WKE

DEC 2017

PROJECT ID: 2723-00-71

WITH: N/A

COUNTY: WAUKESHA COUNTY

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	Right of Way Plat
Section No.	5	Plan and Profile
Section No.	6	Standard Detail Drawings
Section No.	7	Sign Plates
~~Section No.~~	~~8~~	~~Structure Plans~~
Section No.	9	Computer Earthwork Data
Section No.	9	Cross Sections

TOTAL SHEETS = 352

13

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

MOORLAND ROAD

WOODS ROAD TO JANESVILLE ROAD

LOCAL STREET

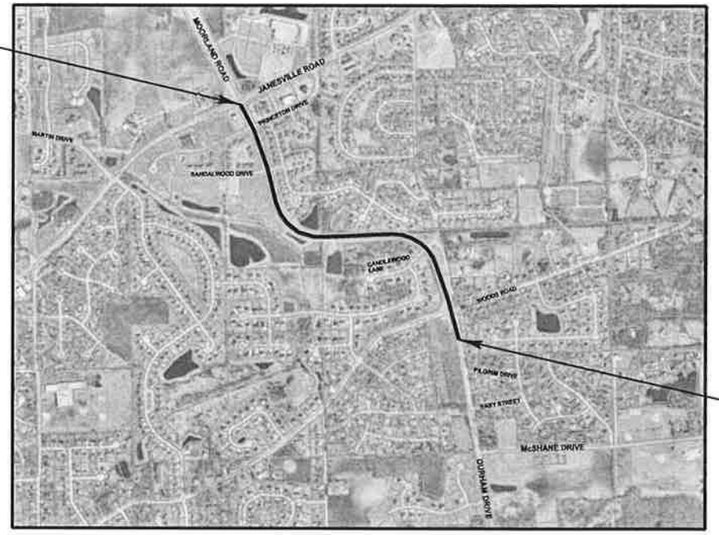
WAUKESHA COUNTY

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
2723-00-71	WISC 2018010	1

STATE PROJECT NUMBER

2723-00-71

END PROJECT 2723-00-71
STA 199+32.88



N

T-5-N

BEGIN PROJECT 2723-00-71
STA 148+35.05
X=2509680.549
Y=337462.238

R-20-E

LAYOUT
SCALE 0 .2 MI.

TOTAL NET LENGTH OF CENTERLINE = 0.965 MI.

DESIGN DESIGNATION

A.A.D.T.	2018	=	8,600
A.A.D.T.	2038	=	11,100
D.H.V.	2038	=	766
D.D.		=	59/41
T.		=	11.4%
DESIGN SPEED		=	40 MPH
ESALS		=	2,226,500

CONVENTIONAL SYMBOLS

PLAN

- CORPORATE LIMITS
- PROPERTY LINE (PL + 58.1)
- LOT LINE
- LIMITED HIGHWAY EASEMENT
- EXISTING RIGHT OF WAY
- PROPOSED OR NEW R/W LINE
- SLOPE INTERCEPT
- REFERENCE LINE
- EXISTING CULVERT
- PROPOSED CULVERT (Box or Pipe)
- COMBUSTIBLE FLUIDS (CAUTION)
- MARSH AREA
- WOODED OR SHRUB AREA

PROFILE

- GRADE LINE
- ORIGINAL GROUND
- MARSH OR ROCK PROFILE (To be noted as such) (ROCK)
- SPECIAL DITCH (LABEL)
- GRADE ELEVATION (95.36)
- CULVERT (Profile View)

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 THE PLAN ARE REFERENCED TO THE WISCONSIN STATE PLANE COORDINATE SYSTEM (WSPCS), SOUTH ZONE, NAD 1927.

ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO THE NATIONAL GEODETIC VERTICAL DATUM (NGVD29).

ACCEPTED FOR CITY OF MUSKEGO

7-20-17 (Date) City Engineer

ORIGINAL PLANS PREPARED BY

KAPUR & ASSOCIATES, INC.
CONSULTING ENGINEERS
MILWAUKEE, WISCONSIN
414.751.7200

WISCONSIN PROFESSIONAL ENGINEER
AARON J. BUBB
E-36994
HUBERTUS, WI.

7-19-17 (Date) (Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	Kapur & Associates, Inc
Designer	Kapur & Associates, Inc
Management Consultant	DAAR Engineering, Inc

APPROVED FOR THE DEPARTMENT

DATE: 7/25/2017 (Management Consultant Signature)

E

2

GENERAL NOTES

THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.

ALL PRIVATE EXISTING UTILITIES NOT INCLUDED IN THE PLAN ARE TO BE ADJUSTED BY THE UTILITIES CONCERNED. SANITARY MANHOLES AND WATER VALVES WILL BE ADJUSTED AND PAID FOR AS CONTRACT BID ITEMS.

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 DIGGERS HOTLINE MUST BE CONTACTED SEPARATELY.

TEMPORARY STORAGE OF ANY EXCAVATED MATERIAL WILL NOT BE PERMITTED IN WETLAND AREAS.

FERTILIZER SHALL NOT BE USED WITHIN 20 FEET OF NAVIGABLE WATERWAYS OR WETLANDS.

CROSS SECTIONS SHOWN INCLUDE THE THICKNESS OF TOPSOIL WHERE REQUIRED. TOPSOIL SHALL BE PLACED A MINIMUM OF 6 INCHES IN DEPTH.

TOPSOIL SHALL NOT BE PLACED UNTIL APPROVED BY ENGINEER.

DISTURBED AREAS WITHIN RIGHT-OF-WAY OR TLE SHALL BE RESTORED BY DIRECTION OF THE ENGINEER WITH THE FOLLOWING FINISHING ITEMS: TOPSOIL, SEED, FERTILIZER, AND EROSION MAT. QUANTITIES FOR FINISHING ITEMS INCLUDE RESTORATION EXTENDING 3 FEET BEYOND THE SLOPE INTERCEPT SHOWN ON THE PLANS. TOPSOIL SHALL BE APPLIED WITHIN 3 CALENDAR DAYS AFTER GRADING WORK IS COMPLETED. SEED, FERTILIZER, AND EROSION MAT SHALL BE APPLIED WITHIN 3 CALENDAR DAYS AFTER PLACEMENT OF TOPSOIL. IF GRADED AREAS OUTSIDE THE FUTURE PAVEMENT ARE LEFT NOT COMPLETED AND EXPOSED FOR MORE THAN 21 CALENDAR DAYS, SEED THOSE AREAS WITH TEMPORARY SEED AND MULCH WITHIN 3 CALENDAR DAYS OF ANY DISTURBANCE.

EROSION CONTROL DEVICES WILL BE PLACED IN SEQUENCE WITH CONSTRUCTION ACTIVITIES AS DETERMINED BY THE ENGINEER.

EROSION CONTROL FEATURES AS SHOWN IN THE PLANS ARE AT SUGGESTED LOCATIONS. EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER.

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

NO TREES OR SHRUBS SHALL BE REMOVED WITHOUT APPROVAL OF THE ENGINEER.

ALL HOLES OR OPENINGS BELOW SUBGRADE RESULTING FROM ABANDONMENT OR REMOVAL OF EXISTING STRUCTURES WILL BE FILLED WITH COMPACTED BACKFILL GRANULAR GRADE 1 UNLESS REGULATIONS REQUIRED OTHERWISE. BACKFILL GRANULAR GRADE 1 IS INCIDENTAL TO THE REMOVAL ITEM.

PRIOR TO ORDERING DRAINAGE PIPES AND STRUCTURES, THE CONTRACTOR MUST VERIFY INVERT AND RIM ELEVATIONS IN THE PLAN WITH THE ENGINEER.

INLET AND DISCHARGE ELEVATIONS FOR DRAINAGE STRUCTURES SHOWN ON THE PLAN MAY BE ADJUSTED BY THE ENGINEER TO FIT FIELD CONDITIONS.

LOCATION AND ELEVATION OF STORM SEWER STRUCTURES IN CURB AND GUTTER SECTION REFER TO FLOW LINE OF CURB.

LOCATION AND ELEVATION OF STORM SEWER STRUCTURES NOT IN CURB AND GUTTER REFER TO CENTERLINE OF COVER.

ADJUSTING MANHOLES TO GRADE SHALL BE COMPLETED AFTER PAVING MIDDLE LAYER.

EXISTING INLET AND MANHOLE COVERS THAT ARE NOT REQUIRED TO BE REUSED ON THE PROJECT SHALL BECOME THE PROPERTY OF THE CITY OF MUSKEGO. RETURN THESE COVERS PALLETIZED FOR HANDLING WITH A FORKLIFT. CONTACT FRANK HEINRICH, THE CITY OF MUSKEGO PUBLIC WORKS SUPERINTENDENT, AT (414) 313-0908 AT LEAST 3 BUSINESS DAYS IN ADVANCE TO COORDINATE THE SHIPMENT AND DROP-OFF LOCATION. THE SALVAGING, PALLETIZING, LOADING, HAULING, AND DELIVERY OF THE EXISTING INLET AND MANHOLE COVERS ARE INCIDENTAL TO THE ITEMS, ADJUSTING INLET COVERS AND ADJUSTING MANHOLE COVERS.

REINFORCED CONCRETE APRON ENDWALLS AND ADJOINING TWO SECTIONS OF CONCRETE PIPE WILL BE TIED TOGETHER AS SHOWN ON THE STANDARD DETAIL DRAWINGS. JOINT TIES WILL BE INCIDENTAL ITEMS INCLUDED IN THE COST OF THE CONCRETE PIPE.

CURB HEIGHTS AT THE END OF CURB AND GUTTER WILL BE TAPERED FROM 0 TO 6 INCHES OVER 6 FEET. CHANGES IN CURB TYPE SHALL TRANSITION AT A RATE OF 8:1.

CURB AND GUTTER GRADES ARE GIVEN TO THE FLANGE LINE, UNLESS NOTED OTHERWISE.

CURB AND GUTTER JOINT SPACING SHALL BE 20 FEET ALONG TANGENT SECTIONS.

1/2-INCH FELT EXPANSION JOINT MATERIAL IS REQUIRED BETWEEN BACK OF CURB AND FRONT OF WALK OR DRIVEWAY APRON.

EXISTING DRIVEWAYS AND FIELD ENTRANCES WILL BE RESTORED IN KIND AS DIRECTED BY THE ENGINEER IN THE FIELD AND AT THE LOCATION DETERMINED BY THE ENGINEER.

BROKEN CONCRETE CONTAINING RE-BAR WILL NOT BE USED AS RIPRAP.

A SAWED JOINT IS REQUIRED WHERE NEW HMA PAVEMENT MEETS EXISTING ASPHALTIC CONCRETE SURFACE.

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

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FEDERAL HIGHWAY ADMINISTRATION MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).

SIGNS TO BE MOVED WILL BE STORED AND PROTECTED BY THE CONTRACTOR, FREE FROM DAMAGE, UNTIL SUCH TIME AS THEY ARE RE-INSTALLED.

CONSTRUCT HMA PAVEMENT WITH THE FOLLOWING LAYERS AND GRADATIONS:

MOORLAND ROAD

7-INCH HMA PAVEMENT
2" UPPER LAYER 4 MT 58-28 S
2.5" MIDDLE LAYER 3 MT 58-28 S
2.5" LOWER LAYER 3 MT 58-28 S

ROUNDABOUT AND WOODS ROAD

7-INCH HMA PAVEMENT
2" UPPER LAYER 4 HT 58-28 H
2.5" MIDDLE LAYER 3 HT 58-28 S
2.5" LOWER LAYER 3 HT 58-28 S

ASPHALT DRIVEWAYS

5-INCH HMA PAVEMENT
2.5" UPPER LAYER 4 LT 58-28 S
2.5" LOWER LAYER 4 LT 58-28 S

ASPHALT PATH

3-INCH HMA PAVEMENT
3" 4 LT 58-28 S

MILL AND OVERLAY

2-INCH HMA PAVEMENT
2" 4 MT 58-28 S

UTILITY/AGENCY CONTACTS

AT&T WISCONSIN
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WAUKESHA, WI 53188
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MILWAUKEE, WI 53212
(414) 277-4045
STEVE.CRAMER@CHARTER.COM

MIDWEST FIBER NETWORKS
MS. JEANNE LISAK
6070 N. FLINT ROAD
GLENDALE, WI 53209
(414) 431-0626
JLISAK@MIDWESTFIBERNETWORKS.COM

WAUKESHA COUNTY DEPT OF PUBLIC WORKS
MR. BRUCE BARNES
ENGINEERING SERVICES MANAGER
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WAUKESHA, WI 53188
(262) 548-7748
BGBARNES@WAUKESHACOUNTY.GOV

WE ENERGIES - ELECTRIC
MR. BRYAN STOEHR
500 S. 116TH STREET
WEST ALLIS, WI 53214
(414) 944-5516
BRYAN.STOEHR@WE-ENERGIES.COM

WE ENERGIES - GAS
MS. AUTUMN RECORE
4800 W. RAWSON AVENUE
FRANKLIN, WI 53132
(414) 423-5071
AUTUMN.RECORE@WE-ENERGIES.COM

CITY OF MUSKEGO SEWER, WATER AND LIGHTING
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CITY ENGINEER
W182 S8200 RACINE AVENUE
MUSKEGO, WI 53150
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MIKE.PAULOS@GRAEF-USA.COM

OTHER CONTACTS

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WAUKESHA, WI 53187
(262) 574-2141
CRAIG.WEBSTER@WISCONSIN.GOV

CITY OF MUSKEGO POLICE
MR. RICHARD RENS
POLICE CHIEF
W183 S8150 RACINE AVENUE
MUSKEGO, WI 53150
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KAPUR AND ASSOCIATES, INC.
MR. AARON BUBB
PROJECT MANAGER
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MILWAUKEE, WI 53217
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DIGGERS HOTLINE
Dial 811 or (800) 242-8511
www.DiggersHotline.com

DESIGN INDEX

TITLE
GENERAL NOTES AND UTILITY CONTACTS
PROJECT OVERVIEW
TYPICAL SECTIONS
CONSTRUCTION DETAILS
PLAN DETAILS
PAVING GRADES
EROSION CONTROL
STORM SEWER
WATER MAIN
SIGNING
LIGHTING
PAVEMENT MARKING
STAGE CONSTRUCTION
TRAFFIC CONTROL
DETOUR PLAN
ALIGNMENT PLAN

STANDARD ABBREVIATIONS

<	ANGLE
ADT	AVERAGE DAILY TRAFFIC
AC	ACRE
AE, AEW	APRON ENDWALL
AGG	AGGREGATE
AH	AHEAD
ASPH	ASPHALTIC
BC	BACK OF CURB
BF	BACK FACE
BIT	EXISTING BITUMINOUS
BM	BENCH MARK
BEG	BEGIN
BK	BACK
C & G	CURB AND GUTTER
CABC	CRUSHED AGGREGATE BASE COURSE
CB	CATCH BASIN
CMCP	CORRUGATED METAL CULVERT PIPE
CMP	CORRUGATED METAL PIPE
CP	CULVERT PIPE
CY	CUBIC YARD
CL OR C/L	CENTER LINE
CO	COUNTY
CONC	CONCRETE
CONST	CONSTRUCTION
CR	CREEK
CTH	COUNTY TRUNK HIGHWAY
CWT	HUNDRED WEIGHT
D	DEGREE OF CURVE
△	DELTA
DHV	DESIGN HOUR VOLUME
DIA	DIAMETER
DISCH	DISCHARGE
E	EAST
EA	EACH
EB	EASTBOUND
EBS	EXCAVATION BELOW SUBGRADE
EL, ELEV	ELEVATION
ELEC	ELECTRIC(AL), ELEC CABLE
EMB	EMBANKMENT
ESALS	EQUIVALENT SINGLE AXEL LOADS
ESMT	EASEMENT
EW	ENDWALL
EXC	EXCAVATION
EXIST	EXISTING BITUMINOUS
EXP	EXPANSION
FC	FACE OF CURB
FE	FIELD ENTRANCE
FF	FACE TO FACE
F/L, FL	FLOW LINE
FERT	FERTILIZER
FHWA	FEDERAL HIGHWAY
FT	FOOT (FEET)
G	GAS
GN	GRID NORTH
H	HOUSE
HMA	HOT MIX ASPHALT
HORZ	HORIZONTAL
HP	HIGH POINT
HR	HANDICAP RAMP
HYD	HYDRANT
I	INTERSECTION ANGLE
ID	INSIDE DIAMETER
INL	INLET
INTER	INTERSECTION
INV	INVERT
IP	IRON PIPE
JT	JOINT
K	RATE OF VERTICAL CURVATURE
L	LENGTH OF CURVE
LB	POUND
LC	LONG CHORD OF CURVE
LP	LOW POINT
LF	LINEAR FOOT(FEET)
LHF	LEFT HAND FORWARD
LS	LUMP SUM
LT	LEFT
M	MARSH
MATL	MATERIAL
MP	MARKER POST
MAX	MAXIMUM
MGAL	1000 GALLONS
MH	MANHOLE
MIN	MINIMUM
ML OR M/L	MATCH LINE
N	NORTH
NB	NORTHBOUND
NC	NORMAL CROWN OR NO CHANGE
NO	NUMBER
NW OR N/W	NORMAL WATER
OBLIT	OBLITERATE
OD	OUTSIDE DIAMETER
PAVT	PAVEMENT
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVE
PE	PRIVATE ENTRANCE
PGL	PROFILE GRADE LINE
PI	POINT OF INTERSECTION
PL	PROPERTY LINE
PLE	PERMANENT LIMITED EASEMENT
PRC	POINT OF REVERSE CURVE
PROJ	PROJECT
PSI	POUNDS PER SQUARE INCH
PT	POINT OF TANGENCY
PVC	POLYVINYL CHLORIDE
PAV'T	PAVEMENT
PCC	PORTLAND CEMENT CONCRETE
R	RADIUS OR RANGE
RC	REVERSE CURVE
RCCP	REINFORCED CONCRETE CULVERT PIPE
RCHECP	REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CULVERT PIPE
RCPSS	REINFORCED CONCRETE PIPE STORM SEWER
RHF	RIGHT HAND FORWARD
R/L	REFERENCE LINE
R/W	RIGHT OF WAY
RD	ROAD
RDWY	ROADWAY
REL	RELOCATE
REM	REMAINING
REQD	REQUIRED
RO	RUN OFF LENGTH
RT	RIGHT
RW	RETAINING WALL
S	SOUTH
SALV	SALVAGED
SAN	SANITARY
SB	SOUTHBOUND
SDD	STANDARD DETAIL DRAWINGS
SE	SUPERELEVATION
SEC	SECTION
SF	SQUARE FOOT (FEET)
S/L	SURVEY LINE
SHLDR	SHOULDER(S)
SHR	SHRINKAGE
SPECS	SPECIFICATIONS
SS	STORM SEWER
STA	STATION
STH	STATE TRUNK HIGHWAY
STR	STRUCTURE
SW	SIDEWALK
SY	SQUARE YARD
TAN	TANGENT
TEL	TELEPHONE
T	(TRUCKS) PERCENT OF
TC	TOP OF CURB
TAN	TANGENT
TEMP	TEMPORARY
TL OR T/L	TRANSIT LINE
TLE	TEMPORARY LIMITED EASEMENT
TYP	TYPICAL
UG	UNDERGROUND (CABLE)
UNCL	UNCLASSIFIED
VAR	VARIABLE
VCL	VERTICAL CURVE LENGTH
VPC	VERTICAL POINT OF CURVATURE
VPCC	VERTICAL POINT OF COMPOUND CURVE
VPI	VERTICAL POINT OF INTERSECTION
VPRC	VERTICAL POINT OF REVERSE CURVE
VPT	VERTICAL POINT OF TANGENCY
VLV	VALVE
VOL	VOLUME
W	WEST
WB	WESTBOUND
WV	WATER VALVE
X	EASTING OR EAST GRID COORDINATE
Y	NORTHING OR NORTH GRID COORDINATE
YD	YARD

2

2

BEGIN CONSTRUCTION
STA 79+04.56

OVERHEAD SIGN SUPPORT

END PROJECT
STA 199+32.88

BEGIN CONSTRUCTION
STA 69+14.92

R/L MOORLAND RD SB

SANDALWOOD DR

PRINCETON DR

MOORLAND RD

200

END CONSTRUCTION
STA 196+75.00

EXISTING DETENTION BASIN

180

JANESVILLE RD

R/L MOORLAND RD

END CONSTRUCTION
STA 80+67.46

R/L PRINCETON DR

END CONSTRUCTION
STA 70+63.09

R/L SANDALWOOD DR

R/L MOORLAND RD SB

R/L CANDLEWOOD LN

MOORLAND RD

170

BEGIN CONSTRUCTION
STA 58+75.00

BEGIN CONSTRUCTION
STA 40+32.29

WOODS RD

CANDLEWOOD LN

R/L WOODS RD

R/L DURHAM DR SB

BEGIN PROJECT
STA 148+35.05

R/L DURHAM DR

260

DETENTION BASIN

DURHAM PL

END CONSTRUCTION
STA 61+36.50

130

DURHAM DR

140

R/L DRIVEWAY

R/L RAB

EASY ST

PILGRIM DR

END CONSTRUCTION
STA 46+80.36

WOODS RD

McSHANE DR

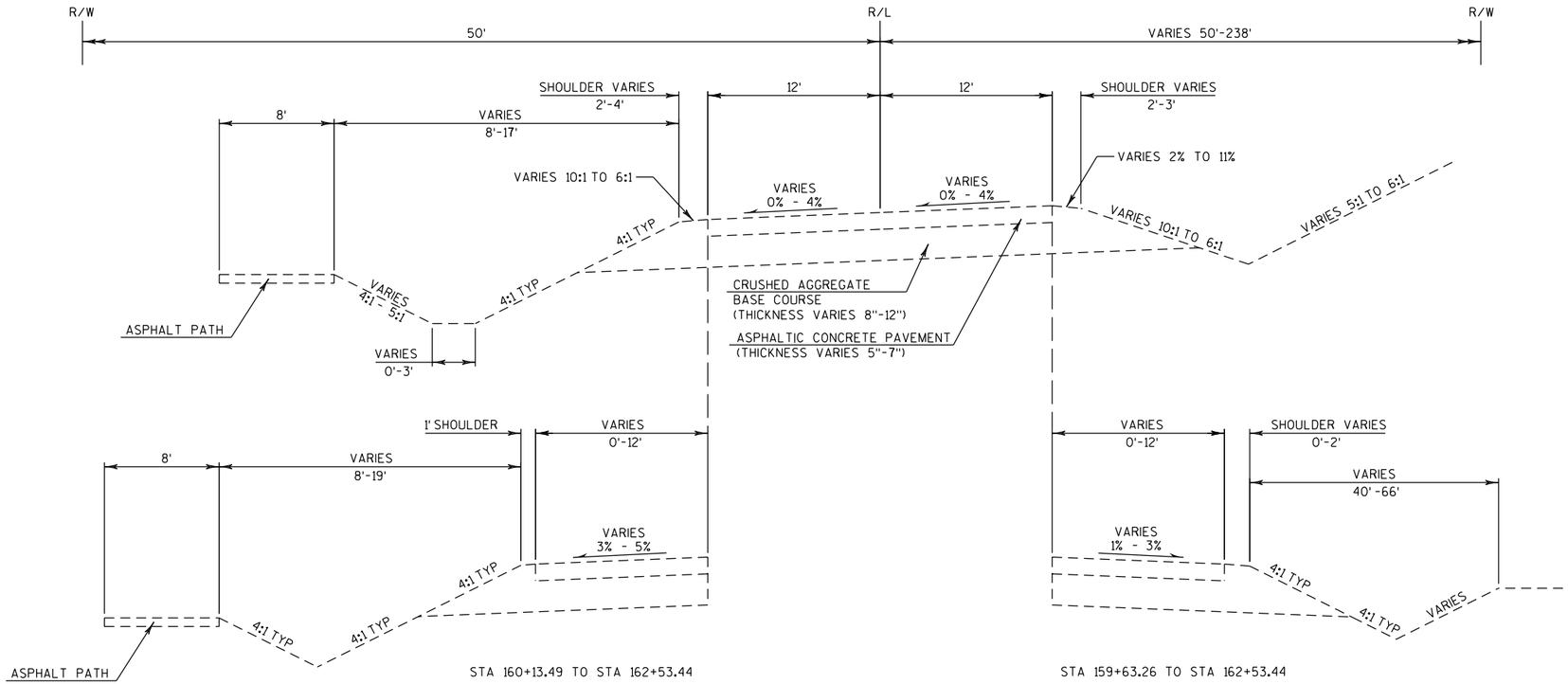
R/L EASY ST

R/L PILGRAM DR

PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	PROJECT OVERVIEW	SHEET 4	E

FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\020201_PO.dgn PLOT DATE : 7/26/2017 PLOT BY : wwolak PLOT NAME : PLOT SCALE : 1:400

