WKE JAN 2016

PROJECT ID: 2200-16-71

WITH: N/A

COUNTY: WAUKESHA

ORDER OF SHEETS

Section No.	1	Title
Section No.	2	Typical Sections and Details
Section No.	3	Estimate of Quantities
Section No.	3	Miscellaneous Quantities
Section No.	4	R/W Plan & Profile
Section No.	5	Plan
Section No.	6	Standard Detail Drawings
Section No.	7	Sign Plates
~~Section No.~~	~~8~~	~~Structure Plans~~

TOTAL SHEETS = 788

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
2200-16-71		

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

MORELAND BOULEVARD

MANHATTAN DRIVE TO I-94

USH 18

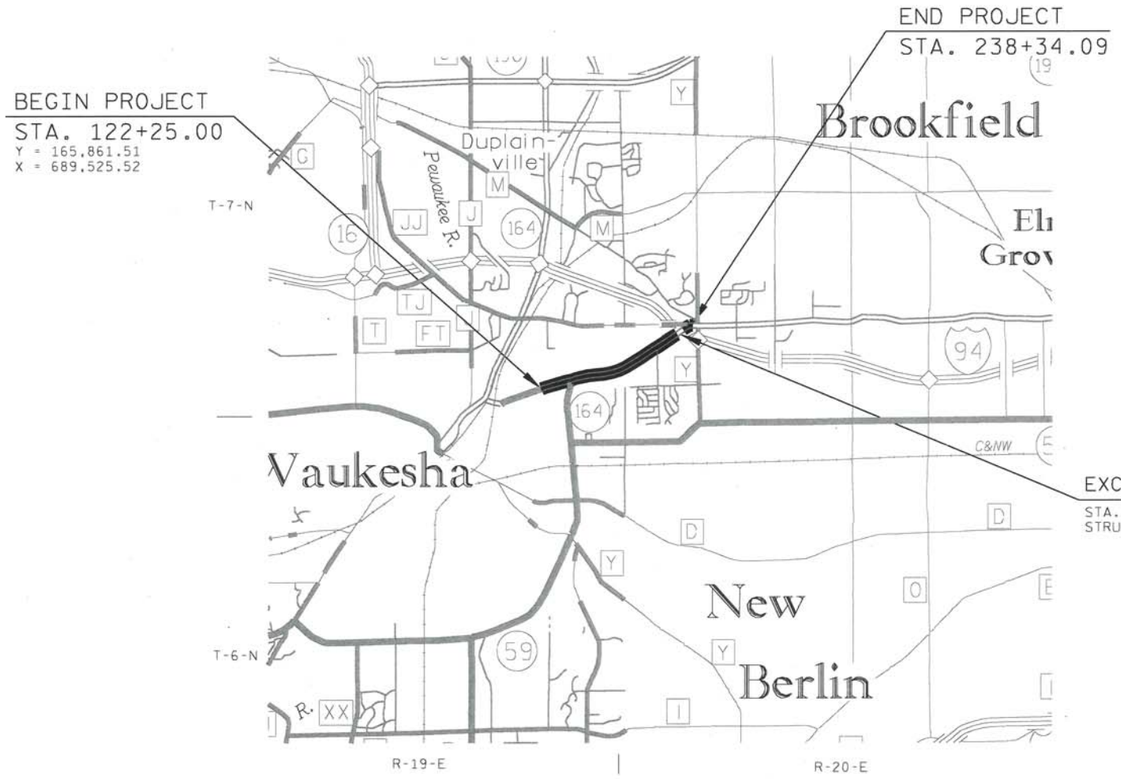
WAUKESHA COUNTY

STATE PROJECT NUMBER

2200-16-71







EXCEPTION TO NET C/L LENGTH

STA. 225+87.3 - STA. 228+69.1
STRUCTURES B-67-044 & B-67-045

LAYOUT
SCALE 0 1 MI.

TOTAL NET LENGTH OF CENTERLINE = 2.145 MI.

DESIGN DESIGNATION		MANHATTAN DR TO IH-94
A.A.D.T. (2012)	=	23,075
A.A.D.T. (2032)	=	28,500
D.H.V.	=	2,765
D.D.	=	50/50
T.	=	4.7%
DESIGN SPEED	=	50 MPH
ESALS	=	3,160,900

CONVENTIONAL SYMBOLS

PLAN

CORPORATE LIMITS	
REFERENCE LINE	
COMBUSTIBLE FLUIDS	CAUTION

UTILITIES

ELECTRIC	E
FIBER OPTIC	FO
GAS	G
SANITARY SEWER	SAN
STORM SEWER	SS
TELEPHONE	T
WATER	W
UTILITY PEDESTAL	
POWER POLE	
TELEPHONE POLE	

Coordinates on this plan are referenced to the Wisconsin County Coordinate System, Waukesha County, NAD 1983 (2007).

Elevations shown on this plan are referenced to the North American Vertical Datum of 1988 NAVD 88 (2007).

ORIGINAL PLANS PREPARED BY

GRAEF
One Honey Creek Corporate Center
125 South 84th Street, Suite 401
Milwaukee, WI 53214-1470
414 / 259 1500
414 / 259 0037 fax

WISCONSIN
STEVE L. HUBERTY
32396
WAUWATOSA, WI
PROFESSIONAL ENGINEER

5-1-15 (Date) (Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY	
Surveyor	GRAEF
Designer	GRAEF
Project Manager	MARK WILFERT
Regional Examiner	
Regional Supervisor	REEM SHAHIN
C.O. Examiner	

APPROVED FOR THE DEPARTMENT

DATE: 5-1-15 (Signature)

E

GENERAL NOTES

NO TREES OR SHRUBS ARE TO BE REMOVED UNLESS INDICATED FOR REMOVAL BY THE ENGINEER.

THE EXACT LOCATION OF PRIVATE ENTRANCES IS TO BE DETERMINED IN THE FIELD BY THE ENGINEER.

ALL HOLES OR OPENINGS BELOW SUBGRADE RESULTING FROM THE ABANDONMENT OR REMOVAL OF EXISTING STRUCTURES OR FROM GRUBBING OF TREES OR STUMPS SHALL BE BACKFILLED WITH GRANULAR BACKFILL. BACKFILL GRANULAR MATERIAL IS INCIDENTAL TO THE REMOVAL ITEM.

ALL RADIUS DIMENSIONS FOR CURB & GUTTER ARE GIVEN TO THE FLANGE. ALL ELEVATIONS ALONG CURB & GUTTER ARE GIVEN TO THE FLANGE. OFFSETS NOTED ARE TO THE FLANGE OR EDGE OF LANE IF NO CURB, UNLESS OTHERWISE NOTED.

CONTRACTOR SHALL CONTACT SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION (SEWRPC) TWO WEEKS PRIOR TO ANY WORK THAT MAY DISTURB ANY PUBLIC SURVEY MONUMENTS. CONTACT JOHN WASHBURN AT (262) 953-4295 FOR MONUMENT RELOCATION PROCEDURES. CONTRACTOR SHALL ALSO CONTACT TOM LIPSKY AT WDOT SOUTHEAST REGION AT (262) 548-6737.

THE LOCATION OF KNOWN EXISTING UTILITIES IN THE VICINITY OF THE PROJECT ON THE PLANS IS APPROXIMATE. THERE MAY BE OTHER UTILITIES IN THE AREA THAT ARE NOT SHOWN.

HMA PAVEMENT, TYPE E-10, WHERE INDICATED ON THE PLANS, SHALL CONSIST OF LAYERS AS FOLLOWS, UNLESS OTHERWISE NOTED ON THE PLANS OR DIRECTED BY THE ENGINEER.

1 ¾" DEPTH	1 ¾" OF 12.5mm HMA PAVEMENT TYPE E-10 PERFORMANCE GRADE 64-28, AS THE UPPER LAYER
4" DEPTH	2 ¼" OF 19.0mm HMA PAVEMENT TYPE E-10 PERFORMANCE GRADE 64-28, AS THE LOWER LAYER
	1 ¾" OF 12.5mm HMA PAVEMENT TYPE E-10 PERFORMANCE GRADE 64-28, AS THE UPPER LAYER
6 ¼" DEPTH	2 ¼" OF 19.0mm HMA PAVEMENT TYPE E-10 PERFORMANCE GRADE 64-28, AS THE LOWER LAYER
	2 ¼" OF 19.0mm HMA PAVEMENT TYPE E-10 PERFORMANCE GRADE 64-28, AS THE UPPER LOWER LAYER
	1 ¾" OF 12.5mm HMA PAVEMENT TYPE E-10 PERFORMANCE GRADE 64-28, AS THE UPPER LAYER

ALL EROSION CONTROL MEASURES SHALL BE ADJUSTED TO MEET FIELD CONDITIONS AT THE TIME OF CONSTRUCTION AND SHALL BE INSTALLED PRIOR TO ANY GRADING OR DISTURBANCE OF EXISTING SURFACE MATERIAL ON THE SITE.

SILT FENCE SHALL BE INSTALLED IN THE LOCATIONS SHOWN ON THE PLANS, OR AS DIRECTED BY THE ENGINEER.

INLET PROTECTION IS REQUIRED AT ALL INLETS AS PER DETAIL OR AS DIRECTED BY THE ENGINEER.

REMOVAL OF EROSION CONTROL DEVICES IS INCLUDED IN THE COST OF THEIR RESPECTIVE BID ITEMS.

RETOPSOIL OF GRADED AREAS, AS DESIGNATED BY THE ENGINEER, IMMEDIATELY AFTER GRADING IS COMPLETED WITHIN THOSE AREAS. SOD OR SEED, FERTILIZE AND MULCH/EROSION MAT AS IDENTIFIED IN THE PLAN ALL TOP-SOILED AREAS WITHIN 5 CALENDAR DAYS AFTER PLACEMENT OF TOPSOIL. IF GRADED AREAS ARE LEFT EXPOSED FOR MORE THAN FOURTEEN CALENDAR DAYS, SEED THOSE AREAS WITH TEMPORARY SEED.

ASPHALT AND CONCRETE DRIVEWAYS SHALL BE SAWCUT AT THE MATCH LINE AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

THE CONTRACTOR SHALL NOTIFY DIGGERS HOTLINE AND AFFECTED UTILITIES PRIOR TO THE START OF WORK. ANY LOCAL MUNICIPAL UTILITY WHICH IS NOT A MEMBER OF THE DIGGERS HOTLINE MUST BE CONTACTED SEPARATELY.

SIGNS IN CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE COVERED AS DIRECTED BY THE ENGINEER AND PAID FOR UNDER THE ITEM TRAFFIC CONTROL COVERING SIGNS.

TRAFFIC CONTROL DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

NO ASPHALTIC SURFACE MILLING OR ASPHALTIC OVERLAYS SHALL OCCUR ON BRIDGE.

CONCRETE JOINTS SHALL MATCH ABUTTING PAVEMENT AND CURB AND GUTTER JOINTS UNLESS OTHERWISE DESIGNATED BY THE ENGINEER.

ALL TIE OR DOWEL BARS INSERTED INTO A HOLE DRILLED IN THE EXISTING CONCRETE SHALL BE PAID FOR UNDER THE ITEM "DRILLED PAVEMENT TIES" AND "DRILLED DOWEL BARS." ALL OTHER TIE OR DOWEL BARS INCORPORATED INTO NEW POURED CONCRETE SHALL BE INCIDENTAL TO THE APPROPRIATE ITEM.

THE LOCATIONS OF LONGITUDINAL JOINTS IN HMA PAVEMENT SHALL BE APPROVED BY THE ENGINEER.

THE MAXIMUM CROSS SLOPE OF SIDEWALKS SHALL BE 2.0%. THE CONTRACTOR IS RESPONSIBLE MAKING CONSIDERATIONS FOR CONSTRUCTION TOLERANCES DURING SIDEWALK PLACEMENT TO ENSURE 2% MAXIMUM CROSS SLOPE IS OBTAINED IN THE FINISHED PRODUCT. SIDEWALK IN NON-COMPLIANCE WITH AMERICAN WITH DISABILTY ACT STANDARDS SHALL BE REMOVED AND REPLACED AT THE CONTRACTORS EXPENSE.

STANDARD ABBREVIATIONS

AEW	APRON END WALL
AGG	AGGREGATE
BAD	BASE AGGREGATE DENSE
BM	BENCH MARK
C&G	CURB AND GUTTER
C/L	CENTER OR CONSTRUCTION LINE
CONC	CONCRETE
CP	CULVERT PIPE
CPCM	CULVERT PIPE CORRUGATED METAL
CPRC	CULVERT PIPE REINFORCED CONCRETE
CPRCHE	CULVERT PIPE REINFORCED CONCRETE HOR. ELLIPTICAL
CSCP	CORRUGATED STEEL CULVERT PIPE
CSPA	CORRUGATED STEEL PIPE ARCH
CSD	CONCRETE SURFACE DRAIN
CY	CUBIC-YARD
D	DEGREE OF CURVE
FE	FIELD ENTRANCE
HERCP	HORIZONTAL ELLIPTICAL REINFORCED CONCRETE PIPE
HMA	HOT MIX ASPHALT
INV	INVERT
L	LENGTH OF CURVE
LHF	LEFT HAND FORWARD
LT	LEFT
MIN	MINIMUM
M/L	MATCHLINE
NB	NORTHBOUND
NC	NORMAL CROWN
NTS	NOT TO SCALE
PAVT	PAVEMENT
PB	PULL BOX
PC	POINT-OF-CURVE
PCC	POINT OF COMPOUND CURVE
PE	PRIVATE ENTRANCE
PI	POINT OF INTERSECTION
PLE	PERMANENT LIMITED EASEMENT
PT	POINT OF TANGENT
PVC	POINT OF VERTICAL CURVE
PVI	POINT OF VERTICAL INTERSECTION
PVT	POINT OF VERTICAL TANGENT
R	RADIUS OF CURVE
R/L	REFERENCE LINE
R/W	RIGHT OF WAY
RAD	RADIUS
RC	REVERSE CROWN
RCAEW	APRON ENDWALL FOR CULVERT PIPE REINFORCED CONCRETE
RCHESS	REINFORCED CONCRETE HORIZONTAL ELLIPTICAL STORM SEWER
RCPSS	REINFORCED CONCRETE PIPE - STORM SEWER
REQD	REQUIRED
RHF	RIGHT HAND FORWARD
RO	RUN OFF LENGTH
RT	RIGHT
SALV	SALVAGED
SB	SIGNAL BASE
SDD	STANDARD DETAIL DRAWING
SE	SUPER ELEVATION
SF	SQUARE FOOT
STA	STATION
SY	SQUARE YARD
T	TANGENT LENGTH
TC	TOP OF CURB
TLE	TEMPORARY LIMITED EASEMENT

INDEX OF TYPICAL SECTION AND DETAIL SHEETS

WRITTEN MATERIAL	2. - 2.
TYPICAL SECTIONS	2. - 2.
CONSTRUCTION DETAILS	2. - 2.
PLAN DETAILS	2. - 2.
STORM SEWER, UTILITIES, & EROSION CONTROL	2. - 2.
SIGNING AND PAVEMENT MARKING	2. - 2.
TRAFFIC SIGNALS	2. - 2.
TRAFFIC CONTROL AND CONSTRUCTION STAGING	2. - 2.
ALIGNMENT	2. - 2.

AGENCY CONTACTS

MR. PAUL DAY, P.E.
WAUKESHA SANITARY & STORM SEWER, CITY OF
130 DELAFIELD STREET
WAUKESHA, WI 53188-3616
(262)524-3585 / FAX: (262)524-3898
PDAY@CI.WAUKESHA.WI.US

MR. JEFF GOLNER
TOWN OF BROOKFIELD
645 N. JANACEK ROAD
BROOKFIELD, WI 53045
(262)796-3795
DPW@TOWNOFBROOKFIELD.COM

MR. GARY EVANS, ENG. SERVICES MGR.
WAUKESHA COUNTY DPW
1320 PEWAUKEE ROAD, RM. 220
WAUKESHA, WI 53188
(262)548-7740 / FAX: (262)896-8097
GEVANS@WAUKESHACOUNTY.GOV

MR. JOHN WASHBURN
SOUTHEASTERN REGIONAL PLANNING COMMISSION
W239 N1812 ROCKWOOD DRIVE
P.O. BOX 1607
WAUKESHA, WI 53187-1607
(262) 953-4295 / FAX: (262) 547-1103
JWASHBURN@SEWRPC.ORG

DNR

MR. CRAIG WEBSTER
DNR SOUTHEAST REGION HEADQUARTERS
141 NW BARSTOW ST, ROOM 180
WAUKESHA, WI 53187
(414) 303-3011
CRAIG.WEBSTER@WISCONSIN.GOV

WIS DOT

MR. MARK WILFERT
WISCONSIN DEPARTMENT OF TRANSPORTATION
141 N.W. BARSTOW STREET
P.O. BOX 798
WAUKESHA, WI 53187-0798
(262) 548-5936
MARK.WILFERT@DOT.WI.GOV

DESIGNER

MS. MARY BETH PETTIT
GRAEF
ONE HONEY CREEK CORPORATE CENTER
125 S. 84TH STREET, SUITE 401
MILWAUKEE, WI 53214
(414) 266-9175
MARYBETH.PETTIT@GRAEF-USA.COM

UTILITY CONTACTS

MR. RICK PODOLAK
AT&T WISCONSIN
304 S DEWEY STREET, 4TH FLOOR
EAU CLAIRE, WI 54701
(715)839-5565
RICK.T.PODOLAK@ATT.COM

CONSTRUCTION FIELD CONTACT:
MR. DAVE PINKOWSKI
AT&T WISCONSIN - "BACK OF CURB, AERIAL PLANT & BURIED CABLES"
2005 PEWAUKEE ROAD
WAUKESHA, WI 53188
(262)896-6556
DP8192@ATT.COM

CONSTRUCTION FIELD CONTACT:
MR. MARK EDER
AT&T WISCONSIN - "CONDUIT"
2005 PEWAUKEE ROAD
WAUKESHA, WI 53188
(262)896-7434
ME1754@ATT.COM

MR. LATROY BRUMFIELD
PROJECT MANAGER
WE ENERGIES - ELECTRIC
333 W. EVERETT STREET, A299
MILWAUKEE, WI 53203
(414)221-5617 / FAX: (414)221-2336
LATROY.BRUMFIELD@WE-ENERGIES.COM

CONSTRUCTION FIELD CONTACT:
MR. STEVEN KING
WE ENERGIES (ELECTRIC)
S13 W33800 HWY 18
DELAFIELD, WI 53018
(262) 968-5768
STEVEN.KING@WE-ENERGIES.COM

MR. LATROY BRUMFIELD
PROJECT MANAGER
WE ENERGIES (GAS OPERATIONS)
333 W. EVERETT STREET, A299
MILWAUKEE, WI 53203
(414)221-5617 / FAX: (414)221-2336
LATROY.BRUMFIELD@WE-ENERGIES.COM

CONSTRUCTION FIELD CONTACT:
MR. JOE DABLE
WE ENERGIES (GAS OPERATIONS)
500 S. 116TH STREET
WEST ALLIS, WI 53214
(414) 944-5543

UTILITY CONTACTS

MR. JEFF MADSON
WISDOT STOC
433 W. ST. PAUL AVE., STE 300
MILWAUKEE, WI 53203 3007
(414)255-3723
JEFFREY.MADSON@DOT.WI.GOV

MS. ELIZABETH LLOYD-WEIS
WISDOT SIGNALS
141 NW BARSTOW
P.O. BOX 798
WAUKESHA, WI 53187-0798
(414) 750-2605
ELIZABETH.LLOYD-WEIS@DOT.WI.GOV

MR. ERIC PEREA
WISDOT TRAFFIC LIGHTING
141 NW BARSTOW
P.O. BOX 798
WAUKESHA, WI 53187-0798
(262)574-5422
ERIC.PEREA@DOT.WI.GOV

MR. CARL DONAHUE
AT&T CORP.
866 ROCK CREEK ROAD
PLANO, IL 60545
(847) 420-9115 / FAX: (847) 244-9597
CD8729@ATT.COM

TW CABLE ENGINEERING
TIME WARNER CABLE
1320 N. DR. MARTIN LUTHER KING DRIVE
MILWAUKEE, WI 53212
(414)277-4045
WIS.ENGINEERING@TWCABLE.COM

MR. BRAHIM GADDOUR
TIME WARNER TELECOM
3235 INTERTECH DRIVE, SUITE 600
BROOKFIELD, WI 53045
(414)908-1027
BRAHIM.GADDOUR@TWTELECOM.COM

MR. MICHAEL JOHNSON
TDS METROCOM
20875 CORSSROADS CIRCLE, SUITE 800
WAUKESHA, WI 53186
(262) 754-3052 / FAX: (262) 717-6002
MICHAEL.JOHNSON@TDSTELECOM.COM

UTILITY CONTACTS

MR. RICHARD TRGOVEC, OPS ENGINEER
MIDWEST FIBER NETWORKS
3701 W. BURNHAM STREET, STE C
MILWAUKEE, WI 53215
(414) 672-5612 / FAX: (414) 226-2269
RTRGOVEC@MIDWESTFIBERNETWORKS.COM

MR. PAUL DAY, P.E.
CITY OF WAUKESHA
SANITARY, STORM SEWER, & LIGHTING
130 DELAFIELD STREET
WAUKESHA, WI 53188-3616
(262)524-3585 / FAX: (262)524-3898
PDAY@CI.WAUKESHA.WI.US

CONSTRUCTION FIELD CONTACT:
MR. CHRISTOPHER LANGEMAK
CITY OF WAUKESHA
SANITARY & STORM SEWER
130 DELAFIELD STREET
WAUKESHA, WI 53188-3616
(262) 524-3598

MS. KELLY ZYLSTRA
WAUKESHA WATER UTILITY
P.O. BOX 1648
WAUKESHA, WI 53187-1648
(262) 521-5272 X536
CONTACTUS@WAUKESHA-WATER.COM

CONSTRUCTION FIELD CONTACT:
MR. TOM KRAUSE
WAUKESHA WATER UTILITY
115 DELAFIELD STREET, PO BOX 1648
WAUKESHA, WI 53187-1648
(262) 521-5272 X534

MR. TONY SKOF
SUPERINTENDENT
TOWN OF BROOKFIELD, SAN DISTRICT 4
645 N JANACEK ROAD
BROOKFIELD, WI 53045
(262) 798-8629
TONYSD4@GMAIL.COM

MS. DEBBIE SADDLER
TELEPORT COMMUNICATIONS AMERICA, LLC
6070 N FLINT RD
C/O NORTHWIND TECHNICAL SERVICES
GLENDALE, WI 53209
(414)459-3572
D.SADDLER@NORTHWINDTECH.COM

DIGGERS HOTLINE
Dial 811 or (800) 242-8511
www.DiggersHotline.com

2

2

N

TOWN OF
BROOKFIELD

END PROJECT
ID 2200-16-71
STA. 238+34.09

BARKER ROAD

BLUEMOUND ROAD (USH 18)

IH 94

KOSSOW ROAD

PROPOSED DRY
DETENTION POND

PARKLAWN DRIVE

ABBOT DR.

SWENSON DRIVE

CROSSROADS CIRCLE

KOSSOW ROAD

SPRINGDALE ROAD

CITY OF
WAUKESHA

AVALON DRIVE

RAMONA ROAD

MANHATTAN DRIVE

JENNIFER LANE

WOLF ROAD

E. MORELAND BLVD (USH 18)

GATEWAY
DRIVE

E. MAIN STREET

BEGIN PROJECT
ID 2200-16-71
STA. 122+25.00

LES PAUL PKWY
(STH 164)

CITY OF
WAUKESHA

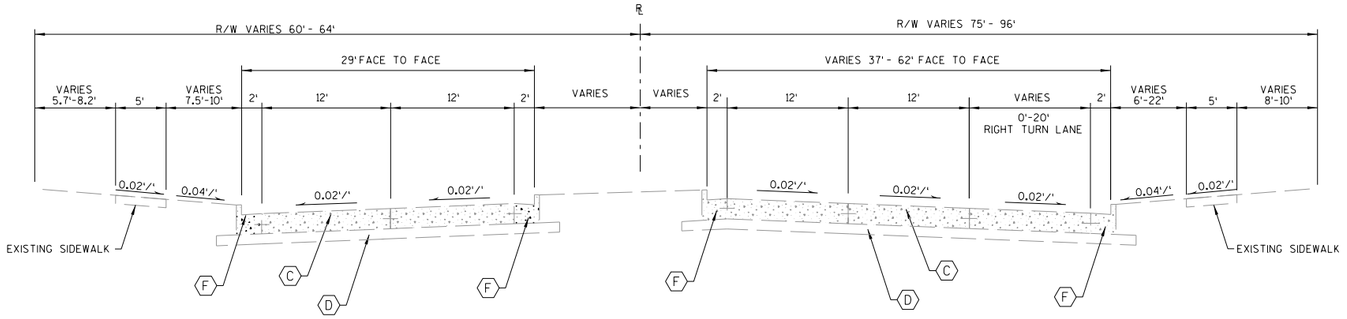
MUNICIPAL BOUNDARY

TOWN OF
BROOKFIELD

CITY OF
BROOKFIELD

SCALE, FEET 0 500 1000

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	PROJECT OVERVIEW	SHEET 4	E



TYPICAL EXISTING SECTION

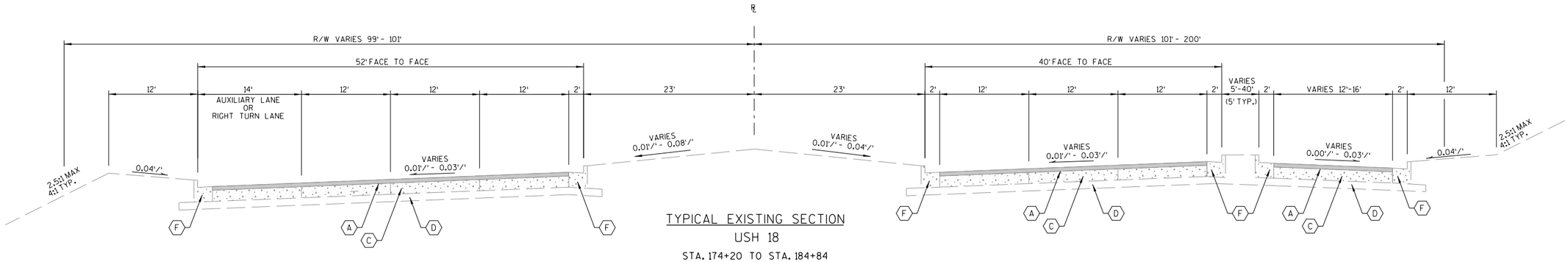
USH 18

STA. 122+25 - STA. 125+30

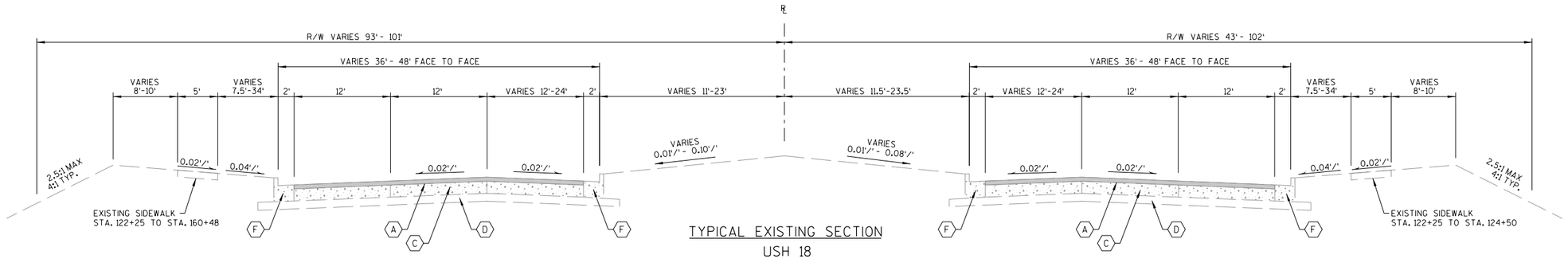
LEGEND

- (A) 3" ASPHALTIC CONC. PAV'T
- (B) 7" ASPHALTIC CONC. PAV'T
- (C) 9" P.C. REINFORCED CONC.
- (D) 6" GRANULAR OR CRUSHED STONE BASE COURSE
- (E) 14" GRANULAR OR CRUSHED STONE BASE COURSE
- (F) 30" CURB & GUTTER

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	TYPICAL EXISTING SECTIONS	SHEET 5	E



TYPICAL EXISTING SECTION
USH 18
STA. 174+20 TO STA. 184+84



TYPICAL EXISTING SECTION
USH 18
STA. 125+30 TO STA. 174+20

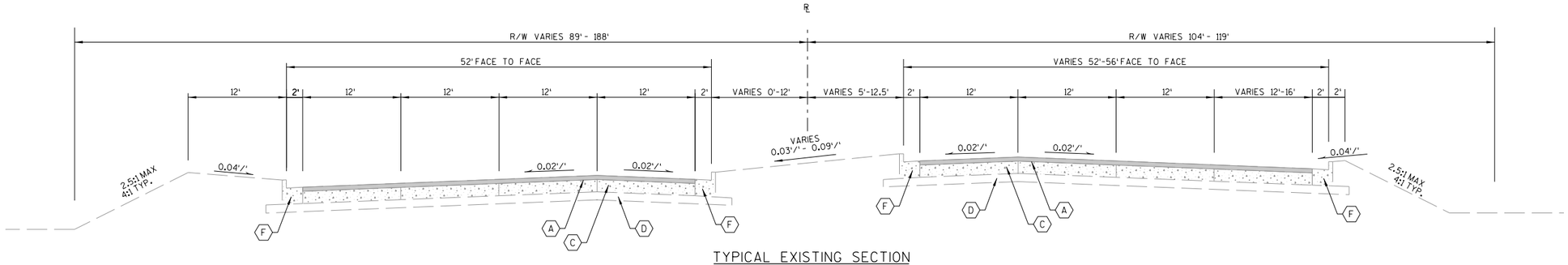
LEGEND

- (A) 3" ASPHALTIC CONC. PAV'T
- (B) 7" ASPHALTIC CONC. PAV'T
- (C) 9" P.C. REINFORCED CONC.
- (D) 6" GRANULAR OR CRUSHED STONE BASE COURSE
- (E) 14" GRANULAR OR CRUSHED STONE BASE COURSE
- (F) 30" CURB & GUTTER

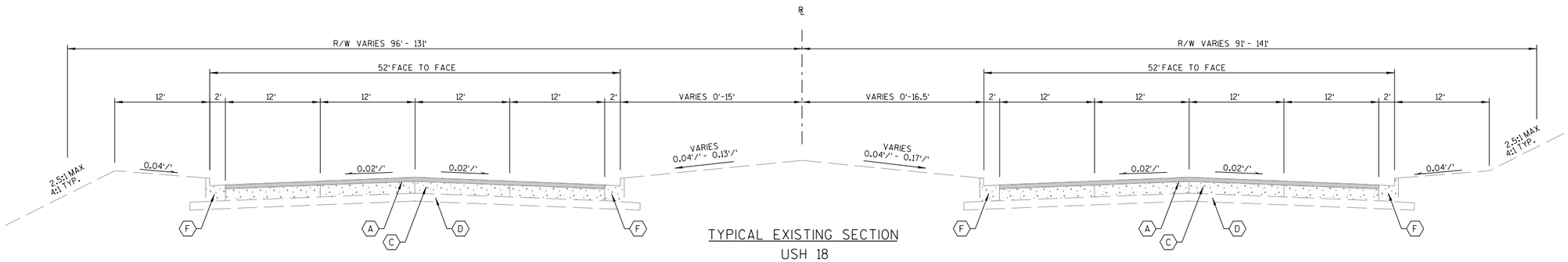
PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	TYPICAL EXISTING SECTIONS	SHEET 6	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\020301_ts.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 15.000 sf / in.

WISDOT/CADDS SHEET 42



TYPICAL EXISTING SECTION
USH 18
STA. 209+22 TO STA. 221+32

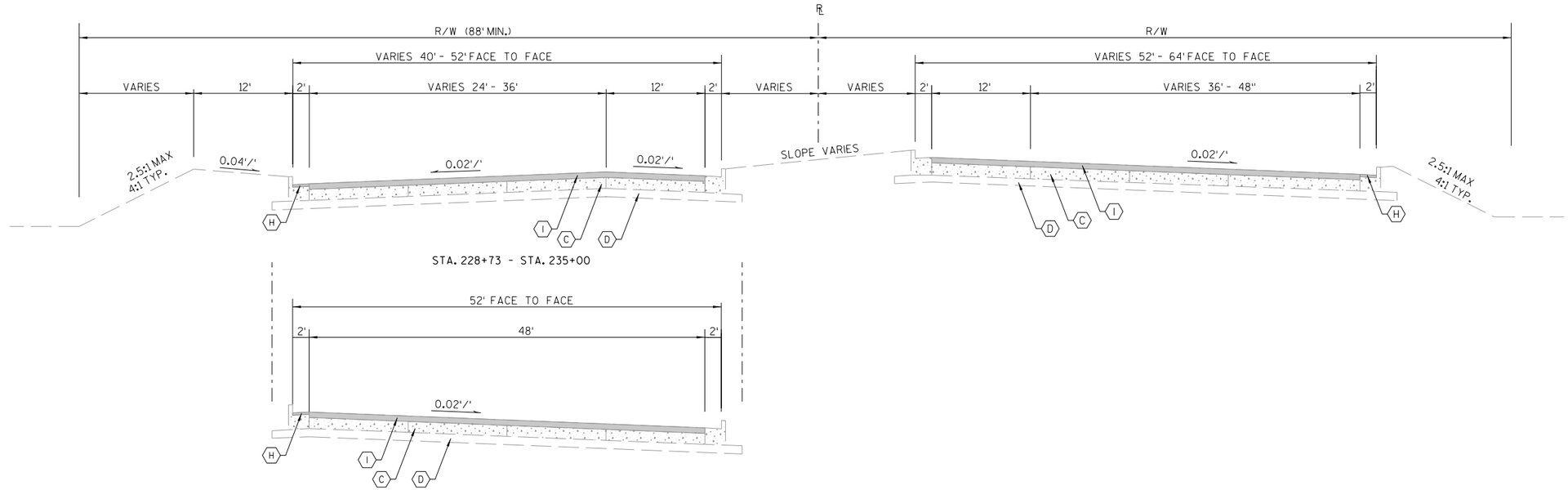


TYPICAL EXISTING SECTION
USH 18
STA. 184+84 TO STA. 209+22

LEGEND

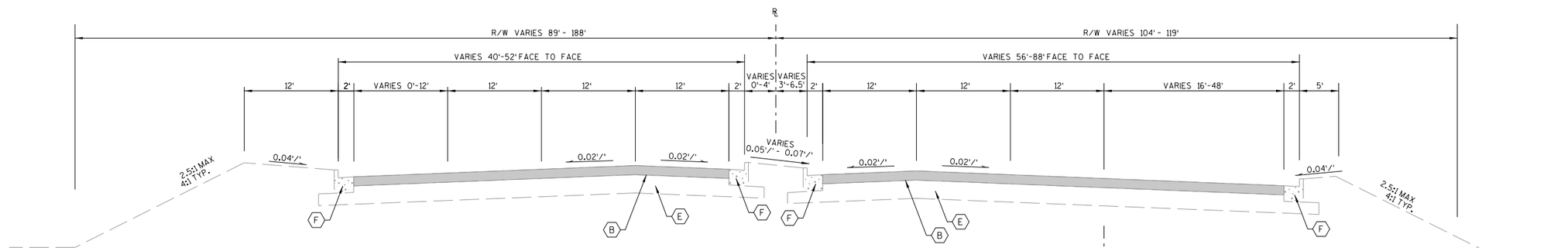
- (A) 3" ASPHALTIC CONC. PAV'T
- (B) 7" ASPHALTIC CONC. PAV'T
- (C) 9" P.C. REINFORCED CONC.
- (D) 6" GRANULAR OR CRUSHED STONE BASE COURSE
- (E) 14" GRANULAR OR CRUSHED STONE BASE COURSE
- (F) 30" CURB & GUTTER

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	TYPICAL EXISTING SECTIONS	SHEET 7	E

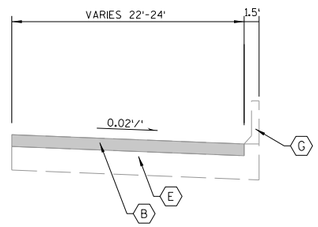


TYPICAL EXISTING SECTION
USH 18
STA. 228+73 TO STA. 238+36

NOTE: EXISTING STRUCTURE OVER IH-94 LOCATED FROM STA. 225+87 TO STA. 228+73.



TYPICAL EXISTING SECTION
USH 18
STA. 221+32 TO STA. 225+87



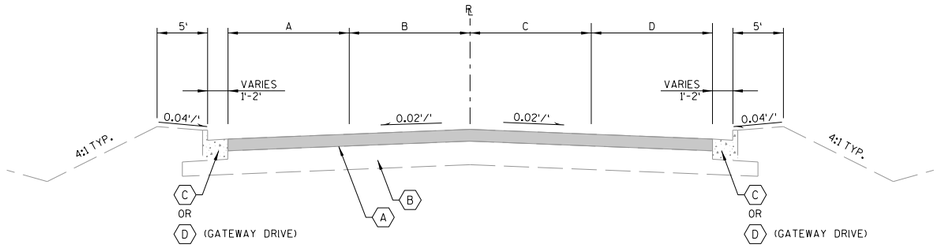
STA. 223+67 TO STA. 225+87

LEGEND

- A — 3" ASPHALTIC CONC. PAV'T
- B — 7" ASPHALTIC CONC. PAV'T
- C — 9" P.C. REINFORCED CONC.
- D — 6" GRANULAR OR CRUSHED STONE BASE COURSE
- E — 14" GRANULAR OR CRUSHED STONE BASE COURSE
- F — 30" CURB & GUTTER
- G — CONCRETE BARRIER
- H — 1.75" ASPHALTIC CONC. PAV'T
- I — 4" ASPHALTIC CONC. PAV'T

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	TYPICAL EXISTING SECTIONS	SHEET 8	E

SIDE STREET	A FT	B FT	C FT	D FT
MANHATTAN DRIVE	5-12	12	12	5-12
JENNIFER LANE	5	12	12	5
WOLF ROAD	18	12	12	8
GATEWAY DRIVE	4	12	12	4
AVALON DRIVE	8	12	12	8
RAMONA ROAD	5	12	12	5
MAIN STREET	10-14	10-12	12	12-13
SPRINGDALE ROAD (SOUTH)	19	12	12	19
LONGVIEW DRIVE	3	12	12	3
PARKLAWN DRIVE	8	12	12	8
PARKLAWN COURT	--	11	11	--
SWENSON DRIVE	8-16	10	10	8-40
KOSSOW ROAD (SOUTH)	--	11-13	12-14	--
KOSSOW ROAD (NORTH)	12-33	12	12	12-28
ABBOTT DRIVE	4	12	12	4



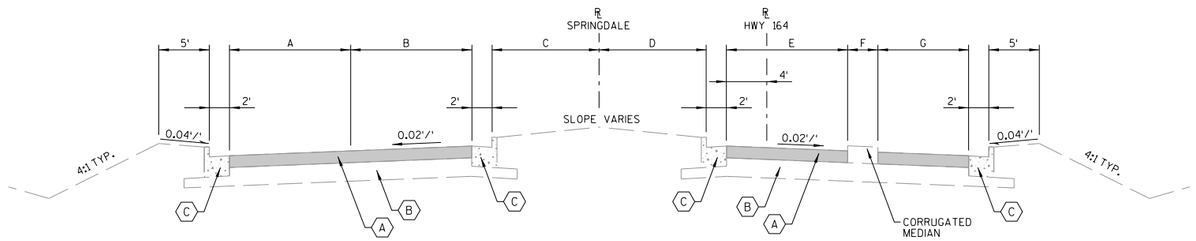
TYPICAL EXISTING SECTION

SIDE STREET URBAN
(SEE TABLE FOR APPLICABLE STREETS)

LEGEND

- (A) VARIABLE DEPTH ASPHALTIC CONC. PAV'T
- (B) 9" CRUSHED AGGREGATE BASE COURSE
- (C) 30" CURB & GUTTER
- (D) 18" CURB & GUTTER

SIDE STREET	A FT	B FT	C FT	D FT	E FT	F FT	G FT
LES PAUL PARKWAY / HWY 164 (SOUTH)	24	12	2.5	2.5	24	0-6	24-40
SPRINGDALE ROAD (NORTH)	12	12	10	10	12	--	12



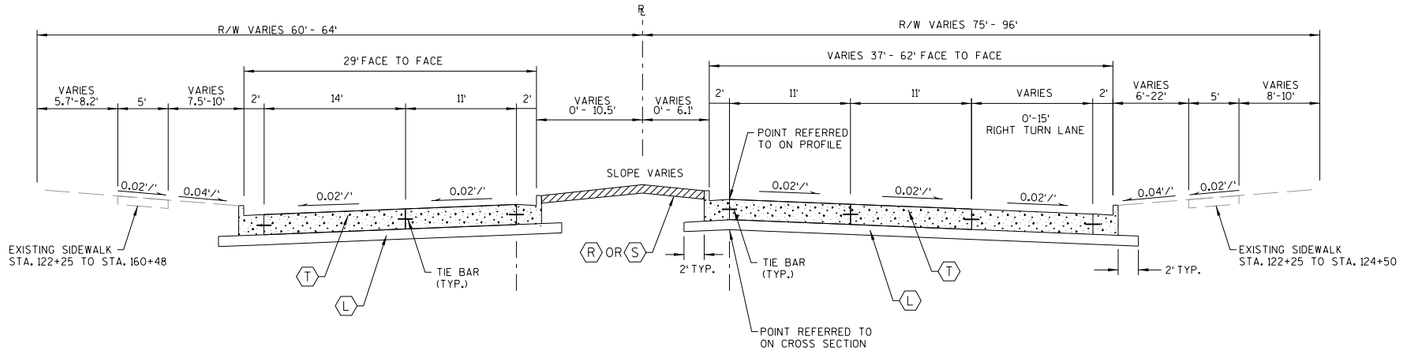
TYPICAL EXISTING SECTION

SIDE STREET URBAN
(SEE TABLE FOR APPLICABLE STREETS)

LEGEND

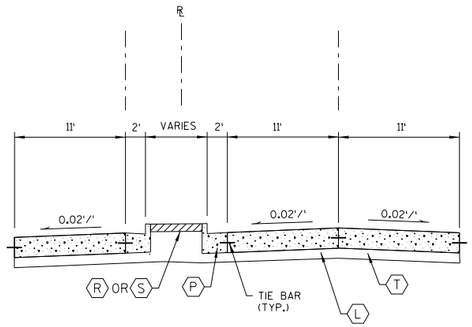
- (A) VARIABLE DEPTH ASPHALTIC CONC. PAV'T
- (B) 9" CRUSHED AGGREGATE BASE COURSE
- (C) 30" CURB & GUTTER

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	TYPICAL EXISTING SECTIONS	SHEET 9	E



TYPICAL FINISHED SECTION
USH 18

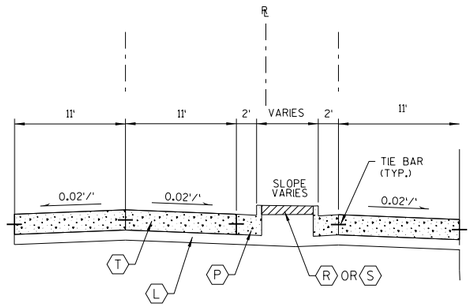
STA. 122+25 - STA. 125+30



TYPICAL FINISHED SECTION DETAILS
USH 18

EASTBOUND MEDIAN-LEFT TURN LANE

STA. 122+60 - STA. 124+55



TYPICAL FINISHED SECTION
USH 18

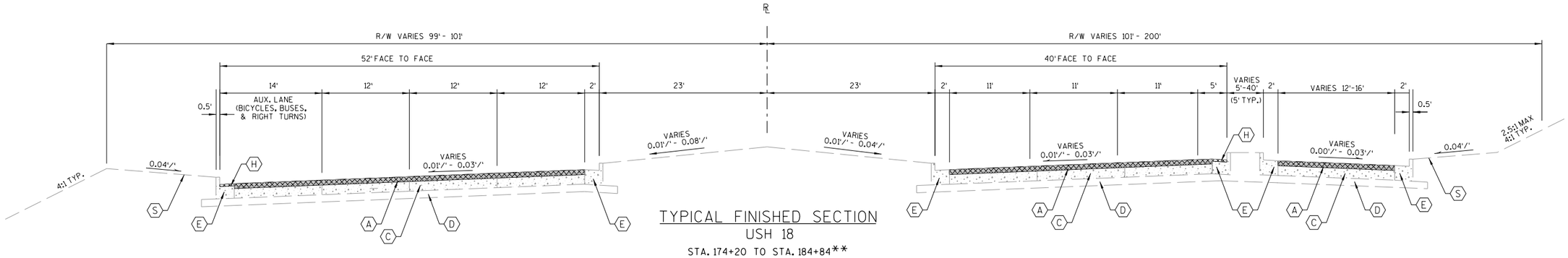
WESTBOUND MEDIAN-LEFT TURN LANE

STA. 122+50 - STA. 124+25

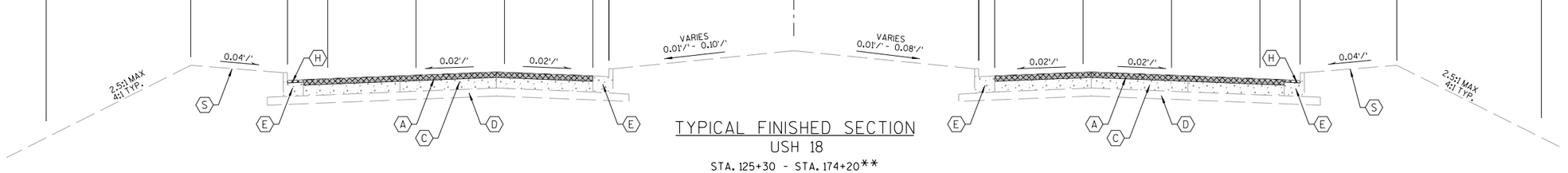
LEGEND - TYPICAL FINISHED SECTIONS

- (A) REMOVING ASPHALTIC SURFACE MILLING, 4-INCH SPECIAL, 4" HMA PAVEMENT, TYPE E-10
- (B) EXISTING ASPHALTIC CONCRETE PAVEMENT
- (C) EXISTING REINFORCED CONCRETE - (8" TO REMAIN (TYP.))
- (D) EXISTING GRANULAR OR CRUSHED STONE BASE COURSE
- (E) EXISTING CURB & GUTTER
- (F) 4" HMA PAVEMENT, TYPE E-10
- (G) 6¼" HMA PAVEMENT, TYPE E-10
- (H) REMOVE CONCRETE GUTTER PARTIAL DEPTH, 1 ¾-INCH, 1 ¾-INCH HMA PAVEMENT TYPE E-10
- (I) CONCRETE BASE 8-INCH
- (J) 6¼" BASE AGGREGATE DENSE, ¾-INCH
- (K) 4" BASE AGGREGATE DENSE, 1 1¾4-INCH
- (L) 6" BASE AGGREGATE DENSE 1 ¼-INCH
- (M) 12" BASE AGGREGATE DENSE 1 ¼-INCH
- (N) CONCRETE CURB & GUTTER 18-INCH, TYPE A
- (O) CONCRETE CURB & GUTTER 18-INCH, TYPE D
- (P) CONCRETE CURB & GUTTER 30-INCH, TYPE A
- (Q) CONCRETE CURB & GUTTER 30-INCH, TYPE D
- (R) 5" CONCRETE SIDEWALK
- (S) 4" TOPSOIL, FERTILIZER & SOD
- (T) CONCRETE PAVEMENT 9-INCH (DOWELLED)

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	TYPICAL FINISHED SECTIONS	SHEET 10	E



TYPICAL FINISHED SECTION
USH 18
STA. 174+20 TO STA. 184+84**



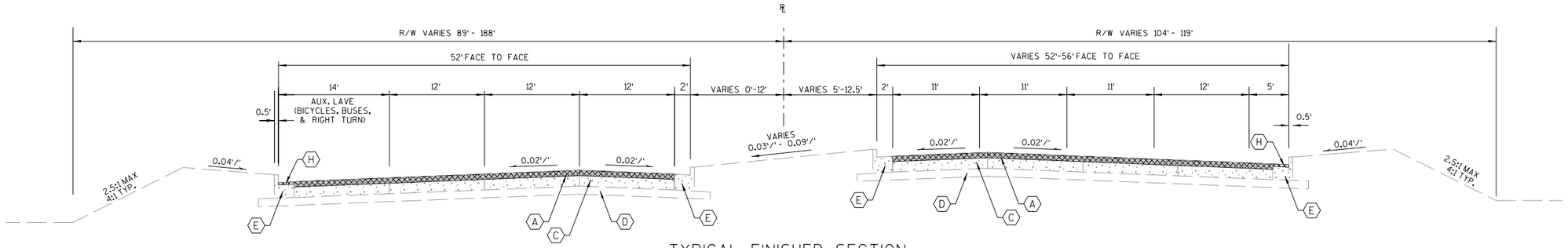
TYPICAL FINISHED SECTION
USH 18
STA. 125+30 - STA. 174+20**

**SEE TYPICAL SECTION DETAILS FOR LOCATIONS OF LEFT TURN WIDENING, SLOTTED LEFT-TURN LANES, AND RIGHT-TURN WIDENING.

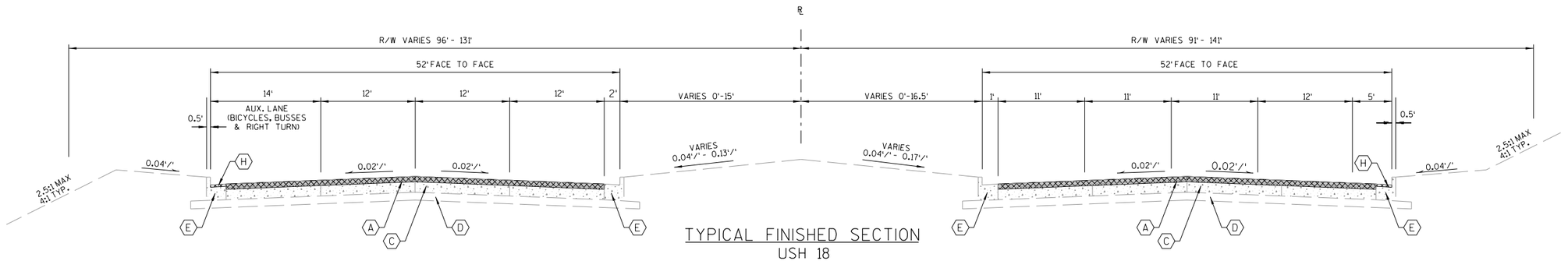
LEGEND - TYPICAL FINISHED SECTIONS

- (A) REMOVING ASPHALTIC SURFACE MILLING, 4-INCH SPECIAL, 4" HMA PAVEMENT, TYPE E-10
- (B) EXISTING ASPHALTIC CONCRETE PAVEMENT
- (C) EXISTING REINFORCED CONCRETE - (8" TO REMAIN (TYP.))
- (D) EXISTING GRANULAR OR CRUSHED STONE BASE COURSE
- (E) EXISTING CURB & GUTTER
- (F) 4" HMA PAVEMENT, TYPE E-10
- (G) 6¼" HMA PAVEMENT, TYPE E-10
- (H) REMOVE CONCRETE GUTTER PARTIAL DEPTH, 1 ¾-INCH, 1 ¾-INCH HMA PAVEMENT TYPE E-10
- (I) CONCRETE BASE 8-INCH
- (J) 6¼" BASE AGGREGATE DENSE, ¾-INCH
- (K) 4" BASE AGGREGATE DENSE, 1 1¾-INCH
- (L) 6" BASE AGGREGATE DENSE 1 ¼-INCH
- (M) 12" BASE AGGREGATE DENSE 1 ¼-INCH
- (N) CONCRETE CURB & GUTTER 18-INCH, TYPE A
- (O) CONCRETE CURB & GUTTER 18-INCH, TYPE D
- (P) CONCRETE CURB & GUTTER 30-INCH, TYPE A
- (Q) CONCRETE CURB & GUTTER 30-INCH, TYPE D
- (R) 5" CONCRETE SIDEWALK
- (S) 4" TOPSOIL, FERTILIZER & SOD
- (T) CONCRETE PAVEMENT 9-INCH (DOWELLED)

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	TYPICAL FINISHED SECTIONS	SHEET 11	E



TYPICAL FINISHED SECTION
USH 18
STA. 209+22 - STA.221+32**



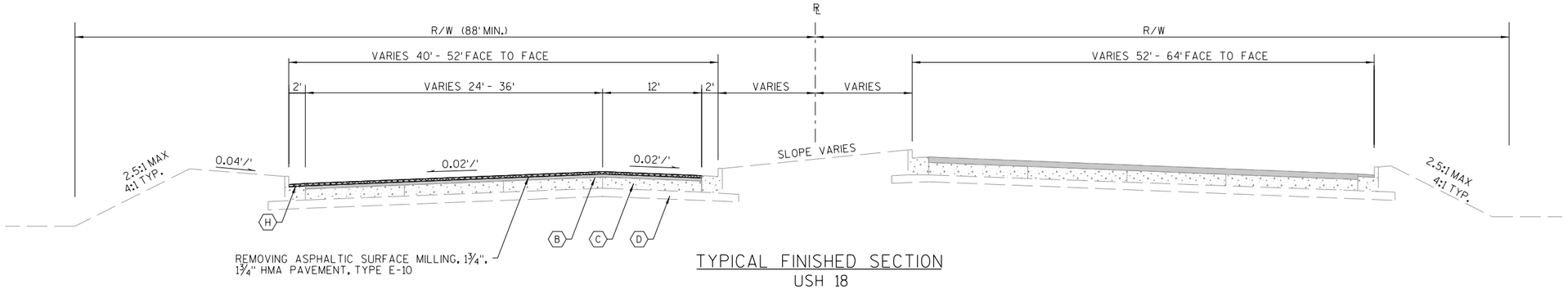
TYPICAL FINISHED SECTION
USH 18
STA. 184+84 - STA. 209+22**

**SEE TYPICAL SECTION DETAILS FOR LOCATIONS OF LEFT TURN WIDENING, SLOTTED LEFT-TURN LANES, AND RIGHT-TURN WIDENING.

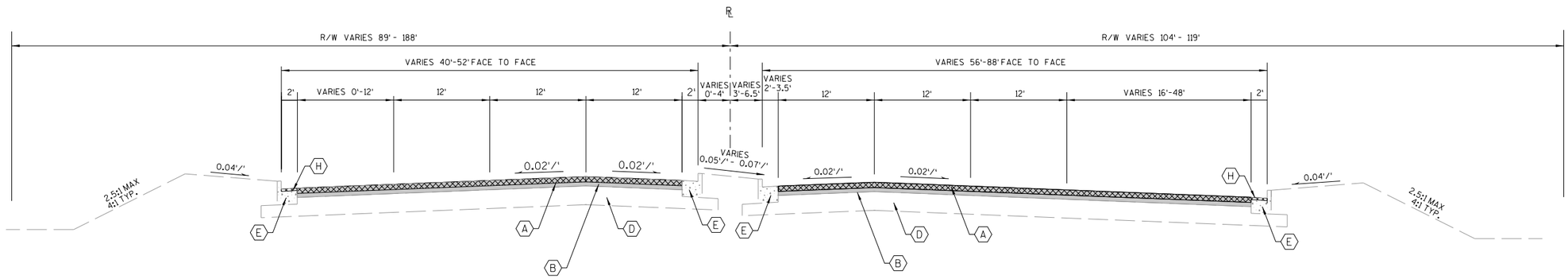
LEGEND - TYPICAL FINISHED SECTIONS

- (A) REMOVING ASPHALTIC SURFACE MILLING, 4-INCH SPECIAL, 4" HMA PAVEMENT, TYPE E-10
- (B) EXISTING ASPHALTIC CONCRETE PAVEMENT
- (C) EXISTING REINFORCED CONCRETE - (8" TO REMAIN (TYP.))
- (D) EXISTING GRANULAR OR CRUSHED STONE BASE COURSE
- (E) EXISTING CURB & GUTTER
- (F) 4" HMA PAVEMENT, TYPE E-10
- (G) 6¼" HMA PAVEMENT, TYPE E-10
- (H) REMOVE CONCRETE GUTTER PARTIAL DEPTH, 1 ¾-INCH, 1 ¾-INCH HMA PAVEMENT TYPE E-10
- (I) CONCRETE BASE 8-INCH
- (J) 6¼" BASE AGGREGATE DENSE, ¾-INCH
- (K) 4" BASE AGGREGATE DENSE, 1 1¾-INCH
- (L) 6" BASE AGGREGATE DENSE 1 ¼-INCH
- (M) 12" BASE AGGREGATE DENSE 1 ¼-INCH
- (N) CONCRETE CURB & GUTTER 18-INCH, TYPE A
- (O) CONCRETE CURB & GUTTER 18-INCH, TYPE D
- (P) CONCRETE CURB & GUTTER 30-INCH, TYPE A
- (Q) CONCRETE CURB & GUTTER 30-INCH, TYPE D
- (R) 5" CONCRETE SIDEWALK
- (S) 4" TOPSOIL, FERTILIZER & SOD
- (T) CONCRETE PAVEMENT 9-INCH (DOWELLED)

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	TYPICAL FINISHED SECTIONS	SHEET 12	E



TYPICAL FINISHED SECTION
USH 18
STA. 228+73 TO STA. 238+36



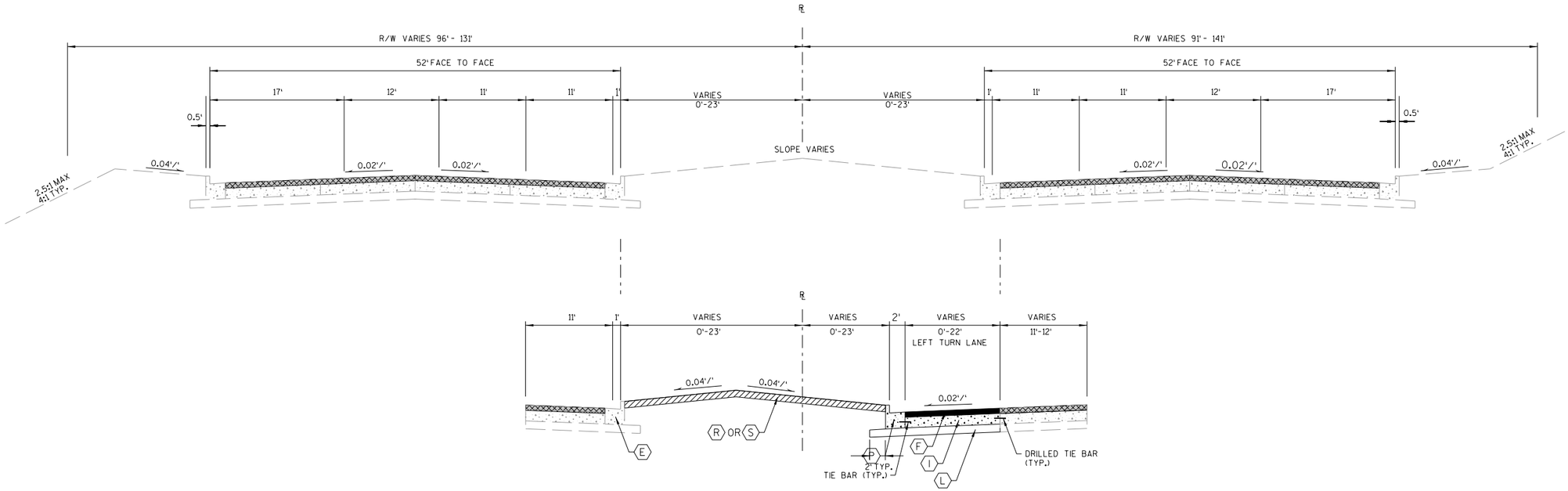
TYPICAL FINISHED SECTION
USH 18
STA. 221+32 TO STA. 225+87**

**SEE TYPICAL SECTION DETAILS FOR LOCATIONS OF LEFT TURN WIDENING, SLOTTED LEFT-TURN LANES, AND RIGHT-TURN WIDENING.

LEGEND - TYPICAL FINISHED SECTIONS

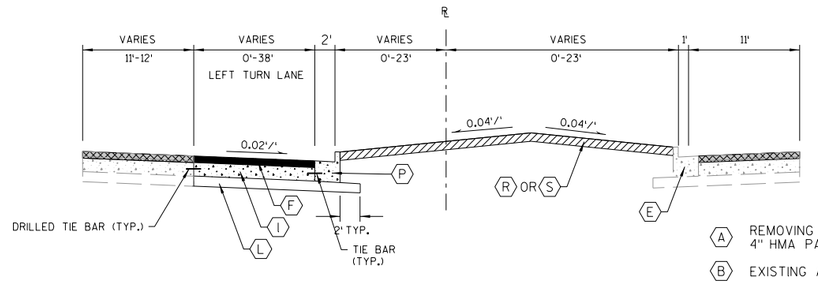
- (A) REMOVING ASPHALTIC SURFACE MILLING, 4-INCH SPECIAL, 4" HMA PAVEMENT, TYPE E-10
- (B) EXISTING ASPHALTIC CONCRETE PAVEMENT
- (C) EXISTING REINFORCED CONCRETE - (8" TO REMAIN (TYP.))
- (D) EXISTING GRANULAR OR CRUSHED STONE BASE COURSE
- (E) EXISTING CURB & GUTTER
- (F) 4" HMA PAVEMENT, TYPE E-10
- (G) 6¼" HMA PAVEMENT, TYPE E-10
- (H) REMOVE CONCRETE GUTTER PARTIAL DEPTH, 1 ¾-INCH, 1 ¾-INCH HMA PAVEMENT TYPE E-10
- (I) CONCRETE BASE 8-INCH
- (J) 6¼" BASE AGGREGATE DENSE, ¾-INCH
- (K) 4" BASE AGGREGATE DENSE, 1 1¾-INCH
- (L) 6" BASE AGGREGATE DENSE 1 ¼-INCH
- (M) 12" BASE AGGREGATE DENSE 1 ¼-INCH
- (N) CONCRETE CURB & GUTTER 18-INCH, TYPE A
- (O) CONCRETE CURB & GUTTER 18-INCH, TYPE D
- (P) CONCRETE CURB & GUTTER 30-INCH, TYPE A
- (Q) CONCRETE CURB & GUTTER 30-INCH, TYPE D
- (R) 5" CONCRETE SIDEWALK
- (S) 4" TOPSOIL, FERTILIZER & SOD
- (T) CONCRETE PAVEMENT 9-INCH (DOWELLED)

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	TYPICAL FINISHED SECTIONS	SHEET 13	E



TYPICAL SECTION DETAILS
USH 18
EASTBOUND MEDIAN-LEFT TURN LANE

STA. 130+57 - STA. 132+32
STA. 133+76 - STA. 133+84
STA. 155+30 - STA. 159+04
STA. 162+72 - STA. 165+23
STA. 178+97 - STA. 182+29
STA. 193+49 - STA. 195+74
STA. 203+33 - STA. 206+73



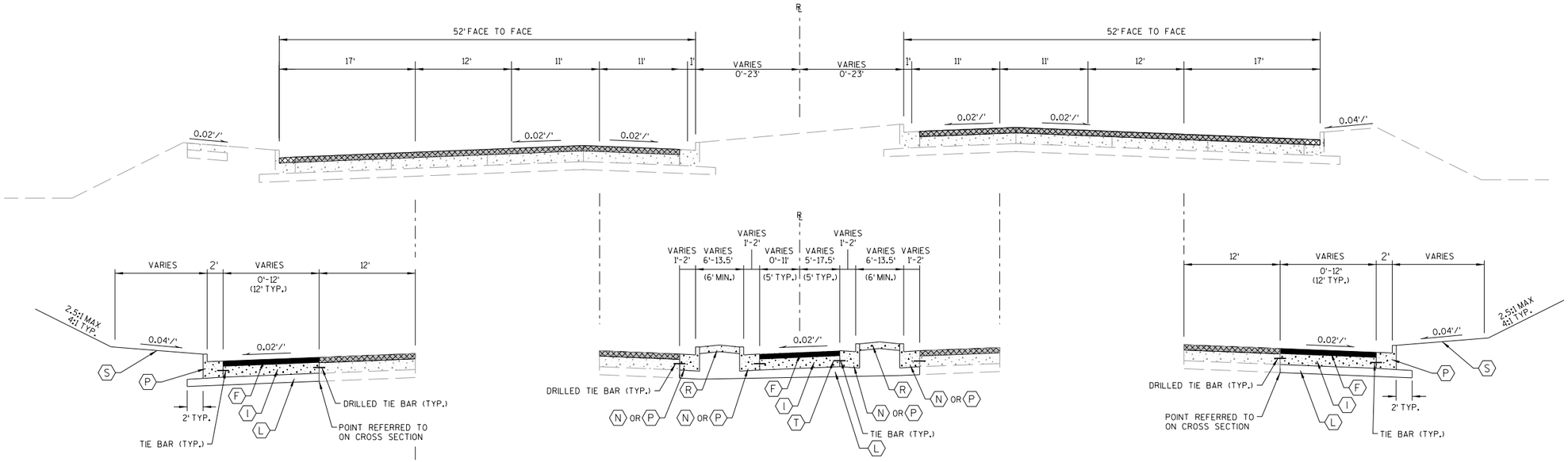
TYPICAL FINISHED SECTION
USH 18
WESTBOUND MEDIAN-LEFT TURN LANE

STA. 135+95 - STA. 139+80
STA. 146+99 - STA. 151+86
STA. 153+32 - STA. 156+41
STA. 162+50 - STA. 166+23
STA. 169+09 - STA. 171+70
STA. 177+91 - STA. 183+18
STA. 187+99 - STA. 189+98
STA. 201+11 - STA. 203+16
STA. 213+26 - STA. 215+29

LEGEND - TYPICAL FINISHED SECTIONS

- (A) REMOVING ASPHALTIC SURFACE MILLING, 4-INCH SPECIAL, 4" HMA PAVEMENT, TYPE E-10
- (B) EXISTING ASPHALTIC CONCRETE PAVEMENT
- (C) EXISTING REINFORCED CONCRETE - (8" TO REMAIN (TYP.))
- (D) EXISTING GRANULAR OR CRUSHED STONE BASE COURSE
- (E) EXISTING CURB & GUTTER
- (F) 4" HMA PAVEMENT, TYPE E-10
- (G) 6¼" HMA PAVEMENT, TYPE E-10
- (H) REMOVE CONCRETE GUTTER PARTIAL DEPTH, 1 ¾-INCH, 1 ¾-INCH HMA PAVEMENT TYPE E-10
- (I) CONCRETE BASE 8-INCH
- (J) 6¼" BASE AGGREGATE DENSE, ¾-INCH
- (K) 4" BASE AGGREGATE DENSE, 1 1#4-INCH
- (L) 6" BASE AGGREGATE DENSE 1 ¼-INCH
- (M) 12" BASE AGGREGATE DENSE 1 ¼-INCH
- (N) CONCRETE CURB & GUTTER 18-INCH, TYPE A
- (O) CONCRETE CURB & GUTTER 18-INCH, TYPE D
- (P) CONCRETE CURB & GUTTER 30-INCH, TYPE A
- (Q) CONCRETE CURB & GUTTER 30-INCH, TYPE D
- (R) 5" CONCRETE SIDEWALK
- (S) 4" TOPSOIL, FERTILIZER & SOD
- (T) CONCRETE PAVEMENT 9-INCH (DOWELLED)

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	TYPICAL FINISHED SECTIONS	SHEET 14	E



TYPICAL FINISHED SECTION
USH 18
WIDENED RIGHT TURN DETAIL

STA. 146+00 - STA.149+54

TYPICAL FINISHED SECTION
USH 18
SLOTTED LEFT TURN LANE & MEDIAN DETAIL

EB USH 18

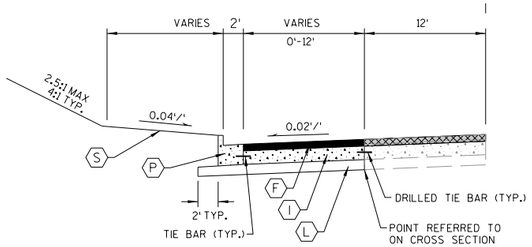
STA. 156+35 - STA. 160+35
STA. 165+33 - STA. 168+00
STA. 170+70 - STA. 171+51
STA. 182+29 - STA. 184+58
STA. 190+59 - STA. 192+43
STA. 195+74 - STA. 197+91
STA. 206+73 - STA. 208+88

WB USH 18

STA. 126+80 - STA. 128+69
STA. 185+18 - STA. 187+99
STA. 198+79 - STA. 201+11
STA. 209+67 - STA. 213+26

TYPICAL FINISHED SECTION
USH 18
WIDENED RIGHT TURN DETAIL

STA. 138+59 - STA. 142+07
STA. 168+99 - STA.172+52
STA. 203+88 - STA. 208+86



TYPICAL FINISHED SECTION
USH 18
WIDENED RIGHT TURN DETAIL

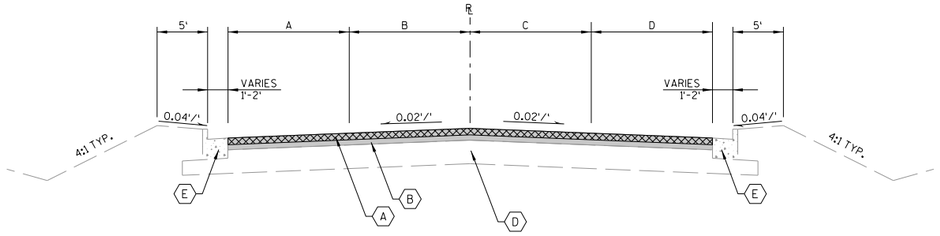
STA. 209+76 - STA. 214+21
STA. 216+87 - STA. 222+52

LEGEND - TYPICAL FINISHED SECTIONS

- (A) REMOVING ASPHALTIC SURFACE MILLING, 4-INCH SPECIAL, 4" HMA PAVEMENT, TYPE E-10
- (B) EXISTING ASPHALTIC CONCRETE PAVEMENT
- (C) EXISTING REINFORCED CONCRETE - (8" TO REMAIN (TYP.))
- (D) EXISTING GRANULAR OR CRUSHED STONE BASE COURSE
- (E) EXISTING CURB & GUTTER
- (F) 4" HMA PAVEMENT, TYPE E-10
- (G) 6¼" HMA PAVEMENT, TYPE E-10
- (H) REMOVE CONCRETE GUTTER PARTIAL DEPTH, 1 ¾-INCH, 1 ¾-INCH HMA PAVEMENT TYPE E-10
- (I) CONCRETE BASE 8-INCH
- (J) 6¼" BASE AGGREGATE DENSE, ¾-INCH
- (K) 4" BASE AGGREGATE DENSE, 1 1#4-INCH
- (L) 6" BASE AGGREGATE DENSE 1 ¼-INCH
- (M) 12" BASE AGGREGATE DENSE 1 ¼-INCH
- (N) CONCRETE CURB & GUTTER 18-INCH, TYPE A
- (O) CONCRETE CURB & GUTTER 18-INCH, TYPE D
- (P) CONCRETE CURB & GUTTER 30-INCH, TYPE A
- (Q) CONCRETE CURB & GUTTER 30-INCH, TYPE D
- (R) 5" CONCRETE SIDEWALK
- (S) 4" TOPSOIL, FERTILIZER & SOD
- (T) CONCRETE PAVEMENT 9-INCH (DOWELLED)

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	TYPICAL FINISHED SECTIONS	SHEET 15	E

SIDE STREET	A FT	B FT	C FT	D FT
MANHATTAN DRIVE	5-12	12	12	5-12
JENNIFER LANE	5	12	12	5
WOLF ROAD	18	12	12	8
GATEWAY DRIVE	4	12	12	4
AVALON DRIVE	8	12	12	8
RAMONA ROAD	5	12	12	5
MAIN STREET	10-14	10-12	12	12-13
SPRINGDALE ROAD (SOUTH)	19	12	12	19
LONGVIEW DRIVE	3	12	12	3

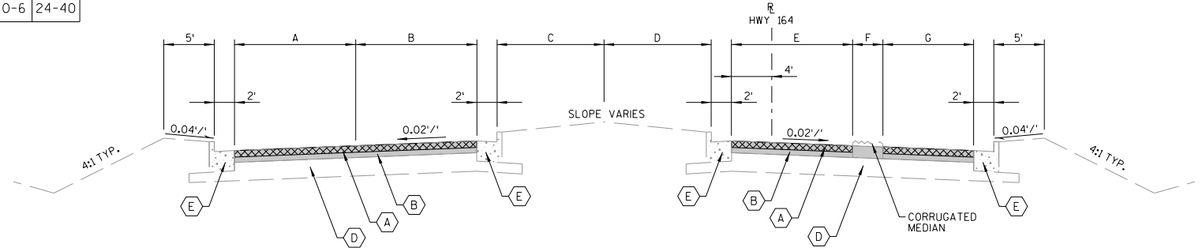


TYPICAL FINISHED SECTION

SIDE STREET URBAN
(SEE TABLE FOR APPLICABLE STREETS)

2

SIDE STREET	A FT	B FT	C FT	D FT	E FT	F FT	G FT
LES PAUL PARKWAY / HWY 164 (SOUTH)	24	12	2.5	2.5	24	0-6	24-40



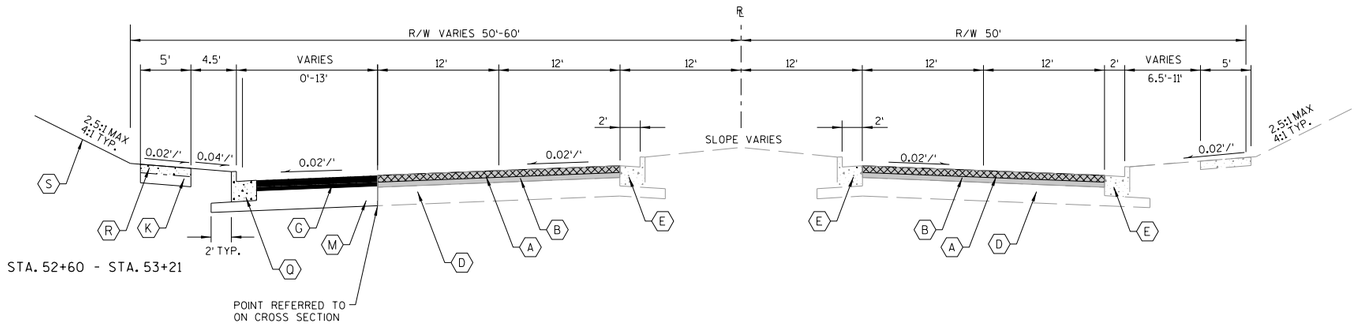
TYPICAL FINISHED SECTION

SIDE STREET URBAN
(SEE TABLE FOR APPLICABLE STREETS)

LEGEND - TYPICAL FINISHED SECTIONS

- (A) 4" REMOVING ASPHALTIC SURFACE MILLING
  4" HMA PAVEMENT, TYPE E-10
- (B) EXISTING ASPHALTIC CONCRETE PAVEMENT
- (C) EXISTING REINFORCED CONCRETE - (8" TO REMAIN (TYP.))
- (D) EXISTING GRANULAR OR CRUSHED STONE BASE COURSE
- (E) EXISTING CURB & GUTTER
- (F) 4" HMA PAVEMENT, TYPE E-10
- (G) 6¼" HMA PAVEMENT, TYPE E-10
- (H) REMOVING CONCRETE GUTTER PARTIAL DEPTH, 1¾-INCH,
  1¾" HMA PAVEMENT TYPE E-10
- (I) CONCRETE BASE 8-INCH
- (J) 6¼" BASE AGGREGATE DENSE, ¾-INCH
- (K) 4" BASE AGGREGATE DENSE, 1 1¾-INCH
- (L) 6" BASE AGGREGATE DENSE 1¼-INCH
- (M) 12" BASE AGGREGATE DENSE 1¼-INCH
- (N) CONCRETE CURB & GUTTER 18-INCH, TYPE A
- (O) CONCRETE CURB & GUTTER 18-INCH, TYPE D
- (P) CONCRETE CURB & GUTTER 30-INCH, TYPE A
- (Q) CONCRETE CURB & GUTTER 30-INCH, TYPE D
- (R) 5" CONCRETE SIDEWALK
- (S) 4" TOPSOIL, FERTILIZER & SOD
- (T) CONCRETE PAVEMENT 9-INCH (DOWELLED)

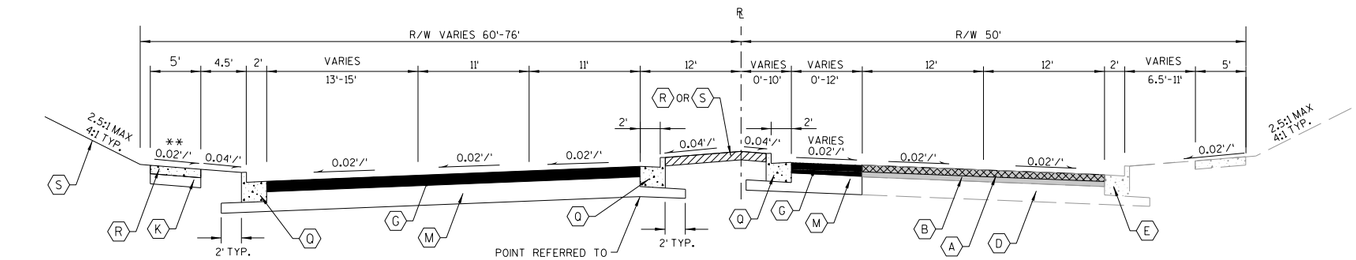
PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	TYPICAL FINISHED SECTIONS	SHEET 16	E



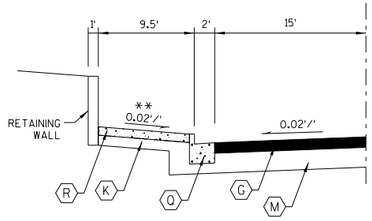
** THE MAXIMUM SIDEWALK CROSS SLOPE ALLOWED IS 2.0%. THE CONTRACTOR SHALL TAKE INTO ACCOUNT CONSTRUCTION TOLERANCES WHEN PLACING CONCRETE SIDEWALK TO ENSURE THE FINISHED PRODUCT IS NOT GREATER THAN 2.0%

SIDEWALK PLACED AT GREATER THAN 2.0% SHALL BE REMOVED AND REPLACED AT THE CONTRACTORS EXPENSE.

TYPICAL FINISHED SECTION
SPRINGDALE ROAD
STA. 52+60 TO STA. 53+50



STA. 51+60 - STA. 52+60



STA. 50+68 - STA. 51+60

** THE MAXIMUM SIDEWALK CROSS SLOPE ALLOWED IS 2.0%. THE CONTRACTOR SHALL TAKE INTO ACCOUNT CONSTRUCTION TOLERANCES WHEN PLACING CONCRETE SIDEWALK TO ENSURE THE FINISHED PRODUCT IS NOT GREATER THAN 2.0%

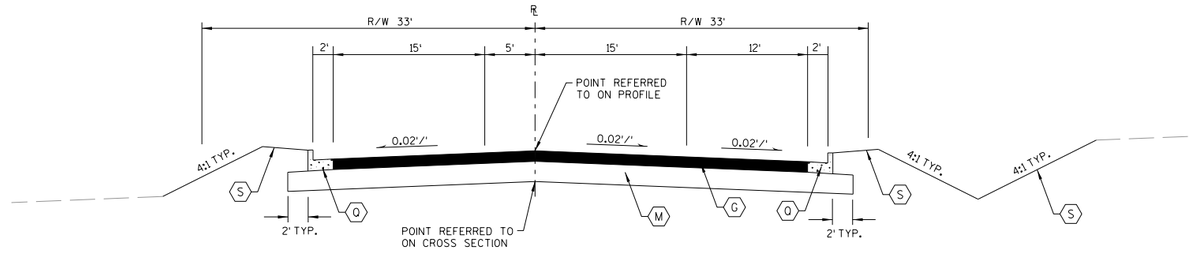
SIDEWALK PLACED AT GREATER THAN 2.0% SHALL BE REMOVED AND REPLACED AT THE CONTRACTORS EXPENSE.

TYPICAL FINISHED SECTION
SPRINGDALE ROAD
STA. 50+68 TO STA. 52+60

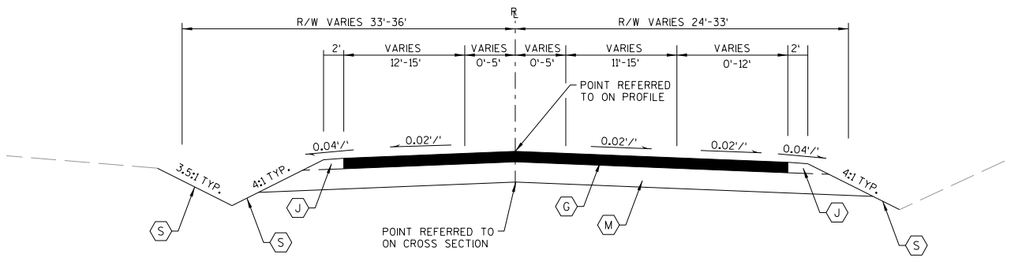
LEGEND - TYPICAL FINISHED SECTIONS

- (A) 4" REMOVING ASPHALTIC SURFACE MILLING 4" HMA PAVEMENT, TYPE E-10
- (B) EXISTING ASPHALTIC CONCRETE PAVEMENT
- (C) EXISTING REINFORCED CONCRETE - (8" TO REMAIN (TYP.))
- (D) EXISTING GRANULAR OR CRUSHED STONE BASE COURSE
- (E) EXISTING CURB & GUTTER
- (F) 4" HMA PAVEMENT, TYPE E-10
- (G) 6¼" HMA PAVEMENT, TYPE E-10
- (H) REMOVING CONCRETE GUTTER PARTIAL DEPTH, 1¾-INCH, 1¾" HMA PAVEMENT TYPE E-10
- (I) CONCRETE BASE 8-INCH
- (J) 6¼" BASE AGGREGATE DENSE, ¾-INCH
- (K) 4" BASE AGGREGATE DENSE, 1 1¾-4-INCH
- (L) 6" BASE AGGREGATE DENSE 1¼-INCH
- (M) 12" BASE AGGREGATE DENSE 1¼-INCH
- (N) CONCRETE CURB & GUTTER 18-INCH, TYPE A
- (O) CONCRETE CURB & GUTTER 18-INCH, TYPE D
- (P) CONCRETE CURB & GUTTER 30-INCH, TYPE A
- (Q) CONCRETE CURB & GUTTER 30-INCH, TYPE D
- (R) 5" CONCRETE SIDEWALK
- (S) 4" TOPSOIL, FERTILIZER & SOD
- (T) CONCRETE PAVEMENT 9-INCH (DOWELLED)

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	TYPICAL FINISHED SECTIONS	SHEET 17	E



TYPICAL FINISHED SECTION
PARKLAWN COURT
STA. 47+71 TO STA. 49+38

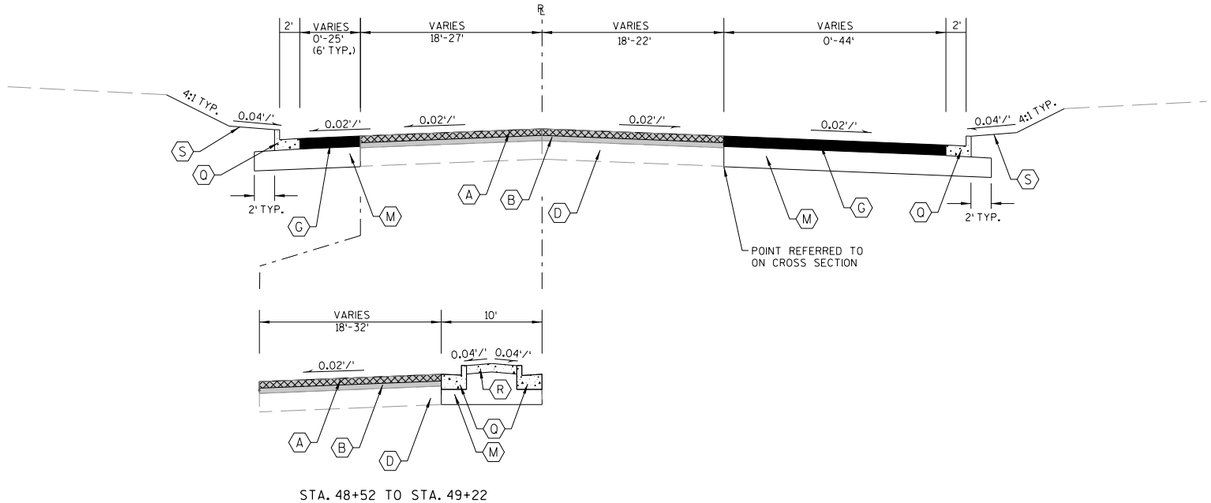


TYPICAL FINISHED SECTION
PARKLAWN COURT
STA. 45+27 TO STA. 47+71

LEGEND - TYPICAL FINISHED SECTIONS

- (A) 4" REMOVING ASPHALTIC SURFACE MILLING, 4" HMA PAVEMENT, TYPE E-10
- (B) EXISTING ASPHALTIC CONCRETE PAVEMENT
- (C) EXISTING REINFORCED CONCRETE - (8" TO REMAIN (TYP.))
- (D) EXISTING GRANULAR OR CRUSHED STONE BASE COURSE
- (E) EXISTING CURB & GUTTER
- (F) 4" HMA PAVEMENT, TYPE E-10
- (G) 6 1/4" HMA PAVEMENT, TYPE E-10
- (H) REMOVING CONCRETE GUTTER PARTIAL DEPTH, 1 3/4-INCH, 1 3/4" HMA PAVEMENT TYPE E-10
- (I) CONCRETE BASE 8-INCH
- (J) 6 1/4" BASE AGGREGATE DENSE, 3/4-INCH
- (K) 4" BASE AGGREGATE DENSE, 1 1¤4-INCH
- (L) 6" BASE AGGREGATE DENSE 1 1/4-INCH
- (M) 12" BASE AGGREGATE DENSE 1 1/4-INCH
- (N) CONCRETE CURB & GUTTER 18-INCH, TYPE A
- (O) CONCRETE CURB & GUTTER 18-INCH, TYPE D
- (P) CONCRETE CURB & GUTTER 30-INCH, TYPE A
- (Q) CONCRETE CURB & GUTTER 30-INCH, TYPE D
- (R) 5" CONCRETE SIDEWALK
- (S) 4" TOPSOIL, FERTILIZER & SOD
- (T) CONCRETE PAVEMENT 9-INCH (DOWELLED)

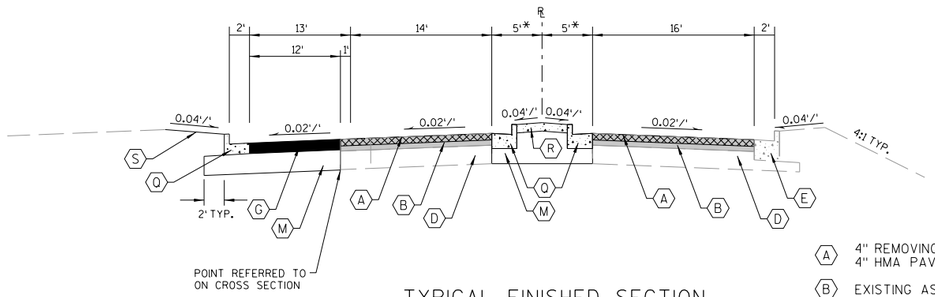
PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	TYPICAL FINISHED SECTIONS	SHEET 18	E



STA. 48+52 TO STA. 49+22

TYPICAL FINISHED SECTION
SWENSON DRIVE

STA. 42+62 TO STA. 49+38



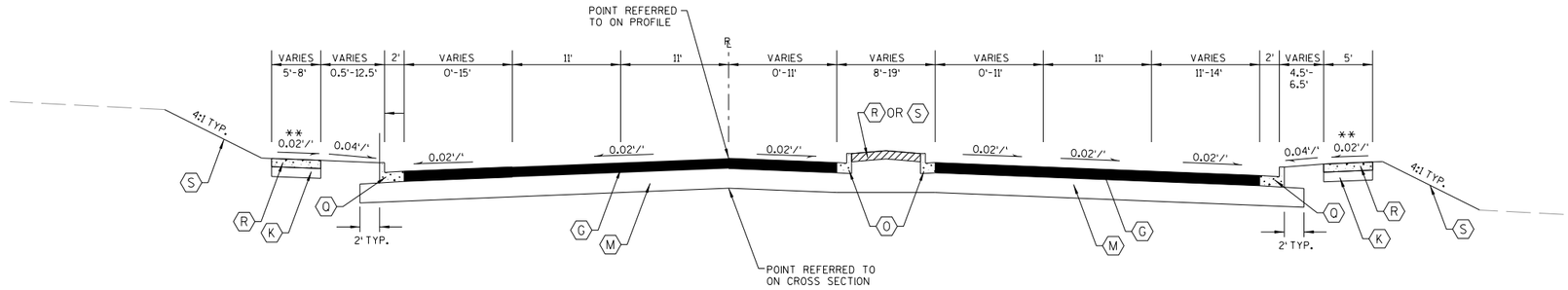
TYPICAL FINISHED SECTION
PARKLAWN DRIVE

STA. 50+62 TO STA. 52+44
* NO MEDIAN FROM STA. 50+62 TO STA. 50+86
AND STA. 52+20 TO STA. 52+44

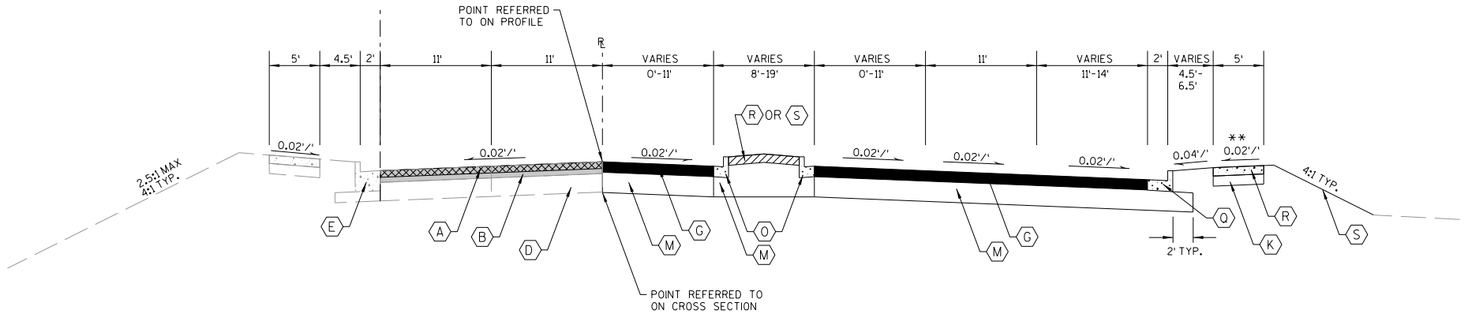
LEGEND - TYPICAL FINISHED SECTIONS

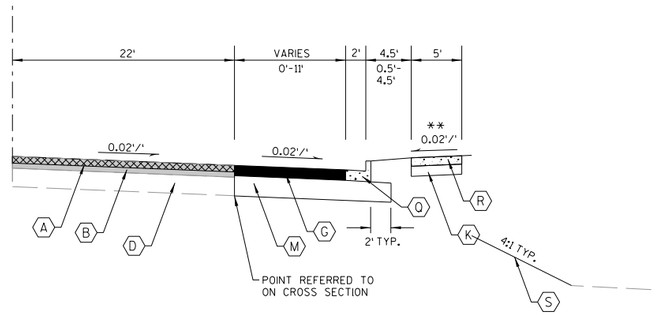
- (A) 4" REMOVING ASPHALTIC SURFACE MILLING
  4" HMA PAVEMENT, TYPE E-10
- (B) EXISTING ASPHALTIC CONCRETE PAVEMENT
- (C) EXISTING REINFORCED CONCRETE - (8" TO REMAIN (TYP.))
- (D) EXISTING GRANULAR OR CRUSHED STONE BASE COURSE
- (E) EXISTING CURB & GUTTER
- (F) 4" HMA PAVEMENT, TYPE E-10
- (G) 6¼" HMA PAVEMENT, TYPE E-10
- (H) REMOVING CONCRETE GUTTER PARTIAL DEPTH, 1 ¾-INCH,
  1 ¾" HMA PAVEMENT TYPE E-10
- (I) CONCRETE BASE 8-INCH
- (J) 6¼" BASE AGGREGATE DENSE, ¾-INCH
- (K) 4" BASE AGGREGATE DENSE, 1 1¾-4-INCH
- (L) 6" BASE AGGREGATE DENSE 1 ¼-INCH
- (M) 12" BASE AGGREGATE DENSE 1 ¼-INCH
- (N) CONCRETE CURB & GUTTER 18-INCH, TYPE A
- (O) CONCRETE CURB & GUTTER 18-INCH, TYPE D
- (P) CONCRETE CURB & GUTTER 30-INCH, TYPE A
- (Q) CONCRETE CURB & GUTTER 30-INCH, TYPE D
- (R) 5" CONCRETE SIDEWALK
- (S) 4" TOPSOIL, FERTILIZER & SOD
- (T) CONCRETE PAVEMENT 9-INCH (DOWELLED)

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	TYPICAL FINISHED SECTIONS	SHEET 19	E



TYPICAL FINISHED SECTION
KOSSOW ROAD (NORTH)
STA. 50+62 TO STA. 55+29





STA. 56+80 TO STA. 59+27

TYPICAL FINISHED SECTION
KOSSOW ROAD (NORTH)
STA. 55+29 TO STA. 59+27

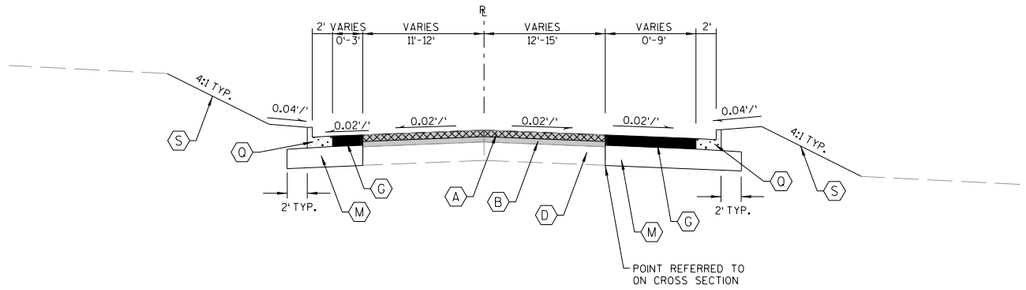
** THE MAXIMUM SIDEWALK CROSS SLOPE ALLOWED IS 2.0%. THE CONTRACTOR SHALL TAKE INTO ACCOUNT CONSTRUCTION TOLERANCES WHEN PLACING CONCRETE SIDEWALK TO ENSURE THE FINISHED PRODUCT IS NOT GREATER THAN 2.0%

SIDEWALK PLACED AT GREATER THAN 2.0% SHALL BE REMOVED AND REPLACED AT THE CONTRACTORS EXPENSE.

LEGEND - TYPICAL FINISHED SECTIONS

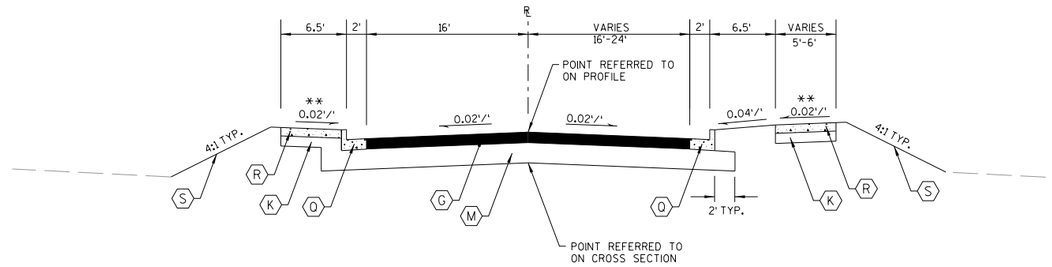
- (A) 4" REMOVING ASPHALTIC SURFACE MILLING 4" HMA PAVEMENT, TYPE E-10
- (B) EXISTING ASPHALTIC CONCRETE PAVEMENT
- (C) EXISTING REINFORCED CONCRETE - (8" TO REMAIN (TYP.))
- (D) EXISTING GRANULAR OR CRUSHED STONE BASE COURSE
- (E) EXISTING CURB & GUTTER
- (F) 4" HMA PAVEMENT, TYPE E-10
- (G) 6 1/4" HMA PAVEMENT, TYPE E-10
- (H) REMOVING CONCRETE GUTTER PARTIAL DEPTH, 1 3/4-INCH, 1 3/4" HMA PAVEMENT TYPE E-10
- (I) CONCRETE BASE 8-INCH
- (J) 6 1/4" BASE AGGREGATE DENSE, 3/4-INCH
- (K) 4" BASE AGGREGATE DENSE, 1 1¾-4-INCH
- (L) 6" BASE AGGREGATE DENSE 1 1/4-INCH
- (M) 12" BASE AGGREGATE DENSE 1 1/4-INCH
- (N) CONCRETE CURB & GUTTER 18-INCH, TYPE A
- (O) CONCRETE CURB & GUTTER 18-INCH, TYPE D
- (P) CONCRETE CURB & GUTTER 30-INCH, TYPE A
- (Q) CONCRETE CURB & GUTTER 30-INCH, TYPE D
- (R) 5" CONCRETE SIDEWALK
- (S) 4" TOPSOIL, FERTILIZER & SOD
- (T) CONCRETE PAVEMENT 9-INCH (DOWELLED)

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	TYPICAL FINISHED SECTIONS	SHEET 20	E



TYPICAL FINISHED SECTION
KOSSOW ROAD (SOUTH)

STA. 96+77 TO STA. 99+51



TYPICAL FINISHED SECTION
ABBOTT DRIVE

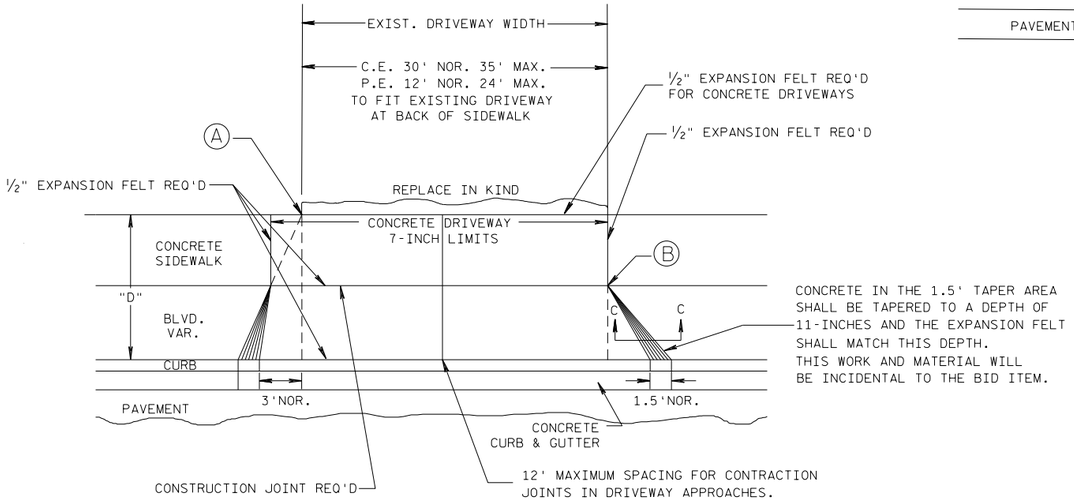
STA. 16+43 TO STA. 19+50

** THE MAXIMUM SIDEWALK CROSS SLOPE ALLOWED IS 2.0%. THE CONTRACTOR SHALL TAKE INTO ACCOUNT CONSTRUCTION TOLERANCES WHEN PLACING CONCRETE SIDEWALK TO ENSURE THE FINISHED PRODUCT IS NOT GREATER THAN 2.0%

SIDEWALK PLACED AT GREATER THAN 2.0% SHALL BE REMOVED AND REPLACED AT THE CONTRACTORS EXPENSE.

LEGEND - TYPICAL FINISHED SECTIONS

- (A) 4" REMOVING ASPHALTIC SURFACE MILLING 4" HMA PAVEMENT, TYPE E-10
- (B) EXISTING ASPHALTIC CONCRETE PAVEMENT
- (C) EXISTING REINFORCED CONCRETE - (8" TO REMAIN (TYP.))
- (D) EXISTING GRANULAR OR CRUSHED STONE BASE COURSE
- (E) EXISTING CURB & GUTTER
- (F) 4" HMA PAVEMENT, TYPE E-10
- (G) 6¼" HMA PAVEMENT, TYPE E-10
- (H) REMOVING CONCRETE GUTTER PARTIAL DEPTH, 1 ¾-INCH, 1 ¾" HMA PAVEMENT TYPE E-10
- (I) CONCRETE BASE 8-INCH
- (J) 6¼" BASE AGGREGATE DENSE, ¾-INCH
- (K) 4" BASE AGGREGATE DENSE, 1 1¾-4-INCH
- (L) 6" BASE AGGREGATE DENSE 1 ¼-INCH
- (M) 12" BASE AGGREGATE DENSE 1 ¼-INCH
- (N) CONCRETE CURB & GUTTER 18-INCH, TYPE A
- (O) CONCRETE CURB & GUTTER 18-INCH, TYPE D
- (P) CONCRETE CURB & GUTTER 30-INCH, TYPE A
- (Q) CONCRETE CURB & GUTTER 30-INCH, TYPE D
- (R) 5" CONCRETE SIDEWALK
- (S) 4" TOPSOIL, FERTILIZER & SOD
- (T) CONCRETE PAVEMENT 9-INCH (DOWELLED)

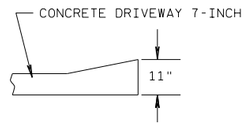


CONCRETE IN THE 1.5' TAPER AREA SHALL BE TAPERED TO A DEPTH OF 11-INCHES AND THE EXPANSION FELT SHALL MATCH THIS DEPTH. THIS WORK AND MATERIAL WILL BE INCIDENTAL TO THE BID ITEM.

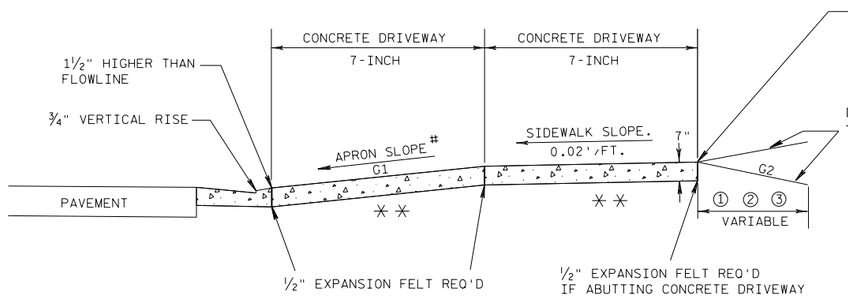
PLAN VIEW

Ⓐ WHEN "D" IS 13' OR LESS, ALIGN TAPER WITH BACK OF SIDEWALK

Ⓑ WHEN "D" IS GREATER THAN 13', ALIGN TAPER WITH FRONT OF SIDEWALK



SECTION C-C



TYPICAL SIDEWALK SECTION

①—7" CONCRETE DRIVEWAY OR H.E.S. CONCRETE DRIVEWAY

②— 6" BASE AGG. DENSE 1 1/4-INCH

③—6" BASE AGGREGATE DENSE 1 1/4-INCH BASE WITH 3 1/2" ASPHALTIC SURFACE

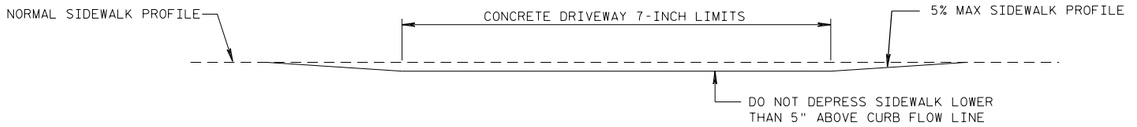
* * = 6" BASE AGGREGATE DENSE 1 1/4-INCH REQ'D UNDER CONCRETE DRWY

\#

TERRACE WIDTH	APRON SLOPE (G1) MIN %	DESIRABLE %	MAX %
3 FT	7.0	8.5	9.0
4 FT	5.0	7.0	9.0
5 FT	4.0	7.0	9.0
6 FT	4.0	7.0	9.0
7 FT	3.5	7.0	9.0
8 FT	3.0	7.0	9.0

NOTE: ALGEBRAIC DIFFERENCE BETWEEN TANGENT GRADES G1 & G2 TO NOT EXCEED 15%

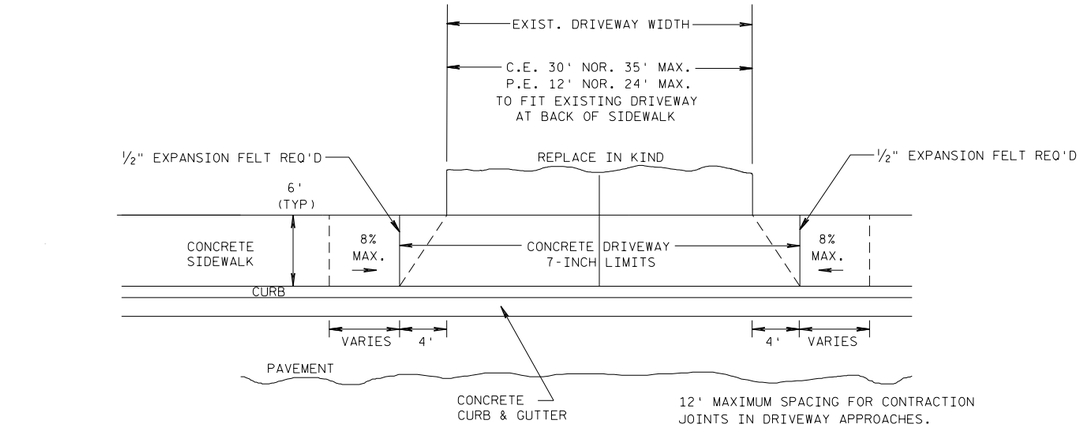
DEPRESS SIDEWALK PROFILE IF DRIVEWAY APRON EXCEEDS MAX SLOPE



DEPRESSED SIDEWALK PROFILE DETAIL

DRIVEWAY ENTRANCE DETAIL WITH SIDEWALK, CURB & GUTTER

WITH TERRACE



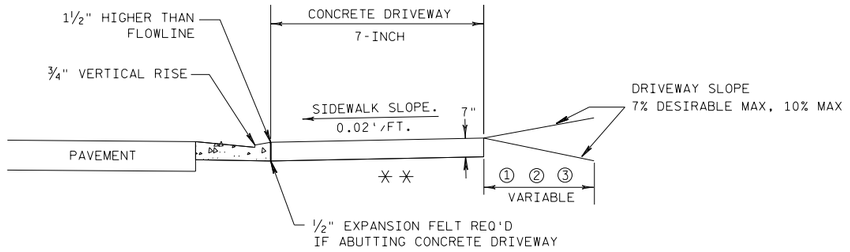
①—7" CONCRETE DRIVEWAY OR
H.E.S. CONCRETE DRIVEWAY

②— 6" BASE AGG. DENSE 1 1/4-INCH

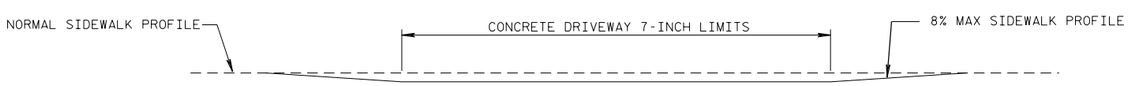
③—6" BASE AGGREGATE DENSE 1 1/4-INCH
BASE WITH 3 1/2" ASPHALTIC SURFACE

✳✳ = 6" BASE AGGREGATE DENSE 1 1/4-INCH
REQ'D UNDER CONCRETE DRWY

PLAN VIEW

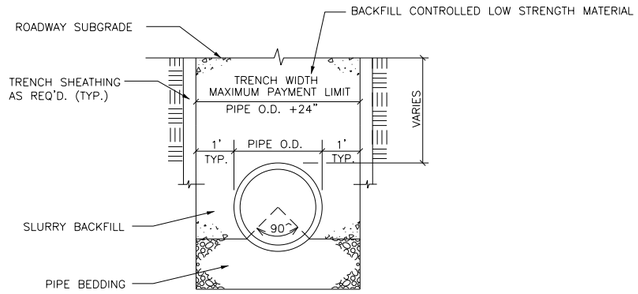


TYPICAL SIDEWALK SECTION



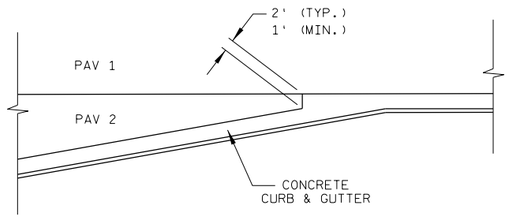
DEPRESSED SIDEWALK PROFILE DETAIL

DRIVEWAY ENTRANCE DETAIL WITH SIDEWALK, CURB & GUTTER WITHOUT TERRACE

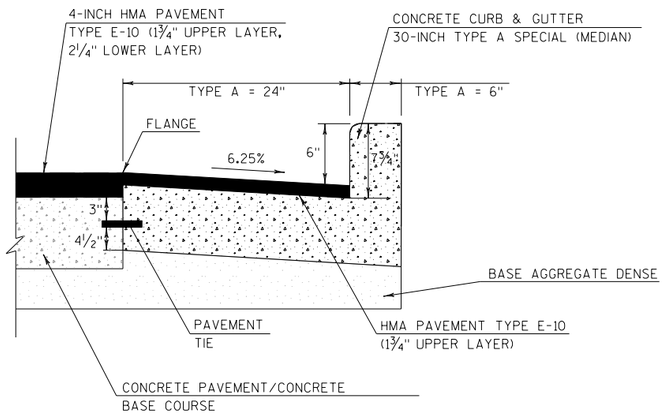


BACKFILL CONTROLLED LOW STRENGTH MATERIAL FOR STORM SEWER/CULVERTS

(REQUIRED BENEATH PAVED SURFACES ONLY)

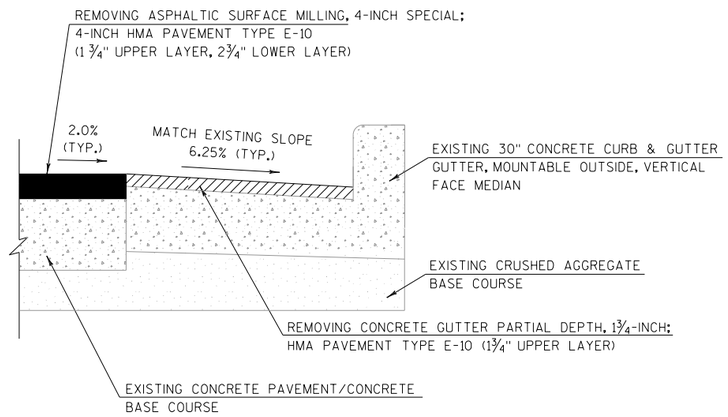


GUTTER TRANSITION AT TAPER POINTS



ASPHALT OVERLAY OF NEW CURB & GUTTER

PROPOSED CONCRETE CURB & GUTTER



ASPHALT OVERLAY OF EXISTING CURB & GUTTER

EXISTING OUTSIDE/MEDIAN
CONCRETE CURB & GUTTER

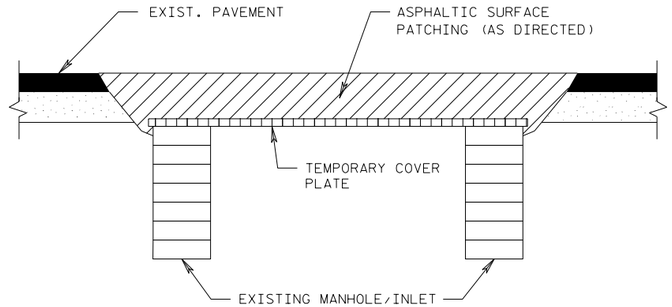
STEP 1

PRIOR TO REMOVING
ASPH. SURF.

A. REMOVE AND STORE
   MANHOLE COVER
B. FURNISH AND INSTALL
   TEMPORARY COVER PLATE*
C. BACKFILL USING ASPHALT
   SURFACE, PATCHING.*

* TO BE PAID FOR UNDER CONTR. ITEMS

STEP 1A MAY BE DONE BY OTHERS (UTILITY CO. OR MUNICIPALITY)
STEP 1B AND 1C BY CONTRACTOR



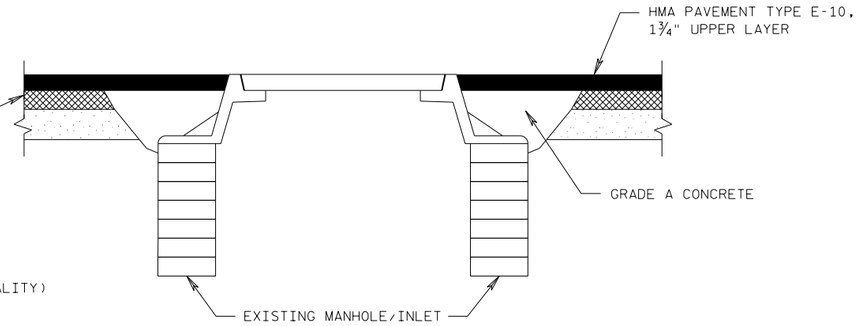
STEP 2

AFTER PAVING
LOWER LAYER

A. EXCAVATE AND REMOVE
   TEMP. COVER PLATE
B. ADJUST MANHOLE AND
   REINSTALL MANHOLE FRAME
   AND COVER TO FINISHED GRADE

(BACKFILL AND OTHER WORK TO BE DONE IN ACCORDANCE WITH ITEM - ADJUSTING MANHOLE COVERS)

ALL WORK DONE MAY BE DONE BY OTHERS (UTILITY CO. OR MUNICIPALITY)
TEMPORARY COVER PLATES TO BE RETURNED TO CONTRACTOR.



ADJUSTING MANHOLE/INLET COVERS

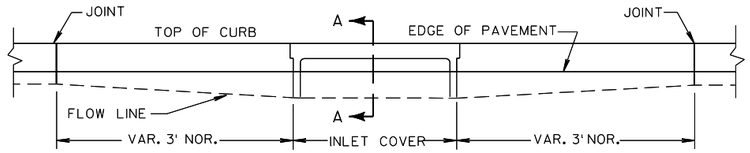
NOTES:
ADJUSTING MANHOLE COVERS WILL NOT BE PAID FOR AS A SEPARATE ITEM OF WORK WHEN ADJUSTMENTS ARE MADE BY OTHERS (UTILITY CO. OR MUNICIPALITY).

COVER PLATES, TEMPORARY, ITEM 611.8120.S

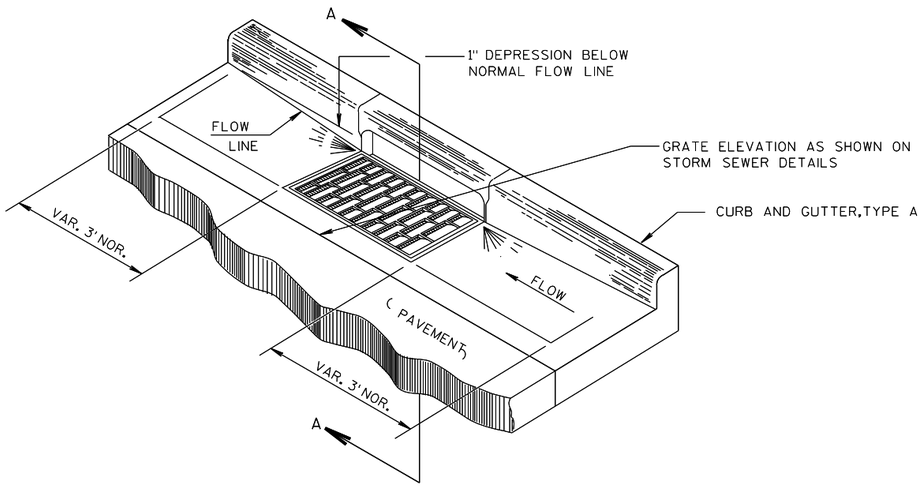
A. DESCRIPTION
   THIS WORK CONSISTS OF FURNISHING, INSTALLING AND REMOVING A STEEL PLATE TO COVER AND SUPPORT BACKFILL AND TRAFFIC LOADING AT MANHOLES.

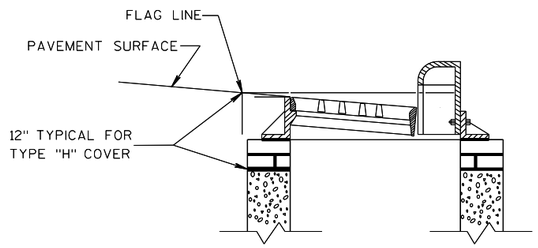
B. MATERIALS
   MATERIAL FURNISHED AND USED IN THE WORK SHALL BE 1/4-INCH MINIMUM THICKNESS STEEL PLATE THAT EXTENDS AT LEAST TO THE OUTSIDE EDGE OF EXISTING MANHOLE MASONRY.

C. METHOD OF MEASUREMENT AND BASIS OF PAYMENT
   TEMPORARY COVER PLATES WILL BE MEASURED SEPARATELY AS UNITS AND WILL BE PAID FOR AT CONTRACT UNIT PRICE EACH, WHICH PRICE SHALL BE FULL COMPENSATION FOR FURNISHING, INSTALLING AND REMOVING THE COVER PLATES; AND FOR ALL LABOR, TOOLS, EQUIPMENT AND INCIDENTAL NECESSARY TO COMPLETE THE WORK. THE STEEL PLATES SHALL BECOME THE PROPERTY OF THE CONTRACTOR WHEN NO LONGER NEEDED IN THE CONTRACT WORK.



ELEVATION

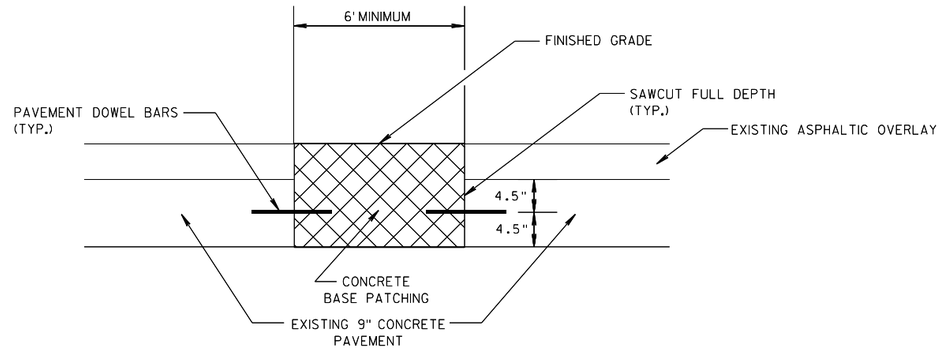




SECTION A-A

DETAIL OF CURB AND GUTTER AT INLETS

(TYPE H INLET SHOWN)
FOR NEW CURB & GUTTER CONSTRUCTION



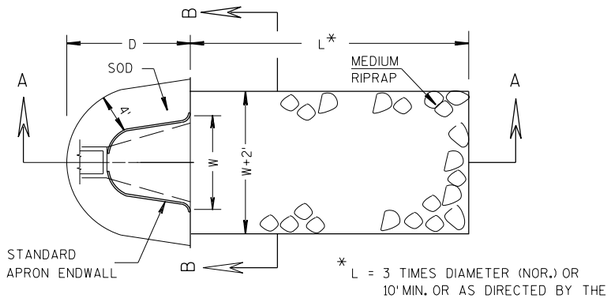
NOTES: CONTRACTOR SHALL REMOVE ALL UNSUITABLE MATERIAL BELOW BASE PATCH AREA AND REPLACE WITH BASE AGGREGATE DENSE 1-1/4".

LOCATION AND AREA OF BASE PATCHING SHALL BE PLACED AS SHOWN ON PLANS AND AS DIRECTED BY THE ENGINEER.

BASE PATCH TO BE CONTRUCTED TO FINISHED SURFACE AND MILLED OFF WITH ADJACENT ASPHALT OVERLAY PRIOR TO PLACEMENT OF NEW HMA OVERLAY.

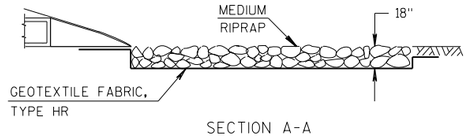
DETAIL OF BASE PATCH, CONCRETE

SEE "BASE PATCHING CONCRETE" S.D.D. FOR ADDITIONAL DETAILS

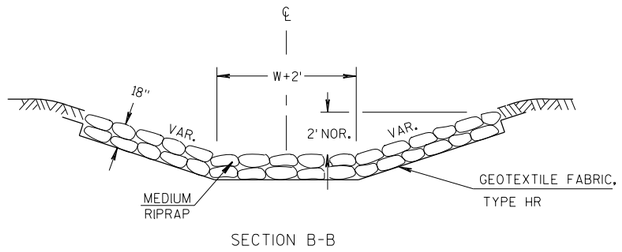


* L = 3 TIMES DIAMETER (NOR.) OR 10' MIN. OR AS DIRECTED BY THE ENGINEER

NOTE: PLACE GEOTEXTILE FABRIC ½D UNDER ENDWALL

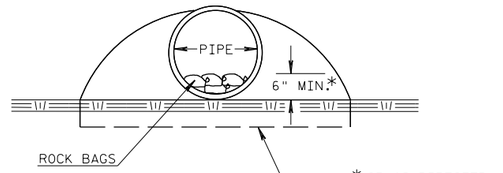


SECTION A-A



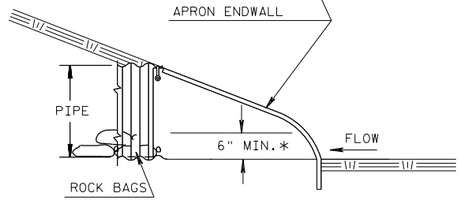
SECTION B-B

MEDIUM RIPRAP AND GEOTEXTILE FABRIC
DETAIL AT APRON ENDWALLS



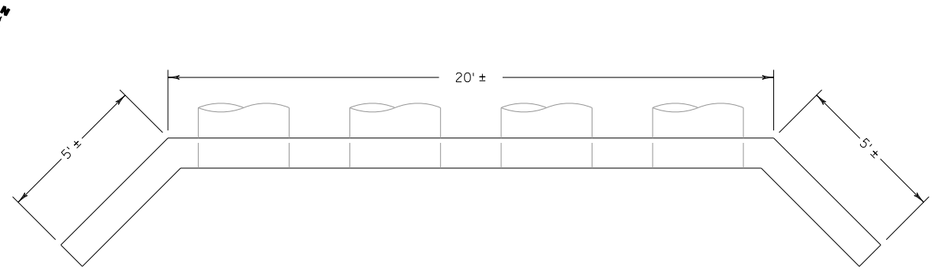
END VIEW

* OR AS DIRECTED BY THE ENGINEER

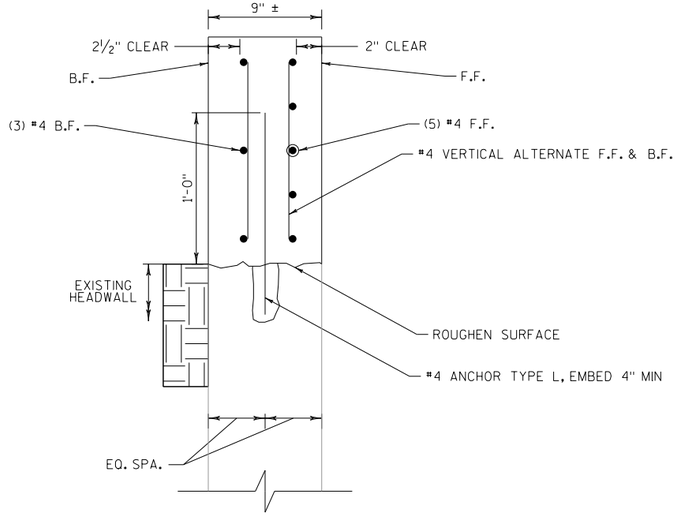


SIDE VIEW

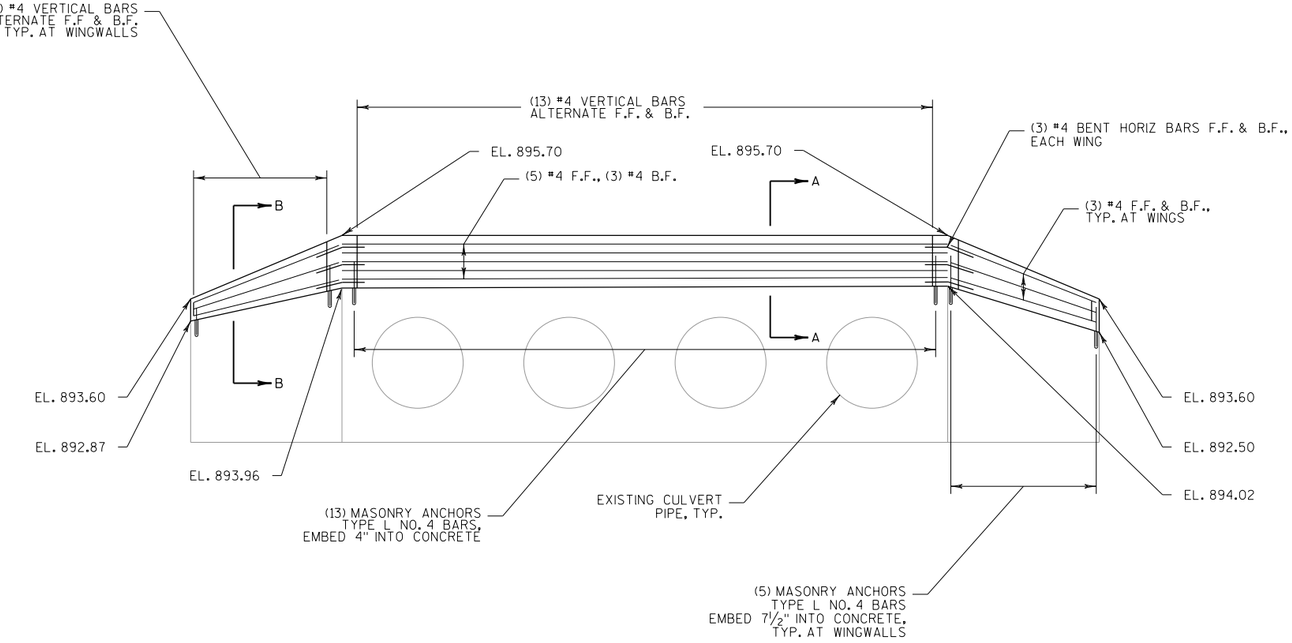
CULVERT PIPE CHECK
(PAID FOR AS ROCK BAGS)



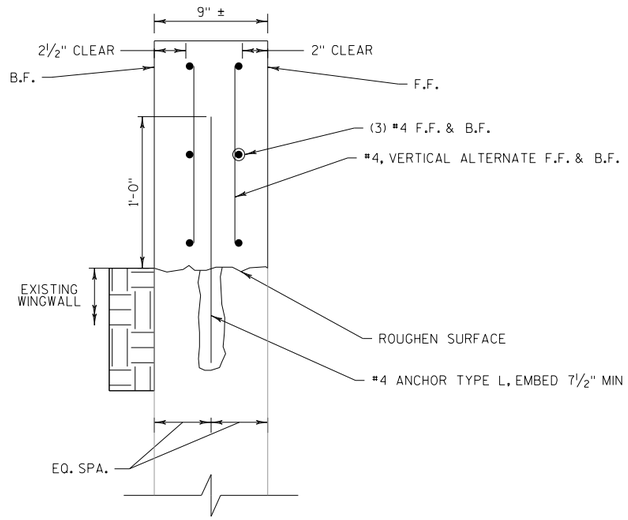
PLAN



SECTION A-A



ELEVATION

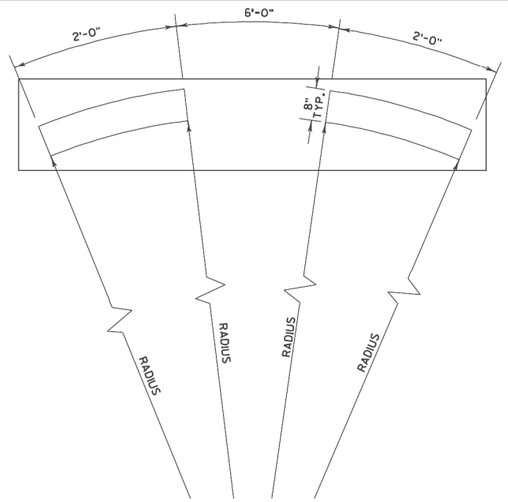


SECTION B-B

RECONSTRUCT CONCRETE HEADWALL

STA. 205+50, 85' RT

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CONSTRUCTION DETAILS	SHEET 27	E

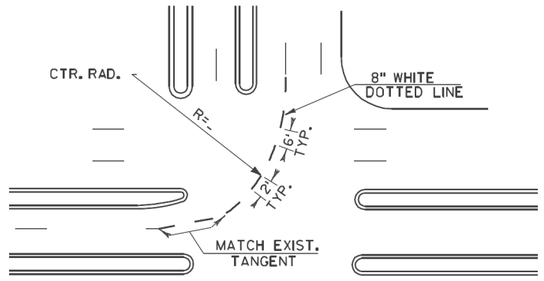


DOTTED TEMPLATE

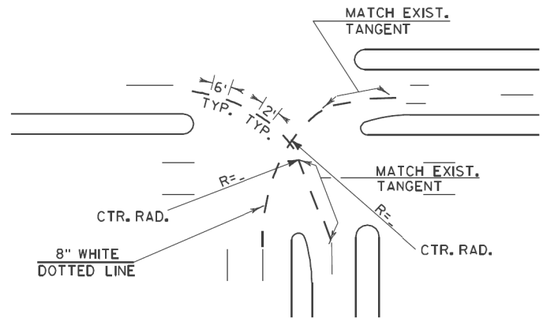
NOTE: CONTRACTOR TO BUILD TEMPLATE BASED ON RADIUS SHOWN. TEMPLATES ARE TO BE CONSTRUCTED OF PLYWOOD, PLASTIC, OR SUITABLE MATERIAL APPROVED BY THE ENGINEER IN THE FIELD.

DESIGNER NOTE: ESTABLISH RADIUS FOR DUAL LEFT MARKING PROVIDE R=VALUE IN SPECIFIC CASE

INTERSECTING HIGHWAYS (DOTTED PATTERN) DOUBLE LEFT-TURNING MOVEMENTS



INTERSECTING HIGHWAYS (DOTTED PATTERN) DOUBLE LEFT-TURNING MOVEMENTS

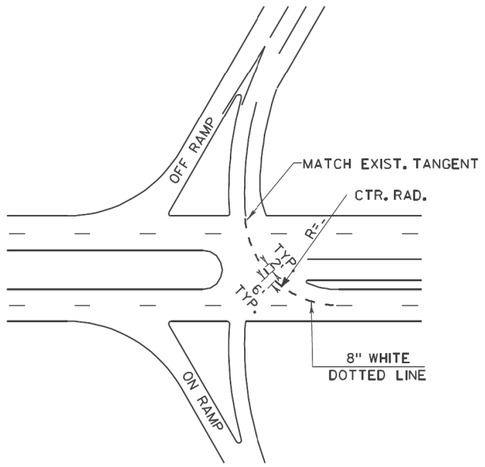


GENERAL NOTES

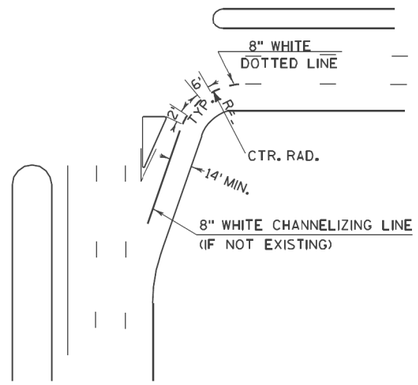
1. DOTTED PAVEMENT MARKING PATTERNS SHALL BE INSTALLED WITH A 2-FOOT SEGMENT AND A 6-FOOT GAP.
2. EXISTING MARKINGS THRU INTERSECTIONS DO NOT ALWAYS HAVE THE 2-FOOT X 6-FOOT CYCLE. IF THE EXISTING MARKINGS ARE OF THE 5-FOOT CYCLE, THEY WILL BE BRUSH PLASTED AND PAVEMENT MARKED WITH A 380 WR TAPE GROOVED IN.

   IF THE EXISTING MARKINGS ARE NOT OF THE 2-FOOT CYCLE. THE CONTRACTOR WILL LAY OUT THE NEW MARKINGS, PREPARE THE EXISTING PAVMENT BY BRUSH PLASTING, AND A 380 WR TAPE PAVEMENT MARK THE NEW CYCLE.
3. IF THE DOTTED PAVEMENT MARKINGS ARE NON-EXISTING, THE CONTRACTOR SHALL LAY OUT THE RADIUS, AS BEING USED BY THE PRESENT TRAFFIC, WITH THE MINIMUM LANE WIDTHS AS SHOWN ON THE PLANS.
4. THE CONTRACTOR SHALL CONSTRUCT AND USE ONE OF THE TWO DOTTED TEMPLATES WHICH MOST CLOSELY MATCH THE FIELD CONDITIONS.
5. THE CONTRACTOR SHALL PROTECT THE TAPE LINES UNTIL DRY, BY THE USE OF TRAFFIC CONTROLS AND TRAFFIC CONES AS SHOWN ON THE TRAFFIC CONTROL PLANS.

FREEWAY EXIT RAMPS (DOTTED PATTERN) DOUBLE LEFT-TURNING MOVEMENTS

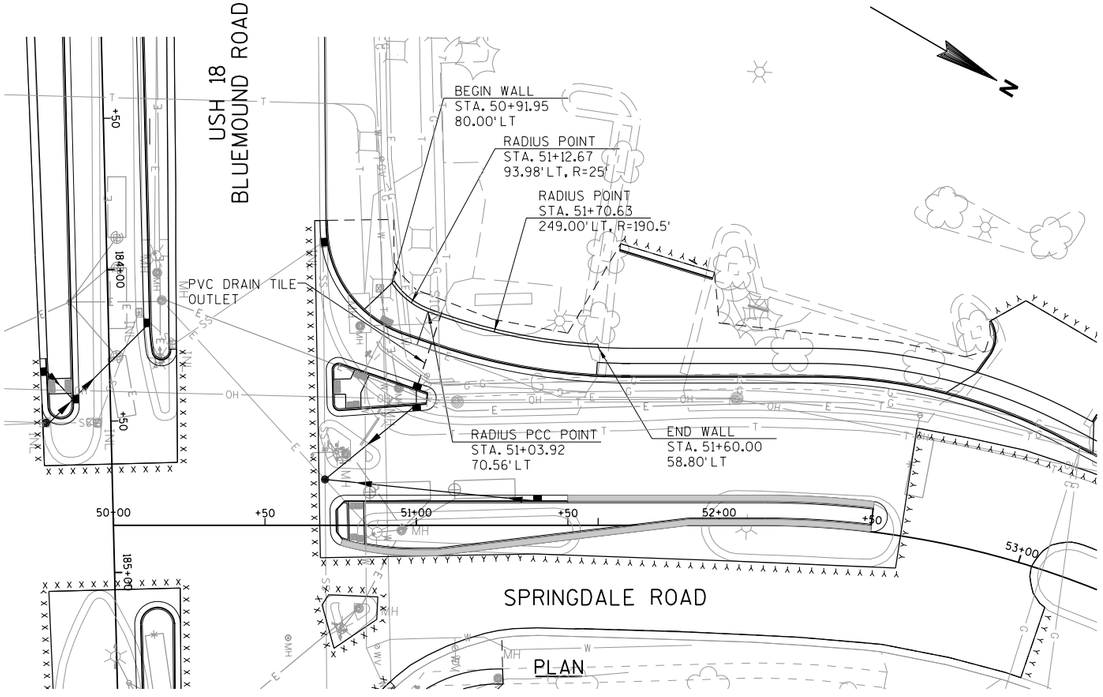


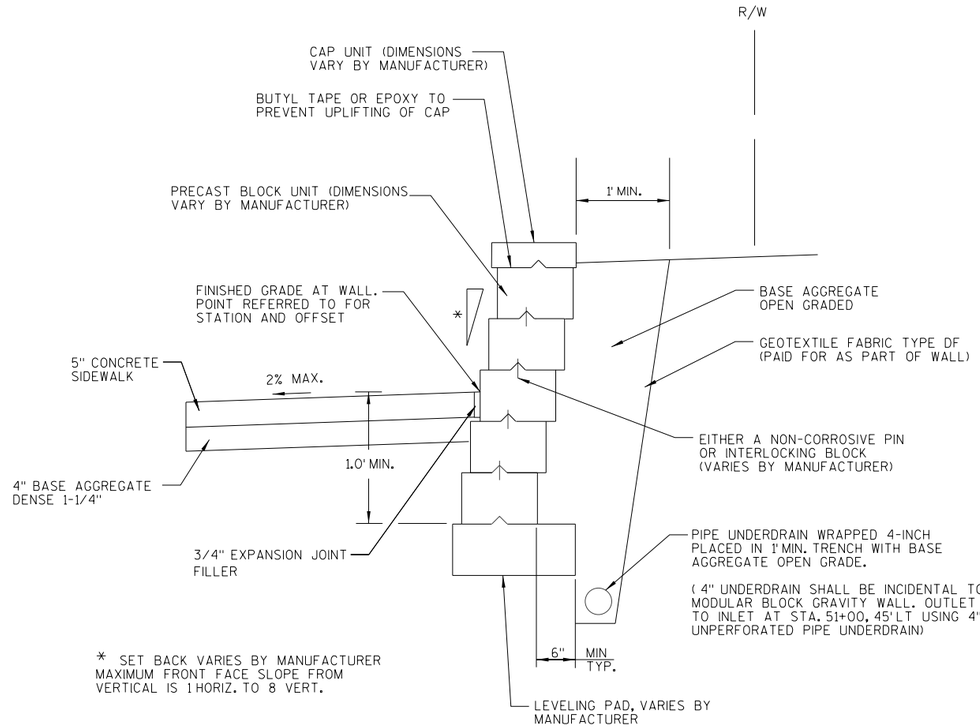
INTERSECTIONS & EXIT RAMPS (DOTTED PATTERN) DOUBLE RIGHT-TURNING MOVEMENTS



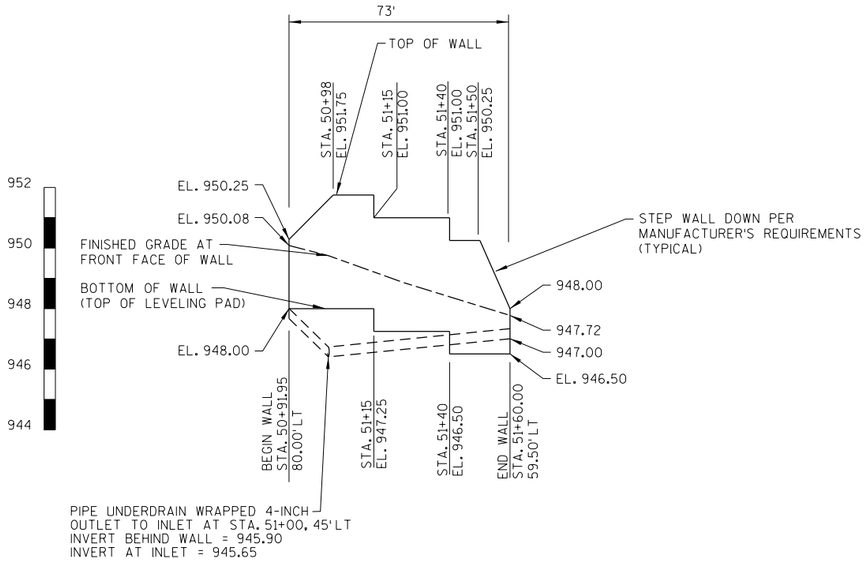
STANDARD DETAIL DRAWINGS

15 C 12-2 TRAFFIC CONTROL FOR LANE CLOSURES (SUITABLE FOR MOVING OPERATIONS)





TYPICAL SECTION
MODULAR CONCRETE UNIT
N.T.S.



PROFILE
(LOOKING WEST AT WALL)

MODULAR BLOCK RETAINING WALL

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CONSTRUCTION DETAILS	SHEET 29	E

2

N

JENNIFER LN.

REMOVE SIDEWALK
STA. 135+32 - STA. 135+50 LT

REMOVE CURB & GUTTER
STA. 135+29 LT - STA. 135+33 LT

SAWCUT & MATCH EXISTING
STA. 135+12, 108.68' LT.

REMOVE CURB & GUTTER
STA. 134+80 LT - STA. 134+89 LT

REMOVE SIDEWALK
STA. 134+61 LT - STA. 134+85 LT

REMOVE SIDEWALK
STA. 132+65 LT - STA. 132+69 LT

REMOVE ISLAND
STA. 125+32 LT - STA. 125+58 LT

REMOVE SIDEWALK
STA. 125+43 LT - STA. 125+72 LT

REMOVE SIDEWALK
STA. 125+68 RT - STA. 126+73 RT

REMOVE SIDEWALK
STA. 127+97 LT - STA. 128+03 LT
STA. 128+21 LT - STA. 128+27 LT
STA. 128+33 LT - STA. 128+39 LT

END SAWCUT
STA. 128+69 LT

SAWCUT & MATCH EXISTING
STA. 50+84

REMOVE SIDEWALK
STA. 124+58 LT - STA. 50+75 RT

REMOVE SIDEWALK
STA. 122+50 RT - STA. 123+38 LT

SAWCUT & MATCH EXISTING
STA. 122+25

STA. 123+53
48.96' LT

STA. 126+32

STA. 127+12

STA. 128+47

STA. 129+02

STA. 130+31

STA. 130+77

STA. 131+00

STA. 131+18

STA. 131+86

STA. 132+03

STA. 132+99
13' WIDE

STA. 133+53

STA. 133+83

STA. 134+33

STA. 134+90

STA. 135+75
9' WIDE

STA. 136+00

MATCH LINE

E. MORELAND BLVD. (USH 18)

121+00 122+00 123+00 124+00 125+00 126+00 127+00 128+00 129+00 130+00 131+00 132+00 133+00 134+00 135+00 136

51+00 52+00 53+00 50+00 49+00 48+00 47+00 46+00

MANHATTAN DR.

STA. 122+00
56.60' RT

REMOVE ISLAND
STA. 124+37 RT - STA. 124+74 RT
STA. 125+30 RT - STA. 125+62 RT

REMOVE SIDEWALK
STA. 124+42 RT - STA. 124+68 RT
STA. 125+34 RT - STA. 125+63 RT

REMOVE CURB & GUTTER
STA. 121+25 RT - STA. 122+25 RT

SAWCUT & MATCH EXISTING
STA. 48+62

REMOVE CURB & GUTTER
STA. 48+31 RT - STA. 48+62 RT

STA. 126+11
STA. 126+21

STA. 126+76

STA. 127+47
20' WIDE

STA. 128+98

STA. 129+53

STA. 130+30
7' WIDE

STA. 131+01
10' WIDE

STA. 132+76
14' WIDE

STA. 133+02
10' WIDE

STA. 133+17

STA. 134+08

STA. 134+80

STA. 135+93
10' WIDE

REPAIR LONGITUDINAL JOINT
STA. 126+12 RT - STA. 129+05 RT

FILLER CAPS

CANOPY

LEGEND

- CONCRETE BASE PATCH
- REMOVING PAVEMENT
- REMOVING ASPHALTIC SURFACE MILLING
- REMOVING ASPHALT PAVEMENT (PAID AS EXCAVATION COMMON)
- REMOVING CONCRETE SIDEWALK
- LONGITUDINAL JOINT REPAIR
- //////// CURB & GUTTER REMOVAL
- x x x x x SAWING CONCRETE
- Y Y Y Y SAWING ASPHALT
- X TREE REMOVAL

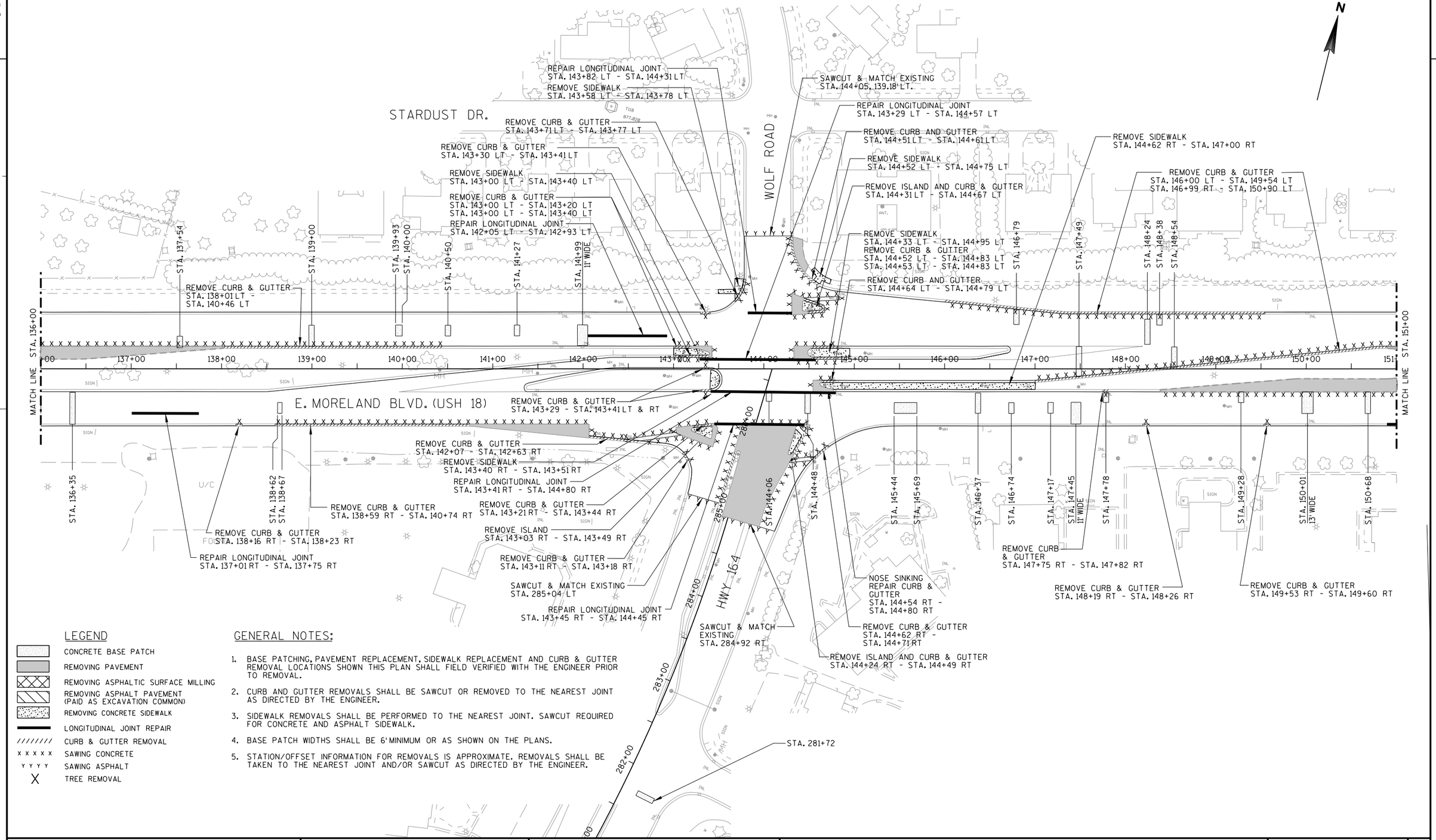
GENERAL NOTES:

1. BASE PATCHING, PAVEMENT REPLACEMENT, SIDEWALK REPLACEMENT AND CURB & GUTTER REMOVAL LOCATIONS SHOWN THIS PLAN SHALL FIELD VERIFIED WITH THE ENGINEER PRIOR TO REMOVAL.
2. CURB AND GUTTER REMOVALS SHALL BE SAWCUT OR REMOVED TO THE NEAREST JOINT AS DIRECTED BY THE ENGINEER.
3. SIDEWALK REMOVALS SHALL BE PERFORMED TO THE NEAREST JOINT. SAWCUT REQUIRED FOR CONCRETE AND ASPHALT SIDEWALK.
4. BASE PATCH WIDTHS SHALL BE 6' MINIMUM OR AS SHOWN ON THE PLANS.
5. STATION/OFFSET INFORMATION FOR REMOVALS IS APPROXIMATE. REMOVALS SHALL BE TAKEN TO THE NEAREST JOINT AND/OR SAWCUT AS DIRECTED BY THE ENGINEER.

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	REMOVAL PLAN	SHEET 30	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\021002_rm.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 100.0000 sf / in.

2



LEGEND

- CONCRETE BASE PATCH
- REMOVING PAVEMENT
- REMOVING ASPHALTIC SURFACE MILLING
- REMOVING ASPHALT PAVEMENT (PAID AS EXCAVATION COMMON)
- REMOVING CONCRETE SIDEWALK
- LONGITUDINAL JOINT REPAIR
- //////// CURB & GUTTER REMOVAL
- X X X X X SAWING CONCRETE
- Y Y Y Y SAWING ASPHALT
- X TREE REMOVAL

GENERAL NOTES:

1. BASE PATCHING, PAVEMENT REPLACEMENT, SIDEWALK REPLACEMENT AND CURB & GUTTER REMOVAL LOCATIONS SHOWN THIS PLAN SHALL FIELD VERIFIED WITH THE ENGINEER PRIOR TO REMOVAL.
2. CURB AND GUTTER REMOVALS SHALL BE SAWCUT OR REMOVED TO THE NEAREST JOINT AS DIRECTED BY THE ENGINEER.
3. SIDEWALK REMOVALS SHALL BE PERFORMED TO THE NEAREST JOINT. SAWCUT REQUIRED FOR CONCRETE AND ASPHALT SIDEWALK.
4. BASE PATCH WIDTHS SHALL BE 6' MINIMUM OR AS SHOWN ON THE PLANS.
5. STATION/OFFSET INFORMATION FOR REMOVALS IS APPROXIMATE. REMOVALS SHALL BE TAKEN TO THE NEAREST JOINT AND/OR SAWCUT AS DIRECTED BY THE ENGINEER.

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	REMOVAL PLAN	SHEET 31	E

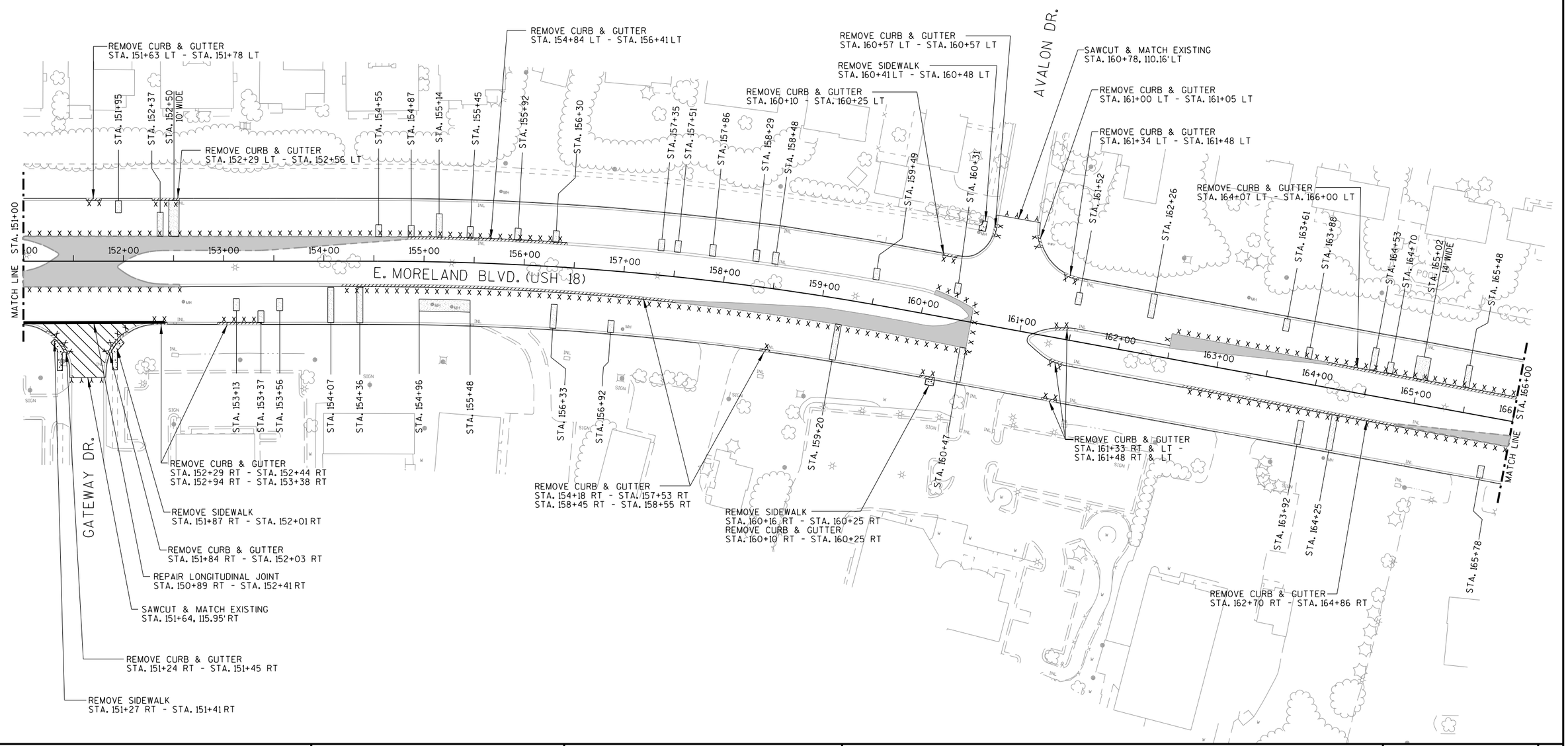
LEGEND

- CONCRETE BASE PATCH
- REMOVING PAVEMENT
- REMOVING ASPHALTIC SURFACE MILLING
- REMOVING ASPHALT PAVEMENT (PAID AS EXCAVATION COMMON)
- REMOVING CONCRETE SIDEWALK
- LONGITUDINAL JOINT REPAIR
- CURB & GUTTER REMOVAL
- X X X X X SAWING CONCRETE
- Y Y Y Y SAWING ASPHALT
- X TREE REMOVAL

GENERAL NOTES:

1. BASE PATCHING, PAVEMENT REPLACEMENT, SIDEWALK REPLACEMENT AND CURB & GUTTER REMOVAL LOCATIONS SHOWN THIS PLAN SHALL FIELD VERIFIED WITH THE ENGINEER PRIOR TO REMOVAL.
2. CURB AND GUTTER REMOVALS SHALL BE SAWCUT OR REMOVED TO THE NEAREST JOINT AS DIRECTED BY THE ENGINEER.
3. SIDEWALK REMOVALS SHALL BE PERFORMED TO THE NEAREST JOINT. SAWCUT REQUIRED FOR CONCRETE AND ASPHALT SIDEWALK.
4. BASE PATCH WIDTHS SHALL BE 6'MINIMUM OR AS SHOWN ON THE PLANS.
5. STATION/OFFSET INFORMATION FOR REMOVALS IS APPROXIMATE. REMOVALS SHALL BE TAKEN TO THE NEAREST JOINT AND/OR SAWCUT AS DIRECTED BY THE ENGINEER.

N



PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	REMOVAL PLAN	SHEET 32	E

LEGEND

- CONCRETE BASE PATCH
- REMOVING PAVEMENT
- REMOVING ASPHALTIC SURFACE MILLING
- REMOVING ASPHALT PAVEMENT (PAID AS EXCAVATION COMMON)
- REMOVING CONCRETE SIDEWALK
- LONGITUDINAL JOINT REPAIR
- CURB & GUTTER REMOVAL
- SAWING CONCRETE
- SAWING ASPHALT
- TREE REMOVAL

GENERAL NOTES:

1. BASE PATCHING, PAVEMENT REPLACEMENT, SIDEWALK REPLACEMENT AND CURB & GUTTER REMOVAL LOCATIONS SHOWN THIS PLAN SHALL FIELD VERIFIED WITH THE ENGINEER PRIOR TO REMOVAL.
2. CURB AND GUTTER REMOVALS SHALL BE SAWCUT OR REMOVED TO THE NEAREST JOINT AS DIRECTED BY THE ENGINEER.
3. SIDEWALK REMOVALS SHALL BE PERFORMED TO THE NEAREST JOINT. SAWCUT REQUIRED FOR CONCRETE AND ASPHALT SIDEWALK.
4. BASE PATCH WIDTHS SHALL BE 6'MINIMUM OR AS SHOWN ON THE PLANS.
5. STATION/OFFSET INFORMATION FOR REMOVALS IS APPROXIMATE. REMOVALS SHALL BE TAKEN TO THE NEAREST JOINT AND/OR SAWCUT AS DIRECTED BY THE ENGINEER.

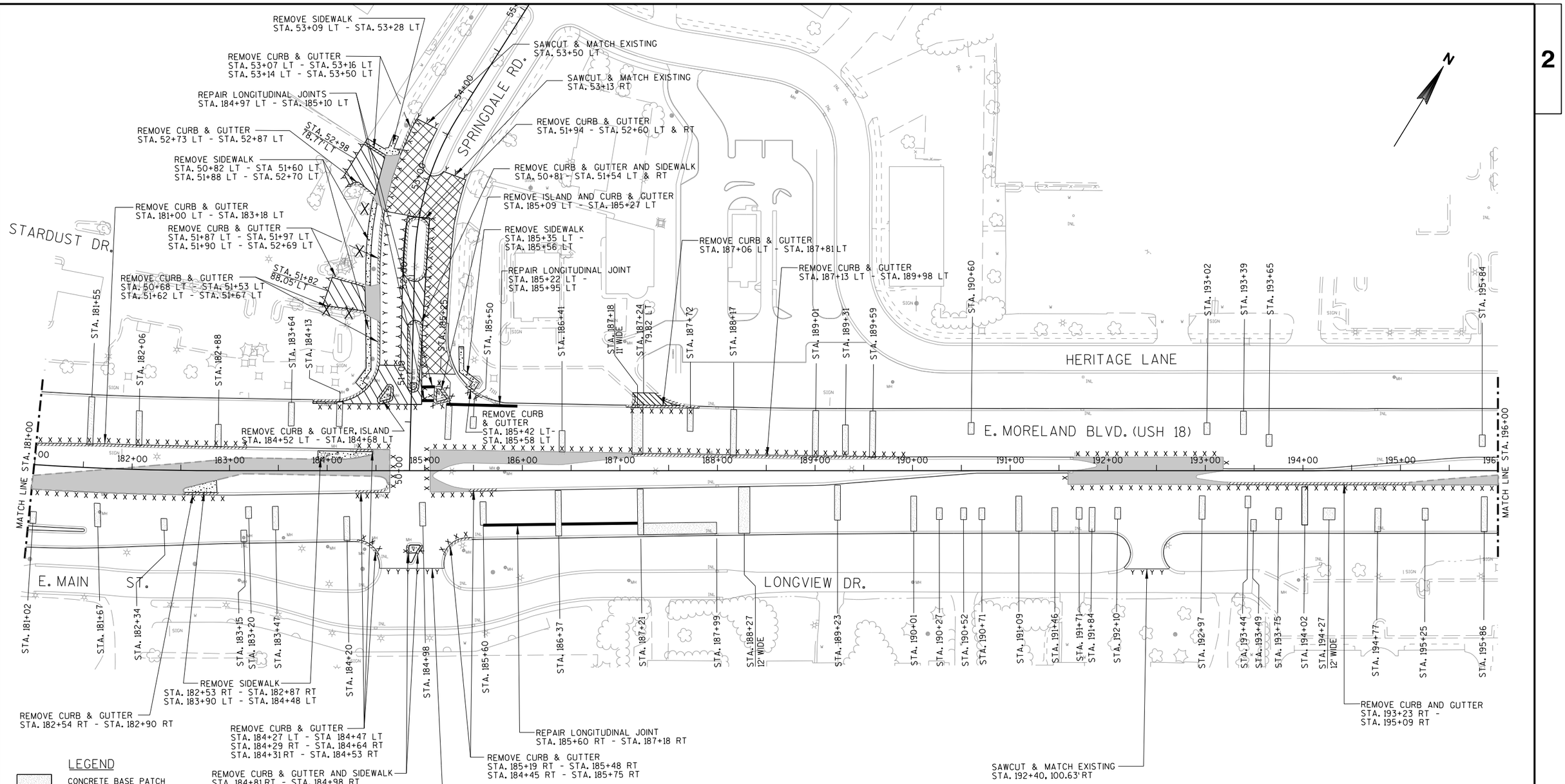
N

REMOVE SIDEWALK STA. 166+65 LT - STA. 166+74 LT
STA. 166+26
STA. 166+57
STA. 166+93
STA. 167+09
STA. 167+36
STA. 167+64
RAMONA RD.
SAWCUT & MATCH EXISTING STA. 168+07, 114.64' LT
REMOVE CURB & GUTTER STA. 167+84 LT - STA. 167+89 LT
STA. 168+25 LT - STA. 168+44 LT
REMOVE CURB & GUTTER STA. 171+29 LT - STA. 171+71 LT
REPAIR LONGITUDINAL JOINT STA. 173+91 LT - STA. 174+91 LT
REMOVE CURB & GUTTER STA. 173+55 LT - STA. 174+17 LT
REMOVE CURB & GUTTER STA. 171+06 RT - STA. 171+51 RT
REMOVE SIDEWALK STA. 171+09 RT - STA. 171+48 RT
REPAIR LONGITUDINAL JOINT STA. 171+07 LT - STA. 174+82 LT
STA. 169+84
STA. 170+67
STA. 171+31
STA. 171+92
STA. 172+23
STA. 172+50
STA. 172+71
STA. 173+12 14' WIDE
STA. 173+46
STA. 173+53
SAWCUT & MATCH EXISTING STA. 174+95, 157.72' LT
REPAIR LONGITUDINAL JOINT STA. 178+30 LT - STA. 179+25 LT
REMOVE CURB & GUTTER STA. 177+91 RT - STA. 181+00 LT
REMOVE ISLAND STA. 174+80 LT - STA. 175+20 LT
REMOVE CURB & GUTTER STA. 174+80 LT - STA. 175+20 LT
STA. 174+81 LT - STA. 174+92 LT
STA. 174+81 LT - STA. 174+93 LT
STA. 175+19 LT - STA. 175+25 LT
STA. 177+53
STA. 177+77
STA. 177+88
STA. 178+74
STA. 179+26
STA. 179+36
STA. 179+65
STA. 180+27
REMOVE STONE RETAINING WALL STA. 175+27 TO 175+50
REMOVE SIDEWALK STA. 174+74 LT - STA. 175+30 LT
MATCH LINE STA. 166+00
167+00
168+00
169+00
170+00
171+00
172+00
173+00
174+00
175+00
176+00
177+00
178+00
179+00
180+00
181+00
MATCH LINE STA. 181+00
REMOVE SIDEWALK STA. 173+00 LT - STA. 173+48 LT
REMOVE SIDEWALK STA. 173+57 RT - STA. 173+75 RT
E. MORELAND BLVD. (USH 18)
STA. 167+90
STA. 168+20 84.00' RT
STA. 168+79 11' WIDE
STA. 169+20
STA. 169+60
STA. 169+73
STA. 170+08
STA. 170+98 96.47' RT
STA. 171+44
STA. 171+75 103.78' RT
REMOVE CURB & GUTTER STA. 166+00 LT - STA. 167+25 LT
REMOVE CURB & GUTTER STA. 167+87 RT - STA. 168+43 RT
REMOVE CURB & GUTTER STA. 168+96 RT - STA. 170+78 RT
STA. 171+17 RT - STA. 171+60 RT
REMOVE CURB & GUTTER STA. 171+96 RT - STA. 172+52 RT
REMOVE CURB & GUTTER STA. 173+50 RT - STA. 173+70 RT
REMOVE CURB & GUTTER STA. 173+10 RT - STA. 173+19 RT
REMOVE SIDEWALK STA. 175+04 RT - STA. 177+94 RT
REMOVE CURB & GUTTER STA. 174+10 RT - STA. 174+16 RT
STA. 174+65 RT - STA. 174+76 RT
REMOVE SIDEWALK STA. 174+06 RT - STA. 174+64 RT
REMOVE CURB & GUTTER STA. 174+01 RT - STA. 174+15 RT
STA. 174+07 RT - STA. 174+23 RT
REMOVE CURB & GUTTER STA. 178+97 RT - STA. 180+28 RT
REMOVE CURB & GUTTER STA. 179+43 RT - STA. 179+50 RT
REPAIR LONGITUDINAL JOINT STA. 180+05 RT - STA. 180+54 RT
STA. 176+58
STA. 179+92
STA. 180+54
STA. 180+65
STA. 180+65 30' WIDE
REPAIR LONGITUDINAL JOINT STA. 173+57 RT - STA. 174+36 RT
REMOVE ISLAND STA. 173+30 RT - STA. 173+58 RT
SAWCUT & MATCH EXISTING STA. 173+22, 173.13' RT
E. MAIN ST.
FILLER CAPS
1-061
2-066
2-069

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	REMOVAL PLAN	SHEET 33	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\021005_rm.dgn
PLOT DATE : 4/27/2015
PLOT BY : GRAEF
PLOT NAME :
PLOT SCALE : 100.0000 sf / in.
WISDOT/CADDS SHEET 42

2



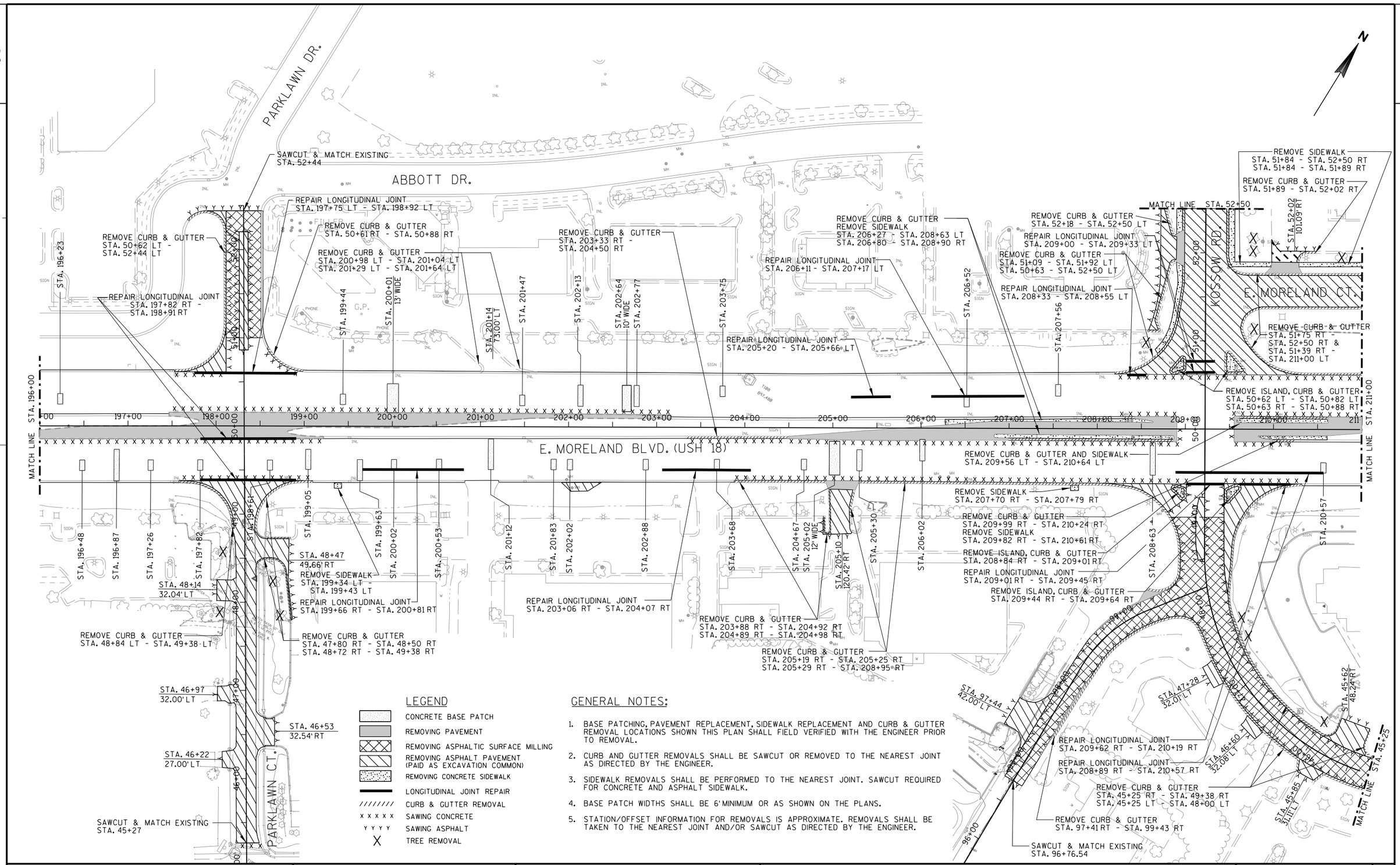
LEGEND

- CONCRETE BASE PATCH
- REMOVING PAVEMENT
- REMOVING ASPHALTIC SURFACE MILLING
- REMOVING ASPHALT PAVEMENT (PAID AS EXCAVATION COMMON)
- REMOVING CONCRETE SIDEWALK
- LONGITUDINAL JOINT REPAIR
- ///////// CURB & GUTTER REMOVAL
- x x x x x SAWING CONCRETE
- Y Y Y Y SAWING ASPHALT
- X TREE REMOVAL

GENERAL NOTES:

1. BASE PATCHING, PAVEMENT REPLACEMENT, SIDEWALK REPLACEMENT AND CURB & GUTTER REMOVAL LOCATIONS SHOWN THIS PLAN SHALL FIELD VERIFIED WITH THE ENGINEER PRIOR TO REMOVAL.
2. CURB AND GUTTER REMOVALS SHALL BE SAWCUT OR REMOVED TO THE NEAREST JOINT AS DIRECTED BY THE ENGINEER.
3. SIDEWALK REMOVALS SHALL BE PERFORMED TO THE NEAREST JOINT. SAWCUT REQUIRED FOR CONCRETE AND ASPHALT SIDEWALK.
4. BASE PATCH WIDTHS SHALL BE 6' MINIMUM OR AS SHOWN ON THE PLANS.
5. STATION/OFFSET INFORMATION FOR REMOVALS IS APPROXIMATE. REMOVALS SHALL BE TAKEN TO THE NEAREST JOINT AND/OR SAWCUT AS DIRECTED BY THE ENGINEER.

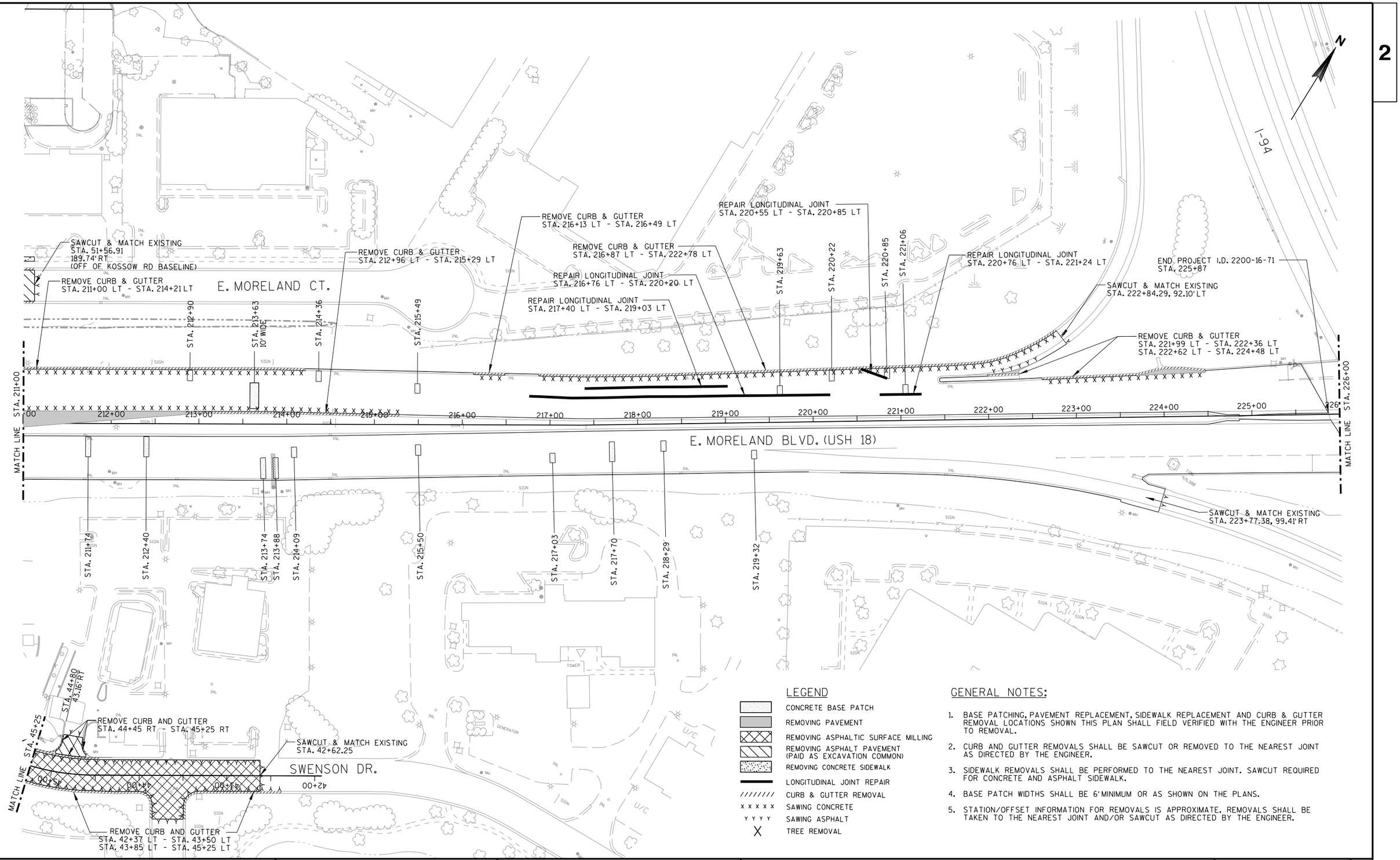
PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	REMOVAL PLAN	SHEET 34	E



PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	REMOVAL PLAN	SHEET 35	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\021007_rm.dgn
PLOT DATE : 4/27/2015
PLOT BY : GRAEF
PLOT NAME :
PLOT SCALE : 100.0000 sf / in.
WISDOT/CADDS SHEET 42

2



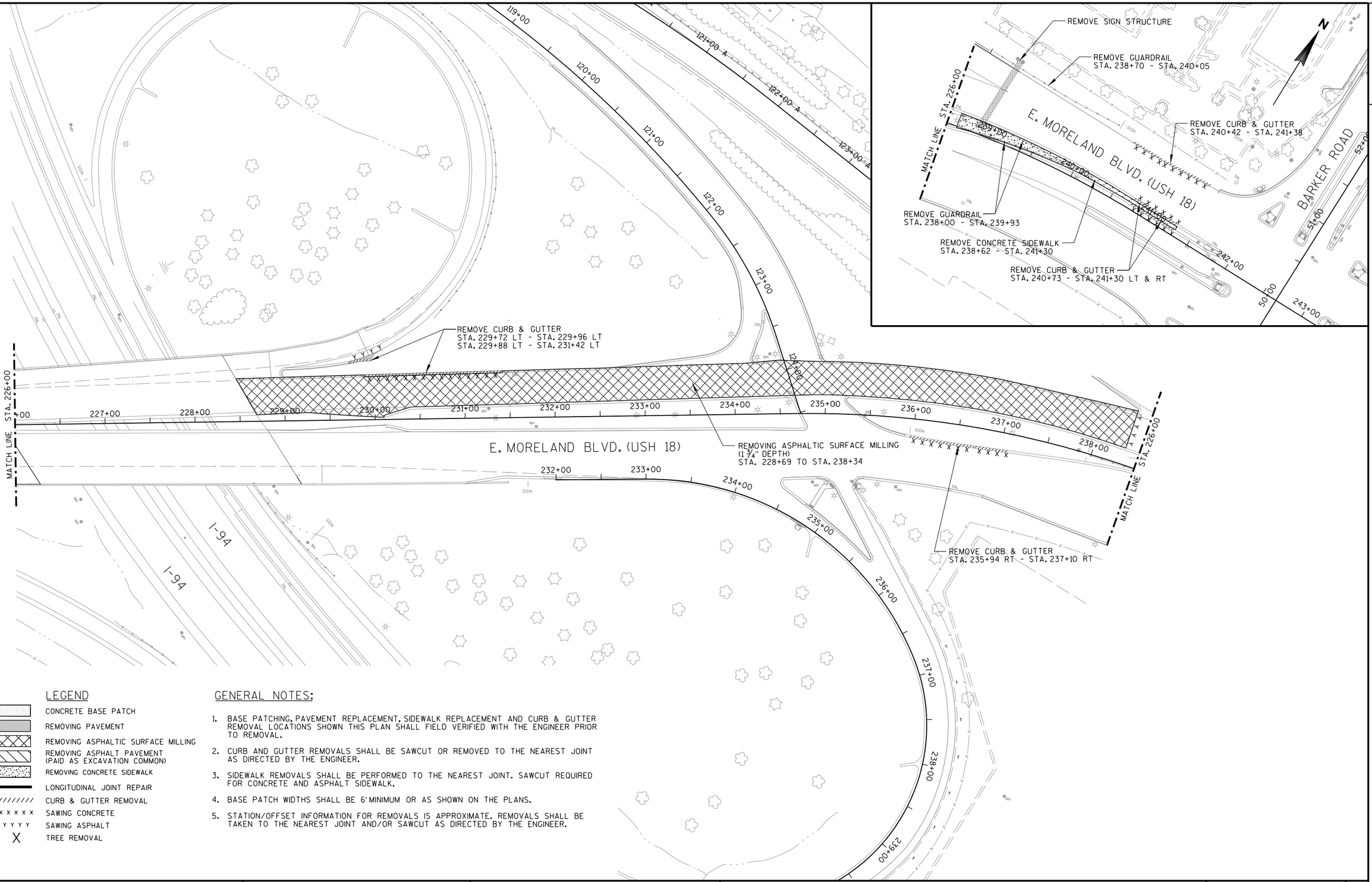
LEGEND

- CONCRETE BASE PATCH
- REMOVING PAVEMENT
- REMOVING ASPHALTIC SURFACE MILLING
- REMOVING ASPHALT PAVEMENT (PAID AS EXCAVATION COMMON)
- REMOVING CONCRETE SIDEWALK
- LONGITUDINAL JOINT REPAIR
- //////// CURB & GUTTER REMOVAL
- X X X X X SAWING CONCRETE
- Y Y Y Y SAWING ASPHALT
- X TREE REMOVAL

GENERAL NOTES:

1. BASE PATCHING, PAVEMENT REPLACEMENT, SIDEWALK REPLACEMENT AND CURB & GUTTER REMOVAL LOCATIONS SHOWN THIS PLAN SHALL FIELD VERIFIED WITH THE ENGINEER PRIOR TO REMOVAL.
2. CURB AND GUTTER REMOVALS SHALL BE SAWCUT OR REMOVED TO THE NEAREST JOINT AS DIRECTED BY THE ENGINEER.
3. SIDEWALK REMOVALS SHALL BE PERFORMED TO THE NEAREST JOINT. SAWCUT REQUIRED FOR CONCRETE AND ASPHALT SIDEWALK.
4. BASE PATCH WIDTHS SHALL BE 6' MINIMUM OR AS SHOWN ON THE PLANS.
5. STATION/OFFSET INFORMATION FOR REMOVALS IS APPROXIMATE. REMOVALS SHALL BE TAKEN TO THE NEAREST JOINT AND/OR SAWCUT AS DIRECTED BY THE ENGINEER.

2



LEGEND

- CONCRETE BASE PATCH
- REMOVING PAVEMENT
- REMOVING ASPHALTIC SURFACE MILLING
- REMOVING ASPHALT PAVEMENT (PAID AS EXCAVATION COMMON)
- REMOVING CONCRETE SIDEWALK
- LONGITUDINAL JOINT REPAIR
- //////// CURB & GUTTER REMOVAL
- X X X X X SAWING CONCRETE
- Y Y Y Y SAWING ASPHALT
- X TREE REMOVAL

GENERAL NOTES:

1. BASE PATCHING, PAVEMENT REPLACEMENT, SIDEWALK REPLACEMENT AND CURB & GUTTER REMOVAL LOCATIONS SHOWN THIS PLAN SHALL FIELD VERIFIED WITH THE ENGINEER PRIOR TO REMOVAL.
2. CURB AND GUTTER REMOVALS SHALL BE SAWCUT OR REMOVED TO THE NEAREST JOINT AS DIRECTED BY THE ENGINEER.
3. SIDEWALK REMOVALS SHALL BE PERFORMED TO THE NEAREST JOINT. SAWCUT REQUIRED FOR CONCRETE AND ASPHALT SIDEWALK.
4. BASE PATCH WIDTHS SHALL BE 6'MINIMUM OR AS SHOWN ON THE PLANS.
5. STATION/OFFSET INFORMATION FOR REMOVALS IS APPROXIMATE. REMOVALS SHALL BE TAKEN TO THE NEAREST JOINT AND/OR SAWCUT AS DIRECTED BY THE ENGINEER.

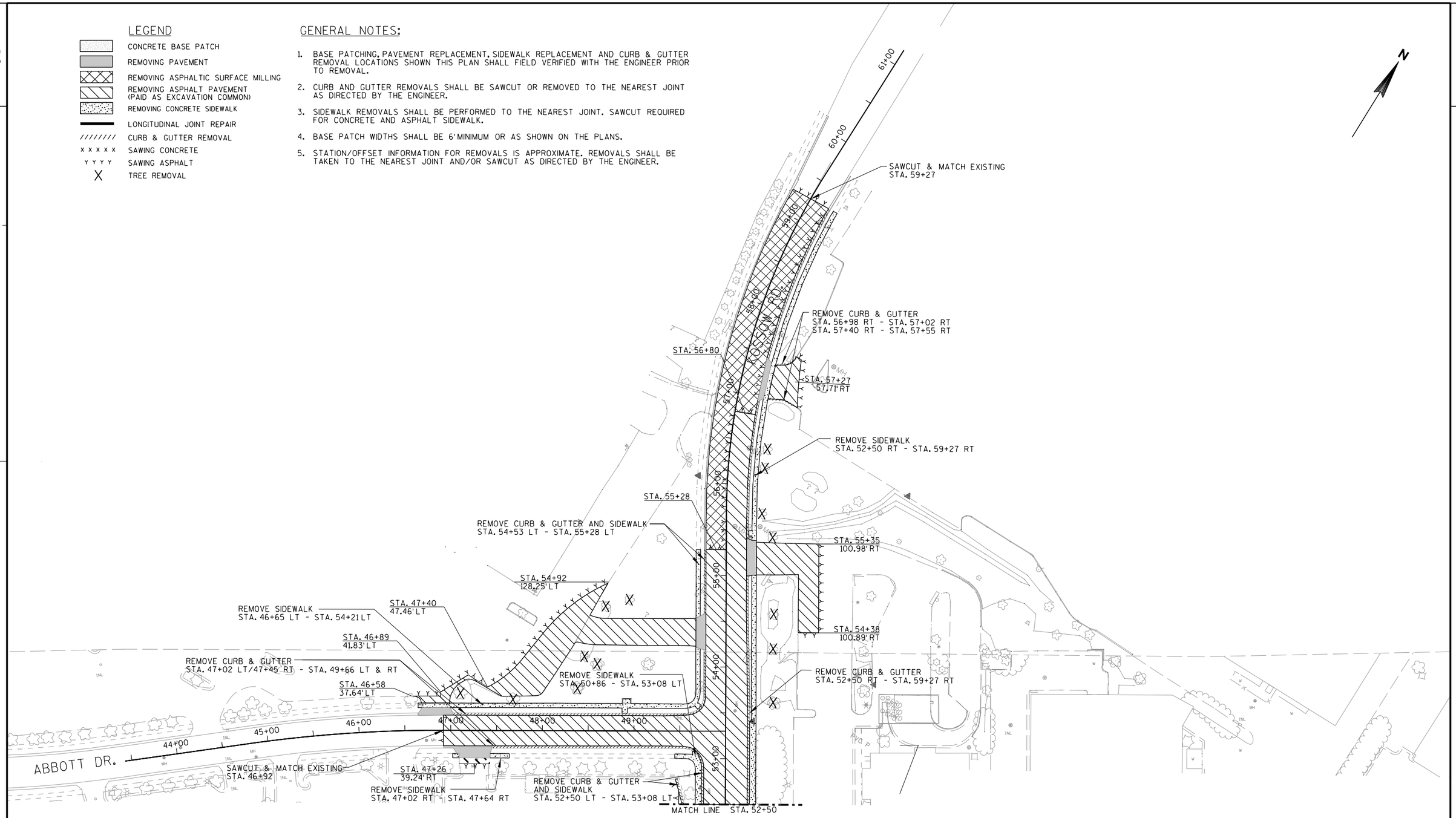
PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	REMOVAL PLAN	SHEET 37	E

LEGEND

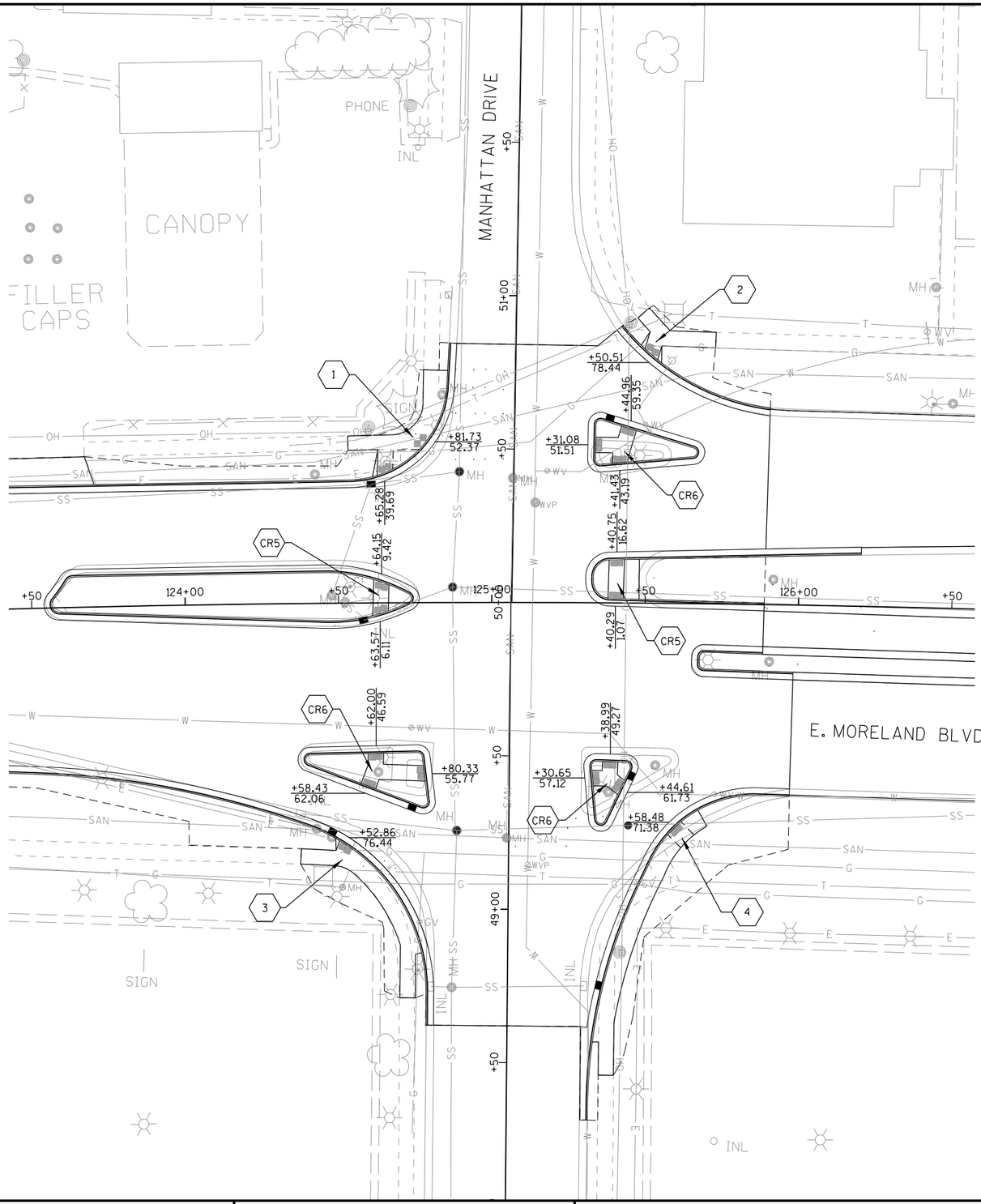
- CONCRETE BASE PATCH
- REMOVING PAVEMENT
- REMOVING ASPHALTIC SURFACE MILLING
- REMOVING ASPHALT PAVEMENT (PAID AS EXCAVATION COMMON)
- REMOVING CONCRETE SIDEWALK
- LONGITUDINAL JOINT REPAIR
- //////// CURB & GUTTER REMOVAL
- X X X X X SAWING CONCRETE
- Y Y Y Y SAWING ASPHALT
- X TREE REMOVAL

GENERAL NOTES:

1. BASE PATCHING, PAVEMENT REPLACEMENT, SIDEWALK REPLACEMENT AND CURB & GUTTER REMOVAL LOCATIONS SHOWN THIS PLAN SHALL FIELD VERIFIED WITH THE ENGINEER PRIOR TO REMOVAL.
2. CURB AND GUTTER REMOVALS SHALL BE SAWCUT OR REMOVED TO THE NEAREST JOINT AS DIRECTED BY THE ENGINEER.
3. SIDEWALK REMOVALS SHALL BE PERFORMED TO THE NEAREST JOINT. SAWCUT REQUIRED FOR CONCRETE AND ASPHALT SIDEWALK.
4. BASE PATCH WIDTHS SHALL BE 6' MINIMUM OR AS SHOWN ON THE PLANS.
5. STATION/OFFSET INFORMATION FOR REMOVALS IS APPROXIMATE. REMOVALS SHALL BE TAKEN TO THE NEAREST JOINT AND/OR SAWCUT AS DIRECTED BY THE ENGINEER.



PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	REMOVAL PLAN	SHEET 38	E



N

LEGEND

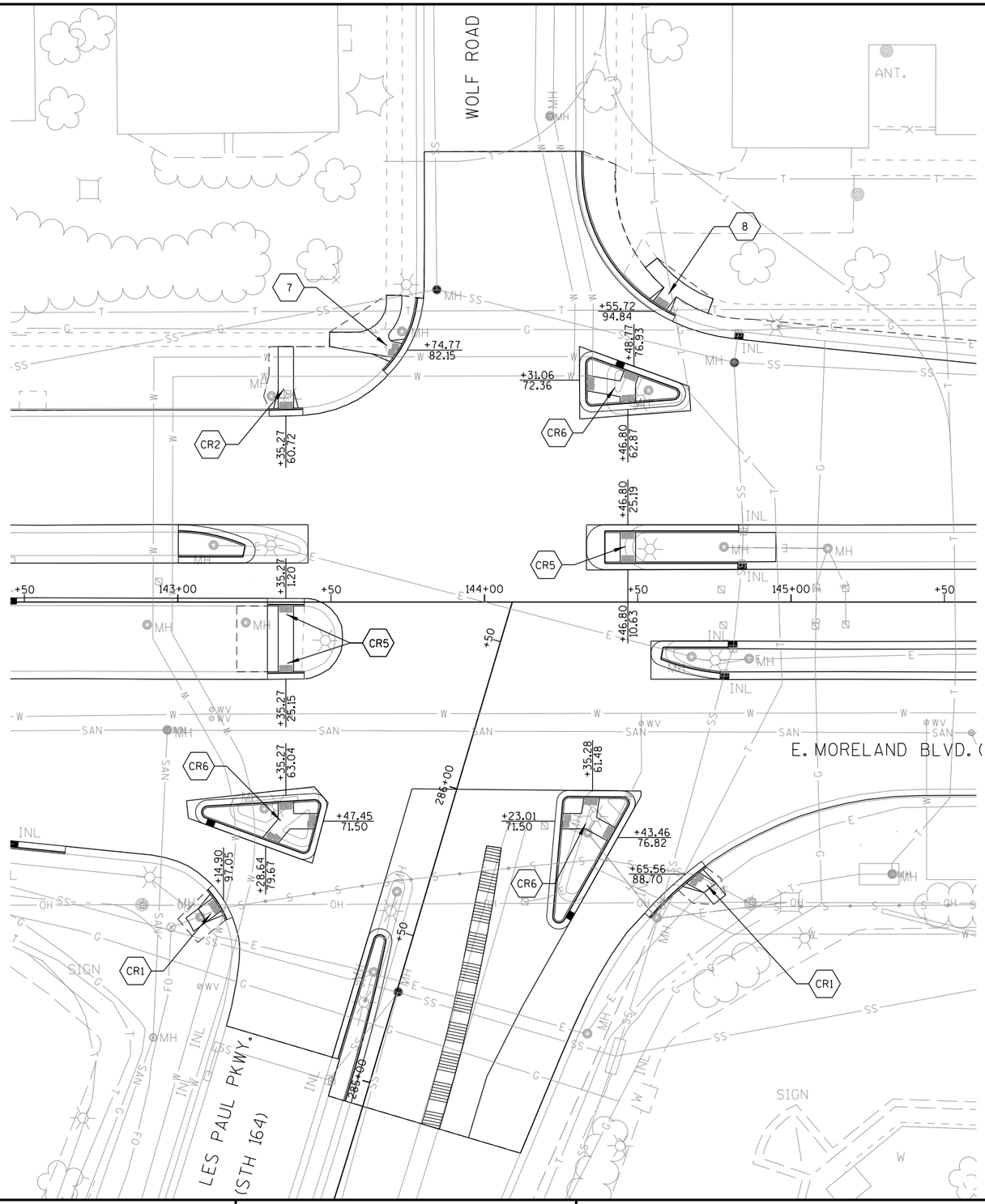
CR1 — CURB RAMP TYPE

1 — CURB RAMP NUMBER (REFER TO CURB RAMP DETAIL SHEETS)

NOTE:
CURB RAMP STATION/OFFSET INFORMATION REFERS TO THE CENTER OF RAMP ALONG THE CURB FLANGE LINE

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CONSTRUCTION DETAIL - CURB RAMP LAYOUT (MANHATTAN DRIVE)	SHEET 39	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\021101_id.dgn
PLOT DATE : 4/27/2015
PLOT BY : GRAEF
PLOT NAME :
PLOT SCALE : 40.0000 sf / in.
WISDOT/CADDS SHEET 42



N

LEGEND

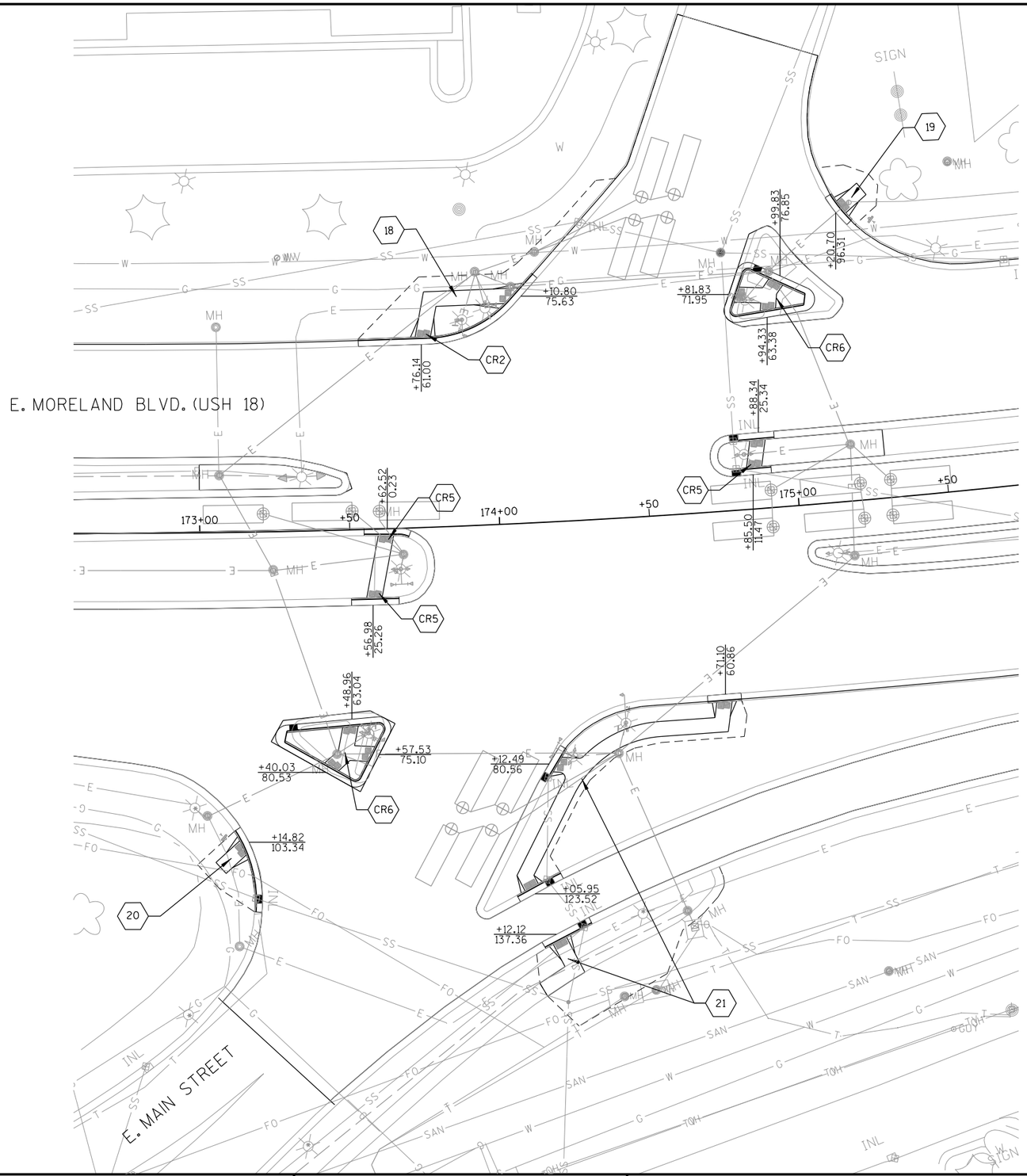
CR1 — CURB RAMP TYPE

1 — CURB RAMP NUMBER (REFER TO CURB RAMP DETAIL SHEETS)

NOTE:
CURB RAMP STATION/OFFSET INFORMATION REFERS TO THE CENTER OF RAMP ALONG THE CURB FLANGE LINE

2

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CONSTRUCTION DETAIL - CURB RAMP LAYOUT (STH 164)	SHEET 40	E



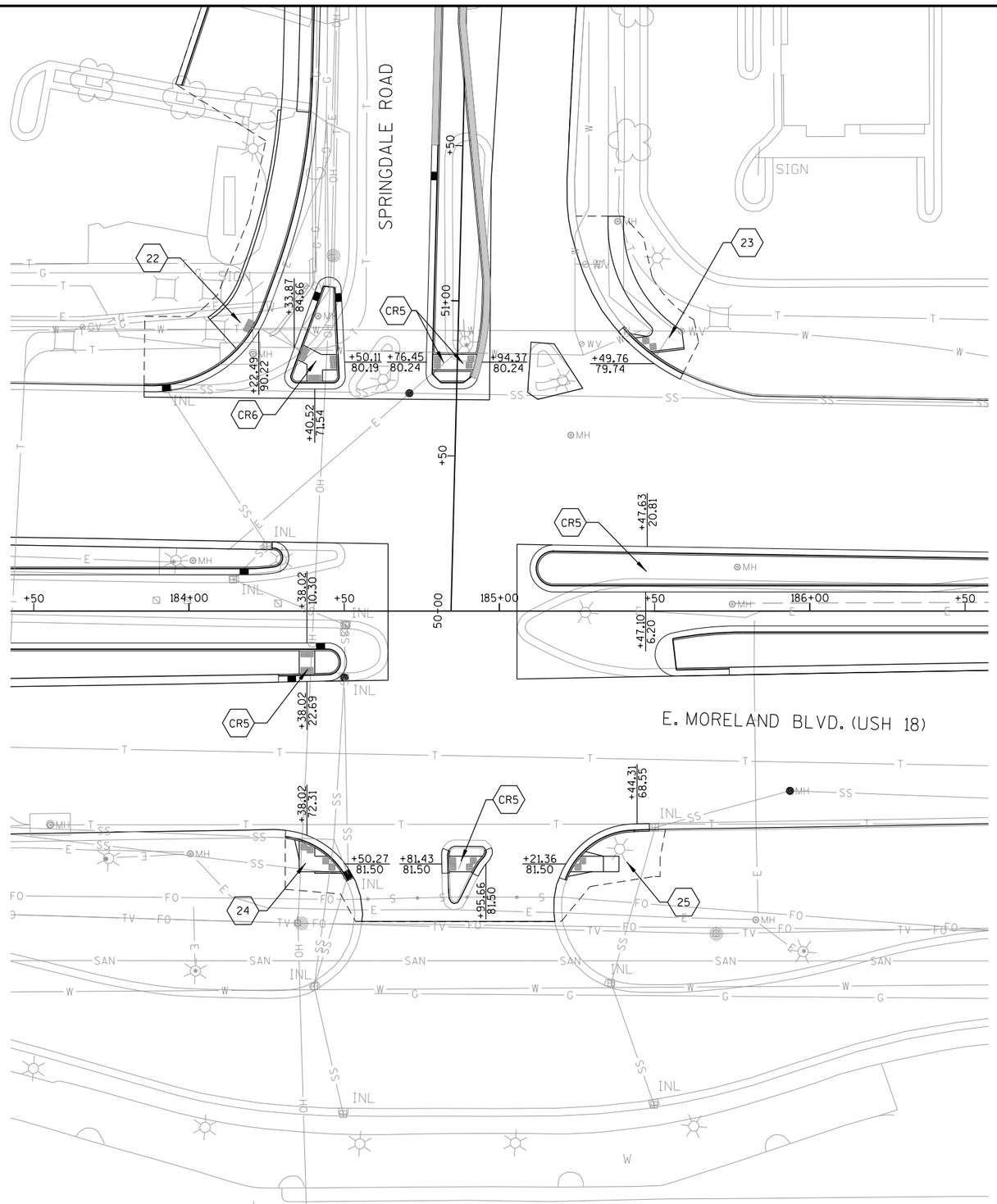
LEGEND

CR1 — CURB RAMP TYPE

1 — CURB RAMP NUMBER (REFER TO CURB RAMP DETAIL SHEETS)

NOTE:
CURB RAMP STATION/OFFSET INFORMATION REFERS TO THE CENTER OF RAMP ALONG THE CURB FLANGE LINE

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CONSTRUCTION DETAIL - CURB RAMP LAYOUT (E. MAIN STREET)	SHEET 41	E



N

LEGEND

CR1 — CURB RAMP TYPE

1 — CURB RAMP NUMBER (REFER TO CURB RAMP DETAIL SHEETS)

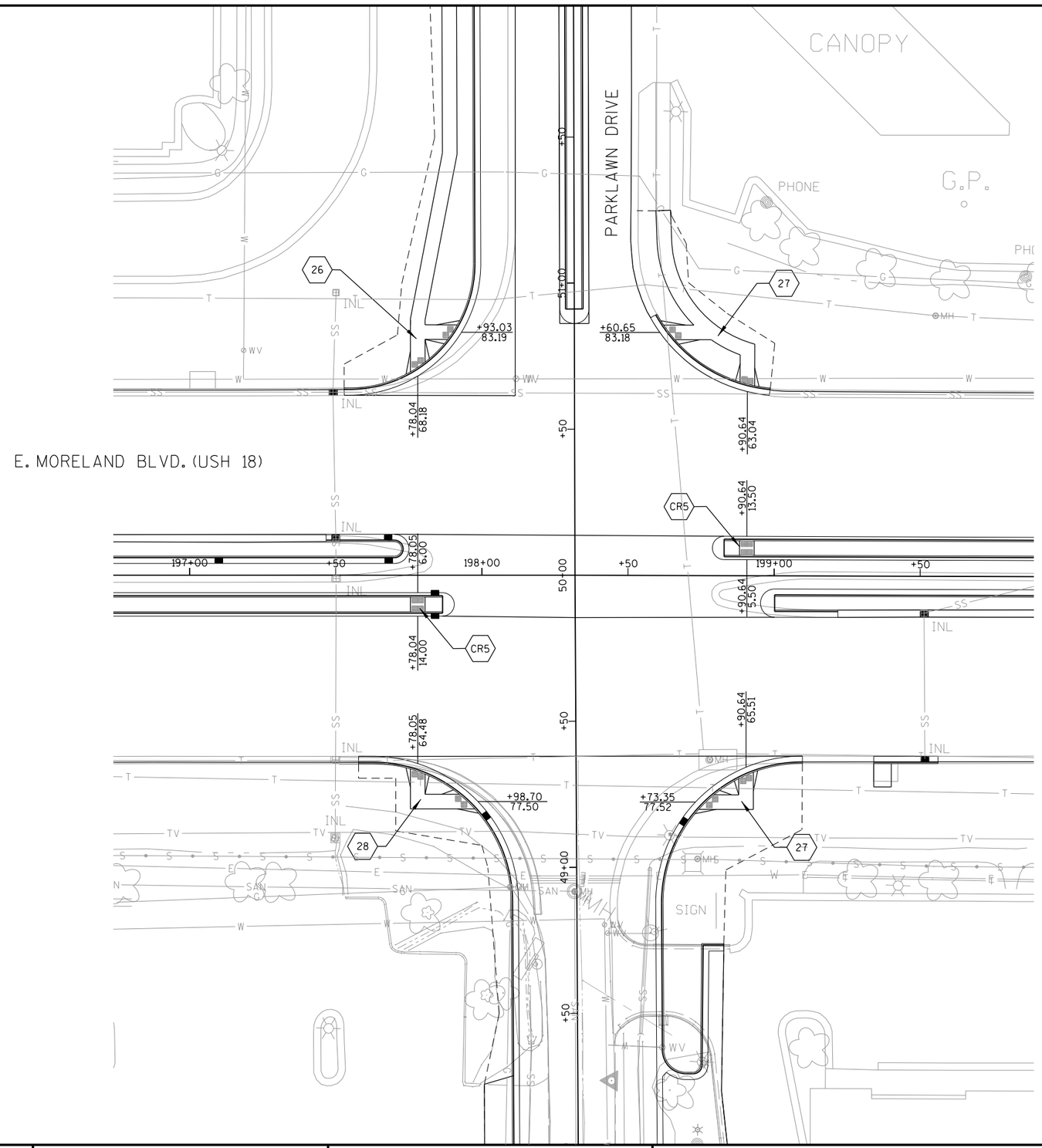
NOTE:
CURB RAMP STATION/OFFSET INFORMATION REFERS TO THE CENTER OF RAMP ALONG THE CURB FLANGE LINE

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CONSTRUCTION DETAIL - CURB RAMP LAYOUT (SPRINGDALE ROAD)	SHEET 42	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\021104_id.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 40.0000 sf / in.

WISDOT/CADDS SHEET 42

2



LEGEND

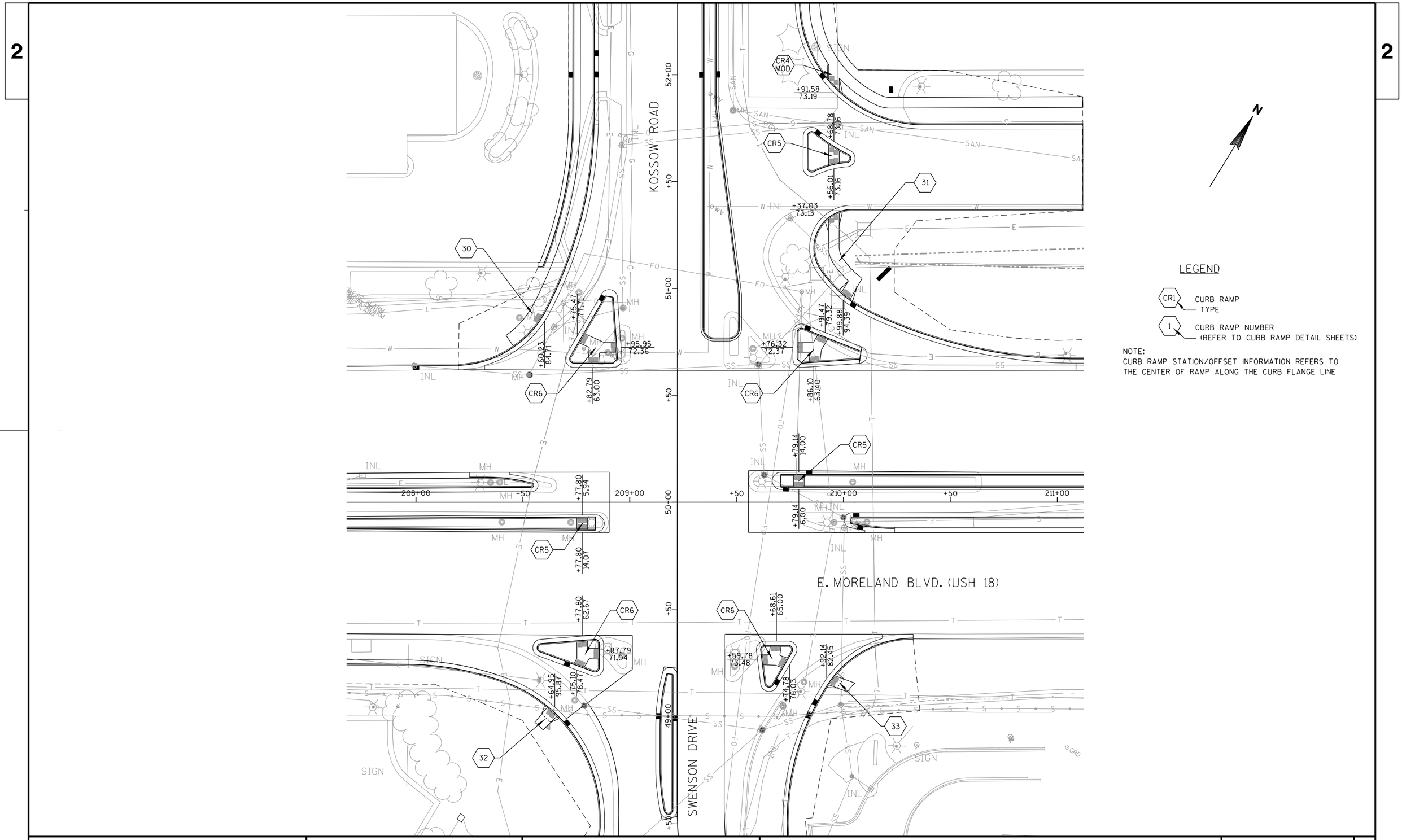
CR1 — CURB RAMP TYPE

1 — CURB RAMP NUMBER (REFER TO CURB RAMP DETAIL SHEETS)

NOTE:
CURB RAMP STATION/OFFSET INFORMATION REFERS TO THE CENTER OF RAMP ALONG THE CURB FLANGE LINE

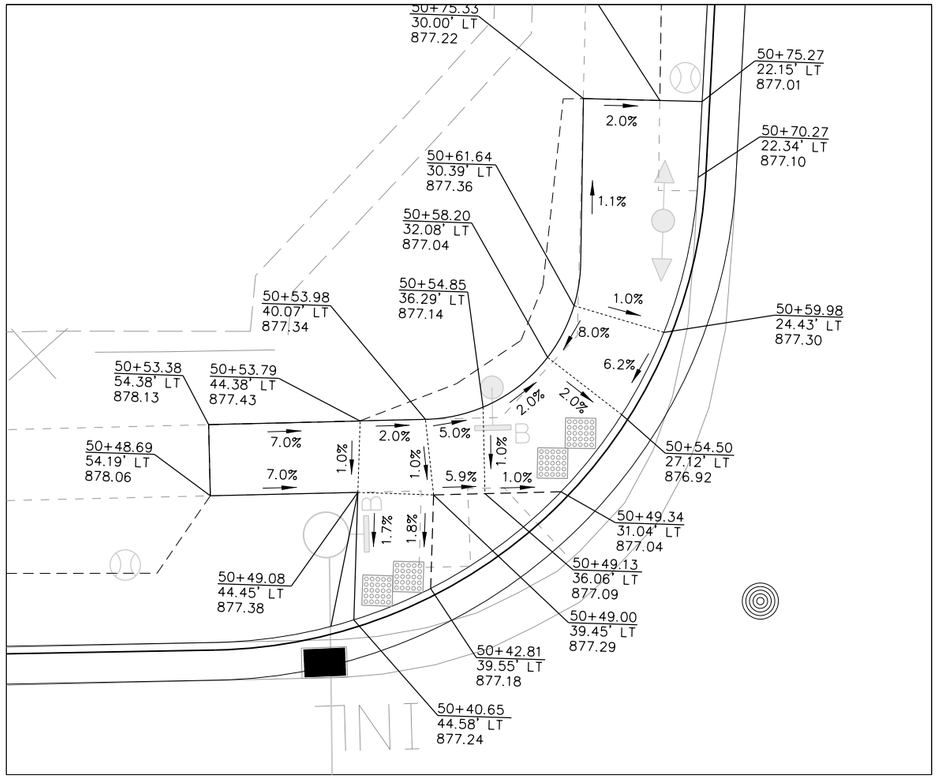
PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CONSTRUCTION DETAIL - CURB RAMP LAYOUT (PARKLAWN DRIVE)	SHEET 43	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\021105_id.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 40.0000 sf / in.

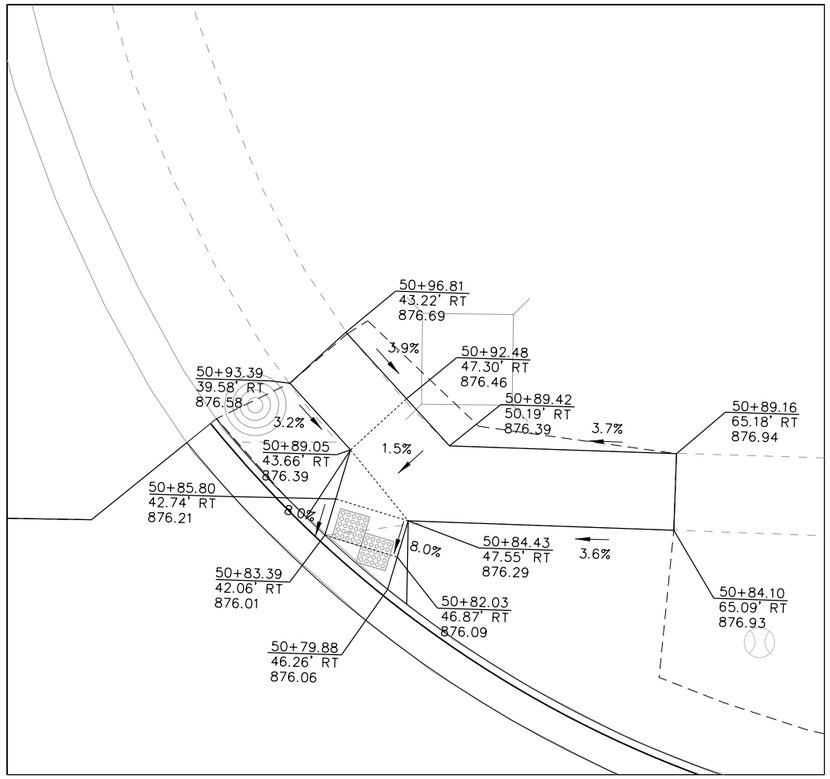


PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CONSTRUCTION DETAIL - CURB RAMP LAYOUT (KOSSOW ROAD)	SHEET 44	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\021106_id.dgn
PLOT DATE : 4/27/2015
PLOT BY : GRAEF
PLOT NAME :
PLOT SCALE : 40.0003 sf / in.
WISDOT/CADDS SHEET 42



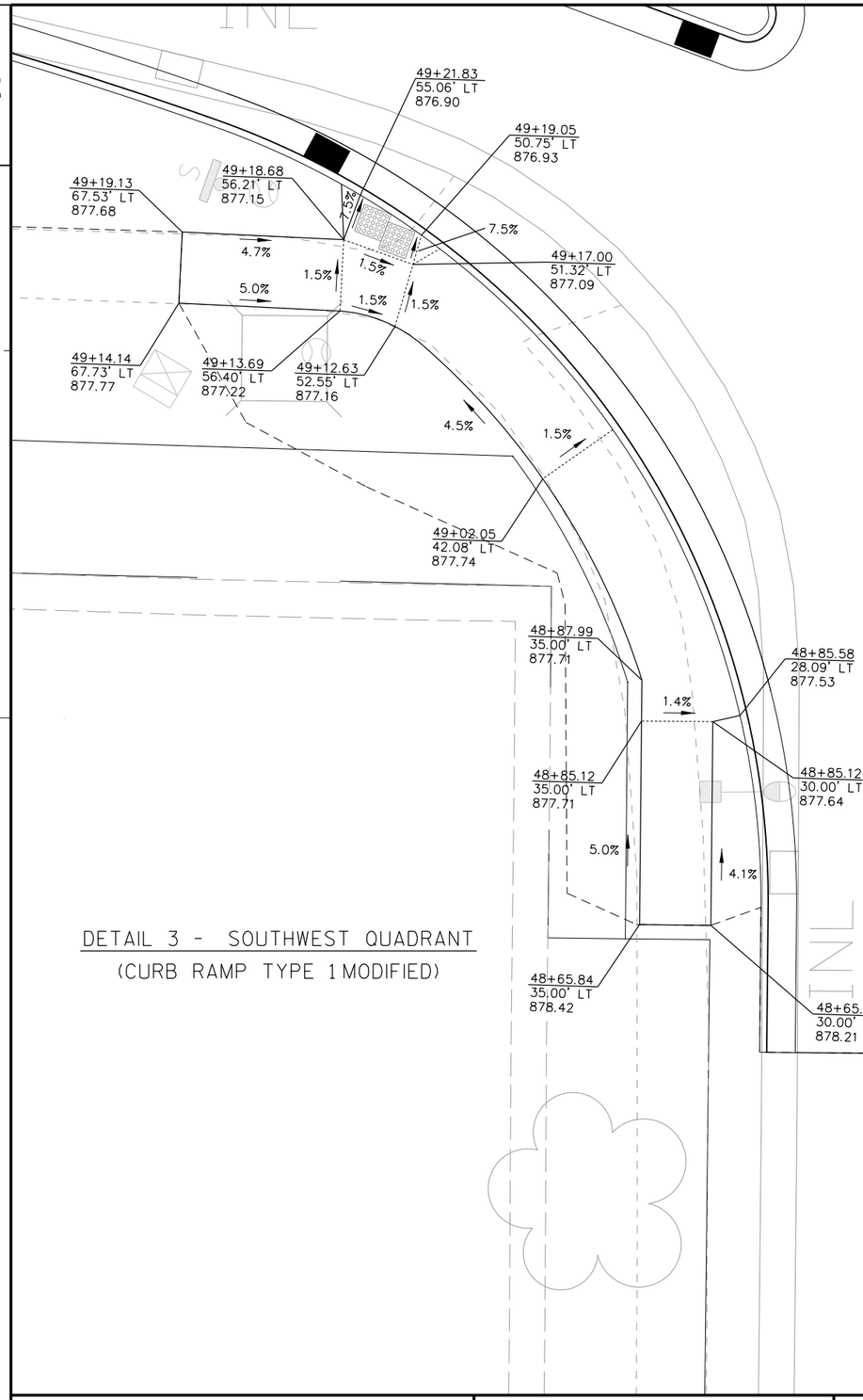
DETAIL 1 - NORTHWEST QUADRANT
(CURB RAMP TYPE 1 & 2 MODIFIED)



DETAIL 2 - NORTHEAST QUADRANT
(CURB RAMP TYPE 1 MODIFIED)

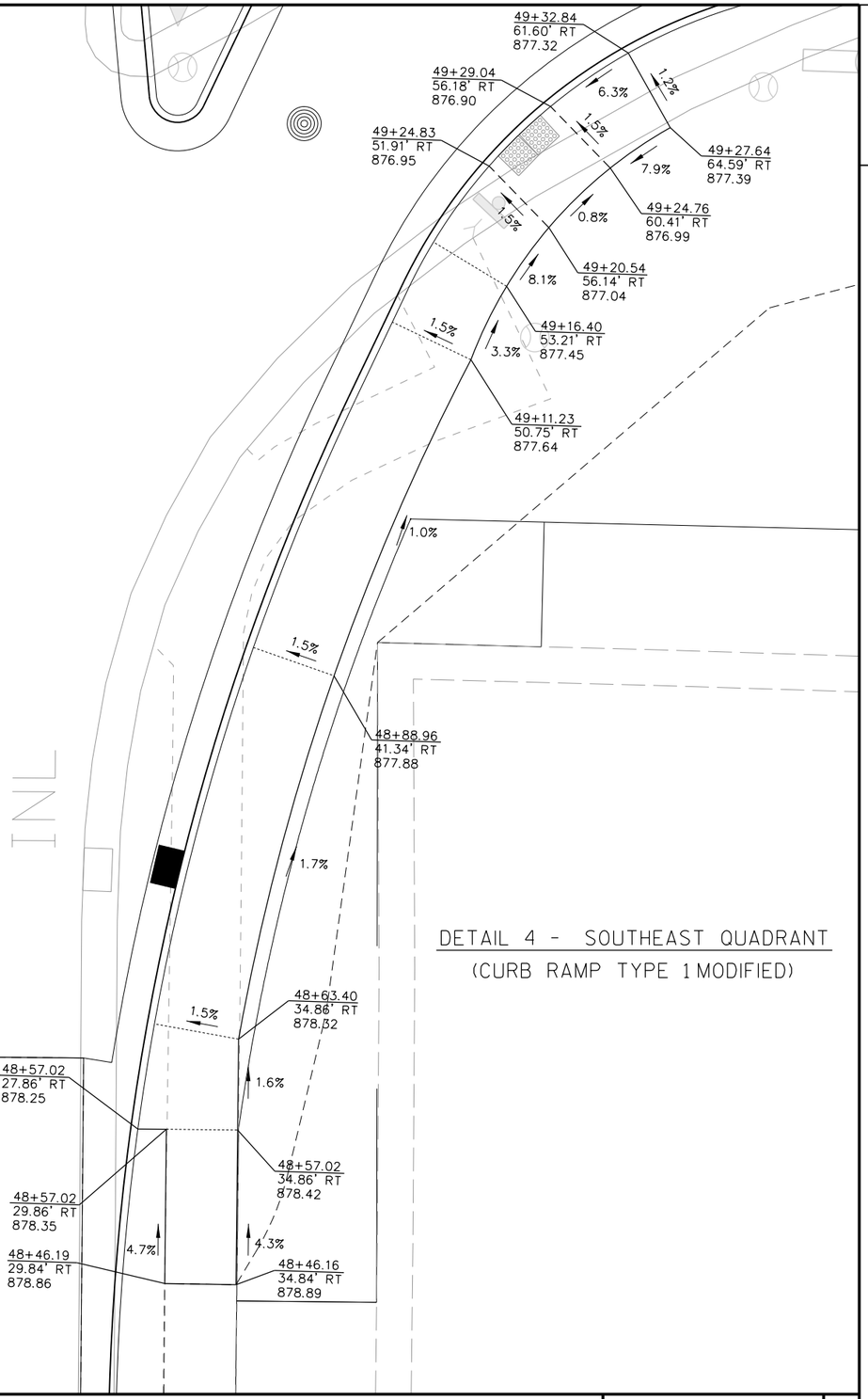
2

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CURB RAMP DETAILS - MANHATTAN DRIVE	SHEET 45	E



DETAIL 3 - SOUTHWEST QUADRANT

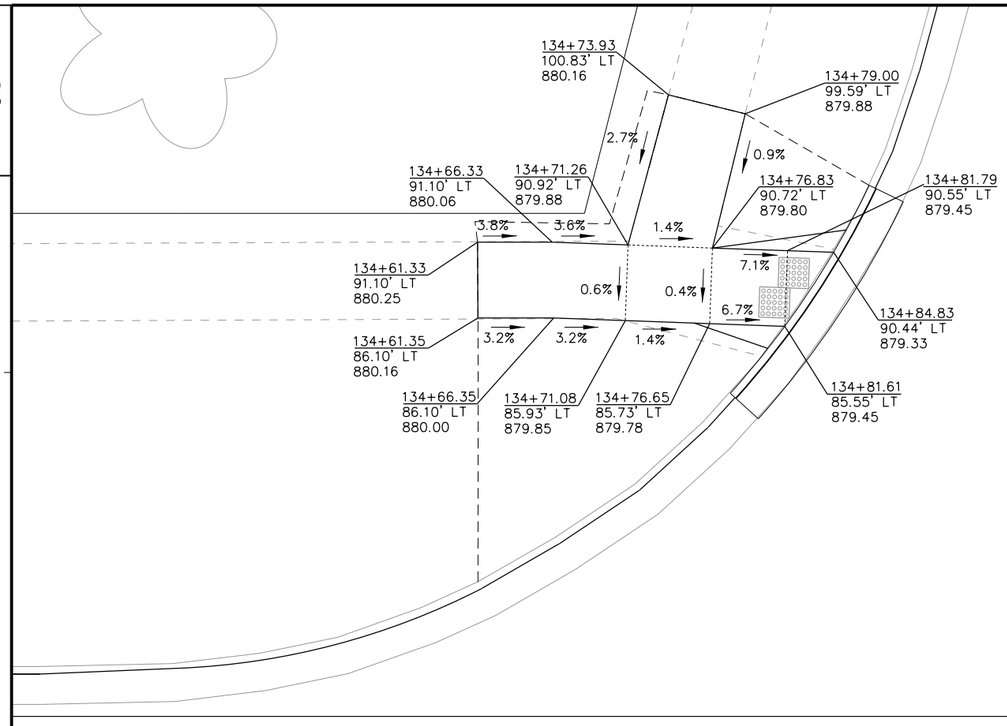
(CURB RAMP TYPE 1 MODIFIED)



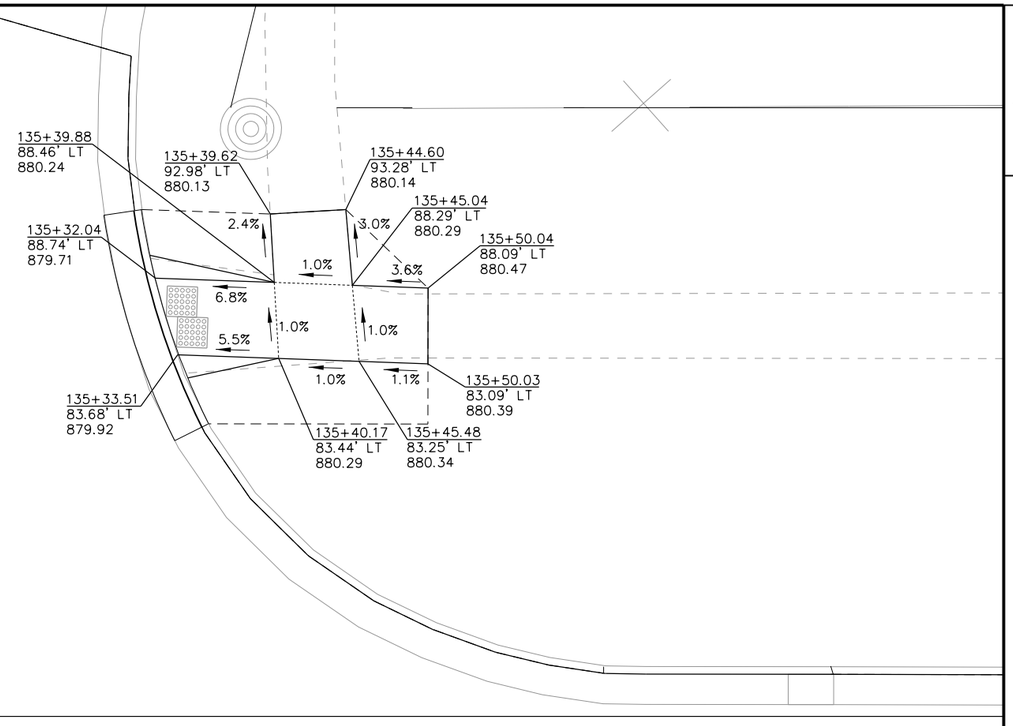
DETAIL 4 - SOUTHEAST QUADRANT

(CURB RAMP TYPE 1 MODIFIED)

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CURB RAMP DETAILS - MANHATTAN DRIVE	SHEET 46	E

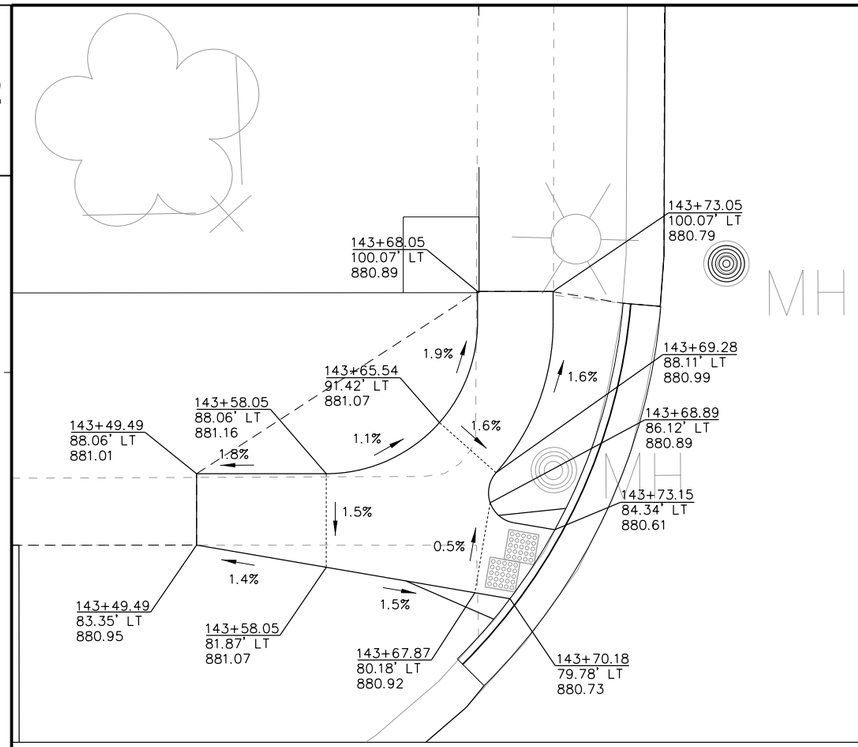


DETAIL 5 - NORTHWEST QUADRANT
(CURB RAMP TYPE 2 MODIFIED)

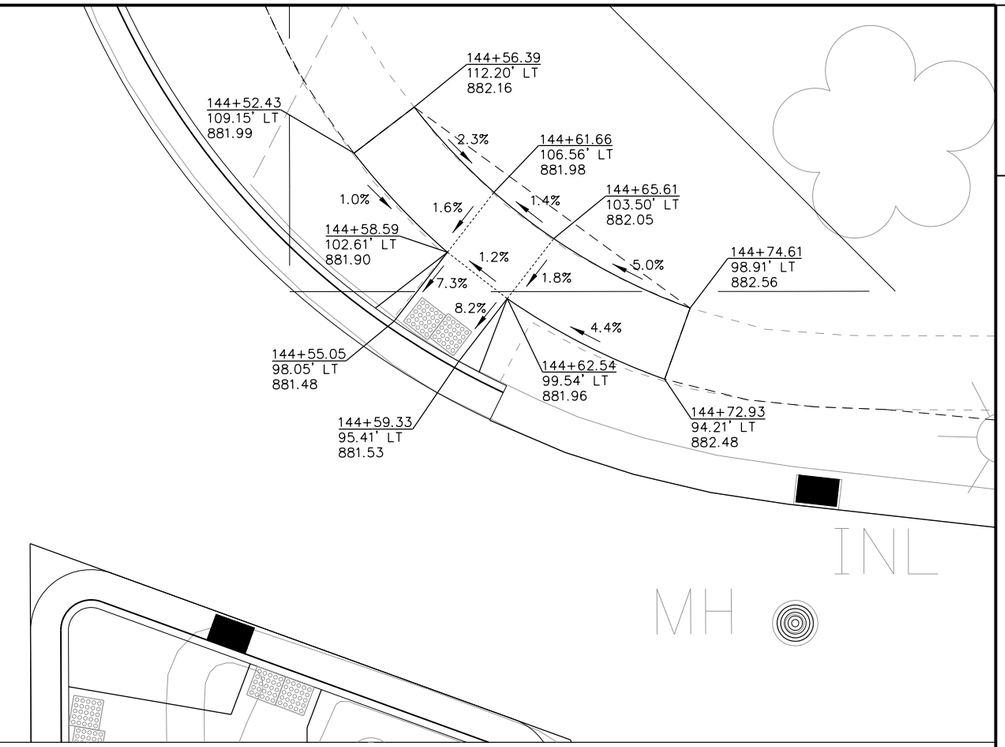


DETAIL 6 - NORTHEAST QUADRANT
(CURB RAMP TYPE 2 MODIFIED)

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CURB RAMP DETAILS - JENNIFER LANE	SHEET 47	E



DETAIL 7 - NORTHWEST QUADRANT
(CURB RAMP TYPE 1 MODIFIED)

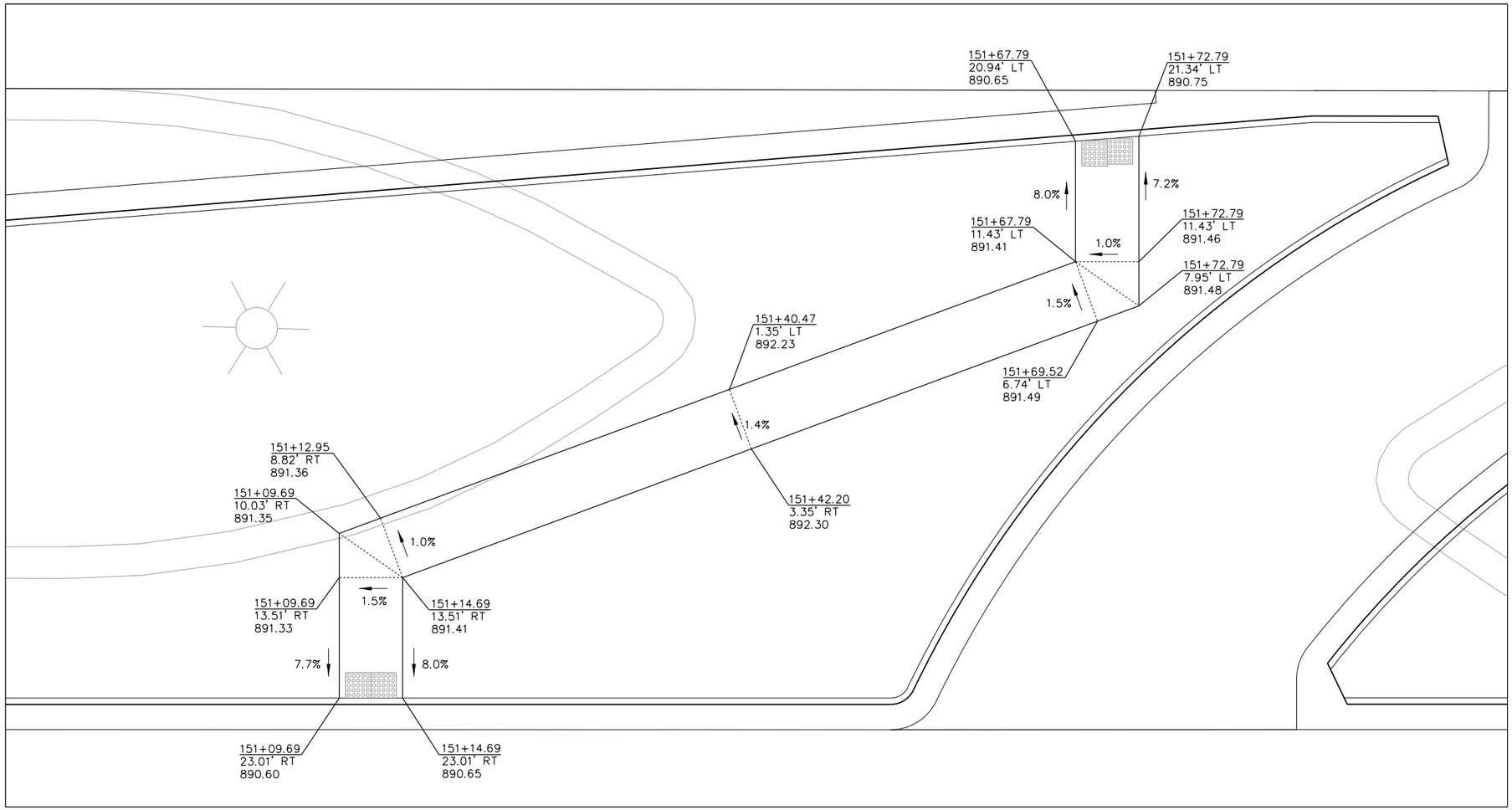


DETAIL 8 - NORTHEAST QUADRANT
(CURB RAMP TYPE 1 MODIFIED)

2

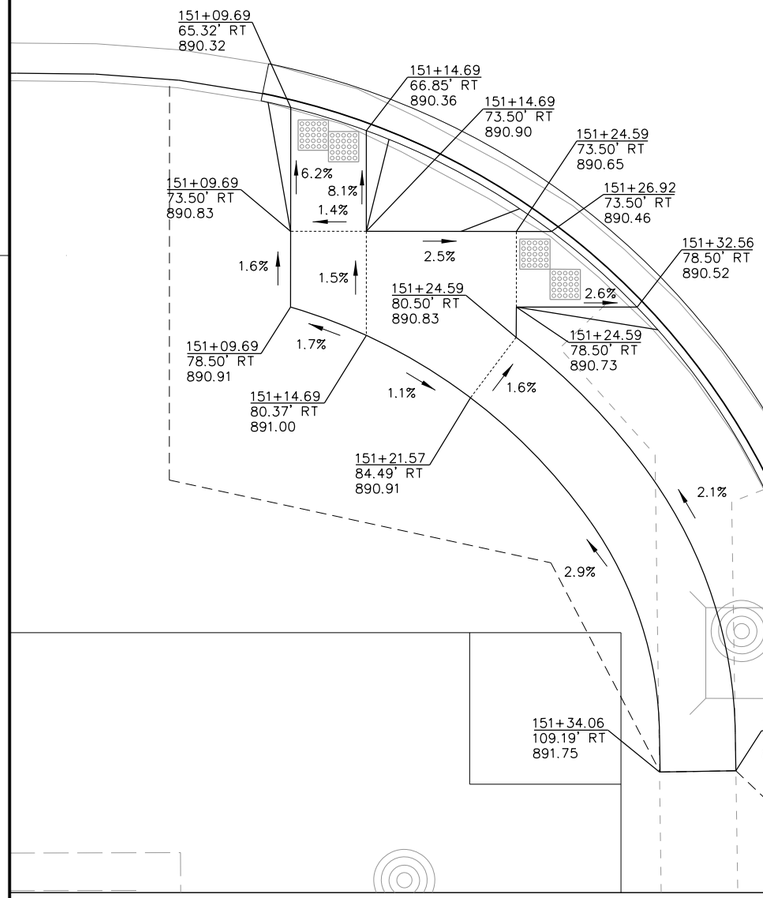
PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CURB RAMP DETAILS - WOLF ROAD	SHEET 48	E

2

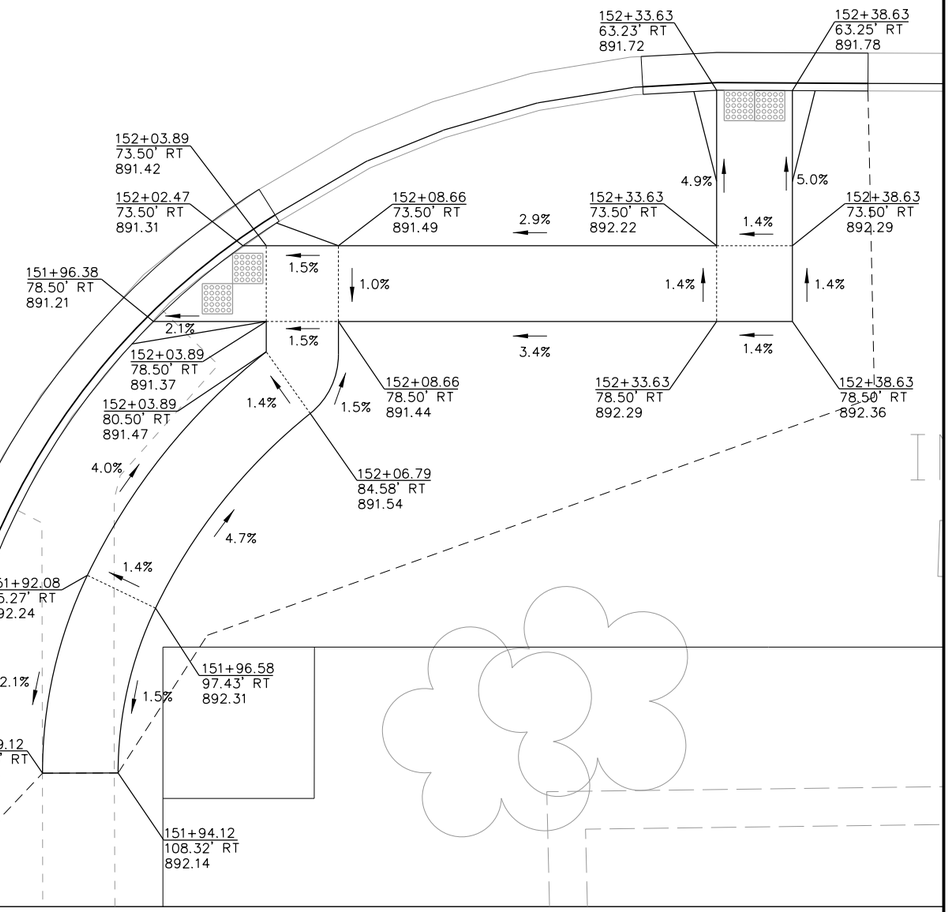


DETAIL 9 - MIDDLE ISLAND
(CURB RAMP TYPE 2 MODIFIED)

2

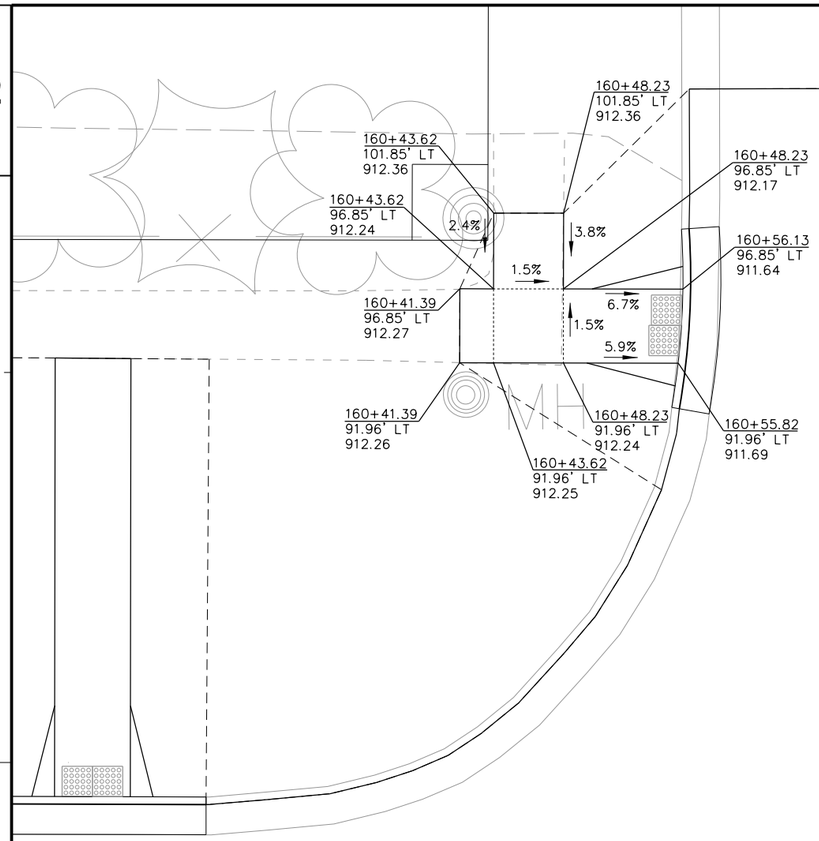


DETAIL 10 - SOUTHWEST QUADRANT
(CURB RAMP TYPE 2 MODIFIED)

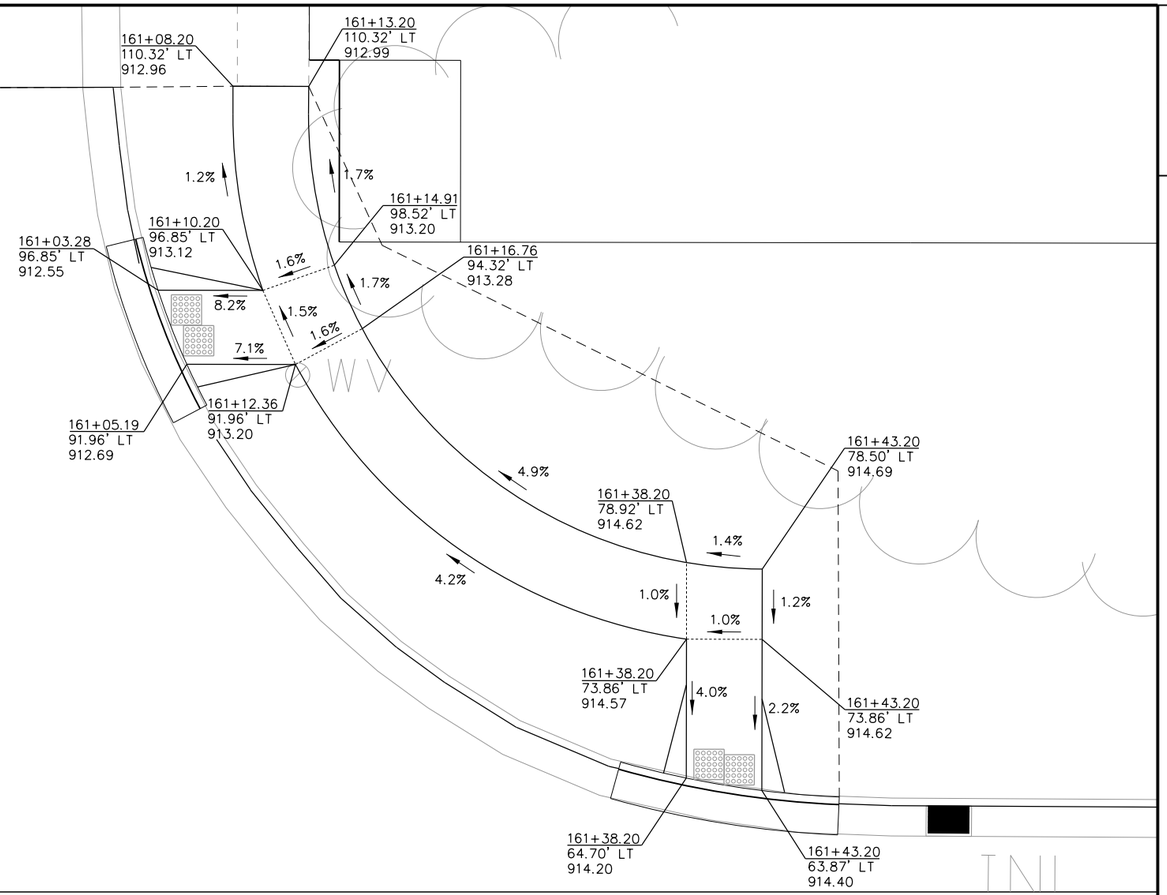


DETAIL 11 - SOUTHEAST QUADRANT
(CURB RAMP TYPE 2 MODIFIED)

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CURB RAMP DETAILS - GATEWAY DRIVE	SHEET 50	E

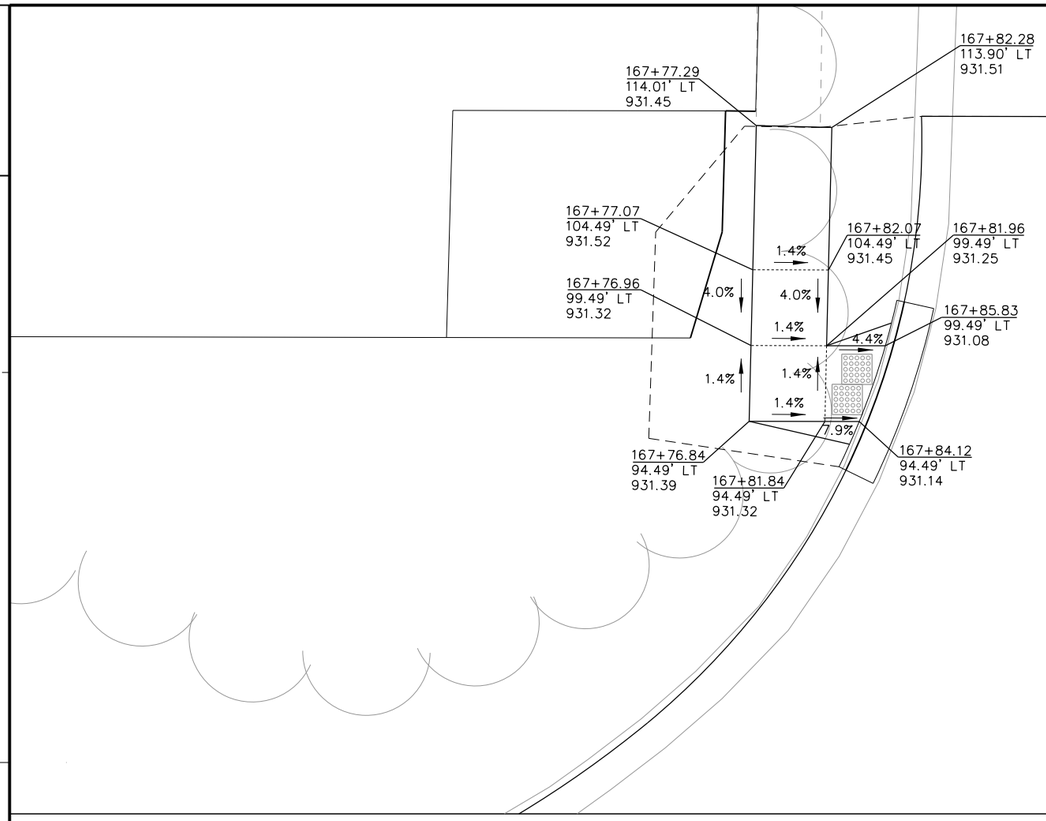


DETAIL 12 - NORTHWEST QUADRANT
(CURB RAMP TYPE 2 MODIFIED)

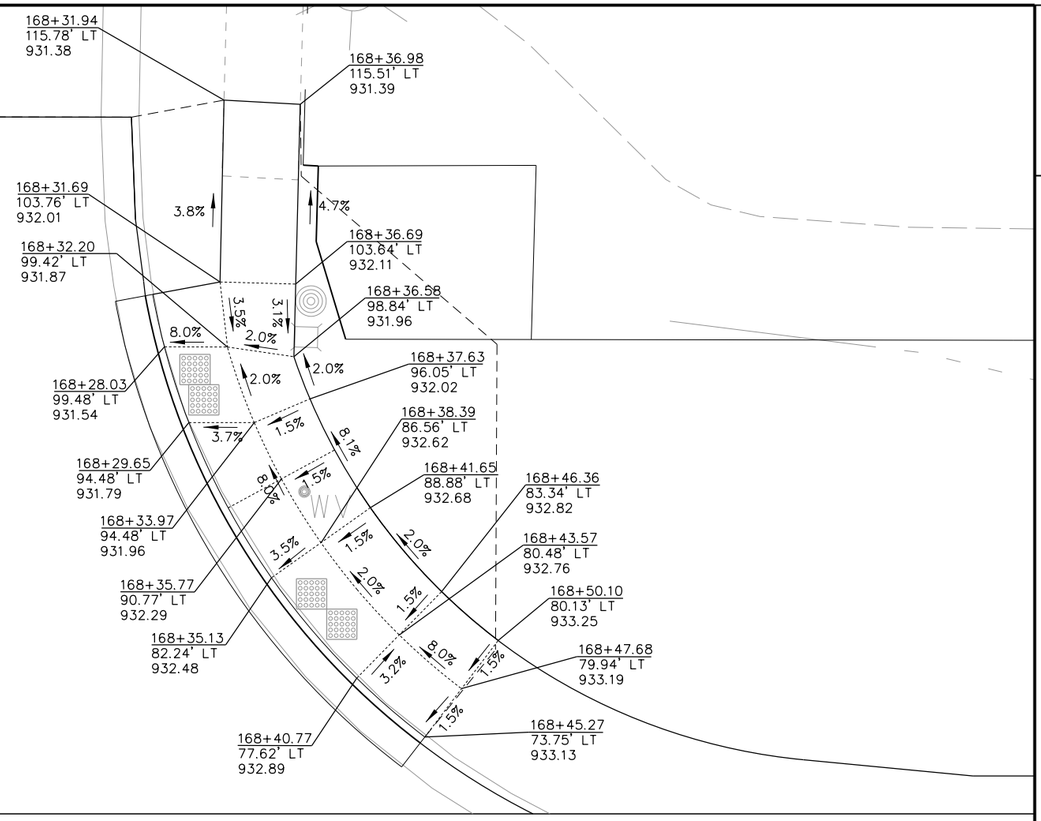


DETAIL 13 - NORTHEAST QUADRANT
(CURB RAMP TYPE 2 MODIFIED)

PROJECT NO:2200-16-71	HWY:USH 18	COUNTY:WAUKESHA	CURB RAMP DETAILS - AVALON DRIVE	SHEET 51	E



DETAIL 14 - NORTHWEST QUADRANT
(CURB RAMP TYPE 2 MODIFIED)

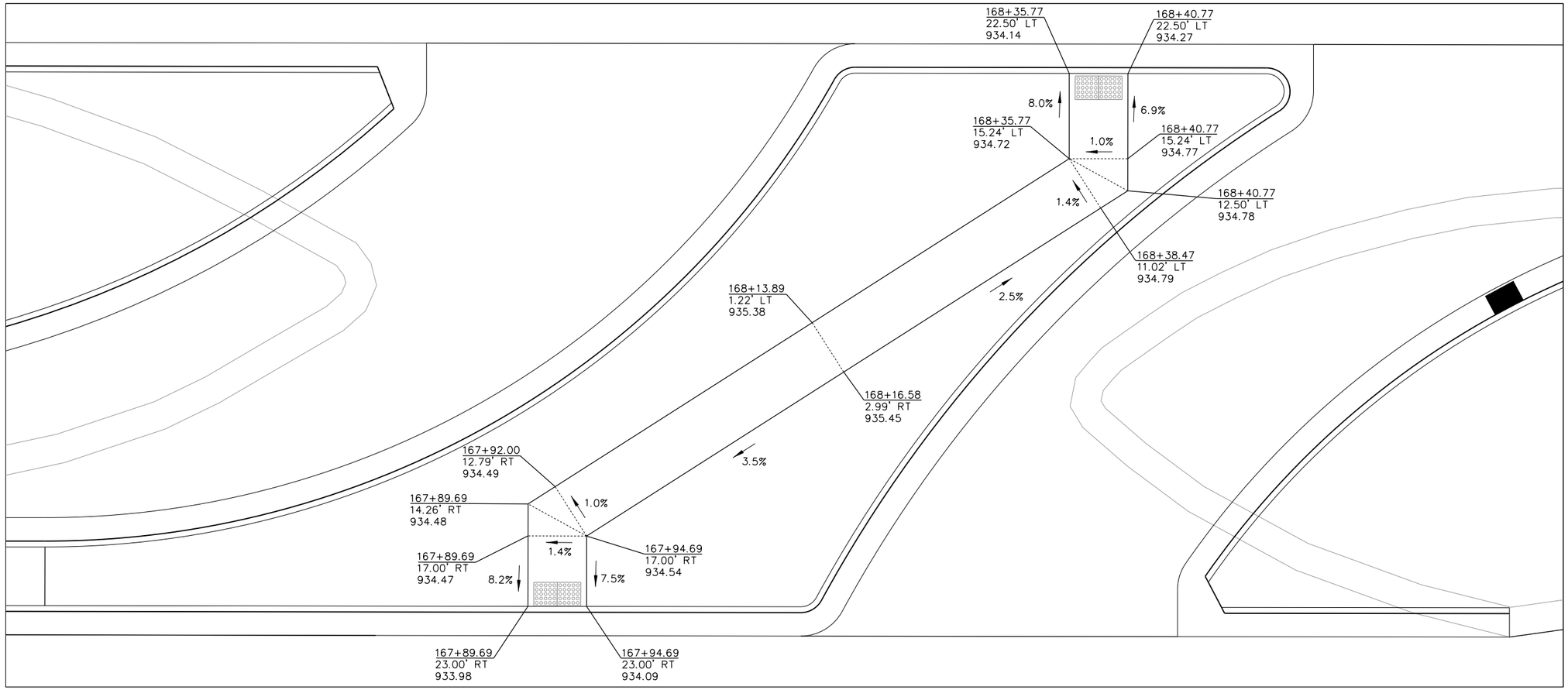


DETAIL 15 - NORTHEAST QUADRANT
(CURB RAMP TYPE 1 MODIFIED)

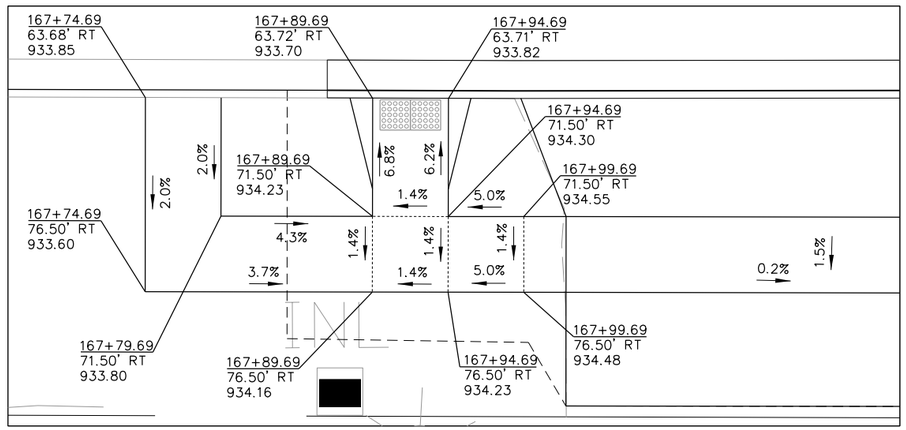
2

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CURB RAMP DETAILS - RAMONA ROAD	SHEET 52	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\021114_id.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 10.0000 sf / in.
WISDOT/CADDS SHEET 42

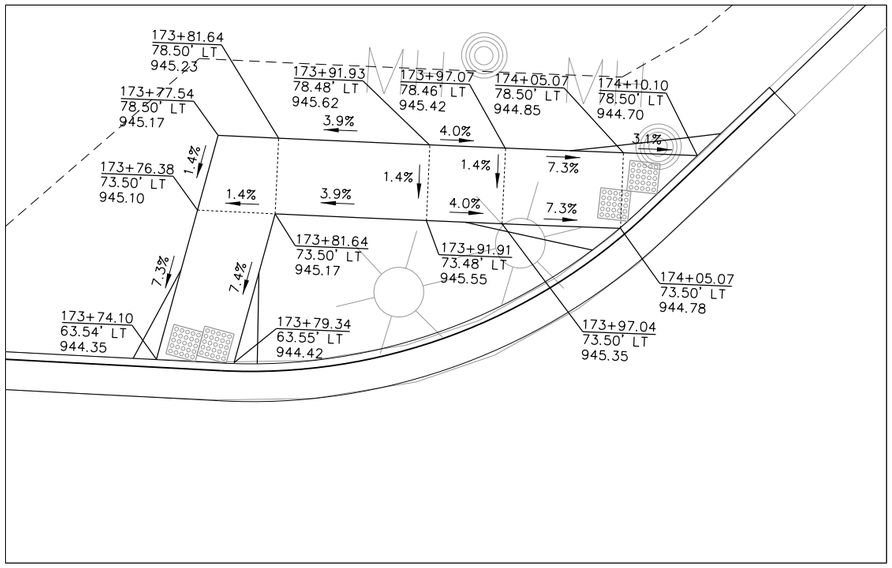


DETAIL 16 - MIDDLE ISLAND
(CURB RAMP TYPE 2 MODIFIED)

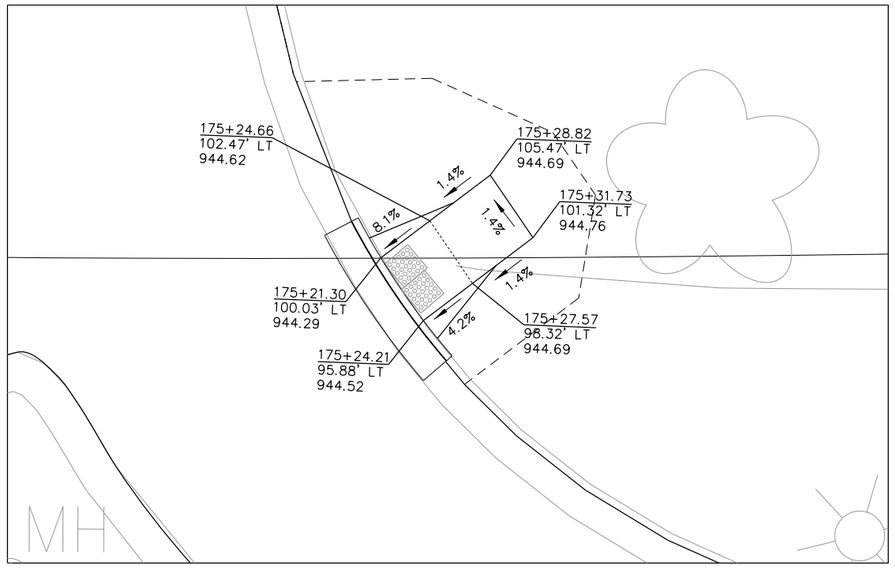


DETAIL 17 - EAST SIDE
(CURB RAMP TYPE 2 MODIFIED)

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CURB RAMP DETAILS - RAMONA ROAD	SHEET 53	E



DETAIL 18 - NORTHWEST QUADRANT
(CURB RAMP TYPE 2 MODIFIED)



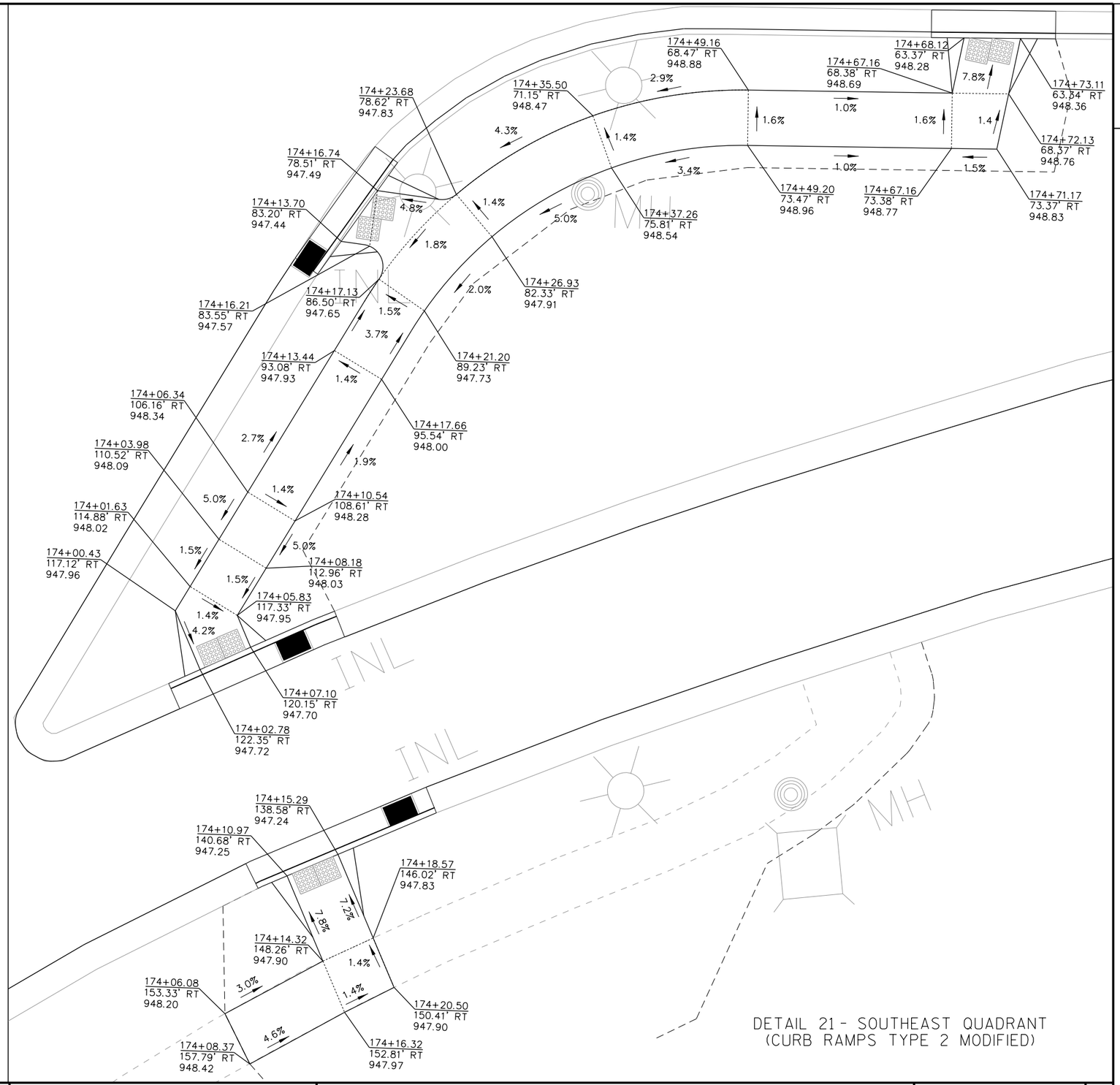
DETAIL 19 - NORTHEAST QUADRANT
(CURB RAMP TYPE 2 MODIFIED)

2

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CURB RAMP DETAILS - E. MAIN STREET	SHEET 54	E

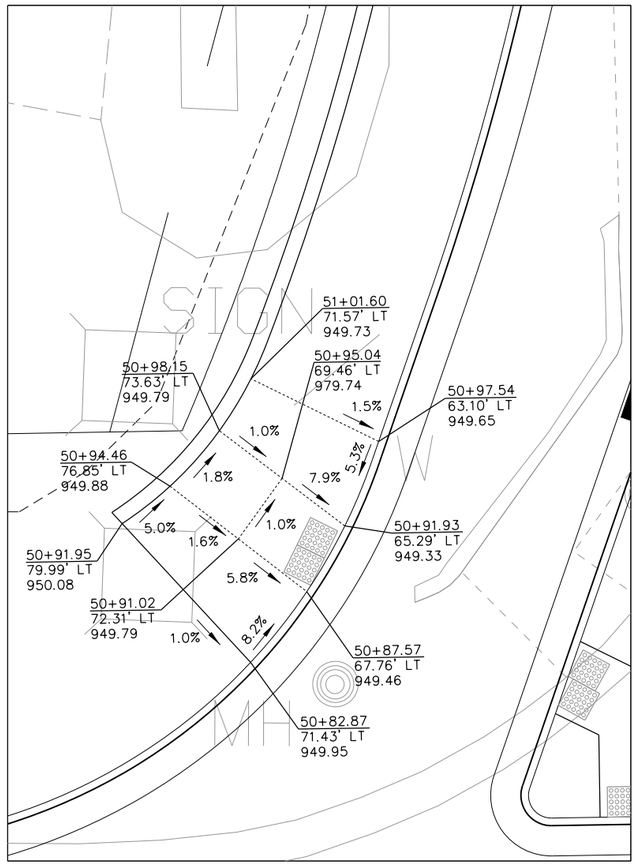
FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\021116_id.dgn
PLOT DATE : 4/27/2015
PLOT BY : GRAEF
PLOT NAME :
PLOT SCALE : 10.0000 sf / in.
WISDOT/CADDS SHEET 42

DETAIL 20 - SOUTHWEST QUADRANT
(CURB RAMP TYPE 2 MODIFIED)

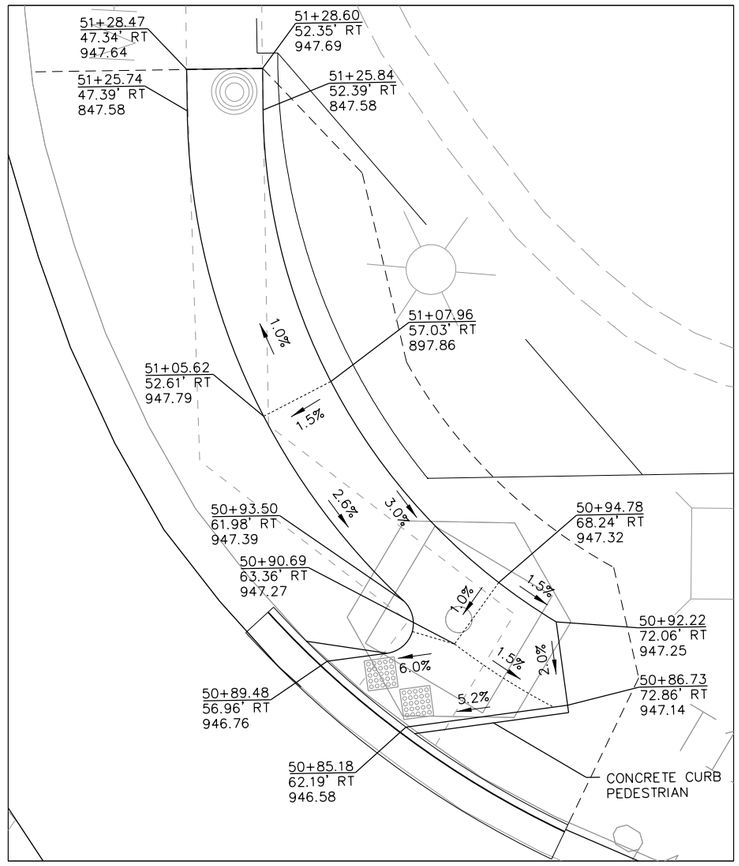


DETAIL 21 - SOUTHEAST QUADRANT
(CURB RAMPS TYPE 2 MODIFIED)

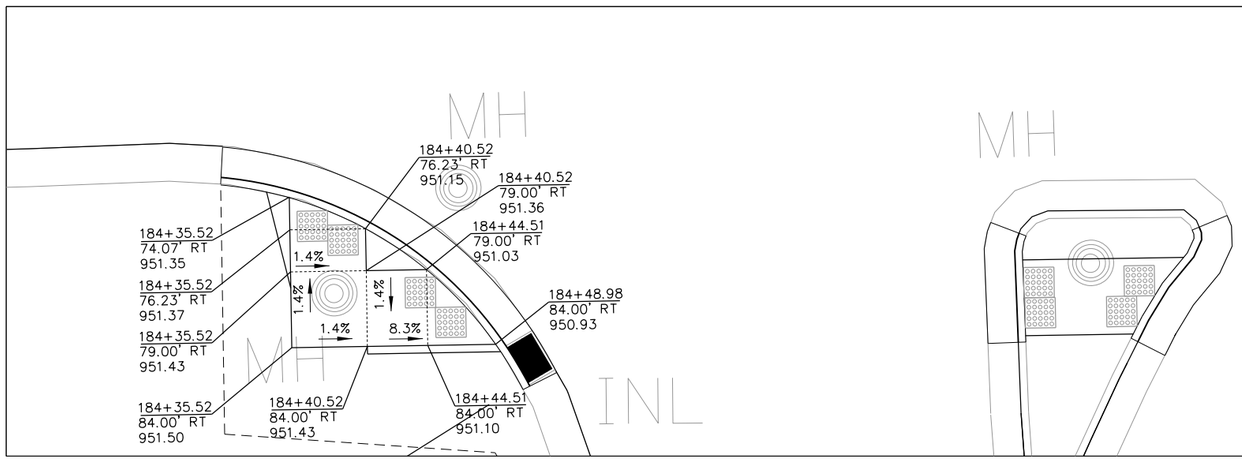
PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CURB RAMP DETAILS - E. MAIN STREET	SHEET 55	E



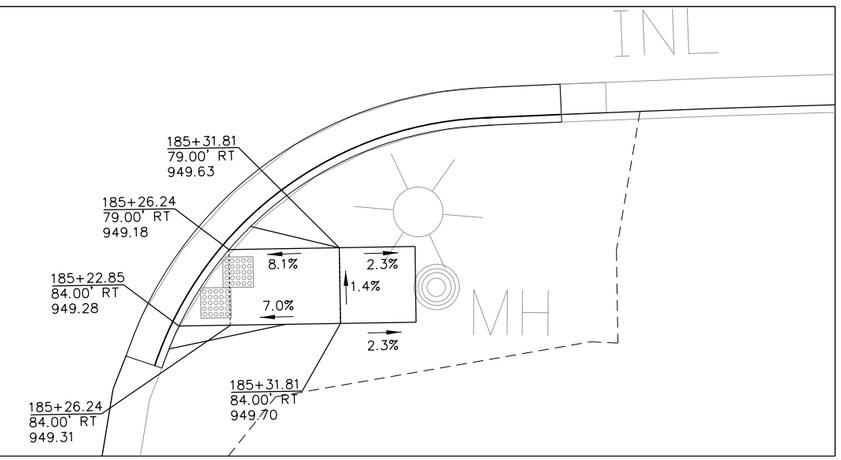
DETAIL 22 - NORTHWEST QUADRANT
(CURB RAMP TYPE 1 MODIFIED)



DETAIL 23 - NORTHEAST QUADRANT
(CURB RAMP TYPE 4 MODIFIED)

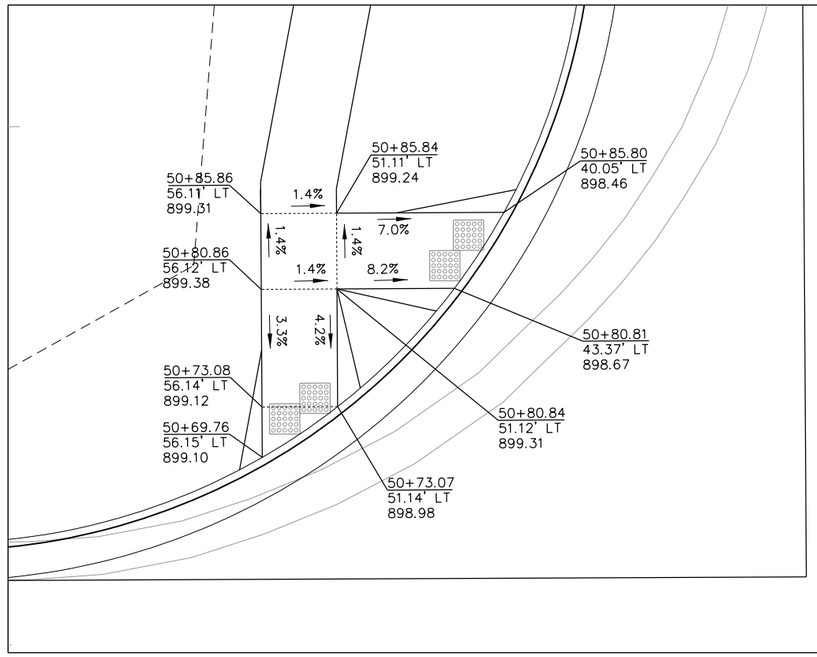


DETAIL 24 - SOUTHWEST QUADRANT
(CURB RAMP TYPE 2 MODIFIED)

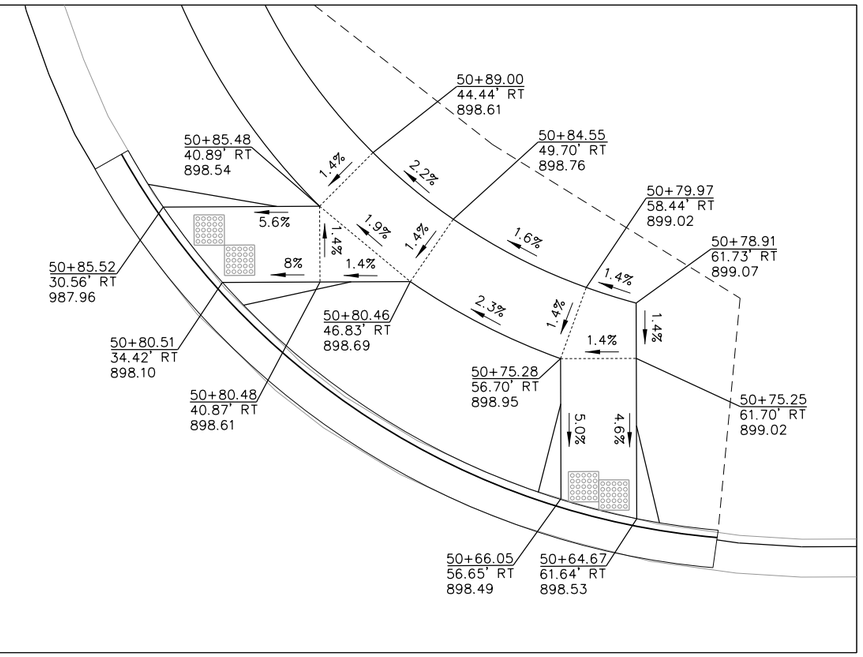


DETAIL 25 - SOUTHEAST QUADRANT
(CURB RAMP TYPE 2 MODIFIED)

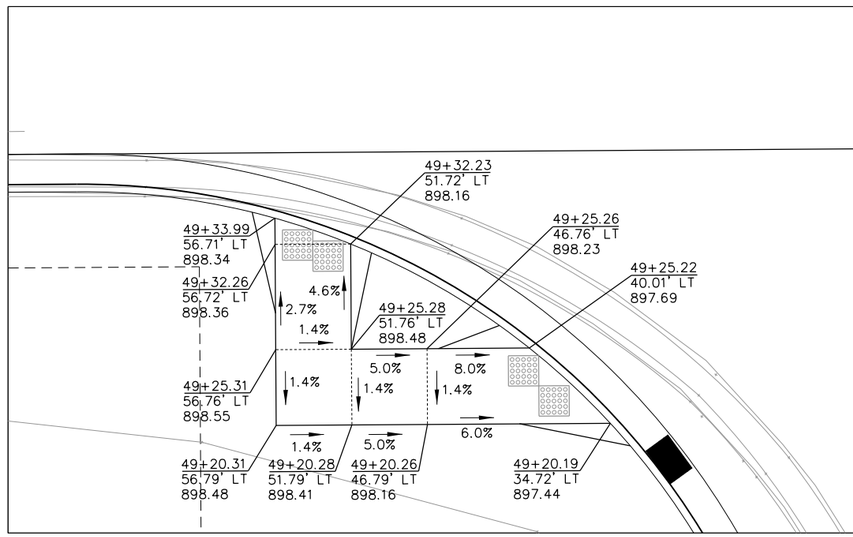
PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CURB RAMP DETAILS - SPRINGDALE ROAD	SHEET 56	E



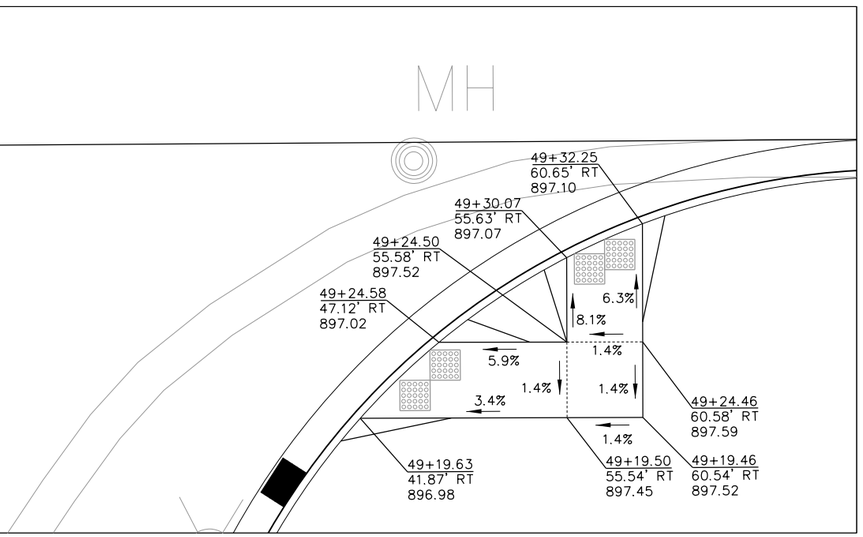
DETAIL 26 - NORTHWEST QUADRANT
(CURB RAMP TYPE 2 MODIFIED)



DETAIL 27 - NORTHEAST QUADRANT
(CURB RAMP TYPE 2 MODIFIED)

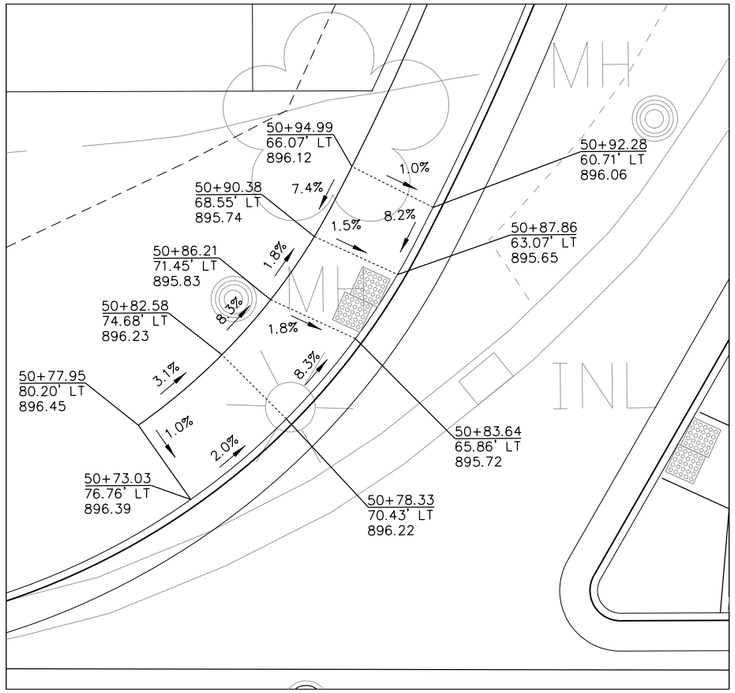


DETAIL 28 - SOUTHWEST QUADRANT
(CURB RAMP TYPE 2 MODIFIED)

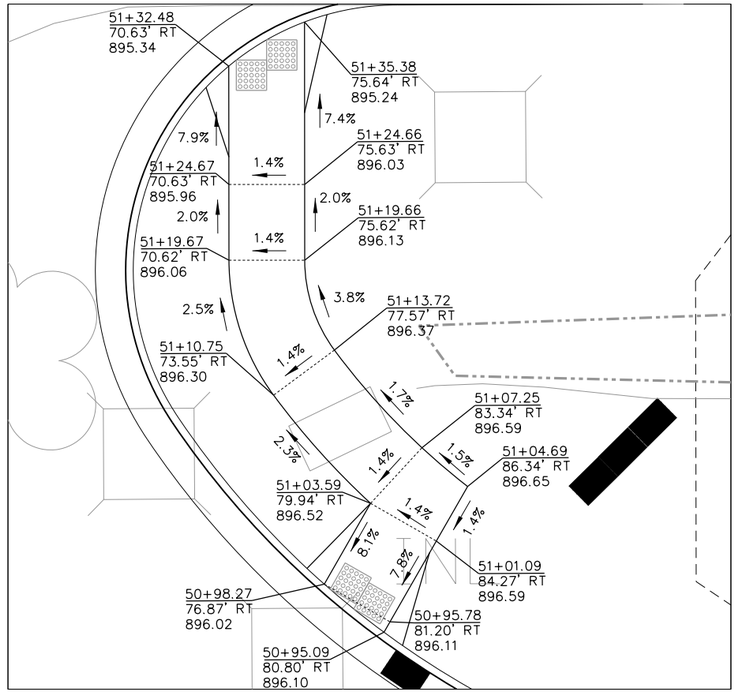


DETAIL 29 - SOUTHEAST QUADRANT
(CURB RAMP TYPE 2 MODIFIED)

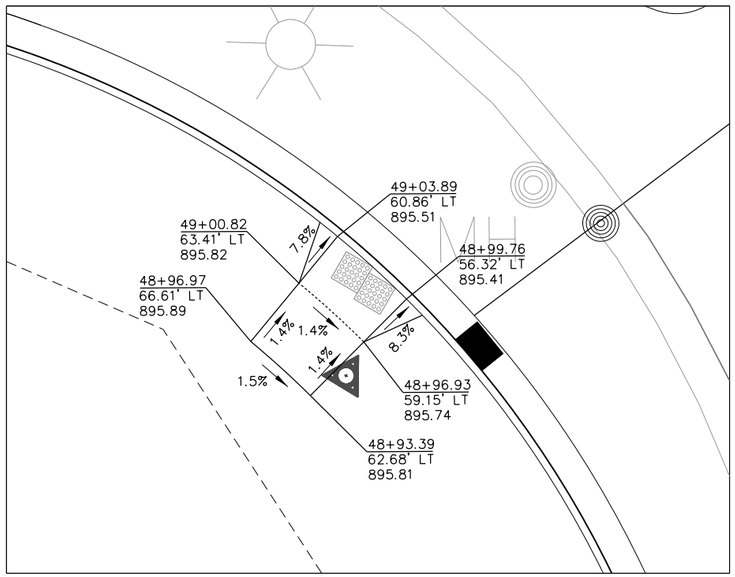
PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CURB RAMP DETAILS - PARKLAWN DRIVE	SHEET 57	E



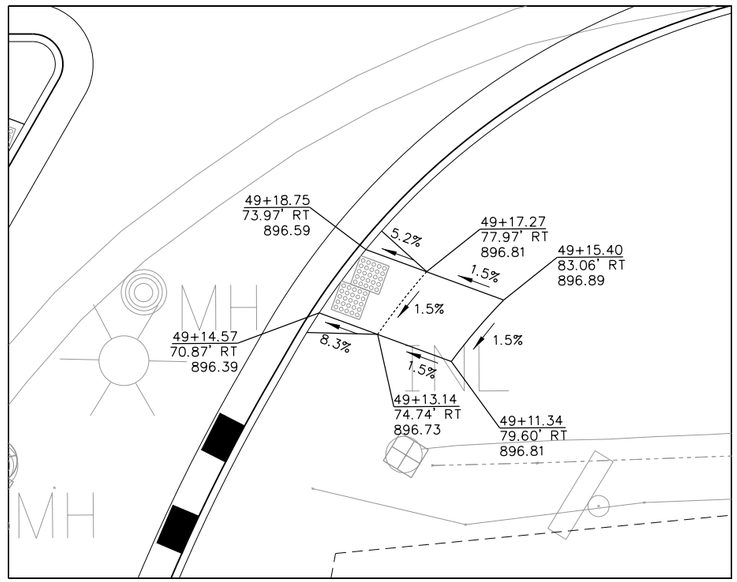
DETAIL 30 - NORTHWEST QUADRANT
(CURB RAMP TYPE 1A MODIFIED)



DETAIL 31 - SOUTHWEST QUADRANT
(CURB RAMP TYPE 2 MODIFIED)

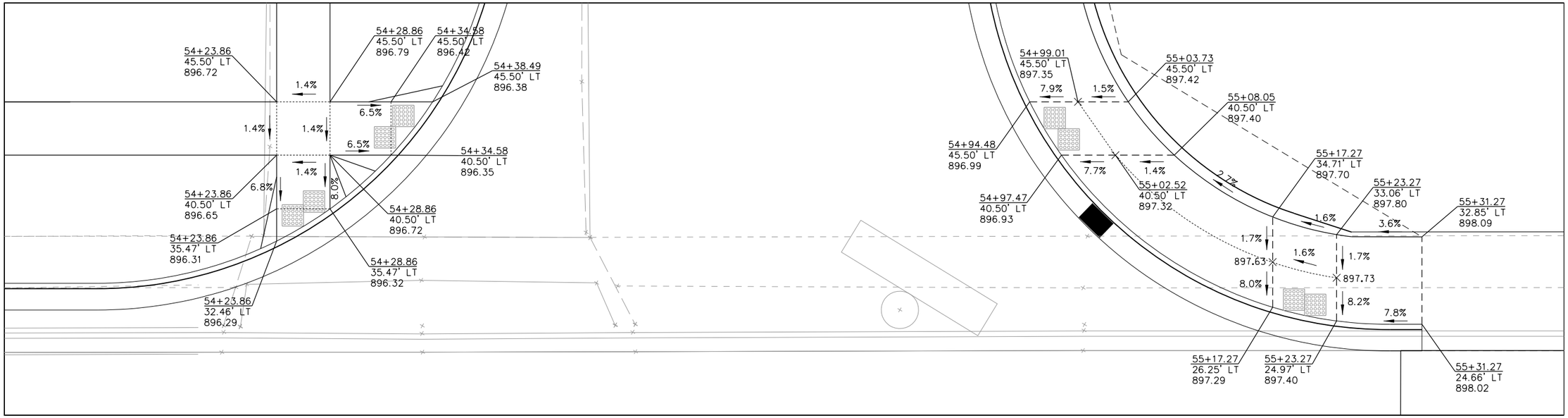


DETAIL 32 - SOUTHWEST QUADRANT
(CURB RAMP TYPE 2 MODIFIED)



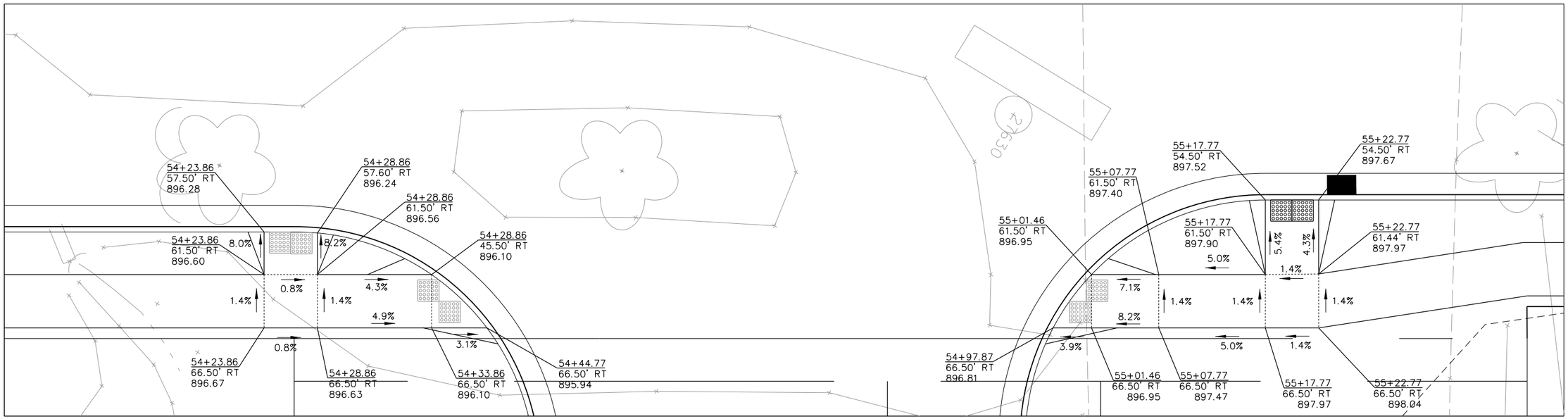
DETAIL 33 - SOUTHWEST QUADRANT
(CURB RAMP TYPE 2 MODIFIED)

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CURB RAMP DETAILS - KOSSOW ROAD	SHEET 58	E



DETAIL 34 - SOUTHWEST QUADRANT
(CURB RAMP TYPE 2 MODIFIED)

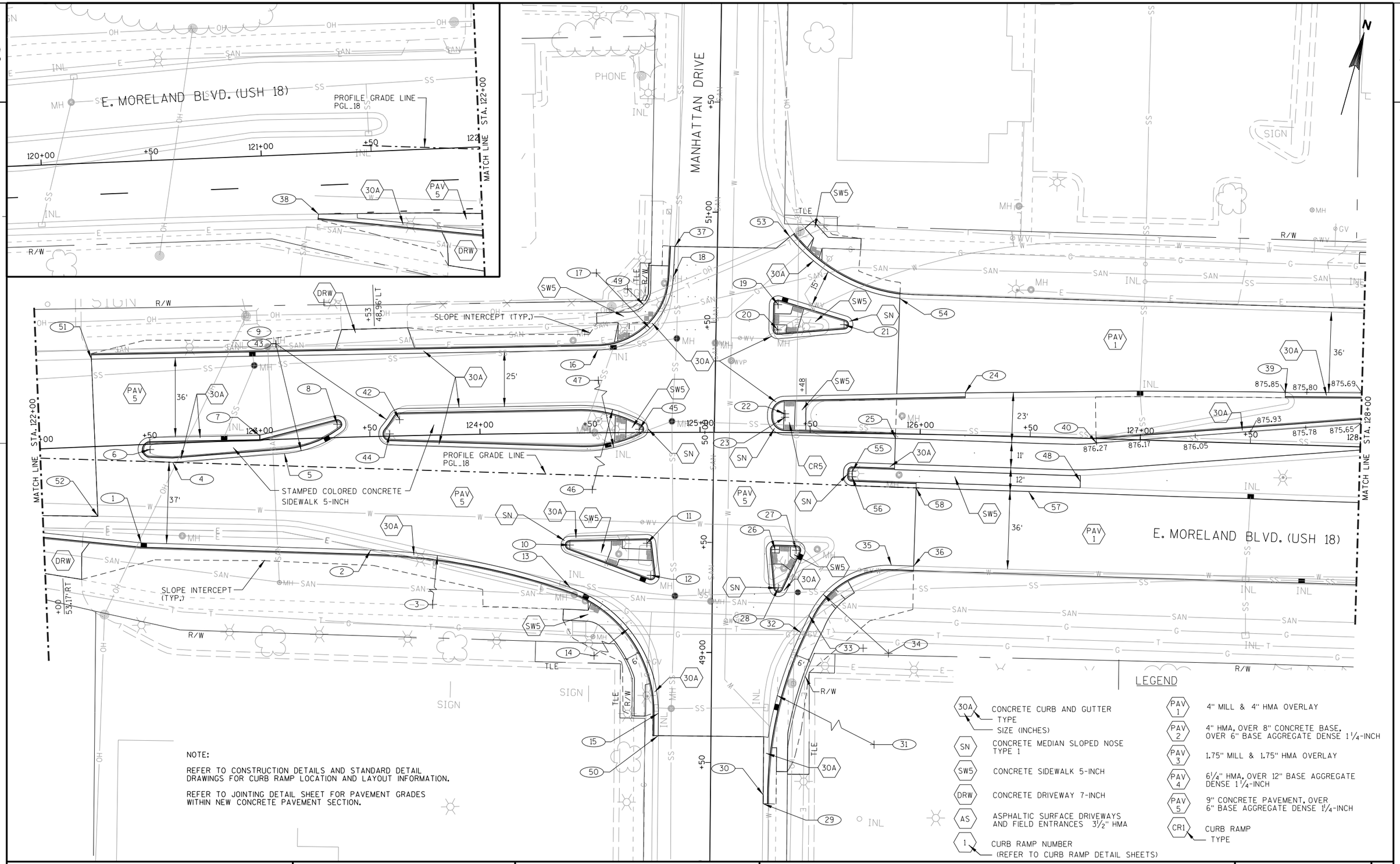
DETAIL 35 - NORTHWEST QUADRANT
(CURB RAMP TYPE 1 MODIFIED)



DETAIL 36 - SOUTHEAST QUADRANT
(CURB RAMP TYPE 2 MODIFIED)

DETAIL 37 - NORTHEAST QUADRANT
(CURB RAMP TYPE 2 MODIFIED)

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CURB RAMP DETAILS - ABBOTT DRIVE	SHEET 59	E



PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	PLAN DETAILS	SHEET 60	E

2

DATA TABLE

E. MORELAND BLVD (USH 18)

POINT NO.	STATION	OFFSET	COMMENTS
1	122+44.12	44.54' RT	END 10:1 TAPER
2	123+48.96	51.50' RT	BEGIN 300' RADIUS
3	123+30.48	350.97' RT	300' RADIUS
4	122+60.00	8.60' RT	BEGIN TAPER
5	123+10.91	6.50' RT	END TAPER
6	122+49.98	2.35' RT	5.5' RADIUS
7	122+99.80	2.11' LT	BEGIN TAPER
8	123+35.29	6.04' LT	4' RADIUS
9	123+08.64	43.45' LT	50' RADIUS
10	124+40.30	50.87' RT	4' RADIUS
11	124+75.65	50.36' RT	4' RADIUS
12	124+77.35	64.90' RT	4' RADIUS
13	124+40.34	70.24' RT	END 300' RADIUS, BEGIN 60' RADIUS
14	124+19.25	126.54' RT	60' RADIUS
15	124+80.60	127.61' RT	END 60' RADIUS, END CURB AND GUTTER
16	124+53.82	37.60' LT	BEGIN 35' RADIUS
17	124+53.47	72.60' LT	35' RADIUS
18	124+87.98	70.51' LT	END 35' RADIUS
19	125+35.11	58.10' LT	4' RADIUS
20	125+34.99	46.65' LT	4' RADIUS
21	125+64.87	49.32' LT	4' RADIUS
22	125+38.56	8.55' LT	8' RADIUS
23	125+38.56	6.98' LT	8' RADIUS
24	126+20.08	19.31' LT	END CURB AND GUTTER
25	125+88.77	2.05' RT	END CURB AND GUTTER
26	125+34.33	53.15' RT	4' RADIUS
27	125+44.09	53.39' RT	4' RADIUS
28	125+36.00	70.47' RT	4' RADIUS
29	125+29.53	168.64' RT	BEGIN CURB AND GUTTER
30	125+29.55	164.70' RT	BEGIN 175' RADIUS
31	127+08.86	162.71' RT	175' RADIUS
32	125+46.50	90.78' RT	END 175' RADIUS
33	125+50.22	82.94' RT	BEGIN 40' RADIUS
34	125+87.11	99.74' RT	40' RADIUS
35	125+87.84	59.75' RT	END 40' RADIUS
36	125+98.05	59.92' RT	END CURB AND GUTTER
37	124+88.73	84.47' LT	END CURB AND GUTTER
38	121+24.93	27.50' RT	BEGIN 10:1 TAPER
39	127+65.17	23.72' LT	BEGIN 75' TAPER, BEGIN CURB AND GUTTER
40	126+80.14	2.01' RT	BEGIN 9.5:1 TAPER, BEGIN CURB AND GUTTER
41	125+75.39	97.55' RT	20' SIDEWALK RADIUS
42	123+63.68	7.40' LT	5' RADIUS
43	123+08.64	43.45' LT	61' RADIUS
44	123+59.00	1.02' LT	5' RADIUS
45	124+72.34	1.48' LT	4' RADIUS
46	124+45.06	47.49' RT	60' RADIUS
47	124+47.82	51.77' LT	60' RADIUS
48	126+73.36	19.73' RT	END SIDEWALK
49	124+67.45	65.23' LT	10.5' SIDEWALK RADIUS
50	124+80.47	137.78' RT	END CURB AND GUTTER

RADII SHOWN ARE TO CURB FLANGE

POINT NO.	STATION	OFFSET	COMMENTS
51	122+25.00	39.74' LT	BEGIN CURB AND GUTTER
52	122+25.00	31.67' RT	SAWCUT FOR RECONSTRUCTION
53	125+40.22	88.92' LT	BEGIN CURB AND GUTTER
54	125+89.78	61.52' LT	END CURB AND GUTTER
55	125+69.37	17.28' RT	4' RADIUS
56	125+69.31	19.78' RT	4' RADIUS
57	126+50.00	25.09' RT	END CURB AND GUTTER
58	125+98.57	24.39' RT	END CURB AND GUTTER

RADII SHOWN ARE TO CURB FLANGE

DATA TABLE

E. MORELAND BLVD (USH 18)

POINT NO.	STATION	OFFSET	COMMENTS
1	128+40.38	25.50' LT	END 75' TAPER
2	128+65.14	25.47' LT	BEGIN 4' RADIUS
3	128+65.13	21.47' LT	4' RADIUS
4	128+65.55	17.49' LT	END 4' RADIUS. END 9.5:1 TAPER
5	NOT USED		
6	NOT USED		
7	130+56.61	20.24' RT	BEGIN CURB AND GUTTER, BEGIN 12.5:1 TAPER
8	131+40.91	13.50' RT	END 12.5:1 TAPER
9	132+32.26	13.50' RT	END CURB AND GUTTER

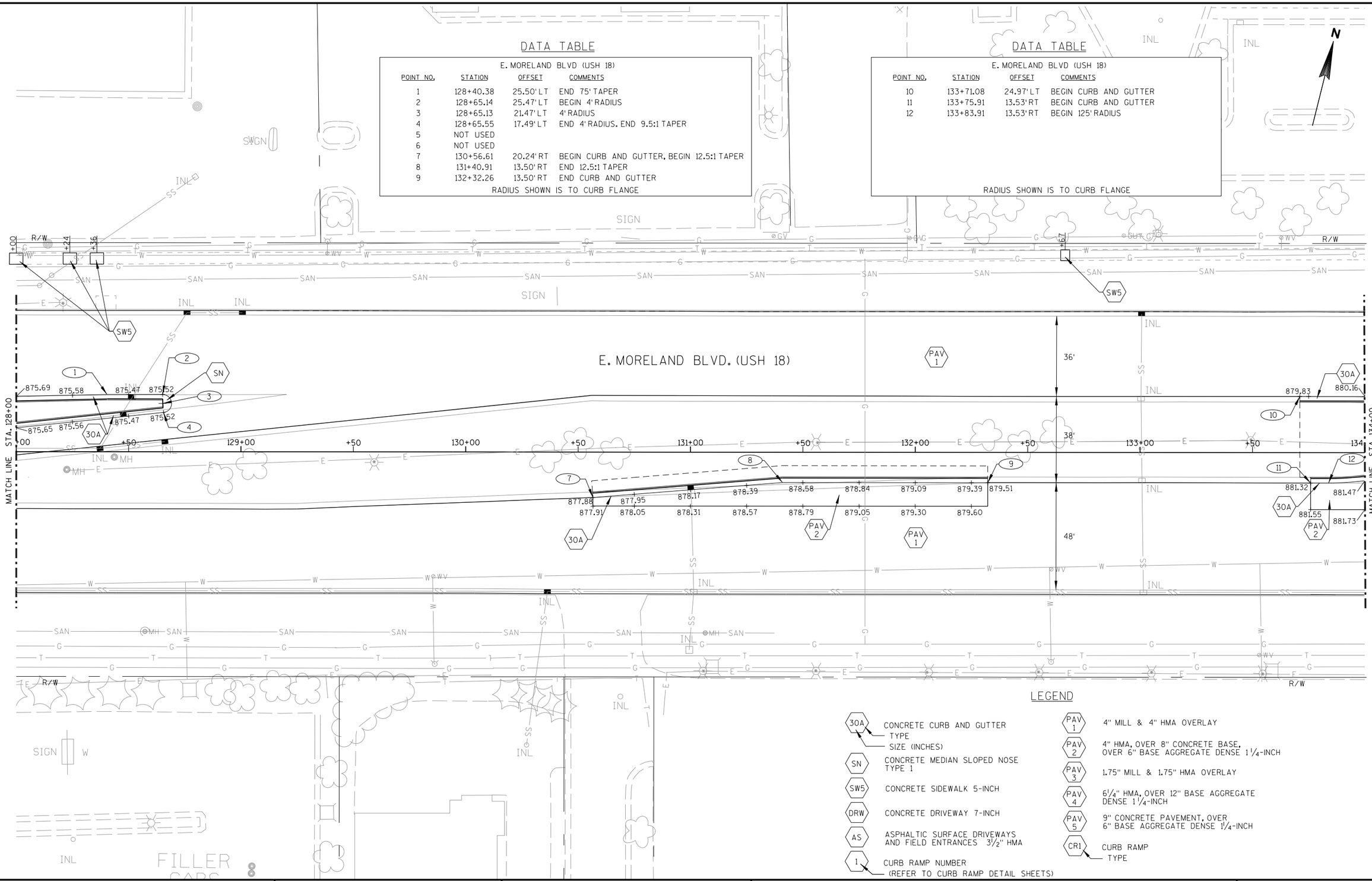
RADIUS SHOWN IS TO CURB FLANGE

DATA TABLE

E. MORELAND BLVD (USH 18)

POINT NO.	STATION	OFFSET	COMMENTS
10	133+71.08	24.97' LT	BEGIN CURB AND GUTTER
11	133+75.91	13.53' RT	BEGIN CURB AND GUTTER
12	133+83.91	13.53' RT	BEGIN 125' RADIUS

RADIUS SHOWN IS TO CURB FLANGE



LEGEND

- 30A — CONCRETE CURB AND GUTTER (TYPE / SIZE (INCHES))
- SN — CONCRETE MEDIAN SLOPED NOSE TYPE 1
- SW5 — CONCRETE SIDEWALK 5-INCH
- DRW — CONCRETE DRIVEWAY 7-INCH
- AS — ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES 3½" HMA
- 1 — CURB RAMP NUMBER (REFER TO CURB RAMP DETAIL SHEETS)
- PAV 1 — 4" MILL & 4" HMA OVERLAY
- PAV 2 — 4" HMA, OVER 8" CONCRETE BASE, OVER 6" BASE AGGREGATE DENSE 1¼-INCH
- PAV 3 — 1.75" MILL & 1.75" HMA OVERLAY
- PAV 4 — 6¼" HMA, OVER 12" BASE AGGREGATE DENSE 1¼-INCH
- PAV 5 — 9" CONCRETE PAVEMENT, OVER 6" BASE AGGREGATE DENSE 1¼-INCH
- CR1 — CURB RAMP TYPE

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	PLAN DETAILS	SHEET 62	E

DATA TABLE
E. MORELAND BLVD (USH 18)

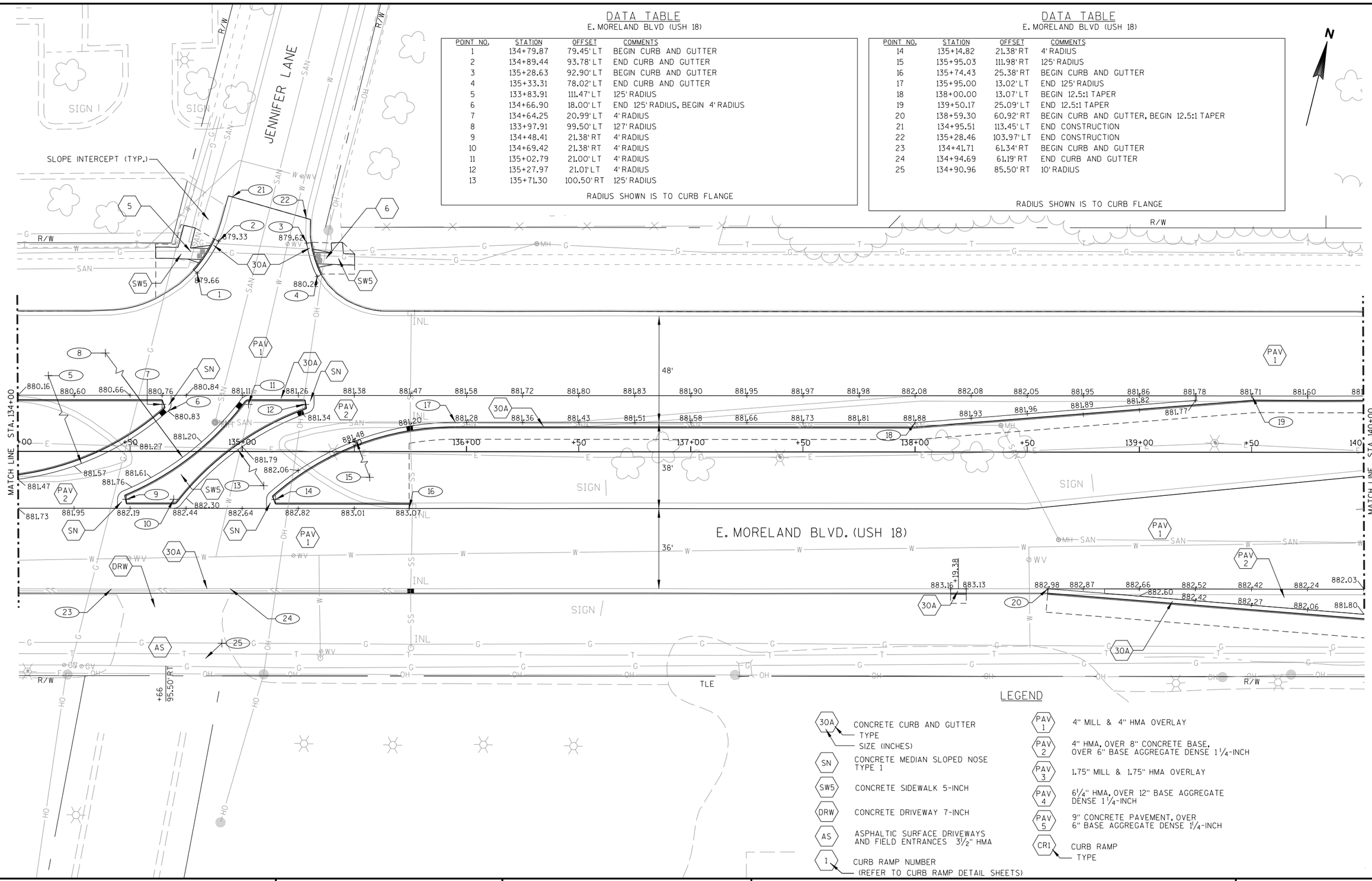
POINT NO.	STATION	OFFSET	COMMENTS
1	134+79.87	79.45' LT	BEGIN CURB AND GUTTER
2	134+89.44	93.78' LT	END CURB AND GUTTER
3	135+28.63	92.90' LT	BEGIN CURB AND GUTTER
4	135+33.31	78.02' LT	END CURB AND GUTTER
5	133+83.91	111.47' LT	125' RADIUS
6	134+66.90	18.00' LT	END 125' RADIUS, BEGIN 4' RADIUS
7	134+64.25	20.99' LT	4' RADIUS
8	133+97.91	99.50' LT	127' RADIUS
9	134+48.41	21.38' RT	4' RADIUS
10	134+69.42	21.38' RT	4' RADIUS
11	135+02.79	21.00' LT	4' RADIUS
12	135+27.97	21.01' LT	4' RADIUS
13	135+71.30	100.50' RT	125' RADIUS

RADIUS SHOWN IS TO CURB FLANGE

DATA TABLE
E. MORELAND BLVD (USH 18)

POINT NO.	STATION	OFFSET	COMMENTS
14	135+14.82	21.38' RT	4' RADIUS
15	135+95.03	111.98' RT	125' RADIUS
16	135+74.43	25.38' RT	BEGIN CURB AND GUTTER
17	135+95.00	13.02' LT	END 125' RADIUS
18	138+00.00	13.07' LT	BEGIN 12.5:1 TAPER
19	139+50.17	25.09' LT	END 12.5:1 TAPER
20	138+59.30	60.92' RT	BEGIN CURB AND GUTTER, BEGIN 12.5:1 TAPER
21	134+95.51	113.45' LT	END CONSTRUCTION
22	135+28.46	103.97' LT	END CONSTRUCTION
23	134+41.71	61.34' RT	BEGIN CURB AND GUTTER
24	134+94.69	61.19' RT	END CURB AND GUTTER
25	134+90.96	85.50' RT	10' RADIUS

RADIUS SHOWN IS TO CURB FLANGE



LEGEND

- 30A — CONCRETE CURB AND GUTTER (TYPE / SIZE (INCHES))
- SN — CONCRETE MEDIAN SLOPED NOSE TYPE 1
- SW5 — CONCRETE SIDEWALK 5-INCH
- DRW — CONCRETE DRIVEWAY 7-INCH
- AS — ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES 3½" HMA
- 1 — CURB RAMP NUMBER (REFER TO CURB RAMP DETAIL SHEETS)
- PAV 1 — 4" MILL & 4" HMA OVERLAY
- PAV 2 — 4" HMA, OVER 8" CONCRETE BASE, OVER 6" BASE AGGREGATE DENSE 1¼-INCH
- PAV 3 — 1.75" MILL & 1.75" HMA OVERLAY
- PAV 4 — 6¼" HMA, OVER 12" BASE AGGREGATE DENSE 1¼-INCH
- PAV 5 — 9" CONCRETE PAVEMENT, OVER 6" BASE AGGREGATE DENSE 1¼-INCH
- CR1 — CURB RAMP TYPE

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	PLAN DETAILS	SHEET 63	E

NOTE:

REFER TO CONSTRUCTION DETAILS AND STANDARD DETAIL DRAWINGS FOR CURB RAMP LOCATION AND LAYOUT INFORMATION.

WOLF ROAD

E. MORELAND BLVD. (USH 18)

LES PAUL PKWY. (STH 164)

DRIVEWAY APPROACH REMOVED

SLOPE INTERCEPT (TYP.)

MATCH LINE STA. 140+00

MATCH LINE STA. 146+00

LEGEND

30A — CONCRETE CURB AND GUTTER TYPE / SIZE (INCHES)	PAV 1 — 4" MILL & 4" HMA OVERLAY
SN — CONCRETE MEDIAN SLOPED NOSE TYPE 1	PAV 2 — 4" HMA, OVER 8" CONCRETE BASE, OVER 6" BASE AGGREGATE DENSE 1 1/4-INCH
SW5 — CONCRETE SIDEWALK 5-INCH	PAV 3 — 1.75" MILL & 1.75" HMA OVERLAY
DRW — CONCRETE DRIVEWAY 7-INCH	PAV 4 — 6 1/4" HMA, OVER 12" BASE AGGREGATE DENSE 1 1/4-INCH
AS — ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES 3 1/2" HMA	PAV 5 — 9" CONCRETE PAVEMENT, OVER 6" BASE AGGREGATE DENSE 1 1/4-INCH
1 — CURB RAMP NUMBER (REFER TO CURB RAMP DETAIL SHEETS)	CR1 — CURB RAMP TYPE

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	PLAN DETAILS	SHEET 64 E

2

DATA TABLE

E. MORELAND BLVD (USH 18)

POINT NO.	STATION	OFFSET	COMMENTS
1	140+22.86	74.00' RT	END 12.5:1 TAPER
2	142+06.47	74.00' RT	END CURB AND GUTTER
3	143+09.81	68.56' RT	4' RADIUS
4	143+44.64	66.48' RT	4' RADIUS
5	143+41.08	79.94' RT	4' RADIUS
6	143+00.21	12.75' LT	BEGIN CURB AND GUTTER, BEGIN SIDEWALK
7	143+00.21	25.23' LT	BEGIN CURB AND GUTTER, BEGIN 60' RADIUS, BEGIN SIDEWALK
8	142+99.27	34.76' RT	60' RADIUS
9	143+21.23	16.75' LT	4' RADIUS
10	144+50.52	98.73' LT	BEGIN CURB AND GUTTER, BEGIN 50' RADIUS
11	144+83.02	136.73' LT	50' RADIUS
12	144+61.43	91.64' LT	END 50' RADIUS, END CURB AND GUTTER
13	144+35.04	77.67' LT	4' RADIUS
14	144+35.08	66.00' LT	4' RADIUS
15	144+61.60	68.00' LT	4' RADIUS
16	144+82.93	25.19' LT	BEGIN CURB AND GUTTER
17	144+39.30	19.19' LT	6' RADIUS
18	144+39.30	16.63' LT	6' RADIUS
19	144+82.59	10.63' LT	END CURB AND GUTTER
20	144+79.49	12.75' RT	BEGIN CURB AND GUTTER
21	144+58.30	16.75' RT	4' RADIUS
22	144+83.15	46.54' LT	72' RADIUS
23	144+76.85	25.18' RT	END 72' RADIUS, END CURB AND GUTTER
24	144+24.31	102.67' RT	4' RADIUS
25	144+27.55	65.40' RT	4' RADIUS
26	144+45.23	65.58' RT	4' RADIUS
27	145+99.59	74.00' LT	BEGIN CURB AND GUTTER
28	143+80.37	146.85' LT	SAWCUT AND MATCH EXISTING
29	144+29.77	147.04' LT	SAWCUT AND MATCH EXISTING
30	285+04.49	14.10' LT	BEGIN CURB AND GUTTER
31	285+45.26	10.04' LT	4' RADIUS
32	285+45.61	6.05' LT	END 4' RADIUS, BEGIN 570' RADIUS
33	284+96.22	573.91' LT	570' RADIUS, 594' RADIUS
34	284+91.94	3.92' LT	END 570' RADIUS, END CURB AND GUTTER, SAWCUT AND MATCH EXISTING
35	284+91.97	20.08' RT	BEGIN CORRUGATED MEDIAN, BEGIN 594' RADIUS
36	285+47.68	17.86' RT	END 594' RADIUS
37	285+84.89	14.62' RT	END CORRUGATED MEDIAN
38	285+04.49	50.07' LT	SAWCUT AND MATCH EXISTING
39	284+92.02	53.65' RT	SAWCUT AND MATCH EXISTING
40	143+58.05	98.06' LT	10' SIDEWALK RADIUS
41	143+29.27	1.29' RT	BEGIN SIDEWALK
42	143+29.26	22.71' RT	BEGIN SIDEWALK
43	144+95.00	17.91' LT	END SIDEWALK
44	140+45.84	25.17' LT	END CURB & GUTTER

RADIUS SHOWN IS TO CURB FLANGE

LEGEND

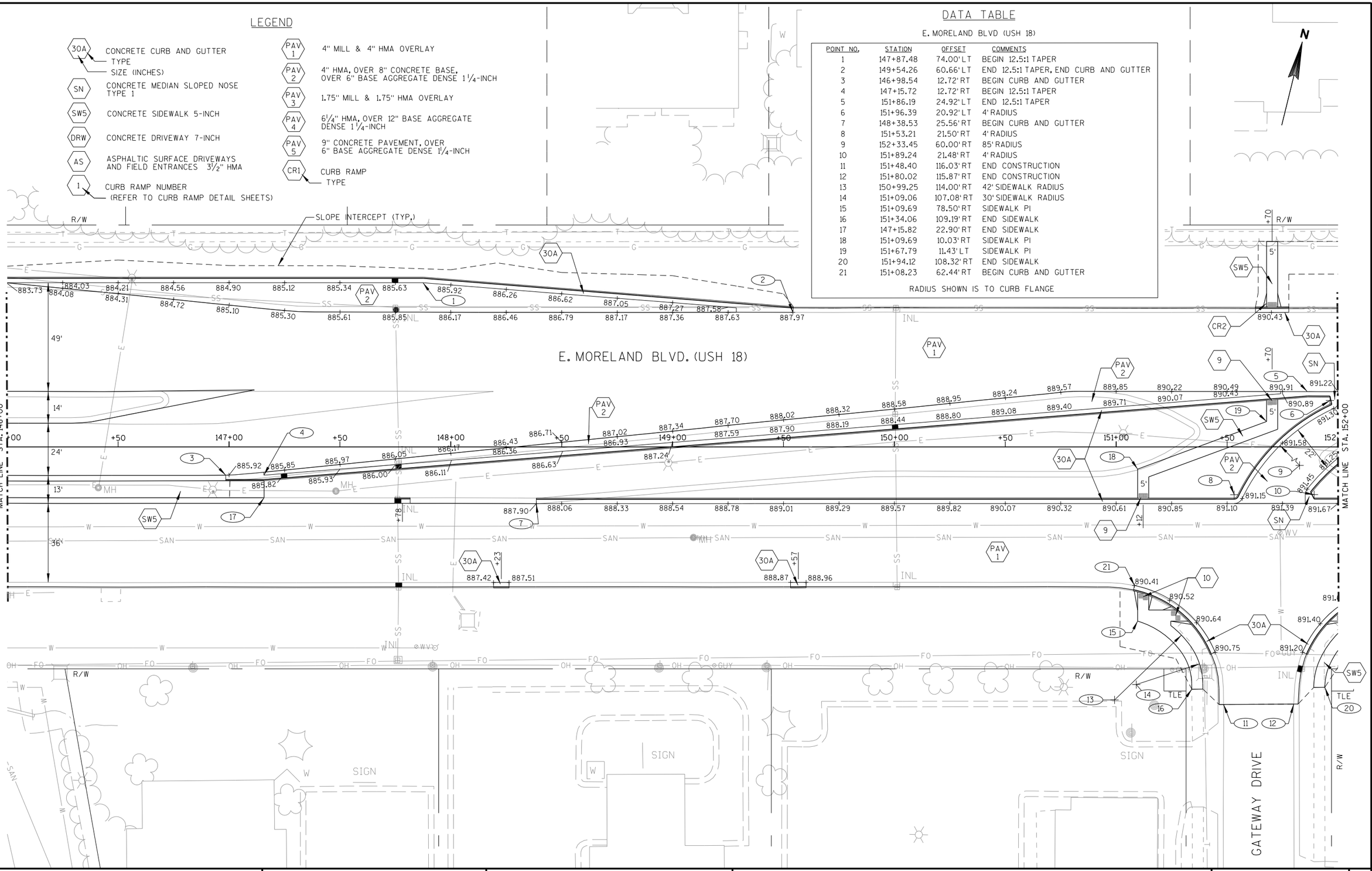
- 30A — CONCRETE CURB AND GUTTER (TYPE / SIZE (INCHES))
- SN — CONCRETE MEDIAN SLOPED NOSE TYPE 1
- SW5 — CONCRETE SIDEWALK 5-INCH
- DRW — CONCRETE DRIVEWAY 7-INCH
- AS — ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES 3½" HMA
- 1 — CURB RAMP NUMBER (REFER TO CURB RAMP DETAIL SHEETS)
- PAV 1 — 4" MILL & 4" HMA OVERLAY
- PAV 2 — 4" HMA, OVER 8" CONCRETE BASE, OVER 6" BASE AGGREGATE DENSE 1 1/4-INCH
- PAV 3 — 1.75" MILL & 1.75" HMA OVERLAY
- PAV 4 — 6¼" HMA, OVER 12" BASE AGGREGATE DENSE 1 1/4-INCH
- PAV 5 — 9" CONCRETE PAVEMENT, OVER 6" BASE AGGREGATE DENSE 1¼-INCH
- CR1 — CURB RAMP (TYPE)

DATA TABLE

E. MORELAND BLVD (USH 18)

POINT NO.	STATION	OFFSET	COMMENTS
1	147+87.48	74.00' LT	BEGIN 12.5:1 TAPER
2	149+54.26	60.66' LT	END 12.5:1 TAPER, END CURB AND GUTTER
3	146+98.54	12.72' RT	BEGIN CURB AND GUTTER
4	147+15.72	12.72' RT	BEGIN 12.5:1 TAPER
5	151+86.19	24.92' LT	END 12.5:1 TAPER
6	151+96.39	20.92' LT	4' RADIUS
7	148+38.53	25.56' RT	BEGIN CURB AND GUTTER
8	151+53.21	21.50' RT	4' RADIUS
9	152+33.45	60.00' RT	85' RADIUS
10	151+89.24	21.48' RT	4' RADIUS
11	151+48.40	116.03' RT	END CONSTRUCTION
12	151+80.02	115.87' RT	END CONSTRUCTION
13	150+99.25	114.00' RT	42' SIDEWALK RADIUS
14	151+09.06	107.08' RT	30' SIDEWALK RADIUS
15	151+09.69	78.50' RT	SIDEWALK PI
16	151+34.06	109.19' RT	END SIDEWALK
17	147+15.82	22.90' RT	END SIDEWALK
18	151+09.69	10.03' RT	SIDEWALK PI
19	151+67.79	11.43' LT	SIDEWALK PI
20	151+94.12	108.32' RT	END SIDEWALK
21	151+08.23	62.44' RT	BEGIN CURB AND GUTTER

RADIUS SHOWN IS TO CURB FLANGE



PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	PLAN DETAILS	SHEET 66	E

LEGEND

- 30A — CONCRETE CURB AND GUTTER; TYPE; SIZE (INCHES)
- SN — CONCRETE MEDIAN SLOPED NOSE TYPE 1
- SW5 — CONCRETE SIDEWALK 5-INCH
- DRW — CONCRETE DRIVEWAY 7-INCH
- AS — ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES 3½" HMA
- 1 — CURB RAMP NUMBER (REFER TO CURB RAMP DETAIL SHEETS)
- PAV 1 — 4" MILL & 4" HMA OVERLAY
- PAV 2 — 4" HMA, OVER 8" CONCRETE BASE, OVER 6" BASE AGGREGATE DENSE 1¼-INCH
- PAV 3 — 1.75" MILL & 1.75" HMA OVERLAY
- PAV 4 — 6¼" HMA, OVER 12" BASE AGGREGATE DENSE 1¼-INCH
- PAV 5 — 9" CONCRETE PAVEMENT, OVER 6" BASE AGGREGATE DENSE 1¼-INCH
- CR1 — CURB RAMP; TYPE

DATA TABLE

E. MORELAND BLVD (USH 18)

POINT NO.	STATION	OFFSET	COMMENTS
1	152+52.80	71.69' RT	85' RADIUS
2	152+57.38	13.33' LT	END CURB AND GUTTER
3	152+58.89	25.47' RT	END CURB AND GUTTER
4	152+38.63	78.50' RT	SIDEWALK PI
5	--	--	NOT USED
6	154+17.50	25.14' RT	BEGIN CURB AND GUTTER, BEGIN 12.5:1 TAPER
7	153+32.02	13.30' LT	BEGIN CURB AND GUTTER
8	154+92.19	13.30' LT	BEGIN 12.5:1 TAPER
9	156+41.36	24.90' LT	END 12.5:1 TAPER, END CURB AND GUTTER
10	152+94.08	60.97' RT	BEGIN CURB AND GUTTER
11	153+37.88	60.96' RT	END CURB AND GUTTER
12	152+29.94	113.45' RT	42' SIDEWALK RADIUS
13	152+08.66	78.50' RT	SIDEWALK PI
14	156+79.90	3.75' RT	END 12.5:1 TAPER
15	157+82.25	61.15' RT	BEGIN SIDEWALK
16	156+84.93	19.75' RT	5' RAD.
17	156+85.15	14.75' RT	END 5' RAD., BEGIN 2850' RAD.
18	156+84.93	24.75' RT	END 2840' RAD., BEGIN 5' RAD.
19	154+53.39	2864.79' RT	2850' RAD.
20	154+53.39	2864.79' RT	2840' RAD.
			RADIUS SHOWN IS TO CURB FLANGE

E. MORELAND BLVD. (USH 18)

MATCH LINE STA. 152+00

MATCH LINE STA. 158+00

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	PLAN DETAILS	SHEET 67	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\021206_pd.dgn | PLOT DATE : 4/27/2015 | PLOT BY : GRAEF | PLOT NAME : | PLOT SCALE : 40.0000 sf / in. | WISDOT/CADDS SHEET 42

LEGEND

- 30A — CONCRETE CURB AND GUTTER (TYPE / SIZE (INCHES))
- SN — CONCRETE MEDIAN SLOPED NOSE TYPE 1
- SW5 — CONCRETE SIDEWALK 5-INCH
- DRW — CONCRETE DRIVEWAY 7-INCH
- AS — ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES 3½" HMA
- 1 — CURB RAMP NUMBER (REFER TO CURB RAMP DETAIL SHEETS)
- PAV 1 — 4" MILL & 4" HMA OVERLAY
- PAV 2 — 4" HMA, OVER 8" CONCRETE BASE, OVER 6" BASE AGGREGATE DENSE 1¼-INCH
- PAV 3 — 1.75" MILL & 1.75" HMA OVERLAY
- PAV 4 — 6¼" HMA, OVER 12" BASE AGGREGATE DENSE 1¼-INCH
- PAV 5 — 9" CONCRETE PAVEMENT, OVER 6" BASE AGGREGATE DENSE 1¼-INCH
- CR1 — CURB RAMP TYPE

DATA TABLE

E. MORELAND BLVD (USH 18)

POINT NO.	STATION	OFFSET	COMMENTS
1	--	--	NOT USED
2	154+53.39	2864.79' RT	2840' RAD.
3	160+58.52	110.08' LT	END CONSTRUCTION
4	160+98.29	110.24' LT	END CONSTRUCTION
5	161+43.20	108.50' LT	35' SIDEWALK RADIUS
6	162+71.76	25.81' RT	BEGIN CURB AND GUTTER, BEGIN 12.5:1 TAPER
7	160+34.67	15.42' RT	END 2850' RAD., BEGIN 5' RAD.
8	160+34.58	20.42' RT	5' RAD.
9	160+34.49	25.42' RT	END 5' RAD., BEGIN 2840' RAD.
10	160+09.68	23.21' LT	BEGIN CURB AND GUTTER
11	160+36.47	12.43' LT	4' RAD.
12	159+93.64	81.18' LT	85' RAD.
13	162+50.00	12.94' LT	BEGIN CURB AND GUTTER

RADIUS SHOWN IS TO CURB FLANGE

AVALON DRIVE

E. MORELAND BLVD. (USH 18)

SLOPE INTERCEPT (TYP.)

MATCH LINE STA. 158+00

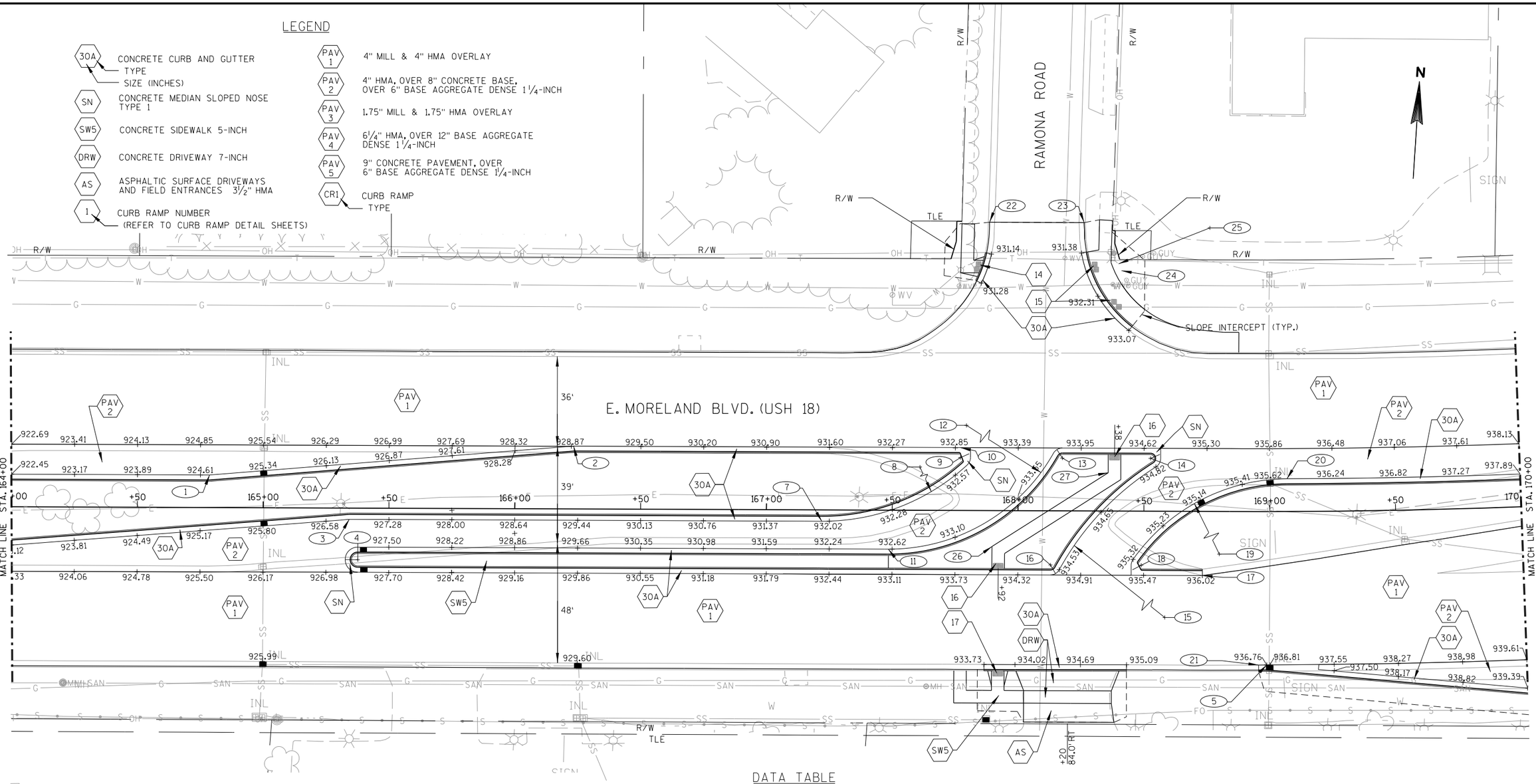
MATCH LINE STA. 164+00

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	PLAN DETAILS	SHEET 68	E

2

LEGEND

- 30A — CONCRETE CURB AND GUTTER (TYPE / SIZE (INCHES))
- SN — CONCRETE MEDIAN SLOPED NOSE TYPE 1
- SW5 — CONCRETE SIDEWALK 5-INCH
- DRW — CONCRETE DRIVEWAY 7-INCH
- AS — ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES 3½" HMA
- 1 — CURB RAMP NUMBER (REFER TO CURB RAMP DETAIL SHEETS)
- PAV 1 — 4" MILL & 4" HMA OVERLAY
- PAV 2 — 4" HMA, OVER 8" CONCRETE BASE, OVER 6" BASE AGGREGATE DENSE 1 1/4-INCH
- PAV 3 — 1.75" MILL & 1.75" HMA OVERLAY
- PAV 4 — 6 1/4" HMA, OVER 12" BASE AGGREGATE DENSE 1 1/4-INCH
- PAV 5 — 9" CONCRETE PAVEMENT, OVER 6" BASE AGGREGATE DENSE 1 1/4-INCH
- CR1 — CURB RAMP TYPE



DATA TABLE

E. MORELAND BLVD (USH 18)

POINT NO.	STATION	OFFSET	COMMENTS
1	164+78.62	12.94' LT	BEGIN 12.5:1 TAPER
2	166+23.29	25.00' LT	END 12.5:1 TAPER
3	165+34.23	4.50' RT	END 12.5:1 TAPER
4	165+37.67	20.50' RT	5' RADIUS
5	168+98.74	60.98' RT	CURB AND GUTTER ANGLE POINT
6	--	--	NOT USED
7	167+22.02	4.50' RT	BEGIN 85' RADIUS
8	167+22.02	80.50' LT	85' RADIUS
9	167+76.98	21.00' LT	4' RADIUS
10	167+76.98	25.00' LT	BEGIN 4' RADIUS
11	167+48.52	15.50' RT	BEGIN 75' RADIUS, END SIDEWALK

RADIUS SHOWN IS TO CURB FLANGE

E. MORELAND BLVD (USH 18)

POINT NO.	STATION	OFFSET	COMMENTS
12	167+48.52	59.50' LT	75' RADIUS
13	168+17.51	21.00' LT	4' RADIUS
14	168+52.59	21.00' LT	4' RADIUS
15	169+14.10	77.00' RT	85' RADIUS
16	168+12.96	21.50' RT	4' RADIUS
17	168+73.36	25.50' RT	BEGIN CURB AND GUTTER
18	168+49.07	21.50' RT	4' RADIUS
19	169+06.95	62.00' RT	75' RADIUS
20	169+06.95	13.00' LT	END 75' RADIUS
21	168+95.58	60.99' RT	BEGIN CURB AND GUTTER

RADIUS SHOWN IS TO CURB FLANGE

E. MORELAND BLVD (USH 18)

POINT NO.	STATION	OFFSET	COMMENTS
22	167+88.25	114.64' LT	SAWCUT AND MATCH EXISTING
23	168+25.83	114.64' LT	SAWCUT AND MATCH EXISTING
24	168+40.77	95.56' LT	SIDEWALK ANGLE POINT
25	168+75.80	112.72' LT	39' SIDEWALK RADIUS
26	167+89.69	14.26' LT	SIDEWALK PI
27	168+35.77	15.24' LT	SIDEWALK PI

RADIUS SHOWN IS TO CURB FLANGE

NOTE:

REFER TO CONSTRUCTION DETAILS AND STANDARD DETAIL DRAWINGS FOR CURB RAMP LOCATION AND LAYOUT INFORMATION.

E. MORELAND BLVD. (USH 18)

E. MAIN STREET

MATCH LINE STA. 170+00

MATCH LINE STA. 176+00

SLOPE INTERCEPT (TYP.)

DRIVEWAY REMOVED

LEGEND

- 30A — CONCRETE CURB AND GUTTER TYPE / SIZE (INCHES)
- SN — CONCRETE MEDIAN SLOPED NOSE TYPE 1
- SW5 — CONCRETE SIDEWALK 5-INCH
- DRW — CONCRETE DRIVEWAY 7-INCH
- AS — ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES 3½" HMA
- 1 — CURB RAMP NUMBER (REFER TO CURB RAMP DETAIL SHEETS)
- PAV 1 — 4" MILL & 4" HMA OVERLAY
- PAV 2 — 4" HMA, OVER 8" CONCRETE BASE, OVER 6" BASE AGGREGATE DENSE 1¼-INCH
- PAV 3 — 1.75" MILL & 1.75" HMA OVERLAY
- PAV 4 — 6¼" HMA, OVER 12" BASE AGGREGATE DENSE 1¼-INCH
- PAV 5 — 9" CONCRETE PAVEMENT, OVER 6" BASE AGGREGATE DENSE 1¼-INCH
- CR1 — CURB RAMP TYPE

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	PLAN DETAILS	SHEET 70 E

2

2

DATA TABLE

E. MORELAND BLVD (USH 18)

POINT NO.	STATION	OFFSET	COMMENTS
1	170+36.67	13.00' LT	BEGIN TAPER
2	171+70.39	25.19' LT	END TAPER, END CURB AND GUTTER
3	170+74.07	21.42' RT	4' RADIUS
4	170+73.52	17.46' RT	BEGIN TAPER
5	171+50.91	7.80' RT	END TAPER, END CURB AND GUTTER, END SIDEWALK
6	171+50.91	25.42' RT	END CURB AND GUTTER, END SIDEWALK
7	170+10.56	73.50' RT	END TAPER, BEGIN 2,938.29' RADIUS
8	168+84.11	2864.79' LT	2,938.29' RADIUS
9	172+52.09	73.50' RT	END 2,938.29' RADIUS, END CURB AND GUTTER
10	173+27.87	68.50' RT	4' RADIUS
11	173+49.58	81.73' RT	4' RADIUS
12	173+57.68	66.50' RT	4' RADIUS
13	174+83.90	66.45' LT	4' RADIUS
14	174+88.94	78.09' LT	4' RADIUS
15	175+06.87	68.49' LT	4' RADIUS
16	174+73.09	165.64' LT	END CONSTRUCTION
17	175+17.31	149.63' LT	END CONSTRUCTION
18	--	--	NOT USED
19	--	--	NOT USED
20	--	--	NOT USED
21	173+04.29	154.99' RT	END CONSTRUCTION
22	173+40.26	191.39' RT	END CONSTRUCTION
23	--	--	NOT USED
24	174+00.43	117.12' RT	PI SIDEWALK
25	174+49.46	108.46' RT	40' RADIUS
26	174+67.16	68.38' RT	PI SIDEWALK
27	174+22.38	77.13' RT	2' RADIUS
28	--	--	NOT USED
29	--	--	NOT USED
30	--	--	NOT USED
31	--	--	NOT USED
32	173+81.64	73.50' LT	PI SIDEWALK
33	173+00.00	18.45' LT	BEGIN SIDEWALK
34	175+29.87	18.54' LT	END SIDEWALK

RADII SHOWN ARE TO CURB FLANGE

LEGEND

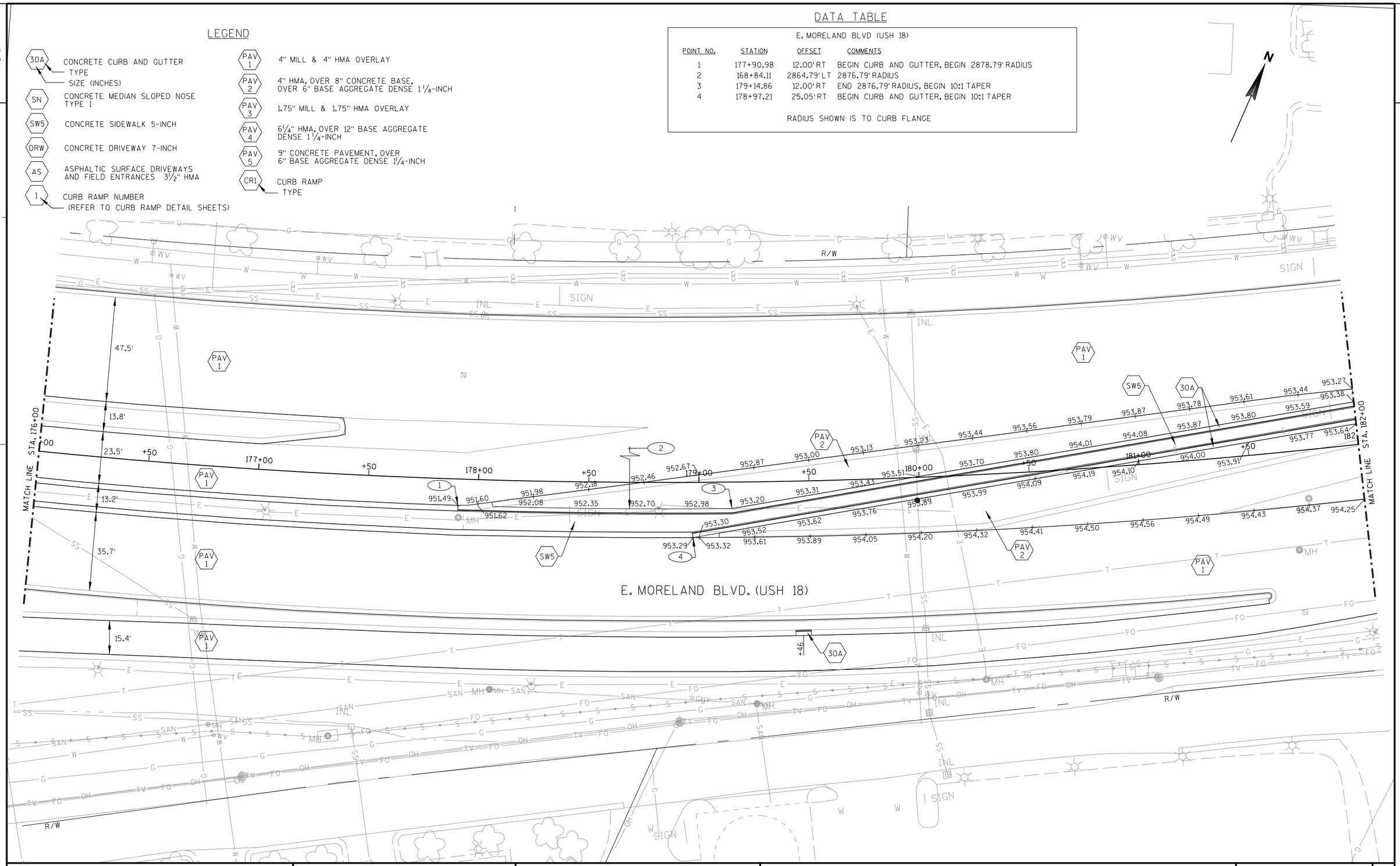
- 30A — CONCRETE CURB AND GUTTER (TYPE / SIZE (INCHES))
- SN — CONCRETE MEDIAN SLOPED NOSE TYPE 1
- SW5 — CONCRETE SIDEWALK 5-INCH
- DRW — CONCRETE DRIVEWAY 7-INCH
- AS — ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES 3½" HMA
- 1 — CURB RAMP NUMBER (REFER TO CURB RAMP DETAIL SHEETS)
- PAV 1 — 4" MILL & 4" HMA OVERLAY
- PAV 2 — 4" HMA, OVER 8" CONCRETE BASE, OVER 6" BASE AGGREGATE DENSE 1 ¼-INCH
- PAV 3 — 1.75" MILL & 1.75" HMA OVERLAY
- PAV 4 — 6¼" HMA, OVER 12" BASE AGGREGATE DENSE 1 ¼-INCH
- PAV 5 — 9" CONCRETE PAVEMENT, OVER 6" BASE AGGREGATE DENSE 1¼-INCH
- CR1 — CURB RAMP TYPE

DATA TABLE

E. MORELAND BLVD (USH 18)

POINT NO.	STATION	OFFSET	COMMENTS
1	177+90.98	12.00' RT	BEGIN CURB AND GUTTER, BEGIN 2878.79' RADIUS
2	168+84.11	2864.79' LT	2876.79' RADIUS
3	179+14.86	12.00' RT	END 2876.79' RADIUS, BEGIN 10:1 TAPER
4	178+97.21	25.05' RT	BEGIN CURB AND GUTTER, BEGIN 10:1 TAPER

RADIUS SHOWN IS TO CURB FLANGE



PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	PLAN DETAILS	SHEET 72	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\021210_pd.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 40.0000 sf / in.

WISDOT/CADDS SHEET 42

LEGEND

- 30A — CONCRETE CURB AND GUTTER TYPE / SIZE (INCHES)
- SN — CONCRETE MEDIAN SLOPED NOSE TYPE 1
- SW5 — CONCRETE SIDEWALK 5-INCH
- DRW — CONCRETE DRIVEWAY 7-INCH
- AS — ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES 3½" HMA
- 1 — CURB RAMP NUMBER (REFER TO CURB RAMP DETAIL SHEETS)
- PAV 1 — 4" MILL & 4" HMA OVERLAY
- PAV 2 — 4" HMA, OVER 8" CONCRETE BASE, OVER 6" BASE AGGREGATE DENSE 1¼-INCH
- PAV 3 — 1.75" MILL & 1.75" HMA OVERLAY
- PAV 4 — 6¼" HMA, OVER 12" BASE AGGREGATE DENSE 1¼-INCH
- PAV 5 — 9" CONCRETE PAVEMENT, OVER 6" BASE AGGREGATE DENSE 1¼-INCH
- CR1 — CURB RAMP TYPE

NOTE:
REFER TO CONSTRUCTION DETAILS AND STANDARD DETAIL DRAWINGS FOR CURB RAMP LAYOUT INFORMATION.

PROPOSED RETAINING WALL

MATCH LINE STA. 51+50

HIGH SIDE

SPRINGDALE RD

SLOPE INTERCEPT (TYP.)

INSTALL PEDESTRIAN CURB

DRIVEWAY

E. MORELAND BLVD. (USH 18)

SAWCUT AND MATCH EXISTING PAVEMENT, 100' LT

SLOPE INTERCEPT (TYP.)

MATCH LINE STA. 182+00

MATCH LINE STA. 188+00

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	PLAN DETAILS	SHEET 73	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\021211_pd.dgn
PLOT DATE : 7/24/2015
PLOT BY : GRAEF
PLOT NAME :
PLOT SCALE : 40.0000 sf / in.

2

DATA TABLE

E. MORELAND BLVD (USH 18)

POINT NO.	STATION	OFFSET	COMMENTS
1	183+18.36	24.22' LT	END 10:1 TAPER, END CURB AND GUTTER
2	182+30.63	11.09' LT	END 10:1 TAPER
3	184+19.28	11.70' LT	BEGIN 60' RADIUS
4	184+19.28	71.70' LT	60' RADIUS
5	184+26.76	22.27' LT	END CURB AND GUTTER
6	184+27.16	17.27' LT	5' RADIUS
7	182+35.55	17.87' RT	7' RADIUS
8	182+89.90	24.92' RT	BEGIN CURB AND GUTTER
9	184+28.84	22.91' RT	END CURB AND GUTTER
10	184+44.72	16.30' RT	6' RADIUS
11	183+85.51	70.70' LT	BEGIN CURB AND GUTTER, BEGIN 40' RADIUS
12	183+88.12	110.68' LT	40' RADIUS
13	184+25.71	97.00' LT	END 40' RADIUS, BEGIN 20:1 TAPER
14	184+29.62	107.75' LT	END 20:1 TAPER, BEGIN 200' RADIUS
15	182+36.51	176.37' LT	200' RADIUS
16	184+45.03	103.60' LT	4' RADIUS
17	184+34.81	75.54' LT	4' RADIUS
18	184+46.32	75.54' LT	4' RADIUS
19	184+81.36	76.59' LT	5' RADIUS
20	184+88.17	76.59' LT	5' RADIUS
21	184+06.97	101.70' LT	90' RADIUS
22	184+97.11	106.38' LT	BEGIN 70' TAPER
23	185+17.43	13.75' LT	7.55' RADIUS
24	185+17.55	21.30' LT	BEGIN 7.55' RADIUS
25	185+17.43	6.20' LT	END 7.55' RADIUS
26	187+63.13	6.20' LT	BEGIN 10:1 TAPER
27	187+95.28	12.78' LT	4' RADIUS
28	185+74.07	20.64' RT	BEGIN CURB AND GUTTER
29	185+57.14	13.95' RT	7' RADIUS
30	185+76.49	99.80' RT	120' RADIUS
31	185+76.49	4.80' RT	END 120' RADIUS
32	187+60.70	4.80' RT	BEGIN 10:1 TAPER
33	187+06.48	64.97' LT	BEGIN CURB AND GUTTER
34	187+81.10	63.90' LT	END CURB AND GUTTER
35	184+31.18	70.69' RT	BEGIN CURB AND GUTTER
36	184+52.99	85.92' RT	END CURB AND GUTTER
37	185+19.32	85.92' RT	BEGIN CURB AND GUTTER
38	185+48.27	68.45' RT	END CURB AND GUTTER
39	184+35.52	84.00' RT	SIDEWALK PI
40	185+35.00	127.24' LT	BEGIN SIDEWALK
41	185+60.16	89.57' LT	SIDEWALK PI
42	185+46.81	84.00' RT	SIDEWALK PI
43	--	--	NOT USED
44	51+12.67	93.98' LT	25' SIDEWALK RADIUS
45	51+03.92	70.56' LT	END 25' RADIUS
46	50+91.95	80.00' LT	BEGIN RETAINING WALL
47	--	--	NOT USED
48	--	--	NOT USED
49	185+79.97	124.31' LT	45' SIDEWALK RADIUS
50	187+16.76	69.82' LT	5' RADIUS
51	178+72.01	114.04' LT	50' RADIUS

RADIUS SHOWN IS TO CURB FLANGE

LEGEND

- 30A — CONCRETE CURB AND GUTTER (TYPE / SIZE (INCHES))
- SN — CONCRETE MEDIAN SLOPED NOSE TYPE 1
- SW5 — CONCRETE SIDEWALK 5-INCH
- DRW — CONCRETE DRIVEWAY 7-INCH
- AS — ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES 3½" HMA
- 1 — CURB RAMP NUMBER (REFER TO CURB RAMP DETAIL SHEETS)
- PAV 1 — 4" MILL & 4" HMA OVERLAY
- PAV 2 — 4" HMA, OVER 8" CONCRETE BASE, OVER 6" BASE AGGREGATE DENSE 1 ¼-INCH
- PAV 3 — 1.75" MILL & 1.75" HMA OVERLAY
- PAV 4 — 6¼" HMA, OVER 12" BASE AGGREGATE DENSE 1 ¼-INCH
- PAV 5 — 9" CONCRETE PAVEMENT, OVER 6" BASE AGGREGATE DENSE 1¼-INCH
- CR1 — CURB RAMP TYPE

DATA TABLE

SPRINGDALE ROAD

POINT NO.	STATION	OFFSET	COMMENTS
1	51+67.49	93.00' LT	BEGIN CURB AND GUTTER
2	51+98.43	83.55' LT	END CURB AND GUTTER
3	51+70.63	47.00' LT	END 200' RADIUS
4	52+28.85	47.38' LT	BEGIN 165' RADIUS
5	52+43.32	127.23' RT	165' RADIUS
6	53+01.45	41.43' LT	END 165' RADIUS
7	53+49.80	35.59' LT	END CONSTRUCTION
8	53+50.12	12.11' LT	END CONSTRUCTION
9	53+13.07	11.52' RT	END CONSTRUCTION
10	53+13.17	36.06' RT	END CONSTRUCTION
11	52+50.00	5.00' LT	11' RADIUS
12	52+50.00	10.00' LT	END 11' RADIUS, START 304' RADIUS
13	52+15.06	10.00' LT	END 304' RADIUS
14	52+50.00	0.00' LT	BEGIN 5' RADIUS, END 294' RADIUS
15	52+15.06	0.00' LT	BEGIN 294' RADIUS
16	51+89.96	0.00' LT	END TAPER
17	53+27.90	49.97' LT	MATCH EXISTING SIDEWALK
18	51+60.00	58.80' LT	END RETAINING WALL
19	52+82.73	84.15' LT	SIDEWALK PI

RADIUS SHOWN IS TO CURB FLANGE

PROPOSED R/W
TLE
SLOPE INTERCEPT (TYP.)
CONSTRUCTION PERMIT BOUNDARY
CONCRETE CURB TYPE D
R/W
HIGH SIDE
MATCH LINE STA. 51+50
SPRINGDALE ROAD
SIGN
52+00
53+00
54+00
55+00
56+00
+50
946.56
945.39
944.70
943.41
942.04
943.08
942.24
940.64
940.76
939.32
939.36
937.89
946.93
946.13
945.44
944.16
943.68
946.69
945.94
945.24
944.33
946.51
945.70
944.99
944.05
943.72

LEGEND

- 30A — CONCRETE CURB AND GUTTER TYPE (SIZE (INCHES))
- SN — CONCRETE MEDIAN SLOPED NOSE TYPE 1
- SW5 — CONCRETE SIDEWALK 5-INCH
- DRW — CONCRETE DRIVEWAY 7-INCH
- AS — ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES 3½" HMA
- 1 — CURB RAMP NUMBER (REFER TO CURB RAMP DETAIL SHEETS)
- PAV 1 — 4" MILL & 4" HMA OVERLAY
- PAV 2 — 4" HMA, OVER 8" CONCRETE BASE, OVER 6" BASE AGGREGATE DENSE 1 1/4-INCH
- PAV 3 — 1.75" MILL & 1.75" HMA OVERLAY
- PAV 4 — 6¼" HMA, OVER 12" BASE AGGREGATE DENSE 1 1/4-INCH
- PAV 5 — 9" CONCRETE PAVEMENT, OVER 6" BASE AGGREGATE DENSE 1¼-INCH
- CR1 — CURB RAMP TYPE

DATA TABLE

E. MORELAND BLVD (USH 18)

POINT NO.	STATION	OFFSET	COMMENTS
1	189+97.55	14.15' LT	END 10:1 TAPER, END CURB AND GUTTER
2	--	--	NOT USED
3	--	--	NOT USED
4	191+59.60	14.00' LT	BEGIN CURB AND GUTTER
5	191+99.52	10.00' LT	4' RADIUS
6	191+65.83	72.50' LT	75' RADIUS
7	191+59.35	2.50' RT	END CURB AND GUTTER
8	192+20.56	10.00' RT	4' RADIUS
9	191+65.83	72.50' LT	95' RADIUS
10	192+42.61	10.00' LT	4' RADIUS

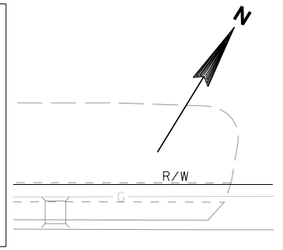
RADIUS SHOWN IS TO CURB FLANGE

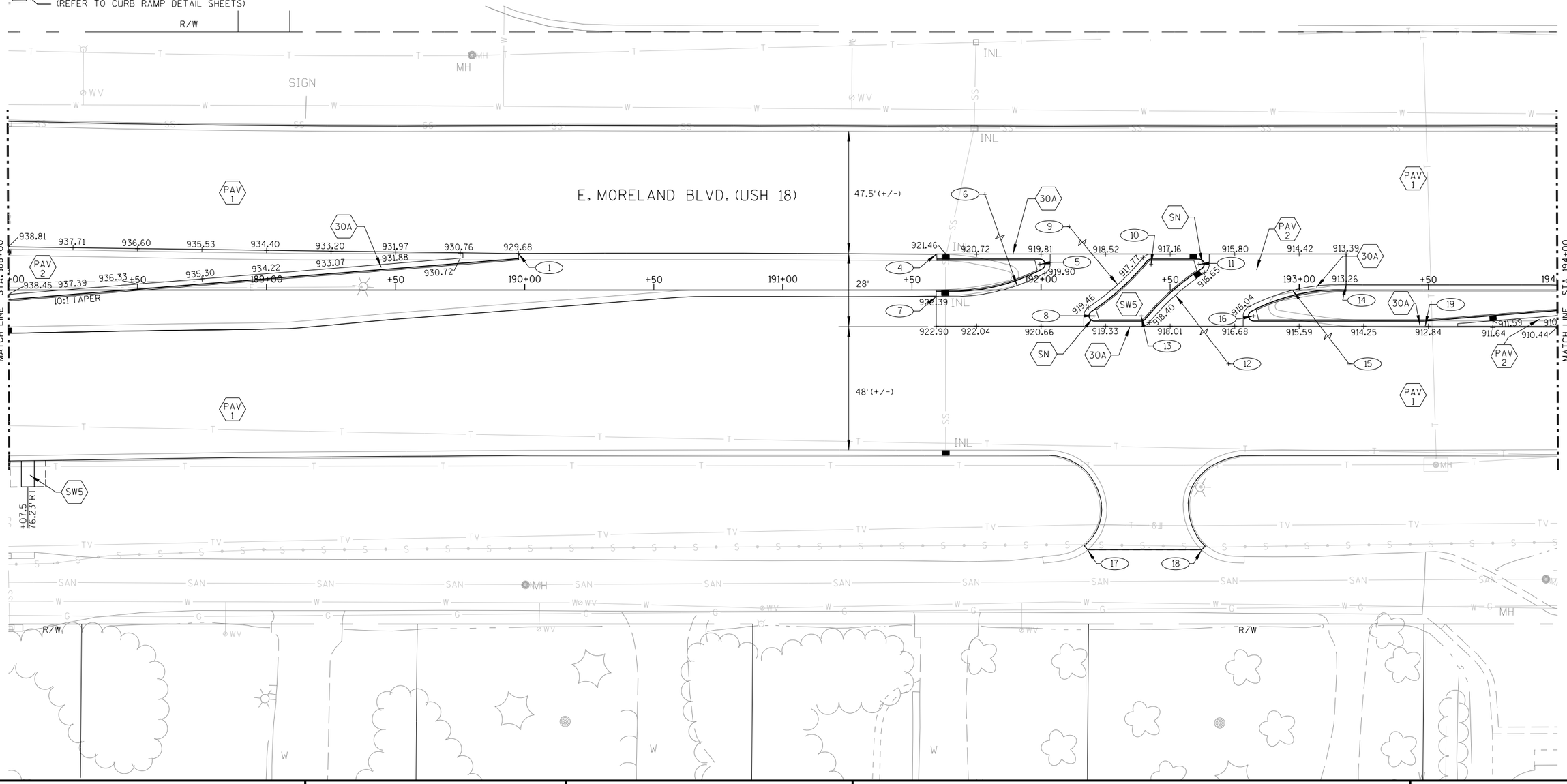
DATA TABLE

E. MORELAND BLVD (USH 18)

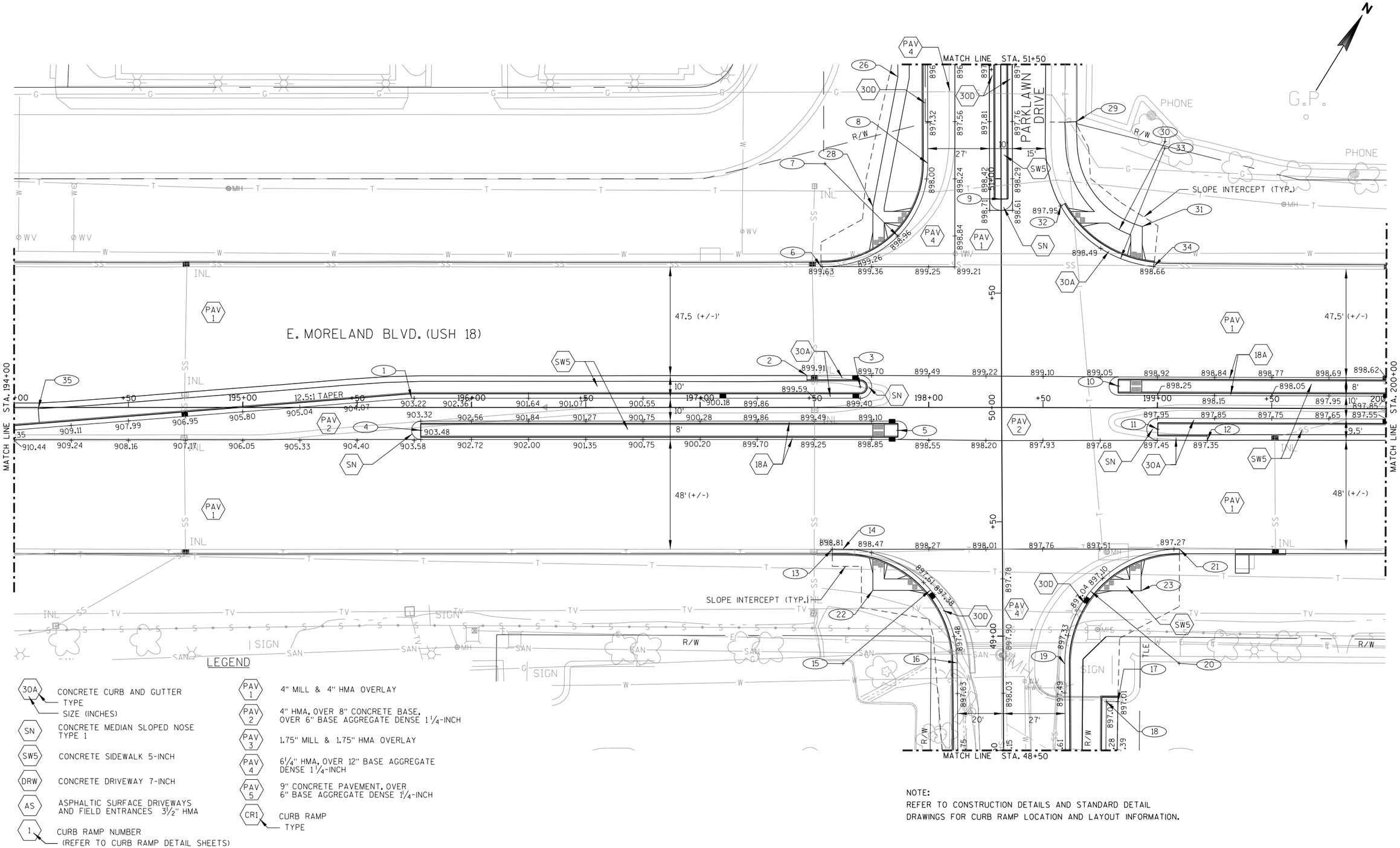
POINT NO.	STATION	OFFSET	COMMENTS
11	192+61.14	10.00' LT	4' RADIUS
12	193+15.23	72.91' RT	95' RADIUS
13	192+38.79	10.00' RT	4' RADIUS
14	193+18.18	2.08' LT	BEGIN CURB AND GUTTER, BEGIN 75' RADIUS
15	193+15.23	72.91' RT	75' RADIUS
16	192+82.33	10.00' RT	4' RADIUS
17	192+18.06	100.63' RT	SAWCUT AND MATCH EXISTING
18	192+62.17	100.63' RT	SAWCUT AND MATCH EXISTING
19	193+48.82	14.00' RT	BEGIN 12.5:1 TAPER

RADIUS SHOWN IS TO CURB FLANGE





PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	PLAN DETAILS	SHEET 76	E



NOTE:
REFER TO CONSTRUCTION DETAILS AND STANDARD DETAIL DRAWINGS FOR CURB RAMP LOCATION AND LAYOUT INFORMATION.

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	PLAN DETAILS	SHEET 77	E

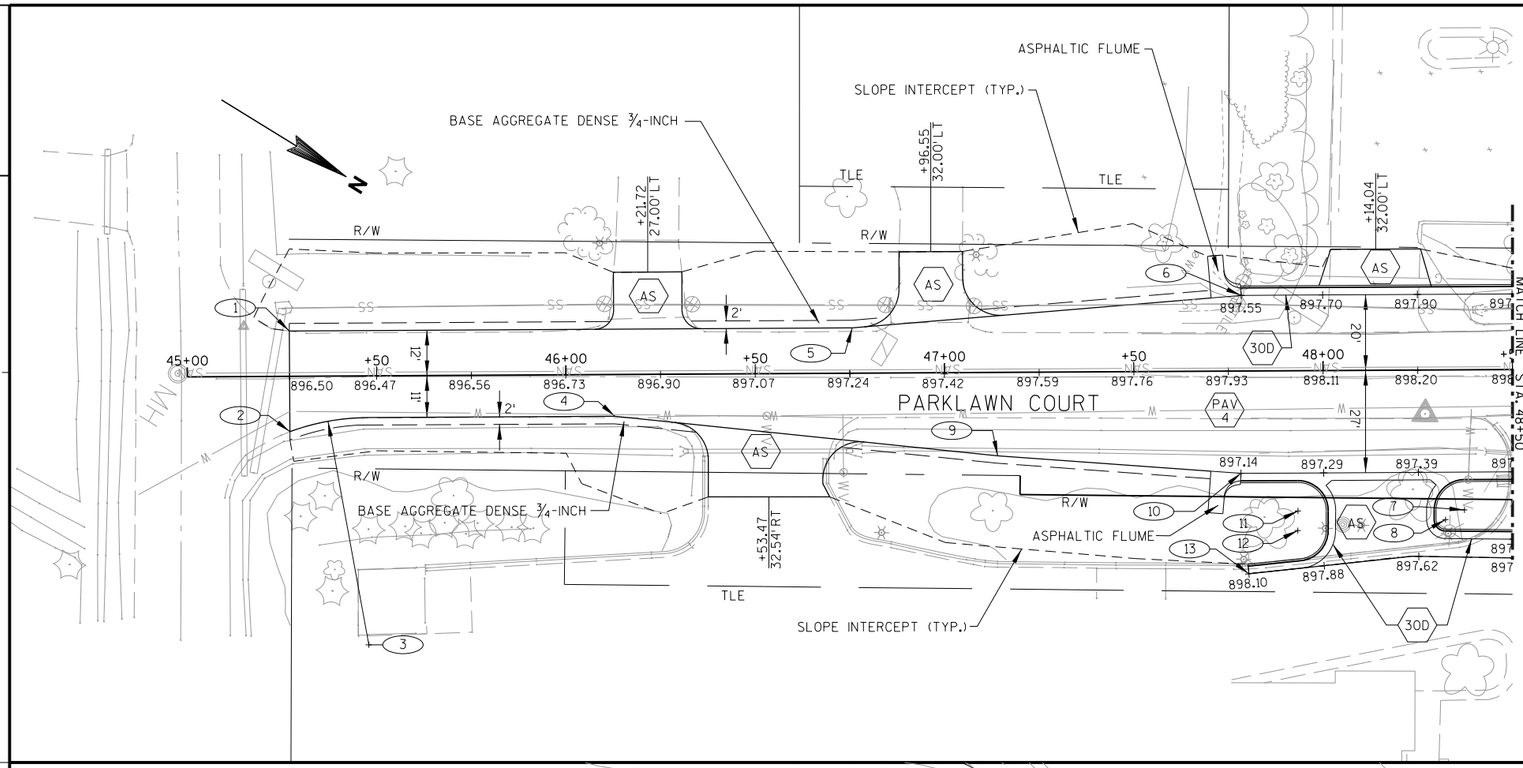
2

DATA TABLE

E. MORELAND BLVD (USH 18)

POINT NO.	STATION	OFFSET	COMMENTS
1	195+73.82	4.00' LT	END 12.5:1 TAPER
2	197+46.73	14.00' LT	END CURB AND GUTTER
3	197+70.04	9.00' LT	5' RADIUS
4	197+77.82	10.00' RT	4' RADIUS
5	197+86.54	10.00' RT	4' RADIUS
6	197+52.91	61.59' LT	BEGIN CURB AND GUTTER, BEGIN 45' RADIUS
7	197+54.60	106.59' LT	45' RADIUS
8	197+99.60	106.71' LT	END 45' RADIUS
9	198+31.64	91.15' LT	5' RADIUS
10	198+82.85	9.50' LT	4' RADIUS
11	199+00.21	9.33' RT	4.83' RADIUS
12	199+21.85	14.16' RT	END CURB AND GUTTER
13	197+57.81	62.00' RT	BEGIN CURB AND GUTTER
14	197+62.49	62.00' RT	BEGIN 50' RADIUS
15	197+62.51	112.00' RT	50' RADIUS
16	198+12.51	111.72' RT	END 50' RADIUS
17	198+83.19	128.45' RT	BEGIN CURB AND GUTTER
18	198+78.11	128.47' RT	PI CURB AND GUTTER
19	198+59.88	112.10' RT	BEGIN 50' RADIUS
20	199+09.88	111.66' RT	50' RADIUS
21	199+09.89	61.66' RT	END 50' RADIUS
22	197+75.54	80.00' RT	SIDEWALK PI
23	198+93.14	80.00' RT	SIDEWALK PI
24	--	--	NOT USED
25	--	--	NOT USED
26	197+86.49	144.57' LT	SIDEWALK PI
27	--	--	NOT USED
28	197+75.54	87.79' LT	END SIDEWALK TAPER
29	198+64.11	125.06' LT	BEGIN SIDEWALK
30	199+03.00	116.50' LT	43.5' SIDEWALK RADIUS
31	198+93.14	79.29' LT	SIDEWALK PI
32	198+57.44	88.23' LT	BEGIN 52' RADIUS
33	199+02.83	113.59' LT	52' RADIUS
34	198+98.16	61.80' LT	END 52' RADIUS
35	194+10.52	0.55' RT	BEGIN SIDEWALK

RADII SHOWN ARE TO CURB FLANGE

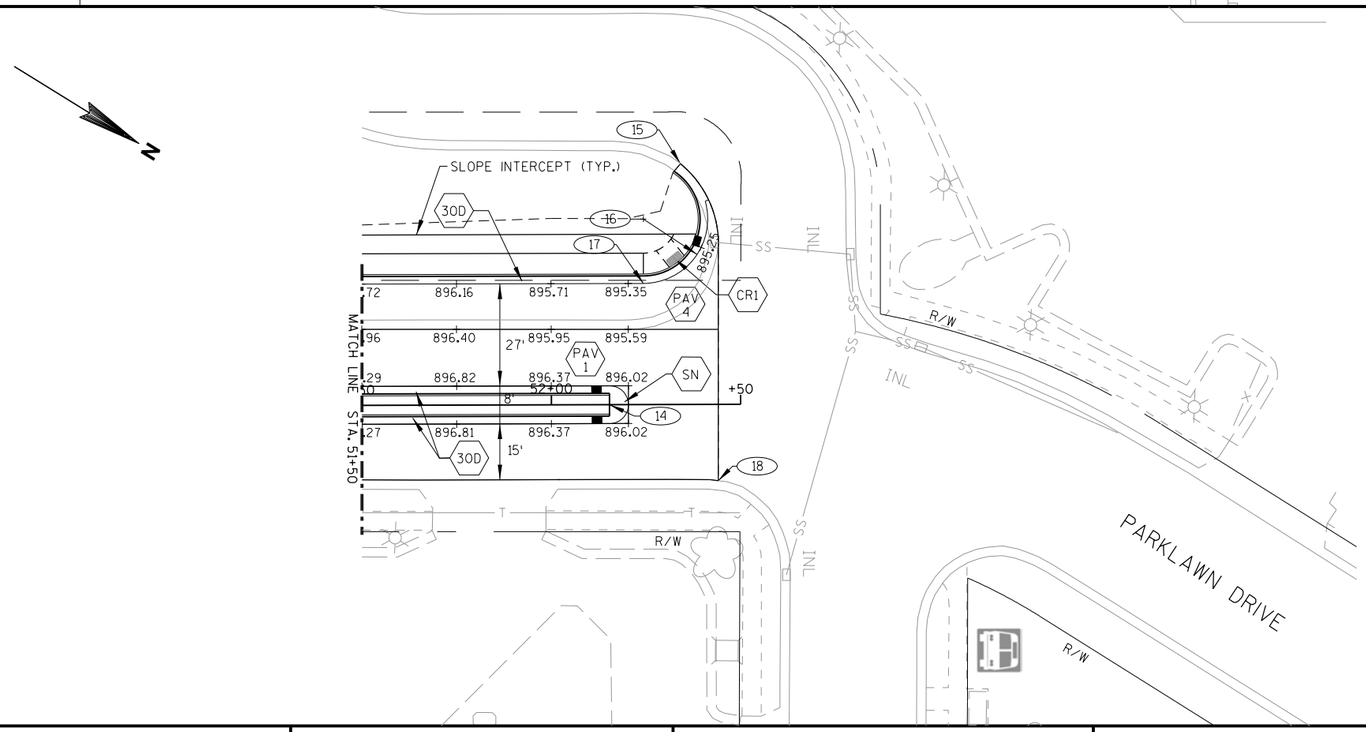


DATA TABLE

PARKLAWN COURT

POINT NO.	STATION	OFFSET	COMMENTS
1	45+27.00	12.00' LT	BEGIN CONSTRUCTION
2	45+27.00	14.62' RT	BEGIN CONSTRUCTION
3	45+47.53	71.00' RT	60' RADIUS
4	46+12.89	11.00' RT	PAVEMENT PI
5	46+75.69	12.00' LT	BEGIN 95' TAPER
6	47+78.48	20.00' LT	END 95' TAPER, BEGIN CURB AND GUTTER
7	48+37.15	37.00' RT	10' RADIUS
8	48+32.11	39.52' RT	5' RADIUS
9	47+13.95	22.00' RT	BEGIN 10.5:1 TAPER
10	47+78.19	27.00' RT	END 10.5:1 TAPER, BEGIN CURB AND GUTTER
11	47+93.15	37.00' RT	10' RADIUS
12	47+93.07	42.20' RT	10' RADIUS
13	47+80.10	53.51' RT	END CURB AND GUTTER

RADIUS SHOWN IS TO CURB FLANGE



LEGEND

- 30A — CONCRETE CURB AND GUTTER (TYPE / SIZE (INCHES))
- SN — CONCRETE MEDIAN SLOPED NOSE TYPE 1
- SW5 — CONCRETE SIDEWALK 5-INCH
- DRW — CONCRETE DRIVEWAY 7-INCH
- AS — ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES 3½" HMA
- 1 — CURB RAMP NUMBER (REFER TO CURB RAMP DETAIL SHEETS)
- PAV 1 — 4" MILL & 4" HMA OVERLAY
- PAV 2 — 4" HMA, OVER 8" CONCRETE BASE, OVER 6" BASE AGGREGATE DENSE 1 1/4-INCH
- PAV 3 — 1.75" MILL & 1.75" HMA OVERLAY
- PAV 4 — 6¼" HMA, OVER 12" BASE AGGREGATE DENSE 1 1/4-INCH
- PAV 5 — 9" CONCRETE PAVEMENT, OVER 6" BASE AGGREGATE DENSE 1¼-INCH
- CR1 — CURB RAMP (TYPE)

DATA TABLE

PARKLAWN DRIVE

POINT NO.	STATION	OFFSET	COMMENTS
14	52+15.36	0.00' LT	5' RADIUS
15	52+34.26	63.61' LT	END CURB AND GUTTER, END 17' RADIUS, END CONSTRUCTION
16	52+24.42	49.00' LT	17' RADIUS
17	52+24.42	32.00' LT	BEGIN 17' RADIUS
18	52+44.04	20.14' RT	END CONSTRUCTION

RADIUS SHOWN IS TO CURB FLANGE

LEGEND

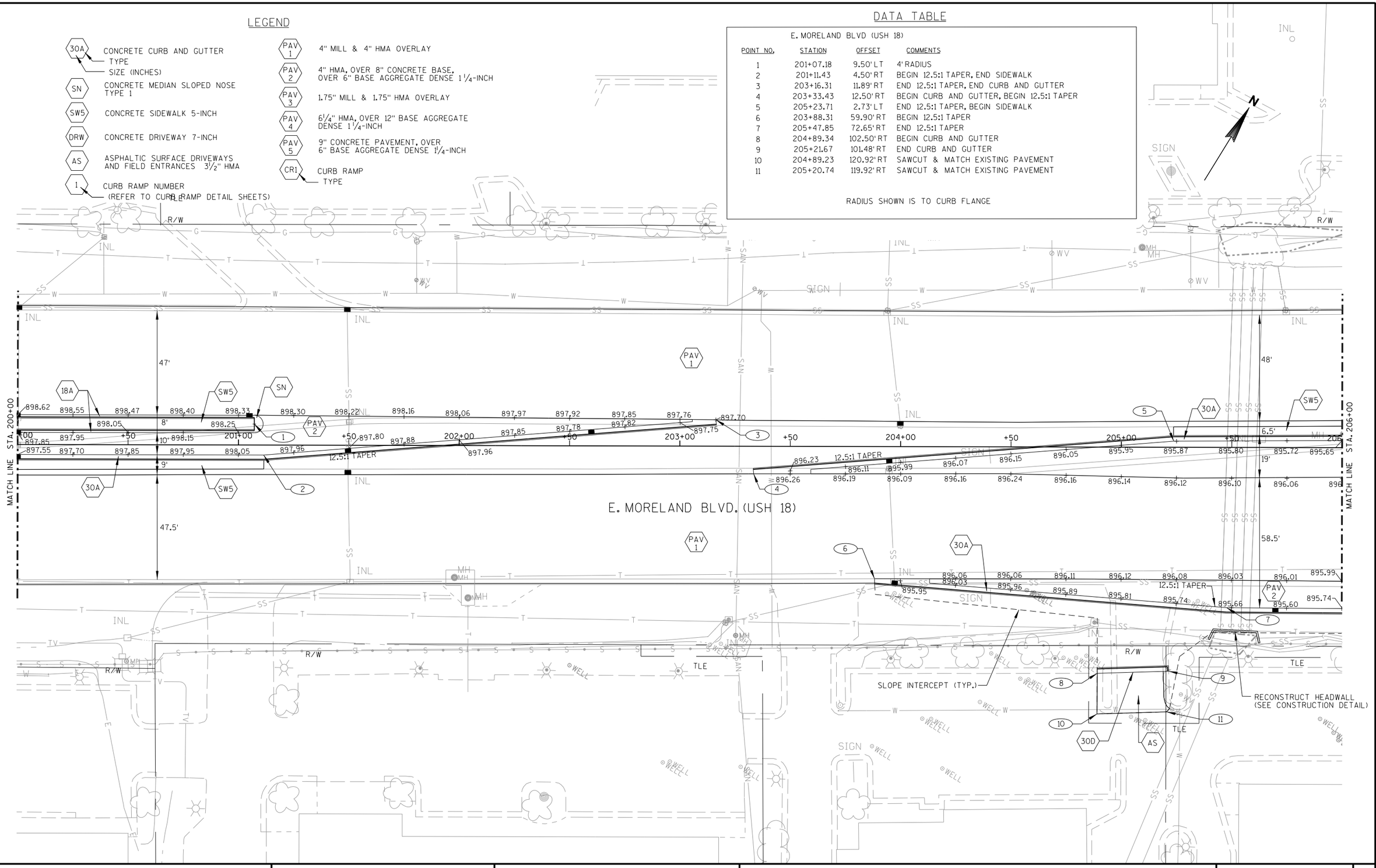
- 30A — CONCRETE CURB AND GUTTER (TYPE / SIZE (INCHES))
- SN — CONCRETE MEDIAN SLOPED NOSE TYPE 1
- SW5 — CONCRETE SIDEWALK 5-INCH
- DRW — CONCRETE DRIVEWAY 7-INCH
- AS — ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES 3½" HMA
- 1 — CURB RAMP NUMBER (REFER TO CURB RAMP DETAIL SHEETS)
- PAV 1 — 4" MILL & 4" HMA OVERLAY
- PAV 2 — 4" HMA, OVER 8" CONCRETE BASE, OVER 6" BASE AGGREGATE DENSE 1 1/4-INCH
- PAV 3 — 1.75" MILL & 1.75" HMA OVERLAY
- PAV 4 — 6 1/4" HMA, OVER 12" BASE AGGREGATE DENSE 1 1/4-INCH
- PAV 5 — 9" CONCRETE PAVEMENT, OVER 6" BASE AGGREGATE DENSE 1 1/4-INCH
- CR1 — CURB RAMP TYPE

DATA TABLE

E. MORELAND BLVD (USH 18)

POINT NO.	STATION	OFFSET	COMMENTS
1	201+07.18	9.50' LT	4' RADIUS
2	201+11.43	4.50' RT	BEGIN 12.5:1 TAPER, END SIDEWALK
3	203+16.31	11.89' RT	END 12.5:1 TAPER, END CURB AND GUTTER
4	203+33.43	12.50' RT	BEGIN CURB AND GUTTER, BEGIN 12.5:1 TAPER
5	205+23.71	2.73' LT	END 12.5:1 TAPER, BEGIN SIDEWALK
6	203+88.31	59.90' RT	BEGIN 12.5:1 TAPER
7	205+47.85	72.65' RT	END 12.5:1 TAPER
8	204+89.34	102.50' RT	BEGIN CURB AND GUTTER
9	205+21.67	101.48' RT	END CURB AND GUTTER
10	204+89.23	120.92' RT	SAWCUT & MATCH EXISTING PAVEMENT
11	205+20.74	119.92' RT	SAWCUT & MATCH EXISTING PAVEMENT

RADIUS SHOWN IS TO CURB FLANGE



PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	PLAN DETAILS	SHEET 80	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\021216_pd.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 40.0000 sf / in.

WISDOT/CADDS SHEET 42

LEGEND

- 30A — CONCRETE CURB AND GUTTER (TYPE / SIZE (INCHES))
- SN — CONCRETE MEDIAN SLOPED NOSE TYPE 1
- SW5 — CONCRETE SIDEWALK 5-INCH
- DRW — CONCRETE DRIVEWAY 7-INCH
- AS — ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES 3½" HMA
- 1 — CURB RAMP NUMBER (REFER TO CURB RAMP DETAIL SHEETS)
- PAV 1 — 4" MILL & 4" HMA OVERLAY
- PAV 2 — 4" HMA, OVER 8" CONCRETE BASE, OVER 6" BASE AGGREGATE DENSE 1 1/4-INCH
- PAV 3 — 1.75" MILL & 1.75" HMA OVERLAY
- PAV 4 — 6¼" HMA, OVER 12" BASE AGGREGATE DENSE 1¼-INCH
- PAV 5 — 9" CONCRETE PAVEMENT, OVER 6" BASE AGGREGATE DENSE 1¼-INCH
- CR1 — CURB RAMP TYPE

MATCH LINE STA. 52+25

KOSSOW ROAD

SLOPE INTERCEPT (TYP.)

E. MORELAND BLVD. (USH 18)

SWENSON DRIVE

30J 4-INCH SLOPED

NOTE:

REFER TO CONSTRUCTION DETAILS AND STANDARD DETAIL DRAWINGS FOR CURB RAMP LOCATION AND LAYOUT INFORMATION.

MATCH LINE STA. 206+00

MATCH LINE STA. 212+00

MATCH LINE STA. 48+50

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	PLAN DETAILS	SHEET 81	E

2

DATA TABLE

E. MORELAND BLVD (USH 18)

POINT NO.	STATION	OFFSET	COMMENTS
1	206+75.97	7.27' RT	BEGIN 2.75' RADIUS
2	206+75.99	10.02' RT	2.75' RADIUS
3	206+75.97	12.77' RT	END 2.75' RADIUS
4	208+25.05	13.92' LT	BEGIN CURB AND GUTTER
5	208+43.70	12.97' LT	BEGIN 90' RADIUS
6	208+54.87	10.81' LT	END 90' RADIUS, BEGIN 3' RADIUS
7	208+54.12	7.90' LT	3' RADIUS
8	208+54.14	4.90' LT	END 3' RADIUS
9	208+84.02	10.00' RT	4.10' RADIUS
10	207+95.22	73.84' RT	BEGIN 140' RADIUS
11	207+94.55	213.84' RT	140' RADIUS
12	208+41.83	82.06' RT	END 140' RADIUS, BEGIN 70' RADIUS
13	208+58.68	68.15' RT	4' RADIUS
14	208+83.80	66.23' RT	4' RADIUS
15	208+83.78	77.41' RT	4' RADIUS
16	209+18.73	80.84' RT	3.5' RADIUS
17	209+65.24	84.59' RT	4' RADIUS
18	209+63.24	69.00' RT	4' RADIUS
19	209+74.22	69.00' RT	4' RADIUS
20	209+87.72	89.63' RT	END 120' RADIUS
21	209+89.45	86.62' RT	BEGIN 50' RADIUS
22	210+32.72	111.62' RT	50' RADIUS
23	210+32.58	61.80' RT	END 50' RADIUS, END CURB AND GUTTER
24	210+23.94	14.26' RT	BEGIN CURB AND GUTTER, BEGIN 90' RADIUS
25	210+23.53	75.74' RT	90' RADIUS
26	210+03.88	8.50' RT	3.5' RADIUS
27	209+70.64	10.00' LT	4' RADIUS
28	211+08.76	65.00' LT	BEGIN CURB AND GUTTER, BEGIN 225' RADIUS
29	211+08.76	290.00' LT	225' RADIUS
30	210+11.40	87.15' LT	END 225' RADIUS, BEGIN 60' RADIUS
31	210+37.36	141.25' LT	60' RADIUS
32	209+87.54	107.82' LT	END 60' RADIUS, BEGIN 20' RADIUS
33	210+07.07	68.88' LT	4' RADIUS
34	209+80.33	67.00' LT	4' RADIUS
35	209+80.33	79.41' LT	4' RADIUS
36	209+52.34	97.17' LT	BEGIN TO TAPER IN
37	209+52.33	81.36' LT	BEGIN 6' RADIUS
38	209+46.33	81.37' LT	6' RADIUS
39	209+46.33	75.37' LT	END 6' RADIUS
40	209+39.33	75.37' LT	BEGIN 6' RADIUS
41	209+39.33	81.37' LT	6' RADIUS
42	209+33.33	81.37' LT	END 6' RADIUS
43	208+92.35	67.00' LT	4' RADIUS
44	208+73.91	67.00' LT	4' RADIUS
45	208+90.34	95.45' LT	4' RADIUS
46	208+57.05	112.22' LT	BEGIN CURB AND GUTTER
47	208+62.65	88.85' LT	END 200' RADIUS, BEGIN 50' RADIUS
48	208+18.33	112.00' LT	50' RADIUS
49	208+19.87	62.03' LT	END 50' RADIUS, END CURB AND GUTTER
50	--	--	NOT USED

RADIUS SHOWN IS TO CURB FLANGE

DATA TABLE

SWENSON DRIVE

POINT NO.	STATION	OFFSET	COMMENTS
51	48+54.14	104.08' LT	70' RADIUS
52	48+52.85	34.10' LT	END 70' RADIUS
53	48+56.02	0.02' LT	BEGIN 4' RADIUS
54	48+56.07	4.00' LT	4' RADIUS
55	48+55.34	7.95' LT	END 4' RADIUS, BEGIN 100' RADIUS
56	48+75.51	90.00' RT	100' RADIUS
57	48+75.51	10.00' LT	END 100' RADIUS
58	48+95.28	10.00, LT	BEGIN 100' RADIUS
59	48+95.28	90.00' RT	100' RADIUS
60	48+33.60	169.00' RT	120' RADIUS
61	--	NOT USED	--
62	--	NOT USED	--
63	--	NOT USED	--

RADIUS SHOWN IS TO CURB FLANGE

DATA TABLE

KOSSOW ROAD

POINT NO.	STATION	OFFSET	COMMENTS
64	51+19.01	81.80' RT	20' RADIUS
65	51+39.01	81.78' RT	END 20' RADIUS
66	51+39.12	189.64' RT	SAWCUT AND MATCH EXISTING, END CURB AND GUTTER
67	51+64.51	80.80' RT	BEGIN 4' RADIUS, END 38' RADIUS
68	51+56.92	79.31' RT	END 4' RADIUS, BEGIN 38' RADIUS
69	51+52.88	64.58' RT	BEGIN 4' RADIUS, END 38' RADIUS
70	51+56.45	58.77' RT	END 4' RADIUS, BEGIN 38' RADIUS
71	51+71.39	58.78' RT	BEGIN 4' RADIUS, END 38' RADIUS
72	51+74.47	65.33' RT	END 4' RADIUS, BEGIN 38' RADIUS
73	51+85.86	19.00' RT	END TAPER
74	51+81.32	37.00' RT	BEGIN 200' RADIUS
75	51+81.32	237.00' LT	END 200' RADIUS
76	51+74.69	189.62' RT	SAWCUT AND MATCH EXISTING, END CURB AND GUTTER
77	51+74.61	115.36' RT	END 60' RADIUS
78	52+34.61	115.00' RT	53.5' RADIUS
79	51+19.65	58.62' RT	15' RADIUS
80	51+99.42	99.39' RT	15' RADIUS

RADIUS SHOWN IS TO CURB FLANGE

DATA TABLE

SWENSON DRIVE/KOSSOW ROAD

POINT NO.	STATION	OFFSET	COMMENTS
1	42+62.22	17.72' RT	BEGIN CONSTRUCTION
2	42+62.21	17.71' RT	BEGIN CONSTRUCTION, BEGIN 10:1 TAPER
3	43+27.02	24.12' LT	END 10:1 TAPER, BEGIN 25' RADIUS
4	43+24.56	49.00' LT	25' RADIUS
5	43+49.56	49.79' LT	END 25' RADIUS, END CURB AND GUTTER, END CONSTRUCTION
6	43+85.11	49.78' LT	BEGIN CONSTRUCTION, BEGIN CURB AND GUTTER, BEGIN 25' RADIUS
7	44+10.11	49.00' LT	25' RADIUS
8	44+10.11	24.00' LT	END 25' RADIUS
9	44+45.03	17.64' RT	BEGIN CURB AND GUTTER, BEGIN 230.11' RADIUS
10	44+32.04	247.38' RT	230.11' RADIUS
11	46+39.29	34.15' RT	END 230.11' RADIUS, BEGIN 5:1 TAPER
12	47+11.50	49.00' RT	END 5:1 TAPER, BEGIN 211' RADIUS
13	45+93.61	260.00' RT	211' RADIUS
14	48+33.60	49.00' RT	END 211' RADIUS, BEGIN 120' RADIUS
15	44+51.07	24.00' LT	BEGIN 284' RADIUS
16	45+93.61	260.00' RT	284' RADIUS

RADIUS SHOWN IS TO CURB FLANGE

DATA TABLE

SWENSON DRIVE/KOSSOW ROAD

POINT NO.	STATION	OFFSET	COMMENTS
17	47+65.26	24.00' LT	END 284' RADIUS, BEGIN 30' RADIUS
18	47+65.26	54.00' LT	30' RADIUS
19	47+89.97	56.03' LT	END 30' RADIUS
20	99+31.38	24.00' RT	END 200' RADIUS
21	97+87.26	212.00' RT	200' RADIUS
22	97+87.26	12.00' RT	BEGIN 200' RADIUS
23	97+15.40	12.00' LT	END CURB AND GUTTER
24	96+76.54	11.52' RT	END CONSTRUCTION
25	96+76.54	11.04' LT	END CONSTRUCTION, BEGIN 10:1 TAPER
26	97+16.16	15.00' LT	END 10:1 TAPER, BEGIN CURB AND GUTTER
27	98+26.32	15.00' LT	BEGIN 170' RADIUS
28	98+26.32	155.00' RT	170' RADIUS
29	99+27.70	15.00' LT	END 170' RADIUS
30	48+21.30	62.55' LT	BEGIN 40' RADIUS
31	48+51.63	74.15' LT	40' RADIUS
32	42+37.00	17.64' LT	BEGIN CURB AND GUTTER

RADIUS SHOWN IS TO CURB FLANGE

LEGEND

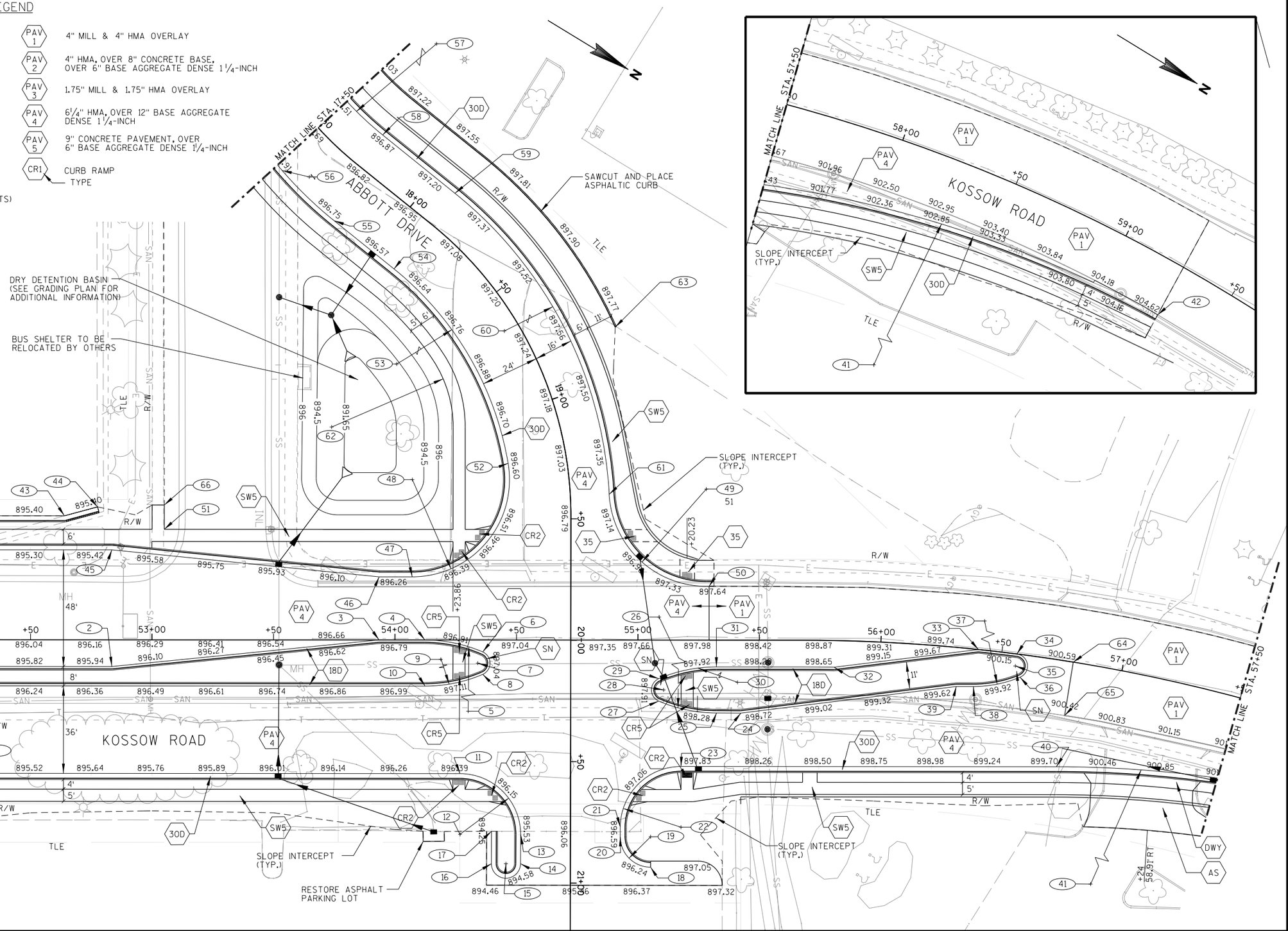
- 30A — CONCRETE CURB AND GUTTER (TYPE / SIZE (INCHES))
- SN — CONCRETE MEDIAN SLOPED NOSE TYPE 1
- SW5 — CONCRETE SIDEWALK 5-INCH
- DRW — CONCRETE DRIVEWAY 7-INCH
- AS — ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES 3½" HMA
- 1 — CURB RAMP NUMBER (REFER TO CURB RAMP DETAIL SHEETS)
- PAV 1 — 4" MILL & 4" HMA OVERLAY
- PAV 2 — 4" HMA, OVER 8" CONCRETE BASE, OVER 6" BASE AGGREGATE DENSE 1¼-INCH
- PAV 3 — 1.75" MILL & 1.75" HMA OVERLAY
- PAV 4 — 6¼" HMA, OVER 12" BASE AGGREGATE DENSE 1¼-INCH
- PAV 5 — 9" CONCRETE PAVEMENT, OVER 6" BASE AGGREGATE DENSE 1¼-INCH
- CR1 — CURB RAMP TYPE

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	PLAN DETAIL	SHEET 83 E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\021218_pd.dgn | PLOT DATE : 4/27/2015 | PLOT BY : GRAEF | PLOT NAME : | PLOT SCALE : 40.0000 sf / in.

LEGEND

- 30A — CONCRETE CURB AND GUTTER TYPE (TYPE / SIZE (INCHES))
- SN — CONCRETE MEDIAN SLOPED NOSE TYPE 1
- SW5 — CONCRETE SIDEWALK 5-INCH
- DRW — CONCRETE DRIVEWAY 7-INCH
- AS — ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES 3½" HMA
- 1 — CURB RAMP NUMBER (REFER TO CURB RAMP DETAIL SHEETS)
- PAV 1 — 4" MILL & 4" HMA OVERLAY
- PAV 2 — 4" HMA, OVER 8" CONCRETE BASE, OVER 6" BASE AGGREGATE DENSE 1 1/4-INCH
- PAV 3 — 1.75" MILL & 1.75" HMA OVERLAY
- PAV 4 — 6¼" HMA, OVER 12" BASE AGGREGATE DENSE 1 1/4-INCH
- PAV 5 — 9" CONCRETE PAVEMENT, OVER 6" BASE AGGREGATE DENSE 1¼-INCH
- CR1 — CURB RAMP TYPE



PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	PLAN DETAIL	SHEET 84 E

DATA TABLE

KOSSOW ROAD

POINT NO.	STATION	OFFSET	COMMENTS
1	52+34.61	55.00' RT	END 60' RADIUS
2	52+83.45	11.00' RT	BEGIN 10:1 TAPER
3	53+93.40	0.00' LT	END 10:1 TAPER
4	54+12.29	0.00' LT	BEGIN 60' RADIUS
5	54+12.29	60.00' RT	60' RADIUS
6	54+36.11	4.93' RT	END 60' RADIUS, BEGIN 5' RADIUS
7	54+34.12	9.52' RT	5' RADIUS
8	54+36.10	14.11' RT	END 5' RADIUS, BEGIN 60' RADIUS
9	54+12.38	41.00' LT	60' RADIUS
10	54+12.38	19.00' RT	END 60' RADIUS
11	54+26.77	55.00' RT	BEGIN 25' RADIUS
12	54+26.77	80.00' RT	25' RADIUS
13	54+51.77	80.11' RT	END 25' RADIUS
14	54+51.71	92.05' RT	BEGIN 6' RADIUS
15	54+45.71	92.06' RT	6' RADIUS
16	54+39.71	92.06' RT	END 6' RADIUS
17	54+39.77	78.73' RT	END CURB AND GUTTER
18	55+05.26	93.45' RT	BEGIN CURB AND GUTTER, BEGIN 12.5' RADIUS
19	55+05.25	80.95' RT	12.5' RADIUS
20	54+92.75	80.89' RT	END 12.5' RADIUS
21	54+92.77	76.89' RT	BEGIN 25' RADIUS
22	55+17.77	77.00' RT	25' RADIUS
23	55+17.77	52.00' RT	END 25' RADIUS
24	55+42.37	30.00' RT	BEGIN 90' TAPER
25	55+32.37	30.00' RT	BEGIN 60' RADIUS
26	55+32.37	30.00' LT	60' RADIUS
27	55+08.55	25.07' RT	END 60' RADIUS, BEGIN 5' RADIUS
28	55+10.53	20.48' RT	5' RADIUS
29	55+08.56	15.89' RT	END 5' RADIUS, BEGIN 60' RADIUS
30	55+32.28	71.00' RT	60' RADIUS
31	55+32.28	11.00' RT	END 60' RADIUS
32	55+81.00	11.00' RT	BEGIN 60' TAPER
33	56+40.25	0.00' LT	END 60' TAPER
34	56+56.21	0.00' LT	BEGIN 5' RADIUS
35	56+56.21	5.00' RT	5' RADIUS
36	56+58.73	9.33' RT	END 5' RADIUS, BEGIN 50' RADIUS
37	56+34.89	34.39' LT	50' RADIUS
38	56+39.80	15.36' RT	END 50' RADIUS
39	56+32.63	16.06' RT	END 90' TAPER
40	56+79.66	43.60' RT	BEGIN 478' RADIUS
41	59+57.58	500.00' RT	478' RADIUS
42	59+27.38	22.02' RT	END 478' RADIUS, END CURB AND GUTTER
43	52+63.91	51.00' LT	BEGIN 14' TAPER
44	52+77.53	54.72' LT	END 14' TAPER
45	52+83.45	37.00' LT	BEGIN TAPER
46	53+93.45	26.00' LT	END TAPER
47	54+07.09	26.00' LT	BEGIN 40' RADIUS
48	54+07.09	66.00' LT	40' RADIUS,
49	55+28.08	62.16' LT	40' RADIUS
50	55+29.28	22.30' LT	END CURB & GUTTER
51	53+05.01	45.50' LT	SIDEWALK PI

RADIUS SHOWN IS TO CURB FLANGE

DATA TABLE

ABBOTT DRIVE

POINT NO.	STATION	OFFSET	COMMENTS
52	19+23.02	24.00' RT	END 40' RADIUS, BEGIN 131' RADIUS
53	18+10.81	155.00' RT	131' RADIUS
54	18+10.81	24.00' RT	END 131' RADIUS
55	17+79.19	24.00' RT	BEGIN 166' RADIUS
56	17+79.19	142.00' LT	166' RADIUS
57	17+72.57	146.00' LT	130' RADIUS
58	17+72.57	16.00' LT	END 130' RADIUS
59	18+10.81	16.00' LT	BEGIN 171' RADIUS
60	18+10.81	155.00' RT	171' RADIUS
61	19+40.82	16.00' LT	END 171' RADIUS, BEGIN 40' RADIUS
62	18+59.42	87.50' RT	50' RADIUS
63	18+83.55	35.00' LT	END CURB AND GUTTER
64	56+79.66	0.00' LT	ASPHALT OVERLAY MATCH POINT
65	56+79.66	22.28' RT	ASPHALT OVERLAY MATCH POINT
66	53+05.00	55.50' LT	MATCH EXISTING SIDEWALK

RADIUS SHOWN IS TO CURB FLANGE

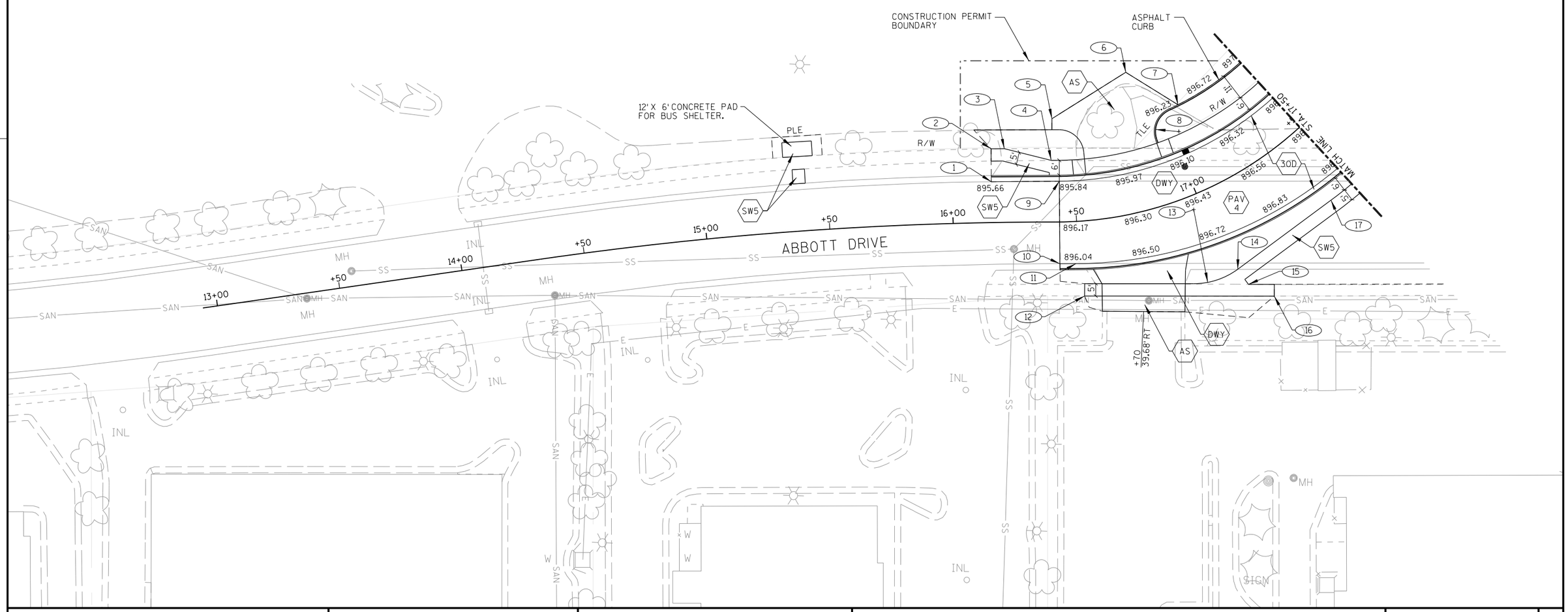
DATA TABLE

ABBOTT DRIVE

POINT NO.	STATION	OFFSET	COMMENTS
1	16+15.74	16.52' LT	BEGIN CURB AND GUTTER
2	16+15.87	29.87' LT	MATCH EXISTING SIDEWALK
3	16+21.14	29.83' LT	SIDEWALK ANGLE POINT
4	16+39.70	24.97' LT	SIDEWALK ANGLE POINT
5	16+40.03	41.83' LT	MATCH EXISTING PARKING LOT
6	16+88.33	56.04' LT	MATCH EXISTING PARKING LOT
7	17+09.47	35.76' LT	MATCH EXISTING PARKING LOT
8	17+04.00	25.78' LT	10' RADIUS
9	16+43.17	16.49' LT	BEGIN 130' RADIUS
10	16+43.06	16.89' RT	BEGIN CURB AND GUTTER
11	16+48.89	17.06' RT	BEGIN 166' RADIUS
12	16+51.23	30.34' RT	MATCH EXISTING SIDEWALK
13	16+95.22	35.58' RT	30' RADIUS
14	17+02.86	34.78' RT	END 30' RADIUS
15	17+04.01	42.13' RT	SIDEWALK ANGLE POINT
16	17+09.60	50.97' RT	MATCH EXISTING SIDEWALK
17	17+41.20	30.72 RT	SIDEWALK ANGLE POINT

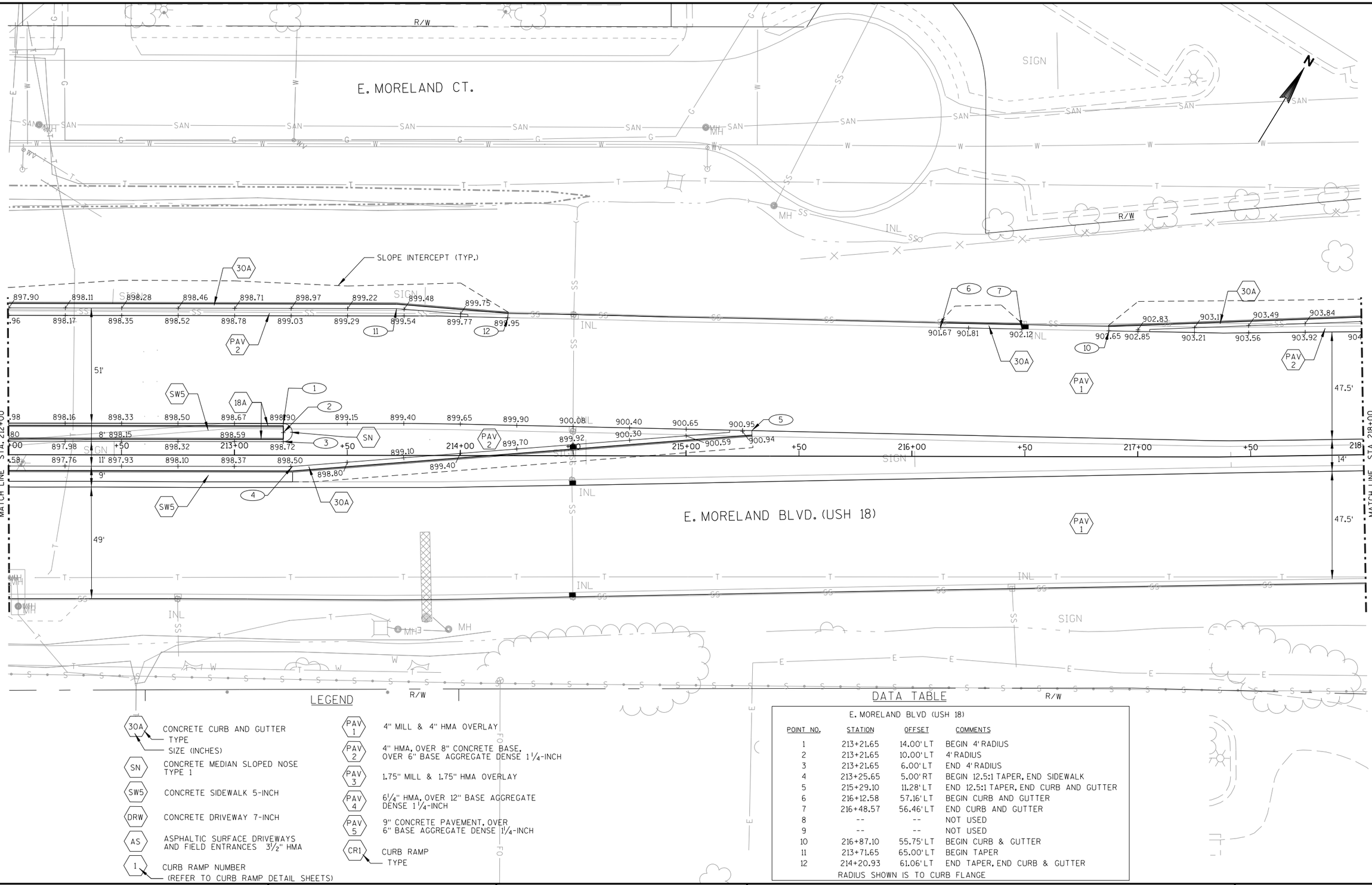
LEGEND

- 30A — CONCRETE CURB AND GUTTER (TYPE / SIZE (INCHES))
- SN — CONCRETE MEDIAN SLOPED NOSE TYPE 1
- SW5 — CONCRETE SIDEWALK 5-INCH
- DRW — CONCRETE DRIVEWAY 7-INCH
- AS — ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES 3½" HMA
- 1 — CURB RAMP NUMBER (REFER TO CURB RAMP DETAIL SHEETS)
- PAV 1 — 4" MILL & 4" HMA OVERLAY
- PAV 2 — 4" HMA, OVER 8" CONCRETE BASE, OVER 6" BASE AGGREGATE DENSE 1¼-INCH
- PAV 3 — 1.75" MILL & 1.75" HMA OVERLAY
- PAV 4 — 6¼" HMA, OVER 12" BASE AGGREGATE DENSE 1¼-INCH
- PAV 5 — 9" CONCRETE PAVEMENT, OVER 6" BASE AGGREGATE DENSE 1¼-INCH
- CR1 — CURB RAMP (TYPE)



PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	PLAN DETAIL	SHEET 86	E

2



LEGEND

30A	CONCRETE CURB AND GUTTER TYPE SIZE (INCHES)
SN	CONCRETE MEDIAN SLOPED NOSE TYPE 1
SW5	CONCRETE SIDEWALK 5-INCH
DRW	CONCRETE DRIVEWAY 7-INCH
AS	ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES 3½" HMA
1	CURB RAMP NUMBER (REFER TO CURB RAMP DETAIL SHEETS)
PAV 1	4" MILL & 4" HMA OVERLAY
PAV 2	4" HMA, OVER 8" CONCRETE BASE, OVER 6" BASE AGGREGATE DENSE 1 1/4-INCH
PAV 3	1.75" MILL & 1.75" HMA OVERLAY
PAV 4	6¼" HMA, OVER 12" BASE AGGREGATE DENSE 1 1/4-INCH
PAV 5	9" CONCRETE PAVEMENT, OVER 6" BASE AGGREGATE DENSE 1¼-INCH
CR1	CURB RAMP TYPE

DATA TABLE

E. MORELAND BLVD (USH 18)

POINT NO.	STATION	OFFSET	COMMENTS
1	213+21.65	14.00' LT	BEGIN 4' RADIUS
2	213+21.65	10.00' LT	4' RADIUS
3	213+21.65	6.00' LT	END 4' RADIUS
4	213+25.65	5.00' RT	BEGIN 12.5:1 TAPER, END SIDEWALK
5	215+29.10	11.28' LT	END 12.5:1 TAPER, END CURB AND GUTTER
6	216+12.58	57.16' LT	BEGIN CURB AND GUTTER
7	216+48.57	56.46' LT	END CURB AND GUTTER
8	--	--	NOT USED
9	--	--	NOT USED
10	216+87.10	55.75' LT	BEGIN CURB & GUTTER
11	213+71.65	65.00' LT	BEGIN TAPER
12	214+20.93	61.06' LT	END TAPER, END CURB & GUTTER

RADIUS SHOWN IS TO CURB FLANGE

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	PLAN DETAILS	SHEET 87	E

LEGEND

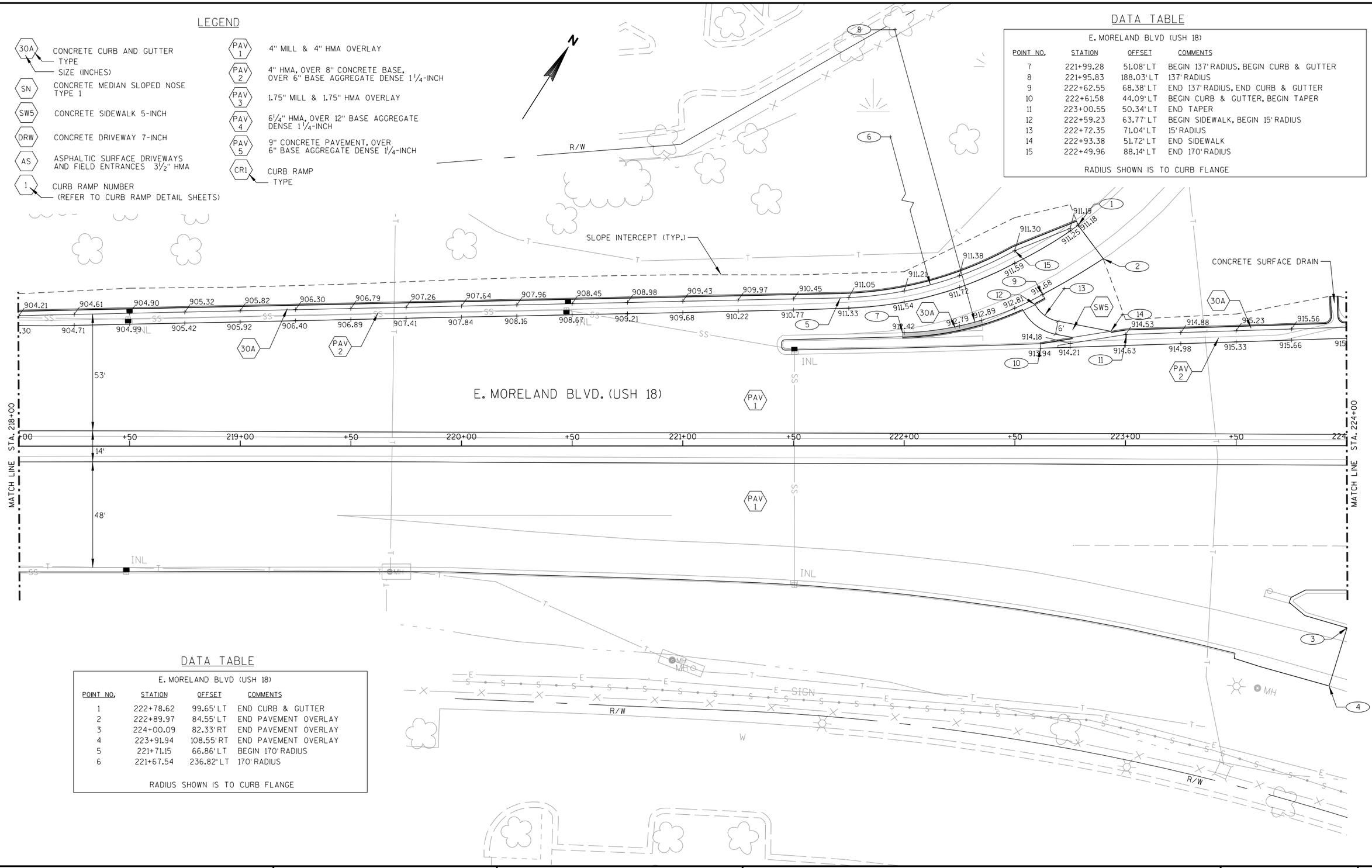
- 30A — CONCRETE CURB AND GUTTER (TYPE / SIZE (INCHES))
- SN — CONCRETE MEDIAN SLOPED NOSE TYPE 1
- SW5 — CONCRETE SIDEWALK 5-INCH
- DRW — CONCRETE DRIVEWAY 7-INCH
- AS — ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES 3½" HMA
- 1 — CURB RAMP NUMBER (REFER TO CURB RAMP DETAIL SHEETS)
- PAV 1 — 4" MILL & 4" HMA OVERLAY
- PAV 2 — 4" HMA, OVER 8" CONCRETE BASE, OVER 6" BASE AGGREGATE DENSE 1 1/4-INCH
- PAV 3 — 1.75" MILL & 1.75" HMA OVERLAY
- PAV 4 — 6¼" HMA, OVER 12" BASE AGGREGATE DENSE 1 1/4-INCH
- PAV 5 — 9" CONCRETE PAVEMENT, OVER 6" BASE AGGREGATE DENSE 1¼-INCH
- CR1 — CURB RAMP TYPE

DATA TABLE

E. MORELAND BLVD (USH 18)

POINT NO.	STATION	OFFSET	COMMENTS
7	221+99.28	51.08' LT	BEGIN 137' RADIUS, BEGIN CURB & GUTTER
8	221+95.83	188.03' LT	137' RADIUS
9	222+62.55	68.38' LT	END 137' RADIUS, END CURB & GUTTER
10	222+61.58	44.09' LT	BEGIN CURB & GUTTER, BEGIN TAPER
11	223+00.55	50.34' LT	END TAPER
12	222+59.23	63.77' LT	BEGIN SIDEWALK, BEGIN 15' RADIUS
13	222+72.35	71.04' LT	15' RADIUS
14	222+93.38	51.72' LT	END SIDEWALK
15	222+49.96	88.14' LT	END 170' RADIUS

RADIUS SHOWN IS TO CURB FLANGE



DATA TABLE

E. MORELAND BLVD (USH 18)

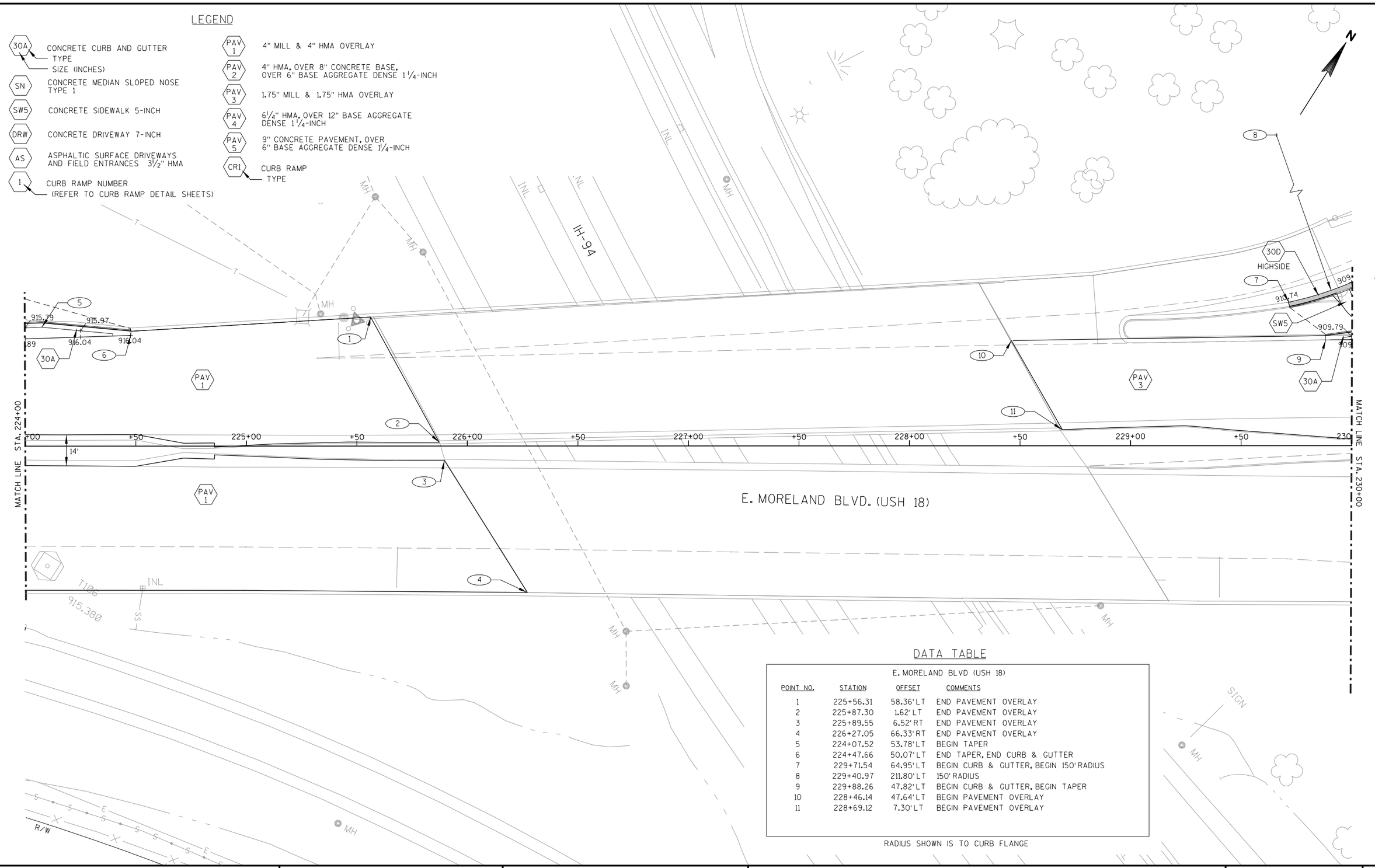
POINT NO.	STATION	OFFSET	COMMENTS
1	222+78.62	99.65' LT	END CURB & GUTTER
2	222+89.97	84.55' LT	END PAVEMENT OVERLAY
3	224+00.09	82.33' RT	END PAVEMENT OVERLAY
4	223+91.94	108.55' RT	END PAVEMENT OVERLAY
5	221+71.15	66.86' LT	BEGIN 170' RADIUS
6	221+67.54	236.82' LT	170' RADIUS

RADIUS SHOWN IS TO CURB FLANGE

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	PLAN DETAILS	SHEET 88	E

LEGEND

- 30A — CONCRETE CURB AND GUTTER (TYPE / SIZE (INCHES))
- SN — CONCRETE MEDIAN SLOPED NOSE TYPE 1
- SW5 — CONCRETE SIDEWALK 5-INCH
- DRW — CONCRETE DRIVEWAY 7-INCH
- AS — ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES 3½" HMA
- 1 — CURB RAMP NUMBER (REFER TO CURB RAMP DETAIL SHEETS)
- PAV 1 — 4" MILL & 4" HMA OVERLAY
- PAV 2 — 4" HMA, OVER 8" CONCRETE BASE, OVER 6" BASE AGGREGATE DENSE 1¼-INCH
- PAV 3 — 1.75" MILL & 1.75" HMA OVERLAY
- PAV 4 — 6¼" HMA, OVER 12" BASE AGGREGATE DENSE 1¼-INCH
- PAV 5 — 9" CONCRETE PAVEMENT, OVER 6" BASE AGGREGATE DENSE 1¼-INCH
- CR1 — CURB RAMP TYPE



DATA TABLE

E. MORELAND BLVD (USH 18)

POINT NO.	STATION	OFFSET	COMMENTS
1	225+56.31	58.36' LT	END PAVEMENT OVERLAY
2	225+87.30	1.62' LT	END PAVEMENT OVERLAY
3	225+89.55	6.52' RT	END PAVEMENT OVERLAY
4	226+27.05	66.33' RT	END PAVEMENT OVERLAY
5	224+07.52	53.78' LT	BEGIN TAPER
6	224+47.66	50.07' LT	END TAPER, END CURB & GUTTER
7	229+71.54	64.95' LT	BEGIN CURB & GUTTER, BEGIN 150' RADIUS
8	229+40.97	211.80' LT	150' RADIUS
9	229+88.26	47.82' LT	BEGIN CURB & GUTTER, BEGIN TAPER
10	228+46.14	47.64' LT	BEGIN PAVEMENT OVERLAY
11	228+69.12	7.30' LT	BEGIN PAVEMENT OVERLAY

RADIUS SHOWN IS TO CURB FLANGE

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	PLAN DETAILS	SHEET 89	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\021222_pd.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 40.0000 sf / in.

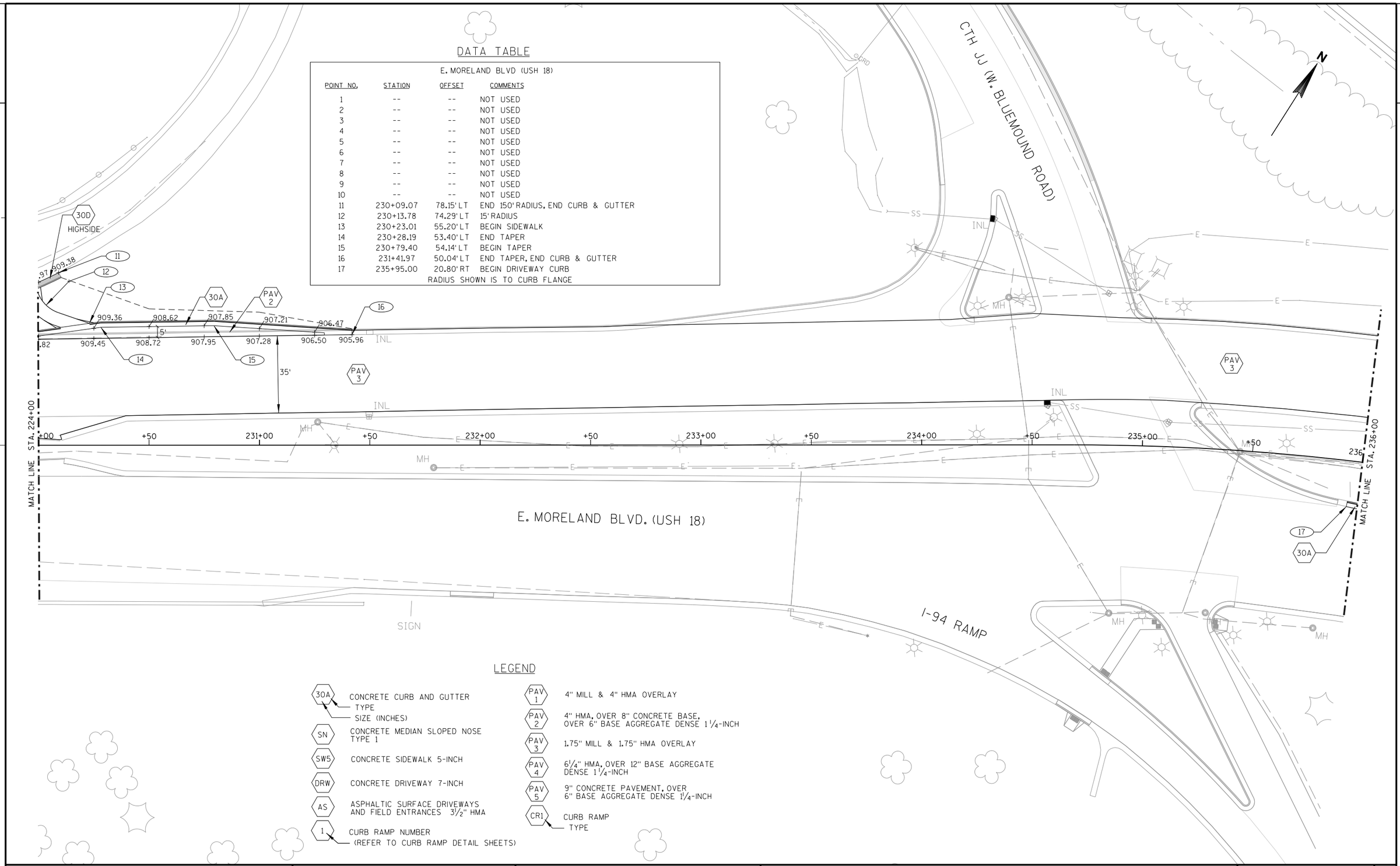
WISDOT/CADDS SHEET 42

DATA TABLE

E. MORELAND BLVD (USH 18)

POINT NO.	STATION	OFFSET	COMMENTS
1	--	--	NOT USED
2	--	--	NOT USED
3	--	--	NOT USED
4	--	--	NOT USED
5	--	--	NOT USED
6	--	--	NOT USED
7	--	--	NOT USED
8	--	--	NOT USED
9	--	--	NOT USED
10	--	--	NOT USED
11	230+09.07	78.15' LT	END 150' RADIUS, END CURB & GUTTER
12	230+13.78	74.29' LT	15' RADIUS
13	230+23.01	55.20' LT	BEGIN SIDEWALK
14	230+28.19	53.40' LT	END TAPER
15	230+79.40	54.14' LT	BEGIN TAPER
16	231+41.97	50.04' LT	END TAPER, END CURB & GUTTER
17	235+95.00	20.80' RT	BEGIN DRIVEWAY CURB

RADIUS SHOWN IS TO CURB FLANGE

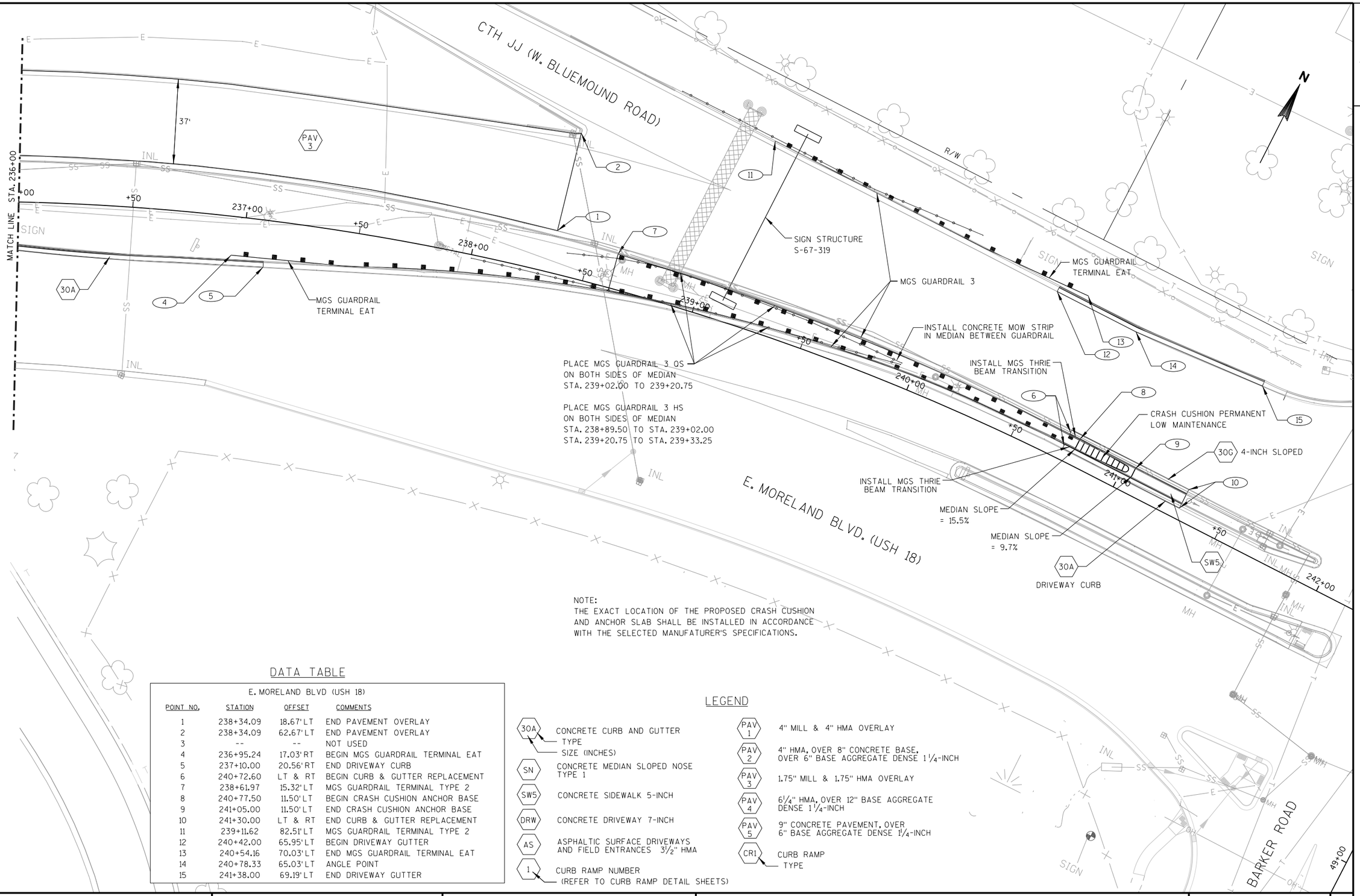


LEGEND

- 30A — CONCRETE CURB AND GUTTER (TYPE / SIZE (INCHES))
- SN — CONCRETE MEDIAN SLOPED NOSE TYPE 1
- SW5 — CONCRETE SIDEWALK 5-INCH
- DRW — CONCRETE DRIVEWAY 7-INCH
- AS — ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES 3½" HMA
- 1 — CURB RAMP NUMBER (REFER TO CURB RAMP DETAIL SHEETS)
- PAV 1 — 4" MILL & 4" HMA OVERLAY
- PAV 2 — 4" HMA, OVER 8" CONCRETE BASE, OVER 6" BASE AGGREGATE DENSE 1 1/4-INCH
- PAV 3 — 1.75" MILL & 1.75" HMA OVERLAY
- PAV 4 — 6¼" HMA, OVER 12" BASE AGGREGATE DENSE 1 1/4-INCH
- PAV 5 — 9" CONCRETE PAVEMENT, OVER 6" BASE AGGREGATE DENSE 1¼-INCH
- CR1 — CURB RAMP TYPE

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	PLAN DETAILS	SHEET 90	E

2



NOTE:
THE EXACT LOCATION OF THE PROPOSED CRASH CUSHION AND ANCHOR SLAB SHALL BE INSTALLED IN ACCORDANCE WITH THE SELECTED MANUFATURER'S SPECIFICATIONS.

DATA TABLE

E. MORELAND BLVD (USH 18)

POINT NO.	STATION	OFFSET	COMMENTS
1	238+34.09	18.67'LT	END PAVEMENT OVERLAY
2	238+34.09	62.67'LT	END PAVEMENT OVERLAY
3	--	--	NOT USED
4	236+95.24	17.03'RT	BEGIN MGS GUARDRAIL TERMINAL EAT
5	237+10.00	20.56'RT	END DRIVEWAY CURB
6	240+72.60	LT & RT	BEGIN CURB & GUTTER REPLACEMENT
7	238+61.97	15.32'LT	MGS GUARDRAIL TERMINAL TYPE 2
8	240+77.50	11.50'LT	BEGIN CRASH CUSHION ANCHOR BASE
9	241+05.00	11.50'LT	END CRASH CUSHION ANCHOR BASE
10	241+30.00	LT & RT	END CURB & GUTTER REPLACEMENT
11	239+11.62	82.51'LT	MGS GUARDRAIL TERMINAL TYPE 2
12	240+42.00	65.95'LT	BEGIN DRIVEWAY GUTTER
13	240+54.16	70.03'LT	END MGS GUARDRAIL TERMINAL EAT
14	240+78.33	65.03'LT	ANGLE POINT
15	241+38.00	69.19'LT	END DRIVEWAY GUTTER

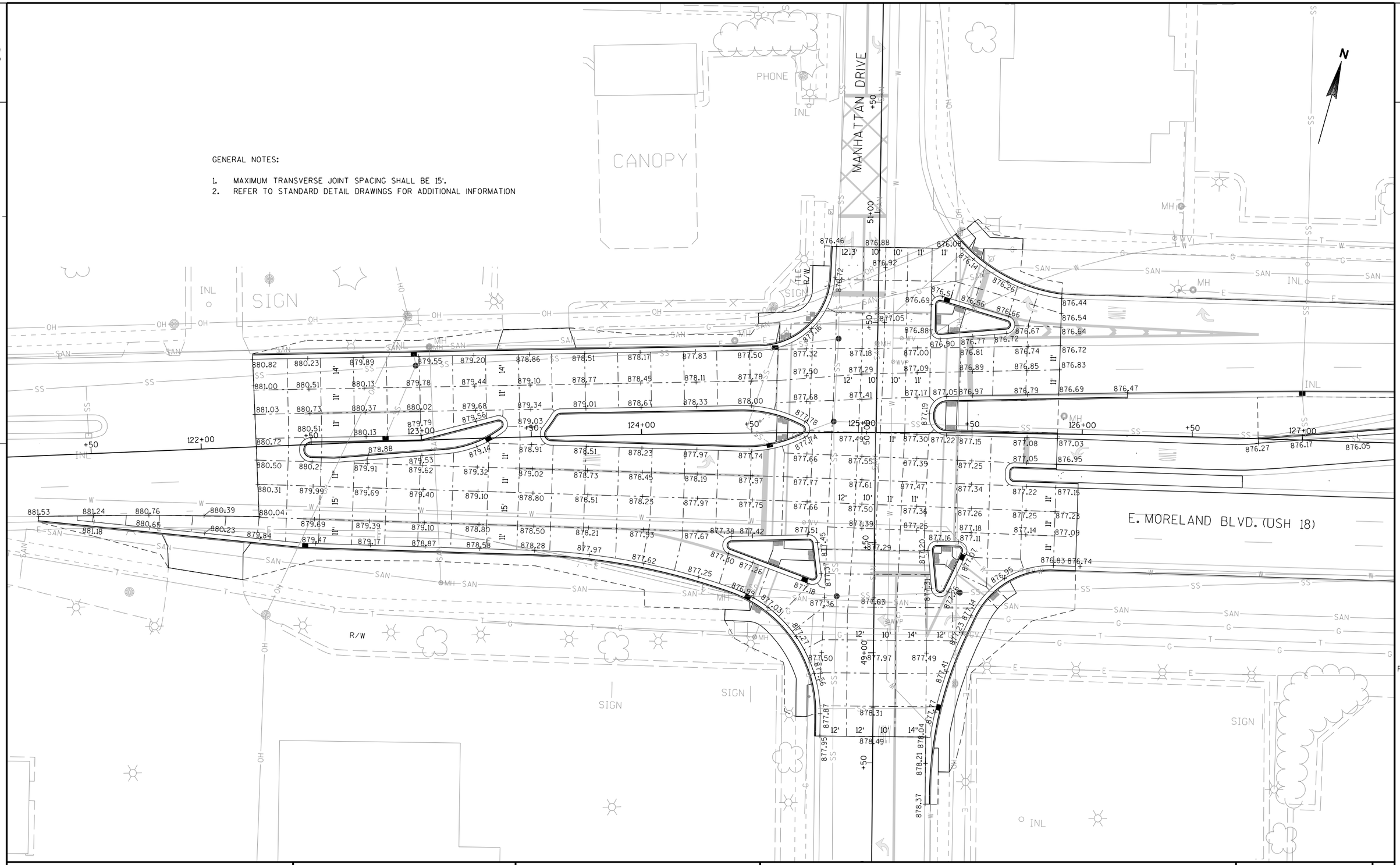
LEGEND

- 30A — CONCRETE CURB AND GUTTER (TYPE, SIZE (INCHES))
- SN — CONCRETE MEDIAN SLOPED NOSE TYPE 1
- SW5 — CONCRETE SIDEWALK 5-INCH
- DRW — CONCRETE DRIVEWAY 7-INCH
- AS — ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES 3½" HMA
- 1 — CURB RAMP NUMBER (REFER TO CURB RAMP DETAIL SHEETS)
- PAV 1 — 4" MILL & 4" HMA OVERLAY
- PAV 2 — 4" HMA, OVER 8" CONCRETE BASE, OVER 6" BASE AGGREGATE DENSE 1 ¼-INCH
- PAV 3 — 1.75" MILL & 1.75" HMA OVERLAY
- PAV 4 — 6¼" HMA, OVER 12" BASE AGGREGATE DENSE 1 ¼-INCH
- PAV 5 — 9" CONCRETE PAVEMENT, OVER 6" BASE AGGREGATE DENSE 1¼-INCH
- CR1 — CURB RAMP (TYPE)

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	PLAN DETAILS	SHEET 91	E

GENERAL NOTES:

1. MAXIMUM TRANSVERSE JOINT SPACING SHALL BE 15'.
2. REFER TO STANDARD DETAIL DRAWINGS FOR ADDITIONAL INFORMATION



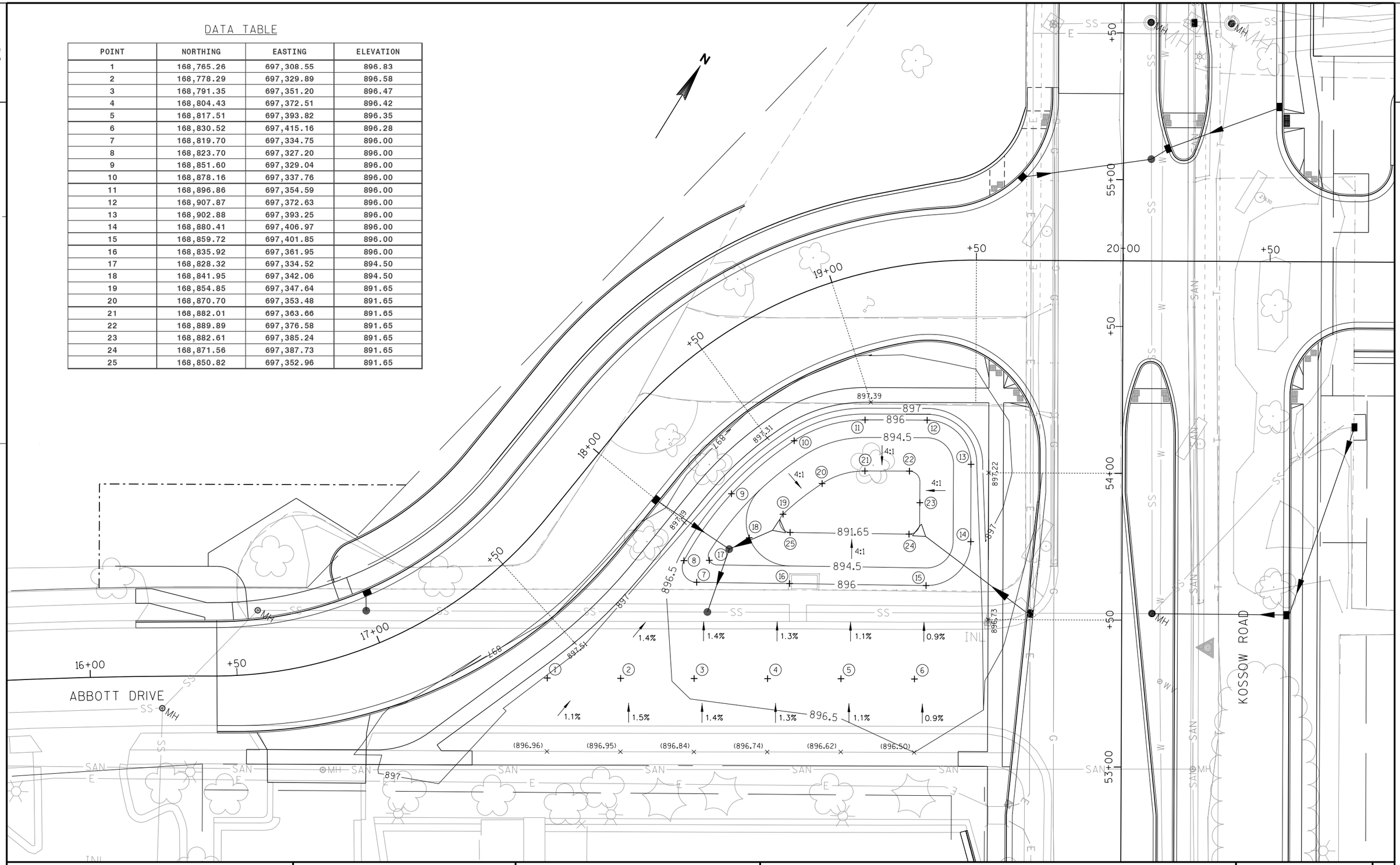
PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	JOINT DETAILS	SHEET 92	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\021301_jd.dgn | PLOT DATE : 4/27/2015 | PLOT BY : GRAEF | PLOT NAME : | PLOT SCALE : 40.0000 sf / in.

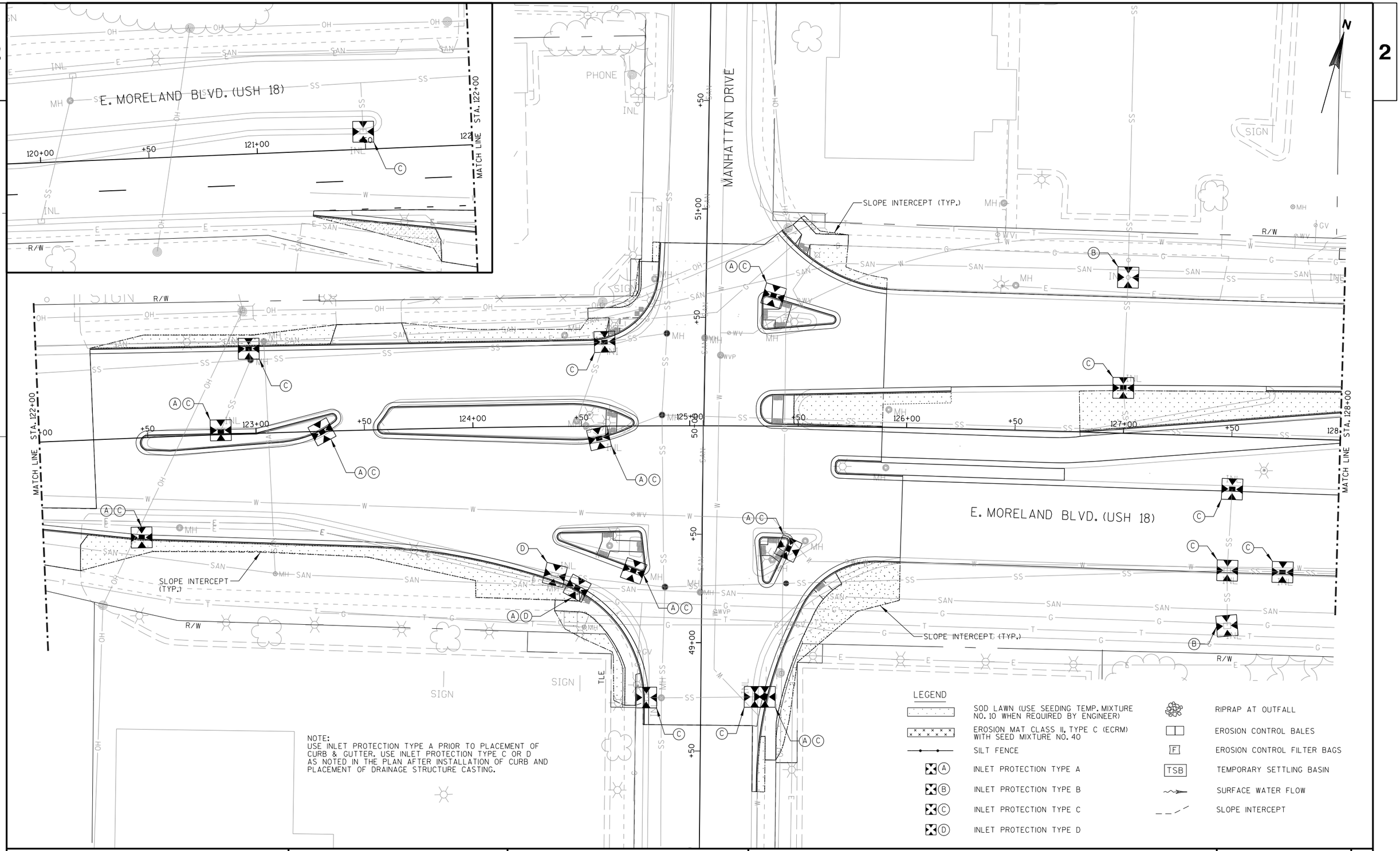
WISDOT/CADDS SHEET 42

DATA TABLE

POINT	NORTHING	EASTING	ELEVATION
1	168,765.26	697,308.55	896.83
2	168,778.29	697,329.89	896.58
3	168,791.35	697,351.20	896.47
4	168,804.43	697,372.51	896.42
5	168,817.51	697,393.82	896.35
6	168,830.52	697,415.16	896.28
7	168,819.70	697,334.75	896.00
8	168,823.70	697,327.20	896.00
9	168,851.60	697,329.04	896.00
10	168,878.16	697,337.76	896.00
11	168,896.86	697,354.59	896.00
12	168,907.87	697,372.63	896.00
13	168,902.88	697,393.25	896.00
14	168,880.41	697,406.97	896.00
15	168,859.72	697,401.85	896.00
16	168,835.92	697,361.95	896.00
17	168,828.32	697,334.52	894.50
18	168,841.95	697,342.06	894.50
19	168,854.85	697,347.64	891.65
20	168,870.70	697,353.48	891.65
21	168,882.01	697,363.66	891.65
22	168,889.89	697,376.58	891.65
23	168,882.61	697,385.24	891.65
24	168,871.56	697,387.73	891.65
25	168,850.82	697,352.96	891.65



PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	DETENTION BASIN GRADING PLAN	SHEET 93	E



PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	EROSION CONTROL	SHEET 94	E

NOTE:
USE INLET PROTECTION TYPE A PRIOR TO PLACEMENT OF CURB & GUTTER. USE INLET PROTECTION TYPE C OR D AS NOTED IN THE PLAN AFTER INSTALLATION OF CURB AND PLACEMENT OF DRAINAGE STRUCTURE CASTING.

E. MORELAND BLVD. (USH 18)

MATCH LINE STA. 128+00

MATCH LINE STA. 134+00

SLOPE INTERCEPT (TYP.)

SLOPE INTERCEPT (TYP.)

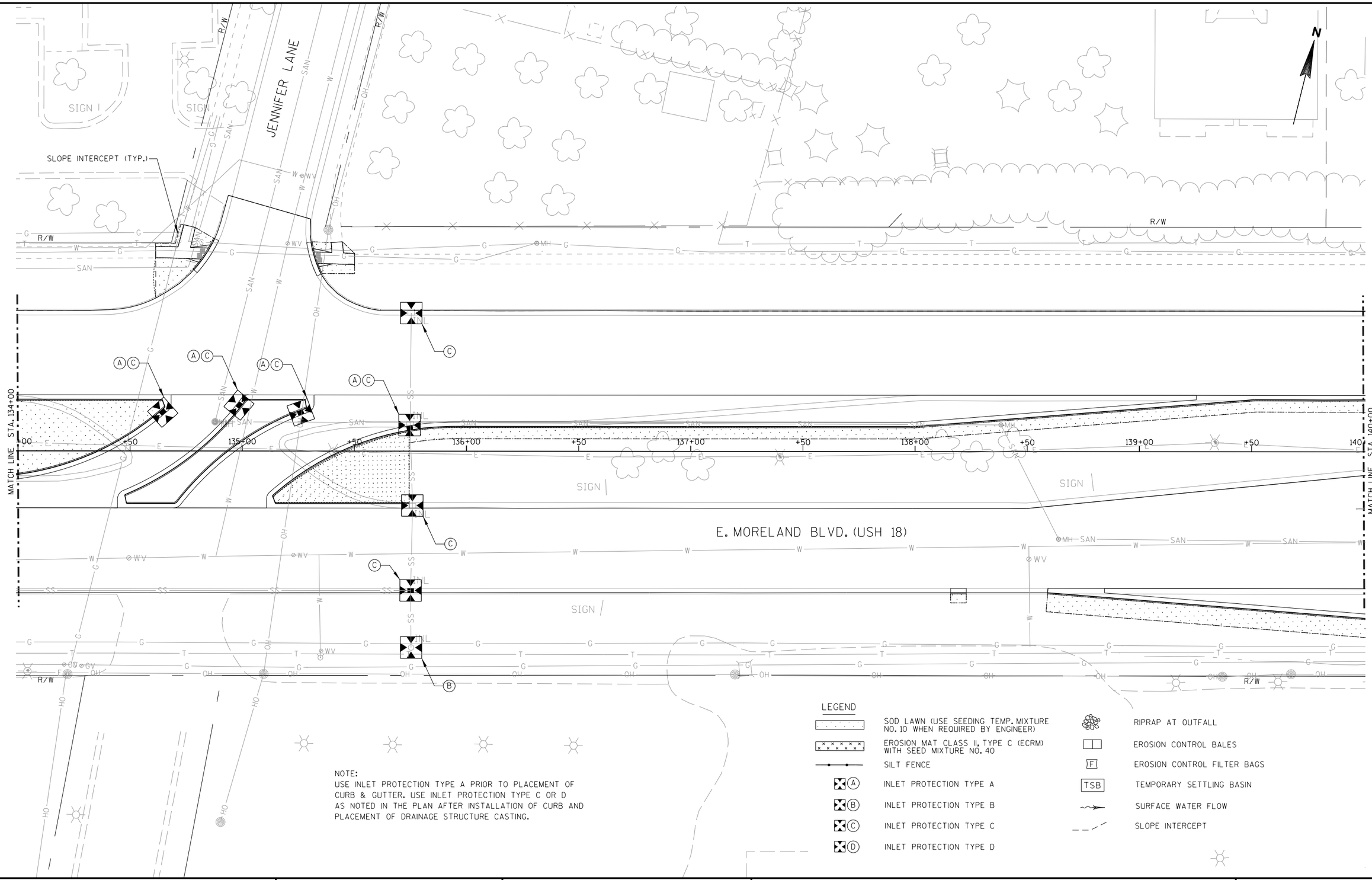
LEGEND

SOD LAWN (USE SEEDING TEMP. MIXTURE NO. 10 WHEN REQUIRED BY ENGINEER)	RIPRAP AT OUTFALL
EROSION MAT CLASS II, TYPE C (ECRM) WITH SEED MIXTURE NO. 40	EROSION CONTROL BALES
SILT FENCE	EROSION CONTROL FILTER BAGS
INLET PROTECTION TYPE A	TEMPORARY SETTLING BASIN
INLET PROTECTION TYPE B	SURFACE WATER FLOW
INLET PROTECTION TYPE C	SLOPE INTERCEPT
INLET PROTECTION TYPE D	

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	EROSION CONTROL	SHEET 95	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\022002_ec.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 40.0000 sf / in.

2



NOTE:
USE INLET PROTECTION TYPE A PRIOR TO PLACEMENT OF CURB & GUTTER. USE INLET PROTECTION TYPE C OR D AS NOTED IN THE PLAN AFTER INSTALLATION OF CURB AND PLACEMENT OF DRAINAGE STRUCTURE CASTING.

LEGEND

- SOD LAWN (USE SEEDING TEMP. MIXTURE NO. 10 WHEN REQUIRED BY ENGINEER)
- EROSION MAT CLASS II, TYPE C (ECRM) WITH SEED MIXTURE NO. 40
- SILT FENCE
- (A) INLET PROTECTION TYPE A
- (B) INLET PROTECTION TYPE B
- (C) INLET PROTECTION TYPE C
- (D) INLET PROTECTION TYPE D
- RIPRAP AT OUTFALL
- EROSION CONTROL BALES
- F EROSION CONTROL FILTER BAGS
- TSB TEMPORARY SETTLING BASIN
- SURFACE WATER FLOW
- SLOPE INTERCEPT

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	EROSION CONTROL	SHEET 96	E

NOTE:
USE INLET PROTECTION TYPE A PRIOR TO PLACEMENT OF CURB & GUTTER. USE INLET PROTECTION TYPE C OR D AS NOTED IN THE PLAN AFTER INSTALLATION OF CURB AND PLACEMENT OF DRAINAGE STRUCTURE CASTING.

WOLF ROAD

E. MORELAND BLVD. (USH 18)

LES PAUL PKWY. (STH 164)

SLOPE INTERCEPT (TYP.)

MATCH LINE STA. 140+00

MATCH LINE STA. 146+00

LEGEND

- SOD LAWN (USE SEEDING TEMP. MIXTURE NO. 10 WHEN REQUIRED BY ENGINEER)
- EROSION MAT CLASS II, TYPE C (ECRM) WITH SEED MIXTURE NO. 40
- SILT FENCE
- (A) INLET PROTECTION TYPE A
- (B) INLET PROTECTION TYPE B
- (C) INLET PROTECTION TYPE C
- (D) INLET PROTECTION TYPE D
- RIPRAP AT OUTFALL
- EROSION CONTROL BALES
- F EROSION CONTROL FILTER BAGS
- TSB TEMPORARY SETTLING BASIN
- SURFACE WATER FLOW
- SLOPE INTERCEPT

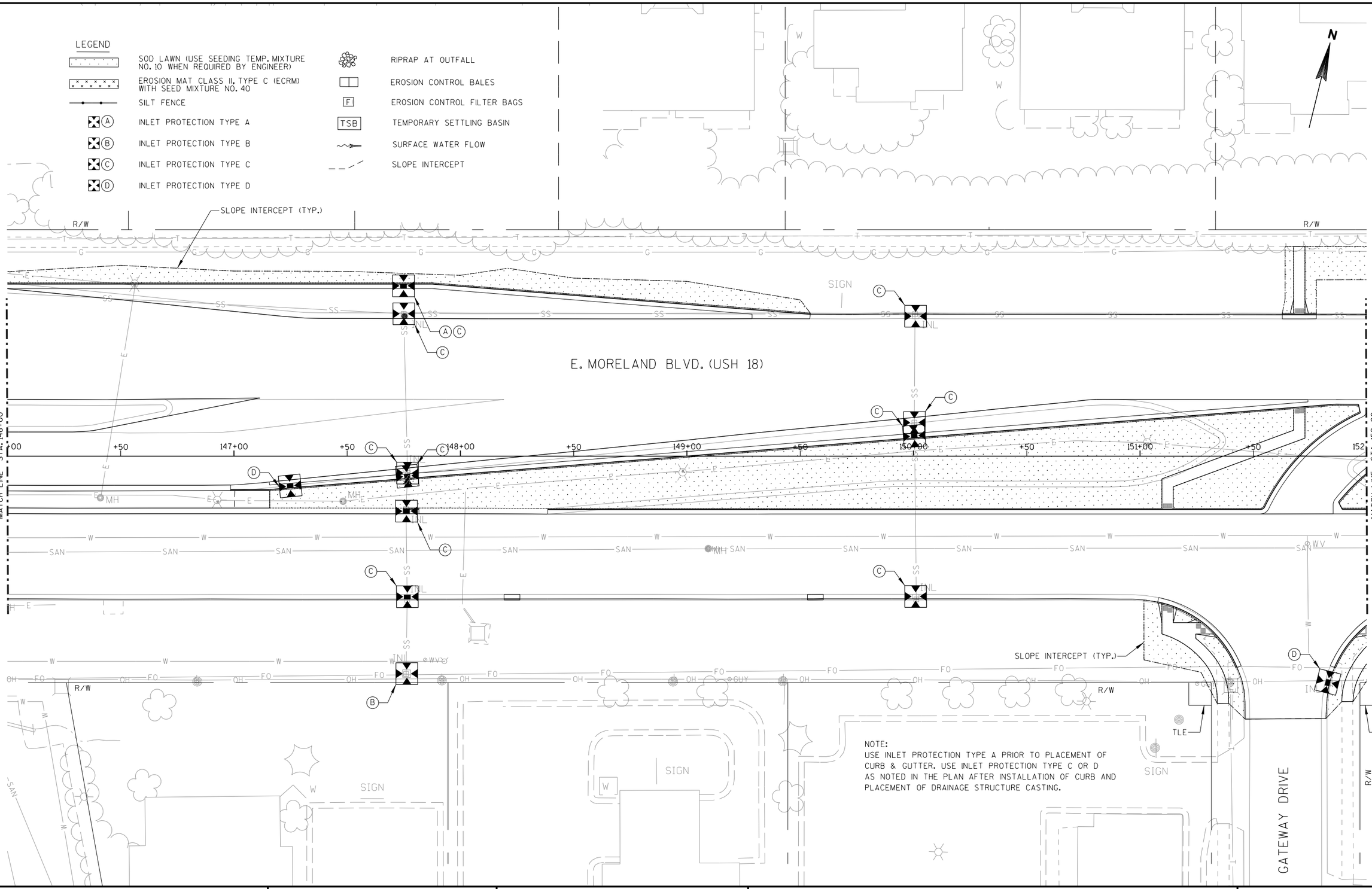
PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	EROSION CONTROL	SHEET 97	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\022004_ec.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 40.0000 sf / in.

WISDOT/CADDS SHEET 42

LEGEND

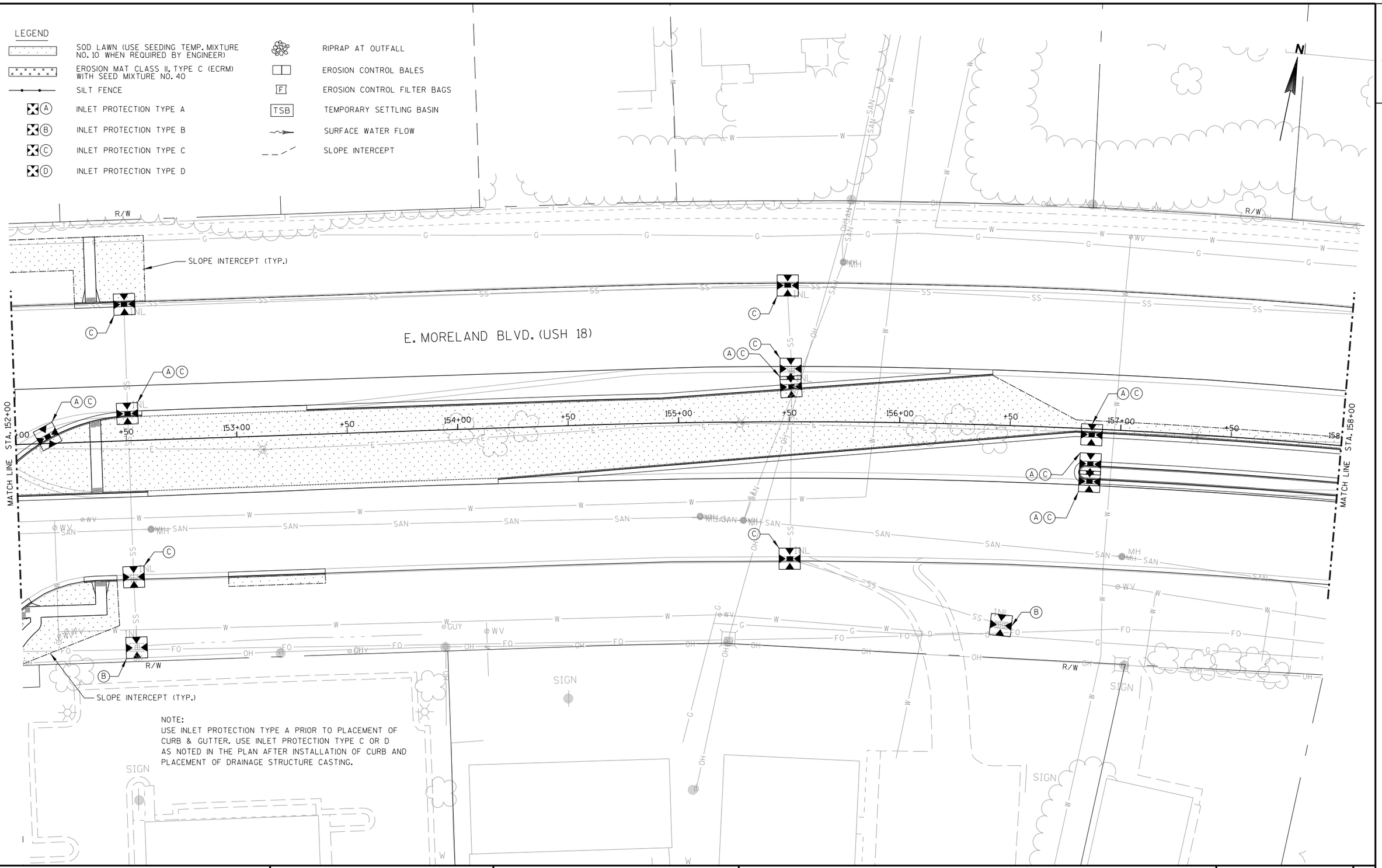
- SOD LAWN (USE SEEDING TEMP. MIXTURE NO. 10 WHEN REQUIRED BY ENGINEER)
- EROSION MAT CLASS II, TYPE C (ECRM) WITH SEED MIXTURE NO. 40
- SILT FENCE
- (A) INLET PROTECTION TYPE A
- (B) INLET PROTECTION TYPE B
- (C) INLET PROTECTION TYPE C
- (D) INLET PROTECTION TYPE D
- RIPRAP AT OUTFALL
- EROSION CONTROL BALES
- F EROSION CONTROL FILTER BAGS
- TSB TEMPORARY SETTLING BASIN
- SURFACE WATER FLOW
- SLOPE INTERCEPT



PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	EROSION CONTROL	SHEET 98	E

LEGEND

- SOD LAWN (USE SEEDING TEMP. MIXTURE NO. 10 WHEN REQUIRED BY ENGINEER)
- EROSION MAT CLASS II, TYPE C (ECRM) WITH SEED MIXTURE NO. 40
- SILT FENCE
- (A) INLET PROTECTION TYPE A
- (B) INLET PROTECTION TYPE B
- (C) INLET PROTECTION TYPE C
- (D) INLET PROTECTION TYPE D
- RIPRAP AT OUTFALL
- EROSION CONTROL BALES
- F EROSION CONTROL FILTER BAGS
- TSB TEMPORARY SETTLING BASIN
- SURFACE WATER FLOW
- SLOPE INTERCEPT



NOTE:
USE INLET PROTECTION TYPE A PRIOR TO PLACEMENT OF CURB & GUTTER. USE INLET PROTECTION TYPE C OR D AS NOTED IN THE PLAN AFTER INSTALLATION OF CURB AND PLACEMENT OF DRAINAGE STRUCTURE CASTING.

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	EROSION CONTROL	SHEET 99	E

LEGEND

- SOD LAWN (USE SEEDING TEMP. MIXTURE NO. 10 WHEN REQUIRED BY ENGINEER)
- EROSION MAT CLASS II, TYPE C (ECRM) WITH SEED MIXTURE NO. 40
- SILT FENCE
- (A) INLET PROTECTION TYPE A
- (B) INLET PROTECTION TYPE B
- (C) INLET PROTECTION TYPE C
- (D) INLET PROTECTION TYPE D
- RIPRAP AT OUTFALL
- EROSION CONTROL BALES
- F EROSION CONTROL FILTER BAGS
- TSB TEMPORARY SETTLING BASIN
- SURFACE WATER FLOW
- SLOPE INTERCEPT

AVALON DRIVE

E. MORELAND BLVD. (USH 18)

SLOPE INTERCEPT (TYP.)

R/W

TLE

MATCH LINE STA. 158+00

MATCH LINE STA. 164+00

158+00 +50 159+00 +50 160+00 +50 161+00 +50 162+00 +50 163+00 +50 164

NOTE:
USE INLET PROTECTION TYPE A PRIOR TO PLACEMENT OF CURB & GUTTER. USE INLET PROTECTION TYPE C OR D AS NOTED IN THE PLAN AFTER INSTALLATION OF CURB AND PLACEMENT OF DRAINAGE STRUCTURE CASTING.

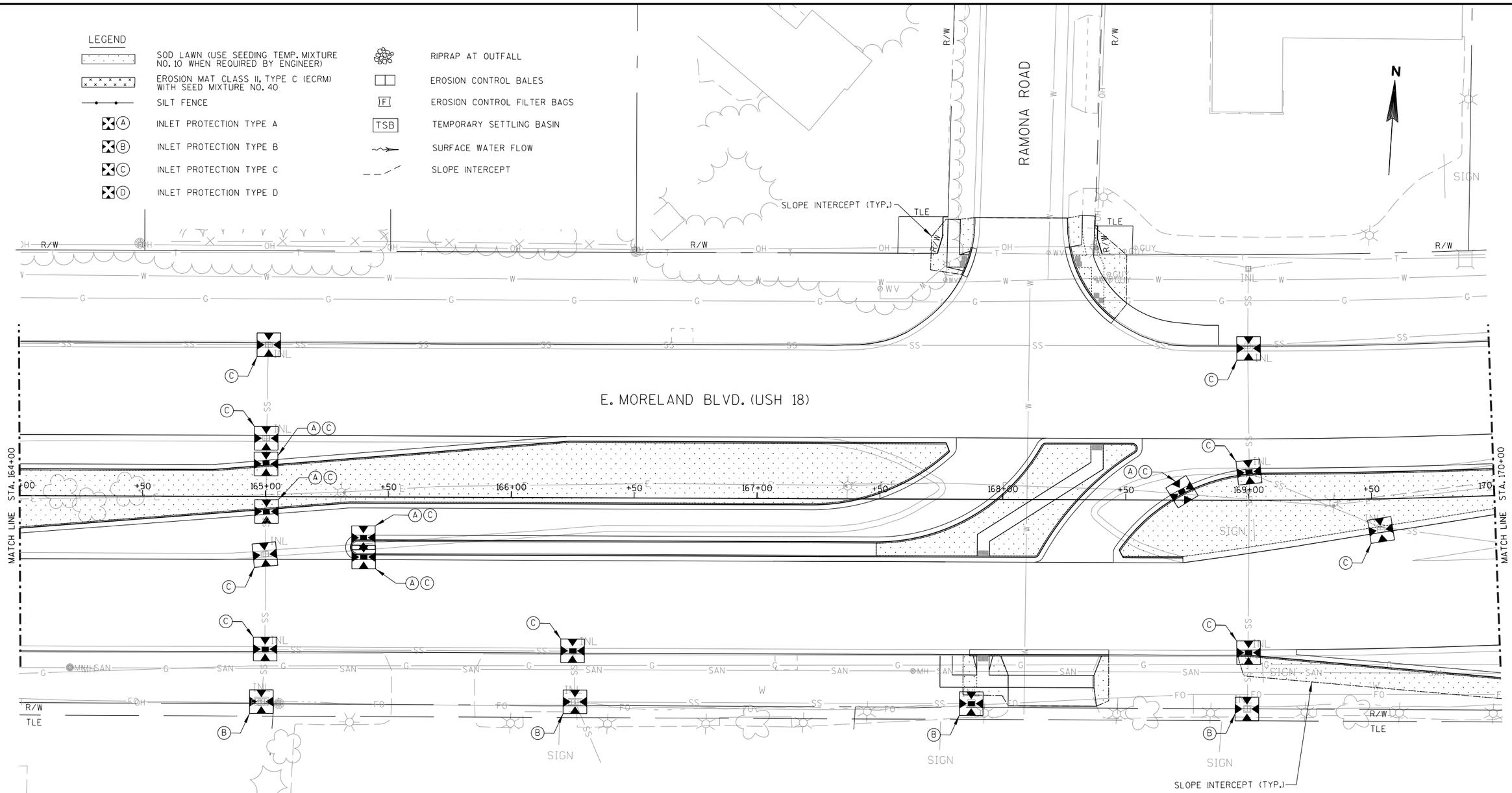
PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	EROSION CONTROL	SHEET 100	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\022007_ec.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 40.0000 sf / in.

WISDOT/CADDS SHEET 42

LEGEND

- SOD LAWN (USE SEEDING TEMP. MIXTURE NO. 10 WHEN REQUIRED BY ENGINEER)
- EROSION MAT CLASS II, TYPE C (ECRM) WITH SEED MIXTURE NO. 40
- SILT FENCE
- (A) INLET PROTECTION TYPE A
- (B) INLET PROTECTION TYPE B
- (C) INLET PROTECTION TYPE C
- (D) INLET PROTECTION TYPE D
- RIPRAP AT OUTFALL
- EROSION CONTROL BALES
- (F) EROSION CONTROL FILTER BAGS
- TSB TEMPORARY SETTLING BASIN
- SURFACE WATER FLOW
- SLOPE INTERCEPT



NOTE:
USE INLET PROTECTION TYPE A PRIOR TO PLACEMENT OF CURB & GUTTER. USE INLET PROTECTION TYPE C OR D AS NOTED IN THE PLAN AFTER INSTALLATION OF CURB AND PLACEMENT OF DRAINAGE STRUCTURE CASTING.

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	EROSION CONTROL	SHEET 101	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\022008_ec.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 40.0000 sf / in.

WISDOT/CADDS SHEET 42

NOTE:
USE INLET PROTECTION TYPE A PRIOR TO PLACEMENT OF CURB & GUTTER. USE INLET PROTECTION TYPE C OR D AS NOTED IN THE PLAN AFTER INSTALLATION OF CURB AND PLACEMENT OF DRAINAGE STRUCTURE CASTING.

N

E. MORELAND BLVD. (USH 18)

E. MAIN STREET

SLOPE INTERCEPT (TYP.)

SLOPE INTERCEPT (TYP.)

MATCH LINE STA. 170+00

MATCH LINE STA. 176+00

170+00 +50 171+00 +50 172+00 +50 173+00 +50 174+00 +50 175+00 +50 176

LEGEND

- SOD LAWN (USE SEEDING TEMP. MIXTURE NO. 10 WHEN REQUIRED BY ENGINEER)
- EROSION MAT CLASS II, TYPE C (ECRM) WITH SEED MIXTURE NO. 40
- SILT FENCE
- (A) INLET PROTECTION TYPE A
- (B) INLET PROTECTION TYPE B
- (C) INLET PROTECTION TYPE C
- (D) INLET PROTECTION TYPE D
- RIPRAP AT OUTFALL
- EROSION CONTROL BALES
- F EROSION CONTROL FILTER BAGS
- TSB TEMPORARY SETTLING BASIN
- SURFACE WATER FLOW
- SLOPE INTERCEPT

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	EROSION CONTROL	SHEET 102	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\022009_ec.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 40.0000 sf / in.

WISDOT/CADDS SHEET 42

LEGEND

- SOD LAWN (USE SEEDING TEMP. MIXTURE NO. 10 WHEN REQUIRED BY ENGINEER)
- EROSION MAT CLASS II, TYPE C (ECRM) WITH SEED MIXTURE NO. 40
- SILT FENCE
- (A) INLET PROTECTION TYPE A
- (B) INLET PROTECTION TYPE B
- (C) INLET PROTECTION TYPE C
- (D) INLET PROTECTION TYPE D
- RIPRAP AT OUTFALL
- EROSION CONTROL BALES
- (F) EROSION CONTROL FILTER BAGS
- TSB TEMPORARY SETTLING BASIN
- SURFACE WATER FLOW
- SLOPE INTERCEPT

N

NOTE:
USE INLET PROTECTION TYPE A PRIOR TO PLACEMENT OF CURB & GUTTER. USE INLET PROTECTION TYPE C OR D AS NOTED IN THE PLAN AFTER INSTALLATION OF CURB AND PLACEMENT OF DRAINAGE STRUCTURE CASTING.

MATCH LINE STA. 176+00

176+00 +50 177+00 +50 178+00 +50 179+00 +50 180+00 +50 181+00 +50 182+00

MATCH LINE STA. 182+00

E. MORELAND BLVD. (USH 18)

R/W

LEGEND

- SOD LAWN (USE SEEDING TEMP. MIXTURE NO. 10 WHEN REQUIRED BY ENGINEER)
- EROSION MAT CLASS II, TYPE C (ECRM) WITH SEED MIXTURE NO. 40
- SILT FENCE
- (A) INLET PROTECTION TYPE A
- (B) INLET PROTECTION TYPE B
- (C) INLET PROTECTION TYPE C
- (D) INLET PROTECTION TYPE D
- RIPRAP AT OUTFALL
- EROSION CONTROL BALES
- [F] EROSION CONTROL FILTER BAGS
- [TSB] TEMPORARY SETTLING BASIN
- SURFACE WATER FLOW
- SLOPE INTERCEPT

NOTE:
USE INLET PROTECTION TYPE A PRIOR TO PLACEMENT OF CURB & GUTTER. USE INLET PROTECTION TYPE C OR D AS NOTED IN THE PLAN AFTER INSTALLATION OF CURB AND PLACEMENT OF DRAINAGE STRUCTURE CASTING.

MATCH LINE STA. 182+00

MATCH LINE STA. 51+50

MATCH LINE STA. 188+00

SPRINGDALE ROAD

E. MORELAND BLVD. (USH 18)

SLOPE INTERCEPT (TYP.)

R/W

SIGN

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	EROSION CONTROL	SHEET 104	E

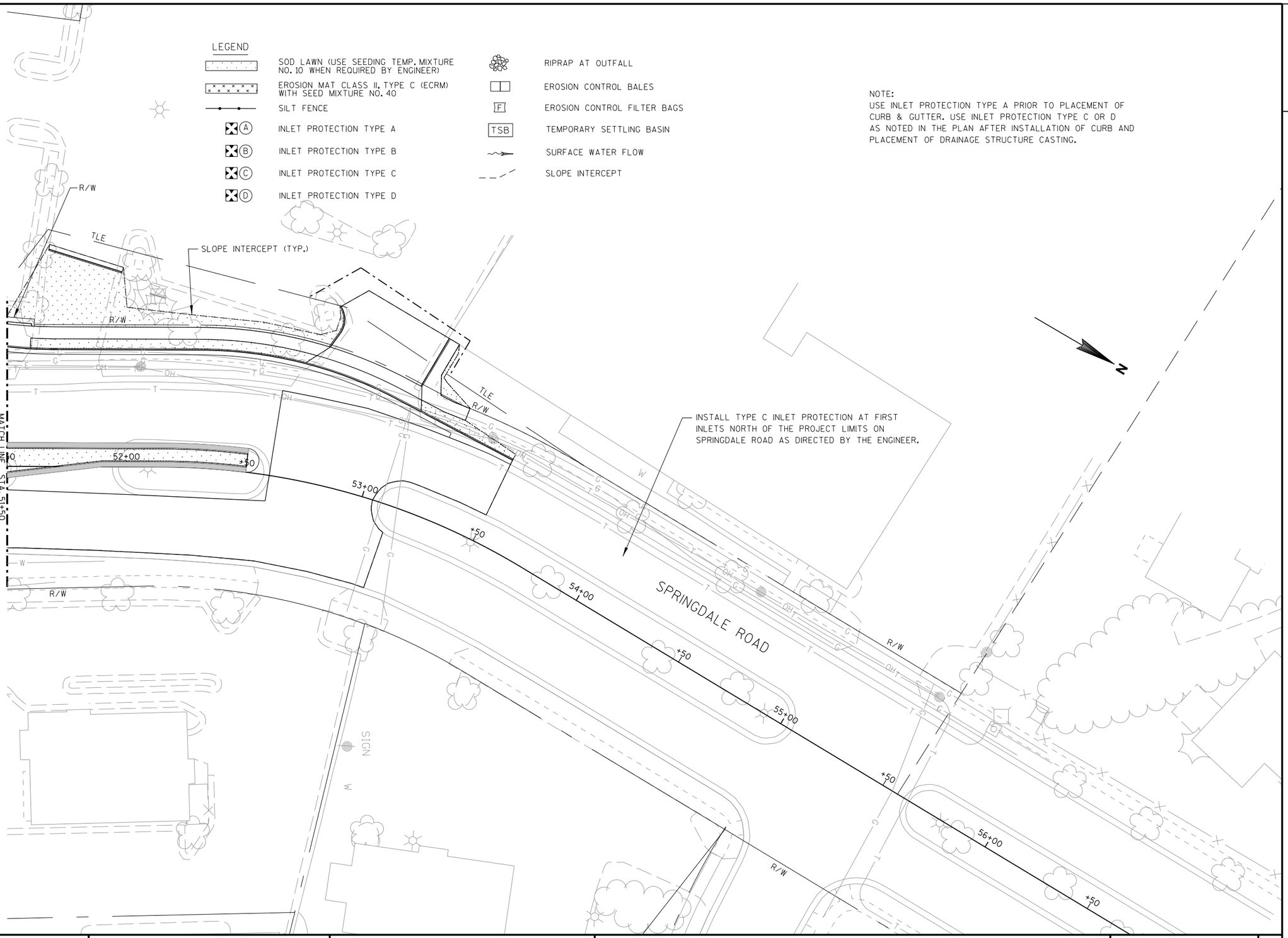
FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\022011_ec.dgn PLOT DATE : 7/24/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 40.0000 sf / in.

WISDOT/CADDS SHEET 42

LEGEND

- SOD LAWN (USE SEEDING TEMP. MIXTURE NO. 10 WHEN REQUIRED BY ENGINEER)
- EROSION MAT CLASS II, TYPE C (ECRM) WITH SEED MIXTURE NO. 40
- SILT FENCE
- (A) INLET PROTECTION TYPE A
- (B) INLET PROTECTION TYPE B
- (C) INLET PROTECTION TYPE C
- (D) INLET PROTECTION TYPE D
- RIPRAP AT OUTFALL
- EROSION CONTROL BALES
- F EROSION CONTROL FILTER BAGS
- TSB TEMPORARY SETTLING BASIN
- SURFACE WATER FLOW
- SLOPE INTERCEPT

NOTE:
USE INLET PROTECTION TYPE A PRIOR TO PLACEMENT OF CURB & GUTTER. USE INLET PROTECTION TYPE C OR D AS NOTED IN THE PLAN AFTER INSTALLATION OF CURB AND PLACEMENT OF DRAINAGE STRUCTURE CASTING.



PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	EROSION CONTROL	SHEET 105	E

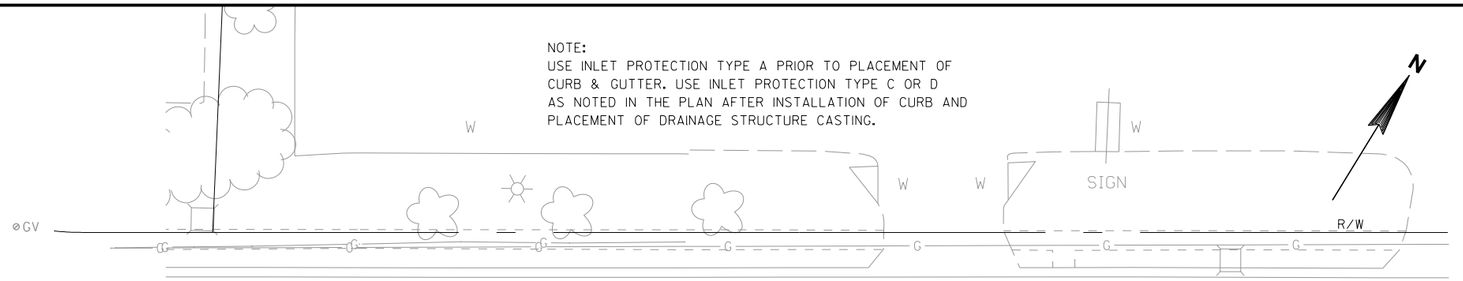
FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\022012_ec.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 40.0000 sf / in.

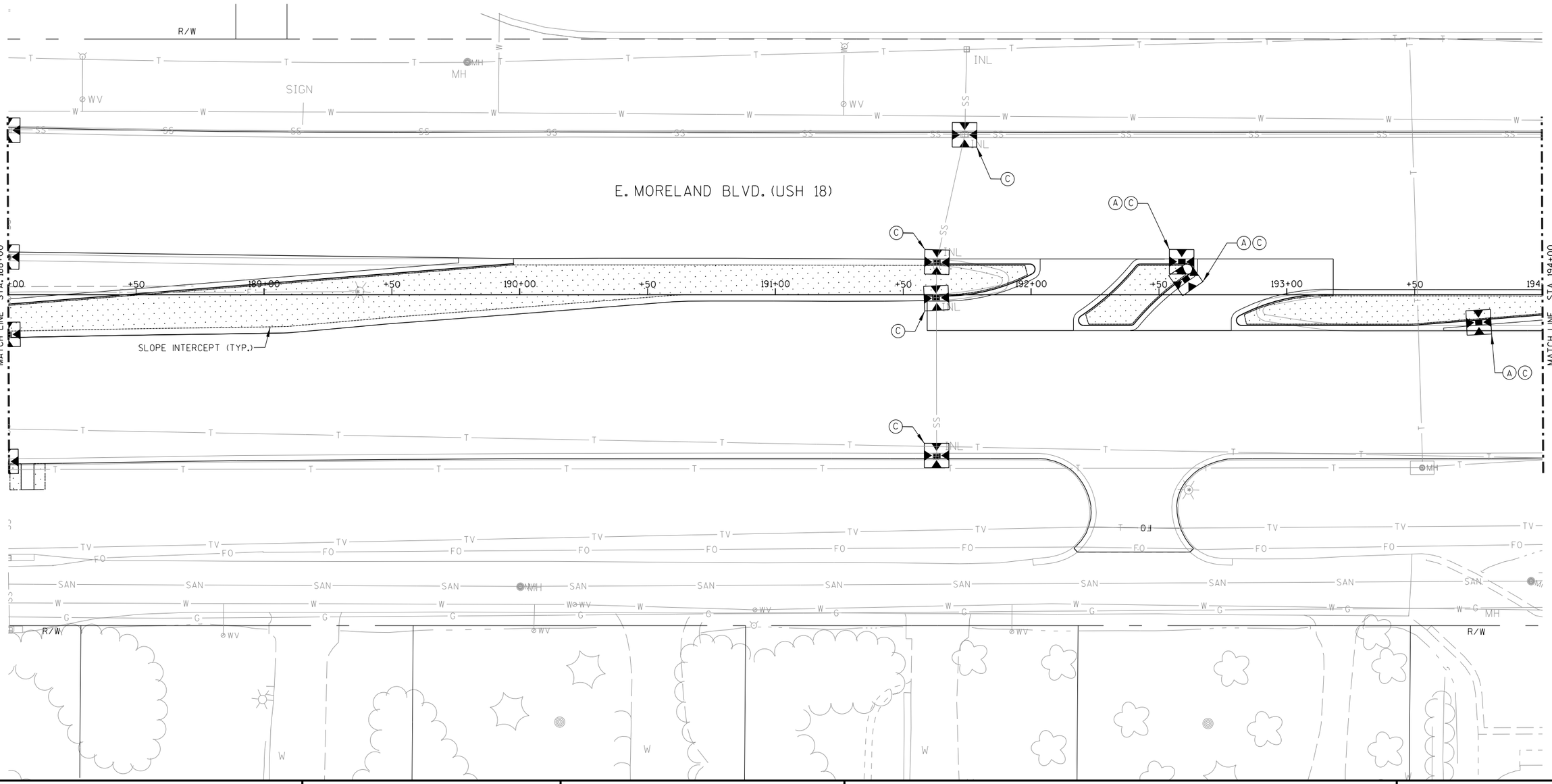
WISDOT/CADDS SHEET 42

LEGEND

- SOD LAWN (USE SEEDING TEMP. MIXTURE NO. 10 WHEN REQUIRED BY ENGINEER)
- EROSION MAT CLASS II, TYPE C (ECRM) WITH SEED MIXTURE NO. 40
- SILT FENCE
- (A) INLET PROTECTION TYPE A
- (B) INLET PROTECTION TYPE B
- (C) INLET PROTECTION TYPE C
- (D) INLET PROTECTION TYPE D
- RIPRAP AT OUTFALL
- EROSION CONTROL BALES
- F EROSION CONTROL FILTER BAGS
- TSB TEMPORARY SETTLING BASIN
- SURFACE WATER FLOW
- SLOPE INTERCEPT

NOTE:
USE INLET PROTECTION TYPE A PRIOR TO PLACEMENT OF CURB & GUTTER. USE INLET PROTECTION TYPE C OR D AS NOTED IN THE PLAN AFTER INSTALLATION OF CURB AND PLACEMENT OF DRAINAGE STRUCTURE CASTING.



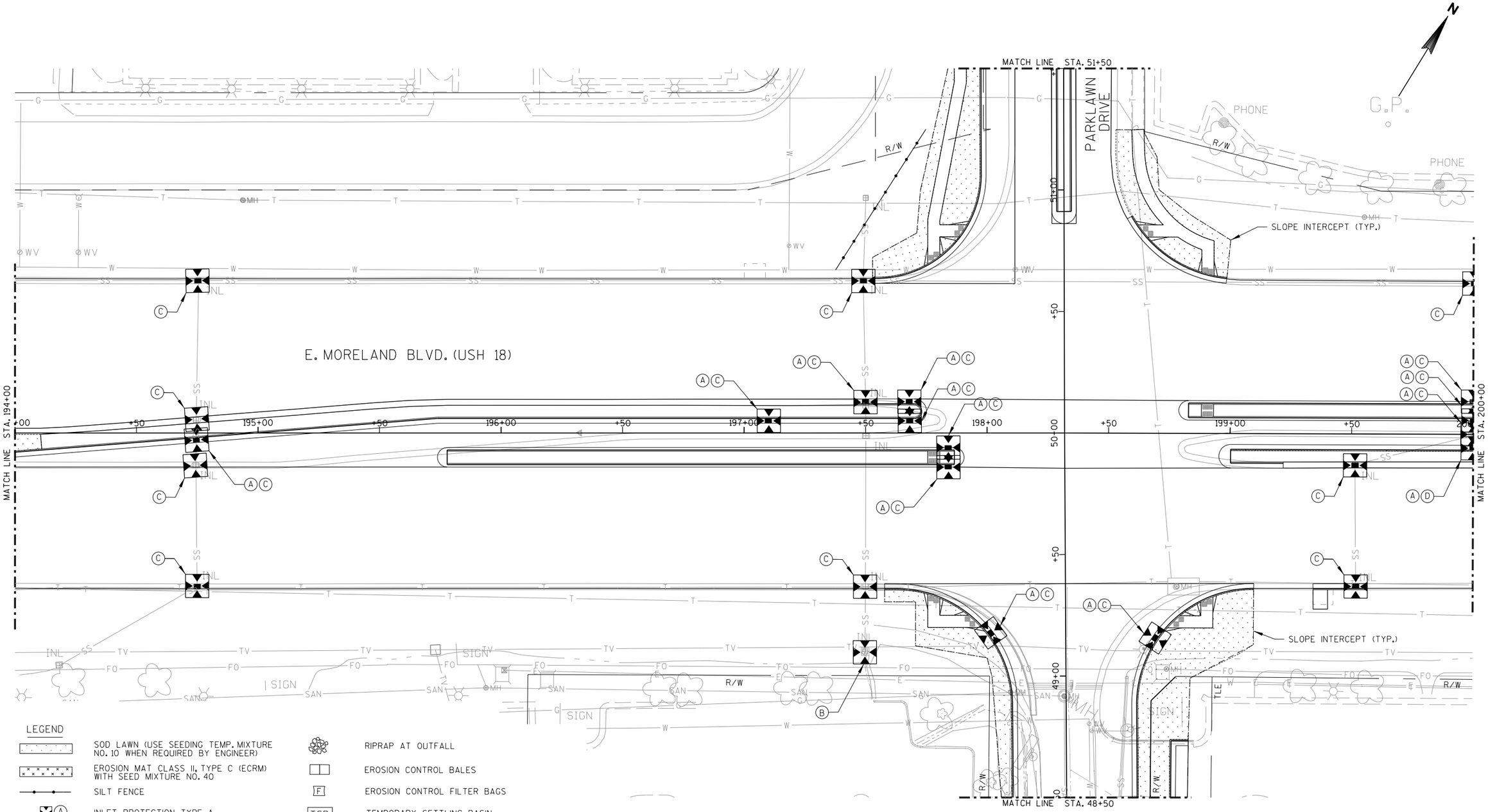


PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	EROSION CONTROL	SHEET 106	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\022013_ec.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 40.0000 sf / in.

WISDOT/CADDS SHEET 42

2

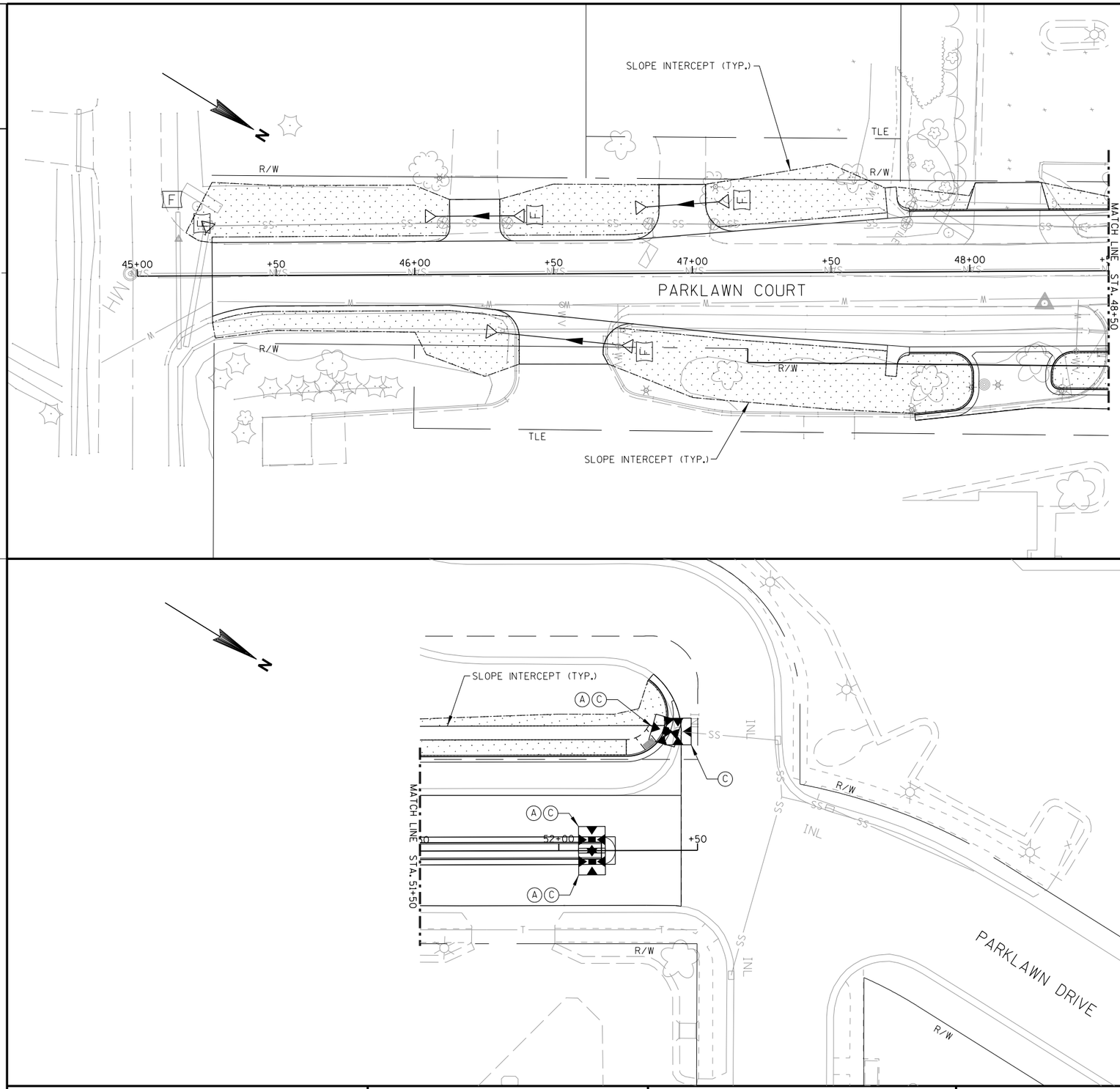


LEGEND

- SOD LAWN (USE SEEDING TEMP. MIXTURE NO. 10 WHEN REQUIRED BY ENGINEER)
- EROSION MAT CLASS II, TYPE C (ECRM) WITH SEED MIXTURE NO. 40
- SILT FENCE
- (A) INLET PROTECTION TYPE A
- (B) INLET PROTECTION TYPE B
- (C) INLET PROTECTION TYPE C
- (D) INLET PROTECTION TYPE D
- RIPRAP AT OUTFALL
- EROSION CONTROL BALES
- F EROSION CONTROL FILTER BAGS
- TSB TEMPORARY SETTLING BASIN
- SURFACE WATER FLOW
- SLOPE INTERCEPT

NOTE:
USE INLET PROTECTION TYPE A PRIOR TO PLACEMENT OF CURB & GUTTER. USE INLET PROTECTION TYPE C OR D AS NOTED IN THE PLAN AFTER INSTALLATION OF CURB AND PLACEMENT OF DRAINAGE STRUCTURE CASTING.

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	EROSION CONTROL	SHEET 107	E



LEGEND

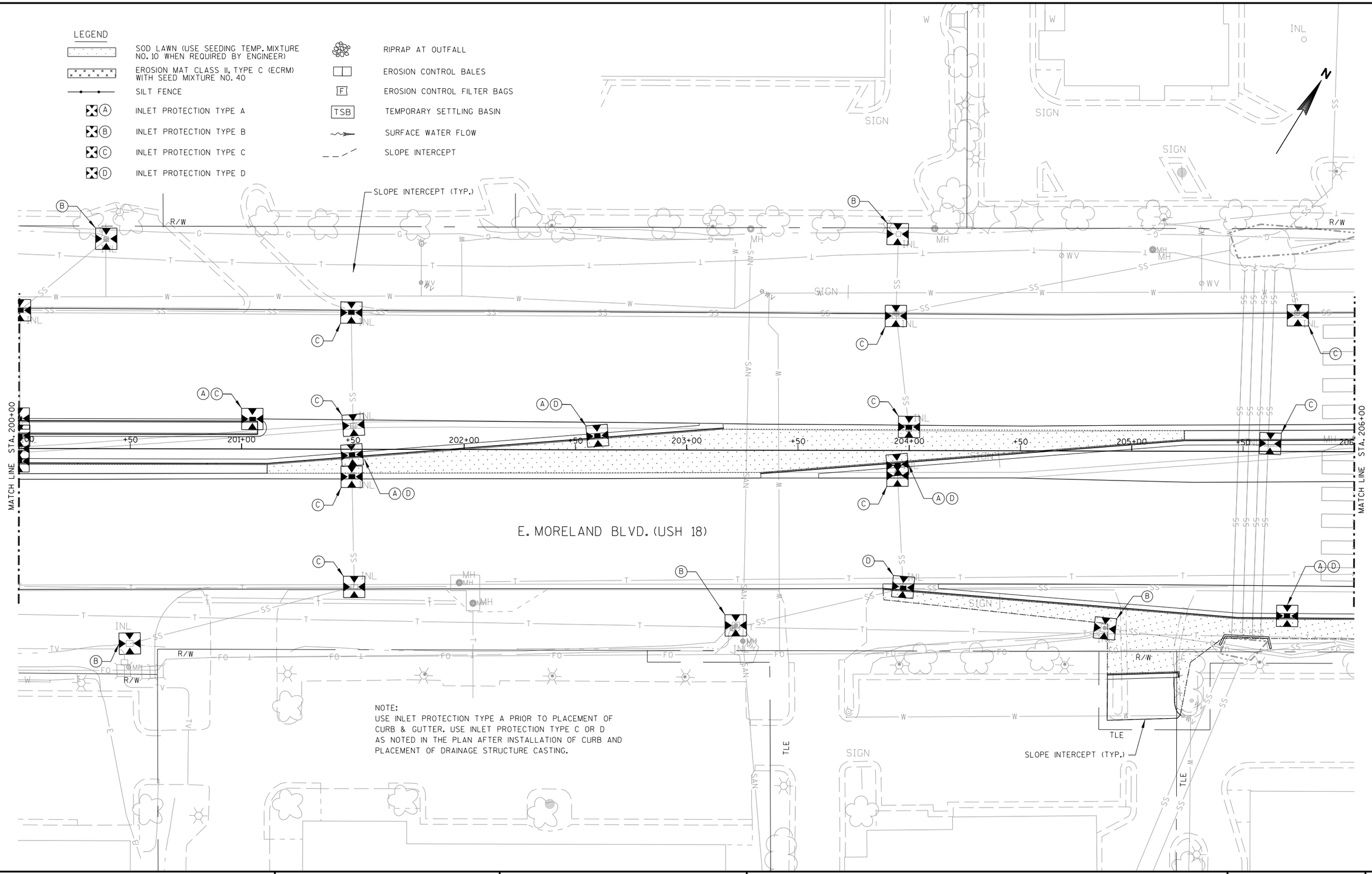
- SOD LAWN (USE SEEDING TEMP. MIXTURE NO. 10 WHEN REQUIRED BY ENGINEER)
- EROSION MAT CLASS II, TYPE C (ECRM) WITH SEED MIXTURE NO. 40
- SILT FENCE
- INLET PROTECTION TYPE A
- INLET PROTECTION TYPE B
- INLET PROTECTION TYPE C
- INLET PROTECTION TYPE D
- RIPRAP AT OUTFALL
- EROSION CONTROL BALES
- EROSION CONTROL FILTER BAGS
- TEMPORARY SETTLING BASIN
- SURFACE WATER FLOW
- SLOPE INTERCEPT

NOTE:
USE INLET PROTECTION TYPE A PRIOR TO PLACEMENT OF CURB & GUTTER. USE INLET PROTECTION TYPE C OR D AS NOTED IN THE PLAN AFTER INSTALLATION OF CURB AND PLACEMENT OF DRAINAGE STRUCTURE CASTING.

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	EROSION CONTROL	SHEET 108	E

LEGEND

- SOD LAWN (USE SEEDING TEMP. MIXTURE NO. 10 WHEN REQUIRED BY ENGINEER)
- EROSION MAT CLASS II, TYPE C (ECRM) WITH SEED MIXTURE NO. 40
- SILT FENCE
- (A) INLET PROTECTION TYPE A
- (B) INLET PROTECTION TYPE B
- (C) INLET PROTECTION TYPE C
- (D) INLET PROTECTION TYPE D
- RIPRAP AT OUTFALL
- EROSION CONTROL BALES
- (F) EROSION CONTROL FILTER BAGS
- TSB TEMPORARY SETTLING BASIN
- SURFACE WATER FLOW
- SLOPE INTERCEPT



NOTE:
USE INLET PROTECTION TYPE A PRIOR TO PLACEMENT OF CURB & GUTTER. USE INLET PROTECTION TYPE C OR D AS NOTED IN THE PLAN AFTER INSTALLATION OF CURB AND PLACEMENT OF DRAINAGE STRUCTURE CASTING.

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	EROSION CONTROL	SHEET 109	E

LEGEND

- SOD LAWN (USE SEEDING TEMP. MIXTURE NO. 10 WHEN REQUIRED BY ENGINEER)
- EROSION MAT CLASS II, TYPE C (ECRM) WITH SEED MIXTURE NO. 40
- SILT FENCE
- (A) INLET PROTECTION TYPE A
- (B) INLET PROTECTION TYPE B
- (C) INLET PROTECTION TYPE C
- (D) INLET PROTECTION TYPE D
- RIPRAP AT OUTFALL
- EROSION CONTROL BALES
- (F) EROSION CONTROL FILTER BAGS
- TSB TEMPORARY SETTLING BASIN
- SURFACE WATER FLOW
- SLOPE INTERCEPT

MATCH LINE STA. 52+25

KOSSOW ROAD

SLOPE INTERCEPT (TYP.)

WETLAND BOUNDARY

SILT FENCE BACKED WITH EROSION BALES (TYP.)

MATCH LINE STA. 206+00

MATCH LINE STA. 212+00

E. MORELAND BLVD. (USH 18)

SLOPE INTERCEPT (TYP.)

NOTE:
USE INLET PROTECTION TYPE A PRIOR TO PLACEMENT OF CURB & GUTTER. USE INLET PROTECTION TYPE C OR D AS NOTED IN THE PLAN AFTER INSTALLATION OF CURB AND PLACEMENT OF DRAINAGE STRUCTURE CASTING.

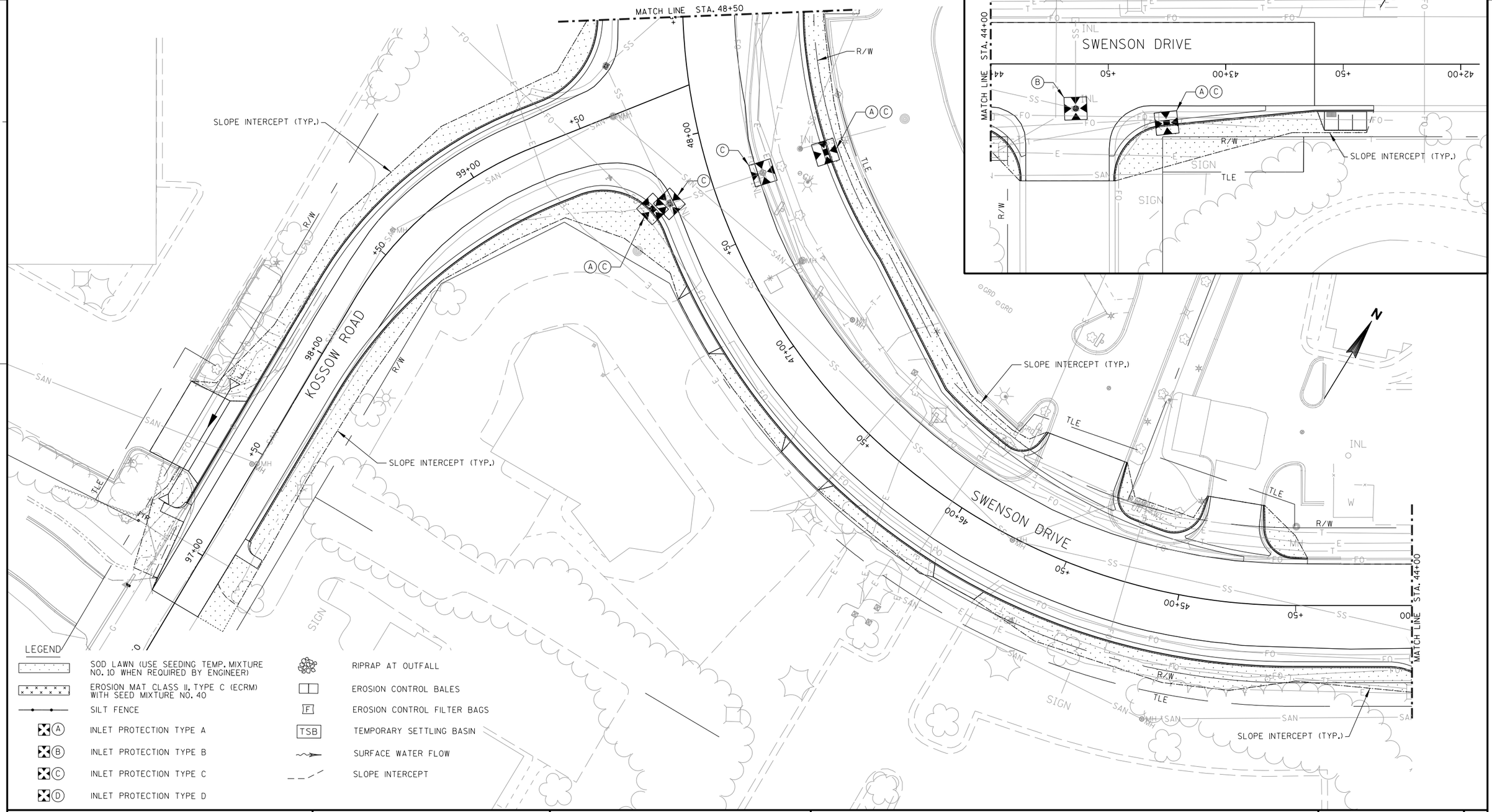
MATCH LINE STA. 48+50

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	EROSION CONTROL	SHEET 110	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\022017_ec.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 40.0003 sf / in.

WISDOT/CADDS SHEET 42

NOTE:
USE INLET PROTECTION TYPE A PRIOR TO PLACEMENT OF CURB & GUTTER. USE INLET PROTECTION TYPE C OR D AS NOTED IN THE PLAN AFTER INSTALLATION OF CURB AND PLACEMENT OF DRAINAGE STRUCTURE CASTING.



LEGEND

- SOD LAWN (USE SEEDING TEMP. MIXTURE NO. 10 WHEN REQUIRED BY ENGINEER)
- EROSION MAT CLASS II, TYPE C (ECRM) WITH SEED MIXTURE NO. 40
- SILT FENCE
- (A) INLET PROTECTION TYPE A
- (B) INLET PROTECTION TYPE B
- (C) INLET PROTECTION TYPE C
- (D) INLET PROTECTION TYPE D
- RIPRAP AT OUTFALL
- EROSION CONTROL BALES
- F EROSION CONTROL FILTER BAGS
- TSB TEMPORARY SETTLING BASIN
- SURFACE WATER FLOW
- SLOPE INTERCEPT

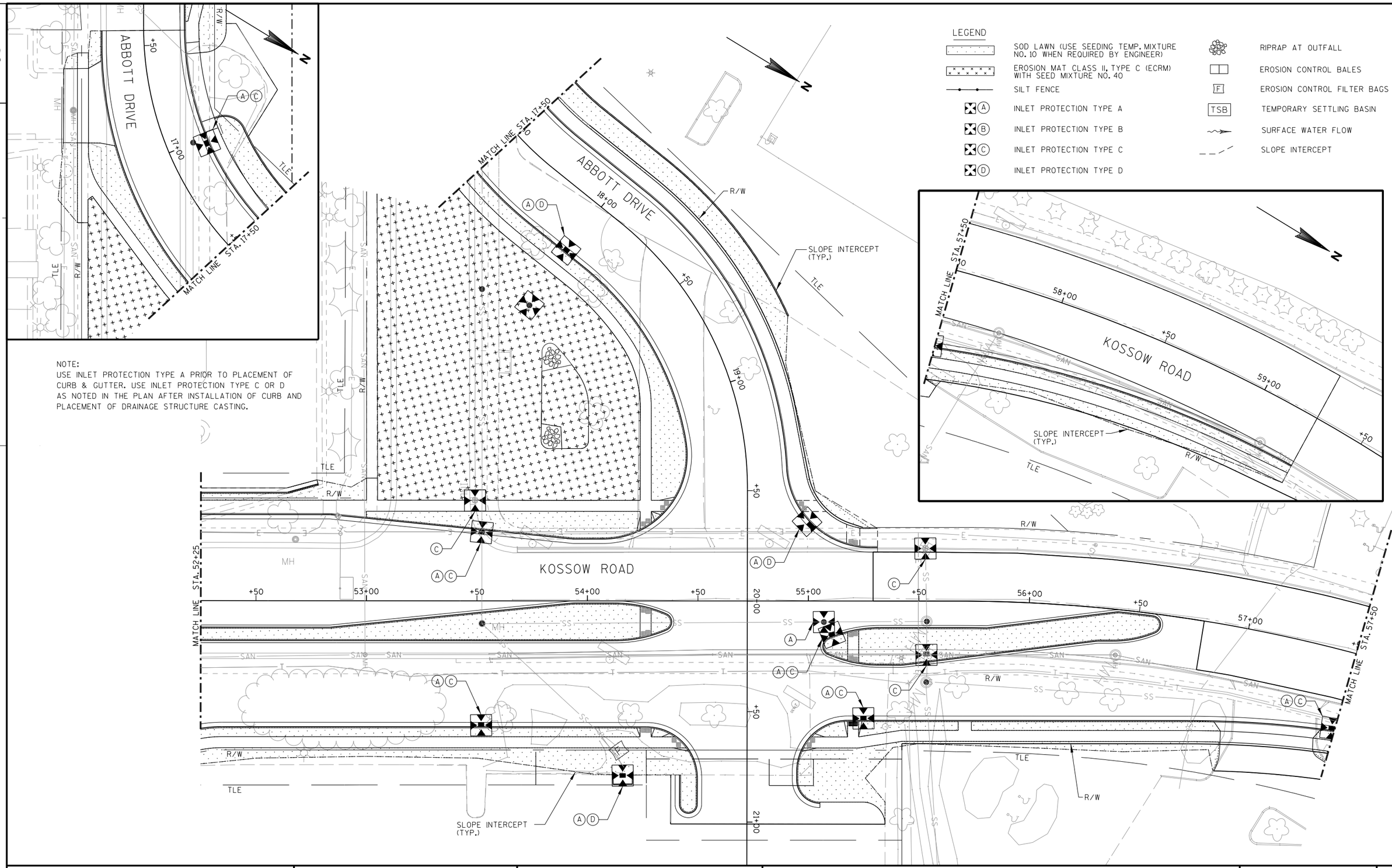
PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	EROSION CONTROL	SHEET 111	E

2

LEGEND

- SOD LAWN (USE SEEDING TEMP. MIXTURE NO. 10 WHEN REQUIRED BY ENGINEER)
- EROSION MAT CLASS II, TYPE C (ECRM) WITH SEED MIXTURE NO. 40
- SILT FENCE
- (A) INLET PROTECTION TYPE A
- (B) INLET PROTECTION TYPE B
- (C) INLET PROTECTION TYPE C
- (D) INLET PROTECTION TYPE D
- RIPRAP AT OUTFALL
- EROSION CONTROL BALES
- (F) EROSION CONTROL FILTER BAGS
- TSB TEMPORARY SETTLING BASIN
- SURFACE WATER FLOW
- SLOPE INTERCEPT

NOTE:
USE INLET PROTECTION TYPE A PRIOR TO PLACEMENT OF CURB & GUTTER. USE INLET PROTECTION TYPE C OR D AS NOTED IN THE PLAN AFTER INSTALLATION OF CURB AND PLACEMENT OF DRAINAGE STRUCTURE CASTING.



E. MORELAND CT.

WETLAND BOUNDARY

SLOPE INTERCEPT (TYP.)

SILT FENCE BACKED WITH EROSION BALES (TYP.)

MATCH LINE STA. 212+00

MATCH LINE STA. 218+00

212+00 SIGN +50 213+00 +50 214+00 215+00 +50 216+00 +50 217+00 +50 218

SLOPE INTERCEPT (TYP.)

E. MORELAND BLVD. (USH 18)

SIGN

SIGN

NOTE:
USE INLET PROTECTION TYPE A PRIOR TO PLACEMENT OF CURB & GUTTER. USE INLET PROTECTION TYPE C OR D AS NOTED IN THE PLAN AFTER INSTALLATION OF CURB AND PLACEMENT OF DRAINAGE STRUCTURE CASTING.

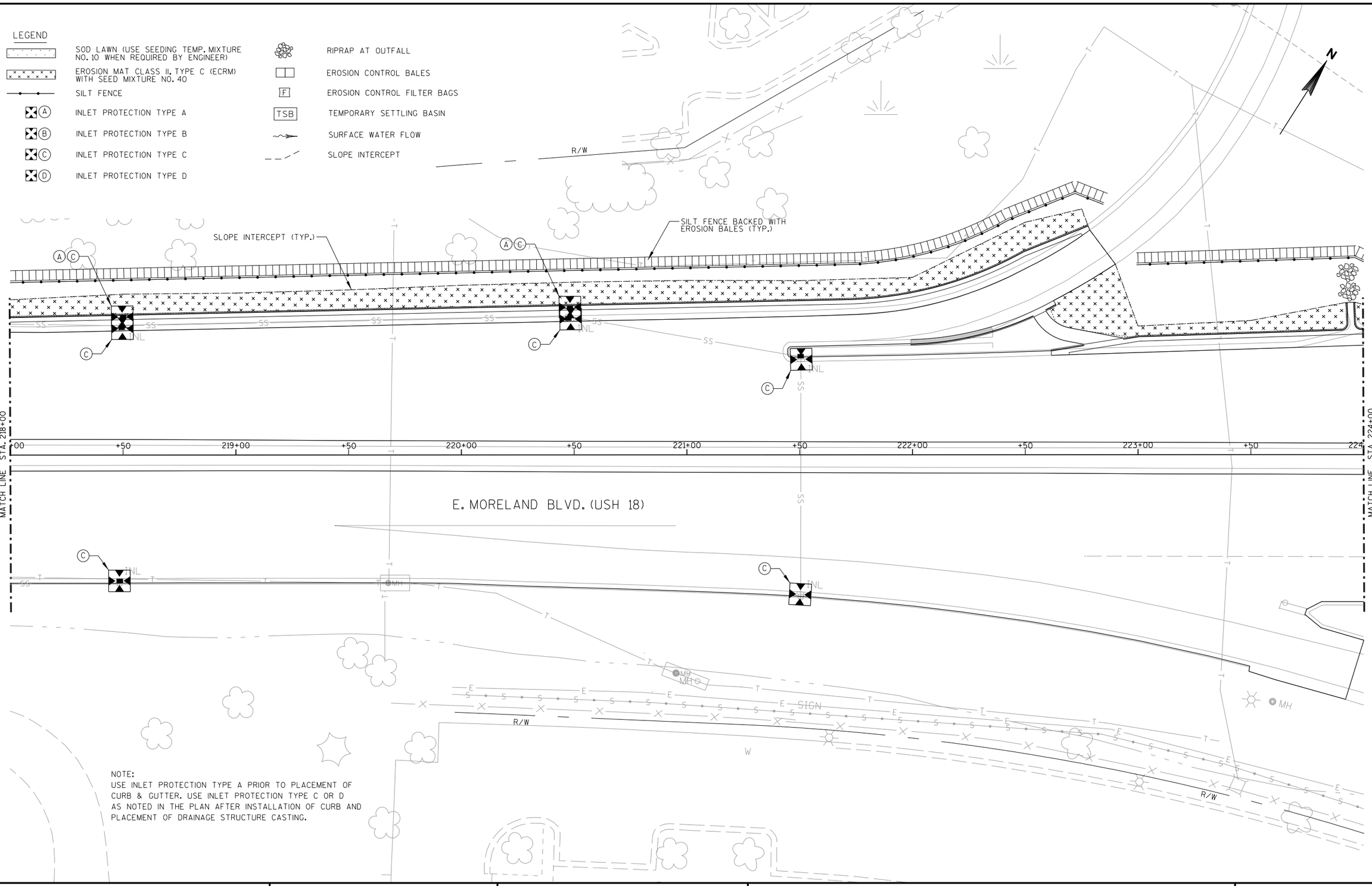
LEGEND

- SOD LAWN (USE SEEDING TEMP. MIXTURE NO. 10 WHEN REQUIRED BY ENGINEER)
- EROSION MAT CLASS II, TYPE C (ECRM) WITH SEED MIXTURE NO. 40
- SILT FENCE
- (A) INLET PROTECTION TYPE A
- (B) INLET PROTECTION TYPE B
- (C) INLET PROTECTION TYPE C
- (D) INLET PROTECTION TYPE D
- RIPRAP AT OUTFALL
- EROSION CONTROL BALES
- (F) EROSION CONTROL FILTER BAGS
- TSB TEMPORARY SETTLING BASIN
- SURFACE WATER FLOW
- SLOPE INTERCEPT

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	EROSION CONTROL	SHEET 113	E

LEGEND

- SOD LAWN (USE SEEDING TEMP. MIXTURE NO. 10 WHEN REQUIRED BY ENGINEER)
- EROSION MAT CLASS II, TYPE C (ECRM) WITH SEED MIXTURE NO. 40
- SILT FENCE
- (A) INLET PROTECTION TYPE A
- (B) INLET PROTECTION TYPE B
- (C) INLET PROTECTION TYPE C
- (D) INLET PROTECTION TYPE D
- RIPRAP AT OUTFALL
- EROSION CONTROL BALES
- F EROSION CONTROL FILTER BAGS
- TSB TEMPORARY SETTLING BASIN
- SURFACE WATER FLOW
- SLOPE INTERCEPT



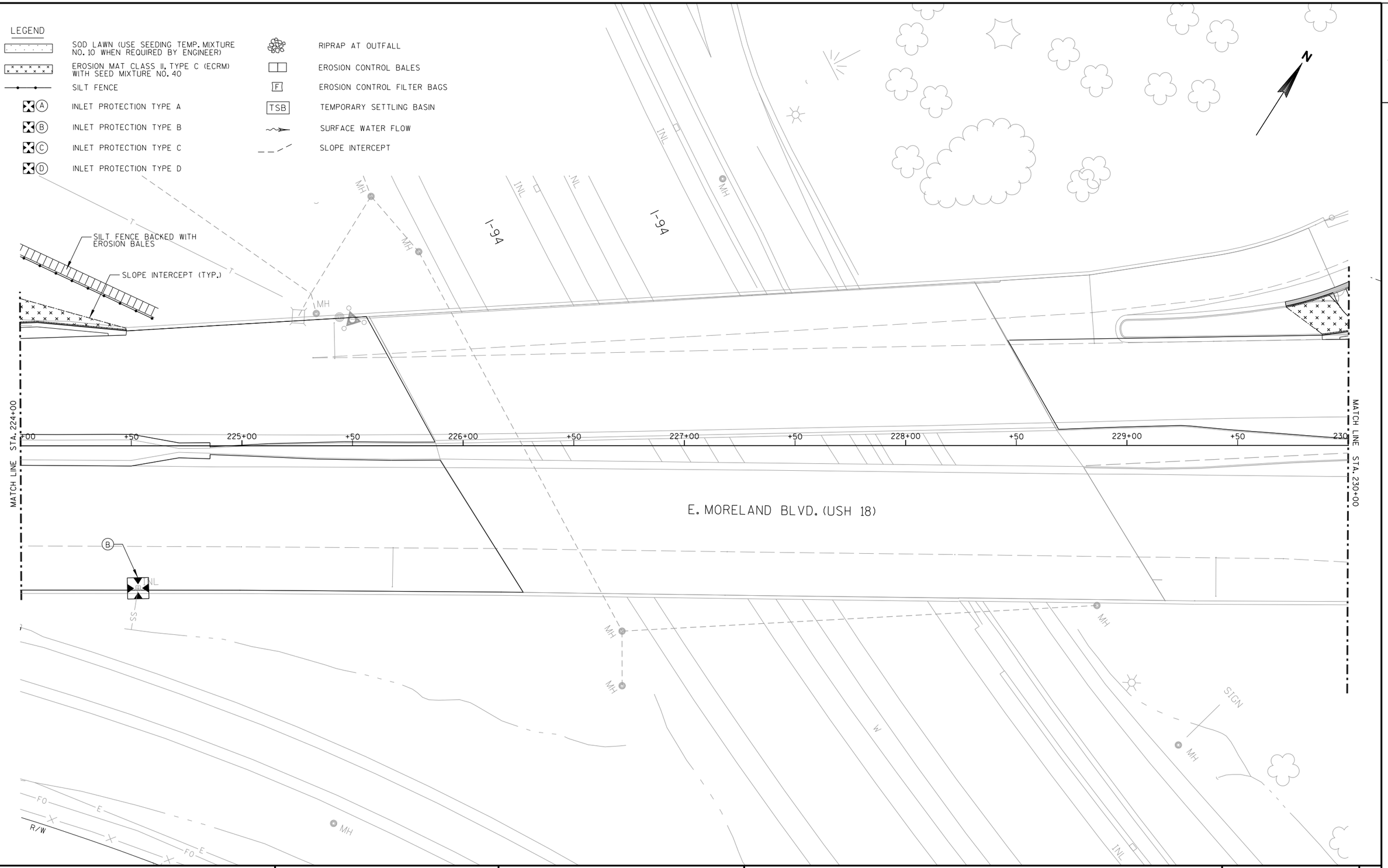
NOTE:
USE INLET PROTECTION TYPE A PRIOR TO PLACEMENT OF CURB & GUTTER. USE INLET PROTECTION TYPE C OR D AS NOTED IN THE PLAN AFTER INSTALLATION OF CURB AND PLACEMENT OF DRAINAGE STRUCTURE CASTING.

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	EROSION CONTROL	SHEET 114	E

2

LEGEND

- SOD LAWN (USE SEEDING TEMP. MIXTURE NO. 10 WHEN REQUIRED BY ENGINEER)
- EROSION MAT CLASS II, TYPE C (ECRM) WITH SEED MIXTURE NO. 40
- SILT FENCE
- (A) INLET PROTECTION TYPE A
- (B) INLET PROTECTION TYPE B
- (C) INLET PROTECTION TYPE C
- (D) INLET PROTECTION TYPE D
- RIPRAP AT OUTFALL
- EROSION CONTROL BALES
- F EROSION CONTROL FILTER BAGS
- TSB TEMPORARY SETTLING BASIN
- SURFACE WATER FLOW
- SLOPE INTERCEPT



PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	EROSION CONTROL	SHEET 115	E

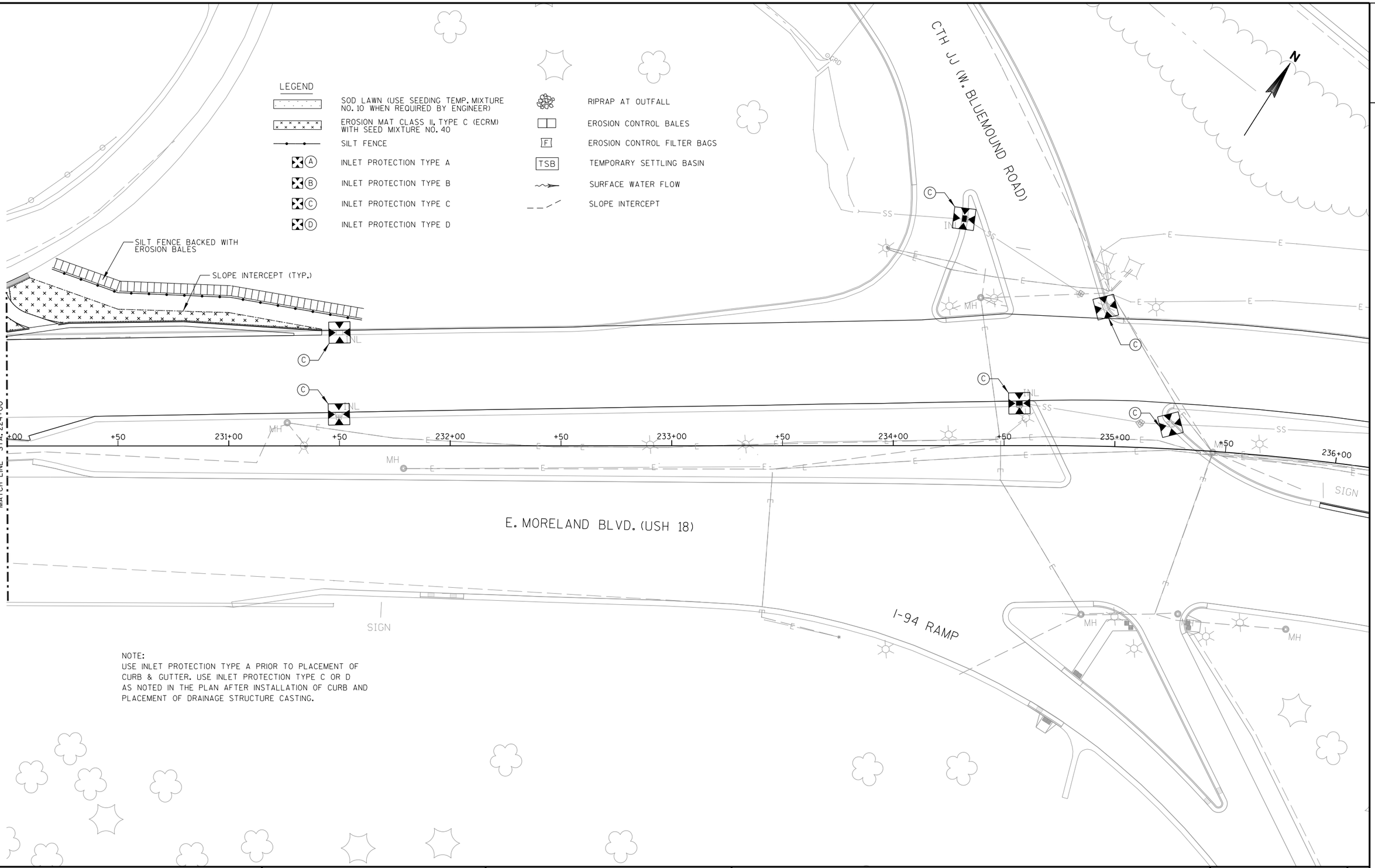
FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\022022_ec.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 40.0000 sf / in.

WISDOT/CADDS SHEET 42

2

LEGEND

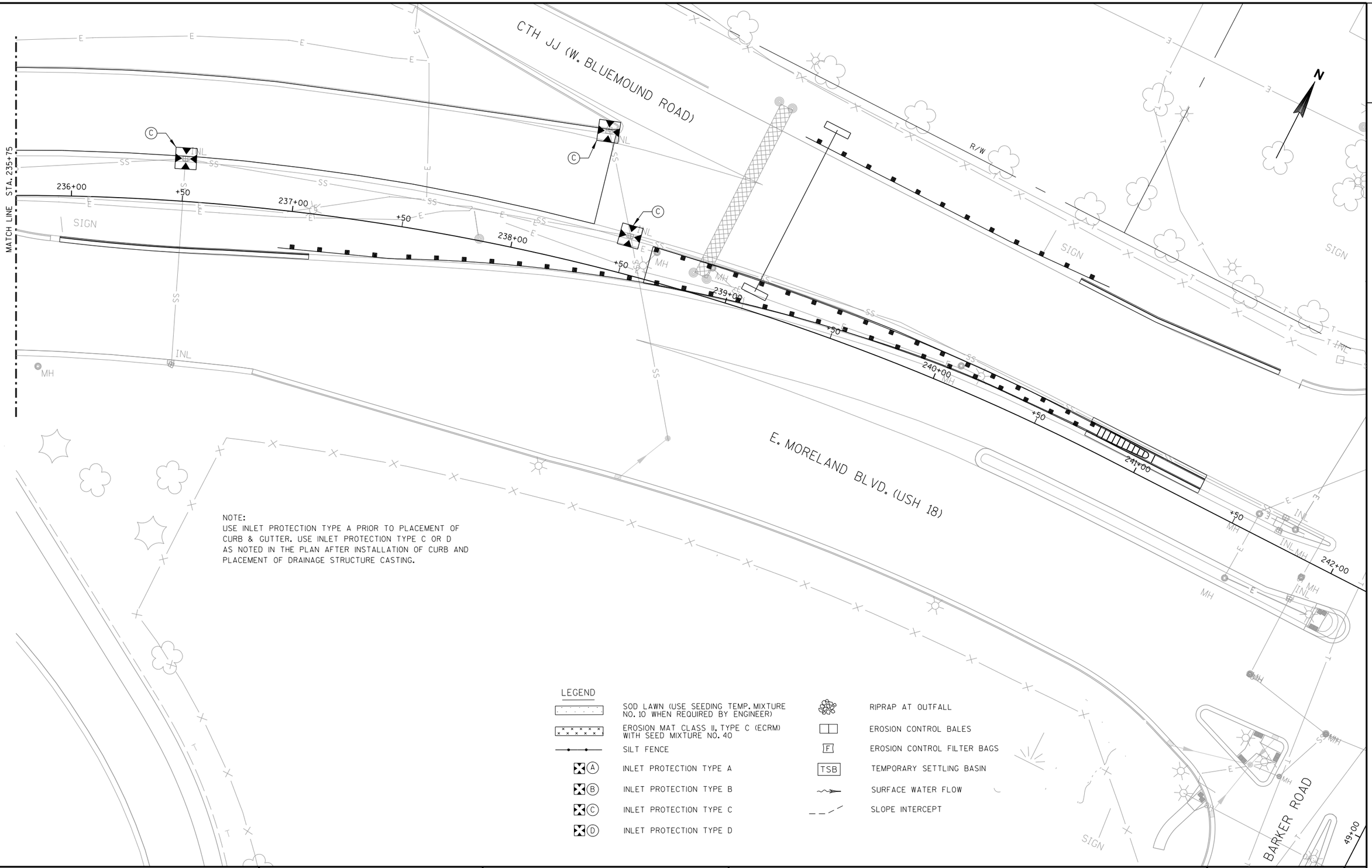
- SOD LAWN (USE SEEDING TEMP. MIXTURE NO. 10 WHEN REQUIRED BY ENGINEER)
- EROSION MAT CLASS II, TYPE C (ECRM) WITH SEED MIXTURE NO. 40
- SILT FENCE
- (A) INLET PROTECTION TYPE A
- (B) INLET PROTECTION TYPE B
- (C) INLET PROTECTION TYPE C
- (D) INLET PROTECTION TYPE D
- RIPRAP AT OUTFALL
- EROSION CONTROL BALES
- F EROSION CONTROL FILTER BAGS
- TSB TEMPORARY SETTLING BASIN
- SURFACE WATER FLOW
- SLOPE INTERCEPT



NOTE:
USE INLET PROTECTION TYPE A PRIOR TO PLACEMENT OF CURB & GUTTER. USE INLET PROTECTION TYPE C OR D AS NOTED IN THE PLAN AFTER INSTALLATION OF CURB AND PLACEMENT OF DRAINAGE STRUCTURE CASTING.

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	EROSION CONTROL	SHEET 116	E

2



NOTE:
USE INLET PROTECTION TYPE A PRIOR TO PLACEMENT OF CURB & GUTTER. USE INLET PROTECTION TYPE C OR D AS NOTED IN THE PLAN AFTER INSTALLATION OF CURB AND PLACEMENT OF DRAINAGE STRUCTURE CASTING.

LEGEND

- SOD LAWN (USE SEEDING TEMP. MIXTURE NO. 10 WHEN REQUIRED BY ENGINEER)
- EROSION MAT CLASS II, TYPE C (ECRM) WITH SEED MIXTURE NO. 40
- SILT FENCE
- (A) INLET PROTECTION TYPE A
- (B) INLET PROTECTION TYPE B
- (C) INLET PROTECTION TYPE C
- (D) INLET PROTECTION TYPE D
- RIPRAP AT OUTFALL
- EROSION CONTROL BALES
- (F) EROSION CONTROL FILTER BAGS
- TSB TEMPORARY SETTLING BASIN
- SURFACE WATER FLOW
- SLOPE INTERCEPT

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	EROSION CONTROL	SHEET 117	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\022024_ec.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 40.0000 sf / in.

LEGEND

P-XX STORM SEWER PIPE NUMBER

(XXX) DRAINAGE STRUCTURE NUMBER

[XXX] EXISTING DRAINAGE STRUCTURE TO BE RECONSTRUCTED

<XX> EXISTING DRAINAGE STRUCTURE TO BE REMOVED

<XXX> EXISTING DRAINAGE STRUCTURE TO BE ADJUSTED

(XXX) EXISTING DRAINAGE STRUCTURE TO BE ABANDONED

MANHATTAN DRIVE

FILLER CAPS

SLOPE INTERCEPT TYP.

SLOPE INTERCEPT TYP.

REMOVE STORM SEWER

1 STA. 124+47.00, 75.35' RT.
CATCH BASINS 2x3-FT, H-S

1A STA. 124+74.00, 65.80' RT.
CATCH BASINS 2x3-FT, H-S

1B STA. 123+22+45.25, 46.6' RT.
CATCH BASINS 2x3-FT, H

1C STA. 123+30.00, 0.50' LT.
CATCH BASINS 2x3-FT, H-S

2 STA. 48+75.30, 30.65' RT.
CATCH BASINS 2x3-FT, H-S

3 STA. 125+45.00, 72.50' RT.
MANHOLES 6-FT DIAMETER, J

3A STA. 125+45.10, 56.00' RT.
CATCH BASINS 2x3-FT, H-S

4 STA. 125+38.00, 59.3' LT.
CATCH BASINS 2x3-FT, H-S

CONCRETE COLLAR REQUIRED

EXISTING INLET TO REMAIN

E. MORELAND BLVD. (USH 18)

MATCH LINE STA. 128+00

122+00 123+00 124+00 125+00 126+00 127+00 128+00

51+00 50+00 49+00

P-1.1 P-1.2 P-1.3 P-1.4 P-2.1 P-3.1 P-4.1

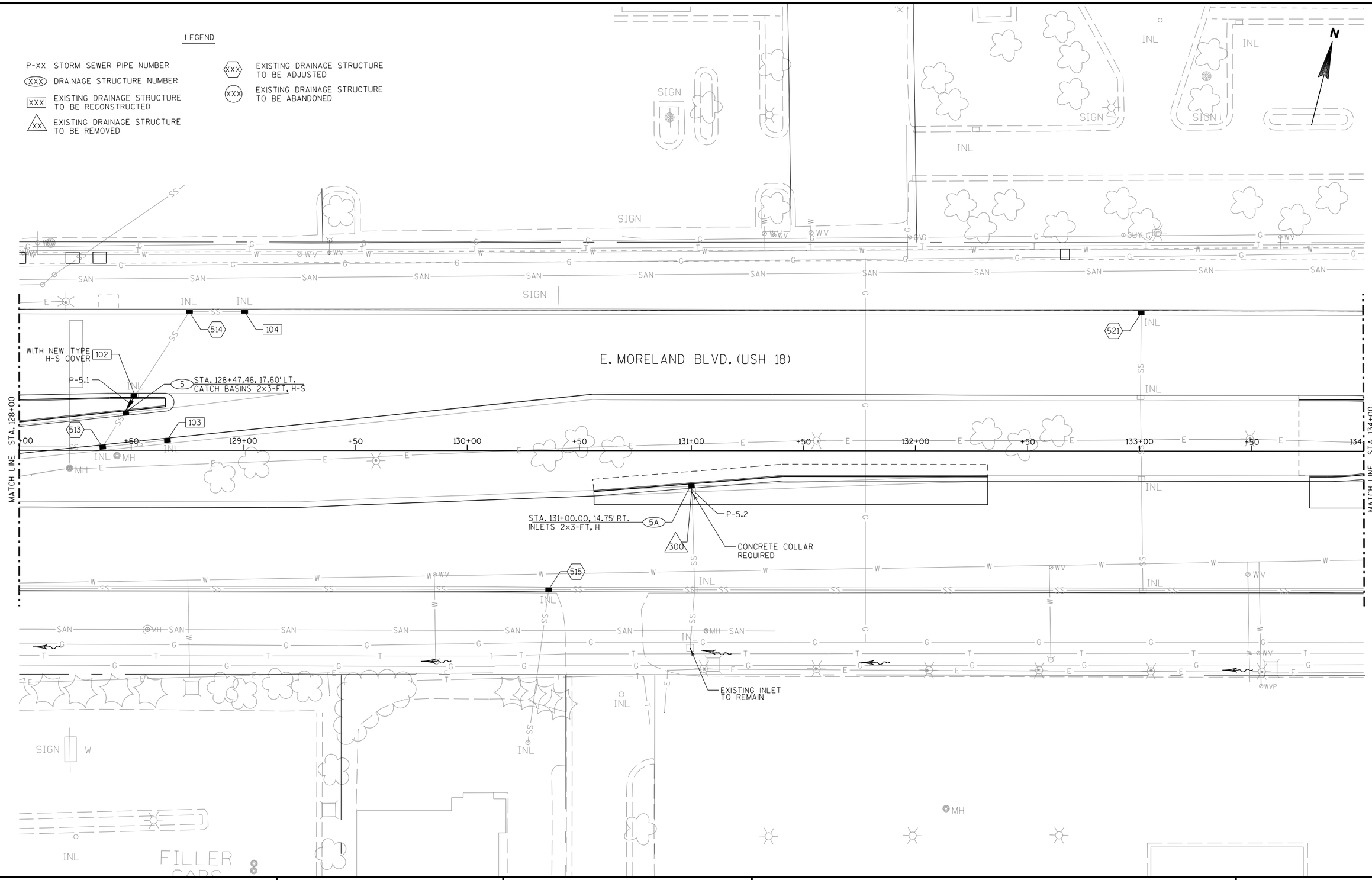
100 100A 101 344 343 501 502 504 505 506 507 508 509 510 512

SIGN INL MH OH SAN SS W G T E WV GV WVP

PROJECT NO: 2200-16-71 | HWY: USH 18 | COUNTY: WAUKESHA | STORM SEWER | SHEET 118 | E

LEGEND

- P-XX STORM SEWER PIPE NUMBER
- (XXX) DRAINAGE STRUCTURE NUMBER
- [XXX] EXISTING DRAINAGE STRUCTURE TO BE RECONSTRUCTED
- ⟨XX⟩ EXISTING DRAINAGE STRUCTURE TO BE REMOVED
- ⟨XXX⟩ EXISTING DRAINAGE STRUCTURE TO BE ADJUSTED
- (XXX) EXISTING DRAINAGE STRUCTURE TO BE ABANDONED



PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	STORM SEWER	SHEET 119	E

2

2

LEGEND

P-XX STORM SEWER PIPE NUMBER

(XXX) DRAINAGE STRUCTURE NUMBER

[XXX] EXISTING DRAINAGE STRUCTURE TO BE RECONSTRUCTED

△XX EXISTING DRAINAGE STRUCTURE TO BE REMOVED

⬡XXX EXISTING DRAINAGE STRUCTURE TO BE ADJUSTED

(XXX) EXISTING DRAINAGE STRUCTURE TO BE ABANDONED

N

JENNIFER LANE

7 STA. 134+99.37, 19.83' LT.
CATCH BASINS 2x3-FT, H-S

8 STA. 135+25.62, 18.00' LT.
CATCH BASINS 2x3-FT, H

6 STA. 134+63.86, 18.00' LT.
CATCH BASINS 2x3-FT, H

CONCRETE COLLAR REQUIRED

△301

P-7.1

P-8.1

P-9.1

P-6.1

9 STA. 135+74.91, 9.37' LT.
CATCH BASINS 2x3-FT, H-S

MATCH LINE STA. 134+00

MATCH LINE STA. 140+00

134+00 +50 135+00 +50 136+00 +50 137+00 +50 138+00 +50 139+00 +50 140

E. MORELAND BLVD. (USH 18)

⬡522

EXISTING INLET TO REMAIN

SLOPE INTERCEPT TYP.

SIGN

U/C

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	STORM SEWER	SHEET 120	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\022503_ss.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 40.0000 sf / in.

WISDOT/CADDS SHEET 42

2

LEGEND

P-XX STORM SEWER PIPE NUMBER

(XXX) DRAINAGE STRUCTURE NUMBER

[XXX] EXISTING DRAINAGE STRUCTURE TO BE RECONSTRUCTED

⟨XX⟩ EXISTING DRAINAGE STRUCTURE TO BE REMOVED

⟨XXX⟩ EXISTING DRAINAGE STRUCTURE TO BE ADJUSTED

(XXX) EXISTING DRAINAGE STRUCTURE TO BE ABANDONED

N

WOLF ROAD

E. MORELAND BLVD. (USH 18)

LES PAUL PKWY. (STH 164)

MATCH LINE STA. 140+00

MATCH LINE STA. 146+00

STA. 141+25.00, 76.00' RT.
CATCH BASINS 2x3-FT, H-S

STA. 143+11.00, 71.10' RT.
INLETS 2x3-FT, H-S

STA. 144+44.00, 76.50' LT.
INLETS 2x3-FT, H-S

STA. 144+27.07, 101.80' RT.
INLETS 2x3-FT, H-S

P-10.1

P-11.1

P-12.1

P-13.1

SLOPE INTERCEPT TYP.

EXISTING INLET TO REMAIN

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	STORM SEWER	SHEET 121	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\022504_ss.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 40.0000 sf / in.

WISDOT/CADDS SHEET 42

LEGEND

P-XX STORM SEWER PIPE NUMBER

(XXX) DRAINAGE STRUCTURE NUMBER

[XXX] EXISTING DRAINAGE STRUCTURE TO BE RECONSTRUCTED

<XX> EXISTING DRAINAGE STRUCTURE TO BE REMOVED

<XXX> EXISTING DRAINAGE STRUCTURE TO BE ADJUSTED

(XXX) EXISTING DRAINAGE STRUCTURE TO BE ABANDONED

N

15 STA. 147+74.86, 76.00' LT. INLETS 2x3-FT, H

SLOPE INTERCEPT TYP.

SIGN

P-15.1

108 WITH NEW TYPE J COVER

E. MORELAND BLVD. (USH 18)

CONCRETE COLLAR REQUIRED

CONCRETE COLLAR REQUIRED

16 STA. 150+00.46, 8.00' LT. INLETS 2x3-FT, H

304

P-16.1

303

14A STA. 147+25.00, 14.00' RT. INLETS 2x3-FT, H-S

P-14.2

14 STA. 147+76.60, 9.90' RT. INLETS 2x3-FT, H

P-14.1

546

545

549

EXISTING INLET TO REMAIN

SIGN

SIGN

SIGN

GATEWAY DRIVE

MATCH LINE STA. 146+00

MATCH LINE STA. 152+00

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	STORM SEWER	SHEET 122	E

LEGEND

P-XX STORM SEWER PIPE NUMBER

XXX DRAINAGE STRUCTURE NUMBER

XXX EXISTING DRAINAGE STRUCTURE TO BE RECONSTRUCTED

XX EXISTING DRAINAGE STRUCTURE TO BE REMOVED

XXX EXISTING DRAINAGE STRUCTURE TO BE ADJUSTED

XXX EXISTING DRAINAGE STRUCTURE TO BE ABANDONED

N

16B STA. 152+55.00, 87.00' LT.
12" APRON ENDWALL

P-16.3

550

551

P-16.2

MATCH LINE STA. 152+00

555

INL

CONCRETE COLLAR REQUIRED

305

17 STA. 155+51.11, 14.9' LT.
INLETS 2x3-FT, H

P-17.1

P-17.2

17C STA. 156+87.00, 1.75' RT.
INLETS 2x3-FT, H

P-17.3

P-17.4

17B STA. 156+87.00, 16.75' RT.
INLETS 2x3-FT, H

17A STA. 156+87.00, 22.75' RT.
INLETS 2x3-FT, H

MATCH LINE STA. 158+00

E. MORELAND BLVD. (USH 18)

16A STA. 152+15.00, 2.20' LT.
INLETS 2x3-FT, H

553

EXISTING INLET TO REMAIN

EXISTING INLET TO REMAIN

SIGN

SIGN

SIGN

SIGN

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	STORM SEWER	SHEET 123	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\022506_ss.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 40.0000 sf / in.

WISDOT/CADDS SHEET 42

2

LEGEND

P-XX STORM SEWER PIPE NUMBER

(XXX) DRAINAGE STRUCTURE NUMBER

[XXX] EXISTING DRAINAGE STRUCTURE TO BE RECONSTRUCTED

<XX> EXISTING DRAINAGE STRUCTURE TO BE REMOVED

(XXX) EXISTING DRAINAGE STRUCTURE TO BE ADJUSTED

(XXX) EXISTING DRAINAGE STRUCTURE TO BE ABANDONED

AVALON DRIVE

N

SLOPE INTERCEPT TYP.

MH

563

INL

557

562

561

556

560

MATCH LINE STA. 158+00

MATCH LINE STA. 164+00

158+00 +50 159+00 +50 160+00 +50 161+00 +50 162+00 +50 163+00 +50 164

E. MORELAND BLVD. (USH 18)

EXISTING INLET TO REMAIN

EXISTING INLET TO REMAIN

SIGN

SIGN

SIGN

SIGN

2

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	STORM SEWER	SHEET 124	E

LEGEND

P-XX STORM SEWER PIPE NUMBER

(XXX) DRAINAGE STRUCTURE NUMBER

[XXX] EXISTING DRAINAGE STRUCTURE TO BE RECONSTRUCTED

<XX> EXISTING DRAINAGE STRUCTURE TO BE REMOVED

<XXX> EXISTING DRAINAGE STRUCTURE TO BE ADJUSTED

<XXX> EXISTING DRAINAGE STRUCTURE TO BE ABANDONED

RAMONA ROAD

E. MORELAND BLVD. (USH 18)

N

SIGN

EXISTING INLET TO REMAIN

CONCRETE COLLAR REQUIRED

308

P-18.3

18A STA. 165+00.00, 12.7' LT. INLETS 2x3-FT, H

P-18.2

P-19.2

19 STA. 165+40.00, 17.5' RT. INLETS 2x3-FT, H

18 STA. 165+00.00, 5.2' RT. INLETS 2x3-FT, H

P-18.1

P-19.1

19A STA. 165+40.00, 23.5' RT. INLETS 2x3-FT, H

CONCRETE COLLAR REQUIRED

307

110A

P-20.1

20 STA. 168+73.30, 2.60' LT. INLETS 2x3-FT, H-S

110

568

569

EXISTING INLET TO REMAIN

EXISTING INLET TO REMAIN

EXISTING INLET TO REMAIN

EXISTING INLET TO REMAIN

MATCH LINE STA. 164+00

MATCH LINE STA. 170+00

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	STORM SEWER	SHEET 125	E

LEGEND

P-XX STORM SEWER PIPE NUMBER

(XXX) DRAINAGE STRUCTURE NUMBER

[XXX] EXISTING DRAINAGE STRUCTURE TO BE RECONSTRUCTED

<XX> EXISTING DRAINAGE STRUCTURE TO BE REMOVED

<XXX> EXISTING DRAINAGE STRUCTURE TO BE ADJUSTED

<XXX> EXISTING DRAINAGE STRUCTURE TO BE ABANDONED

E. MORELAND BLVD. (USH 18)

STARDUST DRIVE

E. MAIN STREET

MATCH LINE STA. 170+00

MATCH LINE STA. 176+00

(21) STA. 170+77.00, 19.00' RT.
INLETS 2x3-FT, H

P-21.1

P-22.1

[111] WITH NEW TYPE J COVER

(22) STA. 170+77.00, 23.40' RT.
INLETS 2x3-FT, H

(25) STA. 174+91.84, 78.80' LT.
INLETS 2x3-FT, H-S

P-25.1

(24) STA. 173+30.00, 66.30' RT.
INLETS 2x3-FT, H-S

P-24.1

[113]

SLOPE INTERCEPT TYP.

EXISTING INLET TO REMAIN

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	STORM SEWER	SHEET 126 E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\022509_ss.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 40.0000 sf / in.

WISDOT/CADDS SHEET 42

LEGEND

P-XX STORM SEWER PIPE NUMBER

(XXX) DRAINAGE STRUCTURE NUMBER

[XXX] EXISTING DRAINAGE STRUCTURE TO BE RECONSTRUCTED

<XX> EXISTING DRAINAGE STRUCTURE TO BE REMOVED

<XXX> EXISTING DRAINAGE STRUCTURE TO BE ADJUSTED

(XXX) EXISTING DRAINAGE STRUCTURE TO BE ABANDONED

N

STA. 176+00

MATCH LINE

STA. 182+00

MATCH LINE

176+00

+50

177+00

+50

178+00

+50

179+00

+50

180+00

+50

181+00

+50

182+00

CONCRETE COLLAR REQUIRED

310

P-26.1

588

EXISTING INLET TO REMAIN

EXISTING INLET TO REMAIN

E. MORELAND BLVD. (USH 18)

SIGN

INL

MH

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	STORM SEWER	SHEET 127	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\022510_ss.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 40.0000 sf / in.

WISDOT/CADDS SHEET 42

2

LEGEND

- P-XX STORM SEWER PIPE NUMBER
- (XXX) DRAINAGE STRUCTURE NUMBER
- [XXX] EXISTING DRAINAGE STRUCTURE TO BE RECONSTRUCTED
- ⟨XX⟩ EXISTING DRAINAGE STRUCTURE TO BE REMOVED
- ⟨XXX⟩ EXISTING DRAINAGE STRUCTURE TO BE ADJUSTED
- (XXX) EXISTING DRAINAGE STRUCTURE TO BE ABANDONED

SLOPE INTERCEPT TYP.

SPRINGDALE ROAD

MATCH LINE STA. 52+00

MATCH LINE STA. 52+00

SPRINGDALE ROAD

31B STA. 51+00.00, 39.80' LT.
INLETS 2x3-FT, H

31A STA. 51+00.00, 45.00' LT.
INLETS 2x3-FT, H

30 STA. 51+40.00, 8.00' LT.
INLETS 2x3-FT, H

P-30.1

P-31.2

P-31.1

592

31 STA. 184+71.00, 70.20' LT.
MANHOLES 6-FT, J

WITH NEW TYPE H COVER 598

WITH NEW TYPE J COVER 116

P-34.1

34 STA. 187+91.00, 14.8' LT.
INLETS 2x3-FT, H

P-33.1

E. MORELAND BLVD. (USH 18)

29 STA. 184+17.78, 13.70' LT.
INLETS 2x3-FT, H

REMOVE STORM SEWER

312

311

P-28.2

P-27.1

REMOVE STORM SEWER

27 STA. 184+33.00, 20.80' RT.
INLETS 2x3-FT, H

P-28.1

28 STA. 184+42.50, 12.30' RT.
INLETS 2x3-FT, H

114
WITH NEW TYPE J COVER

33 STA. 187+91.00, 10.4' LT.
INLETS 2x3-FT, H

600

32 STA. 187+91.00, 4.4' RT.
INLETS 2x3-FT, H

P-32.1

597

591

595

115

MATCH LINE STA. 182+00

MATCH LINE STA. 188+00

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	STORM SEWER	SHEET 128	E

LEGEND

P-XX STORM SEWER PIPE NUMBER

(XXX) DRAINAGE STRUCTURE NUMBER

[XXX] EXISTING DRAINAGE STRUCTURE TO BE RECONSTRUCTED

<XX> EXISTING DRAINAGE STRUCTURE TO BE REMOVED

⬡XXX EXISTING DRAINAGE STRUCTURE TO BE ADJUSTED

(XXX) EXISTING DRAINAGE STRUCTURE TO BE ABANDONED

N

EXISTING INLET TO REMAIN

E. MORELAND BLVD. (USH 18)

MATCH LINE STA. 188+00

MATCH LINE STA. 194+00

188+00 +50 189+00 +50 190+00 +50 191+00 +50 192+00 +50 193+00 +50 194+00

36 STA. 192+59.00, 12.00' LT.
INLETS 2x3-FT, H

37 STA. 192+60.00, 6.80' LT.
INLETS 2x3-FT, H

38 STA. 193+75.00, 9.90' RT.
INLETS 2X3-FT, H

P-36.1 P-37.1 P-38.1

601 602 603 INL

SIGN MH ⌀WV W T SS TV FO SAN G

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	STORM SEWER	SHEET 129	E

LEGEND

P-XX STORM SEWER PIPE NUMBER
(XXX) DRAINAGE STRUCTURE NUMBER
XXX EXISTING DRAINAGE STRUCTURE TO BE RECONSTRUCTED
XX EXISTING DRAINAGE STRUCTURE TO BE REMOVED
XXX EXISTING DRAINAGE STRUCTURE TO BE ADJUSTED
XXX EXISTING DRAINAGE STRUCTURE TO BE ABANDONED

N

MATCH LINE STA. 51+50

PARKLAWN DRIVE

PHONE

G.P.

EXISTING INLET TO REMAIN

E. MORELAND BLVD. (USH 18)

605 INL

607 INL

44 STA. 197+50.00, 12.00' LT. INLETS 2x3-FT, H

43 STA. 197+68.00, 12.00' LT. INLETS 2x3-FT, H

42 STA. 197+68.00, 6.00' LT. INLETS 2x3-FT, H

44A STA. 197+10.00, 6.00' LT. INLETS 2x3-FT, H

316

P-43.1

P-42.1

P-41.1

P-44.2

MATCH LINE STA. 194+00

194+00 +50 195+00 +50 196+00 +50 197+00 +50 198+00 +50 199+00 +50 200

MATCH LINE STA. 200+00

50+00

39 STA. 194+74.48, 1.90' RT. INLETS 4-FT DIAMETER, H

P-38.1

P-39.1

314

CONCRETE COLLAR REQUIRED

CONCRETE COLLAR REQUIRED

315

P-40.1

41 STA. 197+84.48, 7.00' RT. INLETS 2x3-FT, H

40 STA. 197+84.00, 13.00' RT. INLETS 2x3-FT, H

P-45.1

609

318

REMOVE STORM SEWER

604

608

45A STA. 49+17.00, 31.50' RT. INLETS 2x3-FT, H

P-45.2

P-45.3

45B STA. 49+15.00, 37.50' RT. INLETS 2x3-FT, H

49+00 +50

EXISTING INLET TO REMAIN

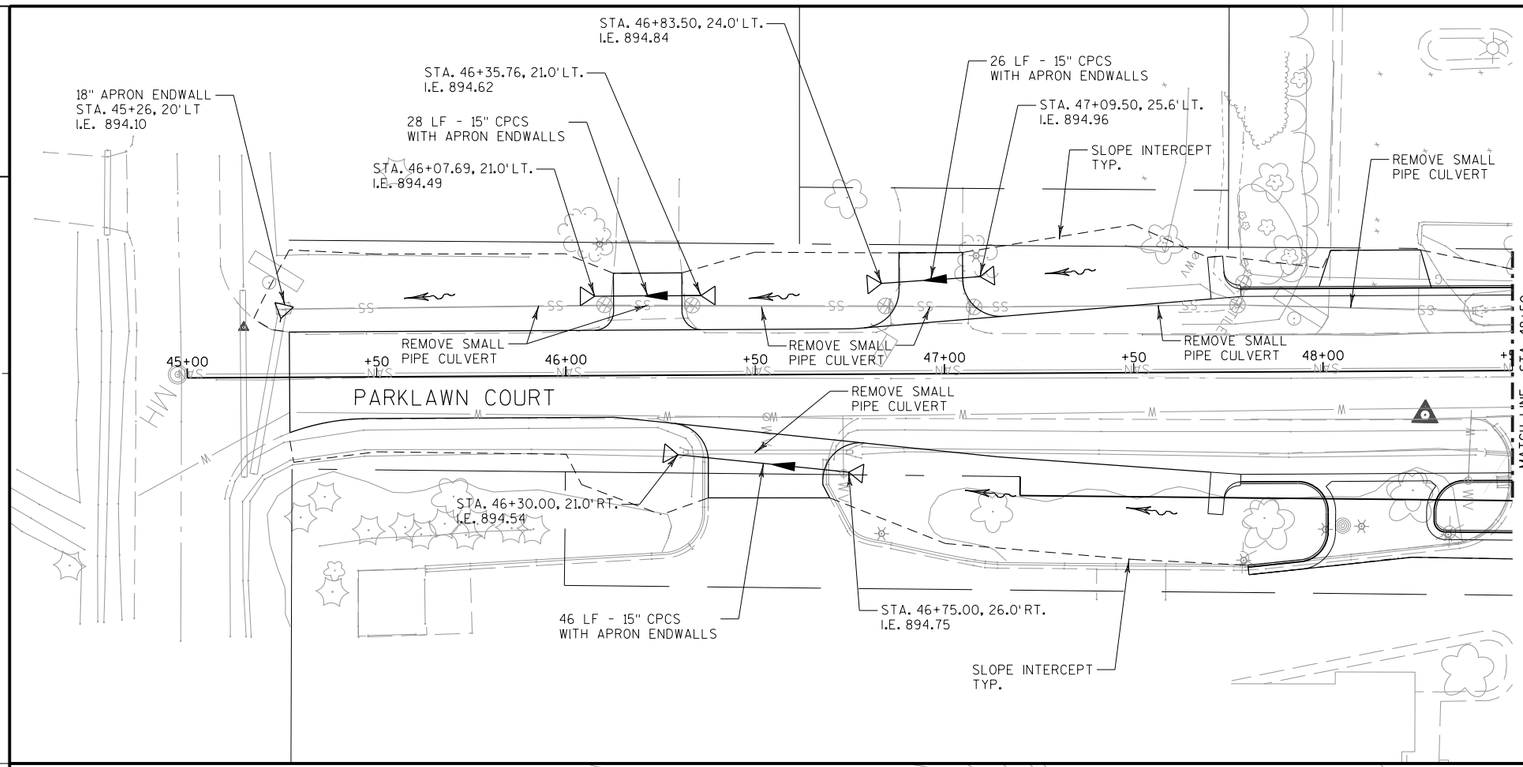
EXISTING INLET TO REMAIN

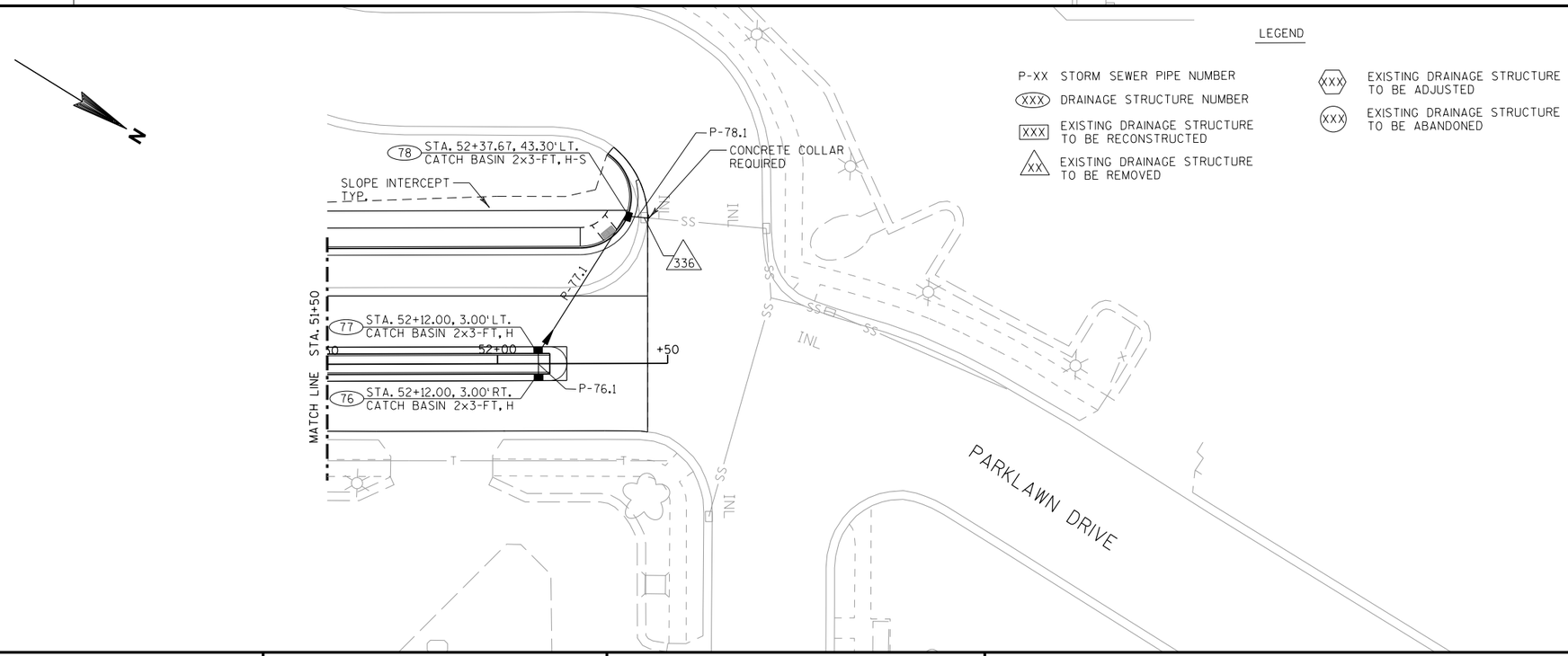
REMOVE SMALL PIPE CULVERT

MATCH LINE STA. 48+50

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	STORM SEWER	SHEET 130	E

2





LEGEND

- P-XX STORM SEWER PIPE NUMBER
- (XXX) DRAINAGE STRUCTURE NUMBER
- [XXX] EXISTING DRAINAGE STRUCTURE TO BE RECONSTRUCTED
- ⟨XX⟩ EXISTING DRAINAGE STRUCTURE TO BE REMOVED
- ⟨XXX⟩ EXISTING DRAINAGE STRUCTURE TO BE ADJUSTED
- (XXX) EXISTING DRAINAGE STRUCTURE TO BE ABANDONED

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	STORM SEWER	SHEET 131	E

LEGEND

P-XX STORM SEWER PIPE NUMBER

(XXX) DRAINAGE STRUCTURE NUMBER

[XXX] EXISTING DRAINAGE STRUCTURE TO BE RECONSTRUCTED

△XX EXISTING DRAINAGE STRUCTURE TO BE REMOVED

⬡XXX EXISTING DRAINAGE STRUCTURE TO BE ADJUSTED

(XXX) EXISTING DRAINAGE STRUCTURE TO BE ABANDONED

N

EXISTING INLET TO REMAIN

610

WITH NEW TYPE H FRAME & GRADE 613

CONCRETE COLLAR REQUIRED

47 STA. 200+00.00, 12.50'LT. INLETS 2x3-FT, H

49 STA. 201+05.00, 12.50'LT. INLETS 2x3-FT, H

319

P-47.1

46 STA. 200+00.00, 6.50'LT. INLETS 2x3-FT, H

P-49.1

P-50.1

P-51.1

51 STA. 202+62.00, 5.50'LT. INLETS 2x3-FT, H-S

615

326

MATCH LINE STA. 200+00

MATCH LINE STA. 206+00

200+00 P-46.1 +50 201+00 +50 202+00 +50 203+00 +50 204+00 +50 205+00 +50 206

REMOVE STORM SEWER

45 STA. 200+00.00, 6.50'RT. INLETS 2x3-FT, H

612

50 STA. 201+50.00, 3.40'RT. INLETS 2x3-FT, H-S

E. MORELAND BLVD. (USH 18)

P-53.1

CONCRETE COLLAR REQUIRED

321

53 STA. 203+94.72, 5.60'RT. INLETS 2x3-FT, H-S

54 STA. 205+70.00, 74.76'RT. INLETS 2x3-FT, H-S

614

P-54.1

APPROXIMATE PETROLEUM CONTAMINATION AREA

CONTAMINATION IS EXPECTED TO BE BELOW PROJECT EXCAVATION DEPTHS

CORE INTO EXISTING PIPE. CONCRETE COLLAR REQUIRED.

RECONSTRUCT CONCRETE HEADWALL (SEE DETAIL)

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	STORM SEWER	SHEET 132	E

LEGEND

P-XX STORM SEWER PIPE NUMBER

(XXX) DRAINAGE STRUCTURE NUMBER

[XXX] EXISTING DRAINAGE STRUCTURE TO BE RECONSTRUCTED

<XX> EXISTING DRAINAGE STRUCTURE TO BE REMOVED

XXX EXISTING DRAINAGE STRUCTURE TO BE ADJUSTED

(XXX) EXISTING DRAINAGE STRUCTURE TO BE ABANDONED

N

MATCH LINE STA. 51+50

KOSSOW ROAD

96 STA. 50+95.00, 34.30'LT. INLETS 4-FT DIAMETER, H-S

REMOVE STORM SEWER

P-94.1

REMOVE STORM SEWER

328

329

330

331

REMOVE STORM SEWER

97 STA. 210+16.00, 104.00'LT. INLETS MEDIAN 3 GRATE, MS

P-97.1

P-96.1

P-98.1

98 STA. 210+05.00, 93.10'LT. INLETS 2x3-FT, H

64A STA. 211+70.00, 67.00'LT. INLETS 2x3-FT, H

P-64.1

623

624

125 WITH NEW TYPE J COVER

P-99.1

99 STA. 209+83.00, 80.60'LT. INLETS 4-FT DIAMETER, H-S

128A WITH NEW TYPE J COVER

58 STA. 209+73.00, 7.00'LT. MANHOLES 6-FT, H-S

64 STA. 211+70.20, 13.00'LT. INLETS 2x3-FT, H

P-59.1

620 621

REMOVE STORM SEWER

CONCRETE COLLAR REQUIRED

59 STA. 209+84.00, 13.00'LT. INLETS 2x3-FT, H

63 STA. 211+70.20, 7.00'LT. INLETS 2x3-FT, H

P-63.1

333

WITH NEW TYPE J COVER 117

P-61.1

P-56.1

P-55.1

342

56 STA. 206+78.00, 8.30'RT. INLETS 2x3-FT, H-S

E. MORELAND BLVD. (USH 18)

P-60.1

WITH NEW TYPE J COVER 118

P-62.1

P-61.2

332

61 STA. 210+06.00, 7.00'RT. INLETS 2x3-FT, H-S

62 STA. 211+70.20, 7.00'RT. INLETS 2x3-FT, H

P-55.2

55 STA. 207+00.00, 11.90'RT. INLETS 2x3-FT, H-S

CONCRETE COLLAR REQUIRED

60 STA. 210+08.00, 10.90'RT. INLETS 2x3-FT, H

CONCRETE COLLAR REQUIRED

327

65 STA. 208+71.00, 74.80'RT. INLETS 2x3-FT, H-S

72 STA. 48+99.10, 2.00'LT. INLETS 2x3-FT, H-S

124

P-57.1

57 STA. 206+51.00, 75.20'RT. INLETS 2x3-FT, H-S

73 STA. 49+16.24, 45.80'RT. INLETS 2x3-FT, H-S

P-65.1

P-71.1

P-73.1

EXISTING INLET TO REMAIN

P-66.1

74A STA. 49+06.00, 65.80'RT. INLETS 2x3-FT, H

119 WITH NEW TYPE J COVER

123 WITH NEW TYPE J COVER

P-74.1

66 STA. 208+70.00, 104.00'RT. INLETS 2x3-FT, H-S

74 STA. 49+00.00, 62.40'RT. MANHOLES 6-FT, H-S

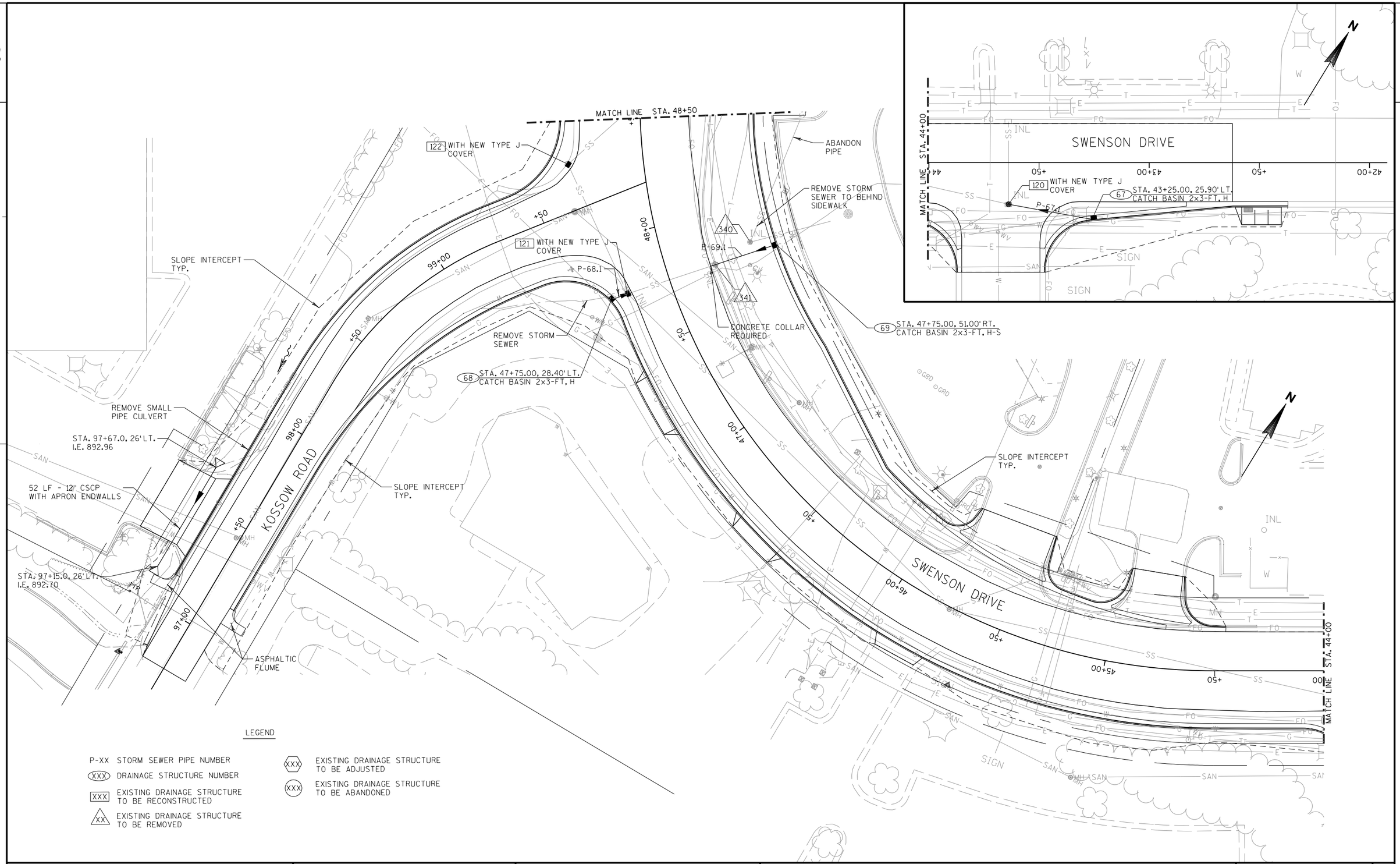
71 STA. 48+99.90, 7.90'LT. INLETS 2x3-FT, H-S

ABANDON PIPE

MATCH LINE STA. 48+50

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	STORM SEWER	SHEET 133	E

2



PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	STORM SEWER	SHEET 134	E

2

LEGEND

- P-XX STORM SEWER PIPE NUMBER
- (XXX) DRAINAGE STRUCTURE NUMBER
- [XXX] EXISTING DRAINAGE STRUCTURE TO BE RECONSTRUCTED
- <XX> EXISTING DRAINAGE STRUCTURE TO BE REMOVED
- (XXX) EXISTING DRAINAGE STRUCTURE TO BE ADJUSTED
- (XXX) EXISTING DRAINAGE STRUCTURE TO BE ABANDONED

ABBOTT DRIVE

MATCH LINE STA. 17+50

MATCH LINE STA. 51+50

KOSSOW ROAD

87 STA. 17+03.00, 18.30' LT. CATCH BASIN 2x3-FT, H

88 STA. 17+00.00, 11.80' LT. MANHOLES 4-FT, J

86A STA. 17+81.30, 62.70' RT. MANHOLES 4-FT, J

86 STA. 18+02.60, 55.00' RT. INLETS MEDIAN 2 GRATE, MS

85A STA. 18+26.70, 63.70' RT 12" APRON END WALL

84B STA. 18+26.70, 63.70' RT 24" APRON END WALL

85 STA. 18+00.00, 26.00' RT. CATCH BASIN 2x3-FT, H-S

SLOPE INTERCEPT TYP.

DRY DETENTION POND
STORAGE VOLUME = 6500 CF
12" DIAMETER OUTLET PIPE

OVERFLOW STRUCTURE NO. 86
RIM ELEV. = 895.00

REMOVE STORM SEWER

338

84A STA. 53+52.20, 32.10' LT. CATCH BASINS 4-FT DIAMETER, H

95 STA. 52+00.00, 49.00' LT. INLETS 2x3-FT, H-S

94A STA. 52+10.00, 39.00' LT. INLETS 2X3-FT, H

339

94 STA. 52+00.00, 39.00' LT. INLETS 4-FT DIAMETER, H-S

93 STA. 52+00.00, 12.00' RT. INLETS 2x3-FT, H-S

92 STA. 52+00.00, 18.00' RT. INLETS 2x3-FT, H-S

REMOVE STORM SEWER

89 STA. 51+72.00, 65.40' RT. INLETS 2x3-FT, H-S

84 STA. 53+52.00, 57.00' RT. CATCH BASIN 2x3-FT, H

REMOVE STORM SEWER

337

91 STA. 52+00.00, 68.60' RT. INLETS 2x3-FT, H

SLOPE INTERCEPT TYP.

90 STA. 51+93.00, 100.00' RT. INLETS MEDIAN 1 GRATE, MS-A

83 STA. 54+16.00, 79.00' RT. INLETS MEDIAN 1 GRATE, MS-A

82 STA. 55+00.00, 36.56' LT. CATCH BASIN 2x3-FT, H-S

80 STA. 55+11.00, 16.00' RT. CATCH BASIN 2x3-FT, H

127 WITH NEW TYPE J COVER

81 STA. 55+07.00, 9.50' RT. MANHOLES 6-FT, J

79 STA. 55+25.00, 53.90' RT. CATCH BASIN 2x3-FT, H

79A STA. 57+48.00, 36.42' RT. CATCH BASIN 2x3-FT, H

644 642 641 128 131

P-87.1 P-86.1 P-85.1 P-85.2 P-84.2 P-84.1 P-94.1 P-95.1 P-94.2 P-93.1 P-92.1 P-91.1 P-89.1 P-90.1 P-83.1 P-82.1 P-80.1 P-79.1 P-79.2

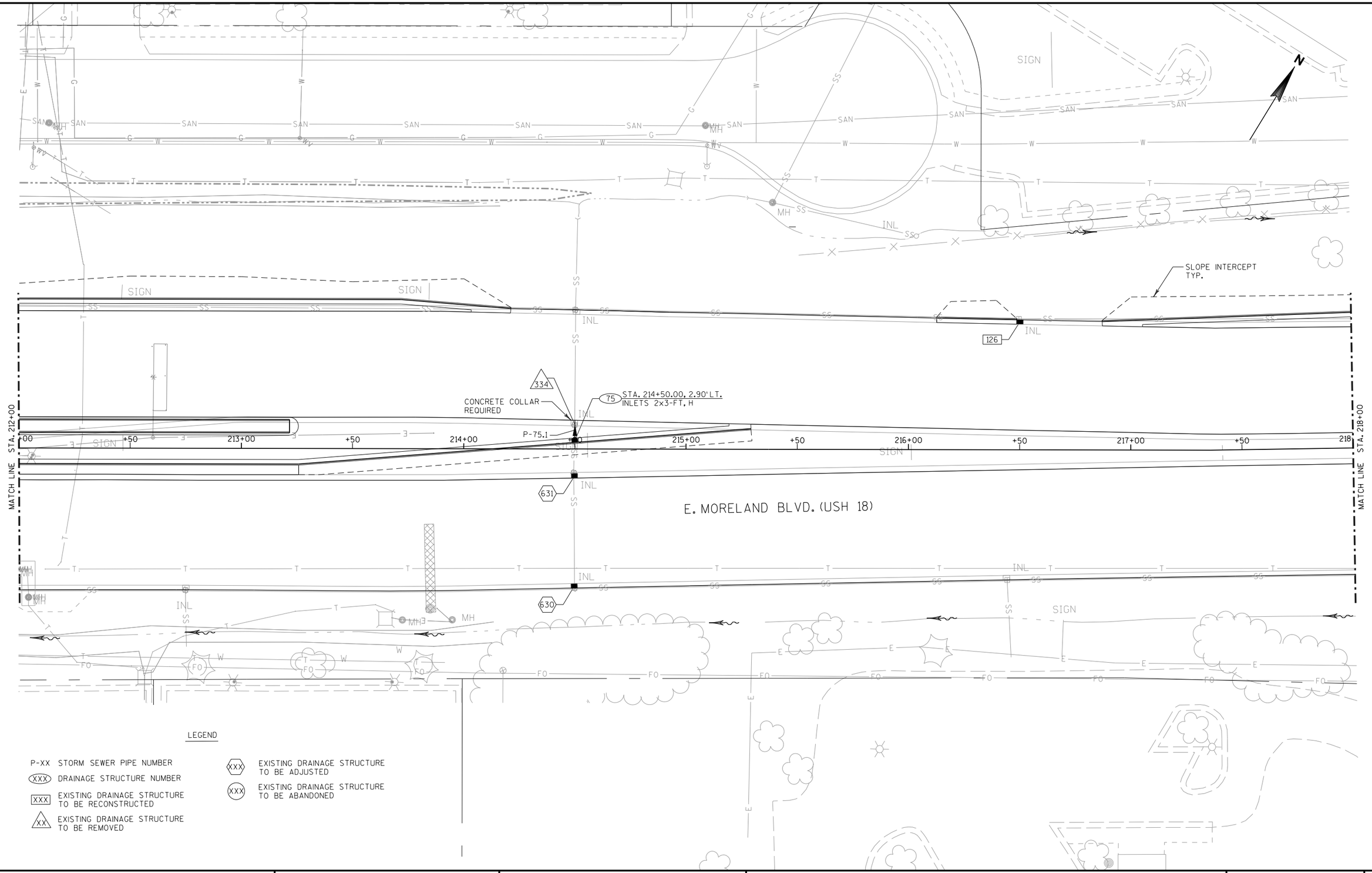
16+00 17+00 +50 18+00 19+00 20+00 21+00 52+00 53+00 54+00 55+00 56+00 57+00

894.5 896

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	STORM SEWER	SHEET 135 E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\022518_ss.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 40.0000 sf / in.

2



LEGEND

- P-XX STORM SEWER PIPE NUMBER
- (XXX) DRAINAGE STRUCTURE NUMBER
- [XXX] EXISTING DRAINAGE STRUCTURE TO BE RECONSTRUCTED
- ⟨XX⟩ EXISTING DRAINAGE STRUCTURE TO BE REMOVED
- ⬡XXX⬡ EXISTING DRAINAGE STRUCTURE TO BE ADJUSTED
- (XXX) EXISTING DRAINAGE STRUCTURE TO BE ABANDONED

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	STORM SEWER	SHEET 136	E

2

LEGEND

- P-XX STORM SEWER PIPE NUMBER
- (XXX) DRAINAGE STRUCTURE NUMBER
- [XXX] EXISTING DRAINAGE STRUCTURE TO BE RECONSTRUCTED
- <XX> EXISTING DRAINAGE STRUCTURE TO BE REMOVED
- ⟨XXX⟩ EXISTING DRAINAGE STRUCTURE TO BE ADJUSTED
- (XXX) EXISTING DRAINAGE STRUCTURE TO BE ABANDONED

N

75A STA. 218+50.00, 62.00'LT. INLETS 2x3-FT, H

75B STA. 220+48.00, 66.25'LT. INLETS 2x3-FT, H

P-75.2

P-75.3

129 WITH NEW TYPE J COVER

130 WITH NEW TYPE J COVER

633

632

INL

SS

MATCH LINE STA. 218+00

MATCH LINE STA. 224+00

218+00 +50 219+00 +50 220+00 +50 221+00 +50 222+00 +50 223+00 +50 224+00

E. MORELAND BLVD. (USH 18)

MH

SIGN

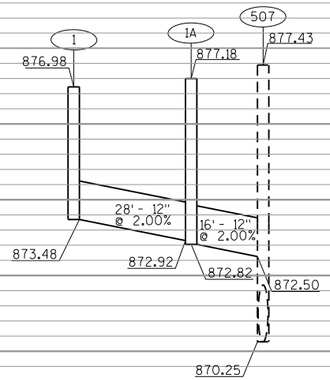
W

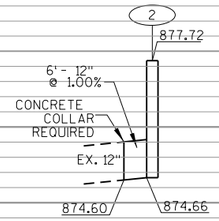
E

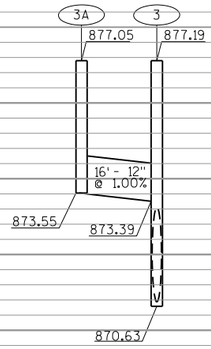
FO

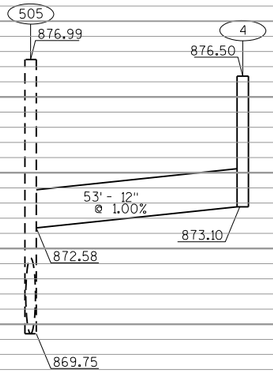
T

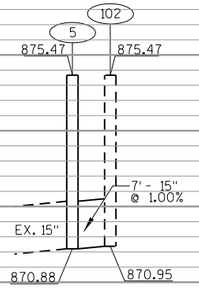
PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	STORM SEWER	SHEET 137	E

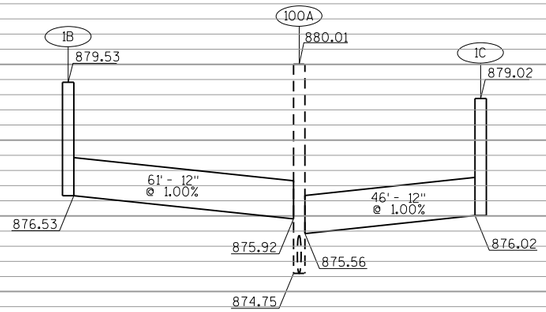


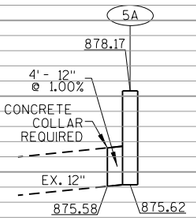


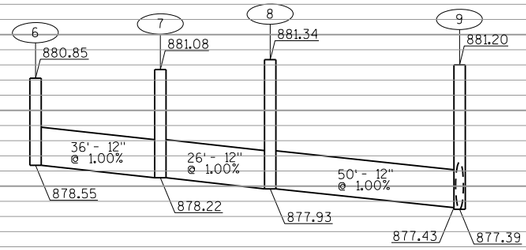






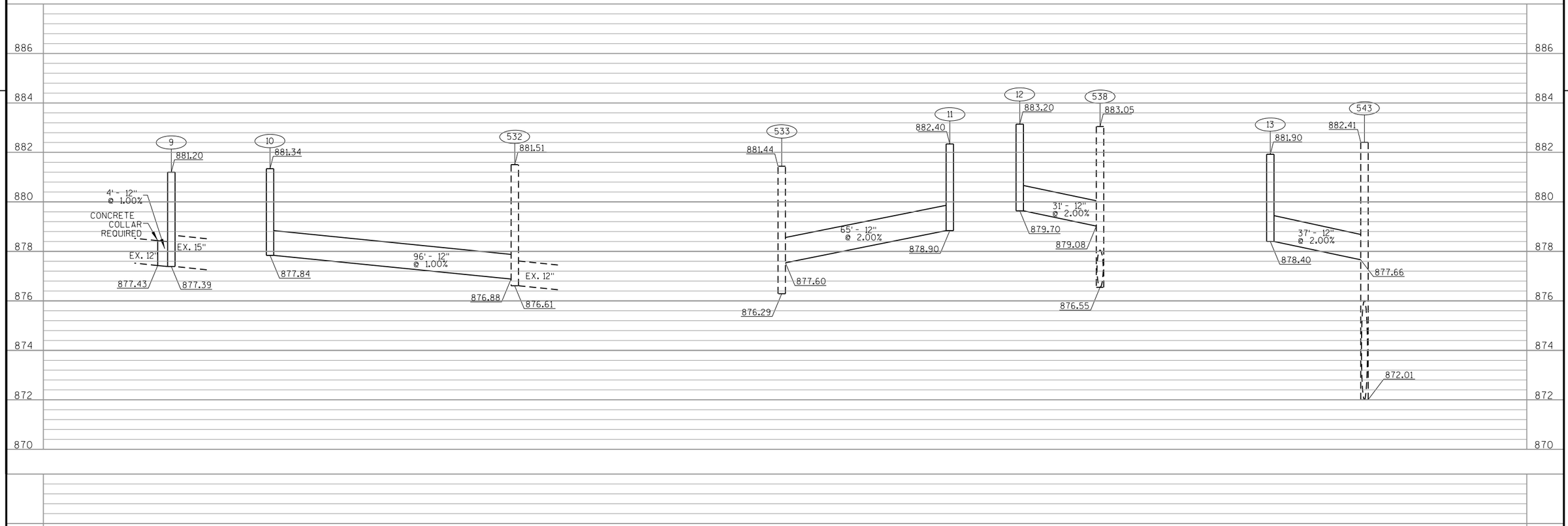




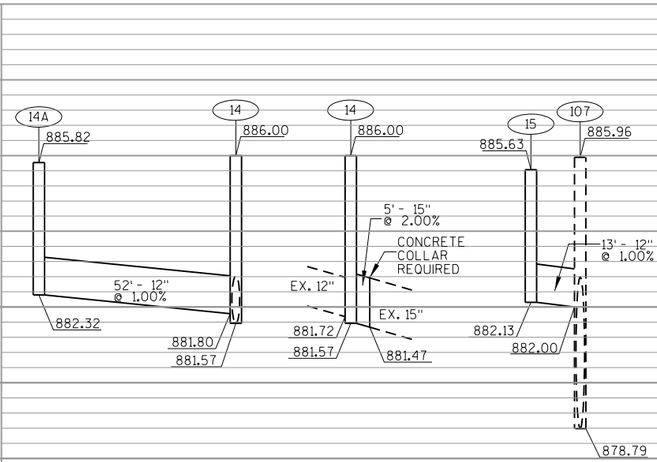


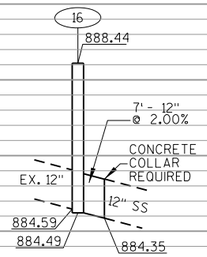
PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	STORM SEWER PROFILES	SHEET 138	E

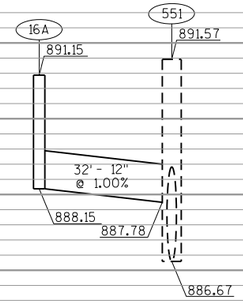
FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\022521_ss_profile.dgn
PLOT DATE : 4/27/2015
PLOT BY : GRAEF
PLOT NAME :
PLOT SCALE : 40.0000 sf / in.
WISDOT/CADDS SHEET 41

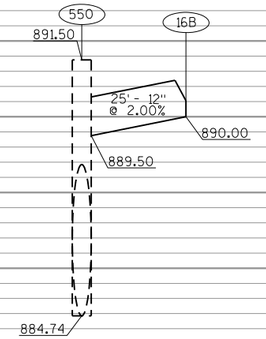


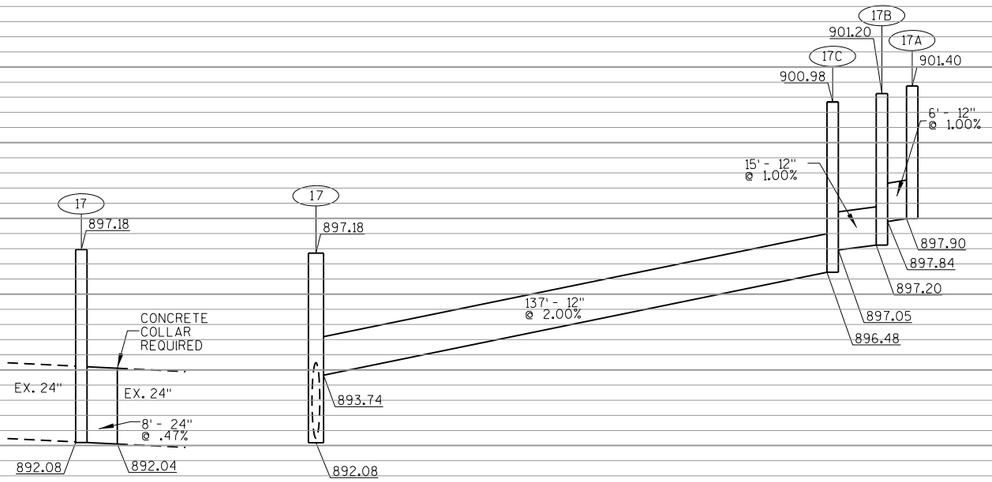
PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	STORM SEWER PROFILES	SHEET 139	E

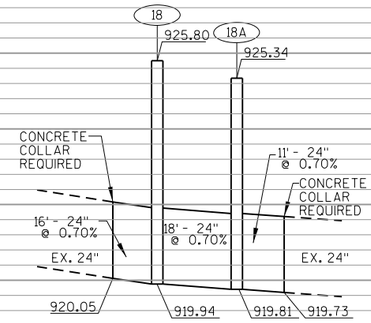


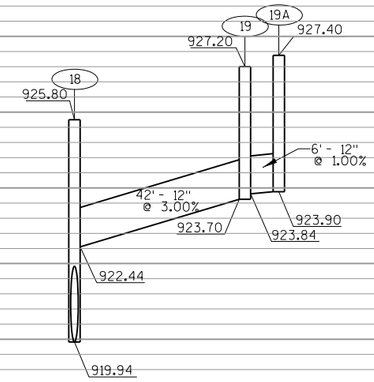




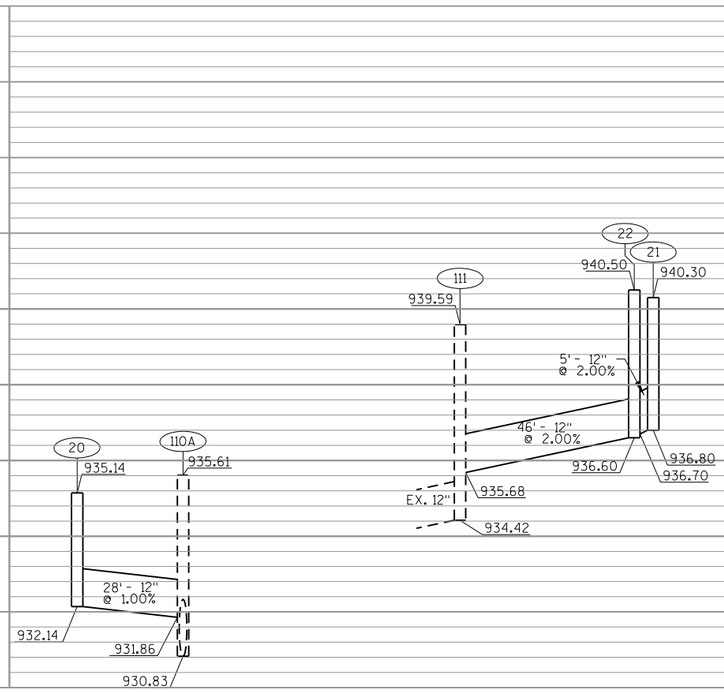


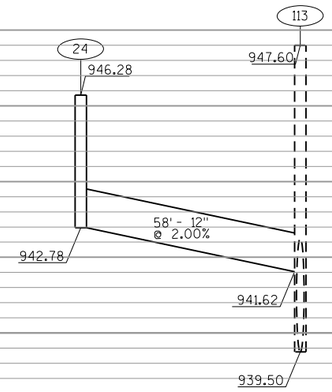


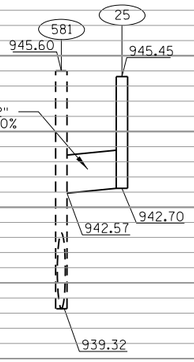


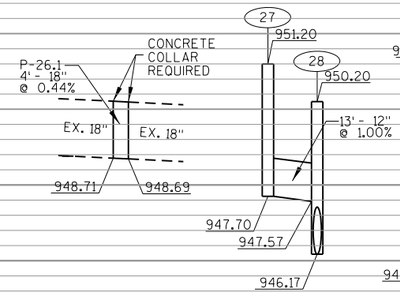


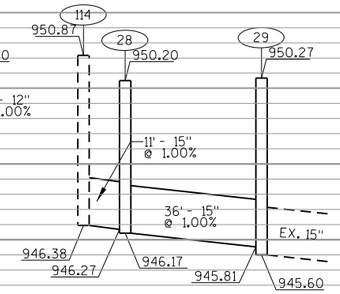
PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	STORM SEWER PROFILES	SHEET 140	E

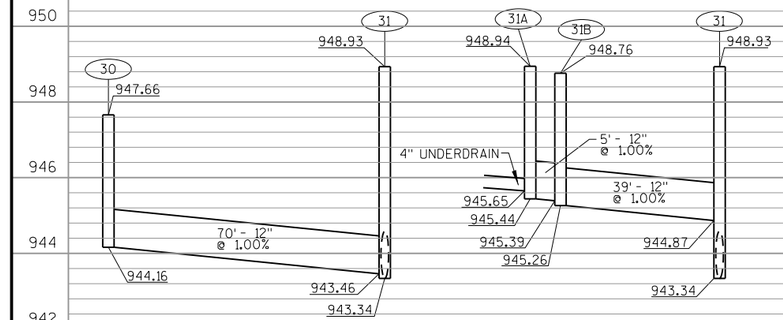


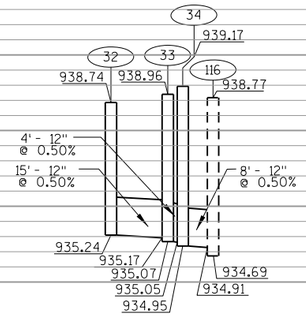


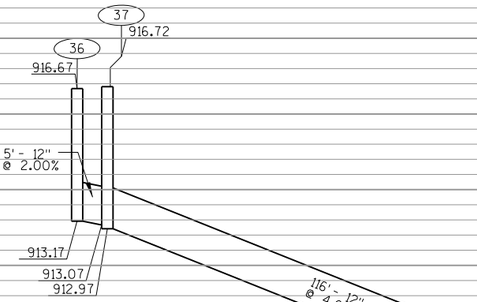


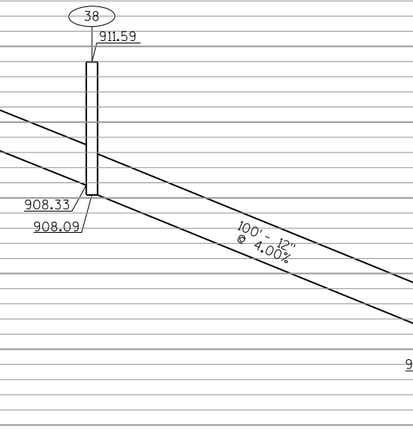


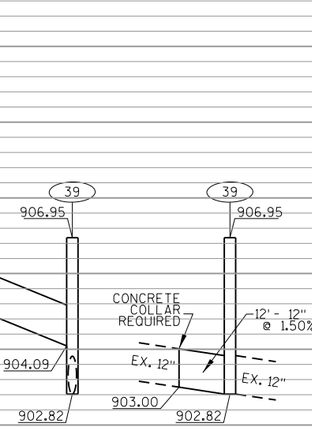






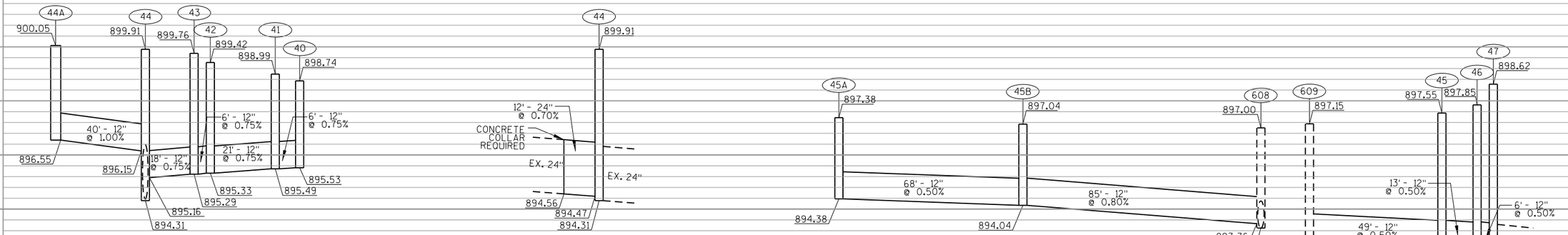


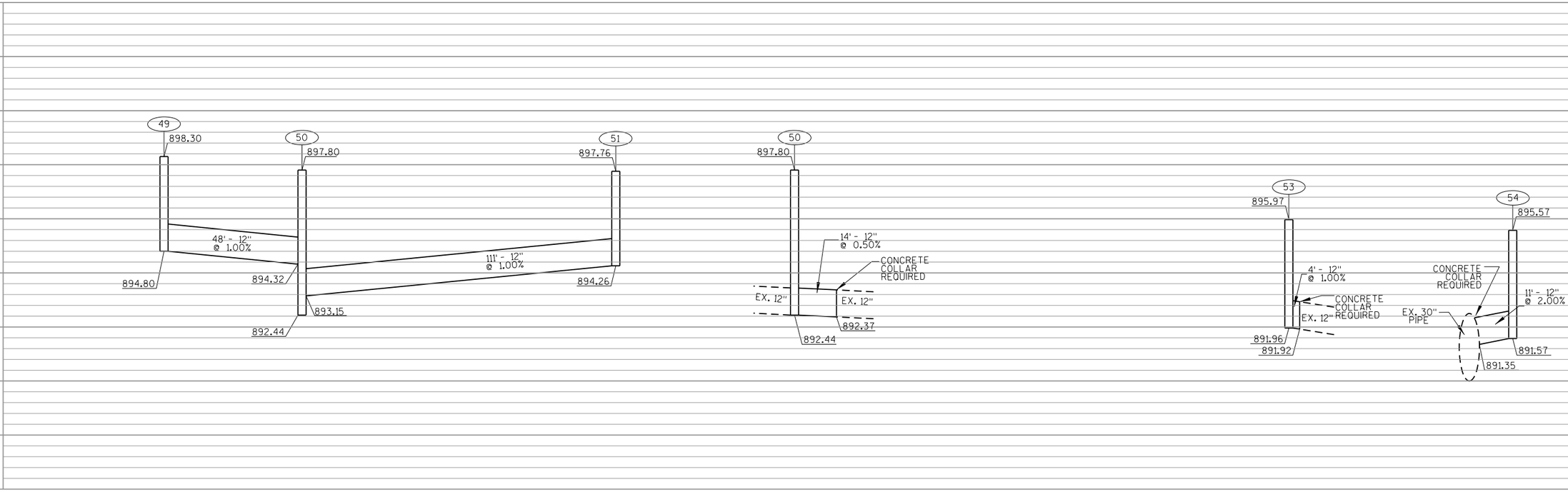




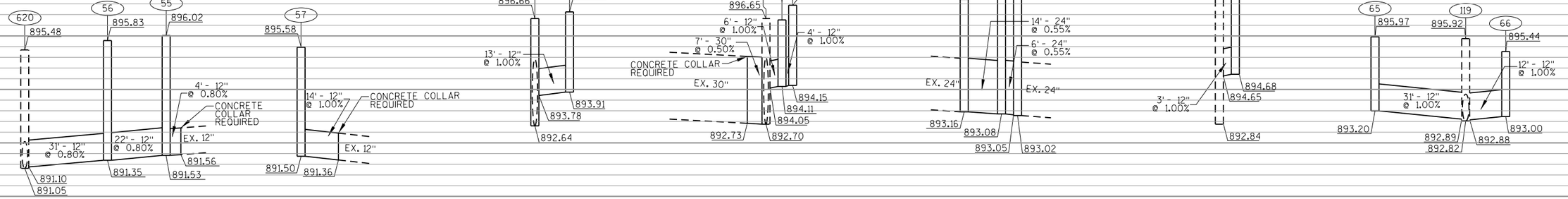
PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	STORM SEWER PROFILES	SHEET 141	E

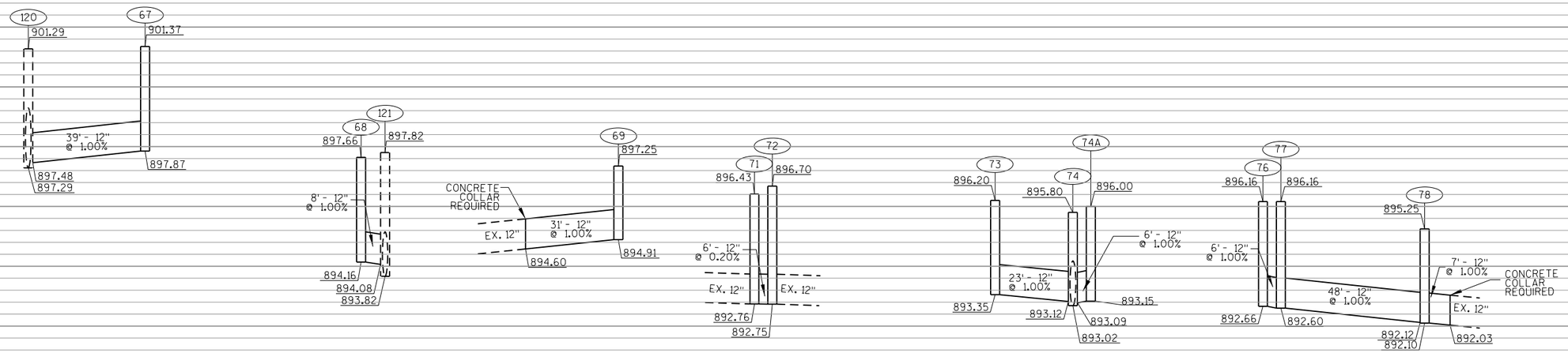
FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\022521_ss_profile.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 40.0000 sf / in.



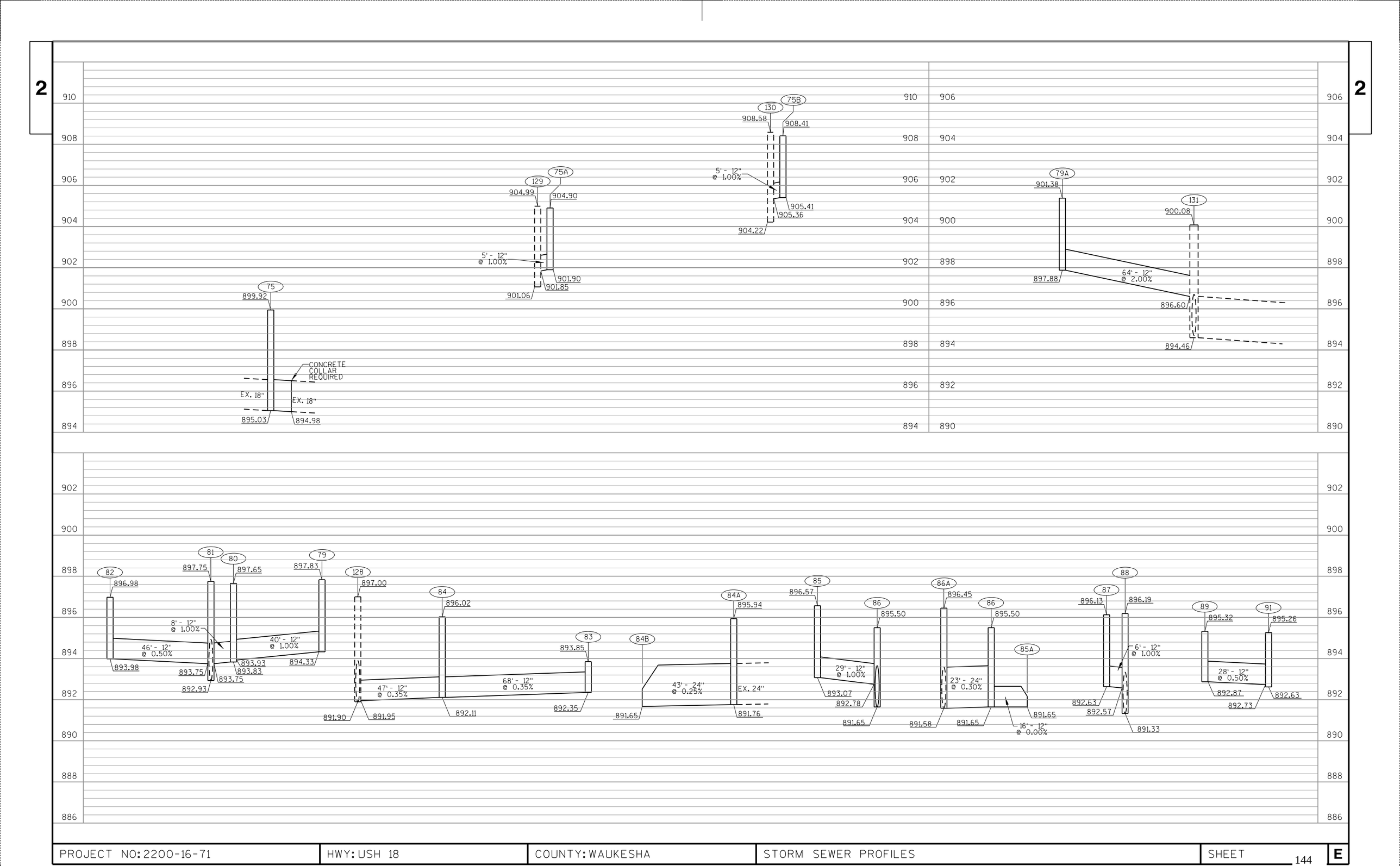


PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	STORM SEWER PROFILES	SHEET 142	E

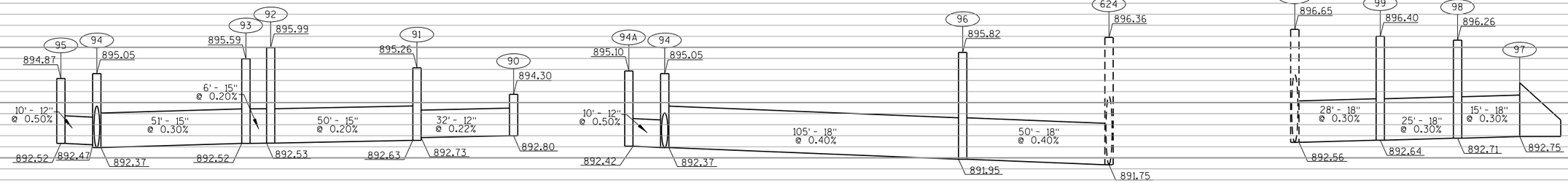




PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	STORM SEWER PROFILES	SHEET 143	E



PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	STORM SEWER PROFILES	SHEET 144	E



PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	STORM SEWER PROFILES	SHEET 145	E

STRUCT. NO.	STATION	OFFSET	PIPE NO.	C-C (FT)	TO STRUCT.	INLET/CB TYPE & COVER		MH TYPE & COVER		RIM/GRATE ELEV.	DEPTH (FT)	DISCHARGE PIPE SIZE (IN)	INLET ELEV.	DISCH. ELEV.	LENGTH (FT)	SLOPE (%)	PIPE CLASS	REMARKS
1	124+47.00	75.35' RT	P-1.1	28	1A	CB 2x3	H-S	--	--	876.98	3.50	12	873.48	872.92	28.00	2.00	III	
1A	124+74.00	65.8' RT	P-1.2	16	507	CB 2x3	H-S	--	--	877.18	4.36	12	872.82	872.50	16.00	2.00	III	CORE INTO EX. MH 507
1B	123+30.00	0.5' LT	P-1.3	46	100A	CB 2x3	H-S	--	--	879.02	3.00	12	876.02	875.56	46.00	1.00	III	CORE INTO EX. INLET 100A
2	48+75.3	30.65' RT	P-2.1	6	--	CB 2x3	H-S	--	--	877.72	3.06	12	874.66	874.60	6.00	1.00	IV	CONCRETE COLLAR REQUIRED
3A	125+45.60	55.0' RT	P-3.1	16	3	CB 2x3	H-S	--	--	877.05	3.50	12	873.55	873.39	16.00	1.00	III	
3	125+45.60	72.5' RT	--	--	--	--	--	6-FT	J	877.19	6.56	30	870.63	--	--	--	--	CONNECT MH TO EX. STORM SEWER, 30" E & W I.E. = 870.63+/-
4	125+38.00	59.3' LT	P-4.1	52	505	CB 2x3	H-S	--	--	876.50	3.40	12	873.10	872.58	52.00	1.00	III	CORE INTO EX. MH 505
102	128+51.17	23.5' LT	P-5.1	7	5	--	H-S	--	--	875.47	4.52	15	870.95	870.88	7.00	1.00	III	RECONSTRUCT EXISTING INLET 102
5	128+47.46	17.6' LT	--	--	--	CB 2x3	H-S	--	--	875.47	4.59	15	870.88	--	--	--	--	CONNECT CATCH BASIN TO EX. STORM SEWER, 15" S. I.E. = 870.88+/-
5A	131+00.00	14.75' RT	P-5.5	4	--	INL 2x3	H	--	--	878.17	2.55	12	875.62	875.58	4.00	1.00	--	CONNECT INLET TO EX. STORM SEWER, 12" S. I.E. = 875.58+/- CONCRETE COLLAR REQUIRED
6	134+63.86	18.0' LT	P-6.1	36	7	CB 2x3	H	--	--	880.85	2.30	12	878.55	878.19	36.00	1.00	IV	
7	134+99.37	19.83' LT	P-7.1	26	8	CB 2x3	H-S	--	--	881.08	2.86	12	878.22	877.96	26.00	1.00	IV	
8	135+25.62	18.0' LT	P-8.1	50	9	CB 2x3	H	--	--	881.34	3.41	12	877.93	877.43	50.00	1.00	III	
9	135+74.91	9.37' LT	--	--	--	CB 2x3	H-S	--	--	881.20	3.81	15	877.39	--	--		--	CONNECT CATCH BASIN TO EX. STORM SEWER, 15" S I.E. = 877.39+/-
--	--	--	P-9.1	4	9	--	--	--	--	--	--	12	877.43	877.39	4.00	1.00	III	CONCRETE COLLAR REQUIRED
10	141+25.00	76.0' RT	P-10.1	96	532	CB 2x3	H-S	--	--	881.34	3.50	12	877.84	876.88	96.00	1.00	III	CORE INTO EX. INLET 532
11	143+11.00	71.1' RT	P-11.1	65	533	INL 2x3	H-S	--	--	882.40	3.50	12	878.90	877.60	65.00	2.00	III	CORE INTO EX. INLET 533
12	144+27.07	101.8' RT	P-12.1	31	538	INL 2x3	H-S	--	--	883.20	3.50	12	879.70	879.08	31.00	2.00	III	CORE INTO EX. INLET 538
13	144+44.00	76.5' LT	P-13.1	37	543	INL 2x3	H-S	--	--	881.90	3.50	12	878.40	877.66	37.00	2.00	III	CORE INTO EX. MH 543
14A	147+25.00	14.0' RT	P-14.1	52	14	INL 2x3	H-S	--	--	885.82	3.50	12	882.32	881.80	52.00	1.00	III	
14	147+76.60	9.9' RT	P-14.2	5	--	INL 2x3	H	--	--	886.00	4.43	15	881.57	881.47	5.00	2.00	III	CONNECT INLET TO EX. STORM SEWER, 12" S. I.E. = 881.82+/- CONCRETE COLLAR REQUIRED
15	147+74.86	76.0' LT	P-15.1	13	108	INL 2x3	H	--	--	885.63	3.50	12	882.13	882.00	13.00	1.00	III	CORE INTO EX. MH 108
108	147+75.00	62.9' LT	--	--	--	--	--	--	J	885.96	--	--	--	--	--	--	--	RECONSTRUCT EXISTING MH 108
16	150+00.46	8.0' LT	P-16.1	7	--	INL 2x3	H	--	--	888.44	3.95	12	884.49	884.35	7.00	2.00	III	CONNECT INLET TO EX. STORM SEWER, 12" S. I.E. = 884.59+/- CONCRETE COLLAR REQUIRED
16A	152+15.00	2.20' LT	P-16.2	37	551	INL 2x3	H	--	--	891.15	3.00	12	888.15	887.78	37.15	1.00	III	CORE INTO EX. INLET 551
16B	152+55.00	87.0' LT	P-16.3	25	550	--	--	--	--	--	--	12	890.00	889.50	25.00	2.00	III	CORE INTO EX. INLET 550. APRON ENDWALL REQUIRED
17	155+51.11	14.9' LT	P-17.1	8	--	INL 2x3	H	--	--	897.18	5.10	24	892.08	892.04	8.00	0.47	III	
17A	156+87.00	22.75' RT	P-17.4	6	17B	INL 2x3	H	--	--	901.40	3.50	12	897.90	897.84	6.00	1.00	III	
17B	156+87.00	16.75' RT	P-17.3	15	17C	INL 2x3	H	--	--	901.20	4.00	12	897.20	897.05	15.00	1.00	III	
17C	156+87.00	1.75' RT	P-17.2	137	17	INL 2x3	H	--	--	900.98	4.50	12	896.48	893.74	137.00	2.00	III	
--	--	--	P-18.1	16	18	--	--	--	--	--	--	24	920.05	919.94	16.00	0.70	III	CONCRETE COLLAR REQUIRED
18	165+00.00	5.2' RT	P-18.2	18	18A	INL 2x3	H	--	--	925.80	5.86	24	919.94	919.81	18.00	0.70	III	
18A	165+00.00	12.7' LT	P-18.3	11	--	INL 2x3	H	--	--	925.34	5.53	24	919.81	919.73	11.00	0.70	III	CONNECT INLET TO EX. STORM SEWER, 24" N. I.E. = 919.73+/- CONCRETE COLLAR REQUIRED
19A	165+40.00	23.5' RT	P-19.1	6	19	INL 2x3	H	--	--	927.40	3.50	12	923.90	923.84	6.00	1.00	III	
19	165+40.00	17.5' RT	P-19.2	42	18	INL 2x3	H	--	--	927.20	3.50	12	923.70	922.44	42.00	3.00	III	
20	168+73.30	2.6' LT	P-20.1	28	110A	INL 2x3	H-S	--	--	935.14	3.00	12	932.14	931.86	28.00	1.00	III	CORE INTO EX. INLET 110A
21	170+77.00	19.0' RT	P-21.1	5	22	INL 2x3	H	--	--	940.30	3.50	12	936.80	936.70	5.00	2.00	III	
22	170+77.00	23.4' RT	P-22.1	46	111	INL 2x3	H	--	--	940.50	3.90	12	936.60	935.68	46.00	2.00	III	CORE INTO EX. INLET 111
111	170+31.10	24.3' RT	--	--	--	--	--	--	J	939.59	--	--	--	--	--		--	RECONSTRUCT EXISTING INLET 111
24	173+30.00	66.3' RT	P-24.1	58	113	INL 2x3	H-S	--	--	946.28	3.50	12	942.78	941.62	58.00	2.00	III	CORE INTO EX. INLET 113

NOTES: 1. STATIONS AND OFFSETS TO MANHOLES AND INLETS MEDIAN 1 GRATE ARE GIVEN TO THE CENTER OF STRUCTURE.
2. STATIONS AND OFFSETS TO INLETS AND CATCH BASINS ARE GIVEN TO THE FACE OF CURB.
3. STATIONS AND OFFSETS TO INLETS MEDIAN 3 GRATE ARE GIVEN TO THE PIPE INVERT.
4. STATIONS AND OFFSETS TO ENDWALLS ARE GIVEN TO THE END OF THE ENDWALL.
5. MANHOLE RIM/GRATE ELEVATIONS ARE GIVEN TO THE CENTER OF STRUCTURE.
6. INLET RIM/GRATE ELEVATIONS ARE GIVEN TO THE FLANGE LINE.
7. DEPTH OF MANHOLES AND INLETS ARE MEASURED FROM THE LOWEST INVERT OF THE STRUCTURE TO THE RIM/GRATE ELEVATION.
8. PIPE LENGTHS ARE SHOWN FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE.

STRUCT. NO.	STATION	OFFSET	PIPE NO.	C-C (FT)	TO STRUCT.	INLET/CB TYPE & COVER		MH TYPE & COVER		RIM/GRATE ELEV.	DEPTH (FT)	DISCHARGE PIPE SIZE (IN)	INLET ELEV.	DISCH. ELEV.	LENGTH (FT)	SLOPE (%)	PIPE CLASS	REMARKS
25	174+91.84	78.8' LT	P-25.1	13	581	INL 2x3	H-S	--	--	945.45	2.75	12	942.70	942.57	13.00	1.00	IV	CORE INTO EX. MH 581
--	179+99.20	14' LT	P-26.1	4	--	--	--	--	--	--	--	18	948.71	948.69	4.00	0.44	III	REMOVE STRUCTURE 113A AND REPLACE WITH 18" PIPE. CONCRETE COLLAR REQUIRED
27	184+33.00	20.8' RT	P-27.1	13	28	INL 2x3	H	--	--	951.20	3.50	12	947.70	947.57	13.00	1.00	IV	
114	184+50.10	20.4' RT	P-28.1	11	28	--	--	--	J	950.87	4.49	15	946.38	946.27	11.00	1.00	III	RECONSTRUCT EXISTING INLET 114
28	184+42.50	12.3' RT	P-28.2	36	29	INL 2x3	H	--	--	950.20	4.03	15	946.17	945.81	36.00	1.00	III	
29	184+17.78	13.7' LT	--	--	--	INL 2x3	H	--	--	950.27	4.67	15	945.60	--	--	--	--	CONNECT INLET TO EX. STORM SEWER, 15" N. I.E. = 945.60+/-
30	51+40.00	8.0' LT	P-30.1	70	31	INL 2x3	H	--	--	947.66	3.50	12	944.16	943.46	70.00	1.00	III	
31	184+71.00	70.2' LT	--	--	--	--	--	6-FT	J	948.93	5.59	15	943.34	--	--	--	--	CONNECT MANHOLE TO EX. STORM SEWER, 15" E & W I.E. = 943.34+/-
31A	51+00.00	45.0' LT	P-31.1	5	31B	INL 2x3	H	--	--	948.94	3.50	12	945.44	945.39	5.00	1.00	III	
31B	51+00.00	39.8' LT	P-31.2	39	31B	INL 2x3	H	--	--	948.76	3.50	12	945.26	944.87	39.00	1.00	III	
32	187+91.00	4.4' RT	P-32.1	15	33	INL 2x3	H	--	--	938.74	3.50	12	935.24	935.17	15.00	0.50	III	
33	187+91.00	10.4' LT	P-33.1	4	34	INL 2x3	H	--	--	938.96	3.89	12	935.07	935.05	4.00	0.50	III	
34	187+91.00	14.8' LT	P-34.1	8	116	INL 2x3	H	--	--	939.17	4.22	12	934.95	934.91	8.00	0.50	III	CORE INTO EX. INLET 116
116	187+99.70	14.7' LT	--	--	--	--	--	--	J	938.77	4.08	15	934.69	--	--	--	--	RECONSTRUCT EXISTING INLET 116
36	192+59.00	12.0' LT	P-36.1	5	37	INL 2x3	H	--	--	916.67	3.50	12	913.17	913.07	5.00	2.00	III	
37	192+60.00	6.8' LT	P-37.1	116	38	INL 2x3	H	--	--	916.72	3.75	12	912.97	908.33	116.00	4.00	III	
38	193+75.00	9.9' RT	P-38.1	100	39	INL 2x3	H	--	--	911.59	3.50	12	908.09	904.09	100.00	4.00	IV	
--	--	--	P-39.1	12	39	--	--	--	--	--	--	12	903.00	902.82	12.00	1.50	III	CONCRETE COLLAR REQUIRED
39	194+74.48	1.9' RT	--	--	--	INL 4-FT DIA.	H	--	--	906.95	4.13	12	902.82	--	--	--	--	CONNECT INLET TO EX. STORM SEWER, 12" N. I.E. = 902.82+/-
40	197+84.00	13.0' RT	P-40.1	6	41	INL 2x3	H	--	--	898.74	3.21	12	895.53	895.49	6.00	0.75	III	
41	197+84.00	7.0' RT	P-41.1	21	42	INL 2x3	H	--	--	898.99	3.50	12	895.49	895.33	21.00	0.75	III	
42	197+68.00	6.0' LT	P-42.1	6	43	INL 2x3	H	--	--	899.42	4.09	12	895.33	895.29	6.00	0.75	III	
43	197+68.00	12.0' LT	P-43.1	18	44	INL 2x3	H	--	--	899.76	4.47	12	895.29	895.16	18.00	0.75	III	
--	--	--	P-44.1	13	44	--	--	--	--	--	--	24	894.56	894.47	13.00	0.70	III	CONCRETE COLLAR REQUIRED
44	197+50.00	12.0' LT	--	--	--	INL 2x3	H	--	--	899.91	5.60	24	894.31	--	--	--	--	CONNECT INLET TO EX. STORM SEWER, 24" N. I.E. = 894.31+/-
44A	197+10.00	6.0' LT	P-44.2	40	44	INL 2x3	H	--	--	900.05	3.50	12	896.55	896.15	40.00	1.00	III	
45A	49+17.00	31.5' LT	P-45.3	69	45B	INL 2x3	H	--	--	897.38	3.00	12	894.38	894.04	69.00	0.50	IV	
45B	49+15.00	37.5' RT	P-45.2	85	608	INL 2x3	H	--	--	897.04	3.00	12	894.04	893.36	85.00	0.80	III	CORE INTO EX. INLET 608
609	199+51.38	12.0' RT	P-45.1	49	45	--	--	--	--	897.15	4.33	12	892.82	892.58	49.00	0.50	III	EXISTING INLET
45	200+00.00	6.5' RT	P-46.1	13	46	INL 2x3	H	--	--	897.55	4.97	12	892.58	892.52	13.00	0.50	III	
46	200+00.00	6.5' LT	P-47.1	6	47	INL 2x3	H	--	--	897.85	5.33	12	892.52	892.49	6.00	0.50	III	
47	200+00.00	12.5' LT	--		--	INL 2x3	H	--	--	898.62	6.19	12	892.43	--	--	--	--	CONNECT INLET TO EX. STORM SEWER, EX. 12" N. I.E. 892.43
49	201+05.00	12.5' LT	P-49.1	48	50	INL 2x3	H	--	--	898.30	3.50	12	894.80	894.32	48.00	1.00	III	
50	201+50.00	3.4' RT	P-50.1	14	--	INL 2x3	H-S	--	--	897.80	5.36	12	892.44	892.37	14.00	0.50	III	CONCRETE COLLAR REQUIRED
51	202+62.00	5.5' LT	P-51.1	111	50	INL 2x3	H-S	--	--	897.76	3.50	12	894.26	893.15	111.00	1.00	III	
53	203+94.72	5.6' RT	P-53.1	4	--	INL 2x3	H-S	--	--	895.97	4.01	12	891.96	891.92	4.00	1.00	III	CONCRETE COLLAR REQUIRED
54	205+70.00	74.8' RT	P-54.1	11	--	INL 2x3	H-S	--	--	895.57	4.00	12	891.57	891.35	11.00	2.00	III	CORE INTO EX. 30" STORM SEWER. CONCRETE COLLAR REQUIRED.
--	--	--	P-55.2	4	55	--	--	--	--	--	--	12	891.56	891.53	4.00	0.80	III	CONNECT INLET TO EX. STORM SEWER, EX. 12" N. I.E. 891.56 CONCRETE COLLAR REQUIRED
55	207+00.00	11.9' RT	P-55.1	22	56	INL 2x3	H-S	--	--	896.02	4.49	12	891.53	891.35	22.00	0.80	III	
56	206+78.00	8.3' RT	P-56.1	31	620	INL 2x3	H-S	--	--	895.83	4.48	12	891.35	891.10	31.00	0.80	III	
57	206+51.00	75.2' RT	P-57.1	14	--	INL 2x3	H-S	--	--	895.58	4.08	12	891.50	891.36	14.00	1.00	III	CONCRETE COLLAR REQUIRED
117	209+62.90	12.7' LT	--	--	--	--	--	--	J	896.90	--	--	--	--	--	--	--	RECONSTRUCT EXISTING INLET 117
59	209+84.00	13.0' LT	P-59.1	13	58	INL 2x3	H	--	--	896.91	3.00	12	893.91	893.78	13.00	1.00	IV	
58	209+73.00	7.0' LT	--	--	--	--	--	6-FT	H-S	896.65	3.99	30	892.66	--	--	--	--	CONNECT MANHOLE TO EX. STORM SEWER, EX. 30" E & W I.E. 892.64+/-

NOTES:
1. STATIONS AND OFFSETS TO MANHOLES AND INLETS MEDIAN 1 GRATE ARE GIVEN TO THE CENTER OF STRUCTURE.
2. STATIONS AND OFFSETS TO INLETS AND CATCH BASINS ARE GIVEN TO THE FACE OF CURB.
3. STATIONS AND OFFSETS TO INLETS MEDIAN 3 GRATE ARE GIVEN TO THE PIPE INVERT.
4. STATIONS AND OFFSETS TO ENDWALLS ARE GIVEN TO THE END OF THE ENDWALL.
5. MANHOLE RIM/GRATE ELEVATIONS ARE GIVEN TO THE CENTER OF STRUCTURE.
6. INLET RIM/GRATE ELEVATIONS ARE GIVEN TO THE FLANGE LINE.
7. DEPTH OF MANHOLES AND INLETS ARE MEASURED FROM THE LOWEST INVERT OF THE STRUCTURE TO THE RIM/GRATE ELEVATION.
8. PIPE LENGTHS ARE SHOWN FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE.

STRUCT. NO.	STATION	OFFSET	PIPE NO.	C-C (FT)	TO STRUCT.	INLET/CB TYPE & COVER		MH TYPE & COVER		RIM/GRATE ELEV.	DEPTH (FT)	DISCHARGE PIPE SIZE (IN)	INLET ELEV.	DISCH. ELEV.	LENGTH (FT)	SLOPE (%)	PIPE CLASS	REMARKS
60	210+08.00	10.9' RT	P-60.1	4	61	INL 2x3	H	--	--	897.15	3.00	12	894.15	894.11	4.00	1.00	IV	
61	210+06.00	7.0' RT	P-61.1	6	118	INL 2x3	H-S	--	--	896.60	2.49	12	894.11	894.05	6.00	1.00	IV	CORE INTO EX. INLET 118
118	210+00.00	7.1' RT	--	--	--	--	--	--	J	896.65	--	--	--	--	--	--	--	RECONSTRUCT EXISTING INLET 118
--	--	--	P-61.2	7	118	--	--	--	--	--	--	30	892.73	892.70	7.00	0.50	IV	CONCRETE COLLAR REQUIRED
62	211+70.20	7.0' RT	P-62.1	14	63	INL 2x3	H	--	--	897.37	4.21	24	893.16	893.08	14.00	0.55	IV	CONNECT INLET TO EX. STORM SEWER, 24" S I.E. = 893.16+/-
63	211+70.20	7.0' LT	P-63.1	6	64	INL 2x3	H	--	--	897.59	4.51	24	893.08	893.05	6.00	0.55	III	
64	211+70.20	13.0' LT	--	--	--	INL 2x3	H	--	--	897.77	4.72	24	893.05	--	--	--	--	CONNECT INLET TO EX. STORM SEWER, 24" N I.E. = 893.02+/-
64A	211+70.00	67.0' LT	P-64.1	3	128	INL 2x3	H	--	--	897.68	3.00	12	894.68	894.65	3.00	1.00	#N/A	CORE INTO EX. INLET 128
128A	211+70.00	64.2' LT	--	--	--	--	--	--	J	897.72	--	--	--	--	--	--	--	RECONSTRUCT EXISTING INLET 128
65	208+71.00	74.8' RT	65.1	22	119	INL 2x3	H-S	--	--	896.10	3.00	12	893.10	892.88	22.00	1.00	IV	CORE INTO EX. INLET 119
119	208+78.75	95.2' RT	--	--	--	--	--	--	J	895.72	--	--	--	--	--	--	--	RECONSTRUCT EXISTING INLET 119
66	208+70.00	104.0' RT	P-66.1	12	119	INL 2x3	H-S	--	--	895.44	2.44	12	893.00	892.88	12.00	1.00	IV	CORE INTO EX. INLET 119
67	43+25.00	25.9' LT	P-67.1	39	120	CB 2x3	H	--	--	901.37	3.50	12	897.87	897.48	39.00	1.00	III	CORE INTO EX. INLET 120
120	43+63.86	19.0' LT	--	--	--	--	--	--	J	901.29	--	--	--	--	--	--	--	RECONSTRUCT EXISTING INLET 120
68	47+75.00	28.4' LT	P-68.1	8	121	CB 2x3	H	--	--	897.66	3.50	12	894.16	894.08	8.00	1.00	III	
121	47+75.28	20.1' LT	--	--	--	--	--	--	J	897.82	--	--	--	--	--	--	--	RECONSTRUCT EXISTING INLET 121
69	47+75.00	51.0' RT	P-69.1	31	--	CB 2x3	H-S	--	--	897.25	2.34	12	894.91	894.60	31.00	1.00	IV	CONCRETE COLLAR REQUIRED
122	48+32.59	34.2' LT	--	--	--	--	--	--	J	896.80	--	--	--	--	--	--	--	RECONSTRUCT EXISTING INLET 122
71	48+99.90	7.9' LT	P-71.1	6	72	INL 2x3	H-S	--	--	896.43	3.67	12	892.76	892.75	6.00	0.20	III	CONNECT TO EX. STORM SEWER, 12" W I.E. = 892.76+/-
72	48+99.10	2.0' LT	--	--	--	INL 2x3	H-S	--	--	896.70	3.95	12	892.75	--	--	--	--	CONNECT TO EX. STORM SEWER, 12" E I.E. = 892.75+/-
73	49+16.24	45.8' RT	P-73.1	23	74	INL 2x3	H-S	--	--	896.20	2.85	12	893.35	893.12	23.00	1.00	IV	
74	49+00.00	62.4' RT	--	--	--	--	--	6-FT	H-S	895.80	2.78	18	893.02	--	--	--	--	CONNECT TO EX. STORM SEWER, 18" S.W. & N.E. I.E. = 893.02+/-
74A	49+06.00	65.8' RT	P-74.1	6	74	INL 2x3	H	--	--	896.00	2.85	18	893.15	893.09	6.00	1.00	IV	
123	48+93.40	39.8' RT	--	--	--	--	--	--	J	896.15	--	--	--	--	--	--	--	RECONSTRUCT EXISTING INLET 123
75	214+50.00	2.9' LT	P-75.1	10	--	INL 2x3	H	--	--	899.92	4.89	18	895.03	894.98	10.00	0.50	III	CONNECT TO EX. STORM SEWER, 18" S I.E. = 895.03+/- CONCRETE COLLAR REQUIRED
75A	218+50.00	62.0' LT	P-75.2	5	129	INL 2x3	H	--	--	904.90	3.00	12	901.90	901.85	5.00	1.00	IV	CORE INTO EX. INLET 129
129	218+49.35	57.4' LT	--	--	--	--	--	--	J	904.99	--	--	--	--	--	--	--	RECONSTRUCT EXISTING INLET 129
75B	220+48.00	66.25' LT	P-75.3	5	130	INL 2x3	H	--	--	908.41	3.00	12	905.41	905.36	5.00	1.00	IV	CORE INTO EX. INLET 130
130	220+47.50	61.4' LT	--	--	--	--	--	--	J	908.58	--	--	--	--	--	--	--	RECONSTRUCT EXISTING INLET 130
76	52+12.00	3.0' RT	P-76.1	6	77	CB 2x3	H	--	--	896.16	3.50	12	892.66	892.60	6.00	1.00	III	
77	52+12.00	3.0' LT	P-77.1	48	78	CB 2x3	H	--	--	896.16	3.56	12	892.60	892.12	48.00	1.00	IV	
78	52+37.67	43.3' LT	P-78.1	7	--	CB 2x3	H-S	--	--	895.25	3.15	12	892.10	892.03	7.00	1.00	IV	CONCRETE COLLAR REQUIRED
127	55+53.60	23.7' RT	--	--	--	--	--	--	J	899.08	--	--	--	--	--	--	--	RECONSTRUCT EXISTING INLET 127
79	55+25.00	53.9' RT	P-79.1	40	80	CB 2x3	H	--	--	897.83	3.50	12	894.33	893.93	40.00	1.00	III	
80	55+11.00	16.0' RT	P-80.1	8	81	CB 2x3	H	--	--	897.65	3.82	12	893.83	893.75	8.00	1.00	III	
81	55+07.00	9.5' RT	--	--	--	--	--	6-FT	J	897.75	4.82	12	892.93	--	--		--	CONNECT TO EX. STORM SEWER, 24" N & S I.E. = 892.93+/-
82	55+01.30	35.12' LT	P-82.1	46	81	CB 2x3	H-S	--	--	896.98	3.00	12	893.98	893.75	46.00	0.50	IV	
83	54+16.00	79.0' RT	P-83.1	68	84	INL MED 1 GRATE	MS-A	--	--	893.85	1.50	12	892.35	892.11	68.00	0.35	III	
84	53+52.00	57.0' RT	P-84.1	47	128	CB 2x3	H	--	--	896.02	3.91	12	892.11	891.95	47.00	0.35	III	

NOTES: 1. STATIONS AND OFFSETS TO MANHOLES AND INLETS MEDIAN 1 GRATE ARE GIVEN TO THE CENTER OF STRUCTURE.
2. STATIONS AND OFFSETS TO INLETS AND CATCH BASINS ARE GIVEN TO THE FACE OF CURB.
3. STATIONS AND OFFSETS TO INLETS MEDIAN 3 GRATE ARE GIVEN TO THE PIPE INVERT.
4. STATIONS AND OFFSETS TO ENDWALLS ARE GIVEN TO THE END OF THE ENDWALL.
5. MANHOLE RIM/GRATE ELEVATIONS ARE GIVEN TO THE CENTER OF STRUCTURE.
6. INLET RIM/GRATE ELEVATIONS ARE GIVEN TO THE FLANGE LINE.
7. DEPTH OF MANHOLES AND INLETS ARE MEASURED FROM THE LOWEST INVERT OF THE STRUCTURE TO THE RIM/GRATE ELEVATION.
8. PIPE LENGTHS ARE SHOWN FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE.

STRUCT. NO.	STATION	OFFSET	PIPE NO.	C-C (FT)	TO STRUCT.	INLET/CB TYPE & COVER		MH TYPE & COVER		RIM/GRATE ELEV.	DEPTH (FT)	DISCHARGE PIPE SIZE (IN)	INLET ELEV.	DISCH. ELEV.	LENGTH (FT)	SLOPE (%)	PIPE CLASS	REMARKS
84A	53+52.20	32.1' LT	P-84.2	43	84B	CB 4-FT DIA.	H	--	--	895.94	4.18	24	891.76	891.65	43.00	0.25	III	CONNECT TO EX. STORM SEWER, 24" E I.E. = 891.76+/- APRON ENDWALL REQUIRED
85	18+00.00	26.0' RT	P-85.1	29	86	CB 2x3	H-S	--	--	896.57	3.50	12	893.07	892.78	29.00	1.00	III	
85A	18+26.70	63.7' RT	P-85.2	16	86	--	--	--	--	--	--	12	891.65	891.65	16.00	0.00	III	12" APRON ENDWALL REQUIRED
86	18+02.60	55.0' RT	P-86.1	23	86A	INL MED 2 GRATE	MS	--	--	895.00	3.35	24	891.65	891.58	23.00	0.30	III	
86A	17+81.30	62.7' RT	--	--	--	--	--	4-FT	J	896.45	4.87	24	891.58	--	--	--	III	CONNECT TO EX. STORM SEWER, 24" W I.E. = 891.58+/-
87	17+03.00	18.3' LT	P-87.1	6	88	CB 2x3	H	--	--	896.13	3.50	12	892.63	892.57	6.00	1.00	III	
88	17+00.00	11.8' LT	--	--	--	--	--	4-FT	J	896.19	4.86	24	891.33	--	--	--	--	CONNECT TO EX. STORM SEWER, 24" E & W I.E. = 891.33+/-
89	51+72.00	65.4' RT	P-89.1	28	91	INL 2x3	H-S	--	--	895.32	2.45	12	892.87	892.73	28.00	0.50	IV	
90	51+93.00	100.0' RT	P-90.1	32	91	INL MED 1 GRATE	MS-A	--	--	894.30	1.50	12	892.80	892.73	32.00	0.22	IV	
91	52+00.00	68.6' RT	P-91.1	50	92	INL 2x3	H	--	--	895.26	2.63	15	892.63	892.53	50.00	0.20	IV	
92	52+00.00	18.0' RT	P-92.1	6	93	INL 2x3	H-S	--	--	895.99	3.46	15	892.53	892.52	6.00	0.20	IV	
93	52+00.00	12.0' RT	P-93.1	51	94	INL 2x3	H-S	--	--	895.59	3.07	15	892.52	892.37	51.00	0.30	IV	
95	52+00.00	49.0' LT	P-95.1	10	94	INL 2x3	H-S	--	--	894.87	2.35	12	892.52	892.47	10.00	0.50	IV	
94A	52+10.00	39.0' LT	P-94.2	10	94	INL 2x3	H	--	--	895.10	2.68	12	892.42	892.37	10.00	0.50	IV	
94	52+00.00	39.0' LT	P-94.1	105	96	INL 4-FT DIA.	H-S	--	--	895.05	2.68	18	892.37	891.95	105.00	0.40	IV	
96	50+95.00	34.3' LT	P-96.1	50	624	INL 4-FT DIA.	H-S	--	--	895.84	3.89	18	891.95	891.75	50.00	0.40	IV	
97	210+16.00	104.0' LT	P-97.1	15	98	INL MED 3 GRATE	MS	--	--	895.25	2.50	18	892.75	892.71	15.00	0.30	III	
98	210+05.00	93.1' LT	P-98.1	25	99	INL 2x3	H	--	--	896.26	3.55	18	892.71	892.64	25.00	0.30	III	
99	209+83.00	80.6' LT	P-99.1	28	125	INL 4-FT DIA.	H-S	--	--	896.40	3.76	18	892.64	892.56	28.00	0.30	III	
125	209+60.30	64.6' LT	--	--	--	--	--	--	J	896.65	--	--	--	--	--	--	--	RECONSTRUCT EXISTING INLET 125

NOTES:
1. STATIONS AND OFFSETS TO MANHOLES AND INLETS MEDIAN 1 GRATE ARE GIVEN TO THE CENTER OF STRUCTURE.
2. STATIONS AND OFFSETS TO INLETS AND CATCH BASINS ARE GIVEN TO THE FACE OF CURB.
3. STATIONS AND OFFSETS TO INLETS MEDIAN 3 GRATE ARE GIVEN TO THE PIPE INVERT.
4. STATIONS AND OFFSETS TO ENDWALLS ARE GIVEN TO THE END OF THE ENDWALL.
5. MANHOLE RIM/GRATE ELEVATIONS ARE GIVEN TO THE CENTER OF STRUCTURE.
6. INLET RIM/GRATE ELEVATIONS ARE GIVEN TO THE FLANGE LINE.
7. DEPTH OF MANHOLES AND INLETS ARE MEASURED FROM THE LOWEST INVERT OF THE STRUCTURE TO THE RIM/GRATE ELEVATION.
8. PIPE LENGTHS ARE SHOWN FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE.

WISCONSIN
PAUL J.
DREIS
E-22463
BLACK EARTH
WI
PROFESSIONAL ENGINEER
12/19/14

GENERAL NOTES:
1. CONTRACTOR SHALL, AT A MINIMUM, NOTIFY THE TOWN OF BROOKFIELD SANITARY DISTRICT NO. 4 72 HOURS PRIOR TO STARTING ANY WORK INCLUDED IN THIS WORK PLAN.
2. A REPRESENTATIVE FROM THE TOWN OF BROOKFIELD SANITARY DISTRICT NO. 4 SHALL BE PRESENT WHILE ANY WORK INCLUDED IN THIS WORK PLAN IS BEING PERFORMED.
3. PROPOSED FIRE HYDRANT LEAD LENGTHS SHALL BE FIELD VERIFIED TO ACCOMODATE PROPOSED HYDRANT LOCATION.
4. ALL UTILITY WORK INCLUDED IS THIS WORK PLAN SHALL BE IN ACCORDANCE WITH THE TOWN OF BROOKFIELD SANITARY DISTRICT NO. 4 SPECIFICATIONS, LATEST ADDITION.

DIGGERS HOTLINE
Call 811 3 Work Days Before You Dig
or Toll Free (800) 242-8511
Milwaukee Area (414) 259-1181
Hearing Impaired TDD (800) 542-2289
www.DiggersHotline.com

0 FEET 50 100

N

5

*VERIFY FINAL GRADES WITH FINAL WISDOT DESIGN AND DESIGN AMENDMENTS

STA. 99+65/0'RT
ADJUST SANITARY SEWER MANHOLE
PROP. ELEV. = 897.1±

STA. 98+60/5'RT
ADJUST SANITARY SEWER MANHOLE
PROP. ELEV. = 895.4±

STA. 98+36/22'RT
ADJUST VALVE BOX
PROP. ELEV. = 895.6±

STA. 97+48/18'RT
ADJUST VALVE BOX
PROP. ELEV. = 894.8±

STA. 97+48/22'RT
EXISTING HYDRANT TO REMAIN

STA. 97+46/0'LT
ADJUST SANITARY SEWER MANHOLE
PROP. ELEV. = 895.0±

STA. 97+30/15'RT
ADJUST VALVE BOX
PROP. ELEV. = 894.8±

KOSSOW ROAD

*VERIFY FINAL GRADES WITH FINAL WISDOT DESIGN AND DESIGN AMENDMENTS

E. MOORLAND BLVD. (USH 18)

STA. 48+92/1'LT
ADJUST SANITARY SEWER MANHOLE
PROP. ELEV. = 897.9±

STA. 48+77/33'RT
NEW FIRE HYDRANT
PROP. BURY LINE ELEV. = 897.8±

CONNECT TO EXISTING HYDRANT LEAD AND PROVIDE NEW 6-INCH PVC LEAD FROM CONNECTION TO HYDRANT.

STA. 48+40/29'RT
REMOVE EXISTING CURB BOX

ABANDON EXISTING WATER SERVICE

STA. 48+78/10'RT
ADJUST VALVE BOX (2)
PROP. ELEV. = 897.6±

PARKLAWN COURT

STA. 46+73/31'RT
NEW CURB BOX
PROP. ELEV. = 897.3±

STA. 46+54/12'RT
ADJUST VALVE BOX
PROP. ELEV. = 896.8±

REMOVE AND REPLACE EXISTING WATER SERVICE, COPPER, 1-INCH.

PARKLAWN COURT

*VERIFY FINAL GRADES WITH FINAL WISDOT DESIGN AND DESIGN AMENDMENTS

STA. 46+94/27'RT
RECONSTRUCT SANITARY SEWER MANHOLE AND INSTALL NEW CHIMNEY SEAL
PROP. RIM ELEV. = 899.0±

STA. 46+16/32'RT
ADJUST VALVE BOX
PROP. ELEV. = 899.9±

STA. 45+32/35'RT
ADJUST STORM SEWER MANHOLE
PROP. ELEV. = 902.5±

STA. 45+20/31'RT
ADJUST VALVE BOX
PROP. ELEV. = 901.0±

STA. 43+71/27'LT
ADJUST VALVE BOX
PROP. ELEV. = 901.0±

STA. 43+84/26'LT
ADJUST VALVE BOX
PROP. ELEV. = 900.8±

STA. 47+74/38'LT
ADJUST VALVE BOX
PROP. ELEV. = 897.8±

SWENSON DRIVE

CROSSROADS CIRCLE

NEW ATT FACILITY TO BE LOCATED BETWEEN NEW HYDRANT AND PROPERTY LINE

STA. 44+60/31'LT
NEW FIRE HYDRANT
PROP. BURY LINE
ELEV. = 901.5±

STA. 44+60/24'LT
ADJUST VALVE BOX
PROP. ELEV. = 900.5±

CONNECT TO EXISTING HYDRANT LEAD AND PROVIDE NEW 6-INCH PVC LEAD FROM CONNECTION TO HYDRANT

STA. 45+75/1'LT
ADJUST STORM SEWER MANHOLE
PROP. ELEV. = 900.6±

*VERIFY FINAL GRADES WITH FINAL WISDOT DESIGN AND DESIGN AMENDMENTS

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	UTILITY CONFLICT RESOLUTION PLAN - TOWN OF BROOKFIELD	SHEET 1	E

FILE NAME : S:\MAD\1900--1999\1956\002\Micros\USH 18\West (I-94 to Manhattan Dr)\Conflict Resolution Plan_Sheet_FINAL.dgn PLOT DATE : 12/19/2014 PLOT BY : _username_ PLOT NAME : PLOT SCALE : $$.....plotscale.....$$
WISDOT/CADDS SHEET 44

2

2

CANOPY

MANHATTEN DRIVE

SIGN

EXIST. MANHOLE TO BE CONVERTED TO VALVE BOX
REMOVE TOP SECTION OF MANHOLE AND INSTALL
VALVE BOX WITH SLURRY BACKFILL

REMOVE 10" VALVE AND (2)12"x10" REDUCERS
INSTALL 12" VALVE, 12" D.I. (CLASS 52) PIPE AND
12" SOLID SLEEVE (VALVE TO WEST OF SLEEVE)

USH 18 (MORELAND BLVD.)

EXIST. MANHOLE TO BE CONVERTED TO VALVE BOX
REMOVE TOP SECTION OF MANHOLE AND INSTALL
VALVE BOX WITH SLURRY BACKFILL

Waukesha Water Utility
115 Delafield Street, Waukesha, WI 53188
Phone 262-521-5272 Fax 262-521-5265

THIS STAMP APPLIES TO THE WATER MAIN PLANS
(SHEETS 1 TO 4 OF 4)

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	WATER MAIN (SHEET 1 OF 4)	SCALE, FEET 0 20 40	SHEET NO: E

FILE NAME : $$....designfile....$$ PLOT DATE : $$...plottingdate...$$ ORG DATE : PLOT NAME : Originator : PLOT SCALE : $$.....plotscale.....$$

2

INL

INL

INL

SIGN

SIGN

SIGN

SIGN

JENNIFER LANE

USH 18 (MORELAND BLVD.)

MH

133+00

+50

134+00

+50

135+00

+50

136+00

+50

137+00

+50

138+00

REMOVE 10" VALVE AND (2)12"x10" REDUCERS
INSTALL 12" VALVE, 12" D.I. (CLASS 52) PIPE
AND 12" SOLID SLEEVE

REMOVE 10" VALVE AND (2)12"x10" REDUCERS
INSTALL 12" VALVE, 12" D.I. (CLASS 52) PIPE
AND 12" SOLID SLEEVE

SIGN

SIGN

N

W

E

S

U/C

FOUND

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	WATER MAIN (SHEET 2 OF 4)	SCALE, FEET 0 20 40	SHEET NO: 152	E

FILE NAME : $$....designfile....$$ PLOT DATE : $$....plottingdate...$$ ORG DATE : PLOT NAME : Originator : PLOT SCALE : $$.....plotscale.....$$

2

REMOVE 10" VALVE AND (2)12"x10" REDUCERS
INSTALL 12" VALVE, 12" D.I. (CLASS 52) PIPE
AND 12" SOLID SLEEVE

USH 18 (MORELAND BLVD.)

GATEWAY DRIVE

RAMONA ROAD

ABANDON HYDRANT

REMOVE 6" – 90° BEND
PROP. 6" – 22.5° BEND

PROP. HYDRANT
PROP. 11.0' OF 6" D.I. (CLASS 52) PIPE

USH 18 (MORELAND BLVD.)

SIGN

SIGN

PROJECT NO: 2200–16–71	HWY: USH 18	COUNTY: WAUKESHA	WATER MAIN (SHEET 3 OF 4)	SCALE, FEET 0 20 40	SHEET NO: 153	E

FILE NAME : $$....designfile....$$ PLOT DATE : $$...plottingdate...$$ ORG DATE : PLOT NAME : Originator : PLOT SCALE : $$.....plotscale.....$$

2

PROP. 6" PLUG
ABANDON VALVE BOX

ABANDON HYDRANT

PROP. HYDRANT
PROP. 5.5' OF 6" D.I.
(CLASS 52) PIPE

PROP. 12"x6" TAPPING SLEEVE
WITH 6" TAPPING VALVE & BOX
(MATERIALS TO BE PROVIDED AND
INSTALLED BY THE WAUKESHA
WATER UTILITY – CONTRACTOR
TO PROVIDE TRENCH, SHIELD
AND MEANS FOR LOWERING
TAPPING MACHINE)

EXIST. MANHOLE TO BE CONVERTED TO VALVE BOX
REMOVE TOP SECTION OF MANHOLE AND INSTALL
VALVE BOX WITH SLURRY BACKFILL

KOSSOW ROAD

USH 18 (MORELAND BLVD.)

SIGN

SIGN

PROP. 12"x6" TAPPING SLEEVE
WITH 6" TAPPING VALVE & BOX
(MATERIALS TO BE PROVIDED AND
INSTALLED BY THE WAUKESHA
WATER UTILITY – CONTRACTOR
TO PROVIDE TRENCH, SHIELD
AND MEANS FOR LOWERING
TAPPING MACHINE)

PROP. HYDRANT
PROP. 40.0' OF 6" D.I.(CLASS 52) PIPE
(ALL JOINTS MUST BE RESTRAINED)

ABBOTT DRIVE

KOSSOW ROAD

RVCP

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	WATER MAIN (SHEET 4 OF 4)	SCALE, FEET 0 20 40	SHEET NO: 154	E

FILE NAME : $$....designfile....$$ PLOT DATE : $$...plottingdate...$$ ORG DATE : PLOT NAME : Originator : PLOT SCALE : $$.....plotscale.....$$

LEGEND

- XX — SIGN REMOVAL NUMBER
- XXX — PROPOSED SIGN NUMBER
- ESTR — EXISTING SIGN TO REMAIN
- EXISTING SIGN
- PROPOSED SIGN
- (X) — DENOTES SIGN SIZE
- A — MOUNT TO UTILITY POLE
- B — MOUNT TO SIGNAL POLE
- C — MOUNT TO SIGNAL MAST ARM

2

MANHATTAN DRIVE

E. MORELAND BLVD. (USH 18)

1-1 NO PARKING ANY TIME R7-1D 18" X 24"
A-1 NO PARKING ANY TIME REMOVE
1-2 ONE WAY R6-2R 24" X 30"
A-2 ONE WAY REMOVE
1-3 SPEED LIMIT 25 R2-1 24" X 36"
1-4
A-3 SPEED LIMIT 25 REMOVE
A-4
1-5 B ONE WAY R6-2L 24" X 30"
1-6 B DO NOT ENTER R5-1 30" X 30"
1-7 B STOP R1-1F 36" X 36"
1-8 R6-3A 30" X 24" DIVIDED HIGHWAY
1-9 R5-2 24" X 24"
1-10 3 TONS OR OVER R5-2A 24" X 12"
1-11 STOP R1-1 36" X 36"
1-12 B STOP R1-1F 36" X 36"
1-13 NO PARKING ANY TIME A R7-1D 18" X 24"
1-14 ONE WAY R6-2R 24" X 30"
1-15 B STOP R1-1F 36" X 36"
1-16 B DO NOT ENTER R5-1 30" X 30"
1-17 STOP R1-1F 36" X 36" B
1-18 B STOP R1-1F 36" X 36"
1-19 B R4-7 24" X 36"
1-20 R4-7 24" X 36"
1-21 ONE WAY R6-2R 24" X 30"
1-22 BEGIN LEFT TURN LANE R3-20L 24" X 36"
1-23 WRONG WAY R5-1A 36" X 24"
1-24 STOP R1-1 36" X 36"
1-25 STOP R1-1 36" X 36"
1-26 SPEED LIMIT 25 R2-1 24" X 36"
1-27 NO PARKING ANY TIME R7-1D 18" X 24"
1-28 B DO NOT ENTER R5-1 30" X 30"
1-29 B STOP R1-1F 36" X 36"
1-30 DIVIDED HIGHWAY R6-3A 30" X 24"
1-31 YIELD R1-2 36" X 31"
1-32 B ONE WAY R6-2L 24" X 30"
1-33 NO PARKING ANY TIME R7-1D 18" X 24"
1-34 J1-1 24" X 39" JCT 164 M2-1 M1-6
1-35 C Manhattan Dr M1-94H 102" X 24"
1-36 Moreland Blvd M1-94H 96" X 24"
1-37 C Manhattan Dr M1-94H 102" X 24"
1-38 C Moreland Blvd M1-94H 96" X 24"
1-39 R4-7 24" X 36"
1-40 DO NOT ENTER R5-1 30" X 30"
1-41 DO NOT ENTER R5-1 30" X 30"
1-42 WRONG WAY R5-1A 36" X 24"
1-43 MOVE
1-44 DO NOT ENTER R5-1 30" X 30"
1-45 C LEFT TURN YIELD ON FLASHING YELLOW ARROW R10-50 30" X 36"
1-46 C LEFT TURN YIELD ON FLASHING YELLOW ARROW R10-50 30" X 36"
1-47 1-48 R10-50 30" X 36"

A-5 ESTR
A-6 3 TONS OR OVER REMOVE
A-7
A-8 YIELD REMOVE
A-9 NO PARKING ANY TIME REMOVE
A-10 REMOVE
A-11 A-12 STOP REMOVE
A-13 DO NOT ENTER REMOVE
A-14 ONE WAY REMOVE
A-15 LEFT TURN LANE REMOVE
A-16 DO NOT ENTER REMOVE
A-17 A-18 STOP REMOVE
A-19 WRONG WAY REMOVE
A-20 ONE WAY REMOVE
A-21 STOP REMOVE
A-22 SPEED LIMIT 25 REMOVE
A-23 NO PARKING ANY TIME REMOVE
A-24 REMOVE
A-25 ONE WAY REMOVE
A-26 ONE WAY REMOVE
A-27 YIELD REMOVE
A-28 NO PARKING ANY TIME REMOVE
A-29 JCT 164 REMOVE

MANHATTAN MORELAND MOVE BY CITY
BUS STOP REMOVE BY OTHERS
DO NOT BLOCK DRIVE NO PARKING ANY TIME ESTR
NO PARKING ANY TIME ESTR
SIGN
MATCH LINE STA. 128+00

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	PERMANENT SIGNING	SHEET 155	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\023201_ps.dgn
PLOT DATE : 4/27/2015
PLOT BY : GRAEF
PLOT NAME :
PLOT SCALE : 40.0000 sf / in.
WISDOT/CADDS SHEET 42

2

2

N

E. MORELAND BLVD. (USH 18)

MATCH LINE STA. 128+00

MATCH LINE STA. 134+00

12.5:1 TAPER

2-1 RIGHT LANE MUST TURN RIGHT R3-7R 30" X 30"

2-2 BEGIN LEFT TURN LANE R3-20LL 24" X 36"

2-3 2-8 Manhattan Dr NEXT SIGNAL D1-65 78" X 21"

2-4 NO PARKING ANY TIME R7-1D 18" X 24"

2-5 RIGHT LANE MUST TURN RIGHT R3-7R 36" X 36"

2-6 2-7 W3-3 36" X 36"

2-9 BEGIN LEFT TURN LANE R3-20L 24" X 36"

2-10 2-11 SPEED LIMIT 35 R2-1 24" X 36"

2-12 BEGIN LEFT TURN LANE R3-20L 24" X 36"

2-13 J4-1 24" X 36" EAST 18 M3-2 M1-4

2-14 ONE WAY R6-2R 24" X 30"

2-15 NO PARKING ANY TIME R7-1D 18" X 24"

2-16 Manhattan Drive ONLY 84" X 84" MOUNT TO OVERHEAD SIGN SUPPORT SEE DETAIL

OVERHEAD SIGN SUPPORT S-67-970

B-1 RIGHT LANE MUST TURN RIGHT REMOVE

B-2 Manhattan Dr

B-3 NO PARKING ANY TIME REMOVE

B-4 RIGHT LANE MUST TURN RIGHT REMOVE

B-5 B-6 REMOVE

B-7 Manhattan Dr

B-8 LEFT TURN LANE REMOVE

B-9 ONE WAY REMOVE

B-10 B-11 SPEED LIMIT 35 REMOVE

B-12 NO PARKING ANY TIME REMOVE

SIGN W

FILLER CAPS

MH

INL

SIGN

LEGEND

- XX — SIGN REMOVAL NUMBER
- XXX — PROPOSED SIGN NUMBER
- ESTR — EXISTING SIGN TO REMAIN
- EXISTING SIGN
- PROPOSED SIGN
- (X) — DENOTES SIGN SIZE
- A — MOUNT TO UTILITY POLE
- B — MOUNT TO SIGNAL POLE
- C — MOUNT TO SIGNAL MAST ARM

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	PERMANENT SIGNING	SHEET 156	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\023202_ps.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 40.0000 sf / in.

WISDOT/CADDS SHEET 42

2

LEGEND

- XX — SIGN REMOVAL NUMBER
- XXX — PROPOSED SIGN NUMBER
- ESTR — EXISTING SIGN TO REMAIN
- EXISTING SIGN
- PROPOSED SIGN
- (X) DENOTES SIGN SIZE
- A — MOUNT TO UTILITY POLE
- B — MOUNT TO SIGNAL POLE

N

JENNIFER LANE

3-1 STOP R1-1 36" X 36"

3-2 RIGHT TURN ONLY R3-53R 24" X 30"

C-2 DIVIDED HIGHWAY STOP REMOVE C-3

3-3 NO PARKING ANY TIME R7-1D 18" X 24"

3-4 ONE WAY R6-2L 24" X 30"

NO PARKING ANY TIME REMOVE C-1

ONE WAY REMOVE C-4

3-11 DO NOT ENTER R5-1 36" X 36"

3-5 R5-2 24" X 24"

3-6 3 TONS OR OVER R5-2A 24" X 12"

C-5 3 TONS OR OVER C-6 REMOVE

JENNIFER MORELAND MOVE (BY CITY)

C-7 EAST NORTH SOUTH 18 164 164 REMOVE

3-7 BEGIN LEFT TURN LANE R3-20L 24" X 36"

D1-65(MOD) 96" X 39" Wolf Rd ← Les Paul Pkwy → NEXT SIGNAL 3-26

R4-7 36" X 48" 3-9

3-10 R3-2 30" X 30"

3-12 ONE WAY R6-2R 24" X 30"

3-13 2' MOUNTING HEIGHT W12-1D 24" X 24"

C-8 ONE WAY REMOVE

3-8 DO NOT ENTER R5-1 36" X 36"

INL

MATCH LINE STA. 134+00

134+00 +50 135+00 +50 136+00 +50 137+00 +50 138+00 +50 139+00 +50 140+00

MATCH LINE STA. 140+00

C-10 REMOVE

C-9 REMOVE

R4-7 36" X 48" 3-14

3-15 R3-2 30" X 30"

C-11 ONE WAY REMOVE

E. MORELAND BLVD. (USH 18)

SIGN

C-13 REMOVE

3-28 BEGIN LEFT TURN LANE R3-20L 24" X 36"

W12-1D 24" X 24" 3-16 2' MOUNTING HEIGHT

DO NOT ENTER R5-1 36" X 36" 3-17

3-33 ONE WAY R6-2L 24" X 30"

3-18 RIGHT TURN ONLY R3-53R 24" X 30"

3-20 ONE WAY R6-2R 24" X 30"

3-19 DO NOT ENTER R5-1 36" X 36"

3-29 3-30 J3-3 72" X 57"

EAST NORTH SOUTH 18 164 164

M3-2 M1-4 M6-2 | M3-1 M1-6 M6-1 | M3-3 M1-6 M5-1R

3-21 NO PARKING ANY TIME R7-1D 18" X 24"

C-12 EAST NORTH SOUTH 18 164 164 REMOVE

3-22 3-23 W3-3 36" X 36"

C-14

NO PARKING ANY TIME C-15 REMOVE

U/C

D1-65(MOD) 96" X 39" Wolf Rd ← Les Paul Pkwy → NEXT SIGNAL 3-24

W12-1D 24" X 24"

W12-1D 24" X 24"

C-16 Wolf Rd LEFT TURN LANE C-17 REMOVE

FOUND

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	PERMANENT SIGNING	SHEET 157	E

LEGEND

- XX — SIGN REMOVAL NUMBER
- XXX — PROPOSED SIGN NUMBER
- ESTR — EXISTING SIGN TO REMAIN
- EXISTING SIGN
- PROPOSED SIGN
- (X) — DENOTES SIGN SIZE
- A — MOUNT TO UTILITY POLE
- B — MOUNT TO SIGNAL POLE
- C — MOUNT TO SIGNAL MAST ARM

MATCH LINE SEE NEXT SHEET

MATCH LINE STA. 140+00

MATCH LINE STA. 146+00

MATCH LINE STA. 284+81

WOLF ROAD

E. MORELAND BLVD. (USH 18)

LES PAUL PKWY. (STH 164)

STH 164 MORELAND WOLF — MOVE (BY CITY)

Les Paul Pkwy / Wolf Rd

Moreland Blvd

LES PAUL MORELAND — MOVE (BY CITY)

EAST 18 | NORTH 164 | SOUTH 164

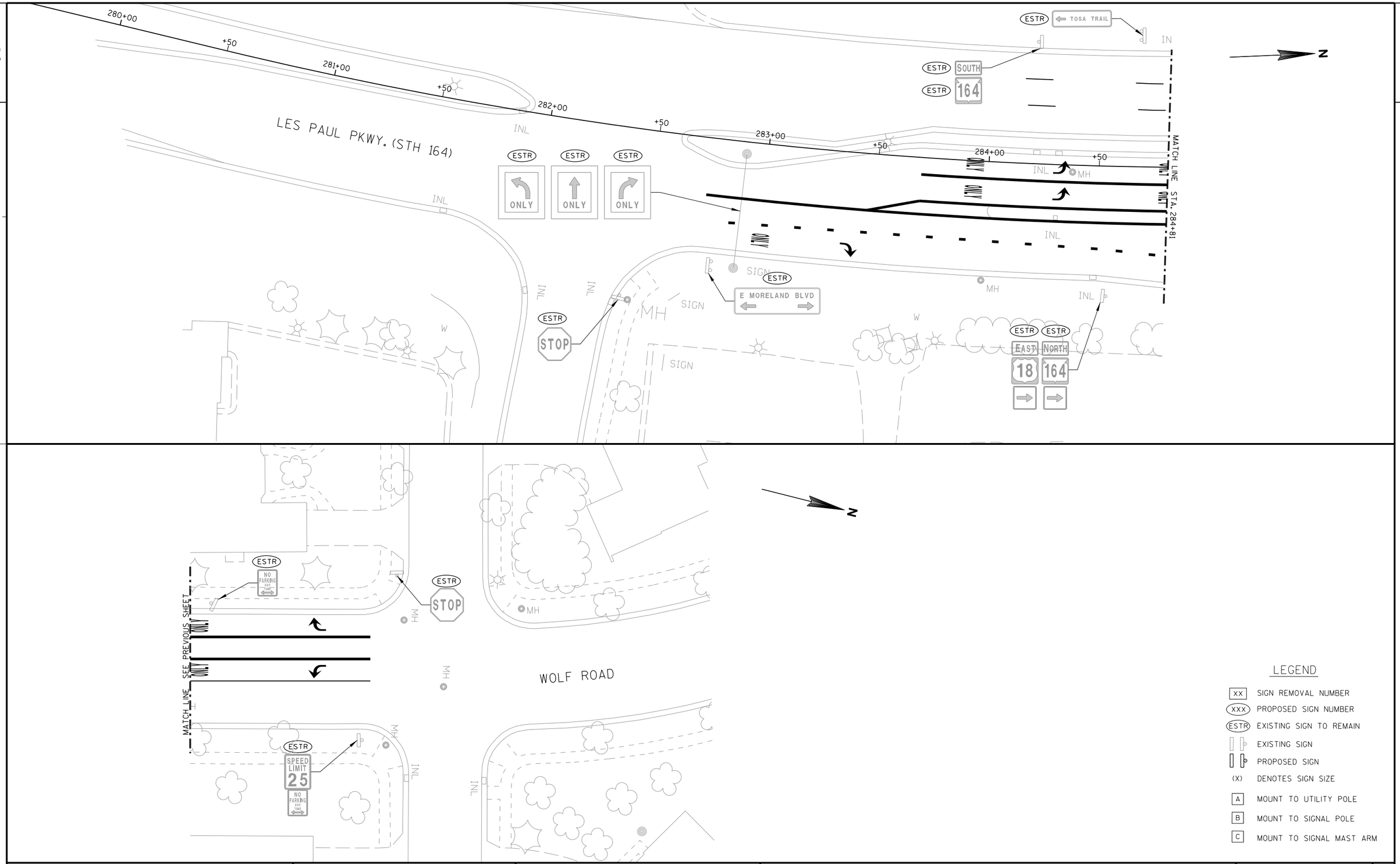
SOUTH 164

EAST 18 | NORTH 164

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	PERMANENT SIGNING	SHEET 158	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\023204_ps.dgn PLOT DATE : 7/15/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 40.0000 sf / in.

2



LEGEND

XX	SIGN REMOVAL NUMBER
XXX	PROPOSED SIGN NUMBER
ESTR	EXISTING SIGN TO REMAIN
	EXISTING SIGN
	PROPOSED SIGN
(X)	DENOTES SIGN SIZE
A	MOUNT TO UTILITY POLE
B	MOUNT TO SIGNAL POLE
C	MOUNT TO SIGNAL MAST ARM

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	PERMANENT SIGNING	SHEET 159	E

2

LEGEND

- XX — SIGN REMOVAL NUMBER
- XXX — PROPOSED SIGN NUMBER
- ESTR — EXISTING SIGN TO REMAIN
- EXISTING SIGN
- PROPOSED SIGN
- (X) — DENOTES SIGN SIZE
- A — MOUNT TO UTILITY POLE
- B — MOUNT TO SIGNAL POLE
- C — MOUNT TO SIGNAL MAST ARM

N

E. MORELAND BLVD. (USH 18)

MATCH LINE STA. 146+00

MATCH LINE STA. 152+00

GATEWAY DRIVE

6-19 J3-2 72" X 84" — SOUTH 164 WEST 18 — M3-3 M1-6 M6-1 / M3-4 M1-4 M6-1

E-1 WEST 18 — REMOVE

E-6 LEFT TURN LANE — REMOVE

6-1 BEGIN LEFT TURN LANE — R3-20LL 24" X 36"

6-2 ← Les Paul Pkwy / Wolf Rd → NEXT SIGNAL — D1-1-65 (MOD.) 96" X 39"

E-2 Wolf Rd / E-3 WRONG WAY — REMOVE

6-4 NO PARKING ANY TIME — R7-1D 24" X 30"

E-4 SOUTH 164 WEST 18 — REMOVE

6-20 6-21 J3-2 72" X 84" — SOUTH 164 WEST 18 — M3-3 M1-6 M5-1L / M3-4 M1-4 M6-1

E-5 ONE WAY — REMOVE

6-6 / 6-5 R4-7 36" X 48" — LEFT TURN LANE — R3-55L 36" X 48"

6-23 WRONG WAY — R5-1A 36" X 24"

E-7 LEFT TURN LANE — REMOVE

E-8 — REMOVE

6-7 ← Les Paul Pkwy / Wolf Rd → NEXT SIGNAL — D1-1-65 (MOD.) 96" X 39"

6-25 — R3-2 30" X 30"

6-15 DO NOT ENTER — R5-1 36" X 36"

6-14 / 6-13 R4-7 36" X 48" / R3-2 30" X 30"

6-16 DO NOT ENTER — R5-1 36" X 36"

E-9 EAST 18 NORTH 164 / E-10 NO PARKING ANY TIME — REMOVE

6-22 J4-2 72" X 54" — EAST 18 NORTH 164 — M3-2 M1-4 / M3-1 M1-6

6-9 NO PARKING ANY TIME — R7-1D 24" X 30"

6-10 6-11 SPEED LIMIT 45 — R2-1 36" X 48"

E-11 E-12 SPEED LIMIT 45 — REMOVE

E-13 NO PARKING ANY TIME — REMOVE

6-12 NO PARKING ANY TIME — R7-1D 24" X 30"

E-14 SOUTH 164 WEST 18 — REMOVE

6-24 ONE WAY — R6-2L 24" X 30"

6-17 STOP — R1-1 36" X 36"

RIGHT TURN ONLY — R3-53R 24" X 30"

6-18

E-15 STOP — REMOVE

SIGN

INL

MH

W

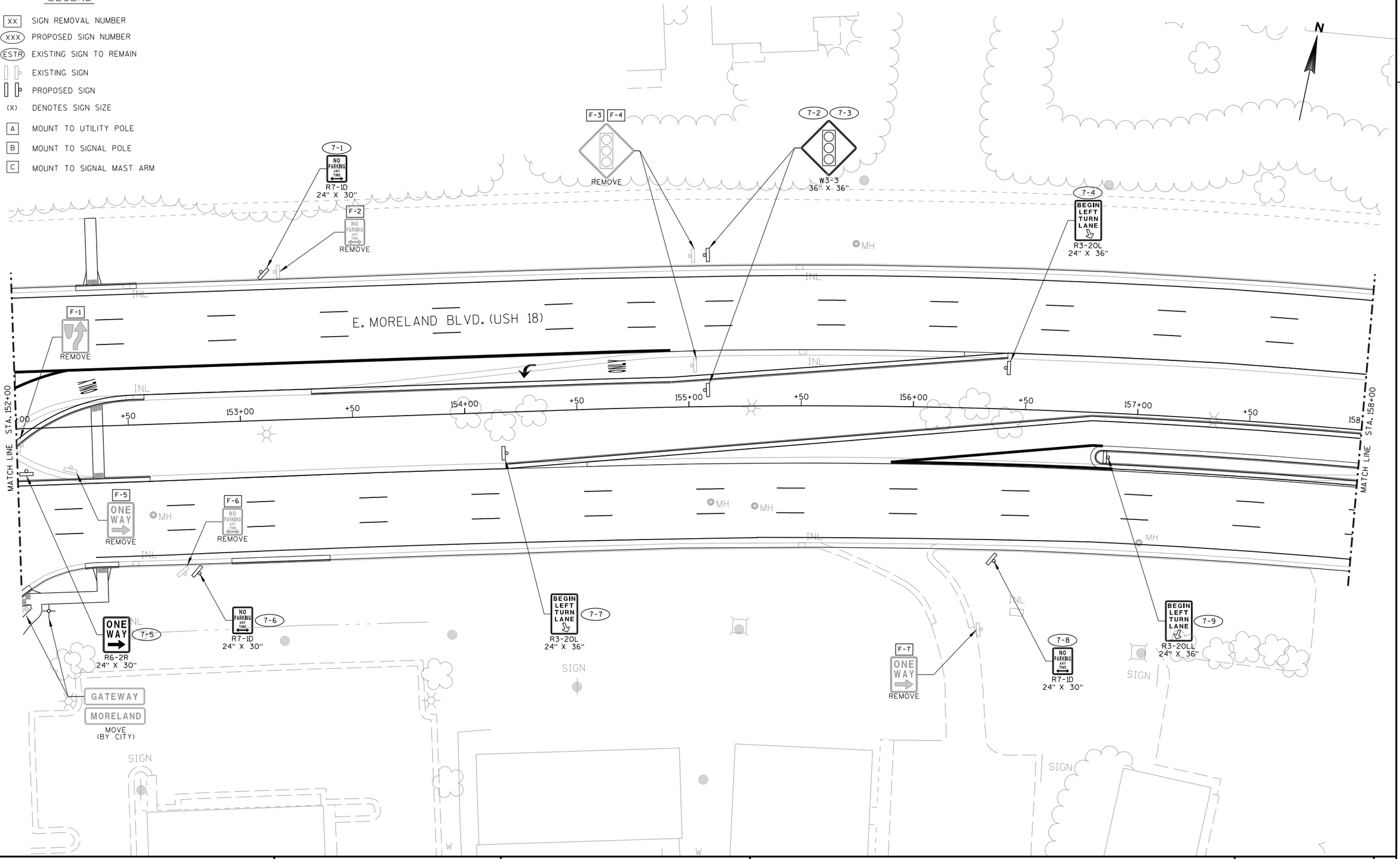
PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	PERMANENT SIGNING	SHEET 160	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\023206_ps.dgn
PLOT DATE : 4/27/2015
PLOT BY : GRAEF
PLOT NAME :
PLOT SCALE : 40.0000 sf / in.
WISDOT/CADDS SHEET 42

2

LEGEND

- XX — SIGN REMOVAL NUMBER
- XXX — PROPOSED SIGN NUMBER
- ESTR — EXISTING SIGN TO REMAIN
- EXISTING SIGN
- PROPOSED SIGN
- (X) — DENOTES SIGN SIZE
- A — MOUNT TO UTILITY POLE
- B — MOUNT TO SIGNAL POLE
- C — MOUNT TO SIGNAL MAST ARM

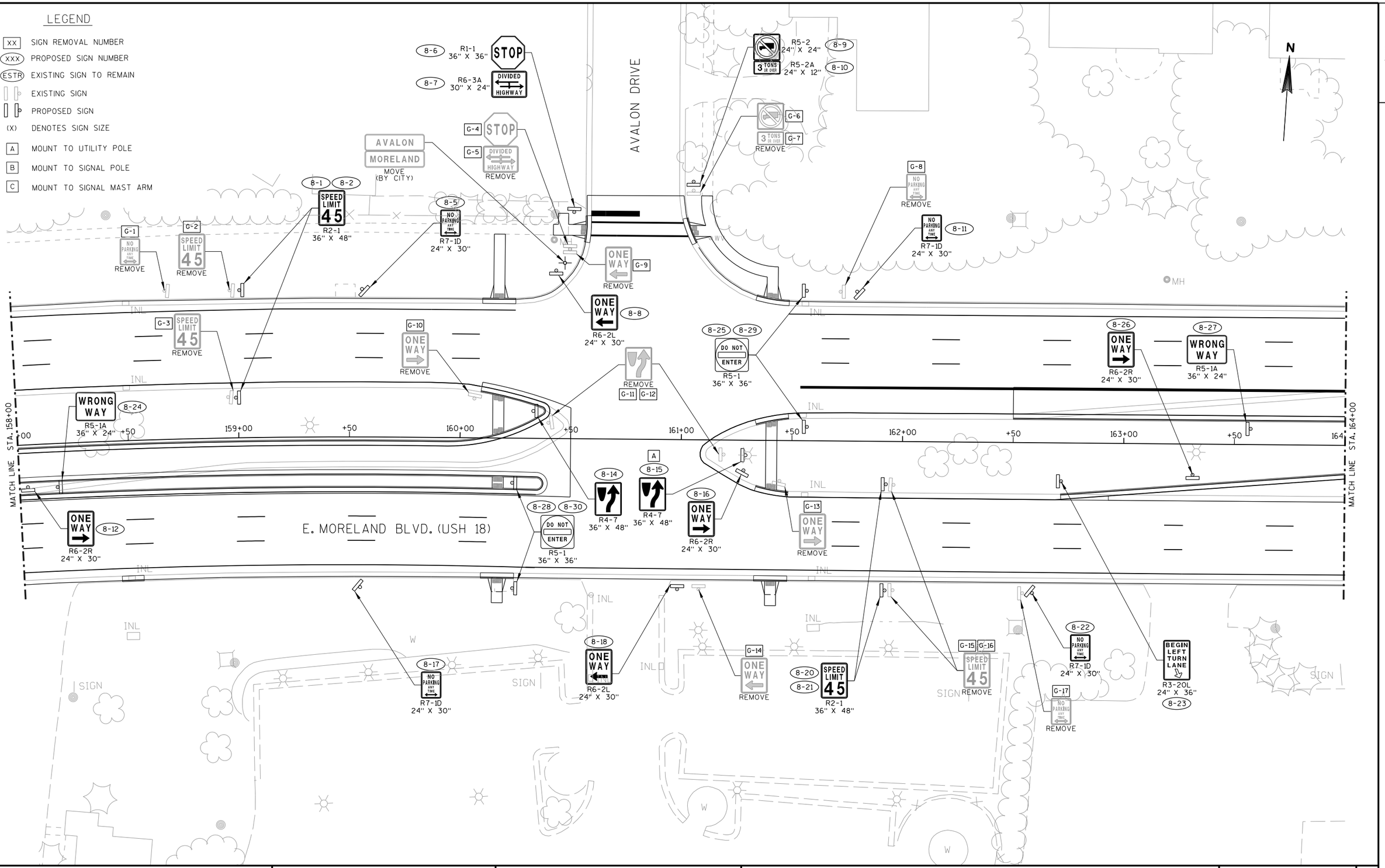


PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	PERMANENT SIGNING	SHEET 161	E

2

LEGEND

- XX — SIGN REMOVAL NUMBER
- XXX — PROPOSED SIGN NUMBER
- ESTR — EXISTING SIGN TO REMAIN
- EXISTING SIGN
- PROPOSED SIGN
- (X) — DENOTES SIGN SIZE
- A — MOUNT TO UTILITY POLE
- B — MOUNT TO SIGNAL POLE
- C — MOUNT TO SIGNAL MAST ARM

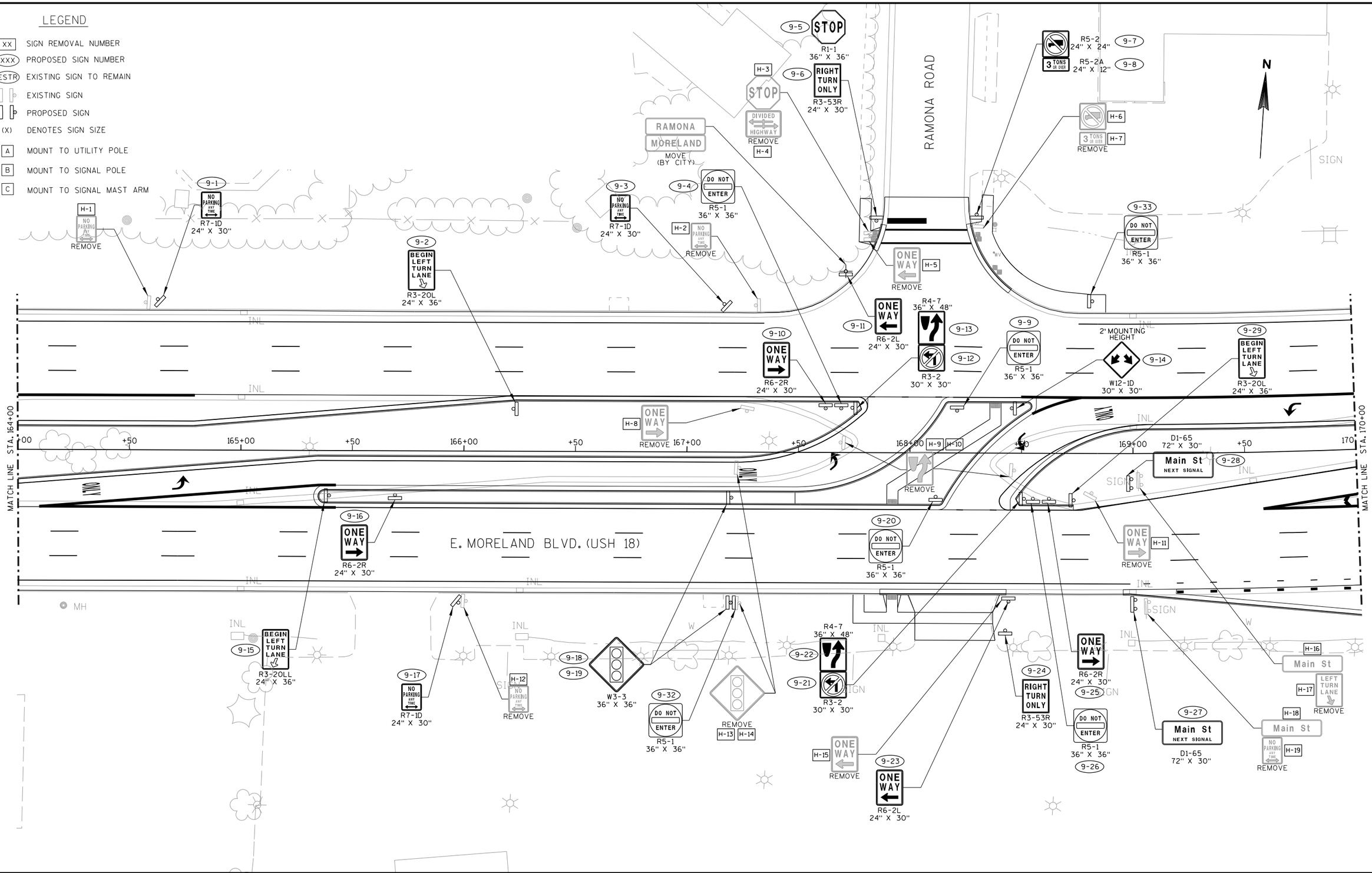


PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	PERMANENT SIGNING	SHEET 162	E

2

LEGEND

- XX — SIGN REMOVAL NUMBER
- XXX — PROPOSED SIGN NUMBER
- ESTR — EXISTING SIGN TO REMAIN
- EXISTING SIGN
- PROPOSED SIGN
- (X) — DENOTES SIGN SIZE
- A — MOUNT TO UTILITY POLE
- B — MOUNT TO SIGNAL POLE
- C — MOUNT TO SIGNAL MAST ARM



PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	PERMANENT SIGNING	SHEET 163	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\023209_ps.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 40.0000 sf / in.

WISDOT/CADDS SHEET 42

2

E. MORELAND BLVD. (USH 18)

MAIN STREET

MATCH LINE STA. 170+00

MATCH LINE STA. 176+00

I-1 WEST SOUTH 18 164 REMOVE

10-1 J4-2 72" X 54" WEST SOUTH 18 164 M3-4 M1-4 M3-3 M1-6

I-2 SPEED LIMIT 45 REMOVE

I-3 NO PARKING ANY TIME REMOVE

10-2 NO PARKING ANY TIME R7-1D 24" X 30"

10-3 BEGIN LEFT TURN LANE R3-20L 24" X 36"

10-4 10-5 SPEED LIMIT 45 R2-1 36" X 48"

10-33 C Main St M1-94H 60" X 24"

10-7 R1-1F 36" X 36"

10-8 R6-3A 30" X 24"

B STOP DIVIDED HIGHWAY

10-34 C 18 Moreland Blvd M1-94H 120" X 24"

I-4 SPEED LIMIT 45 REMOVE

I-5 STOP REMOVE

I-6 REMOVE

10-6 B DO NOT ENTER R5-1 36" X 36"

10-9 YIELD R1-2 36" X 31"

I-10 YIELD REMOVE

I-7 STOP REMOVE

10-11 A ONE WAY R6-2L 24" X 30"

10-12 B DO NOT ENTER R5-1 36" X 36"

10-43 B LEFT TURN YIELD ON FLASHING YELLOW ARROW R10-50 30" X 36"

I-8 I-9 STOP REMOVE

10-13 10-14 10-15 B STOP R1-1F 36" X 36"

I-11 DO NOT ENTER REMOVE

10-10 R4-7 36" X 48"

I-12 WEST SOUTH 18 164 REMOVE

10-16 BEGIN LEFT TURN LANE R3-20LL 24" X 36"

10-17 ONE WAY R6-2R 24" X 30"

WRONG WAY R5-1A 36" X 24" 10-39

10-19 2' MOUNTING HEIGHT W12-1D 24" X 24

10-20 B STOP R1-1F 36" X 36"

10-27 B DO NOT ENTER R5-1 36" X 36"

I-13 LEFT TURN LANE REMOVE

10-18 STOP R1-1F 36" X 36"

I-14 STOP REMOVE

I-15 DO NOT ENTER REMOVE

I-16 ONE WAY REMOVE

10-21 A DO NOT ENTER R5-1 36" X 36"

10-22 R4-7 36" X 48"

10-26 ONE WAY R6-2L 24" X 30"

I-17 REMOVE

I-18 ONE WAY REMOVE

I-20 STOP REMOVE

I-21 STOP REMOVE

I-22 STOP REMOVE

10-40 NO PARKING ANY TIME R7-1D 24" X 30"

REMOVE I-23

10-23 YIELD R1-2 36" X 31"

I-19 REMOVE

10-24 DO NOT ENTER R5-1 36" X 36"

I-24 DO NOT ENTER REMOVE

MAIN MORELAND MOVE (BY CITY)

B STOP R1-1F 36" X 36" 10-25

10-28 B STOP R1-1F 36" X 36"

10-29 DIVIDED HIGHWAY R6-3A 30" X 24"

10-35 Main St M1-94H 60" X 24" C

10-32 J3-4 96" X 57" WEST SOUTH EAST NORTH 18 164 18 164 M3-4 M1-4 M6-1 M3-3 M1-6 M6-1 M3-2 M1-4 M6-2 M3-1 M1-6 M6-2

I-26 WEST SOUTH EAST 18 164 18 REMOVE

10-42 C LEFT TURN YIELD ON FLASHING YELLOW ARROW R10-50 30" X 36"

10-36 18 Moreland Blvd M1-94H 120" X 24"

10-30 A ONLY R3-8 36" X 30"

I-25 REMOVE

10-31 J12-1 24" X 45" 18 A M1-4 M6-4

10-41 W12-1D 24" X 24" 2' MOUNTING HEIGHT

MATCH LINE SEE DETAIL

10-37 A ONLY R3-8 36" X 30"

ESTR SPEED LIMIT 30

MATCH LINE

MAIN STREET

LEGEND

XX	SIGN REMOVAL NUMBER
XXX	PROPOSED SIGN NUMBER
ESTR	EXISTING SIGN TO REMAIN
	EXISTING SIGN
	PROPOSED SIGN
(X)	DENOTES SIGN SIZE
A	MOUNT TO UTILITY POLE
B	MOUNT TO SIGNAL POLE
C	MOUNT TO SIGNAL MAST ARM

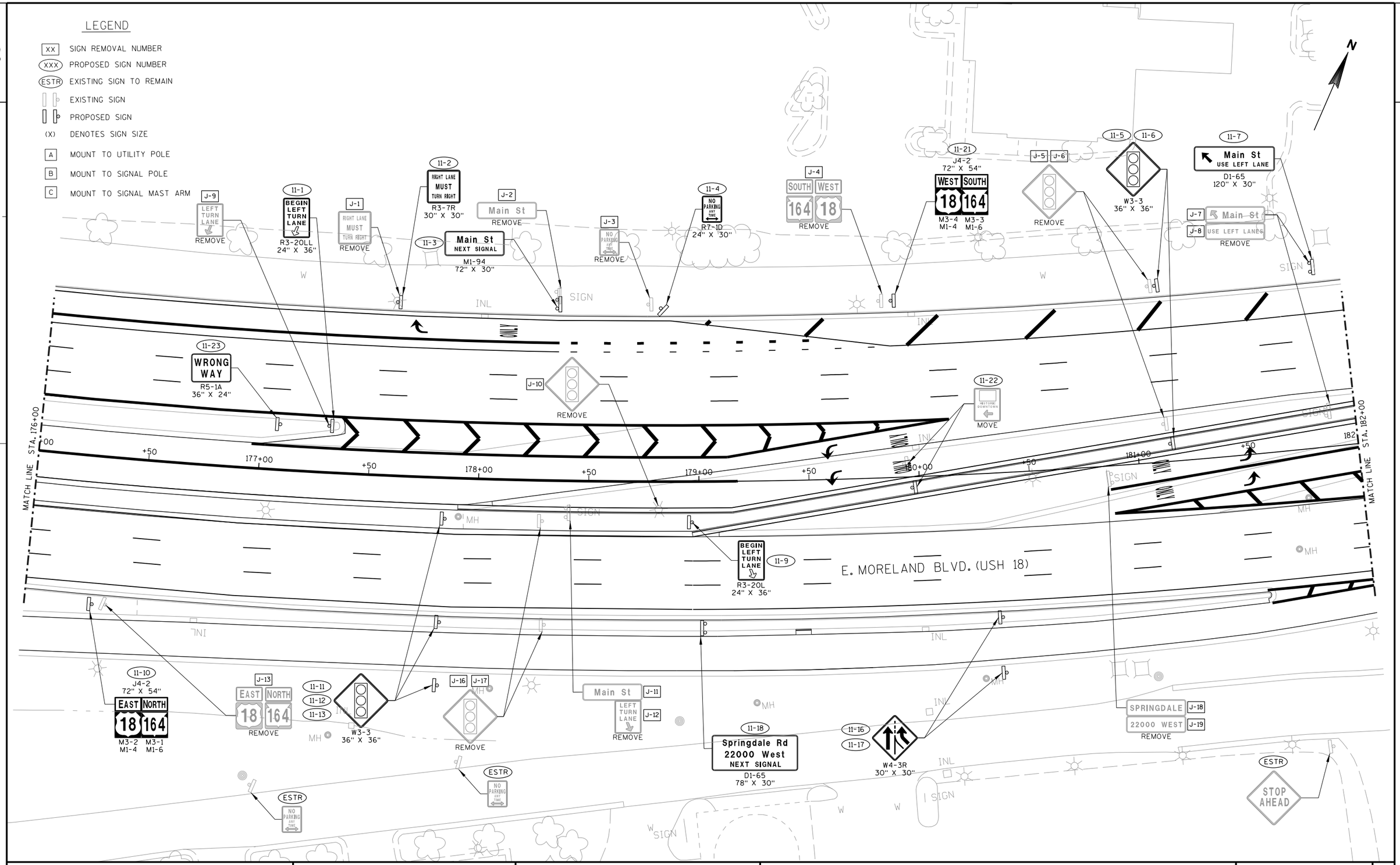
PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	PERMANENT SIGNING	SHEET 164	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\023210_ps.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 40.0000 sf / in.

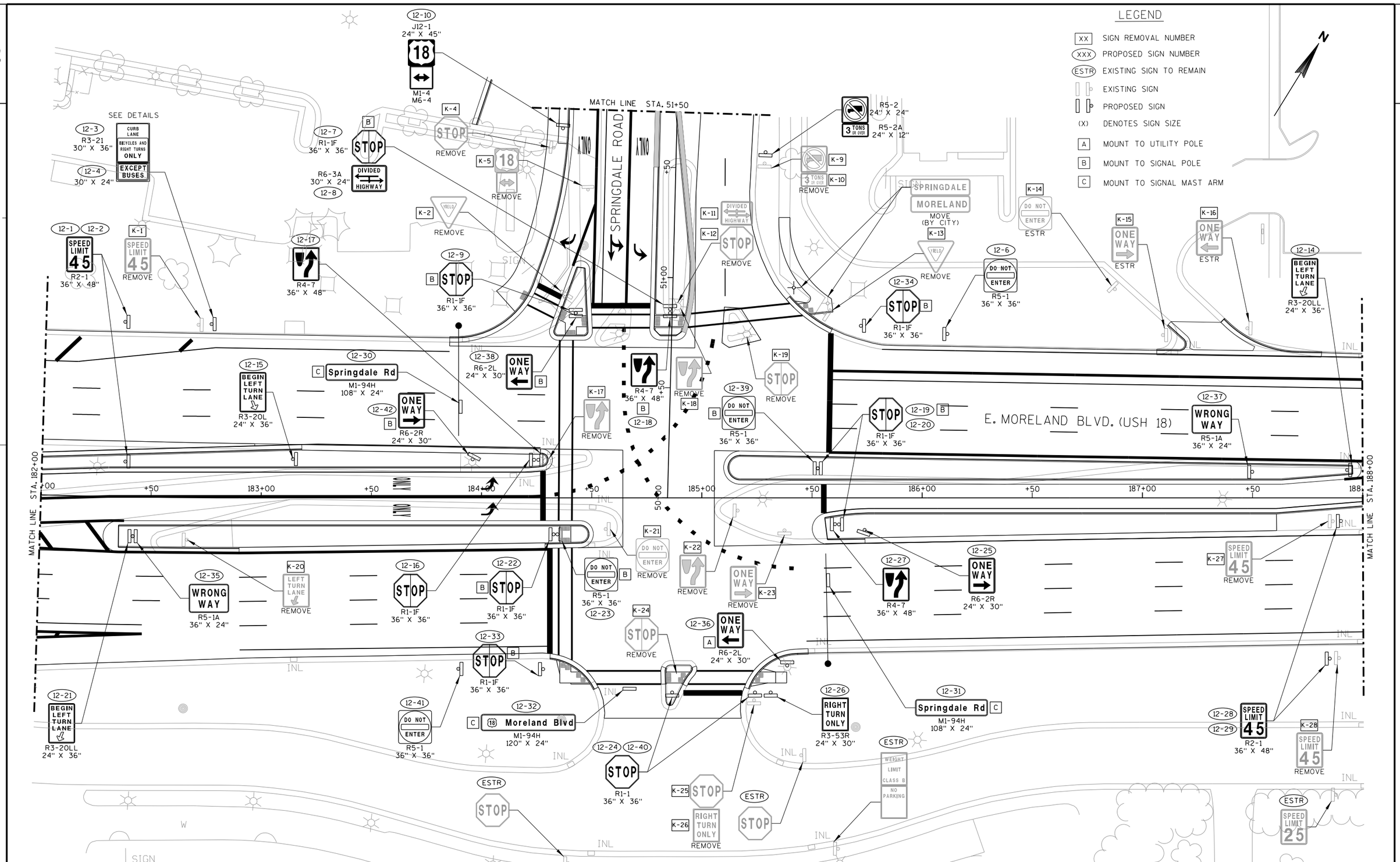
2

LEGEND

- XX — SIGN REMOVAL NUMBER
- XXX — PROPOSED SIGN NUMBER
- ESTR — EXISTING SIGN TO REMAIN
- EXISTING SIGN
- PROPOSED SIGN
- (X) — DENOTES SIGN SIZE
- A — MOUNT TO UTILITY POLE
- B — MOUNT TO SIGNAL POLE
- C — MOUNT TO SIGNAL MAST ARM



PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	PERMANENT SIGNING	SHEET 165	E



PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	PERMANENT SIGNING	SHEET 166	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\023212_ps.dgn PLOT DATE : 7/24/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 40.0000 sf / in.

WISDOT/CADDS SHEET 42

2

LEGEND

- XX — SIGN REMOVAL NUMBER
- XXX — PROPOSED SIGN NUMBER
- ESTR — EXISTING SIGN TO REMAIN
- EXISTING SIGN
- PROPOSED SIGN
- (X) — DENOTES SIGN SIZE
- A — MOUNT TO UTILITY POLE
- B — MOUNT TO SIGNAL POLE
- C — MOUNT TO SIGNAL MAST ARM

N

NO PARKING THIS SIGN
K-3
REMOVE

K-6 K-7
DO NOT BLOCK INTERSECTION
REMOVE

MATCH LINE STA. 51+50

52+00
+50
53+00
+50
54+00
+50
55+00
+50
56+00
+50

12-43
ONLY ONLY
R3-8P
54" X 30"

SPEED LIMIT 30
12-11
R2-1
24" X 36"

K-8
SPEED LIMIT 30
REMOVE

12-44
W4-2R
36" X 36"

SPRINGDALE ROAD

SIGN

R/W

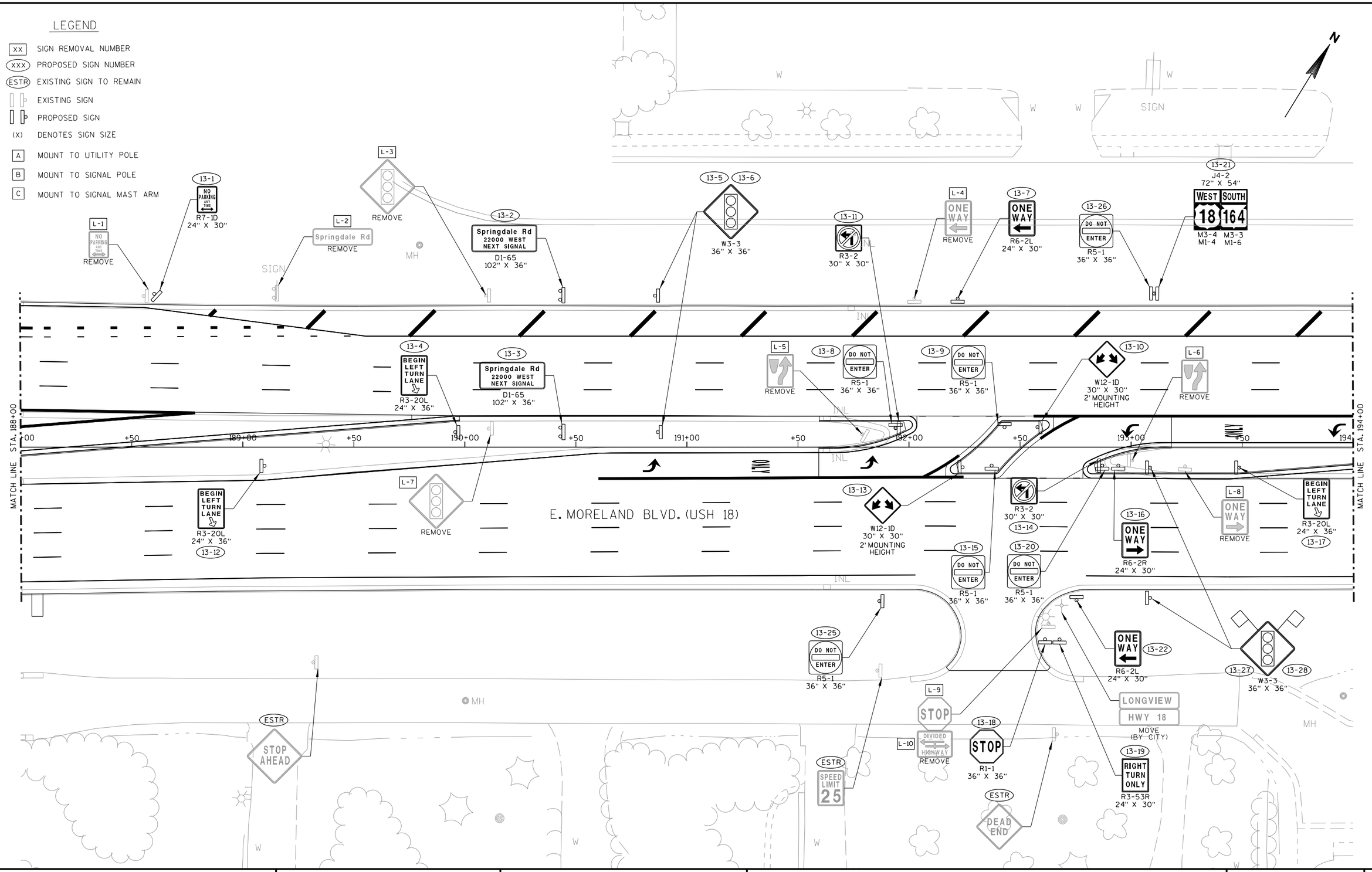
PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	PERMANENT SIGNING	SHEET 167	E

2

2

LEGEND

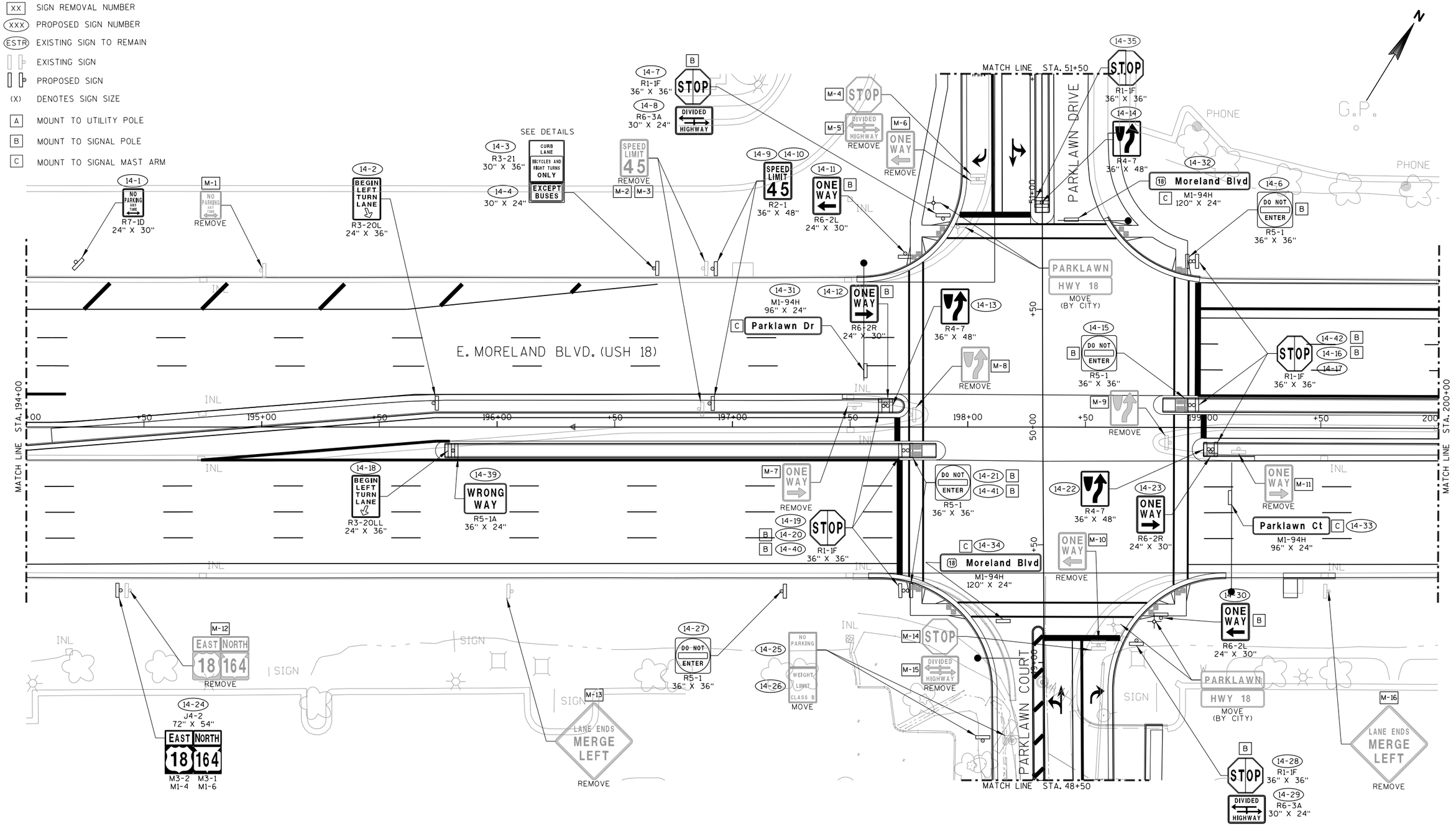
- XX — SIGN REMOVAL NUMBER
- XXX — PROPOSED SIGN NUMBER
- ESTR — EXISTING SIGN TO REMAIN
- EXISTING SIGN
- PROPOSED SIGN
- (X) — DENOTES SIGN SIZE
- A — MOUNT TO UTILITY POLE
- B — MOUNT TO SIGNAL POLE
- C — MOUNT TO SIGNAL MAST ARM



PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	PERMANENT SIGNING	SHEET 168	E

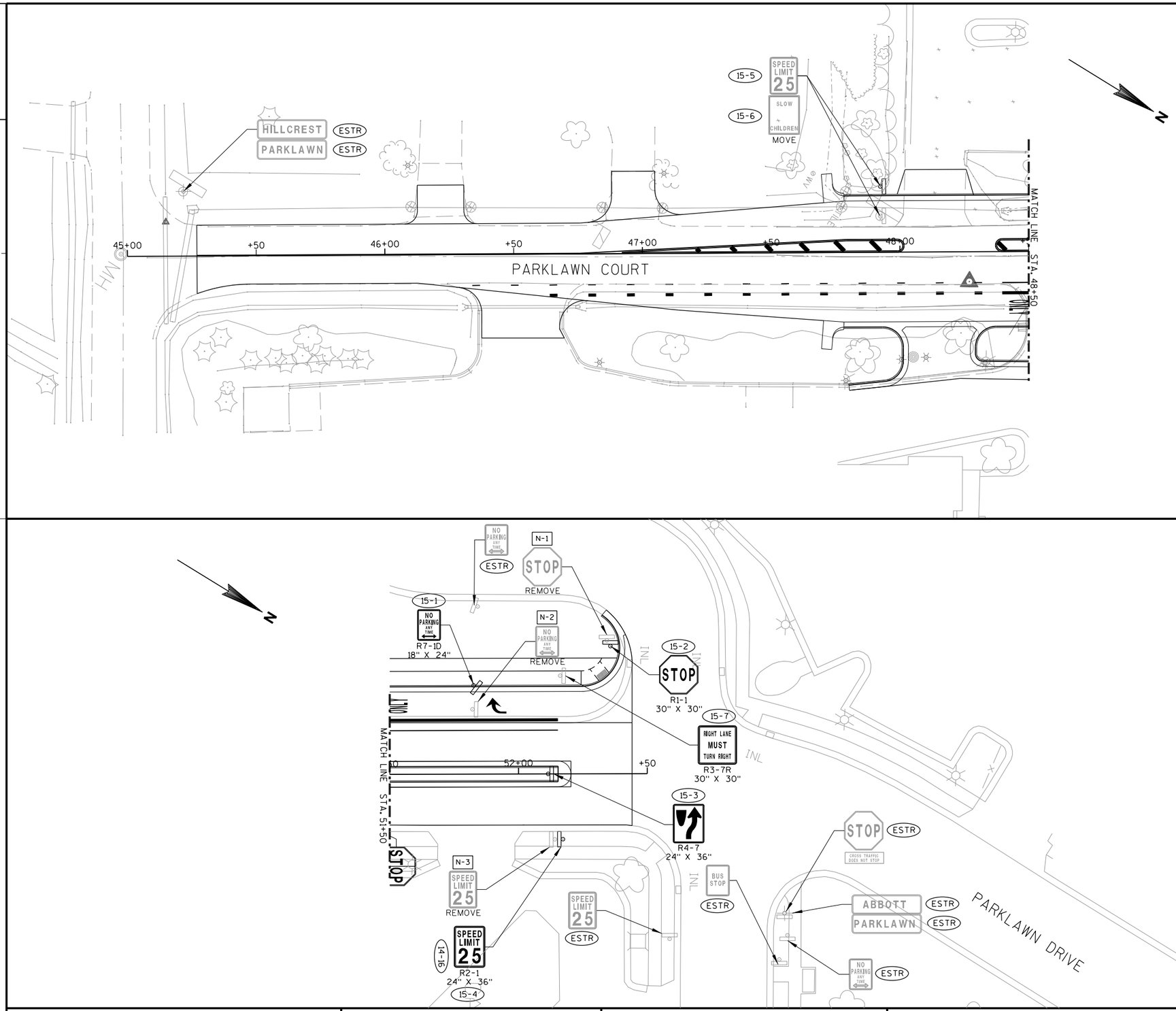
LEGEND

- XX — SIGN REMOVAL NUMBER
- XXX — PROPOSED SIGN NUMBER
- ESTR — EXISTING SIGN TO REMAIN
- EXISTING SIGN
- PROPOSED SIGN
- (X) — DENOTES SIGN SIZE
- A — MOUNT TO UTILITY POLE
- B — MOUNT TO SIGNAL POLE
- C — MOUNT TO SIGNAL MAST ARM



PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	PERMANENT SIGNING	SHEET 169 E

2



LEGEND

- XX — SIGN REMOVAL NUMBER
- XXX — PROPOSED SIGN NUMBER
- ESTR — EXISTING SIGN TO REMAIN
- EXISTING SIGN
- PROPOSED SIGN
- (X) — DENOTES SIGN SIZE
- A — MOUNT TO UTILITY POLE
- B — MOUNT TO SIGNAL POLE
- C — MOUNT TO SIGNAL MAST ARM

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	PERMANENT SIGNING	SHEET 170	E

2

LEGEND

- XX — SIGN REMOVAL NUMBER
- XXX — PROPOSED SIGN NUMBER
- ESTR — EXISTING SIGN TO REMAIN
- EXISTING SIGN
- PROPOSED SIGN
- (X) — DENOTES SIGN SIZE
- A — MOUNT TO UTILITY POLE
- B — MOUNT TO SIGNAL POLE
- C — MOUNT TO SIGNAL MAST ARM

16-2 DO NOT ENTER R5-1 36" X 36"

16-3 ONE WAY R6-2L 24" X 30"

0-1 ONE WAY REMOVE

16-4 NO PARKING ANY TIME R7-1D 24" X 30"

16-5 BEGIN LEFT TURN LANE R3-20L 24" X 36"

16-17 HISTORIC DOWNTOWN

16-18 WAUKESHA MEMORIAL HOSPITAL MOVE

16-21 / 16-22 W3-3 36" X 36"

0-2 Kossow Rd 21300 West

0-3 LEFT TURN LANE REMOVE

ESTR Waukesha POPULATION 64,825

0-6 SPEED LIMIT 45 REMOVE

16-7 NO PARKING ANY TIME R7-1D 24" X 30"

0-5 NO PARKING ANY TIME REMOVE

16-19 WRONG WAY R5-1A 36" X 24"

16-1 BEGIN LEFT TURN LANE R3-20LL 24" X 36"

E. MORELAND BLVD. (USH 18)

MATCH LINE STA. 200+00

+00 +50 201+00 +50 202+00 +50 203+00 +50 204+00 +50 205+00 +50 MH 206

MATCH LINE STA. 206+00

16-8 ONE WAY R6-2R 24" X 30"

0-7 / 0-8 REMOVE

16-9 ONE WAY R6-2R 24" X 30"

OVERHEAD SIGN SUPPORT S-67-951

16-10 / 16-11 W3-3 36" X 36"

16-20 EAST INTERSTATE 94 66" X 36"

MOUNT TO OVERHEAD SIGN SUPPORT SEE DETAIL

16-12 State Patrol Hdqrs M1-94H 108" X 36"

16-13 BEGIN LEFT TURN LANE R3-20L 24" X 36"

16-14 / 16-15 Kossow Rd 21300 West NEXT SIGNAL D1-65 (MOD.) 78" X 36"

0-9 Kossow Rd 21300 West

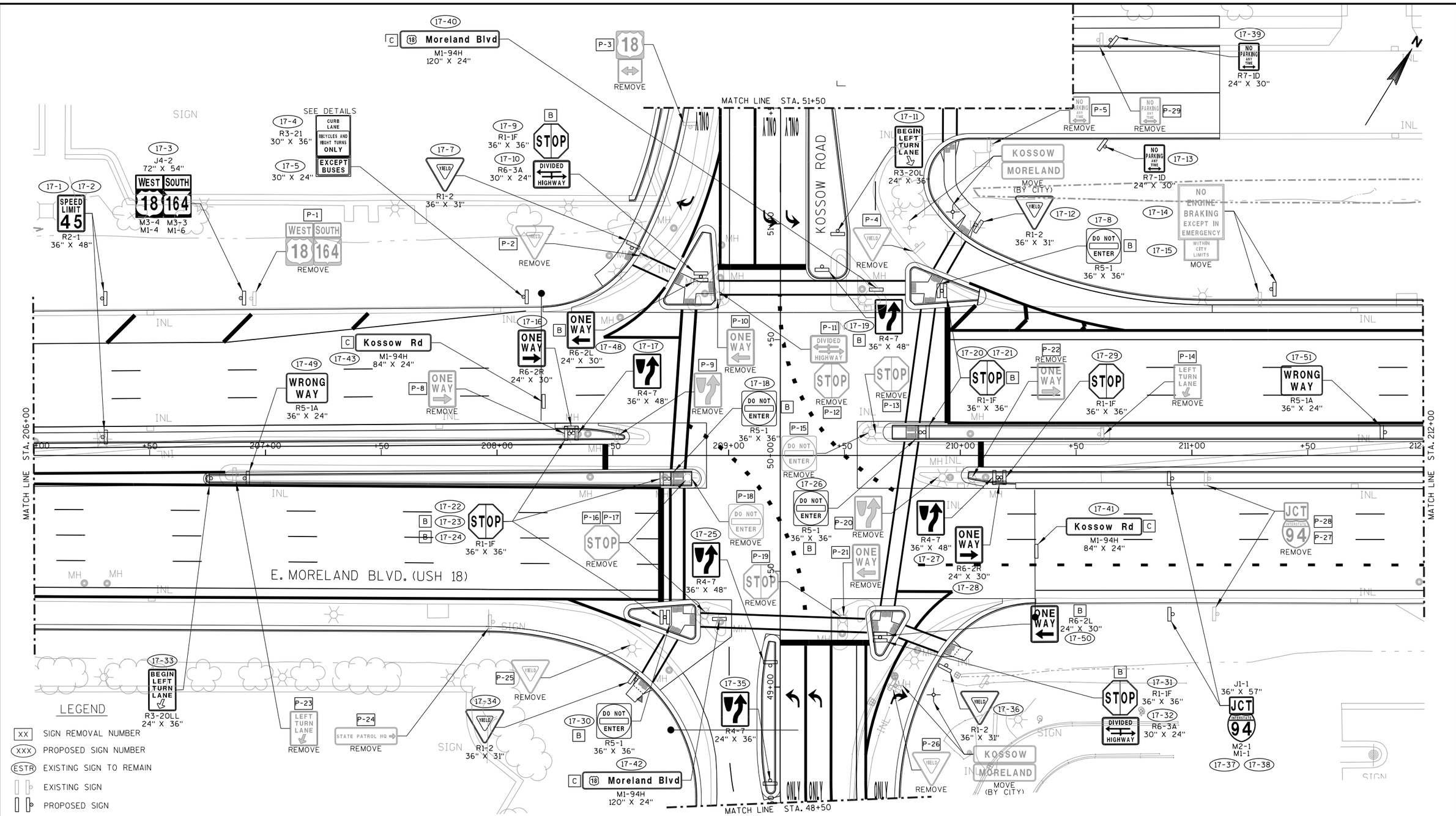
0-10 NO PARKING ANY TIME SIGN REMOVE

16-16 NO PARKING ANY TIME R7-1D 24" X 30"

SIGN, INL, MH, W

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	PERMANENT SIGNING	SHEET 171	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\023216_ps.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 40.0000 sf / in.



PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	PERMANENT SIGNING	SHEET 172	E

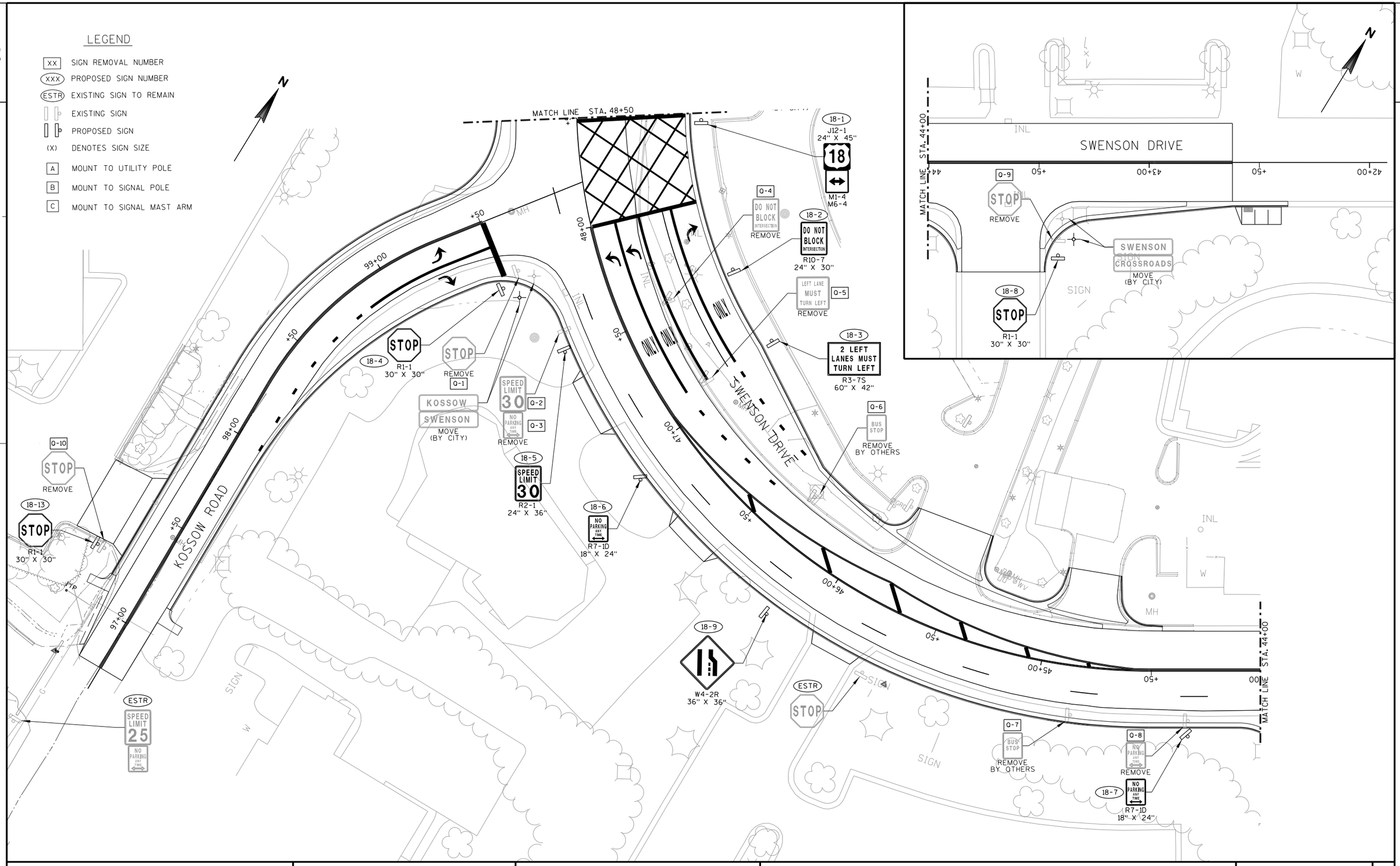
FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\023217_ps.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 40.0000 sf / in.

WISDOT/CADDS SHEET 42

2

LEGEND

- XX — SIGN REMOVAL NUMBER
- XXX — PROPOSED SIGN NUMBER
- ESTR — EXISTING SIGN TO REMAIN
- EXISTING SIGN
- PROPOSED SIGN
- (X) — DENOTES SIGN SIZE
- A — MOUNT TO UTILITY POLE
- B — MOUNT TO SIGNAL POLE
- C — MOUNT TO SIGNAL MAST ARM



PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	PERMANENT SIGNING	SHEET 173	E

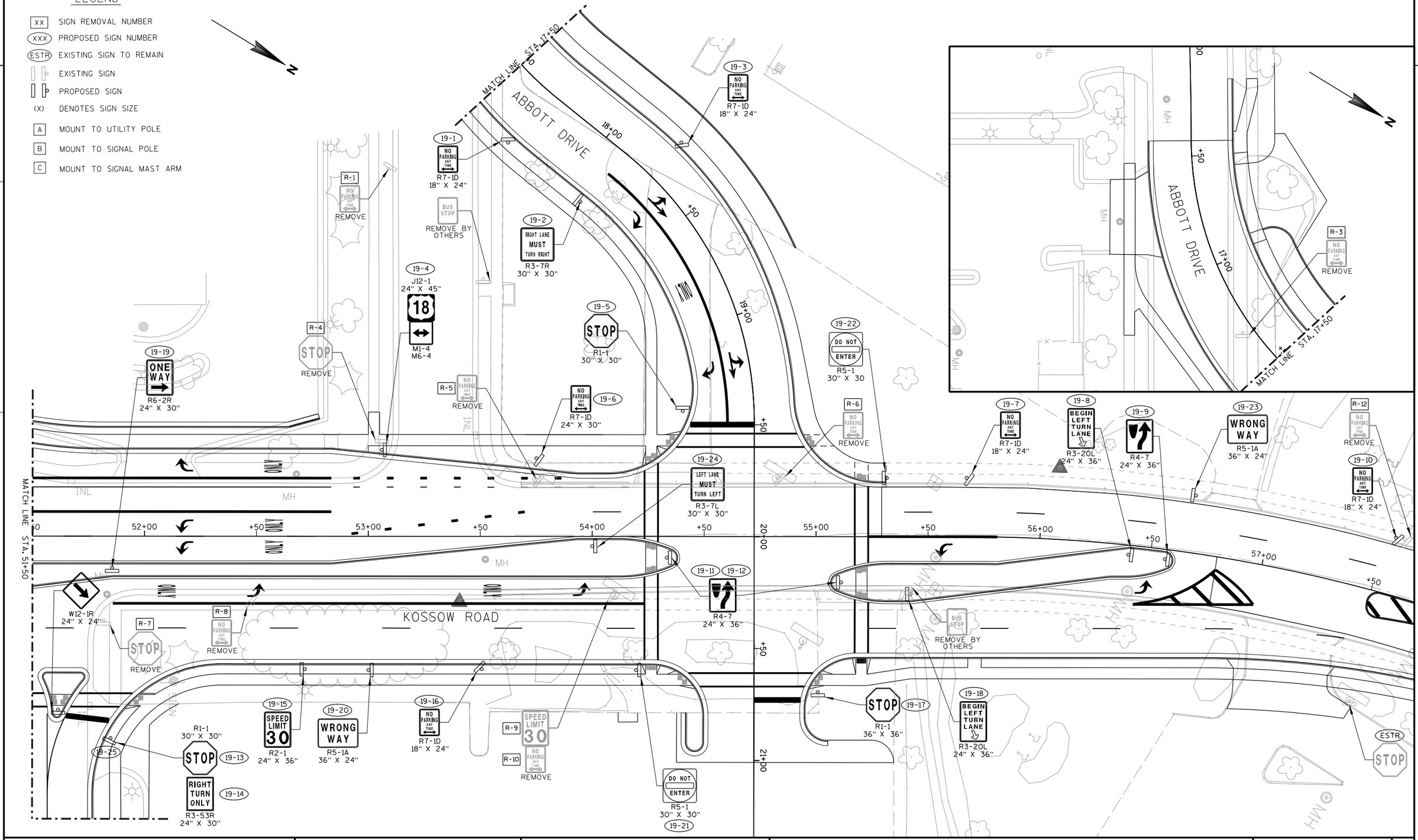
FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\023218_ps.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 40.0000 sf / in.

WISDOT/CADDS SHEET 42

2

LEGEND

- XX — SIGN REMOVAL NUMBER
- XXX — PROPOSED SIGN NUMBER
- ESTR — EXISTING SIGN TO REMAIN
- EXISTING SIGN
- PROPOSED SIGN
- (X) — DENOTES SIGN SIZE
- A — MOUNT TO UTILITY POLE
- B — MOUNT TO SIGNAL POLE
- C — MOUNT TO SIGNAL MAST ARM



PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	PERMANENT SIGNING	SHEET 174	E

2

LEGEND

- XX — SIGN REMOVAL NUMBER
- XXX — PROPOSED SIGN NUMBER
- ESTR — EXISTING SIGN TO REMAIN
- EXISTING SIGN
- PROPOSED SIGN
- (X) — DENOTES SIGN SIZE
- A — MOUNT TO UTILITY POLE
- B — MOUNT TO SIGNAL POLE
- C — MOUNT TO SIGNAL MAST ARM

MORELAND COURT

ESTR NO PARKING ANY TIME

ESTR STOP

SIGN

MH

ESTR NO PARKING ANY TIME

ESTR

20-2 20-3
Kossow Rd
21300 WEST
NEXT SIGNAL
D1-65
78" X 36"

MH

S-3 S-4
REMOVE

INL

20-5 20-6
W3-3
36" X 36"

S-5
WEST SOUTH
18 164
REMOVE

20-7
J4-2
72" X 54"
WEST SOUTH
18 164
M3-4 M3-3
M1-4 M1-6

SEE DETAILS
CURB LANE
BICYCLES AND RIGHT TURNS ONLY
EXCEPT BUSES
20-8
R3-21
30" X 36"
20-9
30" X 24"

S-1
Kossow Rd
21300 West
REMOVE

20-1
BEGIN LEFT TURN LANE
R3-20LL
24" X 36"

SIGN

ESTR
LODGING

SIGN

20-4
NO PARKING ANY TIME
R7-1D
24" X 30"

INL

S-2
NO PARKING ANY TIME
REMOVE

INL

INL

MATCH LINE STA. 212+00

212+00 +50 213+00 +50 214+00 +50 215+00 +50 216+00 +50 217+00 +50 218

MATCH LINE STA. 218+00

SIGN SIGN SIGN

INL

E. MORELAND BLVD. (USH 18)

INL

MH

INL

MH MH

S-6
NO PARKING ANY TIME
REMOVE

20-11
NO PARKING ANY TIME
R7-1D
24" X 30"
A

W

Kossow Rd
21300 West

W

S-7
LEFT TURN LANE
S-8
REMOVE

S-9
STATE PATROL HQ
REMOVE

20-12
BEGIN LEFT TURN LANE
R3-20L
24" X 36"

20-13
State Patrol Hdqrs
M1-94H
108" X 36"

SIGN

S-10 S-11
EAST WEST EAST
18 94 94
REMOVE

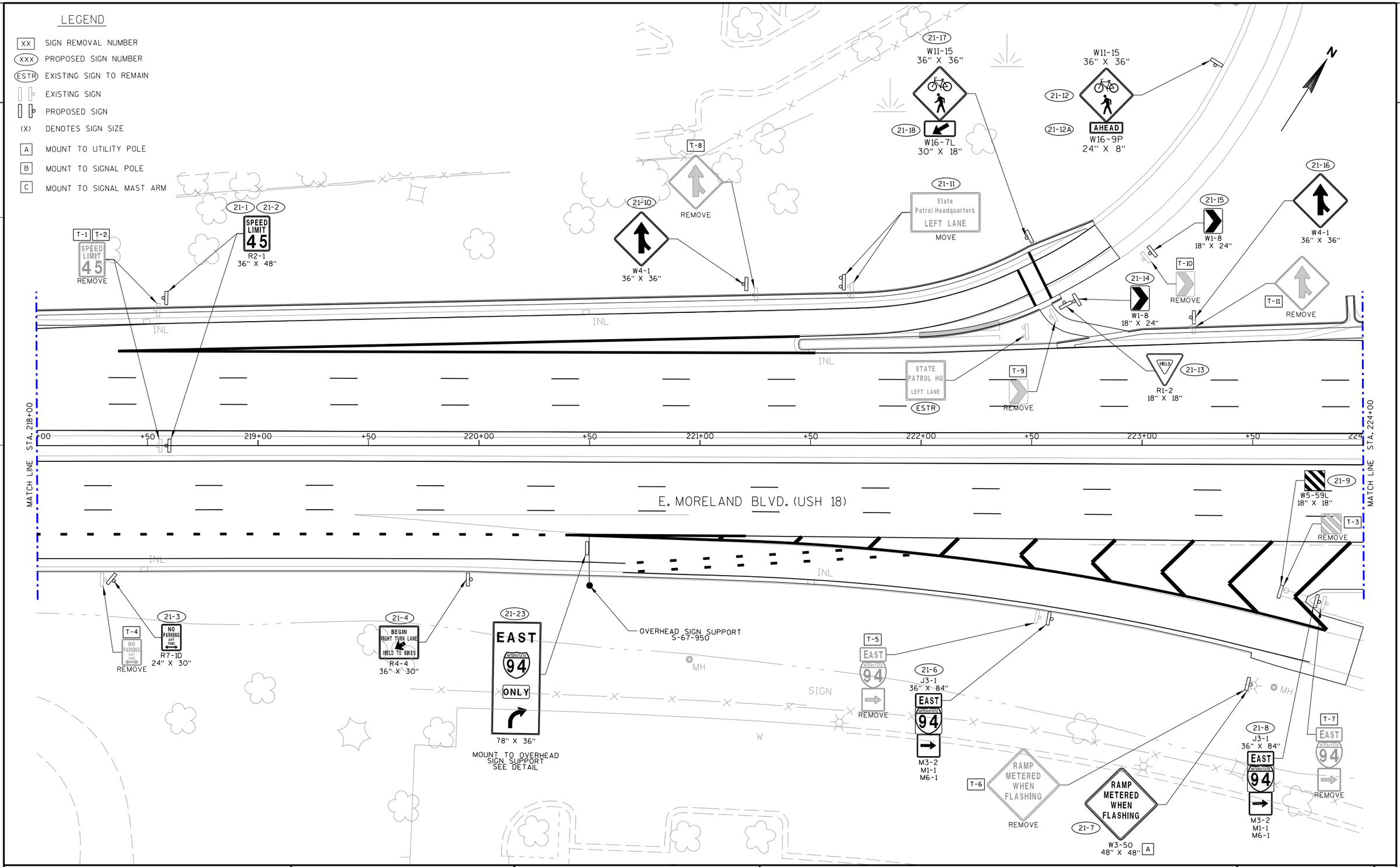
ESTR
WISCONSIN STATE PATROL HEADQUAERS SIGN

20-14 20-15
J3-3
108" X 84"
EAST WEST EAST
18 94 94
M3-2 M3-4 M3-2
M1-4 M1-1 M1-1
M6-1 M6-1 M5-1R

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	PERMANENT SIGNING	SHEET 175	E

LEGEND

- XX — SIGN REMOVAL NUMBER
- XXX — PROPOSED SIGN NUMBER
- ESTR — EXISTING SIGN TO REMAIN
- EXISTING SIGN
- PROPOSED SIGN
- (X) — DENOTES SIGN SIZE
- A — MOUNT TO UTILITY POLE
- B — MOUNT TO SIGNAL POLE
- C — MOUNT TO SIGNAL MAST ARM



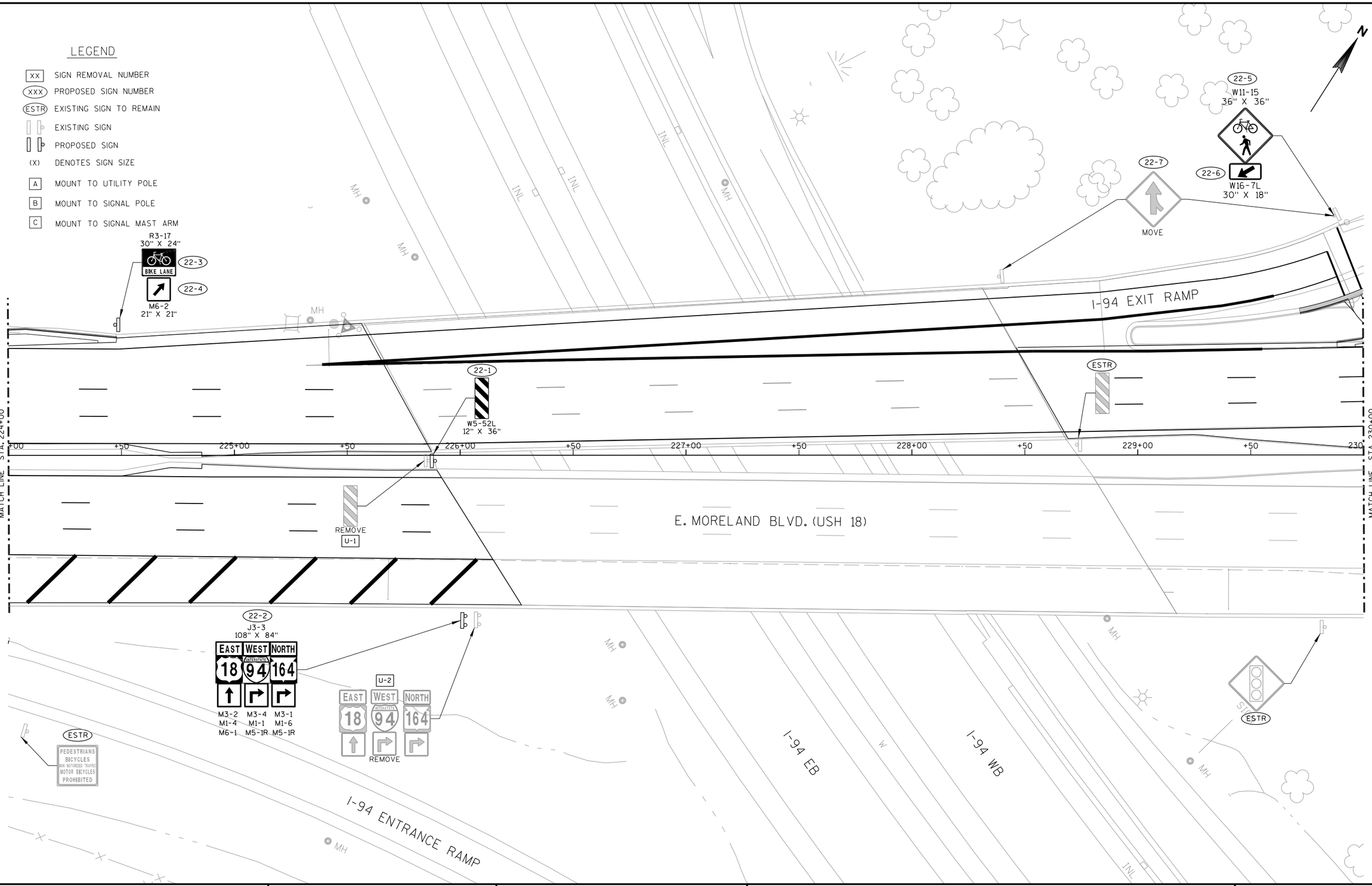
PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	PERMANENT SIGNING	SHEET 176	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\023221_ps.dgn PLOT DATE : 7/15/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 40.0000 sf / in.

2

LEGEND

- XX — SIGN REMOVAL NUMBER
- XXX — PROPOSED SIGN NUMBER
- ESTR — EXISTING SIGN TO REMAIN
- EXISTING SIGN
- PROPOSED SIGN
- (X) — DENOTES SIGN SIZE
- A — MOUNT TO UTILITY POLE
- B — MOUNT TO SIGNAL POLE
- C — MOUNT TO SIGNAL MAST ARM



PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	PERMANENT SIGNING	SHEET 177	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\023222_ps.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 40.0000 sf / in.

2

W11-15
36" X 36"
23-5
23-6
AHEAD
W16-9P
24" X 8"

LEGEND

XX	SIGN REMOVAL NUMBER
XXX	PROPOSED SIGN NUMBER
ESTR	EXISTING SIGN TO REMAIN
	EXISTING SIGN
	PROPOSED SIGN
(X)	DENOTES SIGN SIZE
A	MOUNT TO UTILITY POLE
B	MOUNT TO SIGNAL POLE
C	MOUNT TO SIGNAL MAST ARM

23-1
YIELD
R1-2
18" X 18"
23-2
MOVE
R3-17
30" X 24"
BIKE LANE
23-3
23-4
M6-2
21" X 21"
ESTR WEST 18 SOUTH 164
ESTR WEST 18
ESTR YIELD
ESTR EAST 18 WEST INTERSTATE 94
ESTR STOP
ESTR DIVIDED HIGHWAY
ESTR
ESTR JCT COUNTY Y Barker Rd 20400 WEST
ESTR DO NOT ENTER
ESTR STOP
ESTR WEST 18
ESTR
ESTR ALTERNATE EAST INTERSTATE 94
ESTR STOP
ESTR
ESTR Madison RAMP 20 M.P.H.
ESTR WEST NORTH INTERSTATE 94 164
ESTR WEST WEST INTERSTATE 94 164
ESTR
ESTR
ESTR RAMP 20 M.P.H.
ESTR EAST 18 JCT COUNTY Y Barker Rd 20400 WEST
ESTR
ESTR Bluemound Rd

W. BLUEMOUND ROAD (CTH JJ)
E. MORELAND BLVD. (USH 18)
I-94 ENTRANCE RAMP
INL
MH
SIGN
N

MATCH LINE STA. 230+00
+00 +50 231+00 +50 232+00 +50 233+00 +50 234+00 +50 235+00 +50 236
MATCH LINE STA. 236+00

2

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	PERMANENT SIGNING	SHEET 178	E

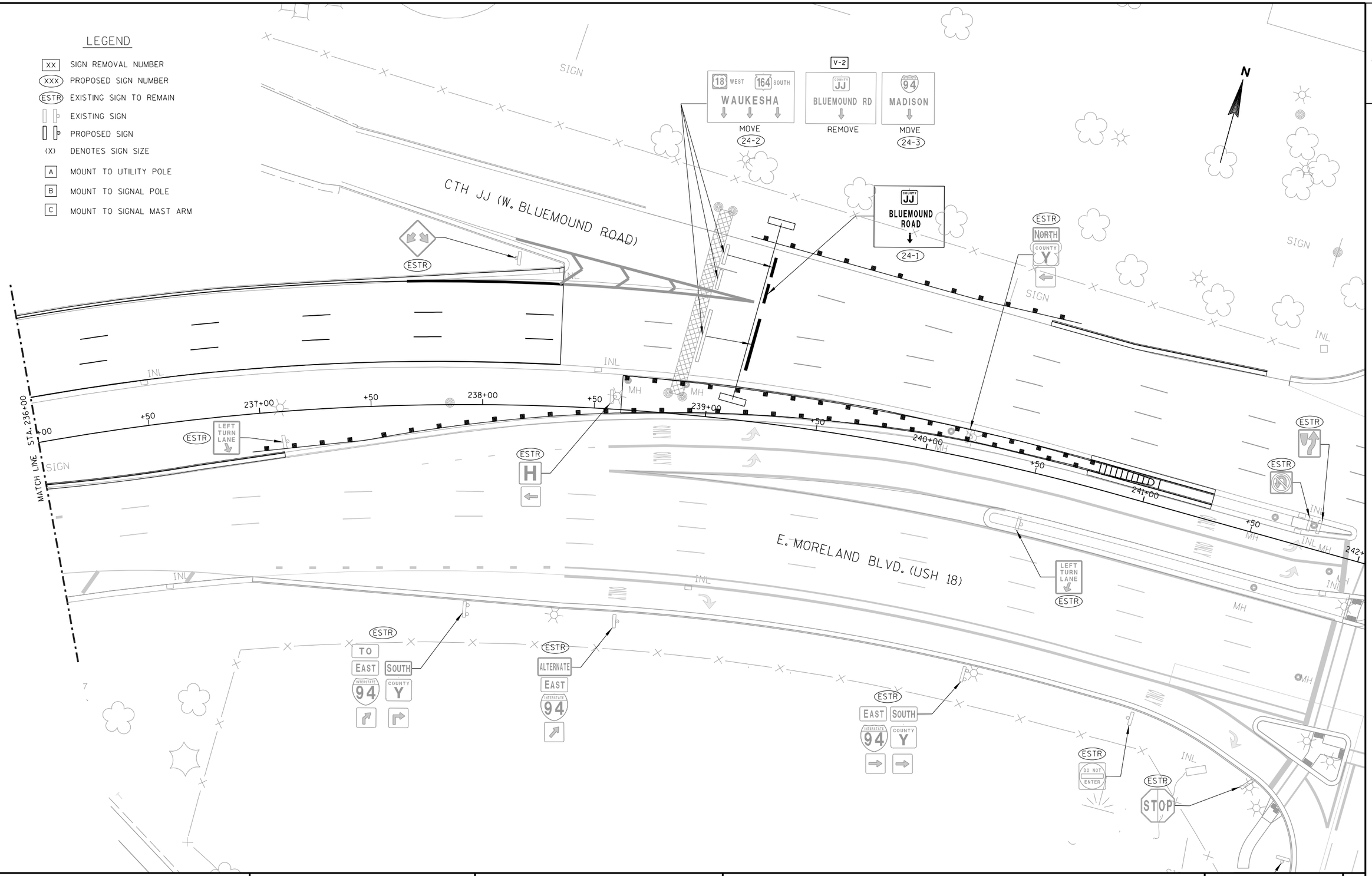
FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\023223_ps.dgn PLOT DATE : 7/15/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 40.0000 sf / in.

WISDOT/CADDS SHEET 42

2

LEGEND

- XX — SIGN REMOVAL NUMBER
- XXX — PROPOSED SIGN NUMBER
- ESTR — EXISTING SIGN TO REMAIN
- EXISTING SIGN
- PROPOSED SIGN
- (X) — DENOTES SIGN SIZE
- A — MOUNT TO UTILITY POLE
- B — MOUNT TO SIGNAL POLE
- C — MOUNT TO SIGNAL MAST ARM

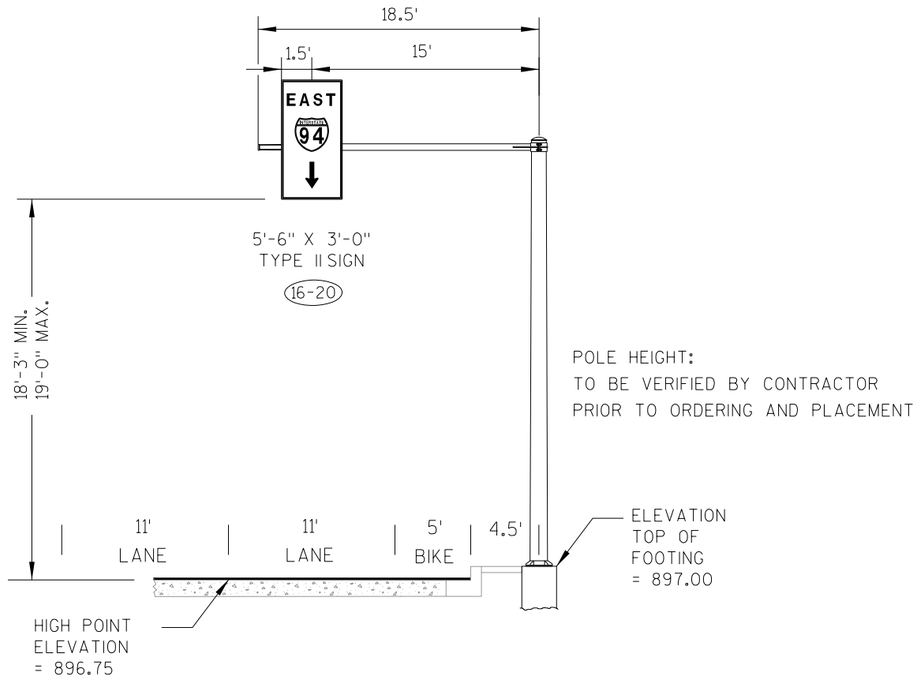


PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	PERMANENT SIGNING	SHEET 179	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\023224_ps.dgn
PLOT DATE : 4/27/2015
PLOT BY : GRAEF
PLOT NAME :
PLOT SCALE : 40.0000 sf / in.
WISDOT/CADDS SHEET 42

LEGEND

(XXX) DENOTES SIGN NUMBER



OVERHEAD SIGN SUPPORTS DETAIL

S-67-951
E MORELAND BLVD (USH 18)
STA. 202+25 EB

CONTRACTOR SHALL:

1.) SUBMIT SHOP DRAWINGS OF OVERHEAD SIGN SUPPORT TO WISDOT TRAFFIC OPERATIONS, TOM HEYDEL. FOOTING IS INCIDENTAL TO OVERHEAD SIGN SUPPORT.

2.) PROVIDE DESIGN CALCULATIONS.

3.) SHOW SIGNS ON SHOP DRAWINGS.

4.) I.D. PLAQUE INCIDENTAL TO OVERHEAD SIGN SUPPORT

5.) 6 ANCHOR RODS MINIMUM PER STANDARD DETAIL DRAWING ARE REQUIRED

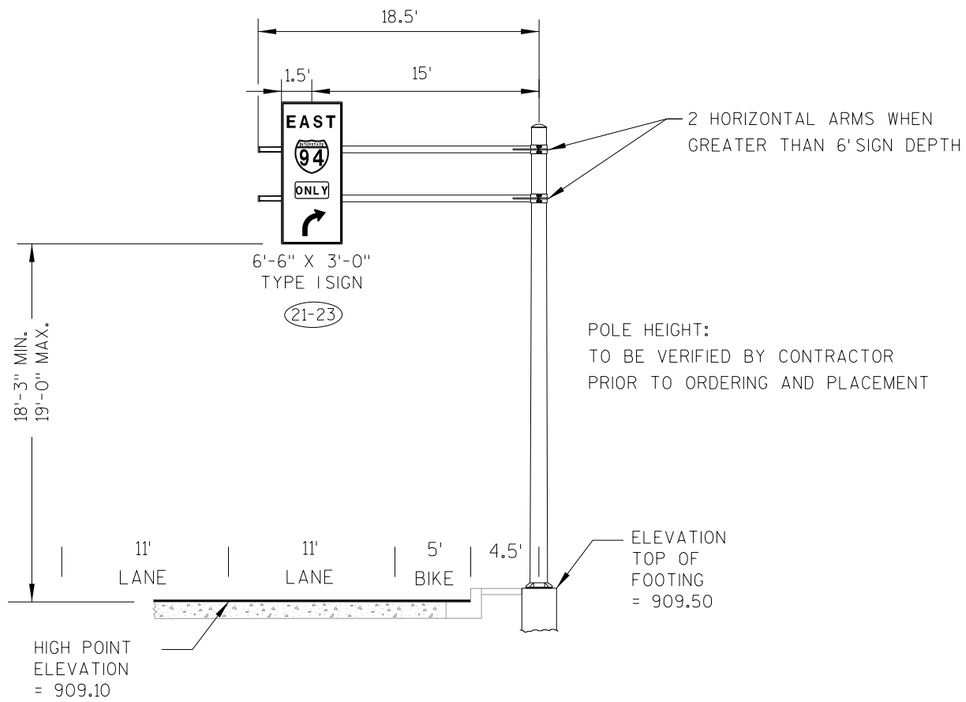
NOTE: CONTRACTOR TO USE STANDARD DETAIL DRAWING 36" DIAMETER CANTILEVER OVERHEAD SIGN SUPPORT BASE.

MOUNTING BRACKETS FOR SIGNS TO BE APPROVED FROM PRODUCT LIST FOR TYPE II SIGNS

IBEAMS - W5X3.7 IBEAMS FOR MOUNTING SIGNS ARE INCIDENTAL TO TYPE I SIGNS.

LEGEND

(XXX) DENOTES SIGN NUMBER



OVERHEAD SIGN SUPPORT DETAIL

S-67-950
E MORELAND BLVD (USH 18)
STA. 220+50 EB

CONTRACTOR SHALL:

1.) SUBMIT SHOP DRAWINGS OF OVERHEAD SIGN SUPPORT
TO WISDOT TRAFFIC OPERATIONS, TOM HEYDEL.
FOOTING IS INCIDENTAL TO OVERHEAD SIGN SUPPORT.

2.) PROVIDE DESIGN CALCULATIONS.

3.) SHOW SIGNS ON SHOP DRAWINGS.

4.) I.D. PLAQUE INCIDENTAL TO OVERHEAD SIGN SUPPORT

5.) 6 ANCHOR RODS MINIMUM PER STANDARD DETAIL DRAWING ARE REQUIRED

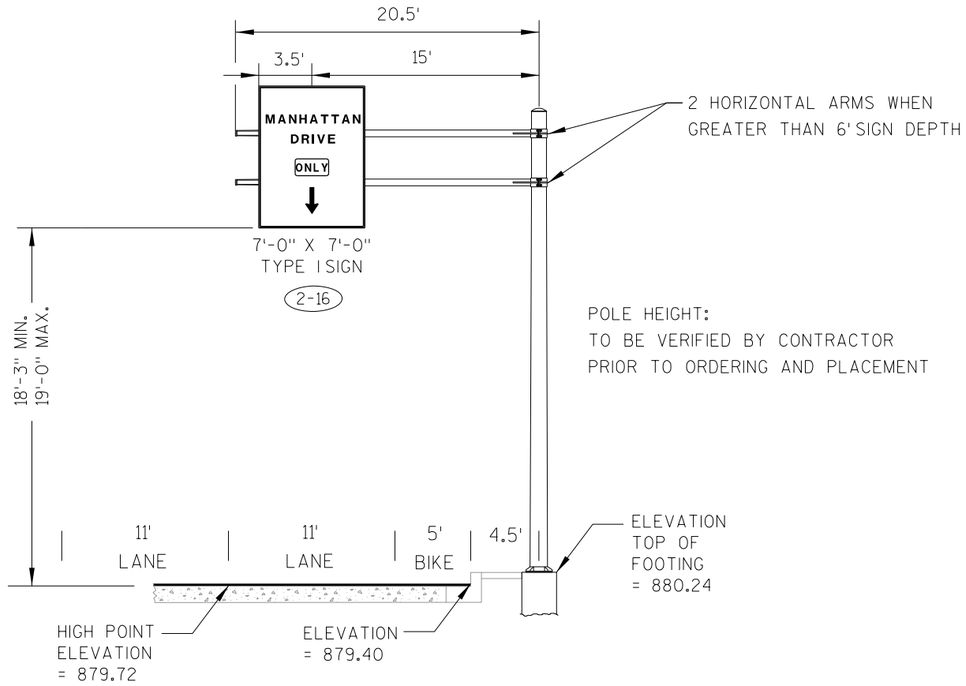
NOTE: CONTRACTOR TO USE STANDARD DETAIL DRAWING
36" DIAMETER CANTILEVER OVERHEAD SIGN SUPPORT BASE.

MOUNTING BRACKETS FOR SIGNS TO BE APPROVED
FROM PRODUCT LIST FOR TYPE II SIGNS

IBEAMS - W5X3.7 IBEAMS FOR MOUNTING SIGNS
ARE INCIDENTAL TO TYPE I SIGNS.

LEGEND

(XXX) DENOTES SIGN NUMBER



OVERHEAD SIGN SUPPORT DETAIL

S-67-970
E MORELAND BLVD (USH 18)
STA. 133+50 WB

CONTRACTOR SHALL:

1.) SUBMIT SHOP DRAWINGS OF OVERHEAD SIGN SUPPORT TO WISDOT TRAFFIC OPERATIONS, TOM HEYDEL. FOOTING IS INCIDENTAL TO OVERHEAD SIGN SUPPORT.

2.) PROVIDE DESIGN CALCULATIONS.

3.) SHOW SIGNS ON SHOP DRAWINGS.

4.) I.D. PLAQUE INCIDENTAL TO OVERHEAD SIGN SUPPORT

5.) 6 ANCHOR RODS MINIMUM PER STANDARD DETAIL DRAWING ARE REQUIRED

NOTE: CONTRACTOR TO USE STANDARD DETAIL DRAWING 36" DIAMETER CANTILEVER OVERHEAD SIGN SUPPORT BASE.

MOUNTING BRACKETS FOR SIGNS TO BE APPROVED FROM PRODUCT LIST FOR TYPE II SIGNS

IBEAMS - W5X3.7 IBEAMS FOR MOUNTING SIGNS ARE INCIDENTAL TO TYPE I SIGNS.

2

2

N

MANHATTAN DR.

JENNIFER LANE

USH 18 (E. MORELAND BLVD.)

52+00

50+00

48+00

46+00

125+00

130+00

135+00

STA 124+54, LT (1)

STA. 124+48 (3)
2.5' LT

STA 121+66, RT (4)

STA 123+72, RT (4)

STA. 124+42 (3)
73.5' RT

STA 124+75, RT (2)

(1) STA 125+71, RT

(2) STA 127+65, RT

(2) STA 133+49, LT

STA 135+40, RT (4)

MATCH LINE - STA 136+00

GENERAL NOTES

1. ITEMS SHOWN ON THE REMOVAL PLAN AS SCREENED LINES ARE EXISTING TO REMAIN. ITEMS SHOWN AS SCREENED LINES WITH "X" ON TOP OF LINE ARE TO BE DEMOLISHED.

2. WHERE UNDERGROUND LIGHTING FEEDER IS SHOWN TO BE DEMOLISHED CONTRACTOR SHALL REMOVE CONDUCTORS AND CUT OFF CONDUIT 18" BELOW GRADE AND ABANDON CONDUIT BELOW GRADE.

LEGEND

- EXISTING UNDERGROUND LIGHTING FEEDER CONDUIT AND CONDUCTORS
- x x x ABANDON CONDUIT
- DISTRIBUTION CENTER TO BE REMOVED
- PULL BOX TO BE REMOVED
- DOT LIGHT POLE TO BE REMOVED
- LOCAL MUNICIPAL LIGHT POLE TO BE REMOVED

KEYED NOTES

(1) REMOVE AND DISPOSE OF MUNICIPAL LIGHT POLE, ARM, LUMINAIRE & BASE

(2) EXISTING LIGHT POLE TO REMAIN - FOR INFORMATION ONLY

(3) REMOVE AND DISPOSE OF PULL BOX

(4) RELOCATE LIGHT POLE, ARM & LUMINAIRE TO LOCATION SHOWN ON NEW LIGHTING PLANS. DEMOLISH AND DISPOSE OF CONCRETE LIGHT POLE BASE

(5) REMOVE CONDUCTORS BACK TO NEAREST EXISTING LIGHT POLE

(6) EXISTING PULL BOX TO REMAIN - FOR INFORMATION ONLY

(7) REMOVE AND DISPOSED OF DOT CONTROL CABINET AND CONCRETE BASE

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	LIGHTING REMOVAL PLAN	SHEET 183	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\023501_lp-rem.dgn
PLOT DATE : 4/27/2015
PLOT BY : GRAEF
PLOT NAME :
PLOT SCALE : 100.0000 sf / in.
WISDOT/CADDS SHEET 42

LEGEND

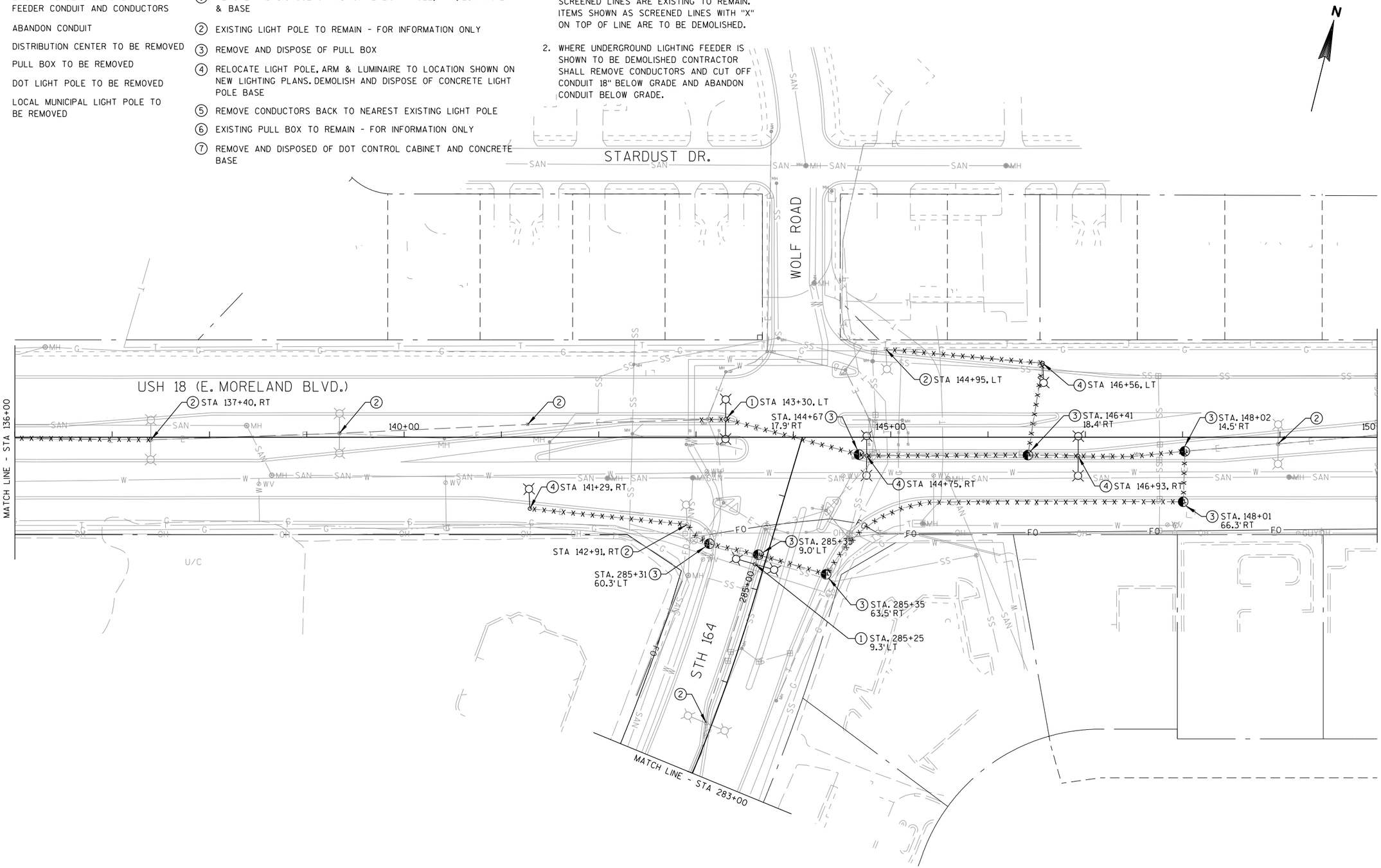
- EXISTING UNDERGROUND LIGHTING FEEDER CONDUIT AND CONDUCTORS
- x x x ABANDON CONDUIT
- ⊠ DISTRIBUTION CENTER TO BE REMOVED
- ◐ PULL BOX TO BE REMOVED
- ⊸⬭ DOT LIGHT POLE TO BE REMOVED
- ⊸⊗ LOCAL MUNICIPAL LIGHT POLE TO BE REMOVED

KEYED NOTES

1. REMOVE AND DISPOSE OF MUNICIPAL LIGHT POLE, ARM, LUMINAIRE & BASE
2. EXISTING LIGHT POLE TO REMAIN - FOR INFORMATION ONLY
3. REMOVE AND DISPOSE OF PULL BOX
4. RELOCATE LIGHT POLE, ARM & LUMINAIRE TO LOCATION SHOWN ON NEW LIGHTING PLANS. DEMOLISH AND DISPOSE OF CONCRETE LIGHT POLE BASE
5. REMOVE CONDUCTORS BACK TO NEAREST EXISTING LIGHT POLE
6. EXISTING PULL BOX TO REMAIN - FOR INFORMATION ONLY
7. REMOVE AND DISPOSED OF DOT CONTROL CABINET AND CONCRETE BASE

GENERAL NOTES

1. ITEMS SHOWN ON THE REMOVAL PLAN AS SCREENED LINES ARE EXISTING TO REMAIN. ITEMS SHOWN AS SCREENED LINES WITH "X" ON TOP OF LINE ARE TO BE DEMOLISHED.
2. WHERE UNDERGROUND LIGHTING FEEDER IS SHOWN TO BE DEMOLISHED CONTRACTOR SHALL REMOVE CONDUCTORS AND CUT OFF CONDUIT 18" BELOW GRADE AND ABANDON CONDUIT BELOW GRADE.



PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	LIGHTING REMOVAL PLAN	SHEET 184	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\023502_lp-rem.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 100.0000 sf / in.
WISDOT/CADDS SHEET 42

LEGEND

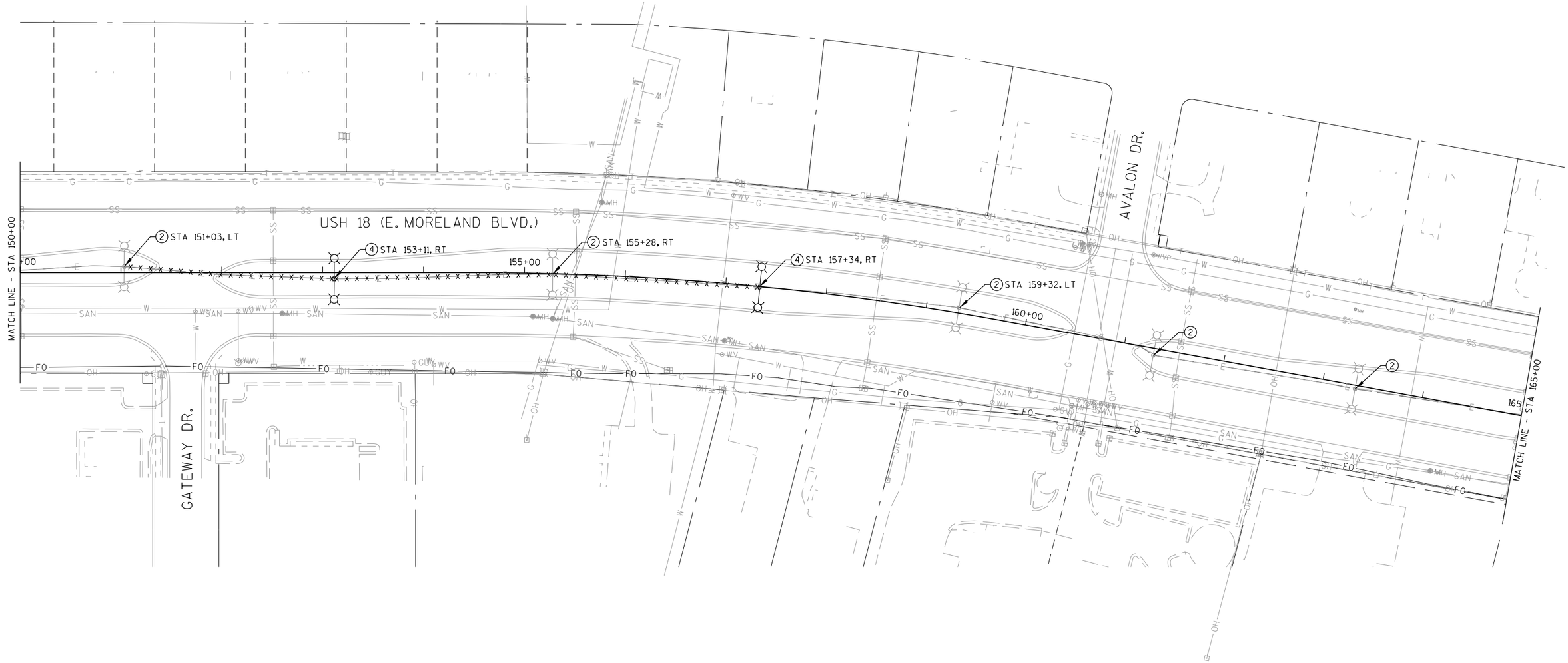
- EXISTING UNDERGROUND LIGHTING FEEDER CONDUIT AND CONDUCTORS
- X X X ABANDON CONDUIT
- DISTRIBUTION CENTER TO BE REMOVED
- PULL BOX TO BE REMOVED
- DOT LIGHT POLE TO BE REMOVED
- LOCAL MUNICIPAL LIGHT POLE TO BE REMOVED

KEYED NOTES

1. REMOVE AND DISPOSE OF MUNICIPAL LIGHT POLE, ARM, LUMINAIRE & BASE
2. EXISTING LIGHT POLE TO REMAIN - FOR INFORMATION ONLY
3. REMOVE AND DISPOSE OF PULL BOX
4. RELOCATE LIGHT POLE, ARM & LUMINAIRE TO LOCATION SHOWN ON NEW LIGHTING PLANS. DEMOLISH AND DISPOSE OF CONCRETE LIGHT POLE BASE
5. REMOVE CONDUCTORS BACK TO NEAREST EXISTING LIGHT POLE
6. EXISTING PULL BOX TO REMAIN - FOR INFORMATION ONLY
7. REMOVE AND DISPOSED OF DOT CONTROL CABINET AND CONCRETE BASE

GENERAL NOTES

1. ITEMS SHOWN ON THE REMOVAL PLAN AS SCREENED LINES ARE EXISTING TO REMAIN. ITEMS SHOWN AS SCREENED LINES WITH "X" ON TOP OF LINE ARE TO BE DEMOLISHED.
2. WHERE UNDERGROUND LIGHTING FEEDER IS SHOWN TO BE DEMOLISHED CONTRACTOR SHALL REMOVE CONDUCTORS AND CUT OFF CONDUIT 18" BELOW GRADE AND ABANDON CONDUIT BELOW GRADE.



PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	LIGHTING REMOVAL PLAN	SHEET 185	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\023503_lp-rem.dgn
PLOT DATE : 4/27/2015
PLOT BY : GRAEF
PLOT NAME :
PLOT SCALE : 100.0000 sf / in.
WISDOT/CADDS SHEET 42

LEGEND

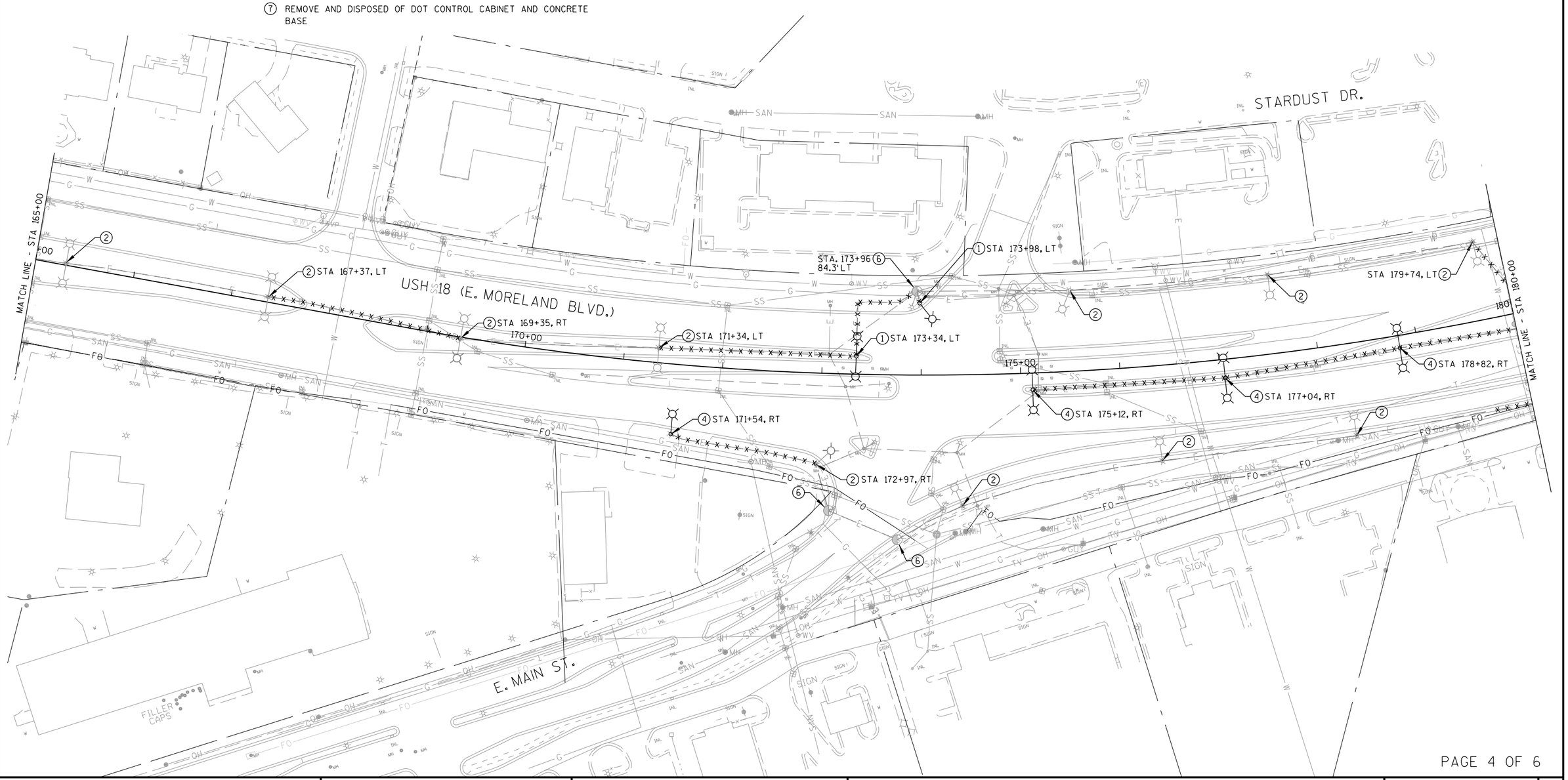
- EXISTING UNDERGROUND LIGHTING FEEDER CONDUIT AND CONDUCTORS
- x x x ABANDON CONDUIT
- ⊠ DISTRIBUTION CENTER TO BE REMOVED
- ◐ PULL BOX TO BE REMOVED
- —○— DOT LIGHT POLE TO BE REMOVED
- —⊙— LOCAL MUNICIPAL LIGHT POLE TO BE REMOVED

KEYED NOTES

1. REMOVE AND DISPOSE OF MUNICIPAL LIGHT POLE, ARM, LUMINAIRE & BASE
2. EXISTING LIGHT POLE TO REMAIN - FOR INFORMATION ONLY
3. REMOVE AND DISPOSE OF PULL BOX
4. RELOCATE LIGHT POLE, ARM & LUMINAIRE TO LOCATION SHOWN ON NEW LIGHTING PLANS. DEMOLISH AND DISPOSE OF CONCRETE LIGHT POLE BASE
5. REMOVE CONDUCTORS BACK TO NEAREST EXISTING LIGHT POLE
6. EXISTING PULL BOX TO REMAIN - FOR INFORMATION ONLY
7. REMOVE AND DISPOSED OF DOT CONTROL CABINET AND CONCRETE BASE

GENERAL NOTES

1. ITEMS SHOWN ON THE REMOVAL PLAN AS SCREENED LINES ARE EXISTING TO REMAIN. ITEMS SHOWN AS SCREENED LINES WITH "X" ON TOP OF LINE ARE TO BE DEMOLISHED.
2. WHERE UNDERGROUND LIGHTING FEEDER IS SHOWN TO BE DEMOLISHED CONTRACTOR SHALL REMOVE CONDUCTORS AND CUT OFF CONDUIT 18" BELOW GRADE AND ABANDON CONDUIT BELOW GRADE.



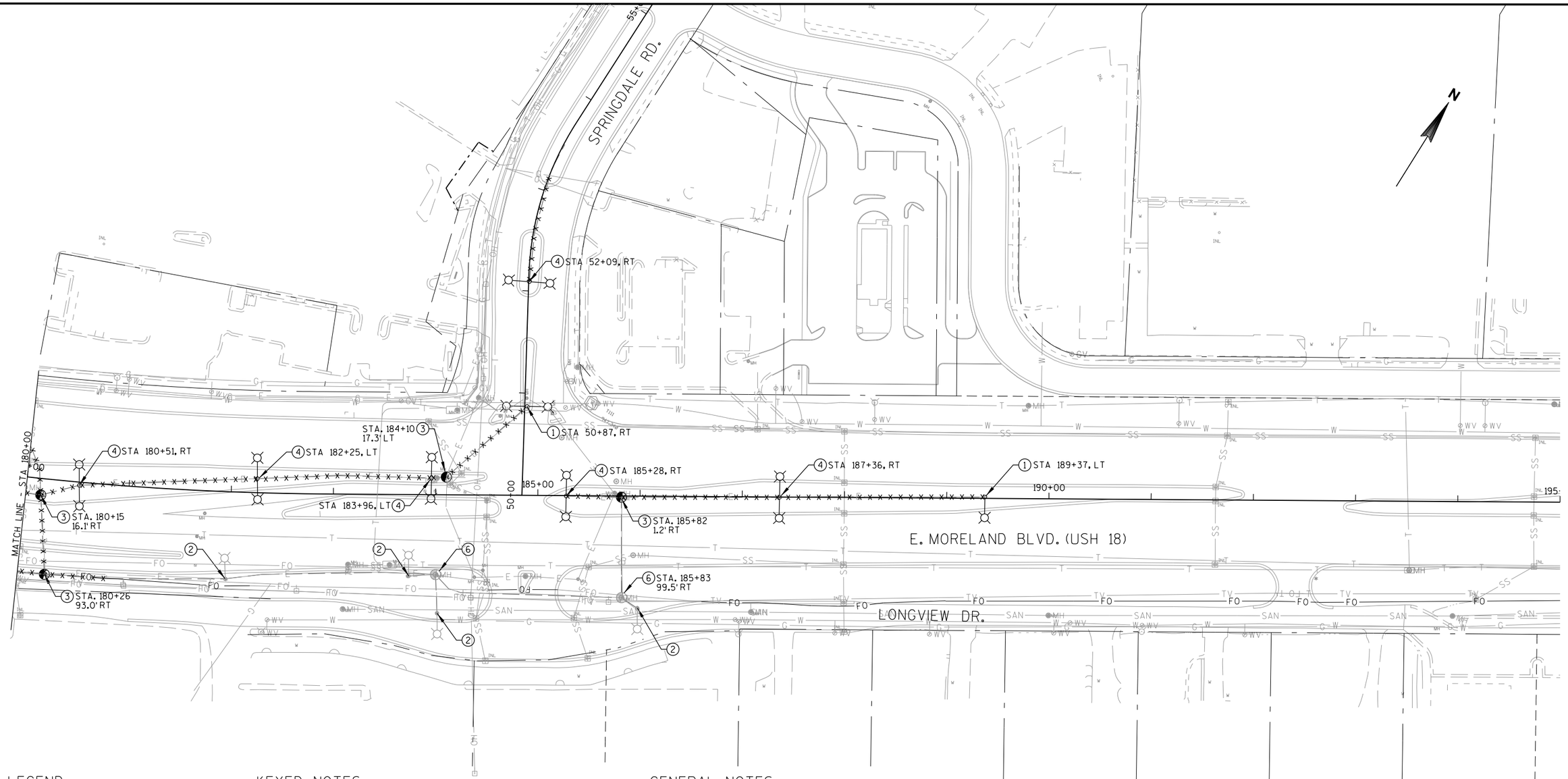
PAGE 4 OF 6

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	LIGHTING REMOVAL PLAN	SHEET 186	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\023504_lp-rem.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 100.0000 sf / in.

WISDOT/CADDS SHEET 42

2



LEGEND

- EXISTING UNDERGROUND LIGHTING FEEDER CONDUIT AND CONDUCTORS
- X X X ABANDON CONDUIT
- DISTRIBUTION CENTER TO BE REMOVED
- PULL BOX TO BE REMOVED
- DOT LIGHT POLE TO BE REMOVED
- LOCAL MUNICIPAL LIGHT POLE TO BE REMOVED

KEYED NOTES

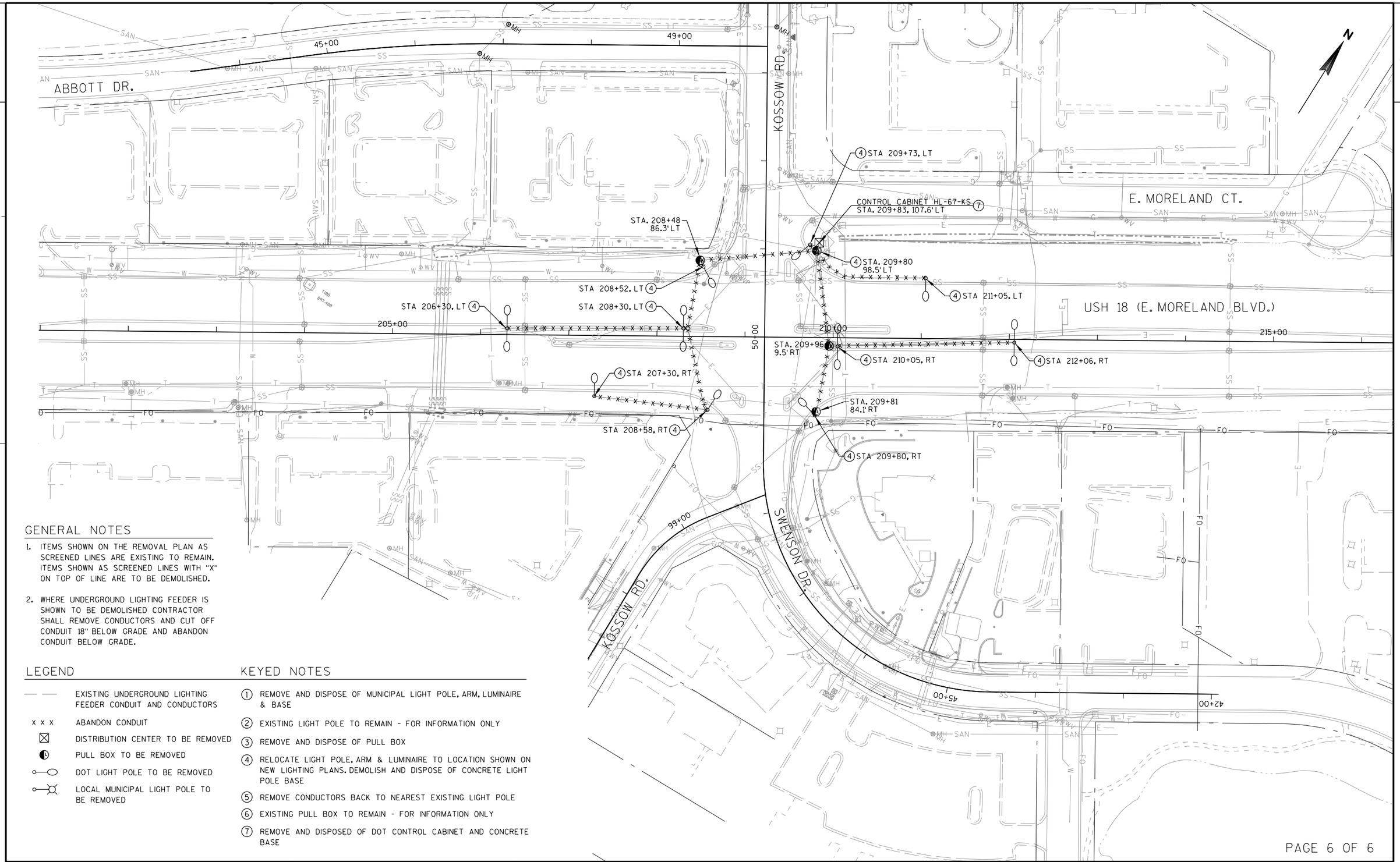
1. REMOVE AND DISPOSE OF MUNICIPAL LIGHT POLE, ARM, LUMINAIRE & BASE
2. EXISTING LIGHT POLE TO REMAIN - FOR INFORMATION ONLY
3. REMOVE AND DISPOSE OF PULL BOX
4. RELOCATE LIGHT POLE, ARM & LUMINAIRE TO LOCATION SHOWN ON NEW LIGHTING PLANS. DEMOLISH AND DISPOSE OF CONCRETE LIGHT POLE BASE
5. REMOVE CONDUCTORS BACK TO NEAREST EXISTING LIGHT POLE
6. EXISTING PULL BOX TO REMAIN - FOR INFORMATION ONLY
7. REMOVE AND DISPOSED OF DOT CONTROL CABINET AND CONCRETE BASE

GENERAL NOTES

1. ITEMS SHOWN ON THE REMOVAL PLAN AS SCREENED LINES ARE EXISTING TO REMAIN. ITEMS SHOWN AS SCREENED LINES WITH "X" ON TOP OF LINE ARE TO BE DEMOLISHED.
2. WHERE UNDERGROUND LIGHTING FEEDER IS SHOWN TO BE DEMOLISHED CONTRACTOR SHALL REMOVE CONDUCTORS AND CUT OFF CONDUIT 18" BELOW GRADE AND ABANDON CONDUIT BELOW GRADE.

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	LIGHTING REMOVAL PLAN	SHEET 187	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\023505_lp-rem.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 100.0000 sf / in.
WISDOT/CADDS SHEET 42



GENERAL NOTES

1. ITEMS SHOWN ON THE REMOVAL PLAN AS SCREENED LINES ARE EXISTING TO REMAIN. ITEMS SHOWN AS SCREENED LINES WITH "X" ON TOP OF LINE ARE TO BE DEMOLISHED.
2. WHERE UNDERGROUND LIGHTING FEEDER IS SHOWN TO BE DEMOLISHED CONTRACTOR SHALL REMOVE CONDUCTORS AND CUT OFF CONDUIT 18" BELOW GRADE AND ABANDON CONDUIT BELOW GRADE.

LEGEND

- EXISTING UNDERGROUND LIGHTING FEEDER CONDUIT AND CONDUCTORS
- x x x ABANDON CONDUIT
- DISTRIBUTION CENTER TO BE REMOVED
- PULL BOX TO BE REMOVED
- DOT LIGHT POLE TO BE REMOVED
- LOCAL MUNICIPAL LIGHT POLE TO BE REMOVED

KEYED NOTES

1. REMOVE AND DISPOSE OF MUNICIPAL LIGHT POLE, ARM, LUMINAIRE & BASE
2. EXISTING LIGHT POLE TO REMAIN - FOR INFORMATION ONLY
3. REMOVE AND DISPOSE OF PULL BOX
4. RELOCATE LIGHT POLE, ARM & LUMINAIRE TO LOCATION SHOWN ON NEW LIGHTING PLANS. DEMOLISH AND DISPOSE OF CONCRETE LIGHT POLE BASE
5. REMOVE CONDUCTORS BACK TO NEAREST EXISTING LIGHT POLE
6. EXISTING PULL BOX TO REMAIN - FOR INFORMATION ONLY
7. REMOVE AND DISPOSED OF DOT CONTROL CABINET AND CONCRETE BASE

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	LIGHTING REMOVAL PLAN	SHEET 188	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\023506_lp-rem.dgn
PLOT DATE : 4/27/2015
PLOT BY : GRAEF
PLOT NAME :
PLOT SCALE : 100.0910 sf / in.
WISDOT/CADDS SHEET 42

KEYED NOTES

1. EXISTING LIGHT POLE TO REMAIN - FOR INFORMATION ONLY.
2. REPLACE EXISTING LUMINAIRE WITH TYPE C LUMINAIRE.
3. EXISTING PULL BOX TO REMAIN - FOR INFORMATION ONLY.
4. CONTRACTOR SHALL VERIFY AND EXTEND EXISTING CIRCUITING AND WIRING FROM EXISTING LIGHTING CONTROL CABINET "EMB" (NOT SHOWN) TO NEW LIGHT POLE LOCATIONS. CONTRACTOR SHALL ALTERNATE CIRCUITS TO BALANCE THE LOAD.
5. CONTRACTOR SHALL VERIFY AND EXTEND EXISTING CIRCUITING AND WIRING FROM EXISTING LIGHTING CONTROL CABINET "SPRINGDALE Z3" (NOT SHOWN) TO NEW LIGHT POLE LOCATION. CONTRACTOR SHALL ALTERNATE CIRCUITS TO BALANCE THE LOAD.
6. REPLACE EXISTING LUMINAIRE WITH NEW DOT TYPE C LUMINAIRE.
7. CONNECT NEW LIGHTING FEEDER TO EXISTING LIGHT BRANCH CIRCUIT CONDUCTORS IN EXISTING POLE. CONNECT TO EXISTING CONDUIT EXITING POLE BASE BELOW GRADE.
8. LIGHT FEEDER CONDUCTORS SHALL BE PROVIDED FROM NEAREST EXISTING POLE 230 FEET EAST TO RELOCATED POLE.

CABLE AND CONDUIT LEGEND

- (A) 3#4 AWG AND 1#4 GROUND IN 3" CONDUIT.
- (B) 3#8, 3#4, AND 1#4 GROUND IN 3" CONDUIT.
- (C) 2#8 AND 1#8 GROUND IN 2" CONDUIT.
- (D) NOT USED.
- (E) 3#8 AND 1#8 GROUND IN 2" CONDUIT.

STA. 125+65, 15.0' RT
208-1,B-1
- STATION
- OFFSET
- POLE NUMBER
- LUMINAIRE CIRCUIT
- CONTROL CABINET

N

MANHATTAN DR.

JENNIFER LANE

USH 18 (E. MORELAND BLVD.)

52+00

50+00

125+00

130+00

135+00

MATCH LINE - STA 136+00

48+00

46+00

STA 121+66, 38.0' RT
EMB

STA 123+72, 58.2' RT
EMB

STA 124+75, 119.4' RT
EMB

STA 135+40, 12.0' RT
MG

STA 133+49, 5.0' LT
MG

GENERAL NOTES

1. ITEMS SHOWN ON THE LIGHTING PLAN AS SCREENED LINES ARE EXISTING TO REMAIN. ITEMS SHOWN ON PLANS AS DARK BLACK LINES ARE NEW.
2. CONTRACTOR SHALL CONFIRM ALL EXISTING CONDITIONS PRIOR TO START OF CONSTRUCTION.
3. RELOCATED FIXTURES SHALL BE CONNECTED TO EXISTING CIRCUIT.

LIGHTING PLAN LEGEND

- RELOCATED MUNICIPAL LIGHT POLE WITH SINGLE ARM AND LUMINAIRE. PROVIDE NEW TYPE 6 CONCRETE POLE BASE.
- RELOCATED MUNICIPAL LIGHT POLE WITH DOUBLE AREM AND LUMINAIRES. PROVIDE NEW TYPE 6 CONCRETE POLE BASE.
- EXISTING MUNI. POLE, ARM, AND LUMINAIRE TO REMAIN.
- EXISTING MUNI. POLE, ARMS, AND LUMINAIRES TO REMAIN.
- LIGHTING CONTROL CABINET
- PULL BOX (24" X 42")
- PULL BOX (24" X 36")
- CONDUIT (SEE CABLE AND CONDUIT LEGEND)
- CONDUIT STUBOUT

DISTRIBUTION CENTER EMB, MG

USH 18 (E. MORELAND BLVD)
CITY OF WAUKESHA
WAUKESHA COUNTY

8/13 PAGE 1 OF 5

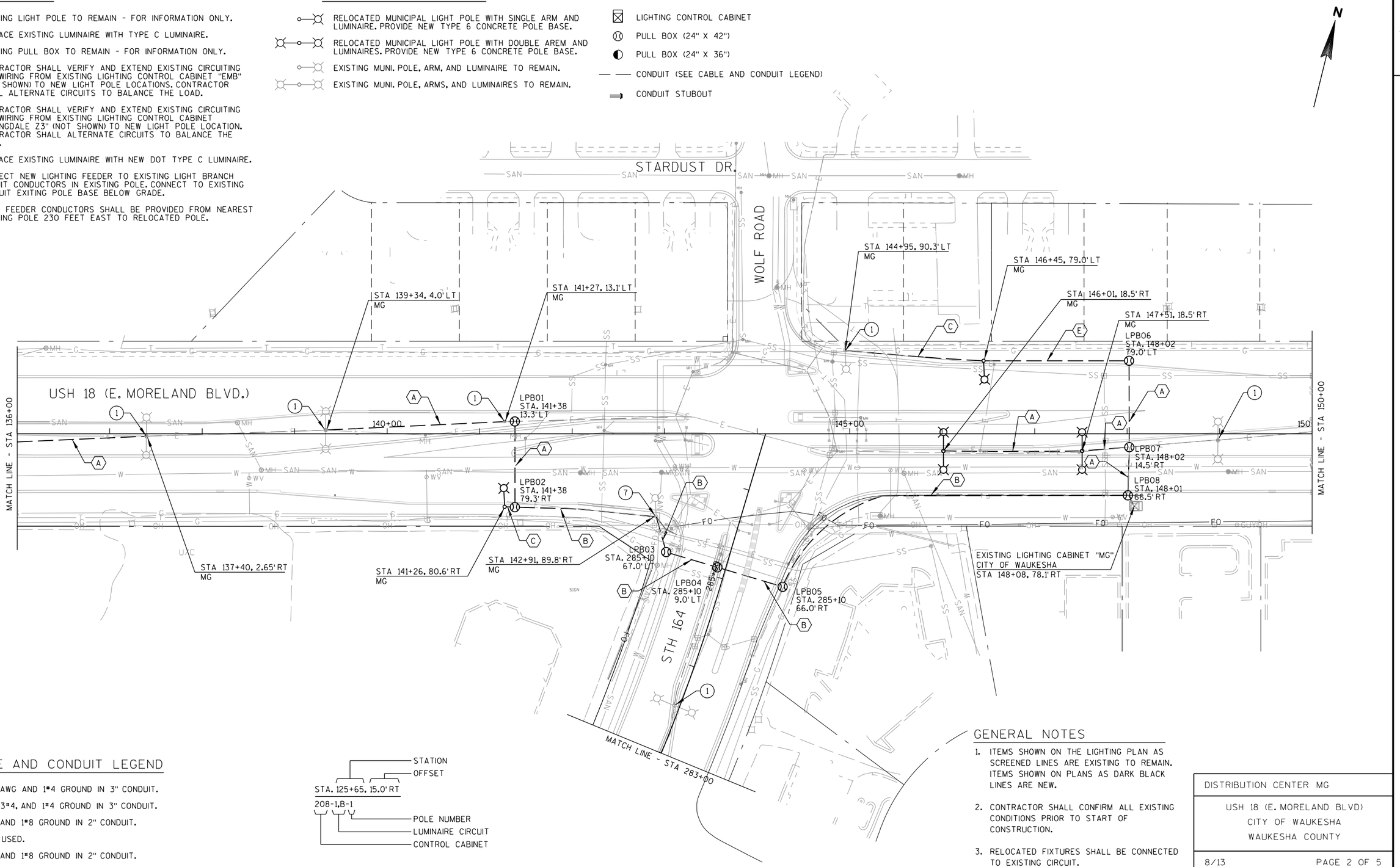
PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	LIGHTING PLAN	SHEET 189	E

KEYED NOTES

1. EXISTING LIGHT POLE TO REMAIN - FOR INFORMATION ONLY.
2. REPLACE EXISTING LUMINAIRE WITH TYPE C LUMINAIRE.
3. EXISTING PULL BOX TO REMAIN - FOR INFORMATION ONLY.
4. CONTRACTOR SHALL VERIFY AND EXTEND EXISTING CIRCUITING AND WIRING FROM EXISTING LIGHTING CONTROL CABINET "EMB" (NOT SHOWN) TO NEW LIGHT POLE LOCATIONS. CONTRACTOR SHALL ALTERNATE CIRCUITS TO BALANCE THE LOAD.
5. CONTRACTOR SHALL VERIFY AND EXTEND EXISTING CIRCUITING AND WIRING FROM EXISTING LIGHTING CONTROL CABINET "SPRINGDALE Z3" (NOT SHOWN) TO NEW LIGHT POLE LOCATION. CONTRACTOR SHALL ALTERNATE CIRCUITS TO BALANCE THE LOAD.
6. REPLACE EXISTING LUMINAIRE WITH NEW DOT TYPE C LUMINAIRE.
7. CONNECT NEW LIGHTING FEEDER TO EXISTING LIGHT BRANCH CIRCUIT CONDUCTORS IN EXISTING POLE. CONNECT TO EXISTING CONDUIT EXITING POLE BASE BELOW GRADE.
8. LIGHT FEEDER CONDUCTORS SHALL BE PROVIDED FROM NEAREST EXISTING POLE 230 FEET EAST TO RELOCATED POLE.

LIGHTING PLAN LEGEND

- RELOCATED MUNICIPAL LIGHT POLE WITH SINGLE ARM AND LUMINAIRE. PROVIDE NEW TYPE 6 CONCRETE POLE BASE.
- RELOCATED MUNICIPAL LIGHT POLE WITH DOUBLE AREM AND LUMINAIRES. PROVIDE NEW TYPE 6 CONCRETE POLE BASE.
- EXISTING MUNI. POLE, ARM, AND LUMINAIRE TO REMAIN.
- EXISTING MUNI. POLE, ARMS, AND LUMINAIRES TO REMAIN.
- LIGHTING CONTROL CABINET
- PULL BOX (24" X 42")
- PULL BOX (24" X 36")
- CONDUIT (SEE CABLE AND CONDUIT LEGEND)
- CONDUIT STUBOUT



CABLE AND CONDUIT LEGEND

- (A) 3#4 AWG AND 1#4 GROUND IN 3" CONDUIT.
- (B) 3#8, 3#4, AND 1#4 GROUND IN 3" CONDUIT.
- (C) 2#8 AND 1#8 GROUND IN 2" CONDUIT.
- (D) NOT USED.
- (E) 3#8 AND 1#8 GROUND IN 2" CONDUIT.

STA. 125+65, 15.0' RT
208-1,B-1

- STATION
- OFFSET
- POLE NUMBER
- LUMINAIRE CIRCUIT
- CONTROL CABINET

GENERAL NOTES

1. ITEMS SHOWN ON THE LIGHTING PLAN AS SCREENED LINES ARE EXISTING TO REMAIN. ITEMS SHOWN ON PLANS AS DARK BLACK LINES ARE NEW.
2. CONTRACTOR SHALL CONFIRM ALL EXISTING CONDITIONS PRIOR TO START OF CONSTRUCTION.
3. RELOCATED FIXTURES SHALL BE CONNECTED TO EXISTING CIRCUIT.

DISTRIBUTION CENTER MG

USH 18 (E. MORELAND BLVD)
CITY OF WAUKESHA
WAUKESHA COUNTY

8/13 PAGE 2 OF 5

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	LIGHTING PLAN	SHEET 190	E

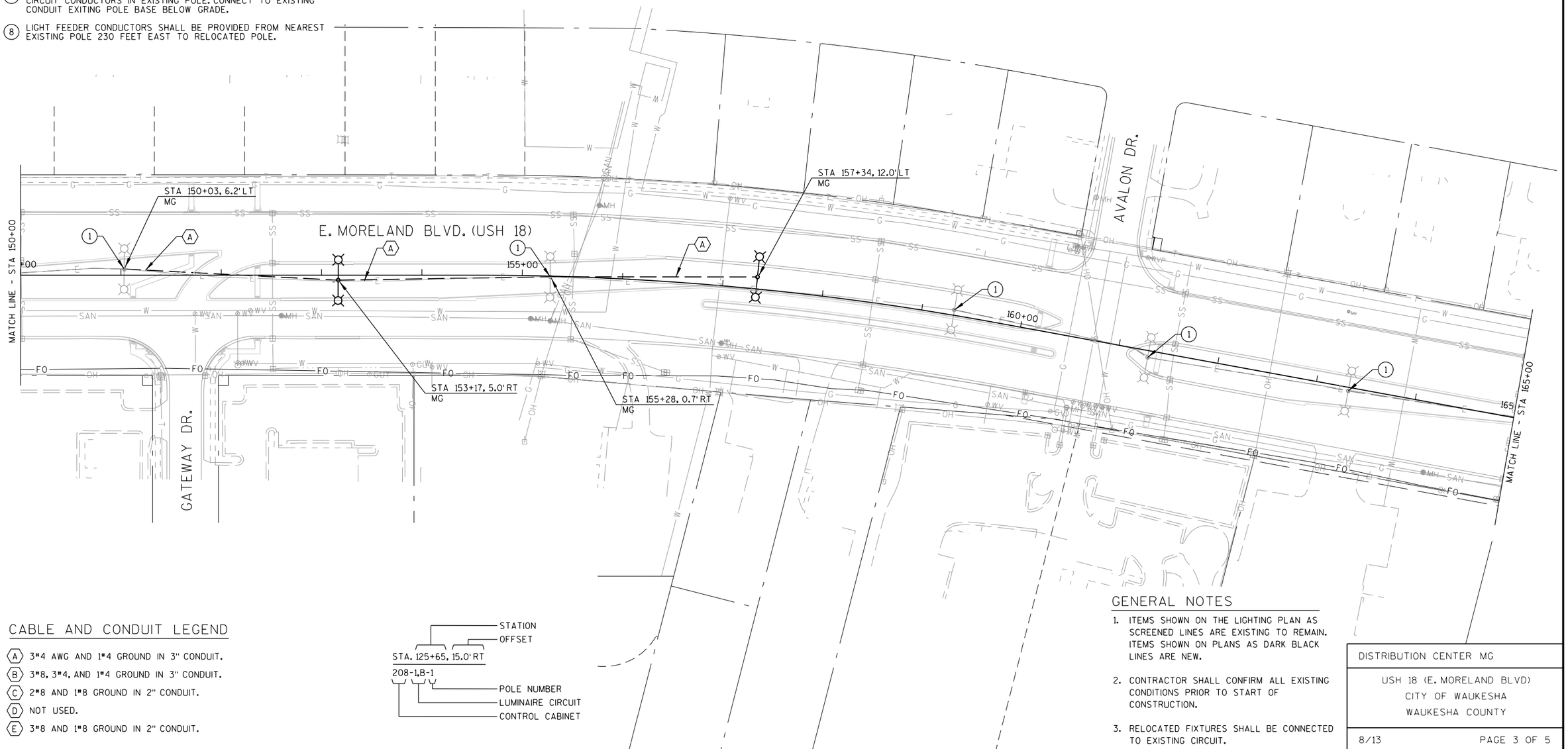
2

KEYED NOTES

1. EXISTING LIGHT POLE TO REMAIN - FOR INFORMATION ONLY.
2. REPLACE EXISTING LUMINAIRE WITH TYPE C LUMINAIRE.
3. EXISTING PULL BOX TO REMAIN - FOR INFORMATION ONLY.
4. CONTRACTOR SHALL VERIFY AND EXTEND EXISTING CIRCUITING AND WIRING FROM EXISTING LIGHTING CONTROL CABINET "EMB" (NOT SHOWN) TO NEW LIGHT POLE LOCATIONS. CONTRACTOR SHALL ALTERNATE CIRCUITS TO BALANCE THE LOAD.
5. CONTRACTOR SHALL VERIFY AND EXTEND EXISTING CIRCUITING AND WIRING FROM EXISTING LIGHTING CONTROL CABINET "SPRINGDALE Z3" (NOT SHOWN) TO NEW LIGHT POLE LOCATION. CONTRACTOR SHALL ALTERNATE CIRCUITS TO BALANCE THE LOAD.
6. REPLACE EXISTING LUMINAIRE WITH NEW DOT TYPE C LUMINAIRE.
7. CONNECT NEW LIGHTING FEEDER TO EXISTING LIGHT BRANCH CIRCUIT CONDUCTORS IN EXISTING POLE. CONNECT TO EXISTING CONDUIT EXITING POLE BASE BELOW GRADE.
8. LIGHT FEEDER CONDUCTORS SHALL BE PROVIDED FROM NEAREST EXISTING POLE 230 FEET EAST TO RELOCATED POLE.

LIGHTING PLAN LEGEND

- RELOCATED MUNICIPAL LIGHT POLE WITH SINGLE ARM AND LUMINAIRE. PROVIDE NEW TYPE 6 CONCRETE POLE BASE.
- RELOCATED MUNICIPAL LIGHT POLE WITH DOUBLE AREM AND LUMINAIRES. PROVIDE NEW TYPE 6 CONCRETE POLE BASE.
- EXISTING MUNI. POLE, ARM, AND LUMINAIRE TO REMAIN.
- EXISTING MUNI. POLE, ARMS, AND LUMINAIRES TO REMAIN.
- LIGHTING CONTROL CABINET
- PULL BOX (24" X 42")
- PULL BOX (24" X 36")
- CONDUIT (SEE CABLE AND CONDUIT LEGEND)
- CONDUIT STUBOUT



CABLE AND CONDUIT LEGEND

- (A) 3#4 AWG AND 1#4 GROUND IN 3" CONDUIT.
- (B) 3#8, 3#4, AND 1#4 GROUND IN 3" CONDUIT.
- (C) 2#8 AND 1#8 GROUND IN 2" CONDUIT.
- (D) NOT USED.
- (E) 3#8 AND 1#8 GROUND IN 2" CONDUIT.

STA. 125+65, 15.0' RT
208-1,B-1
- STATION
- OFFSET
- POLE NUMBER
- LUMINAIRE CIRCUIT
- CONTROL CABINET

GENERAL NOTES

1. ITEMS SHOWN ON THE LIGHTING PLAN AS SCREENED LINES ARE EXISTING TO REMAIN. ITEMS SHOWN ON PLANS AS DARK BLACK LINES ARE NEW.
2. CONTRACTOR SHALL CONFIRM ALL EXISTING CONDITIONS PRIOR TO START OF CONSTRUCTION.
3. RELOCATED FIXTURES SHALL BE CONNECTED TO EXISTING CIRCUIT.

DISTRIBUTION CENTER MG

USH 18 (E. MORELAND BLVD)
CITY OF WAUKESHA
WAUKESHA COUNTY

8/13 PAGE 3 OF 5

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	LIGHTING PLAN	SHEET 191 E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\023513_lp.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 100.0000 sf / in.
WISDOT/CADDS SHEET 42

CABLE AND CONDUIT LEGEND

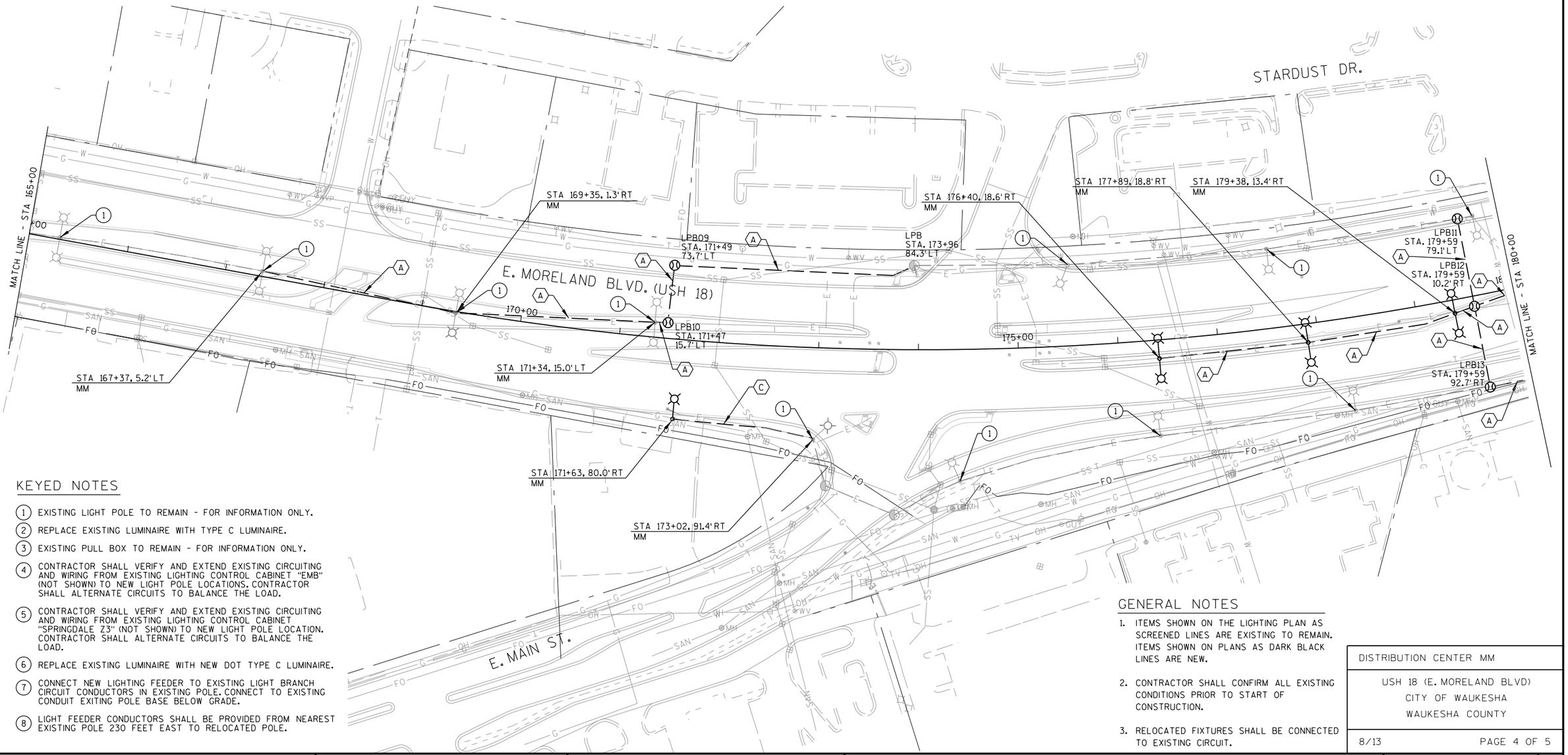
- (A) 3#4 AWG AND 1#4 GROUND IN 3" CONDUIT.
- (B) 3#8, 3#4, AND 1#4 GROUND IN 3" CONDUIT.
- (C) 2#8 AND 1#8 GROUND IN 2" CONDUIT.
- (D) NOT USED.
- (E) 3#8 AND 1#8 GROUND IN 2" CONDUIT.

STA. 125+65, 15.0' RT — STATION, OFFSET
208-1,B-1 — POLE NUMBER, LUMINAIRE CIRCUIT, CONTROL CABINET

LIGHTING PLAN LEGEND

- RELOCATED MUNICIPAL LIGHT POLE WITH SINGLE ARM AND LUMINAIRE. PROVIDE NEW TYPE 6 CONCRETE POLE BASE.
- RELOCATED MUNICIPAL LIGHT POLE WITH DOUBLE AREM AND LUMINAIRES. PROVIDE NEW TYPE 6 CONCRETE POLE BASE.
- EXISTING MUNI. POLE, ARM, AND LUMINAIRE TO REMAIN.
- EXISTING MUNI. POLE, ARMS, AND LUMINAIRES TO REMAIN.
- LIGHTING CONTROL CABINET
- PULL BOX (24" X 42")
- PULL BOX (24" X 36")
- CONDUIT (SEE CABLE AND CONDUIT LEGEND)
- CONDUIT STUBOUT

N



KEYED NOTES

1. EXISTING LIGHT POLE TO REMAIN - FOR INFORMATION ONLY.
2. REPLACE EXISTING LUMINAIRE WITH TYPE C LUMINAIRE.
3. EXISTING PULL BOX TO REMAIN - FOR INFORMATION ONLY.
4. CONTRACTOR SHALL VERIFY AND EXTEND EXISTING CIRCUITING AND WIRING FROM EXISTING LIGHTING CONTROL CABINET "EMB" (NOT SHOWN) TO NEW LIGHT POLE LOCATIONS. CONTRACTOR SHALL ALTERNATE CIRCUITS TO BALANCE THE LOAD.
5. CONTRACTOR SHALL VERIFY AND EXTEND EXISTING CIRCUITING AND WIRING FROM EXISTING LIGHTING CONTROL CABINET "SPRINGDALE 23" (NOT SHOWN) TO NEW LIGHT POLE LOCATION. CONTRACTOR SHALL ALTERNATE CIRCUITS TO BALANCE THE LOAD.
6. REPLACE EXISTING LUMINAIRE WITH NEW DOT TYPE C LUMINAIRE.
7. CONNECT NEW LIGHTING FEEDER TO EXISTING LIGHT BRANCH CIRCUIT CONDUCTORS IN EXISTING POLE. CONNECT TO EXISTING CONDUIT EXITING POLE BASE BELOW GRADE.
8. LIGHT FEEDER CONDUCTORS SHALL BE PROVIDED FROM NEAREST EXISTING POLE 230 FEET EAST TO RELOCATED POLE.

GENERAL NOTES

1. ITEMS SHOWN ON THE LIGHTING PLAN AS SCREENED LINES ARE EXISTING TO REMAIN. ITEMS SHOWN ON PLANS AS DARK BLACK LINES ARE NEW.
2. CONTRACTOR SHALL CONFIRM ALL EXISTING CONDITIONS PRIOR TO START OF CONSTRUCTION.
3. RELOCATED FIXTURES SHALL BE CONNECTED TO EXISTING CIRCUIT.

DISTRIBUTION CENTER MM

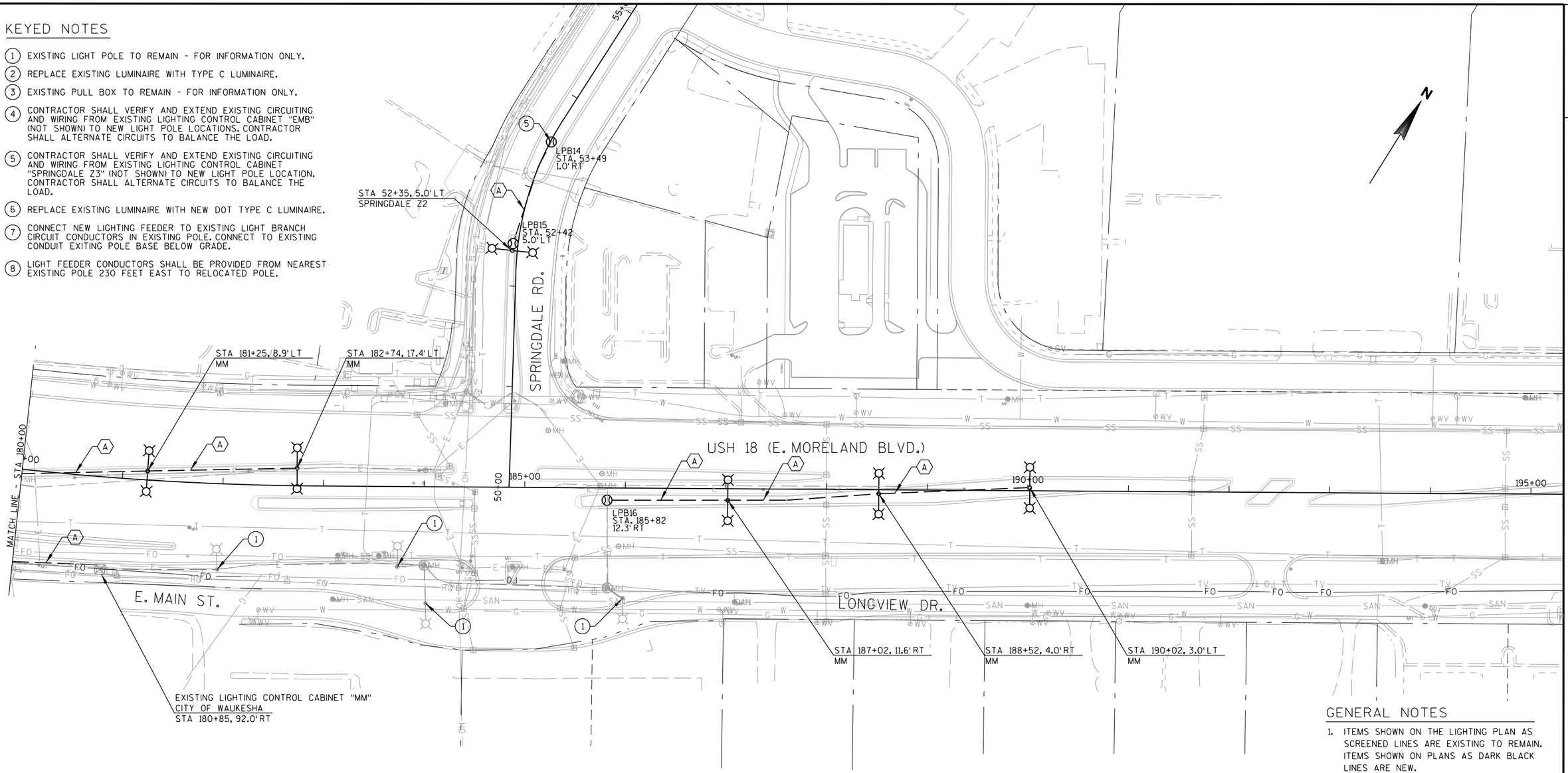
USH 18 (E. MORELAND BLVD)
CITY OF WAUKESHA
WAUKESHA COUNTY

8/13 PAGE 4 OF 5

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	LIGHTING PLAN	SHEET 192	E

KEYED NOTES

1. EXISTING LIGHT POLE TO REMAIN - FOR INFORMATION ONLY.
2. REPLACE EXISTING LUMINAIRE WITH TYPE C LUMINAIRE.
3. EXISTING PULL BOX TO REMAIN - FOR INFORMATION ONLY.
4. CONTRACTOR SHALL VERIFY AND EXTEND EXISTING CIRCUITING AND WIRING FROM EXISTING LIGHTING CONTROL CABINET "EMB" (NOT SHOWN) TO NEW LIGHT POLE LOCATIONS. CONTRACTOR SHALL ALTERNATE CIRCUITS TO BALANCE THE LOAD.
5. CONTRACTOR SHALL VERIFY AND EXTEND EXISTING CIRCUITING AND WIRING FROM EXISTING LIGHTING CONTROL CABINET "SPRINGDALE Z3" (NOT SHOWN) TO NEW LIGHT POLE LOCATION. CONTRACTOR SHALL ALTERNATE CIRCUITS TO BALANCE THE LOAD.
6. REPLACE EXISTING LUMINAIRE WITH NEW DOT TYPE C LUMINAIRE.
7. CONNECT NEW LIGHTING FEEDER TO EXISTING LIGHT BRANCH CIRCUIT CONDUCTORS IN EXISTING POLE. CONNECT TO EXISTING CONDUIT EXITING POLE BASE BELOW GRADE.
8. LIGHT FEEDER CONDUCTORS SHALL BE PROVIDED FROM NEAREST EXISTING POLE 230 FEET EAST TO RELOCATED POLE.



GENERAL NOTES

1. ITEMS SHOWN ON THE LIGHTING PLAN AS SCREENED LINES ARE EXISTING TO REMAIN. ITEMS SHOWN ON PLANS AS DARK BLACK LINES ARE NEW.
2. CONTRACTOR SHALL CONFIRM ALL EXISTING CONDITIONS PRIOR TO START OF CONSTRUCTION.
3. RELOCATED FIXTURES SHALL BE CONNECTED TO EXISTING CIRCUIT.

LIGHTING PLAN LEGEND

- RELOCATED MUNICIPAL LIGHT POLE WITH SINGLE ARM AND LUMINAIRE. PROVIDE NEW TYPE 6 CONCRETE POLE BASE.
- RELOCATED MUNICIPAL LIGHT POLE WITH DOUBLE AREM AND LUMINAIRES. PROVIDE NEW TYPE 6 CONCRETE POLE BASE.
- EXISTING MUNI. POLE, ARM, AND LUMINAIRE TO REMAIN.
- EXISTING MUNI. POLE, ARMS, AND LUMINAIRES TO REMAIN.
- LIGHTING CONTROL CABINET
- PULL BOX (24" X 42")
- PULL BOX (24" X 36")
- CONDUIT (SEE CABLE AND CONDUIT LEGEND)
- CONDUIT STUBOUT

CABLE AND CONDUIT LEGEND

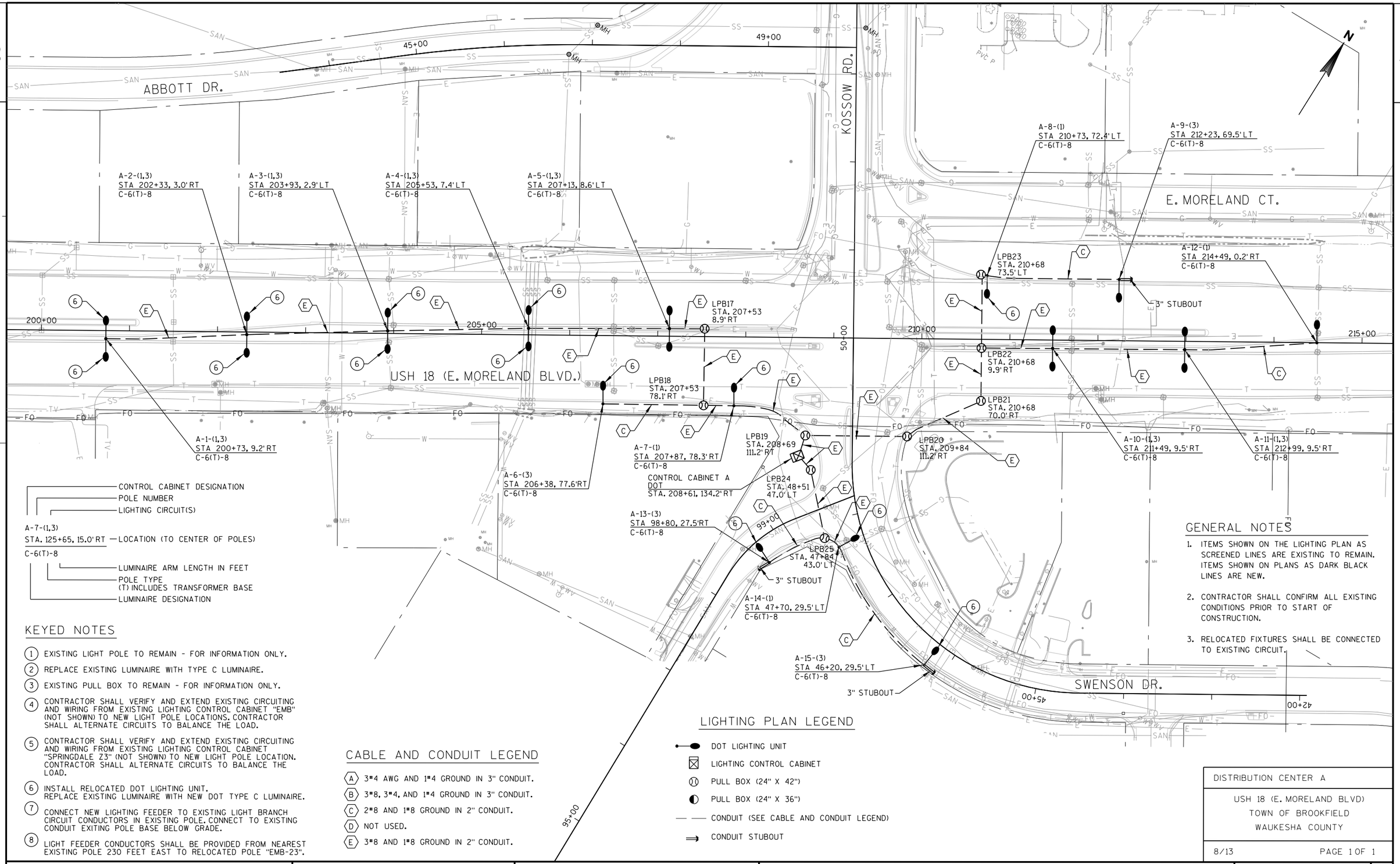
- (A) 3#4 AWG AND 1#4 GROUND IN 3" CONDUIT.
- (B) 3#8, 3#4, AND 1#4 GROUND IN 3" CONDUIT.
- (C) 2#8 AND 1#8 GROUND IN 2" CONDUIT.
- (D) NOT USED.
- (E) 3#8 AND 1#8 GROUND IN 2" CONDUIT.

STA. 125+65, 15.0' RT (STATION, OFFSET)
208-1,B-1 (POLE NUMBER, LUMINAIRE CIRCUIT, CONTROL CABINET)

DISTRIBUTION CENTER MM, Z2
USH 18 (E. MORELAND BLVD)
CITY OF WAUKESHA
WAUKESHA COUNTY
8/13 PAGE 5 OF 5

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	LIGHTING PLAN	SHEET 193	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\023515_lp.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 100.0000 sf / in.



CONTROL CABINET DESIGNATION
POLE NUMBER
LIGHTING CIRCUIT(S)

A-7-(1,3)
STA. 125+65, 15.0' RT — LOCATION (TO CENTER OF POLES)
C-6(T)-8
LUMINAIRE ARM LENGTH IN FEET
POLE TYPE
(T) INCLUDES TRANSFORMER BASE
LUMINAIRE DESIGNATION

KEYED NOTES

1. EXISTING LIGHT POLE TO REMAIN - FOR INFORMATION ONLY.
2. REPLACE EXISTING LUMINAIRE WITH TYPE C LUMINAIRE.
3. EXISTING PULL BOX TO REMAIN - FOR INFORMATION ONLY.
4. CONTRACTOR SHALL VERIFY AND EXTEND EXISTING CIRCUITING AND WIRING FROM EXISTING LIGHTING CONTROL CABINET "EMB" (NOT SHOWN) TO NEW LIGHT POLE LOCATIONS. CONTRACTOR SHALL ALTERNATE CIRCUITS TO BALANCE THE LOAD.
5. CONTRACTOR SHALL VERIFY AND EXTEND EXISTING CIRCUITING AND WIRING FROM EXISTING LIGHTING CONTROL CABINET "SPRINGDALE Z3" (NOT SHOWN) TO NEW LIGHT POLE LOCATION. CONTRACTOR SHALL ALTERNATE CIRCUITS TO BALANCE THE LOAD.
6. INSTALL RELOCATED DOT LIGHTING UNIT. REPLACE EXISTING LUMINAIRE WITH NEW DOT TYPE C LUMINAIRE.
7. CONNECT NEW LIGHTING FEEDER TO EXISTING LIGHT BRANCH CIRCUIT CONDUCTORS IN EXISTING POLE. CONNECT TO EXISTING CONDUIT EXITING POLE BASE BELOW GRADE.
8. LIGHT FEEDER CONDUCTORS SHALL BE PROVIDED FROM NEAREST EXISTING POLE 230 FEET EAST TO RELOCATED POLE "EMB-23".

CABLE AND CONDUIT LEGEND

- (A) 3#4 AWG AND 1#4 GROUND IN 3" CONDUIT.
- (B) 3#8, 3#4, AND 1#4 GROUND IN 3" CONDUIT.
- (C) 2#8 AND 1#8 GROUND IN 2" CONDUIT.
- (D) NOT USED.
- (E) 3#8 AND 1#8 GROUND IN 2" CONDUIT.

LIGHTING PLAN LEGEND

- DOT LIGHTING UNIT
- LIGHTING CONTROL CABINET
- PULL BOX (24" X 42")
- PULL BOX (24" X 36")
- CONDUIT (SEE CABLE AND CONDUIT LEGEND)
- CONDUIT STUBOUT

GENERAL NOTES

1. ITEMS SHOWN ON THE LIGHTING PLAN AS SCREENED LINES ARE EXISTING TO REMAIN. ITEMS SHOWN ON PLANS AS DARK BLACK LINES ARE NEW.
2. CONTRACTOR SHALL CONFIRM ALL EXISTING CONDITIONS PRIOR TO START OF CONSTRUCTION.
3. RELOCATED FIXTURES SHALL BE CONNECTED TO EXISTING CIRCUIT.

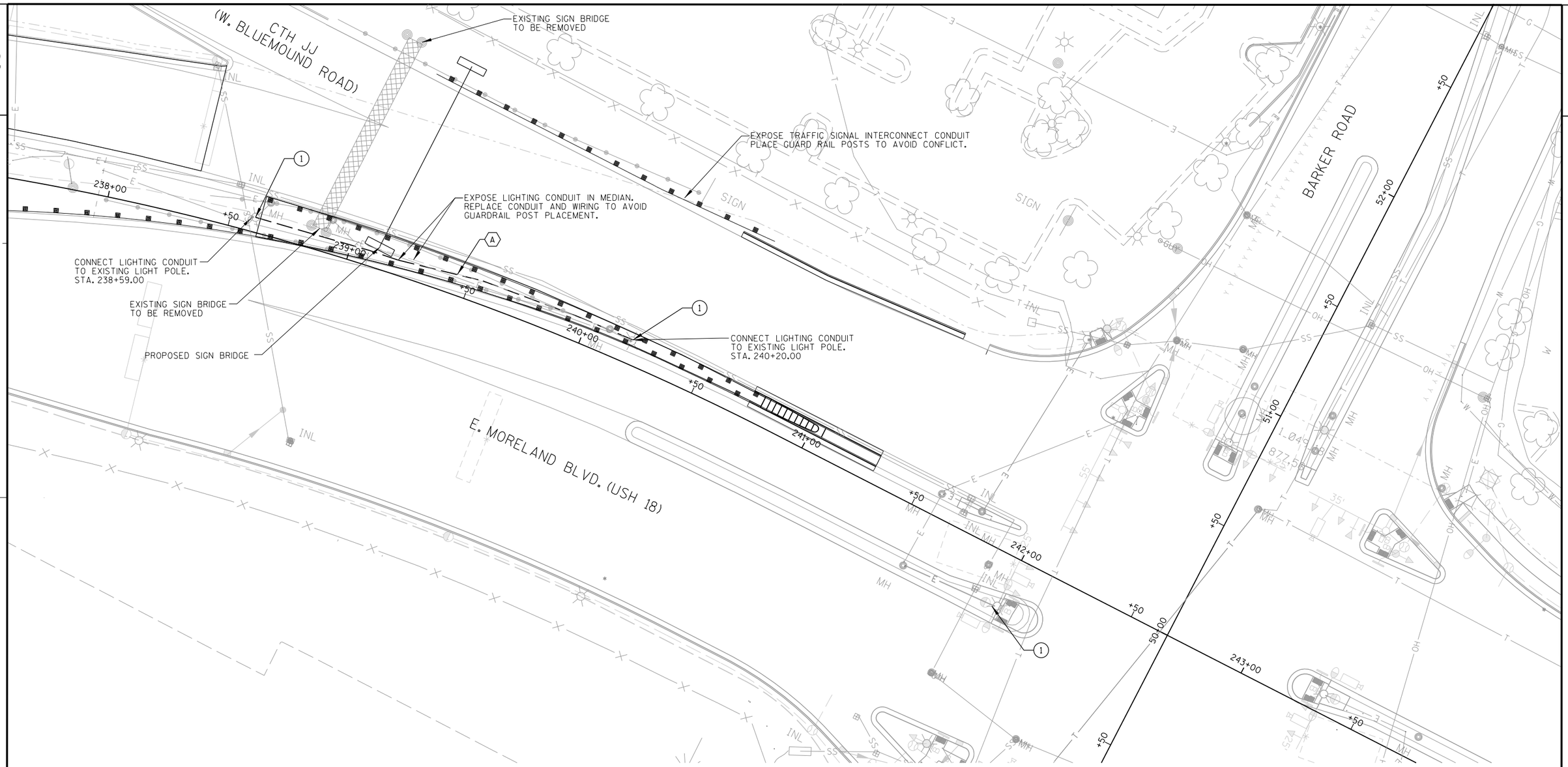
DISTRIBUTION CENTER A

USH 18 (E. MORELAND BLVD)
TOWN OF BROOKFIELD
WAUKESHA COUNTY

8/13 PAGE 1 OF 1

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	LIGHTING PLAN	SHEET 194 E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\023516_lp.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 100.0000 sf / in.



LIGHTING PLAN LEGEND

- EXISTING LIGHTING POLE, ARM, AND LUMINAIRE TO REMAIN.
- EXISTING LIGHTING. POLE, ARMS, AND LUMINAIRES TO REMAIN.
- CONDUIT (SEE CABLE AND CONDUIT LEGEND)

CABLE AND CONDUIT LEGEND

(A) 3#4 AWG AND 1#4 GROUND IN CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH.

KEYED NOTES

(1) EXISTING LIGHT POLE TO REMAIN - FOR INFORMATION ONLY.

GENERAL NOTES

1. ITEMS SHOWN ON THE LIGHTING PLAN AS SCREENED LINES ARE EXISTING TO REMAIN. ITEMS SHOWN ON PLANS AS DARK BLACK LINES ARE NEW.
2. CONTRACTOR SHALL CONFIRM ALL EXISTING CONDITIONS PRIOR TO START OF CONSTRUCTION.

DISTRIBUTION CENTER MM, Z2

USH 18 (E. MORELAND BLVD)
CITY OF WAUKESHA
WAUKESHA COUNTY

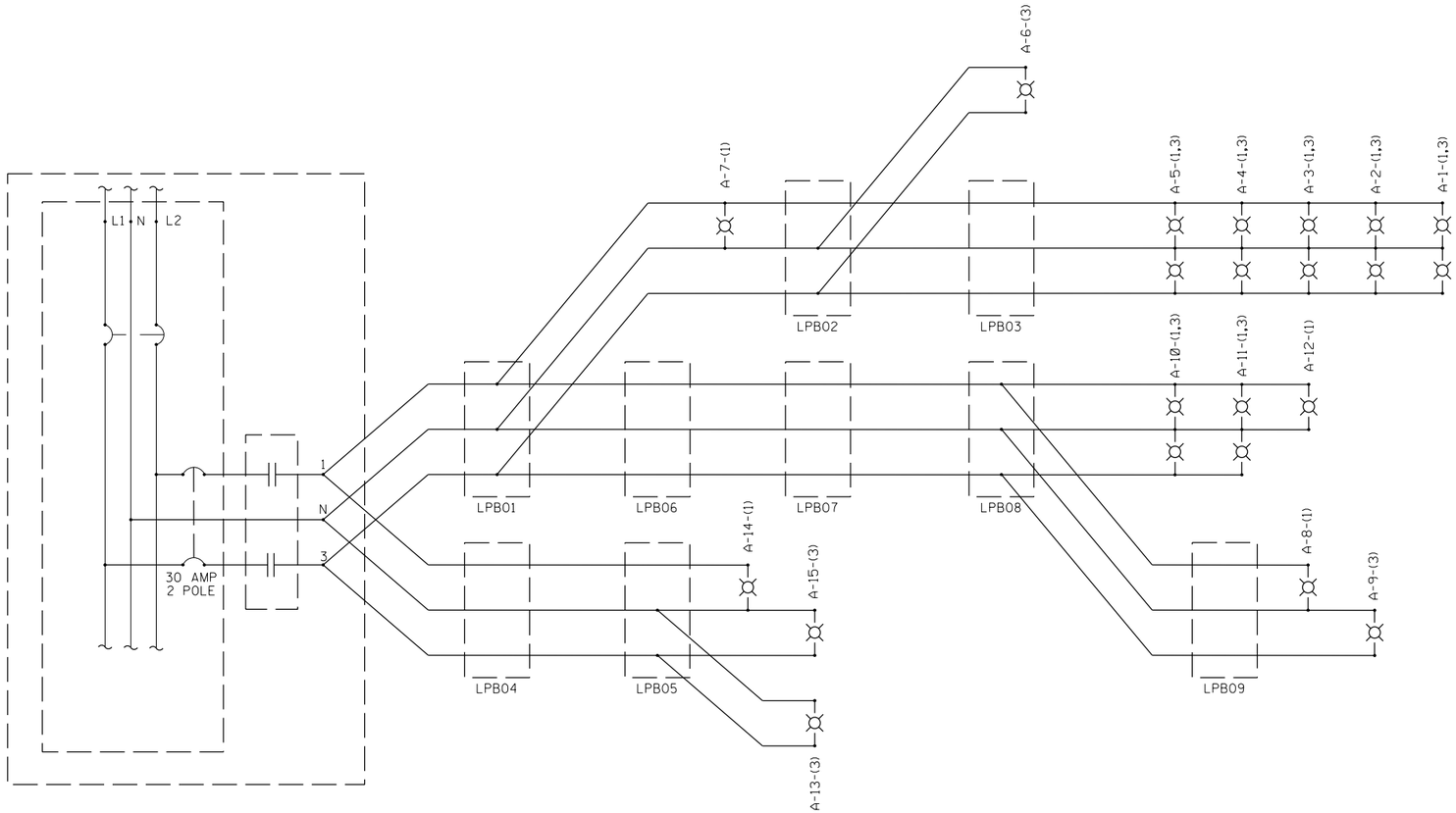
8/13 PAGE 5 OF 5

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	LIGHTING PLAN	SHEET 195	E

2

GENERAL NOTES

REFER TO WISDOT S.D.D. 9D4: LIGHTING CONTROL CABINET FOR MORE INFORMATION



DOT CONTROL CABINET "A" WIRING DIAGRAM

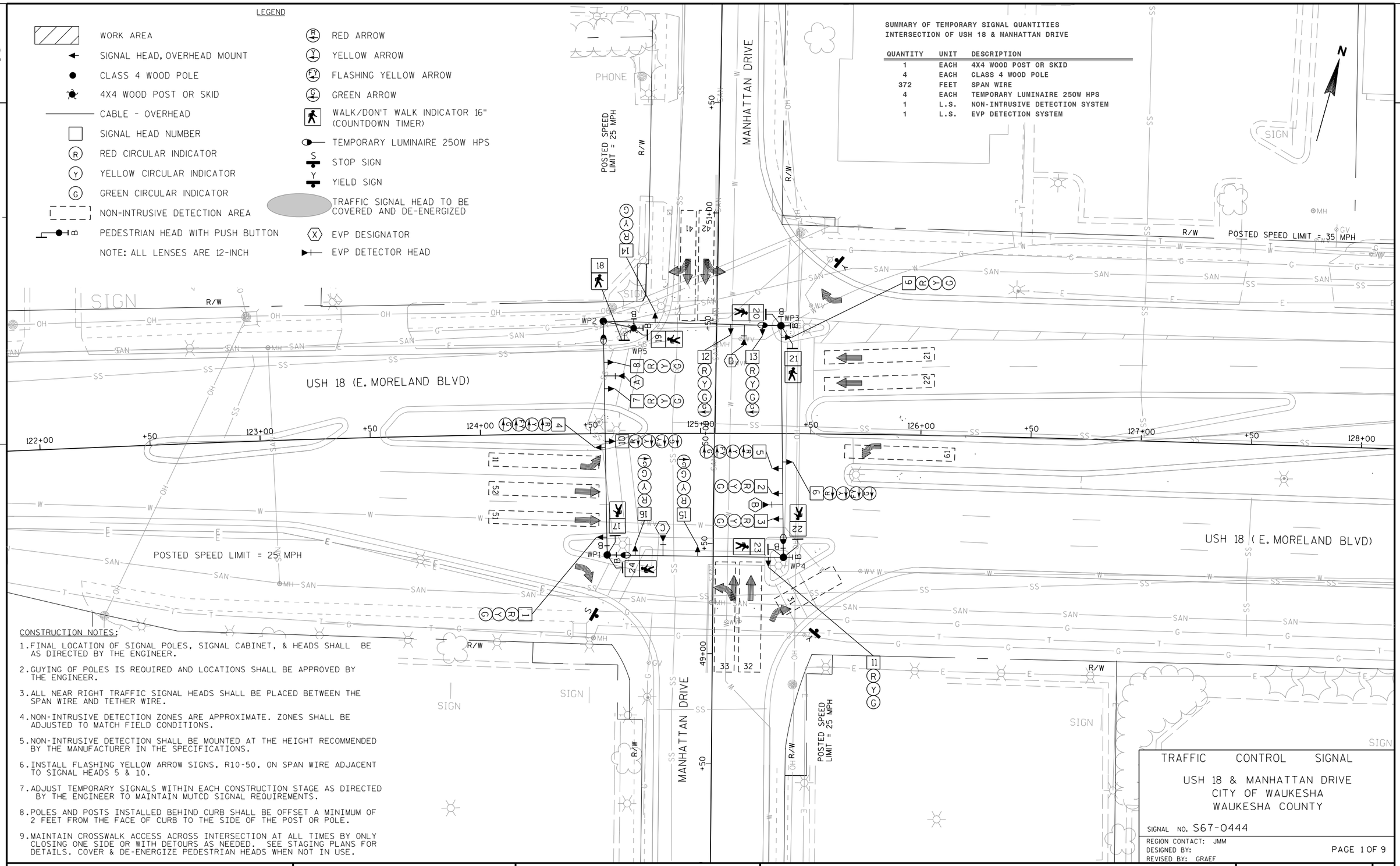
LOAD TABULATION FOR LIGHTING CONTROLLER "136"				
CIRCUIT	DESCRIPTION	L1	L2	BREAKER SIZE AMPS
1	11 FIXTURES @ 1.1 AMPS	12.1		30 AMP, 2 POLE
3	11 FIXTURES @ 1.1 AMPS		12.1	
	TOTAL CONNECTED LOAD @ 240 VOLT, 1 PHASE	12.1 AMPS	12.1 AMPS	
	TOTAL CONNECTED LOAD @ 240 VOLT, 1 PHASE	2.9 KILOVOLT AMPS	2.9 KILOVOLT AMPS	
	TOTAL CONNECTED LOAD @ 480 VOLT, 1 PHASE	12.1 AMPS		

LEGEND

- WORK AREA
- SIGNAL HEAD, OVERHEAD MOUNT
- CLASS 4 WOOD POLE
- 4X4 WOOD POST OR SKID
- CABLE - OVERHEAD
- SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- NON-INTRUSIVE DETECTION AREA
- B PEDESTRIAN HEAD WITH PUSH BUTTON
- NOTE: ALL LENSES ARE 12-INCH
- (R) RED ARROW
- (Y) YELLOW ARROW
- (FY) FLASHING YELLOW ARROW
- (G) GREEN ARROW
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- TEMPORARY LUMINAIRE 250W HPS
- S STOP SIGN
- Y YIELD SIGN
- TRAFFIC SIGNAL HEAD TO BE COVERED AND DE-ENERGIZED
- (X) EVP DESIGNATOR
- EVP DETECTOR HEAD

SUMMARY OF TEMPORARY SIGNAL QUANTITIES
INTERSECTION OF USH 18 & MANHATTAN DRIVE

QUANTITY	UNIT	DESCRIPTION
1	EACH	4X4 WOOD POST OR SKID
4	EACH	CLASS 4 WOOD POLE
372	FEET	SPAN WIRE
4	EACH	TEMPORARY LUMINAIRE 250W HPS
1	L.S.	NON-INTRUSIVE DETECTION SYSTEM
1	L.S.	EVP DETECTION SYSTEM



CONSTRUCTION NOTES:

1. FINAL LOCATION OF SIGNAL POLES, SIGNAL CABINET, & HEADS SHALL BE AS DIRECTED BY THE ENGINEER.
2. GUYING OF POLES IS REQUIRED AND LOCATIONS SHALL BE APPROVED BY THE ENGINEER.
3. ALL NEAR RIGHT TRAFFIC SIGNAL HEADS SHALL BE PLACED BETWEEN THE SPAN WIRE AND TETHER WIRE.
4. NON-INTRUSIVE DETECTION ZONES ARE APPROXIMATE. ZONES SHALL BE ADJUSTED TO MATCH FIELD CONDITIONS.
5. NON-INTRUSIVE DETECTION SHALL BE MOUNTED AT THE HEIGHT RECOMMENDED BY THE MANUFACTURER IN THE SPECIFICATIONS.
6. INSTALL FLASHING YELLOW ARROW SIGNS, R10-50, ON SPAN WIRE ADJACENT TO SIGNAL HEADS 5 & 10.
7. ADJUST TEMPORARY SIGNALS WITHIN EACH CONSTRUCTION STAGE AS DIRECTED BY THE ENGINEER TO MAINTAIN MUTCD SIGNAL REQUIREMENTS.
8. POLES AND POSTS INSTALLED BEHIND CURB SHALL BE OFFSET A MINIMUM OF 2 FEET FROM THE FACE OF CURB TO THE SIDE OF THE POST OR POLE.
9. MAINTAIN CROSSWALK ACCESS ACROSS INTERSECTION AT ALL TIMES BY ONLY CLOSING ONE SIDE OR WITH DETOURS AS NEEDED. SEE STAGING PLANS FOR DETAILS. COVER & DE-ENERGIZE PEDESTRIAN HEADS WHEN NOT IN USE.

TRAFFIC CONTROL SIGNAL

USH 18 & MANHATTAN DRIVE
CITY OF WAUKESHA
WAUKESHA COUNTY

SIGNAL NO. S67-0444

REGION CONTACT: JMM
DESIGNED BY:
REVISED BY: GRAEF

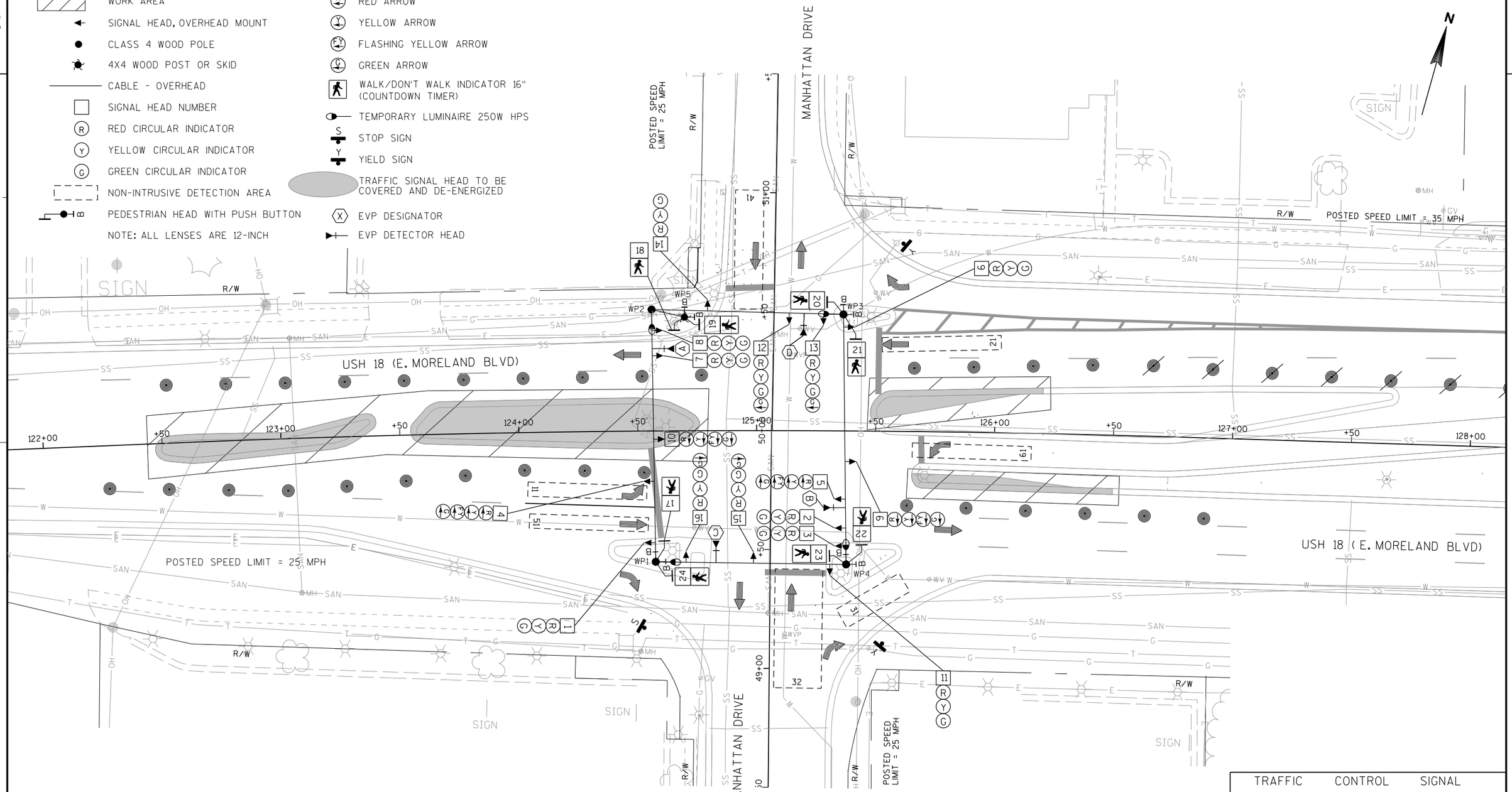
PAGE 1 OF 9

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	TEMPORARY TRAFFIC SIGNAL PLAN - PRE-STAGE A1	SHEET 197	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\01_Manhattan\024001_sp.dgn
PLOT DATE : 4/29/2015
PLOT BY : GRAEF
PLOT NAME :
PLOT SCALE : 40.0000 sf / in.
WISDOT/CADDS SHEET 42

LEGEND

- WORK AREA
- SIGNAL HEAD, OVERHEAD MOUNT
- CLASS 4 WOOD POLE
- 4X4 WOOD POST OR SKID
- CABLE - OVERHEAD
- SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- NON-INTRUSIVE DETECTION AREA
- B PEDESTRIAN HEAD WITH PUSH BUTTON
- NOTE: ALL LENSES ARE 12-INCH
- (R) RED ARROW
- (Y) YELLOW ARROW
- (FY) FLASHING YELLOW ARROW
- (G) GREEN ARROW
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- TEMPORARY LUMINAIRE 250W HPS
- S STOP SIGN
- Y YIELD SIGN
- TRAFFIC SIGNAL HEAD TO BE COVERED AND DE-ENERGIZED
- (X) EVP DESIGNATOR
- EVP DETECTOR HEAD



TRAFFIC CONTROL SIGNAL

USH 18 & MANHATTAN DRIVE
CITY OF WAUKESHA
WAUKESHA COUNTY

SIGNAL NO. S67-0444

REGION CONTACT: JMM
DESIGNED BY:
REVISED BY: GRAEF

PAGE 2 OF 9

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	TEMPORARY TRAFFIC SIGNAL PLAN - PRE STAGE A2	SHEET 198	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\01_Manhattan\024002_sp.dgn PLOT DATE : 4/29/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 40.0000 sf / in.

LEGEND

- WORK AREA
- SIGNAL HEAD, OVERHEAD MOUNT
- CLASS 4 WOOD POLE
- 4X4 WOOD POST OR SKID
- CABLE - OVERHEAD
- SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- NON-INTRUSIVE DETECTION AREA
- B PEDESTRIAN HEAD WITH PUSH BUTTON
- NOTE: ALL LENSES ARE 12-INCH
- (R) RED ARROW
- (Y) YELLOW ARROW
- (FY) FLASHING YELLOW ARROW
- (G) GREEN ARROW
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- TEMPORARY LUMINAIRE 250W HPS
- S STOP SIGN
- Y YIELD SIGN
- TRAFFIC SIGNAL HEAD TO BE COVERED AND DE-ENERGIZED
- (X) EVP DESIGNATOR
- EVP DETECTOR HEAD

N

MANHATTAN DRIVE

POSTED SPEED LIMIT = 25 MPH

POSTED SPEED LIMIT = 35 MPH

USH 18 (E. MORELAND BLVD)

R/W

SIGN

WP1 WP2 WP3 WP4 WP5

TRAFFIC CONTROL SIGNAL

USH 18 & MANHATTAN DRIVE
CITY OF WAUKESHA
WAUKESHA COUNTY

SIGNAL NO. S67-0444

REGION CONTACT: JMM
DESIGNED BY:
REVISED BY: GRAEF

PAGE 3 OF 9

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	TEMPORARY TRAFFIC SIGNAL PLAN - PRE STAGE B	SHEET 199	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\01_Manhattan\024003_sp.dgn
PLOT DATE : 4/29/2015
PLOT BY : GRAEF
PLOT NAME :
PLOT SCALE : 40.0000 sf / in.

LEGEND

- WORK AREA
- SIGNAL HEAD, OVERHEAD MOUNT
- CLASS 4 WOOD POLE
- 4X4 WOOD POST OR SKID
- CABLE - OVERHEAD
- SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- NON-INTRUSIVE DETECTION AREA
- B PEDESTRIAN HEAD WITH PUSH BUTTON
- NOTE: ALL LENSES ARE 12-INCH
- (R) RED ARROW
- (Y) YELLOW ARROW
- (FY) FLASHING YELLOW ARROW
- (G) GREEN ARROW
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- TEMPORARY LUMINAIRE 250W HPS
- S STOP SIGN
- Y YIELD SIGN
- TRAFFIC SIGNAL HEAD TO BE COVERED AND DE-ENERGIZED
- (X) EVP DESIGNATOR
- EVP DETECTOR HEAD

N

USH 18 (E. MORELAND BLVD)

MANHATTAN DRIVE

POSTED SPEED LIMIT = 25 MPH

POSTED SPEED LIMIT = 35 MPH

R/W

SIGN

WP1 WP2 WP3 WP4 WP5

122+00 123+00 124+00 125+00 126+00 127+00 128+00 49+00 51+00

TRAFFIC CONTROL SIGNAL

USH 18 & MANHATTAN DRIVE
CITY OF WAUKESHA
WAUKESHA COUNTY

SIGNAL NO. S67-0444

REGION CONTACT: JMM
DESIGNED BY:
REVISED BY: GRAEF

PAGE 4 OF 9

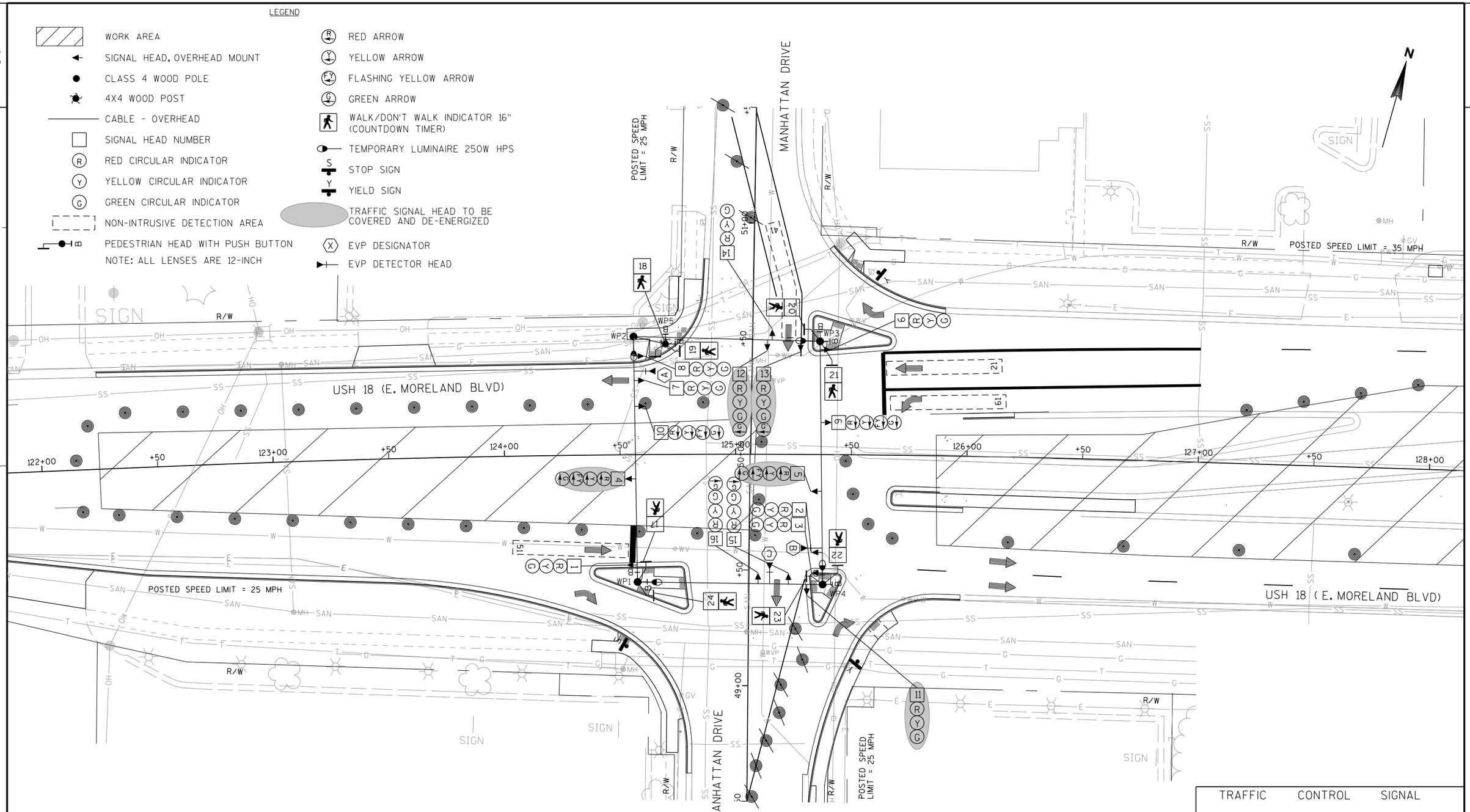
PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	TEMPORARY TRAFFIC SIGNAL PLAN - PRE STAGE C	SHEET 200	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\01_Manhattan\024004_sp.dgn
PLOT DATE : 4/29/2015
PLOT BY : GRAEF
PLOT NAME :
PLOT SCALE : 40.0000 sf / in.

WISDOT/CADDS SHEET 42

LEGEND

- WORK AREA
- SIGNAL HEAD, OVERHEAD MOUNT
- CLASS 4 WOOD POLE
- 4X4 WOOD POST
- CABLE - OVERHEAD
- SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- NON-INTRUSIVE DETECTION AREA
- B PEDESTRIAN HEAD WITH PUSH BUTTON
  NOTE: ALL LENSES ARE 12-INCH
- (R) RED ARROW
- (Y) YELLOW ARROW
- (FY) FLASHING YELLOW ARROW
- (G) GREEN ARROW
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- TEMPORARY LUMINAIRE 250W HPS
- S STOP SIGN
- Y YIELD SIGN
- TRAFFIC SIGNAL HEAD TO BE COVERED AND DE-ENERGIZED
- (X) EVP DESIGNATOR
- EVP DETECTOR HEAD



TRAFFIC CONTROL SIGNAL

USH 18 & MANHATTAN DRIVE
CITY OF WAUKESHA
WAUKESHA COUNTY

SIGNAL NO. S67-0444

REGION CONTACT: JMM
DESIGNED BY:
REVISED BY: GRAEF

PAGE 5 OF 9

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 1	SHEET 201	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\01_Manhattan\024005_sp.dgn
PLOT DATE : 4/29/2015
PLOT BY : GRAEF
PLOT NAME :
PLOT SCALE : 40.0000 sf / in.

WISDOT/CADDS SHEET 42

LEGEND

- WORK AREA
- SIGNAL HEAD, OVERHEAD MOUNT
- CLASS 4 WOOD POLE
- 4X4 WOOD POST OR SKID
- CABLE - OVERHEAD
- SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- NON-INTRUSIVE DETECTION AREA
- B PEDESTRIAN HEAD WITH PUSH BUTTON
- NOTE: ALL LENSES ARE 12-INCH
- (R) RED ARROW
- (Y) YELLOW ARROW
- (FY) FLASHING YELLOW ARROW
- (G) GREEN ARROW
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- TEMPORARY LUMINAIRE 250W HPS
- S STOP SIGN
- Y YIELD SIGN
- TRAFFIC SIGNAL HEAD TO BE COVERED AND DE-ENERGIZED
- (X) EVP DESIGNATOR
- EVP DETECTOR HEAD

N

USH 18 (E. MORELAND BLVD)

MANHATTAN DRIVE

POSTED SPEED LIMIT = 25 MPH

POSTED SPEED LIMIT = 35 MPH

SEE MONOTUBE CONSTRUCTION NOTE

MONOTUBE CONSTRUCTION NOTE:

THE TEMPORARY TRAFFIC SIGNAL HEADS INSTALLED ON THE TEMPORARY TRAFFIC SIGNAL SPAN WIRE SHALL BE ACTIVE UNTIL THE MONOTUBE ARMS IN FRONT OF THE TRAFFIC SIGNAL SPAN WIRE ARE INSTALLED. THE CONTRACTOR SHALL OPERATE THE PERMANENT TRAFFIC SIGNAL HEADS ON THE MONOTUBE POLES WITH THE TEMPORARY TRAFFIC SIGNAL INSTALLATION ONCE THE MONOTUBE ARM IS INSTALLED IN FRONT OF THE TEMPORARY TRAFFIC SIGNAL SPAN WIRE. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO DETERMINE THE MOST APPROPRIATE METHOD TO FEED THE PERMANENT TRAFFIC SIGNAL HEADS BEING USED WITH THE TEMPORARY TRAFFIC SIGNAL INSTALLATION. THEN CONTRACTOR SHALL HAVE THE TRAFFIC SIGNAL HEADS ON THE MONOTUBE TRAFFIC SIGNALS OPERATIONAL WITH THE TEMPORARY TRAFFIC SIGNAL WITHIN 2 HOURS OF THE MONOTUBE INSTALLATION.

ALL PERMANENT TRAFFIC SIGNAL HEADS NOT BEING USED SHALL BE COVERED AND TURNED UNTIL THE PERMANENT TRAFFIC SIGNAL INSTALLATION IS ACTIVATED.

TRAFFIC CONTROL SIGNAL

USH 18 & MANHATTAN DRIVE
CITY OF WAUKESHA
WAUKESHA COUNTY

SIGNAL NO. S67-0444

REGION CONTACT: JMM
DESIGNED BY:
REVISED BY: GRAEF

PAGE 6 OF 9

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 1A	SHEET 202	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\01_Manhattan\024006_sp.dgn PLOT DATE : 4/29/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 40.0000 sf / in.

WISDOT/CADDS SHEET 42

LEGEND

- WORK AREA
- SIGNAL HEAD, OVERHEAD MOUNT
- CLASS 4 WOOD POLE
- 4X4 WOOD POST OR SKID
- CABLE - OVERHEAD
- SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- NON-INTRUSIVE DETECTION AREA
- B PEDESTRIAN HEAD WITH PUSH BUTTON
- NOTE: ALL LENSES ARE 12-INCH
- (R) RED ARROW
- (Y) YELLOW ARROW
- (FY) FLASHING YELLOW ARROW
- (G) GREEN ARROW
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- TEMPORARY LUMINAIRE 250W HPS
- S STOP SIGN
- Y YIELD SIGN
- TRAFFIC SIGNAL HEAD TO BE COVERED AND DE-ENERGIZED
- (X) EVP DESIGNATOR
- EVP DETECTOR HEAD

N

MANHATTAN DRIVE

POSTED SPEED LIMIT = 25 MPH

R/W

SIGN

USH 18 (E. MORELAND BLVD)

SEE MONOTUBE CONSTRUCTION NOTE

POSTED SPEED LIMIT = 35 MPH

MONOTUBE CONSTRUCTION NOTE:

THE TEMPORARY TRAFFIC SIGNAL HEADS INSTALLED ON THE TEMPORARY TRAFFIC SIGNAL SPAN WIRE SHALL BE ACTIVE UNTIL THE MONOTUBE ARMS IN FRONT OF THE TRAFFIC SIGNAL SPAN WIRE ARE INSTALLED. THE CONTRACTOR SHALL OPERATE THE PERMANENT TRAFFIC SIGNAL HEADS ON THE MONOTUBE POLES WITH THE TEMPORARY TRAFFIC SIGNAL INSTALLATION ONCE THE MONOTUBE ARM IS INSTALLED IN FRONT OF THE TEMPORARY TRAFFIC SIGNAL SPAN WIRE. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO DETERMINE THE MOST APPROPRIATE METHOD TO FEED THE PERMANENT TRAFFIC SIGNAL HEADS BEING USED WITH THE TEMPORARY TRAFFIC SIGNAL INSTALLATION. THEN CONTRACTOR SHALL HAVE THE TRAFFIC SIGNAL HEADS ON THE MONOTUBE TRAFFIC SIGNALS OPERATIONAL WITH THE TEMPORARY TRAFFIC SIGNAL WITHIN 2 HOURS OF THE MONOTUBE INSTALLATION.

ALL PERMANENT TRAFFIC SIGNAL HEADS NOT BEING USED SHALL BE COVERED AND TURNED UNTIL THE PERMANENT TRAFFIC SIGNAL INSTALLATION IS ACTIVATED.

TRAFFIC CONTROL SIGNAL

USH 18 & MANHATTAN DRIVE
CITY OF WAUKESHA
WAUKESHA COUNTY

SIGNAL NO. S67-0444

REGION CONTACT: JMM
DESIGNED BY:
REVISED BY: GRAEF

PAGE 7 OF 9

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 1B	SHEET 203	E

LEGEND

- WORK AREA
- SIGNAL HEAD, OVERHEAD MOUNT
- CLASS 4 WOOD POLE
- 4X4 WOOD POST OR SKID
- CABLE - OVERHEAD
- SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- NON-INTRUSIVE DETECTION AREA
- PEDESTRIAN HEAD WITH PUSH BUTTON
- NOTE: ALL LENSES ARE 12-INCH
- (R) RED ARROW
- (Y) YELLOW ARROW
- (FY) FLASHING YELLOW ARROW
- (G) GREEN ARROW
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- TEMPORARY LUMINAIRE 250W HPS
- S STOP SIGN
- Y YIELD SIGN
- TRAFFIC SIGNAL HEAD TO BE COVERED AND DE-ENERGIZED
- (X) EVP DESIGNATOR
- EVP DETECTOR HEAD

N

USH 18 (E. MORELAND BLVD)

MANHATTAN DRIVE

POSTED SPEED LIMIT = 25 MPH

POSTED SPEED LIMIT = 35 MPH

SEE MONOTUBE CONSTRUCTION NOTE

MONOTUBE CONSTRUCTION NOTE:

THE TEMPORARY TRAFFIC SIGNAL HEADS INSTALLED ON THE TEMPORARY TRAFFIC SIGNAL SPAN WIRE SHALL BE ACTIVE UNTIL THE MONOTUBE ARMS IN FRONT OF THE TRAFFIC SIGNAL SPAN WIRE ARE INSTALLED. THE CONTRACTOR SHALL OPERATE THE PERMANENT TRAFFIC SIGNAL HEADS ON THE MONOTUBE POLES WITH THE TEMPORARY TRAFFIC SIGNAL INSTALLATION ONCE THE MONOTUBE ARM IS INSTALLED IN FRONT OF THE TEMPORARY TRAFFIC SIGNAL SPAN WIRE. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO DETERMINE THE MOST APPROPRIATE METHOD TO FEED THE PERMANENT TRAFFIC SIGNAL HEADS BEING USED WITH THE TEMPORARY TRAFFIC SIGNAL INSTALLATION. THEN CONTRACTOR SHALL HAVE THE TRAFFIC SIGNAL HEADS ON THE MONOTUBE TRAFFIC SIGNALS OPERATIONAL WITH THE TEMPORARY TRAFFIC SIGNAL WITHIN 2 HOURS OF THE MONOTUBE INSTALLATION.

ALL PERMANENT TRAFFIC SIGNAL HEADS NOT BEING USED SHALL BE COVERED AND TURNED UNTIL THE PERMANENT TRAFFIC SIGNAL INSTALLATION IS ACTIVATED.

TRAFFIC CONTROL SIGNAL

USH 18 & MANHATTAN DRIVE
CITY OF WAUKESHA
WAUKESHA COUNTY

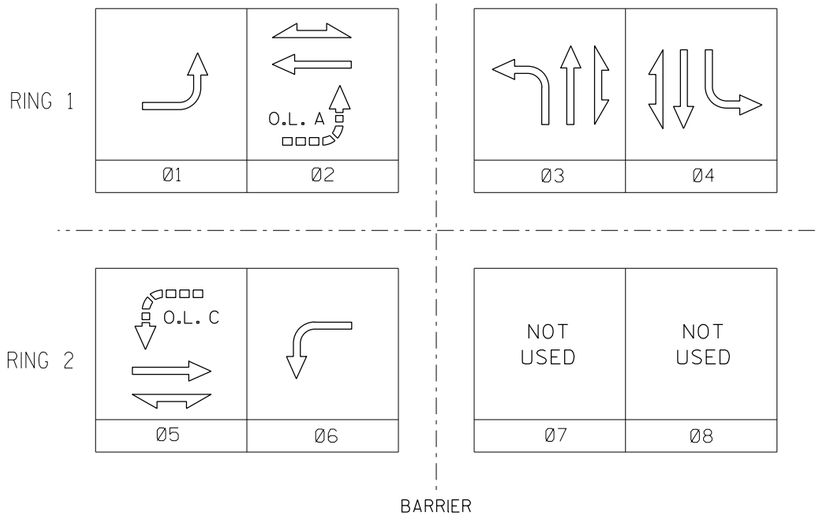
SIGNAL NO. S67-0444

REGION CONTACT: JMM
DESIGNED BY:
REVISED BY: GRAEF

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 2	SHEET 204 E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\01_Manhattan\024008_sp.dgn
PLOT DATE : 4/29/2015
PLOT BY : GRAEF
PLOT NAME :
PLOT SCALE : 40.0000 sf / in.
WISDOT/CADDS SHEET 42

	HEAD NUMBERS	FLASH
Ø1	4,5	-
Ø2	6,7,8	R
Ø3	11,12,13	R
Ø4	14,15,16	R
Ø5	1,2,3	R
Ø6	9,10	-
Ø7		
Ø8		
Ø2P	19,20	
Ø3P	21,22	
Ø4P	17,18	
Ø5P	23,24	
OLA	4,5	R ←
OLB		
OLC	9,10	R ←
OLD		





CONTROLLER LOGIC

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / Ø	PHASE RECALL	PHASE ACTIVE
1		5		X
2		5	MIN	X
3				X
4				X
5		2	MIN	X
6		2		X
7				
8				

GENERAL NOTES:

1. ANY ACTUATED PHASE FOR WHICH THERE IS NO CALL SHALL BE SKIPPED.
2. PHASES 1 AND 6 ARE IN CONFLICT AND NOT ALLOWED TO TIME CONCUTENTLY.
3. PHASES 1 AND 3 ARE NOT USED IN STAGES: PRE STAGE A2, PRE STAGE B, PRE STAGE C. STAGE 1, STAGE 1A & STAGE 1B.

TYPE OF INTERCONNECT/COMMUNICATION	
NONE	X
CLOSED LOOP	
TWISTED PAIR*	
FIBER OPTIC*	
FIBER OPTIC (ETHERNET)	
RADIO	

TYPE OF COORDINATION	
NONE	
TBC	X
TRAFFIC RESPONSIVE	
ADAPTIVE	
*LOCATION OF MASTER CONTROLLER NO:	S-
SIGNAL SYSTEM #:	SS- -

TYPE OF LIGHTING	
BY OTHER AGENCY	
IN TRAFFIC SIGNAL CABINET	X
IN SEPARATE DOT LIGHTING CABINET	

TYPE OF PRE-EMPT	
NONE	
RAILROAD	
EMERGENCY VEHICLE	X
GTT	
TOMAR	
HARDWIRE	
OTHER	
LIFT BRIDGE	
QUEUE DETECTOR	

DETECTOR LOGIC

DETECTOR INPUT	3	1	7	5	11	9	15	13
PLAN LOOP DETECTOR #(S)	11	22	32	41	51	61		
ASSIGNED PHASE	1	2	3	4	5	6		
OPERATION MODE	VEH	VEH	VEH	VEH	VEH	VEH		
SWITCH								
EXTEND								
DELAY			X	X	X			

19	17	23	21	27	25	31	29	DETECTOR INPUT
								PLAN LOOP DETECTOR #(S)
								ASSIGNED PHASE
								OPERATION MODE
								SWITCH
								EXTEND
								DELAY

DETECTOR INPUT	4	2	8	6	12	10	16	14
PLAN LOOP DETECTOR #(S)	21	31	33	42	52			
ASSIGNED PHASE	2	3	3	4	6			
OPERATION MODE	VEH	VEH	VEH	VEH	VEH			
SWITCH								
EXTEND								
DELAY	X	X	X	X				

20	18	24	22	28	26	32	30	DETECTOR INPUT
								PLAN LOOP DETECTOR #(S)
								ASSIGNED PHASE
								OPERATION MODE
								SWITCH
								EXTEND
								DELAY

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE DETECTOR	A	B	C	D
MOVEMENT				
PHASE	2+6	5+1	4	3

AFTER PREEMPTION SEQUENCE 2+6 OR 5+1, CONTROLLER SHALL RETURN TO PHASES 2+5.

AFTER PREEMPTION SEQUENCE 4, CONTROLLER SHALL RETURN TO PHASE 4.

AFTER PREEMPTION SEQUENCE 3, CONTROLLER SHALL RETURN TO PHASE 3.

USH 18 & MANHATTAN DRIVE
CITY OF WAUKESHA
WAUKESHA COUNTY

SIGNAL NO. S67-0444

CONTROLLER TYPE: TEMP

DATE 4/15

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	TEMPORARY SEQUENCE OF OPERATIONS - ALL STAGES	SHEET 205	E

LEGEND

- WORK AREA
- SIGNAL HEAD, OVERHEAD MOUNT
- CLASS 4 WOOD POLE
- 4X4 WOOD POST OR SKID
- CABLE - OVERHEAD
- SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- NON-INTRUSIVE DETECTION AREA
- B PEDESTRIAN HEAD WITH PUSH BUTTON
- (R) RED ARROW
- (Y) YELLOW ARROW
- (G) GREEN ARROW
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- TEMPORARY LUMINAIRE 250W HPS
- S STOP SIGN
- Y YIELD SIGN
- TRAFFIC SIGNAL HEAD TO BE COVERED AND DE-ENERGIZED
- (X) EVP DESIGNATOR
- EVP DETECTOR HEAD

NOTE: ALL LENSES ARE 12-INCH

SUMMARY OF TEMPORARY SIGNAL QUANTITIES
INTERSECTION OF USH 18 & STH 164/WOLF ROAD

QUANTITY	UNIT	DESCRIPTION
2	EACH	4X4 WOOD POST OR SKID
6	EACH	CLASS 4 WOOD POLE
591	FEET	SPAN WIRE
6	EACH	TEMPORARY LUMINAIRE 250W HPS
1	L.S.	NON-INTRUSIVE DETECTION SYSTEM
1	L.S.	EVP DETECTION SYSTEM

N

WOLF ROAD

USH 18 (E. MORELAND BLVD)

USH 18/STH 164 (E. MORELAND BLVD)

STH 164

POSTED SPEED LIMIT = 25 MPH

POSTED SPEED LIMIT = 45 MPH

POSTED SPEED LIMIT = 35 MPH

POSTED SPEED LIMIT = 45 MPH

SIGN

R/W

WP1 WP2 WP3 WP4 WP5 WP6 WP7 WP8

141+00 142+00 143+00 144+00 145+00 146+00 147+00 +50

285+00 286+00

CONSTRUCTION NOTES:

1. FINAL LOCATION OF SIGNAL POLES, SIGNAL CABINET, & HEADS SHALL BE AS DIRECTED BY THE ENGINEER.
2. GUYING OF POLES IS REQUIRED AND LOCATIONS SHALL BE APPROVED BY THE ENGINEER.
3. ALL NEAR RIGHT TRAFFIC SIGNAL HEADS SHALL BE PLACED BETWEEN THE SPAN WIRE AND TETHER WIRE.
4. NON-INTRUSIVE DETECTION ZONES ARE APPROXIMATE. ZONES SHALL BE ADJUSTED TO MATCH FIELD CONDITIONS.
5. NON-INTRUSIVE DETECTION SHALL BE MOUNTED AT THE HEIGHT RECOMMENDED BY THE MANUFACTURER IN THE SPECIFICATIONS.
6. ADJUST TEMPORARY SIGNALS WITHIN EACH CONSTRUCTION STAGE AS DIRECTED BY THE ENGINEER TO MAINTAIN MUTCD SIGNAL REQUIREMENTS.
7. POLES AND POSTS INSTALLED BEHIND CURBS SHALL BE OFFSET A MINIMUM OF 2 FEET FROM THE FACE OF CURB TO THE SIDE OF THE POST OR POLE.
8. MAINTAIN CROSSWALK ACCESS ACROSS INTERSECTION AT ALL TIMES BY ONLY CLOSING ONE SIDE OR WITH DETOURS AS NEEDED. SEE STAGING PLANS FOR DETAILS. COVER & DE-ENERGIZE PEDESTRIAN HEADS WHEN NOT IN USE.

TRAFFIC CONTROL SIGNAL

USH 18 & STH 164/WOLF ROAD
CITY OF WAUKESHA
WAUKESHA COUNTY

SIGNAL NO. S67-0129

REGION CONTACT: JMM
DESIGNED BY:
REVISED BY: GRAEF

PAGE 1 OF 7

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	TEMPORARY TRAFFIC SIGNAL PLAN - PRE-STAGE 1	SHEET 206	E

LEGEND

- WORK AREA
- SIGNAL HEAD, OVERHEAD MOUNT
- CLASS 4 WOOD POLE
- 4X4 WOOD POST OR SKID
- CABLE - OVERHEAD
- SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- NON-INTRUSIVE DETECTION AREA
- B PEDESTRIAN HEAD WITH PUSH BUTTON
- (R) RED ARROW
- (Y) YELLOW ARROW
- (G) GREEN ARROW
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- TEMPORARY LUMINAIRE 250W HPS
- S STOP SIGN
- Y YIELD SIGN
- TRAFFIC SIGNAL HEAD TO BE COVERED AND DE-ENERGIZED
- (X) EVP DESIGNATOR
- EVP DETECTOR HEAD

NOTE: ALL LENSES ARE 12-INCH

WOLF ROAD

USH 18 (E. MORELAND BLVD)

USH 18/STH 164 (E. MORELAND BLVD)

STH 164

POSTED SPEED LIMIT = 25 MPH

POSTED SPEED LIMIT = 45 MPH

POSTED SPEED LIMIT = 35 MPH

POSTED SPEED LIMIT = 45 MPH

WP1 WP2 WP3 WP4 WP5 WP6 WP7 WP8

142+00 143+00 144+00 145+00 146+00 147+00 286+00

TRAFFIC CONTROL SIGNAL

USH 18 & STH 164/WOLF ROAD
CITY OF WAUKESHA
WAUKESHA COUNTY

SIGNAL NO. S67-0129

REGION CONTACT: JMM
DESIGNED BY:
REVISED BY: GRAEF

PAGE 2 OF 7

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 1	SHEET 207 E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\02_STH164\024002_sp.dgn
PLOT DATE : 4/29/2015
PLOT BY : GRAEF
PLOT NAME :
PLOT SCALE : 40.0000 sf / in.

WISDOT/CADDS SHEET 42

LEGEND

- WORK AREA
- SIGNAL HEAD, OVERHEAD MOUNT
- CLASS 4 WOOD POLE
- 4X4 WOOD POST OF SKID
- CABLE - OVERHEAD
- SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- NON-INTRUSIVE DETECTION AREA
- B PEDESTRIAN HEAD WITH PUSH BUTTON
- (R) RED ARROW
- (Y) YELLOW ARROW
- (G) GREEN ARROW
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- TEMPORARY LUMINAIRE 250W HPS
- S STOP SIGN
- Y YIELD SIGN
- TRAFFIC SIGNAL HEAD TO BE COVERED AND DE-ENERGIZED
- (X) EVP DESIGNATOR
- EVP DETECTOR HEAD

NOTE: ALL LENSES ARE 12-INCH

WOLF ROAD

USH 18 (E. MORELAND BLVD)

USH 18/STH 164 (E. MORELAND BLVD)

STH 164

POSTED SPEED LIMIT = 25 MPH

POSTED SPEED LIMIT = 45 MPH

POSTED SPEED LIMIT = 35 MPH

POSTED SPEED LIMIT = 45 MPH

R/W

SIGN

N

WP1 WP2 WP3 WP4 WP5 WP6 WP7 WP8

142+00 143+00 144+00 145+00 146+00 147+00 286+00

TRAFFIC CONTROL SIGNAL

USH 18 & STH 164/WOLF ROAD
CITY OF WAUKESHA
WAUKESHA COUNTY

SIGNAL NO. S67-0129

REGION CONTACT: JMM
DESIGNED BY:
REVISED BY: GRAEF

PAGE 3 OF 7

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 1A	SHEET 208	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\02_STH164\024003_sp.dgn
PLOT DATE : 4/29/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 40.0000 sf / in.

WISDOT/CADDS SHEET 42

LEGEND

- WORK AREA
- SIGNAL HEAD, OVERHEAD MOUNT
- CLASS 4 WOOD POLE
- 4X4 WOOD POST OR SKID
- CABLE - OVERHEAD
- SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- NON-INTRUSIVE DETECTION AREA
- PEDESTRIAN HEAD WITH PUSH BUTTON
- RED ARROW
- YELLOW ARROW
- GREEN ARROW
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- TEMPORARY LUMINAIRE 250W HPS
- STOP SIGN
- YIELD SIGN
- TRAFFIC SIGNAL HEAD TO BE COVERED AND DE-ENERGIZED
- EVP DESIGNATOR
- EVP DETECTOR HEAD

NOTE: ALL LENSES ARE 12-INCH

WOLF ROAD

USH 18 (E. MORELAND BLVD)

USH 18/STH 164 (E. MORELAND BLVD)

STH 164

POSTED SPEED LIMIT = 45 MPH

POSTED SPEED LIMIT = 35 MPH

POSTED SPEED LIMIT = 25 MPH

SIGN

R/W

N

TRAFFIC CONTROL SIGNAL

USH 18 & STH 164/WOLF ROAD
CITY OF WAUKESHA
WAUKESHA COUNTY

SIGNAL NO. S67-0129

REGION CONTACT: JMM
DESIGNED BY:
REVISED BY: GRAEF

PAGE 4 OF 7

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 2	SHEET 209	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\02_STH164\024004_sp.dgn
PLOT DATE : 4/29/2015
PLOT BY : GRAEF
PLOT NAME :
PLOT SCALE : 40.0000 sf / in.

WISDOT/CADDS SHEET 42

LEGEND

- WORK AREA
- SIGNAL HEAD, OVERHEAD MOUNT
- CLASS 4 WOOD POLE
- 4X4 WOOD POST OF SKID
- CABLE - OVERHEAD
- SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- NON-INTRUSIVE DETECTION AREA
- B PEDESTRIAN HEAD WITH PUSH BUTTON
- (R) RED ARROW
- (Y) YELLOW ARROW
- (G) GREEN ARROW
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- TEMPORARY LUMINAIRE 250W HPS
- S STOP SIGN
- Y YIELD SIGN
- TRAFFIC SIGNAL HEAD TO BE COVERED AND DE-ENERGIZED
- (X) EVP DESIGNATOR
- EVP DETECTOR HEAD

NOTE: ALL LENSES ARE 12-INCH

WOLF ROAD

USH 18 (E. MORELAND BLVD)

USH 18/STH 164 (E. MORELAND BLVD)

STH 164

POSTED SPEED LIMIT = 25 MPH

POSTED SPEED LIMIT = 45 MPH

POSTED SPEED LIMIT = 35 MPH

WP8: HEADS 28,29 TO BE REMOVED UNTIL ISLAND IS RECONSTRUCTED

TRAFFIC CONTROL SIGNAL

USH 18 & STH 164/WOLF ROAD
CITY OF WAUKESHA
WAUKESHA COUNTY

SIGNAL NO. S67-0129

REGION CONTACT: JMM
DESIGNED BY:
REVISED BY: GRAEF

PAGE 5 OF 7

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 2B	SHEET 210	E

LEGEND

- WORK AREA
- SIGNAL HEAD, OVERHEAD MOUNT
- CLASS 4 WOOD POLE
- 4X4 WOOD POST OR SKID
- CABLE - OVERHEAD
- SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- NON-INTRUSIVE DETECTION AREA
- B PEDESTRIAN HEAD WITH PUSH BUTTON
- (R) RED ARROW
- (Y) YELLOW ARROW
- (G) GREEN ARROW
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- TEMPORARY LUMINAIRE 250W HPS
- S STOP SIGN
- Y YIELD SIGN
- TRAFFIC SIGNAL HEAD TO BE COVERED AND DE-ENERGIZED
- (X) EVP DESIGNATOR
- EVP DETECTOR HEAD

NOTE: ALL LENSES ARE 12-INCH

WOLF ROAD

USH 18 (E. MORELAND BLVD)

USH 18/STH 164 (E. MORELAND BLVD)

STH 164

SEE MONOTUBE CONSTRUCTION NOTE

POSTED SPEED LIMIT = 25 MPH

POSTED SPEED LIMIT = 45 MPH

POSTED SPEED LIMIT = 35 MPH

MONOTUBE CONSTRUCTION NOTE:

THE TEMPORARY TRAFFIC SIGNAL HEADS INSTALLED ON THE TEMPORARY TRAFFIC SIGNAL SPAN WIRE SHALL BE ACTIVE UNTIL THE MONOTUBE ARMS IN FRONT OF THE TRAFFIC SIGNAL SPAN WIRE ARE INSTALLED. THE CONTRACTOR SHALL OPERATE THE PERMANENT TRAFFIC SIGNAL HEADS ON THE MONOTUBE POLES WITH THE TEMPORARY TRAFFIC SIGNAL INSTALLATION ONCE THE MONOTUBE ARM IS INSTALLED IN FRONT OF THE TEMPORARY TRAFFIC SIGNAL SPAN WIRE. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO DETERMINE THE MOST APPROPRIATE METHOD TO FEED THE PERMANENT TRAFFIC SIGNAL HEADS BEING USED WITH THE TEMPORARY TRAFFIC SIGNAL INSTALLATION. THEN CONTRACTOR SHALL HAVE THE TRAFFIC SIGNAL HEADS ON THE MONOTUBE TRAFFIC SIGNALS OPERATIONAL WITH THE TEMPORARY TRAFFIC SIGNAL WITHIN 2 HOURS OF THE MONOTUBE INSTALLATION.

ALL PERMANENT TRAFFIC SIGNAL HEADS NOT BEING USED SHALL BE COVERED AND TURNED UNTIL THE PERMANENT TRAFFIC SIGNAL INSTALLATION IS ACTIVATED.

TRAFFIC CONTROL SIGNAL

USH 18 & STH 164/WOLF ROAD
CITY OF WAUKESHA
WAUKESHA COUNTY

SIGNAL NO. S67-0129

REGION CONTACT: JMM
DESIGNED BY:
REVISED BY: GRAEF

PAGE 6 OF 7

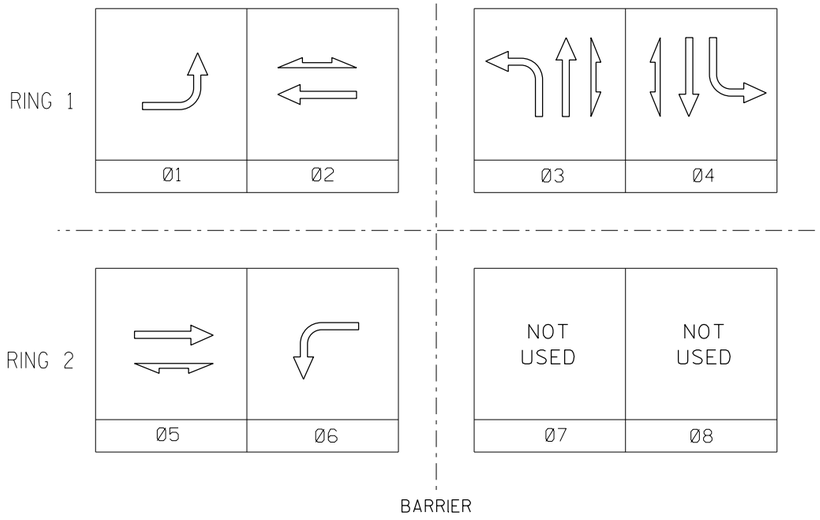
PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 2C & 2D	SHEET 211	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\02_STH164\024006_sp.dgn
PLOT DATE : 4/29/2015
PLOT BY : GRAEF
PLOT NAME :
PLOT SCALE : 40.0000 sf / in.

WISDOT/CADDS SHEET 42

	HEAD NUMBERS	FLASH
Ø1	4,5,6	R ←
Ø2	7,8,9	R ←
Ø3	14,15,16,17,18,19	A
Ø4	20,21,22	R
Ø5	1,2,3	R
Ø6	10,11,12,13	R ←
Ø7		
Ø8		
Ø2P	25,26	
Ø3P	27,28	
Ø4P	23,24	
Ø5P	29,30	
OLA		
OLB		
OLC		
OLD		

A = R, R ←





CONTROLLER LOGIC

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / Ø	PHASE RECALL	PHASE ACTIVE
1		5		X
2		5	MIN	X
3				X
4				X
5		2	MIN	X
6		2		X
7				
8				

GENERAL NOTES:

1. ANY ACTUATED PHASE FOR WHICH THERE IS NO CALL SHALL BE SKIPPED.
2. PHASES 1 AND 6 ARE IN CONFLICT AND NOT ALLOWED TO TIME CONCUTENTLY.

TYPE OF INTERCONNECT/COMMUNICATION	
NONE	X
CLOSED LOOP	
TWISTED PAIR*	
FIBER OPTIC*	
FIBER OPTIC (ETHERNET)	
RADIO	

TYPE OF COORDINATION	
NONE	
TBC	X
TRAFFIC RESPONSIVE	
ADAPTIVE	
*LOCATION OF MASTER CONTROLLER NO:	S-
SIGNAL SYSTEM #:	SS- -

TYPE OF LIGHTING	
BY OTHER AGENCY	
IN TRAFFIC SIGNAL CABINET	X
IN SEPARATE DOT LIGHTING CABINET	

TYPE OF PRE-EMPT	
NONE	
RAILROAD	
EMERGENCY VEHICLE	X
GTT	
TOMAR	
HARDWIRE	
OTHER	
LIFT BRIDGE	
QUEUE DETECTOR	

DETECTOR LOGIC

DETECTOR INPUT	3	1	7	5	11	9	15	13
PLAN LOOP DETECTOR #(S)	11	22	32	41	43	52		
ASSIGNED PHASE	1	2	3	4	4	5		
OPERATION MODE	VEH	VEH	VEH	VEH	VEH	VEH		
SWITCH								
EXTEND								
DELAY			X	X	X			

19	17	23	21	27	25	31	29	DETECTOR INPUT
								PLAN LOOP DETECTOR #(S)
								ASSIGNED PHASE
								OPERATION MODE
								SWITCH
								EXTEND
								DELAY

DETECTOR INPUT	4	2	8	6	12	10	16	14
PLAN LOOP DETECTOR #(S)	21	31	33	42	51	61		
ASSIGNED PHASE	2	3	3	4	5	6		
OPERATION MODE	VEH	VEH	VEH	VEH	VEH	VEH		
SWITCH								
EXTEND								
DELAY	X	X	X	X	X			

20	18	24	22	28	26	32	30	DETECTOR INPUT
								PLAN LOOP DETECTOR #(S)
								ASSIGNED PHASE
								OPERATION MODE
								SWITCH
								EXTEND
								DELAY

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE DETECTOR	A	B	C	D
MOVEMENT	←	→	↓	↑
PHASE	2+6	5+1	4	3

AFTER PREEMPTION SEQUENCE 2+6 OR 5+1, CONTROLLER SHALL RETURN TO PHASES 2+5.

AFTER PREEMPTION SEQUENCE 4, CONTROLLER SHALL RETURN TO PHASE 4.

AFTER PREEMPTION SEQUENCE 3, CONTROLLER SHALL RETURN TO PHASE 3.

USH 18 (MORELAND BLVD) &
STH 164/WOLF ROAD
CITY OF WAUKESHA
WAUKESHA COUNTY

SIGNAL NO. S67-0129

CONTROLLER TYPE: TEMP

DATE 4/15

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	TEMPORARY SEQUENCE OF OPERATIONS - ALL STAGES	SHEET 212	E

LEGEND

- WORK AREA
- SIGNAL HEAD, OVERHEAD MOUNT
- CLASS 4 WOOD POLE
- 4X4 WOOD POST OR SKID
- CABLE - OVERHEAD
- SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- NON-INTRUSIVE DETECTION AREA
- NOTE: ALL LENSES ARE 12-INCH
- (R) RED ARROW
- (Y) YELLOW ARROW
- (G) GREEN ARROW
- B PEDESTRIAN HEAD WITH PUSH BUTTON
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- TEMPORARY LUMINAIRE 250W HPS
- Y YIELD SIGN
- TRAFFIC SIGNAL HEAD TO BE COVERED AND DE-ENERGIZED
- (X) EVP DESIGNATOR
- EVP DETECTOR HEAD

SUMMARY OF TEMPORARY SIGNAL QUANTITIES
INTERSECTION OF USH 18 & MAIN STREET

QUANTITY	UNIT	DESCRIPTION
1	EACH	4X4 WOOD POST OR SKID
8	EACH	CLASS 4 WOOD POLE
573	FEET	SPAN WIRE
9	EACH	TEMPORARY LUMINAIRE 250W HPS
1	L.S.	NON-INTRUSIVE DETECTION SYSTEM
1	L.S.	EVP DETECTION SYSTEM

N

USH 18/STH 164 (E. MORELAND BLVD)

POSTED SPEED LIMIT = 45 MPH

POSTED SPEED LIMIT = 30 MPH

MAIN STREET

R/W

SIGN

WP1 WP2 WP3 WP4 WP5 WP6 WP7 WP8 WP9

171+00 +50 172+00 +50 173+00 +50 174+00 +50 175+00 +50 176+00 +50 177+00

CONSTRUCTION NOTES:

1. FINAL LOCATION OF SIGNAL POLES, SIGNAL CABINET, & HEADS SHALL BE AS DIRECTED BY THE ENGINEER.
2. GUYING OF POLES IS REQUIRED AND LOCATIONS SHALL BE APPROVED BY THE ENGINEER.
3. ALL NEAR RIGHT TRAFFIC SIGNAL HEADS SHALL BE PLACED BETWEEN THE SPAN WIRE AND TETHER WIRE.
4. NON-INTRUSIVE DETECTION ZONES ARE APPROXIMATE. ZONES SHALL BE ADJUSTED TO MATCH FIELD CONDITIONS.
5. NON-INTRUSIVE DETECTION SHALL BE MOUNTED AT THE HEIGHT RECOMMENDED BY THE MANUFACTURER IN THE SPECIFICATIONS.
6. ADJUST TEMPORARY SIGNALS WITHIN EACH CONSTRUCTION STAGE AS DIRECTED BY THE ENGINEER TO MAINTAIN MUTCD SIGNAL REQUIREMENTS.
7. POLES AND POSTS INSTALLED BEHIND CURBS SHALL BE OFFSET A MINIMUM OF 2 FEET FROM THE FACE OF CURB TO THE SIDE OF POST OR POLE.
8. MAINTAIN CROSSWALK ACCESS ACROSS INTERSECTION AT ALL TIMES BY ONLY CLOSING ONE SIDE OR WITH DETOURS AS NEEDED. SEE STAGING PLANS FOR DETAILS. COVER & DE-ENERGIZE PEDESTRIAN HEADS WHEN NOT IN USE.

TRAFFIC CONTROL SIGNAL

USH 18/STH 164 & MAIN STREET
CITY OF WAUKESHA
WAUKESHA COUNTY

SIGNAL NO. S67-0258

REGION CONTACT: JMM
DESIGNED BY:
REVISED BY: GRAEF

PAGE 1 OF 6

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	TEMPORARY TRAFFIC SIGNAL PLAN - PRE-STAGE 1	SHEET 213	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\03_Main\024001_sp.dgn
PLOT DATE : 4/29/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 40.0000 sf / in.

WISDOT/CADDS SHEET 42

LEGEND

- WORK AREA
- SIGNAL HEAD, OVERHEAD MOUNT
- CLASS 4 WOOD POLE
- 4X4 WOOD POST OR SKID
- CABLE - OVERHEAD
- SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- NON-INTRUSIVE DETECTION AREA
- NOTE: ALL LENSES ARE 12-INCH
- (R) RED ARROW
- (Y) YELLOW ARROW
- (G) GREEN ARROW
- PEDESTRIAN HEAD WITH PUSH BUTTON
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- TEMPORARY LUMINAIRE 250W HPS
- Y YIELD SIGN
- TRAFFIC SIGNAL HEAD TO BE COVERED AND DE-ENERGIZED
- (X) EVP DESIGNATOR
- EVP DETECTOR HEAD

N

USH 18/STH 164 (E. MORELAND BLVD)

USH 18/STH 164 (E. MORELAND BLVD)

MAIN STREET

POSTED SPEED LIMIT = 45 MPH

POSTED SPEED LIMIT = 45 MPH

POSTED SPEED LIMIT = 30 MPH

POSTED SPEED LIMIT = 25 MPH

R/W

SIGN

SS

SAN

MH

WP1 WP2 WP3 WP4 WP5 WP6 WP7 WP8 WP9

171+00 +50 172+00 +50 173+00 +50 174+00 +50 175+00 +50 176+00 +50 177+00

TRAFFIC CONTROL SIGNAL

USH 18/STH 164 & MAIN STREET
CITY OF WAUKESHA
WAUKESHA COUNTY

SIGNAL NO. S67-0258

REGION CONTACT: JMM
DESIGNED BY:
REVISED BY: GRAEF

PAGE 2 OF 6

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 1	SHEET 214 E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\03_Main\024002_sp.dgn PLOT DATE : 4/29/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 40.0000 sf / in.

WISDOT/CADDS SHEET 42

LEGEND

- WORK AREA
- SIGNAL HEAD, OVERHEAD MOUNT
- CLASS 4 WOOD POLE
- 4X4 WOOD POST OR SKID
- CABLE - OVERHEAD
- SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- NON-INTRUSIVE DETECTION AREA
- NOTE: ALL LENSES ARE 12-INCH
- (R) RED ARROW
- (Y) YELLOW ARROW
- (G) GREEN ARROW
- PEDESTRIAN HEAD WITH PUSH BUTTON
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- TEMPORARY LUMINAIRE 250W HPS
- Y YIELD SIGN
- TRAFFIC SIGNAL HEAD TO BE COVERED AND DE-ENERGIZED
- (X) EVP DESIGNATOR
- EVP DETECTOR HEAD

USH 18/STH 164 (E. MORELAND BLVD)

USH 18/STH 164 (E. MORELAND BLVD)

MAIN STREET

POSTED SPEED LIMIT = 45 MPH

POSTED SPEED LIMIT = 45 MPH

POSTED SPEED LIMIT = 30 MPH

R/W

SIGN

WP1 WP2 WP3 WP4 WP5 WP6 WP7 WP8 WP9

171+00 +50 172+00 +50 173+00 +50 174+00 +50 175+00 +50 176+00 +50 177+00

N

TRAFFIC CONTROL SIGNAL

USH 18/STH 164 & MAIN STREET
CITY OF WAUKESHA
WAUKESHA COUNTY

SIGNAL NO. S67-0258

REGION CONTACT: JMM
DESIGNED BY:
REVISED BY: GRAEF

PAGE 3 OF 6

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 1A	SHEET 215	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\03_Main\024003_sp.dgn PLOT DATE : 4/29/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 40.0000 sf / in.

WISDOT/CADDS SHEET 42

LEGEND

- WORK AREA
- SIGNAL HEAD, OVERHEAD MOUNT
- CLASS 4 WOOD POLE
- 4X4 WOOD POST OR SKID
- CABLE - OVERHEAD
- SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- NON-INTRUSIVE DETECTION AREA

NOTE: ALL LENSES ARE 12-INCH

- (R) RED ARROW
- (Y) YELLOW ARROW
- (G) GREEN ARROW
- PEDESTRIAN HEAD WITH PUSH BUTTON
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- TEMPORARY LUMINAIRE 250W HPS
- Y YIELD SIGN
- TRAFFIC SIGNAL HEAD TO BE COVERED AND DE-ENERGIZED
- (X) EVP DESIGNATOR
- EVP DETECTOR HEAD

USH 18/STH 164 (E. MORELAND BLVD)

USH 18/STH 164 (E. MORELAND BLVD)

MAIN STREET

R/W

POSTED SPEED LIMIT = 25 MPH

POSTED SPEED LIMIT = 45 MPH

POSTED SPEED LIMIT = 30 MPH

SIGN

WP1 WP2 WP3 WP4 WP5 WP6 WP7 WP8 WP9

171+00 +50 172+00 +50 173+00 +50 174+00 +50 175+00 +50 176+00 +50 177+00

N

TRAFFIC CONTROL SIGNAL

USH 18/STH 164 & MAIN STREET
CITY OF WAUKESHA
WAUKESHA COUNTY

SIGNAL NO. S67-0258

REGION CONTACT: JMM
DESIGNED BY:
REVISED BY: GRAEF

PAGE 4 OF 6

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 2	SHEET 216 E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\03_Main\024004_sp.dgn PLOT DATE : 4/29/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 40.0000 sf / in.