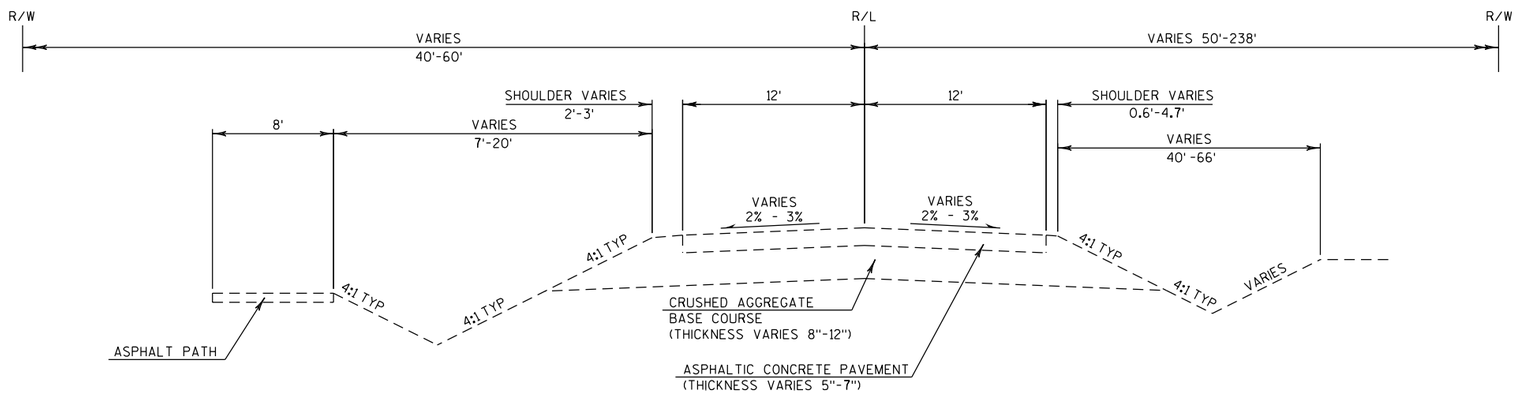
WISDOT/CADDS SHEET 42



TYPICAL EXISTING SECTION

MOORLAND RD

STA 157+00.00 TO STA 167+75.00

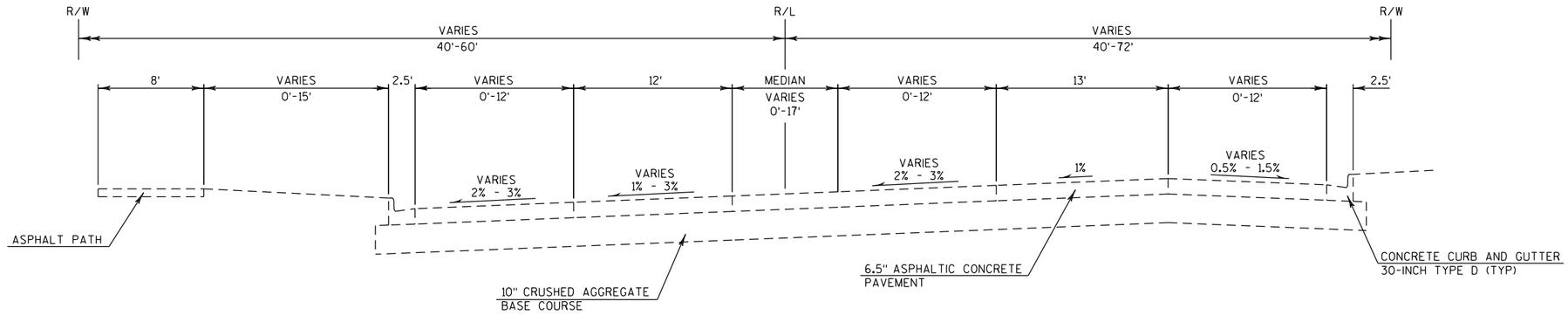


TYPICAL EXISTING SECTION

DURHAM DR/MOORLAND RD

STA 148+35.05 TO STA 157+00.00
STA 167+75.00 TO STA 174+25.00
STA 188+57.00 TO STA 189+00.00

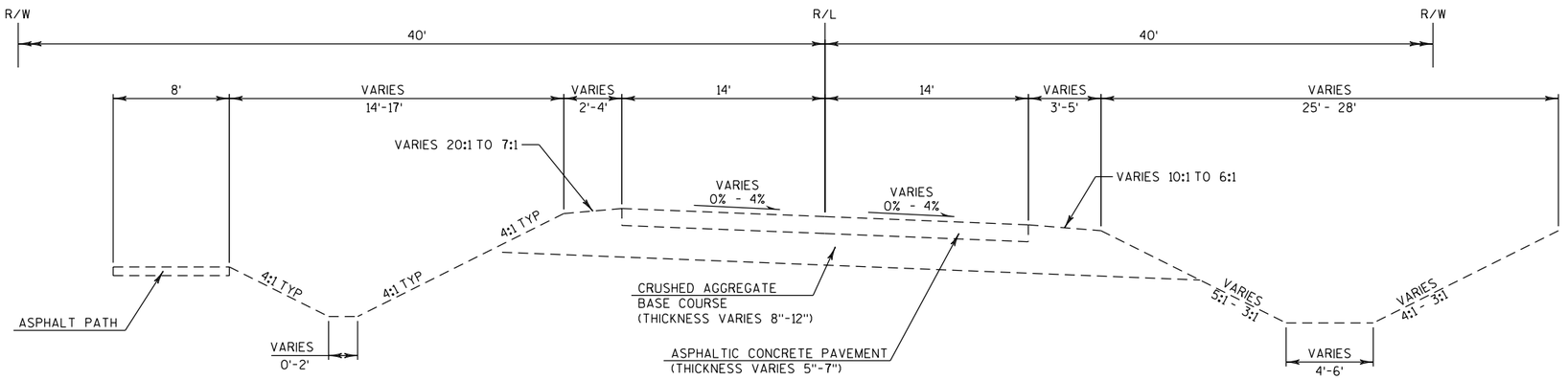
PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	TYPICAL SECTIONS	SHEET 5	E



TYPICAL EXISTING SECTION

MOORLAND RD

STA 189+00.00 TO STA 196+32.65

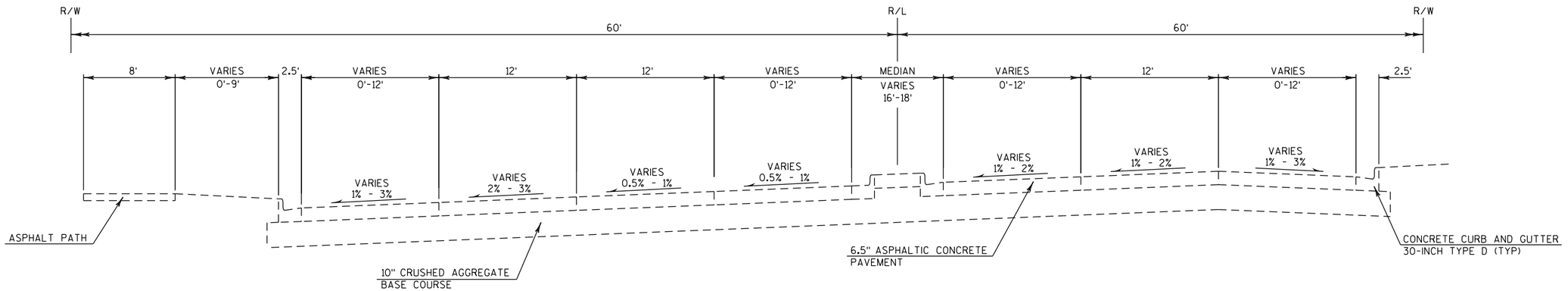


TYPICAL EXISTING SECTION

MOORLAND RD

STA 174+25.00 TO STA 188+57.00

PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	TYPICAL SECTIONS	SHEET 6	E

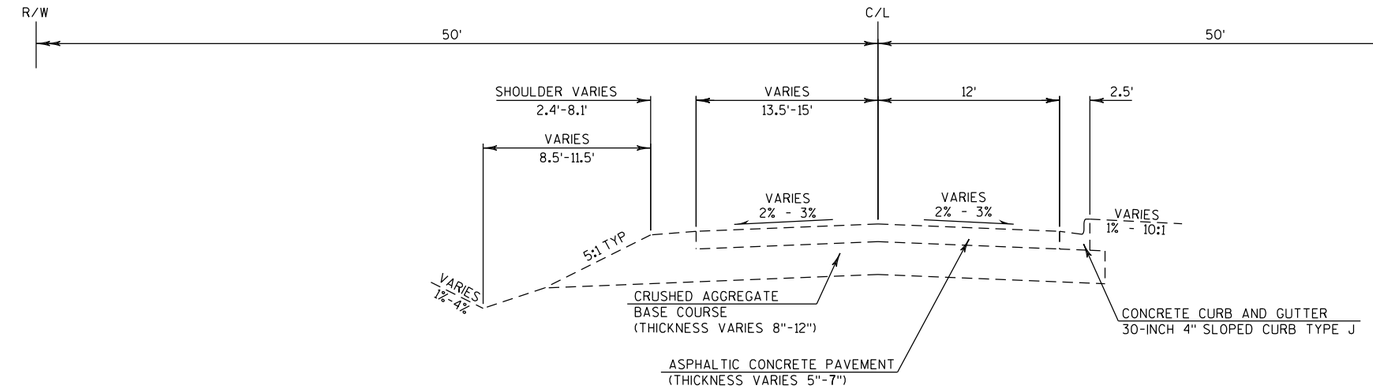


TYPICAL EXISTING SECTION

MOORLAND RD

STA 196+32.65 TO STA 199+32.88

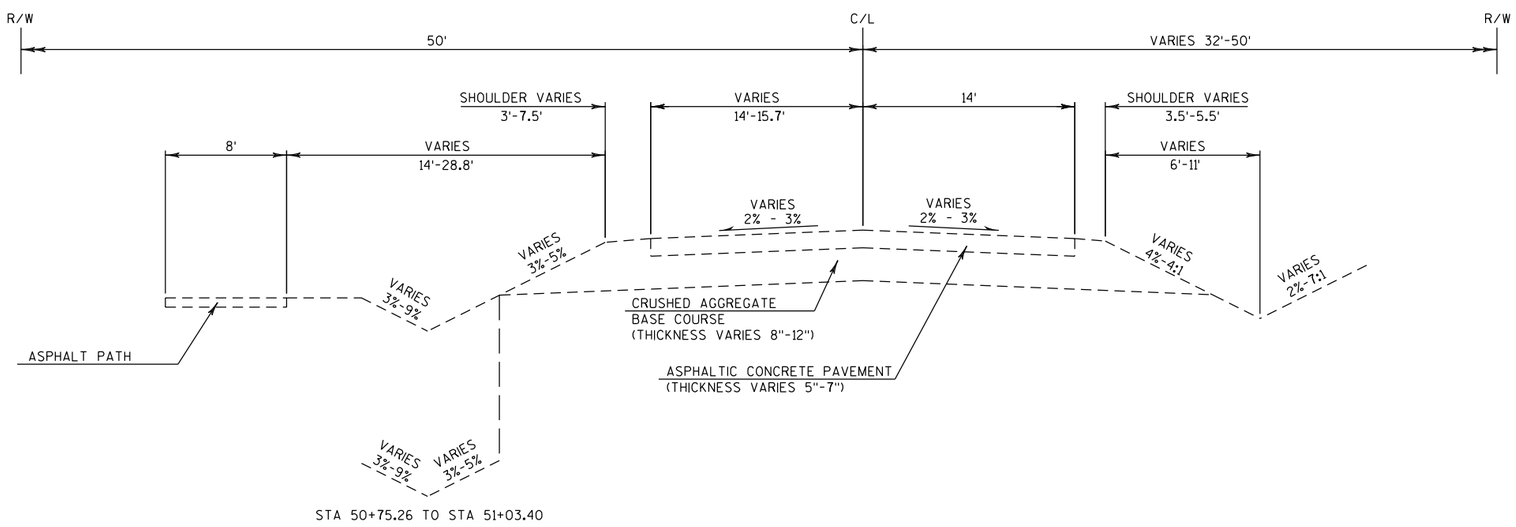
PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	TYPICAL SECTIONS	SHEET 7	E



TYPICAL EXISTING SECTION

WOODS RD

STA 44+61.61 TO STA 46+80.36



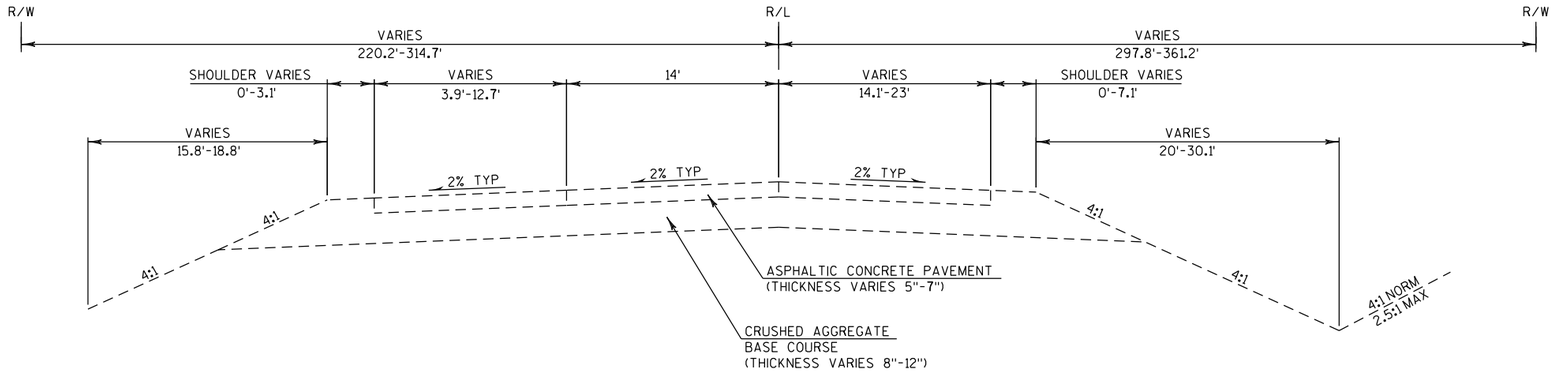
STA 50+75.26 TO STA 51+03.40

TYPICAL EXISTING SECTION

WOODS RD

STA 40+32.29 TO STA 42+93.97

PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	TYPICAL SECTIONS	SHEET 8	E

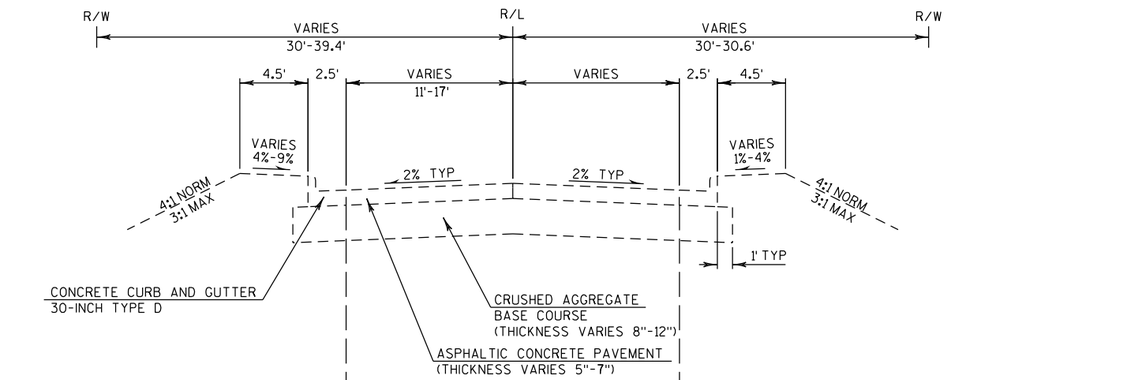


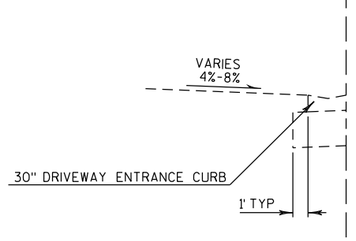
TYPICAL EXISTING SECTION

DURHAM PL

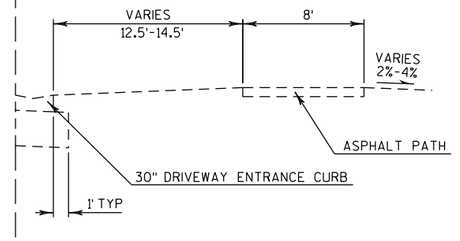
STA 60+19.32 TO STA 61+36.50

PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	TYPICAL SECTIONS	SHEET 9	E

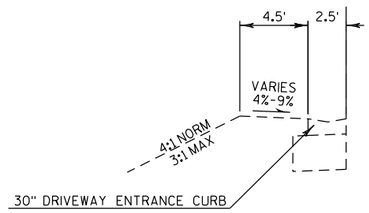




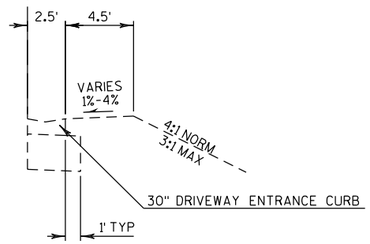
SANDALWOOD DR
STA 69+14.92 TO STA 69+73.18



SANDALWOOD DR
STA 69+14.92 TO STA 69+73.18



PRINCETON DR
STA 79+04.56 TO STA 79+36.64
STA 80+27.00 TO STA 80+63.98



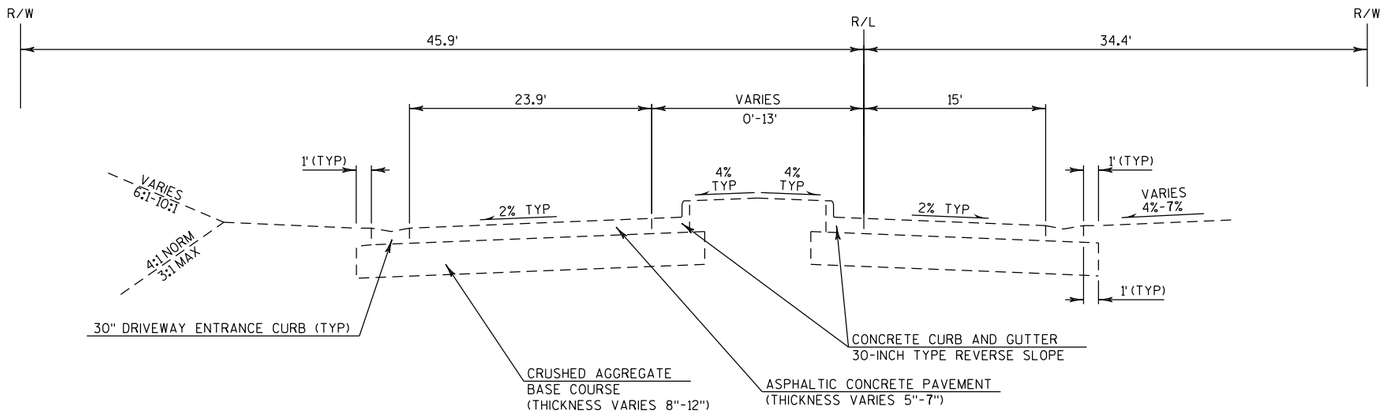
PRINCETON DR
STA 79+04.56 TO STA 79+36.64
STA 80+27.00 TO STA 80+63.98

TYPICAL EXISTING SECTION

CANDLEWOOD LN
STA 58+75.00 TO STA 59+60.60

PRINCETON DR
STA 79+04.56 TO STA 79+36.64
STA 80+27.00 TO STA 80+67.46

SANDALWOOD DR
STA 69+14.92 TO STA 70+38.16



TYPICAL EXISTING SECTION

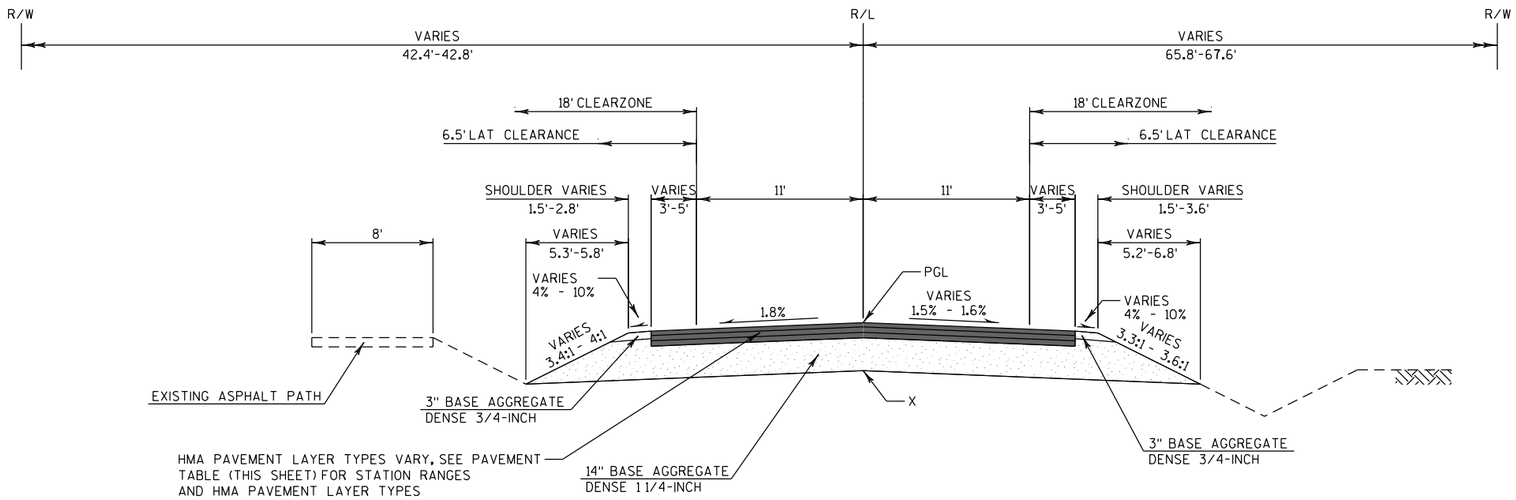
SANDALWOOD DR
STA 70+38.16 TO STA 70+63.09

MOORLAND ROAD PAVEMENT TABLE	
STATION RANGE	PAVEMENT TYPE
STA 148+35.05 TO STA 148+45.00	2" HMA 4 MT 58-28 S (UPPER LAYER) 2.5" HMA 3 MT 58-28 S (MIDDLE LAYER) 2.5" HMA 3 MT 58-28 S (LOWER LAYER)

NOTE:

1) SEE "PAVING GRADES" FOR LANE WARPING.

PGL=POINT REFERENCED TO ON PROFILE
X=POINT REFERENCED TO ON CROSS SECTIONS



TYPICAL FINISHED SECTION

DURHAM DR

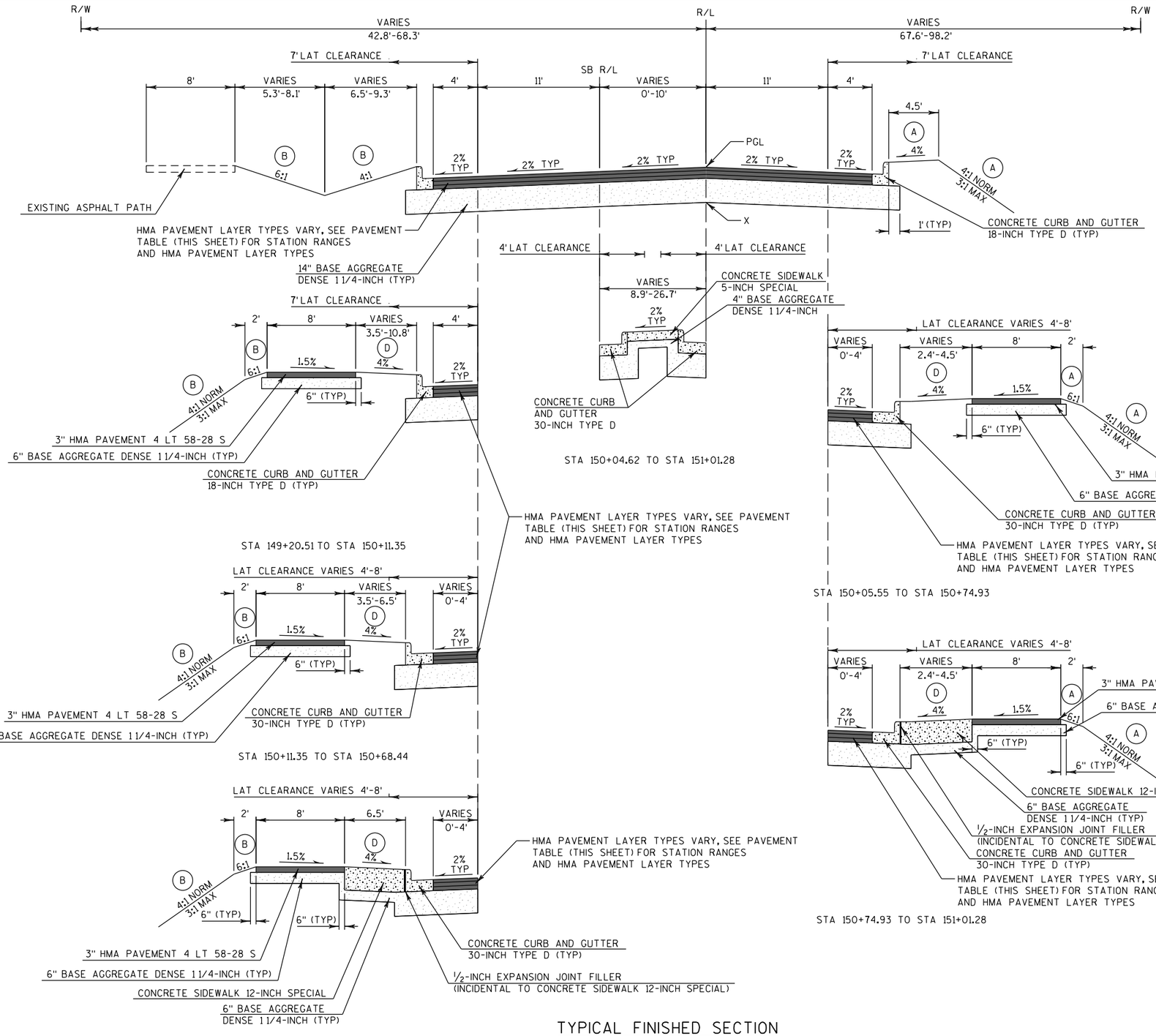
STA 148+35.05 TO STA 148+45.00

LEGEND

(A) 6" TOPSOIL, SOD LAWN AND FERTILIZER TYPE B

(B) 6" TOPSOIL, SEED MIXTURE NO. 30 AND FERTILIZER TYPE B

PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	TYPICAL SECTIONS	SHEET 12	E



MOORLAND ROAD PAVEMENT TABLE	
STATION RANGE	PAVEMENT TYPE
STA 148+45.00 TO STA 149+90.52	2" HMA 4 MT 58-28 S (UPPER LAYER) 2.5" HMA 3 MT 58-28 S (MIDDLE LAYER) 2.5" HMA 3 MT 58-28 S (LOWER LAYER)
STA 149+90.52 TO STA 151+01.28	2" 4HT 58-28 H (UPPER LAYER) 2.5" 3 HT 58-28 S (MIDDLE LAYER) 2.5" 3 HT 58-28 S (LOWER LAYER)

NOTE:

1) SEE "PAVING GRADES" FOR LANE WARPING.