WISDOT/CADDS SHEET 42

LEGEND

- WORK AREA
- SIGNAL HEAD, OVERHEAD MOUNT
- CLASS 4 WOOD POLE
- 4X4 WOOD POST OR SKID
- CABLE - OVERHEAD
- SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- NON-INTRUSIVE DETECTION AREA
- NOTE: ALL LENSES ARE 12-INCH
- (R) RED ARROW
- (Y) YELLOW ARROW
- (G) GREEN ARROW
- B PEDESTRIAN HEAD WITH PUSH BUTTON
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- TEMPORARY LUMINAIRE 250W HPS
- Y YIELD SIGN
- TRAFFIC SIGNAL HEAD TO BE COVERED AND DE-ENERGIZED
- (X) EVP DESIGNATOR
- EVP DETECTOR HEAD

USH 18/STH 164 (E. MORELAND BLVD)

USH 18/STH 164 (E. MORELAND BLVD)

MAIN STREET

R/W

POSTED SPEED LIMIT = 45 MPH

POSTED SPEED LIMIT = 30 MPH

SIGN

WP1 WP2 WP3 WP4 WP5 WP6 WP7 WP8 WP9

171+00 +50 172+00 +50 173+00 +50 174+00 +50 175+00 +50 176+00 +50 177+00

SEE MONOTUBE CONSTRUCTION NOTE

SEE MONOTUBE CONSTRUCTION NOTE

MONOTUBE CONSTRUCTION NOTE:

THE TEMPORARY TRAFFIC SIGNAL HEADS INSTALLED ON THE TEMPORARY TRAFFIC SIGNAL SPAN WIRE SHALL BE ACTIVE UNTIL THE MONOTUBE ARMS IN FRONT OF THE TRAFFIC SIGNAL SPAN WIRE ARE INSTALLED. THE CONTRACTOR SHALL OPERATE THE PERMANENT TRAFFIC SIGNAL HEADS ON THE MONOTUBE POLES WITH THE TEMPORARY TRAFFIC SIGNAL INSTALLATION ONCE THE MONOTUBE ARM IS INSTALLED IN FRONT OF THE TEMPORARY TRAFFIC SIGNAL SPAN WIRE. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO DETERMINE THE MOST APPROPRIATE METHOD TO FEED THE PERMANENT TRAFFIC SIGNAL HEADS BEING USED WITH THE TEMPORARY TRAFFIC SIGNAL INSTALLATION. THEN CONTRACTOR SHALL HAVE THE TRAFFIC SIGNAL HEADS ON THE MONOTUBE TRAFFIC SIGNALS OPERATIONAL WITH THE TEMPORARY TRAFFIC SIGNAL WITHIN 2 HOURS OF THE MONOTUBE INSTALLATION.

ALL PERMANENT TRAFFIC SIGNAL HEADS NOT BEING USED SHALL BE COVERED AND TURNED UNTIL THE PERMANENT TRAFFIC SIGNAL INSTALLATION IS ACTIVATED.

TRAFFIC CONTROL SIGNAL

USH 18/STH 164 & MAIN STREET
CITY OF WAUKESHA
WAUKESHA COUNTY

SIGNAL NO. S67-0258

REGION CONTACT: JMM
DESIGNED BY:
REVISED BY: GRAEF

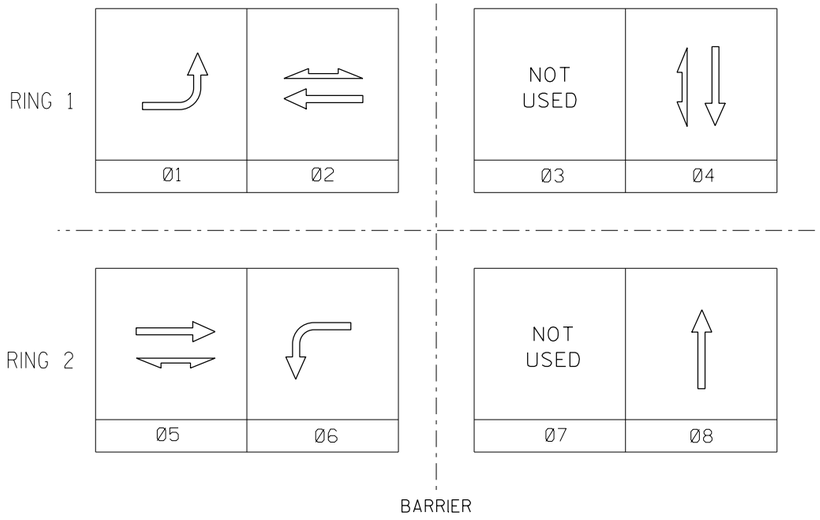
PAGE 5 OF 6

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 2B, 2C, & 2D	SHEET 217	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\03_Main\024005_sp.dgn
PLOT DATE : 4/29/2015
PLOT BY : GRAEF
PLOT NAME :
PLOT SCALE : 40.0000 sf / in.
WISDOT/CADDS SHEET 42

2

	HEAD NUMBERS	FLASH
Ø1	4,5,6	R
Ø2	7,8,9	R
Ø3		
Ø4	17,18,19	R
Ø5	1,2,3	R
Ø6	10,11,12,13	R
Ø7		
Ø8	14,15,16	R
Ø2P	22,23	
Ø4P	20,21	
Ø5P	24,25	
Ø7P		
OLA		
OLB		
OLC		
OLD		





CONTROLLER LOGIC

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / Ø	PHASE RECALL	PHASE ACTIVE
1		5		X
2		5	MIN	X
3				
4		8		X
5		2	MIN	X
6		2		X
7				
8		4		X

GENERAL NOTES:

1. ANY ACTUATED PHASE FOR WHICH THERE IS NO CALL SHALL BE SKIPPED.
2. PHASES 1 AND 6 ARE IN CONFLICT AND NOT ALLOWED TO TIME CONCUTENTLY.

TYPE OF INTERCONNECT/COMMUNICATION	
NONE	X
CLOSED LOOP	
TWISTED PAIR*	
FIBER OPTIC*	
FIBER OPTIC (ETHERNET)	
RADIO	

TYPE OF COORDINATION	
NONE	
TBC	X
TRAFFIC RESPONSIVE	
ADAPTIVE	
*LOCATION OF MASTER CONTROLLER NO:	S-
SIGNAL SYSTEM #:	SS- -

TYPE OF LIGHTING	
BY OTHER AGENCY	
IN TRAFFIC SIGNAL CABINET	X
IN SEPARATE DOT LIGHTING CABINET	

TYPE OF PRE-EMPT	
NONE	
RAILROAD	
EMERGENCY VEHICLE	X
GTT	
TOMAR	
HARDWIRE	
OTHER	
LIFT BRIDGE	
QUEUE DETECTOR	

DETECTOR LOGIC

DETECTOR INPUT	3	1	7	5	11	9	15	13
PLAN LOOP DETECTOR #(S)	11	22	41	51	53	81		
ASSIGNED PHASE	1	2	4	5	5	8		
OPERATION MODE	VEH	VEH	VEH	VEH	VEH	VEH		
SWITCH								
EXTEND								
DELAY			X	X		X		

19	17	23	21	27	25	31	29	DETECTOR INPUT
								PLAN LOOP DETECTOR #(S)
								ASSIGNED PHASE
								OPERATION MODE
								SWITCH
								EXTEND
								DELAY

DETECTOR INPUT	4	2	8	6	12	10	16	14
PLAN LOOP DETECTOR #(S)	21	23	42	52	61	82		
ASSIGNED PHASE	2	2	4	5	6	8		
OPERATION MODE	VEH	VEH	VEH	VEH	VEH	VEH		
SWITCH								
EXTEND								
DELAY	X		X			X		

20	18	24	22	28	26	32	30	DETECTOR INPUT
								PLAN LOOP DETECTOR #(S)
								ASSIGNED PHASE
								OPERATION MODE
								SWITCH
								EXTEND
								DELAY

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE DETECTOR	A	B	C	D
MOVEMENT				
PHASE	2+6	5+1	4	8

AFTER PREEMPTION SEQUENCE 2+6 OR 5+1, CONTROLLER SHALL RETURN TO PHASES 2+5.

AFTER PREEMPTION SEQUENCE 4 OR 8, CONTROLLER SHALL RETURN TO PHASES 4+8.

USH 18/STH 164 & MAIN STREET
CITY OF WAUKESHA
WAUKESHA COUNTY

SIGNAL NO. S67-0258

CONTROLLER TYPE: TEMP

DATE 4/15

PAGE NO. 6 OF 6

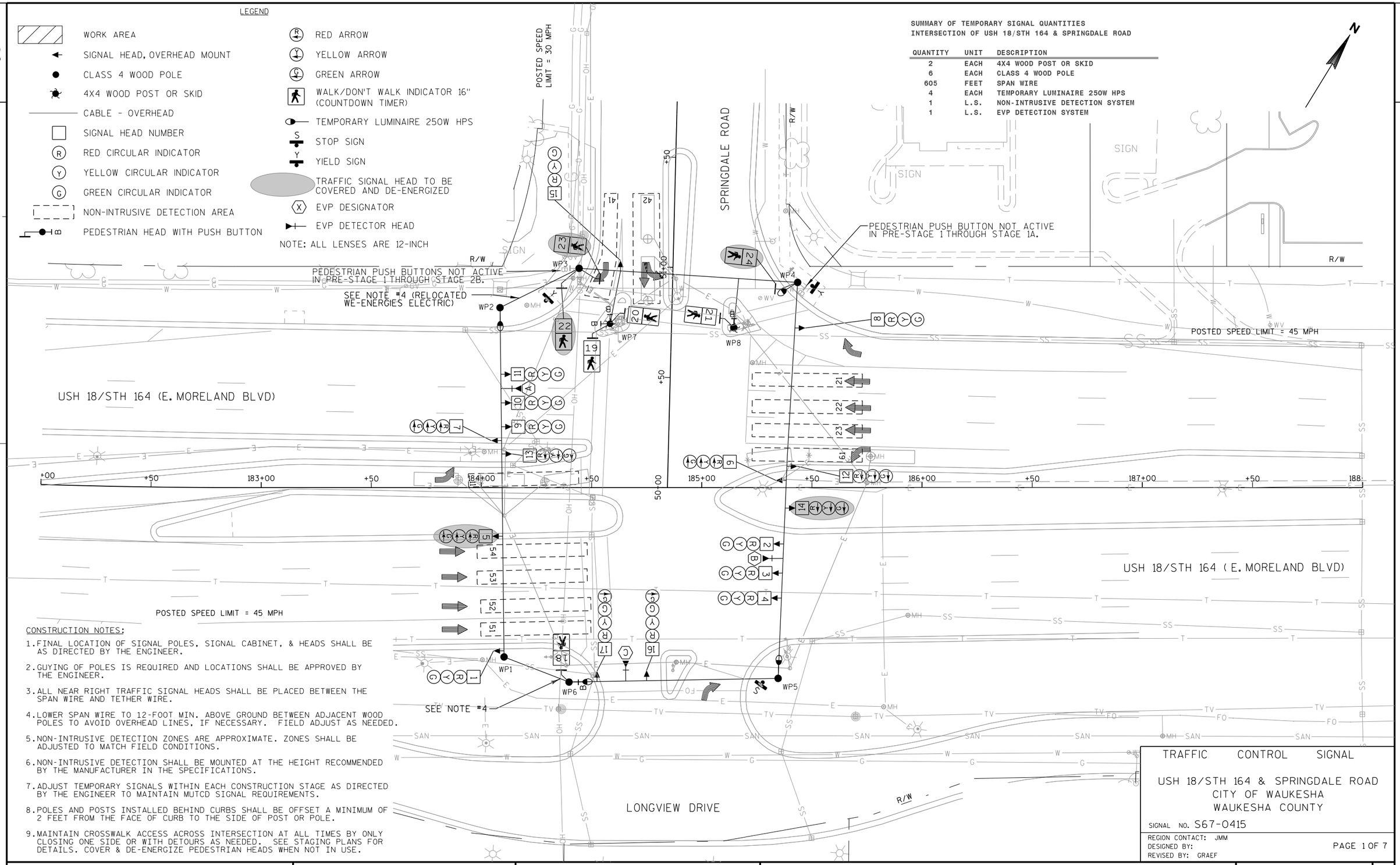
LEGEND

- WORK AREA
- SIGNAL HEAD, OVERHEAD MOUNT
- CLASS 4 WOOD POLE
- 4X4 WOOD POST OR SKID
- CABLE - OVERHEAD
- SIGNAL HEAD NUMBER
- RED CIRCULAR INDICATOR
- YELLOW CIRCULAR INDICATOR
- GREEN CIRCULAR INDICATOR
- NON-INTRUSIVE DETECTION AREA
- PEDESTRIAN HEAD WITH PUSH BUTTON
- RED ARROW
- YELLOW ARROW
- GREEN ARROW
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- TEMPORARY LUMINAIRE 250W HPS
- STOP SIGN
- YIELD SIGN
- TRAFFIC SIGNAL HEAD TO BE COVERED AND DE-ENERGIZED
- EVP DESIGNATOR
- EVP DETECTOR HEAD

NOTE: ALL LENSES ARE 12-INCH

SUMMARY OF TEMPORARY SIGNAL QUANTITIES
INTERSECTION OF USH 18/STH 164 & SPRINGDALE ROAD

QUANTITY	UNIT	DESCRIPTION
2	EACH	4X4 WOOD POST OR SKID
6	EACH	CLASS 4 WOOD POLE
605	FEET	SPAN WIRE
4	EACH	TEMPORARY LUMINAIRE 250W HPS
1	L.S.	NON-INTRUSIVE DETECTION SYSTEM
1	L.S.	EVP DETECTION SYSTEM



CONSTRUCTION NOTES:

1. FINAL LOCATION OF SIGNAL POLES, SIGNAL CABINET, & HEADS SHALL BE AS DIRECTED BY THE ENGINEER.
2. GUYING OF POLES IS REQUIRED AND LOCATIONS SHALL BE APPROVED BY THE ENGINEER.
3. ALL NEAR RIGHT TRAFFIC SIGNAL HEADS SHALL BE PLACED BETWEEN THE SPAN WIRE AND TETHER WIRE.
4. LOWER SPAN WIRE TO 12-FOOT MIN. ABOVE GROUND BETWEEN ADJACENT WOOD POLES TO AVOID OVERHEAD LINES, IF NECESSARY. FIELD ADJUST AS NEEDED.
5. NON-INTRUSIVE DETECTION ZONES ARE APPROXIMATE. ZONES SHALL BE ADJUSTED TO MATCH FIELD CONDITIONS.
6. NON-INTRUSIVE DETECTION SHALL BE MOUNTED AT THE HEIGHT RECOMMENDED BY THE MANUFACTURER IN THE SPECIFICATIONS.
7. ADJUST TEMPORARY SIGNALS WITHIN EACH CONSTRUCTION STAGE AS DIRECTED BY THE ENGINEER TO MAINTAIN MUTCD SIGNAL REQUIREMENTS.
8. POLES AND POSTS INSTALLED BEHIND CURBS SHALL BE OFFSET A MINIMUM OF 2 FEET FROM THE FACE OF CURB TO THE SIDE OF POST OR POLE.
9. MAINTAIN CROSSWALK ACCESS ACROSS INTERSECTION AT ALL TIMES BY ONLY CLOSING ONE SIDE OR WITH DETOURS AS NEEDED. SEE STAGING PLANS FOR DETAILS. COVER & DE-ENERGIZE PEDESTRIAN HEADS WHEN NOT IN USE.

TRAFFIC CONTROL SIGNAL

USH 18/STH 164 & SPRINGDALE ROAD
CITY OF WAUKESHA
WAUKESHA COUNTY

SIGNAL NO. S67-0415

REGION CONTACT: JMM
DESIGNED BY:
REVISED BY: GRAEF

PAGE 1 OF 7

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	TEMPORARY TRAFFIC SIGNAL PLAN - PRE-STAGE 1	SHEET 219	E

LEGEND

- WORK AREA
- SIGNAL HEAD, OVERHEAD MOUNT
- CLASS 4 WOOD POLE
- 4X4 WOOD POST OR SKID
- CABLE - OVERHEAD
- SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- NON-INTRUSIVE DETECTION AREA
- B PEDESTRIAN HEAD WITH PUSH BUTTON
- (R) RED ARROW
- (Y) YELLOW ARROW
- (G) GREEN ARROW
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- TEMPORARY LUMINAIRE 250W HPS
- S STOP SIGN
- Y YIELD SIGN
- TRAFFIC SIGNAL HEAD TO BE COVERED AND DE-ENERGIZED
- (X) EVP DESIGNATOR
- EVP DETECTOR HEAD

NOTE: ALL LENSES ARE 12-INCH

N

POSTED SPEED LIMIT = 30 MPH

SPRINGDALE ROAD

R/W

SIGN

PEDESTRIAN PUSH BUTTONS NOT ACTIVE IN PRE-STAGE 1 THROUGH STAGE 2B.

PEDESTRIAN PUSH BUTTON NOT ACTIVE IN PRE-STAGE 1 THROUGH STAGE 1A.

POSTED SPEED LIMIT = 45 MPH

USH 18/STH 164 (E. MORELAND BLVD)

WP1 WP2 WP3 WP4 WP5 WP6 WP7 WP8

+00 +50 183+00 +50 184+00 +50 50+00 185+00 +50 186+00 +50 187+00 +50 188

LONGVIEW DRIVE

TRAFFIC CONTROL SIGNAL

USH 18/STH 164 & SPRINGDALE ROAD
CITY OF WAUKESHA
WAUKESHA COUNTY

SIGNAL NO. S67-0415

REGION CONTACT: JMM
DESIGNED BY:
REVISED BY: GRAEF

PAGE 2 OF 7

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 1	SHEET 220	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\04_Springdale\024002_sp.dgn PLOT DATE : 4/29/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 40.0000 sf / in.

WISDOT/CADDS SHEET 42

LEGEND

- WORK AREA
- SIGNAL HEAD, OVERHEAD MOUNT
- CLASS 4 WOOD POLE
- 4X4 WOOD POST OR SKID
- CABLE - OVERHEAD
- SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- NON-INTRUSIVE DETECTION AREA
- B PEDESTRIAN HEAD WITH PUSH BUTTON
- (R) RED ARROW
- (Y) YELLOW ARROW
- (G) GREEN ARROW
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- TEMPORARY LUMINAIRE 250W HPS
- S STOP SIGN
- Y YIELD SIGN
- TRAFFIC SIGNAL HEAD TO BE COVERED AND DE-ENERGIZED
- (X) EVP DESIGNATOR
- EVP DETECTOR HEAD

NOTE: ALL LENSES ARE 12-INCH

POSTED SPEED LIMIT = 30 MPH

SPRINGDALE ROAD

PEDESTRIAN PUSH BUTTONS NOT ACTIVE IN PRE-STAGE 1 THROUGH STAGE 2B.

PEDESTRIAN PUSH BUTTON NOT ACTIVE IN PRE-STAGE 1 THROUGH STAGE 1A.

POSTED SPEED LIMIT = 45 MPH

USH 18/STH 164 (E. MORELAND BLVD)

USH 18/STH 164 (E. MORELAND BLVD)

LONGVIEW DRIVE

WP1 WP2 WP3 WP4 WP5 WP6 WP7 WP8

SIGN

R/W

+00 +50 183+00 +50 184+00 +50 185+00 +50 186+00 +50 187+00 +50 188

50+00 51+00

TRAFFIC CONTROL SIGNAL

USH 18/STH 164 & SPRINGDALE ROAD
CITY OF WAUKESHA
WAUKESHA COUNTY

SIGNAL NO. S67-0415

REGION CONTACT: JMM
DESIGNED BY:
REVISED BY: GRAEF

PAGE 3 OF 7

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 1A	SHEET 221	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\04_Springdale\024003_sp.dgn
PLOT DATE : 4/29/2015
PLOT BY : GRAEF
PLOT NAME :
PLOT SCALE : 40.0000 sf / in.

WISDOT/CADDS SHEET 42

LEGEND

- WORK AREA
- SIGNAL HEAD, OVERHEAD MOUNT
- CLASS 4 WOOD POLE
- 4X4 WOOD POST OR SKID
- CABLE - OVERHEAD
- SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- NON-INTRUSIVE DETECTION AREA
- B PEDESTRIAN HEAD WITH PUSH BUTTON
- (R) RED ARROW
- (Y) YELLOW ARROW
- (G) GREEN ARROW
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- TEMPORARY LUMINAIRE 250W HPS
- S STOP SIGN
- Y YIELD SIGN
- TRAFFIC SIGNAL HEAD TO BE COVERED AND DE-ENERGIZED
- (X) EVP DESIGNATOR
- EVP DETECTOR HEAD

NOTE: ALL LENSES ARE 12-INCH

POSTED SPEED LIMIT = 30 MPH

SPRINGDALE ROAD

R/W

SIGN

PEDESTRIAN PUSH BUTTONS NOT ACTIVE IN PRE-STAGE 1 THROUGH STAGE 2B.

REMOVE WP8, HEAD 21 AND ASSOCIATED PEDESTRIAN PUSH BUTTON AT THE BEGINNING OF STAGE 2.

POSTED SPEED LIMIT = 45 MPH

USH 18/STH 164 (E. MORELAND BLVD)

LONGVIEW DRIVE

WP1 WP2 WP3 WP4 WP5 WP6 WP7 WP8

+00 +50 183+00 +50 184+00 +50 185+00 +50 186+00 +50 187+00 +50 188

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 2 AND 2B	SHEET 222	E

TRAFFIC CONTROL SIGNAL

USH 18/STH 164 & SPRINGDALE ROAD
CITY OF WAUKESHA
WAUKESHA COUNTY

SIGNAL NO. S67-0415

REGION CONTACT: JMM
DESIGNED BY:
REVISED BY: GRAEF

PAGE 4 OF 7

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\04_Springdale\024004_sp.dgn PLOT DATE : 4/29/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 40.0000 sf / in.

WISDOT/CADDS SHEET 42

LEGEND

- WORK AREA
- SIGNAL HEAD, OVERHEAD MOUNT
- CLASS 4 WOOD POLE
- 4X4 WOOD POST OR SKID
- CABLE - OVERHEAD
- SIGNAL HEAD NUMBER
- RED CIRCULAR INDICATOR
- YELLOW CIRCULAR INDICATOR
- GREEN CIRCULAR INDICATOR
- NON-INTRUSIVE DETECTION AREA
- PEDESTRIAN HEAD WITH PUSH BUTTON
- RED ARROW
- YELLOW ARROW
- GREEN ARROW
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- TEMPORARY LUMINAIRE 250W HPS
- STOP SIGN
- YIELD SIGN
- TRAFFIC SIGNAL HEAD TO BE COVERED AND DE-ENERGIZED
- EVP DESIGNATOR
- EVP DETECTOR HEAD

NOTE: ALL LENSES ARE 12-INCH

USH 18/STH 164 (E. MORELAND BLVD)

POSTED SPEED LIMIT = 30 MPH

SPRINGDALE ROAD

POSTED SPEED LIMIT = 45 MPH

REMOVE WP7, HEADS 19,20 AND ASSOCIATED PEDESTRIAN PUSH BUTTONS AT THE BEGINNING OF STAGE 2C. REINSTALL IN STAGE 2D.

WP1 WP2 WP3 WP4 WP5 WP6

LONGVIEW DRIVE

TRAFFIC CONTROL SIGNAL

USH 18/STH 164 & SPRINGDALE ROAD
CITY OF WAUKESHA
WAUKESHA COUNTY

SIGNAL NO. S67-0415

REGION CONTACT: JMM
DESIGNED BY:
REVISED BY: GRAEF

PAGE 5 OF 7

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 2C	SHEET 223	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\04_Springdale\024005_sp.dgn
PLOT DATE : 4/29/2015
PLOT BY : GRAEF
PLOT NAME :
PLOT SCALE : 40.0000 sf / in.

WISDOT/CADDS SHEET 42

LEGEND

- WORK AREA
- SIGNAL HEAD, OVERHEAD MOUNT
- CLASS 4 WOOD POLE
- 4X4 WOOD POST OR SKID
- CABLE - OVERHEAD
- SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- NON-INTRUSIVE DETECTION AREA
- B PEDESTRIAN HEAD WITH PUSH BUTTON
- (R) RED ARROW
- (Y) YELLOW ARROW
- (G) GREEN ARROW
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- TEMPORARY LUMINAIRE 250W HPS
- S STOP SIGN
- Y YIELD SIGN
- TRAFFIC SIGNAL HEAD TO BE COVERED AND DE-ENERGIZED
- (X) EVP DESIGNATOR
- EVP DETECTOR HEAD

NOTE: ALL LENSES ARE 12-INCH

N

USH 18/STH 164 (E. MORELAND BLVD)

SPRINGDALE ROAD

LONGVIEW DRIVE

POSTED SPEED LIMIT = 30 MPH

POSTED SPEED LIMIT = 45 MPH

PEDESTRIAN PUSH BUTTONS NOT ACTIVE IN STAGE 2D.

REINSTALL WP7, HEADS 19,20 AND ASSOCIATED PEDESTRIAN PUSH BUTTONS AT THE BEGINNING OF STAGE 2D.

SEE MONOTUBE CONSTRUCTION NOTE

SIGN

SIGN

WP1 WP2 WP3 WP4 WP5 WP6 WP7

R/W

MONOTUBE CONSTRUCTION NOTE:

THE TEMPORARY TRAFFIC SIGNAL HEADS INSTALLED ON THE TEMPORARY TRAFFIC SIGNAL SPAN WIRE SHALL BE ACTIVE UNTIL THE MONOTUBE ARMS IN FRONT OF THE TRAFFIC SIGNAL SPAN WIRE ARE INSTALLED. THE CONTRACTOR SHALL OPERATE THE PERMANENT TRAFFIC SIGNAL HEADS ON THE MONOTUBE POLES WITH THE TEMPORARY TRAFFIC SIGNAL INSTALLATION ONCE THE MONOTUBE ARM IS INSTALLED IN FRONT OF THE TEMPORARY TRAFFIC SIGNAL SPAN WIRE. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO DETERMINE THE MOST APPROPRIATE METHOD TO FEED THE PERMANENT TRAFFIC SIGNAL HEADS BEING USED WITH THE TEMPORARY TRAFFIC SIGNAL INSTALLATION. THEN CONTRACTOR SHALL HAVE THE TRAFFIC SIGNAL HEADS ON THE MONOTUBE TRAFFIC SIGNALS OPERATIONAL WITH THE TEMPORARY TRAFFIC SIGNAL WITHIN 2 HOURS OF THE MONOTUBE INSTALLATION.

ALL PERMANENT TRAFFIC SIGNAL HEADS NOT BEING USED SHALL BE COVERED AND TURNED UNTIL THE PERMANENT TRAFFIC SIGNAL INSTALLATION IS ACTIVATED.

TRAFFIC CONTROL SIGNAL

USH 18/STH 164 & SPRINGDALE ROAD
CITY OF WAUKESHA
WAUKESHA COUNTY

SIGNAL NO. S67-0415

REGION CONTACT: JMM
DESIGNED BY:
REVISED BY: GRAEF

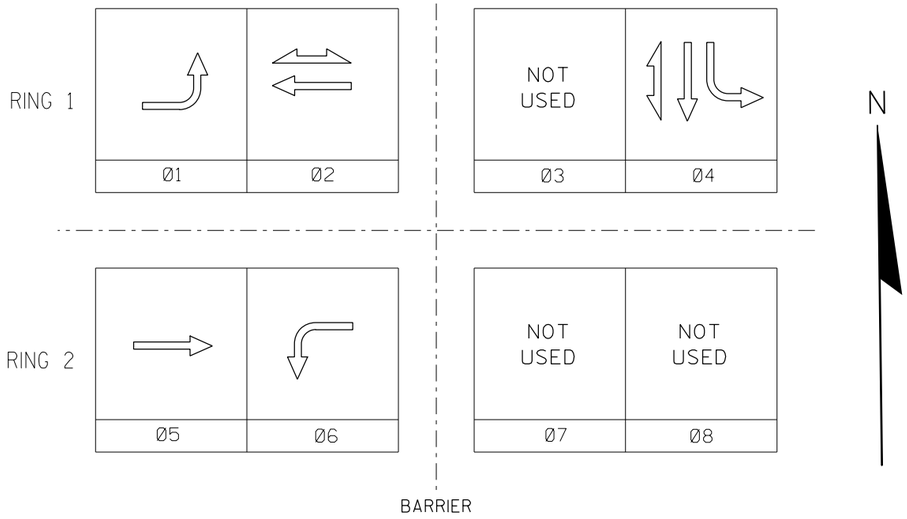
PAGE 6 OF 7

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 2D	SHEET 224	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\04_Springdale\024006_sp.dgn
PLOT DATE : 4/29/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 40.0000 sf / in.

WISDOT/CADDS SHEET 42

	HEAD NUMBERS	FLASH
Ø1	5,6,7	R
Ø2	8,9,10,11	R
Ø3		
Ø4	15,16,17	R
Ø5	1,2,3,4	R
Ø6	12,13,14	R
Ø7		
Ø8		
Ø2P	20,21,23,24	
Ø4P	18,19,22	
Ø5P		
Ø8P		
OLA		
OLB		
OLC		
OLD		



CONTROLLER LOGIC

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / Ø	PHASE RECALL	PHASE ACTIVE
1		5		X
2		5	MIN	X
3				
4				X
5		2	MIN	X
6		2		X
7				
8				

GENERAL NOTES:

1. ANY ACTUATED PHASE FOR WHICH THERE IS NO CALL SHALL BE SKIPPED.
2. PHASES 1 AND 6 ARE IN CONFLICT AND NOT ALLOWED TO TIME CONCUTENTLY.

TYPE OF INTERCONNECT/COMMUNICATION	
NONE	X
CLOSED LOOP	
TWISTED PAIR*	
FIBER OPTIC*	
FIBER OPTIC (ETHERNET)	
RADIO	

TYPE OF COORDINATION	
NONE	
TBC	X
TRAFFIC RESPONSIVE	
ADAPTIVE	
*LOCATION OF MASTER CONTROLLER NO:	S-
SIGNAL SYSTEM #:	SS- -

TYPE OF LIGHTING	
BY OTHER AGENCY	
IN TRAFFIC SIGNAL CABINET	X
IN SEPARATE DOT LIGHTING CABINET	

TYPE OF PRE-EMPT	
NONE	
RAILROAD	
EMERGENCY VEHICLE	X
GTT	
TOMAR	
HARDWIRE	
OTHER	
LIFT BRIDGE	
QUEUE DETECTOR	

DETECTOR LOGIC

DETECTOR INPUT	3	1	7	5	11	9	15	13
PLAN LOOP DETECTOR #(S)	11	22	41	51	53	61		
ASSIGNED PHASE	1	2	4	5	5	6		
OPERATION MODE	VEH	VEH	VEH	VEH	VEH	VEH		
SWITCH								
EXTEND								
DELAY			X	X				

19	17	23	21	27	25	31	29	DETECTOR INPUT
								PLAN LOOP DETECTOR #(S)
								ASSIGNED PHASE
								OPERATION MODE
								SWITCH
								EXTEND
								DELAY

DETECTOR INPUT	4	2	8	6	12	10	16	14
PLAN LOOP DETECTOR #(S)	21	23	42	52	54			
ASSIGNED PHASE	2	2	4	5	5			
OPERATION MODE	VEH	VEH	VEH	VEH	VEH			
SWITCH								
EXTEND								
DELAY	X							

20	18	24	22	28	26	32	30	DETECTOR INPUT
								PLAN LOOP DETECTOR #(S)
								ASSIGNED PHASE
								OPERATION MODE
								SWITCH
								EXTEND
								DELAY

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE DETECTOR	A	B	C
MOVEMENT			
PHASE	2+6	5+1	4

AFTER PREEMPTION SEQUENCE 2+6 OR 5+1, CONTROLLER SHALL RETURN TO PHASES 2+5.

AFTER PREEMPTION SEQUENCE 4, CONTROLLER SHALL RETURN TO PHASE 4.

USH 18/STH 164 & SPRINGDALE ROAD
CITY OF WAUKESHA
WAUKESHA COUNTY

SIGNAL NO. S67-0415

CONTROLLER TYPE: TEMP

DATE 4/15

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	TEMPORARY SEQUENCE OF OPERATIONS - ALL STAGES	SHEET 225	E

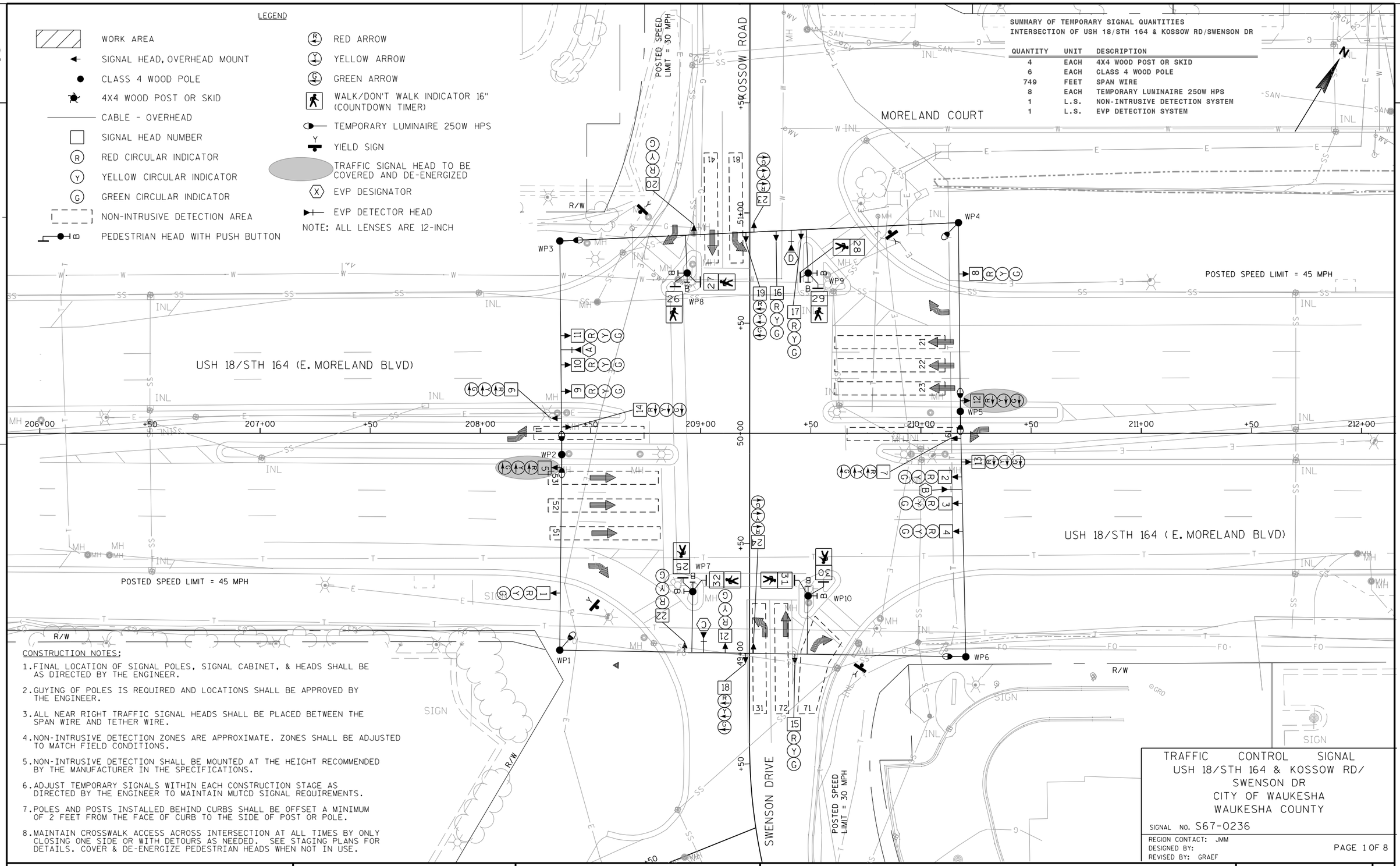
LEGEND

- WORK AREA
- SIGNAL HEAD, OVERHEAD MOUNT
- CLASS 4 WOOD POLE
- 4X4 WOOD POST OR SKID
- CABLE - OVERHEAD
- SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- NON-INTRUSIVE DETECTION AREA
- PEDESTRIAN HEAD WITH PUSH BUTTON
- (R) RED ARROW
- (Y) YELLOW ARROW
- (G) GREEN ARROW
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- TEMPORARY LUMINAIRE 250W HPS
- Y YIELD SIGN
- TRAFFIC SIGNAL HEAD TO BE COVERED AND DE-ENERGIZED
- (X) EVP DESIGNATOR
- EVP DETECTOR HEAD

NOTE: ALL LENSES ARE 12-INCH

SUMMARY OF TEMPORARY SIGNAL QUANTITIES
INTERSECTION OF USH 18/STH 164 & KOSSOW RD/SWENSON DR

QUANTITY	UNIT	DESCRIPTION
4	EACH	4X4 WOOD POST OR SKID
6	EACH	CLASS 4 WOOD POLE
749	FEET	SPAN WIRE
8	EACH	TEMPORARY LUMINAIRE 250W HPS
1	L.S.	NON-INTRUSIVE DETECTION SYSTEM
1	L.S.	EVP DETECTION SYSTEM



CONSTRUCTION NOTES:

1. FINAL LOCATION OF SIGNAL POLES, SIGNAL CABINET, & HEADS SHALL BE AS DIRECTED BY THE ENGINEER.
2. GUYING OF POLES IS REQUIRED AND LOCATIONS SHALL BE APPROVED BY THE ENGINEER.
3. ALL NEAR RIGHT TRAFFIC SIGNAL HEADS SHALL BE PLACED BETWEEN THE SPAN WIRE AND TETHER WIRE.
4. NON-INTRUSIVE DETECTION ZONES ARE APPROXIMATE. ZONES SHALL BE ADJUSTED TO MATCH FIELD CONDITIONS.
5. NON-INTRUSIVE DETECTION SHALL BE MOUNTED AT THE HEIGHT RECOMMENDED BY THE MANUFACTURER IN THE SPECIFICATIONS.
6. ADJUST TEMPORARY SIGNALS WITHIN EACH CONSTRUCTION STAGE AS DIRECTED BY THE ENGINEER TO MAINTAIN MUTCD SIGNAL REQUIREMENTS.
7. POLES AND POSTS INSTALLED BEHIND CURBS SHALL BE OFFSET A MINIMUM OF 2 FEET FROM THE FACE OF CURB TO THE SIDE OF POST OR POLE.
8. MAINTAIN CROSSWALK ACCESS ACROSS INTERSECTION AT ALL TIMES BY ONLY CLOSING ONE SIDE OR WITH DETOURS AS NEEDED. SEE STAGING PLANS FOR DETAILS. COVER & DE-ENERGIZE PEDESTRIAN HEADS WHEN NOT IN USE.

TRAFFIC CONTROL SIGNAL
USH 18/STH 164 & KOSSOW RD/
SWENSON DR
CITY OF WAUKESHA
WAUKESHA COUNTY

SIGNAL NO. S67-0236

REGION CONTACT: JMM
DESIGNED BY:
REVISED BY: GRAEF

PAGE 1 OF 8

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	TEMPORARY TRAFFIC SIGNAL PLAN - PRE-STAGE 1	SHEET 226	E

LEGEND

- WORK AREA
- SIGNAL HEAD, OVERHEAD MOUNT
- CLASS 4 WOOD POLE
- 4X4 WOOD POST OR SKID
- CABLE - OVERHEAD
- SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- NON-INTRUSIVE DETECTION AREA
- PEDESTRIAN HEAD WITH PUSH BUTTON
- (R) RED ARROW
- (Y) YELLOW ARROW
- (G) GREEN ARROW
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- TEMPORARY LUMINAIRE 250W HPS
- Y YIELD SIGN
- TRAFFIC SIGNAL HEAD TO BE COVERED AND DE-ENERGIZED
- (X) EVP DESIGNATOR
- EVP DETECTOR HEAD

NOTE: ALL LENSES ARE 12-INCH

POSTED SPEED LIMIT = 30 MPH

KOSSOW ROAD

MORELAND COURT

POSTED SPEED LIMIT = 45 MPH

USH 18/STH 164 (E. MORELAND BLVD)

WP1 WP2 WP3 WP4 WP5 WP6 WP7 WP8 WP9 WP10

SWENSON DRIVE

POSTED SPEED LIMIT = 30 MPH

R/W

SIGN

TRAFFIC CONTROL SIGNAL
USH 18/STH 164 & KOSSOW RD/
SWENSON DR
CITY OF WAUKESHA
WAUKESHA COUNTY

SIGNAL NO. S67-0236

REGION CONTACT: JMM
DESIGNED BY:
REVISED BY: GRAEF

PAGE 2 OF 8

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 1	SHEET 227	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\06_Kossow\024002_sp.dgn
PLOT DATE : 4/29/2015
PLOT BY : GRAEF
PLOT NAME :
PLOT SCALE : 40.0000 sf / in.

LEGEND

- WORK AREA
- SIGNAL HEAD, OVERHEAD MOUNT
- CLASS 4 WOOD POLE
- 4X4 WOOD POST OR SKID
- CABLE - OVERHEAD
- SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- NON-INTRUSIVE DETECTION AREA
- PEDESTRIAN HEAD WITH PUSH BUTTON
- (R) RED ARROW
- (Y) YELLOW ARROW
- (G) GREEN ARROW
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- TEMPORARY LUMINAIRE 250W HPS
- Y YIELD SIGN
- TRAFFIC SIGNAL HEAD TO BE COVERED AND DE-ENERGIZED
- (X) EVP DESIGNATOR
- EVP DETECTOR HEAD

NOTE: ALL LENSES ARE 12-INCH

KOSSOW ROAD

POSTED SPEED LIMIT = 30 MPH

MORELAND COURT

POSTED SPEED LIMIT = 45 MPH

USH 18/STH 164 (E. MORELAND BLVD)

WP1 WP2 WP3 WP4 WP5 WP6 WP7 WP8 WP9 WP10

SWENSON DRIVE

POSTED SPEED LIMIT = 30 MPH

TRAFFIC CONTROL SIGNAL
USH 18/STH 164 & KOSSOW RD/
SWENSON DR
CITY OF WAUKESHA
WAUKESHA COUNTY

SIGNAL NO. S67-0236

REGION CONTACT: JMM
DESIGNED BY:
REVISED BY: GRAEF

PAGE 3 OF 8

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 1A	SHEET 228 E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\06_Kossow\024003_sp.dgn
PLOT DATE : 4/29/2015
PLOT BY : GRAEF
PLOT NAME :
PLOT SCALE : 40.0000 sf / in.

WISDOT/CADDS SHEET 42

LEGEND

- WORK AREA
- SIGNAL HEAD, OVERHEAD MOUNT
- CLASS 4 WOOD POLE
- 4X4 WOOD POST OR SKID
- CABLE - OVERHEAD
- SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- NON-INTRUSIVE DETECTION AREA
- PEDESTRIAN HEAD WITH PUSH BUTTON
- (R) RED ARROW
- (Y) YELLOW ARROW
- (G) GREEN ARROW
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- TEMPORARY LUMINAIRE 250W HPS
- Y YIELD SIGN
- TRAFFIC SIGNAL HEAD TO BE COVERED AND DE-ENERGIZED
- (X) EVP DESIGNATOR
- EVP DETECTOR HEAD

NOTE: ALL LENSES ARE 12-INCH

KOSSOW ROAD

POSTED SPEED LIMIT = 30 MPH

MORELAND COURT

POSTED SPEED LIMIT = 45 MPH

USH 18/STH 164 (E. MORELAND BLVD)

WP1 WP2 WP3 WP4 WP5 WP6 WP7 WP8 WP9 WP10

SWENSON DRIVE

POSTED SPEED LIMIT = 30 MPH

TRAFFIC CONTROL SIGNAL
USH 18/STH 164 & KOSSOW RD/
SWENSON DR
CITY OF WAUKESHA
WAUKESHA COUNTY

SIGNAL NO. S67-0236

REGION CONTACT: JMM
DESIGNED BY:
REVISED BY: GRAEF

PAGE 4 OF 8

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 2	SHEET 229	E

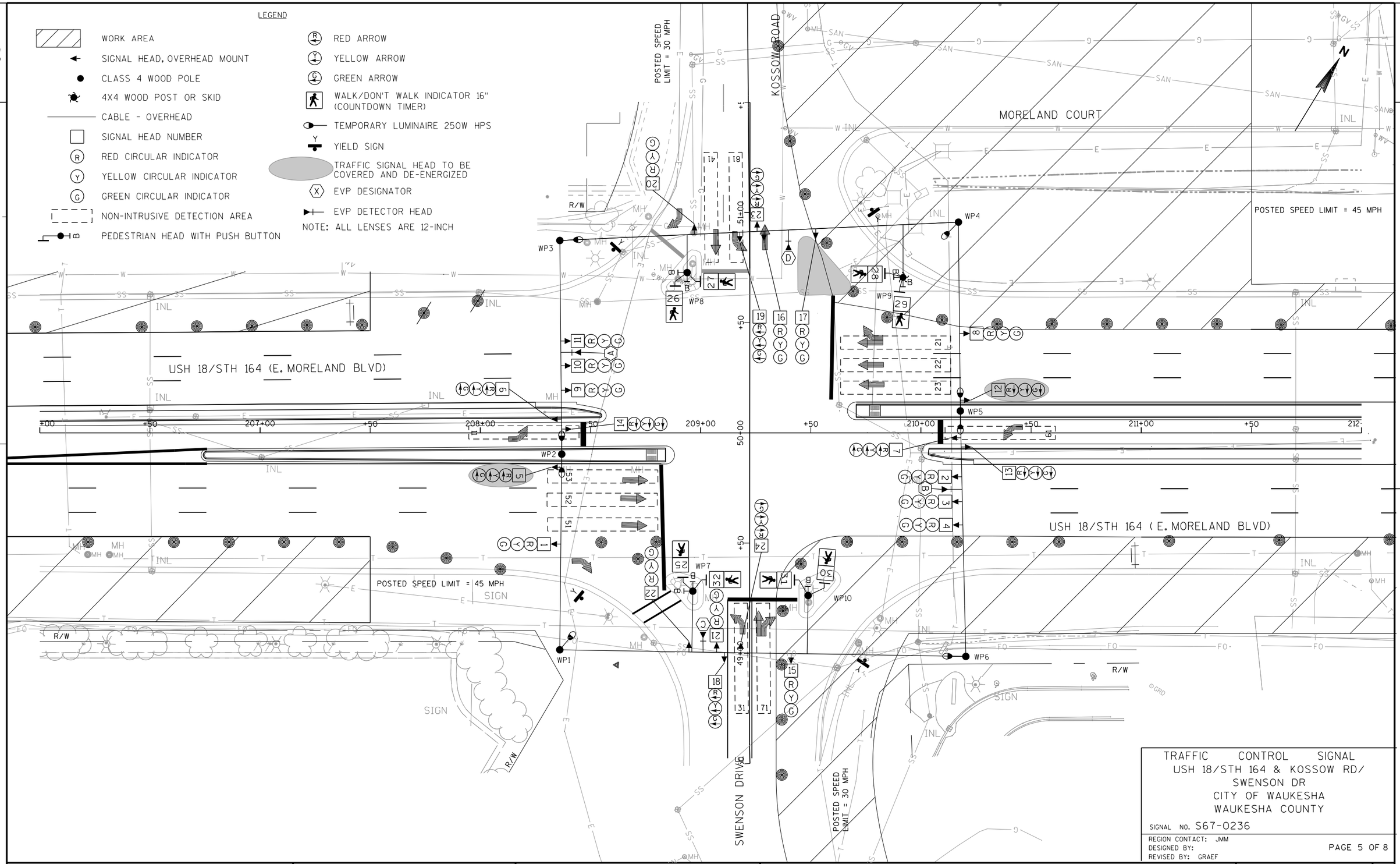
FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\06_Kossow\024004_sp.dgn PLOT DATE : 4/29/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 40.0000 sf / in.

WISDOT/CADDS SHEET 42

LEGEND

- WORK AREA
- SIGNAL HEAD, OVERHEAD MOUNT
- CLASS 4 WOOD POLE
- 4X4 WOOD POST OR SKID
- CABLE - OVERHEAD
- SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- NON-INTRUSIVE DETECTION AREA
- PEDESTRIAN HEAD WITH PUSH BUTTON
- (R) RED ARROW
- (Y) YELLOW ARROW
- (G) GREEN ARROW
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- TEMPORARY LUMINAIRE 250W HPS
- Y YIELD SIGN
- TRAFFIC SIGNAL HEAD TO BE COVERED AND DE-ENERGIZED
- (X) EVP DESIGNATOR
- EVP DETECTOR HEAD

NOTE: ALL LENSES ARE 12-INCH



TRAFFIC CONTROL SIGNAL
USH 18/STH 164 & KOSSOW RD/
SWENSON DR
CITY OF WAUKESHA
WAUKESHA COUNTY

SIGNAL NO. S67-0236

REGION CONTACT: JMM
DESIGNED BY:
REVISED BY: GRAEF

PAGE 5 OF 8

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 2B	SHEET 230	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\06_Kossow\024005_sp.dgn
PLOT DATE : 4/29/2015
PLOT BY : GRAEF
PLOT NAME :
PLOT SCALE : 40.0000 sf / in.

WISDOT/CADDS SHEET 42

LEGEND

- WORK AREA
- SIGNAL HEAD, OVERHEAD MOUNT
- CLASS 4 WOOD POLE
- 4X4 WOOD POST OR SKID
- CABLE - OVERHEAD
- SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- NON-INTRUSIVE DETECTION AREA
- PEDESTRIAN HEAD WITH PUSH BUTTON
- (R) RED ARROW
- (Y) YELLOW ARROW
- (G) GREEN ARROW
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- TEMPORARY LUMINAIRE 250W HPS
- Y YIELD SIGN
- TRAFFIC SIGNAL HEAD TO BE COVERED AND DE-ENERGIZED
- (X) EVP DESIGNATOR
- EVP DETECTOR HEAD

NOTE: ALL LENSES ARE 12-INCH

POSTED SPEED LIMIT = 30 MPH

KOSSOW ROAD

MORELAND COURT

SEE MONOTUBE CONSTRUCTION NOTE

POSTED SPEED LIMIT = 45 MPH

USH 18/STH 164 (E. MORELAND BLVD)

USH 18/STH 164 (E. MORELAND BLVD)

SWENSON DRIVE

POSTED SPEED LIMIT = 30 MPH

R/W

SIGN

INL

WP1 WP2 WP3 WP4 WP5 WP6 WP7 WP8 WP9 WP10

MONOTUBE CONSTRUCTION NOTE:

THE TEMPORARY TRAFFIC SIGNAL HEADS INSTALLED ON THE TEMPORARY TRAFFIC SIGNAL SPAN WIRE SHALL BE ACTIVE UNTIL THE MONOTUBE ARMS IN FRONT OF THE TRAFFIC SIGNAL SPAN WIRE ARE INSTALLED. THE CONTRACTOR SHALL OPERATE THE PERMANENT TRAFFIC SIGNAL HEADS ON THE MONOTUBE POLES WITH THE TEMPORARY TRAFFIC SIGNAL INSTALLATION ONCE THE MONOTUBE ARM IS INSTALLED IN FRONT OF THE TEMPORARY TRAFFIC SIGNAL SPAN WIRE. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO DETERMINE THE MOST APPROPRIATE METHOD TO FEED THE PERMANENT TRAFFIC SIGNAL HEADS BEING USED WITH THE TEMPORARY TRAFFIC SIGNAL INSTALLATION. THEN CONTRACTOR SHALL HAVE THE TRAFFIC SIGNAL HEADS ON THE MONOTUBE TRAFFIC SIGNALS OPERATIONAL WITH THE TEMPORARY TRAFFIC SIGNAL WITHIN 2 HOURS OF THE MONOTUBE INSTALLATION.

ALL PERMANENT TRAFFIC SIGNAL HEADS NOT BEING USED SHALL BE COVERED AND TURNED UNTIL THE PERMANENT TRAFFIC SIGNAL INSTALLATION IS ACTIVATED.

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING

TRAFFIC CONTROL SIGNAL
USH 18/STH 164 & KOSSOW RD/
SWENSON DR
CITY OF WAUKESHA
WAUKESHA COUNTY

SIGNAL NO. S67-0236

REGION CONTACT: JMM
DESIGNED BY:
REVISED BY: GRAEF

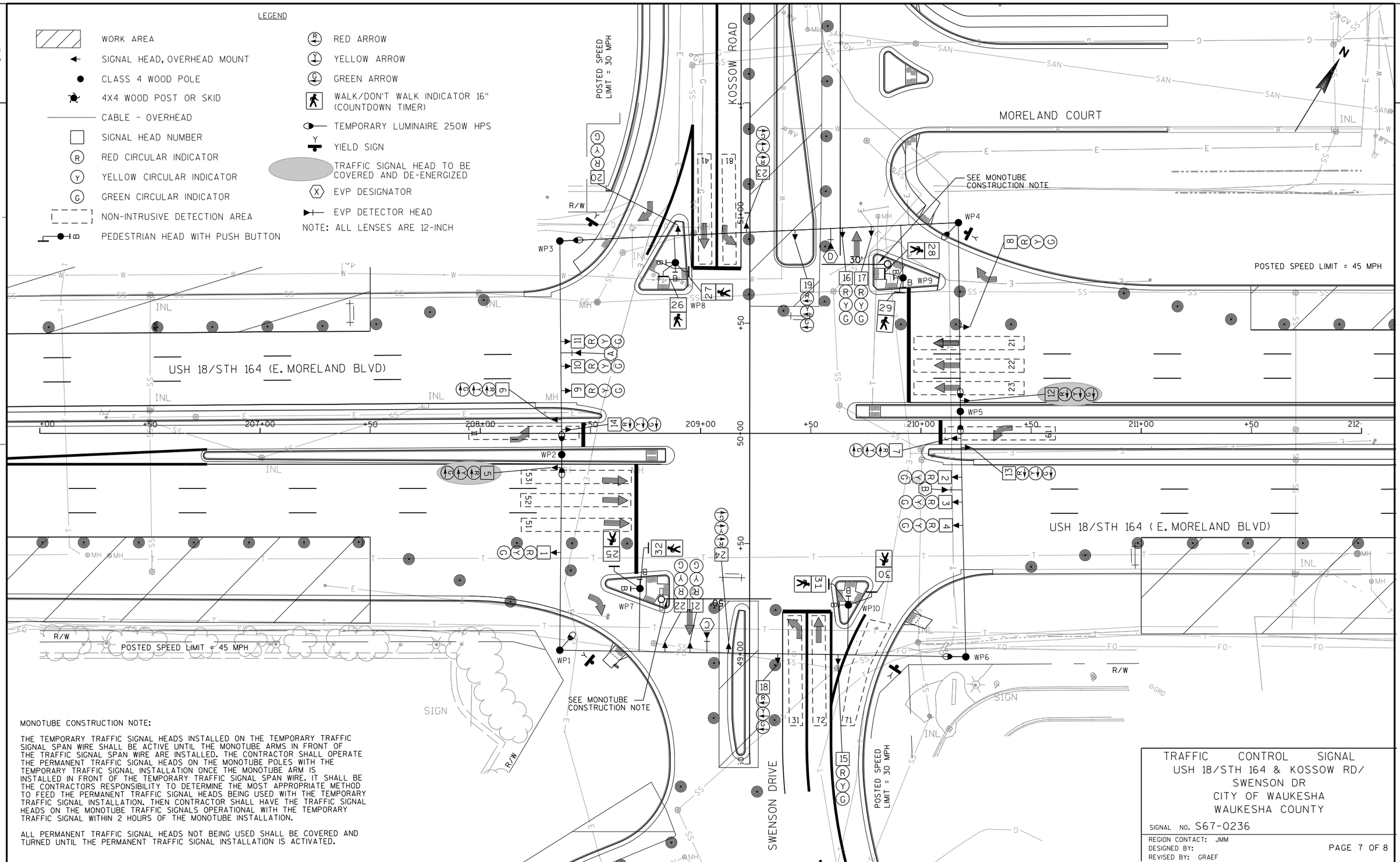
PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 2C	SHEET 231 E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\06_Kossow\024006_sp.dgn
PLOT DATE : 4/29/2015
PLOT BY : GRAEF
PLOT NAME :
PLOT SCALE : 40.0000 sf / in.
WISDOT/CADDS SHEET 42

LEGEND

- WORK AREA
- SIGNAL HEAD, OVERHEAD MOUNT
- CLASS 4 WOOD POLE
- 4X4 WOOD POST OR SKID
- CABLE - OVERHEAD
- SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- NON-INTRUSIVE DETECTION AREA
- PEDESTRIAN HEAD WITH PUSH BUTTON
- (R) RED ARROW
- (Y) YELLOW ARROW
- (G) GREEN ARROW
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- TEMPORARY LUMINAIRE 250W HPS
- Y YIELD SIGN
- TRAFFIC SIGNAL HEAD TO BE COVERED AND DE-ENERGIZED
- (X) EVP DESIGNATOR
- EVP DETECTOR HEAD

NOTE: ALL LENSES ARE 12-INCH



MONOTUBE CONSTRUCTION NOTE:

THE TEMPORARY TRAFFIC SIGNAL HEADS INSTALLED ON THE TEMPORARY TRAFFIC SIGNAL SPAN WIRE SHALL BE ACTIVE UNTIL THE MONOTUBE ARMS IN FRONT OF THE TRAFFIC SIGNAL SPAN WIRE ARE INSTALLED. THE CONTRACTOR SHALL OPERATE THE PERMANENT TRAFFIC SIGNAL HEADS ON THE MONOTUBE POLES WITH THE TEMPORARY TRAFFIC SIGNAL INSTALLATION ONCE THE MONOTUBE ARM IS INSTALLED IN FRONT OF THE TEMPORARY TRAFFIC SIGNAL SPAN WIRE. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO DETERMINE THE MOST APPROPRIATE METHOD TO FEED THE PERMANENT TRAFFIC SIGNAL HEADS BEING USED WITH THE TEMPORARY TRAFFIC SIGNAL INSTALLATION. THEN CONTRACTOR SHALL HAVE THE TRAFFIC SIGNAL HEADS ON THE MONOTUBE TRAFFIC SIGNALS OPERATIONAL WITH THE TEMPORARY TRAFFIC SIGNAL WITHIN 2 HOURS OF THE MONOTUBE INSTALLATION.

ALL PERMANENT TRAFFIC SIGNAL HEADS NOT BEING USED SHALL BE COVERED AND TURNED UNTIL THE PERMANENT TRAFFIC SIGNAL INSTALLATION IS ACTIVATED.

TRAFFIC CONTROL SIGNAL
USH 18/STH 164 & KOSSOW RD/
SWENSON DR
CITY OF WAUKESHA
WAUKESHA COUNTY

SIGNAL NO. S67-0236

REGION CONTACT: JMM
DESIGNED BY:
REVISED BY: GRAEF

PAGE 7 OF 8

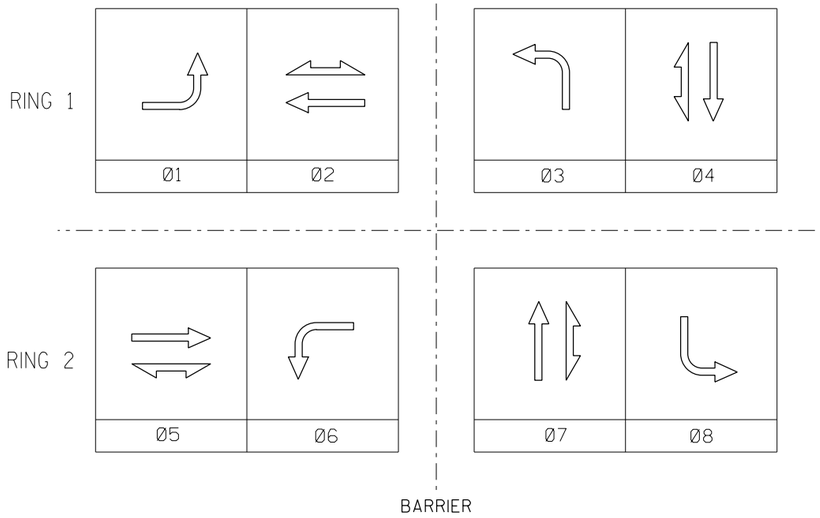
PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 2D	SHEET 232 E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\06_Kossow\024007_sp.dgn
PLOT DATE : 4/29/2015
PLOT BY : GRAEF
PLOT NAME :
PLOT SCALE : 40.0000 sf / in.

WISDOT/CADDS SHEET 42

2

	HEAD NUMBERS	FLASH
Ø1	5,6,7	R
Ø2	8,9,10,11	R
Ø3	18,19	R
Ø4	20,21,22	R
Ø5	1,2,3,4	R
Ø6	12,13,14	R
Ø7	15,16,17	R
Ø8	23,24	R
Ø2P	27,28	
Ø4P	25,26	
Ø5P	31,32	
Ø7P	29,30	
OLA		
OLB		
OLC		
OLD		





CONTROLLER LOGIC

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / Ø	PHASE RECALL	PHASE ACTIVE
1		5		X
2		5	MIN	X
3		7		X
4		7		X
5		2	MIN	X
6		2		X
7		4		X
8		4		X

GENERAL NOTES:

1. ANY ACTUATED PHASE FOR WHICH THERE IS NO CALL SHALL BE SKIPPED.
2. PHASES 1 AND 6 ARE IN CONFLICT AND NOT ALLOWED TO TIME CONCUTENTLY.
3. PHASES 3 AND 8 ARE IN CONFLICT AND NOT ALLOWED TO TIME CONCUTENTLY.

TYPE OF INTERCONNECT/COMMUNICATION	
NONE	X
CLOSED LOOP	
TWISTED PAIR*	
FIBER OPTIC*	
FIBER OPTIC (ETHERNET)	
RADIO	

TYPE OF COORDINATION	
NONE	
TBC	X
TRAFFIC RESPONSIVE	
ADAPTIVE	
*LOCATION OF MASTER CONTROLLER NO:	S-
SIGNAL SYSTEM #:	SS- -

TYPE OF LIGHTING	
BY OTHER AGENCY	
IN TRAFFIC SIGNAL CABINET	X
IN SEPARATE DOT LIGHTING CABINET	

TYPE OF PRE-EMPT	
NONE	
RAILROAD	
EMERGENCY VEHICLE	X
GTT	
TOMAR	
HARDWIRE	
OTHER	
LIFT BRIDGE	
QUEUE DETECTOR	

DETECTOR LOGIC

DETECTOR INPUT	3	1	7	5	11	9	15	13
PLAN LOOP DETECTOR #(S)	11	22	31	51	53	71	81	
ASSIGNED PHASE	1	2	3	5	5	7	8	
OPERATION MODE	VEH	VEH	VEH	VEH	VEH	VEH	VEH	
SWITCH								
EXTEND								
DELAY			X	X		X	X	

DETECTOR INPUT	19	17	23	21	27	25	31	29
PLAN LOOP DETECTOR #(S)								
ASSIGNED PHASE								
OPERATION MODE								
SWITCH								
EXTEND								
DELAY								

DETECTOR INPUT	4	2	8	6	12	10	16	14
PLAN LOOP DETECTOR #(S)	21	23	41	52	61	72		
ASSIGNED PHASE	2	2	4	5	6	7		
OPERATION MODE	VEH	VEH	VEH	VEH	VEH	VEH		
SWITCH								
EXTEND								
DELAY	X		X					

DETECTOR INPUT	20	18	24	22	28	26	32	30
PLAN LOOP DETECTOR #(S)								
ASSIGNED PHASE								
OPERATION MODE								
SWITCH								
EXTEND								
DELAY								

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE DETECTOR	A	B	C	D
MOVEMENT				
PHASE	2+6	5+1	4+8	7+3

AFTER PREEMPTION SEQUENCE 2+6 OR 5+1, CONTROLLER SHALL RETURN TO PHASES 2+5.
AFTER PREEMPTION SEQUENCE 4+8 OR 7+3, CONTROLLER SHALL RETURN TO PHASES 4+7.

USH 18/STH 164 &
KOSSOW ROAD/SWENSON DR
CITY OF WAUKESHA
WAUKESHA COUNTY

SIGNAL NO. S67-0236

CONTROLLER TYPE: TEMP

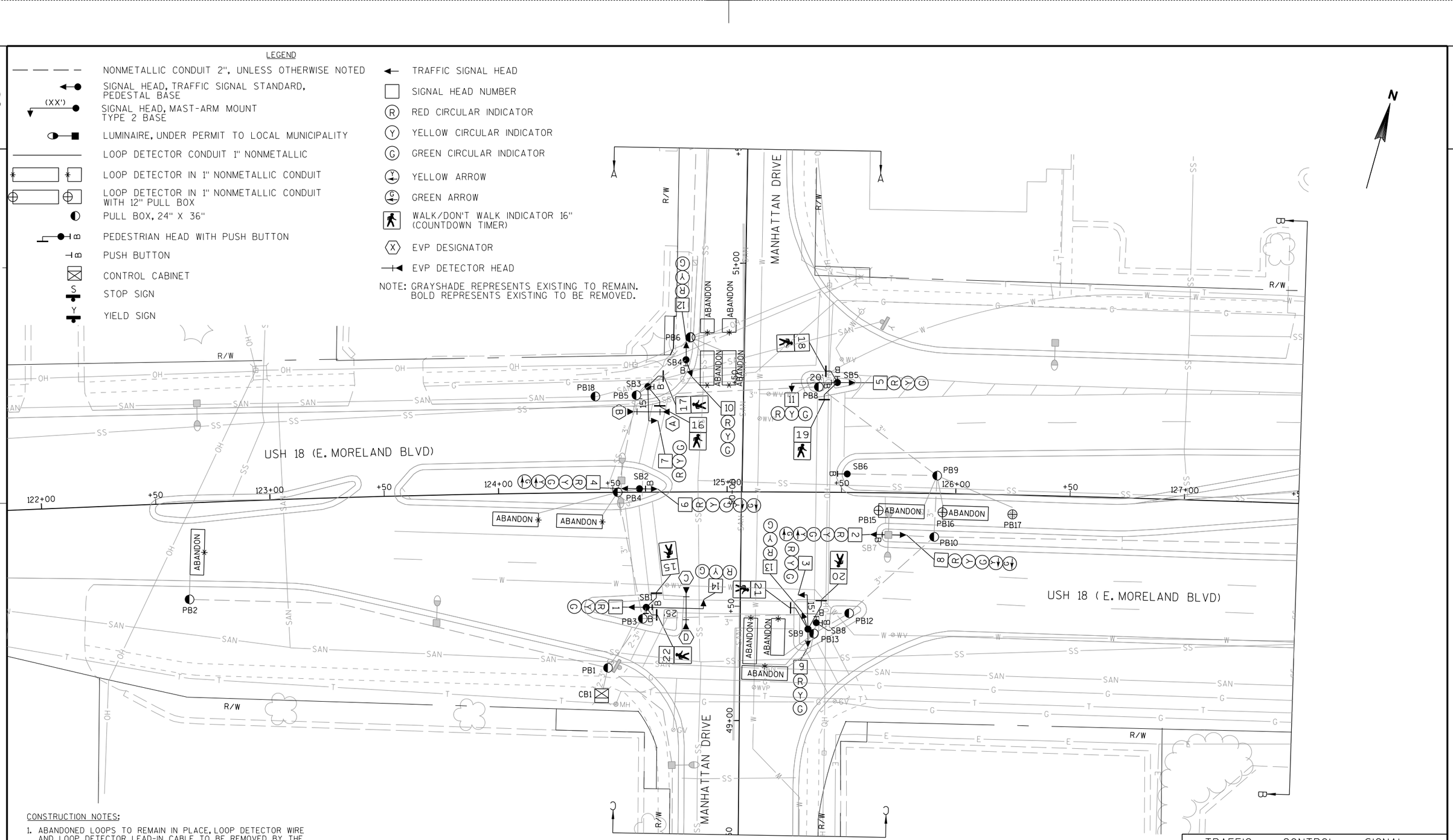
DATE 4/15

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\06_Kossow\024101_ph.dgn PLOT DATE : 4/29/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 40.0000 sf / in.
WISDOT/CADDS SHEET 42

LEGEND

- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- (XX') SIGNAL HEAD, MAST-ARM MOUNT TYPE 2 BASE
- LUMINAIRE, UNDER PERMIT TO LOCAL MUNICIPALITY
- LOOP DETECTOR CONDUIT 1" NONMETALLIC
- LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
- LOOP DETECTOR IN 1" NONMETALLIC CONDUIT WITH 12" PULL BOX
- PULL BOX, 24" X 36"
- PEDESTRIAN HEAD WITH PUSH BUTTON
- PUSH BUTTON
- CONTROL CABINET
- S STOP SIGN
- Y YIELD SIGN
- TRAFFIC SIGNAL HEAD
- SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- YELLOW ARROW
- GREEN ARROW
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- (X) EVP DESIGNATOR
- EVP DETECTOR HEAD

NOTE: GRAYSHADE REPRESENTS EXISTING TO REMAIN. BOLD REPRESENTS EXISTING TO BE REMOVED.



CONSTRUCTION NOTES:

1. ABANDONED LOOPS TO REMAIN IN PLACE. LOOP DETECTOR WIRE AND LOOP DETECTOR LEAD-IN CABLE TO BE REMOVED BY THE CONTRACTOR.
2. SEE LIGHTING PLAN FOR MUNICIPAL LIGHTING REMOVALS.
3. EVP CABLE TO BE REMOVED BY THE CONTRACTOR.
4. CONTROLLER AND CABINET SHALL BE REMOVED BY WISDOT PERSONNEL.
5. EXISTING CONDUIT RUNS TO REMAIN IN PLACE. CONTRACTOR TO REMOVE REMAINING CONDUCTORS IN CONDUIT.

TRAFFIC CONTROL SIGNAL
USH 18 & MANHATTAN DRIVE
CITY OF WAUKESHA
WAUKESHA COUNTY

SIGNAL NO. S67-0444

REGION CONTACT: JMM
DESIGNED BY:
REVISED BY: GRAEF

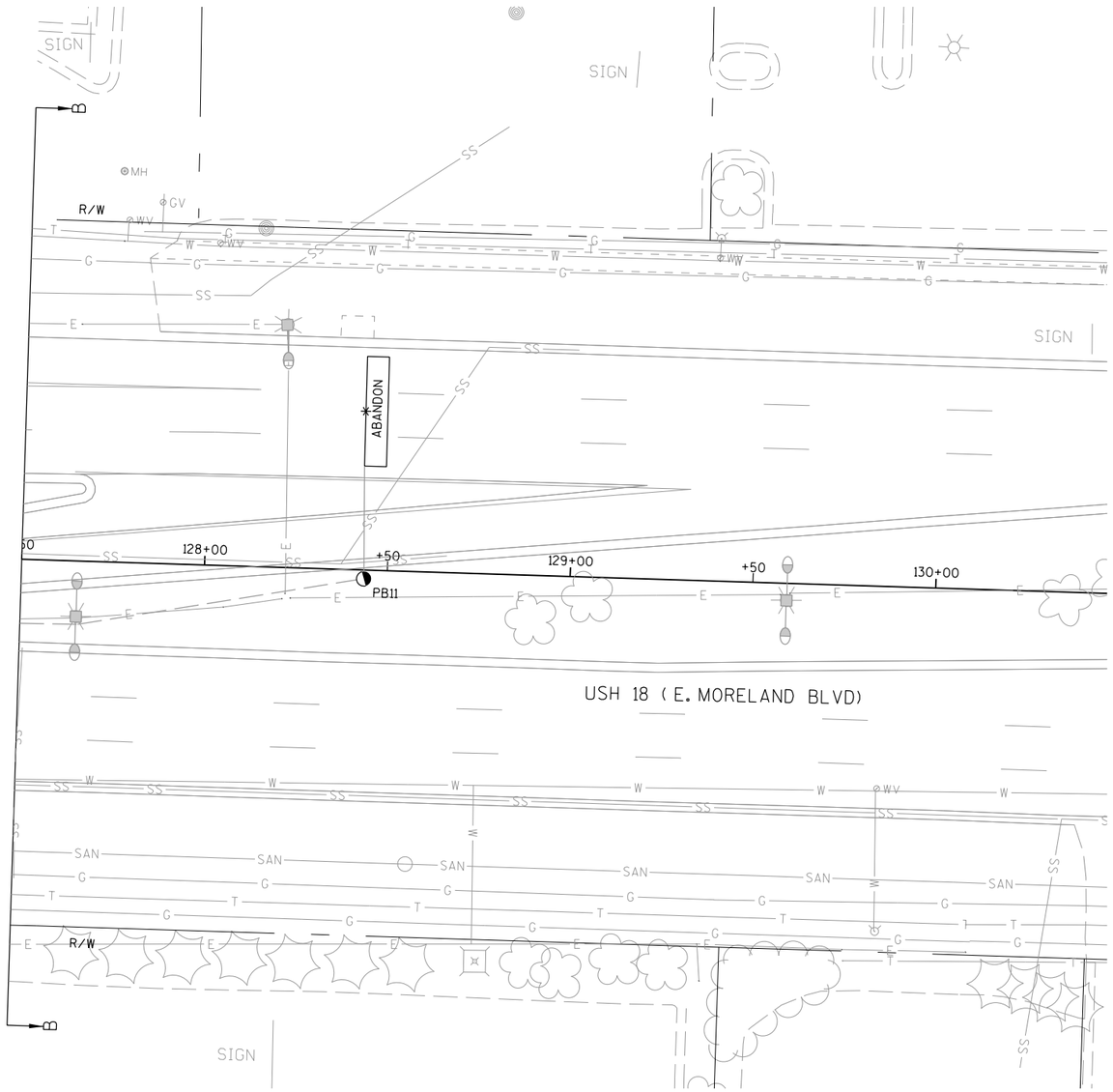
PAGE 1 OF 3

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	TRAFFIC SIGNAL REMOVAL PLAN	SHEET 234	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\01_Manhattan\024011_sp.dgn
PLOT DATE : 4/27/2015
PLOT BY : GRAEF
PLOT NAME :
PLOT SCALE : 40.0000 sf / in.

2

N



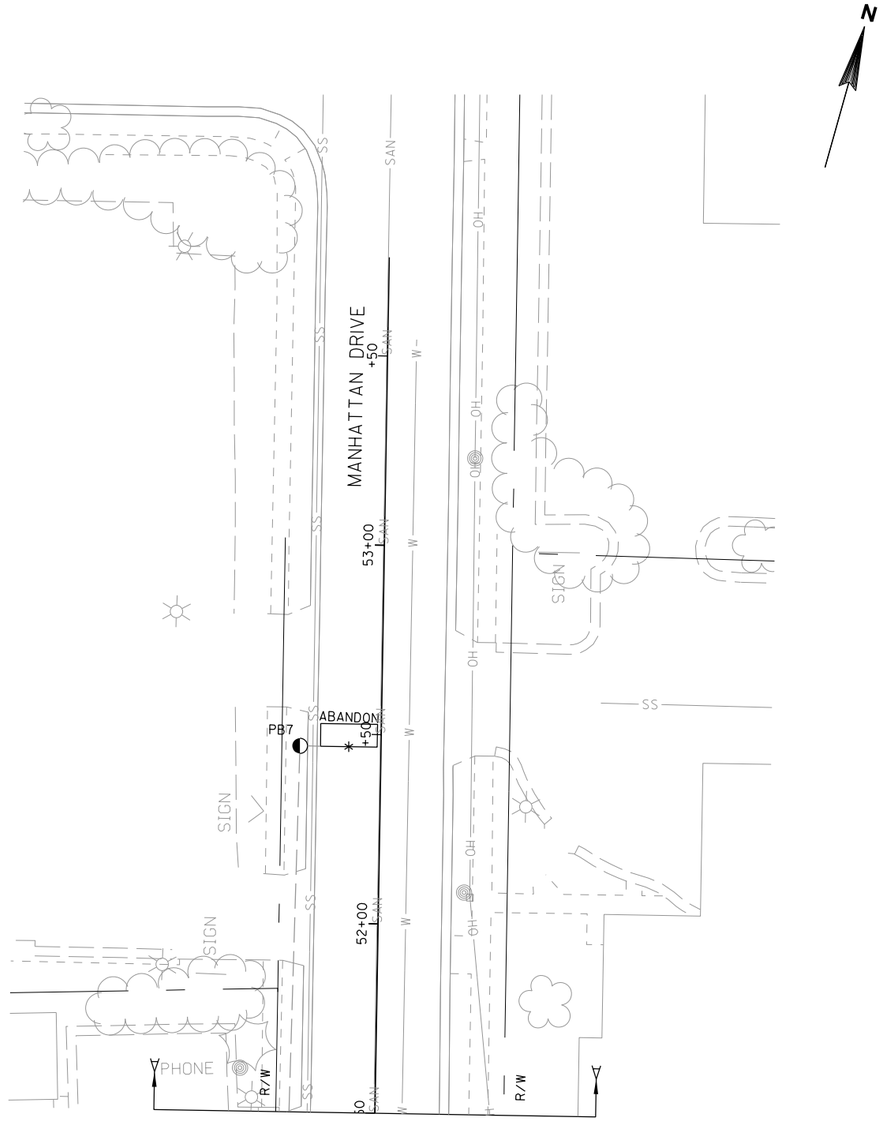
TRAFFIC CONTROL SIGNAL
USH 18 & MANHATTAN DRIVE
CITY OF WAUKESHA
WAUKESHA COUNTY

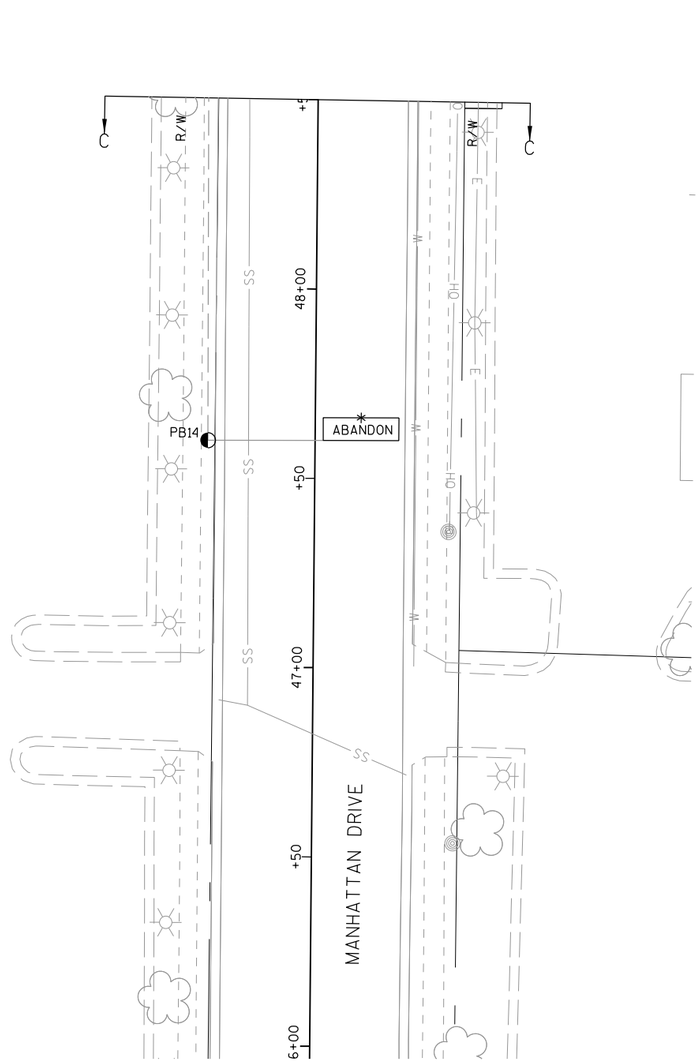
SIGNAL NO. S67-0444

REGION CONTACT: JMM
DESIGNED BY:
REVISED BY: GRAEF

PAGE 2 OF 3

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	TRAFFIC SIGNAL REMOVAL PLAN	SHEET 235	E





2

TRAFFIC CONTROL SIGNAL
USH 18 & MANHATTAN DRIVE
CITY OF WAUKESHA
WAUKESHA COUNTY

SIGNAL NO. S67-0444

REGION CONTACT: JMM
DESIGNED BY:
REVISED BY: GRAEF

PAGE 3 OF 3

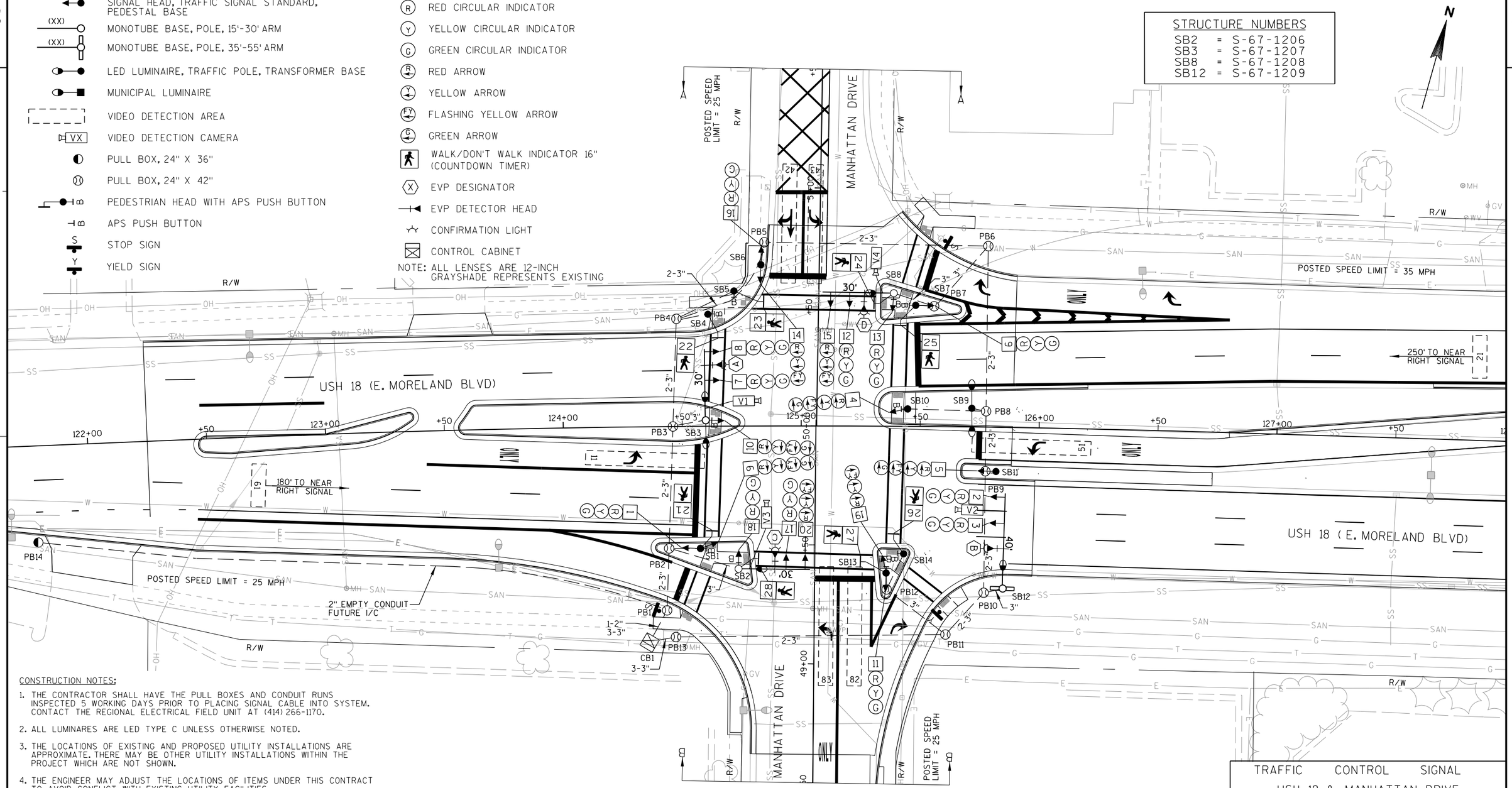
PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	TRAFFIC SIGNAL REMOVAL PLAN	SHEET 236	E

LEGEND

- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- (XX) MONOTUBE BASE, POLE, 15'-30' ARM
- (XX) MONOTUBE BASE, POLE, 35'-55' ARM
- LED LUMINAIRE, TRAFFIC POLE, TRANSFORMER BASE
- MUNICIPAL LUMINAIRE
- VIDEO DETECTION AREA
- VX VIDEO DETECTION CAMERA
- PULL BOX, 24" X 36"
- PULL BOX, 24" X 42"
- PEDESTRIAN HEAD WITH APS PUSH BUTTON
- APS PUSH BUTTON
- S STOP SIGN
- Y YIELD SIGN
- SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- RED ARROW
- YELLOW ARROW
- FLASHING YELLOW ARROW
- GREEN ARROW
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- (X) EVP DESIGNATOR
- EVP DETECTOR HEAD
- CONFIRMATION LIGHT
- CONTROL CABINET

NOTE: ALL LENSES ARE 12-INCH GRAYSHADE REPRESENTS EXISTING

STRUCTURE NUMBERS
SB2 = S-67-1206
SB3 = S-67-1207
SB8 = S-67-1208
SB12 = S-67-1209

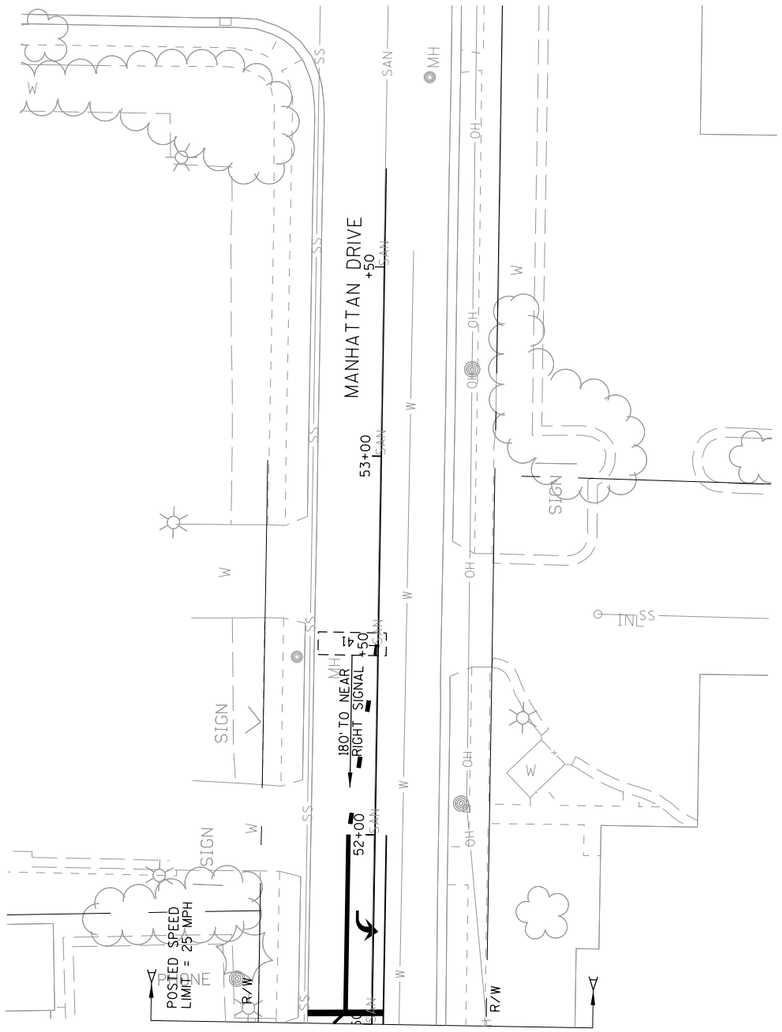


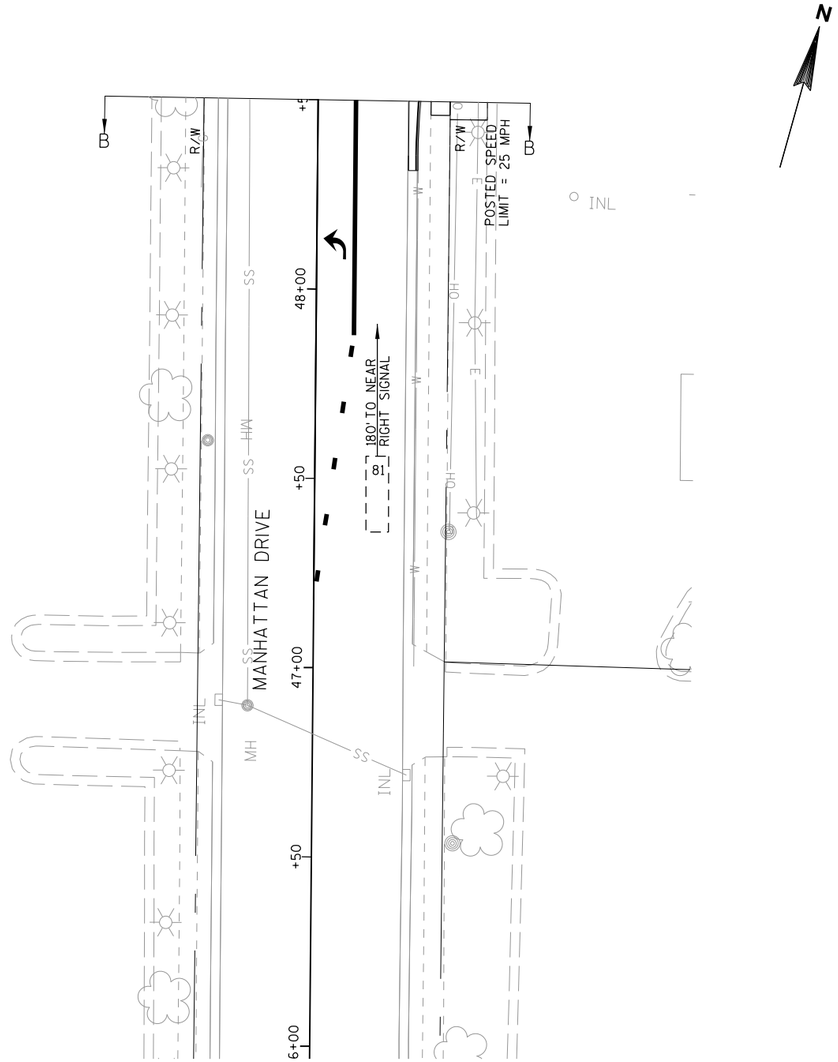
CONSTRUCTION NOTES:

1. THE CONTRACTOR SHALL HAVE THE PULL BOXES AND CONDUIT RUNS INSPECTED 5 WORKING DAYS PRIOR TO PLACING SIGNAL CABLE INTO SYSTEM. CONTACT THE REGIONAL ELECTRICAL FIELD UNIT AT (414) 266-1170.
2. ALL LUMINARES ARE LED TYPE C UNLESS OTHERWISE NOTED.
3. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
4. THE ENGINEER MAY ADJUST THE LOCATIONS OF ITEMS UNDER THIS CONTRACT TO AVOID CONFLICT WITH EXISTING UTILITY FACILITIES.
5. THE CONDUIT EMBEDDED IN A TYPE 10 OR 13 CONCRETE BASE SHALL BE 3" CONDUIT.
6. INSTALL CABINET BASE 6" ABOVE ROADWAY ELEVATION.
7. VIDEO DETECTION ZONES TO BE PROGRAMMED IN THE FIELD.
8. ACCESSIBLE PEDESTRIAN SIGNAL (APS) PUSH BUTTONS SHALL HAVE A 14AWG 12 CONDUCTOR CABLE.

TRAFFIC CONTROL SIGNAL
USH 18 & MANHATTAN DRIVE
CITY OF WAUKESHA
WAUKESHA COUNTY
CABINET TYPE: TS-2
SIGNAL NO. S67-0444 CONTROLLER TYPE: EPAC
CITY CONTACT: MICHAEL GRULKE
DESIGNED BY: GRAEF
REVISED BY:
PAGE 1 OF 3

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	TRAFFIC SIGNAL PLAN	SHEET 237	E





TRAFFIC CONTROL SIGNAL
USH 18 & MANHATTAN DRIVE
CITY OF WAUKESHA
WAUKESHA COUNTY

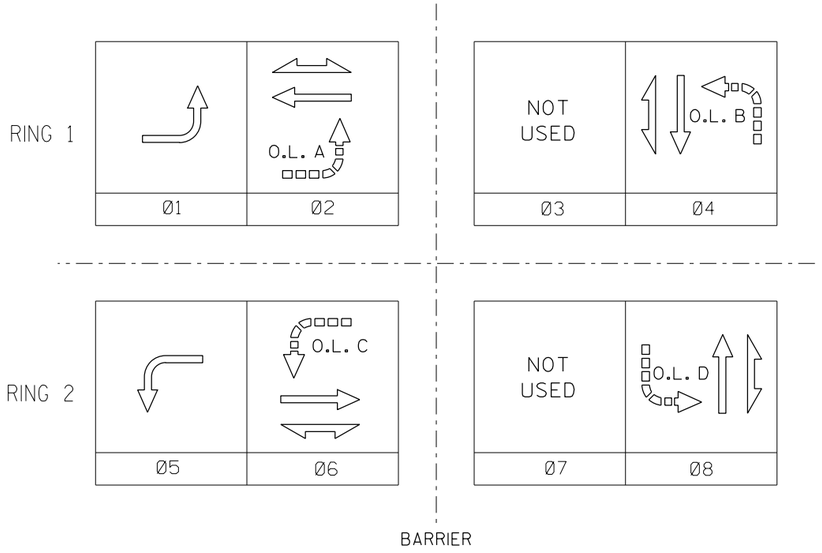
SIGNAL NO. S67-0444

CITY CONTACT: MICHAEL GRULKE
DESIGNED BY: GRAEF
REVISED BY:

PAGE 2 OF 3

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	TRAFFIC SIGNAL PLAN	SHEET 238	E

	HEAD NUMBERS	FLASH
Ø1	4,5	-
Ø2	6,7,8	R
Ø3		
Ø4	16,17,18	R
Ø5	9,10	-
Ø6	1,2,3	R
Ø7		
Ø8	11,12,13	R
Ø2P	23,24	
Ø4P	21,22	
Ø6P	27,28	
Ø8P	25,26	
OLA	4,5	R ←
OLB	14,15	R ←
OLC	9,10	R ←
OLD	19,20	R ←





CONTROLLER LOGIC

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / Ø	PHASE RECALL	PHASE ACTIVE
1		6		X
2	X	6	MIN	X
3				
4		8		X
5		2		X
6	X	2	MIN	X
7				
8		4		X

TYPE OF INTERCONNECT/COMMUNICATION	
NONE	X
CLOSED LOOP	
TWISTED PAIR*	
FIBER OPTIC*	
FIBER OPTIC (ETHERNET)	
RADIO	

TYPE OF COORDINATION	
NONE	X
TBC	
TRAFFIC RESPONSIVE	
ADAPTIVE	
*LOCATION OF MASTER CONTROLLER NO:	S-
SIGNAL SYSTEM #:	SS- -

TYPE OF LIGHTING	
BY OTHER AGENCY	
IN TRAFFIC SIGNAL CABINET	X
IN SEPARATE DOT LIGHTING CABINET	

TYPE OF PRE-EMPT	
NONE	
RAILROAD	
EMERGENCY VEHICLE	X
GTT	X
TOMAR	
HARDWIRE	
OTHER	
LIFT BRIDGE	
QUEUE DETECTOR	

DETECTOR LOGIC

DETECTOR INPUT	3	1	7	5	11	9	15	13
PLAN LOOP DETECTOR #(S)	11	41	43	61	82			
ASSIGNED PHASE	1	4	4	6	8			
OPERATION MODE	VEH	VEH	VEH	VEH	VEH			
SWITCH								
EXTEND		X						
DELAY			X					

19	17	23	21	27	25	31	29	DETECTOR INPUT
								PLAN LOOP DETECTOR #(S)
								ASSIGNED PHASE
								OPERATION MODE
								SWITCH
								EXTEND
								DELAY

DETECTOR INPUT	4	2	8	6	12	10	16	14
PLAN LOOP DETECTOR #(S)	21	42	51	81	83			
ASSIGNED PHASE	2	4	5	8	8			
OPERATION MODE	VEH	VEH	VEH	VEH	VEH			
SWITCH								
EXTEND				X				
DELAY					X			

20	18	24	22	28	26	32	30	DETECTOR INPUT
								PLAN LOOP DETECTOR #(S)
								ASSIGNED PHASE
								OPERATION MODE
								SWITCH
								EXTEND
								DELAY

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE DETECTOR	A	B	C	D
MOVEMENT				
PHASE	2+5	1+6	4+8	8+4

AFTER PREEMPTION SEQUENCE 2+5 OR 1+6, CONTROLLER SHALL RETURN TO PHASES 2+6.

AFTER PREEMPTION SEQUENCE 4+8 OR 8+4, CONTROLLER SHALL RETURN TO PHASES 4+8.

USH 18 & MANHATTAN DRIVE
CITY OF WAUKESHA
WAUKEHSA COUNTY

SIGNAL NO. S67-0444 CABINET TYPE: TS2

CONTROLLER TYPE: EPAC

DATE 4/15 PAGE NO. 3 OF 3

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	SEQUENCE OF OPERATIONS	SHEET 239	E

PROJECT ID:	2200-16-71
INTERSECTION:	USH 18 (MORELAND BLVD) & MANHATTAN DRIVE

SIGNAL WIRE COLOR CODING	BLK-BLACK	RED-RED	GRN-GREEN
	WHT-WHITE	BLU-BLUE	ORG-ORANGE

CB1 TO	NO. OF 14 AWG CONDUCTORS	HEAD NO.	RED	YELLOW	GREEN	<RED>	<YELLOW>	<GREEN>	FLASHING <YELLOW>	D/WALK	WALK
SB1	12	1	RED	ORG	GRN						
		9				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT		
		21								BLK	BLU
SB2	12	17	RED	ORG	GRN						
		18	RED	ORG	GRN						
		20				RED/BLK	ORG/BLK		BLK/WHT		
		28								BLK	BLU
SB3	12	7	RED	ORG	GRN						
		8	RED	ORG	GRN						
		10				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT		
SB4	12	22								BLK	BLU
SB5	7	23								BLK	BLU
SB6	12	14				RED	ORG		BLK/WHT		
		16	RED/BLK	ORG/BLK	GRN/BLK						
SB7	12	6	RED	ORG	GRN						
		25								BLK	BLU
SB8	12	12	RED	ORG	GRN						
		13	RED	ORG	GRN						
		15				RED/BLK	ORG/BLK		BLK/WHT		
		24								BLK	BLU
SB10	12	4				RED	ORG	GRN	BLK/WHT		
SB11	12	5				RED	ORG	GRN	BLK/WHT		
SB12	7	2	RED	ORG	GRN						
		3	RED	ORG	GRN						
SB13	12	11	RED	ORG	GRN						
		19				RED/BLK	ORG/BLK		BLK/WHT		
		27								BLK	BLU
SB14	7	26								BLK	BLU

NOTES: USE WHITE CONDUCTOR IN THE SIGNAL CABLE AS THE GROUNDED CONDUCTOR FOR ALL TRAFFIC SIGNAL INDICATIONS.
ENSURE THE GROUNDED CONDUCTOR IN THE FEEDER CABLE AND THE POLE CABLES ARE BOTH 18" LONGER THAN THE UNGROUNDED CONDUCTORS.
AT THE SIGNAL BASES, CONNECT ON TERMINAL FROM THE PEDESTRIAN PUSH BUTTONS TO THE COLOR INDICATED IN THE CHART. CONNECT THE OTHER TERMINAL TO THE GROUNDED CONDUCTOR.

EQUIPMENT GROUNDING CONDUCTOR 10 AWG GRN XLP	
FROM	TO
CB1	SB1
SB1	SB2
SB2	SB3
SB3	SB4
SB4	SB5
SB5	SB6
SB6	SB7
SB7	SB8
SB8	SB10
SB10	SB11
SB11	SB12
SB12	SB13
SB13	SB14
SB14	CB1

PULL BOX BONDING JUMPER 10 AWG GRN XLP	
FROM	TO
PB1	CB1
PB2	SB1
PB3	SB3
PB4	SB4
PB5	SB6
PB6	SB7
PB7	SB7
PB8	SB9
PB9	SB11
PB10	SB12
PB11	SB12
PB12	SB13
PB13	CB1

PEDESTRIAN PUSH BUTTONS ISMA 20-1 14 AWG 12 CONDUCTOR		
BASE	PHASE	PED BUTTON
SB1	4	ORG
SB3	4	ORG
SB4	4	ORG
SB5	2	RED
SB8	2	RED
SB7	8	BLK
SB10	8	BLK
SB14	8	BLK
SB13	6	BLU
SB2	6	BLU

VIDEO DETECTION CABLE	
FROM	TO
CB1	V1(SB3)
CB1	V2(SB12)
CB1	V3(SB2)
CB1	V4(SB8)

LIGHTING UF 10 AWG W/ GROUND	
FROM	TO
CB1	SB2
SB2	SB3
CB1	SB12
SB12	SB9
SB9	SB8

EMERGENCY VEHICLE PREEMPTION	
FROM	TO
CB1	HEAD A(SB3)
CB1	HEAD B(SB12)
CB1	HEAD C(SB2)
CB1	HEAD D(SB8)

TRAFFIC CONTROL SIGNAL
USH 18 & MANHATTAN DRIVE
CITY OF WAUKESHA
WAUKESHA COUNTY

SIGNAL NO. S67-0444

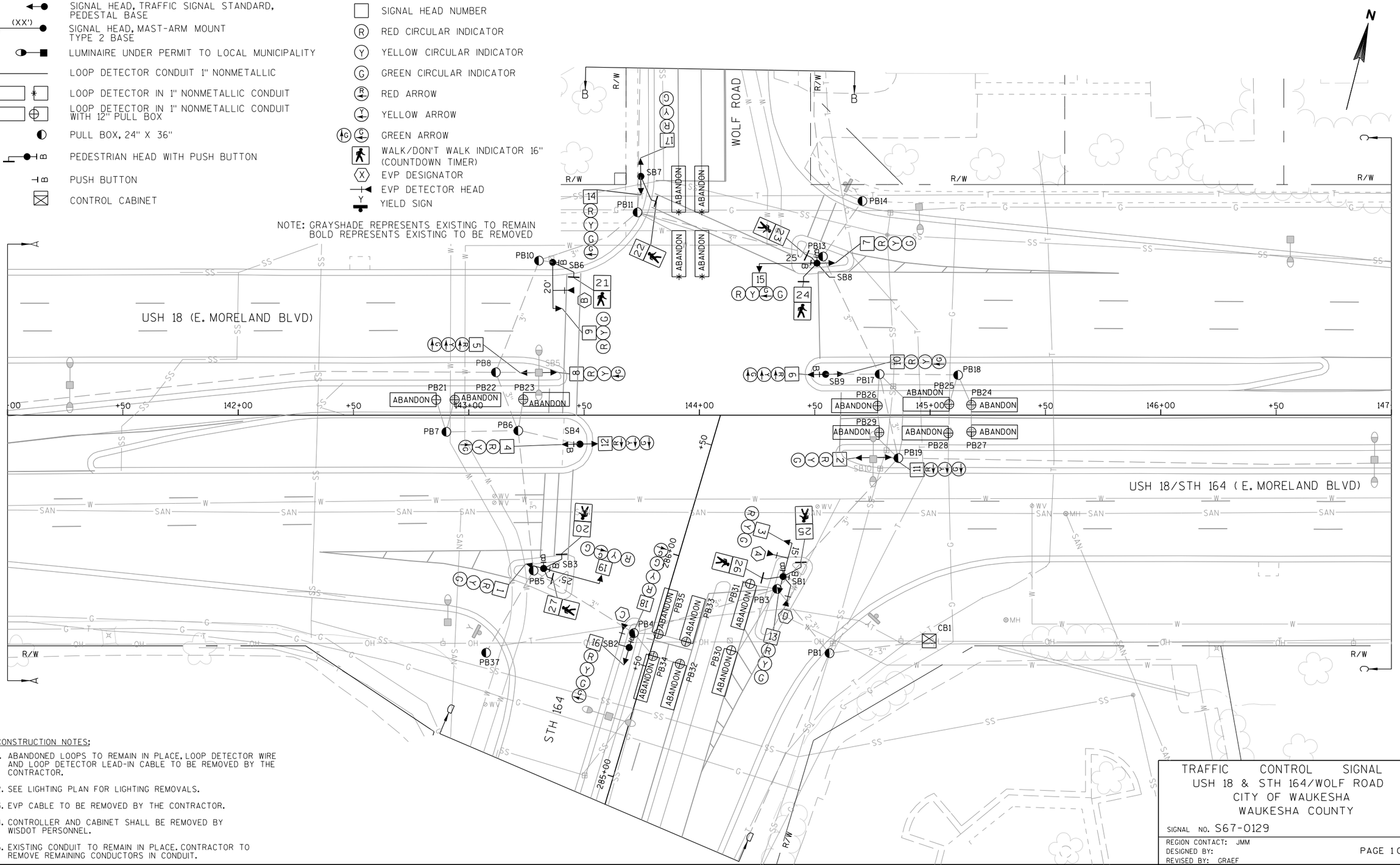
CITY CONTACT: MICHAEL GRULKE
DESIGNED BY: GRAEF
REVISED BY:

PAGE 1 OF 1

LEGEND

- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- (XX') SIGNAL HEAD, MAST-ARM MOUNT TYPE 2 BASE
- LUMINAIRE UNDER PERMIT TO LOCAL MUNICIPALITY
- LOOP DETECTOR CONDUIT 1" NONMETALLIC
- LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
- LOOP DETECTOR IN 1" NONMETALLIC CONDUIT WITH 12" PULL BOX
- PULL BOX, 24" X 36"
- PEDESTRIAN HEAD WITH PUSH BUTTON
- PUSH BUTTON
- CONTROL CABINET
- TRAFFIC SIGNAL HEAD
- SIGNAL HEAD NUMBER
- RED CIRCULAR INDICATOR
- YELLOW CIRCULAR INDICATOR
- GREEN CIRCULAR INDICATOR
- RED ARROW
- YELLOW ARROW
- GREEN ARROW
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- EVP DESIGNATOR
- EVP DETECTOR HEAD
- YIELD SIGN

NOTE: GRAYSHADE REPRESENTS EXISTING TO REMAIN
BOLD REPRESENTS EXISTING TO BE REMOVED



CONSTRUCTION NOTES:

1. ABANDONED LOOPS TO REMAIN IN PLACE, LOOP DETECTOR WIRE AND LOOP DETECTOR LEAD-IN CABLE TO BE REMOVED BY THE CONTRACTOR.
2. SEE LIGHTING PLAN FOR LIGHTING REMOVALS.
3. EVP CABLE TO BE REMOVED BY THE CONTRACTOR.
4. CONTROLLER AND CABINET SHALL BE REMOVED BY WISDOT PERSONNEL.
5. EXISTING CONDUIT TO REMAIN IN PLACE. CONTRACTOR TO REMOVE REMAINING CONDUCTORS IN CONDUIT.

TRAFFIC CONTROL SIGNAL
USH 18 & STH 164/WOLF ROAD
CITY OF WAUKESHA
WAUKESHA COUNTY

SIGNAL NO. S67-0129

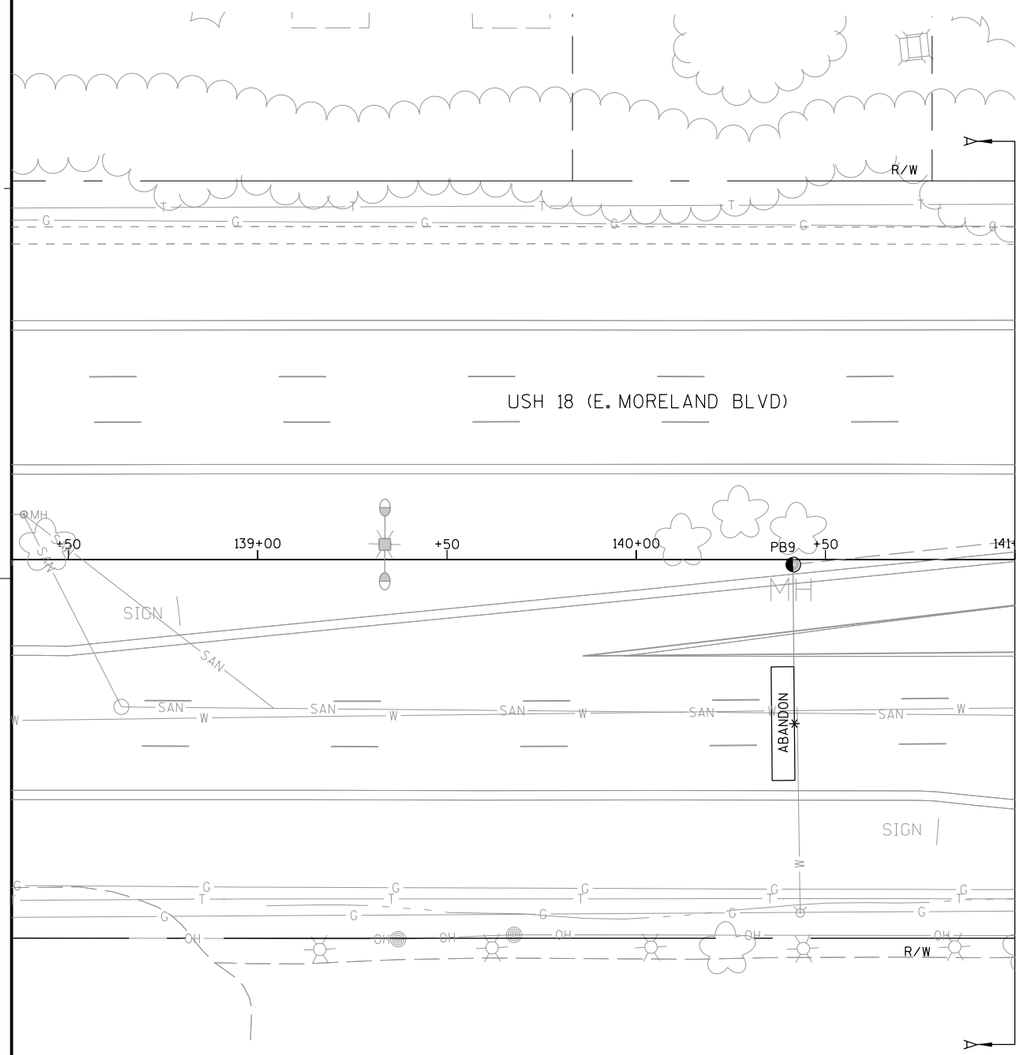
REGION CONTACT: JMM
DESIGNED BY:
REVISED BY: GRAEF

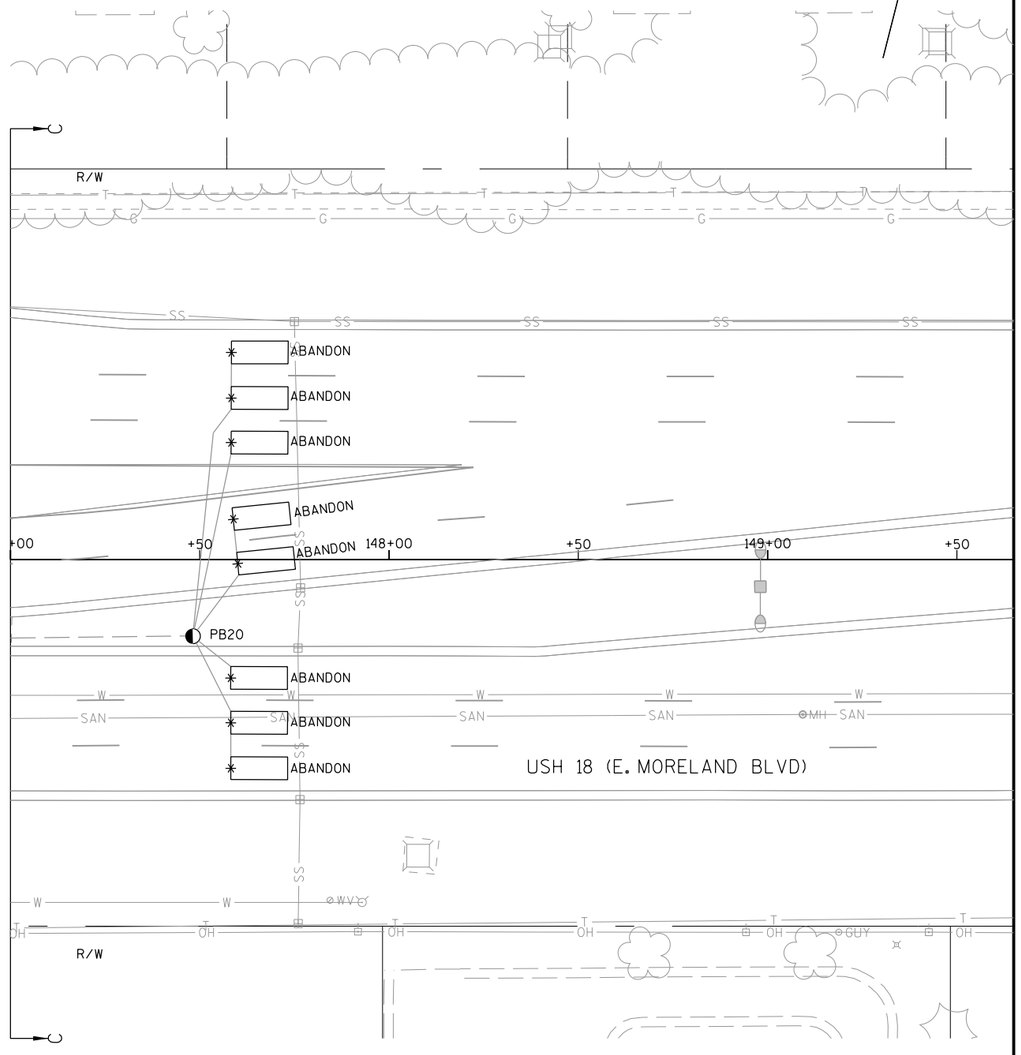
PAGE 1 OF 3

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	TRAFFIC SIGNAL REMOVAL PLAN	SHEET 241	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\02_STH164\024011_sp.dgn
PLOT DATE : 4/27/2015
PLOT BY : GRAEF
PLOT NAME :
PLOT SCALE : 40.0000 sf / in.

2





2

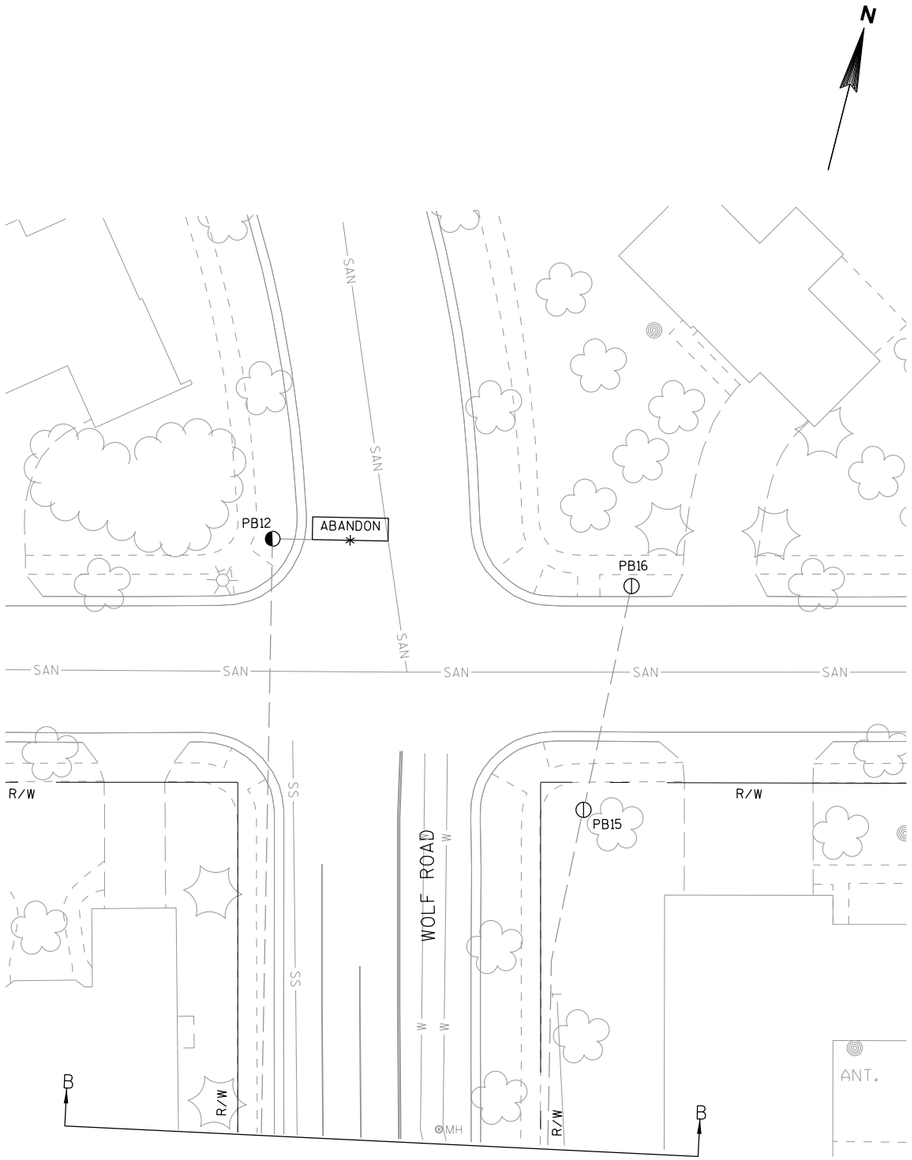
TRAFFIC CONTROL SIGNAL
USH 18 & STH 164/WOLF ROAD
CITY OF WAUKESHA
WAUKESHA COUNTY

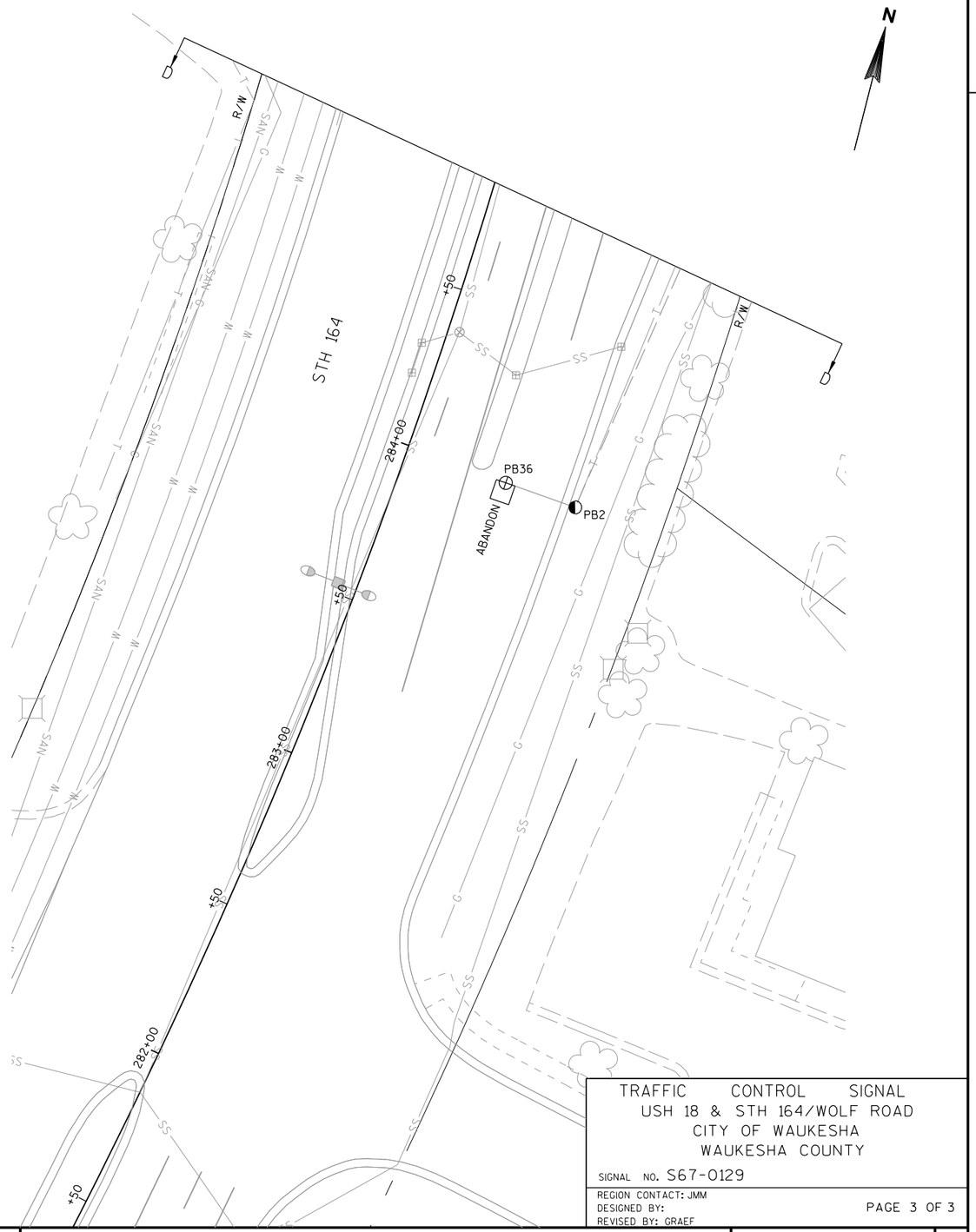
SIGNAL NO. S67-0129

REGION CONTACT: JMM
DESIGNED BY:
REVISED BY: GRAEF

PAGE 2 OF 3

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	TRAFFIC SIGNAL REMOVAL PLAN	SHEET 242	E





TRAFFIC CONTROL SIGNAL
USH 18 & STH 164/WOLF ROAD
CITY OF WAUKESHA
WAUKESHA COUNTY

SIGNAL NO. S67-0129

REGION CONTACT: JMM
DESIGNED BY:
REVISED BY: GRAEF

PAGE 3 OF 3

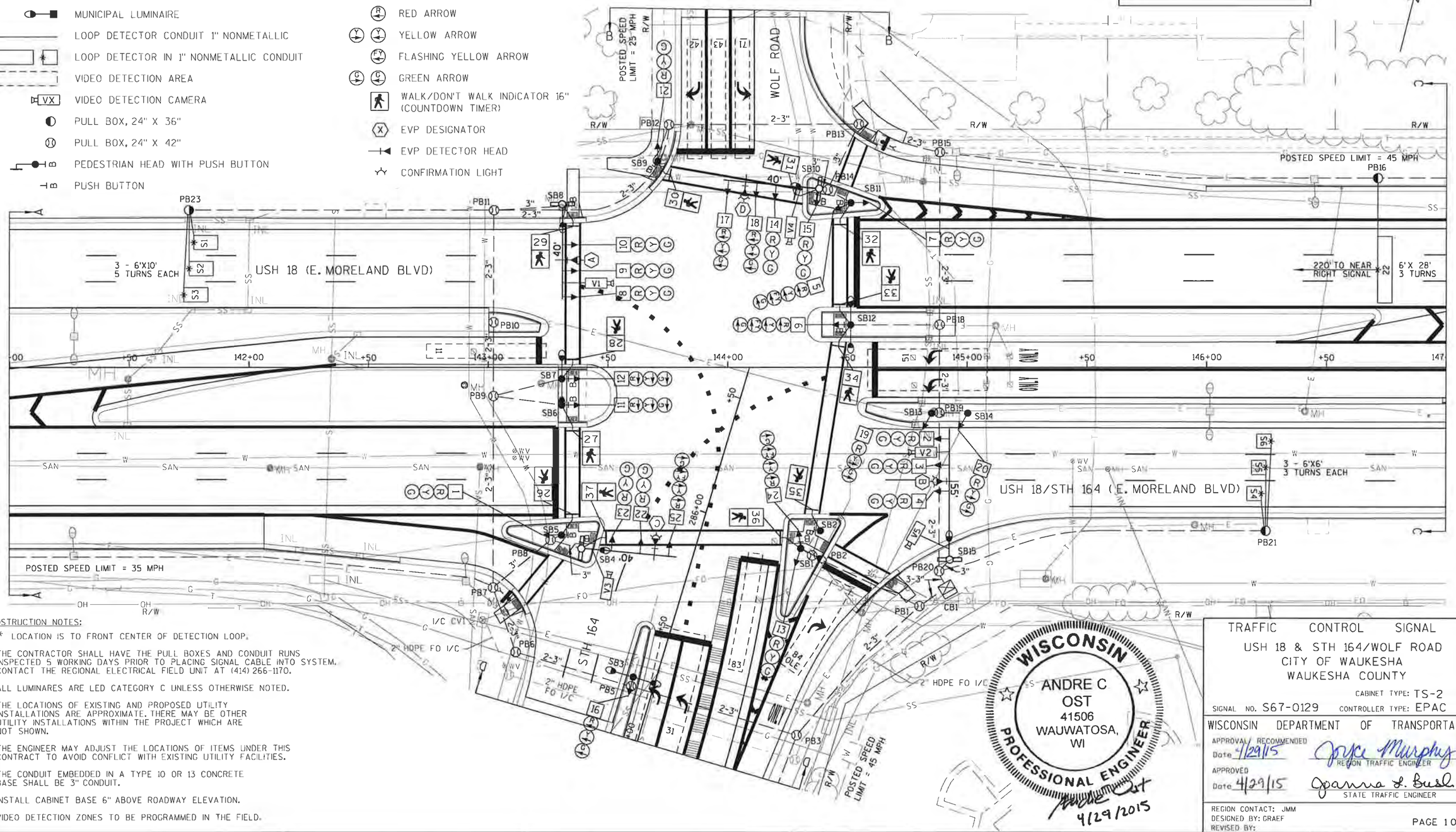
PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	TRAFFIC SIGNAL REMOVAL PLAN	SHEET 243	E

LEGEND

- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- (XX) MONOTUBE BASE, POLE, 35'-55' ARM
- LED LUMINAIRE, TRAFFIC POLE, TRANSFORMER BASE
- MUNICIPAL LUMINAIRE
- LOOP DETECTOR CONDUIT 1" NONMETALLIC
- LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
- VIDEO DETECTION AREA
- VX VIDEO DETECTION CAMERA
- PULL BOX, 24" X 36"
- PULL BOX, 24" X 42"
- B PEDESTRIAN HEAD WITH PUSH BUTTON
- B PUSH BUTTON
- SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- RED ARROW
- YELLOW ARROW
- FLASHING YELLOW ARROW
- GREEN ARROW
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- (X) EVP DESIGNATOR
- EVP DETECTOR HEAD
- CONFIRMATION LIGHT
- CONTROL CABINET
- (V) COMMUNICATIONS VAULT
- YIELD SIGN

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING

STRUCTURE NUMBERS	
SB4	= S-67-1184
SB8	= S-67-1185
SB10	= S-67-1186
SB15	= S-67-1187



CONSTRUCTION NOTES:

1. * LOCATION IS TO FRONT CENTER OF DETECTION LOOP.
2. THE CONTRACTOR SHALL HAVE THE PULL BOXES AND CONDUIT RUNS INSPECTED 5 WORKING DAYS PRIOR TO PLACING SIGNAL CABLE INTO SYSTEM. CONTACT THE REGIONAL ELECTRICAL FIELD UNIT AT (414) 266-1170.
3. ALL LUMINARES ARE LED CATEGORY C UNLESS OTHERWISE NOTED.
4. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
5. THE ENGINEER MAY ADJUST THE LOCATIONS OF ITEMS UNDER THIS CONTRACT TO AVOID CONFLICT WITH EXISTING UTILITY FACILITIES.
6. THE CONDUIT EMBEDDED IN A TYPE 10 OR 13 CONCRETE BASE SHALL BE 3" CONDUIT.
7. INSTALL CABINET BASE 6" ABOVE ROADWAY ELEVATION.
8. VIDEO DETECTION ZONES TO BE PROGRAMMED IN THE FIELD.

WISCONSIN
ANDRE C OST
41506
WAUWATOSA, WI
PROFESSIONAL ENGINEER
4/29/2015

TRAFFIC CONTROL SIGNAL
USH 18 & STH 164/WOLF ROAD
CITY OF WAUKESHA
WAUKESHA COUNTY

CABINET TYPE: TS-2
SIGNAL NO. S67-0129 CONTROLLER TYPE: EPAC

WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVAL RECOMMENDED Date 4/29/15 Joyce Murphy REGION TRAFFIC ENGINEER

APPROVED Date 4/29/15 Joanna L. Bush STATE TRAFFIC ENGINEER

REGION CONTACT: JMM
DESIGNED BY: GRAEF
REVISED BY:

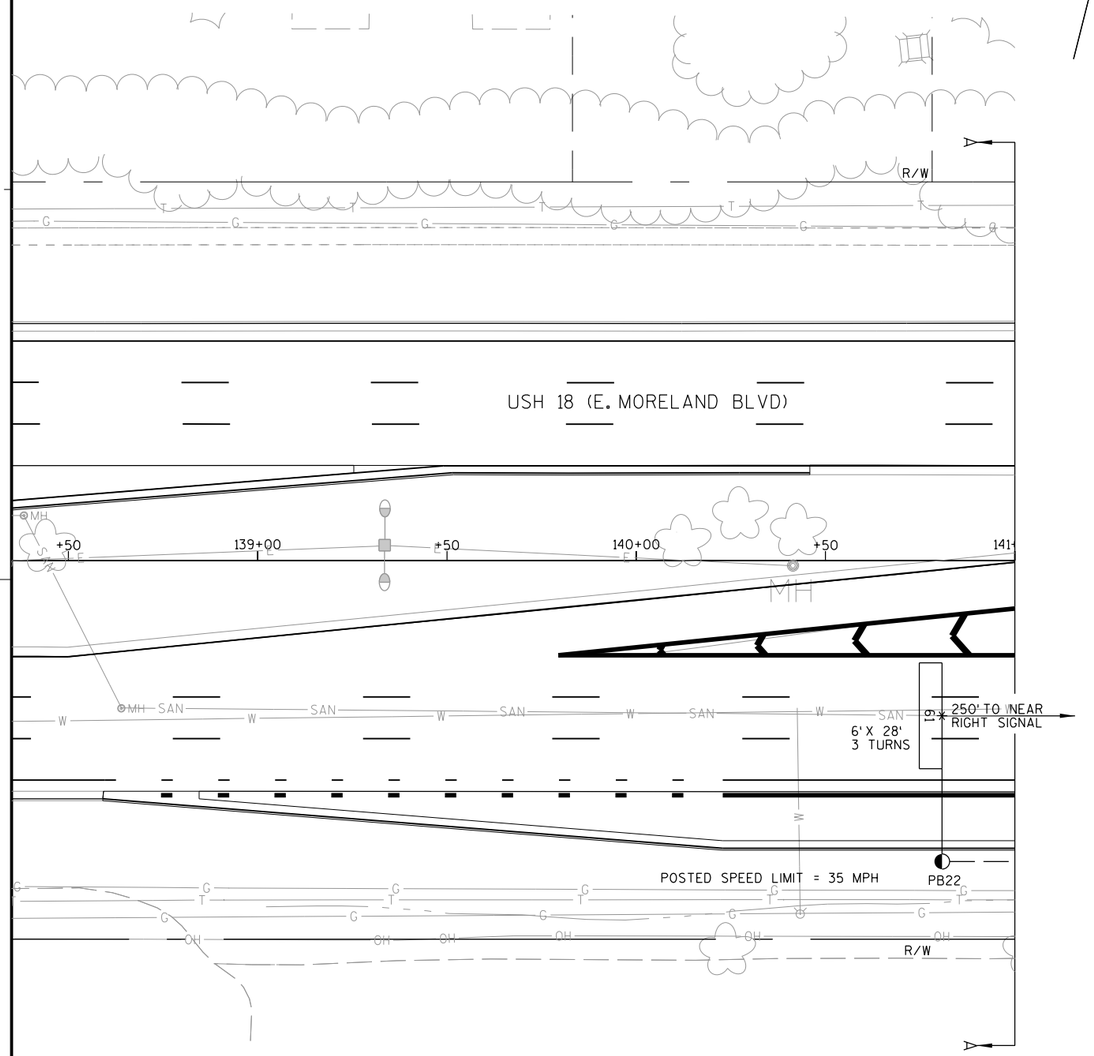
PAGE 1 OF 4

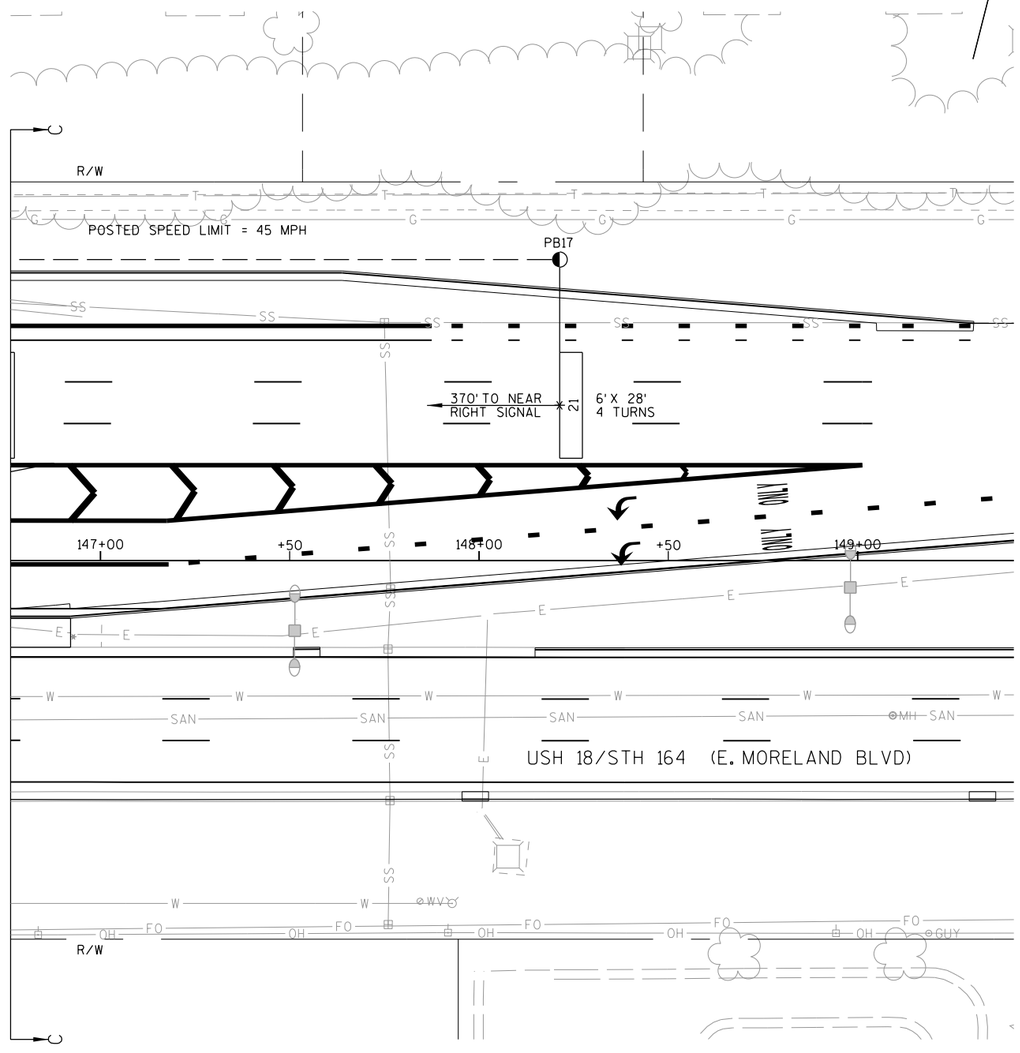
PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	TRAFFIC SIGNAL PLAN	SHEET 244 E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\02_STH164\024021_sp.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 40.0000 sf / in.

WISDOT/CADDS SHEET 42

4/29/15 DMB





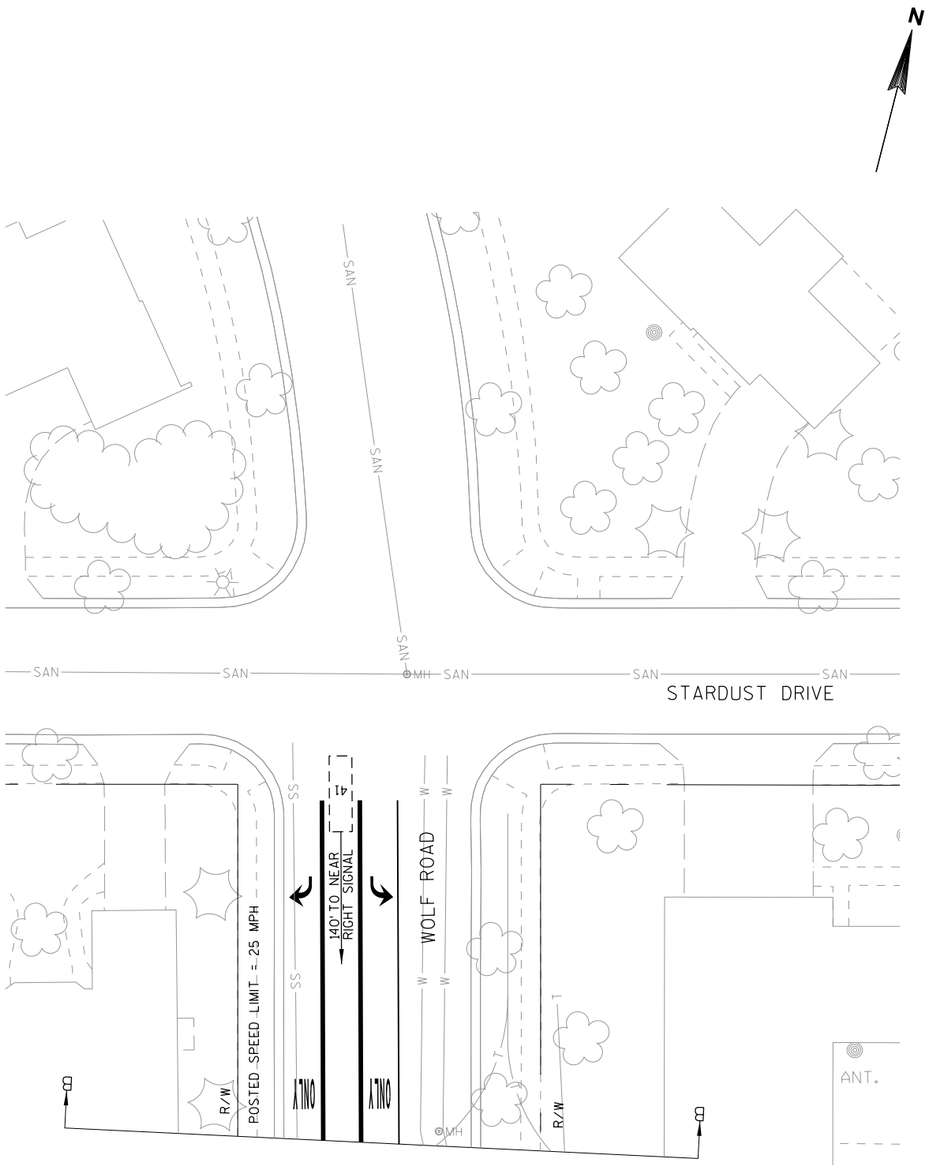
TRAFFIC CONTROL SIGNAL
USH 18 & STH 164/WOLF ROAD
CITY OF WAUKESHA
WAUKESHA COUNTY

SIGNAL NO. S67-0129

REGION CONTACT: JMM
DESIGNED BY: GRAEF
REVISED BY:

PAGE 2 OF 4

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	TRAFFIC SIGNAL PLAN	SHEET 245	E





TRAFFIC CONTROL SIGNAL
USH 18 & STH 164/WOLF ROAD
CITY OF WAUKESHA
WAUKESHA COUNTY

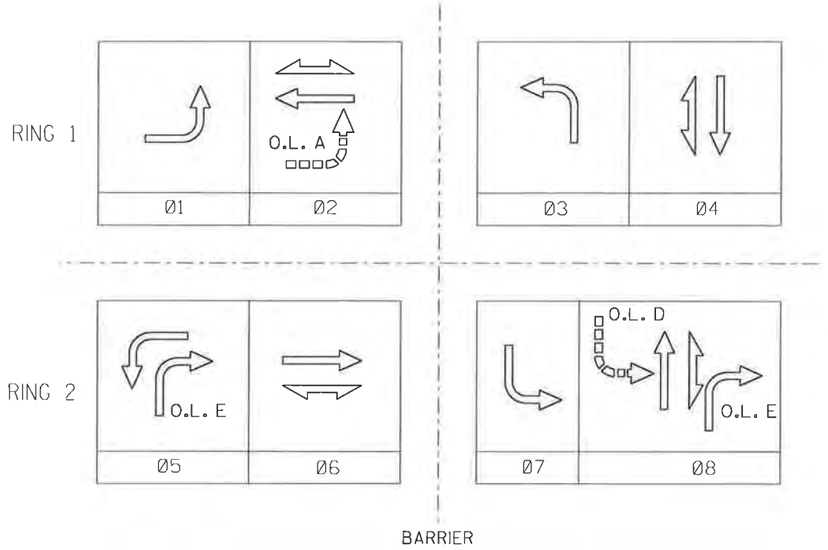
SIGNAL NO. S67-0129

REGION CONTACT: JMM
DESIGNED BY: GRAEF
REVISED BY:

PAGE 3 OF 4

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	TRAFFIC SIGNAL PLAN	SHEET 246	E

	HEAD NUMBERS	FLASH
Ø1	5,6	-
Ø2	7,8,9,10	R
Ø3	16,17,18	R
Ø4	21,22,23	R
Ø5	11,12	R
Ø6	1,2,3,4	R
Ø7	24,25	-
Ø8	13,14,15	R
Ø2P	30,31	
Ø4P	26,27,28,29	
Ø6P	36,37	
Ø8P	32,33,34,35	
OLA	5,6	R
OLB		
OLC		
OLD	24,25	R
OLE	19,20	R





CONTROLLER LOGIC

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / Ø	PHASE RECALL	PHASE ACTIVE
1		6		X
2	X	6	MIN	X
3		8		X
4		8		X
5		2		X
6	X	2	MIN	X
7		4		X
8		4		X

TYPE OF INTERCONNECT/COMMUNICATION	
NONE	
CLOSED LOOP	
TWISTED PAIR*	
FIBER OPTIC*	X
FIBER OPTIC (ETHERNET)	
RADIO	

TYPE OF COORDINATION	
NONE	
TBC	
TRAFFIC RESPONSIVE	X
ADAPTIVE	
*LOCATION OF MASTER CONTROLLER NO:	S-
SIGNAL SYSTEM #:	SS-00-42

TYPE OF LIGHTING	
BY OTHER AGENCY	
IN TRAFFIC SIGNAL CABINET	X
IN SEPARATE DOT LIGHTING CABINET	

TYPE OF PRE-EMPT	
NONE	
RAILROAD	
EMERGENCY VEHICLE	X
GTT	X
TOMAR	
HARDWIRE	
OTHER	
LIFT BRIDGE	
QUEUE DETECTOR	

DETECTOR LOGIC

DETECTOR INPUT	3	1	7	5	11	9	15	13
PLAN LOOP DETECTOR #(S)	21	61	S1	S3	S5			
ASSIGNED PHASE	2	6						
OPERATION MODE	VEH	VEH						
SWITCH								
EXTEND								
DELAY								

19	17	23	21	27	25	31	29	DETECTOR INPUT
11	41	43	71	83				PLAN LOOP DETECTOR #(S)
1	4	4	7	7				ASSIGNED PHASE
VEH	VEH	VEH	VEH	VEH				OPERATION MODE
								SWITCH
	X							EXTEND
	X		X					DELAY

DETECTOR INPUT	4	2	8	6	12	10	16	14
PLAN LOOP DETECTOR #(S)	22	81	S2	S4	S6			
ASSIGNED PHASE	2	8						
OPERATION MODE	VEH	VEH						
SWITCH								
EXTEND		X						
DELAY		X						

20	18	24	22	28	26	32	30	DETECTOR INPUT
31	42	51	82	84				PLAN LOOP DETECTOR #(S)
3	4	5	8	8				ASSIGNED PHASE
VEH	VEH	VEH	VEH	VEH				OPERATION MODE
								SWITCH
			X					EXTEND
	X			X				DELAY

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE DETECTOR	A	B	C	D
MOVEMENT				
PHASE	2+5	1+6	4+7	8+3

AFTER PREEMPTION SEQUENCE 2+5 OR 1+6, CONTROLLER SHALL RETURN TO PHASES 2+6.

AFTER PREEMPTION SEQUENCE 4+7 OR 8+3, CONTROLLER SHALL RETURN TO PHASES 4+8.

USH 18 & STH 164/WOLF ROAD
CITY OF WAUKESHA
WAUKESHA COUNTY

SIGNAL NO. S67-0129

CONTROLLER TYPE: EPAC

DATE 4/15 PAGE NO. 4 OF 4

4/29/15 PAR
4/29/15 JMM

PROJECT NO: 2200-16-71 | HWY: USH 18 | COUNTY: WAUKESHA | SEQUENCE OF OPERATIONS | SHEET 247 E

PROJECT ID:	2200-16-71
INTERSECTION:	USH 18 & STH 164/WOLF ROAD

SIGNAL WIRE COLOR CODING	BLK-BLACK	RED-RED	GRN-GREEN
	WHT-WHITE	BLU-BLUE	ORG-ORANGE

CB1 TO	NO. OF 14 AWG CONDUCTORS	HEAD NO.	RED	YELLOW	GREEN	<RED>	<YELLOW>	<GREEN>	FLASHING <YELLOW>	D/WALK	WALK	PED BUTTON
SB1	12	13	RED	ORG	GRN							
		24				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT			
		36								BLK	BLU	
		B										WHT/BLK
SB2	7	35								BLK	BLU	
		B										WHT/BLK
SB3	7	16				RED	ORG	GRN				
SB4	12	22	RED	ORG	GRN							
		23	RED	ORG	GRN							
		25				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT			
		37								BLK	BLU	
		B										WHT/BLK
SB5	12	1	RED	ORG	GRN							
		26								BLK	BLU	
		B										WHT/BLK
SB6	12	11				RED	ORG	GRN				
		27								BLK	BLU	
		B										WHT/BLK
SB7	12	12				RED	ORG	GRN				
		28								BLK	BLU	
		B										WHT/BLK
SB8	12	8	RED	ORG	GRN							
		9	RED	ORG	GRN							
		10	RED	ORG	GRN							
		29								BLK	BLU	
		B										WHT/BLK
SB9	12	21	RED	ORG	GRN							
		30								BLK	BLU	
		B										WHT/BLK
SB10	12	14	RED	ORG	GRN							
		15	RED	ORG	GRN							
		17				RED/BLK	ORG/BLK	GRN/BLK				
		18				RED/BLK	ORG/BLK	GRN/BLK				
		31								BLK	BLU	
		B										WHT/BLK
SB11	12	5				RED	ORG	GRN	BLK/WHT			
		7	RED/BLK	ORG/BLK	GRN/BLK							
		32								BLK	BLU	
		B										WHT/BLK
SB12	12	6				RED	ORG	GRN	BLK/WHT			
		33								BLK	BLU	
		34								BLK	BLU	
		B										WHT/BLK
SB13	7	19	RED				ORG	GRN				
SB14	7	20	RED				ORG	GRN				
SB15	7	2	RED	ORG	GRN							
		3	RED	ORG	GRN							
		4	RED	ORG	GRN							

NOTES: USE WHITE CONDUCTOR IN THE SIGNAL CABLE AS THE GROUNDED CONDUCTOR FOR ALL TRAFFIC SIGNAL INDICATIONS.
ENSURE THE GROUNDED CONDUCTOR IN THE FEEDER CABLE AND THE POLE CABLES ARE BOTH 18" LONGER THAN THE UNGROUNDED CONDUCTORS.
AT THE SIGNAL BASES, CONNECT ON TERMINAL FROM THE PEDESTRIAN PUSH BUTTONS TO THE COLOR INDICATED IN THE CHART. CONNECT THE OTHER TERMINAL TO THE GROUNDED CONDUCTOR.

EQUIPMENT GROUNDING CONDUCTOR 10 AWG GRN XLP	
FROM	TO
CB1	SB1
SB1	SB2
SB2	SB3
SB3	SB4
SB4	SB5
SB5	SB6
SB6	SB7
SB7	SB8
SB8	SB9
SB9	SB10
SB10	SB11
SB11	SB12
SB12	SB13
SB13	SB14
SB14	SB15
SB15	CB1

PULL BOX BONDING JUMPER 10 AWG GRN XLP	
FROM	TO
PB1	CB1
PB2	SB1
PB3	CB1
PB5	SB3
PB6	SB3
PB7	SB5
PB8	SB5
PB9	SB6
PB10	SB6
PB11	SB8
PB12	SB9
PB13	SB10
PB14	SB10
PB15	SB10
PB18	SB12
PB19	SB13
PB20	SB15

LIGHTING UF 10 AWG W/ GROUND	
FROM	TO
CB1	SB1
SB1	SB3
SB3	SB4
SB4	SB7
CB1	SB15
SB15	SB12
SB12	SB10
SB10	SB8

VIDEO DETECTION CABLE	
FROM	TO
CB1	V1(SB8)
CB1	V2(SB15)
CB1	V3(SB4)
CB1	V4(SB10)
CB1	V5(SB15)

EMERGENCY VEHICLE PREEMPTION	
FROM	TO
CB1	HEAD A(SB8)
CB1	HEAD B(SB15)
CB1	HEAD C(SB4)
CB1	HEAD D(SB10)

TRAFFIC CONTROL SIGNAL
USH 18 & STH 164/WOLF ROAD
CITY OF WAUKESHA
WAUKESHA COUNTY

SIGNAL NO. S67-0129

REGION CONTACT: JMM
DESIGNED BY: GRAEF
REVISED BY:

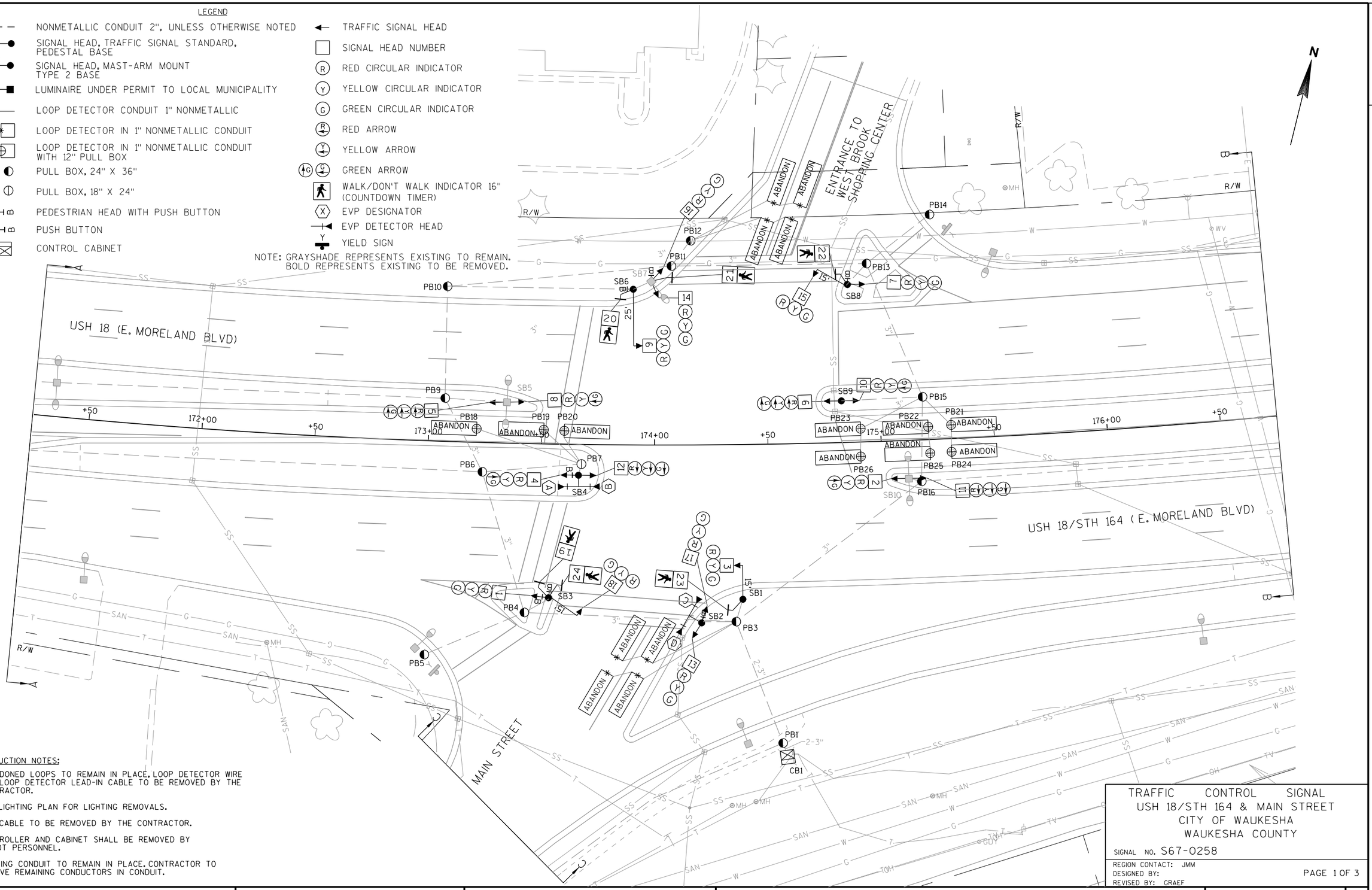
PAGE 1 OF 1

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CABLE ROUTING	SHEET 248	E

LEGEND

NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED	TRAFFIC SIGNAL HEAD
SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE	SIGNAL HEAD NUMBER
(XX') SIGNAL HEAD, MAST-ARM MOUNT TYPE 2 BASE	(R) RED CIRCULAR INDICATOR
LUMINAIRE UNDER PERMIT TO LOCAL MUNICIPALITY	(Y) YELLOW CIRCULAR INDICATOR
LOOP DETECTOR CONDUIT 1" NONMETALLIC	(G) GREEN CIRCULAR INDICATOR
LOOP DETECTOR IN 1" NONMETALLIC CONDUIT	(R) RED ARROW
LOOP DETECTOR IN 1" NONMETALLIC CONDUIT WITH 12" PULL BOX	(Y) YELLOW ARROW
PULL BOX, 24" X 36"	(G) GREEN ARROW
PULL BOX, 18" X 24"	WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
PEDESTRIAN HEAD WITH PUSH BUTTON	(X) EVP DESIGNATOR
PUSH BUTTON	EVP DETECTOR HEAD
CONTROL CABINET	Y YIELD SIGN

NOTE: GRAYSHADE REPRESENTS EXISTING TO REMAIN.
BOLD REPRESENTS EXISTING TO BE REMOVED.



CONSTRUCTION NOTES:

1. ABANDONED LOOPS TO REMAIN IN PLACE, LOOP DETECTOR WIRE AND LOOP DETECTOR LEAD-IN CABLE TO BE REMOVED BY THE CONTRACTOR.
2. SEE LIGHTING PLAN FOR LIGHTING REMOVALS.
3. EVP CABLE TO BE REMOVED BY THE CONTRACTOR.
4. CONTROLLER AND CABINET SHALL BE REMOVED BY WISDOT PERSONNEL.
5. EXISTING CONDUIT TO REMAIN IN PLACE. CONTRACTOR TO REMOVE REMAINING CONDUCTORS IN CONDUIT.

TRAFFIC CONTROL SIGNAL
USH 18/STH 164 & MAIN STREET
CITY OF WAUKESHA
WAUKESHA COUNTY

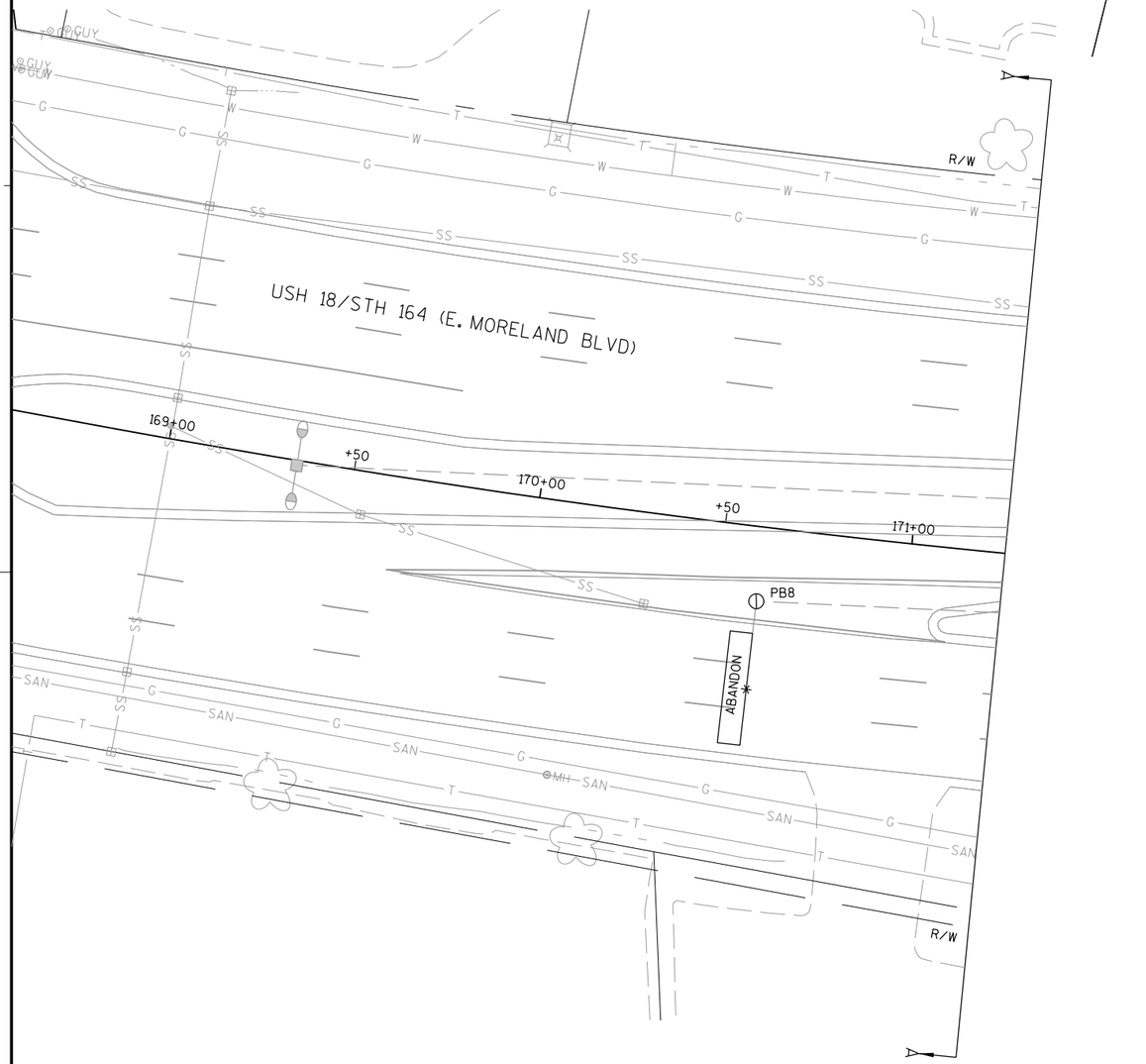
SIGNAL NO. S67-0258

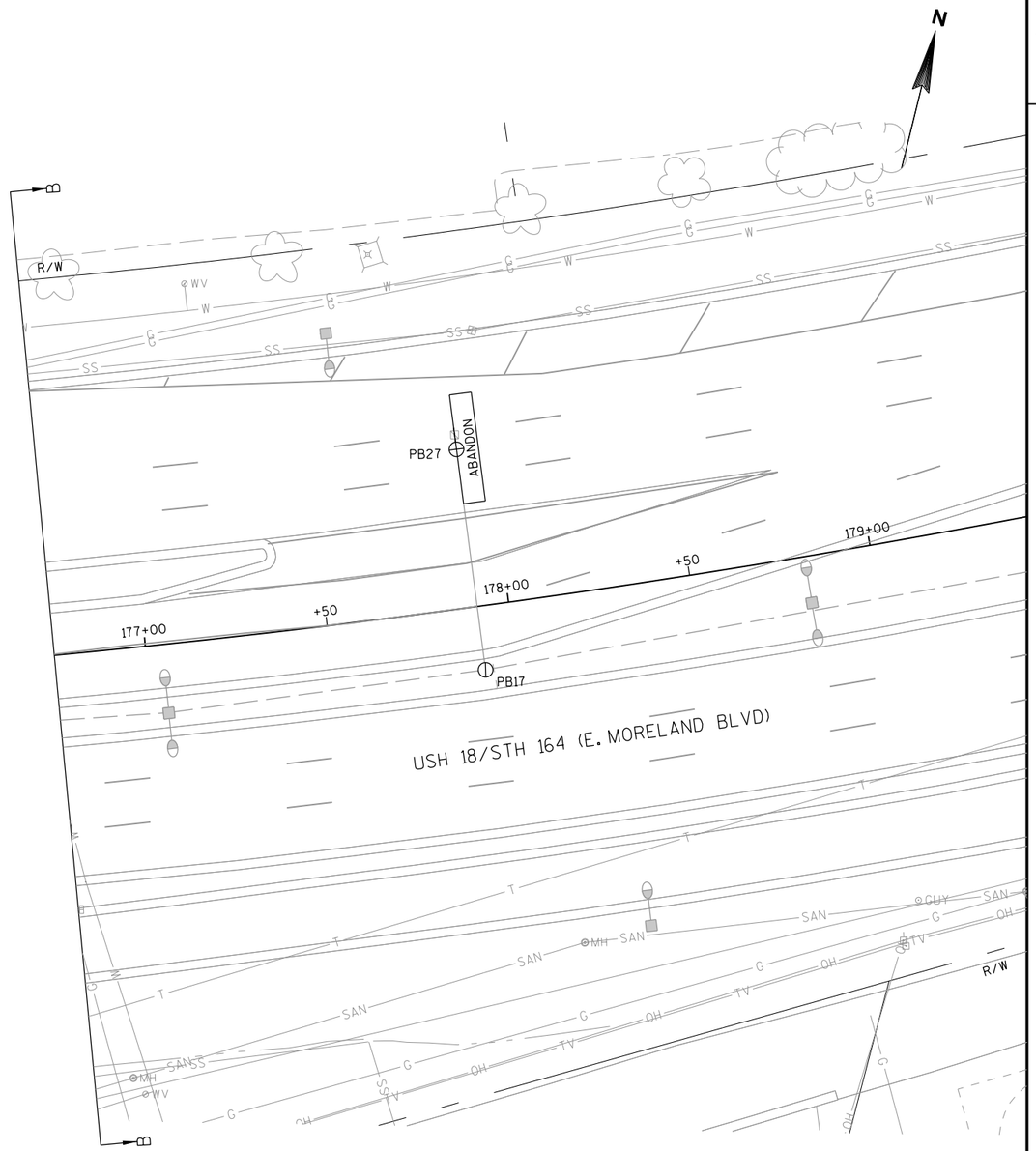
REGION CONTACT: JMM
DESIGNED BY:
REVISED BY: GRAEF

PAGE 1 OF 3

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	TRAFFIC SIGNAL REMOVAL PLAN	SHEET 249	E

2





2

TRAFFIC CONTROL SIGNAL
USH 18/STH 164 & MAIN STREET
CITY OF WAUKESHA
WAUKESHA COUNTY

SIGNAL NO. S67-0258

REGION CONTACT: JMM
DESIGNED BY:
REVISED BY: GRAEF

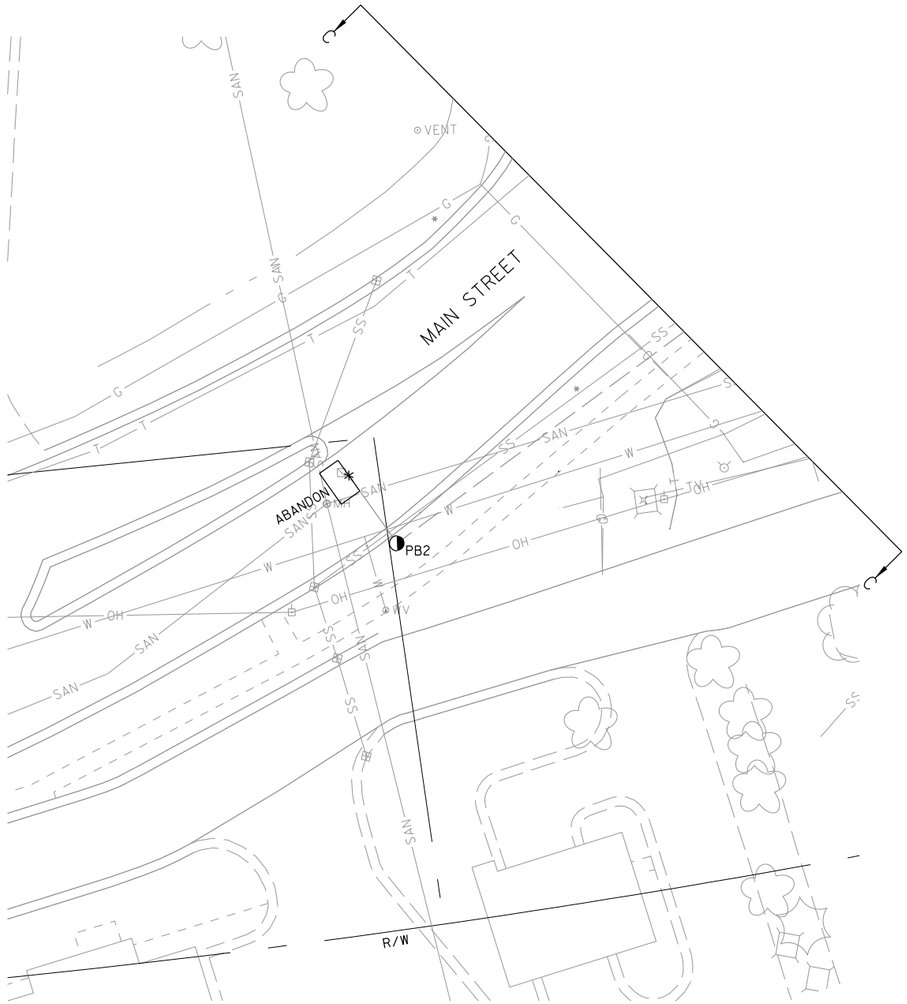
PAGE 2 OF 3

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	TRAFFIC SIGNAL REMOVAL PLAN	SHEET 250	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\03_Main\024012_sp.dgn
PLOT DATE : 4/27/2015
PLOT BY : GRAEF
PLOT NAME :
PLOT SCALE : 40.0000 sf / in.
WISDOT/CADDS SHEET 42

2

N



TRAFFIC CONTROL SIGNAL
USH 18/STH 164 & MAIN STREET
CITY OF WAUKESHA
WAUKESHA COUNTY

SIGNAL NO. S67-0258

REGION CONTACT: JMM
DESIGNED BY:
REVISED BY: GRAEF

PAGE 3 OF 3

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	TRAFFIC SIGNAL REMOVAL PLAN	SHEET 251	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\03_Main\024013_sp.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 40.0000 sf / in.

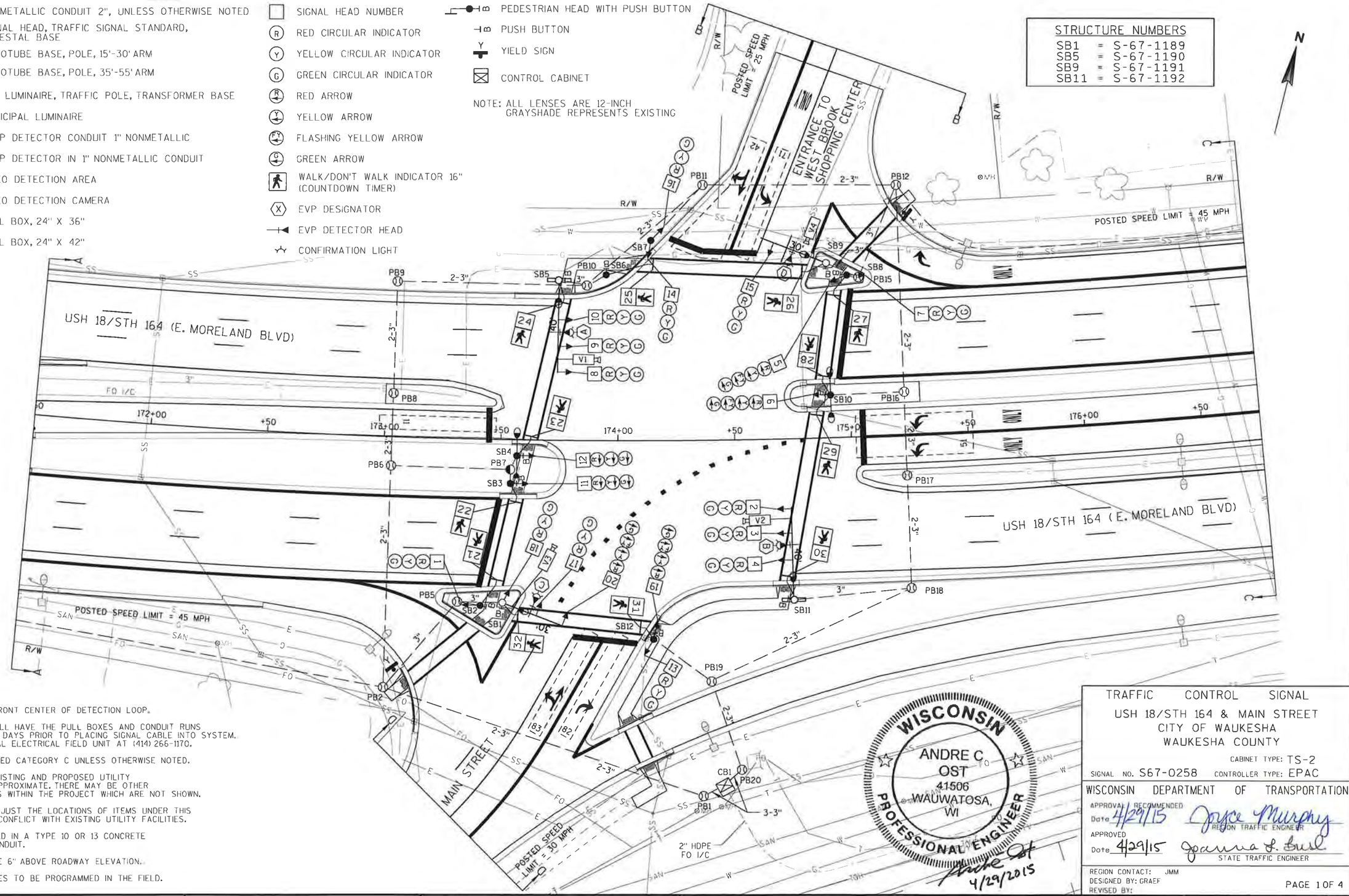
LEGEND

- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- (XX) MONOTUBE BASE, POLE, 15'-30' ARM
- (XX) MONOTUBE BASE, POLE, 35'-55' ARM
- LED LUMINAIRE, TRAFFIC POLE, TRANSFORMER BASE
- MUNICIPAL LUMINAIRE
- LOOP DETECTOR CONDUIT 1" NONMETALLIC
- LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
- VIDEO DETECTION AREA
- VX VIDEO DETECTION CAMERA
- PULL BOX, 24" X 36"
- PULL BOX, 24" X 42"
- SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- (R) RED ARROW
- (Y) YELLOW ARROW
- (FY) FLASHING YELLOW ARROW
- (G) GREEN ARROW
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- (X) EVP DESIGNATOR
- EVP DETECTOR HEAD
- CONFIRMATION LIGHT
- PEDESTRIAN HEAD WITH PUSH BUTTON
- PUSH BUTTON
- YIELD SIGN
- CONTROL CABINET

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING

STRUCTURE NUMBERS

SB1	= S-67-1189
SB5	= S-67-1190
SB9	= S-67-1191
SB11	= S-67-1192



CONSTRUCTION NOTES:

1. * LOCATION IS TO FRONT CENTER OF DETECTION LOOP.
2. THE CONTRACTOR SHALL HAVE THE PULL BOXES AND CONDUIT RUNS INSPECTED 5 WORKING DAYS PRIOR TO PLACING SIGNAL CABLE INTO SYSTEM. CONTACT THE REGIONAL ELECTRICAL FIELD UNIT AT (414) 266-1170.
3. ALL LUMINARES ARE LED CATEGORY C UNLESS OTHERWISE NOTED.
4. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
5. THE ENGINEER MAY ADJUST THE LOCATIONS OF ITEMS UNDER THIS CONTRACT TO AVOID CONFLICT WITH EXISTING UTILITY FACILITIES.
6. THE CONDUIT EMBEDDED IN A TYPE 10 OR 13 CONCRETE BASE SHALL BE 3" CONDUIT.
7. INSTALL CABINET BASE 6" ABOVE ROADWAY ELEVATION.
8. VIDEO DETECTION ZONES TO BE PROGRAMMED IN THE FIELD.

WISCONSIN
ANDRE C. OST
41506
WAUWATOSA, WI
PROFESSIONAL ENGINEER
4/29/2015

TRAFFIC CONTROL SIGNAL
USH 18/STH 164 & MAIN STREET
CITY OF WAUKESHA
WAUKESHA COUNTY

CABINET TYPE: TS-2
SIGNAL NO. S67-0258 CONTROLLER TYPE: EPAC

WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVAL RECOMMENDED
Date 4/29/15 Joyce Murphy REGION TRAFFIC ENGINEER

APPROVED
Date 4/29/15 Joanna L. Bush STATE TRAFFIC ENGINEER

REGION CONTACT: JMM
DESIGNED BY: GRAEF
REVISED BY:

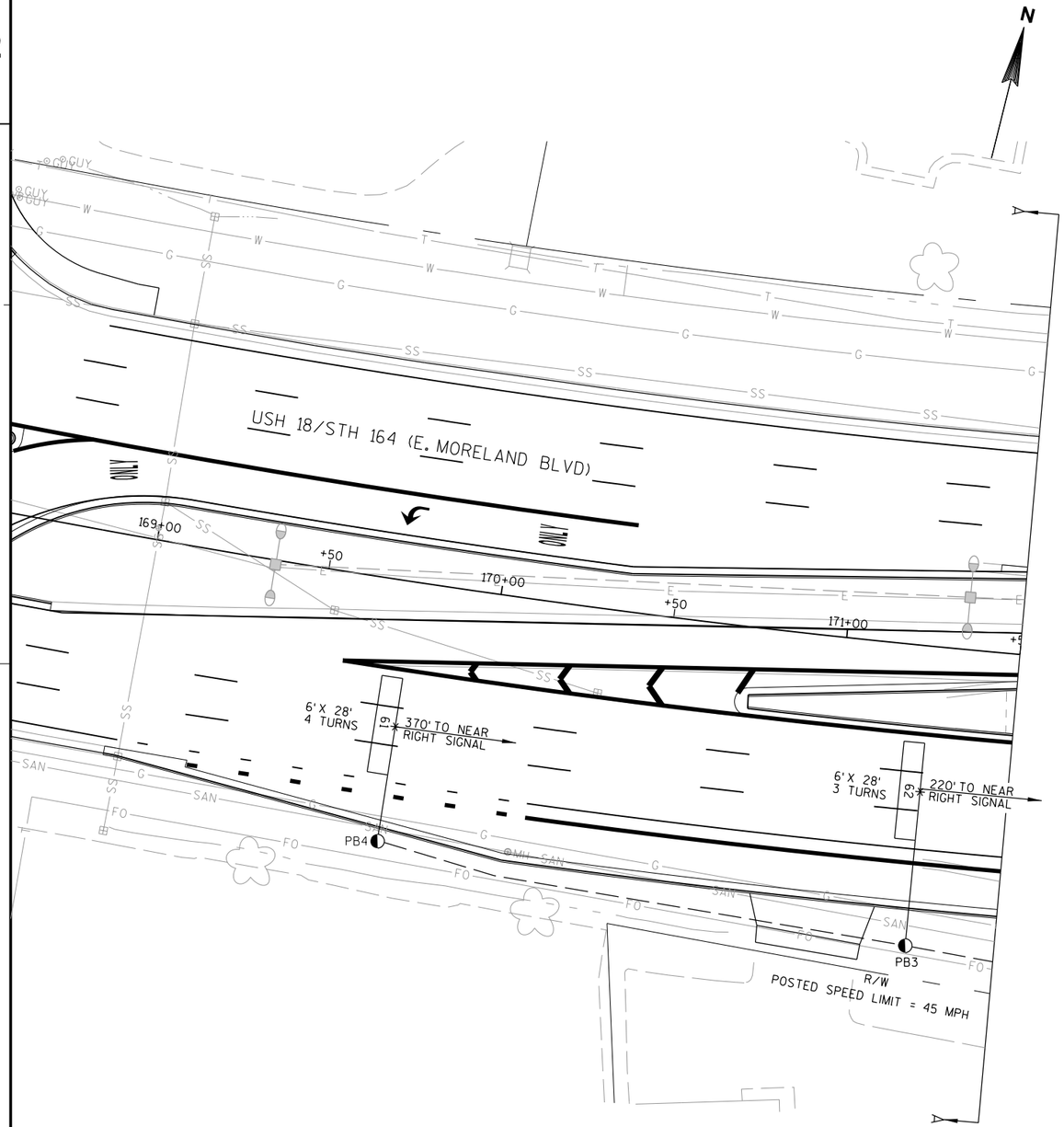
PAGE 1 OF 4

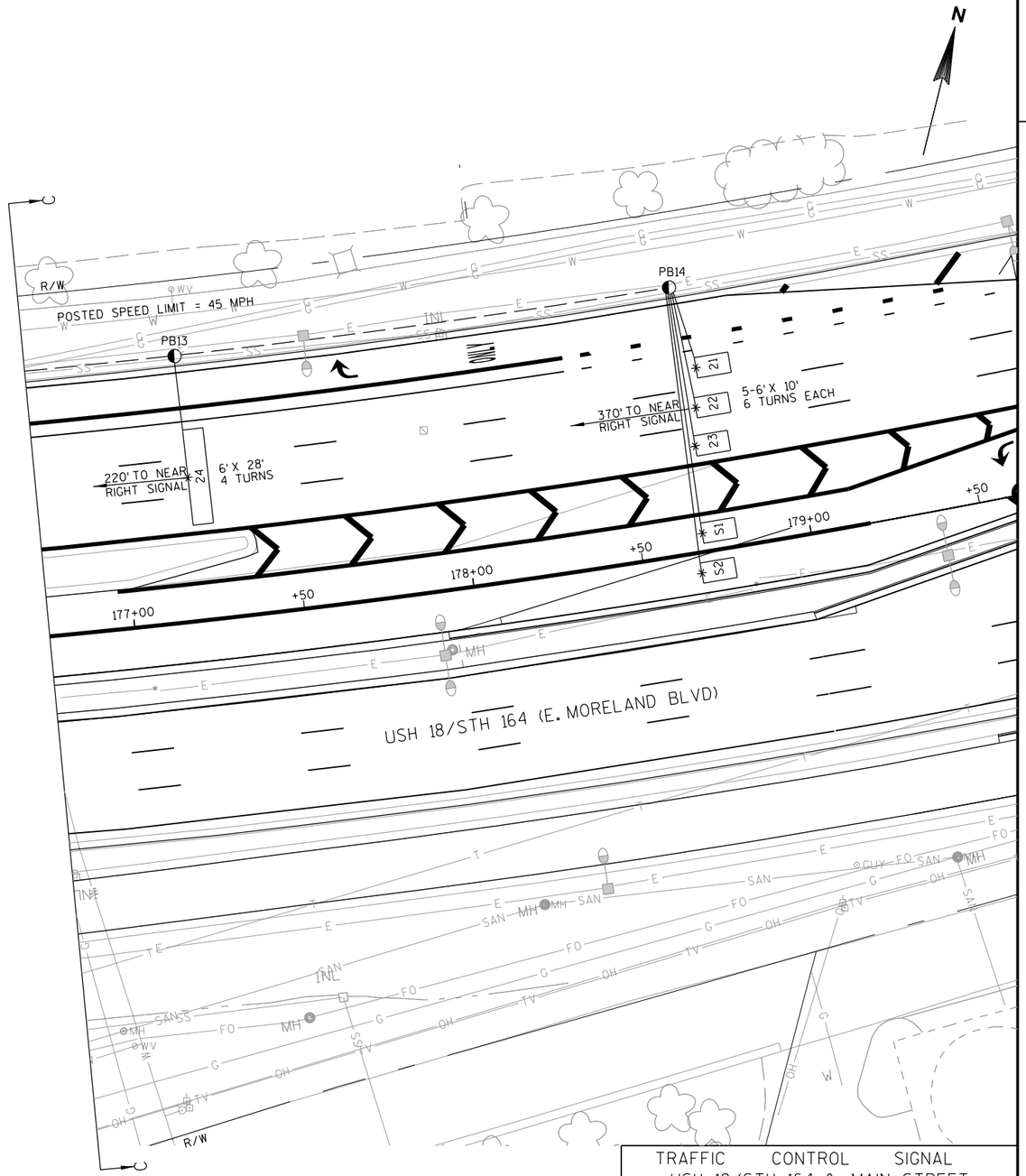
PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	TRAFFIC SIGNAL PLAN	SHEET 252 E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\03_Main\024021_sp.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 40.0000 sf / in.

WISDOT/CADDS SHEET 42

4/29/15 DAB





TRAFFIC CONTROL SIGNAL
USH 18/STH 164 & MAIN STREET
CITY OF WAUKESHA
WAUKESHA COUNTY

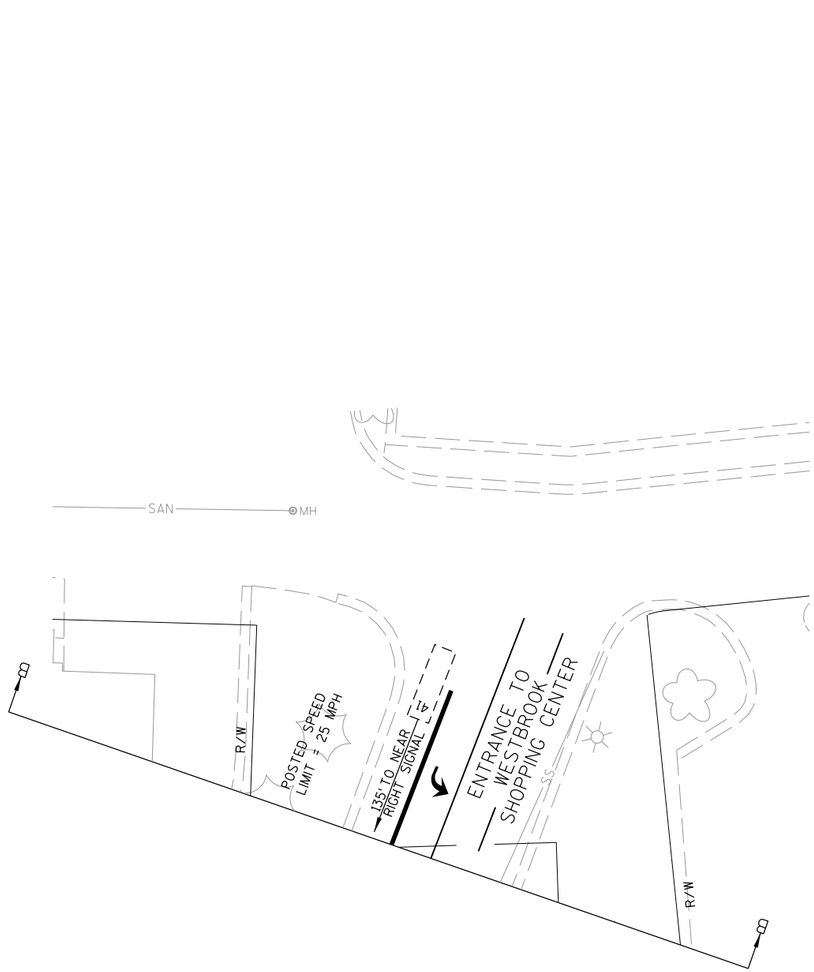
SIGNAL NO. S67-0258

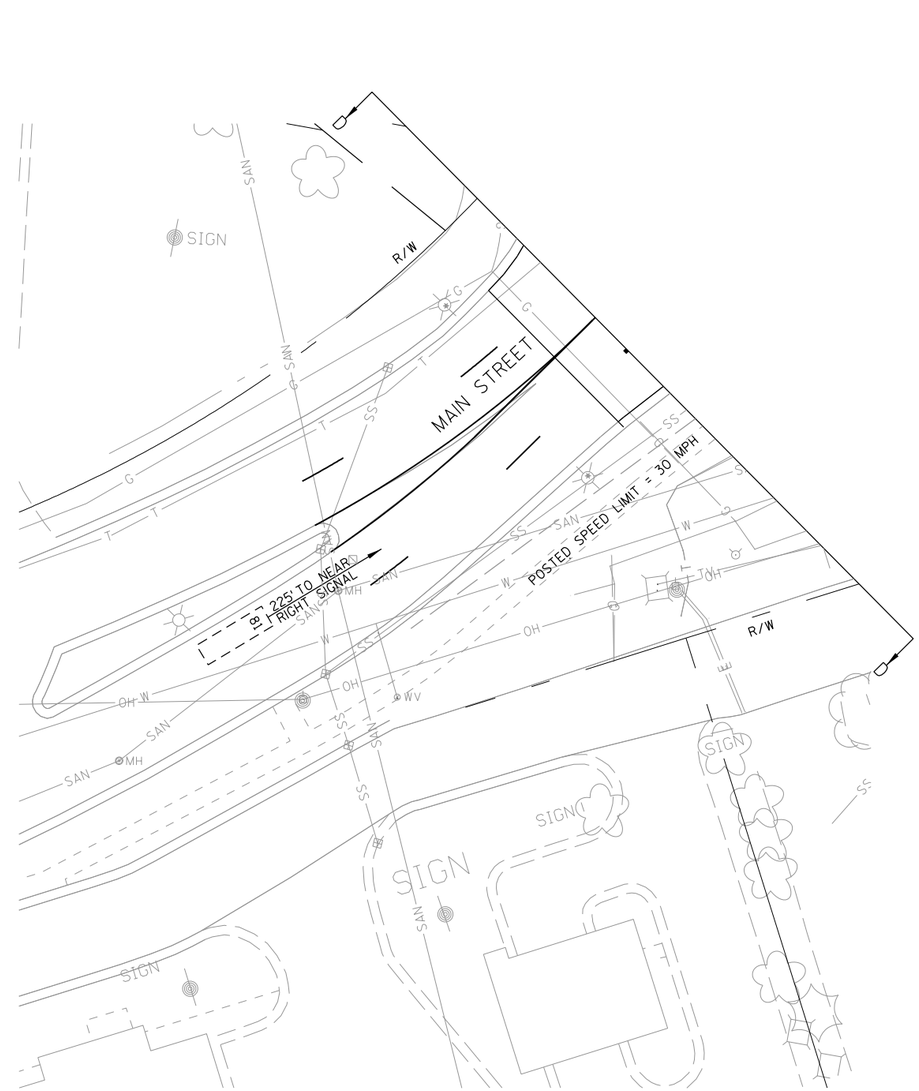
REGION CONTACT: JMM
DESIGNED BY: GRAEF
REVISED BY:

PAGE 2 OF 4

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	TRAFFIC SIGNAL PLAN	SHEET 253	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\03_Main\024022_sp.dgn
PLOT DATE : 4/27/2015
PLOT BY : GRAEF
PLOT NAME :
PLOT SCALE : 40.0000 sf / in.
WISDOT/CADDS SHEET 42





2

TRAFFIC CONTROL SIGNAL
USH 18/STH 164 & MAIN STREET
CITY OF WAUKESHA
WAUKESHA COUNTY

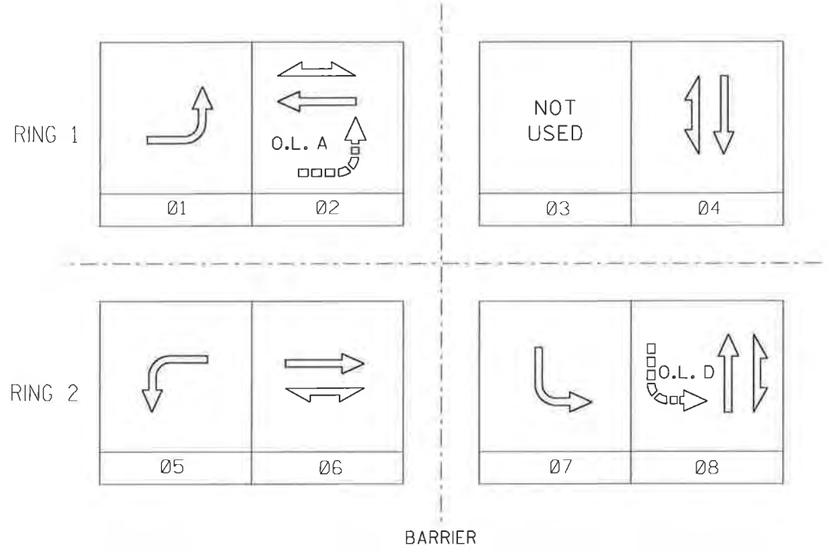
SIGNAL NO. S67-0258

REGION CONTACT: JMM
DESIGNED BY: GRAEF
REVISED BY:

PAGE 3 OF 4

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	TRAFFIC SIGNAL PLAN	SHEET 254	E

	HEAD NUMBERS	FLASH
Ø1	5,6	-
Ø2	7,8,9,10	R
Ø3		
Ø4	16,17,18	R
Ø5	11,12	R
Ø6	1,2,3,4	R
Ø7	19,20	-
Ø8	13,14,15	R
Ø2P	25,26	
Ø4P	21,22,23,24	
Ø6P	31,32	
Ø8P	27,28,29,30	
OLA	5,6	R
OLB		
OLC		
OLD	21,22	R





CONTROLLER LOGIC

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / Ø	PHASE RECALL	PHASE ACTIVE
1		6		X
2	X	6	MIN	X
3				
4		8		X
5		2		X
6	X	2	MIN	X
7		4		X
8		4		X

TYPE OF INTERCONNECT/COMMUNICATION	
NONE	
CLOSED LOOP	
TWISTED PAIR*	
FIBER OPTIC*	X
FIBER OPTIC (ETHERNET)	
RADIO	

TYPE OF COORDINATION	
NONE	
TBC	
TRAFFIC RESPONSIVE	X
ADAPTIVE	
*LOCATION OF MASTER CONTROLLER NO:	S-
SIGNAL SYSTEM #:	SS-00-42

TYPE OF LIGHTING	
BY OTHER AGENCY	
IN TRAFFIC SIGNAL CABINET	X
IN SEPARATE DOT LIGHTING CABINET	

TYPE OF PRE-EMPT	
NONE	
RAILROAD	
EMERGENCY VEHICLE	X
GTT	X
TOMAR	
HARDWIRE	
OTHER	
LIFT BRIDGE	
QUEUE DETECTOR	

DETECTOR LOGIC

DETECTOR INPUT	3	1	7	5	11	9	15	13
PLAN LOOP DETECTOR #(S)	*21	*23	61	S1				
ASSIGNED PHASE	2	2	6					
OPERATION MODE	VEH	VEH	VEH					
SWITCH								
EXTEND								
DELAY								

DETECTOR INPUT	19	17	23	21	27	25	31	29
PLAN LOOP DETECTOR #(S)	11	42	71	82				
ASSIGNED PHASE	1	4	7	8				
OPERATION MODE	VEH	VEH	VEH	VEH				
SWITCH								
EXTEND								
DELAY		X	X					

DETECTOR INPUT	4	2	8	6	12	10	16	14
PLAN LOOP DETECTOR #(S)	*22	24	62	S2				
ASSIGNED PHASE	2	2	6					
OPERATION MODE	VEH	VEH	VEH					
SWITCH								
EXTEND								
DELAY								

DETECTOR INPUT	20	18	24	22	28	26	32	30
PLAN LOOP DETECTOR #(S)	41	51	81	83				
ASSIGNED PHASE	4	5	8	8				
OPERATION MODE	VEH	VEH	VEH	VEH				
SWITCH								
EXTEND	X		X					
DELAY	X		X	X				

*= DILEMMA ZONE AND SYSTEM DETECTION

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE DETECTOR	A	B	C	D
MOVEMENT				
PHASE	2+5	1+6	4+7	8+4

AFTER PREEMPTION SEQUENCE 2+5 OR 1+6, CONTROLLER SHALL RETURN TO PHASES 2+6.

AFTER PREEMPTION SEQUENCE 4+7 OR 8+4 CONTROLLER SHALL RETURN TO PHASES 4+8.

USH 18/STH 164 & MAIN STREET
CITY OF WAUKESHA
WAUKESHA COUNTY

SIGNAL NO. S67-0258

CONTROLLER TYPE: EPAC

DATE 4/15 PAGE NO. 4 OF 4

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	SEQUENCE OF OPERATIONS	SHEET 255	E

PROJECT ID:	2200-16-71
INTERSECTION:	USH 18/STH 164 & MAIN STREET

SIGNAL WIRE COLOR CODING	BLK-BLACK WHT-WHITE	RED-RED BLU-BLUE	GRN-GREEN ORG-ORANGE

CB1 TO	NO. OF 14 AWG CONDUCTORS	HEAD NO.	RED	YELLOW	GREEN	<RED>	<YELLOW>	<GREEN>	FLASHING <YELLOW>	D/WALK	WALK	PED BUTTON
SB1	12	17	RED	ORG	GRN							
		18	RED	ORG	GRN							
		20				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT			
		32								BLK	BLU	
		B										WHT/BLK
SB2	12	1	RED	ORG	GRN							
		21								BLK	BLU	
		B										WHT/BLK
SB3	12	11				RED	ORG	GRN				
		22								BLK	BLU	
		B										WHT/BLK
SB4	12	12				RED	ORG	GRN				
		23								BLK	BLU	
		B										WHT/BLK
SB5	12	8	RED	ORG	GRN							
		9	RED	ORG	GRN							
		10	RED	ORG	GRN							
		24								BLK	BLU	
		B										WHT/BLK
SB6	7	25								BLK	BLU	
		B										WHT/BLK
SB7	12	14	RED	ORG	GRN							
		16	RED/BLK	ORG/BLK	GRN/BLK							
SB8	12	5				RED	ORG	GRN	BLK/WHT			
		7	RED/BLK	ORG/BLK	GRN/BLK							
		27								BLK	BLU	
		B										WHT/BLK
SB9	12	15	RED	ORG	GRN							
		26								BLK	BLU	
		B										WHT/BLK
SB10	12	6				RED	ORG	GRN	BLK/WHT			
		28								BLK	BLU	
		29								BLK	BLU	
		B										WHT/BLK
SB11	12	2	RED	ORG	GRN							
		3	RED	ORG	GRN							
		4	RED	ORG	GRN							
		30								BLK	BLU	
		B										WHT/BLK
SB12	12	13	RED	ORG	GRN							
		19				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT			
		31								BLK	BLU	
		B										WHT/BLK

NOTES: USE WHITE CONDUCTOR IN THE SIGNAL CABLE AS THE GROUNDED CONDUCTOR FOR ALL TRAFFIC SIGNAL INDICATIONS.
ENSURE THE GROUNDED CONDUCTOR IN THE FEEDER CABLE AND THE POLE CABLES ARE BOTH 18" LONGER THAN THE UNGROUNDED CONDUCTORS.
AT THE SIGNAL BASES, CONNECT ON TERMINAL FROM THE PEDESTRIAN PUSH BUTTONS TO THE COLOR INDICATED IN THE CHART. CONNECT THE OTHER TERMINAL TO THE GROUNDED CONDUCTOR.

EQUIPMENT GROUNDING CONDUCTOR 10 AWG GRN XLP	
FROM	TO
CB1	SB1
SB1	SB2
SB2	SB3
SB3	SB4
SB4	SB5
SB5	SB6
SB6	SB7
SB7	SB8
SB8	SB9
SB9	SB10
SB10	SB11
SB11	SB12
SB12	CB1

PULL BOX BONDING JUMPER 10 AWG GRN XLP	
FROM	TO
PB1	CB1
PB2	SB2
PB5	SB2
PB6	SB3
PB7	SB3
PB8	SB3
PB9	SB6
PB10	SB6
PB11	SB7
PB12	SB8
PB15	SB8
PB16	SB10
PB17	SB10
PB18	SB11
PB19	SB12
PB20	CB1

LIGHTING UF 10 AWG W/ GROUND	
FROM	TO
CB1	SB1
SB1	SB4
SB4	SB5
CB1	SB11
SB11	SB10
SB10	SB9

VIDEO DETECTION CABLE	
FROM	TO
CB1	V1(SB5)
CB1	V2(SB11)
CB1	V3(SB1)
CB1	V4(SB9)

EMERGENCY VEHICLE PREEMPTION	
FROM	TO
CB1	HEAD A(SB5)
CB1	HEAD B(SB11)
CB1	HEAD C(SB1)
CB1	HEAD D(SB9)

TRAFFIC CONTROL SIGNAL
USH 18/STH 164 & MAIN STREET
CITY OF WAUKESHA
WAUKESHA COUNTY

SIGNAL NO. S67-0258

REGION CONTACT: JMM
DESIGNED BY: GRAEF
REVISED BY:

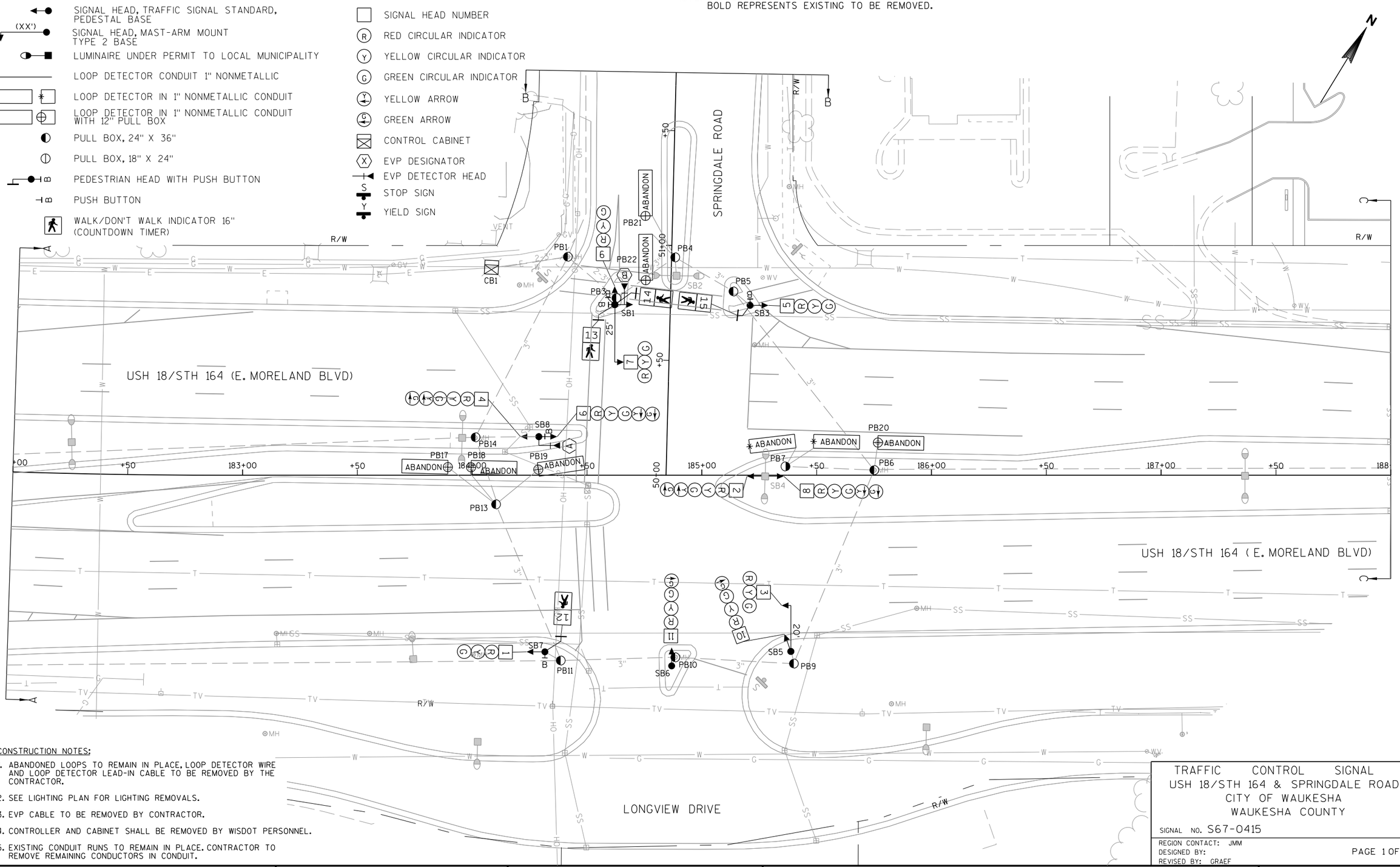
PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CABLE ROUTING	SHEET 256	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\03_Main\024201_cr.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 40.0000 sf / in.
WISDOT/CADDS SHEET 42

LEGEND

- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- (XX') SIGNAL HEAD, MAST-ARM MOUNT TYPE 2 BASE
- LUMINAIRE UNDER PERMIT TO LOCAL MUNICIPALITY
- LOOP DETECTOR CONDUIT 1" NONMETALLIC
- LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
- LOOP DETECTOR IN 1" NONMETALLIC CONDUIT WITH 12" PULL BOX
- PULL BOX, 24" X 36"
- PULL BOX, 18" X 24"
- PEDESTRIAN HEAD WITH PUSH BUTTON
- PUSH BUTTON
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- TRAFFIC SIGNAL HEAD
- SIGNAL HEAD NUMBER
- R RED CIRCULAR INDICATOR
- Y YELLOW CIRCULAR INDICATOR
- G GREEN CIRCULAR INDICATOR
- Y YELLOW ARROW
- G GREEN ARROW
- CONTROL CABINET
- X EVP DESIGNATOR
- EVP DETECTOR HEAD
- S STOP SIGN
- Y YIELD SIGN

NOTE: GRAYSHADE REPRESENTS EXISTING TO REMAIN.
BOLD REPRESENTS EXISTING TO BE REMOVED.



CONSTRUCTION NOTES;

1. ABANDONED LOOPS TO REMAIN IN PLACE. LOOP DETECTOR WIRE AND LOOP DETECTOR LEAD-IN CABLE TO BE REMOVED BY THE CONTRACTOR.
2. SEE LIGHTING PLAN FOR LIGHTING REMOVALS.
3. EVP CABLE TO BE REMOVED BY CONTRACTOR.
4. CONTROLLER AND CABINET SHALL BE REMOVED BY WISDOT PERSONNEL.
5. EXISTING CONDUIT RUNS TO REMAIN IN PLACE. CONTRACTOR TO REMOVE REMAINING CONDUCTORS IN CONDUIT.

TRAFFIC CONTROL SIGNAL
USH 18/STH 164 & SPRINGDALE ROAD
CITY OF WAUKESHA
WAUKESHA COUNTY

SIGNAL NO. S67-0415

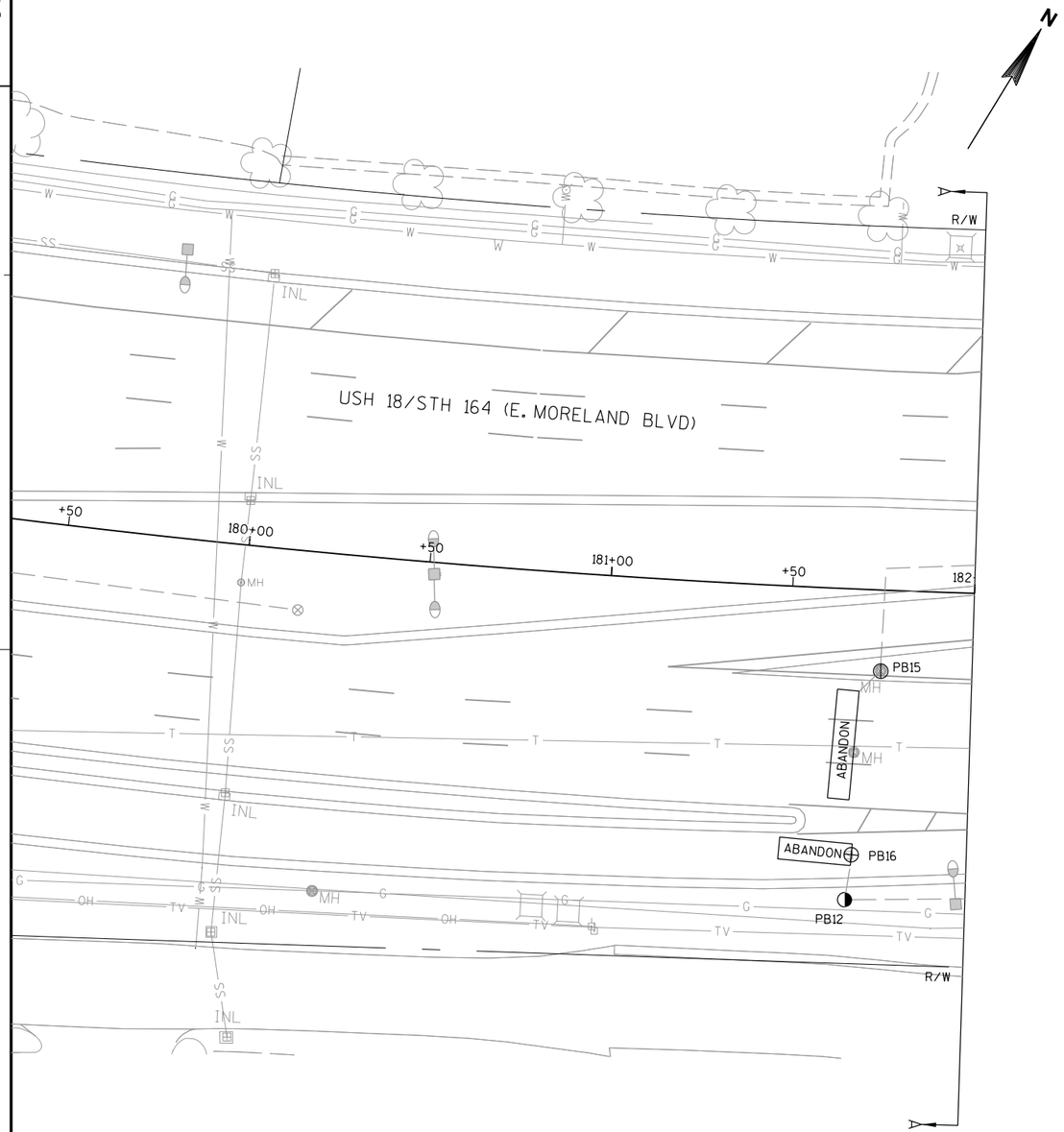
REGION CONTACT: JMM
DESIGNED BY:
REVISED BY: GRAEF

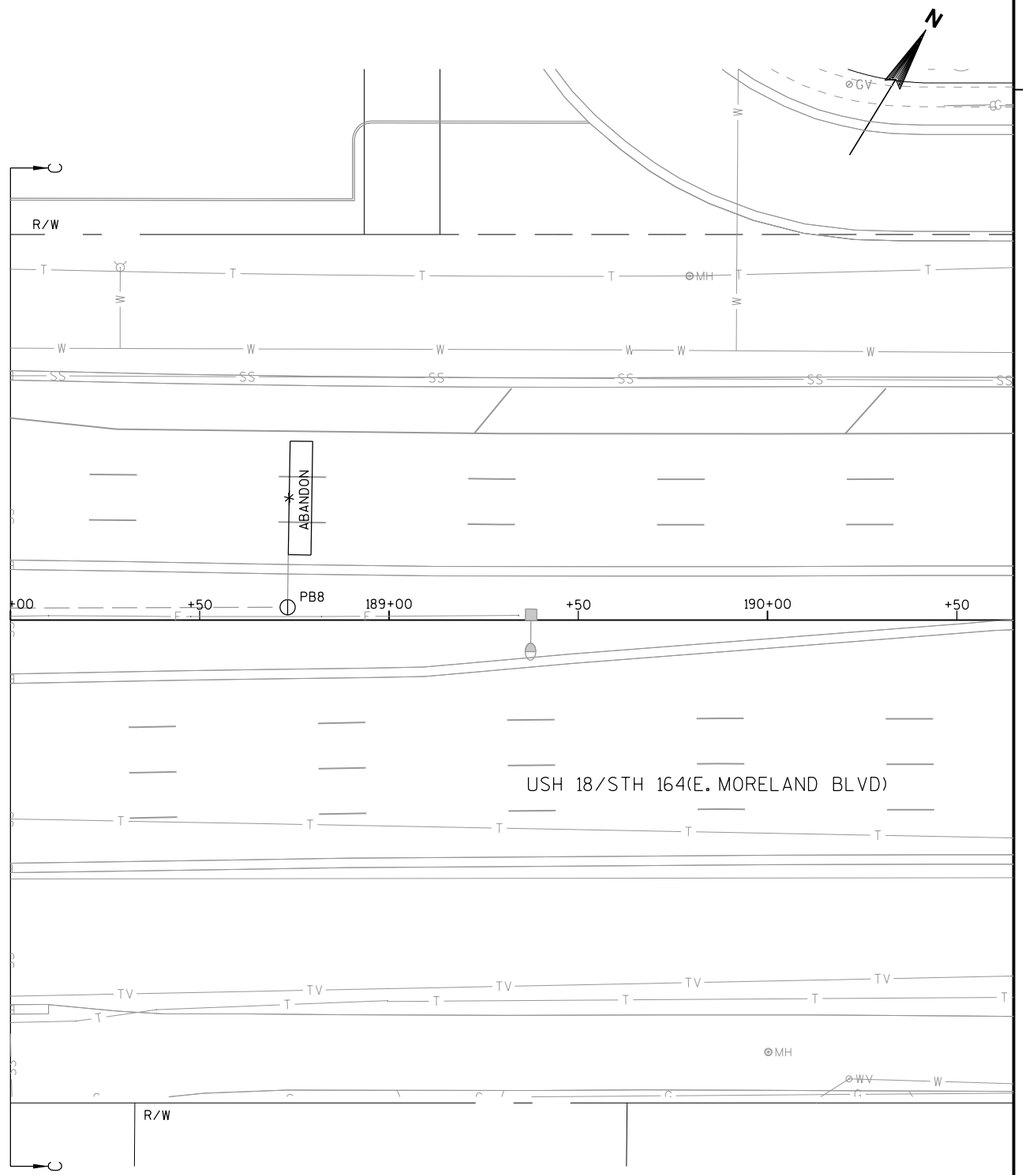
PAGE 1 OF 3

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	TRAFFIC SIGNAL REMOVAL PLAN	SHEET 257	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\04_Springdale\024011_sp.dgn
PLOT DATE : 4/27/2015
PLOT BY : GRAEF
PLOT NAME :
PLOT SCALE : 40.0000 sf / in.

WISDOT/CADDS SHEET 42





TRAFFIC CONTROL SIGNAL
USH 18/STH 164 & SPRINGDALE ROAD
CITY OF WAUKESHA
WAUKESHA COUNTY

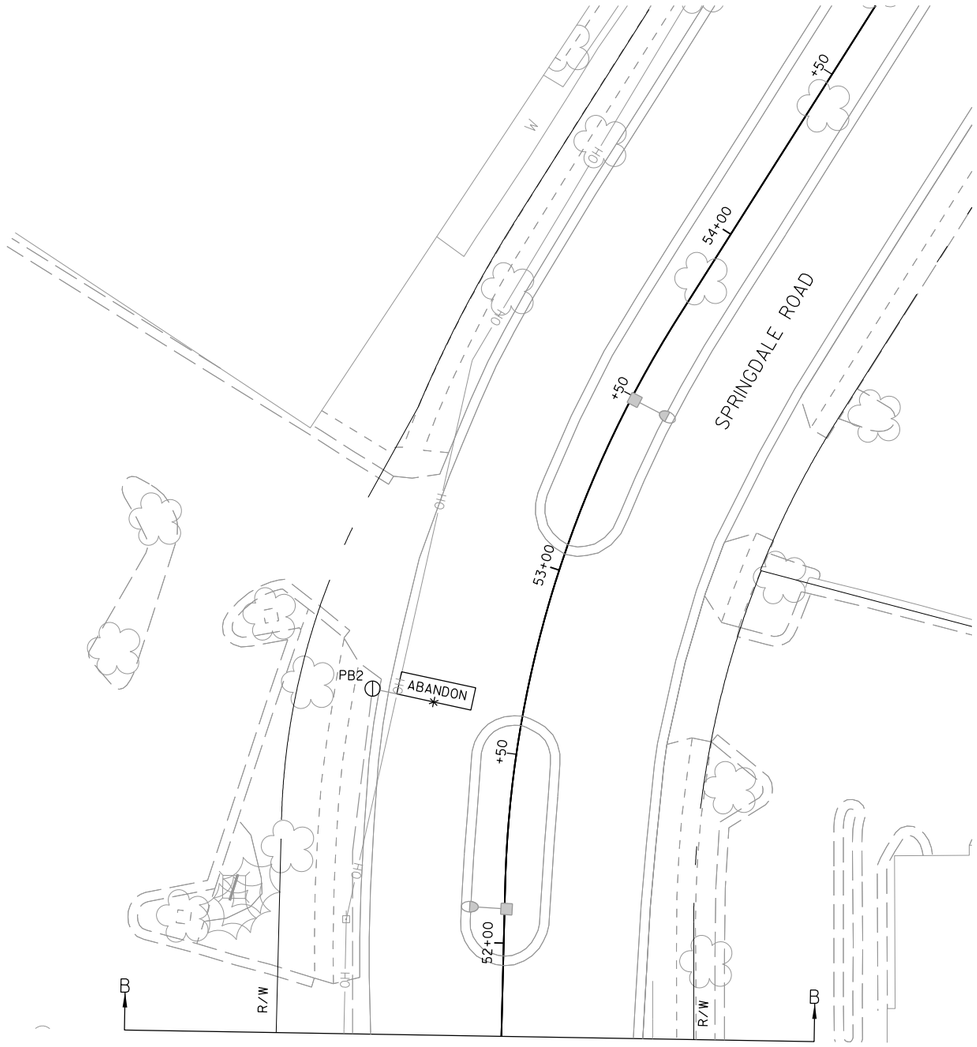
SIGNAL NO. S67-0415

REGION CONTACT: JMM
DESIGNED BY:
REVISED BY: GRAEF

PAGE 2 OF 3

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	TRAFFIC SIGNAL REMOVAL PLAN	SHEET 258	E

2



TRAFFIC CONTROL SIGNAL
USH 18/STH 164 & SPRINGDALE ROAD
CITY OF WAUKESHA
WAUKESHA COUNTY

SIGNAL NO. S67-0415

REGION CONTACT: JMM
DESIGNED BY:
REVISED BY: GRAEF

PAGE 3 OF 3

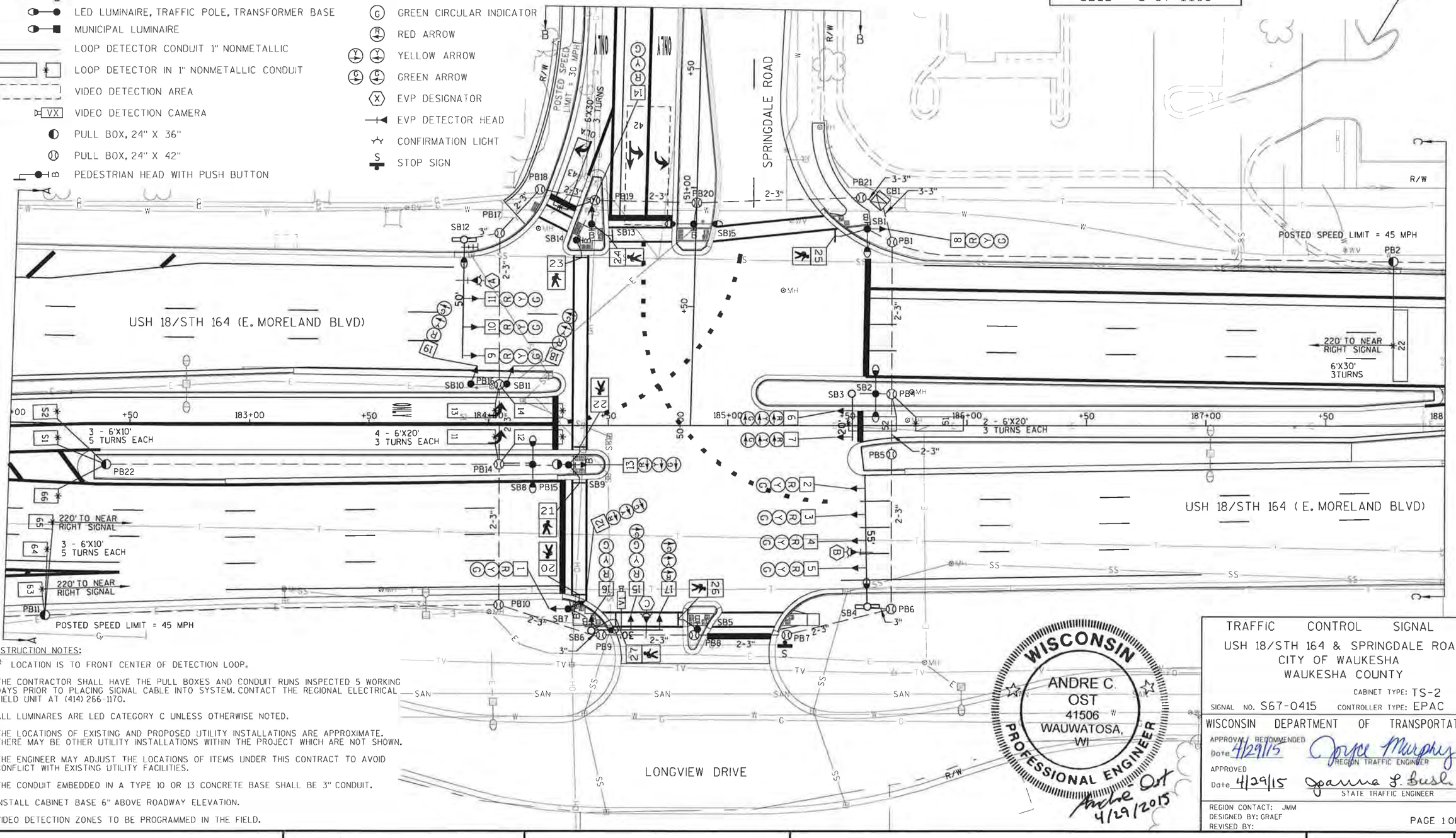
PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	TRAFFIC SIGNAL REMOVAL PLAN	SHEET 259	E

LEGEND

- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- (XX) MONOTUBE BASE, POLE, 15'-30' ARM
- (XX) MONOTUBE BASE, POLE, 35'-55' ARM
- LED LUMINAIRE, TRAFFIC POLE, TRANSFORMER BASE
- MUNICIPAL LUMINAIRE
- LOOP DETECTOR CONDUIT 1" NONMETALLIC
- LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
- VIDEO DETECTION AREA
- VX VIDEO DETECTION CAMERA
- PULL BOX, 24" X 36"
- PULL BOX, 24" X 42"
- PEDESTRIAN HEAD WITH PUSH BUTTON
- PUSH BUTTON
- SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- RED ARROW
- YELLOW ARROW
- GREEN ARROW
- (X) EVP DESIGNATOR
- EVP DETECTOR HEAD
- CONFIRMATION LIGHT
- STOP SIGN
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- CONTROL CABINET
- WIRELESS RADIO ANTENNA

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING

STRUCTURE NUMBERS	
SB2	= S-67-1193
SB4	= S-67-1194
SB6	= S-67-1195
SB12	= S-67-1196



CONSTRUCTION NOTES:

1. * LOCATION IS TO FRONT CENTER OF DETECTION LOOP.
2. THE CONTRACTOR SHALL HAVE THE PULL BOXES AND CONDUIT RUNS INSPECTED 5 WORKING DAYS PRIOR TO PLACING SIGNAL CABLE INTO SYSTEM. CONTACT THE REGIONAL ELECTRICAL FIELD UNIT AT (414) 266-1170.
3. ALL LUMINARES ARE LED CATEGORY C UNLESS OTHERWISE NOTED.
4. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
5. THE ENGINEER MAY ADJUST THE LOCATIONS OF ITEMS UNDER THIS CONTRACT TO AVOID CONFLICT WITH EXISTING UTILITY FACILITIES.
6. THE CONDUIT EMBEDDED IN A TYPE 10 OR 13 CONCRETE BASE SHALL BE 3" CONDUIT.
7. INSTALL CABINET BASE 6" ABOVE ROADWAY ELEVATION.
8. VIDEO DETECTION ZONES TO BE PROGRAMMED IN THE FIELD.

WISCONSIN
ANDRE C. OST
41506
WAUWATOSA, WI
PROFESSIONAL ENGINEER
Andre Ost 4/29/2015

TRAFFIC CONTROL SIGNAL

USH 18/STH 164 & SPRINGDALE ROAD
CITY OF WAUKESHA
WAUKESHA COUNTY

CABINET TYPE: TS-2
SIGNAL NO. S67-0415 CONTROLLER TYPE: EPAC

WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVAL RECOMMENDED
Date 4/29/15 Joyce Murphy
REGION TRAFFIC ENGINEER

APPROVED
Date 4/29/15 Joanna L. Bush
STATE TRAFFIC ENGINEER

REGION CONTACT: JMM
DESIGNED BY: GRAEF
REVISED BY:

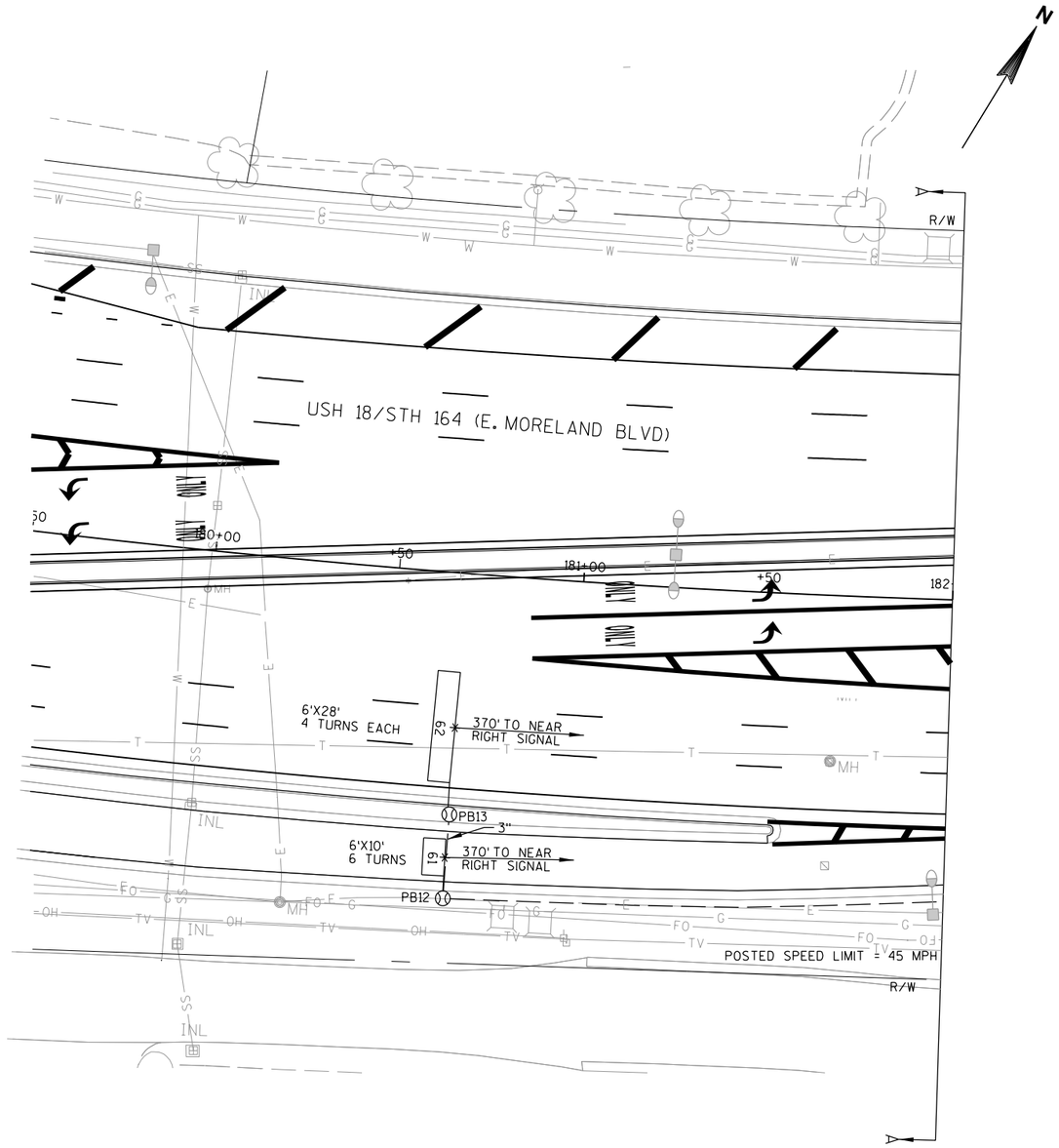
PAGE 1 OF 4

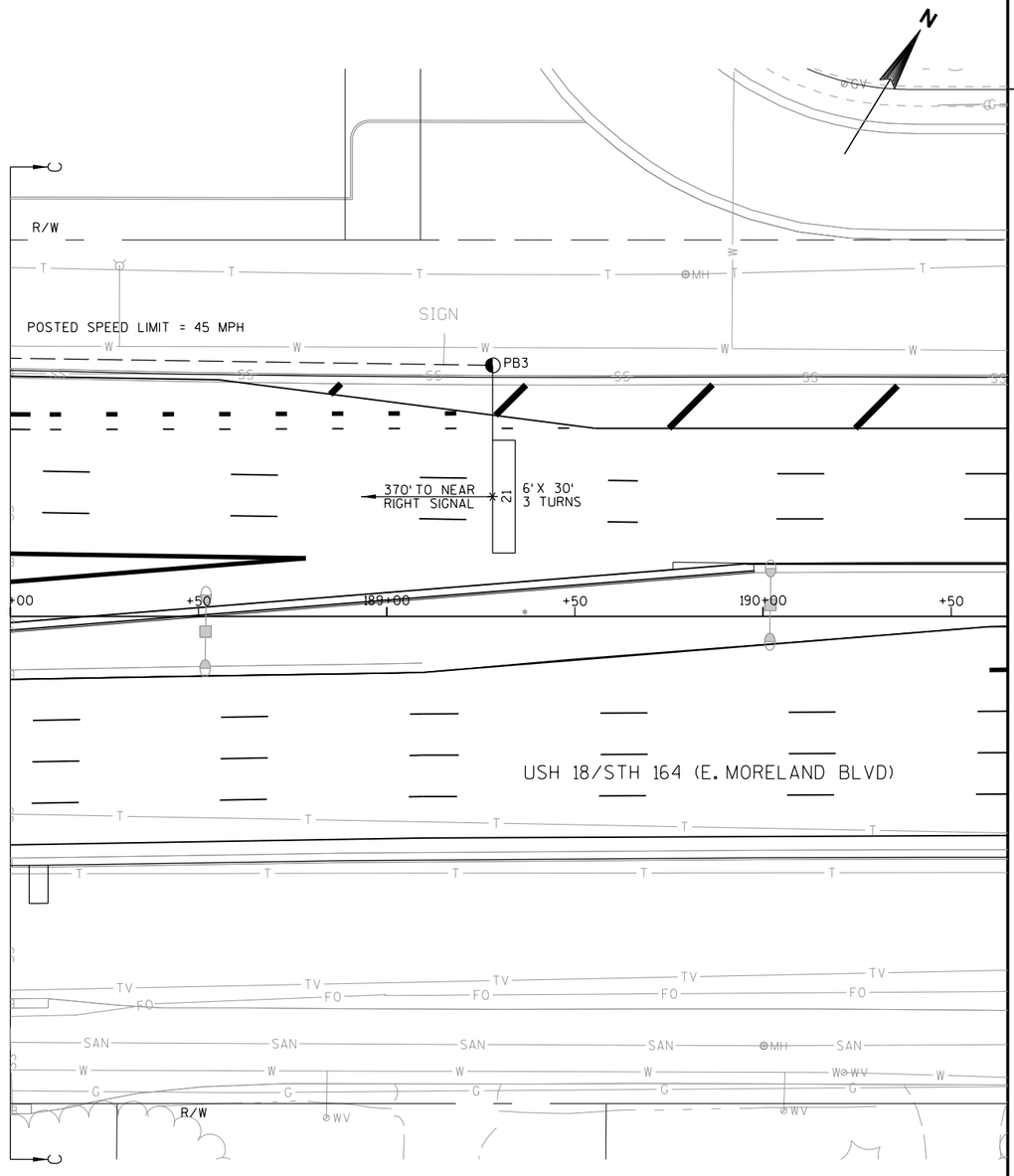
PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	TRAFFIC SIGNAL PLAN	SHEET E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\04_Springdale\024021_sp.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 40.0000 sf / in.

WISDOT/CADDS SHEET 42

SAD 5 11/28/14





TRAFFIC CONTROL SIGNAL
USH 18/STH 164 & SPRINGDALE ROAD
CITY OF WAUKESHA
WAUKESHA COUNTY

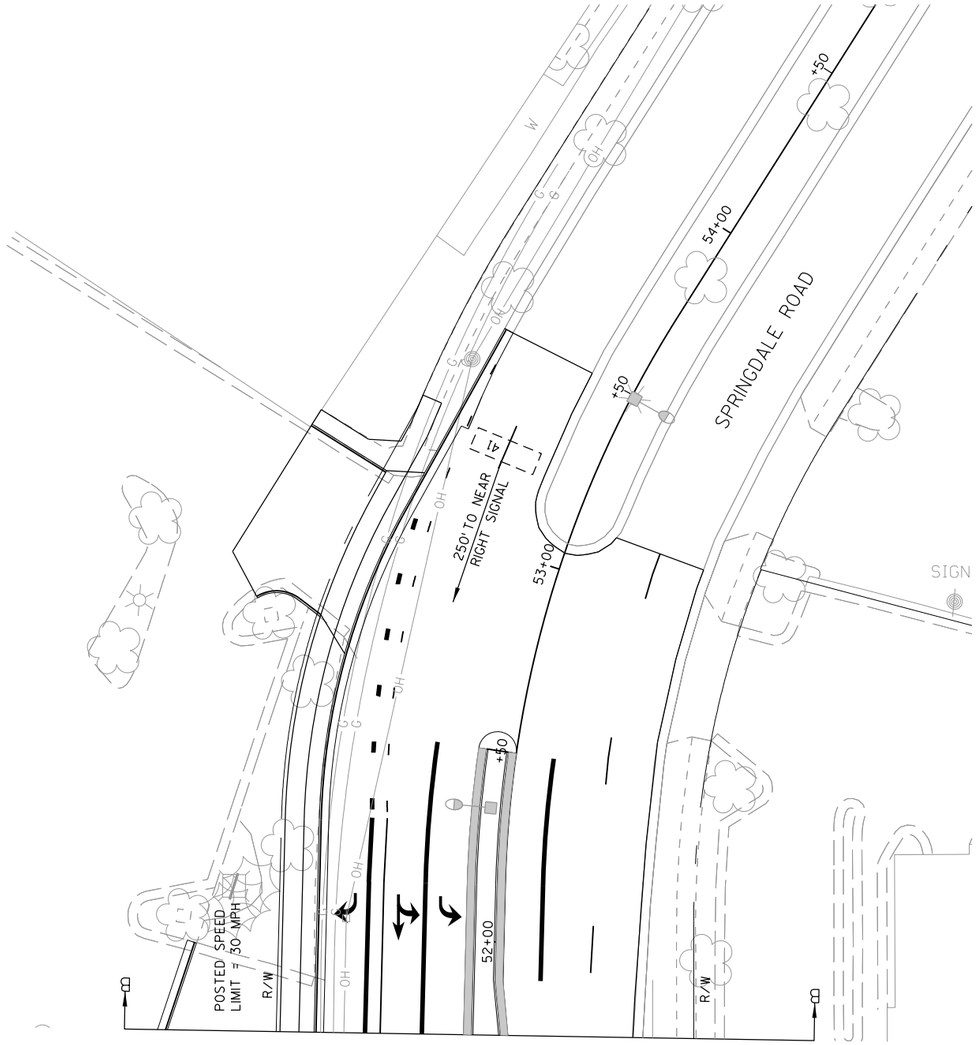
SIGNAL NO. S67-0415

REGION CONTACT: JMM
DESIGNED BY: GRAEF
REVISED BY:

PAGE 2 OF 4

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	TRAFFIC SIGNAL PLAN	SHEET 261	E

2



TRAFFIC CONTROL SIGNAL
USH 18/STH 164 & SPRINGDALE ROAD
CITY OF WAUKESHA
WAUKESHA COUNTY

SIGNAL NO. S67-0415

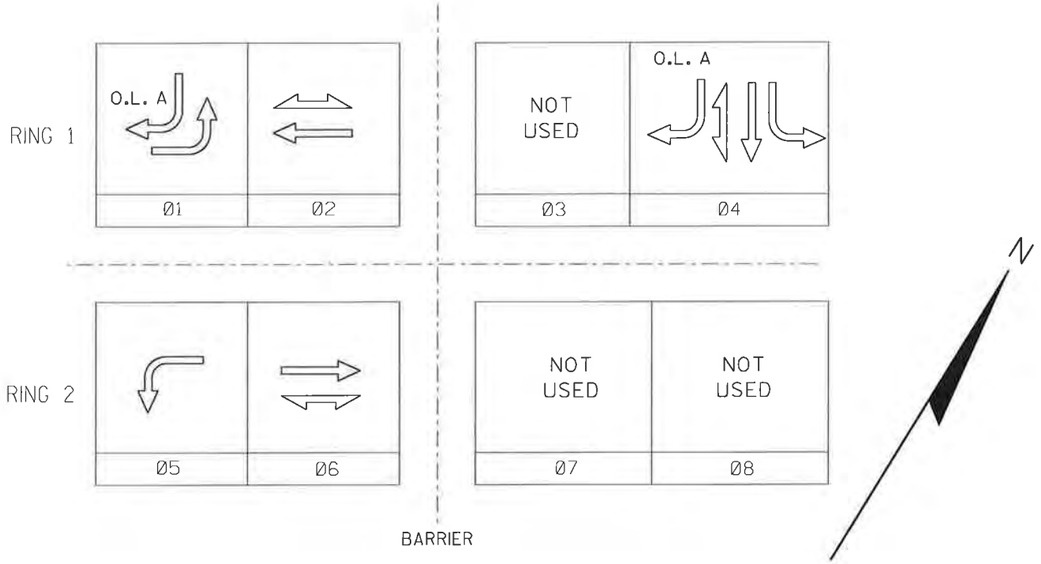
REGION CONTACT: JMM
DESIGNED BY: GRAEF
REVISED BY:

PAGE 3 OF 4

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	TRAFFIC SIGNAL PLAN	SHEET 262	E

	HEAD NUMBERS	FLASH
Ø1	6,7	R
Ø2	8,9,10,11	R
Ø3		
Ø4	14,15,16,17	A
Ø5	12,13	R
Ø6	1,2,3,4,5	R
Ø7		
Ø8		
Ø2P	24,25	
Ø4P	20,21,22,23	
Ø6P	26,27	
Ø8P		
OLA	18,19	R
OLB		
OLC		
OLD		

A = R, R



CONTROLLER LOGIC

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / Ø	PHASE RECALL	PHASE ACTIVE
1		6		X
2	X	6	MIN	X
3				
4				X
5		2		X
6	X	2	MIN	X
7				
8				

TYPE OF INTERCONNECT/COMMUNICATION	
NONE	
CLOSED LOOP	
TWISTED PAIR*	
FIBER OPTIC*	
FIBER OPTIC (ETHERNET)	
RADIO	X

TYPE OF COORDINATION	
NONE	
TBC	
TRAFFIC RESPONSIVE	X
ADAPTIVE	
*LOCATION OF MASTER CONTROLLER NO:	S-
SIGNAL SYSTEM #:	SS-00-42

TYPE OF LIGHTING	
BY OTHER AGENCY	
IN TRAFFIC SIGNAL CABINET	X
IN SEPARATE DOT LIGHTING CABINET	

TYPE OF PRE-EMPT	
NONE	
RAILROAD	
EMERGENCY VEHICLE	X
GTT	X
TOMAR	
HARDWIRE	
OTHER	
LIFT BRIDGE	
QUEUE DETECTOR	

DETECTOR LOGIC

DETECTOR INPUT	3	1	7	5	11	9	15	13
PLAN LOOP DETECTOR #(S)	11,12	21	43	52	62	*64	*66	S2
ASSIGNED PHASE	1	2	4	5	6	6	6	
OPERATION MODE	VEH	VEH	VEH	VEH	VEH	VEH	VEH	
SWITCH								
EXTEND								
DELAY			X					

19	17	23	21	27	25	31	29	DETECTOR INPUT
41								PLAN LOOP DETECTOR #(S)
4								ASSIGNED PHASE
VEH								OPERATION MODE
								SWITCH
X								EXTEND
X								DELAY

DETECTOR INPUT	4	2	8	6	12	10	16	14
PLAN LOOP DETECTOR #(S)	13,14	22	51	61	*63	*65	S1	
ASSIGNED PHASE	1	2	5	6	6	6		
OPERATION MODE	VEH	VEH	VEH	VEH	VEH	VEH		
SWITCH								
EXTEND								
DELAY								

20	18	24	22	28	26	32	30	DETECTOR INPUT
42								PLAN LOOP DETECTOR #(S)
4								ASSIGNED PHASE
VEH								OPERATION MODE
								SWITCH
								EXTEND
								DELAY

*= DILEMMA ZONE AND SYSTEM DETECTION

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE DETECTOR	A	B	C
MOVEMENT			
PHASE	2+5	1+6	4

AFTER PREEMPTION SEQUENCE 2+5 OR 1+6, CONTROLLER SHALL RETURN TO PHASES 2+6.

AFTER PREEMPTION SEQUENCE 4, CONTROLLER SHALL RETURN TO PHASE 4.

USH 18/STH 164 & SPRINGDALE ROAD
CITY OF WAUKESHA
WAUKESHA COUNTY

SIGNAL NO. S67-0415

CONTROLLER TYPE: EPAC

DATE 4/15 PAGE NO. 4 OF 4

4/29/15 JMM

6/29/15 PMB

PROJECT NO: 2200-16-71 | HWY: USH 18 | COUNTY: WAUKESHA | SEQUENCE OF OPERATIONS | SHEET 263 E

PROJECT ID:	2200-16-71
INTERSECTION:	USH 18/STH 164 & SPRINGDALE ROAD

SIGNAL WIRE COLOR CODING	BLK-BLACK	RED-RED	GRN-GREEN
	WHT-WHITE	BLU-BLUE	ORG-ORANGE

CB1 TO	NO. OF 14 AWG CONDUCTORS	HEAD NO.	RED	YELLOW	GREEN	<RED>	<YELLOW>	<GREEN>	FLASHING <YELLOW>	D/WALK	WALK	PED BUTTON
SB1	12	8	RED	ORG	GRN							
		25								BLK	BLU	
		B										WHT/BLK
SB3	7	6				RED	ORG	GRN				
		7				RED	ORG	GRN				
SB4	7	2	RED	ORG	GRN							
		3	RED	ORG	GRN							
		4	RED	ORG	GRN							
		5	RED	ORG	GRN							
SB5	7	26								BLK	BLU	
		B										WHT/BLK
SB6	12	15	RED	ORG	GRN			GRN/BLK				
		16	RED	ORG	GRN							
		17				RED	ORG	GRN				
		27								BLK	BLU	
		B										WHT/BLK
SB7	12	1	RED	ORG	GRN							
		12				RED/BLK	ORG/BLK	GRN/BLK				
		20								BLK	BLU	
		B										WHT/BLK
SB9	12	13	RED	ORG	GRN							
		21								BLK	BLU	
		22								BLK	BLU	
		B										WHT/BLK
SB10	7	19	RED				ORG	GRN				
SB11	7	18	RED				ORG	GRN				
SB12	7	9	RED	ORG	GRN							
		10	RED	ORG	GRN							
		11	RED	ORG	GRN							
SB13	12	14	RED	ORG	GRN							
		24								BLK	BLU	
		B										WHT/BLK
SB14	7	23								BLK	BLU	
		B										WHT/BLK
SB15	7	B										WHT/BLK

NOTES: USE WHITE CONDUCTOR IN THE SIGNAL CABLE AS THE GROUNDED CONDUCTOR FOR ALL TRAFFIC SIGNAL INDICATIONS.
ENSURE THE GROUNDED CONDUCTOR IN THE FEEDER CABLE AND THE POLE CABLES ARE BOTH 18" LONGER THAN THE UNGROUNDED CONDUCTORS.
AT THE SIGNAL BASES, CONNECT ON TERMINAL FROM THE PEDESTRIAN PUSH BUTTONS TO THE COLOR INDICATED IN THE CHART. CONNECT THE OTHER TERMINAL TO THE GROUNDED CONDUCTOR.

EQUIPMENT GROUNDING CONDUCTOR 10 AWG GRN XLP	
FROM	TO
CB1	SB1
SB1	SB3
SB3	SB4
SB4	SB5
SB5	SB6
SB6	SB7
SB7	SB9
SB9	SB10
SB10	SB11
SB11	SB12
SB12	SB13
SB13	SB14
SB14	CB1

PULL BOX BONDING JUMPER 10 AWG GRN XLP	
FROM	TO
PB1	SB1
PB4	SB2
PB5	SB2
PB6	SB4
PB7	SB5
PB8	SB5
PB9	SB6
PB10	SB6
PB14	SB8
PB15	SB9
PB16	SB11
PB17	SB12
PB18	SB13
PB19	SB13
PB20	SB15
PB21	CB1

LIGHTING UF 10 AWG W/ GROUND	
FROM	TO
CB1	SB1
SB1	SB2
SB2	SB4
SB4	SB6
CB1	SB15
SB15	SB12
SB12	SB8

VIDEO DETECTION CABLE	
FROM	TO
CB1	V1(SB12)

EMERGENCY VEHICLE PREEMPTION	
FROM	TO
CB1	HEAD A(SB12)
CB1	HEAD B(SB4)
CB1	HEAD C(SB6)

TRAFFIC CONTROL SIGNAL
USH 18/STH 164 & SPRINGDALE ROAD
CITY OF WAUKESHA
WAUKESHA COUNTY

SIGNAL NO. S67-0415

REGION CONTACT: JMM
DESIGNED BY: GRAEF
REVISED BY:

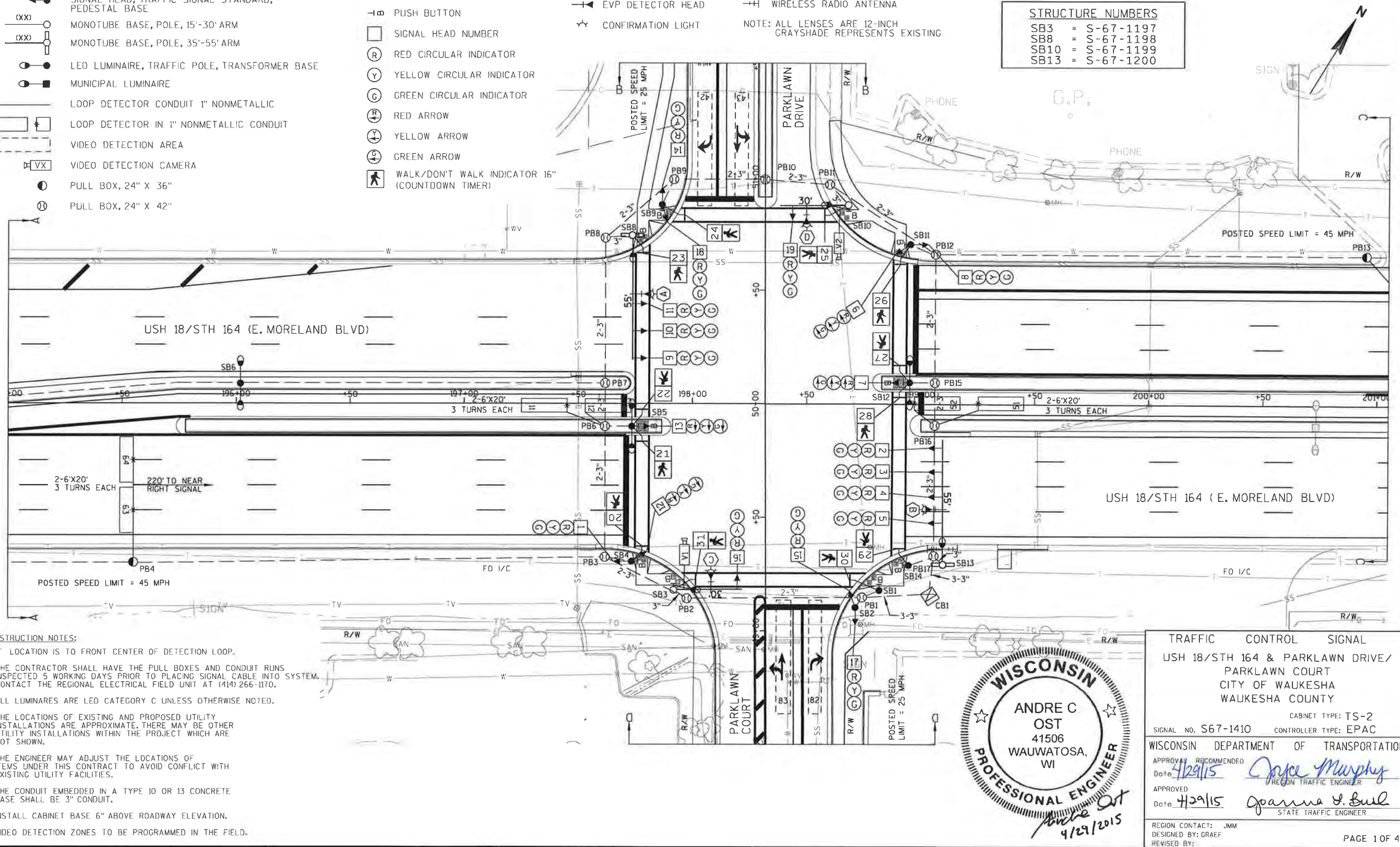
PAGE 1 OF 1

LEGEND

- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- (XX) MONOTUBE BASE, POLE, 15'-30' ARM
- (XX) MONOTUBE BASE, POLE, 35'-55' ARM
- LED LUMINAIRE, TRAFFIC POLE, TRANSFORMER BASE
- MUNICIPAL LUMINAIRE
- LOOP DETECTOR CONDUIT 1" NONMETALLIC
- LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
- VIDEO DETECTION AREA
- VX VIDEO DETECTION CAMERA
- PULL BOX, 24" X 36"
- PULL BOX, 24" X 42"
- PEDESTRIAN HEAD WITH PUSH BUTTON
- PUSH BUTTON
- SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- (R) RED ARROW
- (Y) YELLOW ARROW
- (G) GREEN ARROW
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- (X) EVP DESIGNATOR
- EVP DETECTOR HEAD
- CONFIRMATION LIGHT
- CONTROL CABINET
- WIRELESS RADIO ANTENNA

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING

STRUCTURE NUMBERS	
SB3	= S-67-1197
SB8	= S-67-1198
SB10	= S-67-1199
SB13	= S-67-1200



CONSTRUCTION NOTES:

1. * LOCATION IS TO FRONT CENTER OF DETECTION LOOP.
2. THE CONTRACTOR SHALL HAVE THE PULL BOXES AND CONDUIT RUNS INSPECTED 5 WORKING DAYS PRIOR TO PLACING SIGNAL CABLE INTO SYSTEM. CONTACT THE REGIONAL ELECTRICAL FIELD UNIT AT (414) 266-1170.
3. ALL LUMINARES ARE LED CATEGORY C UNLESS OTHERWISE NOTED.
4. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
5. THE ENGINEER MAY ADJUST THE LOCATIONS OF ITEMS UNDER THIS CONTRACT TO AVOID CONFLICT WITH EXISTING UTILITY FACILITIES.
6. THE CONDUIT EMBEDDED IN A TYPE 10 OR 13 CONCRETE BASE SHALL BE 3" CONDUIT.
7. INSTALL CABINET BASE 6" ABOVE ROADWAY ELEVATION.
8. VIDEO DETECTION ZONES TO BE PROGRAMMED IN THE FIELD.

WISCONSIN
ANDRE C OST
41506
WAUWATOSA, WI
PROFESSIONAL ENGINEER
4/29/2015

TRAFFIC CONTROL SIGNAL

USH 18/STH 164 & PARKLAWN DRIVE/
PARKLAWN COURT
CITY OF WAUKESHA
WAUKESHA COUNTY

CABINET TYPE: TS-2
SIGNAL NO. S67-1410 CONTROLLER TYPE: EPAC

WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVED RECOMMENDED
Date 4/29/15 Joyce Murphy
REGION TRAFFIC ENGINEER

APPROVED
Date 4/29/15 Joanna L. Buol
STATE TRAFFIC ENGINEER

REGION CONTACT: JMM
DESIGNED BY: GRAEF
REVISED BY:

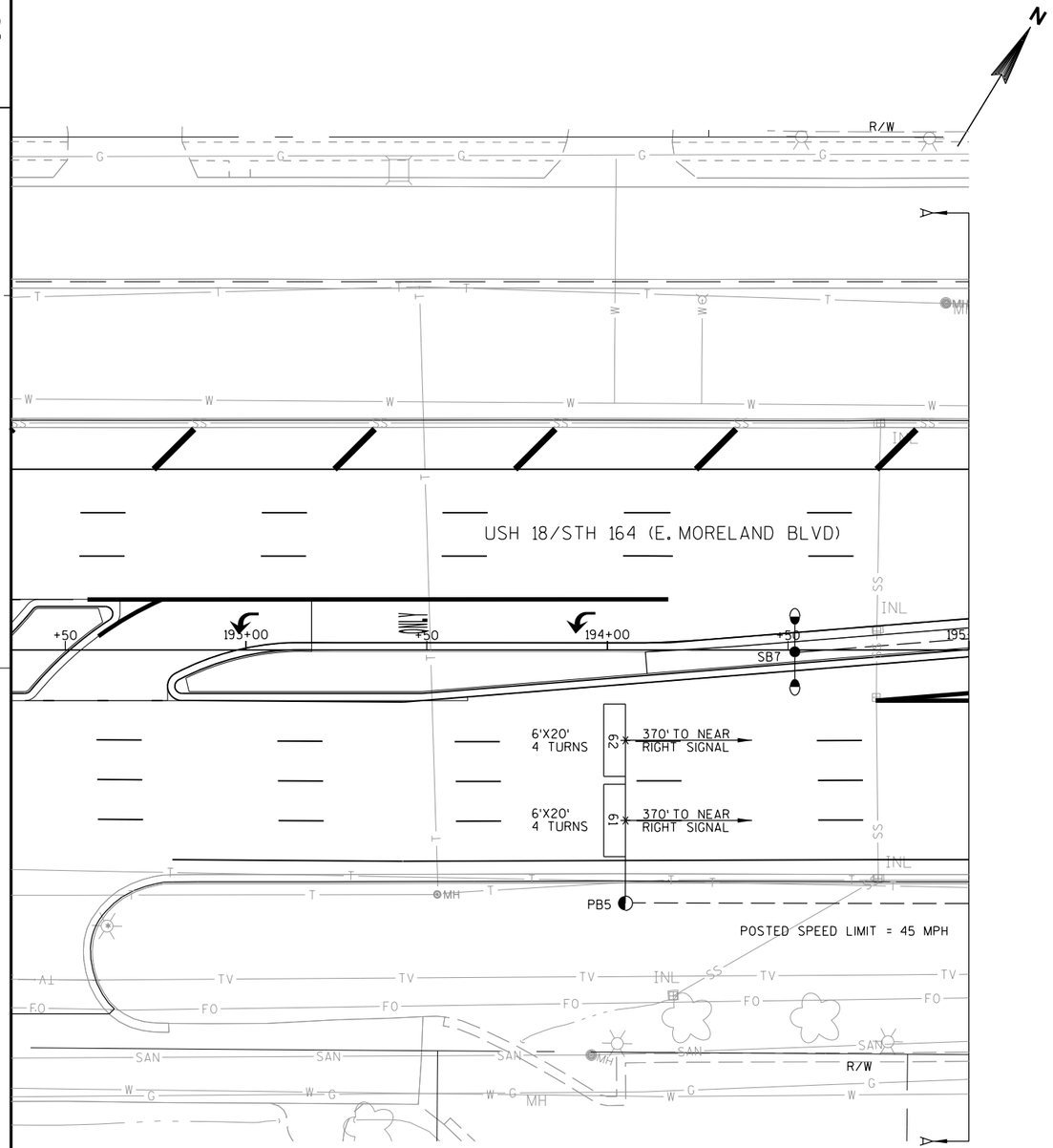
PAGE 1 OF 4

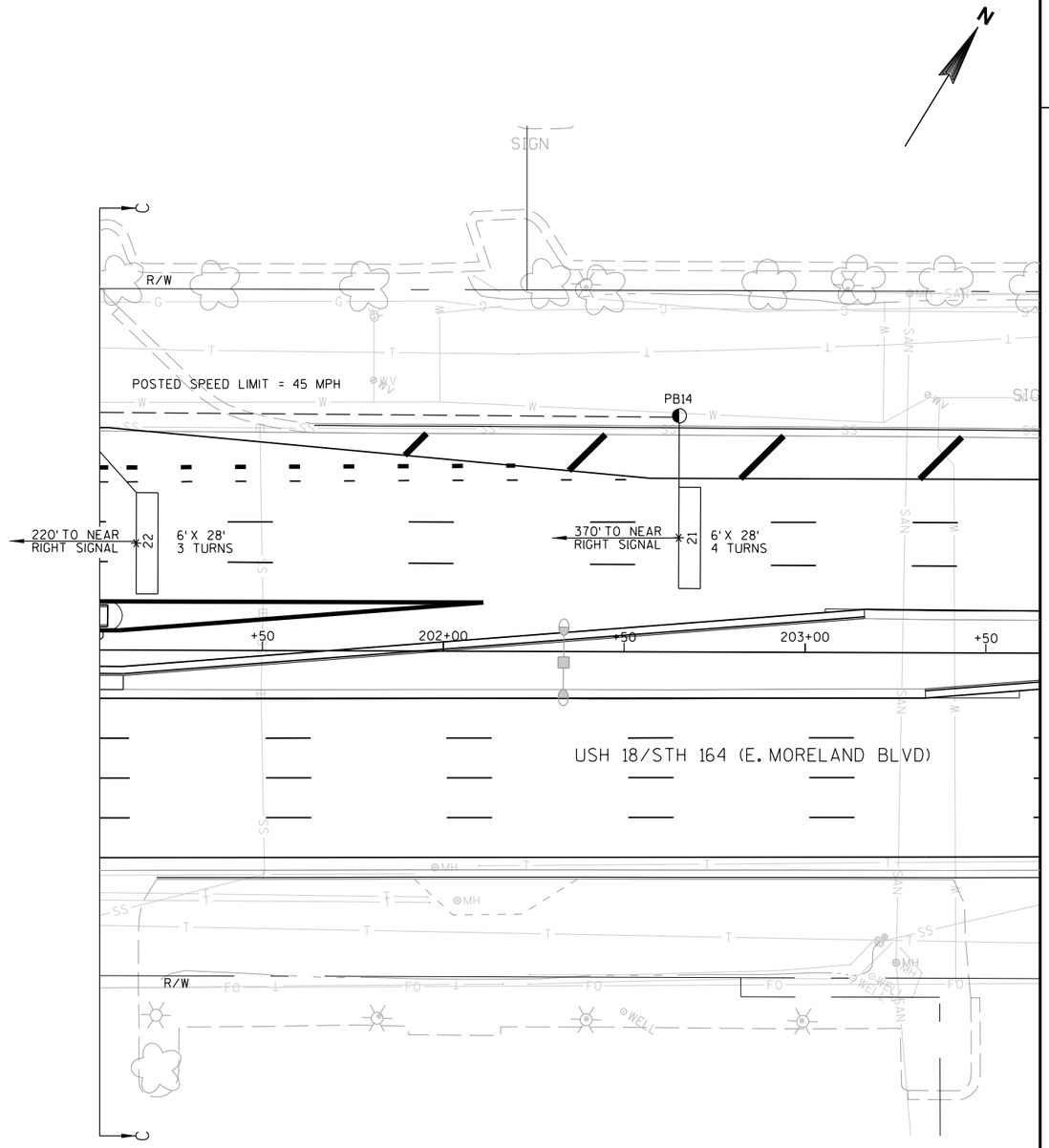
PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	TRAFFIC SIGNAL PLAN	SHEET 265 E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\05_Parklawn\024021_sp.dgn
PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 40.0000 sf / in.

WISDOT/CADDS SHEET 42

4/29/15 JMM





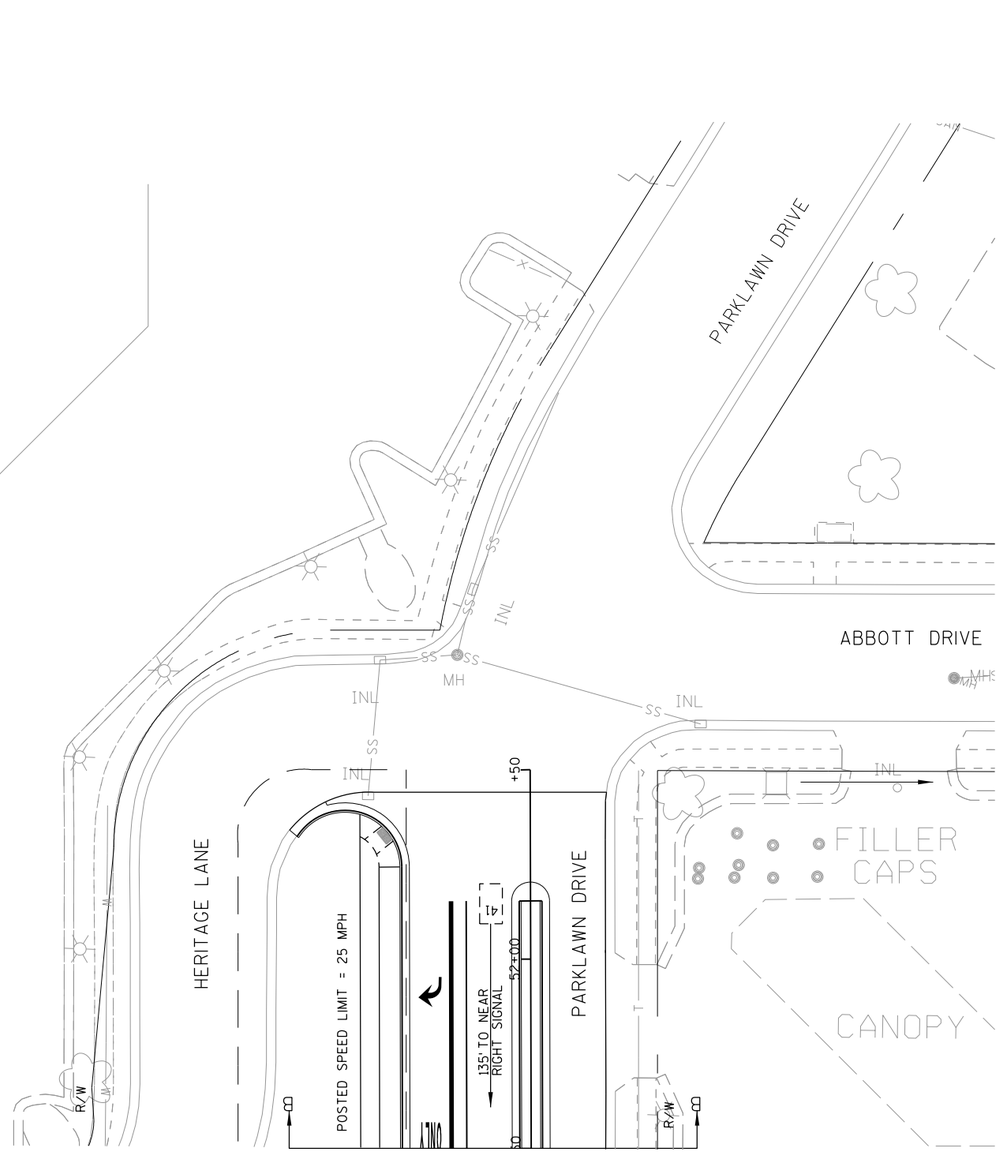
TRAFFIC CONTROL SIGNAL
USH 18/STH 164 & PARKLAWN DRIVE/
PARKLAWN COURT
CITY OF WAUKESHA
WAUKESHA COUNTY

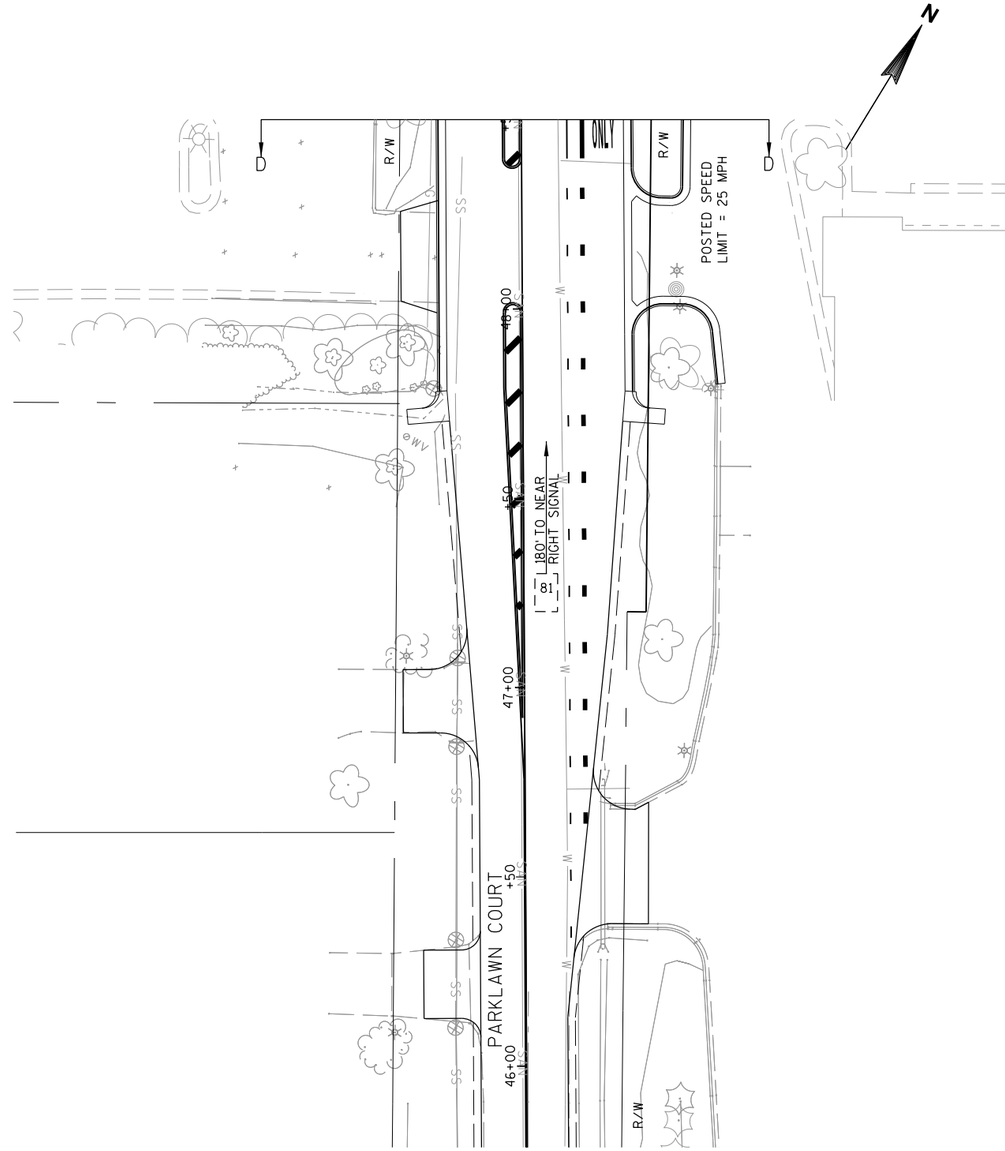
SIGNAL NO. S67-1410

REGION CONTACT: JMM
DESIGNED BY: GRAEF
REVISED BY:

PAGE 2 OF 4

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	TRAFFIC SIGNAL PLAN	SHEET 266	E





2

TRAFFIC CONTROL SIGNAL
USH 18/STH 164 & PARKLAWN DRIVE/
PARKLAWN COURT
CITY OF WAUKESHA
WAUKESHA COUNTY

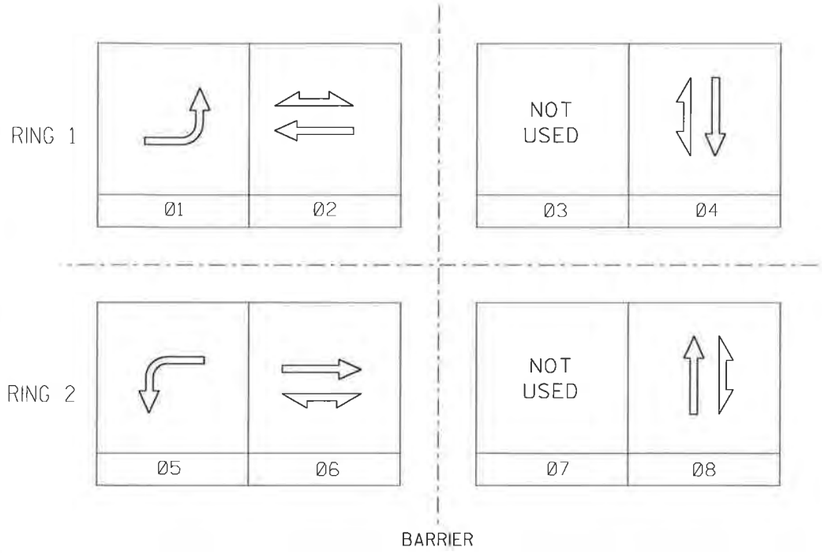
SIGNAL NO. S67-1410

REGION CONTACT: JMM
DESIGNED BY: GRAEF
REVISED BY:

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	TRAFFIC SIGNAL PLAN	SHEET 267 E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\05_Parklawn\024023_sp.dgn
PLOT DATE : 4/27/2015
PLOT BY : GRAEF
PLOT NAME :
PLOT SCALE : 40.0000 sf / in.
WISDOT/CADDS SHEET 42

	HEAD NUMBERS	FLASH
Ø1	6,7	R
Ø2	8,9,10,11	R
Ø3		
Ø4	14,15,16	R
Ø5	12,13	R
Ø6	1,2,3,4,5	R
Ø7		
Ø8	17,18,19	R
Ø2P	24,25	
Ø4P	20,21,22,23	
Ø6P	30,31	
Ø8P	26,27,28,29	
OLA		
OLB		
OLC		
OLD		





CONTROLLER LOGIC

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / Ø	PHASE RECALL	PHASE ACTIVE
1		6		X
2	X	6	MIN	X
3				
4		8		X
5		2		X
6	X	2	MIN	X
7				
8		4		X

TYPE OF INTERCONNECT/COMMUNICATION	
NONE	
CLOSED LOOP	
TWISTED PAIR*	
FIBER OPTIC*	
FIBER OPTIC (ETHERNET)	
RADIO	X

TYPE OF COORDINATION	
NONE	
TBC	
TRAFFIC RESPONSIVE	X
ADAPTIVE	
*LOCATION OF MASTER CONTROLLER NO:	S-
SIGNAL SYSTEM #:	SS-00-42

TYPE OF LIGHTING	
BY OTHER AGENCY	
IN TRAFFIC SIGNAL CABINET	X
IN SEPARATE DOT LIGHTING CABINET	

TYPE OF PRE-EMPT	
NONE	
RAILROAD	
EMERGENCY VEHICLE	X
GTT	X
TOMAR	
HARDWIRE	
OTHER	
LIFT BRIDGE	
QUEUE DETECTOR	

DETECTOR LOGIC

DETECTOR INPUT	3	1	7	5	11	9	15	13
PLAN LOOP DETECTOR #(S)	11	21	51	61	63			
ASSIGNED PHASE	1	2	5	6	6			
OPERATION MODE	VEH	VEH	VEH	VEH	VEH			
SWITCH								
EXTEND								
DELAY								

19	17	23	21	27	25	31	29	DETECTOR INPUT
41	43	82						PLAN LOOP DETECTOR #(S)
4	4	8						ASSIGNED PHASE
VEH	VEH	VEH						OPERATION MODE
								SWITCH
X								EXTEND
X		X						DELAY

DETECTOR INPUT	4	2	8	6	12	10	16	14
PLAN LOOP DETECTOR #(S)	12	22	52	62	64			
ASSIGNED PHASE	1	2	5	6	6			
OPERATION MODE	VEH	VEH	VEH	VEH	VEH			
SWITCH								
EXTEND								
DELAY								

20	18	24	22	28	26	32	30	DETECTOR INPUT
42	81	83						PLAN LOOP DETECTOR #(S)
4	8	8						ASSIGNED PHASE
VEH	VEH	VEH						OPERATION MODE
								SWITCH
	X							EXTEND
X	X							DELAY

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE DETECTOR	A	B	C	D
MOVEMENT				
PHASE	2+5	1+6	4+8	8+4

AFTER PREEMPTION SEQUENCE 2+5 OR 1+6, CONTROLLER SHALL RETURN TO PHASES 2+6.

AFTER PREEMPTION SEQUENCE 4+8 OR 8+4, CONTROLLER SHALL RETURN TO PHASES 4+8.

USH 18/STH 164 & PARKLAWN DRIVE/
PARKLAWN COURT
CITY OF WAUKESHA
WAUKESHA COUNTY

SIGNAL NO. S67-1410

CONTROLLER TYPE: EPAC

DATE 4/15 PAGE NO. 4 OF 4

5/11/15 Plans

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	SEQUENCE OF OPERATIONS	SHEET 268	E

PROJECT ID:	2200-16-71
INTERSECTION:	USH 18/STH 164 & PARKLAWN DRIVE

SIGNAL WIRE COLOR CODING	BLK-BLACK WHT-WHITE	RED-RED BLU-BLUE	GRN-GREEN ORG-ORANGE

CB1 TO	NO. OF 14 AWG CONDUCTORS	HEAD NO.	RED	YELLOW	GREEN	<RED>	<YELLOW>	<GREEN>	FLASHING <YELLOW>	D/WALK	WALK	PED BUTTON
SB1	7	30								BLK	BLU	
		B										WHT/BLK
SB2	12	15	RED/BLK	ORG/BLK	GRN/BLK							
		17	RED	ORG	GRN							
SB3	12	16	RED	ORG	GRN							
		31								BLK	BLU	
		B										WHT/BLK
SB4	12	1	RED	ORG	GRN							
		12				RED/BLK	ORG/BLK	GRN/BLK				
		20								BLK	BLU	
		B										WHT/BLK
SB5	12	13				RED	ORG	GRN				
		21								BLK	BLU	
		22								BLK	BLU	
		B										WHT/BLK
SB8	12	9	RED	ORG	GRN							
		10	RED	ORG	GRN							
		11	RED	ORG	GRN							
		23								BLK	BLU	
		B										WHT/BLK
SB9	12	14	RED/BLK	ORG/BLK	GRN/BLK							
		18	RED	ORG	GRN							
		24								BLK	BLU	
		B										WHT/BLK
SB10	12	19	RED	ORG	GRN							
		25								BLK	BLU	
		B										WHT/BLK
SB11	12	6				RED	ORG	GRN				
		8	RED/BLK	ORG/BLK	GRN/BLK							
		26								BLK	BLU	
		B										WHT/BLK
SB12	12	7				RED	ORG	GRN				
		27								BLK	BLU	
		28								BLK	BLU	
		B										WHT/BLK
SB13	7	2	RED	ORG	GRN							
		3	RED	ORG	GRN							
		4	RED	ORG	GRN							
		5	RED	ORG	GRN							
SB14	7	29								BLK	BLU	
		B										WHT/BLK

NOTES: USE WHITE CONDUCTOR IN THE SIGNAL CABLE AS THE GROUNDED CONDUCTOR FOR ALL TRAFFIC SIGNAL INDICATIONS.
ENSURE THE GROUNDED CONDUCTOR IN THE FEEDER CABLE AND THE POLE CABLES ARE BOTH 18" LONGER THAN THE UNGROUNDED CONDUCTORS.
AT THE SIGNAL BASES, CONNECT ON TERMINAL FROM THE PEDESTRIAN PUSH BUTTONS TO THE COLOR INDICATED IN THE CHART. CONNECT THE OTHER TERMINAL TO THE GROUNDED CONDUCTOR.

EQUIPMENT GROUNDING CONDUCTOR 10 AWG GRN XLP	
FROM	TO
CB1	SB1
SB1	SB2
SB2	SB3
SB3	SB4
SB4	SB5
SB5	SB8
SB8	SB9
SB9	SB10
SB10	SB11
SB11	SB12
SB12	SB13
SB13	SB14
SB14	CB1

PULL BOX BONDING JUMPER 10 AWG GRN XLP	
FROM	TO
PB1	SB2
PB2	SB3
PB3	SB4
PB6	SB5
PB7	SB5
PB8	SB8
PB9	SB9
PB10	SB10
PB11	SB10
PB12	SB11
PB15	SB12
PB16	SB12
PB17	SB13

LIGHTING UF 10 AWG W/ GROUND	
FROM	TO
CB1	SB3
SB3	SB5
SB5	SB6
SB6	SB7
CB1	SB13
SB13	SB12
SB12	SB10
SB10	SB8

VIDEO DETECTION CABLE	
FROM	TO
CB1	V1(SB8)
CB1	V2(SB13)
CB1	V3(SB3)
CB1	V4(SB10)

EMERGENCY VEHICLE PREEMPTION	
FROM	TO
CB1	HEAD A(SB8)
CB1	HEAD B(SB13)
CB1	HEAD C(SB3)
CB1	HEAD D(SB10)

TRAFFIC CONTROL SIGNAL
USH 18/STH 164 & PARKLAWN DRIVE/
PARKLAWN COURT
CITY OF WAUKESHA
WAUKESHA COUNTY

SIGNAL NO. S67-1410

REGION CONTACT: JMM
DESIGNED BY: GRAEF
REVISED BY:

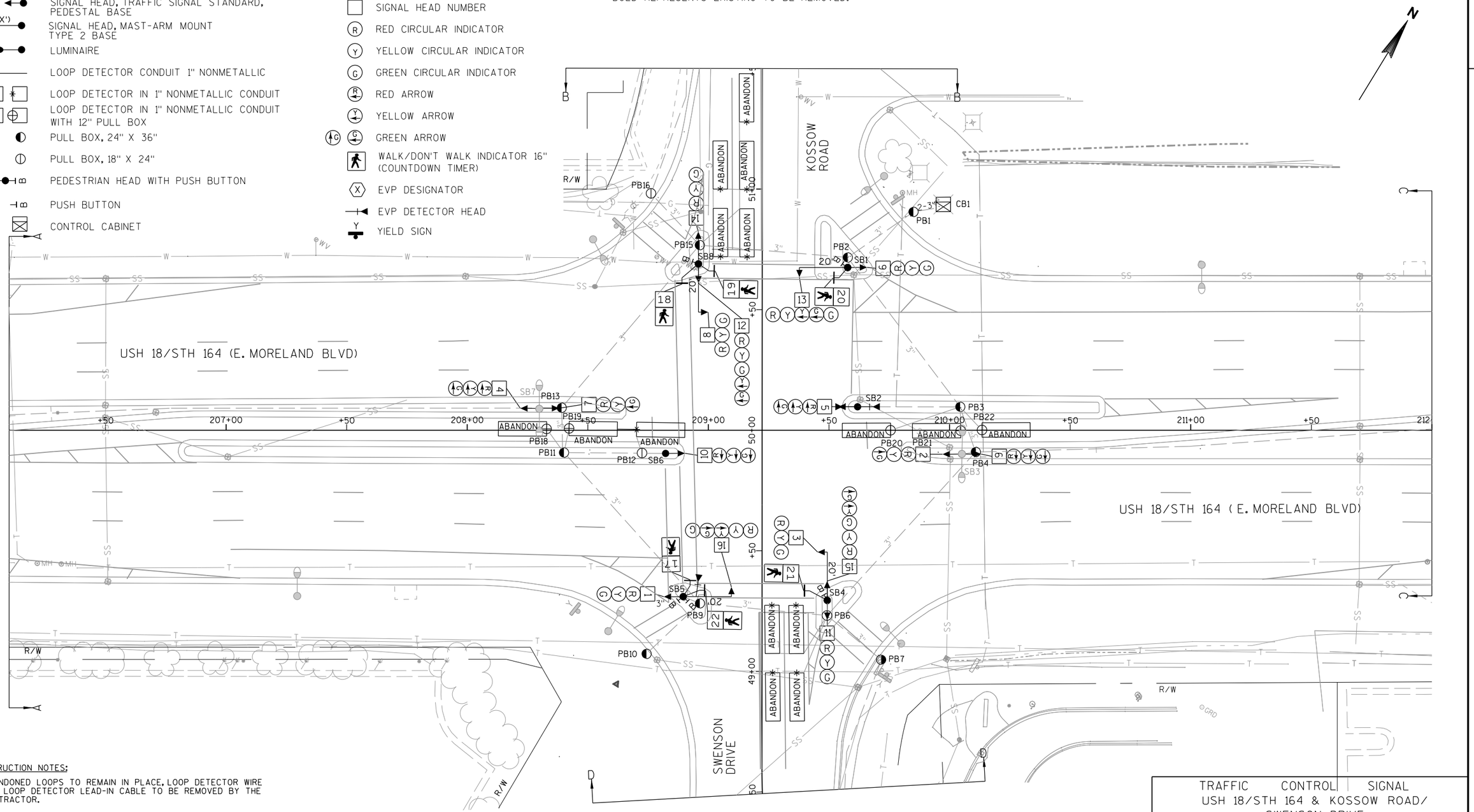
PAGE 1 OF 1

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CABLE ROUTING	SHEET 269	E

LEGEND

- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- (XX') SIGNAL HEAD, MAST-ARM MOUNT TYPE 2 BASE
- LUMINAIRE
- LOOP DETECTOR CONDUIT 1" NONMETALLIC
- LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
- LOOP DETECTOR IN 1" NONMETALLIC CONDUIT WITH 12" PULL BOX
- PULL BOX, 24" X 36"
- PULL BOX, 18" X 24"
- PEDESTRIAN HEAD WITH PUSH BUTTON
- PUSH BUTTON
- CONTROL CABINET
- TRAFFIC SIGNAL HEAD
- SIGNAL HEAD NUMBER
- RED CIRCULAR INDICATOR
- YELLOW CIRCULAR INDICATOR
- GREEN CIRCULAR INDICATOR
- RED ARROW
- YELLOW ARROW
- GREEN ARROW
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- EVP DESIGNATOR
- EVP DETECTOR HEAD
- YIELD SIGN

NOTE: GRAYSHADE REPRESENTS EXISTING TO REMAIN.
BOLD REPRESENTS EXISTING TO BE REMOVED.



CONSTRUCTION NOTES;

1. ABANDONED LOOPS TO REMAIN IN PLACE, LOOP DETECTOR WIRE AND LOOP DETECTOR LEAD-IN CABLE TO BE REMOVED BY THE CONTRACTOR.
2. SEE LIGHTING PLAN FOR LIGHTING REMOVALS.
3. EVP CABLE TO BE REMOVED BY THE CONTRACTOR.
4. CONTROLLER AND CABINET SHALL BE REMOVED BY WISDOT PERSONNEL.
5. EXISTING CONDUIT RUNS TO REMAIN IN PLACE. CONTRACTOR TO REMOVE REMAINING CONDUCTORS IN CONDUIT.

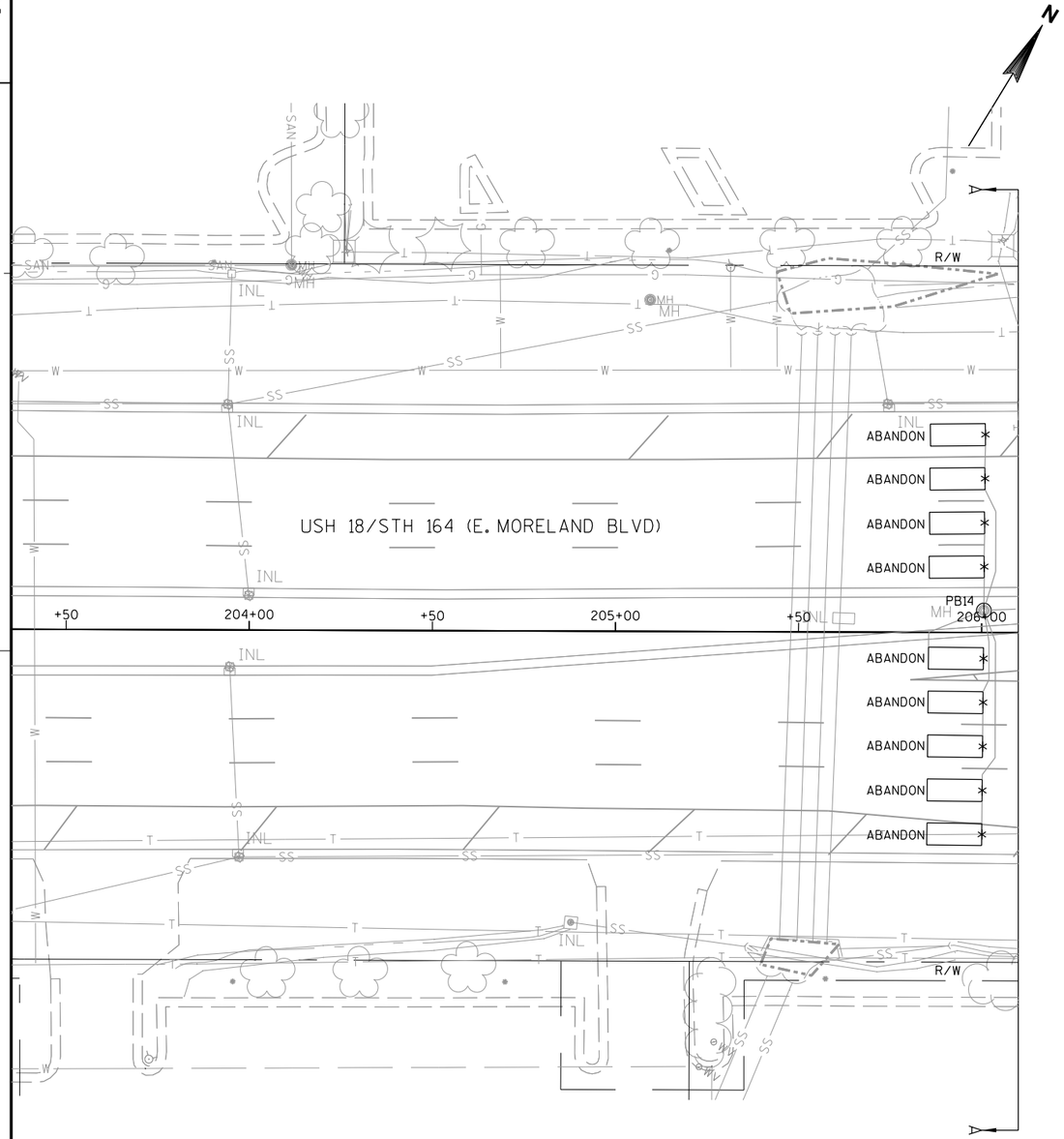
TRAFFIC CONTROL SIGNAL
USH 18/STH 164 & KOSSOW ROAD/
SWENSON DRIVE
CITY OF WAUKESHA
WAUKESHA COUNTY

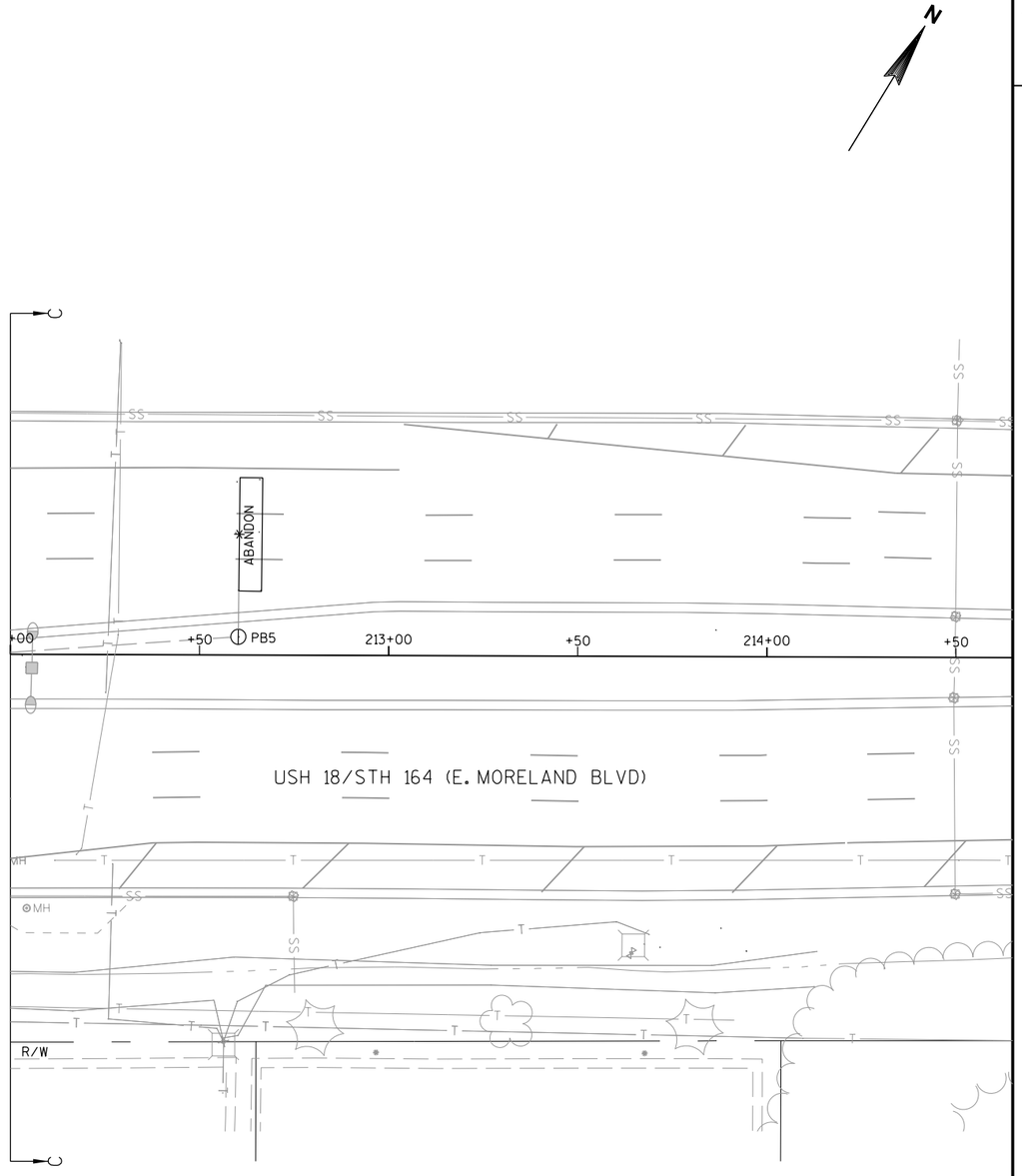
SIGNAL NO. S67-0236

REGION CONTACT: JMM
DESIGNED BY:
REVISED BY: GRAEF

PAGE 1 OF 3

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	TRAFFIC SIGNAL REMOVAL PLAN	SHEET 270	E





2

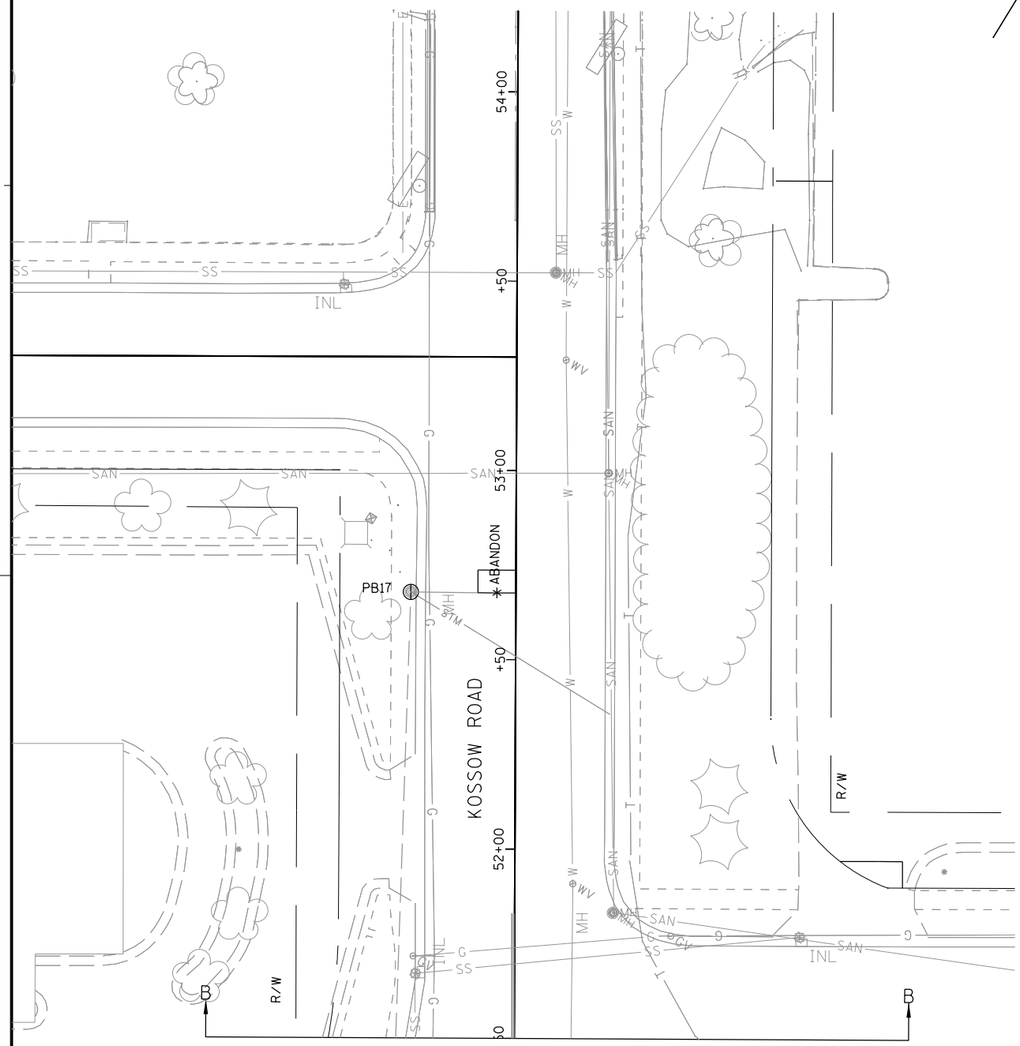
TRAFFIC CONTROL SIGNAL
USH 18/STH 164 & KOSSOW ROAD/
SWENSON DRIVE
CITY OF WAUKESHA
WAUKESHA COUNTY

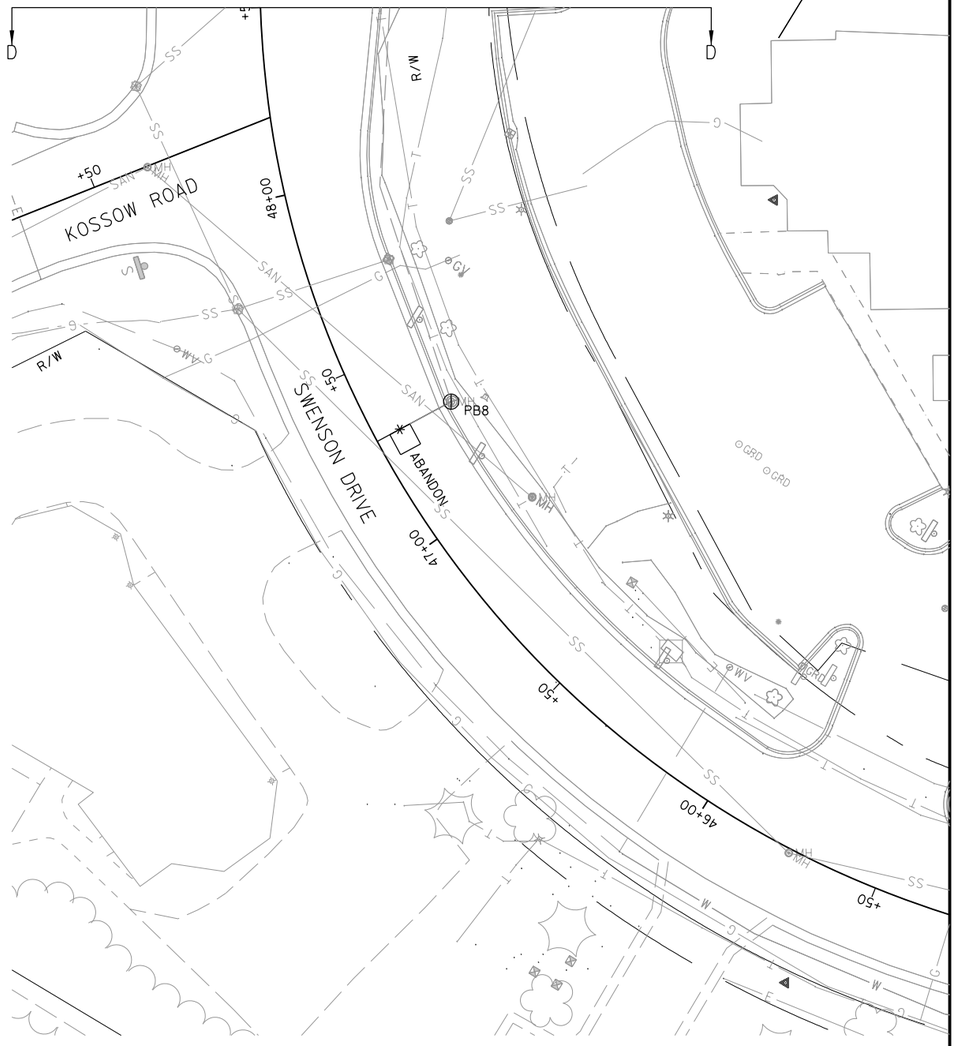
SIGNAL NO. S67-0236

REGION CONTACT: JMM
DESIGNED BY:
REVISED BY: GRAEF

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	TRAFFIC SIGNAL REMOVAL PLAN	SHEET 271	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\06_Kossow\024012_sp.dgn
PLOT DATE : 4/27/2015
PLOT BY : GRAEF
PLOT NAME :
PLOT SCALE : 40.0000 sf / in.
WISDOT/CADDS SHEET 42





TRAFFIC CONTROL SIGNAL
USH 18/STH 164 & KOSSOW ROAD/
SWENSON DRIVE
CITY OF WAUKESHA
WAUKESHA COUNTY

SIGNAL NO. S67-0236

REGION CONTACT: JMM
DESIGNED BY:
REVISED BY: GRAEF

PAGE 3 OF 3

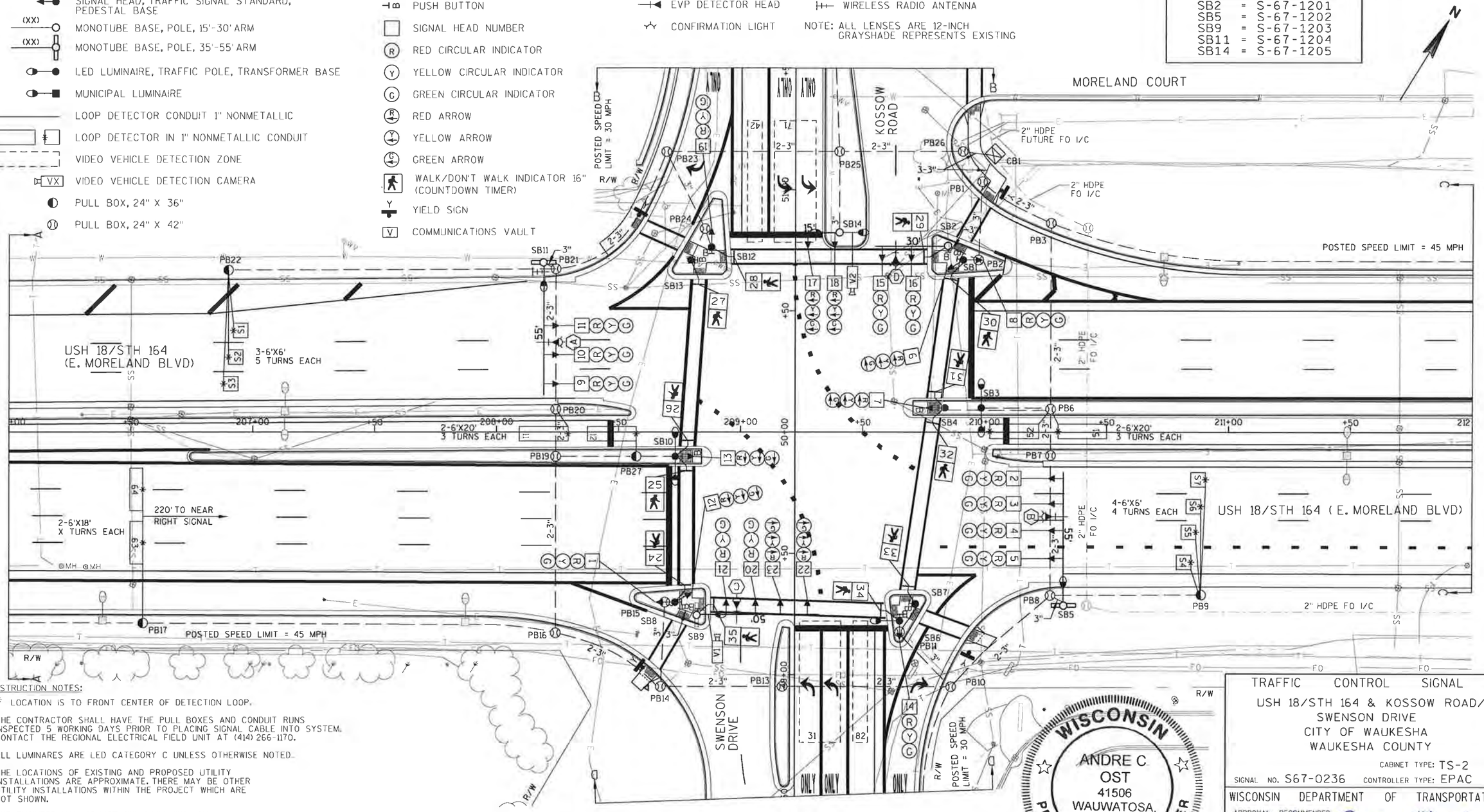
PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	TRAFFIC SIGNAL REMOVAL PLAN	SHEET 272	E

LEGEND

- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- (XX) MONOTUBE BASE, POLE, 15'-30' ARM
- (XX) MONOTUBE BASE, POLE, 35'-55' ARM
- LED LUMINAIRE, TRAFFIC POLE, TRANSFORMER BASE
- MUNICIPAL LUMINAIRE
- LOOP DETECTOR CONDUIT 1" NONMETALLIC
- LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
- VIDEO VEHICLE DETECTION ZONE
- VX VIDEO VEHICLE DETECTION CAMERA
- PULL BOX, 24" X 36"
- PULL BOX, 24" X 42"
- PEDESTRIAN HEAD WITH PUSH BUTTON
- PUSH BUTTON
- SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- RED ARROW
- YELLOW ARROW
- GREEN ARROW
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- Y YIELD SIGN
- V COMMUNICATIONS VAULT
- (X) EVP DESIGNATOR
- EVP DETECTOR HEAD
- CONFIRMATION LIGHT
- CONTROL CABINET
- WIRELESS RADIO ANTENNA

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING

STRUCTURE NUMBERS	
SB2	= S-67-1201
SB5	= S-67-1202
SB9	= S-67-1203
SB11	= S-67-1204
SB14	= S-67-1205



CONSTRUCTION NOTES:

1. * LOCATION IS TO FRONT CENTER OF DETECTION LOOP.
2. THE CONTRACTOR SHALL HAVE THE PULL BOXES AND CONDUIT RUNS INSPECTED 5 WORKING DAYS PRIOR TO PLACING SIGNAL CABLE INTO SYSTEM. CONTACT THE REGIONAL ELECTRICAL FIELD UNIT AT (414) 266-1170.
3. ALL LUMINARES ARE LED CATEGORY C UNLESS OTHERWISE NOTED.
4. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
5. THE ENGINEER MAY ADJUST THE LOCATIONS OF ITEMS UNDER THIS CONTRACT TO AVOID CONFLICT WITH EXISTING UTILITY FACILITIES.
6. THE CONDUIT EMBEDDED IN A TYPE 10 OR 13 CONCRETE BASE SHALL BE 3" CONDUIT.
7. INSTALL CABINET BASE 6" ABOVE ROADWAY ELEVATION.
8. VIDEO DETECTION ZONES TO BE PROGRAMMED IN THE FIELD.

WISCONSIN
ANDRE C OST
41506
WAUWATOSA, WI
PROFESSIONAL ENGINEER
4/29/2015

TRAFFIC CONTROL SIGNAL

USH 18/STH 164 & KOSSOW ROAD/
SWENSON DRIVE
CITY OF WAUKESHA
WAUKESHA COUNTY

CABINET TYPE: TS-2
SIGNAL NO. S67-0236 CONTROLLER TYPE: EPAC

WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVAL RECOMMENDED Date 4/29/15 Joyce Murphy REGION TRAFFIC ENGINEER
APPROVED Date 4/29/15 Joanna L. Bush STATE TRAFFIC ENGINEER

REGION CONTACT: JMM
DESIGNED BY: GRAEF
REVISED BY:

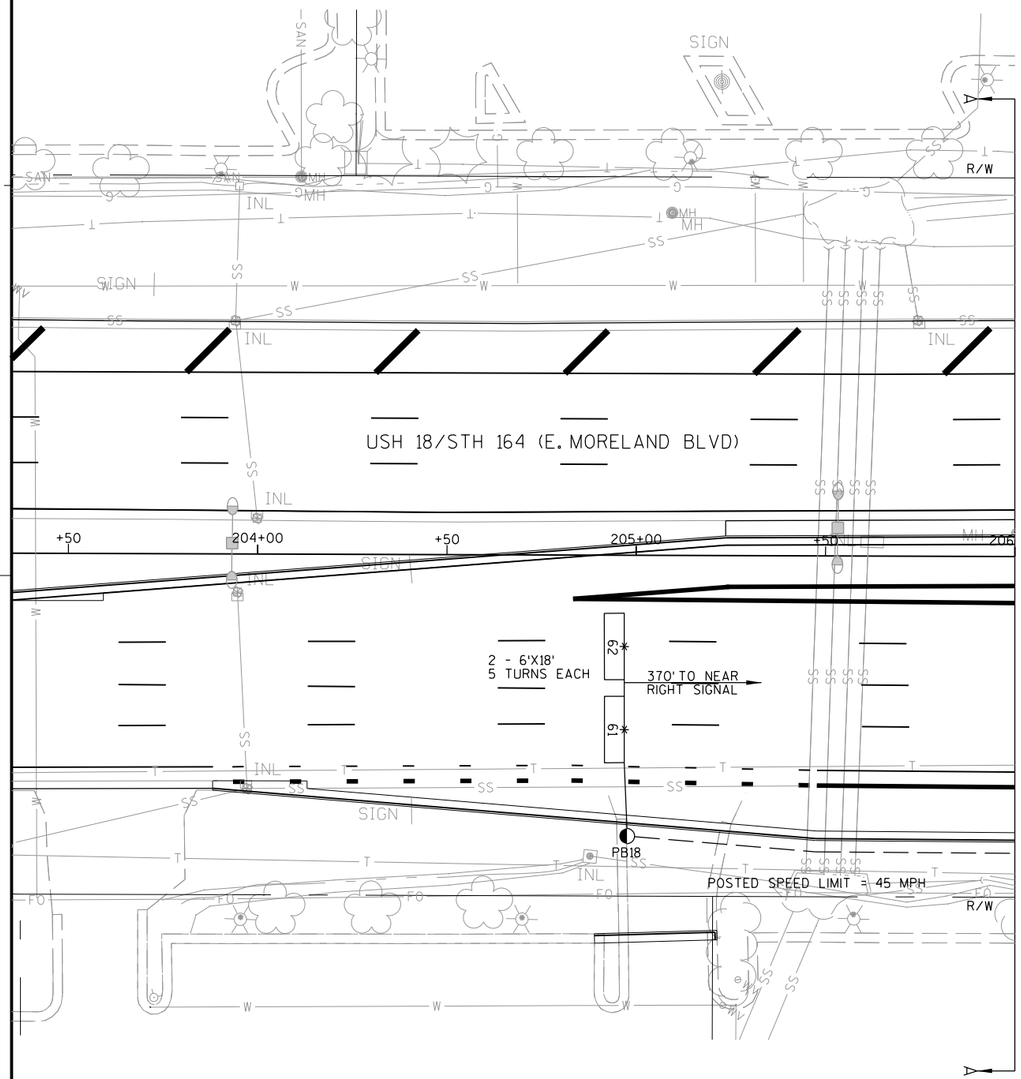
PAGE 1 OF 4

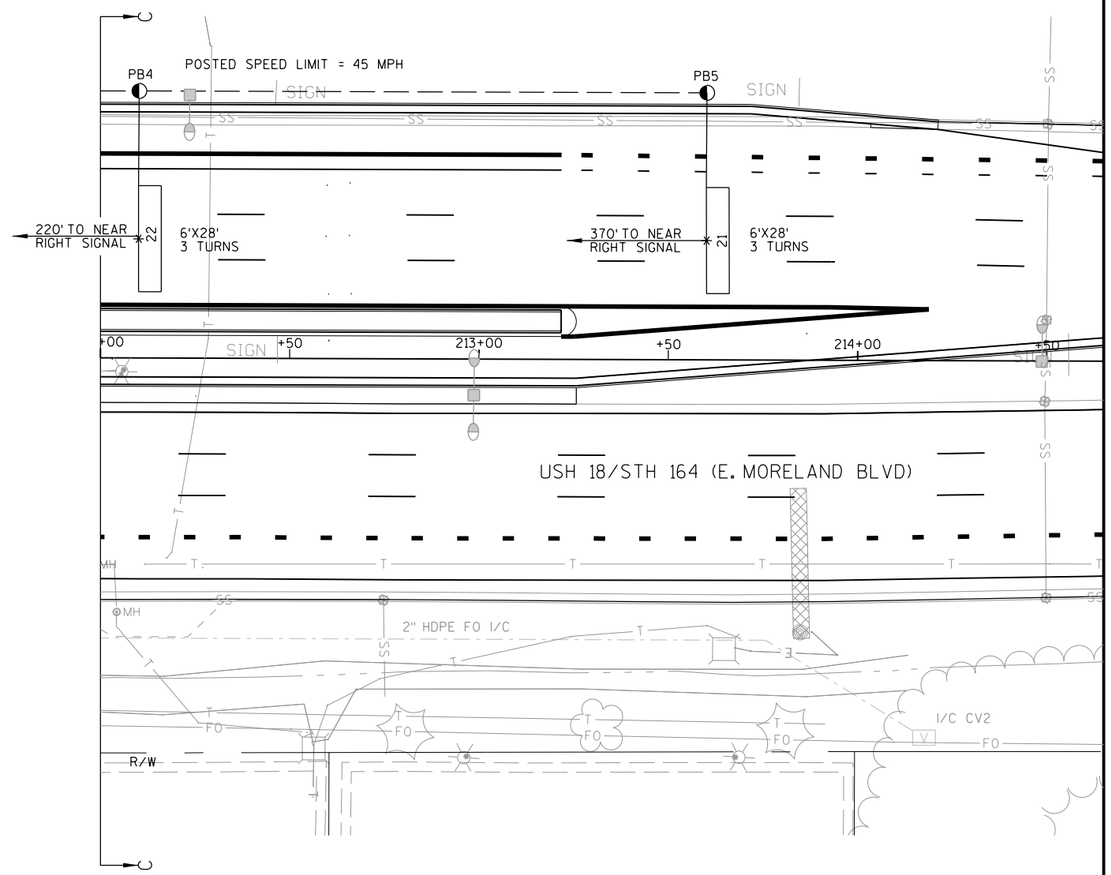
PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	TRAFFIC SIGNAL PLAN	SHEET 273 E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\06_Kossow\024021_sp.dgn PLOT DATE : 4/28/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 40.0000 sf / in.

WISDOT/CADDS SHEET 42

SB2 S 1/16/15





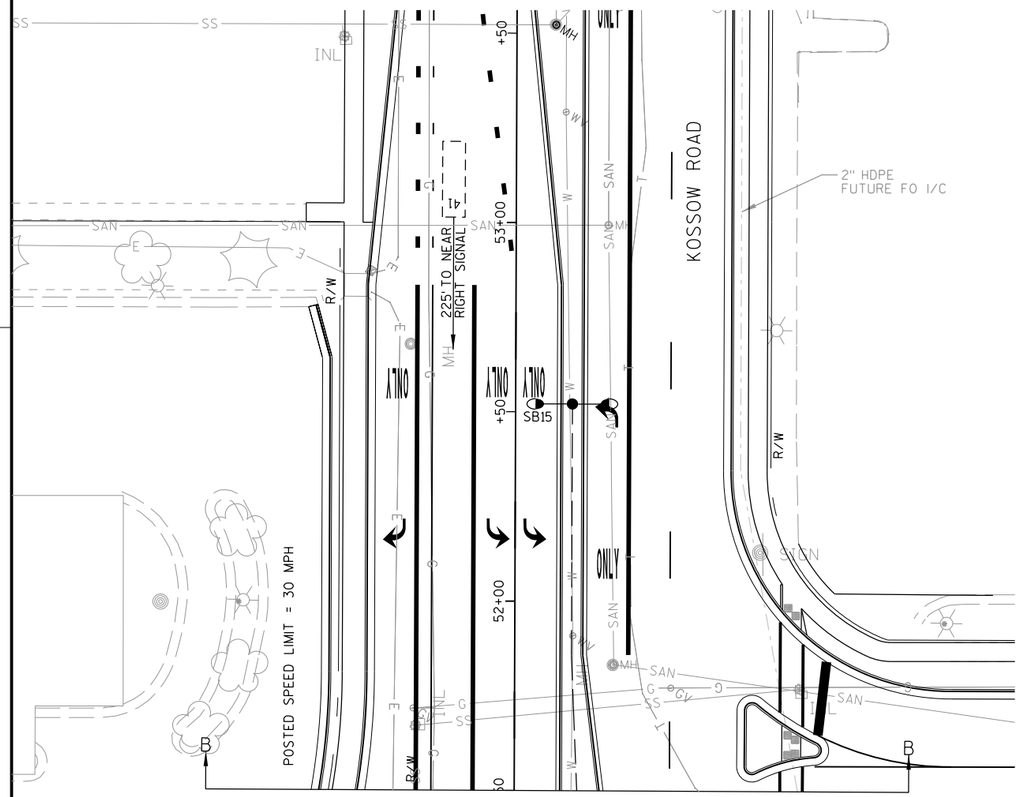
TRAFFIC CONTROL SIGNAL
USH 18/STH 164 & KOSSOW ROAD/
SWENSON DRIVE
CITY OF WAUKESHA
WAUKESHA COUNTY

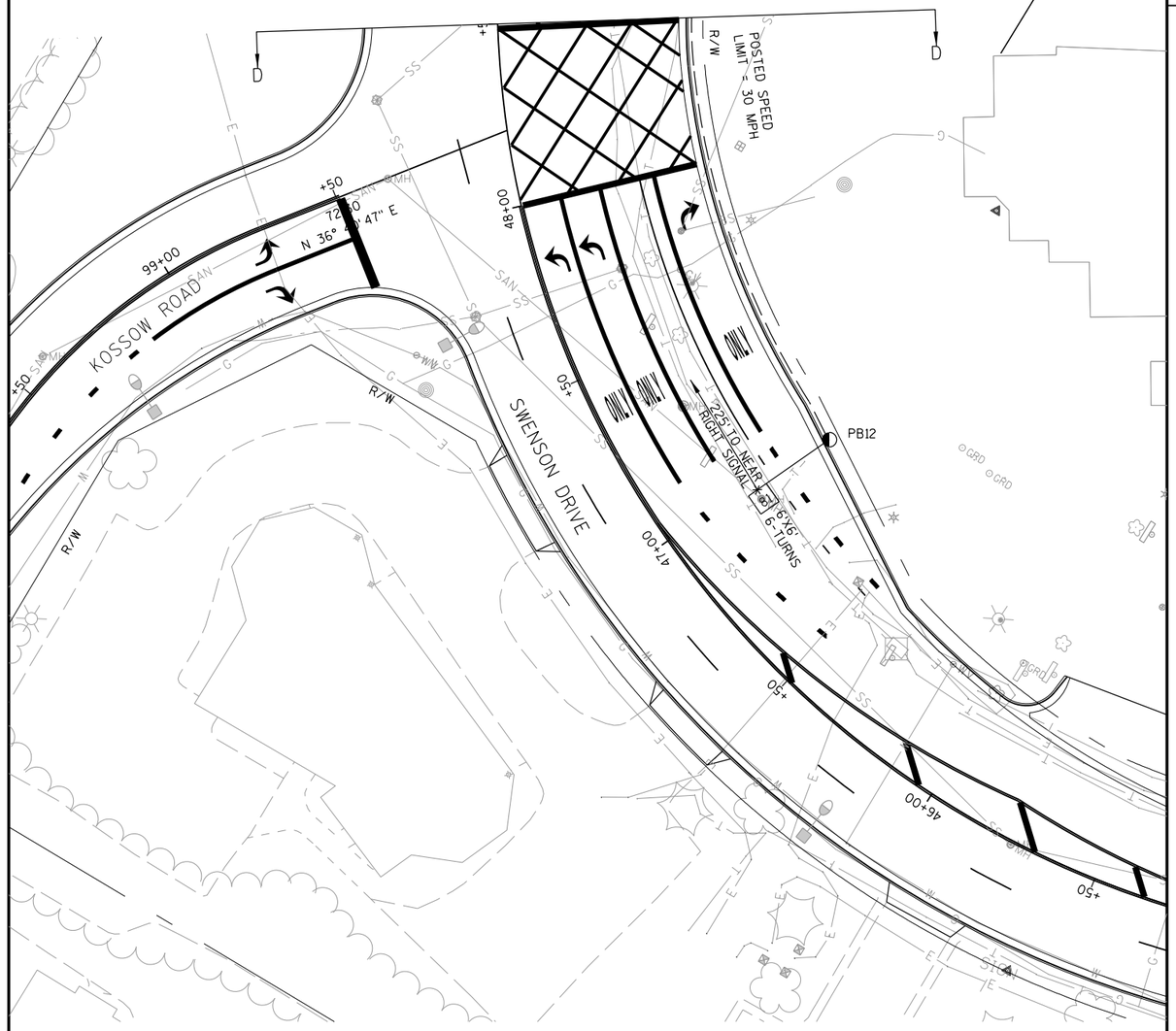
SIGNAL NO. S67-0236

REGION CONTACT: JMM
DESIGNED BY: GRAEF
REVISED BY:

PAGE 2 OF 4

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	TRAFFIC SIGNAL PLAN	SHEET 274	E





TRAFFIC CONTROL SIGNAL
USH 18/STH 164 & KOSSOW ROAD/
SWENSON DRIVE
CITY OF WAUKESHA
WAUKESHA COUNTY

SIGNAL NO. S67-0236

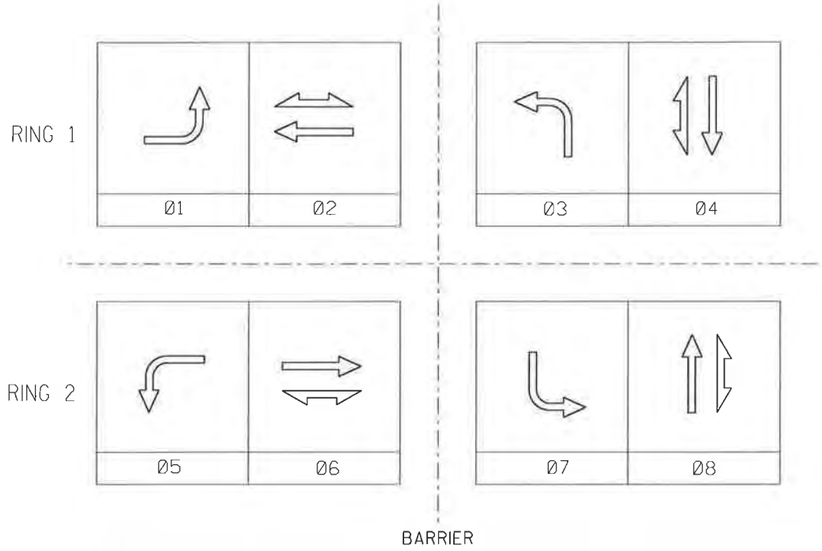
REGION CONTACT: JMM
DESIGNED BY: GRAEF
REVISED BY:

PAGE 3 OF 4

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	TRAFFIC SIGNAL PLAN	SHEET 275	E

2

	HEAD NUMBERS	FLASH
Ø1	6,7	R
Ø2	8,9,10,11	R
Ø3	17,18	R
Ø4	19,20,21	R
Ø5	12,13	R
Ø6	1,2,3,4,5	R
Ø7	22,23	R
Ø8	14,15,16	R
Ø2P	28,29	
Ø4P	24,25,26,27	
Ø6P	34,35	
Ø8P	30,31,32,33	
OLA		
OLB		
OLC		
OLD		



CONTROLLER LOGIC

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / Ø	PHASE RECALL	PHASE ACTIVE
1		6		X
2	X	6	MIN	X
3		8		X
4		8		X
5		2		X
6	X	2	MIN	X
7		4		X
8		4		X

TYPE OF INTERCONNECT/COMMUNICATION	
NONE	
CLOSED LOOP	
TWISTED PAIR*	
FIBER OPTIC*	X
FIBER OPTIC (ETHERNET)	
RADIO	X

TYPE OF COORDINATION	
NONE	
TBC	
TRAFFIC RESPONSIVE	X
ADAPTIVE	
*LOCATION OF MASTER CONTROLLER NO:	S-
SIGNAL SYSTEM #:	SS-00-42

TYPE OF LIGHTING	
BY OTHER AGENCY	
IN TRAFFIC SIGNAL CABINET	X
IN SEPARATE DOT LIGHTING CABINET	

TYPE OF PRE-EMPT	
NONE	
RAILROAD	
EMERGENCY VEHICLE	X
GTT	X
TOMAR	
HARDWIRE	
OTHER	
LIFT BRIDGE	
QUEUE DETECTOR	

DETECTOR LOGIC

DETECTOR INPUT	3	1	7	5	11	9	15	13	19	17	23	21	27	25	31	29
PLAN LOOP DETECTOR #(S)	11,12	22	61	63	81	S2	S4	S6	31	42	82					
ASSIGNED PHASE	1	2	6	6	8				3	4	8					
OPERATION MODE	VEH	VEH	VEH	VEH	VEH				VEH	VEH	VEH					
SWITCH																
EXTEND					X											
DELAY					X											

DETECTOR INPUT	4	2	8	6	12	10	16	14	20	18	24	22	28	26	32	30
PLAN LOOP DETECTOR #(S)	21	51,52	62	64	S1	S3	S5	S7	41	71						
ASSIGNED PHASE	2	5	6	6					4	7						
OPERATION MODE	VEH	VEH	VEH	VEH					VEH	VEH						
SWITCH																
EXTEND									X							
DELAY									X							

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE DETECTOR	A	B	C	D
MOVEMENT				
PHASE	2+5	1+6	4+7	3+8

AFTER PREEMPTION SEQUENCE 2+5 OR 1+6, CONTROLLER SHALL RETURN TO PHASES 2+6.

AFTER PREEMPTION SEQUENCE 4+7 OR 3+8, CONTROLLER SHALL RETURN TO PHASES 4+8.

USH 18/STH 164 & KOSSOW ROAD/
SWENSON DRIVE
CITY OF WAUKESHA
WAUKESHA COUNTY

SIGNAL NO. S67-0236

CONTROLLER TYPE: EPAC

DATE 4/15 PAGE NO. 4 OF 4

4/29/15 JMM

4/29/15 DMB

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	SEQUENCE OF OPERATIONS	SHEET 276	E

PROJECT ID:	2200-16-71
INTERSECTION:	USH 18/STH 164 & KOSSOW ROAD/SWENSON DRIVE

SIGNAL WIRE COLOR CODING	BLK-BLACK	RED-RED	GRN-GREEN
	WHT-WHITE	BLU-BLUE	ORG-ORANGE

CB1 TO	NO. OF 14 AWG CONDUCTORS	HEAD NO.	RED	YELLOW	GREEN	<RED>	<YELLOW>	<GREEN>	FLASHING <YELLOW>	D/WALK	WALK	PED BUTTON
SB1	12	6				RED	ORG	GRN				
		8	RED/BLK	ORG/BLK	GRN/BLK							
		30								BLK	BLU	
		B										WHT/BLK
SB2	12	15	RED	ORG	GRN							
		16	RED	ORG	GRN							
		29								BLK	BLU	
		B										WHT/BLK
SB4	12	7				RED	ORG	GRN				
		31								BLK	BLU	
		32								BLK	BLU	
		B										WHT/BLK
SB5	7	2	RED	ORG	GRN							
		3	RED	ORG	GRN							
		4	RED	ORG	GRN							
		5	RED	ORG	GRN							
SB6	12	14	RED	ORG	GRN							
		34								BLK	BLU	
		B										WHT/BLK
SB7	7	33								BLK	BLU	
		B										WHT/BLK
SB8	12	1	RED	ORG	GRN							
		12				RED/BLK	ORG/BLK	GRN/BLK				
		24								BLK	BLU	
		B										WHT/BLK
SB9	12	20	RED	ORG	GRN							
		21	RED	ORG	GRN							
		22				RED/BLK	ORG/BLK	GRN/BLK				
		23				RED/BLK	ORG/BLK	GRN/BLK				
		35								BLK	BLU	
		B										WHT/BLK
SB10	12	13				RED	ORG	GRN				
		25								BLK	BLU	
		26								BLK	BLU	
		B										WHT/BLK
SB11	7	9	RED	ORG	GRN							
		10	RED	ORG	GRN							
		11	RED	ORG	GRN							
SB12	12	19	RED	ORG	GRN							
		28								BLK	BLU	
		B										WHT/BLK
SB13	7	27								BLK	BLU	
		B										WHT/BLK
SB14	7	17				RED	ORG	GRN				
		18				RED	ORG	GRN				

EQUIPMENT GROUNDING CONDUCTOR 10 AWG GRN XLP	
FROM	TO
CB1	SB1
SB1	SB2
SB2	SB4
SB4	SB5
SB5	SB6
SB6	SB7
SB7	SB8
SB8	SB9
SB9	SB10
SB10	SB11
SB11	SB12
SB12	SB13
SB13	SB14
SB14	CB1

PULL BOX BONDING JUMPER 10 AWG GRN XLP	
FROM	TO
PB1	CB1
PB2	SB1
PB3	CB1
PB6	SB3
PB7	SB3
PB8	SB5
PB10	SB6
PB11	SB6
PB13	SB8
PB14	SB8
PB15	SB8
PB16	SB8
PB19	SB10
PB20	SB10
PB21	SB11
PB23	SB12
PB24	SB12
PB25	SB14
PB26	CB1
PB27	SB10

LIGHTING UF 10 AWG W/ GROUND	
FROM	TO
CB1	SB3
SB3	SB5
SB5	SB6
SB6	SB9
CB1	SB15
SB15	SB14
SB14	SB11
SB11	SB10

VIDEO DETECTION CABLE	
FROM	TO
CB1	V1(SB9)
CB1	V2(SB14)

EMERGENCY VEHICLE PREEMPTION	
FROM	TO
CB1	HEAD A(SB11)
CB1	HEAD B(SB5)
CB1	HEAD C(SB9)
CB1	HEAD D(SB2)

NOTES: USE WHITE CONDUCTOR IN THE SIGNAL CABLE AS THE GROUNDED CONDUCTOR FOR ALL TRAFFIC SIGNAL INDICATIONS.
ENSURE THE GROUNDED CONDUCTOR IN THE FEEDER CABLE AND THE POLE CABLES ARE BOTH 18" LONGER THAN THE UNGROUNDED CONDUCTORS.
AT THE SIGNAL BASES, CONNECT ON TERMINAL FROM THE PEDESTRIAN PUSH BUTTONS TO THE COLOR INDICATED IN THE CHART. CONNECT THE OTHER TERMINAL TO THE GROUNDED CONDUCTOR.

TRAFFIC CONTROL SIGNAL
USH 18/STH 164 & KOSSOW ROAD/
SWENSON DRIVE
CITY OF WAUKESHA
WAUKESHA COUNTY

SIGNAL NO. S67-0236

REGION CONTACT: JMM
DESIGNED BY: GRAEF
REVISED BY:

PAGE 1 OF 1

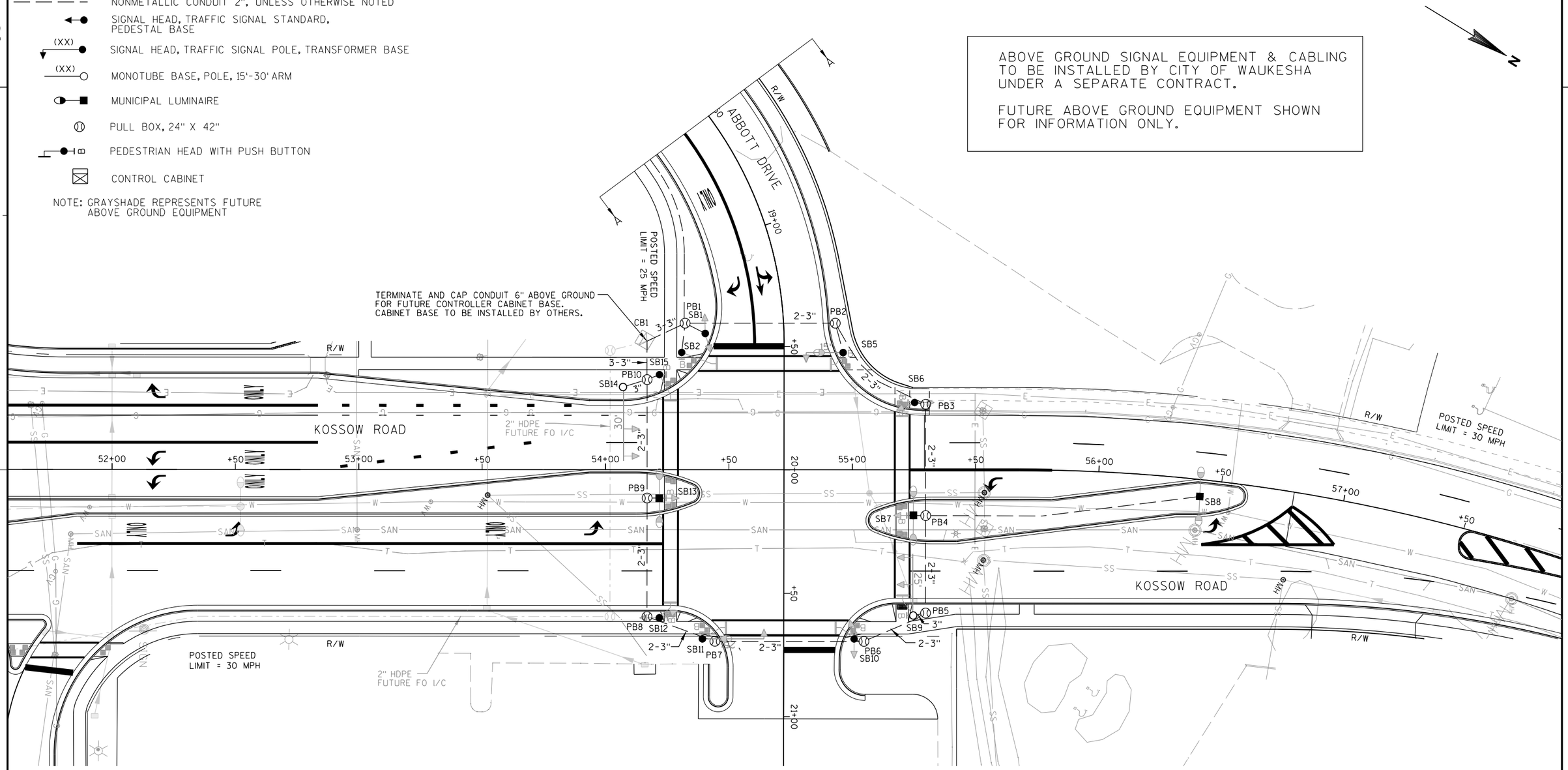
LEGEND

- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- (XX) SIGNAL HEAD, TRAFFIC SIGNAL POLE, TRANSFORMER BASE
- (XX) MONOTUBE BASE, POLE, 15'-30' ARM
- MUNICIPAL LUMINAIRE
- PULL BOX, 24" X 42"
- PEDESTRIAN HEAD WITH PUSH BUTTON
- CONTROL CABINET

NOTE: GRAYSHADE REPRESENTS FUTURE ABOVE GROUND EQUIPMENT

ABOVE GROUND SIGNAL EQUIPMENT & CABLING TO BE INSTALLED BY CITY OF WAUKESHA UNDER A SEPARATE CONTRACT.

FUTURE ABOVE GROUND EQUIPMENT SHOWN FOR INFORMATION ONLY.



CONSTRUCTION NOTES:

1. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
2. THE ENGINEER SHALL ADJUST THE LOCATIONS OF ITEMS UNDER THIS CONTRACT TO AVOID CONFLICT WITH EXISTING UTILITY FACILITIES.
3. THE CONDUIT EMBEDDED IN A TYPE 10 CONCRETE BASE SHALL BE 3" CONDUIT.

TRAFFIC CONTROL SIGNAL

KOSSOW ROAD & ABBOTT DRIVE
CITY OF WAUKESHA
WAUKESHA COUNTY

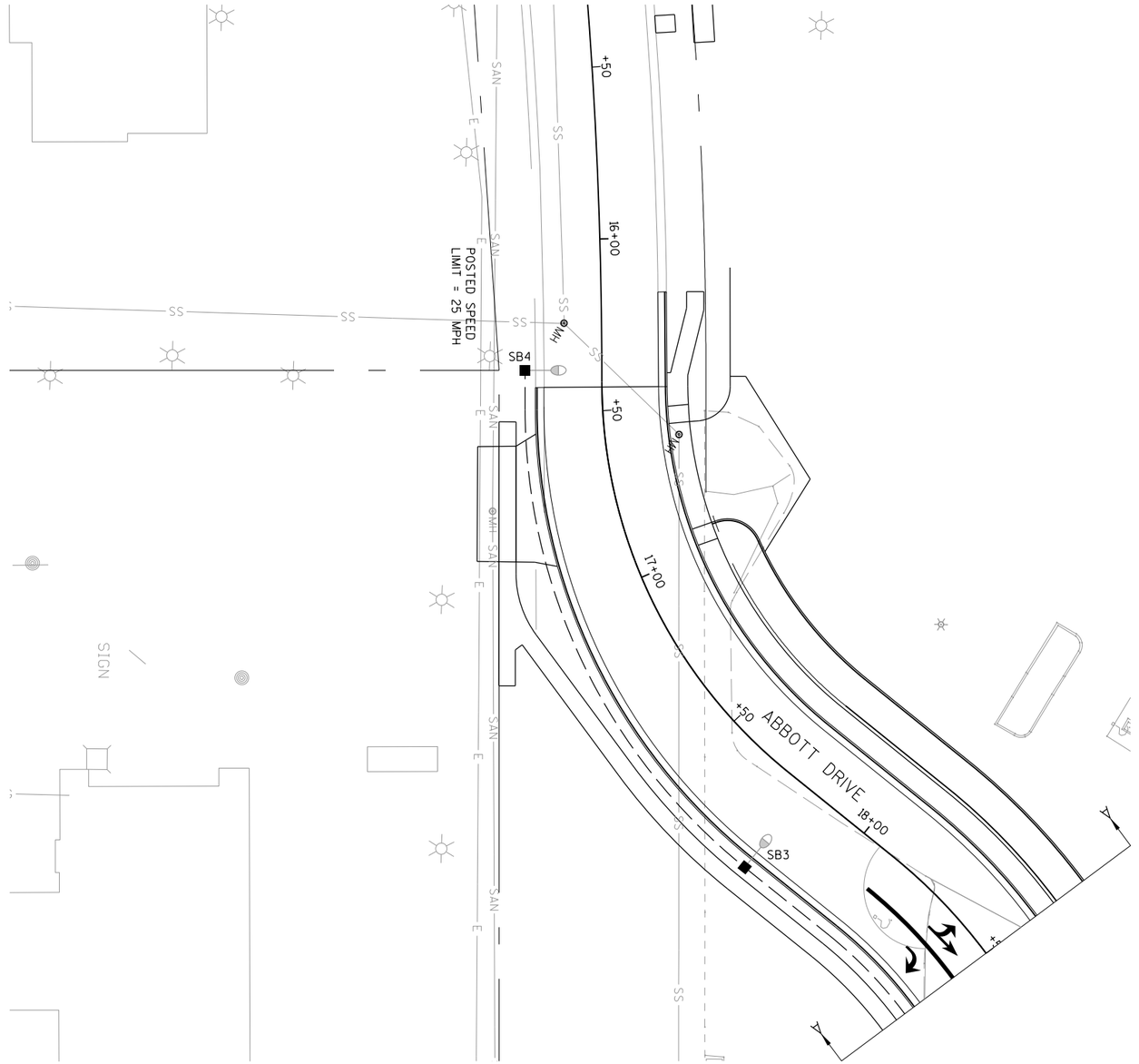
SIGNAL NO.

CITY CONTACT: MICHAEL GRULKE
DESIGNED BY: GRAEF
REVISED BY:

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	UNDERGROUND PLAN	SHEET 278	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\07_Abbott\024021_sp.dgn
PLOT DATE : 4/27/2015
PLOT BY : GRAEF
PLOT NAME :
PLOT SCALE : 40.0000 sf / in.
WISDOT/CADDS SHEET 42

2



TRAFFIC CONTROL SIGNAL

KOSSOW ROAD & ABBOTT DRIVE
CITY OF WAUKESHA
WAUKESHA COUNTY

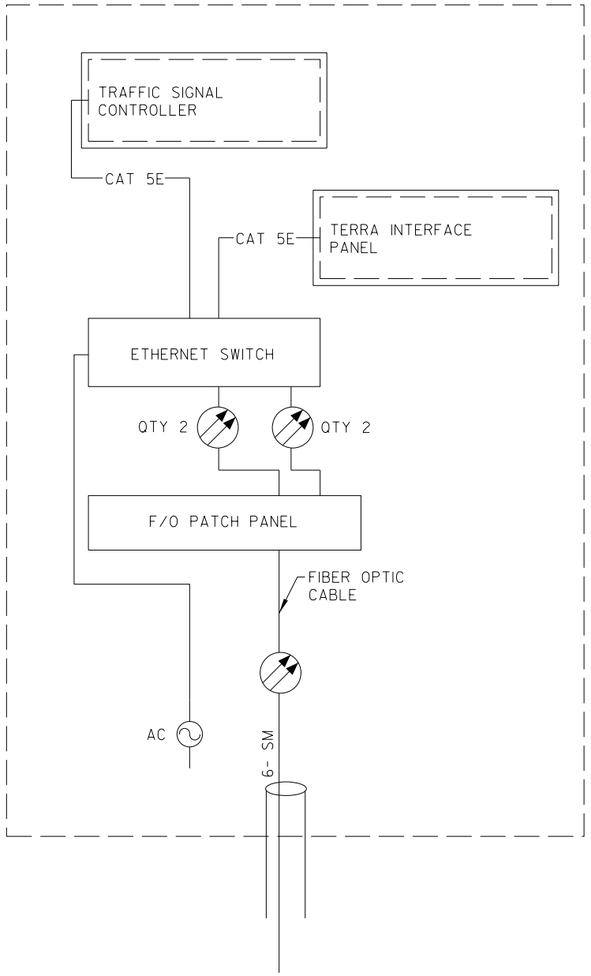
SIGNAL NO.

CITY CONTACT: MICHAEL GRULKE
DESIGNED BY: GRAEF

PAGE 2 OF 2

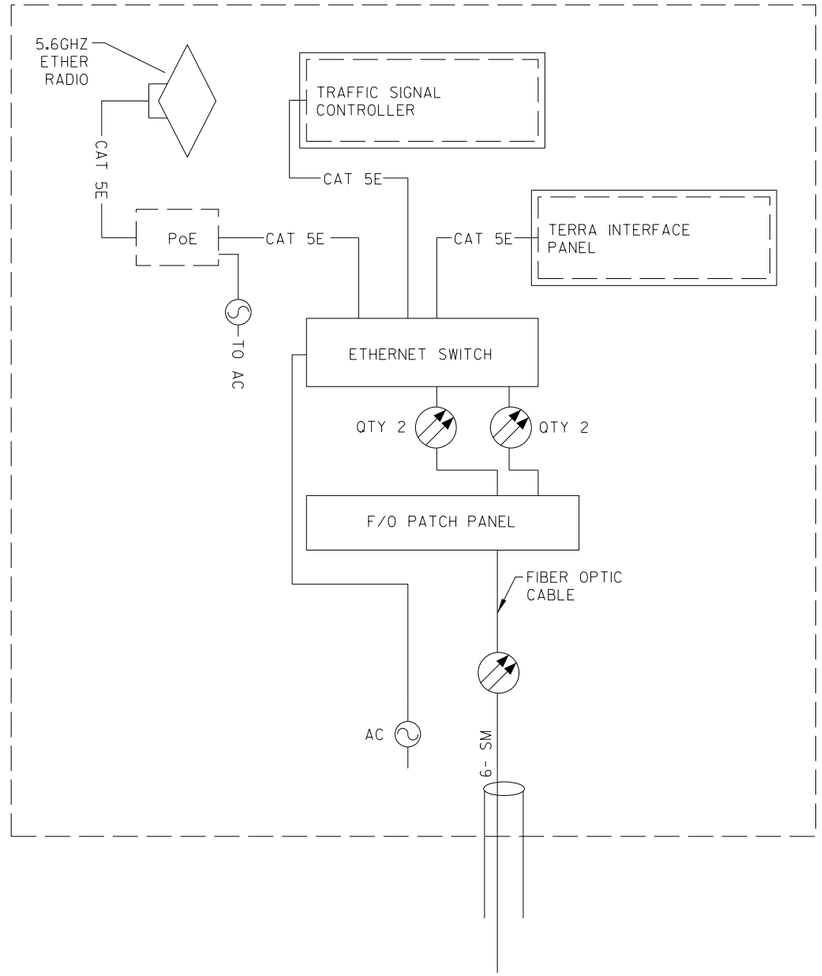
PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	UNDERGROUND PLAN	SHEET 279	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\07_Abbott\024022_sp.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 40.0000 sf / in.



PERMANENT TRAFFIC SIGNALS

STH 164 (S67-0129)
MAIN STREET (S67-0258)



PERMANENT TRAFFIC SIGNALS

KOSSOW ROAD (S67-0236)

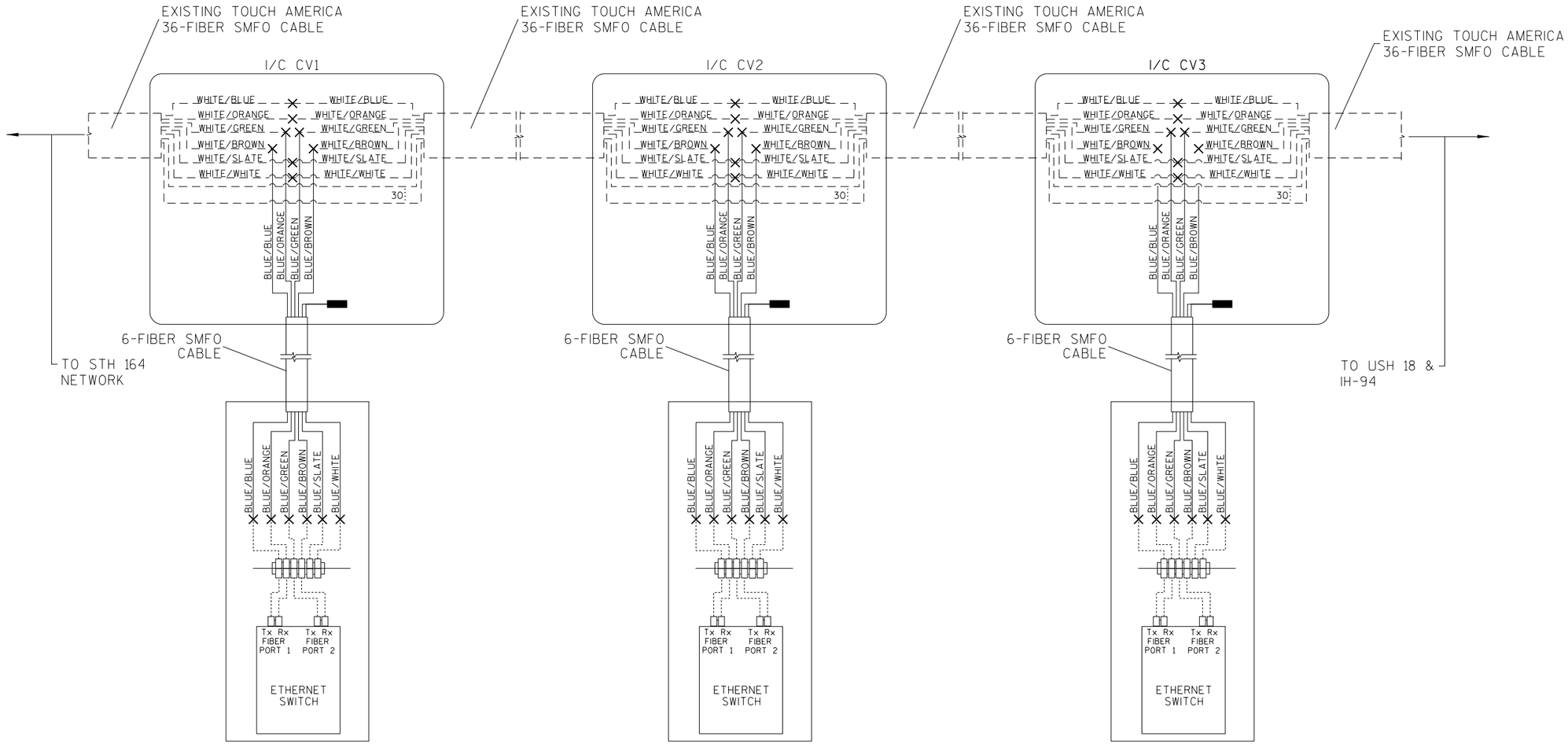
TRAFFIC CONTROL INTERCONNECT
USH 18
CITY OF WAUKESHA/TOWN OF BROOKFIELD
WAUKESHA COUNTY

SIGNAL NO.
S67-0129,S67-0258,S67-0236

REGION CONTACT: JMM
DESIGNED BY: GRAEF
REVISED BY:

PAGE 1 OF 1

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	FIBER OPTIC INTERCONNECT CABINET DETAIL	SHEET 280	E



KEY

- SM EQUIPMENT CONNECTION FIBER OPTIC JUMPER
- SM FIBER OPTIC PIGTAIL
- BARE FIBER LEFT COILED IN SPLICE TRAY
- EXISTING/PROPOSED FUSION SPLICE
- PATCH PANEL MODULE

NOTE: DASHED LINES DENOTE EXISTING CABLES, DEVICES OR ENCLOSURES.

NOTES

1. MAXIMUM SPLICE LOSS SHALL BE 0.1 dB
2. NO INTERMEDIATE SPLICES ALLOWED
3. ALL SPLICES SHALL BE FUSION SPLICES
4. COORDINATE FIBER ASSIGNMENTS WITH DON SCHELL, STOC, AT (414) 227-2148 BEFORE SPLICING FIBER OPTIC CABLE
5. THE ENTIRE MAINLINE FIBER OPTIC CABLE SHALL NOT BE CUT AND/OR SPLICED IN THE VAULTS NEAREST THE TRAFFIC SIGNAL CABINET WHILE MAKING THE PIGTAIL CONNECTION. ONLY THE REQUIRED BUFFER TUBE SHALL BE CUT AND SPLICED WITH THE PIGTAIL CONNECTION.

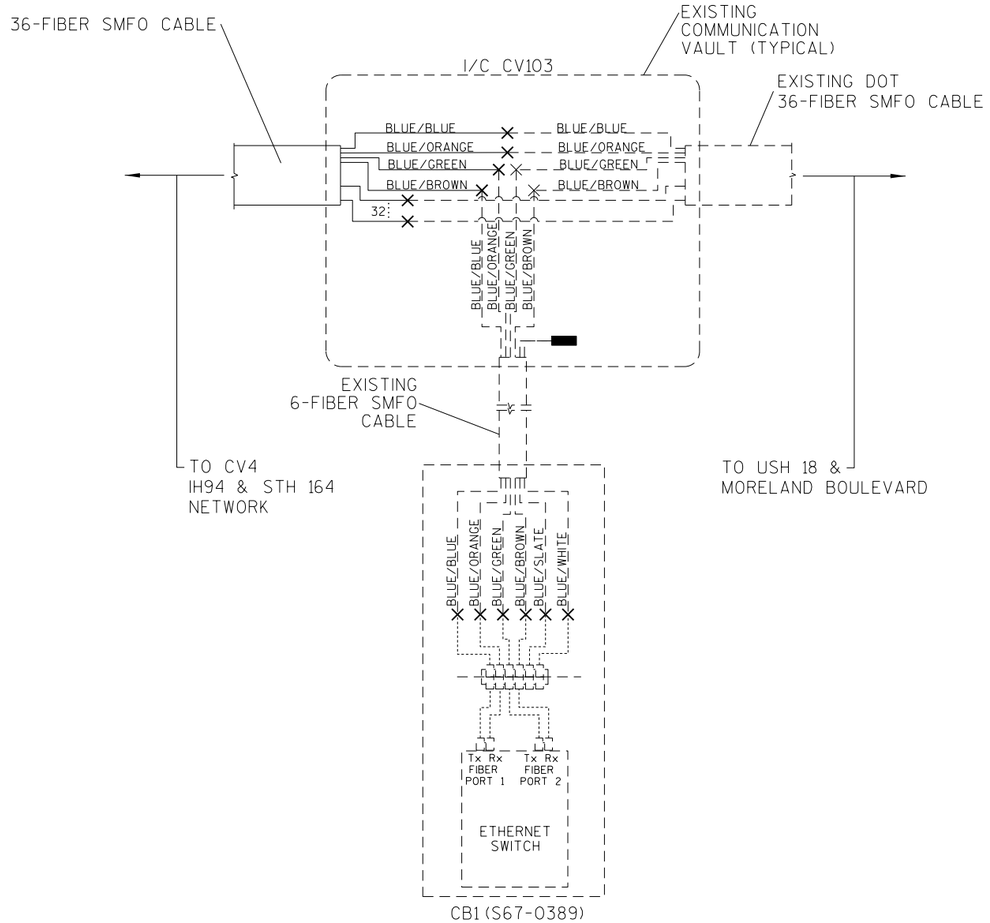
TRAFFIC CONTROL INTERCONNECT
USH 18
CITY OF WAUKESHA/TOWN OF BROOKFIELD
WAUKESHA COUNTY

SIGNAL NO.
S67-0129,S67-0258,S67-0236,
S67-0389

REGION CONTACT: JMM
DESIGNED BY: GRAEF
REVISED BY:

PAGE 1 OF 2

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	FIBER OPTIC ASSIGNMENT DETAIL	SHEET 281	E



KEY

- SM EQUIPMENT CONNECTION FIBER OPTIC JUMPER
- SM FIBER OPTIC PIGTAIL
- BARE FIBER LEFT COILED IN SPLICE TRAY
- EXISTING/PROPOSED FUSION SPLICE
- PATCH PANEL MODULE

NOTE: DASHED LINES DENOTE EXISTING CABLES, DEVICES OR ENCLOSURES.

NOTES

1. MAXIMUM SPLICE LOSS SHALL BE 0.1 dB
2. NO INTERMEDIATE SPLICES ALLOWED
3. ALL SPLICES SHALL BE FUSION SPLICES
4. COORDINATE FIBER ASSIGNMENTS WITH DON SCHELL, STOC, AT (414) 227-2148 BEFORE SPLICING FIBER OPTIC CABLE
5. THE ENTIRE MAINLINE FIBER OPTIC CABLE SHALL NOT BE CUT AND/OR SPLICED IN THE VAULTS NEAREST THE TRAFFIC SIGNAL CABINET WHILE MAKING THE PIGTAIL CONNECTION. ONLY THE REQUIRED BUFFER TUBE SHALL BE CUT AND SPLICED WITH THE PIGTAIL CONNECTION.

TRAFFIC CONTROL INTERCONNECT
USH 18
CITY OF WAUKESHA/TOWN OF BROOKFIELD
WAUKESHA COUNTY

SIGNAL NO. S67-0129, S67-0258, S67-0236, S67-0389

REGION CONTACT: JMM
DESIGNED BY: GRAEF
REVISED BY:

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	FIBER OPTIC ASSIGNMENT DETAIL	SHEET 282	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\08_Interconnect\022002_cd.dgn PLOT DATE : 4/28/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 200.0000 sf / in.
WISDOT/CADDS SHEET 42

2

N

WOLF ROAD

R/W

USH 18 (E. MORELAND BLVD)

137+00 138+00 139+00 140+00 141+00 142+00 143+00 144+00 145+00 146+00 147+00 148+00 149+00 150+00 151+00

MATCH LINE STA. 151+00

USH 18/STH 164 (E. MORELAND BLVD)

2" HDPE F0 I/C CONDUIT
COLOR BLK/GRE
FO I/C CABLE 36-CT

FO I/C

286+00 285+00 284+00 283+00 282+00

STH 164

U/C

FOUND

I/C CV1
SEE NOTE 8.
MKR#ML208WKL

I/C PB1

I/C PB2

CB1
(S67-0129)

FIBER OPTIC SPLICE (8)
FIBER OPTIC SPLICE ENCLOSURE

2" HDPE FO I/C CONDUIT
INSTALL (1) 6-COUNT FOC
FIBER OPTIC TRACER CABLE

2" HDPE FO I/C CONDUIT DIRECTIONALLY BORED
INSTALL (1) 6-COUNT FOC

2" HDPE FO I/C CONDUIT
COLOR BLK/GRE
FO I/C CABLE 36-CT

CONSTRUCTION NOTES:

1. THE CONTRACTOR SHALL HAVE THE PULL BOXES AND CONDUIT RUNS INSPECTED 5 WORKING DAYS PRIOR TO PLACING INTERCONNECT CABLE INTO SYSTEM. CONTACT THE REGIONAL ELECTRICAL FIELD UNIT AT (414) 266-1170.
2. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
3. THE ENGINEER MAY ADJUST THE LOCATIONS OF ITEMS UNDER THIS CONTRACT TO AVOID CONFLICT WITH EXISTING UTILITY FACILITIES.
4. LEAVE 100-FEET OF FIBER OPTIC INTERCONNECT CABLE COILED IN EACH COMMUNICATIONS VAULT AND 30-FEET IN EACH PULL BOX.
5. MAINLINE SPLICES SHALL BE AS DIRECTED BY THE ENGINEER IN THE FIELD.
6. THE ENTIRE MAINLINE FIBER OPTIC CABLE SHALL NOT BE CUT AND/OR SPLICED IN THE VAULTS NEAREST THE TRAFFIC SIGNAL CABINET WHILE MAKING THE PIGTAIL CONNECTION. ONLY THE REQUIRED BUFFER TUBE SHALL BE CUT AND SPLICED WITH THE PIGTAIL CONNECTION.
7. INCIDENTAL 14 AWG PULL WIRE TO BE INSTALLED AS FIBER OPTIC TRACER WIRE IN INTERCONNECT CONDUIT.
8. EXISTING FO I/C VAULTS ARE BURIED. VERIFY EXISTING WISDOT VAULT LOCATION AND PLACE NEW TYPE 1 COMMUNICATIONS VAULT ON TOP OF EXISTING VAULT TO MATCH SURROUNDING GRADE WHEN WORK IS COMPLETE.

LEGEND

- HDPE INTERCONNECT CONDUIT 2", UNLESS OTHERWISE NOTED
- V — COMMUNICATION VAULT, TYPE 1
- PULL BOX, 24" X 42"
- 5.8GHZ IP WIRELESS RADIO ANTENNA
- CONTROL CABINET

NOTE: GREYSHADE REPRESENTS EXISTING

TRAFFIC CONTROL INTERCONNECT
USH 18
CITY OF WAUKESHA/TOWN OF BROOKFIELD
WAUKESHA COUNTY

SIGNAL NO. S67-0129, S67-0258, S67-0415, S67-1410, S67-0236, S67-0389

REGION CONTACT: JMM
DESIGNED BY: GRAEF
REVISED BY:

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	TRAFFIC SIGNAL INTERCONNECT PLAN	SHEET 283	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\08_Interconnect\024001_sp.dgn PLOT DATE : 4/28/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 100.0000 sf / in.

WISDOT/CADDS SHEET 42

2

2

N

USH 18/STH 164 (E. MORELAND BLVD)

MATCH LINE STA. 151+00

151+00
152+00
153+00
154+00
155+00
156+00
157+00
158+00
159+00
160+00
161+00
162+00
163+00
164+00
165+00
166

MATCH LINE STA. 166+00

JENNIFER LANE

R/W

POOL

2" HDPE FO CONDUIT
COLOR BLK/GRE
FO CABLE 36-CT

TRAFFIC CONTROL INTERCONNECT
USH 18
CITY OF WAUKESHA/TOWN OF BROOKFIELD
WAUKESHA COUNTY
SIGNAL NO. S67-0129, S67-0258, S67-0415,
S67-1410, S67-0236, S67-0389

REGION CONTACT: JMM
DESIGNED BY: GRAEF
REVISED BY:

PAGE 2 OF 8

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	TRAFFIC SIGNAL INTERCONNECT PLAN	SHEET 284	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\08_Interconnect\024002_sp.dgn
PLOT DATE : 4/28/2015
PLOT BY : GRAEF
PLOT NAME :
PLOT SCALE : 100.0000 sf / in.

WISDOT/CADDS SHEET 42

2

2

N

USH 18/STH 164 (E. MORELAND BLVD)

MATCH LINE STA. 166+00

MATCH LINE STA. 179+00

ENTRANCE TO WEST BROOK SHOPPING CENTER

MAIN STREET

2" HDPE FO CONDUIT
COLOR BLK/GRE
FO CABLE 36-CT

FIBER OPTIC SPLICE (8)
FIBER OPTIC SPLICE
ENCLOSURE

I/C CV2
SEE NOTE 8.

CBI
(S67-0258)

MKR#ML195WKL

2" HDPE FO I/C CONDUIT
INSTALL (1) 6-COUNT FOC
FIBER OPTIC TRACER CABLE

2" HDPE FO CONDUIT
COLOR BLK/GRE
FO CABLE 36-CT

TRAFFIC CONTROL INTERCONNECT
USH 18
CITY OF WAUKESHA/TOWN OF BROOKFIELD
WAUKESHA COUNTY
SIGNAL NO. S67-0129, S67-0258, S67-0415,
S67-1410, S67-0236, S67-0389

REGION CONTACT: JMM
DESIGNED BY: GRAEF
REVISED BY:

PAGE 3 OF 8

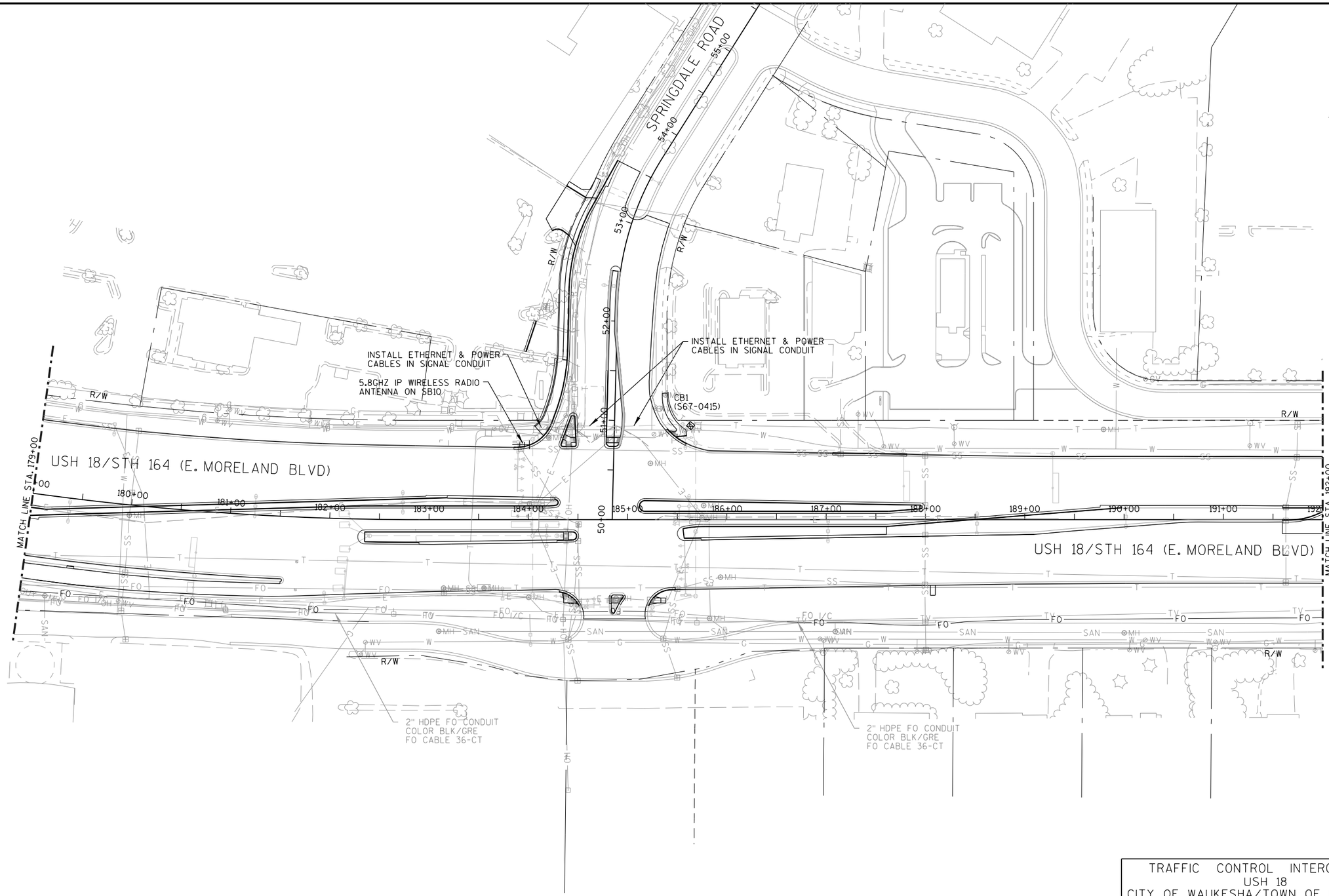
PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	TRAFFIC SIGNAL INTERCONNECT PLAN	SHEET 285	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\08_Interconnect\024003_sp.dgn

PLOT DATE : 4/28/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 100.0000 sf / in.

WISDOT/CADDS SHEET 42

2



TRAFFIC CONTROL INTERCONNECT
USH 18
CITY OF WAUKESHA/TOWN OF BROOKFIELD
WAUKESHA COUNTY
SIGNAL NO. S67-0129, S67-0258, S67-0415, S67-1410, S67-0236, S67-0389

REGION CONTACT: JMM
DESIGNED BY: GRAEF
REVISED BY:

PAGE 4 OF 8

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	TRAFFIC SIGNAL INTERCONNECT PLAN	SHEET 286	E

2

N

PARKLAWN DRIVE

R/W

USH 18/STH 164 (E. MORELAND BLVD)

MATCH LINE STA. 192+00

MATCH LINE STA. 204+00

193+00 194+00 195+00 196+00 197+00 198+00 199+00 200+00 201+00 202+00 203+00

44+00 52+00 51+00 50+00 49+00 48+00 47+00 46+00

CANOPY

G.P.

SAN MH WV TV FO SS W G T

INSTALL ETHERNET & POWER CABLES IN SIGNAL CONDUIT

CB1 (S67-1410)

(2) 5.8GHZ IP WIRELESS RADIO ANTENNAS ON SB8

2" HDPE FO CONDUIT
COLOR BLK/GRE
FO CABLE 36-CT

PARKLAWN COURT

TRAFFIC CONTROL INTERCONNECT
USH 18
CITY OF WAUKESHA/TOWN OF BROOKFIELD
WAUKESHA COUNTY
SIGNAL NO. S67-0129, S67-0258, S67-0415, S67-1410, S67-0236, S67-0389

REGION CONTACT: JMM
DESIGNED BY: GRAEF
REVISED BY:

PAGE 5 OF 8

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	TRAFFIC SIGNAL INTERCONNECT PLAN	SHEET 287	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\08_Interconnect\024005_sp.dgn PLOT DATE : 4/28/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 100.0000 sf / in.

2

2

ABBOTT DRIVE

KOSSOW ROAD

MORELAND COURT

SWENSON DRIVE

USH 18/STH 164 (E. MORELAND BLVD)

MATCH LINE STA. 204+00

I/C PB6

I/C PB5

INSTALL EMPTY
2" HDPE FO I/C CONDUIT

INSTALL EMPTY
2" HDPE FO I/C CONDUIT
FIBER OPTIC TRACER CABLE

INSTALL ETHERNET & POWER
CABLES IN SIGNAL CONDUIT

5.8GHZ IP WIRELESS RADIO
ANTENNA ON SB11

CB1 (S67-0236)

2" HDPE FO I/C CONDUIT
INSTALL (1) 6-COUNT FOC
FIBER OPTIC TRACER CABLE

I/C PB4

2" HDPE FO I/C CONDUIT
DIRECTIONALLY BORED
INSTALL (1) 6-COUNT FOC

I/C PB3

I/C CV3 - SEE NOTE 8.
MKR#ML186½WK

2" HDPE FO CONDUIT
COLOR BLK/GRE
FO CABLE 36-CT

2" HDPE FO I/C CONDUIT
INSTALL (1) 6-COUNT FOC
FIBER OPTIC TRACER CABLE

FIBER OPTIC SPLICE (8)
FIBER OPTIC SPLICE ENCLOSURE

TRAFFIC CONTROL INTERCONNECT
USH 18
CITY OF WAUKESHA/TOWN OF BROOKFIELD
WAUKESHA COUNTY
SIGNAL NO. S67-0129, S67-0258, S67-0415,
S67-1410, S67-0236, S67-0389

REGION CONTACT: JMM
DESIGNED BY: GRAEF
REVISED BY:

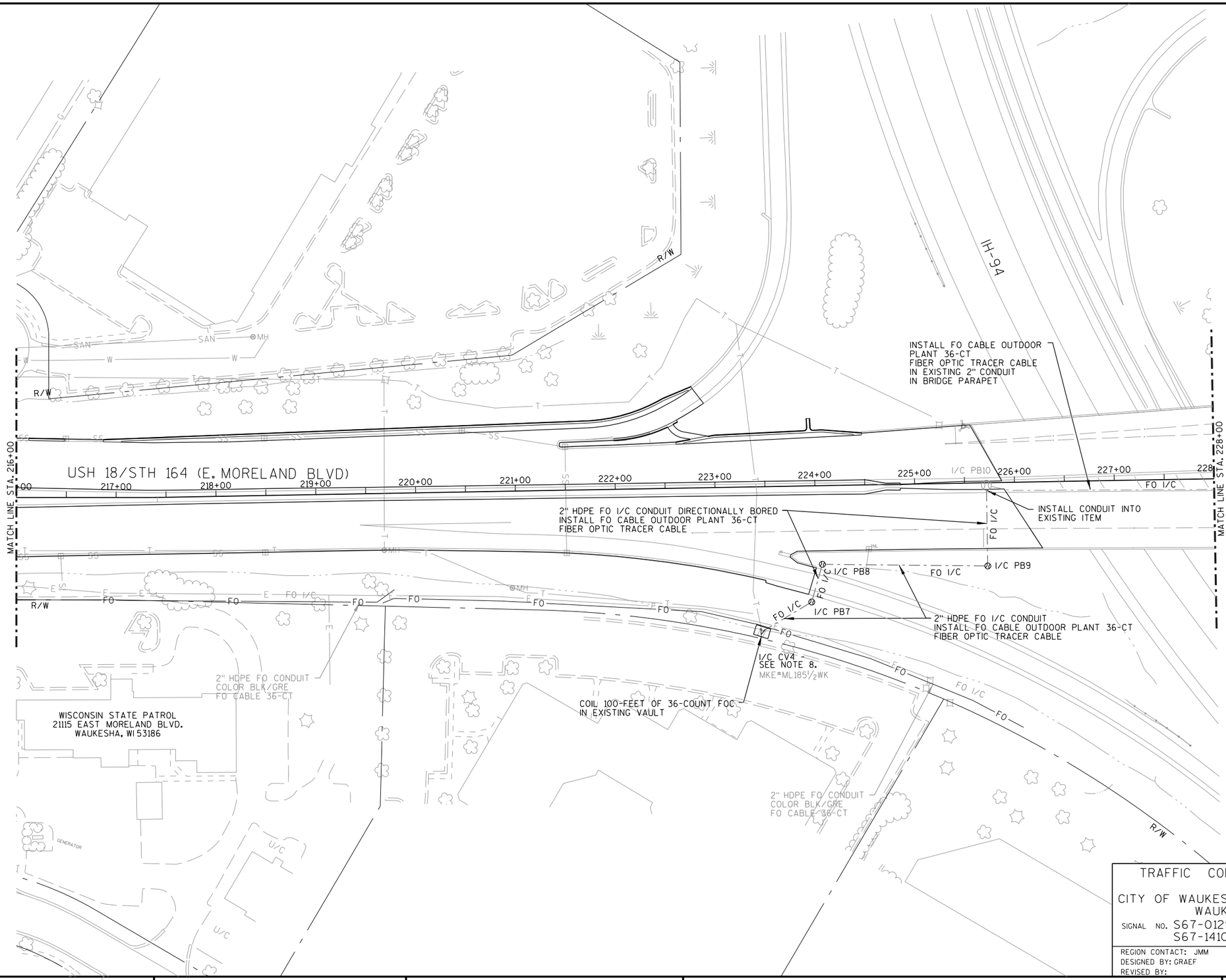
PAGE 6 OF 8

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	TRAFFIC SIGNAL INTERCONNECT PLAN	SHEET 288	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\08_Interconnect\024006_sp.dgn PLOT DATE : 4/28/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 100.0000 sf / in.

WISDOT/CADDS SHEET 42

2



TRAFFIC CONTROL INTERCONNECT
USH 18
CITY OF WAUKESHA/TOWN OF BROOKFIELD
WAUKESHA COUNTY
SIGNAL NO. S67-0129, S67-0258, S67-0415, S67-1410, S67-0236, S67-0389

REGION CONTACT: JMM
DESIGNED BY: GRAEF
REVISED BY:

PAGE 7 OF 8

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	TRAFFIC SIGNAL INTERCONNECT PLAN	SHEET 289	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\08_Interconnect\024007_sp.dgn PLOT DATE : 4/28/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 100.0000 sf / in.

2

2

N

CTH JJ (W. BLUEMOUND ROAD)

R/W

119+00 A
120+00 A
121+00 A
122+00 A
123+00 A
124+00 A
125+00 A
126+00 A
127+00 A

119+00
120+00
121+00
122+00
123+00
124+00

CB1
(S67-0389)

I/C CV103

FIBER OPTIC SPLICE (36)
EXISTING SPLICE ENCLOSURE

2" HDPE FO I/C CONDUIT
INSTALL FO CABLE OUTDOOR
PLANT 36-CT
FIBER OPTIC TRACER CABLE

INSTALL FO CABLE OUTDOOR
PLANT 36-CT IN EXIST. CONDUIT

FO I/C

I/C PB102

MATCH LINE STA. 228+00

228+00
229+00
230+00
231+00
232+00
233+00
234+00
235+00
236+00
237+00
238+00
239+00
240+00
241+00
242+00
243+00

I/C PB11
I/C PB101
I/C PB100

FO I/C

3" EMPTY CONDUIT

INSTALL CONDUIT
INTO EXISTING ITEM

INSTALL FO CABLE OUTDOOR
PLANT 36-CT
FIBER OPTIC TRACER CABLE
IN EXISTING 2" CONDUIT
IN BRIDGE PARAPET

USH 18 (E. MORELAND ROAD)

IH-94 ENTRANCE RAMP

IH-94

CTH Y
(BARKER ROAD)

R/W

50+00
51+00
49+00

TRAFFIC CONTROL INTERCONNECT
USH 18
CITY OF WAUKESHA/TOWN OF BROOKFIELD
WAUKESHA COUNTY
SIGNAL NO. S67-0129, S67-0258, S67-0415,
S67-1410, S67-0236, S67-0389

REGION CONTACT: JMM
DESIGNED BY: GRAEF
REVISED BY:

PAGE 8 OF 8

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	TRAFFIC SIGNAL INTERCONNECT PLAN	SHEET 290	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\08_Interconnect\024008_sp.dgn PLOT DATE : 4/28/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 100.0000 sf / in.

WISDOT/CADDS SHEET 42

LEGEND

- * Ⓐ PAVEMENT MARKING 4-INCH, WHITE (37.5' SKIP, 12.5' DASH)
- * Ⓑ PAVEMENT MARKING 4-INCH, WHITE (3' LINE, 9' GAP)
- ** Ⓒ PAVEMENT MARKING, ARROWS, TYPE 1, WHITE
- ** Ⓔ PAVEMENT MARKING STOP LINE 18-INCH, WHITE
- Ⓕ PAVEMENT MARKING ISLAND NOSE EPOXY, YELLOW
- Ⓗ PAVEMENT MARKING EPOXY 4-INCH, WHITE EDGE LINE
- Ⓘ PAVEMENT MARKING EPOXY 4-INCH, YELLOW
- * Ⓙ PAVEMENT MARKING CHANNELIZING 8-INCH, WHITE
- Ⓚ PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (25' C-C)
- * Ⓛ PAVEMENT MARKING 8-INCH (3' LINE 9' GAP), WHITE
- ** Ⓜ PAVEMENT MARKING, ARROWS, TYPE 2, WHITE
- ** Ⓝ PAVEMENT MARKING, WORDS, "ONLY", WHITE
- ** Ⓟ PAVEMENT MARKING CROSSWALK 6-INCH
- Ⓠ PAVEMENT MARKING CURB EPOXY, YELLOW
- * Ⓡ PAVEMENT MARKING 8-INCH (2' LINE 6' GAP)
- Ⓢ PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (10' C-C)
- ** Ⓣ PAVEMENT MARKING, ARROWS, TYPE 3, WHITE
- Ⓤ PAVEMENT MARKING DIAGONAL EPOXY 6-INCH (10' C-C)
- Ⓥ PAVEMENT MARKING EPOXY 12-INCH WHITE

NOTES

* 1.) PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE. (USE CONTRAST TAPE ON CONCRETE PAVEMENT WHERE NOTED ON PLAN)

** 2.) PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC.

3.) SEE SIGNAL PLANS FOR PLACEMENT OF STOP BARS.

MATCH LINE STA. 51+50

MANHATTAN DRIVE

E. MORELAND BLVD. (USH 18)

MATCH LINE STA. 48+50

MATCH LINE STA. 128+00

DOUBLE

CONTRAST TAPE

ONLY

SIGN

PHONE

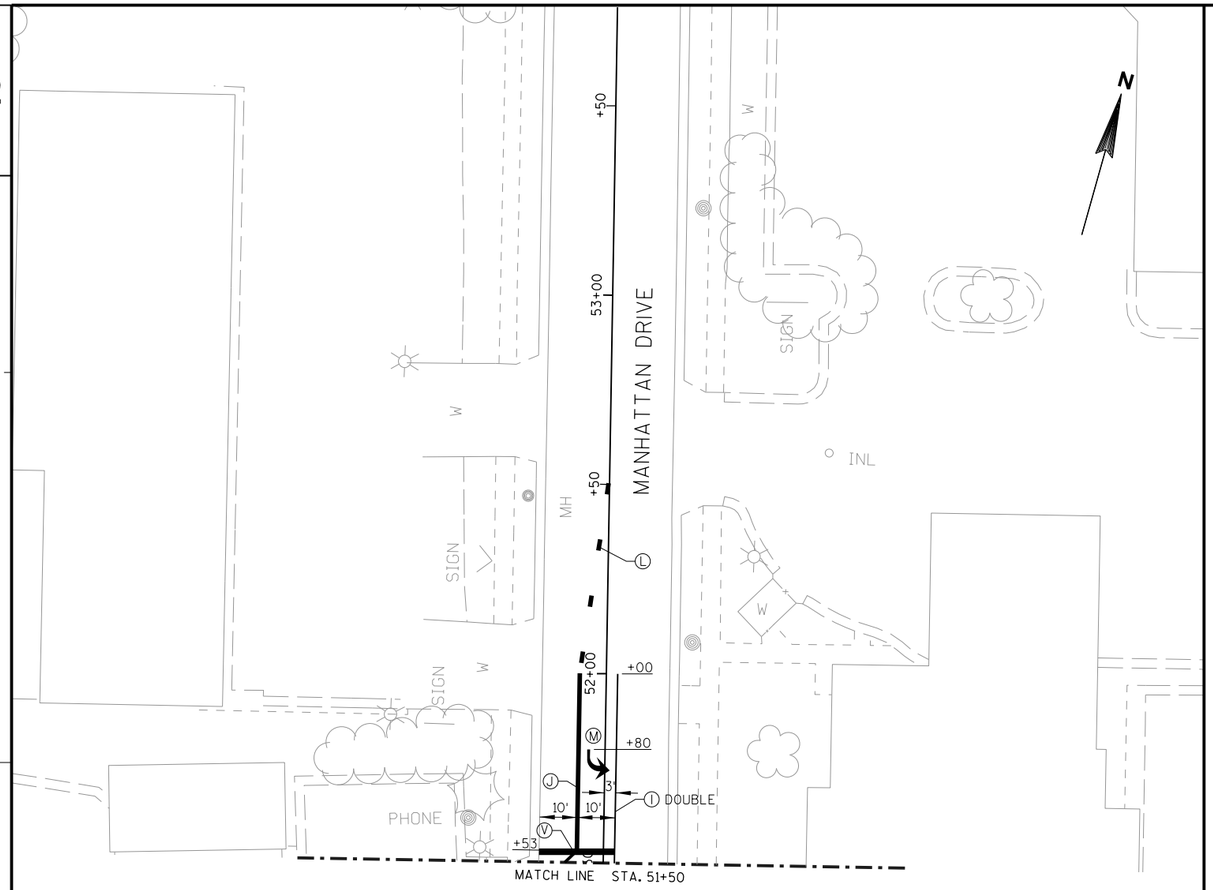
INL

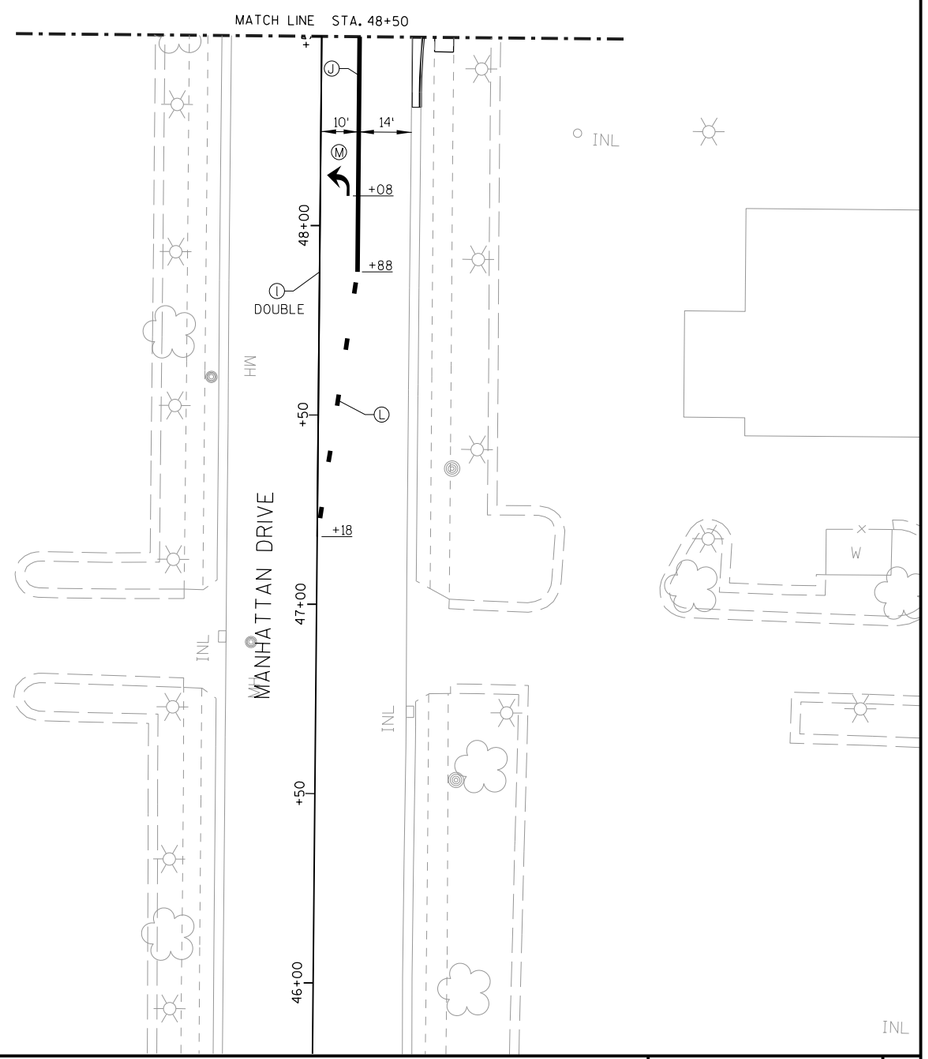
MH

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	PAVEMENT MARKING	SHEET 291	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\024501_pm.dgn PLOT DATE : 7/15/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 40.0000 sf / in.

WISDOT/CADDS SHEET 42





LEGEND

- * Ⓐ PAVEMENT MARKING 4-INCH, WHITE (37.5' SKIP, 12.5' DASH)
- * Ⓑ PAVEMENT MARKING 4-INCH, WHITE (3' LINE, 9' GAP)
- ** Ⓒ PAVEMENT MARKING, ARROWS, TYPE 1, WHITE
- ** Ⓔ PAVEMENT MARKING STOP LINE 18-INCH, WHITE
- Ⓕ PAVEMENT MARKING ISLAND NOSE EPOXY, YELLOW
- Ⓗ PAVEMENT MARKING EPOXY 4-INCH, WHITE EDGE LINE
- Ⓘ PAVEMENT MARKING EPOXY 4-INCH, YELLOW
- * Ⓙ PAVEMENT MARKING CHANNELIZING 8-INCH, WHITE
- Ⓚ PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (25' C-C)
- * Ⓛ PAVEMENT MARKING 8-INCH (3' LINE 9' GAP), WHITE
- ** Ⓜ PAVEMENT MARKING, ARROWS, TYPE 2, WHITE
- ** Ⓝ PAVEMENT MARKING, WORDS, "ONLY", WHITE
- ** Ⓟ PAVEMENT MARKING CROSSWALK 6-INCH
- Ⓠ PAVEMENT MARKING CURB EPOXY, YELLOW
- * Ⓡ PAVEMENT MARKING 8-INCH (2' LINE 6' GAP)
- Ⓢ PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (10' C-C)
- ** Ⓣ PAVEMENT MARKING, ARROWS, TYPE 3, WHITE
- Ⓤ PAVEMENT MARKING DIAGONAL EPOXY 6-INCH (10' C-C)
- Ⓥ PAVEMENT MARKING EPOXY 12-INCH WHITE

NOTES

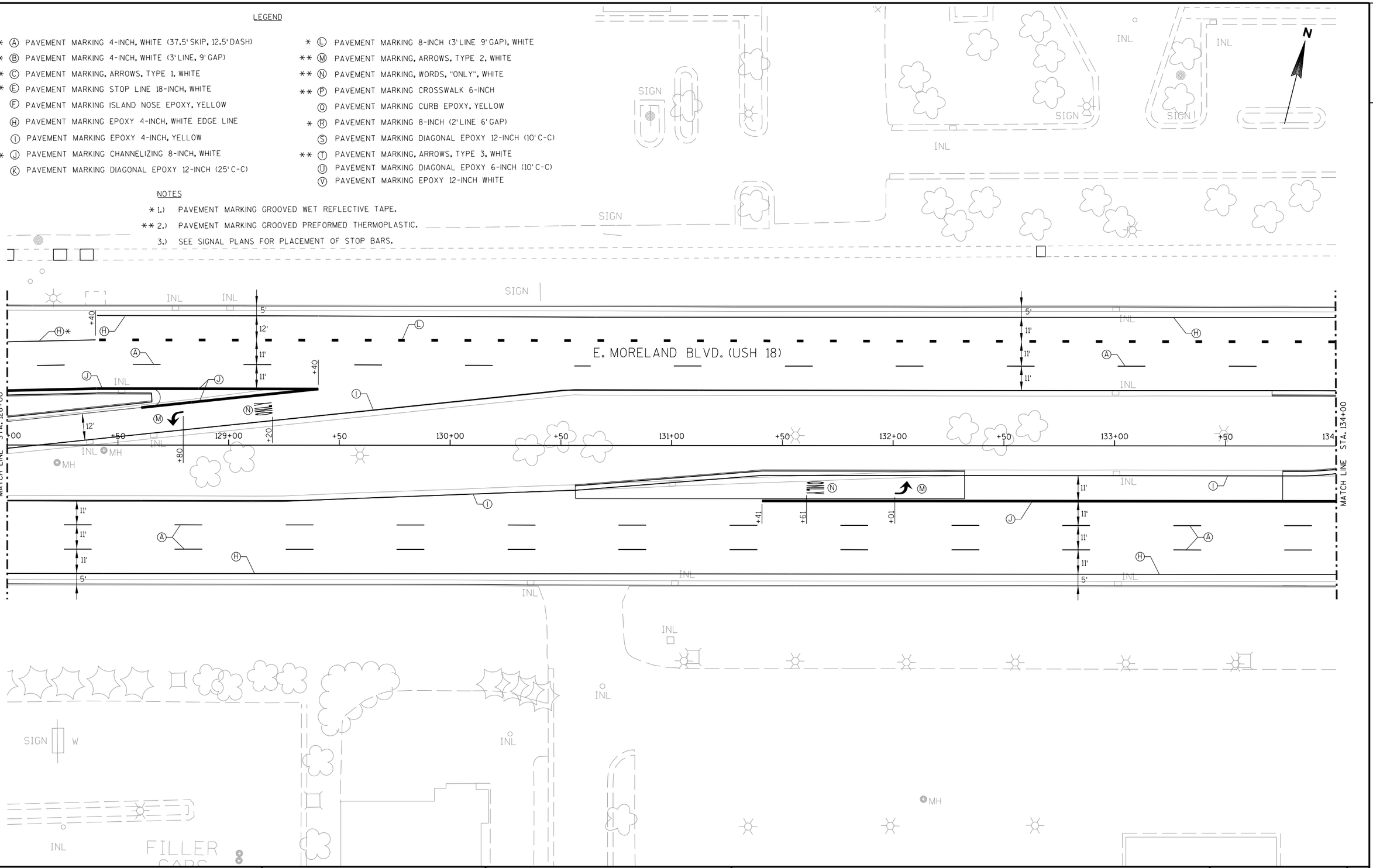
- * 1.) PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE.
- ** 2.) PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC.
- 3.) SEE SIGNAL PLANS FOR PLACEMENT OF STOP BARS.

LEGEND

* Ⓐ PAVEMENT MARKING 4-INCH, WHITE (37.5' SKIP, 12.5' DASH)
* Ⓑ PAVEMENT MARKING 4-INCH, WHITE (3' LINE, 9' GAP)
** Ⓒ PAVEMENT MARKING, ARROWS, TYPE 1, WHITE
** Ⓔ PAVEMENT MARKING STOP LINE 18-INCH, WHITE
Ⓕ PAVEMENT MARKING ISLAND NOSE EPOXY, YELLOW
Ⓗ PAVEMENT MARKING EPOXY 4-INCH, WHITE EDGE LINE
Ⓘ PAVEMENT MARKING EPOXY 4-INCH, YELLOW
* Ⓙ PAVEMENT MARKING CHANNELIZING 8-INCH, WHITE
Ⓚ PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (25' C-C)
* Ⓛ PAVEMENT MARKING 8-INCH (3' LINE 9' GAP), WHITE
** Ⓜ PAVEMENT MARKING, ARROWS, TYPE 2, WHITE
** Ⓝ PAVEMENT MARKING, WORDS, "ONLY", WHITE
** Ⓟ PAVEMENT MARKING CROSSWALK 6-INCH
Ⓠ PAVEMENT MARKING CURB EPOXY, YELLOW
* Ⓡ PAVEMENT MARKING 8-INCH (2' LINE 6' GAP)
Ⓢ PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (10' C-C)
** Ⓣ PAVEMENT MARKING, ARROWS, TYPE 3, WHITE
Ⓤ PAVEMENT MARKING DIAGONAL EPOXY 6-INCH (10' C-C)
Ⓥ PAVEMENT MARKING EPOXY 12-INCH WHITE

NOTES

* 1.) PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE.
** 2.) PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC.
3.) SEE SIGNAL PLANS FOR PLACEMENT OF STOP BARS.



PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	PAVEMENT MARKING	SHEET 293	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\024503_pm.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 40.0000 sf / in.

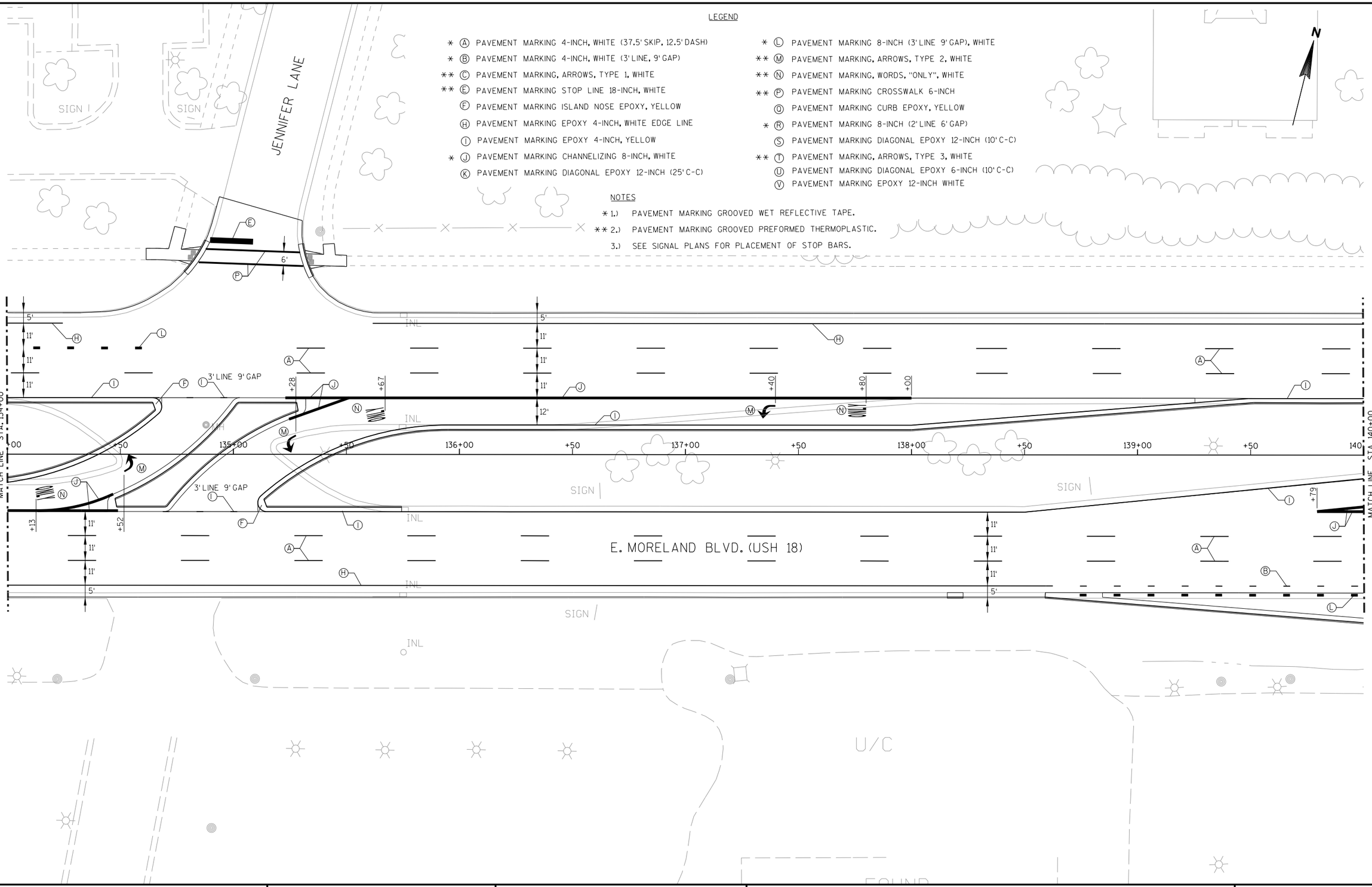
WISDOT/CADDS SHEET 42

LEGEND

- * Ⓐ PAVEMENT MARKING 4-INCH, WHITE (37.5' SKIP, 12.5' DASH)
- * Ⓑ PAVEMENT MARKING 4-INCH, WHITE (3' LINE, 9' GAP)
- ** Ⓒ PAVEMENT MARKING, ARROWS, TYPE 1, WHITE
- ** Ⓔ PAVEMENT MARKING STOP LINE 18-INCH, WHITE
- Ⓕ PAVEMENT MARKING ISLAND NOSE EPOXY, YELLOW
- Ⓗ PAVEMENT MARKING EPOXY 4-INCH, WHITE EDGE LINE
- Ⓘ PAVEMENT MARKING EPOXY 4-INCH, YELLOW
- * Ⓙ PAVEMENT MARKING CHANNELIZING 8-INCH, WHITE
- Ⓚ PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (25'C-C)
- * Ⓛ PAVEMENT MARKING 8-INCH (3' LINE 9' GAP), WHITE
- ** Ⓜ PAVEMENT MARKING, ARROWS, TYPE 2, WHITE
- ** Ⓝ PAVEMENT MARKING, WORDS, "ONLY", WHITE
- ** Ⓟ PAVEMENT MARKING CROSSWALK 6-INCH
- Ⓠ PAVEMENT MARKING CURB EPOXY, YELLOW
- * Ⓡ PAVEMENT MARKING 8-INCH (2' LINE 6' GAP)
- Ⓢ PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (10'C-C)
- ** Ⓣ PAVEMENT MARKING, ARROWS, TYPE 3, WHITE
- Ⓤ PAVEMENT MARKING DIAGONAL EPOXY 6-INCH (10'C-C)
- Ⓥ PAVEMENT MARKING EPOXY 12-INCH WHITE

NOTES

- * 1.) PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE.
- ** 2.) PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC.
- 3.) SEE SIGNAL PLANS FOR PLACEMENT OF STOP BARS.

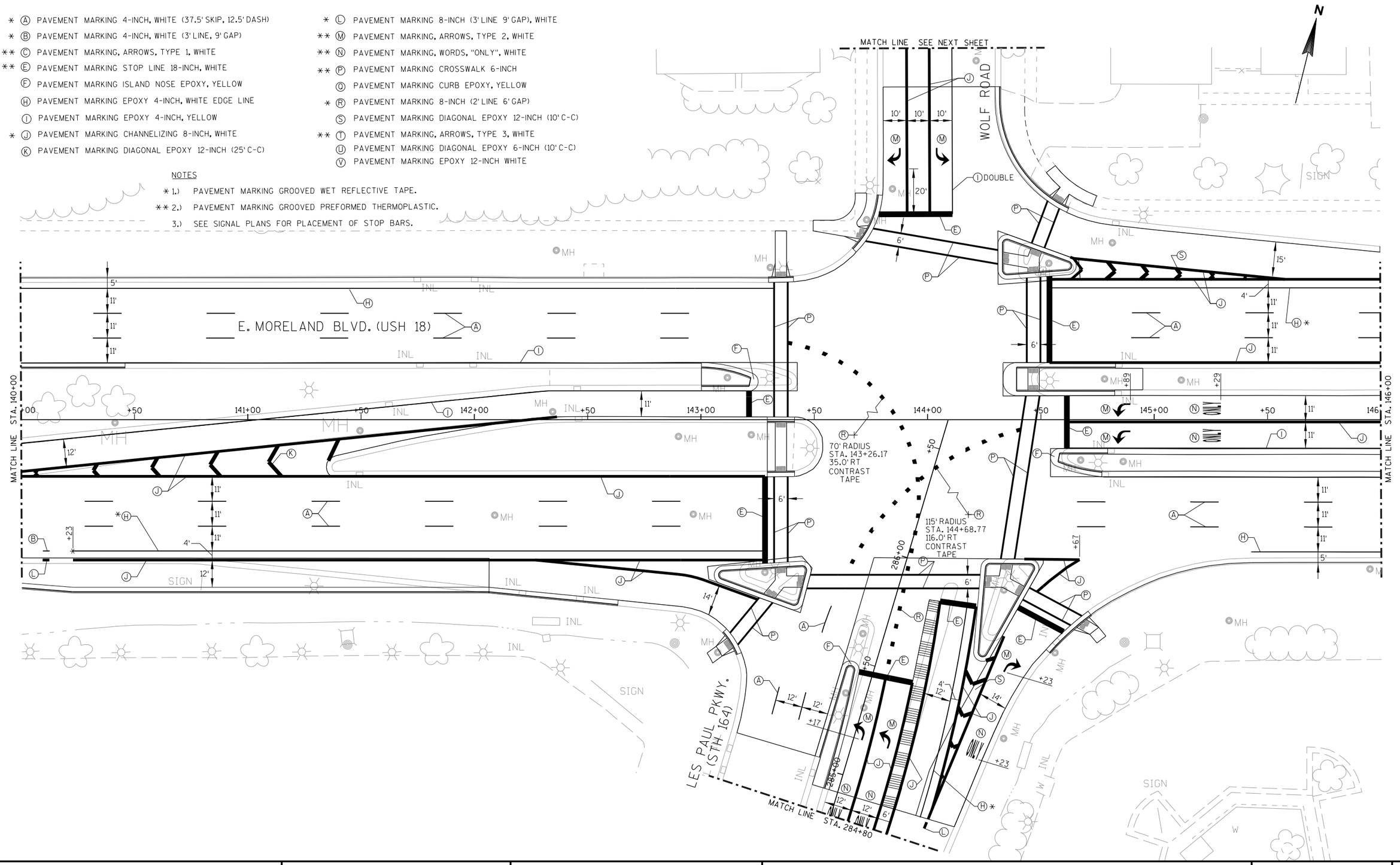


LEGEND

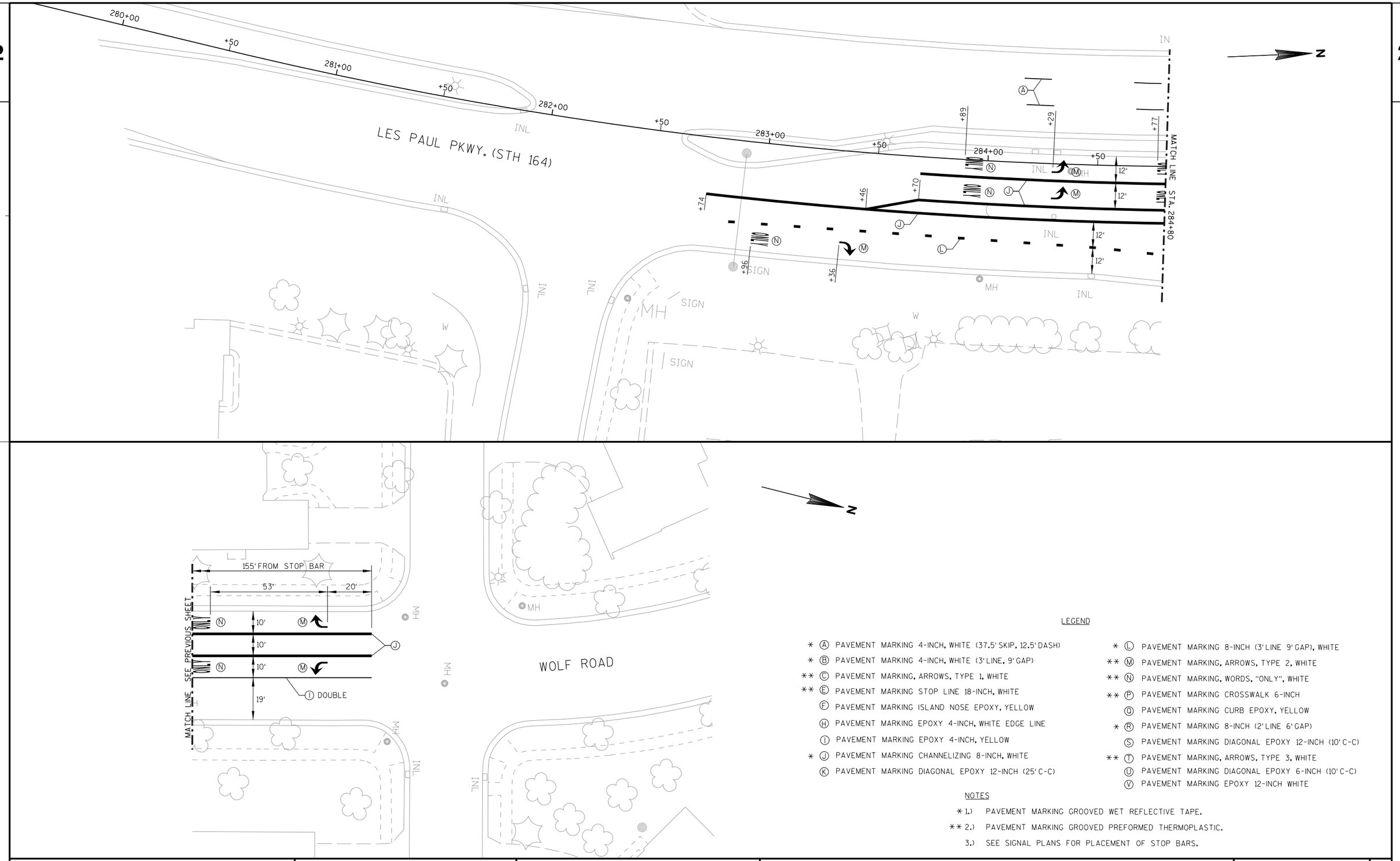
- * Ⓐ PAVEMENT MARKING 4-INCH, WHITE (37.5' SKIP, 12.5' DASH)
- * Ⓑ PAVEMENT MARKING 4-INCH, WHITE (3' LINE, 9' GAP)
- ** Ⓒ PAVEMENT MARKING, ARROWS, TYPE 1, WHITE
- ** Ⓔ PAVEMENT MARKING STOP LINE 18-INCH, WHITE
- Ⓕ PAVEMENT MARKING ISLAND NOSE EPOXY, YELLOW
- Ⓗ PAVEMENT MARKING EPOXY 4-INCH, WHITE EDGE LINE
- Ⓘ PAVEMENT MARKING EPOXY 4-INCH, YELLOW
- * Ⓙ PAVEMENT MARKING CHANNELIZING 8-INCH, WHITE
- Ⓚ PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (25' C-C)
- * Ⓛ PAVEMENT MARKING 8-INCH (3' LINE 9' GAP), WHITE
- ** Ⓜ PAVEMENT MARKING, ARROWS, TYPE 2, WHITE
- ** Ⓝ PAVEMENT MARKING, WORDS, "ONLY", WHITE
- ** Ⓟ PAVEMENT MARKING CROSSWALK 6-INCH
- Ⓠ PAVEMENT MARKING CURB EPOXY, YELLOW
- * Ⓡ PAVEMENT MARKING 8-INCH (2' LINE 6' GAP)
- Ⓢ PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (10' C-C)
- ** Ⓣ PAVEMENT MARKING, ARROWS, TYPE 3, WHITE
- Ⓤ PAVEMENT MARKING DIAGONAL EPOXY 6-INCH (10' C-C)
- Ⓥ PAVEMENT MARKING EPOXY 12-INCH WHITE

NOTES

- * 1.) PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE.
- ** 2.) PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC.
- 3.) SEE SIGNAL PLANS FOR PLACEMENT OF STOP BARS.



PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	PAVEMENT MARKING	SHEET 295	E



LEGEND

* Ⓐ	PAVEMENT MARKING 4-INCH, WHITE (37.5' SKIP, 12.5' DASH)	* Ⓛ PAVEMENT MARKING 8-INCH (3' LINE 9' GAP), WHITE
* Ⓑ	PAVEMENT MARKING 4-INCH, WHITE (3' LINE, 9' GAP)	** Ⓜ PAVEMENT MARKING, ARROWS, TYPE 2, WHITE
** Ⓒ	PAVEMENT MARKING, ARROWS, TYPE 1, WHITE	** Ⓝ PAVEMENT MARKING, WORDS, "ONLY", WHITE
** Ⓔ	PAVEMENT MARKING STOP LINE 18-INCH, WHITE	** Ⓟ PAVEMENT MARKING CROSSWALK 6-INCH
Ⓕ	PAVEMENT MARKING ISLAND NOSE EPOXY, YELLOW	Ⓠ PAVEMENT MARKING CURB EPOXY, YELLOW
Ⓗ	PAVEMENT MARKING EPOXY 4-INCH, WHITE EDGE LINE	* Ⓡ PAVEMENT MARKING 8-INCH (2' LINE 6' GAP)
Ⓘ	PAVEMENT MARKING EPOXY 4-INCH, YELLOW	Ⓢ PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (10' C-C)
* Ⓙ	PAVEMENT MARKING CHANNELIZING 8-INCH, WHITE	** Ⓣ PAVEMENT MARKING, ARROWS, TYPE 3, WHITE
Ⓚ	PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (25' C-C)	Ⓤ PAVEMENT MARKING DIAGONAL EPOXY 6-INCH (10' C-C)
		Ⓥ PAVEMENT MARKING EPOXY 12-INCH WHITE

NOTES

* 1.) PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE.

** 2.) PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC.

3.) SEE SIGNAL PLANS FOR PLACEMENT OF STOP BARS.

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	PAVEMENT MARKING	SHEET 296	E

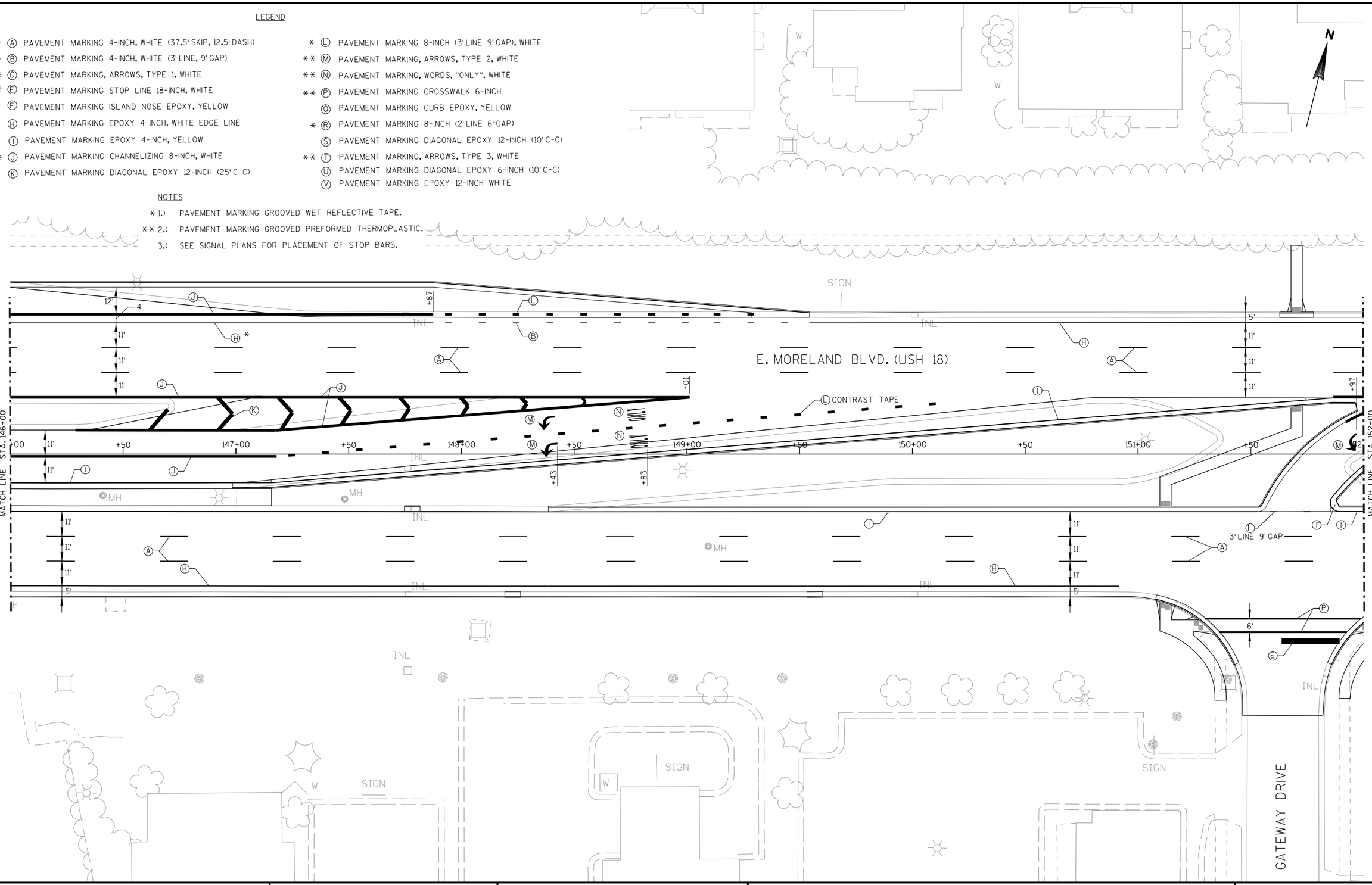
2

LEGEND

* Ⓐ PAVEMENT MARKING 4-INCH, WHITE (37.5' SKIP, 12.5' DASH)
* Ⓑ PAVEMENT MARKING 4-INCH, WHITE (3' LINE, 9' GAP)
** Ⓒ PAVEMENT MARKING, ARROWS, TYPE 1, WHITE
** Ⓔ PAVEMENT MARKING STOP LINE 18-INCH, WHITE
Ⓕ PAVEMENT MARKING ISLAND NOSE EPOXY, YELLOW
Ⓗ PAVEMENT MARKING EPOXY 4-INCH, WHITE EDGE LINE
Ⓘ PAVEMENT MARKING EPOXY 4-INCH, YELLOW
* Ⓙ PAVEMENT MARKING CHANNELIZING 8-INCH, WHITE
Ⓚ PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (25'C-C)
* Ⓛ PAVEMENT MARKING 8-INCH (3' LINE 9' GAP), WHITE
** Ⓜ PAVEMENT MARKING, ARROWS, TYPE 2, WHITE
** Ⓝ PAVEMENT MARKING, WORDS, "ONLY", WHITE
** Ⓟ PAVEMENT MARKING CROSSWALK 6-INCH
Ⓠ PAVEMENT MARKING CURB EPOXY, YELLOW
* Ⓡ PAVEMENT MARKING 8-INCH (2' LINE 6' GAP)
Ⓢ PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (10'C-C)
** Ⓣ PAVEMENT MARKING, ARROWS, TYPE 3, WHITE
Ⓤ PAVEMENT MARKING DIAGONAL EPOXY 6-INCH (10'C-C)
Ⓥ PAVEMENT MARKING EPOXY 12-INCH WHITE

NOTES

* 1.) PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE.
** 2.) PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC.
3.) SEE SIGNAL PLANS FOR PLACEMENT OF STOP BARS.



2

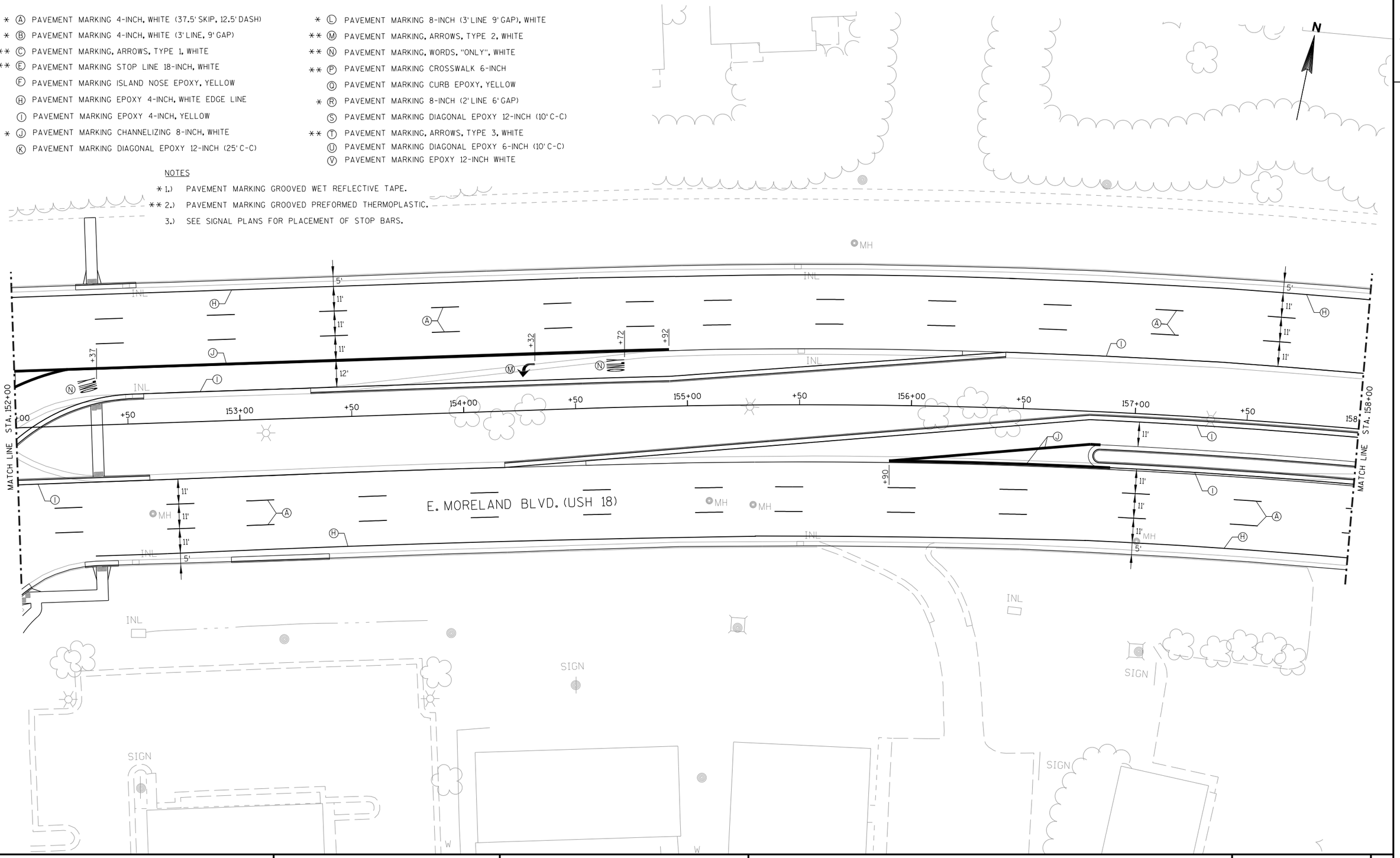
PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	PAVEMENT MARKING	SHEET 297	E

LEGEND

* Ⓐ PAVEMENT MARKING 4-INCH, WHITE (37.5' SKIP, 12.5' DASH)
* Ⓑ PAVEMENT MARKING 4-INCH, WHITE (3' LINE, 9' GAP)
** Ⓒ PAVEMENT MARKING, ARROWS, TYPE 1, WHITE
** Ⓔ PAVEMENT MARKING STOP LINE 18-INCH, WHITE
Ⓕ PAVEMENT MARKING ISLAND NOSE EPOXY, YELLOW
Ⓗ PAVEMENT MARKING EPOXY 4-INCH, WHITE EDGE LINE
Ⓘ PAVEMENT MARKING EPOXY 4-INCH, YELLOW
* Ⓙ PAVEMENT MARKING CHANNELIZING 8-INCH, WHITE
Ⓚ PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (25' C-C)
* Ⓛ PAVEMENT MARKING 8-INCH (3' LINE 9' GAP), WHITE
** Ⓜ PAVEMENT MARKING, ARROWS, TYPE 2, WHITE
** Ⓝ PAVEMENT MARKING, WORDS, "ONLY", WHITE
** Ⓟ PAVEMENT MARKING CROSSWALK 6-INCH
Ⓠ PAVEMENT MARKING CURB EPOXY, YELLOW
* Ⓡ PAVEMENT MARKING 8-INCH (2' LINE 6' GAP)
Ⓢ PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (10' C-C)
** Ⓣ PAVEMENT MARKING, ARROWS, TYPE 3, WHITE
Ⓤ PAVEMENT MARKING DIAGONAL EPOXY 6-INCH (10' C-C)
Ⓥ PAVEMENT MARKING EPOXY 12-INCH WHITE

NOTES

* 1.) PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE.
** 2.) PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC.
3.) SEE SIGNAL PLANS FOR PLACEMENT OF STOP BARS.



PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	PAVEMENT MARKING	SHEET 298	E

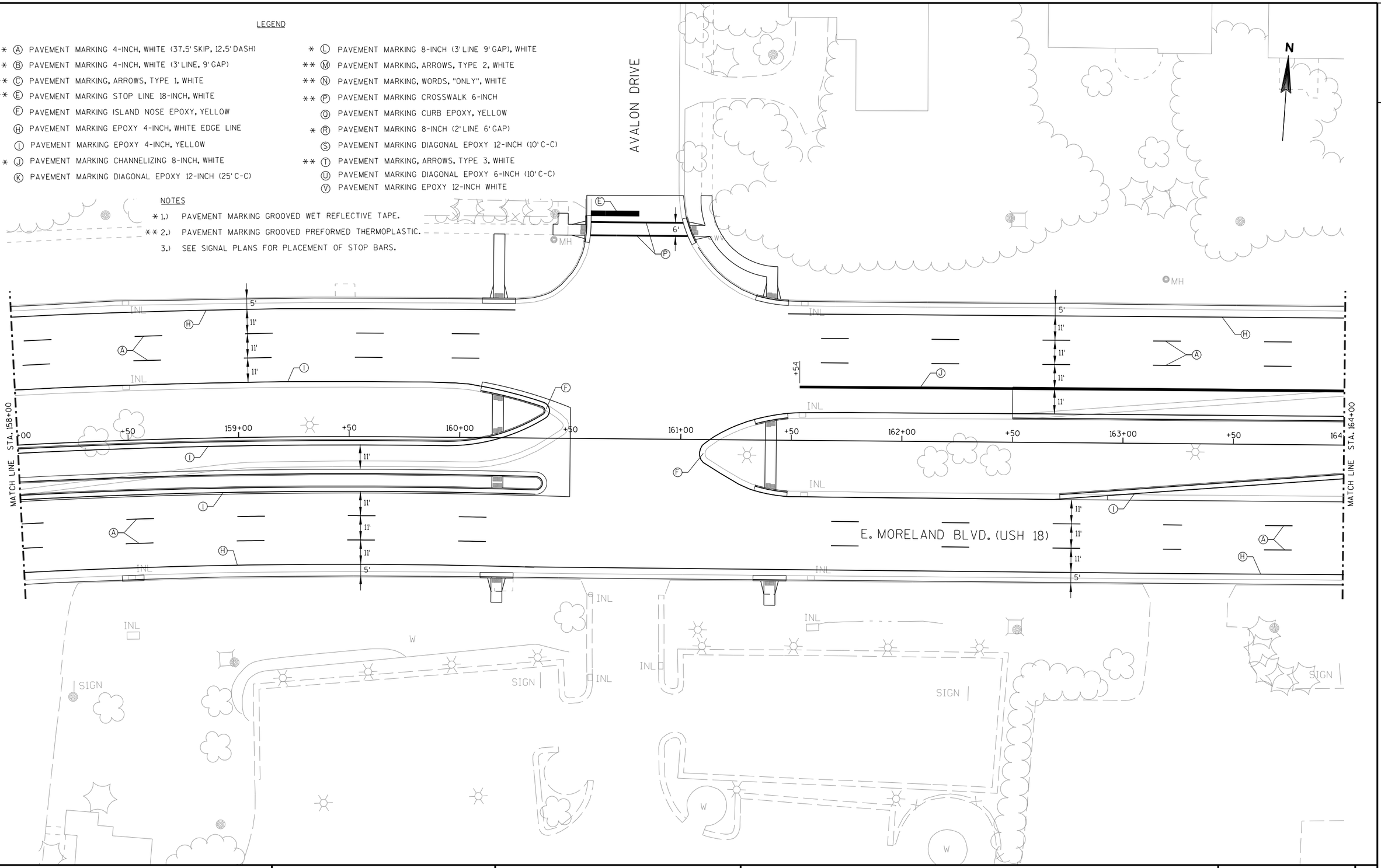
FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\024508_pm.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 40.0000 sf / in.

LEGEND

- * Ⓐ PAVEMENT MARKING 4-INCH, WHITE (37.5' SKIP, 12.5' DASH)
- * Ⓑ PAVEMENT MARKING 4-INCH, WHITE (3' LINE, 9' GAP)
- ** Ⓒ PAVEMENT MARKING, ARROWS, TYPE 1, WHITE
- ** Ⓔ PAVEMENT MARKING STOP LINE 18-INCH, WHITE
- Ⓕ PAVEMENT MARKING ISLAND NOSE EPOXY, YELLOW
- Ⓗ PAVEMENT MARKING EPOXY 4-INCH, WHITE EDGE LINE
- Ⓘ PAVEMENT MARKING EPOXY 4-INCH, YELLOW
- * Ⓙ PAVEMENT MARKING CHANNELIZING 8-INCH, WHITE
- Ⓚ PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (25' C-C)
- * Ⓛ PAVEMENT MARKING 8-INCH (3' LINE 9' GAP), WHITE
- ** Ⓜ PAVEMENT MARKING, ARROWS, TYPE 2, WHITE
- ** Ⓝ PAVEMENT MARKING, WORDS, "ONLY", WHITE
- ** Ⓟ PAVEMENT MARKING CROSSWALK 6-INCH
- Ⓠ PAVEMENT MARKING CURB EPOXY, YELLOW
- * Ⓡ PAVEMENT MARKING 8-INCH (2' LINE 6' GAP)
- Ⓢ PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (10' C-C)
- ** Ⓣ PAVEMENT MARKING, ARROWS, TYPE 3, WHITE
- Ⓤ PAVEMENT MARKING DIAGONAL EPOXY 6-INCH (10' C-C)
- Ⓥ PAVEMENT MARKING EPOXY 12-INCH WHITE

NOTES

- * 1.) PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE.
- ** 2.) PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC.
- 3.) SEE SIGNAL PLANS FOR PLACEMENT OF STOP BARS.



PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	PAVEMENT MARKING	SHEET 299	E

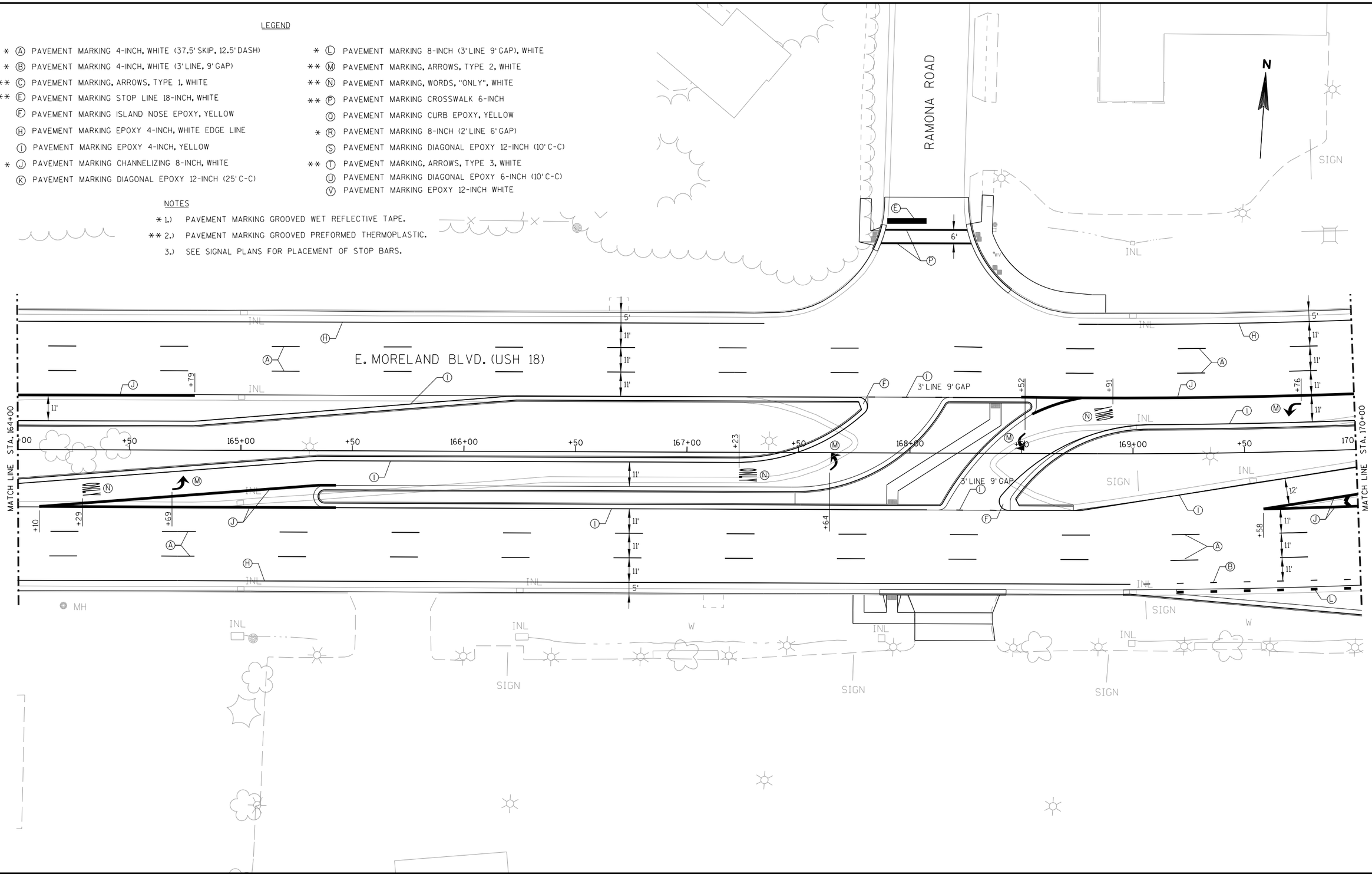
2

LEGEND

* Ⓐ PAVEMENT MARKING 4-INCH, WHITE (37.5' SKIP, 12.5' DASH)
* Ⓑ PAVEMENT MARKING 4-INCH, WHITE (3' LINE, 9' GAP)
** Ⓒ PAVEMENT MARKING, ARROWS, TYPE 1, WHITE
** Ⓔ PAVEMENT MARKING STOP LINE 18-INCH, WHITE
Ⓕ PAVEMENT MARKING ISLAND NOSE EPOXY, YELLOW
Ⓗ PAVEMENT MARKING EPOXY 4-INCH, WHITE EDGE LINE
Ⓘ PAVEMENT MARKING EPOXY 4-INCH, YELLOW
* Ⓙ PAVEMENT MARKING CHANNELIZING 8-INCH, WHITE
Ⓚ PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (25' C-C)
* Ⓛ PAVEMENT MARKING 8-INCH (3' LINE 9' GAP), WHITE
** Ⓜ PAVEMENT MARKING, ARROWS, TYPE 2, WHITE
** Ⓝ PAVEMENT MARKING, WORDS, "ONLY", WHITE
** Ⓟ PAVEMENT MARKING CROSSWALK 6-INCH
Ⓠ PAVEMENT MARKING CURB EPOXY, YELLOW
* Ⓡ PAVEMENT MARKING 8-INCH (2' LINE 6' GAP)
Ⓢ PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (10' C-C)
** Ⓣ PAVEMENT MARKING, ARROWS, TYPE 3, WHITE
Ⓤ PAVEMENT MARKING DIAGONAL EPOXY 6-INCH (10' C-C)
Ⓥ PAVEMENT MARKING EPOXY 12-INCH WHITE

NOTES

* 1.) PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE.
** 2.) PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC.
3.) SEE SIGNAL PLANS FOR PLACEMENT OF STOP BARS.



PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	PAVEMENT MARKING	SHEET 300	E

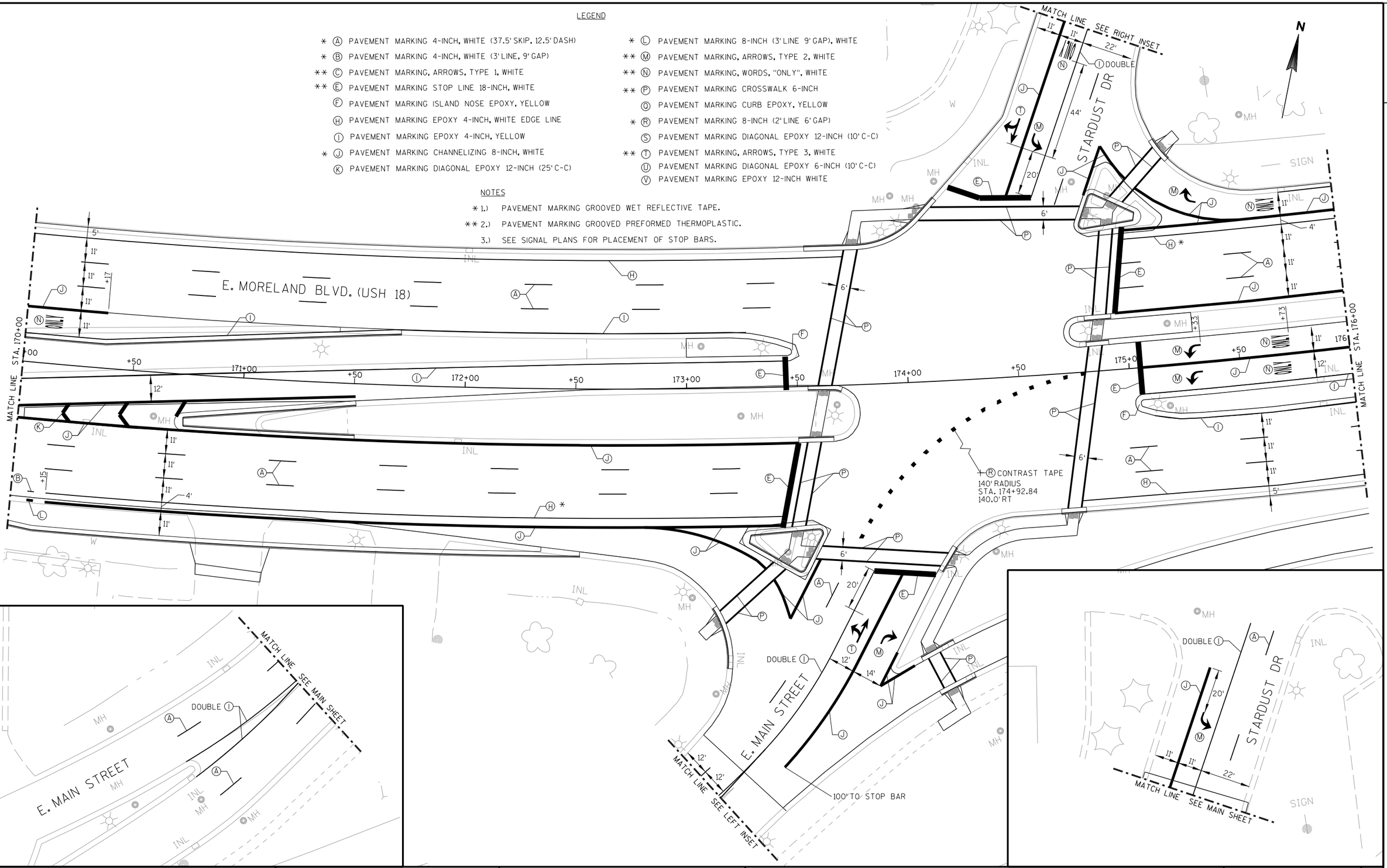
FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\024510_pm.dgn
PLOT DATE : 4/27/2015
PLOT BY : GRAEF
PLOT NAME :
PLOT SCALE : 40.0000 sf / in.

LEGEND

- * Ⓐ PAVEMENT MARKING 4-INCH, WHITE (37.5' SKIP, 12.5' DASH)
- * Ⓑ PAVEMENT MARKING 4-INCH, WHITE (3' LINE, 9' GAP)
- ** Ⓒ PAVEMENT MARKING, ARROWS, TYPE 1, WHITE
- ** Ⓔ PAVEMENT MARKING STOP LINE 18-INCH, WHITE
- Ⓕ PAVEMENT MARKING ISLAND NOSE EPOXY, YELLOW
- Ⓗ PAVEMENT MARKING EPOXY 4-INCH, WHITE EDGE LINE
- Ⓘ PAVEMENT MARKING EPOXY 4-INCH, YELLOW
- * Ⓙ PAVEMENT MARKING CHANNELIZING 8-INCH, WHITE
- Ⓚ PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (25'C-C)
- * Ⓛ PAVEMENT MARKING 8-INCH (3' LINE 9' GAP), WHITE
- ** Ⓜ PAVEMENT MARKING, ARROWS, TYPE 2, WHITE
- ** Ⓝ PAVEMENT MARKING, WORDS, "ONLY", WHITE
- ** Ⓟ PAVEMENT MARKING CROSSWALK 6-INCH
- Ⓠ PAVEMENT MARKING CURB EPOXY, YELLOW
- * Ⓡ PAVEMENT MARKING 8-INCH (2' LINE 6' GAP)
- Ⓢ PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (10'C-C)
- ** Ⓣ PAVEMENT MARKING, ARROWS, TYPE 3, WHITE
- Ⓤ PAVEMENT MARKING DIAGONAL EPOXY 6-INCH (10'C-C)
- Ⓥ PAVEMENT MARKING EPOXY 12-INCH WHITE

NOTES

- * 1.) PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE.
- ** 2.) PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC.
- 3.) SEE SIGNAL PLANS FOR PLACEMENT OF STOP BARS.



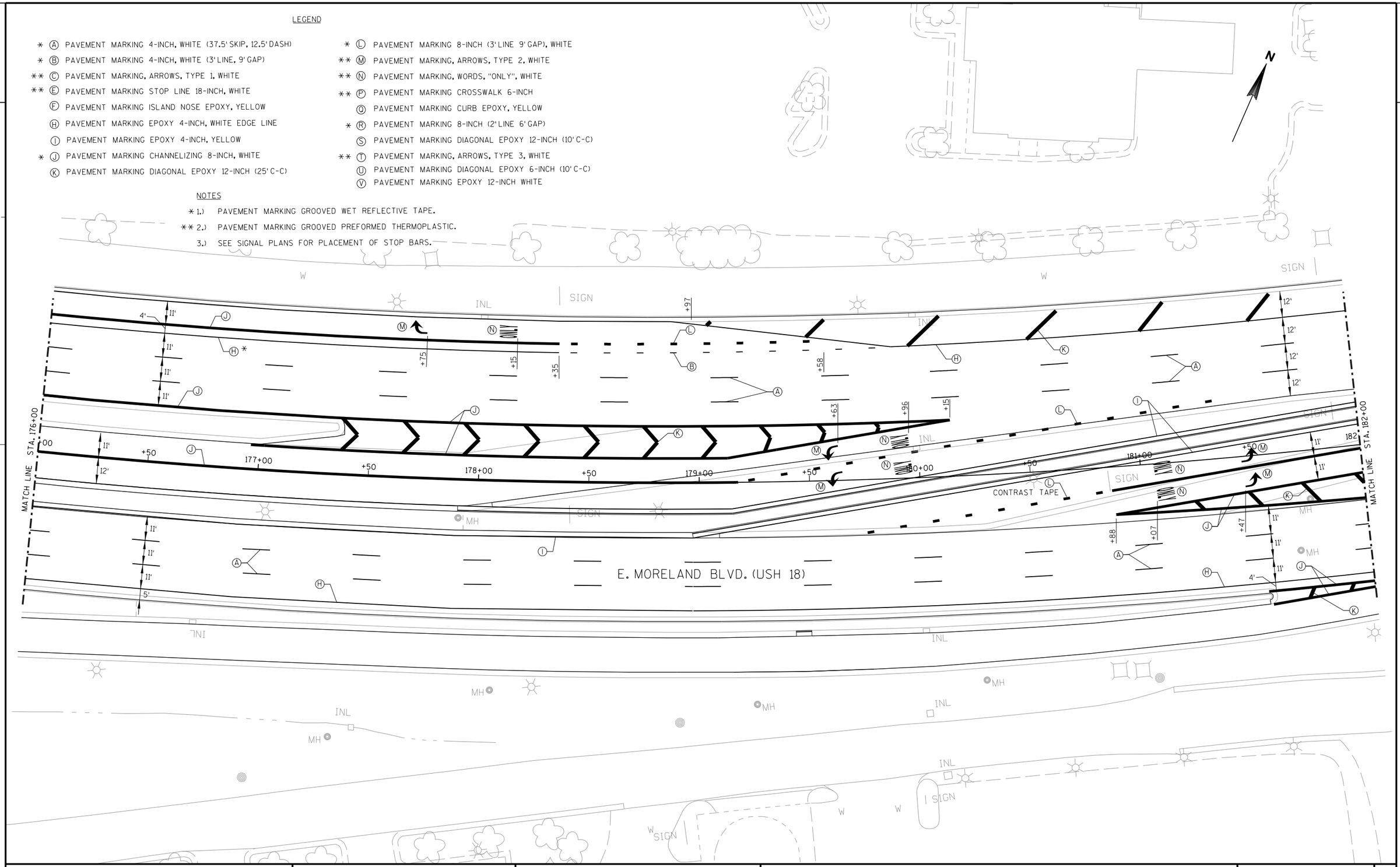
PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	PAVEMENT MARKING	SHEET 301	E

LEGEND

- * Ⓐ PAVEMENT MARKING 4-INCH, WHITE (37.5' SKIP, 12.5' DASH)
- * Ⓑ PAVEMENT MARKING 4-INCH, WHITE (3' LINE, 9' GAP)
- ** Ⓒ PAVEMENT MARKING, ARROWS, TYPE 1, WHITE
- ** Ⓔ PAVEMENT MARKING STOP LINE 18-INCH, WHITE
- Ⓕ PAVEMENT MARKING ISLAND NOSE EPOXY, YELLOW
- Ⓗ PAVEMENT MARKING EPOXY 4-INCH, WHITE EDGE LINE
- Ⓘ PAVEMENT MARKING EPOXY 4-INCH, YELLOW
- * Ⓙ PAVEMENT MARKING CHANNELIZING 8-INCH, WHITE
- Ⓚ PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (25' C-C)
- * Ⓛ PAVEMENT MARKING 8-INCH (3' LINE 9' GAP), WHITE
- ** Ⓜ PAVEMENT MARKING, ARROWS, TYPE 2, WHITE
- ** Ⓝ PAVEMENT MARKING, WORDS, "ONLY", WHITE
- ** Ⓟ PAVEMENT MARKING CROSSWALK 6-INCH
- Ⓠ PAVEMENT MARKING CURB EPOXY, YELLOW
- * Ⓡ PAVEMENT MARKING 8-INCH (2' LINE 6' GAP)
- Ⓢ PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (10' C-C)
- ** Ⓣ PAVEMENT MARKING, ARROWS, TYPE 3, WHITE
- Ⓤ PAVEMENT MARKING DIAGONAL EPOXY 6-INCH (10' C-C)
- Ⓥ PAVEMENT MARKING EPOXY 12-INCH WHITE

NOTES

- * 1.) PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE.
- ** 2.) PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC.
- 3.) SEE SIGNAL PLANS FOR PLACEMENT OF STOP BARS.



PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	PAVEMENT MARKING	SHEET 302	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\024512_pm.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 40.0000 sf / in.

LEGEND

- * Ⓐ PAVEMENT MARKING 4-INCH, WHITE (37.5' SKIP, 12.5' DASH)
- * Ⓑ PAVEMENT MARKING 4-INCH, WHITE (3' LINE, 9' GAP)
- ** Ⓒ PAVEMENT MARKING, ARROWS, TYPE 1, WHITE
- ** Ⓔ PAVEMENT MARKING STOP LINE 18-INCH, WHITE
- Ⓕ PAVEMENT MARKING ISLAND NOSE EPOXY, YELLOW
- Ⓗ PAVEMENT MARKING EPOXY 4-INCH, WHITE EDGE LINE
- Ⓘ PAVEMENT MARKING EPOXY 4-INCH, YELLOW
- * Ⓙ PAVEMENT MARKING CHANNELIZING 8-INCH, WHITE
- Ⓚ PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (25' C-C)
- * Ⓛ PAVEMENT MARKING 8-INCH (3' LINE 9' GAP), WHITE
- ** Ⓜ PAVEMENT MARKING, ARROWS, TYPE 2, WHITE
- ** Ⓝ PAVEMENT MARKING, WORDS, "ONLY", WHITE
- ** Ⓟ PAVEMENT MARKING CROSSWALK 6-INCH
- Ⓠ PAVEMENT MARKING CURB EPOXY, YELLOW
- * Ⓡ PAVEMENT MARKING 8-INCH (2' LINE 6' GAP)
- Ⓢ PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (10' C-C)
- ** Ⓣ PAVEMENT MARKING, ARROWS, TYPE 3, WHITE
- Ⓤ PAVEMENT MARKING DIAGONAL EPOXY 6-INCH (10' C-C)
- Ⓥ PAVEMENT MARKING EPOXY 12-INCH WHITE

NOTES

* 1.) PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE.

2.) PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC.

** 3.) SEE SIGNAL PLANS FOR PLACEMENT OF STOP BARS.

MATCH LINE STA. 52+00

SPRINGDALE ROAD

CONTRAST TAPE

85' RADIUS
STA. 184+21.26
85.7' LT

80' RADIUS
STA. 185+44.58
48.0' LT

CONTRAST TAPE

E. MORELAND BLVD. (USH 18)

MATCH LINE STA. 182+00

MATCH LINE STA. 188+00

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	PAVEMENT MARKING	SHEET 303	E

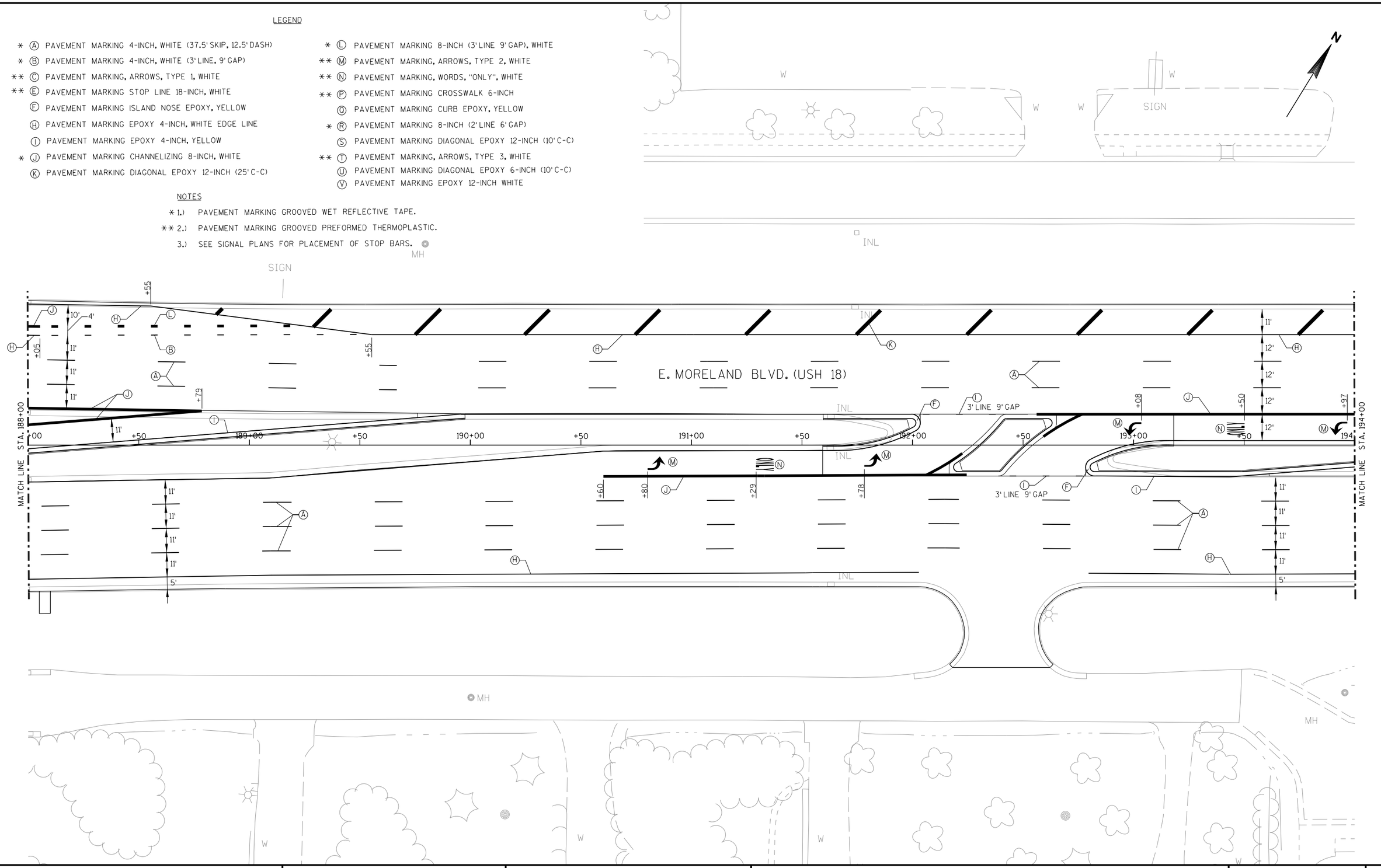
2

LEGEND

* Ⓐ PAVEMENT MARKING 4-INCH, WHITE (37.5' SKIP, 12.5' DASH)
* Ⓑ PAVEMENT MARKING 4-INCH, WHITE (3' LINE, 9' GAP)
** Ⓒ PAVEMENT MARKING, ARROWS, TYPE 1, WHITE
** Ⓔ PAVEMENT MARKING STOP LINE 18-INCH, WHITE
Ⓕ PAVEMENT MARKING ISLAND NOSE EPOXY, YELLOW
Ⓗ PAVEMENT MARKING EPOXY 4-INCH, WHITE EDGE LINE
Ⓘ PAVEMENT MARKING EPOXY 4-INCH, YELLOW
* Ⓙ PAVEMENT MARKING CHANNELIZING 8-INCH, WHITE
Ⓚ PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (25' C-C)
* Ⓛ PAVEMENT MARKING 8-INCH (3' LINE 9' GAP), WHITE
** Ⓜ PAVEMENT MARKING, ARROWS, TYPE 2, WHITE
** Ⓝ PAVEMENT MARKING, WORDS, "ONLY", WHITE
** Ⓟ PAVEMENT MARKING CROSSWALK 6-INCH
Ⓠ PAVEMENT MARKING CURB EPOXY, YELLOW
* Ⓡ PAVEMENT MARKING 8-INCH (2' LINE 6' GAP)
Ⓢ PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (10' C-C)
** Ⓣ PAVEMENT MARKING, ARROWS, TYPE 3, WHITE
Ⓤ PAVEMENT MARKING DIAGONAL EPOXY 6-INCH (10' C-C)
Ⓥ PAVEMENT MARKING EPOXY 12-INCH WHITE

NOTES

* 1.) PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE.
** 2.) PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC.
3.) SEE SIGNAL PLANS FOR PLACEMENT OF STOP BARS.



2

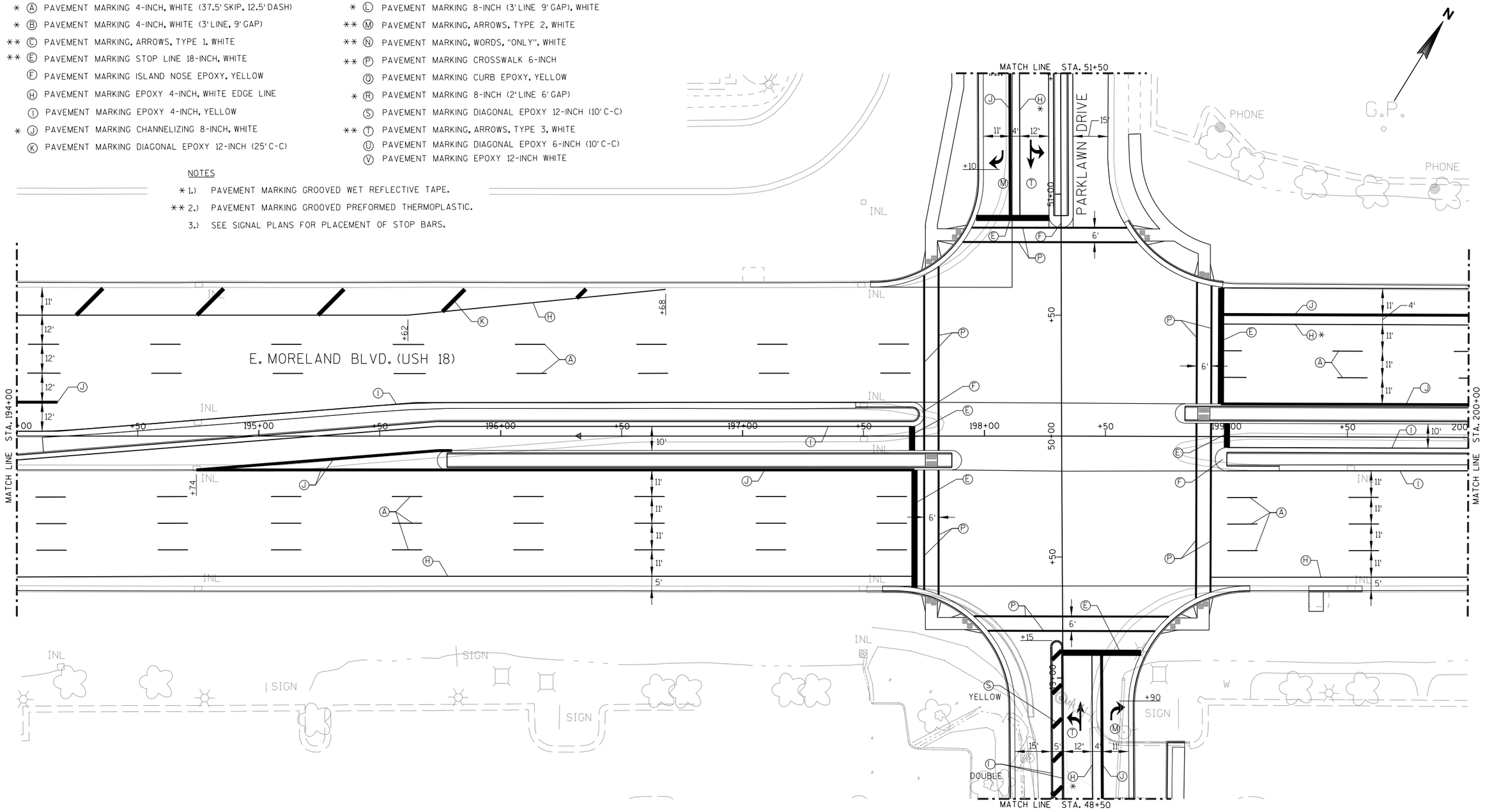
PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	PAVEMENT MARKING	SHEET 304	E

LEGEND

- * Ⓐ PAVEMENT MARKING 4-INCH, WHITE (37.5' SKIP, 12.5' DASH)
- * Ⓑ PAVEMENT MARKING 4-INCH, WHITE (3' LINE, 9' GAP)
- ** Ⓒ PAVEMENT MARKING, ARROWS, TYPE 1, WHITE
- ** Ⓔ PAVEMENT MARKING STOP LINE 18-INCH, WHITE
- Ⓕ PAVEMENT MARKING ISLAND NOSE EPOXY, YELLOW
- Ⓗ PAVEMENT MARKING EPOXY 4-INCH, WHITE EDGE LINE
- Ⓘ PAVEMENT MARKING EPOXY 4-INCH, YELLOW
- * Ⓙ PAVEMENT MARKING CHANNELIZING 8-INCH, WHITE
- Ⓚ PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (25' C-C)
- * Ⓛ PAVEMENT MARKING 8-INCH (3' LINE 9' GAP), WHITE
- ** Ⓜ PAVEMENT MARKING, ARROWS, TYPE 2, WHITE
- ** Ⓝ PAVEMENT MARKING, WORDS, "ONLY", WHITE
- ** Ⓟ PAVEMENT MARKING CROSSWALK 6-INCH
- Ⓠ PAVEMENT MARKING CURB EPOXY, YELLOW
- * Ⓡ PAVEMENT MARKING 8-INCH (2' LINE 6' GAP)
- Ⓢ PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (10' C-C)
- ** Ⓣ PAVEMENT MARKING, ARROWS, TYPE 3, WHITE
- Ⓤ PAVEMENT MARKING DIAGONAL EPOXY 6-INCH (10' C-C)
- Ⓥ PAVEMENT MARKING EPOXY 12-INCH WHITE

NOTES

- * 1.) PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE.
- ** 2.) PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC.
- 3.) SEE SIGNAL PLANS FOR PLACEMENT OF STOP BARS.

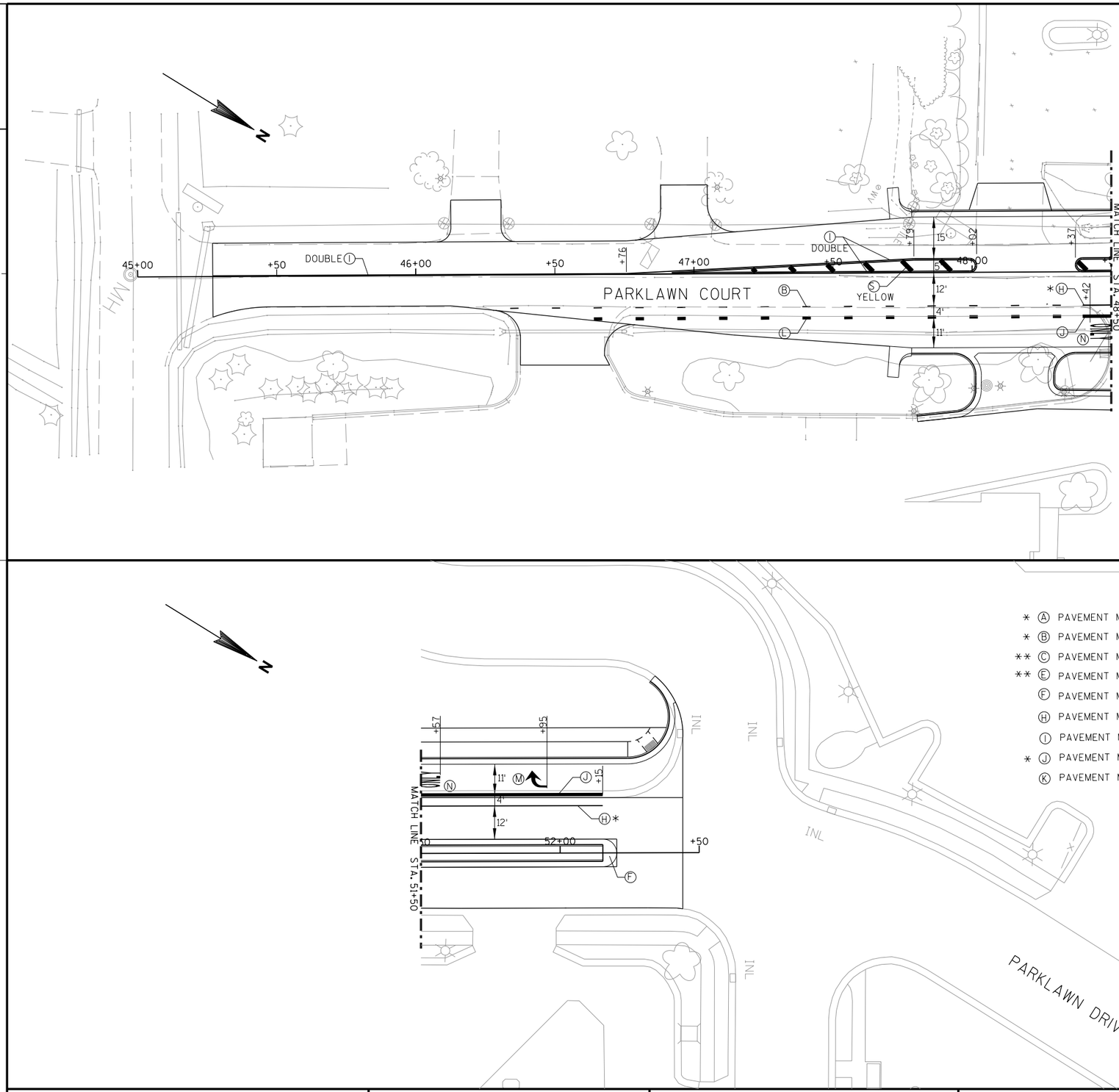


PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	PAVEMENT MARKING	SHEET 305	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\024515_pm.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 40.0000 sf / in.

WISDOT/CADDS SHEET 42

2



LEGEND

- * (A) PAVEMENT MARKING 4-INCH, WHITE (37.5' SKIP, 12.5' DASH)
- * (B) PAVEMENT MARKING 4-INCH, WHITE (3' LINE, 9' GAP)
- ** (C) PAVEMENT MARKING, ARROWS, TYPE 1, WHITE
- ** (E) PAVEMENT MARKING STOP LINE 18-INCH, WHITE
- (F) PAVEMENT MARKING ISLAND NOSE EPOXY, YELLOW
- (H) PAVEMENT MARKING EPOXY 4-INCH, WHITE EDGE LINE
- (I) PAVEMENT MARKING EPOXY 4-INCH, YELLOW
- * (J) PAVEMENT MARKING CHANNELIZING 8-INCH, WHITE
- (K) PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (25' C-C)
- * (L) PAVEMENT MARKING 8-INCH (3' LINE 9' GAP), WHITE
- ** (M) PAVEMENT MARKING, ARROWS, TYPE 2, WHITE
- ** (N) PAVEMENT MARKING, WORDS, "ONLY", WHITE
- ** (P) PAVEMENT MARKING CROSSWALK 6-INCH
- (Q) PAVEMENT MARKING CURB EPOXY, YELLOW
- * (R) PAVEMENT MARKING 8-INCH (2' LINE 6' GAP)
- (S) PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (10' C-C)
- ** (T) PAVEMENT MARKING, ARROWS, TYPE 3, WHITE
- (U) PAVEMENT MARKING DIAGONAL EPOXY 6-INCH (10' C-C)
- (V) PAVEMENT MARKING EPOXY 12-INCH WHITE

NOTES

- * 1.) PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE.
- ** 2.) PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC.
- 3.) SEE SIGNAL PLANS FOR PLACEMENT OF STOP BARS.

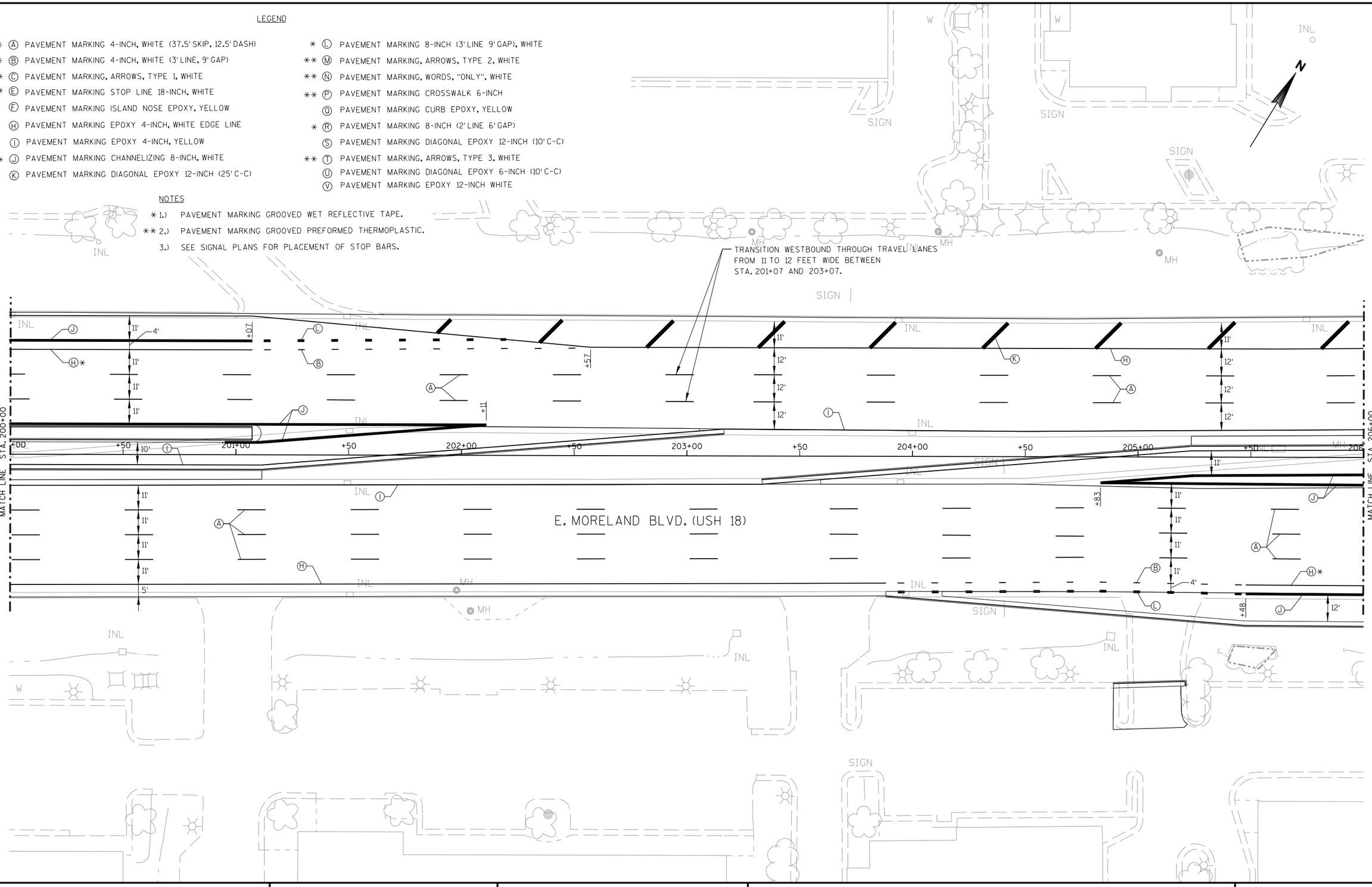
PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	PAVEMENT MARKING	SHEET 306	E

LEGEND

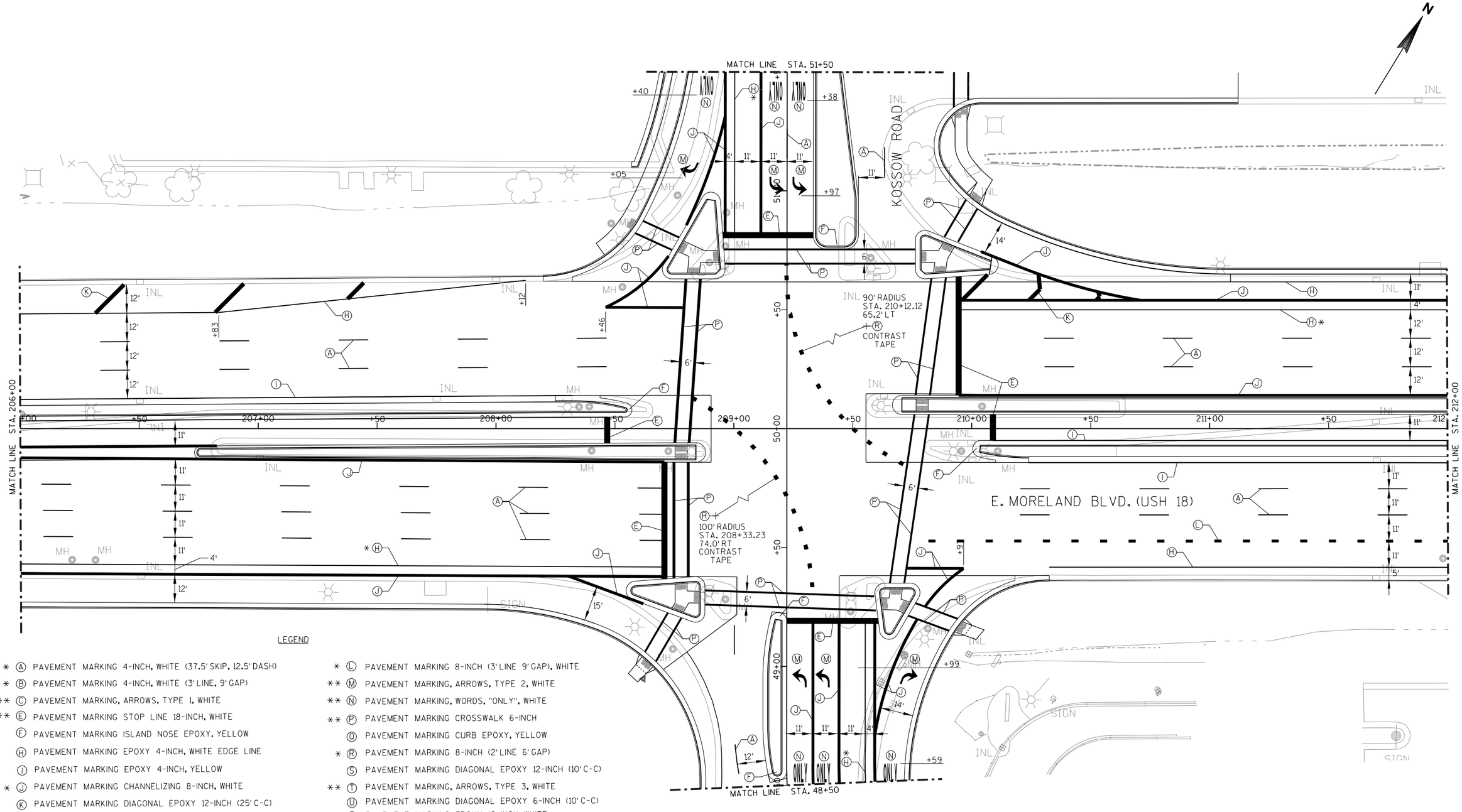
- * Ⓐ PAVEMENT MARKING 4-INCH, WHITE (37.5' SKIP, 12.5' DASH)
- * Ⓑ PAVEMENT MARKING 4-INCH, WHITE (3' LINE, 9' GAP)
- ** Ⓒ PAVEMENT MARKING, ARROWS, TYPE 1, WHITE
- ** Ⓔ PAVEMENT MARKING STOP LINE 18-INCH, WHITE
- Ⓕ PAVEMENT MARKING ISLAND NOSE EPOXY, YELLOW
- Ⓗ PAVEMENT MARKING EPOXY 4-INCH, WHITE EDGE LINE
- Ⓘ PAVEMENT MARKING EPOXY 4-INCH, YELLOW
- * Ⓙ PAVEMENT MARKING CHANNELIZING 8-INCH, WHITE
- Ⓚ PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (25' C-C)
- * Ⓛ PAVEMENT MARKING 8-INCH (3' LINE 9' GAP), WHITE
- ** Ⓜ PAVEMENT MARKING, ARROWS, TYPE 2, WHITE
- ** Ⓝ PAVEMENT MARKING, WORDS, "ONLY", WHITE
- ** Ⓟ PAVEMENT MARKING CROSSWALK 6-INCH
- Ⓠ PAVEMENT MARKING CURB EPOXY, YELLOW
- * Ⓡ PAVEMENT MARKING 8-INCH (2' LINE 6' GAP)
- Ⓢ PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (10' C-C)
- ** Ⓣ PAVEMENT MARKING, ARROWS, TYPE 3, WHITE
- Ⓤ PAVEMENT MARKING DIAGONAL EPOXY 6-INCH (10' C-C)
- Ⓥ PAVEMENT MARKING EPOXY 12-INCH WHITE

NOTES

- * 1.) PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE.
- ** 2.) PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC.
- 3.) SEE SIGNAL PLANS FOR PLACEMENT OF STOP BARS.



2



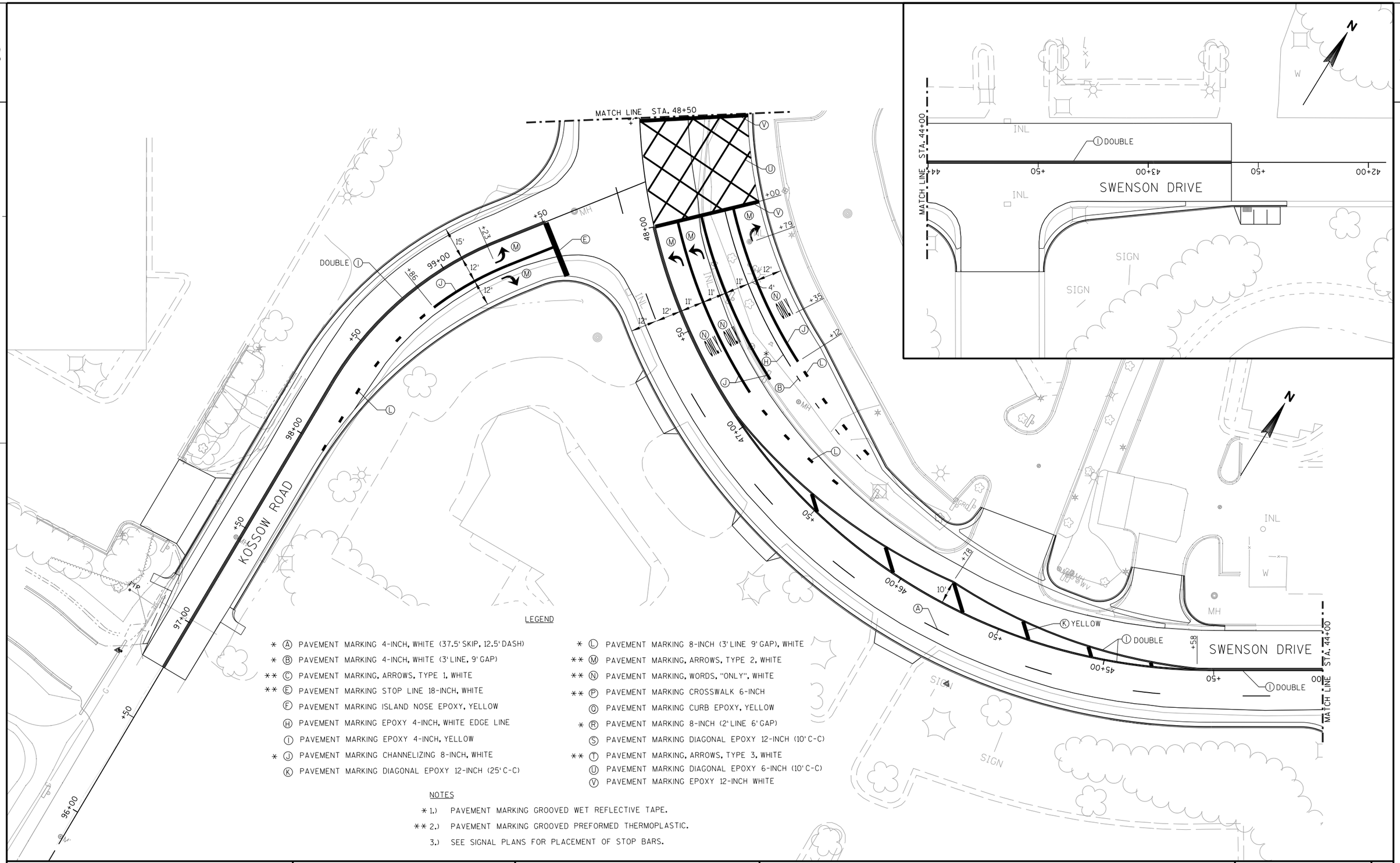
LEGEND

- * Ⓐ PAVEMENT MARKING 4-INCH, WHITE (37.5' SKIP, 12.5' DASH)
- * Ⓑ PAVEMENT MARKING 4-INCH, WHITE (3' LINE, 9' GAP)
- ** Ⓒ PAVEMENT MARKING, ARROWS, TYPE 1, WHITE
- ** Ⓔ PAVEMENT MARKING STOP LINE 18-INCH, WHITE
- Ⓕ PAVEMENT MARKING ISLAND NOSE EPOXY, YELLOW
- Ⓗ PAVEMENT MARKING EPOXY 4-INCH, WHITE EDGE LINE
- Ⓘ PAVEMENT MARKING EPOXY 4-INCH, YELLOW
- * Ⓙ PAVEMENT MARKING CHANNELIZING 8-INCH, WHITE
- Ⓚ PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (25' C-C)
- * Ⓛ PAVEMENT MARKING 8-INCH (3' LINE 9' GAP), WHITE
- ** Ⓜ PAVEMENT MARKING, ARROWS, TYPE 2, WHITE
- ** Ⓝ PAVEMENT MARKING, WORDS, "ONLY", WHITE
- ** Ⓟ PAVEMENT MARKING CROSSWALK 6-INCH
- Ⓠ PAVEMENT MARKING CURB EPOXY, YELLOW
- * Ⓡ PAVEMENT MARKING 8-INCH (2' LINE 6' GAP)
- Ⓢ PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (10' C-C)
- ** Ⓣ PAVEMENT MARKING, ARROWS, TYPE 3, WHITE
- Ⓤ PAVEMENT MARKING DIAGONAL EPOXY 6-INCH (10' C-C)
- Ⓥ PAVEMENT MARKING EPOXY 12-INCH WHITE

NOTES

- * 1.) PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE.
- ** 2.) PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC.
- 3.) SEE SIGNAL PLANS FOR PLACEMENT OF STOP BARS.

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	PAVEMENT MARKING	SHEET 308	E



LEGEND

- * Ⓐ PAVEMENT MARKING 4-INCH, WHITE (37.5' SKIP, 12.5' DASH)
- * Ⓑ PAVEMENT MARKING 4-INCH, WHITE (3' LINE, 9' GAP)
- ** Ⓒ PAVEMENT MARKING, ARROWS, TYPE 1, WHITE
- ** Ⓔ PAVEMENT MARKING STOP LINE 18-INCH, WHITE
- Ⓕ PAVEMENT MARKING ISLAND NOSE EPOXY, YELLOW
- Ⓗ PAVEMENT MARKING EPOXY 4-INCH, WHITE EDGE LINE
- Ⓘ PAVEMENT MARKING EPOXY 4-INCH, YELLOW
- * Ⓙ PAVEMENT MARKING CHANNELIZING 8-INCH, WHITE
- Ⓚ PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (25' C-C)
- * Ⓛ PAVEMENT MARKING 8-INCH (3' LINE 9' GAP), WHITE
- ** Ⓜ PAVEMENT MARKING, ARROWS, TYPE 2, WHITE
- ** Ⓝ PAVEMENT MARKING, WORDS, "ONLY", WHITE
- ** Ⓟ PAVEMENT MARKING CROSSWALK 6-INCH
- Ⓠ PAVEMENT MARKING CURB EPOXY, YELLOW
- * Ⓡ PAVEMENT MARKING 8-INCH (2' LINE 6' GAP)
- Ⓢ PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (10' C-C)
- ** Ⓣ PAVEMENT MARKING, ARROWS, TYPE 3, WHITE
- Ⓤ PAVEMENT MARKING DIAGONAL EPOXY 6-INCH (10' C-C)
- Ⓥ PAVEMENT MARKING EPOXY 12-INCH WHITE

NOTES

- * 1.) PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE.
- ** 2.) PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC.
- 3.) SEE SIGNAL PLANS FOR PLACEMENT OF STOP BARS.

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	PAVEMENT MARKING	SHEET 309	E

LEGEND

- * Ⓐ PAVEMENT MARKING 4-INCH, WHITE (37.5' SKIP, 12.5' DASH)
- * Ⓑ PAVEMENT MARKING 4-INCH, WHITE (3' LINE, 9' GAP)
- ** Ⓒ PAVEMENT MARKING, ARROWS, TYPE 1, WHITE
- ** Ⓔ PAVEMENT MARKING STOP LINE 18-INCH, WHITE
- Ⓕ PAVEMENT MARKING ISLAND NOSE EPOXY, YELLOW
- Ⓗ PAVEMENT MARKING EPOXY 4-INCH, WHITE EDGE LINE
- Ⓘ PAVEMENT MARKING EPOXY 4-INCH, YELLOW
- * Ⓙ PAVEMENT MARKING CHANNELIZING 8-INCH, WHITE
- Ⓚ PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (25' C-C)
- * Ⓛ PAVEMENT MARKING 8-INCH (3' LINE 9' GAP), WHITE
- ** Ⓜ PAVEMENT MARKING, ARROWS, TYPE 2, WHITE
- ** Ⓝ PAVEMENT MARKING, WORDS, "ONLY", WHITE
- ** Ⓟ PAVEMENT MARKING CROSSWALK 6-INCH
- Ⓠ PAVEMENT MARKING CURB EPOXY, YELLOW
- * Ⓡ PAVEMENT MARKING 8-INCH (2' LINE 6' GAP)
- Ⓢ PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (10' C-C)
- ** Ⓣ PAVEMENT MARKING, ARROWS, TYPE 3, WHITE
- Ⓤ PAVEMENT MARKING DIAGONAL EPOXY 6-INCH (10' C-C)
- Ⓥ PAVEMENT MARKING EPOXY 12-INCH WHITE

NOTES

- * 1.) PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE.
- ** 2.) PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC.
- 3.) SEE SIGNAL PLANS FOR PLACEMENT OF STOP BARS.

MATCH LINE STA. 17+50

ABBOTT DRIVE

18+00

19+00

20+00

21+00

KOSSOW ROAD

MATCH LINE STA. 51+50

MATCH LINE STA. 57+50

52+00

53+00

54+00

55+00

56+00

57+00

Ⓘ DOUBLE

Ⓙ DOUBLE

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	PAVEMENT MARKING	SHEET 310	E

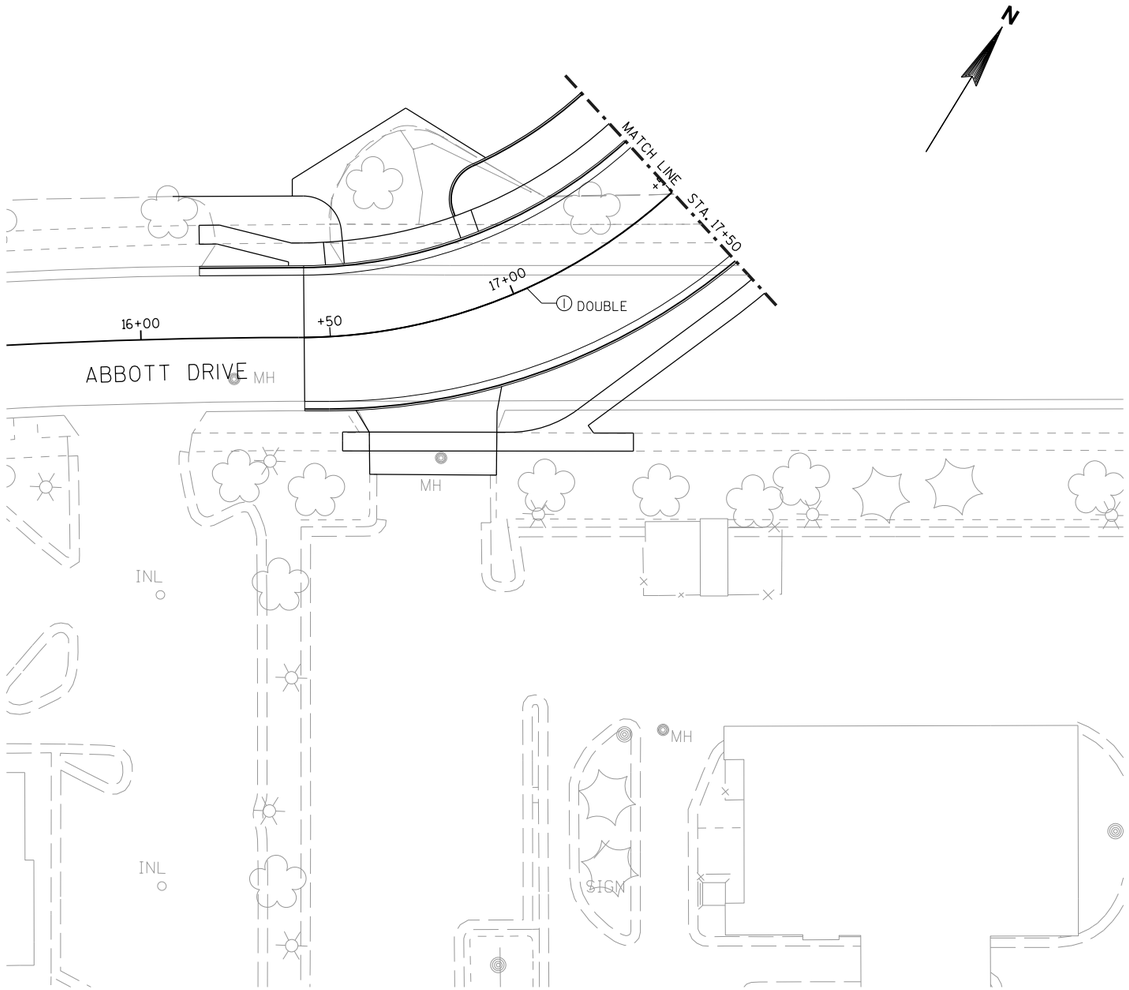
2

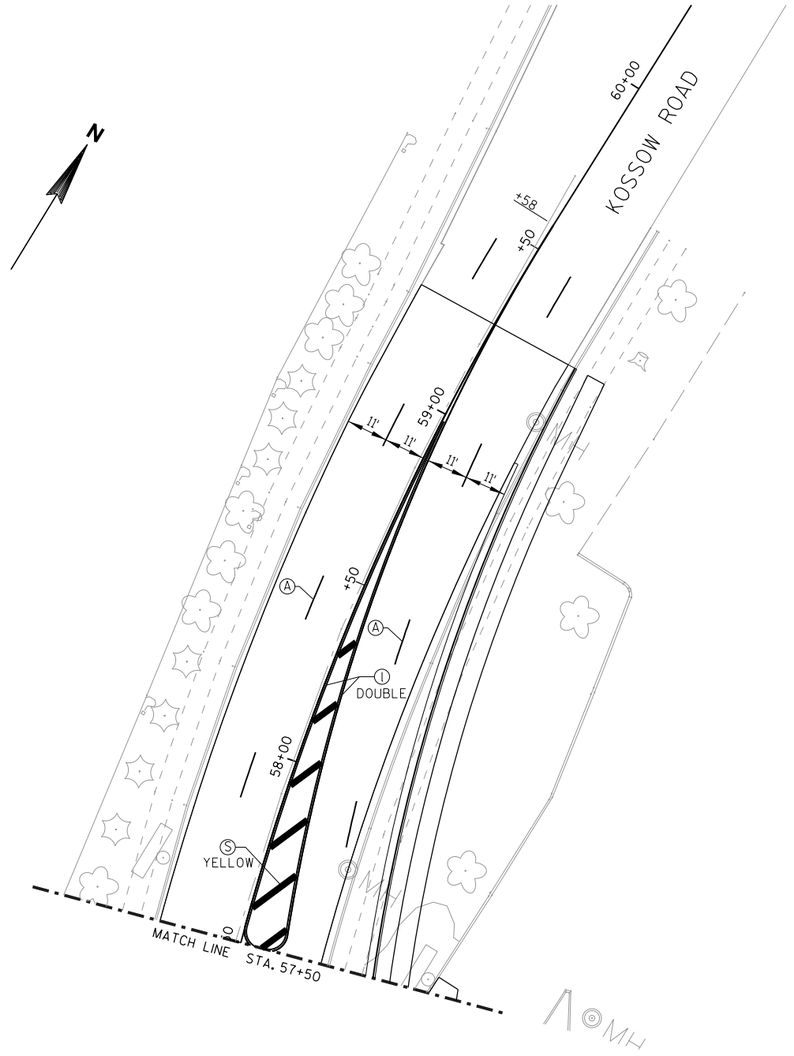
LEGEND

* Ⓐ PAVEMENT MARKING 4-INCH, WHITE (37.5' SKIP, 12.5' DASH)
* Ⓑ PAVEMENT MARKING 4-INCH, WHITE (3' LINE, 9' GAP)
** Ⓒ PAVEMENT MARKING, ARROWS, TYPE 1, WHITE
** Ⓔ PAVEMENT MARKING STOP LINE 18-INCH, WHITE
Ⓕ PAVEMENT MARKING ISLAND NOSE EPOXY, YELLOW
Ⓗ PAVEMENT MARKING EPOXY 4-INCH, WHITE EDGE LINE
Ⓘ PAVEMENT MARKING EPOXY 4-INCH, YELLOW
* Ⓙ PAVEMENT MARKING CHANNELIZING 8-INCH, WHITE
Ⓚ PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (25' C-C)
* Ⓛ PAVEMENT MARKING 8-INCH (3' LINE 9' GAP), WHITE
** Ⓜ PAVEMENT MARKING, ARROWS, TYPE 2, WHITE
** Ⓝ PAVEMENT MARKING, WORDS, "ONLY", WHITE
** Ⓟ PAVEMENT MARKING CROSSWALK 6-INCH
Ⓠ PAVEMENT MARKING CURB EPOXY, YELLOW
* Ⓡ PAVEMENT MARKING 8-INCH (2' LINE 6' GAP)
Ⓢ PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (10' C-C)
** Ⓣ PAVEMENT MARKING, ARROWS, TYPE 3, WHITE
Ⓤ PAVEMENT MARKING DIAGONAL EPOXY 6-INCH (10' C-C)
Ⓥ PAVEMENT MARKING EPOXY 12-INCH WHITE

NOTES

* 1.) PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE.
** 2.) PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC.
3.) SEE SIGNAL PLANS FOR PLACEMENT OF STOP BARS.



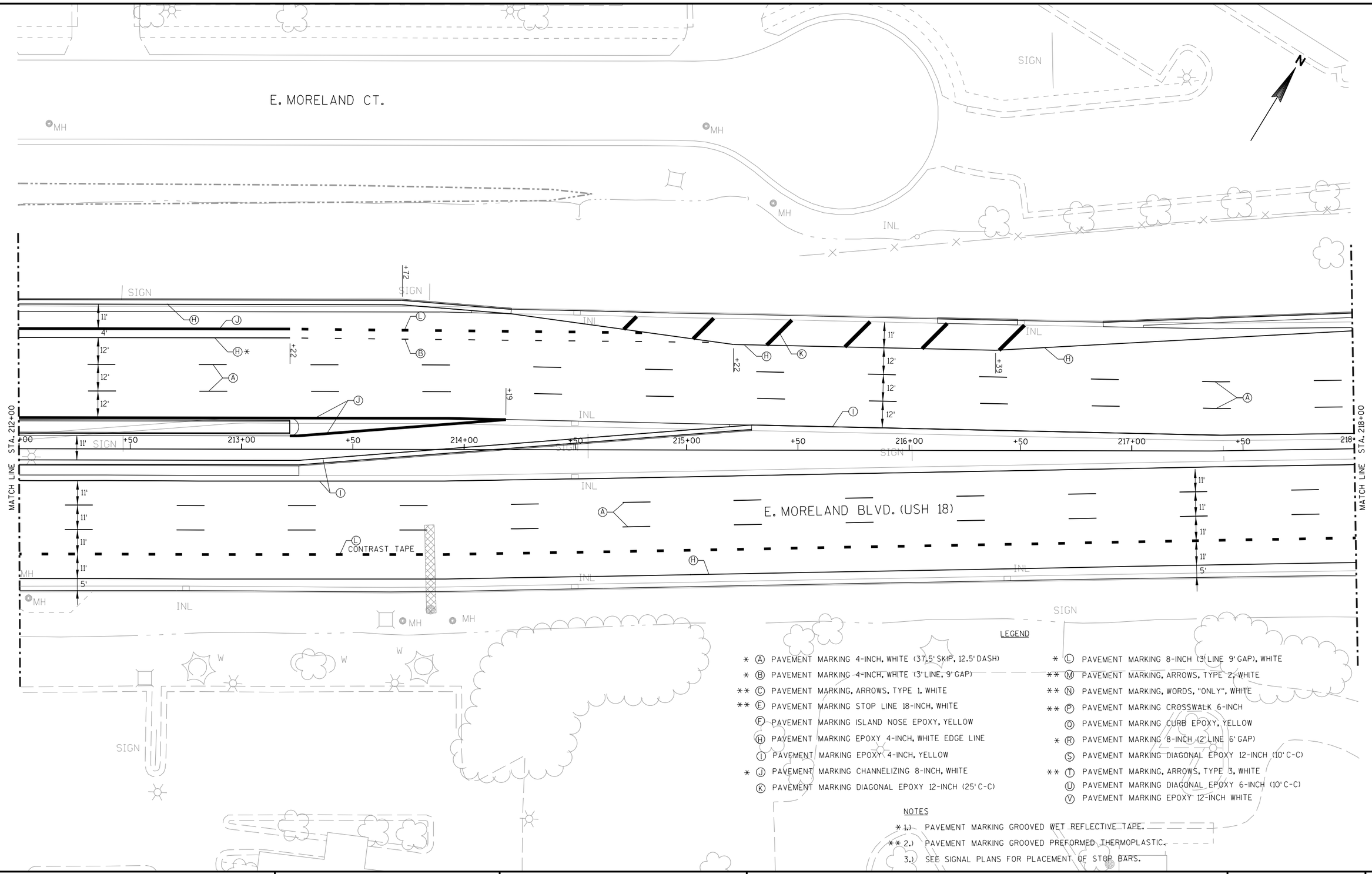


2

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	PAVEMENT MARKING	SHEET 311	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\024521_pm.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 40.0000 sf / in.

2



LEGEND

- * (A) PAVEMENT MARKING 4-INCH, WHITE (37.5' SKIP, 12.5' DASH)
- * (B) PAVEMENT MARKING 4-INCH, WHITE (3' LINE, 9' GAP)
- ** (C) PAVEMENT MARKING, ARROWS, TYPE 1, WHITE
- ** (E) PAVEMENT MARKING STOP LINE 18-INCH, WHITE
- (F) PAVEMENT MARKING ISLAND NOSE EPOXY, YELLOW
- (H) PAVEMENT MARKING EPOXY 4-INCH, WHITE EDGE LINE
- (I) PAVEMENT MARKING EPOXY 4-INCH, YELLOW
- * (J) PAVEMENT MARKING CHANNELIZING 8-INCH, WHITE
- (K) PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (25'C-C)
- * (L) PAVEMENT MARKING 8-INCH (3' LINE 9' GAP), WHITE
- ** (M) PAVEMENT MARKING, ARROWS, TYPE 2, WHITE
- ** (N) PAVEMENT MARKING, WORDS, "ONLY", WHITE
- ** (P) PAVEMENT MARKING CROSSWALK 6-INCH
- (Q) PAVEMENT MARKING CURB EPOXY, YELLOW
- * (R) PAVEMENT MARKING 8-INCH (2' LINE 6' GAP)
- (S) PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (10'C-C)
- ** (T) PAVEMENT MARKING, ARROWS, TYPE 3, WHITE
- (U) PAVEMENT MARKING DIAGONAL EPOXY 6-INCH (10'C-C)
- (V) PAVEMENT MARKING EPOXY 12-INCH WHITE

NOTES

- * 1.) PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE.
- ** 2.) PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC.
- 3.) SEE SIGNAL PLANS FOR PLACEMENT OF STOP BARS.

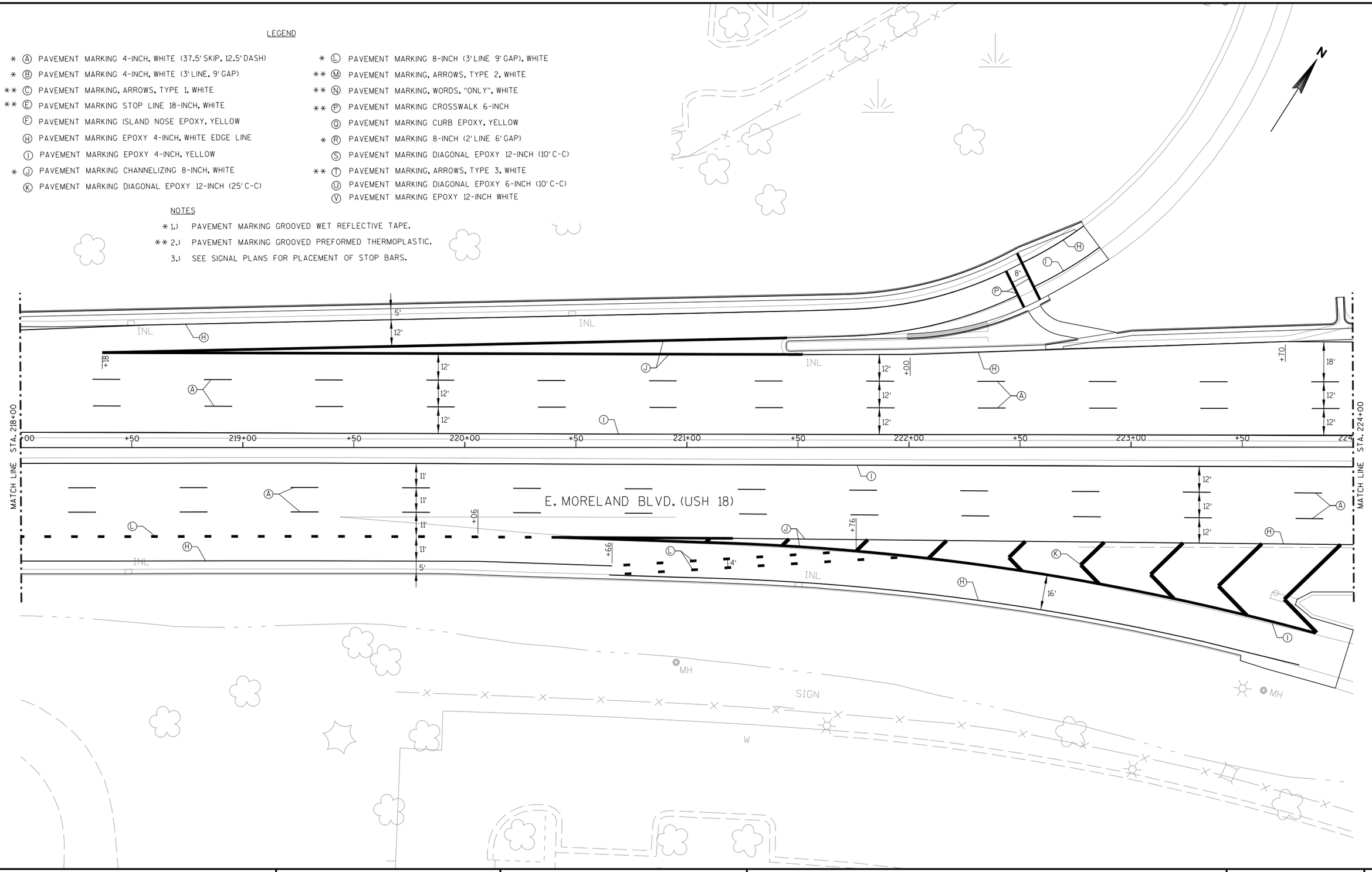
PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	PAVEMENT MARKING	SHEET 312	E

LEGEND

- * Ⓐ PAVEMENT MARKING 4-INCH, WHITE (37.5' SKIP, 12.5' DASH)
- * Ⓑ PAVEMENT MARKING 4-INCH, WHITE (3' LINE, 9' GAP)
- ** Ⓒ PAVEMENT MARKING, ARROWS, TYPE 1, WHITE
- ** Ⓔ PAVEMENT MARKING STOP LINE 18-INCH, WHITE
- Ⓕ PAVEMENT MARKING ISLAND NOSE EPOXY, YELLOW
- Ⓗ PAVEMENT MARKING EPOXY 4-INCH, WHITE EDGE LINE
- Ⓘ PAVEMENT MARKING EPOXY 4-INCH, YELLOW
- * Ⓙ PAVEMENT MARKING CHANNELIZING 8-INCH, WHITE
- Ⓚ PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (25' C-C)
- * Ⓛ PAVEMENT MARKING 8-INCH (3' LINE 9' GAP), WHITE
- ** Ⓜ PAVEMENT MARKING, ARROWS, TYPE 2, WHITE
- ** Ⓝ PAVEMENT MARKING, WORDS, "ONLY", WHITE
- ** Ⓟ PAVEMENT MARKING CROSSWALK 6-INCH
- Ⓠ PAVEMENT MARKING CURB EPOXY, YELLOW
- * Ⓡ PAVEMENT MARKING 8-INCH (2' LINE 6' GAP)
- Ⓢ PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (10' C-C)
- ** Ⓣ PAVEMENT MARKING, ARROWS, TYPE 3, WHITE
- Ⓤ PAVEMENT MARKING DIAGONAL EPOXY 6-INCH (10' C-C)
- Ⓥ PAVEMENT MARKING EPOXY 12-INCH WHITE

NOTES

- * 1.) PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE.
- ** 2.) PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC.
- 3.) SEE SIGNAL PLANS FOR PLACEMENT OF STOP BARS.



PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	PAVEMENT MARKING	SHEET 313	E

LEGEND

* Ⓐ PAVEMENT MARKING 4-INCH, WHITE (37.5' SKIP, 12.5' DASH)
* Ⓑ PAVEMENT MARKING 4-INCH, WHITE (3' LINE, 9' GAP)
** Ⓒ PAVEMENT MARKING, ARROWS, TYPE 1, WHITE
** Ⓔ PAVEMENT MARKING STOP LINE 18-INCH, WHITE
Ⓕ PAVEMENT MARKING ISLAND NOSE EPOXY, YELLOW
Ⓗ PAVEMENT MARKING EPOXY 4-INCH, WHITE EDGE LINE
Ⓘ PAVEMENT MARKING EPOXY 4-INCH, YELLOW
* Ⓙ PAVEMENT MARKING CHANNELIZING 8-INCH, WHITE
Ⓚ PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (25' C-C)
* Ⓛ PAVEMENT MARKING 8-INCH (3' LINE 9' GAP), WHITE
** Ⓜ PAVEMENT MARKING, ARROWS, TYPE 2, WHITE
** Ⓝ PAVEMENT MARKING, WORDS, "ONLY", WHITE
** Ⓟ PAVEMENT MARKING CROSSWALK 6-INCH
Ⓠ PAVEMENT MARKING CURB EPOXY, YELLOW
* Ⓡ PAVEMENT MARKING 8-INCH (2' LINE 6' GAP)
Ⓢ PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (10' C-C)
** Ⓣ PAVEMENT MARKING, ARROWS, TYPE 3, WHITE
Ⓤ PAVEMENT MARKING DIAGONAL EPOXY 6-INCH (10' C-C)
Ⓥ PAVEMENT MARKING EPOXY 12-INCH WHITE

NOTES

* 1.) PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE.
** 2.) PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC.
3.) SEE SIGNAL PLANS FOR PLACEMENT OF STOP BARS.

EXISTING GROOVED SKIP LANE LINES ON BRIDGE TO REMAIN. TRANSITION PROPOSED LANES LINES TO MATCH EXISTING BRIDGE STRIPING OVER 100' EAST OF STRUCTURE.

I-94 EXIT RAMP

E. MORELAND BLVD. (USH 18)

MATCH LINE STA. 224+00

MATCH LINE STA. 230+00

224+00 +00 +50 225+00 +50 226+00 +50 227+00 +50 228+00 +50 229+00 +50 230

+39

5' 12' 8' 11' 11' 11' 12' 12' 12' 12' 20'

T106 915.380

I-94 EB I-94 WB

MH SIGN INL

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	PAVEMENT MARKING	SHEET 314	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\024524_pm.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 40.0000 sf / in.

WISDOT/CADDS SHEET 42

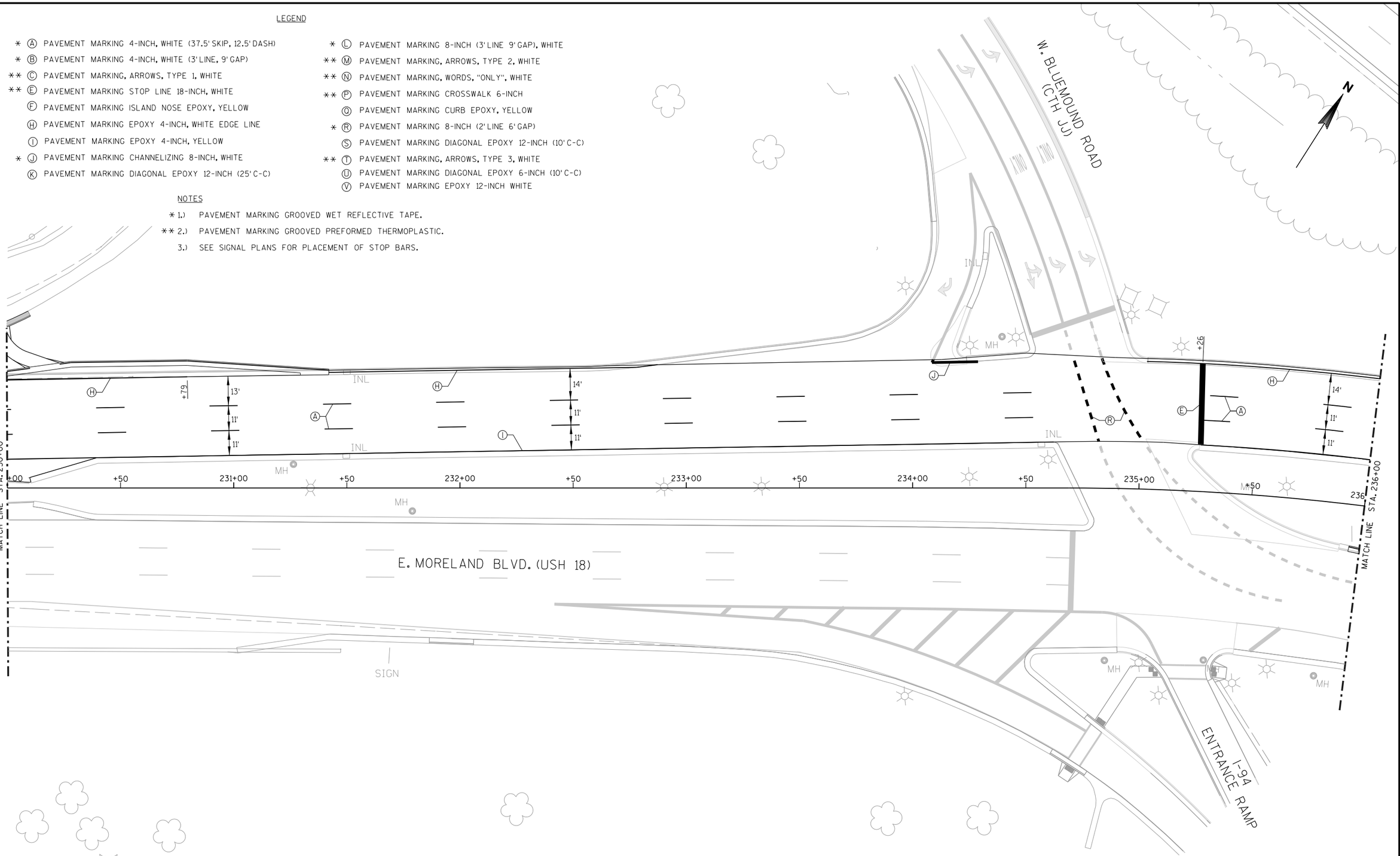
2

LEGEND

* Ⓐ PAVEMENT MARKING 4-INCH, WHITE (37.5' SKIP, 12.5' DASH)
* Ⓑ PAVEMENT MARKING 4-INCH, WHITE (3' LINE, 9' GAP)
** Ⓒ PAVEMENT MARKING, ARROWS, TYPE 1, WHITE
** Ⓔ PAVEMENT MARKING STOP LINE 18-INCH, WHITE
Ⓕ PAVEMENT MARKING ISLAND NOSE EPOXY, YELLOW
Ⓗ PAVEMENT MARKING EPOXY 4-INCH, WHITE EDGE LINE
Ⓘ PAVEMENT MARKING EPOXY 4-INCH, YELLOW
* Ⓙ PAVEMENT MARKING CHANNELIZING 8-INCH, WHITE
Ⓚ PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (25' C-C)
* Ⓛ PAVEMENT MARKING 8-INCH (3' LINE 9' GAP), WHITE
** Ⓜ PAVEMENT MARKING, ARROWS, TYPE 2, WHITE
** Ⓝ PAVEMENT MARKING, WORDS, "ONLY", WHITE
** Ⓟ PAVEMENT MARKING CROSSWALK 6-INCH
Ⓠ PAVEMENT MARKING CURB EPOXY, YELLOW
* Ⓡ PAVEMENT MARKING 8-INCH (2' LINE 6' GAP)
Ⓢ PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (10' C-C)
** Ⓣ PAVEMENT MARKING, ARROWS, TYPE 3, WHITE
Ⓤ PAVEMENT MARKING DIAGONAL EPOXY 6-INCH (10' C-C)
Ⓥ PAVEMENT MARKING EPOXY 12-INCH WHITE

NOTES

* 1.) PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE.
** 2.) PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC.
3.) SEE SIGNAL PLANS FOR PLACEMENT OF STOP BARS.



PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	PAVEMENT MARKING	SHEET 315	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\024525_pm.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 40.0000 sf / in.

WISDOT/CADDS SHEET 42

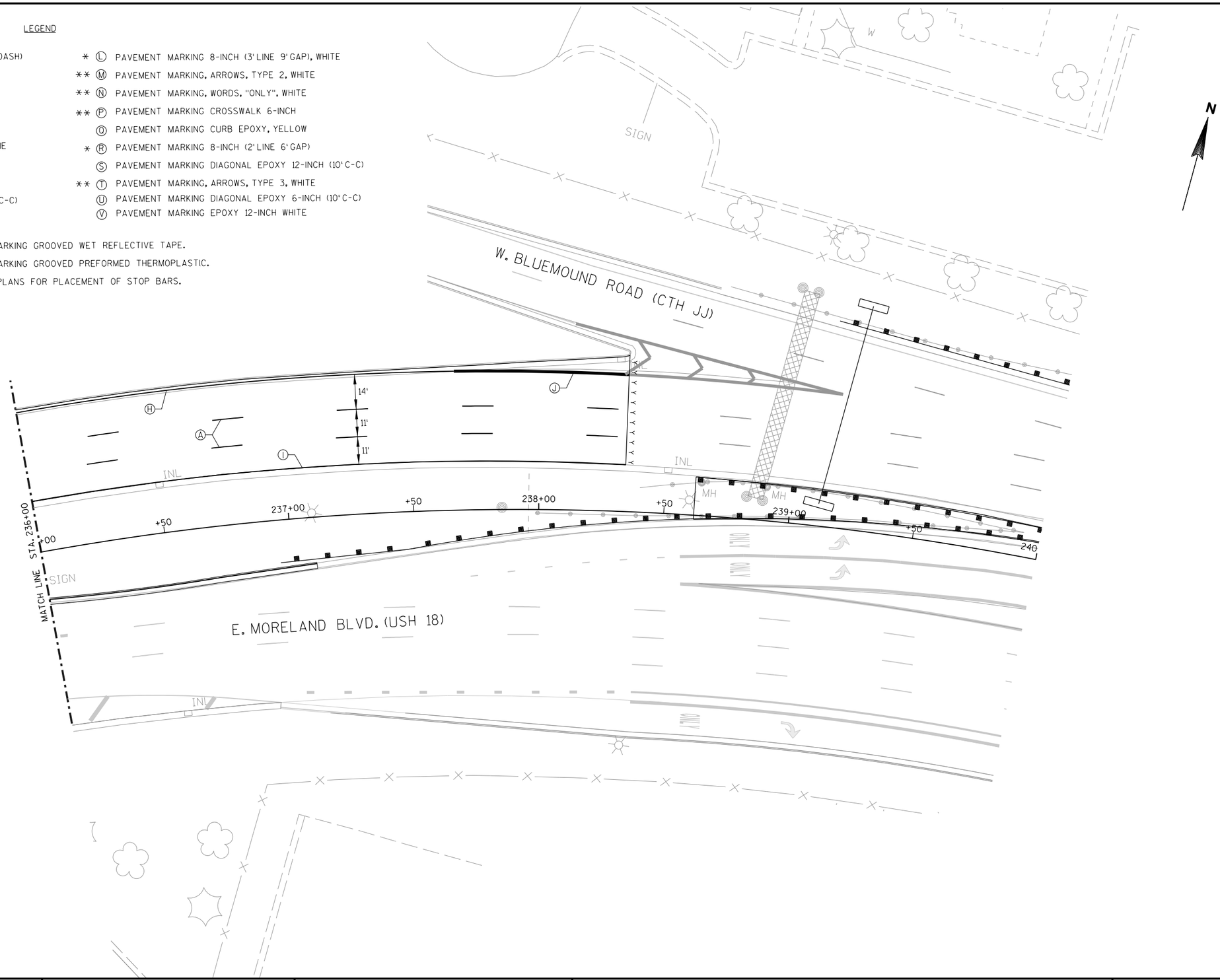
2

LEGEND

* Ⓐ PAVEMENT MARKING 4-INCH, WHITE (37.5' SKIP, 12.5' DASH)
* Ⓑ PAVEMENT MARKING 4-INCH, WHITE (3' LINE, 9' GAP)
** Ⓒ PAVEMENT MARKING, ARROWS, TYPE 1, WHITE
** Ⓔ PAVEMENT MARKING STOP LINE 18-INCH, WHITE
Ⓕ PAVEMENT MARKING ISLAND NOSE EPOXY, YELLOW
Ⓗ PAVEMENT MARKING EPOXY 4-INCH, WHITE EDGE LINE
Ⓘ PAVEMENT MARKING EPOXY 4-INCH, YELLOW
* Ⓙ PAVEMENT MARKING CHANNELIZING 8-INCH, WHITE
Ⓚ PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (25' C-C)
* Ⓛ PAVEMENT MARKING 8-INCH (3' LINE 9' GAP), WHITE
** Ⓜ PAVEMENT MARKING, ARROWS, TYPE 2, WHITE
** Ⓝ PAVEMENT MARKING, WORDS, "ONLY", WHITE
** Ⓟ PAVEMENT MARKING CROSSWALK 6-INCH
Ⓠ PAVEMENT MARKING CURB EPOXY, YELLOW
* Ⓡ PAVEMENT MARKING 8-INCH (2' LINE 6' GAP)
Ⓢ PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (10' C-C)
** Ⓣ PAVEMENT MARKING, ARROWS, TYPE 3, WHITE
Ⓤ PAVEMENT MARKING DIAGONAL EPOXY 6-INCH (10' C-C)
Ⓥ PAVEMENT MARKING EPOXY 12-INCH WHITE

NOTES

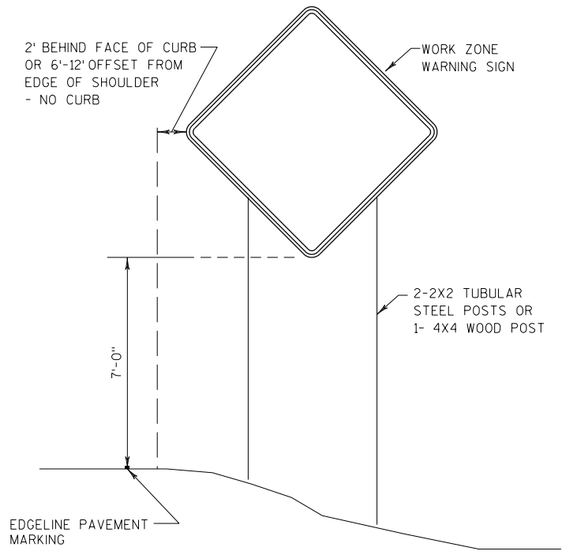
* 1.) PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE.
** 2.) PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC.
3.) SEE SIGNAL PLANS FOR PLACEMENT OF STOP BARS.



PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	PAVEMENT MARKING	SHEET 316	E

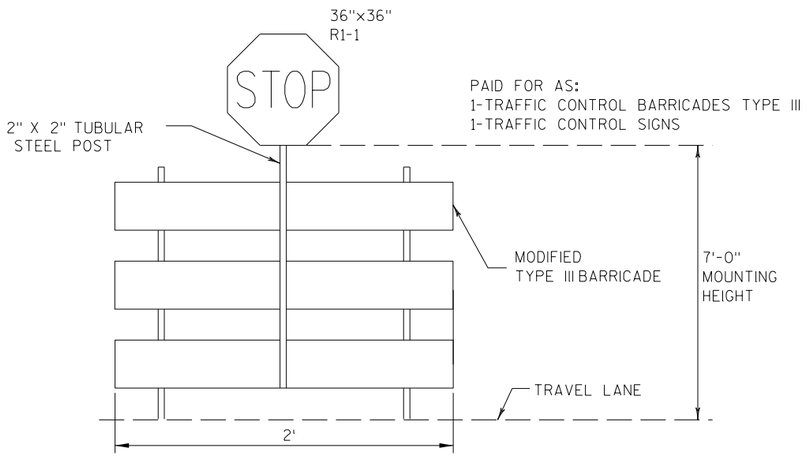
TRAFFIC CONTROL GENERAL NOTES:

1. TRAFFIC CONTROL DRUMS ARE SPACED AT 50'O.C. AND 25'O.C. IN TAPERS UNLESS OTHERWISE NOTED.
2. THE CONTRACTOR SHALL REMOVE ALL EXISTING PAVEMENT MARKINGS WHICH CONFLICT WITH THE TRAFFIC CONTROL.
3. THE CONTRACTOR SHALL COVER ANY SIGN CONFLICTING WITH THE TRAFFIC CONTROL IN OPERATION AS NEEDED OR AS DIRECTED BY THE ENGINEER. COVERING OF SIGNS SHALL BE PAID FOR AS COVERING SIGNS TYPE I OR II.
4. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN ALL NECESSARY BARRICADES, SIGNS, DIRECTIONAL ARROWS, LIGHTS, TEMPORARY MARKINGS, FLAGMEN, AND SAFETY DEVICES AS CALLED FOR ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
5. DRAWINGS SHOW TRAFFIC CONTROL FOR A TYPICAL SITUATION. ADDITIONAL TRAFFIC CONTROL DEVICES MAY BE REQUIRED AND/OR LAYOUT DETAILS MODIFIED DEPENDING ON CONTRACTOR'S METHOD OR SEQUENCES OF OPERATION.
6. MOVE SIGNS BETWEEN DAYTIME AND NIGHTTIME OPERATIONS TO MAINTAIN VISIBILITY TO TRAFFIC.
7. "WO"SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.
8. ALL SIGNS ARE 48" X 48" EXCEPT OTHERWISE NOTED.
9. ANY "STOP" SIGNS THAT ARE REMOVED FOR A CONSTRUCTION OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED.
10. THE EXACT LOCATION AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD LOCATIONS AS APPROVED BY THE ENGINEER IN THE FIELD.
11. BOTH STEADY BURN LIGHTS AND FLASHING LIGHTS SHALL BE ONE WAY WITH THE LIGHT SOURCE SHOWING TOWARDS ADJACENT APPROACHING TRAFFIC.
12. CHANNELIZING DEVICES SHALL BE DRUMS WITH ATTACHED TYPE "C" STEADY BURN LIGHT (TAPERS ONLY).
13. MAINTAIN ACCESS TO DRIVEWAYS AT ALL TIMES.
14. ARROW BOARDS SHALL BE LOCATED AS SHOWN ON THE PLAN, OR AS DIRECTED BY THE ENGINEER.
15. MAINTAIN CROSSWALK ACCESS ACROSS INTERSECTIONS AT ALL TIMES BY ONLY CLOSING ONE SIDE OR WITH DETOURS AS NEEDED FOR THE DURATION OF CONSTRUCTION. TEMPORARY CROSSWALK ACCESS AREAS, ARE TO REMAIN CLEAR OF DRUMS, BARRICADES, SIGNS, EQUIPMENT, ETC.

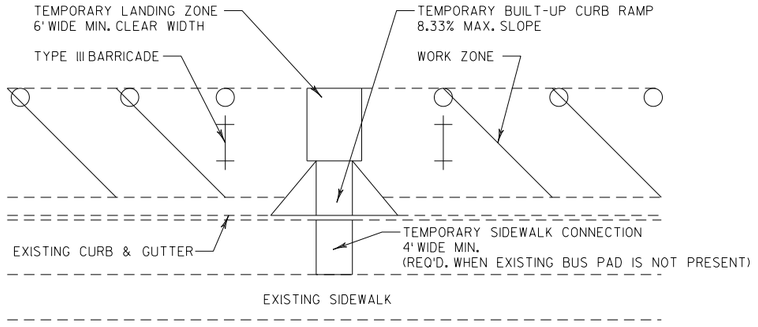


TYPICAL TEMPORARY TRAFFIC CONTROL DETAIL
MOUNTING ON FIXED SUPPORT

LONG TERM
7 DAYS OR MORE



TEMPORARY STOP SIGN



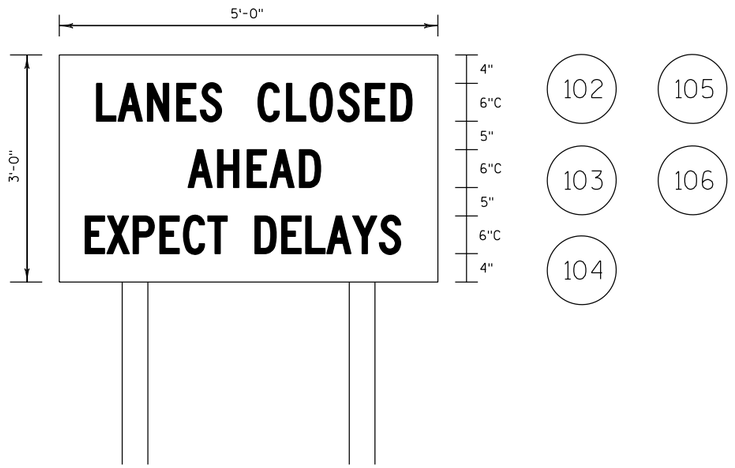
NOTES:

1) MAINTAIN ACCESS TO BUS STOPS.
2) GAP SIDEWALK WORK TO MAINTAIN PEDESTRIAN ACCESS WHERE APPLICABLE.
3) ALTERNATE SIDEWALK WORK BETWEEN LEFT AND RIGHT SIDE OF ROADWAY TO MAINTAIN PEDESTRIAN ACCESS.

BUS STOP CONNECTION WITHIN WORK ZONE



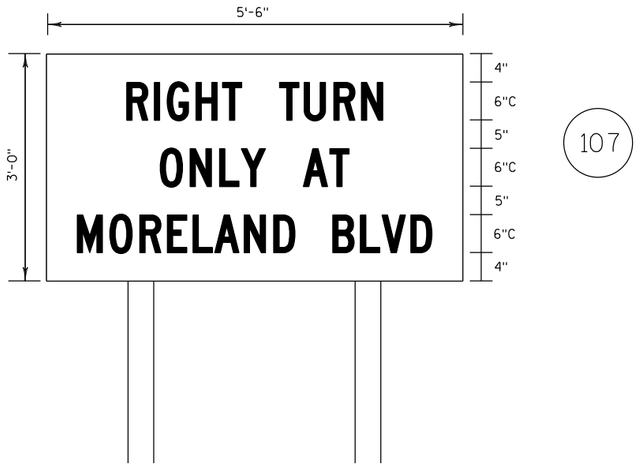
100



102 105 103 106 104



101



107

GENERAL NOTES:

1. DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE PLANS.
2. AFTER SIGNS HAVE BEEN LOCATED IN THE FIELD, BUT BEFORE INSTALLATION, THE PROJECT ENGINEER SHALL VERIFY EACH SIGNS LOCATION.
3. ALL SIGNS TO BE MOUNTED ON WOOD POST SUPPORTS (4" x 6"). THE NUMBER OF POSTS REQUIRED FOR EACH LAYOUT IS SHOWN.
4. SIGNS ON THIS SHEET TO BE PAID UNDER THE BID ITEM"TRAFFIC CONTROL SIGNS FIXED MESSAGE".
5. SIGNS SHALL BE BLACK NON-REFLECTIVE MESSAGE ON ORANGE REFLECTIVE BACKGROUND UNLESS OTHERWISE NOTED.
6. ALL SIGNS SHALL HAVE HAVE CAPITAL LETTERS AND NUMERALS 6" CAPS SHALL BE SERIES C
7. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO ENGINEER FOR REVIEW PRIOR TO MANUFACTURING.
8. DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED.
9. THE SIGN NUMBER IS DENOTED IN THE CIRCLE NEAR EACH DETAIL.
10. DO NOT SCALE.

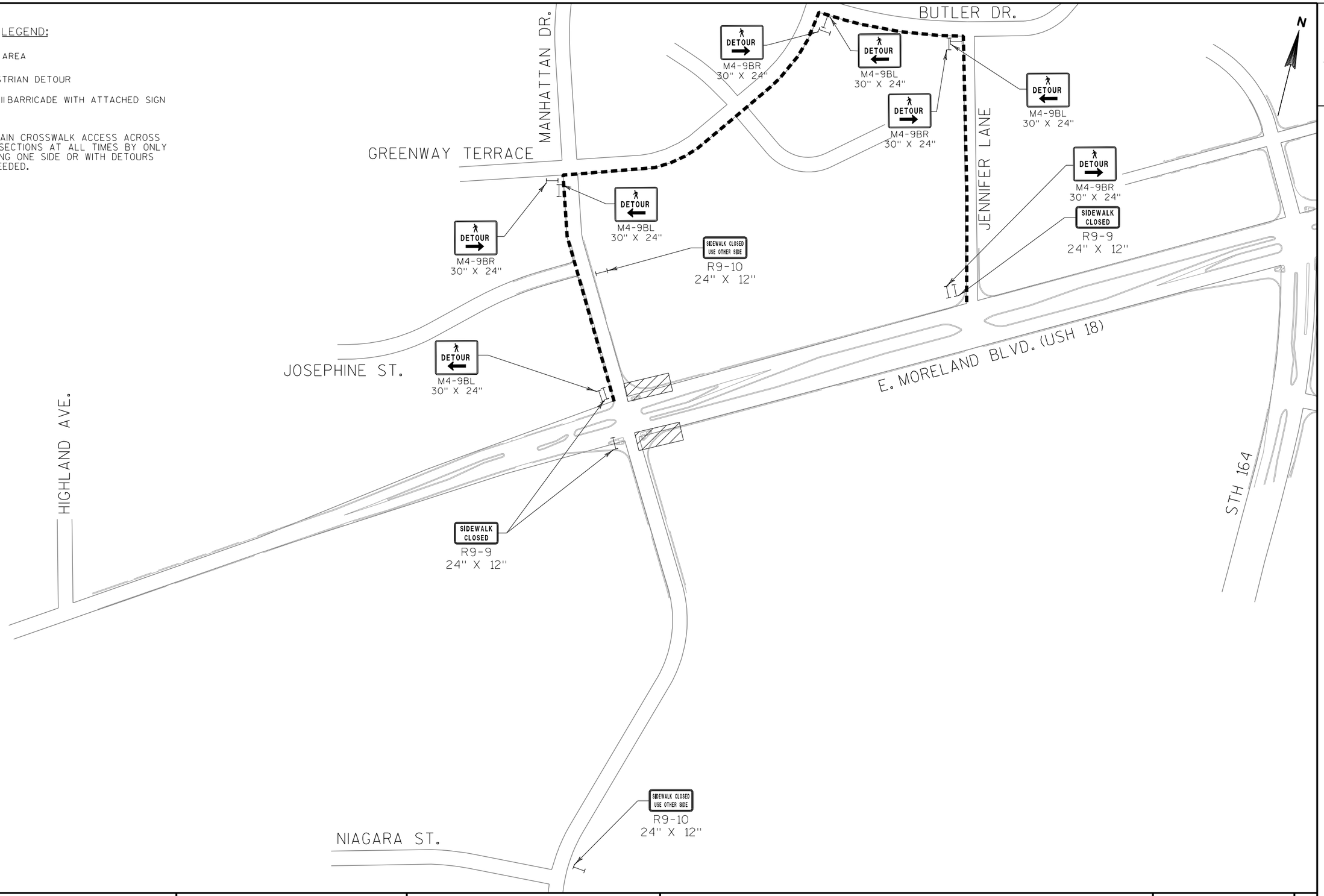
LEGEND:

WORK AREA

PEDESTRIAN DETOUR

TYPE II BARRICADE WITH ATTACHED SIGN

NOTE: MAINTAIN CROSSWALK ACCESS ACROSS INTERSECTIONS AT ALL TIMES BY ONLY CLOSING ONE SIDE OR WITH DETOURS AS NEEDED.



PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	SIDEWALK DETOUR AT MANHATTAN DRIVE - WORK ON EAST SIDE	SHEET 319	E

2

2

LEGEND:

WORK AREA

PEDESTRIAN DETOUR

TYPE II BARRICADE WITH ATTACHED SIGN

NOTE: MAINTAIN CROSSWALK ACCESS ACROSS INTERSECTIONS AT ALL TIMES BY ONLY CLOSING ONE SIDE OR WITH DETOURS AS NEEDED.

N

HIGHLAND AVE.

MANHATTAN DR.

JENNIFER LANE

JOSEPHINE ST.

E. MORELAND BLVD. (USH 18)

STH 164

NIAGARA ST.

DETOUR
M4-9BL
30" X 24"

DETOUR
M4-9BR
30" X 24"

SIDEWALK CLOSED USE OTHER SIDE
R9-10
24" X 12"

SIDEWALK CLOSED
R9-9
24" X 12"

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	SIDEWALK DETOUR AT MANHATTAN DRIVE - WORK ON WEST SIDE	SHEET 320	E

2

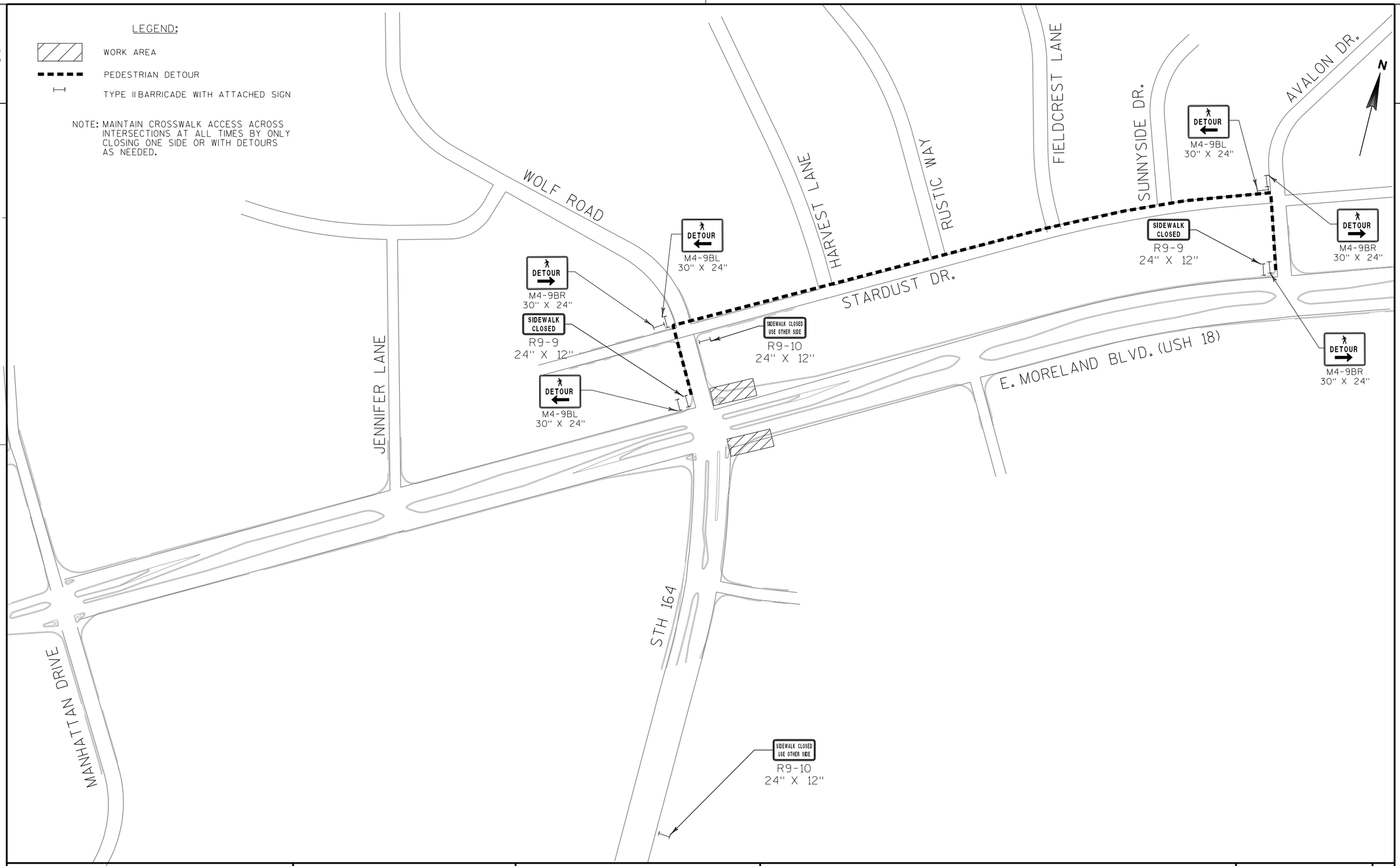
LEGEND:

WORK AREA

PEDESTRIAN DETOUR

TYPE II BARRICADE WITH ATTACHED SIGN

NOTE: MAINTAIN CROSSWALK ACCESS ACROSS INTERSECTIONS AT ALL TIMES BY ONLY CLOSING ONE SIDE OR WITH DETOURS AS NEEDED.



2

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	SIDEWALK DETOUR AT STH 164 - WORK ON EAST SIDE	SHEET 321 E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\025005_tc.dgn PLOT DATE : 4/28/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 249.0339 sf / in.

WISDOT/CADDS SHEET 42

LEGEND:

WORK AREA

PEDESTRIAN DETOUR

TYPE II BARRICADE WITH ATTACHED SIGN

NOTE: MAINTAIN CROSSWALK ACCESS ACROSS INTERSECTIONS AT ALL TIMES BY ONLY CLOSING ONE SIDE OR WITH DETOURS AS NEEDED.

DETOUR
M4-9BL
30" X 24"

DETOUR
M4-9BR
30" X 24"

DETOUR
M4-9BR
30" X 24"

DETOUR
M4-9BL
30" X 24"

DETOUR
M4-9BR
30" X 24"

DETOUR
M4-9BL
30" X 24"

SIDEWALK CLOSED
R9-9
24" X 12"

SIDEWALK CLOSED
R9-9
24" X 12"

SIDEWALK CLOSED USE OTHER SIDE
R9-10
24" X 12"

BUTLER DRIVE

WOLF ROAD

JENNIFER LANE

STARDUST DR.

AVALON DR.

E. MORELAND BLVD. (USH 18)

STH 164

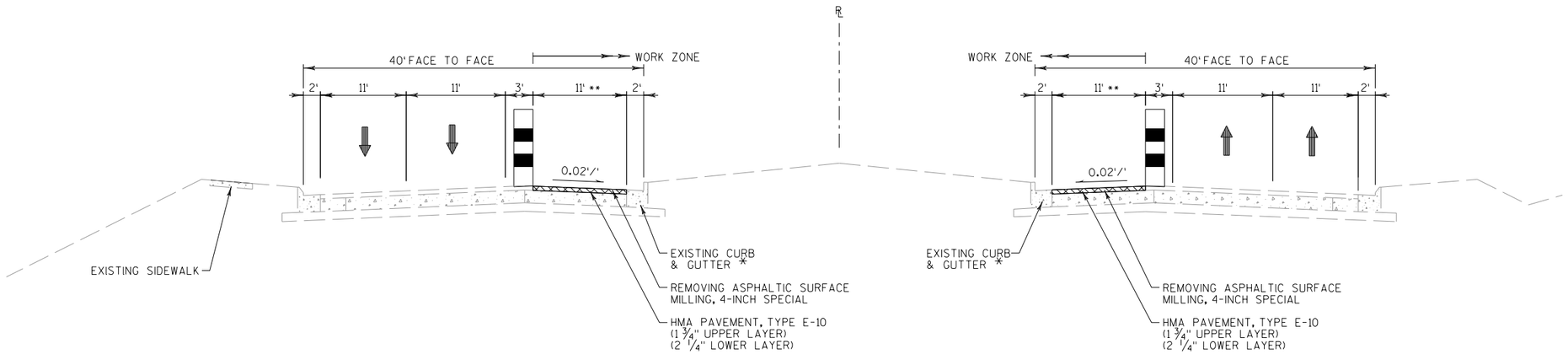
MANHATTAN DRIVE

N

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	SIDEWALK DETOUR AT STH 164 - WORK ON WEST SIDE	SHEET 322	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\025006_tc.dgn PLOT DATE : 4/28/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 249.0339 sf / in.

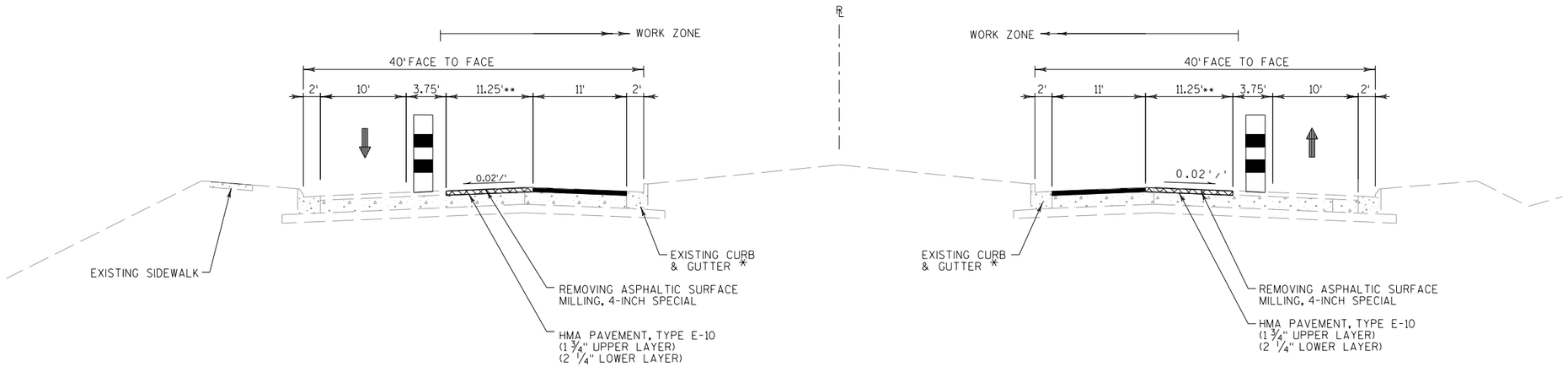
WISDOT/CADDS SHEET 42



STAGE 1 DAYTIME

USH 18

MANHATTAN DRIVE TO MAIN STREET
STA. 125+00 TO STA. 174+20



LEGEND:

- HMA PAVEMENT, TYPE E-10
- REMOVING ASPHALTIC SURFACE MILLING, 4-INCH SPECIAL
- PAVEMENT PLACED IN PREVIOUS STAGE

STAGE 1 NIGHTTIME

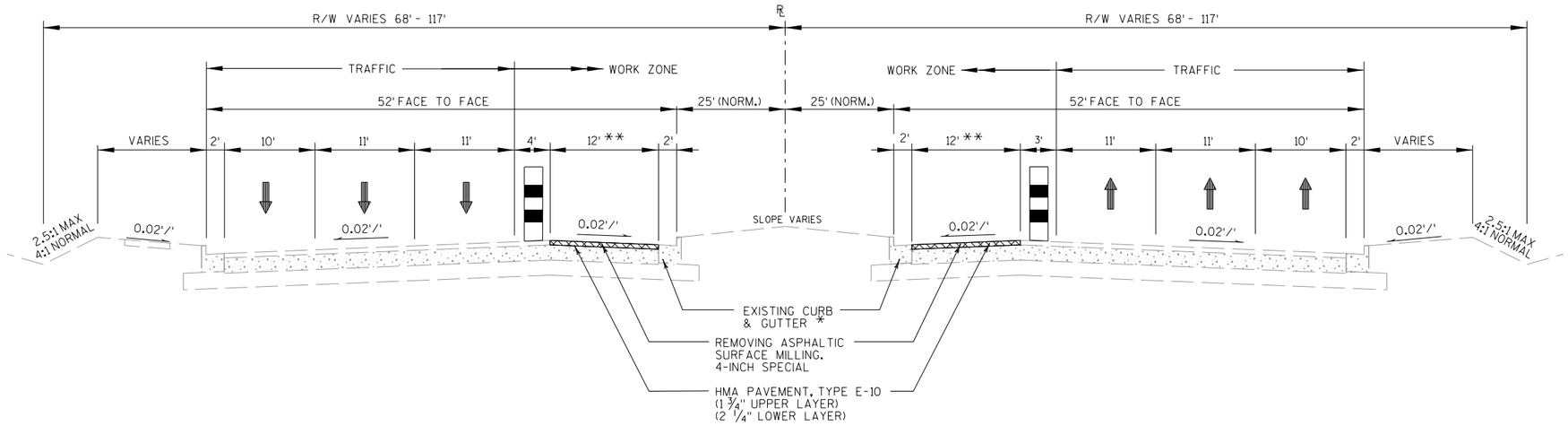
USH 18

MANHATTAN DRIVE TO MAIN STREET
STA. 125+00 TO STA. 174+20

NOTES:

* CONCRETE CURB & GUTTER TO BE REPLACED AT VARIOUS LOCATIONS THROUGHOUT THE PROJECT.

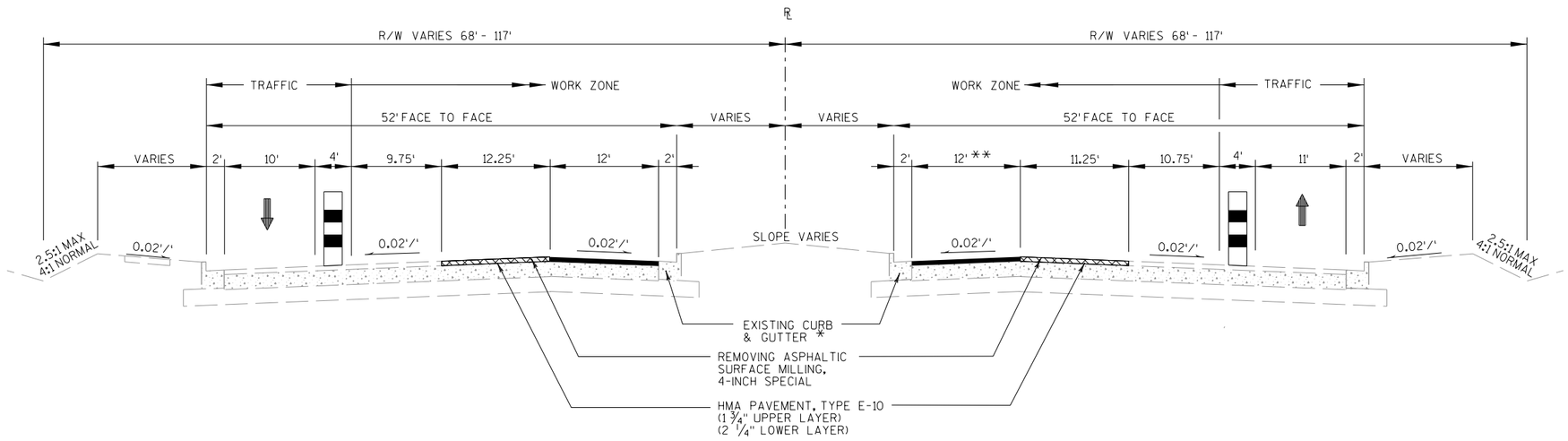
** BASE PATCHING CONCRETE SHES & CONCRETE PAVEMENT REPLACEMENT SHES TO BE PERFORMED AT VARIOUS LOCATIONS. (SEE REMOVAL PLAN FOR LOCATIONS AND AS DIRECTED BY ENGINEER)



STAGE 1 DAYTIME

USH 18

MAIN STREET TO IH-94
STA 174+20 TO STA 226+00



STAGE 1 NIGHTTIME

USH 18

MAIN STREET TO IH-94
STA 174+20 TO STA 226+00

LEGEND:

- HMA PAVEMENT, TYPE E-10
- REMOVING ASPHALTIC SURFACE MILLING, 4-INCH SPECIAL
- PAVEMENT PLACED IN PREVIOUS STAGE

NOTES:

* CONCRETE CURB & GUTTER TO BE REPLACED AT VARIOUS LOCATIONS THROUGHOUT THE PROJECT.

** BASE PATCHING CONCRETE SHES & CONCRETE PAVEMENT REPLACEMENT SHES TO BE PERFORMED AT VARIOUS LOCATIONS. (SEE REMOVAL PLAN FOR LOCATIONS)

PROJECT NO: 2210-16-71	HWY: USH 18	COUNTY: WAUKESHA	CONSTRUCTION STAGING TYPICAL SECTIONS	SHEET 324	E

2

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- FLEXIBLE TUBULAR MARKER AND BASE

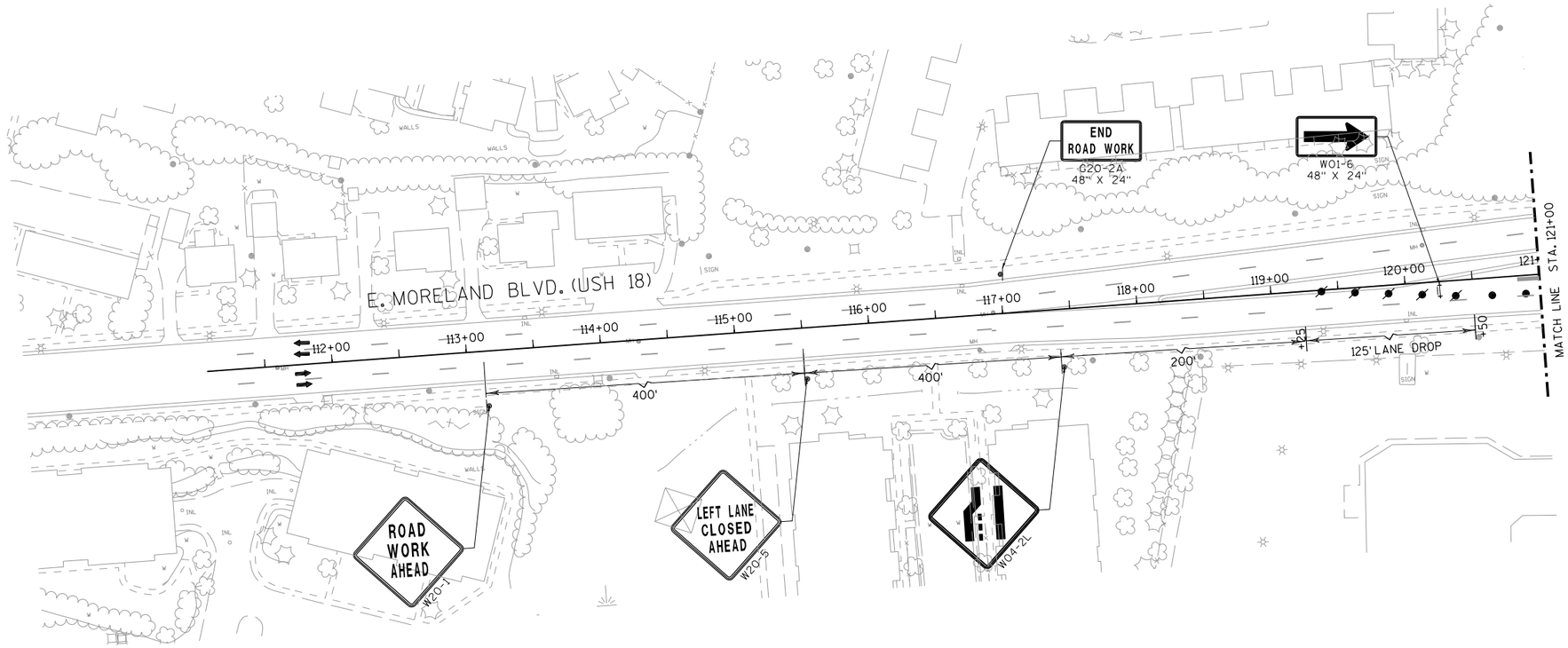
- WORK AREA
- DIRECTION OF TRAFFIC
- EXISTING BUS STOP LOCATION (SEE CONSTRUCTION NOTES)
- FLAGS, 16" X 16" MIN. (ORANGE)

SEE TEMPORARY SIGNAL PLANS FOR TEMPORARY STOP BAR LOCATIONS

PW4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (WHITE)
PW8	TEMPORARY PAVEMENT MARKING EPOXY 8-INCH (WHITE)
PW12	TEMPORARY PAVEMENT MARKING STOP LINE 12-INCH (WHITE)
PY4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
TW4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
TW8	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE)
TW12	TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 12-INCH (WHITE)
TY4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)

N

2



PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CONSTRUCTION STAGING - PRE-STAGE A	SHEET 325	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\026001_psa.dgn PLOT DATE : 11/5/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 100.0000 sf / in.

2

PW4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (WHITE)
PW8	TEMPORARY PAVEMENT MARKING EPOXY 8-INCH (WHITE)
PW12	TEMPORARY PAVEMENT MARKING STOP LINE 12-INCH (WHITE)
PY4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
TW4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
TW8	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE)
TW12	TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 12-INCH (WHITE)
TY4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)

N

END ROAD WORK
G20-2A
48" X 24"

ROAD WORK AHEAD
W20-1

JENNIFER LN.

ROAD WORK AHEAD
W20-1

LANE CLOSED
R11-2(MOD)
48" X 30"

W01-6
48" X 24"

245' LANE DROP

350'

W04-2L

LEFT LANE CLOSED AHEAD
W20-5

700'

ROAD WORK AHEAD
W20-1

700'

350'

END ROAD WORK
G20-2A
48" X 24"

RIGHT LANE MUST TURN RIGHT

ESTR

YIELD

SIGN

FILLER CAPS

CANOPY

MATCH LINE STA. 121+00

122+00 123+00 124+00 125+00 126+00 127+00 128+00 129+00 130+00 131+00 132+00 133+00 134+00 135+00 136

53+00 52+00 51+00 50+00 49+00 48+00 47+00 46+00

25' 11' 11' 12'

BEGIN LEFT TURN LANE
R3-20L
24" X 36"

TW8

STOP
ESTR

MANHATTAN DR.

LANE CLOSED
R11-2(MOD)
48" X 30"

E. MORELAND BLVD. (USH 18)

W012-1D
24" X 24"

END ROAD WORK
G20-2A
48" X 24"

END ROAD WORK
G20-2A
48" X 24"

ROAD WORK AHEAD
W20-1

PLACE SIGN AT NIAGARA STREET

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- FLEXIBLE TUBULAR MARKER AND BASE
- WORK AREA
- DIRECTION OF TRAFFIC
- EXISTING BUS STOP LOCATION (SEE CONSTRUCTION NOTES)
- FLAGS, 16" X 16" MIN. (ORANGE)

SEE TEMPORARY SIGNAL PLANS FOR TEMPORARY STOP BAR LOCATIONS

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CONSTRUCTION STAGING - PRE-STAGE A	SHEET 326	E

2

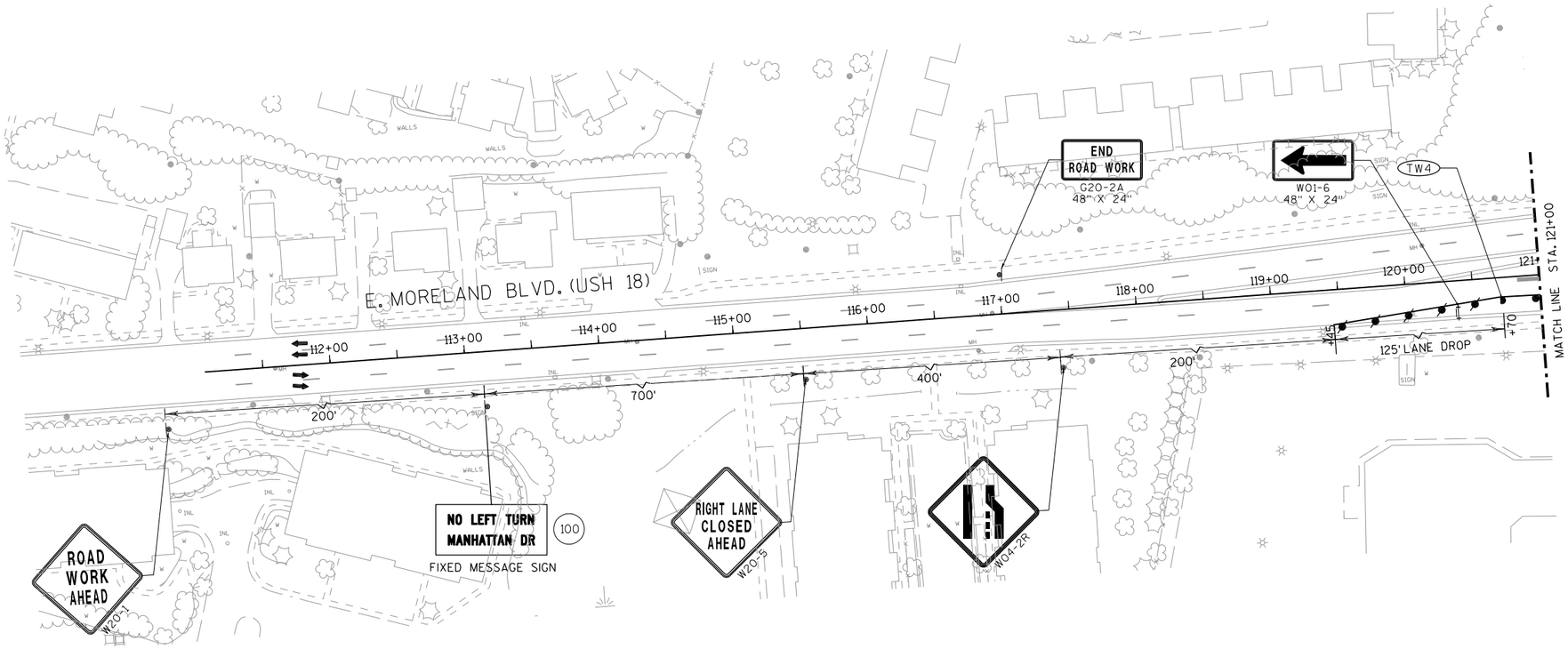
LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- FLEXIBLE TUBULAR MARKER AND BASE

- WORK AREA
- DIRECTION OF TRAFFIC
- EXISTING BUS STOP LOCATION (SEE CONSTRUCTION NOTES)
- FLAGS, 16" X 16" MIN. (ORANGE)
- SEE TEMPORARY SIGNAL PLANS FOR TEMPORARY STOP BAR LOCATIONS

PW4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (WHITE)
PW8	TEMPORARY PAVEMENT MARKING EPOXY 8-INCH (WHITE)
PW12	TEMPORARY PAVEMENT MARKING STOP LINE 12-INCH (WHITE)
PY4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
TW4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
TW8	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE)
TW12	TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 12-INCH (WHITE)
TY4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)

N



PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CONSTRUCTION STAGING - PRE-STAGE B	SHEET 327	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\026005_psb.dgn PLOT DATE : 11/5/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 100.0000 sf / in.

PW4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (WHITE)
PW8	TEMPORARY PAVEMENT MARKING EPOXY 8-INCH (WHITE)
PW12	TEMPORARY PAVEMENT MARKING STOP LINE 12-INCH (WHITE)
PY4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
TW4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
TW8	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE)
TW12	TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 12-INCH (WHITE)
TY4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)

N

ROAD WORK AHEAD W20-1

END ROAD WORK G20-2A 48" X 24"

W01-3L

20 M.P.H. W013-1 24" X 24"

LANE CLOSED R11-2(MOD) 48" X 30"

R3-1 24" X 24"

W01-3R

15 M.P.H. W013-1 24" X 24"

STA. 122+20, 0'RT

W01-6 48" X 24"

LANE CLOSED R11-2(MOD) 48" X 30"

STA. 124+60, 23'LT

245'LANE DROP

RIGHT LANE MUST TURN RIGHT COVER SIGN

W01-6 48" X 24"

LANE CLOSED R11-2(MOD) 48" X 30"

ROAD WORK AHEAD W20-1

JENNIFER LN.

350'

END ROAD WORK G20-2A 48" X 24"

MATCH LINE STA. 121+00

MATCH LINE STA. 136+00

E. MORELAND BLVD. (USH 18)

STA. 126+20, 19'LT

STA. 126+50, 25'RT

STA. 126+00, 19.5'RT

STA. 125+50, 6'LT

STA. 124+56, 14.6'RT

LANE CLOSED R11-2(MOD) 48" X 30"

R3-2 24" X 24"

ROAD CLOSED R11-2 48" X 30"

500'

ROAD CLOSED 500 FT W20-3

ROAD CLOSED AHEAD W20-3

PLACE SIGN AT NIAGARA STREET

END ROAD WORK C20-2A 48" X 24"

MANHATTAN DR.

FILLER CAPS

CANOPY

SIGN

121+00 122+00 123+00 124+00 125+00 126+00 127+00 128+00 129+00 130+00 131+00 132+00 133+00 134+00 135+00 136+00

53+00 52+00 51+00 50+00 49+00 48+00 47+00 46+00

+50 +95 25' 50' 11'

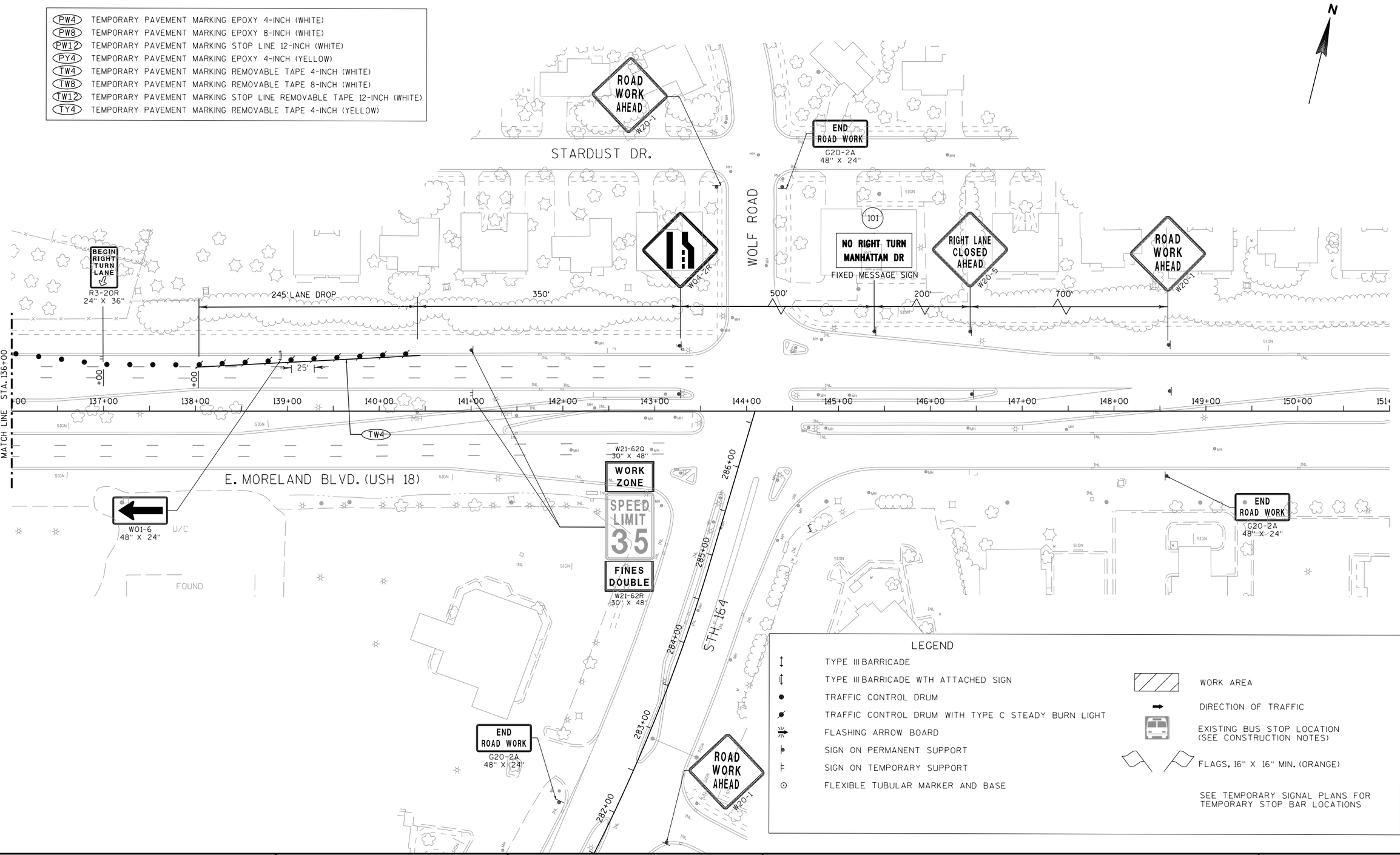
LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- FLEXIBLE TUBULAR MARKER AND BASE
- WORK AREA
- DIRECTION OF TRAFFIC
- EXISTING BUS STOP LOCATION (SEE CONSTRUCTION NOTES)
- FLAGS, 16" X 16" MIN. (ORANGE)

SEE TEMPORARY SIGNAL PLANS FOR TEMPORARY STOP BAR LOCATIONS

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CONSTRUCTION STAGING - PRE-STAGE B	SHEET 328	E

PW4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (WHITE)
PW8	TEMPORARY PAVEMENT MARKING EPOXY 8-INCH (WHITE)
PW12	TEMPORARY PAVEMENT MARKING STOP LINE 12-INCH (WHITE)
PY4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
TW4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
TW8	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE)
TW12	TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 12-INCH (WHITE)
TY4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)



LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- FLEXIBLE TUBULAR MARKER AND BASE
- WORK AREA
- DIRECTION OF TRAFFIC
- EXISTING BUS STOP LOCATION (SEE CONSTRUCTION NOTES)
- FLAGS, 16" X 16" MIN. (ORANGE)

SEE TEMPORARY SIGNAL PLANS FOR TEMPORARY STOP BAR LOCATIONS

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CONSTRUCTION STAGING - PRE-STAGE B	SHEET 329	E

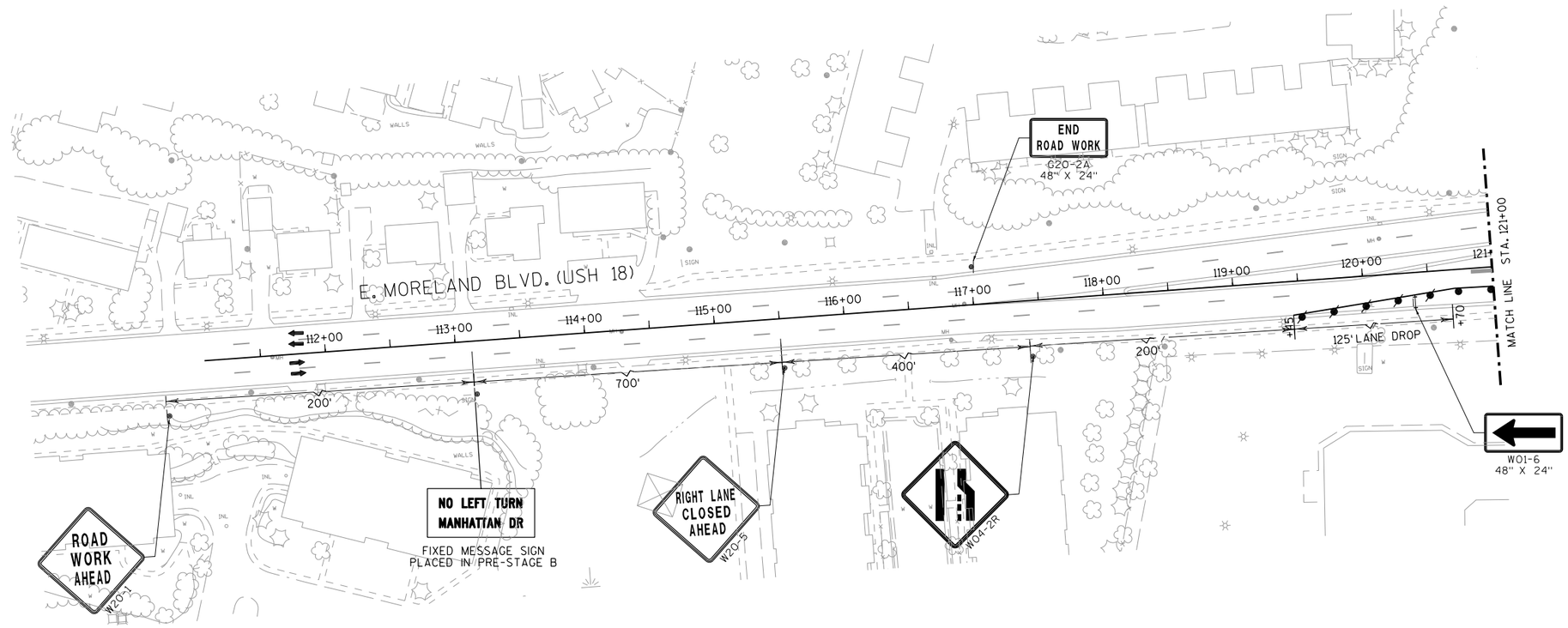
LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- FLEXIBLE TUBULAR MARKER AND BASE

- WORK AREA
- DIRECTION OF TRAFFIC
- EXISTING BUS STOP LOCATION (SEE CONSTRUCTION NOTES)
- FLAGS, 16" X 16" MIN. (ORANGE)
- SEE TEMPORARY SIGNAL PLANS FOR TEMPORARY STOP BAR LOCATIONS

PW4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (WHITE)
PW8	TEMPORARY PAVEMENT MARKING EPOXY 8-INCH (WHITE)
PW12	TEMPORARY PAVEMENT MARKING STOP LINE 12-INCH (WHITE)
PY4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
TW4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
TW8	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE)
TW12	TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 12-INCH (WHITE)
TY4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)

N



PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CONSTRUCTION STAGING - PRE-STAGE C	SHEET 330	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\026009_psc.dgn PLOT DATE : 11/5/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 100.0000 sf / in.

PW4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (WHITE)
PW8	TEMPORARY PAVEMENT MARKING EPOXY 8-INCH (WHITE)
PW12	TEMPORARY PAVEMENT MARKING STOP LINE 12-INCH (WHITE)
PY4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
TW4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
TW8	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE)
TW12	TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 12-INCH (WHITE)
TY4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)

N

END ROAD WORK
G20-2A
48" X 24"

ROAD WORK AHEAD
W20-1

TY4
TW4
STA. 50+70, 21' RT

W01-3L
20 M.P.H.
W013-1
24" X 24"

RIGHT LANE MUST TURN RIGHT
COVER SIGN

PW4

RIGHT LANE MUST TURN RIGHT
R3-7R
30" X 30"

LANE CLOSED
R11-2(MOD)
48" X 30"

ROAD WORK AHEAD
W20-1

JENNIFER LN.

END ROAD WORK
G20-2A
48" X 24"

W01-3R
15 M.P.H.
W013-1
24" X 24"

W01-6
48" X 24"

1 CANOPY
W01-6
48" X 24"

ESTR

SIGN

FILLER CAPS

CANOPY

MATCH LINE STA. 121+00

MATCH LINE STA. 136+00

121+00 122+00 123+00 124+00 125+00 126+00 127+00 128+00 129+00 130+00 131+00 132+00 133+00 134+00 135+00 136+00

53+00 52+00 51+00 50+00 49+00 48+00 47+00 46+00

+50 +50 +100

25' 25' 25' 50' 350'

11'

E. MORELAND BLVD. (USH 18)

LANE CLOSED
R11-2(MOD)
48" X 30"

W12-1D
24" X 24"

LANE CLOSED
R11-2(MOD)
48" X 30"

R3-2
24" X 24"

W01-6
48" X 24"

ROAD CLOSED
R11-2
48" X 30"

500'

ROAD CLOSED 500 FT
W20-3

ROAD CLOSED AHEAD
W20-3

PLACE SIGN AT NIAGARA STREET

END ROAD WORK
G20-2A
48" X 24"

MANHATTAN DR.

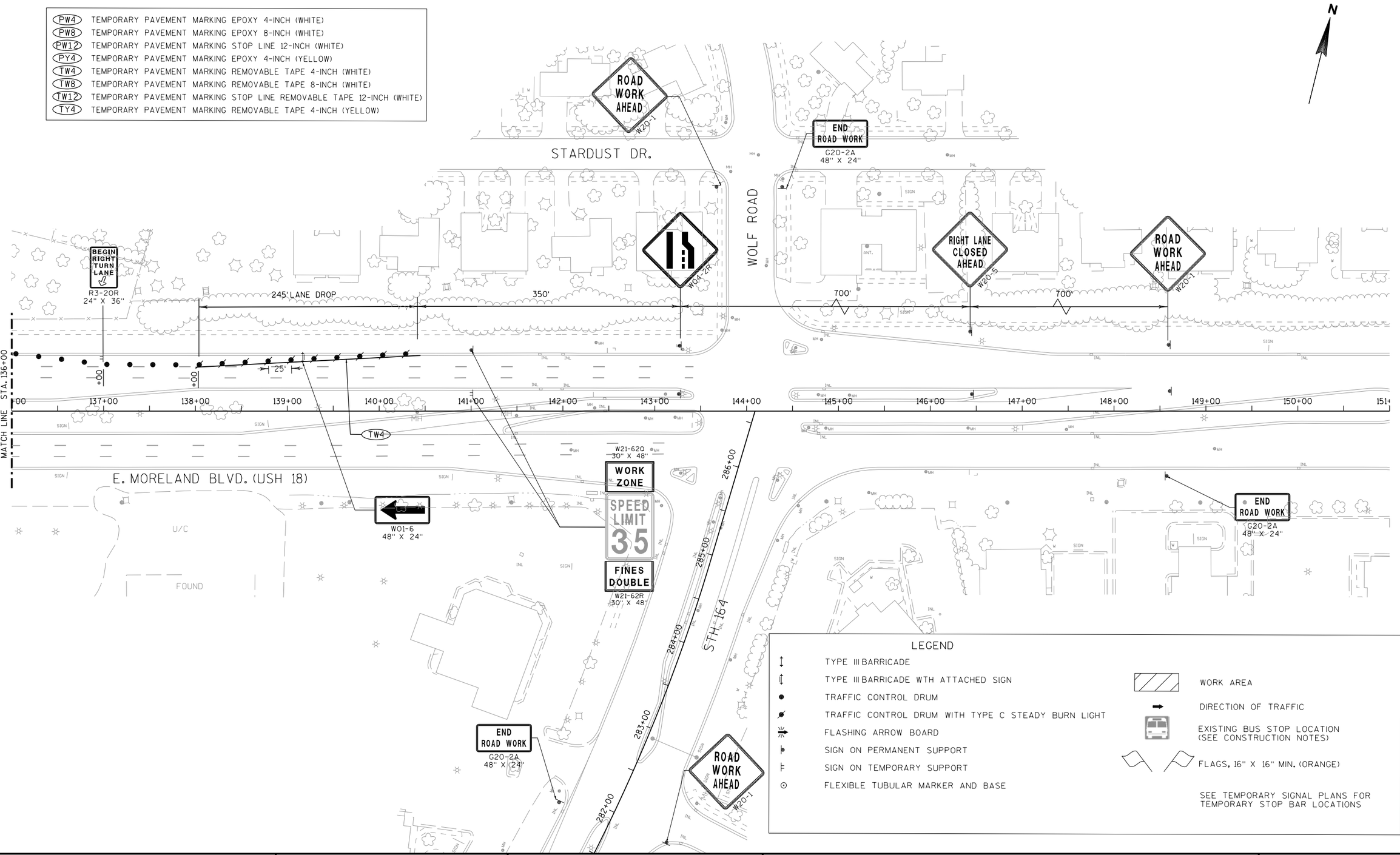
LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- FLEXIBLE TUBULAR MARKER AND BASE
- WORK AREA
- DIRECTION OF TRAFFIC
- EXISTING BUS STOP LOCATION (SEE CONSTRUCTION NOTES)
- FLAGS, 16" X 16" MIN. (ORANGE)

SEE TEMPORARY SIGNAL PLANS FOR TEMPORARY STOP BAR LOCATIONS

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CONSTRUCTION STAGING - PRE-STAGE C	SHEET 331	E

PW4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (WHITE)
PW8	TEMPORARY PAVEMENT MARKING EPOXY 8-INCH (WHITE)
PW12	TEMPORARY PAVEMENT MARKING STOP LINE 12-INCH (WHITE)
PY4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
TW4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
TW8	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE)
TW12	TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 12-INCH (WHITE)
TY4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)



LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- FLEXIBLE TUBULAR MARKER AND BASE
- WORK AREA
- DIRECTION OF TRAFFIC
- EXISTING BUS STOP LOCATION (SEE CONSTRUCTION NOTES)
- FLAGS, 16" X 16" MIN. (ORANGE)

SEE TEMPORARY SIGNAL PLANS FOR TEMPORARY STOP BAR LOCATIONS

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CONSTRUCTION STAGING - PRE-STAGE C	SHEET 332	E

2

LEGEND

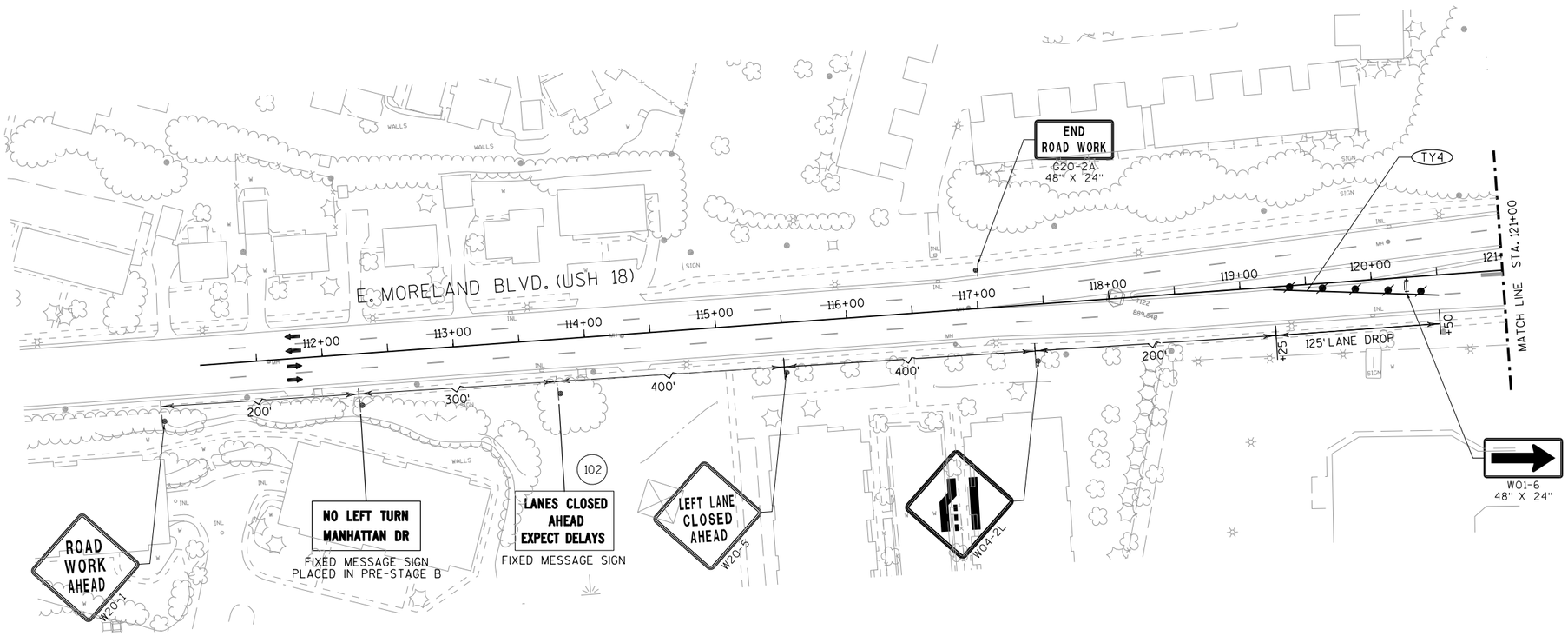
- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- FLEXIBLE TUBULAR MARKER AND BASE

- WORK AREA
- DIRECTION OF TRAFFIC
- EXISTING BUS STOP LOCATION (SEE CONSTRUCTION NOTES)
- FLAGS, 16" X 16" MIN. (ORANGE)
- SEE TEMPORARY SIGNAL PLANS FOR TEMPORARY STOP BAR LOCATIONS

PW4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (WHITE)
PW8	TEMPORARY PAVEMENT MARKING EPOXY 8-INCH (WHITE)
PW12	TEMPORARY PAVEMENT MARKING STOP LINE 12-INCH (WHITE)
PY4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
TW4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
TW8	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE)
TW12	TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 12-INCH (WHITE)
TY4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)

N

2



PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CONSTRUCTION STAGING - STAGE 1	SHEET 333	E

2

PW4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (WHITE)
PW8	TEMPORARY PAVEMENT MARKING EPOXY 8-INCH (WHITE)
PW12	TEMPORARY PAVEMENT MARKING STOP LINE 12-INCH (WHITE)
PY4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
TW4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
TW8	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE)
TW12	TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 12-INCH (WHITE)
TY4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)

N

END ROAD WORK
G20-2A
48" X 24"

ROAD WORK AHEAD
W20-1

W01-6
48" X 24"

LANE CLOSED
R11-2(MOD)
48" X 30"

TW4

TY4
DOUBLE

ESTR

PW8

BEGIN LEFT TURN LANE
R3-20L
24" X 36"

RIGHT LANE MUST TURN RIGHT
ESTR

PW4

ACCESS MAY BE CLOSED WHEN RECONSTRUCTING MEDIAN OPENING

350'

JENNIFER LN.

LANE CLOSED
R11-2(MOD)
48" X 30"

END ROAD WORK
G20-2A
48" X 24"

MATCH LINE STA. 121+00

122+00 123+00 124+00 125+00 126+00 127+00 128+00 129+00 130+00 131+00 132+00 133+00 134+00 135+00 136

MATCH LINE STA. 136+00

25' 50' TYP. 11' 11'

E. MORELAND BLVD. (USH 18)

50'

53+00 52+00 51+00 50+00 49+00 48+00 47+00 46+00

MANHATTAN DR.

TW12

STOP
ESTR

R3-2
24" X 24"

LANE CLOSED
R11-2(MOD)
48" X 30"

W21-62Q
30" X 48"

WORK ZONE

SPEED LIMIT 35

FINES DOUBLE
W21-62R
30" X 48"

FILLER CAPS

CANOPY

END ROAD WORK
G20-2A
48" X 24"

RIGHT TURN ONLY AT MORELAND BLVD
107
FIXED MESSAGE SIGN

ROAD WORK AHEAD
W20-1
PLACE SIGN AT NIAGARA STREET

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- FLEXIBLE TUBULAR MARKER AND BASE
- WORK AREA
- DIRECTION OF TRAFFIC
- EXISTING BUS STOP LOCATION (SEE CONSTRUCTION NOTES)
- FLAGS, 16" X 16" MIN. (ORANGE)

SEE TEMPORARY SIGNAL PLANS FOR TEMPORARY STOP BAR LOCATIONS

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CONSTRUCTION STAGING - STAGE 1	SHEET 334	E

PW4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (WHITE)
PW8	TEMPORARY PAVEMENT MARKING EPOXY 8-INCH (WHITE)
PW12	TEMPORARY PAVEMENT MARKING STOP LINE 12-INCH (WHITE)
PY4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
TW4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
TW8	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE)
TW12	TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 12-INCH (WHITE)
TY4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)

N

STARDUST DR.

W21-62O
30" X 48"
WORK ZONE
SPEED LIMIT 35
FINES DOUBLE
W21-62R
30" X 48"

ROAD WORK AHEAD
W20-1

WOLF ROAD

END ROAD WORK
G20-2A
48" X 24"

BEGIN LEFT TURN LANE
R3-20L
24" X 36"

LANE CLOSED
R11-2(MOD)
48" X 30"

PW4
PW8

MATCH LINE STA. 136+00
137+00
138+00
139+00
140+00
141+00
142+00
143+00
144+00
145+00
146+00
147+00
148+00
149+00
150+00
MATCH LINE STA. 151+00

11'
+50
50' TYP.
25'
+00

E. MORELAND BLVD. (USH 18)

U/C
FOUND

ESTR
YIELD
ANT.

286+00
285+00
284+00
283+00
282+00
STH 164

103
LANES CLOSED AHEAD EXPECT DELAYS
FIXED MESSAGE SIGN

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- FLEXIBLE TUBULAR MARKER AND BASE
- WORK AREA
- DIRECTION OF TRAFFIC
- EXISTING BUS STOP LOCATION (SEE CONSTRUCTION NOTES)
- FLAGS, 16" X 16" MIN. (ORANGE)

SEE TEMPORARY SIGNAL PLANS FOR TEMPORARY STOP BAR LOCATIONS

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CONSTRUCTION STAGING - STAGE 1	SHEET 335	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\026023_s1.dgn
PLOT DATE : 11/5/2015
PLOT BY : GRAEF
PLOT NAME :
PLOT SCALE : 100.0000 sf / in.
WISDOT/CADDS SHEET 42

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- FLEXIBLE TUBULAR MARKER AND BASE
- WORK AREA
- DIRECTION OF TRAFFIC
- EXISTING BUS STOP LOCATION (SEE CONSTRUCTION NOTES)
- FLAGS, 16" X 16" MIN. (ORANGE)
- SEE TEMPORARY SIGNAL PLANS FOR TEMPORARY STOP BAR LOCATIONS

PW4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (WHITE)
PW8	TEMPORARY PAVEMENT MARKING EPOXY 8-INCH (WHITE)
PW12	TEMPORARY PAVEMENT MARKING STOP LINE 12-INCH (WHITE)
PY4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
TW4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
TW8	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE)
TW12	TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 12-INCH (WHITE)
TY4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)

N

ACCESS MAY BE CLOSED WHEN RECONSTRUCTING MEDIAN OPENING

MATCH LINE STA. 151+00

E. MORELAND BLVD. (USH 18)

GATEWAY DR.

AVALON DR.

STA. 166+00 MATCH LINE

POOL

50' TYP.

W21-62O 30" X 48" WORK ZONE

SPEED LIMIT 45

W21-62R 30" X 48" FINES DOUBLE

ROAD WORK AHEAD W20-1 — PLACE AT STARDUST DR.

END ROAD WORK G20-2A 48" X 24"

ROAD WORK AHEAD W20-1 — PLACE AT PARAMOUNT DR.

END ROAD WORK G20-2A 48" X 24"

LANE CLOSED R11-2(MOD) 48" X 30"

BEGIN LEFT TURN LANE R3-20L 24" X 36"

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CONSTRUCTION STAGING - STAGE 1	SHEET 336	E

2

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- FLEXIBLE TUBULAR MARKER AND BASE
- WORK AREA
- DIRECTION OF TRAFFIC
- EXISTING BUS STOP LOCATION (SEE CONSTRUCTION NOTES)
- FLAGS, 16" X 16" MIN. (ORANGE)

SEE TEMPORARY SIGNAL PLANS FOR TEMPORARY STOP BAR LOCATIONS

PW4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (WHITE)
PW8	TEMPORARY PAVEMENT MARKING EPOXY 8-INCH (WHITE)
PW12	TEMPORARY PAVEMENT MARKING STOP LINE 12-INCH (WHITE)
PY4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
TW4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
TW8	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE)
TW12	TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 12-INCH (WHITE)
TY4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)

N

ROAD WORK AHEAD W20-1

END ROAD WORK G20-2A 48" X 24"

LANE CLOSED R11-2(MOD) 48" X 30"

BEGIN LEFT TURN LANE R3-20L 24" X 36"

BEGIN RIGHT TURN LANE R3-20R 24" X 36"

RAMONA RD

STARDUST DR.

E. MORELAND BLVD. (USH 18)

LONGVIEW DR.

E. MAIN ST.

ESTR.

MATCH LINE STA. 166+00

MATCH LINE STA. 181+00

540' LANE DROP

50' (TYP)

25'

11'

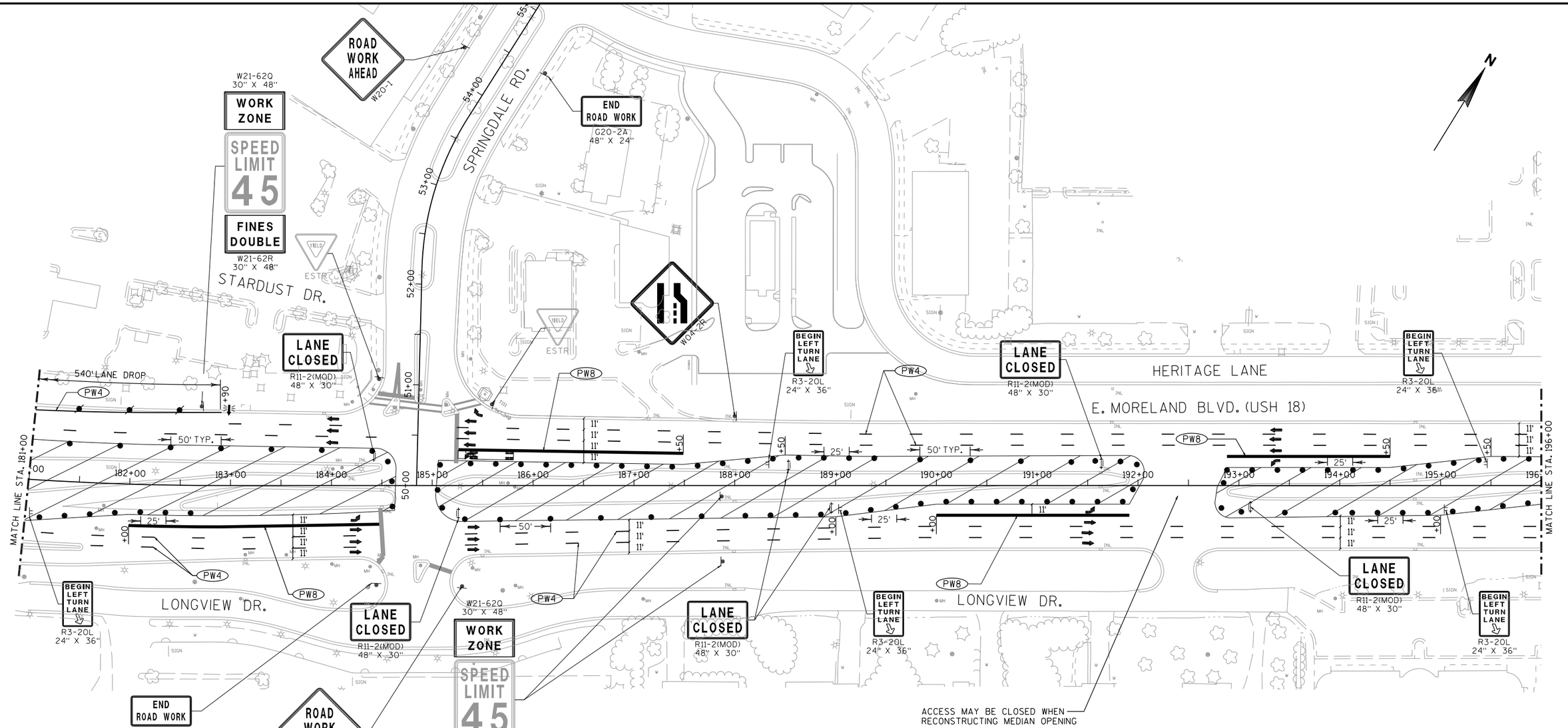
ACCESS MAY BE CLOSED WHEN RECONSTRUCTING MEDIAN OPENING

FILLER CAPS

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CONSTRUCTION STAGING - STAGE 1	SHEET 337	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\026025_s1.dgn PLOT DATE : 11/5/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 100.0000 sf / in.

2



PW4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (WHITE)
PW8	TEMPORARY PAVEMENT MARKING EPOXY 8-INCH (WHITE)
PW12	TEMPORARY PAVEMENT MARKING STOP LINE 12-INCH (WHITE)
PY4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
TW4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
TW8	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE)
TW12	TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 12-INCH (WHITE)
TY4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- FLEXIBLE TUBULAR MARKER AND BASE
- WORK AREA
- DIRECTION OF TRAFFIC
- EXISTING BUS STOP LOCATION (SEE CONSTRUCTION NOTES)
- FLAGS, 16" X 16" MIN. (ORANGE)

SEE TEMPORARY SIGNAL PLANS FOR TEMPORARY STOP BAR LOCATIONS

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CONSTRUCTION STAGING - STAGE 1	SHEET 338	E

2

PARKLAWN DR.

ABBOTT DR.

E. MORELAND BLVD. (USH 18)

PARKLAWN CT.

KOSSOW RD.

E. MORELAND CT.

SWENSON DR

KOSSOW RD

PW4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (WHITE)
PW8	TEMPORARY PAVEMENT MARKING EPOXY 8-INCH (WHITE)
PW12	TEMPORARY PAVEMENT MARKING STOP LINE 12-INCH (WHITE)
PY4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
TW4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
TW8	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE)
TW12	TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 12-INCH (WHITE)
TY4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)

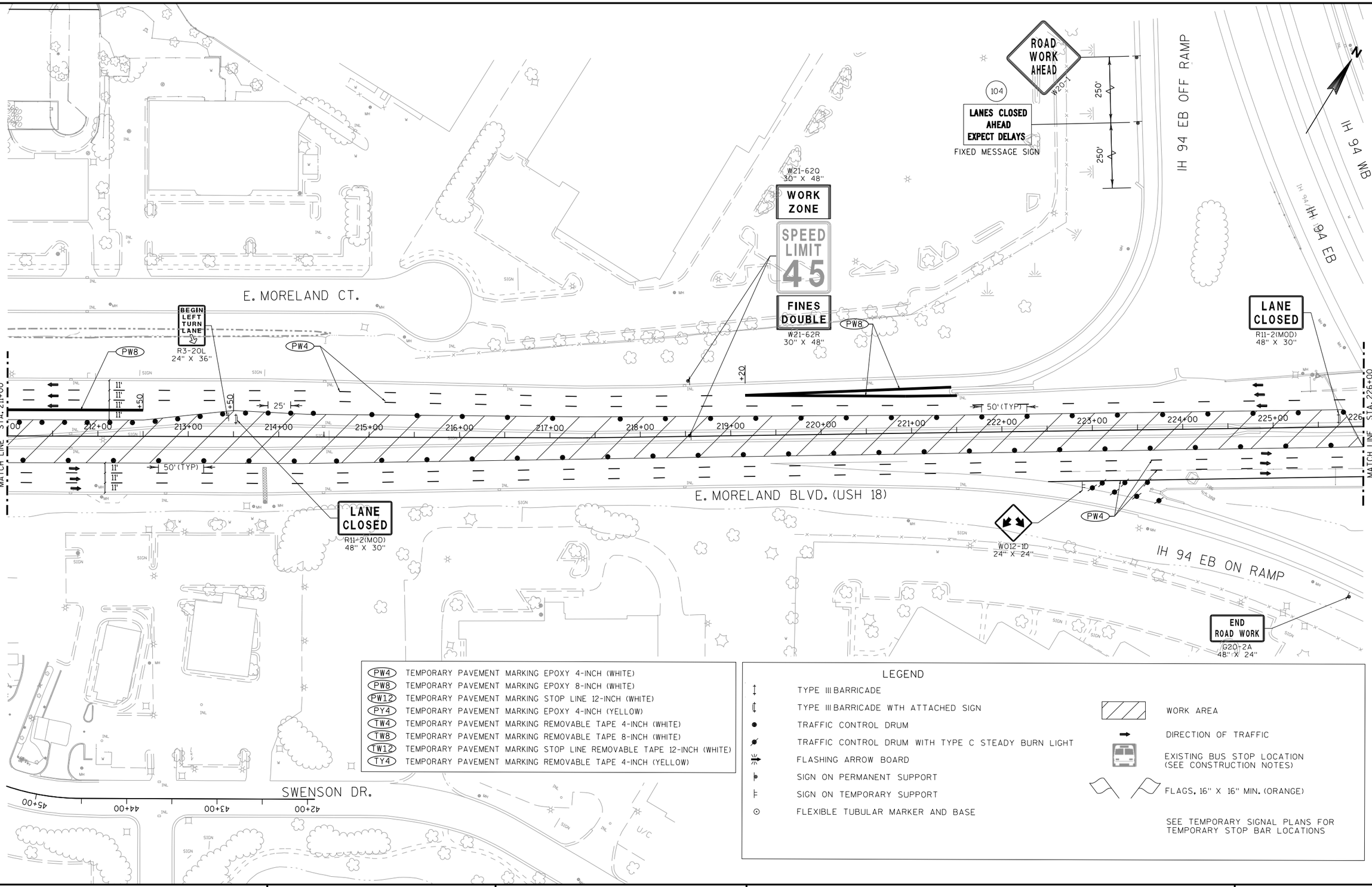
LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- FLEXIBLE TUBULAR MARKER AND BASE
- WORK AREA
- DIRECTION OF TRAFFIC
- EXISTING BUS STOP LOCATION (SEE CONSTRUCTION NOTES)
- FLAGS, 16" X 16" MIN. (ORANGE)

SEE TEMPORARY SIGNAL PLANS FOR TEMPORARY STOP BAR LOCATIONS

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CONSTRUCTION STAGING - STAGE 1	SHEET 339 E

2



PW4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (WHITE)
PW8	TEMPORARY PAVEMENT MARKING EPOXY 8-INCH (WHITE)
PW12	TEMPORARY PAVEMENT MARKING STOP LINE 12-INCH (WHITE)
PY4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
TW4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
TW8	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE)
TW12	TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 12-INCH (WHITE)
TY4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)

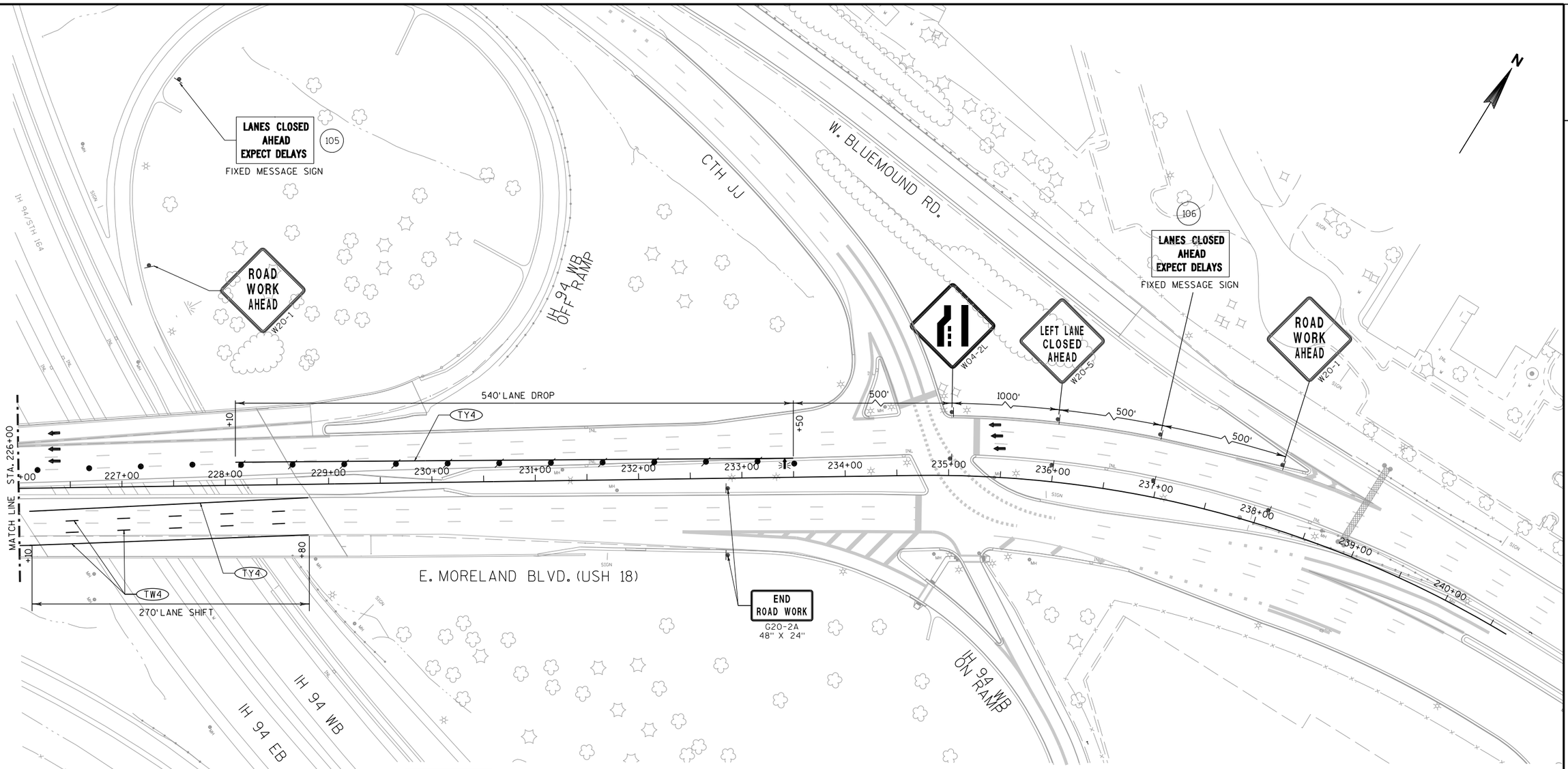
LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- FLEXIBLE TUBULAR MARKER AND BASE
- WORK AREA
- DIRECTION OF TRAFFIC
- EXISTING BUS STOP LOCATION (SEE CONSTRUCTION NOTES)
- FLAGS, 16" X 16" MIN. (ORANGE)

SEE TEMPORARY SIGNAL PLANS FOR TEMPORARY STOP BAR LOCATIONS

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CONSTRUCTION STAGING - STAGE 1	SHEET 340	E

2



PW4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (WHITE)
PW8	TEMPORARY PAVEMENT MARKING EPOXY 8-INCH (WHITE)
PW12	TEMPORARY PAVEMENT MARKING STOP LINE 12-INCH (WHITE)
PY4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
TW4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
TW8	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE)
TW12	TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 12-INCH (WHITE)
TY4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- FLEXIBLE TUBULAR MARKER AND BASE
- WORK AREA
- DIRECTION OF TRAFFIC
- EXISTING BUS STOP LOCATION (SEE CONSTRUCTION NOTES)
- FLAGS, 16" X 16" MIN. (ORANGE)

SEE TEMPORARY SIGNAL PLANS FOR TEMPORARY STOP BAR LOCATIONS

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CONSTRUCTION STAGING - STAGE 1	SHEET 341	E

2

LEGEND

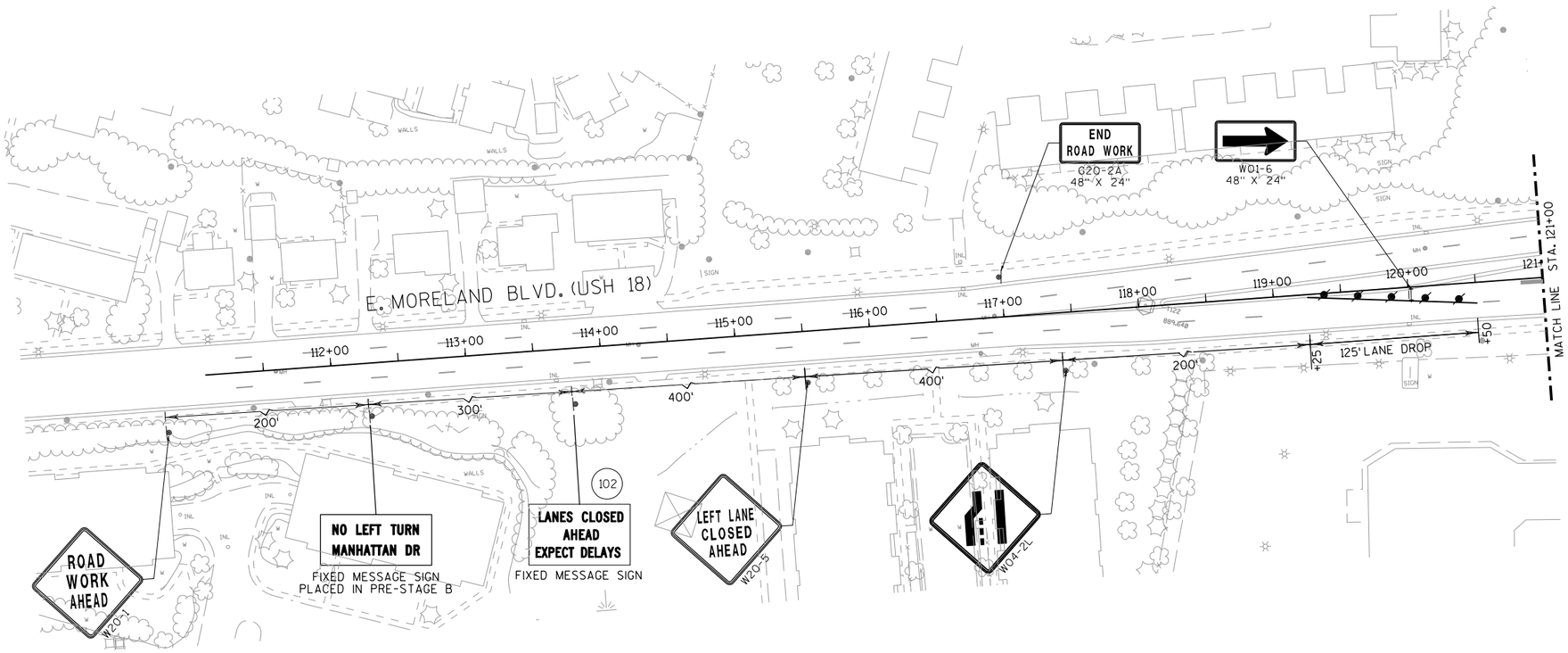
- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- FLEXIBLE TUBULAR MARKER AND BASE

- WORK AREA
- DIRECTION OF TRAFFIC
- EXISTING BUS STOP LOCATION (SEE CONSTRUCTION NOTES)
- FLAGS, 16" X 16" MIN. (ORANGE)
- SEE TEMPORARY SIGNAL PLANS FOR TEMPORARY STOP BAR LOCATIONS

PW4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (WHITE)
PW8	TEMPORARY PAVEMENT MARKING EPOXY 8-INCH (WHITE)
PW12	TEMPORARY PAVEMENT MARKING STOP LINE 12-INCH (WHITE)
PY4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
TW4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
TW8	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE)
TW12	TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 12-INCH (WHITE)
TY4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)

N

2



PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CONSTRUCTION STAGING - STAGE 1 NIGHTTIME	SHEET 342	E

PW4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (WHITE)
PW8	TEMPORARY PAVEMENT MARKING EPOXY 8-INCH (WHITE)
PW12	TEMPORARY PAVEMENT MARKING STOP LINE 12-INCH (WHITE)
PY4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
TW4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
TW8	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE)
TW12	TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 12-INCH (WHITE)
TY4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)

END ROAD WORK
G20-2A
48" X 24"

ROAD WORK AHEAD
W20-1

LANE CLOSED
R11-2(MOD)
48" X 30"

YIELD
ESTR

RIGHT LANE MUST TURN RIGHT
ESTR

350'

JENNIFER LN.

END ROAD WORK
G20-2A
48" X 24"

N

STA. 121+00

MATCH LINE

122+00 123+00 124+00 125+00 126+00 127+00 128+00 129+00 130+00 131+00 132+00 133+00 134+00 135+00 136+00

STA. 136+00

MATCH LINE

50'(TYP) 11' 11' 50'(TYP)

E. MORELAND BLVD. (USH 18)

53+00 52+00 51+00 50+00 49+00 48+00 47+00 46+00

25'

STOP
ESTR

R3-2
24" X 24"

W21-62Q
30" X 48"

LANE CLOSED
R11-2(MOD)
48" X 30"

WORK ZONE

SPEED LIMIT 35

FINES DOUBLE
W21-62R
30" X 48"

FILLER CAPS

CANOPY

MANHATTAN DR.

END ROAD WORK
G20-2A
48" X 24"

RIGHT TURN ONLY AT MORELAND BLVD
107
FIXED MESSAGE SIGN

50'

ROAD WORK AHEAD
W20-1

PLACE SIGN AT NIAGARA STREET

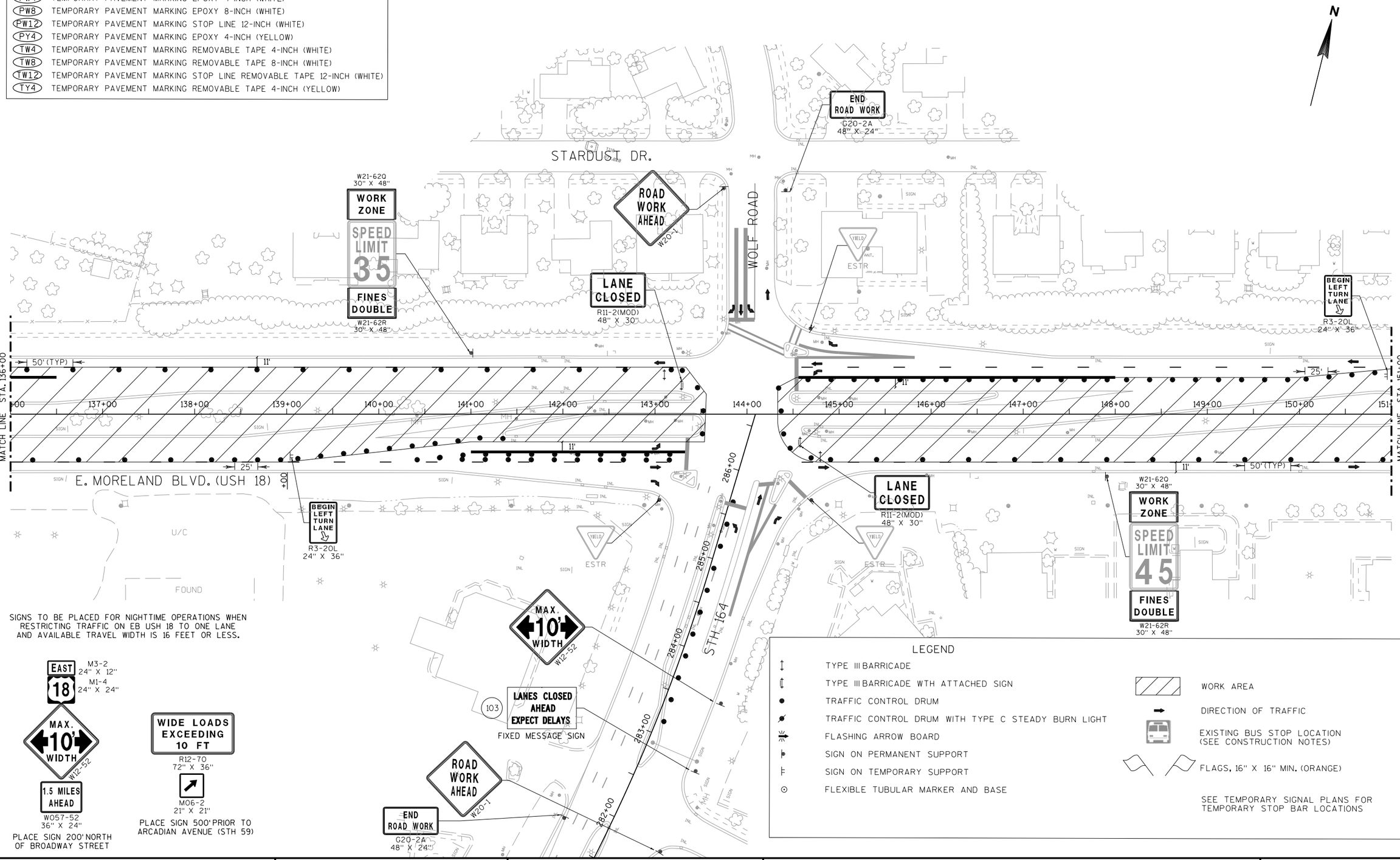
LEGEND

	TYPE III BARRICADE
	TYPE III BARRICADE WTH ATTACHED SIGN
	TRAFFIC CONTROL DRUM
	TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
	FLASHING ARROW BOARD
	SIGN ON PERMANENT SUPPORT
	SIGN ON TEMPORARY SUPPORT
	FLEXIBLE TUBULAR MARKER AND BASE
	WORK AREA
	DIRECTION OF TRAFFIC
	EXISTING BUS STOP LOCATION (SEE CONSTRUCTION NOTES)
	FLAGS, 16" X 16" MIN. (ORANGE)

SEE TEMPORARY SIGNAL PLANS FOR TEMPORARY STOP BAR LOCATIONS

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CONSTRUCTION STAGING - STAGE 1 NIGHTTIME	SHEET 343	E

PW4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (WHITE)
PW8	TEMPORARY PAVEMENT MARKING EPOXY 8-INCH (WHITE)
PW12	TEMPORARY PAVEMENT MARKING STOP LINE 12-INCH (WHITE)
PY4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
TW4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
TW8	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE)
TW12	TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 12-INCH (WHITE)
TY4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)



SIGNS TO BE PLACED FOR NIGHTTIME OPERATIONS WHEN RESTRICTING TRAFFIC ON EB USH 18 TO ONE LANE AND AVAILABLE TRAVEL WIDTH IS 16 FEET OR LESS.

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- FLEXIBLE TUBULAR MARKER AND BASE
- WORK AREA
- DIRECTION OF TRAFFIC
- EXISTING BUS STOP LOCATION (SEE CONSTRUCTION NOTES)
- FLAGS, 16" X 16" MIN. (ORANGE)

SEE TEMPORARY SIGNAL PLANS FOR TEMPORARY STOP BAR LOCATIONS

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CONSTRUCTION STAGING - STAGE 1 NIGHTTIME	SHEET 344	E

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- FLEXIBLE TUBULAR MARKER AND BASE
- WORK AREA
- DIRECTION OF TRAFFIC
- EXISTING BUS STOP LOCATION (SEE CONSTRUCTION NOTES)
- FLAGS, 16" X 16" MIN. (ORANGE)

SEE TEMPORARY SIGNAL PLANS FOR TEMPORARY STOP BAR LOCATIONS

PW4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (WHITE)
PW8	TEMPORARY PAVEMENT MARKING EPOXY 8-INCH (WHITE)
PW12	TEMPORARY PAVEMENT MARKING STOP LINE 12-INCH (WHITE)
PY4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
TW4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
TW8	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE)
TW12	TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 12-INCH (WHITE)
TY4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)

N

W21-62Q
30" X 48"
WORK ZONE
SPEED LIMIT 45
FINES DOUBLE
W21-62R
30" X 48"

ROAD WORK AHEAD
W20-1
PLACE AT STARDUST DR.

AVALON DR.

END ROAD WORK
G20-2A
48" X 24"

LANE CLOSED
R11-2(MOD)
48" X 30"

BEGIN LEFT TURN LANE
R3-20L
24" X 36"

MATCH LINE STA. 151+00

50' (TYP)

11'

152+00 153+00 154+00 155+00 156+00 157+00 158+00 159+00 160+00 161+00 162+00 163+00 164+00 165+00 166+00

25'

+50

E. MORELAND BLVD. (USH 18)

GATEWAY DR.

END ROAD WORK
G20-2A
48" X 24"

ROAD WORK AHEAD
W20-1
PLACE AT PARAMOUNT DR.

BEGIN LEFT TURN LANE
R3-20L
24" X 36"

LANE CLOSED
R11-2(MOD)
48" X 30"

W21-62Q
30" X 48"
WORK ZONE
SPEED LIMIT 45
FINES DOUBLE
W21-62R
30" X 48"

POOL

MATCH LINE STA. 166+00

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CONSTRUCTION STAGING - STAGE 1 NIGHTTIME	SHEET 345 E

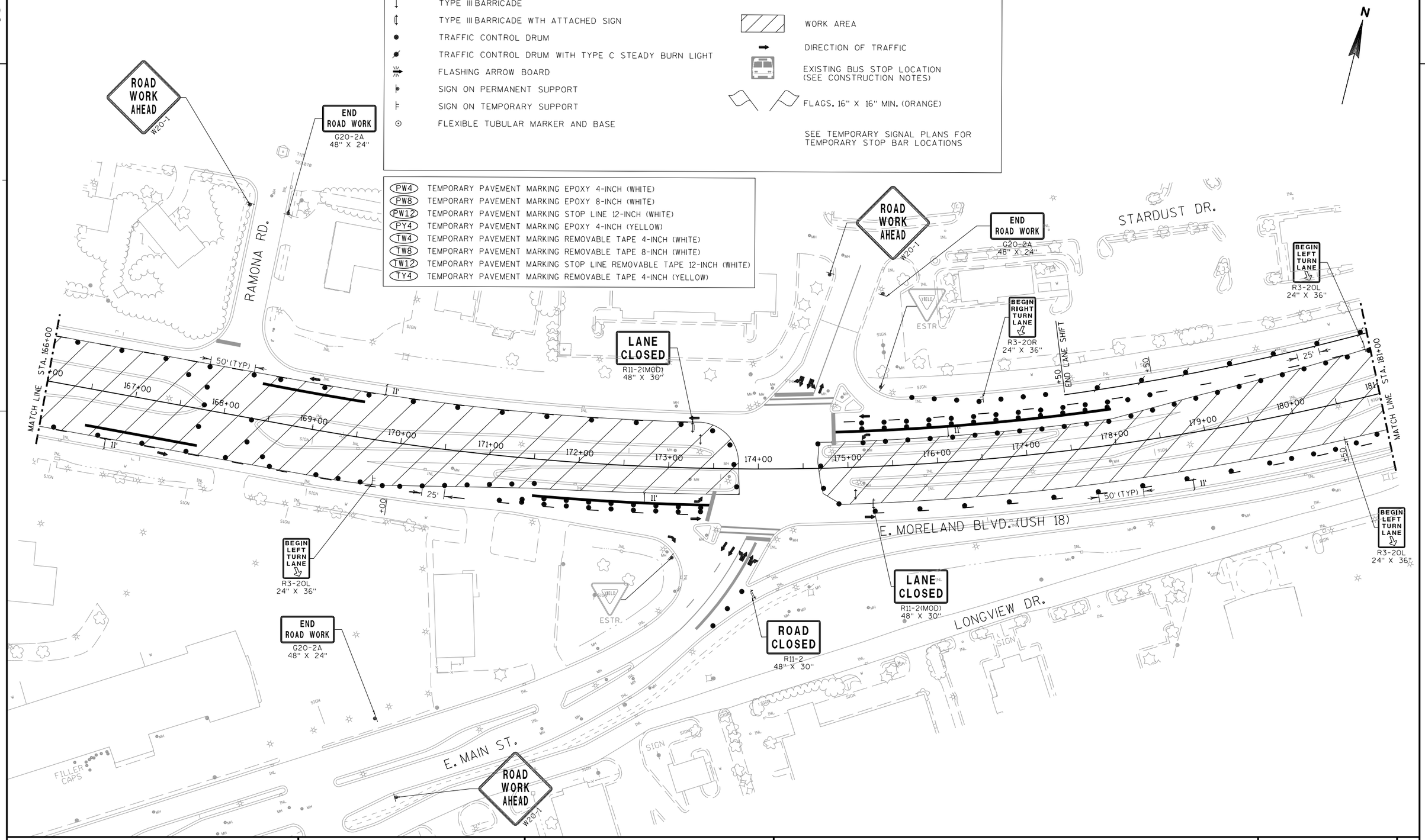
FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\026044_s1n.dgn PLOT DATE : 11/5/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 100.0000 sf / in.

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- FLEXIBLE TUBULAR MARKER AND BASE
- WORK AREA
- DIRECTION OF TRAFFIC
- EXISTING BUS STOP LOCATION (SEE CONSTRUCTION NOTES)
- FLAGS, 16" X 16" MIN. (ORANGE)

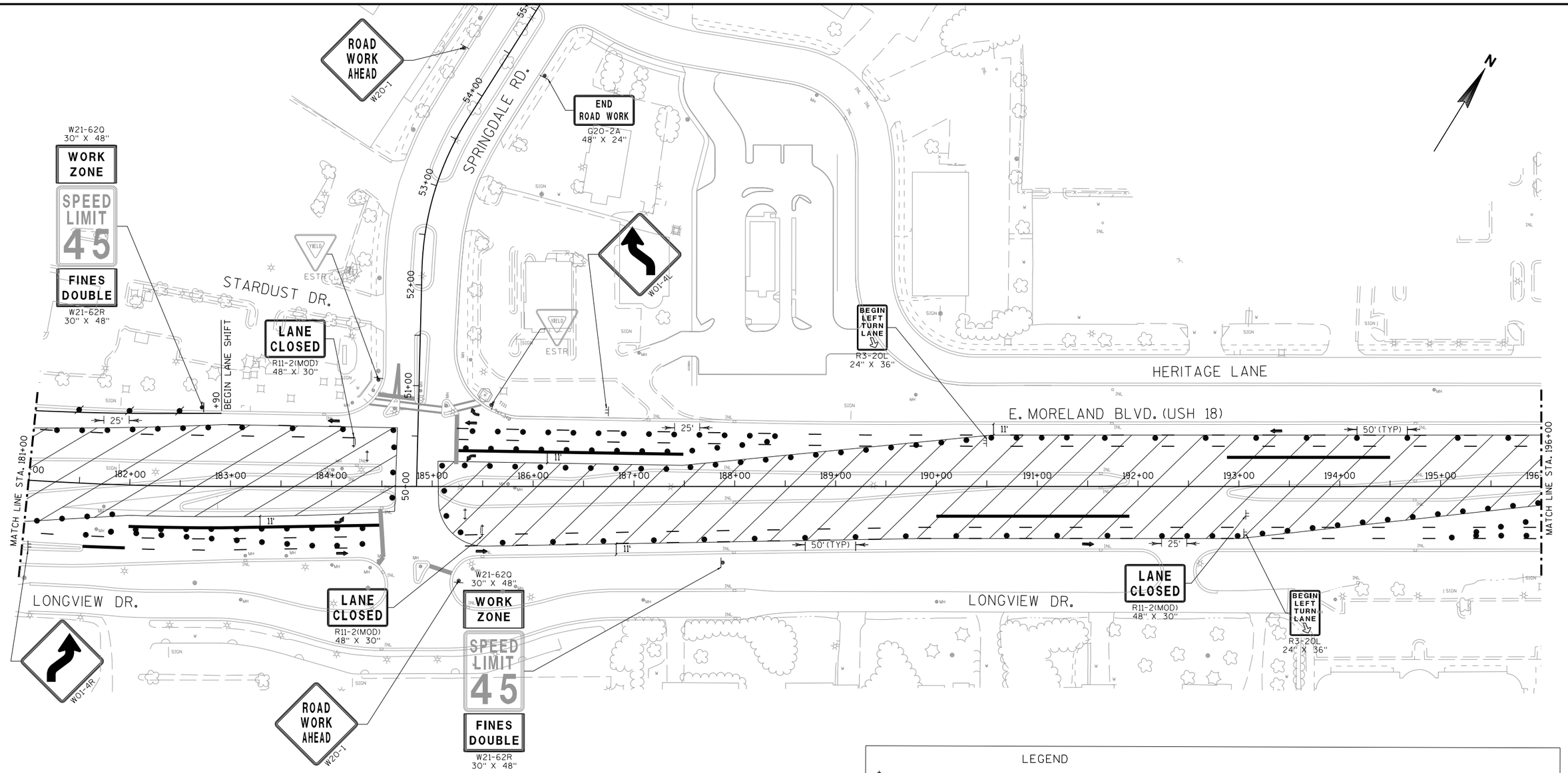
SEE TEMPORARY SIGNAL PLANS FOR TEMPORARY STOP BAR LOCATIONS

PW4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (WHITE)
PW8	TEMPORARY PAVEMENT MARKING EPOXY 8-INCH (WHITE)
PW12	TEMPORARY PAVEMENT MARKING STOP LINE 12-INCH (WHITE)
PY4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
TW4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
TW8	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE)
TW12	TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 12-INCH (WHITE)
TY4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)



PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CONSTRUCTION STAGING - STAGE 1 NIGHTTIME	SHEET 346	E

2



PW4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (WHITE)
PW8	TEMPORARY PAVEMENT MARKING EPOXY 8-INCH (WHITE)
PW12	TEMPORARY PAVEMENT MARKING STOP LINE 12-INCH (WHITE)
PY4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
TW4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
TW8	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE)
TW12	TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 12-INCH (WHITE)
TY4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- FLEXIBLE TUBULAR MARKER AND BASE
- WORK AREA
- DIRECTION OF TRAFFIC
- EXISTING BUS STOP LOCATION (SEE CONSTRUCTION NOTES)
- FLAGS, 16" X 16" MIN. (ORANGE)

SEE TEMPORARY SIGNAL PLANS FOR TEMPORARY STOP BAR LOCATIONS

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CONSTRUCTION STAGING - STAGE 1 NIGHTTIME	SHEET 347	E

2

PW4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (WHITE)
PW8	TEMPORARY PAVEMENT MARKING EPOXY 8-INCH (WHITE)
PW12	TEMPORARY PAVEMENT MARKING STOP LINE 12-INCH (WHITE)
PY4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
TW4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
TW8	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE)
TW12	TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 12-INCH (WHITE)
TY4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- FLEXIBLE TUBULAR MARKER AND BASE
- WORK AREA
- DIRECTION OF TRAFFIC
- EXISTING BUS STOP LOCATION (SEE CONSTRUCTION NOTES)
- FLAGS, 16" X 16" MIN. (ORANGE)

SEE TEMPORARY SIGNAL PLANS FOR TEMPORARY STOP BAR LOCATIONS

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CONSTRUCTION STAGING - STAGE 1 NIGHTTIME	SHEET 348	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\026047_sln.dgn PLOT DATE : 11/5/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 100.0000 sf / in.

2

E. MORELAND CT.

W21-62Q
30" X 48"
WORK ZONE
SPEED LIMIT 45
FINES DOUBLE
W21-62R
30" X 48"

W01-4R

BEGIN LEFT TURN LANE
R3-20L
24" X 36"

R1-2
36" X 31"

104
LANES CLOSED AHEAD EXPECT DELAYS
FIXED MESSAGE SIGN

ROAD WORK AHEAD
W20-1

250'
250'

W03-2

W04-1

IH 94 EB OFF RAMP

IH 94 WB

IH 94 EB

LANE CLOSED
R11-2(MOD)
48" X 30"

270' LANE SHIFT
STA 210+80 - 213+50

450' LANE DROP

+50
+70
+20

25'
11'
50'(TYP)

MATCH LINE STA. 211+00

MATCH LINE STA. 226+00

212+00 213+00 214+00 215+00 216+00 217+00 218+00 219+00 220+00 221+00 222+00 223+00 224+00 225+00 226

LANE CLOSED
R11-2(MOD)
48" X 30"

E. MORELAND BLVD. (USH 18)

W012-1D
24" X 24"

IH 94 EB ON RAMP

END ROAD WORK
G20-2A
48" X 24"

SWENSON DR.

45+00 44+00 43+00 42+00

U/C

PW4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (WHITE)
PW8	TEMPORARY PAVEMENT MARKING EPOXY 8-INCH (WHITE)
PW12	TEMPORARY PAVEMENT MARKING STOP LINE 12-INCH (WHITE)
PY4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
TW4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
TW8	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE)
TW12	TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 12-INCH (WHITE)
TY4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- FLEXIBLE TUBULAR MARKER AND BASE
- WORK AREA
- DIRECTION OF TRAFFIC
- EXISTING BUS STOP LOCATION (SEE CONSTRUCTION NOTES)
- FLAGS, 16" X 16" MIN. (ORANGE)

SEE TEMPORARY SIGNAL PLANS FOR TEMPORARY STOP BAR LOCATIONS

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CONSTRUCTION STAGING - STAGE 1 NIGHTTIME	SHEET 349	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\026048_s1n.dgn PLOT DATE : 11/5/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 100.0000 sf / in.

2

LANES CLOSED AHEAD EXPECT DELAYS
105
FIXED MESSAGE SIGN

ROAD WORK AHEAD
W20-1

LANE CLOSED
R11-2(MOD)
48" X 30"

LANE CLOSED
R11-2(MOD)
48" X 30"

END ROAD WORK
G20-2A
48" X 24"

CTH JJ

IH 94 WB OFF RAMP

W. BLUEMOUND RD.

IH 94 WB ON RAMP

IH 94 EB

IH 94 WB

E. MORELAND BLVD. (USH 18)

MATCH LINE STA. 226+00

MATCH LINE STA. 240+00

50' (TYP)

00 227+00 228+00 229+00 230+00 231+00 232+00 233+00 234+00 235+00 236+00 237+00 238+00 239+00 240

PW4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (WHITE)
PW8	TEMPORARY PAVEMENT MARKING EPOXY 8-INCH (WHITE)
PW12	TEMPORARY PAVEMENT MARKING STOP LINE 12-INCH (WHITE)
PY4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
TW4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
TW8	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE)
TW12	TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 12-INCH (WHITE)
TY4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- FLEXIBLE TUBULAR MARKER AND BASE
- WORK AREA
- DIRECTION OF TRAFFIC
- EXISTING BUS STOP LOCATION (SEE CONSTRUCTION NOTES)
- FLAGS, 16" X 16" MIN. (ORANGE)

SEE TEMPORARY SIGNAL PLANS FOR TEMPORARY STOP BAR LOCATIONS

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CONSTRUCTION STAGING - STAGE 1 NIGHTTIME	SHEET 350	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\026049_s1n.dgn
PLOT DATE : 11/5/2015
PLOT BY : GRAEF
PLOT NAME :
PLOT SCALE : 100.0000 sf / in.
WISDOT/CADDS SHEET 42

SIGNS TO BE PLACED FOR NIGHTTIME OPERATIONS WHEN RESTRICTING TRAFFIC ON WB USH 18 TO ONE LANE AND AVAILABLE TRAVEL WIDTH IS 16 FEET OR LESS.

WEST 18 M3-4 24" X 12" / M1-4 24" X 24"

MAX. 10' WIDTH W12-52

LANE CLOSED R11-2(MOD) 48" X 30"

LANE CLOSED R11-2(MOD) 48" X 30"

END ROAD WORK G20-2A 48" X 24"

N. BARKER RD.

SIGNS TO BE PLACED FOR NIGHTTIME OPERATIONS WHEN RESTRICTING TRAFFIC ON WB USH 18 TO ONE LANE AND AVAILABLE TRAVEL WIDTH IS 16 FEET OR LESS.

WIDE LOADS EXCEEDING 10 FT R12-70 72" X 36"

M06-2 21" X 21"

END ROAD WORK G20-2A 48" X 24"

106

LANES CLOSED AHEAD EXPECT. DELAYS

FIXED MESSAGE SIGN

JENNIFER DR.

N

540' LANE DROP

50' (TYP)

25'

STA. 240+00

MATCH LINE

241+00 242+00 243+00 244+00 245+00 246+00 247+00 248+00 249+00 250+00 251+00 252+00 253+00 254+00

STA. 254+00

MATCH LINE

54+00 53+00 52+00 51+00 50+00 49+00 48+00 47+00 46+00 45+00

W. MORELAND BLVD. (USH 18)

BEGIN LEFT TURN LANE R3-20L 24" X 36"

LANE CLOSED R11-2(MOD) 48" X 30"

LANE CLOSED R11-2(MOD) 48" X 30"

END ROAD WORK G20-2A 48" X 24"

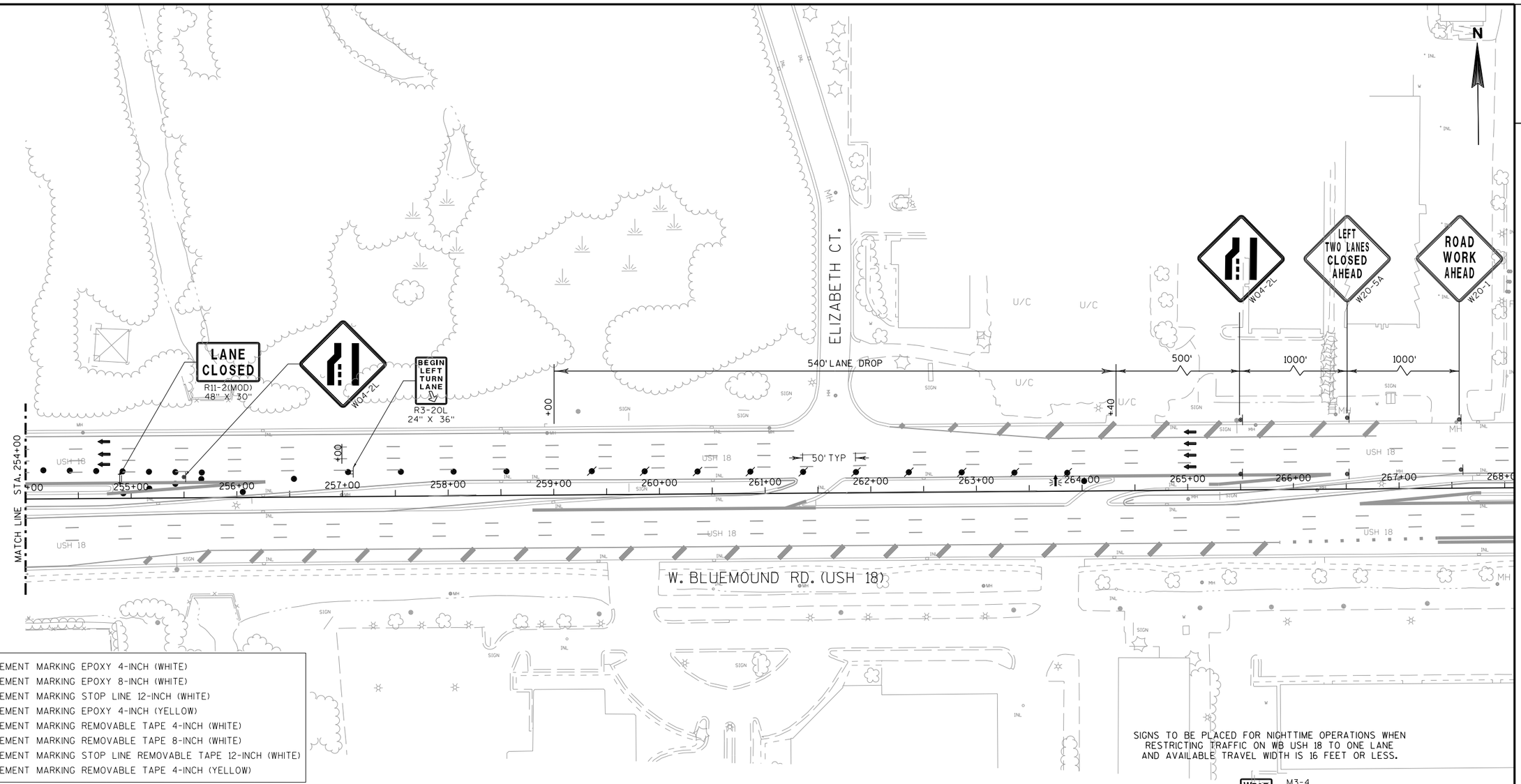
PW4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (WHITE)
PW8	TEMPORARY PAVEMENT MARKING EPOXY 8-INCH (WHITE)
PW12	TEMPORARY PAVEMENT MARKING STOP LINE 12-INCH (WHITE)
PY4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
TW4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
TW8	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE)
TW12	TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 12-INCH (WHITE)
TY4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- FLEXIBLE TUBULAR MARKER AND BASE
- WORK AREA
- DIRECTION OF TRAFFIC
- EXISTING BUS STOP LOCATION (SEE CONSTRUCTION NOTES)
- FLAGS, 16" X 16" MIN. (ORANGE)

SEE TEMPORARY SIGNAL PLANS FOR TEMPORARY STOP BAR LOCATIONS

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CONSTRUCTION STAGING - STAGE 1 NIGHTTIME	SHEET 351	E



PW4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (WHITE)
PW8	TEMPORARY PAVEMENT MARKING EPOXY 8-INCH (WHITE)
PW12	TEMPORARY PAVEMENT MARKING STOP LINE 12-INCH (WHITE)
PY4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
TW4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
TW8	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE)
TW12	TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 12-INCH (WHITE)
TY4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- FLEXIBLE TUBULAR MARKER AND BASE
- WORK AREA
- DIRECTION OF TRAFFIC
- EXISTING BUS STOP LOCATION (SEE CONSTRUCTION NOTES)
- FLAGS, 16" X 16" MIN. (ORANGE)

SEE TEMPORARY SIGNAL PLANS FOR TEMPORARY STOP BAR LOCATIONS

SIGNS TO BE PLACED FOR NIGHTTIME OPERATIONS WHEN RESTRICTING TRAFFIC ON WB USH 18 TO ONE LANE AND AVAILABLE TRAVEL WIDTH IS 16 FEET OR LESS.

WEST 18 — M3-4 24" X 12", M1-4 24" X 24"

MAX. 10' WIDTH — W12-52

1 MILES AHEAD
W057-52
36" X 24"
PLACE SIGN 200' WEST OF BROOKFIELD ROAD

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CONSTRUCTION STAGING - STAGE 1 NIGHTTIME	SHEET 352	E

2

LEGEND

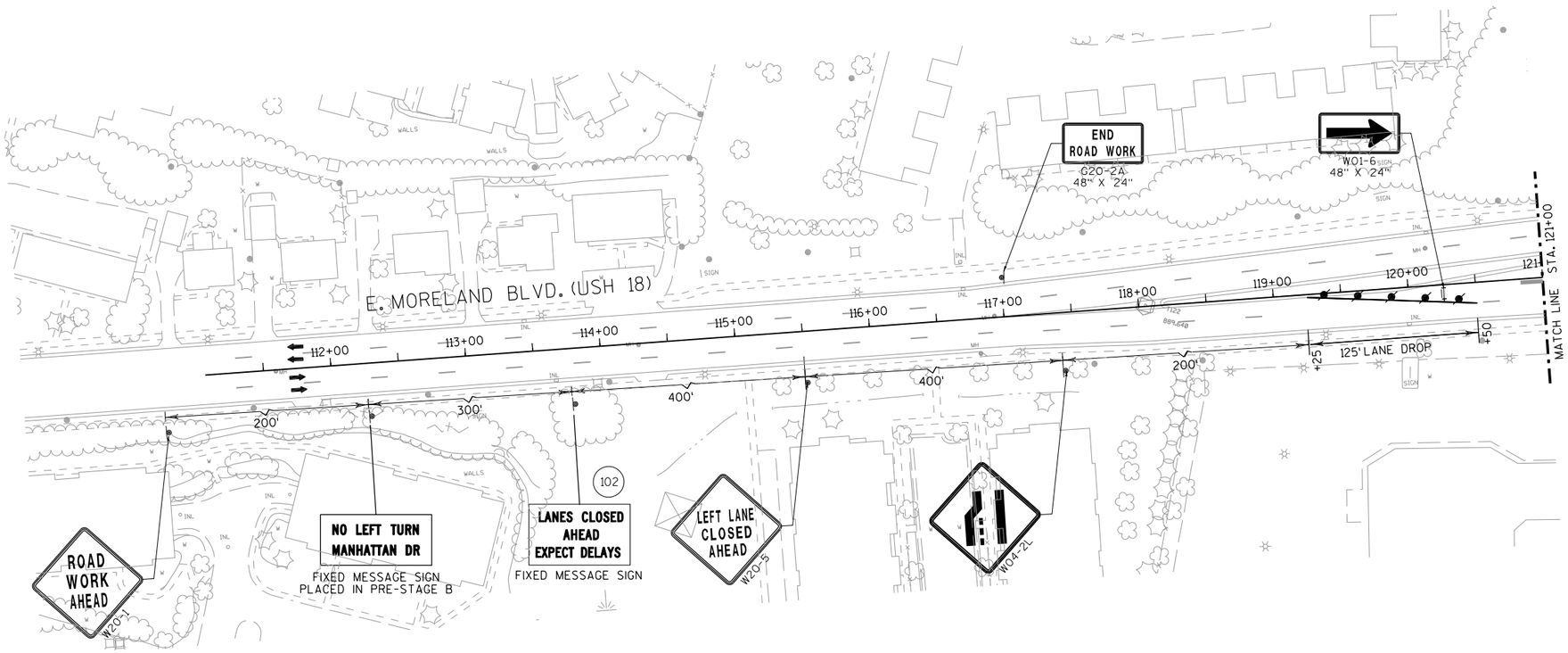
- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- FLEXIBLE TUBULAR MARKER AND BASE

- WORK AREA
- DIRECTION OF TRAFFIC
- EXISTING BUS STOP LOCATION (SEE CONSTRUCTION NOTES)
- FLAGS, 16" X 16" MIN. (ORANGE)
- SEE TEMPORARY SIGNAL PLANS FOR TEMPORARY STOP BAR LOCATIONS

PW4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (WHITE)
PW8	TEMPORARY PAVEMENT MARKING EPOXY 8-INCH (WHITE)
PW12	TEMPORARY PAVEMENT MARKING STOP LINE 12-INCH (WHITE)
PY4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
TW4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
TW8	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE)
TW12	TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 12-INCH (WHITE)
TY4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)

N

2



PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CONSTRUCTION STAGING - STAGE 1A	SHEET 353	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\026061_s1a.dgn
PLOT DATE : 11/5/2015
PLOT BY : GRAEF
PLOT NAME :
PLOT SCALE : 100.0000 sf / in.
WISDOT/CADDS SHEET 42

2

PW4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (WHITE)
PW8	TEMPORARY PAVEMENT MARKING EPOXY 8-INCH (WHITE)
PW12	TEMPORARY PAVEMENT MARKING STOP LINE 12-INCH (WHITE)
PY4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
TW4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
TW8	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE)
TW12	TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 12-INCH (WHITE)
TY4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)

N

END ROAD WORK
G20-2A
48" X 24"

ROAD WORK AHEAD
W20-1

LANE CLOSED
R11-2(MOD)
48" X 30"

BEGIN LEFT TURN LANE
R3-20L
24" X 36"

RIGHT LANE MUST TURN RIGHT
ESTR

YIELD
ESTR

TW12

E. MORELAND BLVD. (USH 18)

JENNIFER LN.

350'

25'

50'(TYP)

11'
11'

MATCH LINE STA. 121+00

MATCH LINE STA. 136+00

53+00
52+00
51+00
50+00
49+00
48+00
47+00
46+00

MANHATTAN DR.

R3-2
24" X 24"

STOP
ESTR

W21-62Q
30" X 48"
WORK ZONE
FLAGS
SPEED LIMIT 35
FINES DOUBLE
W21-62R
30" X 48"

CANOPY

SIGN

PHONE

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- FLEXIBLE TUBULAR MARKER AND BASE
- WORK AREA
- DIRECTION OF TRAFFIC
- EXISTING BUS STOP LOCATION (SEE CONSTRUCTION NOTES)
- FLAGS, 16" X 16" MIN. (ORANGE)

SEE TEMPORARY SIGNAL PLANS FOR TEMPORARY STOP BAR LOCATIONS

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CONSTRUCTION STAGING - STAGE 1A	SHEET 354	E

2

PW4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (WHITE)
PW8	TEMPORARY PAVEMENT MARKING EPOXY 8-INCH (WHITE)
PW12	TEMPORARY PAVEMENT MARKING STOP LINE 12-INCH (WHITE)
PY4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
TW4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
TW8	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE)
TW12	TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 12-INCH (WHITE)
TY4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)

N

STARDUST DR.

WOLF ROAD

E. MORELAND BLVD. (USH 18)

STH 164

MATCH LINE STA. 136+00

MATCH LINE STA. 151+00

W21-62Q
30" X 48"
WORK ZONE
SPEED LIMIT 35
FINES DOUBLE
W21-62R
30" X 48"

ROAD WORK AHEAD
W20-1

END ROAD WORK
G20-2A
48" X 24"

BEGIN LEFT TURN LANE
R3-20L
24" X 36"

LANE CLOSED
R11-2(MOD)
48" X 30"

BEGIN LEFT TURN LANE
R3-20L
24" X 36"

LANE CLOSED
R11-2(MOD)
48" X 30"

LANE CLOSED
R11-2(MOD)
48" X 30"

W21-62Q
30" X 48"
WORK ZONE
SPEED LIMIT 45
FINES DOUBLE
W21-62R
30" X 48"

LANE CLOSED
R11-2(MOD)
48" X 30"

103

LANES CLOSED AHEAD EXPECT DELAYS
FIXED MESSAGE SIGN

ROAD WORK AHEAD
W20-1

END ROAD WORK
G20-2A
48" X 24"

TW4

TW12

PW12

500'

25' 50'(TYP) ±50 11' 11'

137+00 138+00 139+00 140+00 141+00 142+00 143+00 144+00 145+00 146+00 147+00 148+00 149+00 150+00 151+00

286+00 285+00 284+00 283+00 282+00

U/C FOUND ESTR YIELD AHEAD

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- FLEXIBLE TUBULAR MARKER AND BASE
- WORK AREA
- DIRECTION OF TRAFFIC
- EXISTING BUS STOP LOCATION (SEE CONSTRUCTION NOTES)
- FLAGS, 16" X 16" MIN. (ORANGE)

SEE TEMPORARY SIGNAL PLANS FOR TEMPORARY STOP BAR LOCATIONS

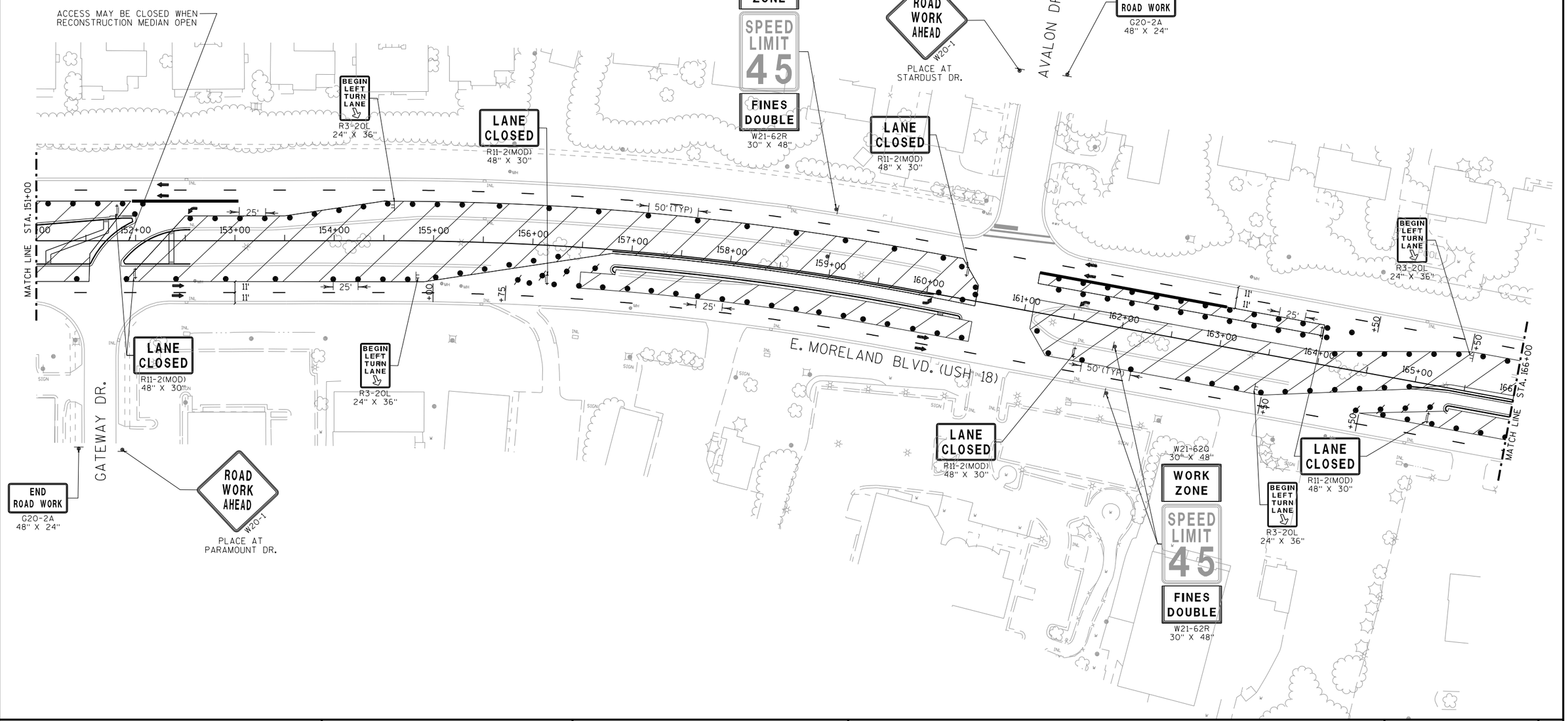
PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CONSTRUCTION STAGING - STAGE 1A	SHEET E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\026063_s1a.dgn PLOT DATE : 11/5/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 100.9544 sf / in. WISDOT/CADDS SHEET 42

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- FLEXIBLE TUBULAR MARKER AND BASE
- WORK AREA
- DIRECTION OF TRAFFIC
- EXISTING BUS STOP LOCATION (SEE CONSTRUCTION NOTES)
- FLAGS, 16" X 16" MIN. (ORANGE)
- SEE TEMPORARY SIGNAL PLANS FOR TEMPORARY STOP BAR LOCATIONS

PW4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (WHITE)
PW8	TEMPORARY PAVEMENT MARKING EPOXY 8-INCH (WHITE)
PW12	TEMPORARY PAVEMENT MARKING STOP LINE 12-INCH (WHITE)
PY4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
TW4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
TW8	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE)
TW12	TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 12-INCH (WHITE)
TY4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)



PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CONSTRUCTION STAGING - STAGE 1A	SHEET 356	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\026064_s1a.dgn | PLOT DATE : 11/5/2015 | PLOT BY : GRAEF | PLOT NAME : | PLOT SCALE : 100.0000 sf / in.

2

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- FLEXIBLE TUBULAR MARKER AND BASE
- WORK AREA
- DIRECTION OF TRAFFIC
- EXISTING BUS STOP LOCATION (SEE CONSTRUCTION NOTES)
- FLAGS, 16" X 16" MIN. (ORANGE)

SEE TEMPORARY SIGNAL PLANS FOR TEMPORARY STOP BAR LOCATIONS

PW4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (WHITE)
PW8	TEMPORARY PAVEMENT MARKING EPOXY 8-INCH (WHITE)
PW12	TEMPORARY PAVEMENT MARKING STOP LINE 12-INCH (WHITE)
PY4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
TW4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
TW8	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE)
TW12	TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 12-INCH (WHITE)
TY4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)

N

ROAD WORK AHEAD W20-1

END ROAD WORK G20-2A 48" X 24"

RAMONA RD.

LANE CLOSED R11-2(MOD) 48" X 30"

BEGIN LEFT TURN LANE R3-20L 24" X 36"

BEGIN RIGHT TURN LANE R3-20R 24" X 36"

BEGIN LEFT TURN LANE R3-20LL 24" X 36"

540' LANE DROP

STARDUST DR.

ESTR

YIELD

MATCH LINE STA. 166+00

MATCH LINE STA. 181+00

50' (TYP)

11' 11' 25'

+00 +50

166+00 167+00 168+00 169+00 170+00 171+00 172+00 173+00 174+00 175+00 176+00 177+00 178+00 179+00 180+00

TW12

TW4

E. MORELAND BLVD. (USH 18)

E.MORELAND BLVD (USH 18)

LONGVIEW DR.

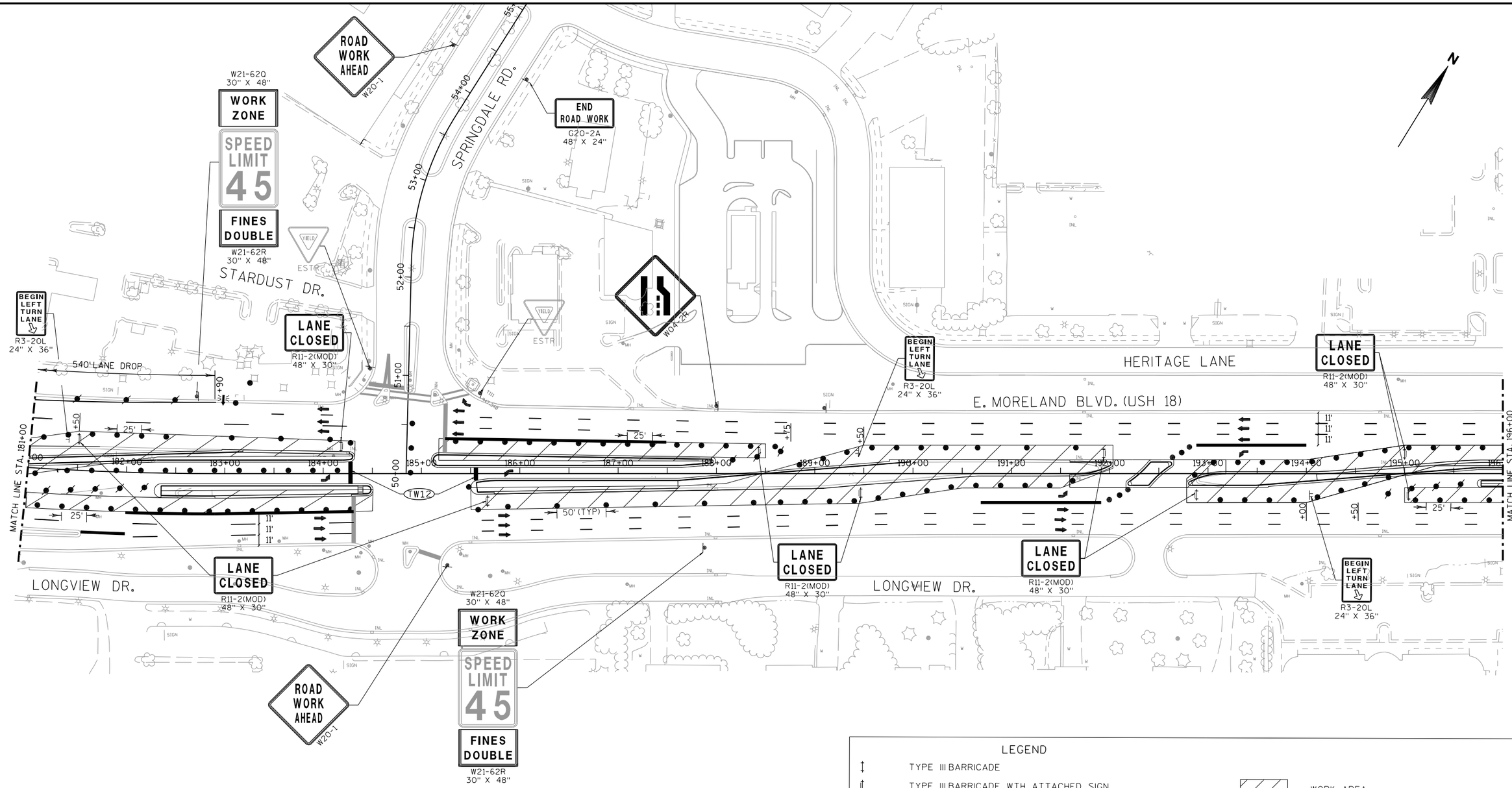
E. MAIN ST.

FILLER CAPS

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CONSTRUCTION STAGING - STAGE 1A	SHEET 357	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\026065_s1a.dgn PLOT DATE : 11/5/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 100.0000 sf / in.

2



PW4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (WHITE)
PW8	TEMPORARY PAVEMENT MARKING EPOXY 8-INCH (WHITE)
PW12	TEMPORARY PAVEMENT MARKING STOP LINE 12-INCH (WHITE)
PY4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
TW4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
TW8	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE)
TW12	TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 12-INCH (WHITE)
TY4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- FLEXIBLE TUBULAR MARKER AND BASE
- WORK AREA
- DIRECTION OF TRAFFIC
- EXISTING BUS STOP LOCATION (SEE CONSTRUCTION NOTES)
- FLAGS, 16" X 16" MIN. (ORANGE)

SEE TEMPORARY SIGNAL PLANS FOR TEMPORARY STOP BAR LOCATIONS

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CONSTRUCTION STAGING - STAGE 1A	SHEET 358	E

2

PARKLAWN DR.

ABBOTT DR.

E. MORELAND BLVD. (USH 18)

KOSSOW RD.

E. MORELAND CT.

PARKLAWN CT.

SWENSON DR.

KOSSOW RD.

PW4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (WHITE)
PW8	TEMPORARY PAVEMENT MARKING EPOXY 8-INCH (WHITE)
PW12	TEMPORARY PAVEMENT MARKING STOP LINE 12-INCH (WHITE)
PY4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
TW4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
TW8	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE)
TW12	TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 12-INCH (WHITE)
TY4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)

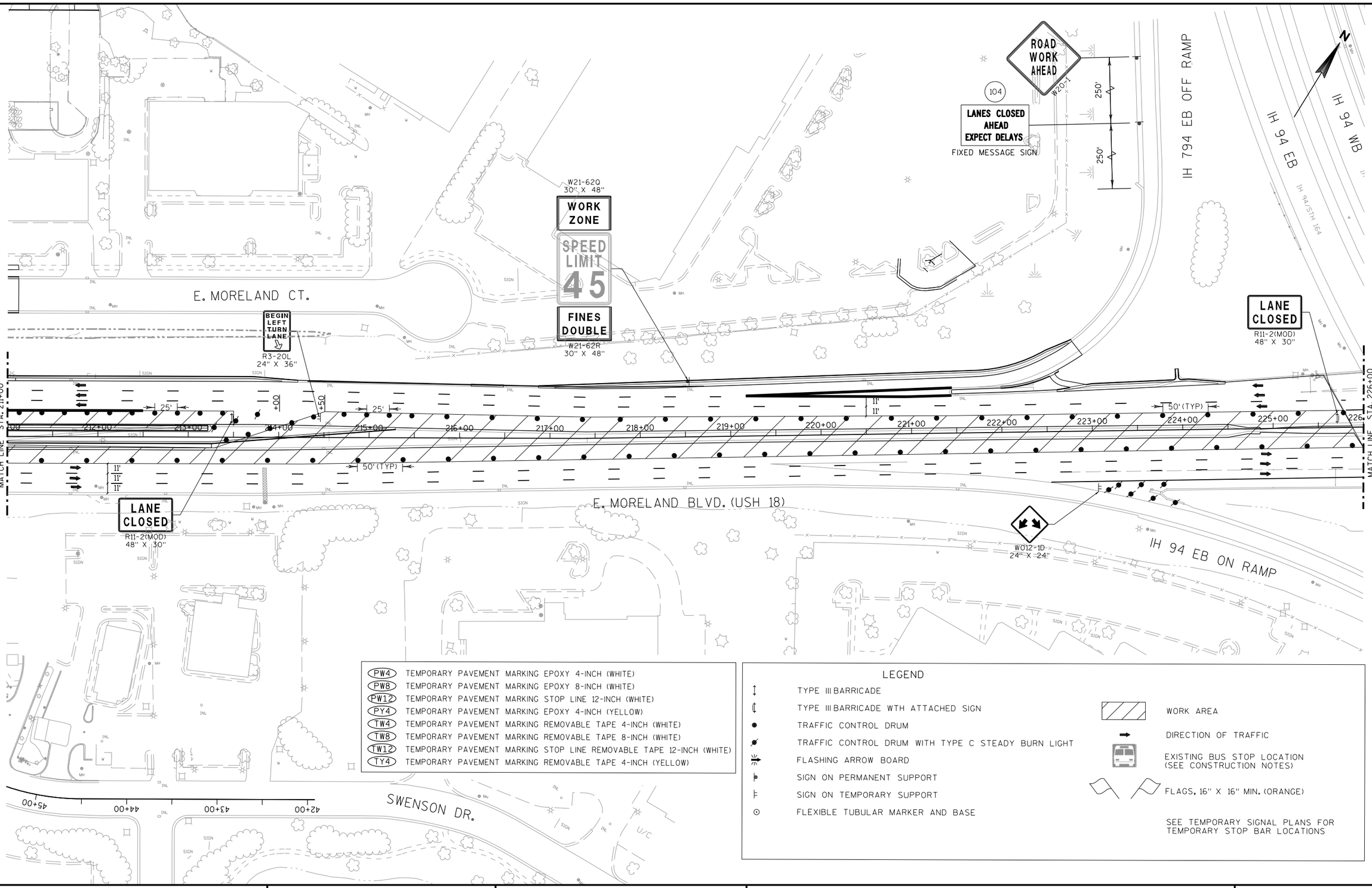
LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- FLEXIBLE TUBULAR MARKER AND BASE
- WORK AREA
- DIRECTION OF TRAFFIC
- EXISTING BUS STOP LOCATION (SEE CONSTRUCTION NOTES)
- FLAGS, 16" X 16" MIN. (ORANGE)

SEE TEMPORARY SIGNAL PLANS FOR TEMPORARY STOP BAR LOCATIONS

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CONSTRUCTION STAGING - STAGE 1A	SHEET 359 E

2



PW4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (WHITE)
PW8	TEMPORARY PAVEMENT MARKING EPOXY 8-INCH (WHITE)
PW12	TEMPORARY PAVEMENT MARKING STOP LINE 12-INCH (WHITE)
PY4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
TW4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
TW8	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE)
TW12	TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 12-INCH (WHITE)
TY4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)

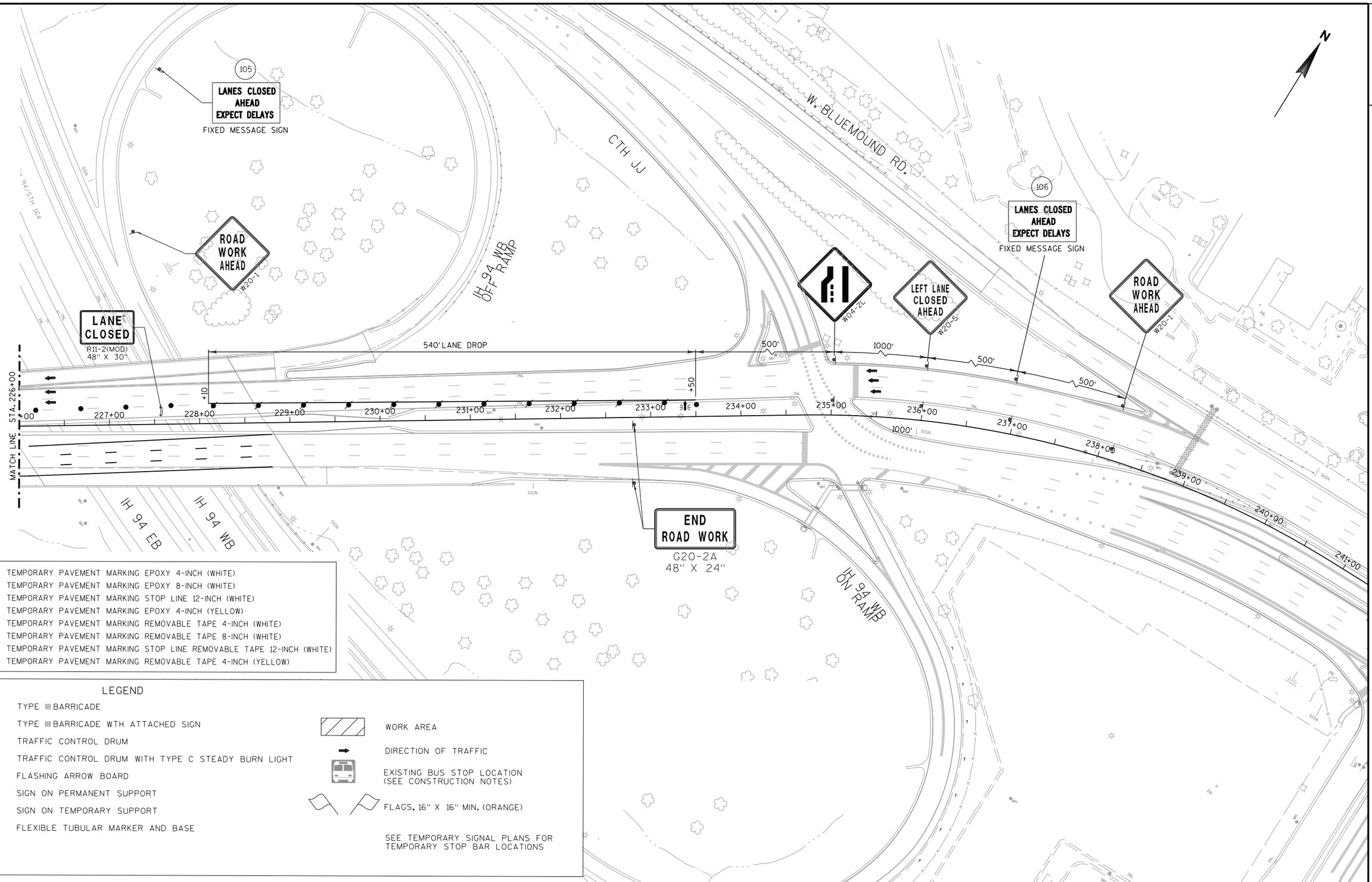
LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- FLEXIBLE TUBULAR MARKER AND BASE
- WORK AREA
- DIRECTION OF TRAFFIC
- EXISTING BUS STOP LOCATION (SEE CONSTRUCTION NOTES)
- FLAGS, 16" X 16" MIN. (ORANGE)

SEE TEMPORARY SIGNAL PLANS FOR TEMPORARY STOP BAR LOCATIONS

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CONSTRUCTION STAGING - STAGE 1A	SHEET 360	E

2



PW4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (WHITE)
PW8	TEMPORARY PAVEMENT MARKING EPOXY 8-INCH (WHITE)
PW12	TEMPORARY PAVEMENT MARKING STOP LINE 12-INCH (WHITE)
PY4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
TW4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
TW8	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE)
TW12	TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 12-INCH (WHITE)
TY4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- FLEXIBLE TUBULAR MARKER AND BASE
- WORK AREA
- DIRECTION OF TRAFFIC
- EXISTING BUS STOP LOCATION (SEE CONSTRUCTION NOTES)
- FLAGS, 16" X 16" MIN. (ORANGE)

SEE TEMPORARY SIGNAL PLANS FOR TEMPORARY STOP BAR LOCATIONS

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CONSTRUCTION STAGING - STAGE 1A	SHEET 361 E

2

PW4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (WHITE)
PW8	TEMPORARY PAVEMENT MARKING EPOXY 8-INCH (WHITE)
PW12	TEMPORARY PAVEMENT MARKING STOP LINE 12-INCH (WHITE)
PY4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
TW4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
TW8	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE)
TW12	TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 12-INCH (WHITE)
TY4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)

N

END ROAD WORK
G20-2A
48" X 24"

ROAD WORK AHEAD
W20-1

ROAD WORK AHEAD
W20-1

JENNIFER LN.

350'

END ROAD WORK
G20-2A
48" X 24"

LANE CLOSED
R11-2(MOD)
48" X 30"

YIELD
ESTR

BEGIN LEFT TURN LANE
R3-20L
24" X 36"

RIGHT LANE MUST TURN RIGHT
ESTR

LANE CLOSED
R11-2(MOD)
48" X 30"

E. MORELAND BLVD. (USH 18)

25'
50' (TYP)
11'
11'

53+00
52+00
51+00
50+00
49+00
48+00
47+00
46+00

121+00
122+00
123+00
124+00
125+00
126+00
127+00
128+00
129+00
130+00
131+00
132+00
133+00
134+00
135+00
136+00

MATCH LINE STA. 121+00

MATCH LINE STA. 136+00

TW12

R3-2
24" X 24"

STOP
ESTR

LANE CLOSED
R11-2(MOD)
48" X 30"

YIELD
ESTR

CANOPY

W21-62Q
30" X 48"

WORK ZONE

SPEED LIMIT 35

FINES DOUBLE
W21-62R
30" X 48"

LANE CLOSED
R11-2(MOD)
48" X 30"

BEGIN LEFT TURN LANE
R3-20L
24" X 36"

MANHATTAN DR.

END ROAD WORK
G20-2A
48" X 24"

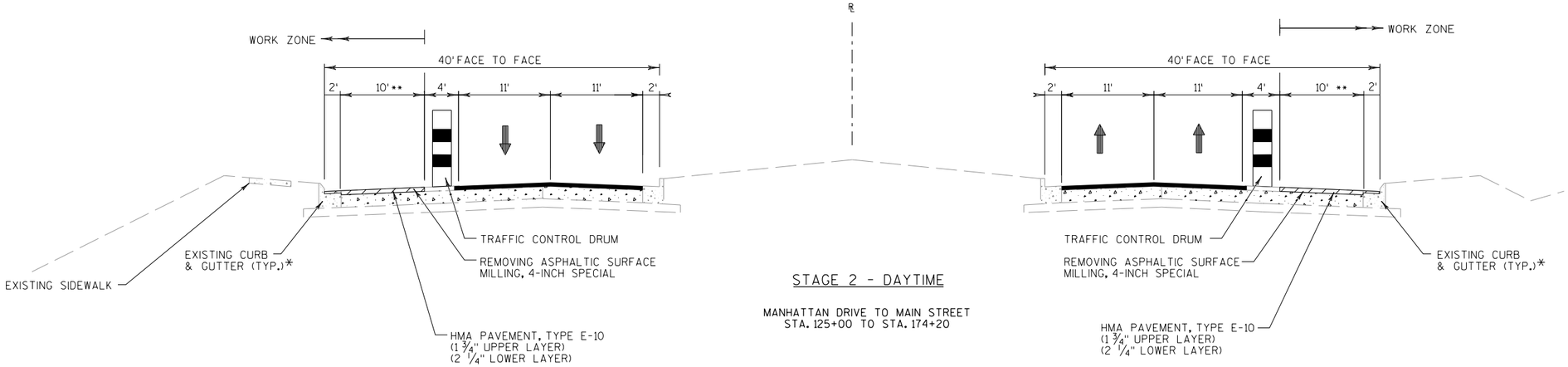
ROAD WORK AHEAD
W20-1

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- FLEXIBLE TUBULAR MARKER AND BASE
- WORK AREA
- DIRECTION OF TRAFFIC
- EXISTING BUS STOP LOCATION (SEE CONSTRUCTION NOTES)
- FLAGS, 16" X 16" MIN. (ORANGE)

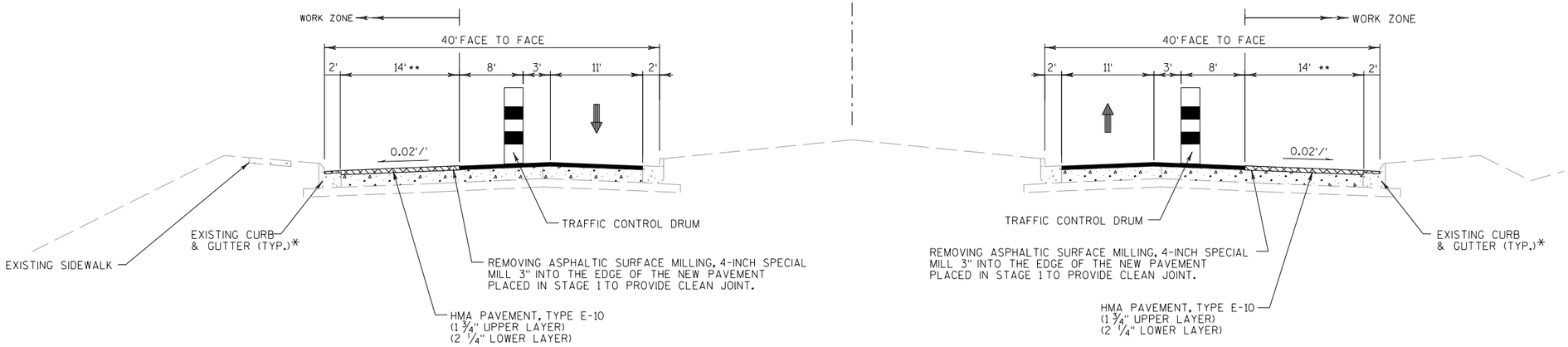
SEE TEMPORARY SIGNAL PLANS FOR TEMPORARY STOP BAR LOCATIONS

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CONSTRUCTION STAGING - STAGE 1B	SHEET 362	E



STAGE 2 - DAYTIME

MANHATTAN DRIVE TO MAIN STREET
STA. 125+00 TO STA. 174+20



STAGE 2 - NIGHTTIME

USH 18

MANHATTAN DRIVE TO MAIN STREET
STA. 125+00 TO STA. 174+20

LEGEND:

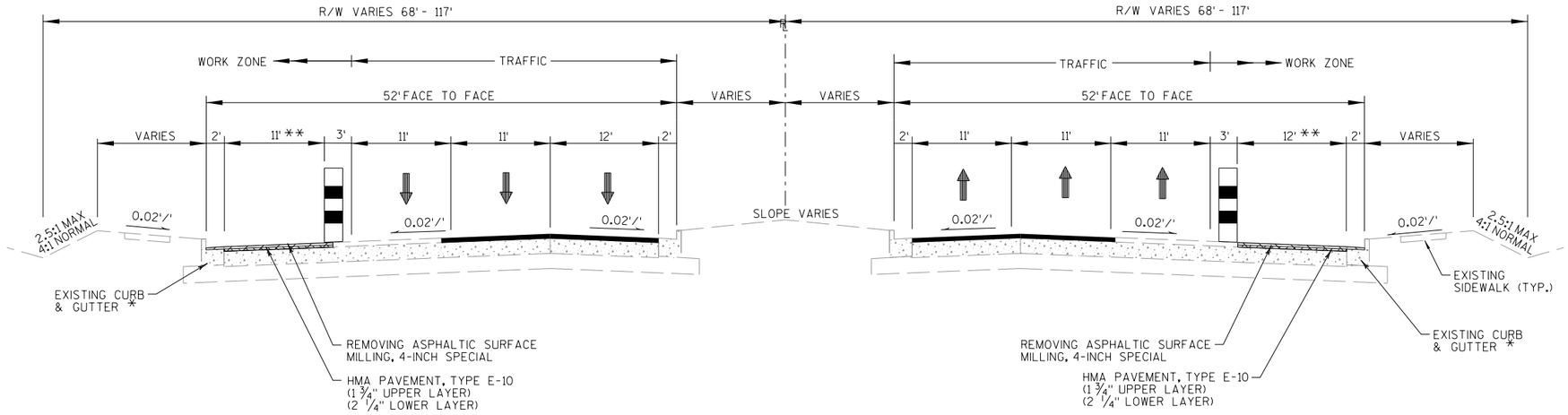
- HMA PAVEMENT, TYPE E-10
- REMOVING ASPHALTIC SURFACE MILLING
- PAVEMENT PLACED IN PREVIOUS STAGE

NOTES:

* CONCRETE CURB & GUTTER TO BE REPLACED AT VARIOUS LOCATIONS THROUGHOUT THE PROJECT.

** BASE PATCHING CONCRETE SHES & CONCRETE PAVEMENT REPLACEMENT SHES TO BE PERFORMED AT VARIOUS LOCATIONS. (SEE REMOVAL PLAN FOR LOCATIONS)

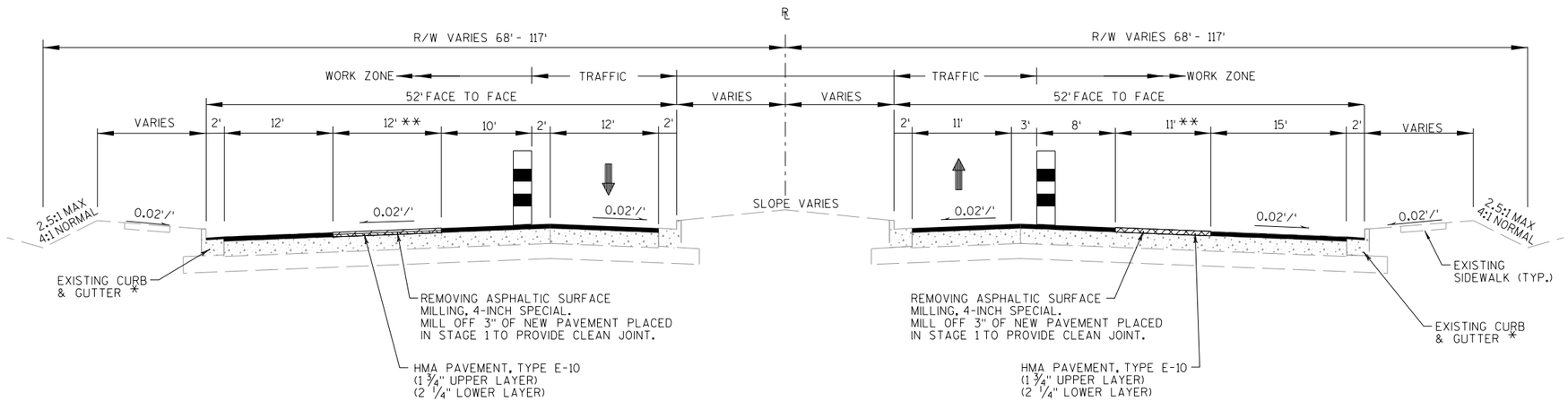
PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CONSTRUCTION STAGING TYPICAL SECTIONS	SHEET 363	E



STAGE 2 DAYTIME

USH 18

MAIN STREET TO IH-94
STA 174+20 TO STA 226+00



LEGEND:

- HMA PAVEMENT, TYPE E-10
- REMOVING ASPHALTIC SURFACE MILLING
- PAVEMENT PLACED IN PREVIOUS STAGE

STAGE 2 NIGHTTIME

USH 18

MAIN STREET TO IH-94
STA 174+20 TO STA 226+00

NOTES:

* CONCRETE CURB & GUTTER TO BE REPLACED AT VARIOUS LOCATIONS THROUGHOUT THE PROJECT.

** BASE PATCHING CONCRETE SHES & CONCRETE PAVEMENT REPLACEMENT SHES TO BE PERFORMED AT VARIOUS LOCATIONS. (SEE REMOVAL PLAN FOR LOCATIONS)

2

LEGEND

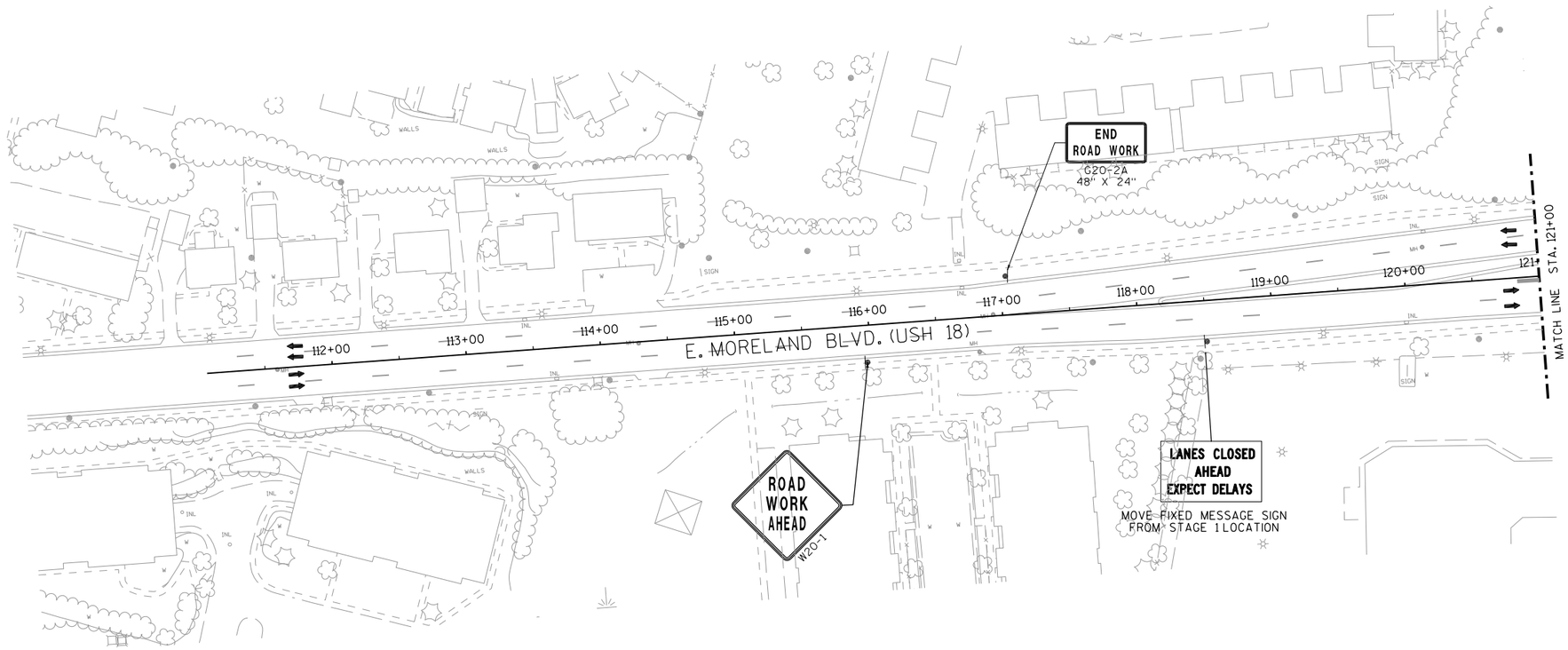
- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- FLEXIBLE TUBULAR MARKER AND BASE

- WORK AREA
- DIRECTION OF TRAFFIC
- EXISTING BUS STOP LOCATION (SEE CONSTRUCTION NOTES)
- FLAGS, 16" X 16" MIN. (ORANGE)
- SEE TEMPORARY SIGNAL PLANS FOR TEMPORARY STOP BAR LOCATIONS

PW4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (WHITE)
PW8	TEMPORARY PAVEMENT MARKING EPOXY 8-INCH (WHITE)
PW12	TEMPORARY PAVEMENT MARKING STOP LINE 12-INCH (WHITE)
PY4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
TW4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
TW8	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE)
TW12	TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 12-INCH (WHITE)
TY4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)

N

2



PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CONSTRUCTION STAGING - STAGE 2	SHEET 365	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\026101_s2.dgn PLOT DATE : 11/5/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 100.0000 sf / in.

WISDOT/CADDS SHEET 42

PW4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (WHITE)
PW8	TEMPORARY PAVEMENT MARKING EPOXY 8-INCH (WHITE)
PW12	TEMPORARY PAVEMENT MARKING STOP LINE 12-INCH (WHITE)
PY4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
TW4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
TW8	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE)
TW12	TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 12-INCH (WHITE)
TY4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)

N

ROAD WORK AHEAD
W20-1

END ROAD WORK
G20-2A
48" X 24"

FINAL PAVEMENT MARKING

RIGHT LANE MUST TURN RIGHT
R3-7R
30" X 30"

LANE CLOSED
R11-2(MOD)
48" X 30"

350'

JENNIFER LN.

END ROAD WORK
G20-2A
48" X 24"

ROAD WORK AHEAD
W20-1

MATCH LINE STA. 121+00

MATCH LINE STA. 136+00

50'(TYP)

E. MORELAND BLVD. (USH 18)

FINAL PAVEMENT MARKING

LANE CLOSED
R11-2(MOD)
48" X 30"

W21-62Q
30" X 48"

WORK ZONE

SPEED LIMIT 35

FINES DOUBLE
W21-62R
30" X 48"

MANHATTAN DR.

END ROAD WORK
G20-2A
48" X 24"

ROAD WORK AHEAD
W20-1

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- FLEXIBLE TUBULAR MARKER AND BASE
- WORK AREA
- DIRECTION OF TRAFFIC
- EXISTING BUS STOP LOCATION (SEE CONSTRUCTION NOTES)
- FLAGS, 16" X 16" MIN. (ORANGE)

SEE TEMPORARY SIGNAL PLANS FOR TEMPORARY STOP BAR LOCATIONS

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CONSTRUCTION STAGING - STAGE 2	SHEET 366 E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\026102_s2.dgn PLOT DATE : 11/5/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 100.0000 sf / in.

WISDOT/CADDS SHEET 42

2

PW4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (WHITE)
PW8	TEMPORARY PAVEMENT MARKING EPOXY 8-INCH (WHITE)
PW12	TEMPORARY PAVEMENT MARKING STOP LINE 12-INCH (WHITE)
PY4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
TW4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
TW8	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE)
TW12	TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 12-INCH (WHITE)
TY4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)

ROAD WORK AHEAD
W20-1

N

STARDUST DR.

W21-62O
30" X 48"
WORK ZONE
SPEED LIMIT 35
FINES DOUBLE
W21-62R
30" X 48"

LANE CLOSED
R11-2(MOD)
48" X 30"

END ROAD WORK
G20-2A
48" X 24"

WOLF ROAD

FINAL PAVEMENT MARKING

PW8

LANE CLOSED
R11-2(MOD)
48" X 30"

BEGIN LEFT TURN LANE
R3-20L
24" X 36"

STA. 136+00
MATCH LINE
11'
11'
50'(TYP)
136+00
137+00
138+00
139+00
140+00
141+00
142+00
143+00
144+00
145+00
146+00
147+00
148+00
149+00
150+00
151+00
STA. 151+00
MATCH LINE

E. MORELAND BLVD. (USH 18)

U/C

FOUND

FINAL PAVEMENT MARKING

SEE CONSTRUCTION STAGING SHEETS FOR STH 164 FOR ADDITIONAL TRAFFIC CONTROL

286+00
285+00
284+00
283+00
282+00
STH 164

W21-62O
30" X 48"
WORK ZONE
SPEED LIMIT 45
FINES DOUBLE
W21-62R
30" X 48"

LANE CLOSED
R11-2(MOD)
48" X 30"

FINAL PAVEMENT MARKING

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- FLEXIBLE TUBULAR MARKER AND BASE
- WORK AREA
- DIRECTION OF TRAFFIC
- EXISTING BUS STOP LOCATION (SEE CONSTRUCTION NOTES)
- FLAGS, 16" X 16" MIN. (ORANGE)

SEE TEMPORARY SIGNAL PLANS FOR TEMPORARY STOP BAR LOCATIONS

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CONSTRUCTION STAGING - STAGE 2	SHEET 367	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\026103_s2.dgn
PLOT DATE : 11/5/2015
PLOT BY : GRAEF
PLOT NAME :
PLOT SCALE : 100.0000 sf / in.
WISDOT/CADDS SHEET 42

2

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- FLEXIBLE TUBULAR MARKER AND BASE
- WORK AREA
- DIRECTION OF TRAFFIC
- EXISTING BUS STOP LOCATION (SEE CONSTRUCTION NOTES)
- FLAGS, 16" X 16" MIN. (ORANGE)

SEE TEMPORARY SIGNAL PLANS FOR TEMPORARY STOP BAR LOCATIONS

PW4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (WHITE)
PW8	TEMPORARY PAVEMENT MARKING EPOXY 8-INCH (WHITE)
PW12	TEMPORARY PAVEMENT MARKING STOP LINE 12-INCH (WHITE)
PY4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
TW4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
TW8	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE)
TW12	TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 12-INCH (WHITE)
TY4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)

N

2

W21-62O
30" X 48"
WORK ZONE
SPEED LIMIT 45
FINES DOUBLE
W21-62R
30" X 48"

ROAD WORK AHEAD
W20-1
PLACE AT STARDUST DR.

AVALON DR.

END ROAD WORK
G20-2A
48" X 24"

FINAL PAVEMENT MARKING

LANE CLOSED
R11-2(MOD)
48" X 30"

STA. 151+00
MATCH LINE
152+00
153+00
154+00
155+00
156+00
157+00
158+00
159+00
160+00
161+00
162+00
163+00
164+00
165+00
166+00
STA. 166+00
MATCH LINE
50' TYP.
11'
11'

E. MORELAND BLVD. (USH 18)

GATEWAY DR.

LANE CLOSED
R11-2(MOD)
48" X 30"

FINAL PAVEMENT MARKING

ROAD WORK AHEAD
W20-1
PLACE AT PARAMOUNT DR.

END ROAD WORK
G20-2A
48" X 24"

W21-62O
30" X 48"
WORK ZONE
SPEED LIMIT 45
FINES DOUBLE
W21-62R
30" X 48"

POOL

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CONSTRUCTION STAGING - STAGE 2	SHEET 368	E

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- FLEXIBLE TUBULAR MARKER AND BASE
- WORK AREA
- DIRECTION OF TRAFFIC
- EXISTING BUS STOP LOCATION (SEE CONSTRUCTION NOTES)
- FLAGS, 16" X 16" MIN. (ORANGE)

SEE TEMPORARY SIGNAL PLANS FOR TEMPORARY STOP BAR LOCATIONS

PW4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (WHITE)
PW8	TEMPORARY PAVEMENT MARKING EPOXY 8-INCH (WHITE)
PW12	TEMPORARY PAVEMENT MARKING STOP LINE 12-INCH (WHITE)
PY4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
TW4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
TW8	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE)
TW12	TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 12-INCH (WHITE)
TY4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)

ROAD WORK AHEAD W20-1

END ROAD WORK G20-2A 48" X 24"

LANE CLOSED R11-2(MOD) 48" X 30"

RAMONA RD.

STARDUST DR.

FINAL PAVEMENT MARKING

BEGIN RIGHT TURN LANE R3-20R 24" X 36"

540' LANE DROP

TW4

TW8

PW8

MATCH LINE STA. 166+00

MATCH LINE STA. 181+00

E. MORELAND BLVD. (USH 18)

50' (TYP)

25'

11'

ESTR.

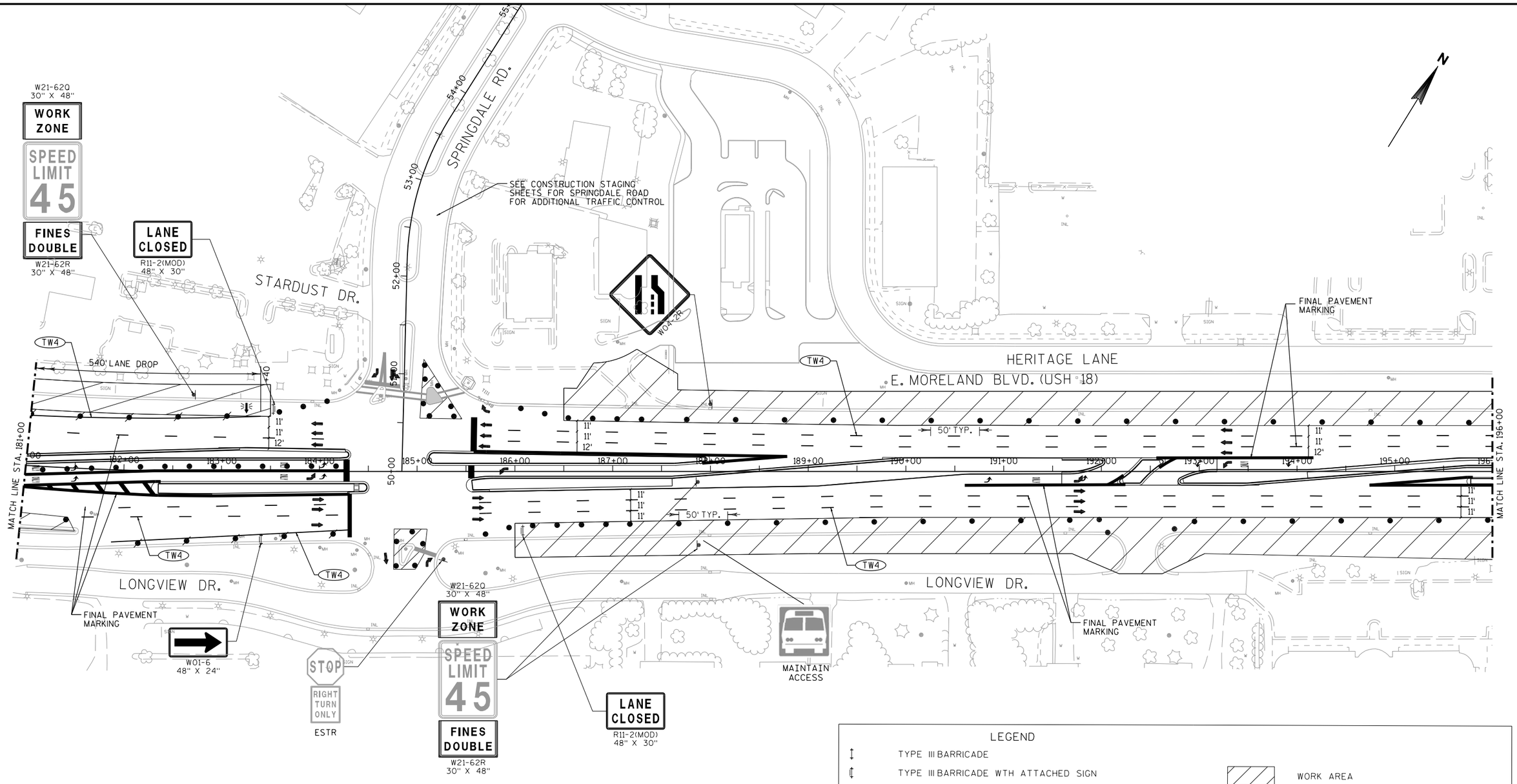
LONGVIEW DR.

SIDEWALK CLOSED R9-9 24" X 12" PLACE SIGN AT DAVIDSON ROAD

E. MAIN ST.

FILLER CAPS

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CONSTRUCTION STAGING - STAGE 2	SHEET 369	E



PW4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (WHITE)
PW8	TEMPORARY PAVEMENT MARKING EPOXY 8-INCH (WHITE)
PW12	TEMPORARY PAVEMENT MARKING STOP LINE 12-INCH (WHITE)
PY4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
TW4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
TW8	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE)
TW12	TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 12-INCH (WHITE)
TY4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- FLEXIBLE TUBULAR MARKER AND BASE
- WORK AREA
- DIRECTION OF TRAFFIC
- EXISTING BUS STOP LOCATION (SEE CONSTRUCTION NOTES)
- FLAGS, 16" X 16" MIN. (ORANGE)

SEE TEMPORARY SIGNAL PLANS FOR TEMPORARY STOP BAR LOCATIONS

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CONSTRUCTION STAGING - STAGE 2	SHEET 370	E

2

PARKLAWN DR.

SEE CONSTRUCTION STAGING SHEETS FOR PARKLAWN DRIVE FOR ADDITIONAL TRAFFIC CONTROL

PRIOR TO STAGE 2B, CONSTRUCT PROPOSED STORM SEWER USING LANE CLOSURES. USE TEMPORARY COVER PLATES AS NEEDED.

ABBOTT DR.

PW4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (WHITE)
PW8	TEMPORARY PAVEMENT MARKING EPOXY 8-INCH (WHITE)
PW12	TEMPORARY PAVEMENT MARKING STOP LINE 12-INCH (WHITE)
PY4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
TW4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
TW8	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE)
TW12	TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 12-INCH (WHITE)
TY4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)

W21-62Q 30" X 48"
WORK ZONE
SPEED LIMIT 45
FINES DOUBLE

RIGHT LANE CLOSED AHEAD W20-5

W21-62R 30" X 48"

LANE CLOSED R11-2(MOD) 48" X 30"

FINAL PAVEMENT MARKING

TW4

50' TYP.

25'

E. MORELAND BLVD. (USH 18)

PARKLAWN CT.

SEE CONSTRUCTION STAGING SHEETS FOR PARKLAWN DRIVE FOR ADDITIONAL TRAFFIC CONTROL

SEE CONSTRUCTION STAGING SHEETS FOR KOSSOW ROAD FOR ADDITIONAL TRAFFIC CONTROL

KOSSOW RD.

SWENSON DR.

E. MORELAND CT.

MATCH LINE STA. 196+00

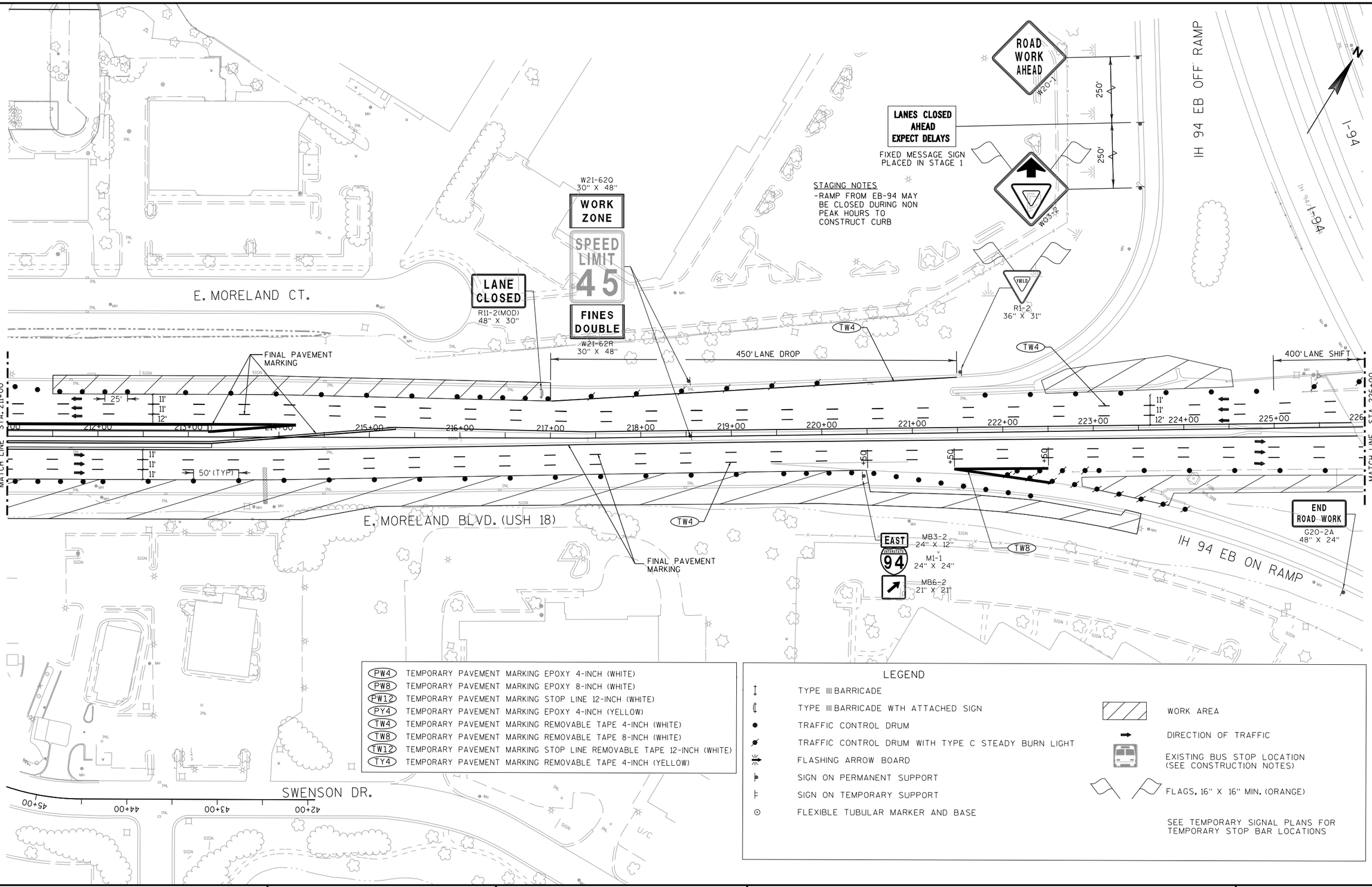
MATCH LINE STA. 211+00

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- FLEXIBLE TUBULAR MARKER AND BASE
- WORK AREA
- DIRECTION OF TRAFFIC
- EXISTING BUS STOP LOCATION (SEE CONSTRUCTION NOTES)
- FLAGS, 16" X 16" MIN. (ORANGE)
- SEE TEMPORARY SIGNAL PLANS FOR TEMPORARY STOP BAR LOCATIONS

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CONSTRUCTION STAGING - STAGE 2	SHEET 371	E

2



PW4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (WHITE)
PW8	TEMPORARY PAVEMENT MARKING EPOXY 8-INCH (WHITE)
PW12	TEMPORARY PAVEMENT MARKING STOP LINE 12-INCH (WHITE)
PY4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
TW4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
TW8	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE)
TW12	TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 12-INCH (WHITE)
TY4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)

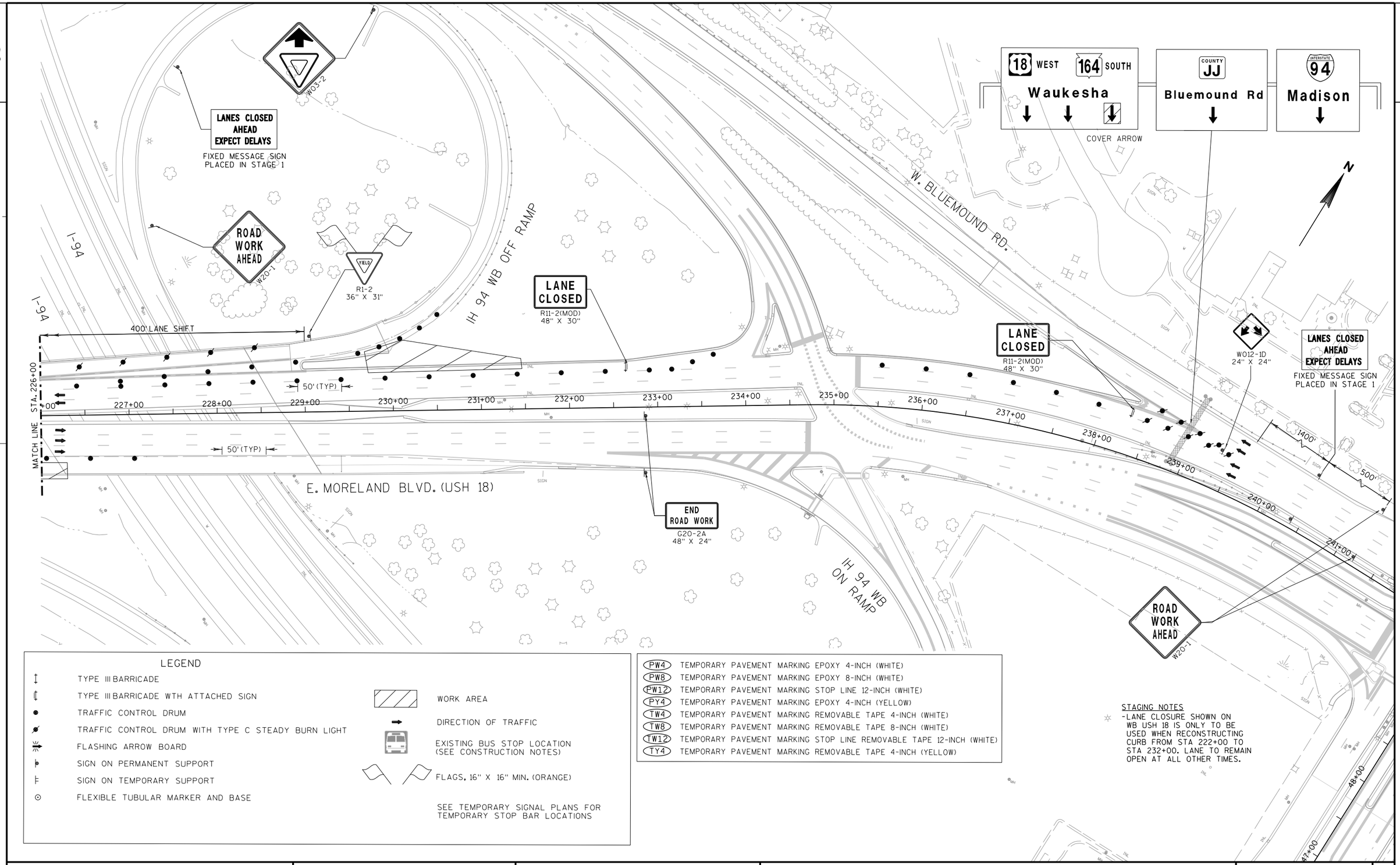
LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- FLEXIBLE TUBULAR MARKER AND BASE
- WORK AREA
- DIRECTION OF TRAFFIC
- EXISTING BUS STOP LOCATION (SEE CONSTRUCTION NOTES)
- FLAGS, 16" X 16" MIN. (ORANGE)

SEE TEMPORARY SIGNAL PLANS FOR TEMPORARY STOP BAR LOCATIONS

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CONSTRUCTION STAGING - STAGE 2	SHEET 372	E

2



LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- FLEXIBLE TUBULAR MARKER AND BASE
- WORK AREA
- DIRECTION OF TRAFFIC
- EXISTING BUS STOP LOCATION (SEE CONSTRUCTION NOTES)
- FLAGS, 16" X 16" MIN. (ORANGE)

SEE TEMPORARY SIGNAL PLANS FOR TEMPORARY STOP BAR LOCATIONS

PW4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (WHITE)
PW8	TEMPORARY PAVEMENT MARKING EPOXY 8-INCH (WHITE)
PW12	TEMPORARY PAVEMENT MARKING STOP LINE 12-INCH (WHITE)
PY4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
TW4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
TW8	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE)
TW12	TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 12-INCH (WHITE)
TY4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)

STAGING NOTES

- LANE CLOSURE SHOWN ON WB USH 18 IS ONLY TO BE USED WHEN RECONSTRUCTING CURB FROM STA 222+00 TO STA 232+00. LANE TO REMAIN OPEN AT ALL OTHER TIMES.

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CONSTRUCTION STAGING - STAGE 2	SHEET 373	E

2

LEGEND

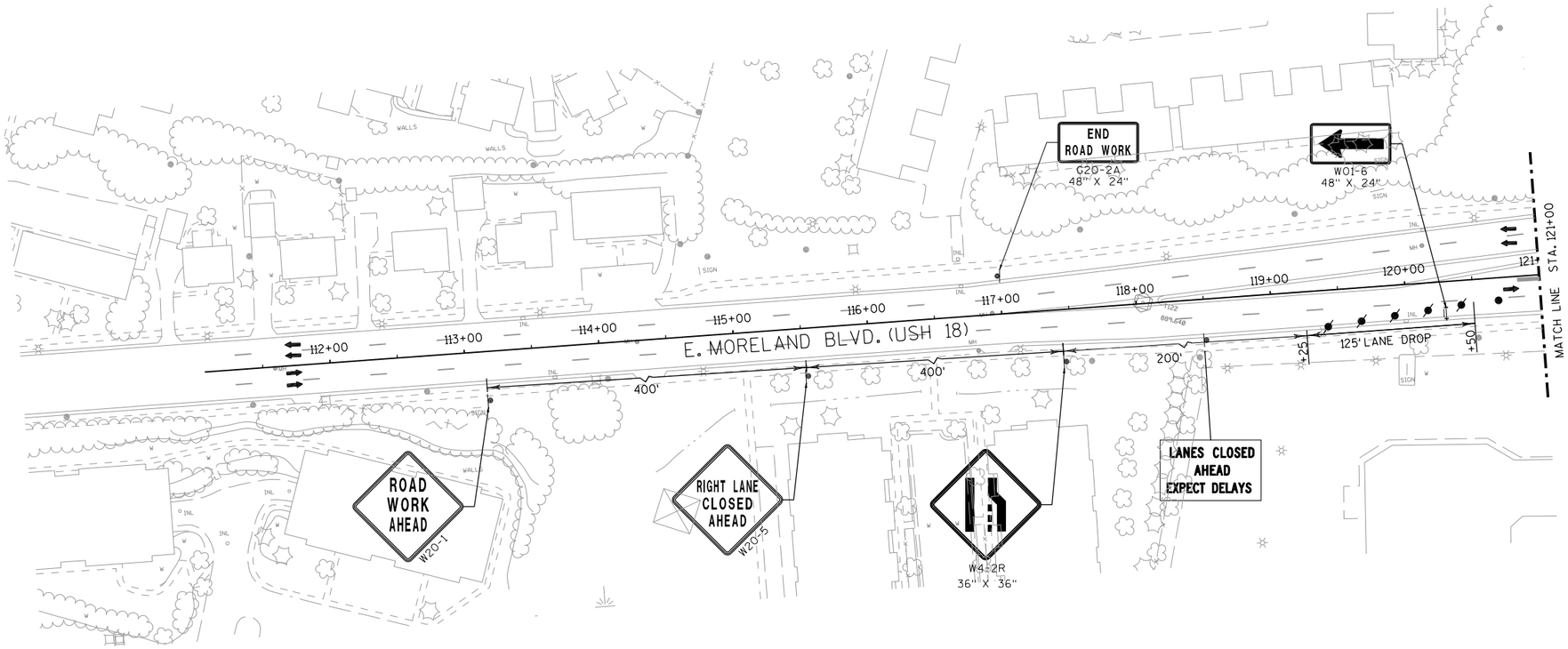
- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- FLEXIBLE TUBULAR MARKER AND BASE

- WORK AREA
- DIRECTION OF TRAFFIC
- EXISTING BUS STOP LOCATION (SEE CONSTRUCTION NOTES)
- FLAGS, 16" X 16" MIN. (ORANGE)
- SEE TEMPORARY SIGNAL PLANS FOR TEMPORARY STOP BAR LOCATIONS

PW4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (WHITE)
PW8	TEMPORARY PAVEMENT MARKING EPOXY 8-INCH (WHITE)
PW12	TEMPORARY PAVEMENT MARKING STOP LINE 12-INCH (WHITE)
PY4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
TW4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
TW8	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE)
TW12	TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 12-INCH (WHITE)
TY4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)

N

2



PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CONSTRUCTION STAGING - STAGE 2 NIGHTTIME	SHEET 374	E

2

PW4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (WHITE)
PW8	TEMPORARY PAVEMENT MARKING EPOXY 8-INCH (WHITE)
PW12	TEMPORARY PAVEMENT MARKING STOP LINE 12-INCH (WHITE)
PY4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
TW4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
TW8	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE)
TW12	TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 12-INCH (WHITE)
TY4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)

N

ROAD WORK AHEAD
W20-1

END ROAD WORK
G20-2A
48" X 24"

BEGIN RIGHT TURN LANE
R3-20R
24" X 36"

LANE CLOSED
R11-2(MOD)
48" X 30"

JENNIFER LN.

350'

E. MORELAND BLVD. (USH 18)

MANHATTAN DR.

MATCH LINE STA. 121+00

MATCH LINE STA. 136+00

W21-62Q
30" X 48"

WORK ZONE

SPEED LIMIT 35

FINES DOUBLE
W21-62R
30" X 48"

FILLER CAPS

CANOPY

SIGN

PHONE

50'

11'

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- FLEXIBLE TUBULAR MARKER AND BASE
- WORK AREA
- DIRECTION OF TRAFFIC
- EXISTING BUS STOP LOCATION (SEE CONSTRUCTION NOTES)
- FLAGS, 16" X 16" MIN. (ORANGE)

SEE TEMPORARY SIGNAL PLANS FOR TEMPORARY STOP BAR LOCATIONS

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CONSTRUCTION STAGING - STAGE 2 NIGHTTIME	SHEET 375	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\026122_s2n.dgn PLOT DATE : 11/5/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 100.0000 sf / in.

2

PW4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (WHITE)
PW8	TEMPORARY PAVEMENT MARKING EPOXY 8-INCH (WHITE)
PW12	TEMPORARY PAVEMENT MARKING STOP LINE 12-INCH (WHITE)
PY4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
TW4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
TW8	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE)
TW12	TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 12-INCH (WHITE)
TY4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)

N

STARDUST DR.

W21-62O
30" X 48"
WORK ZONE
SPEED LIMIT 35
FINES DOUBLE
W21-62R
30" X 48"

ROAD WORK AHEAD
W20-1

LANE CLOSED
R11-2(MOD)
48" X 30"

WOLF ROAD

END ROAD WORK
G20-2A
48" X 24"

YIELD
ANT.
ESTR

BEGIN RIGHT TURN LANE
R3-2OR
24" X 36"

STA. 136+00
MATCH LINE
11'
50'(TYP)
136+00
137+00
138+00
139+00
140+00
141+00
142+00
143+00
144+00
145+00
146+00
147+00
148+00
149+00
150+00
151+00
STA. 151+00
MATCH LINE

E. MORELAND BLVD. (USH 18)

U/C

FOUND

BEGIN RIGHT TURN LANE
R3-20R
24" X 36"

ESTR

286+00
285+00
284+00
283+00
282+00
STH 164

LANES CLOSED AHEAD
EXPECT DELAYS
FIXED MESSAGE SIGN

ROAD WORK AHEAD
W20-1

END ROAD WORK
G20-2A
48" X 24"

W21-62O
30" X 48"
WORK ZONE
SPEED LIMIT 45
FINES DOUBLE
W21-62R
30" X 48"

LANE CLOSED
R11-2(MOD)
48" X 30"

ESTR

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- FLEXIBLE TUBULAR MARKER AND BASE
- WORK AREA
- DIRECTION OF TRAFFIC
- EXISTING BUS STOP LOCATION (SEE CONSTRUCTION NOTES)
- FLAGS, 16" X 16" MIN. (ORANGE)

SEE TEMPORARY SIGNAL PLANS FOR TEMPORARY STOP BAR LOCATIONS

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CONSTRUCTION STAGING - STAGE 2 NIGHTTIME	SHEET 376	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\026123_s2n.dgn
PLOT DATE : 11/5/2015
PLOT BY : GRAEF
PLOT NAME :
PLOT SCALE : 100.0000 sf / in.
WISDOT/CADDS SHEET 42

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- FLEXIBLE TUBULAR MARKER AND BASE
- WORK AREA
- DIRECTION OF TRAFFIC
- EXISTING BUS STOP LOCATION (SEE CONSTRUCTION NOTES)
- FLAGS, 16" X 16" MIN. (ORANGE)
- SEE TEMPORARY SIGNAL PLANS FOR TEMPORARY STOP BAR LOCATIONS

PW4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (WHITE)
PW8	TEMPORARY PAVEMENT MARKING EPOXY 8-INCH (WHITE)
PW12	TEMPORARY PAVEMENT MARKING STOP LINE 12-INCH (WHITE)
PY4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
TW4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
TW8	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE)
TW12	TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 12-INCH (WHITE)
TY4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)

N

W21-62O
30" X 48"
WORK ZONE
SPEED LIMIT 45
FINES DOUBLE
W21-62R
30" X 48"

ROAD WORK AHEAD
W20-1
PLACE AT STARDUST DR.

AVALON DR.

END ROAD WORK
G20-2A
48" X 24"

LANE CLOSED
R11-2(MOD)
48" X 30"

STA. 151+00
MATCH LINE
152+00
153+00
154+00
155+00
156+00
157+00
158+00
159+00
160+00
161+00
162+00
163+00
164+00
165+00
166+00
STA. 166+00
MATCH LINE
11'
50'(TYP)

E. MORELAND BLVD. (USH 18)

GATEWAY DR.

LANE CLOSED
R11-2(MOD)
48" X 30"

ROAD WORK AHEAD
W20-1
PLACE AT PARAMOUNT DR.

END ROAD WORK
G20-2A
48" X 24"

POOL

W21-62O
30" X 48"
WORK ZONE
SPEED LIMIT 45
FINES DOUBLE
W21-62R
30" X 48"

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CONSTRUCTION STAGING - STAGE 2 NIGHTTIME	SHEET 377	E

2

2

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- FLEXIBLE TUBULAR MARKER AND BASE
- WORK AREA
- DIRECTION OF TRAFFIC
- EXISTING BUS STOP LOCATION (SEE CONSTRUCTION NOTES)
- FLAGS, 16" X 16" MIN. (ORANGE)

SEE TEMPORARY SIGNAL PLANS FOR TEMPORARY STOP BAR LOCATIONS

PW4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (WHITE)
PW8	TEMPORARY PAVEMENT MARKING EPOXY 8-INCH (WHITE)
PW12	TEMPORARY PAVEMENT MARKING STOP LINE 12-INCH (WHITE)
PY4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
TW4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
TW8	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE)
TW12	TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 12-INCH (WHITE)
TY4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)

ROAD WORK AHEAD
W20-1

END ROAD WORK
G20-2A
48" X 24"

LANE CLOSED
R11-2(MOD)
48" X 30"

RAMONA RD.

MATCH LINE STA. 166+00

167+00

168+00

169+00

170+00

171+00

172+00

173+00

174+00

175+00

176+00

177+00

178+00

179+00

180+00

MATCH LINE STA. 181+00

11'

25'

50' (TYP)

STARDUST DR.

BEGIN RIGHT TURN LANE
R3-20R
24" X 36"

E. MORELAND BLVD. (USH 18)

ESTR.

LONGVIEW DR.

SIDEWALK CLOSED
R9-9
24" X 12"
PLACE SIGN AT DAVIDSON ROAD

FILLER CAPS

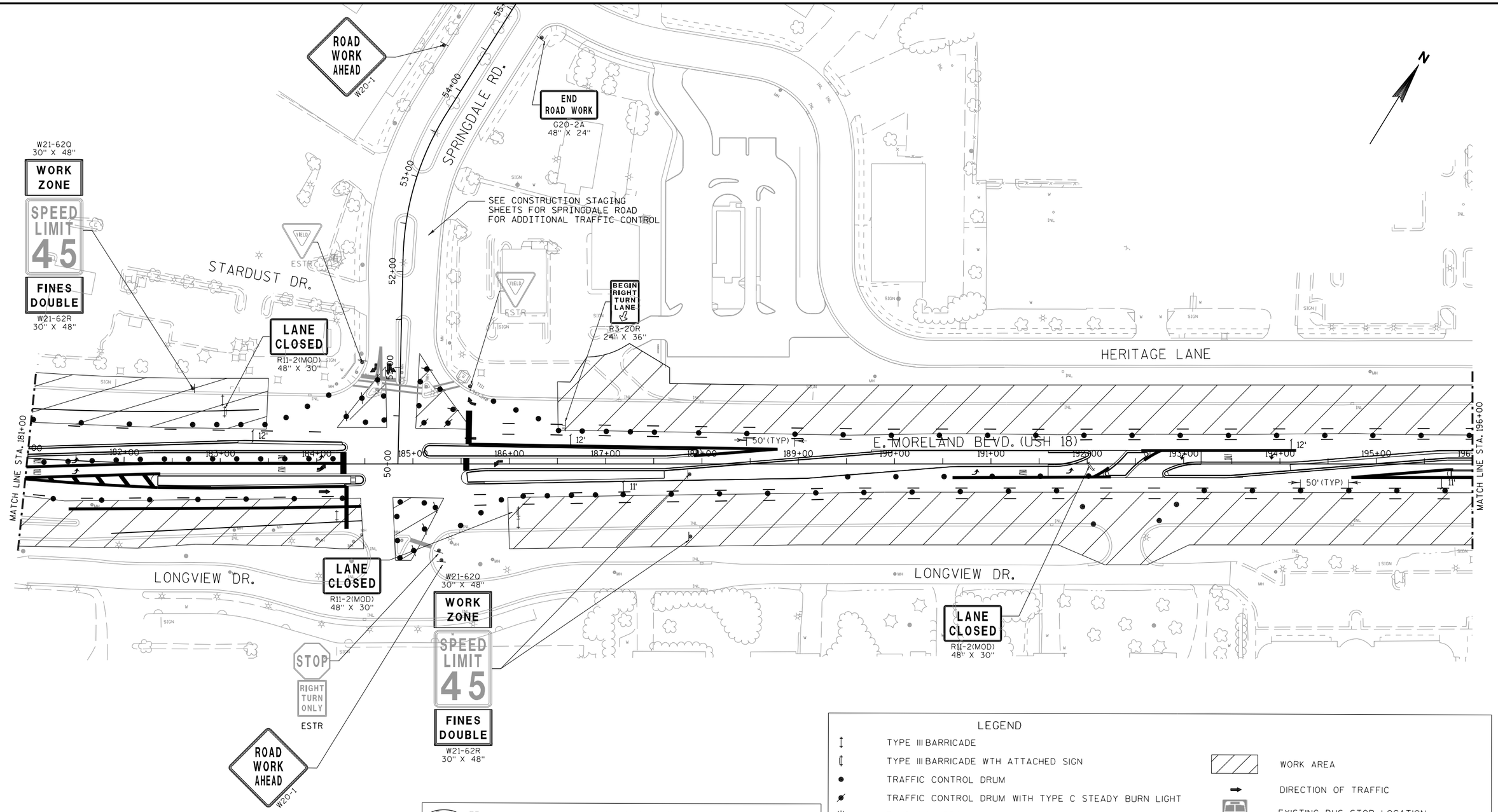
E. MAIN ST.

ROAD CLOSED
R11-2
48" X 30"

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CONSTRUCTION STAGING - STAGE 2 NIGHTTIME	SHEET 378	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\026125_s2n.dgn PLOT DATE : 11/5/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 100.0000 sf / in.

2



PW4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (WHITE)
PW8	TEMPORARY PAVEMENT MARKING EPOXY 8-INCH (WHITE)
PW12	TEMPORARY PAVEMENT MARKING STOP LINE 12-INCH (WHITE)
PY4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
TW4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
TW8	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE)
TW12	TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 12-INCH (WHITE)
TY4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- FLEXIBLE TUBULAR MARKER AND BASE
- WORK AREA
- DIRECTION OF TRAFFIC
- EXISTING BUS STOP LOCATION (SEE CONSTRUCTION NOTES)
- FLAGS, 16" X 16" MIN. (ORANGE)

SEE TEMPORARY SIGNAL PLANS FOR TEMPORARY STOP BAR LOCATIONS

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CONSTRUCTION STAGING - STAGE 2 NIGHTTIME	SHEET 379	E

2

PARKLAWN DR.

ABBOTT DR.

E. MORELAND BLVD. (USH 18)

PARKLAWN CT.

KOSSOW RD.

E. MORELAND CT.

SWENSON DR.

PW4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (WHITE)
PW8	TEMPORARY PAVEMENT MARKING EPOXY 8-INCH (WHITE)
PW12	TEMPORARY PAVEMENT MARKING STOP LINE 12-INCH (WHITE)
PY4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
TW4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
TW8	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE)
TW12	TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 12-INCH (WHITE)
TY4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)

W21-62Q 30" X 48" WORK ZONE SPEED LIMIT 45 FINES DOUBLE

W21-62R 30" X 48"

LANE CLOSED R11-2(MOD) 48" X 30"

SEE CONSTRUCTION STAGING SHEETS FOR PARKLAWN DRIVE FOR ADDITIONAL TRAFFIC CONTROL

R3-2

R3-2.P.

ROAD WORK AHEAD W20-1

END ROAD WORK G20-2A 48" X 24"

BEGIN RIGHT TURN LANE R3-20R 24" X 36"

SEE CONSTRUCTION STAGING SHEETS FOR KOSSOW ROAD FOR ADDITIONAL TRAFFIC CONTROL

48" X 24" G20-2A ROAD WORK END

48" X 24" G20-2A ROAD WORK END

50' TYP.

12'

25'

11'

MATCH LINE STA. 196+00

MATCH LINE STA. 211+00

LEGEND

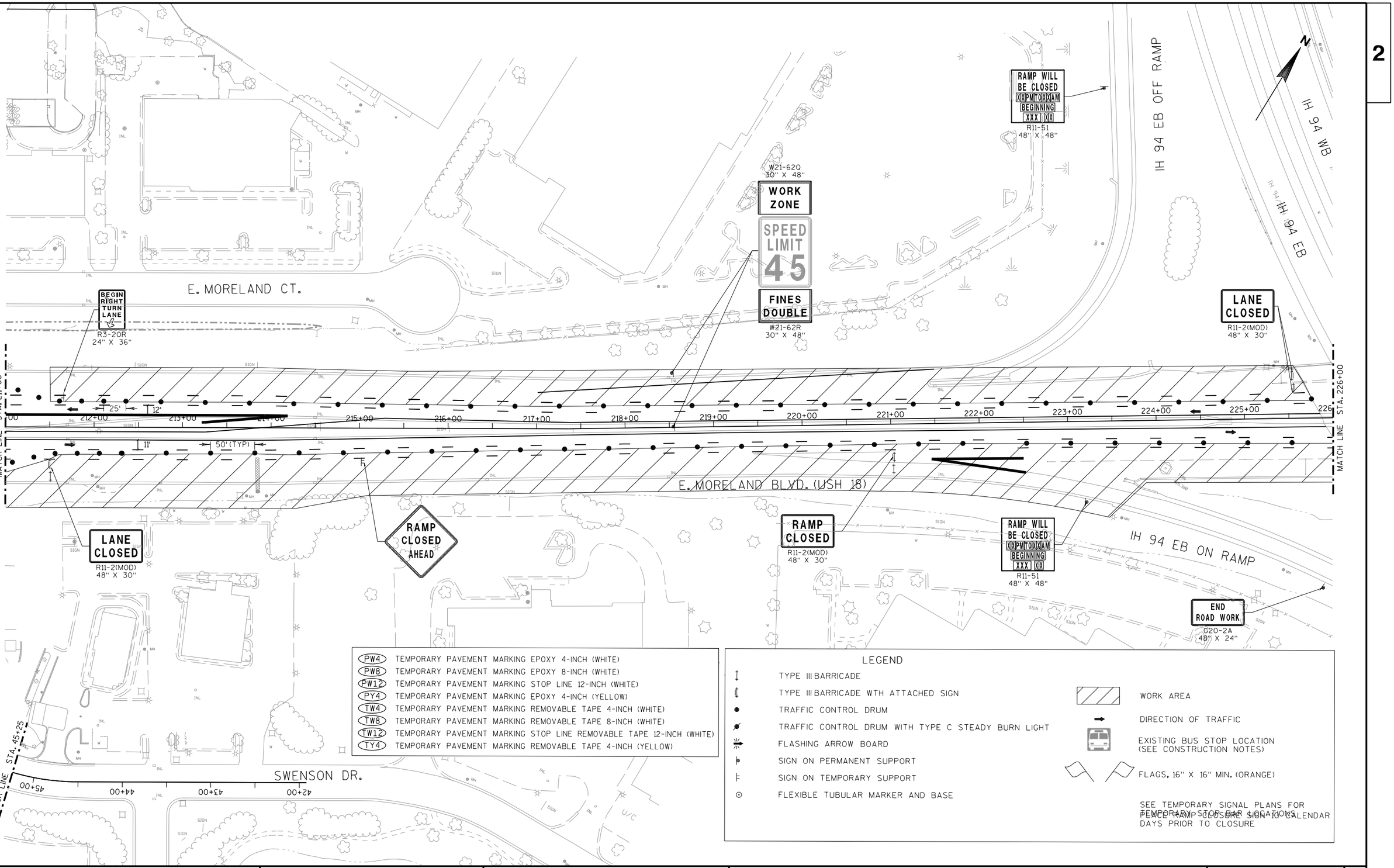
- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- FLEXIBLE TUBULAR MARKER AND BASE
- WORK AREA
- DIRECTION OF TRAFFIC
- EXISTING BUS STOP LOCATION (SEE CONSTRUCTION NOTES)
- FLAGS, 16" X 16" MIN. (ORANGE)

SEE TEMPORARY SIGNAL PLANS FOR TEMPORARY STOP BAR LOCATIONS

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CONSTRUCTION STAGING - STAGE 2 NIGHTTIME	SHEET 380	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\026127_s2n.dgn
PLOT DATE : 11/5/2015
PLOT BY : GRAEF
PLOT NAME :
PLOT SCALE : 100.0000 sf / in.
WISDOT/CADDS SHEET 42

2



PW4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (WHITE)
PW8	TEMPORARY PAVEMENT MARKING EPOXY 8-INCH (WHITE)
PW12	TEMPORARY PAVEMENT MARKING STOP LINE 12-INCH (WHITE)
PY4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
TW4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
TW8	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE)
TW12	TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 12-INCH (WHITE)
TY4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- FLEXIBLE TUBULAR MARKER AND BASE
- WORK AREA
- DIRECTION OF TRAFFIC
- EXISTING BUS STOP LOCATION (SEE CONSTRUCTION NOTES)
- FLAGS, 16" X 16" MIN. (ORANGE)

SEE TEMPORARY SIGNAL PLANS FOR TEMPORARY STOP BAR LOCATIONS

PLACE RAMP CLOSURE SIGNS 10 CALENDAR DAYS PRIOR TO CLOSURE

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CONSTRUCTION STAGING - STAGE 2 NIGHTTIME	SHEET 381	E

2

RAMP WILL BE CLOSED
XXPMTOXXPM
BEGINNING
XXX XX
R11-51
48" X 48"

RAMP CLOSED
R11-2(MOD)
48" X 30"

LANE CLOSED
R11-2(MOD)
48" X 30"

LANE CLOSED
R11-2(MOD)
48" X 30"

END ROAD WORK
G20-2A
48" X 24"

CTH JJ

W. BLUEMOUND RD.

IH 94 WB OFF RAMP

IH 94/STH 164

E. MORELAND BLVD. (USH 18)

IH 94 WB

IH 94 EB

IH 94 WB ON RAMP

MATCH LINE STA. 226+00

227+00

228+00

229+00

230+00

231+00

232+00

233+00

234+00

235+00

236+00

237+00

238+00

239+00

240+00

200' LANE SHIFT

STA. 240+00

MATCH LINE

N

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- FLEXIBLE TUBULAR MARKER AND BASE

- WORK AREA
- DIRECTION OF TRAFFIC
- EXISTING BUS STOP LOCATION (SEE CONSTRUCTION NOTES)
- FLAGS, 16" X 16" MIN. (ORANGE)

PLACE RAMP CLOSURE SIGN 10 CALENDAR DAYS PRIOR TO CLOSURE

SEE TEMPORARY SIGNAL PLANS FOR TEMPORARY STOP BAR LOCATIONS

PW4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (WHITE)
PW8	TEMPORARY PAVEMENT MARKING EPOXY 8-INCH (WHITE)
PW12	TEMPORARY PAVEMENT MARKING STOP LINE 12-INCH (WHITE)
PY4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
TW4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
TW8	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE)
TW12	TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 12-INCH (WHITE)
TY4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CONSTRUCTION STAGING - STAGE 2 NIGHTTIME	SHEET 382 E

2

N

N. BARKER RD.

JENNIFER DR.

W. MORELAND BLVD. (USH 18)

USH 18

54+00 53+00 52+00 51+00 50+00 49+00 48+00 47+00 46+00 45+00

241+00 242+00 243+00 244+00 245+00 246+00 247+00 248+00 249+00 250+00 251+00 252+00 253+00 254+00

STA. 240+00

MATCH LINE

+00 +50 +25 +00 +40

25' 50'(TYP)

200' LANE SHIFT

540' LANE DROP

500' 1000' 1000'

W01-4L
40 M.P.H.
W013-1
24" X 24"

LANE CLOSED
R11-2(MOD)
48" X 30"

END ROAD WORK
G20-2A
48" X 24"

LANE CLOSED
R11-2(MOD)
48" X 30"

LANES CLOSED AHEAD EXPECT DELAYS
FIXED MESSAGE SIGN FROM STAGE 1

LEFT LANE CLOSED AHEAD
W20-5

W04-2L

ROAD WORK AHEAD
W20-1

BEGIN LEFT TURN LANE
R3-20L
24" X 36"

LANE CLOSED
R11-2(MOD)
48" X 30"

END ROAD WORK
G20-2A
48" X 24"

PW4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (WHITE)
PW8	TEMPORARY PAVEMENT MARKING EPOXY 8-INCH (WHITE)
PW12	TEMPORARY PAVEMENT MARKING STOP LINE 12-INCH (WHITE)
PY4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
TW4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
TW8	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE)
TW12	TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 12-INCH (WHITE)
TY4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- FLEXIBLE TUBULAR MARKER AND BASE
- WORK AREA
- DIRECTION OF TRAFFIC
- EXISTING BUS STOP LOCATION (SEE CONSTRUCTION NOTES)
- FLAGS, 16" X 16" MIN. (ORANGE)

SEE TEMPORARY SIGNAL PLANS FOR TEMPORARY STOP BAR LOCATIONS

T204 859,848

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CONSTRUCTION STAGING - STAGE 2 NIGHTTIME	SHEET 383	E

2

2

W. BLUEMOUND RD.

CTH JJ

IH 94 WB OFF RAMP

IH 94 EB OFF RAMP

IH 94 WB ON RAMP

IH 94 EB ON RAMP

IH 94 WB

IH 94 EB

E. MORELAND BLVD. (USH 18)

BARKER ROAD

N

RAMP CLOSED AHEAD

500'

RAMP CLOSED
R11-2(MOD)
48" X 30"

RAMP CLOSED
R11-2(MOD)
48" X 30"

END DETOUR
M4-8A
24" X 18"

END DETOUR
M4-8A
24" X 18"

DETOUR WEST 18
M4-8 24" X 12"
M3-4 24" X 12"
M1-4 24" X 24"
M5-2R 21" X 21"

DETOUR SOUTH 164
M4-8 24" X 12"
M3-3 24" X 12"
M1-6 24" X 24"
M5-2R 21" X 21"

DETOUR WEST 18
M4-8 24" X 12"
M3-4 24" X 12"
M1-4 24" X 24"
M 5-1L 21" X 21"

DETOUR SOUTH 164
M4-8 24" X 12"
M3-3 24" X 12"
M1-6 24" X 24"
M 5-1L 21" X 21"

DETOUR WEST 18
M4-8 36" X 18"
M3-4 36" X 18"
M1-4 36" X 36"
M5-2R 30" X 30"

DETOUR SOUTH 164
M4-8 36" X 18"
M3-3 36" X 18"
M1-6 36" X 36"
M5-2R 30" X 30"

DETOUR WEST 18
M4-8 36" X 18"
M3-4 36" X 18"
M1-4 36" X 36"
M5-2R 30" X 30"

DETOUR SOUTH 164
M4-8 36" X 18"
M3-3 36" X 18"
M1-6 36" X 36"
M5-2R 30" X 30"

DETOUR WEST 18
M4-8 36" X 18"
M3-4 36" X 18"
M1-4 36" X 36"
M5-2R 30" X 30"

DETOUR SOUTH 164
M4-8 36" X 18"
M3-3 36" X 18"
M1-6 36" X 36"
M5-2R 30" X 30"

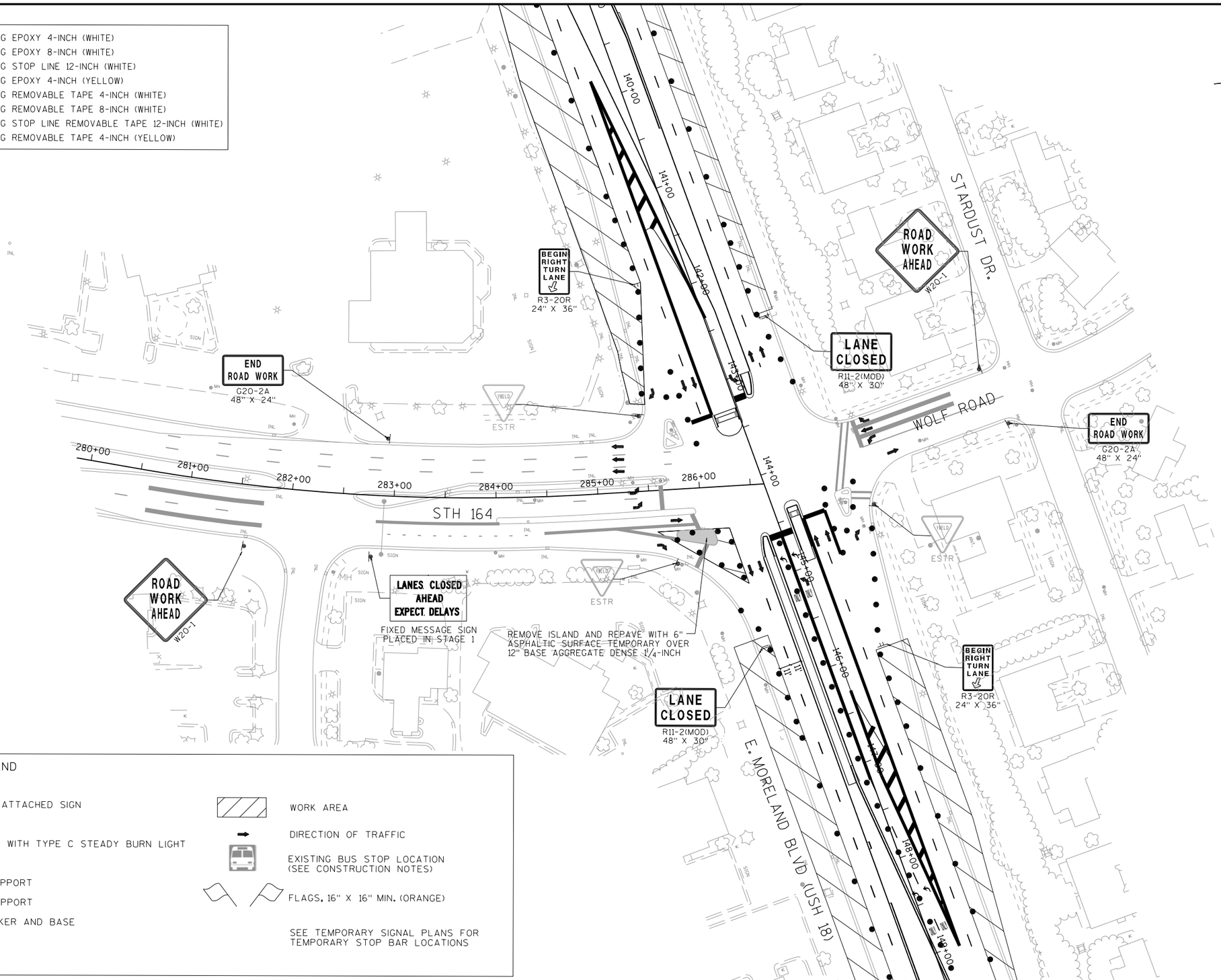
500'

RAMP CLOSED
R11-2(MOD)
48" X 30"

RAMP CLOSED AHEAD

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CONSTRUCTION STAGING - STAGE 2 NIGHTTIME	SHEET 384	E

PW4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (WHITE)
PW8	TEMPORARY PAVEMENT MARKING EPOXY 8-INCH (WHITE)
PW12	TEMPORARY PAVEMENT MARKING STOP LINE 12-INCH (WHITE)
PY4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
TW4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
TW8	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE)
TW12	TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 12-INCH (WHITE)
TY4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)



LEGEND

	TYPE III BARRICADE
	TYPE III BARRICADE WTH ATTACHED SIGN
	TRAFFIC CONTROL DRUM
	TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
	FLASHING ARROW BOARD
	SIGN ON PERMANENT SUPPORT
	SIGN ON TEMPORARY SUPPORT
	FLEXIBLE TUBULAR MARKER AND BASE
	WORK AREA
	DIRECTION OF TRAFFIC
	EXISTING BUS STOP LOCATION (SEE CONSTRUCTION NOTES)
	FLAGS, 16" X 16" MIN. (ORANGE)

SEE TEMPORARY SIGNAL PLANS FOR TEMPORARY STOP BAR LOCATIONS

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CONSTRUCTION STAGING - STAGE 2A	SHEET 385	E

2

N

END ROAD WORK
G20-2A
48" X 24"

LANE CLOSED
R11-2(MOD)
48" X 30"

STOP
RIGHT TURN ONLY
ESTR

ROAD WORK AHEAD
W20-1

LANE CLOSED
R11-2(MOD)
48" X 30"

END ROAD WORK
G20-2A
48" X 24"

BEGIN RIGHT TURN LANE
R3-20R
24" X 36"

END ROAD WORK
G20-2A
48" X 24"

ROAD WORK AHEAD
W20-1

REMOVE ISLAND AND REPAVE WITH FINAL PAVEMENT. SEE PAVING PLAN.

STARDUST DR.

SPRINGDALE RD.

E. MORELAND BLVD (USH 18)

LONGVIEW DR.

HERITAGE LANE

50+00 51+00 52+00 53+00 54+00 55+00 56+00 57+00

180+00 181+00 182+00 183+00 184+00 185+00 186+00 187+00 188+00 189+00 190+00

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- FLEXIBLE TUBULAR MARKER AND BASE
- WORK AREA
- DIRECTION OF TRAFFIC
- EXISTING BUS STOP LOCATION (SEE CONSTRUCTION NOTES)
- FLAGS, 16" X 16" MIN. (ORANGE)

SEE TEMPORARY SIGNAL PLANS FOR TEMPORARY STOP BAR LOCATIONS

PW4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (WHITE)
PW8	TEMPORARY PAVEMENT MARKING EPOXY 8-INCH (WHITE)
PW12	TEMPORARY PAVEMENT MARKING STOP LINE 12-INCH (WHITE)
PY4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
TW4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
TW8	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE)
TW12	TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 12-INCH (WHITE)
TY4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)

2

END ROAD WORK
G20-2A
48" X 24"

LANE CLOSED
R11-2(MOD)
48" X 30"

ROAD CLOSED
R11-2
48" X 30"

HILLCREST DR.

200'

PARKLAWN CT.

ROAD WORK AHEAD
W20-1

END ROAD WORK
G20-2A
48" X 24"

200'

ROAD CLOSED TO THRU TRAFFIC
R11-4
60" X 30"

R3-2
24" X 24"

STOP
ESTR

DO NOT ENTER
R5-1
30" X 30"

R3-1
24" X 24"

LANE CLOSED
R11-2(MOD)
48" X 30"

45+00 46+00 47+00 48+00 49+00 50+00 51+00 52+00

195+00 196+00 197+00 198+00 199+00 200+00 201+00 202+00 203+00

HERITAGE LANE

LANE CLOSED
R11-2(MOD)
48" X 30"

STOP
MOVE SIGN

PW12

R3-2
24" X 24"

PW4
PY4
DOUBLE

FILLER CAPS

ABBOTT DR.

44+00

TY4
DOUBLE

W01-4L

ROAD WORK AHEAD
W20-1

11'
11'
11'
11'

125' LANE SHIFT

200'

200'

W01-6
48" X 24"

PARKLAWN DR.

END ROAD WORK
G20-2A
48" X 24"

E. MORELAND BLVD. (USH 18)

PW4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (WHITE)
PW8	TEMPORARY PAVEMENT MARKING EPOXY 8-INCH (WHITE)
PW12	TEMPORARY PAVEMENT MARKING STOP LINE 12-INCH (WHITE)
PY4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
TW4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
TW8	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE)
TW12	TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 12-INCH (WHITE)
TY4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- FLEXIBLE TUBULAR MARKER AND BASE

- WORK AREA
- DIRECTION OF TRAFFIC
- EXISTING BUS STOP LOCATION (SEE CONSTRUCTION NOTES)
- FLAGS, 16" X 16" MIN. (ORANGE)

SEE TEMPORARY SIGNAL PLANS FOR TEMPORARY STOP BAR LOCATIONS

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CONSTRUCTION STAGING - STAGE 2A	SHEET 387	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\026156_s2a.dgn PLOT DATE : 11/5/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 100.0000 sf / in.

2

ROAD WORK AHEAD
W20-1

PLACE SIGN AT INTERSECTION OF BLUEMOUND ROAD

KOSSOW RD.

END ROAD WORK
G20-2A
48" X 24"

PRIOR TO STAGE 2B, CONSTRUCT PROPOSED STORM SEWER USING LANE CLOSURES. USE TEMPORARY COVER PLATES AS NEEDED.

REMOVE ISLAND AND REPAVE WITH ASPHALTIC SURFACE TEMPORARY

YIELD

ESTR

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- FLEXIBLE TUBULAR MARKER AND BASE
- WORK AREA
- DIRECTION OF TRAFFIC
- EXISTING BUS STOP LOCATION (SEE CONSTRUCTION NOTES)
- FLAGS, 16" X 16" MIN. (ORANGE)

SEE TEMPORARY SIGNAL PLANS FOR TEMPORARY STOP BAR LOCATIONS

204+00 205+00 206+00 207+00 208+00 209+00 210+00 211+00 212+

52+00 51+00 50+00 49+00 48+00 47+00 46+00 45+00 44+00 43+00 42+00

99+00 98+00 97+00 96+00 95+00 94+00

KOSSOW RD

LANE CLOSED
R11-2(MOD)
48" X 30"

E. MORELAND BLVD (USH 18)

PW4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (WHITE)
PW8	TEMPORARY PAVEMENT MARKING EPOXY 8-INCH (WHITE)
PW12	TEMPORARY PAVEMENT MARKING STOP LINE 12-INCH (WHITE)
PY4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
TW4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
TW8	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE)
TW12	TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 12-INCH (WHITE)
TY4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)

W21-62O
30" X 48"

WORK ZONE

SPEED LIMIT 30

FINES DOUBLE

W21-62R
30" X 48"

END ROAD WORK
G20-2A
48" X 24"

ROAD WORK AHEAD
W20-1

END ROAD WORK
G20-2A
48" X 24"

SWENSON DR.

CROSSROADS CIR.

END ROAD WORK
G20-2A
48" X 24"

ROAD WORK AHEAD
W20-1

TOWER

GENERATOR

U/C

U/C

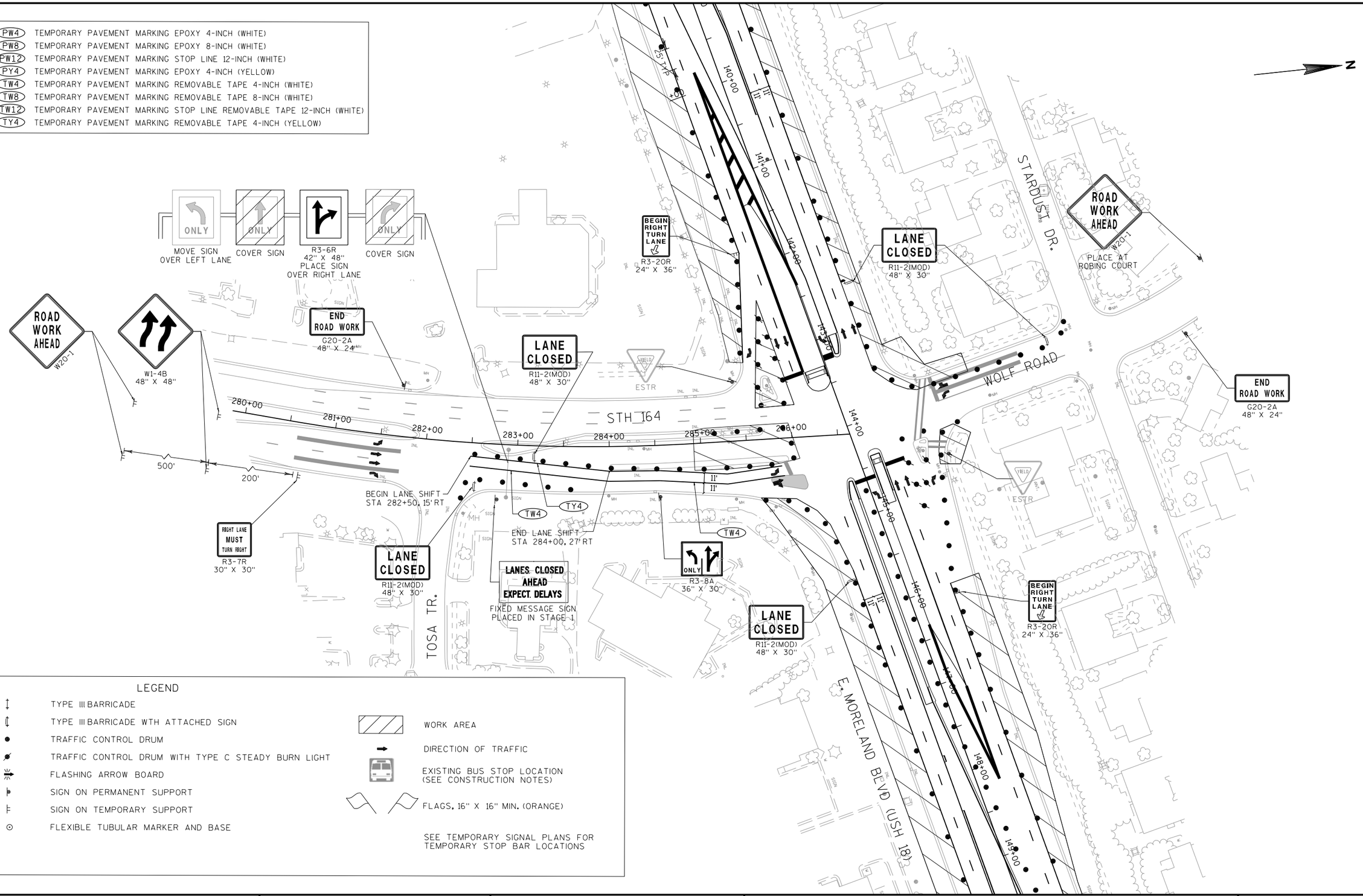
N

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CONSTRUCTION STAGING - STAGE 2A	SHEET 388	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\026157_s2a.dgn PLOT DATE : 11/5/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 100.0000 sf / in.

WISDOT/CADDS SHEET 42

PW4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (WHITE)
PW8	TEMPORARY PAVEMENT MARKING EPOXY 8-INCH (WHITE)
PW12	TEMPORARY PAVEMENT MARKING STOP LINE 12-INCH (WHITE)
PY4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
TW4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
TW8	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE)
TW12	TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 12-INCH (WHITE)
TY4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)



LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- FLEXIBLE TUBULAR MARKER AND BASE
- WORK AREA
- DIRECTION OF TRAFFIC
- EXISTING BUS STOP LOCATION (SEE CONSTRUCTION NOTES)
- FLAGS, 16" X 16" MIN. (ORANGE)

SEE TEMPORARY SIGNAL PLANS FOR TEMPORARY STOP BAR LOCATIONS

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CONSTRUCTION STAGING - STAGE 2B	SHEET 389	E

2

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- FLEXIBLE TUBULAR MARKER AND BASE
- WORK AREA
- DIRECTION OF TRAFFIC
- EXISTING BUS STOP LOCATION (SEE CONSTRUCTION NOTES)
- FLAGS, 16" X 16" MIN. (ORANGE)

SEE TEMPORARY SIGNAL PLANS FOR TEMPORARY STOP BAR LOCATIONS

PW4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (WHITE)
PW8	TEMPORARY PAVEMENT MARKING EPOXY 8-INCH (WHITE)
PW12	TEMPORARY PAVEMENT MARKING STOP LINE 12-INCH (WHITE)
PY4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
TW4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
TW8	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE)
TW12	TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 12-INCH (WHITE)
TY4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)

STOP
RIGHT TURN ONLY
ESTR

ROAD WORK AHEAD
W20-1

ROAD WORK AHEAD
W20-1

BEGIN RIGHT TURN LANE
R3-20R
24" X 36"

END ROAD WORK
G20-2A
48" X 24"

SIDEWALK CLOSED USE OTHER SIDE
R9-10
24" X 12"

REMOVE ISLAND AND REPAVE WITH ASPHALTIC SURFACE TEMPORARY

STARDUST DR.

SPRINGDALE RD.

HERITAGE LANE

E. MORELAND BLVD (USH 18)

LONGVIEW DR.

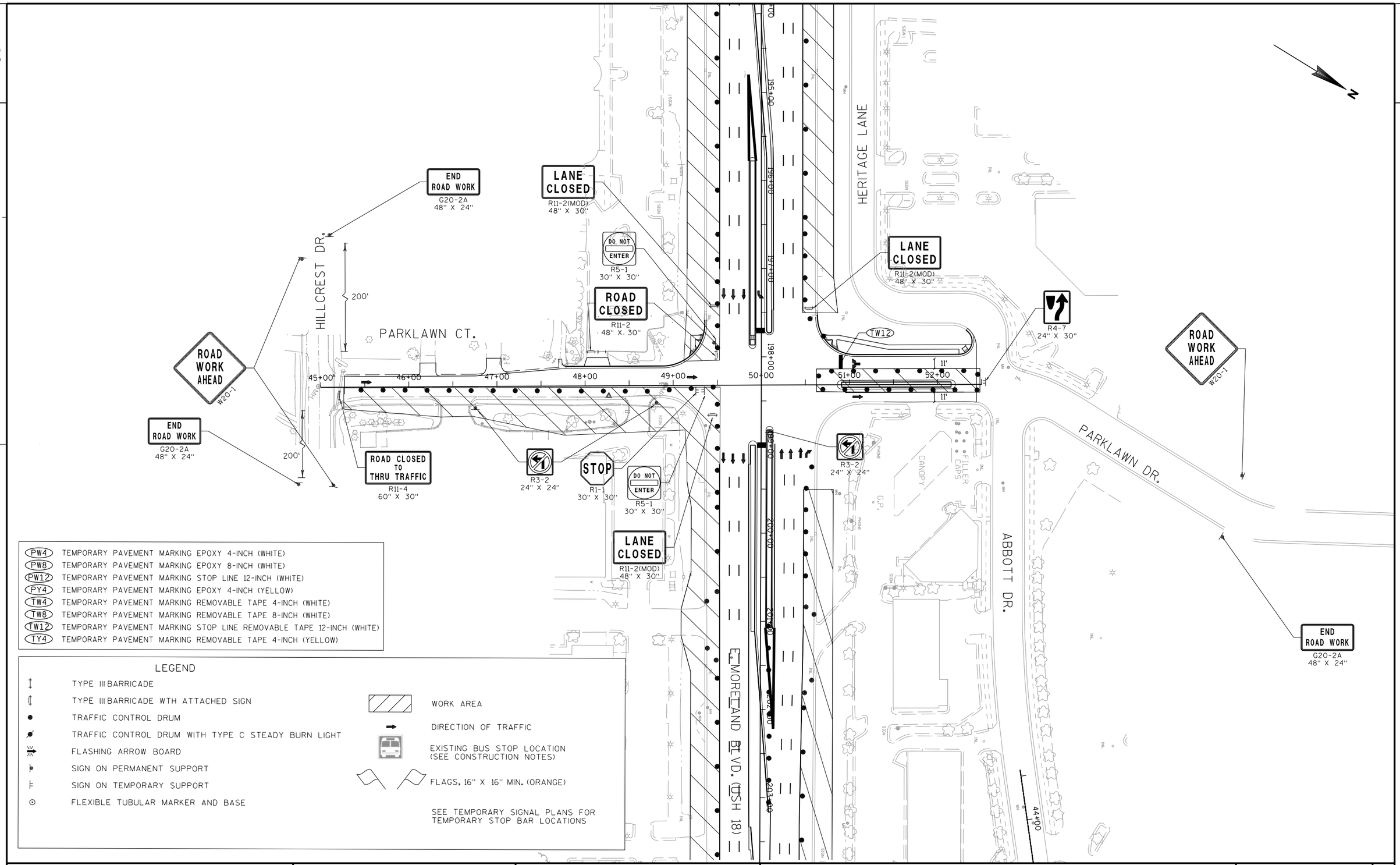
50+00
51+00
52+00
53+00
54+00
55+00
56+00
57+00
183+00
184+00
185+00
186+00
187+00
188+00
189+00
190+00

11'

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CONSTRUCTION STAGING - STAGE 2B	SHEET 390	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\026165_s2b.dgn
PLOT DATE : 11/5/2015
PLOT BY : GRAEF
PLOT NAME :
PLOT SCALE : 100.0000 sf / in.
WISDOT/CADDS SHEET 42

2



PW4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (WHITE)
PW8	TEMPORARY PAVEMENT MARKING EPOXY 8-INCH (WHITE)
PW12	TEMPORARY PAVEMENT MARKING STOP LINE 12-INCH (WHITE)
PY4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
TW4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
TW8	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE)
TW12	TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 12-INCH (WHITE)
TY4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- FLEXIBLE TUBULAR MARKER AND BASE
- WORK AREA
- DIRECTION OF TRAFFIC
- EXISTING BUS STOP LOCATION (SEE CONSTRUCTION NOTES)
- FLAGS, 16" X 16" MIN. (ORANGE)

SEE TEMPORARY SIGNAL PLANS FOR TEMPORARY STOP BAR LOCATIONS

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CONSTRUCTION STAGING - STAGE 2B	SHEET 391	E

2

2

MATCH LINE STA. 52+50

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- FLEXIBLE TUBULAR MARKER AND BASE
- WORK AREA
- DIRECTION OF TRAFFIC
- EXISTING BUS STOP LOCATION (SEE CONSTRUCTION NOTES)
- FLAGS, 16" X 16" MIN. (ORANGE)

SEE TEMPORARY SIGNAL PLANS FOR TEMPORARY STOP BAR LOCATIONS

E. MORELAND CT.

SIDEWALK CLOSED
R9-9
24" X 12"

52+00
51+00
50+00
49+00
48+00
47+00
46+00
45+00
44+00
43+00
42+00
204+00
205+00
206+00
207+00
208+00
209+00
210+00
211+00
212+

PW12
PW4
PY4
11'
11'

ONLY
R3-8A
36" X 30"

E. MORELAND BLVD (USH 18)

PW4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (WHITE)
PW8	TEMPORARY PAVEMENT MARKING EPOXY 8-INCH (WHITE)
PW12	TEMPORARY PAVEMENT MARKING STOP LINE 12-INCH (WHITE)
PY4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
TW4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
TW8	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE)
TW12	TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 12-INCH (WHITE)
TY4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)

MAINTAIN ACCESS

W21-62O
30" X 48"
WORK ZONE
SPEED LIMIT 30
FINES DOUBLE
W21-62R
30" X 48"

END ROAD WORK
G20-2A
48" X 24"

ROAD WORK AHEAD
W20-1

KOSSOW RD

99+00
98+00
97+00
96+00
95+00
94+00

SWENSON DR.

CROSSROADS CIR.

END ROAD WORK
G20-2A
48" X 24"

ROAD WORK AHEAD
W20-1

END ROAD WORK
G20-2A
48" X 24"

N

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CONSTRUCTION STAGING - STAGE 2B	SHEET 392	E

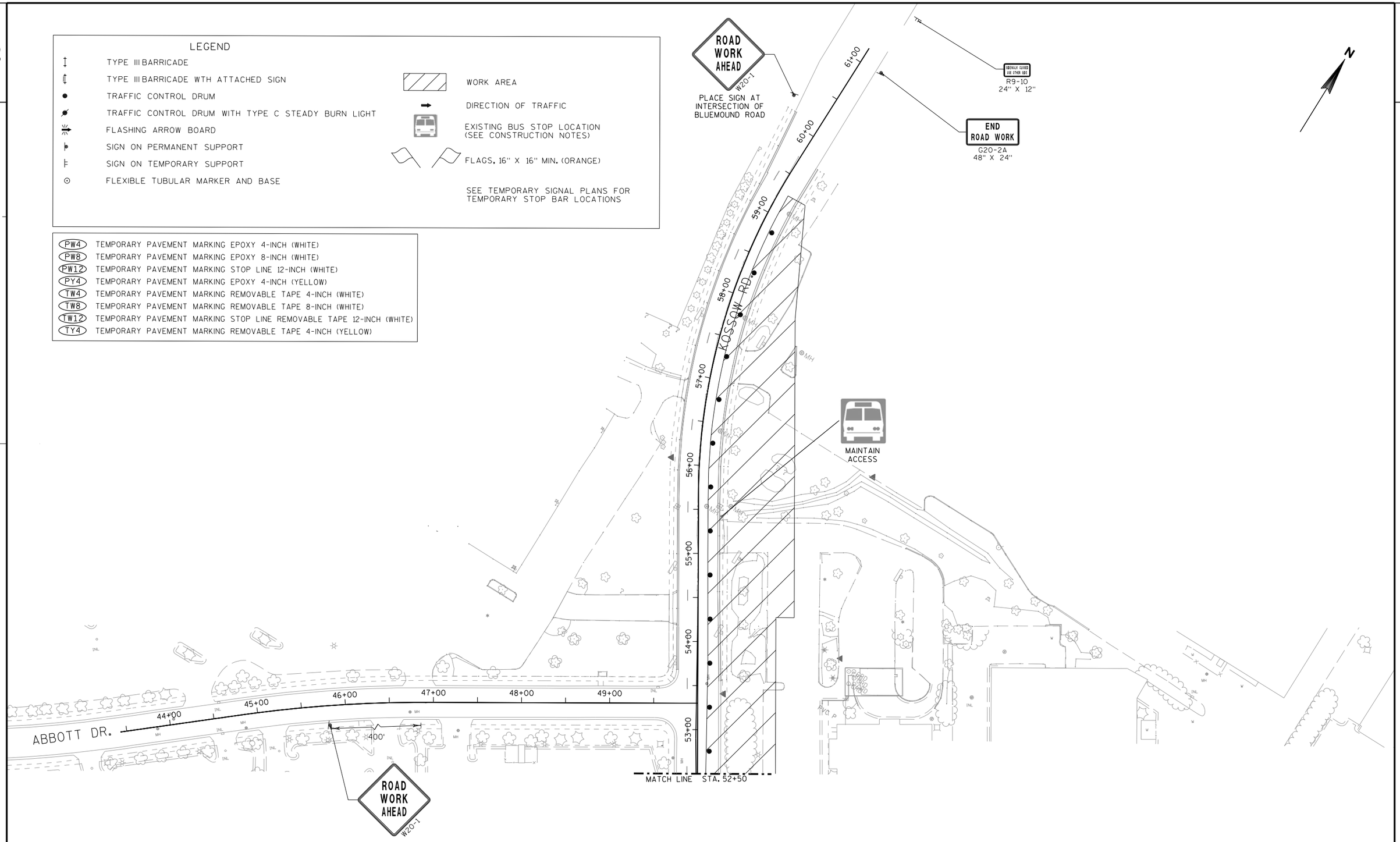
LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- FLEXIBLE TUBULAR MARKER AND BASE

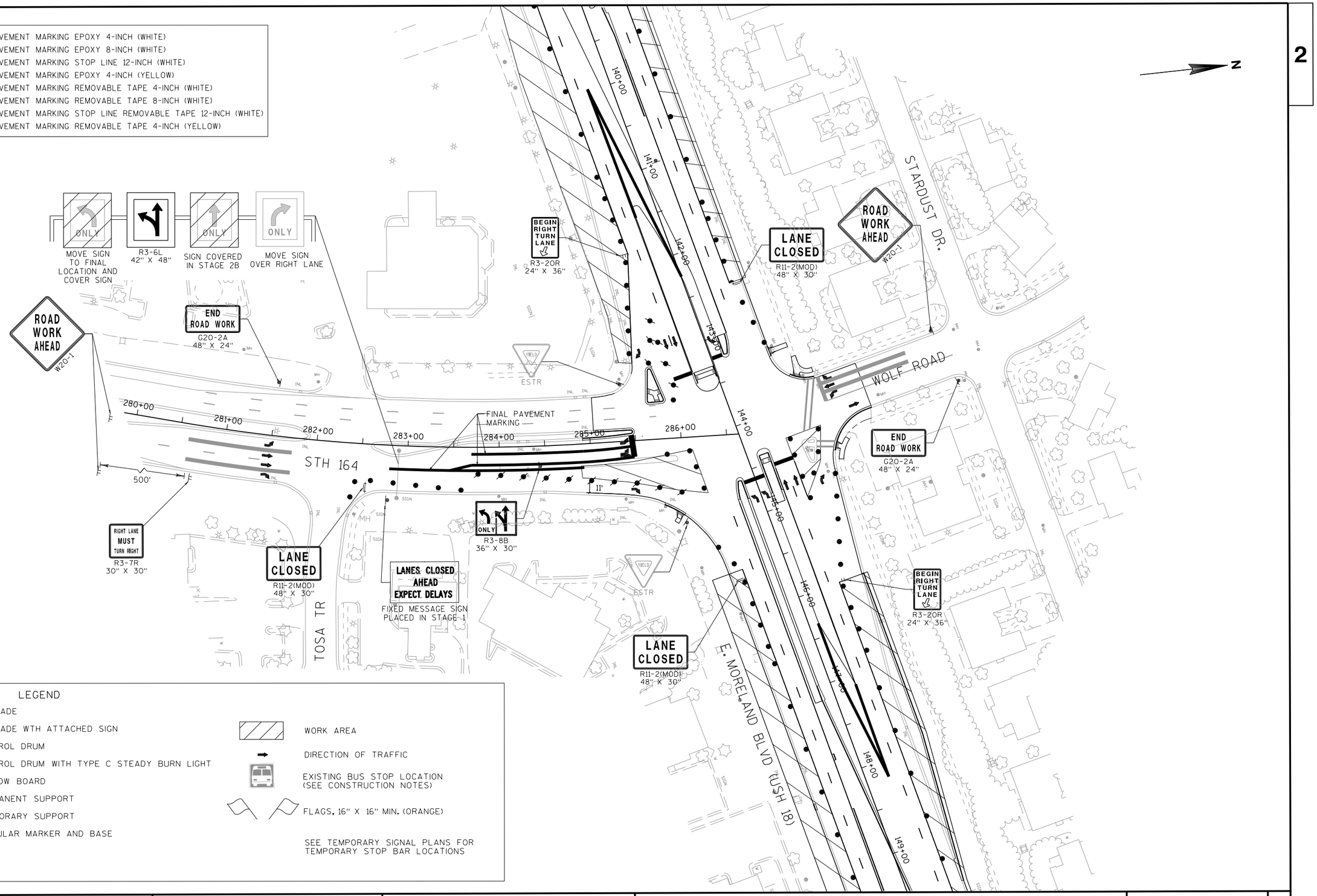
- WORK AREA
- DIRECTION OF TRAFFIC
- EXISTING BUS STOP LOCATION (SEE CONSTRUCTION NOTES)
- FLAGS, 16" X 16" MIN. (ORANGE)

SEE TEMPORARY SIGNAL PLANS FOR TEMPORARY STOP BAR LOCATIONS

PW4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (WHITE)
PW8	TEMPORARY PAVEMENT MARKING EPOXY 8-INCH (WHITE)
PW12	TEMPORARY PAVEMENT MARKING STOP LINE 12-INCH (WHITE)
PY4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
TW4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
TW8	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE)
TW12	TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 12-INCH (WHITE)
TY4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)



PW4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (WHITE)
PW8	TEMPORARY PAVEMENT MARKING EPOXY 8-INCH (WHITE)
PW12	TEMPORARY PAVEMENT MARKING STOP LINE 12-INCH (WHITE)
PY4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
TW4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
TW8	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE)
TW12	TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 12-INCH (WHITE)
TY4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)



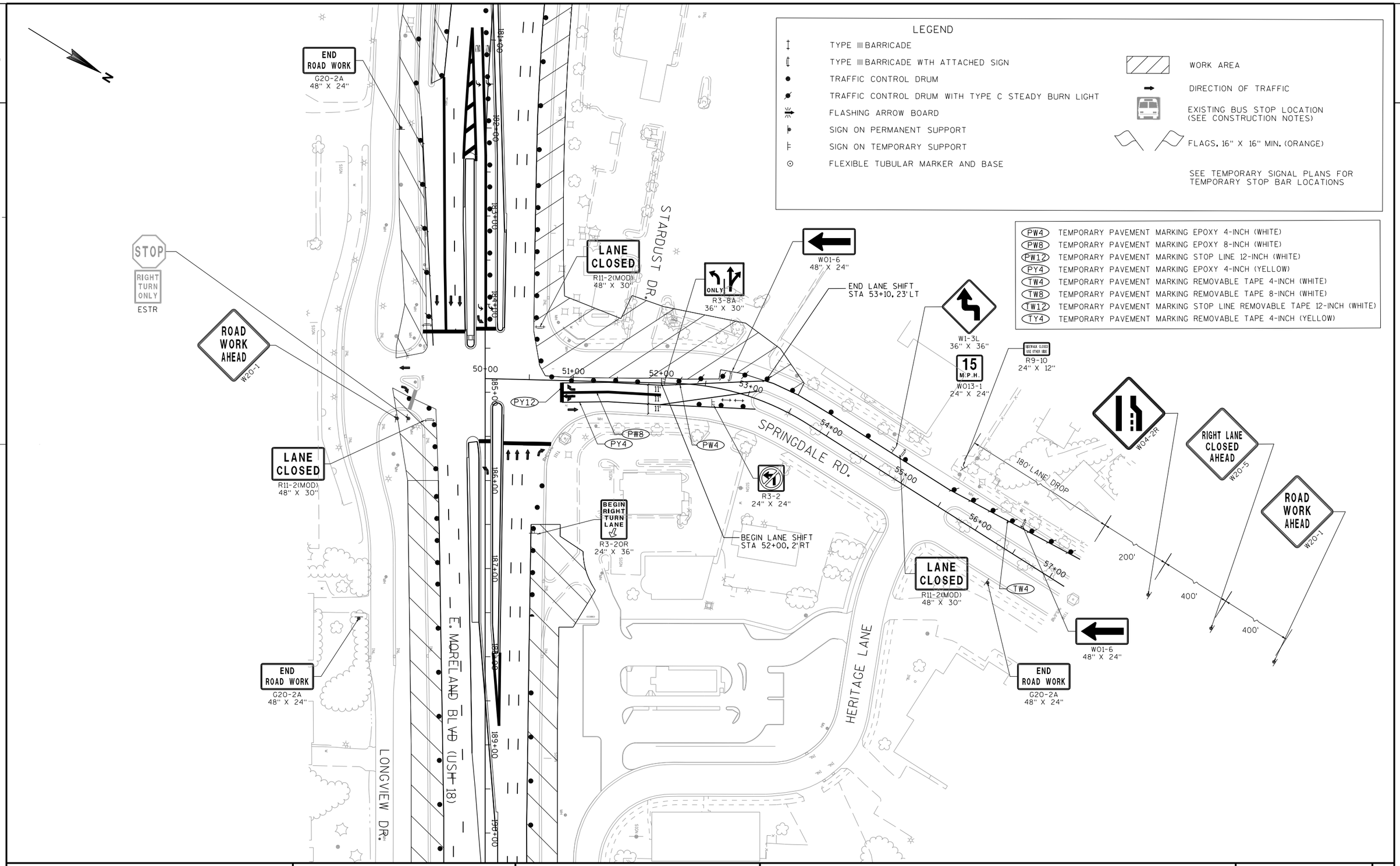
LEGEND

	TYPE III BARRICADE
	TYPE III BARRICADE WTH ATTACHED SIGN
	TRAFFIC CONTROL DRUM
	TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
	FLASHING ARROW BOARD
	SIGN ON PERMANENT SUPPORT
	SIGN ON TEMPORARY SUPPORT
	FLEXIBLE TUBULAR MARKER AND BASE
	WORK AREA
	DIRECTION OF TRAFFIC
	EXISTING BUS STOP LOCATION (SEE CONSTRUCTION NOTES)
	FLAGS, 16" X 16" MIN. (ORANGE)

SEE TEMPORARY SIGNAL PLANS FOR TEMPORARY STOP BAR LOCATIONS

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CONSTRUCTION STAGING - STAGE 2C	SHEET E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\026173_s2c.dgn PLOT DATE : 11/5/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 100.4794 sf / in.



PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CONSTRUCTION STAGING - STAGE 2C	SHEET 395	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\026175_s2c.dgn PLOT DATE : 11/5/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 100.0000 sf / in.

2

MATCH LINE STA. 52+50

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- FLEXIBLE TUBULAR MARKER AND BASE
- WORK AREA
- DIRECTION OF TRAFFIC
- EXISTING BUS STOP LOCATION (SEE CONSTRUCTION NOTES)
- FLAGS, 16" X 16" MIN. (ORANGE)

SEE TEMPORARY SIGNAL PLANS FOR TEMPORARY STOP BAR LOCATIONS

PW4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (WHITE)
PW8	TEMPORARY PAVEMENT MARKING EPOXY 8-INCH (WHITE)
PW12	TEMPORARY PAVEMENT MARKING STOP LINE 12-INCH (WHITE)
PY4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
TW4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
TW8	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE)
TW12	TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 12-INCH (WHITE)
TY4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)

LANE CLOSED
R11-2(MOD)
48" X 30"

BEGIN RIGHT TURN LANE
R3-20R
24" X 36"

PW4
3' LINE
9' GAP

PY4

PW12

PW8

PY4
DOUBLE YELLOW

YIELD
ESTR

E. MORELAND BLVD (USH 18)

KOSSOW RD

SWENSON DR.

CROSSROADS CIR.

90' LANE SHIFT

200'

200'

+40

W21-620
30" X 48"
WORK ZONE
SPEED LIMIT 30
FINES DOUBLE
W21-62R
30" X 48"

END ROAD WORK
G20-2A
48" X 24"

ROAD WORK AHEAD
W20-1

W01-3R

MAINTAIN ACCESS

TOWER

GENERATOR

U/C

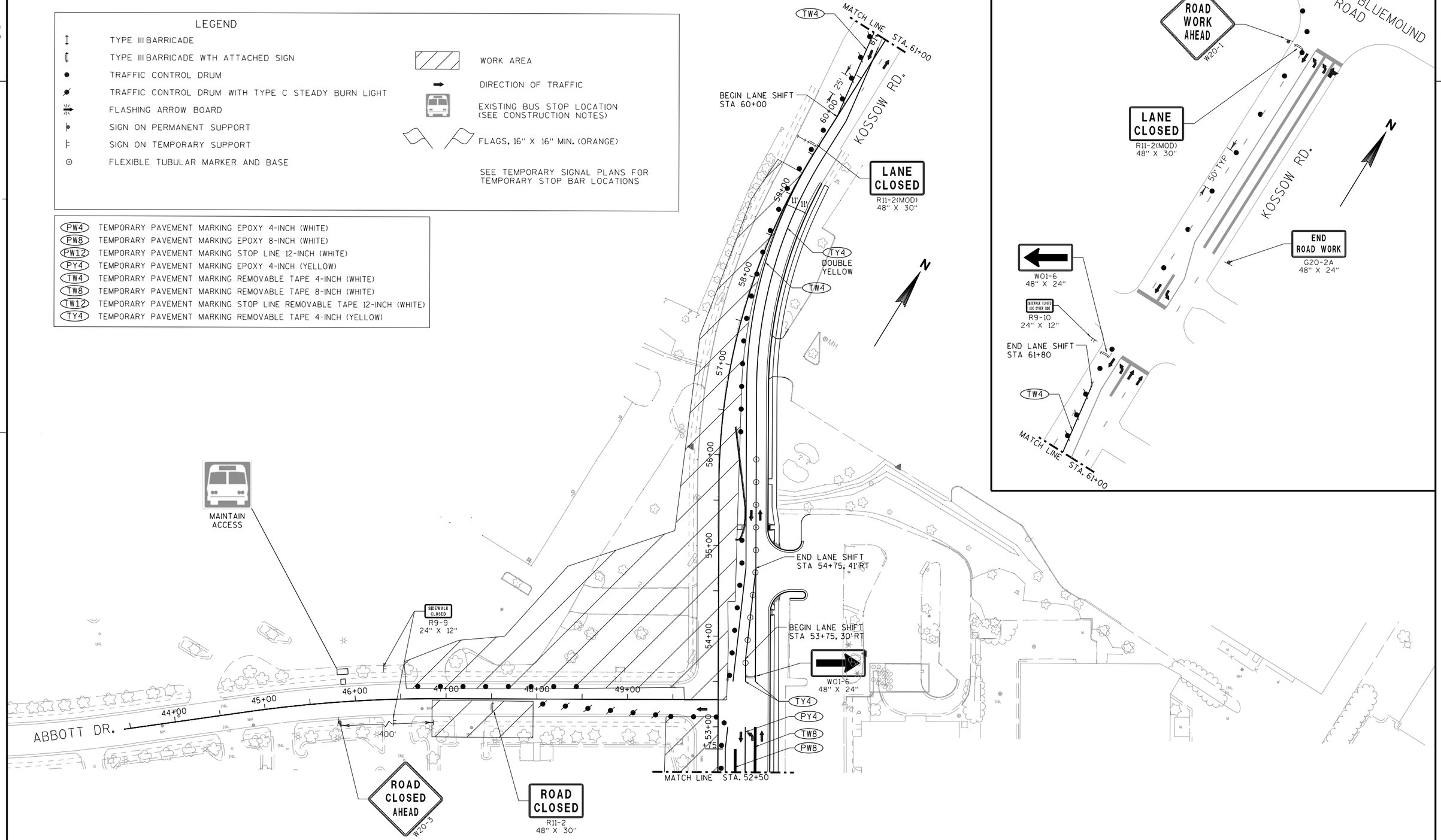
PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CONSTRUCTION STAGING - STAGE 2C	SHEET 396 E

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- FLEXIBLE TUBULAR MARKER AND BASE
- WORK AREA
- DIRECTION OF TRAFFIC
- EXISTING BUS STOP LOCATION (SEE CONSTRUCTION NOTES)
- FLAGS, 16" X 16" MIN. (ORANGE)

SEE TEMPORARY SIGNAL PLANS FOR TEMPORARY STOP BAR LOCATIONS

PW4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (WHITE)
PW8	TEMPORARY PAVEMENT MARKING EPOXY 8-INCH (WHITE)
PW12	TEMPORARY PAVEMENT MARKING STOP LINE 12-INCH (WHITE)
PY4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
TW4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
TW8	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE)
TW12	TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 12-INCH (WHITE)
TY4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)



PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CONSTRUCTION STAGING - STAGE 2C	SHEET 397 E

2

N

END ROAD WORK
G20-2A
48" X 24"

STOP
RIGHT TURN ONLY
ESTR

LANE CLOSED
R11-2(MOD)
48" X 30"

ROAD WORK AHEAD
W20-1

LANE CLOSED
R11-2(MOD)
48" X 30"

LANE CLOSED
R11-2(MOD)
48" X 30"

ONLY
R3-8
36" X 30"

LANE CLOSED
R11-2(MOD)
48" X 30"

BEGIN RIGHT TURN LANE
R3-20R
24" X 36"

W01-6
48" X 24"

END ROAD WORK
G20-2A
48" X 24"

W04-2R

RIGHT LANE CLOSED AHEAD
W20-5

ROAD WORK AHEAD
W20-1

180' LANE DROP

200'

400'

STARDUST DR.

SPRINGDALE RD.

HERITAGE LANE

E. MORELAND BLVD (USH 18)

LONGVIEW DR.

TW8 TY4 TW12 TY4

50+00 51+00 52+00 53+00 54+00 55+00 56+00 57+00

180+00 181+00 182+00 183+00 184+00 185+00 186+00

11'

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- FLEXIBLE TUBULAR MARKER AND BASE
- WORK AREA
- DIRECTION OF TRAFFIC
- EXISTING BUS STOP LOCATION (SEE CONSTRUCTION NOTES)
- FLAGS, 16" X 16" MIN. (ORANGE)

SEE TEMPORARY SIGNAL PLANS FOR TEMPORARY STOP BAR LOCATIONS

PW4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (WHITE)
PW8	TEMPORARY PAVEMENT MARKING EPOXY 8-INCH (WHITE)
PW12	TEMPORARY PAVEMENT MARKING STOP LINE 12-INCH (WHITE)
PY4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
TW4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
TW8	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE)
TW12	TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 12-INCH (WHITE)
TY4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CONSTRUCTION STAGING - STAGE 2D	SHEET 398	E

2

MATCH LINE STA. 52+50

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- FLEXIBLE TUBULAR MARKER AND BASE
- WORK AREA
- DIRECTION OF TRAFFIC
- EXISTING BUS STOP LOCATION (SEE CONSTRUCTION NOTES)
- FLAGS, 16" X 16" MIN. (ORANGE)

SEE TEMPORARY SIGNAL PLANS FOR TEMPORARY STOP BAR LOCATIONS

PW4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (WHITE)
PW8	TEMPORARY PAVEMENT MARKING EPOXY 8-INCH (WHITE)
PW12	TEMPORARY PAVEMENT MARKING STOP LINE 12-INCH (WHITE)
PY4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
TW4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
TW8	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE)
TW12	TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 12-INCH (WHITE)
TY4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)

TW8
TY4
TW8
TY4
E. MORELAND CT.
11' 11'
TW12
204+00
205+00
206+00
207+00
208+00
209+00
210+00
211+00
212+
52+00
51+00
50+00
49+00
48+00
47+00
46+00
45+00
44+00
43+00
42+00
11' 11'
PAVEMENT MARKING FROM PREVIOUS STAGE STA 44+50 - 49+20
98+00
25'
97+00
96+00
95+00
94+00
KOSSOW RD
W21-620
30" X 48"
WORK ZONE
SPEED LIMIT 30
FINES DOUBLE
W21-62R
30" X 48"
END ROAD WORK
G20-2A
48" X 24"
ROAD WORK AHEAD
W20-1
50' TYP
TY4
DOUBLE YELLOW
SWENSON DR.
CROSSROADS CIR.
ROAD WORK AHEAD
W20-1
END ROAD WORK
G20-2A
48" X 24"
END ROAD WORK
G20-2A
48" X 24"
N

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CONSTRUCTION STAGING - STAGE 2D	SHEET 399	E

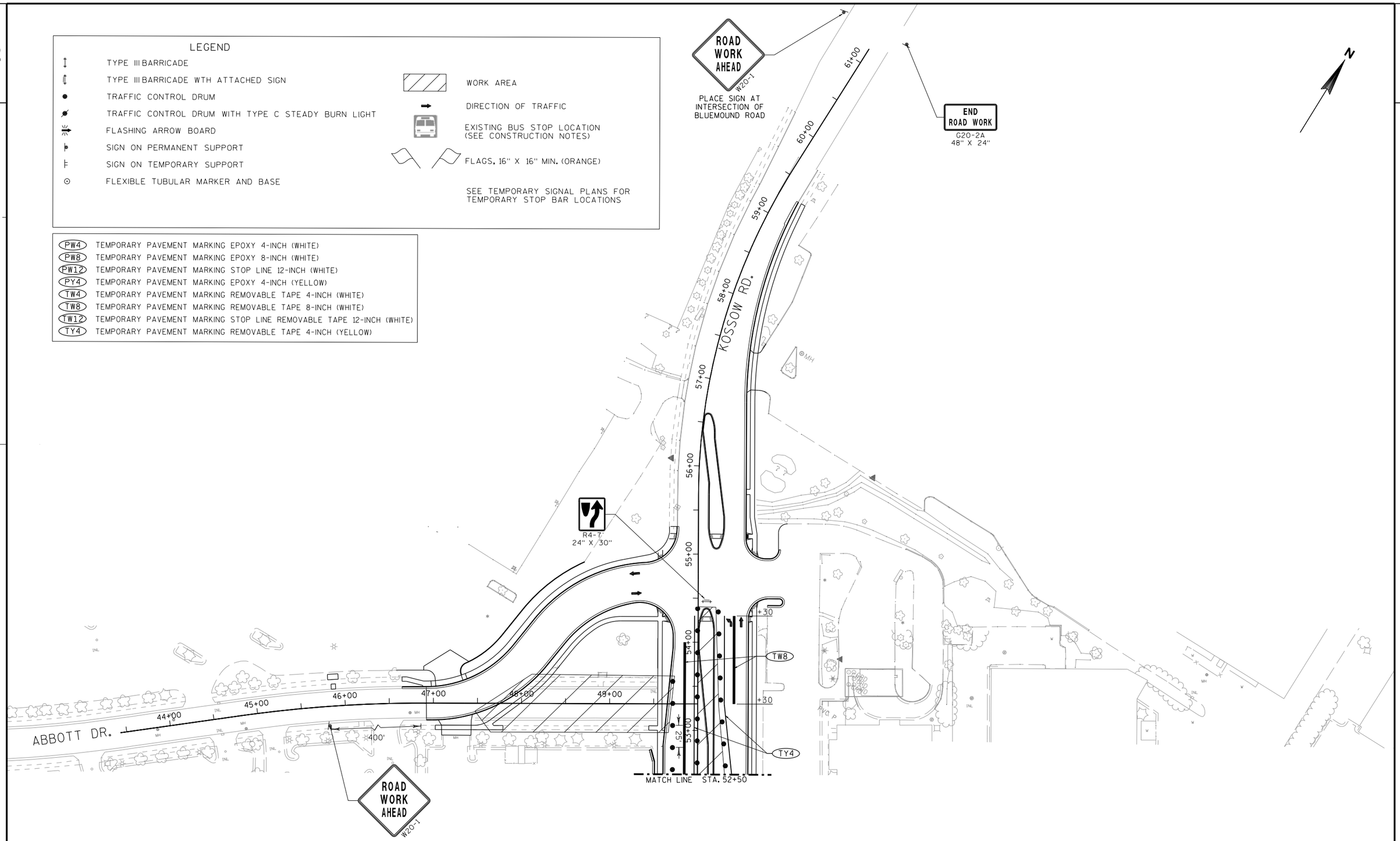
FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\026187_s2d.dgn
PLOT DATE : 11/5/2015
PLOT BY : GRAEF
PLOT NAME :
PLOT SCALE : 100.0000 sf / in.
WISDOT/CADDS SHEET 42

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- FLEXIBLE TUBULAR MARKER AND BASE
- WORK AREA
- DIRECTION OF TRAFFIC
- EXISTING BUS STOP LOCATION (SEE CONSTRUCTION NOTES)
- FLAGS, 16" X 16" MIN. (ORANGE)

SEE TEMPORARY SIGNAL PLANS FOR TEMPORARY STOP BAR LOCATIONS

PW4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (WHITE)
PW8	TEMPORARY PAVEMENT MARKING EPOXY 8-INCH (WHITE)
PW12	TEMPORARY PAVEMENT MARKING STOP LINE 12-INCH (WHITE)
PY4	TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
TW4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
TW8	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE)
TW12	TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 12-INCH (WHITE)
TY4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)



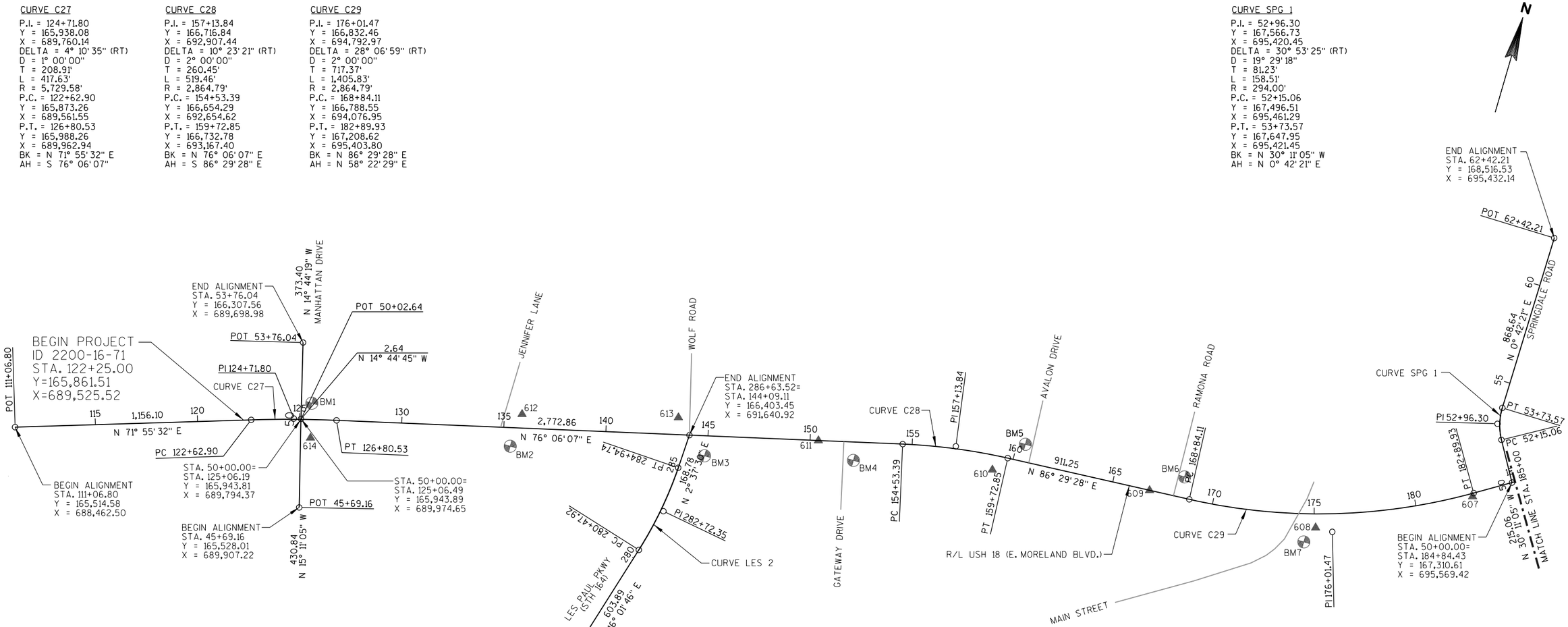
2

CURVE C27
P.I. = 124+71.80
Y = 165,938.08
X = 689,760.14
DELTA = 4° 10' 35" (RT)
D = 1° 00' 00"
T = 208.91'
L = 417.63'
R = 5,729.58'
P.C. = 122+62.90
Y = 165,873.26
X = 689,561.55
P.T. = 126+80.53
Y = 165,988.26
X = 689,962.94
BK = N 71° 55' 32" E
AH = S 76° 06' 07"

CURVE C28
P.I. = 157+13.84
Y = 166,716.84
X = 692,907.44
DELTA = 10° 23' 21" (RT)
D = 2° 00' 00"
T = 260.45'
L = 519.46'
R = 2,864.79'
P.C. = 154+53.39
Y = 166,654.29
X = 692,654.62
P.T. = 159+72.85
Y = 166,732.78
X = 693,167.40
BK = N 76° 06' 07" E
AH = S 86° 29' 28" E

CURVE C29
P.I. = 176+01.47
Y = 166,832.46
X = 694,792.97
DELTA = 28° 06' 59" (RT)
D = 2° 00' 00"
T = 717.37'
L = 1,405.83'
R = 2,864.79'
P.C. = 168+84.11
Y = 166,788.55
X = 694,076.95
P.T. = 182+89.93
Y = 167,208.62
X = 695,403.80
BK = N 86° 29' 28" E
AH = N 58° 22' 29" E

CURVE SPG 1
P.I. = 52+96.30
Y = 167,566.73
X = 695,420.45
DELTA = 30° 53' 25" (RT)
D = 19° 29' 18"
T = 81.23'
L = 158.51'
R = 294.00'
P.C. = 52+15.06
Y = 167,496.51
X = 695,461.29
P.T. = 53+73.57
Y = 167,647.95
X = 695,421.45
BK = N 30° 11' 05" W
AH = N 0° 42' 21" E



CURVE LES 1
P.I. = 271+53.75
Y = 164,929.41
X = 691,312.26
DELTA = 20° 32' 36" (RT)
D = 3° 30' 00"
T = 296.66'
L = 586.95'
R = 1637.02'
P.C. = 268+57.08
Y = 164,633.67
X = 691,335.61
P.T. = 274+44.04
Y = 165,214.54
X = 691,394.18
BK = N 4° 30' 50" W
AH = N 16° 01' 46" E

CURVE LES 2
P.I. = 282+72.35
Y = 166,010.65
X = 691,622.91
DELTA = 13° 24' 16" (RT)
D = 3° 00' 00"
T = 224.43'
L = 446.81'
R = 1909.86'
P.C. = 280+47.92
Y = 165,794.94
X = 691,560.93
P.T. = 284+94.74
Y = 166,234.85
X = 691,633.19
BK = N 16° 01' 46" E
AH = N 2° 37' 30" E

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	ALIGNMENT PLAN	SHEET 401	E

2

CURVE C30

P.I. = 237+86.09
Y = 170,110.21
X = 700,071.41
DELTA = 32° 45' 04.36" (RT)
D = 5° 18' 40.90"
T = 316.99'
L = 616.63'
R = 1,078.74'
P.C. = 234+69.10
Y = 169,940.13
X = 699,803.91
P.T. = 240+85.72
Y = 170,108.54
X = 700,388.40
BK = N 57° 33' 05.45" E
AH = S 89° 41' 50.19" E

N

MATCH LINE STA. 185+00

BM8
700

POT 198+31.89

606 190 1,541.96 195 605
N 58° 22' 29" E
BM9

R/L USH 18 (E. MORELAND BLVD.)

PARKLAWN DRIVE

200 600 701 205 604 BM11 603 210 215 POT 217+35.89 667 220
BM10 601 BM12

PARKLAWN COURT

755 753

908 KOSSOW ROAD

602 SWENSON DRIVE

ABBOTT DR.

757 758 756 759

60 KOSSOW ROAD

BLUEMOUND ROAD

IH 94

1,733.21
N 57° 33' 05" E

225 230 PI 237+86.09 235 CURVE C30 240

PC 234+69.10

PT 240+85.72

245 914.28
S 89° 41' 50" E

250 BLUEMOUND ROAD (USH 18)

END PROJECT
ID 2200-16-71
STA. 238+34.09

BARKER ROAD

END ALIGNMENT
STA. 250+00.00
Y = 170,103.71
X = 701,302.66

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	ALIGNMENT PLAN	SHEET 402	E

2

CURVE AB001
P.I. = 15+37.02
Y = 168,651.35
X = 697,121.62
DELTA = 8° 13' 25" (RT)
D = 3° 55' 28"
T = 104.95'
L = 209.54'
R = 1,459.94'
P.C. = 14+32.07
Y = 168,584.36
X = 697,040.83
P.T. = 16+41.61
Y = 168,706.10
X = 697,211.16
BK = N 50° 20' 01" E
AH = N 58° 33' 26" E

CURVE AB002
P.I. = 17+11.18
Y = 168,742.39
X = 697,270.52
DELTA = 50° 57' 19" (LT)
D = 39° 14' 37"
T = 69.57'
L = 129.84'
R = 146.00'
P.C. = 16+41.61
Y = 168,706.10
X = 697,211.16
P.T. = 17+71.46
Y = 168,811.34
X = 697,279.72
BK = N 58° 33' 28" E
AH = N 7° 36' 09" E

CURVE AB003
P.I. = 18+85.14
Y = 168,924.08
X = 697,297.39
DELTA = 51° 14' 15" (RT)
D = 36° 57' 54"
T = 74.33'
L = 138.61'
R = 155.00'
P.C. = 18+10.81
Y = 168,850.37
X = 697,284.80
P.T. = 19+49.42
Y = 168,962.74
X = 697,357.87
BK = N 7° 24' 52" E
AH = N 58° 39' 07" E

CURVE KOS 1
P.I. = 47+11.12
Y = 168,244.00
X = 697,855.80
DELTA = 90° 00' 38" (RT)
D = 22° 02' 13"
T = 260.05
L = 408.45
R = 260.00
P.C. = 44+51.07
Y= 168,379.53
X = 698,077.73
P.T. = 48+59.52
Y = 168,465.96
X = 697,720.30
BK = S 58° 35' 16" W
AH = N 31° 24' 06" W

CURVE KOS 2
P.I. = 57+67.92
Y = 169,241.31
X = 697,247.00
DELTA = 32° 03' 14" (RT)
D = 8° 13' 26"
T = 200.13
L = 389.76
R = 696.69
P.C. = 55+67.80
Y = 169,070.50
X = 697,351.27
P.T. = 59+57.56
Y = 169,441.43
X = 697,249.27
BK = N 31° 24' 06" W
AH = N 0° 39' 08" E

CURVE KOS 3
P.I. = 98+78.90
Y = 168,334.44
X = 697,668.21
DELTA = 37° 28' 33" (RT)
D = 36° 57' 54"
T = 52.58
L = 101.38
R = 155.00
P.C. = 98+26.32
Y = 168,281.87
X = 697,668.94
P.T. = 99+27.70
Y = 168,376.61
X = 697,699.62
BK = N 0° 47' 47" W
AH = N 36° 40' 47" E

END ALIGNMENT
STA. 61+18.42
Y = 169,602.28
X = 697,251.10

POT 61+18.42
160.87
N 0° 39' 08" E
PT 59+57.56
CURVE KOS 2
PI 57+61.92
KOSSOW ROAD
50.58
N 58° 39' 07" E
PC 55+67.80
CURVE AB003
PI 18+85.14
POT 20+00.00
39.36
N 7° 24' 52" E
CURVE AB002
PT 17+71.46
PC 18+10.81
PT 19+49.42
POT 22+77.09
277.09
N 58° 39' 07" E
MORELAND COURT
STA. 20+00.00=
STA. 54+72.34
Y = 168,989.02
X = 697,401.00
END ALIGNMENT
STA. 22+77.09
Y = 169,133.21
X = 697,637.70

END ALIGNMENT
STA. 52+50.00
Y = 168,229.68
X = 696,585.10
POT 52+50.00
250.00
N 31° 46' 56" W
R/L PARKLAWN DRIVE
STA. 50+00.00=
STA. 198+31.89
Y = 168,017.16
X = 696,716.77
PI 198+31.89
POT 12+94.02
ABBOT DRIVE
PI 15+37.02
138.05
N 50° 20' 01" E
PC 14+32.07
PRC 16+41.61
PI 17+11.18
BEGIN ALIGNMENT
STA. 12+94.02
Y = 168,496.24
X = 696,934.56
CURVE AB001
567.80
N 31° 24' 06" W
R/L KOSSOW ROAD
Y = 168,585.86
X = 697,647.11
POT 50+00.00
PI 217+35.89
Y = 169,010.20
X = 698,341.30
1,904.00
N 58° 33' 49" E
R/L USH 18 (E. MORELAND BLVD.)
PI 50+00.00
140.47
N 31° 24' 06" W
72.30
N 36° 40' 47" E
POT 100+00.00
PT 48+59.52
END ALIGNMENT
STA. 100+00.00=
STA. 48+20.89
Y = 168,434.60
X = 697,742.81
PI 98+78.90
CURVE KOS 3
PT 99+27.70
PC 98+26.32
R/L KOSSOW ROAD (SOUTH)
500.00
N 31° 56' 31" W
R/L PARKLAWN COURT
PC 44+51.07
259.10
S 58° 35' 16" W
SWENSON DRIVE
BEGIN ALIGNMENT
STA. 41+91.97
Y = 168,514.57
X = 698,298.86
POT 41+91.97
PI 47+11.12
CURVE KOS 1
469.15
N 0° 47' 47" W
BEGIN ALIGNMENT
STA. 93+57.17
Y = 167,812.77
X = 697,675.46
POT 93+57.17
KOSSOW ROAD
POT 45+00.00
BEGIN ALIGNMENT
STA. 45+00.00
Y = 167,592.87
X = 696,981.30

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	ALIGNMENT PLAN	SHEET 403	E

2

2

BENCHMARKS

BM #	STATION	OFFSET	DESCRIPTION	ELEVATION
1	125+58	80' LT.	BM-1 CHLSD "+" IN NORTHWEST BOLT TOP FLANGE BOLT OF F. HYD @ NORTHEAST CORNER OF USH-18 AND MANHATTAN DR	879.39
2	135+35	91' RT.	BM-2 CHLSD "+" IN NORTHWEST BOLT TOP FLANGE OF F. HYD @ SOUTHEAST CORNER USH-18 & JENNIFIER LN	884.30
3	144+87	98' RT.	BM-3 SET GEAR SPIKE IN NORTH FACE OF POWER POLE NUMBER COVERED POLE @ SOUTHEAST CORNER OF USH-18 AND USH-164	885.65
4	152+16	90' RT.	BM-4 CHLSD "+" IN NORTHWEST BOLT TOP FLANGE OF F. HYD @ SOUTHEAST CORNER OF USH-18 AND GATEWAY DR	894.23
5	160+42	85' LT.	BM-5 CHLSD "+" IN NORTHWEST BOLT TOP FLANGE OF F. HYD @ NORTHWEST CORNER OF USH-18 AND AVALON RD	913.99
6	168+37	102' LT.	BM-6 SET GEAR SPIKE IN SOUTHWEST FACE OF LIGHT POLE #90-00172 @ NORTHEAST CORNER OF USH-18 AND RAMONA RD	932.89
7	174+53	138' RT.	BM-7 CHLSD SQUARE IN NORTHWEST CORNER OF CONC. PAD FOR TRAFFIC CONTROL BOX @ SOUTHEAST CORNER OF USH-18 AND E. MAIN ST.	949.23
8	185+32	112' LT.	BM-8 CHLSD "+" IN NORTHWEST BOLT TOP FLANGE OF F. HYD @ NORTHEAST CORNER OF USH-18 AND SPRINGDALE RD	949.38
9	192+62	76' RT.	BM-9 SET GEAR SPIKE IN NORTH FACE OF LIGHT POLE #91-07643 @ SOUTHEAST CORNER OF USH-18 AND LONGVIEW	918.59
10	201+21	100' RT.	BM-10 CHLSD SQUARE IN CONC BASE NORTH SIDE FOR LIGHT POLE ON SOUTH SIDE OF USH-18 IN FRONT OF BLD #2315 FROEDTERT & MED COLLEGE OF WISCONSIN	898.03
11	208+69	93' LT.	BM-11 CHLSD "+" IN NORTHWEST BOLT TOP FLANGE OF F. HYD @ NORTHWEST CORNER OF USH-18 AND KOSSOW RD	897.63
12	217+36	0' RT.	BM-12 BRASS DISK IN ISLAND OF USH-18 IN FRONT OF BLD #21115 "DISTRICT HEADQUARTER NO. 2" FOR STATE PATROL STA. ON DISK = 217+35.86	904.48

CONTROL POINTS

NO.	LOCATION	STATION	OFFSET	DESCRIPTION	NORTHING	EASTING
600	USH 18	201+94	0' LT	REBAR	168,206.14	697,025.91
601	SWENSON DRIVE	48+95	60' LT	REBAR	168,464.54	697,650.48
602	SWENSON DRIVE	45+61	32' LT	REBAR	168,311.34	697,978.56
603	KOSSOW ROAD	50+81	110' RT	REBAR	168,711.86	697,698.92
604	KOSSOW ROAD	51+24	48' LT	REBAR	168,667.15	697,541.77
605	USH 18	196+32	0' RT	REBAR	167,912.55	696,546.93
606	USH 18	188+71	0' LT	REBAR	167,513.26	695,898.44
607	USH 18	182+81	15' RT	MAG NAIL	167,191.02	695,403.51
608	USH 18	175+08	67' RT	REBAR	166,829.14	694,709.05
609	USH 18	166+85	0' LT	REBAR	166,776.37	693,877.77
610	USH 18	159+11	72' RT	REBAR	166,656.82	693,111.25
611	USH 18	150+41	0' RT	REBAR	166,555.16	692,254.07
612	USH 18	135+86	68' LT	REBAR	166,271.82	690,826.02
613	USH 18	143+51	84' LT	MAG NAIL	166,471.25	691,564.77
614	USH 18	125+55	90' RT	MAG NAIL	165,870.10	689,864.82
667	USH 18	217+36	0' RT	MONUMENT	169,010.18	698,341.34
700	USH 18	185+52	91' LT	CHISELED CROSS	167,423.39	695,579.78
701	USH 18	204+05	55' LT	MAG NAIL	168,362.79	697,177.48
753	USH 18	198+21	485' RT	MAG NAIL	167,598.53	696,962.13
755	USH 18	198+45	173' RT	MAG NAIL	167,876.40	696,818.15
756	ABBOTT DRIVE	18+31	5' RT	MAG NAIL	168,868.91	697,293.44
757	KOSSOW ROAD	56+07	32' LT	MAG NAIL	169,089.58	697,303.59
758	KOSSOW ROAD	55+95	198' RT	MAG NAIL	169,190.28	697,510.15
759	KOSSOW ROAD	53+81	162' RT	MAG NAIL	168,995.60	697,586.35

Coordinates on this plan are referenced to the Wisconsin County Coordinate System, Waukesha County, NAD 1983 (2007).

Elevations shown on this plan are referenced to the North American Vertical Datum of 1988 NAVD 88 (2007).

DATE 01DEC15 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	2200-16-71 QUANTITY
0010	201.0120	Clearing	ID	374.000	374.000
0020	201.0220	Grubbing	ID	374.000	374.000
0030	203.0100	Removing Small Pipe Culverts	EACH	9.000	9.000
0040	203.0200	Removing Old Structure (station) 01. 238+94	LS	1.000	1.000
0050	204.0100	Removing Pavement	SY	15,312.000	15,312.000
0060	204.0125	Removing Asphaltic Surface Milling	TON	1,865.000	1,865.000
0070	204.0150	Removing Curb & Gutter	LF	13,967.000	13,967.000
0080	204.0155	Removing Concrete Sidewalk	SY	3,244.000	3,244.000
0090	204.0165	Removing Guardrail	LF	495.000	495.000
0100	204.0195	Removing Concrete Bases	EACH	40.000	40.000
0110	204.0210	Removing Manholes	EACH	1.000	1.000
0120	204.0220	Removing Inlets	EACH	33.000	33.000
0130	204.0245	Removing Storm Sewer (size) 01. 12-Inch	LF	495.000	495.000
0140	204.0245	Removing Storm Sewer (size) 02. 15-Inch	LF	129.000	129.000
0150	204.0245	Removing Storm Sewer (size) 03. 24-Inch	LF	84.000	84.000
0160	204.0291.S	Abandoning Sewer	CY	3.000	3.000
0170	205.0100	Excavation Common	CY	35,903.000	35,903.000
0180	209.0200.S	Backfill Controlled Low Strength	CY	63.000	63.000
0190	213.0100	Finishing Roadway (project) 01. 2200-16-71	EACH	1.000	1.000
0200	305.0110	Base Aggregate Dense 3/4-Inch	TON	46.000	46.000
0210	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	22,224.000	22,224.000
0220	311.0110	Breaker Run	TON	5,712.000	5,712.000
0230	320.0145	Concrete Base 8-Inch	SY	12,849.000	12,849.000
0240	390.0403	Base Patching Concrete Shes	SY	6,808.000	6,808.000
0250	415.0090	Concrete Pavement 9-Inch	SY	4,356.000	4,356.000
0260	416.0270	Concrete Driveway HES 7-Inch	SY	757.000	757.000
0270	416.0610	Drilled Tie Bars	EACH	6,636.000	6,636.000
0280	416.0620	Drilled Dowel Bars	EACH	11,808.000	11,808.000
0290	440.4410	Incentive IRI Ride	DOL	26,200.000	26,200.000
0300	455.0120	Asphaltic Material PG64-28	TON	1,923.000	1,923.000
0310	455.0605	Tack Coat	GAL	3,685.000	3,685.000
0320	460.1110	HMA Pavement Type E-10	TON	34,987.000	34,987.000
0330	460.2000	Incentive Density HMA Pavement	DOL	22,400.000	22,400.000
0340	460.4000	HMA Cold Weather Paving	TON	5,000.000	5,000.000
0350	465.0120	Asphaltic Surface Driveways and Field Entrances	TON	255.000	255.000
0360	465.0310	Asphaltic Curb	LF	195.000	195.000
0370	465.0315	Asphaltic Flumes	SY	28.000	28.000
0380	520.8000	Concrete Collars for Pipe	EACH	19.000	19.000
0390	521.0112	Culvert Pipe Corrugated Steel 12-Inch	LF	52.000	52.000
0400	521.0115	Culvert Pipe Corrugated Steel 15-Inch	LF	100.000	100.000
0410	521.1012	Apron Endwalls for Culvert Pipe Steel 12-Inch	EACH	2.000	2.000
0420	521.1015	Apron Endwalls for Culvert Pipe Steel 15-Inch	EACH	6.000	6.000
0430	521.1018	Apron Endwalls for Culvert Pipe Steel 18-Inch	EACH	1.000	1.000
0440	522.1012	Apron Endwalls for Culvert Pipe Reinforced Concrete 12-Inch	EACH	2.000	2.000
0450	522.1024	Apron Endwalls for Culvert Pipe Reinforced Concrete 24-Inch	EACH	1.000	1.000
0460	601.0110	Concrete Curb Type D	LF	42.000	42.000
0470	601.0405	Concrete Curb & Gutter 18-Inch Type A	LF	2,081.000	2,081.000

3

DATE 01DEC15 E S T I M A T E O F Q U A N T I T I E S

LINE 2200-16-71

NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	QUANTITY
0480	601.0407	Concrete Curb & Gutter 18-Inch Type D	LF	1,073.000	1,073.000
0490	601.0409	Concrete Curb & Gutter 30-Inch Type A	LF	18,956.000	18,956.000
0500	601.0411	Concrete Curb & Gutter 30-Inch Type D	LF	6,658.000	6,658.000
0510	601.0574	Concrete Curb & Gutter 4-Inch Sloped 30-Inch Type G	LF	58.000	58.000
0520	601.0576	Concrete Curb & Gutter 4-Inch Sloped 30-Inch Type J	LF	76.000	76.000
0530	601.0600	Concrete Curb Pedestrian	LF	80.000	80.000
0540	602.0410	Concrete Sidewalk 5-Inch	SF	59,468.000	59,468.000
0550	602.0505	Curb Ramp Detectable Warning Field Yellow	SF	1,200.000	1,200.000
0560	606.0200	Riprap Medium	CY	36.000	36.000
0570	608.0312	Storm Sewer Pipe Reinforced Concrete Class III 12-Inch	LF	1,972.000	1,972.000
0580	608.0315	Storm Sewer Pipe Reinforced Concrete Class III 15-Inch	LF	59.000	59.000
0590	608.0318	Storm Sewer Pipe Reinforced Concrete Class III 18-Inch	LF	82.000	82.000
0600	608.0324	Storm Sewer Pipe Reinforced Concrete Class III 24-Inch	LF	138.000	138.000
0610	608.0412	Storm Sewer Pipe Reinforced Concrete Class IV 12-Inch	LF	568.000	568.000
0620	608.0415	Storm Sewer Pipe Reinforced Concrete Class IV 15-Inch	LF	107.000	107.000
0630	608.0418	Storm Sewer Pipe Reinforced Concrete Class IV 18-Inch	LF	161.000	161.000
0640	608.0424	Storm Sewer Pipe Reinforced Concrete Class IV 24-Inch	LF	14.000	14.000
0650	608.0430	Storm Sewer Pipe Reinforced Concrete Class IV 30-Inch	LF	7.000	7.000
0660	611.0420	Reconstructing Manholes	EACH	10.000	10.000
0670	611.0430	Reconstructing Inlets	EACH	21.000	21.000
0680	611.0530	Manhole Covers Type J	EACH	23.000	23.000
0690	611.0624	Inlet Covers Type H	EACH	66.000	66.000
0700	611.0639	Inlet Covers Type H-S	EACH	44.000	44.000
0710	611.0642	Inlet Covers Type MS	EACH	5.000	5.000
0720	611.0645	Inlet Covers Type MS-A	EACH	2.000	2.000
0730	611.1004	Catch Basins 4-FT Diameter	EACH	1.000	1.000
0740	611.1230	Catch Basins 2x3-FT	EACH	26.000	26.000
0750	611.2004	Manholes 4-FT Diameter	EACH	3.000	3.000
0760	611.2006	Manholes 6-FT Diameter	EACH	5.000	5.000
0770	611.3004	Inlets 4-FT Diameter	EACH	4.000	4.000
0780	611.3230	Inlets 2x3-FT	EACH	76.000	76.000
0790	611.3901	Inlets Median 1 Grate	EACH	2.000	2.000
0800	611.3902	Inlets Median 2 Grate	EACH	1.000	1.000
0810	611.3903	Inlets Median 3 Grate	EACH	1.000	1.000
0820	611.8110	Adjusting Manhole Covers	EACH	18.000	18.000
0830	611.8115	Adjusting Inlet Covers	EACH	71.000	71.000
0840	614.0395	Guardrail Mow Strip Concrete	SY	210.000	210.000
0850	614.0805	Crash Cushions Permanent Low Maintenance	EACH	1.000	1.000
0860	614.2300	MGS Guardrail 3	LF	590.000	590.000
0870	614.2310	MGS Guardrail 3 HS	LF	25.000	25.000
0880	614.2320	MGS Guardrail 3 QS	LF	37.500	37.500
0890	614.2500	MGS Thrie Beam Transition	LF	12.500	12.500
0900	614.2610	MGS Guardrail Terminal EAT	EACH	2.000	2.000

3

DATE 01DEC15 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	2200-16-71 QUANTITY
0910	614.2620	MGS Guardrail Terminal Type 2	EACH	2.000	2.000
0920	616.0700.S	Fence Safety	LF	100.000	100.000
0930	619.1000	Mobilization	EACH	1.000	1.000
0940	620.0100	Concrete Corrugated Median	SF	547.000	547.000
0950	620.0300	Concrete Median Sloped Nose	SF	1,632.000	1,632.000
0960	621.0100	Landmark Reference Monuments	EACH	1.000	1.000
0970	624.0100	Water	MGAL	231.000	231.000
0980	625.0100	Topsoil	SY	22,778.000	22,778.000
0990	628.1104	Erosion Bales	EACH	738.000	738.000
1000	628.1504	Silt Fence	LF	1,923.000	1,923.000
1010	628.1520	Silt Fence Maintenance	LF	1,923.000	1,923.000
1020	628.1905	Mobilizations Erosion Control	EACH	2.000	2.000
1030	628.1910	Mobilizations Emergency Erosion Control	EACH	4.000	4.000
1040	628.2027	Erosion Mat Class II Type C	SY	3,377.000	3,377.000
1050	628.7005	Inlet Protection Type A	EACH	110.000	110.000
1060	628.7010	Inlet Protection Type B	EACH	33.000	33.000
1070	628.7015	Inlet Protection Type C	EACH	239.000	239.000
1080	628.7020	Inlet Protection Type D	EACH	39.000	39.000
1090	628.7570	Rock Bags	EACH	25.000	25.000
1100	629.0210	Fertilizer Type B	CWT	2.100	2.100
1110	630.0140	Seeding Mixture No. 40	LB	61.000	61.000
1120	631.0300	Sod Water	MGAL	436.000	436.000
1130	631.1000	Sod Lawn	SY	19,401.000	19,401.000
1140	634.0614	Posts Wood 4x6-Inch X 14-FT	EACH	186.000	186.000
1150	634.0616	Posts Wood 4x6-Inch X 16-FT	EACH	203.000	203.000
1160	634.0618	Posts Wood 4x6-Inch X 18-FT	EACH	26.000	26.000
1170	636.0100	Sign Supports Concrete Masonry	CY	30.000	30.000
1180	636.1500	Sign Supports Steel Coated Reinforcement HS	LB	2,840.000	2,840.000
1190	637.1220	Signs Type I Reflective SH	SF	236.500	236.500
1200	637.2210	Signs Type II Reflective H	SF	4,005.800	4,005.800
1210	637.2215	Signs Type II Reflective H Folding	SF	350.600	350.600
1220	637.2230	Signs Type II Reflective F	SF	359.000	359.000
1230	638.2101	Moving Signs Type I	EACH	2.000	2.000
1240	638.2102	Moving Signs Type II	EACH	13.000	13.000
1250	638.2602	Removing Signs Type II	EACH	274.000	274.000
1260	638.3000	Removing Small Sign Supports	EACH	242.000	242.000
1270	641.6600	Sign Bridge (structure) 01. S-67-319	LS	1.000	1.000
1280	641.8100	Overhead Sign Support (structure) 01. S-67-950	LS	1.000	1.000
1290	641.8100	Overhead Sign Support (structure) 02. S-67-951	LS	1.000	1.000
1300	641.8100	Overhead Sign Support (structure) 03. S-67.970	LS	1.000	1.000
1310	642.5001	Field Office Type B	EACH	1.000	1.000
1320	643.0200	Traffic Control Surveillance and Maintenance (project) 01. 2200-16-71	DAY	180.000	180.000
1330	643.0300	Traffic Control Drums	DAY	126,598.000	126,598.000
1340	643.0410	Traffic Control Barricades Type II	DAY	729.000	729.000
1350	643.0420	Traffic Control Barricades Type III	DAY	7,394.000	7,394.000
1360	643.0500	Traffic Control Flexible Tubular Marker Posts	EACH	18.000	18.000
1370	643.0600	Traffic Control Flexible Tubular Marker Bases	EACH	18.000	18.000
1380	643.0705	Traffic Control Warning Lights Type A	DAY	32,558.000	32,558.000

3

DATE 01DEC15 E S T I M A T E O F Q U A N T I T I E S

LINE 2200-16-71

NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	QUANTITY
1390	643.0715	Traffic Control Warning Lights Type C	DAY	16,279.000	16,279.000
1400	643.0800	Traffic Control Arrow Boards	DAY	440.000	440.000
1410	643.0900	Traffic Control Signs	DAY	25,497.000	25,497.000
1420	643.0910	Traffic Control Covering Signs Type I	EACH	1.000	1.000
1430	643.0920	Traffic Control Covering Signs Type II	EACH	7.000	7.000
1440	643.1000	Traffic Control Signs Fixed Message	SF	149.000	149.000
1450	643.3000	Traffic Control Detour Signs	DAY	165.000	165.000
1460	645.0120	Geotextile Fabric Type HR	SY	118.000	118.000
1470	646.0106	Pavement Marking Epoxy 4-Inch	LF	43,783.000	43,783.000
1480	646.0136	Pavement Marking Epoxy 12-Inch	LF	140.000	140.000
1490	646.0600	Removing Pavement Markings	LF	28,737.000	28,737.000
1500	646.0841.S	Pavement Marking Grooved Wet Reflective Contrast Tape 4-Inch	LF	144.000	144.000
1510	646.0843.S	Pavement Marking Grooved Wet Reflective Contrast Tape 8-Inch	LF	917.000	917.000
1520	646.0881.S	Pavement Marking Grooved Wet Reflective Tape 4-Inch	LF	14,537.000	14,537.000
1530	646.0883.S	Pavement Marking Grooved Wet Reflective Tape 8-Inch	LF	20,140.000	20,140.000
1540	647.0606	Pavement Marking Island Nose Epoxy	EACH	32.000	32.000
1550	647.0706	Pavement Marking Diagonal Epoxy 6-Inch	LF	583.000	583.000
1560	647.0726	Pavement Marking Diagonal Epoxy 12-Inch	LF	2,097.000	2,097.000
1570	649.0400	Temporary Pavement Marking Removable Tape 4-Inch	LF	12,548.000	12,548.000
1580	649.0403	Temporary Pavement Marking Epoxy 4-Inch	LF	12,272.000	12,272.000
1590	649.0801	Temporary Pavement Marking Removable Tape 8-Inch	LF	758.000	758.000
1600	649.0803	Temporary Pavement Marking Epoxy 8-Inch	LF	6,146.000	6,146.000
1610	649.0900	Temporary Pavement Marking Stop Line 12-Inch	LF	109.000	109.000
1620	649.1000	Temporary Pavement Marking Stop Line Removable Tape 12-Inch	LF	309.000	309.000
1630	650.4000	Construction Staking Storm Sewer	EACH	122.000	122.000
1640	650.4500	Construction Staking Subgrade	LF	6,504.000	6,504.000
1650	650.5000	Construction Staking Base	LF	11,863.000	11,863.000
1660	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	28,844.000	28,844.000
1670	650.7000	Construction Staking Concrete Pavement	LF	471.000	471.000
1680	650.8000	Construction Staking Resurfacing Reference	LF	11,371.000	11,371.000
1690	650.8500	Construction Staking Electrical Installations (project) 01. 2200-16-71	LS	1.000	1.000
1700	650.9910	Construction Staking Supplemental Control (project) 01. 2200-16-71	LS	1.000	1.000
1710	650.9920	Construction Staking Slope Stakes	LF	11,611.000	11,611.000
1720	652.0225	Conduit Rigid Nonmetallic Schedule 40 2-Inch	LF	9,174.000	9,174.000
1730	652.0235	Conduit Rigid Nonmetallic Schedule 40 3-Inch	LF	8,800.000	8,800.000
1740	652.0605	Conduit Special 2-Inch	LF	461.000	461.000
1750	652.0615	Conduit Special 3-Inch	LF	6,661.000	6,661.000
1760	652.0700.S	Install Conduit into Existing Item	EACH	3.000	3.000
1770	652.0800	Conduit Loop Detector	LF	4,340.000	4,340.000
1780	653.0135	Pull Boxes Steel 24x36-Inch	EACH	28.000	28.000
1790	653.0140	Pull Boxes Steel 24x42-Inch	EACH	138.000	138.000
1800	653.0905	Removing Pull Boxes	EACH	143.000	143.000

3

DATE 01DEC15 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	2200-16-71 QUANTITY
1810	654.0101	Concrete Bases Type 1	EACH	42.000	42.000
1820	654.0102	Concrete Bases Type 2	EACH	20.000	20.000
1830	654.0105	Concrete Bases Type 5	EACH	9.000	9.000
1840	654.0106	Concrete Bases Type 6	EACH	36.000	36.000
1850	654.0110	Concrete Bases Type 10	EACH	13.000	13.000
1860	654.0113	Concrete Bases Type 13	EACH	14.000	14.000
1870	654.0217	Concrete Control Cabinet Bases Type 9 Special	EACH	5.000	5.000
1880	654.0230	Concrete Control Cabinet Bases Type L30	EACH	1.000	1.000
1890	655.0230	Cable Traffic Signal 5-14 AWG	LF	5,138.000	5,138.000
1900	655.0240	Cable Traffic Signal 7-14 AWG	LF	5,030.000	5,030.000
1910	655.0260	Cable Traffic Signal 12-14 AWG	LF	14,625.000	14,625.000
1920	655.0315	Cable Type UF 2-10 AWG	LF	6,970.000	6,970.000
1930	655.0515	Electrical Wire Traffic Signals 10 AWG	LF	13,007.000	13,007.000
1940	655.0610	Electrical Wire Lighting 12 AWG	LF	17,178.000	17,178.000
1950	655.0620	Electrical Wire Lighting 8 AWG	LF	15,125.000	15,125.000
1960	655.0630	Electrical Wire Lighting 4 AWG	LF	19,764.000	19,764.000
1970	655.0700	Loop Detector Lead In Cable	LF	17,639.000	17,639.000
1980	655.0800	Loop Detector Wire	LF	17,815.000	17,815.000
1990	655.0900	Traffic Signal EVP Detector Cable	LF	7,175.000	7,175.000
2000	656.0200	Electrical Service Meter Breaker Pedestal (location) 01. USH18 & Manhattan Drive	LS	1.000	1.000
2010	656.0200	Electrical Service Meter Breaker Pedestal (location) 02. USH 18 & STH164	LS	1.000	1.000
2020	656.0200	Electrical Service Meter Breaker Pedestal (location) 03. USH 18 & Main Street	LS	1.000	1.000
2030	656.0200	Electrical Service Meter Breaker Pedestal (location) 04. USH18 & Springdale Road	LS	1.000	1.000
2040	656.0200	Electrical Service Meter Breaker Pedestal (location) 05. USH 18 & Parklawn Drive	LS	1.000	1.000
2050	656.0200	Electrical Service Meter Breaker Pedestal (location) 06. USH 18 & Kossow Road	LS	1.000	1.000
2060	656.0200	Electrical Service Meter Breaker Pedestal (location) 07. CCA	LS	1.000	1.000
2070	657.0100	Pedestal Bases	EACH	36.000	36.000
2080	657.0255	Transformer Bases Breakaway 11 1/2-Inch Bolt Circle	EACH	29.000	29.000
2090	657.0305	Poles Type 2	EACH	5.000	5.000
2100	657.0310	Poles Type 3	EACH	11.000	11.000
2110	657.0322	Poles Type 5-Aluminum	EACH	6.000	6.000
2120	657.0327	Poles Type 6-Aluminum	EACH	7.000	7.000
2130	657.0420	Traffic Signal Standards Aluminum 13-FT	EACH	15.000	15.000
2140	657.0425	Traffic Signal Standards Aluminum 15-FT	EACH	10.000	10.000
2150	657.0430	Traffic Signal Standards Aluminum 10-FT	EACH	11.000	11.000
2160	657.0609	Luminaire Arms Single Member 4-Inch Clamp 6-FT	EACH	19.000	19.000
2170	657.0610	Luminaire Arms Single Member 4 1/2-Inch Clamp 6-FT	EACH	14.000	14.000
2180	657.0615	Luminaire Arms Single Member 4 1/2-Inch Clamp 8-FT	EACH	10.000	10.000
2190	657.1345	Install Poles Type 9	EACH	2.000	2.000

3

DATE 01DEC15 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	2200-16-71 QUANTITY
2200	657.1350	Install Poles Type 10	EACH	9.000	9.000
2210	657.1360	Install Poles Type 13	EACH	14.000	14.000
2220	657.1515	Install Monotube Arms 15-FT	EACH	1.000	1.000
2230	657.1520	Install Monotube Arms 20-FT	EACH	1.000	1.000
2240	657.1530	Install Monotube Arms 30-FT	EACH	9.000	9.000
2250	657.1540	Install Monotube Arms 40-FT	EACH	6.000	6.000
2260	657.1550	Install Monotube Arms 50-FT	EACH	2.000	2.000
2270	657.1555	Install Monotube Arms 55-FT	EACH	6.000	6.000
2280	657.1808	Install Luminaire Arms Steel 8-FT	EACH	5.000	5.000
2290	657.1815	Install Luminaire Arms Steel 15-FT	EACH	20.000	20.000
2300	658.0110	Traffic Signal Face 3-12 Inch Vertical	EACH	113.000	113.000
2310	658.0115	Traffic Signal Face 4-12 Inch Vertical	EACH	13.000	13.000
2320	658.0215	Backplates Signal Face 3 Section 12-Inch	EACH	113.000	113.000
2330	658.0220	Backplates Signal Face 4 Section 12-Inch	EACH	13.000	13.000
2340	658.0416	Pedestrian Signal Face 16-Inch	EACH	64.000	64.000
2350	658.0500	Pedestrian Push Buttons	EACH	50.000	50.000
2360	658.0600	Led Modules 12-Inch Red Ball	EACH	86.000	86.000
2370	658.0605	Led Modules 12-Inch Yellow Ball	EACH	82.000	82.000
2380	658.0610	Led Modules 12-Inch Green Ball	EACH	82.000	82.000
2390	658.0615	Led Modules 12-Inch Red Arrow	EACH	40.000	40.000
2400	658.0620	Led Modules 12-Inch Yellow Arrow	EACH	60.000	60.000
2410	658.0625	Led Modules 12-Inch Green Arrow	EACH	41.000	41.000
2420	658.0635	Led Modules Pedestrian Countdown Timer 16-Inch	EACH	64.000	64.000
2430	658.5069	Signal Mounting Hardware (location) 01. USH18 & Manhattan Drive	LS	1.000	1.000
2440	658.5069	Signal Mounting Hardware (location) 02. USH 18 & STH164	LS	1.000	1.000
2450	658.5069	Signal Mounting Hardware (location) 03. USH 18 & Main Street	LS	1.000	1.000
2460	658.5069	Signal Mounting Hardware (location) 04. USH18 & Springdale Road	LS	1.000	1.000
2470	658.5069	Signal Mounting Hardware (location) 05. USH 18 & Parklawn Drive	LS	1.000	1.000
2480	658.5069	Signal Mounting Hardware (location) 06. USH 18 & Kossow Road	LS	1.000	1.000
2490	659.1125	Luminaires Utility LED C	EACH	82.000	82.000
2500	659.2230	Lighting Control Cabinets 240/480 30-Inch	EACH	1.000	1.000
2510	661.0200	Temporary Traffic Signals for Intersections (location) 01. USH18 & Manhattan Drive	LS	1.000	1.000
2520	661.0200	Temporary Traffic Signals for Intersections (location) 02. USH 18 & STH164	LS	1.000	1.000
2530	661.0200	Temporary Traffic Signals for Intersections (location) 03. USH 18 & Main Street	LS	1.000	1.000
2540	661.0200	Temporary Traffic Signals for Intersections (location) 04. USH18 & Springdale Road	LS	1.000	1.000
2550	661.0200	Temporary Traffic Signals for Intersections (location) 06. USH 18 & Kossow Road	LS	1.000	1.000
2560	661.0300	Generators	DAY	10.000	10.000
2570	670.0100	Field System Integrator	LS	1.000	1.000

3

DATE 01DEC15 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	2200-16-71 QUANTITY
2580	670.0200	ITS Documentation	LS	1.000	1.000
2590	671.0112	Conduit HDPE 1-Duct 2-Inch	LF	1,642.000	1,642.000
2600	671.0212	Conduit HDPE Directional Bore 1-Duct 2-Inch	LF	400.000	400.000
2610	673.0105	Communication Vault Type 1	EACH	4.000	4.000
2620	678.0006	Install Fiber Optic Cable Outdoor Plant 6-CT	LF	1,520.000	1,520.000
2630	678.0036	Install Fiber Optic Cable Outdoor Plant 36-CT	LF	1,802.000	1,802.000
2640	678.0200	Fiber Optic Splice Enclosure	EACH	3.000	3.000
2650	678.0300	Fiber Optic Splice	EACH	60.000	60.000
2660	678.0400	Fiber Optic Termination	EACH	18.000	18.000
2670	678.0500	Communication System Testing	LS	1.000	1.000
2680	690.0150	Sawing Asphalt	LF	6,614.000	6,614.000
2690	690.0250	Sawing Concrete	LF	16,590.000	16,590.000
2700	715.0415	Incentive Strength Concrete Pavement	DOL	500.000	500.000
2710	SPV.0060	Special 01. Sanitary Manhole Seal Internal, Town Of Brookfield	EACH	5.000	5.000
2720	SPV.0060	Special 02. Adjusting Sanitary Sewer Manholes, Town Of Brookfield	EACH	4.000	4.000
2730	SPV.0060	Special 03. Reconstruct Sanitary Manholes, Town Of Brookfield	EACH	1.000	1.000
2740	SPV.0060	Special 04. Adjusting Storm Sewer Manholes, Town Of Brookfield	EACH	2.000	2.000
2750	SPV.0060	Special 05. Adjusting Water Valve Box, Town Of Brookfield	EACH	12.000	12.000
2760	SPV.0060	Special 06. New Fire Hydrant, Town Of Brookfield	EACH	2.000	2.000
2770	SPV.0060	Special 07. Abandoning Water Service, Tow Of Brookfield	EACH	1.000	1.000
2780	SPV.0060	Special 08. Replace 10-Inch Gate Valves With 12-Inch Gate Valves	EACH	4.000	4.000
2790	SPV.0060	Special 09. Convert Manhole To Valve Box	EACH	3.000	3.000
2800	SPV.0060	Special 10. Abandon Hydrant And Install New Hydrant	EACH	1.000	1.000
2810	SPV.0060	Special 11. Hydrant Assembly	EACH	2.000	2.000
2820	SPV.0060	Special 12. Abandon Hydrant	EACH	1.000	1.000
2830	SPV.0060	Special 13. Pavement Marking Grooved Preformed Thermoplastic Arrows Type 2	EACH	78.000	78.000
2840	SPV.0060	Special 14. Pavement Marking Grooved Preformed Thermoplastic Arrows Type 3	EACH	8.000	8.000
2850	SPV.0060	Special 15. Pavement Marking Grooved Preformed Thermoplastic Words	EACH	59.000	59.000
2860	SPV.0060	Special 16. Reconstructing Sanitary Manholes	EACH	9.000	9.000
2870	SPV.0060	Special 17. Adjusting Sanitary Manhole Covers	EACH	10.000	10.000
2880	SPV.0060	Special 18. Internal Manhole Sealing System	EACH	19.000	19.000
2890	SPV.0060	Special 19. New Curb Box, Town of Brookfield	EACH	1.000	1.000
2900	SPV.0060	Special 31. Removing Existing Roadway Luminaire	EACH	14.000	14.000
2910	SPV.0060	Special 32. Removing Existing Roadway Lighting Unit	EACH	8.000	8.000
2920	SPV.0060	Special 33. Relocate Existing Single Arm Lighting Assembly	EACH	11.000	11.000

3

3

DATE 01DEC15 E S T I M A T E O F Q U A N T I T I E S

LINE 2200-16-71

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	2200-16-71 QUANTITY
2930	SPV.0060	Special 34. Relocate Existing Double Arm Lighting Assembly	EACH	18.000	18.000
2940	SPV.0060	Special 35. Removing Existing Lighting Control Cabinet	EACH	1.000	1.000
2950	SPV.0060	Special 51. City of Waukesha Concrete Control Cabinet Bases Type 9 Special	EACH	1.000	1.000
2960	SPV.0060	Special 52. Pedestrian Push Buttons Special	EACH	10.000	10.000
2970	SPV.0060	Special 53. Battery Backup System	EACH	1.000	1.000
2980	SPV.0060	Special 54. Install IP Wireless Radio	EACH	4.000	4.000
2990	SPV.0090	Special 01. Water Main (PVC), 6-Inch, Town Of Brookfield	LF	14.000	14.000
3000	SPV.0090	Special 02. Water Service Replacement, Copper, 1-Inch, Town Of Brookfield	LF	17.000	17.000
3010	SPV.0090	Special 03. Pavement Marking Grooved Preformed Thermoplastic Crosswalk 6-Inch	LF	5,794.000	5,794.000
3020	SPV.0090	Special 04. Pavement Marking Grooved Preformed Thermoplastic Stop Bar 18-Inch	LF	1,343.000	1,343.000
3030	SPV.0090	Special 05. Longitudinal Joint Repair	LF	3,664.000	3,664.000
3040	SPV.0090	Special 50. Type UF Cable 2 Conductor No. 14	LF	7,175.000	7,175.000
3050	SPV.0105	Special 01. Reconstruct Concrete Headwall	LS	1.000	1.000
3060	SPV.0105	Special 31. Lighting Integrator, State Systems	LS	1.000	1.000
3070	SPV.0105	Special 32. Lighting Integrator, City Systems	LS	1.000	1.000
3080	SPV.0105	Special 41. Install Fiber Optic Communications In Cabinet, USH 18 & STH 164	LS	1.000	1.000
3090	SPV.0105	Special 42. Install Fiber Optic Communications In Cabinet, USH 18 & Main Street	LS	1.000	1.000
3100	SPV.0105	Special 43. Install Fiber Optic Communications In Cabinet, USH 18 & Springdale Rd	LS	1.000	1.000
3110	SPV.0105	Special 44. Install Fiber Optic Communications In Cabinet, USH 18 & Parklawn Dr	LS	1.000	1.000
3120	SPV.0105	Special 45. Install Fiber Optic Communications In Cabinet, USH 18 & Kossow Road	LS	1.000	1.000
3130	SPV.0105	Special 50. Remove Traffic Signals USH 18 & Manhattan Drive	LS	1.000	1.000
3140	SPV.0105	Special 51. Remove Traffic Signals USH 18 & STH 164	LS	1.000	1.000
3150	SPV.0105	Special 52. Remove Traffic Signals USH 18/STH 164 & Main Street	LS	1.000	1.000
3160	SPV.0105	Special 53. Remove Traffic Signals USH 18/STH 164 & Springdale Road	LS	1.000	1.000
3170	SPV.0105	Special 54. Remove Traffic Signals USH 18 & Kossow Road	LS	1.000	1.000
3180	SPV.0105	Special 55. Transporting Signal And Lighting Materials at USH 18 & Manhattan Drive	LS	1.000	1.000
3190	SPV.0105	Special 56. Transporting Signal And Lighting Materials at USH 18 & STH 164	LS	1.000	1.000

DATE 01DEC15 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	2200-16-71 QUANTITY
3200	SPV.0105	Special 57. Transporting Signal And Lighting Materials at USH 18 & Main Street	LS	1.000	1.000
3210	SPV.0105	Special 58. Transporting Signal And Lighting Materials at USH18 & Springdale Road	LS	1.000	1.000
3220	SPV.0105	Special 59. Transporting Signal And Lighting Materials at USH 18 & Parklawn Drive	LS	1.000	1.000
3230	SPV.0105	Special 60. Transporting Signal And Lighting Materials at USH 18 & Kossow Road	LS	1.000	1.000
3240	SPV.0105	Special 61. Install State Furnished Traffic Signal Cabinet, USH 18 & Manhattan Drive	LS	1.000	1.000
3250	SPV.0105	Special 62. Install State Furnished Traffic Signal Cabinet, USH 18 & STH 164	LS	1.000	1.000
3260	SPV.0105	Special 63. Install State Furnished Traffic Signal Cabinet, USH 18 & Main Street	LS	1.000	1.000
3270	SPV.0105	Special 64. Install State Furnished Traffic Signal Cabinet, USH 18 & Springdale Rd	LS	1.000	1.000
3280	SPV.0105	Special 65. Install State Furnished Traffic Signal Cabinet, USH 18 & Parklawn Dr	LS	1.000	1.000
3290	SPV.0105	Special 66. Install State Furnished Traffic Signal Cabinet, USH 18 & Kossow Road	LS	1.000	1.000
3300	SPV.0105	Special 67. Install Video Detection System, USH 18 & Manhattan Drive	LS	1.000	1.000
3310	SPV.0105	Special 68. Install Video Detection System, USH 18 & STH 164	LS	1.000	1.000
3320	SPV.0105	Special 69. Install Video Detection System, USH 18 & Main Street	LS	1.000	1.000
3330	SPV.0105	Special 70. Install Video Detection System, USH 18 & Springdale Road	LS	1.000	1.000
3340	SPV.0105	Special 71. Install Video Detection System, USH 18 & Parklawn Drive	LS	1.000	1.000
3350	SPV.0105	Special 72. Install Video Detection System, USH 18 & Kossow Road	LS	1.000	1.000
3360	SPV.0105	Special 73. EVP Detector Head Installation, USH 18 & Manhattan Drive	LS	1.000	1.000
3370	SPV.0105	Special 74. EVP Detector Head Installation, USH 18 & STH 164	LS	1.000	1.000
3380	SPV.0105	Special 75. EVP Detector Head Installation, USH 18 & Main Street	LS	1.000	1.000
3390	SPV.0105	Special 76. EVP Detector Head Installation, USH 18 & Springdale Road	LS	1.000	1.000
3400	SPV.0105	Special 77. EVP Detector Head Installation, USH 18 & Parklawn Drive	LS	1.000	1.000
3410	SPV.0105	Special 78. EVP Detector Head Installation, USH 18 & Kossow Road	LS	1.000	1.000
3420	SPV.0105	Special 79. Temporary Infrared EVP System, USH 18 & Manhattan Drive	LS	1.000	1.000
3430	SPV.0105	Special 80. Temporary Infrared EVP System, USH 18 & STH 164	LS	1.000	1.000
3440	SPV.0105	Special 81. Temporary Infrared EVP System, USH 18 & Main Street	LS	1.000	1.000

3

DATE 01DEC15 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	2200-16-71 QUANTITY
3450	SPV.0105	Special 82.Temporary Infrared EVP System, USH 18 & Springdale Road	LS	1.000	1.000
3460	SPV.0105	Special 83. Temporary Infrared EVP System, USH 18 & Kossow Road	LS	1.000	1.000
3470	SPV.0105	Special 84. Temporary Vehicle Detection System, USH 18 & Manhattan Drive	LS	1.000	1.000
3480	SPV.0105	Special 85. Temporary Vehicle Detection System, USH 18 & STH 164	LS	1.000	1.000
3490	SPV.0105	Special 86. Temporary Vehicle Detection System, USH 18 & Main Street	LS	1.000	1.000
3500	SPV.0105	Special 87. Temporary Vehicle Detection System, USH 18 & Springdale Road	LS	1.000	1.000
3510	SPV.0105	Special 88. Temporary Vehicle Detection System, USH18 & Kossow Road	LS	1.000	1.000
3520	SPV.0105	Special 89. Remove Loop Detector Wire and Lead-In Cable, USH 18 & Manhattan Drive	LS	1.000	1.000
3530	SPV.0105	Special 90. Remove Loop Detector Wire and Lead-In Cable, USH 18 & STH 164	LS	1.000	1.000
3540	SPV.0105	Special 91. Remove Loop Detector Wire and Lead-In Cable, USH 18 & Main Street	LS	1.000	1.000
3550	SPV.0105	Special 92. Remove Loop Detector Wire and Lead-In Cable, USH 18 & Springdale Road	LS	1.000	1.000
3560	SPV.0105	Special 93. Remove Loop Detector Wire and Lead-In Cable, USH 18 & Kossow Road	LS	1.000	1.000
3570	SPV.0165	Special 01. Wall Modular Block Gravity LRFD **P**	SF	252.000	252.000
3580	SPV.0165	Special 02. Removing Concrete Gutter Surface Partial Depth	SF	28,782.000	28,782.000
3590	SPV.0165	Special 03. Stamped Colored Concrete Sidewalk 5-Inch	SF	1,898.000	1,898.000
3600	SPV.0195	Special 01. Remove Asphaltic Surface Milling, 4-Inch Special	TON	23,859.000	23,859.000

3

3

CLEARING AND GRUBBING

STREET	STATION	TO	STATION	OFFSET	201.0120 CLEARING ID	201.0220 GRUBBING ID
USH 18	208+55	-	209+78	LT	30	30
SPRINGDALE ROAD	51+60	-	52+59	LT	42	42
PARKLAWN COURT	47+85	-	48+58	LT & RT	32	32
SWENSON DRIVE	46+00	-	47+76	RT	42	42
KOSSOW ROAD	51+95	-	56+42	RT	144	144
ABBOTT DRIVE	47+10	-	48+95	LT	84	84
				PROJECT TOTALS	374	374

REMOVING SMALL PIPE CULVERTS

STREET	STATION	OFFSET	TYPE	SIZE (IN)	LENGTH (FT)	203.0100 TOTAL EACH
PARKLAWN COURT	45+68	18' LT	--	--	85	1
PARKLAWN COURT	46+23	18' LT	--	--	23	1
PARKLAWN COURT	46+53	20' RT	--	--	45	1
PARKLAWN COURT	46+61	18' LT	--	--	51	1
PARKLAWN COURT	46+97	18' LT	--	--	24	1
PARKLAWN COURT	47+43	18' LT	--	--	70	1
PARKLAWN COURT	48+13	17' LT	--	--	63	1
PARKLAWN COURT	48+70	23' RT	--	--	56	1
KOSSOW ROAD	97+57	17' LT	--	--	84	1
				PROJECT TOTAL		9

REMOVING PAVEMENT

STREET	FROM	TO	204.0100 SY
USH 18	121+00	143+00	6,184
USH 18	143+00	160+00	2,360
USH 18	160+00	173+00	1,865
USH 18	173+00	184+00	813
USH 18	184+00	197+00	1,253
USH 18	197+00	208+00	1,725
USH 18	208+00	242+00	728
KOSSOW ROAD	51+00	59+50	294
ABBOTT DRIVE	46+50.00	4750	91
		PROJECT TOTAL	15,312

REMOVING CURB & GUTTER

STREET	FROM		TO	204.0150 REMOVING CURB & GUTTER LF
USH 18	121+00	-	136+00	656
USH 18	143+00	-	160+00	1,901
USH 18	160+00	-	173+00	1140
USH 18	173+00	-	184+00	1020
USH 18	184+00	-	197+00	1606
USH 18	197+00	-	208+00	1,310
USH 18	208+00	-	242+00	2,902
KOSSOW ROAD	51+00	-	59+50	2,038
SWENSON DRIVE	42+00	-	49+00	1,394
			PROJECT TOTAL	13,967

REMOVING ASPHALTIC SURFACE MILLING

STREET	FROM		TO	204.0125 TON
SPRINGDALE ROAD	51+00	-	53+50	209
PARKLAWN COURT	51+00	-	52+50	110
KOSSOW ROAD	51+00	-	59+50	341
SWENSON DRIVE / KOSSOW (SOUTH)	42+00	-	49+00	802
USH 18	228+50	-	238+50	403
			PROJECT TOTAL	1,865

REMOVING ASPHALTIC SURFACE MILLING, 4-INCH SPECIAL

STREET	FROM		TO	SPV.0195.01 TON
USH 18	121+00	-	143+00	3,568
USH 18	143+00	-	160+00	3,811
USH 18	160+00	-	173+00	2,697
USH 18	173+00	-	184+00	3,449
USH 18	184+00	-	197+00	3,387
USH 18	197+00	-	208+00	2,578
USH 18	208+00	-	226+00	4,369
			PROJECT TOTAL	23,859

ALL QUANTITIES ARE CATEGORY 10 UNLESS OTHERWISE NOTED

REMOVING CONCRETE SIDEWALK

STREET	FROM		TO	204.0155 SY
USH 18	121+00	-	143+00	391
USH 18	143+00	-	160+00	447
USH 18	160+00	-	173+00	58
USH 18	173+00	-	184+00	605
USH 18	184+00	-	197+00	267
USH 18	197+00	-	208+00	133
USH 18	208+00	-	242+00	465
KOSSOW ROAD	51+00	-	59+50	879
SWENSON DRIVE	42+00	-	49+00	0
			PROJECT TOTAL	3,244

REMOVING MANHOLES

STREET	STATION	OFFSET	204.0210 EACH
KOSSOW ROAD	50+91	25' LT	1
		PROJECT TOTAL	1

REMOVING INLETS

STREET	STATION	OFFSET	204.0220 EACH
USH 18	124+37	69' RT	1
USH 18	125+31	125' RT	1
USH 18	131+00	16' RT	1
USH 18	135+75	12' LT	1
USH 18	147+76	6' RT	1
USH 18	150+00	15' LT	1
USH 18	155+51	24' LT	1
USH 18	165+00	23' RT	1
USH 18	165+00	24' LT	1
USH 18	179+99	13' LT	1
USH 18	184+14	10' LT	1
USH 18	184+51	4' RT	1
USH 18	194+74	13' RT	1
USH 18	197+50	1' RT	1
USH 18	197+50	12' LT	1
USH 18	200+00	0' LT	1
PARKLAWN DRIVE	52+43	43' LT	1
USH 18	201+50	10' LT	1
USH 18	203+95	10' RT	1
USH 18	205+63	3' LT	1
USH 18	206+51	62' RT	1
USH 18	207+01	12' RT	1
USH 18	208+65	81' LT	1
KOSSOW ROAD	51+34	52' RT	1
KOSSOW ROAD	51+09	79' RT	1
USH 18	210+00	13' RT	1
USH 18	211+70	2' LT	1
SWENSON DRIVE	47+81	40' RT	1
SWENSON DRIVE	47+75	22' RT	1
KOSSOW ROAD	51+77	75' RT	1
KOSSOW ROAD	53+47	46' LT	1
KOSSOW ROAD	51+67	26' LT	1
USH 18	214+50	11' LT	1
		PROJECT TOTAL	33

REMOVING GUARDRAIL

STREET	STATION	-	STATION	LOCATION	204.0165 LF
USH 18	226+00	-	242+00	LT & RT	495
				PROJECT TOTAL	495

REMOVING STORM SEWER (12-INCH)

STREET	STATION	-	STATION	LOCATION	204.0245.01 LF
USH 18	124+37	-	124+88	RT	51
USH 18	199+51	-	200+00	RT	50
USH 18	200+00	-	--	LT & RT	14
USH 18	206+50	-	207+01	LT & RT	53
USH 18	208+53	-	208+65	LT	26
USH 18	208+65	-	208+97	LT	33
KOSSOW ROAD	50+91	-	51+67	LT	76
KOSSOW ROAD	51+08	-	51+33	RT	35
KOSSOW ROAD	51+67	-	51+77	LT & RT	102
SWENSON DRIVE	47+77	-	--	LT	20
SWENSON DRIVE	47+81	-	48+15	RT	35
				PROJECT TOTAL	495

REMOVING STORM SEWER (15-INCH)

STREET	STATION	-	STATION	LOCATION	204.0245.02 LF
USH 18	184+14	-	184+50	LT & RT	39
USH 18	184+50	-	--	RT	17
KOSSOW ROAD	53+52	-	54+06	LT & RT	73
				PROJECT TOTAL	129

REMOVING STORM SEWER (24-INCH)

STREET	STATION	-	STATION	LOCATION	204.0245.03 LF
KOSSOW ROAD	50+64	-	51+08	RT	59
KOSSOW ROAD	53+52	-	--	LT	25
				PROJECT TOTAL	84

ABANDONING CULVERT PIPES

STREET	STATION	OFFSET	204.0270 EACH
SWENSON DRIVE	48+72	82' RT	1
		PROJECT TOTAL	1

ALL QUANTITIES ARE CATEGORY 10 UNLESS OTHERWISE NOTED

EARTHWORK SUMMARY - CATEGORY 0010

Stage	From/To Station	Location	Common Excavation (1) (item # 205.0100) **		Salvaged/ Unusable Pavement Material (4)	Available Material (5)	Unexpanded Fill	Expanded Fill (13)	Mass Ordinate +/- (14)	Waste	Borrow (15)	Comment:
			Cut (2)	EBS Excavation (3)				Factor 1.25				
Pre-Stage	121+22 to 125+94	USH 18 / MANHATTAN DRIVE	2454	0	1090	1364	19	24	1339	1339	-	
Pre-Stage Subtotal			2454	0	1090	1364	19	24	1339	1339	0	
Stage 1	125+06 to 144+09	USH 18 (INSIDE MEDIAN WORK)	2349	0	381	1968	235	294	1675	1675	-	
	144+09 to 184+84	USH 18 (INSIDE MEDIAN WORK)	9623	0	1246	8376	962	1203	7173	7173	-	
	184+84 to 198+32	USH 18 (INSIDE MEDIAN WORK)	2260	0	317	1942	226	282	1660	1660	-	
	198+32 to 209+22	USH 18 (INSIDE MEDIAN WORK)	1628	0	344	1285	163	204	1081	1081	-	
	209+22 to 225+87	USH 18 (INSIDE MEDIAN WORK)	976	0	167	809	98	0	809	809	-	
Stage 1 Subtotal			16836	0	2288	13571	1684	1982	11589	11589	0	
Stage 2	138+59 to 231+42	USH 18 (OUTSIDE WIDENING)	3113	0	537	2576	62	78	2499	2499	-	
Stage 2 Subtotal			3113	0	537	2576	62	78	2499	2499	0	
Stage 2A	50+68 to 50+87 RT	SPRINGDALE ROAD (ISLAND)	15	0	5	10	0	0	10	10	-	
	45+27 to 49+38	PARKLAWN COURT	575	0	0	575	1	1	574	574	-	
	50+62 to 52+44	PARKLAWN DRIVE	310	0	0	310	5	7	303	303	-	
	50+68 to 50+89	KOSSOW ROAD (ISLAND)	32	0	11	21	0	0	21	21	-	
Stage 2A Subtotal			931	0	16	915	6	8	908	908	0	
Stage 2B	50+68 to 52+64	SPRINGDALE ROAD	206	0	0	206	0	0	206	206	-	
	45+27 to 49+38	PARKLAWN COURT	671	0	0	671	25	32	639	639	-	
	50+62 to 52+44	PARKLAWN DRIVE	113	0	0	113	1	1	113	113	-	
	42+63 to 49+38	SWENSON DRIVE	1257	0	0	1257	1	1	1256	1256	-	
	50+62 to 59+27	KOSSOW ROAD	1748	0	0	1748	137	171	1577	1577	-	
	210+00 to 211+12	MORELAND CT (US 18 ALIGNMENT)	140	0	0	140	57	71	68	68	-	
Stage 2B Subtotal			4135	0	0	4135	221	276	3859	3859	0	
Stage 2C	50+68 to 53+50	SPRINGDALE ROAD	989	0	0	989	4	4	984	984	-	
	42+63 to 49+38	SWENSON DRIVE	634	0	0	634	4	5	629	629	-	
	96+74 to 99+50	KOSSOW ROAD (SOUTH)	127	0	0	127	32	40	88	88	-	
	50+62 to 59+27	KOSSOW ROAD	995	0	0	995	58	72	923	923	-	
	15+34 to 21+00	ABBOTT DRIVE	1248	0	0	1248	69	86	1162	1162	-	
		DETENTION POND	539	0	0	539	0	0	539	539	-	
Stage 2C Subtotal			4532	0	0	4532	165	207	4325	4325	0	
Stage 2D	50+68 to 53+50	SPRINGDALE ROAD	222	0	0	222	1	2	221	221	-	
	96+74 to 99+50	KOSSOW ROAD (SOUTH)	166	0	0	166	23	29	138	138	-	
	50+62 to 59+27	KOSSOW ROAD	250	0	0	250	0	0	250	250	-	
Stage 2D Subtotal			639	0	0	639	24	30	608	608	0	
UNDISTRIBUTED			0	3264	0	0	0	0	0	0	0	
			32639	3264								
CATEGORY 0010 TOTAL			Total Common Exc	35903	2825	16148	1746	2060	14087	14087	0	

1) Common Excavation is the sum of the Cut and EBS Excavation columns. Item number 205.0100
2) Salvaged/Unsuable Pavement Material is included in Cut.
3) EBS Excavation to be backfilled with Breaker Run material. Note: Quantities for Breaker Run shown elsewhere in plans.
4) Salvaged/Unusable Pavement Material
5) Available Material = Cut - Salvaged/Unusuable Pavement Material
13) Expanded Fill. Factor = 1.25
14) The Mass Ordinate + or - Qty calculated for the Division. Plus quantity indicates an excess of material within the Division. Minus indicates a shortage of material within the Division.
15) Borrow Excavation

ALL QUANTITIES ARE CATEGORY 10 UNLESS OTHERWISE NOTED

3

209.0200.S
BACKFILL CONTROLLED LOW STRENGTH

STRUCTURE #	PIPE #	LENGTH (FT)	VOLUME (CY)
11 - (533)	P-11.1	65	13.8
12 - (538)	P-12.1	31	6.6
13 - (543)	P-13.1	37	7.8
22 - (111)	P-22.1	46	11.8
24 - (113)	P-24.1	58	12.3
25 - (581)	P-25.1	13	1.7
77 - 78	P-77.1	20	4.3
67 - (120)	P-67.1	20	4.2
	TOTAL:		63

FINISHING ROADWAY (2200-16-71)

STREET	213.0100.01 EACH
PROJECT 2200-16-71	1
	1

BASE AGGREGATE DENSE 3/4 INCH

STREET	FROM		TO		305.0110 TON
PARKLAWN COURT	45+27	-	49+00	LT & RT SHOULDER	46
				PROJECT TOTAL	46

BASE AGGREGATE DENSE 1-1/4 INCH

STREET	FROM		TO	305.0120 TON
USH 18	121+00	-	143+00	1,806
USH 18	143+00	-	160+00	1,088
USH 18	160+00	-	173+00	866
USH 18	173+00	-	184+00	3,868
USH 18	184+00	-	197+00	2,224
USH 18	197+00	-	208+00	3,530
USH 18	208+00	-	242+00	2,470
KOSSOW ROAD	51+00	-	59+50	4,594
SWENSON DRIVE	42+00	-	49+00	1,778
			PROJECT TOTAL	22,224

BREAKER RUN

LOCATION		STATION	TO	STATION	EBS CY	311.0110 TON
UNDISTRIBUTED	USH 18	122+25	-	238+34	3264	5,712
				PROJECT TOTAL		5,712

CONCRETE BASE 8-INCH

STREET	FROM	TO	320.0145 SY
USH 18	121+00	14300	1,444
USH 18	143+00.00	16000	2,454
USH 18	160+00.00	17300	2,072
USH 18	173+00.00	18400	1,800
USH 18	CORPORATE DRIVE	19700	1,524
USH 18	197+00.00	20800	1,928
USH 18	208+00.00	24100	1,628
KOSSOW ROAD	42+00.00	4900	0
KOSSOW ROAD	51+00.00	60+00	0
		SUBTOTALS	12,849
		PROJECT TOTAL	12,849

BASE PATCHING CONCRETE SHES

STREET	FROM		TO	390.0403 SY
USH 18	121+00	-	143+00	544
USH 18	143+00	-	160+00	608
USH 18	160+00	-	173+00	480
USH 18	173+00	-	184+00	451
USH 18	184+00	-	197+00	786
USH 18	197+00	-	208+00	371
USH 18	208+00	-	242+00	234
KOSSOW ROAD	51+00	-	59+50	0
SWENSON DRIVE	42+00	-	49+00	0
UNDISTRIBUTED				3,333
			PROJECT TOTAL	6,808

ALL QUANTITIES ARE CATEGORY 10 UNLESS OTHERWISE NOTED

3

CONCRETE PAVEMENT 9-INCH

STREET	FROM	TO	415.0090 SY
USH 18	121+00	143+00	4,356
		PROJECT TOTAL	4,356

CONCRETE DRIVEWAY HES 7-INCH

STREET	FROM	TO	416.0270 SY
USH 18	121+00	143+00	161
USH 18	143+00	160+00	41
USH 18	160+00	173+00	215
USH 18	173+00	184+00	0
USH 18	184+00	197+00	47
USH 18	197+00	208+00	104
USH 18	208+00	242+00	0
KOSSOW ROAD	51+00	59+50	117
SWENSON DRIVE	42+00	49+00	71
		PROJECT TOTALS	757

HMA COLD WEATHER PAVING

STREET	FROM	TO	460.4000 TON
USH 18 - UNDISTRIBUTED	126+00	226+00	5,000
		PROJECT TOTAL	5,000

DRILLED DOWEL BARS

STREET	FROM		TO	416.0620 EACH
USH 18	121+00	-	143+00	864
USH 18	143+00	-	160+00	944
USH 18	160+00	-	173+00	864
USH 18	173+00	-	184+00	704
USH 18	184+00	-	197+00	1,456
USH 18	197+00	-	208+00	624
USH 18	208+00	-	242+00	448
USH 18	51+00	-	59+50	0
USH 18	42+00	-	49+00	0
UNDISTRIBUTED				5,904
			PROJECT TOTAL	11,808

DRILLED TIE BARS

STREET	FROM		TO	416.0610 EACH
USH 18	121+00	-	143+00	882
USH 18	143+00	-	160+00	1,423
USH 18	160+00	-	173+00	1,086
USH 18	173+00	-	184+00	566
USH 18	184+00	-	197+00	775
USH 18	197+00	-	208+00	845
USH 18	208+00	-	242+00	1,060
KOSSOW ROAD	51+00	-	59+50	0
SWENSON DRIVE	42+00	-	49+00	0
			PROJECT TOTAL	6,636

ASPHALTIC PAVEMENT

ROADWAY	FROM		TO	LOCATION	455.0120 ASPHALTIC MATERIAL PG64-28 TON	455.0605 TACK COAT GAL	460.1110 HMA PAVEMENT TYPE E-10 TON
USH 18	121+00	-	143+00	MAINLINE PAVEMENT	224	442	4,068
USH 18	143+00	-	160+00	MAINLINE PAVEMENT	261	516	4,750
USH 18	160+00	-	173+00	MAINLINE PAVEMENT	188	371	3,411
USH 18	173+00	-	184+00	MAINLINE PAVEMENT	226	447	4,112
USH 18	184+00	-	197+00	MAINLINE PAVEMENT	248	475	4,513
USH 18	197+00	-	208+00	MAINLINE PAVEMENT	226	417	4,113
USH 18	208+00	-	242+00	MAINLINE PAVEMENT	293	569	5,336
KOSSOW ROAD	51+00	-	59+50	SIDEROAD	156	212	2,841
SWENSON DRIVE	42+00	-	49+00	SIDEROAD	101	236	1,843
				PROJECT TOTALS FOR CATEGORY 0010	1,923	3,685	34,987

ALL QUANTITIES ARE CATEGORY 10 UNLESS OTHERWISE NOTED

3

ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES

STREET	FROM	TO	465.0120 TON
USH 18	121+00	143+00	27
USH 18	143+00	160+00	5
USH 18	160+00	173+00	42
USH 18	173+00	184+00	0
USH 18	184+00	197+00	23
USH 18	197+00	208+00	80
USH 18	208+00	242+00	0
KOSSOW ROAD	51+00	59+50	39
SWENSON DRIVE	42+00	49+00	40
		PROJECT TOTALS	255

ASPHALTIC CURB

STREET	FROM	TO	465.0310 LF
ABBOTT DRIVE	16+92	18+84	195
		PROJECT TOTAL	195

ASPHALTIC FLUMES

ROADWAY	FROM		TO	465.0315 CATEGORY 0010 SY
PARKLAWN COURT	47+70	-	47+78	7
PARKLAWN COURT	47+69	-	47+78	7
KOSSOW ROAD	97+07	-	97+16	7
KOSSOW ROAD	97+07	-	97+15	7
			PROJECT TOTAL	28

CULVERT PIPE SUMMARY

ITEM NUMBER	ITEM	TOTAL	
521.0112	CULVERT PIPE CORRUGATED STEEL 12-INCH	52	LF
521.0115	CULVERT PIPE CORRUGATED STEEL 15-INCH	100	LF
521.1012	APRON ENDWALLS FOR CULVERT PIPE STEEL 12-INCH	2	EACH
521.1015	APRON ENDWALLS FOR CULVERT PIPE STEEL 15-INCH	6	EACH
521.1018	APRON ENDWALLS FOR CULVERT PIPE STEEL 18-INCH	1	EACH

CONCRETE CURB TYPE D

STREET	FROM	TO	601.0110 LF
SPRINGDALE ROAD	52+74	53+09	42
		PROJECT TOTAL	42

CONCRETE CURB & GUTTER 18-INCH TYPE A

STREET	FROM	TO	601.0405 LF
USH 18	121+00	143+00	0
USH 18	143+00	160+00	0
USH 18	160+00	173+00	0
USH 18	173+00	184+00	0
USH 18	184+00	197+00	257
USH 18	197+00	208+00	916
USH 18	208+00	242+00	908
KOSSOW ROAD	51+00	59+50	0
SWENSON DRIVE	42+00	49+00	0
		PROJECT TOTAL	2,081

CONCRETE CURB & GUTTER 18-INCH TYPE D

STREET	FROM	TO	601.0407 LF
USH 18	121+00	143+00	0
USH 18	143+00	160+00	0
USH 18	173+00	184+00	0
USH 18	184+00	197+00	0
USH 18	197+00	208+00	0
USH 18	208+00	242+00	63
KOSSOW ROAD	51+00	59+50	1010
SWENSON DRIVE	42+00	49+00	0
		PROJECT TOTAL	1,073

ALL QUANTITIES ARE CATEGORY 10 UNLESS OTHERWISE NOTED

3

CONCRETE CURB & GUTTER 30-INCH TYPE A

STREET	FROM	TO	601.0409 LF
USH 18	121+00	143+00	3981
USH 18	143+00	160+00	3989
USH 18	160+00	173+00	3157
USH 18	173+00	184+00	1666
USH 18	184+00	197+00	2071
USH 18	197+00	208+00	1884
USH 18	208+00	242+00	2208
KOSSOW ROAD	51+00	59+50	0
SWENSON DRIVE	42+00	49+00	0
		PROJECT TOTAL	18,956

CONCRETE CURB & GUTTER 30-INCH TYPE D

STREET	FROM	TO	601.0411 LF
USH 18	121+00	143+00	0
USH 18	143+00	160+00	0
USH 18	160+00	173+00	0
USH 18	173+00	184+00	14
USH 18	184+00	197+00	874
USH 18	197+00	208+00	1031
USH 18	208+00	242+00	706
KOSSOW ROAD	51+00	59+50	2308
SWENSON DRIVE	42+00	49+00	1725
		PROJECT TOTAL	6,658

CONCRETE CURB & GUTTER 4-INCH SLOPED 30-INCH

STREET	FROM	TO	TYPE G 601.0574 LF	TYPE J 601.0570 LF
USH 18	121+00	143+00	0	0
USH 18	143+00	160+00	0	0
USH 18	160+00	173+00	0	0
USH 18	173+00	184+00	0	0
USH 18	184+00	197+00	0	0
USH 18	197+00	208+00	0	0
USH 18	208+00	242+00	58	0
KOSSOW ROAD	51+00	59+50	0	76
SWENSON DRIVE	42+00	49+00	0	0
		PROJECT TOTAL	58	76

CONCRETE CURB PEDESTRIAN

STREET	FROM	TO	601.0600 LF
USH 18	184+00	186+00	30
UNDISTRIBUTED	-	-	50
		PROJECT TOTAL	80

CONCRETE SIDEWALK 5-INCH

STREET	FROM		TO	602.0410 SF
USH 18	121+00	-	143+00	4,336
USH 18	143+00	-	160+00	8,316
USH 18	160+00	-	173+00	3,596
USH 18	173+00	-	184+00	10,056
USH 18	184+00	-	197+00	9,978
USH 18	197+00	-	208+00	7,090
USH 18	208+00	-	242+00	5,580
KOSSOW ROAD	51+00	-	59+50	10,149
SWENSON DRIVE	42+00	-	49+00	367
			PROJECT TOTAL	59,468

CURB RAMP DETECTABLE WARNING FIELD YELLOW

STREET	FROM	TO	602.0505 SF
USH 18	121+00	143+00	160
USH 18	143+00	160+00	224
USH 18	160+00	173+00	144
USH 18	173+00	184+00	144
USH 18	184+00	197+00	136
USH 18	197+00	208+00	104
USH 18	208+00	242+00	160
KOSSOW ROAD	51+00	59+50	120
SWENSON DRIVE	42+00	49+00	8
		PROJECT TOTAL	1,200

RIPRAP & GEOTEXTILE FABRIC

STREET	FROM	TO	606.0200 RIPRAP MEDIUM CY	645.0120 GEOTEXTILE FABRIC TYPE HR SY
USH 18	121+00	143+00	0	0
USH 18	143+00	160+00	0	0
USH 18	160+00	173+00	0	0
USH 18	173+00	184+00	0	0
USH 18	184+00	197+00	0	0
USH 18	197+00	208+00	0	0
USH 18	208+00	242+00	12	39
KOSSOW ROAD	51+00	59+50	12	40
SWENSON DRIVE	42+00	49+00	0	0
UNDISTRIBUTED			12	39
PROJECT TOTAL			36	118

3

ALL QUANTITIES ARE CATEGORY 10 UNLESS OTHERWISE NOTED

3

STORM SEWER SUMMARY

ITEM NUMBER	ITEM		
520.8000	Concrete Collars for Pipe	19	EACH
522.1012	Apron Endwalls for Culvert Pipe Reinforced Concrete 12-Inch	2	EACH
522.1024	Apron Endwalls for Culvert Pipe Reinforced Concrete 24-Inch	1	EACH
608.0312	Storm Sewer Pipe Reinforced Concrete Class III 12-Inch	1972	LF
608.0315	Storm Sewer Pipe Reinforced Concrete Class III 15-Inch	59	LF
608.0318	Storm Sewer Pipe Reinforced Concrete Class III 18-Inch	82	LF
608.0324	Storm Sewer Pipe Reinforced Concrete Class III 24-Inch	138	LF
608.0412	Storm Sewer Pipe Reinforced Concrete Class IV 12-Inch	568	LF
608.0415	Storm Sewer Pipe Reinforced Concrete Class IV 15-Inch	107	LF
608.0418	Storm Sewer Pipe Reinforced Concrete Class IV 18-Inch	161	LF
608.0424	Storm Sewer Pipe Reinforced Concrete Class IV 24-Inch	14	LF
608.0430	Storm Sewer Pipe Reinforced Concrete Class IV 30-Inch	7	LF
611.0530	Manhole Covers Type J	23	EACH
611.0624	Inlet Covers Type H	66	EACH
611.0639	Inlet Covers Type H-S	44	EACH
611.0642	Inlet Covers Type MS	5	EACH
611.0645	Inlet Covers Type MS-A	2	EACH
611.1004	Catch Basins 4-FT Diameter	1	EACH
611.1230	Catch Basins 2x3-FT	26	EACH
611.2004	Manholes 4-FT Diameter	3	EACH
611.2006	Manholes 6-FT Diameter	5	EACH
611.3004	Inlets 4-FT Diameter	4	EACH
611.3230	Inlets 2x3-FT	76	EACH
611.3901	Inlets Median 1 Grate	2	EACH
611.3902	Inlets Median 2 Grate	1	EACH
611.3903	Inlets Median 3 Grate	1	EACH

RECONSTRUCTING MANHOLES

STRUCTURE NO.	STREET	STATION	OFFSET	611.0420 RECONSTRUCTING MANHOLES EACH
108	USH 18	147+75	62' LT	1
114	USH 18	184+50	21' RT	1
116	USH 18	188+00	15' LT	1
117	USH 18	209+63	13' LT	1
118	USH 18	210+00	7' RT	1
119	USH 18	208+79	95' RT	1
123	USH 18	209+62	107' RT	1
125	USH 18	209+60	64' LT	1
128	KOSSOW RD	53+52	10' RT	1
131	KOSSOW RD	56+81	36' RT	1
			PROJECT TOTAL	10

RECONSTRUCTING INLETS

STRUCTURE NO.	STREET	STATION	OFFSET	611.0430 RECONSTRUCTING INLETS EACH
100A	USH 18	122+84	2' LT	1
100	USH 18	124+61	39' LT	1
101	USH 18	127+00	21' LT	1
102	USH 18	128+52	24' LT	1
103	USH 18	128+66	5' LT	1
104	USH 18	129+01	62' LT	1
106	USH 18	141+62	7' LT	1
110	USH 18	165+00	62' RT	1
110A	USH 18	169+01	12' LT	1
111	USH 18	170+31	25' RT	1
113	USH 18	173+18	123' RT	1
115	USH 18	187+99	65' RT	1
120	SWENSON DRIVE	43+64	19' LT	1
121	SWENSON DRIVE	47+75	20' LT	1
122	SWENSON DRIVE	48+33	34' LT	1
124	USH 18	211+70	63' RT	1
126	USH 18	216+50	58' LT	1
127	KOSSOW ROAD	55+54	24' RT	1
128A	USH 18	211+70	63' LT	1
129	USH 18	218+49	57' LT	1
130	USH 18	220+47	61' LT	1
			PROJECT TOTAL	21

ADJUSTING MANHOLE COVERS

STRUCTURE NO.	STREET	STATION	OFFSET	CAT 0010 611.8110 ADJUSTING MANHOLE COVERS EACH
502	USH 18	122+99	34' LT	1
505	USH 18	124+89	43' LT	1
506	USH 18	124+87	5' LT	1
507	USH 18	124+88	74' RT	1
509	USH 18	124+87	125' RT	1
526	USH 18	141+50	5' RT	1
531	USH 18	142+35	4' LT	1
536	USH 18	143+85	102' LT	1
537	LES PAUL PKWY	285+31	1' RT	1
543	USH 18	144+82	78' LT	1
581	USH 18	174+80	86' LT	1
588	USH 18	179+99	10' RT	1
591	USH 18	183+15	69' RT	1
597	USH 18	185+94	58' RT	1
624	USH 18	208+53	60' LT	1
641	KOSSOW RD	55+53	37' RT	1
642	KOSSOW RD	55+54	9' RT	1
644	ABBOTT DR	16+61	21' LT	1
			PROJECT TOTAL	18

3

ALL QUANTITIES ARE CATEGORY 10 UNLESS OTHERWISE NOTED

ADJUSTING INLET COVERS

STRUCTURE NO.	STREET	STATION	OFFSET	611.8115 EACH
501	USH 18	122+98	39' LT	1
504	USH 18	124+58	6' RT	1
508	USH 18	124+80	125' RT	1
510	USH 18	127+51	24' RT	1
512	USH 18	127+75	62' RT	1
513	USH 18	128+37	1' LT	1
514	USH 18	128+76	62' LT	1
515	USH 18	130+36	62' RT	1
521	USH 18	133+01	62' LT	1
525	USH 18	141+49	24' RT	1
529	USH 18	142+00	62' LT	1
532	USH 18	142+21	77' RT	1
533	USH 18	142+47	79' RT	1
534	USH 18	142+46	0' LT	1
538	USH 18	144+58	99' RT	1
539	USH 18	144+78	24' RT	1
540	USH 18	144+81	14' RT	1
541	USH 18	144+84	12' LT	1
544	USH 18	144+83	87' LT	1
545	USH 18	147+77	62' RT	1
546	USH 18	147+76	24' RT	1
549	USH 18	151+83	100' RT	1
550	USH 18	152+50	62' LT	1
551	USH 18	152+50	11' LT	1
553	USH 18	155+50	62' RT	1
555	USH 18	155+49	62' LT	1
556	USH 18	158+50	62' RT	1
557	USH 18	158+50	24' LT	1
560	USH 18	161+60	62' RT	1
561	USH 18	161+56	24' RT	1
562	USH 18	161+55	11' LT	1
563	USH 18	161+56	62' LT	1
568	USH 18	166+25	63' RT	1
569	USH 18	169+00	62' RT	1
574	USH 18	174+11	85' RT	1

ADJUSTING INLET COVERS

STRUCTURE NO.	STREET	STATION	OFFSET	611.8115 EACH
575	USH 18	174+11	120' RT	1
576	USH 18	174+21	135' RT	1
578	USH 18	174+80	13' LT	1
579	USH 18	174+80	24' LT	1
583	USH 18	175+85	13' RT	1
592	USH 18	183+93	72' LT	1
595	USH 18	184+51	85' RT	1
598	USH 18	187+14	66' LT	1
600	USH 18	188+00	16' RT	1
601	USH 18	191+63	63' RT	1
602	USH 18	191+63	1' RT	1
603	USH 18	191+63	13' LT	1
604	USH 18	194+75	63' RT	1
605	USH 18	195+75	63' LT	1
607	USH 18	197+49	63' LT	1
608	USH 18	199+52	63' RT	1
609	USH 18	199+51	13' RT	1
610	USH 18	200+01	62' LT	1
612	USH 18	201+50	12' RT	1
613	USH 18	201+49	62' LT	1
614	USH 18	203+97	62' RT	1
615	USH 18	204+00	10' LT	1
620	USH 18	206+50	5' LT	1
621	USH 18	206+50	12' LT	1
623	USH 18	208+00	63' LT	1
643	KOSSOW RD	55+53	22' LT	1
630	USH 18	214+50	62' RT	1
631	USH 18	214+50	12' RT	1
632	USH 18	218+49	56' RT	1
633	USH 18	221+50	44' LT	1
634	USH 18	224+53	64' RT	1
UNDISTRIBUTED	USH 18			5
			PROJECT TOTAL	71

3

ALL QUANTITIES ARE CATEGORY 10 UNLESS OTHERWISE NOTED

CRASH CUSHION

LOCATION	STATION	OFFSET	CRASH CUSHION PERMANENT LOW MAINTENANCE 614.0805 EACH	BACK WIDTH FT	OBJECT MARKING PATTERN	CRASH TEST LEVEL	TRAFFIC DIRECTION	TRAFFIC LOCATION	CRASH CUSHION SHIELDS
USH 18	241+05	9.5' LT	1	4	OM-3L	TL-3	BIDIRECTIONAL	LT & RT	W5-58L
		PROJECT TOTAL	1						

GUARDRAIL

LOCATION	STATION	OFFSET	GUARDRAIL MOW STRIP CONCRETE 614.0395 SY	MGS GUARDRAIL 3 614.2300 LF	MGS GUARDRAIL 3 HS 614.2310 LF	MGS GUARDRAIL 3 QS 614.2320 LF	MGS GUARDRAIL THRIE BEAM TRANSITION 614.2500 LF	MGS GUARDRAIL TERMINAL EAT 614.2610 EACH	MGS GUARDRAIL TERMINAL TYPE 2 614.2620 EACH
USH 18	236+95 TO 240+77	RT & LT	105	300	12.5	18.75	6.25	1	-
USH 18	238+62 TO 240+77	LT	105	190	12.5	18.75	6.25	-	1
USH 18	239+12 TO 240+54	LT	-	100	-	-	-	1	1
		PROJECT TOTAL	210	590	25	37.5	12.5	2	2

FENCE SAFETY

STATION	OFFSET	616.0700.S LF
UNDISTRIBUTED	LT/RT	100
	PROJECT TOTAL	100

MOBILIZATION

LOCATION	619.1000 EACH
USH 18	1
PROJECT TOTAL	1

ALL QUANTITIES ARE CATEGORY 10 UNLESS OTHERWISE NOTED

3

CONCRETE CORRUGATED MEDIAN

STREET	FROM		TO	620.0100 SF
STH 164	284+92	-	285+85	547
PROJECT TOTAL				547

CONCRETE MEDIAN SLOPED NOSE

STREET	FROM	TO	620.0300 SF
USH 18	121+00	143+00	322
USH 18	143+00	160+00	280
USH 18	160+00	173+00	84
USH 18	173+00	184+00	116
USH 18	184+00	197+00	288
USH 18	197+00	208+00	191
USH 18	208+00	241+00	247
USH 18	42+00	49+00	81
USH 18	51+00	60+00	23
		PROJECT TOTAL	1,632

LANDMARK REFERANCE MONUMENTS

STA	OFSET	621.0100 EACH
127+76.78	23.32' RT	1
	PROJECT TOTAL	1

WATER

STREET	FROM	TO	624.0100 MGAL
USH 18	121+00	143+00	18
USH 18	143+00	160+00	11
USH 18	160+00	173+00	9
USH 18	173+00	184+00	39
USH 18	184+00	197+00	22
USH 18	197+00	208+00	35
USH 18	208+00	242+00	25
KOSSOW ROAD	51+00	59+50	46
SWENSON DRIVE	42+00	49+00	26
		PROJECT TOTAL	231

TOPSOIL

STREET	FROM	TO	625.0100 TOPSOIL SY
USH 18	121+00	143+00	2216
USH 18	143+00	160+00	3901
USH 18	160+00	173+00	2933
USH 18	173+00	184+00	386
USH 18	184+00	197+00	1624
USH 18	197+00	208+00	2670
USH 18	208+00	242+00	1925
KOSSOW ROAD	51+00	59+50	3787
SWENSON DRIVE	42+00	49+00	1265
UNDISTRIBUTED			2071
		PROJECT TOTAL	22,778

EROSION BALES & SILT FENCE

STREET	FROM	TO	628.1104 EROSION BALES EACH	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF
USH 18	121+00	143+00	0	0	0
USH 18	143+00	160+00	0	0	0
USH 18	160+00	173+00	0	0	0
USH 18	173+00	184+00	0	0	0
USH 18	184+00	197+00	0	0	0
USH 18	197+00	208+00	0	70	70
USH 18	208+00	242+00	671	1,678	1,678
KOSSOW ROAD	51+00	59+50	0	0	0
SWENSON DRIVE	42+00	49+00	0	0	0
UNDISTRIBUTED			67	175	175
		PROJECT TOTALS	738	1,923	1,923

ALL QUANTITIES ARE CATEGORY 10 UNLESS OTHERWISE NOTED

3

EROSION CONTROL MOBILIZATIONS

LOCATION	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH
PROJECT 2200-16-70	2	4
PROJECT TOTAL	2	4

ROCK BAGS

STREET	STATION	OFFSET	628.7570 EACH
PARKLAWN COURT	47+18	26' LT	5
PARKLAWN COURT	46+87	28' RT	5
PARKLAWN COURT	46+43	21' LT	5
PARKLAWN COURT	45+32	19' LT	5
SWENSON DRIVE	97+75	25' LT	5
PROJECT TOTAL			25

EROSION MAT

STREET	FROM	TO	628.2027 EROSION MAT CLASS II TYPE C SY
USH 18	121+00	143+00	0
USH 18	143+00	160+00	0
USH 18	160+00	173+00	0
USH 18	173+00	184+00	0
USH 18	184+00	197+00	0
USH 18	197+00	208+00	0
USH 18	208+00	242+00	1,465
KOSSOW ROAD	51+00	59+50	1,605
SWENSON DRIVE	42+00	49+00	0
UNDISTRIBUTED			307
		PROJECT TOTAL	3,377

SEEDING QUANTITIES

STREET	FROM	TO	630.0140 SEEDING MIXTURE NO. 40 LB	629.0210 FERTILIZER TYPE B CWT
USH 18	121+00	143+00	0	0.0
USH 18	143+00	160+00	0	0.0
USH 18	160+00	173+00	0	0.0
USH 18	173+00	184+00	0	0.0
USH 18	184+00	197+00	0	0.0
USH 18	197+00	208+00	0	0.0
USH 18	208+00	242+00	26	0.9
KOSSOW ROAD	51+00	59+50	29	1.0
SWENSON DRIVE	42+00	49+00	0	0.0
UNDISTRIBUTED			6	0.2
		PROJECT TOTALS	61	2.1

INLET PROTECTION

STREET	FROM	TO	628.7005 INLET PROTECTION TYPE A EACH	628.7010 INLET PROTECTION TYPE B EACH	628.7015 INLET PROTECTION TYPE C EACH	628.7020 INLET PROTECTION TYPE D EACH
USH 18	121+00	143+00	14	5	34	16
USH 18	143+00	160+00	10	4	31	5
USH 18	160+00	173+00	5	9	22	0
USH 18	173+00	184+00	3	1	22	0
USH 18	184+00	197+00	12	0	32	0
USH 18	197+00	208+00	24	7	38	7
USH 18	208+00	242+00	19	2	44	3
KOSSOW ROAD	51+00	59+50	17	4	8	8
SWENSON DRIVE	42+00	49+00	6	1	8	0
		PROJECT TOTALS	110	33	239	39

SOD QUANTITIES

STREET	FROM	TO	631.0300 SOD WATER MGAL	631.1000 SOD LAWN SY
USH 18	121+00	143+00	50	2,216
USH 18	143+00	160+00	88	3,901
USH 18	160+00	173+00	66	2,933
USH 18	173+00	184+00	9	386
USH 18	184+00	197+00	36	1,624
USH 18	197+00	208+00	60	2,670
USH 18	208+00	242+00	10	461
KOSSOW ROAD	51+00	59+50	49	2,182
SWENSON DRIVE	42+00	49+00	28	1,265
UNDISTRIBUTED			40	1,764
		PROJECT TOTAL	436	19,401

ALL QUANTITIES ARE CATEGORY 10 UNLESS OTHERWISE NOTED

SIGN NO.	LOCATION	STATION	OFFSET	SIGN CODE	MESSAGE	SIZE	634.0614 POSTS WOOD 4X6-INCH X 14-FT EACH	634.0616 POSTS WOOD 4X6-INCH X 16-FT EACH	634.0618 POSTS WOOD 4X6-INCH X 18-FT EACH	637.1220 SIGNS TYPE I REFLECTIVE SH SF	637.2210 SIGNS TYPE II REFLECTIVE H SF	637.2215 SIGNS TYPE II REFLECTIVE H FOLDING SF	637.2230 SIGNS TYPE II REFLECTIVE F SF	638.2101 MOVING SIGNS TYPE I EACH	638.2102 MOVING SIGNS TYPE II EACH	REMARKS
1-1	USH 18	122+70	LT	R7-1D		18 X 24	-	-	-	-	3.00	-	-	-	-	MOUNT TO UTILITY POLE
1-2	USH 18	123+32	LT	R6-2R		24 X 30	1	-	-	-	5.00	-	-	-	-	
1-3	USH 18	123+98	LT	R2-1	25 MPH	24 X 36	-	1	-	-	6.00	-	-	-	-	
1-4	USH 18	123+98	LT	R2-1	25 MPH	24 X 36	-	1	-	-	6.00	-	-	-	-	
1-5	USH 18	124+45	LT	R6-2L		24 X 30	1	-	-	-	5.00	-	-	-	-	
1-6	USH 18	125+49	LT	R5-1		30 X 30	-	-	-	-	6.25	-	-	-	-	MOUNT TO SIGNAL POLE
1-7	MANHATTAN DRIVE	50+68	LT	R1-1F		36 X 36	-	-	-	-	-	7.46	-	-	-	MOUNT TO SIGNAL POLE
1-8	MANHATTAN DRIVE	50+68	LT	R6-3A		30 X 24	-	-	-	-	5.00	-	-	-	-	MOUNT TO SIGNAL POLE
1-9	MANHATTAN DRIVE	50+92	RT	R5-2		24 X 24	1	-	-	-	4.00	-	-	-	-	
1-10	MANHATTAN DRIVE	50+92	RT	R5-2A	3 TONS	24 X 12	-	-	-	-	2.00	-	-	-	-	ON POST WITH SIGN 1-9
1-11	USH 18	125+60	LT	R1-1		36 X 36	-	1	-	-	7.46	-	-	-	-	
1-12	USH 18	125+49	LT	R1-1F		36 X 36	-	-	-	-	-	7.46	-	-	-	MOUNT TO SIGNAL POLE
1-13	USH 18	126+42	LT	R7-1D		18 X 24	-	-	-	-	3.00	-	-	-	-	MOUNT TO UTILITY POLE
1-14	USH 18	127+59	LT	R6-2R		24 X 30	1	-	-	-	5.00	-	-	-	-	
1-15	USH 18	124+59	LT	R1-1F		36 X 36	-	-	-	-	-	7.46	-	-	-	MOUNT TO SIGNAL POLE
1-16	USH 18	125+44	LT	R5-1		30 X 30	-	-	-	-	6.25	-	-	-	-	MOUNT TO SIGNAL POLE
1-17	USH 18	125+44	LT	R1-1F		36 X 36	-	-	-	-	-	7.46	-	-	-	MOUNT TO SIGNAL POLE
1-18	USH 18	125+83	RT	R1-1F		36 X 36	-	1	-	-	-	7.46	-	-	-	
1-19	USH 18	124+60	LT	R4-7		24 X 36	-	-	-	-	6.00	-	-	-	-	MOUNT TO SIGNAL POLE
1-20	USH 18	125+83	RT	R4-7		24 X 36	-	1	-	-	6.00	-	-	-	-	
1-21	USH 18	125+83	RT	R6-2R		24 X 30	1	-	-	-	5.00	-	-	-	-	
1-22	USH 18	122+66	RT	R3-20L		24 X 36	-	1	-	-	6.00	-	-	-	-	
1-23	USH 18	121+78	RT	R5-1A		36 X 24	1	-	-	-	6.00	-	-	-	-	
1-24	USH 18	124+56	RT	R1-1F		36 X 36	-	-	-	-	-	7.46	-	-	-	MOUNT TO SIGNAL POLE
1-25	USH 18	124+40	RT	R1-1		36 X 36	-	1	-	-	7.46	-	-	-	-	
1-26	MANHATTAN DRIVE	48+16	LT	R2-1	25 MPH	24 X 36	-	1	-	-	6.00	-	-	-	-	
1-27	MANHATTAN DRIVE	48+16	LT	R7-1D		18 X 24	1	-	-	-	3.00	-	-	-	-	
1-28	USH 18	124+56	RT	R5-1		30 X 30	-	-	-	-	6.25	-	-	-	-	MOUNT TO SIGNAL POLE
1-29	USH 18	125+36	RT	R1-1F		36 X 36	-	-	-	-	-	7.46	-	-	-	MOUNT TO SIGNAL POLE
1-30	USH 18	125+36	RT	R6-3A		30 X 24	-	-	-	-	5.00	-	-	-	-	MOUNT TO SIGNAL POLE
1-31	USH 18	125+59	RT	R1-2		36 X 31	1	-	-	-	3.88	-	-	-	-	
1-32	USH 18	125+43	RT	R6-2R		24 X 30	-	-	-	-	5.00	-	-	-	-	MOUNT TO SIGNAL POLE
1-33	USH 18	126+15	RT	R7-1D		18 X 24	1	-	-	-	3.00	-	-	-	-	
1-34	USH 18	127+20	RT	J1-1		24 X 39	-	1	-	-	6.50	-	-	-	-	
				M2-1			-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 1-34
				M1-6	STH 164		-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 1-34
1-35	USH 18	124+39	LT	M1-94H	MANHATTAN DR	102 X 24	-	-	-	-	17.00	-	-	-	-	MOUNT TO SIGNAL MAST ARM
1-36	USH 18	125+39	LT	M1-94H	MORELAND BLVD	96 X 24	-	-	-	-	16.00	-	-	-	-	MOUNT TO SIGNAL MAST ARM
1-37	USH 18	125+88	RT	M1-94H	MANHATTAN DR	102 X 24	-	-	-	-	17.00	-	-	-	-	MOUNT TO SIGNAL MAST ARM
1-38	USH 18	124+73	RT	M1-94H	MORELAND BLVD	96 X 24	-	-	-	-	16.00	-	-	-	-	MOUNT TO SIGNAL MAST ARM
1-39	USH 18	122+54	RT	R4-7		24 X 36	-	1	-	-	6.00		-	-	-	
1-40	USH 18	123+66	LT	R5-1		30 X 30	1	-	-	-	6.25		-	-	-	
1-41	USH 18	123+63	RT	R5-1		30 X 30	1	-	-	-	6.25	-	-	-	-	
1-42	USH 18	127+40	LT	R5-1A		36 X 24	1	-	-	-	6.00	-	-	-	-	
1-43	USH 18	124+49	LT	--	CRIME WATCH		1	-	-	-	-	-	-	-	1	
1-44	USH 18	123+32	LT	R5-1		30 X 30	-	-	-	-	6.25	-	-	-	-	ON POST WITH SIGN 1-2
1-45	USH 18	125+39	LT	R10-50		30 X 36	-	-	-	-	7.50	-	-	-	-	MOUNT TO SIGNAL MAST ARM
1-46	USH 18	124+73	RT	R10-50		30 X 36	-	-	-	-	7.50	-	-	-	-	MOUNT TO SIGNAL MAST ARM
1-47	USH 18	124+60	LT	R10-50		30 X 36	-	-	-	-	7.50	-	-	-	-	MOUNT TO SIGNAL POLE
1-48	USH 18	125+44	LT	R10-50		30 X 36	-	-	-	-	7.50	-	-	-	-	MOUNT TO SIGNAL POLE
										-				-	-	
2-1	USH 18	133+88	LT	R3-7R		30 X 30	1	-	-	-	6.25	-	-	-	-	
2-2	USH 18	128+60	LT	R3-20LL		24 X 36	-	1	-	-	6.00	-	-	-	-	

ALL QUANTITIES ARE CATEGORY 10 UNLESS OTHERWISE NOTED

								634.0614 POSTS WOOD 4X6-INCH X 14-FT	634.0616 POSTS WOOD 4X6-INCH X 16-FT	634.0618 POSTS WOOD 4X6-INCH X 18-FT	637.1220 SIGNS TYPE I REFLECTIVE SH	637.2210 SIGNS TYPE II REFLECTIVE H	637.2215 SIGNS TYPE II REFLECTIVE H FOLDING	637.2230 SIGNS TYPE II REFLECTIVE F	638.2101 MOVING SIGNS TYPE I	638.2102 MOVING SIGNS TYPE II	
2-3	USH 18	132+90	LT	D1-65	MANHATTAN DR NEXT SIGNAL	78	X 21	2	-	-	-	11.38	-	-	-	-	
2-4	USH 18	130+54	LT	R7-1D		18	X 24	1	-	-	-	3.00	-	-	-	-	
2-5	USH 18	131+23	LT	R3-7R		36	X 36	-	1	-	-	9.00	-	-	-	-	
2-6	USH 18	131+83	LT	W3-3		36	X 36	-	1	-	-	-	-	9.00	-	-	
2-7	USH 18	131+83	LT	W3-3		36	X 36	-	1	-	-	-	-	9.00	-	-	
2-8	USH 18	132+90	LT	D1-65	MANHATTAN DR NEXT SIGNAL	78	X 21	2	-	-	-	11.38	-	-	-	-	
2-9	USH 18	130+53	LT	R3-20L		24	X 36	-	1	-	-	6.00	-	-	-	-	
2-10	USH 18	128+46	LT	R2-1	35 MPH	24	X 36	-	1	-	-	6.00	-	-	-	-	
2-11	USH 18	128+46	LT	R2-1	35 MPH	24	X 36	-	1	-	-	6.00	-	-	-	-	
2-12	USH 18	129+26	RT	R3-20L		24	X 36	-	1	-	-	6.00	-	-	-	-	
2-13	USH 18	129+74	RT	J4-1		24	X 36	-	1	-	-	6.00	-	-	-	-	
				M3-2				-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 2-13
				M1-4	USH 18			-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 2-13
2-14	USH 18	130+64	RT	R6-2R		24	X 30	1	-	-	-	5.00	-	-	-	-	
2-15	USH 18	132+11	RT	R7-1D		18	X 24	1	-	-	-	3.00	-	-	-	-	
2-16	USH 18	133+50	LT		MANHATTAN DRIVE, ONLY, ARROW	84	X 84	-	-	-	49.0	-	-	-	-	-	MOUNT TO OVERHEAD SIGN SUPPORT
3-1	USH 18	134+83	LT	R1-1		36	X 36	-	-	1	-	7.46	-	-	-	-	
3-2	USH 18	134+83	LT	R3-53R		24	X 30	-	-	-	-	5.00	-	-	-	-	ON POST WITH SIGN 3-1
3-3	USH 18	134+04	LT	R7-1D		18	X 24	1	-	-	-	3.00	-	-	-	-	
3-4	USH 18	134+83	LT	R6-2L		24	X 30	-	-	-	-	5.00	-	-	-	-	ON POST WITH SIGN 3-1
3-5	USH 18	135+35	LT	R5-2		24	X 24	1	-	-	-	4.00	-	-	-	-	
3-6	USH 18	135+35	LT	R5-2A	3 TONS	24	X 12	-	-	-	-	2.00	-	-	-	-	ON POST WITH SIGN 3-5
3-7	USH 18	139+51	LT	R3-20L		24	X 36	-	1	-	-	6.00	-	-	-	-	
3-8	USH 18	134+53	LT	R5-1		36	X 36	-	1	-	-	9.00	-	-	-	-	
3-9	USH 18	134+61	LT	R4-7		36	X 48	-	-	1	-	12.00	-	-	-	-	
3-10	USH 18	134+61	LT	R3-2		30	X 30	-	-	-	-	6.25	-	-	-	-	ON POST WITH SIGN 3-9
3-11	USH 18	135+04	LT	R5-1		36	X 36	-	1	-	-	9.00	-	-	-	-	
3-12	USH 18	135+14	LT	R6-2R		24	X 30	1	-	-	-	5.00	-	-	-	-	
3-13	USH 18	135+23	LT	W12-1D		24	X 24	1	-	-	-	-	-	4.00	-	-	2' MOUNTING HEIGHT
3-14	USH 18	135+19	RT	R4-7		36	X 48	-	-	1	-	12.00	-	-	-	-	
3-15	USH 18	135+19	RT	R3-2		30	X 30	-	-	-	-	6.25	-	-	-	-	ON POST WITH SIGN 3-14
3-16	USH 18	134+51	RT	W12-1D		24	X 24	1	-	-	-	-	-	4.00	-	-	2' MOUNTING HEIGHT
3-17	USH 18	134+67	RT	R5-1		36	X 36	-	1	-	-	9.00	-	-	-	-	
3-18	USH 18	134+87	RT	R3-53R		24	X 30	1	-	-	-	5.00	-	-	-	-	
3-19	USH 18	135+24	RT	R5-1		36	X 36	-	1	-	-	9.00	-	-	-	-	
3-20	USH 18	135+32	RT	R6-2R		24	X 30	1	-	-	-	5.00	-	-	-	-	
3-21	USH 18	137+09	RT	R7-1D		18	X 24	1	-	-	-	3.00	-	-	-	-	
3-22	USH 18	137+73	RT	W3-3		36	X 36	-	1	-	-	-	-	9.00	-	-	
3-23	USH 18	137+73	RT	W3-3		36	X 36	-	1	-	-	-	-	9.00	-	-	
3-24	USH 18	138+12	RT	D1-65 (MOD)	WOLF RD LES PAUL PKWY NEXT SIGNAL	96	X 39	2	-	-	-	26.00	-	-	-	-	
3-25	NOT USED										-				-	-	
3-26	USH 18	138+12	RT	D1-65 (MOD)	WOLF RD LES PAUL PKWY NEXT SIGNAL	96	X 39	2	-	-	-	26.00	-	-	-	-	
3-27	NOT USED										-				-	-	

ALL QUANTITIES ARE CATEGORY 10 UNLESS OTHERWISE NOTED

SIGN NO.	LOCATION	STATION	OFFSET	SIGN CODE	MESSAGE	SIZE	634.0614 POSTS WOOD 4X6-INCH X 14-FT EACH	634.0616 POSTS WOOD 4X6-INCH X 16-FT EACH	634.0618 POSTS WOOD 4X6-INCH X 18-FT EACH	637.1220 SIGNS TYPE I REFLECTIVE SH SF	637.2210 SIGNS TYPE II REFLECTIVE H SF	637.2215 SIGNS TYPE II REFLECTIVE H FOLDING SF	637.2230 SIGNS TYPE II REFLECTIVE F SF	638.2101 MOVING SIGNS TYPE I EACH	638.2102 MOVING SIGNS TYPE II EACH	REMARKS
3-28	USH 18	138+50	RT	R3-20L		24 X 36	-	1	-	-	6.00	-	-	-	-	
3-29	USH 18	136+50	RT	J3-3		72 X 57	-	2	-	-	28.50	-	-	-	-	
				M3-2			-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 3-29
				M1-4	USH 18		-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 3-29
				M6-1			-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 3-29
				M3-1			-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 3-29
				M1-6	STH 164		-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 3-29
				M6-1			-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 3-29
				M3-3			-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 3-29
				M1-6	STH 164		-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 3-29
				M5-1R			-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 3-29
3-30	USH 18	136+50	RT	J3-3		72 X 57	-	2	-	-	28.50	-	-	-	-	
				M3-2			-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 3-30
				M1-4	USH 18		-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 3-30
				M6-1			-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 3-30
				M3-1			-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 3-30
				M1-6	STH 164		-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 3-30
				M6-1			-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 3-30
				M3-3			-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 3-30
				M1-6	STH 164		-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 3-30
				M5-1R			-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 3-30
3-31	NOT USED									-				-	-	
3-32	NOT USED									-				-	-	
3-33	USH 18	134+94	RT	R6-2L		24 X 30	1	-	-	-	5.00	-	-	-	-	
										-				-	-	
4-1	USH 18	140+31	LT	R7-1D		18 X 24	1	-	-	-	3.00	-	-	-	-	
4-2	USH 18	141+04	LT	R2-1	35 MPH	24 X 36	-	1	-	-	6.00	-	-	-	-	
4-3	USH 18	141+04	LT	R2-1	35 MPH	24 X 36	-	1	-	-	6.00	-	-	-	-	
4-4	USH 18	142+18	LT	J4-1		24 X 36	-	1	-	-	6.00	-	-	-	-	
				M3-4			-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 4-4
				M1-4	USH 18		-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 4-4
4-5	USH 18	142+94	LT	R7-1D		18 X 24	1	-	-	-	3.00	-	-	-	-	
4-7	WOLF ROAD	143+73	LT	R1-1F		36 X 36	-	-	-	-	-	7.46	-	-	-	MOUNT TO SIGNAL POLE
4-8	WOLF ROAD	143+73	LT	R6-3A		30 X 24	-	-	-	-	5.00	-	-	-	-	MOUNT TO SIGNAL POLE
4-9	WOLF ROAD	144+38	LT	R5-2		24 X 24	1	-	-	-	4.00	-	-	-	-	
4-10	WOLF ROAD	144+38	LT	R5-2A	3 TONS	24 X 12	-	-	-	-	2.00	-	-	-	-	ON POST WITH SIGN 4-9
4-11	USH 18	144+68	LT	R1-2		36 X 31	1	-	-	-	7.75	-	-	-	-	
4-12	USH 18	144+52	LT	R1-1F		36 X 36	-	-	-	-	-	7.46	-	-	-	MOUNT TO SIGNAL POLE
4-13	USH 18	143+15	LT	R4-7		36 X 48	-	1	-	-	12.00	-	-	-	-	
4-14	USH 18	143+32	RT	J3-1		24 X 57	-	-	-	-	9.50	-	-	-	-	MOUNT TO SIGNAL POLE
				M3-3			-	-	-	-	-	-	-	-	-	MOUNT TO SIGNAL POLE
				M1-6	STH 164		-	-	-	-	-	-	-	-	-	MOUNT TO SIGNAL POLE
				M6-1			-	-	-	-	-	-	-	-	-	MOUNT TO SIGNAL POLE
4-15	USH 18	144+50	LT	R5-1		36 X 36	-	-	-	-	9.00	-	-	-	-	MOUNT TO SIGNAL POLE
4-16	USH 18	144+70	RT	R4-7		36 X 48	-	1	-	-	12.00	-	-	-	-	
4-17	USH 18	144+52	LT	R1-1F		36 X 36	-	-	-	-	-	7.46	-	-	-	MOUNT TO SIGNAL POLE
4-18	USH 18	144+70	LT	R1-1F		36 X 36	-	1	-	-	-	7.46	-	-	-	
4-19	USH 18	143+14	LT	R1-1F		36 X 36	-	1	-	-	-	7.46	-	-	-	
4-20	USH 18	143+30	RT	R1-1F		36 X 36	-	-	-	-	-	7.46	-	-	-	MOUNT TO SIGNAL POLE
4-21	USH 18	143+30	RT	R1-1F		36 X 36	-	-	-	-	-	7.46	-	-	-	MOUNT TO SIGNAL POLE
4-22	USH 18	143+32	RT	R5-1		36 X 36	-	-	-	-	9.00	-	-	-	-	MOUNT TO SIGNAL POLE
4-23	USH 18	144+39	RT	R6-2L		24 X 30	-	-	-	-	5.00	-	-	-	-	MOUNT TO SIGNAL POLE
4-24	USH 18	145+00	RT	R6-2R		24 X 30	1	-	-	-	5.00	-	-	-	-	
4-25	USH 18	141+44	RT	R3-20LL		24 X 36	-	1	-	-	6.00	-	-	-	-	

ALL QUANTITIES ARE CATEGORY 10 UNLESS OTHERWISE NOTED

SIGN NO.	LOCATION	STATION	OFFSET	SIGN CODE	MESSAGE	SIZE	634.0614 POSTS WOOD 4X6-INCH X 14-FT EACH	634.0616 POSTS WOOD 4X6-INCH X 16-FT EACH	634.0618 POSTS WOOD 4X6-INCH X 18-FT EACH	637.1220 SIGNS TYPE I REFLECTIVE SH SF	637.2210 SIGNS TYPE II REFLECTIVE H SF	637.2215 SIGNS TYPE II REFLECTIVE H FOLDING SF	637.2230 SIGNS TYPE II REFLECTIVE F SF	638.2101 MOVING SIGNS TYPE I EACH	638.2102 MOVING SIGNS TYPE II EACH	REMARKS
4-26	USH 18	143+09	RT	R1-2		36 X 31	1	-	-	-	3.88	-	-	-	-	
4-27	LES PAUL PARKWAY	285+32	LT	R4-7		36 X 48	-	-	-	-	12.00	-	-	-	-	MOUNT TO SIGNAL POLE
4-28	LES PAUL PARKWAY	285+32	LT	R1-1F		36 X 36	-	-	-	-	-	7.46	-	-	-	MOUNT TO SIGNAL POLE
4-29	LES PAUL PARKWAY	285+73	RT	W12-1D		24 X 24	1	-	-	-	-	-	4.00	-	-	2' MOUNTING HEIGHT
4-31	LES PAUL PARKWAY	285+96	RT	R1-1F		36 X 36	-	-	-	-	-	7.46	-	-	-	MOUNT TO SIGNAL POLE
4-32	LES PAUL PARKWAY	285+96	RT	R6-3A		30 X 24	-	-	-	-	5.00	-	-	-	-	MOUNT TO SIGNAL POLE
4-33	USH 18	140+72	RT	J3-3		72 X 57	-	2	-	-	28.50	-	-	-	-	
				M3-2			-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 4-33
				M1-4	USH 18		-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 4-33
				M6-1			-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 4-33
				M3-1			-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 4-33
				M1-6	STH 164		-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 4-33
				M6-1			-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 4-33
				M3-3			-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 4-33
				M1-6	STH 164		-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 4-33
				M6-1			-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 4-33
4-34	USH 18	143+21	LT	M1-94H	LES PAUL PKWY WOLF RD	114 X 54	-	-	-	-	42.75	-	-	-	-	MOUNT TO SIGNAL MAST ARM
4-35	USH 18	144+38	LT	M1-94H	MORELAND BLVD	120 X 24	-	-	-	-	20.00	-	-	-	-	MOUNT TO SIGNAL MAST ARM
4-36	USH 18	144+93	RT	M1-94H	LES PAUL PKWY	114 X 54	-	-	-	-	42.75	-	-	-	-	MOUNT TO SIGNAL MAST ARM
4-37	USH 18	143+54	RT	M1-94H	MORELAND BLVD	120 X 24	-	-	-	-	20.00	-	-	-	-	MOUNT TO SIGNAL MAST ARM
4-38	USH 18	144+57	RT	W12-1D		24 X 24	1	-	-	-	-	-	4.00	-	-	2' MOUNTING HEIGHT
4-39	USH 18	143+13	RT	W12-1D		24 X 24	1	-	-	-	-	-	4.00	-	-	2' MOUNTING HEIGHT
4-40	NOT USED									-			-	-	-	
4-41	NOT USED									-			-	-	-	
4-42	NOT USED									-			-	-	-	
4-43	USH 18	141+44	RT	R5-1A		36 X 24	-	-	-	-	6.00	-	-	-	-	ON POST WITH SIGN 4-25
4-44	USH 18	143+30	LT	R6-2L		24 X 30	-	-	-	-	5.00	-	-	-	-	MOUNT TO SIGNAL POLE
4-45	NOT USED									-			-	-	-	
4-46	NOT USED									-			-	-	-	
										-				-	-	
6-1	USH 18	146+62	LT	R3-20LL		24 X 36	-	1	-	-	6.00	-	-	-	-	
6-2	USH 18	149+68	LT	D1-65(MOD)	WOLF RD LES PAUL PKWY	96 X 39	2	-	-	-	26.00	-	-	-	-	
6-3	NOT USED									-				-	-	
6-4	USH 18	150+10	LT	R7-1D		24 X 30	1	-	-	-	5.00	-	-	-	-	
6-5	USH 18	151+92	LT	R3-55L		36 X 48	-	-	1	-	12.00	-	-	-	-	
6-6	USH 18	151+92	LT	R4-7		36 X 48	-	-	-	-	12.00	-	-	-	-	ON POST WITH SIGN 6-5
6-7	USH 18	149+68	RT	D1-65 (MOD)	LES PAUL PKWY WOLF RD NEXT SIGNAL	96 X 39	2	-	-	-	26.00	-	-	-	-	
6-8	NOT USED									-			-	-	-	
6-9	USH 18	146+81	RT	R7-1D		24 X 30	1	-	-	-	5.00	-	-	-	-	
6-10	USH 18	147+91	RT	R2-1	45 MPH	36 X 48	-	1	-	-	12.00	-	-	-	-	
6-11	USH 18	147+91	RT	R2-1	45 MPH	36 X 48	-	1	-	-	12.00	-	-	-	-	
6-12	USH 18	149+25	RT	R7-1D		24 X 30	1	-	-	-	5.00	-	-	-	-	
6-13	USH 18	151+92	RT	R3-2		30 X 30	-	-	1	-	6.25	-	-	-	-	
6-14	USH 18	151+92	RT	R4-7		36 X 48	-	-	-	-	12.00	-	-	-	-	ON POST WITH SIGN 6-13
6-15	USH 18	151+49	RT	R5-1		36 X 36	-	1	-	-	9.00	-	-	-	-	

ALL QUANTITIES ARE CATEGORY 10 UNLESS OTHERWISE NOTED

SIGN NO.	LOCATION	STATION	OFFSET	SIGN CODE	MESSAGE	SIZE	634.0614 POSTS WOOD 4X6-INCH X 14-FT EACH	634.0616 POSTS WOOD 4X6-INCH X 16-FT EACH	634.0618 POSTS WOOD 4X6-INCH X 18-FT EACH	637.1220 SIGNS TYPE I REFLECTIVE SH SF	637.2210 SIGNS TYPE II REFLECTIVE H SF	637.2215 SIGNS TYPE II REFLECTIVE H FOLDING SF	637.2230 SIGNS TYPE II REFLECTIVE F SF	638.2101 MOVING SIGNS TYPE I EACH	638.2102 MOVING SIGNS TYPE II EACH	REMARKS
6-16	USH 18	151+96	RT	R5-1		36 X 36	-	1	-	-	9.00	-	-	-	-	
6-17	USH 18	151+88	RT	R1-1		36 X 36	-	-	1	-	9.00	-	-	-	-	
6-18	USH 18	151+96	RT	R3-53R		24 X 30	-	-	-	-	5.00	-	-	-	-	ON POST WITH SIGN 6-17
6-19	USH 18	146+70	LT	J3-2		72 X 84	-	-	2	-	42.00	-	-	-	-	
				M3-3			-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 6-19
				M1-6	STH 164		-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 6-19
				M6-1			-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 6-19
				M3-4			-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 6-19
				M1-4	USH 18		-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 6-19
				M6-1			-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 6-19
6-20	USH 18	150+54	LT	J3-2		72 X 84	-	-	2	-	42.00	-	-	-	-	
				M3-3			-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 6-20
				M1-6	STH 164		-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 6-20
				M5-1L			-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 6-20
				M3-4			-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 6-20
				M1-4	USH 18		-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 6-20
				M6-1			-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 6-20
6-21	USH 18	150+54	LT	J3-2		72 X 84	-	-	2	-	42.00	-	-	-	-	
				M3-3			-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 6-21
				M1-6	STH 164		-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 6-21
				M5-1L			-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 6-21
				M3-4			-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 6-21
				M1-4	USH 18		-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 6-21
				M6-1			-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 6-21
6-22	USH 18	146+25	RT	J4-2		72 X 54	-	2	-	-	27.00	-	-	-	-	
				M3-2			-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 6-22
				M1-4	USH 18		-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 6-22
				M3-1			-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 6-22
				M1-6	STH 164		-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 6-22
6-23	USH 18	146+44	LT	R5-1A		36 X 24	1	-	-	-	6.00	-	-	-	-	
6-24	USH 18	151+96	RT	R6-2L		24 X 30	1	-	-	-	5.00	-	-	-	-	
6-25	USH 18	150+81	RT	R3-2		30 X 30	1	-	-	-	6.25		-	-	-	
7-1	USH 18	153+11	LT	R7-1D		24 X 30	1	-	-	-	5.00	-	-	-	-	
7-2	USH 18	155+08	LT	W3-3		36 X 36	-	1	-	-	-	-	9.00	-	-	
7-3	USH 18	155+08	LT	W3-3		36 X 36	-	1	-	-	-	-	9.00	-	-	
7-4	USH 18	156+41	LT	R3-20L		24 X 36	-	1	-	-	6.00	-	-	-	-	
7-5	USH 18	152+05	RT	R6-2R		24 X 30	1	-	-	-	5.00	-	-	-	-	
7-6	USH 18	152+79	RT	R7-1D		24 X 30	1	-	-	-	5.00	-	-	-	-	
7-7	USH 18	154+18	RT	R3-20L		24 X 36	-	1	-	-	6.00	-	-	-	-	
7-8	USH 18	156+38	RT	R7-1D		24 X 30	1	-	-	-	5.00	-	-	-	-	
7-9	USH 18	156+88	RT	R3-20LL		24 X 36	-	1	-	-	6.00	-	-	-	-	
7-10	NOT USED									-				-	-	
7-11	NOT USED									-				-	-	
										-				-	-	
8-1	USH 18	159+01	LT	R2-1	45 MPH	36 X 48	-	1	-	-	12.00	-	-	-	-	
8-2	USH 18	159+01	LT	R2-1	45 MPH	36 X 48	-	1	-	-	12.00	-	-	-	-	
8-3	NOT USED									-				-	-	
8-4	NOT USED									-				-	-	
8-5	USH 18	159+55	LT	R7-1D		24 X 30	1	-	-	-	5.00	-	-	-	-	
8-6	AVALON DRIVE	160+51	LT	R1-1		36 X 36	-	1	-	-	7.46	-	-	-	-	
8-7	AVALON DRIVE	160+51	LT	R6-3A		30 X 24	-	-	-	-	5.00	-	-	-	-	ON POST WITH SIGN 8-6
8-8	AVALON DRIVE	160+43	LT	R6-2L		24 X 30	1	-	-	-	5.00	-	-	-	-	
8-9	AVALON DRIVE	161+05	LT	R5-2		24 X 24	1	-	-	-	4.00	-	-	-	-	
8-10	AVALON DRIVE	161+05	LT	R5-2A	3 TONS	24 X 12	-	-	-	-	2.00	-	-	-	-	ON POST WITH SIGN 8-9