PGL=POINT REFERENCED TO ON PROFILE
X=POINT REFERENCED TO ON CROSS SECTIONS

TYPICAL FINISHED SECTION

DURHAM DR

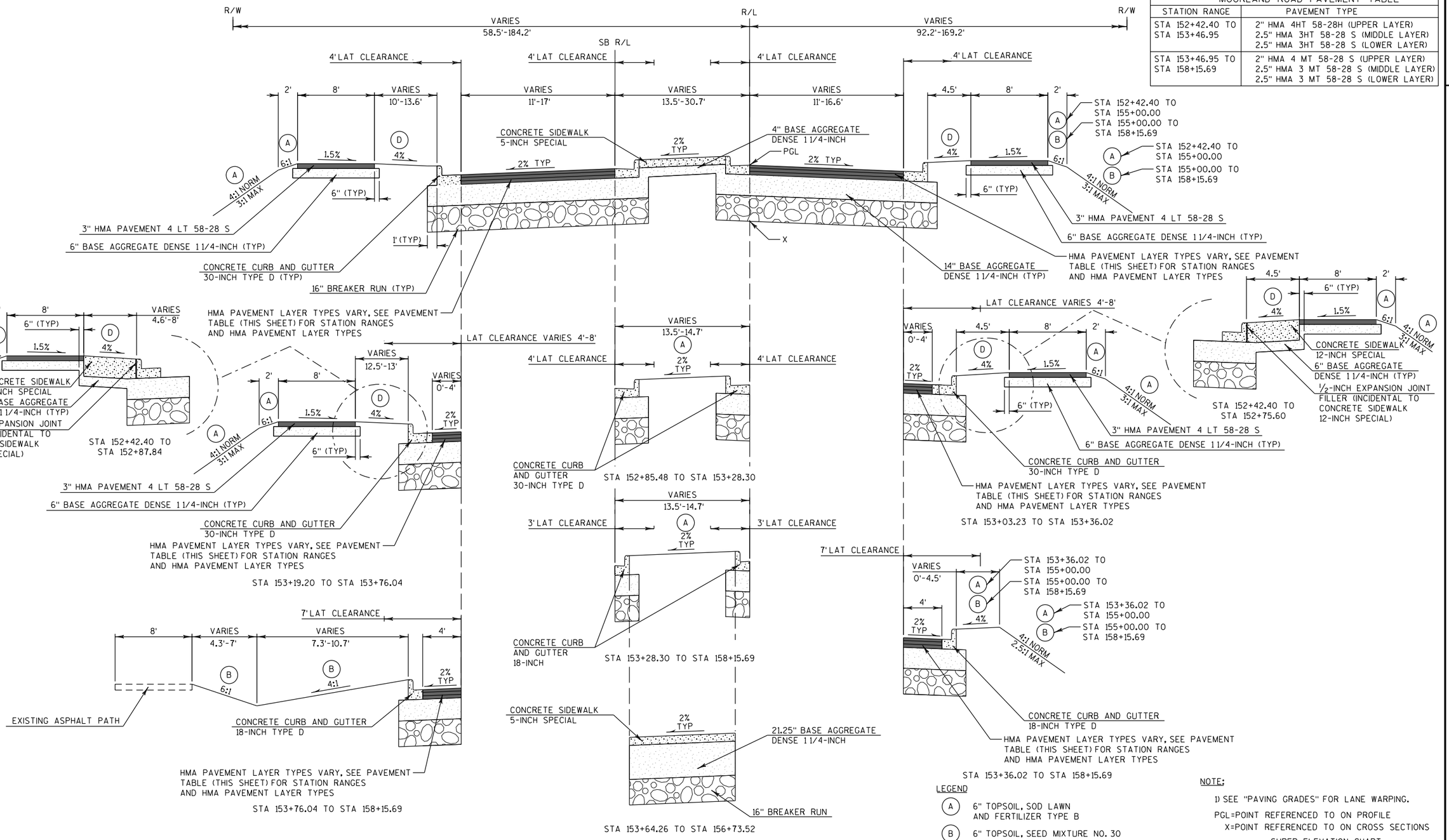
STA 148+45.00 TO STA 151+01.28

LEGEND

- (A) 6" TOPSOIL, SOD LAWN AND FERTILIZER TYPE B
- (B) 6" TOPSOIL, SEED MIXTURE NO. 30 AND FERTILIZER TYPE B
- (C) 6" TOPSOIL, SEED MIXTURE NO. 70 AND FERTILIZER TYPE A OR TYPE B
- (D) SEE PLAN DETAILS FOR LOCATIONS OF LAWN SOD OR CONCRETE SIDEWALK SPECIAL

PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	TYPICAL SECTIONS	SHEET 13	E

MOORLAND ROAD PAVEMENT TABLE	
STATION RANGE	PAVEMENT TYPE
STA 152+42.40 TO STA 153+46.95	2" HMA 4HT 58-28H (UPPER LAYER) 2.5" HMA 3HT 58-28 S (MIDDLE LAYER) 2.5" HMA 3HT 58-28 S (LOWER LAYER)
STA 153+46.95 TO STA 158+15.69	2" HMA 4 MT 58-28 S (UPPER LAYER) 2.5" HMA 3 MT 58-28 S (MIDDLE LAYER) 2.5" HMA 3 MT 58-28 S (LOWER LAYER)



TYPICAL FINISHED SECTION

MOORLAND RD

STA 152+42.40 TO STA 158+15.69

LEGEND

- (A) 6" TOPSOIL, SOD LAWN AND FERTILIZER TYPE B
- (B) 6" TOPSOIL, SEED MIXTURE NO. 30 AND FERTILIZER TYPE B
- (C) 6" TOPSOIL, SEED MIXTURE NO. 70 AND FERTILIZER TYPE A OR TYPE B
- (D) SEE PLAN DETAILS FOR LOCATIONS OF LAWN SOD OR CONCRETE SIDEWALK SPECIAL

NOTE:

1) SEE "PAVING GRADES" FOR LANE WARPING.

PGL=POINT REFERENCED TO ON PROFILE
X=POINT REFERENCED TO ON CROSS SECTIONS

SUPER ELEVATION CHART

SBL PGL STA	SB LANE PAVED SHLD	R/L STA	NB LANE PAVED SHLD
258+31	⟋-2.0%	157+36	-2.0%⟍
257+49	⟋-2.0%	158+18	⟋2.0%

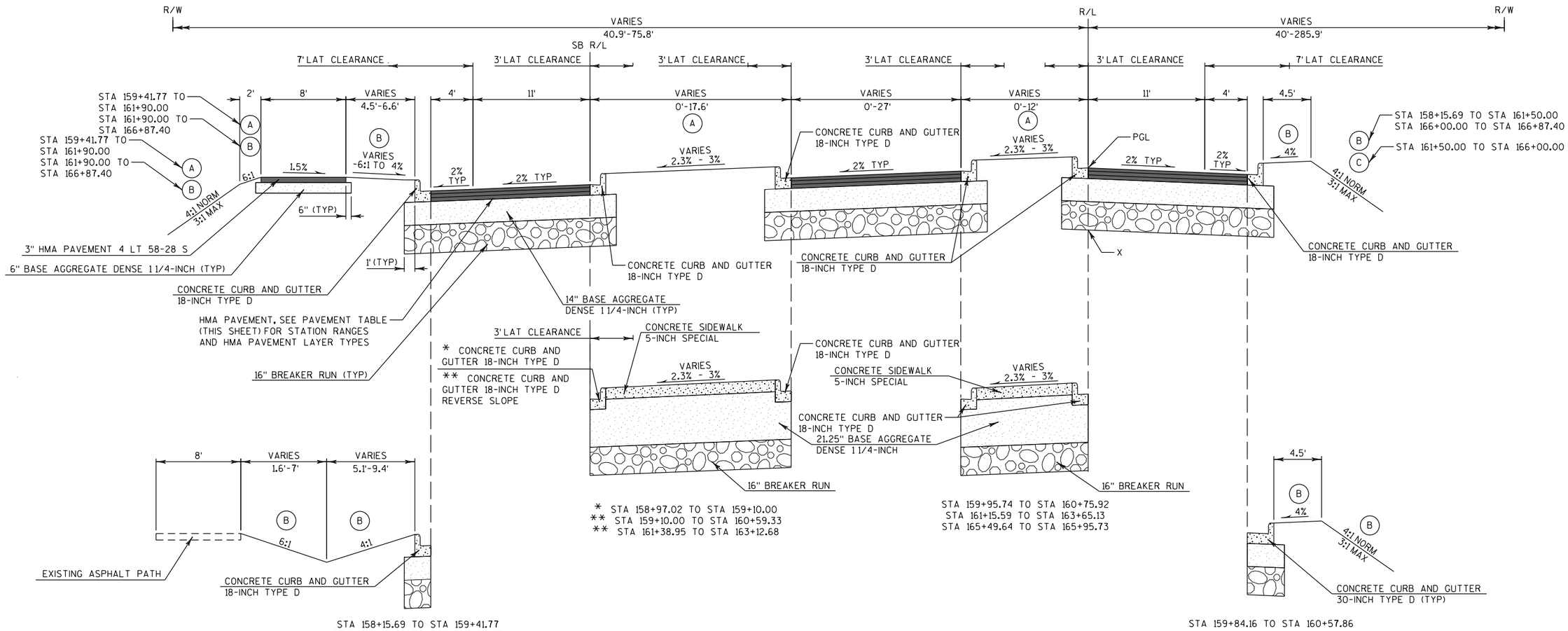
PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	TYPICAL SECTIONS	SHEET 14	E

MOORLAND ROAD PAVEMENT TABLE	
STATION RANGE	PAVEMENT TYPE
STA 158+15.69 TO STA 166+87.40	2" HMA 4MT 58-28S (UPPER LAYER) 2.5" HMA 3MT 58-28 S (MIDDLE LAYER) 2.5" HMA 3MT 58-28 S (LOWER LAYER)

NOTE:

1) SEE "PAVING GRADES" FOR LANE WARPING.

PGL=POINT REFERENCED TO ON PROFILE
X=POINT REFERENCED TO ON CROSS SECTIONS



TYPICAL FINISHED SECTION

MOORLAND RD

STA 158+15.69 TO STA 166+87.40

LEGEND

- (A) 6" TOPSOIL, SOD LAWN AND FERTILIZER TYPE B
- (B) 6" TOPSOIL, SEED MIXTURE NO. 30 AND FERTILIZER TYPE B
- (C) 6" TOPSOIL, SEED MIXTURE NO. 70 AND FERTILIZER TYPE A OR TYPE B

SUPER ELEVATION CHART

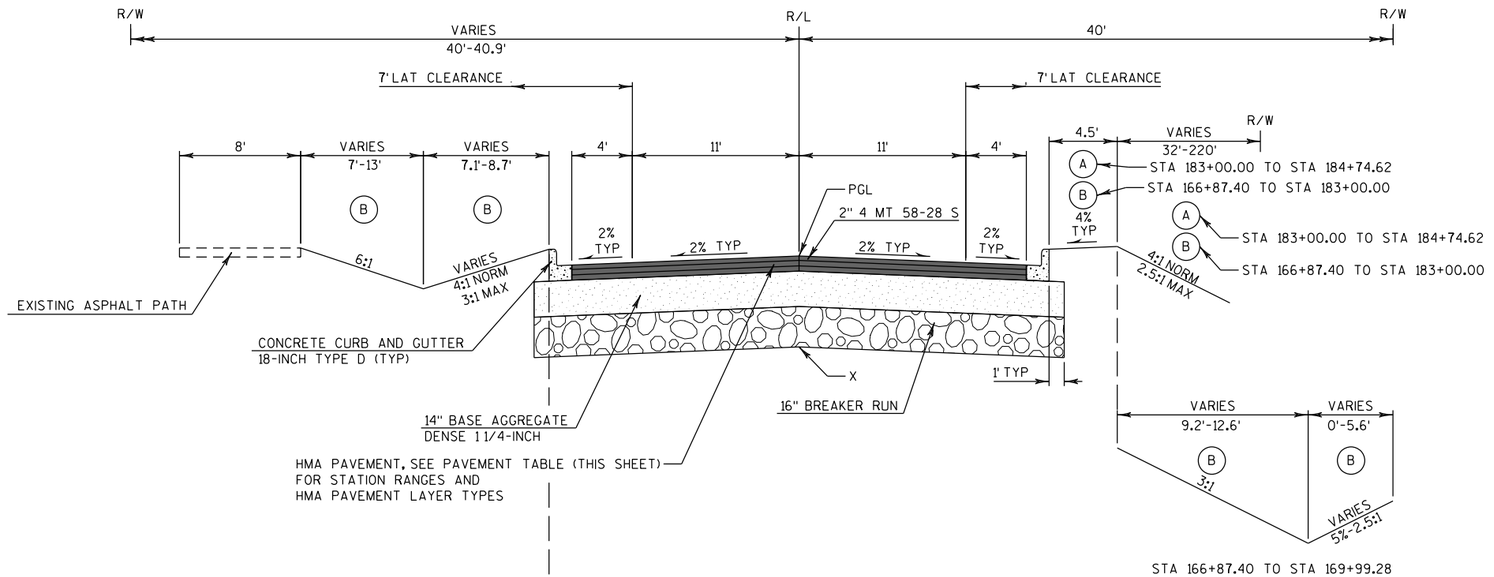
SB PGL STA	SB LANE PAVED SHLD	R/L STA	NB LANE PAVED SHLD
266+04	↙-2.0%	166+03	↙2.0%
266+40	↙-2.0%	166+14	0.0%
266+81	↙-2.0%	166+85	-2.0%↘

MOORLAND ROAD PAVEMENT TABLE	
STATION RANGE	PAVEMENT TYPE
STA 166+87.40 TO STA 184+74.62	2" HMA 4MT 58-28S (UPPER LAYER) 2.5" HMA 3MT 58-28 S (MIDDLE LAYER) 2.5" HMA 3MT 58-28 S (LOWER LAYER)

NOTE:

1) SEE "PAVING GRADES" FOR LANE WARPING.

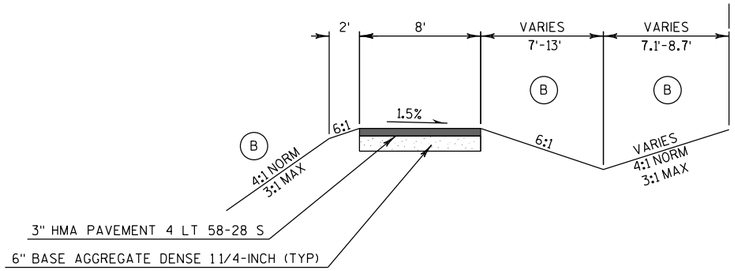
PGL=POINT REFERENCED TO ON PROFILE
X=POINT REFERENCED TO ON CROSS SECTIONS



STA 166+87.40 TO STA 169+99.28
STA 171+37.50 TO STA 176+50.00

TYPICAL FINISHED SECTION

MOORLAND RD
STA 166+87.40 TO STA 184+74.62



STA 166+90.82 TO STA 167+08.82
STA 174+90.81 TO STA 175+08.81
STA 175+62.65 TO STA 175+96.57
STA 177+94.88 TO STA 178+30.64
STA 180+77.57 TO STA 180+96.13

LEGEND

(A) 6" TOPSOIL, SOD LAWN AND FERTILIZER TYPE B

(B) 6" TOPSOIL, SEED MIXTURE NO. 30 AND FERTILIZER TYPE B

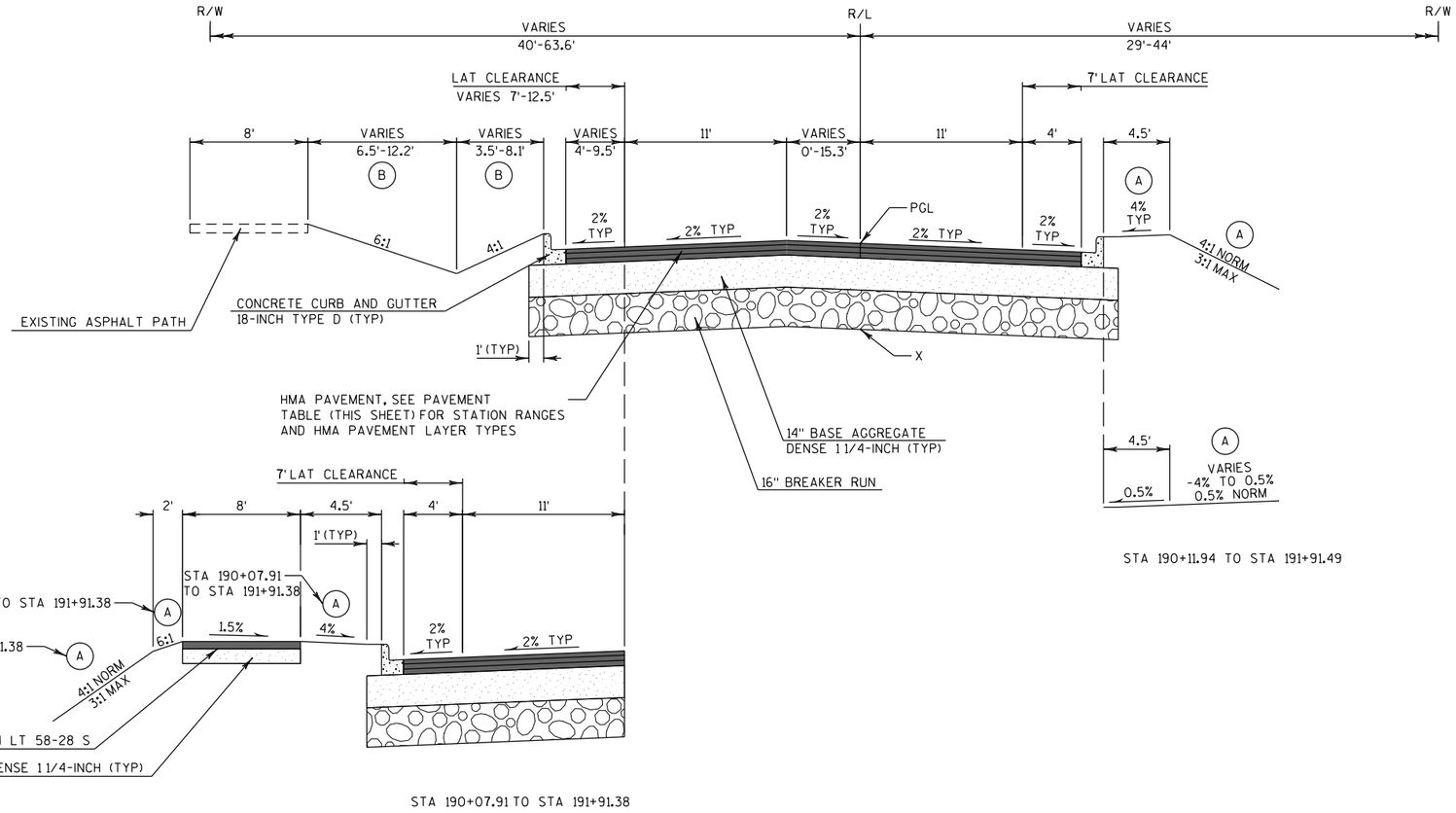
PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	TYPICAL SECTIONS	SHEET 16	E

MOORLAND ROAD PAVEMENT TABLE	
STATION RANGE	PAVEMENT TYPE
STA 184+74.62 TO STA 191+91.38	2" HMA 4MT 58-28S (UPPER LAYER) 2.5" HMA 3MT 58-28 S (MIDDLE LAYER) 2.5" HMA 3MT 58-28 S (LOWER LAYER)

NOTE:

1) SEE "PAVING GRADES" FOR LANE WARPING.

PGL=POINT REFERENCED TO ON PROFILE
X=POINT REFERENCED TO ON CROSS SECTIONS



STA 190+11.94 TO STA 191+91.49

STA 190+07.91 TO STA 191+91.38

TYPICAL FINISHED SECTION

MOORLAND RD
STA 184+74.62 TO STA 191+91.38

LEGEND

(A) 6" TOPSOIL, SOD LAWN AND FERTILIZER TYPE B

(B) 6" TOPSOIL, SEED MIXTURE NO. 30 AND FERTILIZER TYPE B

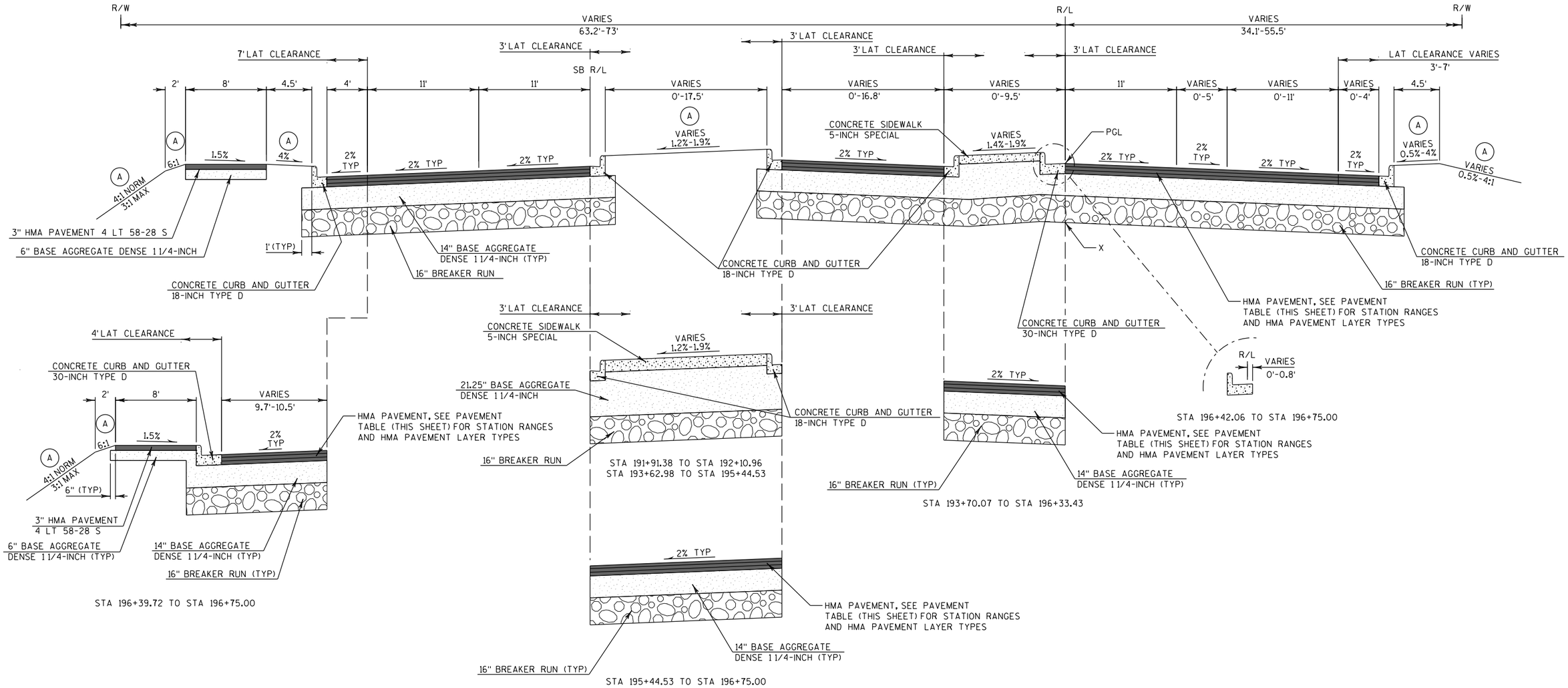
PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	TYPICAL SECTIONS	SHEET 17	E

MOORLAND ROAD PAVEMENT TABLE	
STATION RANGE	PAVEMENT TYPE
STA 191+91.38 TO STA 196+75.00	2" HMA 4MT 58-28S (UPPER LAYER) 2.5" HMA 3MT 58-28 S (MIDDLE LAYER) 2.5" HMA 3MT 58-28 S (LOWER LAYER)

NOTE:

1) SEE "PAVING GRADES" FOR LANE WARPING.

PGL=POINT REFERENCED TO ON PROFILE
X=POINT REFERENCED TO ON CROSS SECTIONS



TYPICAL FINISHED SECTION

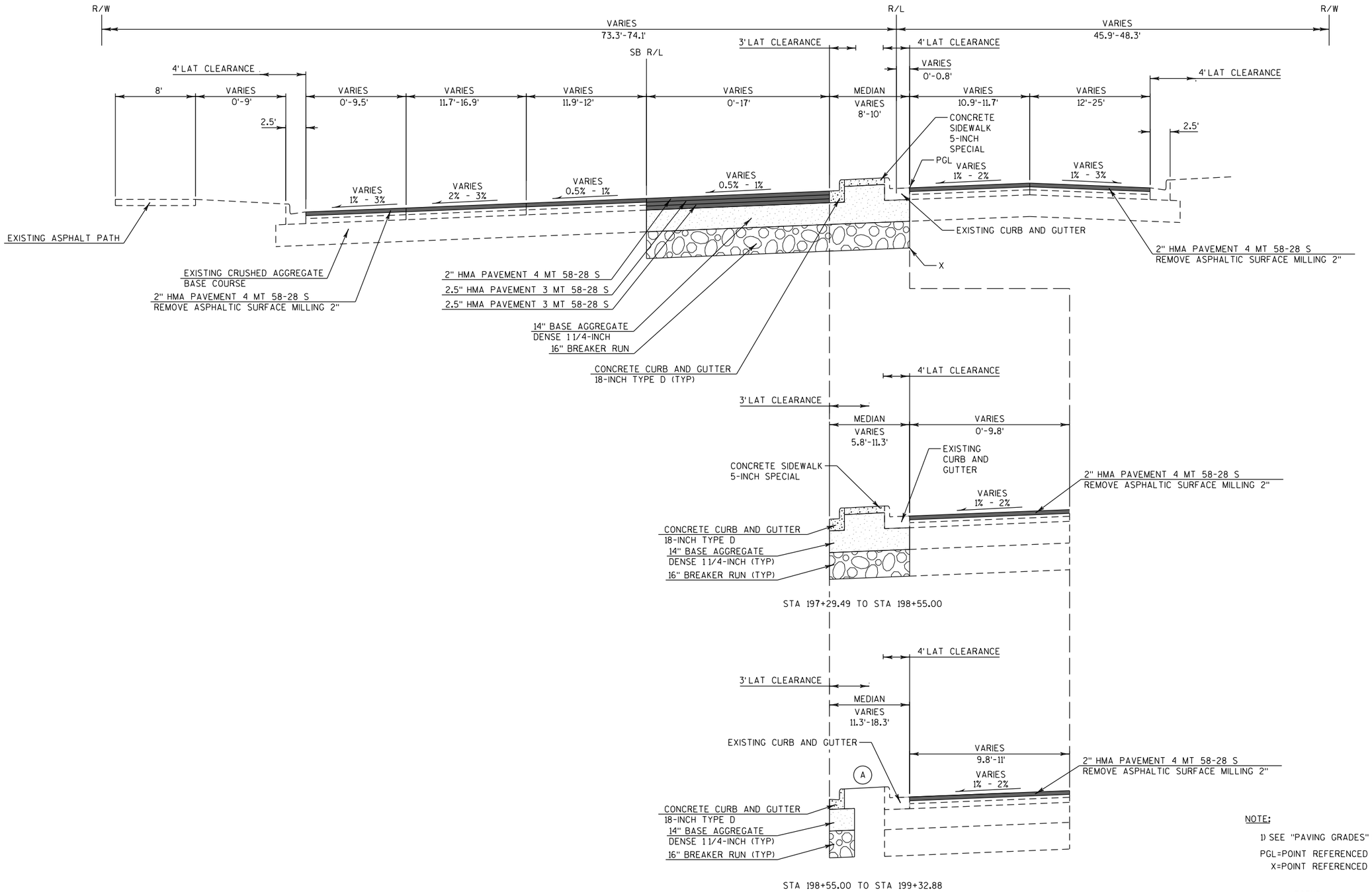
MOORLAND RD
STA 191+91.38 TO STA 196+75.00

LEGEND

(A) 6" TOPSOIL, SOD LAWN AND FERTILIZER TYPE B

(B) 6" TOPSOIL, SEED MIXTURE NO. 30 AND FERTILIZER TYPE B

PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	TYPICAL SECTIONS	SHEET 18	E



TYPICAL FINISHED SECTION

MOORLAND RD

STA 196+75.00 TO STA 199+32.88

NOTE:

1) SEE "PAVING GRADES" FOR LANE WARPING.

PGL=POINT REFERENCED TO ON PROFILE
X=POINT REFERENCED TO ON CROSS SECTIONS

LEGEND

(A) 6" TOPSOIL, SOD LAWN AND FERTILIZER TYPE B

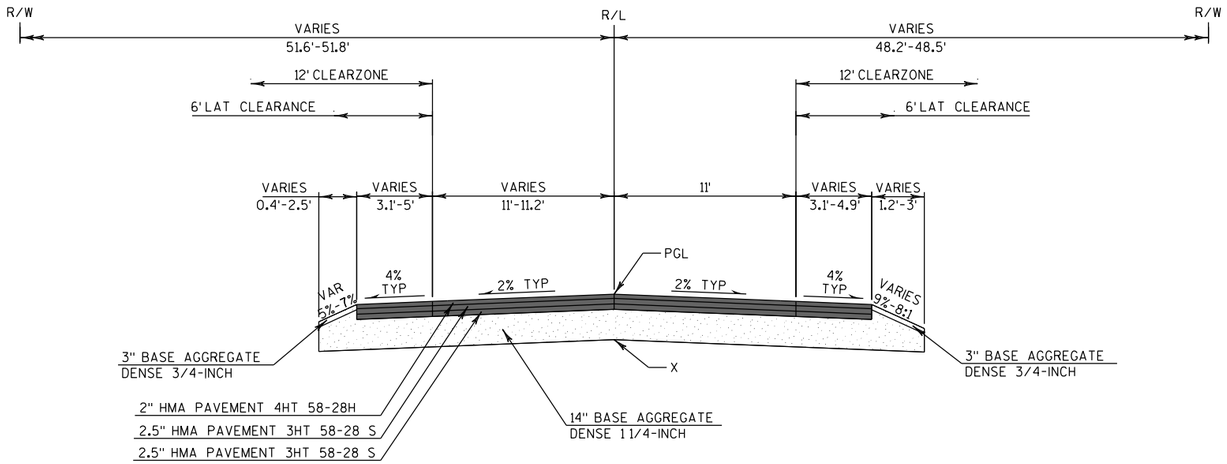
(B) 6" TOPSOIL, SEED MIXTURE NO. 30 AND FERTILIZER TYPE B

PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	TYPICAL SECTIONS	SHEET 19	E

NOTE:

1) SEE "PAVING GRADES" FOR LANE WARPING.

PGL=POINT REFERENCED TO ON PROFILE
X=POINT REFERENCED TO ON CROSS SECTIONS



TYPICAL FINISHED SECTION

WOODS RD

STA 40+32.29 TO STA 40+57.13

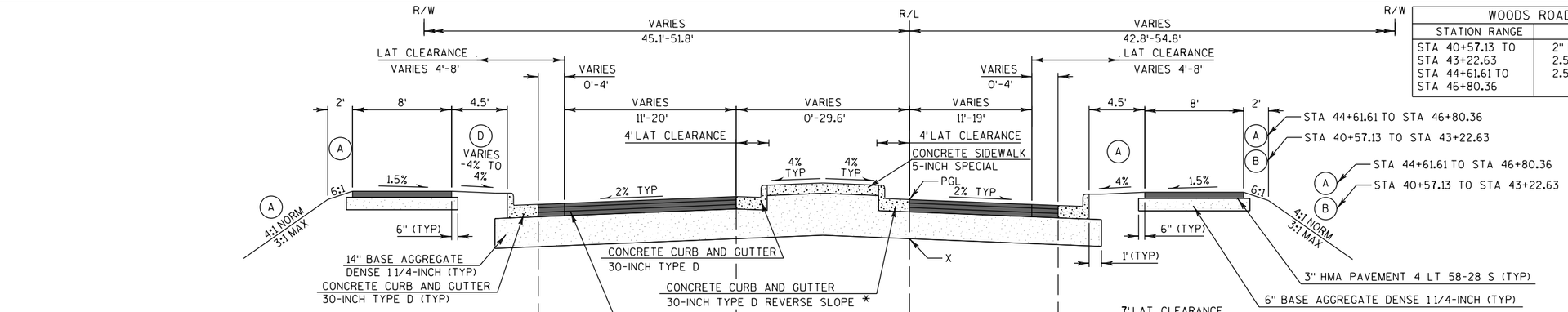
LEGEND

(A) 6" TOPSOIL, SOD LAWN AND FERTILIZER TYPE B

(B) 6" TOPSOIL, SEED MIXTURE NO. 30 AND FERTILIZER TYPE B

PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	TYPICAL SECTIONS	SHEET 20	E

WOODS ROAD PAVEMENT TABLE	
STATION RANGE	PAVEMENT TYPE
STA 40+57.13 TO STA 43+22.63	2" HMA 4HT 58-28H (UPPER LAYER) 2.5" HMA 3HT 58-28 S (MIDDLE LAYER) 2.5" HMA 3HT 58-28 S (LOWER LAYER)
STA 44+61.61 TO STA 46+80.36	



TYPICAL FINISHED SECTION

WOODS RD

STA 40+57.13 TO STA 43+22.63
STA 44+61.61 TO STA 46+80.36

NOTE:

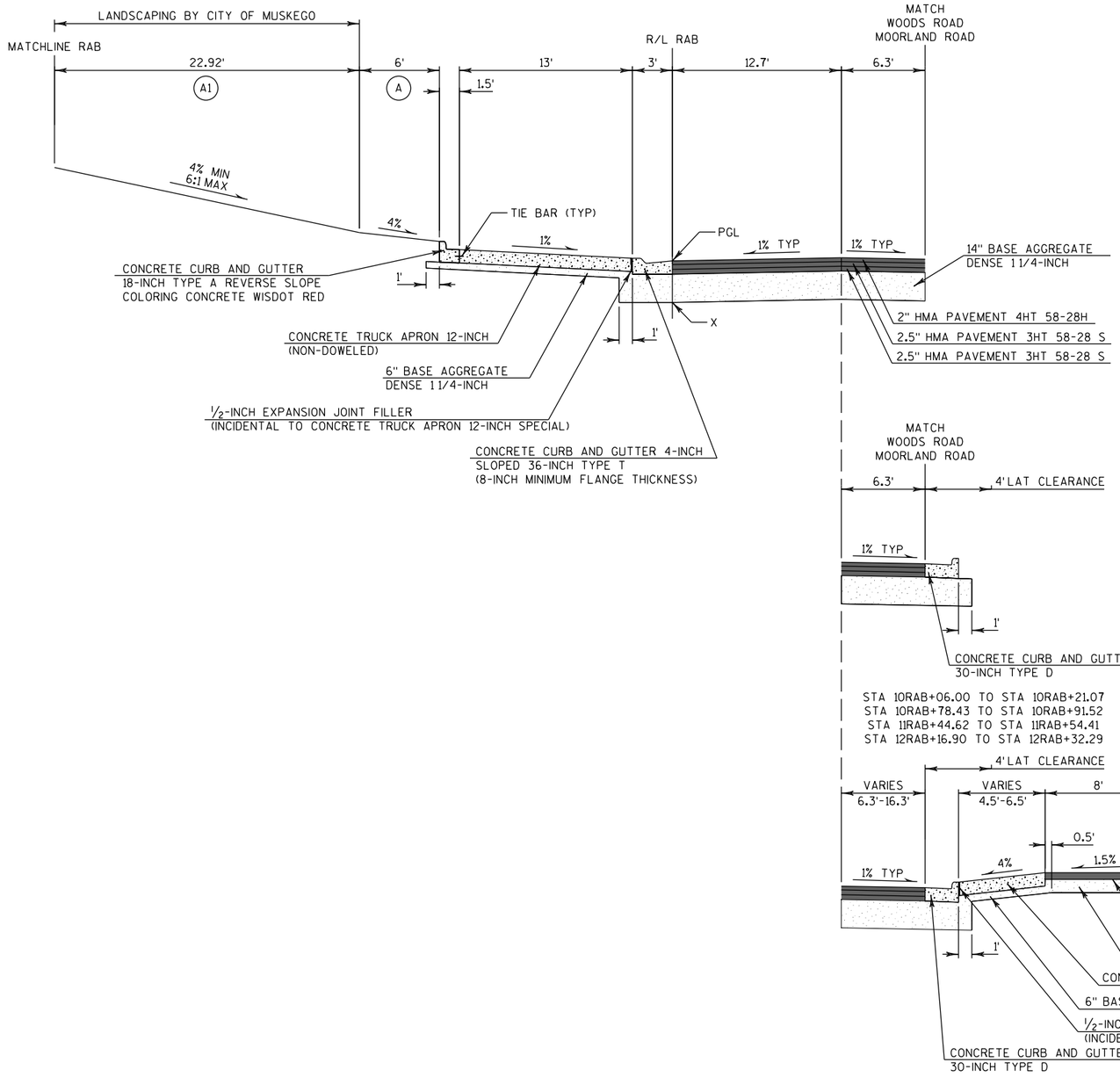
1) SEE "PAVING GRADES" FOR LANE WARPING.

PGL=POINT REFERENCED TO ON PROFILE
X=POINT REFERENCED TO ON CROSS SECTIONS

LEGEND

- (A) 6" TOPSOIL, SOD LAWN AND FERTILIZER TYPE B
- (B) 6" TOPSOIL, SEED MIXTURE NO. 30 AND FERTILIZER TYPE B
- (C) 6" TOPSOIL, SEED MIXTURE NO. 70 AND FERTILIZER TYPE A OR TYPE B
- (D) SEE PLAN DETAILS FOR LOCATIONS OF LAWN SOD OR CONCRETE SIDEWALK SPECIAL

PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	TYPICAL SECTIONS	SHEET 21	E



TYPICAL FINISHED SECTION

ROUNDABOUT

STA 10RAB+00 TO STA 12RAB+91.64

NOTE:

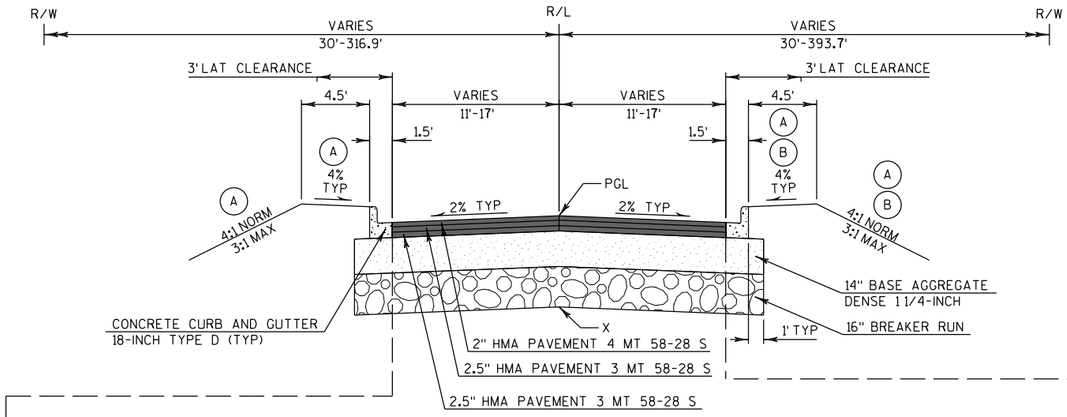
1) SEE "PAVING GRADES" FOR LANE WARPING.

PGL=POINT REFERENCED TO ON PROFILE
X=POINT REFERENCED TO ON CROSS SECTIONS

LEGEND

- (A1) 6" TOPSOIL
- (A) 6" TOPSOIL, SOD LAWN AND FERTILIZER TYPE B
- (B) 6" TOPSOIL, SEED MIXTURE NO. 30 AND FERTILIZER TYPE B

PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	TYPICAL SECTIONS	SHEET 22	E



NOTE:

1) SEE "PAVING GRADES" FOR LANE WARPING.

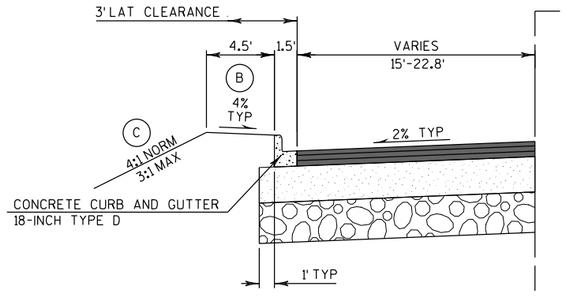
2) SEE EROSION CONTROL PLAN FOR RESTORATION.

3) SEE CONSTRUCTION DETAILS AND PLAN DETAILS FOR LOCATIONS/TRANSITIONS.

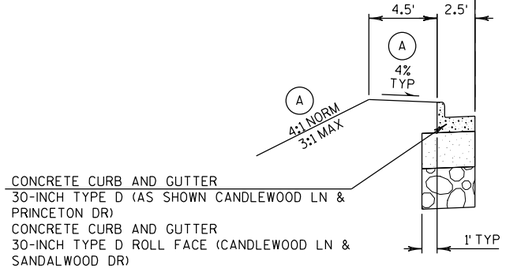
PGL=POINT REFERENCED TO ON PROFILE
X=POINT REFERENCED TO ON CROSS SECTIONS

LEGEND

- (A) 6" TOPSOIL, SOD LAWN AND FERTILIZER TYPE B
- (B) 6" TOPSOIL, SEED MIXTURE NO. 30 AND FERTILIZER TYPE B
- (C) 6" TOPSOIL, SEED MIXTURE NO. 70 AND FERTILIZER TYPE A OR TYPE B



DURHAM PL
STA 60+15.85 TO STA 60+53.95



CANDLEWOOD LN
STA 58+75.00 TO STA 59+16.66
SANDALWOOD DR
STA 69+14.92 TO STA 69+22.92
PRINCETON DR
STA 79+04.56 TO STA 79+36.69
STA 80+34.06 TO STA 80+67.46

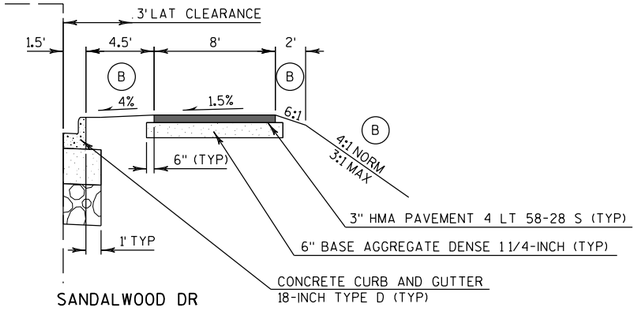
TYPICAL FINISHED SECTION

CANDLEWOOD LN
STA 58+75.00 TO STA 59+60.60

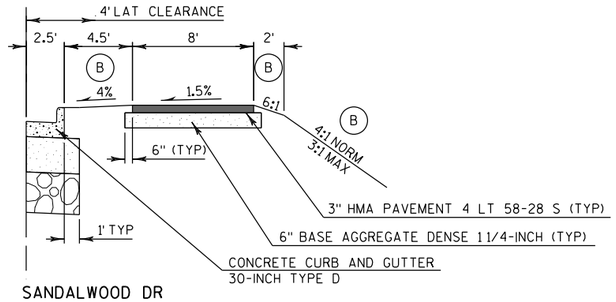
DURHAM PL
STA 60+15.85 TO STA 60+53.95

SANDALWOOD DR
STA 69+14.92 TO STA 69+62.91

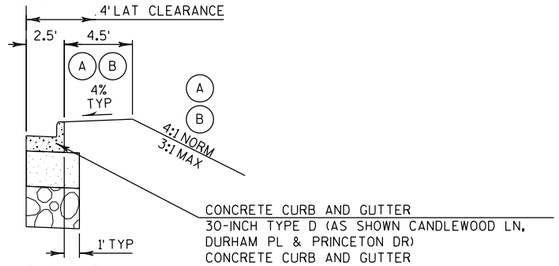
PRINCETON DR
STA 79+04.56 TO STA 79+36.65
STA 80+34.06 TO STA 80+67.46



SANDALWOOD DR
STA 69+38.54 TO STA 69+50.44



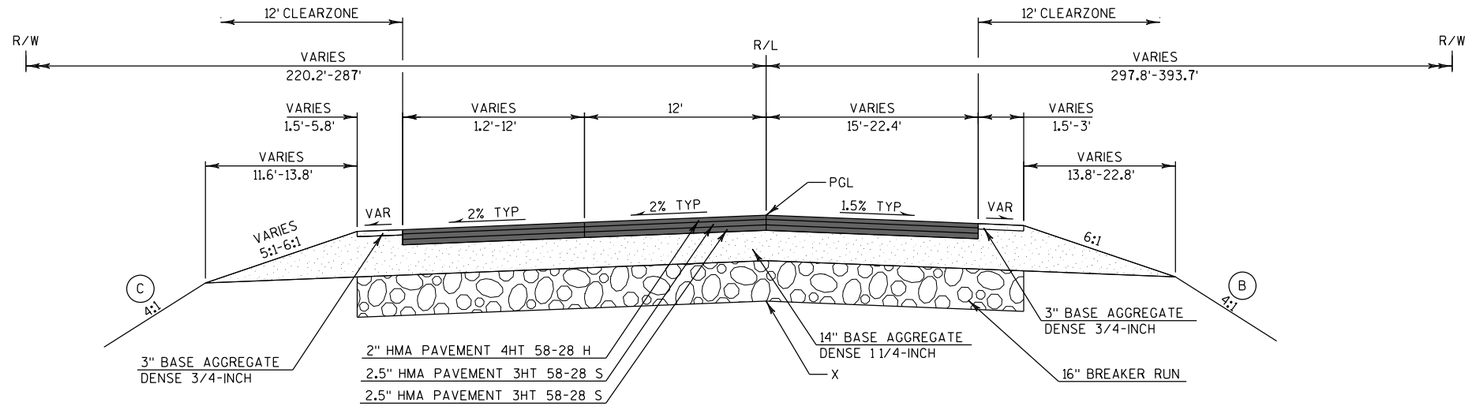
SANDALWOOD DR
STA 69+37.44 TO STA 69+38.54



CANDLEWOOD LN
STA 58+75.00 TO STA 59+13.88
DURHAM PL
STA 60+15.85 TO STA 60+53.95
SANDALWOOD DR
STA 69+14.92 TO STA 69+37.44
PRINCETON DR
STA 79+04.56 TO STA 79+19.11
STA 80+59.93 TO STA 80+67.46

PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	TYPICAL SECTIONS	SHEET 23	E

2



TYPICAL FINISHED SECTION

DURHAM PL

STA 60+53.95 TO STA 61+36.50

NOTE:

1) SEE "PAVING GRADES" FOR LANE WARPING.

PGL=POINT REFERENCED TO ON PROFILE
X=POINT REFERENCED TO ON CROSS SECTIONS

LEGEND

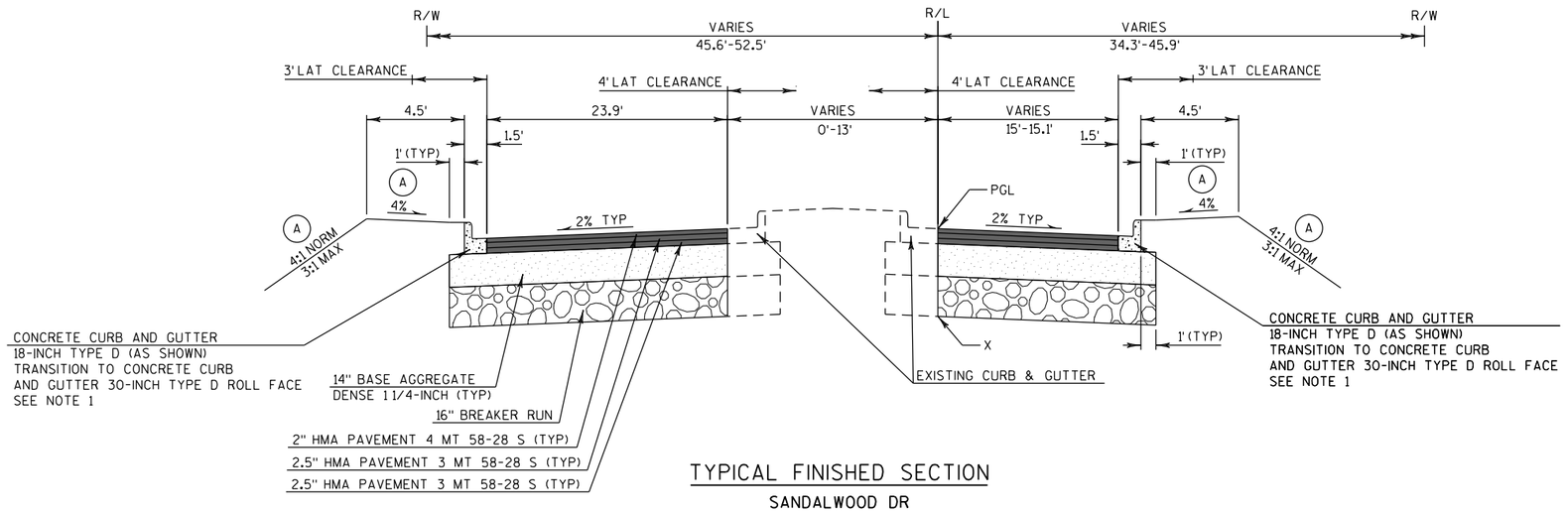
(A) 6" TOPSOIL, SOD LAWN AND FERTILIZER TYPE B

(B) 6" TOPSOIL, SEED MIXTURE NO. 30 AND FERTILIZER TYPE B

(C) 6" TOPSOIL, SEED MIXTURE NO. 70 AND FERTILIZER TYPE A OR TYPE B

NOTE:

1) SEE CONSTRUCTION DETAILS AND PLAN DETAILS FOR LOCATIONS/TRANSITIONS.



TYPICAL FINISHED SECTION

SANDALWOOD DR

STA 70+15.09 TO STA 70+63.09

NOTE:

1) SEE "PAVING GRADES" FOR LANE WARPING.

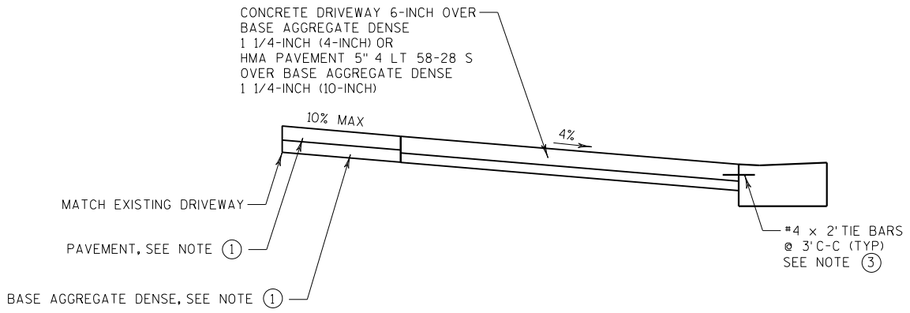
PGL=POINT REFERENCED TO ON PROFILE
X=POINT REFERENCED TO ON CROSS SECTIONS

LEGEND

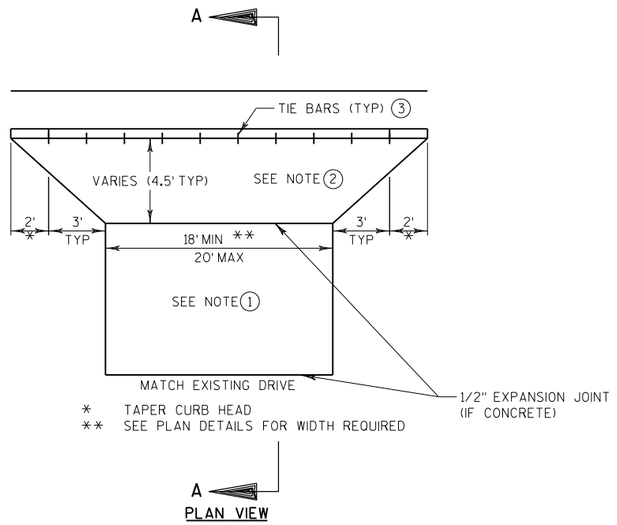
(A) 6" TOPSOIL, SOD LAWN AND FERTILIZER TYPE B

(B) 6" TOPSOIL, SEED MIXTURE NO. 30 AND FERTILIZER TYPE B

PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	TYPICAL SECTIONS	SHEET 25	E



SECTION A-A



DRIVEWAY WITH NO PATH DETAIL

NOTES

(1) DRIVEWAY SURFACE BEYOND APRON TO BE REPLACED IN-KIND WITH MINIMUM SECTION OF:

HMA PAVEMENT 5" 4LT 58-28S (IN 2 LIFTS)
OVER BASE AGGREGATE DENSE 1 1/4-INCH (10-INCH)
OR
CONCRETE DRIVEWAY HES 6-INCH OVER
BASE AGGREGATE DENSE 1 1/4-INCH (4-INCH)
OR
BASE AGGREGATE DENSE 1 1/4-INCH (6-INCH)

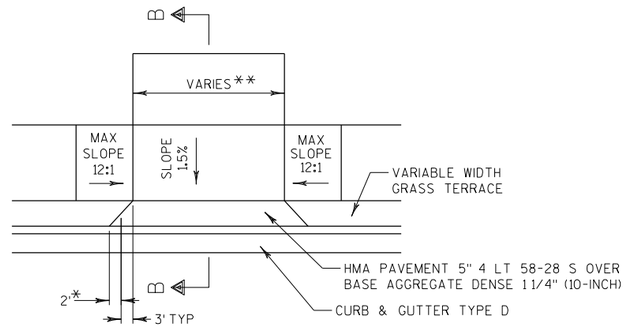
(2) SEE PLAN DETAILS FOR DRIVEWAY APRON SURFACE

(3) TIE BARS ARE INCIDENTAL TO THE BID ITEM "CONCRETE DRIVEWAY HES 6-INCH" NOT REQUIRED WITH HMA APRON

NOTES

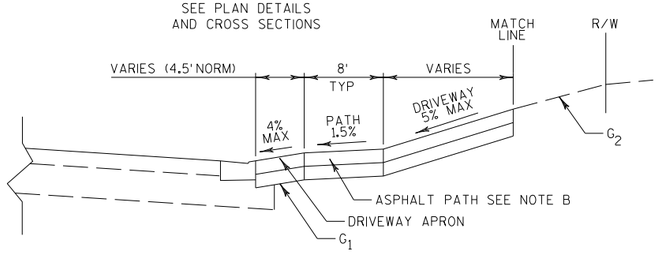
A) ALL URBAN DRIVEWAYS TO BE DEPRESSED AT ASPHALT PATH.

B) AT DRIVEWAYS INCREASE ASPHALT PATH THICKNESS TO 4 LT 58-28 S (5-INCH) OVER BASE AGGREGATE DENSE 1 1/4-INCH (10-INCH).