ALL QUANTITIES ARE CATEGORY 10 UNLESS OTHERWISE NOTED

SIGN NO.	LOCATION	STATION	OFFSET	SIGN CODE	MESSAGE	SIZE	634.0614 POSTS WOOD 4X6-INCH X 14-FT EACH	634.0616 POSTS WOOD 4X6-INCH X 16-FT EACH	634.0618 POSTS WOOD 4X6-INCH X 18-FT EACH	637.1220 SIGNS TYPE I REFLECTIVE SH SF	637.2210 SIGNS TYPE II REFLECTIVE H SF	637.2215 SIGNS TYPE II REFLECTIVE H FOLDING SF	637.2230 SIGNS TYPE II REFLECTIVE F SF	638.2101 MOVING SIGNS TYPE I EACH	638.2102 MOVING SIGNS TYPE II EACH	REMARKS
8-11	USH 18	161+79	LT	R7-1D		24 X 30	1	-	-	-	5.00	-	-	-	-	
8-12	USH 18	158+04	RT	R6-2R		24 X 30	1	-	-	-	5.00	-	-	-	-	
8-13	NOT USED									-			-	-	-	
8-14	USH 18	160+33	LT	R4-7		36 X 48	-	1	-	-	12.00	-	-	-	-	
8-15	USH 18	161+30	RT	R4-7		36 X 48	-	-	-	-	12.00	-	-	-	-	MOUNT ON UTILITY POLE
8-16	USH 18	161+28	RT	R6-2R		24 X 30	1	-	-	-	5.00	-	-	-	-	
8-17	USH 18	159+55	RT	R7-1D		24 X 30	1	-	-	-	5.00	-	-	-	-	
8-18	USH 18	160+99	RT	R6-2L		24 X 30	1	-	-	-	5.00	-	-	-	-	
8-19	NOT USED									-				-	-	
8-20	USH 18	161+93	RT	R2-1	45 MPH	36 X 48	-	1	-	-	12.00	-	-	-	-	
8-21	USH 18	161+93	RT	R2-1	45 MPH	36 X 48	-	1	-	-	12.00	-	-	-	-	
8-22	USH 18	162+59	RT	R7-1D		24 X 30	1	-	-	-	5.00	-	-	-	-	
8-23	USH 18	162+72	RT	R3-20L		24 X 36	-	1	-	-	6.00	-	-	-	-	
8-24	USH 18	158+17	RT	R5-1A		36 X 24	1	-	-	-	6.00	-	-	-	-	
8-25	USH 18	161+57	LT	R5-1		36 X 36	-	1	-	-	9.00	-	-	-	-	
8-26	USH 18	163+31	RT	R6-2R		24 X 30	1	-	-	-	5.00	-	-	-	-	
8-27	USH 18	163+57	LT	R5-1A		36 X 24	1	-	-	-	6.00	-	-	-	-	
8-28	USH 18	160+24	RT	R5-1		36 X 36	-	1	-	-	9.00	-	-	-	-	
8-29	USH 18	161+56	LT	R5-1		36 X 36	-	1	-	-	9.00	-	-	-	-	
8-30	USH 18	160+24	RT	R5-1		36 X 36	-	1	-	-	9.00	-	-	-	-	
										-				-	-	
9-1	USH 18	164+62	LT	R7-1D		24 X 30	1	-	-	-	5.00	-	-	-	-	
9-2	USH 18	166+25	LT	R3-20L		24 X 36	-	1	-	-	6.00	-	-	-	-	
9-3	USH 18	167+17	LT	R7-1D		24 X 30	1	-	-	-	5.00	-	-	-	-	
9-4	USH 18	167+69	LT	R5-1		36 X 36	-	1	-	-	9.00	-	-	-	-	
9-5	RAMONA ROAD	167+85	LT	R1-1		36 X 36	-	1	-	-	9.00	-	-	-	-	
9-6	RAMONA ROAD	167+85	LT	R3-53R		24 X 30	-	-	-	-	5.00	-	-	-	-	ON POST WITH SIGN 9-5
9-7	RAMONA ROAD	168+29	LT	R5-2		24 X 24	1	-	-	-	4.00	-	-	-	-	
9-8	RAMONA ROAD	168+29	LT	R5-2A	3 TONS	24 X 12	-	-	-	-	2.00	-	-	-	-	ON POST WITH SIGN 9-7
9-9	USH 18	168+21	LT	R5-1		36 X 36	-	1	-	-	9.00	-	-	-	-	
9-10	USH 18	167+62	LT	R6-2R		24 X 30	1	-	-	-	5.00	-	-	-	-	
9-11	USH 18	167+71	LT	R6-2L		24 X 30	1	-	-	-	5.00	-	-	-	-	
9-12	USH 18	167+74	LT	R3-2		30 X 30	-	-	1	-	6.25	-	-	-	-	
9-13	USH 18	167+74	LT	R4-7		36 X 48	-	-	-	-	12.00	-	-	-	-	ON POST WITH SIGN 9-12
9-14	USH 18	168+43	LT	W12-1D		30 X 30	1	-	-	-	-	-	6.25	-	-	2' MOUNTING HEIGHT
9-15	USH 18	165+40	RT	R3-20LL		24 X 36	-	1	-	-	6.00	-	-	-	-	
9-16	USH 18	165+69	RT	R6-2R		24 X 30	1	-	-	-	5.00	-	-	-	-	
9-17	USH 18	165+98	RT	R7-1D		24 X 30	1	-	-	-	5.00	-	-	-	-	
9-18	USH 18	167+20	RT	W3-3		36 X 36	-	1	-	-	-	-	9.00	-	-	
9-19	USH 18	167+20	RT	W3-3		36 X 36	-	1	-	-	-	-	9.00	-	-	
9-20	USH 18	168+12	RT	R5-1		36 X 36	-	1	-	-	9.00	-	-	-	-	
9-21	USH 18	168+51	RT	R3-2		30 X 30	-	-	1	-	6.25	-	-	-	-	
9-22	USH 18	168+51	RT	R4-7		36 X 48	-	-	-	-	12.00	-	-	-	-	ON POST WITH SIGN 9-21
9-23	USH 18	168+48	RT	R6-2L		24 X 30	1	-	-	-	5.00	-	-	-	-	
9-24	USH 18	168+43	RT	R3-53R		24 X 30	1	-	-	-	5.00	-	-	-	-	
9-25	USH 18	168+62	RT	R6-2R		24 X 30	1	-	-	-	5.00	-	-	-	-	
9-26	USH 18	168+55	RT	R5-1		36 X 36	-	1	-	-	9.00	-	-	-	-	
9-27	USH 18	168+95	RT	D1-65	MAIN ST	72 X 30	2	-	-	-	15.00	-	-	-	-	
9-28	USH 18	168+99	RT	D1-65	MAIN ST	72 X 30	2	-	-	-	15.00	-	-	-	-	
9-29	USH 18	168+73	RT	R3-20L		24 X 36	-	1	-	-	6.00	-	-	-	-	
9-30	NOT USED									-				-	-	

ALL QUANTITIES ARE CATEGORY 10 UNLESS OTHERWISE NOTED

SIGN NO.	LOCATION	STATION	OFFSET	SIGN CODE	MESSAGE	SIZE	634.0614 POSTS WOOD 4X6-INCH X 14-FT EACH	634.0616 POSTS WOOD 4X6-INCH X 16-FT EACH	634.0618 POSTS WOOD 4X6-INCH X 18-FT EACH	637.1220 SIGNS TYPE I REFLECTIVE SH SF	637.2210 SIGNS TYPE II REFLECTIVE H SF	637.2215 SIGNS TYPE II REFLECTIVE H FOLDING SF	637.2230 SIGNS TYPE II REFLECTIVE F SF	638.2101 MOVING SIGNS TYPE I EACH	638.2102 MOVING SIGNS TYPE II EACH	REMARKS
9-31	NOT USED									-				-	-	
9-32	USH 18	167+20	RT	R5-1		36 X 36	-	-	-	-	9.00	-	-	-	-	ON POST WITH SIGN 9-19
9-33	USH 18	168+81	LT	R5-1		36 X 36	-	1	-	-	9.00	-	-	-	-	
										-				-	-	
10-1	USH 18	170+46	LT	J4-2		72 X 54	-	2	-	-	27.00	-	-	-	-	
				M3-4			-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 10-1
				M1-4	USH 18		-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 10-1
				M3-3			-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 10-1
				M1-6	STH 164		-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 10-1
10-2	USH 18	171+50	LT	R7-1D		24 X 30	1	-	-	-	5.00	-	-	-	-	
10-3	USH 18	171+69	LT	R3-20L		24 X 36	-	1	-	-	6.00	-	-	-	-	
10-4	USH 18	172+39	LT	R2-1	45 MPH	36 X 48	-	1	-	-	12.00	-	-	-	-	
10-5	USH 18	172+39	LT	R2-1	45 MPH	36 X 48	-	1	-	-	12.00	-	-	-	-	
10-6	USH 18	175+01	LT	R5-1		36 X 36	-	-	-	-	9.00	-	-	-	-	MOUNT TO SIGNAL POLE
10-7	USH 18	174+09	LT	R1-1F		36 X 36	-	-	-	-	-	7.46	-	-	-	MOUNT TO SIGNAL POLE
10-8	USH 18	174+09	LT	R6-3A		30 X 24	-	-	-	-	5.00	-	-	-	-	MOUNT TO SIGNAL POLE
10-9	USH 18	175+26	LT	R1-2		36 X 31	1	-	-	-	3.88	-	-	-	-	
10-10	USH 18	173+42	LT	R4-7		36 X 48	-	1	-	-	12.00	-	-	-	-	
10-11	USH 18	173+90	LT	R6-2L		24 X 30	-	-	-	-	5.00	-	-	-	-	MOUNT TO UTILITY POLE
10-12	USH 18	174+91	LT	R5-1		36 X 36	-	-	-	-	9.00	-	-	-	-	MOUNT TO SIGNAL POLE
10-13	USH 18	175+01	LT	R1-1F		36 X 36	-	-	-	-	-	7.46	-	-	-	MOUNT TO SIGNAL POLE
10-14	USH 18	174+92	LT	R1-1F		36 X 36	-	-	-	-	-	7.46	-	-	-	MOUNT TO SIGNAL POLE
10-15	USH 18	175+12	RT	R1-1F		36 X 36	-	1	-	-	-	7.46	-	-	-	
10-16	USH 18	170+81	RT	R3-20LL		24 X 36	-	1	-	-	6.00	-	-	-	-	
10-17	USH 18	171+03	RT	R6-2R		24 X 30	1	-	-	-	5.00	-	-	-	-	
10-18	USH 18	173+40	LT	R1-1F		36 X 36	-	1	-	-	-	7.46	-	-	-	
10-19	USH 18	173+30	RT	W12-1D		24 X 24	1	-	-	-	-	-	4.00	-	-	2' MOUNTING HEIGHT
10-20	USH 18	173+53	RT	R1-1F		36 X 36	-	1	-	-	-	7.46	-	-	-	MOUNT TO SIGNAL POLE
10-21	USH 18	173+67	RT	R5-1		36 X 36	-	-	-	-	9.00	-	-	-	-	MOUNT TO UTILITY POLE
10-22	USH 18	175+11	RT	R4-7		36 X 48	-	1	-	-	12.00	-	-	-	-	
10-23	MAIN STREET	173+08	RT	R1-2		36 X 31	-	-	-	-	3.88	-	-	-	-	ON POST WITH SIGN 10-24
10-24	MAIN STREET	173+08	RT	R5-1		36 X 36	-	1	-	-	9.00	-	-	-	-	
10-25	USH 18	173+42	RT	R1-1F		36 X 36	-	-	-	-	-	7.46	-	-	-	MOUNT TO SIGNAL POLE
10-26	USH 18	174+38	RT	R6-2L		24 X 30	1	-	-	-	5.00	-	-	-	-	
10-27	USH 18	173+42	RT	R5-1		36 X 36	-	-	-	-	9.00	-	-	-	-	MOUNT TO SIGNAL POLE
10-28	USH 18	174+15	RT	R1-1F		36 X 36	-	-	-	-	-	7.46	-	-	-	MOUNT TO SIGNAL POLE
10-29	USH 18	174+15	RT	R6-3A		30 X 24	-	-	-	-	5.00	-	-	-	-	MOUNT TO SIGNAL POLE
10-30	MAIN STREET	173+32	RT	R3-8		36 X 30	-	-	-	-	7.50	-	-	-	-	MOUNT TO SIGNAL POLE
10-31	MAIN STREET	173+32	RT	J12-1		24 X 45	-	-	-	-	7.50	-	-	-	-	MOUNT TO UTILITY POLE
				M1-4	USH 18		-	-	-	-	-	-	-	-	-	MOUNT TO UTILITY POLE
				M6-4			-	-	-	-	-	-	-	-	-	MOUNT TO UTILITY POLE
10-32	MAIN STREET	174+14	RT	J3-4		96 X 57	-	2	-	-	38.00	-	-	-	-	
				M3-4			-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 10-32
				M1-4	USH 18		-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 10-32
				M6-1			-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 10-32
				M3-3			-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 10-32
				M1-6	STH 164		-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 10-32
				M6-1			-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 10-32
				M3-2			-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 10-32
				M1-4	USH 18		-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 10-32
				M6-2			-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 10-32
				M3-1			-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 10-32
				M1-6	STH 164		-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 10-32
				M6-2			-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 10-32

ALL QUANTITIES ARE CATEGORY 10 UNLESS OTHERWISE NOTED

SIGN NO.	LOCATION	STATION	OFFSET	SIGN CODE	MESSAGE	SIZE	634.0614 POSTS WOOD 4X6-INCH X 14-FT EACH	634.0616 POSTS WOOD 4X6-INCH X 16-FT EACH	634.0618 POSTS WOOD 4X6-INCH X 18-FT EACH	637.1220 SIGNS TYPE I REFLECTIVE SH SF	637.2210 SIGNS TYPE II REFLECTIVE H SF	637.2215 SIGNS TYPE II REFLECTIVE H FOLDING SF	637.2230 SIGNS TYPE II REFLECTIVE F SF	638.2101 MOVING SIGNS TYPE I EACH	638.2102 MOVING SIGNS TYPE II EACH	REMARKS
10-33	USH 18	173+57	LT	M1-94H	MAIN ST	60 X 24	-	-	-	-	10.00	-	-	-	-	MOUNT TO SIGNAL MAST ARM
10-34	USH 18	174+68	LT	M1-94H	MORELAND BLVD	120 X 24	-	-	-	-	20.00	-	-	-	-	MOUNT TO SIGNAL MAST ARM
10-35	USH 18	174+94	RT	M1-94H	MAIN ST	60 X 24	-	-	-	-	10.00	-	-	-	-	MOUNT TO SIGNAL MAST ARM
10-36	USH 18	173+72	RT	M1-94H	MORELAND BLVD	120 X 24	-	-	-	-	20.00	-	-	-	-	MOUNT TO SIGNAL MAST ARM
10-37	MAIN STREET	172+20	RT	R3-8	--	36 X 30	-	-	-	-	7.50	-	-	-	-	MOUNT TO UTILITY POLE
10-38	NOT USED									-				-	-	
10-39	USH 18	171+53	RT	R5-1A		36 X 24	1	-	-	-	6.00	-	-	-	-	
10-40	USH 18	170+60	RT	R7-1D		24 X 30	1	-	-	-	5.00	-	-	-	-	
10-41	MAIN STREET	173+95	RT	W12-1D		24 X 24	1	-	-	-	-	-	4.00	-	-	2' MOUNTING HEIGHT
10-42	USH 18	173+72	RT	R10-50		30 X 36	-	-	-	-	7.50	-	-	-	-	MOUNT TO SIGNAL MAST ARM
10-43	USH 18	174+91	LT	R10-50		30 X 36	-	-	-	-	7.50	-	-	-	-	MOUNT TO SIGNAL POLE
										-				-	-	
11-1	USH 18	177+31	LT	R3-20LL		24 X 36	-	1	-	-	6.00	-	-	-	-	
11-2	USH 18	177+60	LT	R3-7R		30 X 30	1	-	-	-	6.25	-	-	-	-	
11-3	USH 18	178+35	LT	M1-94	MAIN ST NEXT SIGNAL	72 X 30	2	-	-	-	15.00	-	-	-	-	
11-4	USH 18	178+83	LT	R7-1D		24 X 30	1	-	-	-	5.00	-	-	-	-	
11-5	USH 18	181+13	LT	W3-3		36 X 36	-	1	-	-	-	-	9.00	-	-	
11-6	USH 18	181+15	LT	W3-3		36 X 36	-	1	-	-	-	-	9.00	-	-	
11-7	USH 18	181+87	LT	D1-65(MOD)	MAIN ST USE LEFT LANES	120 X 30	2	-	-	-	25.00	-	-	-	-	
11-8	NOT USED									-			-	-	-	
11-9	USH 18	178+97	RT	R3-20L		24 X 36	-	1	-	-	6.00	-	-	-	-	
11-10	USH 18	176+30	RT	J4-2		72 X 54	-	2	-	-	27.00	-	-	-	-	
				M3-2			-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 11-10
				M1-4	USH 18		-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 11-10
				M3-1			-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 11-10
				M1-6	STH 164		-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 11-10
11-11	USH 18	178+22	RT	W3-3		36 X 36	-	1	-	-	-	-	9.00	-	-	
11-12	USH 18	178+24	RT	W3-3		36 X 36	-	1	-	-	-	-	9.00	-	-	
11-13	USH 18	178+24	RT	W3-3		36 X 36	-	1	-	-	-	-	9.00	-	-	
11-14	NOT USED									-				-	-	
11-15	NOT USED									-				-	-	
11-16	USH 18	180+35	RT	W4-3R		30 X 30	1	-	-	-	-	-	6.25	-	-	
11-17	USH 18	180+35	RT	W4-3R		30 X 30	1	-	-	-	-	-	6.25	-	-	
11-18	USH 18	179+02	RT	M1-94	SPRINGDALE RD 22000 WEST NEXT SIGNAL	78 X 30	2	-	-	-	16.25	-	-	-	-	
11-19	NOT USED									-				-	-	
11-20	NOT USED									-				-	-	
11-21	USH 18	179+90	LT	J4-2		72 X 54	-	2	-	-	27.00	-	-	-	-	
				M3-4			-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 11-21
				M1-4	USH 18		-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 11-21
				M3-3			-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 11-21
				M1-6	STH 164		-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 11-21
11-22	USH 18	179+97	RT	--	HISTORIC DOWNTOWN		1	-	-	-	-	-	-	-	1	
11-23	USH 18	177+09	LT	R5-1A		36 X 24	1	-	-	-	6.00	-	-	-	-	
										-			-	-	-	
12-1	USH 18	182+38	LT	R2-1	45 MPH	36 X 48	-	1	-	-	12.00	-	-	-	-	
12-2	USH 18	182+37	LT	R2-1	45 MPH	36 X 48	-	1	-	-	12.00	-	-	-	-	
12-3	USH 18	182+74	LT	R3-21		30 X 36	-	1	-	-	7.50	-	-	-	-	
12-4	USH 18	182+74	LT		EXCEPT BUSES	30 X 24	-	-	-	-	5.00	-	-	-	-	ON POST WITH SIGN 12-3
12-5	NOT USED									-				-	-	
12-6	USH 18	186+11	LT	R5-1		36 X 36	-	1	-	-	9.00	-	-	-	-	

ALL QUANTITIES ARE CATEGORY 10 UNLESS OTHERWISE NOTED

SIGN NO.	LOCATION	STATION	OFFSET	SIGN CODE	MESSAGE	SIZE	634.0614 POSTS WOOD 4X6-INCH X 14-FT EACH	634.0616 POSTS WOOD 4X6-INCH X 16-FT EACH	634.0618 POSTS WOOD 4X6-INCH X 18-FT EACH	637.1220 SIGNS TYPE I REFLECTIVE SH SF	637.2210 SIGNS TYPE II REFLECTIVE H SF	637.2215 SIGNS TYPE II REFLECTIVE H FOLDING SF	637.2230 SIGNS TYPE II REFLECTIVE F SF	638.2101 MOVING SIGNS TYPE I EACH	638.2102 MOVING SIGNS TYPE II EACH	REMARKS
12-7	USH 18	184+86	LT	R1-1F		36 X 36	-	-	-	-	-	7.46	-	-	-	MOUNT TO SIGNAL POLE
12-8	USH 18	184+86	LT	R6-3A		30 X 24	-	-	-	-	5.00	-	-	-	-	MOUNT TO SIGNAL POLE
12-9	USH 18	184+20	LT	R1-1F		36 X 36	-	-	-	-	-	7.46	-	-	-	MOUNT TO SIGNAL POLE
12-10	SPRINGDALE ROAD	51+66	LT	J12-1		24 X 45	-	1	-	-	7.50	-	-	-	-	
				M1-4			-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 12-10
				M6-4			-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 12-10
12-11	SPRINGDALE ROAD	52+13	RT	R2-1	30 MPH	24 X 36	-	1	-	-	6.00	-	-	-	-	
12-12	SPRINGDALE ROAD	51+58	RT	R5-2		24 X 24	1	-	-	-	4.00	-	-	-	-	
12-13	SPRINGDALE ROAD	51+58	RT	R5-2A	3 TONS	24 X 12	-	-	-	-	2.00	-	-	-	-	ON POST WITH SIGN 12-12
12-14	USH 18	187+93	LT	R3-20LL		24 X 36	-	1	-	-	6.00	-	-	-	-	
12-15	USH 18	183+14	LT	R3-20L		24 X 36	-	1	-	-	6.00	-	-	-	-	
12-16	USH 18	184+24	LT	R1-1F		36 X 36	-	1	-	-	-	7.46	-	-	-	
12-17	USH 18	184+26	LT	R4-7		36 X 48	-	1	-	-	12.00	-	-	-	-	
12-18	USH 18	184+86	LT	R4-7		36 X 48	-	-	-	-	12.00	-	-	-	-	MOUNT TO SIGNAL POLE
12-19	USH 18	185+53	LT	R1-1F		36 X 36	-	-	-	-	-	7.46	-	-	-	MOUNT TO SIGNAL POLE
12-20	USH 18	185+62	RT	R1-1F		36 X 36	-	1	-	-	-	7.46	-	-	-	
12-21	USH 18	182+42	RT	R3-20LL		24 X 36	-	1	-	-	6.00	-	-	-	-	
12-22	USH 18	184+33	RT	R1-1F		36 X 36	-	-	-	-	-	7.46	-	-	-	MOUNT TO SIGNAL POLE
12-23	USH 18	184+34	RT	R5-1		36 X 36	-	-	-	-	9.00	-	-	-	-	MOUNT TO SIGNAL POLE
12-24	USH 18	185+24	RT	R1-1		36 X 36	-	1	-	-	7.46	-	-	-	-	
12-25	USH 18	185+74	RT	R6-2R		24 X 30	1	-	-	-	5.00	-	-	-	-	
12-26	USH 18	185+31	RT	R3-53R		24 X 30	1	-	-	-	5.00	-	-	-	-	
12-27	USH 18	185+60	RT	R4-7		36 X 48	-	1	-	-	12.00	-	-	-	-	
12-28	USH 18	187+90	RT	R2-1	45 MPH	36 X 48	-	1	-	-	12.00	-	-	-	-	
12-29	USH 18	187+85	RT	R2-1	45 MPH	36 X 48	-	1	-	-	12.00	-	-	-	-	
12-30	USH 18	183+90	LT	M1-94H	SPRINGDALE RD	108 X 24	-	-	-	-	18.00	-	-	-	-	MOUNT TO SIGNAL MAST ARM
12-31	USH 18	185+59	RT	M1-94H	SPRINGDALE RD	108 X 24	-	-	-	-	18.00	-	-	-	-	MOUNT TO SIGNAL MAST ARM
12-32	USH 18	184+67	RT	M1-94H	MORELAND BLVD	120 X 24	-	-	-	-	20.00	-	-	-	-	MOUNT TO SIGNAL MAST ARM
12-33	NOT USED	--	--	--	--	-- --	--	--	--	--	--	--	--	--	--	--
12-34	NOT USED	--	--	--	--	-- --	--	--	--	--	--	--	--	--	--	--
12-35	USH 18	182+42	RT	R5-1A		36 X 24	-	-	-	-	6.00	-	-	-	-	ON POST WITH SIGN 12-21
12-36	USH 18	185+39	RT	R6-2L		24 X 30	-	-	-	-	5.00	-	-	-	-	MOUNT TO UTILITY POLE
12-37	USH 18	187+50	LT	R5-1A		36 X 24	1	-	-	-	6.00	-	-	-	-	
12-38	USH 18	184+43	LT	R6-2L		24 X 30	-	-	-	-	5.00	-	-	-	-	MOUNT TO SIGNAL POLE
12-39	USH 18	185+53	LT	R5-1		36 X 36	-	-	-	-	9.00	-	-	-	-	MOUNT TO SIGNAL POLE
12-40	USH 18	184+87	RT	R1-1		36 X 36	-	1	-	-	9.00	-	-	-	-	
12-41	USH 18	183+89	RT	R5-1		36 X 36	-	1	-	-	9.00	-	-	-	-	
12-42	USH 18	183+96	LT	R6-2R		24 X 30	-	-	-	-	5.00	-	-	-	-	MOUNT TO SIGNAL POLE
12-43	SPRINGDALE ROAD	53+75	LT	R3-8P		30 X 54	-	2	-	-	11.25	-	-	-	-	
12-44	SPRINGDALE ROAD	52+50	RT	W4-2R		36 X 36		1		-	-	-	9.00	-	-	
										-				-	-	
13-1	USH 18	188+60	LT	R7-1D		24 X 30	1	-	-	-	5.00	-	-	-	-	
13-2	USH 18	189+99	LT	D1-65(MOD)	SPRINGDALE RD	102 X 36	2	-	-	-	25.50	-	-	-	-	
13-3	USH 18	189+97	LT	D1-65(MOD)	SPRINGDALE RD	102 X 36	2	-	-	-	25.50	-	-	-	-	
13-4	USH 18	189+97	LT	R3-20L		24 X 36	-	1	-	-	6.00	-	-	-	-	
13-5	USH 18	190+86	LT	W3-3		36 X 36	-	1	-	-	-	-	9.00	-	-	
13-6	USH 18	190+87	LT	W3-3		36 X 36	-	1	-	-	-	-	9.00	-	-	
13-7	USH 18	192+22	LT	R6-2L		24 X 30	1	-	-	-	5.00	-	-	-	-	
13-8	USH 18	191+94	LT	R5-1		36 X 36	-	1	-	-	9.00	-	-	-	-	
13-9	USH 18	192+43	LT	R5-1		36 X 36	-	1	-	-	9.00	-	-	-	-	
13-10	USH 18	192+58	LT	W12-1D		30 X 30	1	-	-	-	-	-	6.25	-	-	2' MOUNTING HEIGHT
13-11	USH 18	191+45	LT	R3-2		30 X 30	1	-	-	-	6.25	-	-	-	-	
13-12	USH 18	189+10	RT	R3-20L		24 X 36	-	1	-	-	6.00	-	-	-	-	
13-13	USH 18	192+24	RT	W12-1D		30 X 30	1	-	-	-	-	-	6.25	-	-	2' MOUNTING HEIGHT
13-14	USH 18	192+37	RT	R3-2		30 X 30	1	-	-	-	6.25	-	-	-	-	

ALL QUANTITIES ARE CATEGORY 10 UNLESS OTHERWISE NOTED

SIGN NO.	LOCATION	STATION	OFFSET	SIGN CODE	MESSAGE	SIZE	634.0614 POSTS WOOD 4X6-INCH X 14-FT EACH	634.0616 POSTS WOOD 4X6-INCH X 16-FT EACH	634.0618 POSTS WOOD 4X6-INCH X 18-FT EACH	637.1220 SIGNS TYPE I REFLECTIVE SH SF	637.2210 SIGNS TYPE II REFLECTIVE H SF	637.2215 SIGNS TYPE II REFLECTIVE H FOLDING SF	637.2230 SIGNS TYPE II REFLECTIVE F SF	638.2101 MOVING SIGNS TYPE I EACH	638.2102 MOVING SIGNS TYPE II EACH	REMARKS
13-15	USH 18	192+37	RT	R5-1		36 X 36	-	1	-	-	9.00	-	-	-	-	
13-16	USH 18	192+94	RT	R6-2R		24 X 30	1	-	-	-	5.00	-	-	-	-	
13-17	USH 18	193+49	RT	R3-20L		24 X 36	-	1	-	-	6.00	-	-	-	-	
13-18	USH 18	192+61	RT	R1-1		36 X 36	-	1	-	-	7.46	-	-	-	-	
13-19	USH 18	192+68	RT	R3-53R		24 X 30	1	-	-	-	5.00	-	-	-	-	
13-20	USH 18	192+87	RT	R5-1		36 X 36	-	1	-	-	9.00	-	-	-	-	
13-21	USH 18	193+10	LT	J4-2		72 X 54	-	2	-	-	27.00	-	-	-	-	
				M3-4			-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 13-21
				M1-4	USH 18		-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 13-21
				M3-3			-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 13-21
				M1-6	STH 164		-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 13-21
13-22	USH 18	192+75	RT	R6-2L		24 X 30	1	-	-	-	5.00	-	-	-	-	
13-23	NOT USED									-				-	-	
13-24	NOT USED									-				-	-	
13-25	USH 18	191+87	RT	R5-1		36 X 36	-	1	-	-	9.00	-	-	-	-	
13-26	USH 18	193+10	LT	R5-1		36 X 36	-	-	-	-	9.00	-	-	-	-	ON POST WITH SIGN 13-21
13-27	USH 18	193+09	RT	W3-3		36 X 36	-	1	-	-	-	-	9.00	-	-	
13-28	USH 18	193+09	RT	W3-3		36 X 36	-	1	-	-	-	-	9.00	-	-	
										-				-	-	
14-1	USH 18	194+21	LT	R7-1D		24 X 30	1	-	-	-	5.00	-	-	-	-	
14-2	USH 18	195+73	LT	R3-20L		24 X 36	-	1	-	-	6.00	-	-	-	-	
14-3	USH 18	196+67	LT	R3-21		30 X 36	-	-	1	-	7.50	-	-	-	-	
14-4	USH 18	196+67	LT		EXCEPT BUSES	30 X 24	-	-	-	-	5.00	-	-	-	-	ON POST WITH SIGN 14-3
14-5	NOT USED									-			-	-	-	
14-6	USH 18	198+95	LT	R5-1		36 X 36	-	-	-	-	9.00	-	-	-	-	MOUNT TO SIGNAL POLE
14-7	USH 18	197+89	LT	R1-1F		36 X 36	-	-	-	-	-	7.46	-	-	-	MOUNT TO SIGNAL POLE
14-8	USH 18	197+89	LT	R6-3A		30 X 24	-	-	-	-	5.00	-	-	-	-	MOUNT TO SIGNAL POLE
14-9	USH 18	196+92	LT	R2-1	45 MPH	36 X 48	-	1	-	-	12.00	-	-	-	-	
14-10	USH 18	196+90	LT	R2-1	45 MPH	36 X 48	-	1	-	-	12.00	-	-	-	-	
14-11	USH 18	197+74	LT	R6-2L		24 X 30	-	-	-	-	5.00	-	-	-	-	MOUNT TO SIGNAL POLE
14-12	USH 18	197+65	LT	R6-2R		24 X 30	-	-	-	-	5.00	-	-	-	-	MOUNT TO SIGNAL POLE
14-13	USH 18	197+66	LT	R4-7		36 X 48	-	1	-	-	12.00	-	-	-	-	
14-14	USH 18	198+31	LT	R4-7		36 X 48	-	1	-	-	12.00	-	-	-	-	
14-15	USH 18	198+94	LT	R5-1		36 X 36	-	-	-	-	9.00	-	-	-	-	MOUNT TO SIGNAL POLE
14-16	USH 18	198+96	LT	R1-1F		36 X 36	-	-	-	-	-	7.46	-	-	-	MOUNT TO SIGNAL POLE
14-17	USH 18	199+04	RT	R1-1F		36 X 36	-	1	-	-	-	7.46	-	-	-	
14-18	USH 18	195+81	RT	R3-20LL		24 X 36	-	1	-	-	6.00	-	-	-	-	
14-19	USH 18	197+64	LT	R1-1F		36 X 36	-	1	-	-	-	7.46	-	-	-	
14-20	USH 18	197+73	RT	R1-1F		36 X 36	-	-	-	-	-	7.46	-	-	-	MOUNT TO SIGNAL POLE
14-21	USH 18	197+74	RT	R5-1		36 X 36	-	-	-	-	9.00	-	-	-	-	MOUNT TO SIGNAL POLE
14-22	USH 18	199+02	RT	R4-7		36 X 48	-	1	-	-	12.00	-	-	-	-	
14-23	USH 18	199+03	RT	R6-2R		24 X 30	1	-	-	-	5.00	-	-	-	-	
14-24	USH 18	194+40	RT	J4-2		72 X 54	-	2	-	-	27.00	-	-	-	-	
				M3-2			-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 14-24
				M1-4	USH 18		-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 14-24
				M3-1			-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 14-24
				M1-6	STH 164		-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 14-24
14-25	PARKLAWN COURT	48+67	LT	--	NO PARKING		1	-	-	-	-	-	-	-	1	
14-26	PARKLAWN COURT	48+67	LT	--	WEIGHT LIMIT CLASS B		-	-	-	-	-	-	-	-	1	ON POST WITH SIGN 14-25
14-27	USH 18	197+21	RT	R5-1		36 X 36	-	1	-	-	9.00	-	-	-	-	
14-28	USH 18	198+72	RT	R1-1F		36 X 36	-	-	-	-	-	7.46	-	-	-	MOUNT TO SIGNAL POLE
14-29	USH 18	198+72	RT	R6-3A		30 X 24	-	-	-	-	5.00	-	-	-	-	MOUNT TO SIGNAL POLE
14-30	USH 18	198+83	RT	R6-2L		24 X 30	-	-	-	-	5.00	-	-	-	-	MOUNT TO SIGNAL POLE
14-31	USH 18	197+56	LT	M1-94H	PARKLAWN DR	96 X 24	-	-	-	-	16.00	-	-	-	-	MOUNT TO SIGNAL MAST ARM

ALL QUANTITIES ARE CATEGORY 10 UNLESS OTHERWISE NOTED

SIGN NO.	LOCATION	STATION	OFFSET	SIGN CODE	MESSAGE	SIZE	634.0614 POSTS WOOD 4X6-INCH X 14-FT EACH	634.0616 POSTS WOOD 4X6-INCH X 16-FT EACH	634.0618 POSTS WOOD 4X6-INCH X 18-FT EACH	637.1220 SIGNS TYPE I REFLECTIVE SH SF	637.2210 SIGNS TYPE II REFLECTIVE H SF	637.2215 SIGNS TYPE II REFLECTIVE H FOLDING SF	637.2230 SIGNS TYPE II REFLECTIVE F SF	638.2101 MOVING SIGNS TYPE I EACH	638.2102 MOVING SIGNS TYPE II EACH	REMARKS
14-32	USH 18	198+44	LT	M1-94H	MORELAND BLVD	120 X 24	-	-	-	-	20.00	-	-	-	-	MOUNT TO SIGNAL MAST ARM
14-33	USH 18	199+12	RT	M1-94H	PARKLAWN CT	96 X 24	-	-	-	-	16.00	-	-	-	-	MOUNT TO SIGNAL MAST ARM
14-34	USH 18	198+15	RT	M1-94H	MORELAND BLVD	120 X 24	-	-	-	-	20.00	-	-	-	-	MOUNT TO SIGNAL MAST ARM
14-35	USH 18	198+72	RT	R1-1F		36 X 36	-	-	-	-	-	7.46	-	-	-	ON POST WITH SIGN 14-14
14-36	NOT USED									-				-	-	
14-37	NOT USED									-				-	-	
14-38	NOT USED									-				-	-	
14-39	USH 18	195+81	RT	R5-1A		36 X 24	-	-	-	-	6.00	-	-	-	-	ON POST WITH SIGN 14-18
14-40	USH 18	197+74	RT	R1-1F		36 X 36	-	-	-	-	-	7.46	-	-	-	MOUNT TO SIGNAL POLE
14-41	USH 18	197+74	RT	R5-1		36 X 36	-	-	-	-	9.00	-	-	-	-	MOUNT TO SIGNAL POLE
14-42	USH 18	198+95	LT	R1-1F		36 X 36	-	-	-	-	-	7.46	-	-	-	MOUNT TO SIGNAL POLE
										-				-	-	
15-1	PARKLAWN DRIVE	51+83	LT	R7-1D		18 X 24	1	-	-	-	3.00	-	-	-	-	
15-2	PARKLAWN DRIVE	52+20	LT	R1-1		30 X 30	1	-	-	-	5.18	-	-	-	-	
15-3	PARKLAWN DRIVE	52+11	LT	R4-7		24 X 36	-	1	-	-	6.00	-	-	-	-	
15-4	PARKLAWN DRIVE	52+17	RT	R2-1	25 MPH	24 X 36	-	1	-	-	6.00	-	-	-	-	
15-5	PARKLAWN COURT	47+92	LT	--	SPEED LIMIT 25 MPH		1	-	-	-	-	-	-	-	1	
15-6	PARKLAWN COURT	47+92	LT	--	SLOW CHILDREN		-	-	-	-	-	-	-	-	1	ON POST WITH SIGN 15-5
15-7	PARKLAWN COURT	52+16	LT	R3-7R		30 X 30	1	-	-	-	6.25	-	-	-	-	
										-				-	-	
16-1	USH 18	201+04	LT	R3-20LL		24 X 36	-	1	-	-	6.00	-	-	-	-	
16-2	USH 18	200+66	LT	R5-1		36 X 36	-	1	-	-	9.00	-	-	-	-	
16-3	USH 18	201+28	LT	R6-2L		24 X 30	1	-	-	-	5.00	-	-	-	-	
16-4	USH 18	201+78	LT	R7-1D		24 X 30	1	-	-	-	5.00	-	-	-	-	
16-5	USH 18	203+16	LT	R3-20L		24 X 36	-	1	-	-	6.00	-	-	-	-	
16-6	NOT USED									-				-	-	
16-7	USH 18	205+78	LT	R7-1D		24 X 30	1	-	-	-	5.00	-	-	-	-	
16-8	USH 18	201+02	RT	R6-2R		24 X 30	1	-	-	-	5.00	-	-	-	-	
16-9	USH 18	203+63	RT	R6-2R		24 X 30	1	-	-	-	5.00	-	-	-	-	
16-10	USH 18	201+82	RT	W3-3		36 X 36	-	1	-	-	-	-	9.00	-	-	
16-11	USH 18	201+82	RT	W3-3		36 X 36	-	1	-	-	-	-	9.00	-	-	
16-12	USH 18	202+64	RT	M1-94H		108 X 36	2	-	-	-	27.00	-	-	-	-	
16-13	USH 18	203+33	RT	R3-20L		24 X 36	-	1	-	-	6.00	-	-	-	-	
16-14	USH 18	203+92	RT	D1-65(MOD)	KOSSOW RD 21300 WEST	78 X 36	2	-	-	-	19.50	-	-	-	-	
16-15	USH 18	203+92	RT	D1-65(MOD)	KOSSOW RD 21300 WEST	78 X 36	2	-	-	-	19.50	-	-	-	-	
16-16	USH 18	204+44	RT	R7-1D		24 X 30	1	-	-	-	5.00	-	-	-	-	
16-17	USH 18	203+70	LT	--	HISTORIC DOWNTOWN		1	-	-	-	-	-	-	-	1	
16-18	USH 18	203+70	LT	--	HOSPITAL		-	-	-	-	-	-	-	-	1	ON POST WITH SIGN 16-17
16-19	USH 18	201+04	LT	R5-1A		36 X 24	-	-	-	-	6.00	-	-	-	-	ON POST WITH SIGN 16-1
16-20	USH 18	202+25	RT		EAST I-94 ARROW	66 X 36	-	-	-	-	16.50	-	-	-	-	MOUNT TO OVERHEAD SIGN SUPPORT
16-21	USH 18	203+63	LT	W3-3		36 X 36	-	1	-	-	-	-	9.00	-	-	
16-22	USH 18	203+63	LT	W3-3		36 X 36	-	1	-	-	-	-	9.00	-	-	
										-				-	-	
17-1	USH 18	206+30	LT	R2-1	45 MPH	36 X 48	-	1	-	-	12.00	-	-	-	-	
17-2	USH 18	206+29	LT	R2-1	45 MPH	36 X 48	-	1	-	-	12.00	-	-	-	-	
17-3	USH 18	206+89	LT	J4-2		72 X 54	-	2	-	-	27.00	-	-	-	-	
				M3-4			-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 17-3
				M1-4	USH 18		-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 17-3
				M3-3			-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 17-3
				M1-6	STH 164		-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 17-3
17-4	USH 18	208+11	LT	R3-21		30 X 36	-	1	-	-	7.50	-	-	-	-	
17-5	USH 18	208+11	LT		EXCEPT BUSES	30 X 24	-	-	-	-	5.00	-	-	-	-	ON POST WITH SIGN 17-4

ALL QUANTITIES ARE CATEGORY 10 UNLESS OTHERWISE NOTED

SIGN NO.	LOCATION	STATION	OFFSET	SIGN CODE	MESSAGE	SIZE	634.0614 POSTS WOOD 4X6-INCH X 14-FT EACH	634.0616 POSTS WOOD 4X6-INCH X 16-FT EACH	634.0618 POSTS WOOD 4X6-INCH X 18-FT EACH	637.1220 SIGNS TYPE I REFLECTIVE SH SF	637.2210 SIGNS TYPE II REFLECTIVE H SF	637.2215 SIGNS TYPE II REFLECTIVE H FOLDING SF	637.2230 SIGNS TYPE II REFLECTIVE F SF	638.2101 MOVING SIGNS TYPE I EACH	638.2102 MOVING SIGNS TYPE II EACH	REMARKS
17-6	NOT USED									-				-	-	
17-7	KOSSOW ROAD	50+90	LT	R1-2		36 X 31	1	-	-	-	7.75	-	-	-	-	
17-8	USH 18	209+92	RT	R5-1		36 X 36	-	-	-	-	9.00	-	-	-	-	MOUNT TO SIGNAL POLE
17-9	KOSSOW ROAD	50+77	LT	R1-1F		36 X 36	-	-	-	-	-	7.46	-	-	-	MOUNT TO SIGNAL POLE
17-10	KOSSOW ROAD	50+77	LT	R6-3A		30 X 24	-	-	-	-	5.00	-	-	-	-	MOUNT TO SIGNAL POLE
17-11	KOSSOW ROAD	50+95	RT	R3-20L		24 X 36	-	1	-	-	6.00	-	-	-	-	
17-12	KOSSOW ROAD	51+00	RT	R1-2		36 X 31	1	-	-	-	3.88	-	-	-	-	
17-13	MORELAND COURT	51+33	RT	R7-1D		24 X 30	1	-	-	-	5.00	-	-	-	-	
17-14	USH 18	211+34	LT	R10-64		42 X 48	-	-	1	-	-	-	-	-	1	
17-15	USH 18	211+34	LT	R10-66F		30 X 18	-	-	-	-	-	-	-	-	1	ON POST WITH SIGN 17-14
17-16	USH 18	208+32	LT	R6-2R		24 X 30	1	-	-	-	5.00	-	-	-	-	
17-17	USH 18	208+33	LT	R4-7		36 X 48	-	1	-	-	12.00	-	-	-	-	
17-18	USH 18	208+74	RT	R5-1		36 X 36	-	-	-	-	9.00	-	-	-	-	MOUNT TO SIGNAL POLE
17-19	KOSSOW ROAD	50+82	RT	R4-7		36 X 48	-	-	-	-	12.00	-	-	-	-	MOUNT TO SIGNAL POLE
17-20	USH 18	209+92	LT	R1-1F		36 X 36	-	-	-	-	-	7.46	-	-	-	MOUNT TO SIGNAL POLE
17-21	USH 18	209+84	LT	R1-1F		36 X 36	-	-	-	-	-	7.46	-	-	-	MOUNT TO SIGNAL POLE
17-22	USH 18	208+31	LT	R1-1F		36 X 36	-	1	-	-	-	7.46	-	-	-	
17-23	USH 18	208+72	RT	R1-1F		36 X 36	-	-	-	-	-	7.46	-	-	-	MOUNT TO SIGNAL POLE
17-24	USH 18	208+72	RT	R1-1F		36 X 36	-	-	-	-	-	7.46	-	-	-	MOUNT TO SIGNAL POLE
17-25	KOSSOW ROAD	49+09	LT	R4-7		36 X 48	-	1	-	-	12.00	-	-	-	-	
17-26	USH 18	209+83	LT	R5-1		36 X 36	-	-	-	-	9.00	-	-	-	-	MOUNT TO SIGNAL POLE
17-27	USH 18	210+16	RT	R4-7		36 X 48	-	1	-	-	12.00	-	-	-	-	
17-28	USH 18	210+17	RT	R6-2R		24 X 30	1	-	-	-	5.00	-	-	-	-	
17-29	USH 18	210+18	RT	R1-1F		36 X 36	-	1	-	-	-	7.46	-	-	-	
17-30	USH 18	208+72	RT	R5-1		36 X 36	-	-	-	-	9.00	-	-	-	-	MOUNT TO SIGNAL POLE
17-31	KOSSOW ROAD	49+22	RT	R1-1F		36 X 36	-	-	-	-	-	7.46	-	-	-	MOUNT TO SIGNAL POLE
17-32	KOSSOW ROAD	49+22	RT	R6-3A		30 X 24	-	-	-	-	5.00	-	-	-	-	MOUNT TO SIGNAL POLE
17-33	USH 18	206+76	RT	R3-20LL		24 X 36	-	1	-	-	6.00	-	-	-	-	
17-34	KOSSOW ROAD	49+03	LT	R1-2		36 X 31	1	-	-	-	3.88	-	-	-	-	
17-35	KOSSOW ROAD	48+60	LT	R4-7		24 X 36	-	1	-	-	6.00	-	-	-	-	
17-36	KOSSOW ROAD	49+09	RT	R1-2		36 X 31	1	-	-	-	3.88	-	-	-	-	
17-37	USH 18	210+92	RT	J1-1		36 X 57	-	1	-	-	14.25	-	-	-	-	
				M2-1			-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 17-37
				M1-1	I-94		-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 17-37
17-38	USH 18	210+92	RT	J1-1		36 X 57	-	1	-	-	14.25	-	-	-	-	
				M2-1			-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 17-38
				M1-1	I-94		-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 17-38
17-39	MORELAND COURT	51+79	RT	R7-1D		24 X 30	-	-	-	-	5.00	-	-	-	-	
17-40	USH 18	209+64	LT	M1-94H	MORELAND BLVD	120 X 24	-	-	-	-	20.00	-	-	-	-	MOUNT TO SIGNAL MAST ARM
17-41	USH 18	210+33	RT	M1-94H	KOSSOW RD	84 X 24	-	-	-	-	14.00	-	-	-	-	MOUNT TO SIGNAL MAST ARM
17-42	USH 18	208+96	RT	M1-94H	MORELAND BLVD	120 X 24	-	-	-	-	20.00	-	-	-	-	MOUNT TO SIGNAL MAST ARM
17-43	USH 18	208+20	LT	M1-94H	KOSSOW RD	84 X 24	-	-	-	-	14.00	-	-	-	-	MOUNT TO SIGNAL MAST ARM
17-44	NOT USED									-				-	-	
17-45	NOT USED									-				-	-	
17-46	NOT USED									-				-	-	
17-47	NOT USED									-				-	-	
17-48	USH 18	208+88	LT	R6-2L		24 X 30	-	-	-	-	5.00	-	-	-	-	MOUNT TO SIGNAL POLE
17-49	USH 18	206+91	RT	R5-1A		36 X 24	1	-	-	-	6.00	-	-	-	-	

ALL QUANTITIES ARE CATEGORY 10 UNLESS OTHERWISE NOTED

SIGN NO.	LOCATION	STATION	OFFSET	SIGN CODE	MESSAGE	SIZE	634.0614 POSTS WOOD 4X6-INCH X 14-FT EACH	634.0616 POSTS WOOD 4X6-INCH X 16-FT EACH	634.0618 POSTS WOOD 4X6-INCH X 18-FT EACH	637.1220 SIGNS TYPE I REFLECTIVE SH SF	637.2210 SIGNS TYPE II REFLECTIVE H SF	637.2215 SIGNS TYPE II REFLECTIVE H FOLDING SF	637.2230 SIGNS TYPE II REFLECTIVE F SF	638.2101 MOVING SIGNS TYPE I EACH	638.2102 MOVING SIGNS TYPE II EACH	REMARKS
17-50	USH 18	209+65	RT	R6-2L		24 X 30	-	-	-	-	5.00	-	-	-	-	MOUNT TO SIGNAL POLE
17-51	USH 18	211+83	LT	R5-1A		36 X 24	1	-	-	-	6.00	-	-	-	-	
										-				-	-	
18-1	KOSSOW ROAD	48+46	RT	J12-1	USH 18	24 X 45	-	1	-	-	7.50	-	-	-	-	
				M1-4			-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 18-1
				M6-4			-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 18-1
18-2	SWENSON DRIVE	47+57	RT	R10-7		24 X 30	1	-	-	-	5.00	-	-	-	-	
18-3	SWENSON DRIVE	47+11	RT	R3-7S		60 X 42	-	1	-	-	17.50	-	-	-	-	
18-4	KOSSOW ROAD	47+85	LT	R1-1		30 X 30	1	-	-	-	5.18	-	-	-	-	
18-5	SWENSON DRIVE	47+52	LT	R2-1	30 MPH	24 X 36	-	1	-	-	6.00	-	-	-	-	
18-6	SWENSON DRIVE	46+92	LT	R7-1D		18 X 24	1	-	-	-	3.00	-	-	-	-	
18-7	SWENSON DRIVE	44+33	LT	R7-1D		18 X 24	1	-	-	-	3.00	-	-	-	-	
18-8	SWENSON DRIVE	43+41	LT	R1-1		30 X 30	1	-	-	-	5.18	-	-	-	-	
18-9	SWENSON DRIVE	46+17	LT	W4-2R		36 X 36	-	1	-	-	-	-	9.00	-	-	
18-10	NOT USED									-				-	-	
18-11	NOT USED									-				-	-	
18-12	NOT USED									-				-	-	
18-13	KOSSOW ROAD	97+24	LT	R1-1		30 X 30	1	-	-	-	5.18	-	-	-	-	
										-				-	-	
19-1	ABBOTT DRIVE	17+79	LT	R7-1D		18 X 24	1	-	-	-	3.00	-	-	-	-	
19-2	ABBOTT DRIVE	18+09	LT	R3-7R		30 X 30	1	-	-	-	6.25	-	-	-	-	
19-3	ABBOTT DRIVE	18+26	LT	R7-1D		18 X 24	1	-	-	-	3.00	-	-	-	-	
19-4	KOSSOW ROAD	53+06	LT	J12-1	USH 18	24 X 45	-	1	-	-	7.50	-	-	-	-	
				M1-4			-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 19-4
				M6-4			-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 19-4
19-5	ABBOTT DRIVE	19+43	LT	R1-1		30 X 30	1	-	-	-	5.18	-	-	-	-	
19-6	KOSSOW ROAD	53+75	LT	R7-1D		24 X 30	1	-	-	-	5.00	-	-	-	-	
19-7	KOSSOW ROAD	55+67	LT	R7-1D		18 X 24	1	-	-	-	3.00	-	-	-	-	
19-8	KOSSOW ROAD	56+40	RT	R3-20L		24 X 36	-	1	-	-	6.00	-	-	-	-	
19-9	KOSSOW ROAD	56+57	RT	R4-7		24 X 36	-	1	-	-	6.00	-	-	-	-	
19-10	KOSSOW ROAD	57+55	LT	R7-1D		18 X 24	1	-	-	-	3.00	-	-	-	-	
19-11	KOSSOW ROAD	54+33	RT	R4-7		24 X 36	-	1	-	-	6.00	-	-	-	-	
19-12	KOSSOW ROAD	55+11	RT	R4-7		24 X 36	-	1	-	-	6.00	-	-	-	-	
19-13	MORELAND COURT	51+85	RT	R1-1		30 X 30	1	-	1	-	5.18	-	-	-	-	
19-14	MORELAND COURT	51+85	RT	R3-53R		24 X 30	-	-	-	-	5.00	-	-	-	-	ON POST WITH SIGN 19-14
19-15	KOSSOW ROAD	52+72	RT	R2-1	30 MPH	24 X 36	-	1	-	-	6.00	-	-	-	-	
19-16	KOSSOW ROAD	53+51	RT	R7-1D		18 X 24	1	-	-	-	3.00	-	-	-	-	
19-17	KOSSOW ROAD	55+01	RT	R1-1		36 X 36	-	1	-	-	7.46	-	-	-	-	
19-18	KOSSOW ROAD	55+42	RT	R3-20L		24 X 36	-	1	-	-	6.00	-	-	-	-	
19-19	KOSSOW ROAD	51+86	RT	R6-2R		24 X 30	1	-	-	-	5.00	-	-	-	-	
19-20	KOSSOW ROAD	53+00	RT	R5-1A		36 X 24	1	-	-	-	6.00	-	-	-	-	
19-21	KOSSOW ROAD	54+20	RT	R5-1		30 X 30	1	-	-	-	6.25	-	-	-	-	
19-22	KOSSOW ROAD	55+32	LT	R5-1		30 X 30	1	-	-	-	6.25	-	-	-	-	
19-23	KOSSOW ROAD	56+67	LT	R5-1A		36 X 24	1	-	-	-	6.00	-	-	-	-	
19-24	KOSSOW ROAD	54+00	RT	R3-7L		30 X 30	-	-	-	-	6.25	-	-	-	-	
19-25	KOSSOW ROAD	51+62	RT	W12-1R		24 X 24	1	-	-	-	-	-	4.00	-	-	2' MOUNTING HEIGHT
										-			-	-	-	
20-1	USH 18	213+18	LT	R3-20LL		24 X 36	-	1	-	-	6.00	-	-	-	-	
20-2	USH 18	214+60	LT	D1-65(MOD)	KOSSOW RD 21300 WEST NEXT SIGNAL	78 X 36	2	-	-	-	19.50	-	-	-	-	
20-3	USH 18	214+72	RT	D1-65(MOD)	KOSSOW RD 21300 WEST NEXT SIGNAL	78 X 36	2	-	-	-	19.50	-	-	-	-	
20-4	USH 18	215+04	LT	R7-1D		24 X 30	1	-	-	-	5.00	-	-	-	-	
20-5	USH 18	216+09	LT	W3-3		36 X 36	-	1	-	-	-	-	9.00	-	-	
20-6	USH 18	216+07	RT	W3-3		36 X 36	-	1	-	-	-	-	9.00	-	-	

ALL QUANTITIES ARE CATEGORY 10 UNLESS OTHERWISE NOTED

PROJECT NO:2200-16-71	HWY:USH 18	COUNTY:WAUKESHA	MISCELLANEOUS QUANTITIES	SHEET 439	E

SIGN NO.	LOCATION	STATION	OFFSET	SIGN CODE	MESSAGE	SIZE	634.0614 POSTS WOOD 4X6-INCH X 14-FT EACH	634.0616 POSTS WOOD 4X6-INCH X 16-FT EACH	634.0618 POSTS WOOD 4X6-INCH X 18-FT EACH	637.1220 SIGNS TYPE I REFLECTIVE SH SF	637.2210 SIGNS TYPE II REFLECTIVE H SF	637.2215 SIGNS TYPE II REFLECTIVE H FOLDING SF	637.2230 SIGNS TYPE II REFLECTIVE F SF	638.2101 MOVING SIGNS TYPE I EACH	638.2102 MOVING SIGNS TYPE II EACH	REMARKS
20-7	USH 18	216+68	LT	J4-2		72 X 54	-	2	-	-	27.00	-	-	-	-	
				M3-4			-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 20-7
				M1-4	USH 18		-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 20-7
				M3-3			-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 20-7
				M1-6	STH 164		-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 20-7
20-8	USH 18	217+41	LT	R3-21		30 X 36	-	-	1	-	7.50	-	-	-	-	
20-9	USH 18	217+41	LT		EXCEPT BUSES	30 X 24	-	-	-	-	5.00	-	-	-	-	ON POST WITH SIGN 20-8
20-10	NOT USED									-			-	-	-	
20-11	USH 18	212+40	RT	R7-1D		24 X 30	-	-	-	-	5.00	-	-	-	-	MOUNT TO UTILITY POLE
20-12	USH 18	215+28	LT	R3-20L		24 X 36	-	1	-	-	6.00	-	-	-	-	
20-13	USH 18	215+61	RT	M1-94H		108 X 36	-	2	-	-	27.00	-	-	-	-	
20-14	USH 18	215+60	LT	J3-3		108 X 84	-	-	2	-	63.00	-	-	-	-	
				M3-2			-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 20-13
				M1-4	USH 18		-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 20-13
				M6-1			-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 20-13
				M3-4			-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 20-13
				M1-1	I-94		-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 20-13
				M6-1			-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 20-13
				M3-2			-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 20-13
				M1-1	I-94		-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 20-13
				M5-1R			-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 20-13
20-15	USH 18	215+60	RT	J3-3		108 X 84	-	-	2	-	63.00	-	-	-	-	
				M3-2			-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 20-15
				M1-4	USH 18		-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 20-15
				M6-1			-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 20-15
				M3-4			-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 20-15
				M1-1	I-94		-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 20-15
				M6-1			-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 20-15
				M3-2			-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 20-15
				M1-1	I-94		-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 20-15
				M6-1			-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 20-15
				M3-2			-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 20-15
				M1-1	I-94		-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 20-15
				M5-1R			-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 20-15
										-			-	-	-	
21-1	USH 18	218+57	LT	R2-1	45 MPH	36 X 48	-	1	-	-	12.00	-	-	-	-	
21-2	USH 18	218+59	LT	R2-1	45 MPH	36 X 48	-	1	-	-	12.00	-	-	-	-	
21-3	USH 18	218+35	RT	R7-1D		24 X 30	1	-	-	-	5.00	-	-	-	-	
21-4	USH 18	219+96	RT	R4-4		36 X 30	1	-	-	-	7.50	-	-	-	-	
21-6	USH 18	222+59	RT	J3-1		36 X 84	-	-	1	-	21.00	-	-	-	-	
				M3-2			-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 21-6
				M1-1	I-94		-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 21-6
				M6-1			-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 21-6
21-7	USH 18	223+50	RT	W3-50		48 X 48	-	-	-	-	-	-	16.00	-	-	MOUNT TO UTILITY POLE
21-8	USH 18	223+80	RT	J3-1		36 X 84	-	-	1	-	21.00	-	-	-	-	
				M3-2			-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 21-8
				M1-1	I-94		-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 21-8
				M6-1			-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 21-8
21-9	USH 18	223+64	RT	W5-59L		18 X 18	-	-	-	-	-	-	2.25	-	-	MOUNT TO BARRIER TERMINAL
21-10	USH 18	221+20	LT	W4-1		36 X 36	-	1	-	-	-	-	9.00	-	-	
21-11	USH 18	221+64	LT	--	STATE PATROL HQ		2	-	-	-	-	-	-	-	1	
21-12	USH 18	223+33	LT	W11-15		36 X 36	-	1	-	-	9.00	-	-	-	-	
21-12A	USH 18	223+33	LT	W16-9P		24 X 8	-	-	-	-	1.33	-	-	-	-	ON POST WITH SIGN 21-12

ALL QUANTITIES ARE CATEGORY 10 UNLESS OTHERWISE NOTED

SIGN NO.	LOCATION	STATION	OFFSET	SIGN CODE	MESSAGE	SIZE	634.0614 POSTS WOOD 4X6-INCH X 14-FT EACH	634.0616 POSTS WOOD 4X6-INCH X 16-FT EACH	634.0618 POSTS WOOD 4X6-INCH X 18-FT EACH	637.1220 SIGNS TYPE I REFLECTIVE SH SF	637.2210 SIGNS TYPE II REFLECTIVE H SF	637.2215 SIGNS TYPE II REFLECTIVE H FOLDING SF	637.2230 SIGNS TYPE II REFLECTIVE F SF	638.2101 MOVING SIGNS TYPE I EACH	638.2102 MOVING SIGNS TYPE II EACH	REMARKS
21-13	USH 18	222+65	LT	R1-2		18 X 18	-	-	-	-	2.25	-	-	-	-	
21-14	USH 18	222+69	LT	W1-8		18 X 24	1	-	-	-	-	-	3.00	-	-	
21-15	USH 18	223+04	LT	W1-8		18 X 24	1	-	-	-	-	-	3.00	-	-	
21-16	USH 18	223+22	LT	W4-1		36 X 36	-	1	-	-	-	-	9.00	-	-	
21-17	USH 18	222+48	LT	W11-15		36 X 36	-	1	-	-	-	-	9.00	-	-	
21-18	USH 18	222+48	LT	W16-7L		18 X 30	-	-	-	-	-	-	3.75	-	-	ON POST WITH SIGN 21-17
21-23	USH 18	220+50	RT		EAST I-94 ONLY ARROW	78 X 36	-	-	-	19.5	-	-	-	-	-	MOUNT TO OVERHEAD SIGN SUPPORT
										-				-	-	
22-1	USH 18	225+89	RT	W5-52L		12 X 36	-	1	-	-	-	-	3.00	-	-	
22-2	USH 18	226+02	RT	J3-3		108 X 84	-	-	2	-	63.00	-	-	-	-	
				M3-2			-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 22-2
				M1-4	USH 18		-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 22-2
				M6-1			-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 22-2
				M3-4			-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 22-2
				M1-1	I-94		-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 22-2
				M5-1R			-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 22-2
				M3-1			-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 22-2
				M1-6	STH 164		-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 22-2
				M5-1R			-	-	-	-	-	-	-	-	-	ON POST WITH SIGN 22-2
22-3	USH 18	224+47	LT	R3-17		30 X 24	1	-	-	-	5.00	-	-	-	-	
22-4	USH 18	224+47	LT	M6-2		21 X 21	-	-	-	-	3.06	-	-	-	-	ON POST WITH SIGN 22-3
22-5	USH 18	229+87	LT	W11-15		36 X 36	-	1	-	-	-	-	9.00	-	-	
22-6	USH 18	229+87	LT	W16-7L		18 X 30	-	-	-	-	-	-	3.75	-	-	ON POST WITH SIGN 22-5
22-7	USH 18	228+45	LT	--	MERGE AHEAD		1	-	-	-	-	-	-	-	1	
										-			-	-	-	
23-1	USH 18	230+07	LT	R1-2		18 X 18	1	-	-	-	2.25	-	-	-	-	
23-2	USH 18	230+37	LT	--	MERGE AHEAD		1	-	-	-	-	-	-	-	1	
23-3	USH 18	231+42	LT	R3-17		30 X 24	-	1	-	-	5.00	-	-	-	-	
23-4	USH 18	231+42	LT	M6-2		21 X 21	-	-	-	-	3.06	-	-	-	-	ON POST WITH SIGN 23-3
23-5	USH 18	230+78	LT	W11-15		36 X 36	-	1	-	-	9.00	-	-	-	-	
23-6	USH 18	230+78	LT	W16-9P		24 X 8	-	-	-	-	1.33	-	-	-	-	ON POST WITH SIGN 23-5
24-1	USH 18	239+21	LT	TYPE I	CTH JJ, BLUEMOUND ROAD, ARROW	168 X 144	-	-	-	168.00	-	-	-	-	-	MOUNT TO SIGN STRUTURE S-67-319
24-2	USH 18	239+18	LT	TYPE I	18 WEST, 164 SOUTH, WAUKESHA, ARROWS		-	-	-	-	-	-	-	1	-	MOUNT TO SIGN STRUTURE S-67-319
24-3	USH 18	239+24	LT	TYPE I	94, MADISON, ARROW		-	-	-	-	-	-	-	1	-	MOUNT TO SIGN STRUTURE S-67-319
						PROJECT TOTALS	186	203	26	236.5	4005.8	350.6	359.0	2	13	

ALL QUANTITIES ARE CATEGORY 10 UNLESS OTHERWISE NOTED

REMOVAL NO.	LOCATION	STATION	OFFSET	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH
A-1	USH 18	122+70	LT	1	--
A-2	USH 18	123+32	LT	1	1
A-3	USH 18	123+91	LT	1	1
A-4	USH 18	123+91	LT	1	1
A-5	NOT USED	--	--	--	--
A-6	USH 18	125+45	LT	1	1
A-7	USH 18	125+45	LT	--	--
A-8	USH 18	125+61	LT	1	1
A-9	USH 18	126+42	LT	1	--
A-10	USH 18	124+62	LT	1	--
A-11	USH 18	124+82	LT	1	--
A-12	USH 18	125+48	LT	1	--
A-13	USH 18	125+55	LT	1	1
A-14	USH 18	127+59	LT	1	1
A-15	USH 18	127+59	LT	--	--
A-16	USH 18	123+32	LT	--	--
A-17	USH 18	124+62	LT	1	--
A-18	USH 18	124+64	RT	1	--
A-19	USH 18	123+07	RT	1	1
A-20	USH 18	123+72	RT	1	--
A-21	USH 18	124+52	RT	1	1
A-22	MANHATTAN DRIVE	48+13	LT	1	1
A-23	MANHATTAN DRIVE	48+13	LT	--	--
A-24	USH 18	125+36	RT	1	--
A-25	USH 18	125+36	RT	1	--
A-26	USH 18	125+89	RT	1	1
A-27	MANHATTAN DRIVE	49+10	RT	1	1
A-28	USH 18	126+08	RT	1	1
A-29	USH 18	127+17	RT	1	1
B-1	USH 18	128+21	LT	1	--
B-2	USH 18	130+41	LT	1	2
B-3	USH 18	130+41	LT	--	--
B-4	USH 18	131+20	LT	1	1
B-5	USH 18	131+80	LT	1	1
B-6	USH 18	131+80	LT	1	1
B-7	USH 18	130+40	LT	1	2
B-8	USH 18	130+40	LT	--	--
B-9	USH 18	130+62	RT	1	1
B-10	USH 18	128+48	RT	1	1
B-11	USH 18	128+48	RT	1	1
B-12	USH 18	132+16	RT	1	1
C-1	USH 18	124+08	LT	1	1
C-2	USH 18	134+83	LT	1	1
C-3	USH 18	134+83	LT	--	--
C-4	USH 18	134+83	LT	--	--
C-5	USH 18	135+34	LT	1	1
C-6	USH 18	135+34	LT	--	--
C-7	USH 18	136+62	RT	1	2
C-8	USH 18	134+32	LT	1	1
C-9	USH 18	134+42	RT	1	1

3

REMOVAL NO.	LOCATION	STATION	OFFSET	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH
C-10	USH 18	135+26	LT	1	1
C-11	USH 18	135+39	RT	1	1
C-12	USH 18	136+60	RT	1	2
C-13	USH 18	137+76	RT	1	1
C-14	USH 18	137+76	RT	1	1
C-15	USH 18	137+76	RT	--	--
C-16	USH 18	138+80	RT	1	2
C-17	USH 18	138+80	RT	--	--
D-1	USH 18	140+31	LT	1	1
D-2	USH 18	141+00	LT	1	1
D-3	USH 18	141+00	LT	1	1
D-4	USH 18	142+25	LT	1	1
D-5	WOLF ROAD	143+75	LT	1	--
D-6	WOLF ROAD	143+75	LT	--	--
D-7	WOLF ROAD	144+38	LT	1	1
D-8	WOLF ROAD	144+38	LT	--	--
D-9	USH 18	144+68	LT	1	1
D-10	USH 18	143+30	LT	1	--
D-11	USH 18	143+36	LT	1	--
D-12	WOLF ROAD	143+75	LT	--	--
D-13	USH 18	144+54	LT	1	--
D-14	USH 18	144+54	LT	1	--
D-15	USH 18	144+51	LT	--	--
D-16	USH 18	143+30	LT	--	--
D-17	USH 18	143+48	RT	1	--
D-18	USH 18	144+75	RT	1	--
D-19	USH 18	141+44	RT	1	1
D-20	USH 18	140+79	RT	1	2
D-21	USH 18	143+07	RT	1	1
D-22	USH 18	143+32	RT	--	--
D-23	USH 18	143+48	RT	1	--
D-24	USH 18	144+36	RT	1	--
D-25	USH 18	144+75	RT	1	--
D-26	USH 18	144+36	RT	1	--
D-27	USH 18	144+86	RT	1	1
D-28	LES PAUL PKWY	285+56	LT	1	--
D-29	LES PAUL PKWY	285+56	LT	1	--
D-30	USH 18	144+36	RT	1	--
D-31	USH 18	144+36	RT	--	--
D-32	USH 18	144+77	RT	1	1
E-1	USH 18	146+70	LT	1	1
E-2	USH 18	149+68	LT	1	2
E-3	USH 18	149+68	LT	--	--
E-4	USH 18	150+47	LT	1	1
E-5	USH 18	151+42	LT	1	1
E-6	USH 18	146+59	LT	1	1
E-7	USH 18	150+05	LT	1	1
E-8	USH 18	151+22	LT	1	1
E-9	USH 18	146+17	RT	1	2
E-10	USH 18	146+17	RT	--	--

ALL QUANTITIES ARE CATEGORY 10 UNLESS OTHERWISE NOTED

REMOVAL NO.	LOCATION	STATION	OFFSET	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH
E-11	USH 18	147+91	RT	1	1
E-12	USH 18	147+91	RT	1	1
E-13	USH 18	149+20	RT	1	1
E-14	USH 18	150+47	LT	1	1
E-15	GATEWAY DRIVE	151+87	RT	1	1
F-1	USH 18	152+02	RT	1	1
F-2	USH 18	153+18	LT	1	1
F-3	USH 18	155+02	LT	1	1
F-4	USH 18	155+02	LT	1	1
F-5	USH 18	152+24	RT	1	1
F-6	USH 18	152+73	RT	1	1
F-7	USH 18	156+33	RT	1	1
G-1	USH 18	158+68	LT	1	1
G-2	USH 18	158+97	LT	1	1
G-3	USH 18	158+96	LT	1	1
G-4	USH 18	160+49	LT	1	1
G-5	USH 18	160+49	LT	--	--
G-6	AVALON DRIVE	161+05	LT	1	1
G-7	AVALON DRIVE	161+05	LT	--	--
G-8	USH 18	161+71	LT	1	1
G-9	USH 18	160+49	LT	--	--
G-10	USH 18	160+06	LT	1	1
G-11	USH 18	160+40	LT	1	1
G-12	USH 18	161+19	RT	1	1
G-13	USH 18	161+44	RT	1	1
G-14	USH 18	161+08	RT	1	1
G-15	USH 18	161+96	RT	1	1
G-16	USH 18	161+96	RT	1	1
G-17	USH 18	162+55	RT	1	1
H-1	USH 18	164+57	LT	1	1
H-2	USH 18	167+31	LT	1	1
H-3	RAMONA ROAD	167+82	LT	1	1
H-4	RAMONA ROAD	167+82	LT	--	--
H-5	RAMONA ROAD	167+82	LT	--	--
H-6	RAMONA ROAD	168+30	LT	1	1
H-7	RAMONA ROAD	168+30	LT	--	--
H-8	USH 18	167+27	LT	1	1
H-9	USH 18	167+69	LT	1	1
H-10	USH 18	168+47	RT	1	1
H-11	USH 18	168+80	RT	1	1
H-12	USH 18	166+01	RT	1	1
H-13	USH 18	167+24	RT	1	1
H-14	USH 18	167+24	RT	1	1
H-15	USH 18	168+48	RT	1	1
H-16	USH 18	169+02	RT	1	2
H-17	USH 18	169+02	RT	--	--
H-18	USH 18	169+06	RT	1	2
H-19	USH 18	169+06	RT	--	--
I-1	USH 18	170+29	LT	1	1
I-2	USH 18	171+45	LT	1	1

REMOVAL NO.	LOCATION	STATION	OFFSET	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH
I-3	USH 18	171+45	LT	--	--
I-4	USH 18	171+45	LT	1	1
I-5	USH 18	173+34	LT	1	--
I-6	USH 18	173+34	LT	--	--
I-7	USH 18	173+98	LT	1	--
I-8	USH 18	174+87	LT	1	--
I-9	USH 18	174+83	LT	1	--
I-10	USH 18	175+37	LT	1	1
I-11	USH 18	174+83	LT	--	--
I-12	USH 18	170+29	LT	1	1
I-13	USH 18	171+21	RT	1	1
I-14	USH 18	173+67	RT	1	--
I-15	USH 18	173+67	RT	--	--
I-16	USH 18	174+38	RT	1	--
I-17	USH 18	175+12	RT	1	--
I-18	USH 18	175+12	RT	1	--
I-19	USH 18	173+34	RT	1	1
I-20	USH 18	173+54	RT	1	--
I-21	USH 18	174+20	RT	1	--
I-22	USH 18	175+12	RT	1	--
I-23	USH 18	172+97	RT	1	--
I-24	MAIN STREET	173+10	RT	1	1
I-25	MAIN STREET	173+98	RT	1	1
I-26	MAIN STREET	174+04	RT	1	2
J-1	USH 18	177+60	LT	1	--
J-2	USH 18	178+35	LT	1	2
J-3	USH 18	178+77	LT	1	1
J-4	USH 18	179+84	LT	1	1
J-5	USH 18	181+10	LT	1	1
J-6	USH 18	181+10	LT	1	1
J-7	USH 18	181+88	LT	1	2
J-8	USH 18	181+88	LT	1	--
J-9	USH 18	177+31	LT	1	1
J-10	USH 18	178+82	RT	1	--
J-11	USH 18	178+42	RT	1	2
J-12	USH 18	178+42	RT	--	--
J-13	USH 18	176+36	RT	1	1
J-16	USH 18	178+29	RT	1	1
J-17	USH 18	178+29	RT	1	1
J-18	USH 18	180+85	RT	1	2
J-19	USH 18	180+85	RT	--	--
K-1	USH 18	182+71	LT	1	1
K-2	USH 18	184+38	LT	1	1
K-3	SPRINGDALE ROAD	51+97	LT	1	1
K-4	SPRINGDALE ROAD	51+58	LT	1	1
K-5	SPRINGDALE ROAD	51+39	LT	1	1
K-6	SPRINGDALE ROAD	51+93	LT	1	1
K-7	SPRINGDALE ROAD	52+09	RT	1	--
K-8	SPRINGDALE ROAD	52+09	RT	1	1
K-9	SPRINGDALE ROAD	51+53	RT	1	1

ALL QUANTITIES ARE CATEGORY 10 UNLESS OTHERWISE NOTED

REMOVAL NO.	LOCATION	STATION	OFFSET	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH
K-10	SPRINGDALE ROAD	51+53	RT	--	--
K-11	USH 18	184+89	LT	1	--
K-12	USH 18	184+89	LT	--	--
K-13	USH 18	185+56	LT	1	1
K-14	USH 18	186+87	LT	1	1
K-15	USH 18	187+09	LT	1	1
K-16	USH 18	187+48	LT	1	1
K-17	USH 18	184+30	LT	1	--
K-18	USH 18	184+89	LT	--	--
K-19	USH 18	185+20	LT	1	--
K-20	USH 18	182+66	RT	1	1
K-21	USH 18	184+56	RT	1	1
K-22	USH 18	185+16	RT	1	1
K-23	USH 18	185+38	RT	1	1
K-24	USH 18	184+88	RT	1	--
K-25	USH 18	185+24	RT	1	1
K-26	USH 18	185+24	RT	--	--
K-27	USH 18	187+86	RT	1	1
K-28	USH 18	187+89	RT	1	1
L-1	USH 18	188+55	LT	1	1
L-2	USH 18	189+15	LT	1	2
L-3	USH 18	190+09	LT	1	1
L-4	USH 18	192+02	LT	1	1
L-5	USH 18	191+79	LT	1	1
L-6	USH 18	193+00	RT	1	1
L-7	USH 18	190+11	LT	1	1
L-8	USH 18	193+24	RT	1	1
L-9	USH 18	192+63	RT	1	1
L-10	USH 18	192+63	RT	--	--
M-1	USH 18	195+00	LT	1	1
M-2	USH 18	196+87	LT	1	1
M-3	USH 18	196+87	LT	1	1
M-4	PARKLAWN DRIVE	51+05	LT	1	1
M-5	PARKLAWN DRIVE	51+05	LT	--	--
M-6	PARKLAWN DRIVE	51+05	LT	--	--
M-7	USH 18	197+52	LT	1	1
M-8	USH 18	197+76	LT	1	1
M-9	USH 18	198+86	RT	1	1
M-10	USH 18	198+56	RT	1	1
M-11	USH 18	199+15	RT	1	1
M-12	USH 18	194+44	RT	1	1
M-13	USH 18	196+06	RT	1	1
M-14	PARKLAWN COURT	49+07	RT	--	--
M-15	PARKLAWN COURT	49+07	RT	--	--
M-16	USH 18	199+56	RT	1	1
N-1	PARKLAWN DRIVE	52+20	LT	1	1
N-2	PARKLAWN DRIVE	51+82	LT	1	1
N-3	PARKLAWN DRIVE	52+14	RT	1	1
O-1	USH 18	201+35	LT	1	1
O-3	USH 18	204+41	RT	--	--
O-4	USH 18	205+40	LT	1	1
O-5	USH 18	205+78	LT	1	1
O-6	USH 18	205+97	LT	1	1
O-7	USH 18	203+03	RT	1	1
O-8	USH 18	203+03	RT	1	1
O-9	USH 18	204+41	RT	1	2
O-10	USH 18	204+41	RT	--	--
P-1	USH 18	206+94	LT	1	1
P-2	USH 18	208+62	LT	1	1
P-3	KOSSOW ROAD	51+42	LT	1	1
P-4	KOSSOW ROAD	50+91	RT	1	1
P-5	MORELAND COURT	51+34	RT	1	1
P-8	USH 18	208+30	LT	1	--
P-9	USH 18	208+50	LT	1	1
P-10	USH 18	208+96	LT	1	--
P-11	USH 18	208+96	LT	--	--
P-12	USH 18	208+96	LT	--	--
P-13	USH 18	209+62	LT	1	--
P-14	USH 18	210+55	LT	1	1
P-15	USH 18	209+62	LT	--	--
P-16	USH 18	208+82	RT	1	--
P-17	USH 18	208+90	RT	1	--
P-18	USH 18	208+82	RT	--	--
P-19	USH 18	209+49	RT	1	--
P-20	USH 18	209+92	RT	1	--
P-21	USH 18	209+49	RT	--	--
P-22	USH 18	210+05	RT	1	--
P-23	USH 18	206+88	RT	1	1
P-24	USH 18	207+97	RT	1	2
P-25	USH 18	208+58	RT	1	--
P-26	KOSSOW ROAD	209+72	RT	1	1
P-27	USH 18	211+07	RT	1	1
P-28	USH 18	211+11	RT	1	1
P-29	MORELAND COURT	51+79	RT	1	1
Q-1	KOSSOW ROAD	47+90	LT	1	1
Q-2	SWENSON DRIVE	47+60	LT	1	1
Q-3	SWENSON DRIVE	47+60	LT	--	--
Q-4	SWENSON DRIVE	47+56	RT	1	1
Q-5	SWENSON DRIVE	47+12	RT	1	1
Q-6	SWENSON DRIVE	46+32	RT	1	1
Q-7	SWENSON DRIVE	44+84	LT	1	1
Q-8	SWENSON DRIVE	44+33	LT	1	1
Q-9	SWENSON DRIVE	43+41	LT	1	1
Q-10	KOSSOW ROAD	97+24	LT	1	1
R-1	ABBOTT DRIVE	17+46	RT	1	1
R-2	NOT USED	--	--	--	--
R-3	ABBOTT DRIVE	17+32	RT	1	1
R-4	ABBOTT DRIVE	53+06	LT	1	1
R-5	KOSSOW ROAD	53+75	LT	1	1
R-6	KOSSOW ROAD	54+82	LT	1	1

3

ALL QUANTITIES ARE CATEGORY 10 UNLESS OTHERWISE NOTED

REMOVAL NO.	LOCATION	STATION	OFFSET	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH
R-7	KOSSOW ROAD	51+82	RT	1	1
R-8	KOSSOW ROAD	52+48	RT	1	1
R-9	KOSSOW ROAD	54+10	RT	1	1
R-10	KOSSOW ROAD	54+10	RT	--	--
R-11	NOT USED	--	--	--	--
R-12	KOSSOW ROAD	57+60	LT	1	1
S-1	USH 18	212+46	LT	1	2
S-2	USH 18	214+98	LT	1	1
S-3	USH 18	215+21	LT	1	1
S-4	USH 18	216+01	RT	1	1
S-5	USH 18	216+63	LT	1	1
S-6	USH 18	212+37	RT	1	1
S-7	USH 18	212+47	RT	1	2
S-8	USH 18	212+47	RT	--	--
S-9	USH 18	214+56	RT	1	2
S-10	USH 18	216+01	RT	1	2
S-11	USH 18	216+01	RT	1	2
T-1	USH 18	218+54	LT	1	1
T-2	USH 18	218+54	LT	1	1
T-3	USH 18	223+64	RT	1	--
T-4	USH 18	218+31	RT	1	1
T-5	USH 18	222+54	RT	1	1
T-6	USH 18	223+50	RT	1	--
T-7	USH 18	223+83	RT	1	1
T-8	USH 18	221+25	LT	1	1
T-9	USH 18	222+59	LT	1	1
T-10	USH 18	223+01	LT	1	1
T-11	USH 18	223+22	LT	1	1
U-1	USH 18	225+86	RT	1	1
U-2	USH 18	226+09	RT	1	2
	PROJECT TOTALS			274	242

OVERHEAD SIGN SUPPORTS

LOCATION	DIRECTION	641.8100.01 OVERHEAD SIGN SUPPORT (S-67-950) LS	641.8100.02 OVERHEAD SIGN SUPPORT (S-67-951) LS	641.8100.03 OVERHEAD SIGN SUPPORT (S-67-970) LS
STA. 220+50	EB	1	-	-
STA. 202+25	EB	-	1	-
STA. 133+50	WB	-	-	1
	PROJECT TOTAL	1	1	1

FIELD OFFICE TYPE B

LOCATION	642.5001 EACH
PROJECT 2200-16-71	1
PROJECT TOTAL	1

TRAFFIC CONTROL
SURVEILLANCE & MAINTENANCE
2200-16-71

STREET	643.0200 DAYS
PROJECT 2200-16-71	180
	180

ALL QUANTITIES ARE CATEGORY 10 UNLESS OTHERWISE NOTED

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\030201_mq.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 40.0000 sf / in.
WISDOT/CADDS SHEET 43

TRAFFIC CONTROL

LOCATION	DAYS	643.0300 TRAFFIC CONTROL DRUMS DRUM	643.0300 DAYS	643.0410 TRAFFIC CONTROL BARRICADES TYPE II EACH	643.0410 DAYS	643.0420 TRAFFIC CONTROL BARRICADES TYPE III EACH	643.0420 DAYS	643.0500 TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS EACH	643.0600 TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER BASES EACH	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A EACH	643.0705 DAYS	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C EACH	643.0715 DAYS	643.0800 TRAFFIC CONTROL ARROW BOARDS EACH	643.0800 DAYS	643.0900 TRAFFIC CONTROL SIGNS EACH	643.0900 DAYS	643.0910 TRAFFIC CONTROL COVERING SIGNS TYPE I EACH	643.0920 TRAFFIC CONTROL COVERING SIGNS TYPE II EACH	643.1000 TRAFFIC CONTROL SIGNS FIXED MESSAGE SF	643.3000 TRAFFIC CONTROL DETOUR SIGNS EACH	643.3000 DAYS
PRE-STAGE A																						
USH 18																						
STA 110+00 - 143+00	3	50	150	--	--	5	15	--	--	30	90	15	45	--	--	22	66	--	--	--	--	--
SUBTOTAL			150				15				90		45				66					
PRE-STAGE B																						
USH 18																						
STA 110+00 - 143+00	19	91	1,729	13	247	11	209	9	9	54	1,026	27	513	--	--	43	817	--	2	13.75	--	--
STA 143+00 - 160+00	19	--	--	--	--	--	--	--	--	--	--	--	--	--	--	11	209	--	--	13.75	--	--
SUBTOTAL			1,729		247		209	9	9		1,026		513				1,026		2	27.50		
PRE-STAGE C																						
USH 18																						
STA 110+00 - 143+00	14	107	1,498	13	182	11	154	9	9	52	728	26	364	--	--	43	602	--	2	--	--	--
STA 143+00 - 160+00	14	--	--	--	--	--	--	--	--	--	--	--	--	--	--	11	154	--	--	--	--	--
SUBTOTAL			1,498		182		154	9	9		728		364				756		2			
STAGE 1																						
USH 18																						
STA 110+00 - 143+00	76	136	10,336	--	--	13	988	--	--	38	2,888	19	1,444	--	--	34	2,584	--	--	31.5	--	--
STA 143+00 - 160+00	76	120	9,120	--	--	9	684	--	--	34	2,584	17	1,292	--	--	24	1,824	--	--	15	--	--
STA 160+00 - 173+00	76	115	8,740	--	--	7	532	--	--	16	1,216	8	608	--	--	22	1,672	--	--	--	--	--
STA 173+00 - 184+00	76	119	9,044	--	--	6	456	--	--	44	3,344	22	1,672	1	76	16	1,216	--	--	--	--	--
STA 184+00 - 197+00	76	91	6,916	--	--	8	608	--	--	14	1,064	7	532	--	--	20	1,520	--	--	--	--	--
STA 197+00 - 208+00	76	76	5,776	--	--	6	456	--	--	22	1,672	11	836	--	--	17	1,292	--	--	--	--	--
STA 208+00 - 268+00	76	227	17,252	--	--	16	1,216	--	--	74	5,624	37	2,812	3	228	42	3,192	--	--	75	--	--
SUBTOTAL			67,184				4,940				18,392		9,196		304		13,300			121.5		
STAGE 2																						
USH 18																						
STA 110+00 - 143+00	68	110	7,480	--	--	3	204	--	--	16	1,088	8	544	--	--	32	2,176	--	--	--	--	--
STA 143+00 - 160+00	68	96	6,528	--	--	4	272	--	--	16	1,088	8	544	--	--	15	1,020	--	--	--	--	--
STA 160+00 - 173+00	68	70	4,760	--	--	2	136	--	--	2	136	1	68	--	--	12	816	--	--	--	--	--
STA 173+00 - 184+00	68	93	6,324	--	--	4	272	--	--	22	1,496	11	748	1	68	11	748	--	--	--	--	--
STA 184+00 - 197+00	68	79	5,372	--	--	2	136	--	--	22	1,496	11	748	--	--	11	748	--	--	--	--	--
STA 197+00 - 208+00	68	91	6,188	--	--	2	136	--	--	4	272	2	136	--	--	4	272	--	--	--	--	--
STA 208+00 - 268+00	68	233	15,844	--	--	7	476	--	--	88	5,984	44	2,992	1	68	37	2,516	1	--	--	55	165
SUBTOTAL			52,496				1,632				11,560		5,780		136		8,296	1				165

ALL QUANTITIES ARE CATEGORY 10 UNLESS OTHERWISE NOTED

TRAFFIC CONTROL

LOCATION	DAYS	643.0300 TRAFFIC CONTROL DRUMS DRUM	643.0300 DAYS	643.0410 TRAFFIC CONTROL BARRICADES TYPE II EACH	643.0410 DAYS	643.0420 TRAFFIC CONTROL BARRICADES TYPE III EACH	643.0420 DAYS	643.0500 TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS EACH	643.0600 TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER BASES EACH	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A EACH	643.0705 DAYS	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C EACH	643.0715 DAYS	643.0800 TRAFFIC CONTROL ARROW BOARDS EACH	643.0800 DAYS	643.0900 TRAFFIC CONTROL SIGNS EACH	643.0900 DAYS	643.0910 TRAFFIC CONTROL COVERING SIGNS TYPE I EACH	643.0920 TRAFFIC CONTROL COVERING SIGNS TYPE II EACH	643.1000 TRAFFIC CONTROL SIGNS FIXED MESSAGE SF	643.3000 TRAFFIC CONTROL DETOUR SIGNS EACH	643.3000 DAYS
STAGE 2A																						
STH 164	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	6	12	--	--	--	--	--
SPRINGDALE ROAD	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	6	12	--	--	--	--	--
PARKLAWN DRIVE	14	9	126	--	--	6	84	--	--	10	140	5	70	--	--	16	224	--	--	--	--	--
KOSSOW ROAD	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	10	20	--	--	--	--	--
SUBTOTAL			126				84				140		70				268					
STAGE 2B																						
STH 164	10	40	400	10	100	2	20	--	--	2	20	1	10	--	--	24	240	--	2	--	--	--
SPRINGDALE ROAD	2	2	4	1	2	--	--	--	--	--	--	--	--	--	--	5	10	--	--	--	--	--
PARKLAWN DRIVE	14	11	154	--	--	4	56	--	--	--	--	--	--	--	--	16	224	--	--	--	--	--
KOSSOW ROAD	21	16	336	1	21	--	--	--	--	--	--	--	--	--	--	12	252	--	--	--	--	--
SUBTOTAL			894		123		76				20		10				726		2			
STAGE 2C																						
STH 164	10	10	100	10	100	1	10	--	--	--	--	--	--	--	--	21	210	--	1	--	--	--
SPRINGDALE ROAD	14	6	84	1	14	7	98	--	--	4	56	2	28	--	--	15	210	--	--	--	--	--
KOSSOW ROAD	21	77	1,617	3	63	6	126	--	--	26	546	13	273	--	--	19	399	--	--	--	--	--
SUBTOTAL			1,801		177		234				602		301				819		1			
STAGE 2D																						
SPRINGDALE ROAD	10	18	180	--	--	4	40	--	--	--	--	--	--	--	--	12	120	--	--	--	--	--
KOSSOW ROAD	10	54	540	--	--	1	10	--	--	--	--	--	--	--	--	12	120	--	--	--	--	--
															--							
SUBTOTAL			720				50										240					
PROJECT TOTAL			126598		729		7394	18	18		32558		16279		440		25497	1	7	149		165

ALL QUANTITIES ARE CATEGORY 10 UNLESS OTHERWISE NOTED

LOCATION	646.0600 REMOVING PAVEMENT MARKINGS LF	649.0403 TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (WHITE) LF	649.0403 TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (YELLOW) LF	649.0400 TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE) LF	649.0400 TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW) LF	649.0803 TEMPORARY PAVEMENT MARKING EPOXY 8-INCH LF	649.0801 TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH LF	649.0900 TEMPORARY PAVEMENT MARKING STOP LINE 12-INCH LF	649.1000 TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 12-INCH LF
LOCATION	MARKINGS LF	(WHITE) LF	(YELLOW) LF	TAPE 4-INCH (WHITE) LF	TAPE 4-INCH (YELLOW) LF	8-INCH LF	TAPE 8-INCH LF	12-INCH LF	REMOVABLE TAPE 12-INCH LF
PRE-STAGE A									
USH 18									
STA 110+00 - 143+00	328	--	--	--	--	--	56	--	--
SUBTOTAL	328						56		
PRE-STAGE B									
USH 18									
STA 110+00 - 143+00	225	512	608	975	72	--	--	--	--
SUBTOTAL	225	512	608	975	72				
PRE-STAGE C									
USH 18									
STA 110+00 - 143+00	731	671	--	325	109	--	--	--	--
SUBTOTAL	731	671		325	109				
STAGE 1									
USH 18									
STA 110+00 - 143+00	1,628	839	--	--	225	741	--	--	93
STA 143+00 - 160+00	1,025	788	--	--	--	739	--	--	35
STA 160+00 - 173+00	875	644	--	--	--	715	--	--	--
STA 173+00 - 184+00	2,369	506	--	529	--	809	--	--	39
STA 184+00 - 197+00	3,077	1,238	--	--	--	777	--	--	36
STA 197+00 - 208+00	3,211	1,100	--	--	--	475	--	--	20
STA 208+00 - 268+00	7,436	1,887	--	395	810	836	--	--	22
SUBTOTAL	19,621	7,002		924	1,035	5,092			245
STAGE 2									
USH 18									
STA 110+00 - 143+00	--	--	--	--	--	--	--	--	--
STA 143+00 - 160+00	125	--	--	--	--	46	--	--	--
STA 160+00 - 173+00	--	--	--	--	--	--	--	--	--
STA 173+00 - 184+00	249	--	--	1,317	--	125	50	--	--
STA 184+00 - 197+00	--	--	--	575	--	--	--	--	--
STA 197+00 - 208+00	754	--	--	550	--	--	--	--	--
STA 208+00 - 268+00	1,493	--	--	1,349	--	212	--	--	--
SUBTOTAL	2,621			3,791		383	50		

ALL QUANTITIES ARE CATEGORY 10 UNLESS OTHERWISE NOTED

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\030201_mq.dgn PLOT DATE : 11/5/2015 PLOT BY : $$...plotuser...$$ PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 43

3

TRAFFIC CONTROL

LOCATION	646.0600 REMOVING PAVEMENT MARKINGS LF	649.0403 TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (WHITE) LF	649.0403 TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (YELLOW) LF	649.0400 TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE) LF	649.0400 TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW) LF	649.0803 TEMPORARY PAVEMENT MARKING EPOXY 8-INCH LF	649.0801 TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH LF	649.0900 TEMPORARY PAVEMENT MARKING STOP LINE 12-INCH LF	649.1000 TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 12-INCH LF
STAGE 2A									
PARKLAWN DRIVE	--	140	140	--	195	--	--	11	--
SUBTOTAL		140	140		195			11	
STAGE 2B									
STH 164	1,188	--	--	346	342	--	--	--	--
AVALON DRIVE	162	--	--	--	--	--	--	--	--
RAMONA ROAD	84	--	--	--	--	--	--	--	--
E MAIN STREET	861	--	--	--	--	--	--	--	--
PARKLAWN DRIVE	--	--	--	--	--	--	--	--	16
KOSSOW ROAD	1,182	72	72	--	--	--	--	32	--
SUBTOTAL	3,477	72	72	346	342			32	16
STAGE 2C									
JENNIFER LANE	151	--	--	--	--	--	--	--	--
STH 164	25	--	--	--	--	--	--	--	--
SPRINGDALE ROAD	--	231	332	411	--	113	--	22	--
KOSSOW ROAD	1,291	845	1,647	827	1,259	558	50	44	--
SUBTOTAL	1,467	1,076	1,979	1,238	1,259	671	50	66	
STAGE 2D									
STH 164	267	--	--	--	--	--	--	--	--
SPRINGDALE ROAD	--	--	--	--	594	--	49	--	26
KOSSOW ROAD	--	--	--	--	1,343	--	553	--	22
SUBTOTAL	267				1,937		602		48
PROJECT TOTAL	28737	9473	2799	7599	4949	6146	758	109	309
TOTAL:		12272		12548					

ALL QUANTITIES ARE CATEGORY 10 UNLESS OTHERWISE NOTED

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\030201_mq.dgn PLOT DATE : 11/5/2015 PLOT BY : $$...plotuser...$$ PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 43

PAVEMENT MARKING

STREET	LOCATION			646.0106 EPOXY 4-INCH WHITE LF	646.0106 EPOXY 4-INCH YELLOW LF	646.0136 EPOXY 12-INCH WHITE LF	646.0841.S GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH LF	646.0843.S GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH LF	646.0881.S GROOVED WET REFLECTIVE TAPE 4-INCH LF	646.0883.S GROOVED WET REFLECTIVE TAPE 8-INCH LF	647.0606 ISLAND NOSE EPOXY EACH	647.0706 DIAGONAL EPOXY 6-INCH WHITE LF	647.0726 DIAGONAL EPOXY 12-INCH WHITE LF	647.0726 DIAGONAL EPOXY 12-INCH YELLOW LF
USH 18	BEG PROJECT	-	STH 164	2625	3501	-	144	549	2469	2368	5	-	89	-
USH 18	STH 164	-	AVALON DR	2424	3516	-	-	69	1903	1833	3	-	135	-
USH 18	AVALON DR	-	E. MAIN ST	1943	2741	-	-	-	1519	1810	4	-	38	-
USH 18	E. MAIN ST	-	SPRINGDALE RD	1723	1848	-	-	34	1304	2844	2	-	345	-
USH 18	SPRINGDALE RD	-	PARKLAWN DR	2235	2381	-	-	66	1761	1491	4	-	568	-
USH 18	PARKLAWN DR	-	KOSSOW RD	1411	1880	-	-	-	1736	1743	2	-	182	-
USH 18	KOSSOW RD	-	END PROJECT	4463	4556	-	-	51	2381	3589	1	-	502	-
MANHATTAN DR	47+18	-	USH 18	-	432	-	-	127	-	92	-	-	-	-
MANHATTAN DR	USH 18	-	52+00	-	274	42	-	21	-	74	-	191	-	-
STH 164	282+74	-	USH 18	-	-	-	-	-	81	1155	1	-	34	-
WOLF RD	USH 18	-	NORTH	-	310	-	-	-	-	310	-	-	-	-
AVALON DR	USH 18	-	NORTH	-	-	-	-	-	-	-	-	-	-	-
E. MAIN ST	SOUTH	-	USH 18	-	374	-	-	-	68	188	-	-	-	-
STARDUST DR	USH 18	-	NORTH	-	324	-	-	-	41	183	-	-	-	-
SPRINGDALE RD	USH 18	-	53+50	-	-	-	-	-	210	422	2	-	-	-
PARKLAWN CT	46+22	-	USH 18	-	1094	-	-	-	71	116	-	-	-	56
PARKLAWN DR	USH 18	-	52+15	-	-	-	-	-	125	125	2	-	-	-
SWENSON DR	42+62	-	USH 18	-	1564	98	-	-	280	581	2	392	-	50
KOSSOW RD	96+77	-	SWENSON DR	-	549	-	-	-	-	85	-	-	-	-
KOSSOW RD	USH 18	-	59+58	-	1001	-	-	-	588	1003	4	-	38	60
ABBOTT DR	16+43	-	KOSSOW RD	-	614	-	-	-	-	128	-	-	-	-
			SUBTOTAL	16,824	26,959	140	144	917	14,537	20,140	32	583	1,931	166
			CATEGORY 0010 TOTAL	43,783		140	144	917	14,537	20,140	32	583	2,097	

SAWING ASPHALT

STREET	STATION		TO STATION	690.0150 LF
USH 18	121+00	-	143+00	350
USH 18	143+00	-	160+00	219
USH 18	160+00	-	173+00	277
USH 18	173+00	-	184+00	101
USH 18	184+00	-	197+00	813
USH 18	197+00	-	208+00	896
USH 18	208+00	-	242+00	527
KOSSOW ROAD	51+00	-	59+50	1,229
SWENSON DRIVE	42+00	-	49+00	2,202
			PROJECT TOTAL	6,614

SAWING CONCRETE

STREET	STATION		TO STATION	690.0250 LF
USH 18	121+00	-	143+00	2,204
USH 18	143+00	-	160+00	3,557
USH 18	160+00	-	173+00	2,714
USH 18	173+00	-	184+00	1,416
USH 18	184+00	-	197+00	1,938
USH 18	197+00	-	208+00	2,112
USH 18	208+00	-	242+00	2,650
KOSSOW ROAD	51+00	-	59+50	0
SWENSON DRIVE	42+00	-	49+00	0
			PROJECT TOTAL	16,590

CONSTRUCTION STAKING MAINLINE ITEMS

ITEM	QUANTITY	UNIT	DESCRIPTION	CATEGORY
650.4000	122	EACH	CONSTRUCTION STAKING STORM SEWER	0010
650.4500	6,504	LF	CONSTRUCTION STAKING SUBGRADE	0010
650.5000	11,863	LF	CONSTRUCTION STAKING BASE	0010
650.5500	28,844	LF	CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER	0010
650.7000	471	LF	CONSTRUCTION STAKING CONCRETE PAVEMENT	0010
650.8000	11,371	LF	CONSTRUCTION STAKING RESURFACING REFERENCE	0010
650.8500	1	LS	CONSTRUCTION STAKING ELECTRICAL INSTALLATIONS (2200-16-71)	0010
650.9910	1	LS	CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (2200-16-71)	0010
650.9920	11,611	LF	CONSTRUCTION STAKING SLOPE STAKES	0010

ALL QUANTITIES ARE CATEGORY 10 UNLESS OTHERWISE NOTED

PAVEMENT MARKING

STREET	LOCATION			SPV.0060.13 GROOVED PREFORMED THERMOPLASTIC, ARROWS TYPE 2 EACH	SPV.0060.14 GROOVED PREFORMED THERMOPLASTIC, ARROWS TYPE 3 EACH	SPV.0060.15 GROOVED PREFORMED THERMOPLASTIC, WORDS EACH	SPV.0090.03 GROOVED PREFORMED THERMOPLASTIC, CROSSWALK, 6-INCH LF	SPV.0090.04 GROOVED PREFORMED THERMOPLASTIC, STOP BAR, 18-INCH LF
USH 18	BEG PROJECT	-	STH 164	9	-	8	690	178
USH 18	STH 164	-	AVALON DR	6	-	6	386	87
USH 18	AVALON DR	-	E. MAIN ST	4	-	4	349	72
USH 18	E. MAIN ST	-	SPRINGDALE RD	10	-	10	544	133
USH 18	SPRINGDALE RD	-	PARKLAWN DR	4	-	2	512	153
USH 18	PARKLAWN DR	-	KOSSOW RD	-	-	-	517	118
USH 18	KOSSOW RD	-	END PROJECT	-	-	-	369	97
MANHATTAN DR	47+18	-	USH 18	3	-	1	133	25
MANHATTAN DR	USH 18	-	52+00	2	-	-	100	24
STH 164	282+74	-	USH 18	6	-	6	201	63
WOLF RD	USH 18	-	NORTH	4	-	2	115	33
AVALON DR	USH 18	-	NORTH	-	-	-	86	22
E. MAIN ST	SOUTH	-	USH 18	1	1	-	144	28
STARDUST DR	USH 18	-	NORTH	2	1	1	138	38
SPRINGDALE RD	USH 18	-	53+50	4	2	2	297	39
PARKLAWN CT	46+22	-	USH 18	1	1	1	150	32
PARKLAWN DR	USH 18	-	52+15	2	1	1	136	30
SWENSON DR	42+62	-	USH 18	6	-	6	180	38
KOSSOW RD	96+77	-	SWENSON DR	2	-	-	-	26
KOSSOW RD	USH 18	-	59+58	10	-	8	640	78
ABBOTT DR	16+43	-	KOSSOW RD	2	2	1	107	29
			SUBTOTAL	78	8	59	5,794	1,343
			CATEGORY 0010 TOTAL	78	8	59	5,794	1,343

WALL MODULAR BLOCK GRAVITY LRFD

STREET	FROM	TO	SPV.0165.01 SF
SPRINGDALE ROAD	50+92	51+60	252
		TOTAL	252

STAMPED COLORED CONCRETE SIDEWALK 5-INCH

STREET	FROM	TO	SPV.0165.03 SF
USH 18	122+50	124+75	1898
		TOTAL	1898

LONGITUDINAL JOINT REPAIR

STREET	FROM STATION		TO STATION	SPV.0090.05 LF
USH 18	121+00	-	143+00	500
USH 18	143+00	-	160+00	579
USH 18	160+00	-	173+00	191
USH 18	173+00	-	184+00	498
USH 18	184+00	-	197+00	251
USH 18	197+00	-	208+00	701
USH 18	208+00	-	242+00	943
KOSSOW ROAD	51+00	-	59+50	0
SWENSON DRIVE	42+00	-	49+00	0
			PROJECT TOTAL	3,664

RECONSTRUCT CONCRETE HEADWALL

STREET	LOCATION	SPV.0105.01 LS
USH 18	STA. 205+50, 85' RT	1
	PROJECT TOTAL	1

REMOVING CONCRETE GUTTER SURFACE PARTIAL DEPTH

STREET	FROM		TO	SPV.0165.02 SF
USH 18	121+00	-	143+00	5,914
USH 18	143+00	-	160+00	4,870
USH 18	160+00	-	173+00	4,080
USH 18	173+00	-	184+00	3,592
USH 18	184+00	-	197+00	4,466
USH 18	197+00	-	208+00	2,718
USH 18	208+00	-	242+00	3,142
KOSSOW ROAD	51+00	-	59+50	0
SWENSON DRIVE	42+00	-	49+00	0
			PROJECT TOTAL	28,782

ALL QUANTITIES ARE CATEGORY 10 UNLESS OTHERWISE NOTED

3

REMOVING CONCRETE BASES

EXISTING BASE NO.	STATION	LOCATION	204.0195 REMOVING CONCRETE BASES EACH
CB1	124+44.3	87.9' RT	1
SB1	124+64.3	50.4' RT	1
SB2	124+61.7	1.5' LT	1
SB3	124+65.6	46.2' LT	1
SB4	124+82.2	57.8' LT	1
SB5	125+47.8	48.1' LT	1
SB6	125+52.4	8.1' LT	1
SB8	125+39.3	57.1' RT	1
SB9	125+35.7	59.9' RT	1
		*** TOTAL	9

*** QUANTITIES LISTED ELSEWHERE

CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH
CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH

FROM	TO	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH L.F.	652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH L.F.
CB1	PB1		45
PB1	PB2		54
PB2	PB3		104
PB3	PB4		92
PB4	PB5		108
PB5	PB6		190
PB6	PB7		35
PB6	PB8		140
PB8	PB9		52
PB9	PB10		104
PB10	PB11		48
PB11	PB12		32
PB11	PB13		228
PB13	CB1		33
PB1	PB14	268	
PB2	SB1	14	
PB2	SB2		31
PB3	SB3		14
PB4	SB4	14	
PB4	SB5	27	
PB5	SB6	10	
PB7	SB7	8	
PB7	SB8		18
PB8	SB9	7	
PB8	SB10	33	
PB9	SB11	5	
PB10	SB12		9
PB12	SB13	7	
PB12	SB14	17	
	*** TOTALS	410	1337

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

INTERSECTION OF
USH 18 & MANHATTAN DRIVE
ALL ITEMS ARE CATEGORY 0020

3

PULL BOXES STEEL 24X36-INCH
PULL BOXES STEEL 24X42-INCH

PULL BOX NO.	STATION	LOCATION	653.0135 PULL BOXES STEEL 24X36-INCH EACH	653.0140 PULL BOXES STEEL 24X42-INCH EACH
PB1	124+42.9	77.3' RT		1
PB2	124+44.0	51.2' RT		1
PB3	124+46.1	0.0' RT		1
PB4	124+47.9	45.3' LT		1
PB5	124+84.7	77.2' LT		1
PB6	125+77.6	76.1' LT		1
PB7	125+55.4	50.5' LT		1
PB8	125+77.6	6.7' LT		1
PB9	125+77.6	18.5' RT		1
PB10	125+77.6	69.6' RT		1
PB11	125+61.6	87.4' RT		1
PB12	125+36.32	68.6' RT		1
PB13	124+46.5	88.5' RT		1
PB14	121+77.5	40.57' RT	1	
		*** TOTAL	1	13

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD
*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

REMOVING PULL BOXES

PULL BOX NO.	STATION	LOCATION	653.0905 REMOVING PULL BOXES EACH
PB1	124+47.1	76.7' RT	1
PB2	122+63.0	42.2' RT	1
PB3	124+62.7	55.3' RT	1
PB4	124+52.1	0.0' LT	1
PB5	124+60.5	42.4' LT	1
PB6	124+84.1	67.6' LT	1
PB7	52+46.7	21.4' LT	1
PB8	125+39.7	46.1' LT	1
PB9	125+91.7	7.9' LT	1
PB10	125+90.8	19.0' RT	1
PB11	128+43.6	2.4' RT	1
PB12	125+53.8	52.8' RT	1
PB13	125+38.3	61.8' RT	1
PB14	47+59.8	28.3' LT	1
PB15	125+66.3	7.7' RT	1
PB16	125+94.3	8.2' RT	1
PB17	126+25.0	8.5' RT	1
PB18	124+42.7	42.0' LT	1
		*** TOTAL	18

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

SHEET 1 OF 6

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	MISCELLANEOUS QUANTITIES	SHEET 452	E

CONCRETE BASES TYPE 1
CONCRETE BASES TYPE 2
CONCRETE BASES TYPE 5
CONCRETE BASES TYPE 10
CONCRETE BASES TYPE 13
CITY OF WAUKESHA CONCRETE CONTROL CABINET BASES TYPE 9 SPECIAL

BASE NO.	STATION	LOCATION	654.0101 CONCRETE BASES TYPE 1 EACH	654.0102 CONCRETE BASES TYPE 2 EACH	654.0105 CONCRETE BASES TYPE 5 EACH	654.0110 CONCRETE BASES TYPE 10 EACH	654.0113 CONCRETE BASES TYPE 13 EACH	SPV.0060.51 CITY OF WAUKESHA CONCRETE CONTROL CABINET BASES TYPE 9 SPECIAL EACH
CB1	124+35.8	89.8' RT						1
SB1	124+57.3	51.3' RT	1					
SB2	124+73.4	60.0' RT				1		
SB3	124+60.0	2.5' LT				1		
SB4	124+61.2	47.1' LT	1					
SB5	124+72.0	56.8' LT	1					
SB6	124+83.2	67.8' LT	1					
SB7	125+47.7	50.9' LT	1					
SB8	125+38.6	55..9' LT				1		
SB9	125+71.6	7.9' LT			1			
SB10	125+44.7	7.3' LT	1					
SB11	125+81.9	18.6' RT		1				
SB12	125+85.7	67.7' RT					1	
SB13	125+36.1	61.7' RT	1					
SB14	125+43.5	53.6' RT	1					
		*** TOTALS	8	1	1	3	1	1

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD
*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

CABLE TYPE UF 2-10 AWG
ELECTRICAL WIRE LIGHTING 12 AWG

		655.0315 CABLE TYPE UF 2-10 AWG (W/ GROUND) L.F.	655.0610 ELECTRICAL WIRE LIGHTING 12 AWG L.F.
CB1	SB2	96	
SB2	LUMIN		123
SB2	SB3	117	
SB3	LUMIN		246
CB1	SB12	187	
SB12	LUMIN		123
SB12	SB9	120	
SB9	LUMIN		246
SB9	SB8	156	
SB8	LUMIN		123
	*** TOTALS	676	861

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

INTERSECTION OF
USH 18 & MANHATTAN DRIVE
ALL ITEMS ARE CATEGORY 0020

3

CABLE TRAFFIC SIGNAL 5-14 AWG
CABLE TRAFFIC SIGNAL 7-14 AWG
CABLE TRAFFIC SIGNAL 12-14 AWG

FROM	TO	655.0230 CABLE TRAFFIC SIGNAL 5-14 AWG L.F.	655.0240 CABLE TRAFFIC SIGNAL 7-14 AWG L.F.	655.0260 CABLE TRAFFIC SIGNAL 12-14 AWG L.F.
CB1	SB1			79
SB1	HEAD 1	21		
SB1	HEAD 9		21	
SB1	HEAD 21	14		
CB1	SB2			96
SB2	HEAD 17	45		
SB2	HEAD 18	21		
SB2	HEAD 20		53	
SB2	HEAD 28	14		
CB1	SB3			137
SB4	HEAD 7	53		
SB4	HEAD 8	41		
SB3	HEAD 10		21	
CB1	SB4			189
SB4	HEAD 22	14		
CB1	SB5		202	
SB5	HEAD 23	14		
CB1	SB6			245
SB6	HEAD 14		21	
SB6	HEAD 16	21		
CB1	SB7			385
SB7	HEAD 6	21		
SB7	HEAD 25	14		
CB1	SB8			395
SB8	HEAD 12	44		
SB8	HEAD 13	21		
SB8	HEAD 15		52	
SB8	HEAD 24	14		
CB1	SB10			301
SB10	HEAD 4		22	
CB1	SB11			301
SB11	HEAD 5		22	
CB1	SB12		187	
SB12	HEAD 2	63		
SB12	HEAD 3	52		
CB1	SB13			193
SB13	HEAD 11	21		
SB13	HEAD 19		21	
SB13	HEAD 27	14		
CB1	SB14		203	
SB14	HEAD 26	14		
	*** TOTALS	536	825	2321

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

SHEET 2 OF 6

ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG

FROM	TO	655.0515 ELETRICAL WIRE TRAFFIC SIGNALS 10 AWG L.F.
CB1	SB1	74
SB1	SB2	59
SB2	SB3	117
SB3	SB4	94
SB4	SB5	55
SB5	SB6	111
SB6	SB7	174
SB7	SB8	40
SB8	SB10	182
SB10	SB11	84
SB11	SB12	86
SB12	SB13	98
SB13	SB13	38
SB14	CB1	203
PB1	CB1	28
PB2	SB1	24
PB3	SB3	24
PB4	SB4	24
PB5	SB6	20
PB6	SB7	59
PB7	SB7	18
PB8	SB9	17
PB9	SB11	15
PB10	SB12	19
PB11	SB12	49
PB12	SB13	17
PB13	CB1	30
*** TOTAL		1759

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

TRAFFIC SIGNAL EVP DETECTOR CABLE
TYPE UF CABLE, 2 CONDUCTOR NO. 14

FROM	TO	655.0900 TRAFFIC SIGNAL EVP DETECTOR CABLE L.F.	SPV.0090.50 TYPE UF CABLE 2 CONDUCTOR NO. 14 L.F.
CB1	SB3 (HEAD A)	226	226
CB1	SB12 (HEAD B)	230	230
CB1	SB2 (HEAD C)	134	134
CB1	SB8 (HEAD D)	430	430
*** TOTAL		1,020	1,020

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

INTERSECTION OF
USH 18 & MANHATTAN DRIVE
ALL ITEMS ARE CATEGORY 0020

ELECTRICAL SERVICE METER BREAKER PEDESTAL,
USH 18 & MANHATTAN DRIVE

BASE NO.	656.0200.01 ELECTRICAL SERVICE METER BREAKER PEDESTAL L.S.
CB1	1
TOTAL	1

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD

SIGNAL MOUNTING HARDWARE
USH 18 & MANHATTAN DRIVE

LOCATION	658.5069.01 SIGNAL MOUNTING HARDWARE L.S.
USH 18 & MANHATTAN DRIVE	1
TOTAL	1

TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS, USH 18 & MANHATTAN DRIVE
GENERATORS
TEMPORARY INFRARED EVP SYSTEM, USH 18 & MANHATTAN DRIVE
TEMPORARY VEHICLE DETECTION SYSTEM, USH18 & MANHATTAN DRIVE

LOCATION	661.0200.01 TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS L.S.	661.0300 GENERATORS DAYS	SPV.0105.79 TEMPORARY INFRARED EVP SYSTEM L.S.	SPV.0105.84 TEMPORARY VEHICLE DETECTION SYSTEM L.S.
USH 18 & MANHATTAN DRIVE	1	2	1	1
*** TOTALS	1	2	1	1

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

3

3

TRAFFIC SIGNAL FACE 3-12 INCH VERTICAL
TRAFFIC SIGNAL FACE 4-12 INCH VERTICAL
BACKPLATES SIGNAL FACE 3 SECTION 12-INCH
BACKPLATES SIGNAL FACE 4 SECTION 12-INCH
PEDESTRIAN SIGNAL FACE 16-INCH
LED MODULES 12-INCH RED BALL
LED MODULES 12-INCH YELLOW BALL
LED MODULES 12-INCH GREEN BALL
LED MODULES 12-INCH RED ARROW
LED MODULES 12-INCH YELLOW ARROW
LED MODULES 12-INCH GREEN ARROW
LED MODULES PEDESTRIAN COUNTDOWN TIMER 16-INCH

SIGNAL HEAD NO.	SIGNAL BASE NO.	658.0110 TRAFFIC SIGNAL FACE 3-12 INCH VERTICAL EACH	658.0115 TRAFFIC SIGNAL FACE 4-12 INCH VERTICAL EACH	658.0215 BACKPLATES SIGNAL FACE 3 SECTION 12-INCH EACH	658.0220 BACKPLATES SIGNAL FACE 4 SECTION 12-INCH EACH	658.0416 PEDESTRIAN SIGNAL FACE 16-INCH EACH	658.0600 LED MODULES 12-INCH RED BALL EACH	658.0605 LED MODULES 12-INCH YELLOW BALL EACH	658.0610 LED MODULES 12-INCH GREEN BALL EACH	658.0615 LED MODULES 12-INCH RED ARROW EACH	658.0620 LED MODULES 12-INCH YELLOW ARROW EACH	658.0625 LED MODULES 12-INCH GREEN ARROW EACH	658.0635 LED MODULES PEDESTRIAN COUNTDOWN TIMER 16-INCH EACH
1	SB1	1		1			1	1	1				
2	SB12	1		1			1	1	1				
3	SB12	1		1			1	1	1				
4	SB10		1		1					1	2	1	
5	SB11		1		1					1	2	1	
6	SB7	1		1			1	1	1				
7	SB3	1		1			1	1	1				
8	SB3	1		1			1	1	1				
9	SB1		1		1					1	2	1	
10	SB3		1		1					1	2	1	
11	SB13	1		1			1	1	1				
12	SB8	1		1			1	1	1				
13	SB8	1		1			1	1	1				
14	SB6	1		1						1	2		
15	SB8	1		1						1	2		
16	SB6	1		1			1	1	1				
17	SB2	1		1			1	1	1				
18	SB2	1		1			1	1	1				
19	SB13	1		1						1	2		
20	SB2	1		1						1	2		
21	SB1					1							1
22	SB4					1							1
23	SB5					1							1
24	SB8					1							1
25	SB7					1							1
26	SB14					1							1
27	SB13					1							1
28	SB2					1							1
	*** TOTALS	16	4	16	4	8	12	12	12	8	16	4	8

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

INTERSECTION OF
USH 18 & MANHATTAN DRIVE
ALL ITEMS ARE CATEGORY 0020

PEDESTAL BASES
TRANSFORMER BASES BREAKAWAY 11 1/2 INCH BOLT CIRCLE
POLES TYPE 2
POLES TYPE 5 ALUMINUM
TRAFFIC SIGNAL STANDARDS ALUMINUM 10-FT
TRAFFIC SIGNAL STANDARDS ALUMINUM 15-FT
LUMINAIRE ARMS SINGLE MEMBER 4-INCH CLAMP 8-FT
INSTALL POLES TYPE 10
INSTALL POLES TYPE 13
INSTALL MONOTUBE ARMS 30-FT
INSTALL MONOTUBE ARMS 40-FT
INSTALL LUMINAIRE ARMS STEEL 15-FT
PEDESTRIAN PUSH BUTTONS, SPECIAL
LUMINAIRES UTILITY LED C

SIGNAL BASE NO.	657.0100 PEDESTAL BASES EACH	657.0255 TRANSFORMER BASES BREAKAWAY 11 1/2 INCH BOLT CIRCLE EACH	657.0305 POLES TYPE 2 EACH	657.0322 POLES TYPE 5 ALUMINUM EACH	657.0430 TRAFFIC SIGNAL STANDARDS ALUMINUM 10-FT EACH	657.0425 TRAFFIC SIGNAL STANDARDS ALUMINUM 15-FT EACH	657.0615 LUMINAIRE ARMS SINGLE MEMBER 4 1/2-INCH CLAMP 8-FT EACH	657.1350 INSTALL POLES TYPE 10 EACH	657.1355 INSTALL POLES TYPE 13 EACH	657.1530 INSTALL MONOTUBE ARMS 30-FT EACH	657.1540 INSTALL MONOTUBE ARMS 40-FT EACH	657.1808 INSTALL LUMINAIRE ARMS STEEL 8-FT EACH	SPV.0060.52 PEDESTRIAN PUSH BUTTONS SPECIAL EACH	659.1125 LUMINAIRES UTILITY LED C EACH
SB1	1					1							1	
SB2								1		1		1	1	1
SB3								1		1		2	1	2
SB4	1				1								1	
SB5	1				1								1	
SB6	1					1								
SB7	1					1							1	
SB8								1		1		1	1	1
SB9		1		1			2							2
SB10	1					1								
SB11		1	1										1	
SB12									1		1	1		1
SB13	1					1							1	
SB14	1				1								1	
*** TOTALS	8	2	1	1	3	5	2	3	1	3	1	5	10	7

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

INTERSECTION OF
USH 18 & MANHATTAN DRIVE
ALL ITEMS ARE CATEGORY 0020

3

REMOVE TRAFFIC SIGNALS USH 18 & MANHATTAN DRIVE
REMOVE LOOP DETECTOR WIRE AND LEAD-IN CABLE, USH 18 & MANHATTAN DRIVE

LOCATION	SPV.0105.50 REMOVE TRAFFIC SIGNALS L.S.	SPV.0105.89 REMOVE LOOP DETECTOR WIRE AND LEAD-IN CABLE L.S.
USH 18 & MANHATTAN DRIVE	1	1
TOTAL	1	1

INSTALL VIDEO DETECTION SYSTEM, USH 18 & MANHATTAN DRIVE

LOCATION	SPV.0105.67 INSTALL VIDEO DETECTION SYSTEM L.S.
USH 18 & MANHATTAN DRIVE	1
TOTAL	1

CAMERA NO.	SIGNAL BASE	MOUNTING LOCATION
V1	SB3	LUMINAIRE ARM
V2	SB12	6' EXTENSION MOUNTING BRACKET
V3	SB2	LUMINAIRE ARM
V4	SB8	LUMINAIRE ARM

3

TRANSPORTING SIGNAL AND LIGHTING MATERIALS AT USH 18 & MANHATTAN DRIVE

LOCATION	SPV.0105.55 TRANSPORTING SIGNAL AND LIGHTING MATERIALS L.S.
USH 18 & MANHATTAN DRIVE	1
TOTAL	1

EVP DETECTOR HEAD INSTALLATION AT USH 18 & MANHATTAN DRIVE

LOCATION	SPV.0105.73 EVP DETECTOR HEAD INSTALLATION L.S.
USH 18 & MANHATTAN DRIVE	1
TOTAL	1

BATTERY BACKUP SYSTEM
INSTALL STATE-FURNISHED TRAFFIC SIGNAL CABINET, USH 18 & MANHATTAN DRIVE

LOCATION	SPV.0060.53 BATTERY BACKUP SYSTEM EACH	SPV.0105.61 INSTALL STATE-FURNISHED TRAFFIC SIGNAL CABINET L.S.
USH 18 & MANHATTAN DRIVE	1	1
TOTAL	1	1

SUMMARY OF STATE FURNISHED MATERIALS - FOR INFORMATION ONLY

QUANTITY	UNIT	DESCRIPTION
1	LS	TRAFFIC SIGNAL CONTROLLER AND CABINET
3	EACH	POLES TYPE 10
1	EACH	POLES TYPE 13
3	EACH	MONOTUBE ARMS 30-FT
1	EACH	MONOTUBE ARMS 40-FT
5	EACH	LUMINAIRE ARMS STEEL 8-FT
1	LS	VIDEO DETECTION SYSTEM
1	LS	EVP DETECTION SYSTEM

SHEET 6 OF 6

3

REMOVING CONCRETE BASES

EXISTING BASE NO.	STATION	LOCATION	204.0195 REMOVING CONCRETE BASES EACH
CB1	144+99.6	96.9' RT	1
SB1	144+36.2	70.0' RT	1
SB2	143+69.5	100.7' RT	1
SB3	143+32.5	66.5' RT	1
SB4	143+48.1	12.6' RT	1
SB6	143+36.4	66.3' LT	1
SB7	143+74.6	103.5' LT	1
SB8	144+50.9	65.9' LT	1
SB9	144+54.7	17.7' LT	1
		*** TOTAL	9

*** QUANTITIES LISTED ELSEWHERE ON PLAN

CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH
CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH
CONDUIT SPECIAL 3-INCH

FROM	TO	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH L.F.	652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH L.F.	652.0615 CONDUIT SPECIAL 3-INCH L.F.
CB1	PB1		42	
PB1	PB2			50
PB1	PB3		150	
PB3	PB4	260		
PB3	PB5			146
PB5	PB6			102
PB6	PB7		58	
PB7	PB8			32
PB7	PB9			162
PB7	PB22	223		
PB9	PB10			64
PB10	PB11			96
PB11	PB12		188	
PB11	PB23	127		
PB12	PB13			160
PB13	PB14			31
PB13	PB15		74	
PB15	PB16	184		
PB16	PB17	151		
PB15	PB18			146
PB18	PB19			74
PB19	PB20			134
PB20	PB21	139		
PB20	CB1		24	
PB2	SB1	6		
PB2	SB2	11		
PB5	SB3	4		
PB8	SB4		14	
PB8	SB5	6		
PB9	SB6	29		
PB9	SB7	30		
PB11	SB8		29	
PB12	SB9	17		
PB14	SB10		4	
PB14	SB11	12		
PB18	SB12	38		
PB19	SB13	6		
PB19	SB14	12		
PB20	SB15		7	
	*** TOTALS	1255	590	1197

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

CONDUIT LOOP DETECTOR
LOOP DETECTOR LEAD IN CABLE
LOOP DETECTOR WIRE

INTERSECTION OF
USH 18 & STH 164/WOLF ROAD
ALL ITEMS CATEGORY 0020

LOOP NO.	HOME RUN PB	STATION	LOCATION	SIZE	NO. OF TURNS	SDD INSTALLATION REFERENCE	652.0800 CONDUIT LOOP DETECTOR L.F.	655.0700 LOOP DETECTOR LEAD IN CABLE L.F.	655.0800 LOOP DETECTOR WIRE L.F.	CONSTRUCTION
21	PB17	148+21.3	41.0' LT	6'X28'	4	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	117	537	478	BASE PATCHING
22	PB16	146+71.3	41.0' LT	6'X28'	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	117	386	361	BASE PATCHING
61	PB22	140+80.8	41.0' RT	6'X28'	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	117	482	361	BASE PATCHING
81	PB4	282+71.1	25.9' RT	6'X20'	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	92	366	286	BASE PATCHING
S1	PB23	141+76.9	52.5' LT	6'X10'	5	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	54	547	280	BASE PATCHING
S2	PB23	141+75.0	41.5' LT	6'X10'	5	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	76	547	390	BASE PATCHING
S3	PB23	141+72.9	30.5' LT	6'X10'	5	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	98	547	500	BASE PATCHING
S4	PB21	146+22.9	52.9' RT	6'X6'	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	50	164	160	BASE PATCHING
S5	PB21	146+24.8	42.0' RT	6'X6'	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	72	164	226	BASE PATCHING
S6	PB21	146+27.0	31.0' RT	6'X6'	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	94	164	292	BASE PATCHING
						*** TOTALS	887	3904	3334	

* STATION AND LOCATION IS TO FRONT CENTER OF DETECTION LOOP
** FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD
*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

PULL BOXES STEEL 24X36-INCH
PULL BOXES STEEL 24X42-INCH

PULL BOX NO.	STATION	LOCATION	653.0135 PULL BOXES STEEL 24X36-INCH EACH	653.0140 PULL BOXES STEEL 24X42-INCH EACH
PB1	144+80.3	100.2' RT		1
PB2	144+35.4	79.0' RT		1
PB3	285+21.3	63.0' RT		1
PB4	282+69.3	55.5' RT	1	
PB5	285+21.3	9.1' LT		1
PB6	285+21.3	59.4' LT		1
PB7	143+02.2	92.4' RT		1
PB8	143+26.2	72.4' RT		1
PB9	143+02.2	12.0' RT		1
PB10	143+02.2	19.0' LT		1
PB11	143+02.3	66.1' LT		1
PB12	143+75.3	102.0' LT		1
PB13	144+54.5	102.3' LT		1
PB14	144+41.7	74.7' LT		1
PB15	144+88.4	90.4' LT		1
PB16	146+71.3	79.5' LT	1	
PB17	148+21.3	79.5' LT	1	
PB18	144+88.4	17.9' LT		1
PB19	144+88.4	19.0' RT		1
PB20	144+88.5	85.5' RT		1
PB21	146+24.7	68.5' RT	1	
PB22	140+80.8	79.5' RT	1	
PB23	146+24.7	68.5' RT	1	
		*** TOTALS	6	17

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD
*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

REMOVING PULL BOXES

PULL BOX NO.	STATION	LOCATION	653.0905 REMOVING PULL BOXES EACH
PB1	144+56.3	103.2' RT	1
PB2	283+99.0	53.9' RT	1
PB3	144+33.6	75.3' RT	1
PB4	143+71.5	94.5' RT	1
PB5	143+28.0	67.4' RT	1
PB6	143+21.4	6.7' RT	1
PB7	142+90.2	7.2' RT	1
PB8	143+11.7	18.6' LT	1
PB9	140+41.4	1.3' RT	1
PB10	143+30.4	67.0' LT	1
PB11	143+73.1	87.9' LT	1
PB12	143+77.3	314.3' LT	1
PB13	144+53.5	68.8' LT	1
PB14	144+70.6	92.9' LT	1
PB15	144+59.5	242.7' LT	1
PB16	144+72.2	301.8' LT	1
PB17	144+78.0	17.8' LT	1
PB18	145+12.1	17.4' LT	1
PB19	144+86.2	18.6' RT	1
PB20	147+48.2	20.2' RT	1
PB21	142+85.8	6.7' LT	1
PB22	142+93.8	6.7' LT	1
PB23	143+23.6	6.8' LT	1
PB24	145+17.8	4.5' LT	1
PB25	145+08.3	4.8' LT	1
PB26	144+77.3	4.1' LT	1
PB27	145+17.9	7.2' RT	1
PB28	145+07.9	7.8' RT	1
PB29	144+77.9	7.5' RT	1
PB30	285+67.1	33.4' RT	1
PB31	285+97.1	33.1' RT	1
PB32	285+55.2	13.8' RT	1
PB33	285+65.1	13.6' RT	1
PB34	285+55.1	1.7' RT	1
PB35	285+65.0	1.2' RT	1
PB36	283+99.0	31.6' RT	1
PB37	285+35.8	68.2' LT	1
		*** TOTAL	37

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

CABLE TYPE UF 2-10 AWG
ELECTRICAL WIRE LIGHTING 12 AWG

		655.0315 CABLE TYPE UF 2-10 AWG (W/ GROUND) L.F.	655.0610 ELECTRICAL WIRE LIGHTING 12 AWG L.F.
CB1	SB1	93	
SB1	LUMIN		117
SB1	SB3	240	
SB3	LUMIN		234
SB3	SB4	162	
SB4	LUMIN		144
SB4	SB7	183	
SB7	LUMIN		234
CB1	SB15	32	
SB15	LUMIN		144
SB15	SB12	175	
SB12	LUMIN		234
SB12	SB10	215	
SB10	LUMIN		144
SB10	SB8	293	
SB8	LUMIN		144
	*** TOTALS	1393	1395

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

SHEET 2 OF 7

3

CONCRETE BASES TYPE 1
CONCRETE BASES TYPE 2
CONCRETE BASES TYPE 13
CONCRETE CONTROL CABINET BASES TYPE 9 SPECIAL

BASE NO.	STATION	LOCATION	654.0101 CONCRETE BASES TYPE 1 EACH	654.0102 CONCRETE BASES TYPE 2 EACH	654.0113 CONCRETE BASES TYPE 13 EACH	654.0217 CONCRETE CONTROL CABINET BASES TYPE 9 SPECIAL EACH
CB1	144+91.61	92.3' RT				1
SB1	144+30.7	76.0' RT		1		
SB2	144+38.8	68.5' RT	1			
SB3	143+39.0	76.0' RT		1		
SB4	143+60.83	129.9' RT			1	
SB5	143+30.8	70.3' RT	1			
SB6	143+30.8	15.8' RT	1			
SB7	143+30.8	4.8' RT		1		
SB8	143+30.8	68.6' LT			1	
SB9	143+70.6	86.6' LT	1			
SB10	144+38.1	75.2' LT			1	
SB11	144+51.3	69.2' LT	1			
SB12	144+51.3	17.8' LT		1		
SB13	144+85.2	19.2' RT		1		
SB14	145+00.2	19.2' RT		1		
SB15	144+92.9	80.7' RT			1	
		*** TOTALS	5	6	4	1

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD
*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

CABLE TRAFFIC SIGNAL 5-14 AWG
CABLE TRAFFIC SIGNAL 7-14 AWG
CABLE TRAFFIC SIGNAL 12-14 AWG

FROM	TO	655.0230 CABLE TRAFFIC SIGNAL 5-14 AWG L.F.	655.0240 CABLE TRAFFIC SIGNAL 7-14 AWG L.F.	655.0260 CABLE TRAFFIC SIGNAL 12-14 AWG L.F.
CB1	SB1			93
SB1	HEAD 13	21		
SB1	HEAD 24		22	
SB1	HEAD 36	14		
CB1	SB2		98	
SB2	HEAD 35	14		
CB1	SB3		195	
SB3	HEAD 16	21		
CB1	SB4			335
SB4	HEAD 22	50		
SB4	HEAD 23	38		
SB4	HEAD 25		63	
SB4	HEAD 37	14		
CB1	SB5			326
SB5	HEAD 1	19		
SB5	HEAD 26	14		
CB1	SB6			399
SB6	HEAD 11	21		
SB6	HEAD 27	14		
CB1	SB7			400
SB7	HEAD 12	21		
SB7	HEAD 28	14		
CB1	SB8			491
SB8	HEAD 8	64		
SB8	HEAD 9	53		
SB8	HEAD 10	42		
SB8	HEAD 29	14		
CB1	SB9			348
SB9	HEAD 21	21		
SB9	HEAD 30	14		
CB1	SB10			298
SB10	HEAD 14	43		
SB10	HEAD 15	21		
SB10	HEAD 17	63		
SB10	HEAD 18	51		
SB10	HEAD 31	14		
CB1	SB11			306
SB11	HEAD 5		22	
SB11	HEAD 7	21		
SB11	HEAD 32	14		
CB1	SB12			179
SB12	HEAD 6		22	
SB12	HEAD 33	14		
SB12	HEAD 34	14		
CB1	SB13		100	
SB13	HEAD 19	25		
CB1	SB14		104	
SB14	HEAD 20	25		
CB1	SB15		32	
SB15	HEAD 2	76		
SB15	HEAD 3	65		
SB15	HEAD 4	54		
	*** TOTALS	983	658	3175

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

INTERSECTION OF
USH 18 & STH 164/WOLF ROAD
ALL ITEMS CATEGORY 0020

3

3

ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG

FROM	TO	655.0515 ELETRICAL WIRE TRAFFIC SIGNALS 10 AWG L.F.
CB1	SB1	93
SB1	SB2	31
SB2	SB3	245
SB3	SB4	162
SB4	SB5	33
SB5	SB6	173
SB6	SB7	73
SB7	SB8	165
SB8	SB9	160
SB9	SB10	158
SB10	SB11	31
SB11	SB12	223
SB12	SB13	97
SB13	SB14	22
SB14	SB15	100
SB15	CB1	32
PB1	CB1	27
PB2	SB1	16
PB3	CB1	108
PB5	SB3	14
PB6	SB3	71
PB7	SB5	53
PB8	SB5	15
PB9	SB6	39
PB10	SB6	77
PB11	SB8	39
PB12	SB9	27
PB13	SB10	51
PB14	SB10	14
PB15	SB10	94
PB18	SB12	48
PB19	SB13	12
PB20	SB15	17
*** TOTAL		2520

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

TRAFFIC SIGNAL EVP DETECTOR CABLE
TYPE UF CABLE 2-CONDUCTOR NO. 14

FROM	TO	655.0900 TRAFFIC SIGNAL EVP DETECTOR CABLE L.F.	SPV.0090.50 TYPE UF CABLE 2-CONDUCTOR NO. 14 L.F.
CB1	SB8 (HEAD A)	530	530
CB1	SB15 (HEAD B)	80	80
CB1	SB4 (HEAD C)	392	392
CB1	SB10 (HEAD D)	361	361
*** TOTAL		1363	1363

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

SIGNAL MOUNTING HARDWARE USH 18 & STH 164

LOCATION	658.5069.02 SIGNAL MOUNTING HARDWARE L.S.
USH 18 & STH 164	1
TOTAL	1

ELECTRICAL SERVICE METER BREAKER PEDESTAL,
USH 18 & STH 164

BASE NO.	656.0200.02 ELETRICAL SERVICE METER BREAKER PEDESTAL L.S.
CB1	1
TOTAL	1

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD

TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS, USH 18 & STH 164
GENERATORS
TEMPORARY INFRARED EVP SYSTEM, USH 18 & STH 164
TEMPORARY VEHICLE DETECTION SYSTEM, USH 18 & STH 164

LOCATION	661.0200.02 TEMPORARY TRAFFIC SINGALS FOR INTERSECTIONS L.S.	661.0300 GENERATORS DAYS	SPV.0105.80 TEMPORARY INFRARED EVP SYSTEM L.S.	SPV.0105.85 TEMPORARY VEHICLE DETECTION SYSTEM L.S.
USH 18 & STH 164	1	2	1	1
*** TOTALS	1	2	1	1

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

SHEET 4 OF 7

3

3

TRAFFIC SIGNAL FACE 3-12 INCH VERTICAL
TRAFFIC SIGNAL FACE 4-12 INCH VERTICAL
BACKPLATES SIGNAL FACE 3 SECTION 12-INCH
BACKPLATES SIGNAL FACE 4 SECTION 12-INCH
PEDESTRIAN SIGNAL FACE 16-INCH
LED MODULES 12-INCH RED BALL
LED MODULES 12-INCH YELLOW BALL
LED MODULES 12-INCH GREEN BALL
LED MODULES 12-INCH RED ARROW
LED MODULES 12-INCH YELLOW ARROW
LED MODULES 12-INCH GREEN ARROW
LED MODULES PEDESTRIAN COUNTDOWN TIMER 16-INCH

SIGNAL HEAD NO.	SIGNAL BASE NO.	658.0110 TRAFFIC SIGNAL FACE 3-12 INCH VERTICAL EACH	658.0115 TRAFFIC SIGNAL FACE 4-12 INCH VERTICAL EACH	658.0215 BACKPLATES SIGNAL FACE 3 SECTION 12-INCH EACH	658.0220 BACKPLATES SIGNAL FACE 4 SECTION 12-INCH EACH	658.0416 PEDESTRIAN SIGNAL FACE 16-INCH EACH	658.0600 LED MODULES 12-INCH RED BALL EACH	658.0605 LED MODULES 12-INCH YELLOW BALL EACH	658.0610 LED MODULES 12-INCH GREEN BALL EACH	658.0615 LED MODULES 12-INCH RED ARROW EACH	658.0620 LED MODULES 12-INCH YELLOW ARROW EACH	658.0625 LED MODULES 12-INCH GREEN ARROW EACH	658.0635 LED MODULES PEDESTRIAN COUNTDOWN TIMER 16-INCH EACH
1	SB5	1		1			1	1	1				
2	SB15	1		1			1	1	1				
3	SB15	1		1			1	1	1				
4	SB15	1		1			1	1	1				
5	SB11		1		1					1	2	1	
6	SB12		1		1					1	2	1	
7	SB11	1		1			1	1	1				
8	SB8	1		1			1	1	1				
9	SB8	1		1			1	1	1				
10	SB8	1		1			1	1	1				
11	SB6	1		1						1	1	1	
12	SB7	1		1						1	1	1	
13	SB1	1		1			1	1	1				
14	SB10	1		1			1	1	1				
15	SB10	1		1			1	1	1				
16	SB3	1		1						1	1	1	
17	SB10	1		1						1	1	1	
18	SB10	1		1						1	1	1	
19	SB13	1		1			1				1	1	
20	SB14	1		1			1				1	1	
21	SB9	1		1			1	1	1				
22	SB4	1		1			1	1	1				
23	SB4	1		1			1	1	1				
24	SB1		1		1					1	2	1	
25	SB4		1		1					1	2	1	
26	SB5					1							1
27	SB6					1							1
28	SB7					1							1
29	SB8					1							1
30	SB9					1							1
31	SB10					1							1
32	SB11					1							1
33	SB12					1							1
34	SB12					1							1
35	SB2					1							1
36	SB1					1							1
37	SB4					1							1
	*** TOTALS	21	4	21	4	12	16	14	14	9	15	11	12

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

INTERSECTION OF
USH 18 & STH 164/WOLF ROAD
ALL ITEMS CATEGORY 0020

PEDESTAL BASES
TRANSFORMER BASES BREAKAWAY 11 1/2 INCH BOLT CIRCLE
POLES TYPE 2
POLES TYPE 3
TRAFFIC SIGNAL STANDARDS ALUMINUM 10-FT
TRAFFIC SIGNAL STANDARDS ALUMINUM 13-FT
TRAFFIC SIGNAL STANDARDS ALUMINUM 15-FT
LUMINAIRE ARMS SINGLE MEMBER 4-INCH CLAMP 6-FT
INSTALL POLES TYPE 13
INSTALL MONOTUBE ARMS 40-FT
INSTALL MONOTUBE ARMS 55-FT
INSTALL LUMINAIRE ARMS STEEL 15-FT
PEDESTRIAN PUSH BUTTONS
LUMINAIRES UTILITY LED C

SIGNAL BASE NO.	657.0100 PEDESTAL BASES EACH	657.0255 TRANSFORMER BASES BREAKAWAY 11 1/2 INCH BOLT CIRCLE EACH	657.0305 POLES TYPE 2 EACH	657.0310 POLES TYPE 3 EACH	657.0410 TRAFFIC SIGNAL STANDARDS ALUMINUM 10-FT EACH	657.0430 TRAFFIC SIGNAL STANDARDS ALUMINUM 13-FT EACH	657.0425 TRAFFIC SIGNAL STANDARDS ALUMINUM 15-FT EACH	657.0609 LUMINAIRE ARMS SINGLE MEMBER 4-INCH CLAMP 6-FT EACH	657.1360 INSTALL POLES TYPE 13 EACH	657.1540 INSTALL MONOTUBE ARMS 40-FT EACH	657.1555 INSTALL MONOTUBE ARMS 55-FT EACH	657.18115 INSTALL LUMINAIRE ARMS STEEL 15-FT EACH	658.0500 PEDESTRIAN PUSH BUTTONS EACH	659.1125 LUMINAIRES UTILITY LED C EACH
SB1		1		1				1					1	1
SB2	1				1								1	
SB3		1		1				2						2
SB4									1	1		1	1	1
SB5	1					1							1	
SB6	1						1						1	
SB7		1		1				2					1	2
SB8									1	1		1	1	1
SB9	1					1							1	
SB10									1	1		1	1	1
SB11	1						1						1	
SB12		1		1				2					1	2
SB13		1	1											
SB14		1	1											
SB15									1		1	1		1
*** TOTALS	5	6	2	4	1	2	2	7	4	3	1	4	11	11

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

SHEET 6 OF 7

INTERSECTION OF
USH 18 & STH 164/WOLF ROAD
ALL ITEMS CATEGORY 0020

3

REMOVE TRAFFIC SIGNALS USH 18 & STH 164
REMOVE LOOP DETECTOR WITE AND LEAD-IN CABLE, USH 18 & STH 164

LOCATION	SPV.0105.51 REMOVE TRAFFIC SIGNALS L.S.	SPV.0105.90 REMOVE LOOP DETECTOR WIRE AND LEAD-IN CABLE L.S.
USH 18 & STH 164	1	1
TOTAL	1	1

TRANSPORTING SIGNAL AND LIGHTING MATERIALS AT USH 18 & STH 164

LOCATION	SPV.0105.56 TRANSPORTING SIGNAL AND LIGHTING MATERIALS L.S.
USH 18 & STH 164	1
TOTAL	1

3

INSTALL STATE-FURNISHED TRAFFIC SIGNAL CABINET, USH 18 & STH 164

LOCATION	SPV.0105.62 INSTALL STATE-FURNISHED TRAFFIC SIGNAL CABINET L.S.
USH 18 & STH 164	1
TOTAL	1

INSTALL VIDEO DETECTION SYSTEM, USH 18 & STH 164

LOCATION	SPV.0105.68 INSTALL VIDEO DETECTION SYSTEM L.S.
USH 18 & STH 164	1
TOTAL	1

CAMERA NO.	SIGNAL BASE	MOUNTING LOCATION
V1	SB8	6' EXTENSTION MOUNTING BRACKET
V2	SB15	6' EXTENSTION MOUNTING BRACKET
V3	SB4	LUMINAIRE ARM
V4	SB10	LUMINAIRE ARM
V5	SB15	LUMINAIRE ARM

EVP DETECTOR HEAD INSTALLATION AT USH 18 & STH 164

LOCATION	SPV.0105.74 EVP DETECTOR HEAD INSTALLATION L.S.
USH 18 & STH 164	1
TOTAL	1

SUMMARY OF STATE FURNISHED MATERIALS - FOR INFORMATION ONLY

QUANTITY	UNIT	DESCRIPTION
1	LS	TRAFFIC SIGNAL CONTROLLER AND CABINET
4	EACH	POLES TYPE 13
3	EACH	MONOTUBE ARMS 40-FT
1	EACH	MONOTUBE ARMS 55-FT
4	EACH	LUMINAIRE ARMS STEEL 15-FT
1	LS	VIDEO DETECTION SYSTEM
1	LS	EVP DETECTION SYSTEM

SHEET 7 OF 7

CONDUIT LOOP DETECTOR
LOOP DETECTOR LEAD IN CABLE
LOOP DETECTOR WIRE

INTERSECTION OF
USH 18/STH 164 & MAIN STREET
ALL ITEMS ARE CATEGORY 0020

LOOP NO.	HOME RUN PB	STATION	LOCATION	SIZE	NO. OF TURNS	SDD INSTALLATION REFERENCE	652.0800 CONDUIT LOOP DETECTOR L.F.	655.0700 LOOP DETECTOR LEAD IN CABLE L.F.	655.0800 LOOP DETECTOR WIRE L.F.	CONSTRUCTION
21	PB14	178+73.2	53.5' LT	6'X10'	6	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	76	691	466	BASE PATCHING
22	PB14	178+71.5	42.0' LT	6'X10'	6	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	98	691	598	BASE PATCHING
23	PB14	178+69.8	31.0' LT	6'X10'	6	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	120	691	730	BASE PATCHING
24	PB13	177+20.0	42.1' LT	6'X28'	4	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	112	538	458	BASE PATCHING
61	PB4	169+75.9	41.9' RT	6'X28'	4	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	110	515	450	BASE PATCHING
62	PB4	169+75.6	41.9' RT	6'X28'	4	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	129	360	526	BASE PATCHING
S1	PB14	178+68.4	5.5' LT	6'X10'	6	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	172	351	1042	BASE PATCHING
S2	PB14	178+66.6	6.0' RT	6'X10'	6	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	194	351	1174	RECONSTRUCT
						*** TOTALS	1011	4188	5444	

* STATION AND LOCATION IS TO FRONT CENTER OF DETECTION LOOP
** FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD
*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

REMOVING CONCRETE BASES

EXISTING BASE NO.	STATION	LOCATION	204.0195 REMOVING CONCRETE BASES EACH
CB1	174+56.2	137.2' RT	1
SB1	174+38.1	68.3' RT	1
SB2	174+20.3	78.5' RT	1
SB3	173+54.3	67.8' RT	1
SB4	173+66.5	13.6' RT	1
SB6	173+90.2	68.7' LT	1
SB8	174+87.1	69.7' LT	1
SB9	174+82.9	18.4' LT	1
		*** TOTAL	8

*** QUANTITIES LISTED ELSEWHERE ON PLAN

CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH
CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH
CONDUIT SPECIAL 3-INCH

FROM	TO	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH L.F.	652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH L.F.	652.0615 CONDUIT SPECIAL 3-INCH L.F.
CB1	PB1		33	
PB1	PB2			292
PB2	PB3	186		
PB3	PB4	155		
PB2	PB5			49
PB2	PB6			192
PB6	PB7	52		
PB6	PB8			64
PB8	PB9			98
PB9	PB10		164	
PB10	PB11		126	
PB11	PB12			166
PB12	PB13	204		
PB13	PB14	147		
PB12	PB15			43
PB12	PB16			180
PB16	PB17			74
PB17	PB18			98
PB18	PB19		190	
PB19	PB20			82
PB20	CB1		33	
PB5	SB1		20	
PB5	SB2	10		
PB7	SB3	7		
PB7	SB4	7		
PB10	SB5		13	
PB10	SB6	9		
PB11	SB7	33		
PB15	SB8	6		
PB15	SB9		16	
PB16	SB10	32		
PB18	SB11		51	
PB19	SB12	31		
	*** TOTALS	879	646	1338

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

SHEET 1 OF 7

INTERSECTION OF
USH 18/STH 164 & MAIN STREET
ALL ITEMS ARE CATEGORY 0020

3

PULL BOXES STEEL 24X36-INCH
PULL BOXES STEEL 24X42-INCH

PULL BOX NO.	STATION	LOCATION	653.0135 PULL BOXES STEEL 24X36-INCH EACH	653.0140 PULL BOXES STEEL 24X42-INCH EACH
PB1	174+35.4	152.9' RT		1
PB2	173+03.5	107.8' RT		1
PB3	171+25.3	86.3' RT	1	
PB4	169+75.4	75.2' RT	1	
PB5	173+33.1	70.1' RT		1
PB6	173+03.4	12.4' RT		1
PB7	173+54.2	12.8' RT	1	
PB8	173+03.3	18.7' LT		1
PB9	173+03.3	67.0' LT		1
PB10	173+86.1	66.8' LT		1
PB11	174+37.2	110.0' LT		1
PB12	175+23.2	108.0' LT		1
PB13	177+20.3	77.9' LT	1	
PB14	178+70.6	78.0' LT	1	
PB15	175+05.2	68.9' LT		1
PB16	175+23.2	18.7' LT		1
PB17	175+23.2	17.3' RT		1
PB18	175+23.2	65.8' RT		1
PB19	174+39.2	103.7' RT		1
PB20	174+51.1	141.8' RT		1
		*** TOTALS	5	15

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD
*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

REMOVING PULL BOXES

PULL BOX NO.	STATION	LOCATION	653.0905 REMOVING PULL BOXES EACH
PB1	174+54.3	132.0' RT	1
PB2	178+15.7	201.3' LT	1
PB3	174+35.1	78.1' RT	1
PB4	173+44.0	74.5' RT	1
PB5	173+01.6	94.3' RT	1
PB6	173+24.2	12.9' RT	1
PB7	173+67.8	8.6' RT	1
PB8	170+60.6	19.9' RT	1
PB9	173+06.8	19.1' LT	1
PB10	173+06.2	68.4' LT	1
PB11	174+07.4	79.0' LT	1
PB12	174+16.2	90.1' LT	1
PB13	174+96.0	78.6' LT	1
PB14	175+25.5	99.2' LT	1
PB15	175+19.0	19.0' LT	1
PB16	175+17.1	18.3' RT	1
PB17	177+91.2	17.5' RT	1
PB18	173+21.3	6.0' LT	1
PB19	173+51.0	6.3' LT	1
PB20	173+60.0	6.0' LT	1
PB21	175+31.2	6.0' LT	1
PB22	175+21.0	5.7' LT	1
PB23	174+91.1	5.9' LT	1
PB24	175+30.9	5.8' RT	1
PB25	175+21.4	6.0' RT	1
PB26	174+90.9	6.4' RT	1
PB27	177+91.4	43.3' LT	1
		*** TOTAL	27

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

3

CONCRETE BASES TYPE 1
CONCRETE BASES TYPE 2
CONCRETE BASES TYPE 10
CONCRETE BASES TYPE 13
CONCRETE CONTROL CABINET BASES TYPE 9 SPECIAL

BASE NO.	STATION	LOCATION	654.0101 CONCRETE BASES TYPE 1 EACH	654.0102 CONCRETE BASES TYPE 2 EACH	654.0110 CONCRETE BASES TYPE 10 EACH	654.0113 CONCRETE BASES TYPE 13 EACH	654.0217 CONCRETE CONTROL CABINET BASES TYPE 9 SPECIAL EACH
CB1	174+43.9	148.3' RT					1
SB1	173+52.0	70.1' RT			1		
SB2	173+42.7	71.5' RT	1				
SB3	173+54.3	18.8' RT	1				
SB4	173+56.9	6.8' RT		1			
SB5	173+73.8	69.0' LT				1	
SB6	173+94.6	71.5' LT	1				
SB7	174+14.2	86.3' LT	1				
SB8	175+00.1	69.9' LT	1				
SB9	174+91.1	75.4' LT			1		
SB10	174+91.6	18.5' LT		1			
SB11	174+74.0	69.2' RT				1	
SB12	174+15.2	85.4' RT	1				
		*** TOTALS	6	2	2	2	1

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD
*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

SHEET 2 OF 7

3

CABLE TRAFFIC SIGNAL 5-14 AWG
CABLE TRAFFIC SIGNAL 7-14 AWG
CABLE TRAFFIC SIGNAL 12-14 AWG

FROM	TO	655.0230 CABLE TRAFFIC SIGNAL 5-14 AWG L.F.	655.0240 CABLE TRAFFIC SIGNAL 7-14 AWG L.F.	655.0260 CABLE TRAFFIC SIGNAL 12-14 AWG L.F.
CB1	SB1			255
SB1	HEAD 17	40		
SB1	HEAD 18	21		
SB1	HEAD 20		53	
SB1	HEAD 32	14		
CB1	SB2			245
SB2	HEAD 1	19		
SB2	HEAD 21	14		
CB1	SB3			347
SB3	HEAD 11	21		
SB3	HEAD 22	14		
CB1	SB4			347
SB4	HEAD 12	21		
SB4	HEAD 23	14		
CB1	SB5			476
SB5	HEAD 8	65		
SB5	HEAD 9	54		
SB5	HEAD 10	42		
SB5	HEAD 24	14		
CB1	SB6		472	
SB6	HEAD 25	14		
CB1	SB7			486
SB7	HEAD 14	19		
SB7	HEAD 16	19		
CB1	SB8			419
SB8	HEAD 5		22	
SB8	HEAD 7	21		
SB8	HEAD 27	14		
CB1	SB9			429
SB9	HEAD 15	37		
SB9	HEAD 26	14		
CB1	SB10			306
SB10	HEAD 6		22	
SB10	HEAD 28	14		
SB10	HEAD 29	14		
CB1	SB11			227
SB11	HEAD 2	64		
SB11	HEAD 3	54		
SB11	HEAD 4	42		
SB11	HEAD 30	14		
CB1	SB12			106
SB12	HEAD 13	21		
SB12	HEAD 19		22	
SB12	HEAD 31	14		
	*** TOTALS	728	591	3643

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

CABLE TYPE UF 2-10 AWG
ELECTRICAL WIRE LIGHTING 12 AWG

		655.0315 CABLE TYPE UF 2-10 AWG (W/ GROUND) L.F.	655.0610 ELECTRICAL WIRE LIGHTING 12 AWG L.F.
CB1	SB1	255	
SB1	LUMIN		144
SB1	SB4	256	
SB4	LUMIN		234
SB4	SB5	273	
SB5	LUMIN		144
CB1	SB11	227	
SB11	LUMIN		144
SB11	SB10	195	
SB10	LUMIN		234
SB10	SB9	207	
SB9	LUMIN		144
	*** TOTALS	1413	1044

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

INTERSECTION OF
USH 18/STH 164 & MAIN STREET
ALL ITEMS ARE CATEGORY 0020

3

ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG

FROM	TO	655.0515 ELETRICAL WIRE TRAFFIC SIGNALS 10 AWG L.F.
CB1	SB1	255
SB1	SB2	44
SB2	SB3	246
SB3	SB4	28
SB4	SB5	273
SB5	SB6	36
SB6	SB7	125
SB7	SB8	191
SB8	SB9	36
SB9	SB10	207
SB10	SB11	195
SB11	SB12	197
SB12	CB1	106
PB1	CB1	24
PB2	SB2	75
PB5	SB2	20
PB6	SB3	75
PB7	SB3	17
PB8	SB3	113
PB9	SB6	111
PB10	SB6	23
PB11	SB7	43
PB12	SB8	65
PB15	SB8	16
PB16	SB10	42
PB17	SB10	85
PB18	SB11	61
PB19	SB12	41
PB20	CB1	24
	*** TOTAL	2774

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

SHEET 3 OF 7

INTERSECTION OF
USH 18/STH 164 & MAIN STREET
ALL ITEMS ARE CATEGORY 0020

3

TRAFFIC SIGNAL EVP DETECTOR CABLE
TYPE UF CABLE 2 CONDUCTOR NO. 14

FROM	TO	655.0900 TRAFFIC SIGNAL EVP DETECTOR CABLE L.F.	SPV.0090.50 TYPE UF CABLE 2 CONDUCTOR NO. 14 L.F.
CB1	SB5 (HEAD A)	525	525
CB1	SB11 (HEAD B)	276	276
CB1	SB1 (HEAD C)	294	294
CB1	SB9 (HEAD D)	479	479
	*** TOTAL	1574	1574

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ELECTRICAL SERVICE METER BREAKER PEDESTAL,
USH 18 & MAIN STREET

BASE NO.	656.0200.03 ELETRICAL SERVICE METER BREAKER PEDESTAL L.S.
CB1	1
TOTAL	1

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD

SIGNAL MOUNTING HARDWARE USH 18 & MAIN STREET

LOCATION	658.5069.03 SIGNAL MOUNTING HARDWARE L.S.
USH 18 & MAIN STREET	1
TOTAL	1

TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS, USH 18 & MAIN STREET
GENERATORS
TEMPORARY INFRARED EVP SYSTEM, USH 18 & MAIN STREET
TEMPORARY VEHICLE DETECTION SYSTEM, USH 18 & MAIN STREET

LOCATION	661.0200.03 TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS L.S.	661.0300 GENERATORS DAYS	SPV.0105.81 TEMPORARY INFRARED EVP SYSTEM L.S.	SPV.0105.86 TEMPORARY VEHICLE DETECTION SYSTEM L.S.
USH 18 & MAIN STREET	1	2	1	1
*** TOTALS	1	2	1	1

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

SHEET 4 OF 7

INTERSECTION OF
USH 18/STH 164 & MAIN STREET
ALL ITEMS ARE CATEGORY 0020

3

3

TRAFFIC SIGNAL FACE 3-12 INCH VERTICAL
TRAFFIC SIGNAL FACE 4-12 INCH VERTICAL
BACKPLATES SIGNAL FACE 3 SECTION 12-INCH
BACKPLATES SIGNAL FACE 4 SECTION 12-INCH
PEDESTRIAN SIGNAL FACE 16-INCH
LED MODULES 12-INCH RED BALL
LED MODULES 12-INCH YELLOW BALL
LED MODULES 12-INCH GREEN BALL
LED MODULES 12-INCH RED ARROW
LED MODULES 12-INCH YELLOW ARROW
LED MODULES 12-INCH GREEN ARROW
LED MODULES PEDESTRIAN COUNTDOWN TIMER 16-INCH

SIGNAL HEAD NO.	SIGNAL BASE NO.	658.0110 TRAFFIC SIGNAL FACE 3-12 INCH VERTICAL EACH	658.0115 TRAFFIC SIGNAL FACE 4-12 INCH VERTICAL EACH	658.0215 BACKPLATES SIGNAL FACE 3 SECTION 12-INCH EACH	658.0220 BACKPLATES SIGNAL FACE 4 SECTION 12-INCH EACH	658.0416 PEDESTRIAN SIGNAL FACE 16-INCH EACH	658.0600 LED MODULES 12-INCH RED BALL EACH	658.0605 LED MODULES 12-INCH YELLOW BALL EACH	658.0610 LED MODULES 12-INCH GREEN BALL EACH	658.0615 LED MODULES 12-INCH RED ARROW EACH	658.0620 LED MODULES 12-INCH YELLOW ARROW EACH	658.0625 LED MODULES 12-INCH GREEN ARROW EACH	658.0635 LED MODULES PEDESTRIAN COUNTDOWN TIMER 16-INCH EACH
1	SB2	1		1			1	1	1				
2	SB11	1		1			1	1	1				
3	SB11	1		1			1	1	1				
4	SB11	1		1			1	1	1				
5	SB8		1		1					1	2	1	
6	SB10		1		1					1	2	1	
7	SB8	1		1			1	1	1				
8	SB5	1		1			1	1	1				
9	SB5	1		1			1	1	1				
10	SB5	1		1			1	1	1				
11	SB3	1		1						1	1	1	
12	SB4	1		1						1	1	1	
13	SB12	1		1			1	1	1				
14	SB7	1		1			1	1	1				
15	SB9	1		1			1	1	1				
16	SB7	1		1			1	1	1				
17	SB'	1		1			1	1	1				
18	SB'	1		1			1	1	1				
19	SB12		1		1					1	2	1	
20	SB'		1		1					1	2	1	
21	SB2					1							1
22	SB3					1							1
23	SB4					1							1
24	SB5					1							1
25	SB6					1							1
26	SB9					1							1
27	SB8					1							1
28	SB10					1							1
29	SB10					1							1
30	SB11					1							1
31	SB12					1							1
32	SB'					1							1
*** TOTALS		16	4	16	4	12	14	14	14	6	10	6	12

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\03_Main\030201_mq.dgn PLOT DATE : 7/13/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 34.0000 sf / in.
WISDOT/CADDS SHEET 43

INTERSECTION OF
USH 18/STH 164 & MAIN STREET
ALL ITEMS ARE CATEGORY 0020

PEDESTAL BASES
TRANSFORMER BASES BREAKAWAY 11 1/2 INCH BOLT CIRCLE
POLES TYPE 3
TRAFFIC SIGNAL STANDARDS ALUMINUM 10-FT
TRAFFIC SIGNAL STANDARDS ALUMINUM 13-FT
TRAFFIC SIGNAL STANDARDS ALUMINUM 15-FT
LUMINAIRE ARMS SINGLE MEMBER 4-INCH CLAMP 6-FT
INSTALL POLES TYPE 10
INSTALL POLES TYPE 13
INSTALL MONOTUBE ARMS 30-FT
INSTALL MONOTUBE ARMS 40-FT
INSTALL LUMINAIRE ARMS STEEL 15-FT
PEDESTRIAN PUSH BUTTONS
LUMINAIRES UTILITY LED C

SIGNAL BASE NO.	657.0100 PEDESTAL BASES EACH	657.0255 TRANSFORMER BASES BREAKAWAY 11 1/2 INCH BOLT CIRCLE EACH	657.0310 POLES TYPE 3 EACH	657.0430 TRAFFIC SIGNAL STANDARDS ALUMINUM 10-FT EACH	657.0420 TRAFFIC SIGNAL STANDARDS ALUMINUM 13-FT EACH	657.0425 TRAFFIC SIGNAL STANDARDS ALUMINUM 15-FT EACH	657.0609 LUMINAIRE ARMS SINGLE MEMBER 4-INCH CLAMP 6-FT EACH	657.1350 INSTALL POLES TYPE 10 EACH	657.1360 INSTALL POLES TYPE 13 EACH	657.1530 INSTALL MONOTUBE ARMS 30-FT EACH	657.1540 INSTALL MONOTUBE ARMS 40-FT EACH	657.1815 INSTALL LUMINAIRE ARMS STEEL 15-FT EACH	658.0500 PEDESTRIAN PUSH BUTTONS EACH	659.1125 LUMINAIRES UTILITY LED C EACH
SB1								1		1		1	1	1
SB2	1				1								1	
SB3	1					1							1	
SB4		1	1				2						1	2
SB5									1		1	1	1	1
SB6	1			1									1	
SB7	1				1									
SB8	1					1							1	
SB9								1		1		1	1	1
SB10		1	1				2						1	2
SB11									1		1	1	1	1
SB12	1					1							1	
*** TOTALS	6	2	2	1	2	3	4	2	2	2	2	4	11	8

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

SHEET 6 OF 7

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	MISCELLANEOUS QUANTITIES	SHEET 470	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\03_Main\030201_mq.dgn PLOT DATE : 7/13/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 34.0000 sf / in.

3

REMOVE TRAFFIC SIGNALS USH 18 & MAIN STREET
REMOVE LOOP DETECTOR WIRE AND LEAD-IN CABLE, USH 18 & MAIN STREET

LOCATION	SPV.0105.52 REMOVE TRAFFIC SIGNALS L.S.	SPV.0105.91 REMOVE LOOP DETECTOR WIRE AND LEAD-IN CABLE L.S.
USH 18 & MAIN STREET	1	1
TOTAL	1	1

INTERSECTION OF
USH 18/STH 164 & MAIN STREET
ALL ITEMS ARE CATEGORY 0020

TRANSPORTING SIGNAL AND LIGHTING MATERIALS AT USH 18 & MAIN STREET

LOCATION	SPV.0105.57 TRANSPORTING SIGNAL AND LIGHTING MATERIALS L.S.
USH 18 & MAIN STREET	1
TOTAL	1

3

INSTALL STATE-FURNISHED TRAFFIC SIGNAL CABINET, USH 18 & MAIN STREET

LOCATION	SPV.0105.63 INSTALL STATE-FURNISHED TRAFFIC SIGNAL CABINET L.S.
USH 18 & MAIN STREET	1
TOTAL	1

INSTALL VIDEO DETECTION SYSTEM, USH 18 & MAIN STREET

LOCATION	SPV.0105.69 INSTALL VIDEO DETECTION SYSTEM L.S.
USH 18 & MAIN STREET	1
TOTAL	1

CAMERA NO.	SIGNAL BASE	MOUNTING LOCATION
V1	SB5	6' EXTENSION MOUNTING BRACKET
V2	SB11	6' EXTENSION MOUNTING BRACKET
V3	SB1	LUMINAIRE ARM
V4	SB9	LUMINAIRE ARM

EVP DETECTOR HEAD INSTALLATION AT USH 18 & MAIN STREET

LOCATION	SPV.0105.75 EVP DETECTOR HEAD INSTALLATION L.S.
USH 18 & MAIN STREET	1
TOTAL	1

SUMMARY OF STATE FURNISHED MATERIALS - FOR INFORMATION ONLY

QUANTITY	UNIT	DESCRIPTION
1	LS	TRAFFIC SIGNAL CONTROLLER AND CABINET
2	EACH	POLES TYPE 10
2	EACH	POLES TYPE 13
2	EACH	MONOTUBE ARMS 30-FT
2	EACH	MONOTUBE ARMS 40-FT
4	EACH	LUMINAIRE ARMS STEEL 15-FT
1	LS	VIDEO DETECTION SYSTEM
1	LS	EVP DETECTION SYSTEM

SHEET 7 OF 7

REMOVING CONCRETE BASES

EXISTING BASE NO.	STATION	LOCATION	204.0195 REMOVING CONCRETE BASES EACH
CB1	184+08.4	89.5' LT	1
SB1	184+62.2	74.2' LT	1
SB3	185+21.0	74.0' LT	1
SB5	185+38.8	76.7' RT	1
SB6	184+86.9	83.0' RT	1
SB7	184+31.7	76.9' RT	1
SB8	184+29.0	16.8' LT	1
		*** TOTAL	7

*** QUANTITIES LISTED ELSEWHERE ON PLAN

INTERSECTION OF
USH 18/STH 164 & SPRINGDALE ROAD
ALL ITEMS ARE CATEGORY 0020

3

CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH
CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH
CONDUIT SPECIAL 3-INCH

FROM	TO	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH L.F.	652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH L.F.	652.0615 CONDUIT SPECIAL 3-INCH L.F.
CB1	PB1		54	
PB1	PB2	211		
PB2	PB3	151		
PB1	PB4			130
PB4	PB5			52
PB5	PB6			132
PB6	PB7		92	
PB7	PB8			78
PB8	PB9			78
PB9	PB10		90	
PB10	PB11	191		
PB11	PB12	153		
PB12	PB13			23
PB10	PB14			120
PB14	PB15	25		
PB14	PB16			68
PB14	PB22	164		
PB16	PB17			128
PB17	PB18		52	
PB18	PB19			48
PB19	PB20			86
PB20	PB21			138
PB21	CB1		24	
PB1	SB1	12		
PB4	SB2	7		
PB4	SB3		18	
PB6	SB4		11	
PB8	SB5	3		
PB9	SB6		5	
PB9	SB7	19		
PB14	SB8	14		
PB15	SB9	5		
PB16	SB10	12		
PB16	SB11	3		
PB17	SB12		16	
PB19	SB13	15		
PB19	SB14	23		
PB20	SB15	14		
	*** TOTALS	1022	362	1081

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

SHEET 1 OF 7

CONDUIT LOOP DETECTOR
LOOP DETECTOR LEAD IN CABLE
LOOP DETECTOR WIRE

INTERSECTION OF
USH 18/STH 164 & SPRINGDALE ROAD
ALL ITEMS ARE CATEGORY 0020

LOOP NO.	HOME RUN PB	STATION	LOCATION	SIZE	NO. OF TURNS	SDD INSTALLATION REFERENCE	652.0800 CONDUIT LOOP DETECTOR L.F.	655.0700 LOOP DETECTOR LEAD IN CABLE L.F.	655.0800 LOOP DETECTOR WIRE L.F.	CONSTRUCTION
11	PB14	184+02.9	4.8' RT	6'X20'	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	70	285	220	RECONSTRUCT
12	PB14	184+30.9	4.8' RT	6'X20'	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	74	285	232	RECONSTRUCT
13	PB16	184+02.9	6.2' LT	6'X20'	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	68	251	214	RECONSTRUCT
14	PB16	184+30.9	6.2' LT	6'X20'	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	73	251	229	RECONSTRUCT
21	PB3	189+28.2	31.8' LT	6'X30'	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	112	397	346	BASE PATCHING
22	PB2	187+78.2	33.9' LT	6'X30'	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	113	246	349	BASE PATCHING
43	PB19	184+29.6	91.9' LT	6'X30'	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	97	137	301	RECONSTRUCT
51	PB4	185+78.5	0.7' LT	6'X20'	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	80	100	250	RECONSTRUCT
52	PB4	185+50.5	0.7' LT	6'X20'	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	72	100	226	RECONSTRUCT
61	PB12	180+68.7	77.1' RT	6'X10'	6	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 1)	44	689	274	BASE PATCHING
62	PB13	180+68.5	41.9' RT	6'X28'	4	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 1)	86	712	354	BASE PATCHING
63	PB11	182+15.6	69.7' RT	6'X10'	5	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	48	536	250	BASE PATCHING
64	PB11	182+17.1	53.0' RT	6'X10'	5	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	82	536	420	BASE PATCHING
65	PB11	182+19.1	41.5' RT	6'X10'	5	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	104	536	530	BASE PATCHING
66	PB22	182+21.0	30.5' RT	6'X10'	5	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	77	415	395	BASE PATCHING
S1	PB22	182+20.0	6.0' RT	6'X10'	5	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	76	415	390	RECONSTRUCT
S2	PB22	182+19.3	5.0' LT	6'X10'	5	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	88	415	450	RECONSTRUCT
						*** TOTALS	604	2381	2100	

* STATION AND LOCATION IS TO FRONT CENTER OF DETECTION LOOP
** FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD
*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

PULL BOXES STEEL 24X36-INCH
PULL BOXES STEEL 24X42-INCH

PULL BOX NO.	STATION	LOCATION	653.0135 PULL BOXES STEEL 24X36-INCH EACH	653.0140 PULL BOXES STEEL 24X42-INCH EACH
PB1	185+68.5	77.2' LT		1
PB2	187+78.1	69.1' LT	1	
PB3	189+28.2	66.7' LT	1	
PB4	185+68.5	13.3' LT		1
PB5	185+68.5	12.0' RT		1
PB6	185+68.5	77.0' RT		1
PB7	185+25.0	88.0' RT		1
PB8	184+86.2	88.0' RT		1
PB9	184+47.3	88.0' RT		1
PB10	184+04.5	75.3' RT		1
PB11	182+16.6	80.6' RT	1	
PB12	180+68.5	88.2' RT		1
PB13	180+68.5	65.4' RT		1
PB14	184+04.5	16.3' RT		1
PB15	184+28.8	16.3' RT	1	
PB16	184+04.5	17.2' LT		1
PB17	184+04.5	81.0' LT		1
PB18	184+21.3	99.4' LT		1
PB19	184+44.2	94.7' LT		1
PB20	184+86.9	93.7' LT		1
PB21	185+55.6	95.9' LT		1
PB22	182+40.6	16.7' RT	1	
		*** TOTALS	4	17

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD
*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

REMOVING PULL BOXES

PULL BOX NO.	STATION	LOCATION	653.0905 REMOVING PULL BOXES EACH
PB1	184+41.6	95.1' LT	1
PB2	52+60.3	40.3' LT	1
PB3	184+62.8	77.1' LT	1
PB4	184+88.3	94.8' LT	1
PB5	185+13.7	80.0' LT	1
PB6	185+75.0	2.2' LT	1
PB7	185+36.5	3.8' LT	1
PB8	188+73.2	3.4' LT	1
PB9	185+40.0	82.0' RT	1
PB10	184+88.4	79.3' RT	1
PB11	184+38.5	80.7' RT	1
PB12	181+67.9	85.5' RT	1
PB13	184+10.3	12.7' RT	1
PB14	184+01.4	16.5' LT	1
PB15	181+75.1	22.3' RT	1
PB16	181+69.1	73.1' RT	1
PB17	183+89.4	3.5' LT	1
PB18	183+99.5	3.5' LT	1
PB19	184+28.8	2.5' LT	1
PB20	185+76.7	14.2' LT	1
PB21	184+75.5	112.9' LT	1
PB22	184+75.6	84.9' LT	1
		*** TOTAL	22

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

SHEET 2 OF 7

CONCRETE BASES TYPE 1
CONCRETE BASES TYPE 2
CONCRETE BASES TYPE 5
CONCRETE BASES TYPE 10
CONCRETE BASES TYPE 13
CONCRETE CONTROL CABINET BASES TYPE 9 SPECIAL

BASE NO.	STATION	LOCATION	654.0101 CONCRETE BASES TYPE 1 EACH	654.0102 CONCRETE BASES TYPE 2 EACH	654.0105 CONCRETE BASES TYPE 5 EACH	654.0110 CONCRETE BASES TYPE 10 EACH	654.0113 CONCRETE BASES TYPE 13 EACH	654.0217 CONCRETE CONTROL CABINET BASES TYPE 9 SPECIAL EACH
CB1	185+62.9	93.9' LT						1
SB1	185+58.2	82.7' LT		1				
SB2	185+61.9	13.5' LT			1			
SB3	185+51.9	13.5' LT				1		
SB4	185+58.6	76.0' RT					1	
SB5	184+87.5	85.5' RT	1					
SB6	184+43.2	86.2' RT				1		
SB7	184+33.5	77.0' RT	1					
SB8	184+18.5	16.3' RT			1			
SB9	184+33.5	16.5' RT	1					
SB10	183+92.6	17.5' LT		1				
SB11	184+07.6	17.5' LT		1				
SB12	183+89.6	78.2' LT					1	
SB13	184+42.9	84.7' LT	1					
SB14	184+36.5	78.0' LT	1					
SB15	184+85.6	84.7' LT			1			
			5	3	3	2	2	1

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD
*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

INTERSECTION OF
USH 18/STH 164 & SPRINGDALE ROAD
ALL ITEMS ARE CATEGORY 0020

3

CABLE TRAFFIC SIGNAL 5-14 AWG
CABLE TRAFFIC SIGNAL 7-14 AWG
CABLE TRAFFIC SIGNAL 12-14 AWG

FROM	TO	655.0230 CABLE TRAFFIC SIGNAL 5-14 AWG L.F.	655.0240 CABLE TRAFFIC SIGNAL 7-14 AWG L.F.	655.0260 CABLE TRAFFIC SIGNAL 12-14 AWG L.F.
CB1	SB1			47
SB1	HEAD 8	21		
SB1	HEAD 25	14		
CB1	SB3		124	
SB3	HEAD 6	32		
SB3	HEAD 7	43		
CB1	SB4		221	
SB6	HEAD 2	75		
SB6	HEAD 3	64		
SB6	HEAD 4	53		
SB6	HEAD 5	41		
CB1	SB5		310	
SB5	HEAD 26	14		
CB1	SB6			357
SB6	HEAD 15		43	
SB6	HEAD 16	21		
SB6	HEAD 17	54		
SB6	HEAD 27	14		
CB1	SB7			371
SB7	HEAD 1	21		
SB7	HEAD 12	21		
SB7	HEAD 20	14		
CB1	SB9			357
SB9	HEAD 13	21		
SB9	HEAD 21	14		
SB9	HEAD 22	14		
CB1	SB10		296	
SB10	HEAD 19	25		
CB1	SB11		227	
SB11	HEAD 18	25		
CB1	SB12		183	
SB12	HEAD 9	74		
SB12	HEAD 10	62		
SB12	HEAD 11	50		
CB1	SB13			172
SB13	HEAD 14	21		
SB13	HEAD 24	14		
CB1	SB14		114	
SB14	HEAD 23	14		
CB1	SB15		109	
	*** TOTALS	836	1627	1304

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

3

CABLE TYPE UF 2-10 AWG
ELECTRICAL WIRE LIGHTING 12 AWG

FROM	TO	655.0315 CABLE TYPE UF 2-10 AWG (W/ GROUND) L.F.	655.0610 ELECTRICAL WIRE LIGHTING 12 AWG L.F.
CB1	SB1	47	
SB1	LUMIN		117
SB1	SB2	104	
SB2	LUMIN		234
SB2	SB4	136	
SB4	LUMIN		144
SB4	SB6	167	
SB6	LUMIN		144
CB1	SB15	114	
SB15	LUMIN		234
SB15	SB12	155	
SB12	LUMIN		144
SB12	SB8	154	
SB8	LUMIN		234
*** TOTALS		877	1251

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG

FROM	TO	655.0515 ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG L.F.
CB1	SB1	47
SB1	SB3	104
SB3	SB4	147
SB4	SB5	125
SB5	SB6	67
SB6	SB7	38
SB7	SB9	186
SB9	SB10	115
SB10	SB11	29
SB11	SB12	104
SB12	SB13	102
SB13	SB14	100
SB14	CB1	134
PB1	SB1	31
PB4	SB2	17
PB5	SB2	49
PB6	SB4	21
PB7	SB5	58
PB8	SB5	13
PB9	SB6	15
PB10	SB6	66
PB14	SB8	24
PB15	SB9	15
PB16	SB10	25
PB16	SB11	13
PB17	SB12	26
PB19	SB13	25
PB20	SB15	19
PB21	CB1	21
*** TOTAL		1736

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

TRAFFIC SIGNAL EVP DETECTOR CABLE
TYPE UF CABLE 2 CONDUCTOR NO. 14

FROM	TO	655.0900 TRAFFIC SIGNAL EVP DETECTOR CABLE L.F.	SPV.0090.50 TYPE UF CABLE 2 CONDUCTOR NO. 14 L.F.
CB1	SB11 (HEAD A)	269	269
CB1	SB4 (HEAD B)	270	270
CB1	SB6 (HEAD C)	407	407
*** TOTAL		946	946

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ELECTRICAL SERVICE METER BREAKER PEDESTAL,
USH 18 & SPRINGDALE ROAD

BASE NO.	656.0200.04 ELETRICAL SERVICE METER BREAKER PEDESTAL L.S.
CB1	1
TOTAL	1

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD

SIGNAL MOUNTING HARDWARE
USH 18 & SPRINGDALE ROAD

LOCATION	658.5069.04 SIGNAL MOUNTING HARDWARE L.S.
USH 18 & SPRINGDALE ROAD	1
TOTAL	1

TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS, USH 18 & SPRINGDALE ROAD
GENERATORS
TEMPORARY INFRARED EVP SYSTEM, USH 18 & SPRINGDALE ROAD
TEMPORARY VEHICLE DETECTION SYSTEM, USH 18 & SPRINGDALE ROAD

LOCATION	661.0200.04 TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS L.S.	661.0300 GENERATORS DAYS	SPV.0105.82 TEMPORARY INFRARED EVP SYSTEM L.S.	SPV.0105.87 TEMPORARY VEHICLE DETECTION SYSTEM L.S.
USH 18 & SPRINGDALE ROAD	1	2	1	1
*** TOTALS	1	2	1	1

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

INTERSECTION OF
USH 18/STH 164 & SPRINGDALE ROAD
ALL ITEMS ARE CATEGORY 0020

3

3

TRAFFIC SIGNAL FACE 3-12 INCH VERTICAL
TRAFFIC SIGNAL FACE 4-12 INCH VERTICAL
BACKPLATES SIGNAL FACE 3 SECTION 12-INCH
BACKPLATES SIGNAL FACE 4 SECTION 12-INCH
PEDESTRIAN SIGNAL FACE 16-INCH
LED MODULES 12-INCH RED BALL
LED MODULES 12-INCH YELLOW BALL
LED MODULES 12-INCH GREEN BALL
LED MODULES 12-INCH RED ARROW
LED MODULES 12-INCH YELLOW ARROW
LED MODULES 12-INCH GREEN ARROW
LED MODULES PEDESTRIAN COUNTDOWN TIMER 16-INCH

SIGNAL HEAD NO.	SIGNAL BASE NO.	658.0110 TRAFFIC SIGNAL FACE 3-12 INCH VERTICAL EACH	658.0115 TRAFFIC SIGNAL FACE 4-12 INCH VERTICAL EACH	658.0215 BACKPLATES SIGNAL FACE 3 SECTION 12-INCH EACH	658.0220 BACKPLATES SIGNAL FACE 4 SECTION 12-INCH EACH	658.0416 PEDESTRIAN SIGNAL FACE 16-INCH EACH	658.0600 LED MODULES 12-INCH RED BALL EACH	658.0605 LED MODULES 12-INCH YELLOW BALL EACH	658.0610 LED MODULES 12-INCH GREEN BALL EACH	658.0615 LED MODULES 12-INCH RED ARROW EACH	658.0620 LED MODULES 12-INCH YELLOW ARROW EACH	658.0625 LED MODULES 12-INCH GREEN ARROW EACH	658.0635 LED MODULES PEDESTRIAN COUNTDOWN TIMER 16-INCH EACH
1	SB7	1		1			1	1	1				
2	SB4	1		1			1	1	1				
3	SB4	1		1			1	1	1				
4	SB4	1		1			1	1	1				
5	SB4	1		1			1	1	1				
6	SB3	1		1						1	1	1	
7	SB3	1		1						1	1	1	
8	SB1	1		1			1	1	1				
9	SB12	1		1			1	1	1				
10	SB12	1		1			1	1	1				
11	SB12	1		1			1	1	1				
12	SB7	1		1						1	1	1	
13	SB9	1		1						1	1	1	
14	SB13	1		1			1	1	1				
15	SB6		1		1		1	1	1			1	
16	SB6	1		1			1	1	1				
17	SB6	1		1						1	1	1	
18	SB11	1		1			1				1	1	
19	SB10	1		1			1				1	1	
20	SB7					1							1
21	SB9					1							1
22	SB9					1							1
23	SB14					1							1
24	SB13					1							1
25	SB1					1							1
26	SB5					1							1
27	SB6					1							1
	*** TOTALS	18	1	18	1	8	14	12	12	5	7	8	8

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

SHEET 5 OF 7

INTERSECTION OF
USH 18/STH 164 & SPRINGDALE ROAD
ALL ITEMS ARE CATEGORY 0020

PEDESTAL BASES
TRANSFORMER BASES BREAKAWAY 11 1/2 INCH BOLT CIRCLE
POLES TYPE 2
POLES TYPE 3
POLES TYPE 5 ALUMINUM
TRAFFIC SIGNAL STANDARDS ALUMINUM 10-FT
TRAFFIC SIGNAL STANDARDS ALUMINUM 13-FT
LUMINAIRE ARMS SINGLE MEMBER 4-INCH CLAMP 6-FT
LUMINAIRE ARMS SINGLE MEMBER 4 1/2-INCH CLAMP 6-FT
INSTALL POLES TYPE 9
INSTALL POLES TYPE 10
INSTALL POLES TYPE 13
INSTALL MONOTUBE ARMS 20-FT
INSTALL MONOTUBE ARMS 30-FT
INSTALL MONOTUBE ARMS 50-FT
INSTALL MONOTUBE ARMS 55-FT
INSTALL LUMINAIRE ARMS STEEL 15-FT
PEDESTRIAN PUSH BUTTONS
LUMINAIRES UTILITY LED C

SIGNAL BASE NO.	657.0100 PEDESTAL BASES EACH	657.0255 TRANSFORMER BASES BREAKAWAY 11 1/2 INCH BOLT CIRCLE EACH	657.0305 POLES TYPE 2 EACH	657.0310 POLES TYPE 3 EACH	657.0322 POLES TYPE 5 ALUMINUM EACH	657.0430 TRAFFIC SIGNAL STANDARDS ALUMINUM 10-FT EACH	657.0420 TRAFFIC SIGNAL STANDARDS ALUMINUM 13-FT EACH	657.0609 LUMINAIRE ARMS SINGLE MEMBER 4-INCH CLAMP 6-FT EACH	657.0610 LUMINAIRE ARMS SINGLE MEMBER 4 1/2-INCH CLAMP 6-FT EACH	657.1345 INSTALL POLES TYPE 9 EACH	657.1350 INSTALL POLES TYPE 10 EACH	657.1360 INSTALL POLES TYPE 13 EACH	657.1520 INSTALL MONOTUBE ARMS 20-FT EACH	657.1530 INSTALL MONOTUBE ARMS 30-FT EACH	657.1550 INSTALL MONOTUBE ARMS 50-FT EACH	657.1555 INSTALL MONOTUBE ARMS 55-FT EACH	657.1815 INSTALL LUMINAIRE ARMS STEEL 15-FT EACH	658.0500 PEDESTRIAN PUSH BUTTONS EACH	659.1125 LUMINAIRES UTILITY LED C EACH
SB1		1		1				1											1
SB2		1			1				2										2
SB3										1			1						
SB4												1					1	1	1
SB5	1					1													1
SB6											1			1				1	1
SB7	1						1												1
SB8		1			1				2										2
SB9	1						1												1
SB10		1	1																
SB11		1	1																
SB12												1				1		1	1
SB13	1						1												1
SB14	1					1													1
SB15		1			1				2										1	2
*** TOTALS	5	6	2	1	3	2	3	1	6	1	1	2	1	1	1	1	3	8	10

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

INTERSECTION OF
USH 18/STH 164 & SPRINGDALE ROAD
ALL ITEMS ARE CATEGORY 0020

3

REMOVE TRAFFIC SIGNALS USH 18 & SPRINGDALE ROAD
REMOVE LOOP DETECTOR WIRE AND LEAD-IN CABLE, USH 18 & SPRINGDALE ROAD

LOCATION	SPV.0105.53 REMOVE TRAFFIC SIGNALS L.S.	SPV.0105.92 REMOVE LOOP DETECTOR WIRE AND LEAD-IN CABLE L.S.
USH 18 & SPRINGDALE ROAD	1	1
TOTAL	1	1

TRANSPORTING SIGNAL AND LIGHTING MATERIALS AT USH 18 & SPRINGDALE ROAD

LOCATION	SPV.0105.58 TRANSPORTING SIGNAL AND LIGHTING MATERIALS L.S.
USH 18 & SPRINGDALE ROAD	1
TOTAL	1

3

INSTALL STATE-FURNISHED TRAFFIC SIGNAL CABINET, USH 18 & SPRINGDALE ROAD

LOCATION	SPV.0105.64 INSTALL STATE-FURNISHED TRAFFIC SIGNAL CABINET L.S.
USH 18 & SPRINGDALE ROAD	1
TOTAL	1

INSTALL VIDEO DETECTION SYSTEM, USH 18 & SPRINGDALE ROAD

LOCATION	SPV.0105.70 INSTALL VIDEO DETECTION SYSTEM L.S.
USH 18 & SPRINGDALE ROAD	1
TOTAL	1

CAMERA NO.	SIGNAL BASE	MOUNTING LOCATION
V1	SB6	LUMINAIRE ARM

EVP DETECTOR HEAD INSTALLATION AT USH 18 & SPRINGDALE ROAD

LOCATION	SPV.0105.76 EVP DETECTOR HEAD INSTALLATION L.S.
USH 18 & SPRINGDALE ROAD	1
TOTAL	1

SUMMARY OF STATE FURNISHED MATERIALS - FOR INFORMATION ONLY

QUANTITY	UNIT	DESCRIPTION
1	LS	TRAFFIC SIGNAL CONTROLLER AND CABINET
1	EACH	POLES TYPE 9
1	EACH	POLES TYPE 10
2	EACH	POLES TYPE 13
1	EACH	MONOTUBE ARMS 20-FT
1	EACH	MONOTUBE ARMS 30-FT
1	EACH	MONOTUBE ARMS 50-FT
1	EACH	MONOTUBE ARMS 55-FT
3	EACH	LUMINAIRE ARMS STEEL 15-FT
1	LS	VIDEO DETECTION SYSTEM
1	LS	EVP DETECTION SYSTEM

SHEET 7 OF 7

INTERSECTION OF
USH 18/STH 164 & PARKLAWN DRIVE
ALL ITEMS ARE CATEGORY 0020

3

3

CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH
CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH
CONDUIT SPECIAL 3-INCH

FROM	TO	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH L.F.	652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH L.F.	652.0615 CONDUIT SPECIAL 3-INCH L.F.
CB1	PB1		90	
PB1	PB2			154
PB2	PB3		82	
PB3	PB4	207		
PB4	PB5	151		
PB3	PB6			116
PB6	PB7			40
PB7	PB8			130
PB8	PB9		80	
PB9	PB10			80
PB10	PB11			58
PB11	PB12		112	
PB12	PB13	189		
PB13	PB14	171		
PB12	PB15			114
PB15	PB16			38
PB16	PB17			116
PB17	CB1		51	
PB1	SB1	9		
PB1	SB2	6		
PB2	SB3		8	
PB3	SB4	12		
PB6	SB5	12		
PB7	SB6	161		
SB6	SB7	151		
PB8	SB8		12	
PB9	SB9	13		
PB11	SB10		13	
PB12	SB11	12		
PB15	SB12	12		
PB17	SB13		6	
PB17	SB14	12		
	*** TOTALS	1118	454	846

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

SHEET 1 OF 6

INTERSECTION OF
USH 18/STH 164 & PARKLAWN DRIVE
ALL ITEMS ARE CATEGORY 0020

3

CONDUIT LOOP DETECTOR
LOOP DETECTOR LEAD IN CABLE
LOOP DETECTOR WIRE

LOOP NO.	HOME RUN PB	STATION	LOCATION	SIZE	NO. OF TURNS	SDD INSTALLATION REFERENCE	652.0800 CONDUIT LOOP DETECTOR L.F.	655.0700 LOOP DETECTOR LEAD IN CABLE L.F.	655.0800 LOOP DETECTOR WIRE L.F.	CONSTRUCTION
11	PB6	197+45.0	0.9' RT	6'X20'	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	88	223	274	RECONSTRUCT
12	PB6	197+73.0	1.0' RT	6'X20'	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	74	223	232	RECONSTRUCT
21	PB14	202+65.0	31.5' LT	6'X28'	4	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	108	528	442	BASE PATCHING
22	PB13	200+10.1	29.6' LT	6'X28'	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	78	357	244	BASE PATCHING
51	PB16	199+25.2	0.5' LT	6'X20'	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	93	92	289	RECONSTRUCT
52	PB16	189+97.2	0.5' LT	6'X20'	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	75	92	235	RECONSTRUCT
61	PB5	194+05.0	25.0' RT	6'X20'	4	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 1)	78	523	322	BASE PATCHING
62	PB5	194+05.0	25.0' RT	6'X20'	4	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 1)	122	523	498	BASE PATCHING
63	PB4	195+55.0	24.9' RT	6'X20'	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 1)	78	372	244	BASE PATCHING
64	PB4	195+55.0	70.0' RT	6'X20'	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 1)	122	372	376	BASE PATCHING
						*** TOTALS	916	3305	3156	

* STATION AND LOCATION IS TO FRONT CENTER OF DETECTION LOOP
** FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD
*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

PULL BOXES STEEL 24X36-INCH
PULL BOXES STEEL 24X42-INCH

PULL BOX NO.	STATION	LOCATION	653.0135 PULL BOXES STEEL 24X36-INCH EACH	653.0140 PULL BOXES STEEL 24X42-INCH EACH
PB1	198+74.8	85.1' RT		1
PB2	197+97.8	85.7' RT		1
PB3	197+61.8	67.5' RT		1
PB4	195+55.0	70.0' RT	1	
PB5	194+05.0	70.0' RT	1	
PB6	197+61.8	10.0' RT		1
PB7	197+61.8	9.0' LT		1
PB8	197+61.8	73.1' LT		1
PB9	197+91.7	98.9' LT		1
PB10	198+31.6	98.9' LT		1
PB11	198+59.6	96.7' LT		1
PB12	199+06.2	66.2' LT		1
PB13	200+95.0	65.9' LT	1	
PB14	202+65.0	65.3' LT	1	
PB15	199+06.2	9.5' LT		1
PB16	199+06.2	9.3' RT		1
PB17	199+06.2	66.8' RT		1
		*** TOTALS	4	13

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD
*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

CONCRETE BASES TYPE 1
CONCRETE BASES TYPE 2
CONCRETE BASES TYPE 6
CONCRETE BASES TYPE 10
CONCRETE BASES TYPE 13
CONCRETE CONTROL CABINET BASES TYPE 9 SPECIAL

BASE NO.	STATION	LOCATION	654.0101 CONCRETE BASES TYPE 1 EACH	654.0102 CONCRETE BASES TYPE 2 EACH	654.0106 CONCRETE BASES TYPE 6 EACH	654.0110 CONCRETE BASES TYPE 10 EACH	654.0113 CONCRETE BASES TYPE 13 EACH	654.0217 CONCRETE CONTROL CABINET BASES TYPE 9 SPECIAL EACH
CB1	199+04.2	83.6' RT						1
SB1	198+82.3	82.0' RT	1					
SB2	198+71.9	89.5' RT	1					
SB3	197+91.9	82.0' RT				1		
SB4	197+73.5	69.4' RT	1					
SB5	197+73.5	10.0' RT		1				
SB6	196+01.9	8.8' LT			1			
SB7	194+51.9	0.5' RT			1			
SB8	197+73.5	74.2' LT					1	
SB9	197+86.5	87.7' LT	1					
SB10	198+67.9	87.7' LT				1		
SB11	198+95.1	70.5' LT	1					
SB12	200+73.3	9.2' RT		1				
SB13	199+10.2	70.5' RT					1	
SB14	198+95.1	70.9' RT	1					
		*** TOTALS	6	2	2	2	2	1

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD
*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

SHEET 2 OF 6

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	MISCELLANEOUS QUANTITIES	SHEET 480	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\05_Parklawn\030201_mq.dgn PLOT DATE : 7/13/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 34.0000 sf / in.

3

CABLE TRAFFIC SIGNAL 5-14 AWG
CABLE TRAFFIC SIGNAL 7-14 AWG
CABLE TRAFFIC SIGNAL 12-14 AWG

FROM	TO	655.0230 CABLE TRAFFIC SIGNAL 5-14 AWG L.F.	655.0240 CABLE TRAFFIC SIGNAL 7-14 AWG L.F.	655.0260 CABLE TRAFFIC SIGNAL 12-14 AWG L.F.
CB1	SB1		56	
SB1	HEAD 30	14		
CB1	SB2			53
SB2	HEAD 15	21		
SB2	HEAD 17	21		
CB1	SB3			138
SB3	HEAD 16	53		
SB3	HEAD 31	14		
CB1	SB4			189
SB4	HEAD 1	21		
SB4	HEAD 12	21		
SB4	HEAD 20	14		
CB1	SB5			253
SB5	HEAD 13	21		
SB5	HEAD 21	14		
SB5	HEAD 22	14		
CB1	SB8			350
SB8	HEAD 9	79		
SB8	HEAD 10	67		
SB8	HEAD 11	55		
SB8	HEAD 23	14		
CB1	SB9			342
SB9	HEAD 14	21		
SB9	HEAD 18	21		
SB9	HEAD 24	14		
CB1	SB10			261
SB10	HEAD 19	50		
SB10	HEAD 25	14		
CB1	SB11			198
SB11	HEAD 6	21		
SB11	HEAD 8	21		
SB11	HEAD 26	14		
CB1	SB12			135
SB12	HEAD 7	21		
SB12	HEAD 27	14		
SB12	HEAD 28	14		
CB1	SB13		40	
SB13	HEAD 2	76		
SB13	HEAD 3	66		
SB13	HEAD 4	55		
SB13	HEAD 5	43		
CB1	SB14		46	
SB14	HEAD 29	14		
	*** TOTALS	922	142	1919

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

CABLE TYPE UF 2-10 AWG
ELECTRICAL WIRE LIGHTING 12 AWG

		655.0315 CABLE TYPE UF 2-10 AWG (W/ GROUND) L.F.	655.0610 ELECTRICAL WIRE LIGHTING 12 AWG L.F.
CB1	SB3	138	
SB3	LUMIN		144
SB3	SB5	145	
SB5	LUMIN		234
SB5	SB6	213	
SB6	LUMIN		276
SB6	SB7	159	
SB7	LUMIN		276
CB1	SB13	40	
SB13	LUMIN		144
SB13	SB12	121	
SB12	LUMIN		234
SB12	SB10	164	
SB10	LUMIN		144
SB10	SB8	166	
SB8	LUMIN		144
	*** TOTALS	1146	1596

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

INTERSECTION OF
USH 18/STH 164 & PARKLAWN DRIVE
ALL ITEMS ARE CATEGORY 0020

3

ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG

FROM	TO	655.0515 ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG L.F.
CB1	SB1	56
SB1	SB2	29
SB2	SB3	111
SB3	SB4	81
SB4	SB5	102
SB5	SB8	135
SB8	SB9	85
SB9	SB10	121
SB10	SB11	102
SB11	SB12	101
SB12	SB13	121
SB13	SB14	32
SB14	CB1	46
PB1	SB2	19
PB2	SB3	18
PB3	SB4	22
PB6	SB5	22
PB7	SB5	48
PB8	SB8	22
PB9	SB9	23
PB10	SB10	58
PB11	SB10	23
PB12	SB11	22
PB15	SB12	22
PB16	SB12	47
PB17	SB13	16
	*** TOTAL	1484

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

SHEET 3 OF 6

TRAFFIC SIGNAL EVP DETECTOR CABLE
TYPE UF CABLE 2 CONDUCTOR NO. 14

FROM	TO	655.0900 TRAFFIC SIGNAL EVP DETECTOR CABLE L.F.	SPV.0090.50 TYPE UF CABLE 2 CONDUCTOR NO. 14
CB1	SB8 (HEAD A)	402	402
CB1	SB13 (HEAD B)	90	90
CB1	SB3 (HEAD C)	181	181
CB1	SB10 (HEAD D)	306	306
	*** TOTAL	979	979

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ELECTRICAL SERVICE METER BREAKER PEDESTAL,
USH 18 & PARKLAWN DRIVE

BASE NO.	656.0200.05 ELETRICAL SERVICE METER BREAKER PEDESTAL L.S.
CB1	1
TOTAL	1

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD

INTERSECTION OF
USH 18/STH 164 & PARKLAWN DRIVE
ALL ITEMS ARE CATEGORY 0020

SIGNAL MOUNTING HARDWARE USH 18 & PARKLAWN DRIVE

LOCATION	658.5069.05 SIGNAL MOUNTING HARDWARE L.S.
USH 18 & PARKLAWN DRIVE	1
TOTAL	1

PEDESTAL BASES
TRANSFORMER BASES BREAKAWAY 11 1/2 INCH BOLT CIRCLE
POLES TYPE 3
POLES TYPE 6 ALUMINUM
TRAFFIC SIGNAL STANDARDS ALUMINUM 10-FT
TRAFFIC SIGNAL STANDARDS ALUMINUM 13-FT
LUMINAIRE ARMS SINGLE MEMBER 4-INCH CLAMP 6-FT
LUMINAIRE ARMS SINGLE MEMBER 4 1/2-INCH CLAMP 8-FT
INSTALL POLES TYPE 10
INSTALL POLES TYPE 13
INSTALL MONOTUBE ARMS 30-FT
INSTALL MONOTUBE ARMS 55-FT
INSTALL LUMINAIRE ARMS STEEL 15-FT
PEDESTRIAN PUSH BUTTONS
LUMINAIRES UTILITY LED C

SIGNAL BASE NO.	657.0100 PEDESTAL BASES EACH	657.0255 TRANSFORMER BASES BREAKAWAY 11 1/2 INCH BOLT CIRCLE EACH	657.0310 POLES TYPE 3 EACH	657.0327 POLES TYPE 6 ALUMINUM EACH	657.0430 TRAFFIC SIGNAL STANDARDS ALUMINUM 10-FT EACH	657.0420 TRAFFIC SIGNAL STANDARDS ALUMINUM 13-FT EACH	657.0609 LUMINAIRE ARMS SINGLE MEMBER 4-INCH CLAMP 6-FT EACH	657.0615 LUMINAIRE ARMS SINGLE MEMBER 4 1/2-INCH CLAMP 8-FT EACH	657.1350 INSTALL POLES TYPE 10 EACH	657.1360 INSTALL POLES TYPE 13 EACH	657.1530 INSTALL MONOTUBE ARMS 30-FT EACH	657.1555 INSTALL MONOTUBE ARMS 55-FT EACH	657.1815 INSTALL LUMINAIRE ARMS STEEL 15-FT EACH	658.0500 PEDESTRIAN PUSH BUTTONS EACH	659.1125 LUMINAIRES UTILITY LED C EACH
SB1	1				1									1	
SB2	1					1									
SB3									1		1		1	1	1
SB4	1					1								1	
SB5		1	1				2							1	2
SB6		1		1				2							2
SB7		1		1				2							2
SB8										1		1	1	1	1
SB9	1					1								1	
SB10									1		1		1	1	1
SB11	1					1								1	
SB12		1	1				2							1	2
SB13										1		1	1		1
SB14	1				1									1	
*** TOTALS	6	4	2	2	2	4	4	4	2	2	2	2	4	10	12

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

INTERSECTION OF
USH 18/STH 164 & PARKLAWN DRIVE
ALL ITEMS ARE CATEGORY 0020

TRAFFIC SIGNAL FACE 3-12 INCH VERTICAL
BACKPLATES SIGNAL FACE 3 SECTION 12-INCH
PEDESTRIAN SIGNAL FACE 16-INCH
LED MODULES 12-INCH RED BALL
LED MODULES 12-INCH YELLOW BALL
LED MODULES 12-INCH GREEN BALL
LED MODULES 12-INCH RED ARROW
LED MODULES 12-INCH YELLOW ARROW
LED MODULES 12-INCH GREEN ARROW
LED MODULES PEDESTRIAN COUNTDOWN TIMER 16-INCH

SIGNAL HEAD NO.	SIGNAL BASE NO.	658.0110 TRAFFIC SIGNAL FACE 3-12 INCH VERTICAL EACH	658.0215 BACKPLATES SIGNAL FACE 3 SECTION 12-INCH EACH	658.0416 PEDESTRIAN SIGNAL FACE 16-INCH EACH	658.0600 LED MODULES 12-INCH RED BALL EACH	658.0605 LED MODULES 12-INCH YELLOW BALL EACH	658.0610 LED MODULES 12-INCH GREEN BALL EACH	658.0615 LED MODULES 12-INCH RED ARROW EACH	658.0620 LED MODULES 12-INCH YELLOW ARROW EACH	658.0625 LED MODULES 12-INCH GREEN ARROW EACH	658.0635 LED MODULES PEDESTRIAN COUNTDOWN TIMER 16-INCH EACH
1	SB4	1	1		1	1	1				
2	SB13	1	1		1	1	1				
3	SB13	1	1		1	1	1				
4	SB13	1	1		1	1	1				
5	SB13	1	1		1	1	1				
6	SB11	1	1					1	1	1	
7	SB12	1	1					1	1	1	
8	SB11	1	1		1	1	1				
9	SB8	1	1		1	1	1				
10	SB8	1	1		1	1	1				
11	SB8	1	1		1	1	1				
12	SB4	1	1					1	1	1	
13	SB5	1	1					1	1	1	
14	SB9	1	1		1	1	1				
15	SB2	1	1		1	1	1				
16	SB3	1	1		1	1	1				
17	SB2	1	1		1	1	1				
18	SB9	1	1		1	1	1				
19	SB10	1	1		1	1	1				
20	SB4			1							1
21	SB5			1							1
22	SB5			1							1
23	SB8			1							1
24	SB9			1							1
25	SB10			1							1
26	SB11			1							1
27	SB12			1							1
28	SB12			1							1
29	SB14			1							1
30	SB1			1							1
31	SB3			1							1
*** TOTALS		19	19	12	15	15	15	4	4	4	12

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

INTERSECTION OF
USH 18/STH 164 & PARKLAWN DRIVE
ALL ITEMS ARE CATEGORY 0020

3

TRANSPORTING SIGNAL AND LIGHTING MATERIALS AT USH 18 & PARKLAWN DRIVE

LOCATION	SPV.0105.59 TRANSPORTING SIGNAL AND LIGHTING MATERIALS L.S.
USH 18 & PARKLAWN DRIVE	1
TOTAL	1

INSTALL STATE-FURNISHED TRAFFIC SIGNAL CABINET, USH 18 & PARKLAWN DRIVE

LOCATION	SPV.0105.65 INSTALL STATE-FURNISHED TRAFFIC SIGNAL CABINET L.S.
USH 18 & PARKLAWN DRIVE	1
TOTAL	1

3

INSTALL VIDEO DETECTION SYSTEM, USH 18 & PARKLAWN DRIVE

LOCATION	SPV.0105.71 INSTALL VIDEO DETECTION SYSTEM L.S.
USH 18 & PARKLAWN DRIVE	1
TOTAL	1

CAMERA NO.	SIGNAL BASE	MOUNTING LOCATION
V1	SB3	LUMINAIRE ARM
V2	SB10	LUMINAIRE ARM

EVP DETECTOR HEAD INSTALLATION AT USH 18 & PARKLAWN DRIVE

LOCATION	SPV.0105.77 EVP DETECTOR HEAD INSTALLATION L.S.
USH 18 & PARKLAWN DRIVE	1
TOTAL	1

SUMMARY OF STATE FURNISHED MATERIALS - FOR INFORMATION ONLY

QUANTITY	UNIT	DESCRIPTION
1	LS	TRAFFIC SIGNAL CONTROLLER AND CABINET
2	EACH	POLES TYPE 10
2	EACH	POLES TYPE 13
2	EACH	MONOTUBE ARMS 30-FT
2	EACH	MONOTUBE ARMS 55-FT
4	EACH	LUMINAIRE ARMS STEEL 15-FT
1	LS	VIDEO DETECTION SYSTEM
1	LS	EVP DETECTION SYSTEM

REMOVING CONCRETE BASES

EXISTING BASE NO.	STATION	LOCATION	204.0195 REMOVING CONCRETE BASES EACH
CB1	209+97.4	92.6' LT	1
SB1	209+57.8	67.5' LT	1
SB2	209+61.8	9.8' LT	1
SB4	209+49.3	70.5' RT	1
SB5	208+89.6	69.0' RT	1
SB6	208+82.2	9.6' RT	1
SB8	208+95.9	69.0' LT	1
		*** TOTAL	7

*** QUANTITIES LISTED ELSEWHERE ON PLAN

INTERSECTION OF
USH 18 & KOSSOW ROAD
ALL ITEMS ARE CATEGORY 0020

3

CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH
CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH
CONDUIT SPECIAL 3-INCH

FROM	TO	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH L.F.	652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH L.F.	652.0615 CONDUIT SPECIAL 3-INCH L.F.
CB1	PB1		36	
PB1	PB2		33	
PB1	PB3		68	
PB3	PB4	185		
PB4	PB5	151		
PB3	PB6			154
PB6	PB7		40	
PB7	PB8			116
PB8	PB9	63		
PB8	PB10		112	
PB10	PB11		31	
PB10	PB12	168		
PB10	PB13			140
PB13	PB14			100
PB14	PB15		35	
PB14	PB16		100	
PB16	PB17	170		
PB17	PB18	158		
PB16	PB19			146
PB19	PB27	33		
PB19	PB20		40	40
PB20	PB21			116
PB21	PB22	85		
PB21	PB23		142	
PB23	PB24		36	
PB23	PB25		142	
PB25	PB26		102	
PB26	CB1		39	
PB2	SB1	7		
PB2	SB2		14	
PB6	SB3	29		
PB6	SB4	44		
PB8	SB5		7	
PB11	SB6	5		
PB11	SB7	14		
PB15	SB8	5		
PB15	SB9		15	
PB21	SB11		6	
PB24	SB12	9		
PB24	SB13	15		
PB25	SB14		34	
PB25	SB15	137		
PB27	SB10	16		
	*** TOTALS	1294	1032	812

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

SHEET 1 OF 7

INTERSECTION OF
USH 18 & KOSSOW ROAD
ALL ITEMS ARE CATEGORY 0020

CONDUIT LOOP DETECTOR
LOOP DETECTOR LEAD IN CABLE
LOOP DETECTOR WIRE

LOOP NO.	HOME RUN PB	STATION	LOCATION	SIZE	NO. OF TURNS	SDD INSTALLATION REFERENCE	652.0800 CONDUIT LOOP DETECTOR L.F.	655.0700 LOOP DETECTOR LEAD IN CABLE L.F.	655.0800 LOOP DETECTOR WIRE L.F.	CONSTRUCTION
11	PB20	208+29.3	0.7' RT	6'X20'	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	70	281	220	RECONSTRUCT
12	PB27	208+57.3	0.7' RT	6'X20'	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	65	334	205	RECONSTRUCT
21	PB5	204+96.9	31.5' LT	6'X28'	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	118	399	364	BASE PATCHING
22	PB4	212+10.1	31.5' LT	6'X28'	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	118	248	364	BASE PATCHING
51	PB6	210+30.1	0.4' LT	6'X20'	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	66	140	208	RECONSTRUCT
52	PB6	210+02.1	0.4' LT	6'X20'	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	68	140	214	RECONSTRUCT
61	PB18	204+97.0	46.0' RT	6'X18'	5	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 1)	86	702	450	BASE PATCHING
62	PB18	204+96.9	24.1' RT	6'X18'	5	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 1)	97	702	495	BASE PATCHING
63	PB17	206+55.0	45.6' RT	6'X18'	4	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 1)	141	544	574	BASE PATCHING
64	PB17	206+55.0	23.6' RT	6'X18'	4	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 1)	132	544	538	BASE PATCHING
81	PB4	46+97.2	27.4' RT	6'X6'	6	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	94	442	574	BASE PATCHING
S1	PB22	206+90.0	66.9' LT	6'X6'	5	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	68	308	350	BASE PATCHING
S2	PB22	206+90.0	66.9' LT	6'X6'	5	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	90	308	460	BASE PATCHING
S3	PB22	206+90.0	66.9' LT	6'X6'	5	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	112	308	570	BASE PATCHING
S4	PB9	210+84.7	53.5' RT	6'X6'	4	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	48	281	202	BASE PATCHING
S5	PB9	210+86.7	41.1' RT	6'X6'	4	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	70	281	290	BASE PATCHING
S6	PB9	210+88.7	30.6' RT	6'X6'	4	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	92	281	378	BASE PATCHING
S7	PB9	210+90.6	19.5' RT	6'X6'	4	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	114	281	466	BASE PATCHING
						*** TOTALS	922	3861	3781	

* STATION AND LOCATION IS TO FRONT CENTER OF DETECTION LOOP
** FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD
*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

PULL BOXES STEEL 24X36-INCH
PULL BOXES STEEL 24X42-INCH

PULL BOX NO.	STATION	LOCATION	653.0135 PULL BOXES STEEL 24X36-INCH EACH	653.0140 PULL BOXES STEEL 24X42-INCH EACH
PB1	209+98.9	103.3' LT		1
PB2	209+97.4	71.1' LT		1
PB3	210+27.1	86.2' LT		1
PB4	212+10.0	70.5' LT	1	
PB5	213+60.0	70.5' LT	1	
PB6	210+27.1	9.5' LT		1
PB7	210+27.1	9.6' RT		1
PB8	210+27.0	67.2' RT		1
PB9	210+88.8	66.9' RT	1	
PB10	209+86.4	104.8' RT		1
PB11	209+65.4	82.3' RT		1
PB12	46+96.8	51.3' RT	1	
PB13	209+17.2	104.7' RT		1
PB14	208+67.4	104.8' RT		1
PB15	208+69.1	70.0' RT		1
PB16	208+24.3	82.7' RT		1
PB17	206+55.0	78.7' RT	1	
PB18	204+97.8	74.2' RT	1	
PB19	208+24.3	10.0' RT		1
PB20	208+24.3	9.5' LT		1
PB21	208+24.3	67.4' LT		1
PB22	206+90.0	66.9' LT	1	
PB23	208+69.5	115.8' LT		1
PB24	208+85.3	84.0' LT		1
PB25	209+40.3	115.8' LT		1
PB26	209+90.9	115.8' LT		1
PB27	208+57.3	10.0' RT	1	
		*** TOTALS	8	19

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD
*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

REMOVING PULL BOXES

PULL BOX NO.	STATION	LOCATION	653.0905 REMOVING PULL BOXES EACH
PB1	209+85.0	90.6' LT	1
PB2	209+57.7	71.7' LT	1
PB3	210+04.4	9.7' LT	1
PB4	210+10.8	9.0' RT	1
PB5	212+60.3	4.9' LT	1
PB6	209+49.2	76.8' RT	1
PB7	209+71.7	95.2' RT	1
PB8	47+30.3	22.2' RT	1
PB9	208+96.5	71.8' RT	1
PB10	208+74.3	92.7' RT	1
PB11	208+40.1	9.3' RT	1
PB12	208+72.5	9.5' RT	1
PB13	208+39.1	9.3' LT	1
PB14	206+00.6	6.0' LT	1
PB15	208+96.4	76.8' LT	1
PB16	208+76.2	98.2' LT	1
PB17	52+67.8	27.7' LT	1
PB18	208+32.9	0.6' LT	1
PB19	208+42.2	0.8' LT	1
PB20	209+75.5	0.0' RT	1
PB21	210+04.6	0.2' RT	1
PB22	210+13.4	0.1' LT	1
		*** TOTAL	22

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

SHEET 2 OF 7

CONCRETE BASES TYPE 1
CONCRETE BASES TYPE 2
CONCRETE BASES TYPE 5
CONCRETE BASES TYPE 10
CONCRETE BASES TYPE 13
CONCRETE CONTROL CABINET BASES TYPE 9 SPECIAL

BASE NO.	STATION	LOCATION	654.0101 CONCRETE BASES TYPE 1 EACH	654.0102 CONCRETE BASES TYPE 2 EACH	654.0105 CONCRETE BASES TYPE 5 EACH	654.0110 CONCRETE BASES TYPE 10 EACH	654.0113 CONCRETE BASES TYPE 13 EACH	654.0217 CONCRETE CONTROL CABINET BASES TYPE 9 SPECIAL EACH
CB1	210+03.4	114.1' LT						1
SB1	209+91.2	71.0' LT	1					
SB2	209+84.9	76.9' LT				1		
SB3	209+98.6	10.0' LT			1			
SB4	209+83.6	10.0' LT	1					
SB5	210+32.5	71.3' RT					1	
SB6	209+65.4	77.7' RT		1				
SB7	209+71.9	70.7' RT	1					
SB8	208+73.3	70.0' RT	1					
SB9	208+82.2	75.3' RT					1	
SB10	208+73.3	10.0' RT		1				
SB11	208+19.1	70.0' LT					1	
SB12	208+88.0	76.4' LT	1					
SB13	208+79.5	71.1' LT	1					
SB14	209+40.3	82.4' LT				1		
SB15	52+52.1	15.0' RT			1			
		*** TOTALS	6	2	2	2	3	1

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD
*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

CABLE TYPE UF 2-10 AWG
ELECTRICAL WIRE LIGHTING 12 AWG

FROM	TO	655.0315 CABLE TYPE UF 2-10 AWG (W/ GROUND) L.F.	655.0610 ELECTRICAL WIRE LIGHTING 12 AWG L.F.
CB1	SB3	181	
SB3	LUMIN		234
SB3	SB5	140	
SB5	LUMIN		144
SB5	SB6	125	
SB6	LUMIN		117
SB6	SB9	244	
SB9	LUMIN		144
CB1	SB15	223	
SB15	LUMIN		234
SB15	SB14	184	
SB14	LUMIN		288
SB14	SB11	208	
SB11	LUMIN		144
SB11	SB10	160	
SB10	LUMIN		234
	*** TOTALS	1465	1539

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

INTERSECTION OF
USH 18 & KOSSOW ROAD
ALL ITEMS ARE CATEGORY 0020

CABLE TRAFFIC SIGNAL 5-14 AWG
CABLE TRAFFIC SIGNAL 7-14 AWG
CABLE TRAFFIC SIGNAL 12-14 AWG

FROM	TO	655.0230 CABLE TRAFFIC SIGNAL 5-14 AWG L.F.	655.0240 CABLE TRAFFIC SIGNAL 7-14 AWG L.F.	655.0260 CABLE TRAFFIC SIGNAL 12-14 AWG L.F.
CB1	SB1			75
SB1	HEAD 6	19		
SB1	HEAD 8	19		
SB1	HEAD 30	14		
CB1	SB2			82
SB2	HEAD 15	40		
SB2	HEAD 16	52		
SB2	HEAD 29	14		
CB1	SB4			196
SB4	HEAD 7	19		
SB4	HEAD 31	14		
SB4	HEAD 32	14		
CB1	SB5		249	
SB5	HEAD 2	78		
SB5	HEAD 3	67		
SB5	HEAD 4	56		
SB5	HEAD 5	45		
CB1	SB6			346
SB6	HEAD 14	19		
SB6	HEAD 34	14		
CB1	SB7		355	
SB7	HEAD 33	14		
CB1	SB8			482
SB8	HEAD 1	19		
SB8	HEAD 12	19		
SB8	HEAD 24	14		
CB1	SB9			492
SB9	HEAD 20	50		
SB10	HEAD 21	37		
SB11	HEAD 22	71		
SB12	HEAD 23	60		
SB12	HEAD 35	14		
CB1	SB10			381
SB10	HEAD 13	19		
SB10	HEAD 25	14		
SB10	HEAD 26	14		
CB1	SB11		247	
SB11	HEAD 9	76		
SB11	HEAD 10	64		
SB11	HEAD 11	52		
CB1	SB12			209
SB12	HEAD 19	19		
SB12	HEAD 28	14		
CB1	SB13		215	
SB13	HEAD 27	14		
CB1	SB14		121	
SB14	HEAD 17	38		
SB14	HEAD 18	27		
	*** TOTALS	1133	1187	2263

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

INTERSECTION OF
USH 18 & KOSSOW ROAD
ALL ITEMS ARE CATEGORY 0020

3

ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG

FROM	TO	655.0515 ELETRICAL WIRE TRAFFIC SIGNALS 10 AWG L.F.
CB1	SB1	75
SB1	SB2	35
SB2	SB4	228
SB4	SB5	155
SB5	SB6	125
SB6	SB7	33
SB7	SB8	243
SB8	SB9	34
SB9	SB10	255
SB10	SB11	160
SB11	SB12	148
SB12	SB13	38
SB13	SB14	182
SB14	CB1	121
PB1	CB1	25
PB2	SB1	17
PB3	CB1	65
PB6	SB3	39
PB7	SB3	65
PB8	SB5	17
PB10	SB6	52
PB11	SB6	15
PB13	SB8	112
PB14	SB8	56
PB15	SB8	15
PB16	SB8	112
PB19	SB10	60
PB20	SB10	86
PB21	SB11	16
PB23	SB12	61
PB24	SB12	19
PB25	SB14	44
PB26	CB1	26
	*** TOTAL	2734

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

TRAFFIC SIGNAL EVP DETECTOR CABLE
TYPE UF CABLE 2 CONDUCTOR NO. 14

FROM	TO	655.0900 TRAFFIC SIGNAL EVP DETECTOR CABLE L.F.	SPV.0090.50 TYPE UF CABLE 2 CONDUCTOR NO. 14 L.F.
CB1	SB11 (HEAD A)	313	313
CB1	SB5 (HEAD B)	315	315
CB1	SB9 (HEAD C)	535	535
CB1	SB2 (HEAD D)	130	130
	*** TOTAL	1293	1293

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

SIGNAL MOUNTING HARDWARE
USH 18 & KOSSOW ROAD

LOCATION	658.5069.06 SIGNAL MOUNTING HARDWARE L.S.
USH 18 & KOSSOW ROAD	1
TOTAL	1

ELECTRICAL SERVICE METER BREAKER PEDESTAL,
USH 18 & KOSSOW ROAD

BASE NO.	656.0200.06 ELECTRICAL SERVICE METER BREAKER PEDESTAL L.S.
CB1	1
TOTAL	1

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD

TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS, USH 18 & KOSSOW ROAD
GENERATORS
TEMPORARY INFRARED EVP SYSTEM, USH 18 & KOSSOW ROAD
TEMPORARY VEHICLE DETECTION SYSTEM, USH 18 & KOSSOW ROAD

LOCATION	661.0200.05 TEMPORARY TRAFFIC SINGALS FOR INTERSECTIOSN L.S.	661.0300 GENERATORS DAYS	SPV.0105.83 TEMPORARY INFRARED EVP SYSTEM L.S.	SPV.0105.88 TEMPORARY VEHICLE DETECTION SYSTEM L.S.
USH 18 & KOSSOW ROAD	1	2	1	1
*** TOTALS	1	2	1	1

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

INTERSECTION OF
USH 18 & KOSSOW ROAD
ALL ITEMS ARE CATEGORY 0020

3

3

TRAFFIC SIGNAL FACE 3-12 INCH VERTICAL
BACKPLATES SIGNAL FACE 3 SECTION 12-INCH
PEDESTRIAN SIGNAL FACE 16-INCH
LED MODULES 12-INCH RED BALL
LED MODULES 12-INCH YELLOW BALL
LED MODULES 12-INCH GREEN BALL
LED MODULES 12-INCH RED ARROW
LED MODULES 12-INCH YELLOW ARROW
LED MODULES 12-INCH GREEN ARROW
LED MODULES PEDESTRIAN COUNTDOWN TIMER 16-INCH

SIGNAL HEAD NO.	SIGNAL BASE NO.	658.0110 TRAFFIC SIGNAL FACE 3-12 INCH VERTICAL EACH	658.0215 BACKPLATES SIGNAL FACE 3 SECTION 12-INCH EACH	658.0416 PEDESTRIAN SIGNAL FACE 16-INCH EACH	658.0600 LED MODULES 12-INCH RED BALL EACH	658.0605 LED MODULES 12-INCH YELLOW BALL EACH	658.0610 LED MODULES 12-INCH GREEN BALL EACH	658.0615 LED MODULES 12-INCH RED ARROW EACH	658.0620 LED MODULES 12-INCH YELLOW ARROW EACH	658.0625 LED MODULES 12-INCH GREEN ARROW EACH	658.0635 LED MODULES PEDESTRIAN COUNTDOWN TIMER 16-INCH EACH
1	SB8	1	1		1	1	1				
2	SB5	1	1		1	1	1				
3	SB5	1	1		1	1	1				
4	SB5	1	1		1	1	1				
5	SB5	1	1		1	1	1				
6	SB1	1	1					1	1	1	
7	SB4	1	1					1	1	1	
8	SB1	1	1		1	1	1				
9	SB11	1	1		1	1	1				
10	SB11	1	1		1	1	1				
11	SB11	1	1		1	1	1				
12	SB8	1	1					1	1	1	
13	SB10	1	1					1	1	1	
14	SB6	1	1		1	1	1				
15	SB2	1	1		1	1	1				
16	SB2	1	1		1	1	1				
17	SB14	1	1					1	1	1	
18	SB14	1	1					1	1	1	
19	SB12	1	1		1	1	1				
20	SB9	1	1		1	1	1				
21	SB9	1	1		1	1	1				
22	SB9	1	1					1	1	1	
23	SB9	1	1					1	1	1	
24	SB8			1							1
25	SB10			1							1
26	SB10			1							1
27	SB13			1							1
28	SB12			1							1
29	SB2			1							1
30	SB1			1							1
31	SB4			1							1
32	SB4			1							1
33	SB7			1							1
34	SB6			1							1
35	SB9			1							1
*** TOTALS		23	23	12	15	15	15	8	8	8	12

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

INTERSECTION OF
USH 18 & KOSSOW ROAD
ALL ITEMS ARE CATEGORY 0020

PEDESTAL BASES
TRANSFORMER BASES BREAKAWAY 11 1/2 INCH BOLT CIRCLE
POLES TYPE 3
POLES TYPE 5 ALUMINUM
TRAFFIC SIGNAL STANDARDS ALUMINUM 10-FT
TRAFFIC SIGNAL STANDARDS ALUMINUM 13-FT
LUMINAIRE ARMS SINGLE MEMBER 4-INCH CLAMP 6-FT
LUMINAIRE ARMS SINGLE MEMBER 4 1/2-INCH CLAMP 6-FT
INSTALL POLES TYPE 9
INSTALL POLES TYPE 10
INSTALL POLES TYPE 13
INSTALL MONOTUBE ARMS 30-FT
INSTALL MONOTUBE ARMS 50-FT
INSTALL MONOTUBE ARMS 55-FT
INSTALL LUMINAIRE ARMS STEEL 16-FT
PEDESTRIAN PUSH BUTTONS
LUMINAIRES UTILITY LED C

SIGNAL BASE NO.	657.0100 PEDESTAL BASES EACH	657.0255 TRANSFORMER BASES BREAKAWAY 11 1/2 INCH BOLT CIRCLE EACH	657.0310 POLES TYPE 3 EACH	657.0322 POLES TYPE 5 ALUMINUM EACH	657.0430 TRAFFIC SIGNAL STANDARDS ALUMINUM 10-FT EACH	657.0420 TRAFFIC SIGNAL STANDARDS ALUMINUM 13-FT EACH	657.0609 LUMINAIRE ARMS SINGLE MEMBER 4-INCH CLAMP 6-FT EACH	657.0610 LUMINAIRE ARMS SINGLE MEMBER 4 1/2-INCH CLAMP 6-FT EACH	657.1345 INSTALL POLES TYPE 9 EACH	657.1350 INSTALL POLES TYPE 10 EACH	657.1360 INSTALL POLES TYPE 13 EACH	657.1515 INSTALL MONOTUBE ARMS 15-FT EACH	657.1530 INSTALL MONOTUBE ARMS 30-FT EACH	657.1550 INSTALL MONOTUBE ARMS 50-FT EACH	657.1555 INSTALL MONOTUBE ARMS 55-FT EACH	657.1815 INSTALL LUMINAIRE ARMS STEEL 15-FT EACH	658.0500 PEDESTRIAN PUSH BUTTONS EACH	659.1125 LUMINAIRES UTILITY LED C EACH
SB1	1					1												1	
SB2									1				1					1	
SB3		1		1				2											2
SB4	1					1												1	
SB5											1				1	1			1
SB6		1	1				1											1	1
SB7	1				1													1	
SB8	1					1												1	
SB9											1			1		1		1	1
SB10		1	1				2											1	2
SB11											1				1	1			1
SB12	1					1												1	
SB13	1				1													1	
SB14										1		1				2			2
SB15		1		1				2											2
*** TOTALS	6	4	2	2	2	4	3	4	1	1	3	1	1	1	2	5	10	12	

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

INTERSECTION OF
USH 18 & KOSSOW ROAD
ALL ITEMS ARE CATEGORY 0020

3

REMOVE TRAFFIC SIGNALS USH 18 & KOSSOW ROAD
REMOVE LOOP DETECTOR WIRE AND LEAD-IN CABLE, USH 18 & KOSSOW ROAD

LOCATION	SPV.0105.54 REMOVE TRAFFIC SIGNALS L.S.	SPV.0105.93 REMOVE LOOP DETECTOR WIRE AND LEAD-IN CABLE L.S.
USH 18 & KOSSOW ROAD	1	1
TOTAL	1	1

TRANSPORTING SIGNAL AND LIGHTING MATERIALS AT USH 18 & KOSSOW ROAD

LOCATION	SPV.0105.60 TRANSPORTING SIGNAL AND LIGHTING MATERIALS L.S.
USH 18 & KOSSOW ROAD	1
TOTAL	1

3

INSTALL STATE-FURNISHED TRAFFIC SIGNAL CABINET, USH 18 & KOSSOW ROAD

LOCATION	SPV.0105.66 INSTALL STATE-FURNISHED TRAFFIC SIGNAL CABINET L.S.
USH 18 & KOSSOW ROAD	1
TOTAL	1

INSTALL VIDEO DETECTION SYSTEM, USH 18 & KOSSOW ROAD

LOCATION	SPV.0105.72 INSTALL VIDEO DETECTION SYSTEM L.S.
USH 18 & KOSSOW ROAD	1
TOTAL	1

CAMERA NO.	SIGNAL BASE	MOUNTING LOCATION
V1	SB9	LUMINAIRE ARM
V2	SB14	LUMINAIRE ARM

EVP DETECTOR HEAD INSTALLATION AT USH 18 & KOSSOW ROAD

LOCATION	SPV.0105.78 EVP DETECTOR HEAD INSTALLATION L.S.
USH 18 & KOSSOW ROAD	1
TOTAL	1

SUMMARY OF STATE FURNISHED MATERIALS - FOR INFORMATION ONLY

QUANTITY	UNIT	DESCRIPTION
1	LS	TRAFFIC SIGNAL CONTROLLER AND CABINET
1	EACH	POLES TYPE 9
1	EACH	POLES TYPE 10
3	EACH	POLES TYPE 13
1	EACH	MONOTUBE ARMS 15-FT
1	EACH	MONOTUBE ARMS 30-FT
1	EACH	MONOTUBE ARMS 50-FT
2	EACH	MONOTUBE ARMS 55-FT
5	EACH	LUMINAIRE ARMS STEEL 15-FT
1	LS	VIDEO DETECTION SYSTEM
1	LS	EVP DETECTION SYSTEM

INTERSECTION OF
KOSSOW ROAD & ABBOTT DRIVE
ALL ITEMS ARE CATEGORY 0020

3

CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH
CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH
CONDUIT SPECIAL 3-INCH

FROM	TO	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH L.F.	652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH L.F.	652.0615 CONDUIT SPECIAL 3-INCH L.F.
CB1	PB1		51	
PB1	PB2			122
PB2	PB3		44	
PB3	PB4			90
PB4	PB5			80
PB5	PB6		56	
PB6	PB7			122
PB7	PB8		60	
PB8	PB9			96
PB9	PB10			96
PB10	CB1		48	
PB1	SB1	9		
PB1	SB2	12		
PB2	SB5	13		
PB3	SB6	5		
PB4	SB7	5		
PB4	SB8	65		
PB5	SB9		5	
PB6	SB10	4		
PB7	SB11	5		
PB8	SB12	5		
PB9	SB13	5		
PB10	SB14		10	
PB10	SB15	6		
	*** TOTALS	134	274	606

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

NOTE: CB1 TO BE INSTALLED BY OTHERS. TERMINATE AND CAP CONDUIT 6" ABOVE GROUND.

PULL BOXES STEEL 24X42-INCH

PULL BOX NO.	STATION	LOCATION	653.0140 PULL BOXES STEEL 24X42-INCH EACH
PB1	54+32.2	59.4' LT	1
PB2	54+93.0	59.5' LT	1
PB3	55+29.8	26.7' LT	1
PB4	55+29.8	18.4' RT	1
PB5	55+29.8	57.9' RT	1
PB6	55+04.9	69.4' RT	1
PB7	54+44.4	69.5' RT	1
PB8	54+16.9	59.5' RT	1
PB9	54+16.9	11.5' RT	1
PB10	54+16.8	36.5' LT	1
		*** TOTALS	10

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD
*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

CONCRETE BASES TYPE 1
CONCRETE BASES TYPE 2
CONCRETE BASES TYPE 5
CONCRETE BASES TYPE 10

BASE NO.	STATION	LOCATION	654.0101 CONCRETE BASES TYPE 1 EACH	654.0102 CONCRETE BASES TYPE 2 EACH	654.0105 CONCRETE BASES TYPE 5 EACH	654.0110 CONCRETE BASES TYPE 10 EACH
CB1	54+16.8	52.0' LT				
SB1	54+40.3	55.2' LT	1			
SB2	54+30.8	47.5' LT	1			
SB3	17+79.2	29.5' RT			1	
SB4	16+38.2	22.4' RT			1	
SB5	54+96.3	47.6' LT		1		
SB6	55+25.3	27.4' LT	1			
SB7	55+24.8	18.4' RT		1		
SB8	56+41.7	7.3' RT			1	
SB9	55+24.8	58.9' RT				1
SB10	55+00.9	68.4' RT	1			
SB11	54+39.4	68.5' RT		1		
SB12	54+21.9	60.0' RT	1			
SB13	54+21.9	11.5' RT		1		
SB14	54+07.1	33.5' LT				1
SB15	54+21.8	38.5' LT	1			
		***TOTALS	6	4	3	2

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD
*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

NOTE: CB1 TO BE INSTALLED BY OTHERS. TERMINATE AND CAP CONDUIT 6" ABOVE GROUND.

SHEET 1 OF 1

3

INSTALL CONDUIT INTO EXISTING ITEM

STRUCTURE NO.	652.0700.S EA.
I/C PB10	1
I/C PB11	1
I/C PB101	1
TOTAL	3

PULL BOXES STEEL 24X42-INCH
COMMUNICATION VAULT TYPE 1

NO.	653.0140 PULL BOXES STEEL 24X42-INCH EACH	673.0105 COMMUNICATIONS VAULT TYPE 1 EACH
I/C CV1		1
I/C CV2		1
I/C CV3		1
I/C CV4		1
I/C PB1	1	
I/C PB2	1	
I/C PB3	1	
I/C PB4	1	
I/C PB5	1	
I/C PB6	1	
I/C PB7	1	
I/C PB8	1	
I/C PB9	1	
***TOTALS	9	4

***ADDITIONAL QUANITIES SHOWN ELSEWHERE

INTERCONNECT QUANTITIES
ALL ITEMS ARE CATEGORY 0030

FIELD SYSTEM INTEGRATOR
ITS DOCUMENTATION
COMMUNICATIONS SYSTEM TESTING

LOCATION	670.0100 FIELD SYSTEM INTEGRATOR L.S.	670.0200 ITS DOCUMENTATION L.S.	678.0500 COMMUNICATIONS SYSTEM TESTING L.S.
2200-16-71	1	1	1
TOTALS	1	1	1

3

INSTALL FIBER CABLE OUTDOOR PLANS 6-CT
INSTALL FIBER CABLE OUTDOOR PLANS 36-CT

FROM	TO	INSTALL FIBER OPTIC CABLE OUTDOOR PLANT 6-CT 678.0006 L.F.	INSTALL FIBER OPTIC CABLE OUTDOOR PLANT 36-CT 678.0036 L.F.
I/C CV1	I/C PB1	140	
I/C PB1	I/C PB2	155	
I/C PB2	CB1(S67-0129)	127	
I/C CV2	CB1(S67-0258)	355	
I/C CV3	I/C PB3	499	
I/C PB3	I/C PB4	185	
I/C PB4	CB1(S67-0236)	59	
I/C CV4	I/C PB7		173
I/C PB7	I/C PB8		69
I/C PB8	I/C PB9		196
I/C PB9	I/C PB10		111
I/C PB10	I/C PB11		415
I/C PB11	I/C PB101		260
I/C PB101	I/C PB102		386
I/C PB102	I/C CV103		192
	TOTALS	1520	1802

NOTE: ALL FIBER OPTIC CABLE WILL BE STATE FURNISHED

FIBER SPICE ENCLOSURE
FIBER OPTIC SPLICE
FIBER OPTIC TERMINATION

LOCATION	678.0200 FIBER SPLICE ENCLOSURE EACH	678.0300 FIBER OPTIC SPLICE EACH	678.0300 FIBER OPTIC TERMINATION EACH	NOTES:
I/C CV1	1	8	6	
I/C CV2	1	8	6	
I/C CV3	1	8	6	
I/C CV103	--	36	--	EXISTING SPLICE ENCLOSURE
TOTALS	3	60	18	

INSTALL IP WIRELESS RADIO

LOCATION	BASE	SPV.0060.54 EACH
SPRINGDALE ROAD	SB10	1
PARKLAWN DRIVE	SB8	2
KOSSOW ROAD	SB11	1
TOTALS		4

SHEET 1 OF 2

INTERCONNECT QUANTITIES
ALL ITEMS ARE CATEGORY 0030

FROM	TO	671.0112 CONDUIT HDPE 1-DUCT 2-INCH L.F.	671.0212 CONDUIT HDPE DIRECTIONAL BORE 1-DUCT 2-INCH L.F.
I/C CV1	I/C PB1	25	
I/C PB1	I/C PB2		125
I/C PB2	CB1 (S67-0129)	97	
CB1 (S67-0258)	I/C CV2	240	
I/C CV3	I/C PB3	384	
I/C PB3	I/C PB4		155
I/C PB4	CB1 (S67-0236)	29	
CB1 (S67-0236)	I/C PB5	305	
I/C PB5	I/C PB6	108	
I/C CV4	I/C PB7	58	
I/C PB7	I/C PB8		39
I/C PB8	I/C PB9	166	
I/C PB9	I/C PB10		81
I/C PB11	I/C PB101	230	
	TOTALS	1642	400

INSTALL FIBER OPTIC COMMUNICATIONS IN CABINET USH 18 & STH 164

LOCATION	SPV.0105.41
CB1(S67-0129)	1
TOTAL	1

*** PAY ITEM INCLUDES INSTALLATION OF BOTH CONTRACTOR FURNISHED AND STATE FURNISHED MATERIALS

SUMMARY OF STATE FURNISHED MATERIALS

QUANTITY	UNIT	DESCRIPTION
1	EACH	PATCH PANEL WITH FIBER OPTIC CABLE PIGTAIL 6-CT
1	EACH	IP ETHERNET SWITCH WITH SINGLE MODE FIBER PORTS
1	EACH	IP VIDEO ENCODER

SUMMARY OF CONTRACTOR FURNISHED MATERIALS

QUANTITY	UNIT	DESCRIPTION
2	LF	ST-ST SINGLE MODE FIBER OPTIC JUMPER 2-CT
3	EACH	CAT-5E CABLE 1-METER

INSTALL FIBER OPTIC COMMUNICATIONS IN CABINET USH 18 & MAIN STREET

LOCATION	SPV.0105.42
CB1(S67-0258)	1
TOTAL	1

*** PAY ITEM INCLUDES INSTALLATION OF BOTH CONTRACTOR FURNISHED AND STATE FURNISHED MATERIALS

SUMMARY OF STATE FURNISHED MATERIALS

QUANTITY	UNIT	DESCRIPTION
300	LF	PATCH PANEL WITH FIBER OPTIC CABLE PIGTAIL 6-CT
1	EACH	IP ETHERNET SWITCH WITH SINGLE MODE FIBER PORTS
1	EACH	IP VIDEO ENCODER

SUMMARY OF CONTRACTOR FURNISHED MATERIALS

QUANTITY	UNIT	DESCRIPTION
2	LF	ST-ST SINGLE MODE FIBER OPTIC JUMPER 2-CT
3	EACH	CAT-5E CABLE 1-METER

INSTALL FIBER OPTIC COMMUNICATIONS IN CABINET USH 18 & SPRINGDALE ROAD

LOCATION	SPV.0105.43
CB1(S67-0415)	1
TOTAL	1

*** PAY ITEM INCLUDES INSTALLATION OF BOTH CONTRACTOR FURNISHED AND STATE FURNISHED MATERIALS

SUMMARY OF STATE FURNISHED MATERIALS

QUANTITY	UNIT	DESCRIPTION
1	EACH	IP ETHERNET SWITCH
1	EACH	IP WIRELESS RADIO
1	EACH	IP VIDEO ENCODER

SUMMARY OF CONTRACTOR FURNISHED MATERIALS

QUANTITY	UNIT	DESCRIPTION
3	EACH	CAT-5E CABLE 1-METER

INSTALL FIBER OPTIC COMMUNICATIONS IN CABINET USH 18 & PARKLAWN DRIVE

LOCATION	SPV.0105.44
CB1(S67-0410)	1
TOTAL	1

*** PAY ITEM INCLUDES INSTALLATION OF BOTH CONTRACTOR FURNISHED AND STATE FURNISHED MATERIALS

SUMMARY OF STATE FURNISHED MATERIALS

QUANTITY	UNIT	DESCRIPTION
1	EACH	IP ETHERNET SWITCH
2	EACH	IP WIRELESS RADIO
1	EACH	IP VIDEO ENCODER

SUMMARY OF CONTRACTOR FURNISHED MATERIALS

QUANTITY	UNIT	DESCRIPTION
3	EACH	CAT-5E CABLE 1-METER

INSTALL FIBER OPTIC COMMUNICATIONS IN CABINET USH 18 & KOSSOW ROAD

LOCATION	SPV.0105.45
CB1(S67-0236)	1
TOTAL	1

*** PAY ITEM INCLUDES INSTALLATION OF BOTH CONTRACTOR FURNISHED AND STATE FURNISHED MATERIALS

SUMMARY OF STATE FURNISHED MATERIALS

QUANTITY	UNIT	DESCRIPTION
650	LF	PATCH PANEL WITH FIBER OPTIC CABLE PIGTAIL 6-CT
1	EACH	IP ETHERNET SWITCH WITH SINGLE MODE FIBER PORTS
1	EACH	IP WIRELESS RADIO
1	EACH	IP VIDEO ENCODER

SUMMARY OF CONTRACTOR FURNISHED MATERIALS

QUANTITY	UNIT	DESCRIPTION
2	LF	ST-ST SINGLE MODE FIBER OPTIC JUMPER 2-CT
3	EACH	CAT-5E CABLE 1-METER

STREET LIGHTING WIRING AND CONDUIT

DESCRIPTION FROM	STATION	DIRECTION	LOCATION	DESCRIPTION TO	STATION	DIRECTION	LOCATION	CATEGORY 0040 ** 652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH L.F.	CATEGORY 0040 ** 652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH L.F.	CATEGORY 0040 ** 652.0605 CONDUIT SPECIAL 2-INCH	CATEGORY 0040 ** 652.0615 CONDUIT SPECIAL 3-INCH L.F.	CATEGORY 0040 655.0610 ELECTRICAL WIRE LIGHTING 12 AWG L.F.	CATEGORY 0040 655.0620 ELECTRICAL WIRE LIGHTING 8 AWG L.F.	CATEGORY 0040 655.0630 ELECTRICAL WIRE LIGHTING 4 AWG L.F.
EMB	119+36	RT	33.6	EMB	121+66	RT	38	230	-	-	-	165	944	-
EMB	121+66	RT	38	EMB	123+72	RT	58.2	204	-	-	-	165	840	-
EMB	123+72	RT	58.2	EMB	124+75	RT	119.4	130	-	-	-	-	396	-
MG	133+49	LT	5	MG	135+40	RT	12	-	198	-	-	342	-	792
MG	135+40	RT	12	MG	137+40	RT	2.65	-	206	-	-	-	-	824
MG	139+34	LT	4	MG	141+27	LT	13.1	-	201	-	-	-	-	804
LPB01	141+38	LT	13.3	LPB02	141+38	RT	79.3	-	-	-	99	-	-	396
LPB02	141+38	RT	79.3	MG	141+26	RT	80.6	18	-	-	-	165	54	-
LPB02	141+38	RT	79.3	MG	142+91	RT	89.8	-	163	-	-	-	489	652
MG	142+91	RT	89.8	LPB03	285+10	LT	67	-	76	-	-	-	228	304
LPB03	285+10	LT	67	LPB04	285+10	LT	9	-	-	-	64	-	192	256
LPB04	285+10	LT	9	LPB05	285+10	RT	66	-	-	-	81	-	243	324
LPB05	285+10	RT	66	LPB08	148+01	RT	66.3	-	324	-	-	-	972	1296
LPB08	148+01	RT	66.3	LPB07	148+02	RT	14.5	-	-	-	58	-	-	232
LPB07	148+02	RT	14.5	MG	147+51	RT	18.5	-	49	-	-	342	-	196
MG	147+51	RT	18.5	MG	146+01	RT	18.5	-	156	-	-	342	-	624
LPB07	148+02	RT	14.5	LBP06	148+02	LT	79	-	-	-	101	165	-	624
LBP06	148+02	LT	79	MG	146+45	LT	79	165	-	-	-	165	660	-
MG	146+45	LT	79	MG	144+95	LT	90.3	155	-	-	-	342	465	-
MG	150+03	LT	6.2	MG	153+17	RT	5	-	224	-	-	-	-	896
MG	153+17	RT	5	MG	155+28	RT	0.7	-	221	-	-	342	-	884
MG	155+28	RT	0.7	MG	157+34	LT	12	-	212	-	-	-	-	848
MM	167+37	LT	5.2	MM	169+35	RT	1.3	-	207	-	-	-	-	828
MM	169+35	RT	1.3	MM	171+34	LT	15	-	204	-	-	-	-	816
MM	171+34	LT	15	LPB10	171+47	LT	15.7	-	23	-	-	-	-	92
LPB10	171+47	LT	15.7	LPB09	171+49	LT	73.7	-	-	-	66	-	-	264
LPB09	171+49	LT	73.7	LPB	173+96	LT	84.3	-	250	-	-	-	-	1000
MM	171+63	RT	80	MM	173+02	RT	91.4	149	-	-	-	165	447	-
MM	176+40	RT	18.6	MM	177+89	RT	18.8	-	156	-	-	342	-	624
MM	177+89	RT	18.8	MM	179+38	RT	13.4	-	157	-	-	342	-	628
MM	179+38	RT	13.4	LPB12	179+59	RT	10.2	-	28	-	-	342	-	112
LPB12	179+59	RT	10.2	LPB11	179+59	LT	79.1	-	-	-	98	-	-	392
LPB12	179+59	RT	10.2	LPB13	179+59	RT	92.7	-	-	-	88	-	-	352
LPB13	179+59	RT	92.7	LCC-MM	180+85	RT	92	-	126	-	-	-	-	504
LPB12	179+59	RT	10.2	MM	181+25	LT	8.9	-	165	-	-	342	-	660
MM	181+25	LT	8.9	MM	182+74	LT	17.4	-	157	-	-	342	-	628
LPB16	185+82	RT	12.3	MM	187+02	RT	11.6	-	126	-	-	342	-	504
MM	187+02	RT	11.6	MM	188+52	RT	4	-	159	-	-	342	-	636

** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ALL QUANTITIES ARE CATEGORY 10 UNLESS OTHERWISE NOTED

STREET LIGHTING WIRING AND CONDUIT

DESCRIPTION FROM	STATION	DIRECTION	LOCATION	DESCRIPTION TO	STATION	DIRECTION	LOCATION	CATEGORY 0040 ** 652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH L.F.	CATEGORY 0040 ** 652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH L.F.	CATEGORY 0040 ** 652.0605 CONDUIT SPECIAL 2-INCH	CATEGORY 0040 ** 652.0615 CONDUIT SPECIAL 3-INCH L.F.	CATEGORY 0040 655.0610 ELECTRICAL WIRE LIGHTING 12 AWG L.F.	CATEGORY 0040 655.0620 ELECTRICAL WIRE LIGHTING 8 AWG L.F.	CATEGORY 0040 655.0630 ELECTRICAL WIRE LIGHTING 4 AWG L.F.
MM	188+52	RT	4	MM	190+02	LT	3	-	156	-	-	342	-	624
LPB14	53+49	RT	1	Z2	52+35	LT	5	-	-	-	126	342	-	504
A-1-(1,3)	200+73	RT	9.2	A-2-(1,3)	202+33	RT	3	168	-	-	-	342	672	-
A-2-(1,3)	202+33	RT	3	A-3-(1,3)	203+93	LT	2.9	165	-	-	-	342	660	-
A-3-(1,3)	203+93	LT	2.9	A-4-(1,3)	205+53	LT	7.4	166	-	-	-	342	664	-
A-4-(1,3)	205+53	LT	7.4	A-5-(1,3)	207+13	LT	8.6	167	-	-	-	342	668	-
A-5-(1,3)	207+13	LT	8.6	LPB17	207+53	RT	8.9	43	-	-	-	342	172	-
LPB17	207+53	RT	8.9	LPB18	207+53	RT	78.1	-	-	93	-	-	372	-
LPB18	207+53	RT	78.1	A-6-(3)	206+38	RT	77.6	121	-	-	-	165	363	-
LPB18	207+53	RT	78.1	A-7-(1)	207+87	RT	78.4	40	-	-	-	165	160	-
A-7-(1)	207+87	RT	78.4	LPB19	208+69	RT	111.2	133	-	-	-	-	532	-
LPB19	208+69	RT	111.2	CCA	208+61	RT	134.2	31	-	-	-	-	124	-
LPB19	208+69	RT	111.2	LPB20	209+84	RT	111.2	-	-	121	-	-	484	-
LPB20	209+84	RT	111.2	LPB21	210+68	RT	70	101	-	-	-	-	404	-
LPB21	210+68	RT	70	LPB22	210+68	RT	9.9	-	-	68	-	-	272	-
LPB22	210+68	RT	9.9	LPB23	210+68	LT	73.5	-	-	93	-	165	372	-
LPB23	210+68	LT	73.5	A-9-(3)	212+23	LT	69.5	162	-	-	-	165	486	-
LPB22	210+68	RT	9.9	A-10-(1,3)	211+49	RT	9.5	86	-	-	-	342	344	-
A-10-(1,3)	211+49	RT	9.5	A-11-(1,3)	212+99	RT	9.5	156	-	-	-	342	624	-
A-11-(1,3)	212+99	RT	9.5	A-12-(1)	214+49	RT	0.2	157	-	-	-	165	471	-
CCA	208+61	RT	134.2	LPB24	48+51	LT	47	29	-	-	-	-	116	-
LPB24	48+51	LT	47	LPB25	47+84	LT	43	-	-	-	86	-	344	-
LPB25	47+84	LT	43	A-13-(3)	98+80	RT	27.5	77	-	-	-	165	231	-
LPB25	47+84	LT	43	A-14-(1)	47+70	LT	29.5	33	-	-	-	165	132	-
A-14-(1)	47+70	LT	29.5	A-15-(3)	46+20	LT	29.5	176	-	-	-	165	528	-
EXISTING	238+59	LT	6	EXISTING	240+20	LT	9.8	-	161	-	-	-	-	644
							***TOTAL	3062	4105	461	781	9492	15125	19764

***SPLICES SHALL BE IN POLE ONLY, NO UNDERGROUND SPLICES SHALL BE ALLOWED.

** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ALL QUANTITIES ARE CATEGORY 10 UNLESS OTHERWISE NOTED

STREET LIGHTING PULL BOXES

DESCRIPTION	STATION	DIRECTION	LOCATION	CATEGORY 0040 ** 653.0140 PULL BOXES STEEL 24X42-INCH EACH	CATEGORY 0040 ** 653.0905 REMOVING PULL BOXES EACH
REMOVAL	124+42	LT	2.5	-	1
REMOVAL	124+42	RT	73.5	-	1
LPB01	141+38	LT	13.3	1	-
LPB02	141+38	RT	79.3	1	-
LPB03	285+10	LT	67	1	-
LPB04	285+10	LT	9	1	-
LPB05	285+10	RT	66	1	
REMOVAL	285+31	LT	60.3	-	1
REMOVAL	285+35	LT	9	-	1
REMOVAL	285+35	RT	63.5	-	1
REMOVAL	144+67	RT	17.9	-	1
REMOVAL	146+41	RT	18.4	-	1
LPB06	148+02	LT	79	1	-
REMOVAL	148+02	RT	14.5	-	1
LPB07	148+02	RT	14.5	1	-
REMOVAL	148+01	LT	79	-	1
LPB08	148+01	RT	66.3	1	-
LPB09	171+49	LT	73.7	1	-
LPB10	171+47	LT	15.7	1	-
LPB11	179+59	LT	79.1	1	-
LPB12	179+59	RT	10.2	1	-
LPB13	179+59	RT	92.7	1	-
REMOVAL	180			-	1
REMOVAL	180			-	1
REMOVAL	184+10	LT	17.3	-	1
LPB14	53+49	RT	1	1	-
LPB15	52+42	LT	5	1	-
REMOVAL	185+82	RT	1.2	-	1
LPB16	185+82	RT	12.3	1	-
LPB17	207+53	RT	8.9	1	-
LPB18	207+53	RT	78.1	1	-
LPB19	208+69	RT	111.2	1	-
REMOVAL	208+48	LT	86.3	-	1
LPB24	48+51	LT	47	1	-
LPB25	47+84	LT	43	1	-
REMOVAL	209+81	RT	84.1	-	1
REMOVAL	209+83	LT	107.6	-	1
LPB20	209+84	RT	111.2	1	-
REMOVAL	209+96	RT	9.5	-	1
LPB21	210+68	RT	70	1	-
LPB22	210+68	RT	9.9	1	-
LPB23	210+68	LT	73.5	1	-
			TOTAL	25	17

** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

LIGHTING CONTROL CABINETS

DESCRIPTION	STATION	DIRECTION	LOCATION	CATEGORY 0040 659.2230 LIGHTING CONTROL CABINET 240/480 30-INCH EACH	CATEGORY 0040 654.0230 CONCRETE CONTROL CABINET BASE TYPE L30 EACH	CATEGORY 0040 656.0200.07 ELECTRICAL SERVICE METER BREAKER PEDESTAL (CCA) EACH	CATEGORY 0040 SPV.0060.35 REMOVING EXISTING LIGHTING CONTROL CABINET EACH
REMOVAL	209+83	LT	107.6	-	-	-	1
CCA	208+61	RT	134.2	1	1	1	-
			TOTAL	1	1	1	1

LIGHTING INTEGRATORS

LOCATION	CATEGORY 0040 SPV.0105.31 LIGHTING INTEGRATOR, STATE SYSTEMS LS	CATEGORY 0040 SPV.0105.32 LIGHTING INTEGRATOR, CITY SYSTEMS LS
USH 18	1	1
TOTAL	1	1

ALL QUANTITIES ARE CATEGORY 10 UNLESS OTHERWISE NOTED

STREET LIGHTING POLES

REMOVAL FROM	STATION	DIRECTION	LOCATION	PROPOSED	STATION	DIRECTION	LOCATION	CATEGORY 0040 SPV.0060.31 REMOVING EXISTING ROADWAY LUMINAIRE EACH	CATEGORY 0040 SPV.0060.32 REMOVING EXISTING ROADWAY LIGHTING UNIT EACH	CATEGORY 0040 SPV.0060.33 RELOCATE EXISTING SINGLE ARM LIGHTING ASSEMBLY EACH	CATEGORY 0040 SPV.0060.34 RELOCATE EXISTING DOUBLE ARM LIGHTING ASSEMBLY EACH	CATEGORY 0040 ** 654.0106 CONCRETE BASES TYPE 6 EACH	CATEGORY 0040 ** 657.0255 TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE EACH	CATEGORY 0040 ** 657.0327 POLES TYPE 6 ALUMINUM EACH	CATEGORY 0040 ** 657.0615 LUMINAIRE ARMS SINGLE MEMBER 1 1/2-INCH CLAMP 8-FOO EACH	CATEGORY 0040 ** 659.1125 LUMINAIRES UTILITY LED C EACH
-	121+66	RT	-	EMB	121+66	RT	38	-	-	1	-	1	-	-	-	-
-	123+72	RT	-	EMB	123+72	RT	58.2	-	-	1	-	1	-	-	-	-
-	124+48	LT	-	-	-	-	-	-	1	-	-	-	-	-	-	-
-	125+71	RT	-	-	-	-	-	-	1	-	-	-	-	-	-	-
-	135+40	RT	-	MG	135+40	RT	12	-	-	-	1	1	-	-	-	-
-	141+29	RT	-	MG	141+26	RT	80.6	-	-	1	-	1	-	-	-	-
-	143+30	LT	-	-	-	-	-	-	1	-	-	-	-	-	-	-
-	285+25	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
-	144+75	RT	-	MG	146+01	RT	18.5	-	-	-	1	1	-	-	-	-
-	146+56	LT	-	MG	146+45	LT	79	-	-	1	-	1	-	-	-	-
-	146+93	RT	-	MG	147+51	RT	18.5	-	-	-	1	1	-	-	-	-
-	153+11	RT	-	MG	153+17	RT	5	-	-	-	1	1	-	-	-	-
-	157+34	RT	-	MG	157+34	LT	12	-	-	-	1	1	-	-	-	-
-	171+54	RT	-	MM	171+63	RT	80	-	-	1	-	1	-	-	-	-
-	173+34	LT	-	-	-	-	-	-	1	-	-	-	-	-	-	-
-	173+96	LT	84.3	-	-	-	-	-	1	-	-	-	-	-	-	-
-	175+12	RT	-	MM	176+40	RT	18.6	-	-	-	1	1	-	-	-	-
-	177+04	RT	-	MM	177+89	RT	18.8	-	-	-	1	1	-	-	-	-
-	178+82	RT	-	MM	179+38	RT	13.4	-	-	-	1	1	-	-	-	-
-	180+51	RT	-	MM	181+25	LT	8.9	-	-	-	1	1	-	-	-	-
-	182+25	LT	-	MM	182+74	LT	17.4	-	-	-	1	1	-	-	-	-
-	52+09	RT	-	Z2	52+35	LT	5	-	-	-	1	1	-	-	-	-
-	50+87	RT	-	-	-	-	-	-	1	-	-	-	-	-	-	-
-	183+96	LT	-	MM	187+02	RT	11.6	-	-	-	1	1	-	-	-	-
-	185+28	RT	-	MM	188+52	RT	4	-	-	-	1	1	-	-	-	-
-	187+36	RT	-	MM	190+02	LT	3	-	-	-	1	1	-	-	-	-
-	189+37	LT	-	-	-	-	-	-	1	-	-	-	-	-	-	-
-	206+30	LT	-	A-1-(1,3)	200+73	RT	9.5	2	-	-	1	1	-	-	-	2
-	208+30	LT	-	A-2-(1,3)	202+33	RT	3	2	-	-	1	1	-	-	-	2
-	210+05	RT	-	A-3-(1,3)	203+93	LT	2.9	2	-	-	1	1	-	-	-	2
-	212+06	RT	-	A-4-(1,3)	205+53	LT	7.4	2	-	-	1	1	-	-	-	2
-	207+30	RT	-	A-6-(3)	206+38	RT	77.6	1	-	1	-	1	-	-	-	1
-	-	-	-	A-5-(1,3)	207+13	LT	8.6	-	-	-	-	1	1	1	2	2
-	208+58	RT	-	A-7-(1)	207+87	RT	78.4	1	-	1	-	1	-	-	-	1
-	211+05	LT	-	A-8-(1)	210+73	LT	72.4	1	-	1	-	1	-	-	-	1
-	-	-	-	A-10-(1,3)	211+49	RT	9.5	-	-	-	-	1	1	1	2	2
-	-	-	-	A-9-(3)	212+23	LT	69.5	-	-	-	-	1	1	1	1	1
-	-	-	-	A-11-(1,3)	212+99	RT	9.5	-	-	-	-	1	1	1	2	2
-	-	-	-	A-12-(1)	214+49	RT	0.2	-	-	-	-	1	1	1	1	1
-	208+48	LT	86.3	A-13-(3)	98+80	RT	27.5	1	-	1	-	1	-	-	-	1
-	209+73	LT	-	A-14-(1)	47+70	LT	29.5	1	-	1	-	1	-	-	-	1
-	209+80	RT	-	A-15-(3)	46+20	LT	29.5	1	-	1	-	1	-	-	-	1
							TOTAL	14	8	11	18	34	5	5	8	22

** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ALL QUANTITIES ARE CATEGORY 10 UNLESS OTHERWISE NOTED

TOWN OF BROOKFIELD SANITARY DISTRICT #4 ITEMS

LOCATION	STATION	OFFSET	CATEGORY 0050 SPV.0060.01 SANITARY MANHOLE SEAL INTERNAL, TOWN OF BROOKFIELD EA	CATEGORY 0050 SPV.0060.02 ADJUSTING SANITARY MANHOLES, TOWN OF BROOKFIELD EA	CATEGORY 0050 SPV.0060.03 RECONSTRUCT SANITARY MANHOLES, TOWN OF BROOKFIELD EA	CATEGORY 0050 SPV.0060.04 ADJUSTING STORM MANHOLES, TOWN OF BROOKFIELD EA	CATEGORY 0050 SPV.0060.05 ADJUSTING WATER VALVE BOX, TOWN OF BROOKFIELD EA	CATEGORY 0050 SPV.0060.06 NEW FIRE HYDRANT, TOWN OF BROOKFIELD EA	CATEGORY 0050 SPV.0060.07 ABANDONING WATER SERVICE, TOWN OF BROOKFIELD EA	CATEGORY 0050 SPV.0060.19 NEW CURB BOX, TOWN OF BROOKFIELD EA	CATEGORY 0050 SPV.0090.01 WATER MAIN (PVC), 6-INCH, TOWN OF BROOKFIELD LF	CATEGORY 0050 SPV.0090.02 WATER SERVICE REPLACEMENT, COPPER, 1-INCH, TOWN OF BROOKFIELD LF
PARKLAWN DRIVE	46+54	12' RT	--	--	--	--	1	--	--	--	--	--
PARKLAWN DRIVE	46+73	28' RT	--	--	--	--	--	--	--	1	--	17
PARKLAWN DRIVE	48+40	28' RT	--	--	--	--	--	--	1	--	--	--
PARKLAWN DRIVE	48+77	33' RT	--	--	--	--	--	1	--	--	8	--
PARKLAWN DRIVE	48+77	10' RT	--	--	--	--	1	--	--	--	--	--
PARKLAWN DRIVE	48+78	10' RT	--	--	--	--	1	--	--	--	--	--
PARKLAWN DRIVE	48+92	1' LT	1	1	--	--	--	--	--	--	--	--
KOSSOW ROAD	97+30	15' RT	--	--	--	--	1	--	--	--	--	--
KOSSOW ROAD	97+46	0' LT	1	1	--	--	--	--	--	--	--	--
KOSSOW ROAD	97+48	18' RT	--	--	--	--	1	--	--	--	--	--
KOSSOW ROAD	98+36	22' RT	--	--	--	--	1	--	--	--	--	--
KOSSOW ROAD	98+60	5' RT	1	1	--	--	--	--	--	--	--	--
KOSSOW ROAD	99+65	0' RT	1	1	--	--	--	--	--	--	--	--
SWENSON DRIVE	43+71	27' LT	--	--	--	--	1	--	--	--	--	--
SWENSON DRIVE	43+84	26' LT	--	--	--	--	1	--	--	--	--	--
SWENSON DRIVE	44+60	24' LT	--	--	--	--	1	--	--	--	--	--
SWENSON DRIVE	44+60	31' LT	--	--	--	--	--	1	--	--	6	--
SWENSON DRIVE	45+20	31' RT	--	--	--	--	1	--	--	--	--	--
SWENSON DRIVE	45+32	35' RT	--	--	--	1	--	--	--	--	--	--
SWENSON DRIVE	45+75	1' LT	--	--	--	1	--	--	--	--	--	--
SWENSON DRIVE	46+16	32' RT	--	--	--	--	1	--	--	--	--	--
SWENSON DRIVE	46+94	27' RT	1	--	1	--	--	--	--	--	--	--
SWENSON DRIVE	47+74	38' LT	--	--	--	--	1	--	--	--	--	--
TOTALS			5	4	1	2	12	2	1	1	14	17

WAUKESHA WATER UTILITY ITEMS

LOCATION	STATION	OFFSET	CATEGORY 0060 SPV.0060.08 REPLACE 10-INCH GATE VALVE WITH 12-INCH GATE VALVE EA	CATEGORY 0060 SPV.0060.09 CONVERT MANHOLE TO VALVE BOX EA	CATEGORY 0060 SPV.0060.10 ABANDON HYDRANT AND INSTALL NEW HYDRANT EA	CATEGORY 0060 SPV.0060.11 HYDRANT ASSEMBLY EA	CATEGORY 0060 SPV.0060.12 ABANDON HYDRANT EA
USH 18	125+73	62' RT	1	--	--	--	--
USH 18	134+43	48' RT	1	--	--	--	--
USH 18	135+23	46' RT	1	--	--	--	--
USH 18	152+29	35' RT	1	--	--	--	--
USH 18	125+12	85' RT	--	1	--	--	--
USH 18	125+14	33' LT	--	1	--	--	--
USH 18	208+79	72' LT	--	1	--	--	--
USH 18	167+57	72' LT	--	--	1	--	--
USH 18	208+25	78.5' RT	--	--	--	1	--
KOSSOW ROAD	55+35	57.5' RT	--	--	--	1	--
KOSSOW ROAD	50+93	53.5' LT	--	--	--	--	1
TOTALS			4	3	1	2	1

ALL QUANTITIES ARE CATEGORY 10 UNLESS OTHERWISE NOTED

3

3

CITY OF WAUKESHA - SANITARY UTILITY ITEMS

LOCATION	STATION	OFFSET	CATEGORY 0070 SPV.0060.16 RECONSTRUCTING SANITARY MANHOLES EA	CATEGORY 0070 SPV.0060.17 ADJUSTING SANITARY MANHOLE COVERS EA	CATEGORY 0070 SPV.0060.18 INTERNAL MANHOLE SEALING SYSTEM EA
MANHATTAN DRIVE	49+23	1' LT	--	1	1
USH 18	123+05	42' LT	--	1	1
USH 18	134+88	13' LT	1	--	1
USH 18	138+38	12' LT	1	--	1
USH 18	138+64	39' RT	--	1	1
USH 18	142+09	42' RT	--	1	1
USH 18	142+97	42' RT	--	1	1
USH 18	145+59	43' RT	--	1	1
USH 18	149+09	41' RT	--	1	1
USH 18	152+60	40' RT	--	1	1
USH 18	155+09	43' RT	--	1	1
USH 18	157+04	57' RT	--	1	1
USH 18	170+12	73' RT	1	--	1
KOSSOW ROAD	51+83	26' RT	1	--	1
KOSSOW ROAD	52+99	24' RT	1	--	1
KOSSOW ROAD	56+41	21' RT	1	--	1
KOSSOW ROAD	57+77	22' RT	1	--	1
KOSSOW ROAD	59+09	22' RT	1	--	1
ABBOTT DRIVE	16+72	36' RT	1	--	1
TOTALS			9	10	19

ALL QUANTITIES ARE CATEGORY 10 UNLESS OTHERWISE NOTED

R/W PROJECT NUMBER	SHEET NUMBER	TOTAL SHEETS
2200-16-21		
FEDERAL PROJECT NUMBER	4.01	

PLAT OF RIGHT-OF-WAY REQUIRED FOR

USH 18

Manhattan Drive to Interstate 94

USH 18 — WAUKESHA COUNTY

CONSTRUCTION PROJECT NUMBER
2200-16-71

CONVENTIONAL ABBREVIATIONS

ACCESS POINT/ DRIVEWAY CONNECTION	AP	REFERENCE LINE	℄
ACCESS RIGHTS	AR	RELEASE OF RIGHTS	ROR
ACRES	AC.	REMAINING	REM.
AND OTHERS	ET.AL.	RIGHT-OF-WAY	R/W
CENTERLINE	℄	SECTION	SEC.
CERTIFIED SURVEY MAP	CSM	SECTION LINE	§
CORNER	COR.	STATION	STA.
DOCUMENT	DOC.	TEMPORARY LIMITED EASEMENT	TLE
EASEMENT	EASE.	VOLUME	V.
HIGHWAY EASEMENT	H.E.		
LAND CONTRACT	LC		
MONUMENT	MON.		
PAGE	P.		
PERMANENT LIMITED EASEMENT	PLE		
PROPERTY LINE	PL		
RECORDED AS	(100')		

CURVE DATA

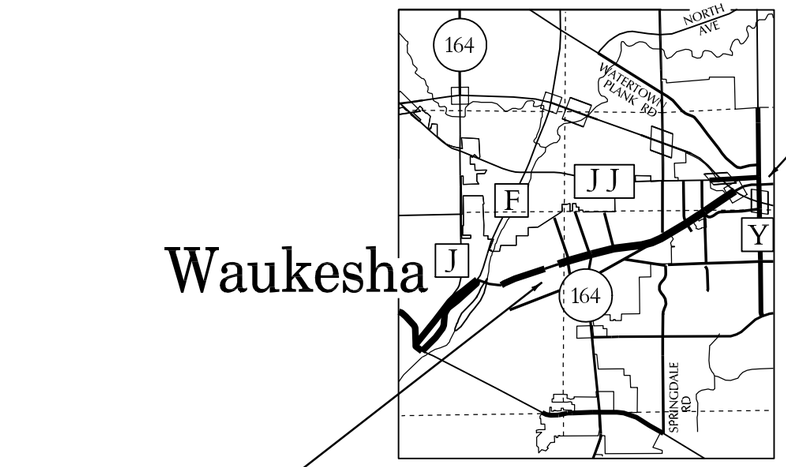
LONG CHORD	LCH
LONG CHORD BEARING	LCB
RADIUS	R
DEGREE OF CURVE	D
CENTRAL ANGLE OR DELTA	DELTA
LENGTH OF CURVE	L
TANGENT	TAN

CONVENTIONAL SYMBOLS

FOUND IRON PIPE/PIN	LP (1" UNLESS NOTED)	PROPOSED R/W LINE	
		EXISTING H.E. LINE	
R/W MONUMENT	●(SET)	PROPERTY LINE	
R/W STANDARD	▲(SET)	LOT & TIE LINES	
SIGN	ISIGN	SLOPE INTERCEPTS	
SECTION CORNER MONUMENT		CORPORATE LIMITS	
SECTION CORNER SYMBOL		NO ACCESS (BY PREVIOUS ACQUISITION/CONTROL)	
FEE (HATCH VARIES)		NO ACCESS (BY ACQUISITION)	
TEMPORARY LIMITED EASEMENT		NO ACCESS (BY STATUTORY AUTHORITY)	
PERMANENT LIMITED EASEMENT		SECTION LINE	
R/W BOUNDARY POINT	RWB20	QUARTER LINE	
PARCEL NUMBER	102	SIXTEENTH LINE	
UTILITY PARCEL NUMBER	92	EXISTING CENTERLINE	
SIGN NUMBER (OFF PREMISE)	21-1	PROPOSED REFERENCE LINE	
BUILDING		PARALLEL OFFSET	

CONVENTIONAL UTILITY SYMBOLS

WATER	W	
GAS	G	
TELEPHONE	T	
OVERHEAD TRANSMISSION LINES	OH	
ELECTRIC	E	
CABLE TELEVISION	TV	
FIBER OPTIC	FO	
SANITARY SEWER	SAN	
STORM SEWER	SS	
	NON COMPENSABLE	COMPENSABLE
POWER POLE		
TELEPHONE POLE		
TELEPHONE PEDESTAL		
ELECTRIC TOWER		



END PROJECT RELOCATION
Sta. 234+69.10
1314.00 S. AND 762.23' W. OF THE NE CORNER OF THE SE 1/4 OF 30-07-20.

BEGIN PROJECT RELOCATION
Sta. 125+06.49
263.17' S. AND 47.18' W. OF THE NE CORNER OF THE SE 1/4 OF 35-07-19.

NOTES

COORDINATES AND BEARINGS ON THIS PLAT ARE ORIENTED TO THE WISCONSIN COUNTY COORDINATE SYSTEM, WAUKESHA COUNTY ZONE, NAD 83 (2007) ADJUSTMENT. THE COORDINATES SHOWN ARE GRID COORDINATES AND ARE TO BE USED AS GRID OR GROUND VALUES ON THIS PLAT.
HARN POINTS: BROOKFIELD S., UES B, MILWAUKEE

TYPE 2 (¾" REBAR TYP.) RIGHT-OF-WAY MONUMENTS WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT BY WISDOT SE REGION.

RIGHT-OF-WAY BOUNDARIES ARE DEFINED WITH COURSES OF THE PERIMETER OF THE HIGHWAY LANDS REFERENCED TO THE U.S. PUBLIC LAND SURVEY SYSTEM OR OTHER SURVEYS OF PUBLIC RECORD.

N

LAYOUT
SCALE 0 1 MI.

TOTAL NET LENGTH OF CENTERLINE = 2.076 MI.

REVISION DATE	STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION
June 13, 2011 July 16, 2012 Nov. 01, 2012	APPROVED FOR THE DEPARTMENT DATE: Oct. 25, 2010 Robert A Duffeck (Signature)

501 E

SCHEDULE OF LANDS & INTERESTS REQUIRED

OWNER'S NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTERESTS TO THE DEPARTMENT.

PARCEL NUMBER	SHEET NUMBER	OWNER	INTEREST REQUIRED	R/W REQUIRED ACRES				TOTAL REMAINING ACRES	T.L.E. TEMP. ACRES	P.L.E. PERM. ACRES	PARCEL NUMBER
				TOTAL ACRES	NEW	EXISTING	TOTAL				
1 (2)	4.03	KHALID AHMED & FOZIA AHMAD	FEE, TLE	0.410	18.94 SF		18.94 SF	0.410	0.002		1
2 (2)	4.03	PYRAMAX FSB	TLE						0.002		2
3 (4)	4.03	BOUCHER HOLDINGS LLC	FEE, TLE	2.670	0.011		0.011	2.659	0.021		3
4 (3)		ELIMINATED									4
5 (2)	4.03	BURGER KING NO 2843	TLE						0.002		5
6 (2)	4.03	LME WAUKESHA LLC	TLE						0.002		6
7	4.04	PRAFUL P & SAROJ P PATEL	TLE						0.001		7
8 (3)	4.04	KEVIN BUBLITZ Per.Rep. For ESTATE OF CARL J LANDGRAF Dec.	FEE, TLE	0.480	0.001		0.001	0.479	0.002		8
9	4.04	LRG LLC	TLE						0.026		9
10 (2)	4.04	JOHN R & MARY ANN WOLF	FEE, TLE	2.395		0.255	0.255	2.140	0.029		10
11 (2)		ELIMINATED									11
12	4.04	ABDELKIBIR MRIOUED & HANANE LAHRACHE	FEE, TLE	0.430	0.001		0.001	0.429	0.006		12
13	4.04	EVERGLADE LLC	TLE						0.027		13
14	4.04	JACK GRIFFIN FORD INC	FEE, TLE	3.538		0.308	0.308	3.230	0.034		14
15	4.04	VARIOUS EQUITIES CORP	PLE, TLE						0.025	0.018	15
16 (2)	4.04	BFS RETAIL & COMMERCIAL	FEE, TLE	0.510	16.56 SF		16.56 SF	0.510	0.004		16
17 (2)		ELIMINATED									17
18	4.04	JRS WESTBROOK LLC	PLE							0.004	18
19 (3)	4.04	WBLP DELAWARE LTD PARTNER	FEE, AR, PLE, TLE	15.740	0.058		0.058	15.682	0.205	0.055	19
20 (2)		ELIMINATED									20
21 (2)		ELIMINATED									21
22 (2)	4.05	MORELAND INVESTMENTS II LLC	FEE, TLE	0.580	0.003		0.003	0.577	0.006		22
23 (4)		ELIMINATED									23
24 (4)		ELIMINATED									24
25 (2)	4.05	WATERSTONE BANK SSB	FEE, TLE	1.694	0.022		0.022	1.672	0.185		25
26 (2)		ELIMINATED									26
27 (2)		ELIMINATED									27
28 (2)	4.05	MORELAND PARTNERS LLC	TLE						0.007		28
29 (3)	4.05	MRED (KOSSOW/MORELAND) ASSOC	TLE						0.080		29
30 (3)		ELIMINATED									30
31	4.05	VAT PROPERTIES LLC	TLE						0.028		31
32 (2)	4.06	FARM & FLEET	FEE, PLE, TLE	10.980	0.492		0.492	10.488	0.224	0.004	32
33	4.06	TARGET CORP T-0082	FEE, TLE	9.300	0.138		0.138	9.162	0.172		33
34 (2)	4.06	BANC ONE CORPORATION	FEE, PLE, TLE	2.020	0.285		0.285	1.735	0.200	0.034	34
35 (2)	4.06	MC DONALD'S CORP 048-0056	FEE, AR,TLE	1.270	0.061		0.061	1.209	0.103		35
36 (3)	4.06	WISCONSIN BANCORP INC	TLE						0.060		36
37 (3)	4.06	UNIVERSITY OF WISCONSIN CU	FEE, TLE	0.887	0.096		0.096	0.791	0.063		37
38 (3)	4.06	TACO BELL OF AMERICA INC.	TLE						0.028		38
39 (2)		ELIMINATED									39
40	4.06	TOWN OF BROOKFIELD	TLE						0.021		40
41 (2)	4.03	LUCILLE R PEPLINSKI/CEDARWOOD CONDOMINIUMS	TLE						0.001		41
42 (2)		ELIMINATED									42
43 (2)	4.05	ROSS T JABS REVOCABLE TRUST	TLE						0.041		43
100 (4)	4.03-4.06	WE ENERGIES-ELECTRIC	ROR								
101		ELIMINATED	ROR								
102 (4)	4.04-4.05	WE-ENERGIES - GAS	ROR								
103 (2)	4.04, 4.06	CITY OF WAUKESHA	ROR								
104 (4)	4.03-4.06	AT & T WISCONSIN	ROR								
105 (4)	4.05-4.06	TOWN OF BROOKFIELD	ROR								

4

4

REVISION DATE
June 13, 2011
July 16, 2012
Nov. 01, 2012

DATE: October 25, 2010

HWY: USH 18

COUNTY: WAUKESHA

STATE R/W PROJECT NUMBER: 2200-16-21

CONSTRUCTION PROJECT NUMBER: 2200-16-71

PLAT SHEET: 4.02

PS&E SHEET

E

FILE NAME : C:\USERS\P\D2\22001620\USH18\22001621\040202_rp.dgn PLOT DATE : 31-OCT-2012 12:35 PLOT BY : dotpmm PLOT NAME : PLOT SCALE : 200.000000:1.000000 WISDOT/CADDS SHEET 60

(100) WE Energies - Electric
Doc. 1284191 - Par. 3
Doc. 1126177 - Par. 5
Doc. 1092488 - Par. 41

(104) AT & T Wisconsin
Doc. 1664174 - Par. 3
Doc. 1126177 - Par. 5
Doc. 1092488 - Par. 41
No Record Of Easement - Par. 2

MANHATTAN DR.
PRW778 50+59.39 32.38'
PRW777 50+62.40 31.00'
PRW717 50+76.33 30.00'
PRW716 50+76.34 31.00'
PRW720 48+57.06 34.92'
PRW724 48+69.84 36.00'
PRW725 48+69.84 30.00'
PRW728 48+87.83 36.00'
PRW719 49+00.00 46.62'
PRW729 49+03.61 44.21'

T 07 N R 19 E — 26 25 35 36
A Concrete Mon. w/
A Brass Cap
Y = 168,659.44
X = 690,083.59

T 07 N R 19 E — 25 25 36 36
A Concrete Mon. w/
A Brass Cap
Y = 168,608.23
X = 692,760.54

T 07 N R 19 E — 35 36 35 36
A Concrete Mon. w/
A Brass Cap
Y = 165,988.74
X = 690,061.97

T 06 N R 19 E — 35 36
A Concrete Mon. w/
A Brass Cap
Y = 163,327.71
X = 690,044.83

T 07 N R 19 E — 36 36 36 36
A Concrete Mon. w/
A Brass Cap
Y = 165,943.67
X = 692,737.32

℄ 2670.79' N 0°27'50" E

℄ 2661.09' N 0°22'09" E

℄ 2664.66' N 0°29'57" E

℄ 2675.73' S 89°02'06" E

℄ 2,658.18' S 89°38'10" E

716 717 177 178
4' 15.34' 3.3' 2.38' 5.87'
N 73°21'59" E
N 25°59'04" E

TLEs are for Slopes

A 4'x 24' TLE

℄ USH 18
PISTA 124+71.80
Y 165938.08
X 689760.14
PC STA 122+62.90
PT STA 126+80.53
DELTA 4°10'35"
D 1°00'00"
L 417.63
R 5729.58
LCH 417.54
LCB N 74°00'50" E

TLE Is for Slopes

5'x5' TLE for Slopes

℄ USH 18 = 144+09.11
℄ STH 164 = 286+63.52

Cedarwood Condominiums

41 Peplinski

Wolf Rd.

Moreland Blvd.

Jennifer Ln.

Stardust Condominium Inc.

Priedeman Estates

64.75'

℄ USH 18 = 125+06.49
℄ Manhattan Dr. = 50+00.00

PI 53+76.04

PYRAMAX (2)

AHMAD (1)

BOUCHER (3)

Lot 2 CSM 4530

Lot 3 CSM 4530 V.36 P.157 DOC. 1258972

PI 154+63.16

PI 124+71.80

BEGIN RELOCATION ORDER
STA. 124+00
Y = 165,914.24
X = 689,692.38

Street/Sidewalk EASEMENT Doc. 1279987

TLE Is for Slopes

LCH 17.79'
LCB S 42°40'36" E
R 52.50'
L 17.88'

LCH 44.51'
LCB N 0°03'05" E
R 165.50'
L 44.65'

℄ Manhattan Dr.

N 14°56'29" W

℄ STH 164

PC 280+41.92

℄ USH 18
PISTA 282+72.35
Y 166010.65
X 691622.91
PC STA 280+47.92
PT STA 284+94.74
DELTA -13°24'16"
D 3°00'00"
L 446.81
R 1909.86
LCH 445.80
LCB N 9°19'38" E

PT 284+94.74
Lot 6A CSM 4309 Doc. 1211366

Lot 1 CSM 7760 Doc. 2056071

PI 282+72.35

Lot 5 CSM 4125 Doc. 1174265

Lot 4 CSM 3615

BURGER KING (5)
Lot 3 CSM 3615 V.27 P.292 Doc. 1095914

Gateway Dr.

LME WAUKESHA (6)
Lot 2 CSM 3615

Lot 1 CSM 4187 V. 33 P. 70 Doc. 1184209

PC 564+53.39

10'x10' TLE

TLEs are for Slopes

HWY	BASIS OF EXISTING R/W	YEAR	WIDTH
USH 18	2200-07-20	1989	varies
USH 18	T016-1(28)	1964	varies
STH 164	SU 1462(3)	1967	varies
Gateway Drive	CSM 3615	1979	66'
Wolf Road	Priedeman Estates	1978	80'
Jennifer Lane	Priedeman Estates	1978	80'
Manhattan Drive	CSM 4530	1984	varies

For Access Control:
2200-07-20
T016-1(28)
Priedeman Estates
CSM 4530

For Access Control information
Contact The Planning Department
At The WisDOT Office In Waukesha

GN

REVISION DATE June 13, 2011 July 16, 2012 Nov. 01, 2012	DATE: October 25, 2010	SCALE, FEET 0 100 200	HWY: USH 18	STATE R/W PROJECT NUMBER: 2200-16-21	PLAT SHEET: 4.03
			COUNTY: WAUKESHA	CONSTRUCTION PROJECT NUMBER: 2200-16-71	PS&E SHEET 503 E

A Concrete Mon. w/
A Brass Cap
Y = 168,608.23
X = 692,760.54

T 07 N
25 25
36 36
R 19 E

A Concrete Mon. w/
A Brass Cap
Y = 168,516.53
X = 695,432.15

T 07 N
25 30
36 31
R 19 E R 20 E

USH 18		
PRW722	161+13.24	112.00'
PRW726	161+15.24	112.00'
PRW727	161+15.24	100.00'
PRW730	167+72.95	100.00'
PRW731	167+75.42	106.65'
PRW732	167+75.53	115.00'
PRW733	167+77.25	115.00'
PRW737	168+37.18	111.50'
PRW736	168+37.81	111.50'
PRW735	168+37.92	106.36'
PRW734	168+40.00	100.00'

SPRINGDALE RD.		
PRW738	50+98.12	76.09'
PRW705	51+54.99	59.50'
PRW739	51+54.99	62.15'
PRW740	52+28.37	59.86'
PRW741	53+02.28	53.96'
PRW742	53+25.12	50.00'

℄ Springdale Rd.
PISTA 52+96.30
Y 167566.73
X 695420.45
PC STA 52+15.06
PT STA 53+73.57
DELTA 30°53'25"
D 19°29'18"
L 158.51
R 294.00
LCH 156.59
LCB N 14°44'22" W

℄ USH 18
PISTA 157+13.84
Y 166716.84
X 692907.44
PC STA 154+53.39
PT STA 159+72.85
DELTA 10°23'21"
D 2°00'00"
L 519.46
R 2864.79
LCH 518.75
LCB N 81°17'48" E

5'x5' TLE Is for Slopes

TLE Is for Slopes

PLE Is for Signals

PLE for Drainage

Singing Hills Subdivision

Parcel 1 CSM 6697 V.56 P.37 DOC. 1715440

Parcel 2 CSM 5001 Doc. 1364788

Parcel 2 CSM 4856 Doc. 1325014

Parcel 2 CSM 6697

Access Ease. See CSM 6697

WBLP DELAWARE (19)

JRS WESTBROOK (18)

BFS (16)

MRIOUED LAHRACHE (12)

LANDGRAF (8)

PATEL (7)

EVERGLADE (13)

WOLF (10)

LRG (9)

GRIFFIN FORD (14)

VARIOUS EQUITIES (15)

Moreland Blvd. 911.25'

N 86°29'28" E

S 64°40'00" E 62.10'

52.27'

N 80°37'10" E 179.52' 89.75' 89.89'

179.33' 177.52' 250.88' 236.63' 306.50' 220.34'

Lot 1 CSM 4430 V. 35 P. 185 Doc. 1235656

Lot 1 CSM 5637 V. 44 P. 368 Doc. 1503103

Lot 2 CSM 5637

Paramont Dr.

2664.66'

N 0°29'57" E

N 0°42'21" E

Avalon Dr.

Ramona Rd.

S 02°01'30" E

N 02°01'30" W

S 11°48'33" E

N 15°49'45" W

N 30°09'35" E 278.42'

S 15°46'05" E 76.40'

N 15°46'05" W 4.78'

S 58°33'49" W 2643.29'

NW-NW

SW-NW

NW-NE

NE-NE

SW-NE

SE-NE

℄ USH 18 = 184+84.43

℄ Springdale Rd. = 50+00.00

℄ USH 18 = 174+30.78

℄ Main St. = 50+00.00

℄ Main St.
PISTA 48+01.86
Y 166649.17
X 694590.36
PC STA 46+02.02
PT STA 49+73.82
DELTA -52°03'07"
D 14°00'00"
L 371.80
R 409.26
LCH 359.14
LCB N 32°33'57" E

℄ USH 18
PISTA 176+01.47
Y 166832.46
X 694792.97
PC STA 168+84.11
PT STA 182+89.93
DELTA -28°06'59"
D 2°00'00"
L 1405.83
R 2864.79
LCH 1391.76
LCB N 72°25'58" E

LCH 29.99'
LCB S 29°26'20" W
R 359.26'
L 30.00'

CSM 3493

LCH 128.02'
LCB S 19°27'20" E
R 344.00'
L 128.77'

LCH 88.08'
LCB N 16°39'00" W
R 187.50'
L 89.02'

LCH 58.55'
LCB N 15°24'58" W
R 187.50'
L 58.79'

S 30°11'02" E 116.29'

S 82°55'12" E 81.72'

S 30°11'02" E 85.76'

N 15°46'05" W 125.60'

S 74°48'58" E 37.14'

S 30°11'02" E 76.40'

S 88°29'20" E 2663.20'

N 0°42'21" E

HWY	BASIS OF EXISTING R/W	YEAR	WIDTH
USH 18	2200-07-20	1989	varies
USH 18	T016-1(28)	1964	varies
Main Street	T016-1(28)	1964	varies
Ramona Drive	Singing Hills Subdivision	1965	60'
Avalon Drive	Singing Hills Subdivision	1965	70'
Paramant Drive	CSM 4430	1983	varies

For Access Control:
2200-07-20
T016-1(28)
Singing Hills Subdivision
CSM 4430

For Access Control Information
Contact The Planning Department
At The WisDOT Office In Waukesha

100 WE Energies - Electric
Doc. 312567 - Par. 9
Doc. 991596 - Par. 9
Doc. 1254285 - Par. 9
Doc. 632601 - Par. 8,12
Doc. 223566 - Par. 15
Doc. 756794 - Par. 16
No Record Of Easement - Par. 7

102 WE Energies - Gas
Doc. 1381663 - Par. 19
Doc. 1586008 - Par. 19
Doc. 1317762 - Par. 19

103 City Of Waukesha
Doc. 501790 - Par. 15

104 AT & T Wisconsin
Doc. 632601 - Par. 8,12
Doc. 756794 - Par. 16
Doc. 2723760 - Par. 19
No Record Of Easement - Par. 9, 14

A Concrete Mon. w/
A Brass Cap
Y = 165,943.67
X = 692,737.32

T 07 N
36 36
36 36
R 19 E

A Concrete Mon. w/
A Brass Cap
Y = 165,873.44
X = 695,399.59

T 07 N
36 31
36 31
R 19 E R 20 E

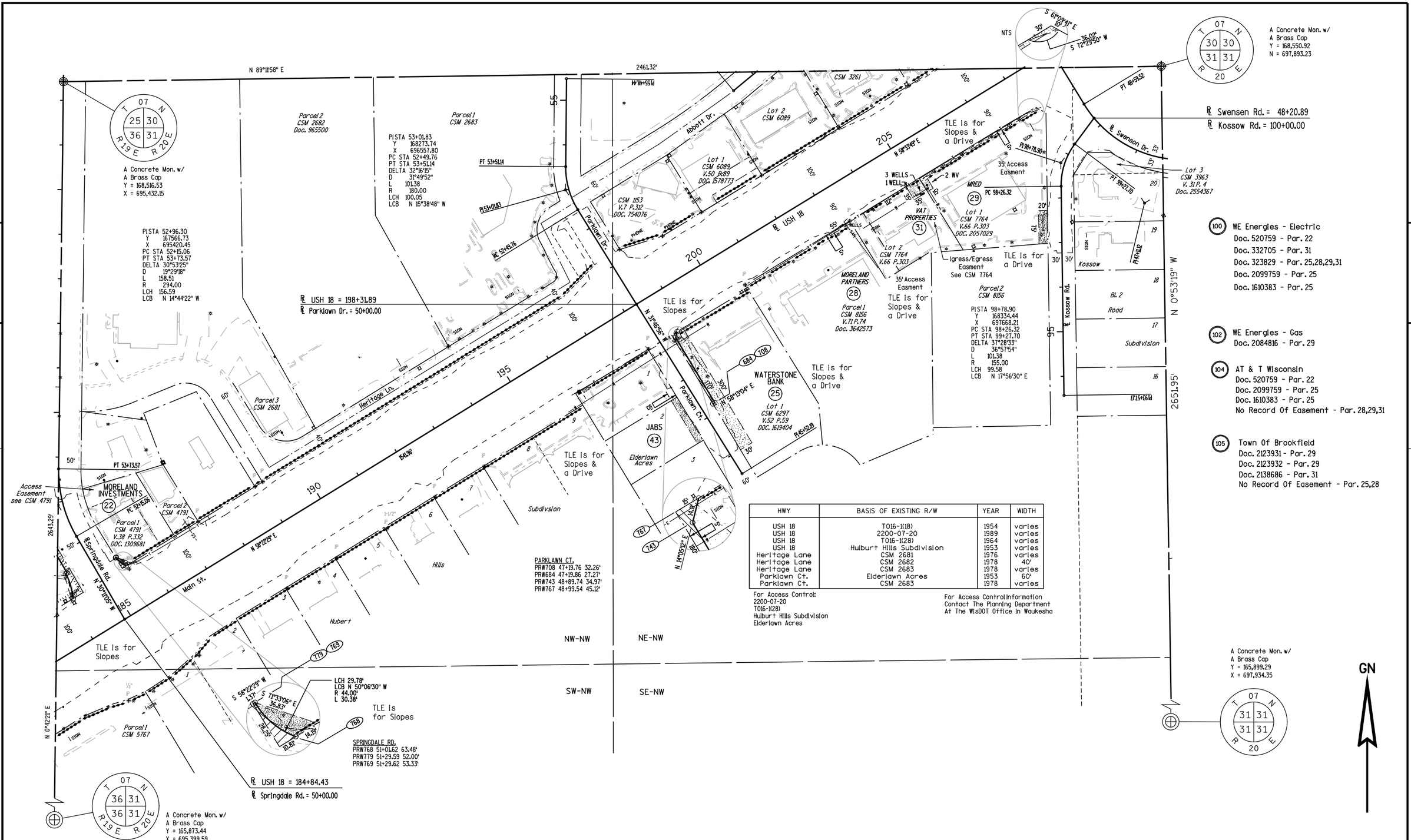
GN

REVISION DATE June 13, 2011 July 16, 2012 Nov. 01, 2012	DATE: October 25, 2010	SCALE, FEET 0 100 200	HWY: USH 18	STATE R/W PROJECT NUMBER: 2200-16-21	PLAT SHEET: 4.04
			COUNTY: WAUKESHA	CONSTRUCTION PROJECT NUMBER: 2200-16-71	PS&E SHEET 504 E

FILE NAME : C:\USERS\P\D2\22001620\USH18\22001621\040404_rp.dgn PLOT DATE : 30-OCT-2012 16:33 PLOT BY : dotpmm PLOT NAME : PLOT SCALE : 200.000000:1.000000

WISDOT/CADDS SHEET 75

4



100 WE Energies - Electric
Doc. 520759 - Par. 22
Doc. 332705 - Par. 31
Doc. 323829 - Par. 25,28,29,31
Doc. 2099759 - Par. 25
Doc. 1610383 - Par. 25

102 WE Energies - Gas
Doc. 2084816 - Par. 29

104 AT & T Wisconsin
Doc. 520759 - Par. 22
Doc. 2099759 - Par. 25
Doc. 1610383 - Par. 25
No Record Of Easement - Par. 28,29,31

105 Town Of Brookfield
Doc. 2123931 - Par. 29
Doc. 2123932 - Par. 29
Doc. 2138686 - Par. 31
No Record Of Easement - Par. 25,28

HWY	BASIS OF EXISTING R/W	YEAR	WIDTH
USH 18	T016-1(18)	1954	varies
USH 18	2200-07-20	1989	varies
USH 18	T016-1(28)	1964	varies
USH 18	Hulburt Hills Subdivision	1953	varies
Heritage Lane	CSM 2681	1976	varies
Heritage Lane	CSM 2682	1978	40'
Heritage Lane	CSM 2683	1978	varies
Parklawn Ct.	Elderlawn Acres	1953	60'
Parklawn Ct.	CSM 2683	1978	varies

For Access Control: 2200-07-20 T016-1(28) Hulburt Hills Subdivision Elderlawn Acres

For Access Control Information Contact The Planning Department At The WisDOT Office In Waukesha

REVISION DATE June 13, 2011 July 16, 2012 Nov. 01, 2012	DATE: October 25, 2010	SCALE, FEET 0 100 200	HWY: USH 18	STATE R/W PROJECT NUMBER: 2200-16-21	PLAT SHEET: 4.05	
			COUNTY: WAUKESHA	CONSTRUCTION PROJECT NUMBER: 2200-16-71	PS&E SHEET 505	E

Y = 171,155.18
X = 695,456.44

T 07 N R 19 E 25 30 25 30 R 20 E

(100) WE Energies - Electric
Doc. 3568506 - Par. 32
Doc. 1119939 - Par. 33
Doc. 174200 - Par. 34
Doc. 1042858 - Par. 35
Doc. 958341 - Par. 36
Doc. 1157516 - Par. 36, 40
Doc. 125776 - Par. 37
Doc. 143106 - Par. 37
Doc. 1256425 - Par. 37

(103) City Of Waukesha
CSM 3115 - Par. 35

(104) AT & T Wisconsin
Doc. 1119939 - Par. 33
Doc. 1528454 - Par. 36
No Record Of Easement - Par. 34,35,37

(105) Town Of Brookfield
CSM 5590 - Par. 40

STA. / OFF KOSSOW RD,

PRW752	51+00.00	64.73'
PRW751	51+81.32	46.50'
PRW758	51+90.08	98.50'
PRW759	52+34.61	67.50'
PRW750	53+00.00	46.50'
PRW753	53+60.00	277.25'
PRW754	54+00.73	215.26'
PRW755	54+30.53	191.30'
PRW766	54+94.56	85.16'
PRW756	55+00.11	56.71'
PRW757	55+19.29	35.00'
PRW721	55+24.69	33.30'
PRW761	55+42.31	64.50'
PRW760	55+42.32	67.50'
PRW762	56+81.83	55.94'
PRW718	59+01.37	35.42'
PRW763	59+39.56	33.17'

STA. / OFF SWENSON DR,

PRW747	45+54.55	33.26'
PRW749	46+37.46	40.50'
PRW746	47+11.10	55.50'
PRW745	48+33.60	55.50'
PRW744	48+81.94	60.40'

℄ Kossow Rd,
PISTA 57+67.92
Y 169241.31
X 697247.00
PC STA 55+67.80
PT STA 59+57.56
DELTA 32°03'14"
D 8°13'26"
L 389.76
R 696.69
LCH 384.70
LCB N 15°22'29" W

℄ Abbott Dr,
PISTA 45+85.99
Y 168651.37
X 697121.65
PC STA 44+81.00
PT STA 46+90.62
DELTA 8°13'35"
D 3°55'28"
L 209.61
R 1459.94
LCH 209.43
LCB N 54°26'49" E

PISTA 53+01.83
Y 168273.74
X 696557.80
PC STA 52+49.76
PT STA 53+51.14
DELTA 32°16'15"
D 31°49'52"
L 101.38
R 180.00
LCH 100.05
LCB N 15°38'48" W

℄ Swenson Dr.
PISTA 47+11.12
Y 168244.00
X 697855.80
PC STA 44+51.07
PT STA 48+59.52
DELTA 90°00'38"
D 22°02'13"
L 408.45
R 260.00
LCH 367.73
LCB N 76°24'25" W

HWY	BASIS OF EXISTING R/W	YEAR	WIDTH
USH 18	2200-07-20	1989	varies
USH 18	T016-1(28)	1964	varies
Swenson Dr.	CSM 3963	1980	66'
Crossroads Clr.	CSM 5590	1988	60'

For Access Control:
T016-1(28)
CSM 4398
CSM 3963

For Access Control Information
Contact The Planning Department
At The WisDOT Office In Waukesha

A Concrete Mon. w/
A Brass Cap
Y = 168,516.53
X = 695,432.15

GN

NTS

LCH 100.02'
LCB S 48°28'23" E
R 250'
L 100.70'

N 58°33'49" E

LCH 42.94'
LCB N 26°12'36" W
R 113.50'
L 43.20'

37.98'

S 14°28'10" W 18.28'
21.40'
S 57°49'41" E 23.98'
S 58°30'02" W
14.78'

LCH 95.47'
LCB N 50°36'45" W
R 204.50'
L 96.36'

Lot 1B
CSM 4828

TACO BELL (38)

TLE Is for Slopes & a Drive

S 01°49'35" E

U.W. (37)

Lot 1A
CSM 4828
V.39 P.107
DOC. 1317715

LCH 71.21'
LCB N 83°41'16" W
R 223.61'
L 71.51'

S 34°27'54" E

N 56°18'57" W 71.15'
61.65'
S79°08'43" E 50.47'
23.95'
N 77°39'23" E 66.85'
71.21'
53'

N 9°21'13" E
9.60'
℄ Swenson Dr.

LCH 247.79'
LCB S 65°24'46" E
R 227.00'
L 262.11'

LCH 18.61'
LCB S 79°09'40" W
R 227.00'
L 18.62'

LCH 72.02'
LCB S 67°40'48" W
R 227.00'
L 72.32'

744 745 746 747

N 0°31'39" E

SW-SW SE-SW NW-NW NE-NW

N 89°11'58" E 2461.32'

LCH 28.94'
LCB N 17°04'00" E
R 28.50'
L 30.35'

N 13°26'55" W 5.68'

FARM & FLEET (32)

Parcel 1
CSM 3349
V.25 P.186
DOC. 1058178

LCH 123.95'
LCB N 27°29'44" E
R 180.50'
L 126.53'

TLE Is for Slopes

LCH 74.14'
LCB N 25°19'52" E
R 120.50'
L 75.36'

PI 46+90.62

8' x 20'
PLE for
Bus Stop

PI 46+80.00

PI 45+85.99

LCH 91.03'
LCB N 56°43'57" E
R 1,429.94'
L 91.04'

CSM 3261

721 757 756 766 573 755 754

PI 57+67.92

PLE Is for Signals & Lighting

PT 59+57.56

763 718 762

LCH 205.30'
LCB S 18°39'44" E
R 465.50'
L 207.00'

S 31°24'06" E 129.90'

PC 55+51.80

S 58°33'36" W

761 760

15.75'x50' PLE for Drainage

TLE Is for Slopes

BANC ONE (34)

Parcel 2
CSM 3517
V.26 P.326
DOC. 1081255

LCH 54.25'
LCB N 66°13'44" W
R 47.50'
L 57.74'

759 758

E Moreland Ct.
N 58°33'36" E

℄ Abbott Dr.

N 47°33'32" E 164.46'
N 29°49'46" E 355.85'
N 7°24'27" E 244.07'
N 58°33'36" E 36.24'
13.72'

MCDONALD'S (35)

CSM 3115
V.23 P.160
DOC. 1023013

LCH 83.35'
LCB S 18°45'53" E
R 190.50'
L 84.03'

151 152

N 15°00'02" W 7.88'
12.10'

℄ Kossow Rd. = 53+29.98
℄ Abbott Rd. = 50+00.00

℄ USH 18 = 209+22.28
℄ Kossow Rd. = 50+00.00

NTS

69'x7' PLE for Drainage

A Concrete Mon. w/
A Brass Cap
Y = 168,550.92
N = 697,893.23

A Concrete Mon. w/
A Brass Cap
Y = 165,899.29
X = 697,934.35

T 07 N R 20 E 30 30 31 31

T 07 N R 20 E 31 31 31 31

T 07 N R 20 E 30 29 31 32

A Concrete Mon. w/
A Brass Cap
Y = 168,599.43
X = 700,555.09

2662.68'
N 0°35'39" E

Y = 171,213.46
X = 697,920.84

T 07 N R 20 E 30 30 30 30

PLE Is for Signals & Lighting

[1] LCH 50.30'
LCB S 29°28'05" E
R 729.69'
L 50.31'

[2] LCH 350.58'
LCB N 16°08'37" W
R 663.69'
L 354.19'

[3] 36.37'
S 05°55'59" E

TARGET (33)

Parcel 1
CSM 3517
V.26 P.326
DOC. 1081255

NTS

31.32'
34.33'
35.67'
40'
5'
20'
155.65'
301.70'
35.64'
35.64'
℄ Kossow Rd

15.75'x50' PLE for Drainage

Lot 1
CSM 4398
V.35 P.84
DOC. 1228360

END RELOCATION ORDER
STA. 215+00
Y = 168,887.17
X = 698,140.04

215

℄ USH 18

S 58°33'36" W

210

190.00'

PI 49+89.97

PI 48+93.52

PC 49+93.07

Lot 2
CSM 3963
R.1460 L.847

Lot 1B
CSM 4828

S 58°33'23" W

SW-SE
NW-NE

U.W. (37)

Lot 1A
CSM 4828
V.39 P.107
DOC. 1317715

℄ Swenson Dr.

Grossroads Clr.

TOWN OF BROOKFIELD (40)

Outlot 1
CSM 5590
V. 45 P. 205
Doc. 1496163

WISCONSIN BANCORP (36)

Parcel 1
CSM 5590
V.45 P.205
Doc. 1496163

PI 47+11.12

TLE Is for Slopes

LCH 22.01'
LCB S 60°42'30" W
R 260.00'
L 22.02'

REVISION DATE	DATE: October 25, 2010	SCALE, FEET	HWY: USH 18	STATE R/W PROJECT NUMBER: 2200-16-21	PLAT SHEET: 4.06	
June 13, 2011 July 16, 2012 Nov. 01, 2012		0 100 200	COUNTY: WAUKESHA	CONSTRUCTION PROJECT NUMBER: 2200-16-71	PS&E SHEET	E

506

FILE NAME : C:\USERS\P\D2\22001620\USH18\22001621\040406_rp.dgn PLOT DATE : 30-OCT-2012 16:40 PLOT BY : dotpmm PLOT NAME : PLOT SCALE : 200.000000:1.000000

WISDOT/CADDS SHEET 75

4

NO.	STATION	DESCRIPTION	ELEV.
1	125+58 80' LT	BM-1 CHLSD "+" IN NW BOLT TOP FLANGE BOLT OF F. HYD @NORTHEAST CORNER OF USH-18 AND MANHATTAN DRIVE	879.39

SLOPE INTERCEPT (TYP.)

R/W

BM-1

14'

END RECONSTRUCTION, BEGIN RESURFACING
STA. 125+88.80

36'

24'

R/L USH 18

PI 124+71.80

POT 50+02.64

N 14° 44' 45" W
2.64

POT 50+00.00

121+00 122+00 123+00 124+00 125+00 126+00 127+00

BEGIN CONSTRUCTION
STA. 121+24.93

PC 122+62.90

37'

USH 18 (E. MORELAND BLVD)

PROFILE GRADE LINE
PGL_18

N 15° 11' 20" W
2.65

PT 126+80.53

SLOPE INTERCEPT (TYP.)

14'

MANHATTAN DRIVE

END RECONSTRUCTION
STA. 125+88.12

BEGIN PROJECT ID 2200-16-71
STA. 122+25.00
(PGL STA. 122+25.22)
Y = 165,861.51
X = 689,525.52

TLE

R/W

49+00

PGL_18 LAYOUT INFORMATION

P.I. STA. 121+42.25
Y = 165,835.83
X = 689,446.85

N 76° 06' 07" E DIST 322.18'

P.I. STA. 124+64.43
Y = 165,913.22
X = 689,759.60

N 76° 34' 11" E DIST 104.46'

P.I. STA. 125+68.88
Y = 165,937.48
X = 689,861.20

N 76° 20' 04" E DIST 19.24'

P.I. STA. 125+88.12
Y = 165,942.02
X = 689,879.89

N 76° 15' 37" E DIST 11.54'

P.I. STA. 125+99.66
Y = 165,944.76
X = 689,891.10

880.50

PROPOSED PROFILE AT PROFILE GRADE LINE

K = 220
L = 150'

123+75.00 EL 878.73

125+25.00 EL 877.47

877.15

PROPOSED PROFILE ELEVATION AT PROFILE GRADE LINE (TYP.)

4.18%

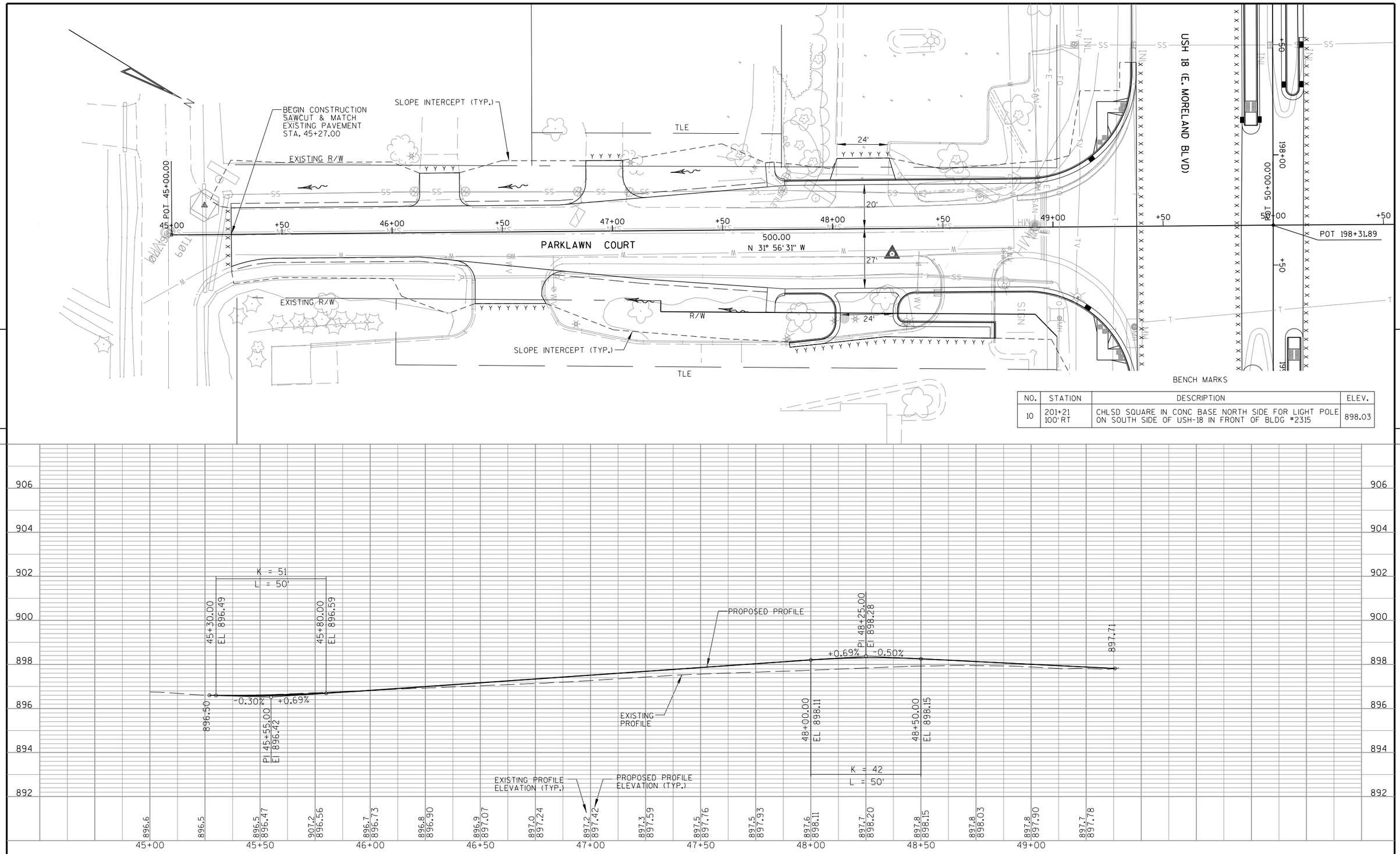
-0.50%

EXISTING GROUND PROFILE AT PROFILE GRADE LINE

EXISTING PROFILE ELEVATION AT PROFILE GRADE LINE (TYP.)

PI 124+50.00
EI 877.84

| | | |



NO.	STATION	DESCRIPTION	ELEV.
10	201+21 100' RT	CHLSD SQUARE IN CONC BASE NORTH SIDE FOR LIGHT POLE ON SOUTH SIDE OF USH-18 IN FRONT OF BLDG #2315	898.03

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	PLAN & PROFILE - PARKLAWN COURT	SHEET 508	E

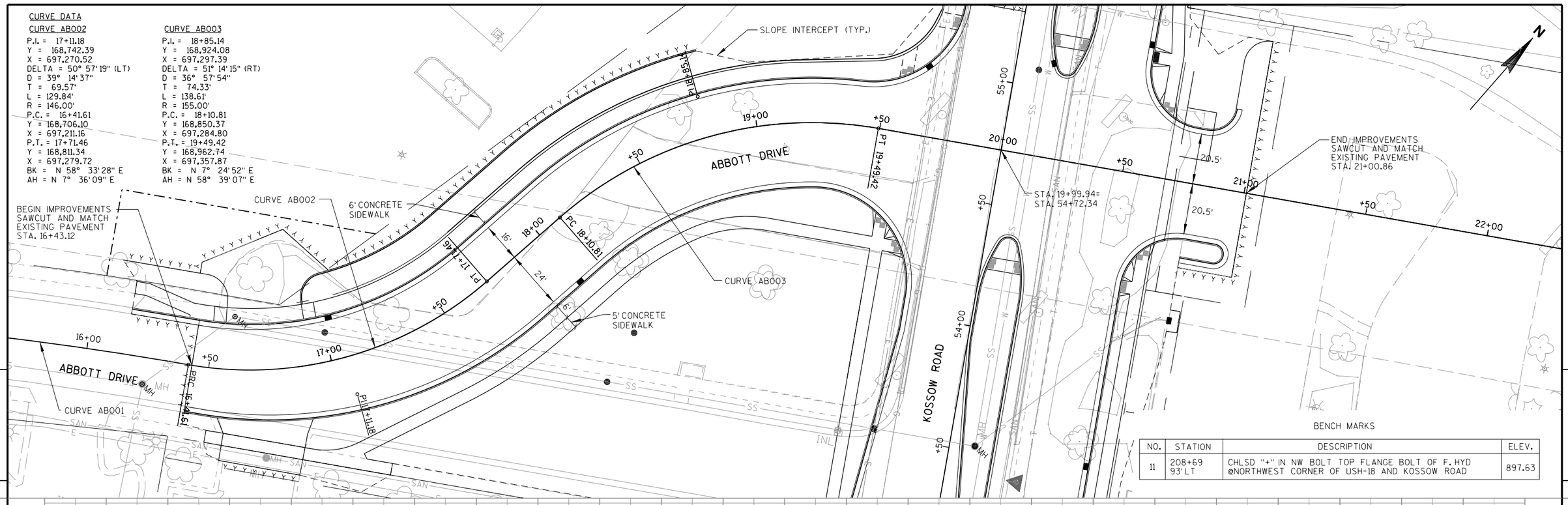
FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\050102_pp.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 40.0000 sf / in.

WISDOT/CADDS SHEET 30

CURVE DATA

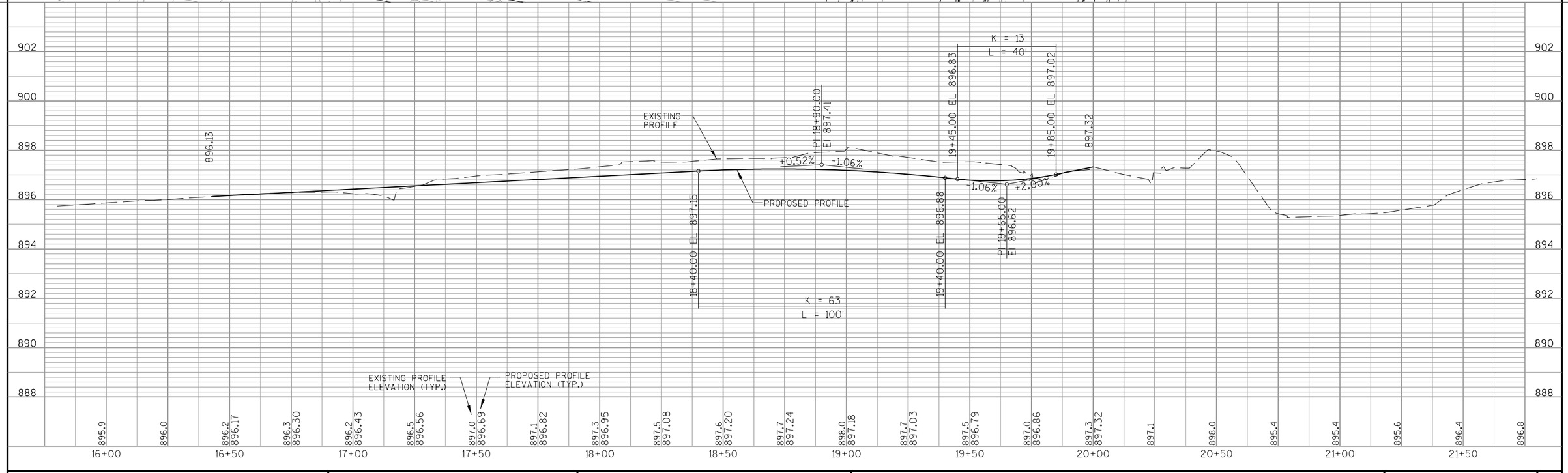
CURVE AB002
P.I. = 17+11.18
Y = 168,742.39
X = 697,270.52
DELTA = 50° 57' 19" (LT)
D = 39° 14' 37"
T = 69.57'
L = 129.84'
R = 146.00'
P.C. = 16+41.61
Y = 168,706.10
X = 697,211.16
P.T. = 17+71.46
Y = 168,811.34
X = 697,279.72
BK = N 58° 33' 28" E
AH = N 7° 36' 09" E

CURVE AB003
P.I. = 18+85.14
Y = 168,924.08
X = 697,297.39
DELTA = 51° 14' 15" (RT)
D = 36° 57' 54"
T = 74.33'
L = 138.61'
R = 155.00'
P.C. = 18+10.81
Y = 168,850.37
X = 697,284.80
P.T. = 19+49.42
Y = 168,962.74
X = 697,357.87
BK = N 7° 24' 52" E
AH = N 58° 39' 07" E



BENCH MARKS

NO.	STATION	DESCRIPTION	ELEV.
11	208+69 93' LT	CHLSD "+" IN NW BOLT TOP FLANGE BOLT OF F. HYD @NORTHWEST CORNER OF USH-18 AND KOSSOW ROAD	897.63



PROJECT NO: 2200-16-70	HWY: USH 18	COUNTY: WAUKESHA	PLAN & PROFILE - ABBOTT DRIVE	SHEET 509 E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\050103_pp.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 40.0000 sf / in.

WISDOT/CADDS SHEET 30

BENCH MARKS

NO.	STATION	DESCRIPTION	ELEV.
11	208+69 93'LT	CHLSD "+" IN NW BOLT TOP FLANGE BOLT OF F. HYD @NORTHWEST CORNER OF USH-18 AND KOSSOW ROAD	897.63

TLE
6' CONCRETE SIDEWALK
SLOPE INTERCEPT (TYP.)
TLE
R/W
ABBOTT DRIVE
PT 19+49.42
STA. 19+99.94=
STA. 54+72.34
48'
11'
8'
36'
BEGIN RECONSTRUCTION
SAWCUT AND MATCH
EXISTING PAVEMENT
STA. 50+61.71
KOSSOW ROAD
6' CONCRETE SIDEWALK
R/W
TLE
END FULL RECONSTRUCTION
SAWCUT AND MATCH
EXISTING PAVEMENT
STA. 55+28.16

K = 105
L = 105'
51+47.50 EL 896.05
52+52.50 EL 896.05
896.48
897.98
PROPOSED PROFILE
-0.50%
+0.50%
+0.50%
+1.26%
P 52+00.00
El 895.79
PI 54+50.00
El 897.04
EXISTING PROFILE
BEGIN RECONSTRUCTION
SAWCUT AND MATCH
EXISTING PAVEMENT
STA. 50+61.71
END FULL RECONSTRUCTION
SAWCUT AND MATCH
EXISTING PAVEMENT
STA. 55+28.16
EXISTING PROFILE ELEVATION (TYP.)
PROPOSED PROFILE ELEVATION (TYP.)

| | | |

Standard Detail Drawing List

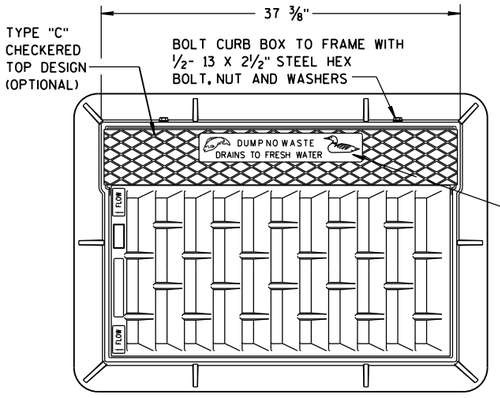
08A05-19A	INLET COVERS TYPE A, H, A-S, H-S & Z
08A05-19B	INLET COVERS TYPE B, B-A, C, MS, MS-A, & WM
08A05-19D	INLET COVER TYPE BW, MANHOLE COVERS, TYPE K, J, J-S, L & M
08A08-01	CATCH BASINS 3-FT, 4-FT, 5-FT AND 6-FT DIAMETER
08A09-01	CATCH BASINS 2X3-FT AND 2.5X3-FT
08B09-01	MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER
08C06-01	INLETS 3-FT AND 4-FT DIAMETER
08C07-01	INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT
08C08-01	INLETS MEDIAN 1 AND 2 GRATE
08C09-01	INLETS MEDIAN 3 AND 4 GRATE
08D01-17	CONCRETE CURB, CONCRETE CURB AND GUTTER AND TIES
08D04-05	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
08D05-15A	CURB RAMPS TYPES 1 AND 1-A
08D05-15B	CURB RAMPS TYPES 2 AND 3
08D05-15C	CURB RAMPS TYPES 4A AND 4A1
08D05-15D	CURB RAMPS TYPE 4B AND 4B1
08D05-15E	CURB RAMPS TYPES 5, 6, 7A, 7B & 8
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
08F05-01	CLASS "B" BEDDING FOR CULVERT PIPE OR STORM SEWER
09B02-08	CONDUIT
09B04-11	PULL BOX
09C02-07	CONCRETE BASES, TYPES 1, 2, 5, & 6
09C03-04	TRANSFORMER/PEDESTAL BASES
09C06-07	CONCRETE CONTROL CABINET BASE, TYPE 9, SPECIAL
09C11-06	CONCRETE BASE TYPE 10
09C12-06A	CONCRETE BASE TYPE 13
09C12-06B	CONCRETE BASE TYPE 13
09C13-02	CONCRETE BASE TYPE 10 & TYPE 13 EXTENSION
09C14-02	CONCRETE CONTROL CABINET BASE, TYPE L
09D01-05	CABINET SERVICE INSTALLATION (METER BREAKER PEDESTAL)
09D02-03	SIGNAL CONTROL CABINET
09D04-01	LIGHTING CONTROL CABINET
09E01-14A	POLE MOUNTINGS FOR TRAFFIC SIGNALS TYPE 2
09E01-14B	POLE MOUNTINGS FOR TRAFFIC SIGNALS AND LIGHTING UNITS, TYPE 3 (HEAVY DUTY)
09E01-14D	POLE MOUNTINGS FOR LIGHTING UNITS, TYPE 5 (30 FEET)
09E01-14E	POLE MOUNTINGS FOR LIGHTING UNITS, TYPE 6 (35 FEET)
09E01-14G	HARDWARE DETAILS FOR POLE MOUNTINGS
09E03-05	NON-FREEWAY LIGHTING UNIT POLE WIRING
09E06-05	TRAFFIC SIGNAL STANDARD POLY BRACKET MOUNTINGS (TYPICAL) 13 FT. OR 15 FT.
09E07-05	TRAFFIC SIGNAL STANDARD PEDESTRIAN AND FLASHER TYPICAL MOUNTING DETAILS
09E08-06A	TYPE 9 POLE 15'-30' MONOTUBE ARM
09E08-06B	TYPE 10 POLE 15'-30' MONOTUBE ARM
09E08-06D	TYPE 13 POLE 35'-55' MONOTBE ARM
09E08-06E	GENERAL NOTES AND HARDWARE DETAILS FOR TYPE 9, 10, 12 & 13 POLES WITH MONOTUBE ARMS
09F15-04A	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 1)
09F15-04B	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)
09G01-03A	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-03B	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-03C	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-03D	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-03E	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-03F	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-03G	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09H09-01	COMMUNICATION VAULT
11B01-05	CONCRETE CORRUGATED MEDIAN
11B02-02	CONCRETE MEDIAN NOSE
12A04-03	STRUCTURE IDENTIFICATION PLAQUES, RAMP GATES, SIGN BRIDGES & OVERHEAD SIGN SUPPORTS & TRAFFIC SIGNALS
13C01-17	CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES
13C09-11A	CONCRETE PAVEMENT REPAIR AND REPLACEMENT
13C09-11B	CONCRETE PAVEMENT REPAIR AND REPLACEMENT
13C09-11C	CONCRETE PAVEMENT REPAIR AND REPLACEMENT
13C13-08	URBAN DOWELED CONCRETE PAVEMENT
13C14-04A	BASE PATCHING CONCRETE
13C14-04B	BASE PATCHING CONCRETE

6

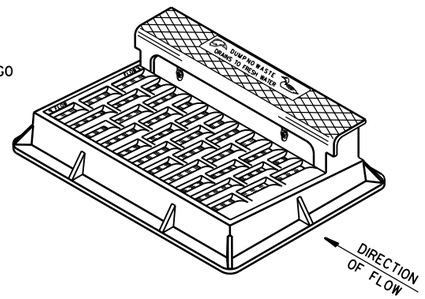
Standard Detail Drawing List

13C14-04C	BASE PATCHING CONCRETE
13C15-05A	CONCRETE BASE
13C15-05B	CONCRETE BASE
13C18-02A	CONCRETE PAVEMENT JOINTING
13C18-02B	CONCRETE PAVEMENT STEEL REINFORCEMENT
13C18-02C	CONCRETE PAVEMENT JOINT TIES
13C18-02D	CONCRETE PAVEMENT JOINTING AT UTILITY FIXTURES
14B28-03	GUARDRAIL MOW STRIP
14B42-03A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-03B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-03C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-02A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-02B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-02C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B45-03A	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03B	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03C	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03D	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03E	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03F	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03G	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03H	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03I	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03J	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B47-02A	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-02B	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-02C	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
15C03-02	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C05-02	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS
15C07-12B	PAVEMENT MARKING WORDS
15C07-12C	PAVEMENT MARKING ARROWS
15C08-16A	PAVEMENT MARKING (MAINLINE)
15C08-16B	PAVEMENT MARKING (INTERSECTIONS)
15C08-16E	PAVEMENT MARKING (LEFT TURN LANE)
15C08-16F	PAVEMENT MARKING (ISLANDS)
15C11-05	FLEXIBLE TUBULAR MARKER POST, ANCHOR & BASES
15C12-04	TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)
15C18-03	MEDIAN ISLAND MARKING
15C24-02	36" DIAMETER CANTILEVER OVERHEAD SIGN SUPPORT BASE
15C30-01	WARRANTY PROJECT PAVEMENT MARKING DETAILS
15C33-01	STOP LINE AND CROSSWALK PAVEMENT MARKING
15D16-02	TRAFFIC CONTROL, EXIT RAMP CLOSURE
15D20-03	TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY
15D21-03	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE
15D22-02	TRAFFIC CONTROL, TWO LANE CLOSURE, NON-FREEWAY/EXPRESSWAY
15D23-03	TRAFFIC CONTROL, INTERSECTION WITHIN TWO LANE CLOSURE
15D30-02A	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-02B	TRAFFIC CONTROL, TEMPORARY ADA COMPLIANT PEDESTRIAN ACCOMMODATION
15D30-02C	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
16A01-06	LANDMARK REFERENCE MONUMENTS AND COVERS

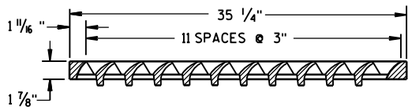
6

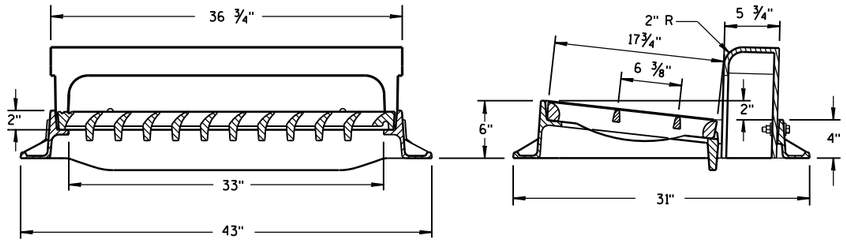


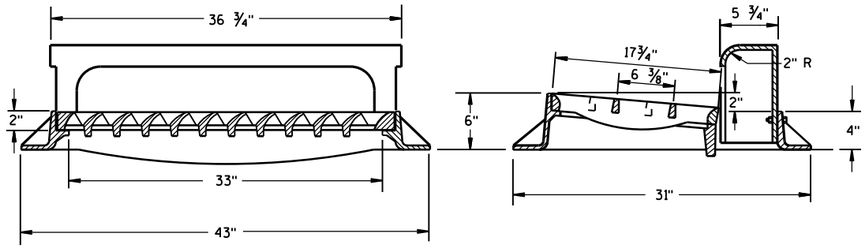
NOTE:
GRATE IS REVERSIBLE.



NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

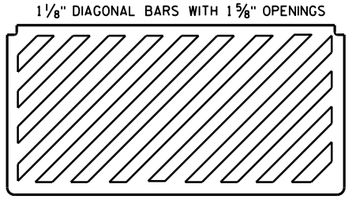






TYPE "H"

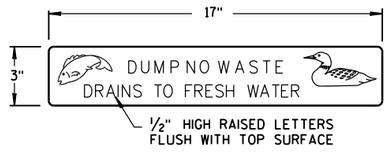
NOTE: EITHER CASTING IS ACCEPTABLE



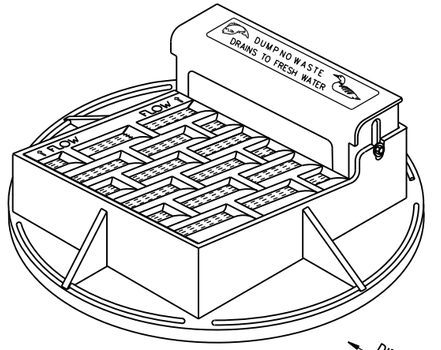
SPECIAL GRATE FOR TYPE "H" COVER

(MEASURES 35 1/4" X 17 3/4" X 2")

(NOTED AS TYPE H-S ON DRAINAGE TABLE)



LOGO DETAIL



NOTE: CURB BOX ADJUSTABLE 4" TO 9"

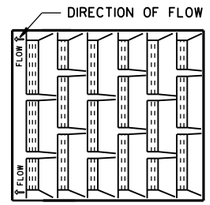
NOTE:
GRATE IS REVERSIBLE.

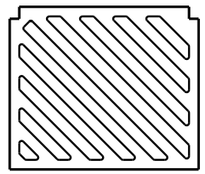
GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR CATCH BASIN, MANHOLE AND INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.

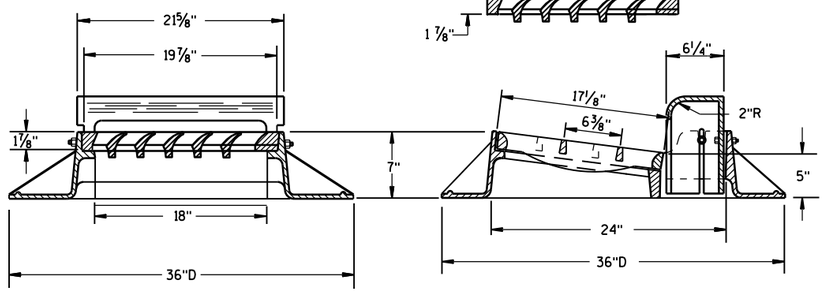




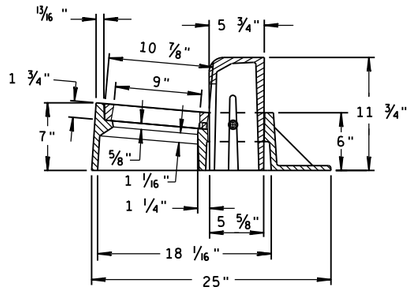
SPECIAL GRATE FOR TYPE "A" COVER

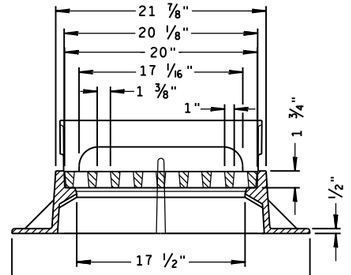
(MEASURES 19 3/4" X 17" X 1 7/8")

(NOTED AS TYPE A-S ON DRAINAGE TABLE)

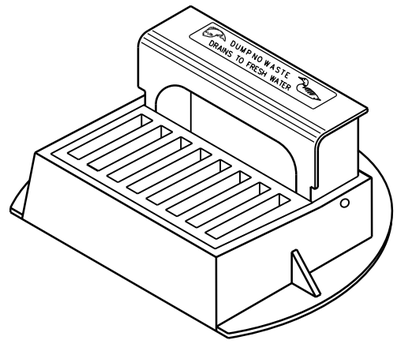


TYPE "A"





TYPE "Z"



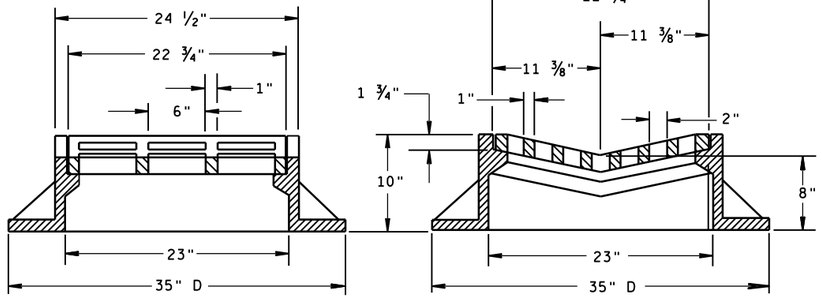
INLET COVERS
TYPE A, H, A-S, H-S & Z

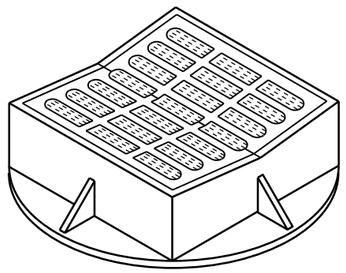
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11-27-13 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

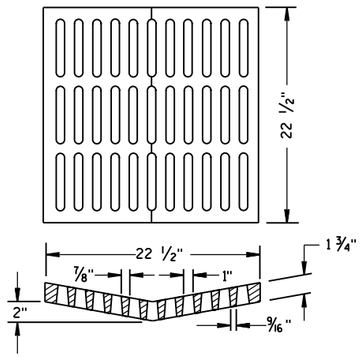
6

S.D.D. 8 A 5-19a



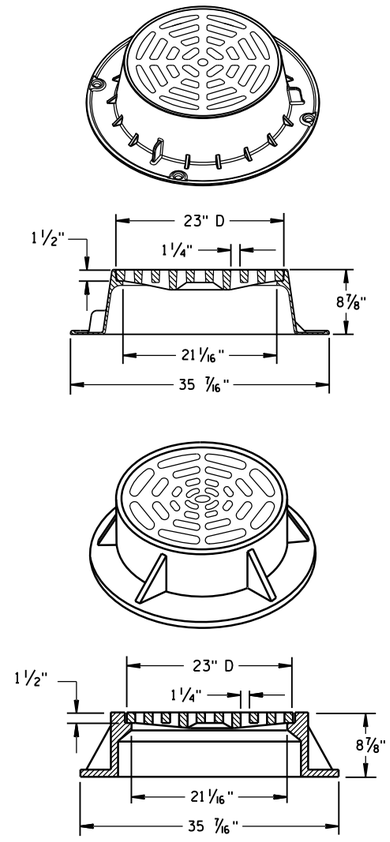


TYPE "B"



ALTERNATIVE GRATE FOR TYPE "B" COVER

USE WHERE PEDESTRIAN OR BICYCLE TRAFFIC IS POSSIBLE.
NOTED AS TYPE B-A ON THE DRAINAGE TABLE



TYPE "C"

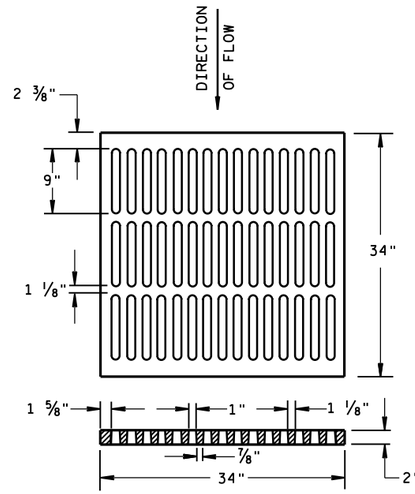
NOTE: EITHER CASTING IS ACCEPTABLE

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

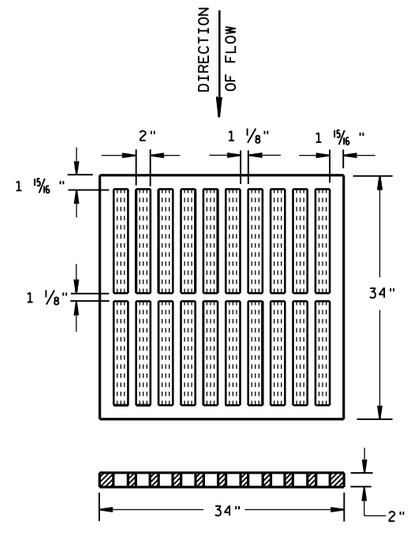
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR CATCH BASIN, MANHOLE AND INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.



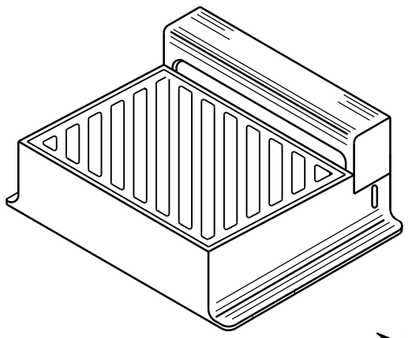
ALTERNATIVE TYPE "MS"

USE WHERE PEDESTRIAN OR BICYCLE TRAFFIC IS PERMITTED
NOTED AS TYPE MS-A ON THE DRAINAGE TABLE

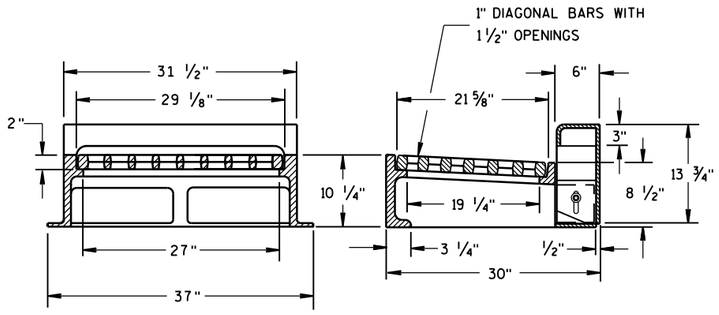


TYPE "MS"

USE ON FREEWAYS AND EXPRESSWAYS
NOTED AS TYPE MS ON DRAINAGE TABLE



DIAGONAL SLOTS, SHALL BE ORIENTED TO THE DIRECTION OF FLOW AS ILLUSTRATED. GRATES ARE MANUFACTURED TO BE REVERSIBLE.



NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

TYPE "WM"

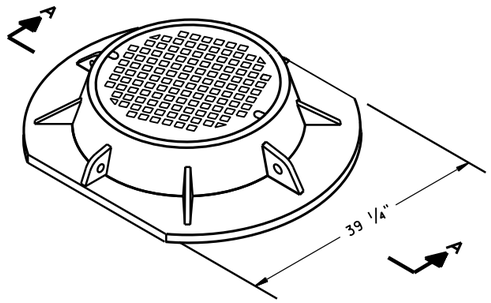
INLET COVERS
TYPE B, B-A, C, MS, MS-A, & WM

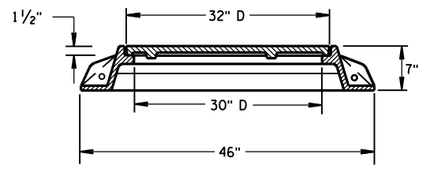
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/27/2013 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

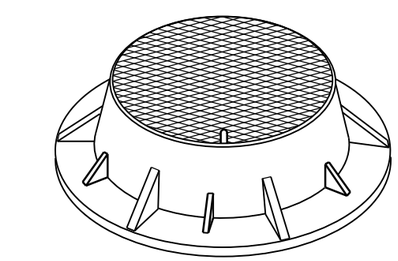
6

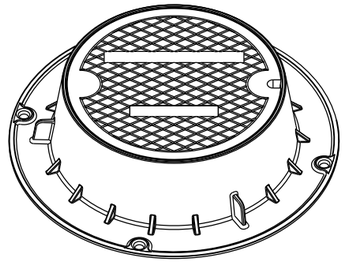
S.D.D. 8 A 5-19b

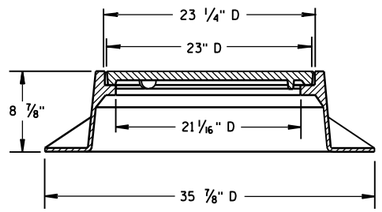


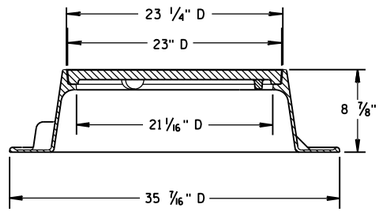


SECTION A-A
TYPE "K"









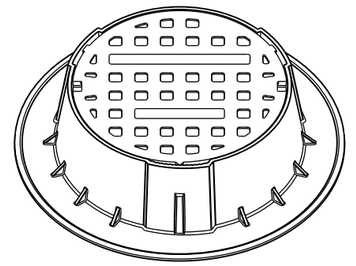
TYPE "J"
NOTE: EITHER CASTING IS ACCEPTABLE

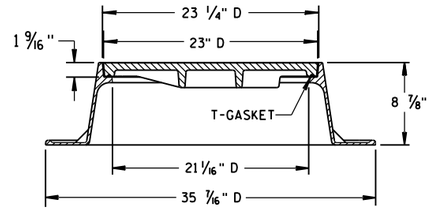
GENERAL NOTES

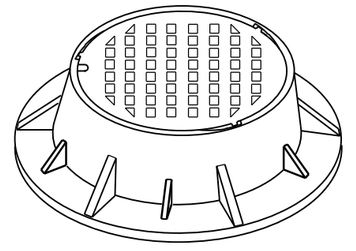
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

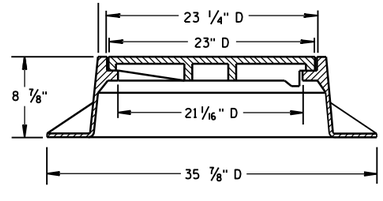
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR MANHOLE COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.

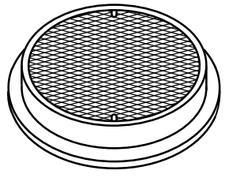


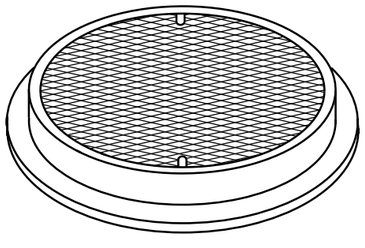


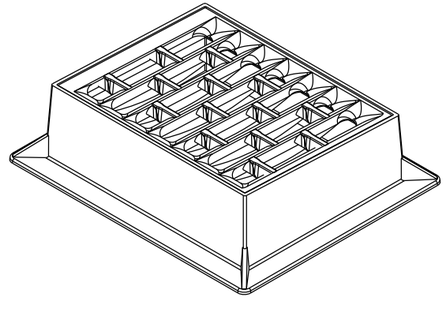


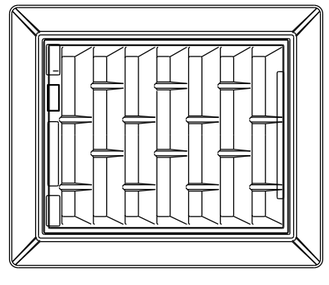


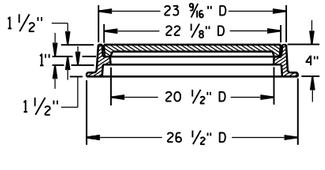
TYPE "J" SPECIAL
TYPE "B" NON-ROCKING SELF-SEAL LID
(NOTED AS TYPE J-S ON THE DRAINAGE TABLE)
NOTE: EITHER CASTING IS ACCEPTABLE



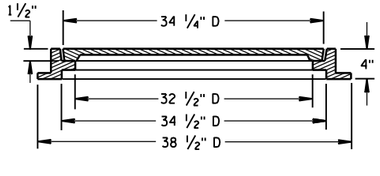




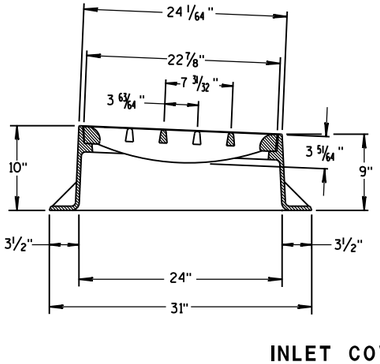


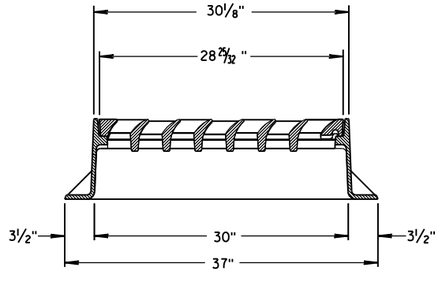


TYPE "L"



TYPE "M"





INLET COVER TYPE "BW"

INLET COVER TYPE BW
MANHOLE COVERS, TYPE K, J, J-S, L & M

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/27/2013
DATE
FHWA

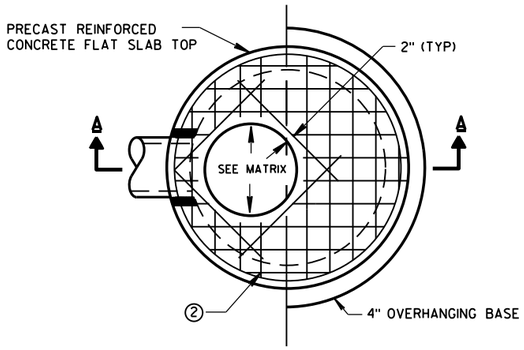
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER

6

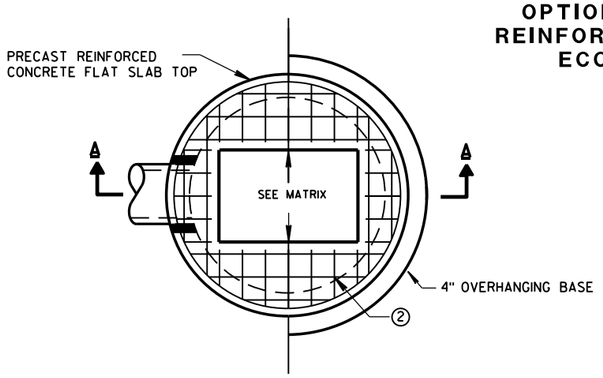
S.D.D. 8 A 5-19d

6

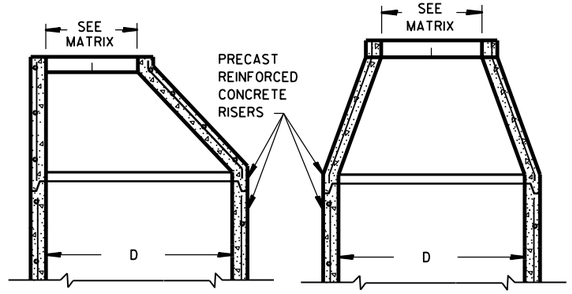
S.D.D. 8 A 5-19d



PLAN VIEW CIRCULAR OPENING

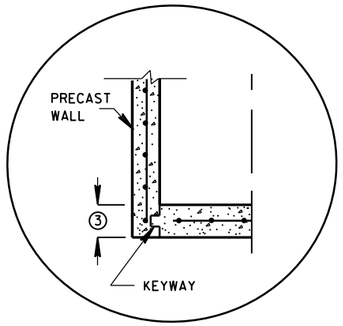


PLAN VIEW RECTANGULAR OPENING

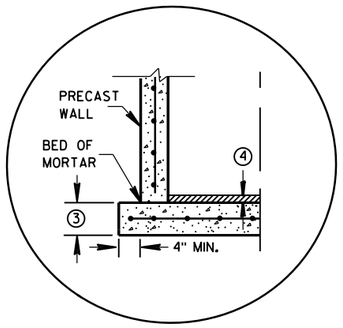


OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP

OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP

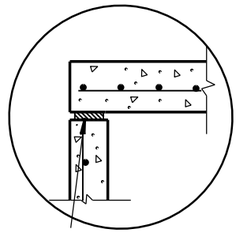


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION



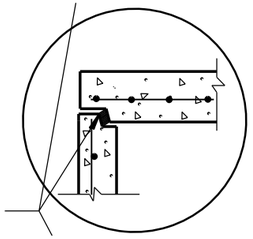
SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "A"

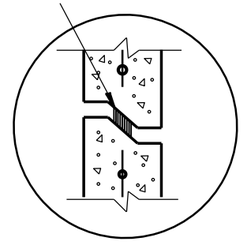


TOP WITH PLAIN END JOINT

JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C 990 (TYP)

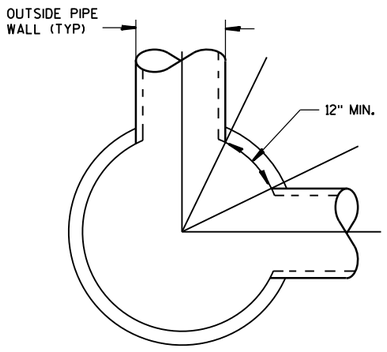


TOP WITH TONGUE AND GROOVE JOINT

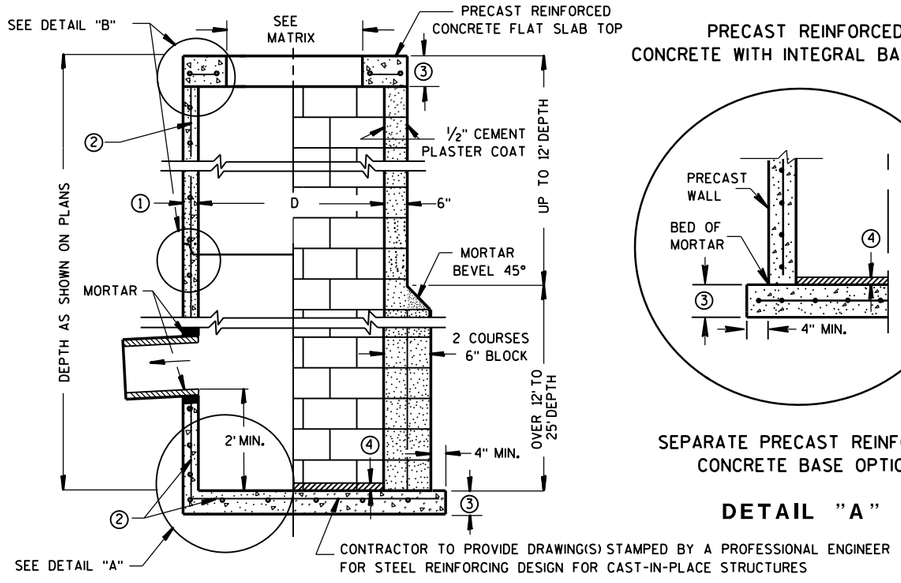


RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B"



DETAIL "C"



CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES

SECTION A-A

PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

CONCRETE BLOCK WITH CAST-IN-PLACE OR PRECAST REINFORCED CONCRETE BASE ②

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST CATCH BASIN UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR UNDERGROUND DRAINAGE STRUCTURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATE THE SIZE OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF GRANULAR BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

PRECAST REINFORCED CONCRETE CONE TOPS (ECCENTRIC OR CONCENTRIC) OR PRECAST REINFORCED CONCRETE FLAT SLAB TOPS MAY BE USED ON CONCRETE BLOCK STRUCTURES. THE TOPS SHALL BE INSTALLED ON A BED OF MORTAR.

ECCENTRIC CONE TOPS MAY BE USED ON ALL STRUCTURES, AND CONCENTRIC CONE TOPS SHALL BE USED ONLY ON STRUCTURES 5 FEET OR LESS IN DEPTH, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

STEPS MEETING AASHTO M199 AND THE FOLLOWING REQUIREMENTS SHALL BE INSTALLED IN ALL STRUCTURES OVER 5 FEET IN DEPTH: 16 INCH C-C MAXIMUM SPACING; PROJECT A MINIMUM CLEAR DISTANCE OF 4 INCHES FROM THE WALL AT THE POINT OF EMBEDMENT; MINIMUM LENGTH OF 10 INCHES; MINIMUM WALL EMBEDMENT OF 3 INCHES. FERROUS METAL STEPS NOT PAINTED OR TREATED TO RESIST CORROSION SHALL HAVE A MINIMUM CROSS SECTIONAL DIMENSION OF 1 INCH.

STEPS OF APPROVED POLYPROPYLENE PLASTIC COATED REINFORCEMENT BAR ARE ACCEPTABLE. REINFORCING BAR MUST BE A MINIMUM OF 1/2 INCH AND MEET THE REQUIREMENTS OF ASTM A615.

CERTIFICATION SHALL BE PROVIDED THAT INSTALLED STEPS WHEN TESTED IN ACCORDANCE WITH SECTION 10 OF AASHTO T280 CAN WITHSTAND A VERTICAL LOAD OF 800 LBS. AND A HORIZONTAL LOAD OF 400 LBS.

ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M199.

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

CONCRETE BLOCK WILL NOT BE PERMITED FOR STRUCTURES GREATER THAN 4 FEET IN DIAMETER.

4" OVERHANGING BASES ARE REQUIRED FOR ALL CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

FOR ADDITIONAL CONFIGURATIONS, MAINTAIN A MINIMUM OF 12 INCHES AS MEASURED FROM THE INSIDE OF THE STRUCTURE WALL BETWEEN THE OUTSIDE PIPE WALLS OF ADJACENT PIPES. SEE DETAIL "C".

① MINIMUM WALL THICKNESS SHALL BE 4 INCHES FOR 3-FT, 5 INCHES FOR 4-FT, 6 INCHES FOR 5-FT AND 7 INCHES FOR 6-FT DIAMETER PRECAST CATCH BASINS.

② FOR PRECAST CATCH BASINS PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.

③ PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER OF 48" AND LESS SHALL HAVE A MINIMUM THICKNESS OF 6". PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER LARGER THAN 48" SHALL HAVE A MINIMUM THICKNESS OF 8".

④ 1" CONCRETE KEY POURED AFTER INSTALLATION. 2' SUMP MEASURED FROM TOP OF KEY.

CATCH BASIN COVER OPENING MATRIX

CATCH BASIN SIZE	INLET COVER TYPE	ALL A'S	ALL B'S	BW	C	F	ALL H'S	S	T	V	WM	Z
	OPENING SIZE (FT)											
3-FT	2X2	X	X					X		X		
	2 DIA.				X							X
4-FT-6-FT	2X2	X	X					X		X		
	2X2.5			X				X	X	X	X	
	2 DIA.				X							X
	2X3						X					
	2.5X3					X						

PIPE MATRIX

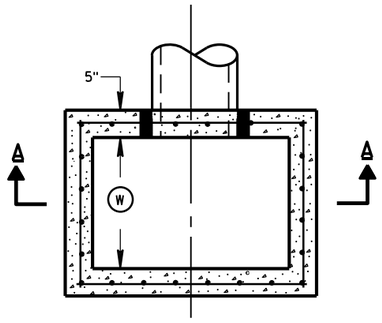
CATCH BASIN SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	180° SEPARATION (IN)	90° SEPARATION (IN)
3-FT	15	12
4-FT	24	18
5-FT	36	24
6-FT	42	30

CATCH BASINS 3-FT, 4-FT, 5-FT AND 6-FT DIAMETER

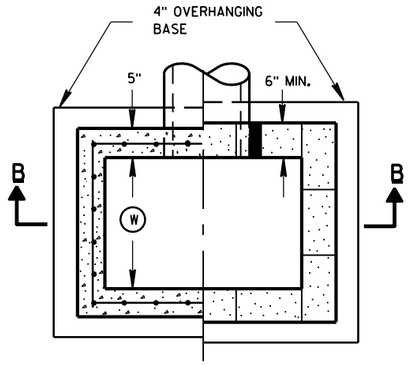
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/5/2012 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

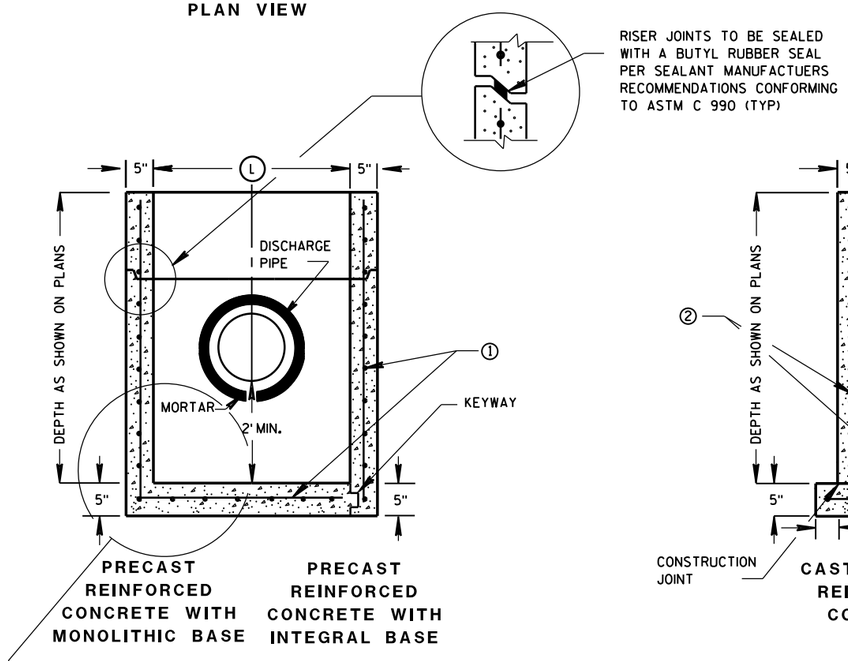
S.D.D. 8 A 8-1



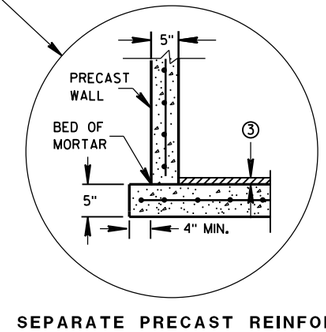
PLAN VIEW



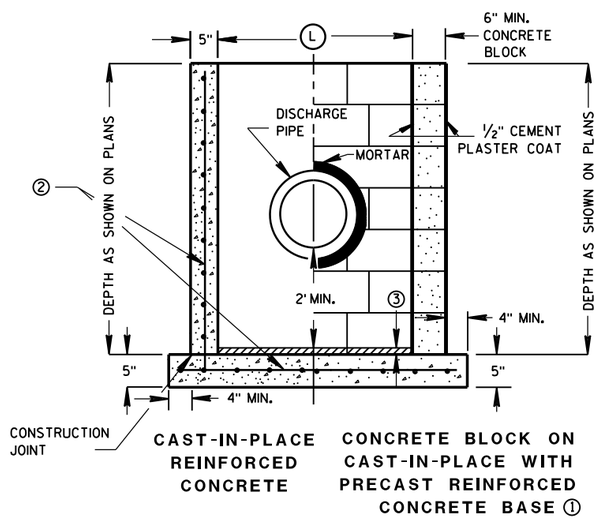
PLAN VIEW



SECTION A-A



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION



SECTION B-B

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST CATCH BASIN UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR UNDERGROUND DRAINAGE STRUCTURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL PRECAST CATCH BASIN UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF ASTM C 913.

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATES THE SIZE OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF GRANULAR BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

4" OVERHANGING BASES ARE REQUIRED FOR CAST-IN-PLACE REINFORCED CONCRETE AND CONCRETE BLOCK INSTALLATIONS.
4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED.
OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

MAXIMUM INSIDE PIPE DIAMETER DETERMINED BY 3" CLEARANCE ON EACH SIDE OF THE OUTSIDE WALL OF THE PIPE. SEE DETAIL "A". ASSUMES PIPE ENTERS PERPENDICULAR TO THE STRUCTURE.

① FOR PRECAST CATCH BASINS PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913.

② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

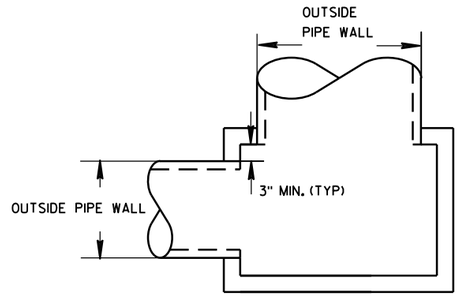
③ 1" CONCRETE KEY POURED AFTER INSTALLATION. 2' SUMP MEASURED FROM TOP OF KEY.

CATCH BASIN COVER MATRIX

CATCH BASIN SIZE		INLET COVER TYPE	F	ALL H'S
	WIDTH (W) (FT)	LENGTH (L) (FT)		
2X3-FT	2	3		X
2.5X3-FT	2.5	3	X	

PIPE MATRIX

CATCH BASIN SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	WIDTH (IN)	LENGTH (IN)
2X3-FT	12	24
2.5X3-FT	18	24



DETAIL "A"

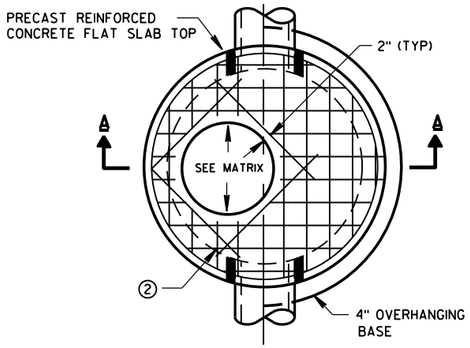
CATCH BASINS 2X3-FT AND 2.5X3-FT

CATCH BASINS 2X3-FT AND 2.5X3-FT

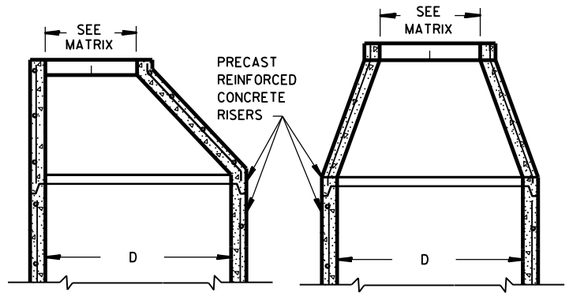
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/5/2012 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

6
S.D.D. 8 A 9-1

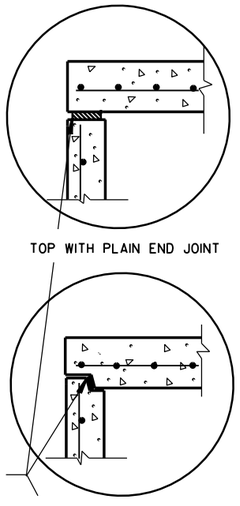


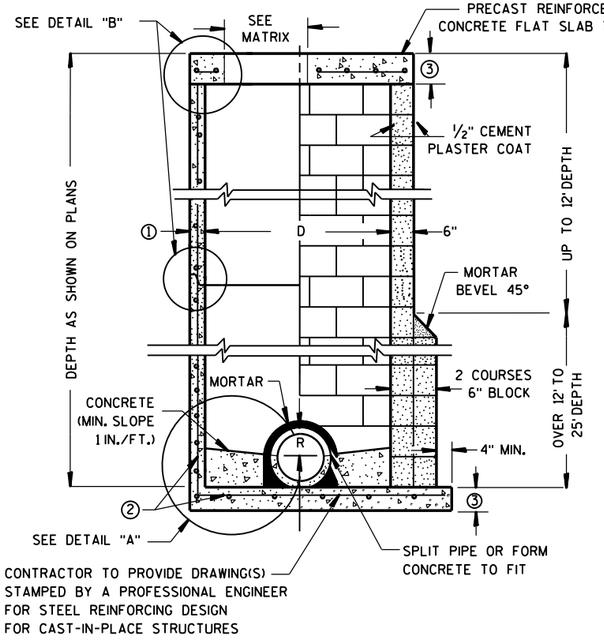
PLAN VIEW CIRCULAR OPENING



OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP

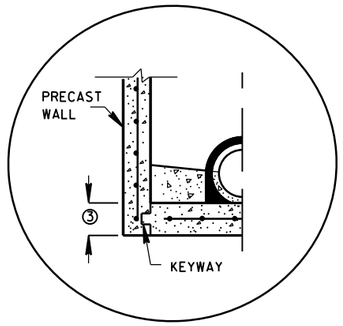
OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP



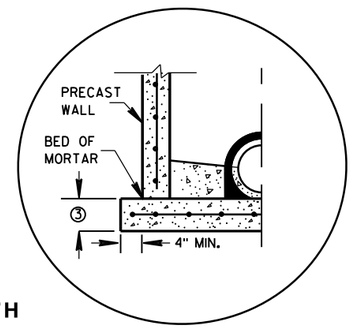


PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

CONCRETE BLOCK WITH CAST-IN-PLACE OR PRECAST REINFORCED CONCRETE BASE ②

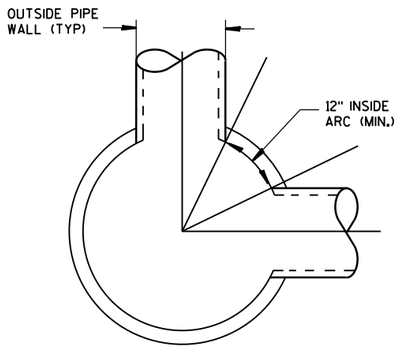


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION

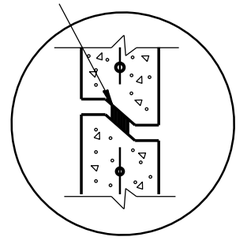


SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "A"



DETAIL "C"



DETAIL "B"

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST MANHOLE UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR UNDERGROUND DRAINAGE STRUCTURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATE THE SIZE OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF GRANULAR BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

PRECAST REINFORCED CONE TOPS (ECCENTRIC OR CONCENTRIC) OR PRECAST REINFORCED FLAT SLAB TOPS MAY BE USED ON CONCRETE BLOCK STRUCTURES. THE CONE TOPS SHALL BE INSTALLED ON A BED OF MORTAR.

ECCENTRIC CONE TOPS MAY BE USED ON ALL STRUCTURES, AND CONCENTRIC CONE TOPS SHALL BE USED ONLY ON STRUCTURES 5 FEET OR LESS IN DEPTH, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

STEPS MEETING AASHTO M199 AND THE FOLLOWING REQUIREMENTS SHALL BE INSTALLED IN ALL STRUCTURES OVER 5 FEET IN DEPTH: 16 INCH C-C MAXIMUM SPACING; PROJECT A MINIMUM CLEAR DISTANCE OF 4 INCHES FROM THE WALL AT THE POINT OF EMBEDMENT; MINIMUM LENGTH OF 10 INCHES; MINIMUM WALL EMBEDMENT OF 3 INCHES. FERROUS METAL STEPS NOT PAINTED OR TREATED TO RESIST CORROSION SHALL HAVE A MINIMUM CROSS SECTIONAL DIMENSION OF 1 INCH.

STEPS OF APPROVED POLYPROPYLENE PLASTIC COATED REINFORCEMENT BAR ARE ACCEPTABLE. REINFORCING BAR MUST BE A MINIMUM OF ½" AND MEET THE REQUIREMENTS OF ASTM A615.

CERTIFICATION SHALL BE PROVIDED THAT INSTALLED STEPS WHEN TESTED IN ACCORDANCE WITH SECTION 10 OF AASHTO T280 CAN WITHSTAND A VERTICAL LOAD OF 800 LBS. AND A HORIZONTAL LOAD OF 400 LBS.

ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

CONCRETE BLOCK WILL NOT BE PERMITED FOR STRUCTURES GREATER THAN 4 FEET IN DIAMETER.

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

ALL PRECAST MANHOLE UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M 199.

4" OVERHANGING BASES ARE REQUIRED FOR ALL CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

FOR ADDITIONAL CONFIGURATIONS, MAINTAIN A MINIMUM OF 12 INCHES AS MEASURED FROM THE INSIDE OF THE STRUCTURE WALL BETWEEN THE OUTSIDE PIPE WALLS OF ADJACENT PIPES. SEE DETAIL "C".

① MINIMUM WALL THICKNESS SHALL BE 4 INCHES FOR 3-FT, 5 INCHES FOR 4-FT, 6 INCHES FOR 5-FT, 7 INCHES FOR 6-FT, 8 INCHES FOR 7-FT AND 9 INCHES FOR 8-FT DIAMETER PRECAST MANHOLES.

② FOR PRECAST MANHOLES PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.

③ PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER OF 48" AND LESS SHALL HAVE A MINIMUM THICKNESS OF 6". PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER LARGER THAN 48" SHALL HAVE A MINIMUM THICKNESS OF 8".

MANHOLE COVER OPENING MATRIX

MANHOLE COVER TYPE	C	ALL J'S	K	L	M
OPENING SIZE (FT)					
2 DIA.	X	X		X	
3 DIA.			X		X

PIPE MATRIX

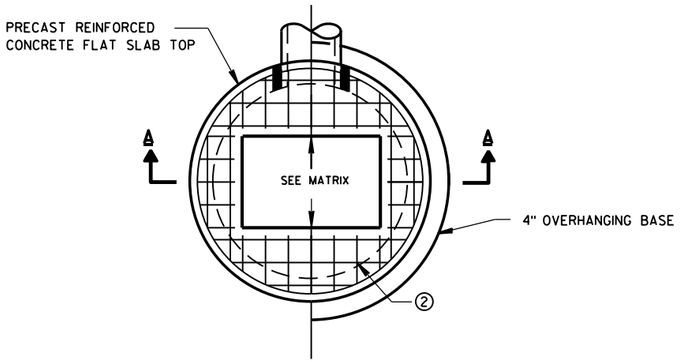
MANHOLE SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	180° SEPARATION (IN)	90° SEPARATION (IN)
3-FT	15	12
4-FT	24	18
5-FT	36	24
6-FT	42	36
7-FT	48	36
8-FT	60	42

MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER

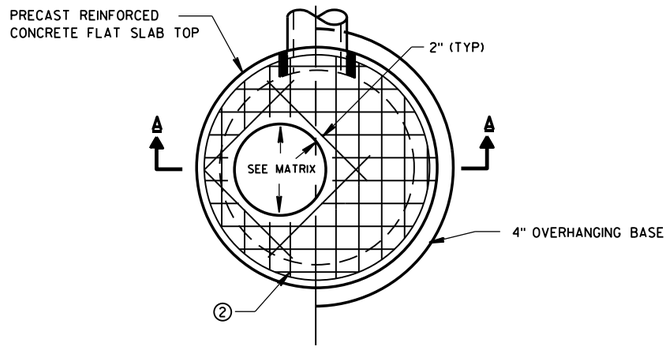
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/5/2012 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

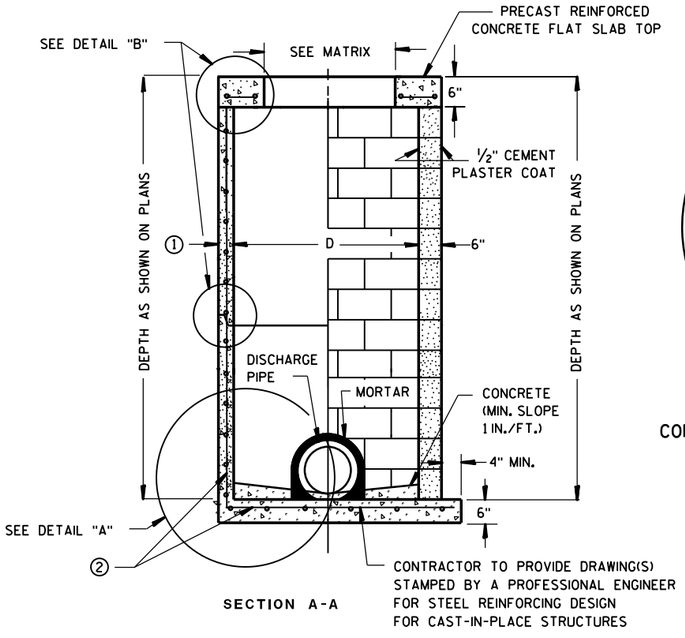
6
S.D.D. 8 B 9-1



PLAN VIEW RECTANGULAR OPENING



PLAN VIEW CIRCULAR OPENING

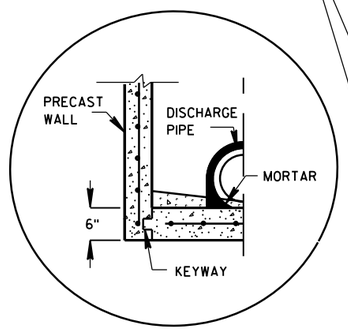


SECTION A-A

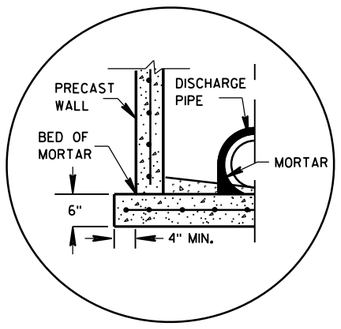
PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

CONCRETE BLOCK WITH CAST-IN-PLACE OR PRECAST REINFORCED CONCRETE BASE ②

CIRCULAR INLETS W/ FLAT TOP

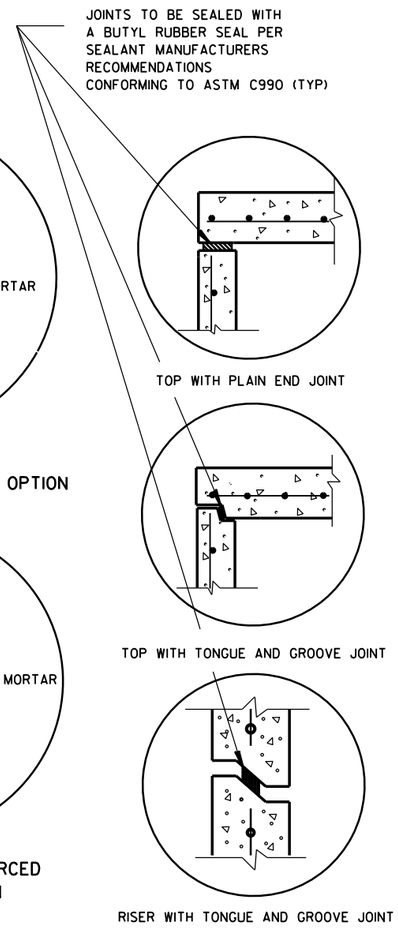


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "A"



DETAIL "B"

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST INLET UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR UNDERGROUND DRAINAGE STRUCTURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATE THE SIZE OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF GRANULAR BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M199.

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

4" OVERHANGING BASES ARE REQUIRED FOR ALL CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

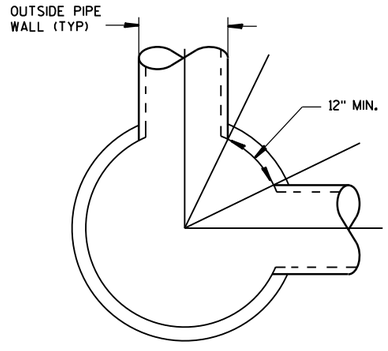
FOR ADDITIONAL CONFIGURATIONS, MAINTAIN A MINIMUM OF 12 INCHES AS MEASURED FROM THE INSIDE OF THE STRUCTURE WALL BETWEEN THE OUTSIDE PIPE WALLS OF ADJACENT PIPES. SEE DETAIL "C".

① MINIMUM WALL THICKNESS SHALL BE 4-IN FOR 3-FT DIAMETER AND 5-IN FOR 4-FT DIAMETER PRECAST INLETS.

② FOR PRECAST CATCH BASINS PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.

INLET COVER OPENING MATRIX

	INLET COVER TYPE	ALL A'S	ALL B'S	BW	C	F	ALL H'S	S	T	V	WM	Z
INLET SIZE	OPENING SIZE (FT)											
3-FT	2 DIA.				X							X
	2X2	X	X					X		X		
4-FT	2 DIA.				X							X
	2X2	X	X					X		X		
	2X2.5			X				X	X	X	X	
	2X3						X					
	2.5X3					X						



DETAIL "C"

PIPE MATRIX

INLET SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	180° SEPARATION (IN)	90° SEPARATION (IN)
3-FT	15	12
4-FT	24	18

INLETS 3-FT AND 4-FT DIAMETER

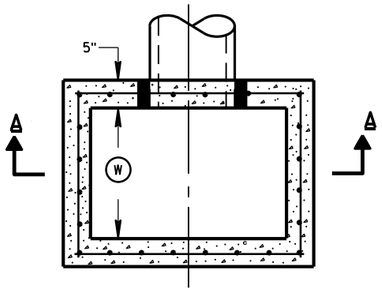
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/5/2012 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

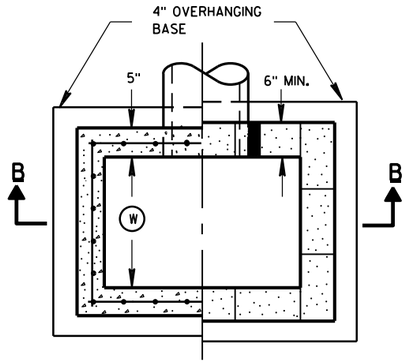
INLETS 3-FT AND 4-FT DIAMETER

6

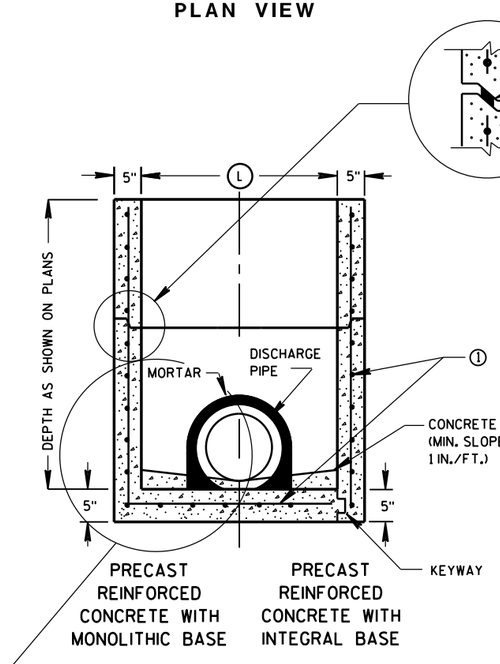
S.D.D. 8 C 6-1



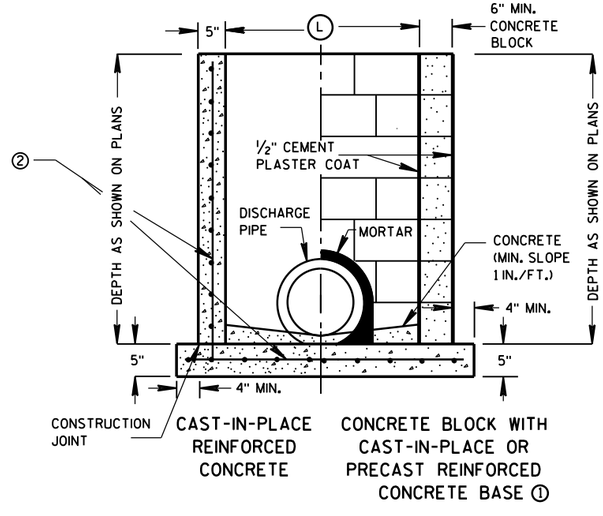
PLAN VIEW



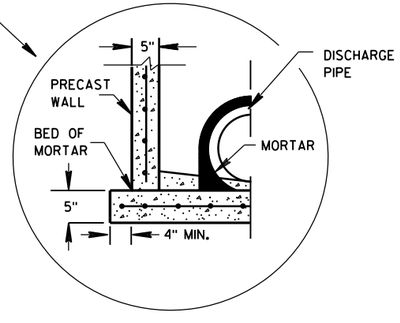
PLAN VIEW



SECTION A-A



SECTION B-B



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST INLET UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR UNDERGROUND DRAINAGE STRUCTURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF ASTM C 913.

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATES THE SIZE OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF GRANULAR BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

4" OVERHANGING BASES ARE REQUIRED FOR CAST-IN-PLACE REINFORCED CONCRETE AND CONCRETE BLOCK INSTALLATIONS.
4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED.
OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

MAXIMUM INSIDE PIPE DIAMETER DETERMINED BY 3 INCH CLEARANCE ON EACH SIDE OF THE OUTSIDE WALL OF THE PIPE. SEE DETAIL "A". ASSUMES PIPE ENTERS PERPENDICULAR TO THE STRUCTURE.

① FOR PRECAST INLETS PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913.

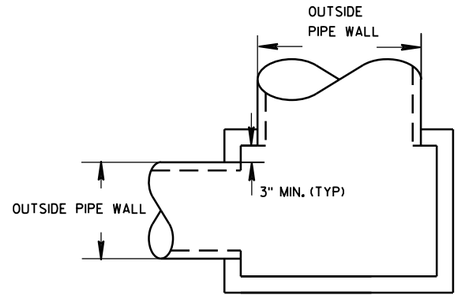
② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

INLET COVER MATRIX

INLET SIZE		INLET COVER TYPE	ALL A'S	ALL B'S	BW	F	ALL H'S	S	T	V	WM
	WIDTH (W) (FT)	LENGTH (L) (FT)									
2X2-FT	2	2	X	X				X		X	
2X2.5-FT	2	2.5			X			X	X	X	X
2X3-FT	2	3					X				
2.5X3-FT	2.5	3				X					

PIPE MATRIX

INLET SIZE	MAXIMUM INSIDE PIPE DIAMETER	
	WIDTH (IN)	LENGTH (IN)
2X2-FT	12	12
2X2.5-FT	12	18
2X3-FT	12	24
2.5X3-FT	18	24



DETAIL "A"

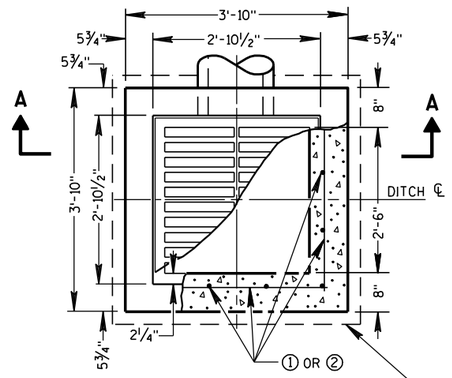
INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

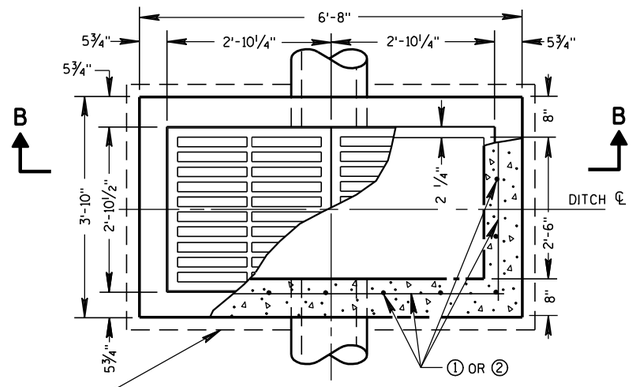
APPROVED
6/5/2012
DATE
FHWA

/S/ Jerry H. Zogg
ROADWAY STANDARDS DE
ENGINEER

6
S.D.D. 8 C 7-1

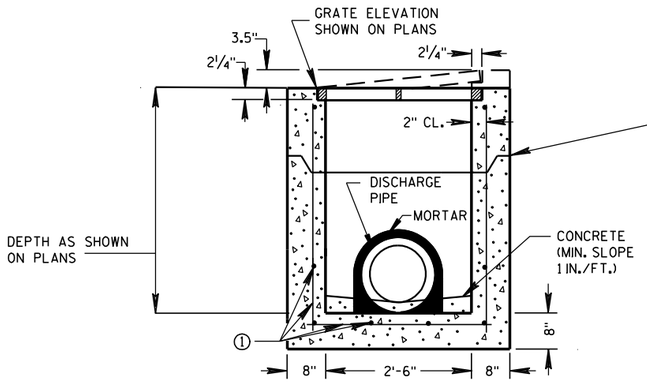


PLAN VIEW

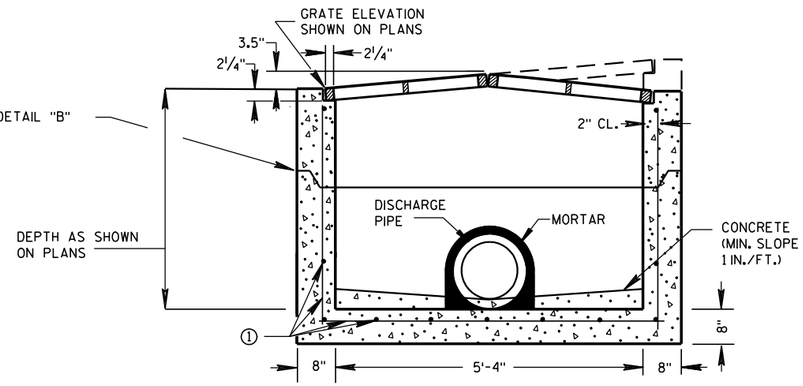


PLAN VIEW

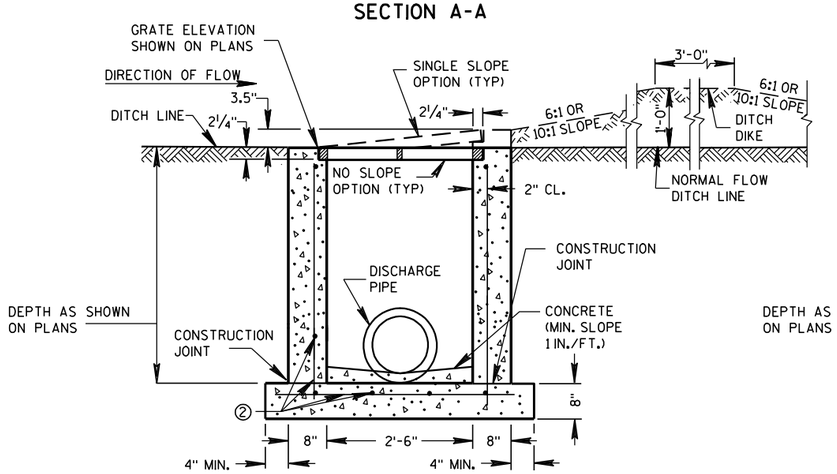
4" OVERHANGING BASE ON REINFORCED CAST-IN-PLACE CONCRETE INLETS



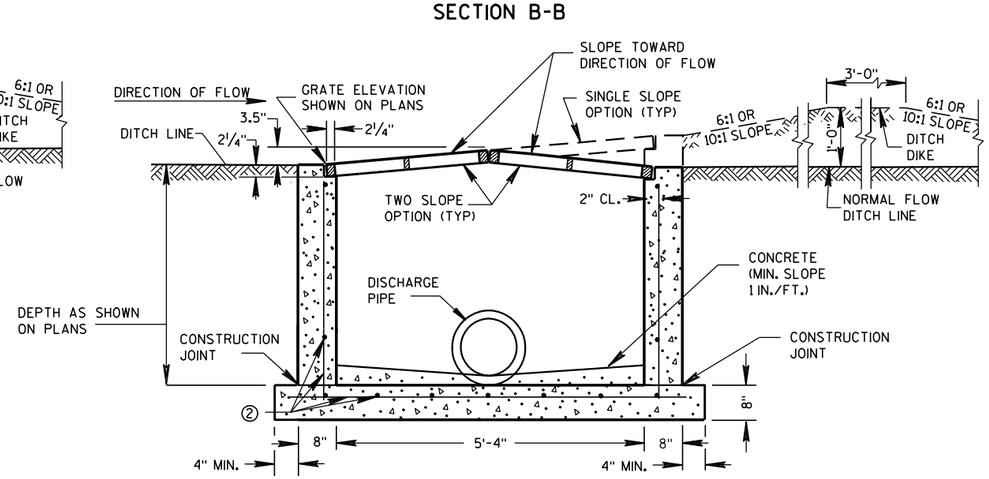
PRECAST REINFORCED CONCRETE SECTION A-A



PRECAST REINFORCED CONCRETE SECTION B-B



REINFORCED CAST-IN-PLACE CONCRETE SECTION A-A



REINFORCED CAST-IN-PLACE CONCRETE SECTION B-B

INLETS MEDIAN 1 GRATE

INLETS MEDIAN 2 GRATE

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST INLET UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR INLETS WHICH MAY INCLUDE PRECAST REINFORCED CONCRETE INLETS, SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL MEDIAN INLETS ARE DESIGNATED ON THE PLANS AS "INLETS, 1G-MS", ETC. THE FIRST NUMBER AND LETTER DESIGNATE THE TYPE OF STRUCTURE, AND THE FOLLOWING LETTERS DESIGNATE THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF ASTM C 913.

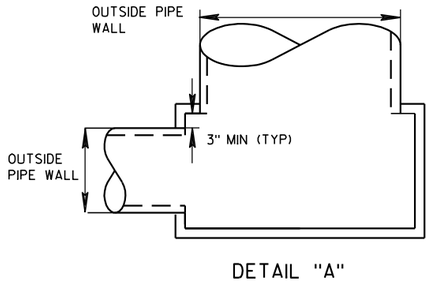
MAXIMUM INSIDE PIPE DIAMETER DETERMINED BY 3" CLEARANCE ON EACH SIDE OF THE OUTSIDE WALL OF THE PIPE. SEE DETAIL "A". ASSUMES PIPE ENTERS PERPENDICULAR TO THE STRUCTURE.

① FOR PRECAST INLETS PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913.

② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

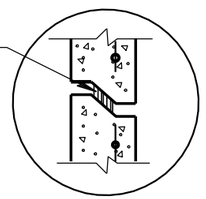
PIPE MATRIX

	MAXIMUM INSIDE PIPE DIAMETER	
INLET SIZE	WIDTH (IN)	LENGTH (IN)
1 GRATE	18	18
2 GRATE	18	42



DETAIL "A"

JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C 990 (TYP)



DETAIL "B"

INLETS MEDIAN 1 AND 2 GRATE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

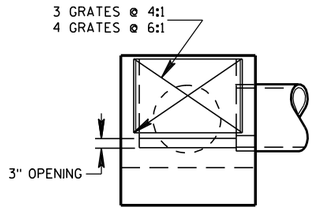
APPROVED
6/5/2012 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6

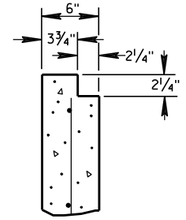
S.D.D. 8 C 8-1

6

S.D.D. 8 C 8-1



SECTION B-B



SECTION C-C

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

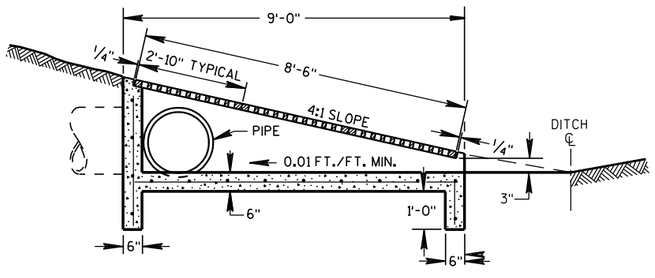
UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST INLET UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR INLETS WHICH MAY INCLUDE PRECAST REINFORCED CONCRETE INLETS, SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

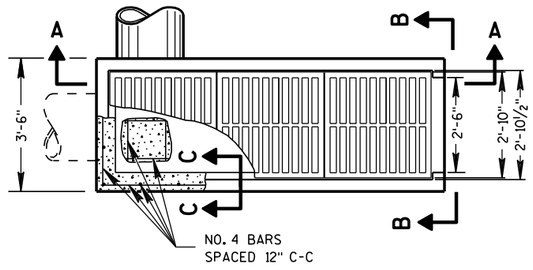
ALL MEDIAN INLETS ARE DESIGNATED ON THE PLANS AS "INLETS, 3G-MS", ETC. THE FIRST NUMBER AND LETTER DESIGNATE THE TYPE OF STRUCTURE, AND THE FOLLOWING LETTERS DESIGNATE THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF ASTM C 913.

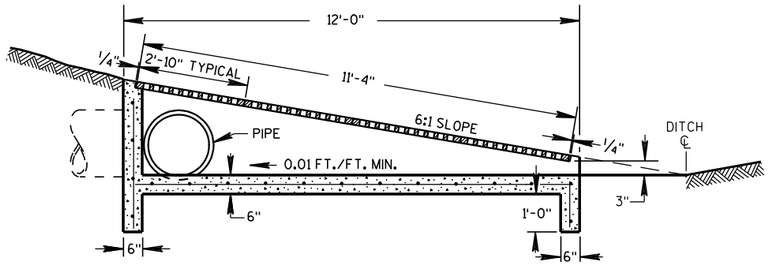


SECTION A-A

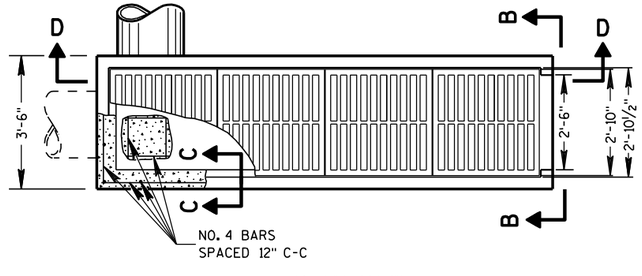


PLAN VIEW

INLETS MEDIAN 3 GRATE



SECTION D-D



PLAN VIEW

INLETS MEDIAN 4 GRATE

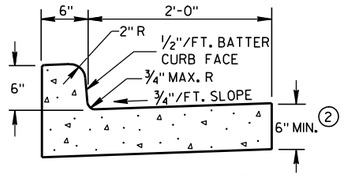
INLETS MEDIAN 3 AND 4 GRATE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 6/5/2012 DATE FHWA	/S/ Jerry H. Zogg ROADWAY STANDARDS DEV ENGINEER

6

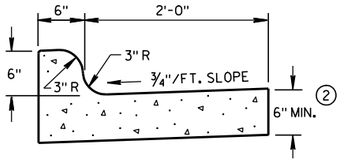
S.D.D. 8 C 9-1

6

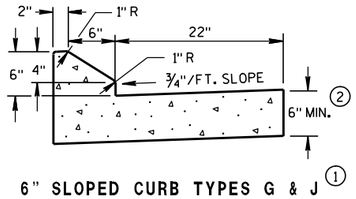
S.D.D. 8 C 9-1



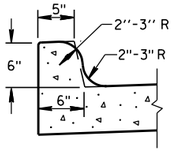
TYPES A & D (1)



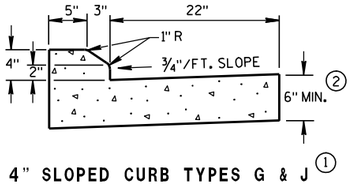
TYPES K & L (1)



6" SLOPED CURB TYPES G & J (1)

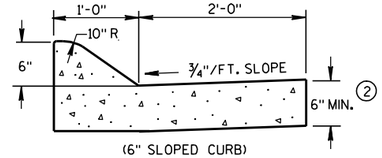


OPTIONAL CURB SHAPE FOR TYPES K & L (1)

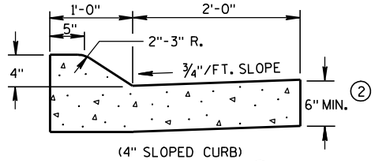


4" SLOPED CURB TYPES G & J (1)

CONCRETE CURB & GUTTER 30"

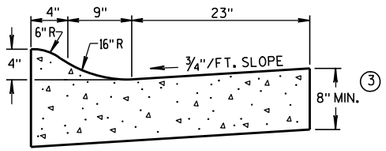


(6" SLOPED CURB)



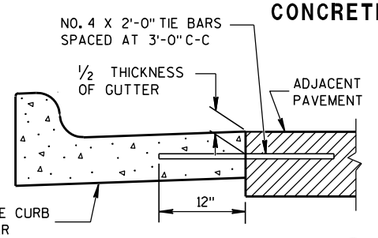
(4" SLOPED CURB)

TYPES A & D (1)

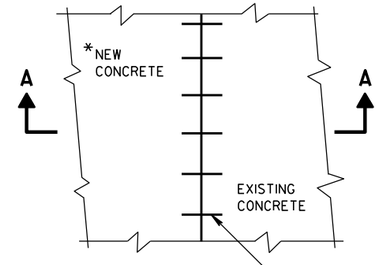


4" SLOPED CURB TYPES R & T (1) (4)

CONCRETE CURB & GUTTER 36"

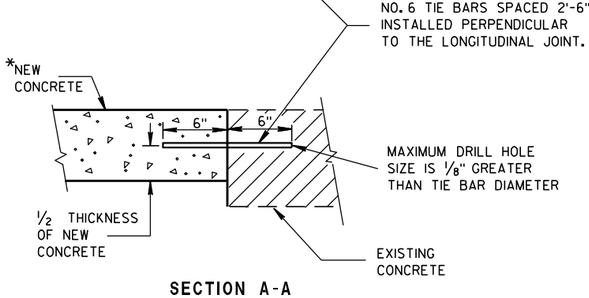


TYPICAL TIE BAR LOCATION (1)



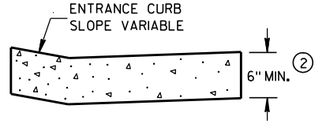
*NEW CURB & GUTTER, SURFACE DRAINS, CONCRETE PAVEMENT OR OTHER NEW CONCRETE.

PLAN VIEW

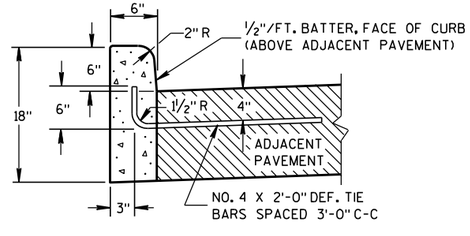


SECTION A-A

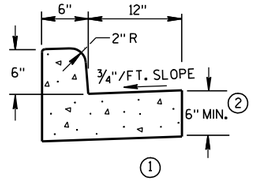
TIE BARS DRILLED INTO EXISTING PAVEMENT



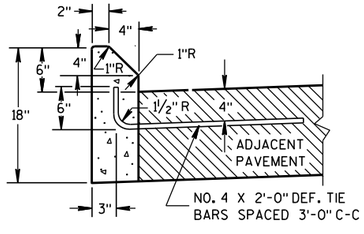
DRIVEWAY ENTRANCE CURB
(WHEN DIRECTED BY THE ENGINEER)



(1)
TYPES A & D

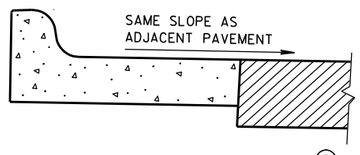


(1)
TYPES A & D
CONCRETE CURB & GUTTER 18"

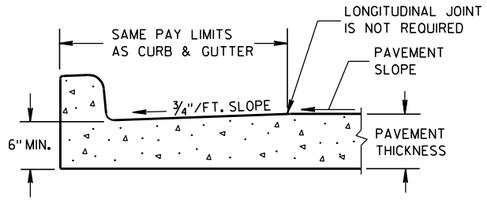


(1)
TYPES G & J

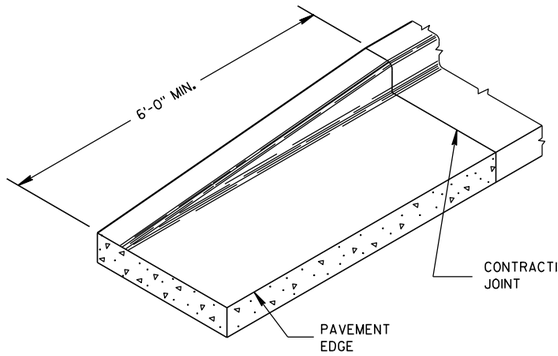
CONCRETE CURB



REVERSE SLOPE GUTTER (5)
(TYPICAL FOR ALL CURB & GUTTER TYPES)



PARTIAL SECTION OF PAVEMENT WITH INTEGRAL CURB & GUTTER



END SECTION CURB & GUTTER

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

INTEGRAL CURB & GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB & GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE. A LONGITUDINAL CONSTRUCTION JOINT IS NOT REQUIRED WITH INTEGRAL CURB AND GUTTER.

WHERE THE TRANSVERSE JOINTS IN THE PAVEMENT ARE REQUIRED TO BE SEALED, THE JOINTS IN THE INTEGRAL CURB AND GUTTER SHALL BE SEALED TO THE FACE OF CURB WITH THE SAME TYPE OF SEALANT. THE COST OF FURNISHING AND INSTALLING THIS SEALANT SHALL BE INCIDENTAL TO THE ITEM CONCRETE CURB AND GUTTER.

UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2'-0" BEHIND THE BACK OF CURBS.

(1) TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K AND R.

(2) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.

(3) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.

(4) THE FACE OF CURB IS 6" FROM THE BACK OF CURB.

(5) WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.

CONCRETE CURB, CONCRETE CURB & GUTTER AND TIES

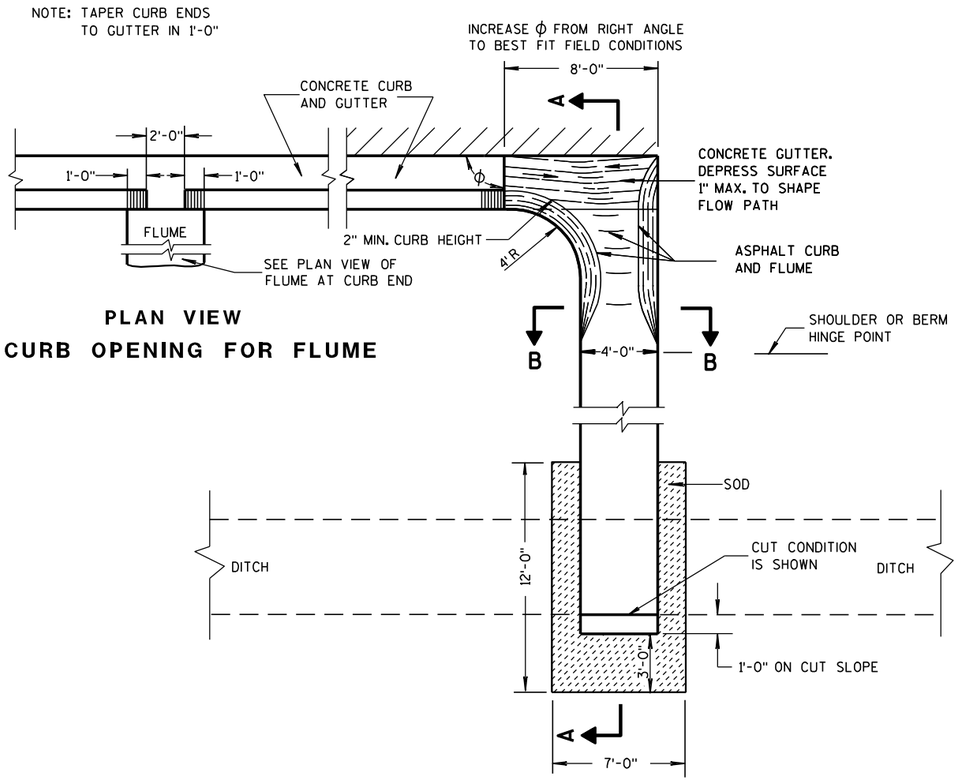
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
9/4/08 DATE
/S/ Jerry H. [illegible]
ROADWAY STANDARDS ENGINEER
523
FHWA

6

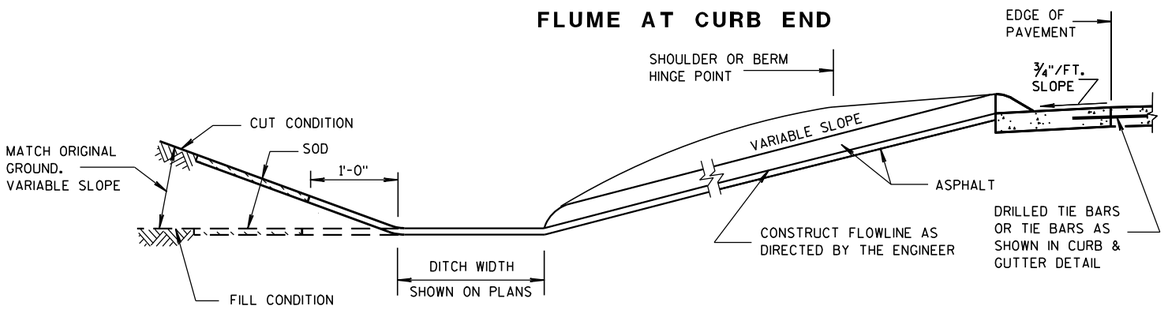
S.D.D. 8 D 1-17

ASPHALTIC FLUME

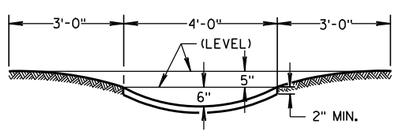


PLAN VIEW
CURB OPENING FOR FLUME

PLAN VIEW
FLUME AT CURB END



SECTION A-A



SECTION B-B

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

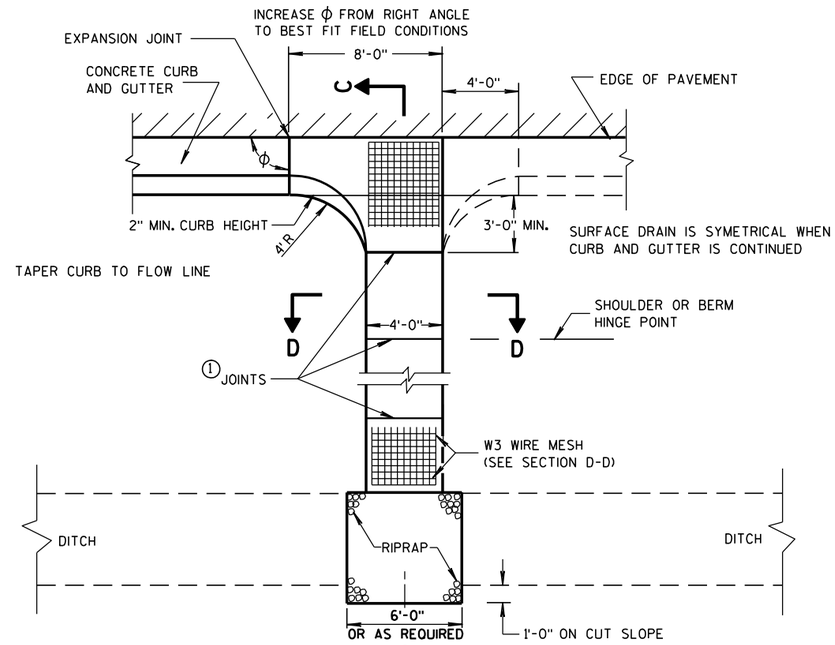
WELDED STEEL WIRE FABRIC SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

① JOINTS SHALL BE ⅛ TO ¼ INCH WIDE BY 1½ INCHES DEEP AND SPACED AT UNIFORM INTERVALS OF APPROXIMATELY 4 FEET.

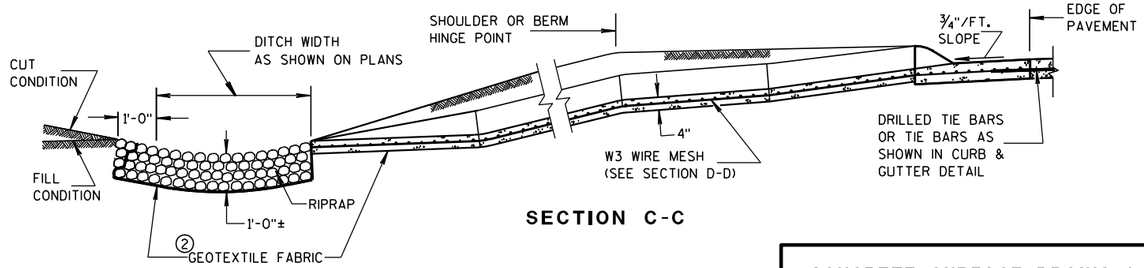
② GEOTEXTILE FABRIC TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.

③ CONCRETE SURFACE DRAIN WITHOUT CURB AND GUTTER MAY BE USED ON BACKSLOPES WHEN SPECIFIED

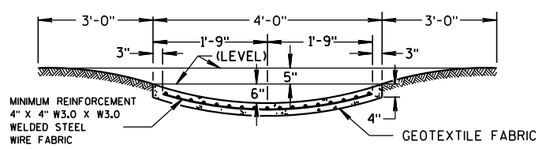
③ CONCRETE SURFACE DRAIN



PLAN VIEW



SECTION C-C



SECTION D-D

CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

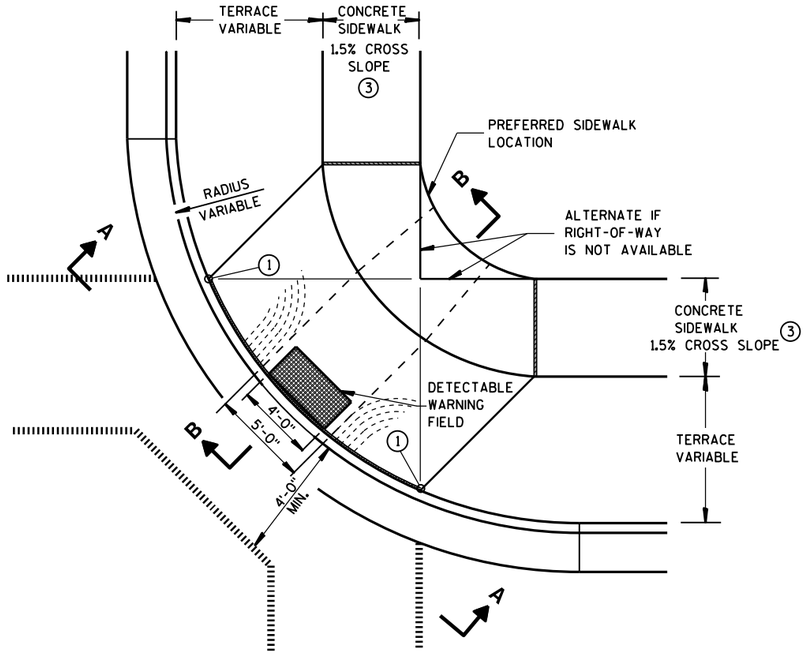
APPROVED
9-4-08 DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER
524
MENT
FHWA

6

S.D.D. 8 D 4-5

6

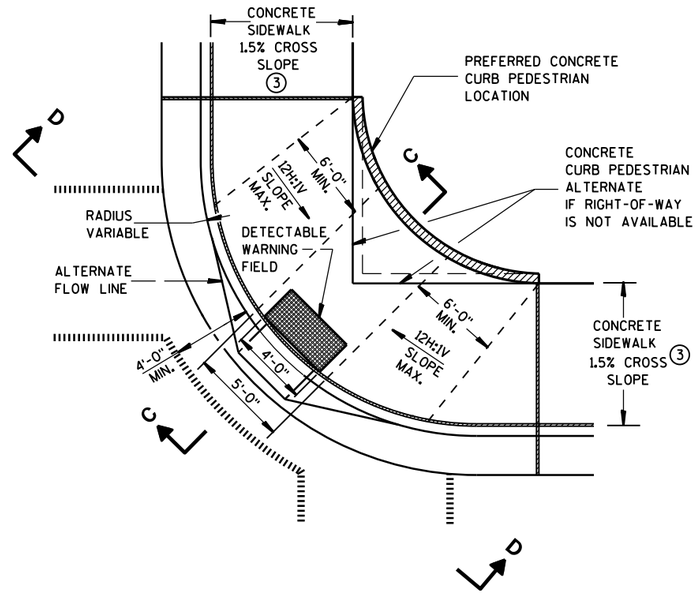
S.D.D. 8 D 4-5



PLAN VIEW

TYPE 1 RAMP

(CENTER OF CORNER RADIUS)



PLAN VIEW

TYPE 1-A RAMP

(NO TERRACE)

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

RAMPS SHALL BE BUILT AT 12H:1V OR FLATTER. WHEN NECESSARY, THE SIDEWALK ELEVATION MAY BE LOWERED TO MEET THE HIGH POINT ON THE RAMP.

TYPE 1 RAMPS SHALL HAVE A NORMAL SIDEWALK APRON AND CURB ON BOTH SIDES OF RAMP.

DETECTABLE WARNING FIELD SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS "CURB RAMP DETECTABLE WARNING FIELD". THE CONCRETE PEDESTRIAN CURB, IF NEEDED, SHALL BE MEASURED AND PAID BY THE LINEAL FOOT AS "CONCRETE CURB PEDESTRIAN". CONCRETE SIDEWALK IN THE CURB RAMP AREA SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS CONCRETE SIDEWALK, INCLUDING THE AREA UNDER THE DETECTABLE WARNING FIELD.

SELECT CURB RAMP DETECTABLE WARNING FIELD MATERIALS AND DEVICES FROM THE DEPARTMENT'S APPROVED MATERIALS LIST. THE COLOR OF THE DETECTABLE WARNING FIELD IS SPECIFIED ELSEWHERE AND IS INCIDENTAL TO THE BID ITEM OF "CURB RAMP DETECTABLE WARNING FIELD".

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

SURFACE TEXTURE OF THE RAMP SHALL BE OBTAINED BY COARSE BROOMING TRANSVERSE TO THE SLOPE OF THE RAMP.

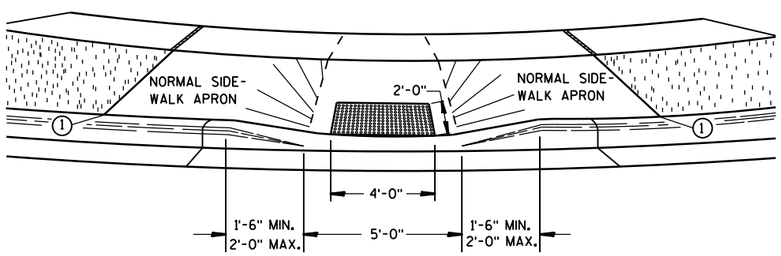
① THIS POINT IS AN EXTENSION OF OUTSIDE EDGE OF APPROACHING SIDEWALK WHERE IT MEETS THE BACK OF CONCRETE CURB.

② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. PROVIDE DRAINAGE AWAY FROM CURB RAMP AT GUTTER FLAG INTERFACE.

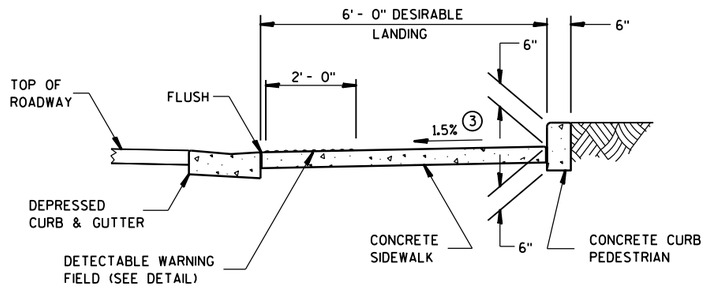
③ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

LEGEND

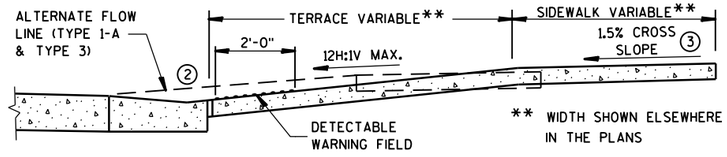
- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)
- ALTERNATIVE LAYOUT



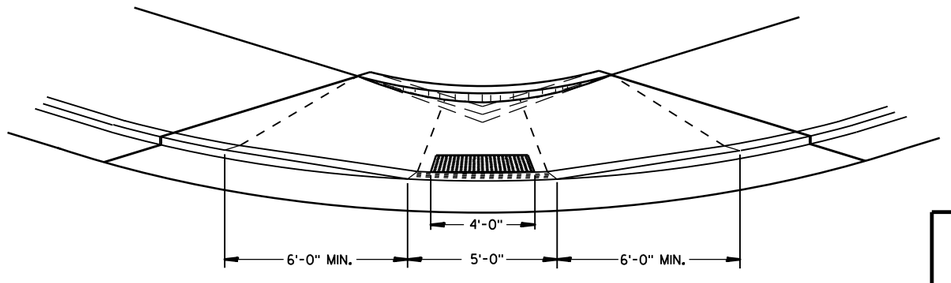
VIEW A-A



SECTION C-C



SECTION B-B



VIEW D-D

CURB RAMPS TYPES 1 AND 1-A

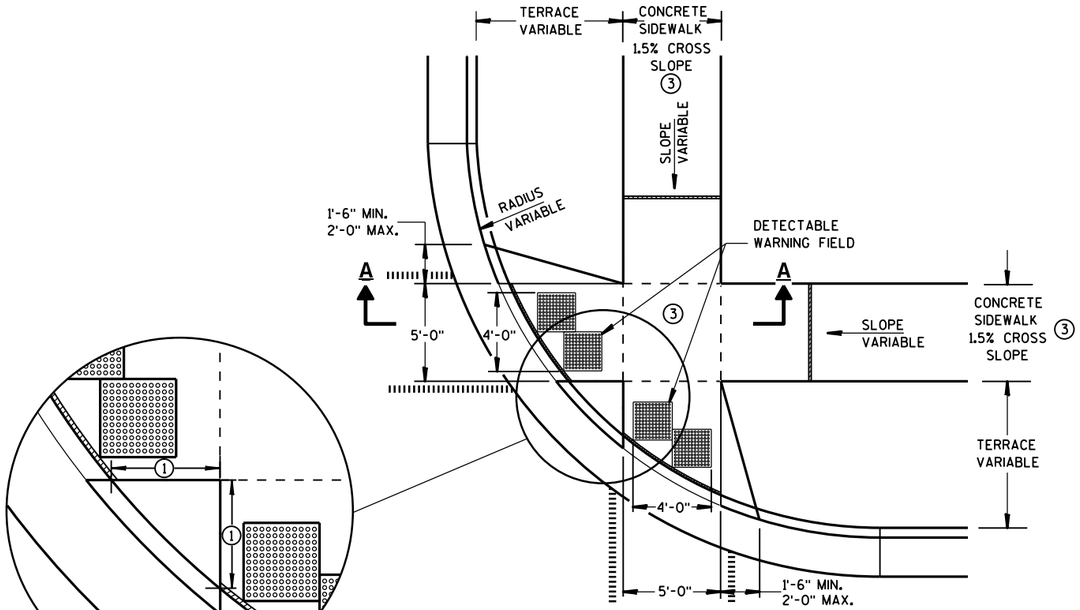
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR 525

6

S.D.D. 8 D 5-15a

6

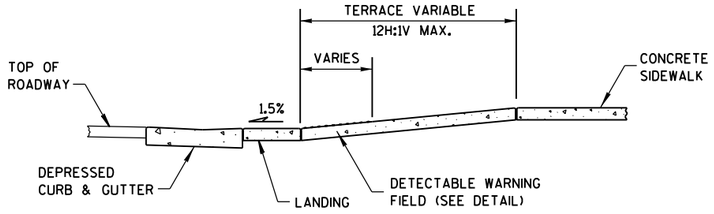
S.D.D. 8 D 5-15a



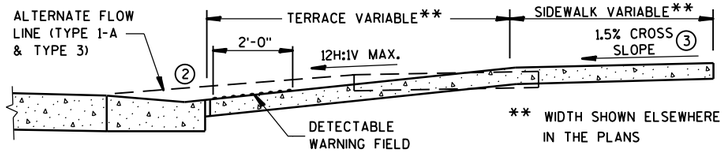
PLAN VIEW

TYPE 2 RAMP

(ON LINE WITH SIDEWALK)



SECTION A-A



SECTION B-B

GENERAL NOTES

USE THE TYPE 3 RAMP ONLY WHEN A TYPE 1 OR TYPE 2 CANNOT BE ACHIEVED BECAUSE OF FIELD CONDITIONS.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

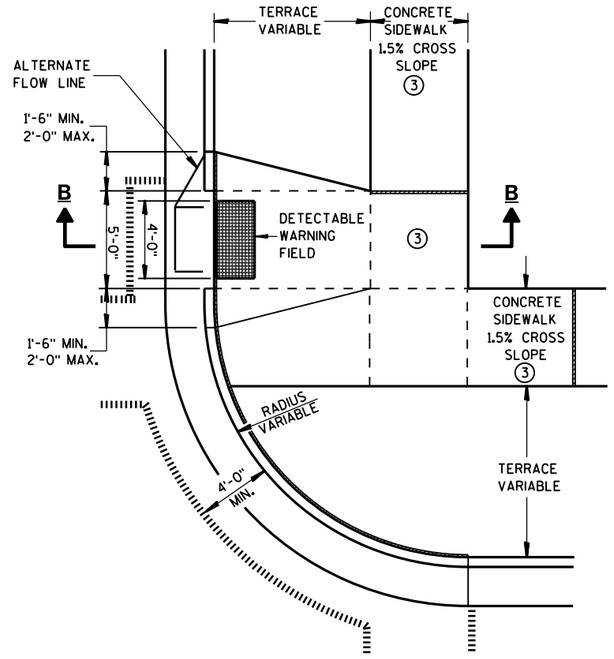
① WHEN THIS DISTANCE IS LESS THAN 6'-0" IT MAY BE DIFFICULT TO ACHIEVE A 12H:1V SLOPE, OR FLATTER, ON THE RAMP. REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 12H:1V SLOPE, OR FLATTER, ON RAMP. 2" MINIMUM CURB HEIGHT.

② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. PROVIDE DRAINAGE AWAY FROM CURB RAMP AT GUTTER FLAG INTERFACE.

③ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

LEGEND

- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)
- ALTERNATIVE LAYOUT



PLAN VIEW

TYPE 3 RAMP

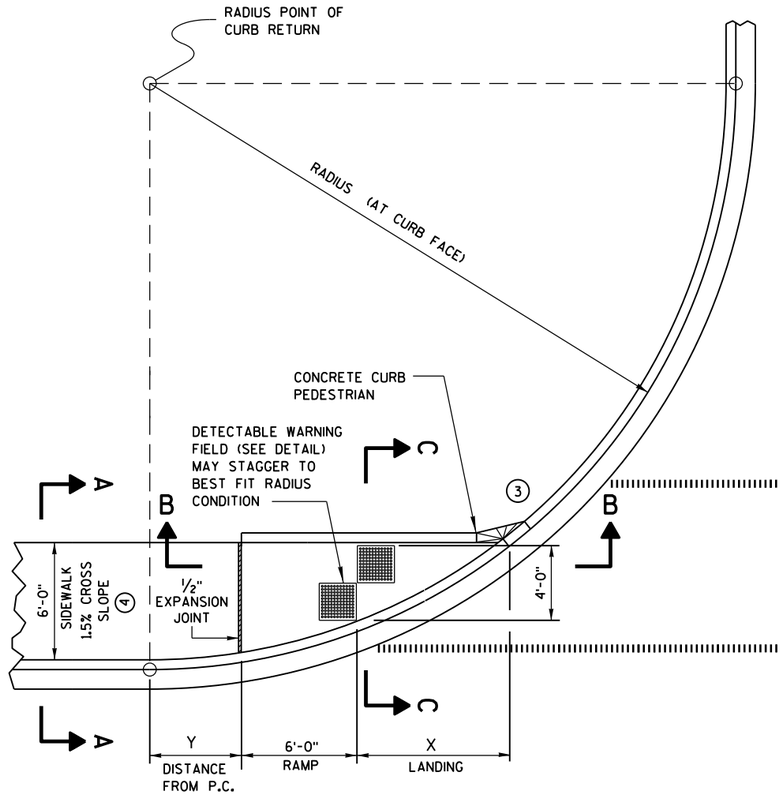
(OUTSIDE OF CROSSWALK AREA)

CURB RAMPS TYPES 2 AND 3

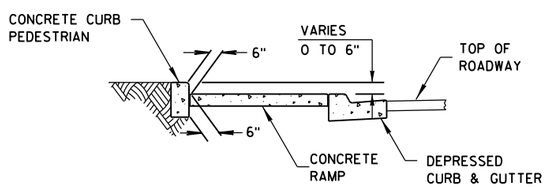
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

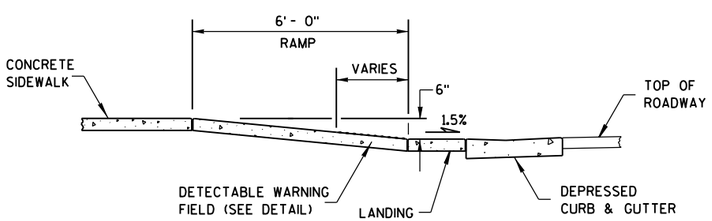
S.D.D. 8 D 5-15b



CURB RAMP TYPE 4A
PLAN VIEW



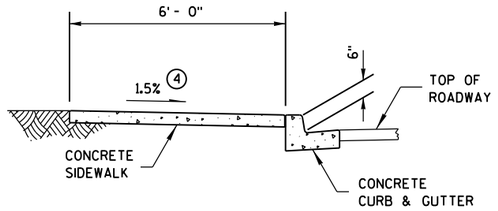
SECTION C-C FOR TYPE 4A



SECTION B-B FOR TYPE 4A

RADIUS (AT CURB FACE)	X	Y
20 FEET	6'-1¾"	2'-7¼"
30 FEET	7'-11¾"	4'-8¼"
40 FEET	9'-5¼"	6'-5"
50 FEET	10'-8¾"	7'-11¼"
60 FEET	11'-10¼"	9'-3½"

INTERMEDIATE RADII CAN BE INTERPOLATED



SECTION A-A FOR TYPE 4A

GENERAL NOTES

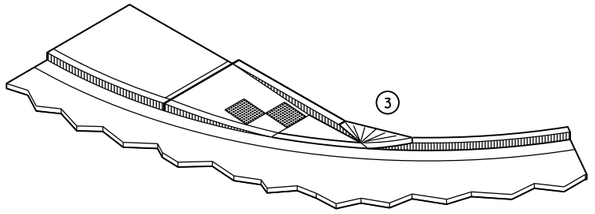
AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

RAMP SLOPES SHALL NOT BE STEEPER THAN 12:1.

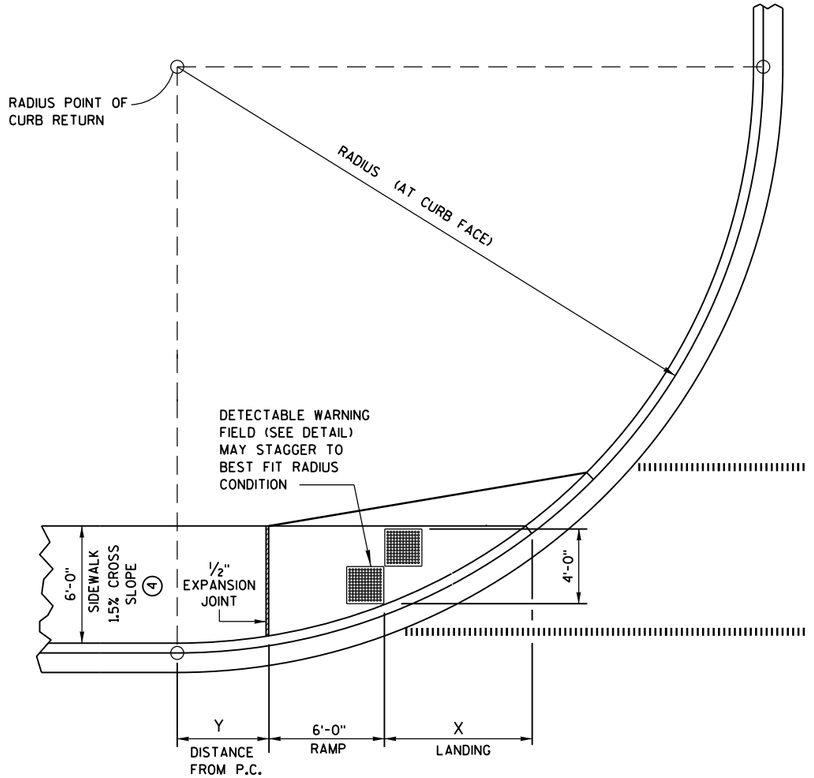
DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

(3) INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS.) DO NOT MARK TRANSITION NOSE.

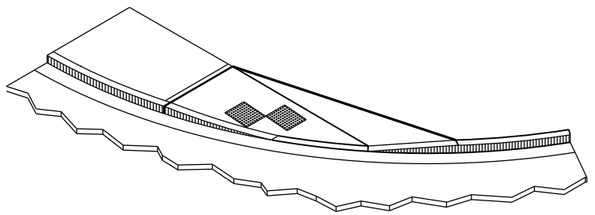
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.



ISOMETRIC VIEW FOR TYPE 4A



CURB RAMP TYPE 4A1
PLAN VIEW



ISOMETRIC VIEW FOR TYPE 4A1

LEGEND

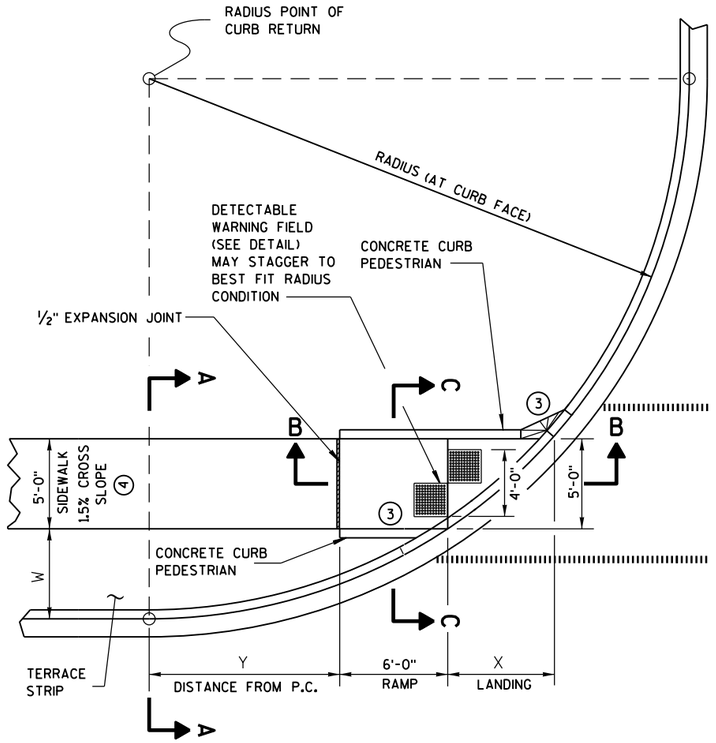
- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS
TYPES 4A AND 4A1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 8 D 5-15c



CURB RAMP TYPE 4B
PLAN VIEW

LEGEND

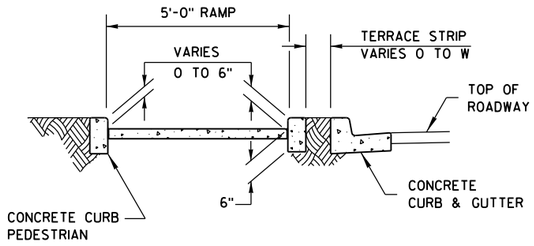
½" EXPANSION JOINT-SIDEWALK

CONTRACTION JOINT FIELD LOCATED

PAVEMENT MARKING CROSSWALK (WHITE)

RADIUS (AT CURB FACE)	W = 3'-0"		W = 4'-0"		W = 5'-0"		W = 6'-0"		W = 7'-0"	
	X	Y	X	Y	X	Y	X	Y	X	Y
20 FEET	5'-5½"	4'-6½"	4'-8½"	6'-0"	4'-1"	7'-2¾"	3'-7"	8'-3½"	3'-1½"	9'-2½"
30 FEET	7'-3¾"	7'-1"	6'-5½"	8'-11½"	5'-9¼"	10'-7"	5'-2½"	12'-0"	4'-8¾"	13'-3¼"
40 FEET	8'-9½"	9'-2½"	7'-10"	11'-5¼"	7'-1"	13'-4½"	6'-5¾"	15'-¾"	5'-11½"	16'-7¼"
50 FEET	10'-¾"	11'-¾"	9'-¼"	13'-7¼"	8'-2½"	15'-9½"	7'-6½"	17'-9"	6'-11¾"	19'-6¼"
60 FEET	11'-2½"	12'-8¾"	10'-¾"	15'-6½"	9'-2¼"	17'-11¾"	8'-5¾"	20'-1¾"	7'-10½"	22'-1½"

INTERMEDIATE RADII CAN BE INTERPOLATED



SECTION C-C FOR TYPE 4B

GENERAL NOTES

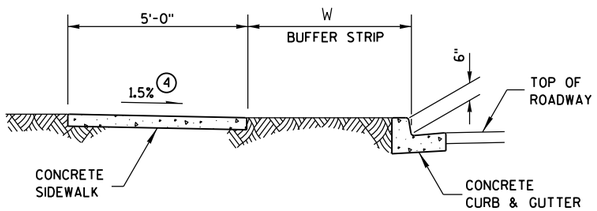
AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

RAMP SLOPES SHALL NOT BE STEEPER THAN 12:1.

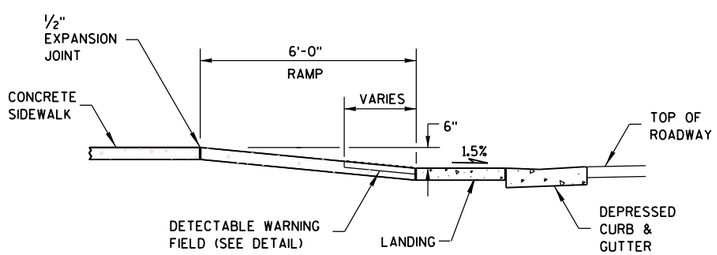
DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

(3) INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS.) DO NOT MARK TRANSITION NOSE.

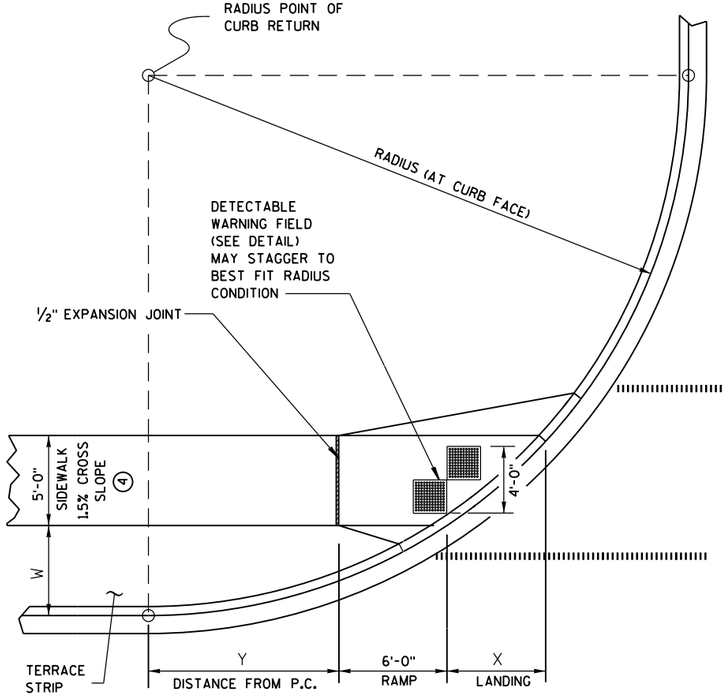
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.



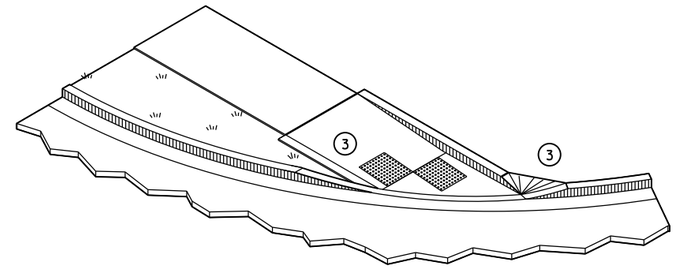
SECTION A-A FOR TYPE 4B



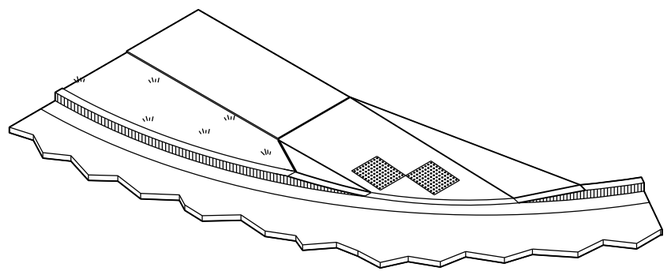
SECTION B-B FOR TYPE 4B



CURB RAMP TYPE 4B1
PLAN VIEW



ISOMETRIC VIEW FOR TYPE 4B



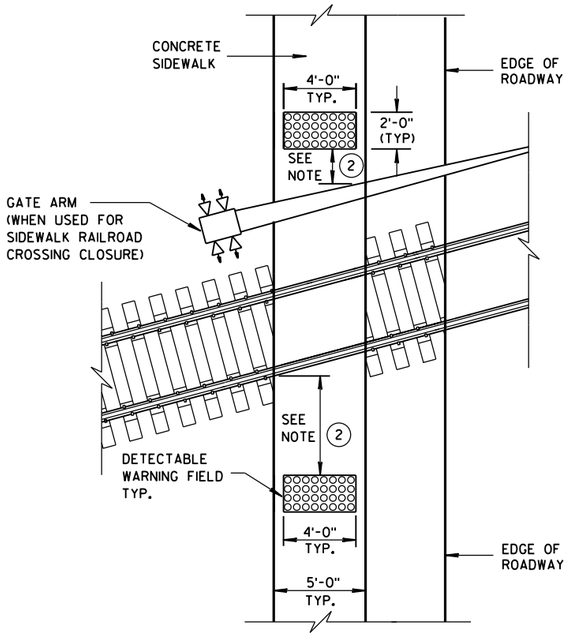
ISOMETRIC VIEW FOR TYPE 4B1

CURB RAMPS
TYPE 4B AND 4B1

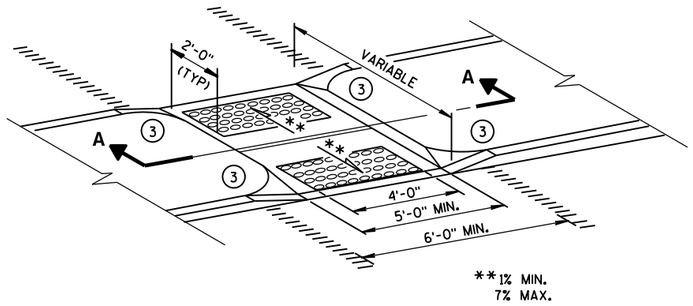
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 8 D 5-15d



TYPE 8
DETECTABLE WARNINGS AT RAILROAD CROSSING



MEDIAN ISLAND
NON-ELEVATED CROSSING
TYPE 5

GENERAL NOTES

SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.

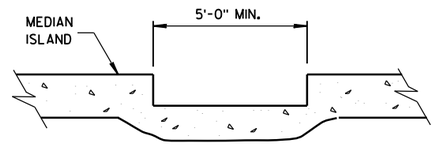
DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

(1) SLOPE SIDEWALK TOWARD LANDING AS SHOWN WHERE THERE IS NO TERRACE OR WHERE THE TERRACE WIDTH IS LESS THAN 6 FEET WIDE.

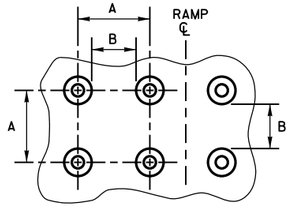
(2) THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO A RAILROAD CROSSING SHALL BE 1.5 FEET ± 0.1' FROM THE FACE OF THE GATE ARM IF THE GATE ARM EXTENDS ACROSS THE SIDEWALK. WHERE THERE IS NO PEDESTRIAN GATE, THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO THE RAILROAD CROSSING SHALL BE 15 FEET FROM THE NEAREST RAIL.

(3) INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS.) DO NOT MARK TRANSITION NOSE.

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.



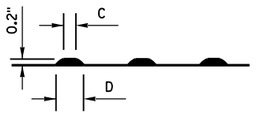
SECTION A-A



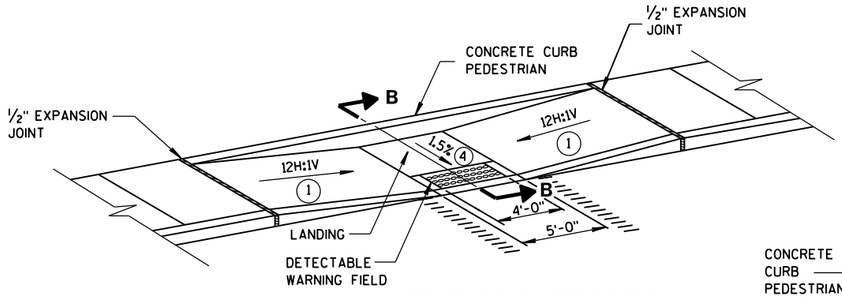
PLAN VIEW

	MIN.	MAX.
A	1.6"	2.4"
B	0.65"	1.5"
C	*	*
D	0.9"	1.4"

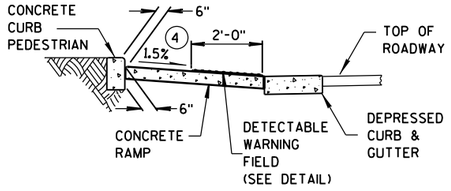
* THE C DIMENSION IS 50% TO 65% OF THE D DIMENSION.



ELEVATION VIEW

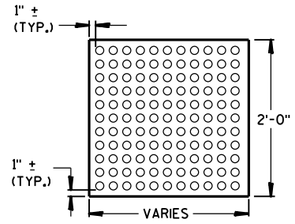


MID-BLOCK CROSSING
TYPE 7A



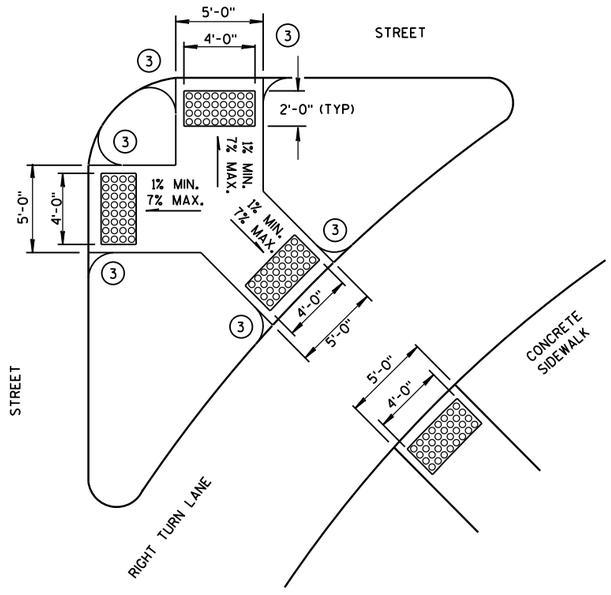
SECTION B-B

TRUNCATED DOMES
DETECTABLE WARNING PATTERN DETAIL

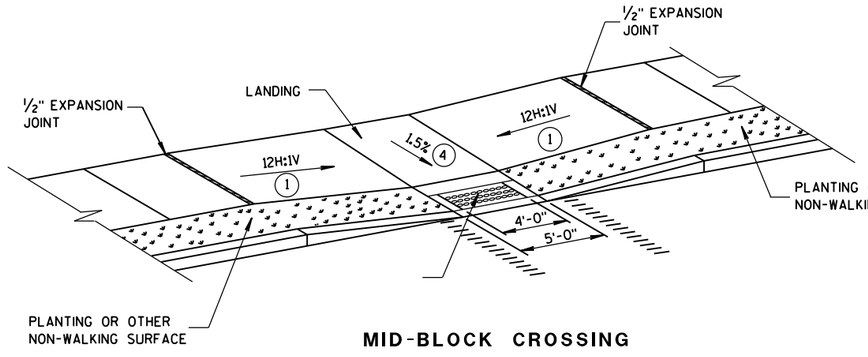


PLAN VIEW

DETECTABLE WARNING FIELD (TYPICAL)



TYPE 6
DETECTABLE WARNING AT ISLANDS



MID-BLOCK CROSSING
TYPE 7B

NOTE: THESE PARALLEL AND PARALLEL/PERPENDICULAR CURB RAMPS MAY BE USED AT INTERSECTIONS AND MID BLOCK LOCATIONS.

LEGEND

- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)

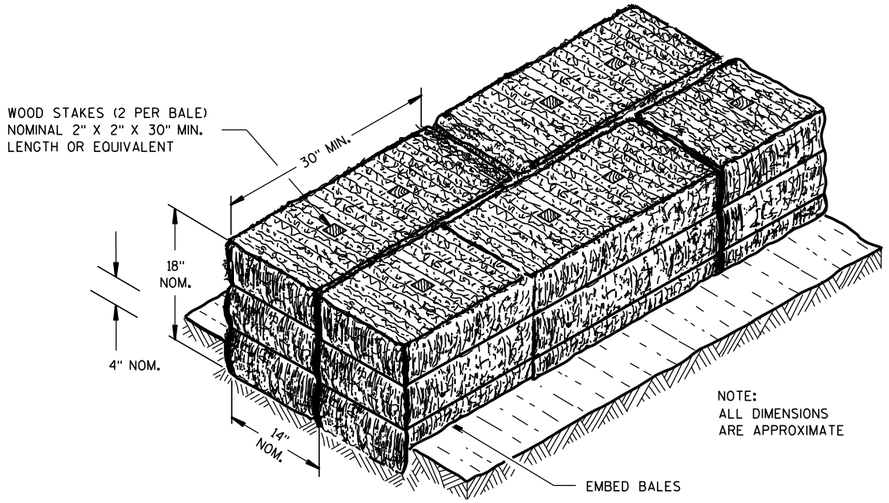
CURB RAMPS
TYPES 5, 6, 7A, 7B & 8

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

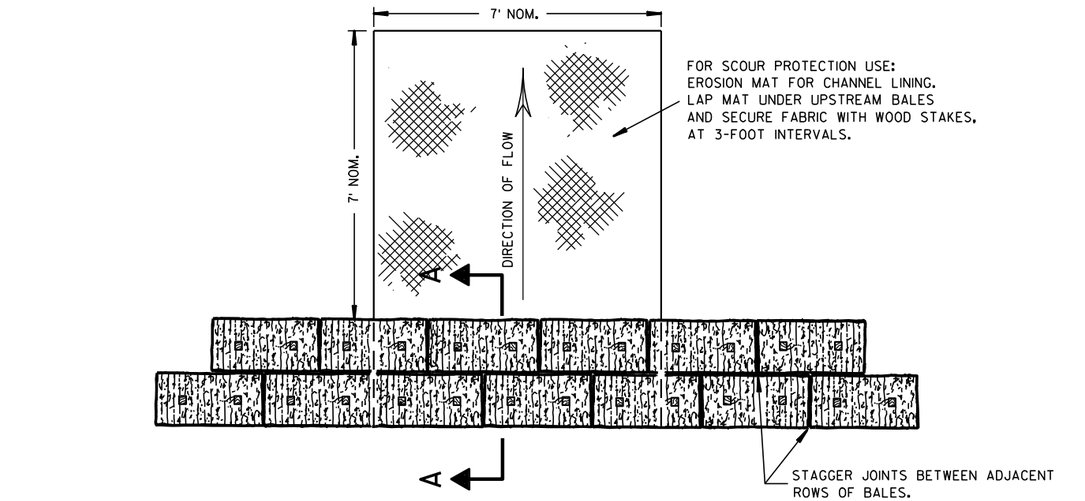
APPROVED
2-6-2013 DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6

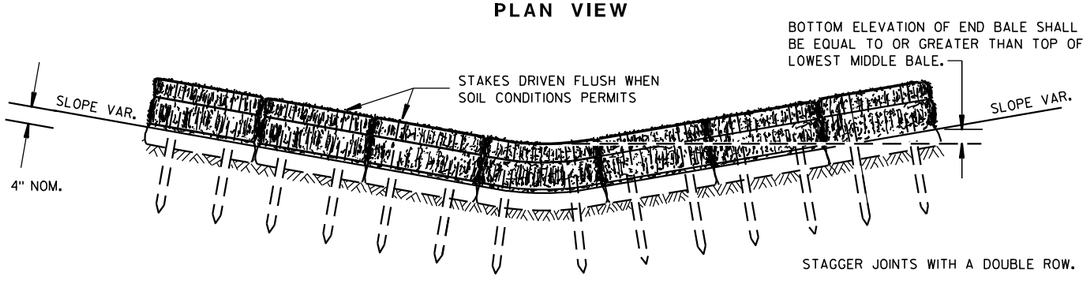
S.D.D. 8 D 5-15e



SECTION A-A



PLAN VIEW



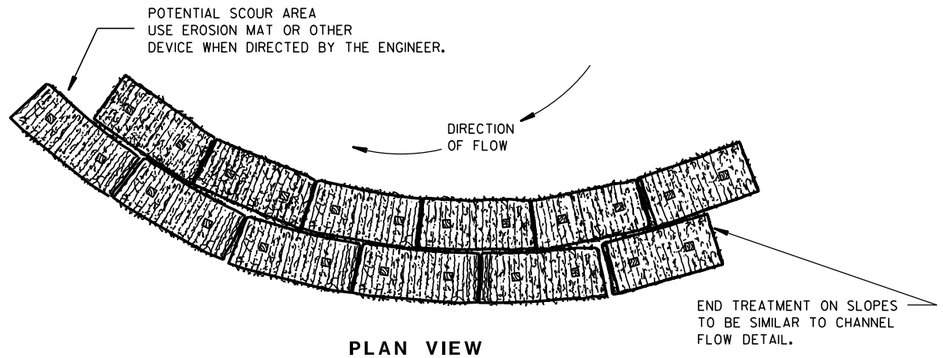
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES (1)

GENERAL NOTES

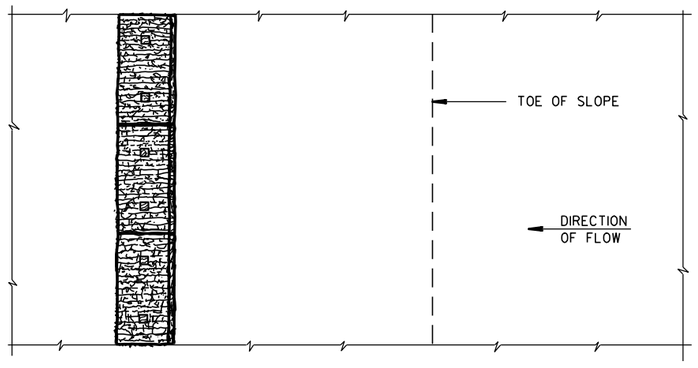
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

(1) TEMPORARY DITCH CHECKS EITHER EROSION BALES OR MANUFACTURED SHALL BE PAID FOR UNDER THE BID ITEM OF TEMPORARY DITCH CHECK. THE DEPARTMENT WILL NOT PAY FOR TEMPORARY DITCH CHECKS CONSTRUCTED OF A SINGLE ROW OF EROSION BALES.