DEPRESSED DRIVEWAY DETAIL WITH TERRACE AND PATH

NOT TO SCALE
SEE PLAN DETAILS
AND CROSS SECTIONS



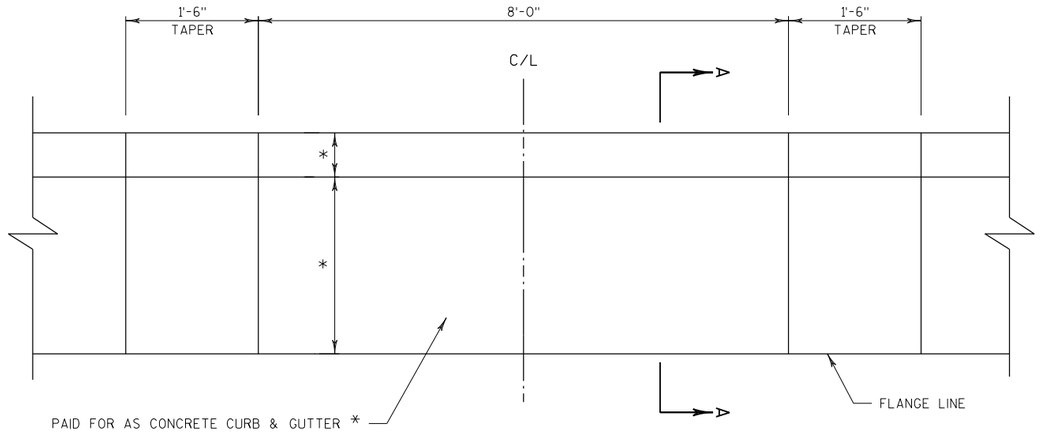
ABSOLUTE MAXIMUM G_1 & G_2=15%
DESIRABLE MAXIMUM = 4% DRIVEWAY APRON AND 5% DRIVEWAY
ABSOLUTE MAXIMUM DIFFERENCE BETWEEN
G_1 AND G_2 IN FILL = 14%

DEPRESSED DRIVEWAY DETAIL SECTION B-B

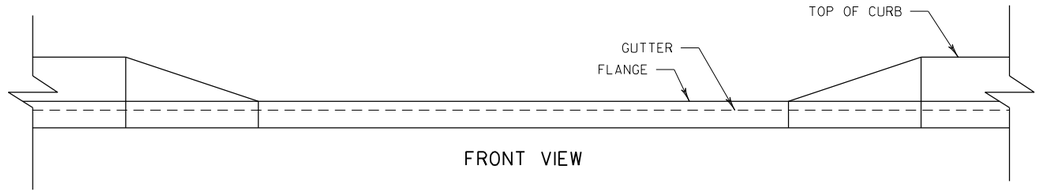
NOT TO SCALE

* TAPER CURB HEAD
** SEE PLAN DETAILS FOR WIDTH REQUIRED

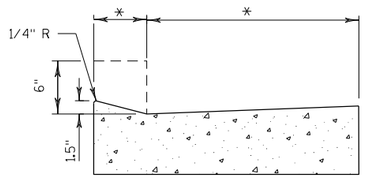
2



PLAN VIEW



FRONT VIEW



SECTION A-A

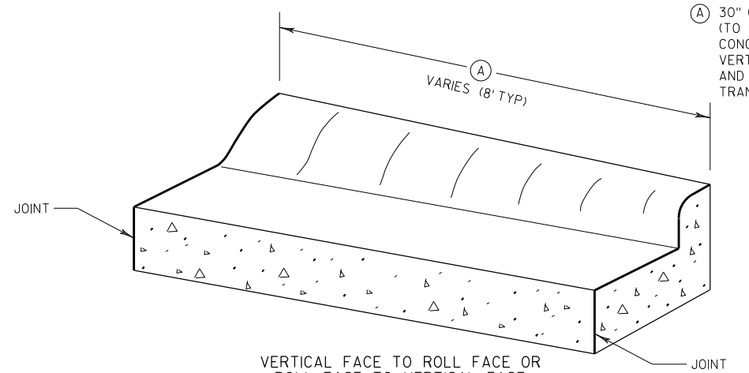
* TYPE AND DIMENSIONS TO MATCH ADJACENT CURB AND GUTTER.

MAINTENANCE OPENING

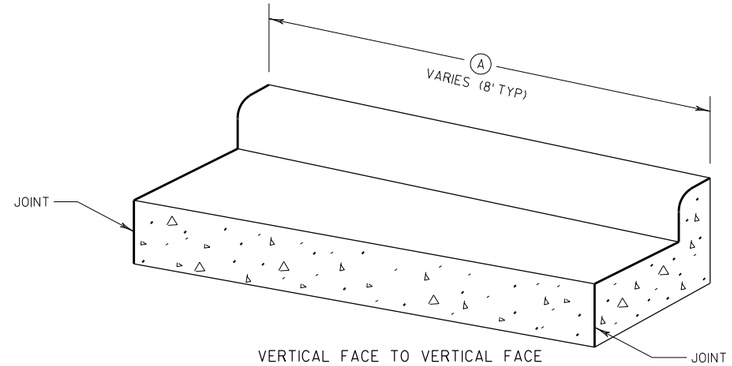
LOCATIONS SHOWN ON PAVING DETAILS

NOTES

(A) 30" CURB & GUTTER TO 18" CURB & GUTTER (TO BE MEASURED & PAID FOR AS CONCRETE CURB & GUTTER 30-INCH) FOR VERTICAL FACE TO ROLL FACE TRANSITIONS AND VERTICAL FACE TO VERTICAL FACE TRANSITIONS.



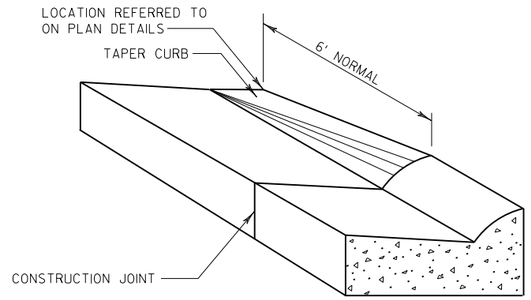
VERTICAL FACE TO ROLL FACE OR
ROLL FACE TO VERTICAL FACE
CANDLEWOOD LN
STA 59+05.88 RT TO STA 59+13.88 RT
STA 59+08.67 LT TO STA 59+16.66 LT
SANDALWOOD DR
STA 69+30.54 RT TO STA 69+38.54 RT
STA 69+14.92 RT TO STA 69+22.92 RT
STA 70+44.89 LT TO STA 70+52.89 LT
STA 70+55.09 RT TO STA 70+63.09 RT



VERTICAL FACE TO VERTICAL FACE
MOORLAND RD
STA 158+92.00 LT TO STA 159+00.00 LT
STA 159+76.48 RT TO STA 159+98.75 RT
STA 161+70.00 LT TO STA 161+78.00 LT
PRINCETON DR
STA 79+11.11 RT TO STA 79+19.11 RT
STA 80+59.93 RT TO STA 80+67.46 RT

CURB & GUTTER TRANSITION

SEE PLAN DETAILS FOR LOCATIONS



CURB & GUTTER TERMINI

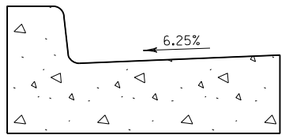
SEE PLAN DETAILS FOR LOCATIONS

2

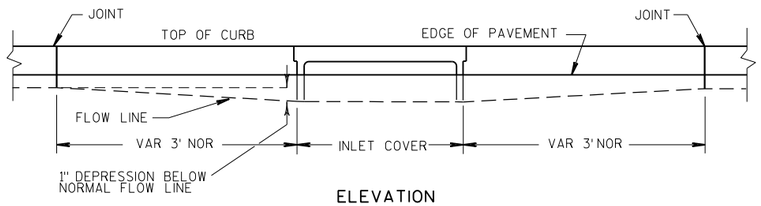
NOTES

1. TIE BARS ARE REQUIRED FOR CURB AND GUTTER ADJACENT TO NEW CONCRETE PAVEMENT.

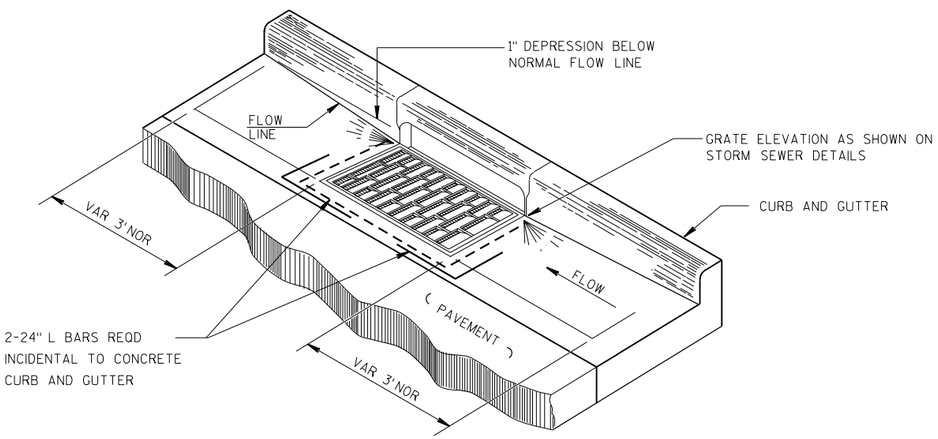
2. SEE STANDARD DETAIL DRAWING FOR DETAILS NOT SHOWN HERE.



CONCRETE CURB AND GUTTER 18-INCH AND 30-INCH



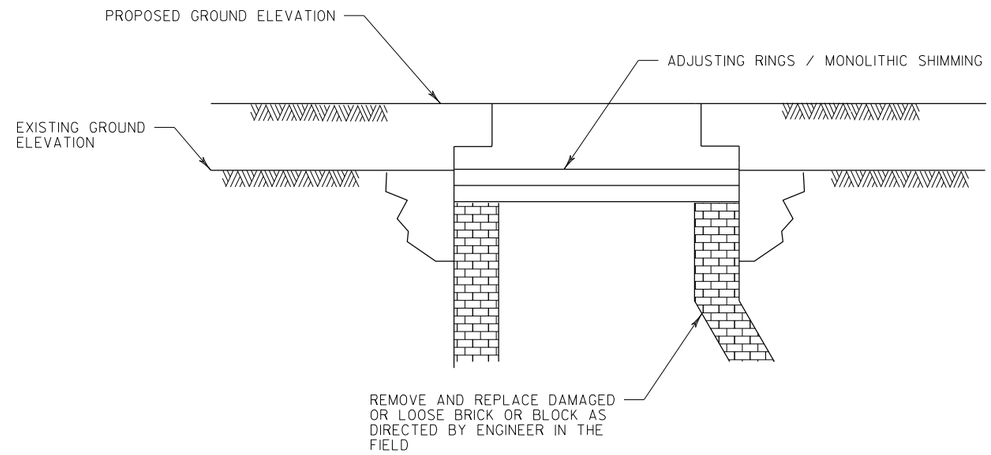
ELEVATION



DETAIL OF CURB AND GUTTER AT INLETS

SEE STORM SEWER MISCELLANEOUS QUANTITIES PLANS FOR LOCATIONS

STRUCTURES: 129, 133, 179, 208, 210, 216, 367, 369, 406, 510

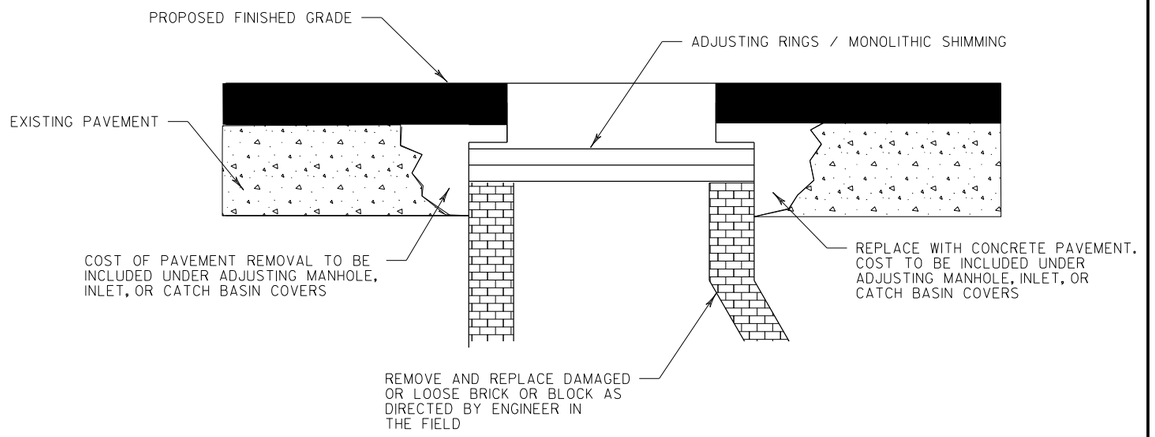


NON-PAVED LOCATION

NOTES

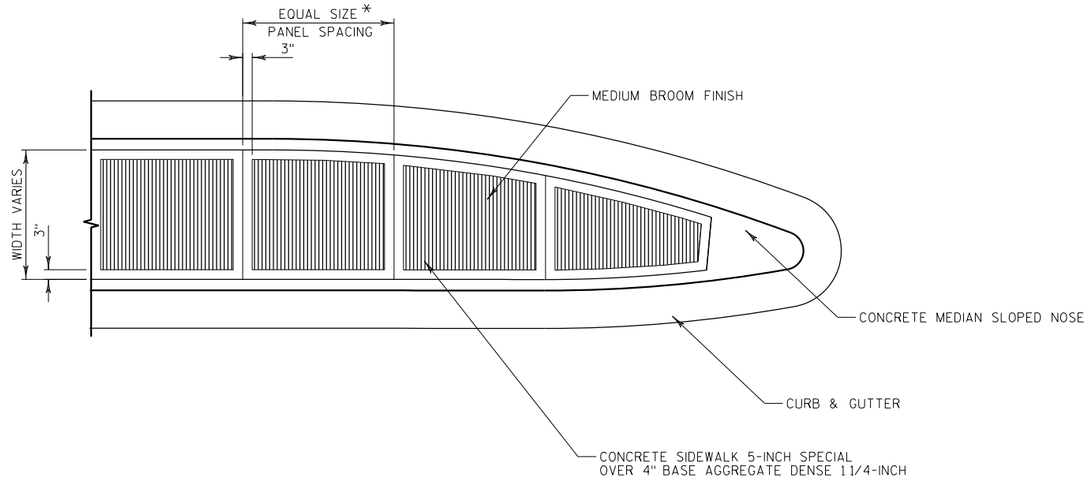
1. ADJUST CHIMNEY WITH PROPER SIZE CONCRETE ADJUSTING RINGS (SIZE OF OPENING OF CONCRETE ADJUSTING RING TO BE DETERMINED BY SIZE OF OPENING IN FRAME) AND REINSTALL EXISTING FRAME AND LID TO FINISHED GRADE. BACKFILL AND OTHER WORK TO BE DONE IN ACCORDANCE WITH ITEM ADJUSTING INLET COVERS.

2. SAWING ASPHALT OR SAWING CONCRETE IS INCIDENTAL TO ADJUSTING MANHOLE OR INLET COVERS.



PAVED LOCATION

ADJUSTING MANHOLE OR INLET COVERS



CONCRETE SIDEWALK 5-INCH SPECIAL - MEDIAN

NOT TO SCALE

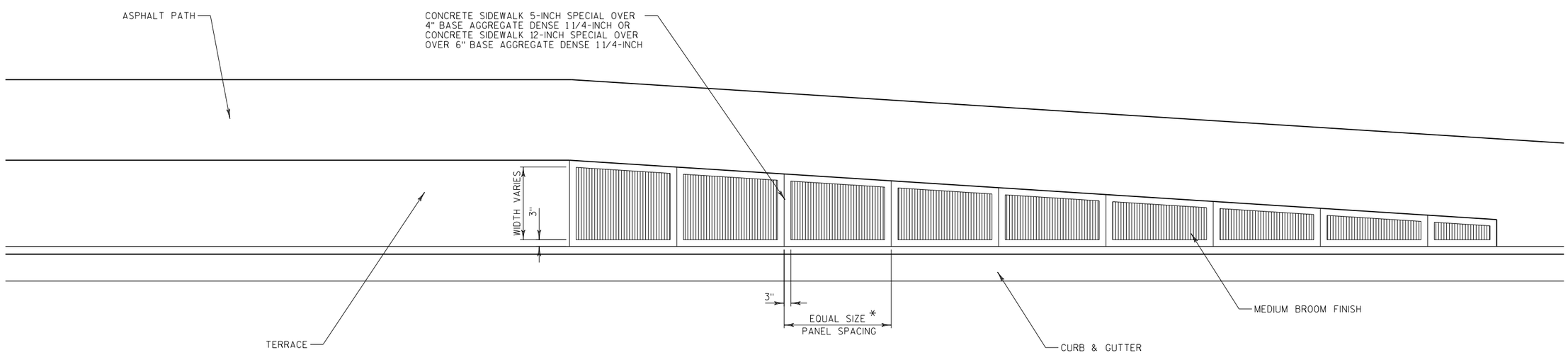
NOTES

1) SEE PLAN DETAILS FOR LOCATIONS

2) * DETERMINE JOINT SPACING IN THE FIELD

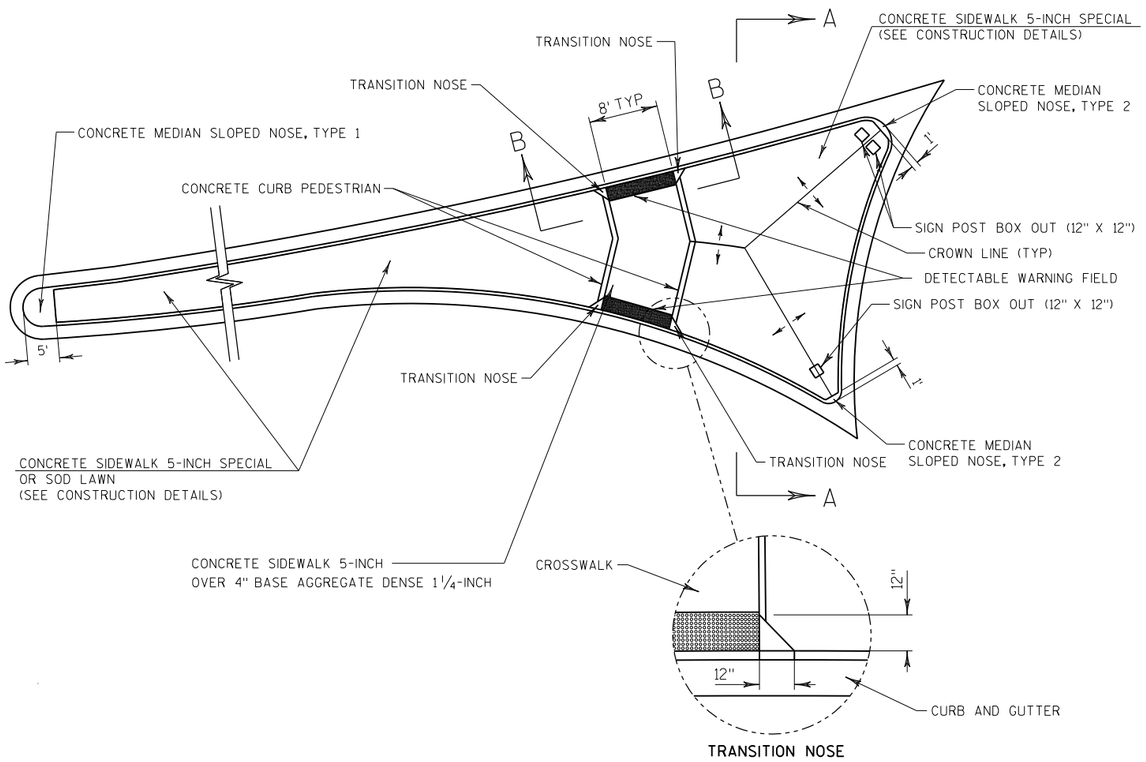
3) SPECIAL JOINTING AND MEDIUM BROOM FINISH ARE INCIDENTAL TO CONCRETE SIDEWALK 5-INCH SPECIAL AND CONCRETE SIDEWALK 12-INCH SPECIAL BID ITEMS.

2

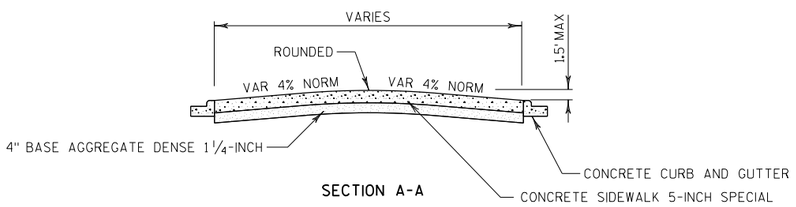


CONCRETE SIDEWALK 5-INCH SPECIAL OR CONCRETE SIDEWALK 12-INCH SPECIAL - TERRACE

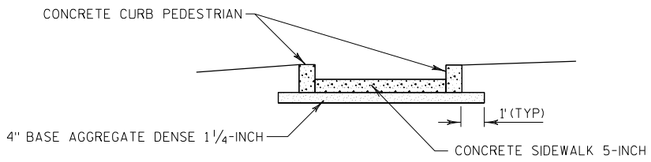
NOT TO SCALE



TRANSITION NOSE



SECTION A-A



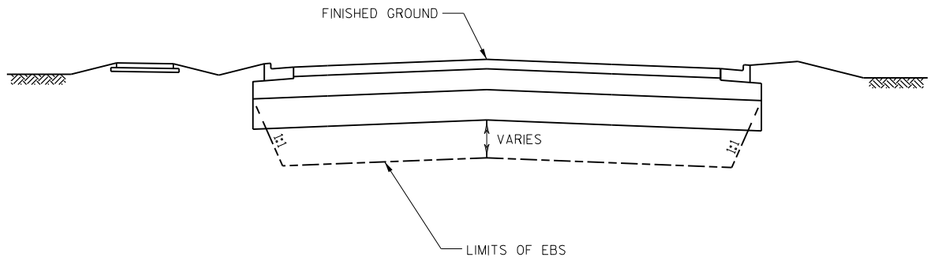
SECTION B-B

SPLITTER ISLAND DETAIL

SEE PLAN DETAILS FOR LOCATIONS

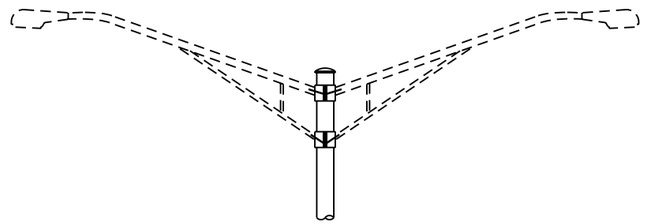
NOTE:

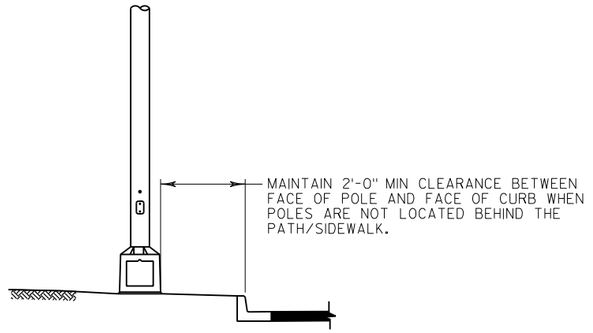
LIMITS TO BE DETERMINED BY ENGINEER IN FIELD.



CROSS SECTION

EXCAVATION BELOW SUBGRADE (EBS)





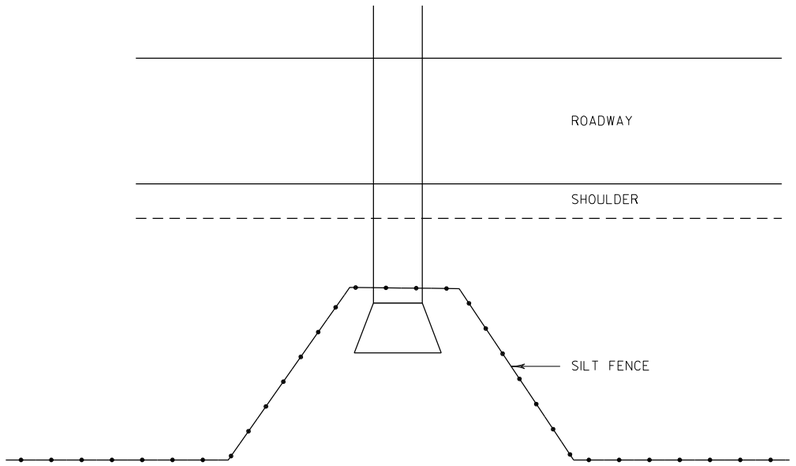
TYPICAL MUNICIPAL LIGHT POLE INSTALLATION

SEE LIGHTING PLANS FOR LOCATIONS

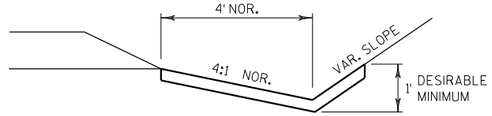
PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	CONSTRUCTION DETAILS	SHEET 30	E

NOTE

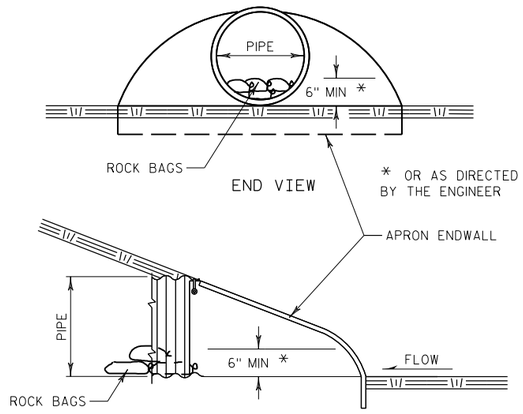
SEE SILT FENCE SDD FOR ADDITIONAL INFORMATION



TYPICAL SILT FENCE DETAIL AT PIPE INLET

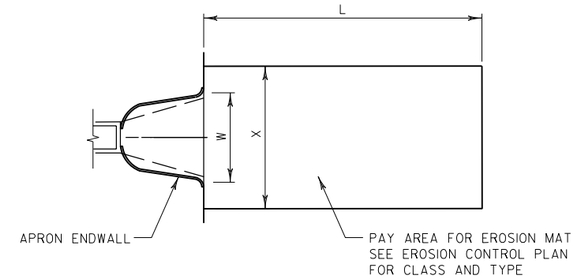


SOD OR EROSION MAT DETAIL FOR DITCHES



CULVERT PIPE DITCH CHECK

SEE EROSION CONTROL PLAN FOR LOCATIONS



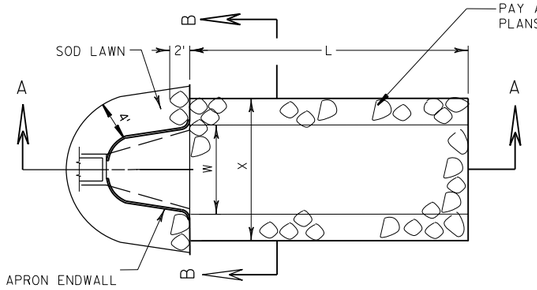
W = WIDTH OF APRON ENDWALL

L = 3 x W (NORMAL) OR 10' (MINIMUM) OR AS INDICATED IN THE PLANS OR AS DIRECTED BY THE ENGINEER.

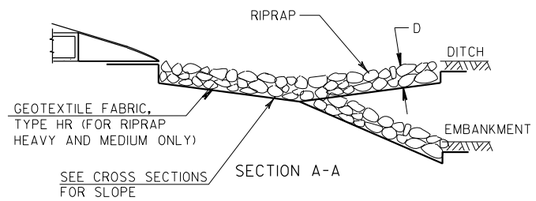
X = W+2' FOR TYPICAL CULVERT DISCHARGE INTO DITCH
W+5' FOR CULVERT DISCHARGE DOWN EMBANKMENT SLOPE

EROSION MAT TREATMENT AT CULVERTS

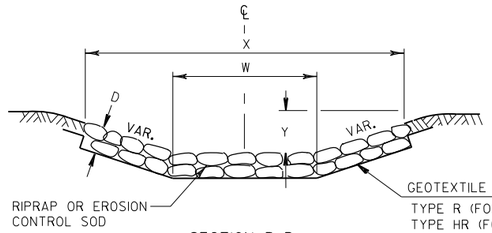
SEE EROSION CONTROL PLAN FOR LOCATIONS



PLAN VIEW



SECTION A-A



SECTION B-B

L = 3 x W (NOR.) OR 10' MIN. OR AS INDICATED IN THE PLANS OR AS DIRECTED BY THE ENGINEER.

D = 12" FOR RIPRAP LIGHT
18" FOR RIPRAP MEDIUM
24" FOR RIPRAP HEAVY

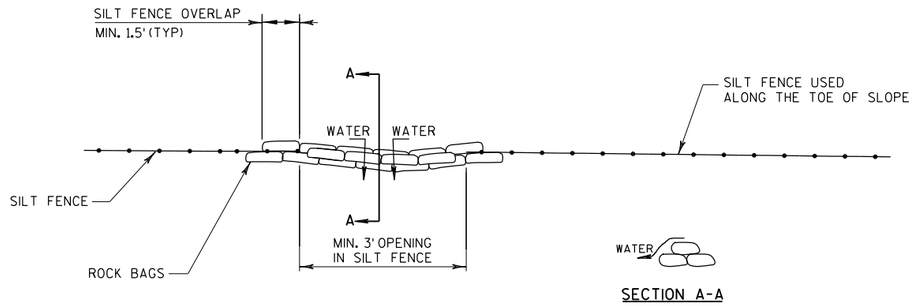
X = W+2' FOR TYPICAL CULVERT DISCHARGE INTO DITCH
W+5' FOR CULVERT DISCHARGE DOWN EMBANKMENT SLOPE

Y = 0' FOR TYPICAL CULVERT DISCHARGE INTO DITCH
12" FOR CULVERT DISCHARGE DOWN EMBANKMENT SLOPE

RIPRAP AND GEOTEXTILE FABRIC DETAIL AT APRON ENDWALLS

SEE EROSION CONTROL PLAN FOR LOCATIONS

PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	CONSTRUCTION DETAILS	SHEET 31	E



ROCK BAGS USED FOR SILT FENCE RELIEF DETAIL

NOTES

1) CONTRACTOR TO PUMP WATER FROM EXCAVATION TO SEDIMENT BAG INSIDE BASIN PRIOR TO DISCHARGING TO THE WATERWAY. SEDIMENT BAG TO BE PLACED IN AN UPLAND VEGETATED AREA OR EQUIVALENT LOCATION APPROVED BY THE ENGINEER.

2) BASIN TO BE KEPT LESS THAN 10% FULL OF SEDIMENT. GEOTEXTILE FABRIC AND SEDIMENTS TO BE DISPOSED BY THE CONTRACTOR OFF OF THE PROJECT SITE.

3) TEMPORARY SETTLING BASIN AND SEDIMENT BAG TO BE PAID FOR AS EROSION BALES AND GEOTEXTILE TYPE HR.

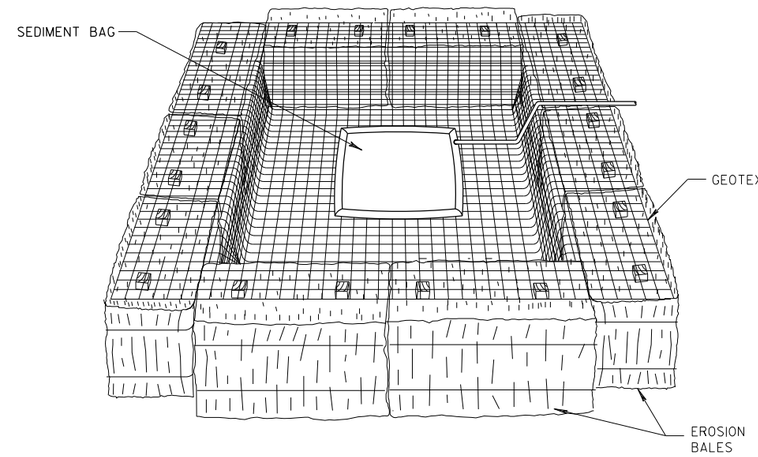
STORAGE VOLUME (C.F.) = 16 X GPM (PUMP RATE)

EXAMPLE:
CONTRACTOR INDICATES PUMP CAPABLE OF 50 GPM
HEIGHT OF BALES = 1.5 FT.

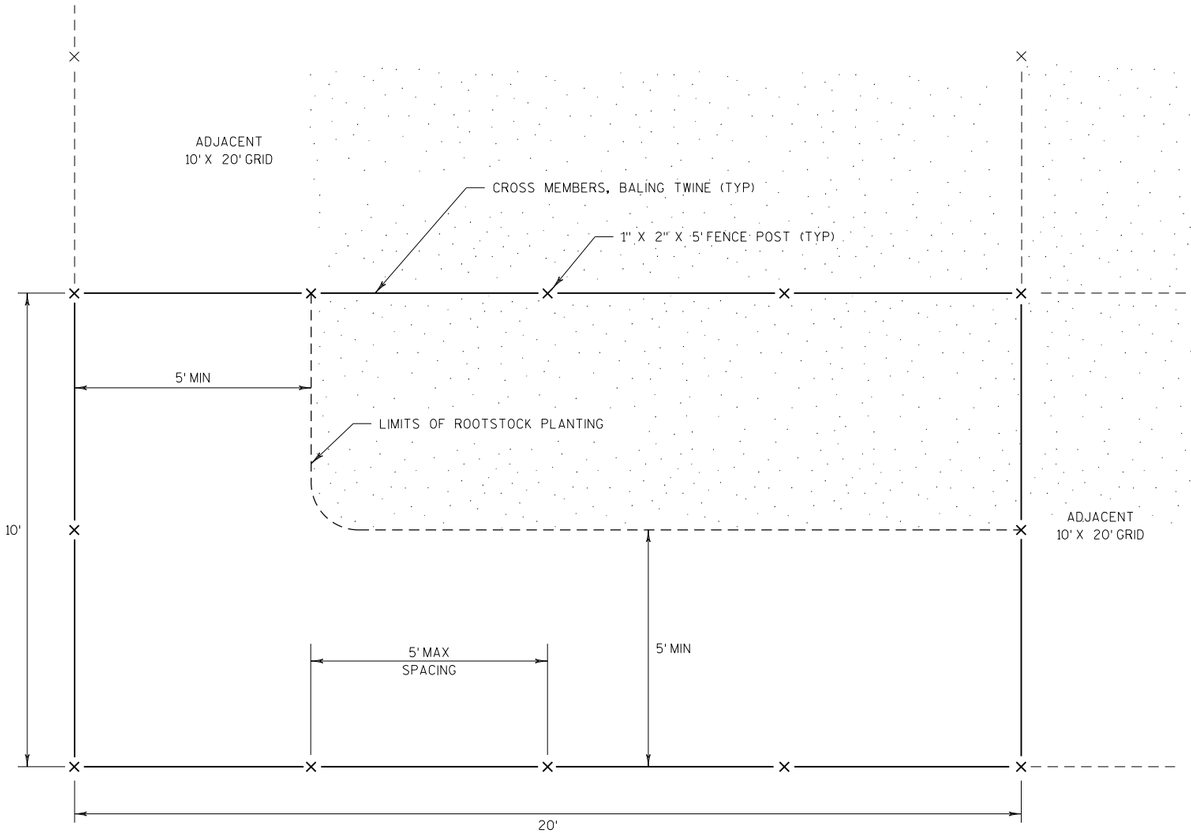
SOLUTION:
SV (C.F.) = 16 X 50
SV = 800 C.F.

$\frac{800 \text{ C.F.}}{1.5 \text{ FT.}}$ = 533 S.F.

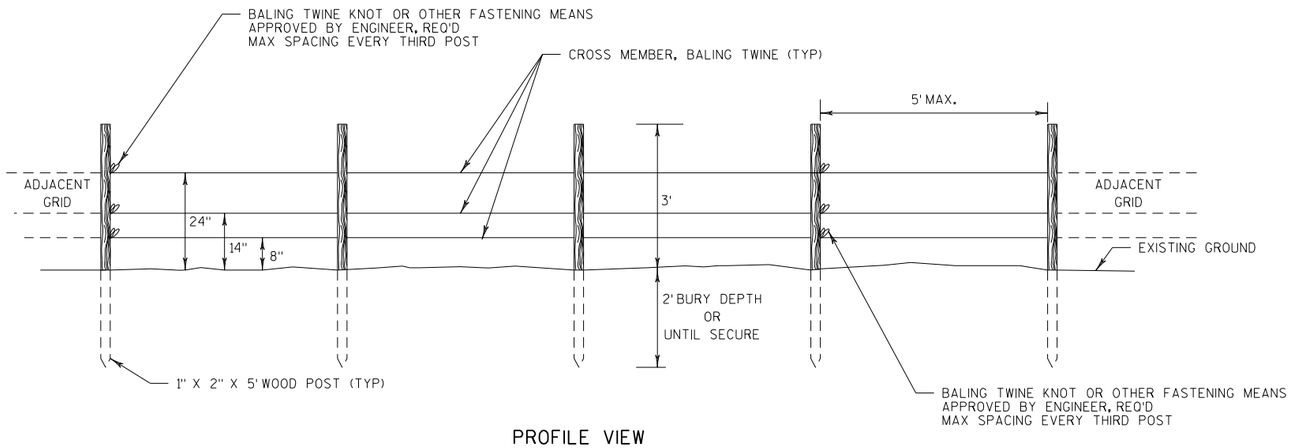
USE A 20 FT. X 27 FT. BASIN



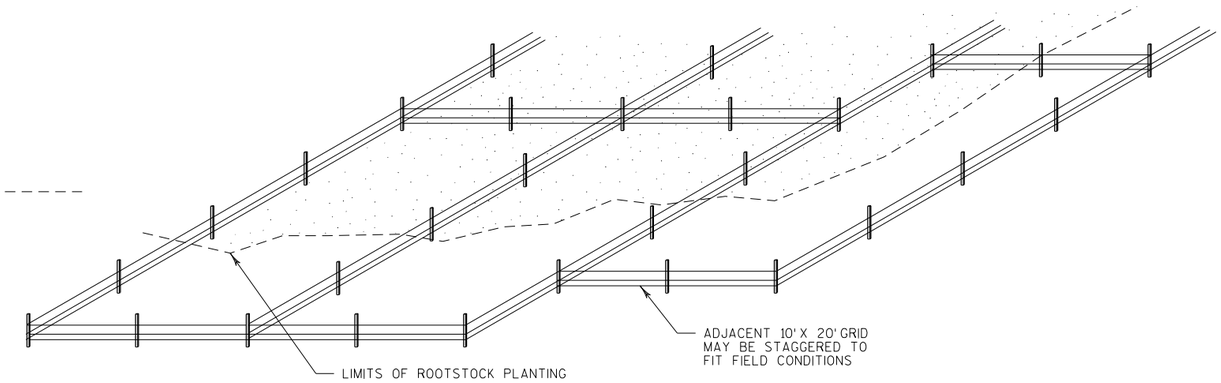
TEMPORARY SETTLING BASIN
(SIZE TO BE DETERMINED IN FIELD)



PLAN VIEW



PROFILE VIEW



ISOMETRIC VIEW

ROOTSTOCK PROTECTION

PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	CONSTRUCTION DETAILS	SHEET 33	E

2

NOTES

1) SEE DETOUR PLAN FOR FIXED MESSAGE SIGN LOCATIONS.

2) SIGNS SHALL HAVE BLACK NON -REFLECTIVE MESSAGE ON ORANGE FLUORESCENT REFLECTIVE BACKGROUND. SHEETING AND BASE MATERIAL PER SPEC 637 & 643. REFERENCE: "WISDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION," LATEST EDITION.

3) SIGNS SHALL HAVE 6" CAPITAL LETTERS, SERIES "B".

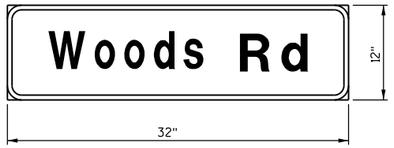
4) SIGNS SHALL HAVE A 1" BLACK BORDER WITH 3" CORNER RADIUS.

5) CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO ENGINEER FOR REVIEW PRIOR TO MANUFACTURING.

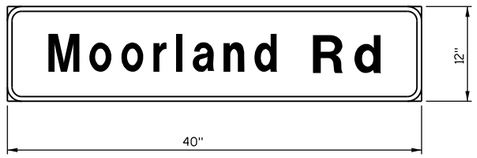
6) AFTER SIGNS HAVE BEEN LOCATED IN THE FIELD, BUT PRIOR TO INSTALLATION, THE ENGINEER SHALL VERIFY EACH SIGN LOCATION.

7) SIGNS SHALL BE MOUNTED ON 4"X6" WOODEN POST SUPPORTS, WITH 2 HOLES PER STATE PLATE A4-11.

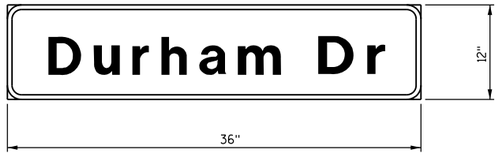
9A 9B 9C 9D 9E



8A 8B 8C 8D 8E



10



DETOUR PLAN FIXED MESSAGE SIGNS

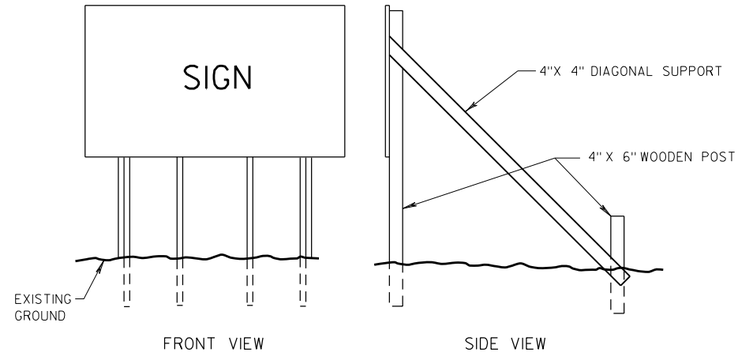
NOTES

1) SEE TRAFFIC CONTROL PLAN & DETOUR PLAN FOR SIGN LOCATIONS.

2) TWO DIAGONAL SUPPORTS TO BE AFFIXED TO THE OUTSIDE SUPPORTS FOR EACH SIGN AND TO BE INCIDENTAL TO "TRAFFIC CONTROL SIGNS FIXED MESSAGE".

3) SEE "TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS" SIGN PLATE FOR ADDITIONAL REQUIREMENTS.

4) ANGLE BRACES CAN ONLY BE USED WHEN BEHIND CURB AND GUTTER OR OTHER BARRIER.



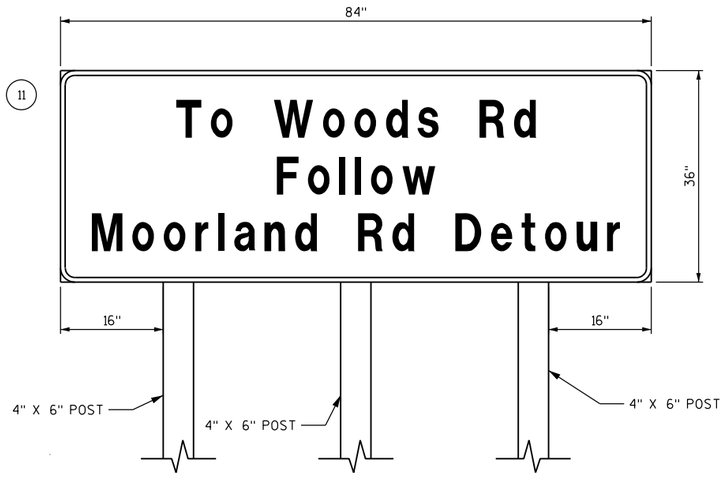
MOUNTING DETAIL FOR FIXED MESSAGE SIGNS

NOTES

1) SEE DETOUR PLAN FOR FIXED MESSAGE SIGN LOCATIONS.
2) SIGNS SHALL HAVE BLACK NON -REFLECTIVE MESSAGE ON ORANGE FLUORESCENT REFLECTIVE BACKGROUND. SHEETING AND BASE MATERIAL PER SPEC 637 & 643. REFERENCE: "WISDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION," LATEST EDITION.
3) SIGNS SHALL HAVE 6" CAPITAL LETTERS, SERIES "C".
4) SIGNS SHALL HAVE A 1" BLACK BORDER WITH 3" CORNER RADIUS.
5) CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO ENGINEER FOR REVIEW PRIOR TO MANUFACTURING.
6) AFTER SIGNS HAVE BEEN LOCATED IN THE FIELD, BUT PRIOR TO INSTALLATION, THE ENGINEER SHALL VERIFY EACH SIGN LOCATION.
7) SIGNS SHALL BE MOUNTED ON 4"X6" WOODEN POST SUPPORTS, WITH 2 HOLES PER STATE PLATE A4-11. THE NUMBER OF POSTS REQUIRED IS SHOWN.

2

(11)



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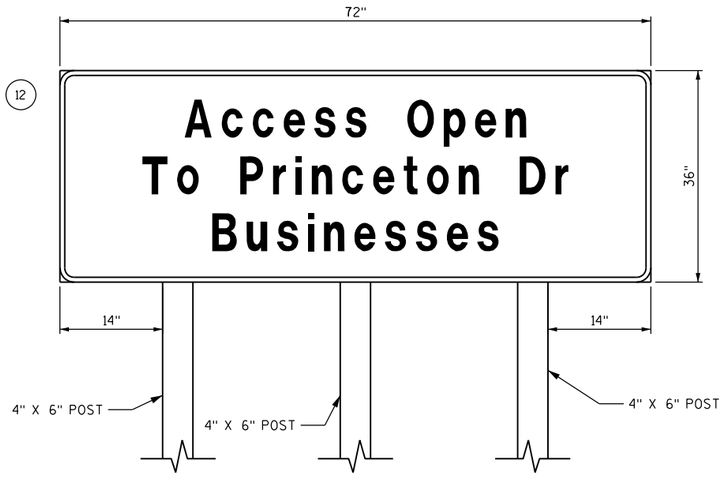
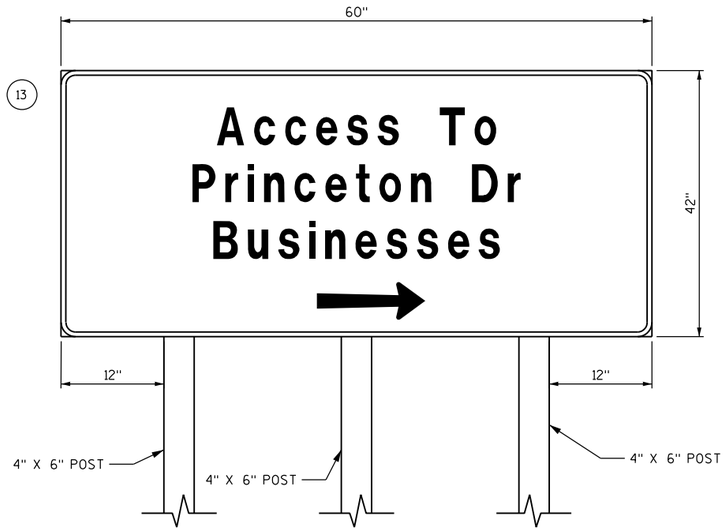
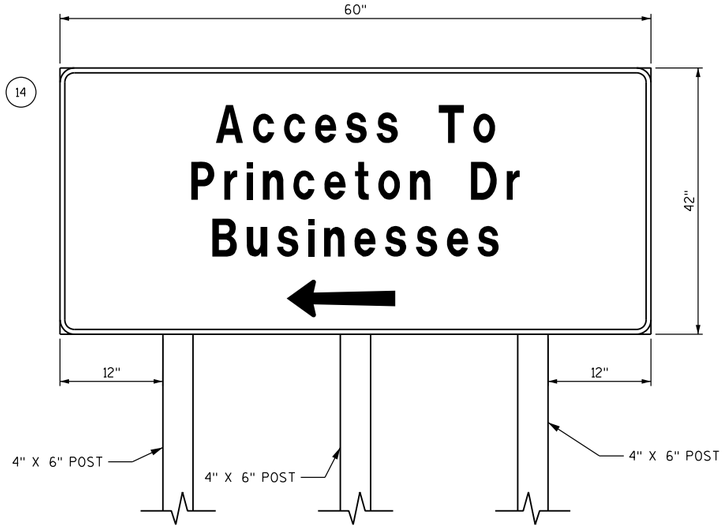


(13)



(14)



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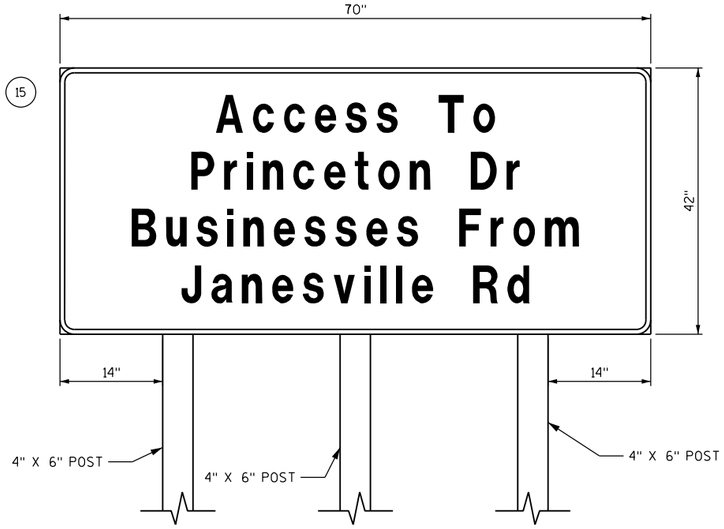


(P2)

MOUNT ON TYPE III BARRICADE

DETOUR PLAN FIXED MESSAGE SIGNS

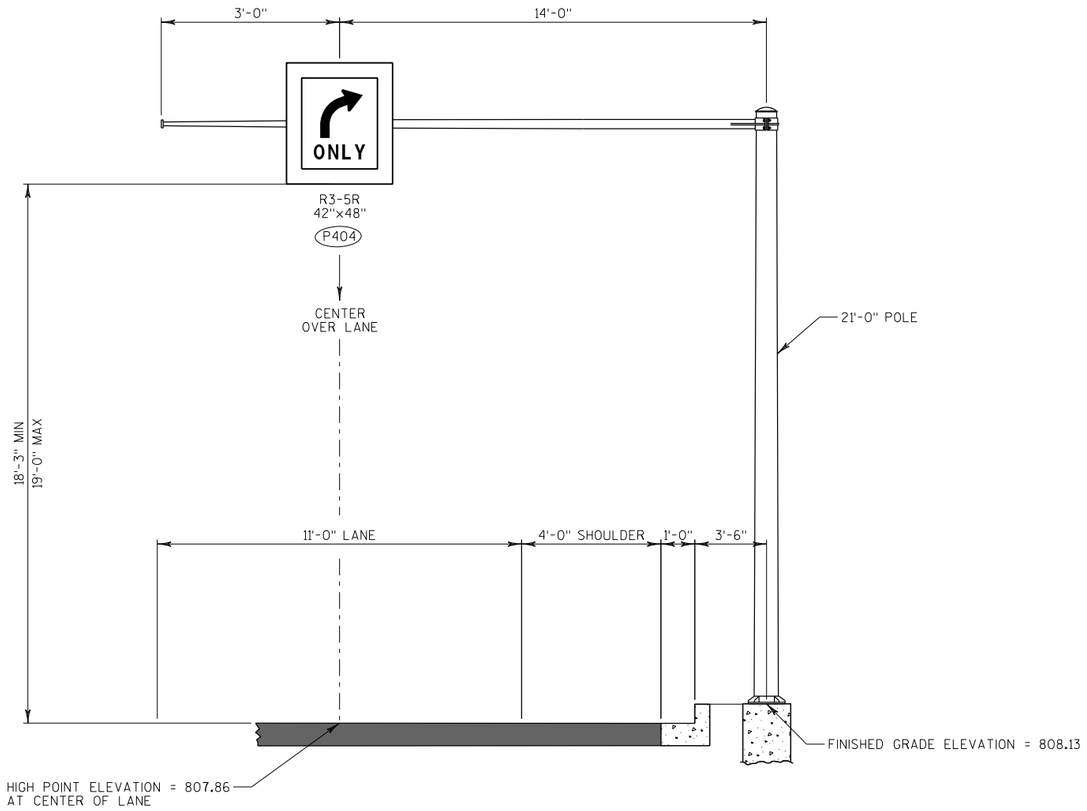
2

LEGEND

(PXXX) DENOTES PROPOSED SIGN NUMBER

NOTE, CONTRACTOR SHALL:

1) SUBMIT SHOP DRAWINGS OF OVERHEAD SIGN SUPPORT. 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 ROADS SHALL BE USED PER STANDARD DETAIL DRAWING.



OVERHEAD SIGN SUPPORT DETAIL

MOORLAND ROAD SOUTHBOUND DIRECTION
STA 193+35, 50'LT

INCIDENTAL FOOTING TO BE PER STANDARD DETAIL DRAWING "24-INCH DIAMETER CANTILEVER OVERHEAD SIGN SUPPORT BASE".

MOUNTING BRACKET FOR SIGNS TO BE PER APPROVED PRODUCT LIST FOR TYPE II SIGNS.

NOTES:

1) CURB AND GUTTER LOCATIONS ARE GIVEN TO THE FLANGE LINE. CURB AND GUTTER RADII ARE MEASURED TO THE FLANGE OF CURB AND GUTTER.

2) SEE TYPICAL SECTIONS AND EROSION CONTROL PLAN FOR MEDIAN, TERRACE AND ISLAND RESTORATION.