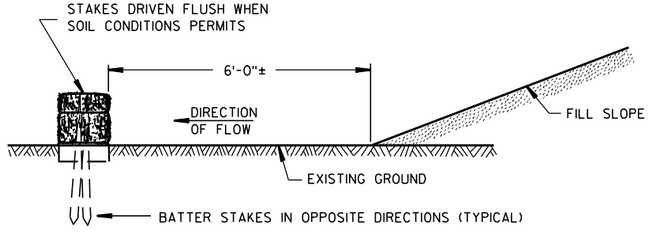


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

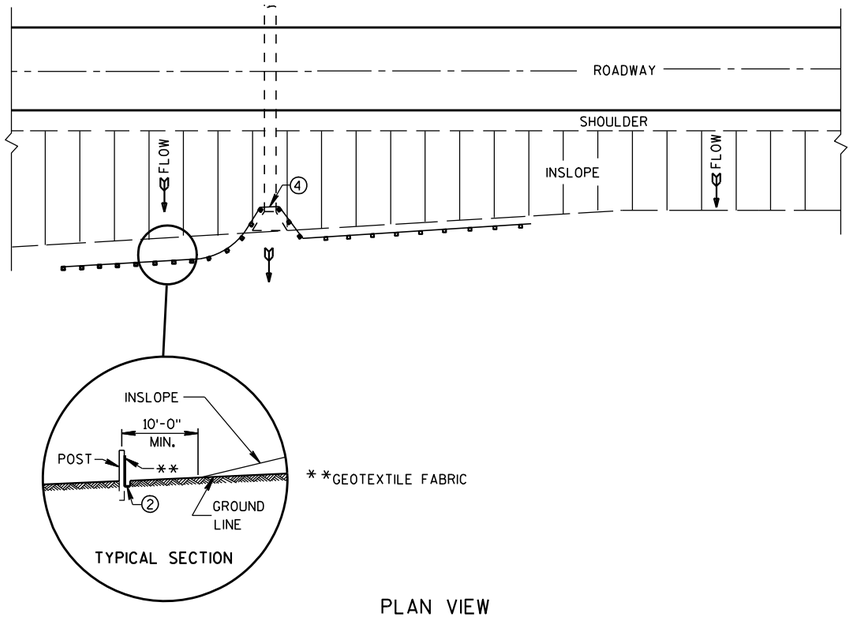
6/04/02 — DATE

/S/ Beth Cannestra — CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA

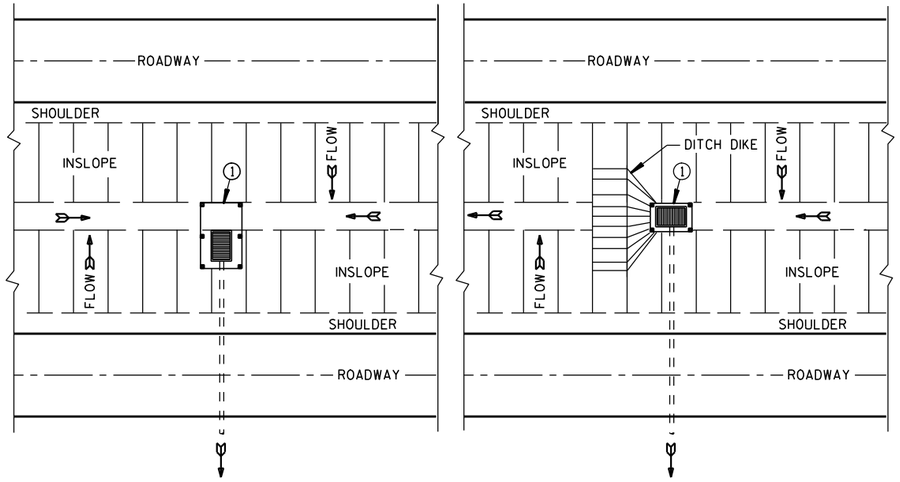
6

S.D.D. 8 E 8-3



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



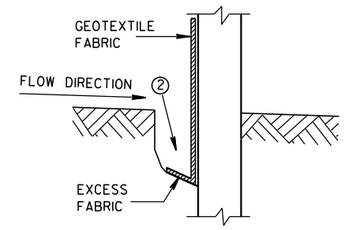
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

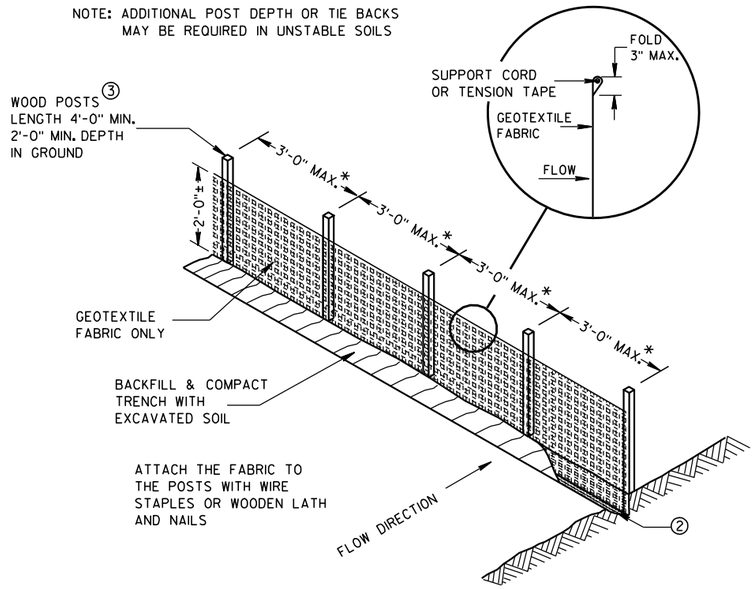
GENERAL NOTES

DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

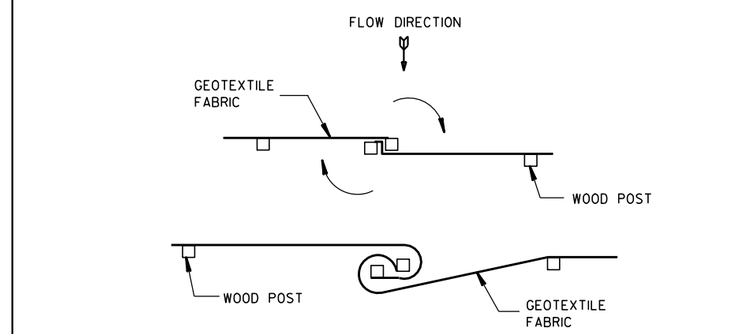
1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.
4. SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.
5. CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



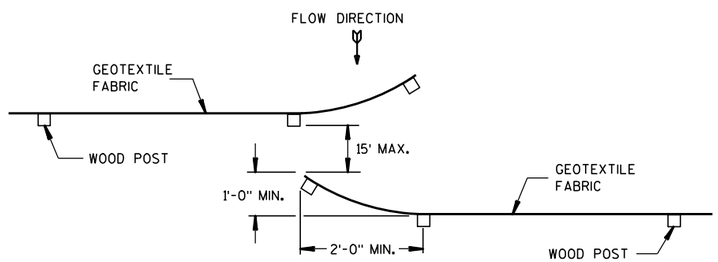
TRENCH DETAIL



SILT FENCE

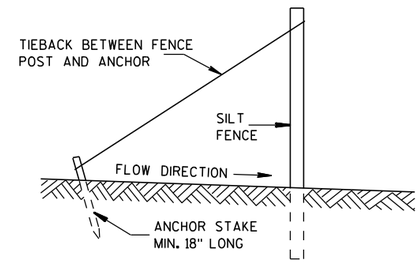


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE 5



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

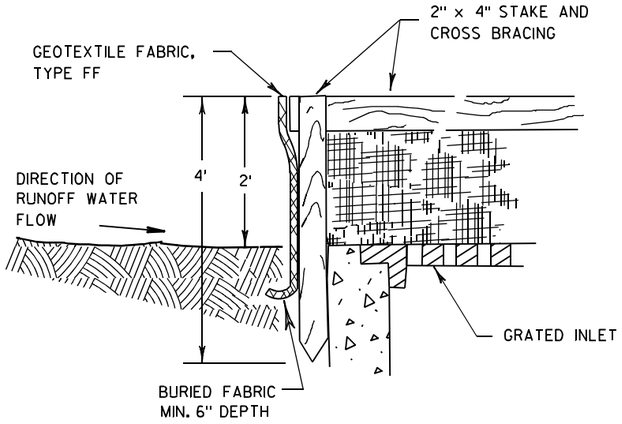
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

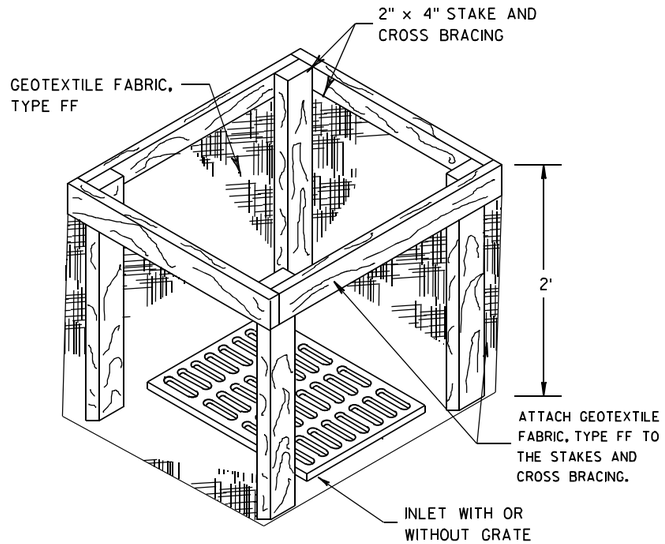
6

S.D.D. 8 E 9-6

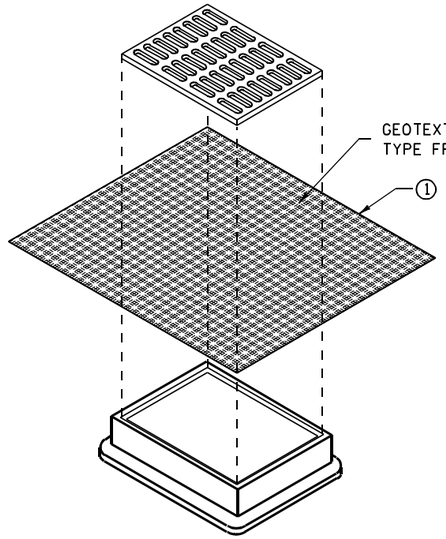
6

S.D.D. 8 E 9-6



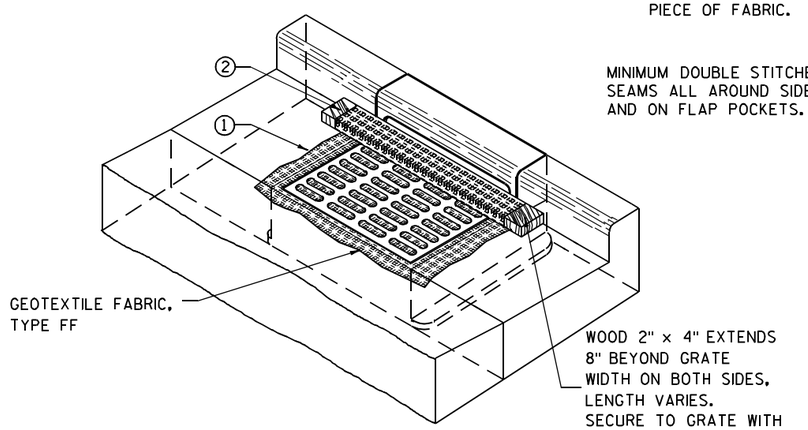


INLET PROTECTION, TYPE A

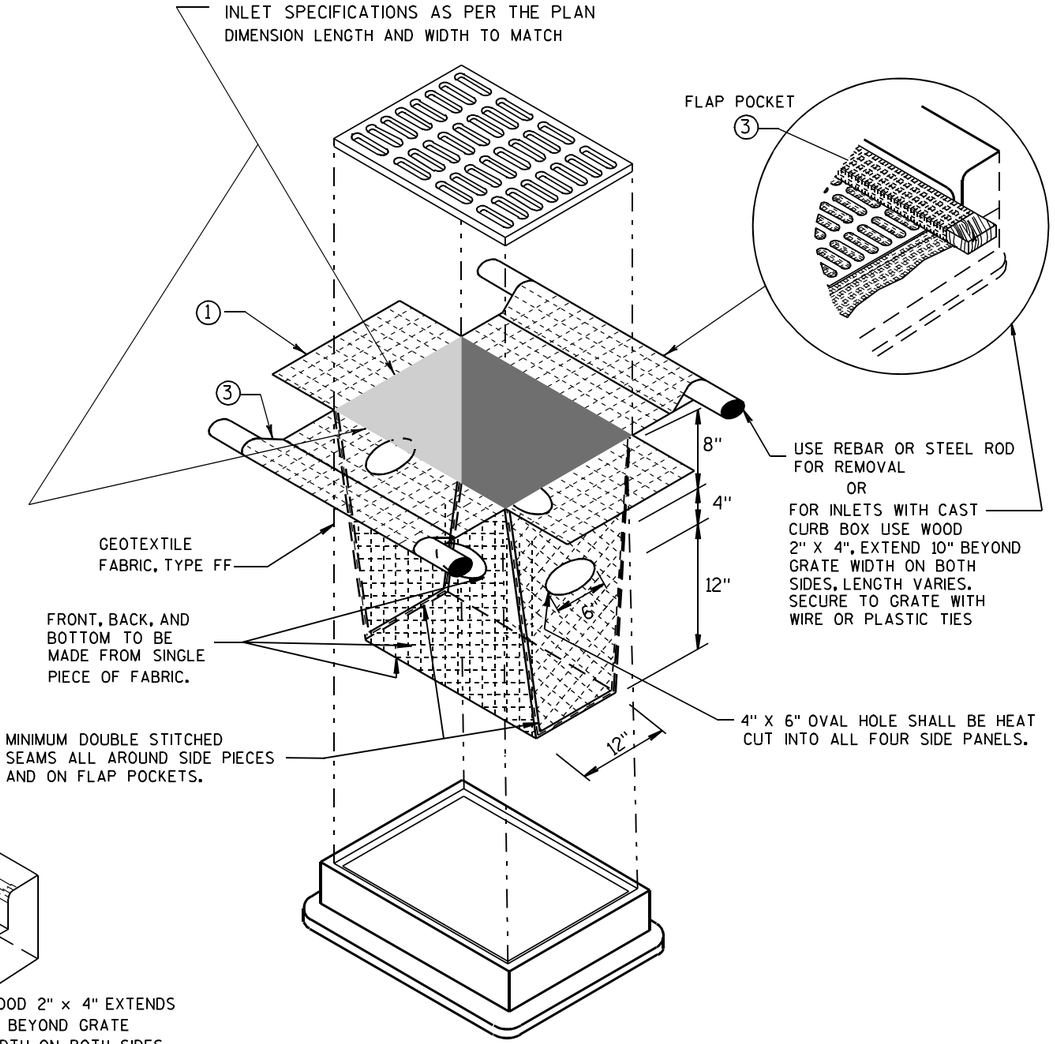


INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

(CAN BE INSTALLED IN ANY INLET WITHOUT A CURB BOX)



INLET PROTECTION, TYPE C (WITH CURB BOX)



INLET PROTECTION, TYPE D

(CAN BE INSTALLED IN ANY INLET TYPE WITH
OR WITHOUT A CURB BOX AS PER NOTE ②)

GENERAL NOTES

INLET PROTECTION DEVICES SHALL BE MAINTAINED OR REPLACED AT THE DIRECTION OF THE ENGINEER.

MANUFACTURED ALTERNATIVES APPROVED AND LISTED ON THE DEPARTMENT'S EROSION CONTROL PRODUCT ACCEPTABILITY LIST MAY BE SUBSTITUTED.

WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

① FINISHED SIZE, INCLUDING FLAP POCKETS WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10" AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.

② FOR INLET PROTECTION, TYPE C (WITH CURB BOX), AN ADDITIONAL 18" OF FABRIC IS WRAPPED AROUND THE WOOD AND SECURED WITH STAPLES. THE WOOD SHALL NOT BLOCK THE ENTIRE HEIGHT OF THE CURB BOX OPENING.

③ FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2X4.

INSTALLATION NOTES

TYPE B & C

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

TYPE D

DO NOT INSTALL INLET PROTECTION TYPE D IN INLETS SHALLOWER THAN 30", MEASURED FROM THE BOTTOM OF THE INLET TO THE TOP OF THE GRATE.

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE BOTTOM OF THE BAG.

INLET PROTECTION
TYPE A, B, C, AND D

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

10/16/02
DATE

/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA

6

S.D.D. 8 E 10-2

6

S.D.D. 8 E 10-2

METAL APRON ENDWALLS

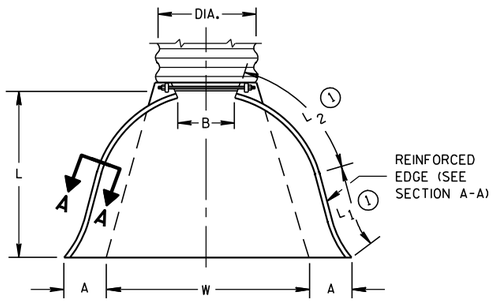
PIPE DIA. (IN.)	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4	36	2 1/2 to 1	1 Pc.
21	.064	.060	9	12	6	36	18	29 5/8	42	2 1/2 to 1	1 Pc.
24	.064	.075	10	13	6	41	18	37 1/4	48	2 1/2 to 1	1 Pc.
30	.079	.075	12	16	8	51	18	52 1/4	60	2 1/2 to 1	1 Pc.
36	.079	.105	14	19	9	60	24	59 3/4	72	2 1/2 to 1	2 Pc.
42	.109	.105	16	22	11	69	24	75 5/8	84	2 1/2 to 1	2 Pc.
48	.109	.105	18	27	12	78	24	81	90	2 1/4 to 1	3 Pc.
54	.109	.105	18	30	12	84	30	85 1/2	102	2 1/4 to 1	3 Pc.
60	.109×	.105×	18	33	12	87	—	—	114	2 to 1	3 Pc.
66	.109×	.105×	18	36	12	87	—	—	120	2 to 1	3 Pc.
72	.109×	.105×	18	39	12	87	—	—	126	2 to 1	3 Pc.
78	.109×	.105×	18	42	12	87	—	—	132	1 1/2 to 1	3 Pc.
84	.109×	.105×	18	45	12	87	—	—	138	1 1/2 to 1	3 Pc.
90	.109×	.105×	18	37	12	87	—	—	144	1 1/2 to 1	3 Pc.
96	.109×	.105×	18	35	12	87	—	—	150	1 1/2 to 1	3 Pc.

× EXCEPT CENTER PANEL SEE GENERAL NOTES

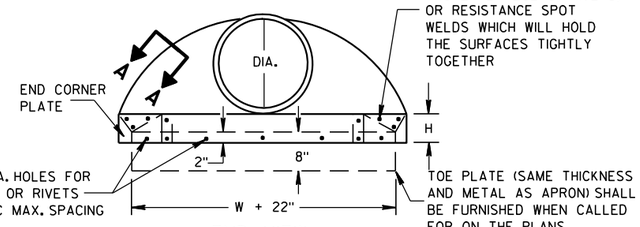
REINFORCED CONCRETE APRON ENDWALLS

PIPE DIA. (IN.)	DIMENSIONS (Inches) T	A	B	C	D	E	G	APPROX. SLOPE
12	2	4	24	48 7/8	72 1/8	24	2	3 to 1
15	2 1/4	6	27	46	73	30	2 1/4	3 to 1
18	2 1/2	9	27	46	73	36	2 1/2	3 to 1
21	2 3/4	9	36	37 1/2	73 1/2	42	2 3/4	3 to 1
24	3	9 1/2	43 1/2	30	73 1/2	48	3	3 to 1
27	3 1/4	10 1/2	49 1/2	24	73 1/2	54	3 1/4	3 to 1
30	3 1/2	12	54	19 3/4	73 1/2	60	3 1/2	3 to 1
36	4	15	63	34 3/4	97 3/4	72	4	3 to 1
42	4 1/2	21	63	35	98	78	4 1/2	3 to 1
48	5	24	72	26	98	84	5	3 to 1
54	5 1/2	27	65	* 33 1/4 - ** 35	* 98 1/4 - ** 100	90	5 1/2	2 2/5 to 1
60	6	* 30 - ** 35	60	39	99	96	5	2 to 1
66	6 1/2	* 24 - ** 30	* 72 - ** 78	* 21 - ** 27	99	102	5 1/2	2 to 1
72	7	* 24 - ** 36	78	21	99	108	6	2 to 1
78	7 1/2	* 24 - ** 36	78	21	99	114	6 1/2	2 to 1
84	8	36	90 1/2	21	111 1/2	120	6 1/2	1 1/2 to 1
90	8 1/2	41	87 1/2	24	111 1/2	132	6 1/2	1 1/2 to 1

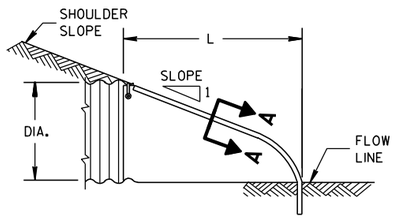
*MINIMUM
**MAXIMUM



PLAN VIEW

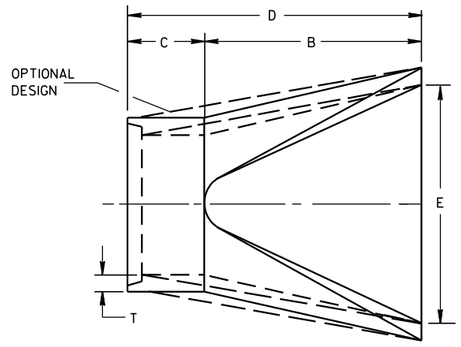


END VIEW

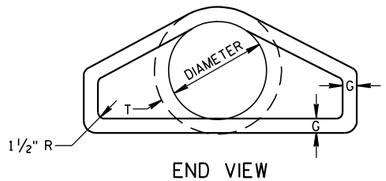


SIDE ELEVATION

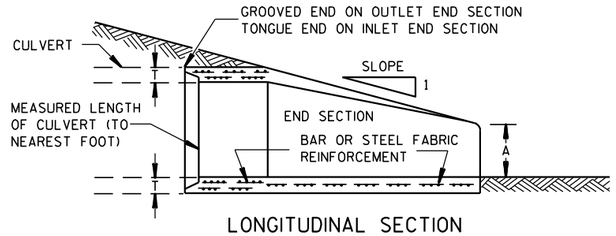
METAL ENDWALLS



PLAN

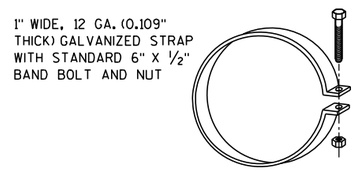


END VIEW



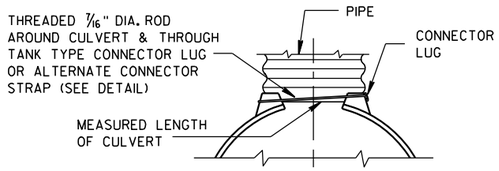
LONGITUDINAL SECTION

CONCRETE ENDWALLS

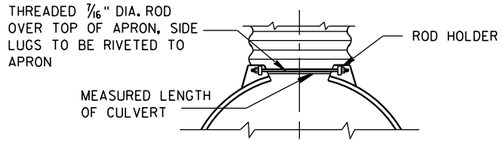


ALTERNATE FOR TYPE 1 CONNECTION

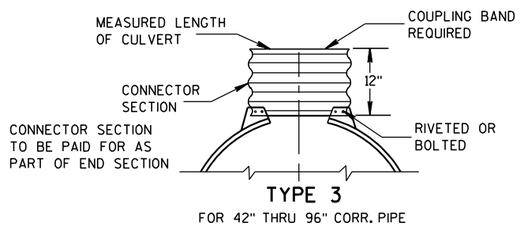
END SECTION CONNECTOR STRAP



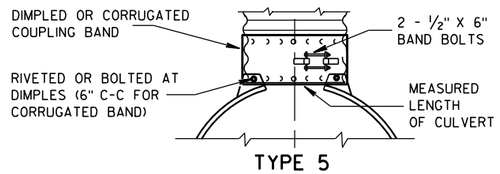
TYPE 1
FOR 12" THRU 24" CORR. PIPE



TYPE 2
FOR 30" THRU 96" CORR. PIPE



TYPE 3
FOR 42" THRU 96" CORR. PIPE



TYPE 5
ALTERNATE FOR:
ALL SIZES CORRUGATED CIRCULAR PIPE

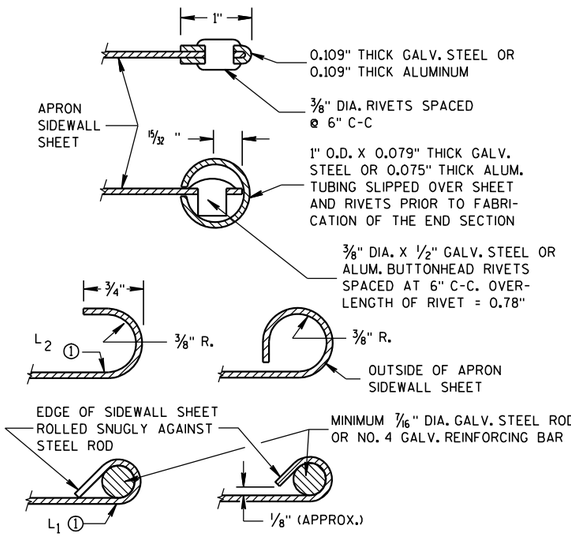
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

FOR CIRCUMFERENTIALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2, 3 OR 5 AS APPLICABLE.

FOR HELICALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2 OR 5.

FOR HELICALLY CORRUGATED PIPES WITH TWO CIRCUMFERENTIAL CORRUGATIONS AT EACH END USE ENDWALL CONNECTION DETAILS 1, 2 OR 3.

CONNECTION DETAILS



SECTION A-A

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

CONCRETE CULVERT ENDWALLS MAY NOT BE USED WITH GALVANIZED STEEL OR ALUMINUM CULVERT PIPE OR VISE VERSA. GALVANIZED STEEL OR ALUMINUM ENDWALLS SHALL NORMALLY BE INSTALLED ON CULVERT PIPE OF THE SAME METAL.

ALL THREE PIECE STEEL APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT OF THE PIPE PERIMETER.

LAP SEAMS SHALL BE TIGHTLY JOINED BY GALVANIZED RIVETS OR BOLTS FOR STEEL UNITS AND ALUMINUM RIVETS AND BOLTS FOR ALUMINUM UNITS. FOR THE 60" THROUGH 96" DIAMETER APRON ENDWALL SIZES, THE REINFORCED EDGES AND CENTER PANEL SEAMS SHALL BE FURTHER REINFORCED WITH GALVANIZED STEEL OR ALUMINUM STIFFENER ANGLES. THE ANGLES SHALL BE ATTACHED BY GALVANIZED NUTS AND BOLTS FOR STEEL UNITS AND ALUMINUM NUTS AND BOLTS FOR ALUMINUM UNITS.

WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

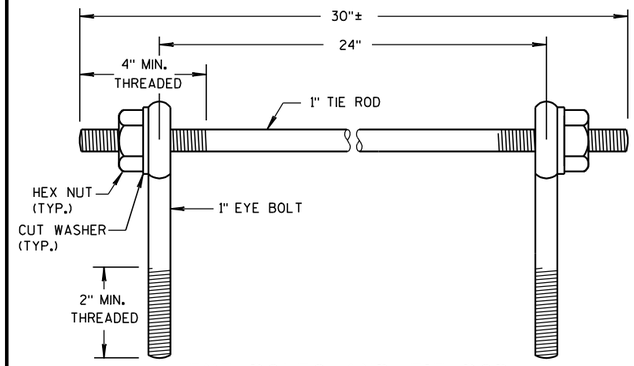
APRON ENDWALLS FOR CULVERT PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

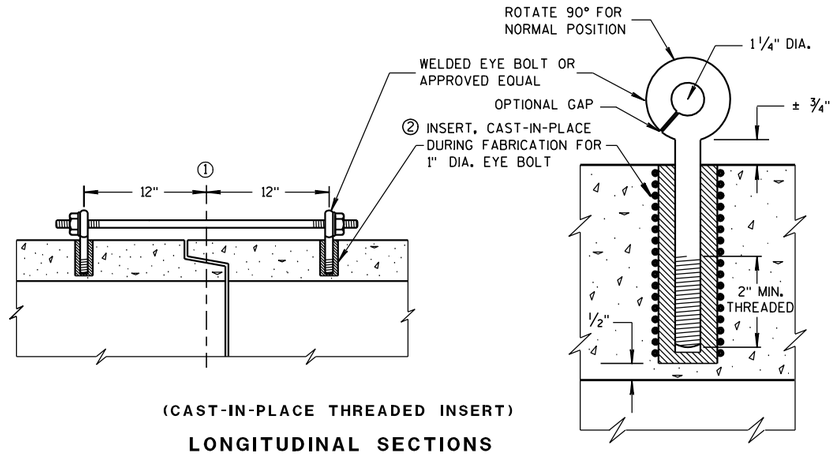
APPROVED
11/30/94 DATE
/S/ Rory L. Rhinesmith
CHIEF ROADWAY DEVELOP 533 NEER
FHWA

6

S.D.D. 8 F 1-11



EYE BOLTS AND TIE ROD



(CAST-IN-PLACE THREADED INSERT)

LONGITUDINAL SECTIONS

EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 1)

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

CONCRETE CULVERT AND STORM SEWER PIPE SHALL BE TIED TOGETHER IN THE MANNER ILLUSTRATED BY THIS DETAIL AT LOCATIONS DESIGNATED IN THE STANDARD SPECIFICATIONS AND THE PLAN. THE CONTRACTOR MAY USE EITHER ALTERNATE 1, 2 OR 3 FOR DRAINAGE STRUCTURES. ONLY ALTERNATE 1 AND 3 MAY BE USED FOR CATTLE PASSES, UNLESS OTHERWISE STATED IN THE CONTRACT. THE MATERIALS, FABRICATION AND WORK NECESSARY TO TIE THE PIPE BY THIS DETAIL WILL BE CONSIDERED INCIDENTAL TO THE PIPE AND APRON ENDWALLS IF REQUIRED.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR JOINT TIES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

JOINT TIES TO BE HOT-DIP GALVANIZED PER ASTM A 153.

① ℄ OF TONGUE AND GROOVE OR BELL AND SPIGOT JOINTS.

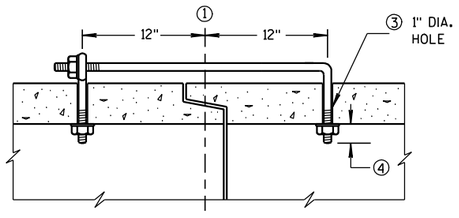
② THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.

③ HOLES SHALL BE CAST-IN-PLACE OR DRILLED 12 INCHES FROM ℄ OF TONGUE AND GROOVE.

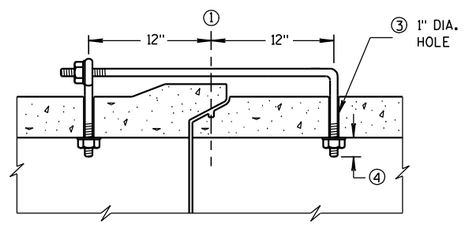
④ BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.

⑤ OPENING TO BE ROD DIAMETER PLUS 1 INCH.

⑥ LENGTH ADEQUATE TO EXTEND TO WITHIN 1/2 INCH OF THE INNER SURFACE OF THE PIPE.



(TONGUE & GROOVE PIPE)

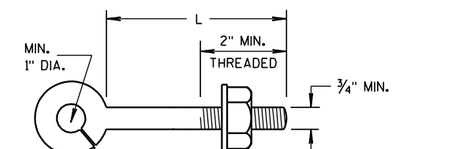


(MODIFIED BELL PIPE)

LONGITUDINAL SECTION

EYE BOLT DIMENSION TABLE

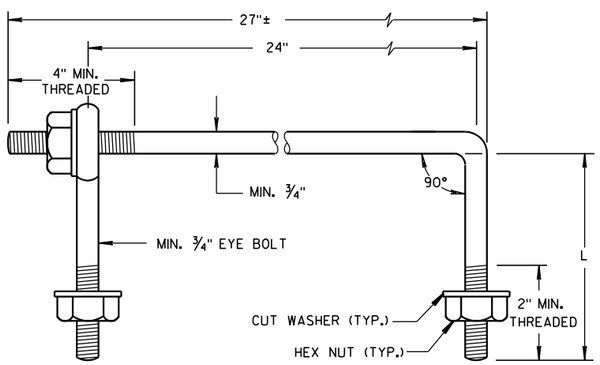
PIPE SIZE	L = LENGTH	
	TONGUE & GROOVE PIPE	MODIFIED BELL PIPE
18" TO 24"	4 1/2"	6 1/4"
30"	5"	7"
36"	5 1/2"	7"
42"	6"	
48"	6 1/2"	
60"	7 1/2"	
66"	8"	



NOTE:

EYE BOLT

NOTE: TWO EYE BOLTS MAY BE USED WITH A 30" LONG THREADED ROD IN LIEU OF THE 90° BENT TIE ROD.



EYE BOLT AND TIE ROD

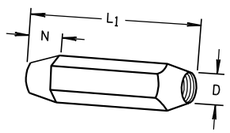
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 2)

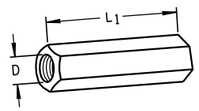
ADJUSTABLE TIE ROD TABLE

PIPE DIAMETER	TIE ROD DIAMETER	D	L_1	N
12-60	5/8	5/8	5	1/2
66-84	3/4	3/4	5	1/2
90-108	1	1	7	1 1/16

DIMENSIONS SHOWN ARE IN INCHES



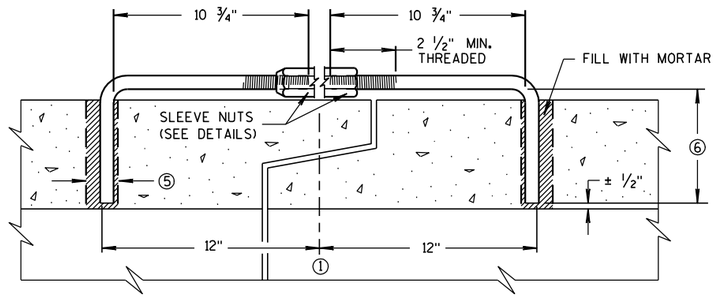
TAPERED



PLAIN

RIGHT AND LEFT THREADS

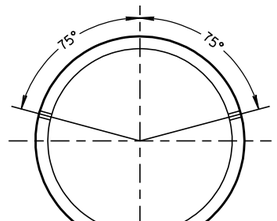
SLEEVE NUTS



LONGITUDINAL SECTION

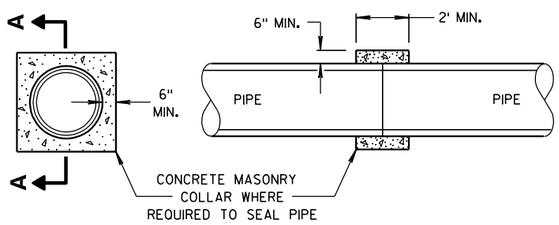
(JOINT TIES FOR 12" TO 108" DIA. CONCRETE PIPE)

ADJUSTABLE TIE ROD (ALTERNATE NO. 3)



PLACEMENT OF (2) CAST-IN-PLACE INSERTS OR HOLES DURING FABRICATION FOR PIPE SECTIONS REQUIRING TIE RODS

TRANSVERSE SECTION



SECTION A-A

CONCRETE COLLAR DETAIL

JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/5/2012 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
534
FHWA

6

S.D.D. 8 F 4-7

6

S.D.D. 8 F 4-7

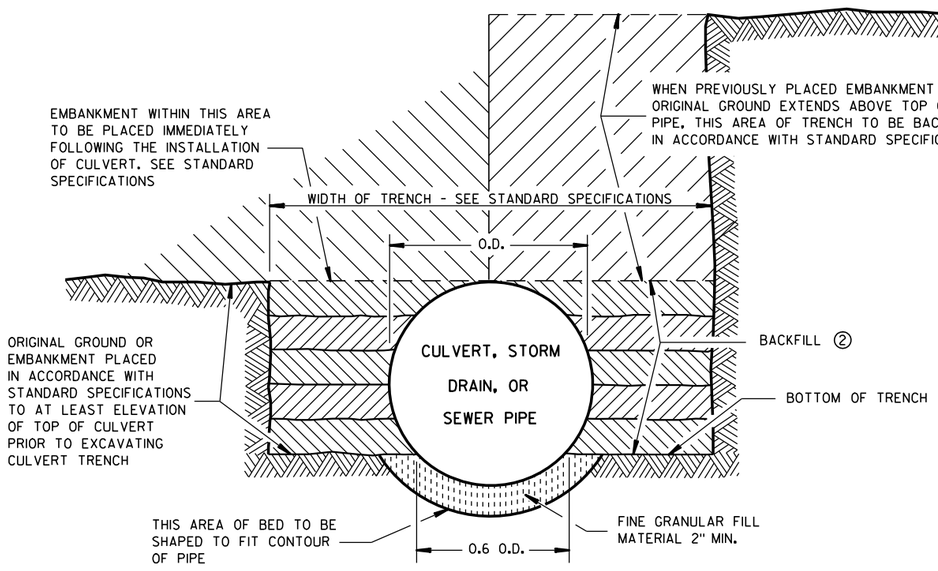
GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

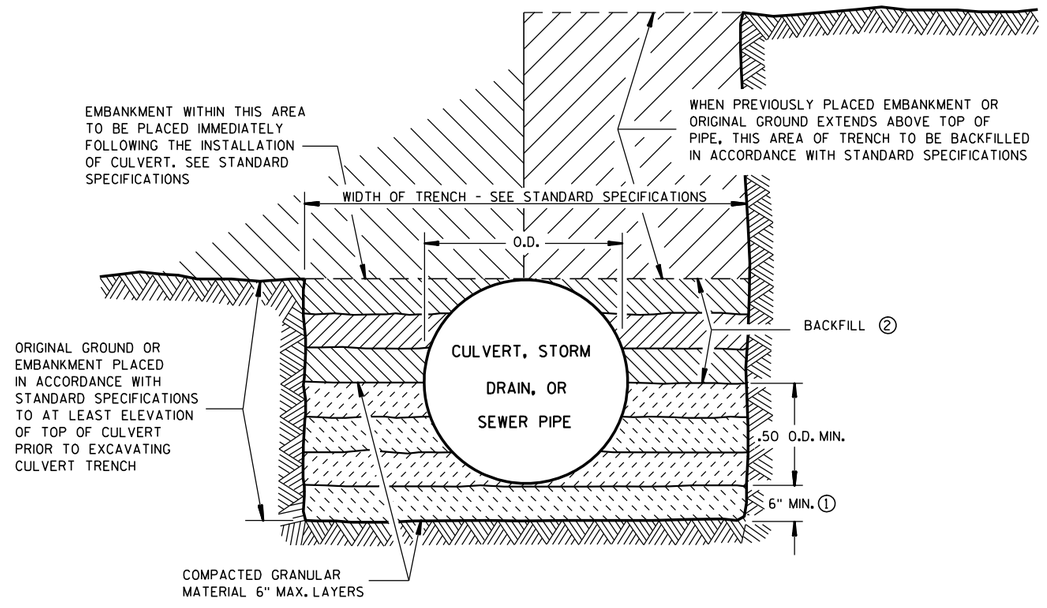
THE SHAPED SUBGRADE WITH GRANULAR FOUNDATION IS AN EQUAL ALTERNATE TO THE GRANULAR FOUNDATION EXCEPT WHERE ROCK IS ENCOUNTERED.

① WHERE ROCK, HARD PAN OR FRAGMENTED MATERIAL IS ENCOUNTERED, THE TRENCH SHALL BE EXCAVATED BELOW THE BOTTOM OF THE PIPE AN AMOUNT EQUAL TO ½ INCH PER FOOT OF PROPOSED EMBANKMENT ABOVE THE TOP OF THE PIPE, BUT NOT LESS THAN 6 INCHES.

② TRENCH SHALL BE BACKFILLED AS REQUIRED BY STANDARD SPECIFICATIONS; SECTION 520 FOR PIPE CULVERTS AND SECTION 607 FOR STORM SEWERS.



SHAPED SUBGRADE WITH GRANULAR FOUNDATION



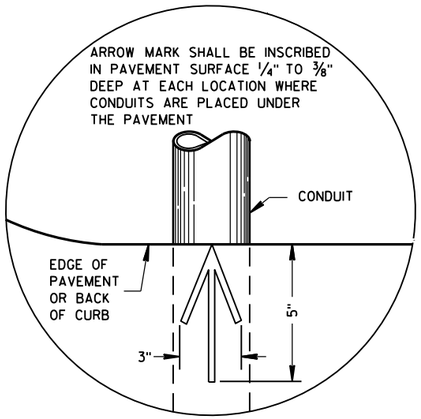
GRANULAR FOUNDATION

CLASS "B" BEDDING

CLASS "B" BEDDING FOR CULVERT PIPE OR STORM SEWER	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
4/7/83 DATE	/S/ D. L. Strand STATE DESIGN ENGINEER
FHWA	535 HWYS

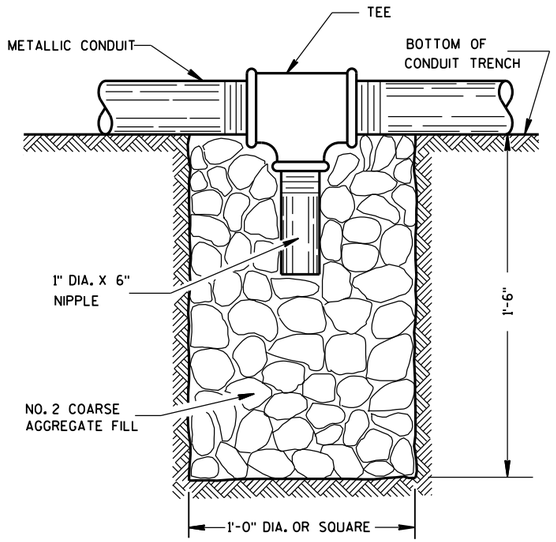
6

S.D.D. 8 F 5-1



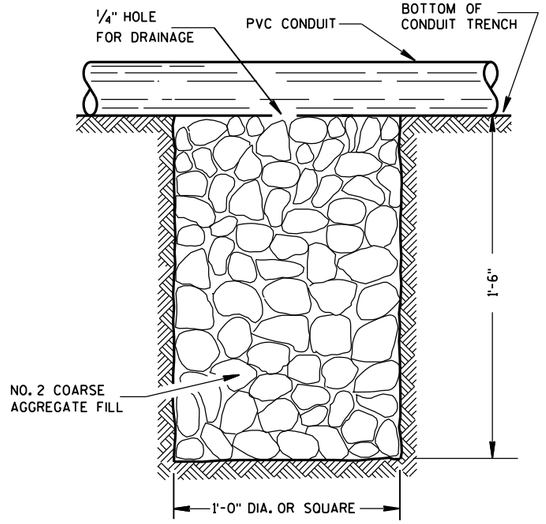
PLAN VIEW

ARROW MARK



NOTE: INSTALL AT LOCATIONS WHERE METALLIC CONDUITS CANNOT BE PITCHED TO DRAIN INTO A PULL BOX.

DRAIN SUMP FOR METALLIC CONDUIT



NOTE: INSTALL AT LOCATIONS WHERE PVC CONDUITS CANNOT BE PITCHED TO DRAIN INTO A PULL BOX.

DRAIN SUMP FOR PVC CONDUIT

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

METALLIC (STANDARD SPECIFICATION 652.2.2) OR NONMETALLIC (STANDARD SPECIFICATION 652.2.3) CONDUIT SHALL BE FURNISHED AND PLACED AS SHOWN.

DEPTH OF CONDUIT INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES MINIMUM AND 36 INCHES MAXIMUM.

DEPTH OF CONDUIT INSTALLED THAT IS NOT BELOW THE TRAVELED WAY SHALL BE 18 INCHES MINIMUM AND 36 INCHES MAXIMUM.

ANY EXCEPTION TO THE MAXIMUM DEPTH SHALL BE ONLY WITH THE WRITTEN APPROVAL OF THE ENGINEER.

THE TRENCH SHALL NOT BE BACKFILLED PRIOR TO INSPECTION OF THE CONDUIT.

ALL METALLIC CONDUIT RACEWAY ENDS SHALL BE REAMED AND THREADED.

ALL METALLIC CONDUIT IN WHICH WIRE OR CABLE IS TO BE INSTALLED SHALL BE BUSHED WITH APPROVED THREADED BUSHINGS BEFORE INSTALLATION OF THE WIRE OR CABLE.

ALL METALLIC CONDUITS IN WHICH WIRE OR CABLE IS NOT TO BE INSTALLED SHALL BE CAPPED WITH THREADED PROTECTIVE CAPS, AS APPROVED BY THE ENGINEER.

ALL NONMETALLIC CONDUIT SHALL BE CAPPED OR PLUGGED IMMEDIATELY AFTER INSTALLATION AND SHALL REMAIN CAPPED OR PLUGGED UNTIL WIRE/CABLES ARE INSTALLED.

NONMETALLIC CONDUITS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

BENDING OF PVC ELECTRICAL CONDUIT SHALL BE ACCOMPLISHED BY USING A BLANKET OR EMERSION TYPE TANK DESIGNED FOR THE PURPOSE OF BENDING PVC ELECTRICAL CONDUIT.

ALL CUT ENDS SHALL BE TRIMMED INSIDE AND OUTSIDE TO REMOVE ALL ROUGH EDGES ON NONMETALLIC CONDUIT. (SEE NEC 347.5)

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY U.L. LISTED ADAPTER FITTINGS SHALL BE USED.

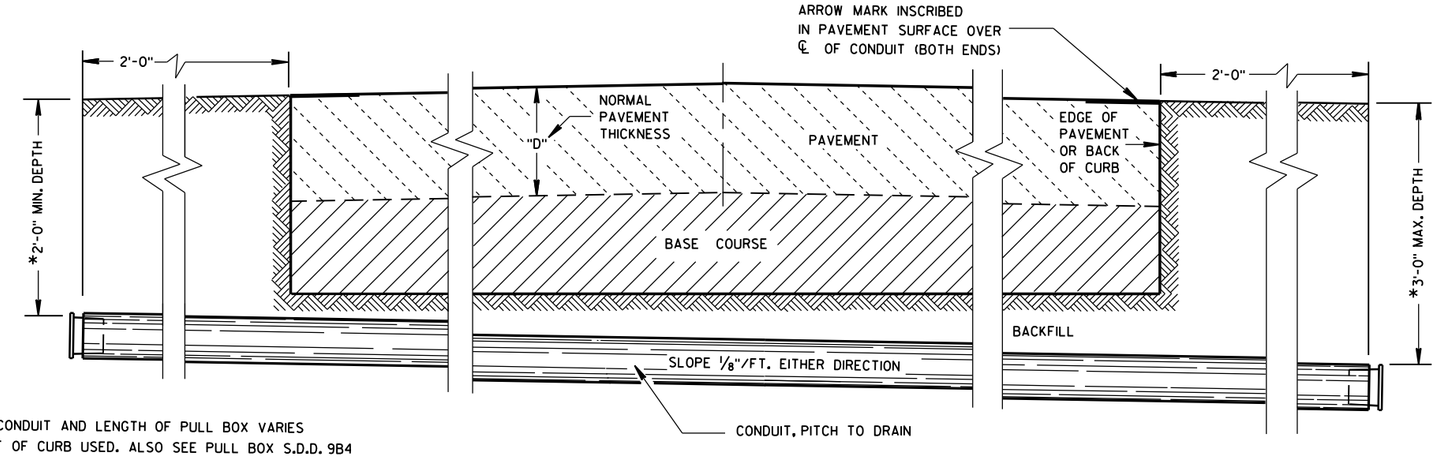
PRIOR TO CONDUIT ACCEPTANCE, CONDUIT CAPS OR PLUGS SHALL BE REMOVED, AND THE CAPS, PLUGS AND CONDUIT ENDS SHALL BE THOROUGHLY CLEANED AND THEN THE CAPS OR PLUGS REINSTALLED TO ENSURE THAT THE CAPS OR PLUGS CAN BE EASILY REMOVED IN THE FUTURE.

ALL CONDUIT BEING FURNISHED AND INSTALLED SHALL HAVE THE U.L. LABEL FIRMLY ATTACHED.

CONDUIT RUNS SHALL BE THE SAME SIZE OF CONDUIT FROM ONE END TO THE OTHER (FROM PULL BOX TO PULL BOX-OR-JUNCTION BOX TO JUNCTION BOX-OR-BASE TO BASE, ETC.).

POLY ROPE OR A PULL WIRE SHALL BE INSTALLED AS STATED IN THE STANDARD SPECIFICATION, ITEM 652.3.1.1.

ALL CONDUIT RUNS SHALL BE STRAIGHT (WITHOUT BENDS) FROM PULL BOX TO PULL BOX, PULL BOX TO BASE AND BASE TO BASE AS SHOWN ON THE PLANS.



*DEPTH OF CONDUIT AND LENGTH OF PULL BOX VARIES WITH HEIGHT OF CURB USED. ALSO SEE PULL BOX S.D.D. 9B4

SIDE ELEVATION

DETAIL FOR CONDUIT UNDER PAVED HIGHWAYS

CONDUIT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

Sept. 2014 — DATE

/S/ Ahmet Demirbilek — STATE ELECTRICAL

FHWA

6

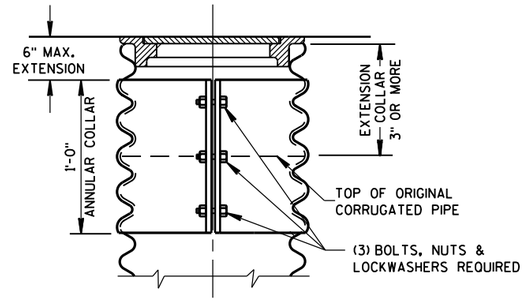
S.D.D. 9 B 2-8

TABLE OF NOMINAL DIMENSIONS AND WEIGHTS

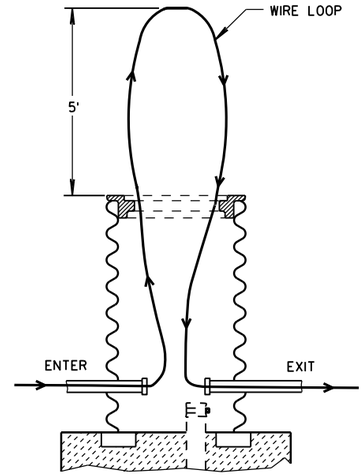
DIMENSION IN INCHES		CORRUGATED STEEL PIPE								
PIPE DIAMETER (INSIDE)	A	12	12	12	18	18	18	24	24	24
PIPE LENGTH **	B	24	30	36	24	30	36	36	42	48
WALL THICKNESS	C	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064
COVER	D	10 1/4	10 1/4	10 1/4	16 1/4	16 1/4	16 1/4	22 1/4	22 1/4	22 1/4
FRAME	E	14 1/2	14 1/2	14 1/2	20 1/2	20 1/2	20 1/2	26 1/2	26 1/2	26 1/2
FRAME	F	8 1/2	8 1/2	8 1/2	14 1/2	14 1/2	14 1/2	20 1/2	20 1/2	20 1/2
FRAME	G	11 1/2	11 1/2	11 1/2	17 1/2	17 1/2	17 1/2	23 1/2	23 1/2	23 1/2
WEIGHT IN POUNDS *										
FRAME AND COVER		60	60	60	110	110	110	155	155	155

* THE ACTUAL WEIGHT OF THE MANHOLE FRAME AND COVER MAY VARY WITHIN 5 PERCENT PLUS OR MINUS OF THE WEIGHTS SHOWN.

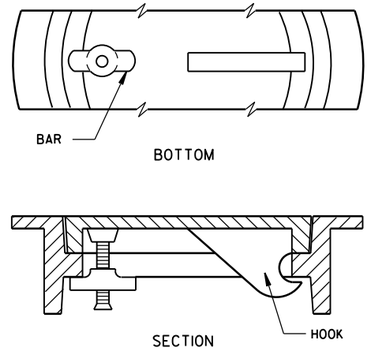
** NORMALLY USED LENGTHS. THE PROJECT ENGINEER SHALL DETERMINE IF PIPE LENGTHS, OTHER THAN THOSE SPECIFIED, SHALL BE USED, TO A MAXIMUM OF 48" (CONTINUOUS LENGTH, NON-SPLICED). THE ADDITIONAL LENGTH SHALL BE INCIDENTAL TO THE PULL BOX BID PRICE.



CORRUGATED PIPE EXTENDER

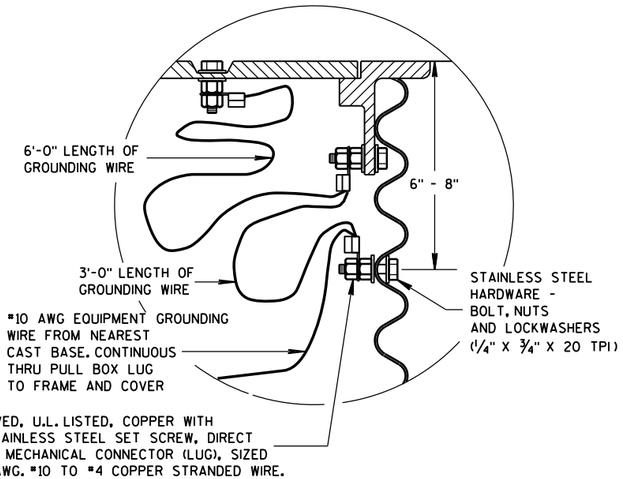


MEASUREMENT DETAIL FOR WIRE/CABLE IN THE PULL BOX

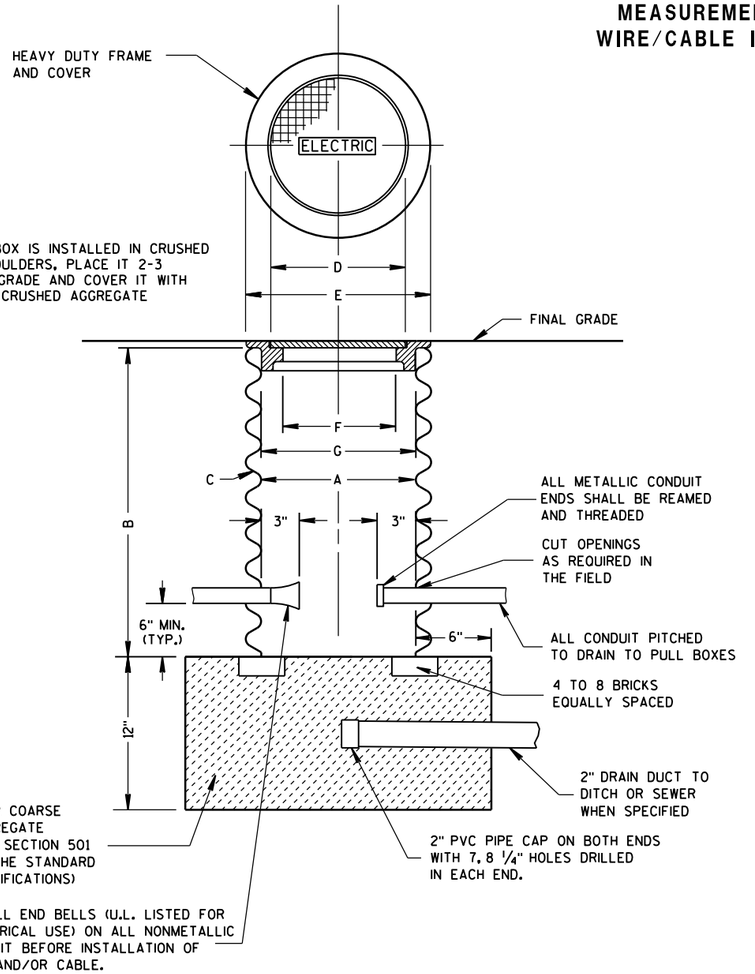


ALTERNATE COVER (LOCKING)

TIGHTENING BAR TYPE



EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES



PULL BOX

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

ALL FRAMES AND COVERS SHALL BE HEAVY DUTY TYPE, SUITABLE FOR VEHICULAR TRAFFIC LOADS.

PULL BOXES LOCATED IN THE ROADWAYS SHALL HAVE LOCKING COVERS.

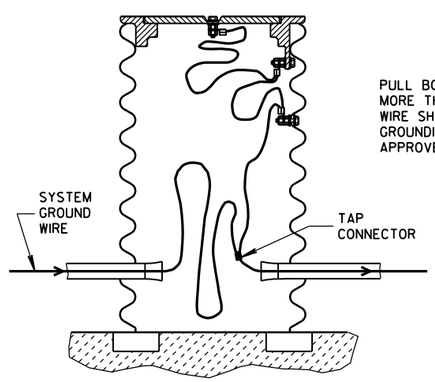
ENTRANCE HOLES INTO PULL BOXES SHALL BE CUT WITH A CIRCULAR HOLE SAW OR HYDRAULIC CONDUIT PUNCH. HOLE SIZE SHALL BE THE OUTSIDE DIAMETER OF THE CONDUIT THAT IS TO FIT IN THE OPENING PLUS NO MORE THAN 1/4".

THE CONTRACTOR SHALL NOT INSTALL WIRE IN ANY PULL BOX UNTIL ITS INSTALLATION HAS BEEN INSPECTED AND ACCEPTED BY THE ENGINEER.

GROUNDING LUGS (MECHANICAL CONNECTORS) SHALL BE U.L. LISTED AND APPROVED FOR USE WITH COPPER WIRE.

ALL METALLIC CONDUIT IN WHICH WIRE AND/OR CABLE IS TO BE INSTALLED, SHALL BE BUSHED BEFORE INSTALLATION OF THE WIRE AND/OR CABLE.

WHEN PULL BOXES ARE INSTALLED FOR FUTURE USE, DO NOT INSTALL THE EQUIPMENT GROUNDING LUG. THE EQUIPMENT GROUNDING LUG, THE EQUIPMENT GROUNDING ELECTRODE AND THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE REQUIRED AND INSTALLED UNDER A FUTURE WIRING CONTRACT.



PULL BOX TO NEAREST BASE DISTANCE MORE THAN 20 FEET. PULL BOX GROUND WIRE SHALL CONNECT AT SYSTEM GROUNDING WIRE. USE DEPARTMENT APPROVED TAP CONNECTOR.

EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES

PULL BOX

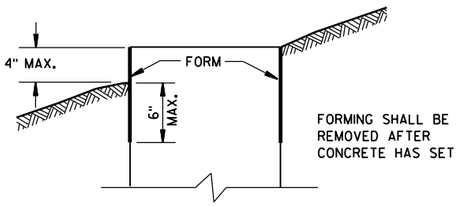
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL 537
FHWA

6

S.D.D. 9 B 4-11

FORM DEPTH SHALL BE NO MORE THAN 6" BELOW GRADE ON THE LOWER SIDE OF BASE



FORMING DETAIL

QUANTITY REQUIREMENTS	CONCRETE BASE TYPE		
	1	2	5 & 6
APPROX. CUBIC YARDS OF CONCRETE	0.40	0.57	0.40
LBS. OF HOOP BAR STEEL	NONE	23	16
LBS. OF VERTICAL BAR STEEL	NONE	60	18

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

BASES SHALL BE EXCAVATED BY USE OF A CIRCULAR AUGER.

TOP SURFACES OF CONCRETE BASES SHALL BE TROWEL FINISHED SMOOTH AND LEVEL.

CONDUIT SIZES AND LOCATIONS SHALL BE AS SHOWN ON THE PLANS.

THE FINAL OR TERMINATING CONCRETE BASE IN A CONDUIT RUN SHALL HAVE A 6" EXIT STUB INSTALLED FOR FUTURE CABLING USE. THE EXIT STUB SHALL BE SIZED AS USED THROUGHOUT THE CONDUIT RUN AS SHOWN AT THE ENTRANCE OF THE BASE.

MINIMUM BENDING RADIUS OF CONDUIT IS EQUAL TO 6 X THE DIAMETER.

CONDUIT HEIGHT ABOVE CONCRETE BASES SHALL BE 1 INCH. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

GENERAL NOTES (CONTINUED)

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF CONCRETE BASES BEFORE INSTALLATION OF CABLE OR WIRE.

ENDS OF CONDUIT INSTALLED BELOW GRADE FOR FUTURE USE SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC.

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS, U.L. LISTED FOR ELECTRICAL USE, SHALL BE USED.

IF A BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE DIRT OR FILL, THE FORM SHALL BE REMOVED BEFORE BACKFILLING AROUND THE BASE. BACKFILL SHALL BE TAMPED TIGHT AGAINST THE BARE CONCRETE BASE IN LAYERS OF 1 FOOT OR LESS.

A NO. 4 AWG, STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD) FOR TYPE 1, TYPE 2, TYPE 5, AND TYPE 6 BASES.

THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE FURNISHED AND INSTALLED TO ENTER THE BASE OF THE TYPE 2 AND TYPE 5 BASES THROUGH A 1 INCH CONDUIT INSTALLED FOR GROUNDING PURPOSES, LEAVING A 4 FOOT COIL OF WIRE ABOVE THE CONCRETE BASE. THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE NEATLY COILED AND THE COILS TIED TOGETHER.

ANCHOR RODS SHALL BE THREADED 12" IN LENGTH ON EACH END OF THE ROD. ANCHOR RODS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 654.2.1 OF THE STANDARD SPECIFICATIONS.

WASHERS AND LOCK WASHERS ARE REQUIRED ON ALL ANCHOR RODS.

WHEN ANCHOR RODS USING THE ALTERNATE "L" BEND ARE FURNISHED, THE 4" "L" BEND SHALL BE IN ADDITION TO THE SPECIFIED ANCHOR ROD BAR LENGTH. THE "L" BEND END SHALL NOT BE THREADED.

ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

WELDING OF THE ANCHOR RODS TO THE CAGE IS UNACCEPTABLE. TIE WIRES SHALL BE USED.

BAR STEEL REINFORCEMENT SHALL BE COATED WITH POWDERED EPOXY RESIN IN ACCORDANCE WITH SECTION 505 OF THE STANDARD SPECIFICATIONS (LATEST EDITION).

(1) THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18 INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36 INCHES EXCEPT WITH WRITTEN APPROVAL BY THE ENGINEER.

(2) (4) 1" DIA. X 3'-6" ANCHOR RODS.

(3) (4) 1" DIA. X 5'-0" ANCHOR RODS.

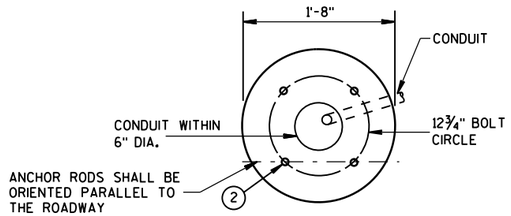
(4) (6) NO. 6 X 6'-8" BAR STEEL REINFORCEMENT.

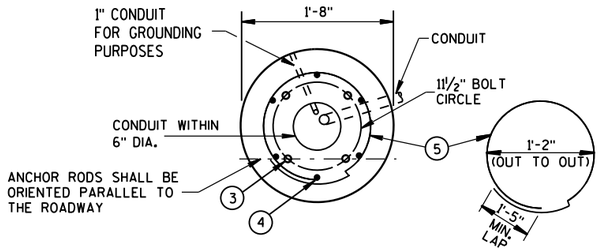
(5) (7) NO. 4 X 5'-1" BAR STEEL REINFORCEMENT @ 1'-0" C-C.

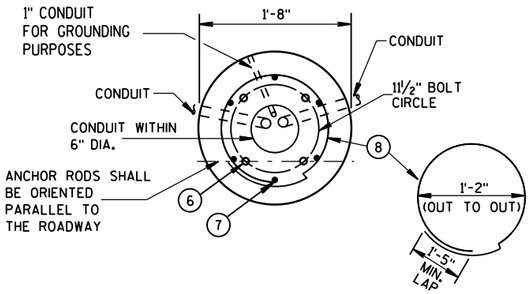
(6) (4) 1" DIA. X 3'-6" ANCHOR RODS.

(7) (6) NO.4 X 4'-8" BAR STEEL REINFORCEMENT.

(8) (5) NO. 4 X 5'-1" BAR STEEL REINFORCEMENT @ 1'-0" C-C.

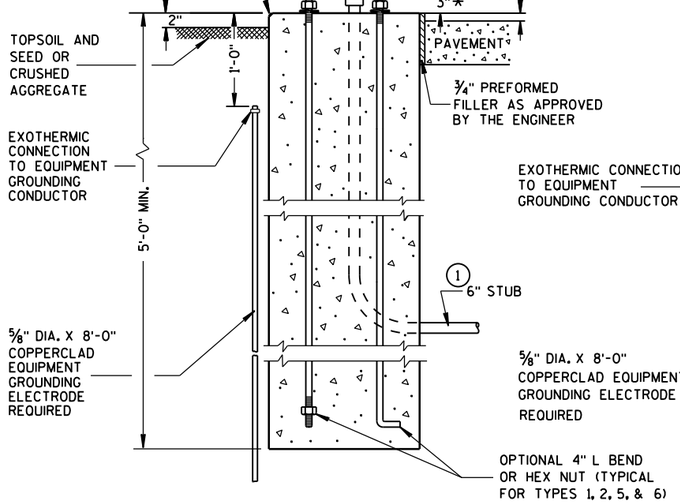






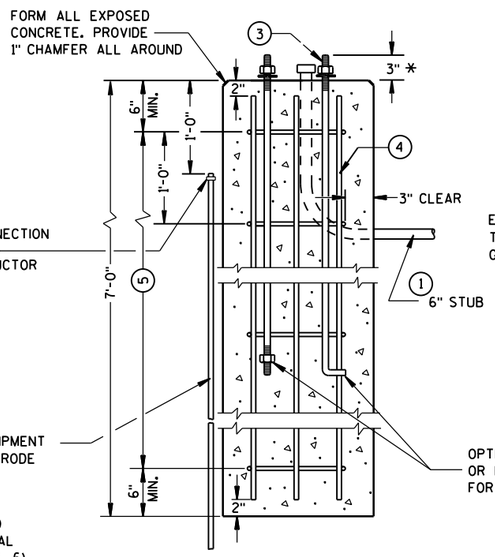
HALF SECTION IN UNPAVED AREA

(TYPICAL FOR TYPES 1, 2, 5, & 6)

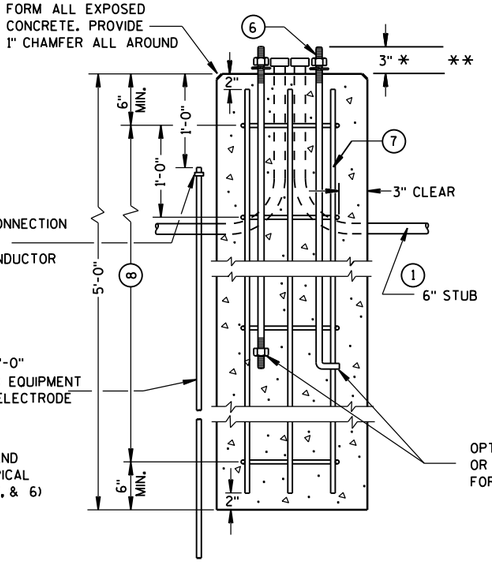


HALF SECTION IN PAVEMENT

(TYPICAL FOR TYPES 1, 2, 5, & 6)



TYPE 2



TYPE 5 & 6

CONCRETE BASES

* ANY ANCHOR ROD PROJECTION SHORTER THAN 2¾" OR LONGER THAN 3¼" SHALL REQUIRE THE BASE TO BE REMOVED AND REPLACED AT THE CONTRACTORS EXPENSE.

** FOR NONBREAKAWAY INSTALLATIONS, 4½" ± ANCHOR ROD PROJECTION WITH THE USE OF LEVELING NUTS. RODENT SCREEN REQUIRED.

CONCRETE BASES, TYPES 1, 2, 5, & 6

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL 538
FHWA

6
S.D.D. 9 C 2-7

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

FOUR (4) BOLTS SHALL BE FURNISHED WITH EACH TRANSFORMER BASE. BOLTS SHALL BE 1" DIAMETER, 4" IN LENGTH, WITH WASHERS, LOCK WASHERS AND NUTS. BOLTS, NUTS AND WASHERS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 641.2.2 OF THE STANDARD SPECIFICATIONS.

LEVELING SHIMS, IF NEEDED, SHALL BE DESIGNED FOR THE PURPOSE AND USED UNDER CAST BASES WHEN PLUMBING POLES OR STANDARDS DURING INSTALLATION. THE USE OF WASHERS IN LIEU OF PROPER LEVELING SHIMS IS NOT ACCEPTABLE.

SHIM LENGTH SHALL BE LONG ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.

DOUBLE NUTTING IS NOT ACCEPTABLE FOR LEVELING OR MOUNTING PURPOSES.

A NEMA APPROVED, U.L. LISTED, COPPER WITH BRASS OR STAINLESS STEEL SET SCREW, DIRECT BURY RATED, MECHANICAL CONNECTOR (LUG), SIZED TO ACCEPT AWG. #10 TO #4 COPPER STRANDED WIRE SHALL BE FURNISHED AND INSTALLED IN THE PEDESTAL AND TRANSFORMER BASES.

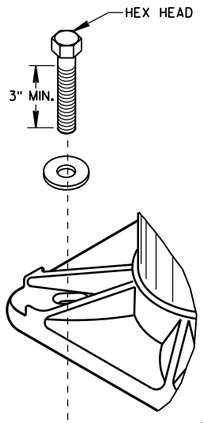
THE MECHANICAL CONNECTOR SHALL BE INSTALLED USING A 1/4" - 20 (TPI) STAINLESS STEEL HEX HEAD BOLT OF SUFFICIENT LENGTH TO FIRMLY ATTACH THE LUG TO THE BASE.

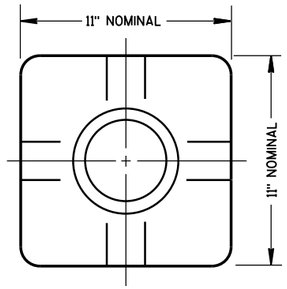
SHOULD THE MANNER OF ATTACHMENT OF THE LUG REQUIRE WASHERS, HEX NUTS, LOCK WASHER - THEY SHALL BE STAINLESS STEEL AS IS THE BOLT. THE MANNER OF ATTACHMENT SHALL NOT BLOCK ACCESSIBILITY TO WIRE PLACEMENT IN THE CONNECTOR.

PEDESTAL BASE COLLAR THREADING SHALL BE TAPERED AND IN ACCORDANCE WITH NATIONAL PIPE THREADING DIMENSIONS.

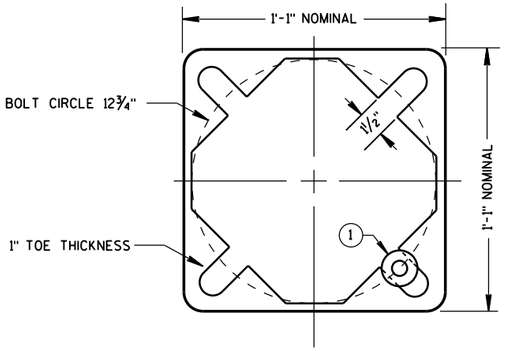
BASE COLLAR THREADING SHALL EXTEND INTO THE BASE COLLAR WITH SUFFICIENT DEPTH TO ACCEPT THE INSTALLATION OF TRAFFIC SIGNAL STANDARDS TO A DEPTH OF 1 1/2", THEN TIGHTENING TO A POINT OF BEING IMMOVABLE.

THE ACCESS DOOR SHALL BE OF THE SAME MATERIAL AS THE BASE.

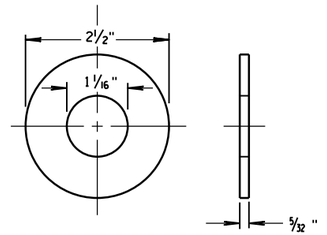




TOP VIEW
(PEDESTAL BASE)

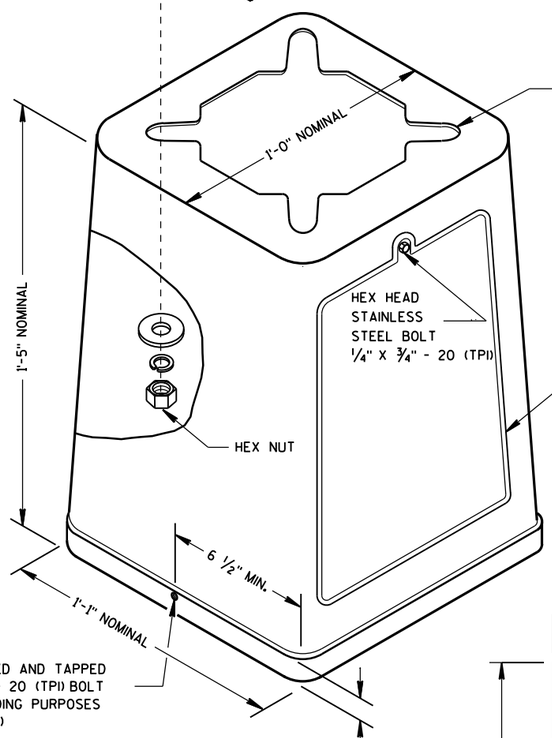


BOTTOM VIEW
(PEDESTAL BASE)

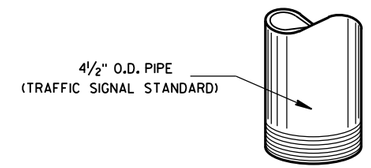


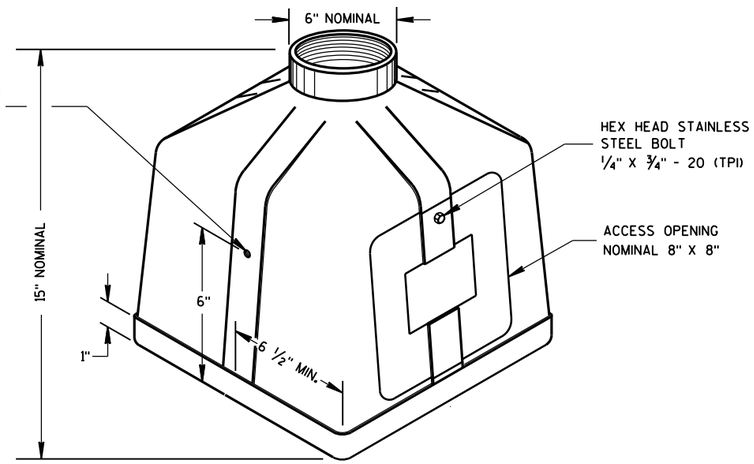
ZINC COATED STEEL WASHER
TO BE PROVIDED BY THE CONTRACTOR

PEDESTAL BASE WASHER (1)



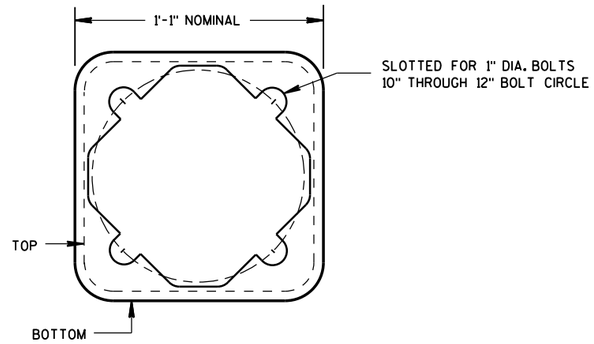
ISOMETRIC VIEW



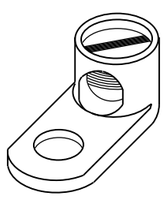


ISOMETRIC VIEW

PEDESTAL BASE



BOTTOM VIEW
(TRANSFORMER BASE)

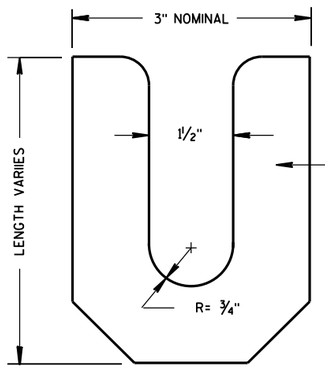


TYPICAL MECHANICAL CONNECTOR LUG

TO BE FURNISHED WITH EACH BASE

TRANSFORMER BASE

INTENDED FOR USE WITH TYPE 2, 3, 4, 5 & 6 POLES



LEVELING SHIM

TRANSFORMER/PEDESTAL BASES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

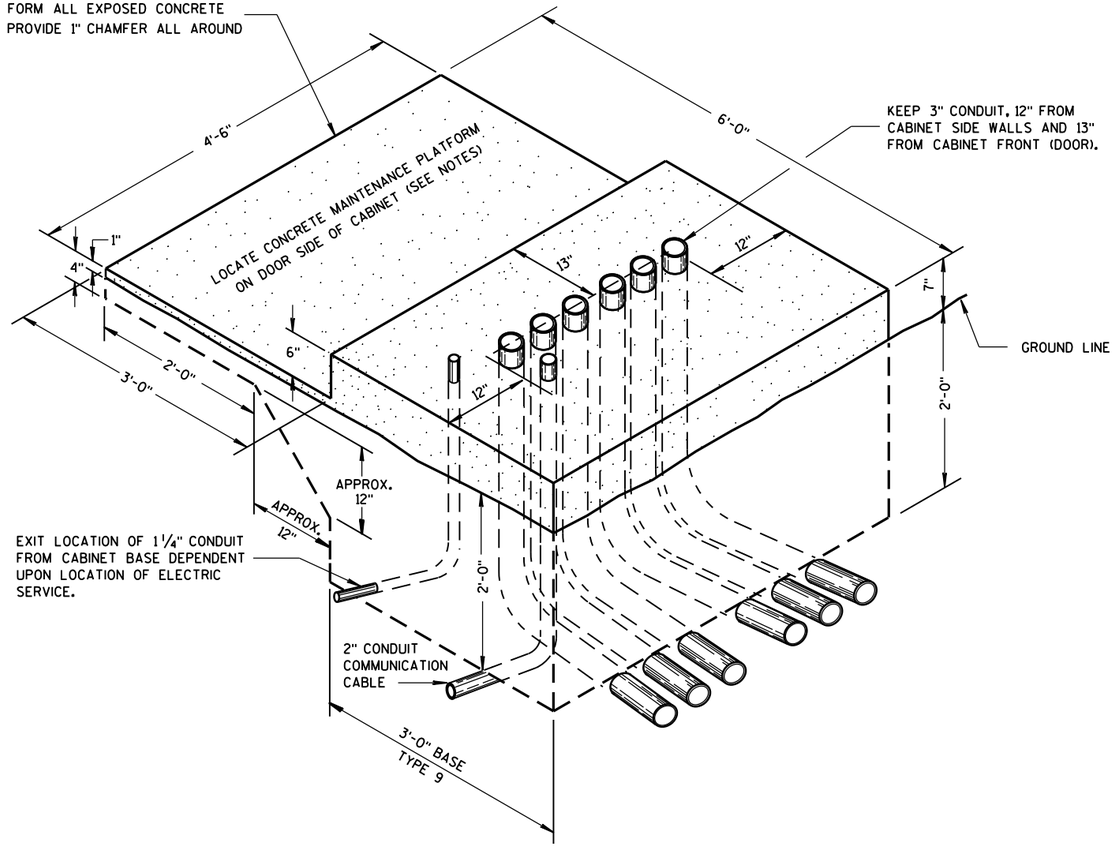
APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

6

S.D.D. 9 C 3-4

6

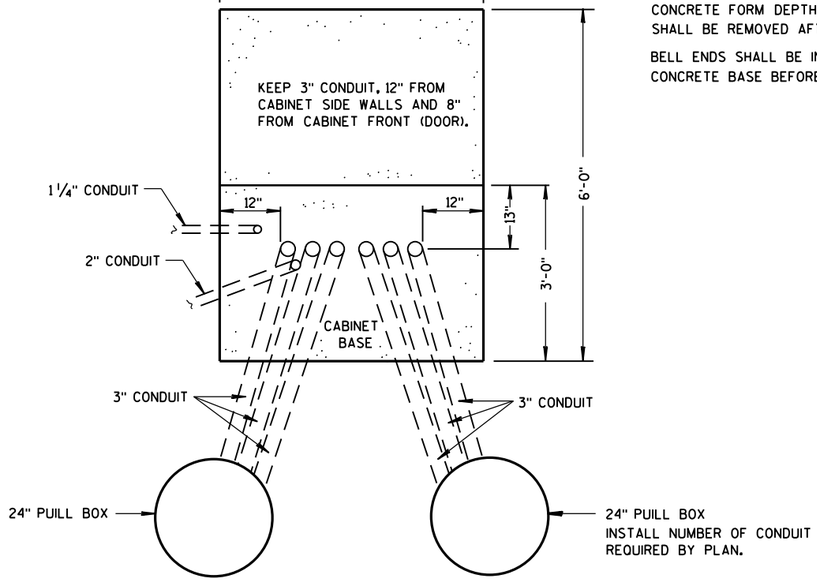
S.D.D. 9 C 3-4



ISOMETRIC VIEW

TYPE 9, SPECIAL

(C.Y. CONCRETE = APPROX. 1.56)



PLAN VIEW

CONCRETE CONTROL CABINET BASE, TYPE 9, SPECIAL

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

INSTALL FOUR ½ INCH MINIMUM DIAMETER X 4 INCH MINIMUM LENGTH STAINLESS STEEL APPROVED CONCRETE MASONRY ANCHORS WITH A PULLOUT STRENGTH OF 9,000 LBS. TO ANCHOR THE CABINET TO TYPE 6, 7, 8, AND 9 BASES. THE ANCHOR STUDS SHALL BE LOCATED AS DIRECTED BY THE ENGINEER TO PROPERLY ANCHOR THE CONTROL CABINET TO THE BASE.

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS, U.L. LISTED FOR ELECTRICAL USE, SHALL BE USED.

CONDUIT HEIGHT ABOVE THE CONCRETE BASE SHALL BE 1 INCH.

DEPTH OF CONDUIT INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES MINIMUM AND 36 INCHES MAXIMUM.

DEPTH OF CONDUIT INSTALLED THAT IS NOT BELOW THE TRAVELED WAY SHALL BE 18 INCHES MINIMUM AND 36 INCHES MAXIMUM.

ANY EXCEPTION TO THE MAXIMUM DEPTH SHALL BE ONLY WITH THE WRITTEN APPROVAL OF THE ENGINEER.

CONTROL CABINET BASE TOP SURFACE SHALL BE TROWEL FINISHED SMOOTH AND LEVEL.

MAINTENANCE PLATFORM SHALL BE FLOAT OR BROOM FINISHED AND BE LEVEL.

MAINTENANCE PLATFORMS ARE NOT REQUIRED WHEN THE SURROUNDING AREA IS PAVED.

MINIMUM BENDING RADIUS OF CONDUIT = 6 X THE DIAMETER.

ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

CAP ALL BELOW GRADE METALLIC CONDUIT ENDS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED.

PLUG ALL BELOW GRADE NONMETALLIC CONDUIT ENDS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

CONDUIT EXITING THE CONCRETE BASE (SIX THREE INCH) SHALL TERMINATE IN PULL BOXES AS SHOWN ON THE PLANS.

CONCRETE FORM DEPTH BELOW FINISHED GRADE SHALL BE 6" MAXIMUM. CONCRETE FORMS SHALL BE REMOVED AFTER CONCRETE HAS SET.

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF THE CONCRETE BASE BEFORE INSTALLATION OF CABLE OR WIRE.

CONCRETE CONTROL CABINET BASE, TYPE 9, SPECIAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

BASES SHALL BE EXCAVATED BY USE OF A CIRCULAR AUGER.

TOP SURFACES OF CONCRETE BASES SHALL BE TROWEL FINISHED AND LEVEL.

CONDUIT SIZES AND LOCATIONS SHALL BE AS SHOWN ON THE PLANS.

THE FINAL OR TERMINATING CONCRETE BASE IN A CONDUIT RUN SHALL HAVE A 6" EXIT STUB INSTALLED FOR FUTURE CABLING USE. THE EXIT STUB SHALL BE SIZED AS USED THROUGHOUT THE CONDUIT RUN AS SHOWN AT THE ENTRANCE OF THE BASE.

MINIMUM BENDING RADIUS OF CONDUIT IS EQUAL TO 6 X THE DIAMETER.

CONDUIT HEIGHT ABOVE CONCRETE BASES SHALL BE 4 INCHES. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED. NONMETALLIC CONDUIT SHALL HAVE BELL END INSTALLED. ALL CONDUIT SHALL BE SLOPED TO PULL BOX.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUIT IN WHICH WIRE OR CABLE IS NOT INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF CONCRETE BASES BEFORE INSTALLATION OF CABLE OR WIRE.

ENDS OF CONDUIT INSTALLED BELOW GRADE FOR FUTURE USE SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC.

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS, U.L. LISTED FOR ELECTRICAL USE, SHALL BE USED.

IF A BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE DIRT OR FILL, THE FORM SHALL BE REMOVED BEFORE BACKFILLING AROUND THE BASE. BACKFILL SHALL BE TAMPED TIGHT AGAINST THE BARE CONCRETE BASE IN LAYERS OF 1 FOOT OR LESS.

A NO. 4 AWG, STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD).

THE EQUIPMENT GROUNDING CONDUCTOR SHALL ENTER THE BASE THROUGH A 1 INCH CONDUIT INSTALLED FOR GROUNDING PURPOSES, LEAVING A 4 FOOT COIL OF WIRE ABOVE THE CONCRETE BASE. THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE NEATLY COILED AND THE COILS TIED TOGETHER.

WELDING OF THE ANCHOR RODS TO THE CAGE IS UNACCEPTABLE. TEMPLATES SHALL BE USED.

BAR STEEL REINFORCEMENT SHALL BE COATED WITH POWDERED EPOXY RESIN IN ACCORDANCE WITH SECTION 505 OF THE STANDARD SPECIFICATIONS (LATEST EDITION).

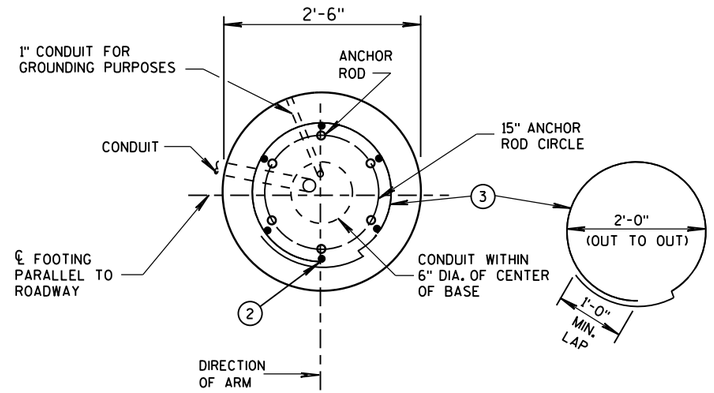
ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

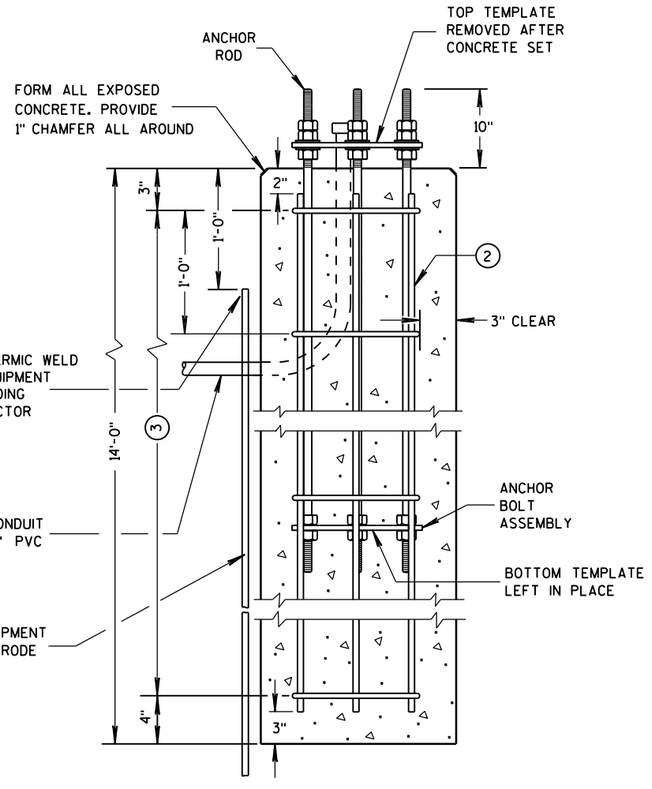
(1) THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18 INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36 INCHES, (GREATER THAN 36 INCHES IF INSTALLED IN BREAKER-RUN), EXCEPT WITH WRITTEN APPROVAL BY THE ENGINEER.

(2) (6) NO. 6 X 13'-7" BAR STEEL REINFORCEMENT.

(3) (15) NO. 4 X 7'-4" BAR STEEL REINFORCEMENT @ 1'-0" C-C.

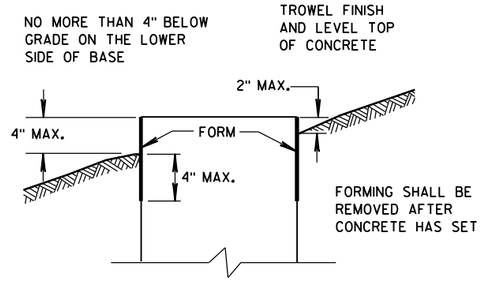
CONCRETE MASONRY	fc=3,500 p.s.i.
HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60	fy=60,000 p.s.i.
ANCHOR RODS, AASHTO M314 GRADE 55	fy=55,000 p.s.i.
TEMPLATES, ASTM, A709 GRADE 36	fy=36,000 p.s.i.



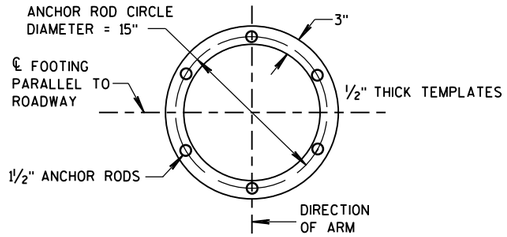


CONCRETE BASE TYPE 10
(FOR TYPE 9 & 10 POLES)

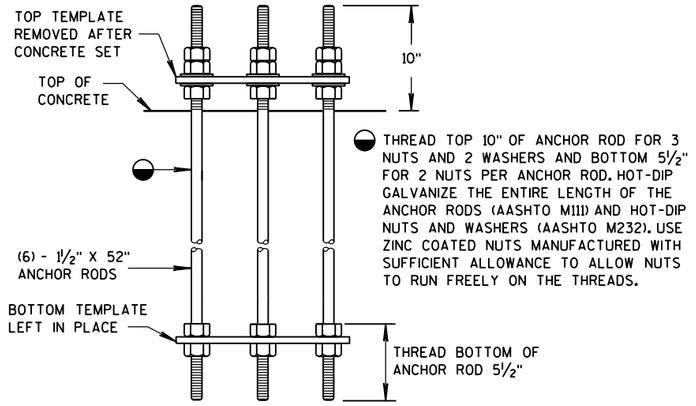
TO BE USED WHEN GROUND ELEVATION AT BASE EQUALS OR IS GREATER THAN HIGH POINT OF ROADWAY ELEVATION. SEE S.D.D. 9C13-2 WHEN GROUND ELEVATION AT BASE IS LOWER THAN HIGH POINT OF ROADWAY ELEVATION.



FORMING DETAIL



TOP AND BOTTOM TEMPLATES



ANCHOR BOLT ASSEMBLY DETAIL

CONCRETE BASE TYPE 10
ANCHOR ASSEMBLY

QUANTITY REQUIREMENTS	
APPROX. CUBIC YARDS OF CONCRETE	2.5
LBS. OF HOOP BAR STEEL	69
LBS. OF VERTICAL BAR STEEL	122

CONCRETE BASE TYPE 10

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

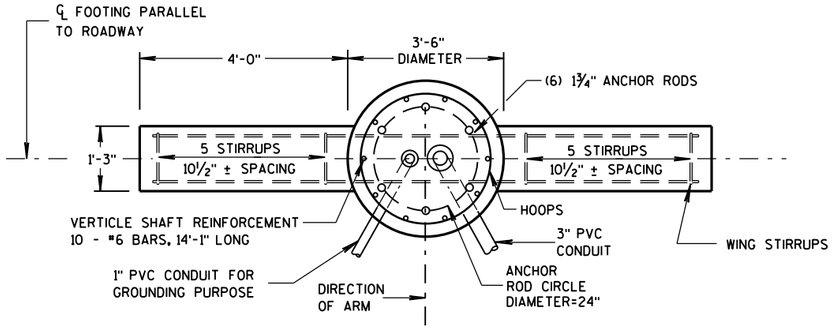
Feb. 2015 — DATE

/S/ Ahmet Demirbilek — STATE ELECTRICAL

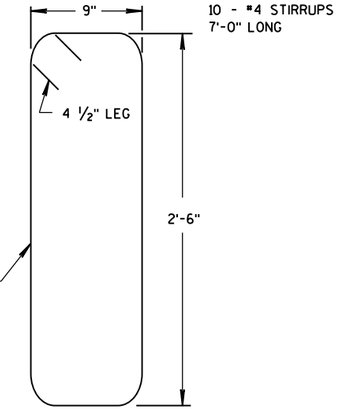
FHWA

6

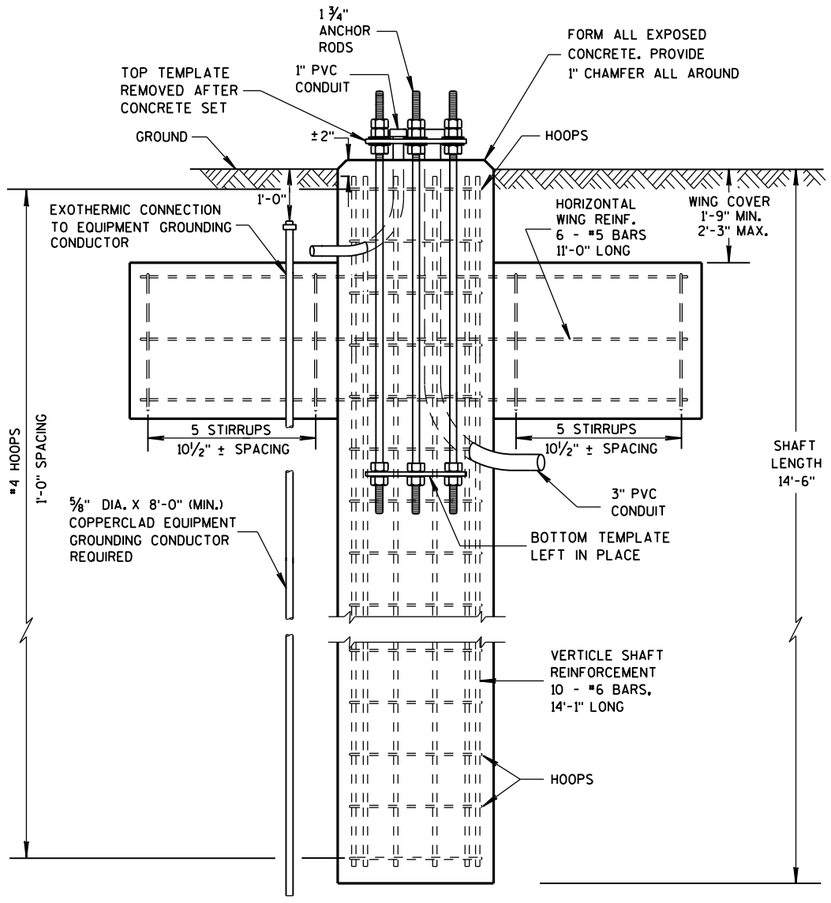
S.D.D. 9 C 11-6



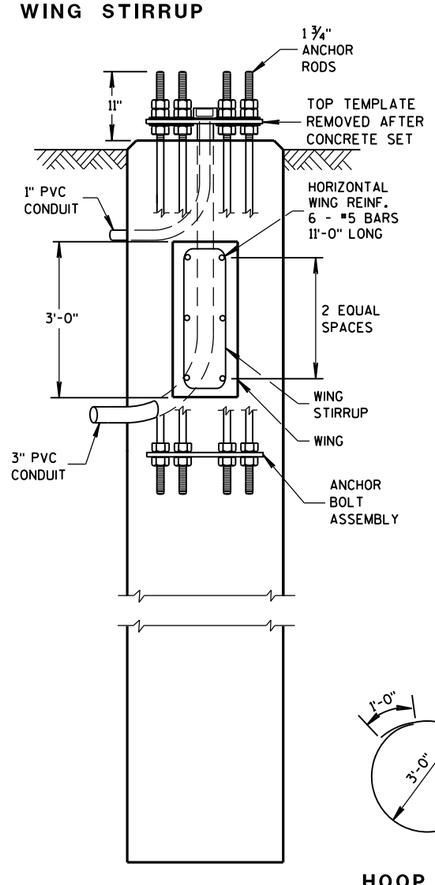
PLAN VIEW



WING STIRRUP

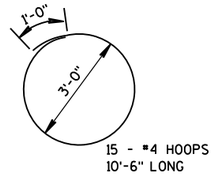


ELEVATION VIEW



SIDE VIEW

DOES NOT SHOW HOOPS OR VERTICAL SHAFT REINFORCEMENT



15 - #4 HOOPS 10'-6" LONG

HOOP DETAIL

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

ORIENT ANCHOR RODS IN FOOTING AND PROVIDE ANCHOR ROD PROJECTION ABOVE TOP OF CONCRETE FOOTING BASE PER THIS SHEET.

BENDING DIMENSIONS FOR REINFORCING BARS ARE OUT TO OUT.

USE 3" CLEAR FOR ALL REINFORCEMENT UNLESS NOTED OTHERWISE.

THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO THE TYPE AND LOCATION OF THE UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO.

WELDING OF ANCHOR RODS TO THE CAGE IS UNACCEPTABLE. TEMPLATES SHALL BE USED.

BASES (SHAFT), BELOW THE WING, SHALL BE EXCAVATED BY THE USE OF A CIRCULAR AUGER. IF A BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE SOIL, THE FORM SHALL BE REMOVED BEFORE BACKFILLING AROUNG THE BASE. BACKFILL SHALL BE TAMPED TIGHT AGAINST THE BARE CONCRETE BASE IN LAYERS OF 1 FOOT OR LESS.

TOP SURFACE OF THE CONCRETE BASE SHALL BE TROWEL FINISHED AND LEVEL.

CONDUIT SIZE AND LOCATIONS SHALL BE AS SHOWN ON THE PLANS.

MINIMUM BENDING RADIUS OF CONDUIT IS EQUAL TO 6 X THE DIAMETER.

CONDUIT HEIGHT ABOVE CONCRETE BASE SHALL BE 4½" INCHES. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED. NONMETALLIC CONDUIT SHALL HAVE BELL ENDS INSTALLED. ALL CONDUIT SHALL SLOPE TO PULL BOX.

ALL CONDUIT ENDS AT THE TOP OF THE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF CONCRETE BASES BEFORE INSTALLATION OF CABLE OR WIRE.

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTOR FITTINGS, UL LISTED FOR ELECTRICAL USE, SHALL BE USED.

A NO. 4 AWG, STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD).

THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE FURNISHED AND INSTALLED TO ENTER THE BASE THROUGH A 1-INCH CONDUIT INSTALLED FOR GROUNDING PURPOSES, LEAVING A 4-FOOT COIL OF WIRE ABOVE THE CONCRETE BASE, THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE NEATLY COILED AND THE COILS TIED TOGETHER.

BAR STEEL REINFORCEMENT SHALL BE COATED WITH POWDERED EPOXY RESIN IN ACCORDANCE WITH SECTION 505 OF THE STANDARD SPECIFICATIONS.

THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVEL WAY SHALL BE 24-INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18-INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36-INCHES, (GREATER THAN 36-INCHES IF INSTALLED IN BREAKER-RUN), EXCEPT WITH THE WRITTEN APPROVAL OF THE ENGINEER.

ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

CONCRETE MASONRY	fc=3,500 p.s.i.
HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60	fy=60,000 p.s.i.
ANCHOR RODS, AASHTO M314 GRADE 55	fy=55,000 p.s.i.
TEMPLATES, ASTM A709 GRADE 36	fy=36,000 p.s.i.

(FOR TYPE 12 & 13 POLES)

CONCRETE = 6.3 C.Y.
H.S. REINFORCEMENT = 433 LBS.

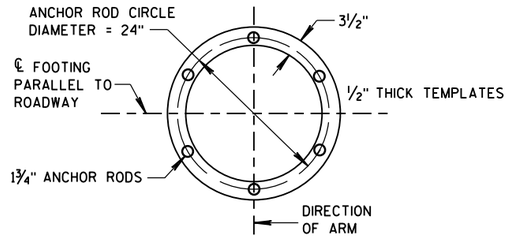
TO BE USED WHEN GROUND ELEVATION AT BASE EQUALS OR IS GREATER THAN HIGH POINT OF ROADWAY ELEVATION.
SEE S.D.D. 9C13-2 WHEN GROUND ELEVATION AT BASE IS LOWER THAN HIGH POINT OF ROADWAY ELEVATION.

CONCRETE BASE TYPE 13

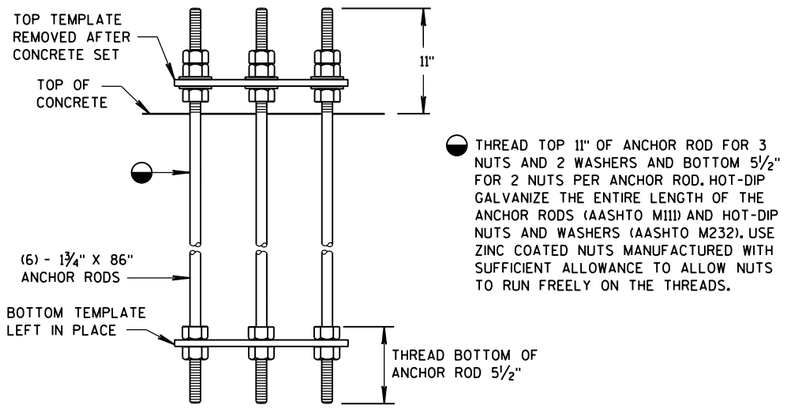
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 9 C 12-6a

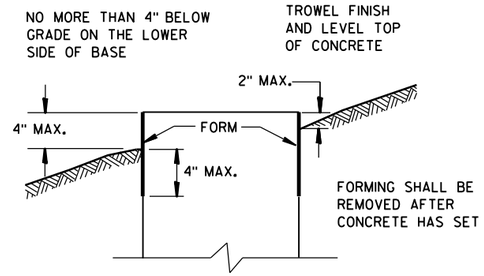


TOP AND BOTTOM TEMPLATES



ANCHOR BOLT ASSEMBLY DETAIL

CONCRETE BASE TYPE 13 ANCHOR ASSEMBLY



FORMING DETAIL

CONCRETE BASE TYPE 13	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED Feb. 2015 DATE FHWA	/S/ Ahmet Demirbilek STATE ELECTRICAL

6

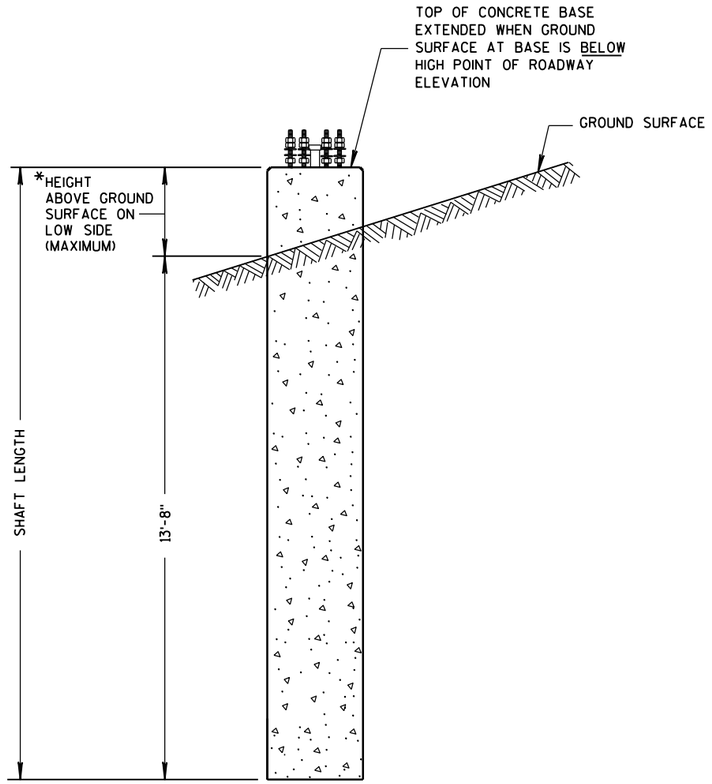
S.D.D. 9 C 12-6b

6

S.D.D. 9 C 12-6b

REINFORCEMENT AND CONCRETE QUANTITIES
ADJUSTED FOR EXTENDED TYPE 10 CONCRETE BASE

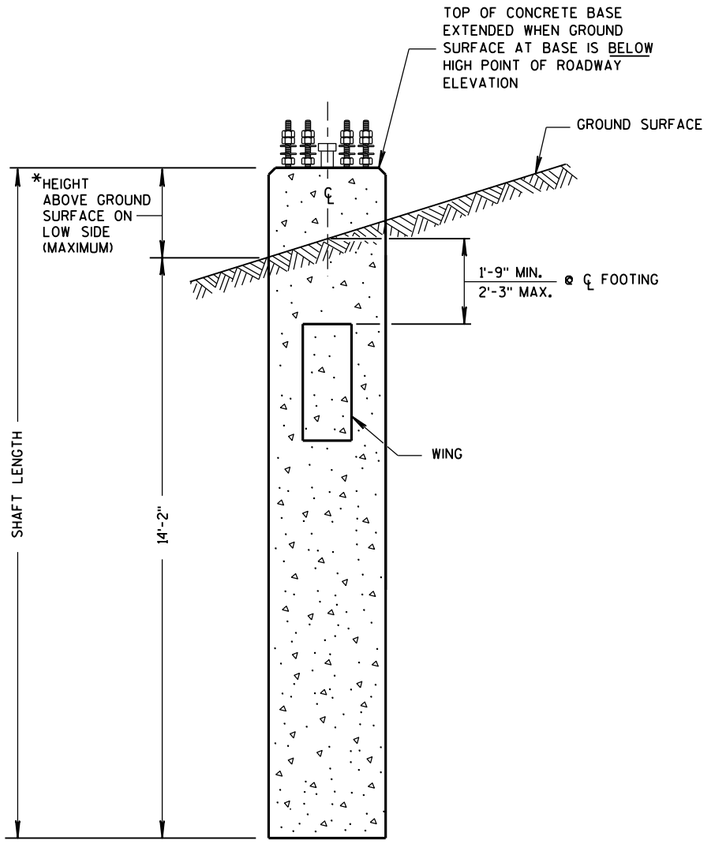
HEIGHT INCREASE REQUIRED	* HEIGHT ABOVE GROUND SURFACE ON LOW SIDE (MAXIMUM)	SHAFT LENGTH	LENGTH OF #6 VERTICAL REINF.	NO. OF #4 HOOPS	C.Y. OF CONCRETE	LBS. OF HOOP BAR STEEL	LBS. OF VERTICAL BAR STEEL
>0" TO 6"	10"	14'-6"	14'-1"	16	2.6	78	127
>6" TO 1'-0"	1'-4"	15'-0"	14'-7"	16	2.7	78	131
>1'-0" TO 1'-6"	1'-10"	15'-6"	15'-1"	17	2.8	83	136
>1'-6" TO 2'-0"	2'-4"	16'-0"	15'-7"	17	2.9	83	141



CONCRETE BASE TYPE 10 (EXTENDED)

REINFORCEMENT AND CONCRETE QUANTITIES
ADJUSTED FOR EXTENDED TYPE 13 CONCRETE BASE

HEIGHT INCREASE REQUIRED	* HEIGHT ABOVE GROUND SURFACE ON LOW SIDE (MAXIMUM)	SHAFT LENGTH	LENGTH OF #6 VERTICAL REINF.	NO. OF #4 HOOPS	C.Y. OF CONCRETE	LBS. OF H.S. BAR STEEL
>0" TO 6"	10"	15'-0"	14'-7"	16	6.5	447
>6" TO 1'-0"	1'-4"	15'-6"	15'-1"	16	6.6	454
>1'-0" TO 1'-6"	1'-10"	16'-0"	15'-7"	17	6.8	469
>1'-6" TO 2'-0"	2'-4"	16'-6"	16'-1"	17	7.0	476



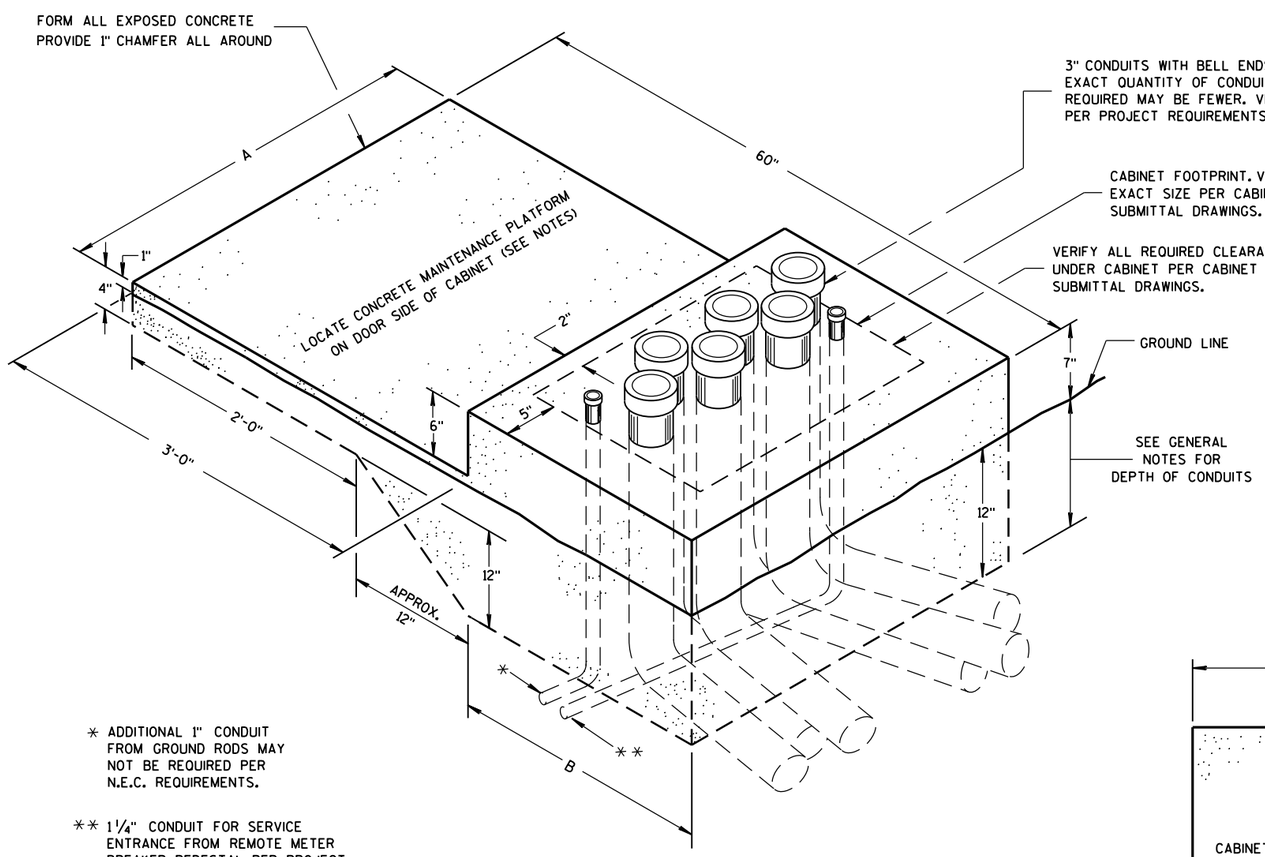
CONCRETE BASE TYPE 13 (EXTENDED)

CONCRETE BASE
TYPE 10 & TYPE 13 EXTENSION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11-26-2013
DATE
/S/ Ahmet Demirbilek
STATE ELECTRICAL
FHWA

6
S.D.D. 9 C 13-2



* ADDITIONAL 1" CONDUIT FROM GROUND RODS MAY NOT BE REQUIRED PER N.E.C. REQUIREMENTS.

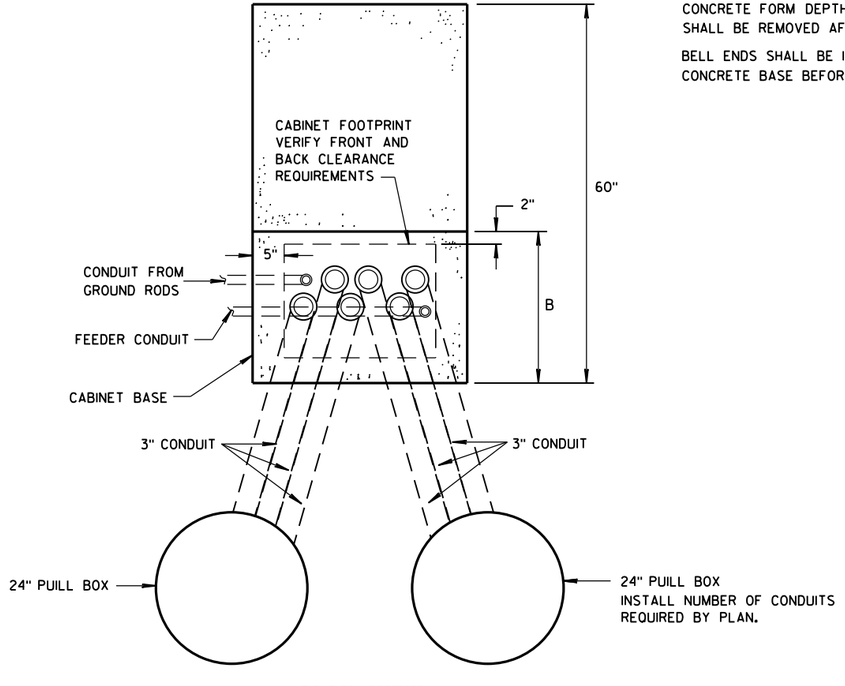
** 1¼" CONDUIT FOR SERVICE ENTRANCE FROM REMOTE METER BREAKER PEDESTAL PER PROJECT REQUIREMENTS. VERIFY LOCATION OF CONDUIT DEPENDENT UPON LOCATION OF INCOMING FEEDER AND FOR EASE OF CONNECTION TO LOAD CENTER.

ISOMETRIC VIEW

CONCRETE CONTROL CABINET BASE, TYPE L

(C.Y. CONCRETE = APPROX. 0.4)

CONCRETE BASE TYPE	CABINET WIDTH	DIMENSIONS		MAXIMUM 3" CONDUITS
		A	B	
L24	24"	34"	24"	4
L30	30"	40"	24"	6



PLAN VIEW

CONCRETE CONTROL CABINET BASE, TYPE L

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

INSTALL FOUR STAINLESS STEEL APPROVED CONCRETE MASONRY ANCHORS TO ANCHOR THE CABINET BASES. THE ANCHORS SHALL BE LOCATED AS DIRECTED BY THE ENGINEER TO PROPERLY ANCHOR THE CONTROL CABINET TO THE BASE.

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS, U.L. LISTED FOR ELECTRICAL USE, SHALL BE USED.

CONDUIT HEIGHT ABOVE THE CONCRETE BASE SHALL BE 1 INCH.

DEPTH OF CONDUIT INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES MINIMUM AND 36 INCHES MAXIMUM.

DEPTH OF CONDUIT INSTALLED THAT IS NOT BELOW THE TRAVELED WAY SHALL BE 18 INCHES MINIMUM AND 36 INCHES MAXIMUM.

ANY EXCEPTION TO THE MAXIMUM DEPTH SHALL BE ONLY WITH THE WRITTEN APPROVAL OF THE ENGINEER.

CONTROL CABINET BASE TOP SURFACE SHALL BE TROWEL FINISHED SMOOTH AND LEVEL.

MAINTENANCE PLATFORM SHALL BE FLOAT OR BROOM FINISHED AND BE LEVEL.

MAINTENANCE PLATFORMS ARE NOT REQUIRED WHEN THE SURROUNDING AREA IS PAVED.

MINIMUM BENDING RADIUS OF CONDUIT = 6 X THE DIAMETER.

ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

CAP ALL BELOW GRADE METALLIC CONDUIT ENDS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED.

PLUG ALL BELOW GRADE NONMETALLIC CONDUIT ENDS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

CONDUIT EXITING THE CONCRETE BASE SHALL TERMINATE IN PULL BOXES AS SHOWN ON THE PLANS.

CONCRETE FORM DEPTH BELOW FINISHED GRADE SHALL BE 6" MAXIMUM. CONCRETE FORMS SHALL BE REMOVED AFTER CONCRETE HAS SET.

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF THE CONCRETE BASE BEFORE INSTALLATION OF CABLE OR WIRE.

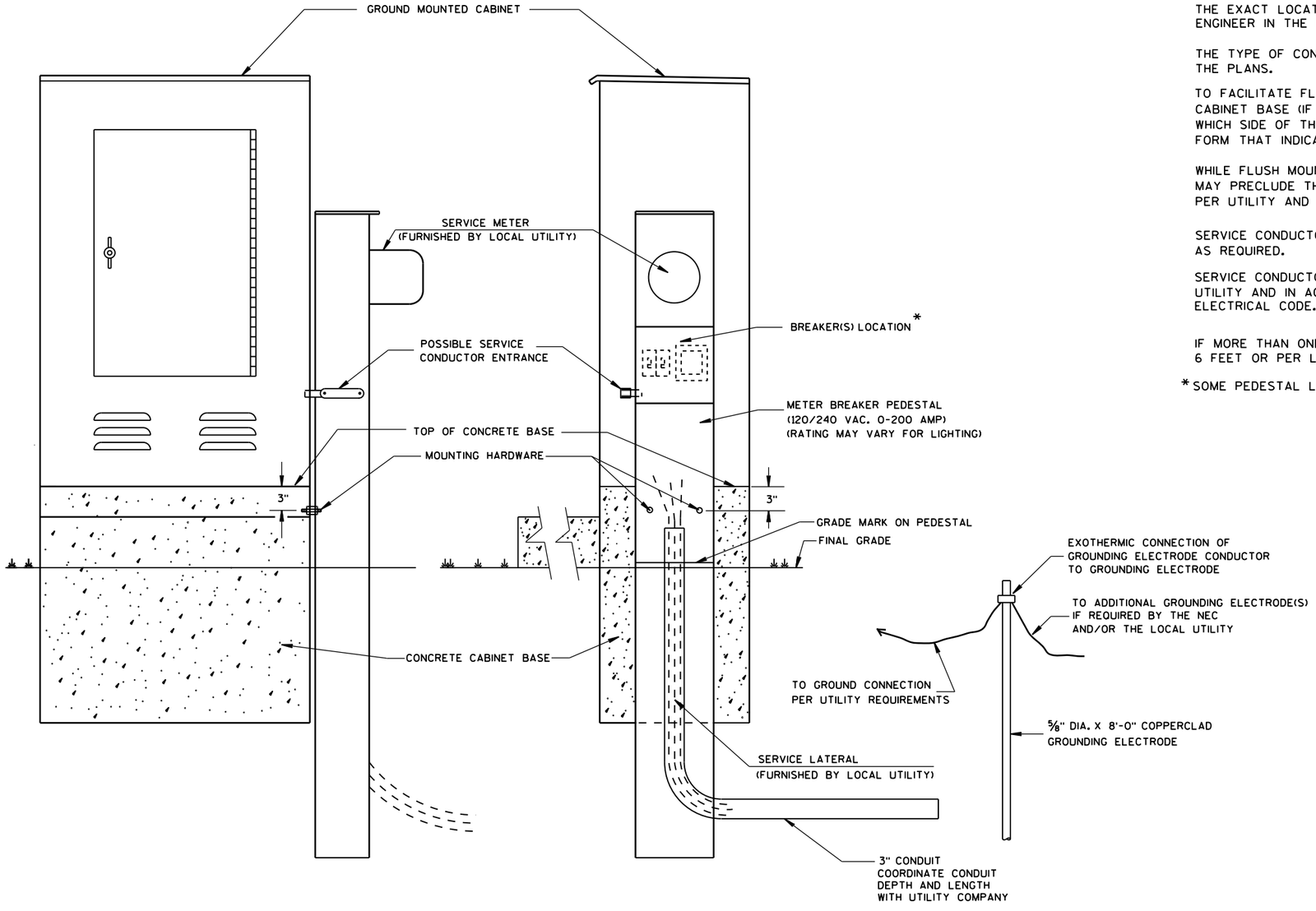
CONCRETE CONTROL CABINET BASE, TYPE L

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Nov. 2014 — DATE
/S/ Thomas Gonring — STATE LIGHTING ENGINE
FHWA

6

S.D.D. 9 C 14-2



TYPICAL CABINET SERVICE INSTALLATION

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

THE EXACT LOCATION OF THE METER BREAKER PEDESTAL SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.

THE TYPE OF CONCRETE CABINET BASE TO BE INSTALLED SHALL BE AS CALLED FOR IN THE PLANS.

TO FACILITATE FLUSH MOUNTING OF THE METER BREAKER PEDESTAL AGAINST THE SIDE OF THE CABINET BASE (IF FLUSH MOUNTING POSSIBLE. CONFER WITH THE LOCAL UTILITY TO DETERMINE WHICH SIDE OF THE CONCRETE BASE THE ELECTRICAL SERVICE LATERAL WILL APPROACH. THEN FORM THAT INDICATED SIDE FOR FULL SIDE DEPTH.

WHILE FLUSH MOUNTING IS THE MOST DESIRABLE MOUNTING CONFIGURATION UTILITY REQUIREMENTS MAY PRECLUDE THIS OPTION. CONTRACTOR MUST PROVIDE UTILITY APPROVED PEDESTAL AND INSTALL PER UTILITY AND MANUFACTURERS REQUIREMENTS.

SERVICE CONDUCTOR ENTRANCES SHALL BE RIGID METALLIC CONDUIT, NIPPLES AND/OR CONDULETS AS REQUIRED.

SERVICE CONDUCTOR ENTRANCES SHALL BE SIZED AND LOCATED AS REQUIRED BY THE LOCAL UTILITY AND IN ACCORDANCE WITH APPROPRIATE ARTICLES OF THE LATEST ACCEPTED NATIONAL ELECTRICAL CODE.

IF MORE THAN ONE GROUNDING ELECTRODE IS REQUIRED, THE DISTANCE APART SHALL BE 6 FEET OR PER LOCAL UTILITY REGULATIONS.

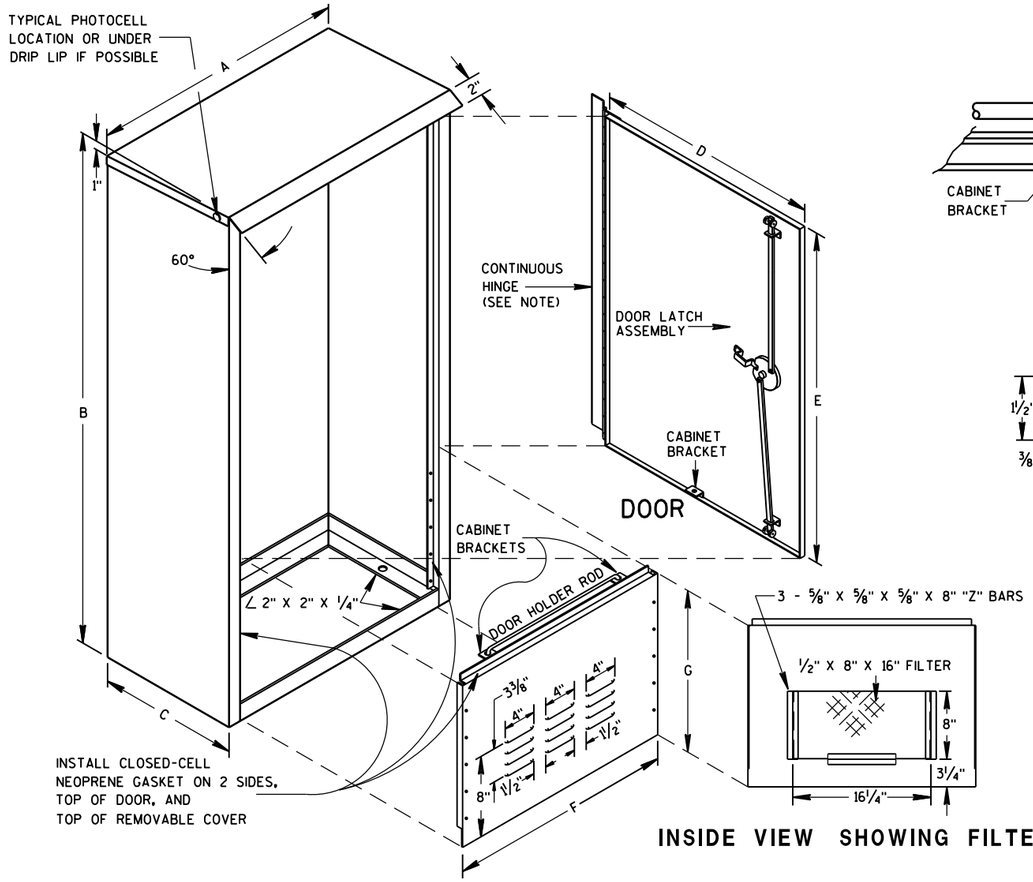
* SOME PEDESTAL LIGHTING PLANS SHOW MAIN LUGS ONLY.

CABINET SERVICE INSTALLATION (METER BREAKER PEDESTAL)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

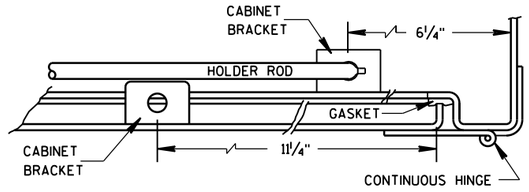
APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

6
S.D.D. 9 D 1-5

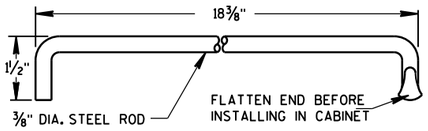


REMOVABLE COVER

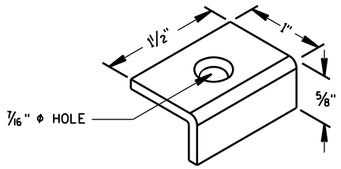
INSIDE VIEW SHOWING FILTER



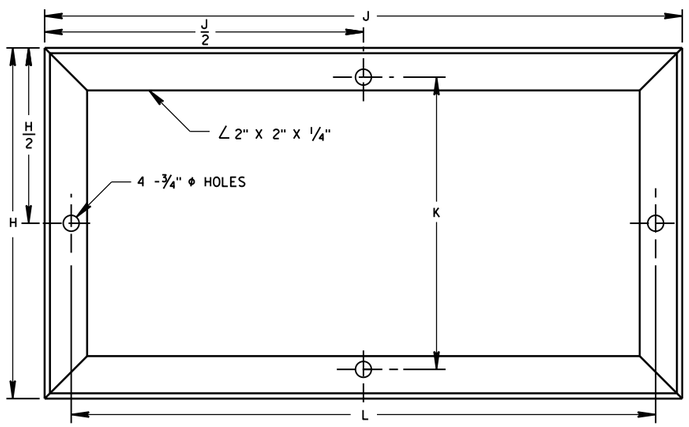
HINGE & DOOR HOLDER



HOLDER ROD



CABINET BRACKET



MOUNTING BASE

TABLE OF DIMENSIONS (INCHES)

MARK	CABINET TYPE		
	3060	3860	3866
A	30	38	38
B	60	60	66
C	16 1/2	16 1/2	24
D	26 1/2	34 3/4	33 3/4
E	38 3/4	38 3/4	38 3/4
F	26 1/2	34 3/4	33 3/4
G	19	19	25
H	16 1/2	16 1/2	24
H/2	8 1/4	8 1/4	12
J	30	38	38
J/2	15	19	19
K	13 3/4	13 3/4	21 1/4
L	27 1/2	35 1/2	35 1/2

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

PRIME WITH PHOSPHATE TREATMENT AND PRIMER.

FINISH EXTERIOR SURFACES WITH RUSTOLEUM #906 SILVER GRAY OR APPROVED EQUAL.

FINISH INTERIOR WITH RUSTOLEUM #2766 HIGH GLOSS WHITE ENAMEL OR APPROVED EQUAL.

ALL SHEET METAL PARTS SHALL BE .125 INCH THICK ALUMINUM.

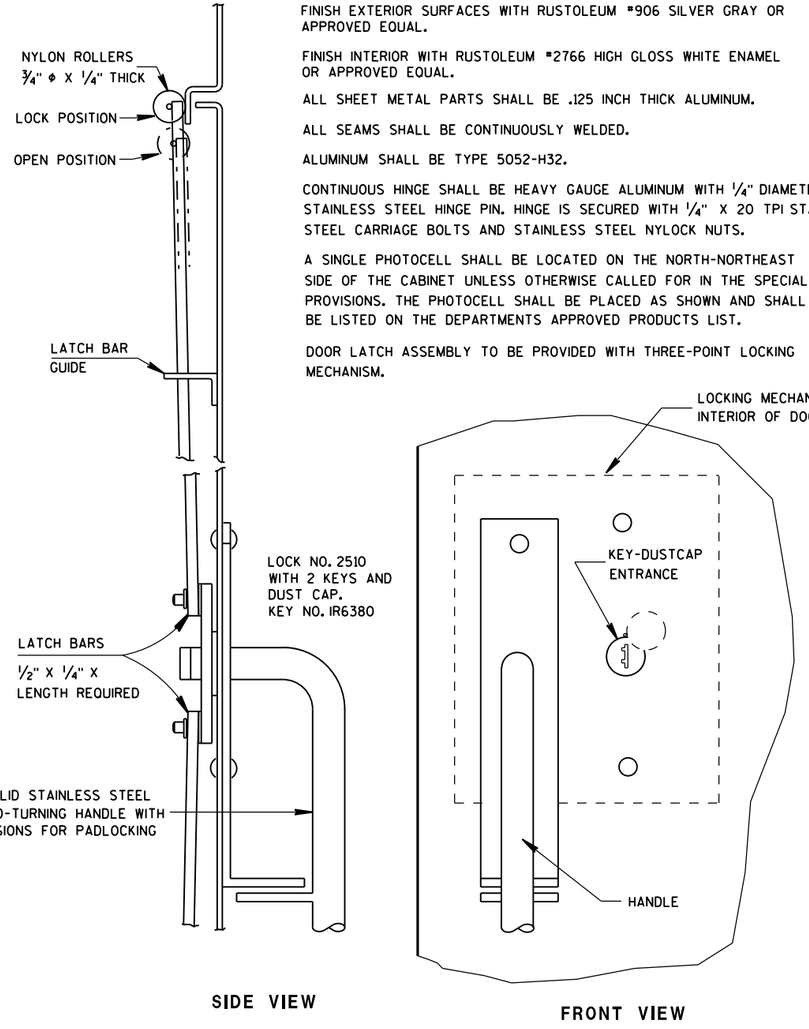
ALL SEAMS SHALL BE CONTINUOUSLY WELDED.

ALUMINUM SHALL BE TYPE 5052-H32.

CONTINUOUS HINGE SHALL BE HEAVY GAUGE ALUMINUM WITH 1/4" DIAMETER STAINLESS STEEL HINGE PIN. HINGE IS SECURED WITH 1/4" X 20 TPI STAINLESS STEEL CARRIAGE BOLTS AND STAINLESS STEEL NYLOCK NUTS.

A SINGLE PHOTOCELL SHALL BE LOCATED ON THE NORTH-NORTHEAST SIDE OF THE CABINET UNLESS OTHERWISE CALLED FOR IN THE SPECIAL PROVISIONS. THE PHOTOCELL SHALL BE PLACED AS SHOWN AND SHALL BE LISTED ON THE DEPARTMENTS APPROVED PRODUCTS LIST.

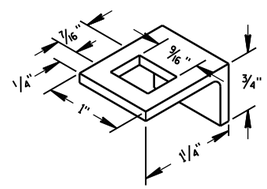
DOOR LATCH ASSEMBLY TO BE PROVIDED WITH THREE-POINT LOCKING MECHANISM.



SIDE VIEW

FRONT VIEW

LATCH ASSEMBLY



LATCH BAR GUIDE

SIGNAL CONTROL CABINET

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014
DATE
/S/ Ahmet Demirbilek
STATE ELECTRICAL 547
FHWA

6

S.D.D. 9 D 2-3

6

S.D.D. 9 D 2-3

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

ALL INTERNAL ELECTRICAL COMPONENTS WILL BE PRE-WIRED BY THE CABINET FABRICATOR.

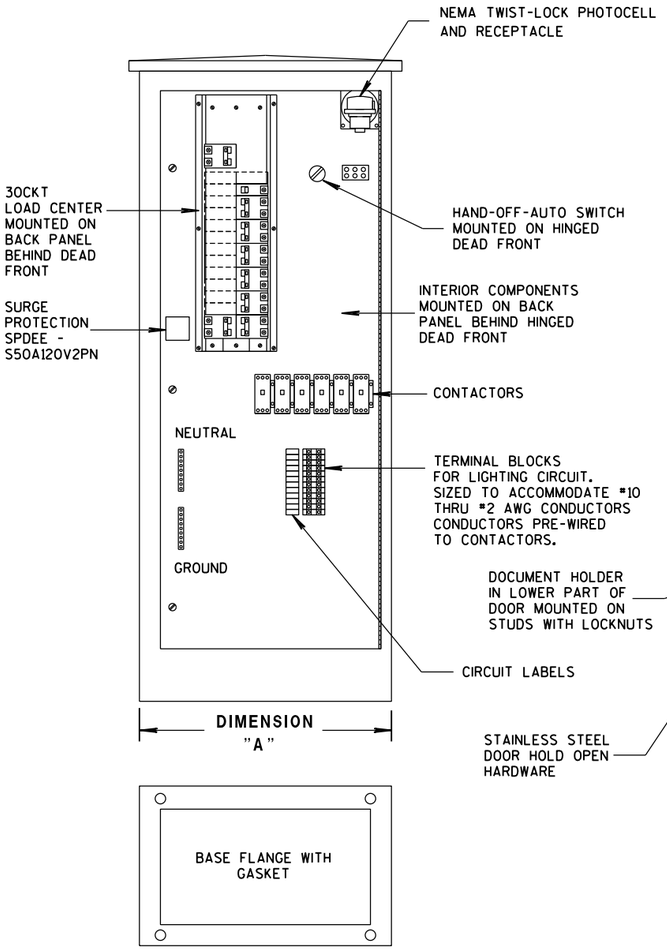
ALL CONDUIT ENTRIES SHALL BE SEALED WITH AN APPROPRIATE DUCT SEALING COMPOUND.

ORIENT PHOTOCELL AWAY FROM AMBIENT LIGHT SOURCES AND ONCOMING TRAFFIC HEADLIGHTS.

THE CONTRACTOR SHALL TOUCH UP ANY DAMAGE TO THE ANODIZED FINISH CAUSED BY THE INSTALLATION PROCESS. COLOR MATCH PAINT SHALL BE USED.

A COMPLETE LIGHTING OR ELECTRICAL PLAN SHALL BE SECURELY PLACED IN THE DOCUMENT HOLDER ATTACHED TO THE DOOR.

FRONT INTERIOR ELEVATION



SIDE VIEW

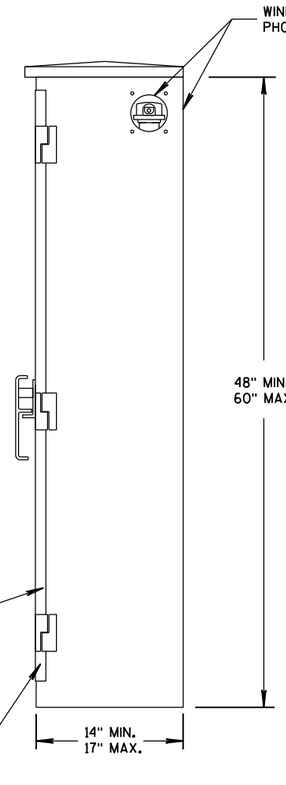
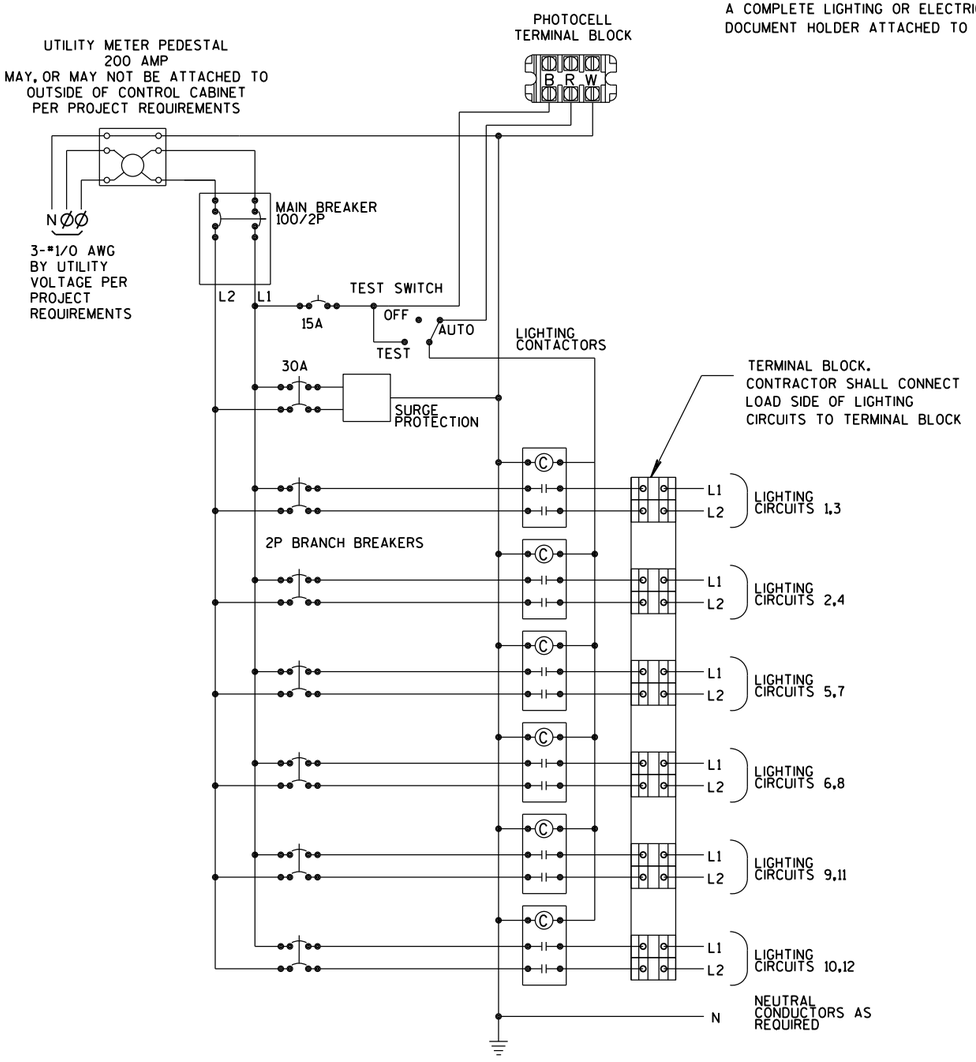


TABLE OF DIMENSIONS (INCHES)

CONCRETE BASE TYPE	CABINET WIDTH	DIMENSION "A"
L24	24"	24"
L30	30"	30"



CONTROL CABINET SCHEMATIC

LIGHTING CONTROL CABINET

LIGHTING CONTROL CABINET

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

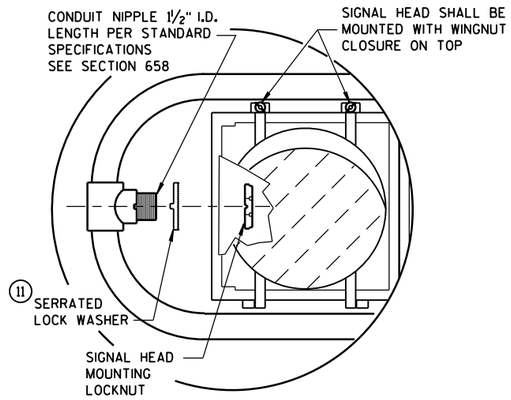
APPROVED
June 2014 — DATE
/S/ Thomas Gonring — STATE LIGHTING ENGINEER
548
NYS.
FHWA

6

S.D.D. 9 D 4-1

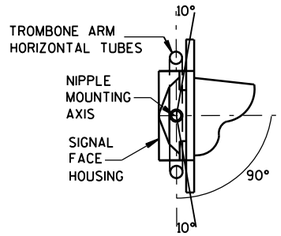
6

S.D.D. 9 D 4-1



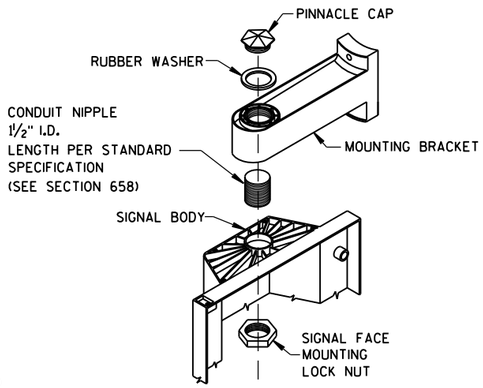
HORIZONTAL SIGNAL HEAD MOUNTING DETAIL *

* SIGNAL HEAD ATTACHMENT ALSO APPLYS TO MOUNTING AT CROSS BAR



SECTION A-A

(10 DEGREES TILT REQUIREMENT OF FACE(S) IN THE TROMBONE MOUNTING)



SIGNAL FACE MOUNTING DETAIL

(BANDED)

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

POLES SHALL BE EITHER ALUMINUM OR GALVANIZED STEEL AS CALLED FOR IN THE CONTRACT.

SECTION 657, POLES, OF THE STANDARD SPECIFICATIONS SHALL APPLY TO THIS DRAWING.

A PULL WIRE/ROPE IN ACCORDANCE WITH STANDARD SPECIFICATION 652 SHALL BE INSTALLED IN EACH TROMBONE ARM RACEWAY DURING THE MANUFACTURING PROCESS.

TYPE 2 ALUMINUM POLES SHALL BE CONSTRUCTED OF 6063-T6 ALUMINUM ALLOY. SLEEVING INSIDE THE POLE IS NOT ACCEPTABLE.

WHEN TRANSFORMER BASES ARE USED, WIRE CONNECTIONS SHALL BE MADE IN THE TRANSFORMER BASE.

(1) 4" X 6" REINFORCED HANDHOLE & COVER ASSEMBLY WITH 2 (TWO) ¼" X ¾" - 20 TPI HEX HEAD STAINLESS STEEL BOLTS.

(2) SIGNAL FACE MOUNTING BRACKETS. MOUNT WITH CAP SCREWS AND BANDING. (SEE STANDARD SPECIFICATIONS - SEC. 658)

(3) GROMMETS, 1" CHASE NIPPLES OR 1" CLOSE CONDUIT NIPPLES WITH BUSHINGS SHALL BE PROVIDED FOR 1⅜" HOLE IN POLE SHAFT FOR WIRING.

(4) SECURELY MOUNT DULL BLACK POLYCARBONATE BACKPLATES, PROJECTING 5" BEYOND ALL SIDES OF THE SIGNAL FACE HOUSING, PER MANUFACTURER'S RECOMMENDATIONS.

(5) POLE MOUNTED SIGNAL FACES SHALL REQUIRE 1 OR MORE MOUNTING SPACERS UNDER THE TOP MOUNTING BRACKET(S) AS REQUIRED, TO PLUMB THE SIGNAL FACES.

(6) CAST ALUMINUM TRANSFORMER BASE, WHEN REQUIRED.

(7) MOUNTING BRACKET NIPPLES FOR THE SIGNAL FACE(S) SHALL BE 2 INCHES IN LENGTH AND 1½ INCHES IN DIAMETER. (SEE STANDARD SPECIFICATION - SECTION 658).

(8) VERTICAL STRUT (ADJUSTABLE). ONE (1) SET SCREW (¼" X ¾" LONG - 20 TPI, STAINLESS STEEL, HEX HEAD) INTO EACH ARM MEMBER IF STRUT IS THE SLIDING TYPE.

(9) FURNISH AND INSTALL VENTILATED, CAST, METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) ¼" X ¾" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.

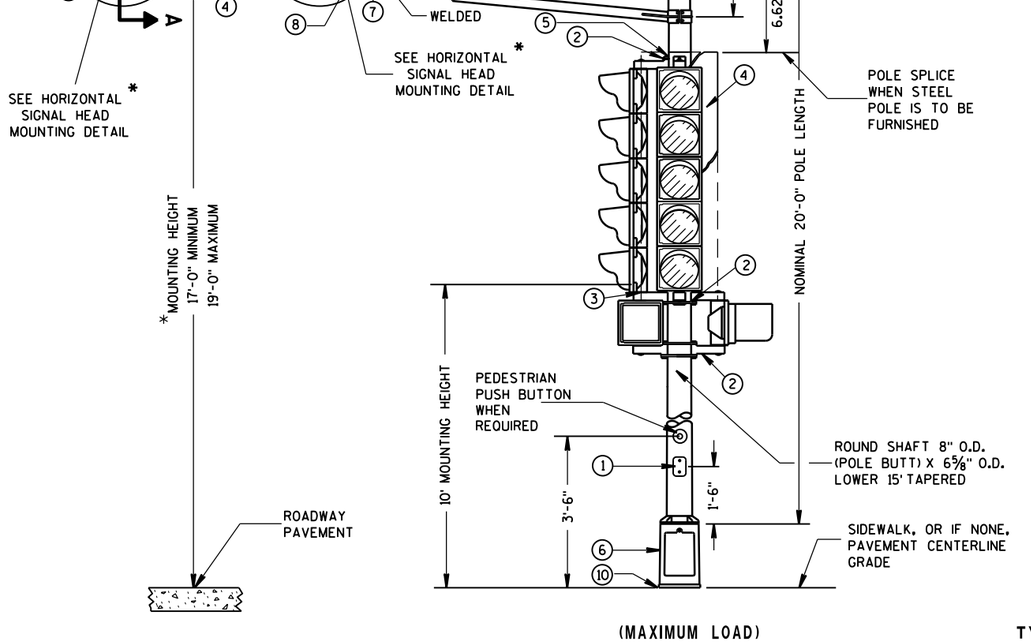
(10) SHIMMING, IF NEEDED, SHALL BE LOCATED BETWEEN THE CONCRETE FOUNDATION AND THE TRANSFORMER BASE.

(11) USE SERRATED LOCK WASHERS WITH NOTCHES BETWEEN END TEE AND SIGNAL HEAD.

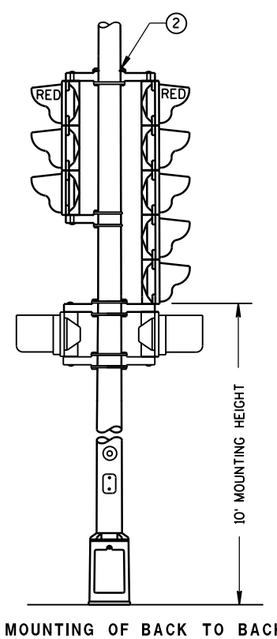
*MOUNTING HEIGHT LIMITATION DIMENSIONS OF THE TROMBONE MAST ARM WILL BE DEPENDENT UPON THE USE/NON-USE OF A TRANSFORMER BASE.

FOR MANUFACTURERS USE ONLY

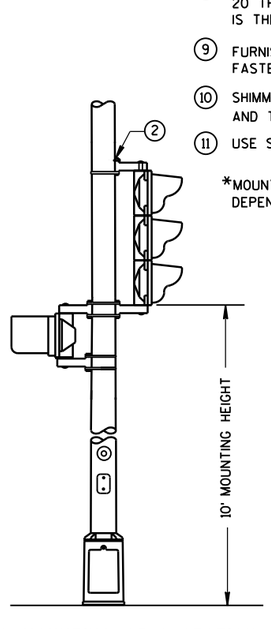
WELD TO BE 100% R.T. OR U.T. TESTED AS PER THE REQUIREMENTS OF AWS D 1.5-88. RECORDS OF COMPLIANCE OF SUCH TESTING SHALL BE FURNISHED TO THE OFFICE OF DESIGN/BRIDGE FOR VERIFICATION AND APPROVAL.



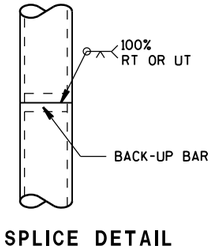
(MAXIMUM LOAD)



TYPICAL MOUNTING OF BACK TO BACK 3 AND 5 SECTION SIGNAL FACES



TYPICAL MOUNTING OF 3 SECTION SIGNAL FACE



POLE SPLICE DETAIL

TYPE 2 POLE MOUNTING CONFIGURATION

POLE MOUNTINGS FOR TRAFFIC SIGNALS TYPE 2

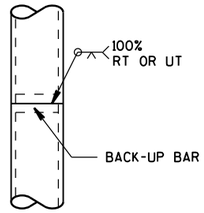
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

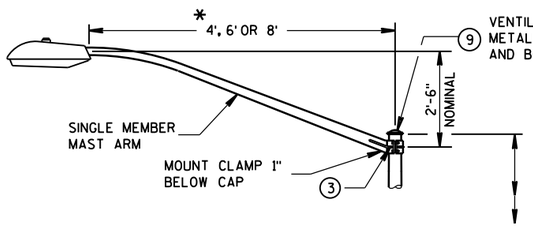
6
S.D.D. 9 E 1-14a

FOR MANUFACTURERS USE ONLY

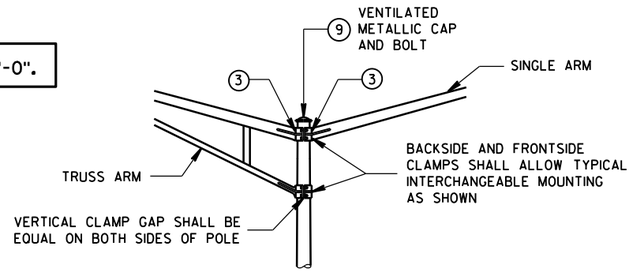
WELD TO BE 100% R.T. OR U.T. TESTED AS PER THE REQUIREMENTS OF AWS D 1.5-88. RECORDS OF COMPLIANCE OF SUCH TESTING SHALL BE FURNISHED TO THE OFFICE OF DESIGN/BRIDGE FOR VERIFICATION AND APPROVAL.

*RISE FOR 4' ARM SHALL BE 2'-0".





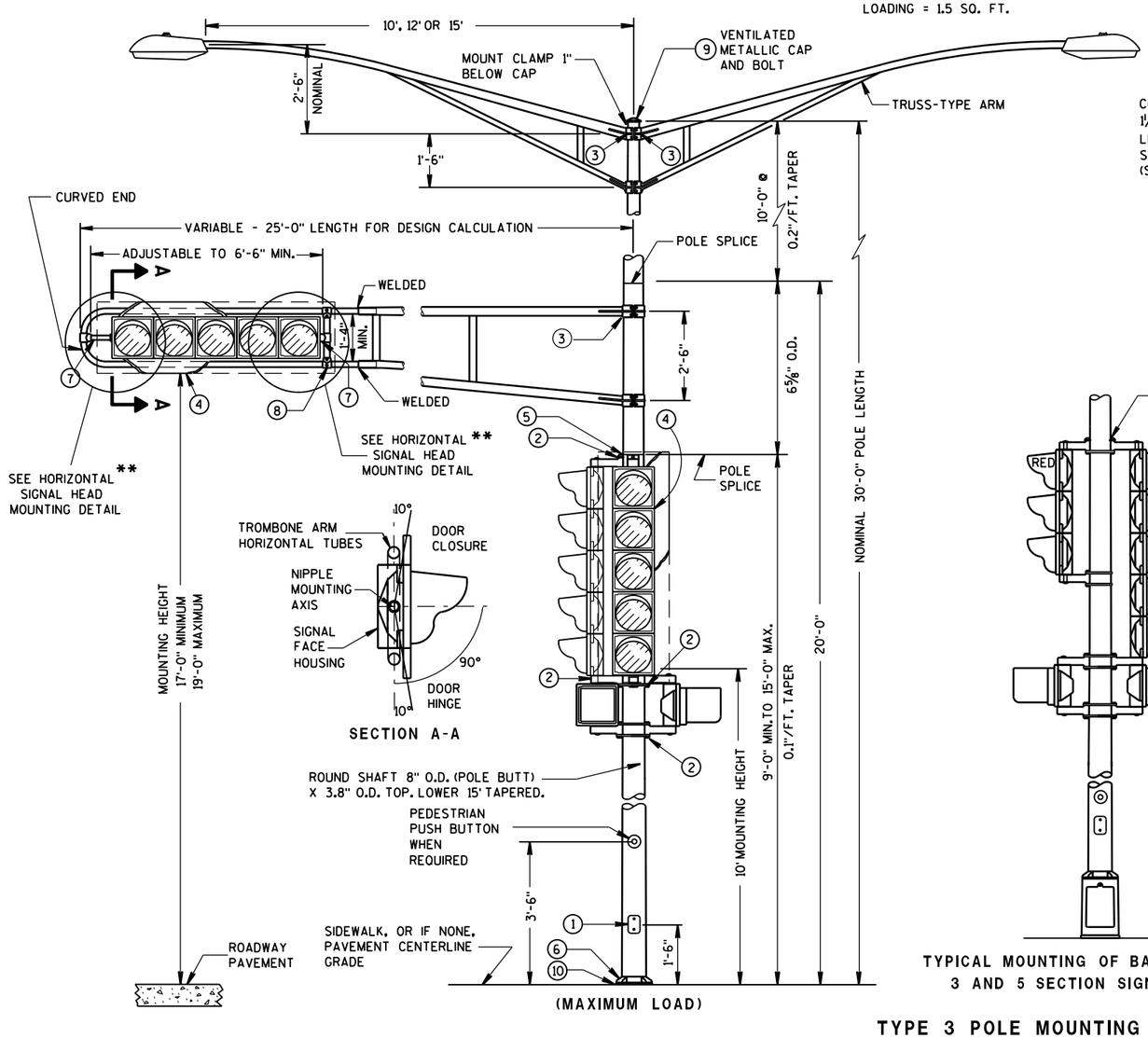
POLE SPLICE DETAIL

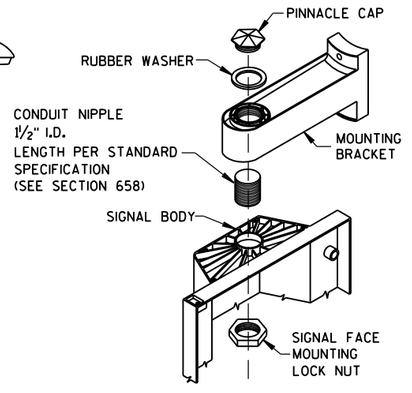


INTERCHANGEABLE MOUNTING DETAIL

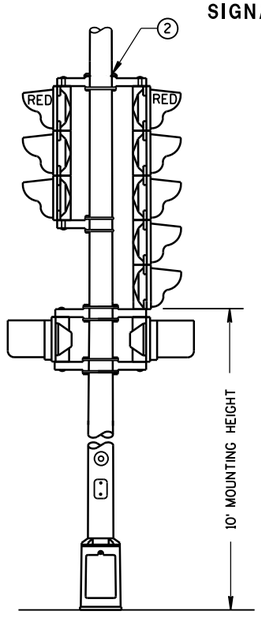
LUMINAIRE

WT. - 50 LBS.
EFFECTIVE PROJECTED
AREA FOR WIND
LOADING = 1.5 SQ. FT.

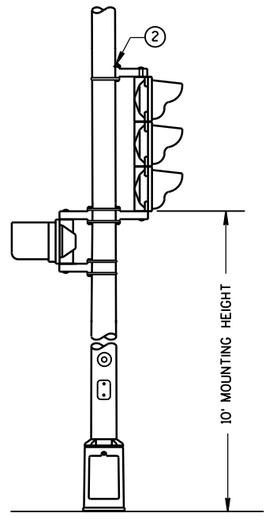




SIGNAL FACE MOUNTING DETAIL
(BANDED)



TYPICAL MOUNTING OF BACK TO BACK
3 AND 5 SECTION SIGNAL FACES



TYPICAL MOUNTING OF 3 SECTION
SIGNAL FACE

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

ALL TYPE 3 POLE MOUNTINGS SHALL BE DESIGNED TO INCLUDE TWIN 15' ARMS WITH LUMINAIRES.

POLES SHALL BE GALVANIZED STEEL.

SECTION 657, POLES, OF THE STANDARD SPECIFICATIONS SHALL APPLY TO THIS DRAWING.

A PULL WIRE/ROPE IN ACCORDANCE WITH STANDARD SPECIFICATION 652, SHALL BE INSTALLED IN EACH TROMBONE ARM RACEWAY DURING THE MANUFACTURING PROCESS.

THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 2⅜ INCHES IN OUTSIDE DIAMETER. THE STRAIGHT PORTION OF THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 12 INCHES IN LENGTH.

WHEN TRANSFORMER BASES ARE USED, WIRE CONNECTIONS SHALL BE MADE IN THE TRANSFORMER BASE.

(1) 4" X 6" REINFORCED HANDHOLE & COVER ASSEMBLY WITH 2 (TWO) ¼" X ¾" - 20 TPI HEX HEAD STAINLESS STEEL BOLTS.

(2) SIGNAL FACE MOUNTING BRACKETS, MOUNT WITH CAP SCREWS AND BANDING. (SEE STANDARD SPECIFICATIONS - SEC. 658)

(3) GROMMETS, 1" CHASE NIPPLES OR 1" CLOSE CONDUIT NIPPLES WITH BUSHINGS SHALL BE PROVIDED FOR 1⅜" HOLE IN POLE SHAFT FOR WIRING.

(4) SECURELY MOUNT DULL BLACK POLYCARBONATE BACKPLATES, PROJECTING 5" BEYOND ALL SIDES OF THE SIGNAL FACE HOUSING, PER MANUFACTURER'S RECOMMENDATIONS.

(5) POLE MOUNTED SIGNAL FACES SHALL REQUIRE 1 OR MORE MOUNTING SPACERS UNDER THE TOP MOUNTING BRACKET(S) AS REQUIRED, TO PLUMB THE SIGNAL FACE.

(6) TYPE 3 POLE CONFIGURATIONS SHALL BE MOUNTED DIRECTLY TO THEIR CONCRETE BASES.

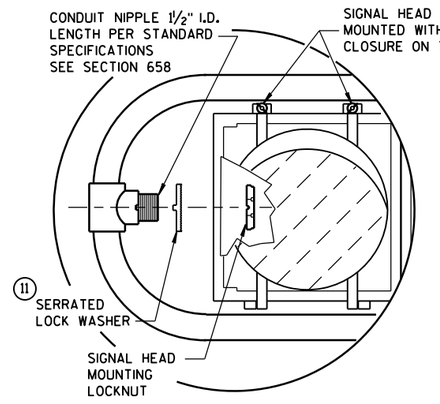
(7) MOUNTING BRACKET NIPPLES FOR THE SIGNAL FACE(S) SHALL BE 2 INCHES IN LENGTH AND 1½ INCHES IN DIAMETER. (SEE STANDARD SPECIFICATION - SECTION 658)

(8) VERTICAL STRUT (ADJUSTABLE). ONE (1) SET SCREW (1/4 " X ¾" -20 TPI, STAINLESS STEEL, HEX HEAD) INTO EACH ARM MEMBER IF STRUT IS THE SLIDING TYPE.

(9) FURNISH AND INSTALL VENTILATED, CAST, METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) ¼" X ¾" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.

(10) SHIMMING, IF NEEDED, SHALL BE LOCATED BETWEEN THE CONCRETE FOUNDATION AND POLE.

(11) USE SERRATED LOCK WASHERS WITH NOTCHES BETWEEN END TEE AND SIGNAL HEAD.



HORIZONTAL SIGNAL HEAD MOUNTING DETAIL **

** SIGNAL HEAD ATTACHMENT ALSO APPLYS TO MOUNTING AT CROSS BAR

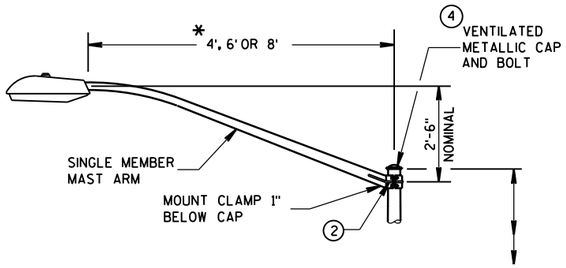
TYPE 3 POLE MOUNTING CONFIGURATION

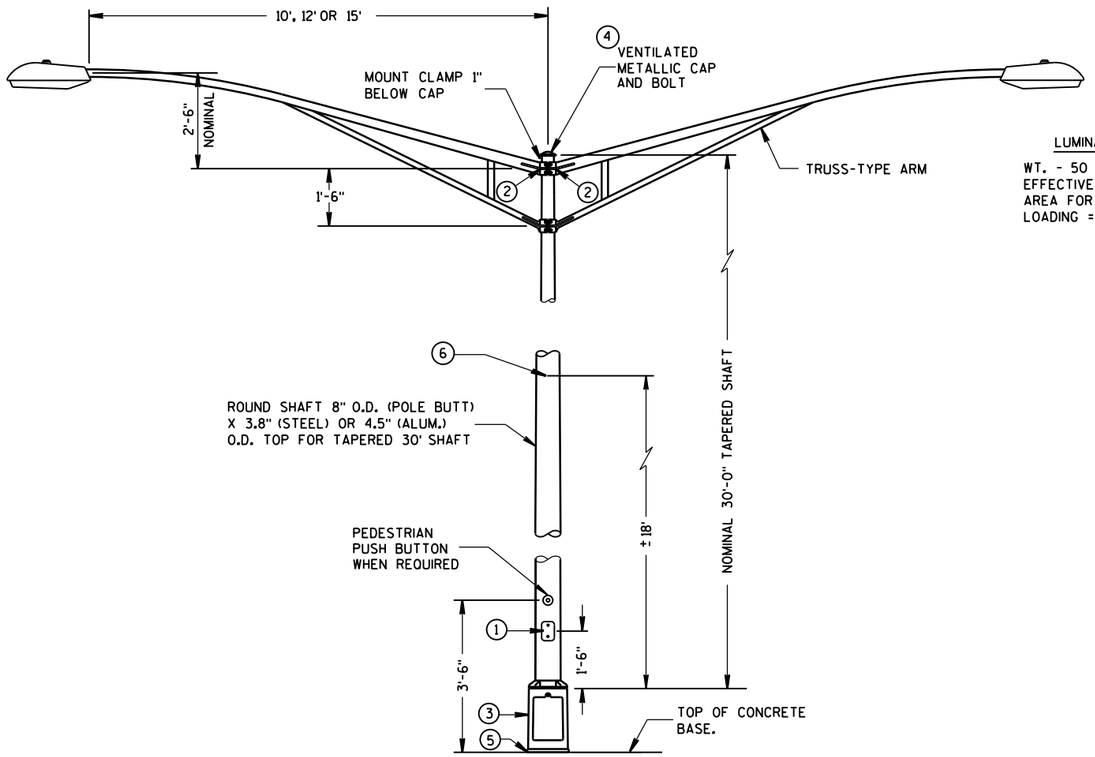
POLE MOUNTINGS FOR
TRAFFIC SIGNALS AND
LIGHTING UNITS, TYPE 3
(HEAVY DUTY)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI 550

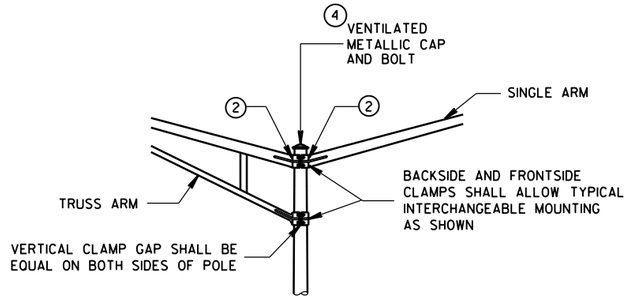
6
S.D.D. 9 E 1-14b

*RISE FOR 4' ARM SHALL BE 2'-0".





TYPE 5 POLE MOUNTING CONFIGURATION
(MAXIMUM LOAD)
LIGHTING ONLY



INTERCHANGEABLE MOUNTING DETAIL

LUMINAIRE

WT. - 50 LBS.
EFFECTIVE PROJECTED
AREA FOR WIND
LOADING = 1.5 SQ. FT.

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

ALL TYPE 5 POLE MOUNTINGS SHALL BE DESIGNED TO INCLUDE TWIN 15' ARMS WITH LUMINAIRES.

POLES SHALL BE GALVANIZED STEEL OR ALUMINUM, AS CALLED FOR IN THE CONTRACT.

TYPE 5 ALUMINUM POLES SHALL BE CONSTRUCTED OF 6063-T6 ALUMINUM ALLOY. SLEEVING INSIDE THE POLE IS NOT ACCEPTABLE.

THE TYPE 5 ALUMINUM POLES SHALL HAVE A MINIMUM WALL THICKNESS OF 0.188".

TYPE 5 STEEL POLES SHALL HAVE A MINIMUM WALL THICKNESS OF U.S. STANDARD 11 GAGE (.1196").

THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 2⅜ INCHES IN OUTSIDE DIAMETER. THE STRAIGHT PORTION OF THE SLIPFITTER END OF THE LUMINAIRE ARM SHALL BE A NOMINAL 12 INCHES IN LENGTH.

WHEN TRANSFORMER BASES ARE USED, WIRE CONEECTIONS SHALL BE MADE IN THE TRANSFORMER BASE.

(1) 4" x 6" REINFORCED HANDHOLE & COVER ASSEMBLY WITH 2 (TWO) ¼" X ¾" - 20 TPI HEX HEAD STAINLESS STEEL BOLTS.

(2) GROMMETS, 1" CHASE NIPPLES OR 1" CLOSE CONDUIT NIPPLES WITH BUSHINGS SHALL BE PROVIDED FOR 1⅜" HOLE IN POLE SHAFT FOR WIRING.

(3) CAST ALUMINUM TRANSFORMER BASE, WHEN REQUIRED.

(4) FURNISH AND INSTALL VENTILATED, CAST, METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) ¼" X ¾" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.

(5) SHIMMING, IF NEEDED, SHALL BE LOCATED BETWEEN THE CONCRETE FOUNDATION AND THE TRANSFORMER BASE.

(6) INTERNAL DUMBBELL-TYPE VIBRATION DAMPER.

6

S.D.D. 9 E 1-14d

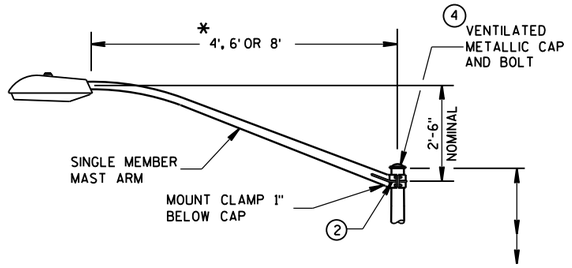
POLE MONTINGS FOR
LIGHTING UNITS, TYPE 5
(30 FEET)

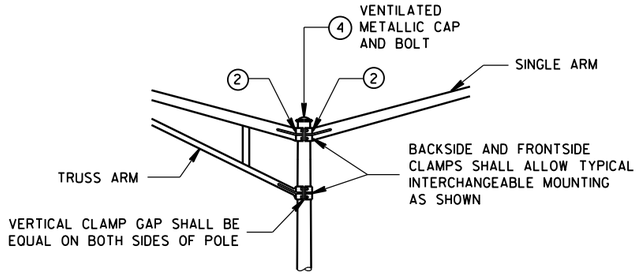
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

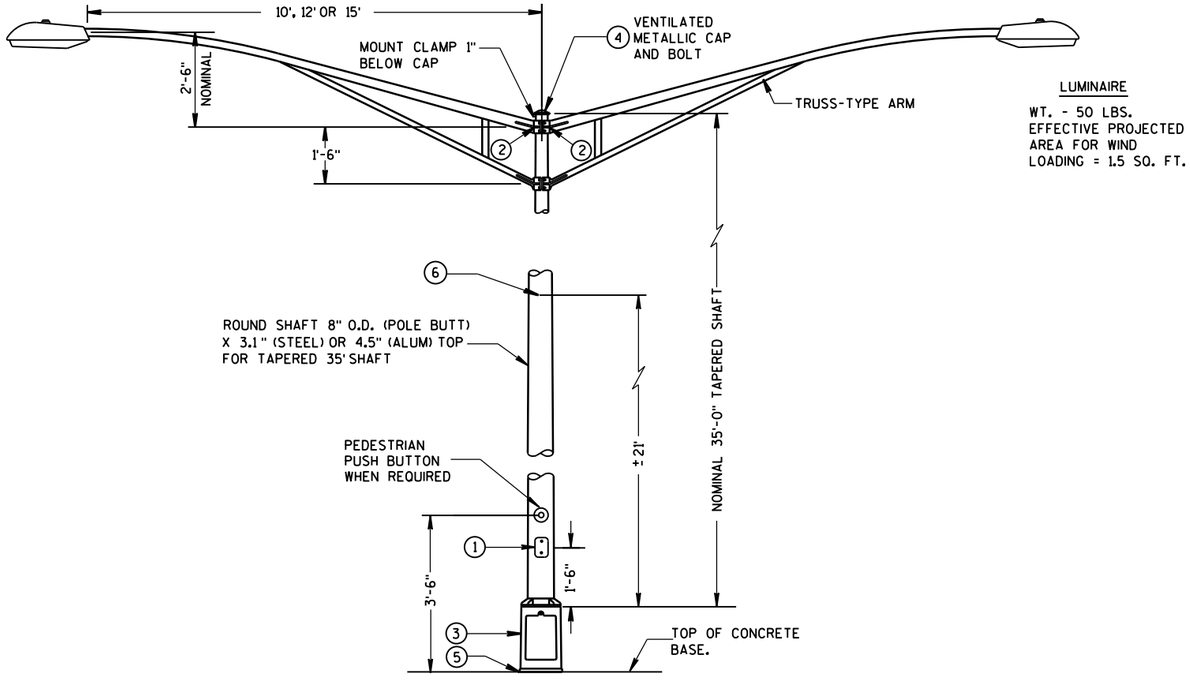
S.D.D. 9 E 1-14d

* RISE FOR 4' ARM SHALL BE 2'-0".





INTERCHANGEABLE MOUNTING DETAIL



TYPE 6 POLE MOUNTING CONFIGURATION

(MAXIMUM LOAD)

LIGHTING ONLY

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM ~~TO THE PERTINENT~~ REQUIREMENTS OF THE CONTRACT.

ALL TYPE 6 POLE MOUNTINGS SHALL BE DESIGNED TO INCLUDE TWIN 15' ARMS WITH LUMINAIRES.

POLES SHALL BE EITHER GALVANIZED STEEL OR ALUMINUM, AS CALLED FOR IN THE CONTRACT.

TYPE 6 ALUMINUM POLES, SHALL BE CONSTRUCTED OF 6063-T6 ALUMINUM ALLOY. SLEEVING INSIDE THE POLE IS NOT ACCEPTABLE.

THE TYPE 6 ALUMINUM POLES SHALL HAVE MINIMUM WALL THICKNESS OF 0.219".

TYPE 6 STEEL POLES SHALL HAVE A MINIMUM WALL THICKNESS OF U.S. STANDARD 11 GAGE (.1196").

THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 2⅜ INCHES IN OUTSIDE DIAMETER. THE STRAIGHT PORTION OF THE SLIPFITTER END OF THE LUMINAIRE ARM SHALL BE A NOMINAL 12 INCHES IN LENGTH.

WHEN TRANSFORMER BASES ARE USED, WIRE CONNECTIONS SHALL BE MADE IN THE TRANSFORMER BASE.

(1) 4" x 6" REINFORCED HANDHOLE & COVER ASSEMBLY WITH 2 (TWO) ¼" X ¾" - 20 TPI HEX HEAD STAINLESS STEEL BOLTS.

(2) GROMMETS, 1" CHASE NIPPLES OR 1" CLOSE CONDUIT NIPPLES WITH BUSHINGS SHALL BE PROVIDED FOR 1⅜" HOLE IN POLE SHAFT FOR WIRING.

(3) CAST ALUMINUM TRANSFORMER BASE, WHEN REQUIRED.

(4) FURNISH AND INSTALL VENTILATED, CAST, METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) ¼" X ¾" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.

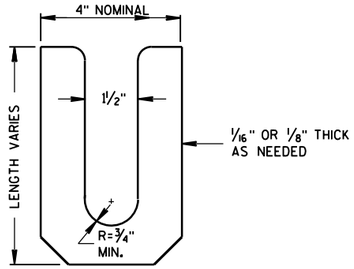
(5) SHIMMING, IF NEEDED, SHALL BE LOCATED BETWEEN THE CONCRETE FOUNDATION AND THE TRANSFORMER BASE.

(6) INTERNAL DUMBBELL-TYPE VIBRATION DAMPER.

POLE MOUNTINGS FOR LIGHTING UNITS, TYPE 6 (35 FEET)

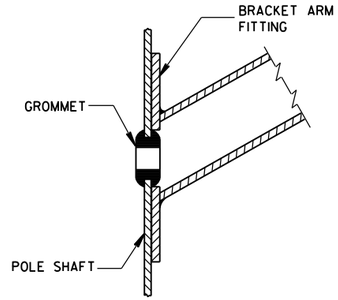
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR 552

6
S.D.D. 9 E 1-14e

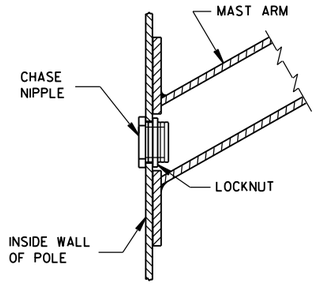


LEVELING SHIM (13)

SHALL BE ALUMINUM



TYPICAL APPLICATION OF GROMMET IN POLE SHAFT



TYPICAL APPLICATION OF CHASE NIPPLE IN POLE SHAFT

GENERAL NOTES

CLAMP BOLT-NUT TIGHTENING TORQUE SHALL BE INDICATED BY INDENT STAMPING (1/2 INCH NUMERALS AND LETTERS) OR WEATHERPROOF PRINTING ON THE INSIDE OF THE CLAMP THAT IS WELDED TO THE ARM MEMBER.

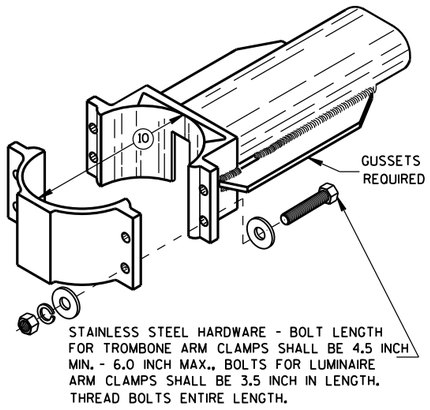
(10) 4.5" I.D. FOR LUMINAIRE MAST ARM CLAMP.
6.625" I.D. FOR TROMBONE MAST ARM CLAMP.

(11) INDIVIDUAL BASE PLATE ANCHOR ROD COVERS. (4 REQUIRED)

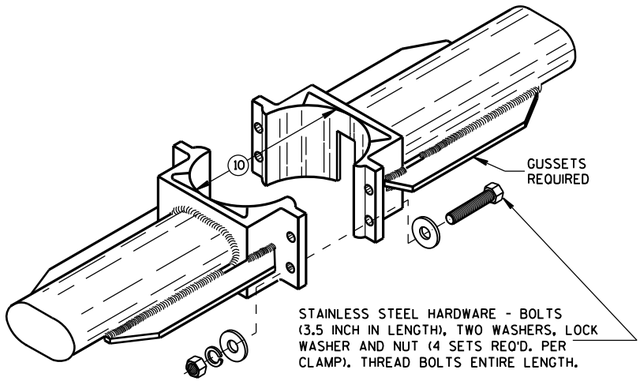
(12) BASE PLATE SLOTTED TO ACCEPT 11" THROUGH 12" BOLT CIRCLE USING 1" DIAMETER ANCHOR RODS.

(13) LEVELING SHIMS, DESIGNED FOR THE PURPOSE, SHALL BE USED WHEN PLUMBING POLES. THE USE OF WASHERS IN LIEU OF PROPER LEVELING SHIMS IS NOT ACCEPTABLE. LEVELING SHIMS SHALL BE USED ONLY BETWEEN THE TOP OF THE CONCRETE BASE AND A METALLIC BASE PLATE.

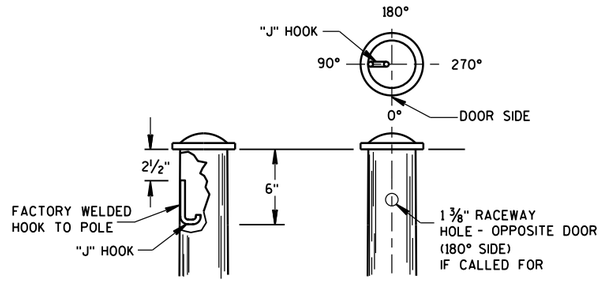
SHIMS SHALL BE LONG ENOUGH AND WIDE ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.



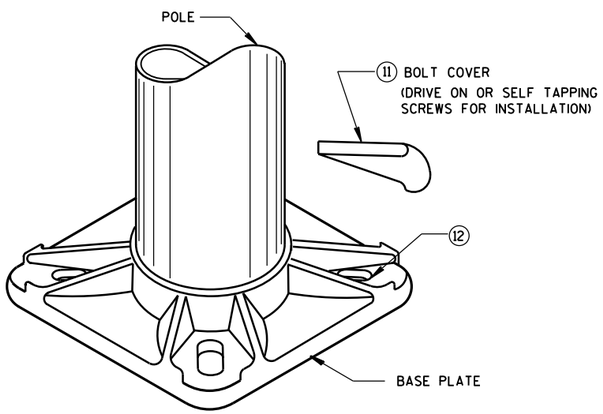
TYPICAL TROMBONE MAST ARM AND SINGLE LUMINAIRE MAST ARM MOUNTING CLAMP



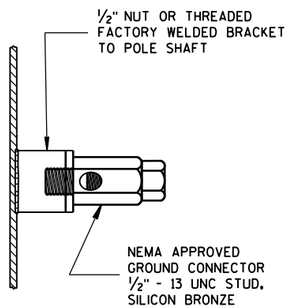
TYPICAL LUMINAIRE MAST ARM (DOUBLE) MOUNTING BRACKETS

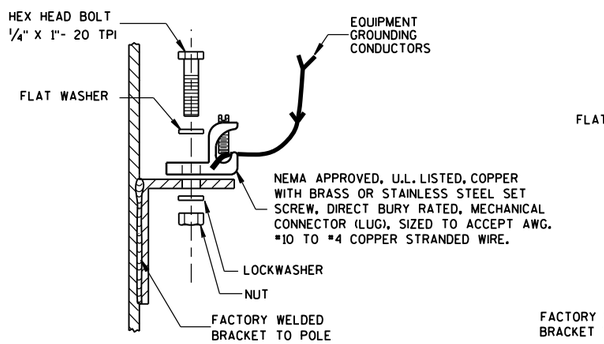


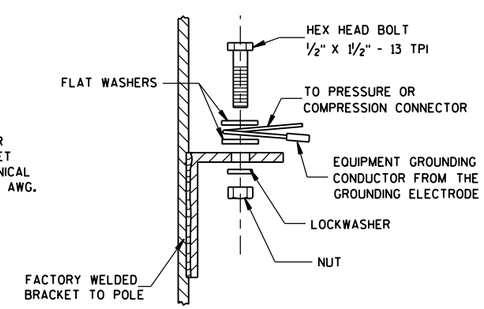
TYPICAL "J" HOOK LOCATION



BASE PLATE







TYPICAL GROUNDING CONNECTIONS

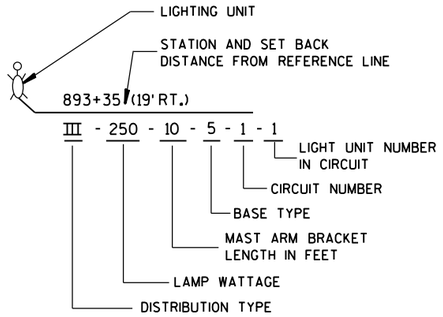
NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL

HARDWARE DETAILS FOR POLE MOUNTINGS

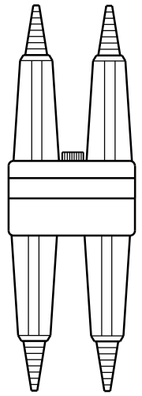
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Feb. 2015 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL 553
FHWA

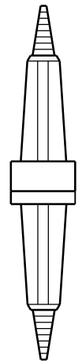
6
S.D.D. 9 E 1-14g



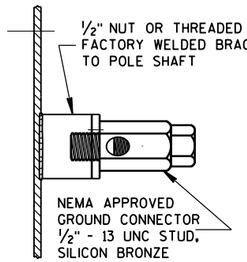
LIGHTING UNIT CODE
(TYPICAL)

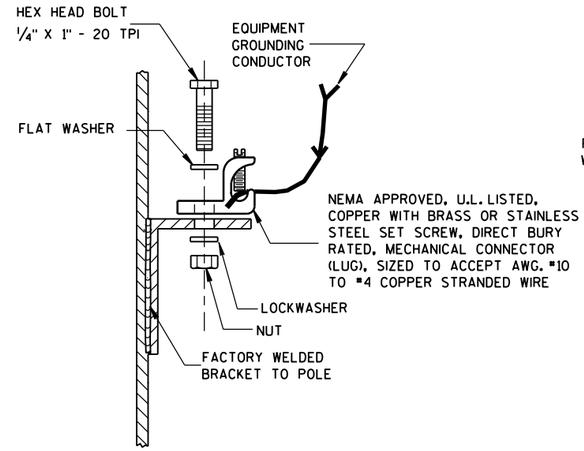


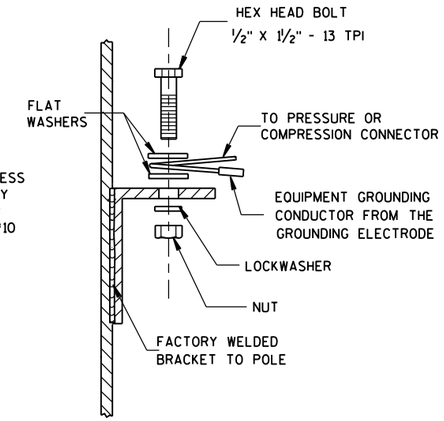
DETAIL "A"
BREAKAWY DOUBLE POLE WITH WATERPROOF INSULATING BOOT



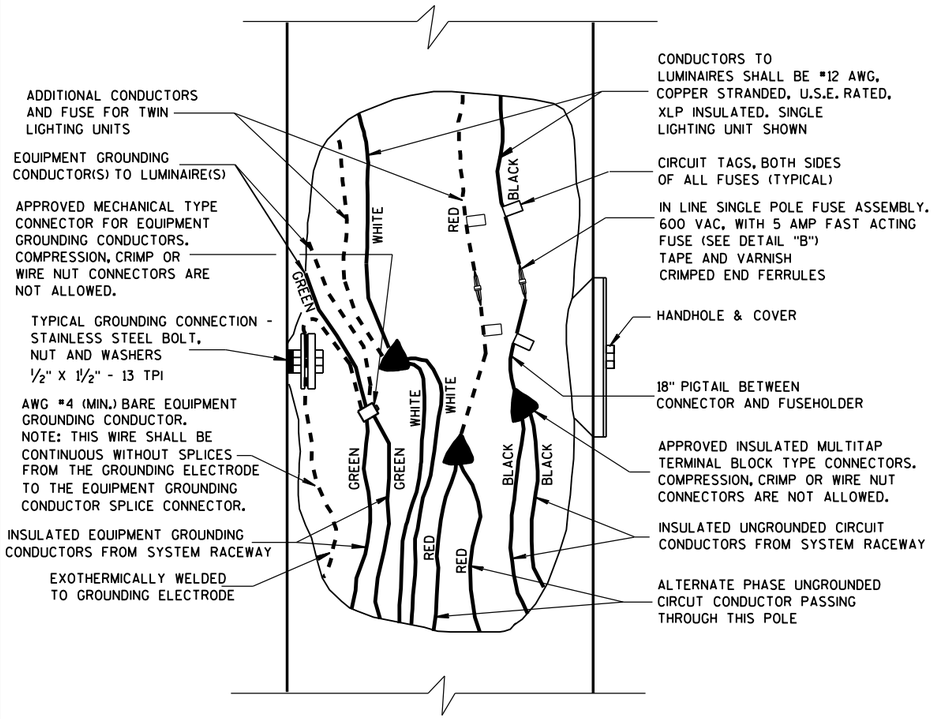
DETAIL "B"
BREAKAWY SINGLE POLE WITH WATERPROOF INSULATING BOOT



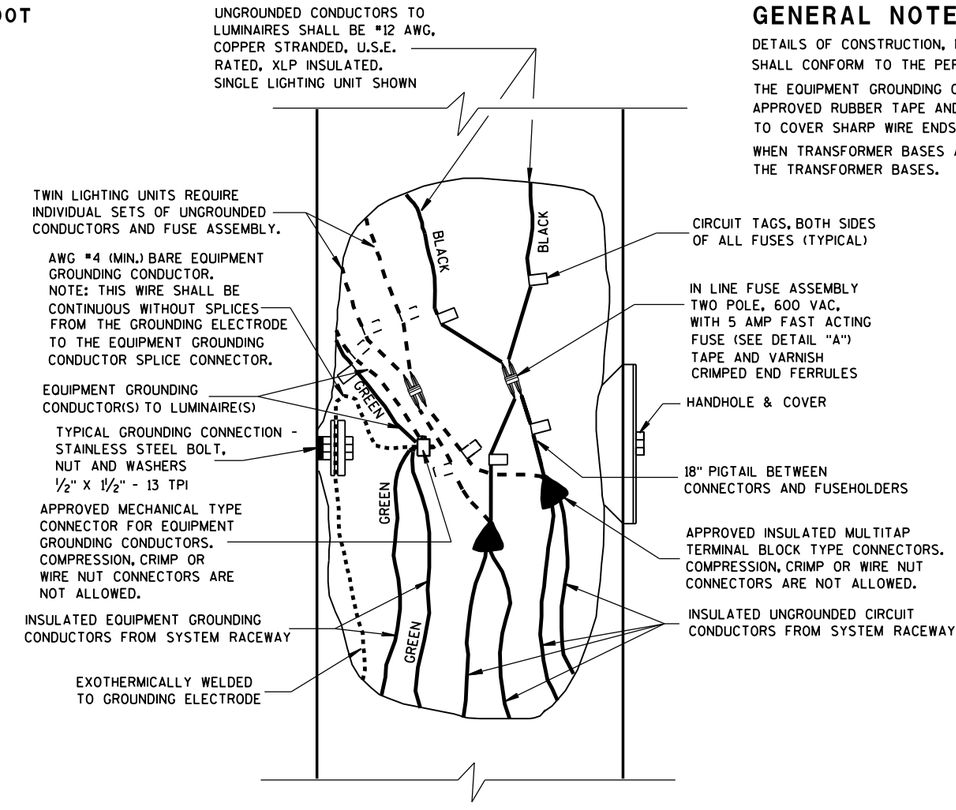




TYPICAL GROUNDING CONNECTIONS
NUT, BOLT, WASHERS AND LOCKWASHERS SHALL BE STAINLESS STEEL



3 WIRE - 120, 240 OR 480 VAC (UNGROUNDED CONDUCTOR) WITH GROUNDED CONDUCTOR AND WITH EQUIPMENT GROUNDING CONDUCTOR



2 WIRE - 240 OR 480 VAC (UNGROUNDED CONDUCTORS) WITH EQUIPMENT GROUNDING CONDUCTOR

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

THE EQUIPMENT GROUNDING CONNECTOR SHALL BE TAPED WITH 3 WRAPS (MINIMUM) OF APPROVED RUBBER TAPE AND THEN 3 WRAPS (MINIMUM) OF APPROVED VINYL TAPE TO COVER SHARP WIRE ENDS AFTER THE CONNECTION IS COMPLETED.

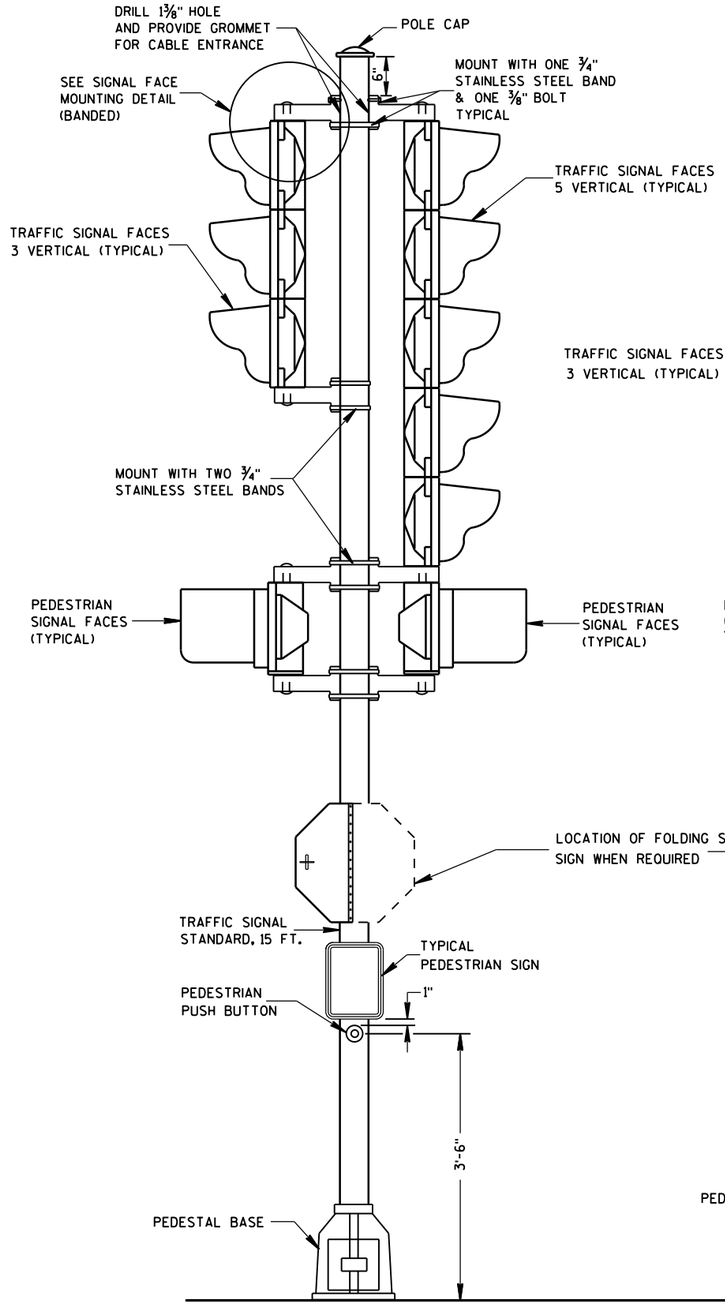
WHEN TRANSFORMER BASES ARE USED, ALL WIRING CONNECTIONS SHALL OCCUR WITHIN THE TRANSFORMER BASES.

NON-FREEWAY LIGHTING UNIT POLE WIRING

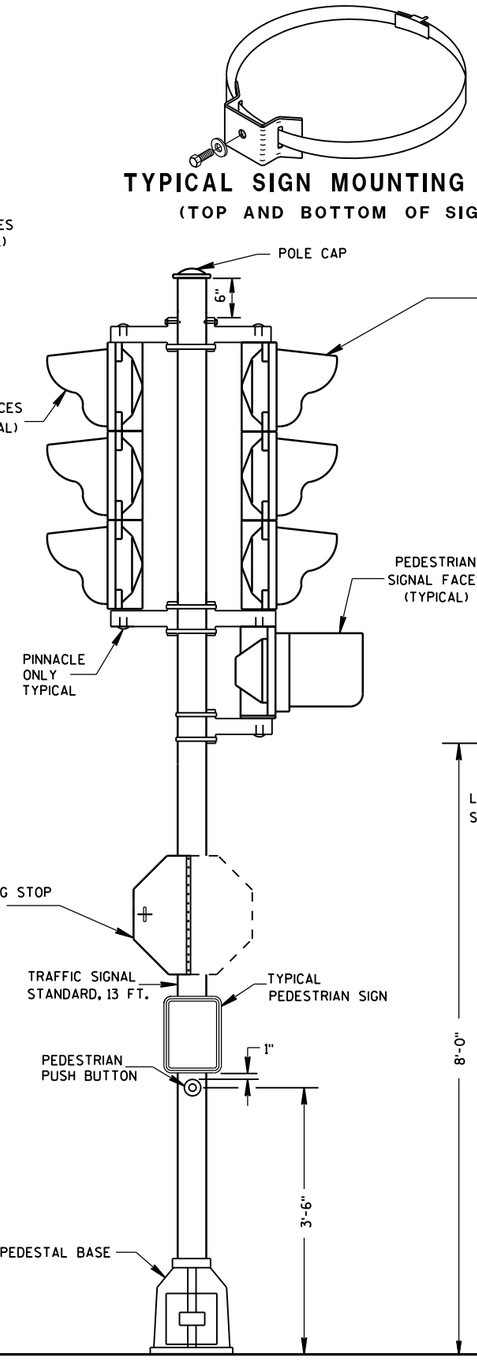
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

6
S.D.D. 9 E 3-5

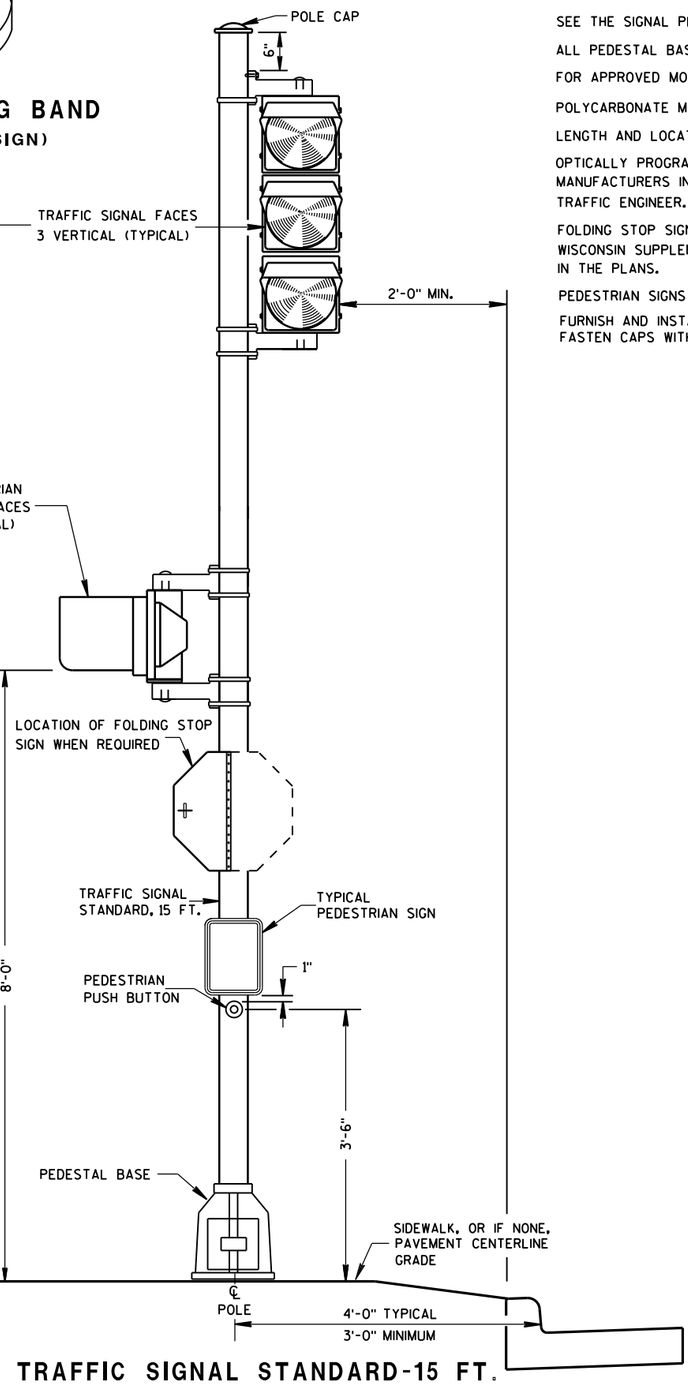


TRAFFIC SIGNAL STANDARD-15 FT.



TRAFFIC SIGNAL STANDARD-13 FT.

TYPICAL SIGN MOUNTING BAND
(TOP AND BOTTOM OF SIGN)



TRAFFIC SIGNAL STANDARD-15 FT.
3M MOUNTING (TYPICAL)

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

SEE THE SIGNAL PLAN FOR REQUIRED SIGNAL FACE SIZES.

ALL PEDESTAL BASES SHALL BE MOUNTED ON CONCRETE BASE - TYPE 1.

FOR APPROVED MOUNTING HARDWARE, SEE THE CONTRACT SPECIAL PROVISIONS.

POLYCARBONATE MOUNTING BRACKETS SHALL BE USED.

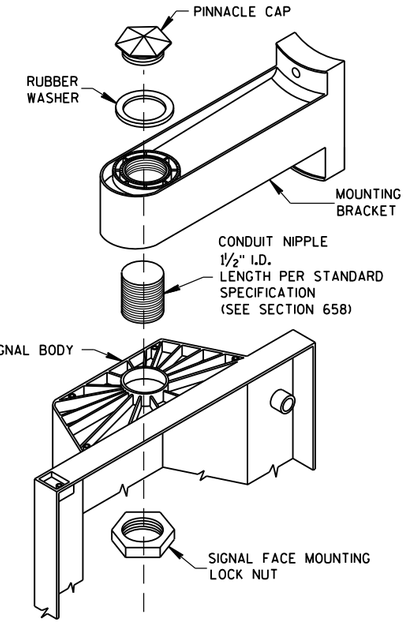
LENGTH AND LOCATION OF TRAFFIC SIGNAL STANDARDS SHALL BE AS SHOWN ON THE PLANS.

OPTICALLY PROGRAMMED SIGNAL FACES SHALL BE MASKED IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS, AND UNDER THE DIRECTIONS OF THE REGION TRAFFIC ENGINEER.

FOLDING STOP SIGNS SHALL BE IN ACCORDANCE WITH THE MUTCD AND/OR THE LATEST WISCONSIN SUPPLEMENT. THE SIGNS SHALL BE SIZED AND LOCATED AS CALLED FOR IN IN THE PLANS.

PEDESTRIAN SIGNS SHALL BE AS DESIGNATED IN THE PLANS.

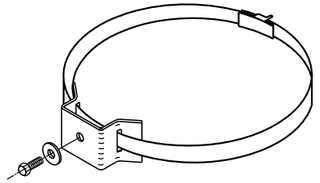
FURNISH AND INSTALL VENTILATED, CAST, METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) ¼" X ¾" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.



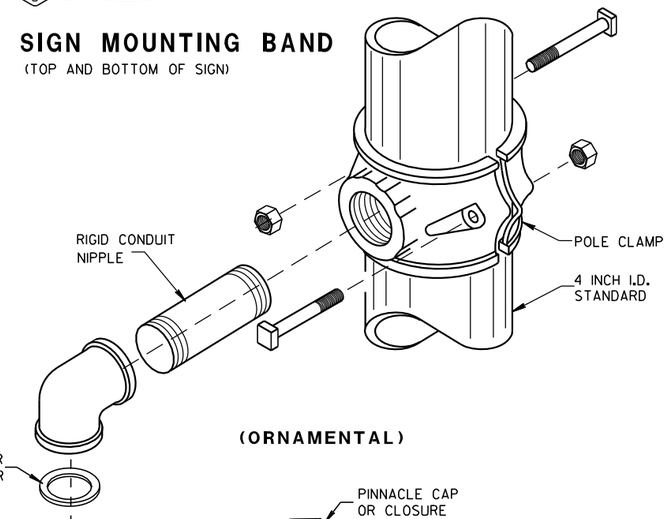
SIGNAL FACE MOUNTING DETAIL
(BANDED)

TRAFFIC SIGNAL STANDARD POLY BRACKET MOUNTINGS (TYPICAL) 13 FT. OR 15 FT.	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
2/28/2013 DATE	/S/ Ahmet Demirbilek STATE ELECTRICAL 555
FHWA	

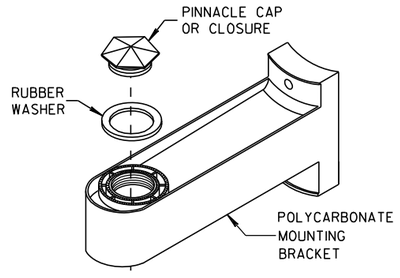
6
S.D.D. 9 E 6-5



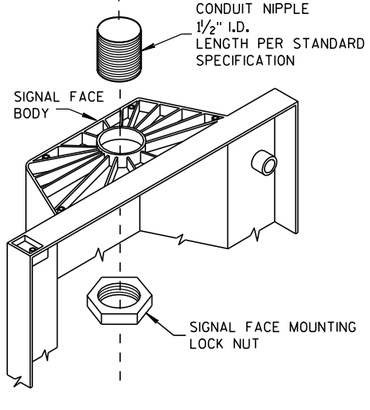
TYPICAL SIGN MOUNTING BAND
(TOP AND BOTTOM OF SIGN)



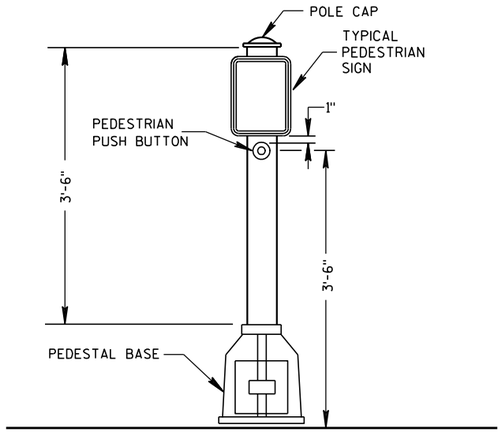
(ORNAMENTAL)



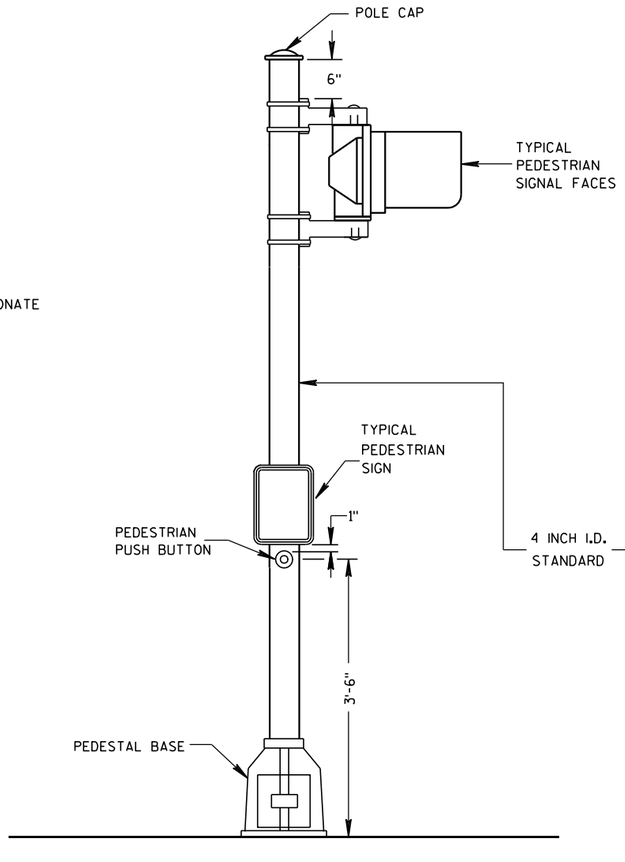
(BANDED)



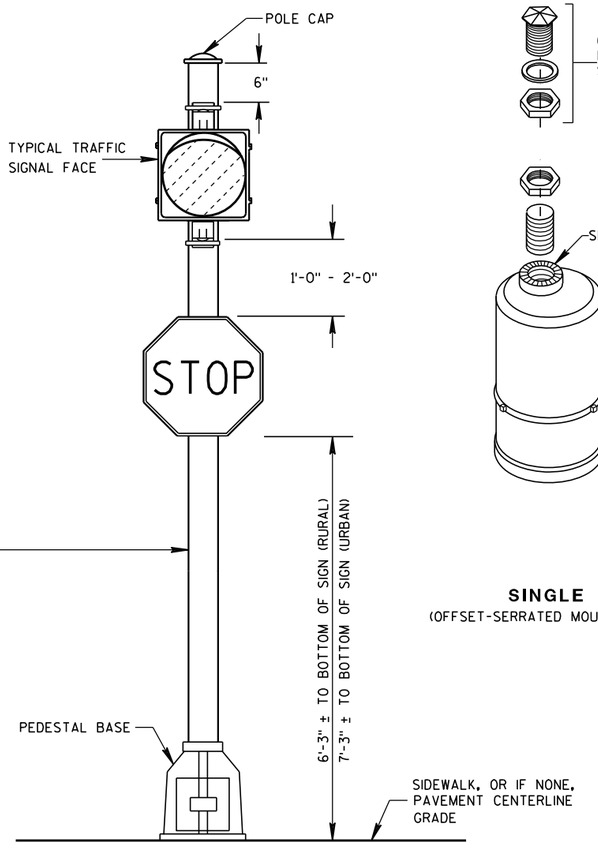
SIGNAL FACE MOUNTING DETAILS



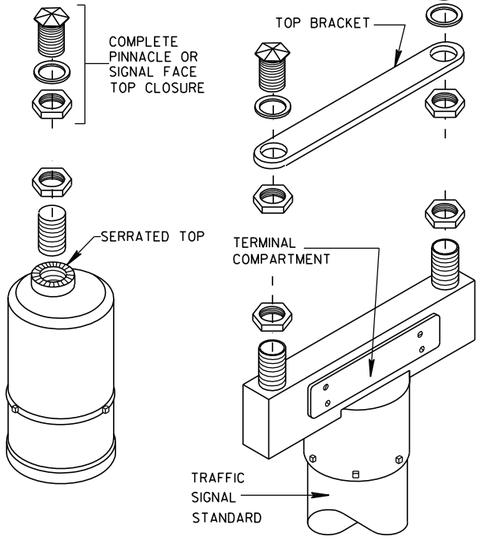
PEDESTRIAN PUSH BUTTON TYPICAL MOUNTING



PEDESTRIAN FACE STANDARD-10 FT.
(WALK-DON'T WALK)



STANDARD FLASHER.
10 FOOT, 13 FOOT OR 15 FOOT AS REQUIRED



SINGLE
(OFFSET-SERRATED MOUNTING)

DOUBLE
(SERRATED MOUNTING)

SLIPFITTERS

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

SEE THE SIGNAL PLAN FOR REQUIRED SIGNAL FACE SIZES.

LOCATIONS SHALL BE AS SHOWN ON THE PLANS.

ALL PEDESTAL BASES SHALL BE MOUNTED ON CONCRETE BASE - TYPE 1.

FOR APPROVED MOUNTING HARDWARE, SEE THE CONTRACT SPECIFICATIONS.

POLYCARBONATE SIGNAL FACE MOUNTING BRACKETS SHALL BE USED UNLESS ORNAMENTAL POLE CLAMPS ARE SPECIFIED.

LENGTH OF TRAFFIC STANDARDS SHALL BE AS SHOWN ON THE PLANS.

MOUNTINGS AND BRACKETS SHALL BE AS SHOWN ON THE PLANS OR DESCRIBED IN THE SPECIAL PROVISIONS (BY THE DISTRICT TRAFFIC ENGINEER).

PEDESTRIAN SIGNS SHALL BE AS DESIGNATED IN THE PLANS.

FURNISH AND INSTALL VENTILATED, CAST, METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) ¼" X ¾" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.

TRAFFIC SIGNAL STANDARD PEDESTRIAN AND FLASHER TYPICAL MOUNTING DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

5/11/10
DATE

/S/ John Corbin
STATE ELECTRICAL ENGI 556

HWYS

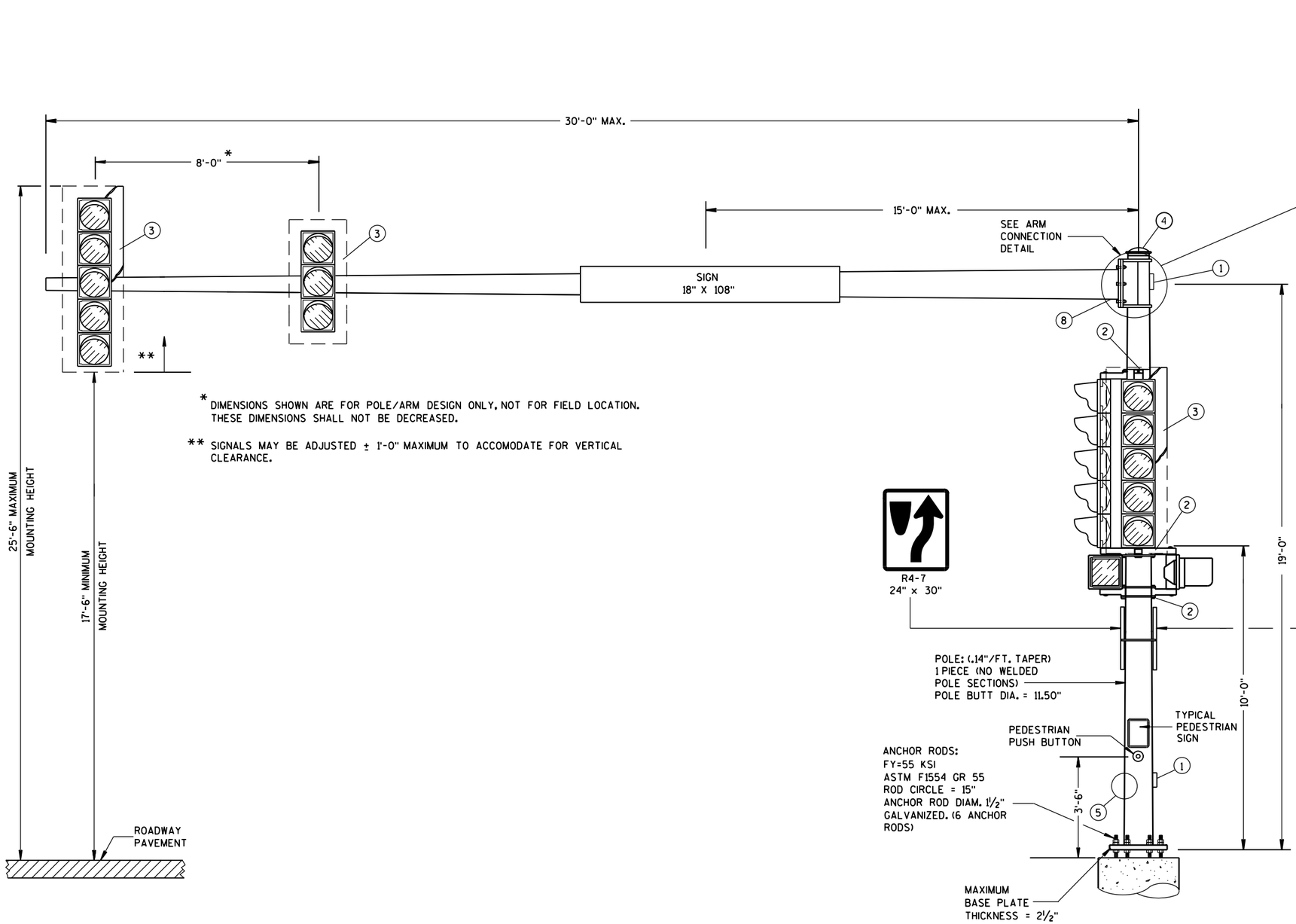
FHWA

6

S.D.D. 9 E 7-5

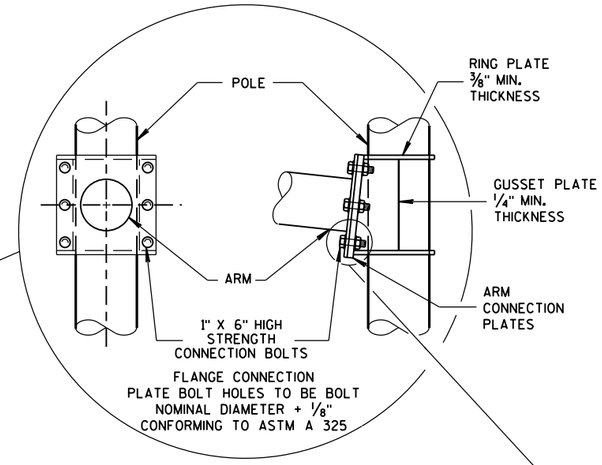
6

S.D.D. 9 E 7-5

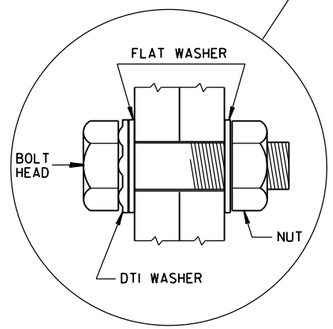


* DIMENSIONS SHOWN ARE FOR POLE/ARM DESIGN ONLY, NOT FOR FIELD LOCATION. THESE DIMENSIONS SHALL NOT BE DECREASED.

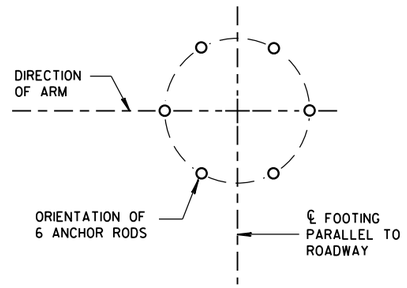
** SIGNALS MAY BE ADJUSTED ± 1'-0" MAXIMUM TO ACCOMODATE FOR VERTICAL CLEARANCE.



6 BOLT ARM CONNECTION DETAIL



RECOMMENDED BOLT ASSEMBLY DETAIL



ANCHOR ROD LOCATION

(MAXIMUM LOAD)

TYPE 9 POLE 15'- 30' MONOTUBE ARM

TYPE 9 POLE 15' - 30' MONOTUBE ARM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

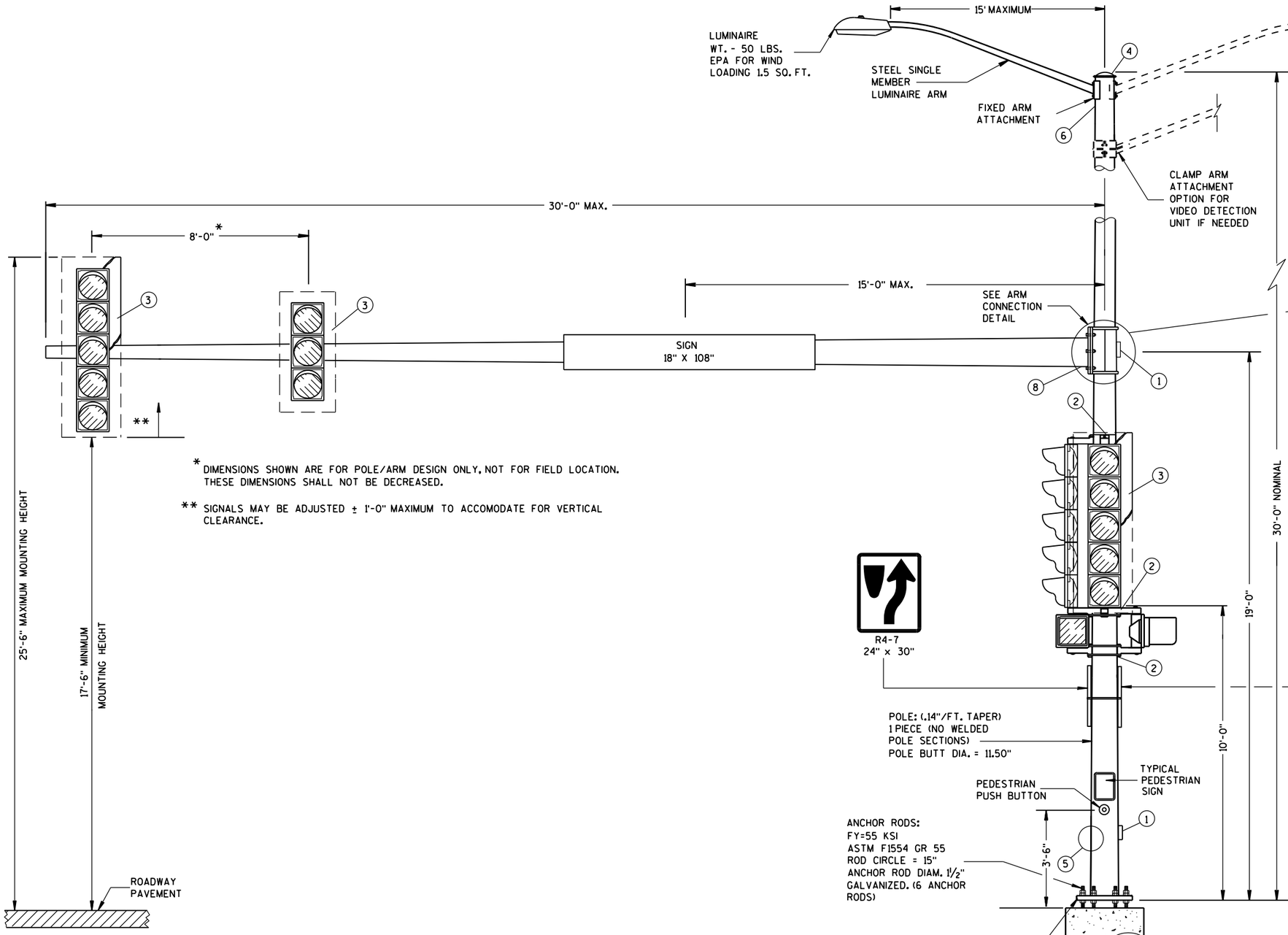
APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL 557
FHWA

6

S.D.D. 9 E 8-6a

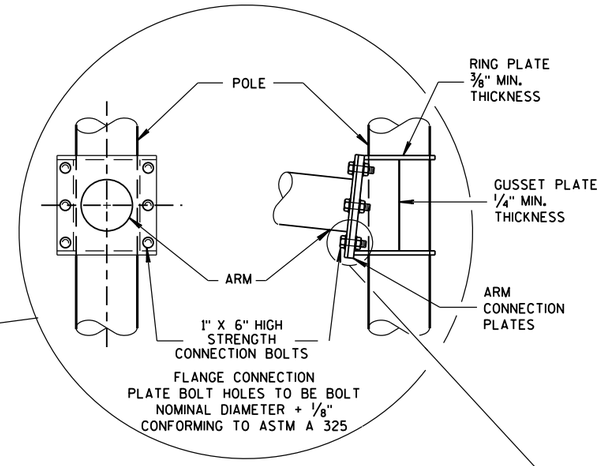
6

S.D.D. 9 E 8-6a

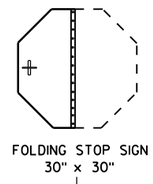


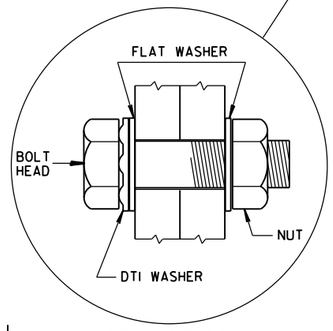
* DIMENSIONS SHOWN ARE FOR POLE/ARM DESIGN ONLY, NOT FOR FIELD LOCATION. THESE DIMENSIONS SHALL NOT BE DECREASED.

** SIGNALS MAY BE ADJUSTED ± 1'-0" MAXIMUM TO ACCOMODATE FOR VERTICAL CLEARANCE.

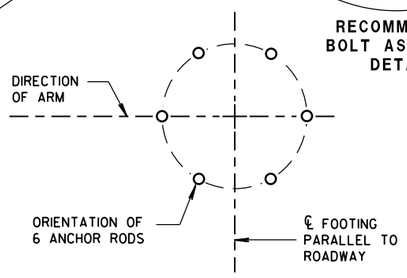


6 BOLT ARM CONNECTION DETAIL





RECOMMENDED
BOLT ASSEMBLY
DETAIL



ANCHOR ROD LOCATION

(MAXIMUM LOAD)

TYPE 10 POLE
15'- 30' MONOTUBE ARM

TYPE 10 POLE
15' - 30' MONOTUBE ARM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

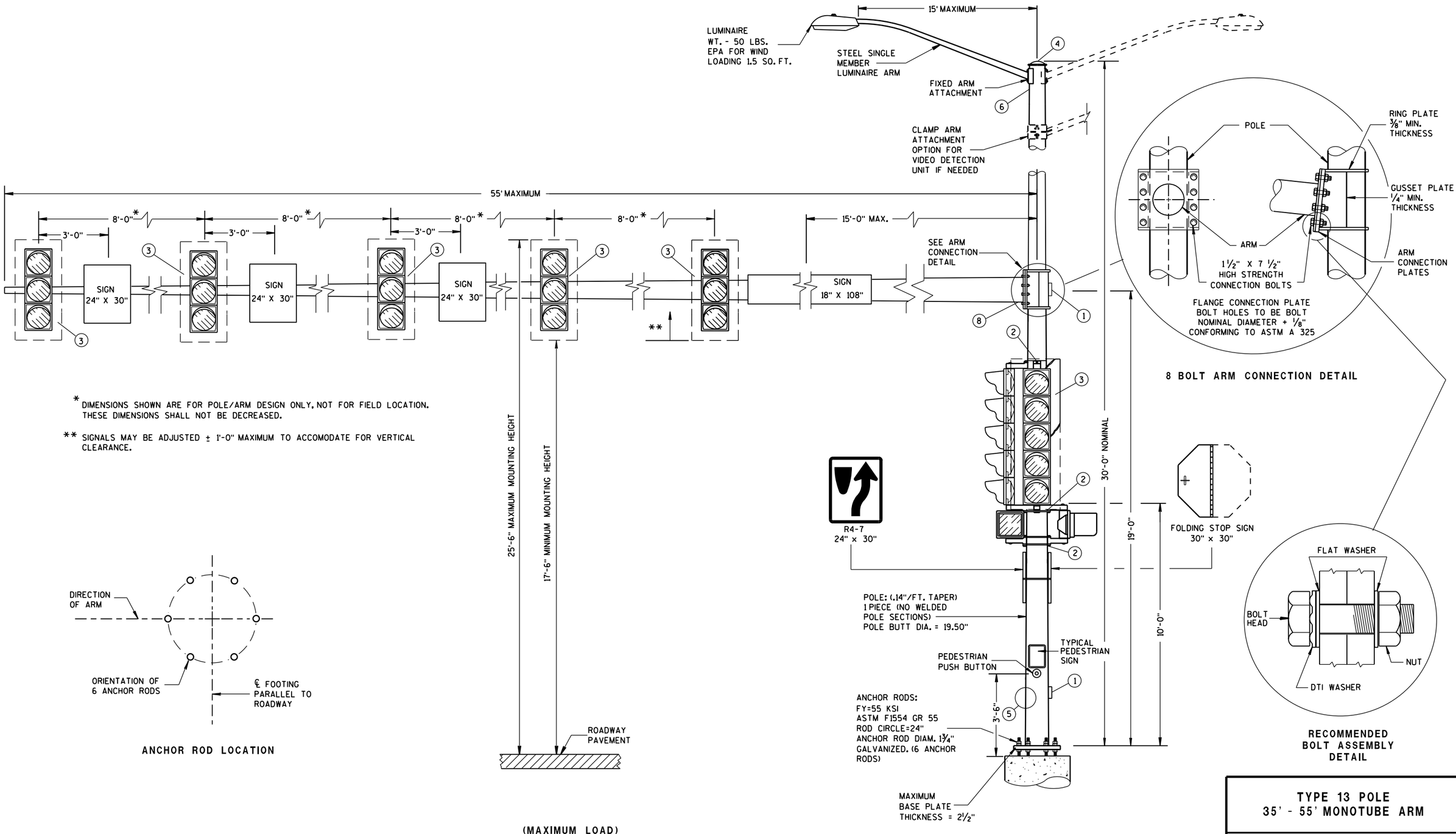
APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL 558
FHWA

6

S.D.D. 9 E 8-6b

6

S.D.D. 9 E 8-6b



8 BOLT ARM CONNECTION DETAIL

RECOMMENDED
BOLT ASSEMBLY
DETAIL

* DIMENSIONS SHOWN ARE FOR POLE/ARM DESIGN ONLY, NOT FOR FIELD LOCATION. THESE DIMENSIONS SHALL NOT BE DECREASED.

** SIGNALS MAY BE ADJUSTED ± 1'-0" MAXIMUM TO ACCOMODATE FOR VERTICAL CLEARANCE.

ANCHOR ROD LOCATION

(MAXIMUM LOAD)

TYPE 13 POLE 35'- 55' MONOTUBE ARM

TYPE 13 POLE 35' - 55' MONOTUBE ARM
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION
APPROVED Sept. 2014 DATE /S/ Ahmet Demirbilek STATE ELECTRICAL
FHWA

6
S.D.D. 9 E 8-6d

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

POLE TYPES 9 AND 10 ARE FOR ARM LENGTHS 15-FOOT TO 30-FOOT.

POLE TYPES 12 AND 13 ARE FOR ARM LENGTHS 35-FOOT TO 55-FOOT.

MONOTUBE POLE AND ARM SHALL BE GALVANIZED STEEL.

RING-STIFFENED BUILT-UP BOX TYPE OF ATTACHMENT FOR TRAFFIC SIGNAL ARM.

ONE (1) PIECE POLE CONSTRUCTION (NO WELDED POLE SECTIONS).

STANDARD STRAIGHT ARM DESIGN (3 % ± RISE).

SECTION 657, POLES OF THE STANDARD SPECIFICATIONS SHALL APPLY TO THIS DRAWING.

PROVIDE WIREWAY THRU POLE WALL AND ARM CONNECTION PLATES. PROVIDE ROUND, SMOOTH INSIDE SURFACE.

MANUFACTURER'S SUBMITTED POLE DESIGNS AND DRAWINGS SHALL BE SIGNED AND STAMPED BY A REGISTERED PROFESSIONAL ENGINEER AND CERTIFIED AS BEING IN COMPLIANCE WITH THE AASHTO 2013 6TH EDITION AND ALL PERTINENT WISDOT SPECIFICATIONS AND DRAWINGS FOR TRAFFIC AND LIGHTING STRUCTURES AND AS FOLLOWS:

- CATEGORY III FATIGUE LOADS OF GALLOPING, TRUCK GUSTS (AT 45 MPH VEHICLE VELOCITY) AND NATURAL WIND GUSTS FOR DESIGN OF TYPE 9 AND TYPE 10 STRUCTURES.
- CATEGORY II FATIGUE LOADS OF GALLOPING, TRUCK GUSTS (AT 45 MPH VEHICLE VELOCITY) AND NATURAL WIND GUSTS FOR DESIGN OF TYPE 12 AND TYPE 13 STRUCTURES.
- 90 MPH (3-SECOND GUST) WIND SPEED AND A 50 YEAR DESIGN LIFE.

SECURE THE OPENING BELOW THE BASE PLATE WITH STAINLESS STEEL OR GALVANIZED STEEL MESH AND SECURE THE MESH WITH ¾" S.S. BANDING AROUND THE LEVELING NUTS.

INDENT PRINT (NOMINAL ½" HIGH) THE POLE LENGTH AND FIRST TWO LETTERS OF THE MANUFACTURERS NAME ON TWO SIDES OF THE BASE PLATE 180 DEGREES APART, BEFORE GALVANIZING. THE ARM SHALL BE IDENTIFIED WITH THE SAME INFORMATION BY INDENT PRINT.

SIGNAL FACE SHALL BE MOUNTED 6 INCHES (NOMINAL) FROM THE END OF THE MONOTUBE ARM OR AS SHOWN ON THE PLAN CONSTRUCTION DETAIL OR AS DIRECTED BY THE PROJECT ENGINEER/ELECTRICAL OPERATIONS PERSONNEL. MOUNT ALL LIKE HEADS AT SAME ELEVATION.

SIGN MOUNTING BRACKETS SHALL BE FURNISHED IN ACCORDANCE WITH SECTION 637 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION.

(1) DESIGN FOR MAXIMUM ALLOWABLE HANDHOLE WITH COVER ASSEMBLY WITH TWO ¼" X ¾" - 20 TPI STAINLESS STEEL HEX HEAD BOLTS.

(2) SIGNAL MOUNTING BRACKETS FOR POLE MOUNTING, MOUNT WITH CAP SCREW AND BANDING, (SEE SPECIFICATIONS SEC. 658).

(3) SECURELY MOUNT BACKPLATES, PROJECTING 5" BEYOND ALL SIDES OF THE SIGNAL FACE HOUSING, PER MANUFACTURERS RECOMMENDATIONS.

(4) THE TOP OF THE POLE SHAFT AND THE END OF THE MONOTUBE ARM SHALL BE EQUIPPED WITH A REMOVABLE, VENTILATED CAP HELD SECURELY IN PLACE WITH SET SCREWS.

(5) FACTORY-WELDED BRACKET FOR GROUNDING LUG, OPPOSITE HANDHOLE, (LUG AND HARDWARE PAID UNDER SEPARATE ITEM). PROVIDE HOLE IN BRACKET FOR ¼" X ¾" - 20 TPI STAINLESS STEEL HEX HEAD BOLT.

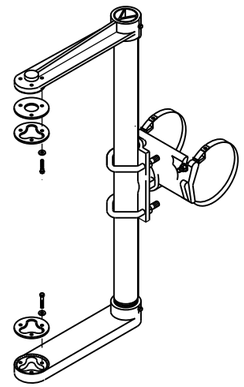
(6) FACTORY-WELDED "J" HOOK FOR STRAIN RELIEF FOR POLE LUMINAIRE WIRE.

(7) INSTALL DEPARTMENT PROVIDED STRUCTURAL IDENTIFICATION PLAQUES.

STRUCTURAL IDENTIFICATION PLAQUES SHALL BE PLACED ON THE POLES IN THE SAME DIRECTION AS THE ARM.

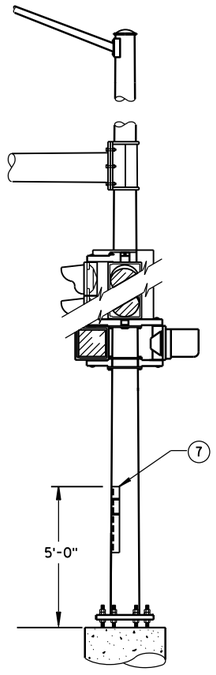
MOUNTING HEIGHT SHALL BE 5'-0" ABOVE THE CURB OR SHOULDER . ADJUST IF IT IS KNOWN THAT REQUIRED TRAFFIC SIGNS WILL BE OBSTRUCTED.

(8) FACTORY DRILLED ½" DRAIN HOLE 2" FROM FLANGE CONNECTION PLATE.

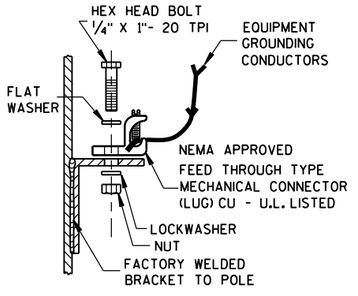


SIGNAL FACE MOUNTING BRACKET DETAIL FOR MONOTUBE ARM

(MOUNT PER MANUFACTURER'S RECOMMENDATION)

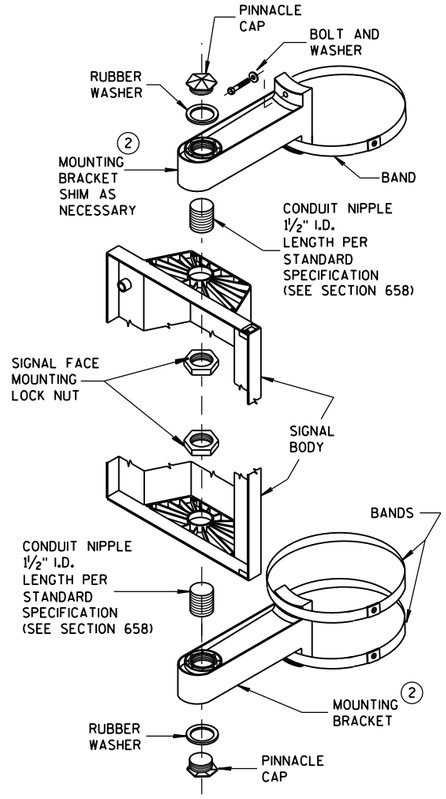


STRUCTURAL IDENTIFICATION PLAQUE PLACEMENT

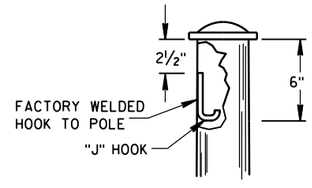


TYPICAL GROUNDING CONNECTIONS (5)

NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL



SIGNAL FACE VERTICAL MOUNTING DETAIL



"J" HOOK WIRE SUPPORT (6)

GENERAL NOTES AND HARDWARE DETAILS FOR TYPE 9, 10, 12 & 13 POLES WITH MONOTUBE ARMS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

Sept. 2014 — DATE

/S/ Ahmet Demirbilek — STATE ELECTRICAL 560

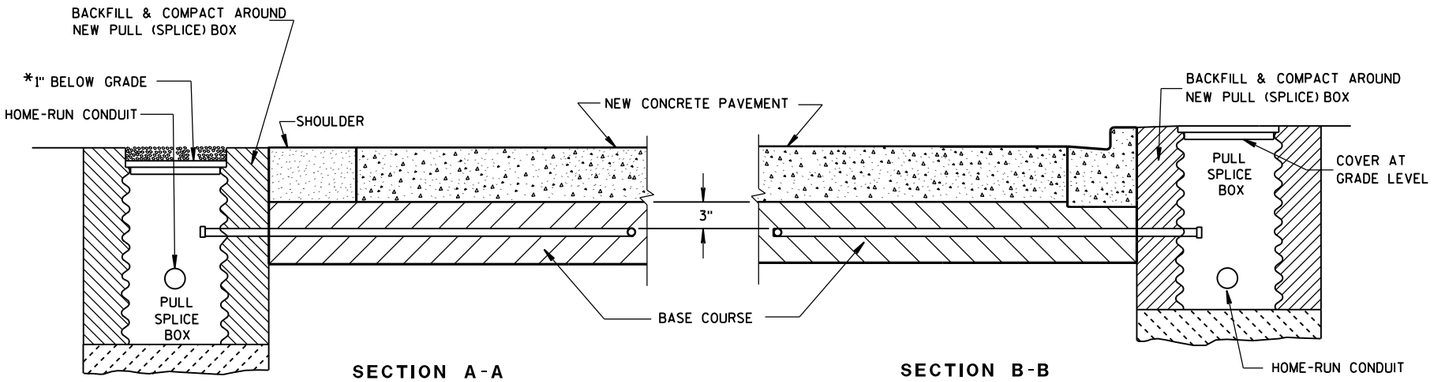
FHWA

6

S.D.D. 9 E 8-6e

6

S.D.D. 9 E 8-6e



SECTION A-A
NO CURB & GUTTER

SECTION B-B
CURB & GUTTER

*RECESS PULL (SPLICE) BOX SO THAT THE COVER IS 3" BELOW GRADE IN SHOULDER AREAS OF CRUSHED AGGREGATE. BACKFILL OVER COVER WITH THE CRUSHED AGGREGATE TO BRING THE AREA TO GRADE LEVEL.

LOOP DETECTOR INSTALLATION DETAIL

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

LOOP SIZE, CONFIGURATION LOCATION, NUMBER OF TURNS OF WIRE AND ASSOCIATED SIGNAL PHASE SHALL BE AS SHOWN ON THE PLANS.

PITCH LEAD OUT CONDUIT TO DRAIN TO ROADSIDE PULL (SPLICE) BOX.

SPLICES SHALL BE INSTALLED BY USING CAST IN PLACE SPLICE KITS LISTED ON THE DEPARTMENTS APPROVED PRODUCTS LIST OR AN ENGINEER APPROVED EQUAL. NON-INSULATED BUTT SPLICES TO FIT #12 AWG STRANDED WIRE SHALL BE USED. SPLICES SHALL BE SOLDERED AND INSULATED FROM EACH OTHER AS PER INSTRUCTIONS INCLUDED IN THE SPLICE KIT.

MEASURE GROUND RESISTANCE USING A MEGGER. REPLACE LOOP WIRE NOT ATTAINING A READING OF INFINITY TO GROUND.

AFTER SPLICING THE LOOP WIRE TO THE LOOP LEAD-IN CABLE, THE CONTRACTOR SHALL MEASURE INDUCTANCE, GROUND RESISTANCE AND WIRE RESISTANCE AT THE CABINET END OF THE LEAD-IN CABLE AND FURNISH A COPY OF THE READINGS TO THE PROJECT ENGINEER FOR EVALUATION.

LOOP DETECTOR LEADS SHALL BE IDENTIFIED WITH THEIR ASSOCIATED LOOP BY USE OF WATERPROOF TAGS AT BOTH ENDS OF THE CABLE. A LISTING OF THE CABLE IDENTIFICATION PER INDIVIDUAL LOOP LEAD-IN SHALL BE PLACED IN THE CABINET.

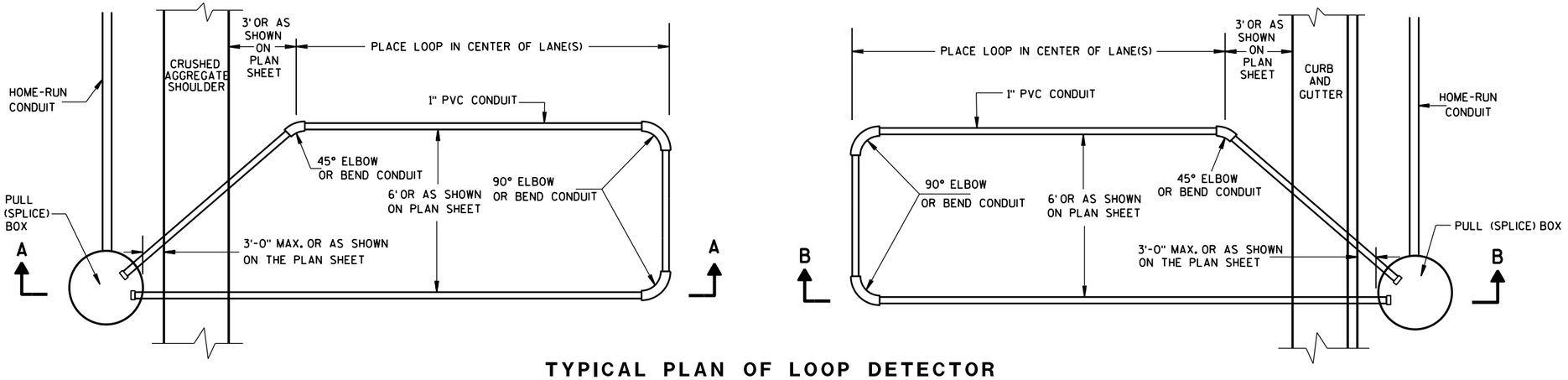
THE #12 AWG. LOOP WIRE IN THE PULL (SPLICE) BOX SHALL BE HAND TWISTED AT LEAST 3 TWISTS PER FOOT BEFORE BEING SPLICED TO THE LOOP LEAD-IN CABLE.

SPLICES OF LOOP WIRE TO LEAD-IN CABLE SHALL BE MADE ONLY IN PULL (SPLICE) BOXES AT THE SIDE OF THE ROAD.

THE #12 AWG LOOP WIRE SHALL BE INSTALLED FROM THE ROADSIDE PULL (SPLICE) BOX THROUGH THE LOOP CONDUIT, BACK TO THE ROADSIDE PULL (SPLICE) BOX, AND BE INSTALLED IN ONE, NON-SPLICE CONTINUOUS LENGTH.

PROTECTION OF THE CONDUIT IN THE BASE COURSE, SHALL BE REQUIRED AFTER INSTALLATION AND BEFORE NEW PAVEMENT IS INSTALLED.

SHOULD INSTALLATION REPAIR BE REQUIRED, IT SHALL BE DONE UNDER THE DIRECTION OF THE PROJECT ENGINEER.



TYPICAL PLAN OF LOOP DETECTOR WITH 18" OR 24" PULL (SPLICE) BOX

LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 1)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

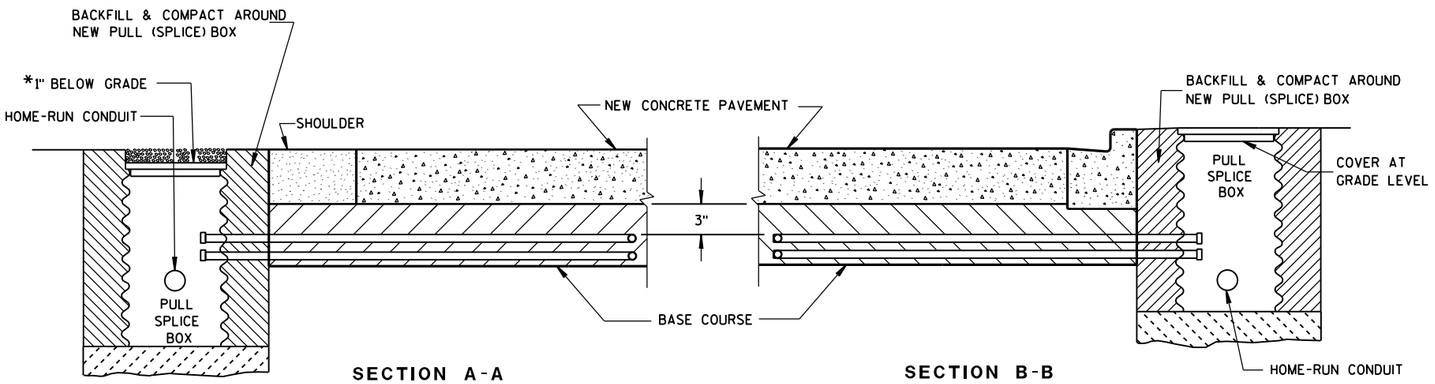
APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

6

S.D.D. 9 F 15-4a

6

S.D.D. 9 F 15-4a



SECTION A-A
NO CURB & GUTTER

SECTION B-B
CURB & GUTTER

*RECESS PULL (SPLICE) BOX SO THAT THE COVER IS 3" BELOW GRADE IN SHOULDER AREAS OF CRUSHED AGGREGATE. BACKFILL OVER COVER WITH THE CRUSHED AGGREGATE TO BRING THE AREA TO GRADE LEVEL.

LOOP DETECTOR INSTALLATION DETAIL

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

LOOP SIZE, CONFIGURATION LOCATION, NUMBER OF TURNS OF WIRE AND ASSOCIATED SIGNAL PHASE SHALL BE AS SHOWN ON THE PLANS.

PITCH LEAD OUT CONDUIT TO DRAIN TO ROADSIDE PULL (SPLICE) BOX.

SPLICES SHALL BE INSTALLED BY USING CAST IN PLACE SPLICE KITS LISTED ON THE DEPARTMENTS APPROVED PRODUCTS LIST OR AN ENGINEER APPROVED EQUAL. NON-INSULATED BUTT SPLICES TO FIT #12 AWG STRANDED WIRE SHALL BE USED. SPLICES SHALL BE SOLDERED AND INSULATED FROM EACH OTHER AS PER INSTRUCTIONS INCLUDED IN THE SPLICE KIT.

MEASURE GROUND RESISTANCE USING A MEGGER. REPLACE LOOP WIRE NOT ATTAINING A READING OF INFINITY TO GROUND.

AFTER SPLICING THE LOOP WIRE TO THE LOOP LEAD-IN CABLE, THE CONTRACTOR SHALL MEASURE INDUCTANCE, GROUND RESISTANCE AND WIRE RESISTANCE AT THE CABINET END OF THE LEAD-IN CABLE AND FURNISH A COPY OF THE READINGS TO THE PROJECT ENGINEER FOR EVALUATION.

LOOP DETECTOR LEADS SHALL BE IDENTIFIED WITH THEIR ASSOCIATED LOOP BY USE OF WATERPROOF TAGS AT BOTH ENDS OF THE CABLE. A LISTING OF THE CABLE IDENTIFICATION PER INDIVIDUAL LOOP LEAD-IN SHALL BE PLACED IN THE CABINET.

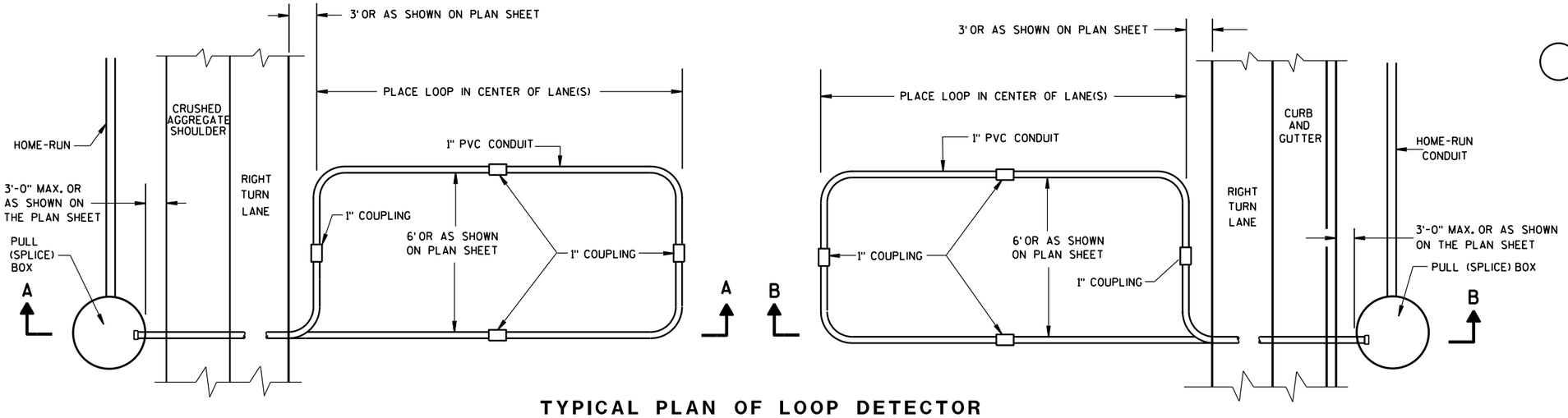
THE #12 AWG. LOOP WIRE IN THE PULL (SPLICE) BOX SHALL BE HAND TWISTED AT LEAST 3 TWISTS PER FOOT BEFORE BEING SPLICED TO THE LOOP LEAD-IN CABLE.

SPLICES OF LOOP WIRE TO LEAD-IN CABLE SHALL BE MADE ONLY IN PULL (SPLICE) BOXES AT THE SIDE OF THE ROAD.

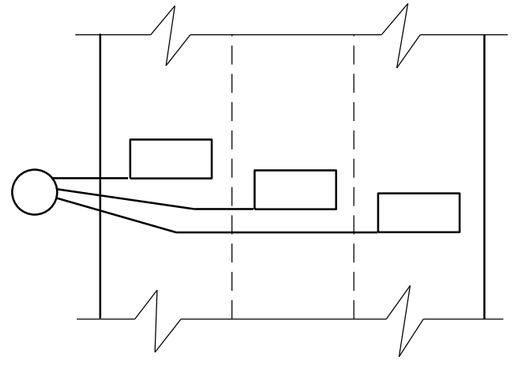
THE #12 AWG LOOP WIRE SHALL BE INSTALLED FROM THE ROADSIDE PULL (SPLICE) BOX, THROUGH THE LOOP CONDUIT, BACK TO THE ROADSIDE PULL (SPLICE) BOX, AND BE INSTALLED IN ONE, NON-SPLICED CONTINUOUS LENGTH.

PROTECTION OF THE CONDUITS IN THE BASE COURSE SHALL BE REQUIRED AFTER INSTALLATION AND BEFORE NEW PAVEMENT IS INSTALLED.

SHOULD INSTALLATION REPAIR BE REQUIRED, IT SHALL BE DONE UNDER THE DIRECTION OF THE PROJECT ENGINEER.



TYPICAL PLAN OF LOOP DETECTOR WITH 24" PULL (SPLICE) BOX



MULTI-LANE INSTALLATION

LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION
APPROVED Sept. 2014 — DATE /S/ Ahmet Demirbilek — STATE ELECTRICAL FHWA

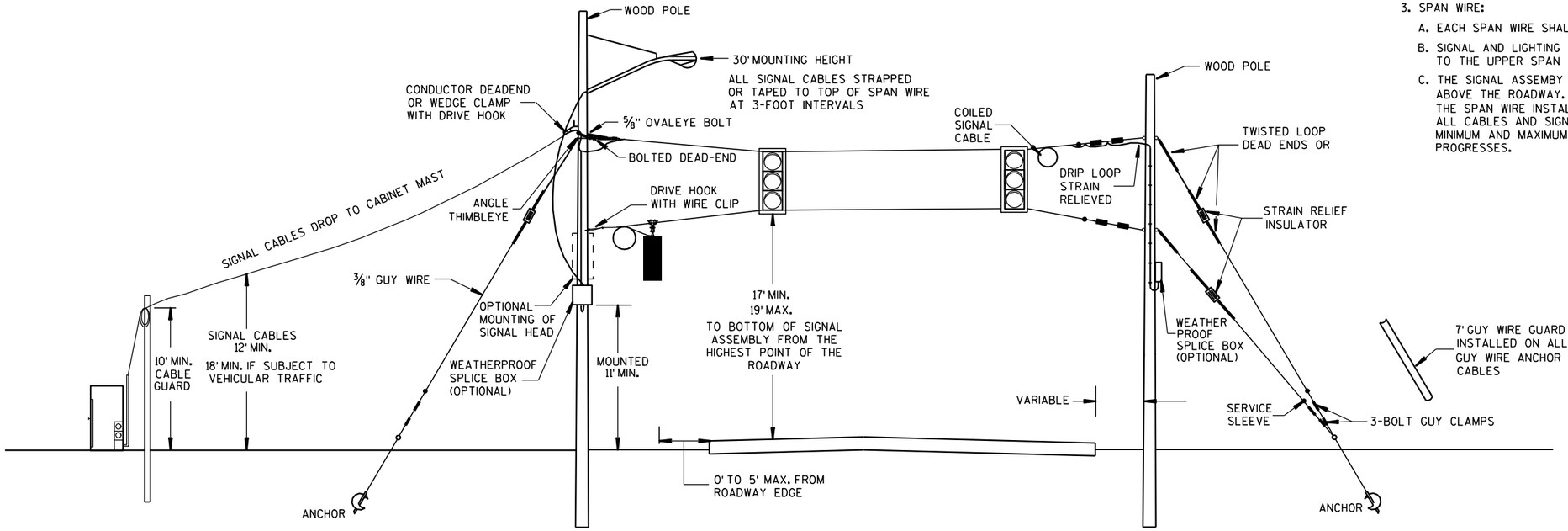
GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

1. WOOD POLES SHALL BE CLASS 4. LENGTH DETERMINED BY SIGNAL PLAN.

2. SIGNAL FACES:
   A. ALL SECTIONS SHALL BE 12" AND POLYCARBONATE.
   B. EACH SHALL CONTAIN A 5" WIDE DULL BLACK POLYCARBONATE BACKPLATE.
   C. EACH SHALL BE WIRED FROM THE TOP SIGNAL MOUNTING BRACKET.
   D. NEAR RIGHT SIGNAL FACE SUSPENDED ON THE TETHER (NO BACKPLATE) SHALL NOT BE OVER THE TRAVELED WAY. IF THE POLE IS WITHIN 5 FEET OF THE TRAVELED WAY MOUNT THE SIGNAL FACE ON THE WOOD POLE WITH BACKPLATE.

3. SPAN WIRE:
   A. EACH SPAN WIRE SHALL BE INDIVIDUALLY DOWN GUYED.
   B. SIGNAL AND LIGHTING CABLES SHALL ONLY BE ATTACHED TO THE UPPER SPAN WIRE.
   C. THE SIGNAL ASSEMBY SHALL HAVE A 17' MIN. HEIGHT ABOVE THE ROADWAY. THIS SHALL BE MEASURED AFTER THE SPAN WIRE INSTALLATION IS COMPLETED WITH ALL CABLES AND SIGNAL FACES IN PLACE. MAINTAIN MINIMUM AND MAXIMUM HEIGHTS AS ROADWAY WORK PROGRESSES.



SPAN WIRE
TEMPORARY SIGNALS

MINIMUM POLE LENGTHS	POLE BURIEL DEPTHS
25'	5'
30'	6'
35'	7'
40'	8'
45'	9'

SPAN WIRE
TEMPORARY TRAFFIC SIGNAL

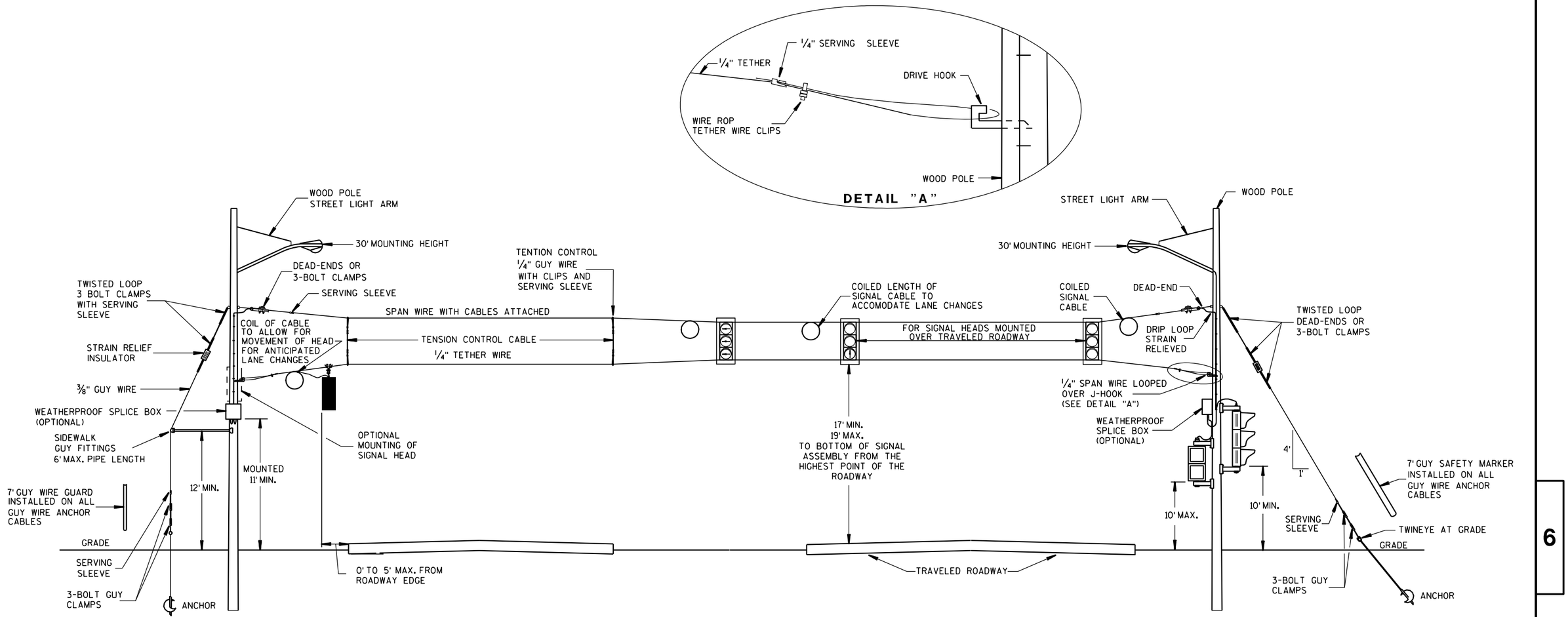
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7-14-08 DATE

/S/ Balu Ananthar [illegible]n
STATE ELECTRICAL ENGI 563 HWYS

FHWA



GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

1. WOOD POLES SHALL BE CLASS 4. LENGTH DETERMINED BY SIGNAL PLAN.
2. SIGNAL FACES:
   A. ALL SECTIONS SHALL BE 12" AND POLYCARBONATE.
   B. EACH SHALL CONTAIN A 5" WIDE DULL BLACK POLYCARBONATE BACKPLATE.
   C. EACH SHALL BE WIRED FROM THE TOP SIGNAL MOUNTING BRACKET.
   D. NEAR RIGHT SIGNAL FACE SUSPENDED ON THE TETHER (NO BACKPLATE) SHALL NOT BE OVER THE TRAVELED WAY. IF THE POLE IS WITHIN 5 FEET OF THE TRAVELED WAY MOUNT THE SIGNAL FACE ON THE WOOD POLE WITH BACKPLATE.
   E. FAR INDICATION SHALL BE MAINTAINED OVER CENTER OF TRAFFIC LANE.
3. SPAN WIRE:
   A. EACH SPAN WIRE SHALL BE INDIVIDUALLY DOWN GUYED.
   B. SIGNAL AND LIGHTING CABLES SHALL ONLY BE ATTACHED TO THE UPPER SPAN WIRE.
   C. THE SIGNAL ASSEMBY SHALL HAVE A 17' MIN. HEIGHT ABOVE THE ROADWAY. THIS SHALL BE MEASURED AFTER THE SPAN WIRE INSTALLATION IS COMPLETED WITH ALL CABLES AND SIGNAL FACES IN PLACE. MAINTAIN MINIMUM AND MAXIMUM HEIGHTS AS ROADWAY WORK PROGRESSES.

SPAN WIRE
TEMPORARY SIGNALS
4 LANE ROADWAYS

MINIMUM POLE LENGTHS	CLASS	MIN. BURIAL DEPTHS
25'	V	5'
30'	V	6'
35'	IV	7'
40'	IV	8'
45'	IV	9'

SPAN WIRE
TEMPORARY TRAFFIC SIGNAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7-14-08 DATE

/S/ Balu Ananthanarayanan
STATE ELECTRICAL ENGI 564 HWYS

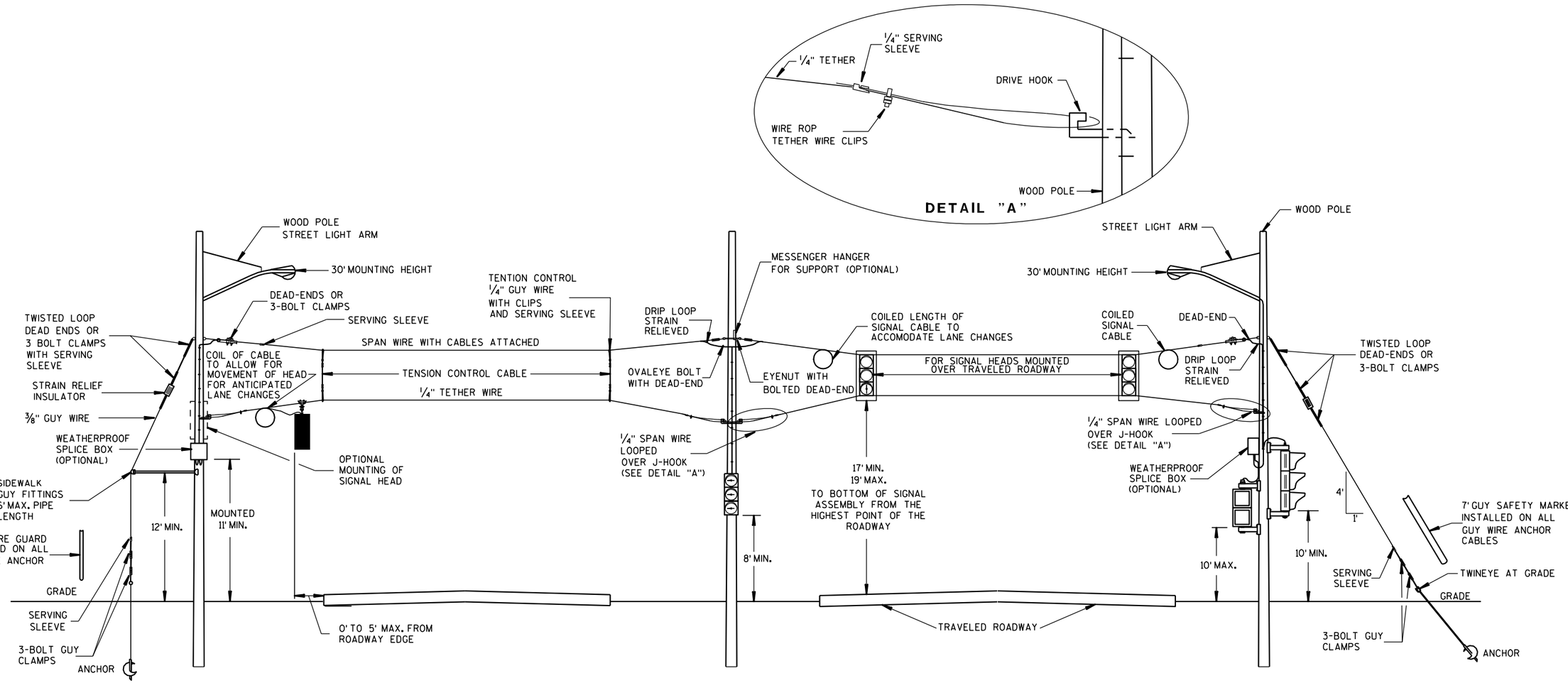
FHWA

6

S.D.D. 9 G 1-3b

6

S.D.D. 9 G 1-3b



SPAN WIRE
TEMPORARY SIGNALS
4 LANE ROADWAYS

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

1. WOOD POLES SHALL BE CLASS 4. LENGTH DETERMINED BY SIGNAL PLAN.
2. SIGNAL FACES:
   A. ALL SECTIONS SHALL BE 12" AND POLYCARBONATE.
   B. EACH SHALL CONTAIN A 5" WIDE DULL BLACK POLYCARBONATE BACKPLATE.
   C. EACH SHALL BE WIRED FROM THE TOP SIGNAL MOUNTING BRACKET.
   D. NEAR RIGHT SIGNAL FACE SUSPENDED ON THE TETHER (NO BACKPLATE) SHALL NOT BE OVER THE TRAVELED WAY. IF THE POLE IS WITHIN 5 FEET OF THE TRAVELED WAY MOUNT THE SIGNAL FACE ON THE WOOD POLE WITH BACKPLATE.
   E. FAR INDICATION SHALL BE MAINTAINED OVER CENTER OF TRAFFIC LANE.
3. SPAN WIRE:
   A. EACH SPAN WIRE SHALL BE INDIVIDUALLY DOWN GUYED.
   B. SIGNAL AND LIGHTING CABLES SHALL ONLY BE ATTACHED TO THE UPPER SPAN WIRE.
   C. THE SIGNAL ASSEMBY SHALL HAVE A 17' MIN. HEIGHT ABOVE THE ROADWAY. THIS SHALL BE MEASURED AFTER THE SPAN WIRE INSTALLATION IS COMPLETED WITH ALL CABLES AND SIGNAL FACES IN PLACE. MAINTAIN MINIMUM AND MAXIMUM HEIGHTS AS ROADWAY WORK PROGRESSES.

MINIMUM POLE LENGTHS	CLASS	MIN. BURIAL DEPTHS
25'	V	5'
30'	V	6'
35'	IV	7'
40'	IV	8'
45'	IV	9'

SPAN WIRE TEMPORARY TRAFFIC SIGNAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7-14-08 DATE

/S/ Balu Ananthanarayanan
STATE ELECTRICAL ENGI

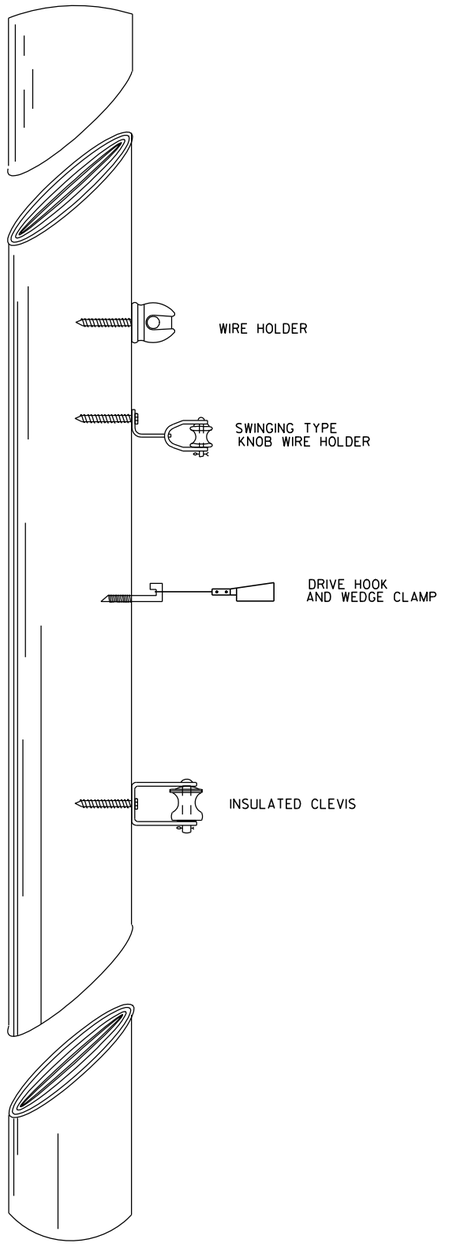
565

HWYS

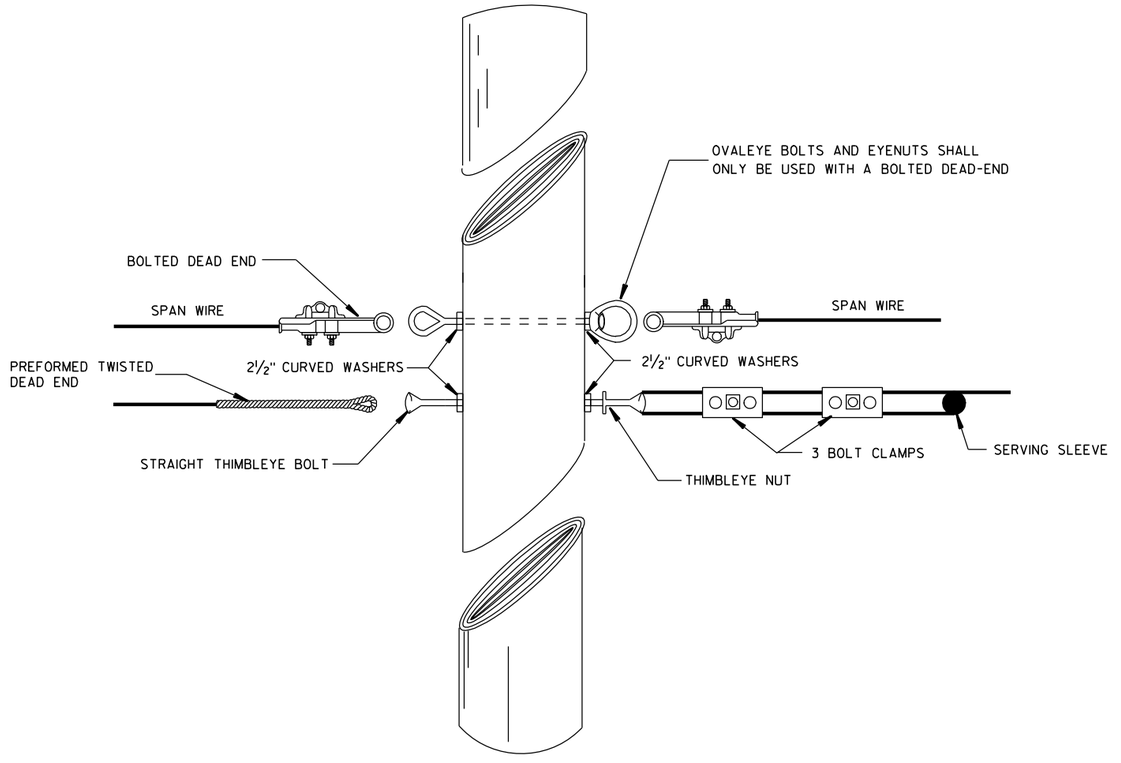
FHWA

6

S.D.D. 9 G 1-3c



TYPICAL CABLE HANGERS



TYPICAL DEAD-ENDING

6

6

S.D.D. 9 G 1-3d

S.D.D. 9 G 1-3d

SPAN WIRE
TEMPORARY TRAFFIC SIGNAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

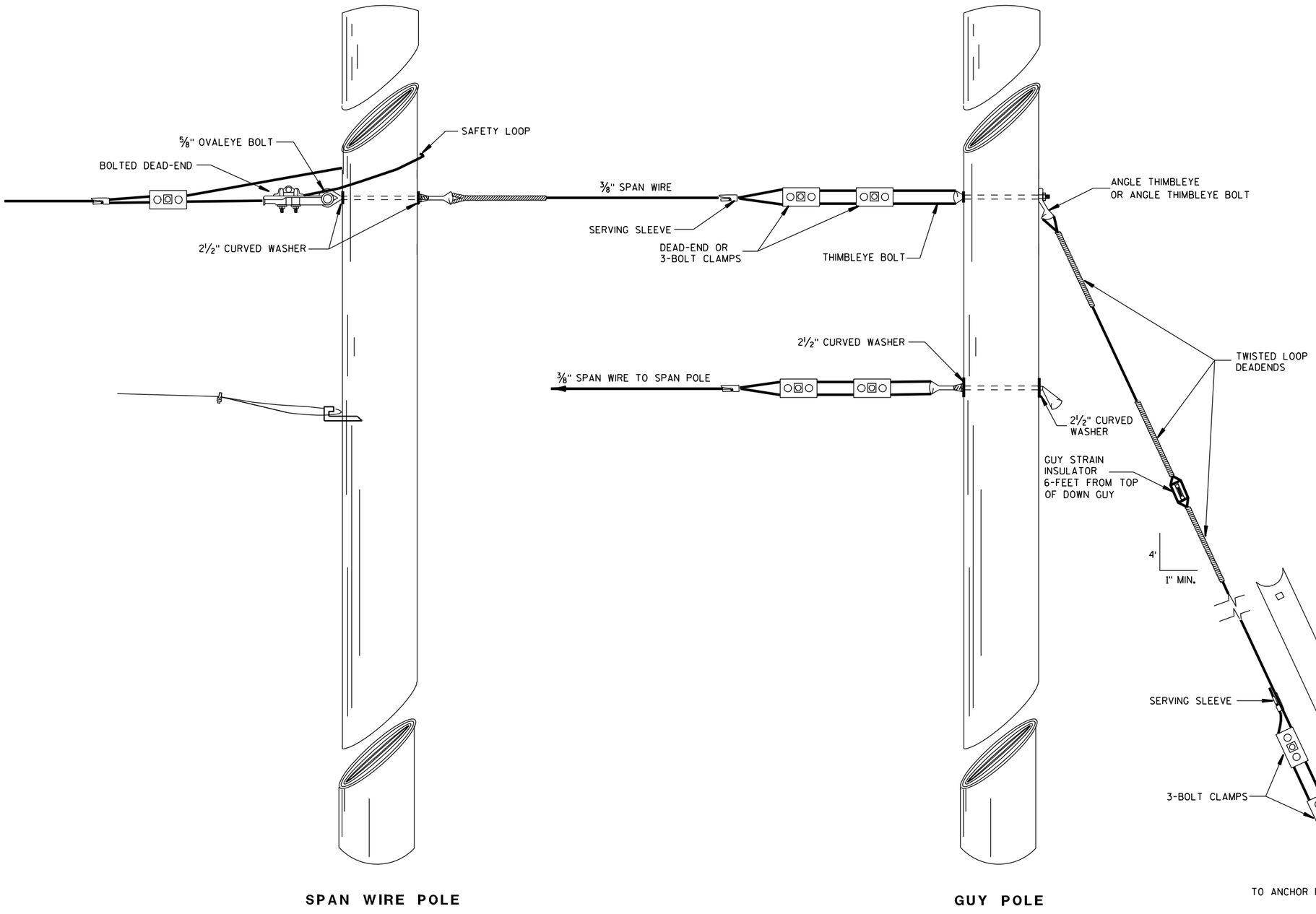
7-14-08
DATE

/S/ Balu Ananthanarayanan
STATE ELECTRICAL ENGI 566 HWYS

FHWA

GENERAL NOTES

1. USE ¾" DRILL IN WOOD POLE TO PROVIDE HOLE FOR ⅝" BOLTS.
2. SAFTY LOOP REQUIRED ON EACH END OF ALL SPAN WIRES.



SPAN WIRE POLE

GUY POLE

TYPICAL DEAD-ENDINGS OR GUYING

SPAN WIRE TEMPORARY TRAFFIC SIGNAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

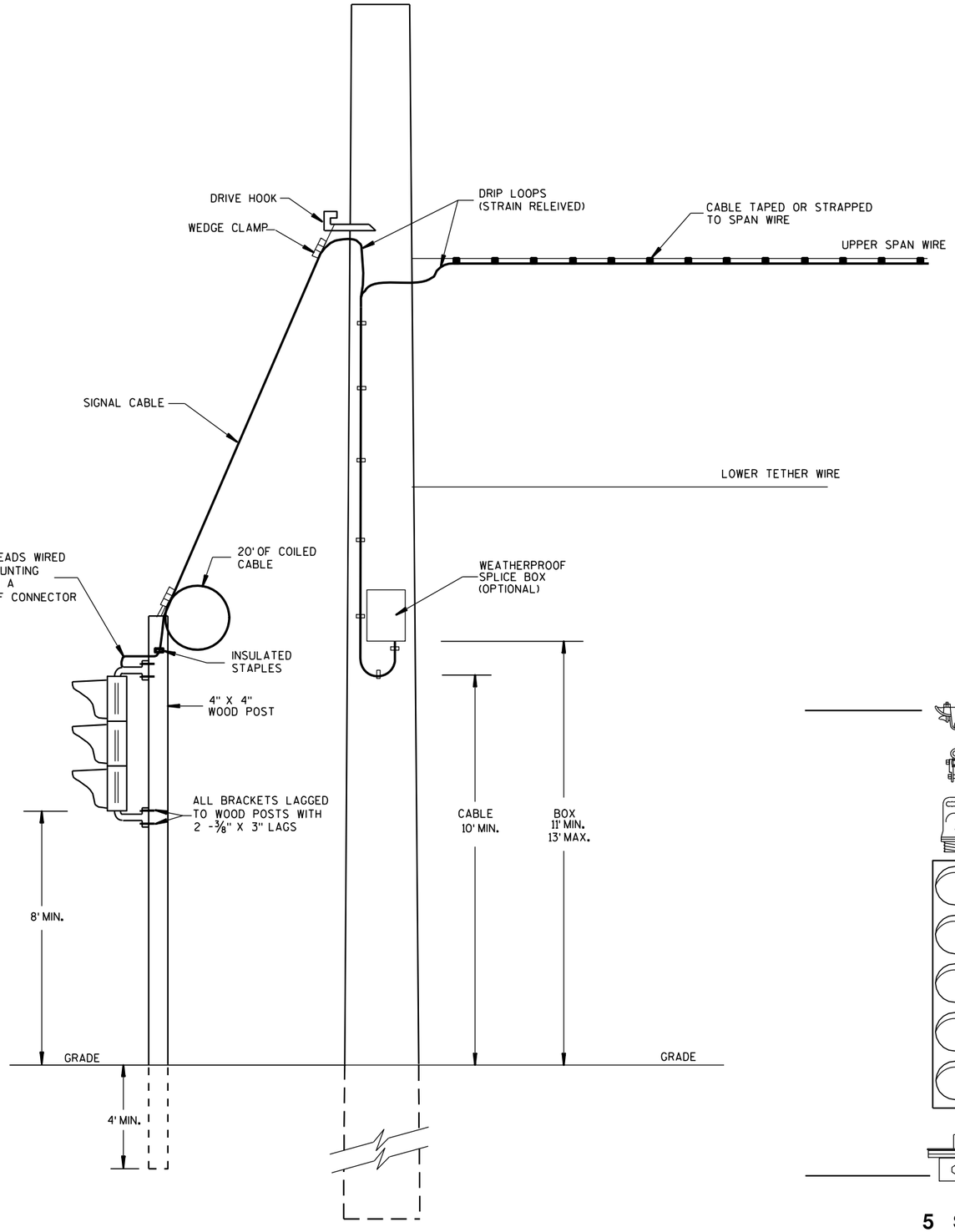
APPROVED
7-14-08 DATE
/S/ Balu Ananthanarayanan
STATE ELECTRICAL ENGI 567 HWYS
FHWA

6

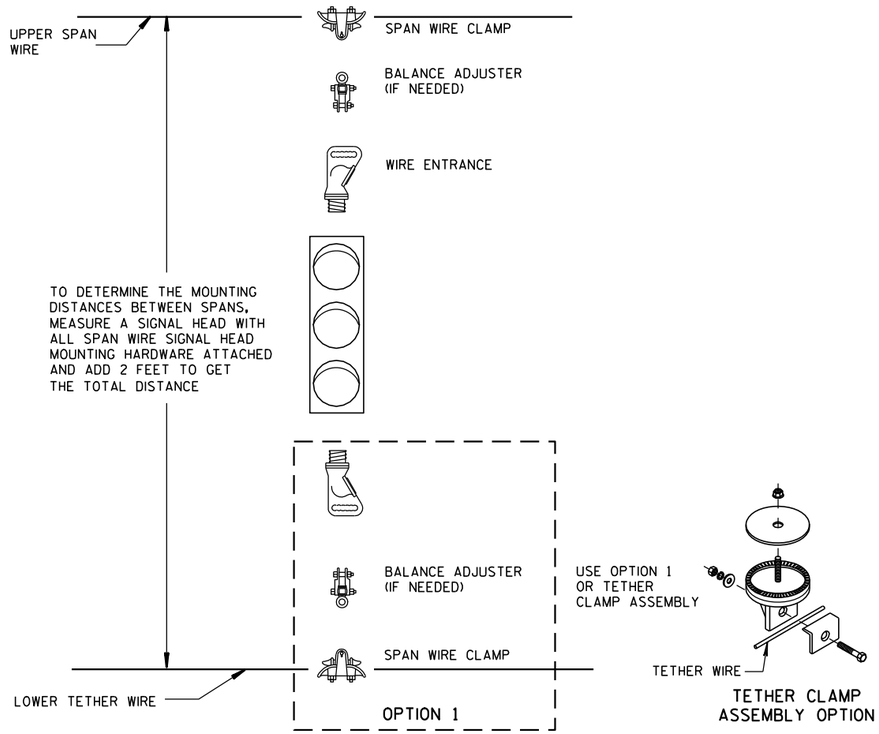
S.D.D. 9 G 1-3e

6

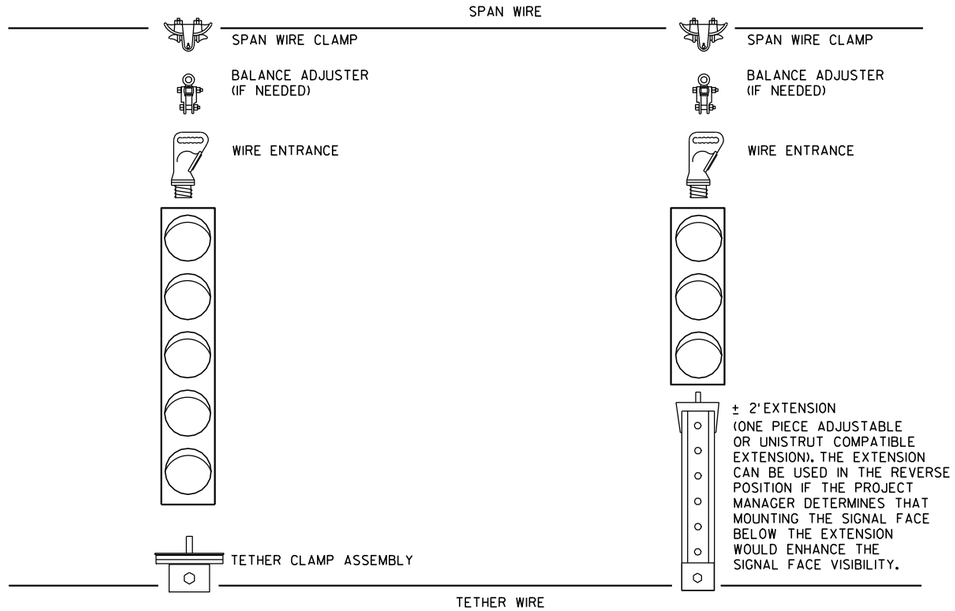
S.D.D. 9 G 1-3e



TYPICAL DROP TO TEMPORARY MOVEABLE SIGNAL



TYPICAL SPAN WIRE MOUNTING HARDWARE



5 SECTION VERTICAL WITH 3 SECTION VERTICAL ON ONE SPAN WIRE

SPAN WIRE
TEMPORARY TRAFFIC SIGNAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

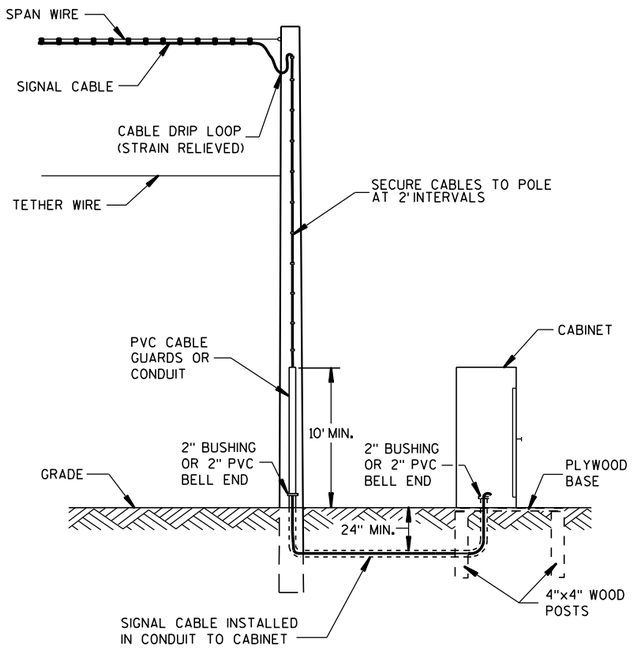
APPROVED
7-14-08 DATE
/S/ Balu Aganthangarayanan
STATE ELECTRICAL ENGI 568 HWYS
FHWA

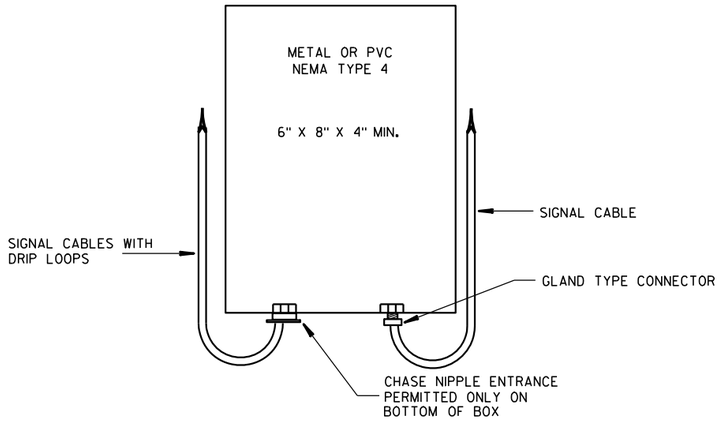
6

S.D.D. 9 G 1-3f

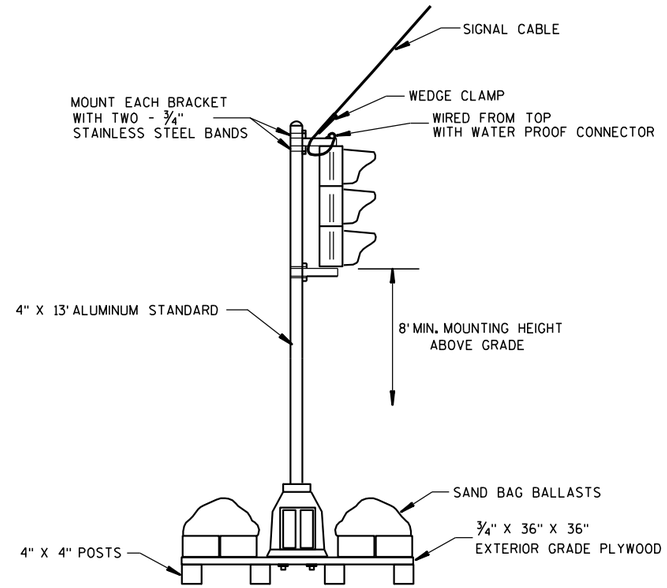
6

S.D.D. 9 G 1-3f

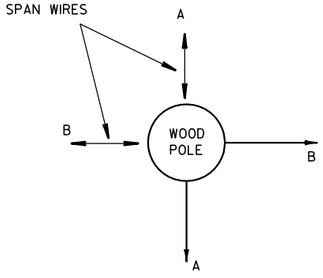




SPLICE BOX

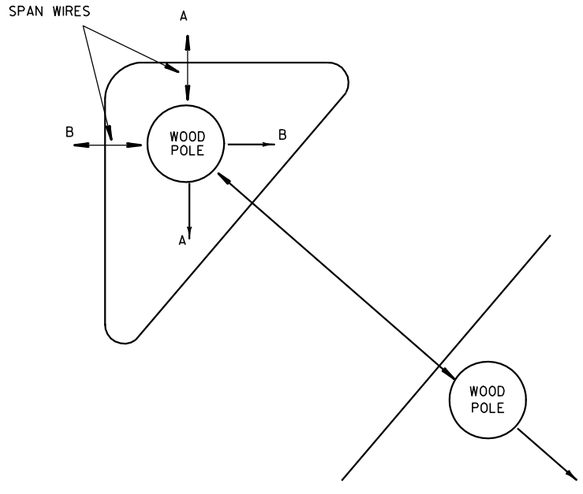


TYPICAL SKID TYPE TEMPORARY

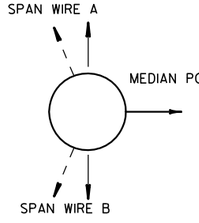


ALL DOWN OR SIDEWALK GUYS
SHALL BE INSTALLED IN THE
OPPOSITE DIRECTION OF THE
STRAIN OF THE SPAN WIRE

CORNER POLES



ISLAND POLES



GUY AWAY FROM
INTERSECTION OR IN
OPPOSITE DIRECTION OF THE
SPAN LOADING

MEDIAN POLES

SPAN WIRE
TEMPORARY TRAFFIC SIGNAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7-14-08
DATE

/S/ Balu Aganthangayagan
STATE ELECTRICAL ENGI 569 HWYS

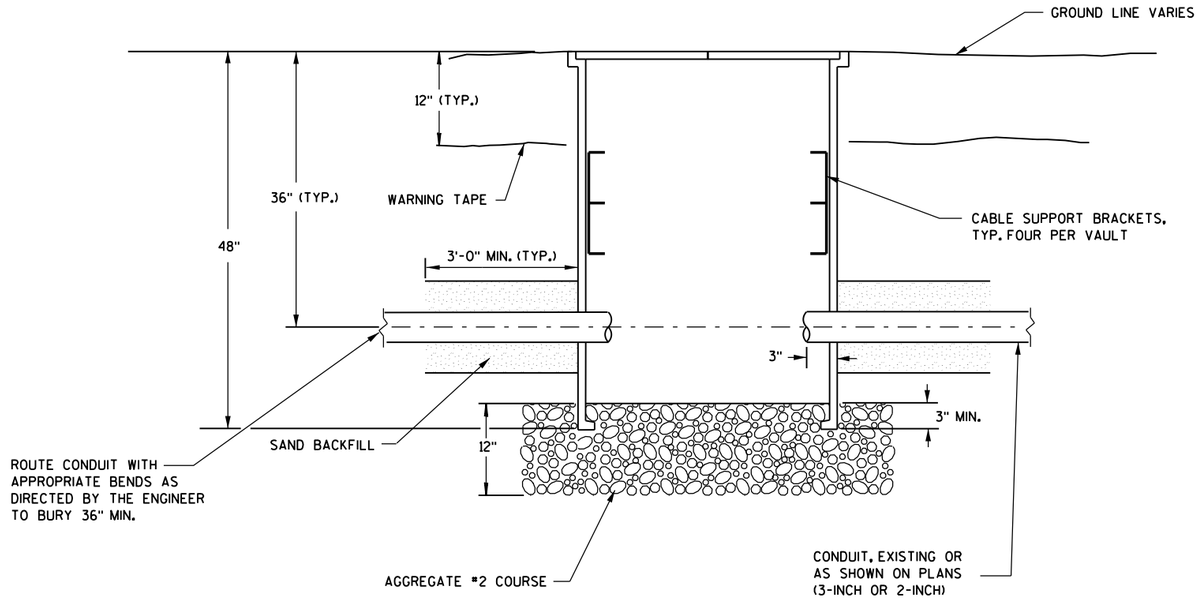
FHWA

6

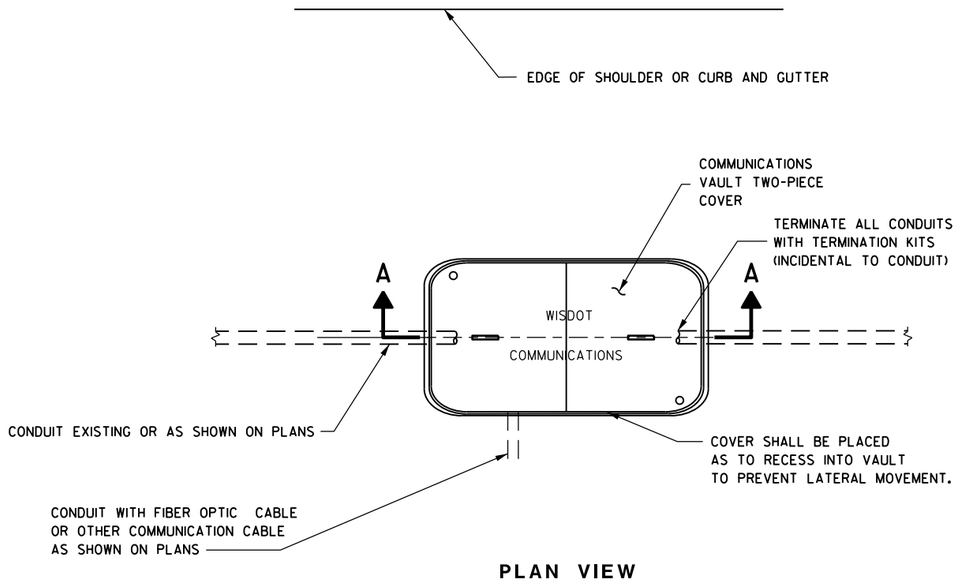
S.D.D. 9 G 1-3g

6

S.D.D. 9 G 1-3g



SECTION A-A



PLAN VIEW

COMMUNICATIONS VAULT

GENERAL NOTES

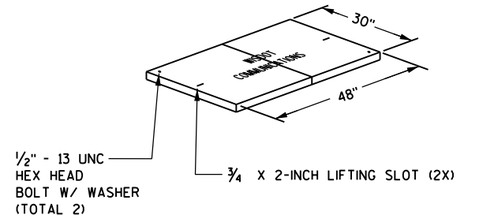
BOX SHALL HAVE AN OPEN BASE.

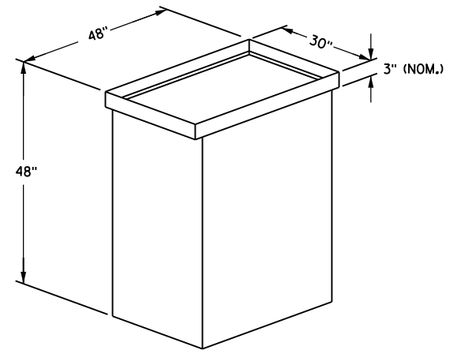
COVER SHALL BE DETECTABLE, AND HAVE A MINIMUM DESIGN LOAD OF 15,000 LBS AND SHALL LOCK.

ALL OPENINGS IN STRUCTURE MUST BE MACHINED AT TIME OF FABRICATION, OR PUNCH DRIVEN AT TIME OF PLACEMENT.

VAULTS SHALL BE OF ONE-PIECE CONSTRUCTION. TWO-PIECE/STACKABLE VAULTS WILL NOT BE PERMITTED.

FIELD PLACEMENT OF COMMUNICATIONS VAULTS SHALL BE AS DIRECTED BY THE ENGINEER.

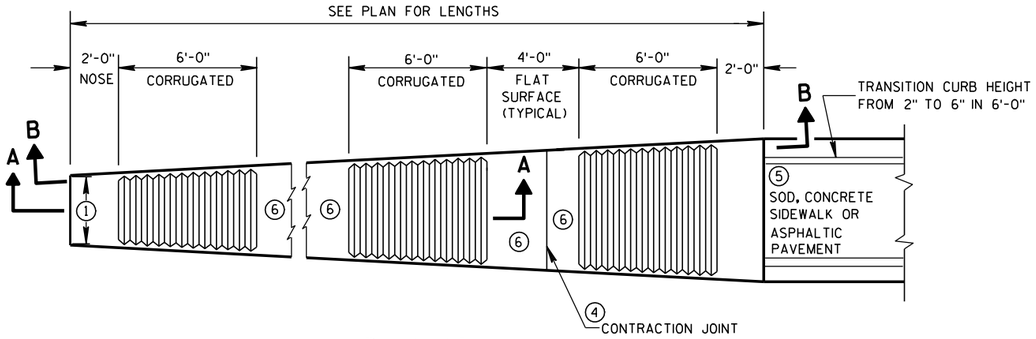




ISOMETRIC VIEW

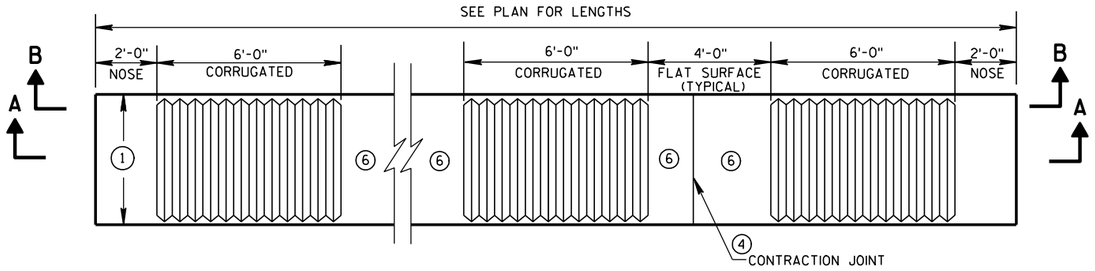
COMMUNICATION VAULT	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
Sept. 2014	/S/ Ahmet Demirbilek
DATE	STATE ELECTRICAL
FHWA	

6
S.D.D. 9 H 9-1



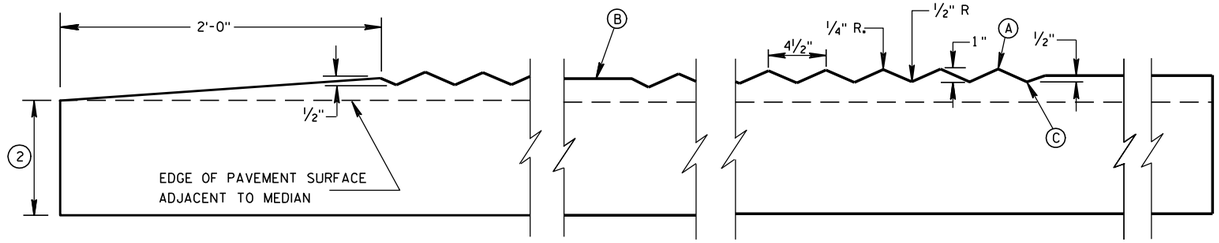
PLAN VIEW

VARIABLE WIDTH CONCRETE CORRUGATED MEDIAN



PLAN VIEW

UNIFORM WIDTH CONCRETE CORRUGATED MEDIAN



SECTION A-A

LONGITUDINAL SECTION

GENERAL NOTES

(1) SEE PLANS FOR CONSTANT OR VARIABLE WIDTH.

(2) THE DEPTH OF THE CONCRETE CORRUGATED MEDIAN SHALL BE 9-INCHES UNLESS SHOWN OTHERWISE IN THE PLAN.

ADJACENT PAVEMENT STRUCTURE DETAILS ARE SHOWN IN THE PLAN. TYPICAL OPTIONS ARE:

(1) NEW OR EXISTING CONCRETE PAVEMENT.

(2) ASPHALTIC CONCRETE OVER NEW OR EXISTING CONCRETE BASE COURSE, OR PAVEMENT.

(3) ASPHALTIC PAVEMENT OVER BASE AGGREGATE DENSE.

(3) TIE BARS OR PAVEMENT TIES REQUIRED IN NEW CONCRETE PAVEMENT OR CONCRETE BASE COURSE. TIE BARS SHALL BE NO. 4 X 2'-0" SPACED AT 2'-0" C-C.

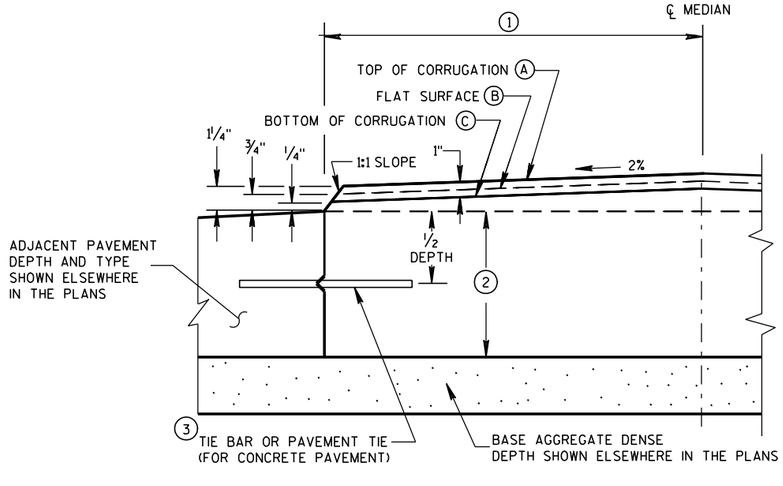
INSTALL TIE BARS TO MAINTAIN A MINIMUM OF 3-INCHES OF COVER BETWEEN THE TIE BAR AND THE CONCRETE SURFACE (BOTTOM AND TOP).

PAVEMENT TIES REQUIRED IN EXISTING CONCRETE PAVEMENT OR CONCRETE BASE COURSE, PAVEMENT TIES SHALL BE NO. 6 X 1'-0" SPACED AT 3'-0" C-C INSTALLED ON A HORIZONTAL SKEW OF 6:1. THE DIRECTION OF SKEW SHALL ALTERNATE AFTER EVERY ONE OR TWO BARS.

(4) CONCRETE CORRUGATED MEDIAN CONTRACTION JOINTS SHALL BE CONSTRUCTED TO MATCH THE JOINTS IN ADJACENT CONCRETE PAVEMENT. WHERE ADJACENT PAVEMENT IS ASPHALT WITH BASE AGGREGATE DENSE. TRANSVERSE CONTRACTION JOINTS SHALL BE PROVIDED AT 20 FOOT INTERVALS.

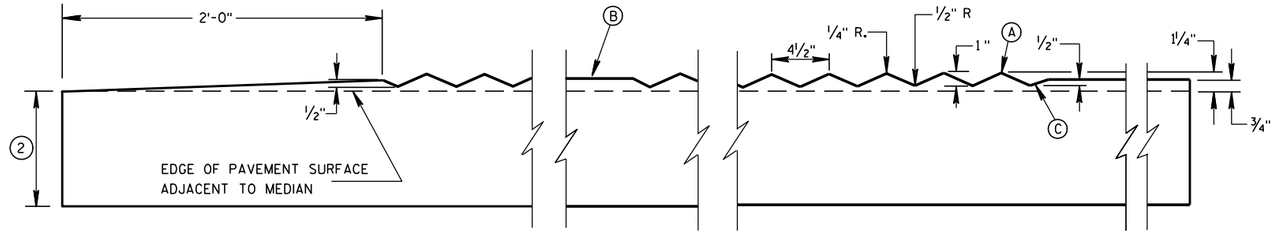
(5) SURFACE TYPE AND DETAILS ARE DEFINED ELSEWHERE IN THE PLAN.

(6) YELLOW MARKING ON FLAT SURFACE WHEN MEDIAN SEPARATES OPPOSING TRAFFIC.



HALF CROSS SECTION

(2) CONCRETE CORRUGATED MEDIAN AND ADJACENT PAVEMENT



SECTION B-B

LONGITUDINAL SECTION

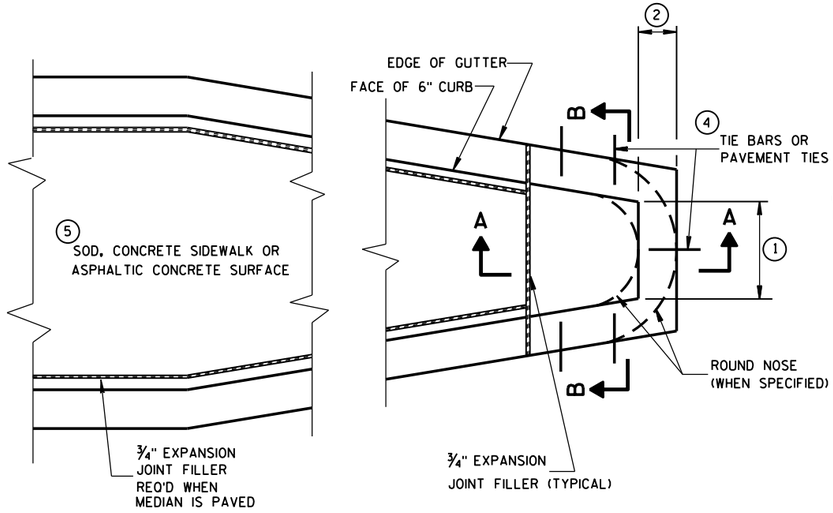
CONCRETE CORRUGATED MEDIAN	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
12/17/07 DATE	/S/ Jerry H. Zogg ROADWAY STANDARDS ENGINEER
FHWA	571

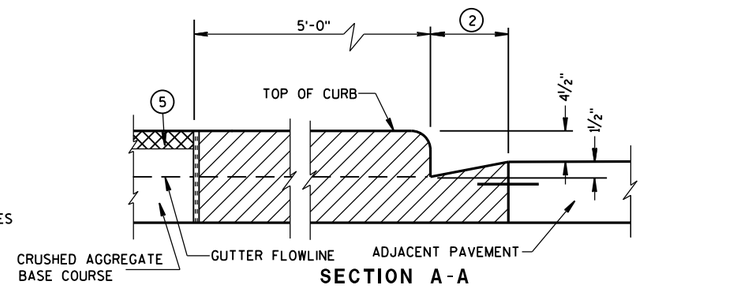
6

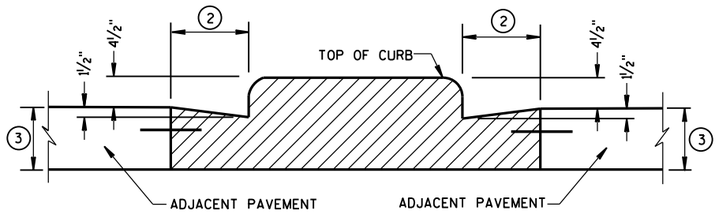
S.D.D. 11 B 1-5

6

S.D.D. 11 B 1-5







CONCRETE MEDIAN BLUNT NOSE DETAIL

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

(1) SEE PLAN FOR MEDIAN NOSE WIDTH AND RADIUS (FOR ROUND NOSE ALTERNATE).

(2) WIDTH OF GUTTER TO MATCH EXISTING ADJACENT GUTTER OR AS SPECIFIED ELSEWHERE IN THE PLAN.

(3) DEPTH EQUAL TO ADJACENT PAVEMENT. ADJACENT PAVEMENT STRUCTURE DETAILS ARE SHOWN ON THE PLAN. TYPICAL OPTIONS ARE:

(1) NEW OR EXISTING CONCRETE PAVEMENT.

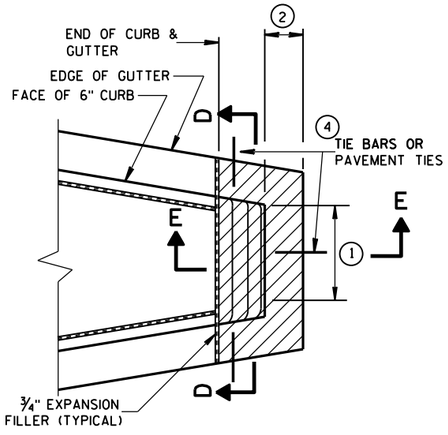
(2) ASPHALTIC CONCRETE PAVEMENT OVER NEW OR EXISTING CONCRETE BASE COURSE.

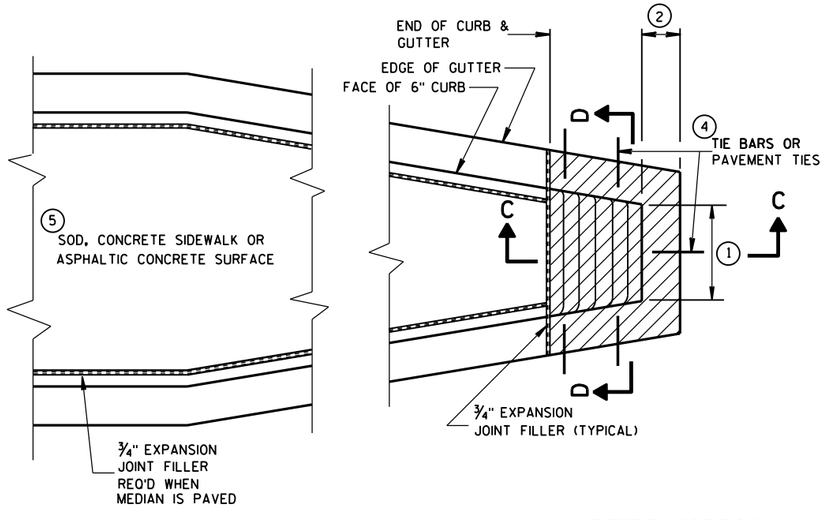
(3) ASPHALTIC CONCRETE PAVEMENT OVER CRUSHED AGGREGATE BASE COURSE.

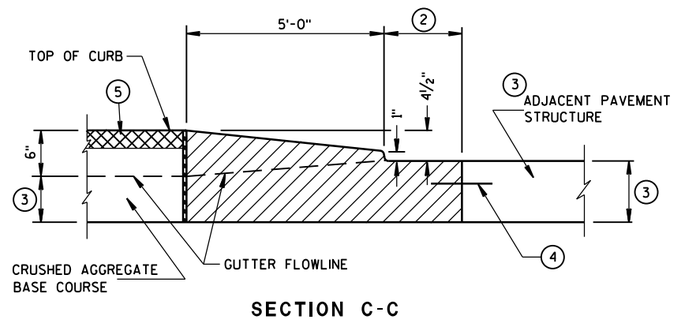
(4) TIE BARS OR PAVEMENT TIES REQUIRED IN NEW CONCRETE PAVEMENT OR CONCRETE BASE COURSE. TIE BARS SHALL BE NO. 4 X 2'-0" SPACED AT 2'-0" C-C.

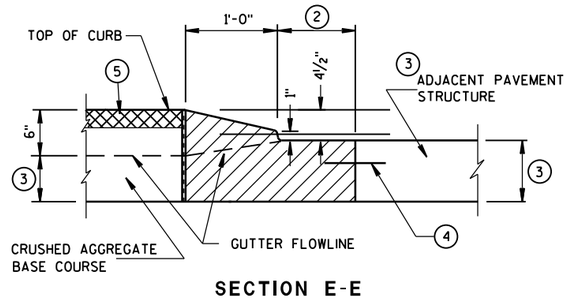
PAVEMENT TIES REQUIRED IN EXISTING CONCRETE BASE COURSE. PAVEMENT TIES SHALL BE NO. 6 X 1'-0" SPACED AT 3'-0" C-C INSTALLED ON A HORIZONTAL SKEW OF 6:1. THE DIRECTION OF SKEW SHALL ALTERNATE AFTER EVERY ONE OR TWO BARS.

(5) SURFACE TYPE AND DETAILS ARE SHOWN ELSEWHERE IN THE PLAN.



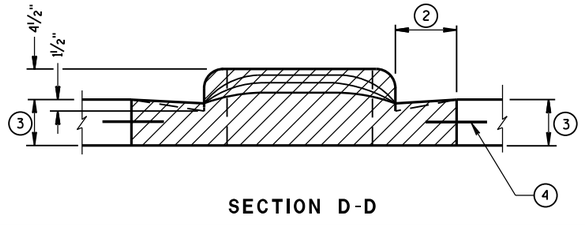






CONCRETE MEDIAN SLOPED NOSE TYPE 2

CONCRETE MEDIAN SLOPED NOSE TYPE 1



CONCRETE MEDIAN NOSE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

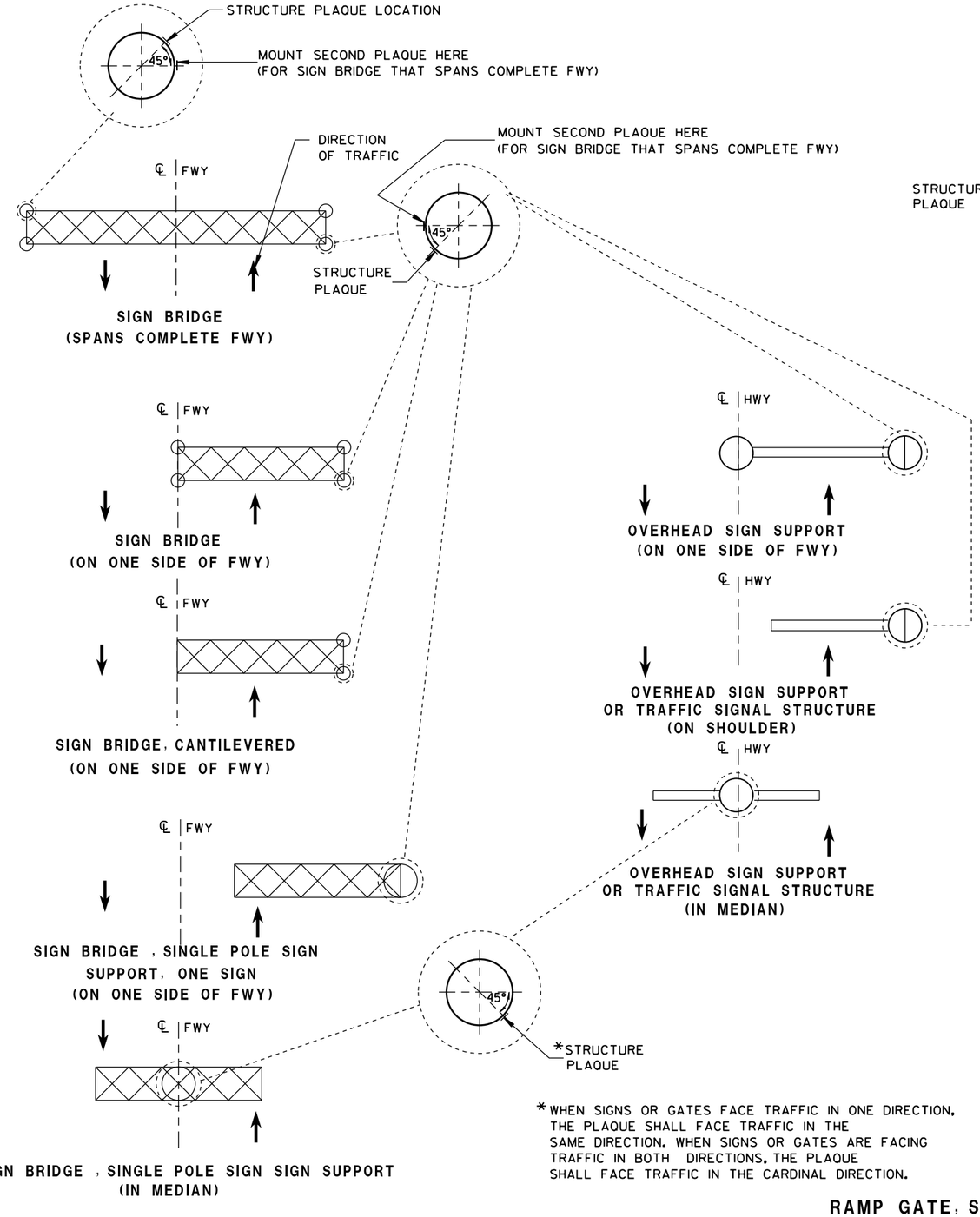
APPROVED
6/8/2006
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER
572
FHWA

6

S.D.D. 11 B 2-2

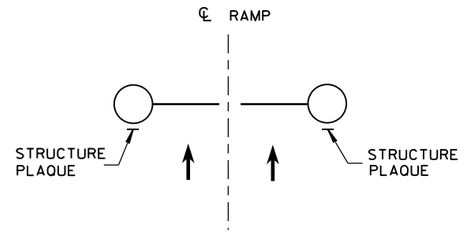
6

S.D.D. 11 B 2-2

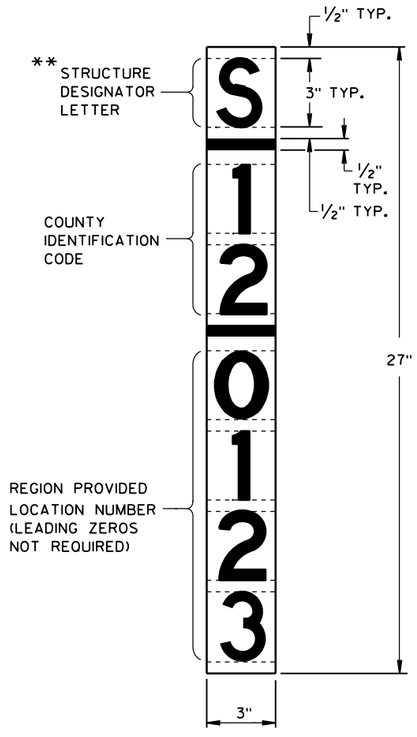


LOCATION OF RAMP GATE, SIGN BRIDGE, OVERHEAD SIGN SUPPORT & TRAFFIC SIGNAL STRUCTURE PLAQUES

* WHEN SIGNS OR GATES FACE TRAFFIC IN ONE DIRECTION, THE PLAQUE SHALL FACE TRAFFIC IN THE SAME DIRECTION. WHEN SIGNS OR GATES ARE FACING TRAFFIC IN BOTH DIRECTIONS, THE PLAQUE SHALL FACE TRAFFIC IN THE CARDINAL DIRECTION.



RAMP GATE
(ACROSS FWY ON-RAMP)



** LETTER "G" UTILIZED FOR RAMP GATES. LETTER "S" UTILIZED FOR SIGN BRIDGES, OVERHEAD SIGN SUPPORTS, AND TRAFFIC SIGNALS.

RAMP GATE, SIGN BRIDGE, OVERHEAD SIGN SUPPORT AND TRAFFIC SIGNAL STRUCTURE PLAQUE FOR SIGN BRIDGES AND OVERHEAD SIGN SUPPORT WHICH ARE NOT STRUCTURE MOUNTED

GENERAL NOTES

DETAILS OF CONSTRUCTION AND WORKMANSHIP NOT SHOWN IN THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

PLAQUES SHALL BE INCIDENTAL TO ALL NEW INSTALLATIONS.

IF THE PROPOSED SIGN BRIDGE OR OVERHEAD SIGN SUPPORT IS REPLACING AN EXISTING SIGN BRIDGE OR OVERHEAD SIGN SUPPORT, A NEW IDENTIFICATION PLAQUE WILL BE REQUIRED.

FASTEN TOP, CENTER AND BOTTOM OF PLAQUE TO POLE OR OTHER LOCATION AS FOLLOWS:

GALVANIZED STEEL SHAFT - 3 STAINLESS STEEL POP RIVETS

A588 STEEL SHAFT - SHIM FOR DRAINAGE WITH STAINLESS WASHERS; FASTEN WITH STAINLESS SELF-TAPPING SCREWS

ALUMINUM SHAFTS - 3 ALUMINUM POP RIVETS

MOUNTING HEIGHT SHALL BE APPROXIMATELY 5.0' ABOVE CURB OR SHOULDER. ADJUST IF IT IS KNOWN THAT REQUIRED TRAFFIC SIGNS WILL OBSTRUCT.

PLAQUE MATERIALS:

BASE - SHEET ALUMINUM, 0.060" THICK.

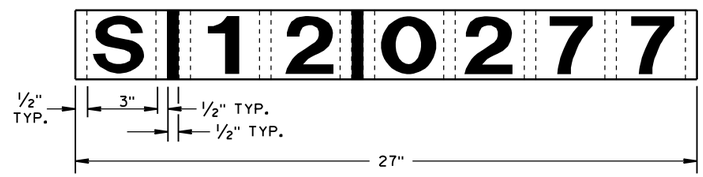
FACE - WHITE, SELF-ADHESIVE VINYL SHEETING, NON-RETROREFLECTIVE

LINES - BLACK, ½" WIDE, SELF-ADHESIVE

CHARACTERS:- BLACK, SELF ADHESIVE, SERIES "D", SIZE AS SHOWN.

FOR SIGN BRIDGES, STRUCTURE MOUNTED, THE STRUCTURE PLAQUE SHALL BE MOUNTED HORIZONTALLY AS SHOWN ON THE DRAWING. THE STRUCTURE PLAQUE SHALL BE MOUNTED HORIZONTALLY TO THE BACK OF THE SIGN, BETWEEN THE ALUMINUM EXTRUSIONS, NEAR THE TOP LEFT HAND CORNER OF THE SIGN. THE BASE MATERIAL SHALL BE OMITTED AND THE FACE ADHERED DIRECTLY TO THE ALUMINUM SURFACE. PRIOR TO ADHERING THE MATERIAL, THE ALUMINUM SURFACE SHALL BE SMOOTH, CLEAN AND DRY.

WHERE SIGN BRIDGE ILLUMINATION IS PROVIDED, THE STRUCTURE MUST ALSO HAVE A SIGN BRIDGE CIRCUIT PLAQUE AS SHOWN IN THE ELECTRICAL DETAILS.



IDENTIFICATION PLAQUE FOR SIGN BRIDGE, STRUCTURE MOUNTED

STRUCTURE IDENTIFICATION PLAQUES, RAMP GATES, SIGN BRIDGES, OVERHEAD SIGN SUPPORTS, & TRAFFIC SIGNALS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

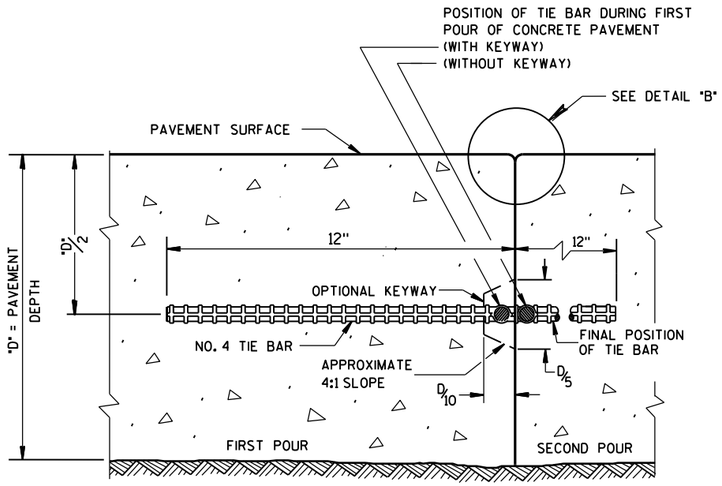
APPROVED
12/4/2012 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

6

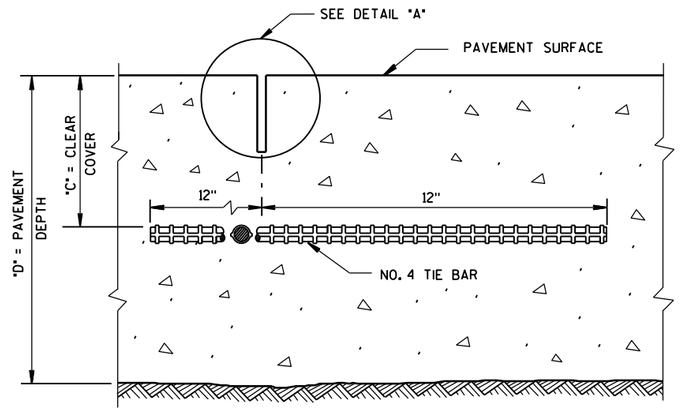
S.D.D. 12 A 4-3

6

S.D.D. 12 A 4-3



CONSTRUCTION JOINT



SAWED JOINT

GENERAL NOTES

DO NOT SEAL OR FILL LONGITUDINAL JOINTS.

CREATE A LONGITUDINAL JOINT FOR PAVEMENT WIDTHS GREATER THAN 15 FEET.

CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

(1) ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

PLAN VIEW

SECTION A-A

LONGITUDINAL CONSTRUCTION JOINT TIE BARS ANCHORED INTO EXISTING PAVEMENT

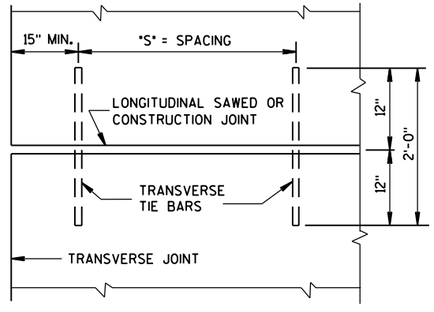
DETAIL "A"

DETAIL "B"

DETAIL "C"

TIE BAR TABLE

PAVEMENT DEPTH "D"	CLEAR COVER "C"	MAXIMUM TIE BAR SPACING "S"	
		PAVEMENT WIDTH	
		24' OR 26'	≥30'
6, 6 1/2"	3"±1/2"	48"	42"
7, 7 1/2"	3 1/4"±1"	45"	36"
8, 8 1/2"	3 3/4"±1"	39"	30"
9, 9 1/2"	4 1/4"±1"	33"	27"
10, 10 1/2"	4 3/4"±1"	30"	24"
11, 11 1/2"	5 1/4"±1"	27"	21"
12"	5 3/4"±1"	24"	21"



PLAN VIEW
SHOWING LOCATION OF TIE BARS

CONCRETE PAVEMENT
LONGITUDINAL JOINTS AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
9/2014 DATE
/S/ Deb Bischoff
PAVEMENT POLICY & DE ENGINEER
FHWA

6

S.D.D. 13 C 1-17

6

S.D.D. 13 C 1-17

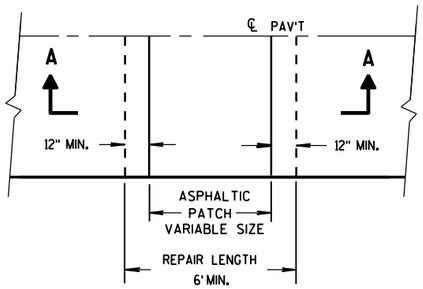
GENERAL NOTES

SAW CUT, DRILL, AND LIFT OUT EXISTING CONCRETE PAVEMENT WITHIN THE BOUNDARIES OF CONCRETE REPAIR AREAS. THE CONTRACTOR MAY MAKE ADDITIONAL SAW CUTS INSIDE THE REPAIR LIMITS TO REDUCE WEIGHT AND SIZE OF CONCRETE PIECES. ADDITIONAL SAW CUTS ARE NOT PAID FOR BY THE DEPARTMENT.

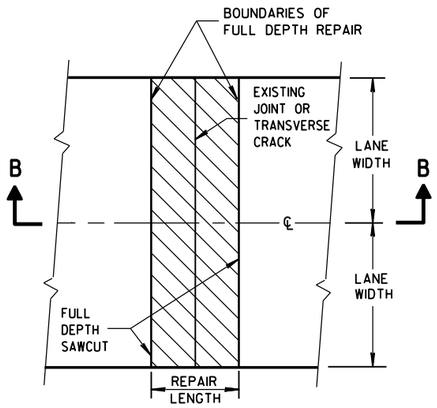
PROVIDE A 6-FOOT MINIMUM DISTANCE FROM BOUNDARIES OF CONCRETE REPAIR AREAS TO ADJACENT TRANSVERSE JOINT OR CRACK IN THE SAME LANE.

THE LENGTH OF THE REPAIRS MAY VARY FROM THE DIMENSIONS SHOWN IF THE EXISTING CONCRETE PAVEMENT IS NONDOWELED AND THE PAVEMENT IS TO BE OVERLAID AFTER REPAIRING.

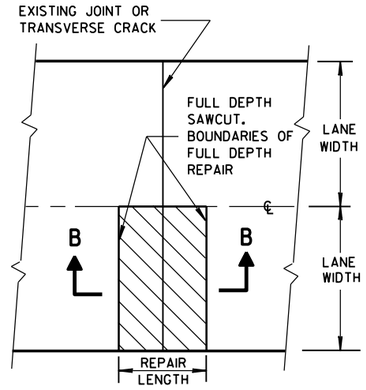
(1) DOWEL BARS MIGHT NOT EXIST.



PLAN VIEW



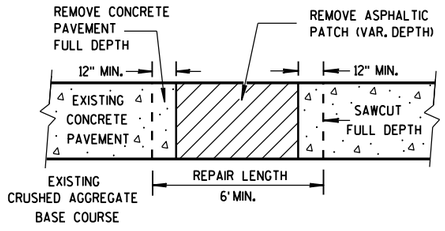
PLAN VIEW
(DOUBLE LANE REPAIR)



PLAN VIEW
(SINGLE LANE REPAIR)

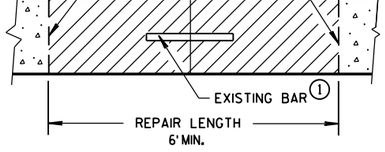
FULL DEPTH CONCRETE PAVEMENT REMOVAL

(SEE NOTE)



SECTION A-A

HMA PATCH REMOVAL



SECTION B-B

CONCRETE REMOVAL

CONCRETE PAVEMENT REPAIR AND REPLACEMENT

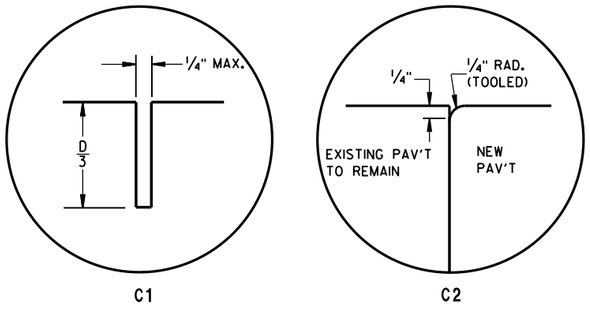
STATE OF WISCONSIN
DEPARTMENT OF TRANSPO 575

6

S.D.D. 13 C 9-11a

6

S.D.D. 13 C 9-11a

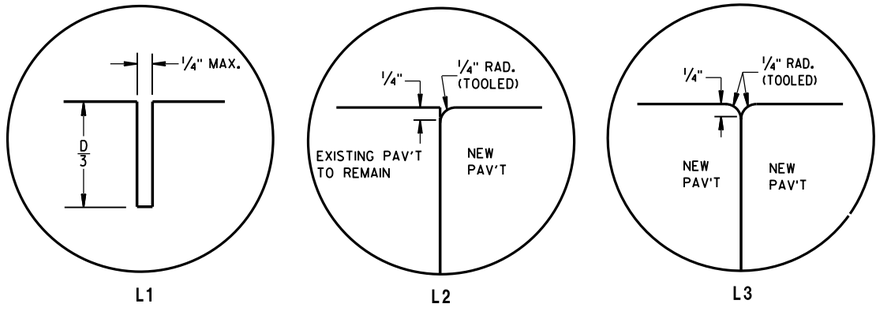


C1 C2

TRANSVERSE JOINTS

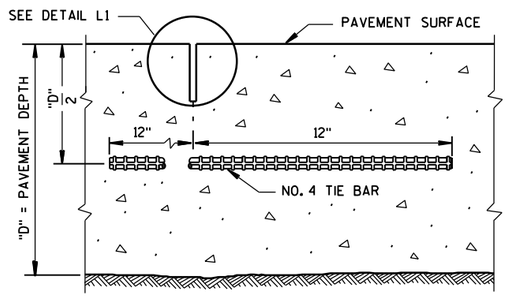
TIE BAR TABLE

PAVEMENT DEPTH "D"	CLEAR COVER "C"	MAXIMUM TIE BAR SPACING "S"	
		PAVEMENT WIDTH	
		24' OR 26'	≥ 30'
6, 6 1/2"	3"±1/2"	48"	42"
7, 7 1/2"	3 1/4"±1"	45"	36"
8, 8 1/2"	3 3/4"±1"	39"	30"
9, 9 1/2"	4 1/4"±1"	33"	27"
10, 10 1/2"	4 3/4"±1"	30"	24"
11, 11 1/2"	5 1/4"±1"	27"	21"
12"	5 3/4"±1"	24"	21"



L1 L2 L3

LONGITUDINAL JOINTS



SECTION C-C

SAWED LONGITUDINAL JOINT

GENERAL NOTES

INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.

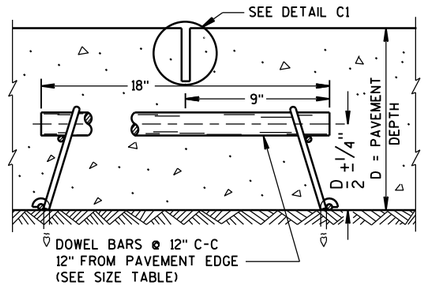
CONCRETE PAVEMENT REPAIRS OF EXISTING NONDOWELED CONCRETE PAVEMENTS DO NOT NEED TO BE DOWELED.

DO NOT SEAL OR FILL JOINTS.

ANCHOR DOWEL BARS AND TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

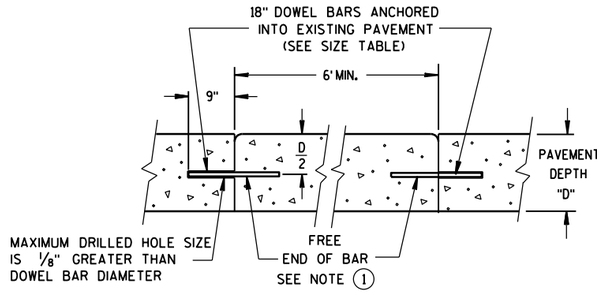
FOR MULTI-LANE CONCRETE PAVEMENT REPLACEMENTS, PROVIDE A MINIMUM DISTANCE OF 15 INCHES FROM ALL TRANSVERSE JOINTS OR EDGES OF REPLACEMENT TO THE CENTER OF THE TIE BAR NEAREST THAT JOINT OR EDGE.

(1) APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.

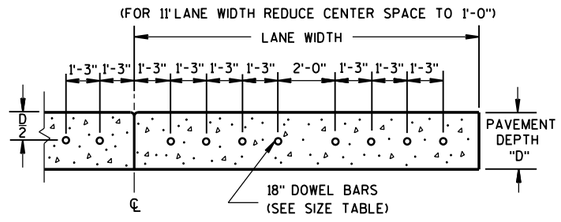


SECTION F-F

CONTRACTION JOINT



SECTION D-D

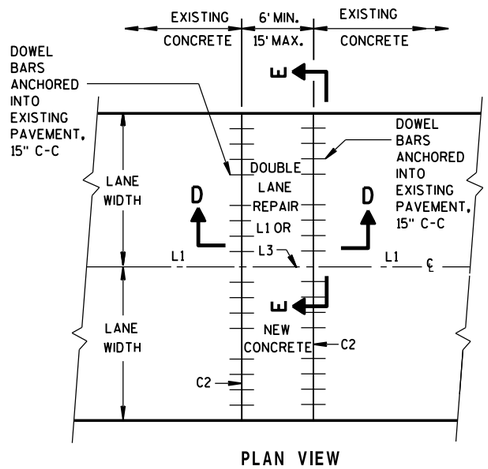


SECTION E-E

DRILLED DOWEL BAR CONSTRUCTION JOINT

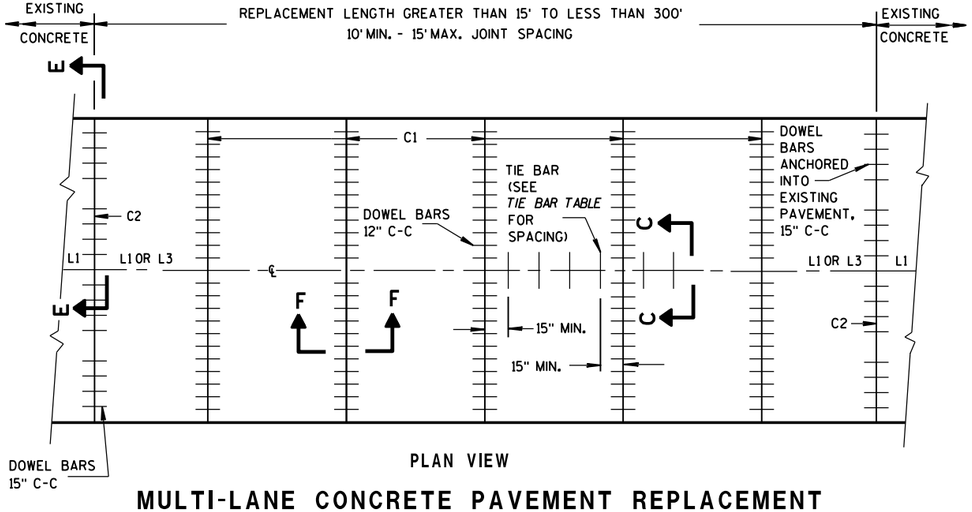
PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
5 1/2", 6",6 1/2"	NONE	12'
7",7 1/2"	1"	14'
8",8 1/2"	1 1/4"	15'
9",9 1/2"	1 1/4"	15'
10" & ABOVE	1 1/2"	15'



PLAN VIEW

MULTI-LANE CONCRETE PAVEMENT REPAIR



PLAN VIEW

MULTI-LANE CONCRETE PAVEMENT REPLACEMENT

CONCRETE PAVEMENT REPAIR AND REPLACEMENT

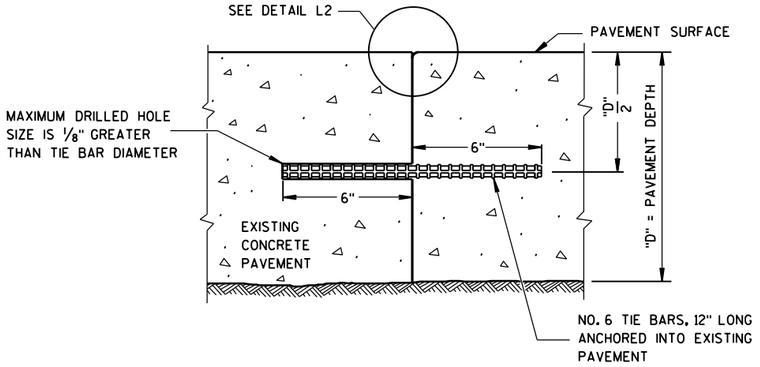
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR 576

6

S.D.D. 13 C 9-11b

6

S.D.D. 13 C 9-11b



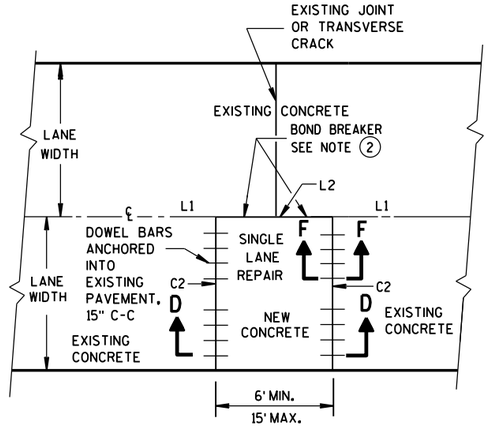
SECTION G-G

TIE BARS ANCHORED INTO EXISTING PAVEMENT

GENERAL NOTES

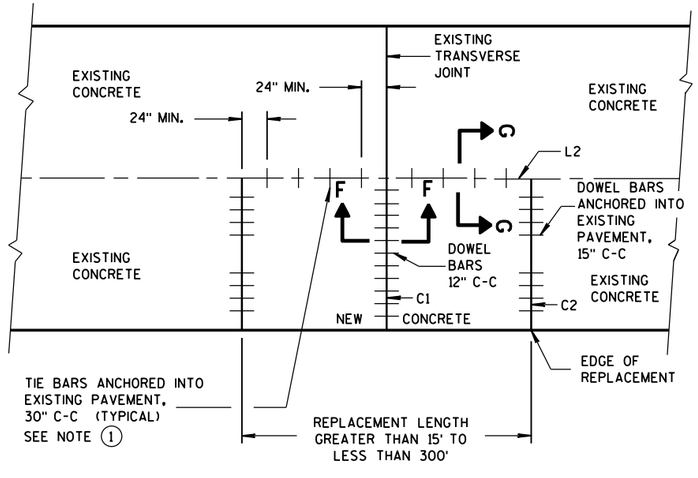
(1) WITH THE APPROVAL OF THE ENGINEER, FOR SINGLE LANE PAVEMENT REPLACEMENTS LESS THAN 30 FEET IN LENGTH, THE CONTRACTOR MAY INSTALL DRILLED TIE BARS ON 6:1 SKEW HORIZONTALLY, DIRECTION OF SKEW ALTERNATING WITH EACH SUCCESSIVE BAR. DRIVE SKEWED TIE BARS TO A DEPTH OF 6 INCHES AND TO SUCH A DIAMETER AS TO PROVIDE A TIGHT DRIVEN FIT.

(2) USE AN ENGINEER-APPROVED BOND BREAKER (E.G. RELEASE AGENT, CURING COMPOUND) FOR SINGLE LANE REPAIRS UP TO 15 FEET IN LENGTH.



PLAN VIEW

SINGLE LANE CONCRETE PAVEMENT REPAIR



PLAN VIEW

SINGLE LANE CONCRETE PAVEMENT REPLACEMENT

CONCRETE PAVEMENT REPAIR AND REPLACEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

12-2013
DATE

/S/ Deb Bischoff
PAVEMENT POLICY & DE

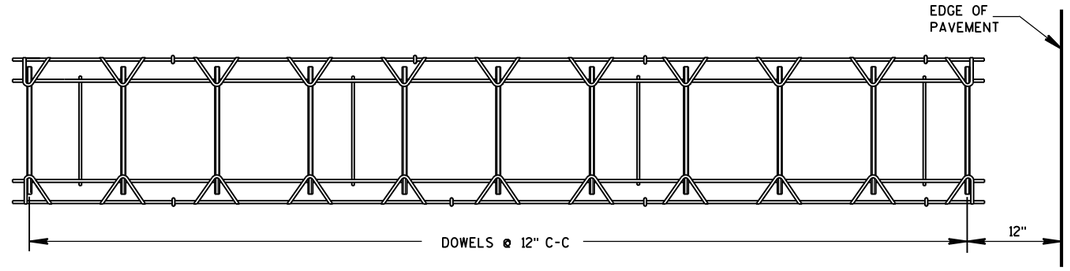
577

IEER

FHWA

6

S.D.D. 13 C 9-11c

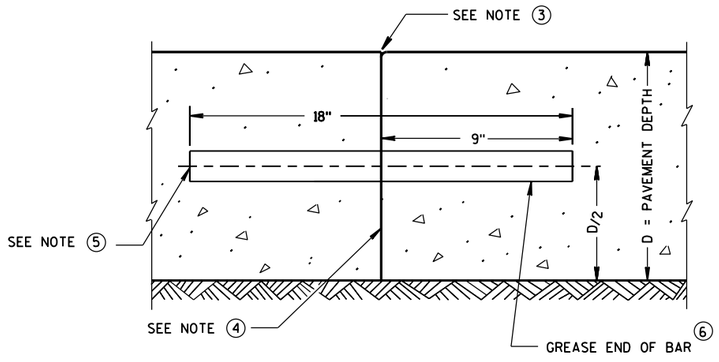


PLAN VIEW

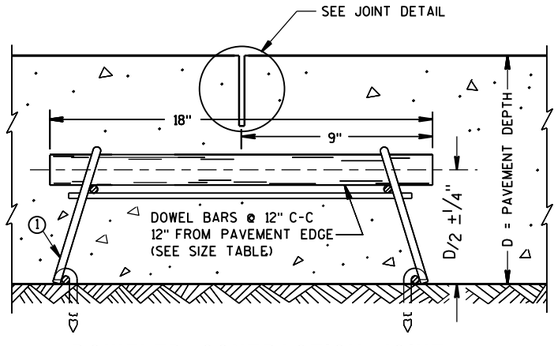


SIDE VIEW

CONTRACTION JOINT DOWEL ASSEMBLY ①



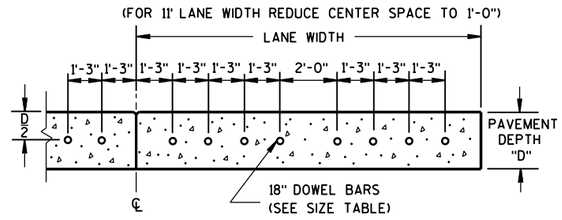
TRANSVERSE CONSTRUCTION JOINT



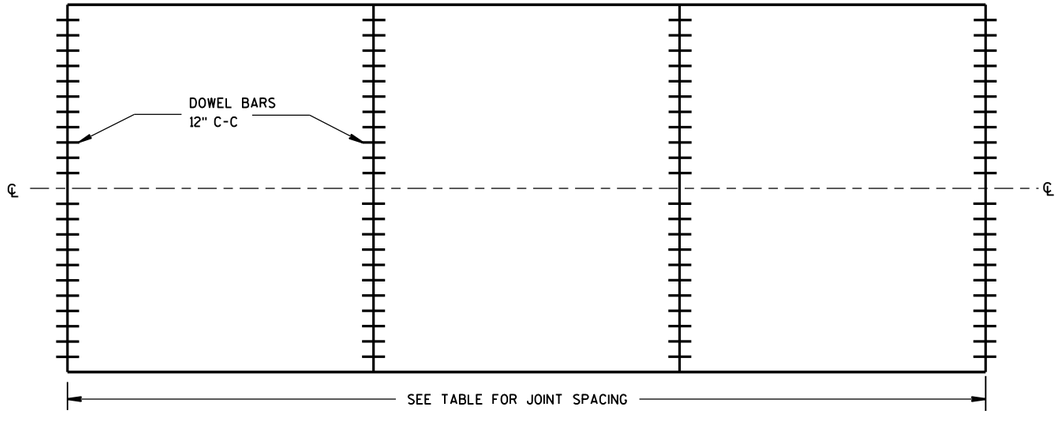
DOWELED CONTRACTION JOINT

PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
5 ½", 6", 6 ½"	NONE	12'
7", 7 ½"	1"	14'
8", 8 ½"	1 ¼"	15'
9", 9 ½"	1 ¼"	15'
10" & ABOVE	1 ½"	15'



DRILLED DOWEL BAR CONSTRUCTION JOINT ⑦



CONTRACTION JOINT LOCATIONS

GENERAL NOTES

CONTRACTION JOINTS

CONSTRUCT TRANSVERSE CONTRACTION JOINTS NORMAL TO THE CENTERLINE. SHOW THE LOCATION OF CONTRACTION JOINTS THROUGH INTERSECTIONS ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

DO NOT SEAL OR FILL CONTRACTION JOINTS.

INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.

FOR PAVEMENT SLABS OF VARYING WIDTHS, LOCATE THE OUTER MOST DOWEL BAR SO THAT THE CENTER OF THE BAR IS A MINIMUM OF 6 INCHES AND A MAXIMUM OF 18 INCHES FROM THE LONGITUDINAL JOINT AND THE FREE EDGE OF PAVEMENT.

CONSTRUCTION JOINTS

LOCATE CONSTRUCTION JOINTS A MINIMUM OF 6 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO CONTRACTION JOINTS.

① **OBTAIN THE ENGINEER'S APPROVAL FOR THE USE OF ALTERNATIVE DESIGNS OF THE DOWEL ASSEMBLY. USE MECHANICAL DOWEL BAR INSERTERS OR DOWEL ASSEMBLIES WHEN CONSTRUCTING CONTRACTION JOINTS.**

② SECURE BASKETS WITH ANCHORS TO HOLD DOWEL BARS IN THE CORRECT POSITION AND ALIGNMENT. TYPE, LOCATION, NUMBER AND LENGTH OF ANCHORS ARE DEPENDENT UPON FIELD CONDITIONS.

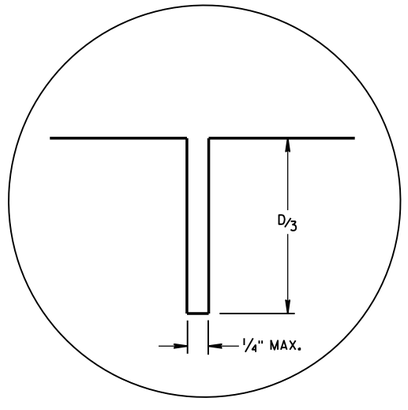
③ FORM OR SAW CONSTRUCTION JOINTS. PROVIDE A ¼-INCH RADIUS AT FORMED JOINTS.

④ PROVIDE A SMOOTH VERTICAL FACE FOR THE ENTIRE DEPTH OF THE PAVEMENT WHEN FORMING CONSTRUCTION JOINTS.

⑤ INSTALL DOWEL BARS AT CONSTRUCTION JOINTS BY FORMING OR DRILLING. INSTALL FORMED DOWEL BARS 12 INCHES C-C AND 12 INCHES FROM PAVEMENT EDGE. REMOVE EXCESS CONCRETE FROM THE FREE END OF THE DOWEL BAR IF DOWEL BARS ARE FORMED THROUGH A HEADER BOARD. INSTALL DRILLED DOWEL BARS ACCORDING TO *DRILLED DOWEL BAR CONSTRUCTION JOINT* DETAIL.

⑥ APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.

⑦ ANCHOR DOWEL BARS INTO DRILLED HOLES WITH AN EPOXY. MAXIMUM DRILLED HOLE SIZE IS ⅛-INCH GREATER THAN DOWEL BAR DIAMETER, 9 INCHES IN LENGTH.



JOINT DETAIL

URBAN DOWELED CONCRETE PAVEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
5/3/2013 DATE
/S/ Deb Bischoff
PAVEMENT POLICY & DE ENGINEER
FHWA

6

S.D.D. 13 C 13-8

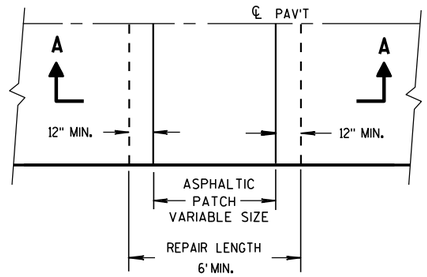
GENERAL NOTES

SAW CUT, DRILL, AND LIFT OUT EXISTING CONCRETE PAVEMENT WITHIN THE BOUNDARIES OF CONCRETE REPAIR AREAS. THE CONTRACTOR MAY MAKE ADDITIONAL SAW CUTS INSIDE THE REPAIR LIMITS TO REDUCE WEIGHT AND SIZE OF CONCRETE PIECES. ADDITIONAL SAW CUTS ARE NOT PAID FOR BY THE DEPARTMENT.

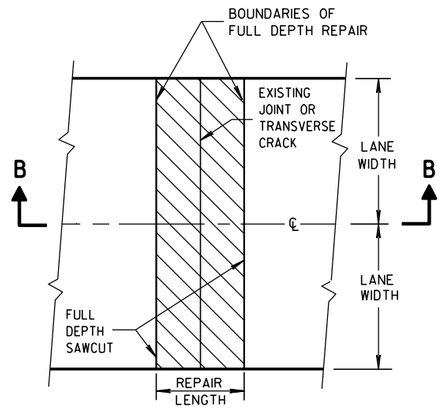
PROVIDE 6-FOOT MINIMUM DISTANCE FROM BOUNDARIES OF CONCRETE REPAIR AREAS TO ADJACENT TRANSVERSE JOINT OR CRACK.

THE LENGTH OF THE REPAIRS MAY VARY FROM THE DIMENSIONS SHOWN IF THE EXISTING CONCRETE PAVEMENT IS NONDOWELED AND THE PAVEMENT IS TO BE OVERLAID AFTER REPAIRING.

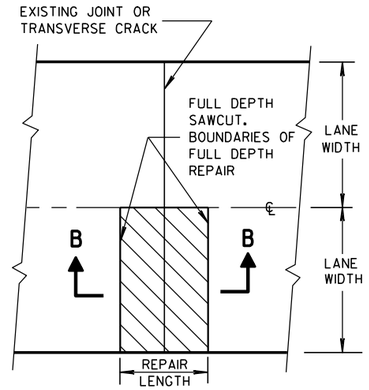
(1) DOWEL BARS MIGHT NOT EXIST.



PLAN VIEW



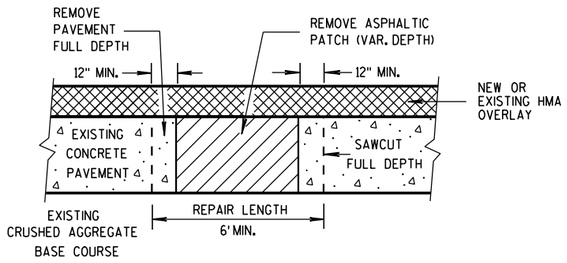
PLAN VIEW
(DOUBLE LANE REPAIR)



PLAN VIEW
(SINGLE LANE REPAIR)

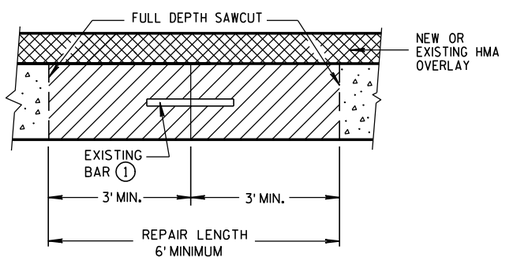
FULL DEPTH CONCRETE PAVEMENT REMOVAL

(SEE NOTE)



SECTION A-A

HMA PATCH REMOVAL



SECTION B-B

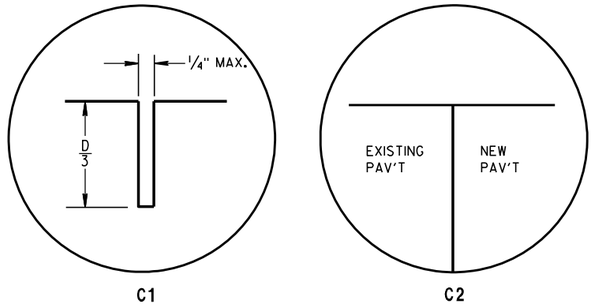
CONCRETE REMOVAL

BASE PATCHING CONCRETE

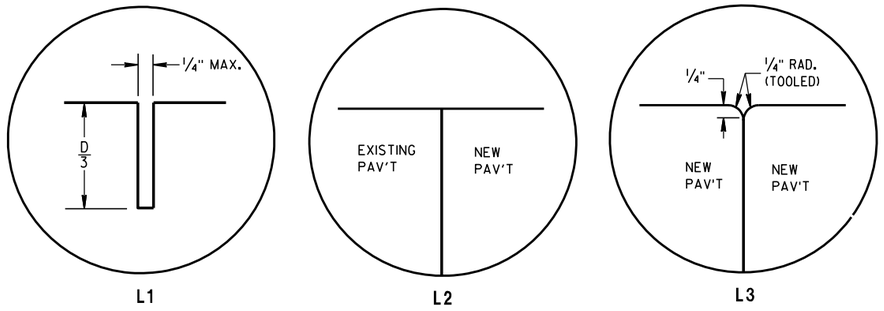
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

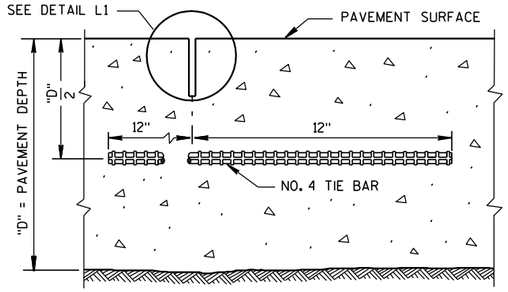
S.D.D. 13 C 14-4a



TRANSVERSE JOINTS

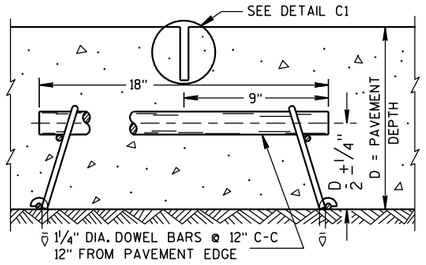


LONGITUDINAL JOINTS



SECTION C-C

SAWED LONGITUDINAL JOINT



SECTION F-F

CONTRACTION JOINT

GENERAL NOTES

INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.

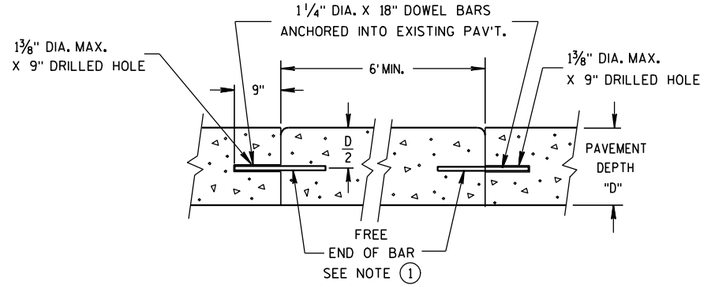
CONCRETE BASE PATCHES OF EXISTING NONDOWELED CONCRETE PAVEMENTS DO NOT NEED TO BE DOWELED.

DO NOT SEAL OR FILL JOINTS.

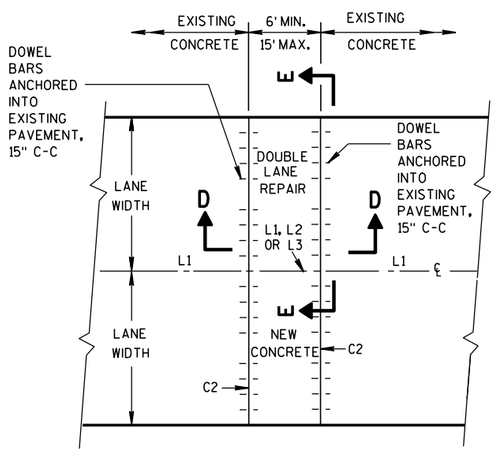
ANCHOR DOWEL BARS AND TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

PROVIDE A MINIMUM DISTANCE OF 24 INCHES FROM AN EXISTING TRANSVERSE JOINT OR THE EDGE OF REPLACEMENT TO THE CENTER OF THE TIE BAR NEAREST THAT JOINT OR EDGE.

(1) APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.

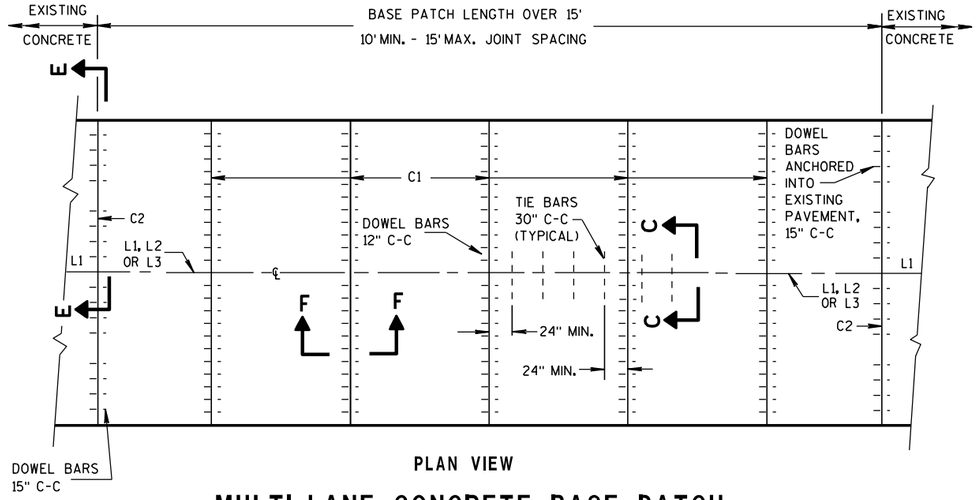


SECTION D-D



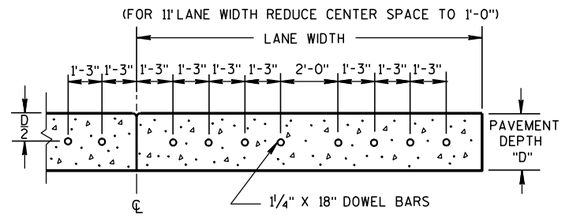
PLAN VIEW

MULTI-LANE CONCRETE BASE PATCH 15' MAXIMUM LENGTH



PLAN VIEW

MULTI-LANE CONCRETE BASE PATCH GREATER THAN 15' IN LENGTH



SECTION E-E

SPACING OF DOWEL BARS ANCHORED INTO EXISTING PAVEMENT

BASE PATCHING CONCRETE

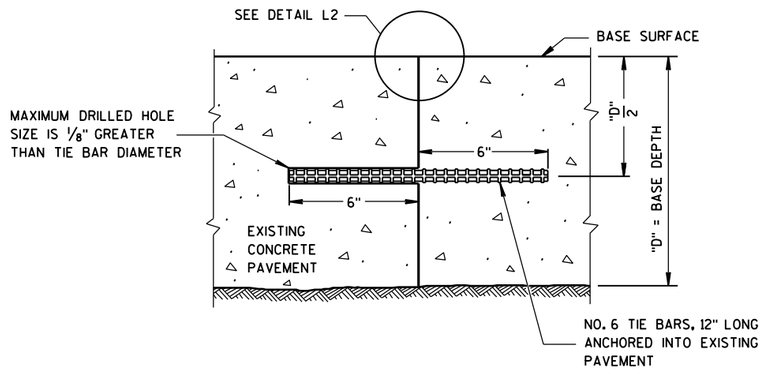
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

S.D.D. 13 C 14-4b

6

S.D.D. 13 C 14-4b



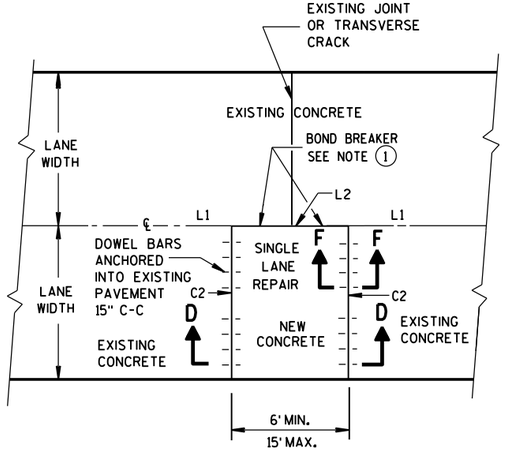
SECTION G-G

TIE BARS ANCHORED INTO EXISTING PAVEMENT

GENERAL NOTES

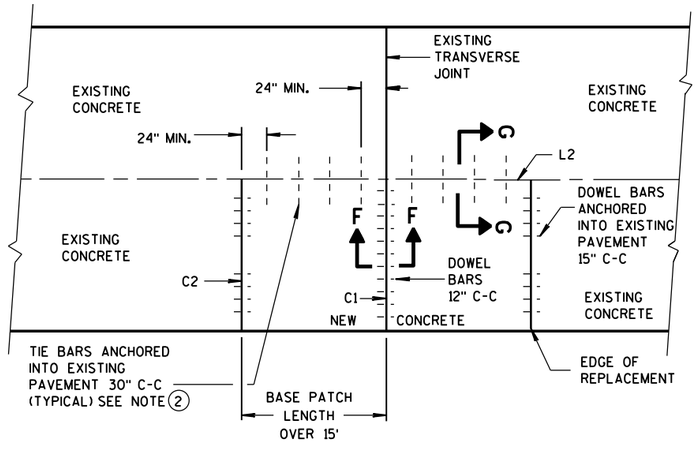
1. USE AN ENGINEER-APPROVED BOND BREAKER (E.G. RELEASE AGENT, CURING COMPOUND) FOR SINGLE LANE BASE PATCHES UP TO 15 FEET IN LENGTH.

2. WITH THE APPROVAL OF THE ENGINEER, FOR SINGLE LANE PAVEMENT REPLACEMENTS LESS THAN 30 FEET IN LENGTH, DRILLED TIE BARS MAY BE INSTALLED ON 6:1 SKEW HORIZONTALLY, DIRECTION OF SKEW ALTERNATING WITH EACH SUCCESSIVE BAR. DRIVE SKEWED TIE BARS TO A DEPTH OF 6 INCHES AND TO SUCH A DIAMETER AS TO PROVIDE A TIGHT DRIVEN FIT.



PLAN VIEW

SINGLE LANE CONCRETE BASE PATCH 15' MAXIMUM LENGTH



PLAN VIEW

SINGLE LANE CONCRETE BASE PATCH GREATER THAN 15' IN LENGTH

BASE PATCHING CONCRETE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

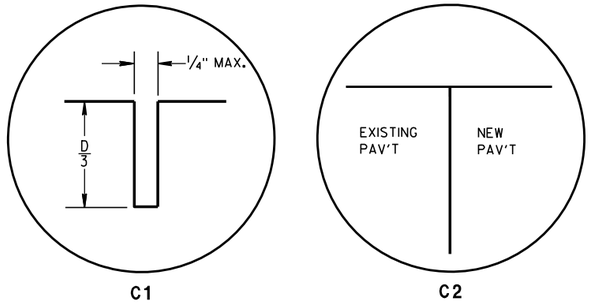
APPROVED
12-11-2009 DATE
/S/ Deb Bischoff
PAVEMENT POLICY & DE
FHWA

6

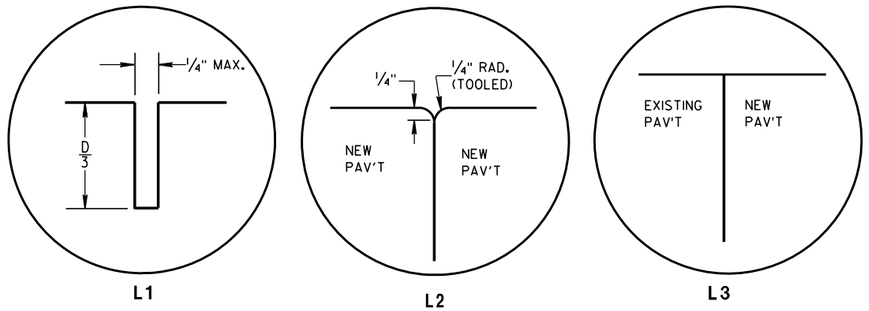
S.D.D. 13 C 14-4c

6

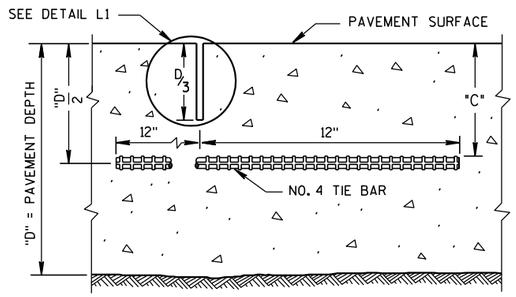
S.D.D. 13 C 14-4c



TRANSVERSE JOINTS

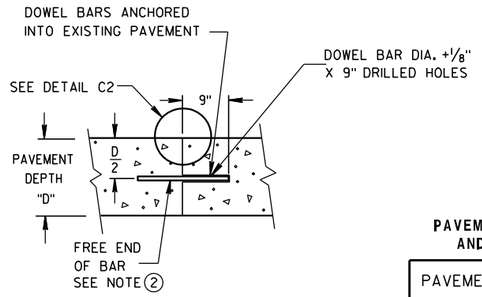


LONGITUDINAL JOINTS



SECTION C-C

SAWED JOINT



SECTION D-D

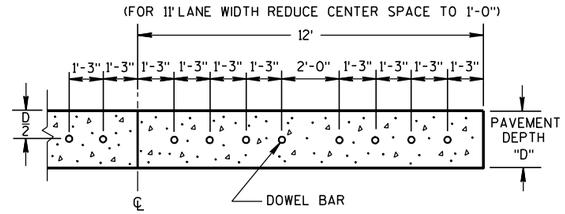
GENERAL NOTES

ANCHOR TIE BARS AND DOWEL BARS INTO DRILLED HOLES WITH AN EPOXY.

PROVIDE A MINIMUM DISTANCE OF 24 INCHES FROM AN EXISTING TRANSVERSE JOINT OR THE EDGE OF REPLACEMENT TO THE CENTER OF THE TIE BAR NEAREST THAT JOINT OR EDGE.

(1) INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.

(2) APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.



SECTION E-E

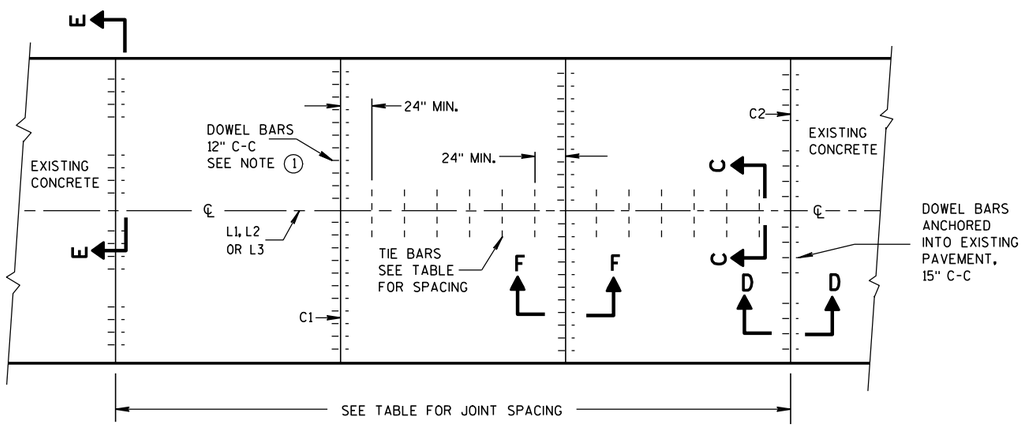
SPACING OF DOWEL BARS ANCHORED INTO EXISTING PAVEMENT

PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

PAVEMENT DEPTH "D"	DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
5½", 6, 6 ½"	NONE	12'
7, 7 ½"	1"	14'
8, 8 ½"	1 ¼"	15'
9, 9 ½"	1 ¼"	15'
10" & ABOVE	1 ½"	15'

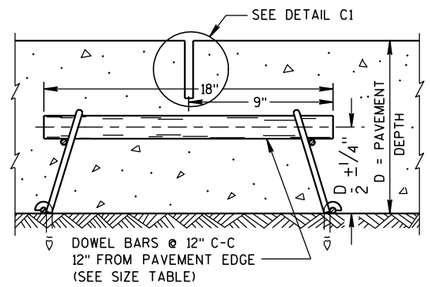
TIE BAR LOCATION TABLE

PAVEMENT DEPTH "D"	CLEAR COVER "C"	MAXIMUM TIE BAR SPACING C-C	
		PAVEMENT WIDTH	
		24' OR 26'	≥ 30'
6, 6 ½"	3"±½"	48"	42"
7, 7 ½"	3 ¼"±1"	45"	36"
8, 8 ½"	3 ¾"±1"	39"	30"
9, 9 ½"	4 ¼"±1"	33"	27"
10, 10 ½"	4 ¾"±1"	30"	24"
11, 11 ½"	5 ¼"±1"	27"	21"
12"	5 ¾"±1"	24"	21"



PLAN VIEW

CONCRETE BASE CONTRACTION JOINT LOCATIONS



SECTION F-F

CONTRACTION JOINT

CONCRETE BASE

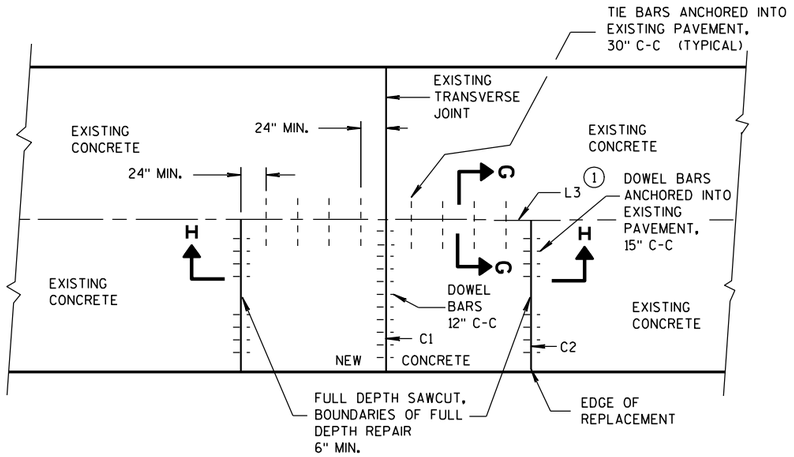
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

S.D.D. 13 C 15-5a

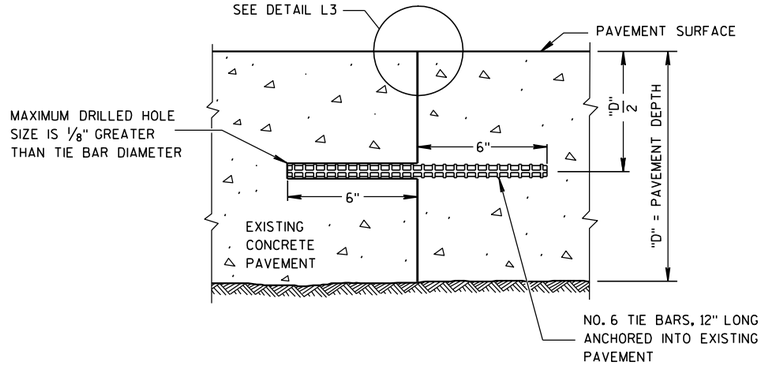
GENERAL NOTES

(1) USE AN ENGINEER-APPROVED BOND BREAKER AT THE LONGITUDINAL JOINT IN LIEU OF TIE BARS FOR SINGLE LANE CONCRETE BASE REPAIRS UP TO 15 FEET IN LENGTH.



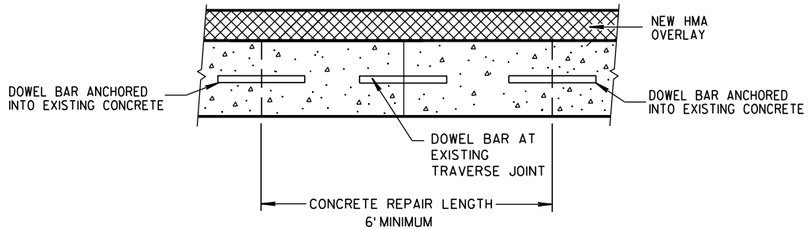
PLAN VIEW

SINGLE LANE CONCRETE BASE REPAIR



SECTION G-G

TIE BARS ANCHORED INTO EXISTING PAVEMENT



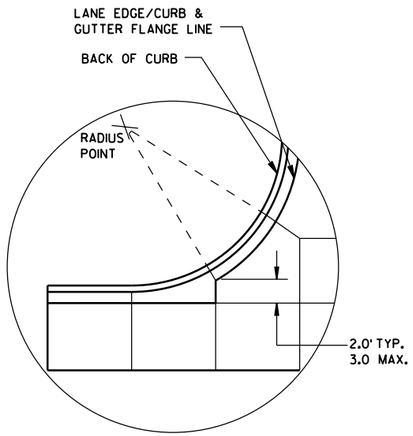
SECTION H-H

CONCRETE BASE

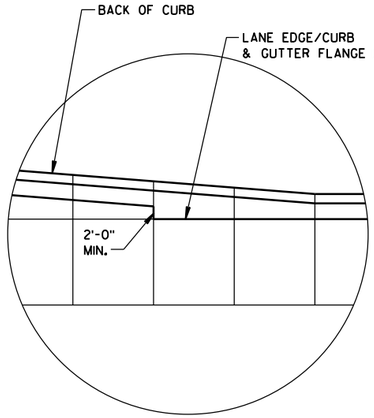
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
12-11-2009 DATE
/S/ Deb Bischoff PAVEMENT POLICY & D583 ENGINEER
FHWA

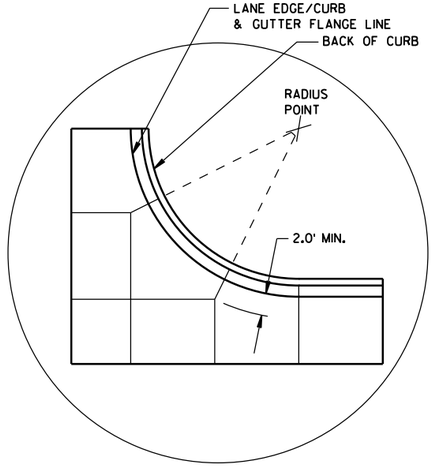
6
S.D.D. 13 C 15-5b



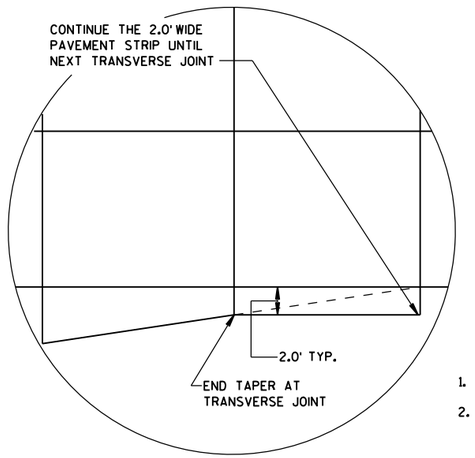
DETAIL "A"



DETAIL "B"



DETAIL "C"



DETAIL "D"

GENERAL NOTES

THE PRIMARY ROADWAY CONTROLS THE TRANSVERSE JOINT PATTERN.

ALIGN NEW JOINTS WITH EXISTING JOINTS OR CRACKS.

CONSTRUCT TRANSVERSE JOINTS PERPENDICULAR TO THE ROADWAY.

ADJUST TRANSVERSE JOINTS TO ALIGN WITH UTILITY FIXTURES (E.G. MANHOLES AND INLETS) IN THE PAVEMENT STRUCTURE WHEN POSSIBLE. WATER VALVES DO NOT REQUIRE JOINT ADJUSTMENT.

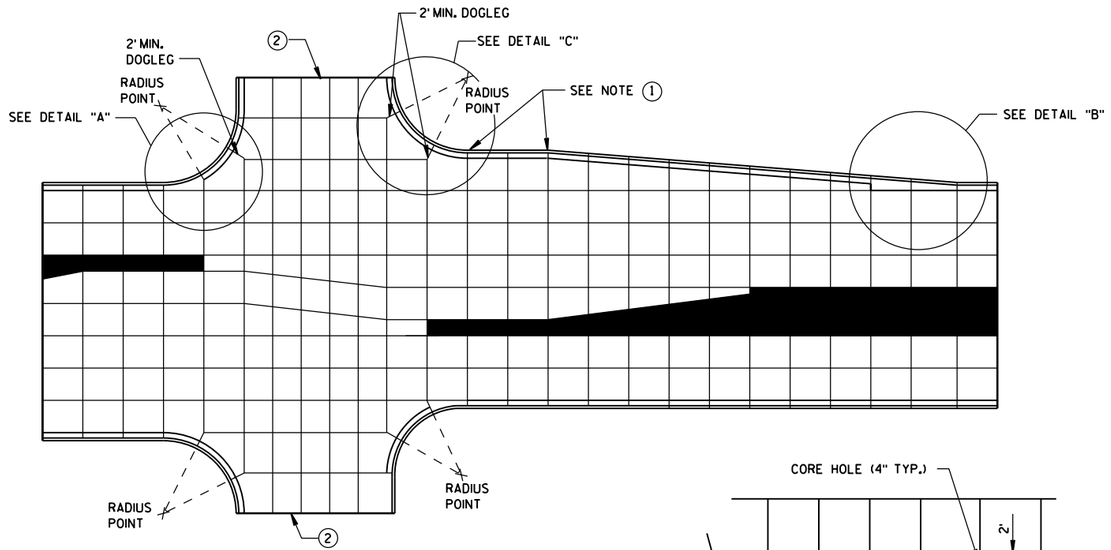
AVOID SLABS LESS THAN 2 FEET WIDE OR GREATER THAN 15 FEET WIDE.

SEE TABLE FOR TRANSVERSE JOINT SPACING. JOINT SPACING SPECIFIED IS MAXIMUM AND ACTUAL SPACING CAN BE ADJUSTED TO ACCOMMODATE INTERSECTIONS.

AVOID ANGLES LESS THAN 60° BY DOGLEGGING JOINTS THROUGH CURVE RADIUS POINTS. USE 90° ANGLES WHEN POSSIBLE.

CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

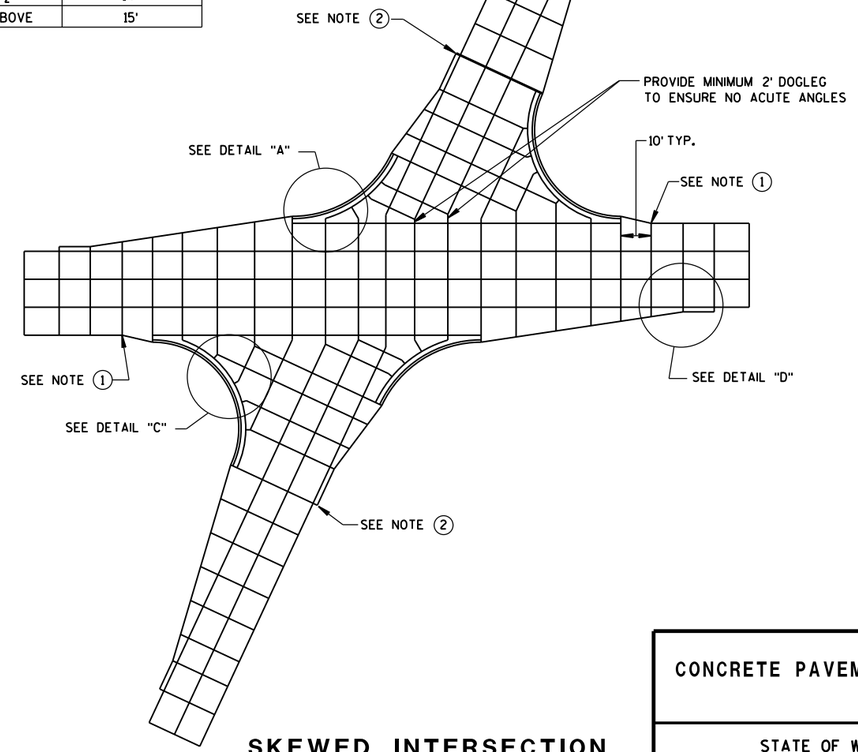
1. PROVIDE TRANSVERSE JOINTS AT ALL PAVEMENT WIDTH CHANGES.
2. CONSTRUCT DOWELED EXPANSION JOINT ON THE SIDE ROAD OF AN INTERSECTION IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH. ALIGN EXPANSION JOINT WITH EDGE OF RADIUS.
3. THE ENGINEER MAY APPROVE SLIGHT VARIATIONS FROM THESE JOINTING DETAILS.



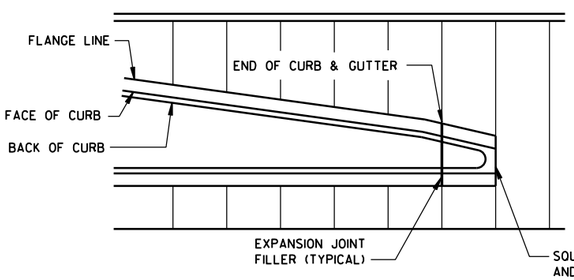
STANDARD INTERSECTION

PAVEMENT DEPTH AND JOINT SPACING TABLE

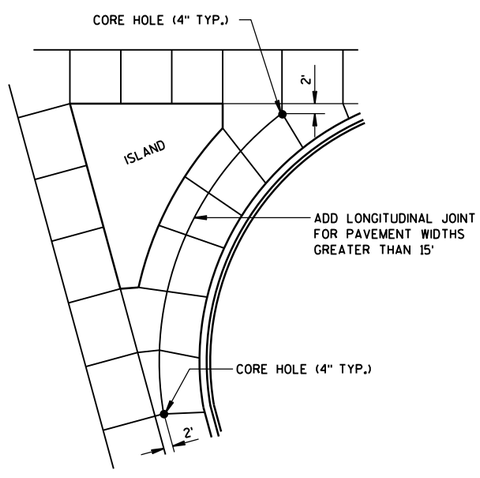
PAVEMENT DEPTH (D)	CONTRACTION JOINT SPACING
6", 6½"	12'
7", 7½"	14'
8" & ABOVE	15'



SKEWED INTERSECTION



APPROACH TO MEDIAN



LARGE RIGHT TURN

CONCRETE PAVEMENT JOINTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

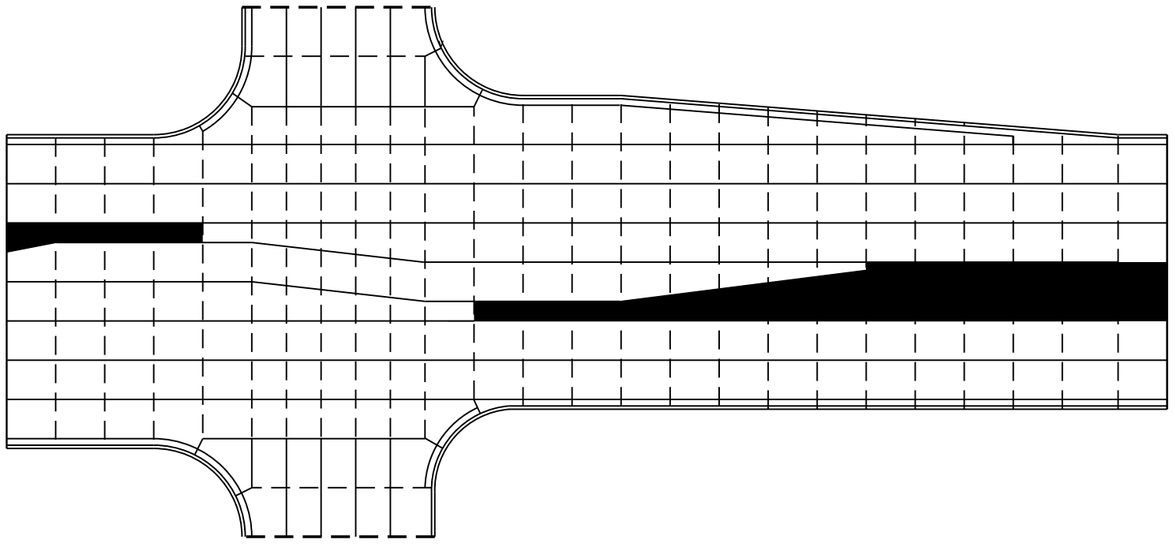
6
S.D.D. 13 C 18-2a

LEGEND

POTENTIAL DOWELED EXPANSION JOINT

DOWELED JOINT

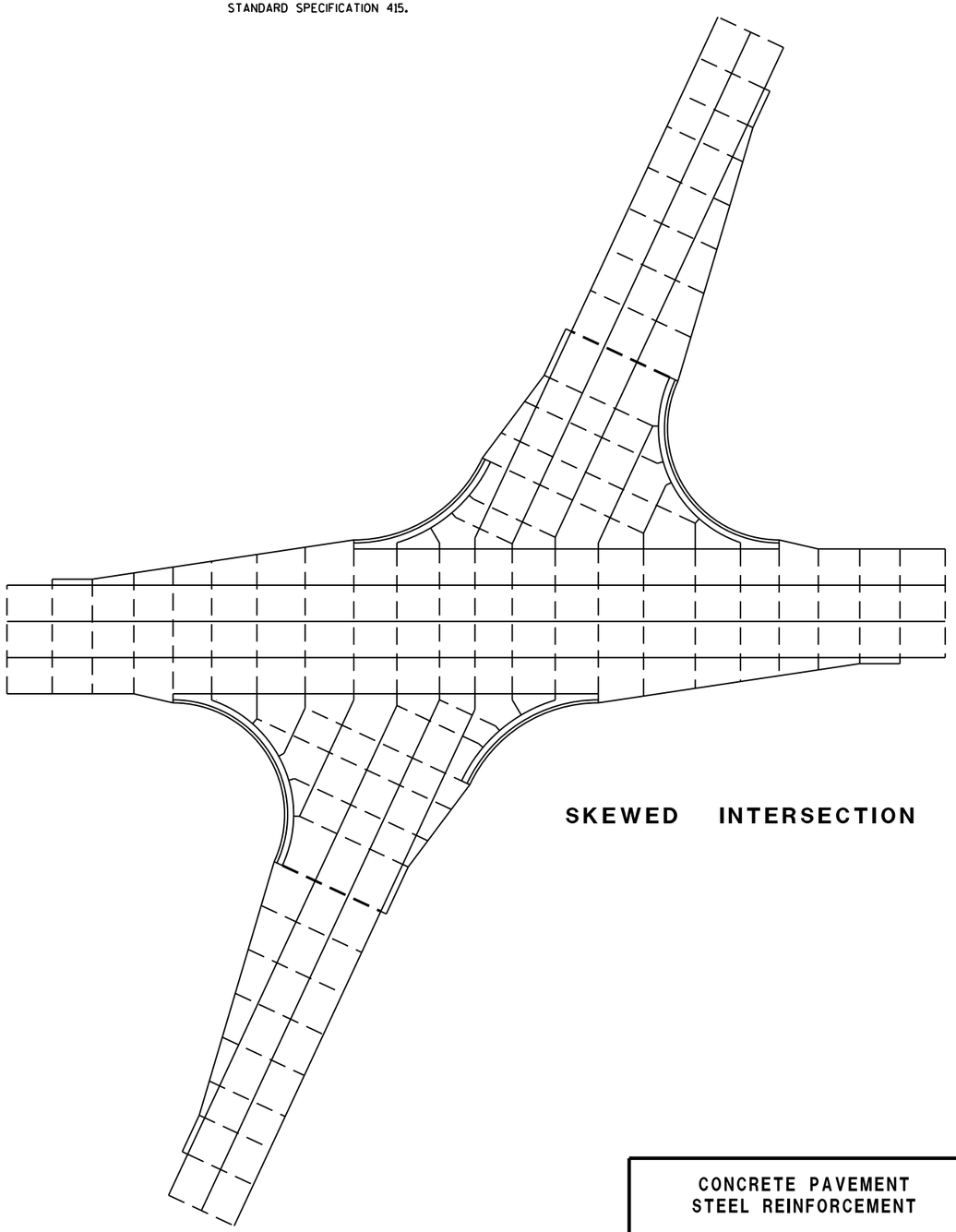
TIED JOINT



STANDARD INTERSECTION

GENERAL NOTES

USE AN EXPANSION JOINT FILLER MEETING THE REQUIREMENTS OF STANDARD SPECIFICATION 415.



SKEWED INTERSECTION

CONCRETE PAVEMENT
STEEL REINFORCEMENT

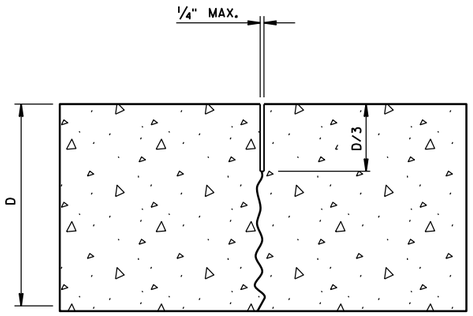
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

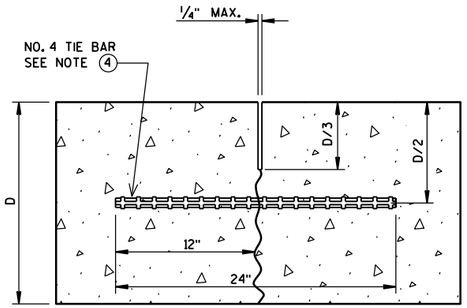
S.D.D. 13 C 18-2b

6

S.D.D. 13 C 18-2b



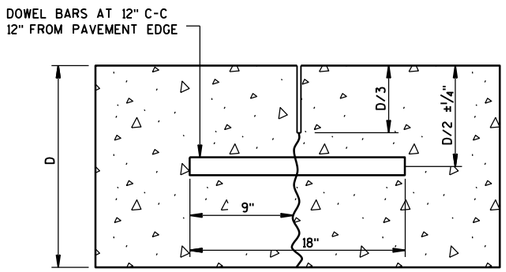
UNDOWELED-TRANSVERSE



TIED LONGITUDINAL

GENERAL NOTES

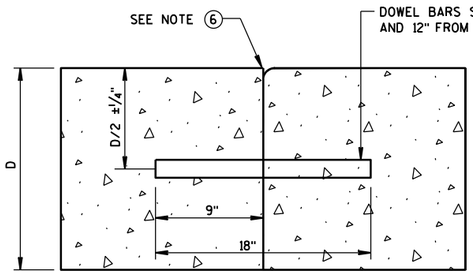
1. USE DOWELED EXPANSION JOINTS ON SIDE ROADS AT INTERSECTIONS (TO ISOLATE THE SIDE ROAD FROM THE THROUGH STREET) IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH.
2. SPACE CONTRACTION JOINTS IN ACCORDANCE WITH 13C4, 13C11 OR 13C13.
3. LOCATE CONSTRUCTION JOINTS A MINIMUM OF 6 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO CONTRACTION JOINTS.
4. SPACE TIE BARS AT LONGITUDINAL CONSTRUCTION OR CONTRACTION JOINTS IN ACCORDANCE WITH SDD 13C1.
5. CONSTRUCTION JOINTS CAN BE FORMED OR SAWED.
6. IF JOINT IS FORMED, PROVIDE A 1/4-INCH RADIUS.



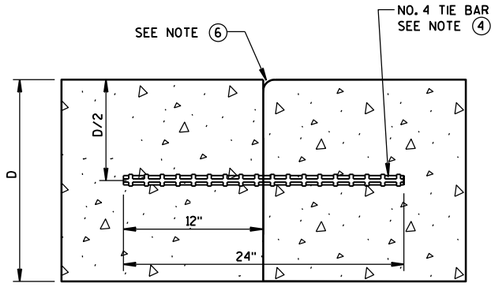
DOWELED-TRANSVERSE

CONTRACTION JOINTS

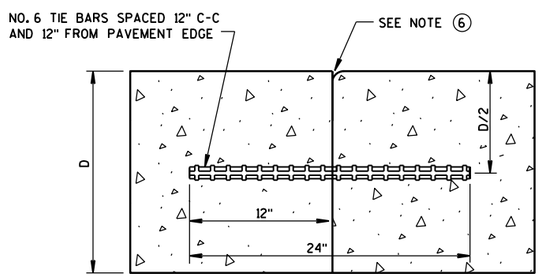
SEE NOTE (2)



DOWELED TRANSVERSE

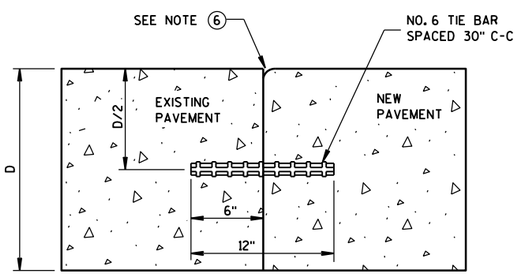


TIED LONGITUDINAL



TIED TRANSVERSE

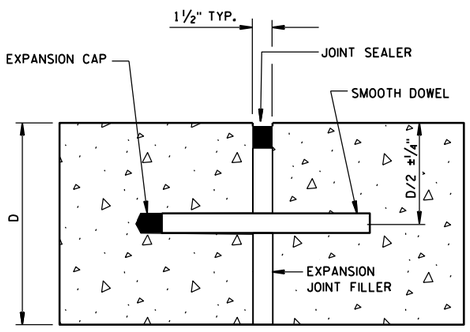
(FOR USE ON NON-DOWELED PAVEMENTS ONLY)



TIED LONGITUDINAL TO EXISTING

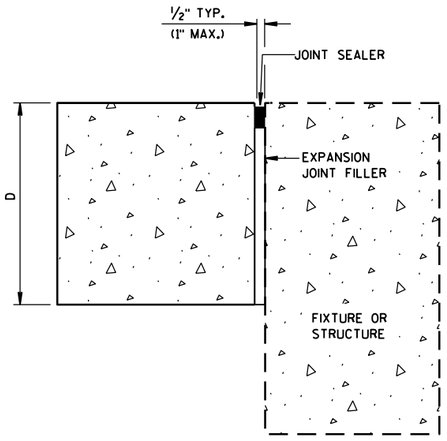
CONSTRUCTION JOINTS

SEE NOTE (5)



DOWELED-TRANSVERSE

SEE NOTE (1)



UNTIED-LONGITUDINAL

EXPANSION JOINTS

CONCRETE PAVEMENT
JOINT TYPES

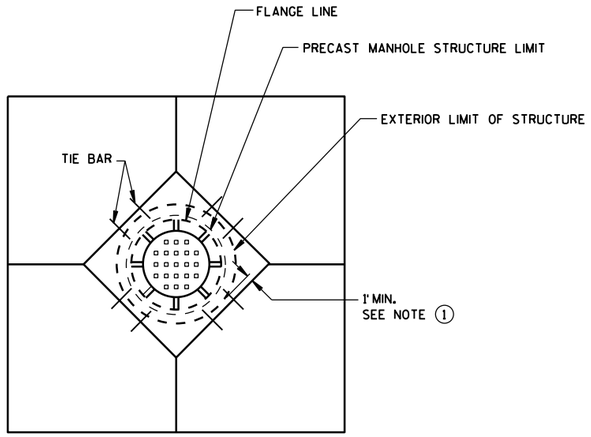
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

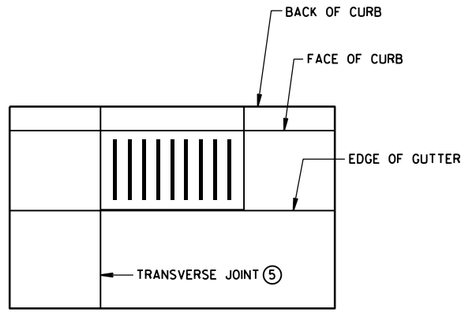
S.D.D. 13 C 18-2c

6

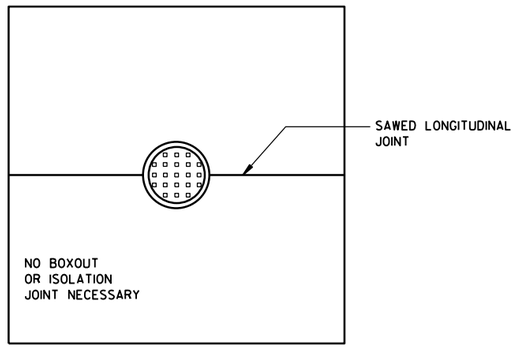
S.D.D. 13 C 18-2c



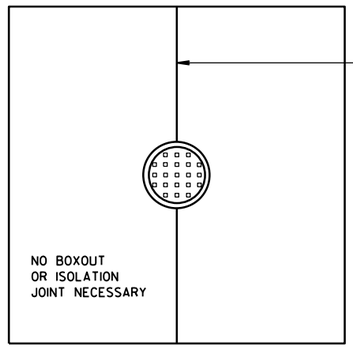
DIAGONAL MANHOLE BOXOUT FOR CONSTRUCTION JOINTS



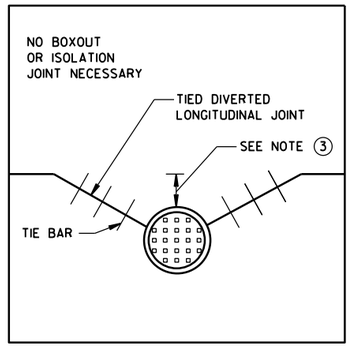
INLET WITH TRANSVERSE JOINT



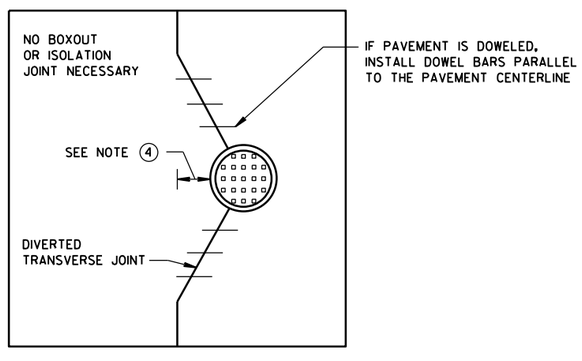
MANHOLE WITH LONGITUDINAL JOINT



MANHOLE WITH TRANSVERSE JOINT



MANHOLE WITH DIVERTED LONGITUDINAL CONTRACTION JOINT



MANHOLE WITH DIVERTED TRANSVERSE CONTRACTION JOINT

GENERAL NOTES

(1) USE BOXOUTS WHEN UTILITY STRUCTURE IS IN THE PATH OF CONSTRUCTION JOINTS. PROVIDE A 1-FOOT MINIMUM CLEARANCE BETWEEN THE EXTERIOR LIMIT OF THE STRUCTURE TO THE DIAMOND BOXOUT.

(2) ADJUST TRANSVERSE JOINT TO INTERSECT MANHOLE IF POSSIBLE.

(3) IF DISTANCE BETWEEN THE LONGITUDINAL JOINT AND THE EDGE OF MANHOLE IS 2 FEET OR LESS, DIVERT THE LONGITUDIAL JOINT AT A 2:1 TAPER RATE TO THE CENTER OF THE MANHOLE. IF THE DISTANCE IS GREATER THAN 2 FEET, DO NOT DIVERT THE JOINT AND SAW AS NORMAL. PLACE REBAR REINFORCEMENT AROUND THE MANHOLE.

(4) IF DISTANCE FROM THE EDGE OF THE MANHOLE TO THE NEAREST TRANSVERSE JOINT IS 4 FEET OR LESS, REDIRECT JOINT TO INTERSECT THE CENTER OF THE MANHOLE. IF DISTANCE IS GREATER THAN 4 FEET, DO NOT DIVERT THE JOINT AND SAW AS NORMAL. PLACE REBAR REINFORCEMENT AROUND THE MANHOLE.

(5) ALIGN TRANSVERSE JOINT WITH ONE EDGE OF INLET WHEN PRACTICAL.

CONCRETE PAVEMENT JOINTING AT UTILITY FIXTURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

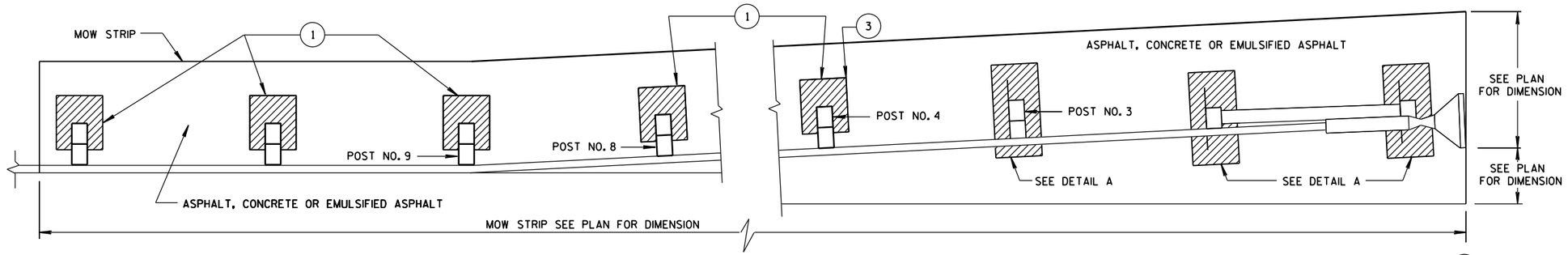
5-3-2013 — DATE

/S/ Deb Bischoff — PAVEMENT POLICY & DE

587

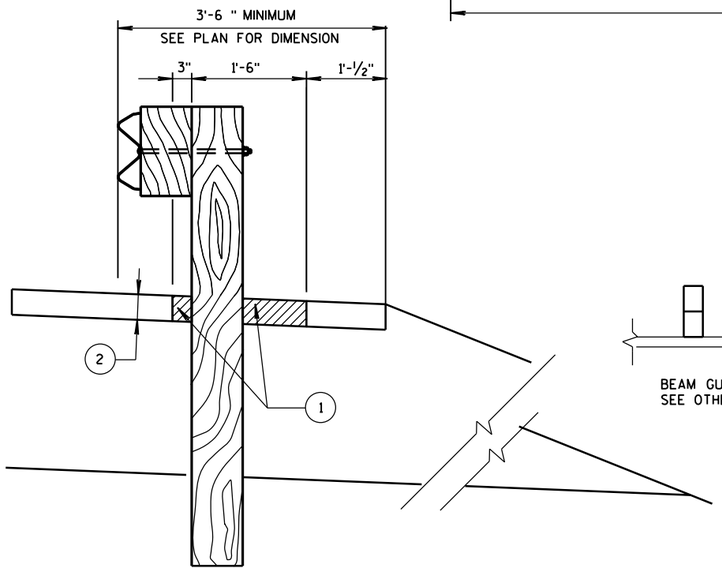
NEER

FHWA

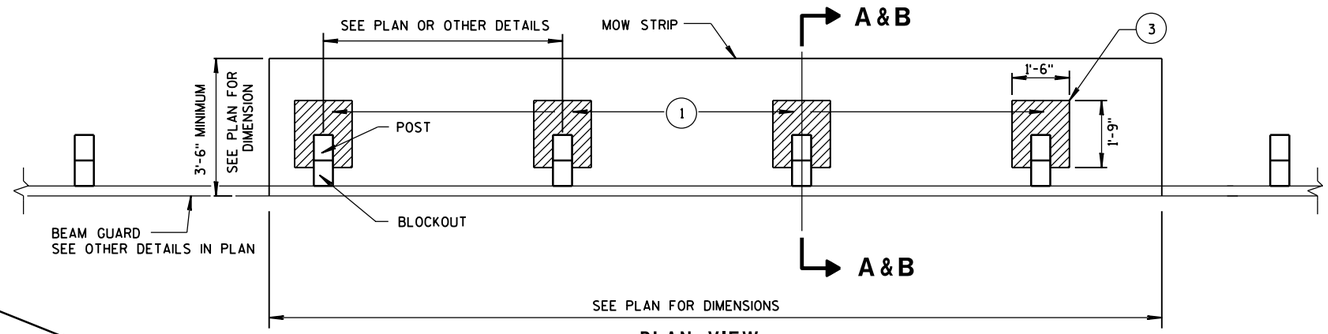


PLAN VIEW

MOW STRIP LAYOUT FOR ENERGY ABORBING TERMINAL

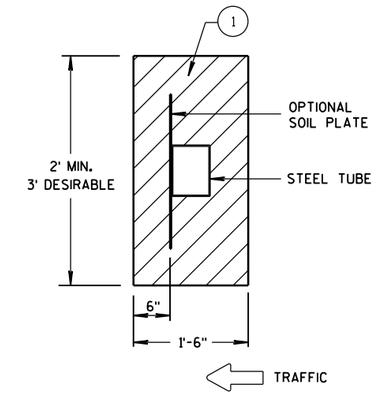


SECTION A-A

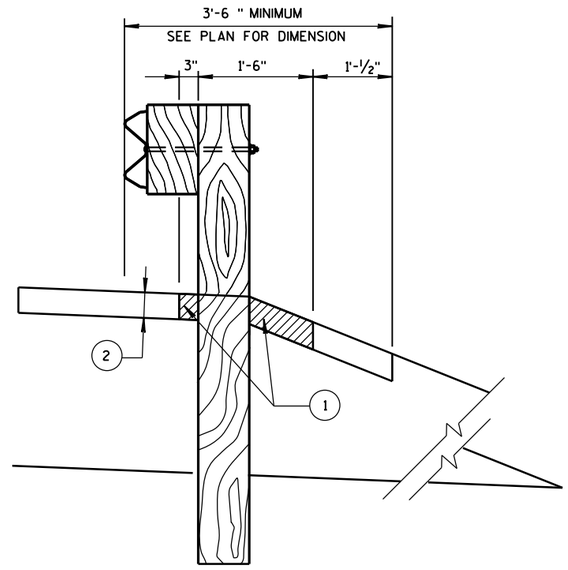


PLAN VIEW

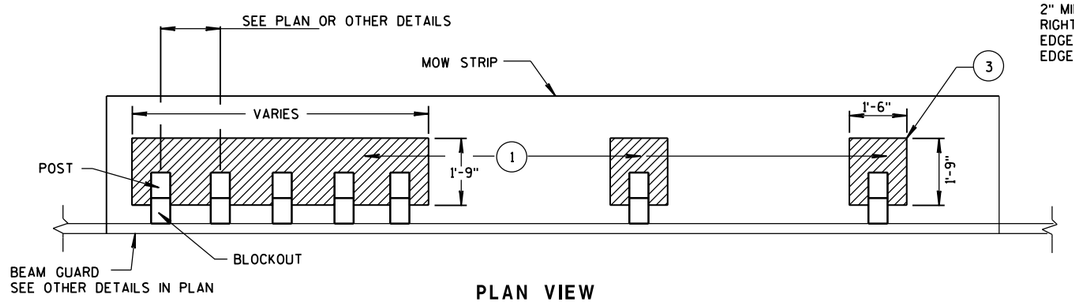
MOW STRIP FOR TYPICAL BLOCKOUT LAYOUT



DETAIL A

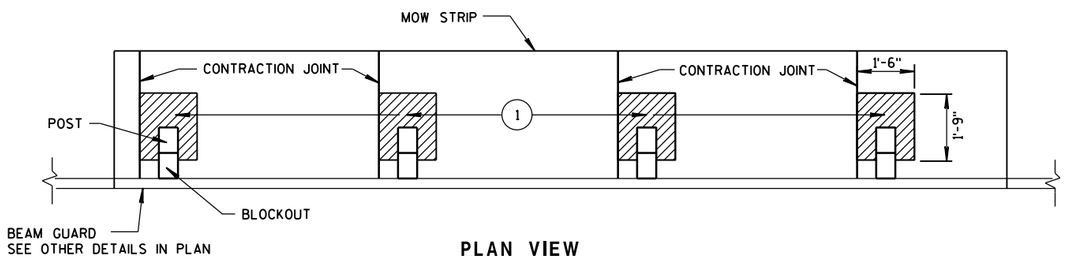


SECTION B-B



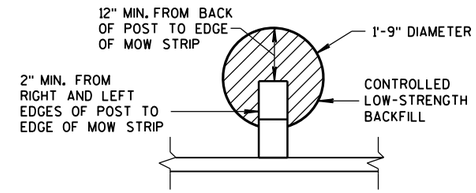
PLAN VIEW

MOW STRIP FOR TIGHT SPACING LAYOUT



PLAN VIEW

JOINT PLACEMENT FOR CONCRETE MOW STRIP



ALTERNATIVE HMA
MOW STRIP DESIGN

(1) CONTROLLED LOW-STRENGTH BACKFILL OR EMULSIFIED ASPHALT.

(2) DEPTH OF MOW STRIP:
ASPHALT - 4"
CONCRETE - 4"
EMULSIFIED ASPHALT - 1" OR LESS

(3) FOR EMULSIFIED ASPHALT MOW STRIP LEAVE OUTS NOT REQUIRED. (TYPICAL FOR ALL POSTS.)

GUARDRAIL MOW STRIP

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2014
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

NT

6

S.D.D. 14 B 28-3

6

S.D.D. 14 B 28-3

GENERAL NOTES

1. WOOD OR STEEL POSTS (w6X9 OR w6X8.5) MAY BE USED. DO NOT INTERMIX WOOD AND STEEL POSTS. INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.

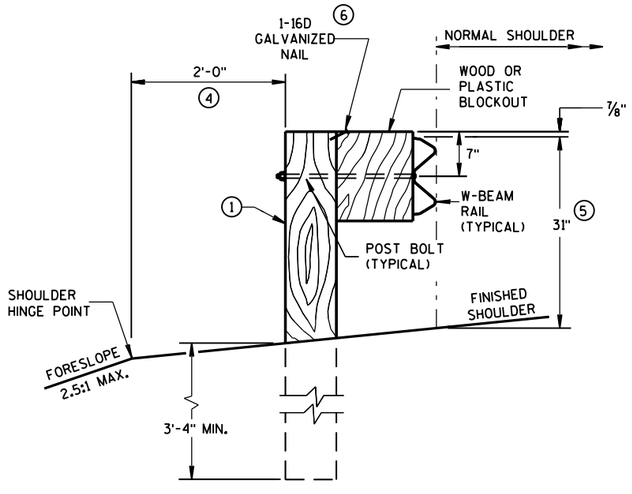
2. USE WOOD OR APPROVED PLASTIC BLOCKOUTS. WOOD BLOCKOUTS MAY BE CONSTRUCTED OUT OF TWO OR MORE WOOD BLOCKOUTS. SEE ALTERNATE WOOD BLOCKOUT DETAIL. DIMENSIONS OF APPROVED PLASTIC BLOCKOUTS MAY VARY.

3. IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2½ INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL IS TO BE FREE OF LARGE ROCKS.

4. WHEN THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING (K).

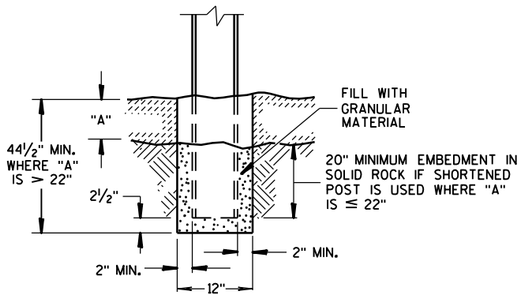
5. FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ± 1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27¾" TO 32".

6. WHEN USING STEEL POST AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.



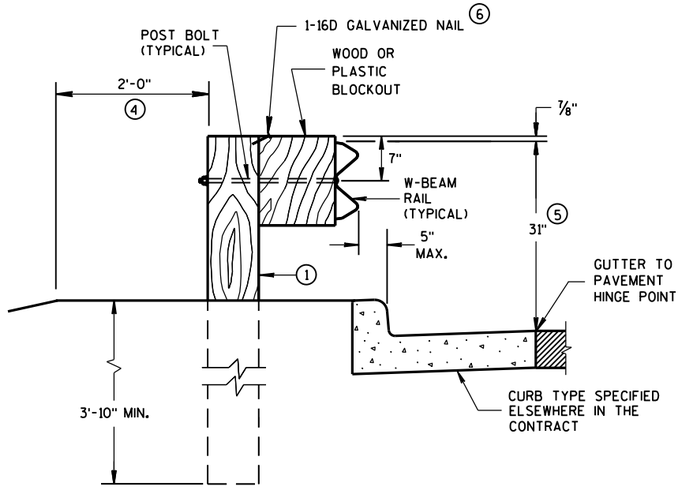
END VIEW

LOCATED ALONG A ROADWAY SHOULDER
STANDARD INSTALLATION



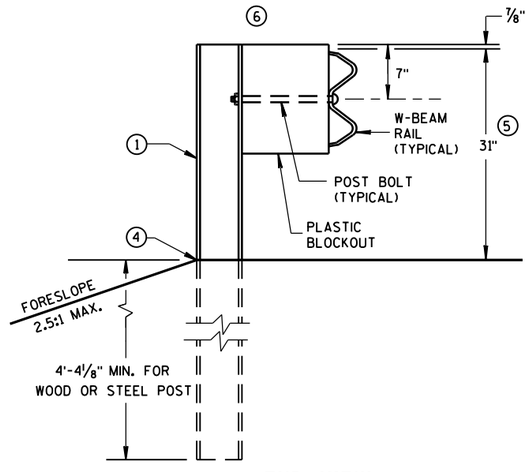
END VIEW

SETTING STEEL OR WOOD POST IN ROCK ③



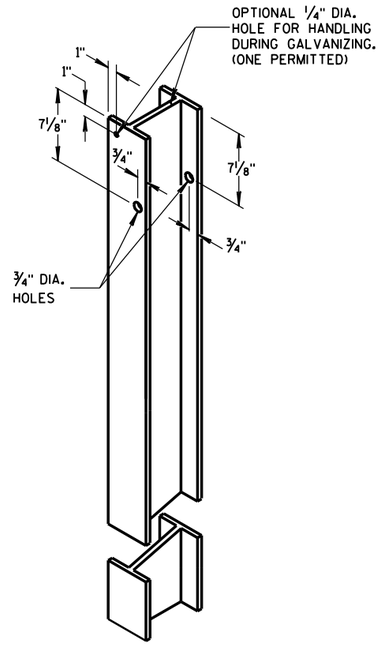
END VIEW

LOCATED ALONG A CURBED ROADWAY

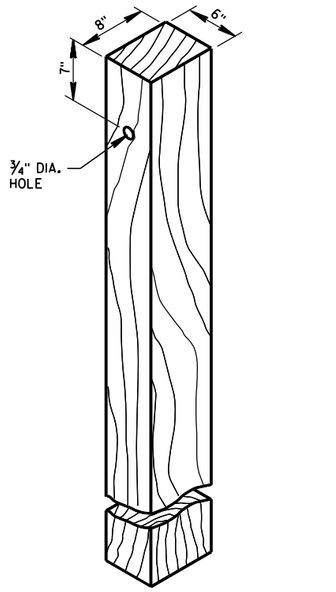


END VIEW

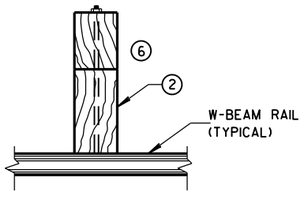
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



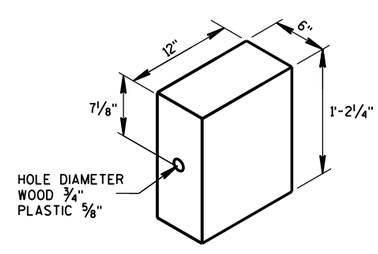
STEEL POST &
HOLE PUNCHING DETAIL
(w6X9) ①



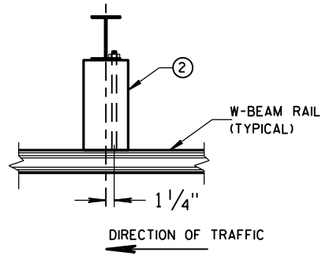
WOOD POST
(6" X 8") NOMINAL ①



PLAN VIEW
WOOD POST,
BLOCKOUT & BEAM



WOOD OR
PLASTIC BLOCKOUT ②

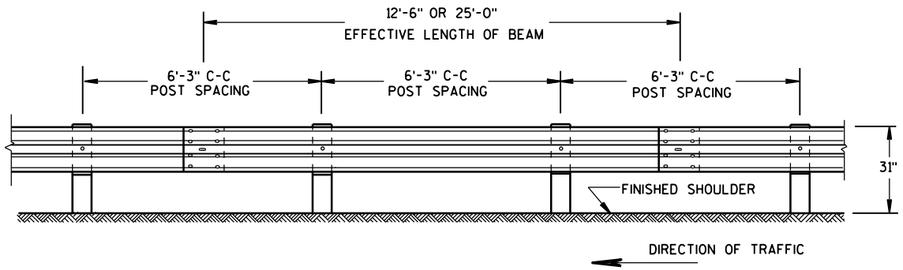


PLAN VIEW
STEEL POST,
PLASTIC BLOCKOUT & BEAM

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

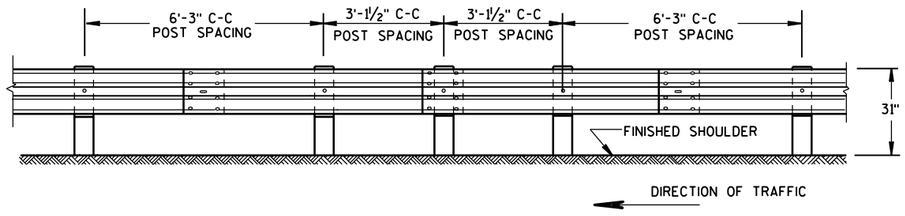
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6
S.D.D. 14 B 42-3a



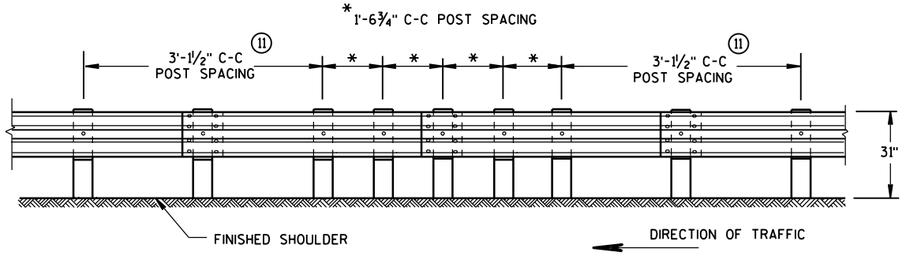
FRONT VIEW

POST SPACING STANDARD INSTALLATION



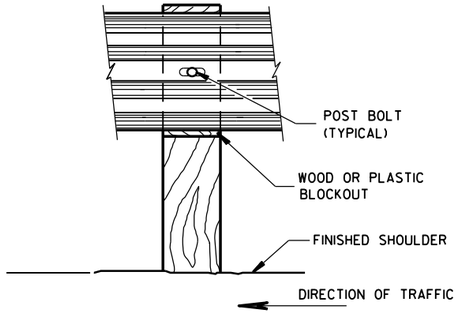
FRONT VIEW

HALF POST SPACING (HS) AND HALF POST SPACING WITH LONGER POSTS (K)

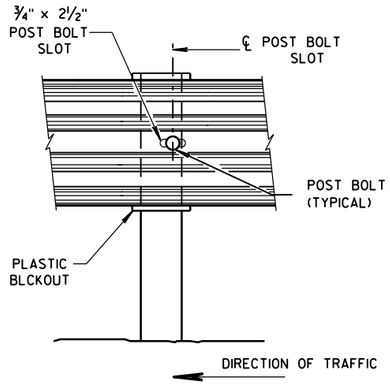


FRONT VIEW

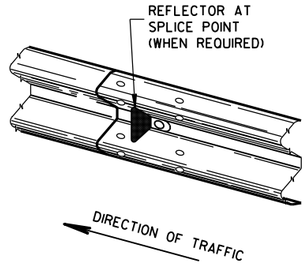
QUARTER POST SPACING (QS)

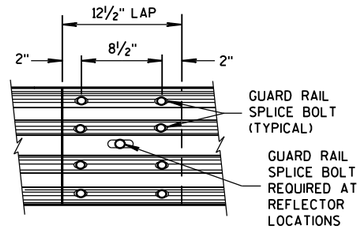


FRONT VIEW AT WOOD POST



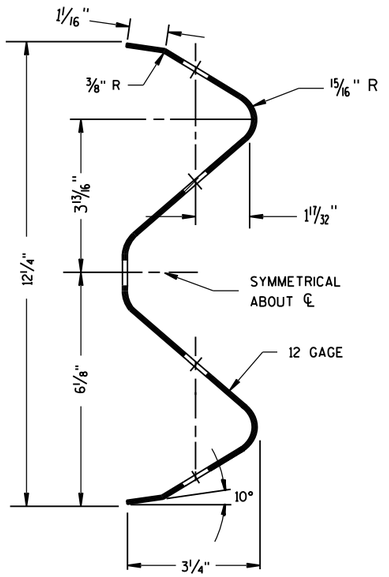
FRONT VIEW AT STEEL POST



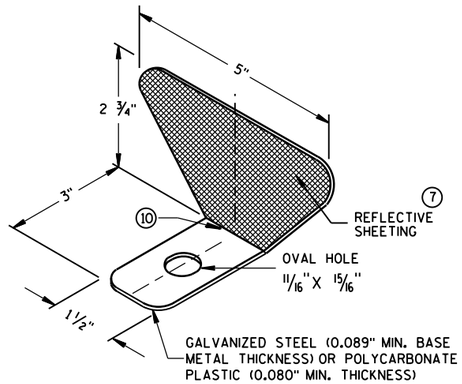


FRONT VIEW

MID-SPAN BEAM SPLICE



SECTION THRU W-BEAM RAIL



GENERAL NOTES

⑦ PROVIDE SILVER REFLECTIVE SHEETING ON ALL REFLECTORS EXCEPT THOSE LOCATED ALONG THE LEFT EDGE OF ONE-WAY ROADWAYS, WHICH SHALL BE PROVIDED WITH YELLOW REFLECTIVE SHEETING. SHEETING IS TYPE H. SEE STANDARD SPECIFICATION 637.

⑧ DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL. RAIL SPLICE LOCATIONS ARE THE ONLY ACCEPTABLE LOCATIONS FOR REFLECTORS.

⑨ REVERSE EVERY OTHER REFLECTOR FOR 2-WAY VISIBILITY. THE CONTRACTOR MAY FURNISH TWO-SIDED REFLECTORS IN LIEU OF ONE-SIDED REFLECTORS.

⑩ PROVIDE AN ANGLE OF BEND OF 90° ± 1° FOR TWO-SIDED REFLECTORS.

⑪ 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.

POST BOLTS ARE A ⅝" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND ⅝" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.

GUARD RAIL SPLICE BOLTS ARE A ⅝" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.

REFLECTOR SPACING ⑧

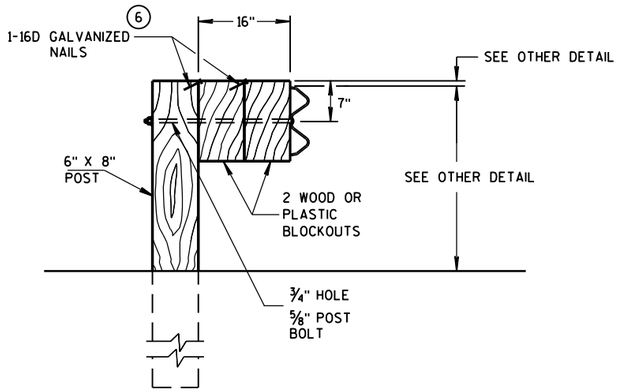
	BEAM GUARD LENGTH	REFLECTOR SPACING	NO. SURFACES REFLECTORIZED	MIN. NO. REFLECTORS
ONE WAY TRAFFIC	< 200' > 200'	50' C-C 100' C-C	1 1	3
TWO WAY TRAFFIC	< 200' > 200'	25' C-C 50' C-C	1 ⑨ 1	6
TWO WAY TRAFFIC	< 200' > 200'	50' C-C 100' C-C	2 2 ⑩	3

ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION ⑦

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

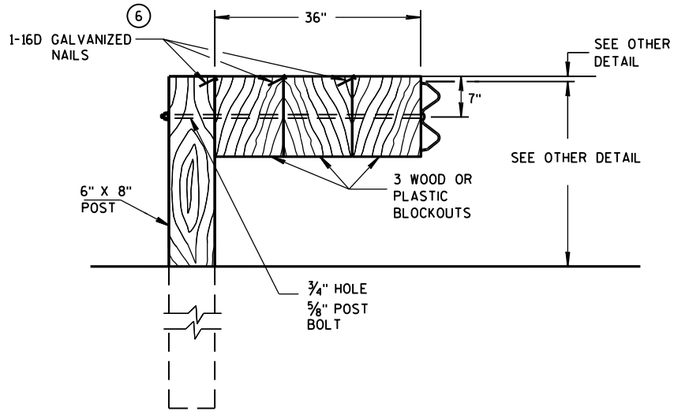
STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

6
S.D.D. 14 B 42-3b



DETAIL FOR 16" BLOCKOUT DEPTH

IT IS ACCEPTABLE TO USE BLOCKOUTS UP TO 16" DEEP TO INCREASE THE POST OFFSET TO AVOID UNDERGROUND OBSTACLES. THERE IS NO LIMIT TO THE NUMBER OF POSTS THAT CAN HAVE ADDITIONAL BLOCKOUTS UP TO 16" DEEP.

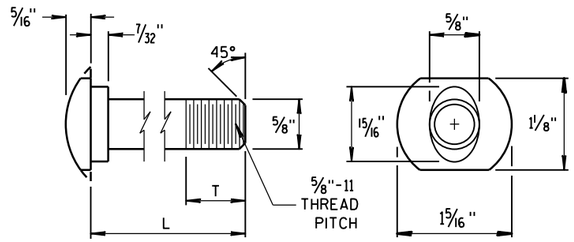


DETAIL FOR 36" BLOCKOUT DEPTH

NOTES: UNDER SPECIAL CIRCUMSTANCES, SUCH AS AVOIDING OBSTACLES THAT ARE NOT RELOCATED, IT IS ACCEPTABLE TO INSTALL ADDITIONAL BLOCKOUTS TO OBTAIN UP TO 36" DEPTH FOR ONE OR TWO POSTS IN A SECTION OF GUARDRAIL.

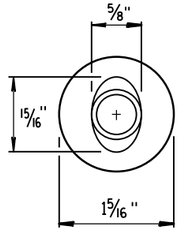
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

NOTE: 1. ALL FILLETS SHALL HAVE A MINIMUM RADIUS OF 1/16".
2. IF THE BOLT EXTENDS MORE THAN 1/4" FROM THE NUT THE BOLT SHOULD BE TRIMMED BACK.

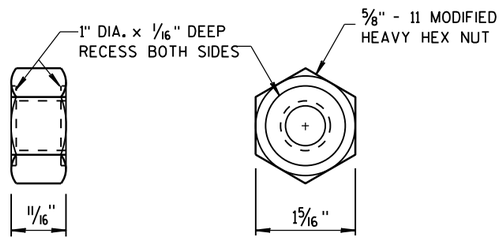


POST BOLT TABLE

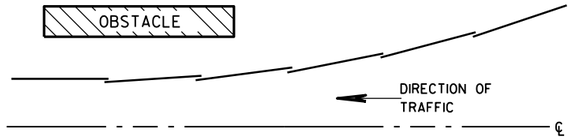
L	T (MIN.)
1¼"	1⅛"
2"	1¾"
10"	4"
14"	4 1/16"
18"	4"
21"	4 1/16"
25"	4"



ALTERNATE BOLT HEAD

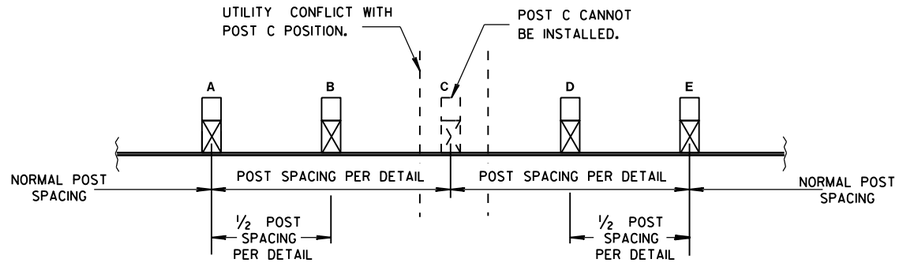


POST BOLT AND RECESS NUT

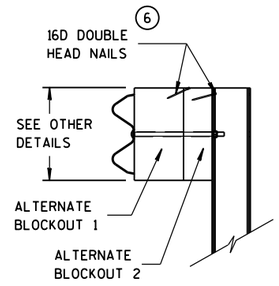


PLAN VIEW

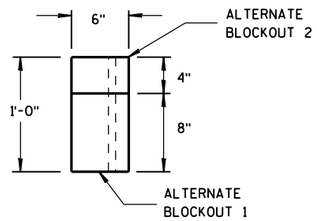
BEAM LAPPING DETAIL



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



SIDE VIEW



TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2014
DATE
FHWA

/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER

591

6

S.D.D. 14 B 42-3c

6

S.D.D. 14 B 42-3c

GENERAL NOTES

(A) THE SLOPE IN THE AREA BOUNDED BY THE GRADELINE, THE HINGE POINT LINE (HPL), AND THE CLEAR ZONE LIMITS (CZL) SHALL BE 4:1 OR FLATTER.

(B) AFTER FINAL ASSEMBLY, RECHECK CABLE TO BE SURE IT IS TAUT AND HAS NOT RELAXED.

(C) DIFFERENT MANUFACTURES REQUIRE DIFFERENT PERFORATED W-BEAM RAIL END PANELS. SEE MANUFACTURES INFORMATION.

(D) THE TOP OF THE STEEL TUBE ON POST 1 AND POST 2 SHALL NOT BE MORE THAN 3" ABOVE THE FINISH GROUND ELEVATION.

(F) ATTACH ALUMINUM SHEET TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF-TAPPING SCREWS. ONE SCREW PER CORNER.

(G) ½" DIAMETER X 3" LONG LAG BOLT AND WASHER.

(H) HARDWARE VARIES BETWEEN DIFFERENT MANUFACTURES. SEE MANUFACTURE'S DRAWING FOR INFORMATION.

(I) DIMENSIONS MAY VARY. SEE MANUFACTURE'S INFORMATION.

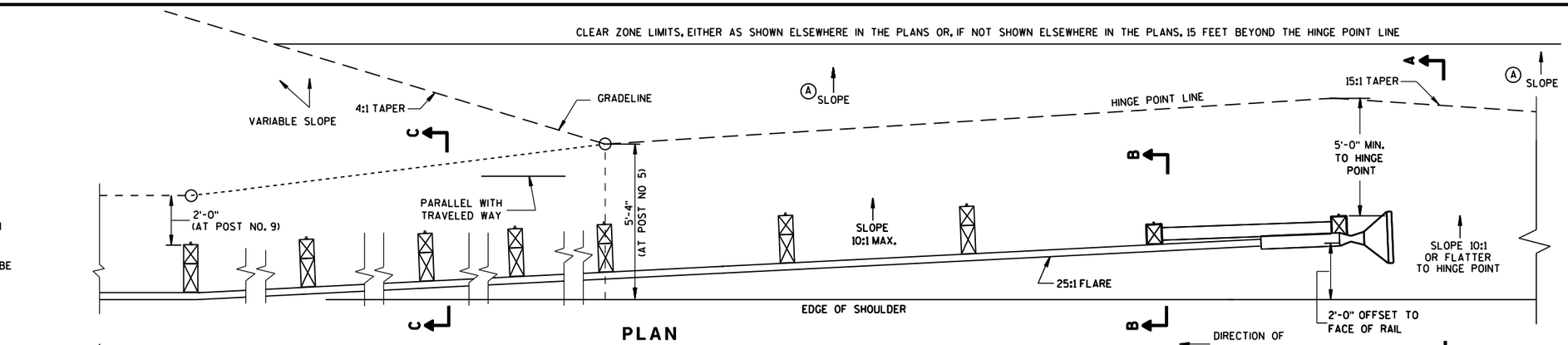
SEE SDD 14B42 FOR MORE INFORMATION.

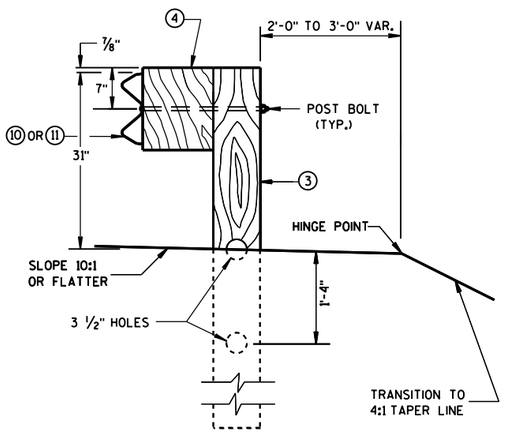
* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.

DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

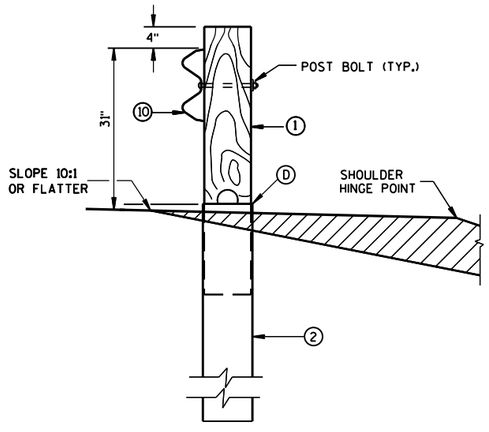
W-BEAM RAIL SPLICES ARE LOCATED AT POST NUMBER 3, AND BETWEEN POST 5 AND 6, BETWEEN POSTS 7 AND 8, AND MIDDLE OF THE SPAN AFTER POST 9.

THE CENTER OF THE UPPER 3½" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE.

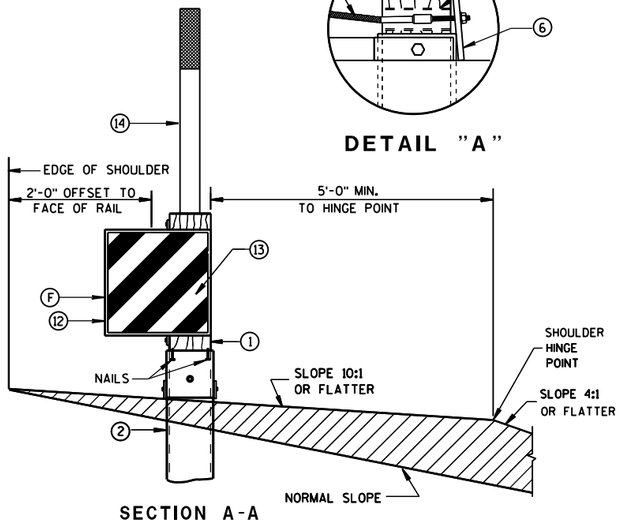




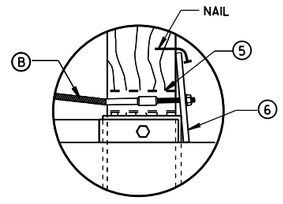
SECTION C-C
TYPICAL AT POST NOS. 3-9



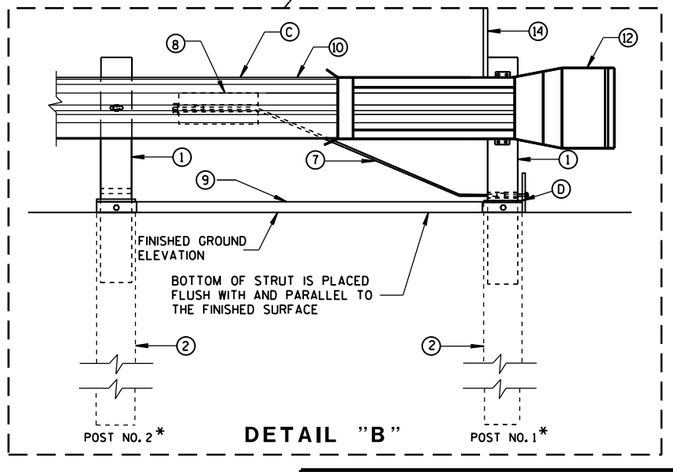
SECTION B-B
TYPICAL AT POST NO. 2*



SECTION A-A
TYPICAL AT POST NO. 1*



DETAIL "A"



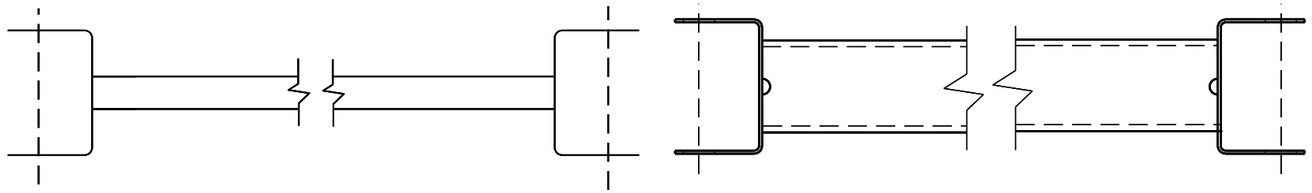
DETAIL "B"

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR 592

S.D.D. 14 B 44-2a

6

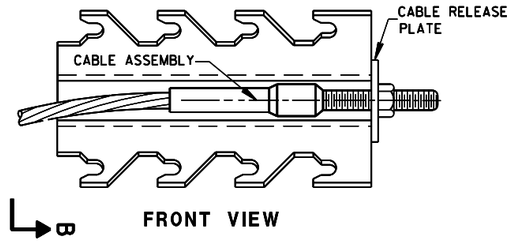


(9) (H)

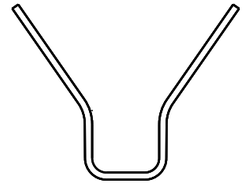
GENERIC GROUND STRUT

BILL OF MATERIALS

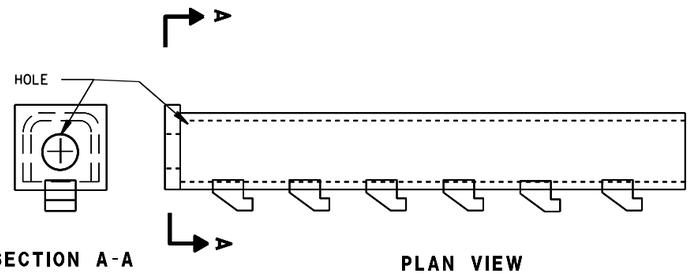
PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUFACTURER'S DETAILS FOR MORE INFORMATION.
(1)	WOOD BREAKAWAY POST
(2)	6" X 8" X 0.188", 6'-0" LONG FOUNDATION TUBE AT POSTS 1 AND 2
(3)	WOOD CRT
(4)	WOOD BLOCKOUT
(5)	PIPE SLEEVE
(6)	BEARING PLATE
(7)	BCT CABLE ASSEMBLY
(8)	ANCHOR CABLE BOX
(9)	GROUND STRUT
(10)	PERFORATED W-BEAM RAIL END PANEL, 12'-6" LONG.
(11)	STANDARD W-BEAM RAIL. MULTIPLE SECTIONS REQUIRED. SECTIONS VARY IN LENGTH.
(12)	END SECTION EAT
(13)	0.040" ALUMINUM SHEET WITH REFLECTIVE SHEETING TYPE F PER SECTION 637 OF THE STANDARD SPECIFICATIONS
(14)	EAT MARKER POST - YELLOW (SEE APPROVED PRODUCTS LIST)



FRONT VIEW



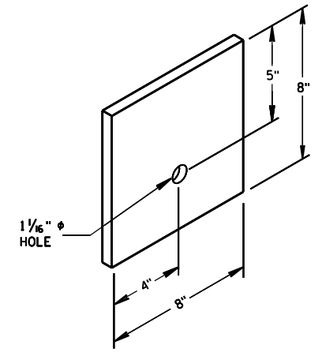
SECTION B-B



SECTION A-A

PLAN VIEW

GENERIC ANCHOR CABLE BOX (8) (H)

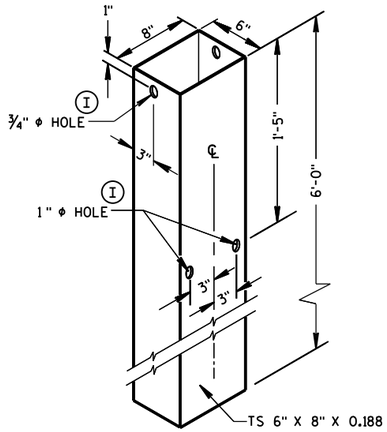


BEARING PLATE (6)

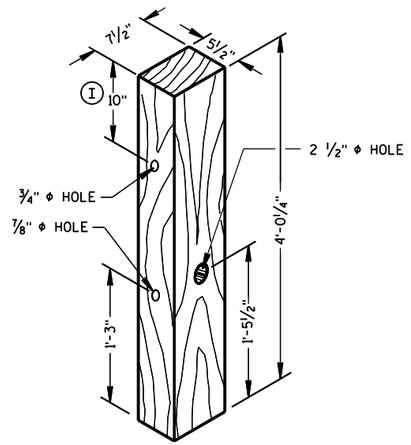
MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6
S.D.D. 14 B 44-2b

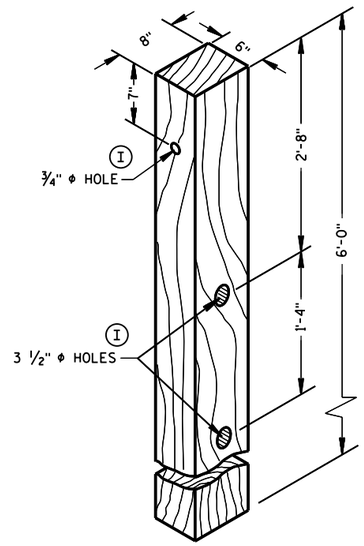


FOUNDATION TUBE (2)



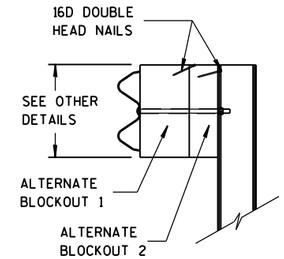
POSTS NUMBER 1 AND 2

WOOD BREAKAWAY POST (1)

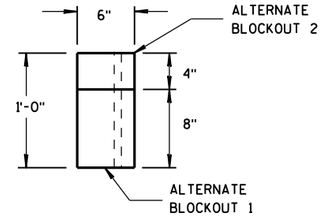


POSTS NUMBER 3-9

WOOD CRT POST (3)

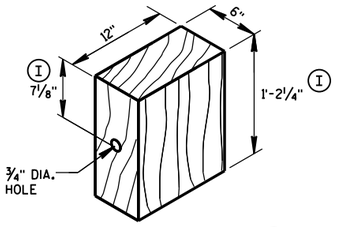


SIDE VIEW



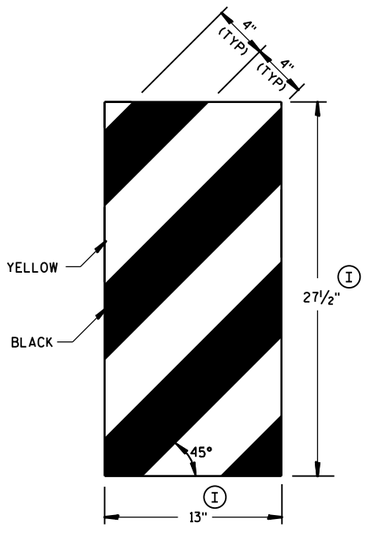
TOP VIEW

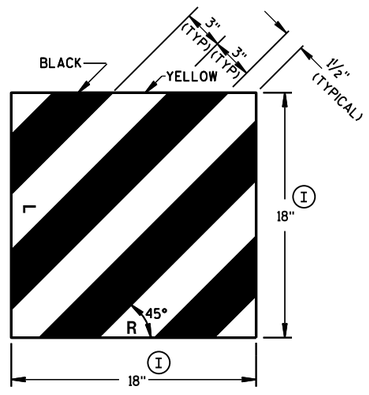
ALTERNATE WOOD BLOCKOUT DETAIL



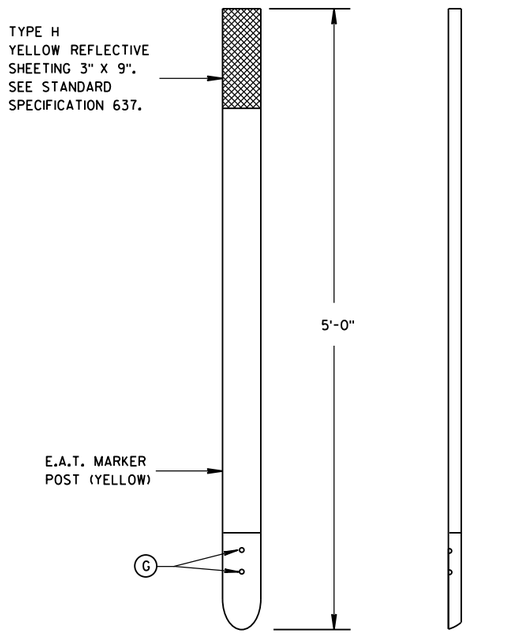
WOOD BLOCKOUT (4)

REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2





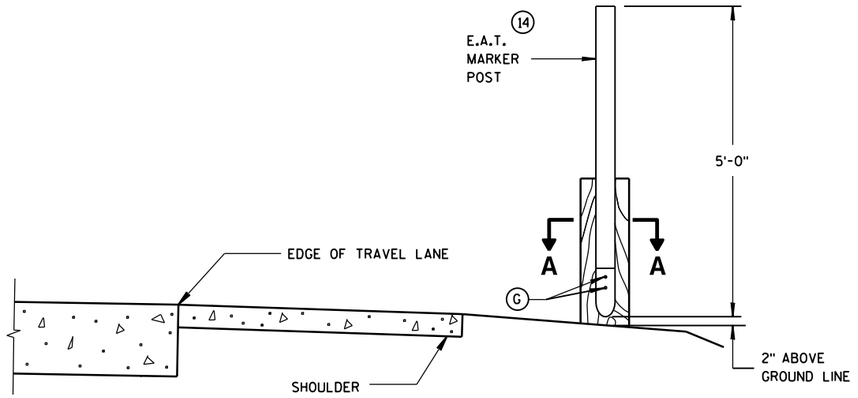
GENERIC REFLECTIVE SHEETING (13) (H)



FRONT VIEW

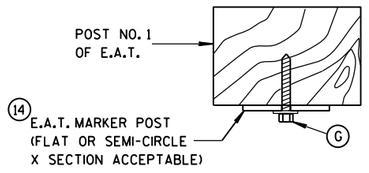
SIDE VIEW

E.A.T. MARKER POST (14)



TYPICAL INSTALLATION OF E.A.T. MARKER POST BACKSIDE OF POST NO. 1

(E.A.T. AND RAIL REMOVED FOR CLARITY)



SECTION A-A

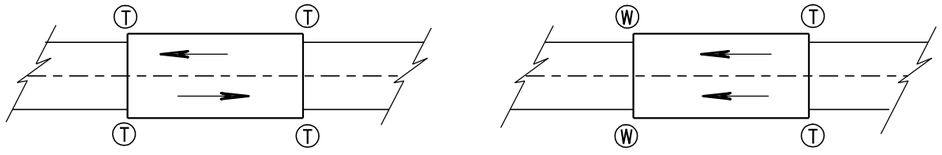
MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2014 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

6

S.D.D. 14 B 44-2c



TWO WAY TRAFFIC

ONE WAY TRAFFIC

Ⓣ THRIE BEAM CONNECTION

Ⓦ W-BEAM CONNECTION WHEN REQUIRED

TYPICAL LOCATIONS OF THRIE BEAM AND W-BEAM CONNECTIONS TO BRIDGE

GENERAL NOTES

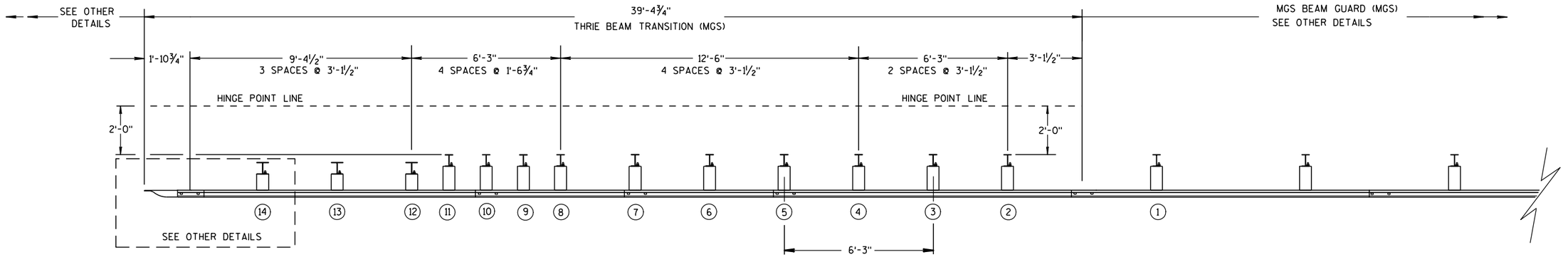
BOLT THE THRIE BEAM TO ALL POSTS AND BLOCKOUTS. DRILL OR PUNCH BOLT HOLES IN THE BEAM IF THE POST SPACING IS LESS THAN 6'-3.

IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2½", AND 12" DIAMETER AROUND POST. SEE 14B42 FOR MORE DETAILS.