3) PRIOR TO PLACING CONCRETE, REVIEW SIGNING PLAN TO DETERMINE THE LOCATIONS OF SIGN POST BOX-OUTS. SIGN POST BOX-OUTS ARE INCIDENTAL TO POSTS TUBULAR STEEL BID ITEMS.

(AG01) BASE AGGREGATE DENSE 3/4-INCH

(AP01) HMA PAVEMENT 2" 4MT 58-28 S OVER
2.5" 3MT 58-28 S OVER
2.5" 3MT 58-28 S

(AP02) HMA PAVEMENT 2" 4HT 58-28 H OVER
2.5" 3HT 58-28 S OVER
2.5" 3HT 58-28 S

(AP03) HMA PAVEMENT 3" 4LT 58-28 S

(AP04) HMA PAVEMENT 5" 4LT 58-28 S

(AP05) HMA PAVEMENT 2" 4MT 58-28 S
REMOVING ASPHALTIC SURFACE MILLING - 2"

(CM01) CONCRETE MEDIAN SLOPED NOSE TYPE 1

(CM02) CONCRETE MEDIAN SLOPED NOSE TYPE 2

(CM03) MAINTENANCE OPENING

(CM04) CONCRETE SIDEWALK 5-INCH

(CM05) CONCRETE SIDEWALK 5-INCH SPECIAL

(CM06) CONCRETE SIDEWALK 12-INCH SPECIAL

(CG01) CONCRETE CURB AND GUTTER 18-INCH TYPE D

(CG02) CONCRETE CURB AND GUTTER 18-INCH TYPE D REVERSE SLOPE

(CG03) CONCRETE CURB AND GUTTER 18-INCH TYPE A REVERSE SLOPE

(CG04) CONCRETE CURB AND GUTTER 30-INCH TYPE D

(CG05) CONCRETE CURB AND GUTTER 30-INCH TYPE D REVERSE SLOPE

(CG06) CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE T

(CG07) CONCRETE CURB PEDESTRIAN

(CG08) CONCRETE CURB AND GUTTER 30-INCH TYPE D ROLL FACE (PAID FOR AS CONCRETE CURB AND GUTTER 30-INCH TYPE D)

(CP01) CONCRETE TRUCK APRON 12-INCH

(DR01) CONCRETE DRIVEWAY HES 6-INCH

(LS01) SOD LAWN

(PV11) CONCRETE SURFACE DRAINS

(SW01) SAWING ASPHALT

(SW02) SAWING CONCRETE

PROPOSED INLET

PROPOSED MANHOLE

PROPOSED DETECTABLE WARNING FIELD

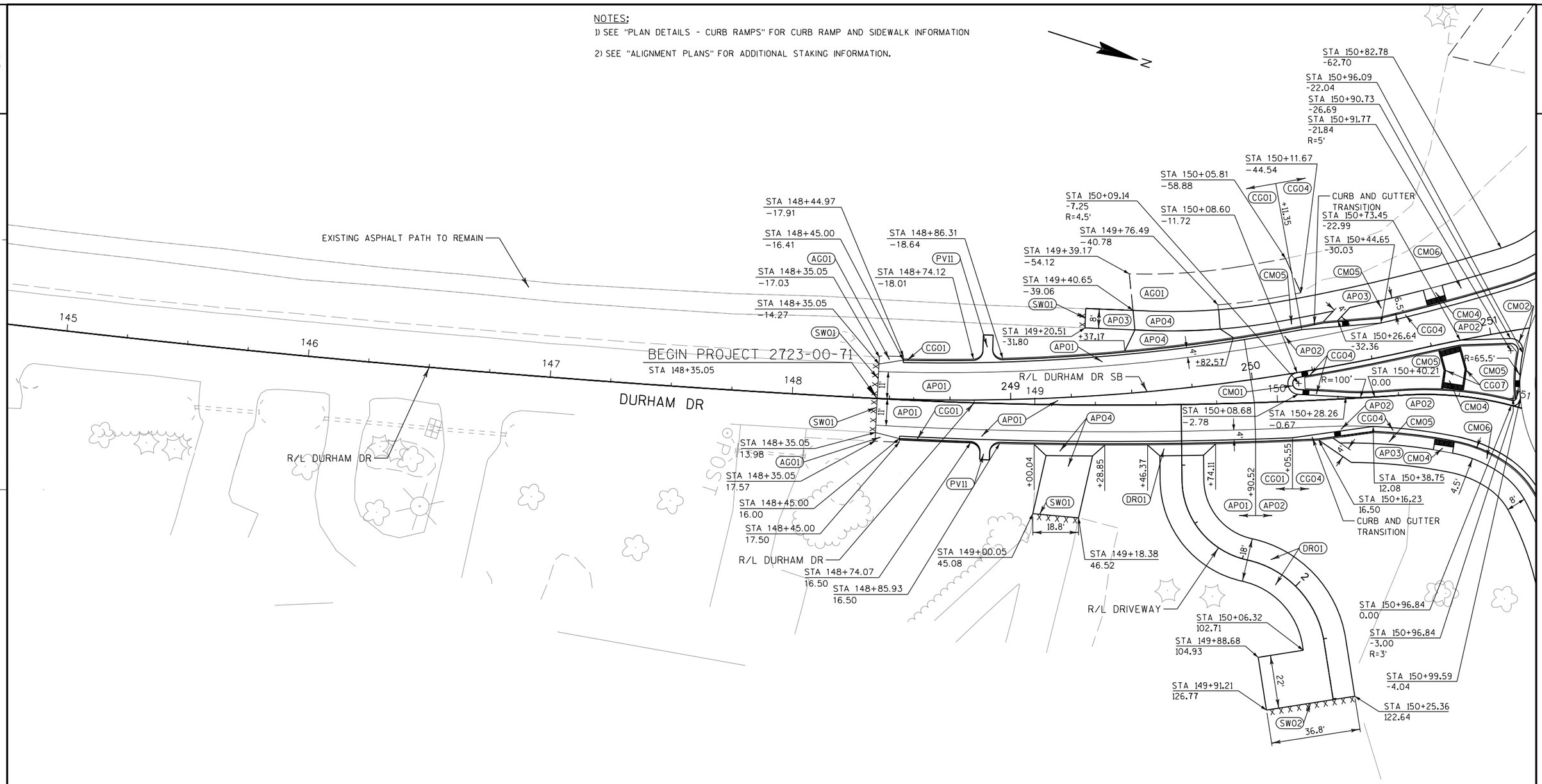
PROPOSED PULL BOX

PROPOSED STREET LIGHT

PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	PLAN DETAILS - LEGEND	SHEET 37	E

NOTES:
1) SEE "PLAN DETAILS - CURB RAMPS" FOR CURB RAMP AND SIDEWALK INFORMATION

2) SEE "ALIGNMENT PLANS" FOR ADDITIONAL STAKING INFORMATION.



PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	PLAN DETAILS - DURHAM DRIVE	SHEET 38	E

FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\021301_PD.dgn PLOT DATE : 7/26/2017 PLOT BY : wwolak PLOT NAME : PLOT SCALE : 1:40

WISDOT/CADDS SHEET 42

NOTES:
1) SEE "PLAN DETAILS - CURB RAMPS" FOR CURB RAMP AND SIDEWALK INFORMATION
2) SEE "ALIGNMENT PLANS" FOR ADDITIONAL STAKING INFORMATION
3) SEE "PLAN DETAILS - WOODS ROAD" FOR ADDITIONAL INFORMATION

N

WOODS RD
R/L WOODS RD
R/L WOODS RD WB
R/L MOORLAND RD SB
MOORLAND RD
R/L MOORLAND RD
R/L WOODS RD WB
R/L WOODS RD
WOODS RD

STA 152+60.81
-32.86
STA 152+59.55
-30.16
R=3'
STA 153+32.60
-41.25
STA 153+19.20
-26.14
STA 153+39.16
-28.92
STA 153+76.04
-37.64
STA 152+56.68
-30.71
R=65.5'
STA 153+64.26
-8.50
STA 156+73.52
-8.50
STA 153+26.98
20.05
STA 153+64.26
-1.50
STA 156+73.52
-1.50
STA 152+49.29
-10.45
STA 152+74.14
0.00
STA 152+53.59
-7.95
R=5'
STA 152+52.85
-3.01
STA 153+03.23
15.11

CURB AND GUTTER TRANSITION
CURB AND GUTTER TRANSITION
EXISTING ASPHALT PATH TO REMAIN

+46.95
+36.02
+20.32
+28.30
+17.99
+25.78

19.1'
12.7'
11
12
9
4.3
8
4
11
4
8
4.5'
5
11
46

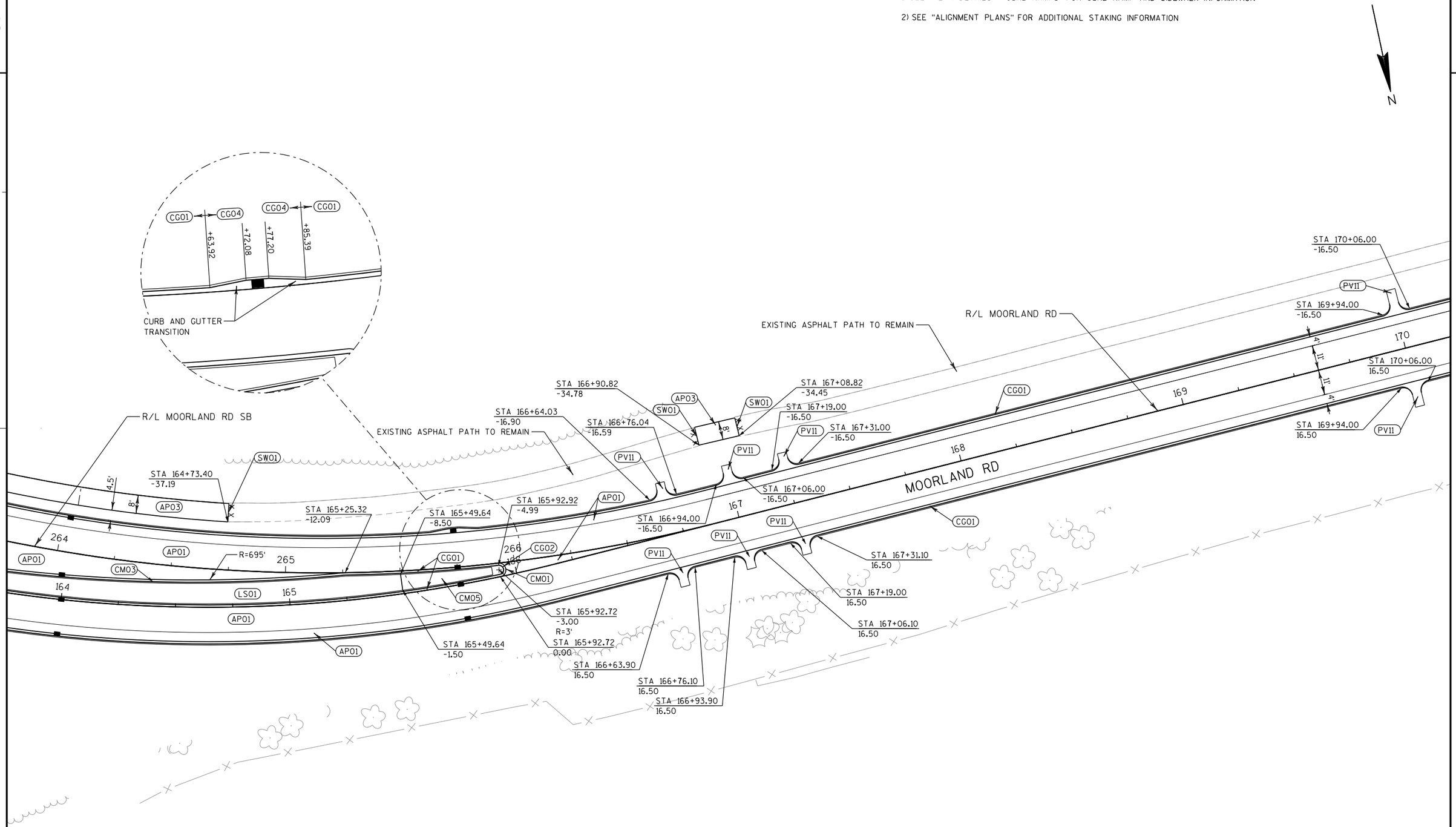
PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	PLAN DETAILS - MOORLAND ROAD	SHEET 39	E

NOTES:
1) SEE "PLAN DETAILS - CURB RAMPS" FOR CURB RAMP AND SIDEWALK INFORMATION
2) SEE "ALIGNMENT PLANS" FOR ADDITIONAL STAKING INFORMATION

R/L CANDLEWOOD LN
BEGIN CONSTRUCTION
STA 58+75.00
STA 59+05.87
12.25
CURB AND GUTTER TRANSITION TO ROLL FACE SEE CONSTRUCTION DETAILS
STA 160+46.77, -81.49 R/L MOORLAND RD =
STA 59+13.85, 52.25 R/L CANDLEWOOD LN
R=40'
STA 160+71.81
-8.01
STA 160+71.89
-4.01
R=4'
STA 160+47.98
-41.50
STA 160+56.17
-26.69
STA 160+56.24
-23.69
R=3'
STA 160+57.10
-20.80
STA 160+40.17
-18.30
STA 159+79.20
-45.29
STA 159+41.77
-45.72
CURB AND GUTTER TRANSITION SEE CONSTRUCTION DETAILS
EXISTING ASPHALT PATH TO REMAIN
R/L MOORLAND RD SB
STA 158+91.85
-18.68
STA 159+98.68
-5.00
STA 158+97.02
-11.69
STA 158+15.69
0.00
R/L MOORLAND RD
STA 159+27.10
-13.86
CURB AND GUTTER TRANSITION SEE CONSTRUCTION DETAILS
STA 159+84.16
15.00
STA 160+57.55, 60.00 R/L MOORLAND RD =
STA 60+55.52, 59.87 R/L CANDLEWOOD LN
R=40'
STA 58+87.95
-11.75
STA 160+71.89
0.00
STA 59+08.66
-13.75
CURB AND GUTTER TRANSITION TO ROLL FACE SEE CONSTRUCTION DETAILS
STA 161+67.03, -82.77 R/L MOORLAND RD =
STA 59+16.66, -51.75 R/L CANDLEWOOD LN
R=40'
STA 161+67.03
-82.77
STA 161+43.50
-27.78
STA 161+43.51
-23.39
R=4.4'
STA 161+43.51
-19.00
STA 161+58.11
-4.69
R=2.5'
STA 160+57.86
20.00
STA 159+98.75
0.00
STA 159+98.75
-3.00
R=3'
STA 60+46.92
20.81
STA 60+52.44
22.66
STA 60+73.62
18.00
STA 61+11.22
18.00
STA 61+11.22
40.00
R=25'
STA 61+29.00
22.42
STA 61+32.11
33.09
STA 61+36.50
15.00
CURB AND GUTTER TRANSITION SEE CONSTRUCTION DETAILS
STA 161+67.39
-8.00
STA 161+74.71
0.00
STA 161+57.67
-7.15
STA 161+57.46
-2.27
STA 161+70.91
15.00
STA 161+70.91, 55.00 R/L MOORLAND RD =
STA 60+53.95, -64.00 R/L CANDLEWOOD LN
R=40'
STA 60+53.95
-24.00
STA 60+58.95
-27.00
STA 60+89.83
-27.00
STA 61+19.36
-20.24
STA 61+36.50
-19.07
STA 61+36.50
-13.23
END CONSTRUCTION
STA 61+36.50
STA 163+65.13
-8.50
STA 163+65.13
-1.50
STA 163+09.69
-25.00
STA 163+09.57
-22.00
R=3'
STA 163+09.57
-19.00
STA 163+09.04
-8.00
R=695'
R=596'
R=60'
R=709'
R=622'
R=325'
CANDLEWOOD LN
MOORLAND RD
DURHAM PL
MOORLAND RD

PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	PLAN DETAILS - MOORLAND ROAD	SHEET 40	E

NOTES:
1) SEE "PLAN DETAILS - CURB RAMPS" FOR CURB RAMP AND SIDEWALK INFORMATION
2) SEE "ALIGNMENT PLANS" FOR ADDITIONAL STAKING INFORMATION



PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	PLAN DETAILS - MOORLAND ROAD	SHEET 41	E

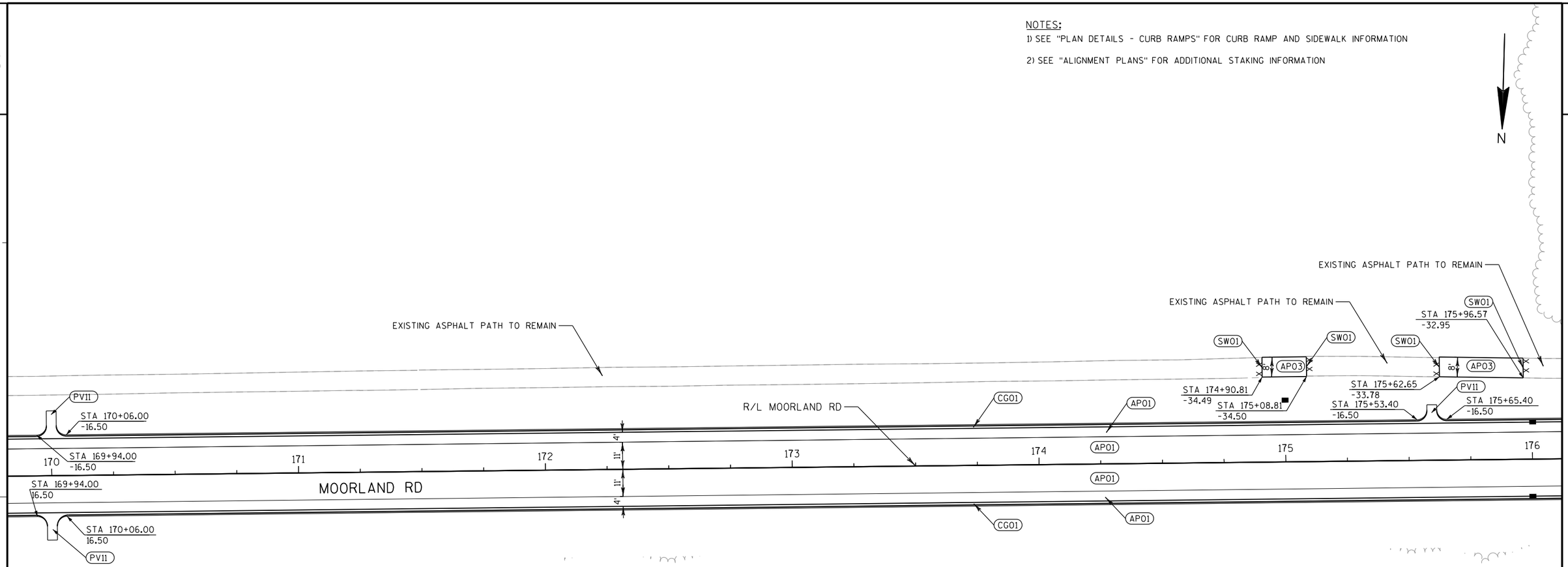
FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\021304_PD.dgn PLOT DATE : 7/26/2017 PLOT BY : wwolak PLOT NAME : PLOT SCALE : 1:40

WISDOT/CADDS SHEET 42

NOTES:

1) SEE "PLAN DETAILS - CURB RAMPS" FOR CURB RAMP AND SIDEWALK INFORMATION

2) SEE "ALIGNMENT PLANS" FOR ADDITIONAL STAKING INFORMATION



PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	PLAN DETAILS - MOORLAND ROAD	SHEET 42	E

2

NOTES:
1) SEE "PLAN DETAILS - CURB RAMPS" FOR CURB RAMP AND SIDEWALK INFORMATION
2) SEE "ALIGNMENT PLANS" FOR ADDITIONAL STAKING INFORMATION

N

EXISTING ASPHALT PATH TO REMAIN

R/L MOORLAND RD

SW01 SW01 APO3 8'

STA 177+94.88
-33.45

STA 178+30.64
-31.96

EXISTING ASPHALT PATH TO REMAIN

APO1

CGO1

STA 180+77.57
-32.33

SW01 APO3 SW01 8'

STA 180+96.13
-32.35

EXISTING ASPHALT
PATH TO REMAIN

SW01 APO3 8'

STA 175+96.57
-32.95

APO1

APO1

APO1

CGO1

MOORLAND RD

11' 11' 4' 4'

176 177 178 179 180 181 182

2

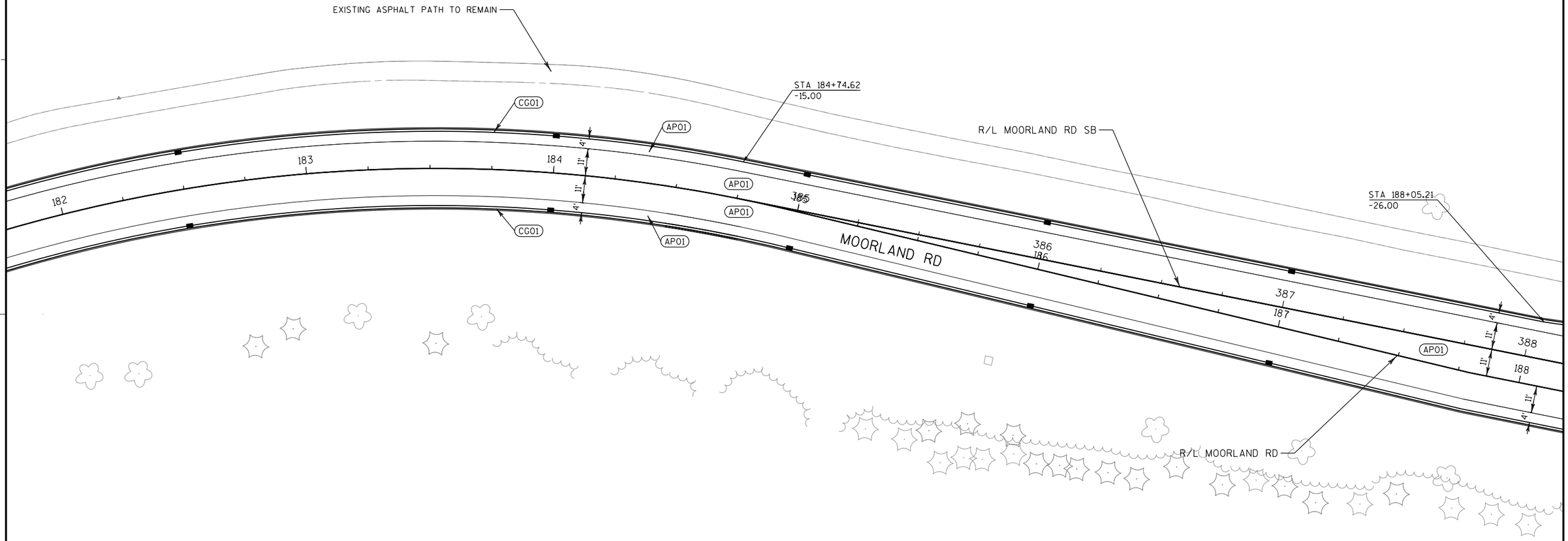
PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	PLAN DETAILS - MOORLAND ROAD	SHEET 43	E

FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\021306_PD.dgn PLOT DATE : 7/26/2017 PLOT BY : wwolak PLOT NAME : PLOT SCALE : 1:40

WISDOT/CADDS SHEET 42

NOTES:
1) SEE "PLAN DETAILS - CURB RAMPS" FOR CURB RAMP AND SIDEWALK INFORMATION

2) SEE "ALIGNMENT PLANS" FOR ADDITIONAL STAKING INFORMATION



PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	PLAN DETAILS - MOORLAND ROAD	SHEET 44	E

FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\021307_PD.dgn PLOT DATE : 7/26/2017 PLOT BY : wwolak PLOT NAME : PLOT SCALE : 1:40

WISDOT/CADDS SHEET 42

NOTES:
1) SEE "PLAN DETAILS - CURB RAMPS" FOR CURB RAMP AND SIDEWALK INFORMATION
2) SEE "ALIGNMENT PLANS" FOR ADDITIONAL STAKING INFORMATION

N

EXISTING ASPHALT PATH TO REMAIN

BEGIN CONSTRUCTION
STA 69+14.92

CURB AND GUTTER TRANSITION TO ROLL FACE SEE CONSTRUCTION DETAILS

R/L SANDALWOOD DR

CURB AND GUTTER TRANSITION TO ROLL FACE SEE CONSTRUCTION DETAILS

STA 69+30.54
19.00

STA 69+37.44
34.09

STA 69+22.92
-17.00

STA 189+03.56, -61.54 R/L MOORLAND RD =
STA 69+38.54, 47.00 R/L SANDALWOOD DR
R=30'

STA 188+82.78
-42.64

EXISTING ASPHALT PATH TO REMAIN

STA 188+05.21
-26.00

STA 189+05.21
-31.50

STA 190+07.56, -77.08 R/L MOORLAND RD =
STA 69+22.92, -57.00 R/L SANDALWOOD DR
R=40'

STA 190+07.94
-37.08

R/L MOORLAND RD SB

STA 192+10.96
-8.50

STA 191+94.88
-7.97

STA 192+69.36
-17.51

STA 193+62.98
-18.94

STA 193+62.98
-11.94

STA 194+03.49
-61.83

MOORLAND RD

CG01 CG02 CG08 SW01 SW02 AP01 AP03 CM01 CM03 CM04 CM05 LS01

STA 188+89.92
15.00

STA 188+89.92, 55.00 R/L MOORLAND RD =
STA 70+55.09, 55.00 R/L SANDALWOOD DR
R=40'

STA 70+55.09
15.00

CURB AND GUTTER TRANSITION SEE CONSTRUCTION DETAILS

END CONSTRUCTION
STA 70+63.09

MATCH EXISTING CURB & GUTTER

STA 190+11.94
15.00

STA 190+11.94, 45.00 R/L MOORLAND RD =
STA 70+44.89, -67.00 R/L SANDALWOOD DR
R=30'

STA 70+44.89
-37.00

CURB AND GUTTER TRANSITION SEE CONSTRUCTION DETAILS

STA 70+52.89
-13.07

STA 70+52.89
-36.98

SIGN

SANDALWOOD DR

STA 191+95.39
-4.00
R=4'

STA 191+95.39
0.00

STA 192+10.96
-1.50

STA 192+39.69
15.00

STA 192+83.53
0.00

R/L MOORLAND RD

STA 193+70.06
0.00

STA 193+89.66
-13.33

STA 193+89.83
-2.33

R=856.9'

STA 194+15.86
27.00

PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	PLAN DETAILS - MOORLAND ROAD	SHEET 45	E

NOTES:
1) SEE "PLAN DETAILS - CURB RAMPS" FOR CURB RAMP AND SIDEWALK INFORMATION

2) SEE "ALIGNMENT PLANS" FOR ADDITIONAL STAKING INFORMATION

BEGIN CONSTRUCTION
STA 79+04.56

STA 79+11.11
19.00
CURB AND GUTTER TRANSITION
SEE CONSTRUCTION DETAILS

STA 79+19.11
17.00
STA 195+43.76, -82.54 R/L MOORLAND RD =
STA 79+19.11, 47.00 R/L PRINCETON DR
R=30'