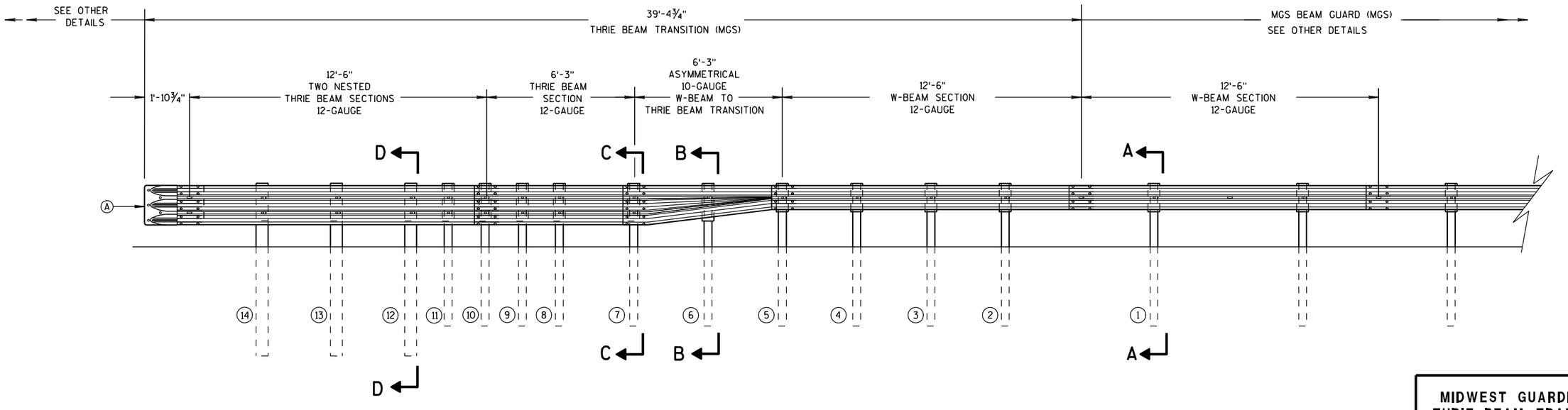
TRANSITION USES STEEL POSTS ONLY.

SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

Ⓐ BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.



PLAN VIEW



ELEVATION VIEW

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

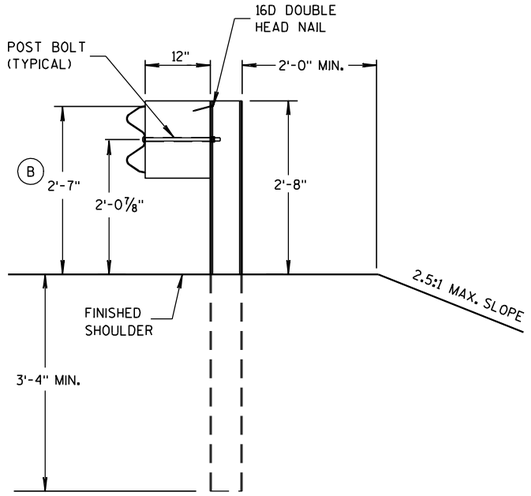
MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
S.D.D. 14 B 45-3a

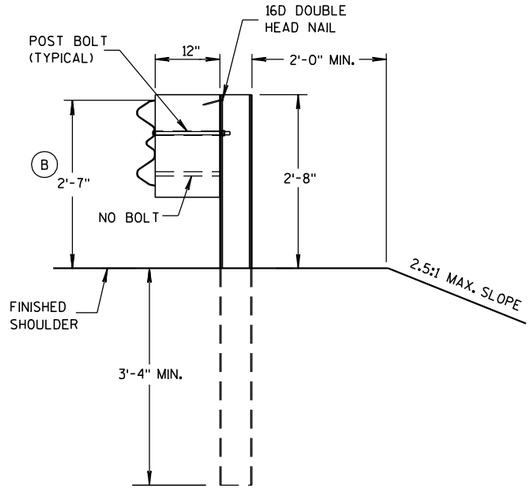
GENERAL NOTES

(B) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".



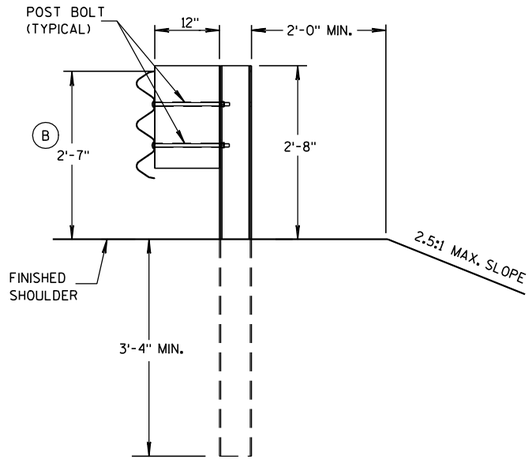
SECTION A-A

POSTS 1-5



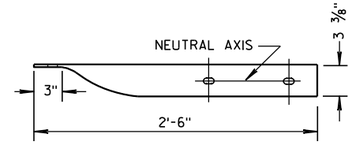
SECTION B-B

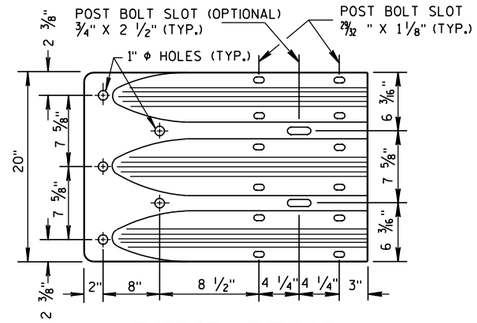
POST 6



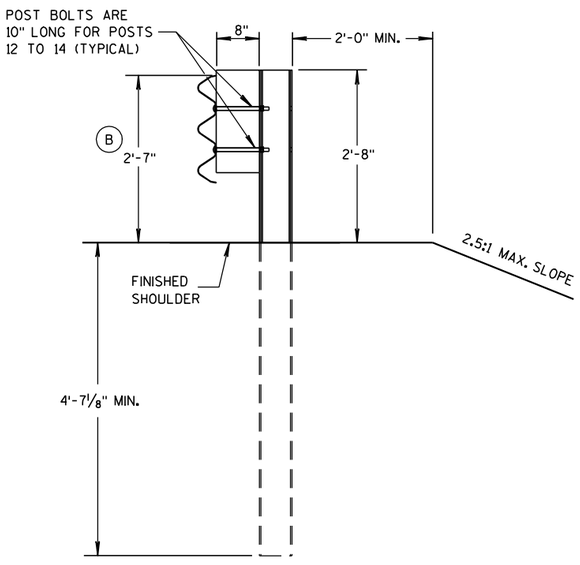
SECTION C-C

POSTS 7-11





THRIE BEAM TERMINAL CONNECTOR



SECTION D-D

POSTS 12-14

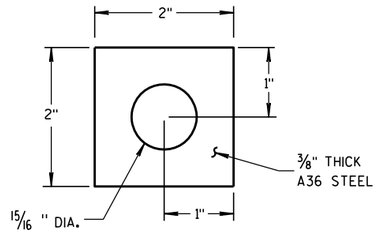
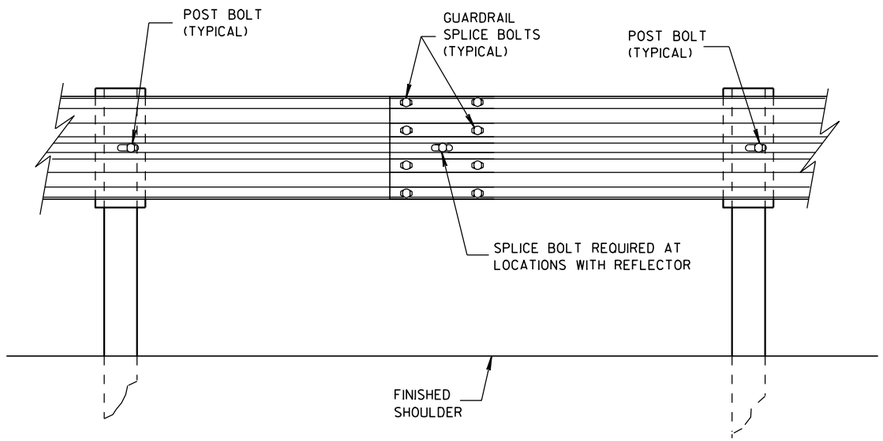
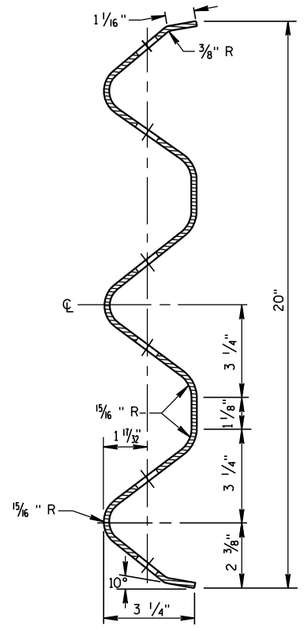


PLATE WASHER DETAIL



SPLICE DETAIL



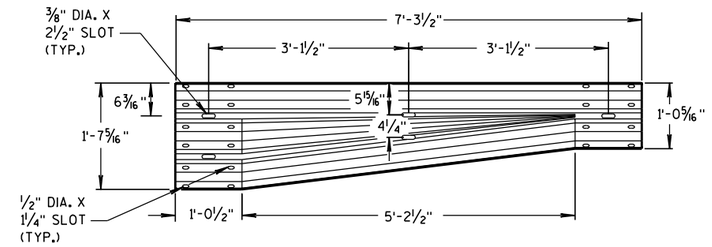
SECTION THRU THRIE BEAM RAIL ELEMENT

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

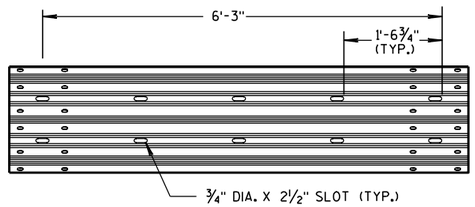
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

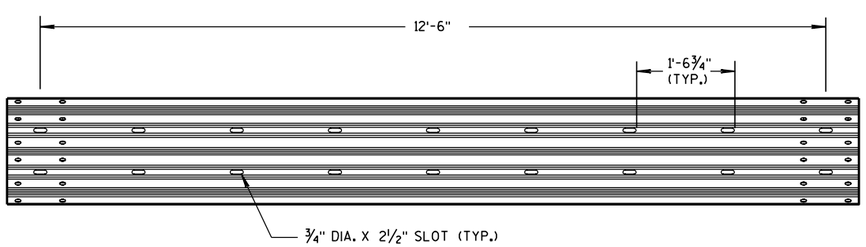
S.D.D. 14 B 45-3b



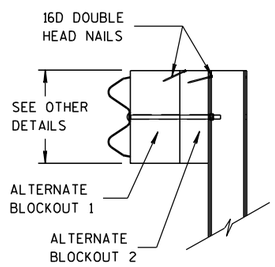
W-BEAM TO THRIE BEAM TRANSITION SECTION



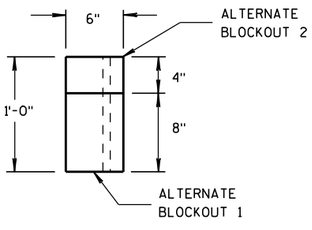
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

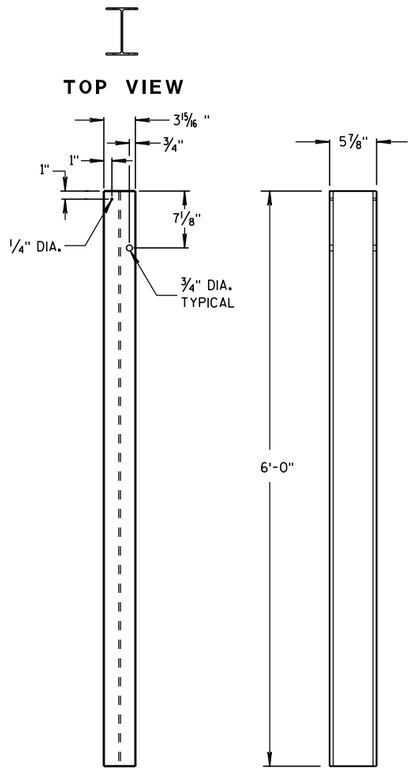


SIDE VIEW

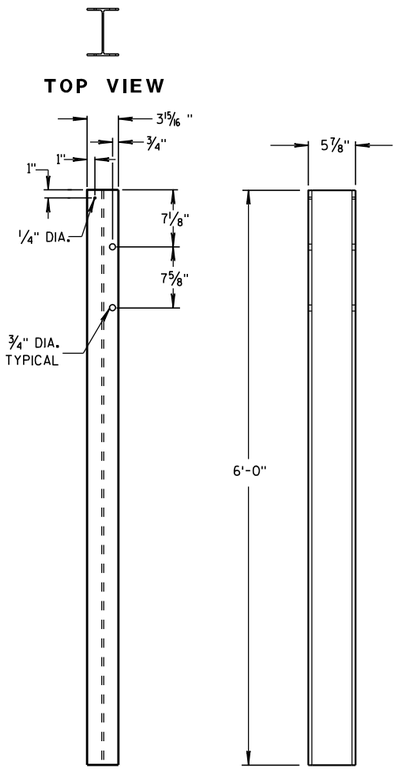


TOP VIEW

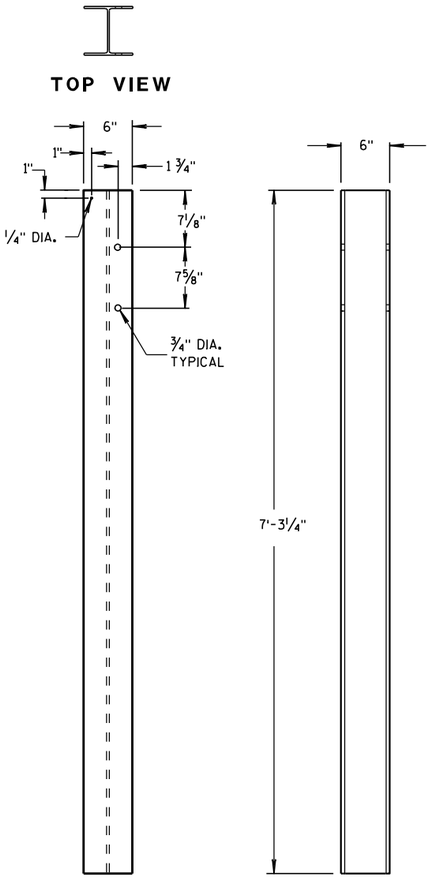
ALTERNATE WOOD BLOCKOUT DETAIL



STEEL POSTS 1-5

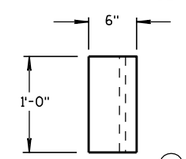


STEEL POSTS 6-11

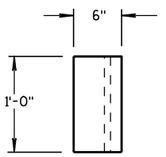


STEEL POSTS 12-14

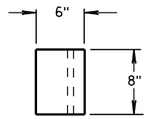
1 WOOD BLOCKS MAY BE CONSTRUCTED OUT OF 2 WOOD BLOCKS. SEE ALTERNATE WOOD BLOCK DETAIL.



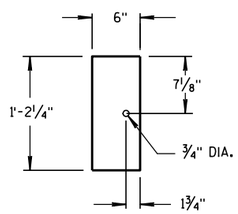
TOP VIEW (1)



TOP VIEW (1)

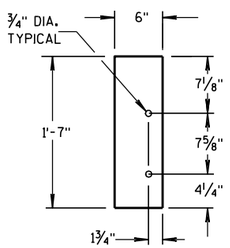


TOP VIEW



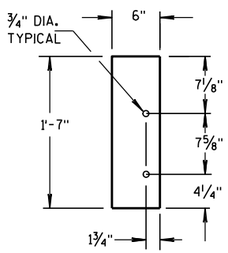
FRONT VIEW

BLOCKOUT POSTS 1-5



FRONT VIEW

BLOCKOUT POSTS 6-11



FRONT VIEW

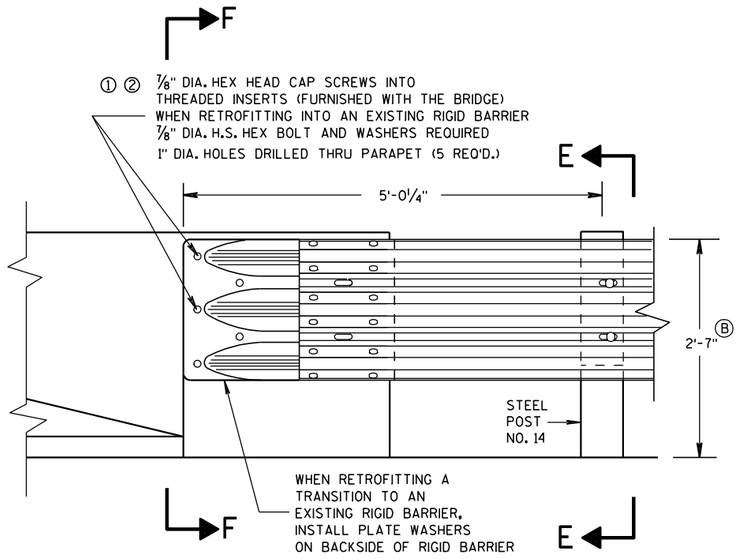
BLOCKOUT POSTS 12-14

STEEL POST SIZES

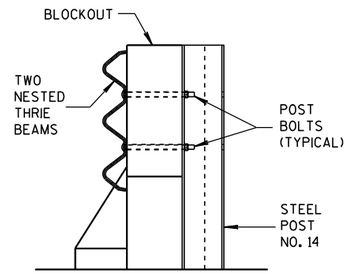
POST NUMBER	SECTION TYPE	LENGTH
1	W6x9	72"
2	W6x9	72"
3	W6x9	72"
4	W6x9	72"
5	W6x9	72"
6	W6x9	72"
7	W6x9	72"
8	W6x9	72"
9	W6x9	72"
10	W6x9	72"
11	W6x9	72"
12	W6x15	87 1/8"
13	W6x15	87 1/8"
14	W6x15	87 1/8"

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



FRONT VIEW



SECTION E-E

GENERAL NOTES

THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSTION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.

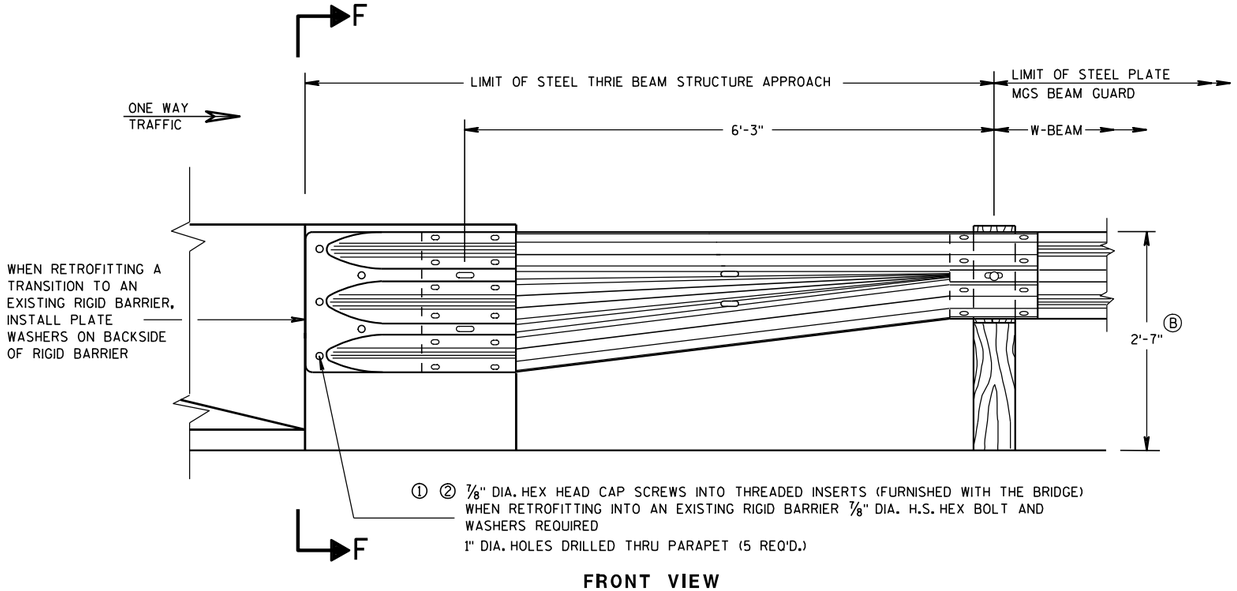
① DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

② BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.

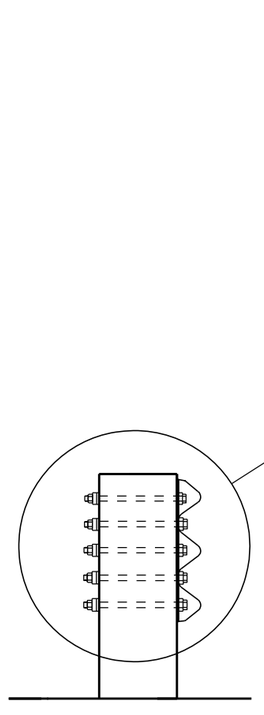
③ THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 1/2".

Ⓑ TOLERANCE FOR TOP OF BEAM IS ± 1".

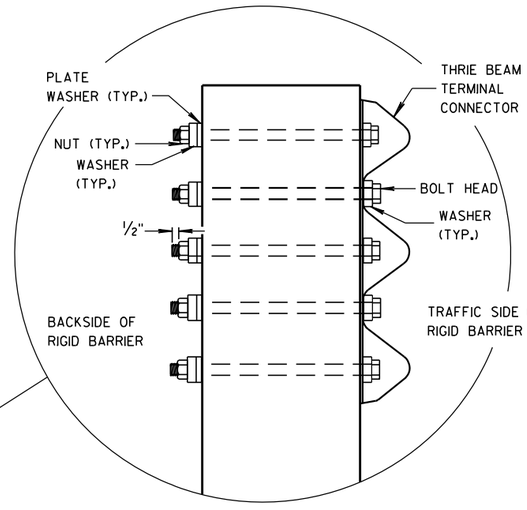
THRIE BEAM CONNECTION TO BRIDGE PARAPET WITH SQUARE ENDS



FRONT VIEW



SECTION F-F



W BEAM TRANSITION AND CONNECTION TO BRIDGE PARAPETS WITH SQUARE ENDS

(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/31/2012 — DATE

/S/ Jerry H. [illegible] — ROADWAY STANDARDS [illegible]598 ENGINEER

FHWA

6

S.D.D. 14 B 45-3d

6

S.D.D. 14 B 45-3d

GENERAL NOTES

THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSTION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.

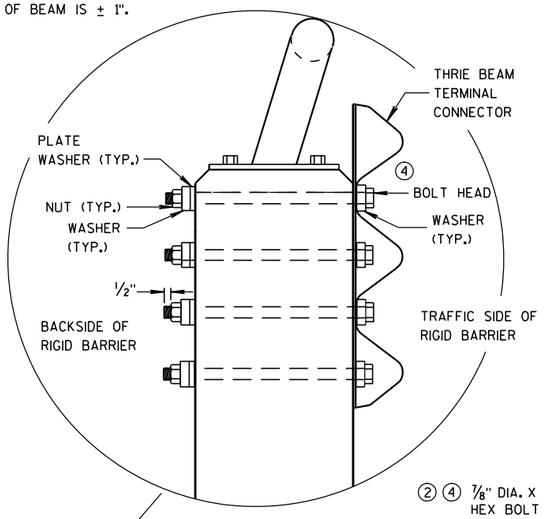
① DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

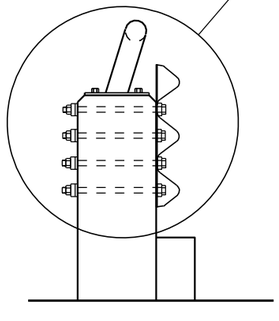
② BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.

③ THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 1/2". BLOCK IS INCIDENTAL TO THE CONTRACT.

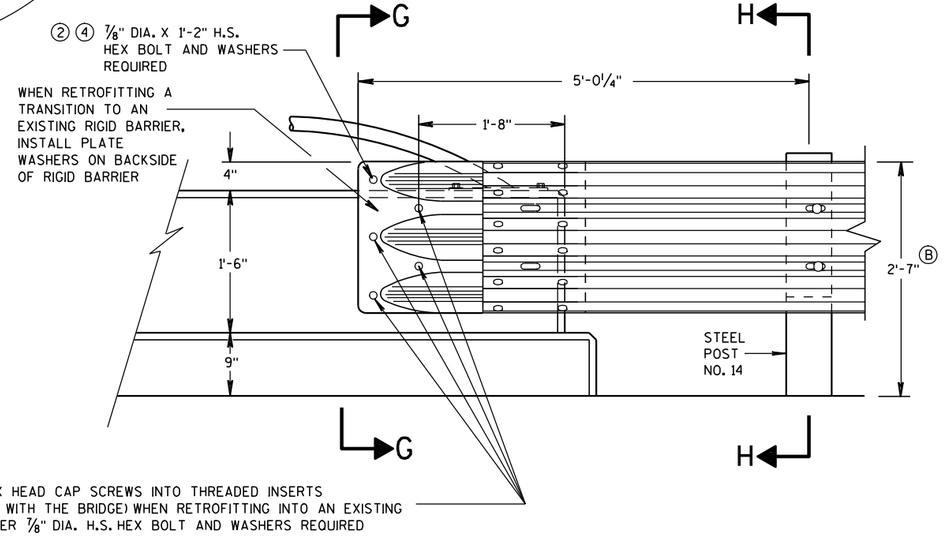
④ BOLT, NUT AND WASHERS NOT REQUIRED FOR THIS LOCATION WHEN RETROFITTING AN EXISTING PAPAPET AND THE HOLE IS EITHER ABOVE PARAPET OR WITHIN 4 INCHES OF THE EDGE OF PARAPET.

Ⓑ TOLERANCE FOR TOP OF BEAM IS ± 1".

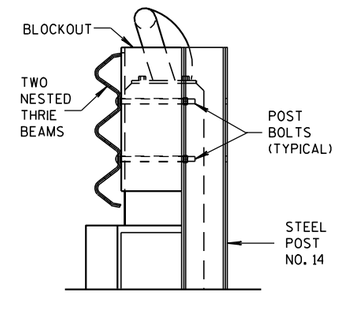




SECTION G-G

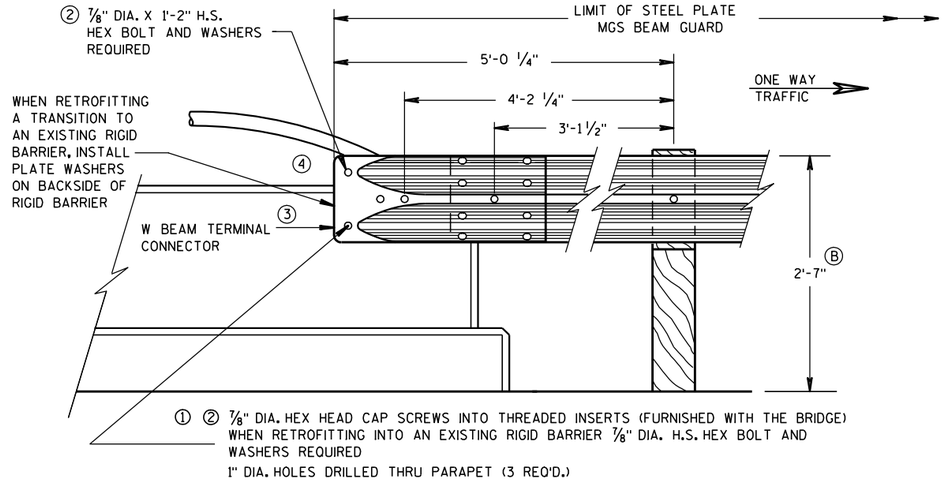


FRONT VIEW



SECTION H-H

THRIE BEAM CONNECTION TO VERTICAL FACED PARAPETS



FRONT VIEW

W BEAM CONNECTION TO VERTICAL FACE PARAPET
(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

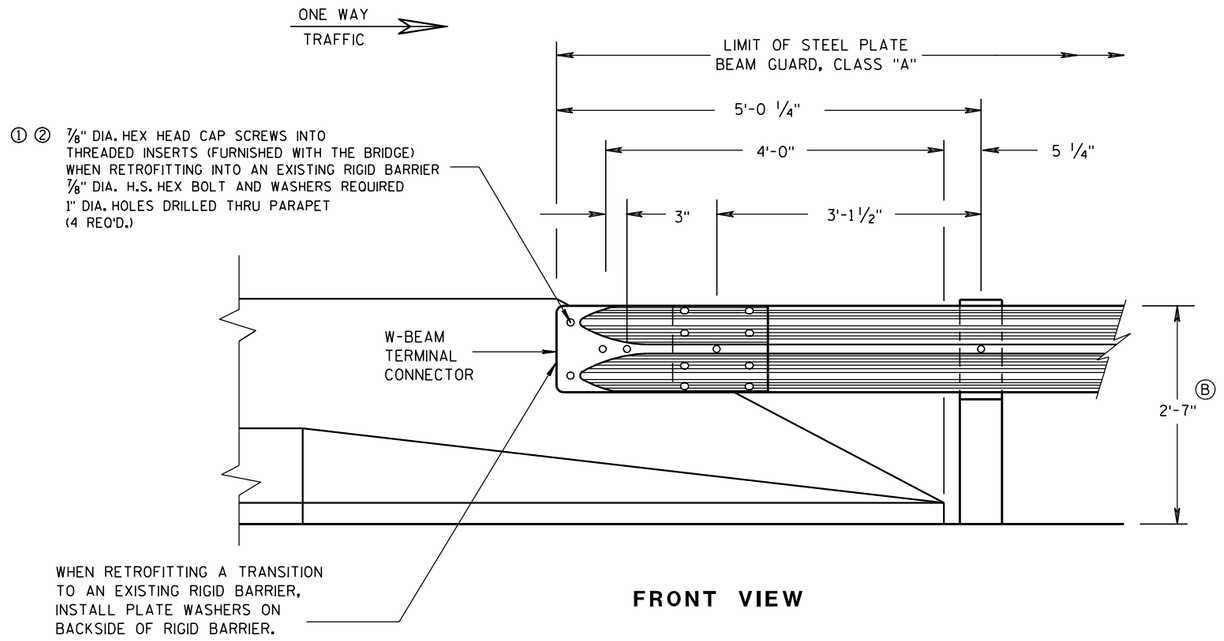
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8-31-2012
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA



FRONT VIEW

W BEAM CONNECTION TO PARAPETS WITH SLOPED ENDS

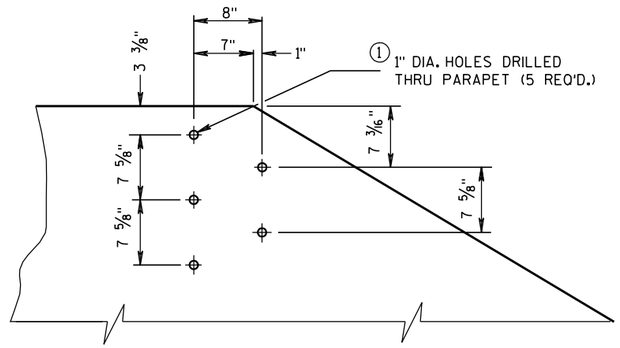
(USE ONLY AT TRAFFIC EXIT END OF ONE WAY BRIDGE)

GENERAL NOTES

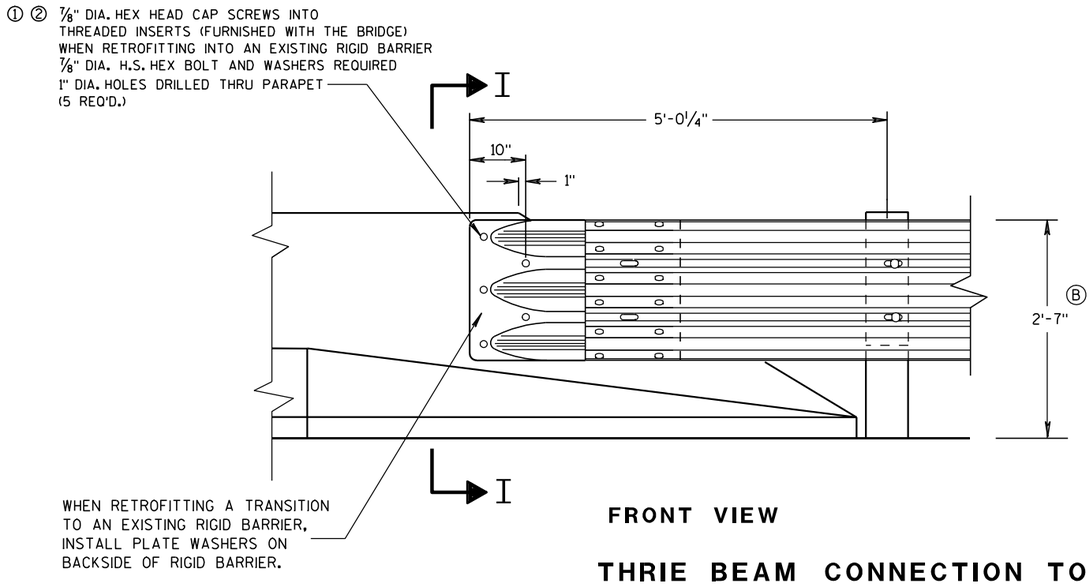
① DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

② BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.

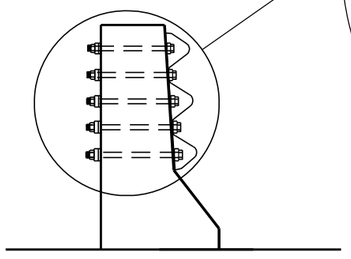
Ⓑ TOLERANCE FOR TOP OF BEAM IS ± 1".



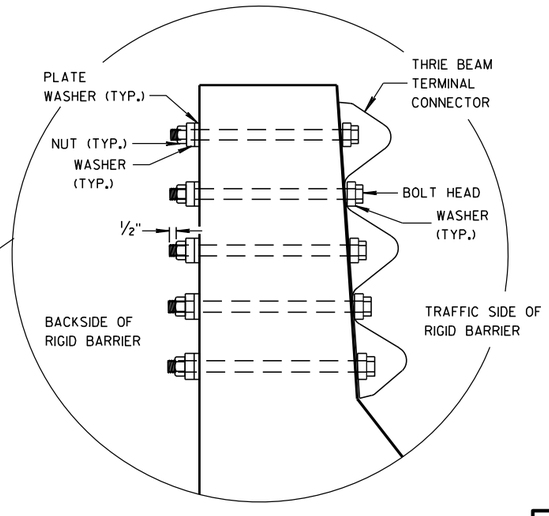
DRILL HOLE LOCATION AND PATTERN FOR THRIE BEAM CONNECTION



FRONT VIEW



SECTION I-I



THRIE BEAM CONNECTION TO BRIDGE PARAPETS WITH SLOPED ENDS

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/31/2012 — DATE

/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER

600 ENT

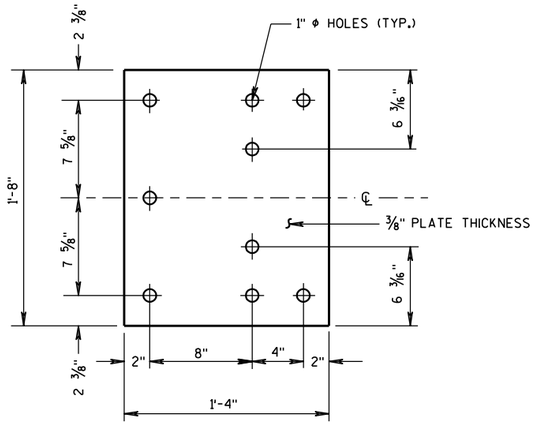
FHWA

6

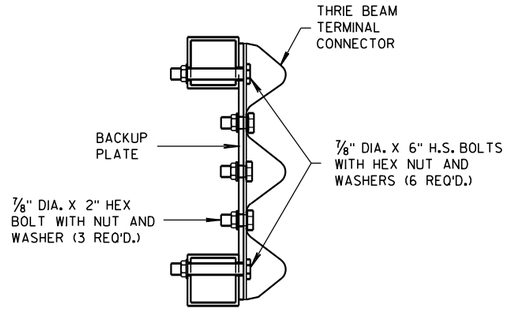
S.D.D. 14 B 45-3f

6

S.D.D. 14 B 45-3f



BACK-UP PLATE DETAIL

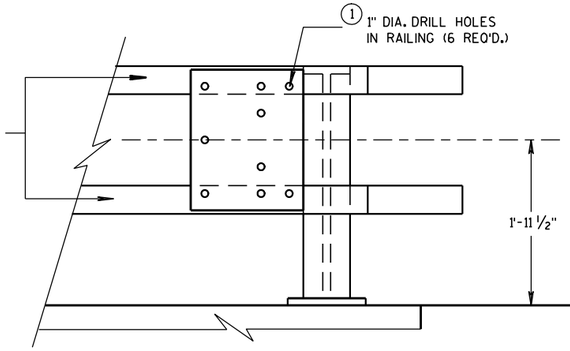


SECTION J-J

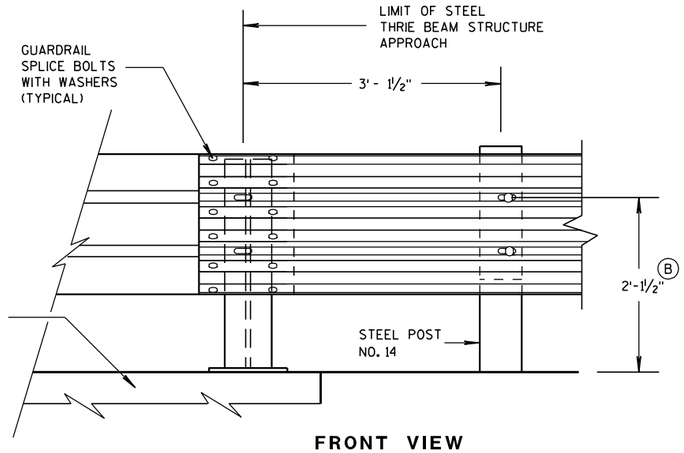
GENERAL NOTES

(1) DRILLING HOLES THROUGH THE PAPRPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

(B) TOLERANCE FOR TOP OF BEAM IS ± 1".

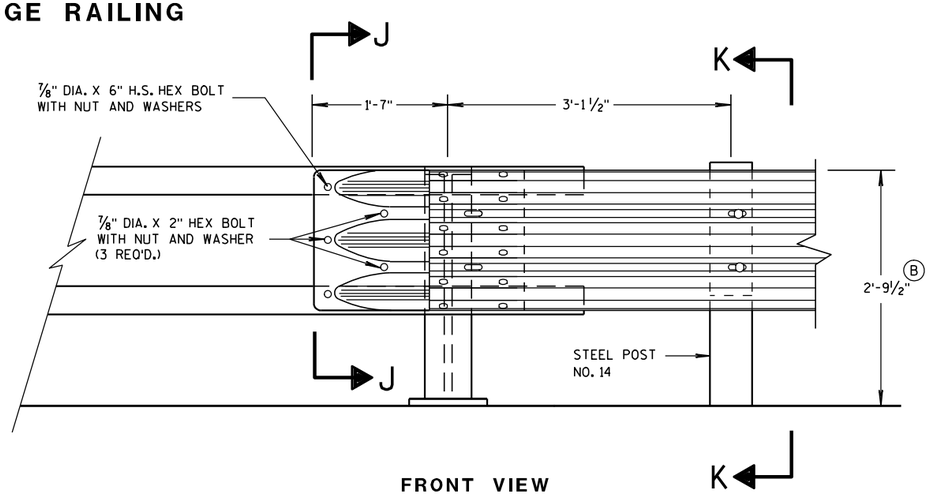


BACK-UP PLATE MOUNTING ONTO BRIDGE RAILING

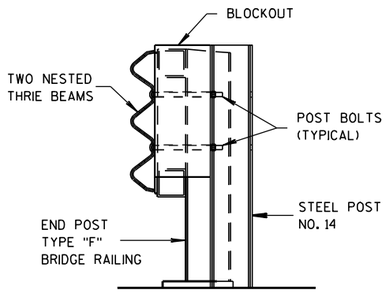


FRONT VIEW

THRIE BEAM CONNECTION TO STEEL RAILING TYPE "W"



FRONT VIEW



SECTION K-K

THRIE BEAM CONNECTION TO TUBULAR RAILING TYPE "F"

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

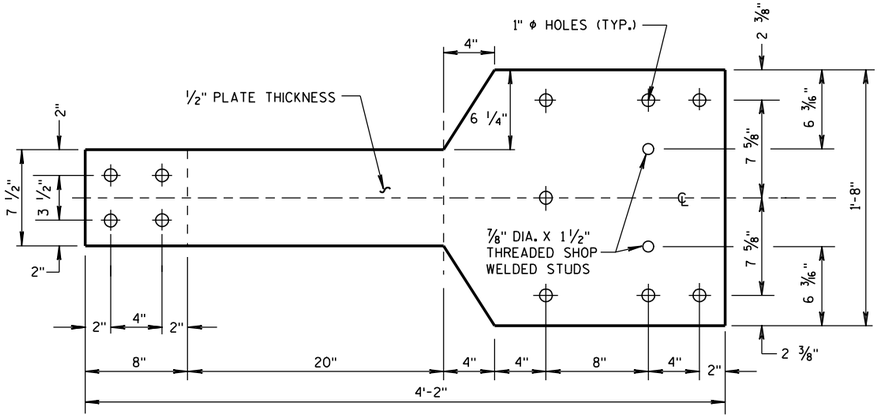
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/31/2012 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

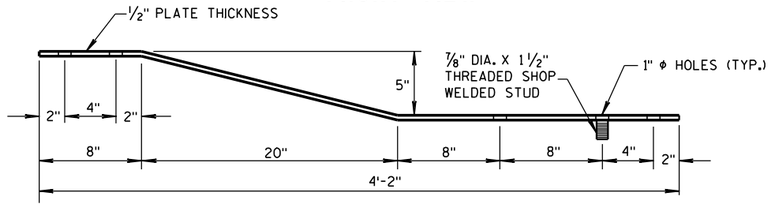
6
S.D.D. 14 B 45-3g

GENERAL NOTES

(B) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".

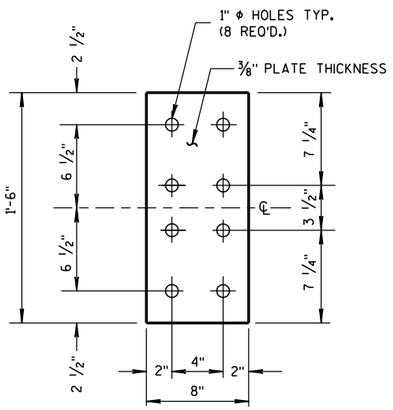


FRONT VIEW



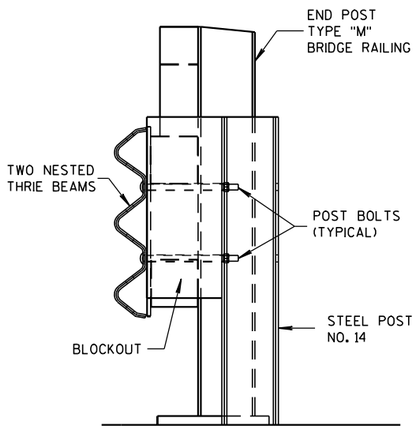
PLAN VIEW

BACK-UP PLATE DETAIL, TYPE "M"

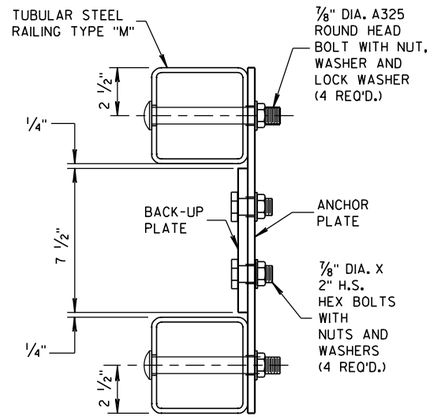


FRONT VIEW

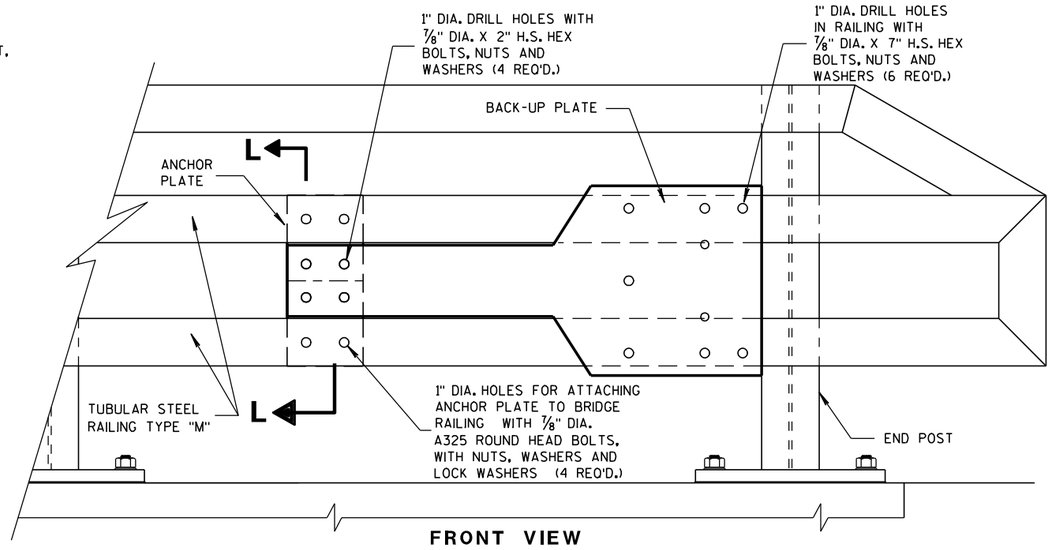
ANCHOR PLATE DETAIL, TYPE "M"



SECTION M-M

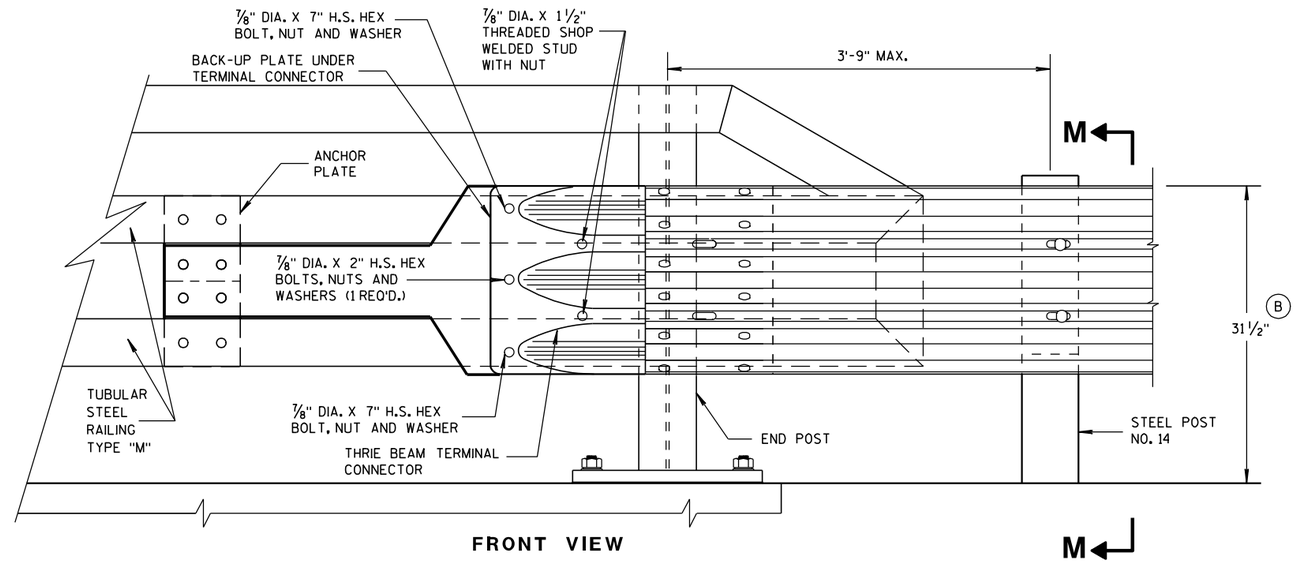


SECTION L-L

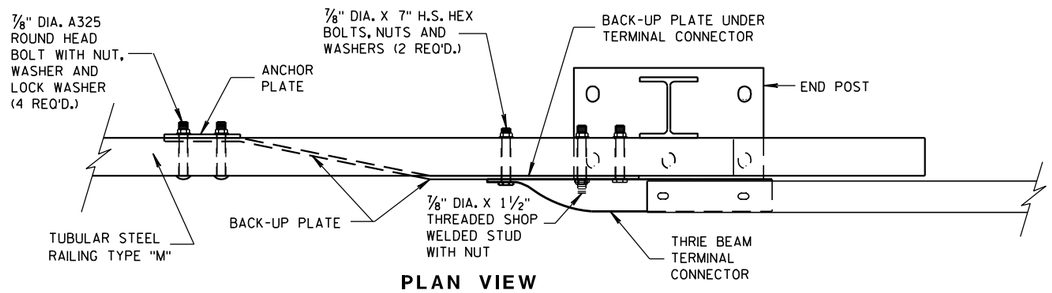


FRONT VIEW

ANCHOR AND BACK-UP PLATE MOUNTING TO BRIDGE RAILING, TYPE "M"



FRONT VIEW



PLAN VIEW

THRIE BEAM CONNECTION TO TUBULAR RAILING, TYPE "M"

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8-31-2012
DATE

/S/ Jerry H. [illegible]
ROADWAY STANDARDS ENGINEER

602

ENT

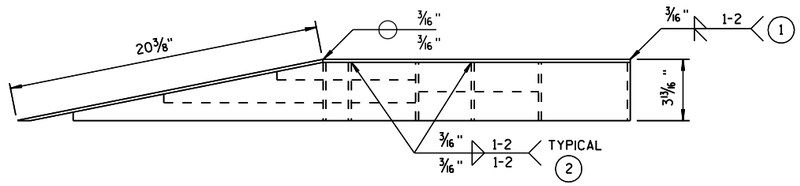
FHWA

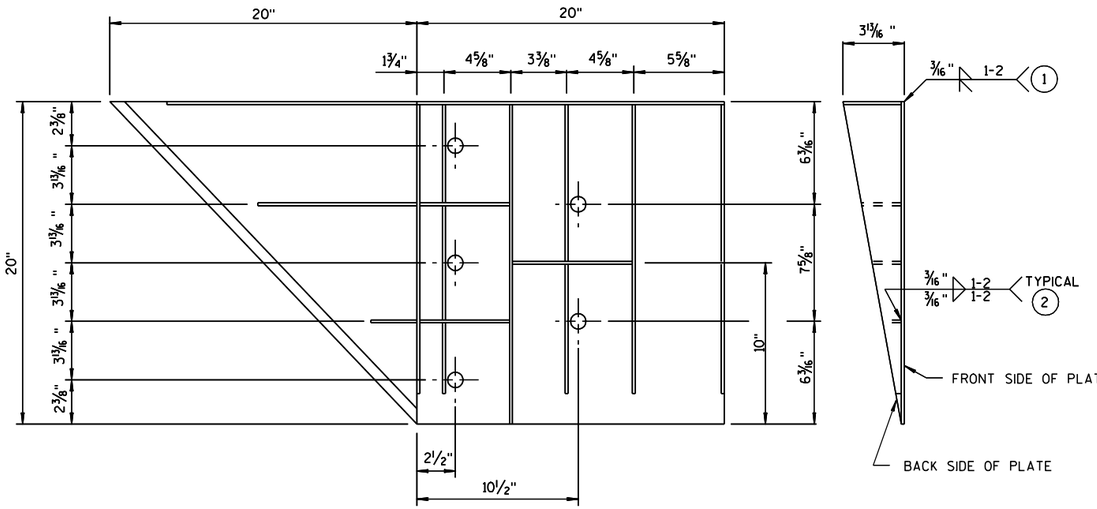
6

S.D. 14 B 45-3h

6

S.D. 14 B 45-3h





WELDING INSTRUCTION

(VIEWED FROM BACK SIDE OF PLATE)

GENERAL NOTES

COVER PLATE PANELS ARE 3/16" THICK.

ALL STIFFENERS ARE 1/4" THICK.

CONNECTOR PLATE SHALL BE FABRICATED FROM ASTM GRADE A36 STEEL AND GALVANIZED.

FOR GALVANIZED REQUIREMENTS, SEE SECTION 614 OF THE STANDARD SPECIFICATIONS.

ALL HOLE DIAMETERS SHALL BE 1".

FOR OPPOSITE SIDE INSTALLATION MIRROR DRAWINGS.

(1) STIFFENERS LOCATED AT THE OUTSIDE EDGES OF THE COVER PLATES SHALL BE WELDED AS FOLLOWS:
SINGLE BEVEL GROOVE WELD ON EXTERNAL SIDES AND 3/16" FILLET WELD BY 1" LONG SPACED AT 2" ON INTERNAL SIDES.

(2) STIFFENERS LOCATED ON THE INSIDE OF THE COVER PLATE SHALL BE WELDED AS FOLLOWS:
3/16" FILLET WELD BY 1" LONG SPACED AT 2".

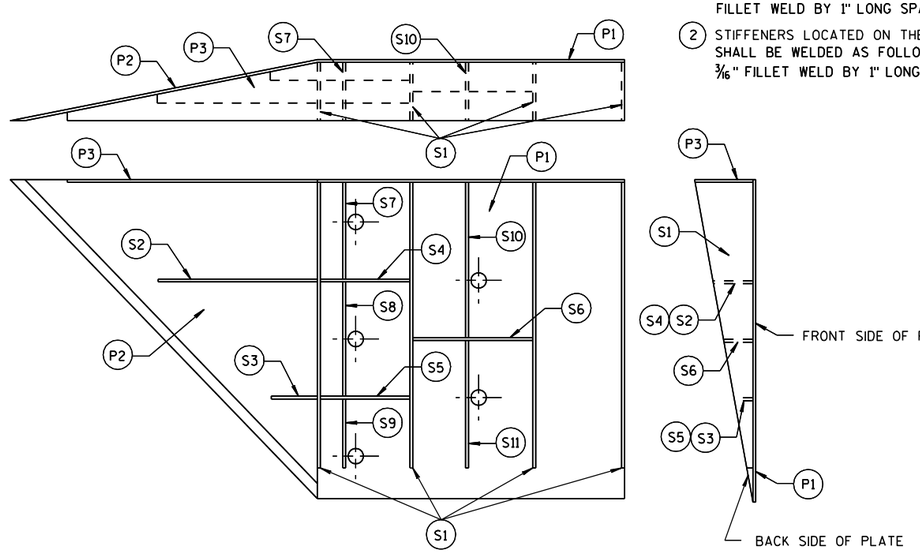


PLATE AND STIFFENER IDENTIFICATION

(VIEWED FROM BACK SIDE OF PLATE)

CONNECTOR PLATE DIMENSION (PER ASSEMBLY)				
PLATE	QUANTITY	SHAPE	SIZE (A x B x C x D)	THICKNESS
P1	1		20" x 20"	3/16"
P2	1		20" x 20" x 28 9/16"	3/16"
P3	1		39" x 3 5/8" x 20" x 19 5/16"	3/16"
S1	4		18 7/16" x 3 5/8" x 18 3/4"	1/4"
S2	1		10 1/4" x 2 7/16" x 10 3/8" x 1/2"	1/4"
S3	1		3" x 1 1/16" x 3 1/8" x 1/2"	1/4"
S4	1		6 1/8" x 2 7/16"	1/4"
S5	1		6 1/8" x 1 1/16"	1/4"
S6	1		7 3/4" x 1 3/4"	1/4"
S7	1		2 9/16" x 6" x 3 5/8" x 5 7/8"	1/4"
S8	1		1 5/32" x 7 1/2" x 2 1/2" x 7 3/8"	1/4"
S9	1		6 1/16" x 6 3/16" x 1 3/32"	1/4"
S10	1		1 7/8" x 9 7/8" x 3 5/8" x 9 11/16"	1/4"
S11	1		8 1/2" x 8 3/4" x 1 13/16"	1/4"

SINGLE SLOPE CONNECTION PLATE

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

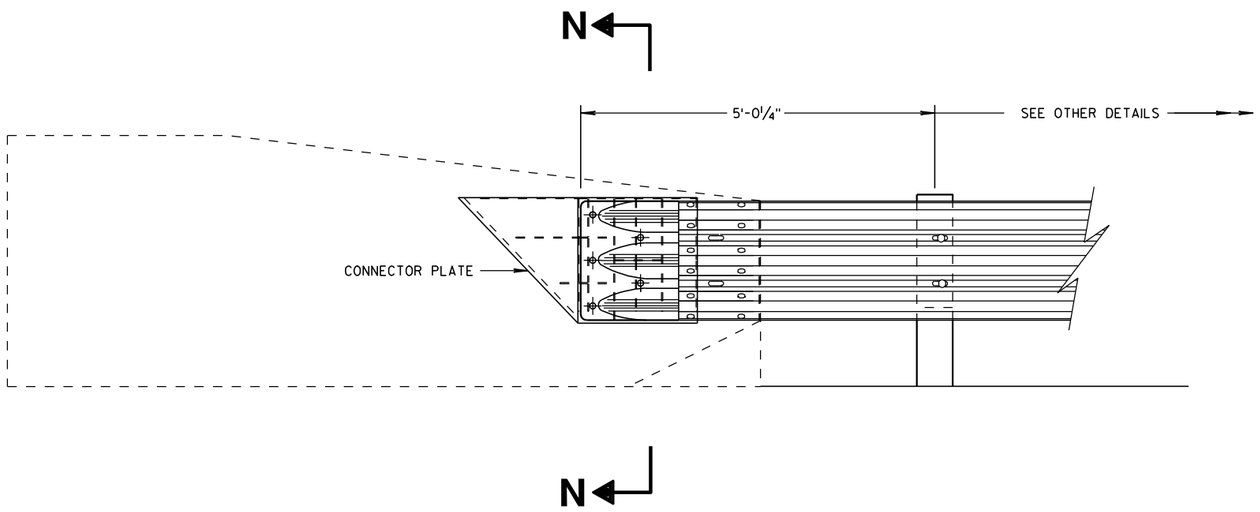
APPROVED
8/31/2012
DATE
/S/ Jerry H ...
ROADWAY STANDARDS ENGINEER
603
...MENT
FHWA

6

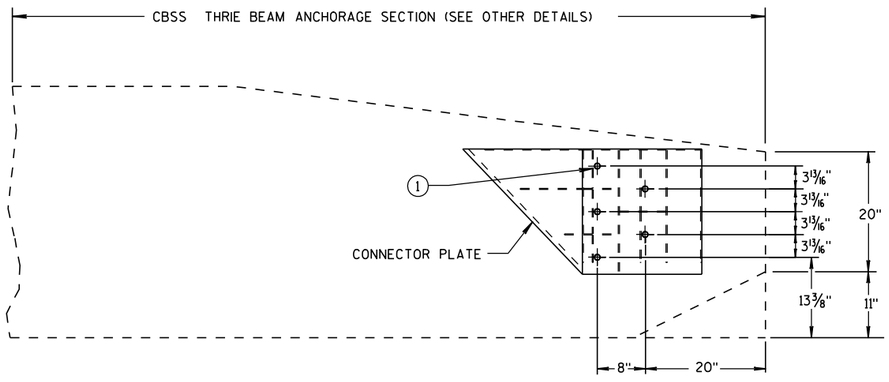
S.D.D. 14 B 45-3i

6

S.D.D. 14 B 45-3i



THRIE BEAM CONNECTION TO SINGLE SLOPE BARRIER

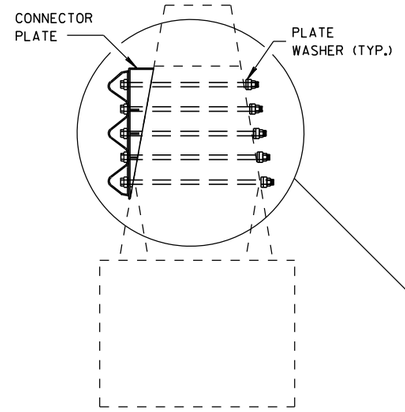


SINGLE SLOPE CONNECTION PLATE PLACEMENT

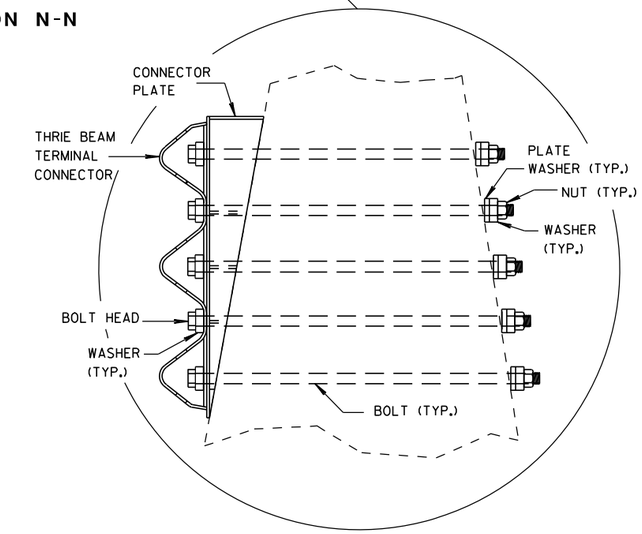
GENERAL NOTES

CONNECTOR PLATE, DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

(1) BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.



SECTION N-N



MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/31/2012
DATE

/S/ Jerry H. [illegible]
ROADWAY STANDARDS ENGINEER

1604

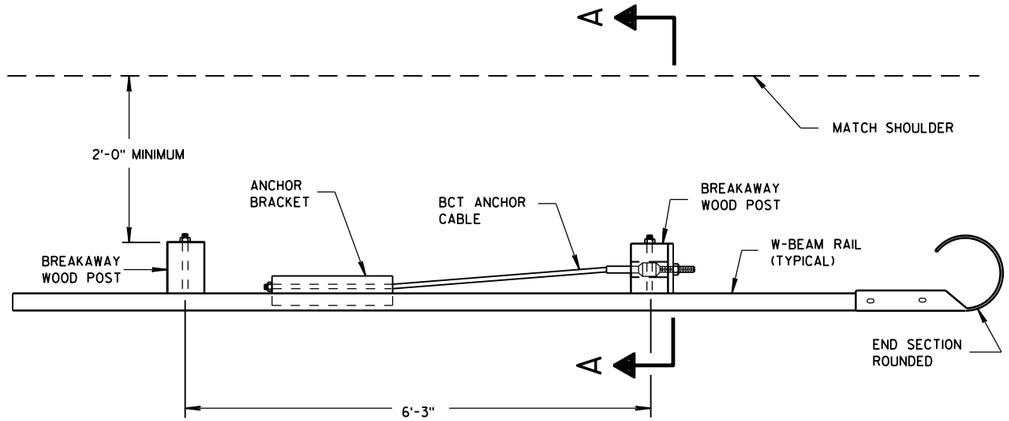
FHWA

6

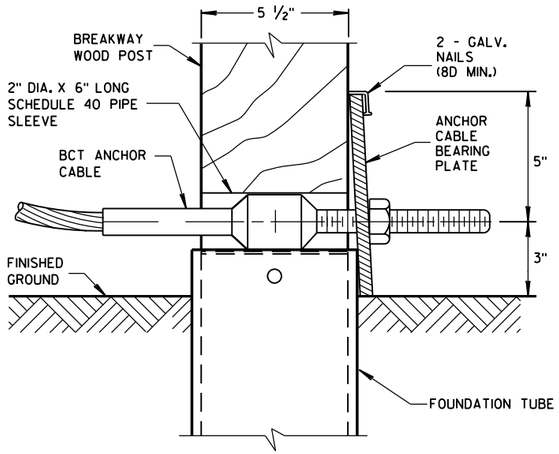
S.D.D. 14 B 45-3j

6

S.D.D. 14 B 45-3j



PLAN VIEW



DETAIL A

POST NO. 1
GROUNG STRUT NOT SHOWN FOR CLARITY.

GENERAL NOTES

SEE SDD 14 B 42 FOR MORE INFORMATION.

END SECTION BOLTS AND NUTS HAVE THE SAME MATERIAL REQUIREMENTS AS SPLICE BOLTS.

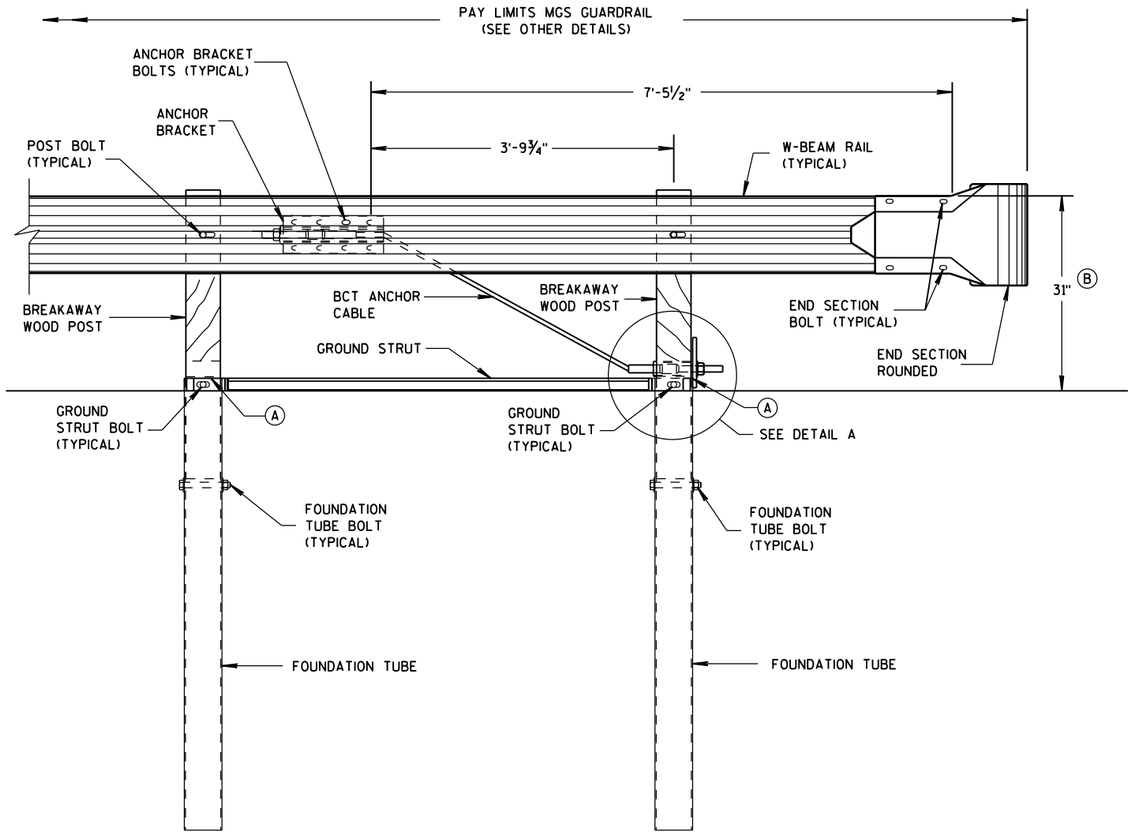
FOUNDATION TUBE BOLTS ARE ⅞" DIAMETER ASTM A307 HEX HEAD BOLT. FOUNDATION TUBE BOLTS REQUIRE ASTM A563 A NUT AND TWO ASTM F844 ⅞" DIAMETER FLAT WASHERS. INSTALL ONE WASHER UNDER BOLT HEAD AND ONE WASHER UNDER NUT.

ANCHOR BRACKET AND GROUND STRUT BOLTS ARE A ⅝" DIAMETER ASTM A307 HEX HEAD BOLT. ANCHOR BRACKET BOLTS REQUIRE ASTM A563 A NUT AND TWO ASTM F844 ⅝" DIAMETER FLAT WASHERS. INSTALL ONE WASHER UNDER BOLT HEAD AND ONE WASHER UNDER NUT.

W-BEAM END SECTION ROUNDED HAS THE SAME MATERIAL PROPERTIES AS STANDARD STEEL RAIL.

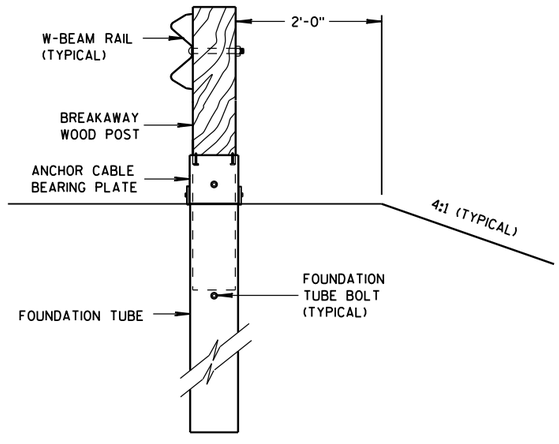
(A) TOP OF FOUNDATION TUBE SHALL BE NO MORE THAN 3" ABOVE FINISHED GROUND.

(B) FOR NEW CONSTRUCTION TOP OF RAIL IS 31" ± 1".
FOR EXISTING INSTALLATIONS TOP OF RAIL IS BETWEEN 27¾" TO 32" ± 1".

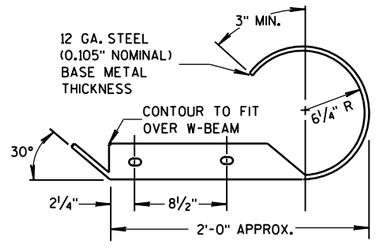


FRONT VIEW

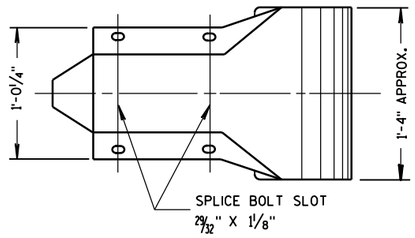
END RAIL DETAIL



SECTION A-A



PLAN VIEW



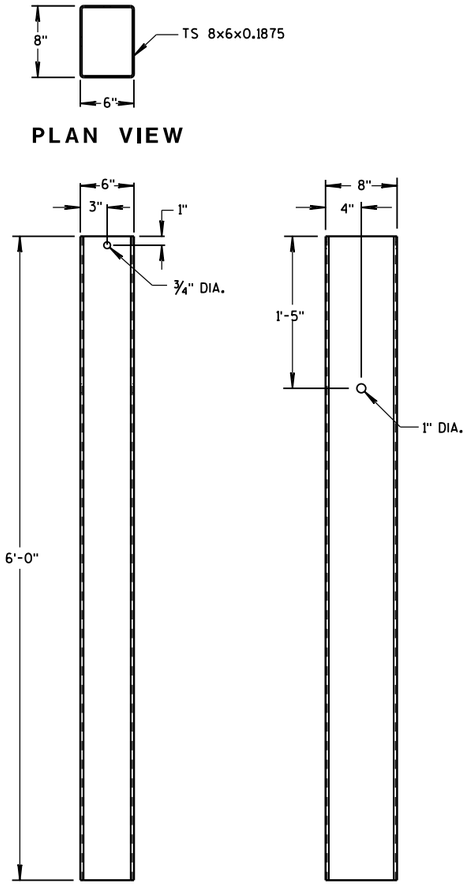
FRONT VIEW

W BEAM END SECTION ROUNDED

MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

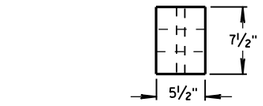
6
S.D.D. 14 B 47-2a



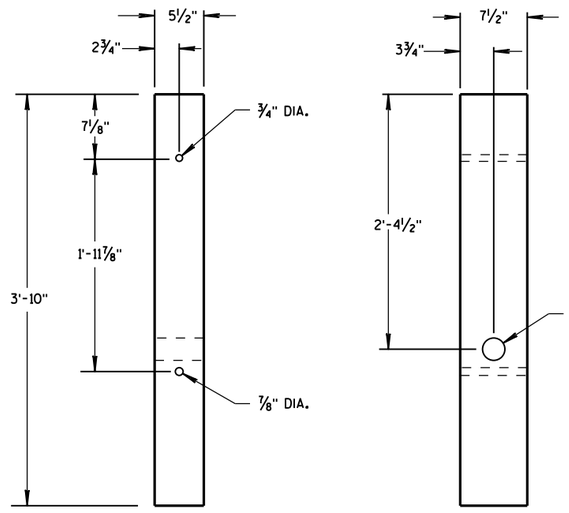
PLAN VIEW

FRONT VIEW SIDE VIEW

FOUNDATION TUBE



PLAN VIEW

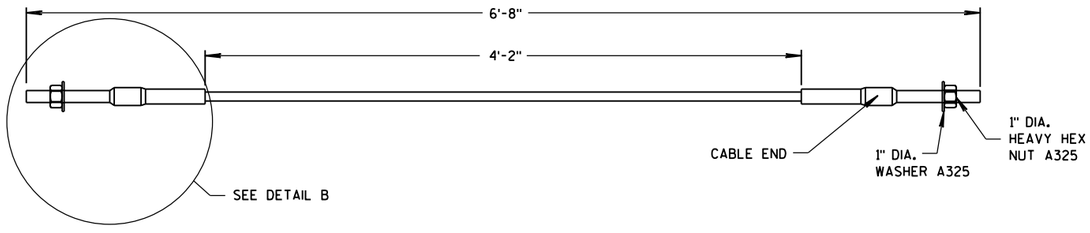


FRONT VIEW SIDE VIEW

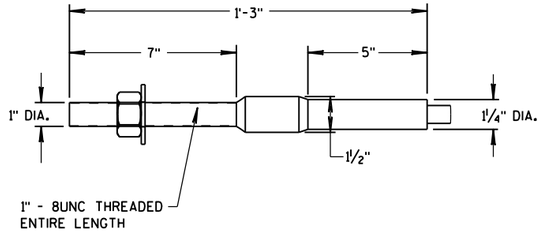
BREAKAWAY WOOD POST

GENERAL NOTES

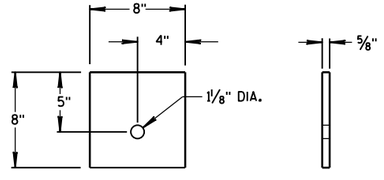
BCT ANCHOR CABLE IS A ¾" DIAMETER 6X19 IWRC IPS GALVANIZED WIRE ROPE. THE SWAGED FITTINGS AND STUD ARE REQUIRED. END FITTING SHALL BE MACHINED FROM HOT-ROLLED CARBON STEEL CONFORMING TO ASTM A576 GRADE 1035 AND GALVANIZED ACCORDING TO ASTM A123. TREADED STUD SHALL CONFORM TO ASTM A325 OR SAE GRADE 5. MINIMUM BREAKING STRENGTH OF WIRE ROPE IS 43,000 LB. WIRE ROPE IS TO BE TAUT.



BCT ANCHOR CABLE



DETAIL B



SIDE VIEW FRONT VIEW

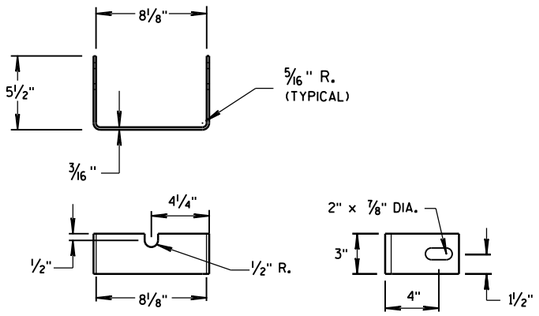
ANCHOR CABLE
BEARING PLATE

MIDWEST GUARDRAIL
SYSTEM (MGS) TYPE 2 TERMINAL

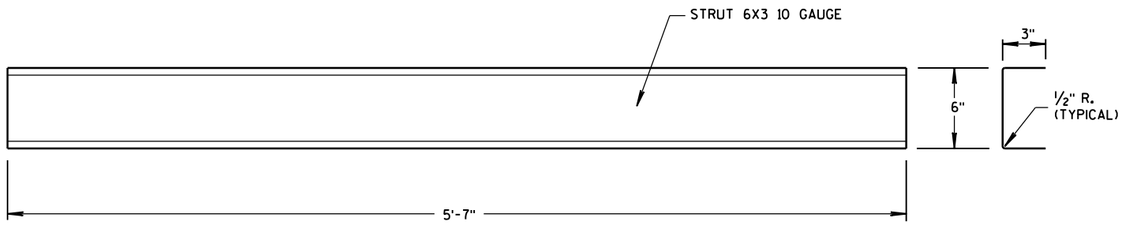
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

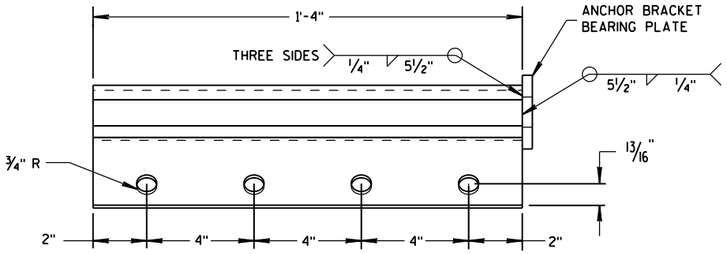
S.D.D. 14 B 47-2b

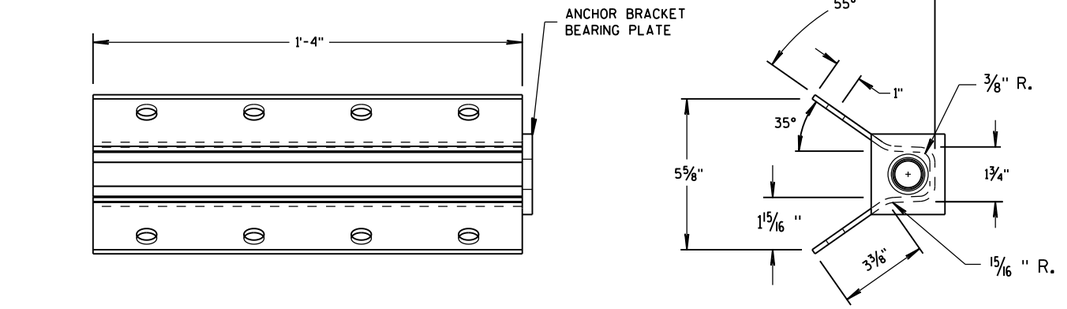


YOKE DETAIL

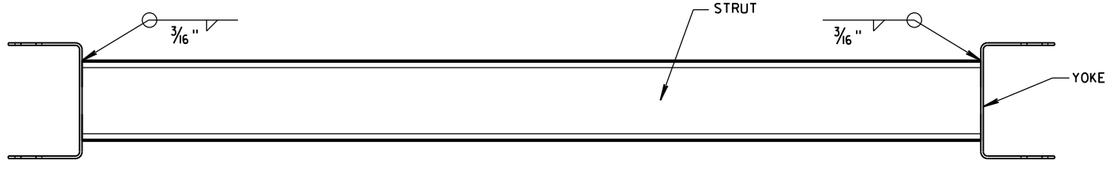


STRUT DETAIL

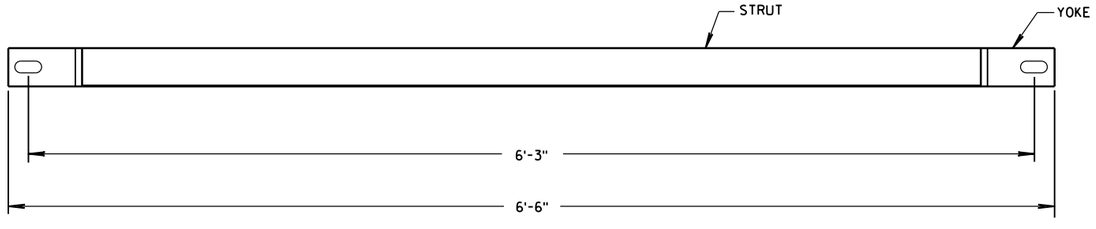




ANCHOR BRACKET

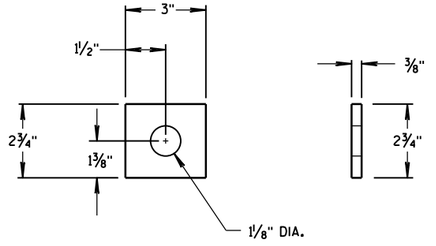


PLAN VIEW



FRONT VIEW

GROUND STRUT DETAIL



ANCHOR BRACKET BEARING PLATE

MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

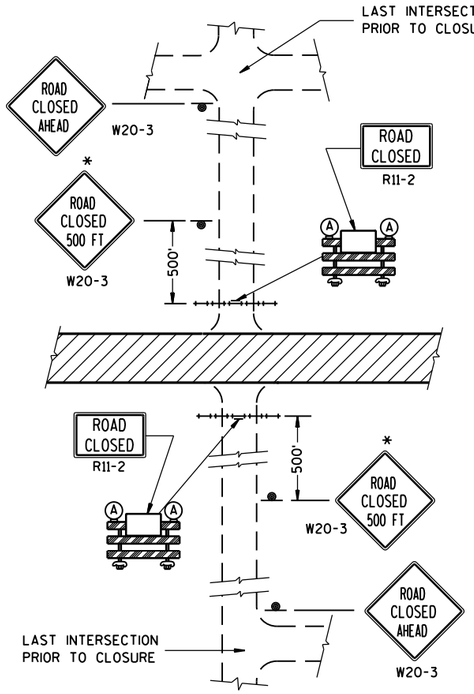
APPROVED
June 2014 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

6

S.D.D. 14 B 47-2c

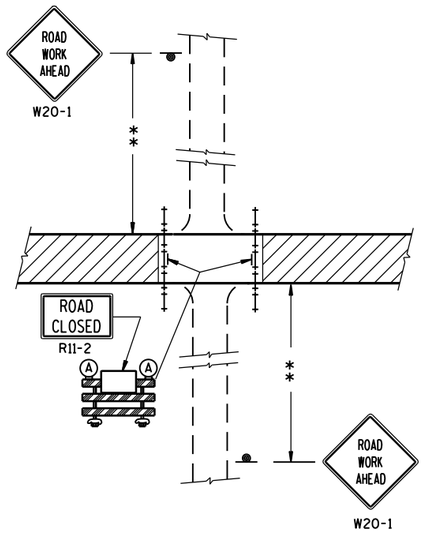
6

S.D.D. 14 B 47-2c



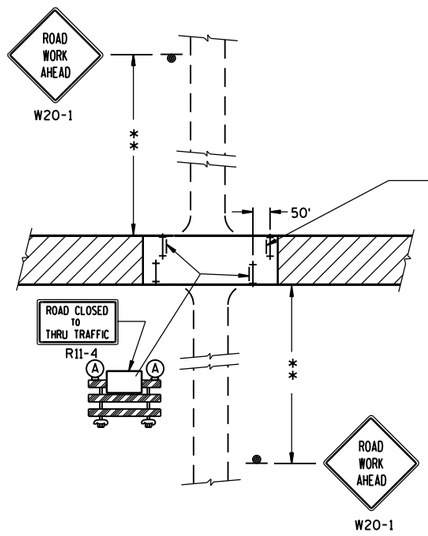
DETAIL 1

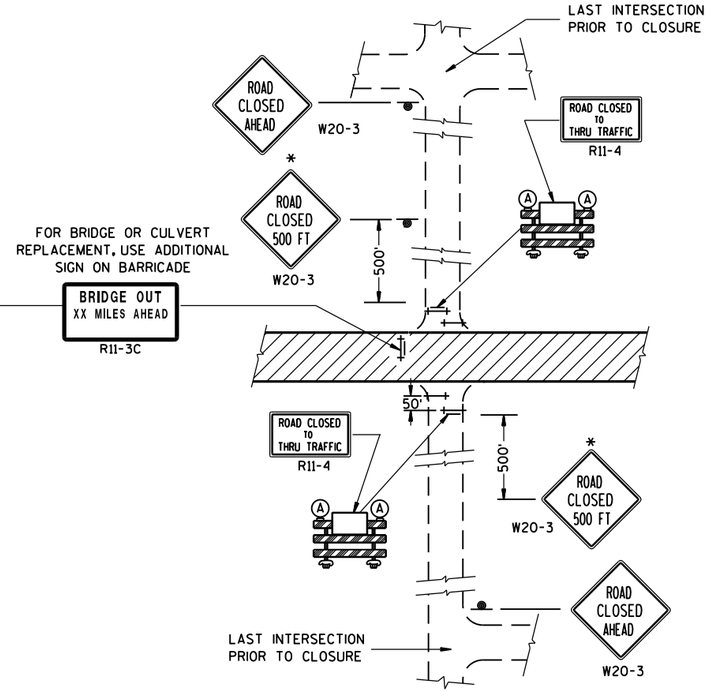
(NO ACCESS TO PROJECT)



DETAIL 2

(PUBLIC CROSS-TRAFFIC MAINTAINED. NO ACCESS TO PROJECT).





DETAIL 3

(PUBLIC CROSS-TRAFFIC MAINTAINED. CONTRACTOR, LOCAL BUSINESS AND RESIDENT ACCESS).

DETAIL 4

(CONTRACTOR, LOCAL BUSINESS AND RESIDENT ACCESS TO PROJECT)

GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND BARRICADES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

IF A "STOP" SIGN MUST BE REMOVED FOR A WORK OPERATION, A TEMPORARY "STOP" SIGN SHALL BE PLACED PRIOR TO THE SIGN REMOVAL, OR A FLAGGER SHALL BE PROVIDED UNTIL THE SIGN IS RE-ESTABLISHED.

BARRICADES THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED UPON COMPLETION OF THE OPERATION OR, FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

ALL TYPE III BARRICADES SHALL HAVE RAILS REFLECTORIZED ON BOTH FACES. STRIPES SHALL BE PROPERLY SLOPED DOWN TOWARD THE TRAFFIC SIDE OR AS SHOWN IN THE ROAD CLOSURE BARRICADE DETAIL D FOR FULL ROAD CLOSURES.

TYPE "A" LOW-INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

THE R11-2, R11-3 AND R11-4 SIGNS PLACED ON BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE OR BOTTOM RAILS.

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
R11-2 SHALL BE 48" X 30".
R11-4 AND R11-3 SHALL BE 60" X 30".

*OMIT THE "ROAD CLOSED 500 FT." SIGN IF THE LAST INTERSECTION IS 500 FT. OR LESS FROM THE WORK ZONE.

**500' MAX. OR AT LAST INTERSECTION WHICHEVER IS CLOSER.

LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- (A) TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA

BARRICADES AND SIGNS FOR SIDEROAD CLOSURES

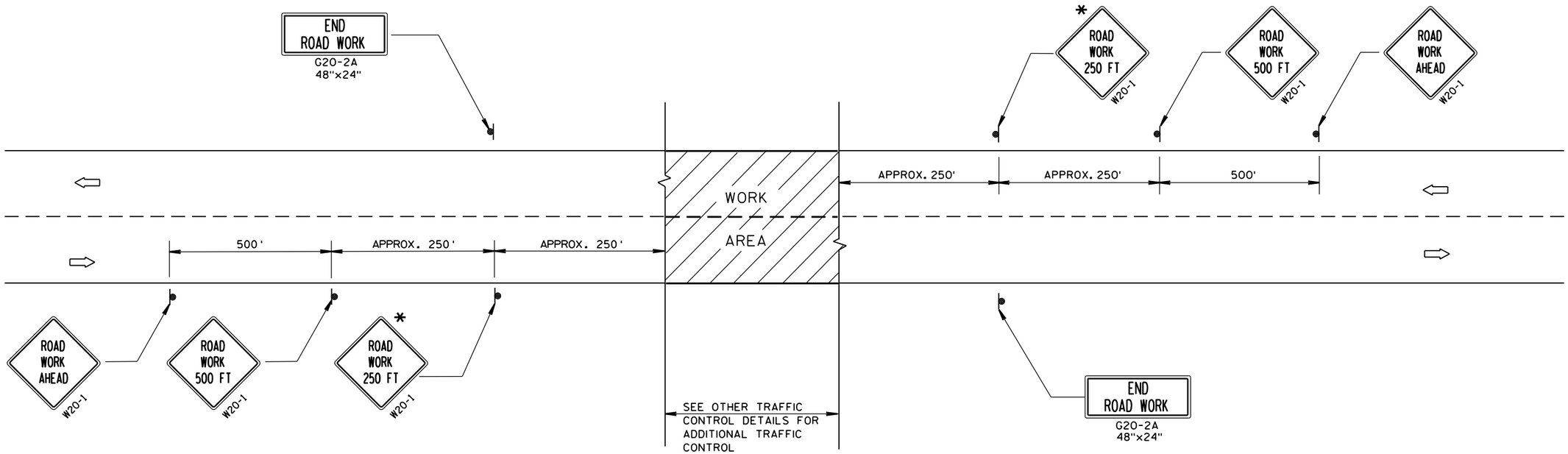
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/2013 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

6

S.D.D. 15 C 3-2

TYPICAL SIDEROAD APPROACH WARNING SIGN DETAIL



GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS.

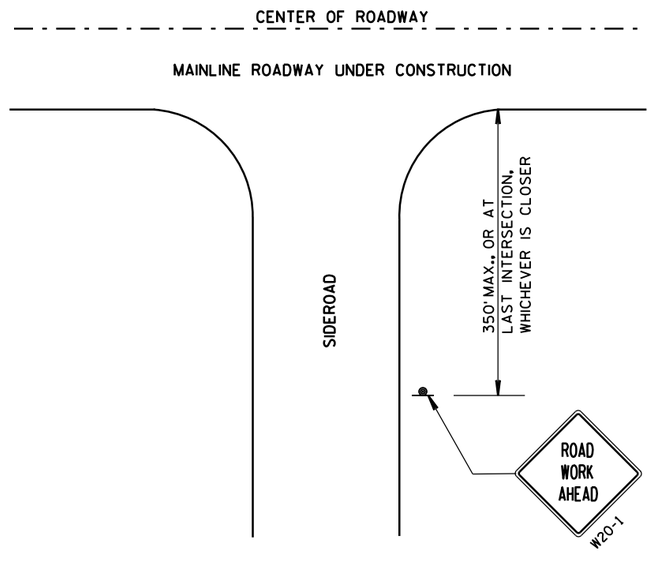
THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS, 36"x36" SIGNS MAY BE USED INSTEAD OF 48"x48" SIGNS.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

IF A "STOP" SIGN MUST BE REMOVED FOR A WORK OPERATION, A TEMPORARY "STOP" SIGN SHALL BE PLACED PRIOR TO THE SIGN REMOVAL, OR A FLAGGER SHALL BE PROVIDED UNTIL THE SIGN IS RE-ESTABLISHED.

* THE THIRD W20-1 SIGN IS REQUIRED ONLY IF THERE IS AN INTERSECTION BETWEEN THE "ROAD WORK 500 FT" SIGN AND THE WORK ZONE. ADJUST THE PLACEMENT OF THIS SIGN BASED ON INTERSECTION LOCATION AND OTHER FIELD CONDITIONS.



LEGEND

- SIGN ON PERMANENT SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA

TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/2013 DATE — /S/ Travis Feltes STATE TRAFFIC ENGINEER — SIGN

FHWA

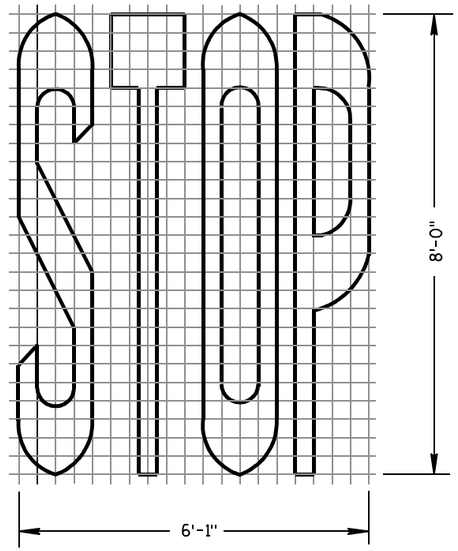
6

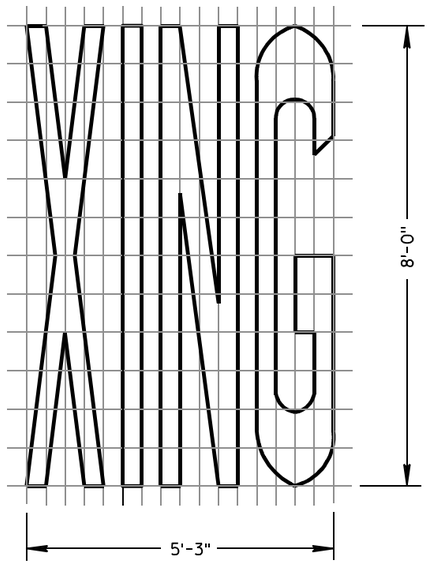
S.D.D. 15 C 5-2

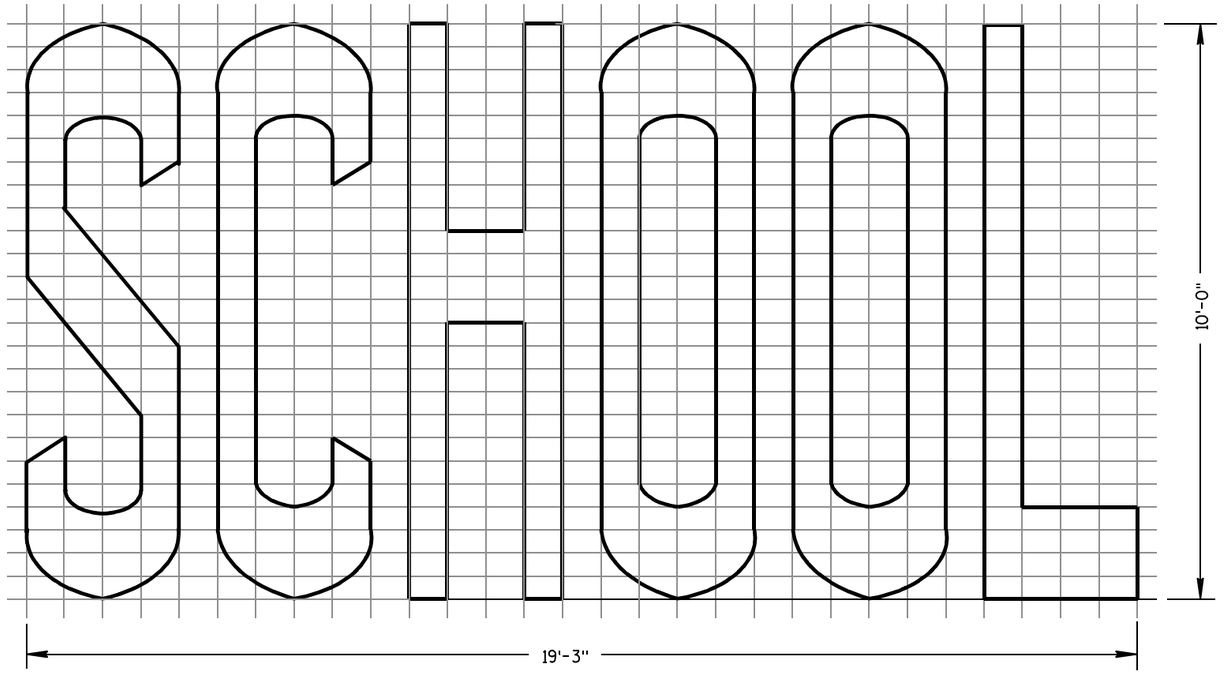
GENERAL NOTES

DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

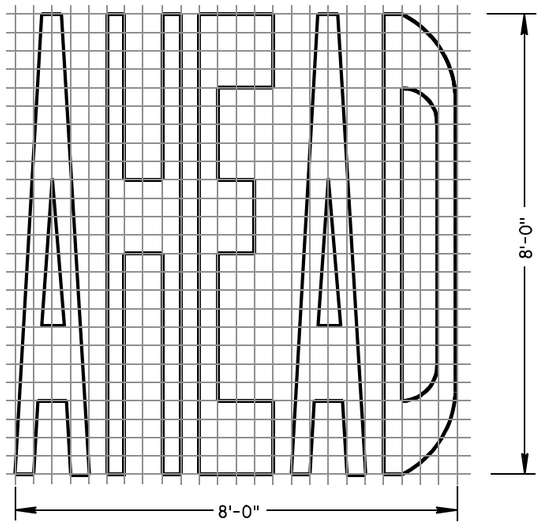
ALL LETTERS, ARROWS AND SYMBOLS SHALL BE IN CONFORMANCE WITH REQUIREMENTS INCLUDED IN "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKING" BOOK BY THE FEDERAL HIGHWAY ADMINISTRATION. ALL LETTERS, ARROWS AND SYMBOLS SHALL BE WHITE AND REFLECTORIZED. SMALL DIFFERENCES IN DIMENSIONS WITHIN THE TOLERANCES OF THAT BOOK ARE ACCEPTABLE.

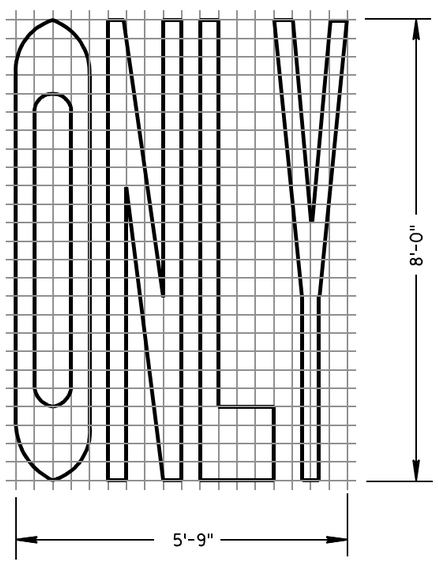


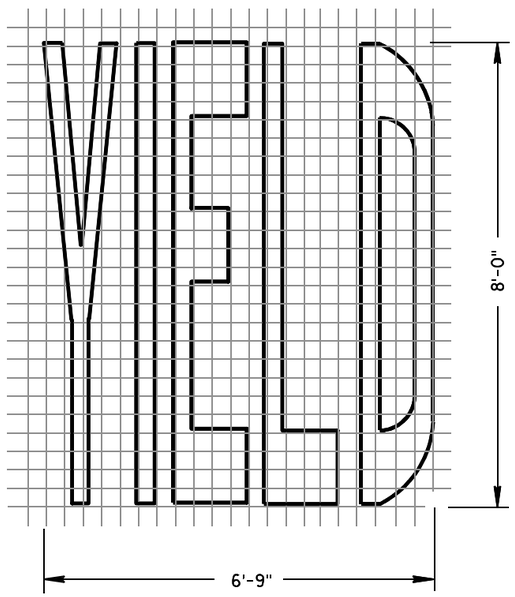


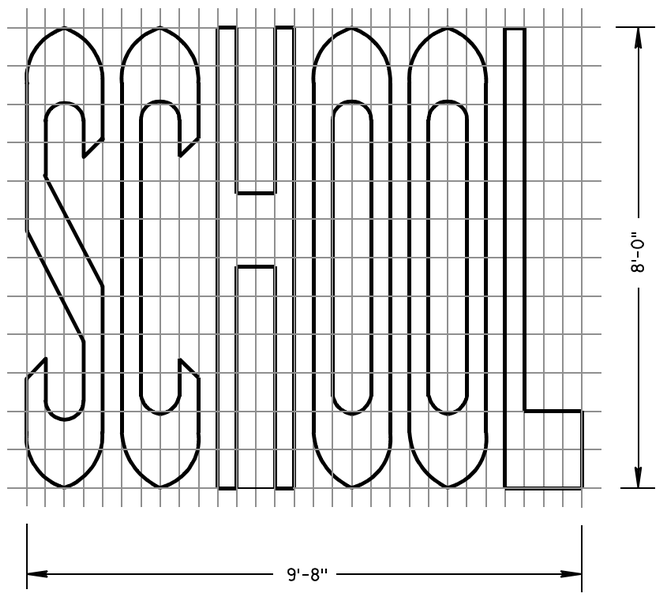


TWO-LANE









SINGLE-LANE

PAVEMENT MARKING WORDS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7-1-11 DATE

/S/ Thomas N. Nothohm
STATE TRAFFIC ENGINEER

610 IGN

FHWA

6

S.D.D. 15 C 7-12b

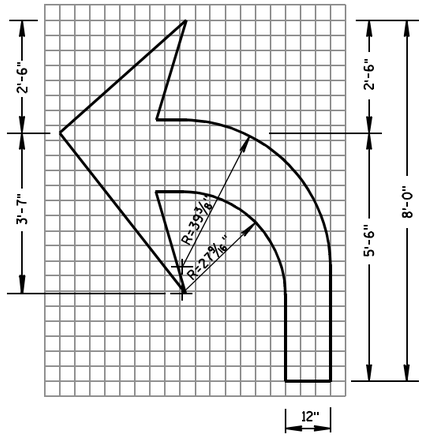
6

S.D.D. 15 C 7-12b

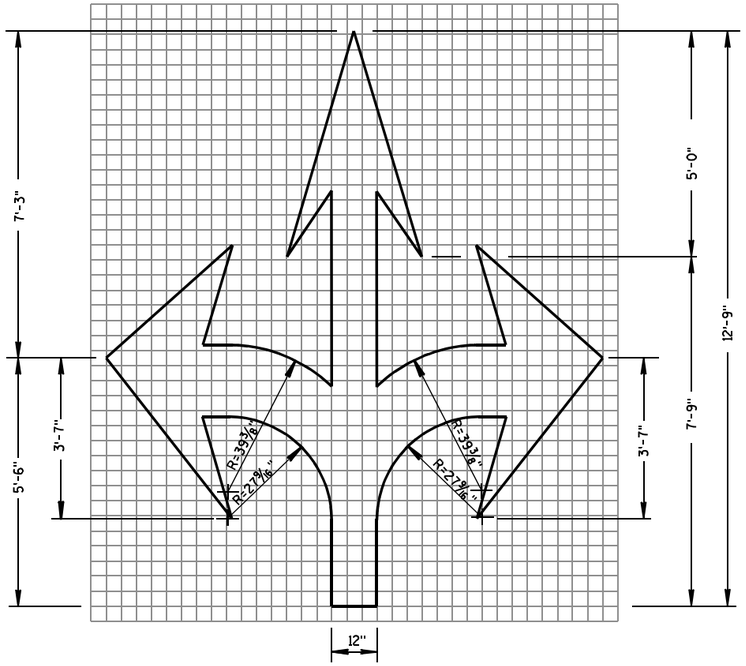
GENERAL NOTES

DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

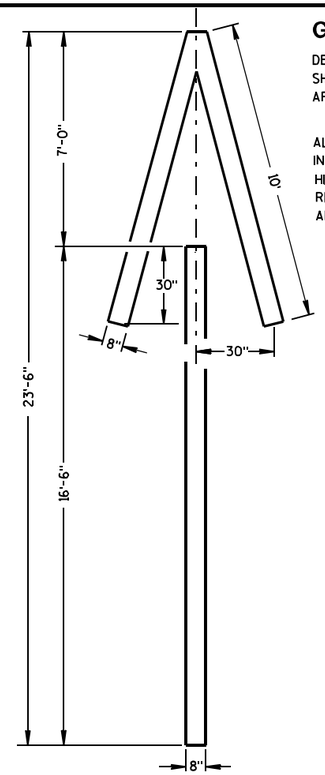
ALL LETTERS, ARROWS AND SYMBOLS SHALL BE IN CONFORMANCE WITH REQUIREMENTS INCLUDED IN "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKING" BOOK BY THE FEDERAL HIGHWAY ADMINISTRATION. ALL LETTERS, ARROWS AND SYMBOLS SHALL BE WHITE AND REFLECTORIZED. SMALL DIFFERENCES IN DIMENSIONS WITHIN THE TOLERANCES OF THAT BOOK ARE ACCEPTABLE.



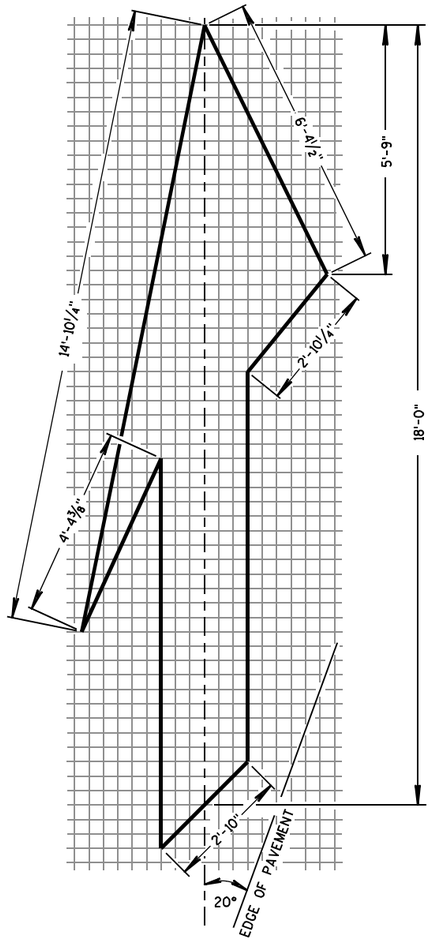
TYPE 2



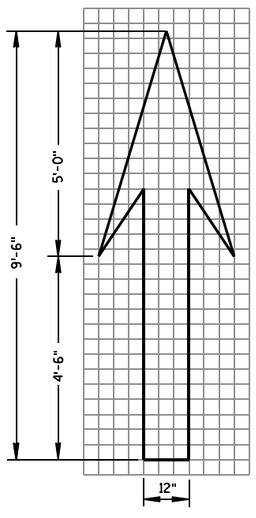
TYPE 6



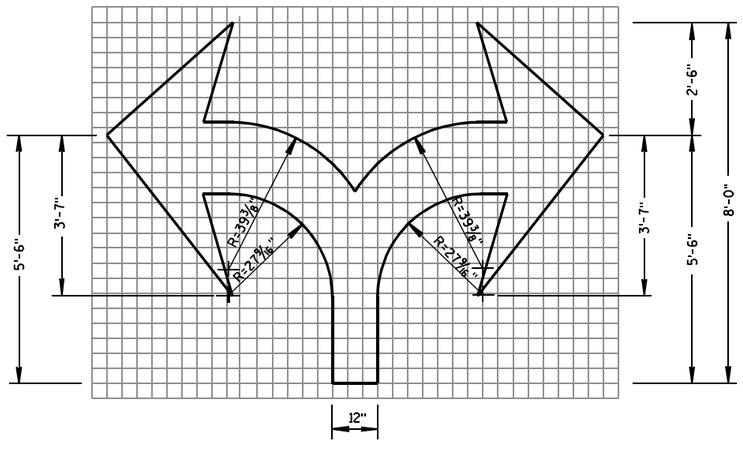
TYPE 4



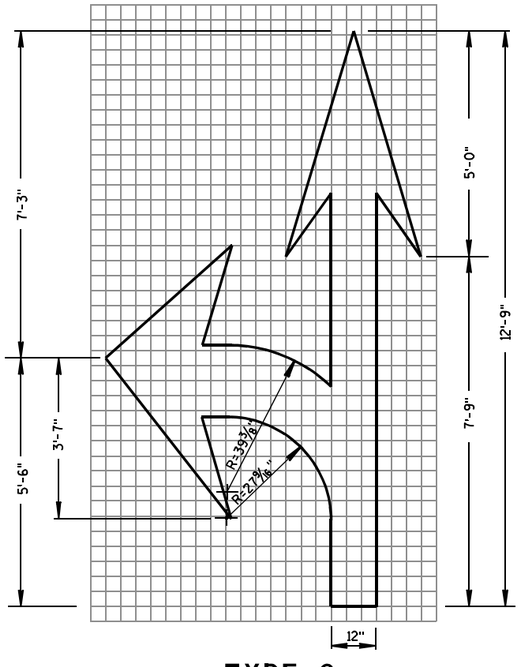
TYPE 5 LANE DROP ARROW



TYPE 1



TYPE 7



TYPE 3

PAVEMENT MARKING ARROWS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7/1/11 — DATE

/S/ Thomas N. Nothdurft — STATE TRAFFIC ENGINEER

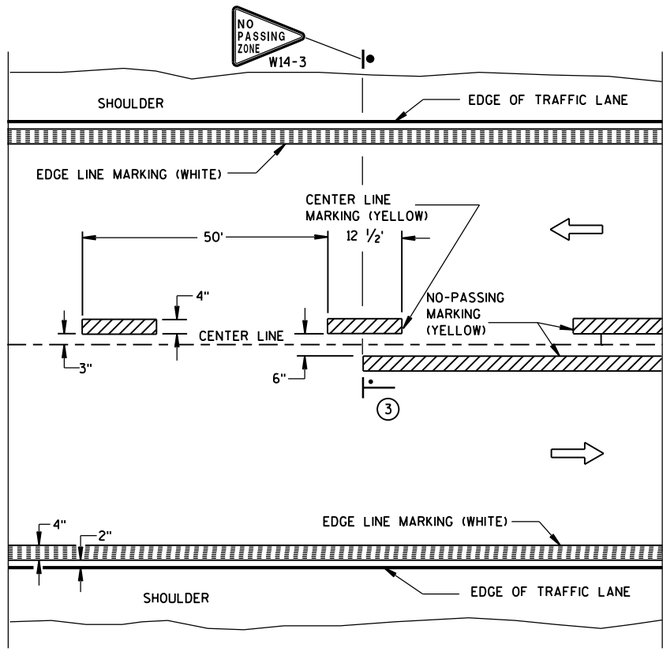
FHWA

6

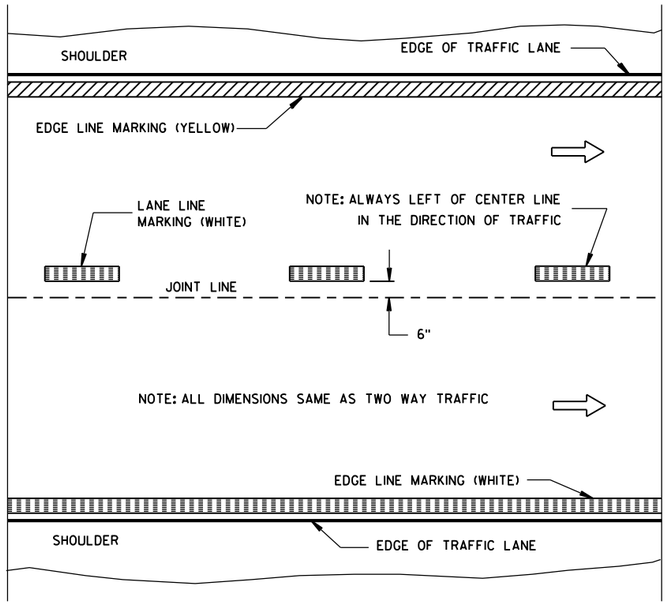
S.D.D. 15 C 7-12c

6

S.D.D. 15 C 7-12c

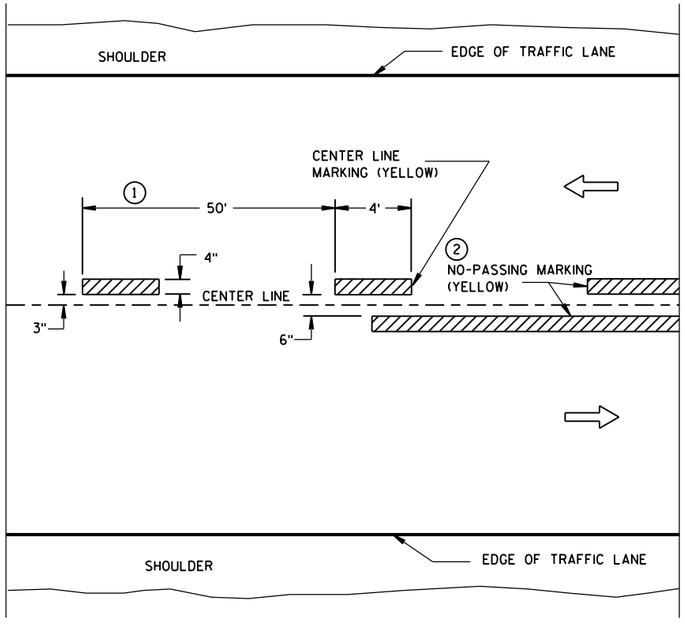


TWO WAY TRAFFIC

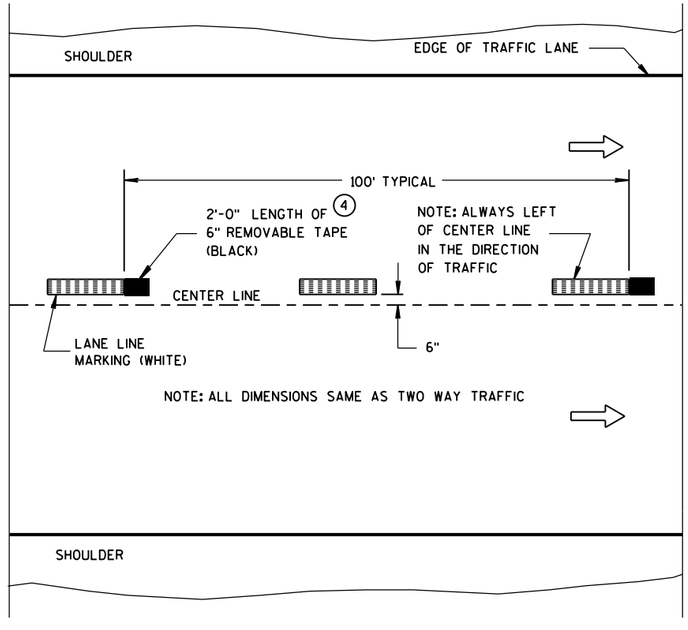


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY (INTERMEDIATE) PAVEMENT MARKING

(SHOWS CYCLE FOR TEMPORARY CENTER LINE OR TEMPORARY LANE LINE MARKING)

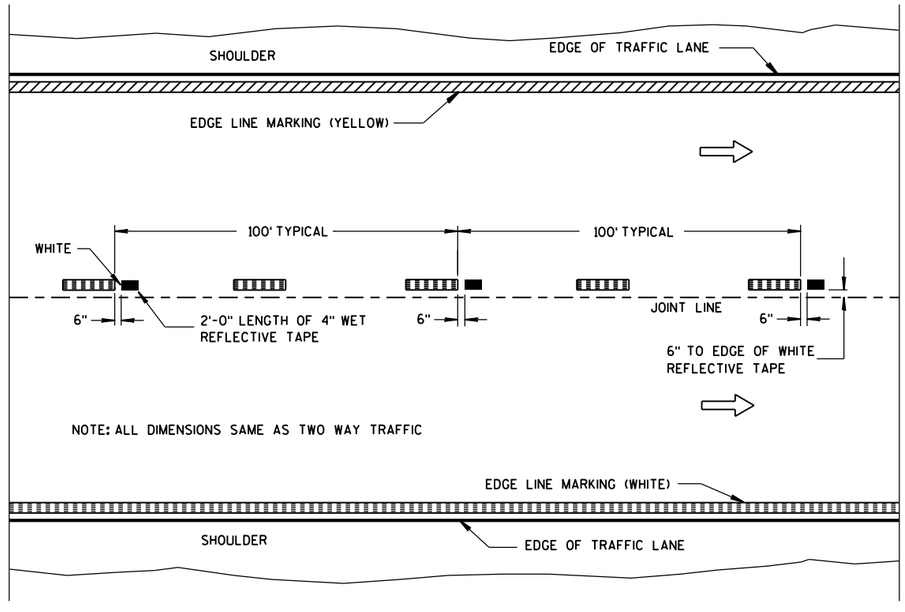
GENERAL NOTES

DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.

1. HALF CYCLE LENGTHS (25'±) WITH 2' MINIMUM STRIPE LENGTHS SHALL BE PROVIDED ON ROADWAYS (INCLUDING TEMPORARY TRAVELED WAYS) WITH REVERSE CURVATURE, CURVATURE OF OVER 5 DEGREES OR WHEN DIRECTED BY THE ENGINEER TO MARK UNUSUAL ALIGNMENT OF THE TRAVELED WAY.
2. NO PASSING ZONE TEMPORARY PAVEMENT MARKING IS REQUIRED TO BE PLACED, WHERE APPROPRIATE, ALONG WITH CENTERLINE TEMPORARY PAVEMENT MARKING WHEN A SAME DAY PERMANENT PAVEMENT MARKING ITEM IS INCLUDED IN THE CONTRACT.
3. NO PASSING ZONE MARKINGS ARE PLACED ACCORDING TO "T" MARKINGS. IF EXISTING NO PASSING ZONE W14-3 SIGNS ARE BEYOND 50 FEET IN EITHER DIRECTION, THE SIGNS SHALL BE MOVED TO THE "T" MARKINGS.
4. CONCRETE ONLY.

NOTE

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL



WET REFLECTIVE TAPE SUPPLEMENT TO
SPRAYED OR NON WET REFLECTIVE TAPE LANE LINE

LEGEND

"T" MARKING

POST MOUNTED SIGN

PAVEMENT MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

5-13-2013 — DATE

/S/ Travis Feltes — STATE TRAFFIC E

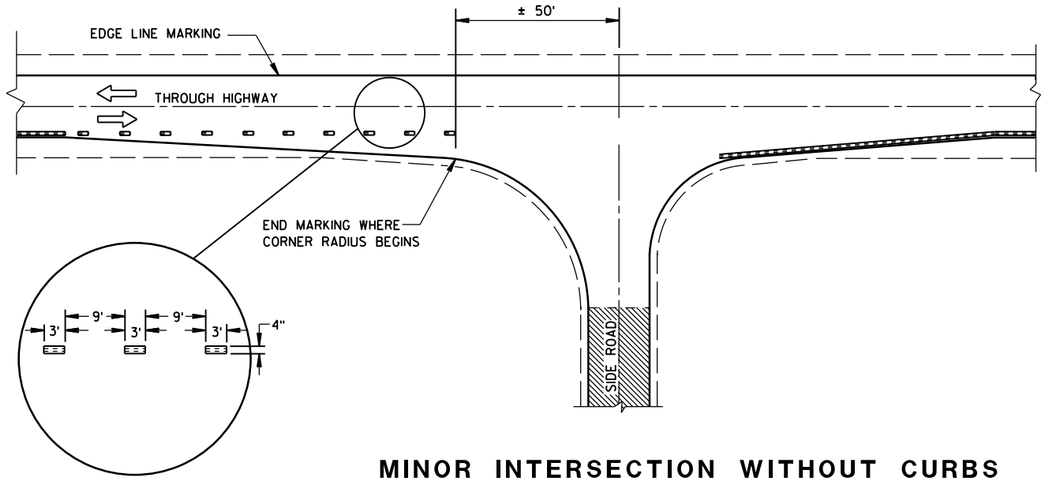
FHWA

6

S.D.D. 15 C 8-16a

6

S.D.D. 15 C 8-16a



MINOR INTERSECTION WITHOUT CURBS

GENERAL NOTES

EDGE LINES SHALL BE OMITTED THROUGH INTERSECTIONS. EDGE LINES SHALL BE CONTINUED THROUGH DRIVEWAYS.

(1) WHEN DISTANCE "A" IS LESS THAN 250 FEET, OMIT LANE LINE.

(2) WHEN DISTANCE "B" IS LESS THAN 100 FEET, OMIT CHANNELIZING LANE LINE.

(3) ALTERNATIVE MARKING SHALL BE PROVIDED WHEN SPECIFIED IN THE CONTRACT. TYPICAL SITUATIONS WHERE THIS MARKING MAY BE REQUIRED ARE WHERE THE INTERSECTION IS ON A SHARP HORIZONTAL CURVE OR CREST VERTICAL CURVE IN AN UNLIGHTED AREA SUCH THAT THE EDGE LINE MAY BE MISLEADING TO THE MOTORIST OR DISAPPEAR FROM SIGHT.

(4) THE EDGE LINE IN THE TAPER AREAS OF THE BYPASS LANE AND THE BYPASS LANE SHALL BE LOCATED 1-FOOT FROM EDGE OF PAVEMENT TO THE OUTSIDE EDGE OF EDGE LINE.

(5) BARRIER LINE ENDS AT SIDE ROAD PAVEMENT/SURFACE EDGE EXTENSION.

(6) BARRIER LINE STARTS 500 FEET PRIOR TO THE BYPASS TAPER.

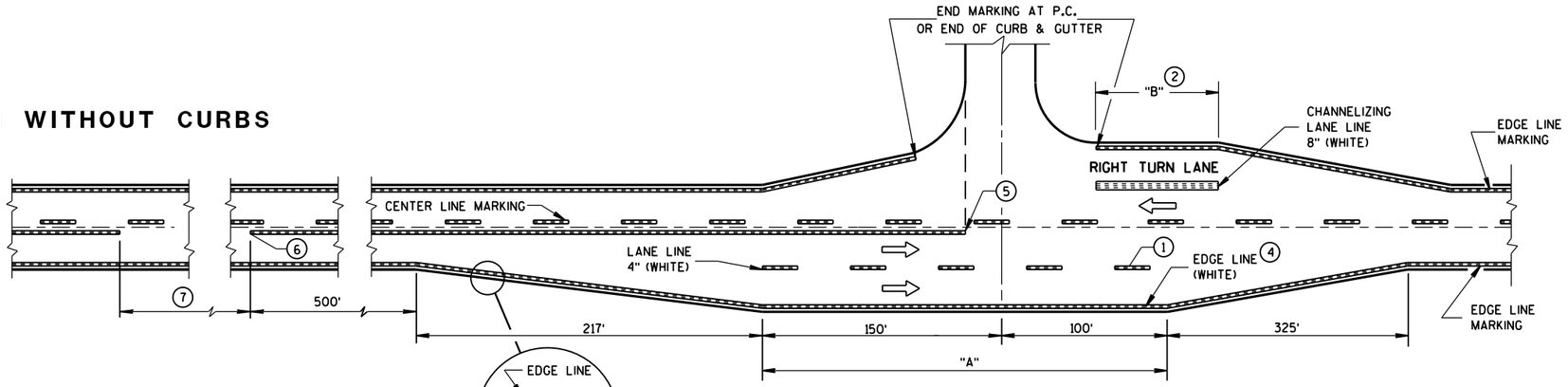
(7) IF THE DISTANCE BETWEEN 2 SUCCESSIVE NO-PASSING ZONES IS LESS THAN THE MINIMUM DISTANCE BETWEEN ZONES, CONNECT THE 2 ZONES.

(8) 3' LINE 9' GAP, EXCEPT RETRACE THE EXISTING LINE - GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE.

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL

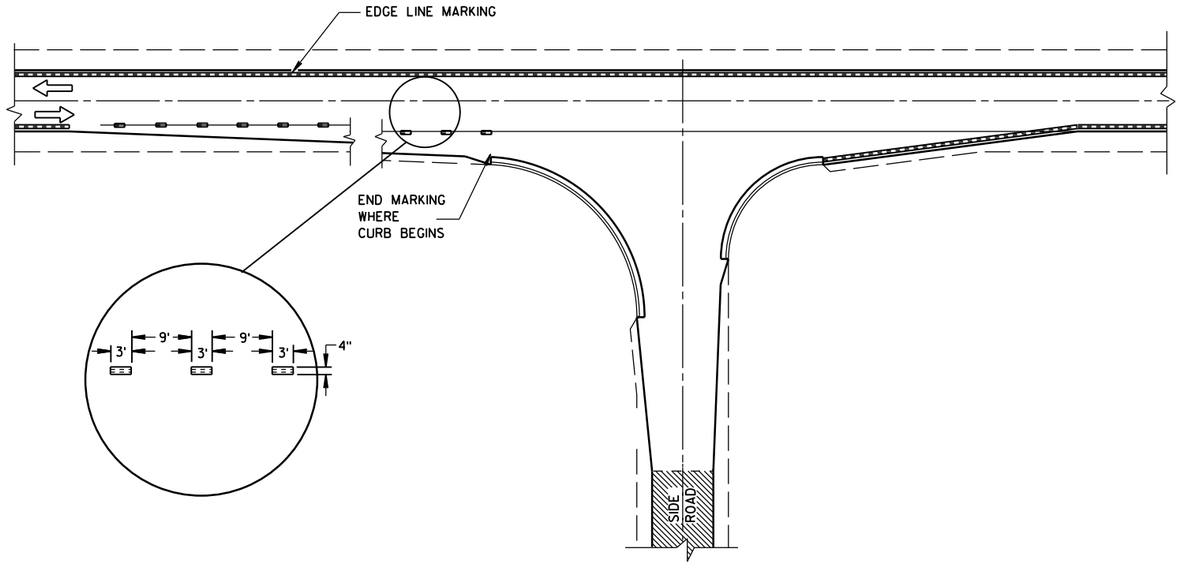
(7)

POSTED SPEED (MPH)	MINIMUM DISTANCE BETWEEN ZONES (FEET)
25 - 30	528
35 - 40	528
45 - 50	686
55	792



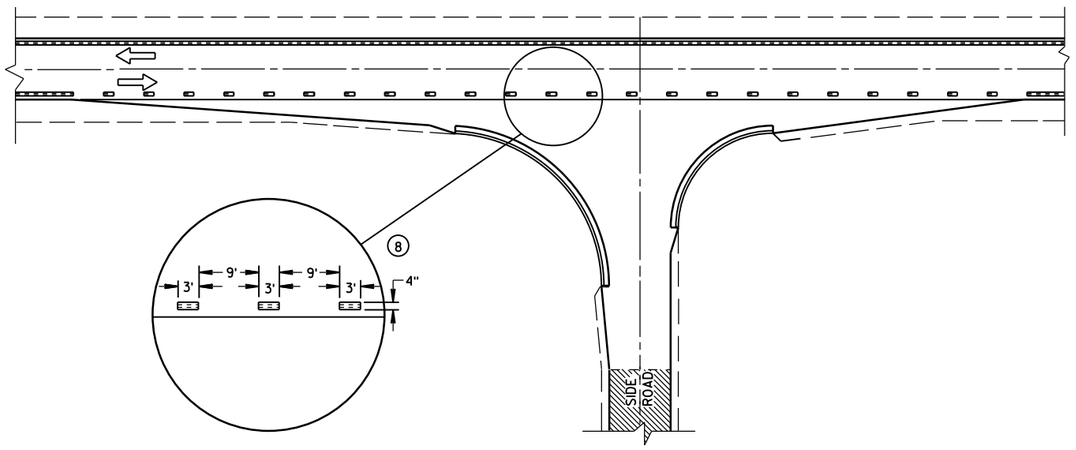
MAJOR INTERSECTIONS

(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANES)



MINOR INTERSECTION WITH CURBS

(TYPICAL MARKING)



MINOR INTERSECTION WITH CURBS

(3) (FOR SPECIAL CONDITIONS AS SPECIFIED)

PAVEMENT MARKING
(INTERSECTIONS)

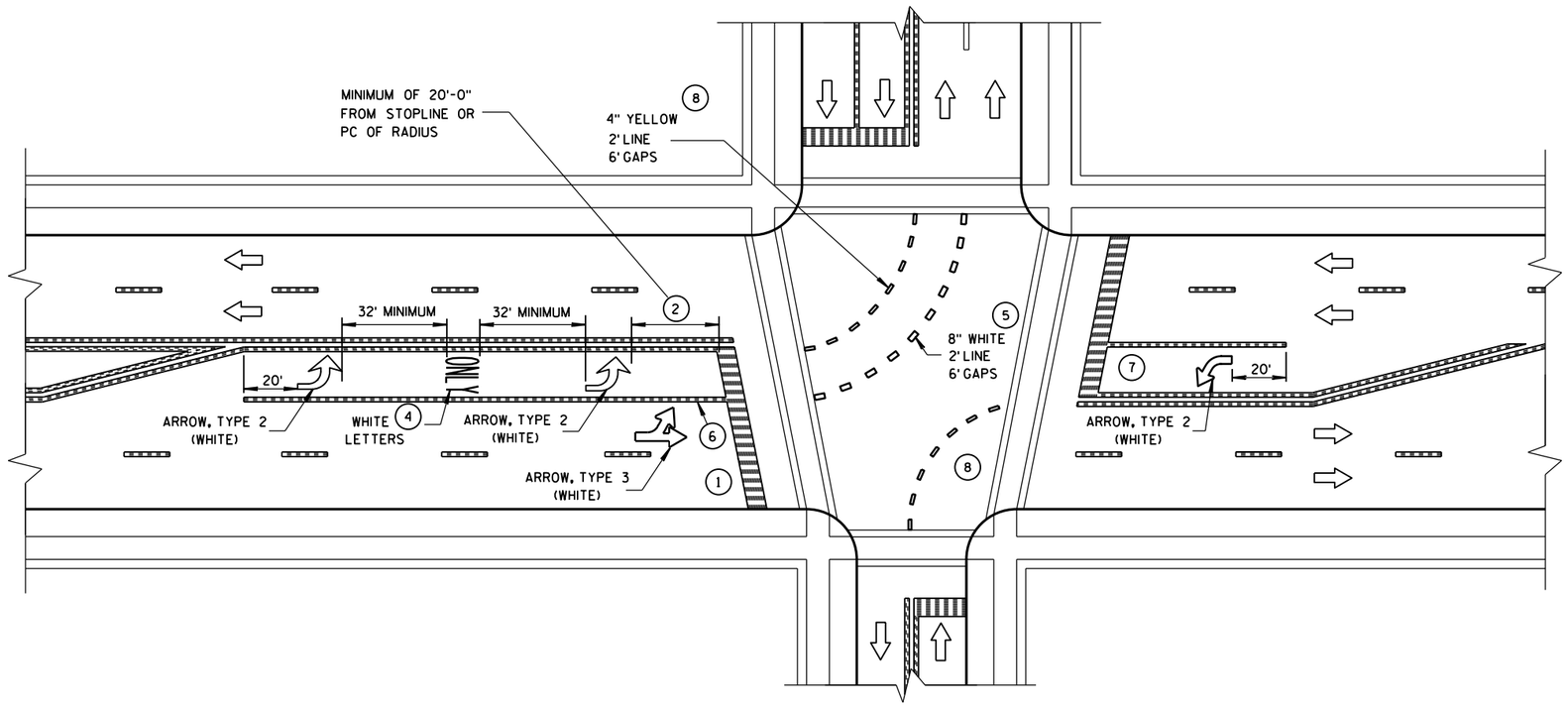
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 15 C 8-16b

6

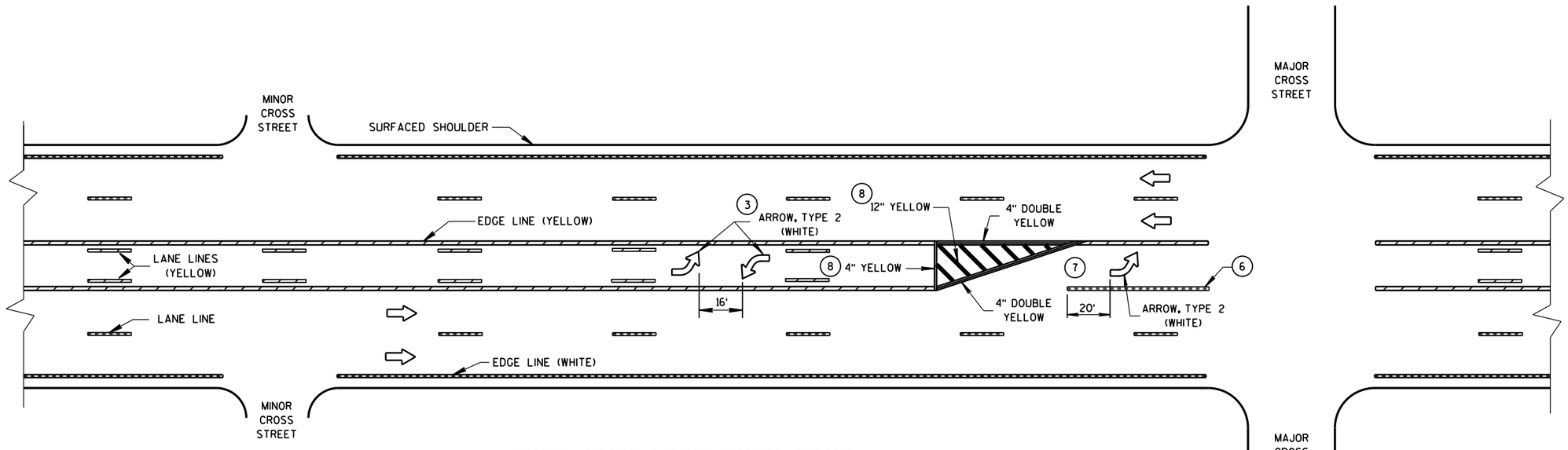
S.D.D. 15 C 8-16b



GENERAL NOTES

1. STOP BAR IS REQUIRED ONLY WHEN SPECIFIED IN THE CONTRACT.
2. DISTANCE MAY BE ADJUSTED TO ACCOMODATE SHORT LEFT TURN LANES. AS APPROVED BY THE ENGINEER.
3. A SET OF ARROWS IS REQUIRED EVERY 400 FEET OR NEAR INTERSECTIONS OR DRIVEWAYS WITH TURNING TRAFFIC.
4. ADD EXTRA SETS OF ONE ARROW AND ONE ONLY PER 160 FEET OR WHEN ON A CURVE.
5. 8" WHITE WITH 2' LINE 6' GAPS FOR DUAL TURN LANE.
6. 8" WHITE
7. ADD SECOND ARROW WHEN TURN BAY IS GREATER THAN OR EQUAL TO 108 FEET.
8. REQUIRED ONLY WHEN SPECIFIED IN THE CONTRACT.

NOTE:
ARROW SYMBOL (⇨)
SHOWS DIRECTION OF TRAVEL



TWO WAY LEFT TURN LANE

PAVEMENT MARKING (LEFT TURN LANE)

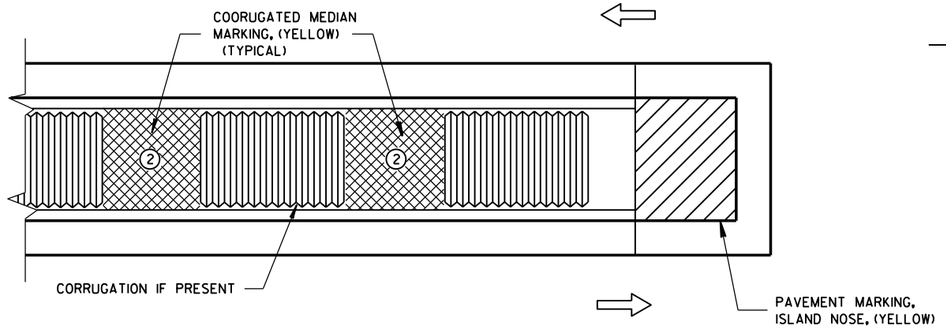
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

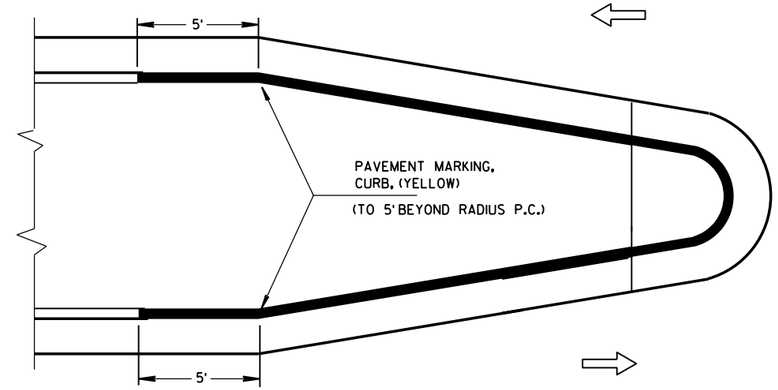
S.D.D. 15 C 8-16e

6

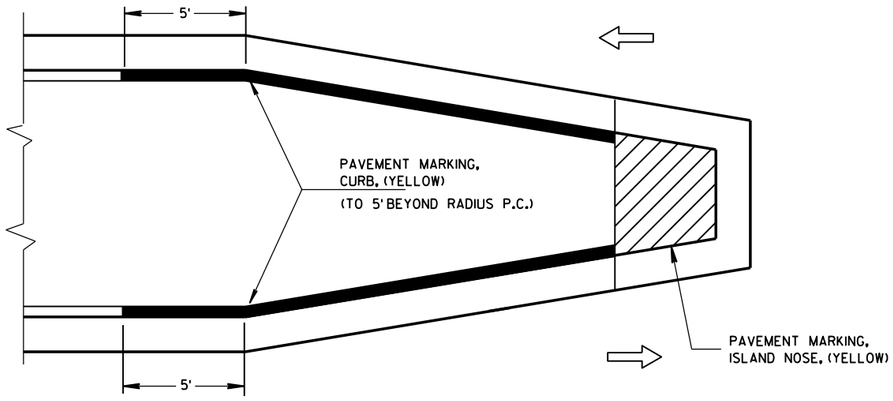
S.D.D. 15 C 8-16e



MEDIAN ISLAND WITH SQUARE BLUNT NOSE

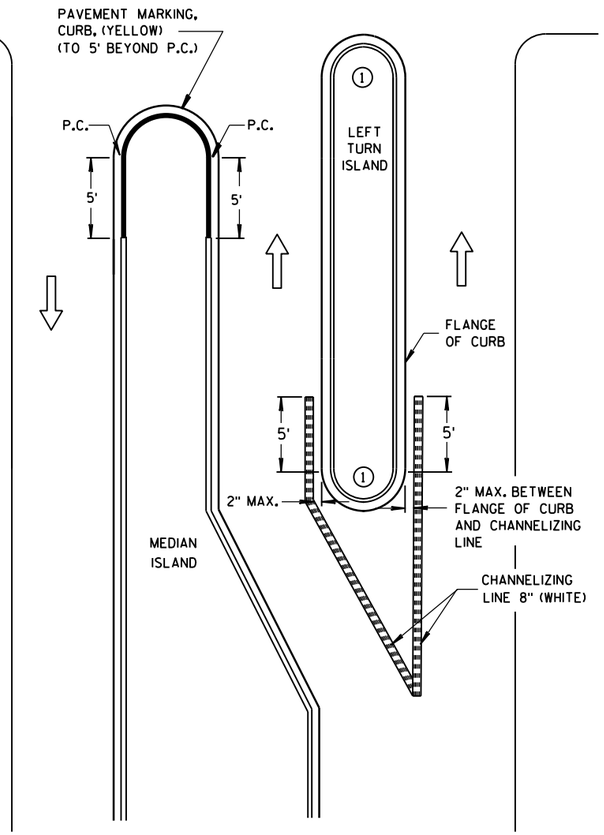


MEDIAN ISLAND WITH ROUND BLUNT NOSE



MEDIAN ISLAND WITH SLOPED NOSE

TYPICAL PLACEMENT OF PAVEMENT MARKING ON MEDIAN ISLANDS

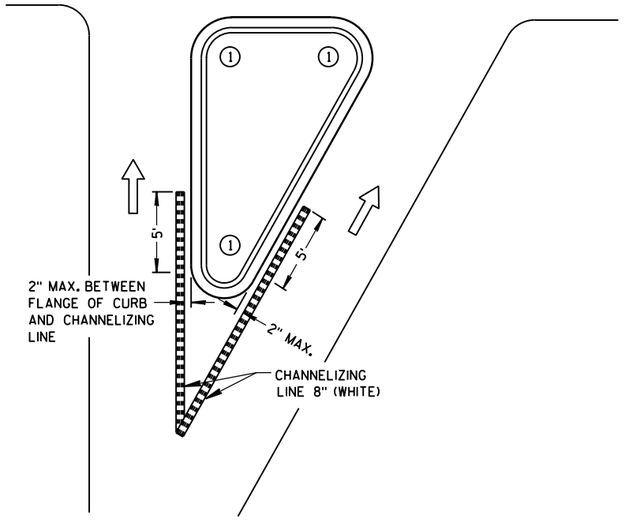


LEFT TURN & MEDIAN ISLAND

GENERAL NOTES

1. DO NOT MARK CURB NOSES THAT SEPARATE LANES OF TRAFFIC TRAVELING IN THE SAME DIRECTION.

2. WHEN CONCRETE CORRUGATED MEDIAN IS CONSTRUCTED TO SEPARATE TRAFFIC OPERATING IN THE OPPOSING DIRECTION YELLOW PAVEMENT MARKING SHALL BE APPLIED TO THE FLAT PORTION OF THE CONCRETE CORRUGATED MEDIAN. THE ITEM OF PAVEMENT MARKING, CONCRETE CORRUGATED MEDIAN, WILL BE MEASURED IN PLACE AND AND ACCEPTED IN ACCORDANCE WITH THE CONTRACT AND PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE FOOT.



RIGHT TURN ISLAND

LEGEND

- ISLAND NOSE MARKING
- CURB MARKING
- CORRUGATED MEDIAN MARKING
- DIRECTION OF TRAVEL

PAVEMENT MARKING
(ISLANDS)

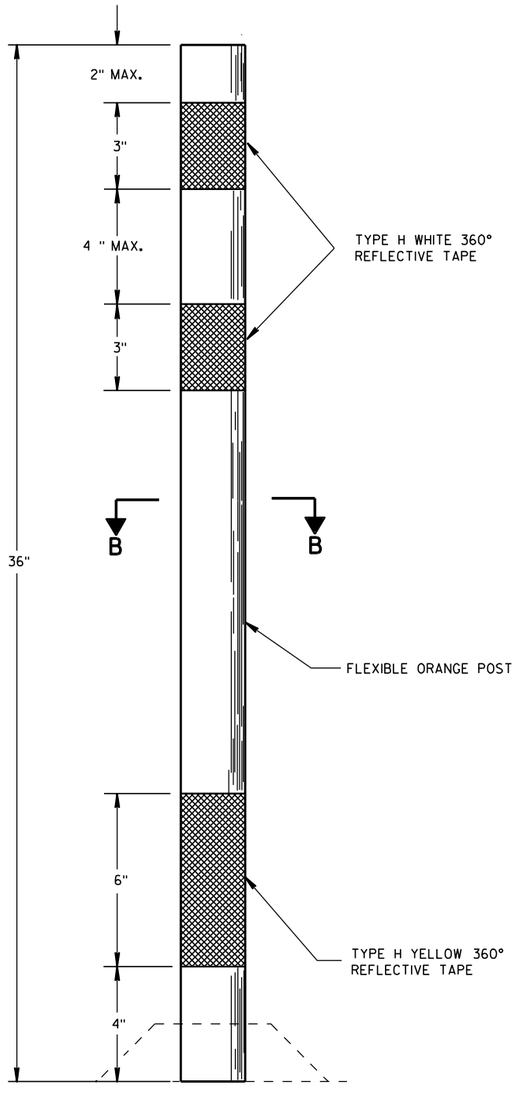
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

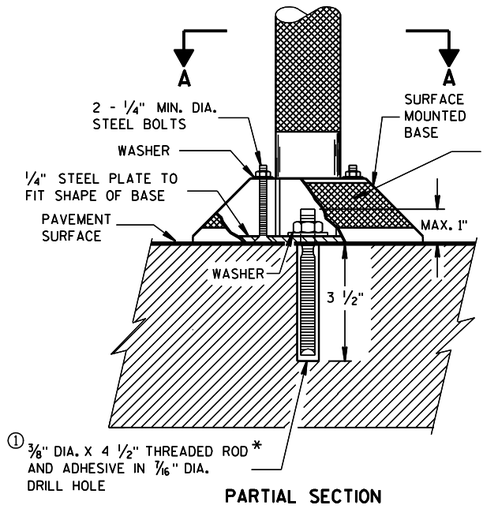
S.D.D. 15 C 8-16f

6

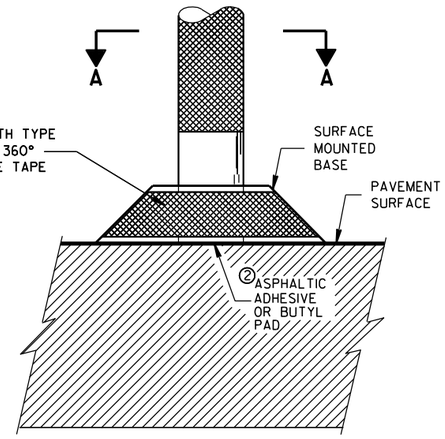
S.D.D. 15 C 8-16f



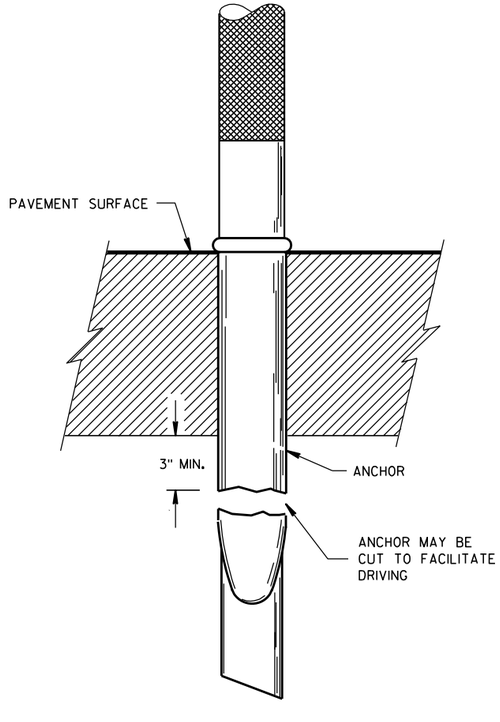
FLEXIBLE TUBULAR MARKER POST



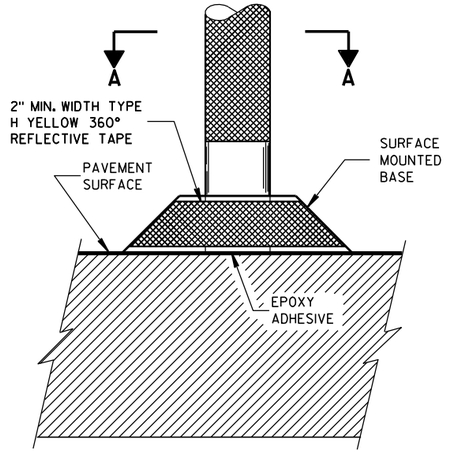
PARTIAL SECTION TO SHOW BOLTS



POST BASES ON NEW OR EXISTING PAVEMENT



POST ANCHOR AND BASE ON PAVEMENT WHICH WILL BE REMOVED



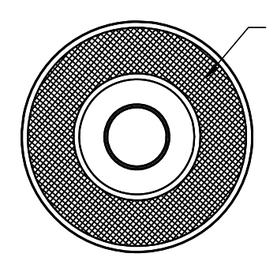
GENERAL NOTES

DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

SURFACE MOUNTED BASES SHALL BE FURNISHED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS TO BE COMPATIBLE WITH FLEXIBLE TUBULAR MARKER POSTS TO A SIZE AND SHAPE THAT WILL PROVIDE A STABLE POST FOUNDATION WHEN SECURED TO THE PAVEMENT.

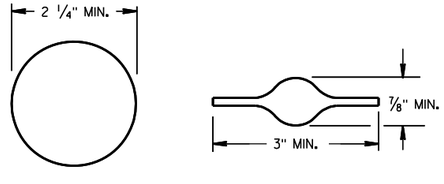
① THREADED ROD SHALL BE MACHINED DOWN TO 0.280 INCH DIA. 1 1/4 INCHES FROM THE TOP.

② THE ASPHALTIC ADHESIVE OR BUTYL PAD FURNISHED SHALL BE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.



SECTION A-A

SURFACE MOUNTED BASE



SECTION B-B

ALTERNATIVE SHAPES

FLEXIBLE TUBULAR MARKER POST, ANCHOR & BASES
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION
APPROVED 2/17/94 DATE /S/ Chester J. [illegible] DIRECTOR, OFFICE O 616 FHWA

6

S.D.D. 15 C 11-5

6

S.D.D. 15 C 11-5

LEGEND

SIGN ON PORTABLE OR PERMANENT SUPPORT

DIRECTION OF TRAFFIC

WORK AREA

FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

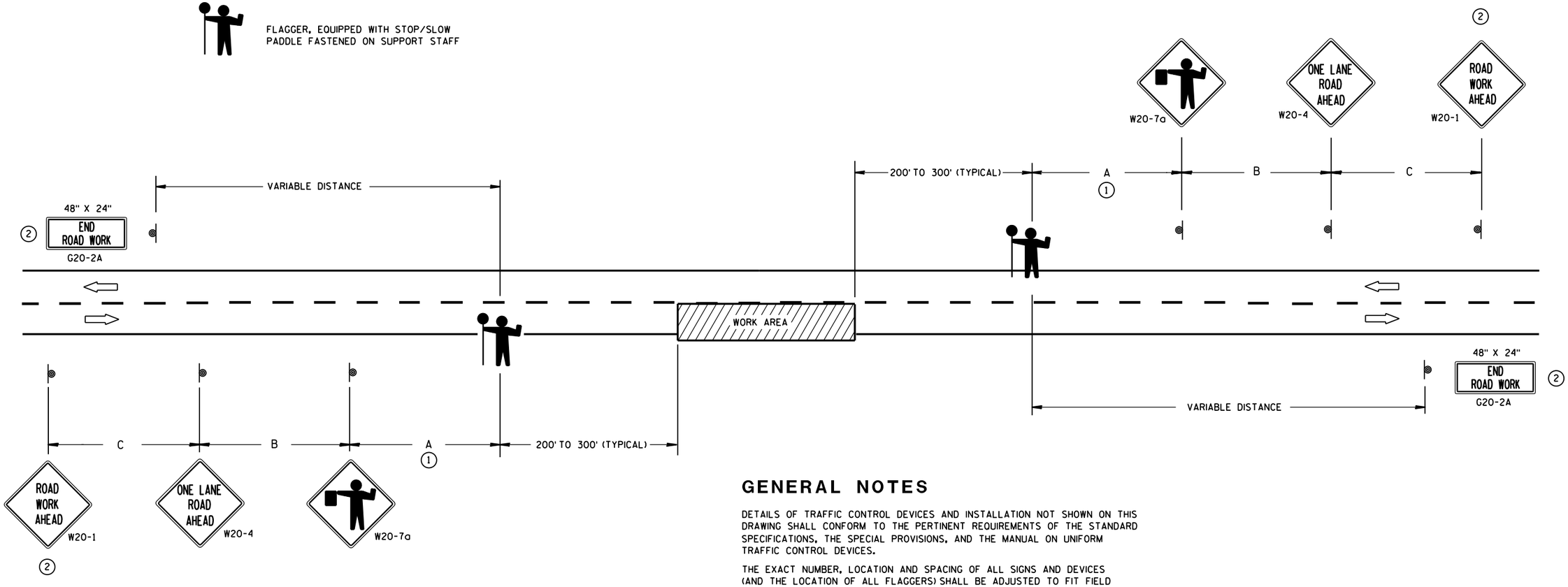
SIGN SPACING TABLE

SPEED LIMIT	SIGN SPACING A,B,C
25-35 MPH	200'
35-40 MPH	350'
45-55 MPH	500'



W3-4

USE OF THE "BE PREPARED TO STOP" SIGN IS OPTIONAL. WHEN USED, THIS SIGN SHALL BE LOCATED BETWEEN THE W20-7a AND W20-4 SIGNS. A 500' TYPICAL SPACING SHALL BE PROVIDED BETWEEN THE SIGNS.



(1) FOR A MOVING WORK OPERATION,
SIGNING FOR BOTH DIRECTIONS SHALL BE REESTABLISHED (AS SIMULTANEOUSLY AS PRACTICAL) AT APPROXIMATELY 3500 FOOT INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.

(2) SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.

GENERAL NOTES

DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS AND DEVICES (AND THE LOCATION OF ALL FLAGGERS) SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

THE FIRST ADVANCE WARNING SIGN SHOULD TYPICALLY BE LOCATED IN ADVANCE OF THE ANTICIPATED TRAFFIC BACKUP OR QUEUE.

WHEN A SIDE ROAD OR RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING OPERATION IS NOT IN EFFECT, COVER OR REMOVE ALL TEMPORARY TRAFFIC CONTROL SIGNS.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

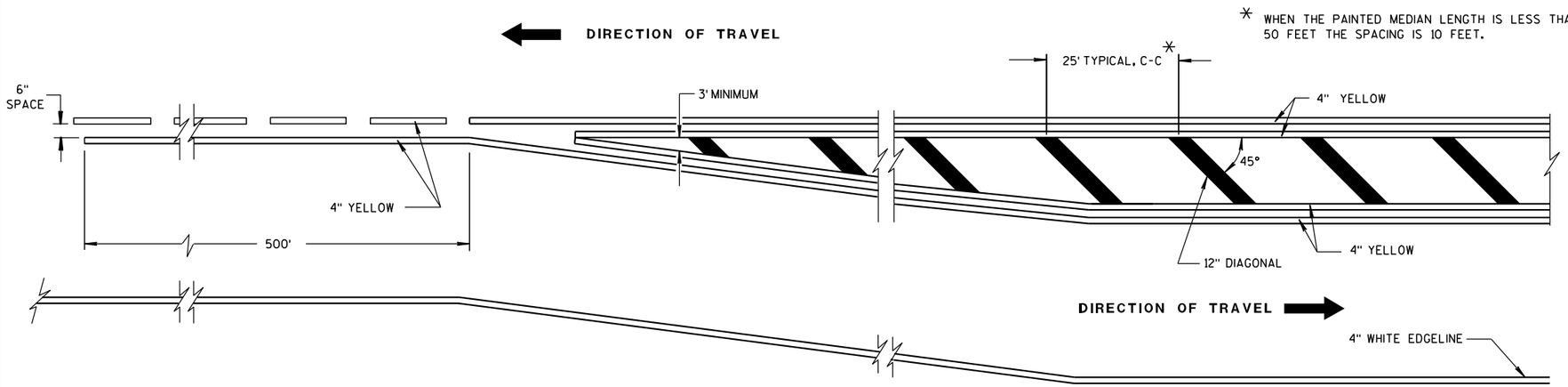
APPROVED
8/2013 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

6

S.D.D. 15 C 12-4

6

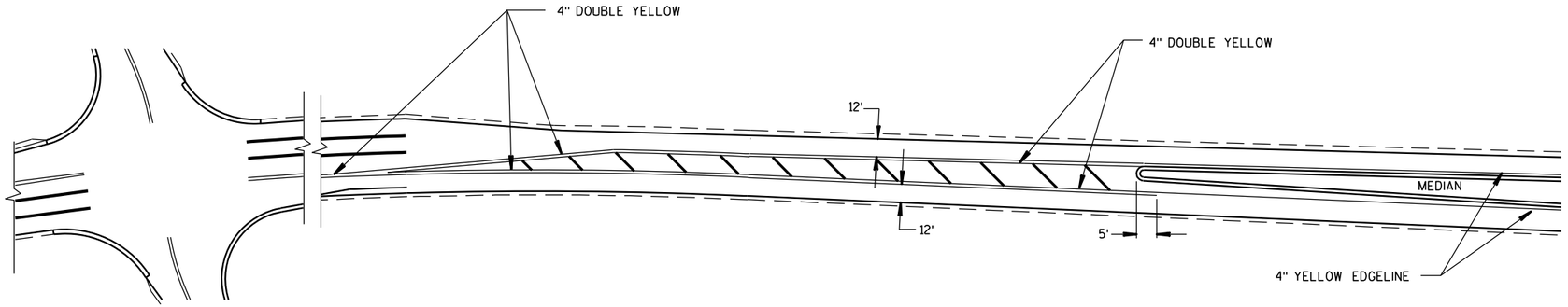
S.D.D. 15 C 12-4



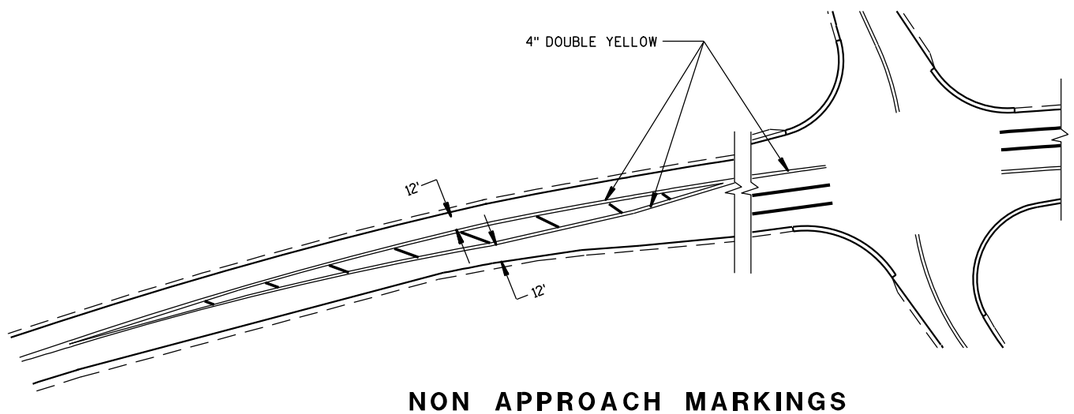
MEDIAN ISLAND DETAIL

GENERAL NOTE

DIAGONALS ARE OPTIONAL WHEN PAINTED ISLAND IS LESS THAN 6 FEET AT WIDEST POINT.



APPROACH MARKINGS FOR OTHER MEDIAN TYPES



NON APPROACH MARKINGS

MEDIAN ISLAND MARKING	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 2-5-09 DATE	/S/ Thomas N. Nothohm STATE TRAFFIC ENGINEER
FHWA	618 IGN

6

S.D.D. 15 C 18-3

6

S.D.D. 15 C 18-3

GENERAL NOTES

ORIENT ANCHOR BOLTS IN FOOTING AND PROVIDE ANCHOR BOLT STICK OUT ABOVE TOP OF CONCRETE FOOTING BASE PER FABRICATION DRAWING.

BENDING DIMENSIONS FOR REINFORCING BARS ARE OUT TO OUT.

USE 3" CLEAR FOR ALL REINFORCEMENT UNLESS NOTED OTHERWISE.

SIGN SUPPORTS SHALL BE LOCATED NORMAL TO ROADWAY.

THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO THE TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO.

WELDING OF ANCHOR BOLTS TO THE CAGE IS UNACCEPTABLE. TEMPLATES SHALL BE USED.

BAR CAGE TO BE ASSEMBLED USING TIE WIRES ONLY, NO WELDING.

BASES (SHAFT) SHALL BE EXCAVATED BY THE USE OF A CIRCULAR AUGER. IF A BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE SOIL, THE FORM SHALL BE REMOVED BEFORE BACK FILLING AROUND THE BASE. ANY REQUIRED BACKFILL SHALL BE WELL COMPACTED IN LAYERS OF 1 FOOT OR LESS. COMPACTION SHALL BE BY MECHANICAL MEANS. CARE SHALL BE TAKEN SO NO DAMAGE OCCURS TO THE CONCRETE BASE DURING COMPACTION.

EXCAVATION OF MATERIALS NOT OCCUPIED BY CONCRETE SHALL BE MINIMIZED TO REDUCE DISTURBANCE OF THE SURROUNDING SOILS.

THE BOTTOM OF THE DRILLED HOLE SHALL BE FIRM AND THOROUGHLY CLEANED SO NO LOOSE OR COMPRESSIBLE MATERIALS ARE PRESENT AT THE TIME OF THE CONCRETE PLACEMENT.

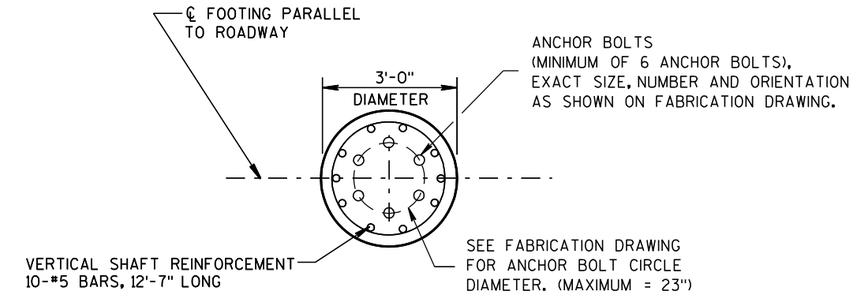
IF THE DRILLED HOLE CONTAINS STANDING WATER, THE CONCRETE SHALL BE PLACED USING A TREMIE TO DISPLACE THE WATER.

THE REINFORCEMENT AND ANCHOR BOLTS SHALL BE ADEQUATELY SUPPORTED IN THE PROPER POSITIONS SO NO MOVEMENT OCCURS DURING CONCRETE PLACEMENT.

ANY DAMAGE TO THE CONCRETE BASE DURING CONSTRUCTION OPERATIONS SHALL BE REPAIRED AT THE ENGINEER'S DIRECTION, AT THE EXPENSE OF THE CONTRACTOR.

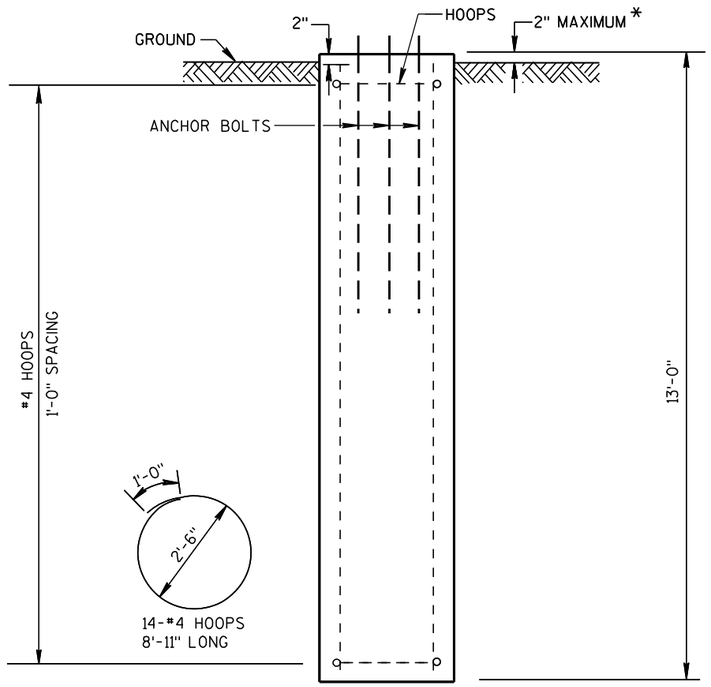
CONCRETE MASONRY ---------- fc=3,500 p.s.i.
HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60 ------ fy=60,000 p.s.i.
ANCHOR BOLTS ---------- AASHTO M314 GRADE 55

THIS FOOTING HAS BEEN DESIGNED FOR SITES WHERE SOILS EXHIBIT A PHI-ANGLE GREATER THAN OR EQUAL TO 20 DEGREES (GRANULAR SOILS), OR A COHESION VALUE GREATER THAN OR EQUAL TO 350 PSF (COHESIVE SOILS).



PLAN VIEW

* FOR OVERHEAD SIGN SUPPORTS THAT ARE INSTALLED ADJACENT TO SIDEWALKS, THE TOP OF THE BASE SHALL BE POURED FLUSH WITH THE GROUND.



ELEVATION VIEW

CONCRETE - 3.4 C.Y. PER FOOTING
H.S. REINFORCEMENT - 215 LBS. PER FOOTING

36" DIAMETER CANTILEVER OVERHEAD SIGN SUPPORT BASE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4/17/2009 DATE
/S/ Thomas N. N[illegible] STATE TRAFFIC ENGINEER
619 IGN
FHWA

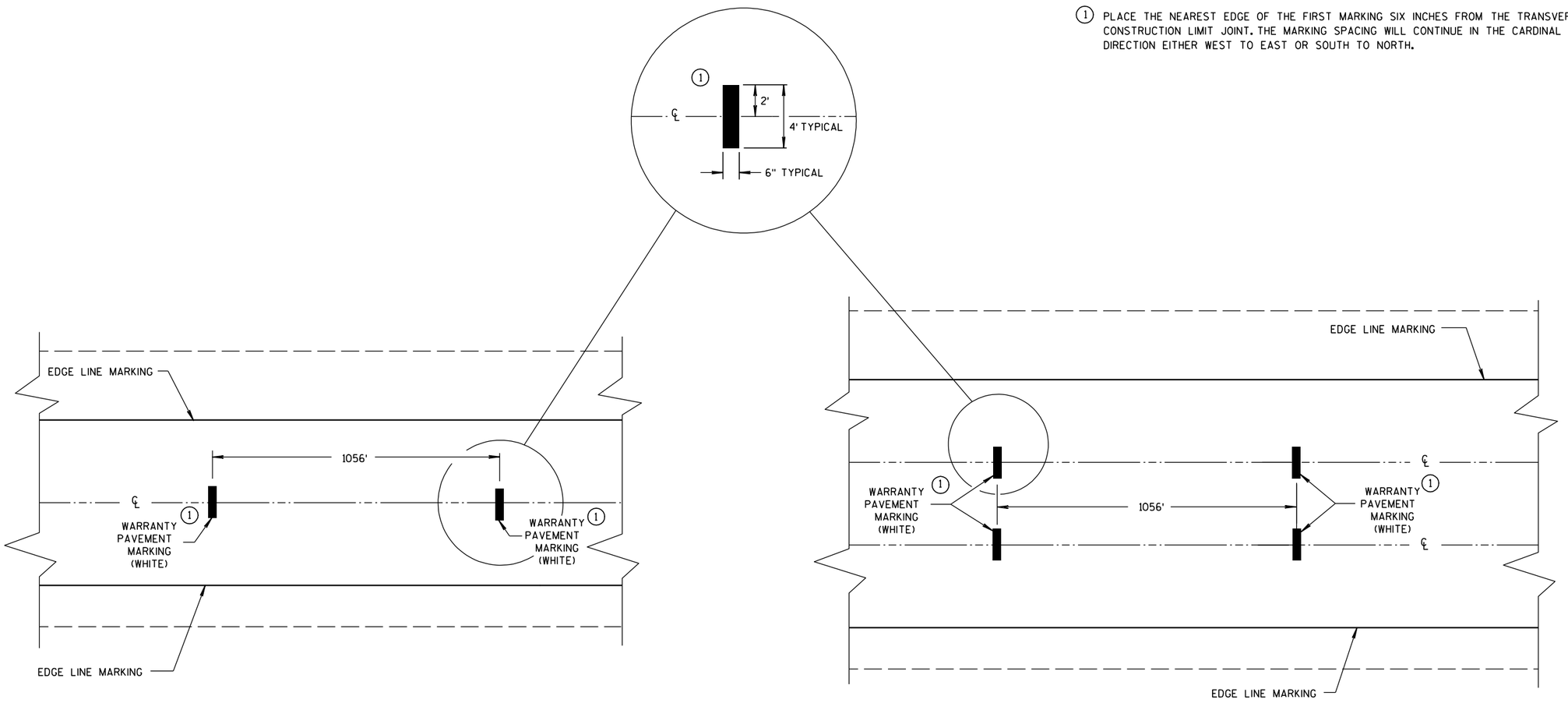
6

S.D.D. 15 C 24-2

6

S.D.D. 15 C 24-2

WARRANTY PAVEMENT MARKING



TYPICAL FOR TWO WAY OR ONE WAY TRAFFIC

TYPICAL FOR MULTILANE TRAFFIC

GENERAL NOTES

1. PLACE THE NEAREST EDGE OF THE FIRST MARKING SIX INCHES FROM THE TRANSVERSE CONSTRUCTION LIMIT JOINT. THE MARKING SPACING WILL CONTINUE IN THE CARDINAL DIRECTION EITHER WEST TO EAST OR SOUTH TO NORTH.

MARKING FOR WARRANTY PROJECTS

WARRANTY PROJECT PAVEMENT MARKING DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

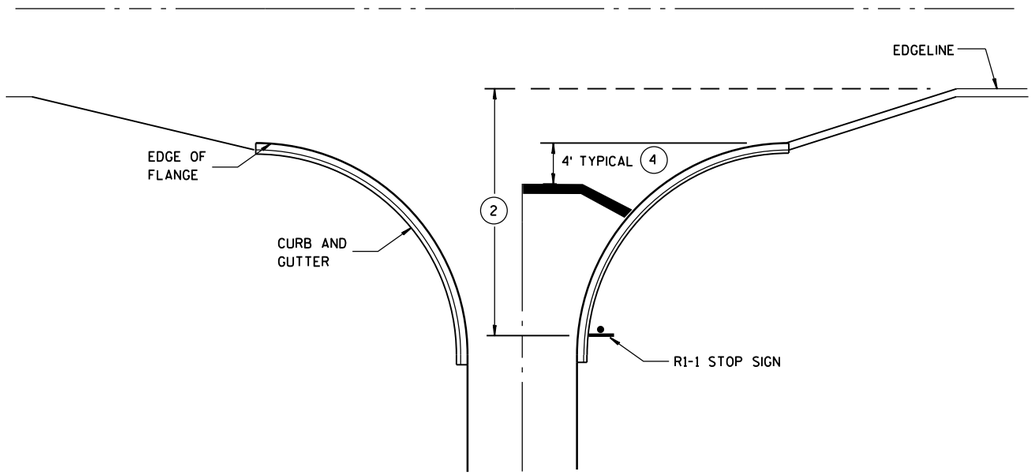
5/6/2011 — DATE

/S/ Thomas N. Nothem — STATE TRAFFIC ENGINEER

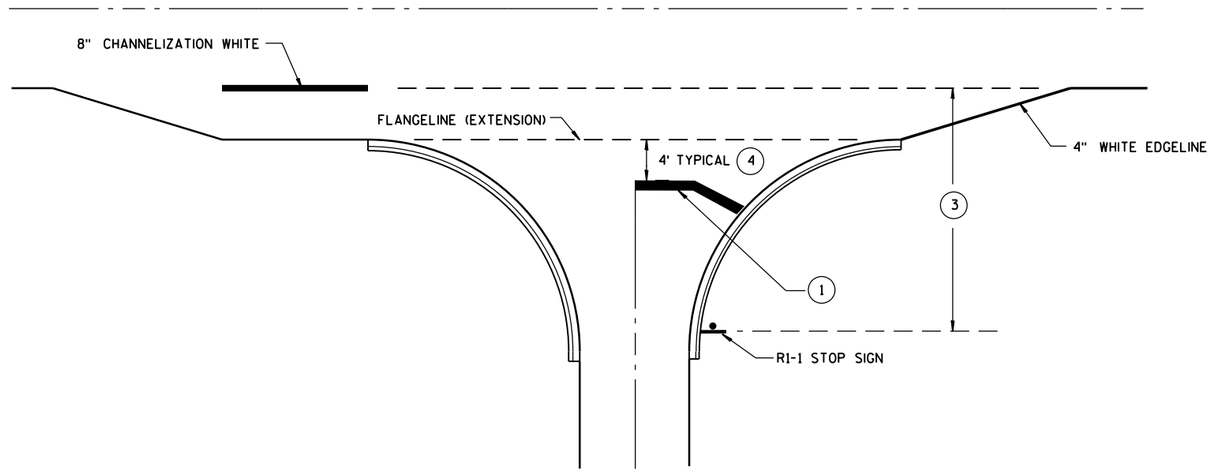
620

FHWA

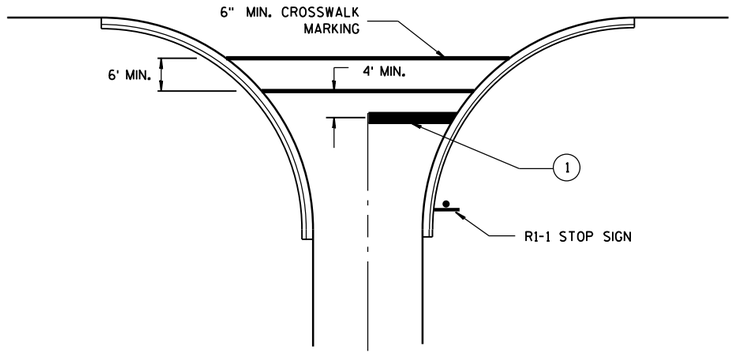
6
S.D.D. 15 C 30-1



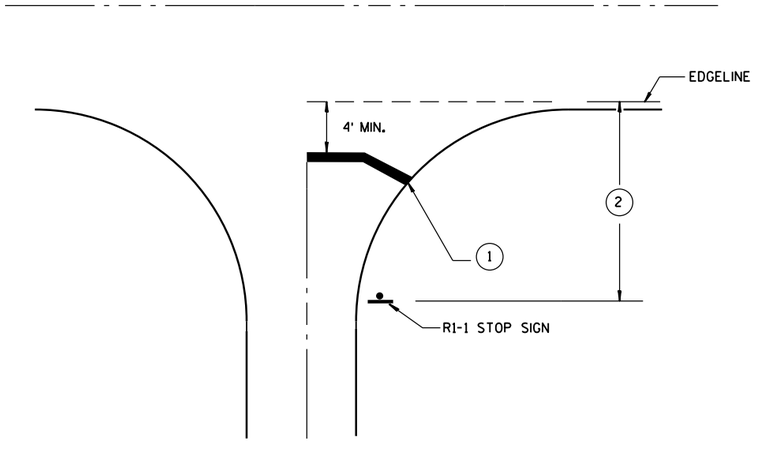
TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER



TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH RIGHT TURN LANE



TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH CROSSWALK MARKING



TYPICAL STOP LINE PAVEMENT MARKING WITHOUT CURB AND GUTTER

GENERAL NOTES

1. 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE PROJECT ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
2. IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGELINE THAN NO STOP LINE IS REQUIRED.
3. IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGELINE EXTENSION THAN NO STOP LINE IS REQUIRED.
4. MOVE CLOSER TO EDGE OF TRAVEL LANE AS NEEDED FOR VISIBILITY AND SIGHT LINES.

STOP LINE AND CROSSWALK PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

4/30/2013
DATE

/S/ Travis Feltes
STATE TRAFFIC E

FHWA

6

S.D.D. 15 C 33-1

LEGEND

TYPE III BARRICADE

TYPE III BARRICADE WITH ATTACHED SIGN

TRAFFIC CONTROL DRUM

SIGN ON PERMANENT SUPPORT

TYPE "A" WARNING LIGHT (FLASHING)

DIRECTION OF TRAFFIC

GENERAL NOTES

THIS RAMP CLOSURE DETAIL IS TYPICAL FOR CLOSING A RIGHT SIDE EXIT RAMP. FOR A LEFT SIDE EXIT RAMP, REVERSE THE TRAFFIC CONTROL.

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

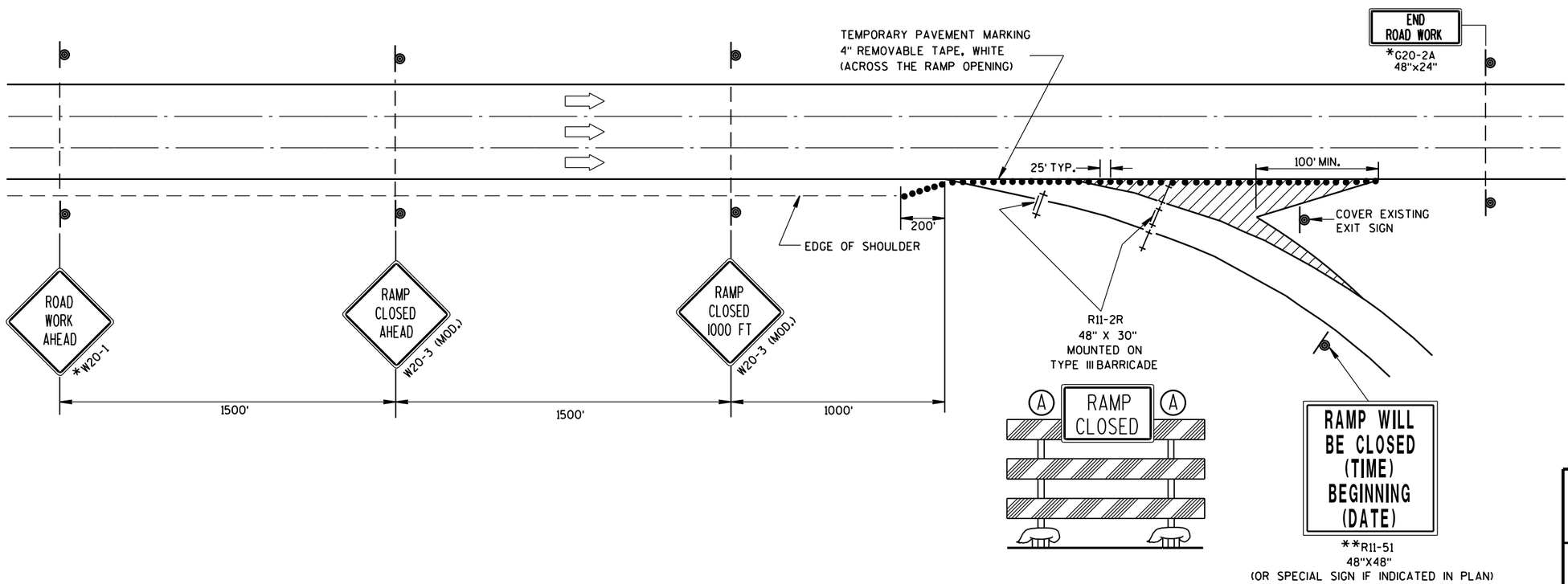
PLACE TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE IF RAMP CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

WORK AREAS WITH A DROPOFF ALONG THE EDGE OF AN OPEN TRAVEL LANE SHALL BE LEVELED WITH TEMPORARY FILL WHEN THE CONTRACTOR IS NOT WORKING ADJACENT TO THE TRAVEL LANE. DRUMS SHALL BE PLACED ENTIRELY OUTSIDE THE TRAVEL LANE, ALLOWING THE FULL UNOBSTRUCTED LANE WIDTH, WHEN THE WORK IS NOT IN PROGRESS.

WHERE MEDIAN BARRIER IS IN PLACE, SIGNS SHOWN ON LEFT SIDE OF ROADWAY MAY BE OMITTED FOR RIGHT SIDE RAMP CLOSURES OF LESS THAN 12-HOUR DURATION.

*W20-1 AND G20-2A SIGNS ARE NOT REQUIRED IF THE RAMP CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

** PLACE "RAMP WILL BE CLOSED" SIGN 10 CALENDAR DAYS PRIOR TO CLOSURE OR AS DIRECTED BY THE ENGINEER. SEE WISCONSIN STANDARD SIGN PLATES FOR SIGN LAYOUT.



TRAFFIC CONTROL,
EXIT RAMP CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/2013
DATE

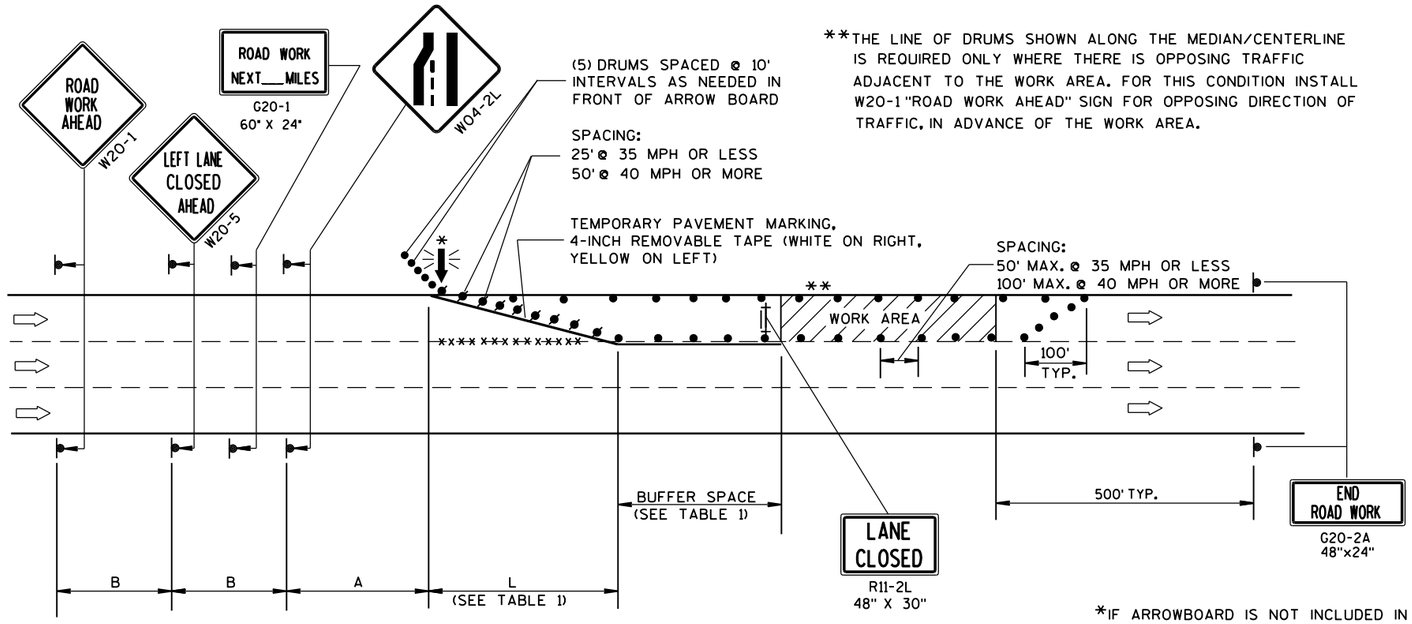
/S/ Travis Feltes
STATE TRAFFIC ENGINEER

DESIGN

FHWA

6

S.D.D. 15 D 16-2



**THE LINE OF DRUMS SHOWN ALONG THE MEDIAN/CENTERLINE IS REQUIRED ONLY WHERE THERE IS OPPOSING TRAFFIC ADJACENT TO THE WORK AREA. FOR THIS CONDITION INSTALL W20-1 "ROAD WORK AHEAD" SIGN FOR OPPOSING DIRECTION OF TRAFFIC, IN ADVANCE OF THE WORK AREA.

B=400' AT 25-30 MPH
700' AT 35-40 MPH
1000' AT 45-55 MPH

A=200' AT 25-30 MPH
350' AT 35-40 MPH
500' AT 45-55 MPH

(PLACE BARRICADE AND SIGN APPROX. EVERY 1000' ACROSS THE CLOSED LANE)

*IF ARROWBOARD IS NOT INCLUDED IN MISCELLANEOUS QUANTITIES, SUBSTITUTE A TYPE III BARRICADE WITH W01-6 SIGN IN THE LANE CLOSURE TAPER.

W01-6
48"x24"

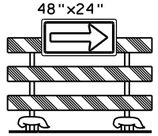


TABLE 1
TAPER AND BUFFER SPACE FOR 12' LANE WIDTH

S	L	BUFFER SPACE
25	125'	55'
30	180'	85'
35	245'	120'
40	320'	170'
45	540'	220'
50	600'	280'
55	660'	335'

FOR LANE WIDTH OTHER THAN 12':

L = WS AT 45 MPH OR GREATER

$L = \frac{WS^2}{60}$ AT 40 MPH OR LESS

L = TAPER LENGTH IN FEET

S = NON-CONSTRUCTION SPEED LIMIT (MPH)

W = WIDTH OF LANE CLOSURE

LEGEND

- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL DRUM
- FLASHING ARROW BOARD
- DIRECTION OF TRAFFIC
- REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)
- WORK AREA

GENERAL NOTES

THIS LANE CLOSURE DETAIL IS TYPICAL FOR CLOSING THE LEFT LANE. FOR A RIGHT LANE CLOSURE, REVERSE THE TRAFFIC CONTROL.

THIS DETAIL MAY BE USED FOR ROADWAYS WITH EITHER TWO OR THREE LANES IN EACH DIRECTION.

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" SIGNS MAY BE USED IF APPROVED BY DISTRICT TRAFFIC UNIT.

"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

ON UNDIVIDED ROADWAYS, OMIT THE SIGNS SHOWN ON LEFT SIDE OF ROAD.

W20-1, G20-1 AND G20-2A SIGNS ARE NOT REQUIRED IF THE LANE CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS.

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROWBOARDS SO THE APPROACHING DRIVER HAS A CLEAR VIEW OF THE ARROWBOARDS AND LANE CLOSURE DRUMS.

PLACE THE ARROWBOARD AS CLOSE AS POSSIBLE TO THE BEGINNING OF THE LANE CLOSURE TAPER, PREFERABLY ON THE SHOULDER OR TERRACE.

CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

BARRICADES IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED UPON COMPLETION OF THE OPERATION OR, FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

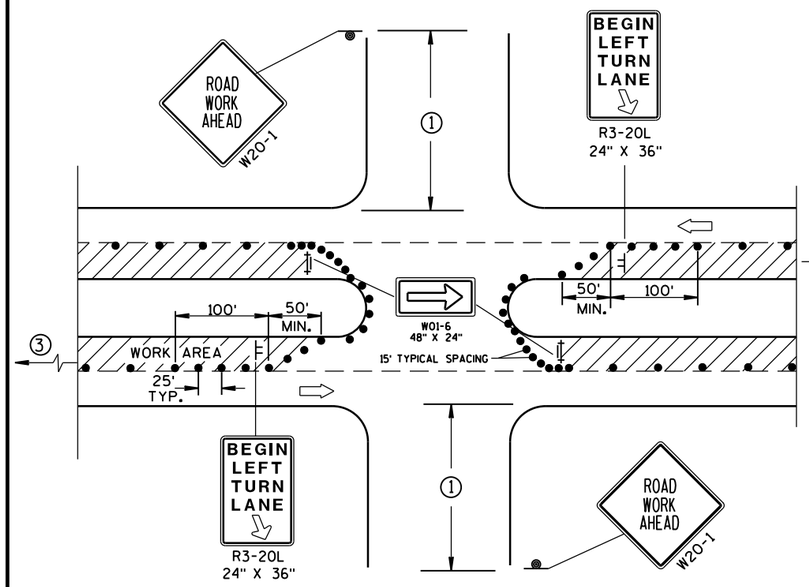
APPROVED
Feb. 2015 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

6

S.D.D. 15 D 20-3

6

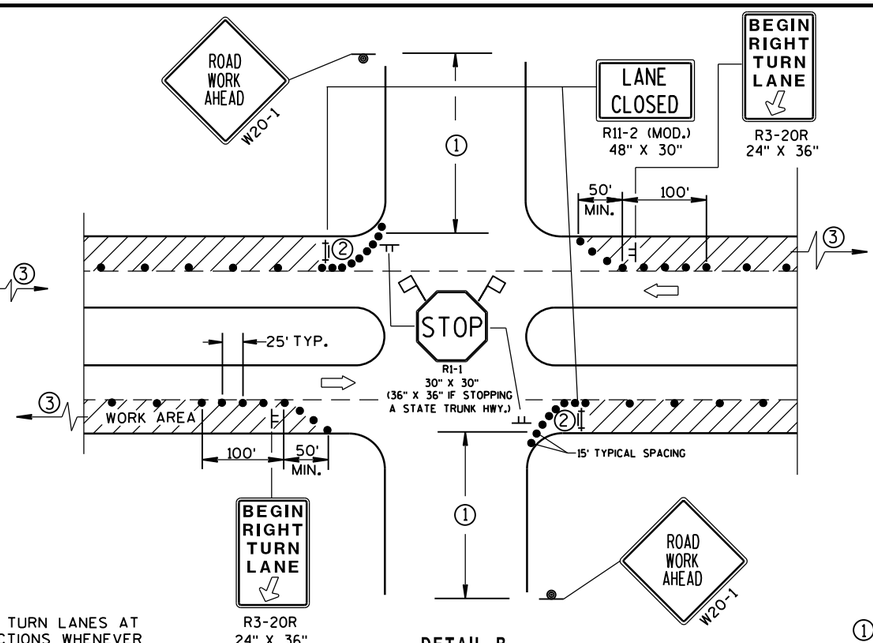
S.D.D. 15 D 20-3



DETAIL A

FOR LEFT LANE CLOSURE AT INTERSECTION OR MEDIAN OPENING

PROVIDE TURN LANES AT INTERSECTIONS WHENEVER STAGING OF WORK ALLOWS. TAPER AND TURN LANE LENGTHS BASED ON FIELD CONDITIONS AS APPROVED BY THE ENGINEER.



DETAIL B

FOR RIGHT LANE CLOSURE AT INTERSECTION

GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" SIGNS MAY BE USED IF APPROVED BY DISTRICT TRAFFIC UNIT.

"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

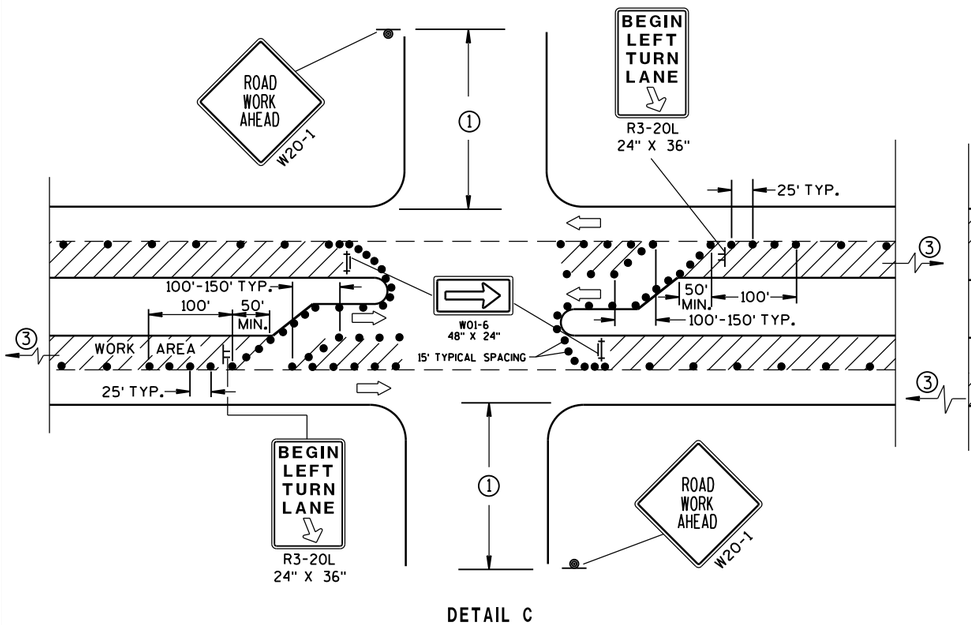
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

BARRICADES IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED UPON COMPLETION OF THE OPERATION OR, FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

① 500' TYPICAL OR AT LAST INTERSECTION, WHICHEVER IS CLOSER.
350' IF 35-40 MPH.
200' IF 25-30 MPH.

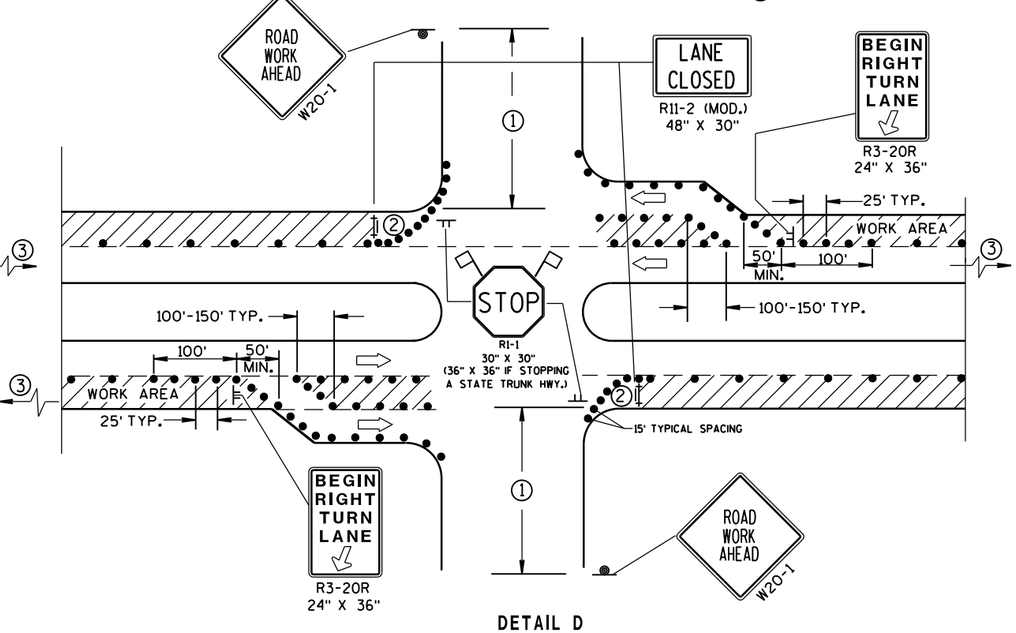
② ALSO USE BARRICADE AND 15-FOOT TYPICAL DRUM SPACING AT COMMERCIAL DRIVEWAYS.

③ SEE SEPARATE LANE CLOSURE DETAIL FOR ADDITIONAL TRAFFIC CONTROL.



DETAIL C

FOR LEFT LANE CLOSURE AT INTERSECTION OR MEDIAN OPENING (WITH LEFT TURN BAY OPEN)



DETAIL D

FOR RIGHT LANE CLOSURE AT INTERSECTION (WITH RIGHT TURN BAY OPEN)

LEGEND

- TRAFFIC CONTROL DRUM
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT (5' MIN. MOUNTING HEIGHT)
- TYPE III BARRICADE WITH ATTACHED SIGN AND TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC
- FLAGS, 16" X 16" MIN., (ORANGE)
- WORK AREA

TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Nov. 2014 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

6

S.D.D. 15 D 21-3

6

S.D.D. 15 D 21-3

TABLE 1
TAPER AND BUFFER SPACE
FOR 12' LANE WIDTH

S	L	BUFFER SPACE
25	125'	55'
30	180'	85'
35	245'	120'
40	320'	170'
45	540'	220'
50	600'	280'
55	660'	335'

FOR LANE WIDTH OTHER THAN 12':

L = WS AT 45 MPH OR GREATER

$L = \frac{WS^2}{60}$ AT 40 MPH OR LESS

L = TAPER LENGTH IN FEET

S = NON-CONSTRUCTION SPEED LIMIT (MPH)

W = WIDTH OF LANE CLOSURE

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL DRUM
- FLASHING ARROW BOARD
- DIRECTION OF TRAFFIC
- REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)
- WORK AREA

GENERAL NOTES

THIS DETAIL IS TYPICAL FOR CLOSING THE RIGHT TWO LANES. FOR CLOSING THE LEFT TWO LANES, REVERSE THE TRAFFIC CONTROL.

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" SIGNS MAY BE USED IF APPROVED BY THE DISTRICT TRAFFIC UNIT.

"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

W20-1, G20-1 AND G20-2A SIGNS ARE NOT REQUIRED IF THE LANE CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS.

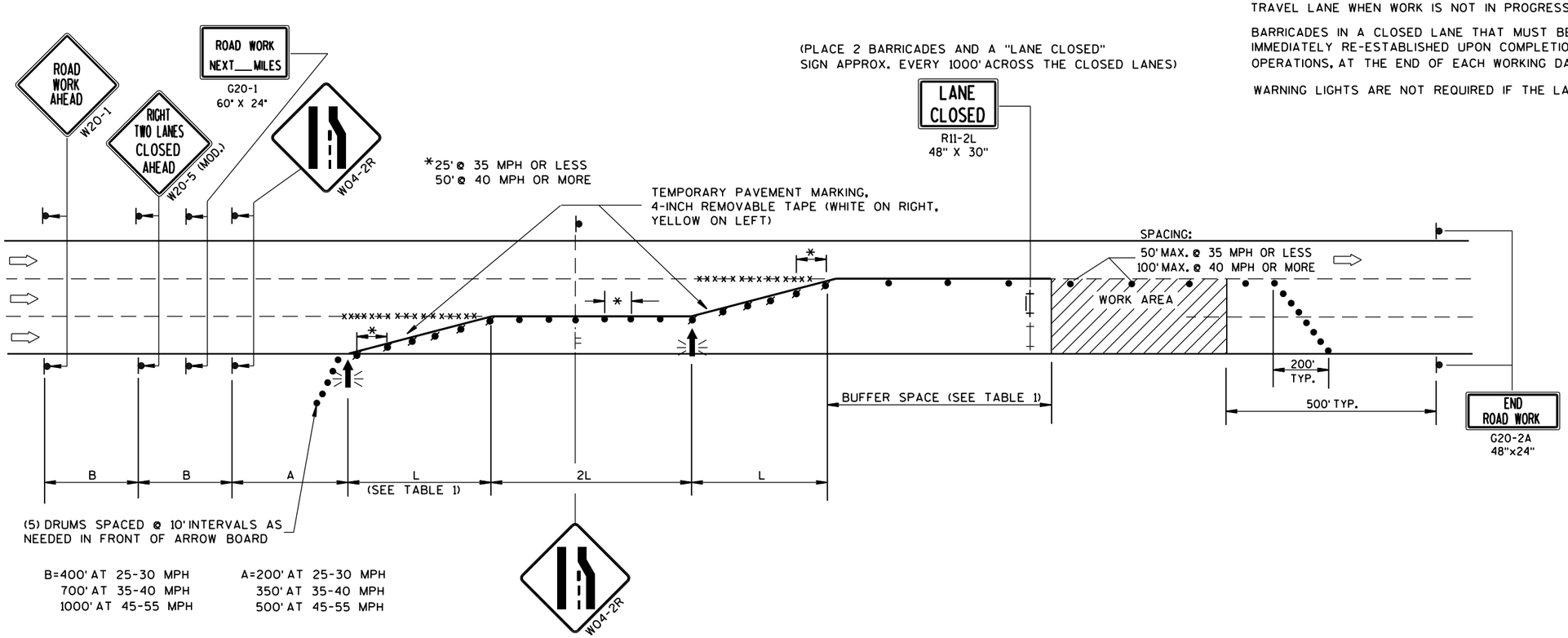
CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROWBOARDS SO THE APPROACHING DRIVER HAS A CLEAR VIEW OF THE ARROWBOARDS AND LANE CLOSURE DRUMS.

WHERE THE SHOULDER OR TERRACE HAS INSUFFICIENT SPACE TO LOCATE THE ARROWBOARD AS SHOWN, PLACE THE ARROWBOARD IN THE LANE CLOSURE TAPER AS CLOSE AS POSSIBLE TO THE BEGINNING OF THE TAPER.

CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

BARRICADES IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED UPON COMPLETION OF THE OPERATION OR, FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.



B=400' AT 25-30 MPH
700' AT 35-40 MPH
1000' AT 45-55 MPH

A=200' AT 25-30 MPH
350' AT 35-40 MPH
500' AT 45-55 MPH

TRAFFIC CONTROL, TWO LANE CLOSURE, NON-FREEWAY/EXPRESSWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/2013 DATE

/S/ Travis Feltes
STATE TRAFFIC ENGINEER

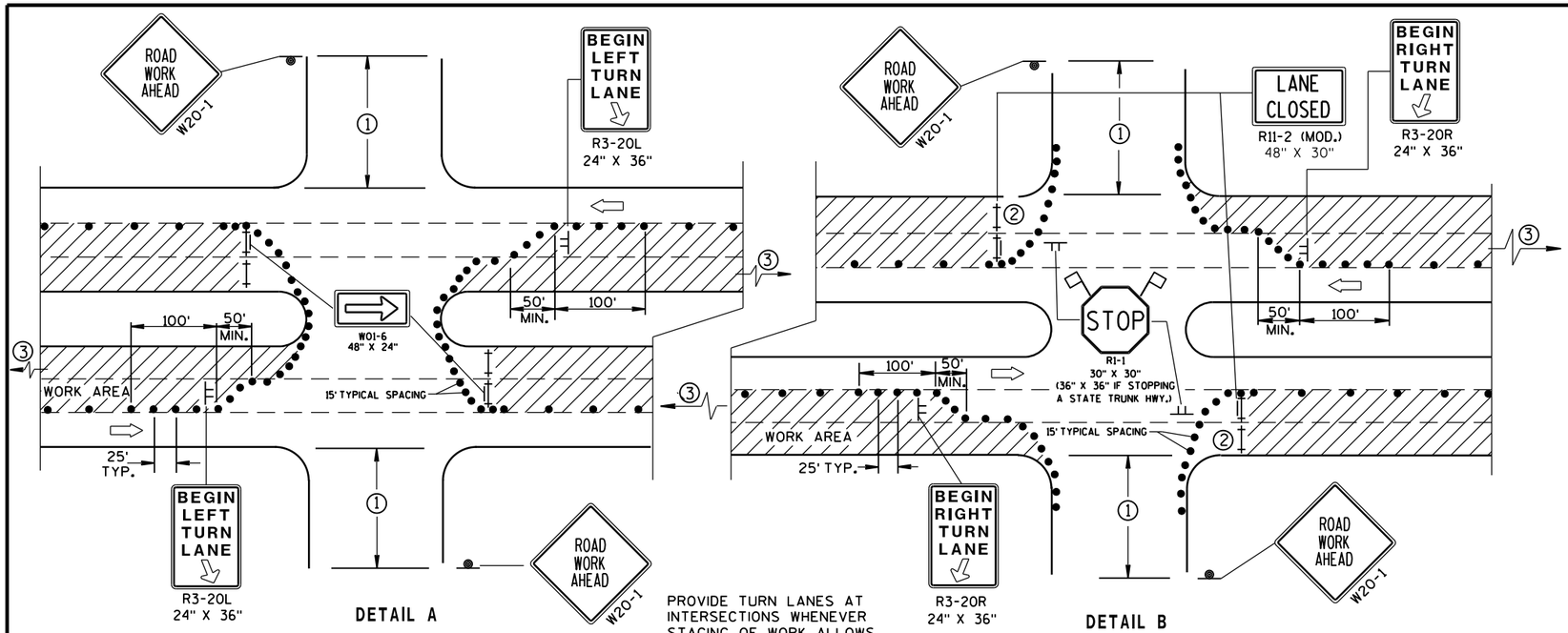
625

SIGN

FHWA

S.D.D. 15 D 22-2

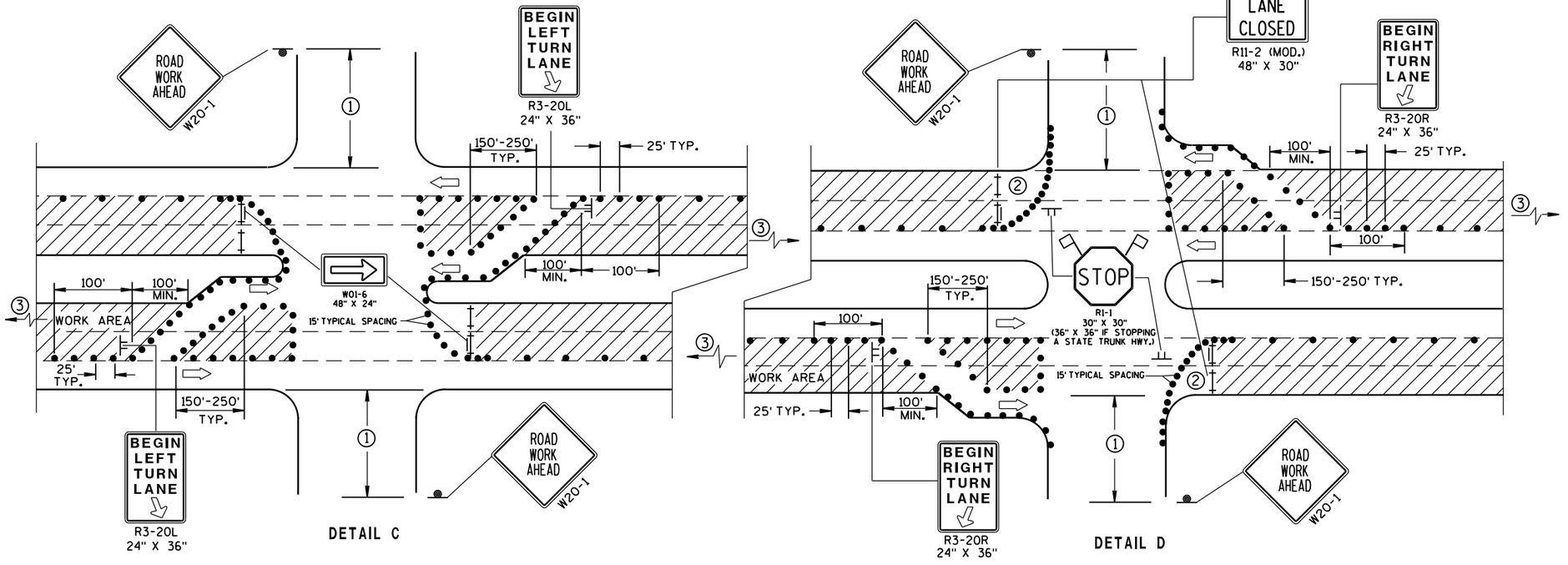
S.D.D. 15 D 22-2



FOR LEFT TWO LANES CLOSED AT INTERSECTION OR MEDIAN BREAK

FOR RIGHT TWO LANES CLOSED AT INTERSECTION

PROVIDE TURN LANES AT INTERSECTIONS WHENEVER STAGING OF WORK ALLOWS. TAPER AND TURN LANE LENGTHS BASED ON FIELD CONDITIONS AS APPROVED BY THE ENGINEER.



FOR LEFT TWO LANES CLOSED AT INTERSECTION OR MEDIAN BREAK (WITH LEFT TURN BAY OPEN)

FOR RIGHT TWO LANES CLOSED AT INTERSECTION (WITH RIGHT TURN BAY OPEN)

GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" SIGNS MAY BE USED IF APPROVED BY DISTRICT TRAFFIC UNIT.

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

BARRICADES IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED UPON COMPLETION OF THE OPERATION OR, FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

① 500 FEET TYPICAL OR AT LAST INTERSECTION, WHICHEVER IS CLOSER.
350 FEET IF 35-40 MPH.
200 FEET IF 25-30 MPH.

② ALSO USE BARRICADES AND 15-FOOT TYPICAL DRUM SPACING AT COMMERCIAL DRIVEWAYS.

③ SEE SEPARATE LANE CLOSURE DETAIL FOR ADDITIONAL TRAFFIC CONTROL.

LEGEND

- TRAFFIC CONTROL DRUM
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT (5' MIN. MOUNTING HEIGHT)
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN AND TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC
- FLAGS, 16" X 16" MIN., (ORANGE)
- WORK AREA

TRAFFIC CONTROL, INTERSECTION WITHIN TWO LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Nov. 2014 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

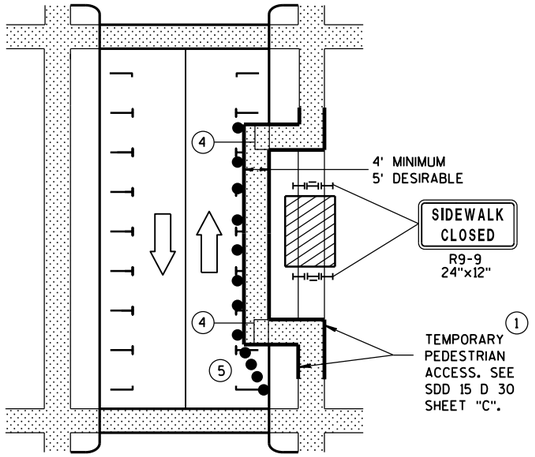
6

S.D.D. 15 D 23-3

6

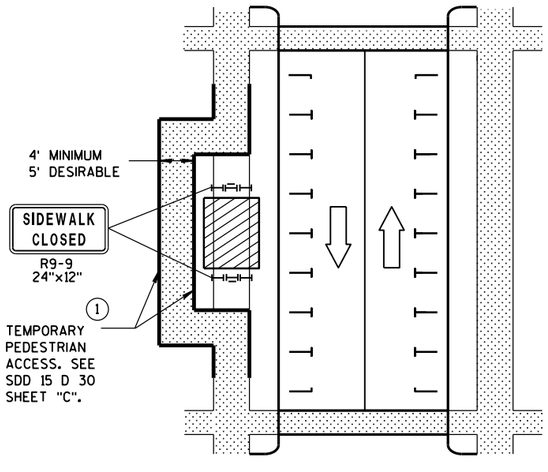
S.D.D. 15 D 23-3

NOTE: MAY BE USED ON ROADWAY WITH POSTED SPEED OF LESS THAN 40 MPH.

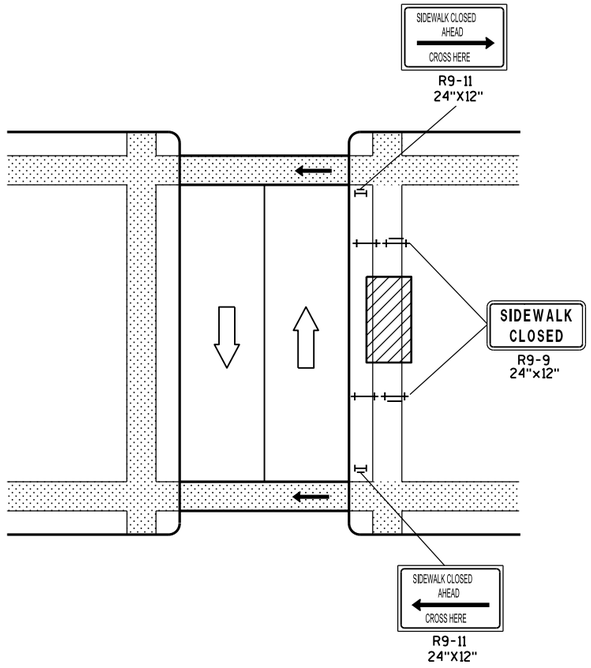


MID-BLOCK SIDEWALK CLOSURE IN PARKING LANE

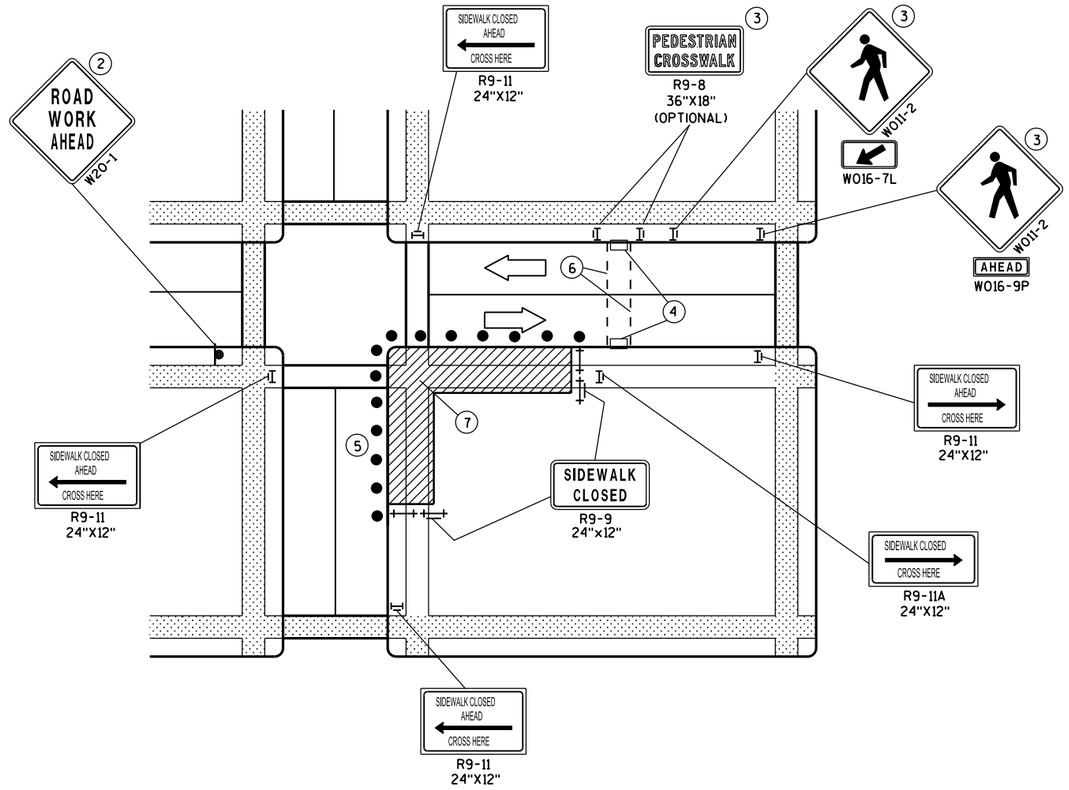
NOTE: LAYOUT SAME AS ABOVE.



SIDEWALK DIVERSION



MID-BLOCK SIDEWALK CLOSURE



CORNER SIDEWALK CLOSURE WITH TEMPORARY CROSSWALK

GENERAL NOTES

WHEN CLOSING OR RELOCATING CROSSWALKS OR SIDEWALKS, PROVIDE DETECABLE TEMPORARY FACILITIES AND INCLUDE ACCESSIBILITY FEATURES CONSISTENT WITH EXISTING PEDESTRIAN FACILITIES.

TEMPORARY TRAFFIC CONTROL DEVICES FOR PEDESTRIANS ARE SHOWN. OTHER DEVICES MAY BE NECESSARY TO CONTROL VEHICULAR TRAFFIC. STAGE WORK, AS NECESSARY, TO PROVIDE A TEMPORARY PEDESTRIAN ACCESS ROUTE AT ALL TIMES. FOR ROADWAYS WITH NO AVAILABLE DETOURS, MAINTAIN ONE OPEN SIDEWALK AT ALL TIMES.

"WO" SIGN IS THE SAME AS "W" SIGN EXCEPT THE BACKGROUND IS ORANGE.

FOR NIGHTTIME CLOSURE USE TYPE "A" FLASHING WARNING LIGHTS ON BARRICADES, SUPPORTING SIGNS AND CLOSING SIDEWALK. USE TYPE "C" STEADY BURN LIGHTS ON CHANNELIZING DEVICES SEPARATING THE WORK AREA FROM VEHICULAR TRAFFIC.

PEDESTRIAN TRAFFIC SIGNAL DISPLAY CONTROLLING CLOSED CROSSWALK SHALL BE COVERED OR DEACTIVATED.

POST MOUNTED SIGNS LOCATED ADJACENT TO A SIDEWALK SHALL HAVE A 7 FOOT MINIMUM CLEARANCE FROM THE BOTTOM OF THE SIGN TO THE SIDEWALK SURFACE.

ALTERNATE SIDEWALK WORK BETWEEN LEFT AND RIGHT SIDE OF ROADWAY TO MAINTAIN PEDESTRIAN ACCESS.

(1) IF SIDEWALK CLOSURE AFFECTS AN ACCESSIBLE AND DETECTABLE FACILITY, MAINTAIN ACCESSIBILITY AND DETECTABILITY ALONG THE ALTERNATE PEDESTRIAN ROUTE.

(2) "ROAD WORK AHEAD" SIGNS ARE NOT REQUIRED IF THE SIDEWALK CLOSURE OCCURS WITHIN A LARGER WORK ZONE WHERE ADVANCE WARNING SIGNS ARE ALREADY PRESENT, OR IF THE WORK AREA AND EQUIPMENT ARE MORE THAN 2 FEET BEHIND THE CURB.

(3) IF TEMPORARY PEDESTRIAN CROSSWALK IS NOT PROVIDED, OMIT R9-8 AND W011-2 SIGN ASSEMBLIES. IF PROVIDED INCLUDE ON BOTH SIDES OF THE CROSSWALK.

(4) TEMPORARY CURB RAMPS. SEE SDD 15 D 30 SHEET "B".

(5) DRUMS OR BARRICADES AT 25 FOOT SPACING. STREET PARKING SHALL BE PROHIBITED FOR AT LEAST 50 FEET IN ADVANCE OF THE MID-BLOCK CROSSWALK.

(6) TEMPORARY PAVEMENT MARKING FOR CROSSWALK LINES.

(7) LIMIT WORK TO ONE QUADRANT AT A TIME TO MINIMIZE PEDESTRIAN DISRUPTION.

LEGEND

- SIGN ON PERMANENT SUPPORT
- UNDER PEDESTRIAN TRAFFIC
- WORK AREA
- PEDESTRIAN CHANNELIZATION DEVICE
- TYPE II BARRICADE WITH/WITHOUT SIGN (ALL WITH ONE WARNING LIGHT, TYPE A, LOW-INTENSITY FLASHING)
- TYPE III BARRICADE WITH/WITHOUT SIGN (ALL WITH ONE WARNING LIGHT, TYPE A, LOW-INTENSITY FLASHING)
- DIRECTION OF TRAFFIC
- TRAFFIC CONTOL DRUM

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

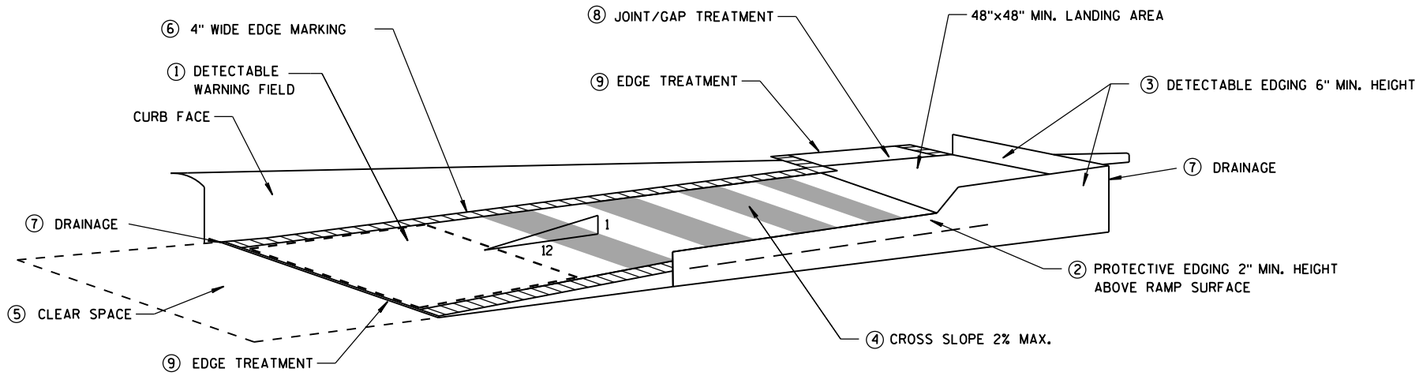
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 15 D 30-2a

6

S.D.D. 15 D 30-2a



TEMPORARY CURB RAMP PARALLEL TO CURB

GENERAL NOTES

NOTIFY THE BUS COMPANY 7 DAYS IN ADVANCE OF THE BUS STOP RELOCATION.

ALTERNATE SIDEWALK WORK BETWEEN LEFT AND RIGHT SIDE OF ROADWAY TO MAINTAIN PEDESTRIAN ACCESS.

① CURB RAMPS SHALL BE 48" MIN. WIDTH WITH A FIRM, STABLE AND SLIP RESISTANT SURFACE. INSTALL CONTRASTING DETECTABLE WARNING FIELD AT PEDESTRIAN STREET CROSSINGS. REFER TO SDD 8D5 SHEET "E".

② PROTECTIVE EDGING WITH A 2" MIN. HEIGHT SHALL BE INSTALLED WHEN A CURB RAMP OR LANDING PLATFORM HAS A VERTICAL DROP OF 6" OR GREATER OR HAS A SIDE APRON SLOPE STEEPER THAN 1:3 (33%). PROTECTIVE EDGING SHOULD BE CONSIDERED WHEN CURB RAMPS OR LANDING PLATFORMS HAVE A VERTICAL DROP OF 3" OR MORE.

③ DETECTABLE EDGING WITH 6" MIN. HEIGHT AND CONTRASTING COLOR SHALL BE INSTALLED ON ALL CURB RAMP LANDINGS WHERE THE WALKWAY CHANGES DIRECTION (TURNS).

④ CURB RAMPS AND LANDINGS SHALL HAVE A 1:50 (2%) MAX. CROSS-SLOPE.

⑤ CLEAR SPACE OF 48"X48" MIN. SHALL BE PROVIDED ABOVE AND BELOW THE CURB RAMP.

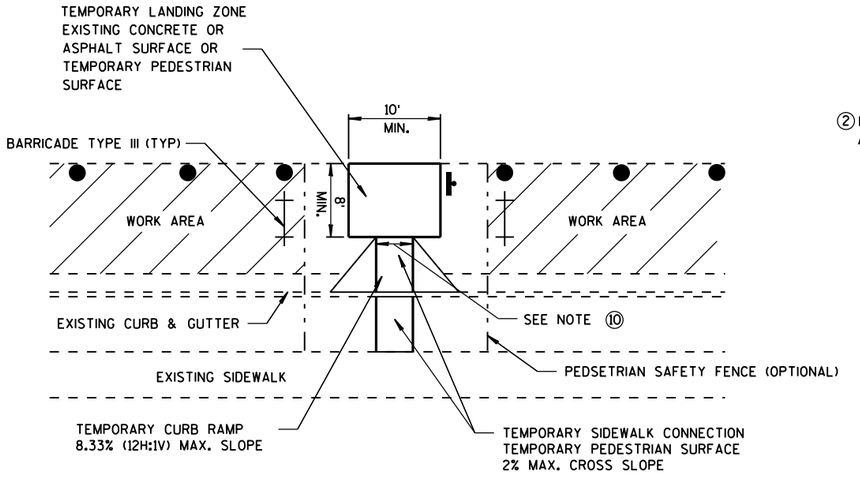
⑥ THE CURB RAMP WALKWAY EDGE SHALL BE MARKED WITH A YELLOW COLOR, 4" WIDE MARKING, UNLESS A CONTRASTING DETECTABLE WARNING FIELD IS PROVIDED.

⑦ DO NOT RESTRICT WATER FLOW IN THE GUTTER SYSTEM.

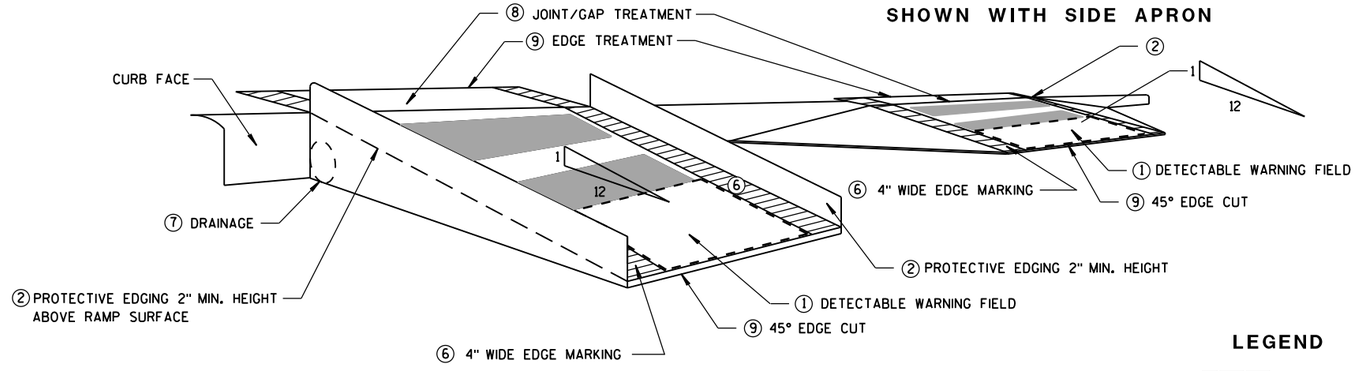
⑧ LATERAL JOINTS OR GAPS BETWEEN SURFACES SHALL BE LESS THAN 1/2" WIDTH.

⑨ CHANGES BETWEEN SURFACE HEIGHTS SHALL NOT EXCEED 1/2". LATERAL EDGES SHALL BE VERTICAL UP TO 1/4" HIGH, AND BEVELED AT 1:2 BETWEEN 1/4" AND 1/2".

⑩ 5' WIDE MIN. WITH PEDSETRIAN SAFETY FENCE, 10' WIDE MIN. WITHOUT PEDESTRIAN SAFETY FENCE.



TEMPORARY BUS STOP PAD



SHOWN WITH PROTECTIVE EDGE

SHOWN WITH SIDE APRON

TEMPORARY CURB RAMP PERPENDICULAR TO CURB

LEGEND

WORK AREA

TYPE III BARRICADE

TRAFFIC CONTOL DRUM

TRAFFIC CONTROL, TEMPORARY ADA COMPLIANT PEDESTRIAN ACCOMMODATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

March 2015 DATE — /S/ Travis Feltes STATE TRAFFIC ENGINEER — SIGN

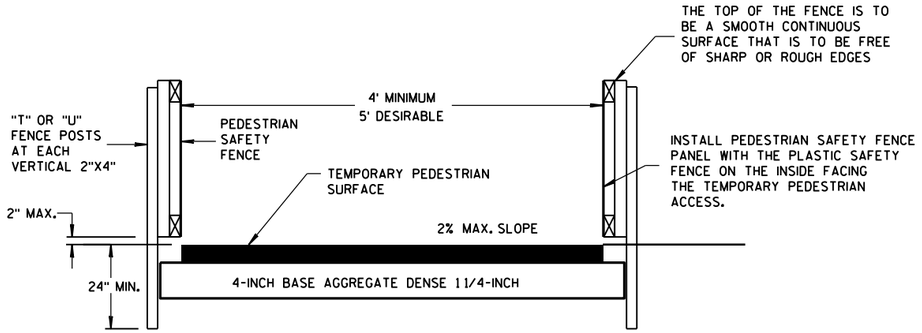
FHWA

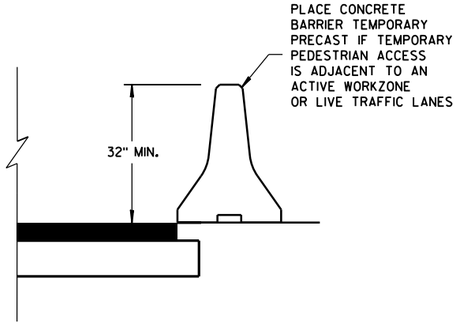
6

S.D.D. 15 D 30-2b

6

S.D.D. 15 D 30-2b

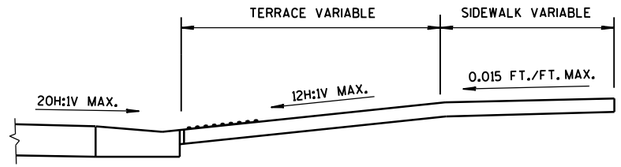




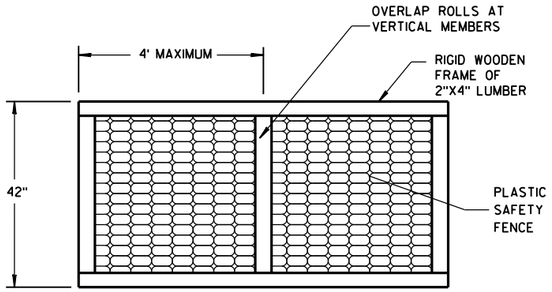
TEMPORARY PEDESTRIAN ACCESS

GENERAL NOTES

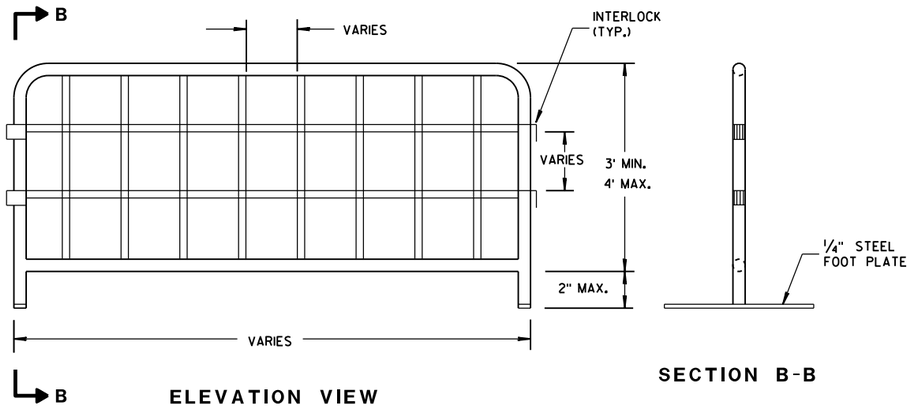
(1) INTERCHANGEABLE WITH THE PEDESTRIAN SAFETY FENCE.



SECTION A-A



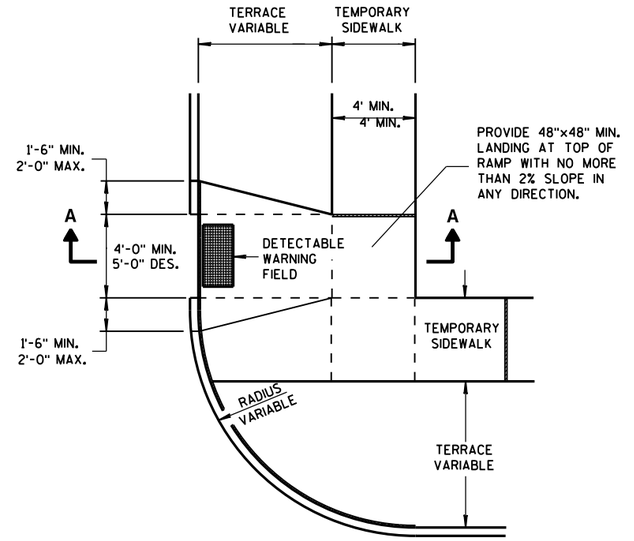
PEDESTRIAN SAFETY FENCE



ELEVATION VIEW

SECTION B-B

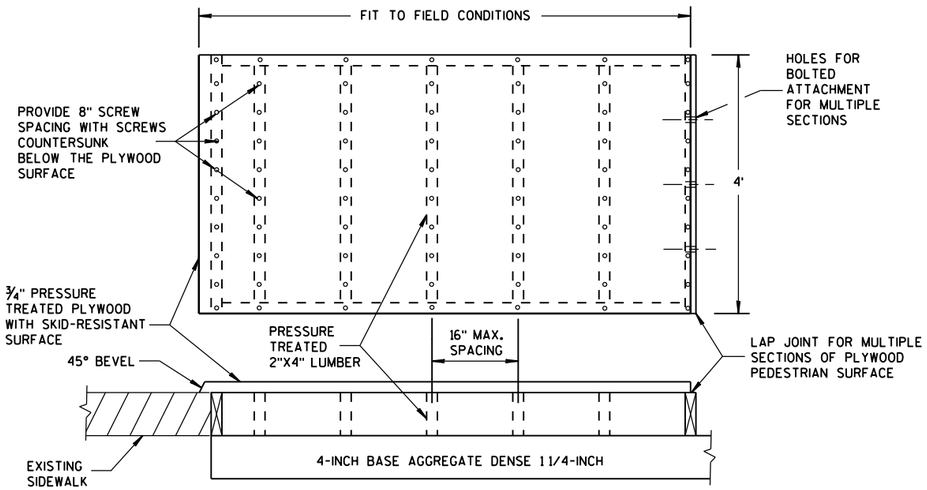
TEMPORARY PEDESTRIAN STEEL BARRICADE (1)



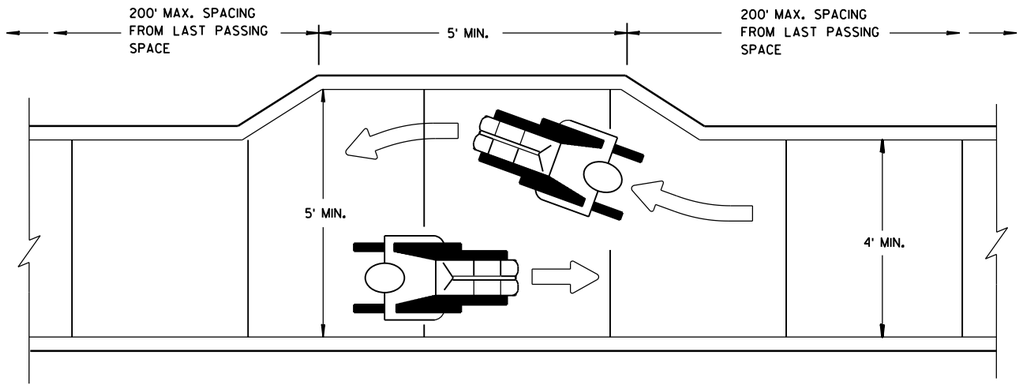
PLAN VIEW

TEMPORARY TYPE 3 RAMP

(OUTSIDE OF CROSSWALK AREA)



TEMPORARY PEDESTRIAN SURFACE PLYWOOD



NARROW SIDEWALK PASSING DETAIL

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2015 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER — SIGN
FHWA

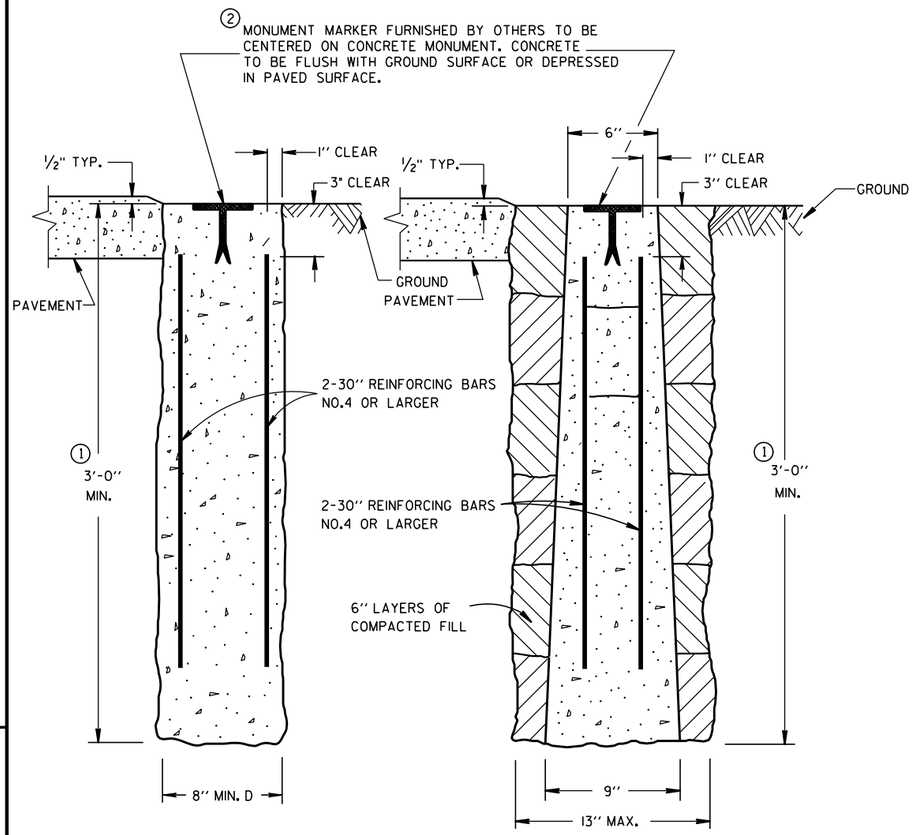
629

6

S.D.D. 15 D 30-2c

6

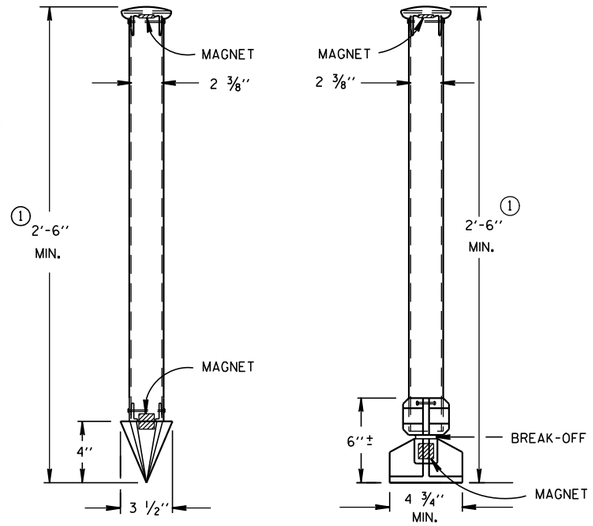
S.D.D. 15 D 30-2c



CAST-IN-PLACE PRECAST

CONCRETE MONUMENTS

TYPE A



TYPE C DRIVE-IN MONUMENT

TYPE D BREAK-OFF MONUMENT

ALUMINUM MONUMENTS

(INCLUDES MARKER)

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

DETAILED DRAWINGS OF PROPOSED ALTERNATE DESIGNS FOR METAL MONUMENTS OR MONUMENT COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

INSTALLED METAL MONUMENTS MUST BE EASILY DETECTED WITH A DIP NEEDLE. INSERT PERMANENT MAGNETS SHALL BE ATTACHED NEAR THE TOP AND BOTTOM OF THOSE MONUMENTS CONSTRUCTED OF A METAL ALLOY WHICH IS NOT ATTRACTIVE TO A DIP NEEDLE.

THE CAST IRON MONUMENT COVER SHALL BE A "NON-ROCKING" TYPE. ADJUSTMENT OF THE COVER TO GRADE MAY BE ACCOMPLISHED BY THE USE OF MORTAR AND BRICK, OR BY EITHER PRECAST OR CAST-IN-PLACE REINFORCED CONCRETE GRADE RINGS.

MONUMENTS SHALL BE LOCATED AND PLACED AT THE DIRECTION OF THE ENGINEER.

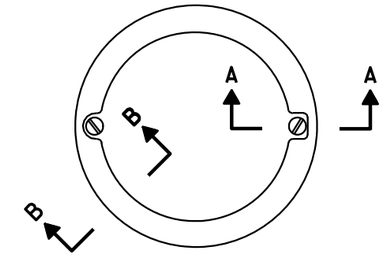
ALUMINUM MONUMENTS AND MONUMENT COVERS SHALL BE MADE FROM AN ALUMINUM AND MAGNESIUM ALLOY AS DETERMINED BY THE MANUFACTURER.

THE MONUMENT COVERS DETAILED ON THIS DRAWING ARE NOT EQUAL ALTERNATES. MONUMENT COVERS SHALL BE CAST IRON UNLESS ALUMINUM IS SPECIFIED ELSEWHERE IN THE CONTRACT.

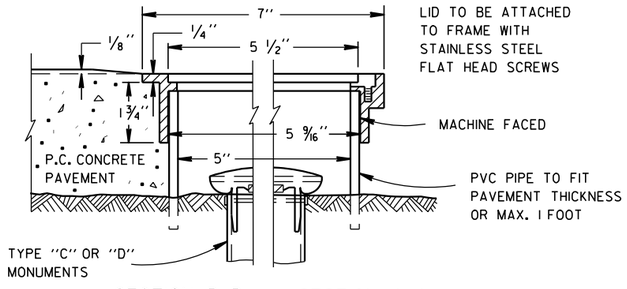
MONUMENT SHALL BE CAST-IN-PLACE CONCRETE UNLESS PRECAST CONCRETE OR ALUMINUM MONUMENTS ARE SPECIFIED IN THE CONTRACT OR PERMITTED BY THE ENGINEER.

① MINIMUM LENGTH SHALL BE 4'-0" FOR MONUMENTS INSTALLED IN PAVED AREAS.

② AN OFFICIAL COUNTY MONUMENT MARKER SUPPLIED BY A COUNTY MAY BE REQUIRED FOR SOME SECTION CORNERS AND WITNESS MONUMENTS INSTEAD OF THIS WIS DOT MARKER.



TOP VIEW

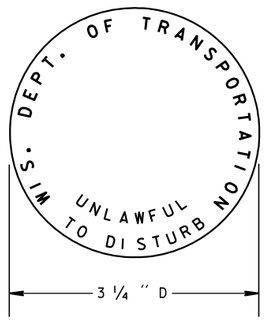


SECTION B-B SECTION A-A

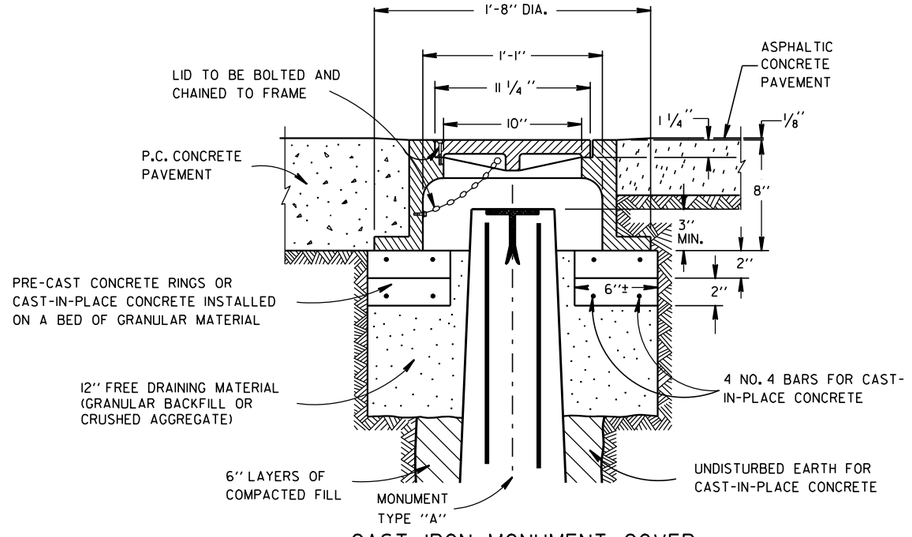
ALUMINUM MONUMENT COVER

(APPROXIMATE WEIGHT 2 LBS)

(FOR CONCRETE PAVEMENT ONLY)



② WIS DOT MONUMENT MARKER LOGO FOR TYPES "A", "C" & "D"



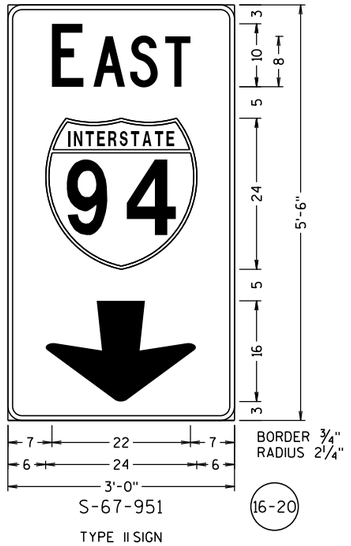
CAST IRON MONUMENT COVER

(APPROXIMATE WEIGHT - 95 LBS.)

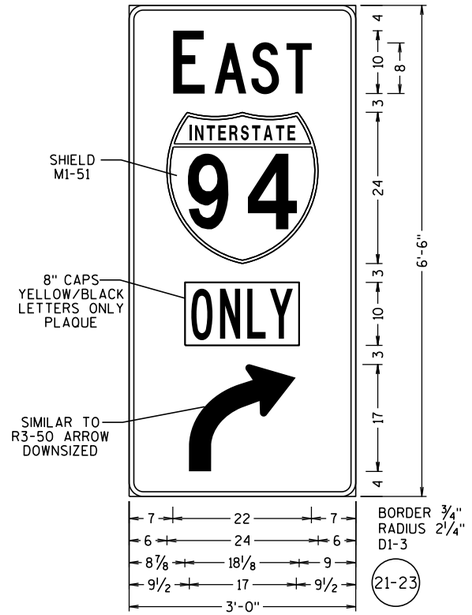
LANDMARK REFERENCE MOUNMENTS AND COVERS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
9/22/1999 DATE
/S/ Rory L. Rhinesmith
CHIEF ROADWAY DEVELOP 630 NEER
FHWA



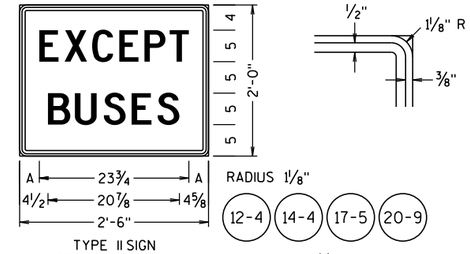
TYPE II SIGN
MESSAGE SERIES C
GREEN BACKGROUND/WHITE COPY
TYPE C ARROW



TYPE I SIGN
MESSAGE SERIES C
GREEN BACKGROUND/WHITE COPY
TYPE SH SHEETING

GENERAL NOTES:

1. DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE PLANS.
2. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET ARE "SIGNS, TYPE I".
3. UNLESS OTHERWISE NOTED, TYPE II SIGNS ON THIS SHEET SHALL HAVE "TYPE H REFLECTIVE SHEETING" AND, "TYPE H MESSAGE MATERIAL". TYPE I SIGNS SHALL HAVE TYPE SH REFLECTIVE SHEETING.
4. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET SHALL HAVE A GREEN BACKGROUND AND WHITE MESSAGE.
5. TYPE II SIGNS ALL UPPER CASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE "SERIES E. ALL LOWER CASE MESSAGE WITH AN INITIAL UPPER CASE LETTER SHALL BE "SERIES E.
6. TYPE I SIGNS - ALL UPPER CASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE SERIES "E" MODIFIED. ALL LOWER CASE MESSAGE WITH AN INITIAL UPPER CASE LETTER SHALL BE SERIES "E" MODIFIED. ALL CAP WORDS ARE "SERIES E"
7. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET SHALL HAVE "TYPE A" OR "TYPE C" ARROWS AS SHOWN. SEE THE STANDARD SIGN PLATES FOR FURTHER DETAILS.
8. SEE THE STANDARD SIGN PLATES FOR FURTHER DETAILS ON ROUTE MARKER SHIELDS.
9. THE SIGN NUMBER IS DENOTED IN THE CIRCLE NEAR EACH DETAIL.
10. NUMBER FRACTIONS FOR INTERCHANGE SEQUENCE SIGNS SHALL BE SERIES "E" PER PLATES A11-7 AND A11-10
11. DO NOT SCALE.



TYPE II SIGN
MESSAGE SERIES C
BLACK BACKGROUND/WHITE COPY
HIGH INTENSITY SHEETING

A = 3⅛"

7

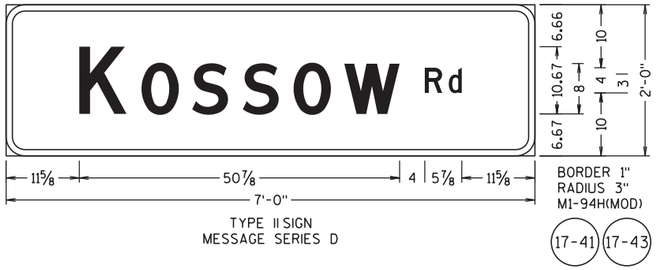
7

SHEET 1 OF 5

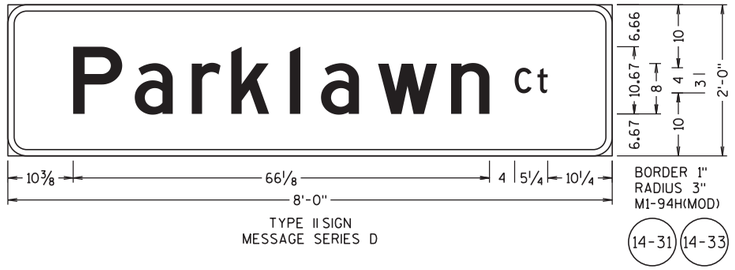
PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	SIGNING DETAIL - TYPE I & II SIGNS	SCALE: 0 ½" 1"	SHEET 631	E

FILE NAME : J:\projects\d2_22001618\Sign\070101_ms.dgn PLOT DATE : 14-JUL-2015 10:51 PLOT BY : dotcmv PLOT NAME : PLOT SCALE : 48.125:1

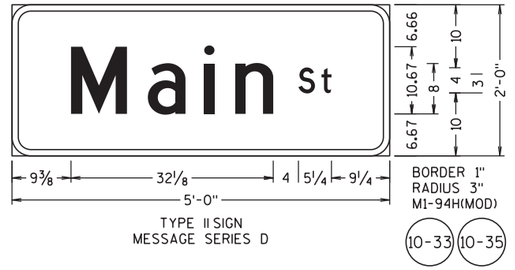
WISDOT/CADDS SHEET 47



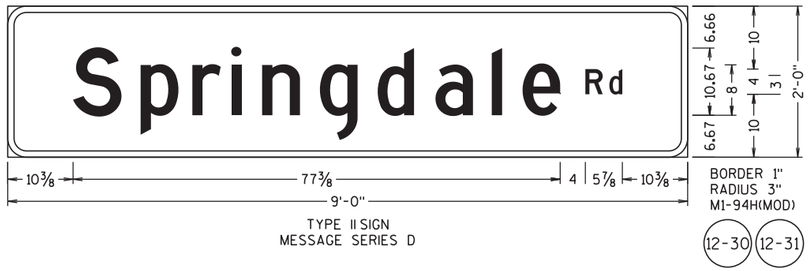
TYPE II SIGN
MESSAGE SERIES D



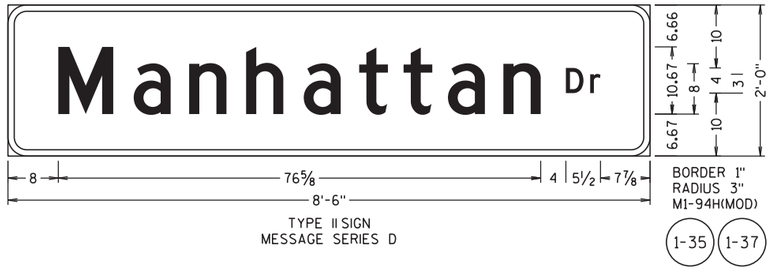
TYPE II SIGN
MESSAGE SERIES D



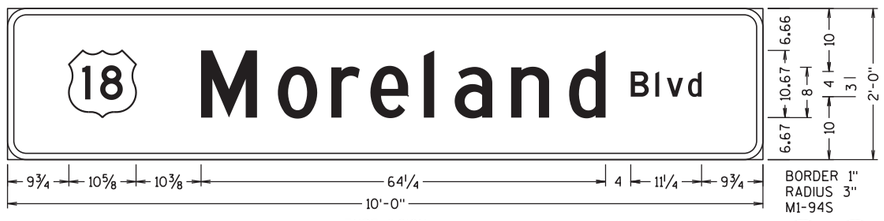
TYPE II SIGN
MESSAGE SERIES D



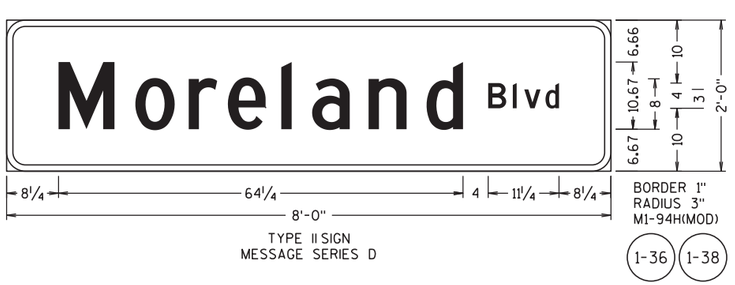
TYPE II SIGN
MESSAGE SERIES D



TYPE II SIGN
MESSAGE SERIES D



TYPE II SIGN
MESSAGE SERIES D



TYPE II SIGN
MESSAGE SERIES D

GENERAL NOTES:

1. DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE PLANS.

2. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET ARE "SIGNS, TYPE I".

3. UNLESS OTHERWISE NOTED, TYPE II SIGNS ON THIS SHEET SHALL HAVE "TYPE H REFLECTIVE SHEETING" AND, "TYPE H MESSAGE MATERIAL". TYPE I SIGNS SHALL HAVE TYPE SH REFLECTIVE SHEETING.

4. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET SHALL HAVE A GREEN BACKGROUND AND WHITE MESSAGE.

5. TYPE II SIGNS ALL UPPER CASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE "SERIES E. ALL LOWER CASE MESSAGE WITH AN INITIAL UPPER CASE LETTER SHALL BE "SERIES E.

6. TYPE I SIGNS - ALL UPPER CASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE SERIES "E" MODIFIED. ALL LOWER CASE MESSAGE WITH AN INITIAL UPPER CASE LETTER SHALL BE SERIES "E" MODIFIED. ALL CAP WORDS ARE "SERIES E"

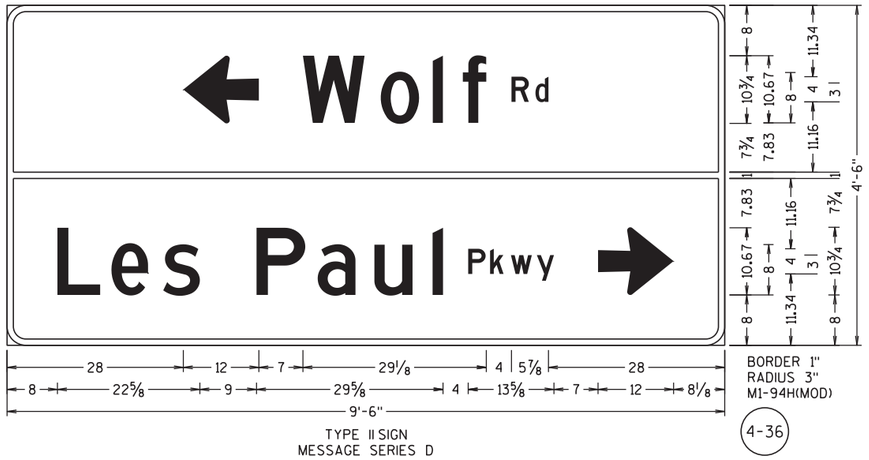
7. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET SHALL HAVE "TYPE A" OR "TYPE C" ARROWS AS SHOWN. SEE THE STANDARD SIGN PLATES FOR FURTHER DETAILS.

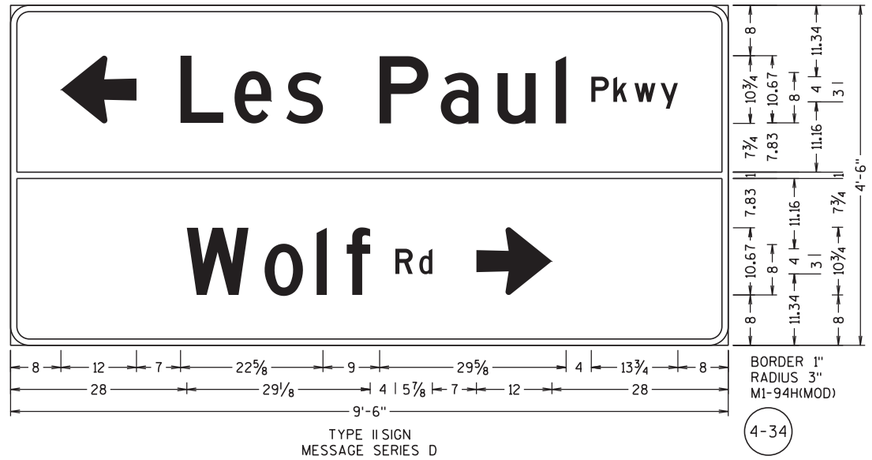
8. SEE THE STANDARD SIGN PLATES FOR FURTHER DETAILS ON ROUTE MARKER SHIELDS.

9. THE SIGN NUMBER IS DENOTED IN THE CIRCLE NEAR EACH DETAIL.

10. NUMBER FRACTIONS FOR INTERCHANGE SEQUENCE SIGNS SHALL BE SERIES "E" PER PLATES A11-7 AND A11-10

11. DO NOT SCALE.





GENERAL NOTES:

1. DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE PLANS.

2. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET ARE "SIGNS, TYPE I".

3. UNLESS OTHERWISE NOTED, TYPE II SIGNS ON THIS SHEET SHALL HAVE "TYPE H REFLECTIVE SHEETING" AND, "TYPE H MESSAGE MATERIAL". TYPE I SIGNS SHALL HAVE TYPE SH REFLECTIVE SHEETING.

4. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET SHALL HAVE A GREEN BACKGROUND AND WHITE MESSAGE.

5. TYPE II SIGNS ALL UPPER CASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE "SERIES E. ALL LOWER CASE MESSAGE WITH AN INITIAL UPPER CASE LETTER SHALL BE "SERIES E.

6. TYPE I SIGNS - ALL UPPER CASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE SERIES "E" MODIFIED. ALL LOWER CASE MESSAGE WITH AN INITIAL UPPER CASE LETTER SHALL BE SERIES "E" MODIFIED. ALL CAP WORDS ARE "SERIES E"

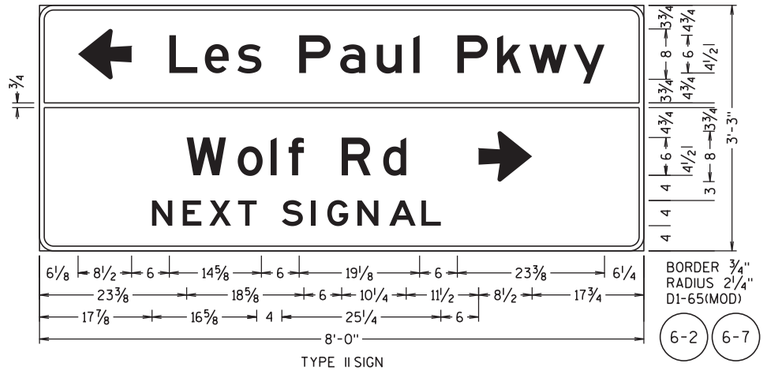
7. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET SHALL HAVE "TYPE A" OR "TYPE C" ARROWS AS SHOWN. SEE THE STANDARD SIGN PLATES FOR FURTHER DETAILS.

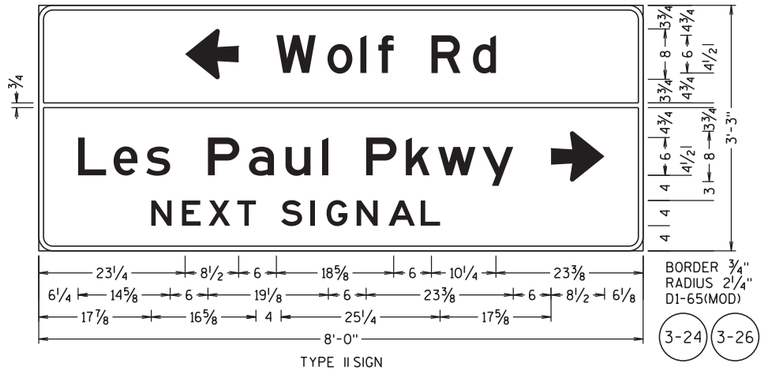
8. SEE THE STANDARD SIGN PLATES FOR FURTHER DETAILS ON ROUTE MARKER SHIELDS.

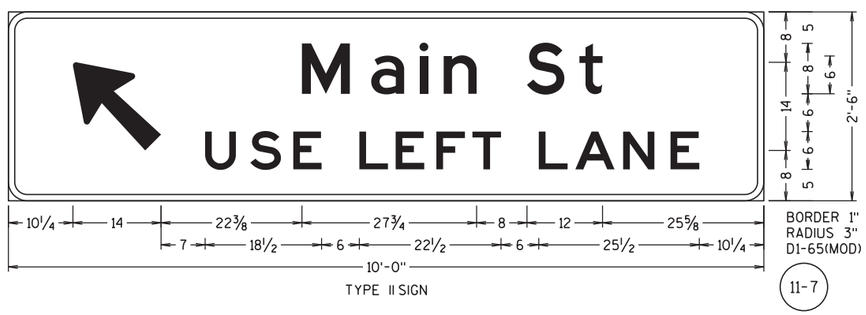
9. THE SIGN NUMBER IS DENOTED IN THE CIRCLE NEAR EACH DETAIL.

10. NUMBER FRACTIONS FOR INTERCHANGE SEQUENCE SIGNS SHALL BE SERIES "E" PER PLATES A11-7 AND A11-10

11. DO NOT SCALE.

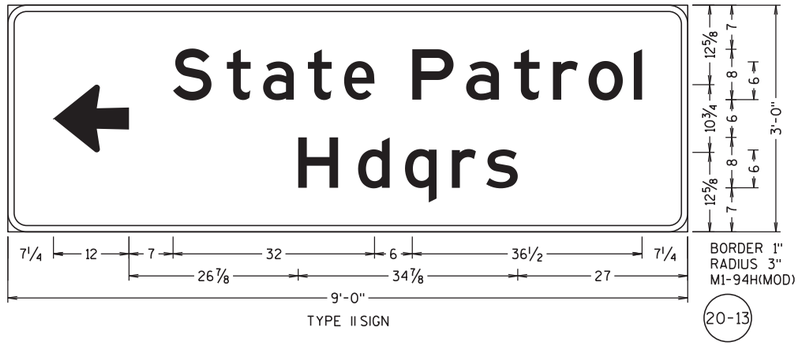




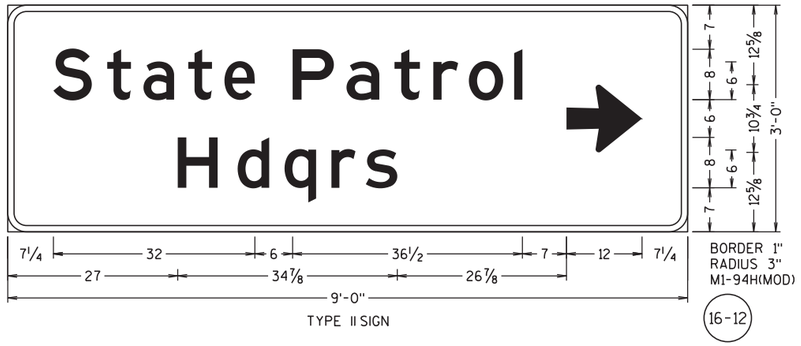


PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	SIGNING DETAIL - TYPE I & II SIGNS	SCALE: 0 1/2" 1"	SHEET 633	E

FILE NAME : J:\projects\d2_22001618\Sign\070101_ms.dgn PLOT DATE : 21-APR-2015 07:47 PLOT BY : mscppl PLOT NAME : PLOT SCALE : 48.125:1
WISDOT/CADDS SHEET 47



TYPE II SIGN



TYPE II SIGN

GENERAL NOTES:

1. DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE PLANS.

2. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET ARE "SIGNS, TYPE I".

3. UNLESS OTHERWISE NOTED, TYPE II SIGNS ON THIS SHEET SHALL HAVE "TYPE H REFLECTIVE SHEETING" AND, "TYPE H MESSAGE MATERIAL". TYPE I SIGNS SHALL HAVE TYPE SH REFLECTIVE SHEETING.

4. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET SHALL HAVE A GREEN BACKGROUND AND WHITE MESSAGE.

5. TYPE II SIGNS ALL UPPER CASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE "SERIES E. ALL LOWER CASE MESSAGE WITH AN INITIAL UPPER CASE LETTER SHALL BE "SERIES E.

6. TYPE I SIGNS - ALL UPPER CASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE SERIES "E" MODIFIED. ALL LOWER CASE MESSAGE WITH AN INITIAL UPPER CASE LETTER SHALL BE SERIES "E" MODIFIED. ALL CAP WORDS ARE "SERIES E"

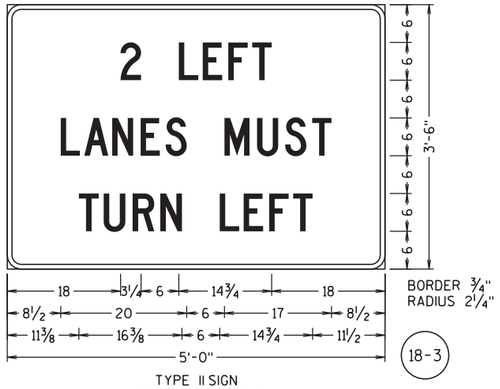
7. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET SHALL HAVE "TYPE A" OR "TYPE C" ARROWS AS SHOWN. SEE THE STANDARD SIGN PLATES FOR FURTHER DETAILS.

8. SEE THE STANDARD SIGN PLATES FOR FURTHER DETAILS ON ROUTE MARKER SHIELDS.

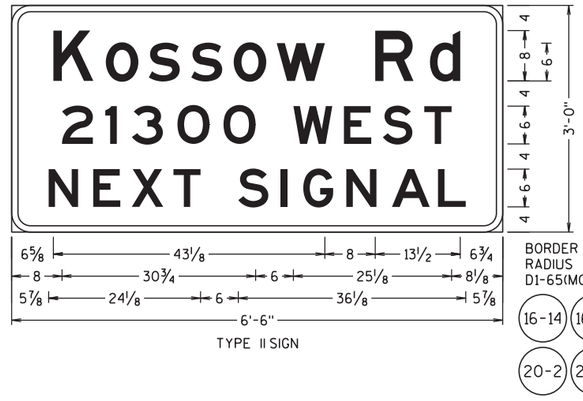
9. THE SIGN NUMBER IS DENOTED IN THE CIRCLE NEAR EACH DETAIL.

10. NUMBER FRACTIONS FOR INTERCHANGE SEQUENCE SIGNS SHALL BE SERIES "E" PER PLATES A11-7 AND A11-10

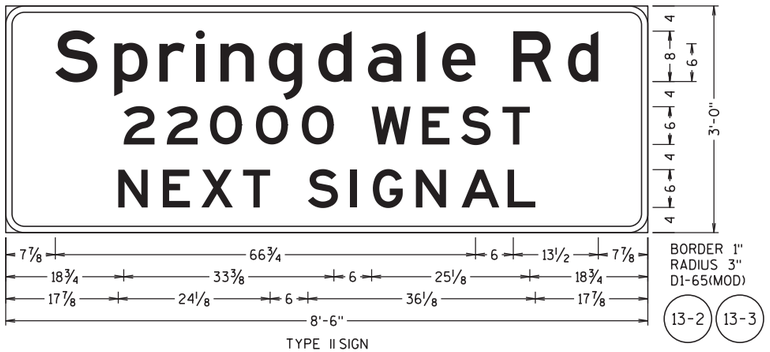
11. DO NOT SCALE.



TYPE II SIGN
MESSAGE SERIES C
WHITE BACKGROUND/BLACK COPY



TYPE II SIGN



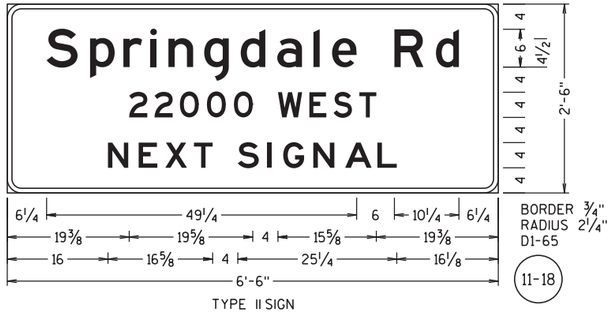
TYPE II SIGN

SHEET 4 OF 5

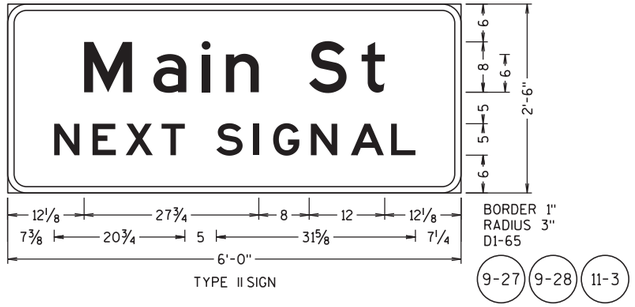
PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	SIGNING DETAIL - TYPE I & II SIGNS	SCALE: 0 ½" 1"	SHEET 634	E

FILE NAME : J:\projects\d2_22001618\Sign\070101_ms.dgn PLOT DATE : 21-APR-2015 07:47 PLOT BY : mscppl PLOT NAME : PLOT SCALE : 48.125:1

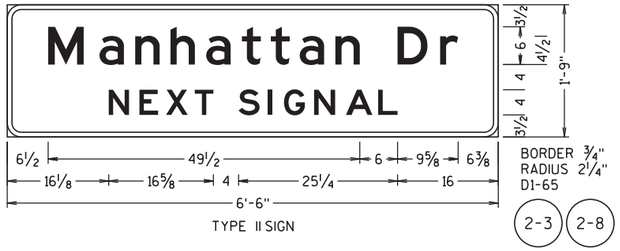
WISDOT/CADDS SHEET 47



TYPE II SIGN



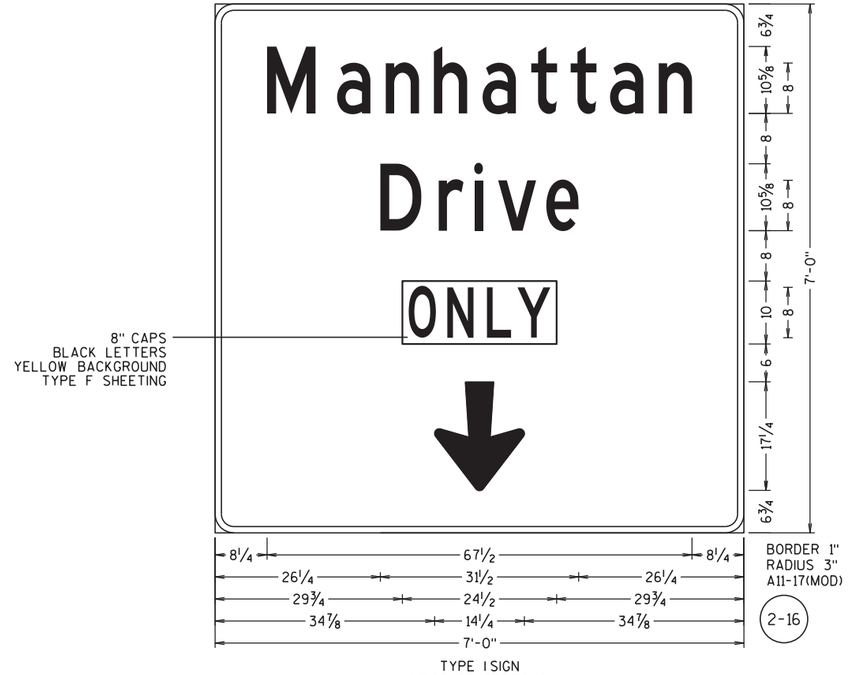
TYPE II SIGN



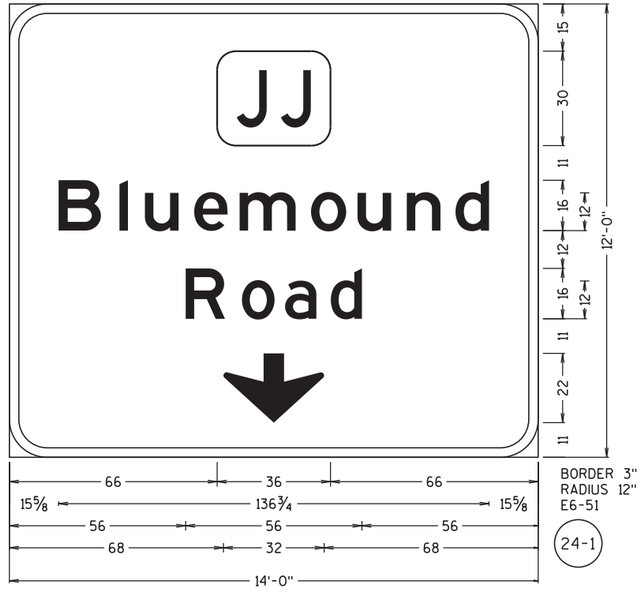
TYPE II SIGN

GENERAL NOTES:

1. DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE PLANS.
2. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET ARE "SIGNS, TYPE I".
3. UNLESS OTHERWISE NOTED, TYPE II SIGNS ON THIS SHEET SHALL HAVE "TYPE H REFLECTIVE SHEETING" AND, "TYPE H MESSAGE MATERIAL". TYPE I SIGNS SHALL HAVE TYPE SH REFLECTIVE SHEETING.
4. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET SHALL HAVE A GREEN BACKGROUND AND WHITE MESSAGE.
5. TYPE II SIGNS ALL UPPER CASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE "SERIES E. ALL LOWER CASE MESSAGE WITH AN INITIAL UPPER CASE LETTER SHALL BE "SERIES E.
6. TYPE I SIGNS - ALL UPPER CASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE SERIES "E" MODIFIED. ALL LOWER CASE MESSAGE WITH AN INITIAL UPPER CASE LETTER SHALL BE SERIES "E" MODIFIED. ALL CAP WORDS ARE "SERIES E"
7. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET SHALL HAVE "TYPE A" OR "TYPE C" ARROWS AS SHOWN. SEE THE STANDARD SIGN PLATES FOR FURTHER DETAILS.
8. SEE THE STANDARD SIGN PLATES FOR FURTHER DETAILS ON ROUTE MARKER SHIELDS.
9. THE SIGN NUMBER IS DENOTED IN THE CIRCLE NEAR EACH DETAIL.
10. NUMBER FRACTIONS FOR INTERCHANGE SEQUENCE SIGNS SHALL BE SERIES "E" PER PLATES A11-7 AND A11-10
11. DO NOT SCALE.



TYPE I SIGN
MESSAGE SERIES C



S-67-319
TYPE I SIGN

SHEET 5 OF 5

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	SIGNING DETAIL - TYPE I & II SIGNS	SCALE: 0 ½" 1"	SHEET 635	E

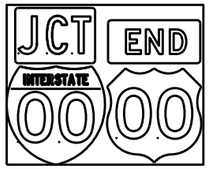
FILE NAME : J:\projects\d2_22001618\Sign\070101_ms.dgn PLOT DATE : 21-APR-2015 07:47 PLOT BY : mscppl PLOT NAME : PLOT SCALE : 48.125:1

WISDOT/CADDS SHEET 47

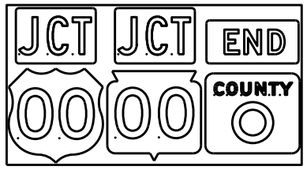
TYPICAL ASSEMBLIES



J1-1



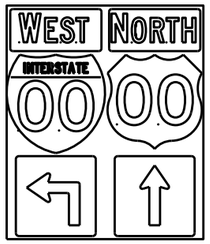
J1-2



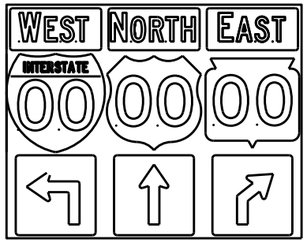
J1-3



J2-1



J2-2

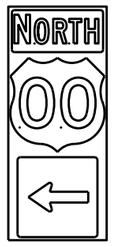


J2-3

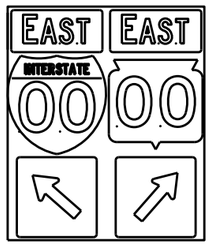


JV

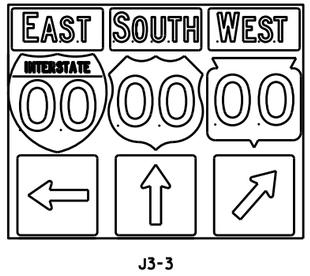
(Typical Vertical J-Assembly
See Note 10 and 11)



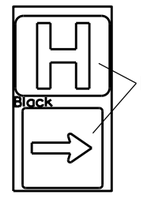
J3-1



J3-2



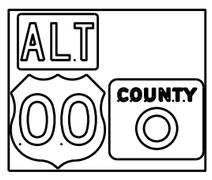
J3-3



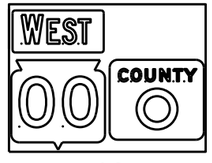
JH-1



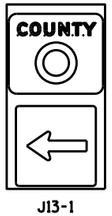
J4-1



J4-2



J4-2



J13-1



J12-1



J32-1



J33-1

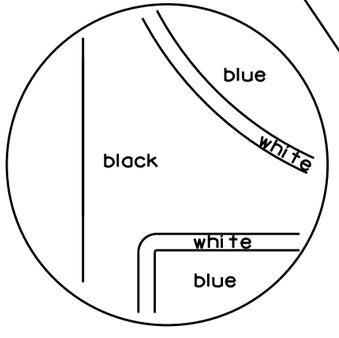


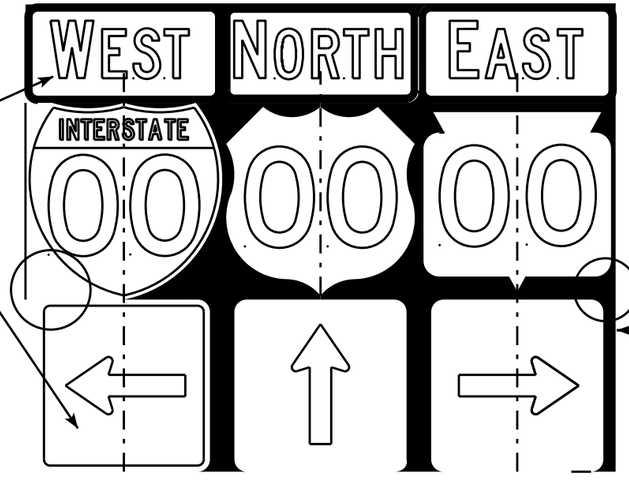
J23-1

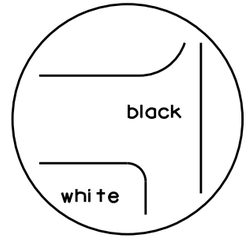


J22-1

[blue background with interstate]







[black background]

NOTES

1. Signs are Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Black Non-reflective
   Message - see Note 5
3. Message Series - See Note 5
4. Corners shall be square or rounded if base material is plywood. If base material is metal the corners shall be rounded.
5. The colors and message spacing on each marker shall be according to the applicable route marker panel specifications.
6. Certain marker heads require the component pieces to be the same color. As an example, all the components used with an M1-1 Interstate marker shall be blue.
7. Single panel j-assemblies shall only be used with route marker shields that are same size. If the route marker shields are different size use multiple piece component.
8. Route assemblies that have 24 inch route shields and have dimensions greater than 48 inches (both vertical and horizontal) shall have one horizontal splice between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 inches or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
9. Route assemblies that have 36 inch shields and have dimensions greater than 48 inchs (both vertical and horizontal) shall have two horizontal splices. One horizontal splice shall be between the cardinal direction and route shields and the other horizontal splice shall be between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
10. All Vertical J Assemblies are given a Sign Code of JV
11. For JV Assemblies that have a mixture of Interstate and non Interstate shields, arrows and cardinals shall be white on blue.

ROUTE MARKERS & COMPONENTS
IN TYPICAL ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

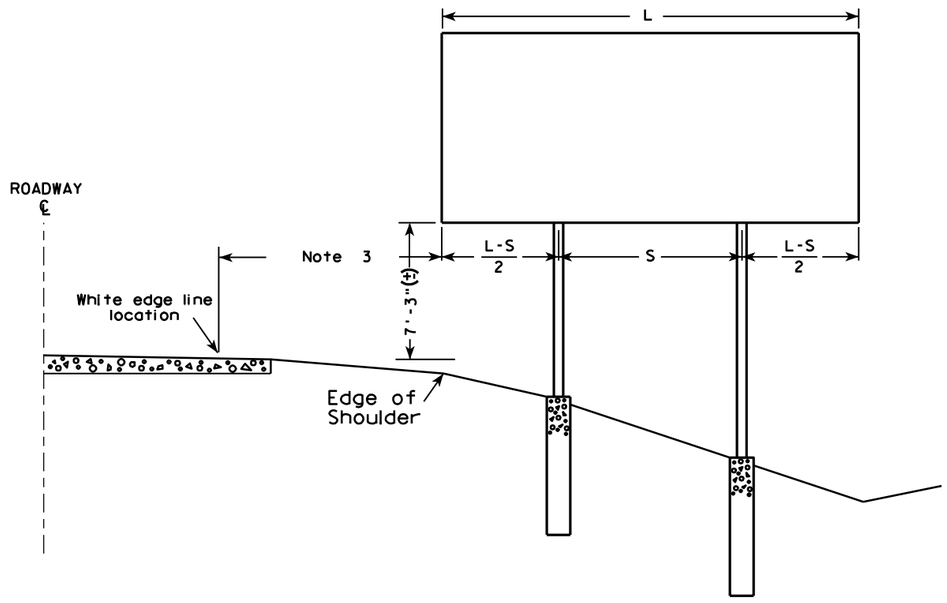
APPROVED Matthew R Rauch
for State Traffic Engineer

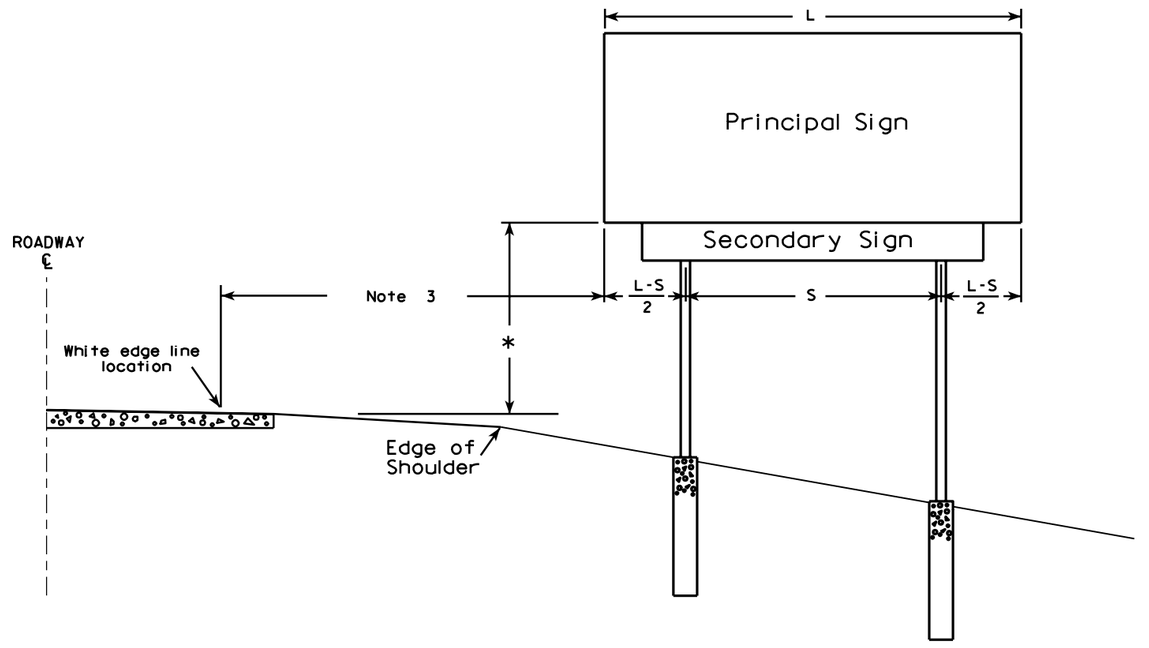
DATE 2/06/14 PL A2-1S.8

PROJECT NO: SHEET NO: E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A21S.DGN PLOT DATE : 06-FEB-2014 14:10 PLOT BY : mscsja PLOT NAME :

WISDOT/CADDS SHEET 42





GENERAL NOTES

1. For a 2 post installation, S equals 3L/5, but shall not be less than 9 ft.
2. For a 3 post installation, S equals 5L/7, but shall not be less than 18 ft., and the space between any two posts shall not be less than 9 ft.
3. Unless noted in the plan, the sign offset distance shall be a minimum of 17'-6", desirable 30'-0".
4. The (±) tolerance shown on this sheet is 3 in.
5. The vertical sign height clearance detailed is measured from the bottom of the sign to the near edge of pavement.
6. Post lengths shown in the miscellaneous quantities are estimated lengths. The contractor shall verify post lengths at the time of final grading.
7. Refer to the Traffic Guidelines Manual for further guidance on minimum vertical clearance requirements.

* Clearance is 8'-3"(±) when the secondary sign is 3 ft. or less in height. For secondary signs larger than 3 ft., the clearance to the bottom of the secondary sign shall be 5'-3"(±).

7

7

TYPICAL INSTALLATION OF TYPE I SIGNS

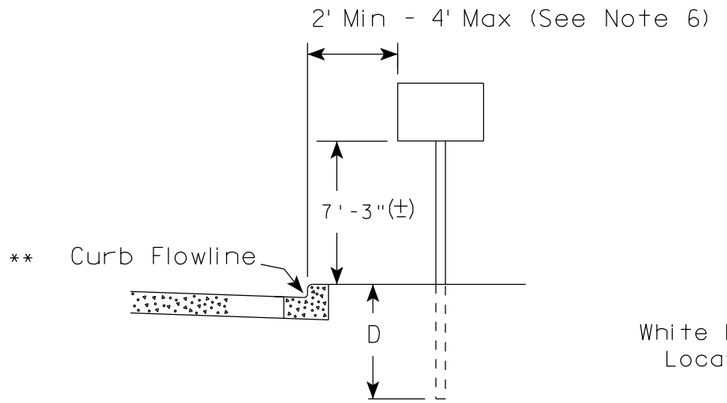
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

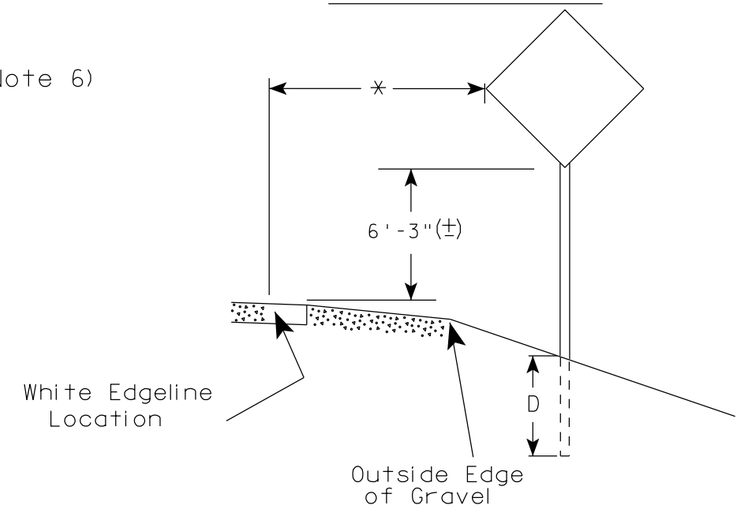
DATE 4/02/08 PLATE NO. A4-1.9

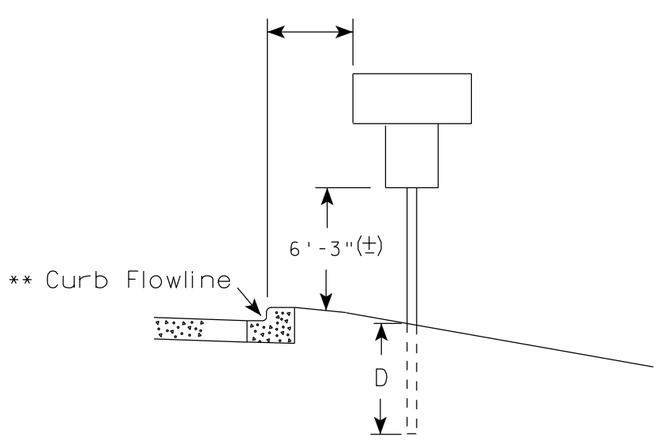
PROJECT NO:				SHEET NO: 637	E

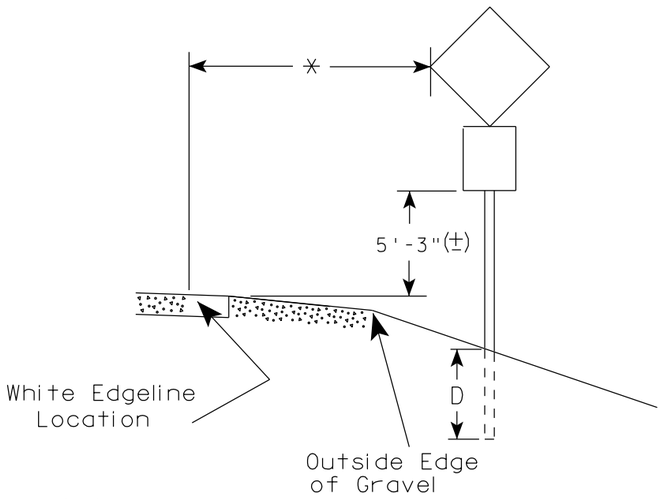
URBAN AREA



RURAL AREA (See Note 2)







** The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.

* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

POST EMBEDMENT DEPTH

Area of Sign Installation (Sq. Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

GENERAL NOTES

1. Signs wider than 4 feet, 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on barrier wall, see A4-10 sign plate.
3. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
4. Minimum mounting height for J assemblies (A2-1S) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
5. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. The (±) tolerance for mounting height is 3 inches.
8. Folding signs shall be mounted at a height of 5'-3" (±) or as directd by the Engineer.
9. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Enhanced Reference Markers, Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±).

TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

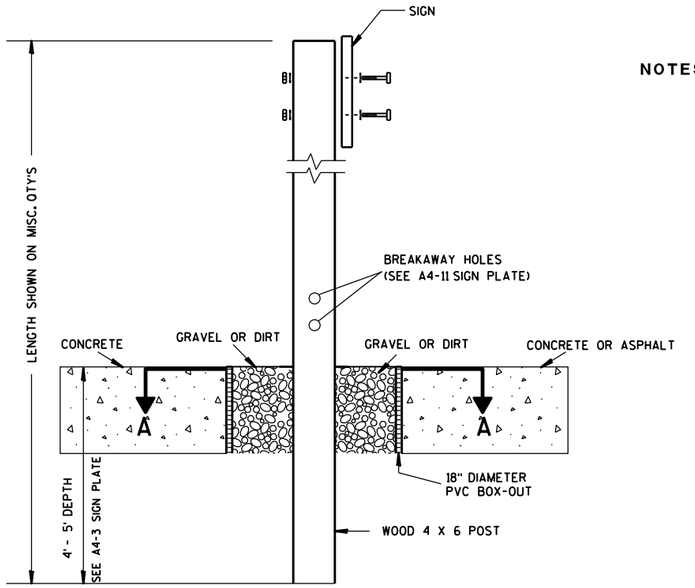
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/12/14 PLATE NO. A4-3.19

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

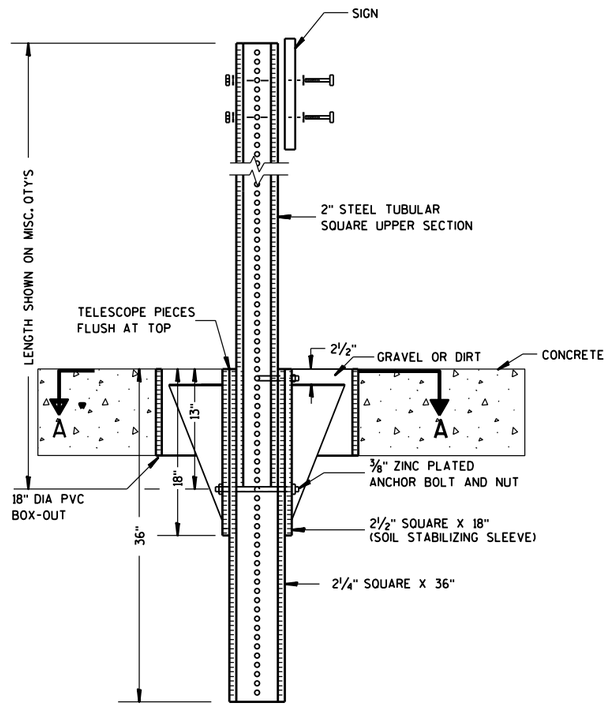
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43.DGN PLOT DATE : 12-NOV-2014 14:03 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 99.237937:1.000000 WISDOT/CADDS SHEET 42



ELEVATION VIEW

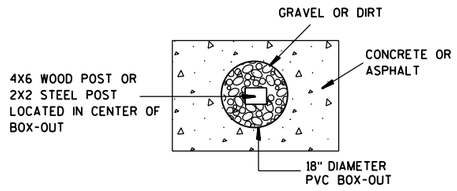
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

NOTES:
1. ALL MATERIAL TO BE APPROVED BY ENGINEER PRIOR TO INSTALLATION
2. SEE SIGN PLATE A4-8 FOR SIGN HARDWARE REQUIREMENTS
3. 18 INCH X 18 INCH SQUARE BOX-OUTS MAY BE USED FOR INSTALLATIONS IN EXISTING CONCRETE OR ASPHALT LOCATIONS.



ELEVATION VIEW

DETAIL OF STEEL 2 X 2 SIGN POST IN BOX-OUT



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST BOX-OUTS A4-3B

WISCONSIN DEPT OF TRANSPORTATION

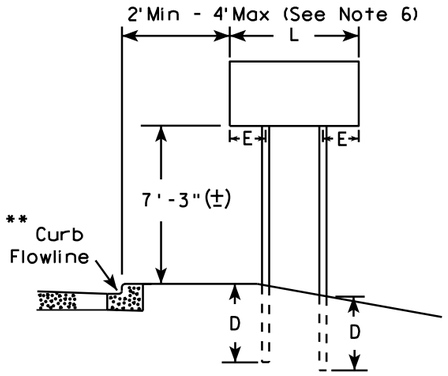
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/27/14 PLATE NO. A4-3B.1

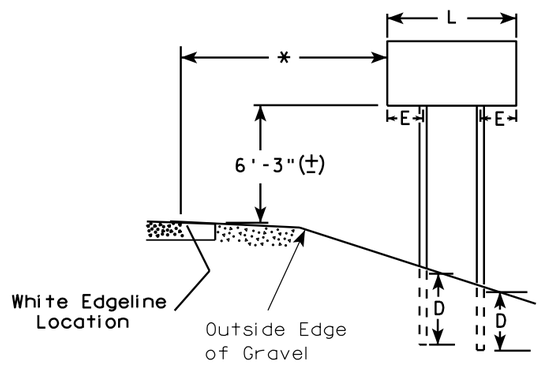
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

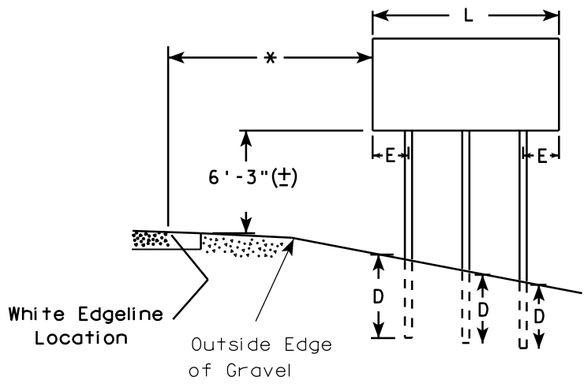
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43B.DGN PLOT DATE : 27-JAN-2014 09:48 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000 WISDOT/CADDS SHEET 42

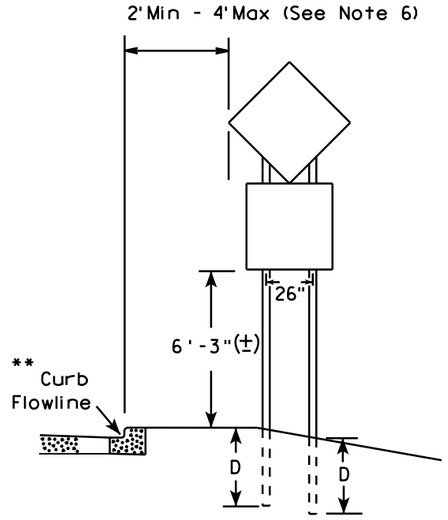
URBAN AREA



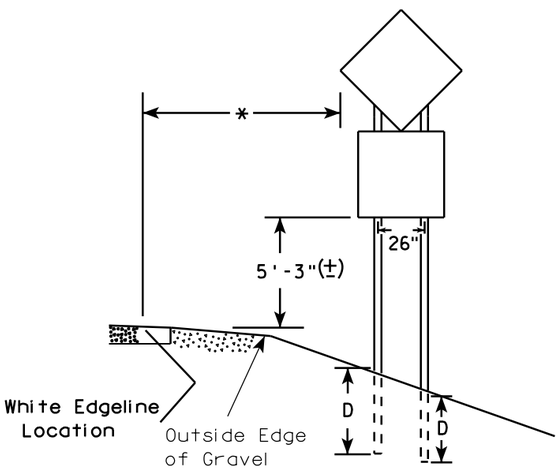
RURAL AREA (See Note 3)







48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

***	SIGN SHAPE OTHER THAN DIAMOND (TWO POSTS REQUIRED)	
	L	E
	Greater than 48" Less than 60"	12"
	60" to 120"	L/5

SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 120" less than 168"	12"

SIGN SHAPE OTHER THAN DIAMOND (FOUR POSTS REQUIRED)	
L	E
168" and greater	12"

GENERAL NOTES

1. For 3 or 4 post installations, individual post spacing shall be greater than 3'-6".
2. See tables below for required number of posts.
3. For expressways and freeways, mounting height is 7'-3" (±) or 6'-3" (±) depending upon existence of sub-sign.
4. The (±) tolerance for mounting height is 3 inches.
5. Minimum mounting height for J assemblies (A2-1S) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. Folding signs shall be mounted at a height of 5'-3" (±) or as directed by the engineer.
8. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4"-3" (±).

* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

** The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.

*** See A4-3 sign plate for signs 4' or less in width or less than 20 S.F. in area.

POST EMBEDMENT DEPTH

Area of Sign Installation (Sq. Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

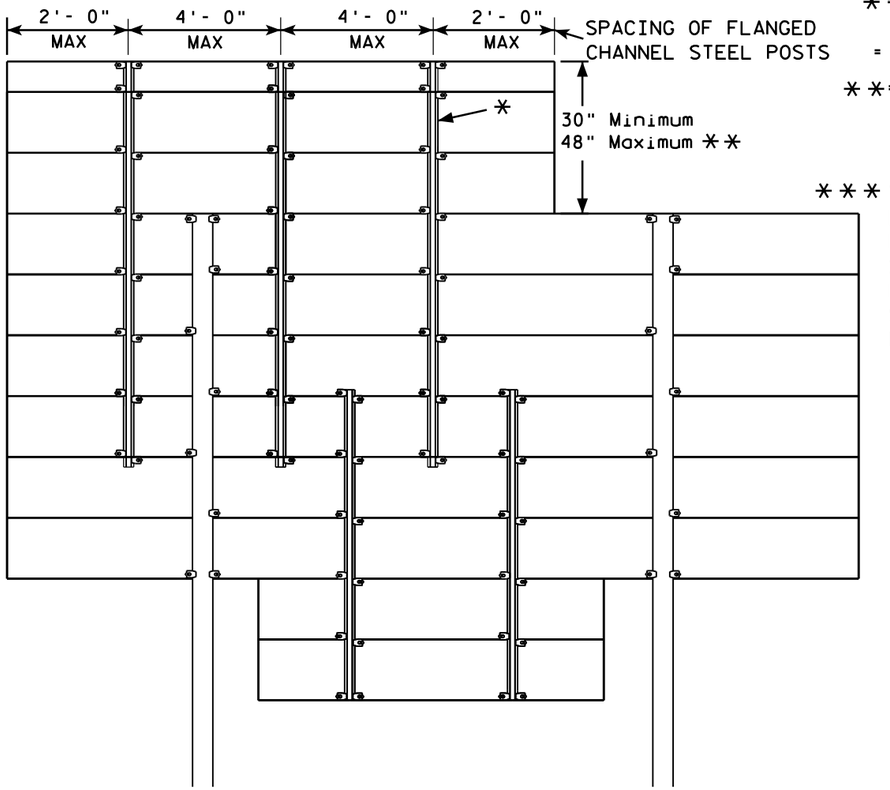
DATE 11/12/14 PLATE NO. A4-4 640 13

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A44.DGN PLOT DATE : 12-NOV-2014 14:01 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 107.021305:1.000000

WISDOT/CADDS SHEET 42

GROUND MOUNTED SIGN

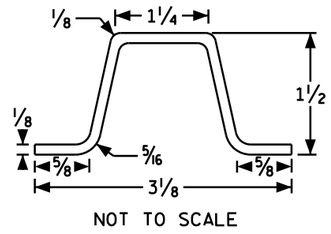


* =2.00 lb/ft FLANGED CHANNEL, MIN. YIELD STRENGTH = 60,000 PSI (GRADE 60) GALVANIZED

** =FOR 48" HEIGHT PANELS ON OVERHEAD STRUCTURES, ENTIRE SIGN SHALL BE CENTERED VERTICALLY ABOUT THE DEPTH OF THE TRUSS.

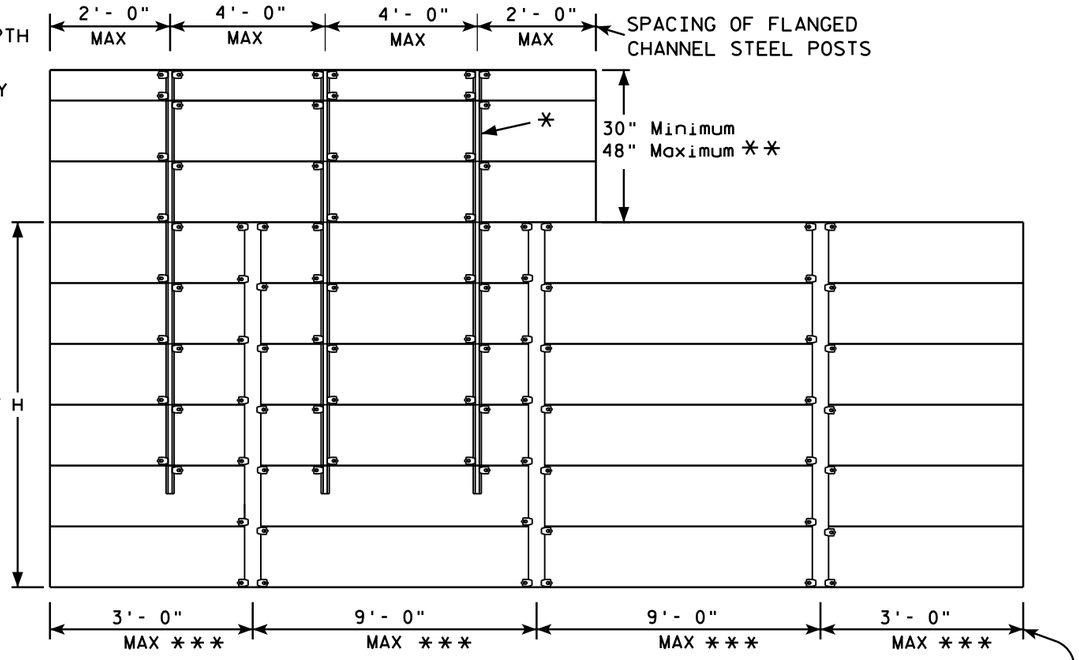
*** THESE SPACING DISTANCES SHALL ONLY BE USED WHEN THE MAIN SIGN HAS A MAXIMUM HEIGHT (DIMENSION H) OF 16 FT OR LESS. FOR SIGNS WITH A HEIGHT OF GREATER THAN 16 FT, STRUCTURAL CALCULATIONS SHALL BE PERFORMED.

FLANGE CHANNEL DETAIL



NOT TO SCALE

SIGN BRIDGE MOUNTED SIGN



GENERAL NOTES

1. Flanged channel steel posts shall conform to size and material above, and shall be considered as incidental to other items in the contract.
2. Number of Flanged channel steel supports varies with length of panel and shall be spaced as shown:

   PANEL LENGTH 8'-0" OR LESS = 2 CHANNELS
   PANEL LENGTH 9'- 0" - 12'- 0" = 3 CHANNELS
   PANEL LENGTH 13'- 0" OR MORE = 4 CHANNELS

   If the flanged channel steel posts can not be horizontally spaced as shown, they can be moved so as to securely hold the sign.
3. The EXIT NUMBER PANEL shall normally be positioned above the guide sign aligned with the right edge of the guide sign. If the guide sign indicates a left exit, the EXIT NUMBER PANEL shall be aligned with the left edge of the guide sign.
4. If the bolt holes in the top panel (EXIT NUMBER), or sub panel (NEXT EXIT) line up with holes in main sign panel, stitch bolts shall be used in addition to the channels.
5. Provide post clips for each sign as shown. (Please note the differences between a ground mounted versus Sign bridge mounted sign as far as number of clips required on the main supports or beams)
6. Structural steel sign supports shall extend to the top of the main signs, as shown on the above details.

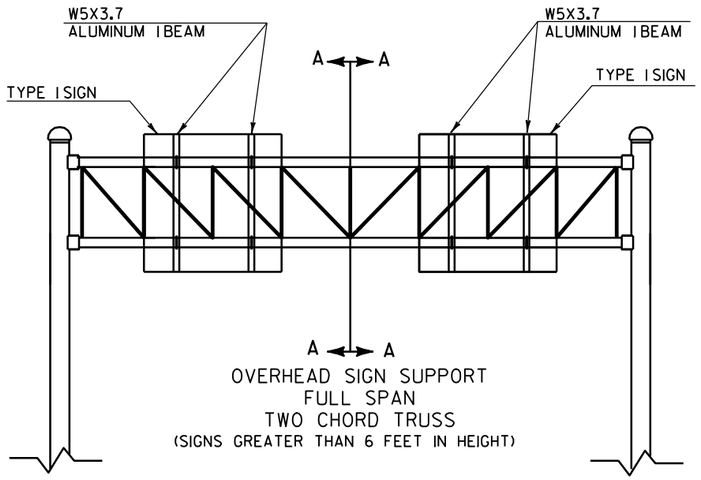
ATTACHMENT OF GUIDE SIGNS TO SUPPORTS

WISCONSIN DEPT OF TRANSPORTATION

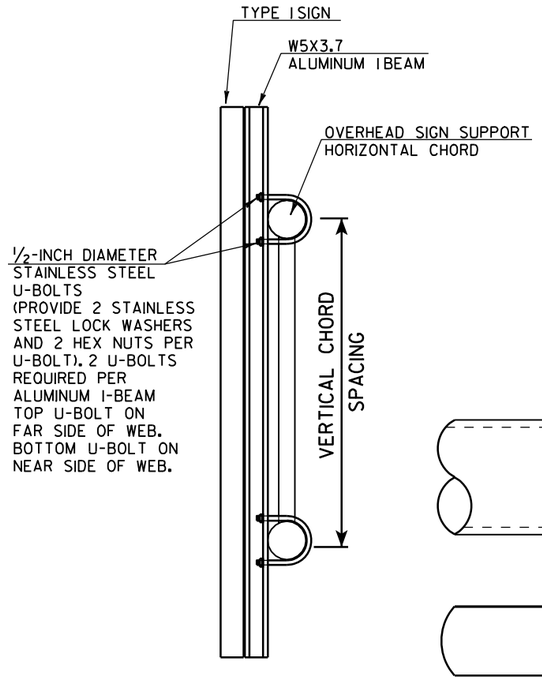
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/05/13 PLAT 641 A4-6.12

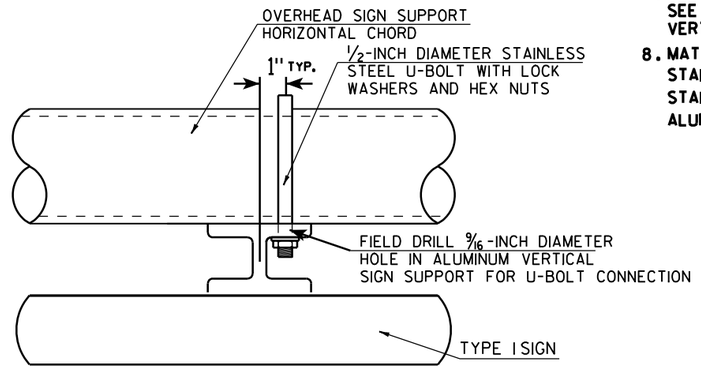
PROJECT NO: | SHEET NO: E



OVERHEAD SIGN SUPPORT
FULL SPAN
TWO CHORD TRUSS
(SIGNS GREATER THAN 6 FEET IN HEIGHT)



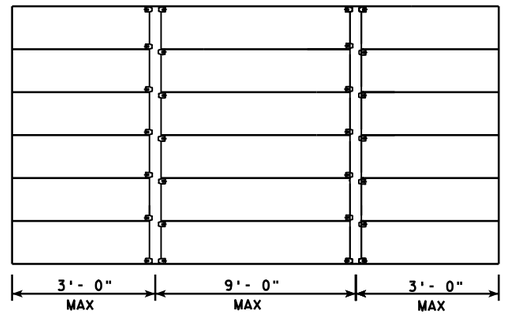
CUT SECTION A-A



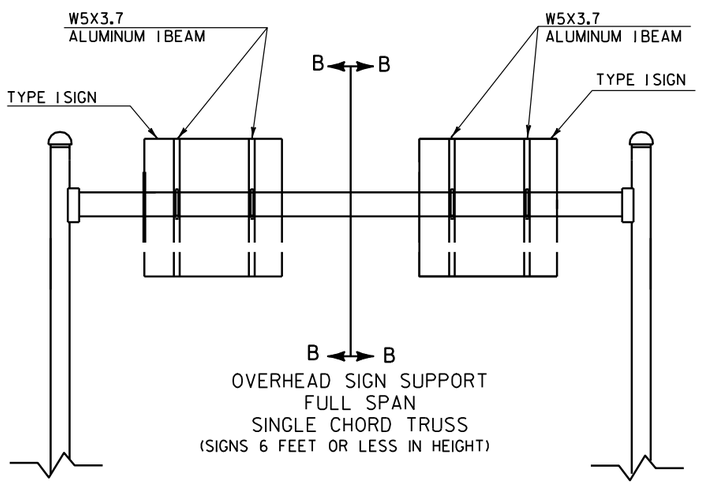
TYPICAL SIGN CONNECTION FOR
TWO CHORD TRUSS
PLAN VIEW

GENERAL NOTES

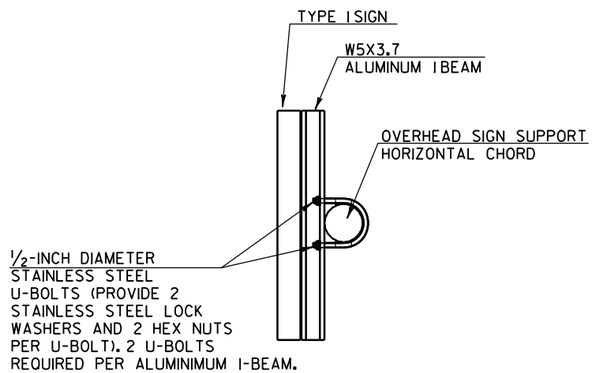
1. USE STAINLESS STEEL U-BOLTS, WASHERS, AND NUTS.
2. USE CLIPS ON EVERY EXTRUDED PANEL JOINT PER SIGN PLATE A4-6.
3. USE ALUMINUM VERTICAL SIGN SUPPORT BEAMS HAVING A 5 INCH BEAM DEPTH AND WEIGHT OF 3.7 LBS PER FOOT.
4. U-BOLTS SHALL BE STAINLESS STEEL AND MANUFACTURED TO THE PROPER SIZE TO FIT THE CHORDS OF THE OVERHEAD SIGN STRUCTURE.
5. DIAMETER OF U-BOLTS SHALL BE AS SHOWN.
6. THE LENGTH OF THE ALUMINUM VERTICAL SIGN SUPPORT BEAMS SHALL BE THE SAME AS THE HEIGHT OF THE SIGN THEY ARE SUPPORTING. BEAM LENGTHS MAY BE LONGER FOR PROPER ATTACHMENT TO CHORDS.
7. MINIMUM NUMBER OF BRACKETS PER SIGN IS TWO. SEE DETAIL BELOW FOR SPACING OF ALUMINUM VERTICAL SIGN SUPPORTS
8. MATERIAL NOTES:
   STAINLESS STEEL U-BOLTS AND LOCKWASHERS ASTM 304.
   STAINLESS STEEL HEX NUTS ASTM A276.
   ALUMINUM I-BEAMS ARE 6061-T6.



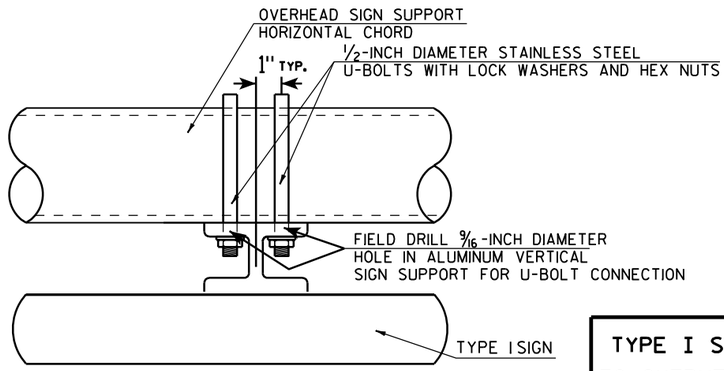
SPACING OF W5X3.7 ALUMINUM
VERTICAL SIGN SUPPORT



OVERHEAD SIGN SUPPORT
FULL SPAN
SINGLE CHORD TRUSS
(SIGNS 6 FEET OR LESS IN HEIGHT)



CUT SECTION B-B



TYPICAL SIGN CONNECTION FOR
SINGLE CHORD TRUSS
PLAN VIEW

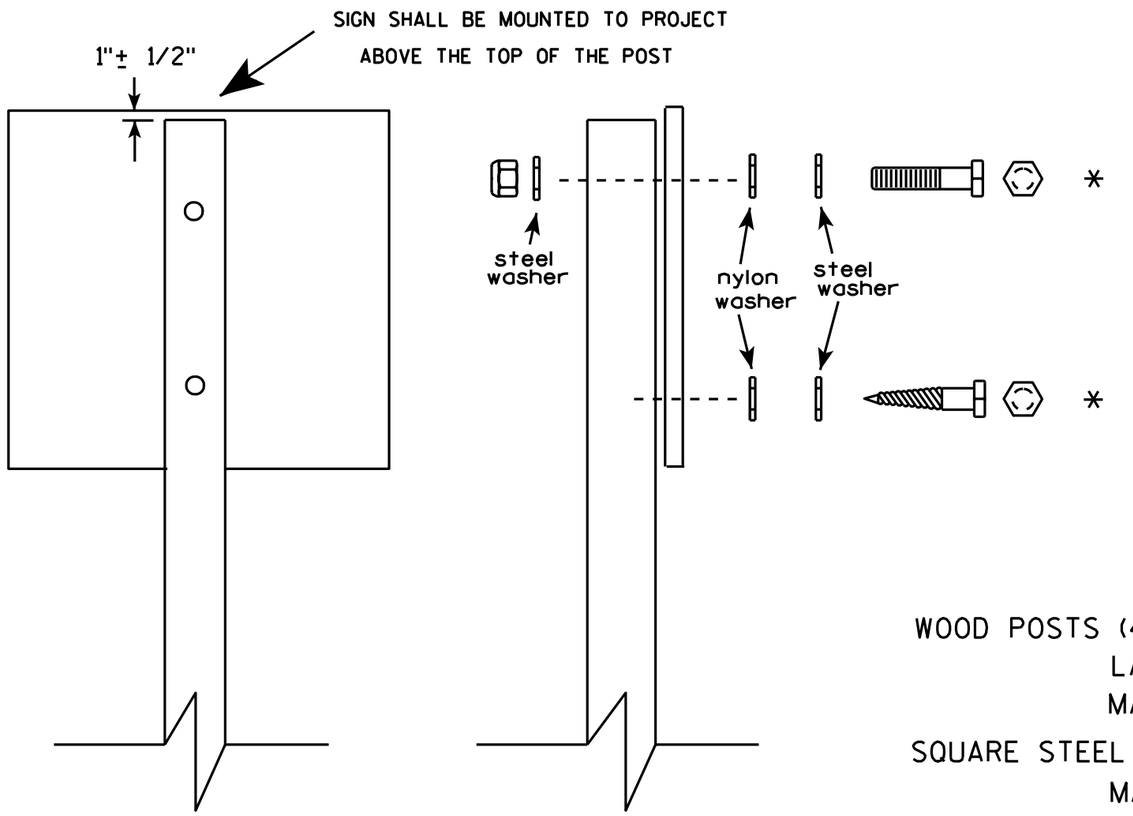
TYPE I SIGN CONNECTION TO OVERHEAD SIGN SUPPORT

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 11/12/12 PLATE NO. A4-7.3

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 642	E



Nuts, bolts and lags used for mounting signs shall have hexagonal heads and shall be either :

a. Hot dip galvanized in accordance with ASTM Designation: A 153, Class D, or SC 3

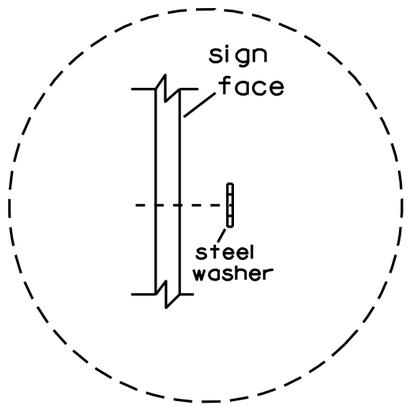
b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

Threads on bolts and nuts shall be manufactured with sufficient allowance for the cadmium plate or galvanized coating to permit the nuts to run freely on the bolts.

WOOD POSTS (4" x 4" or 4" x 6")
LAG SCREWS - 3/8" X 3"
MACHINE BOLTS - 5/16" X 6-1/2" or 7" Length w/ nuts

SQUARE STEEL POSTS (2" x 2")
MACHINE BOLTS - 3/8" X 3-1/4" Length w/ nuts
RIVETS - 9/32 " (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL
O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH

WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON for all Type H signs.



Washer Placement when Sign Has Other Than Type H or Type F Face

* Two different fastening systems are shown for illustration purposes. On any individual sign, either one or the other system shall be used. Actual number of fasteners per sign varies with the sign area, but normally there are two. For a single post installation, all signs greater than 9 sq. ft. require the use of 3 fasteners.

ATTACHMENT OF SIGNS TO POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/23/10 PLATE NO. A4-8.7

7

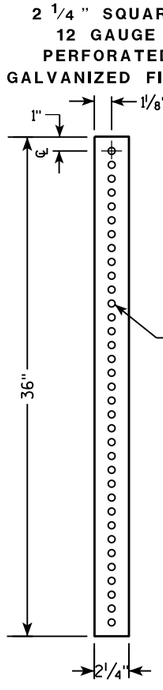
7

PROJECT NO:

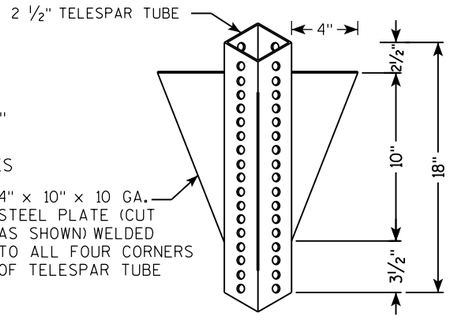
SHEET NO: 643 E

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

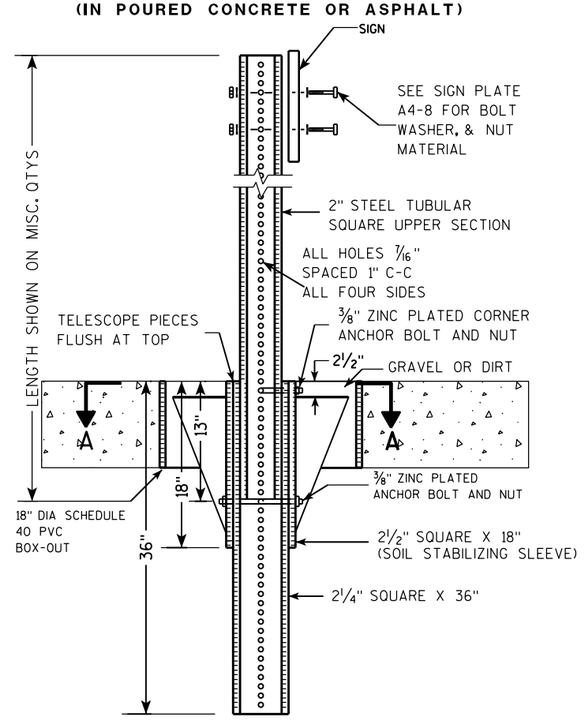
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



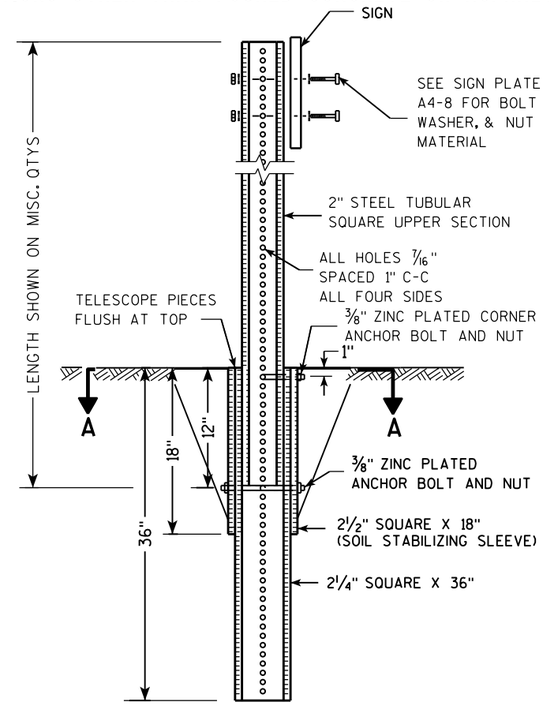
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

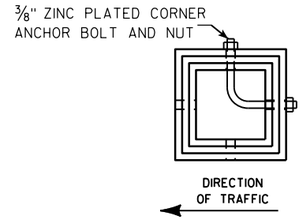


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



DETAIL OF TUBULAR STEEL SIGN POST
(IN LOCATIONS OTHER THAN POURED CONCRETE OR ASPHALT)





SECTION A-A

Area of Sign Installation (Sq. Ft.)	Number of Required Posts
9 or less	1
Greater than 9 less than or equal to 18	2
Greater than 18 less than or equal to 27	3

Signs wider than 3 feet or larger than 9 sq. ft shall be mounted on multiple posts (see above table).

TUBULAR STEEL
SIGN POST
A4-9

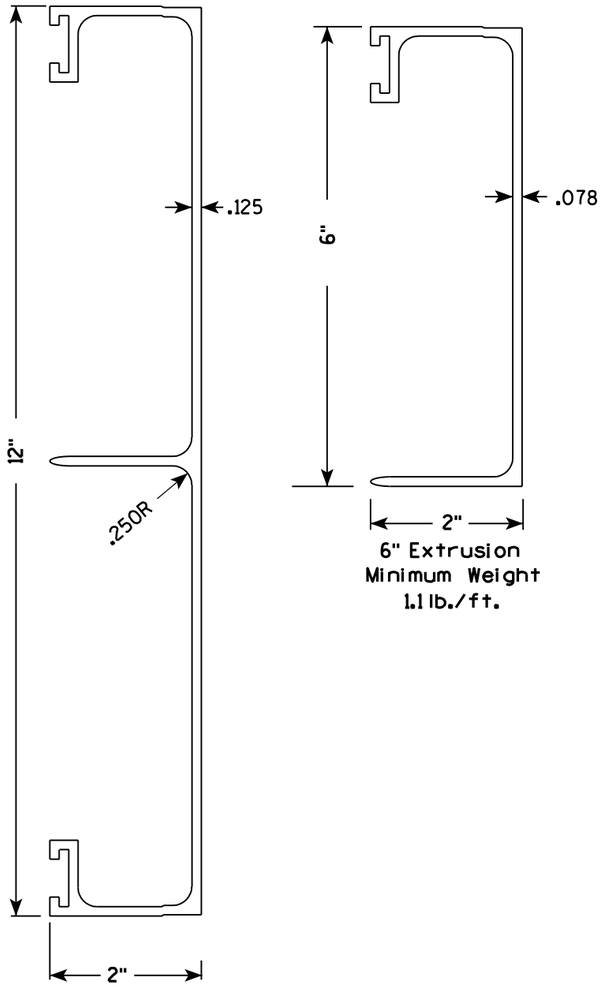
WISCONSIN DEPT OF TRANSPORTATION

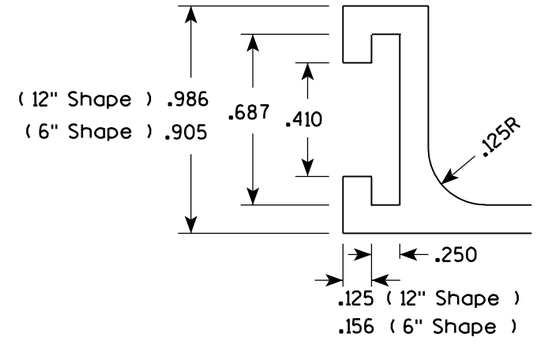
APPROVED Matthew R Rauch
for State Traffic Engineer

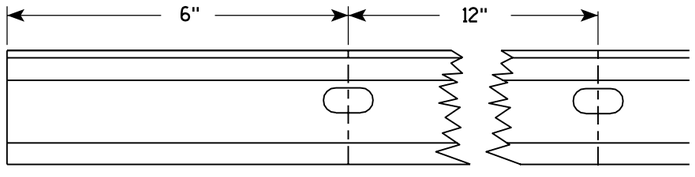
DATE 2/05/15 PLATE 644 A4-9.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

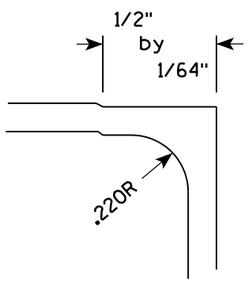
Extruded Shape







Punch 7/16" x 7/8" oval holes beginning 6" in from end of extrusion 12" CC on both edges of 6" and 12" panels.

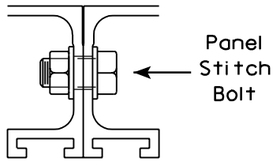


Hardware

STITCH BOLT, WASHER & NUT

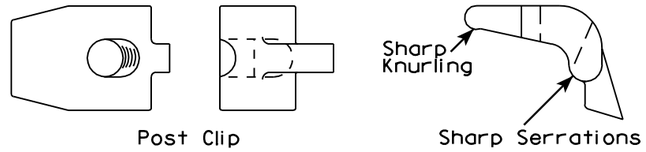
The hardware includes:

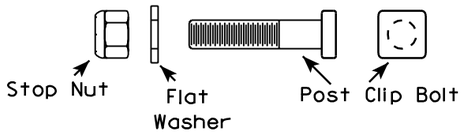
3/8 " - 16 X 3/4 " Economy Bolt 2024-T4 alloy
3/8 " - Stainless steel stop nut
3/8" X .064 Flat Washers, Alclad 2024-T4 alloy



POST CLIP, POST CLIP BOLT, WASHER & NUT

Post Clip shall be Alum. Alloy 356-T6
Post Clip Bolt shall be Stainless Steel.
Flat washer shall be 3/8" X .091, Stainless Steel.
Stop nut shall be stainless steel.





NOTES

1. The contractor may select any brand of extrusion that conforms to the illustrations or meets with the approval of the engineer, but all extrusions used on this contract shall be of the same brand.
2. Panel Stitch Bolts shall be used to assemble adjacent panels. Maximum stitch bolt spacing shall be 24" C-C, and a minimum of 4 bolts shall be used to connect any two extrusions.
3. Post Clips shall be used to attach the sign panel to the sign support.

ALUMINUM EXTRUSIONS FOR TYPE I SIGNS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang
for State Traffic Engineer

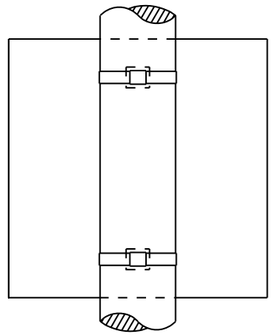
DATE 11/18/99 PLATE NO. A5-2.9

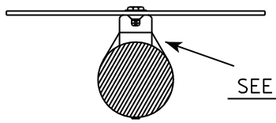
PROJECT NO:

SHEET NO: 645 E

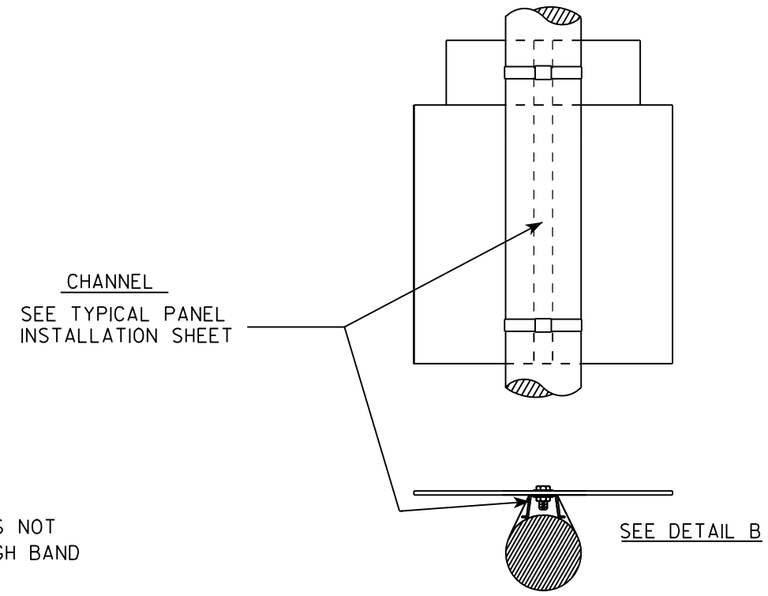
BANDING

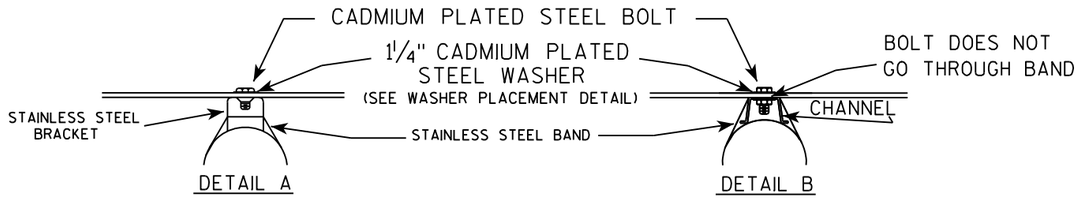
SINGLE SIGN



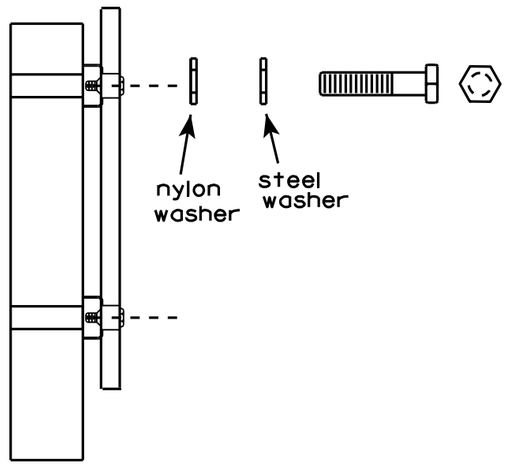


"J" ASSEMBLY





WASHER PLACEMENT



WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

GENERAL NOTES

1. Any sign over 3 feet in width shall use the V-Block banding method. See A5-10 standard plate.
2. Signs 3 feet or greater in height shall have three bracket bands installed. Signs less than 3 feet in height shall have two bracket bands installed.
3. Banding and assembly bracket shall be stainless steel. All bands shall be 3/4" in width and 0.025" thickness.

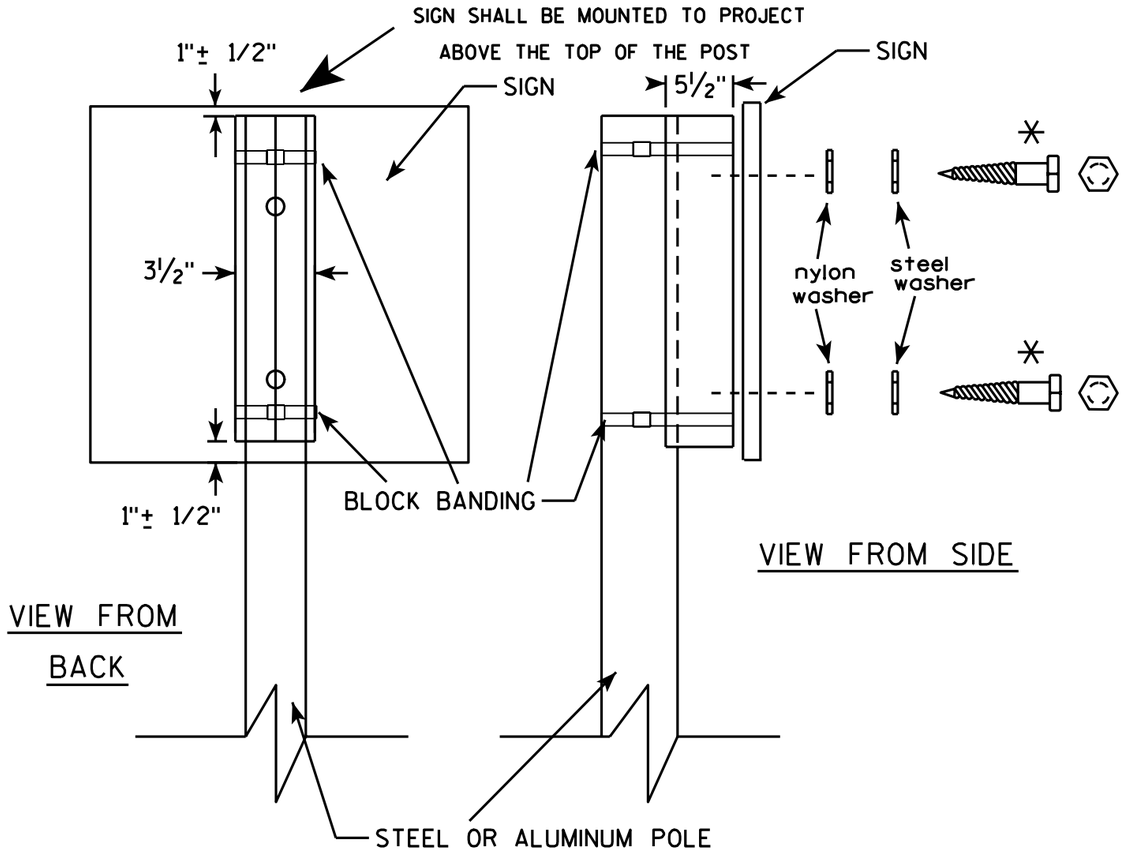
STANDARD SIGN
SIGN BANDING DETAILS

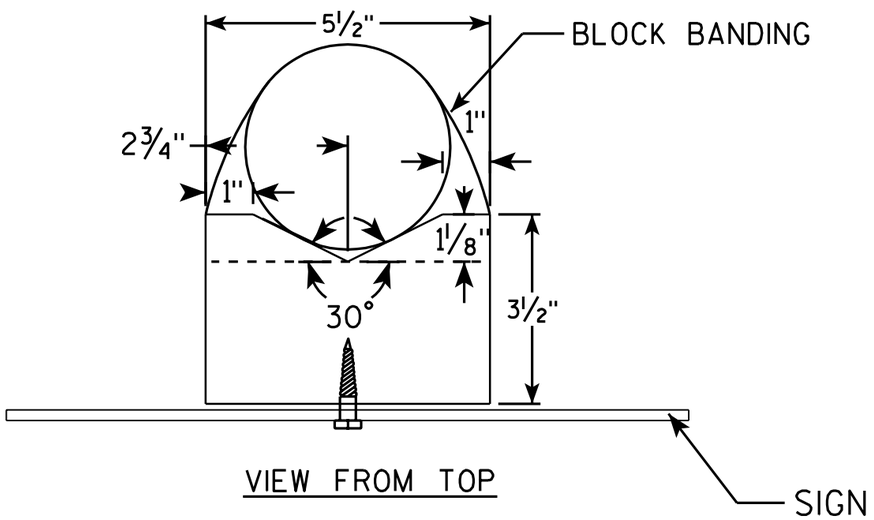
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 8/16/13 PLATE NO. A5-9.3

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 646	E





GENERAL NOTES

1. WOOD 4"X6" POST MATERIAL SHALL CONFORM TO 507.2.2 OF THE WisDOT STANDARD SPECIFICATIONS
2. BLOCK BANDING AND CLIPS SHALL BE STAINLESS STEEL, ¾" WIDTH AND 0.025" THICKNESS
3. SIGNS 3' OR GREATER IN HEIGHT SHALL UTILIZE 3 BLOCK BANDS. SIGNS UNDER 3' IN HEIGHT SHALL UTILIZE 2 BLOCK BANDS
4. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA, BUT NORNALLY THERE ARE TWO. FOR SIGNS GREATER THAN 9 S.F. 3 FASTENERS SHALL BE USED.
5. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
   a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D, or
   b. Cadmium plated in accordance with ASTM Designation : B 766 TYPE 3, Class 12, or
   c. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.
6. ALL BOLTS SHALL HAVE HEXAGONAL HEADS.
7. STEEL WASHERS SHALL BE 1¼" O.D. X ⅜" I.D. X 1/16"
8. NYLON WASHERS SHALL BE 1¼" O.D. X ⅜" I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

✳ LAG BOLTS SHALL BE ⅜" X 2½"

BLOCK BANDING DETAIL (V-BLOCK OPTION)

WISCONSIN DEPT OF TRANSPORTATION

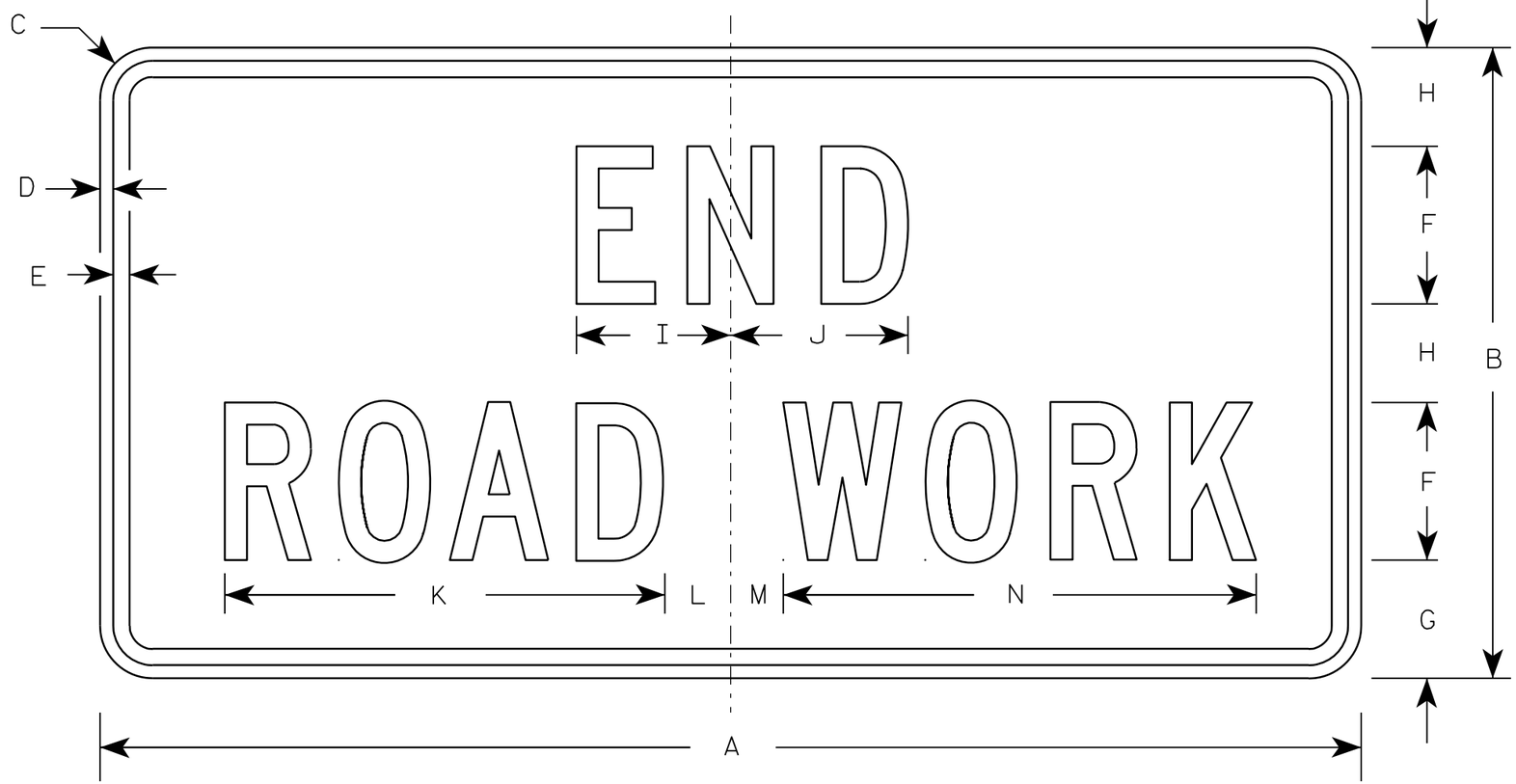
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/12/07 PLATE NO. A5-10.1

PROJECT NO: | SHEET NO: 647 | E

FILE NAME : C:\Users\Projects\tr_stdplate\A510.dgn PLOT DATE : 06-AUG-2007 13:37 PLOT BY : ditjph

WISDOT/CADDS SHEET 42



G20-2A

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

Metric equivalent for this sign is:

SIZE	
1	900 mm X 450 mm
2	1200 mm X 600 mm
3	1200 mm X 600 mm
4	1200 mm X 600 mm
5	1200 mm X 600 mm

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m2
1	36	18	1 1/8	3/8	1/2	4	3 3/4	2 1/2	4 1/8	4 1/8	11 1/8	2	1	12 1/8													4.5	0.41
2	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
3	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
4	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
5	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72

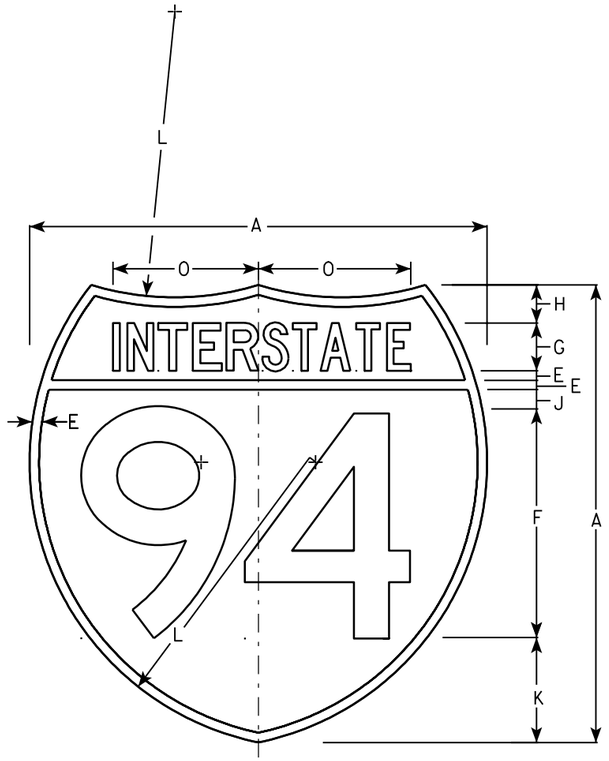
STANDARD SIGN
G20-2A

WISCONSIN DEPT OF TRANSPORTATION

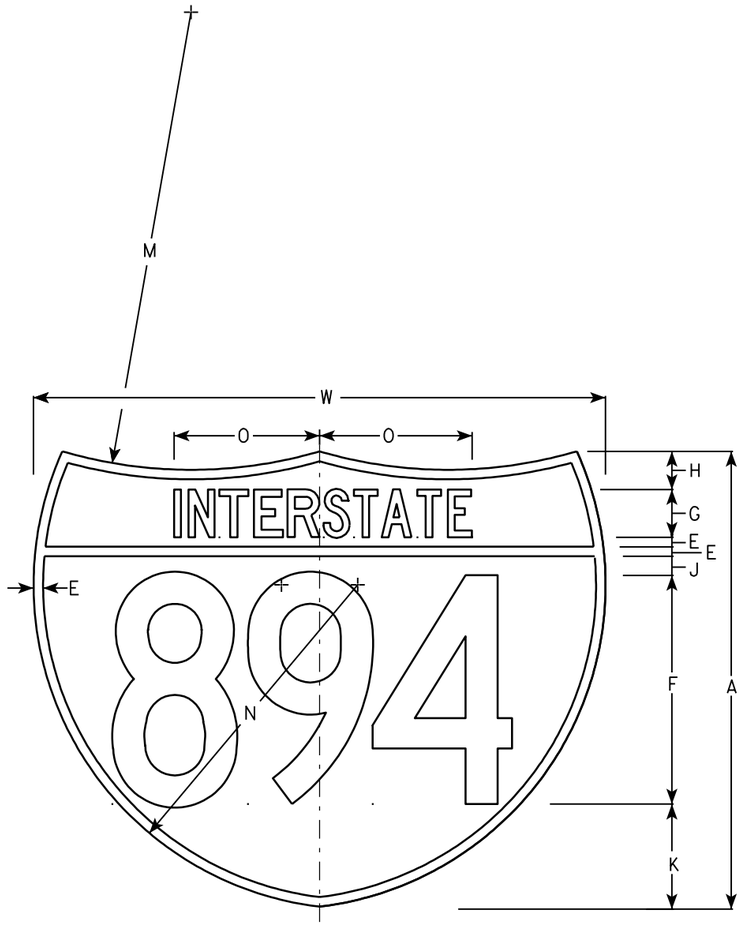
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/30/09 PLATE NO. G20-2A.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 648	E



M1-1



M1-1A

NOTES

1. Sign is Type II - See Note 6 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Top Red - Bottom Blue (See Note 6)
   Message - White - See Note 6
3. Message Series - See note 5
4. Substitute appropriate numerals & ajust spacing as per plate A10-1.
5. M1-1 - Numerals - D
   Interstate - C
   M1-1A - All copy - C
6. Permanent Signs
   Message - Type H Reflective
   Detour or other temporary signs
   Background - Reflective
   Message - Reflective

7

7

Metric equivalent for these signs are:

SIZE	M1-1	SIZE	M1-1A
1			
2	600 mm X 600 mm	2	600 mm X 750 mm
3	900 mm X 900 mm	3	900 mm X 1125 mm
4	900 mm X 900 mm	4	900 mm X 1125 mm
5	900 mm X 900 mm	5	900 mm X 1125 mm

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	M1-1 Area sq. ft.	M1-1A Area sq. ft.	M1-1 Area m2	M1-1A Area m2
1																													
2	24				1/2	12	2 1/2	2		1	5 1/2	15	24	17	7 7/8								30			3.13	3.91	.36	.46
3	36				3/4	18	3 3/4	3		1 1/2	8 1/4	22 1/2	36	25 1/2	11 3/4								45			7.03	8.79	.81	1.05
4	36				3/4	18	3 3/4	3		1 1/2	8 1/4	22 1/2	36	25 1/2	11 3/4								45			7.03	8.79	.81	1.05
5	36				3/4	18	3 3/4	3		1 1/2	8 1/4	22 1/2	36	25 1/2	11 3/4								45			7.03	8.79	.81	1.05

INTERSTATE ROUTE MARKER
M1-1 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

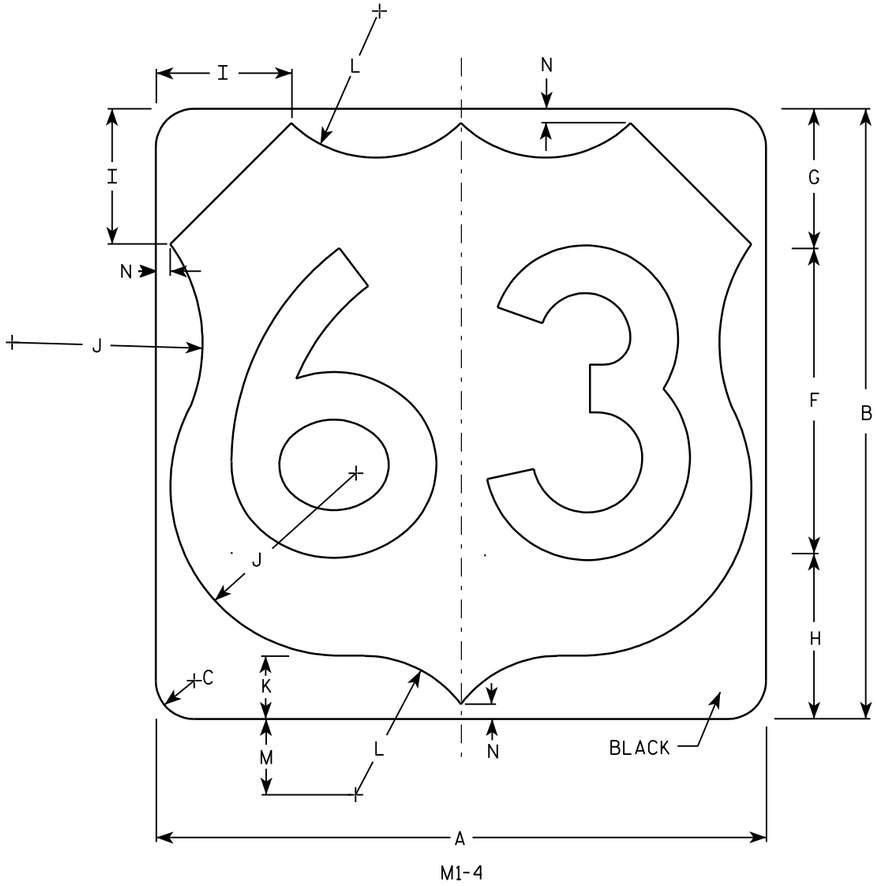
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 08/23/05 PLATE NO. M1-1.8

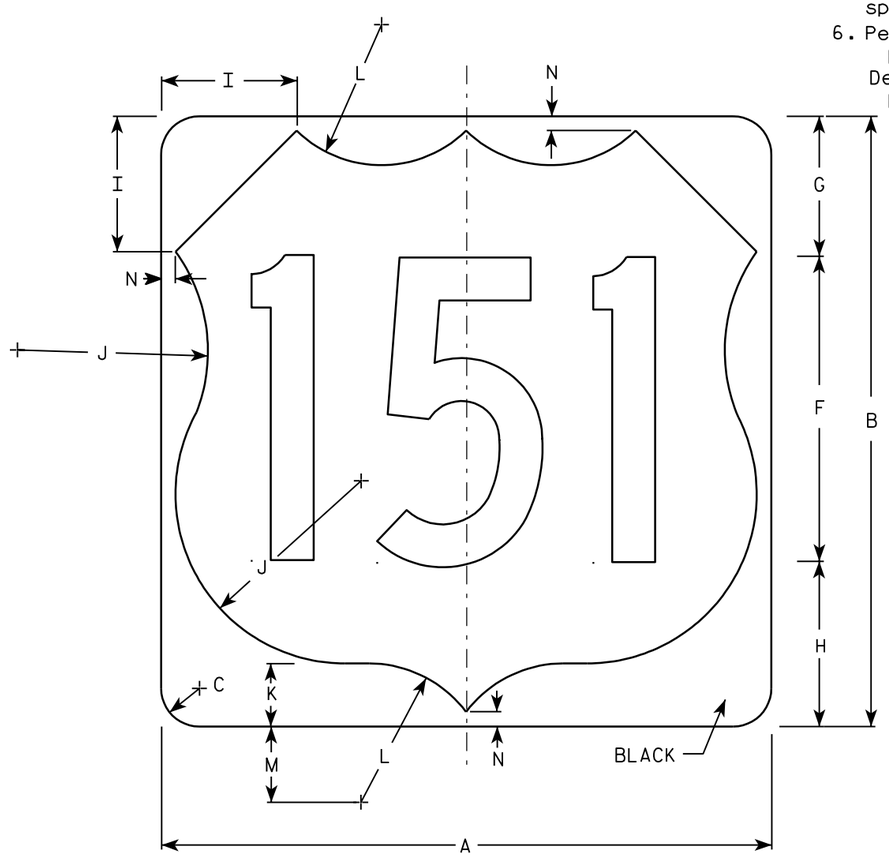
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 649	E

NOTES

1. Sign is Type II - See Note 6 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White & Black - See Note 6
   Message - Black
3. Message Series - See note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and adjust spacing as per Plate A10-1.
6. Permanent Signs
   Background - Type H Reflective
   Detour or other temporary signs
   Background - Reflective



M1-4



M1-4

Metric equivalent for this sign is:

SIZE	
1	
2	600 mm X 600 mm
3	900 mm X 900 mm
4	900 mm X 900 mm
5	900 mm X 900 mm

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m2
1																												
2	24	24	1 1/2			12	5 1/2	6 1/2	5	7 1/2	2 1/2	5 1/2	3	1/2													4.0	.36
3	36	36	2 1/4			18	8 1/4	9 1/4	7 1/4	11 1/4	3 3/4	8 1/4	4 1/2	3/4													9.0	.81
4	36	36	2 1/4			18	8 1/4	9 1/4	7 1/4	11 1/4	3 3/4	8 1/4	4 1/2	3/4													9.0	.81
5	36	36	2 1/4			18	8 1/4	9 1/4	7 1/4	11 1/4	3 3/4	8 1/4	4 1/2	3/4													9.0	.81

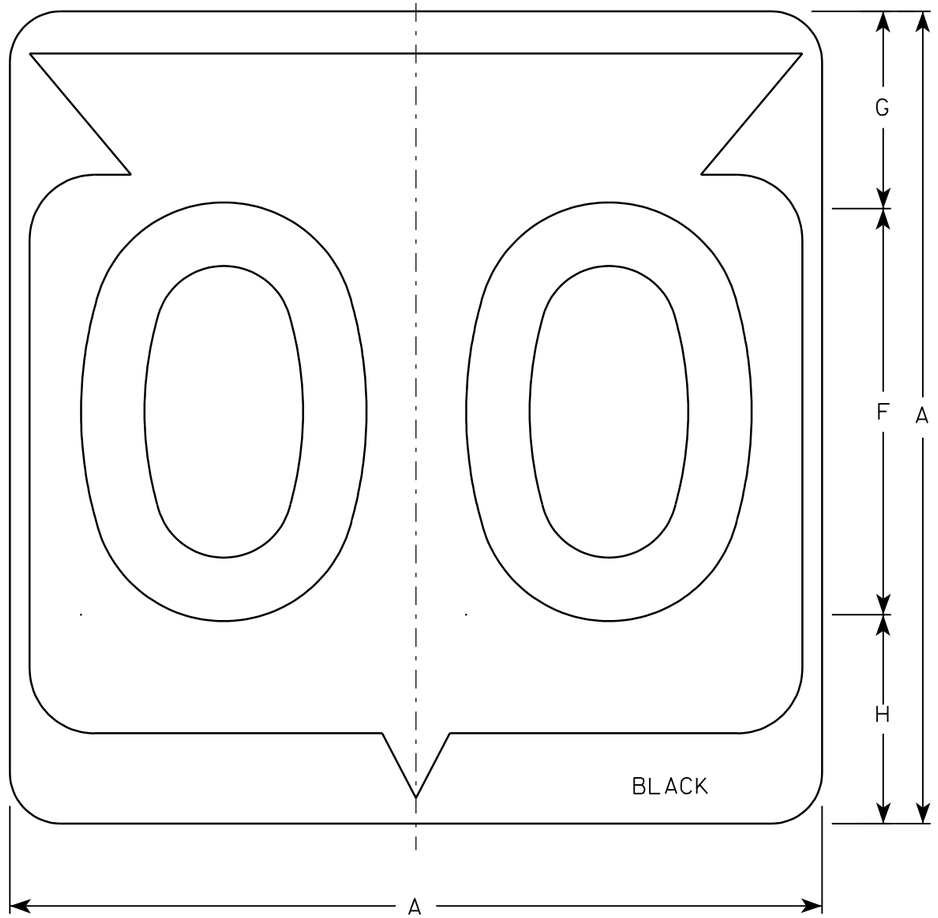
USH MARKER
M1-4 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 08/25/05 PLATE NO. M1-4.9

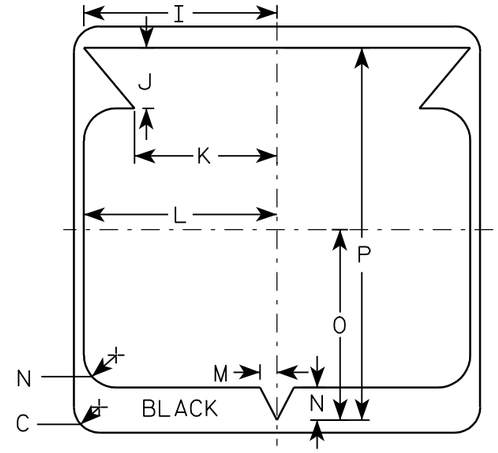
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 650 | E



M1-6

NOTES

1. Sign is Type II - See Note 6 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White & Black - See Note 6
   Message - Black
3. Message Series - See note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate Series numerals and adjust spacing as per plate A10-1.
6. Permanent Signs
   Background - Type H Reflective
   Detour or temporary Signs
   Background - Reflective



Metric equivalent for this sign is:

SIZE	
1	
2	600 mm X 600 mm
3	900 mm X 900 mm
4	900 mm X 900 mm
5	900 mm X 900 mm

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m2
1																												
2	24		1 1/2			12	5 1/2	6 1/2	10 1/4	2 1/2	8 7/8	11 1/2	1	1 7/8	11 1/4	21 7/8											4.0	.36
3	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0	.81
4	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0	.81
5	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0	.81

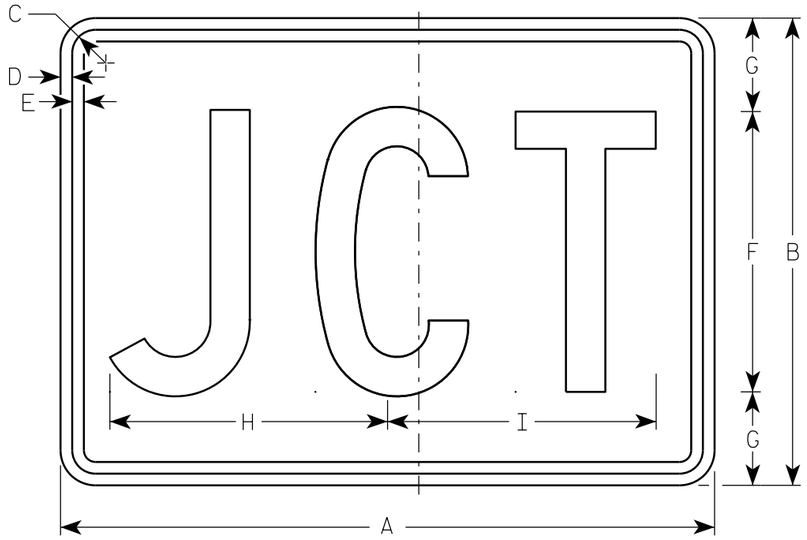
STATE ROUTE MARKER
M1-6 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

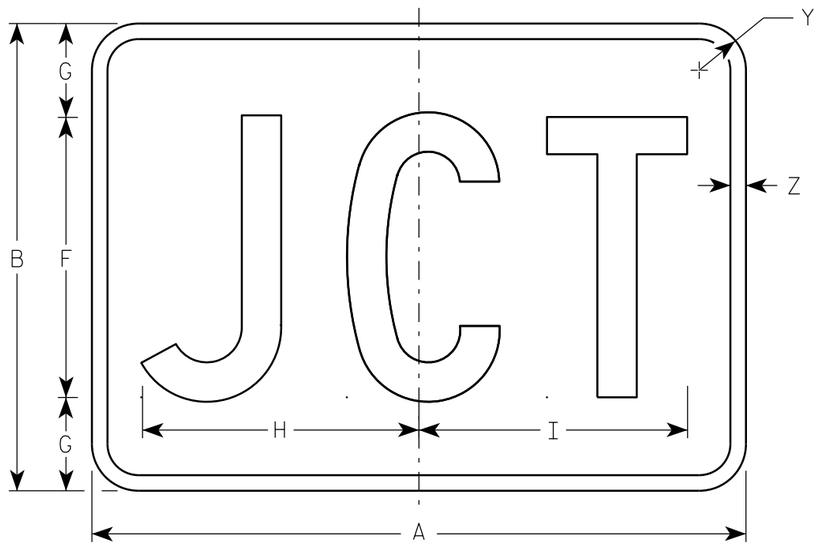
APPROVED Chester J Spang for State Traffic Engineer

DATE 3/20/02 PLATE NO. M1-6.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 651	E



M2-1
MK2-1
MM2-1
MN2-1
MR2-1



MB2-1

NOTES

1. Sign is Type II - Type H
2. Color:
   Background - See note 5
   Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M2-1 Background - White
   Message - Black
   MB2-1 Background - Blue
   Message - White
   MK2-1 Background - Green
   Message - White
   MM2-1 Background - White
   Message - Green
   MN2-1 Background - Brown
   Message - White
   MR2-1 Background - Brown
   Message - Yellow

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21	15	1 1/8	3/8	3/8	9	3	8 7/8	8 5/8																1 1/2	1/2	2.20
3	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40
4	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40
5	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40

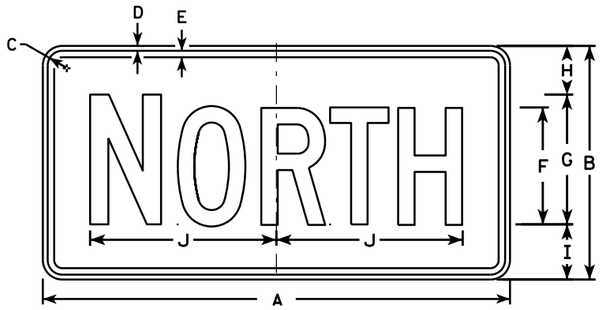
STANDARD SIGN
M2-1

WISCONSIN DEPT OF TRANSPORTATION

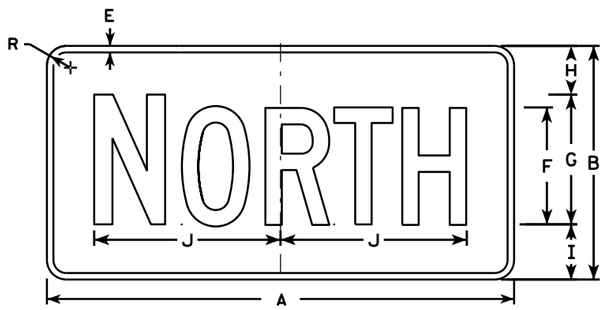
APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 6/30/14 PLATE 652 12-1.11

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



M3-1
MK3-1
MM3-1
MN3-1



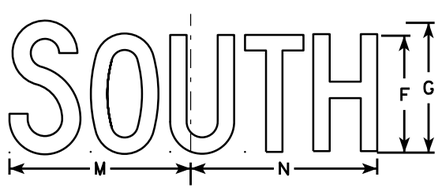
MB3-1



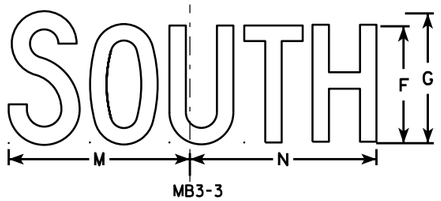
M3-2
MK3-2
MM3-2
MN3-2



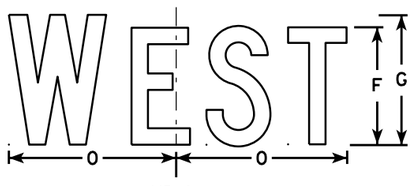
MB3-2



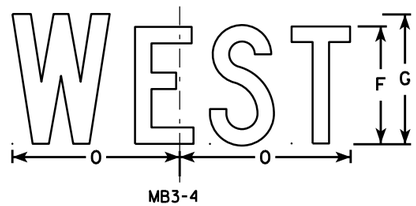
M3-3
MK3-3
MM3-3
MN3-3



MB3-3



M3-4
MK3-4
MM3-4
MN3-4



MB3-4

NOTES

1. All Signs Type II - Type H
2. Color:
   Background - See note 5
   Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M3-1 thru M3-4 Background - White
   Message - Black
   MB3-1 thru MB3-4 Background - Blue
   Message - White
   MK3-1 thru MK3-4 Background - Green
   Message - White
   MM3-1 thru MM3-4 Background - White
   Message - Green
   MN3-1 thru MN3-4 Background - Brown
   Message - White
6. Note the first letter of each direction is larger than the remainder of the message.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	7	2 1/4	2 3/4	10 1/4	7 7/8	8 3/8	10 1/4	9 3/4	8 3/4			1 1/2									2.00
3	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
4	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
5	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5

STANDARD SIGNS
M3-1 thur M3-4
SERIES

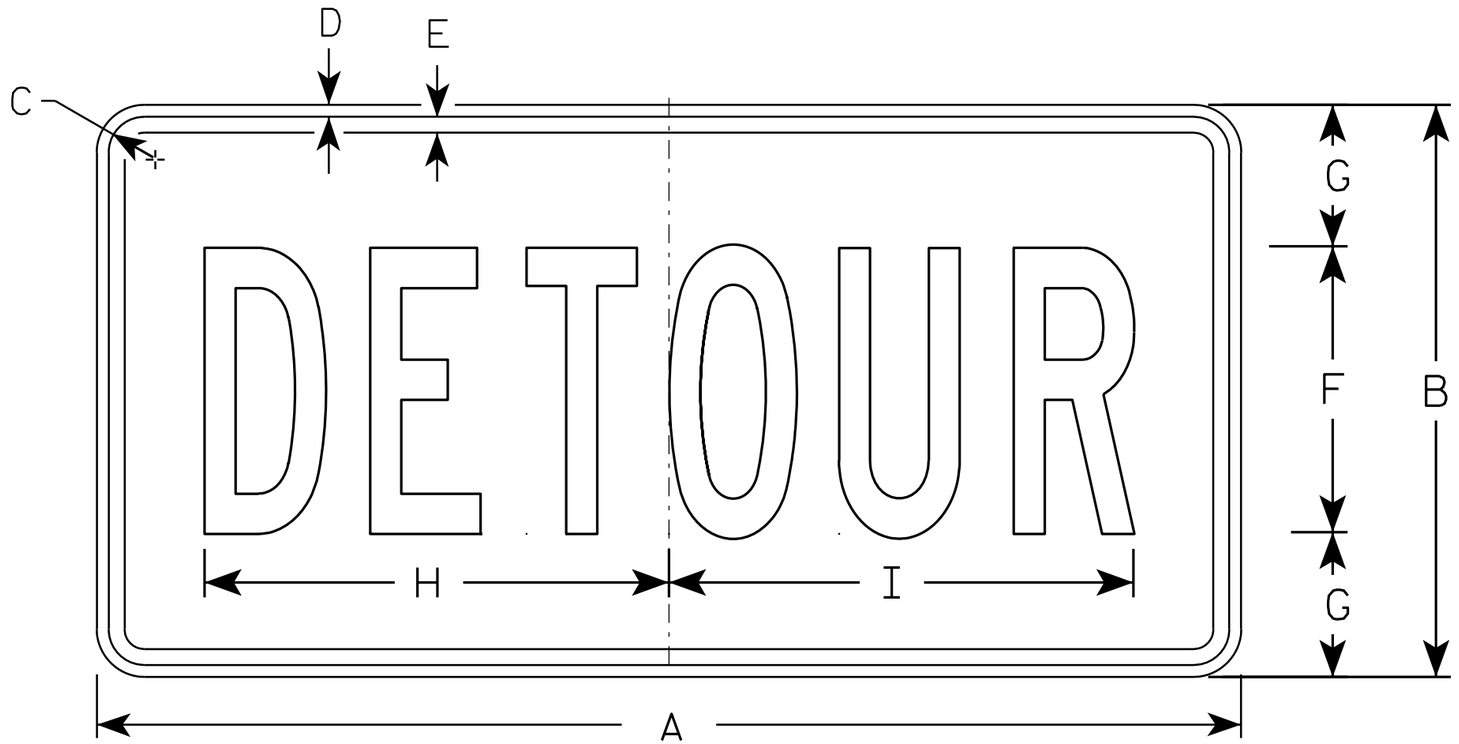
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 6/30/14 PLATE NO M3-1.13

PROJECT NO: | HWY: | COUNTY: | | SHEET NO: E

7



M4-8

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - B
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	3	10	10 1/4																		2.0
3	36	18	1 1/8	3/8	1/2	9	4 1/2	14 5/8	14 1/2																		4.5
4																											
5																											

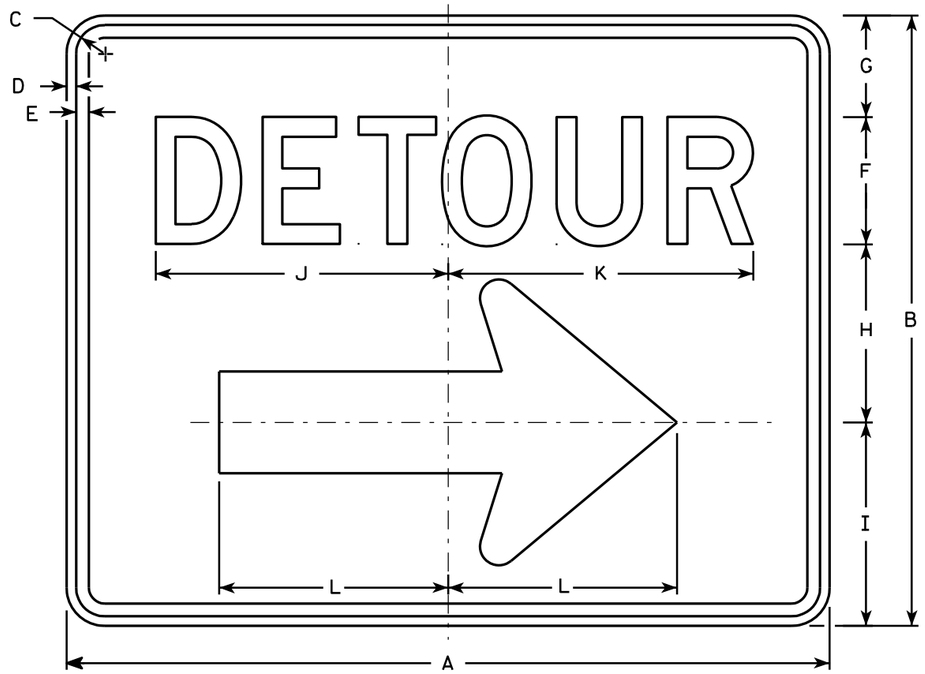
STANDARD SIGN
M4-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/10/10 PLATE NO. M4-8.2

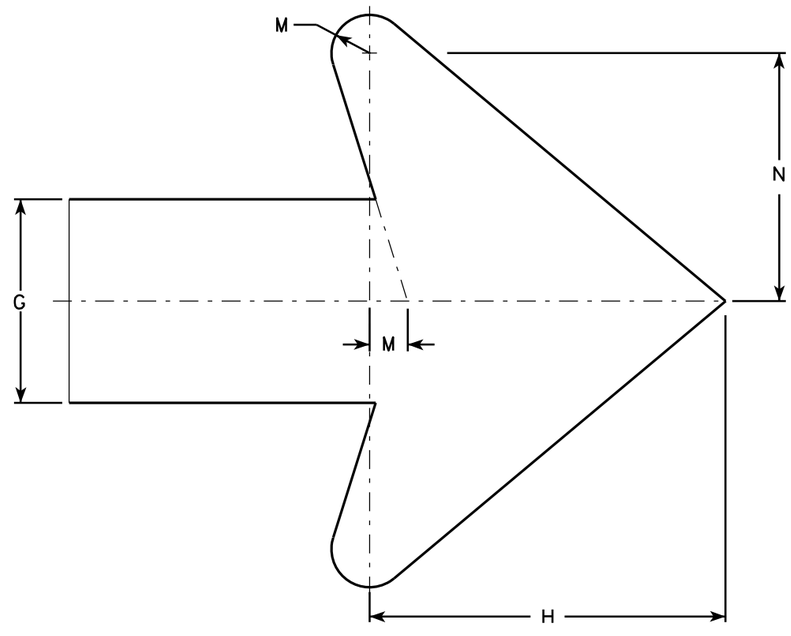
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 654	E



M4-9R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M4-9L is the same as M4-9R except the arrow is reversed.



Arrow Detail

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	30	24	1 1/8	3/8	1/2	5	4	7	8	11 1/2	12	9	3/4	4 7/8													5.00
3	30	24	1 1/8	3/8	1/2	5	4	7	8	11 1/2	12	9	3/4	4 7/8													5.00
4	48	36	1 3/8	1/2	5/8	8	6	10 1/2	11 5/8	20 5/8	20 1/2	13 1/4	1 1/8	6 7/8													12.0
5	48	36	1 3/8	1/2	5/8	8	6	10 1/2	11 5/8	20 5/8	20 1/2	13 1/4	1 1/8	6 7/8													12.0

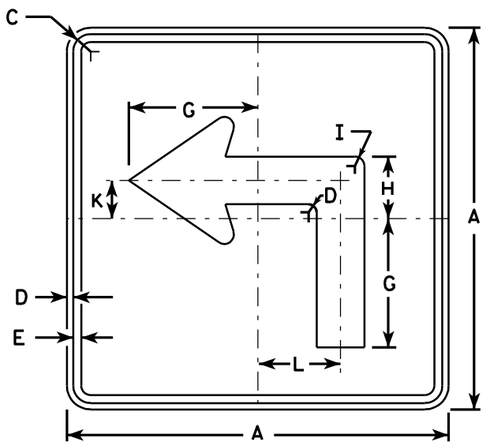
STANDARD SIGN
M4-9 R & L

WISCONSIN DEPT OF TRANSPORTATION

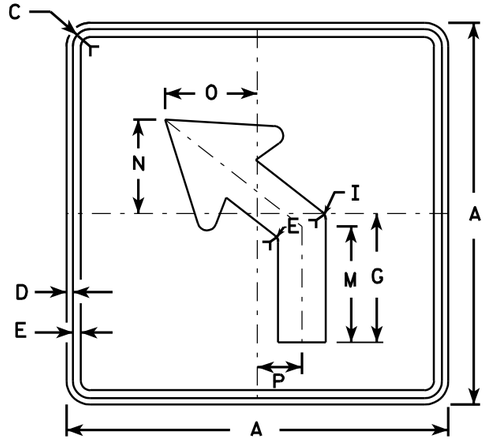
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/9/11 PLATE NO. M4-9R.4

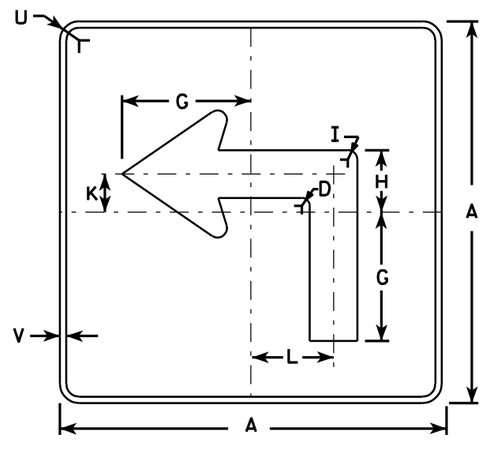
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 655 | E



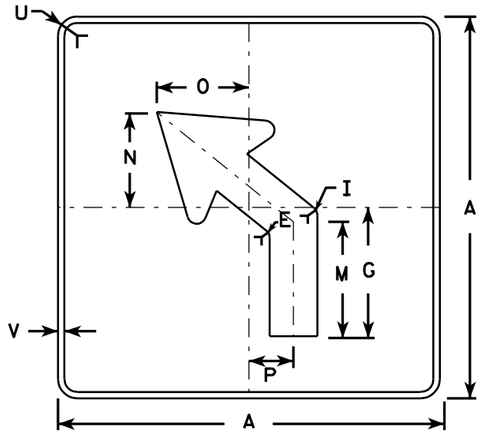
M5-1L
MK5-1L
MM5-1L
MO5-1L
MP5-1L
MR5-1L



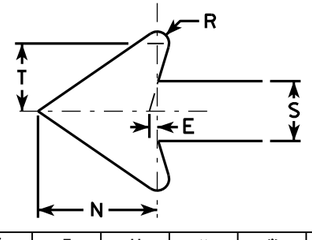
M5-2L
MK5-2L
MM5-2L
MO5-2L
MP5-2L
MR5-2L



MB5-1L
MG5-1L
MN5-1L



MB5-2L
MG5-2L
MN5-2L



NOTES

1. Signs are Type II - See Note 4 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M5-1 and M5-2 Background - White - Type H Reflective
   Message - Black
   MB5-1 and MB5-2 Background - Blue
   Message - White - Type H Reflective
   MG5-1 and MG5-2 Background - Green
   Message - White - Type H Reflective
   MK5-1 and MK5-2 Background - Green
   Message - White Type H Reflective
   MM5-1 and MM5-2 Background - White - Type H Reflective
   Message - Green
   MN5-1 and MN5-2 Background - Brown
   Message - White - Type H Reflective
   MO5-1 and MO5-2 Background - Orange - Type F Reflective
   Message - Black
   MP5-1 and MP5-2 Background - White - Type H Reflective
   Message - Blue
   MR5-1 and MR5-2 Background - Brown
   Message - Yellow - Type H Reflective
5. M5-1R same as M5-1L except arrow points right.
6. M5-2R same as M5-2L except arrow tilts right.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	3/8	3/8		7	3 3/8	5/8		2 1/8	4 1/2	6 3/8	5 1/4	5	2 1/2		1/2	2 5/8	3	1 1/2	1/2					3.06
3	30		1 3/8	1/2	5/8		10 1/8	4 1/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25
4	30		1 3/8	1/2	5/8		10 1/8	4 1/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25
5	30		1 3/8	1/2	5/8		10 1/8	4 1/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25

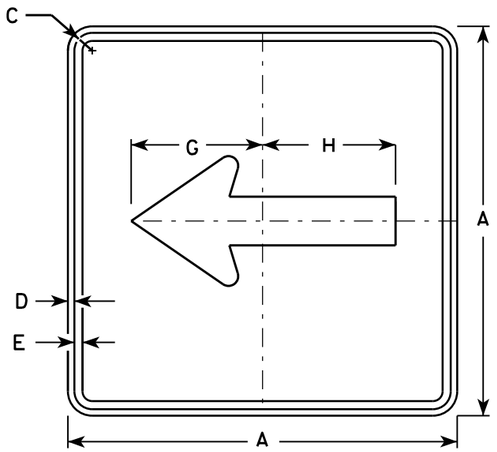
STANDARD SIGN
M5-1 & M5-2

WISCONSIN DEPT OF TRANSPORTATION

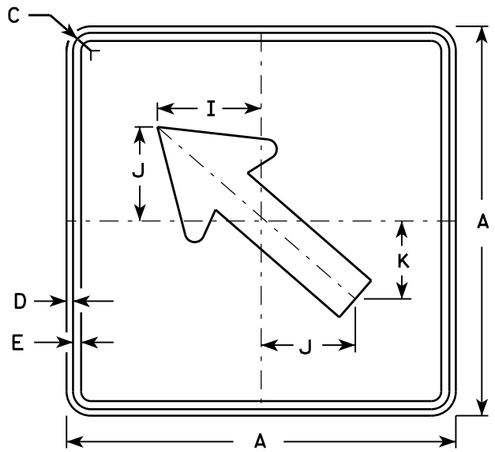
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/29/13 PLATE NO. M5-1.12

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 656	E



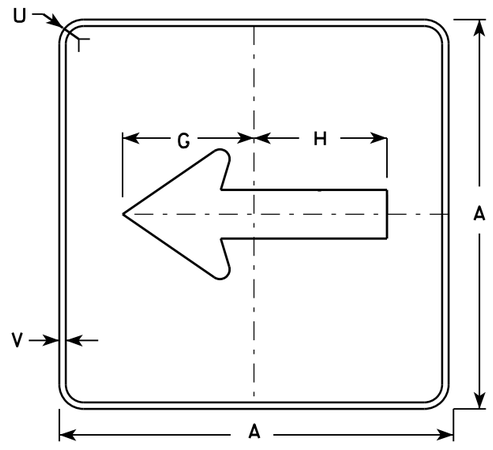
M6-1
MK6-1
MM6-1
MN6-1
MO6-1
MP6-1
MR6-1



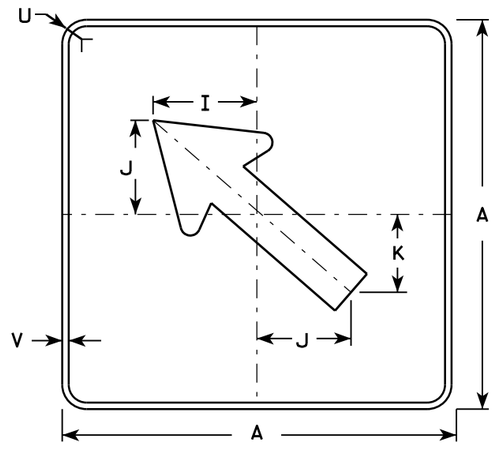
M6-2
MK6-2
MM6-2
MN6-2
MO6-2
MP6-2
MR6-2

NOTES

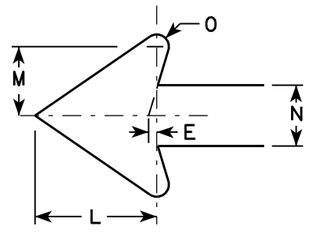
1. Signs are Type II - Type H except as Shown
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M6-1 and M6-2 Background - White
   Message - Black
   MB6-1 and MB6-2 Background - Blue
   Message - White
   MG6-1 and MG6-2 Background - Green
   Message - White
   MK6-1 and MK6-2 Background - Green
   Message - White
   MM6-1 and MM6-2 Background - White
   Message - Green
   MN6-1 and MN6-2 Background - Brown
   Message - White
   MO6-1 and MO6-2 Background - Orange - Type F Reflective
   Message - Black
   MP6-1 and MP6-2 Background - White
   Message - Blue
   MR6-1 and MR6-2 Background - Brown
   Message - Yellow



MB6-1



MB6-2



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	3/8	3/8		7 1/2	7 1/8	5 5/8	5	4 1/4	5 1/4	3	2 5/8	1/2						1 1/2	1/2						3.06
3	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2						6.25
4	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2						6.25
5	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2						6.25

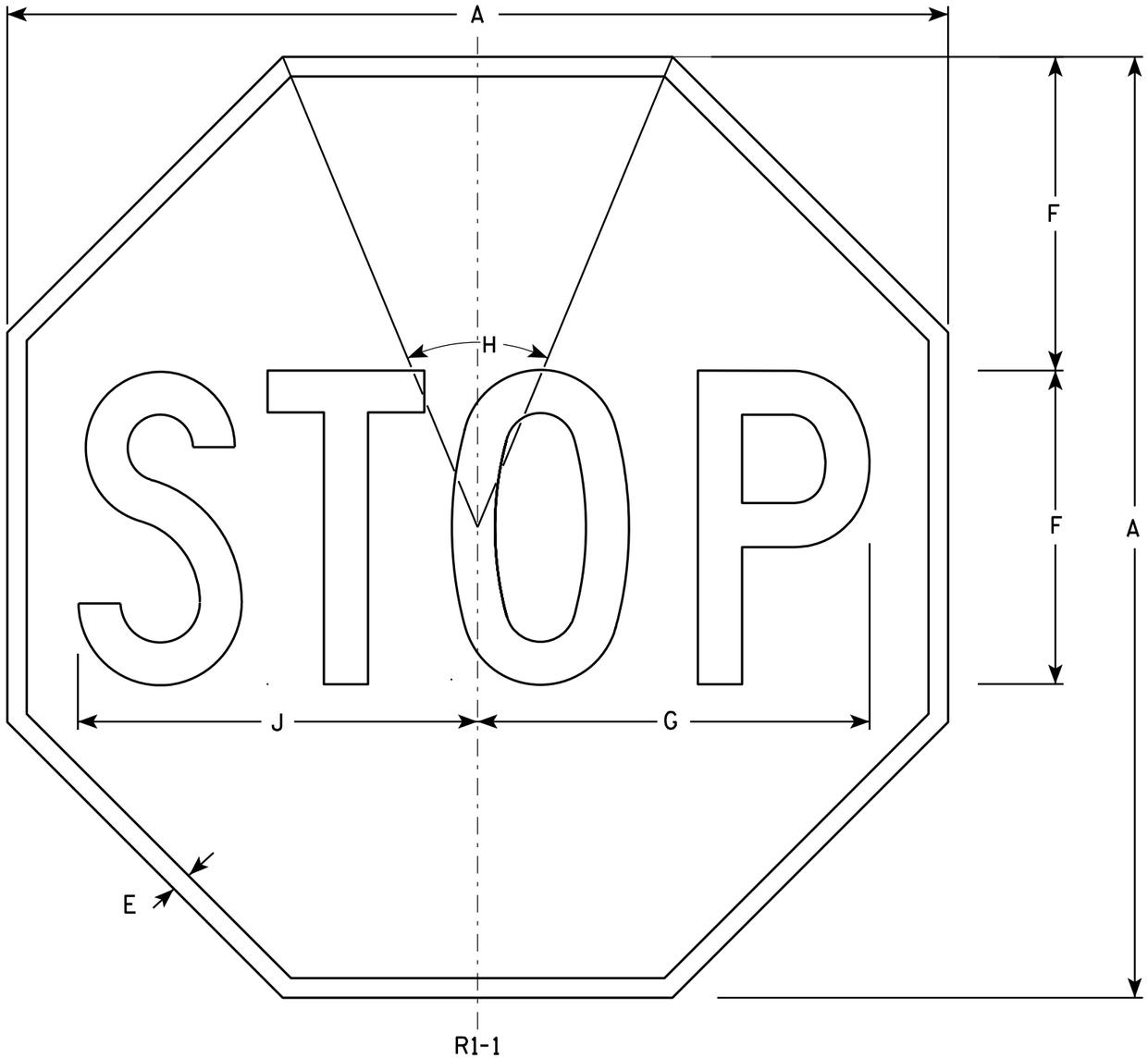
STANDARD SIGN M6-1 & M6-2 SERIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/03/14 PLATE 657 M6-1.14

PROJECT NO: | HWY: | COUNTY: | SHEET NO: E



NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Red
   Message - White
3. Message Series - C

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24				3/8	8	10	45°		10 1/4																	3.31
2S	30				5/8	10	12 1/2	45°		12 3/4																	5.18
2M	36				3/4	12	15	45°		15 3/8																	7.46
3	36				3/4	12	15	45°		15 3/8																	7.46
4	48				1	16	20	45°		20 1/2																	13.25
5	48				1	16	20	45°		20 1/2																	13.25
6	18				3/8	6	7 3/4	45°		7 3/4																	1.86
7	12				1/4	4	5	45°		5 1/8																	0.78

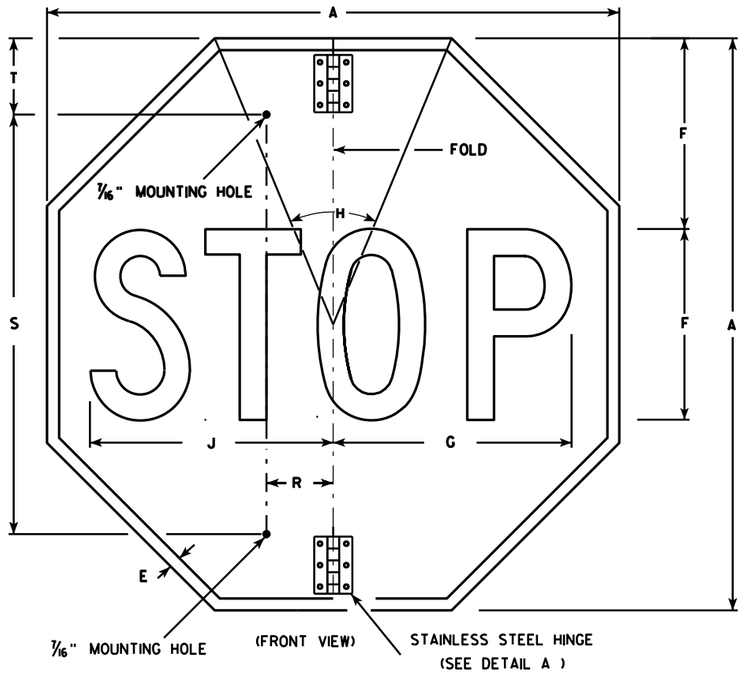
STANDARD SIGN
R1-1

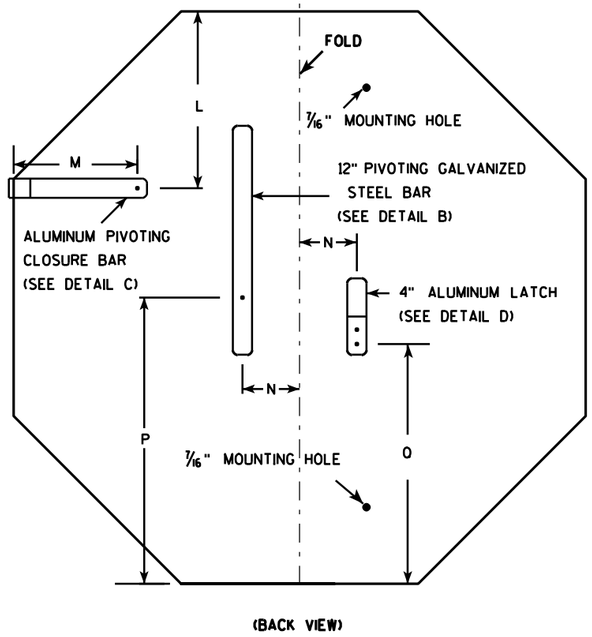
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/03/10 PLATE NO. R1-1.12

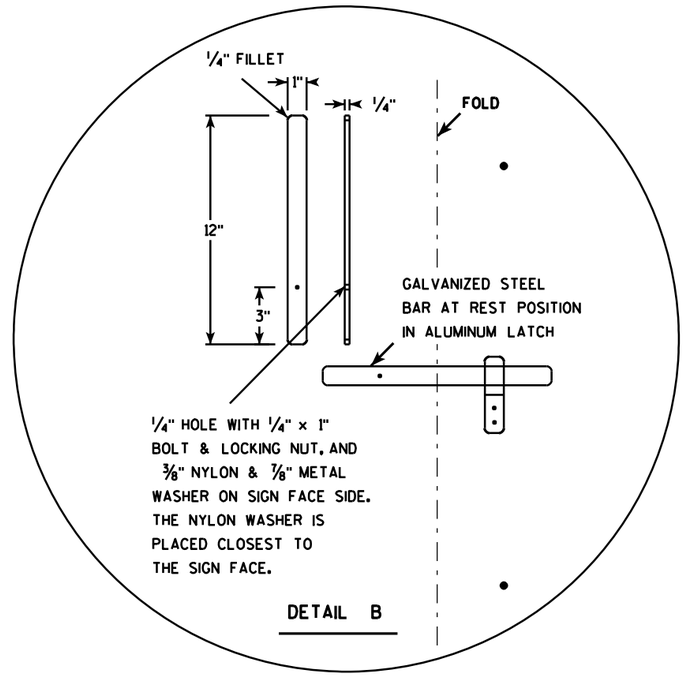
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 658	E



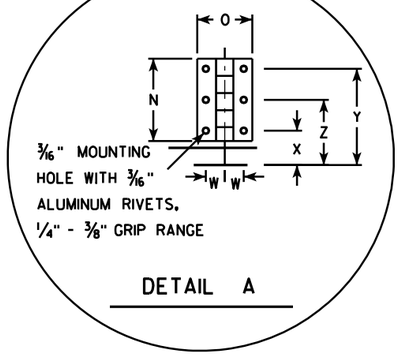


NOTES

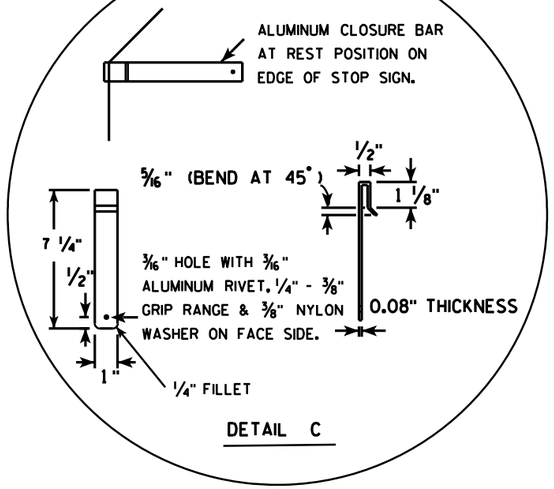
1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Red
   Message - White
3. Message Series - C
4. All hardware used on the folding STOP sign installation shall conform to 637.2.4 of the WIS DOT Standard Specification.



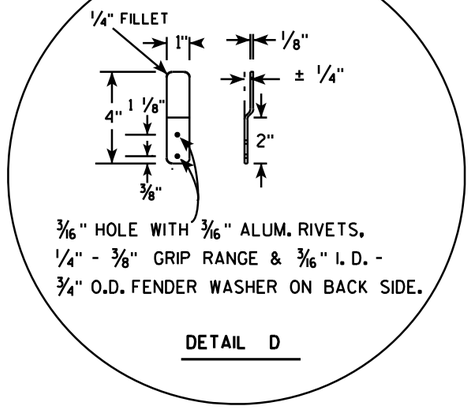
DETAIL B



DETAIL A



DETAIL C



DETAIL D

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30				5/8	10	12 1/2	45		12 3/4		9 1/4	6 1/2	3	2	15	12 3/8	2 1/2	22	5			11/16	1 1/4	3 1/2	2 3/8	5.18
2M	36				3/4	12	15	45		15 3/8		11	6 1/2	3	2	18	15 3/8	2 1/2	26	5			11/16	1 1/4	3 1/2	2 3/8	7.46
3	36				3/4	12	15	45		15 3/8		11	6 1/2	3	2	18	15 3/8	2 1/2	26	5			11/16	1 1/4	3 1/2	2 3/8	7.46
4																											
5																											

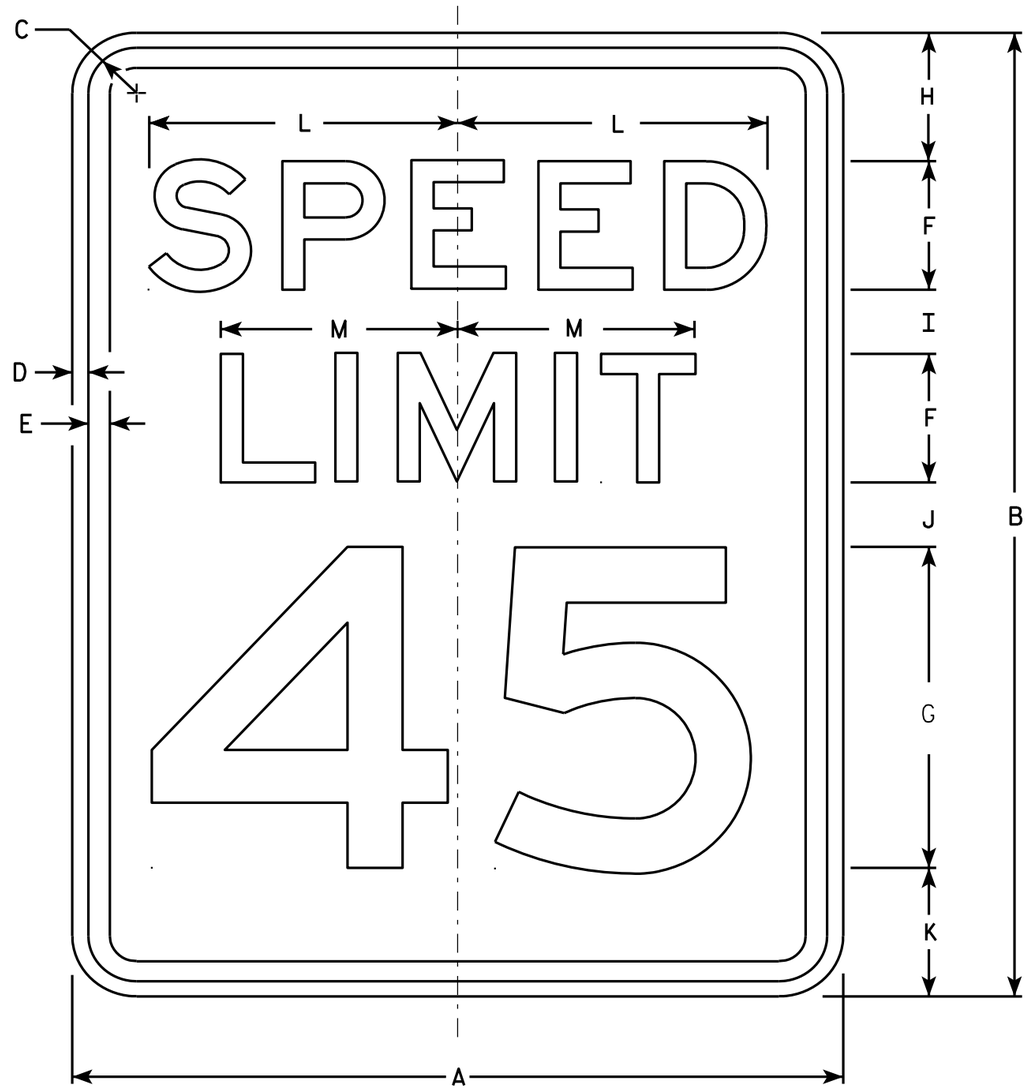
STANDARD SIGN
R1-1F

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/03/10 PLATE NO. R1-1F.3

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 659 | E



R2-1

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - E
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and optically adjust spacing to achieve proper balance.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18	24	1 1/8	3/8	1/2	3	8	3	2	2	3	7 1/4	5 1/2														3.0
2S	24	30	1 1/8	3/8	1/2	4	10	3	2 1/4	3 3/8	3 3/8	9 5/8	7 3/8														5.0
2M	30	36	1 3/8	1/2	5/8	5	12	5	2 1/2	2 1/2	4	12	9 1/4														7.5
3	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
4	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
5	48	60	2 1/4	3/4	1	8	20	6	4 1/2	6 3/4	6 3/4	19 1/4	14 5/8														20.0

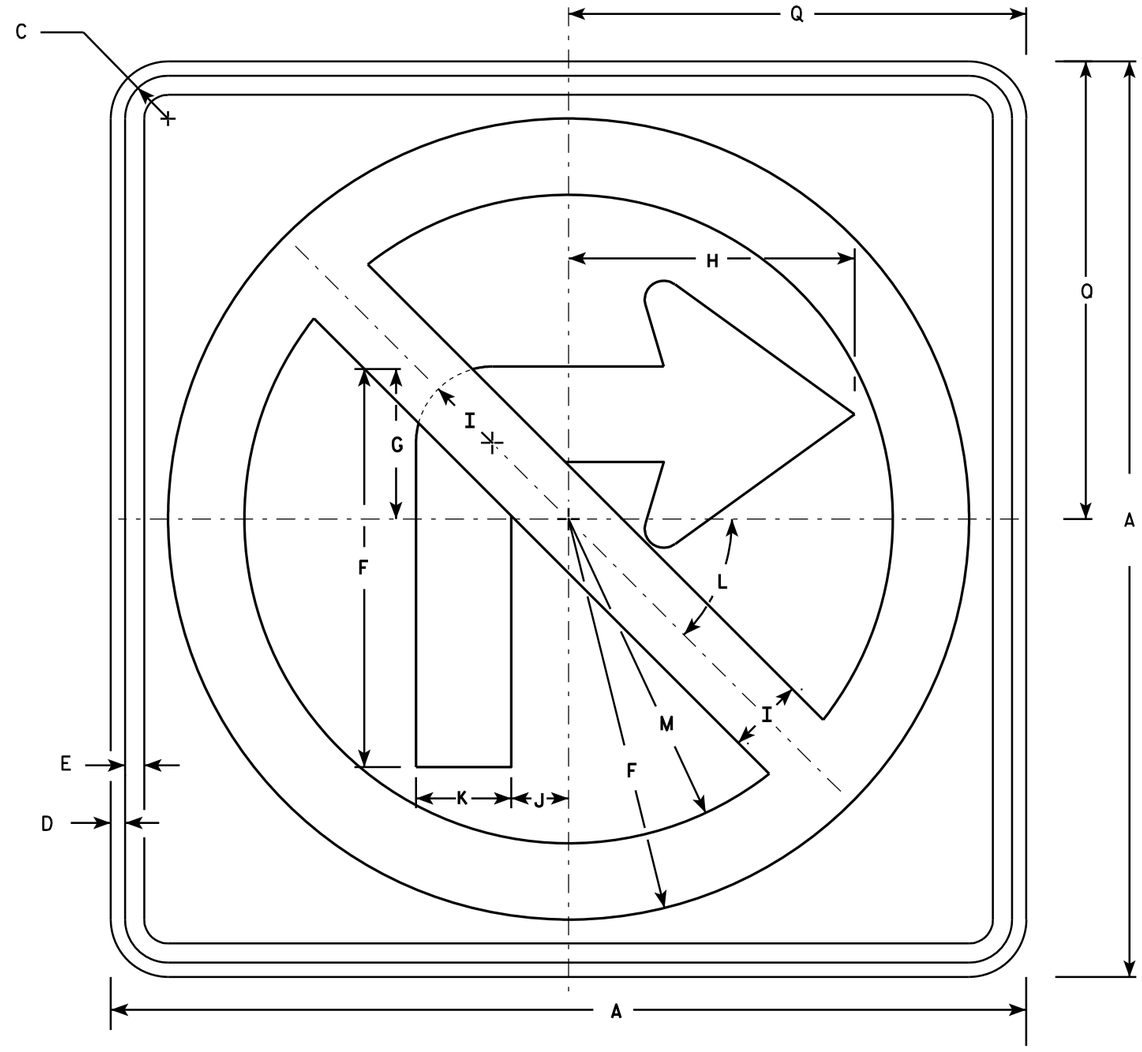
STANDARD SIGN
R2-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/26/10 PLATE NO. R2-1.13

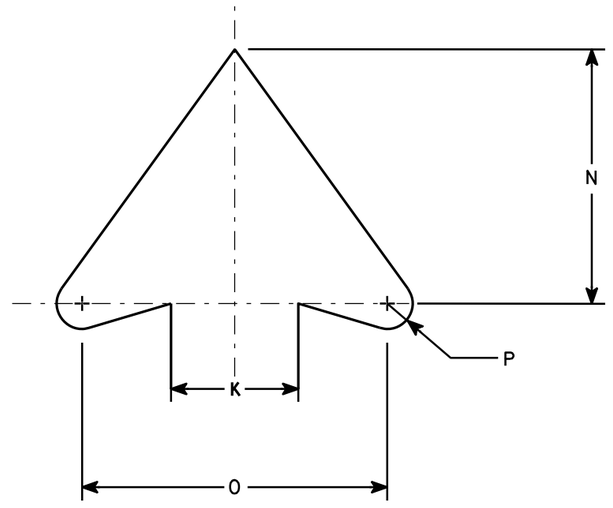
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 660	E



R3-1

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. Border & Arrow are non reflective black, the circle with diagonal bar is reflective red.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2	10 1/2	4	7 1/2	2	1 1/2	2 1/2	45	8 1/2	5	6	1/2	12										4.0
2S	24		1 1/8	3/8	1/2	10 1/2	4	7 1/2	2	1 1/2	2 1/2	45°	8 1/2	5	6	1/2	12										4.0
2M	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45	12 3/4	7 1/2	9	3/4	18										9.0
3	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45	12 3/4	7 1/2	9	3/4	18										9.0
4	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45°	12 3/4	7 1/2	9	3/4	18										9.0
5	48		2 1/4	3/4	1	21	8	15	4	3	5	45°	17	10	12	1	24										16.0

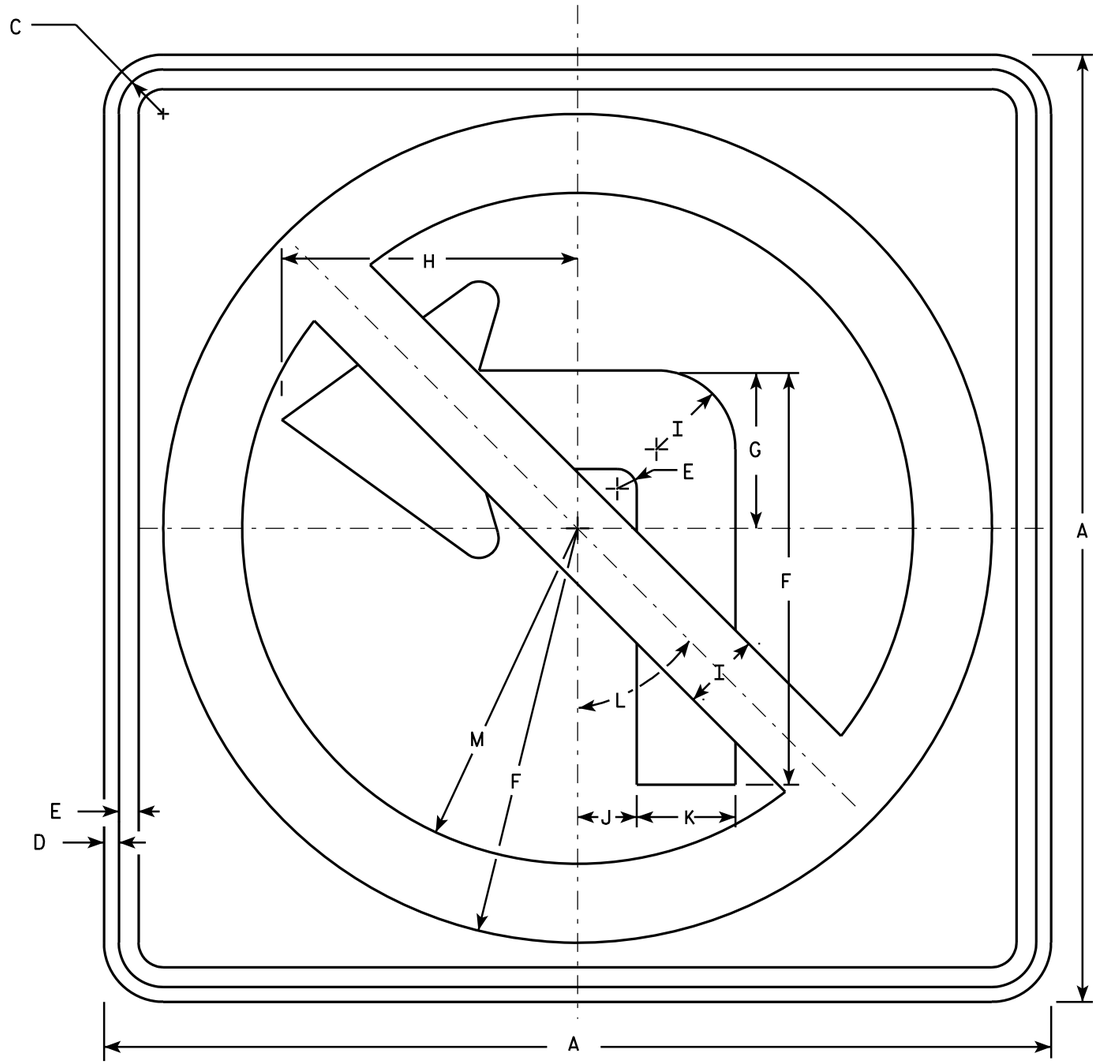
STANDARD SIGN
R3-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/08/10 PLATE NO. R3-1.5

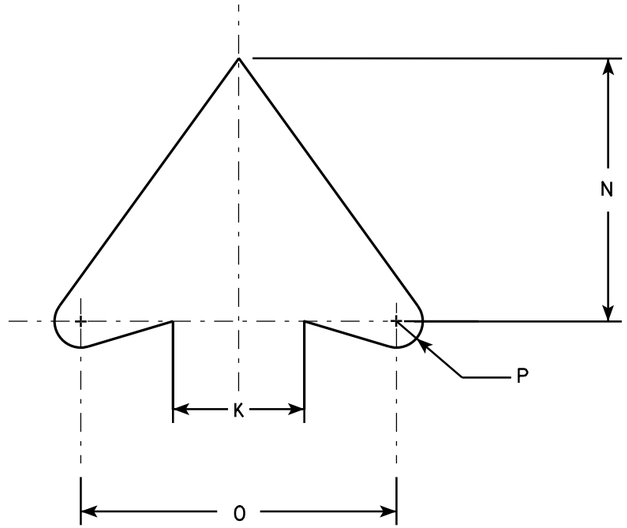
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 661	E



R3-2

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. Border & Arrow are non reflective black, the circle with diagonal bar is reflective red.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2	10 1/2	4	7 1/2	2	1 1/2	2 1/2	45°	8 1/2	5	6	1/2											4.0
2S	24		1 1/8	3/8	1/2	10 1/2	4	7 1/2	2	1 1/2	2 1/2	45°	8 1/2	5	6	1/2											4.0
2M	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45°	12 3/4	7 1/2	9	3/4											9.0
3	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45°	12 3/4	7 1/2	9	3/4											9.0
4	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45°	12 3/4	7 1/2	9	3/4											9.0
5	48		2 1/4	3/4	1	21	8	15	4	3	5	45°	17	10	12	1											16.0

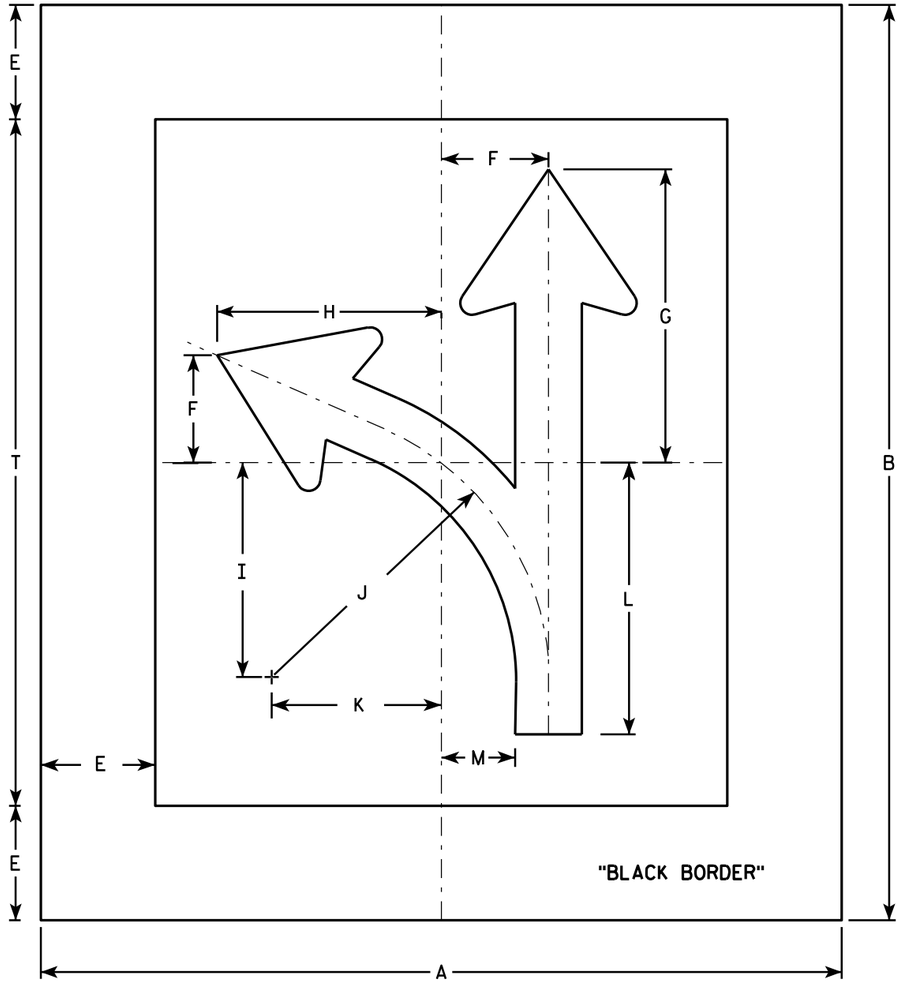
STANDARD SIGN
R3-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/08/10 PLATE NO. R3-2.10

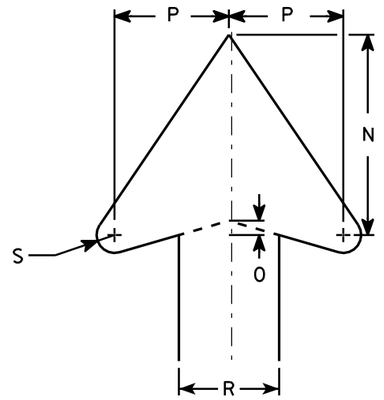
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 662	E



R3-6L

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Corners may be square or rounded when base material is plywood. When base material is metal, the corners shall be rounded.
4. R3-6R is the same as R3-6L except curved portion of arrow points right.
5. The 6" border is non-reflective black.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	42	48			6	5 5/8	15 3/8	11 3/4	11 1/4	14 1/2	8 7/8	14 1/4	3 7/8	7	1/2	4		3 1/2	5/8	36							14.0
2M	42	48			6	5 5/8	15 3/8	11 3/4	11 1/4	14 1/2	8 7/8	14 1/4	3 7/8	7	1/2	4		3 1/2	5/8	36							14.0
3																											
4																											
5																											

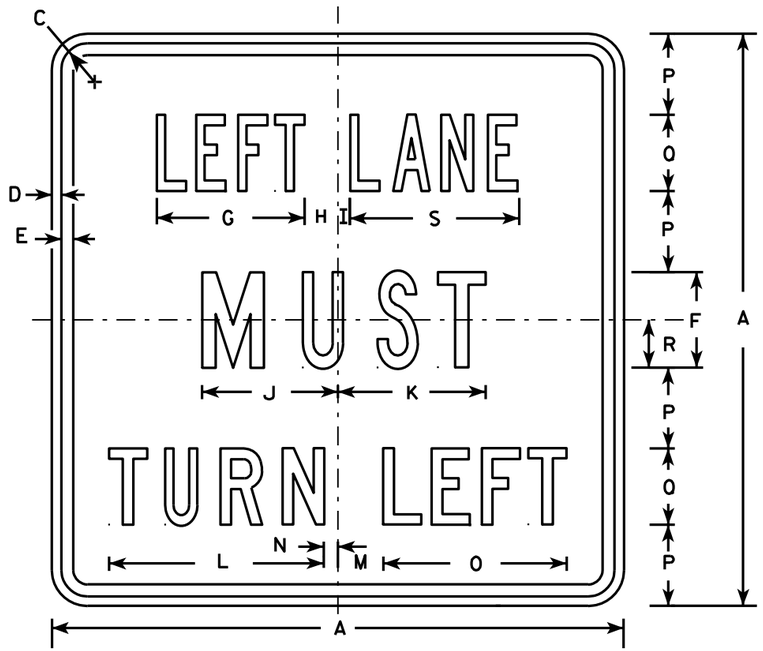
STANDARD SIGN
R3-6

WISCONSIN DEPT OF TRANSPORTATION

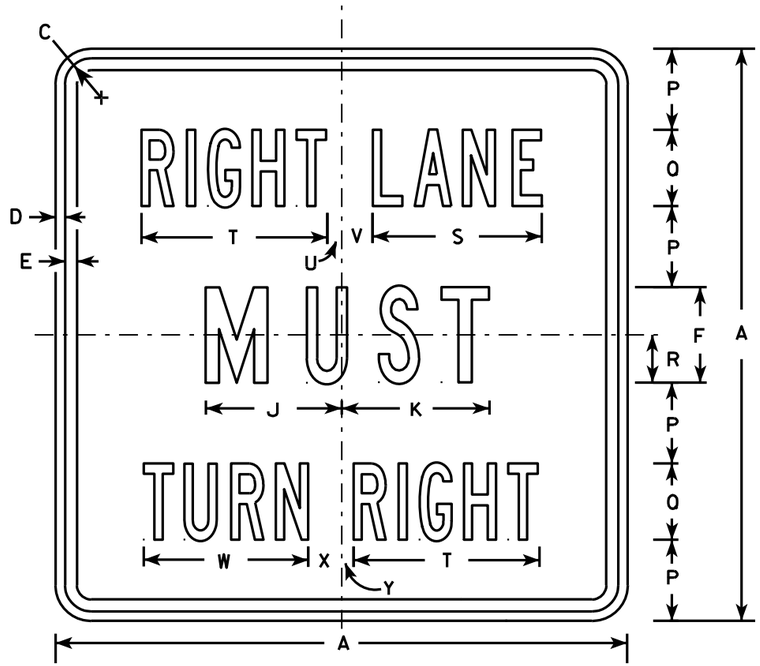
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/17/2011 PLATE NO. R3-6.5

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 663 | E



R3-7L



R3-7R

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - Line 1 is Series B.
   Line 2 is Series C.
   Line 3 on plate R3-7R is Series B and Series C on plate R3-7L.
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 3/8	1/2	5/8	5	7 3/4	1 3/4	5/8	7 1/8	7 3/4	11 1/4	2 3/8	3/4	9 5/8	4 1/4	4	2 1/2	8 7/8	9 3/4	3/4	1 5/8	8 5/8	1 5/8	5/8		6.25
2S	30		1 3/8	1/2	5/8	5	7 3/4	1 3/4	5/8	7 1/8	7 3/4	11 1/4	2 3/8	3/4	9 5/8	4 1/4	4	2 1/2	8 7/8	9 3/4	3/4	1 5/8	8 5/8	1 5/8	5/8		6.25
2M	30		1 3/8	1/2	5/8	5	7 3/4	1 3/4	5/8	7 1/8	7 3/4	11 1/4	2 3/8	3/4	9 5/8	4 1/4	4	2 1/2	8 7/8	9 3/4	3/4	1 5/8	8 5/8	1 5/8	5/8		6.25
3	36		1 5/8	5/8	3/4	6	9 5/8	2	1 1/8	8 3/4	9	13 1/2	3 7/8	1 1/2	12 1/2	5	5	3	10 5/8	12	7/8	2 1/4	10 5/8	2 1/8	1		9.00
4	48		2 1/4	3/4	1	8	13 1/2	2 3/8	1 1/2	11 1/2	11 7/8	17 3/4	3 5/8	2 1/2	16 3/8	6 1/2	7	4	14 3/8	16 7/8	5/8	3 1/4	15 1/8	2 3/4	1 1/8		16.00
5																											

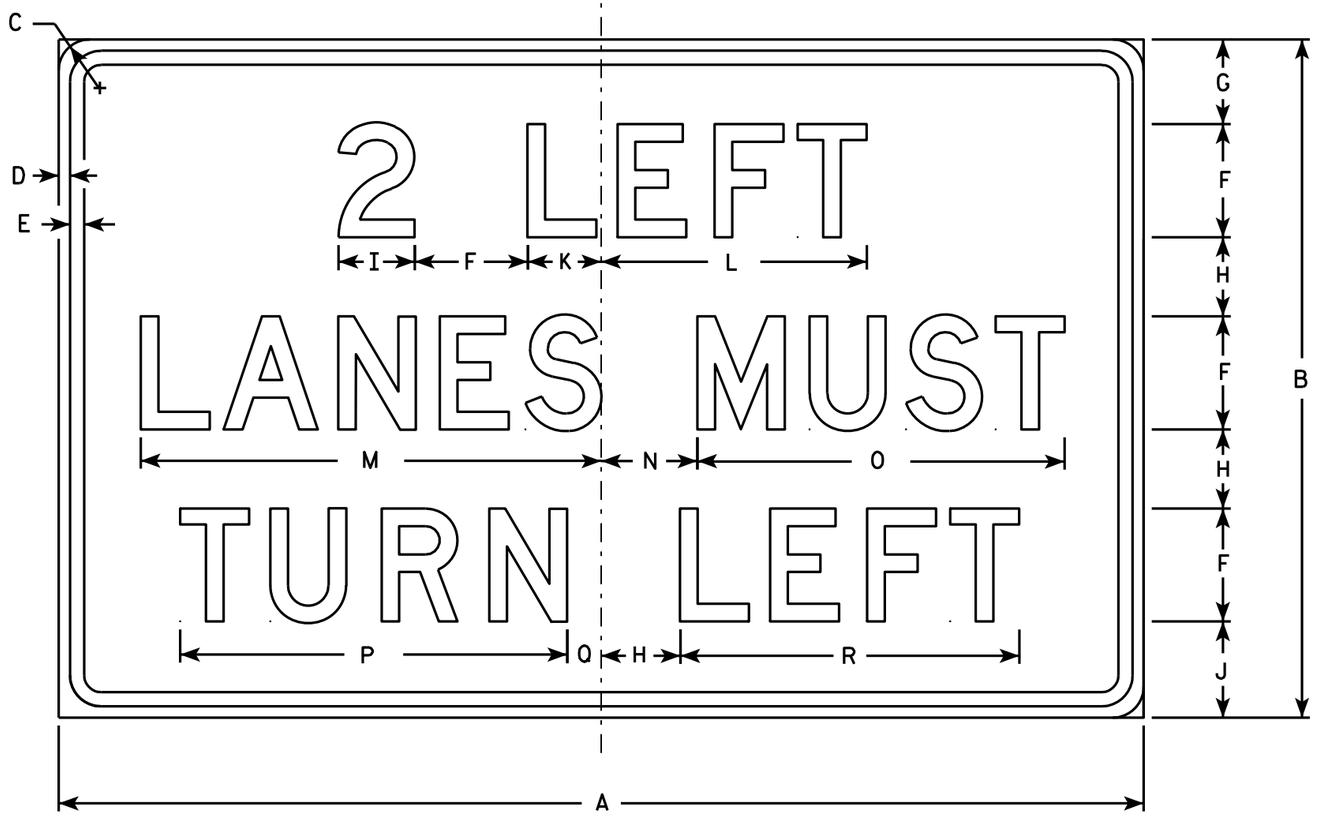
STANDARD SIGN
R3-7L & R3-7R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/2011 PLATE NO. R3-7.3

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 664 | E



R3-7S

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	48	30	1 3/8	1/2	5/8	5	3 3/4	3 1/2	3 3/8	4 1/4	3 1/4	11 3/4	20 3/8	4 1/4	16 1/4	17 1/8	1 1/2	15									10.0
2S	48	30	1 3/8	1/2	5/8	5	3 3/4	3 1/2	3 3/8	4 1/4	3 1/4	11 3/4	20 3/8	4 1/4	16 1/4	17 1/8	1 1/2	15									10.0
2M	48	30	1 3/8	1/2	5/8	5	3 3/4	3 1/2	3 3/8	4 1/4	3 1/4	11 3/4	20 3/8	4 1/4	16 1/4	17 1/8	1 1/2	15									10.0
3																											
4																											
5																											

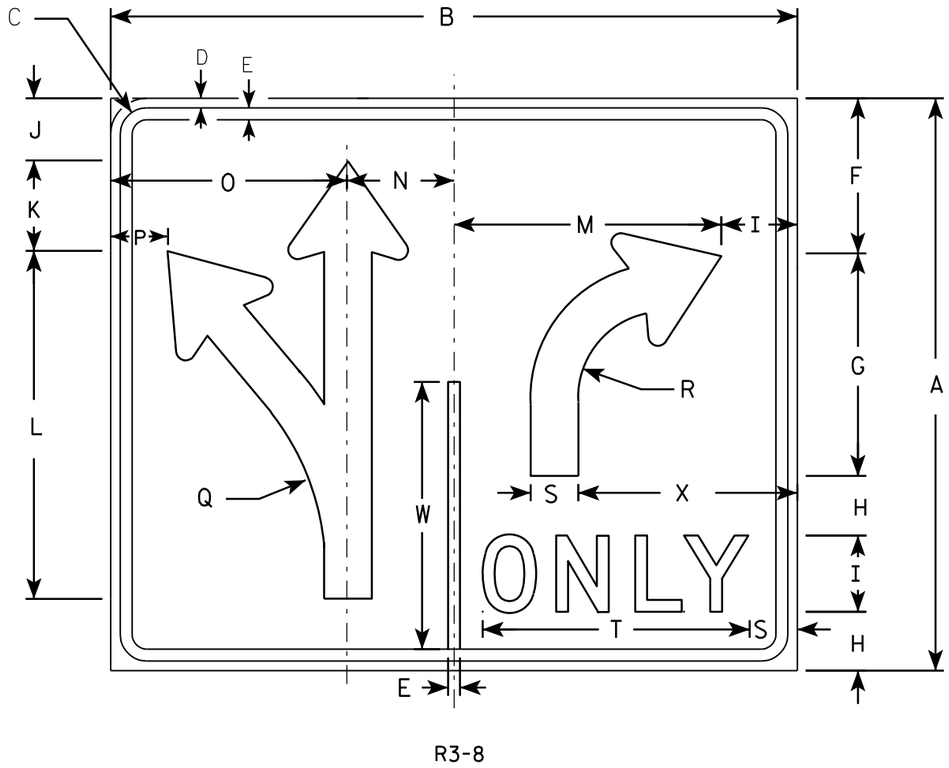
STANDARD SIGN
R3-7S

WISCONSIN DEPT OF TRANSPORTATION

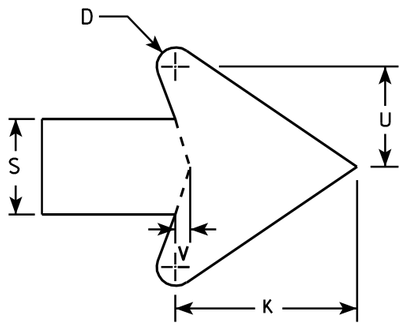
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/2011 PLATE NO. R3-7S.4

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 665 | E



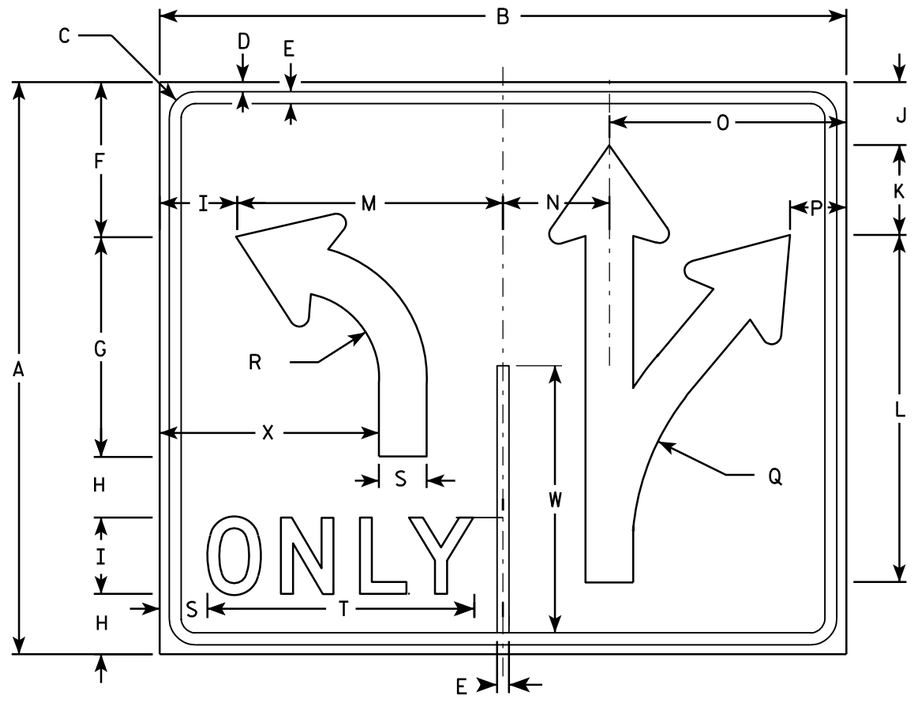
R3-8



ARROW DETAIL

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - WHITE
   Message - BLACK
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



R3-8A

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	36	1 3/8	1/2	5/8	8 1/8	11 5/8	3 1/8	4	3 1/4	4 3/4	18 1/4	14	5 5/8	12 3/8	3	13 1/4	4 1/2	2 1/2	14	2 5/8	3/8	14	11 1/2			7.5
2M	30	36	1 3/8	1/2	5/8	8 1/8	11 5/8	3 1/8	4	3 1/4	4 3/4	18 1/4	14	5 5/8	12 3/8	3	13 1/4	4 1/2	2 1/2	14	2 5/8	3/8	14	11 1/2			7.5
3																											
4	48	54	2 1/4	3/4	1	13 1/4	18 1/2	5 1/8	6	5 1/4	7 1/8	29 1/8	21	8 3/8	18 5/8	4 3/8	21 7/8	7 1/4	3 3/4	20 5/8	4	5/8	22 3/8	17 1/4			18.0
5	48	54	2 1/4	3/4	1	13 1/4	18 1/2	5 1/8	6	5 1/4	7 1/8	29 1/8	21	8 3/8	18 5/8	4 3/8	21 7/8	7 1/4	3 3/4	20 5/8	4	5/8	22 3/8	17 1/4			18.0

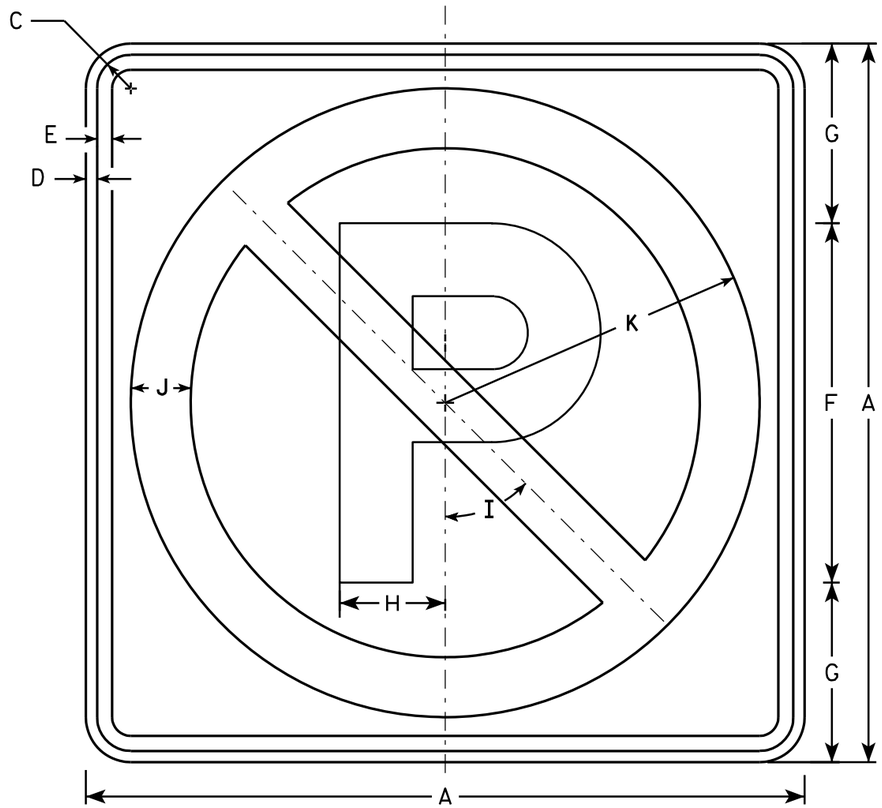
STANDARD SIGN
R3-8 & R3-8A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/2011 PLATE NO. R3-8.5

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 666	E



R3-8A

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. Border & Letter P are non reflective black, the circle with diagonal bar is reflective red.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24		1 1/8	3/8	1/2	12	6	3 1/2	45°	2	10 1/2																4.0
2M	24		1 1/8	3/8	1/2	12	6	3 1/2	45°	2	10 1/2																4.0
3																											
4																											
5																											

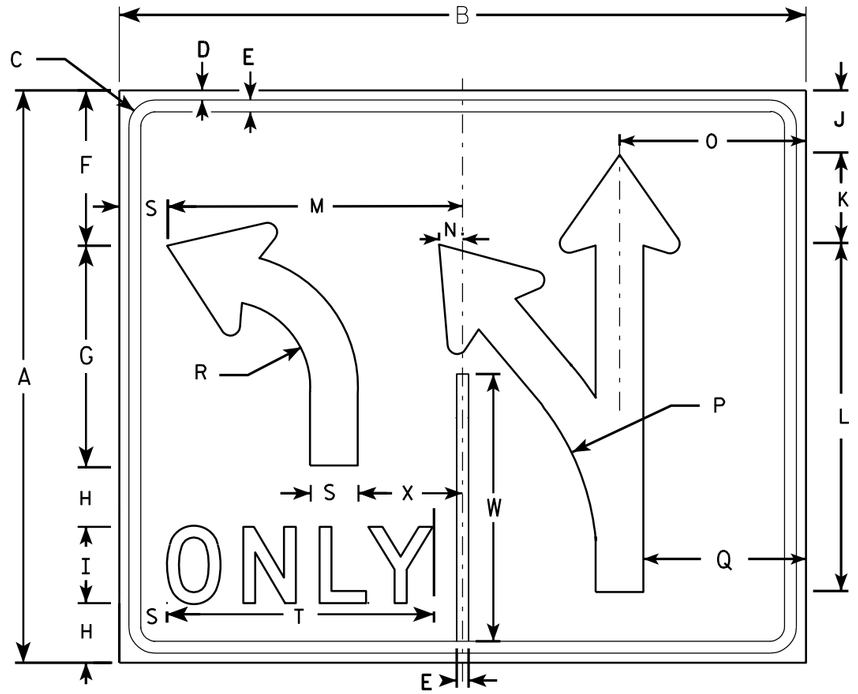
STANDARD SIGN
R3-8A

WISCONSIN DEPT OF TRANSPORTATION

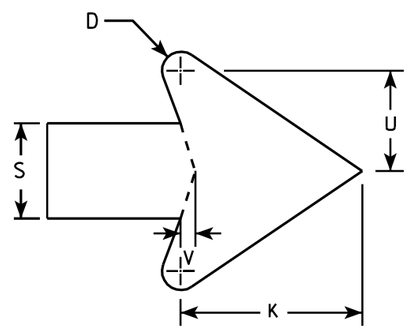
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/01/12 PLATE NO. R3-8A.1

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 667 | E



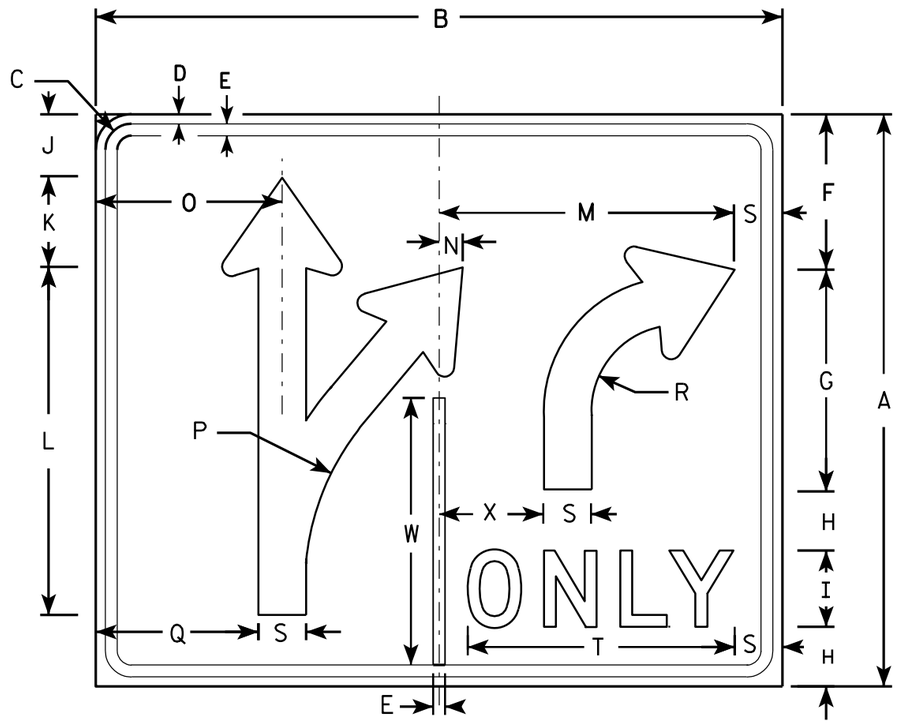
R3-8B



ARROW DETAIL

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - WHITE
   Message - BLACK
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. R3-8B & R3-8C is the same but reversed.



R3-8C

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	36	1 3/8	1/2	5/8	8 1/8	11 5/8	3 1/8	4	3 1/4	4 3/4	18 1/4	15 1/2	1 1/4	9 3/4	13 1/4	8 1/2	4 1/2	2 1/2	14	2 5/8	3/8	14	5 1/4			7.5
2M	30	36	1 3/8	1/2	5/8	8 1/8	11 5/8	3 1/8	4	3 1/4	4 3/4	18 1/4	15 1/2	1 1/4	9 3/4	13 1/4	8 1/2	4 1/2	2 1/2	14	2 5/8	3/8	14	5 1/4			7.5
3																											
4	48	54	2 1/4	3/4	1	13 1/4	18 1/2	5 1/8	6	5 1/4	7 1/8	29 5/8	23 1/8	1 7/8	14 5/8	21 7/8	12 3/4	7 1/4	3 3/4	20 5/8	4	5/8	22 3/8	8 1/8			18.0
5	48	54	2 1/4	3/4	1	13 1/4	18 1/2	5 1/8	6	5 1/4	7 1/8	29 5/8	23 1/8	1 7/8	14 5/8	21 7/8	12 3/4	7 1/4	3 3/4	20 5/8	4	5/8	22 3/8	8 1/8			18.0

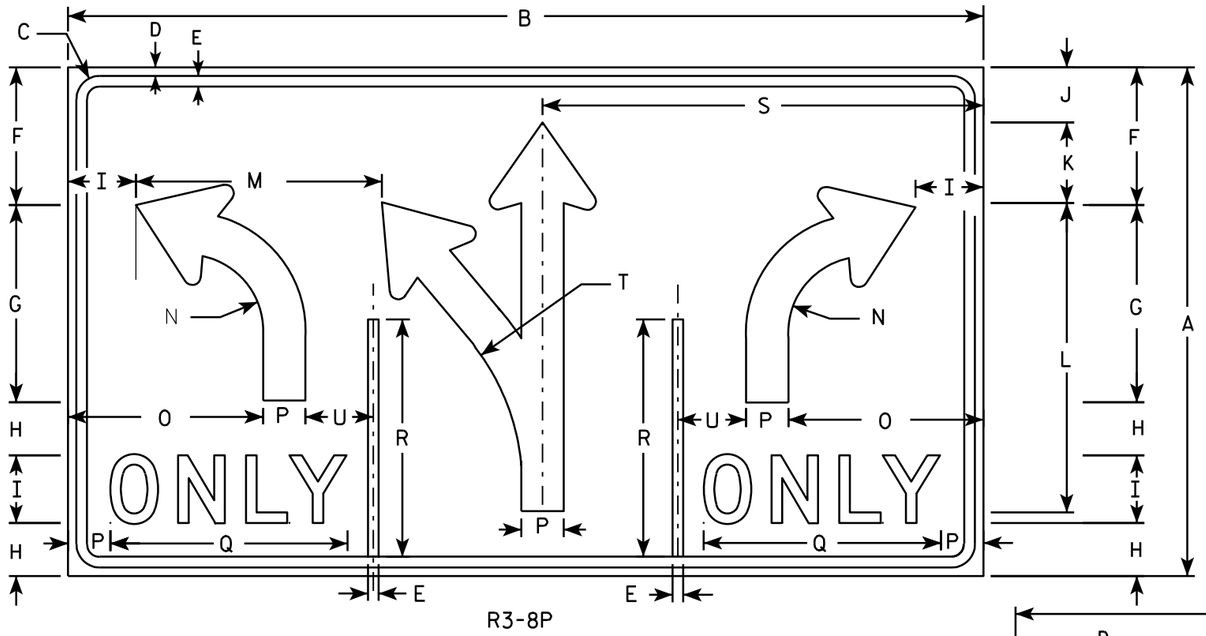
STANDARD SIGN
R3-8B & R3-8C

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/2011 PLATE NO. R3-8B.2

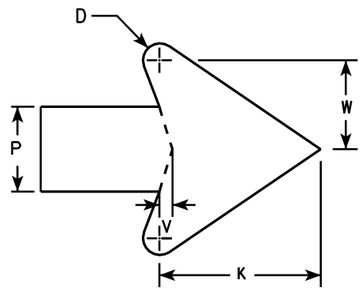
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 668 | E



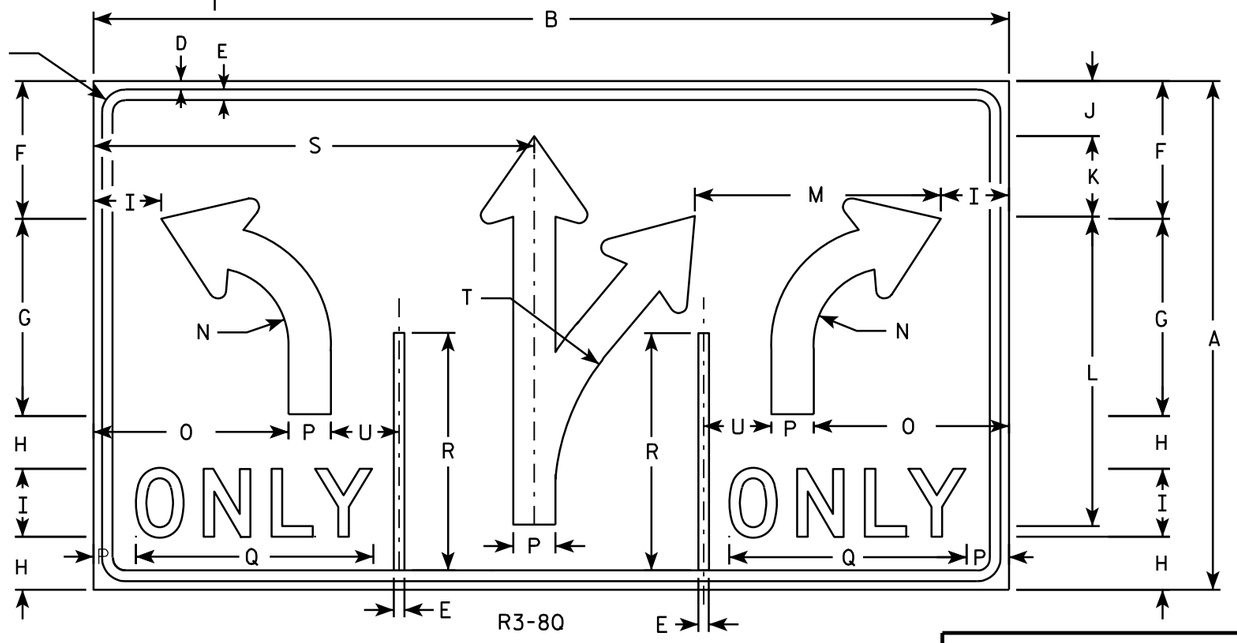
R3-8P

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - WHITE
   Message - BLACK
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



ARROW DETAIL



R3-8Q

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	54	1 3/8	1/2	5/8	8 1/8	11 5/8	3 1/8	4	3 1/4	4 3/4	18 1/4	14 1/2	4 1/2	11 1/2	2 1/2	14	14	26	13 1/4	4	3/8	2 5/8				11.25
2M	30	54	1 3/8	1/2	5/8	8 1/8	11 5/8	3 1/8	4	3 1/4	4 3/4	18 1/4	14 1/2	4 1/2	11 1/2	2 1/2	14	14	26	13 1/4	4	3/8	2 5/8				11.25
3																											
4	48	84	2 1/4	3/4	1	13 1/4	18 1/2	5 1/8	6	5 1/4	7 1/8	29 1/8	22 5/8	7 1/4	17 1/4	3 3/4	20 5/8	22 3/8	40 3/4	21 7/8	7	5/8	4				28.0
5	48	84	2 1/4	3/4	1	13 1/4	18 1/2	5 1/8	6	5 1/4	7 1/8	29 1/8	22 5/8	7 1/4	17 1/4	3 3/4	20 5/8	22 3/8	40 3/4	21 7/8	7	5/8	4				28.0

STANDARD SIGN
R3-8P & R3-8Q

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/24/2011 PLATE NO. R3-8P.2

PROJECT NO:

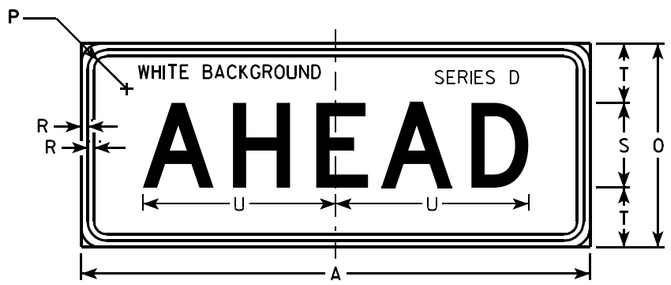
SHEET NO: 669 E



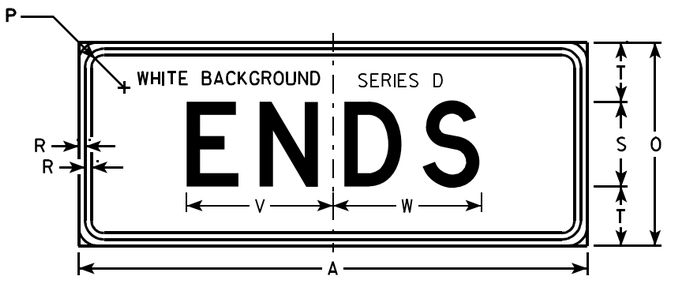
R3-17

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - AS SHOWN
   Message - BLACK
3. Message Series - C or as noted on the Signs.
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



R3-17ap



R3-17bp

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	R3-17 Area sq. ft.	R3-17ap Area sq. ft.	R3-17bp Area sq. ft.
1																													
2S	30	24	1 1/8	3/8	1/2	2	4	4 1/8	7 7/8	6 3/8	9 1/2	2 5/8	7/8	13	12	1 1/8	3 3/8	3/8	5	3 1/2	11 3/8	8 5/8	8 3/4	2 3/8	15 5/8	8	5.0	2.5	2.5
2M	30	24	1 1/8	3/8	1/2	2	4	4 1/8	7 7/8	6 3/8	9 1/2	2 5/8	7/8	13	12	1 1/8	3 3/8	3/8	5	3 1/2	11 3/8	8 5/8	8 3/4	2 3/8	15 5/8	8	5.0	2.5	2.5
3																													
4																													
5																													

STANDARD SIGN
R3-17 & R3-17a&bp

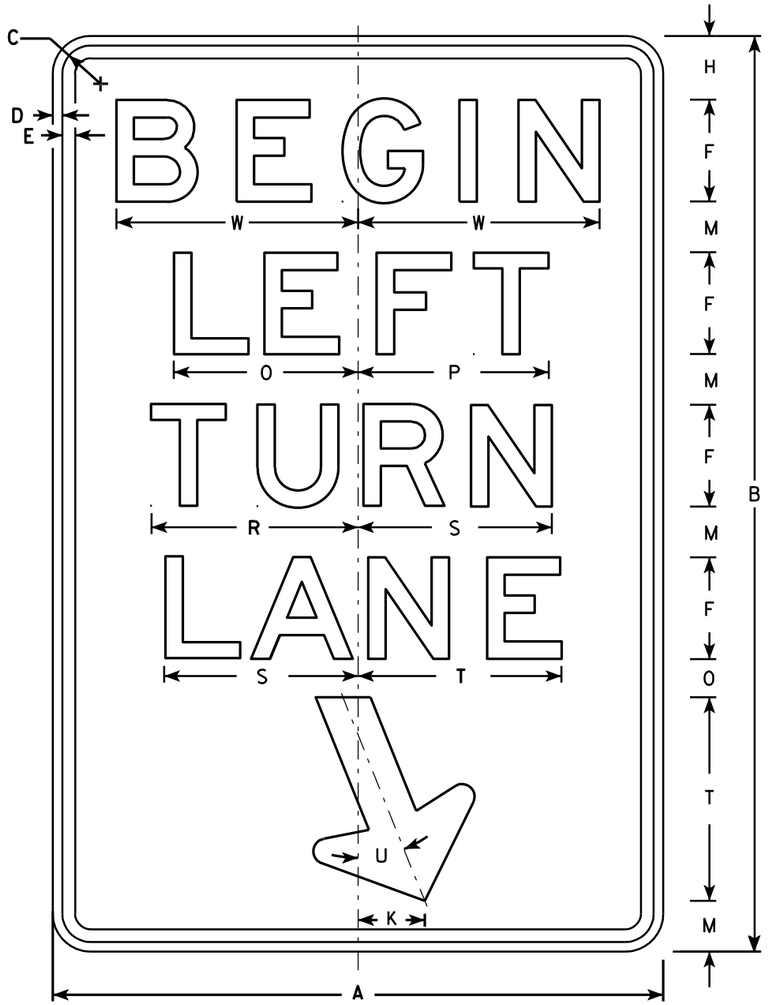
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/12/2011 PLATE NO. R3-17.2

PROJECT NO:

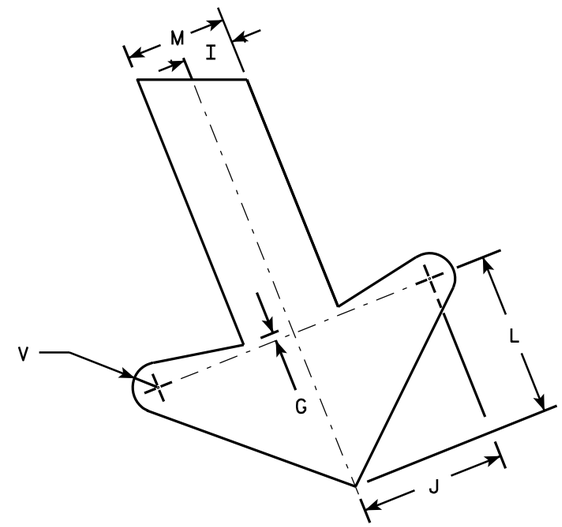
SHEET NO: 670 E



R3-20L

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - E
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	36	1 1/8	3/8	1/2	4	1/4	2 1/2	1	2 7/8	2 5/8	3 1/4	2	1 1/2	7 1/4	7 1/2		8 1/8	7 5/8	8	22°	1/2	9 1/2				6.0
2M	24	36	1 1/8	3/8	1/2	4	1/4	2 1/2	1	2 7/8	2 5/8	3 1/4	2	1 1/2	7 1/4	7 1/2		8 1/8	7 5/8	8	22°	1/2	9 1/2				6.0
3	36	54	1 3/4	1/2	5/8	6	3/8	3 3/4	1 1/2	4 1/4	4	4 7/8	3	2 1/4	10 7/8	11 1/4		12 1/4	11 1/2	12	22°	3/4	13 1/4				13.5
4																											
5																											

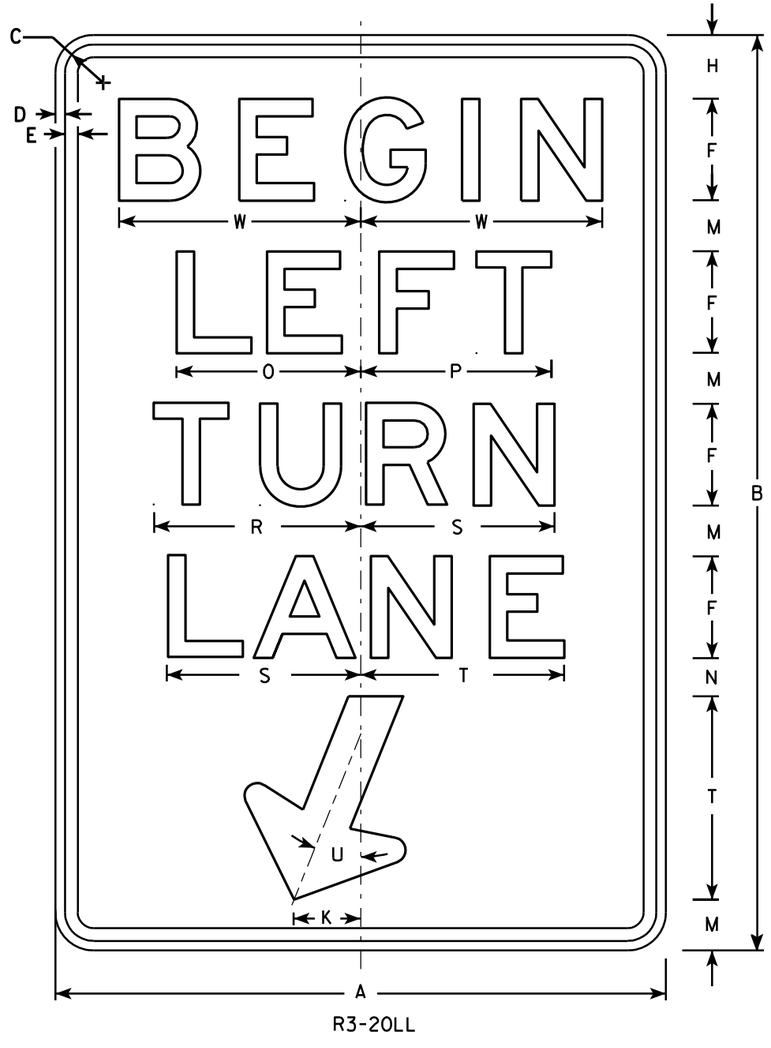
STANDARD SIGN
R3-20L

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/18/10 PLATE NO. R3-20L.7

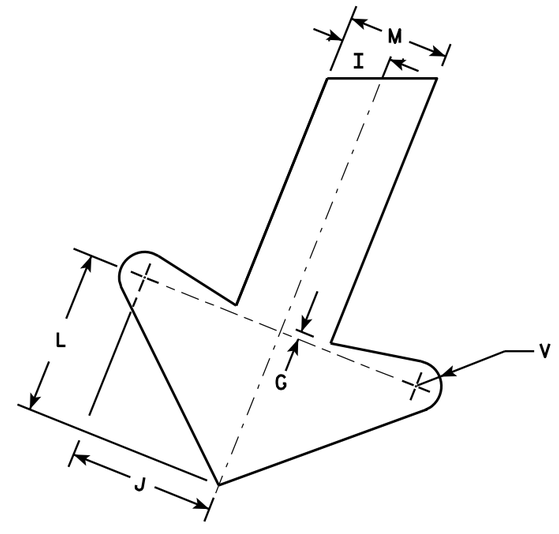
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 671 | E



R3-20LL

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - E
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	36	1 1/8	3/8	1/2	4	1/4	2 1/2	1	2 7/8	2 5/8	3 1/4	2	1 1/2	7 1/4	7 1/2		8 1/8	7 5/8	8	22°	1/2	9 1/2				6.0
2M	24	36	1 1/8	3/8	1/2	4	1/4	2 1/2	1	2 7/8	2 5/8	3 1/4	2	1 1/2	7 1/4	7 1/2		8 1/8	7 5/8	8	22°	1/2	9 1/2				6.0
3	36	54	1 3/4	1/2	5/8	6	3/8	3 3/4	1 1/2	4 1/4	4	4 7/8	3	2 1/4	10 7/8	11 1/4		12 1/4	11 1/2	12	22°	3/4	13 1/4				13.5
4																											
5																											

STANDARD SIGN
R3-20LL

WISCONSIN DEPT OF TRANSPORTATION

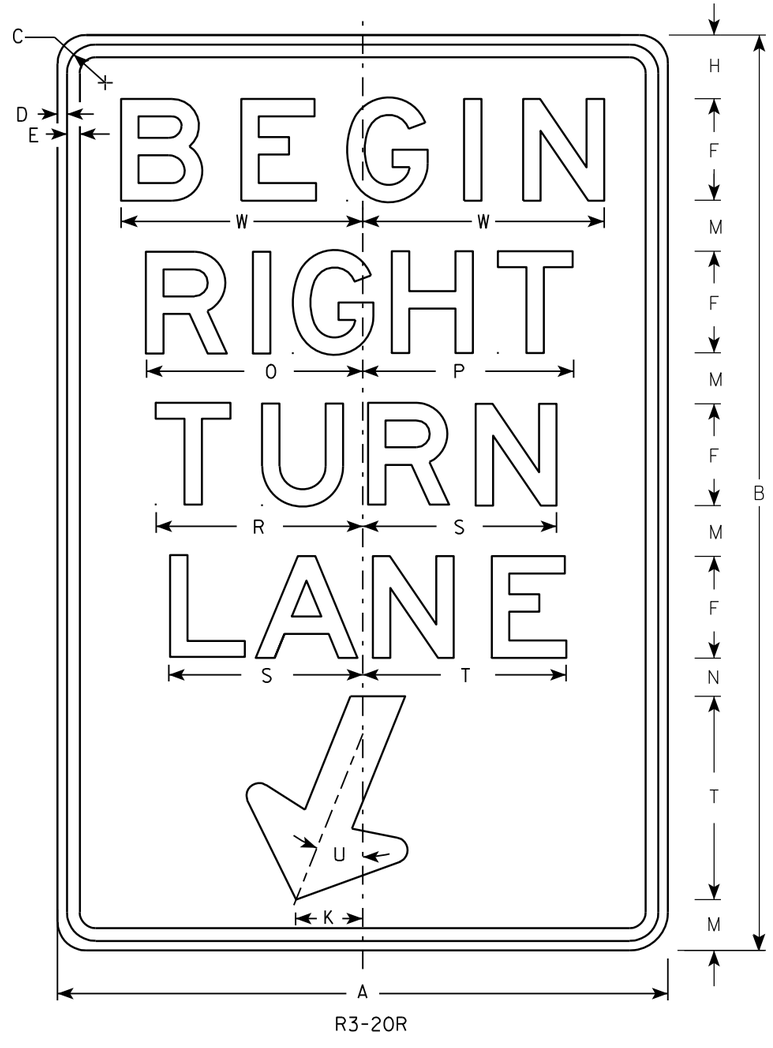
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/18/10 PLATE NO. R3-20LL.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 672	E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R320LL.DGN PLOT DATE : 15-OCT-2010 14:38 PLOT BY : dotsja PLOT NAME : PLOT SCALE : 5.959043:1.000000

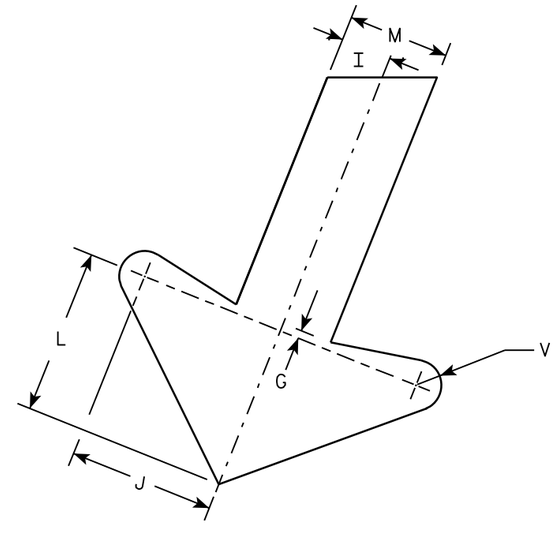
WISDOT/CADDS SHEET 42



R3-20R

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - E
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	36	1 1/8	3/8	1/2	4	1/4	2 1/2	1	2 7/8	2 5/8	3 1/4	2	1 1/2	8 1/2	8 1/4		8 1/8	7 5/8	8	22°	1/2	9 1/2				6.0
2M	24	36	1 1/8	3/8	1/2	4	1/4	2 1/2	1	2 7/8	2 5/8	3 1/4	2	1 1/2	8 1/2	8 1/4		8 1/8	7 5/8	8	22°	1/2	9 1/2				6.0
3	36	54	1 3/4	1/2	5/8	6	3/8	3 3/4	1 1/2	4 1/4	4	4 7/8	3	2 1/4	12 3/4	12 1/2		12 1/4	11 1/2	12	22°	3/4	13 1/4				13.5
4																											
5																											

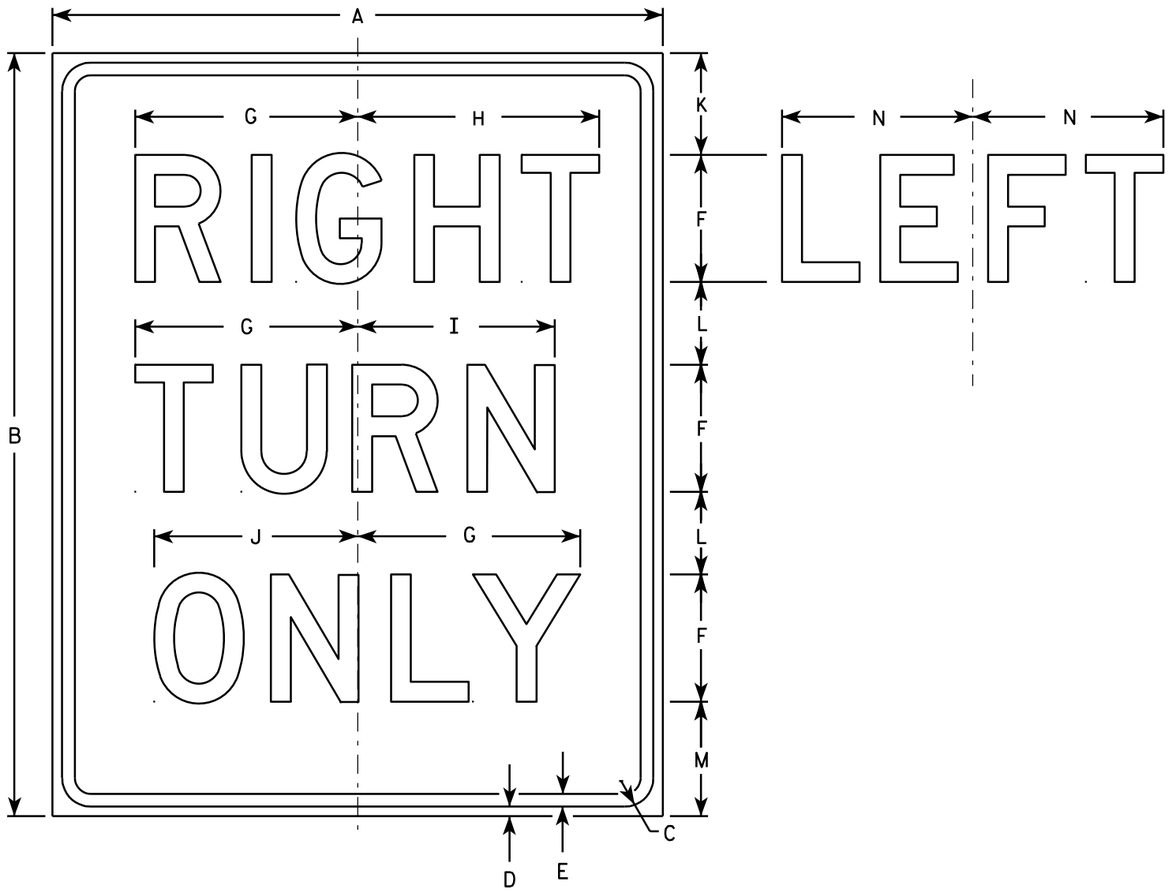
STANDARD SIGN
R3-20R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/18/10 PLATE NO. R3-20R.6

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 673 | E



R3-53R

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. R3-53L same as R3-53R except LEFT is substituted for RIGHT.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	30	1 1/8	3/8	1/2	5	8 3/4	9 1/2	7 3/4	8	4	3 1/4	4 1/2	7 1/2													5.0
2M	24	30	1 1/8	3/8	1/2	5	8 3/4	9 1/2	7 3/4	8	4	3 1/4	4 1/2	7 1/2													5.0
3	24	30	1 1/8	3/8	1/2	5	8 3/4	9 1/2	7 3/4	8	4	3 1/4	4 1/2	7 1/2													5.0
4																											
5																											

STANDARD SIGN
R3-53

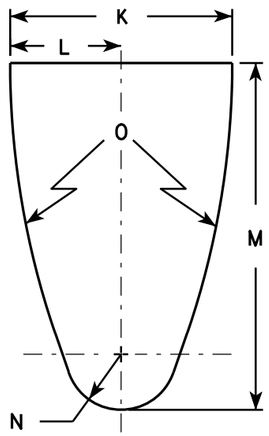
WISCONSIN DEPT OF TRANSPORTATION

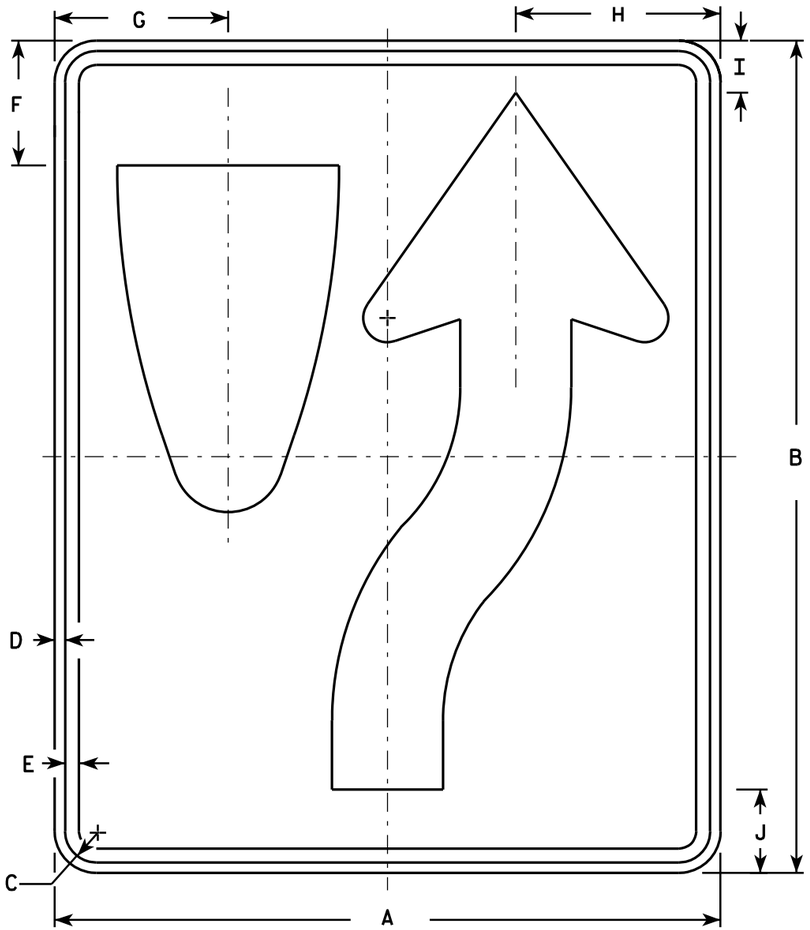
APPROVED Matthew R Rauch
for State Traffic Engineer
DATE 3/24/2011 PLATE NO. R3-53.8

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 674 | E

7

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R353.DGN PLOT DATE : 24-MAR-2011 14:54 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 5.959043:1.000000
WISDOT/CADDS SHEET 42

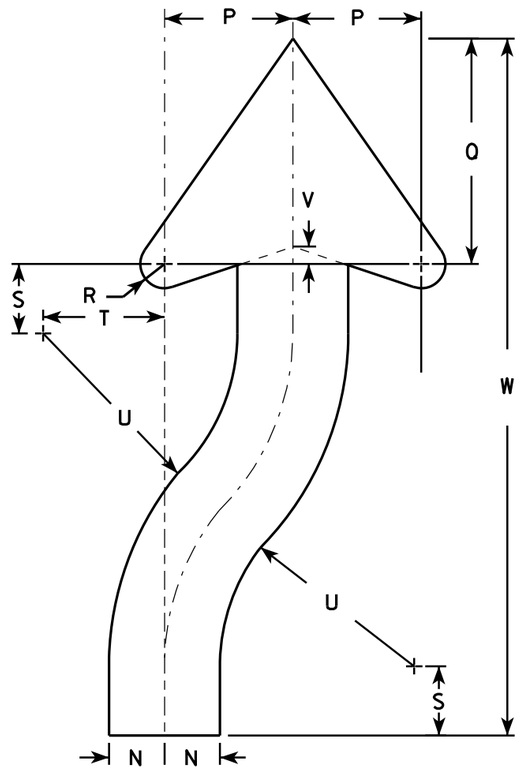




R4-7

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition. material is plywood but borders shall be rounded
2. Color:
   Background - White
   Message - Black
3. Corners may be square or rounded when base as shown. When base material is metal, the corners and borders shall be rounded.
4. R4-8 is the same as R4-7 except Legend is reversed.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18	24	1 1/8	3/8	1/2	3 3/8	4 3/4	5 1/2	1 3/8	2 1/4	6	3	9 3/8	1 1/2	22 1/2	3 1/2	6 1/8	5/8	1 7/8	3 1/4	6 3/4	1/2	20 3/8				3.0
2S	24	30	1 1/8	3/8	1/2	4 1/2	6 1/4	7 3/8	1 7/8	3	8	4	12 1/2	2	30	4 5/8	8 1/8	7/8	2 1/2	4 3/8	9	5/8	25 1/8				5.0
2M	24	30	1 1/8	3/8	1/2	4 1/2	6 1/4	7 3/8	1 7/8	3	8	4	12 1/2	2	30	4 5/8	8 1/8	7/8	2 1/2	4 3/8	9	5/8	25 1/8				5.0
3	36	48	1 3/4	1/2	5/8	6 3/4	9 3/8	11 1/8	2 7/8	4 1/2	12	6	18 3/4	3	45	6 7/8	12 1/4	1 1/4	3 3/4	6 5/8	13 1/2	1	40 3/4				12.0
4	36	48	1 3/4	1/2	5/8	6 3/4	9 3/8	11 1/8	2 7/8	4 1/2	12	6	18 3/4	3	45	6 7/8	12 1/4	1 1/4	3 3/4	6 5/8	13 1/2	1	40 3/4				12.0
5	48	60	2 1/4	3/4	1	9	12 1/2	14 3/4	3 3/4	6	16	8	25	4	60	9 1/4	16 1/4	1 5/8	5	8 3/4	18	1 1/4	50 1/4				20.0

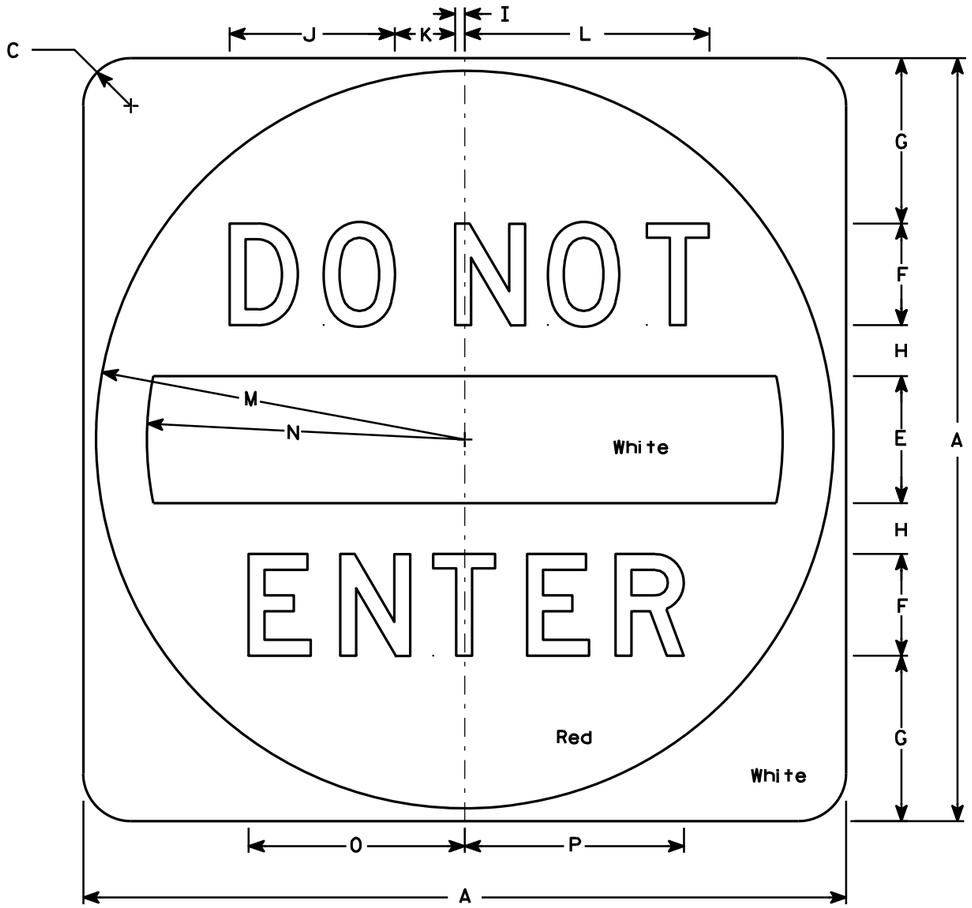
STANDARD SIGN
R4-7 & R4-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 3/25/2011 PLATE NO. R4-7.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 675	E



R5-1

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - See detail
   Message - White - Type H Reflective
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but when base material is metal, the cornors shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30		1 7/8		5	4	6 1/2	2	3/8	6 1/2	2 3/8	9 5/8	14 1/2	12 1/2	8 1/2	8 5/8											6.26
2M	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
3	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
4	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
5	48		3		8	6	11	3	5/8	9 3/4	3 5/8	14 1/2	23 1/2	20	12 3/4	12 7/8											16.0

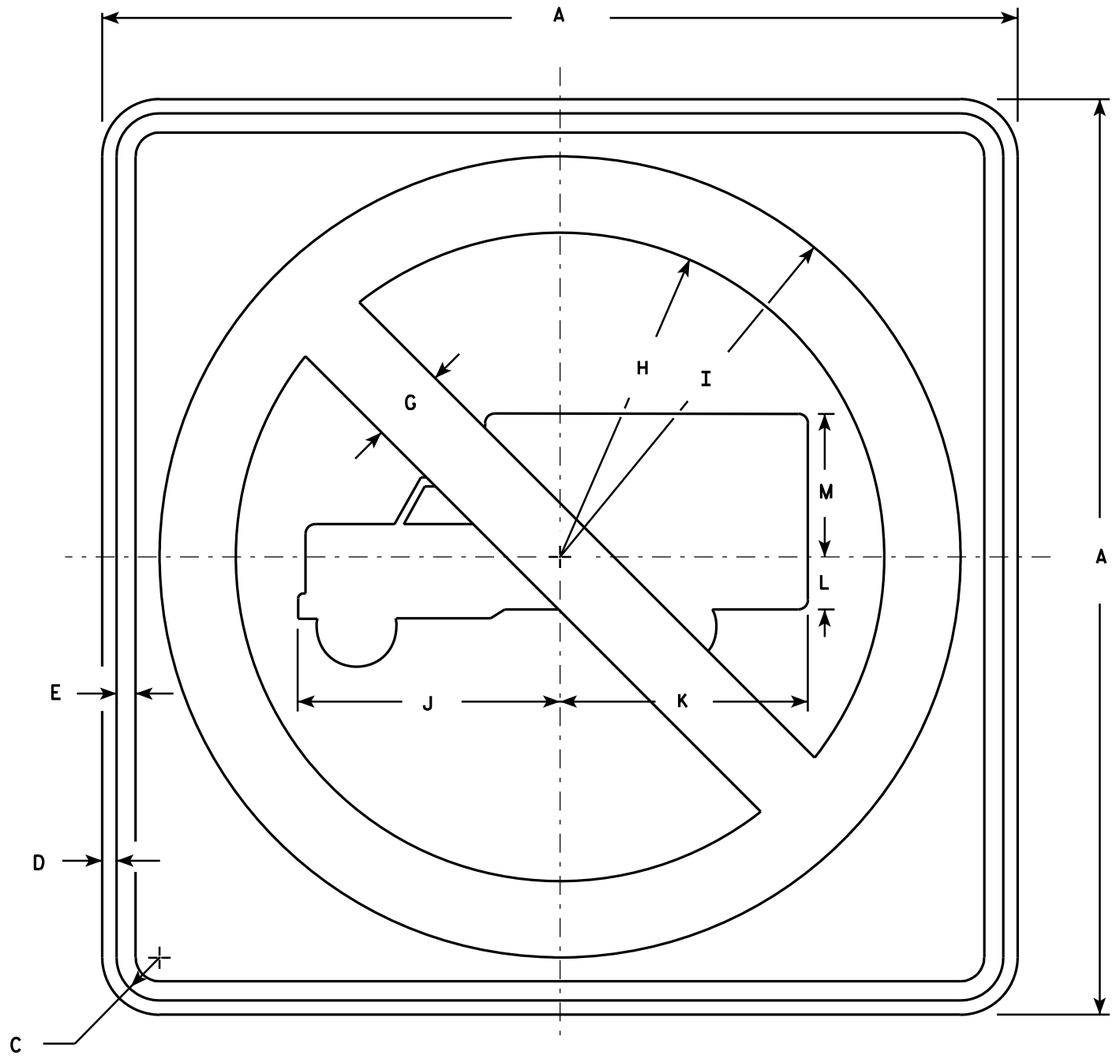
STANDARD SIGN
R5-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/17/10 PLATE NO. R5-1.15

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 676 | E



R5-2

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - See Note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. Circle & Diagonal - Reflective red.
   Truck Symbol & Border - Non-reflective black.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24		1 1/8	3/8	1/2		2	8 1/2	10 1/2	6 7/8	6 1/2	1 3/8	3 3/4														4.0
2M	24		1 1/8	3/8	1/2		2	8 1/2	10 1/2	6 7/8	6 1/2	1 3/8	3 3/4														4.0
3	30		1 3/8	1/2	5/8		2 1/2	10 5/8	13 1/8	8 1/2	8 1/8	1 5/8	4 3/4														6.25
4	36		1 5/8	5/8	3/4		3	12 3/4	15 3/4	10 1/4	9 3/4	2	5 3/4														9.0
5	48		2 1/4	3/4	1		4	17	21	13 5/8	13	2 5/8	7 5/8														16.0

STANDARD SIGN
R5-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/29/2011 PLATE NO. R5-2.6

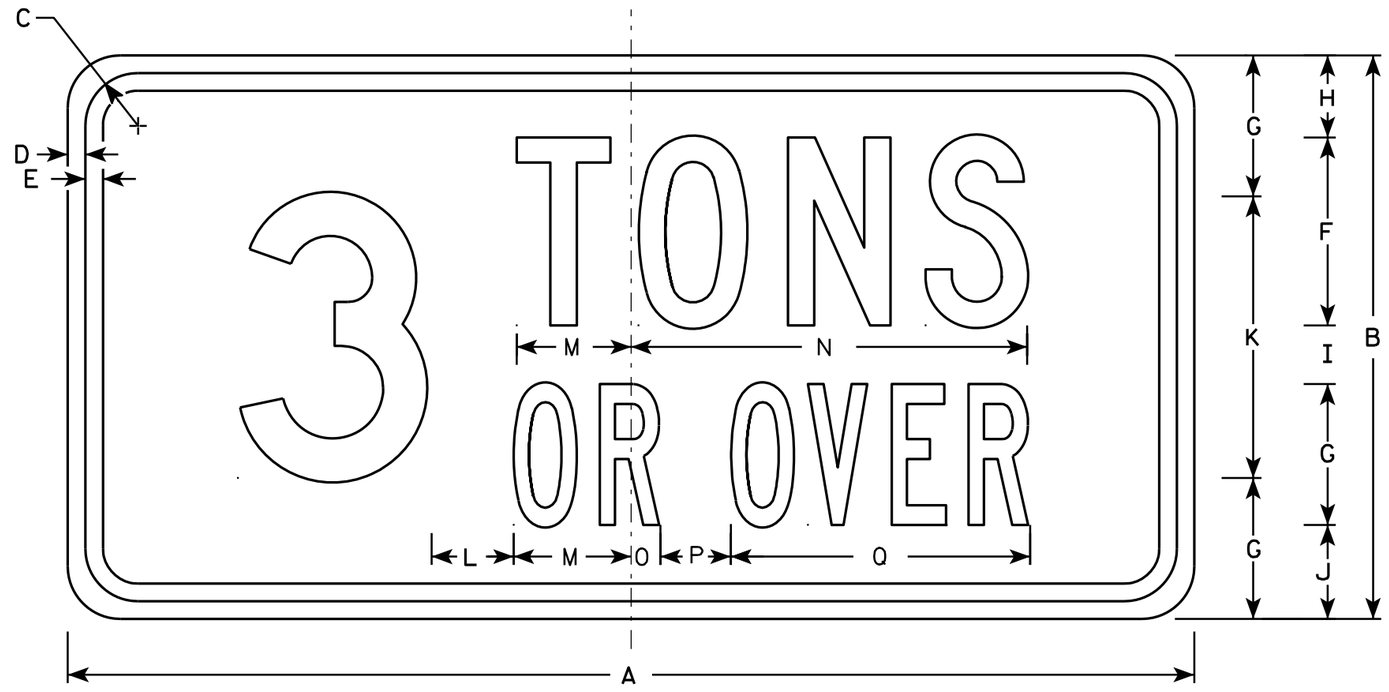
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 677	E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R52.DGN PLOT DATE : 29-MAR-2011 11:02 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 5.959043:1.000000

WISDOT/CADDS SHEET 42

7

7



R5-2A

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - See note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Line 1 is Series "C"
   Line 2 is Series "B"
   Numeral is Series "D"
6. Substitute appropriate numerals.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	12	1 1/8	3/8	3/8	4	3	1 3/4	1 1/4	2	6	1 3/4	2 1/2	8 1/2	5/8	1 1/2	6 3/8										2.0
2M	24	12	1 1/8	3/8	3/8	4	3	1 3/4	1 1/4	2	6	1 3/4	2 1/2	8 1/2	5/8	1 1/2	6 3/8										2.0
3	30	15	1 1/8	3/8	1/2	5	4	2 1/8	1 3/8	2 1/2	7	2 1/4	3 1/8	10 1/2	1	2 3/8	8 1/2										2.25
4	36	18	1 1/8	3/8	1/2	6	5	2 5/8	1 3/8	3	9	2 1/2	3 3/4	12 5/8	1 3/8	3 1/8	10 1/2										4.5
5	48	24	1 3/8	3/8	5/8	8	6	3 1/2	2 1/2	4	12	3 1/2	4 7/8	16 7/8	1 1/4	3	12 3/4										8.0

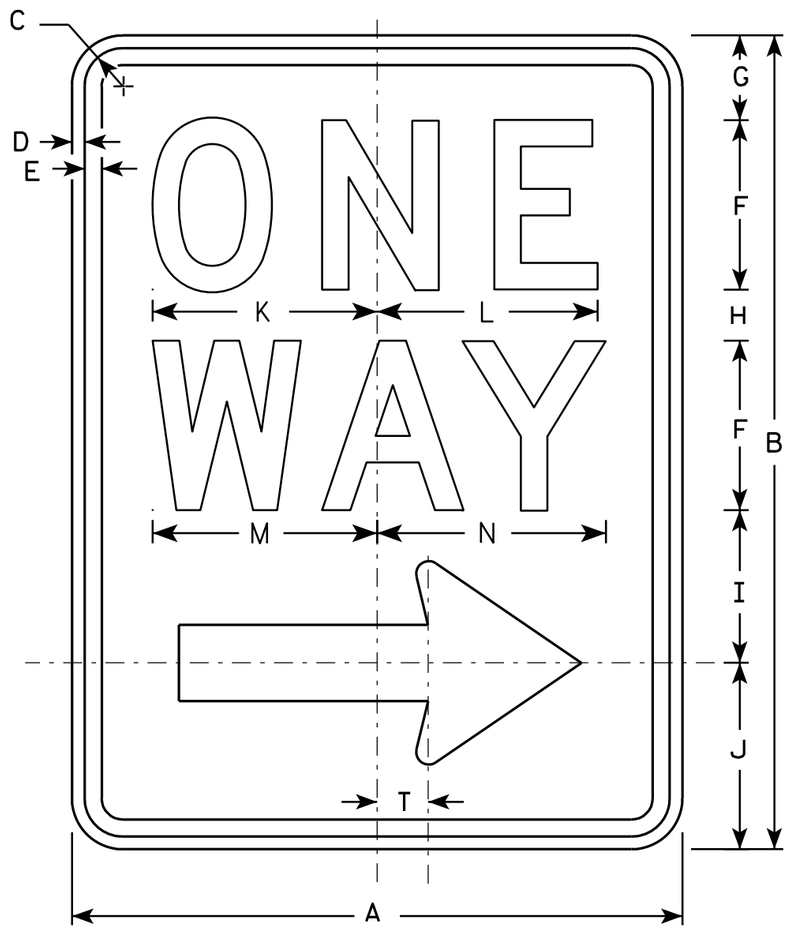
STANDARD SIGN
R5-2A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/29/2011 PLATE NO. R5-2A.7

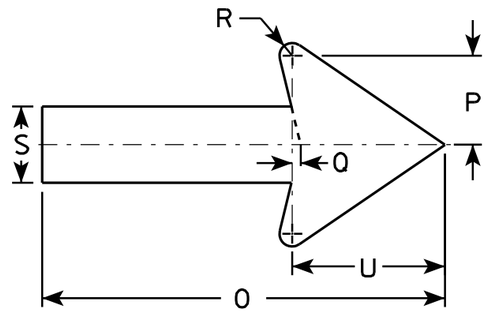
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 678 | E



R6-2R

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. R6-2L same as R6-2R except arrow points to the left.



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
1	18	24	1 1/8	3/8	1/2	5	2 1/2	1 1/2	4 1/2	5 1/2	6 5/8	6 1/2	6 5/8	6 3/4	11 7/8	2 5/8	1/4	3/8	2 1/4	1 1/2	4 1/2					
2S	24	30	1 1/8	3/8	1/2	6	3	2 1/2	5 1/2	7	8 1/8	8 1/8	8 1/2	8 5/8	16	3 1/2	3/8	1/2	3	2	6					
2M	30	36	1 3/8	1/2	5/8	8	2 1/2	2 5/8	6 7/8	8	10 1/2	10 1/2	11 1/4	11 1/4	20	4 3/8	1/2	5/8	3 3/4	2 1/2	7 1/2					
3	36	48	1 7/8	1/2	5/8	10	5 1/4	3 1/4	9	10 1/2	12 3/4	12 3/4	13 1/4	13 1/2	24	5 5/8	1/2	3/4	4 3/4	3	9					
4	36	48	1 7/8	1/2	5/8	10	5 1/4	3 1/4	9	10 1/2	12 3/4	12 3/4	13 1/4	13 1/2	24	5 5/8	1/2	3/4	4 3/4	3	9					
5																										

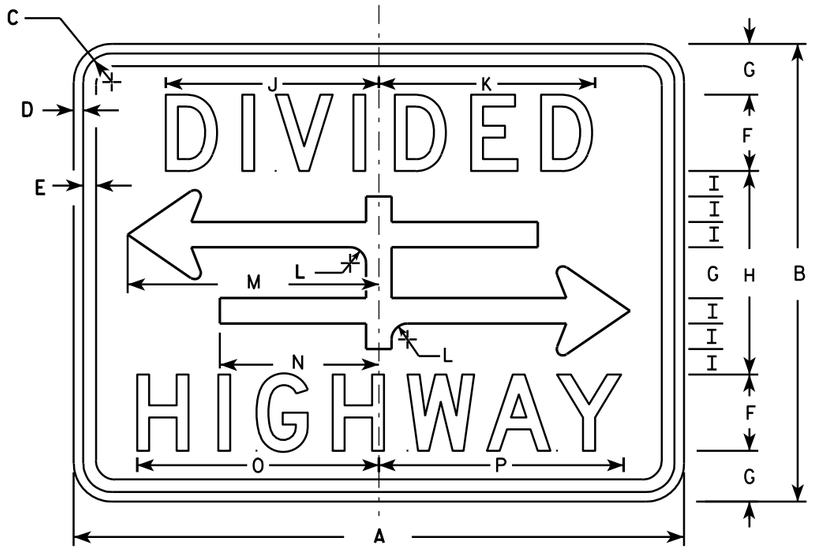
STANDARD SIGN
R6-2 R&L

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/2/10 PLATE NO. R6-2.8

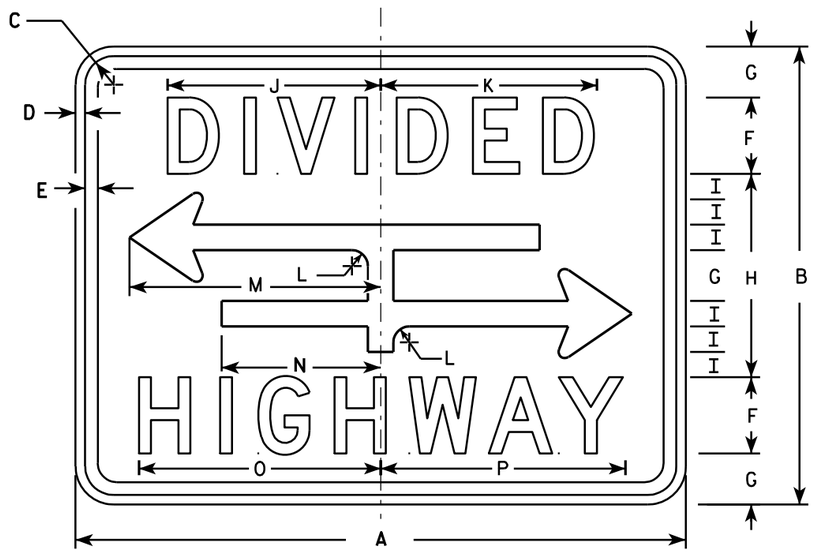
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 679	E



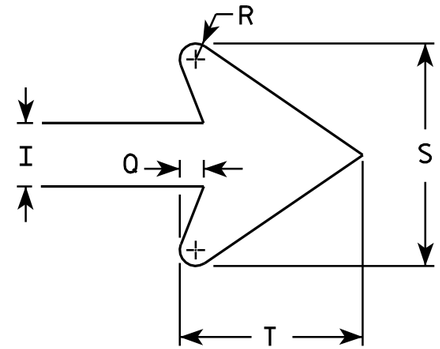
R6-3

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



R6-3A



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24	18	1 1/8	3/8	3/8	3	2	8	1	8 3/8	8 1/2	5/8	9 7/8	6 1/4	9 1/2	9 5/8	3/8	1/4	3 1/2	2 3/4							3.0
2S	30	24	1 1/8	3/8	1/2	4	2 5/8	10 3/4	1 3/8	10 1/2	10 5/8	7/8	12 1/2	7 7/8	12 1/4	12 3/8	1/2	3/8	4 5/8	3 5/8							5.0
2M	30	24	1 1/8	3/8	1/2	4	2 5/8	10 3/4	1 3/8	10 1/2	10 5/8	7/8	12 1/2	7 7/8	12 1/4	12 3/8	1/2	3/8	4 5/8	3 5/8							5.0
3																											
4																											
5																											

STANDARD SIGN
R6-3 & R6-3A

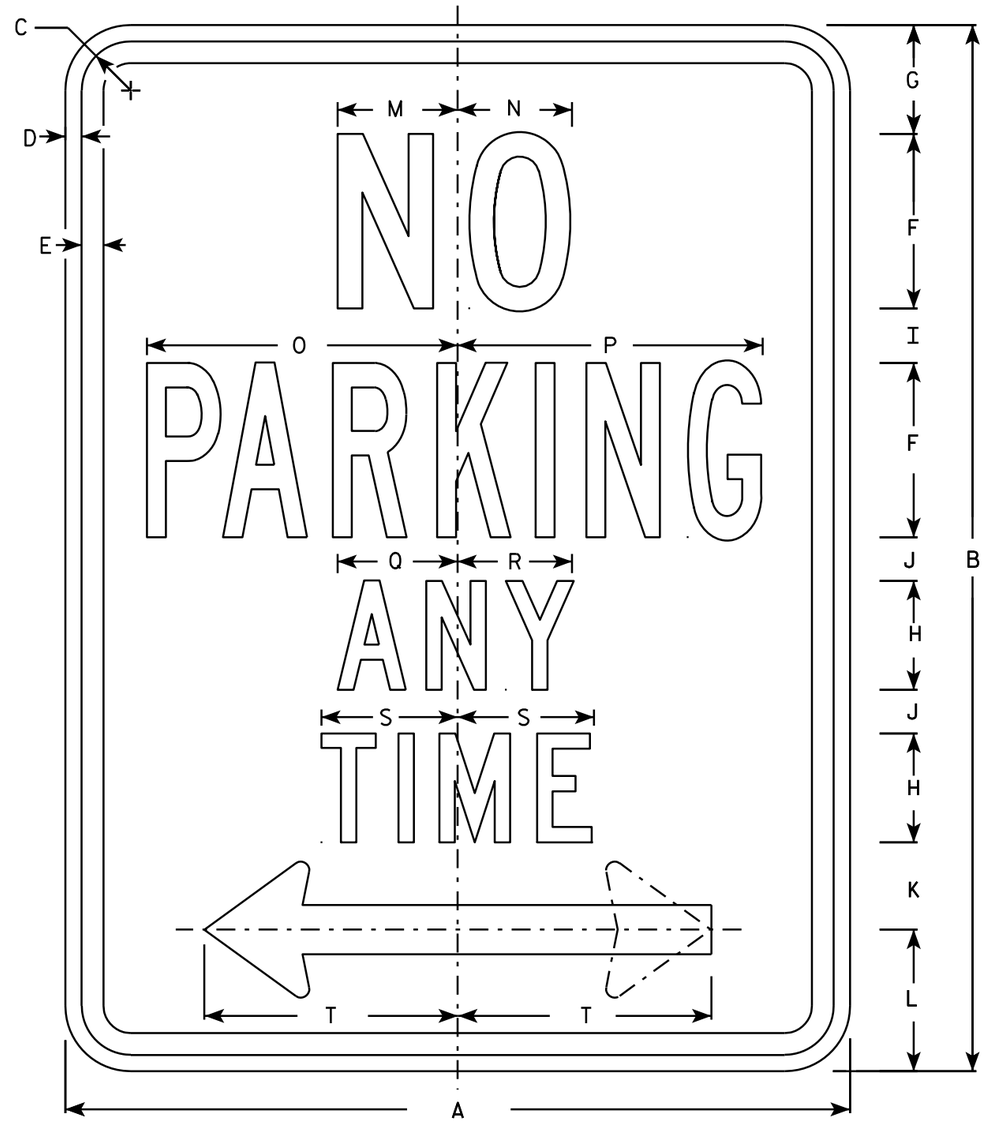
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/31/2011 PLATE NO. R6-3.5

PROJECT NO:

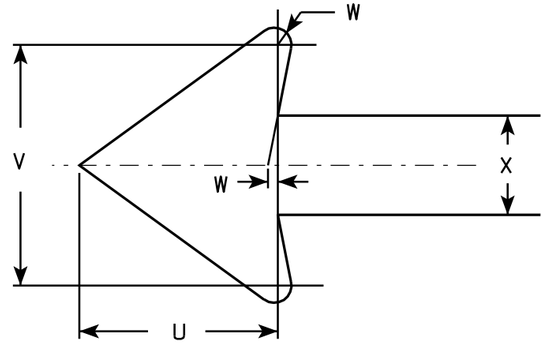
SHEET NO: 680 E



R7-1

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Red
3. Message Series - See Note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Lines 1, 3 and 4 are series C, line 2 is series B.
6. R7-1D (double arrow)
   R7-1L (left arrow)
   R7-1R (right arrow)



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	12	18	1 1/8	3/8	3/8	3	1 7/8	2	7/8	5/8	1 1/2	2 1/2	2	2	4 7/8	4 7/8	2 1/4	2 1/8	2 1/2	3 7/8	1 1/2	1 3/4	1/8	3/4			1.5
2S	18	24	1 1/8	3/8	1/2	4	2 1/2	2 1/2	1 1/4	1	2	3 1/4	2 3/4	2 5/8	7 1/8	7	2 3/4	2 5/8	3 1/8	5 7/8	2 1/4	2 5/8	1/4	1 1/8			3.0
2M	24	30	1 1/8	3/8	1/2	5	3	3	2	1 1/4	2 1/2	4	3 1/4	3 3/8	9 1/4	9 1/4	3 1/4	3 1/4	3 3/4	7 3/4	3	3 1/2	1/4	1 1/2			5.0
3	24	30	1 1/8	3/8	1/2	5	3	3	2	1 1/4	2 1/2	4	3 1/4	3 3/8	9 1/4	9 1/4	3 1/4	3 1/4	3 3/4	7 3/4	3	3 1/2	1/4	1 1/2			5.0
4																											
5																											

STANDARD SIGN
R7-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/31/2011 PLATE NO. R7-1.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 681	E



R9-9

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	18	1 3/4	1/2	1/2	4	3 1/2	3	10 3/4	8 1/8																	3.75
2M	30	18	1 3/4	1/2	1/2	4	3 1/2	3	10 3/4	8 1/8																	3.75
3																											
4																											
5																											

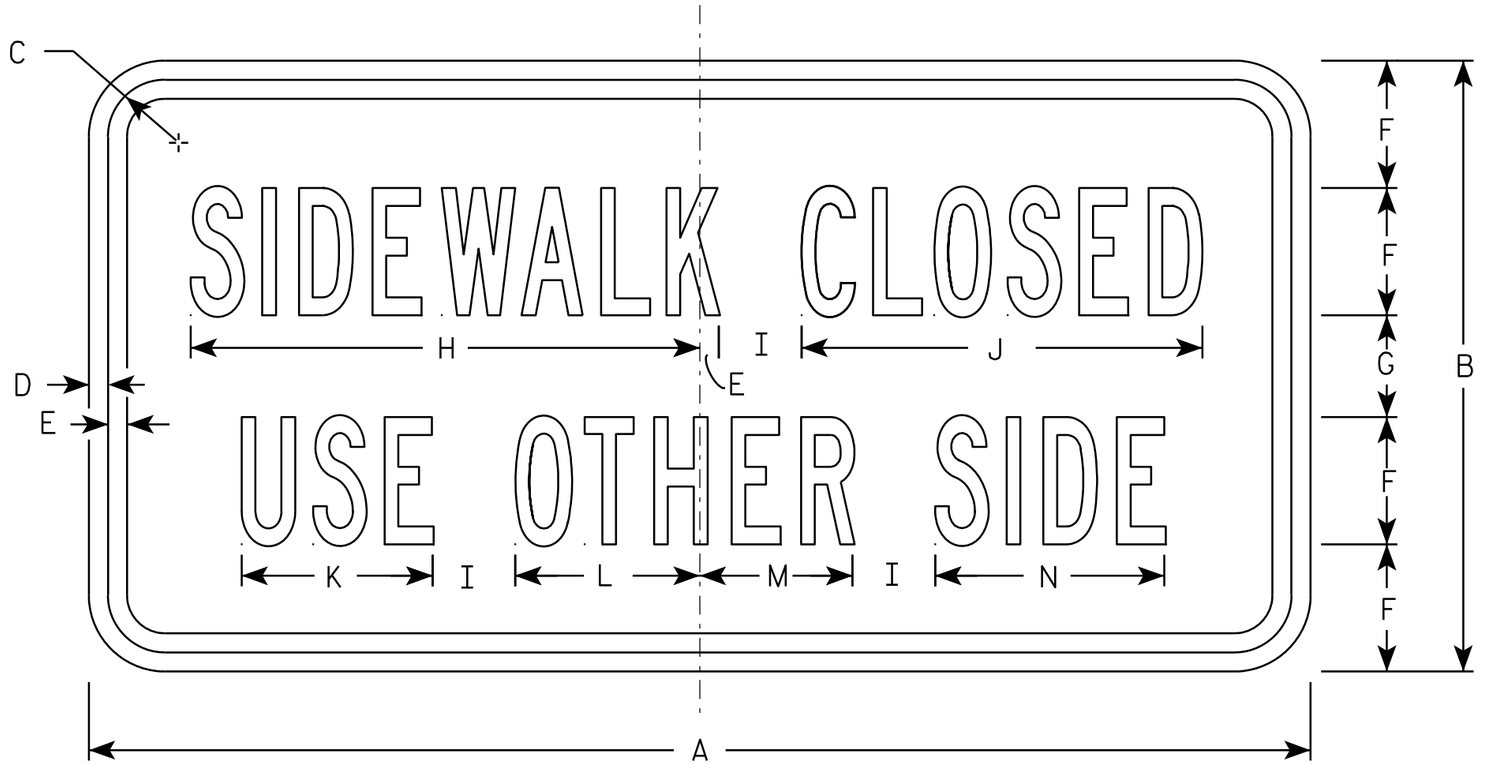
STANDARD SIGN
R9-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/1/2011 PLATE NO. R9-9.5

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 682	E



R9-10

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - B
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24	12	1 1/8	3/8	3/8	2 1/2	2	10	1 5/8	7 7/8	3 3/4	3 5/8	3	4 1/2													2.0
2S	48	24	2 3/4	3/4	3/4	5	4	20	3 1/4	15 3/4	7 1/2	7 1/4	6	9													8.0
2M	48	24	2 3/4	3/4	3/4	5	4	20	3 1/4	15 3/4	7 1/2	7 1/4	6	9													8.0
3																											
4																											
5																											

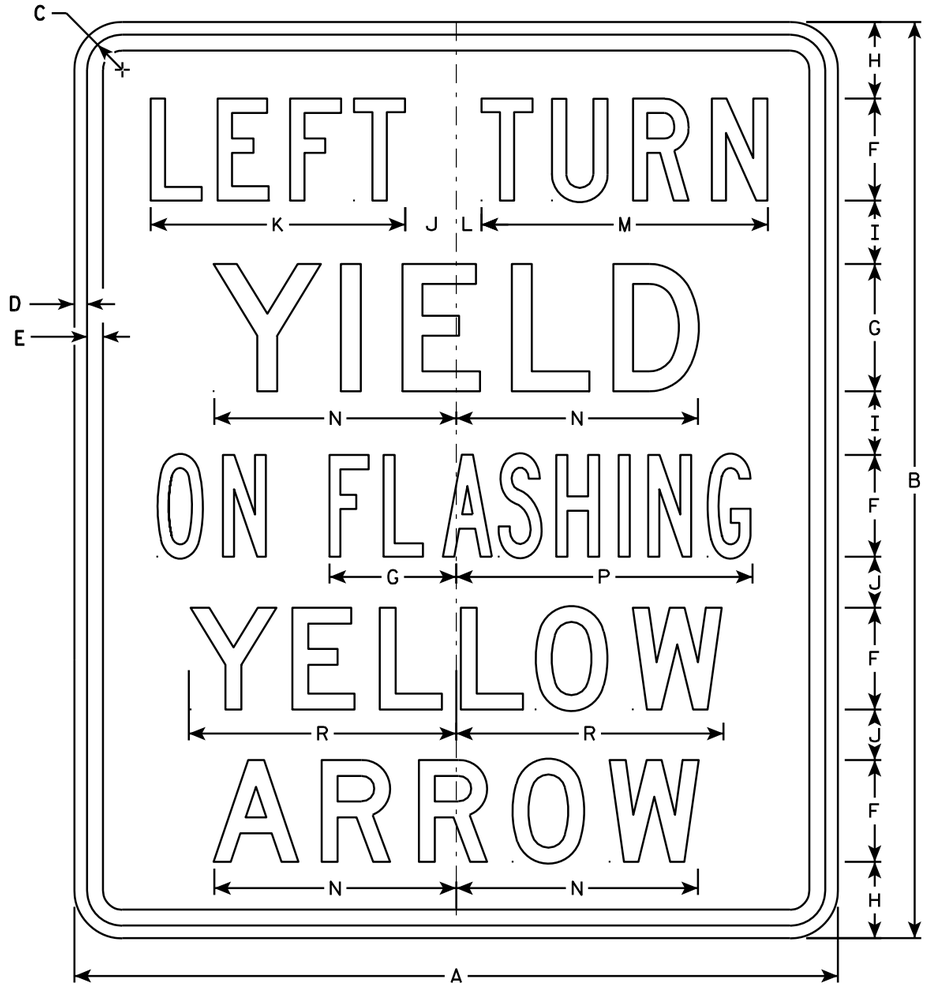
STANDARD SIGN
R9-10

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/16/2012 PLATE NO. R9-10.5

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 683	E

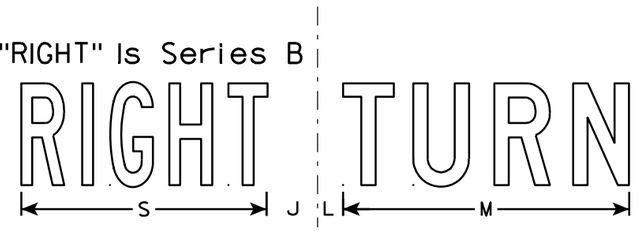


R10-50L

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - see note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Line 1 is Series C.
   Lines 2, 4 and 5 are Series D.
   Line 3 is Series B.

"RIGHT" Is Series B



R10-50R

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	36	1 3/8	1/2	5/8	4	5	3	2 1/2	2	10	1	11 1/4	9 1/2	4 1/4	11 5/8		10 1/2	9 5/8								7.5
2M	30	36	1 3/8	1/2	5/8	4	5	3	2 1/2	2	10	1	11 1/4	9 1/2	4 1/4	11 5/8		10 1/2	9 5/8								7.5
3																											
4																											
5																											

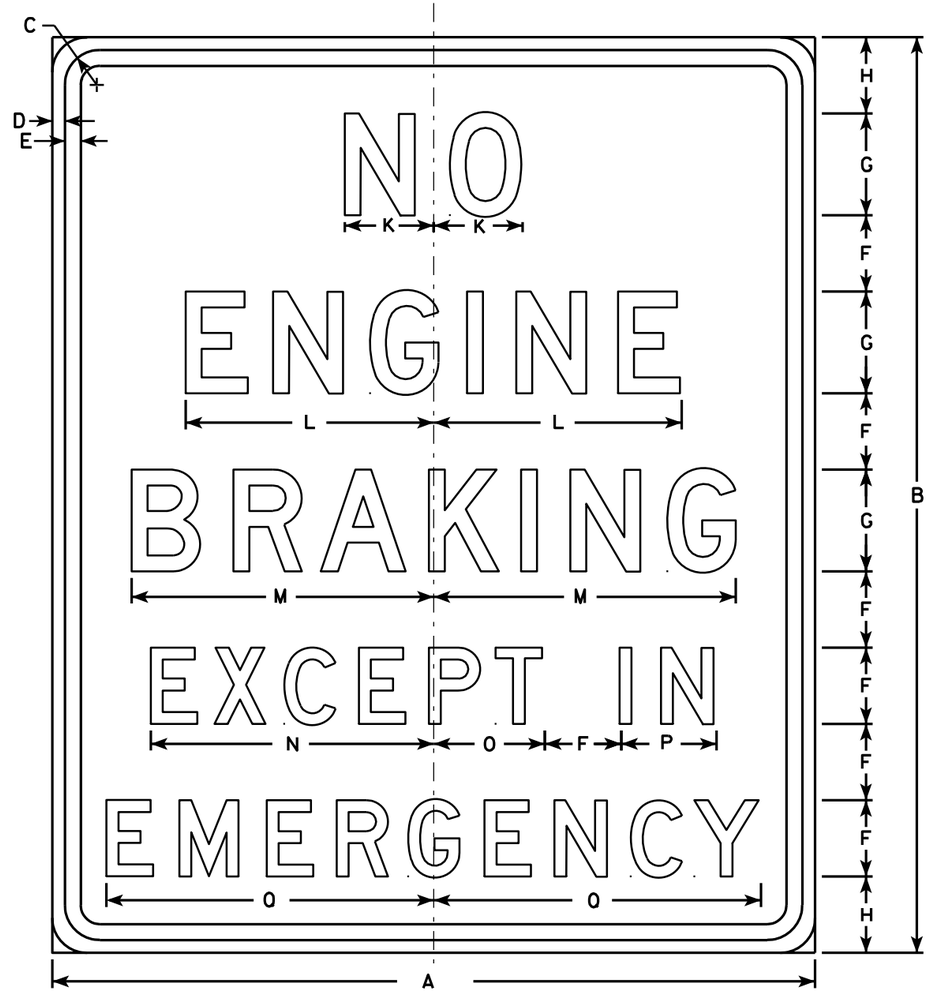
STANDARD SIGN
R10-50

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/11/13 PLATE NO. R10-50.2

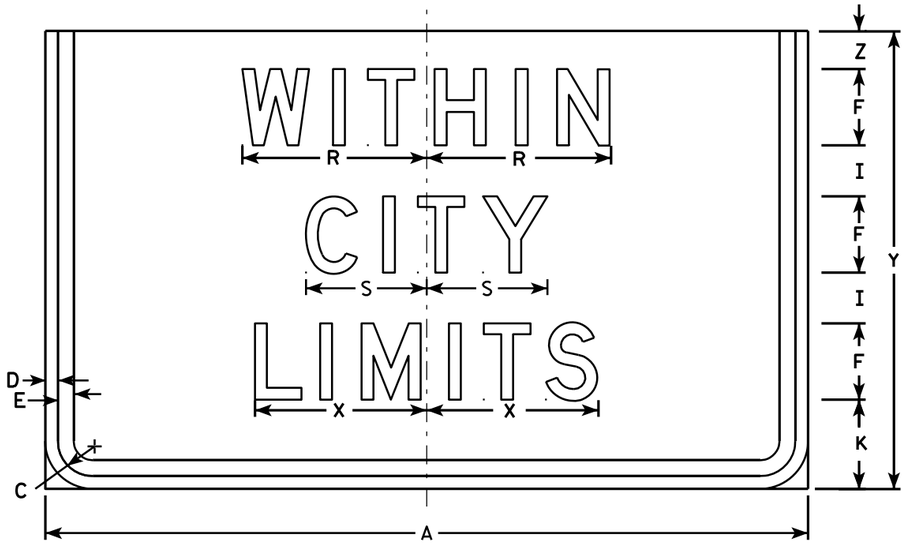
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 684	E



R10-64

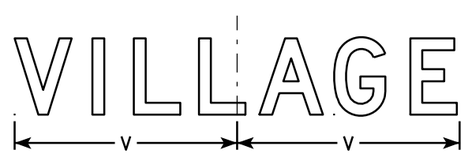
NOTES

1. Signs are Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - D See note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Line 2 of R10-64F is Series C for "TOWNSHIP" Only



R10-64F

Area sq. ft.
3.75
7.0





SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30	36	1 3/8	1/2	5/8	3	4	3	2		3 1/2	9 3/4	11 7/8	11 1/8	4 3/8	3 3/4	12 7/8	7 1/4	4 3/4		8 1/4	8 3/4	5/8	6 3/4	18	1 1/2	7.5
2S	30	36	1 3/8	1/2	5/8	3	4	3	2		3 1/2	9 3/4	11 7/8	11 1/8	4 3/8	3 3/4	12 7/8	7 1/4	4 3/4		8 1/4	8 3/4	5/8	6 3/4	18	1 1/2	7.5
2M	30	36	1 3/8	1/2	5/8	3	4	3	2		3 1/2	9 3/4	11 7/8	11 1/8	4 3/8	3 3/4	12 7/8	7 1/4	4 3/4		8 1/4	8 3/4	5/8	6 3/4	18	1 1/2	7.5
3	42	48	1 3/8	1/2	5/8	4	5	4 1/2	3		4	12 1/4	14 7/8	14 1/8	5 1/4	4 3/4	16 1/4	9	6		11	11 1/4	1 1/2	8 1/2	24	2	14.0
4																											
5																											

STANDARD SIGN
R10-64 & R10-64F

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/4/11 PLATE NO. R10-64.7

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 685	E



R10-70



R10-70L

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

R10-70R

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	R10-70L&R Area sq. ft.	R10-70 Area sq. ft.
1																												
2S	36	72	2 1/4	3/4	1	6	5	4	18	17 1/2	14 1/8	9 1/8	8 1/2	6	16 3/4	30	23 3/4	66	2 3/8	23 7/8	23 7/8	8 3/4	23 1/4	23 1/2	26 7/8	27	18.0	16.5
2M	36	72	2 1/4	3/4	1	6	5	4	18	17 1/2	14 1/8	9 1/8	8 1/2	6	16 3/4	30	23 3/4	66	2 3/8	23 7/8	23 7/8	8 3/4	23 1/4	23 1/2	26 7/8	27	18.0	16.5
3																												
4																												
5																												

STANDARD SIGN
R10-70

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/4/11 PLATE NO. R10-70.2

PROJECT NO:

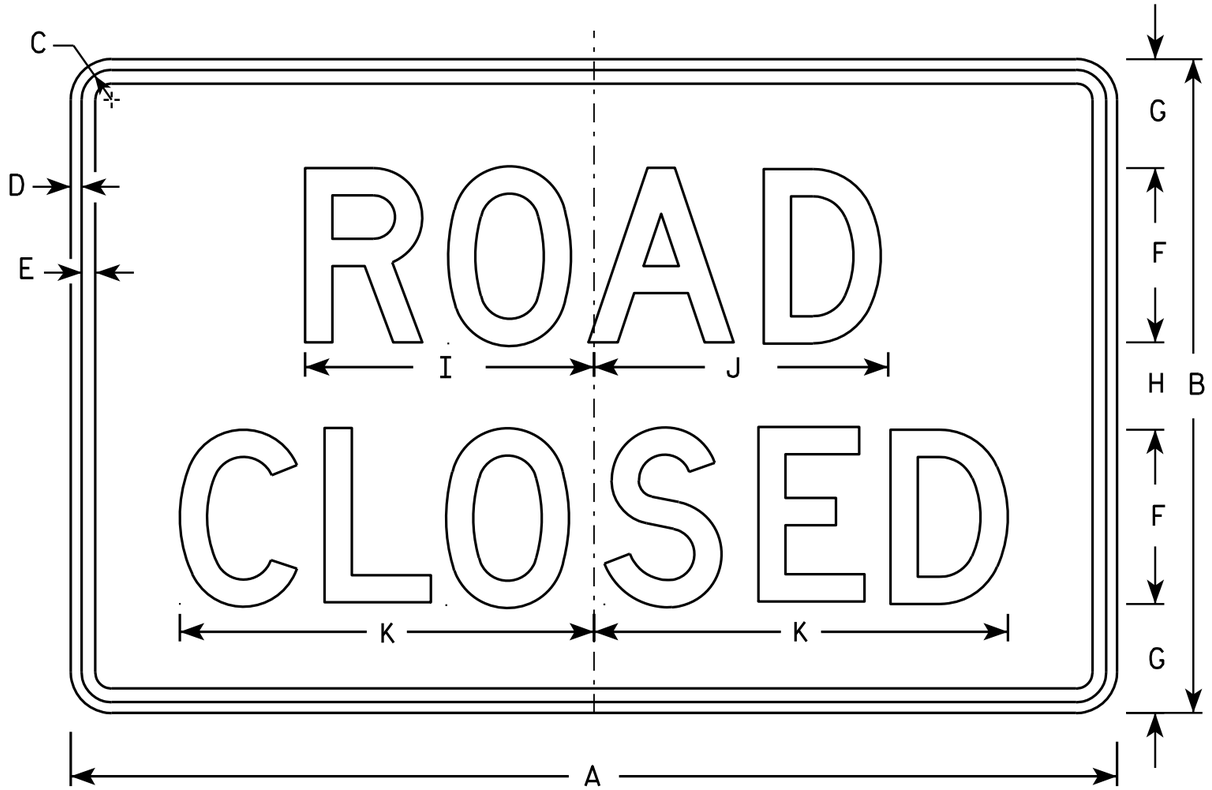
SHEET NO: 686 E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R1070.DGN PLOT DATE : 04-APR-2011 14:41 PLOT BY : mscj9h PLOT NAME :

WISDOT/CADDS SHEET 42

7

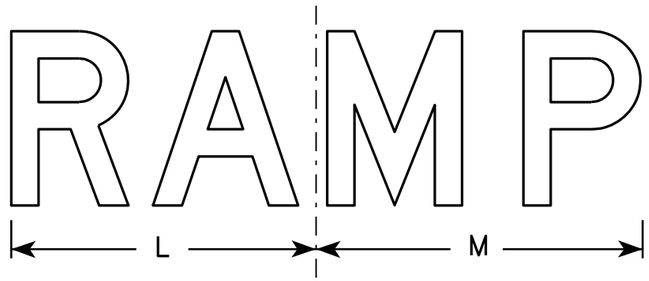
7



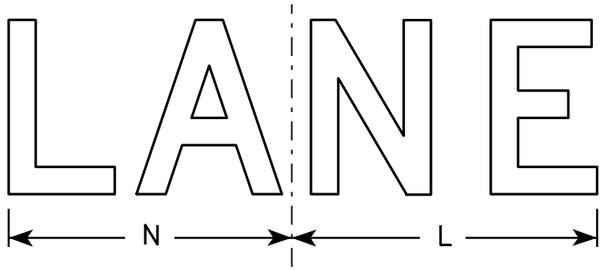
R11-2

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Modify the message as required.



R11-2R



R11-2L

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
2M	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
3	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
4	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
5	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0

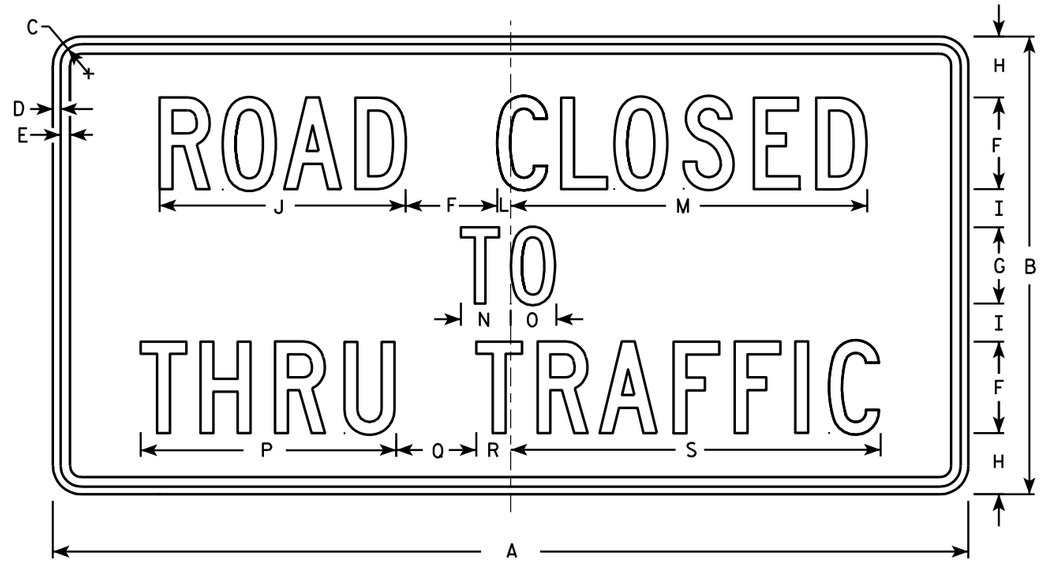
STANDARD SIGN
R11-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/1/11 PLATE NO. R11-2.10

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 687 | E



R11-4

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	60	30	1 3/8	1/2	5/8	6	5	4	2 1/2	16 1/8		7/8	23 3/8	3 1/4	3	16 3/4	5 1/4	2 1/4	24 1/4								12.5
2M	60	30	1 3/8	1/2	5/8	6	5	4	2 1/2	16 1/8		7/8	23 3/8	3 1/4	3	16 3/4	5 1/4	2 1/4	24 1/4								12.5
3																											
4																											
5																											

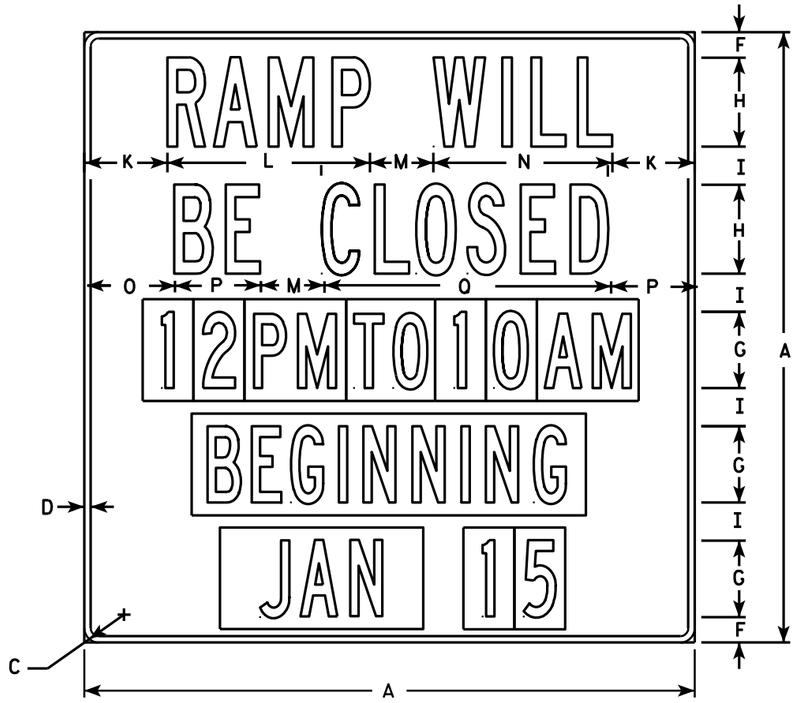
STANDARD SIGN
R11 - 4

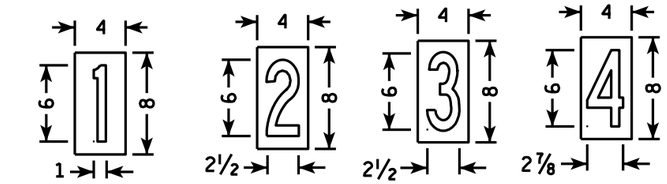
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 4/1/11 PLATE NO. R11-4.3

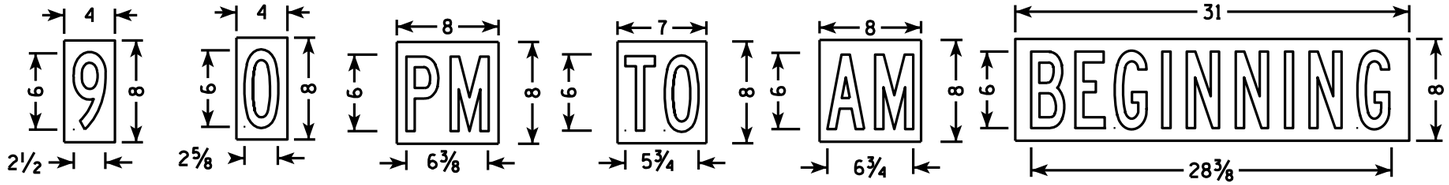
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 688 | E

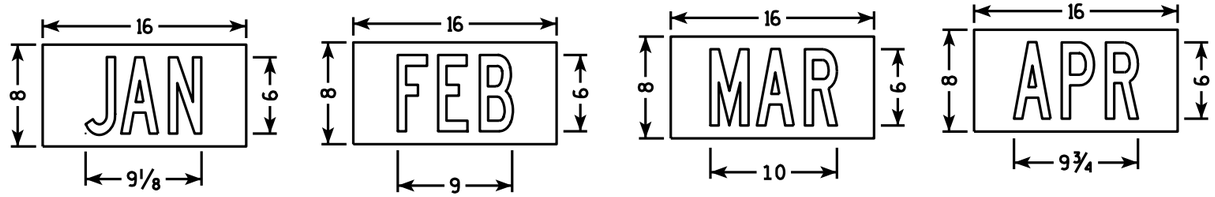


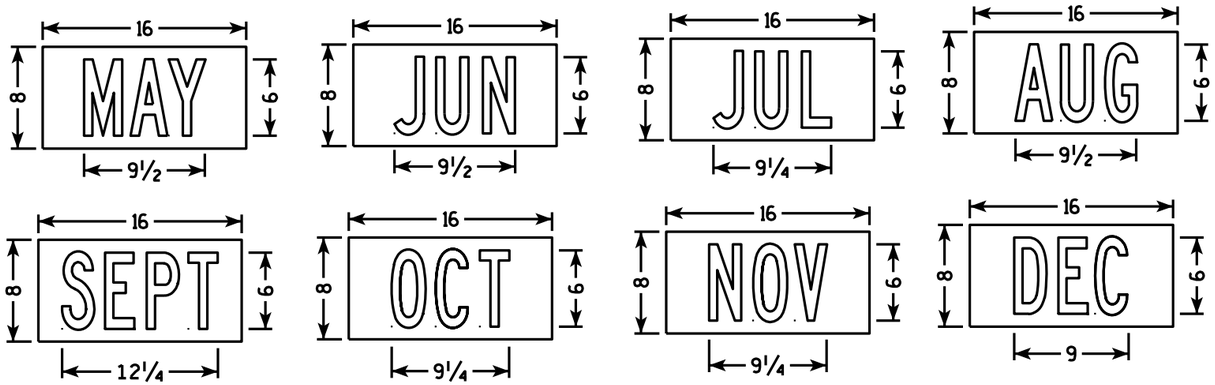


NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - B
4. Message plaques consist of Type H Reflective sheeting with the appropriate non-reflective black message applied to .040 aluminum and screwed to the base sign.









SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48		2 1/4	1/2		2	6	7	3		6 1/2	15 7/8	5	14 1/8	6 7/8	6 3/4	22 1/2										16.0
2M	48		2 1/4	1/2		2	6	7	3		6 1/2	15 7/8	5	14 1/8	6 7/8	6 3/4	22 1/2										16.0
3																											
4																											
5																											

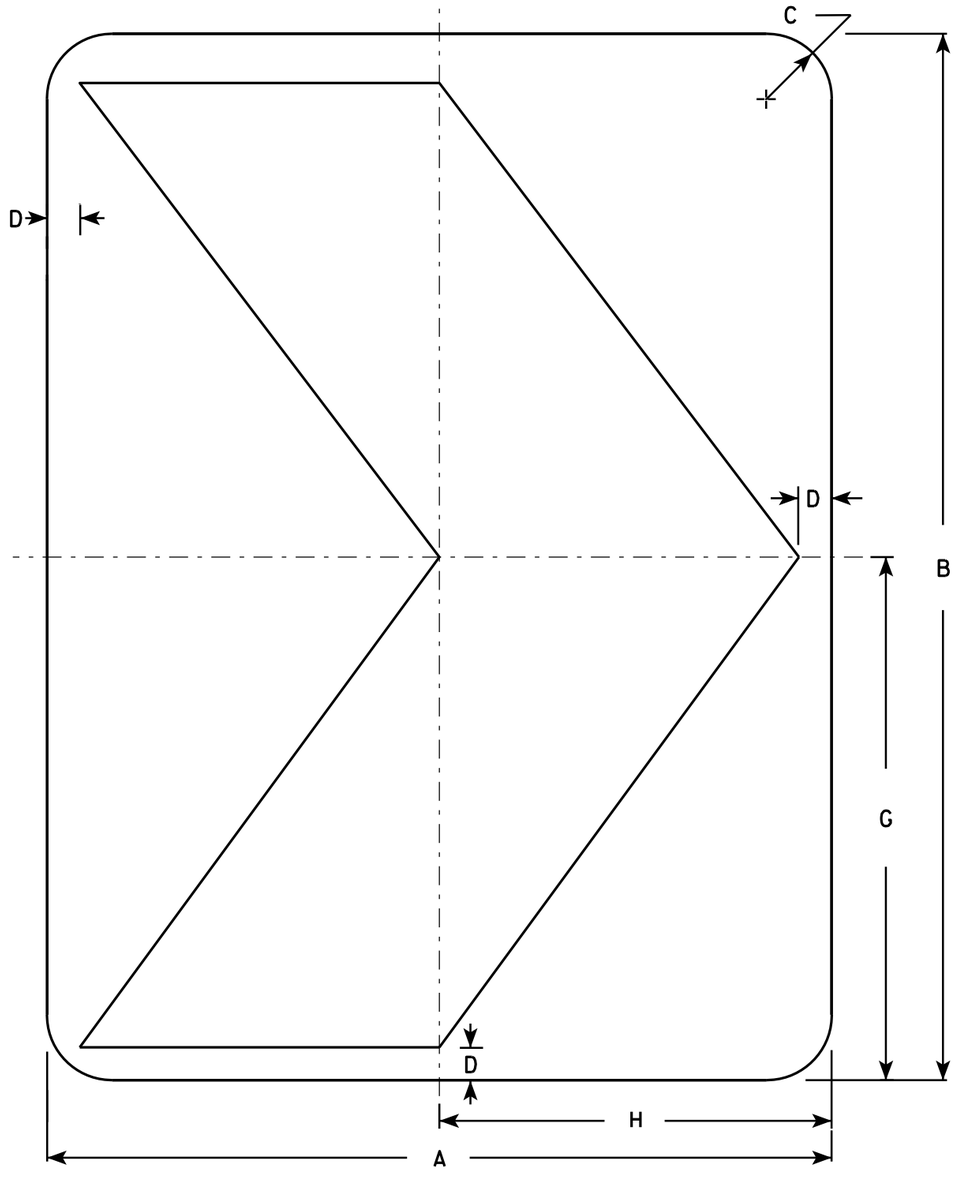
STANDARD SIGN
R11-51

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/1/11 PLATE NO. R11-51.4

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 689	E



NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

W1-8

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	12	18	1 ½	½			9	6																			1.5
2S	18	24	1 ½	¾			12	9																			3.0
2M	18	24	1 ½	¾			12	9																			3.0
3	24	30	1 ½	1			15	12																			5.0
4	30	36	1 ⅞	1 ¼			18	15																			7.5
5	36	48	2 ¼	1 ½			24	18																			12.0

STANDARD SIGN
W1-8

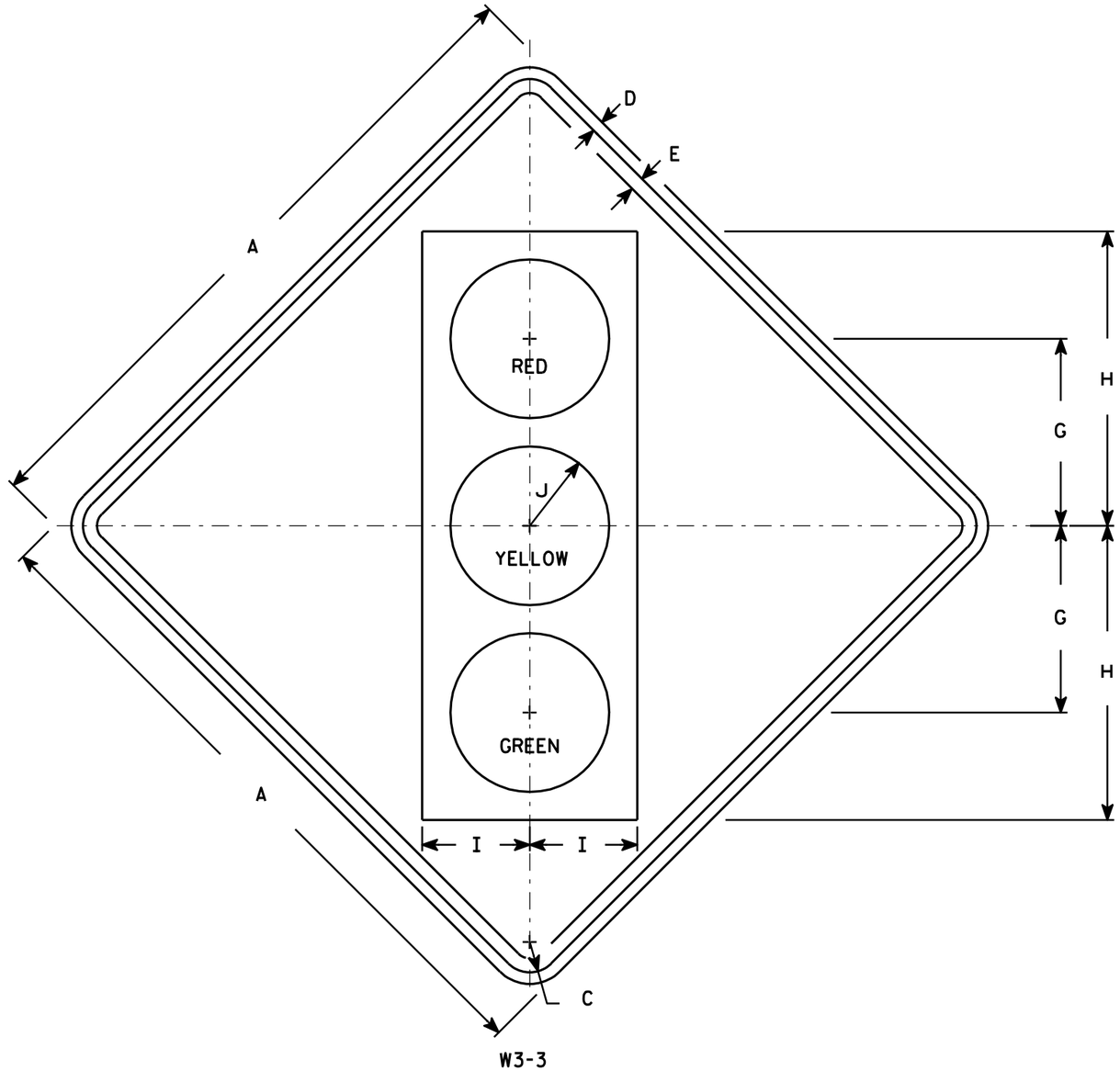
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/7/10 PLATE NO. W1-8.6

PROJECT NO:

SHEET NO: 690 E



W3-3

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - See Note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. Symbol and border are non-reflective black.
   Top circle - Type H Reflectorized Red
   Center circle - Same as background
   Bottom circle - Type H Reflectorized Green

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 3/8	1/2	5/8		8 3/4	13 3/4	5	3 3/4																	6.25
2S	36		1 5/8	5/8	3/4		10	15 3/4	5 3/4	4 1/4																	9.0
2M	36		1 5/8	5/8	3/4		10	15 3/4	5 3/4	4 1/4																	9.0
3	36		1 5/8	5/8	3/4		10	15 3/4	5 3/4	4 1/4																	9.0
4	48		2 1/4	3/4	1		12 1/2	20	7 1/2	5																	16.0
5	48		2 1/4	3/4	1		12 1/2	20	7 1/2	5																	16.0

STANDARD SIGN
W3-3

WISCONSIN DEPT OF TRANSPORTATION

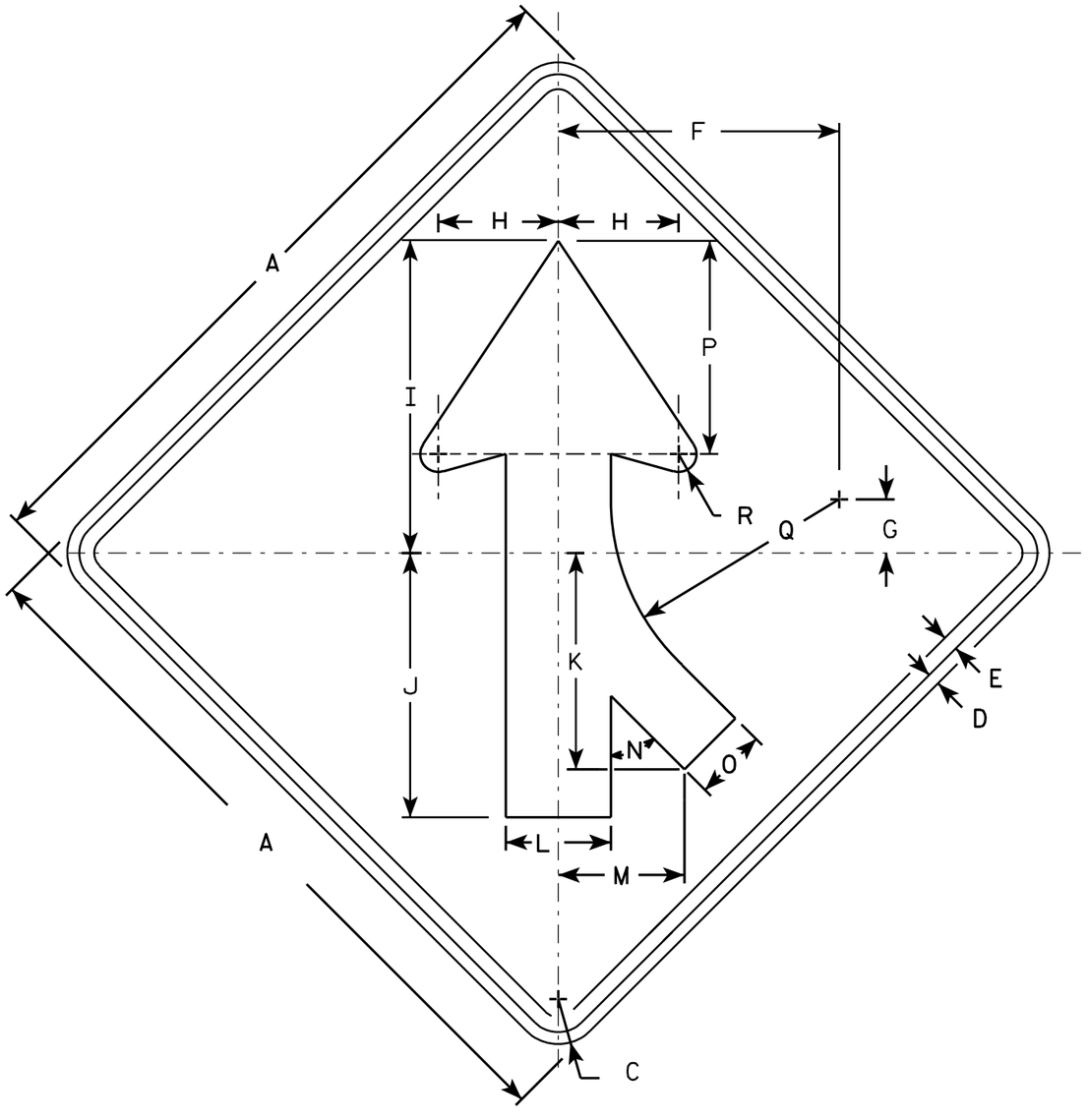
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/7/10 PLATE NO. W3-3.11

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 691 | E

7

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W33.DGN PLOT DATE : 07-JUN-2010 13:07 PLOT BY : ditjph PLOT NAME : PLOT SCALE : 7.448805:1.000000



W4-1 R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W4-1L is the same as W4-1R except the arrow is reversed along the vertical centerline.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 3/8	1/2	5/8	11 5/8	2 1/2	5	13	11	9	4 3/8	5 1/4	45°	3	8 7/8	9 1/2	3/4									6.25
2S	36		1 5/8	5/8	3/4	14	2 3/4	6	15 3/4	13 1/4	10 1/4	5 1/4	6 3/8	45°	3 5/8	10 5/8	11 3/8	7/8									9.0
2M	36		1 5/8	5/8	3/4	14	2 3/4	6	15 3/4	13 1/4	10 1/4	5 1/4	6 3/8	45°	3 5/8	10 5/8	11 3/8	7/8									9.0
3	36		1 5/8	5/8	3/4	14	2 3/4	6	15 3/4	13 1/4	10 1/4	5 1/4	6 3/8	45°	3 5/8	10 5/8	11 3/8	7/8									9.0
4	48		2 1/4	3/4	1	18 3/4	3 5/8	8	20 1/2	17 1/2	14 3/8	7	8 3/8	45°	4 3/4	14 1/4	15 1/4	1 1/4									16.0
5	48		2 1/4	3/4	1	18 3/4	3 5/8	8	20 1/2	17 1/2	14 3/8	7	8 3/8	45°	4 3/4	14 1/4	15 1/4	1 1/4									16.0

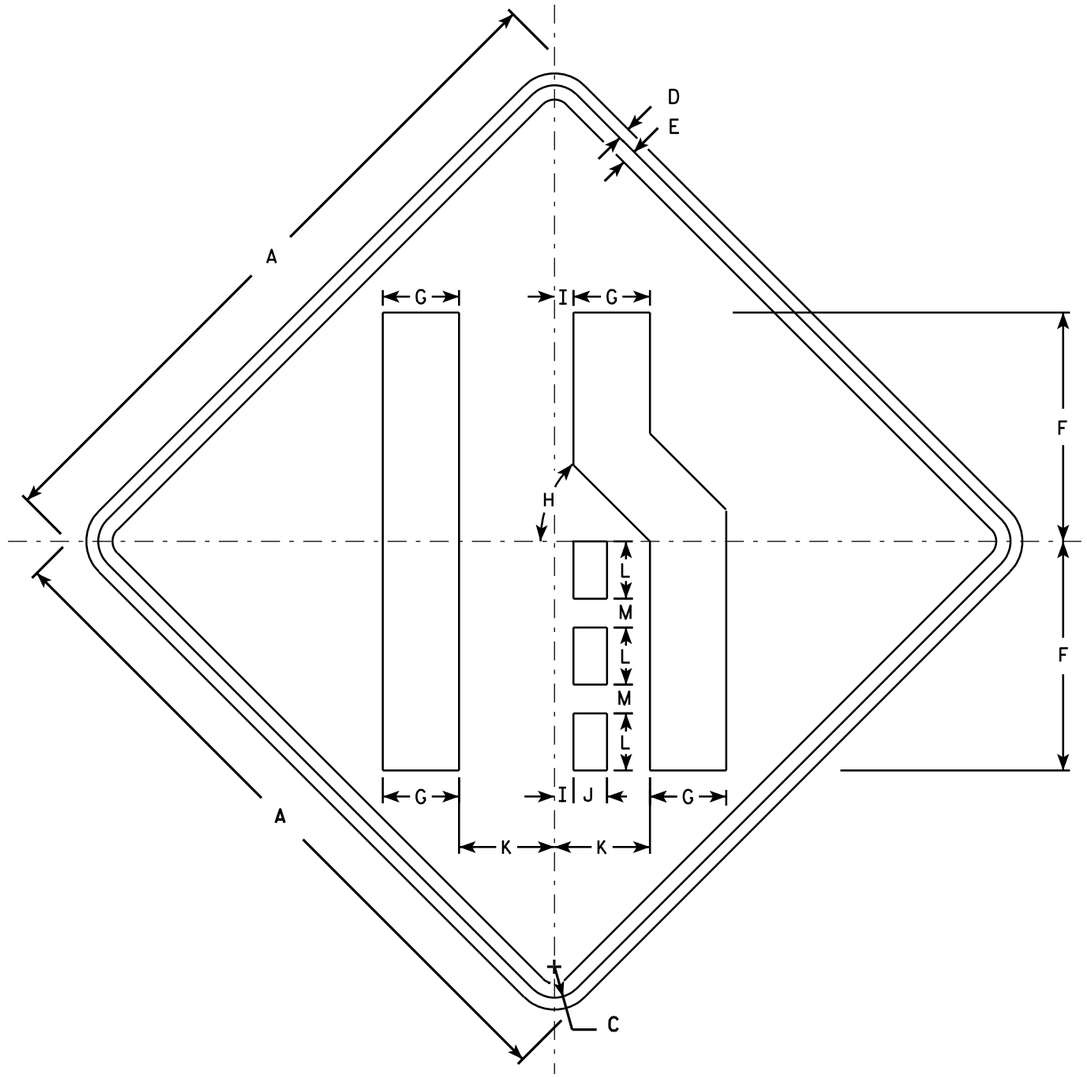
STANDARD SIGN
W4-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 03/12/13 PLATE NO. W4-1.14

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 692	E



W4-2R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W4-2L is the same as W4-2R except the symbol is reversed along the vertical centerline.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 3/8	1/2	5/8	10	3 3/8	45°	7/8	1 1/2	4 1/4	2 1/2	1 1/4														6.25
2S	36		1 5/8	5/8	3/4	12	4	45°	1	1 3/4	5	3	1 1/2														9.0
2M	36		1 5/8	5/8	3/4	12	4	45°	1	1 3/4	5	3	1 1/2														9.0
3	36		1 5/8	5/8	3/4	12	4	45°	1	1 3/4	5	3	1 1/2														9.0
4	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
5	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0

STANDARD SIGN
W4-2

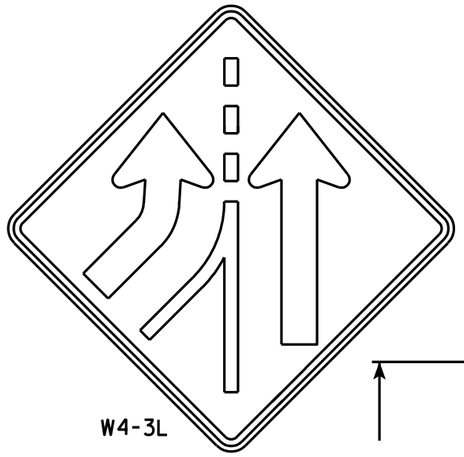
WISCONSIN DEPT OF TRANSPORTATION

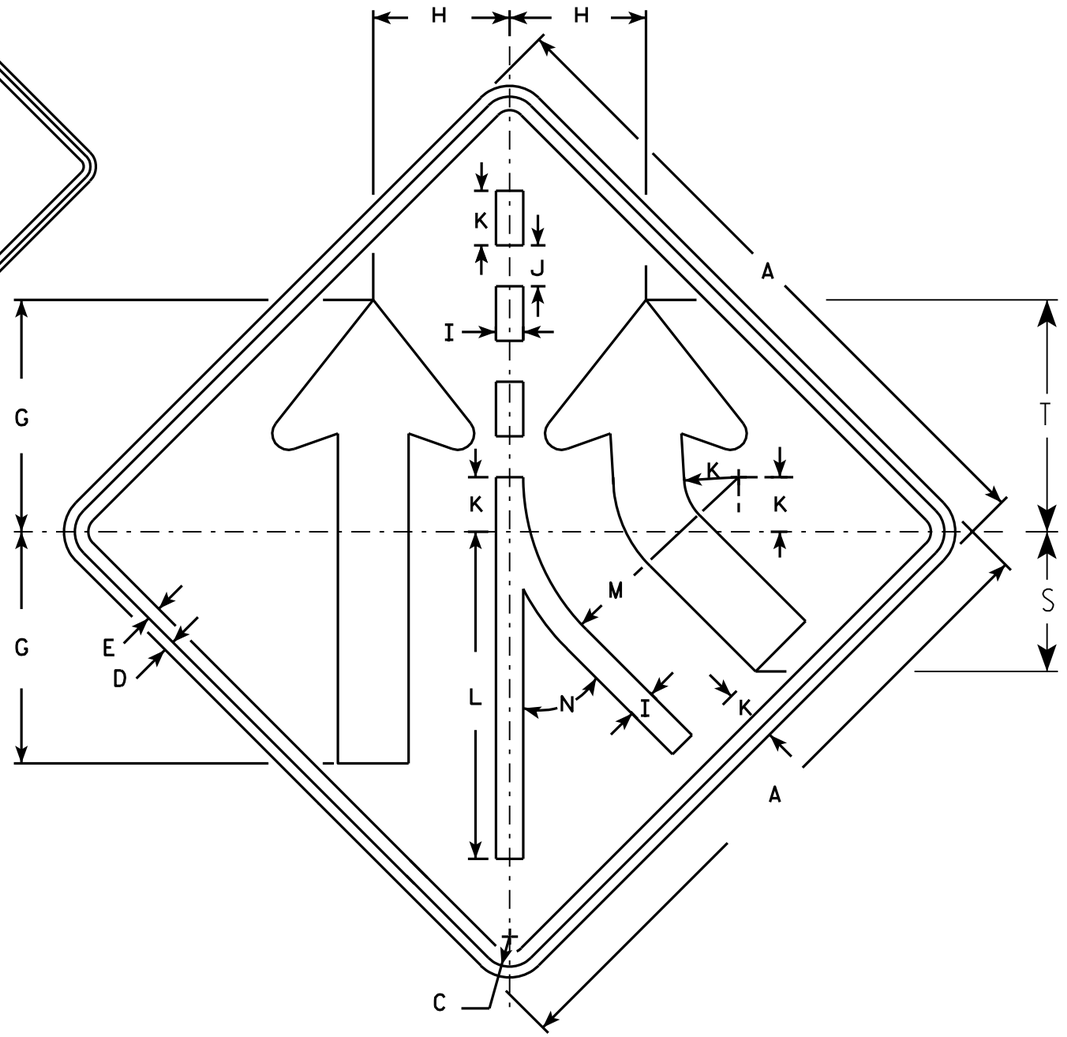
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/12/13 PLATE NO. W4-2.14

PROJECT NO:

SHEET NO: 693 E

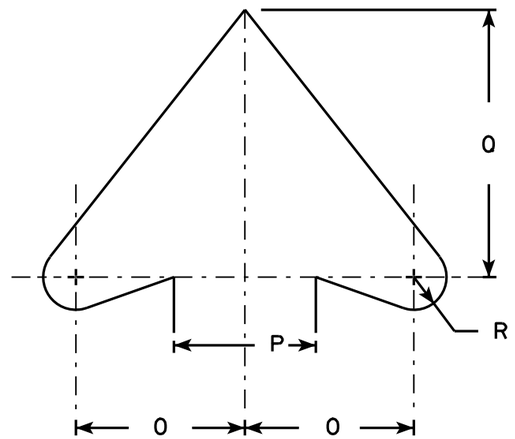




W4-3R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W4-3 L is the same as W4-3 R except the arrow is reversed along the vertical centerline.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 3/8	1/2	5/8		10 5/8	6 1/4	1 1/4	1 7/8	2 1/2	15	9 7/8	45°	3 7/8	3 1/4	6 1/8	3/4	6 3/8	10 5/8							6.25
2S	36		1 5/8	5/8	3/4		12 3/4	7 1/2	1 1/2	2 1/4	3	18	11 7/8	45°	4 5/8	4	7 3/8	7/8	7 3/4	12 3/4							9.0
2M	36		1 5/8	5/8	3/4		12 3/4	7 1/2	1 1/2	2 1/4	3	18	11 7/8	45°	4 5/8	4	7 3/8	7/8	7 3/4	12 3/4							9.0
3																											
4	48		2 1/4	3/4	1		17	10	2	3	4	24	15 3/4	45°	6 1/4	5 1/2	9 7/8	1 1/4	10 1/4	17							16.0
5	48		2 1/4	3/4	1		17	10	2	3	4	24	15 3/4	45°	6 1/4	5 1/2	9 7/8	1 1/4	10 1/4	17							16.0

STANDARD SIGN
W4-3

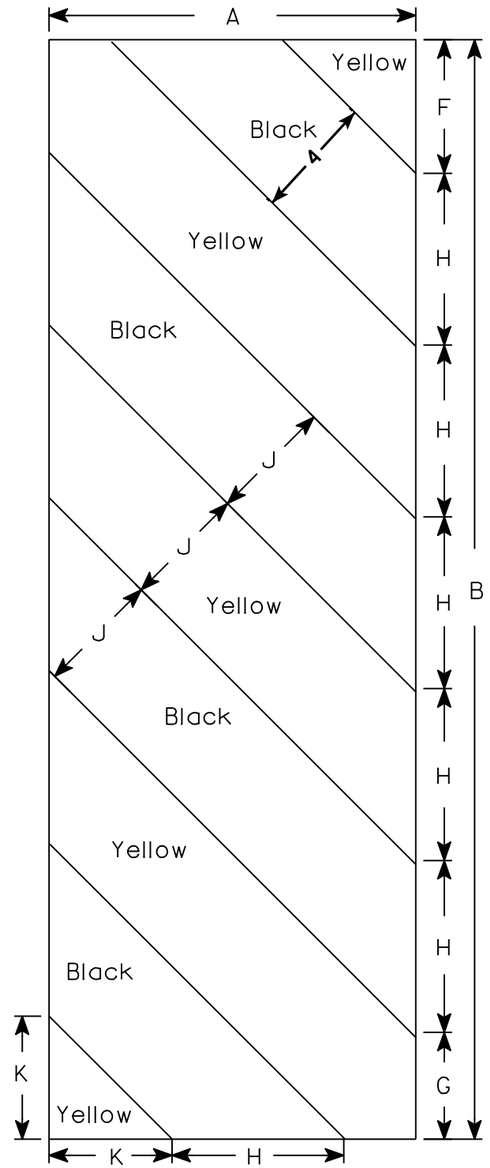
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

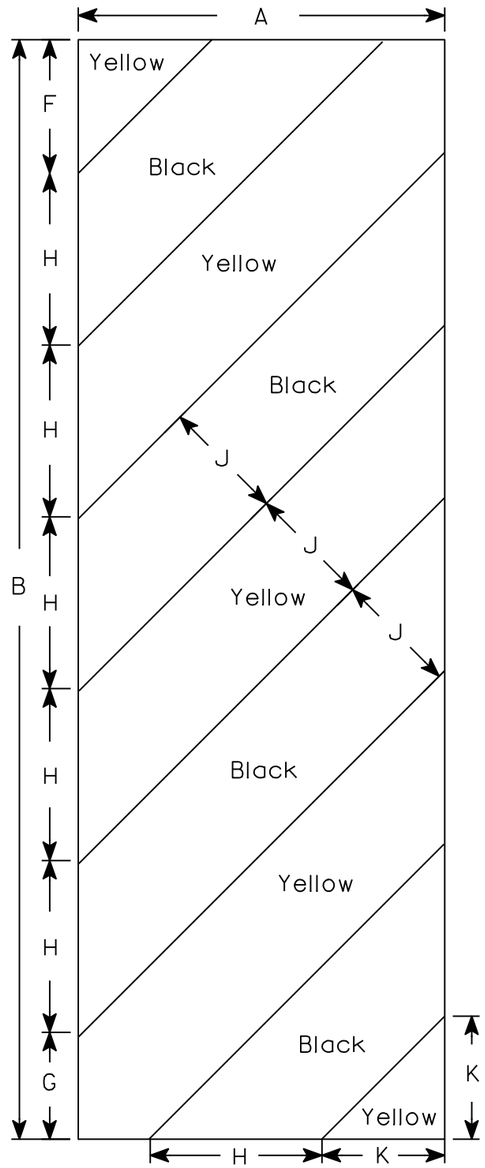
DATE 03/12/13 PLATE NO. W4-3.8

PROJECT NO:

SHEET NO: 694 E



W5-52L



W5-52R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. Alternate colors of stripes as shown.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	12	36				4 3/8	3 1/2	5 5/8	45°	4	4																3.0
2M	12	36				4 3/8	3 1/2	5 5/8	45°	4	4																3.0
3	18	54				6	5 1/2	8 1/2	45°	6	6 9/16																6.75
4																											
5																											

STANDARD SIGN

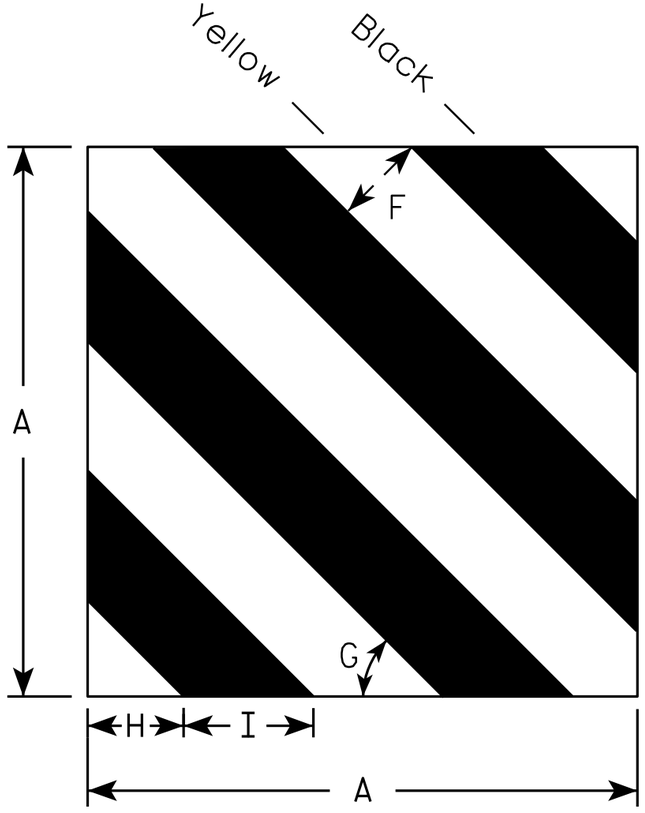
W5-52L & W5-52R

WISCONSIN DEPT OF TRANSPORTATION

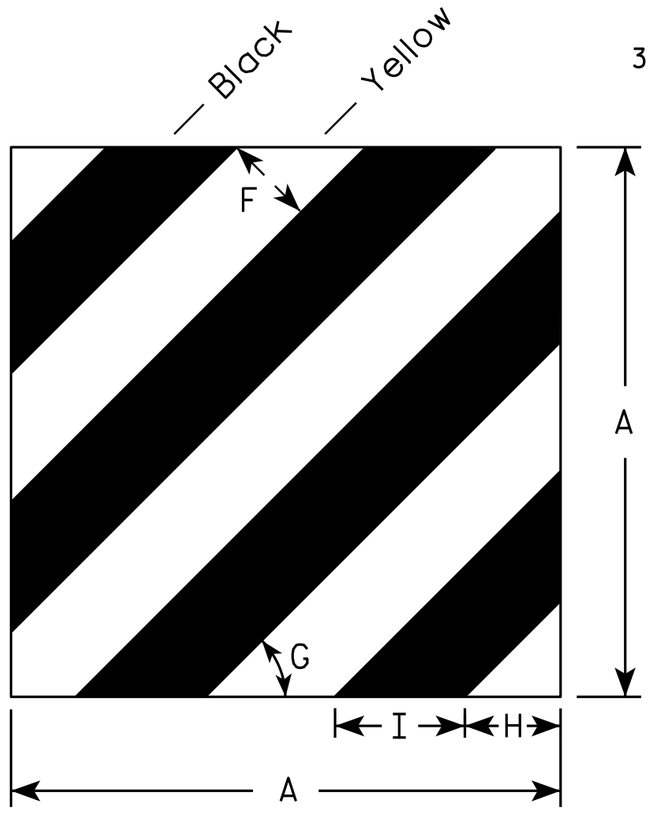
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/29/12 PLATE NO. W5-52.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 695	E



W5-59L



W5-59R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Base material is to be .040 sheet aluminum.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	12					3	45°	3 1/8	4 1/4																		1.00
2S	18					3	45°	3 1/8	4 1/4																		2.25
2M	18					3	45°	3 1/8	4 1/4																		2.25
3																											
4																											
5																											

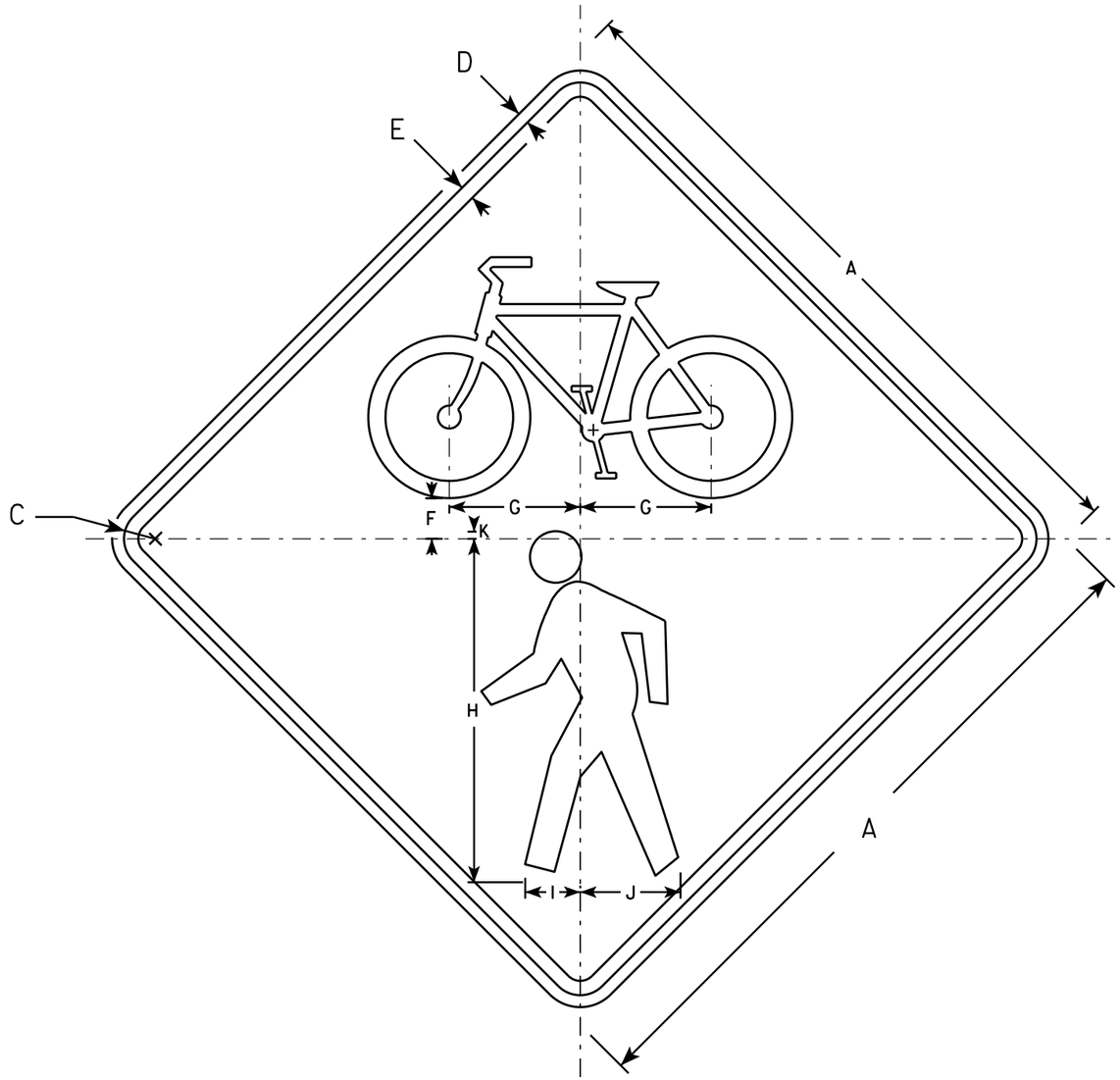
STANDARD SIGN
W5-59L & W5-59R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/31/12 PLATE NO. W5-59.5

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 696	E



W11-15

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Yellow
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2	1 3/8	4 5/8	12	1 7/8	3 1/2	1/4																4.0
2S	30		1 3/8	1/2	5/8	1 3/4	5 3/4	15	2 3/8	4 3/8	3/8																6.25
2M	36		1 5/8	5/8	3/4	2 1/8	6 7/8	18	2 7/8	5 1/4	3/8																9.0
3	36		1 5/8	5/8	3/4	2 1/8	6 7/8	18	2 7/8	5 1/4	3/8																16.0
4	48		2 1/4	3/4	1	2 7/8	9 1/8	24	3 7/8	7	1/2																16.0
5																											

STANDARD SIGN
W11-15

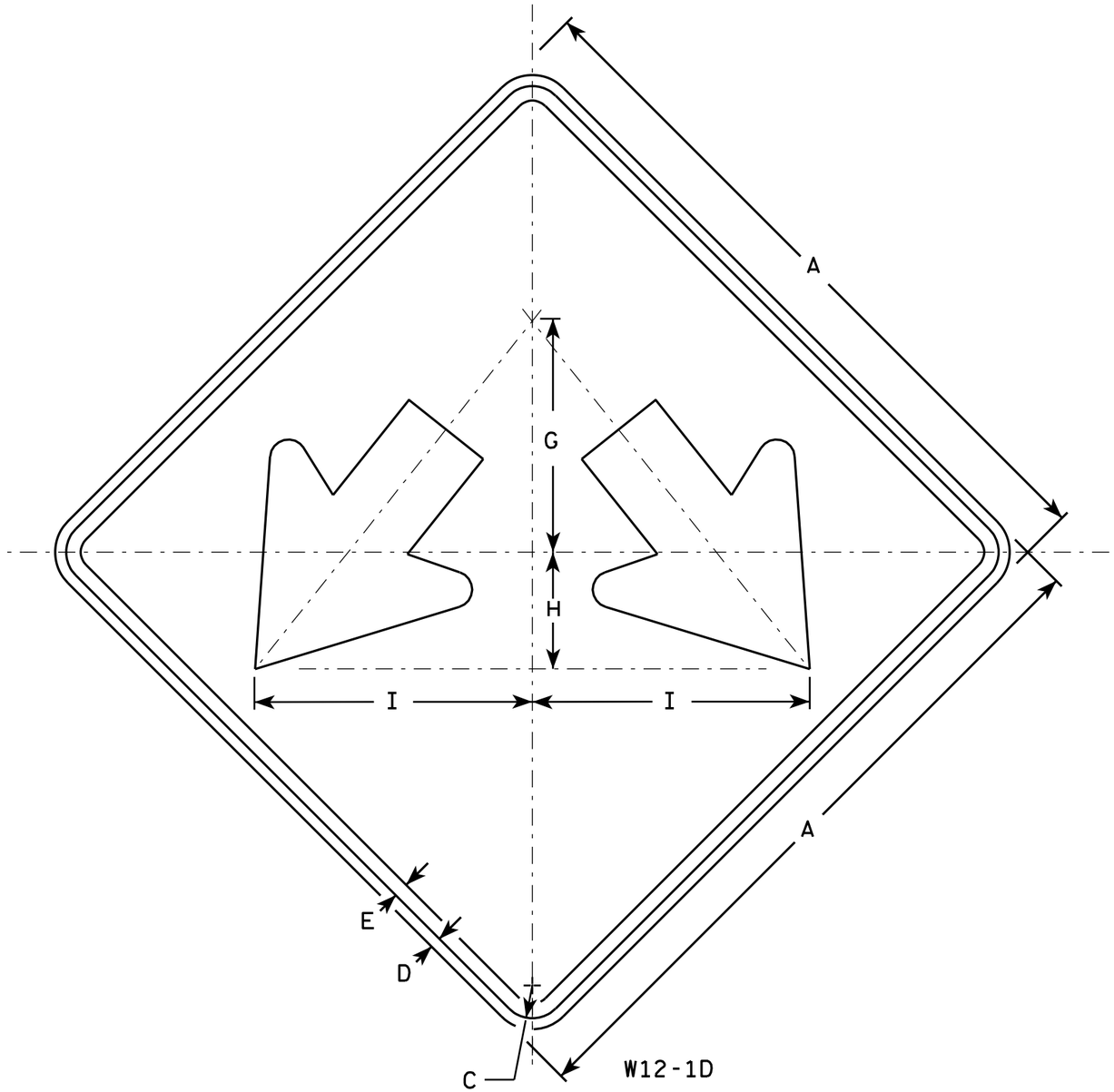
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 2/13/14 PLATE NO. W11-15.4

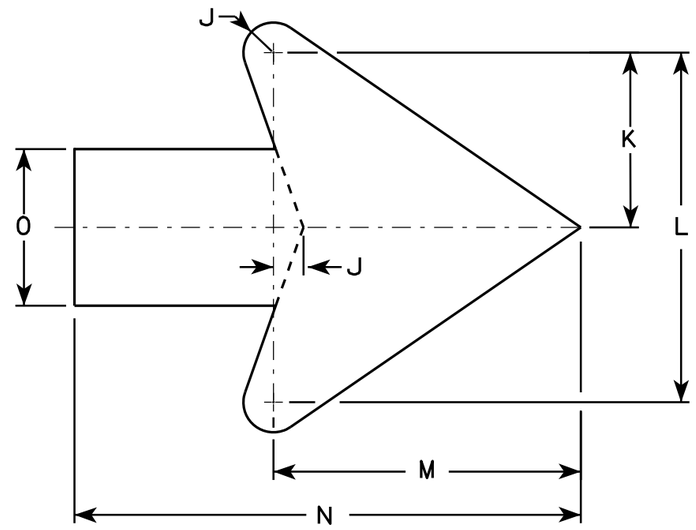
PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W1115.DGN PLOT DATE : 13-FEB-2014 10:54 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 7.783368:1.000000
WISDOT/CADDS SHEET 42



NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



Arrow Detail

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24		1 1/8	1/2	3/8		8	4	9 1/2	3/8	3 3/8	7 1/4	6 3/8	10 3/8	3 1/4												4.0
2M	24		1 1/8	1/2	3/8		8	4	9 1/2	3/8	3 3/8	7 1/4	6 3/8	10 3/8	3 1/4												4.0
3	30		1 3/8	1/2	5/8		10	5	11 7/8	3/4	4 1/2	9	7 7/8	13	4												6.25
4	36		1 3/8	1/2	5/8		12	6	14 1/4	1	5 1/2	10 7/8	9 5/8	15 3/4	4 3/4												9.0
5	48		2 1/4	3/4	1		16	8	19	1 1/4	7 1/4	14 1/2	12 3/4	21	6 1/4												16.0

STANDARD SIGN
W12-1D

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/13/13 PLATE NO. W12-1D.15

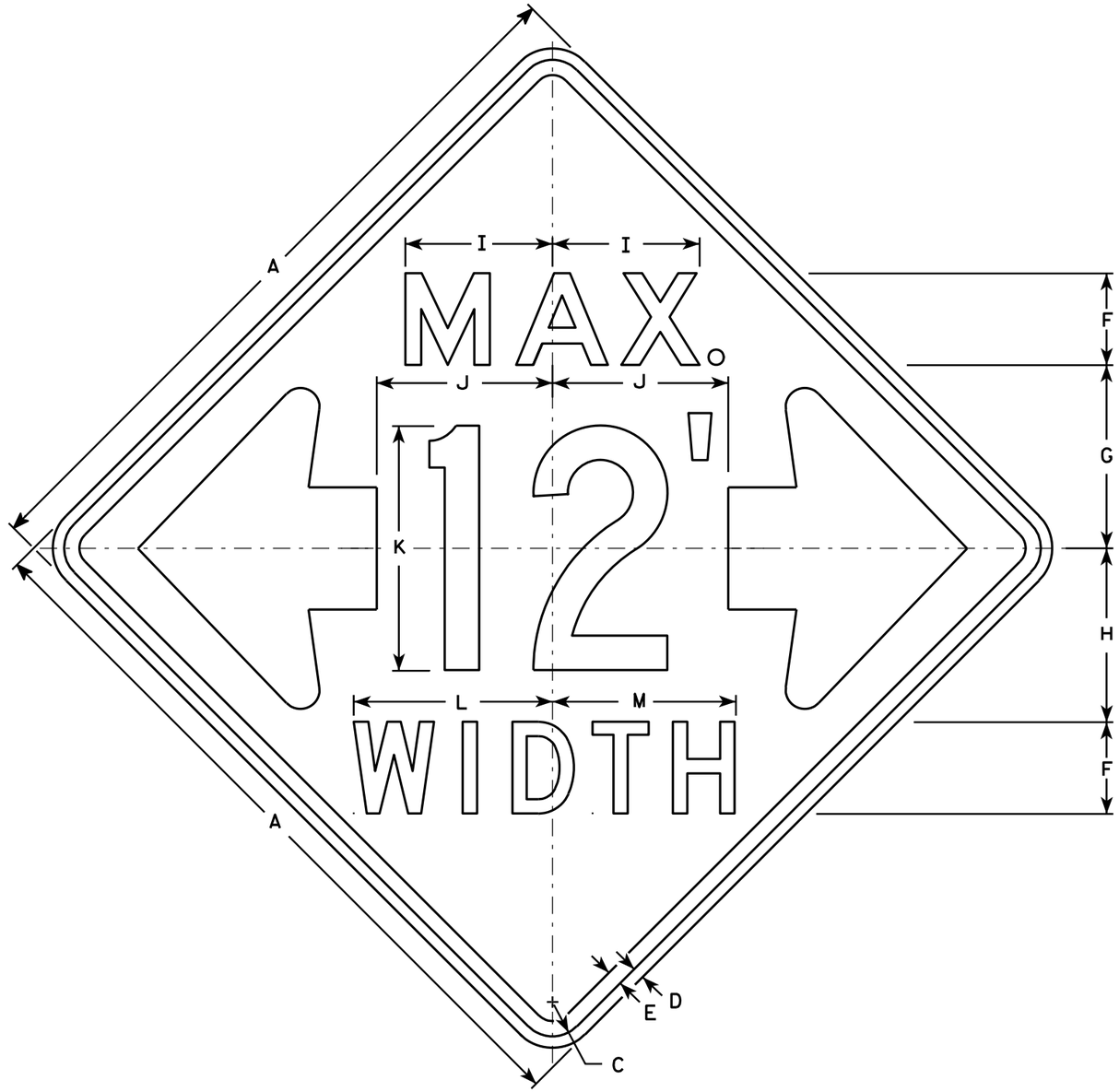
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 698	E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W121D.DGN PLOT DATE : 13-MAR-2013 13:26 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 4.713802:1.000000

WISDOT/CADDS SHEET 42

7

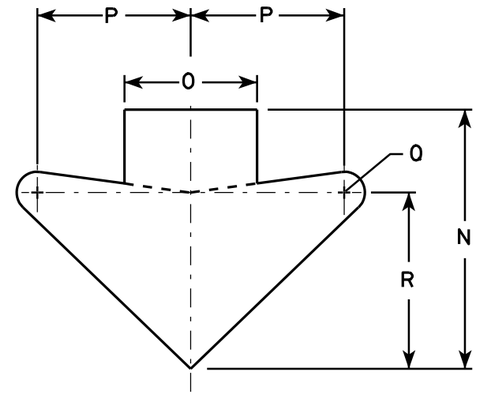
7



W12-52

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - See note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. The top line is series E, the numerals are series C, and the bottom line is series D.
6. Substitute appropriate numerals and adjust spacing as required.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48		2 1/4	3/4	1	6	12	11 3/8	9 5/8	11 1/2	16	13	12	15 5/8	8	9 1/4	1 1/4	10 5/8									16.0
2M	48		2 1/4	3/4	1	6	12	11 3/8	9 5/8	11 1/2	16	13	12	15 5/8	8	9 1/4	1 1/4	10 5/8									16.0
3																											
4																											
5																											

STANDARD SIGN
W12-52

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/16/11 PLATE NO. W12-52.7

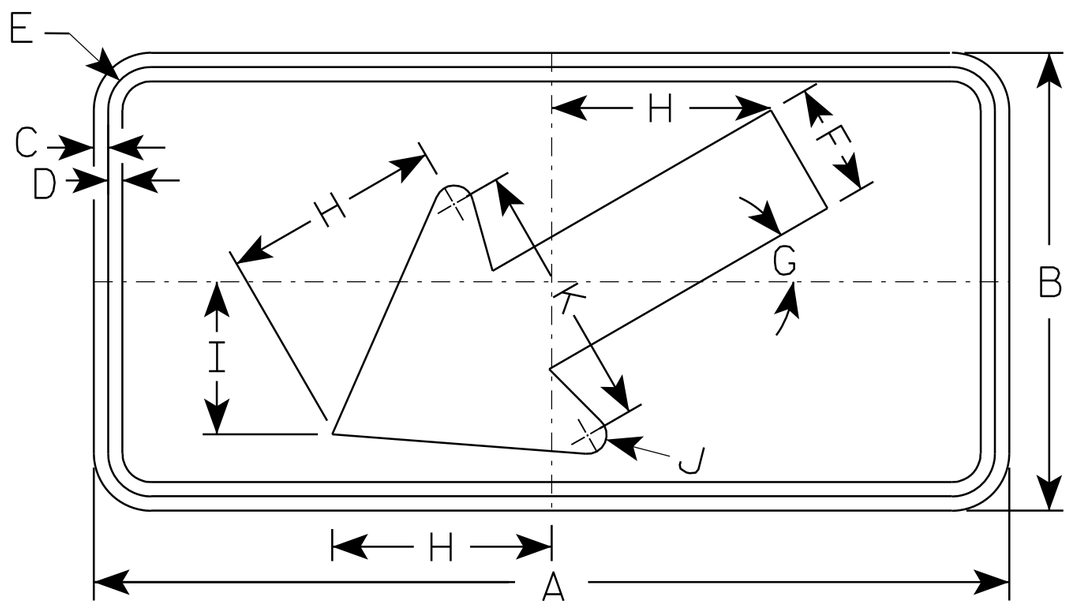
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 699	E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W1252.DGN PLOT DATE : 16-MAR-2011 14:45 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 9.137199:1.000000

WISDOT/CADDS SHEET 42

7

7



W16-7L

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W16-7R is the same as W16-L except the arrow is reversed along the vertical centerline.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	12	3/8	3/8	1 1/8	3	30°	5 3/4	4	1/2	7																2.0
2M	30	18	3/8	1/2	1 1/8	4 1/2	30°	8 1/2	6	5/8	10 1/4																3.75
3	30	18	3/8	1/2	1 1/8	4 1/2	30°	8 1/2	6	5/8	10 1/4																3.75
4																											8
5																											8

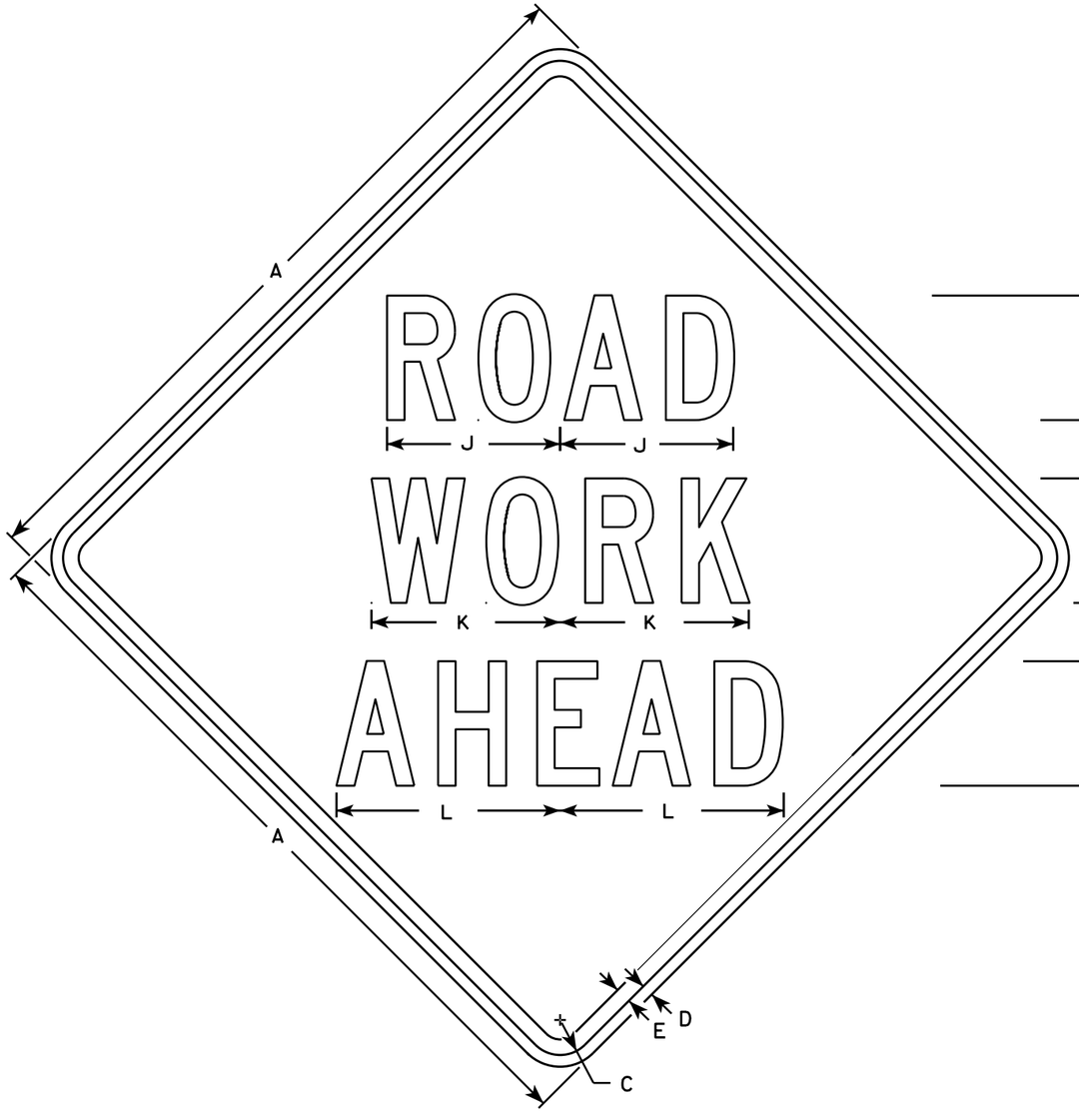
STANDARD SIGN
W16-7

WISCONSIN DEPT OF TRANSPORTATION

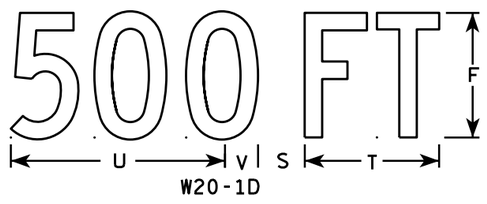
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/02/10 PLATE NO. W16-7.5

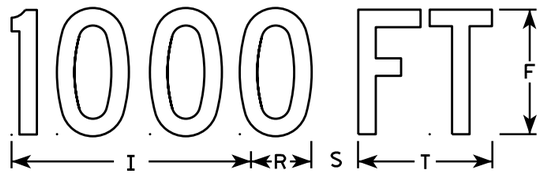
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 700	E



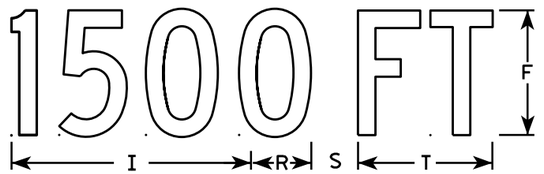
W20-1A



W20-1D



W20-1C



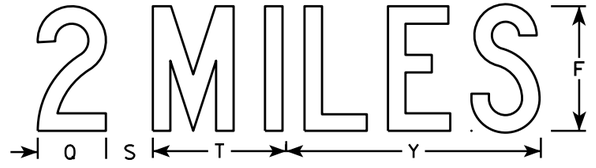
W20-1B



W20-1G



W20-1F



W20-1E

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 3/8	1/2	5/8	5	2 5/8	3 1/4	10 1/8	7	7 5/8	8 7/8	1 1/8	4 1/2	3 1/2	9		2 1/2	2 1/4	5 5/8	9	1 3/8	8	1 3/4	10 3/4	6	9.0
2S	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
2M	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
3	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
4	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
5	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0

STANDARD SIGN
W20-1A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

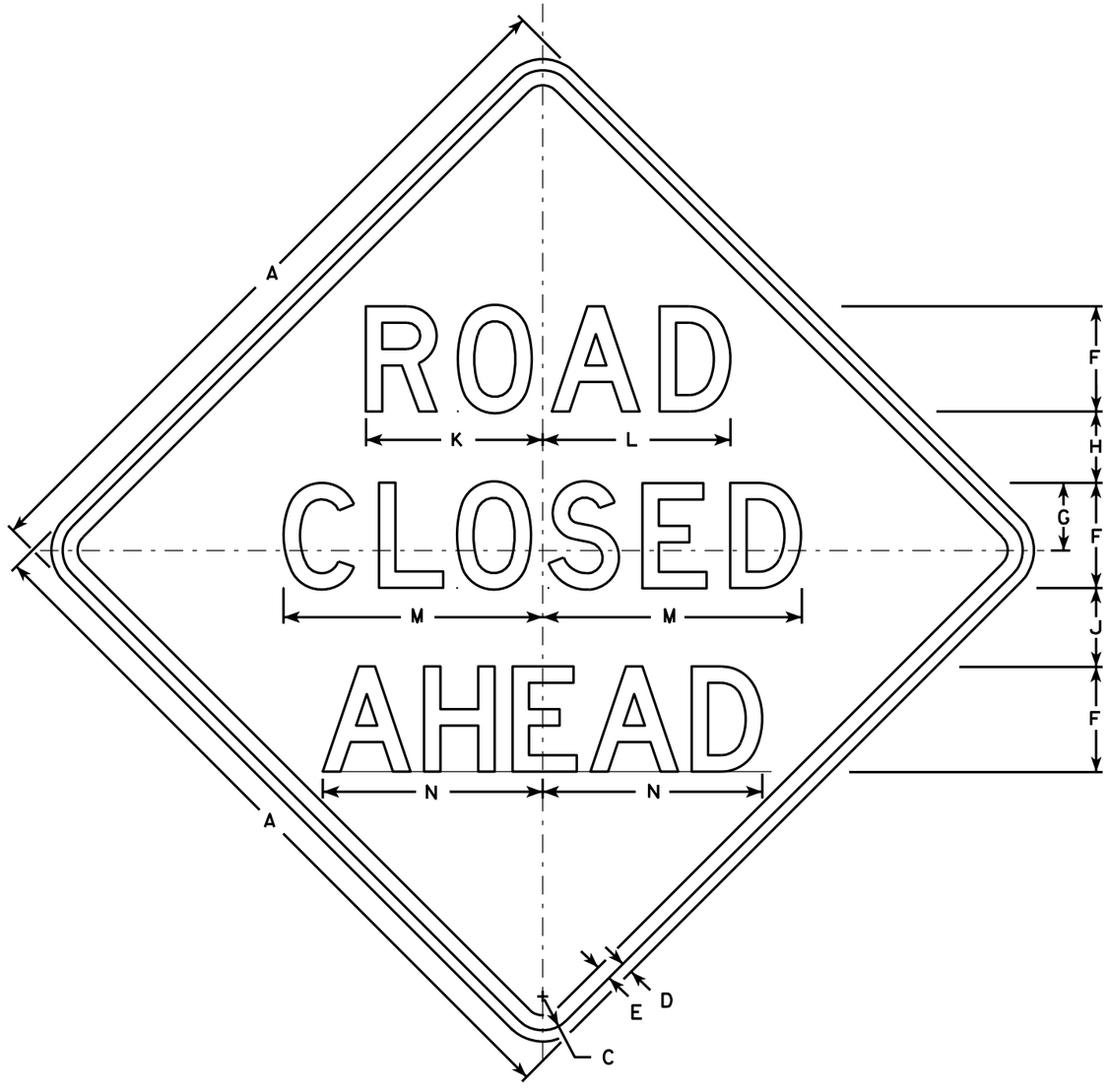
State Traffic Engineer

DATE 5/07/15 PLATE NO. W20-1.10

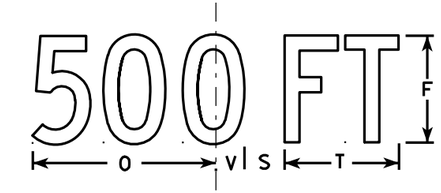
PROJECT NO: | SHEET NO: E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W201.dgn PLOT DATE : 27-MAY-2015 15:58 PLOT BY : mscsja

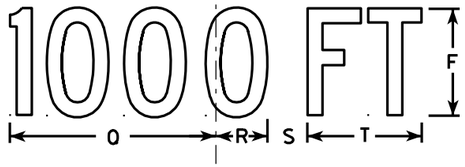
WISDOT/CADDS SHEET 42



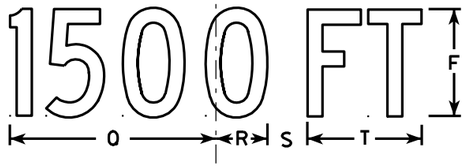
W20-3A



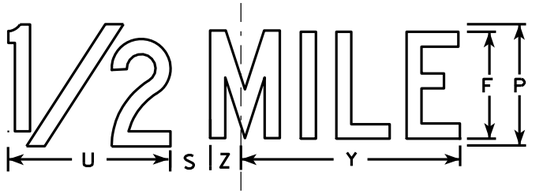
W20-3D



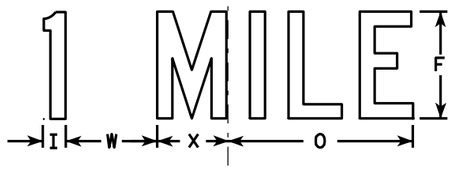
W20-3C



W20-3B



W20-3G



W20-3F

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - see note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Lines 1 and 2 are Series D.
   Line 3 is Series D for AHEAD and Series C for all other distances.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	5	3 3/8	3 1/2	1 1/8	4	8 3/8	8 7/8	12 1/2	11	9	6	10 1/8	2 1/2	1 7/8	5 5/8	8	1 3/8	4 1/2	3 1/2	10 3/4	1 3/4	9.0
2S	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
2M	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
3	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
4	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
5	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0

STANDARD SIGN
W20-3A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer
DATE 3/18/11 PLATE NO. W20-3.7

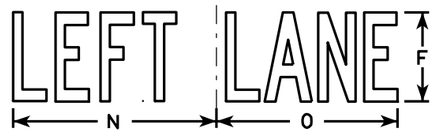
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 702 | E

7

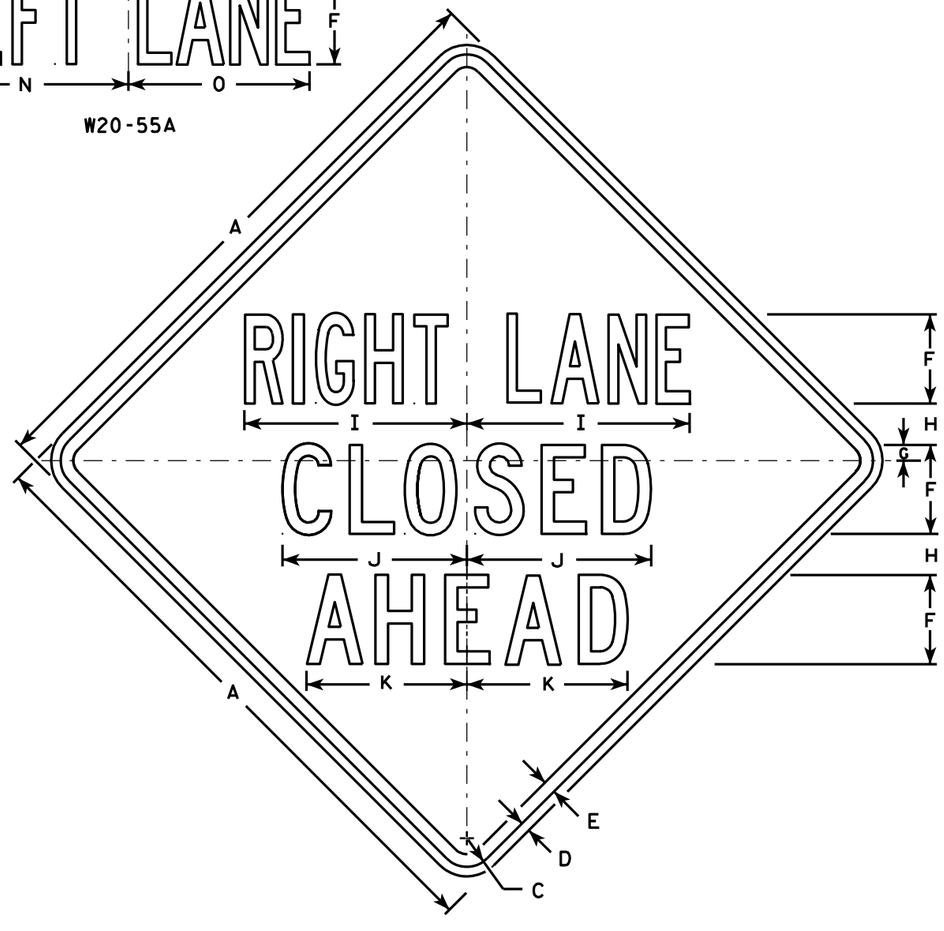
FILE NAME : C:\Users\PROJECTS\tr_stdplate\W203.DGN PLOT DATE : 18-MAR-2011 12:08 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 9.931739:1.000000
WISDOT/CADDS SHEET 42



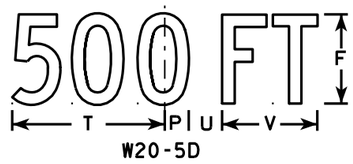
W20-56A



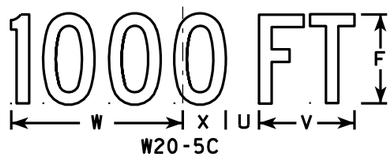
W20-55A



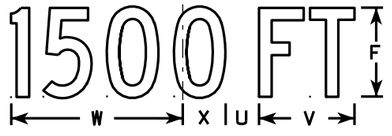
W20-5A



W20-5D



W20-5C



W20-5B



W20-5G



W20-5F

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - See Note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. " _____ LANE" is Series B.
   All other copy is Series C.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	6	1 5/8	5/8	3/4	5	1/8	2 1/2	13 1/8	10 3/4	9 1/2	14 1/4	13 5/8	12	12	1 3/8	1 1/8	4 1/2	3 1/2	9	1 1/8	5 5/8	10 1/8	2 1/2	1 3/4	8	9.0
2S	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
2M	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
3	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
4	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
5	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0

STANDARD SIGN
W20-5A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

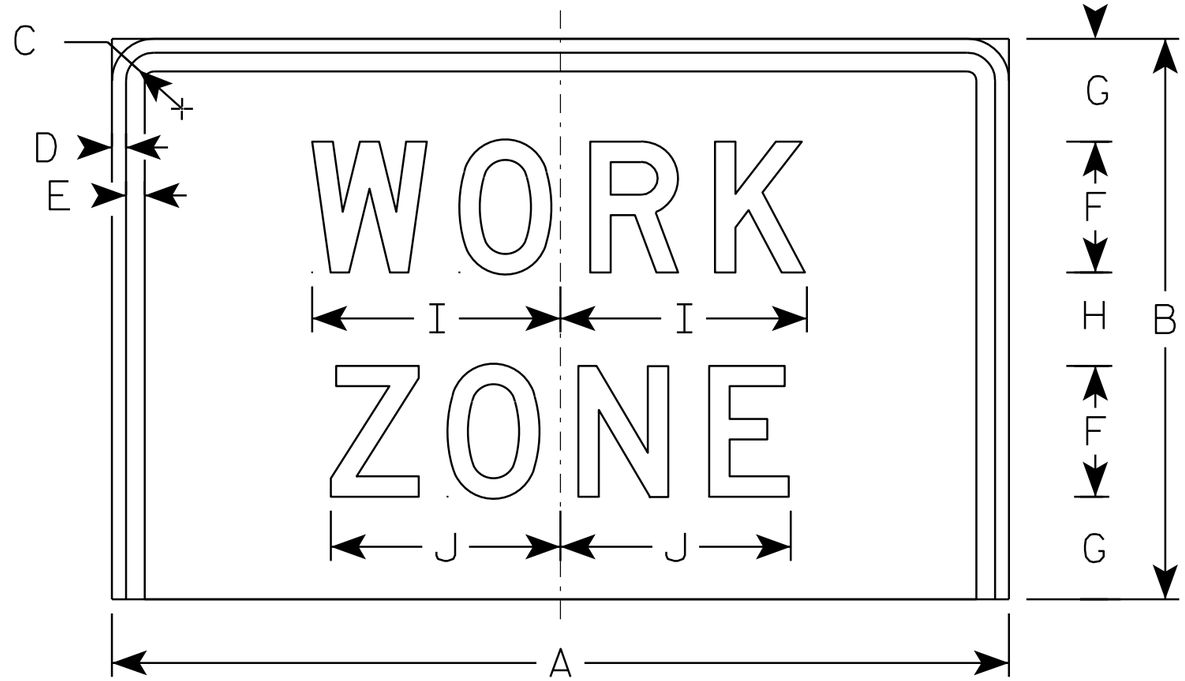
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-5.11

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 703	E

7

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W205.DGN PLOT DATE : 18-MAR-2011 12:15 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 11.918087:1.000000
WISDOT/CADDS SHEET 42



W21-620

NOTES

1. Sign is Type II - Type F - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - D

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	30	2 1/4	3/4	1	7	5 1/2	5	13 1/4	12 1/4																	10.0
2M	48	30	2 1/4	3/4	1	7	5 1/2	5	13 1/4	12 1/4																	10.0
3																											
4																											
5																											

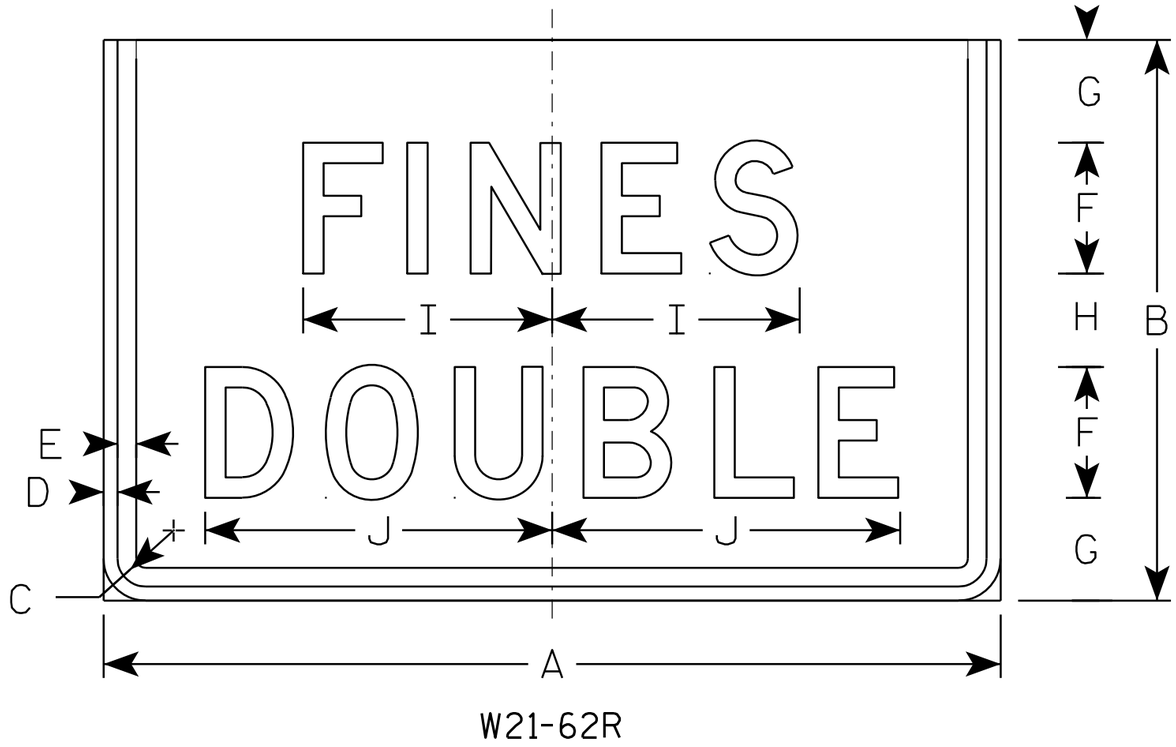
STANDARD SIGN
W21-620

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/21/11 PLATE NO. W21-620.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 704	E



W21-62R

NOTES

1. Sign is Type II - Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - D

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	30	2 1/4	3/4	1	7	5 1/2	5	13 1/4	18 5/8																	10.0
2M	48	30	2 1/4	3/4	1	7	5 1/2	5	13 1/4	18 5/8																	10.0
3																											
4																											
5																											

STANDARD SIGN
W21-62R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/21/11 PLATE NO. W21-62R.2

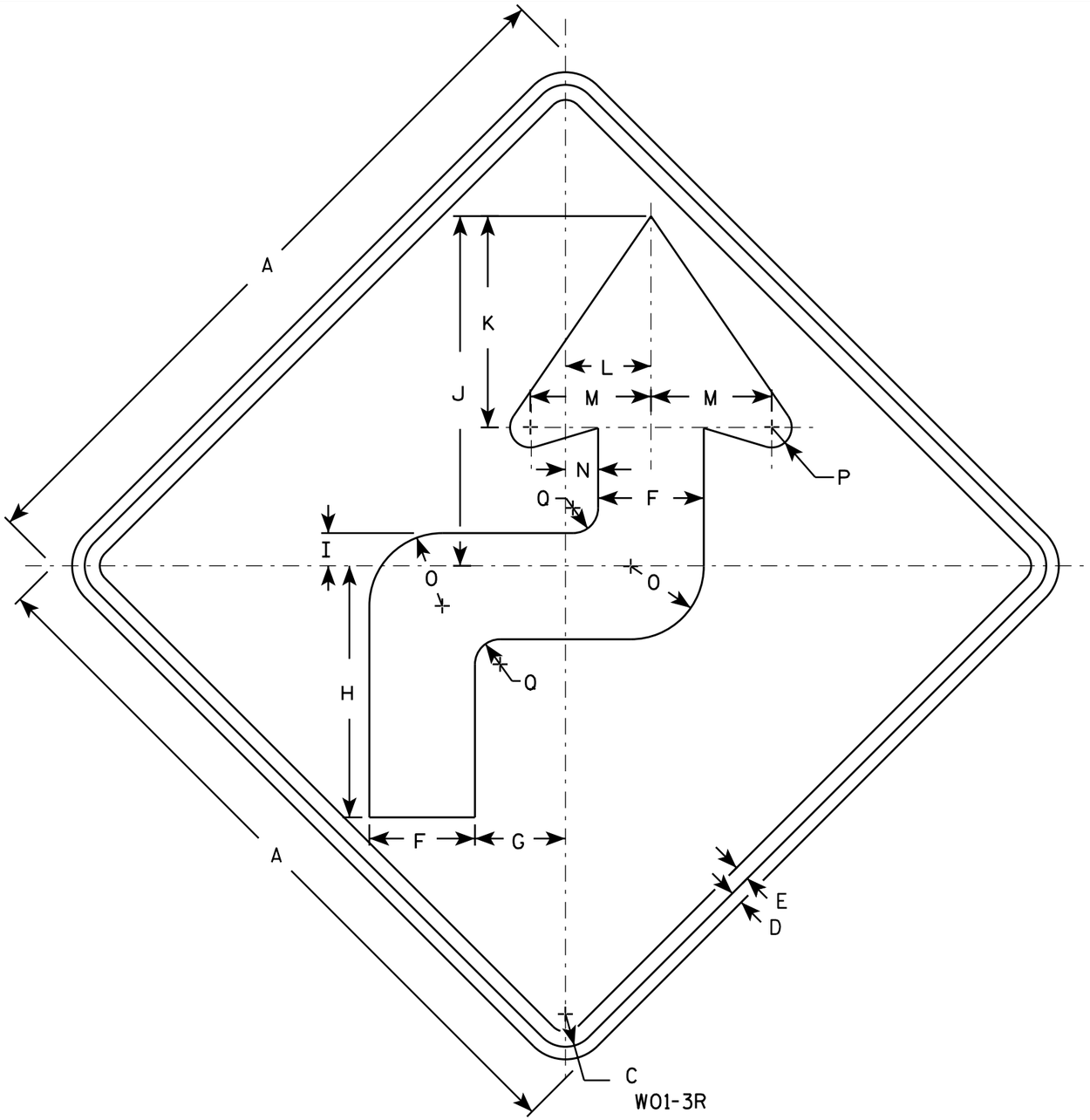
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 705	E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W2162R.DGN PLOT DATE : 21-MAR-2011 10:51 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 8.108332:1.000000

WISDOT/CADDS SHEET 42

7

7



NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W01-3L is the same as W01-3R except the arrow is reversed along the vertical centerline.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	5 1/4	4 1/2	12 1/2	1 5/8	17 3/8	10 1/2	4 1/4	6	1 5/8	3 5/8	1	1 1/4										9.0
2S	48		2 1/4	3/4	1	7	6	16 5/8	2 1/4	23 1/4	14	5 5/8	8	2 1/8	4 7/8	1 1/4	1 5/8										16.0
2M	48		2 1/4	3/4	1	7	6	16 5/8	2 1/4	23 1/4	14	5 5/8	8	2 1/8	4 7/8	1 1/4	1 5/8										16.0
3	48		2 1/4	3/4	1	7	6	16 5/8	2 1/4	23 1/4	14	5 5/8	8	2 1/8	4 7/8	1 1/4	1 5/8										16.0
4	48		2 1/4	3/4	1	7	6	16 5/8	2 1/4	23 1/4	14	5 5/8	8	2 1/8	4 7/8	1 1/4	1 5/8										16.0
5	48		2 1/4	3/4	1	7	6	16 5/8	2 1/4	23 1/4	14	5 5/8	8	2 1/8	4 7/8	1 1/4	1 5/8										16.0

STANDARD SIGN
W01-3

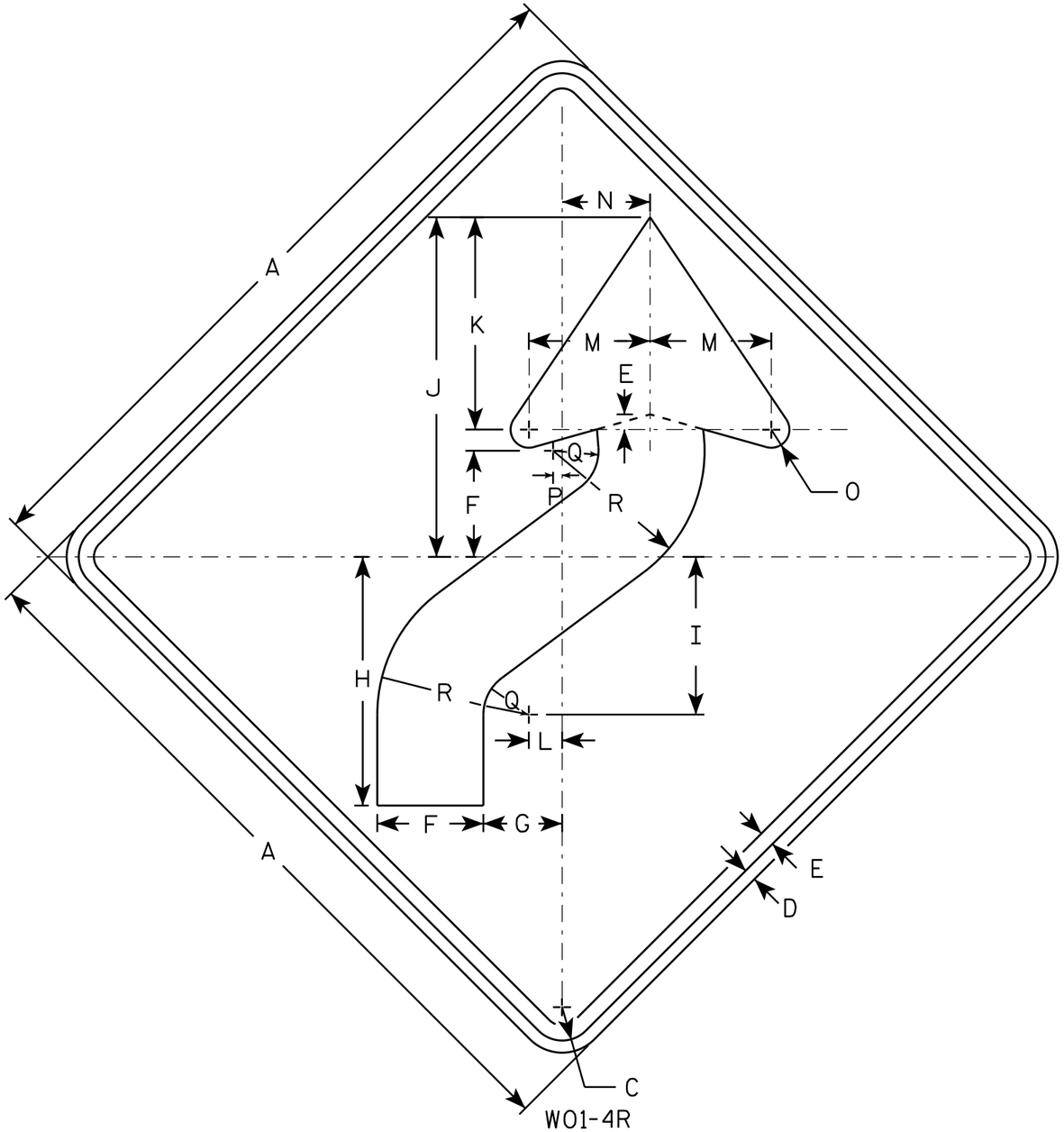
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/18/13 PLATE W01-3.1

706

PROJECT NO: | HWY: | COUNTY: | SHEET NO: E



W01-4R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W01-4L is the same as W01-4R except the arrow is reversed along the vertical centerline.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	5 1/4	4	12 3/8	7 7/8	16 7/8	10 1/2	1 5/8	6	4 1/2	1	1/2	2 1/4	7 1/2									9.0
2S	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
2M	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
3	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
4	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
5	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0

STANDARD SIGN
W01-4

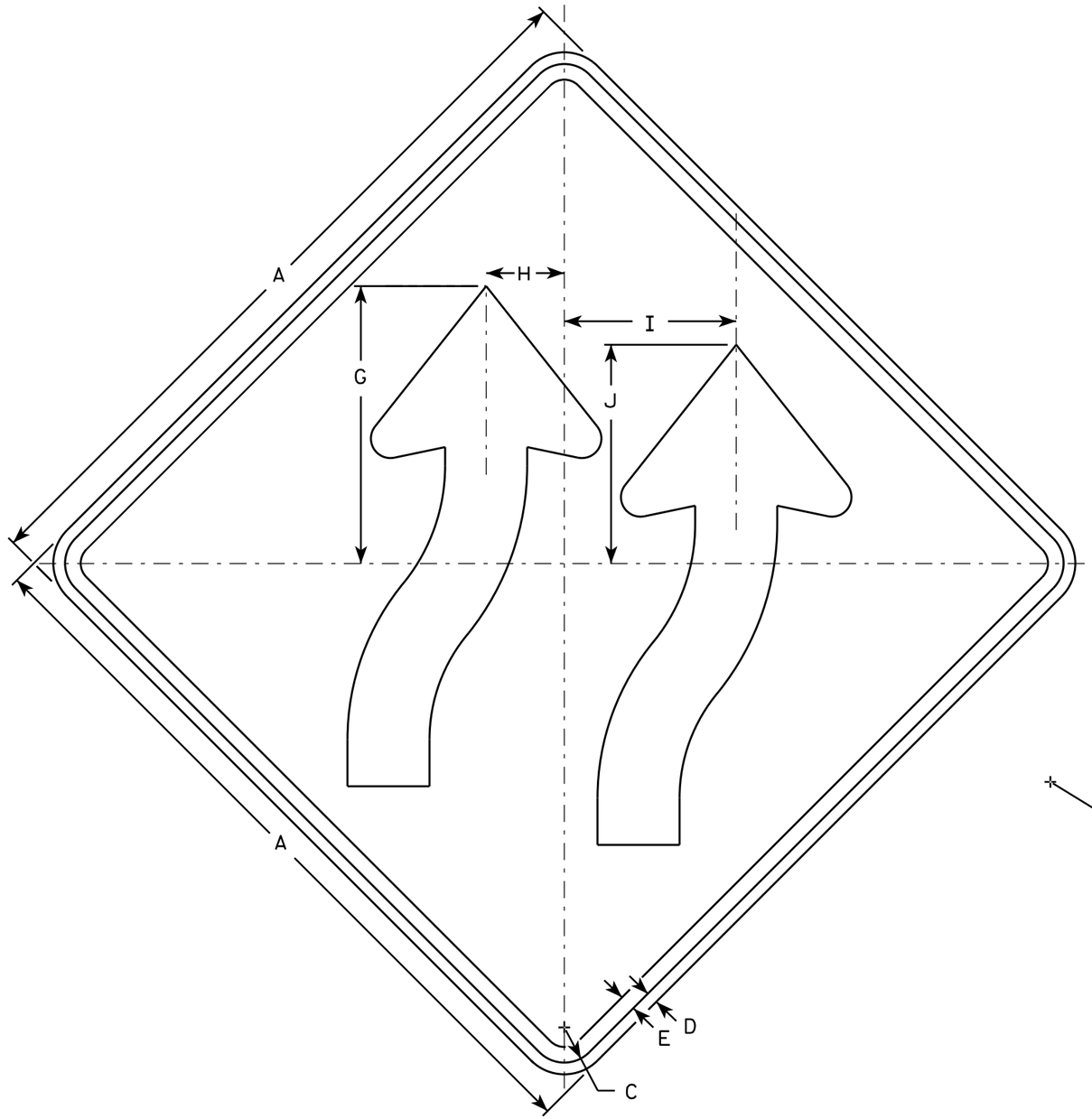
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

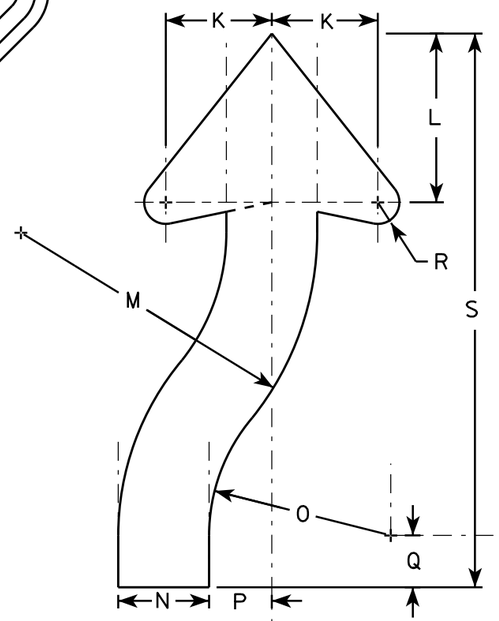
DATE 11/18/13 PLATE NO W01-4.1

707

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



W01-4bR



NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W01-4bL is the same as W014-bR exept arrows are reversed along the vertical centerline

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4		13 3/8	3 3/4	8 1/4	10 1/2	4 5/8	7 3/8	12 7/8	3 7/8	7 7/8	2 3/4	2 1/4	7/8	24								9.0
2S	48		2 1/4	3/4	1		17 3/4	5	11	14	6 1/8	9 3/4	17 1/8	5 1/4	10 1/2	3 5/8	3	1 1/4	32								16.0
2M	48		2 1/4	3/4	1		17 3/4	5	11	14	6 1/8	9 3/4	17 1/8	5 1/4	10 1/2	3 5/8	3	1 1/4	32								16.0
3	48		2 1/4	3/4	1		17 3/4	5	11	14	6 1/8	9 3/4	17 1/8	5 1/4	10 1/2	3 5/8	3	1 1/4	32								16.0
4	48		2 1/4	3/4	1		17 3/4	5	11	14	6 1/8	9 3/4	17 1/8	5 1/4	10 1/2	3 5/8	3	1 1/4	32								16.0
5	48		2 1/4	3/4	1		17 3/4	5	11	14	6 1/8	9 3/4	17 1/8	5 1/4	10 1/2	3 5/8	3	1 1/4	32								16.0

STANDARD SIGN
W01-4b

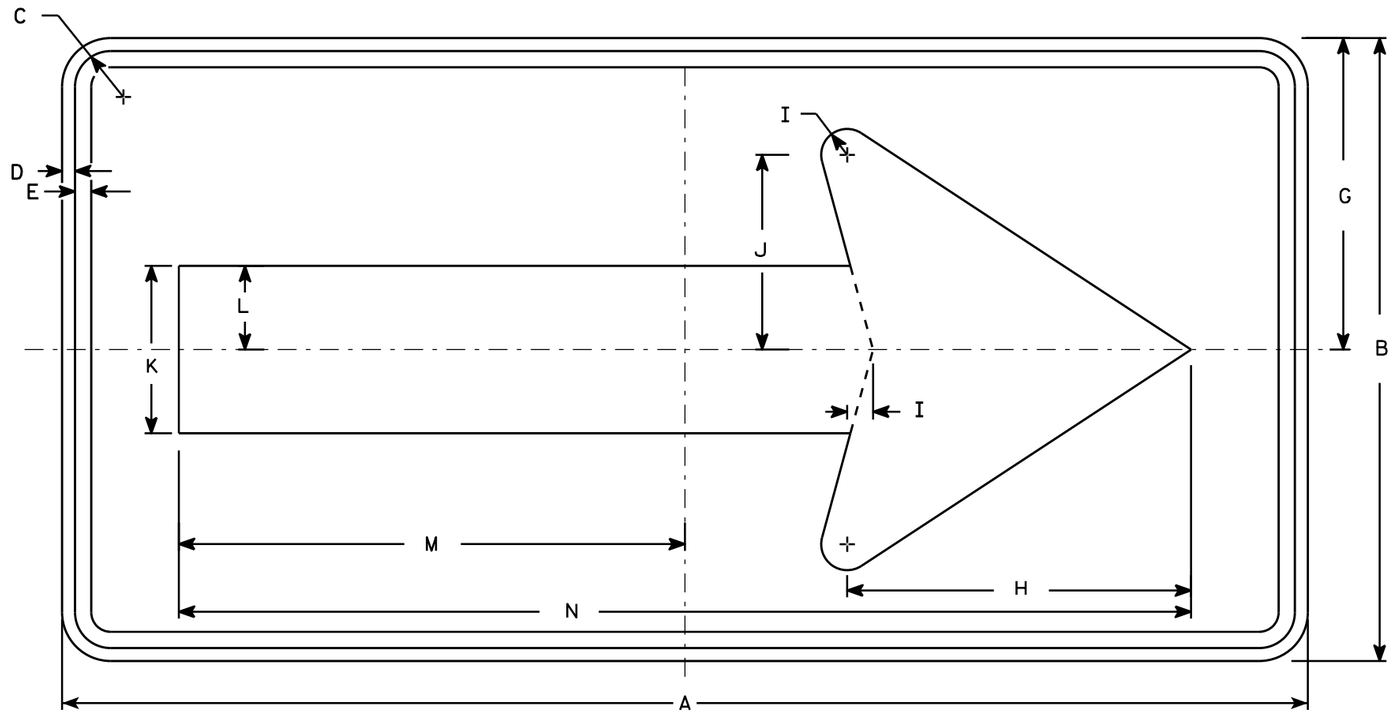
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/18/13 PLATE NO. W01-4b.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W014B.DGN PLOT DATE : 28-FEB-2014 11:36 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 8.756290:1.000000
WISDOT/CADDS SHEET 42



W01-6

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
2M	48	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
3	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
4	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
5	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5

STANDARD SIGN
W01-6

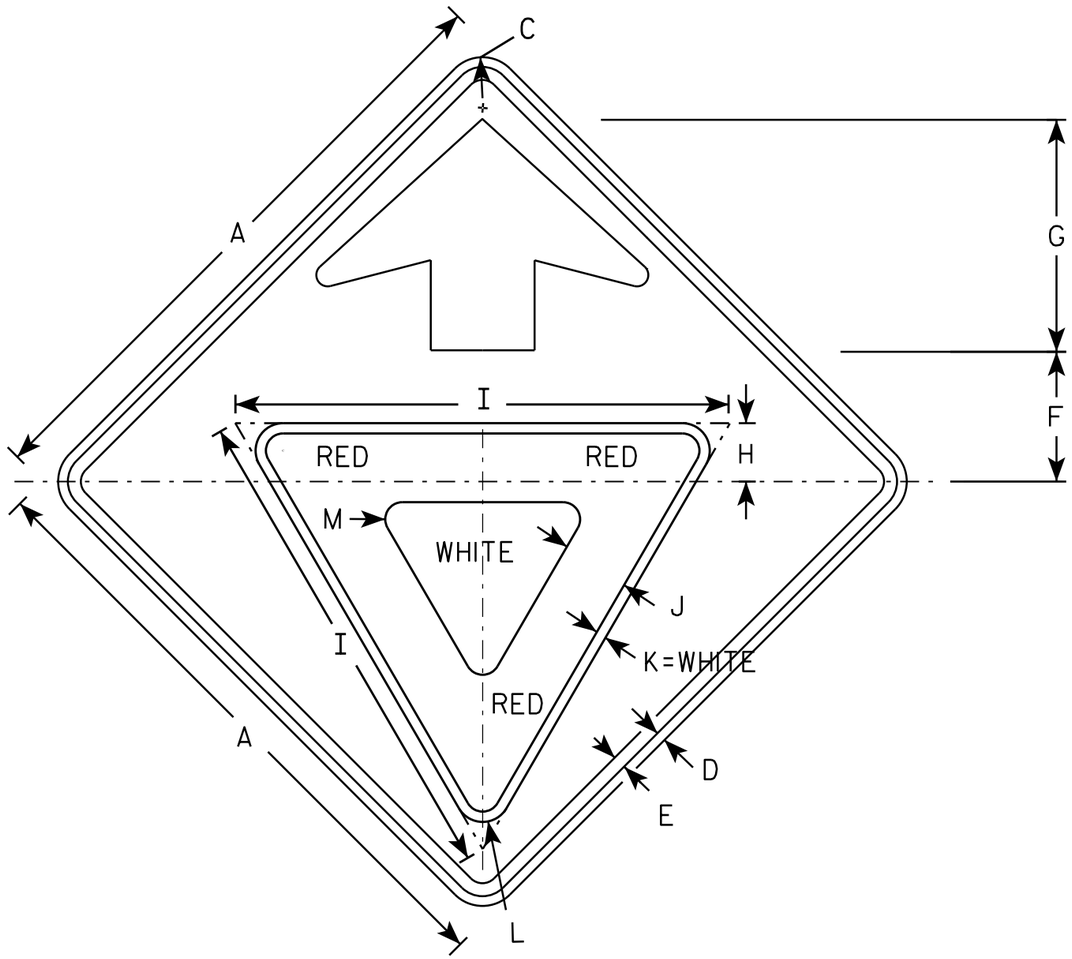
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/18/13 PLATE W01-6.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

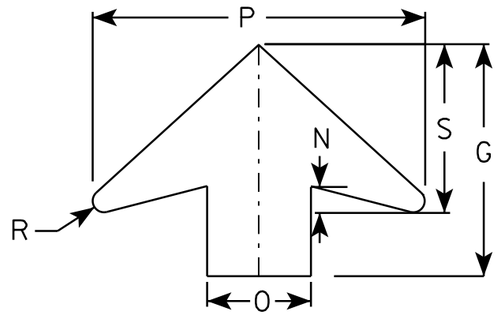
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W016.DGN PLOT DATE : 28-FEB-2014 11:37 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 5.837526:1.000000 WISDOT/CADDS SHEET 42



W03-2

NOTES

1. All Signs Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - ORANGE
   Arrow & Border - BLACK
   Yield Symbol - WHITE BORDER ON RED BACKGROUND



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	7 1/2	13 1/2	3 3/8	28	3 3/4	5/8	1 1/2	1	1 5/8	6	19 1/4		5/8	9 3/4								9.0
2S	48		2 1/4	3/4	1	10	17 7/8	4 1/2	38	5	3/4	2 1/8	1 3/8	2	8	25 5/8		7/8	13								16.0
2M	48		2 1/4	3/4	1	10	17 7/8	4 1/2	38	5	3/4	2 1/8	1 3/8	2	8	25 5/8		7/8	13								16.0
3	48		2 1/4	3/4	1	10	17 7/8	4 1/2	38	5	3/4	2 1/8	1 3/8	2	8	25 5/8		7/8	13								16.0
4	48		2 1/4	3/4	1	10	17 7/8	4 1/2	38	5	3/4	2 1/8	1 3/8	2	8	25 5/8		7/8	13								16.0
5	48		2 1/4	3/4	1	10	17 7/8	4 1/2	38	5	3/4	2 1/8	1 3/8	2	8	25 5/8		7/8	13								16.0

STANDARD SIGN
W03-2

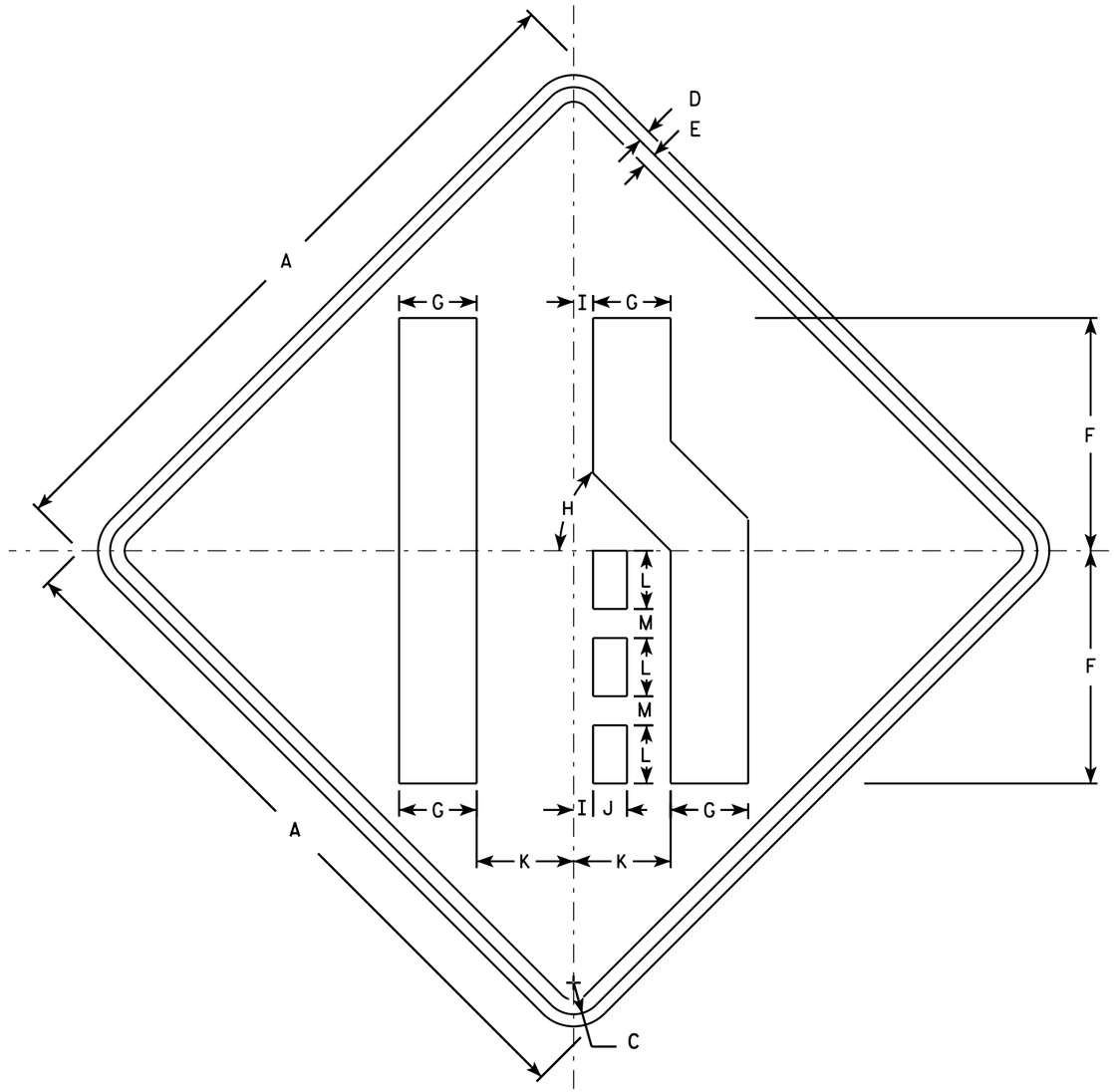
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/20/13 PLATE W03-2.1

PROJECT NO:

SHEET NO: E



W04-2R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W04-2L is the same as W04-2R except the symbol is reversed along the vertical centerline.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	12	4	45°	1	1 3/4	5	3	1 1/2														9.0
2S	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
2M	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
3	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
4	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
5	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0

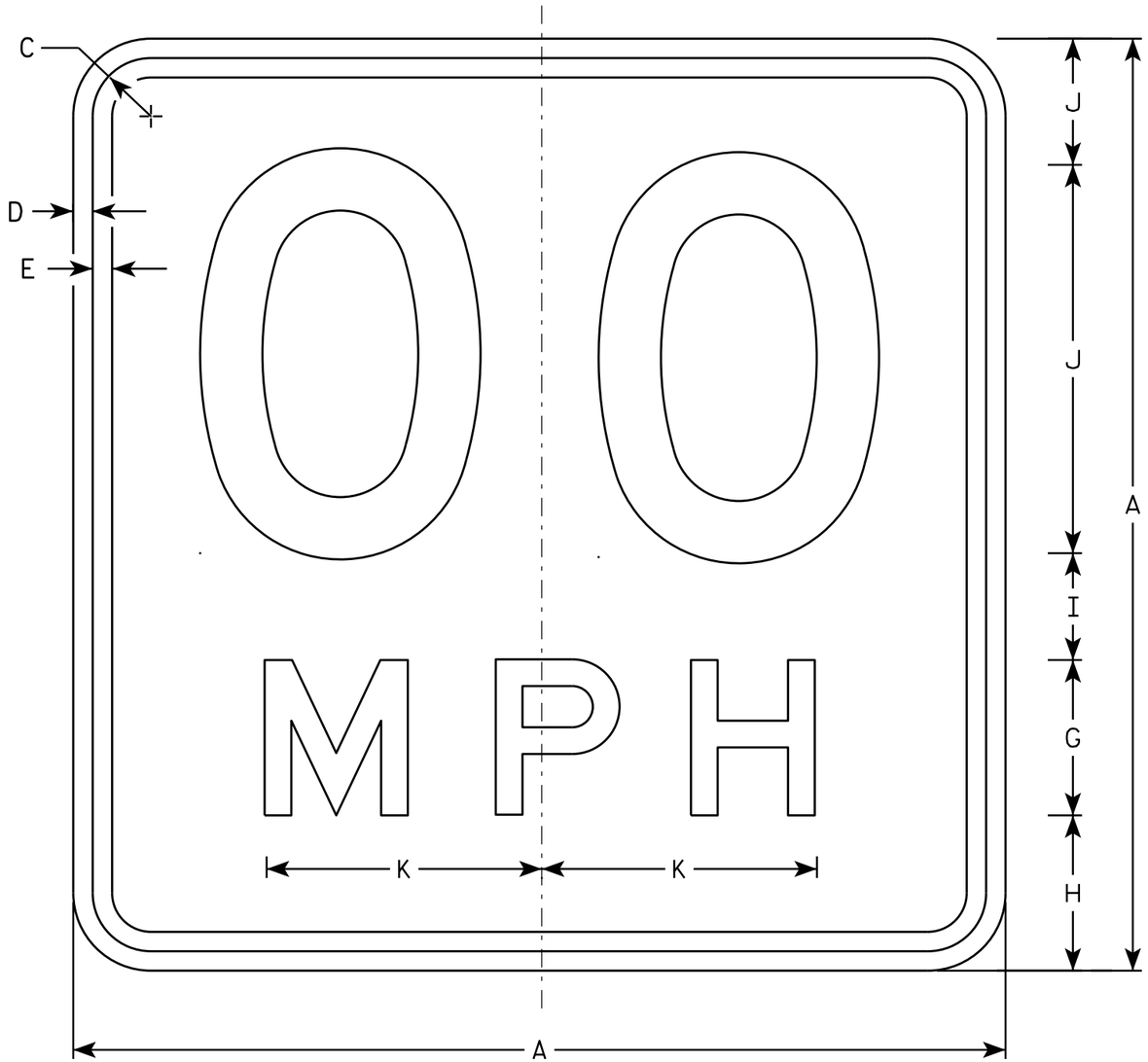
STANDARD SIGN
W04-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/20/13 PLATE 711 W04-2.1

PROJECT NO: | SHEET NO: E



W013-1

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - See Note 6
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and optically space about centerline to achieve proper balance.
6. Line 1 is Series D
   Line 2 is Series E

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2	10	4	4	2 3/4	3 1/4	7 1/8																4.00
2S	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
2M	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
3	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
4	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
5	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00

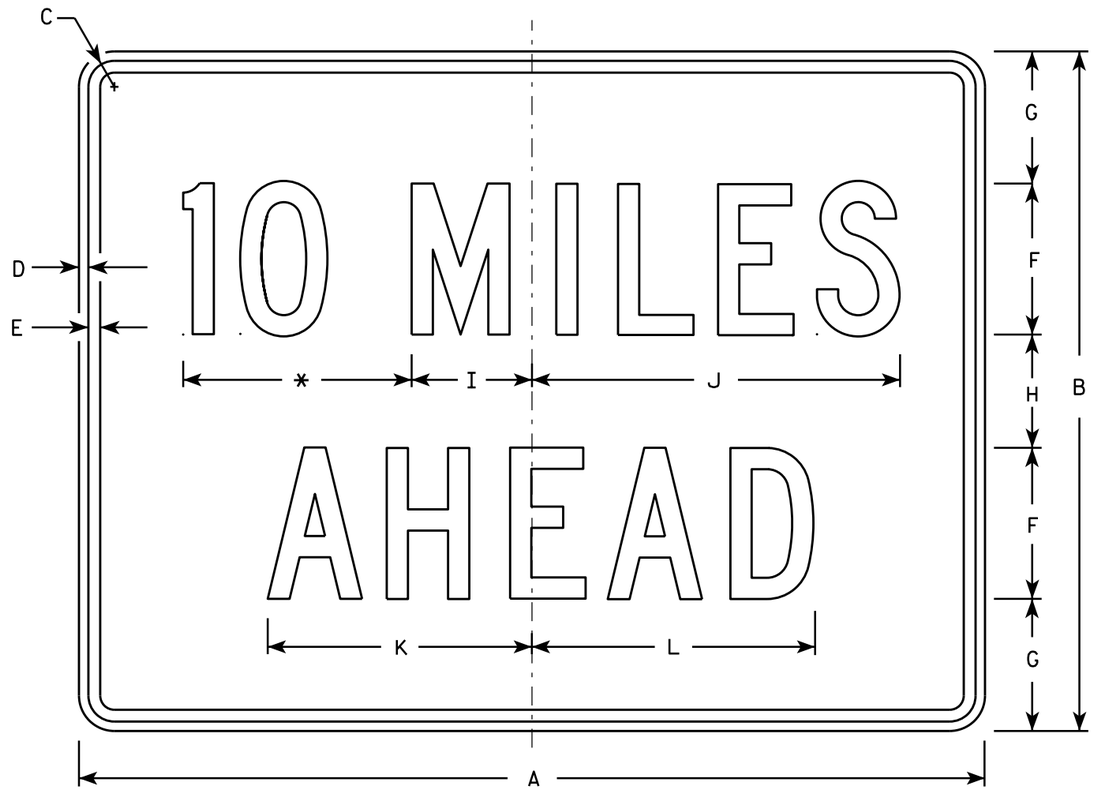
STANDARD SIGN
W013-1

WISCONSIN DEPT OF TRANSPORTATION

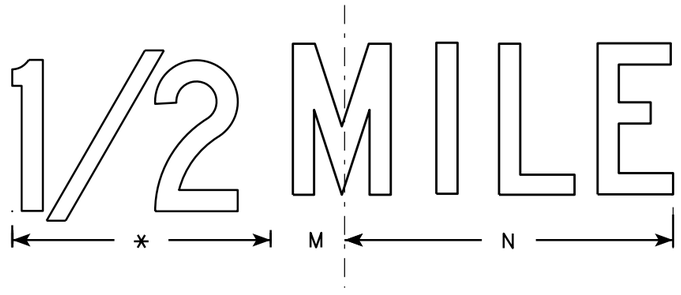
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/21/13 PLATE 712 W013-1.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



W057-52



NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and optically adjust spacing to achieve proper balance.

* See note 5

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	24	1 1/8	3/8	1/2	6	4 1/2	3	4 3/4	14 5/8	10 5/8	11 3/8	2	13													6.0
2S	48	36	1 3/8	1/2	5/8	8	7	6	6 3/8	19 1/2	14	15	2 3/4	17 3/8													12.0
2M	48	36	1 3/8	1/2	5/8	8	7	6	6 3/8	19 1/2	14	15	2 3/4	17 3/8													12.0
3	48	36	1 3/8	1/2	5/8	8	7	6	6 3/8	19 1/2	14	15	2 3/4	17 3/8													12.0
4	48	36	1 3/8	1/2	5/8	8	7	6	6 3/8	19 1/2	14	15	2 3/4	17 3/8													12.0
5	48	36	1 3/8	1/2	5/8	8	7	6	6 3/8	19 1/2	14	15	2 3/4	17 3/8													12.0

STANDARD SIGN
W057-52

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/20/13 PLATE W057-52.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W05752.DGN PLOT DATE : 28-FEB-2014 11:42 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 8.026599:1.000000 WISDOT/CADDS SHEET 42

PRE-STAGE - USH 18/MANHATTAN DRIVE

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Fill	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Fill Note 3	Cumulative Vol (CY) Cut 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.25	Mass Ordinate Note 8
121+22.00	12122		13	0	0	0	0	0	0
122+00.00	12200	78	39	0	74	0	74	0	74
122+50.00	12250	50	132	0	158	0	233	0	232
123+00.00	12300	50	130	0.0	243	0.4	475	1	474
123+50.00	12350	50	129	0	239	0.0	714	1	714
124+00.00	12400	50	113	1	224	1	938	2	937
124+50.00	12450	50	144	3	239	3	1177	6	1171
125+00.00	12500	50	276	0	389	3	1566	9	1557
125+50.00	12550	50	247	5	484	4	2051	14	2036
125+94.00	12594	44	247	5	403	8	2454	24	2430
			Column totals		2454	19			

** Note: Quantity for Salvaged/Unusable shown in Earthwork Summary Table in Miscellaneous Quantities.

STAGE 1 - USH 18

** Note: See Earthwork Summary Table in Miscellaneous Quantities for earthwork information.

9

9

PROJECT NO:2200-16-71 | HWY:USH 18 | COUNTY:WAUKESHA | EARTHWORK - CATEGORY 0010 | SHEET 714 E

STAGE 2 - USH 18

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Fill	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Fill Note 3	Cumulative Vol (CY) Cut 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.25	Mass Ordinate Note 8
138+59.00	13859		19	0	0	0	0	0	0
139+50.00	13950	91	29	0	80	0	80	0	80
140+00.00	14000	50	42	0	66	0	146	0	146
140+50.00	14050	50	46	0	82	0	228	0	228
141+00.00	14100	50	43	0	83	0	311	0	311
141+50.00	14150	50	34	0	71	0	382	0	382
142+00.00	14200	50	27	0	56	0	438	0	438
142+63.00	14263	63	27	0	63	0	500	0	500
146+00.00	14600	0	8	0	0	0	0	0	0
146+50.00	14650	50	22	0	28	0	28	0	28
147+00.00	14700	50	34	0	52	0	79	0	79
147+50.00	14750	50	42	0	71	0	151	0	151
148+00.00	14800	50	42	0	78	0	228	0	228
148+50.00	14850	50	33	0	69	0	298	0	298
149+00.00	14900	50	24	0	52	0	350	0	350
149+54.00	14954	54	10	0	33	0	383	0	383
151+08.00	15108	0	40	0	0	0	0	0	0
151+70.00	15170	62	40	0	91	0	91	0	91
152+00.00	15200	30	16	1	31	0	122	0	121
152+36.00	15236	36	70	0	57	0	179	1	178
167+87.00	16787	0	10	2	0	0	0	0	0
168+43.00	16843	56	28	0	39	2	39	2	36
168+96.00	16896	0	9	0	0	0	0	0	0
169+50.00	16950	54	21	0	29	0	29	0	29
170+00.00	17000	50	34	0	50	0	80	0	80
170+50.00	17050	50	40	0	68	0	148	0	148
171+00.00	17100	50	54	0	87	0	234	0	234
171+50.00	17150	50	36	0	84	0	318	0	318
171+75.00	17175	25	27	0	29	0	347	0	347
172+00.00	17200	25	27	0	25	0	372	0	372
172+52.00	17252	52	10	0	35	0	408	0	408
203+88.00	20388	0	10	0	0	0	0	0	0
204+50.00	20450	62	18	0	31	0	31	0	31
205+00.00	20500	50	43	4	56	4	88	5	83
205+50.00	20550	50	33	8	71	11	158	18	140
206+00.00	20600	50	31	0	59	7	217	27	191
206+50.00	20650	50	37	0	63	0	281	27	254
207+00.00	20700	50	36	0	68	0	349	27	322
207+50.00	20750	50	35	0	66	0	415	27	388
208+00.00	20800	50	30	0	60	0	475	27	448
208+50.00	20850	50	88	6	110	5	585	33	552

STAGE 2 - USH 18

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Fill	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Fill Note 3	Cumulative Vol (CY) Cut 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.25	Mass Ordinate Note 8
210+00.00	21000	0	80	24	0	0	0	0	0
210+50.00	21050	50	30	0	101	22	101	28	73
211+00.00	21100	50	15	0	42	0	143	28	115
211+50.00	21150	50	15	0	28	0	171	28	143
212+00.00	21200	50	15	0	28	0	199	28	171
212+50.00	21250	50	13	1	26	1	225	30	195
213+00.00	21300	50	15	0	26	1	250	31	219
213+50.00	21350	50	14	0	27	0	278	31	246
214+20.00	21420	70	10	1	31	1	309	33	276
216+87.00	21687	0	11	0	0	0	0	0	0
217+50.00	21750	63	15	0	30	0	30	0	30
218+00.00	21800	50	19	0	31	0	61	0	61
218+50.00	21850	50	23	0	39	0	100	0	100
219+00.00	21900	50	22	0	42	0	142	0	142
219+50.00	21950	50	22	0	40	0	182	0	182
220+00.00	22000	50	26	0	44	0	226	0	226
220+50.00	22050	50	28	0	50	0	276	0	276
221+00.00	22100	50	26	0	50	0	326	0	326
221+50.00	22150	50	23	0	45	0	371	0	371
222+00.00	22200	50	26	0	46	0	416	0	416
222+50.00	22250	50	25	3	48	3	464	3	460
223+00.00	22300	50	18	0	40	3	504	7	497
223+50.00	22350	50	17	0	33	0	536	7	529
224+48.00	22448	98	14	1	56	2	593	9	584
229+88.00	22988	0	28	0	0	0	0	0	0
230+50.00	23050	62	21	0	56	0	56	0	56
231+42.00	23142	92	16	0	62	0	118	0	118
				Column totals	3113	62			

** Note: Quantity for Salvaged/Unusable shown in Earthwork Summary Table in Miscellaneous Quantities.

9

9

STAGE 2A - PARKLAWN COURT

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Fill	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Fill Note 3	Cumulative Vol (CY) Cut 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.25	Mass Ordinate Note 8
45+27.00	4527		46	0	0	0	0	0	0
45+50.00	4550	23	44	0	38	0	38	0	38
46+00.00	4600	50	47	0	84	0	123	0	123
46+25.00	4625	25	28	0	34	0	157	0	157
46+50.00	4650	25	41	0	32	0	189	0	189
47+00.00	4700	50	30	0	66	0	254	0	254
47+50.00	4750	50	47	0	71	0	325	0	325
48+00.00	4800	50	32	0	73	0	398	0	398
48+21.00	4821	21	39	0	28	0	426	0	426
48+50.00	4850	29	24	0.3	34	0.2	460	0	460
49+38.00	4938	88	46	0	114	0.5	575	1	574
			Column totals		575	1			

STAGE 2A - PARKLAWN DRIVE

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Fill	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Fill Note 3	Cumulative Vol (CY) Cut 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.25	Mass Ordinate Note 8
50+62.00	5062		39	3	0	0	0	0	0
51+50.00	5150	88	46	0	138	5	138	7	132
52+44.00	5244	94	53	0	171	0	310	7	303
			Column totals		310	5			

STAGE 2B - SPRINGDALE ROAD

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Fill	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Fill Note 3	Cumulative Vol (CY) Cut 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.25	Mass Ordinate Note 8
50+68.00	5068		19	0	0	0	0	0	0
51+25.00	5125	57	23	0	44	0	44	0	44
51+50.00	5150	25	20	0	20	0	64	0	64
52+00.00	5200	50	33	0	49	0	113	0	113
52+64.00	5264	64	45	0	93	0	206	0	206
			Column totals		206	0			

STAGE 2B - PARKLAWN COURT

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Fill	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Fill Note 3	Cumulative Vol (CY) Cut 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.25	Mass Ordinate Note 8
45+27.00	4527		26	0	0	0	0	0	0
45+50.00	4550	23	24	0	21	0	21	0	21
46+00.00	4600	50	23	0	44	0	65	1	64
46+25.00	4625	25	23	0	21	0	86	1	85
46+50.00	4650	25	40	0	29	0	115	1	115
47+00.00	4700	50	61	0	94	0	209	1	208
47+50.00	4750	50	65	0	117	0	326	1	325
48+00.00	4800	50	48	0	104	0	430	1	429
48+21.00	4821	21	54	0	40	0	470	1	469
48+50.00	4850	29	53	5.1	57	2.7	527	4	523
49+38.00	4938	88	36	9	143	22.2	671	32	639
			Column totals		671	25			

STAGE 2A - PARKLAWN DRIVE

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Fill	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Fill Note 3	Cumulative Vol (CY) Cut 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.25	Mass Ordinate Note 8
50+62.00	5062		20	0	0	0	0	0	0
51+50.00	5150	88	16	0	58	1	58	1	57
52+44.00	5244	94	16	0	56	0	113	1	113
			Column totals		113	1			

STAGE 2B - SWENSON DRIVE

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Fill	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Fill Note 3	Cumulative Vol (CY) Cut 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.25	Mass Ordinate Note 8
42+63.00	4263		0	0	0	0	0	0	0
43+00.00	4300	37	0	0	0	0	0	0	0
44+00.00	4400	100	0	0	0	0	0	0	0
44+50.00	4450	50	8	0.4	7	0.4	7	0	7
44+75.00	4475	25	34	0	19	0.2	27	1	26
45+00.00	4500	25	21	0	25	0	52	1	51
45+50.00	4550	50	46	0	61	0	113	1	112
45+80.00	4580	30	42	0	49	0	162	1	161
46+00.00	4600	20	47	0	33	0	195	1	194
46+50.00	4650	50	83	0	120	0	315	1	315
47+00.00	4700	50	92	0	162	0	477	1	476
47+50.00	4750	50	95	0	173	0	650	1	649
48+00.00	4800	50	82	0	163	0	813	1	812
48+28.00	4828	28	81	0	84	0	897	1	897
48+50.00	4850	22	92	0	70	0	968	1	967
49+38.00	4938	88	86	0	289	0	1257	1	1256
			Column totals		1257	1			

STAGE 2B - KOSSOW ROAD

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Fill	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Fill Note 3	Cumulative Vol (CY) Cut 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.25	Mass Ordinate Note 8
50+68.00	5068		37	19	0	0	0	0	0
51+50.00	5150	82	18	0	83	29	83	36	47
52+00.00	5200	50	42	11	56	10	139	49	90
52+50.00	5250	50	36	4	73	14	211	67	145
53+00.00	5300	50	37	3	68	7	279	75	204
53+50.00	5350	50	31	5	62	7	341	84	257
54+00.00	5400	50	41	17	66	20	407	109	298
54+50.00	5450	50	122	0	151	15	558	128	430
55+00.00	5500	50	90	18	197	17	754	150	605
55+50.00	5550	50	76	0.2	154	17.2	908	171	737
56+00.00	5600	50	95	0	158	0.2	1066	171	895
56+50.00	5650	50	123	0	201	0	1267	171	1096
57+00.00	5700	50	81	0	189	0	1456	171	1285
57+25.00	5725	25	70	0	70	0	1526	171	1355
57+50.00	5750	25	54	0	57	0	1583	171	1412
58+00.00	5800	50	29	0	76	0	1660	171	1488
58+50.00	5850	50	18	0	44	0	1703	171	1532
59+27.00	5927	77	13	0.1	45	0.1	1748	171	1577
			Column totals		1748	137			

STAGE 2B - MORELAND COURT

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Fill	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Fill Note 3	Cumulative Vol (CY) Cut 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.25	Mass Ordinate Note 8
210+00.00	21000		11	24	0	0	0	0	0
210+50.00	21050	50	31	14	39	35	39	44	-6
211+12.00	21112	62	57	5	101	22	140	71	68
			Column totals		140	57			

STAGE 2C - SPRINGDALE ROAD

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Fill	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Fill Note 3	Cumulative Vol (CY) Cut 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.25	Mass Ordinate Note 8
50+68.00	5068		118	5	0	0	0	0	0
51+00.00	5100	32	159	0	164	3	164	4	161
51+25.00	5125	25	127	0	133	0	297	4	293
51+50.00	5150	25	110	0	110	0	407	4	403
51+75.00	5175	25	119	1	106	0	513	4	509
52+00.00	5200	25	115	0	108	0	622	4	617
52+25.00	5225	25	94	0	97	0	718	4	714
52+50.00	5250	25	90	0	85	0	803	4	799
52+75.00	5275	25	51	0	65	0	868	4	864
53+00.00	5300	25	58	0	51	0	919	4	915
53+50.00	5350	50	17	0	70	0	989	4	984
			Column totals		989	4			

STAGE 2C - SWENSON DRIVE

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Fill	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Fill Note 3	Cumulative Vol (CY) Cut 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.25	Mass Ordinate Note 8
42+63.00	4263		9	0	0	0	0	0	0
43+00.00	4300	37	22	0	21	0	21	0	21
44+00.00	4400	100	30	0	95	0	116	0	116
44+50.00	4450	50	25	0	50	0	167	0	167
44+75.00	4475	25	30	0	25	0	192	0	192
45+00.00	4500	25	34	0	30	0	222	0	222
45+50.00	4550	50	31	0	60	0	282	0	282
45+80.00	4580	30	20	0	28	0	310	0	310
46+00.00	4600	20	21	0	15	0	325	0	325
46+50.00	4650	50	22	0	39	0	365	0	365
47+00.00	4700	50	19	0	38	0	403	0	402
47+50.00	4750	50	20	0	36	0	439	0	438
48+00.00	4800	50	0	0	18	0	457	0	457
48+28.00	4828	28	30	4	16	2	473	3	470
48+50.00	4850	22	22	0	21	2	494	5	489
49+38.00	4938	88	64	0	140	0	634	5	629
			Column totals		634	4			

STAGE 2C - KOSSOW ROAD (SOUTH)

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Fill	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Fill Note 3	Cumulative Vol (CY) Cut 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.25	Mass Ordinate Note 8
96+74.00	9674		0	0	0	0	0	0	0
97+40.00	9740	66	7	3	8	4	8	5	3
97+50.00	9750	10	7	2	3	1	11	6	5
98+00.00	9800	50	7	1	13	3	24	10	15
98+50.00	9850	50	18	0	23	0	47	10	37
99+00.00	9900	50	22	1	37	1	84	11	74
99+50.00	9950	50	24	24	43	23	127	40	88
			Column totals		127	32			

STAGE 2C - KOSSOW ROAD

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Fill	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Fill Note 3	Cumulative Vol (CY) Cut 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.25	Mass Ordinate Note 8
50+62.00	5062		61	20	0	0	0	0	0
51+50.00	5150	88	42	1	167	34	167	42	124
52+00.00	5200	50	42	1	78	1	245	44	201
52+50.00	5250	50	51	0.2	87	0.6	331	45	287
53+00.00	5300	50	56	0	99	0.2	430	45	385
53+50.00	5350	50	41	10	90	9	520	56	464
54+00.00	5400	50	47	2	81	11	601	70	531
54+50.00	5450	50	60	0	99	2	700	72	628
55+00.00	5500	50	100	0	148	0	848	72	775
55+50.00	5550	50	17	0	109	0	956	72	884
56+00.00	5600	50	13	0	28	0	984	72	911
56+50.00	5650	50	0	0	12	0	995	72	923
57+00.00	5700	50	0	0	0	0	995	72	923
57+25.00	5725	25	0	0	0	0	995	72	923
57+50.00	5750	25	0	0	0	0	995	72	923
58+00.00	5800	50	0	0	0	0	995	72	923
58+50.00	5850	50	0	0	0	0	995	72	923
59+27.00	5927	77	0	0	0	0	995	72	923
			Column totals		995	58			

STAGE 2C - ABBOTT DRIVE

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Fill	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Fill Note 3	Cumulative Vol (CY) Cut 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.25	Mass Ordinate Note 8
15+34.00	1534		4	0	0	0	0	0	0
15+44.00	1544	10	4	0	1	0	1	0	1
16+43.50	1644	0	74	0	0	0	1	0	1
16+50.00	1650	7	76	1	18	0	20	0	19
16+70.00	1670	20	111	0	69	0	89	0	88
17+00.00	1700	30	87	15	110	8	198	11	187
17+50.00	1750	50	84	13	158	26	357	44	312
18+00.00	1800	50	109	4	179	16	536	64	472
18+50.00	1850	50	107	3	200	6.6	736	72	664
18+75.00	1875	25	104	5	98	3.7	834	77	757
19+00.00	1900	25	119	0	103	2	937	79	858
19+50.00	1950	50	138	0	238	0	1175	80	1096
KOSSOW ROAD INTERSECTION									
20+80.00	2080	0	48	13	0	0	1175	80	1096
21+00.00	2100	20	148	0	72	5	1248	86	1162
			Column totals		1248	69			

STAGE 2D - SPRINGDALE ROAD

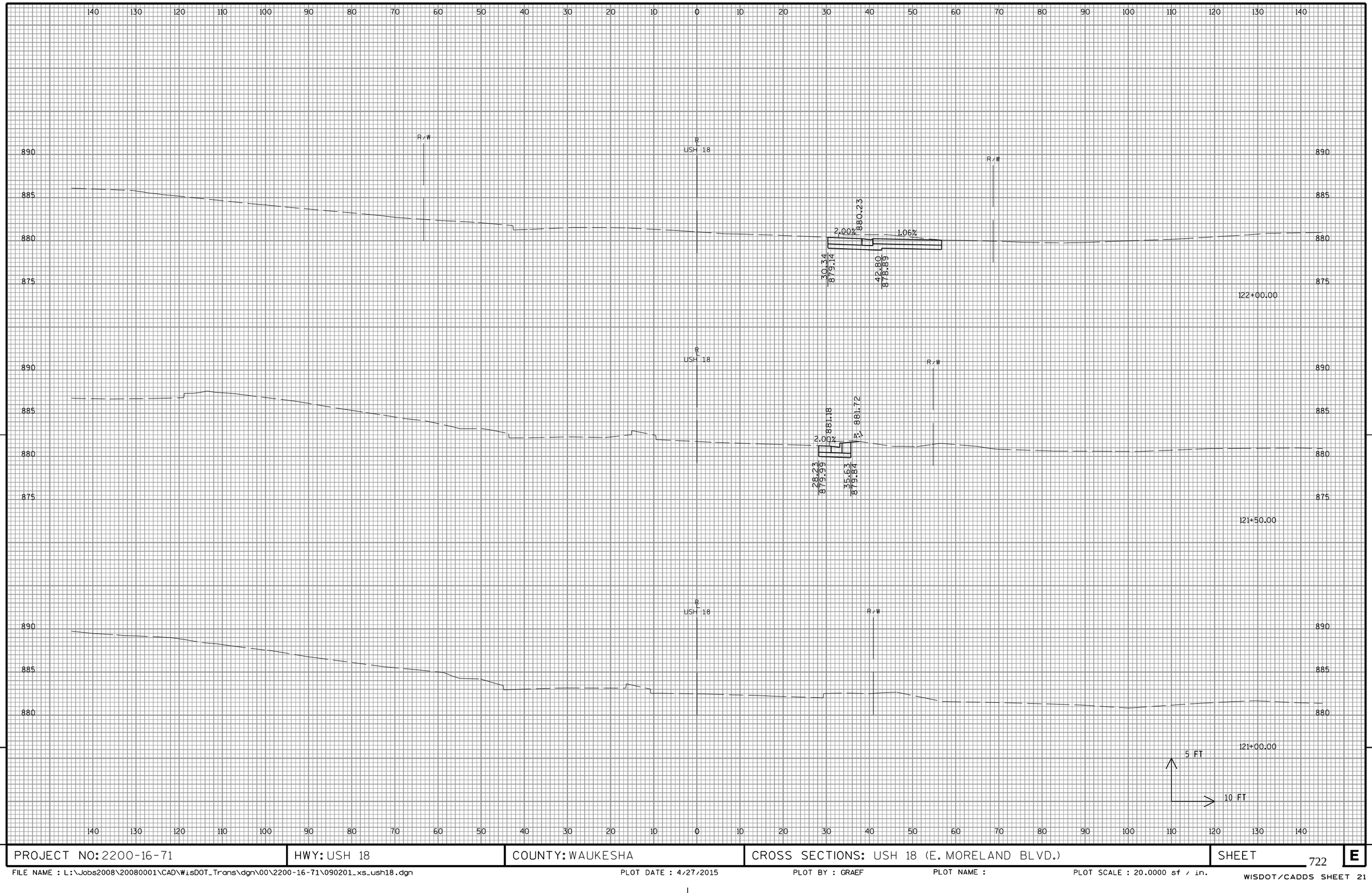
STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Fill	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Fill Note 3	Cumulative Vol (CY) Cut 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.25	Mass Ordinate Note 8
50+68.00	5068		21	2	0	0	0	0	0
51+00.00	5100	32	33	0	32	1	32	2	30
51+25.00	5125	25	30	0	29	0	61	2	59
51+50.00	5150	25	30	0	28	0	88	2	87
51+75.00	5175	25	29	0	27	0	116	2	114
52+00.00	5200	25	33	0	29	0	144	2	143
52+25.00	5225	25	34	0	31	0	175	2	174
52+50.00	5250	25	34	0	31	0	207	2	205
52+75.00	5275	25	0	0	16	0	222	2	221
53+00.00	5300	25	0	0	0	0	222	2	221
53+50.00	5350	50	0	0	0	0	222	2	221
				Column totals	222	1			

STAGE 2D - KOSSOW ROAD (SOUTH)

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Fill	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Fill Note 3	Cumulative Vol (CY) Cut 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.25	Mass Ordinate Note 8
96+74.00	9674		11	2	0	0	0	0	0
97+40.00	9740	66	35	0	57	2	57	2	55
97+50.00	9750	10	33	0	13	0	70	2	67
98+00.00	9800	50	8	3	38	3	107	6	102
98+50.00	9850	50	10	4	17	6	124	14	110
99+00.00	9900	50	11	4	19	7	143	23	120
99+50.00	9950	50	14	1	23	5	166	29	138
				Column totals	166	23			

STAGE 2D - KOSSOW ROAD

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Fill	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Fill Note 3	Cumulative Vol (CY) Cut 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.25	Mass Ordinate Note 8
50+62.00	5062		28	0	0	0	0	0	0
51+50.00	5150	88	17	0	72	0	72	0	72
52+00.00	5200	50	15	0	29	0	101	0	101
52+50.00	5250	50	19	0	31	0	132	0	132
53+00.00	5300	50	20	0	36	0	168	0	168
53+50.00	5350	50	16	0	33	0	202	0	202
54+00.00	5400	50	18	0	31	0	233	0	233
54+50.00	5450	50	0	0	17	0	250	0	250
55+00.00	5500	50	0	0	0	0	250	0	250
55+50.00	5550	50	0	0	0	0	250	0	250
56+00.00	5600	50	0	0	0	0	250	0	250
56+50.00	5650	50	0	0	0	0	250	0	250
57+00.00	5700	50	0	0	0	0	250	0	250
57+25.00	5725	25	0	0	0	0	250	0	250
57+50.00	5750	25	0	0	0	0	250	0	250
58+00.00	5800	50	0	0	0	0	250	0	250
58+50.00	5850	50	0	0	0	0	250	0	250
59+27.00	5927	77	0	0	0	0	250	0	250
				Column totals	250	0			



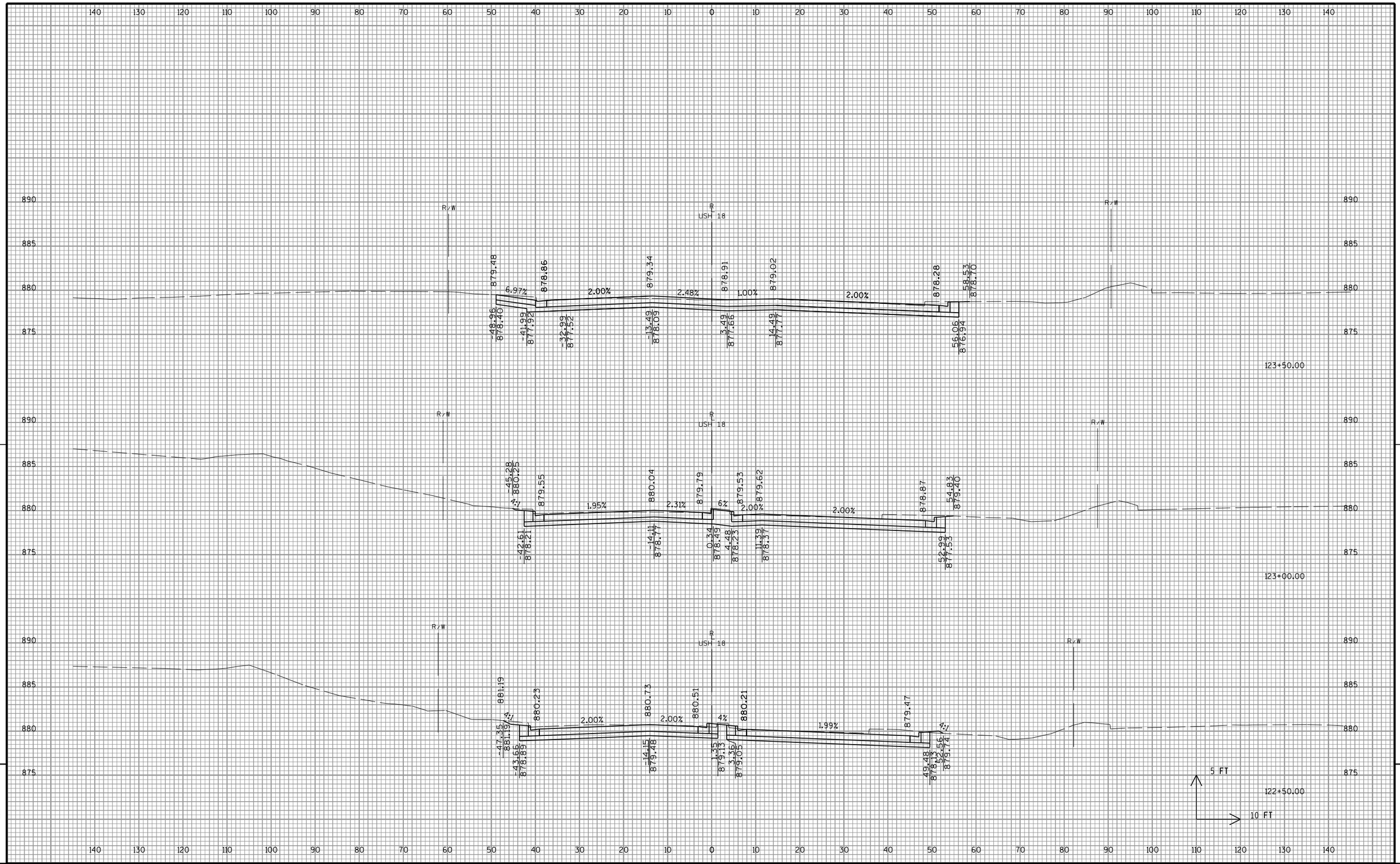
9

9

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CROSS SECTIONS: USH 18 (E. MORELAND BLVD.)	SHEET 722	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\090201_xs_ush18.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

WISDOT/CADDS SHEET 21



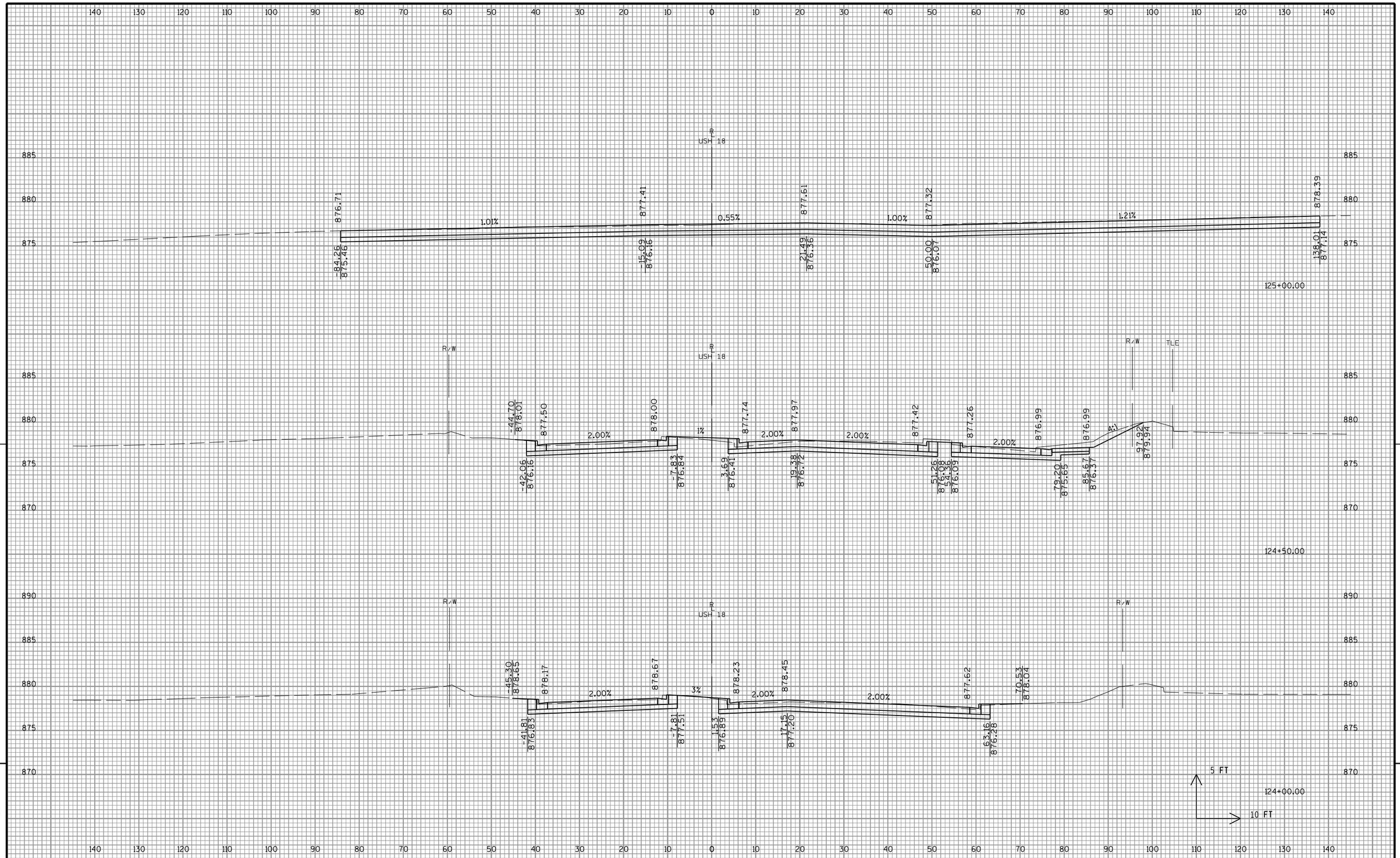
9

9

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CROSS SECTIONS: USH 18 (E. MORELAND BLVD.)	SHEET 723	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\090201_xs_ush18.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

WISDOT/CADDS SHEET 21



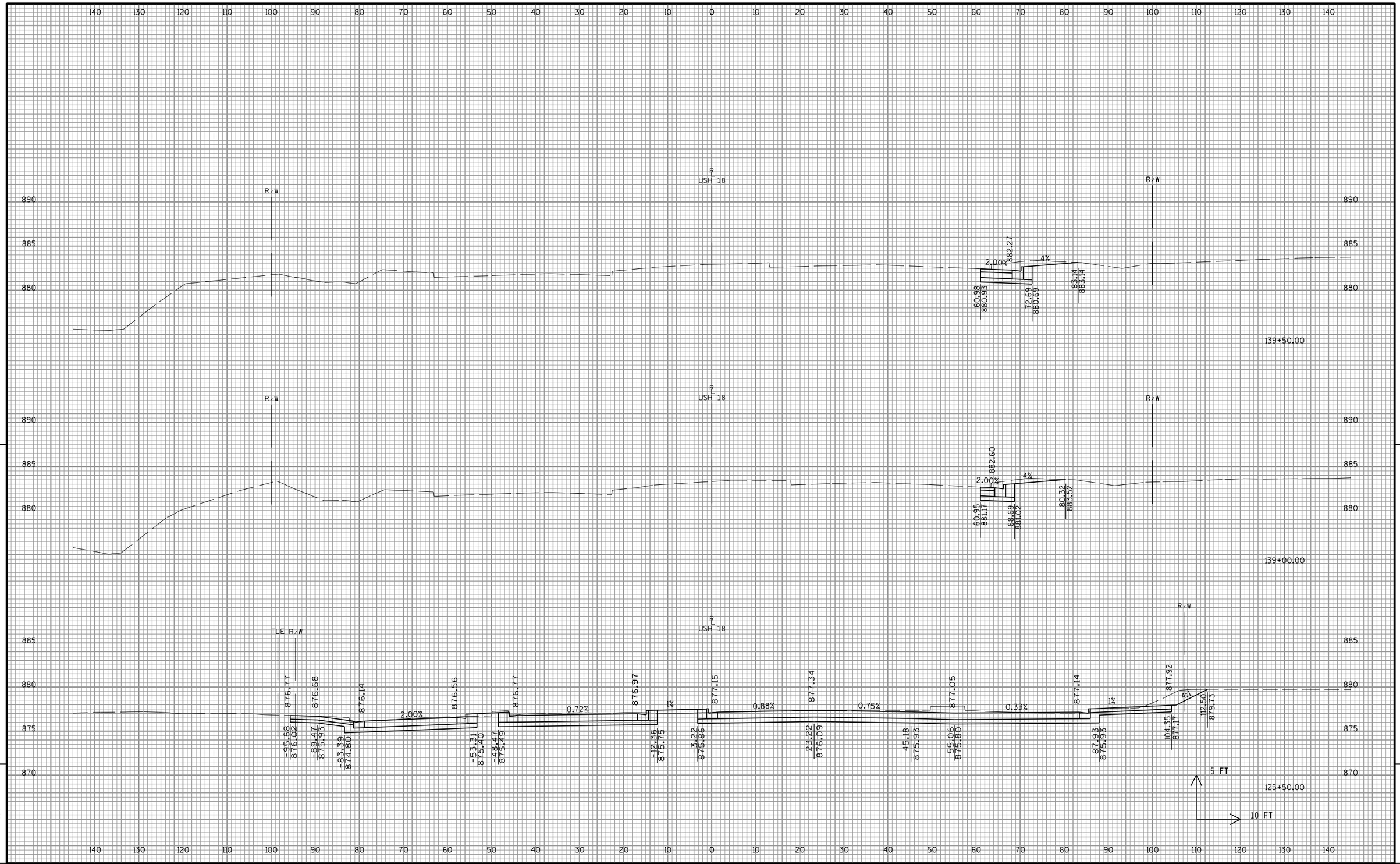
9

9

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CROSS SECTIONS: USH 18 (E. MORELAND BLVD.)	SHEET 724	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\090201_xs_ush18.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

WISDOT/CADDS SHEET 21



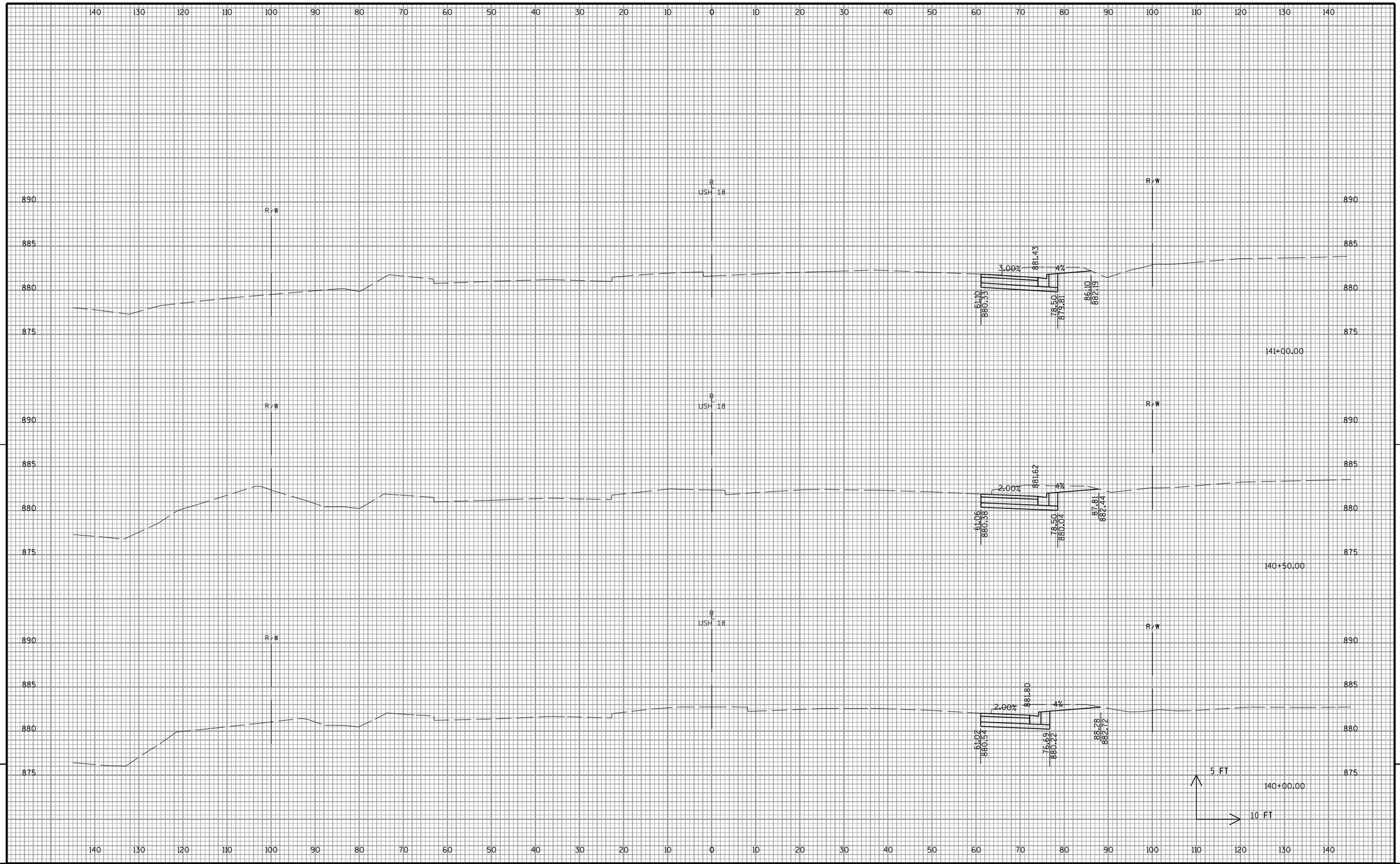
9

9

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CROSS SECTIONS: USH 18 (E. MORELAND BLVD.)	SHEET 725	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\090201_xs_ush18.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

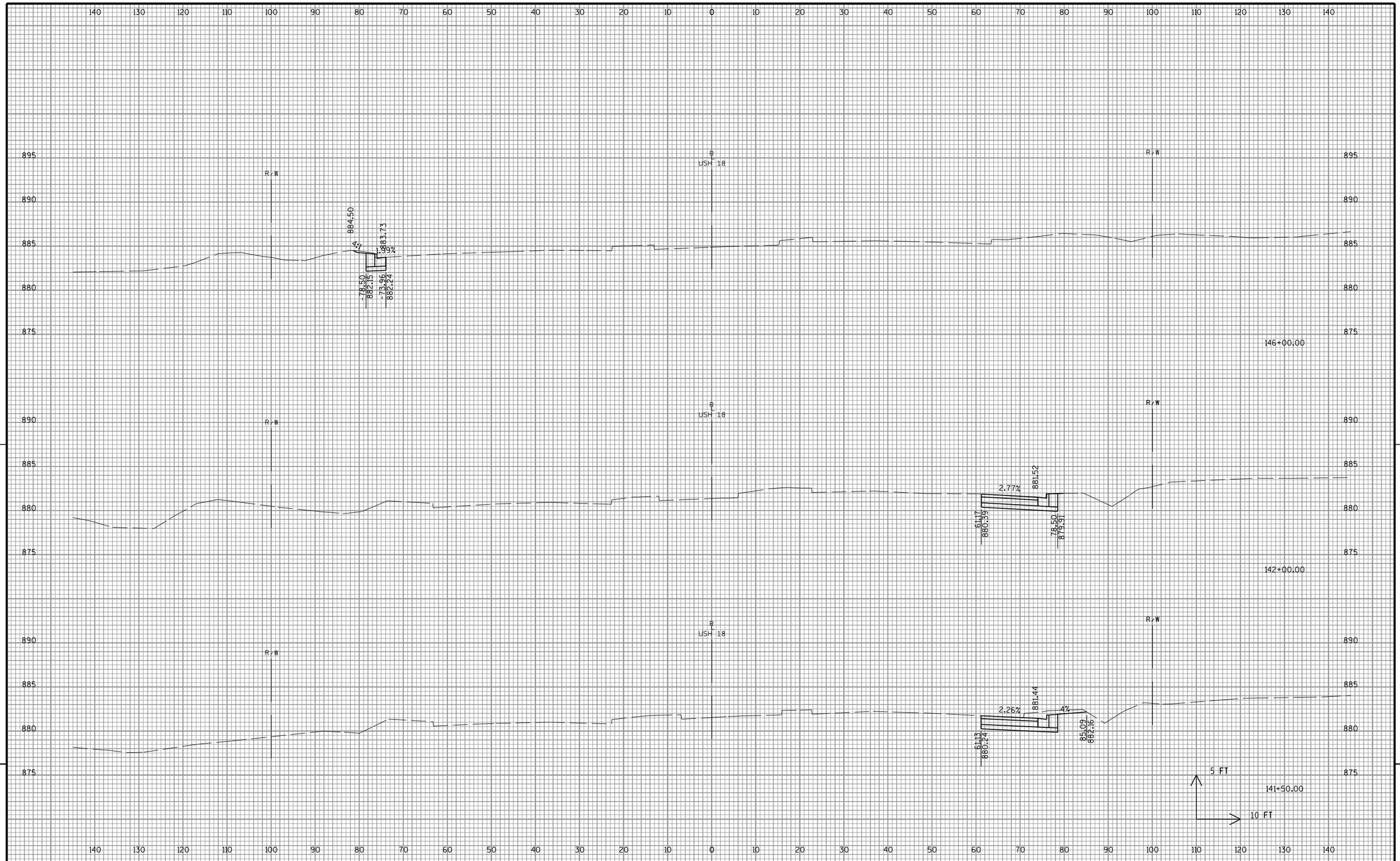
WISDOT/CADDS SHEET 21



9

9

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CROSS SECTIONS: USH 18 (E. MORELAND BLVD.)	SHEET 726	E



9

9

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CROSS SECTIONS: USH 18 (E. MORELAND BLVD.)	SHEET 727	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\090201_xs_ush18.dgn
PLOT DATE : 4/27/2015
PLOT BY : GRAEF
PLOT NAME :
PLOT SCALE : 20.0000 sf / in.
WISDOT/CADDS SHEET 21

140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

895 890 885 880

R/W

USH 18 RP

R/W

147+50.00

885.34
2.00%
-81.59
885.92
-78.50
883.76
-60.78
884.12

895 890 885 880

R/W

USH 18 RP

R/W

147+00.00

884.90
1.99%
-81.70
885.48
-78.50
883.32
-63.91
883.61

895 890 885 880

R/W

USH 18 RP

R/W

146+50.00

884.21
1.99%
-84.21
884.90
-78.50
882.63
-69.05
882.82

5 FT
10 FT

140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

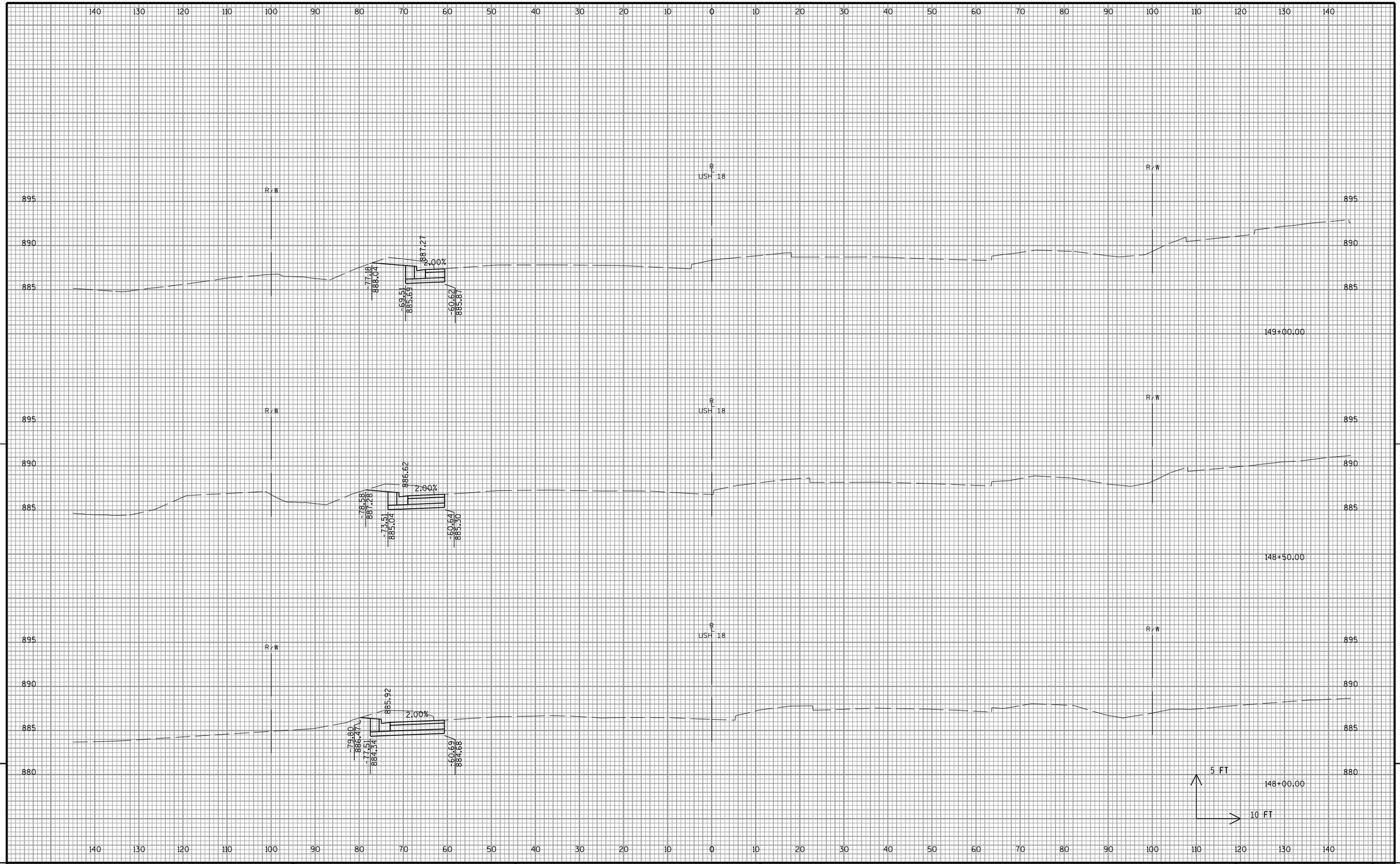
9

9

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CROSS SECTIONS: USH 18 (E. MORELAND BLVD.)	SHEET 728	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\090201_xs_ush18.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

WISDOT/CADDS SHEET 21



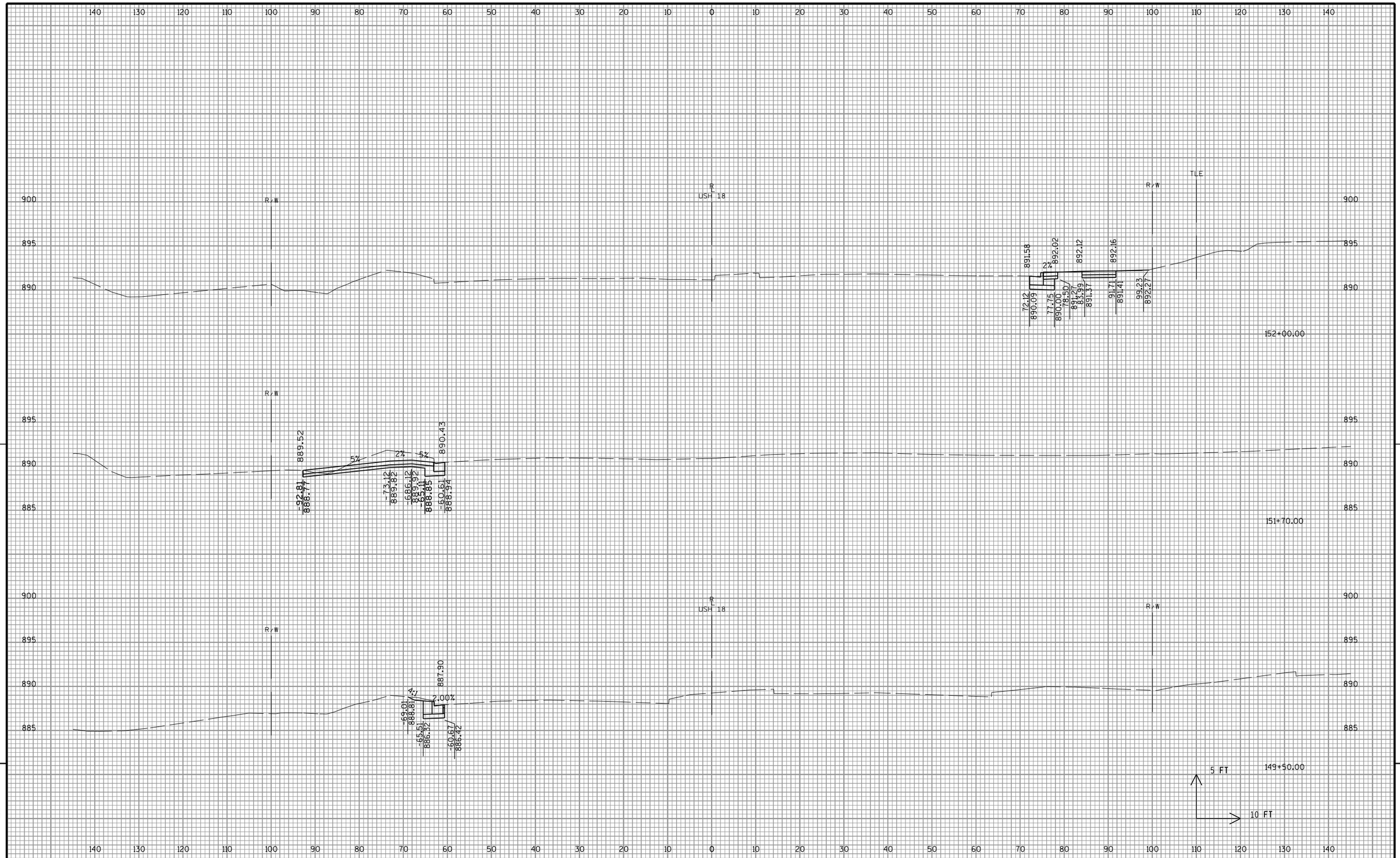
9

9

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CROSS SECTIONS: USH 18 (E. MORELAND BLVD.)	SHEET 729	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\090201_xs_ush18.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

WISDOT/CADDS SHEET 21



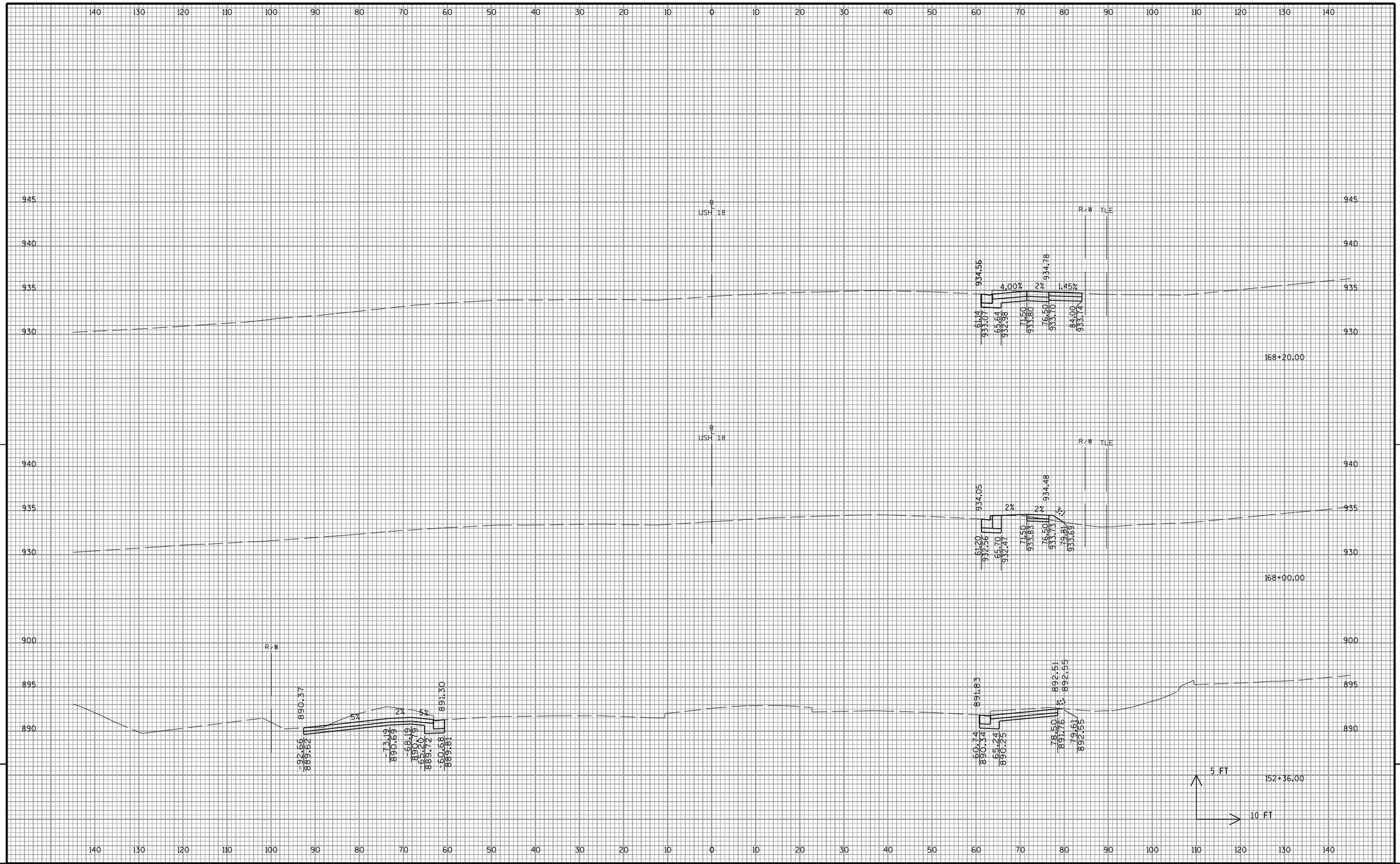
9

9

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CROSS SECTIONS: USH 18 (E. MORELAND BLVD.)	SHEET 730	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\090201_xs_ush18.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

WISDOT/CADDS SHEET 21



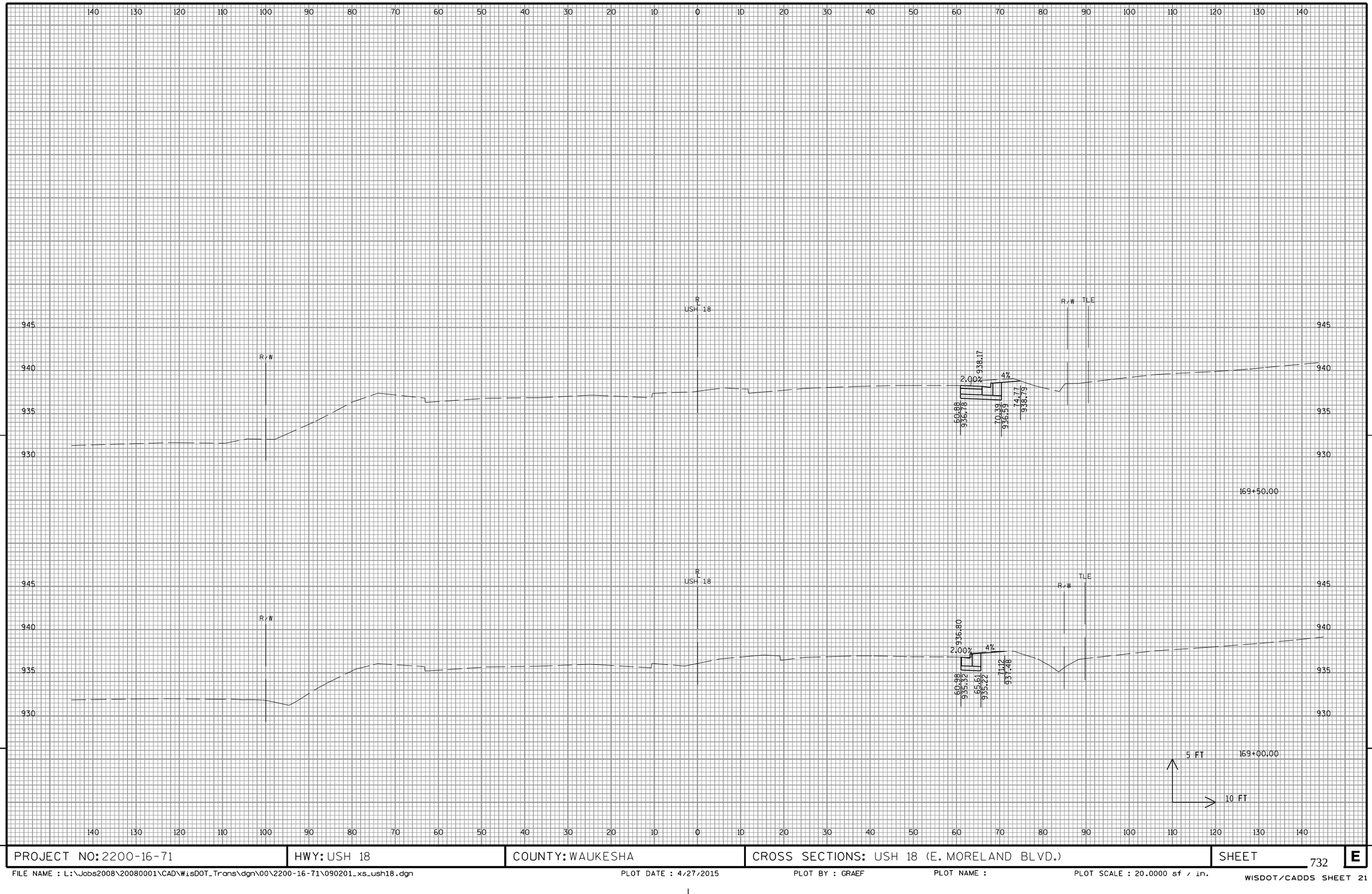
9

9

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CROSS SECTIONS: USH 18 (E. MORELAND BLVD.)	SHEET 731	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\090201_xs_ush18.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

WISDOT/CADDS SHEET 21



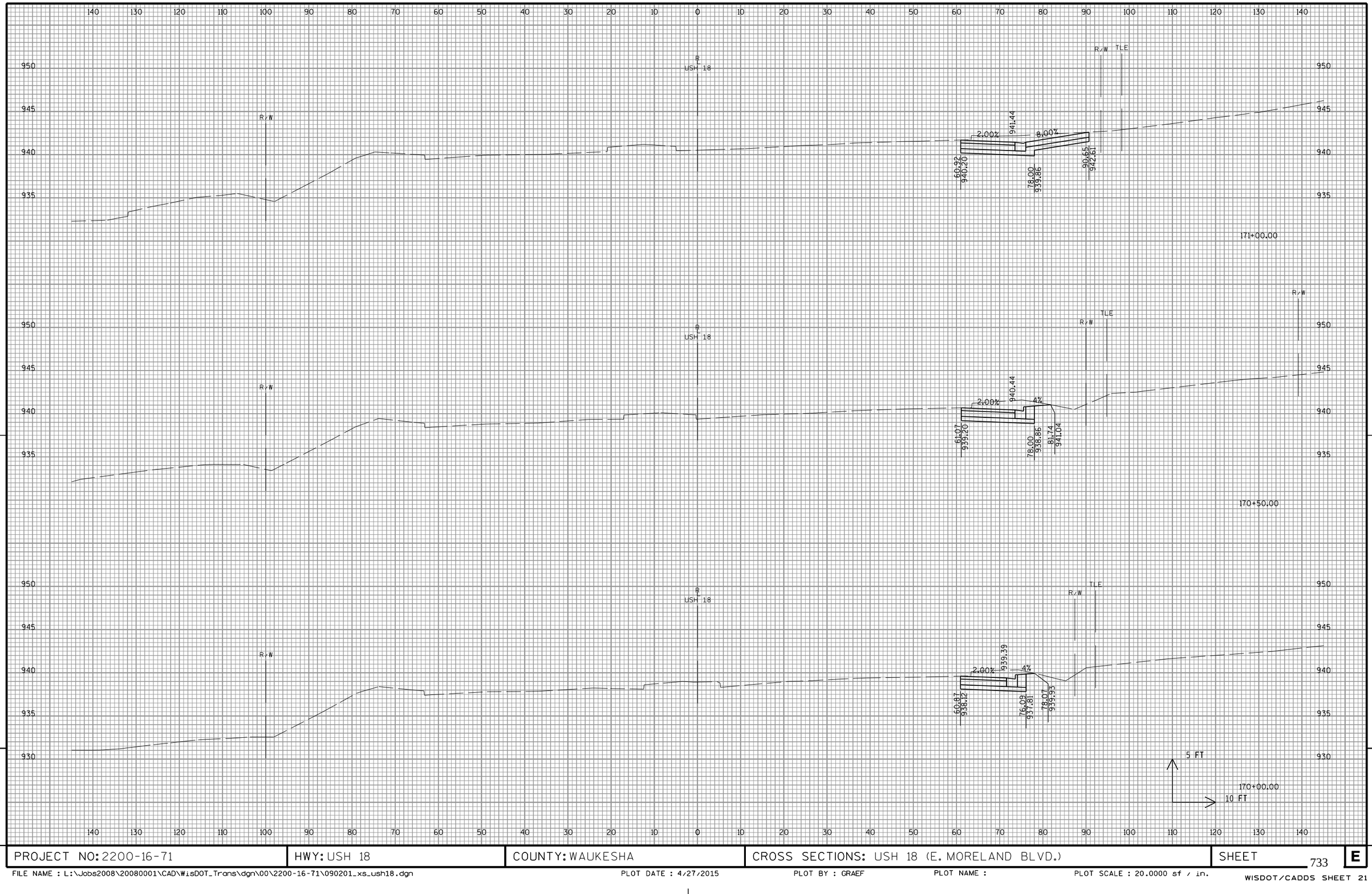
9

9

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CROSS SECTIONS: USH 18 (E. MORELAND BLVD.)	SHEET 732	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\090201_xs_ush18.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

WISDOT/CADDS SHEET 21



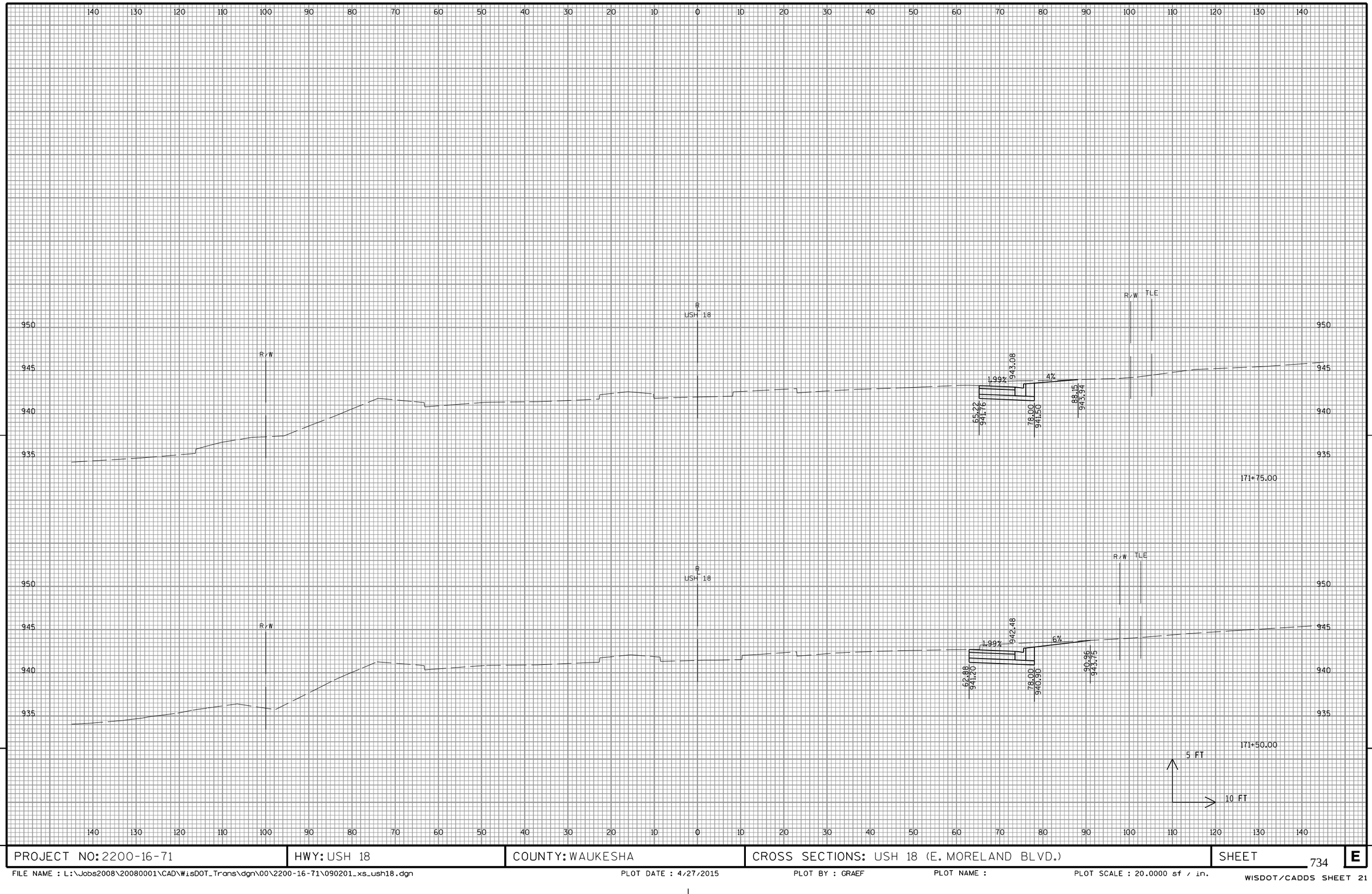
9

9

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CROSS SECTIONS: USH 18 (E. MORELAND BLVD.)	SHEET 733	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\090201_xs_ush18.dgn | PLOT DATE : 4/27/2015 | PLOT BY : GRAEF | PLOT NAME : | PLOT SCALE : 20.0000 sf / in.

WISDOT/CADDS SHEET 21



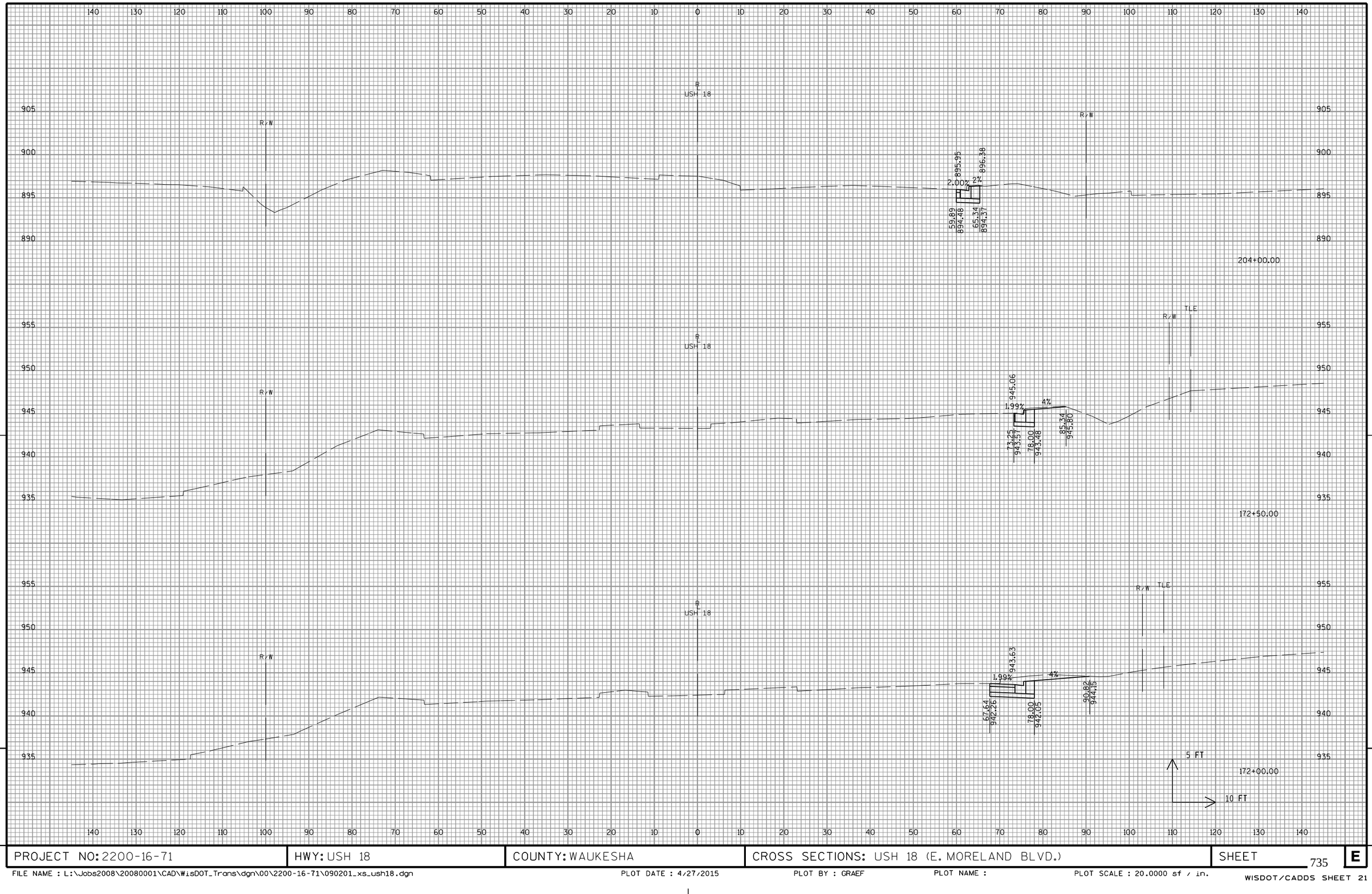
9

9

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CROSS SECTIONS: USH 18 (E. MORELAND BLVD.)	SHEET 734	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\090201_xs_ush18.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

WISDOT/CADDS SHEET 21

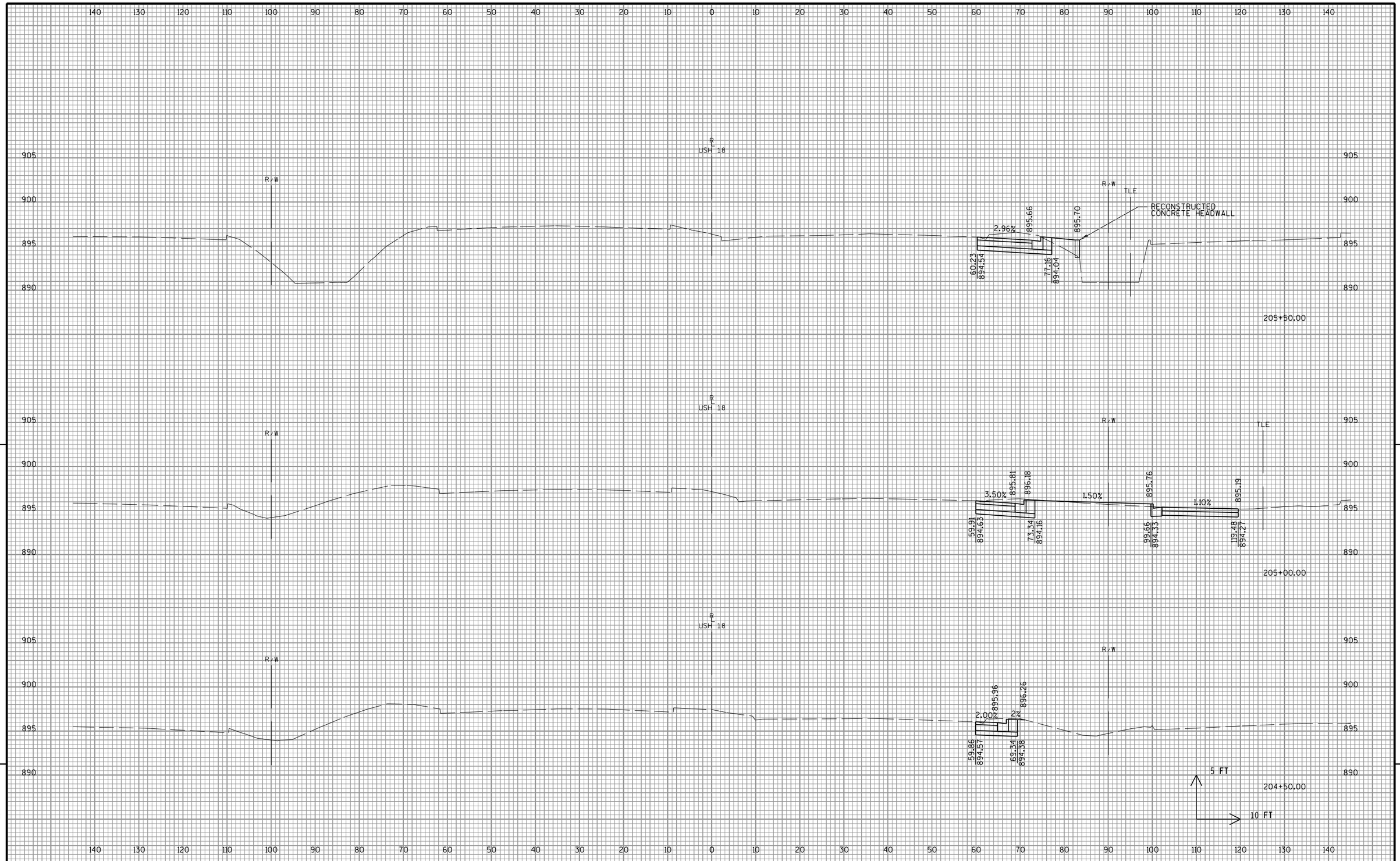


9

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CROSS SECTIONS: USH 18 (E. MORELAND BLVD.)	SHEET 735	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\090201_xs_ush18.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

WISDOT/CADDS SHEET 21



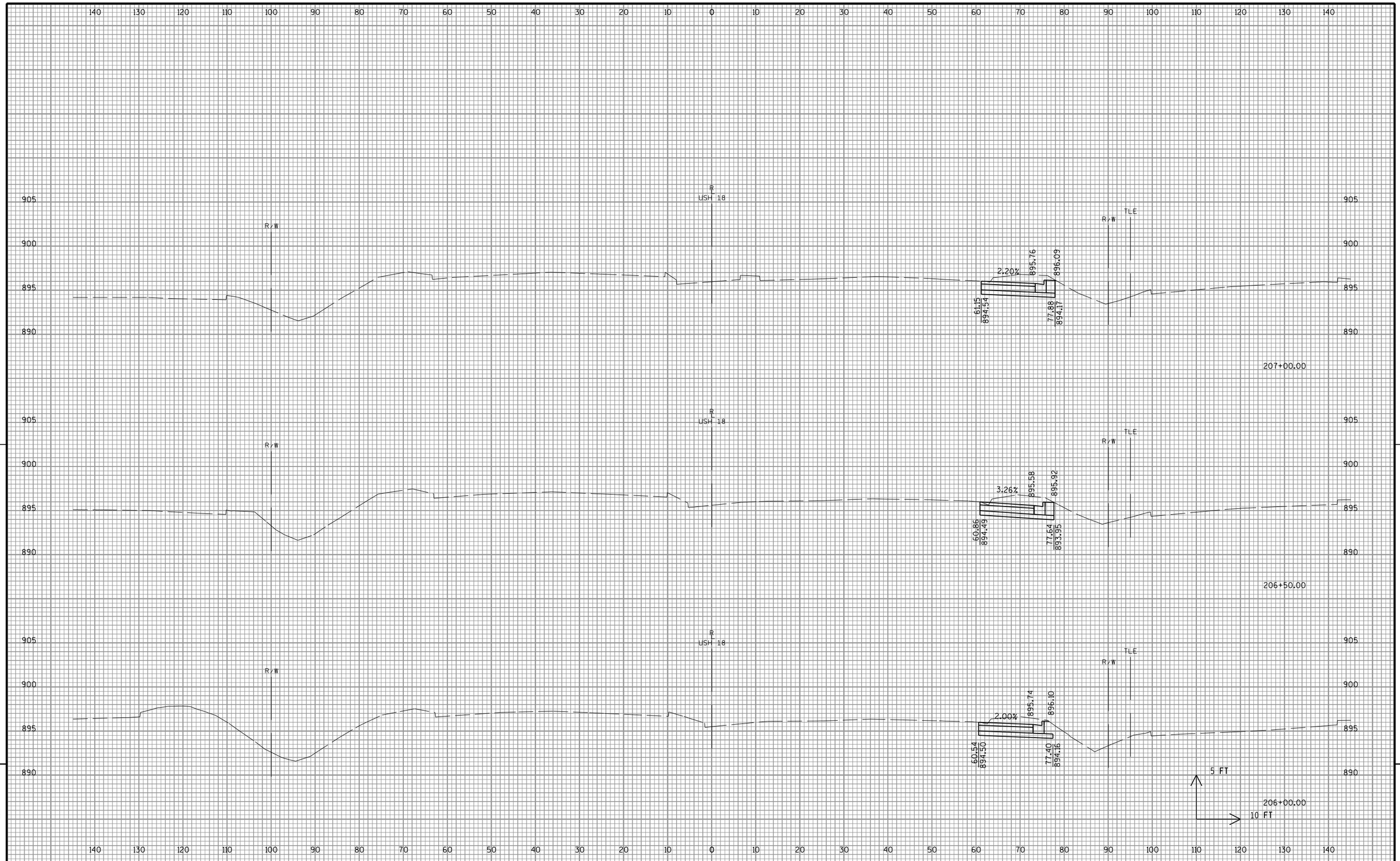
9

9

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CROSS SECTIONS: USH 18 (E. MORELAND BLVD.)	SHEET 736	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\090201_xs_ush18.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

WISDOT/CADDS SHEET 21



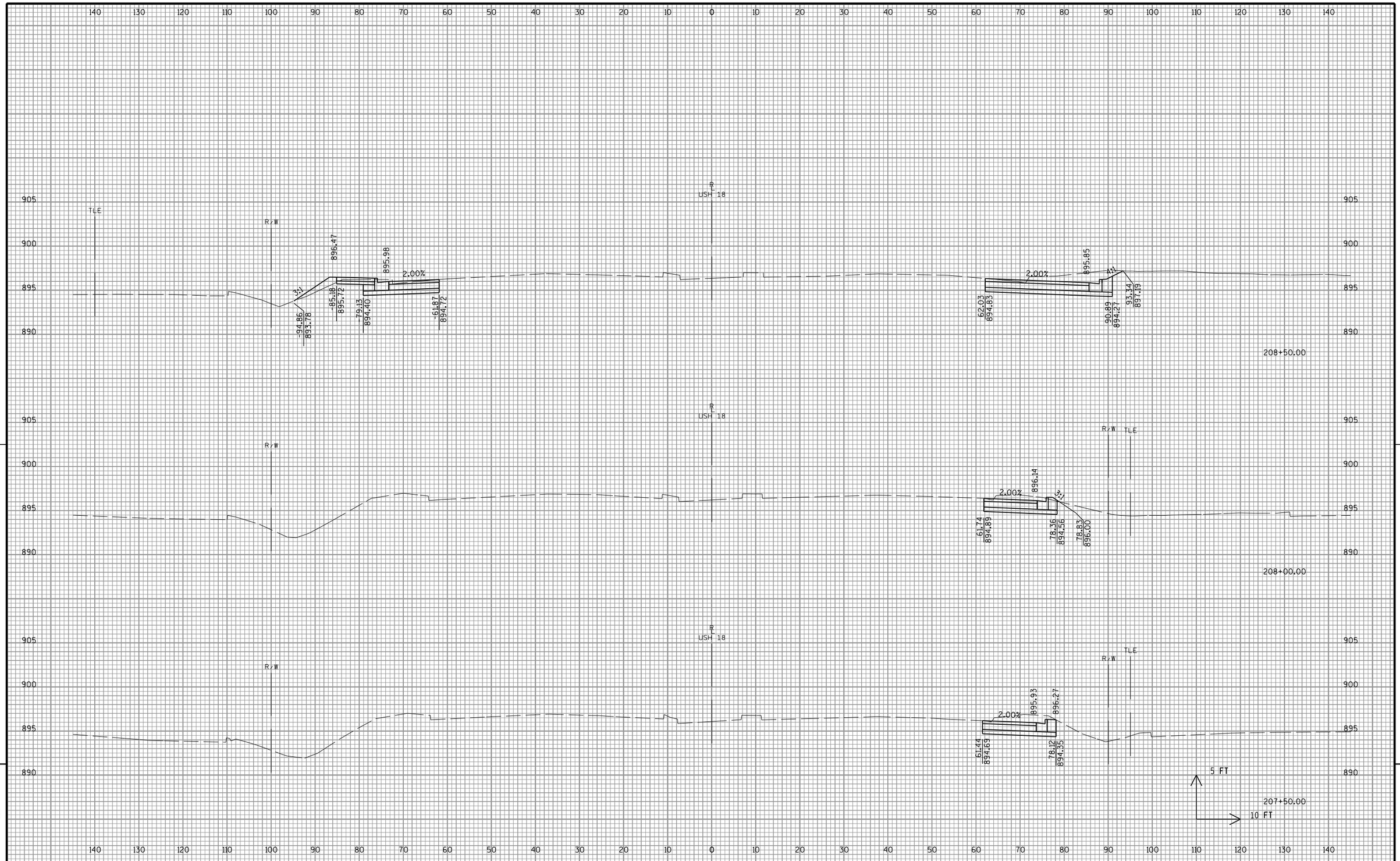
9

9

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CROSS SECTIONS: USH 18 (E. MORELAND BLVD.)	SHEET 737	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\090201_xs_ush18.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

WISDOT/CADDS SHEET 21

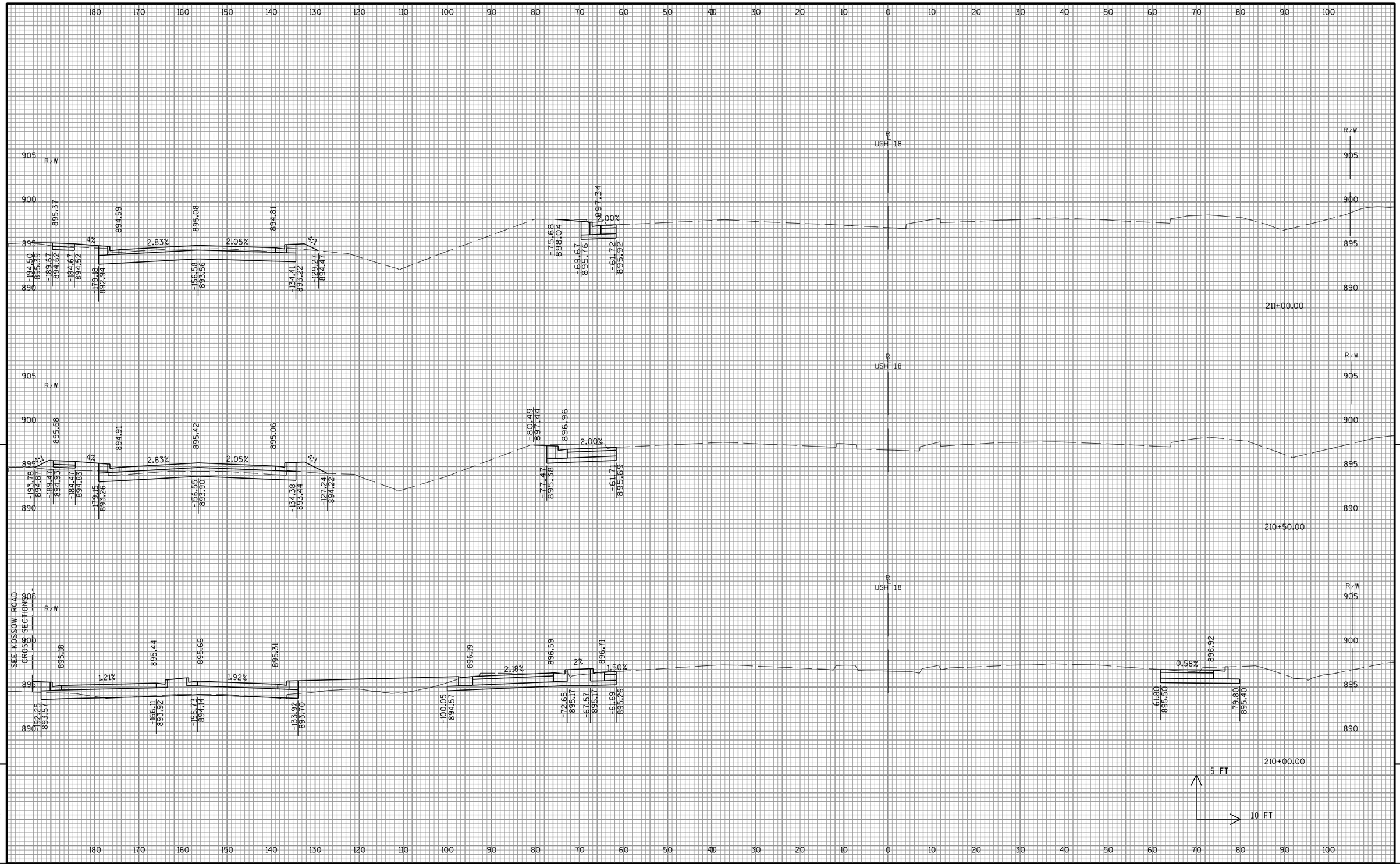


9

9

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CROSS SECTIONS: USH 18 (E. MORELAND BLVD.)	SHEET 738	E

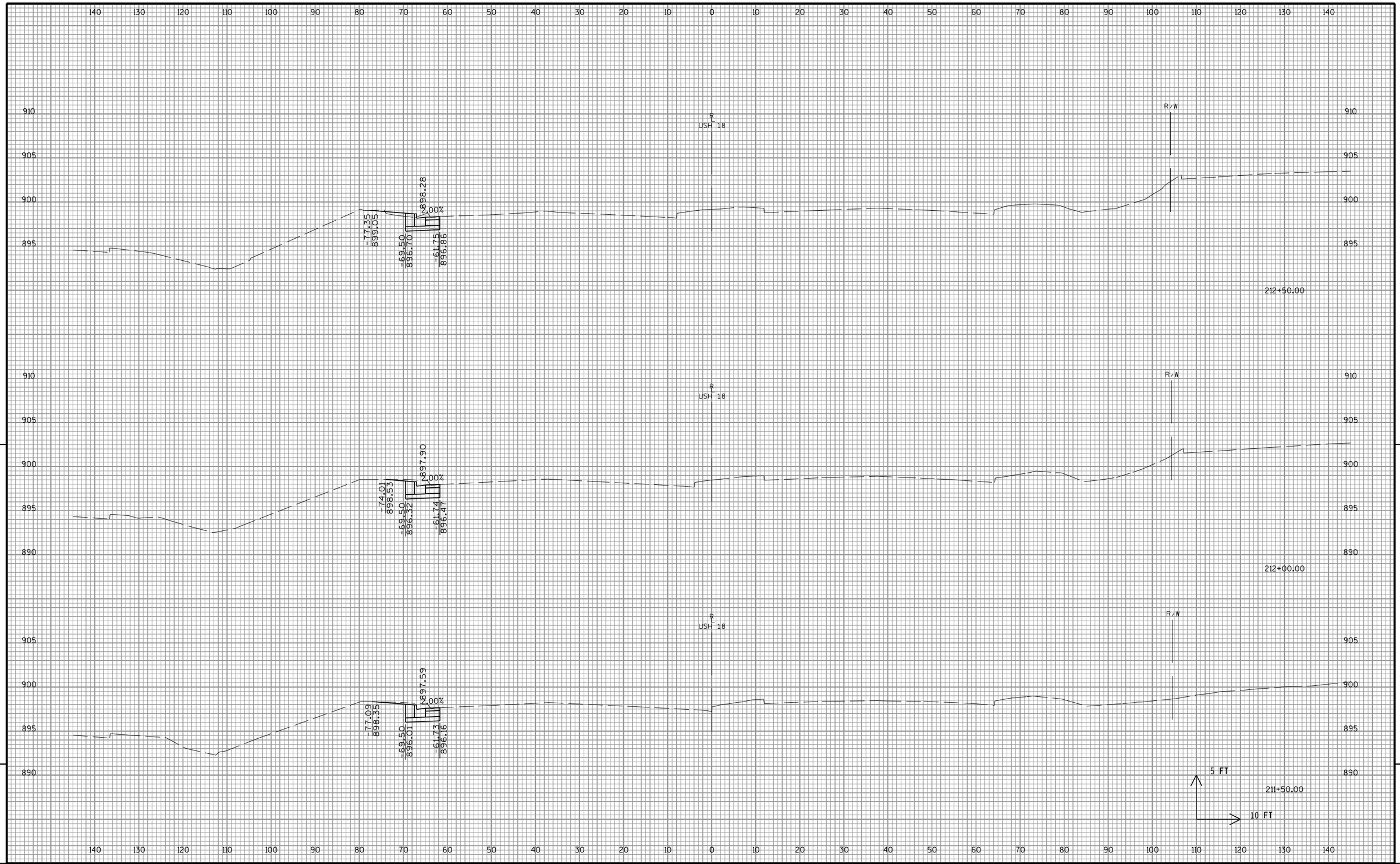
FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\090201_xs_ush18.dgn
PLOT DATE : 4/27/2015
PLOT BY : GRAEF
PLOT NAME :
PLOT SCALE : 20.0000 sf / in.
WISDOT/CADDS SHEET 21



PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CROSS SECTIONS: USH 18 (E. MORELAND BLVD.)	SHEET 739	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\090201_xs_ush18.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

WISDOT/CADDS SHEET 21



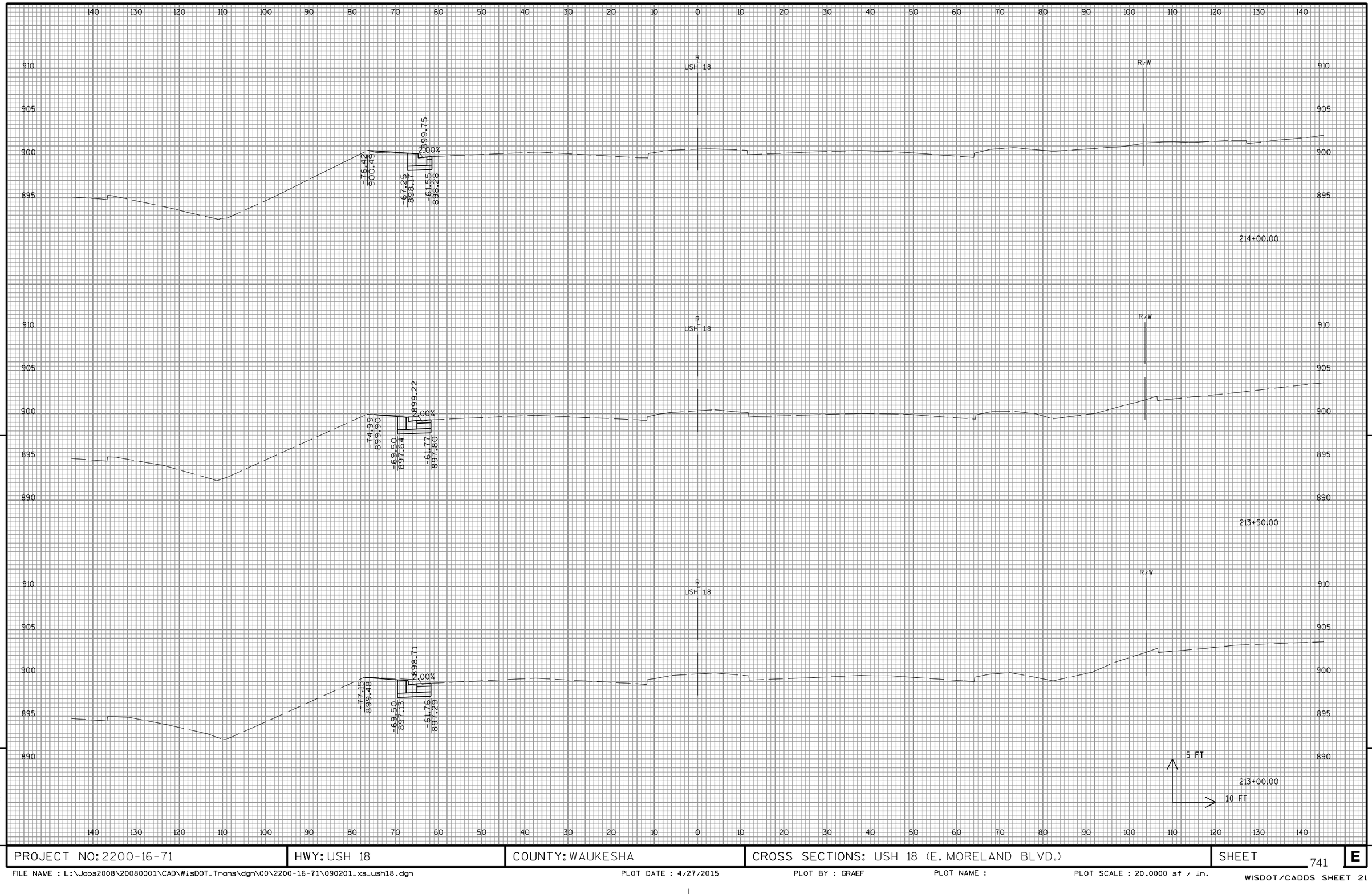
9

9

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CROSS SECTIONS: USH 18 (E. MORELAND BLVD.)	SHEET 740	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\090201_xs_ush18.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

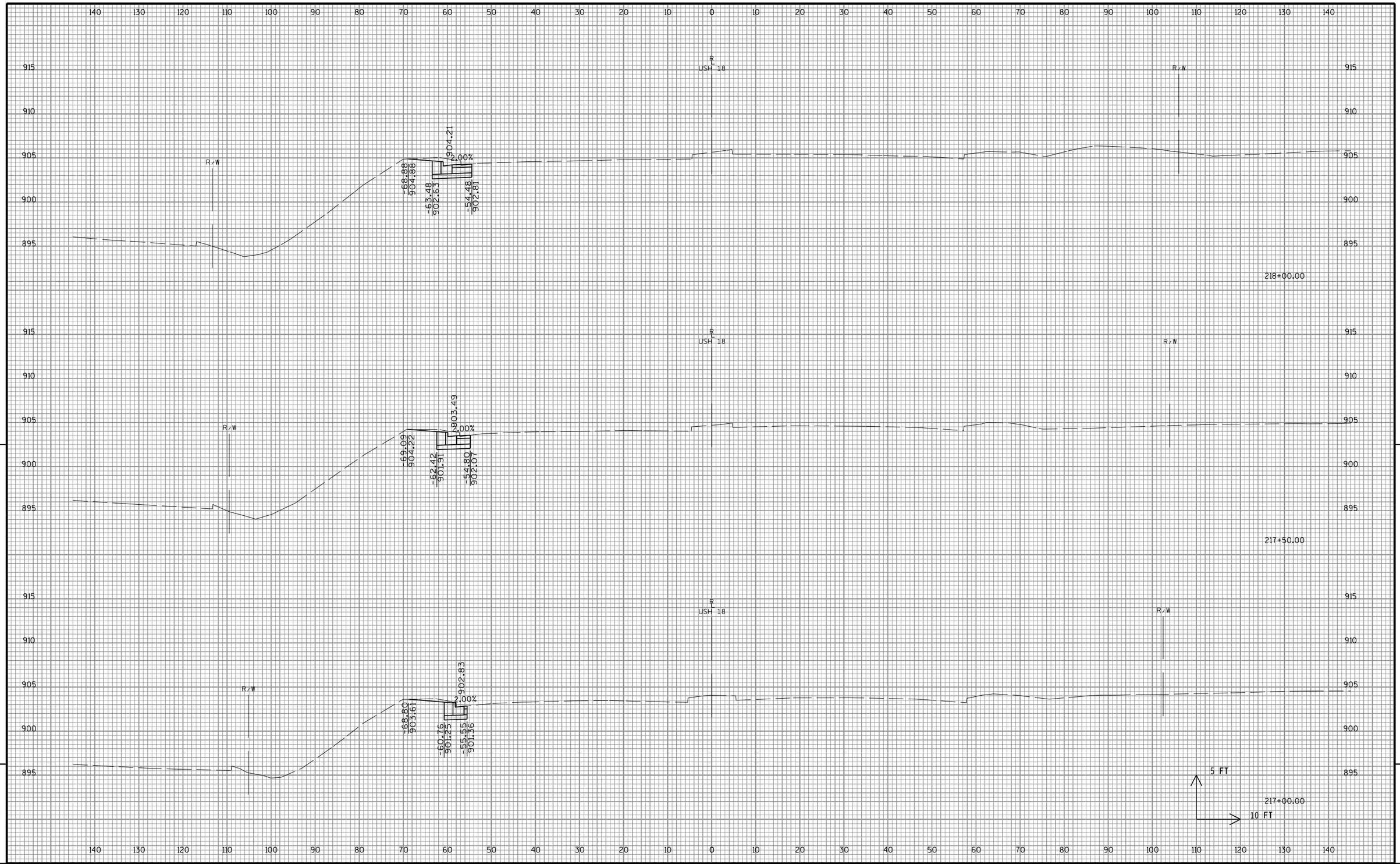
WISDOT/CADDS SHEET 21



PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CROSS SECTIONS: USH 18 (E. MORELAND BLVD.)	SHEET 741	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\090201_xs_ush18.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

WISDOT/CADDS SHEET 21



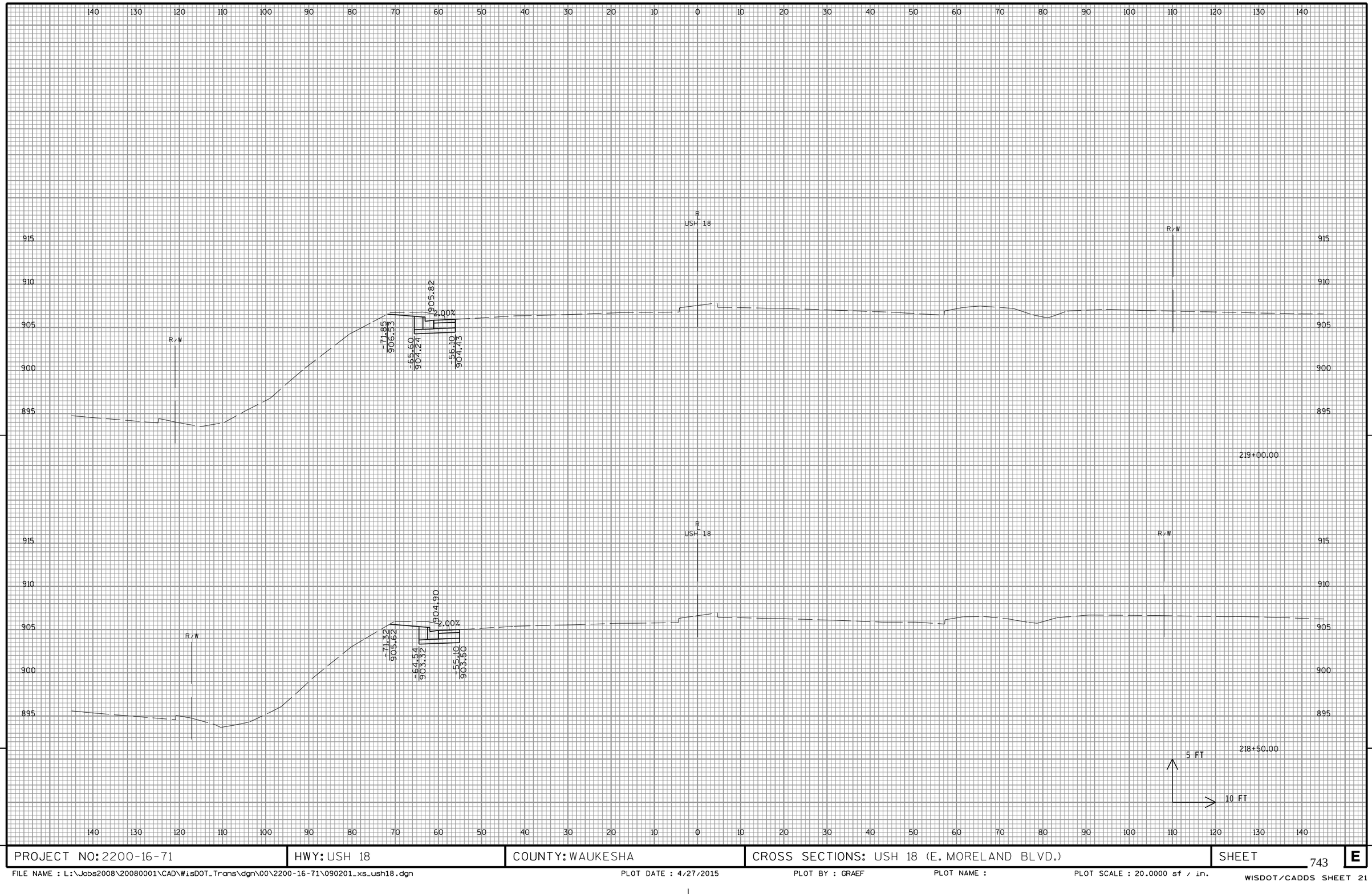
9

9

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CROSS SECTIONS: USH 18 (E. MORELAND BLVD.)	SHEET 742	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\090201_xs_ush18.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

WISDOT/CADDS SHEET 21



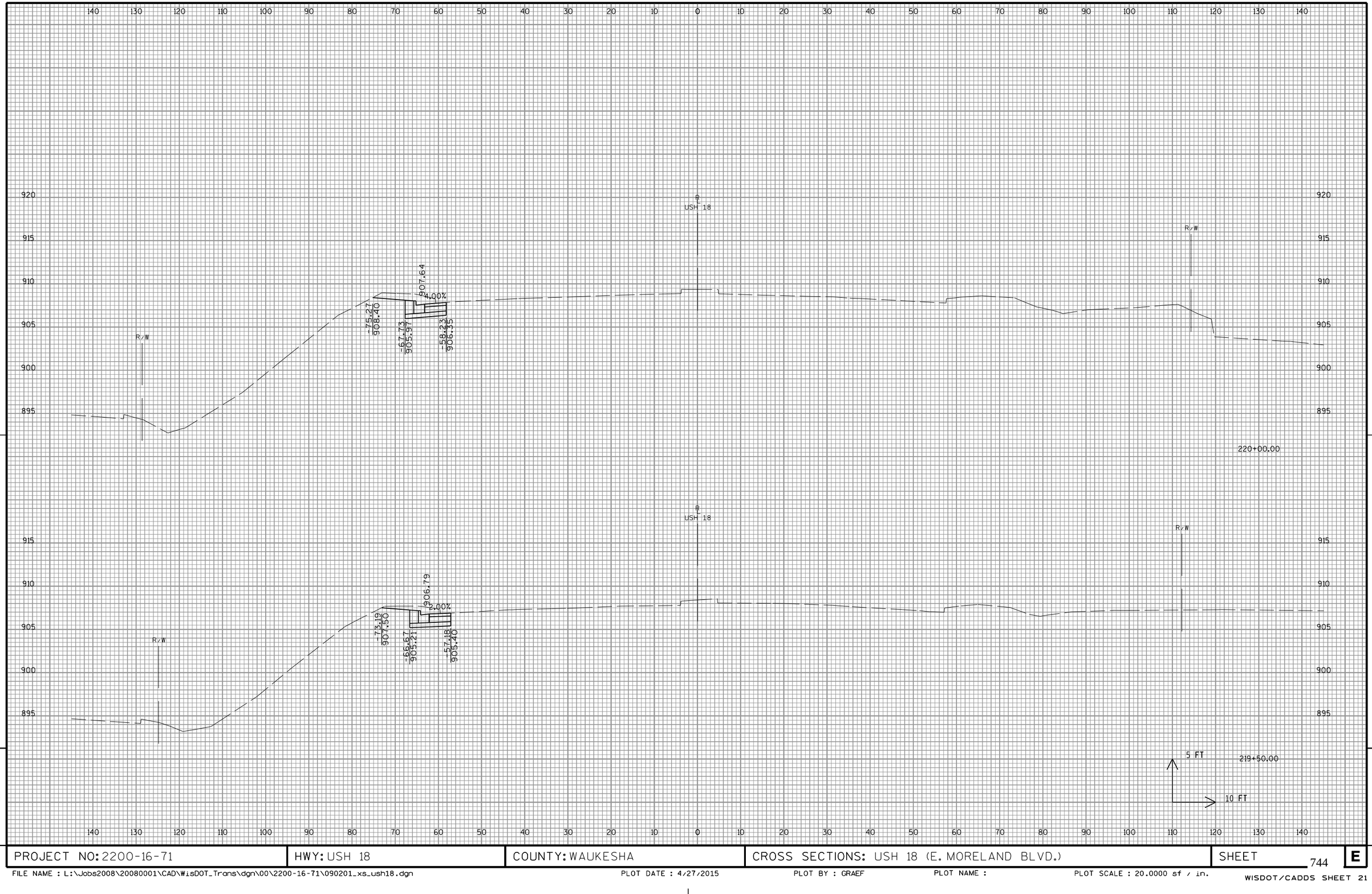
9

9

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CROSS SECTIONS: USH 18 (E. MORELAND BLVD.)	SHEET 743	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\090201_xs_ush18.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

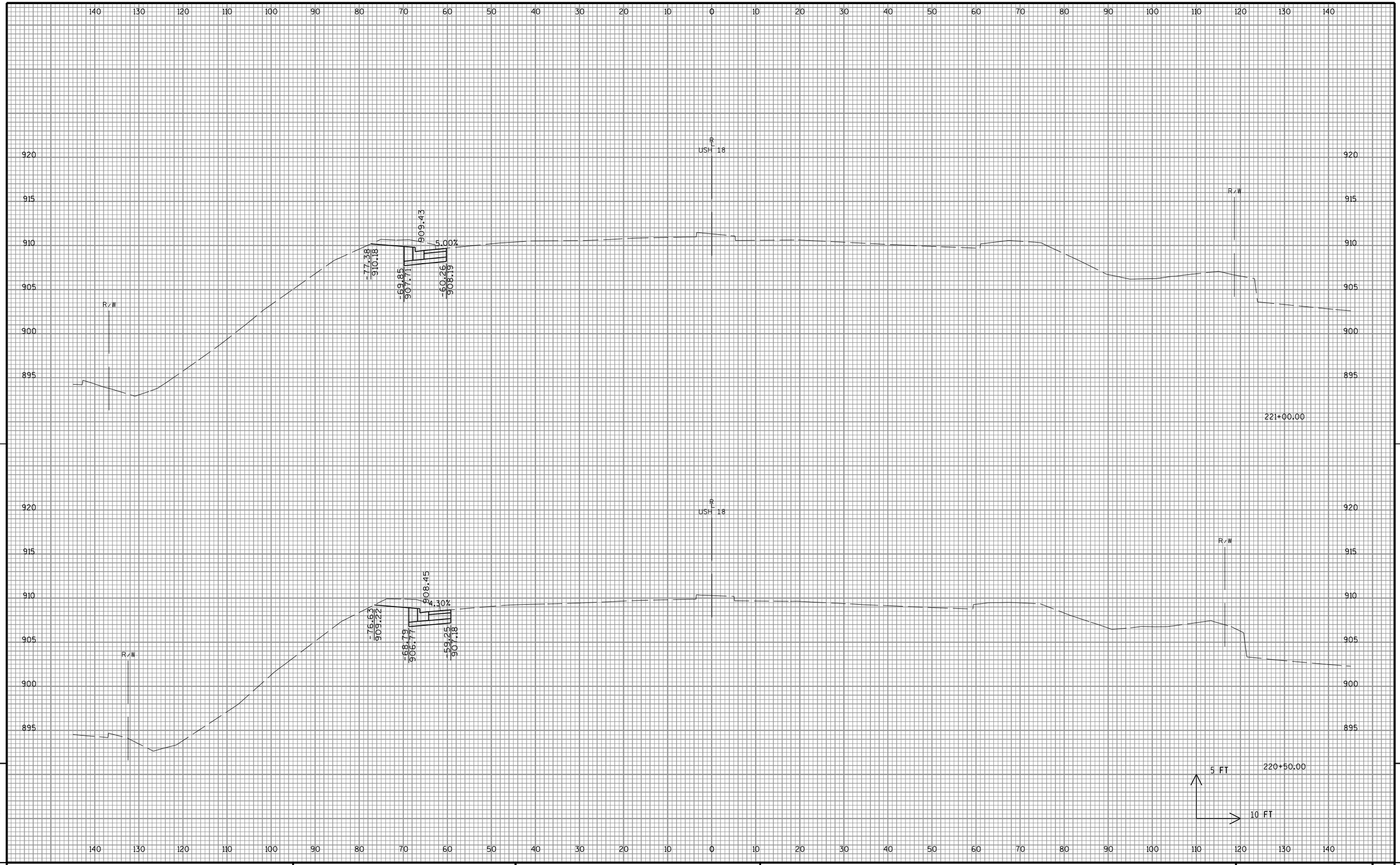
WISDOT/CADDS SHEET 21



PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CROSS SECTIONS: USH 18 (E. MORELAND BLVD.)	SHEET 744	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\090201_xs_ush18.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

WISDOT/CADDS SHEET 21



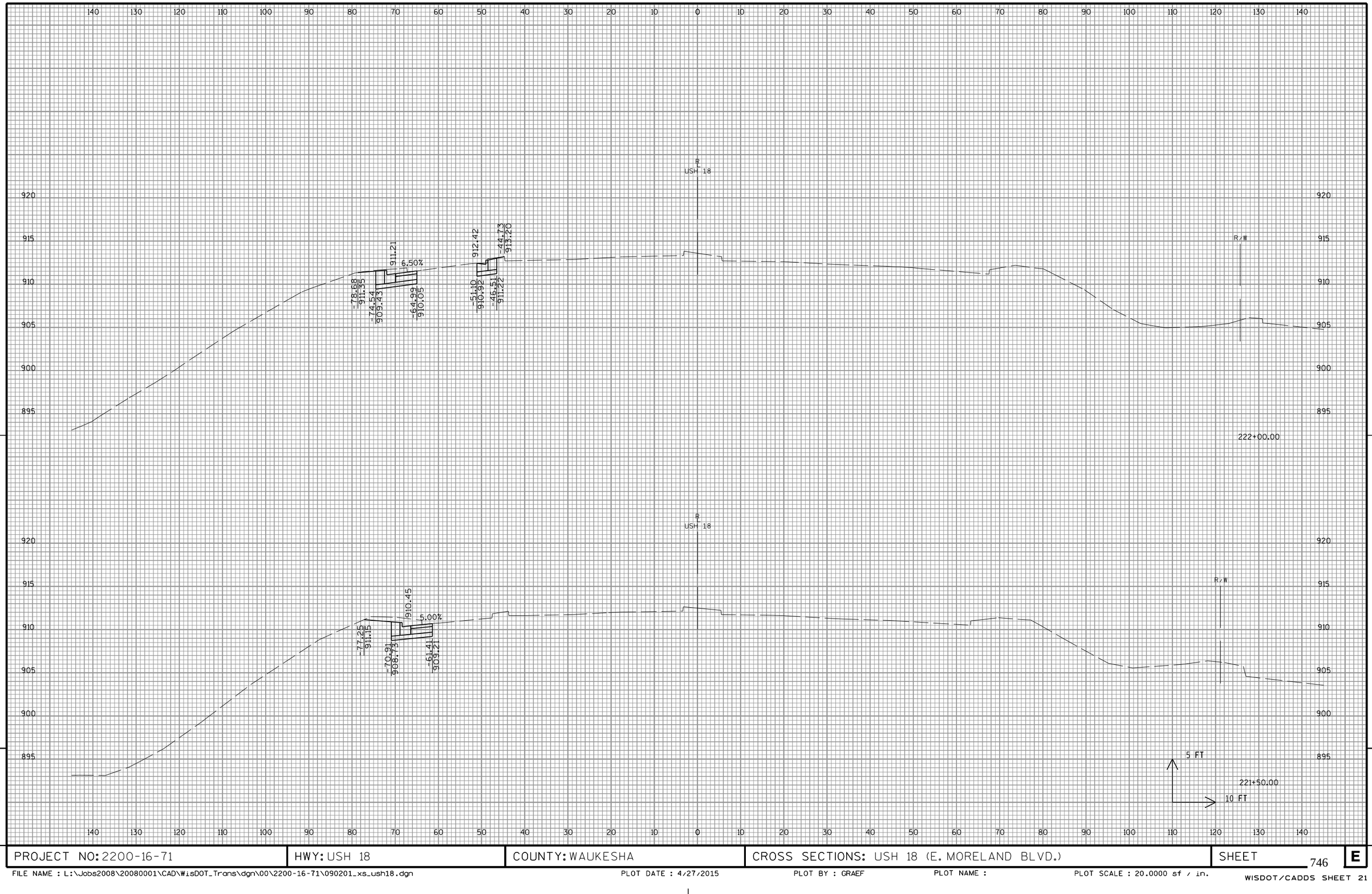
9

9

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CROSS SECTIONS: USH 18 (E. MORELAND BLVD.)	SHEET 745	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\090201_xs_ush18.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

WISDOT/CADDS SHEET 21



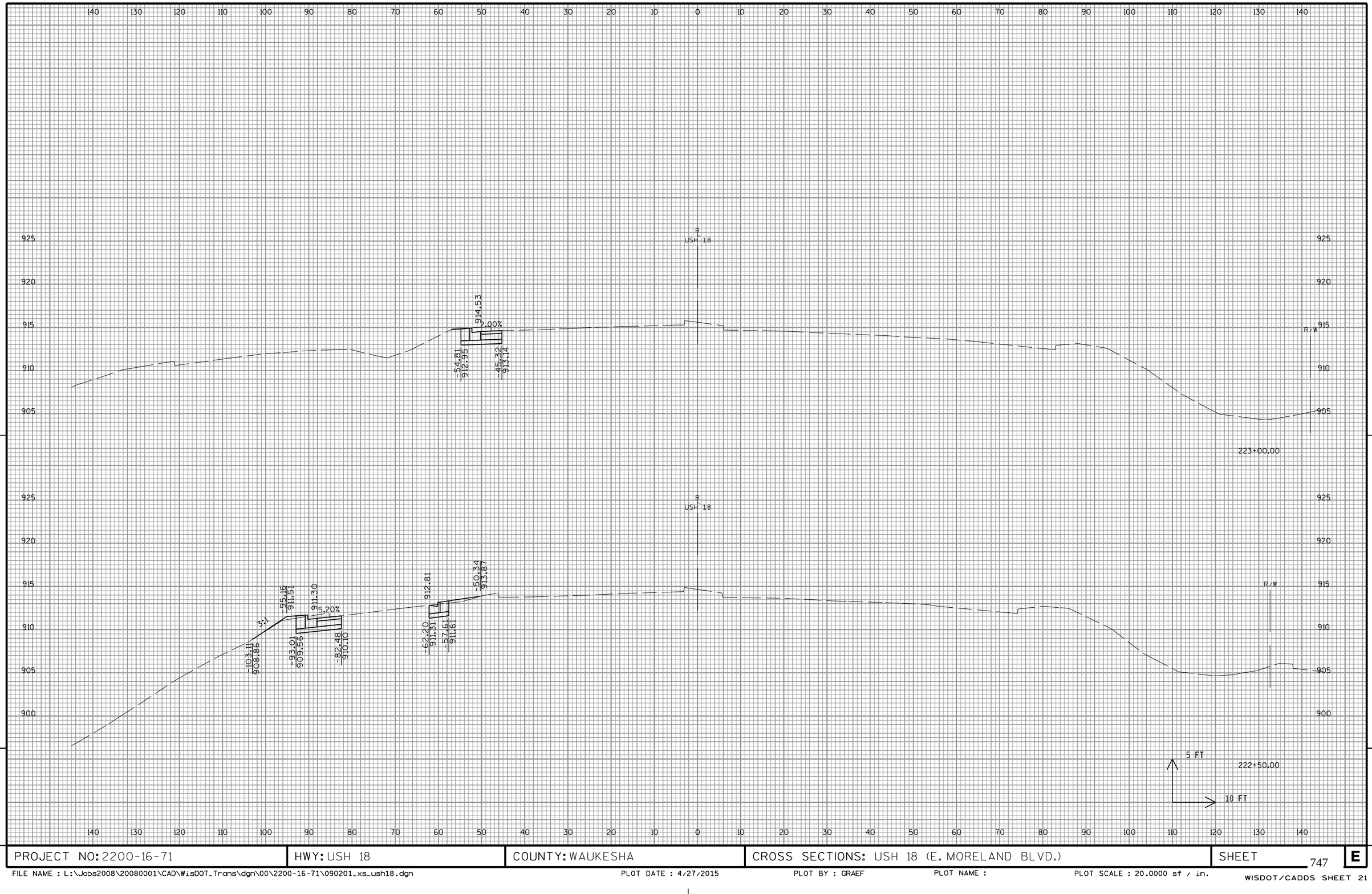
9

9

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CROSS SECTIONS: USH 18 (E. MORELAND BLVD.)	SHEET 746	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\090201_xs_ush18.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

WISDOT/CADDS SHEET 21



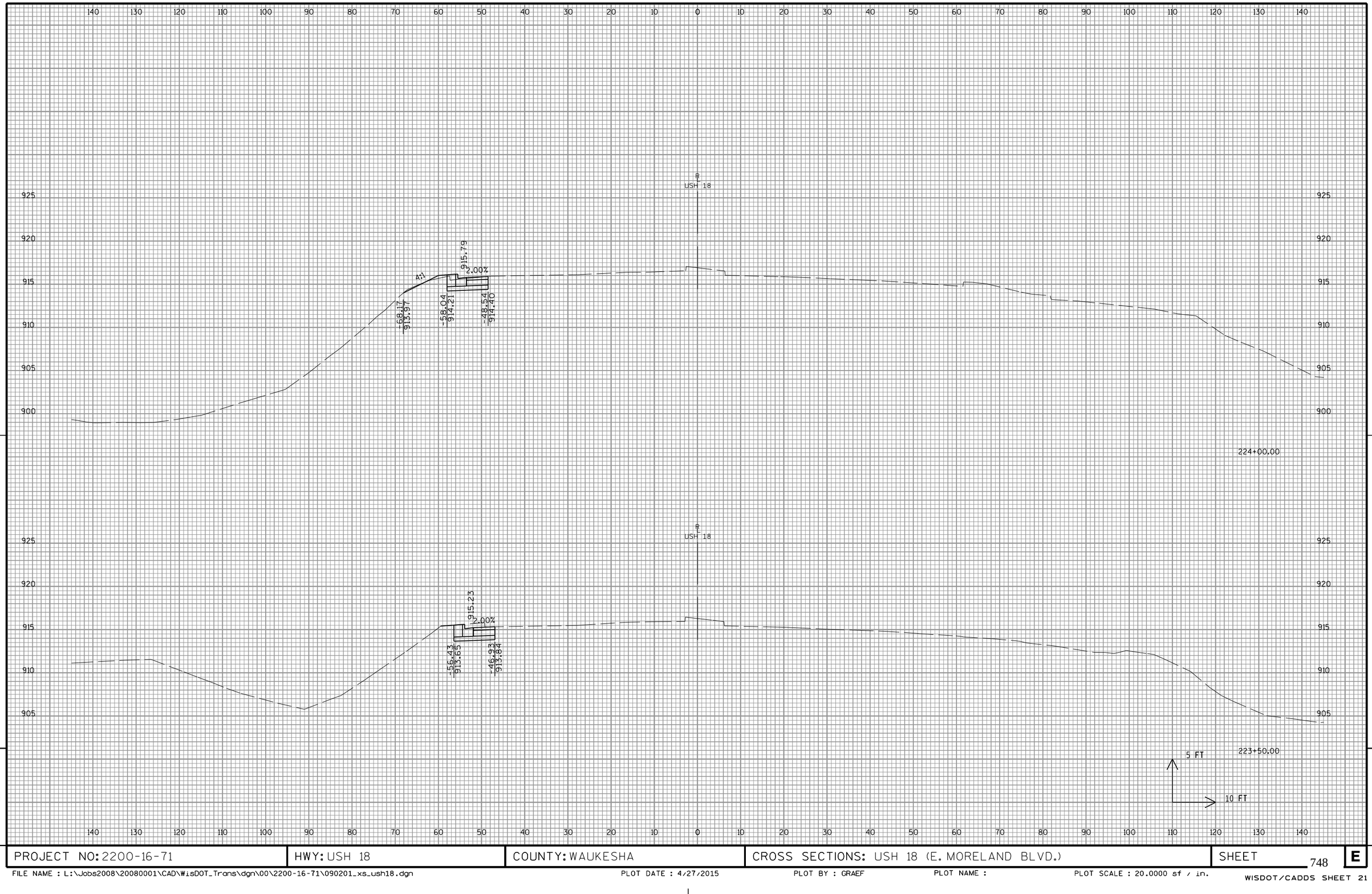
9

9

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CROSS SECTIONS: USH 18 (E. MORELAND BLVD.)	SHEET 747	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\090201_xs_ush18.dgn | PLOT DATE : 4/27/2015 | PLOT BY : GRAEF | PLOT NAME : | PLOT SCALE : 20.0000 sf / in.

WISDOT/CADDS SHEET 21



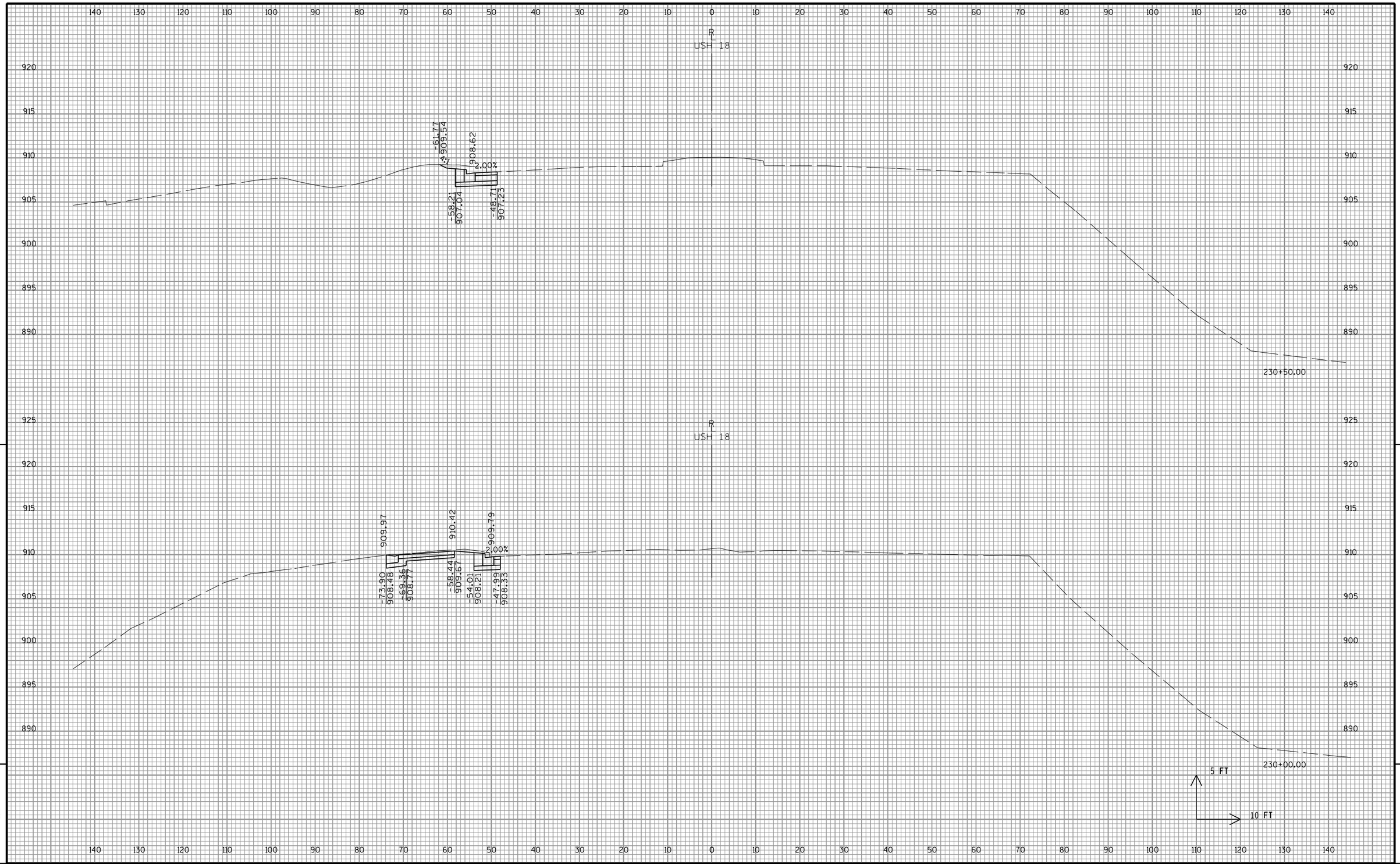
9

9

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CROSS SECTIONS: USH 18 (E. MORELAND BLVD.)	SHEET 748	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\090201_xs_ush18.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

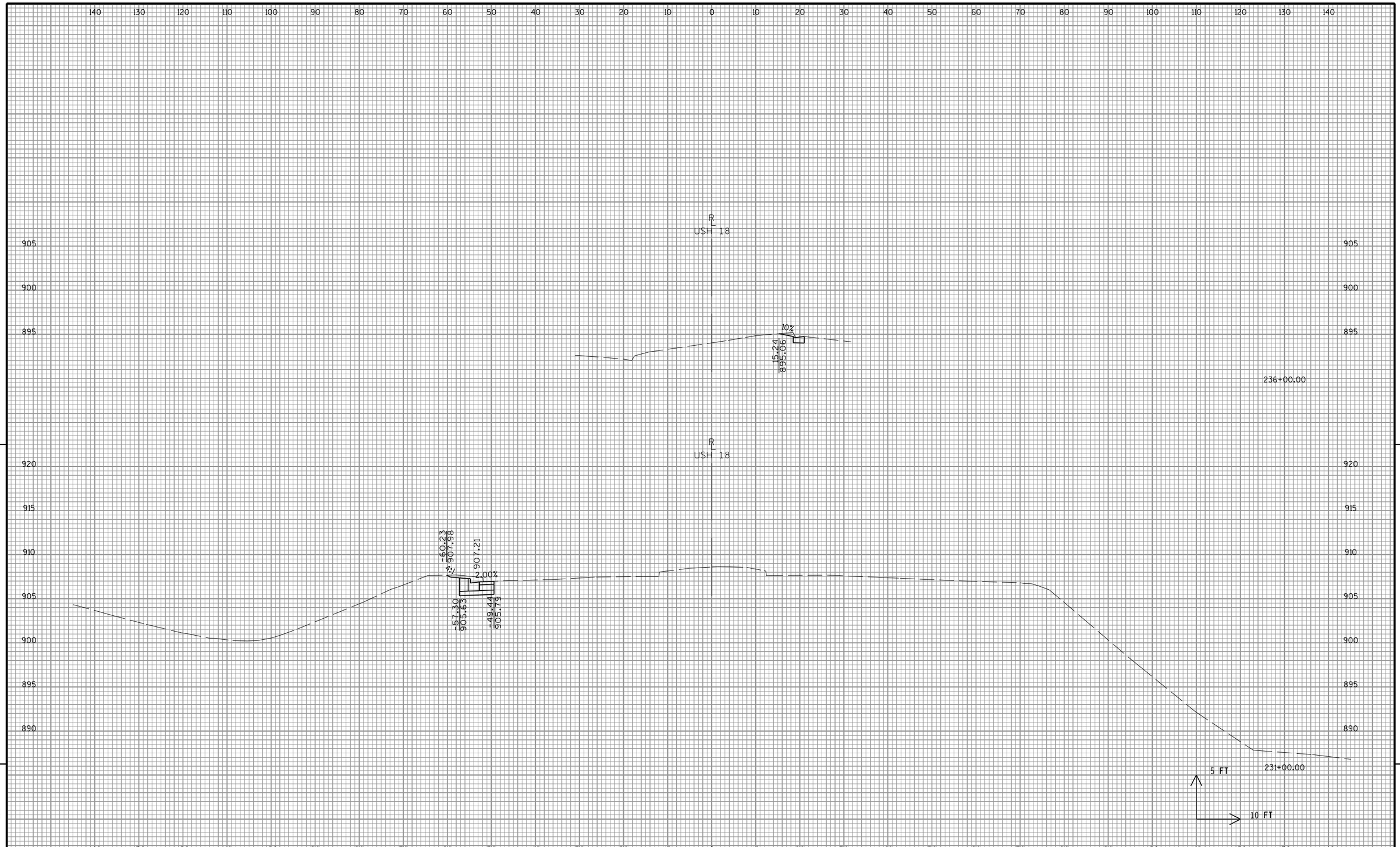
WISDOT/CADDS SHEET 21



PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CROSS SECTIONS: USH 18 (E. MORELAND BLVD.)	SHEET 749	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\090201_xs_ush18.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

WISDOT/CADDS SHEET 21



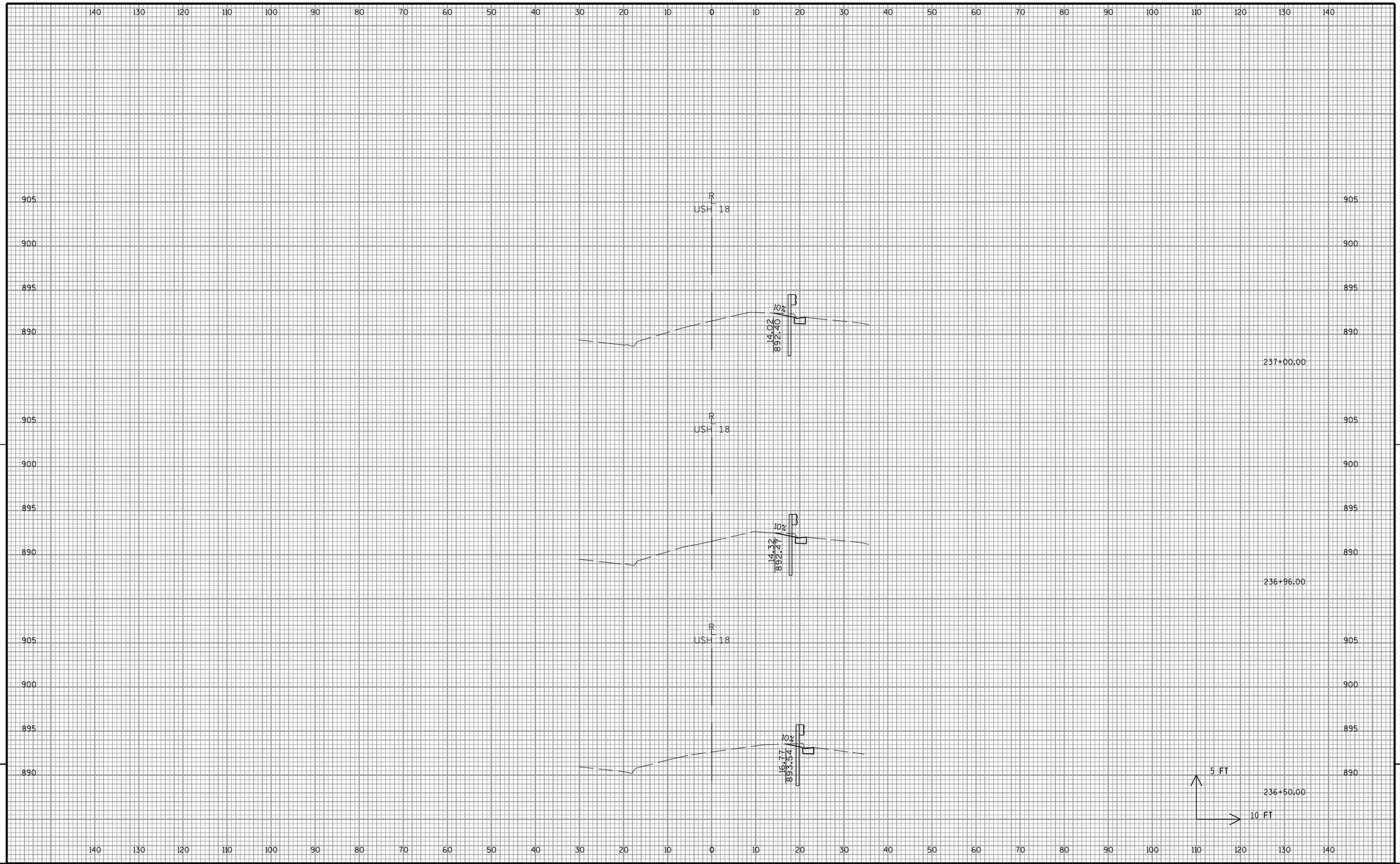
9

9

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CROSS SECTIONS: USH 18 (E. MORELAND BLVD.)	SHEET 750	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\090201_xs_ush18.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

WISDOT/CADDS SHEET 21



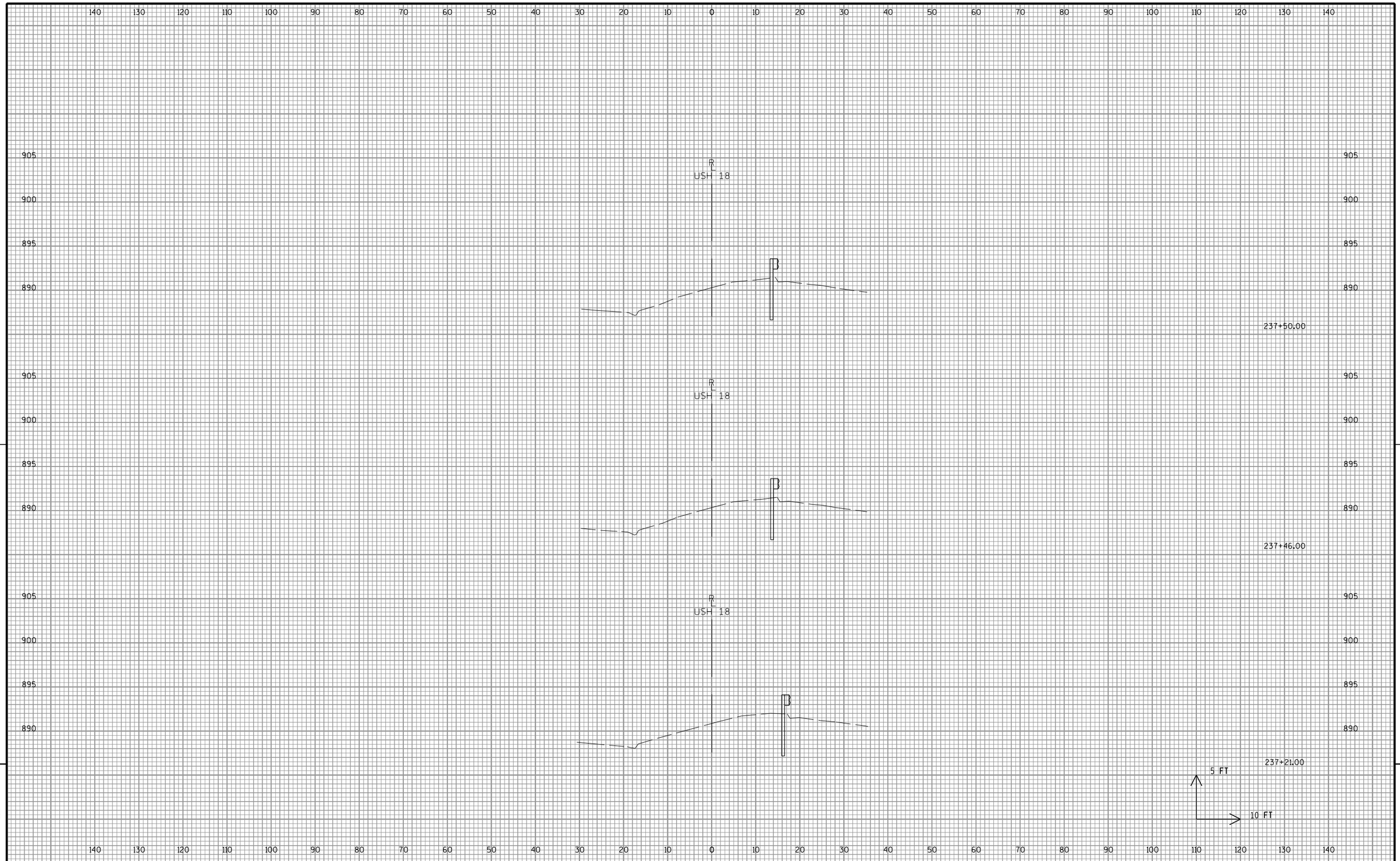
9

9

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CROSS SECTIONS: USH 18 (E. MORELAND BLVD.)	SHEET 751	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\090201_xs_ush18.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

WISDOT/CADDS SHEET 21



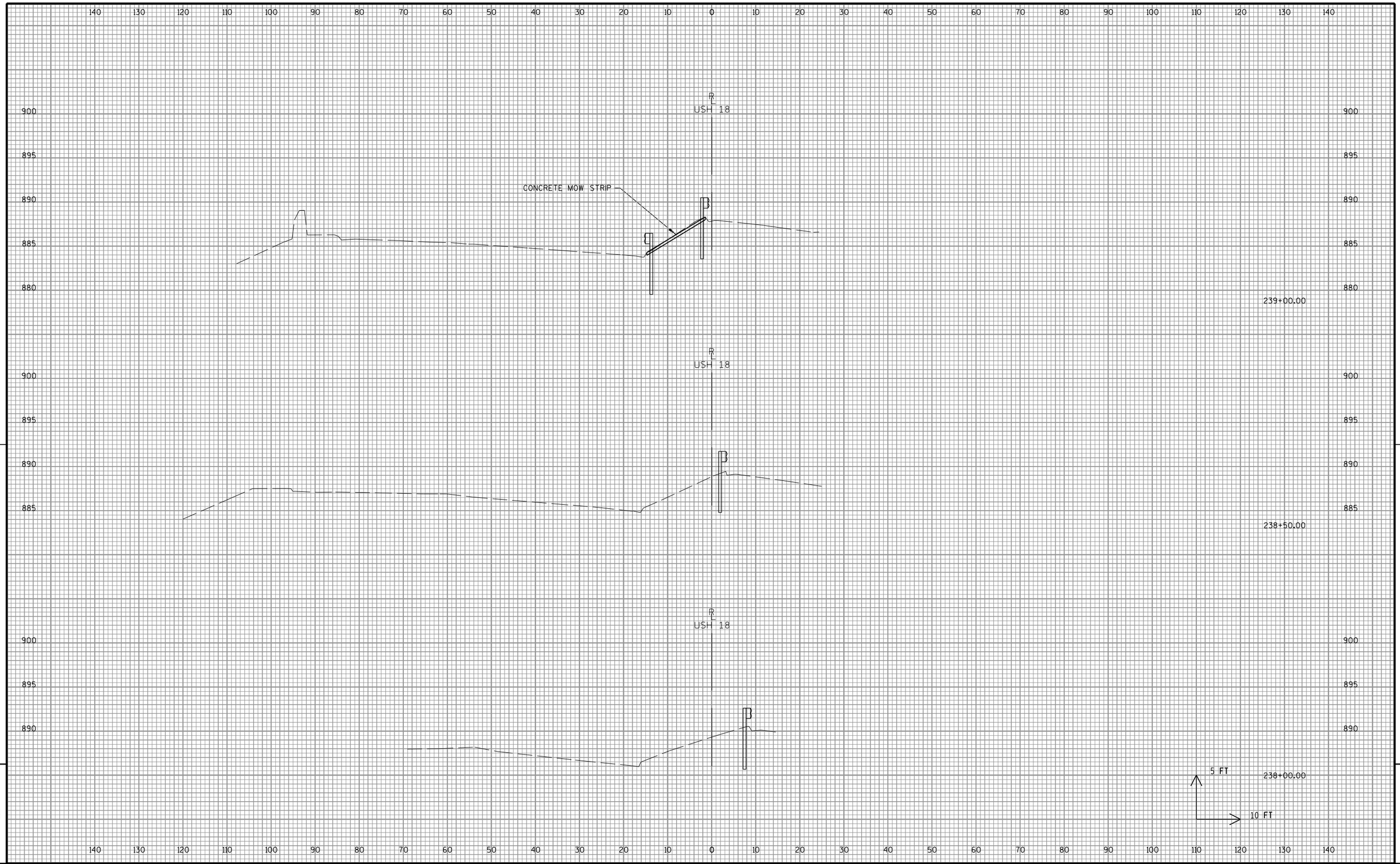
9

9

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CROSS SECTIONS: USH 18 (E. MORELAND BLVD.)	SHEET 752	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\090201_xs_ush18.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

WISDOT/CADDS SHEET 21



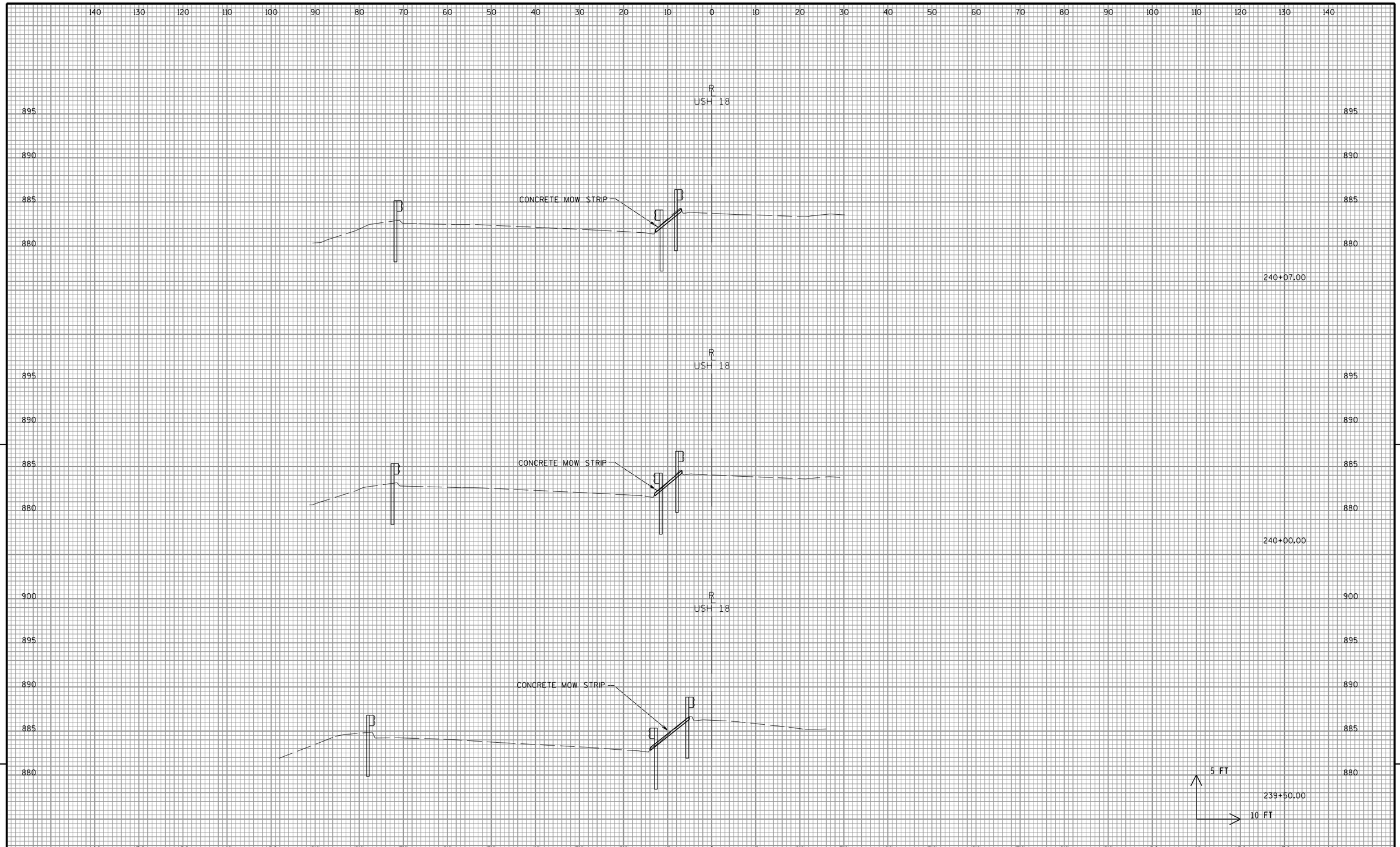
9

9

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CROSS SECTIONS: USH 18 (E. MORELAND BLVD.)	SHEET 753	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\090201_xs_ush18.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

WISDOT/CADDS SHEET 21



PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CROSS SECTIONS: USH 18 (E. MORELAND BLVD.)	SHEET 754 E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\090201_xs_ush18.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

WISDOT/CADDS SHEET 21

9

9

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CROSS SECTIONS: USH 18 (E. MORELAND BLVD.)	SHEET 755	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\090201_xs_ush18.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

WISDOT/CADDS SHEET 21

140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

℄ USH 18

890
885
880
895
890
885
880

241+50.00

℄ USH 18

CONCRETE MOW STRIP

10%

-72.47
880.31

5 FT
10 FT

241+00.00

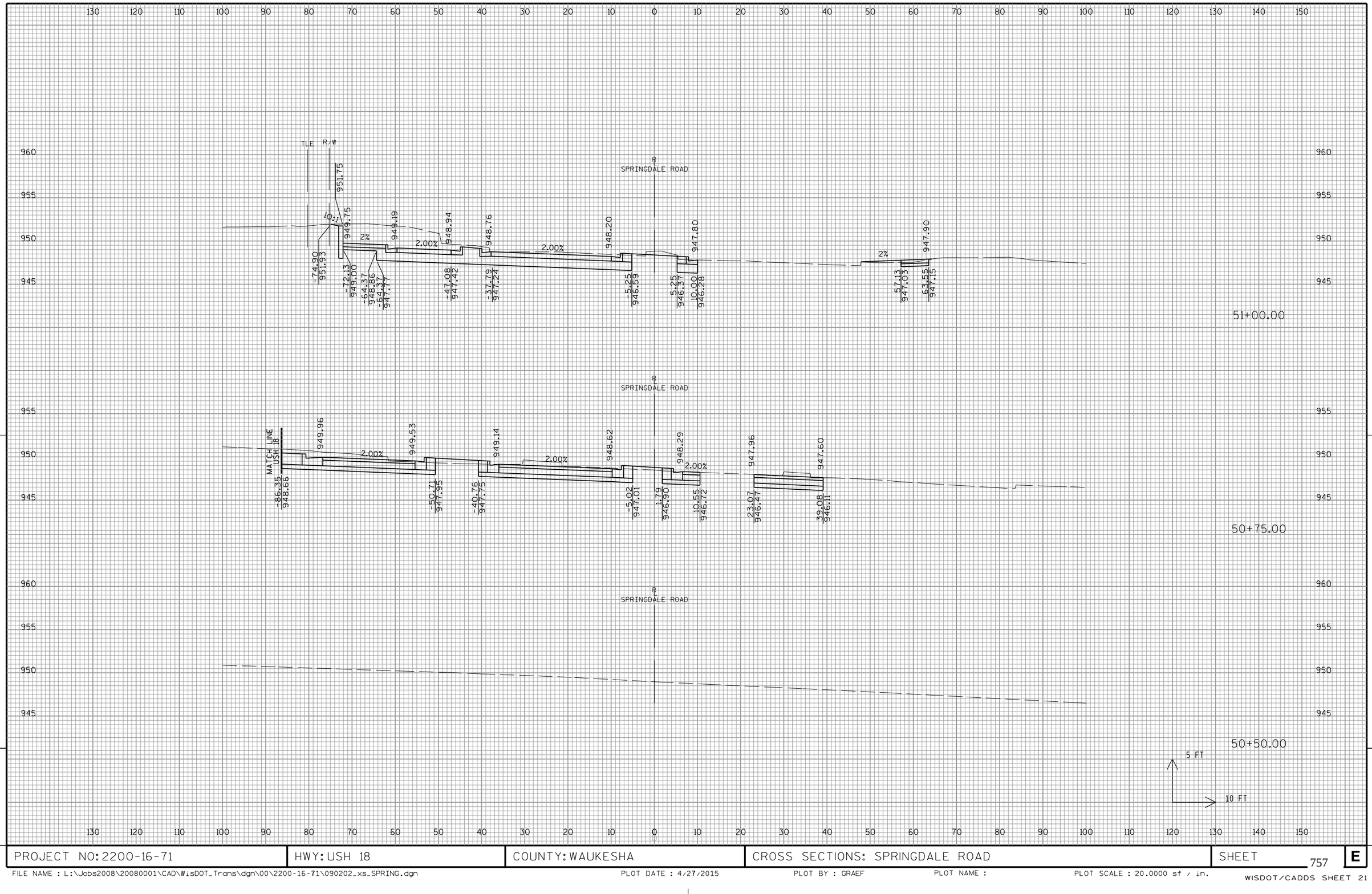
9

9

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CROSS SECTIONS: USH 18 (E. MORELAND BLVD.)	SHEET 756	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\090201_xs_ush18.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

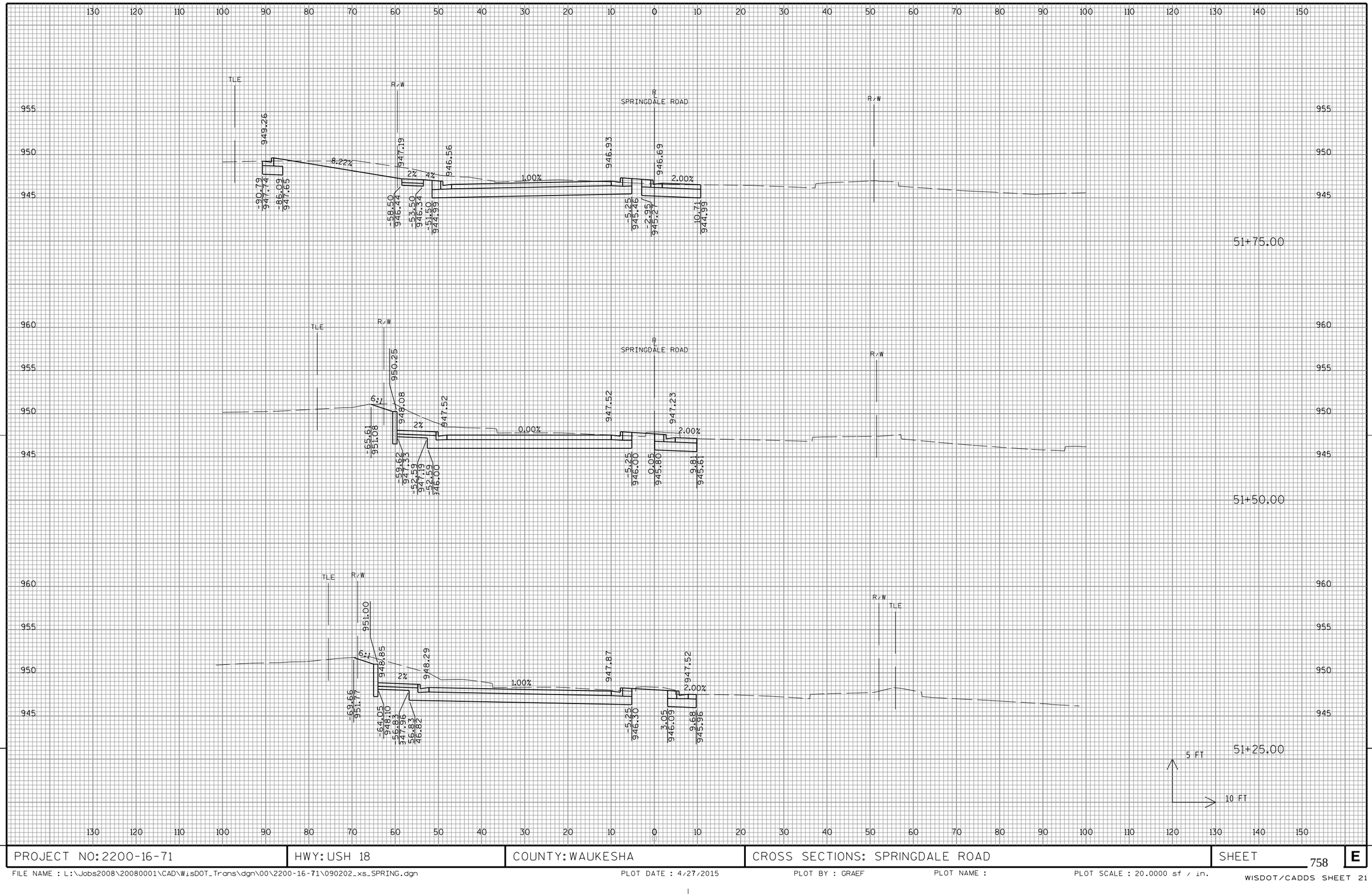
WISDOT/CADDS SHEET 21



PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CROSS SECTIONS: SPRINGDALE ROAD	SHEET 757	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\090202_xs_SPRING.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

WISDOT/CADDS SHEET 21



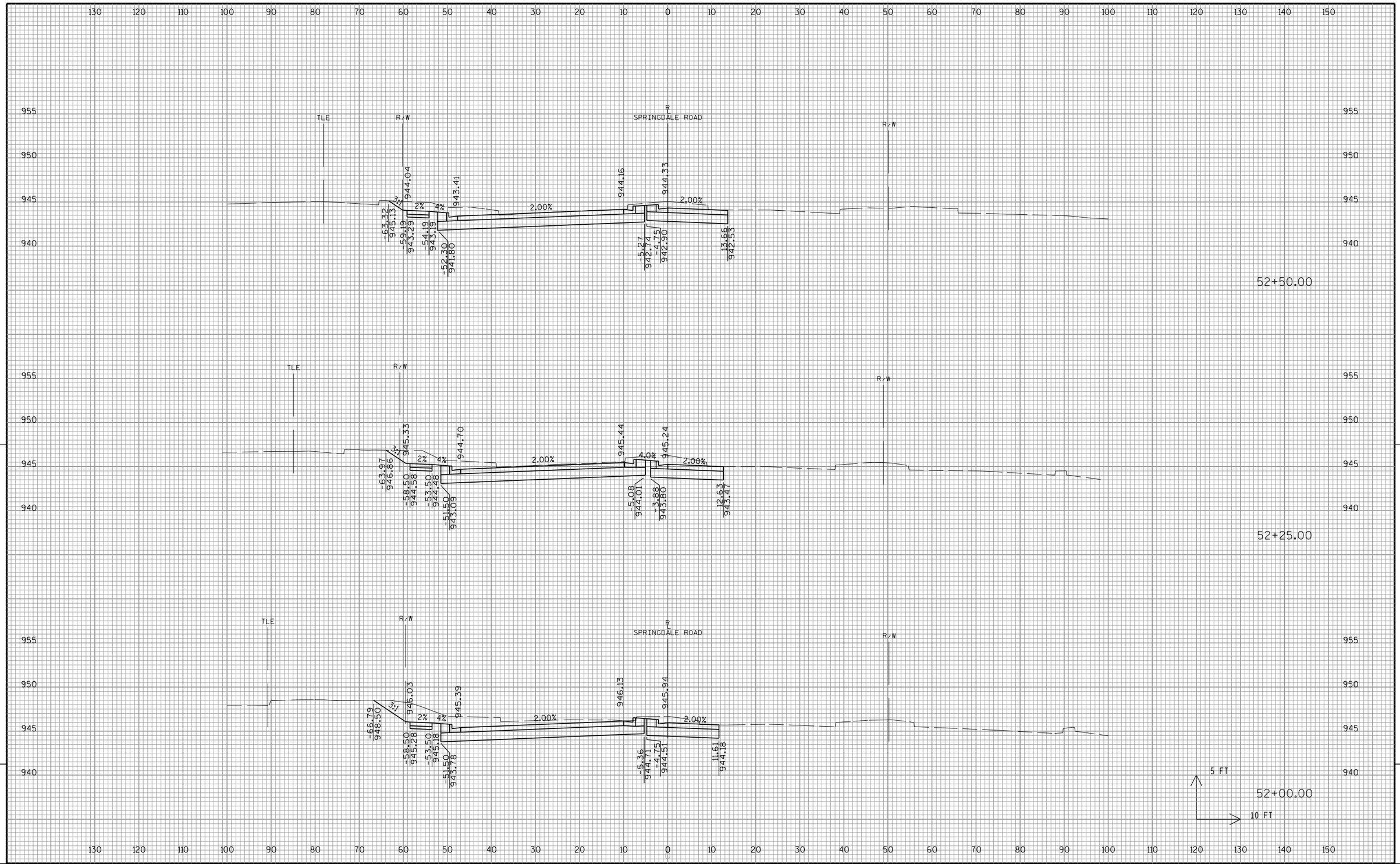
9

9

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CROSS SECTIONS: SPRINGDALE ROAD	SHEET 758	E

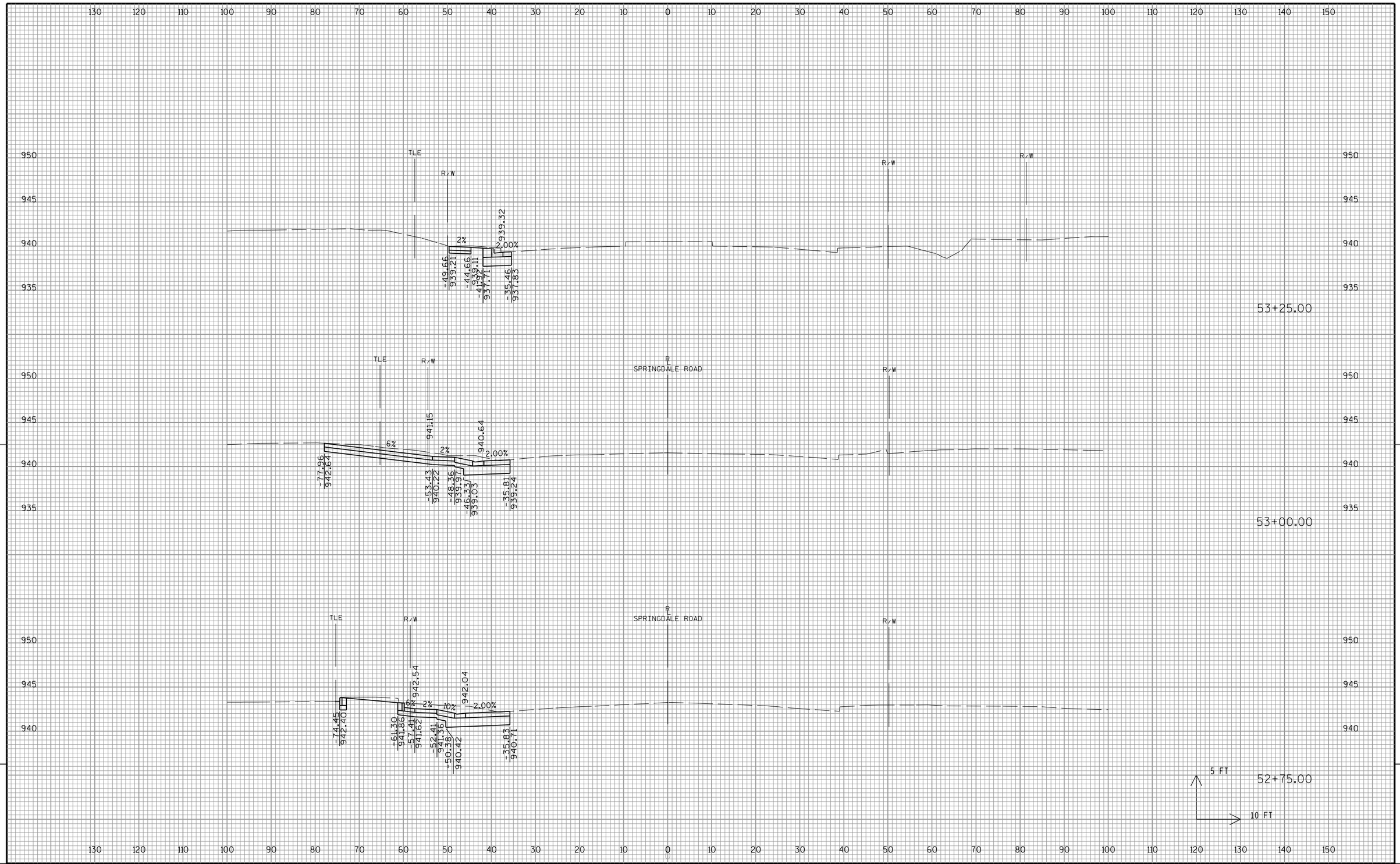
FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\090202_xs_SPRING.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

WISDOT/CADDS SHEET 21



PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CROSS SECTIONS: SPRINGDALE ROAD	SHEET 759	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\090202_xs_SPRING.dgn
PLOT DATE : 4/27/2015
PLOT BY : GRAEF
PLOT NAME :
PLOT SCALE : 20.0000 sf / in.
WISDOT/CADDS SHEET 21



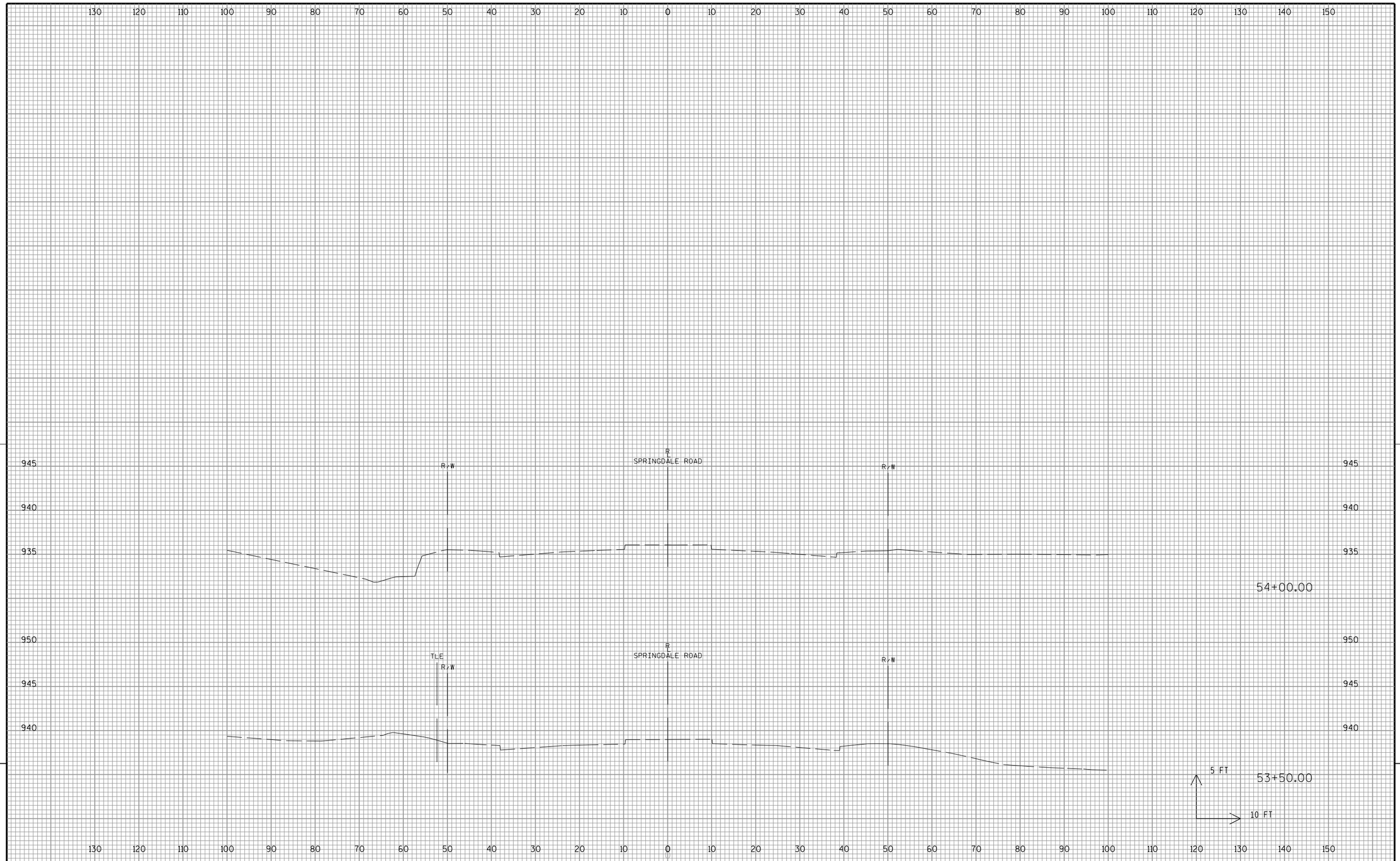
9

9

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CROSS SECTIONS: SPRINGDALE ROAD	SHEET 760	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\090202_xs_SPRING.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

WISDOT/CADDS SHEET 21

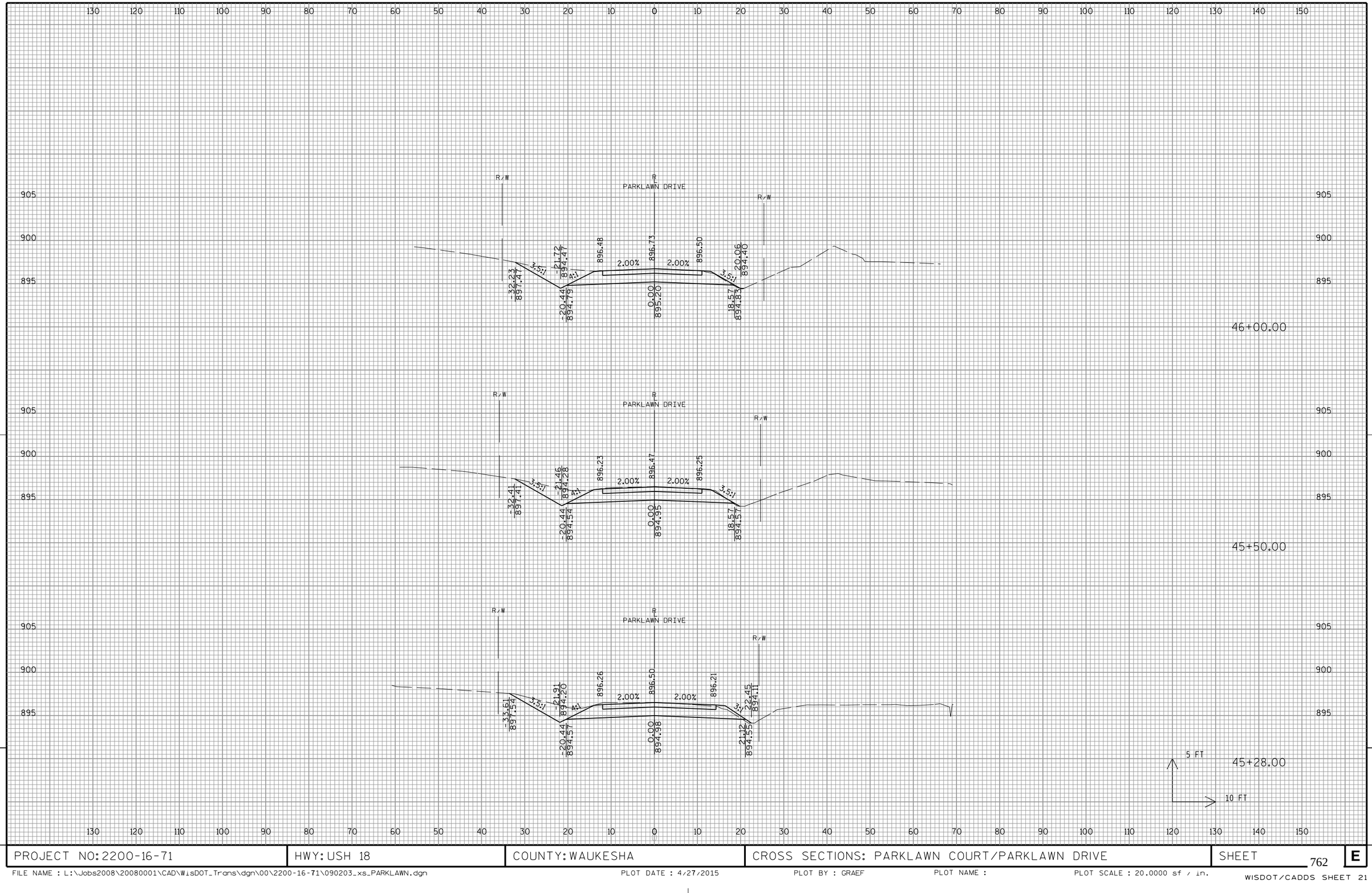


9

9

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CROSS SECTIONS: SPRINGDALE ROAD	SHEET 761	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\090202_xs_SPRING.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.



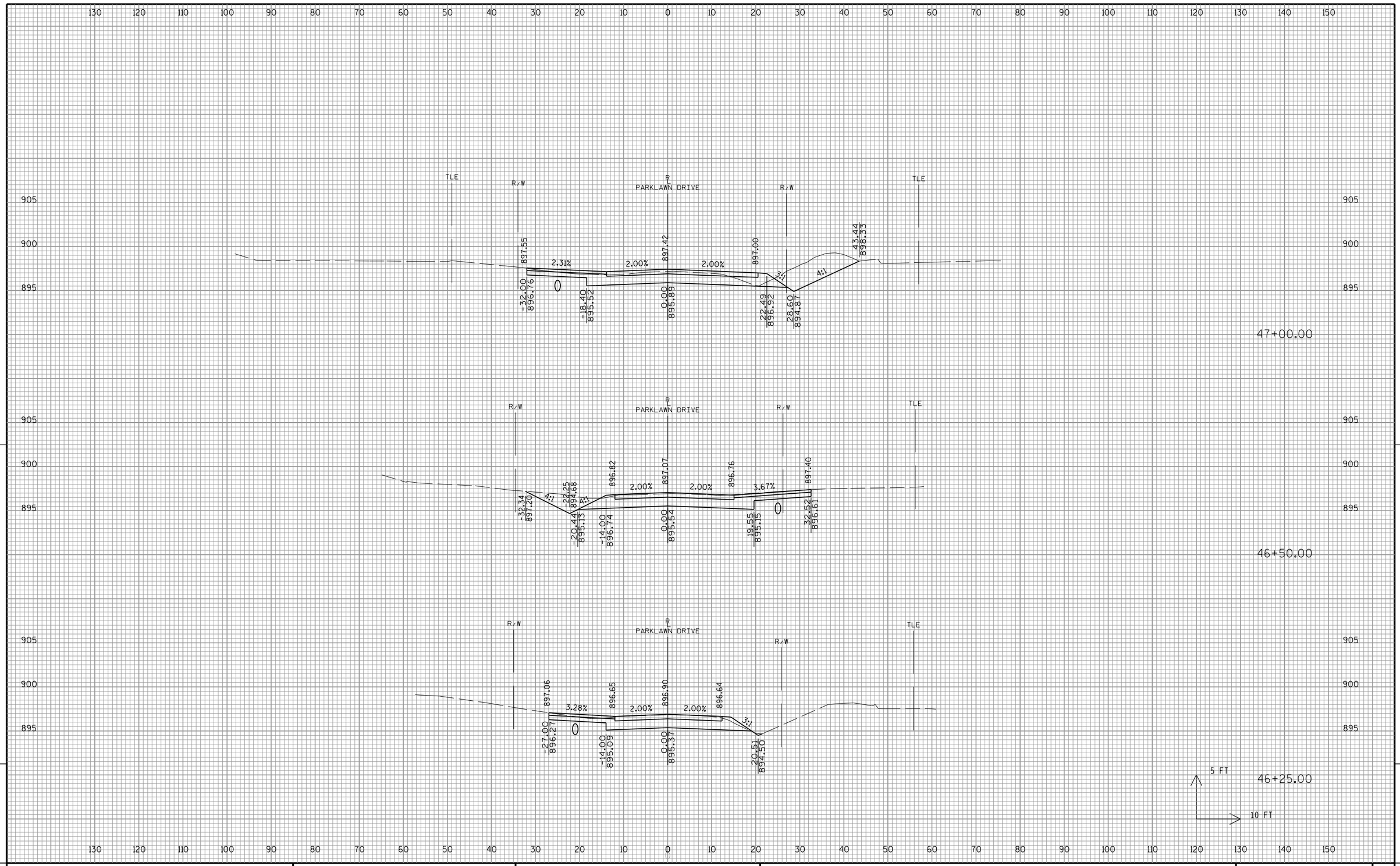
9

9

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CROSS SECTIONS: PARKLAWN COURT/PARKLAWN DRIVE	SHEET 762	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\090203_xs_PARKLAWN.dgn | PLOT DATE : 4/27/2015 | PLOT BY : GRAEF | PLOT NAME : | PLOT SCALE : 20.0000 sf / in.

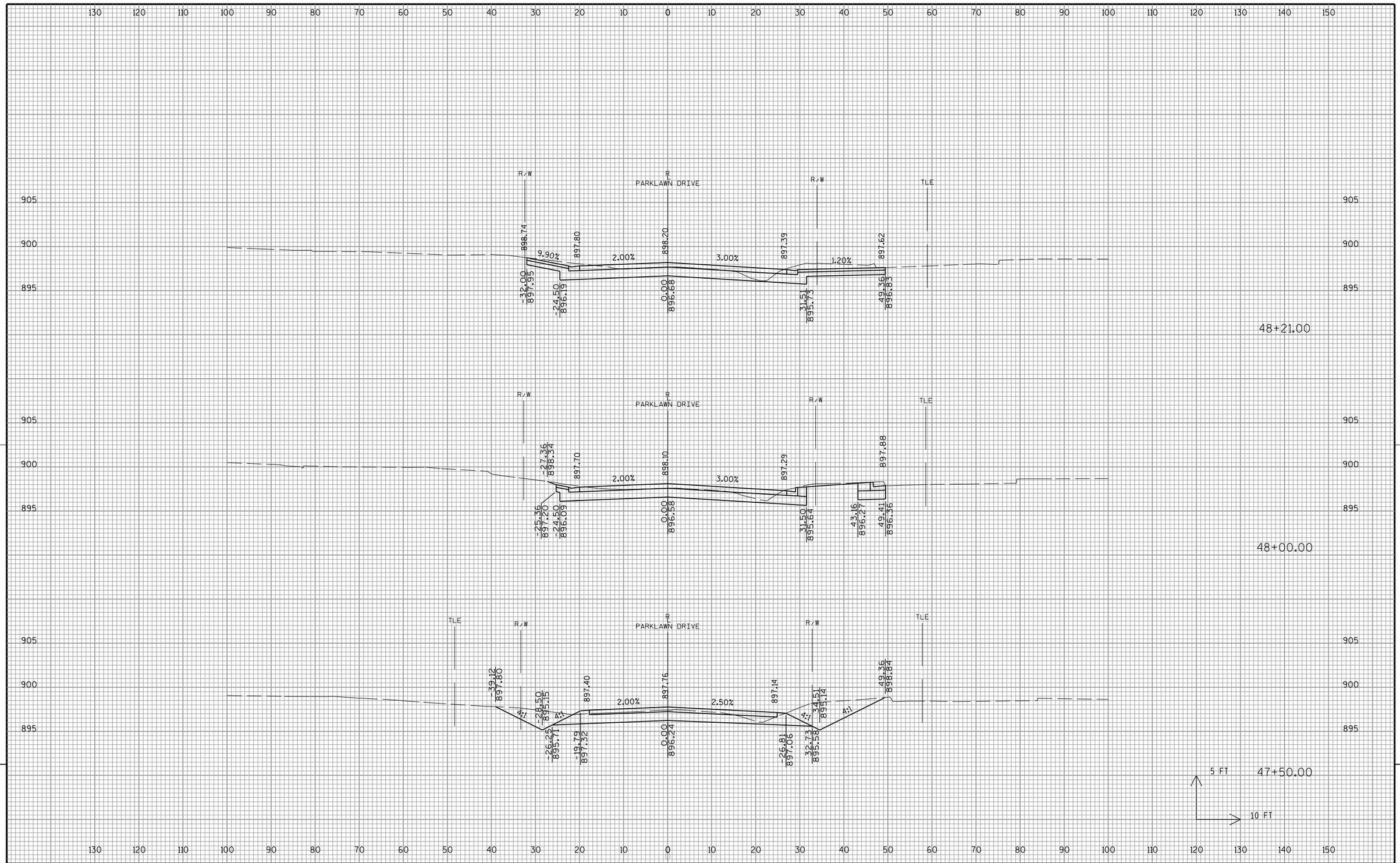
WISDOT/CADDS SHEET 21



PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CROSS SECTIONS: PARKLAWN COURT/PARKLAWN DRIVE	SHEET 763	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\090203_xs_PARKLAWN.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

WISDOT/CADDS SHEET 21



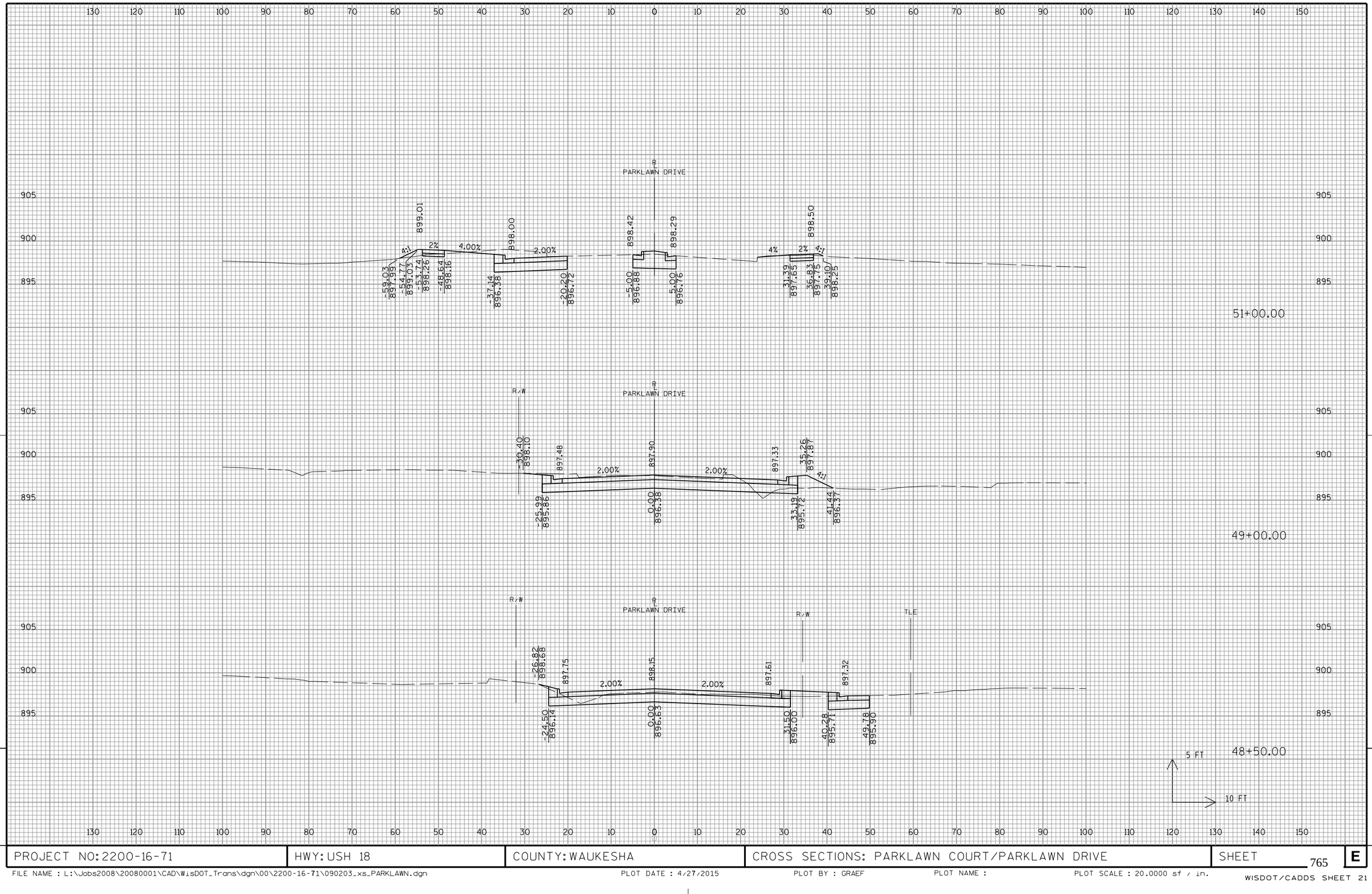
9

9

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CROSS SECTIONS: PARKLAWN COURT/PARKLAWN DRIVE	SHEET 764	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\090203_xs_PARKLAWN.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

WISDOT/CADDS SHEET 21



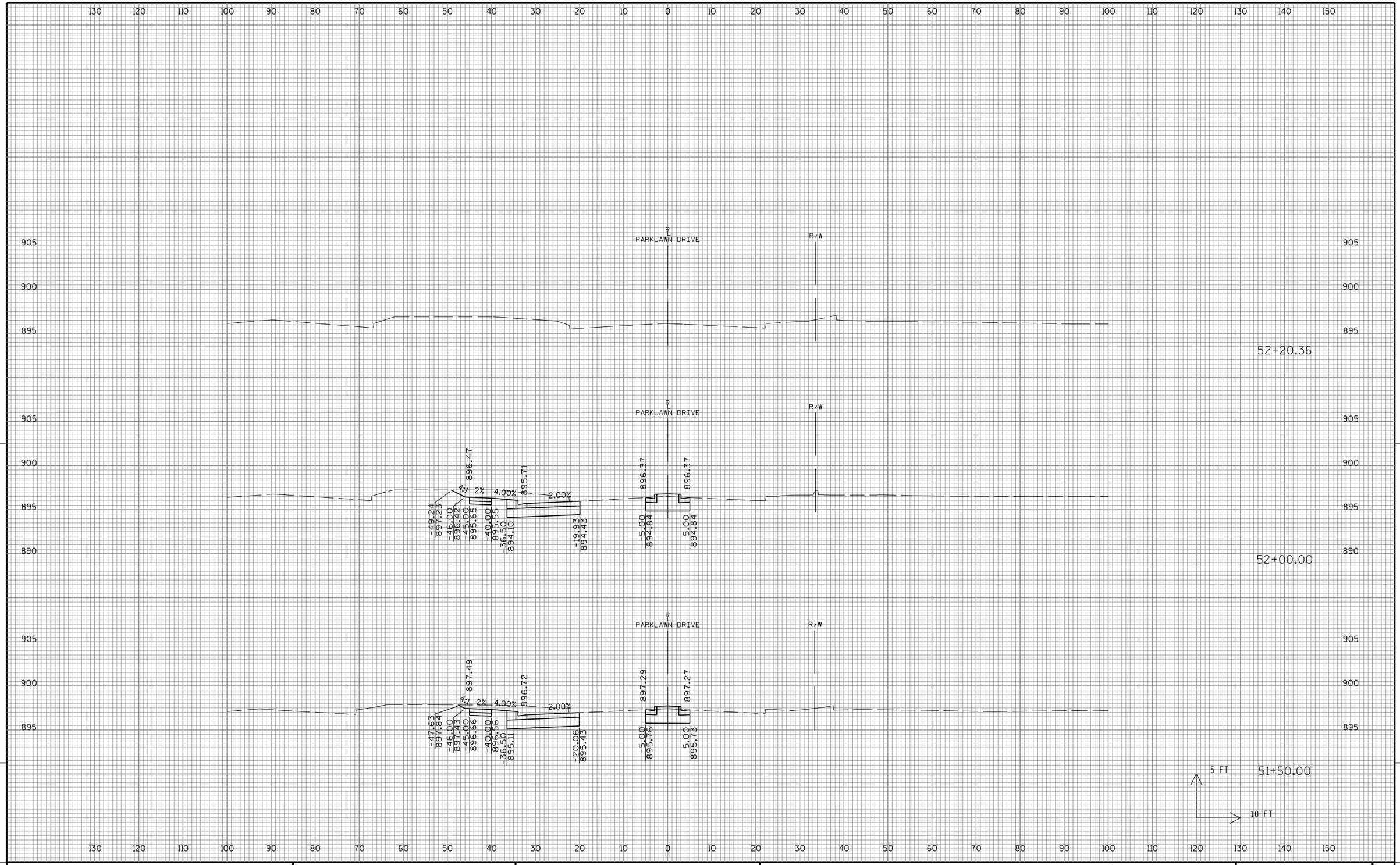
9

9

PROJECT NO:2200-16-71	HWY:USH 18	COUNTY:WAUKESHA	CROSS SECTIONS: PARKLAWN COURT/PARKLAWN DRIVE	SHEET 765	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\090203_xs_PARKLAWN.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

WISDOT/CADDS SHEET 21



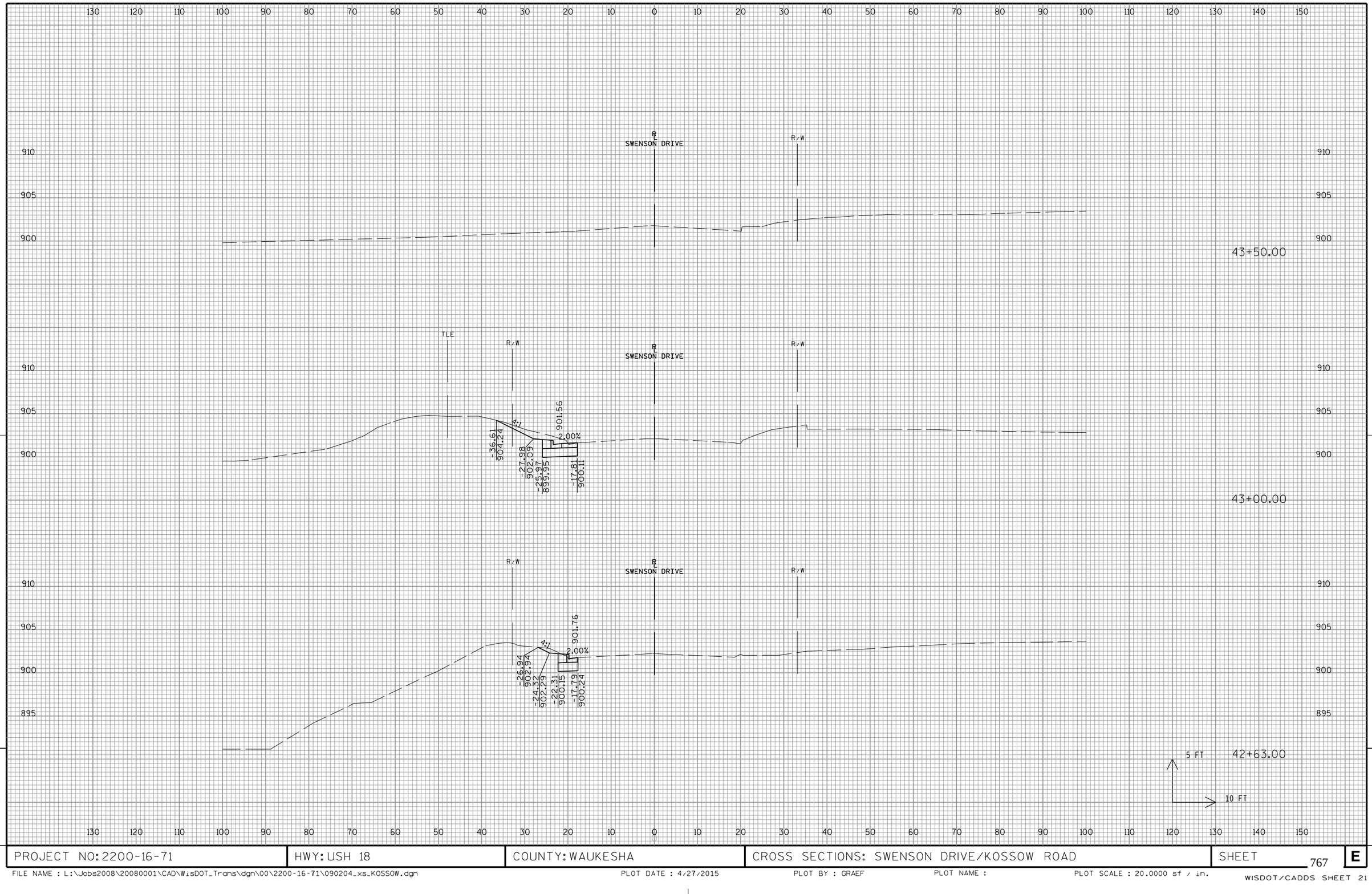
9

9

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CROSS SECTIONS: PARKLAWN COURT/PARKLAWN DRIVE	SHEET 766	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\090203_xs_PARKLAWN.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

WISDOT/CADDS SHEET 21



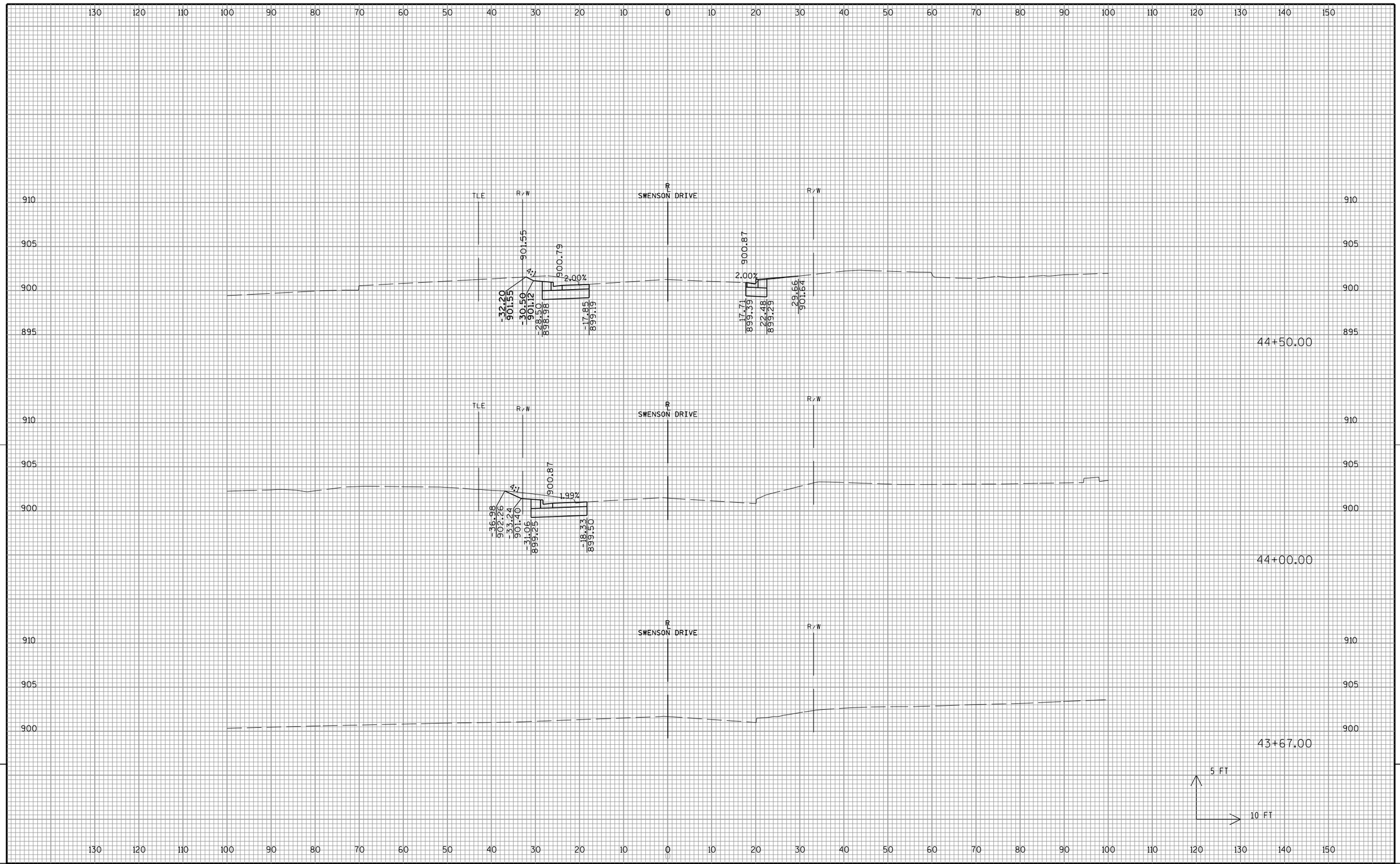
9

9

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CROSS SECTIONS: SWENSON DRIVE/KOSSOW ROAD	SHEET 767	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\090204_xs_KOSSOW.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

WISDOT/CADDS SHEET 21



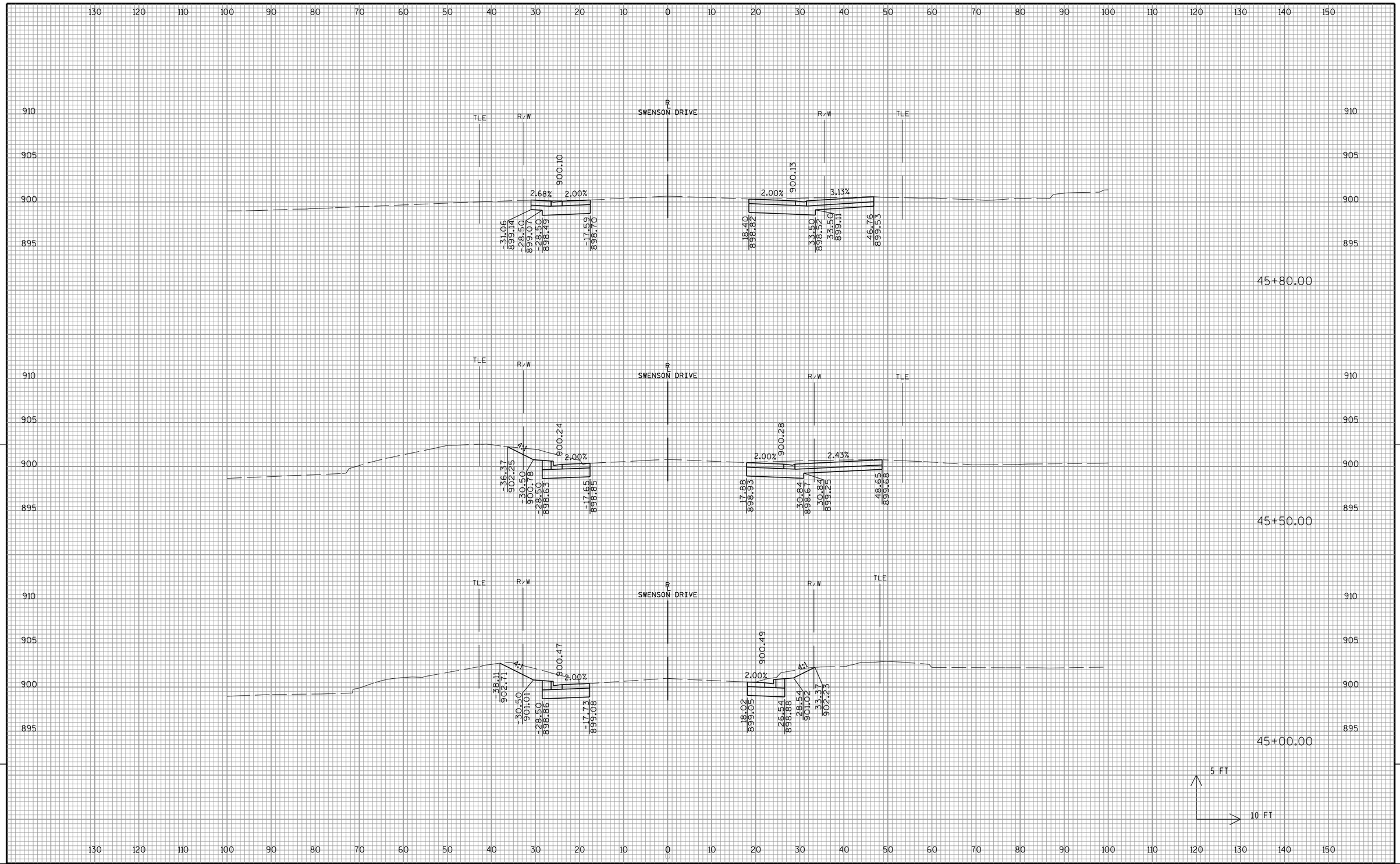
9

9

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CROSS SECTIONS: SWENSON DRIVE/KOSSOW ROAD	SHEET 768	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\090204_xs_KOSSOW.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

WISDOT/CADDS SHEET 21



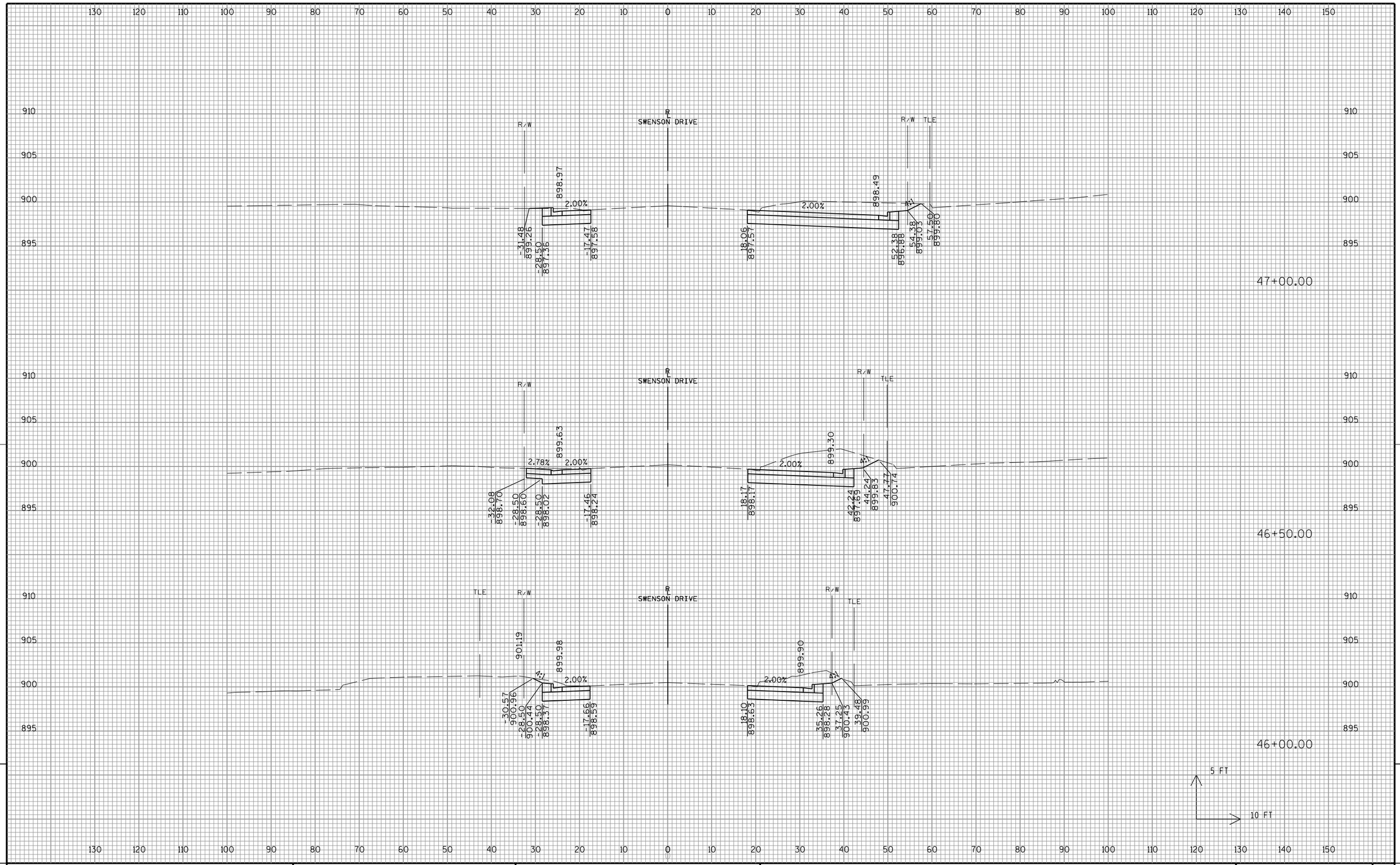
9

9

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CROSS SECTIONS: SWENSON DRIVE/KOSSOW ROAD	SHEET 769 E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\090204_xs_KOSSOW.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

WISDOT/CADDS SHEET 21



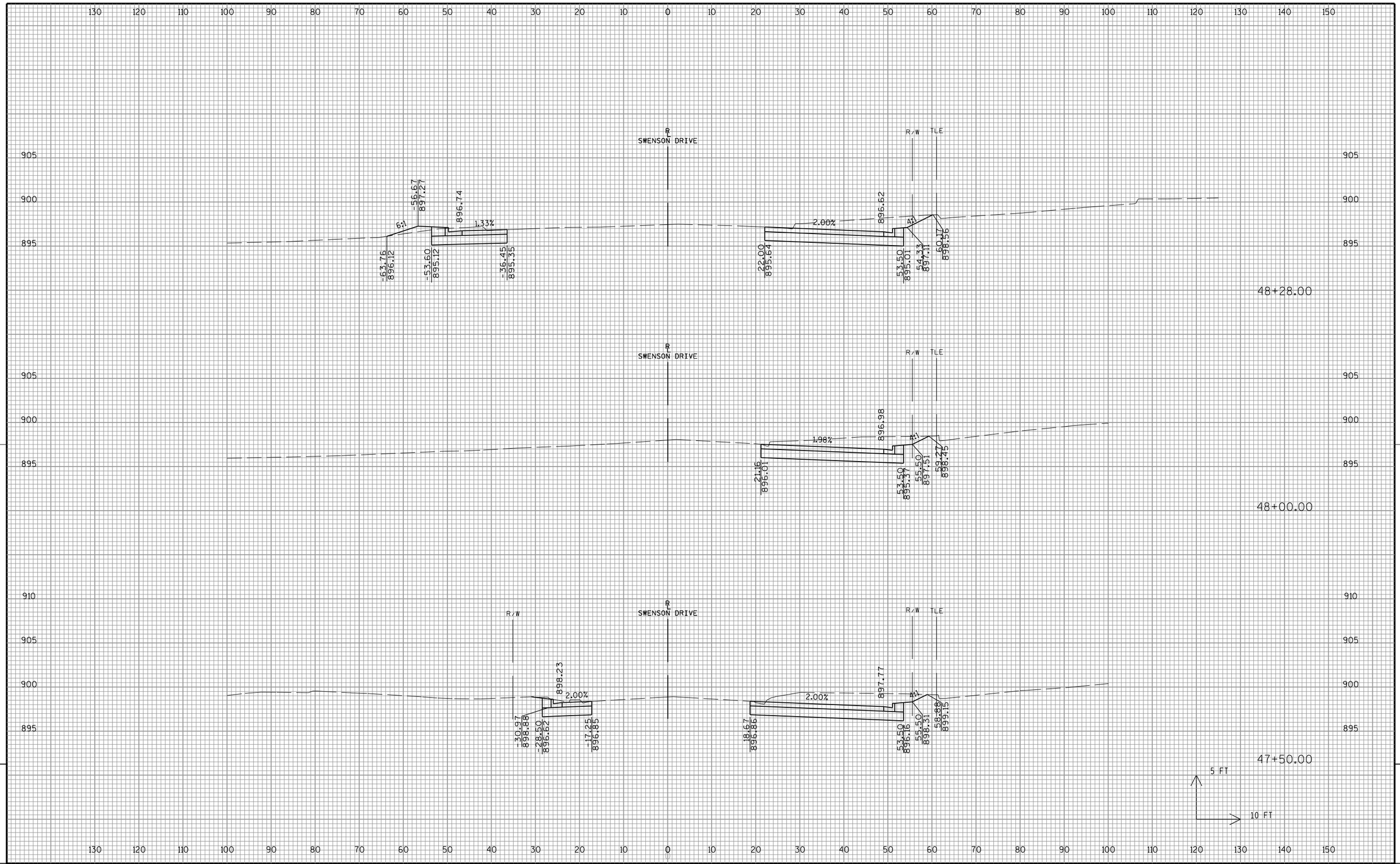
9

9

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CROSS SECTIONS: SWENSON DRIVE/KOSSOW ROAD	SHEET 770	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\090204_xs_KOSSOW.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

WISDOT/CADDS SHEET 21



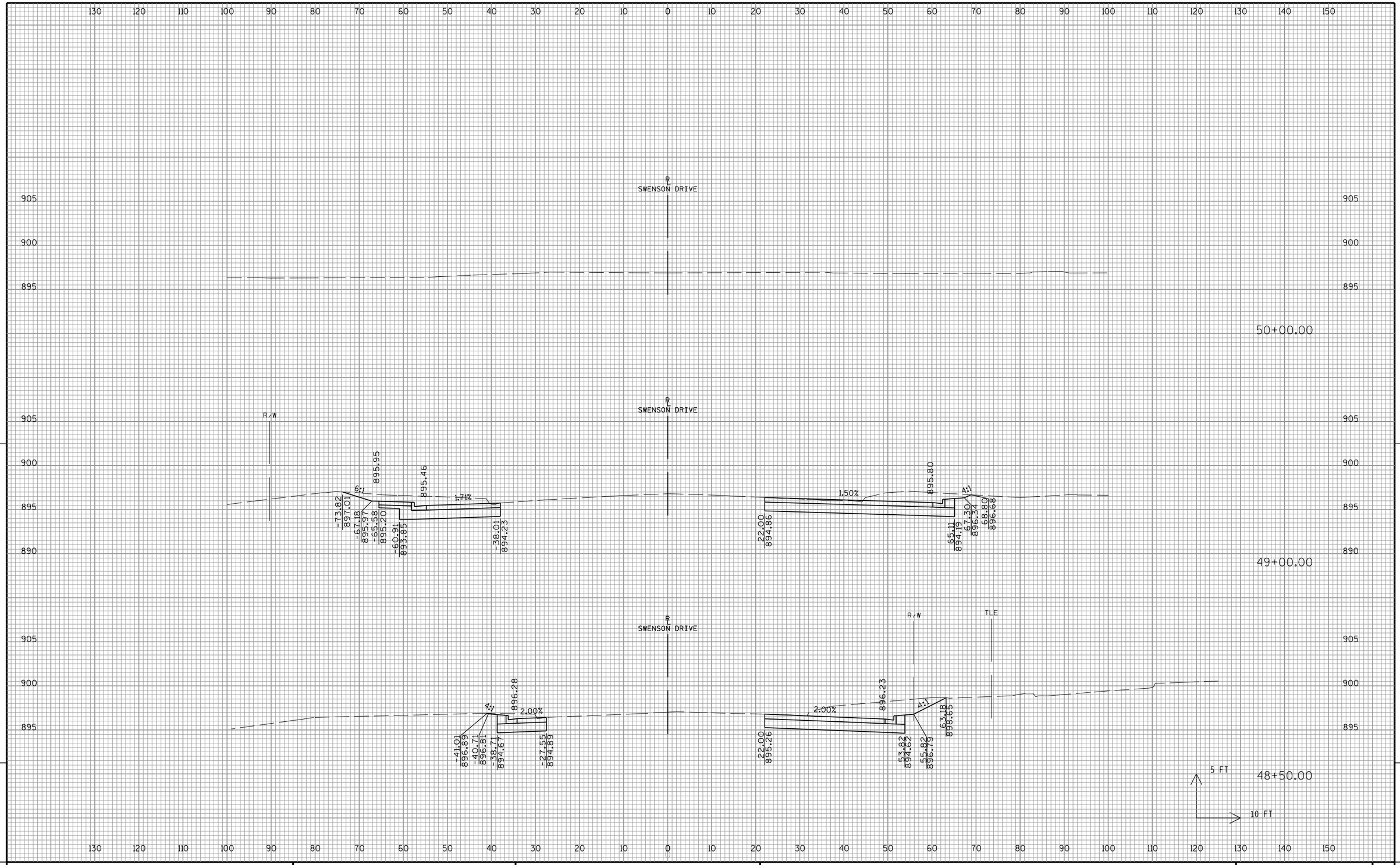
9

9

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CROSS SECTIONS: SWENSON DRIVE/KOSSOW ROAD	SHEET 771	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\090204_xs_KOSSOW.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

WISDOT/CADDS SHEET 21



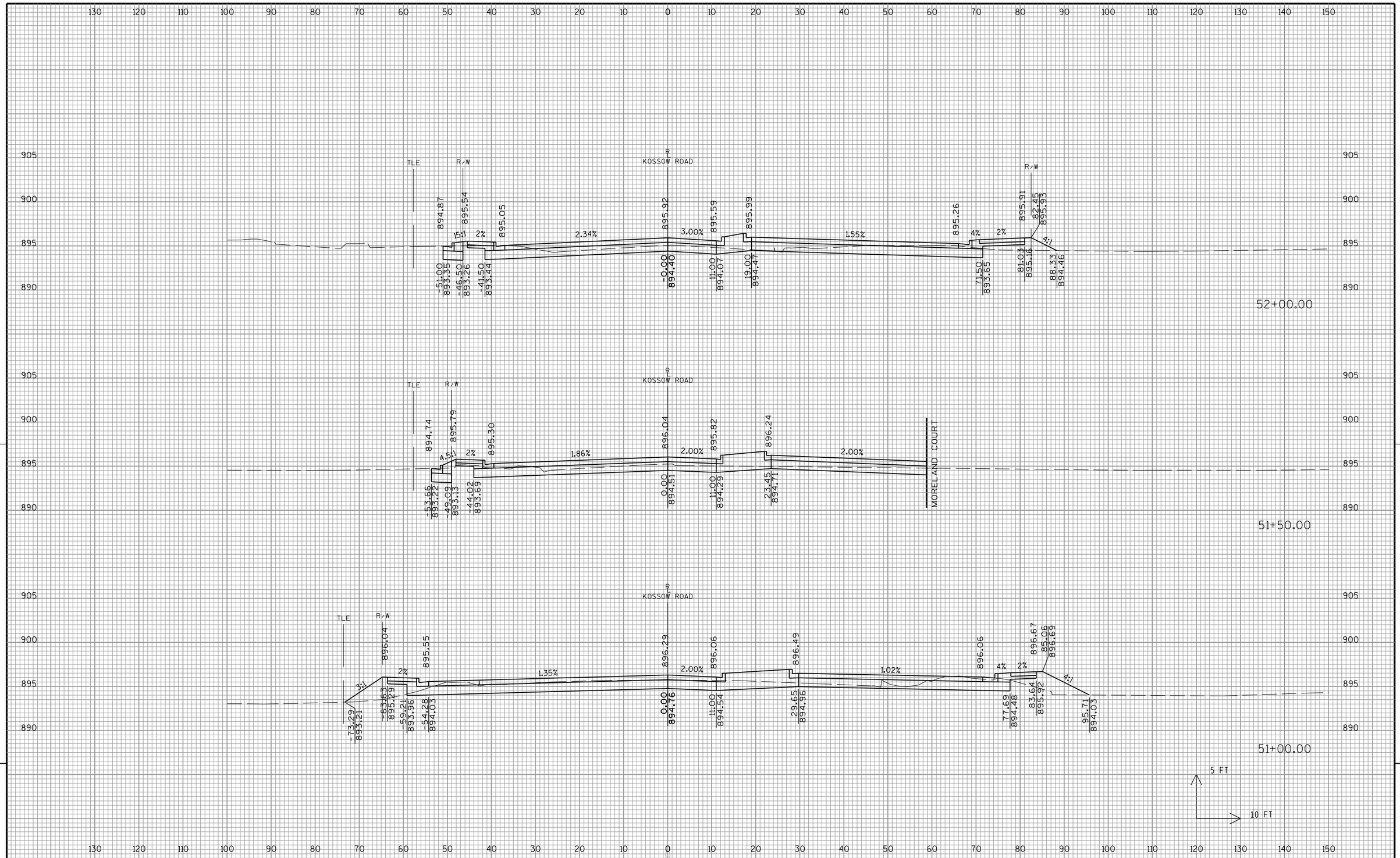
9

9

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CROSS SECTIONS: SWENSON DRIVE/KOSSOW ROAD	SHEET 772	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\090204_xs_KOSSOW.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

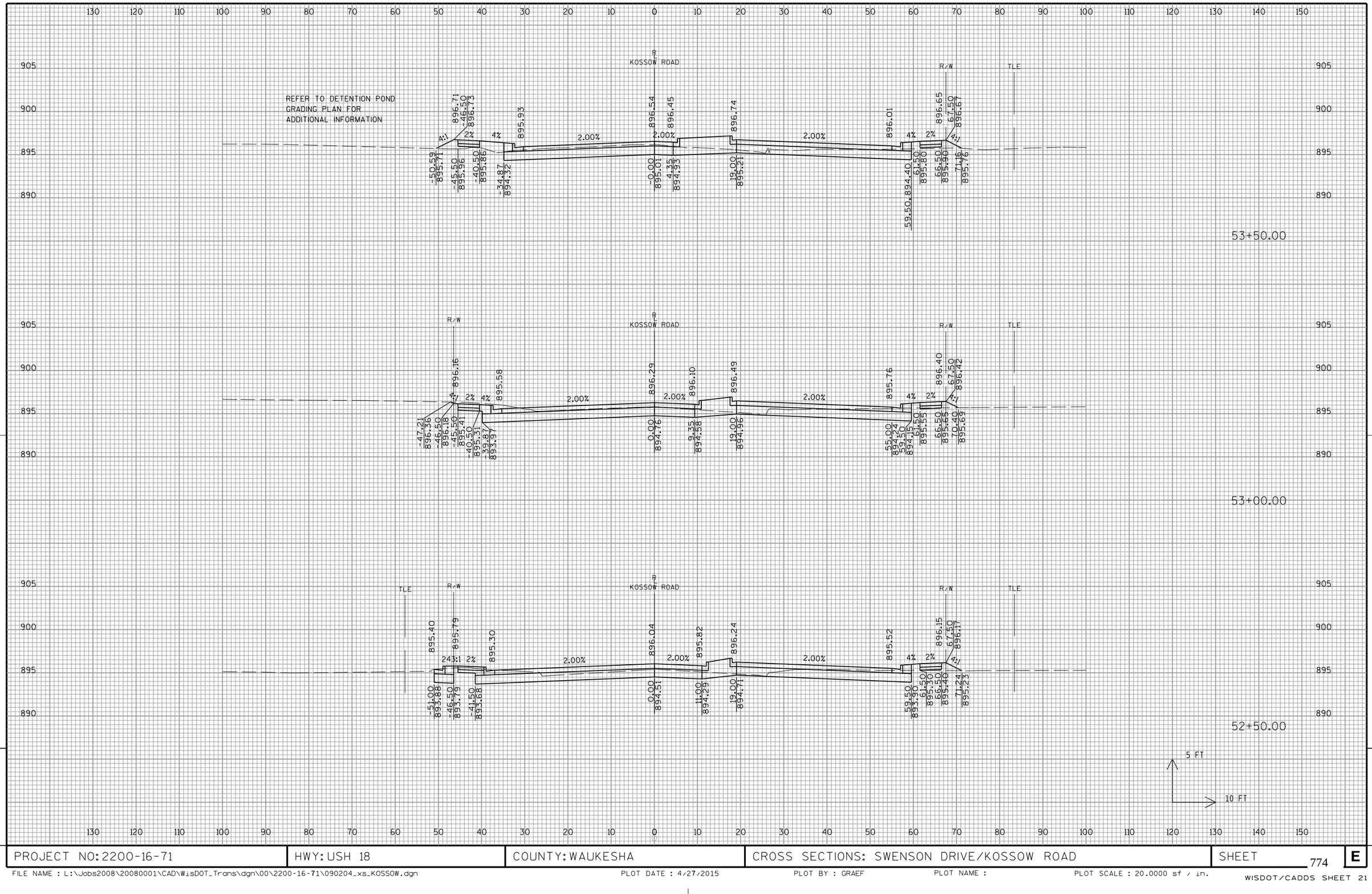
WISDOT/CADDS SHEET 21



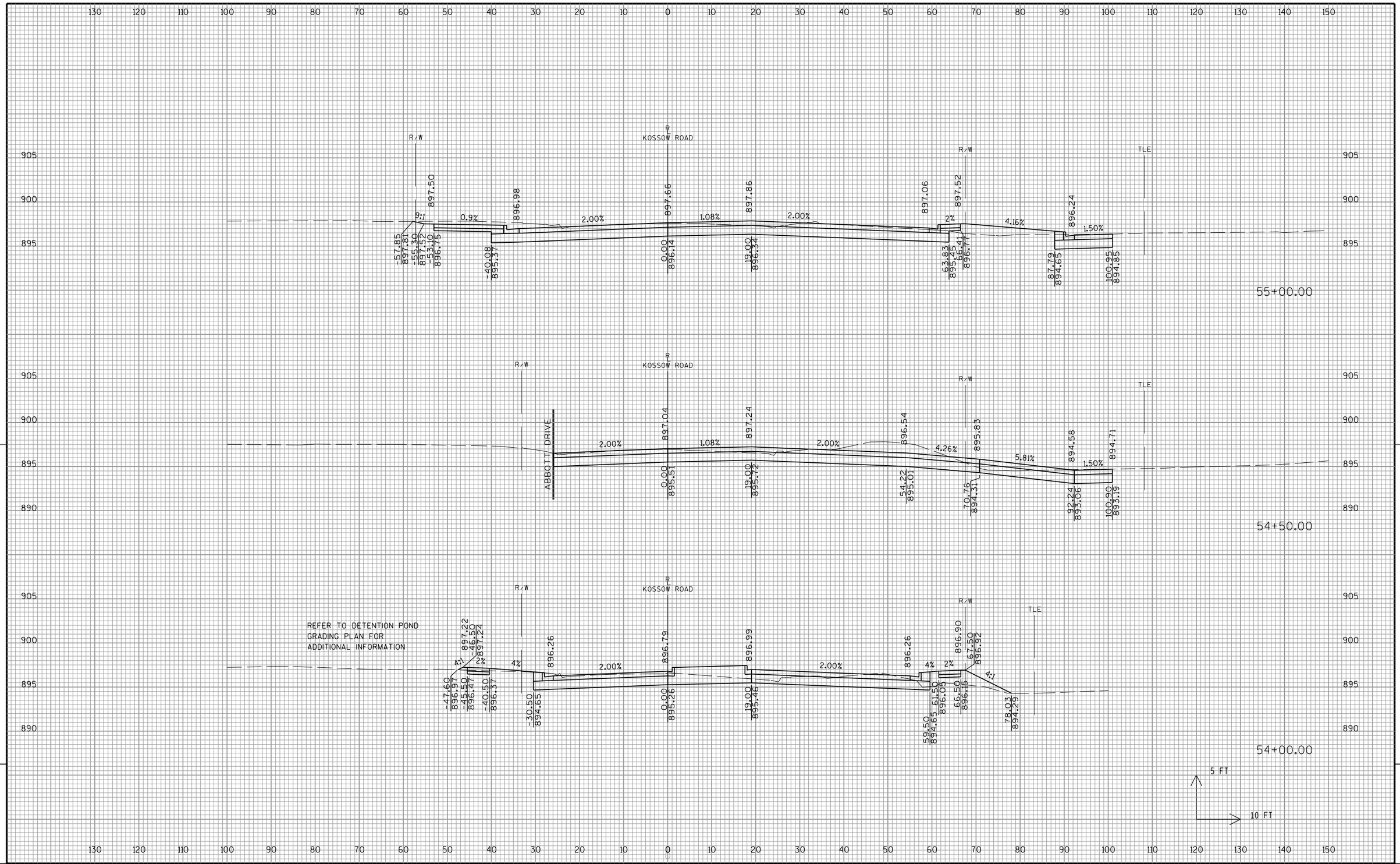
PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CROSS SECTIONS: SWENSON DRIVE/KOSSOW ROAD	SHEET 773 E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\090204_xs_KOSSOW.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

WISDOT/CADDS SHEET 21



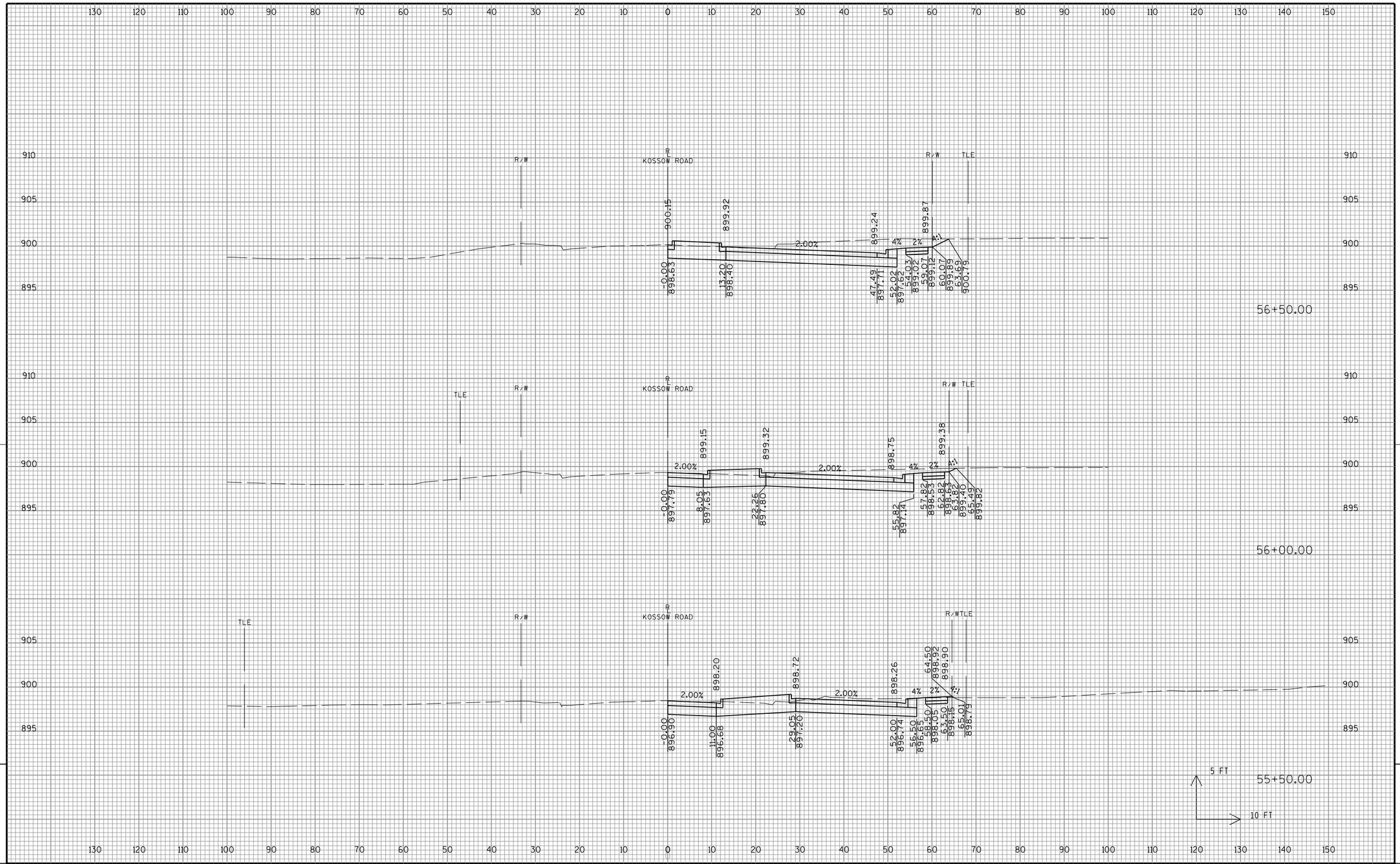
PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CROSS SECTIONS: SWENSON DRIVE/KOSSOW ROAD	SHEET 774	E



PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CROSS SECTIONS: SWENSON DRIVE/KOSSOW ROAD	SHEET 775 E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\090204_xs_KOSSOW.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

WISDOT/CADDS SHEET 21



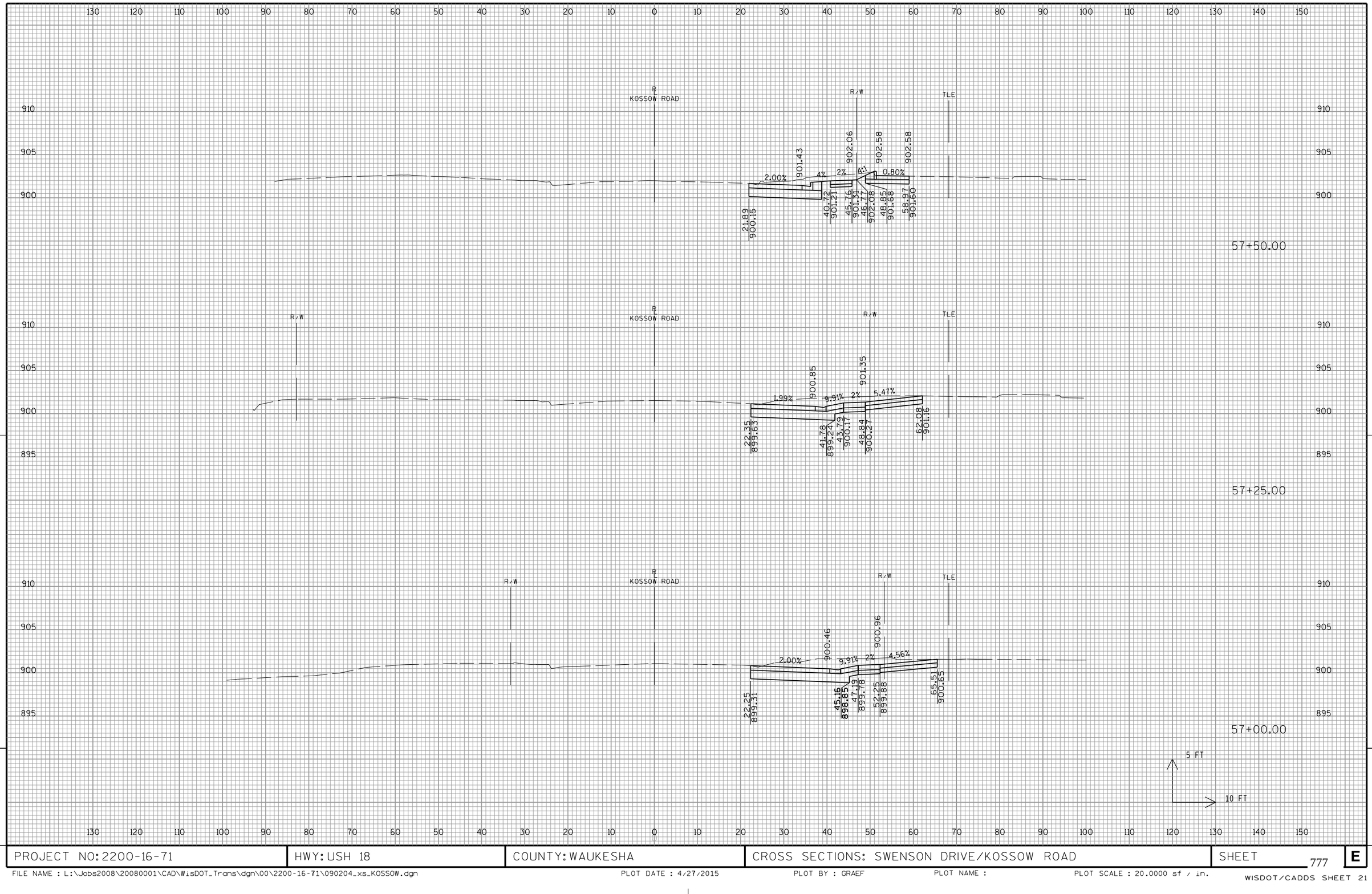
9

9

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CROSS SECTIONS: SWENSON DRIVE/KOSSOW ROAD	SHEET 776	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\090204_xs_KOSSOW.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

WISDOT/CADDS SHEET 21



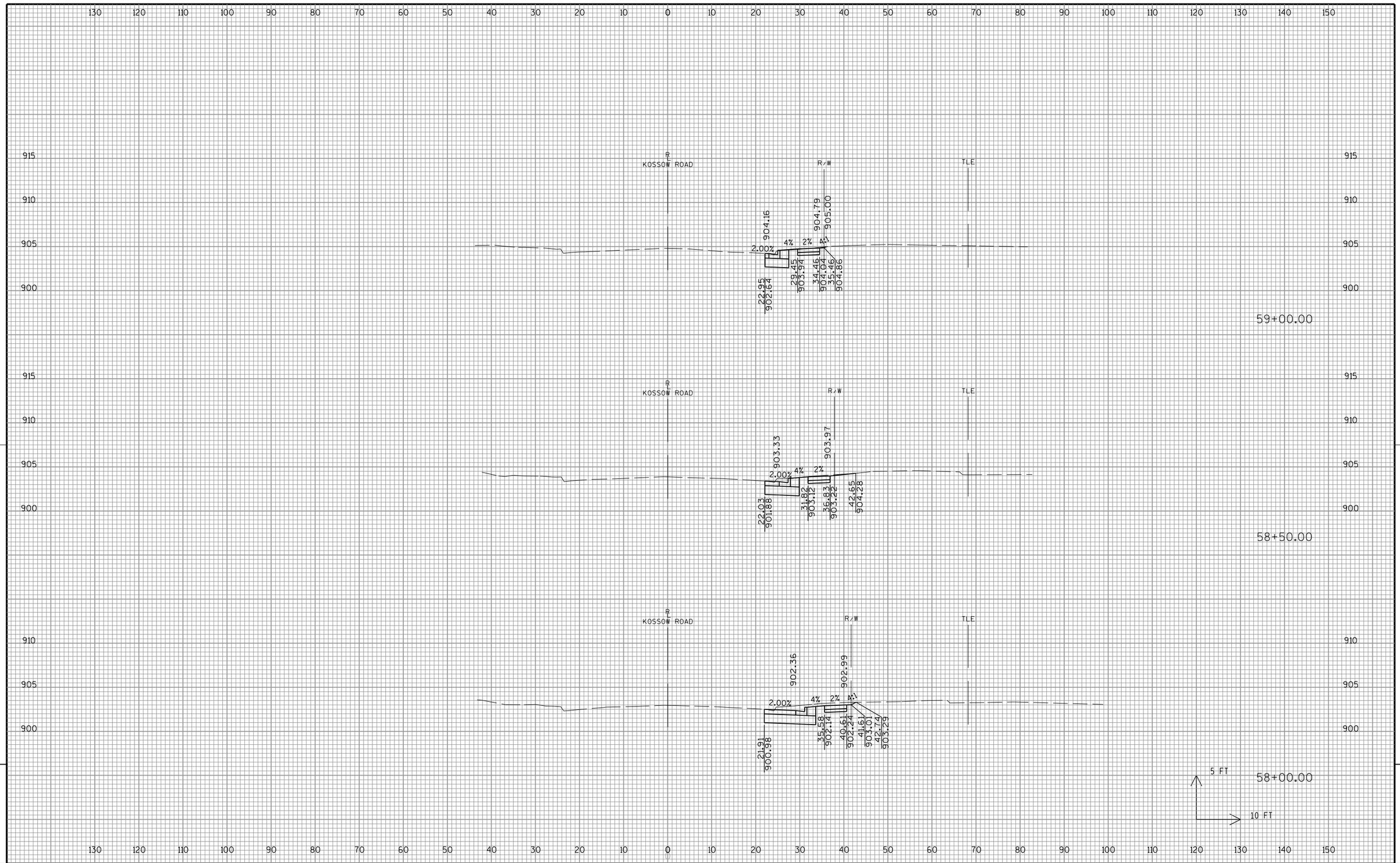
9

9

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CROSS SECTIONS: SWENSON DRIVE/KOSSOW ROAD	SHEET 777	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\090204_xs_KOSSOW.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

WISDOT/CADDS SHEET 21



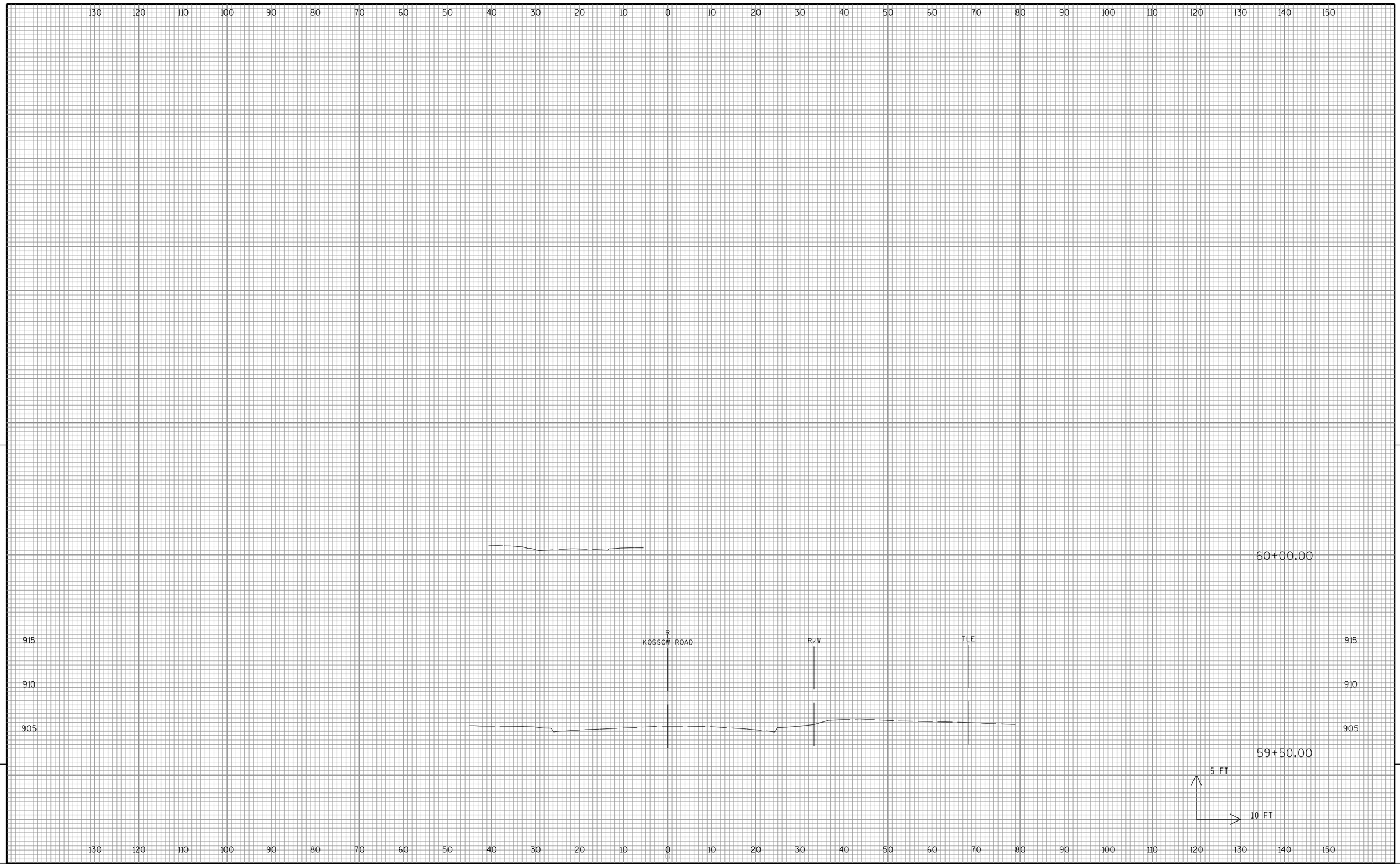
9

9

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CROSS SECTIONS: SWENSON DRIVE/KOSSOW ROAD	SHEET 778	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\090204_xs_KOSSOW.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

WISDOT/CADDS SHEET 21



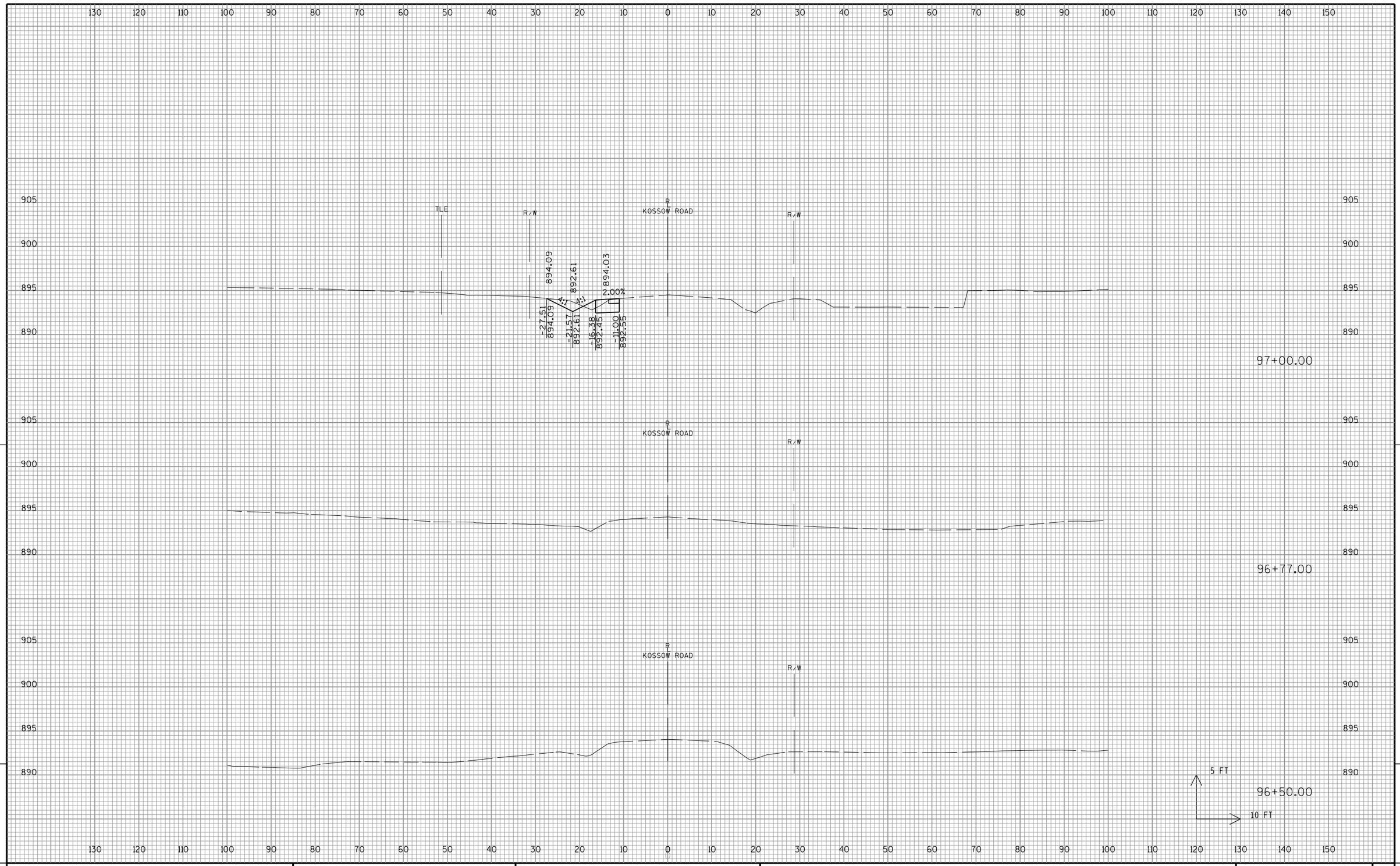
9

9

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CROSS SECTIONS: SWENSON DRIVE/KOSSOW ROAD	SHEET 779	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\090204_xs_KOSSOW.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

WISDOT/CADDS SHEET 21



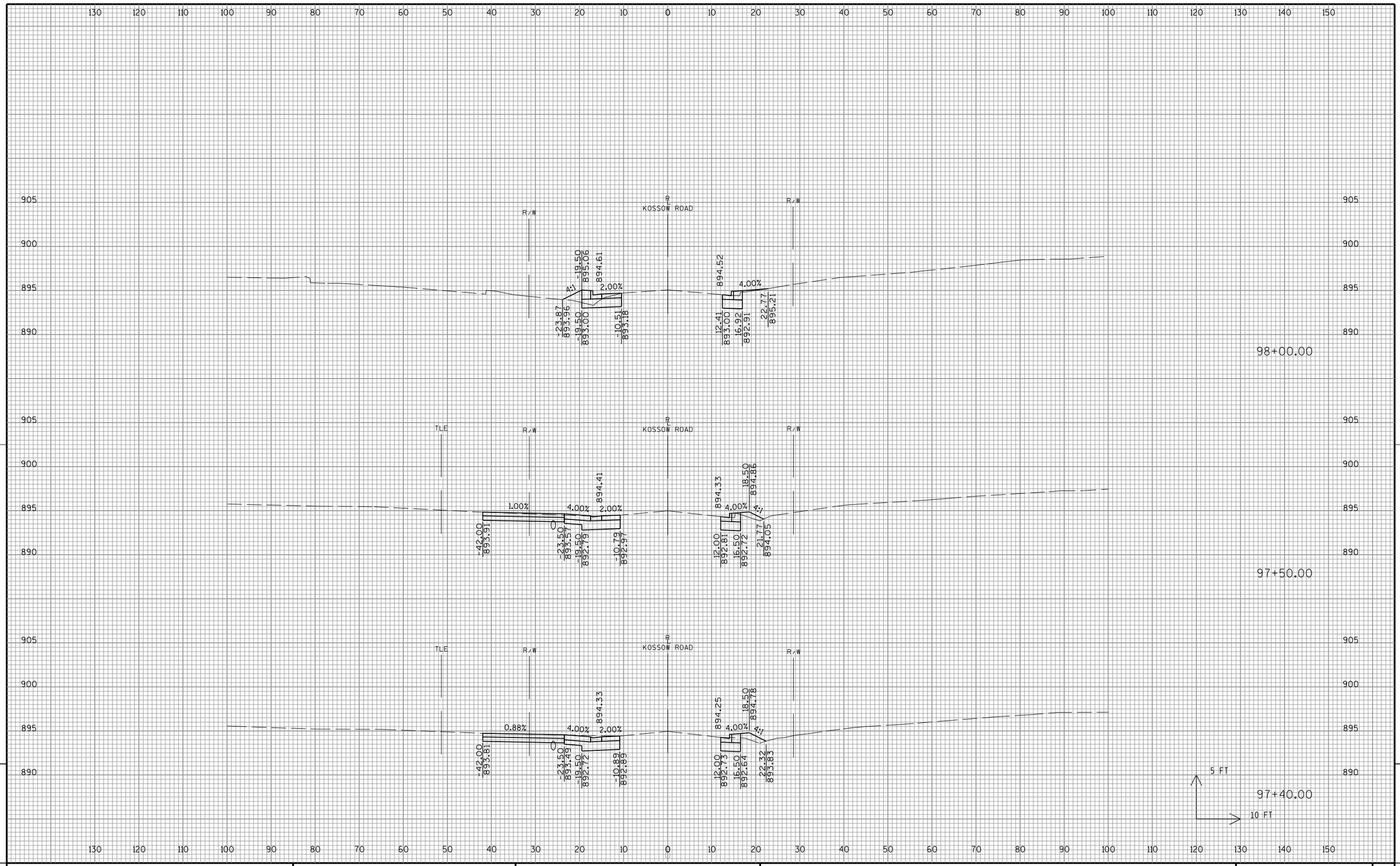
9

9

PROJECT NO:2200-16-71	HWY:USH 18	COUNTY:WAUKESHA	CROSS SECTIONS: KOSSOW ROAD (SOUTH)	SHEET 780	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\090205_xs_KOSSOW_S.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

WISDOT/CADDS SHEET 21



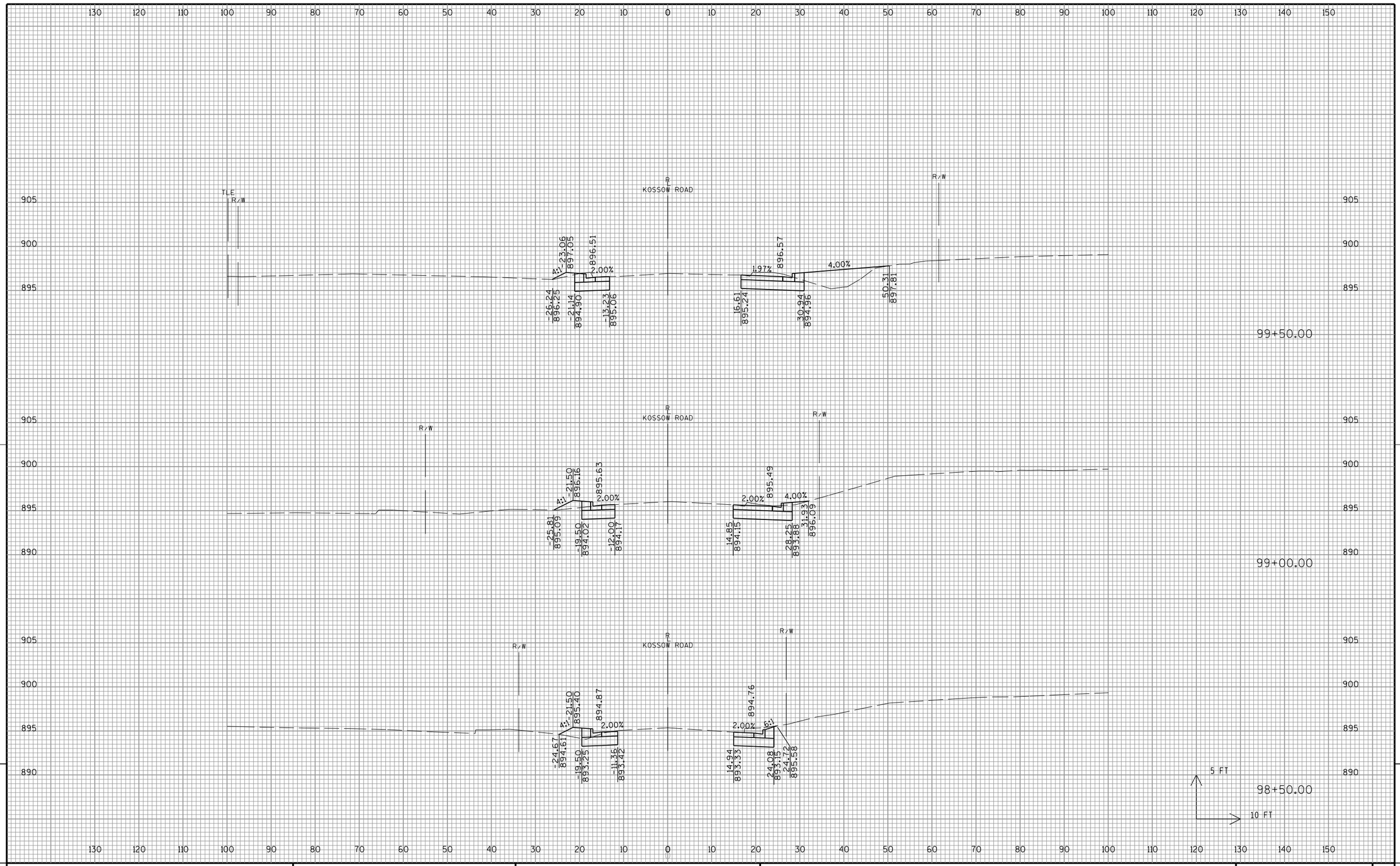
9

9

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CROSS SECTIONS: KOSSOW ROAD (SOUTH)	SHEET 781	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\090205_xs_KOSSOW_S.dgn | PLOT DATE : 4/27/2015 | PLOT BY : GRAEF | PLOT NAME : | PLOT SCALE : 20.0000 sf / in.

WISDOT/CADDS SHEET 21



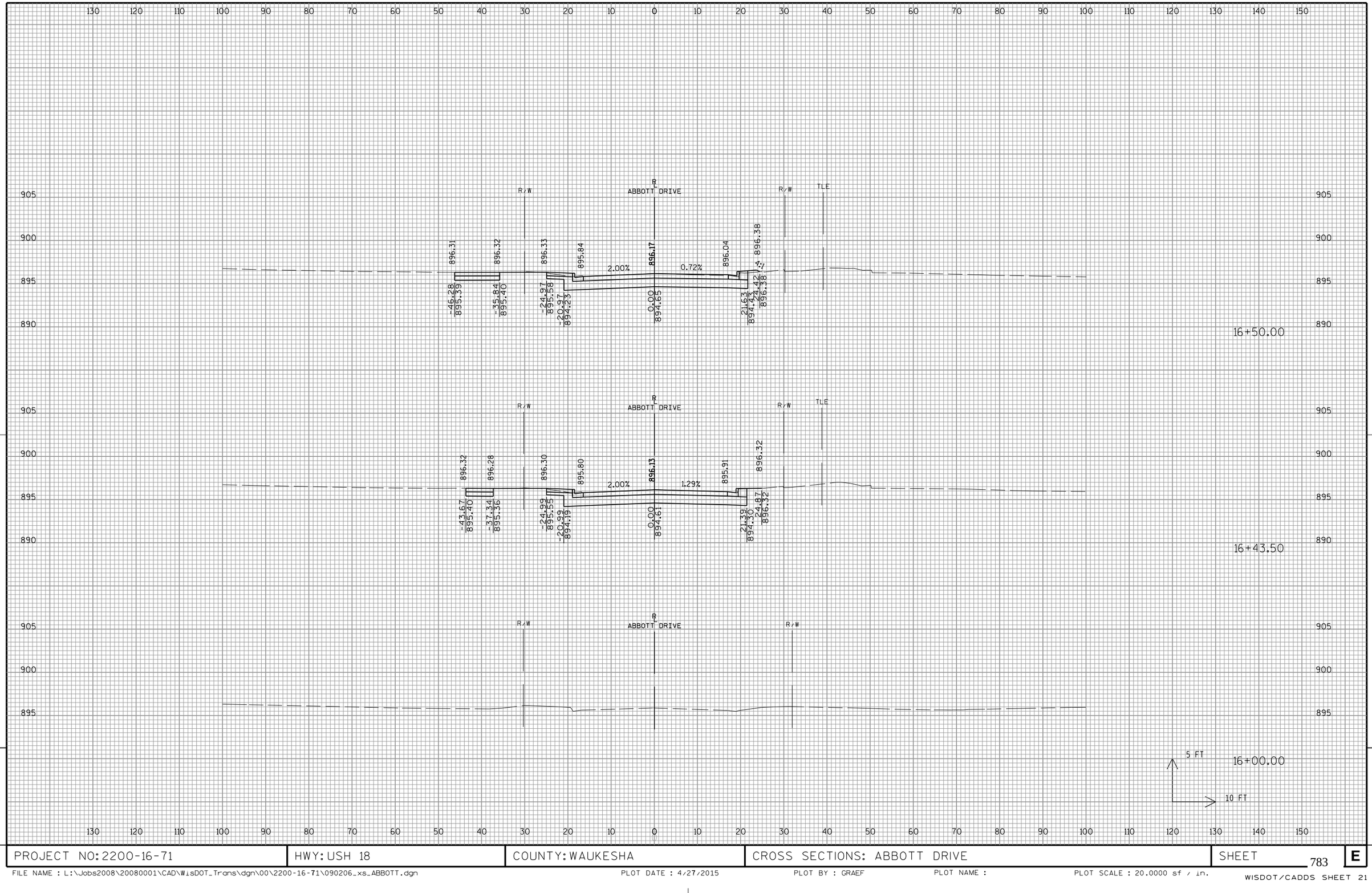
9

9

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CROSS SECTIONS: KOSSOW ROAD (SOUTH)	SHEET 782	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\090205_xs_KOSSOW_S.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

WISDOT/CADDS SHEET 21

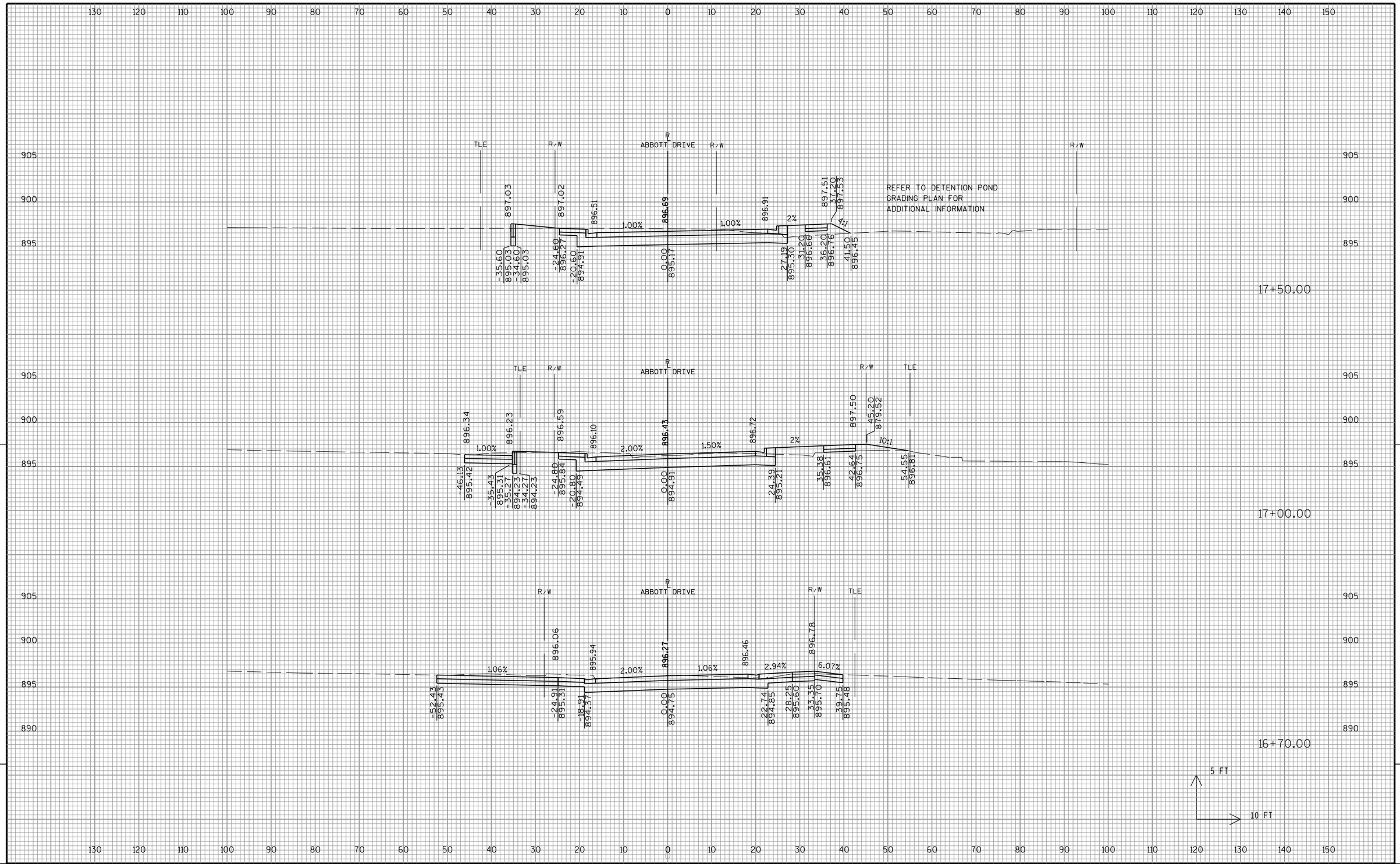


9

9

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CROSS SECTIONS: ABBOTT DRIVE	SHEET 783	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\090206_xs_ABBOTT.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.



PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CROSS SECTIONS: ABBOTT DRIVE	SHEET 784 E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\090206_xs_ABBOTT.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

WISDOT/CADDS SHEET 21

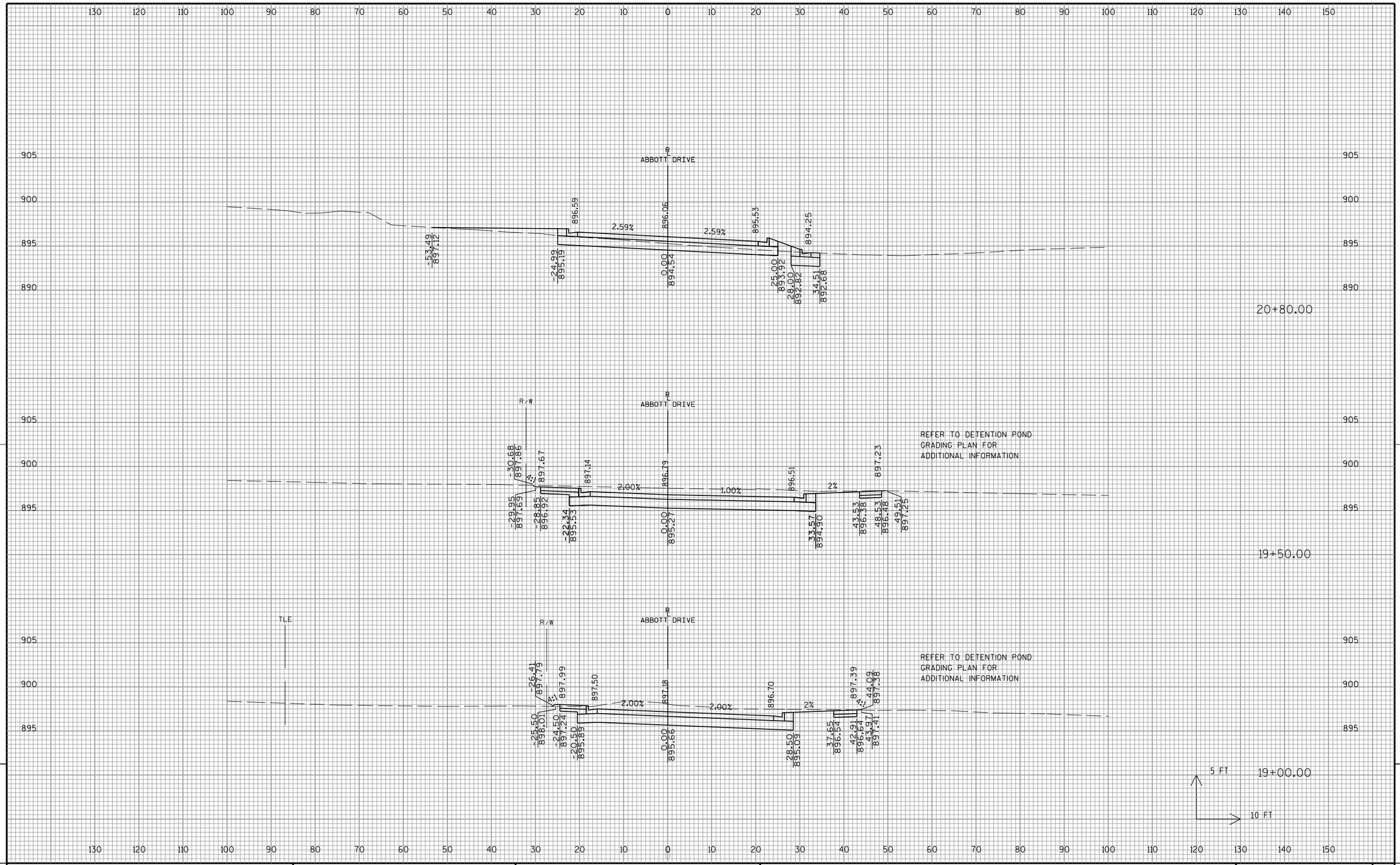
9

9

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CROSS SECTIONS: ABBOTT DRIVE	SHEET 785	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\090206_xs_ABBOTT.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

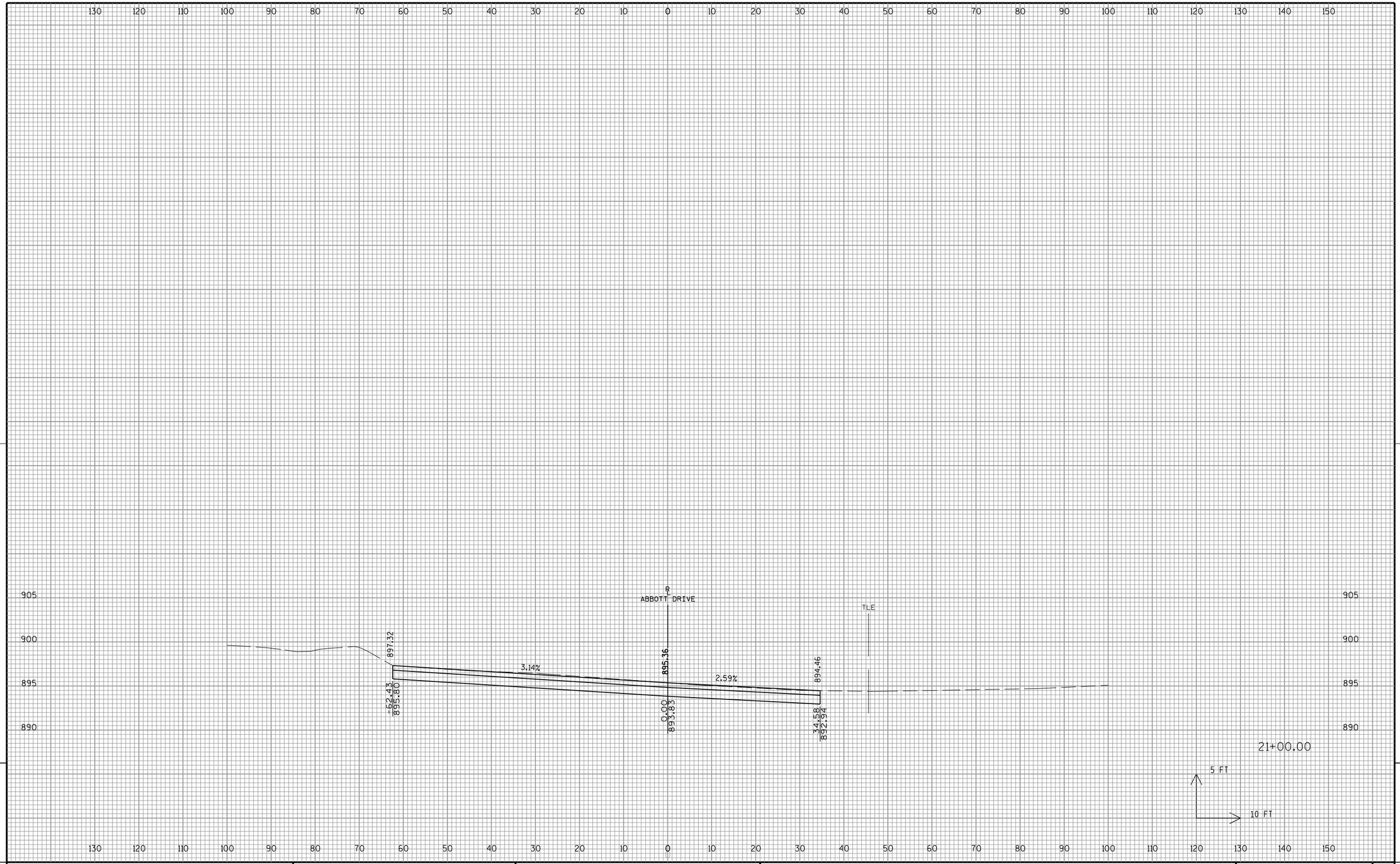
WISDOT/CADDS SHEET 21



PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CROSS SECTIONS: ABBOTT DRIVE	SHEET 786	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\090206_xs_ABBOTT.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

WISDOT/CADDS SHEET 21



9

9

PROJECT NO: 2200-16-71	HWY: USH 18	COUNTY: WAUKESHA	CROSS SECTIONS: ABBOTT DRIVE	SHEET 787	E

FILE NAME : L:\Jobs2008\20080001\CAD\WisDOT_Trans\dgn\00\2200-16-71\090206_xs_ABBOTT.dgn PLOT DATE : 4/27/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

WISDOT/CADDS SHEET 21

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

http://www.dot.wisconsin.gov