STA 195+56.32
-70.38
STA 195+44.37
-52.54
STA 195+30.64
-68.25

STA 194+03.49
-61.83

PRINCETON DR

R/L PRINCETON DR

STA 79+06.66
-17.00
STA 196+39.64, -91.19 R/L MOORLAND RD =
STA 79+06.66, -47.00 R/L PRINCETON DR
R=30'

STA 196+39.72
-61.12

STA 196+75.00
-61.01

STA 196+37.35
-9.03

STA 195+26.29
-26.12
R=60'

STA 195+41.52
-21.48
R=3'

STA 193+89.83
-2.33

STA 195+41.58
-18.48

MOORLAND RD
CURB AND GUTTER TRANSITION
SEE CONSTRUCTION DETAILS

STA 197+85.32
-21.96

STA 198+26.76
-27.69

STA 198+54.95
-18.97

STA 198+55.00
-11.97

STA 197+86.08
-10.97

STA 196+37.40
-5.03
R=4'

STA 196+48.95
-8.18

STA 196+36.41
-1.15

STA 196+75.00
0.77

STA 196+75.00
30.21

STA 196+51.08
0.77
R=60'

STA 196+29.59
35.89

STA 196+32.81, 65.71 R/L MOORLAND RD =
STA 80+63.71, -47.04 R/L PRINCETON DR
R=30'

STA 80+64.00
-17.04

STA 80+67.46
-17.01

END CONSTRUCTION
STA 80+67.46

EXISTING ASPHALT
PATH TO REMAIN

EXISTING CURB AND GUTTER TO REMAIN

R/L MOORLAND RD SB

+0.196

STA 199+08.98
-27.96

CURB AND GUTTER TRANSITION
SEE CONSTRUCTION DETAILS

STA 199+18.98
-27.93

R/L MOORLAND RD

EXISTING CURB AND GUTTER TO REMAIN

COORDINATE MILLING NEAR TRAFFIC
SIGNAL LOOPS WITH WAUKUSHA COUNTY
(SEE SPECIAL PROVISIONS)

END PROJECT 2723-00-71
STA 199+32.88

MOORLAND RD

STA 194+15.86
27.00

STA 195+29.75
27.00

STA 195+29.75, 67.00 R/L MOORLAND RD =
STA 80+68.93, 57.50 R/L PRINCETON DR
R=40'

STA 80+59.21
19.66
STA 80+59.93
19.56
CURB AND GUTTER TRANSITION
SEE CONSTRUCTION DETAILS

STA 80+67.46
17.45

PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	PLAN DETAILS - MOORLAND ROAD	SHEET 46	E

NOTES:
1) SEE "PLAN DETAILS - CURB RAMPS" FOR CURB RAMP AND SIDEWALK INFORMATION
2) SEE "ALIGNMENT PLANS" FOR ADDITIONAL STAKING INFORMATION
3) SEE "PLAN DETAILS - MOORLAND ROAD" FOR ADDITIONAL INFORMATION

N

EXISTING ASPHALT PATH TO REMAIN

STA 40+57.13 -16.14

STA 40+57.14 -15.14

STA 40+32.29 -14.12

BEGIN CONSTRUCTION STA 40+32.29

STA 40+32.29 14.12

STA 40+57.20 16.00

STA 40+57.20 15.00

R/L WOODS RD WB

R/L WOODS RD

WOODS RD

STA 41+87.23 -39.48

STA 42+27.52 -11.32

STA 42+28.06 -6.86 R=4.5'

STA 42+45.56 -0.52

STA 42+55.49 0.00

STA 42+27.61 -2.38

STA 41+88.52 32.00

STA 42+12.23 32:00

CURB AND GUTTER TRANSITION

STA 42+46.15 -42.84

STA 42+66.45 -31.12

STA 42+93.81 -24.24

STA 43+12.20 -29.72

STA 43+13.52 -24.96 R=5'

STA 43+17.89 -24.86 R=65.5'

STA 43+21.09 -3.97

STA 43+18.31 -3.00 R=3'

STA 43+18.31 0.00

STA 42+60.10 11.90

CURB AND GUTTER TRANSITION

STA 42+47.27 64.93

STA 42+41.51 81.37

R=90'

+35.31 +83.42 +17.20 +27.45

APO2 APO3 APO4 AGO1 SWO1 CMO1 CMO2 CMO4 CMO5 CMO6 CGO1 CGO4 CGO7

NOTES:
1) SEE "PLAN DETAILS - CURB RAMPS" FOR CURB RAMP AND SIDEWALK INFORMATION
2) SEE "ALIGNMENT PLANS" FOR ADDITIONAL STAKING INFORMATION
3) SEE "PLAN DETAILS - MOORLAND ROAD" FOR ADDITIONAL INFORMATION

N

STA 44+78.22 -24.65

STA 44+76.51 -22.20 R=3'

STA 44+73.67 -23.03

STA 44+68.51 -10.28

STA 45+05.66 -10.50

STA 45+36.23 -16.31

STA 45+24.40 -5.97

CURB AND GUTTER TRANSITION

STA 46+56.36 -16.50

R/L WOODS RD WB

R/L WOODS RD

WOODS RD

STA 45+23.97 0.00

STA 45+23.97 -3.00 R=3'

STA 45+38.63 14.96

STA 45+23.18 13.34

STA 44+92.98 0.00

STA 44+72.88 -7.91 R=5'

STA 44+72.15 -2.96

STA 46+64.36 -16.00

STA 46+64.36 -15.00

STA 46+80.36 -14.00

STA 46+80.36 15.50

STA 46+68.36 15.50

END CONSTRUCTION STA 46+80.36

+64.19

R=65.5' R=115' R=115'

APO2 APO3 CMO1 CMO2 CMO4 CMO5 CMO6 CGO1 CGO4 CGO5 CGO7 PV11 SWO1 SWO2

PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	PLAN DETAILS - WOODS ROAD	SHEET 47	E

FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\021310_PD.dgn PLOT DATE : 7/26/2017 PLOT BY : wwolak PLOT NAME : PLOT SCALE : 1:40

WISDOT/CADDS SHEET 42

LEGEND
XXX.XX = SPOT ELEVATION
XXX.XX F = FLANGE OF CURB ELEVATION
XXX.XX G = FLOWLINE OF CURB ELEVATION
XXX.XX T = TOP OF CURB ELEVATION

SLOPE INTERCEPT (TYP)

R/W

149+76.77 38.80' LT
794.38

149+77.20 30.81' LT
794.25

150+13.23 30.62' LT
794.42G
794.92T

150+11.21 30.34' LT
794.39G
794.89T

150+11.35 29.35' LT
794.45F

150+13.27 29.42' LT
794.49F

150+25.00 36.37' LT
794.99

150+32.04 37.43' LT
795.09

150+20.65 29.68' LT
794.65F

150+20.59 31.67' LT
794.61G

150+31.75 32.01' LT
794.82G
795.32T

150+31.80 30.01' LT
794.90F

150+26.66 31.87' LT
794.71G

150+26.72 29.87' LT
794.79F

150+54.43 41.22' LT
796.06

150+55.55 34.37' LT
795.35G
795.85T

150+60.43 42.98' LT
795.66

150+55.88 32.41' LT
795.43F

150+61.88 36.22' LT
795.55G
796.14T

150+59.02 50.74' LT
795.78

150+53.25 49.07' LT
796.18

150+64.59 52.77' LT
795.87

150+72.71 56.54' LT
796.64

150+77.96 59.53' LT
796.94

150+80.22 52.09' LT
796.82

150+66.30 45.11' LT
795.75

150+74.78 49.07' LT
796.52

CURB RAMP
TYPE 7B
MODIFIED

150+82.27 45.75' LT
796.06G
796.56T

150+82.89 43.93' LT
796.18F

150+76.70 42.55' LT
795.89G
796.39T

150+67.95 38.45' LT
795.64G
796.14T

150+77.27 40.69' LT
796.02F

150+68.44 36.55' LT
795.76F

150+72.44 22.65' LT
795.88F

150+73.04 20.77' LT
795.80G
796.30T

150+65.73 20.61' LT
795.74F

150+66.25 18.70' LT
795.66G
796.16T

150+62.32 34.29' LT
795.59F

+80
6.25%

CURB RAMP
TYPE 5 MODIFIED

150+68.78 10.13' LT
795.79
796.29T

150+76.30 11.28' LT
795.91
796.41T

CONCRETE CURB PEDESTRIAN

CURB RAMP
TYPE 5 MODIFIED

150+75.91 2.00' LT
795.79G
796.29T

+60
6.25%

150+68.00 2.00' LT
795.67G
796.17T

150+67.79 0.00
795.71F

+83
6.25%

150+75.82 0.00
795.87F

150

DURHAM DR

151

R/L DURHAM DR

150+21.91 13.48' RT
794.58F

150+16.01 14.01' RT
794.43F

150+22.08 15.47' RT
794.50G

150+29.82 12.80' RT
794.78F

150+29.98 14.80' RT
794.65G
795.15T

150+16.19 16.00' RT
794.35G

150+05.55 15.00' RT
794.18F

150+05.55 16.00' RT
794.12G
794.62T

150+24.93 18.12' RT
794.73

150+29.05 26.33' RT
794.90

150+65.94 15.78' RT
795.62F

150+65.67 17.77' RT
795.58G

150+56.83 14.64' RT
795.43F

150+56.48 16.61' RT
795.30G
795.80T

150+64.96 22.73' RT
795.66

CURB RAMP
TYPE 7B
MODIFIED

150+74.93 16.68' RT
795.82F

150+74.81 18.68' RT
795.74G

150+74.49 23.68' RT
795.79

150+85.54 17.86' RT
796.03F

150+85.14 19.83' RT
795.95G
796.45T

150+84.10 24.75' RT
796.34

150+95.87 19.80' RT
796.23F

150+95.27 21.74' RT
796.11G

150+93.68 26.56' RT
796.79

150+53.91 29.43' RT
796.10

150+63.69 30.67' RT
795.84

150+73.44 31.63' RT
795.91

150+82.23 32.61' RT
796.42

150+90.82 34.24' RT
796.91

PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	PLAN DETAILS - CURB RAMPS	SHEET 48	E

FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\021351_PD.dgn
PLOT DATE : 7/26/2017
PLOT BY : wwolak
PLOT NAME :
PLOT SCALE : 1:10

WISDOT/CADDS SHEET 42

LEGEND
XXX.XX = SPOT ELEVATION
XXX.XX F = FLANGE OF CURB ELEVATION
XXX.XX G = FLOWLINE OF CURB ELEVATION
XXX.XX T = TOP OF CURB ELEVATION

MOORLAND RD

R/L MOORLAND RD

SLOPE INTERCEPT (TYP)

CONCRETE CURB PEDESTRIAN

CURB RAMP TYPE 5 MODIFIED

CURB RAMP TYPE 7B MODIFIED

152+84.82 58.49'LT
797.81

152+92.48 55.21'LT
797.49

153+00.05 53.43'LT
797.41

153+09.55 52.13'LT
797.15

152+81.32 51.38'LT
797.69

152+90.20 47.57'LT
797.38

152+77.62 45.07'LT
797.40G
797.90T

152+76.61 43.37'LT
797.53F

152+87.69 39.31'LT
797.26G

152+87.10 37.38'LT
797.34F

152+94.68 36.01'LT
797.14G

152+93.85 34.20'LT
797.22F

152+99.02 45.51'LT
797.29

153+08.57 44.19'LT
797.03

153+17.76 43.01'LT
796.70

153+24.45 42.19'LT
796.59

153+04.75 32.12'LT
796.92G
797.42T

153+26.07 28.20'LT
796.58G
797.08T

153+26.09 26.20'LT
796.70F

153+33.92 26.32'LT
796.58F

153+04.14 30.22'LT
797.05F

153+33.88 28.32'LT
796.50G

153+39.80 28.35'LT
796.40G

153+47.04 27.62'LT
796.30G
796.80T

153+46.95 26.63'LT
796.36F

153+39.85 26.44'LT
796.48F

152+80.26 23.75'LT
797.49F

152+87.73 21.12'LT
797.39F

152+79.39 21.94'LT
795.41G
795.91T

152+86.87 19.30'LT
797.31G
797.81T

152+74.76 12.41'LT
797.52
798.02T

152+82.74 10.67'LT
797.42
797.92T

152+83.03 2.00'LT
797.29G
797.79T

152+75.04 2.00'LT
797.36G
797.86T

152+83.10 0.00
797.33F

152+75.10 0.00
797.40F

152+75.53 15.77'RT
797.12F

152+75.59 17.77'RT
797.04G

152+83.64 15.58'RT
797.04F

152+83.71 17.58'RT
796.96G

152+91.74 15.38'RT
796.95F

152+91.82 17.38'RT
796.83G
797.33T

153+13.68 16.24'RT
796.72F

153+13.47 18.23'RT
796.60G
797.10T

153+21.75 17.05'RT
796.63F

153+21.55 19.04'RT
796.55G

153+27.22 17.57'RT
796.57F

153+27.03 19.55'RT
796.49G

153+36.02 18.35'RT
796.47F

153+36.04 19.35'RT
796.41G
796.91T

152+66.41 16.00'RT
797.23F

152+66.45 18.00'RT
797.11G
797.61T

152+83.88 22.62'RT
797.04

152+75.73 22.77'RT
797.12

152+66.56 23.00'RT
797.79

152+92.03 22.38'RT
797.51

153+17.79 21.77'RT
797.08

153+13.40 29.87'RT
797.22

152+92.37 30.37'RT
797.63

152+84.16 30.57'RT
797.16

152+75.96 30.77'RT
797.24

152+66.72 31.00'RT
797.91

PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	PLAN DETAILS - CURB RAMPS	SHEET 49	E

LEGEND
XXX.XX = SPOT ELEVATION
XXX.XX F = FLANGE OF CURB ELEVATION
XXX.XX G = FLOWLINE OF CURB ELEVATION
XXX.XX T = TOP OF CURB ELEVATION

SLOPE INTERCEPT (TYP)

42+84.45 52.45'LT
797.61
42+78.61 50.11'LT
797.69
CURB RAMP TYPE 7B MODIFIED
42+92.40 47.66'LT
798.02
42+72.57 48.07'LT
798.28
42+86.46 44.87'LT
797.49
42+93.86 43.01'LT
797.34G
797.84T
42+74.13 40.31'LT
798.16
42+94.47 41.16'LT
797.47F
42+75.16 35.47'LT
797.52G
797.92T
42+80.37 42.42'LT
797.57
42+87.82 40.17'LT
797.42G
42+51.56 35.61'LT
797.70
42+81.61 37.66'LT
797.49G
42+88.38 38.29'LT
797.50F
42+45.05 34.90'LT
797.80
42+82.12 35.76'LT
797.53F
42+93.04 23.93'LT
797.51F
42+33.56 30.74'LT
797.63G
798.13T
42+56.91 32.75'LT
797.55G
798.05T
42+75.59 33.54'LT
797.56F
42+93.69 22.07'LT
797.43G
797.93T
+02
6.25%
42+86.89 19.57'LT
797.47G
797.97T
42+56.99 30.75'LT
797.63F
42+86.29 21.46'LT
797.55F
42+42.81 32.17'LT
797.59G
798.09T
42+33.71 29.75'LT
797.69F
+78
6.25%
42+48.81 32.43'LT
797.57G
798.07T
42+48.90 30.43'LT
797.65F
CONCRETE CURB PEDESTRIAN
42+42.90 30.17'LT
797.67F
42+89.73 11.25'LT
797.31
797.81T
42+97.31 12.47'LT
797.24
797.74T
CURB RAMP
TYPE 5 MODIFIED
CONCRETE CURB PEDESTRIAN
42+96.69 2.00'LT
797.09G
797.59T
+81
6.25%
+03
6.25%
42+88.75 2.00'LT
797.15G
797.65T
42+88.53 0.00
797.19F
42+96.56 0.00
797.13F
CURB RAMP TYPE 7B MODIFIED
WOODS RD
42+51.22 12.71'RT
797.20F
42+51.40 14.70'RT
797.12G
797.62T
42+86.71 14.17'RT
796.95F
42+95.53 14.65'RT
796.91F
42+37.42 14.01'RT
797.27F
42+77.29 13.52'RT
797.01F
42+86.56 16.17'RT
796.91G
42+95.38 16.65'RT
796.83G
42+43.30 13.44'RT
797.24F
R/L WOODS RD
42+27.45 15.00'RT
797.32F
42+37.61 16.00'RT
797.19G
42+77.10 15.51'RT
796.93G
797.43T
43+05.72 15.73'RT
796.84F
42+27.45 16.00'RT
797.26G
797.76T
42+43.49 15.44'RT
797.16G
42+85.58 23.13'RT
797.02
43+05.37 17.70'RT
796.72G
797.22T
42+49.19 20.20'RT
797.53
42+76.41 22.48'RT
797.50
42+94.80 23.63'RT
796.90
43+04.04 24.60'RT
797.46
42+53.46 28.44'RT
797.65
42+75.53 30.45'RT
797.62
43+02.37 32.48'RT
797.58
42+84.97 31.11'RT
797.14
42+94.10 31.61'RT
797.04

PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	PLAN DETAILS - CURB RAMPS	SHEET 50	E

2

2

LEGEND
XXX.XX = SPOT ELEVATION
XXX.XX F = FLANGE OF CURB ELEVATION
XXX.XX G = FLOWLINE OF CURB ELEVATION
XXX.XX T = TOP OF CURB ELEVATION

N

SLOPE INTERCEPT (TYP)

CURB RAMP TYPE 7B MODIFIED

CURB RAMP TYPE 5 MODIFIED

CONCRETE CURB PEDESTRIAN

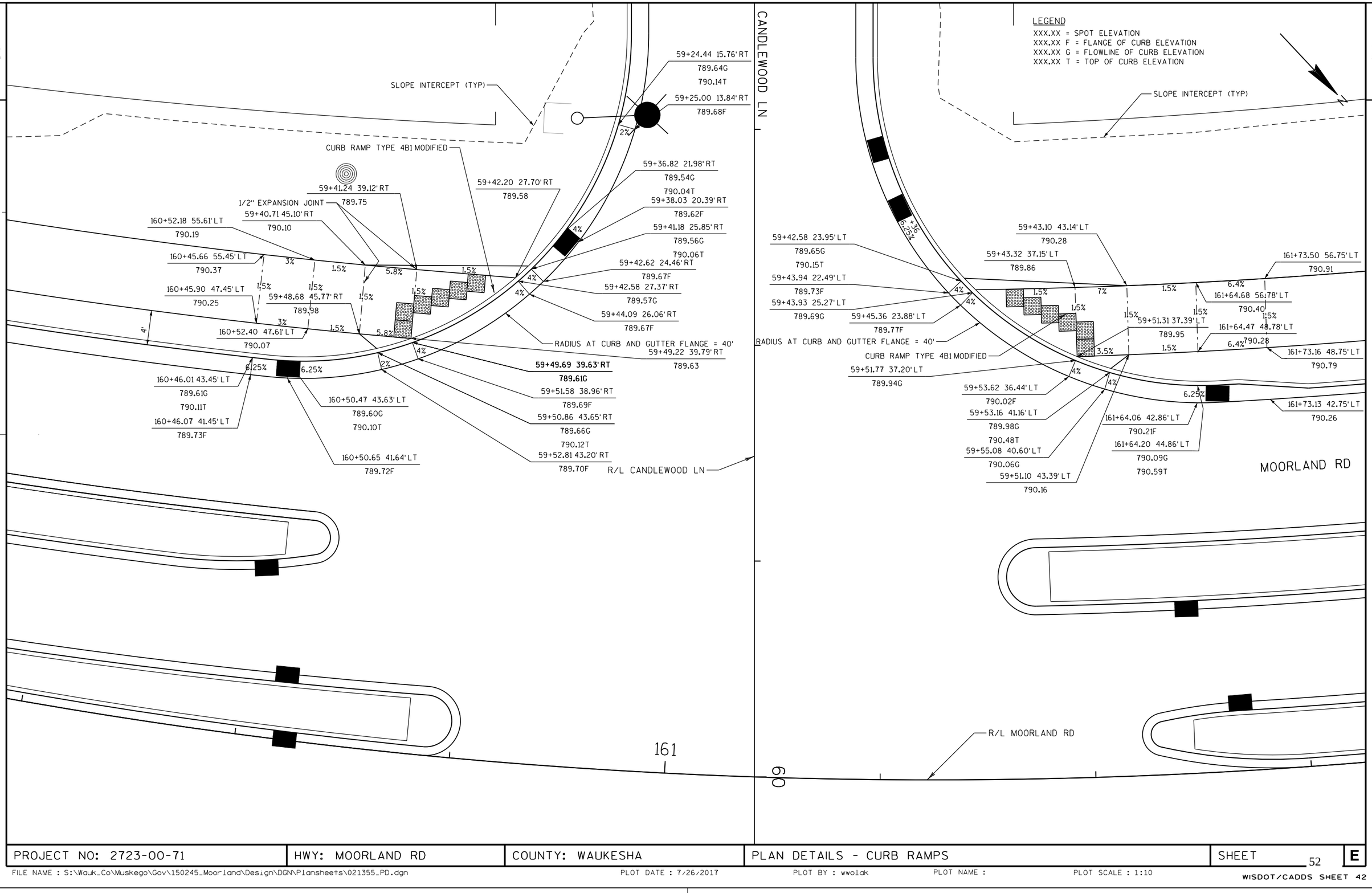
CURB RAMP TYPE 7B MODIFIED

SLOPE INTERCEPT (TYP)

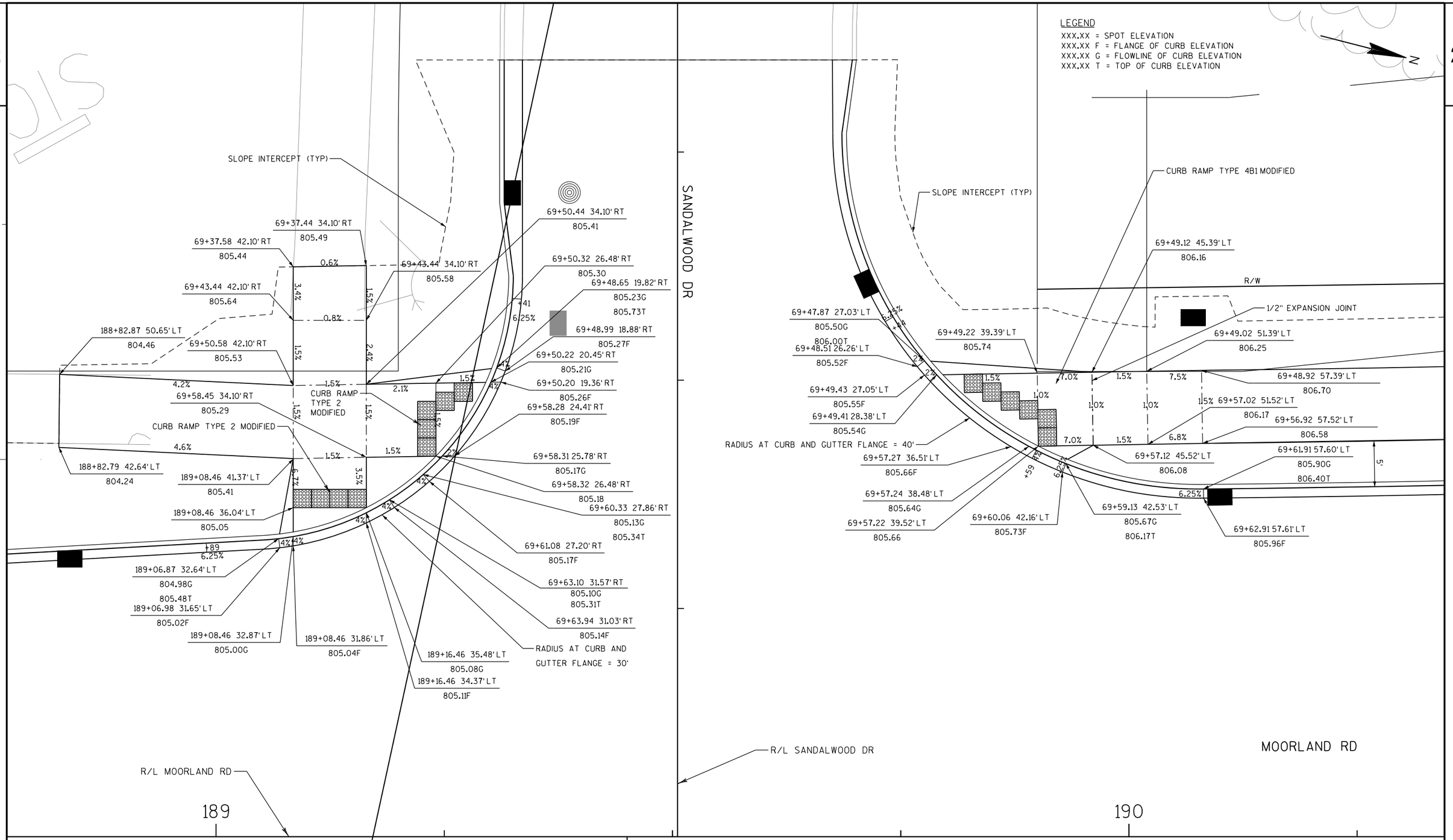
PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	PLAN DETAILS - CURB RAMPS	SHEET 51	E

FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\021354_PD.dgn PLOT DATE : 7/26/2017 PLOT BY : wwolak PLOT NAME : PLOT SCALE : 1:10

WISDOT/CADDS SHEET 42



PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	PLAN DETAILS - CURB RAMPS	SHEET 52	E



PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	PLAN DETAILS - CURB RAMPS	SHEET 53	E

2

R/L MOORLAND RD

189

R/L SANDALWOOD DR

190

LEGEND
XXX.XX = SPOT ELEVATION
XXX.XX F = FLANGE OF CURB ELEVATION
XXX.XX G = FLOWLINE OF CURB ELEVATION
XXX.XX T = TOP OF CURB ELEVATION

MOORLAND RD

N

2

189+07.34 18.99' RT
805.55F

189+08.46 19.55' RT
805.57F

189+06.90 19.89' RT
805.51G

189+08.46 20.69' RT
805.54G

RADIUS AT CURB AND GUTTER FLANGE = 40'

+03
6.25%

189+16.46 25.07' RT
805.72F

189+16.46 26.42' RT
805.68G

189+18.63 27.14' RT
805.80F

4%

189+08.46 21.26' RT
805.56

189+18.98 27.51' RT
805.82F

189+18.26 28.20' RT
805.78G

189+08.46 27.10' RT
805.65

806.03T

1.5%

4%

189+16.46 27.10' RT
805.74

R/W

+24
6.25%

1.5%

189+08.46 35.10' RT
805.97

CURB RAMP TYPE 4B1 MODIFIED

189+16.46 35.10' RT
806.06

SLOPE INTERCEPT (TYP)

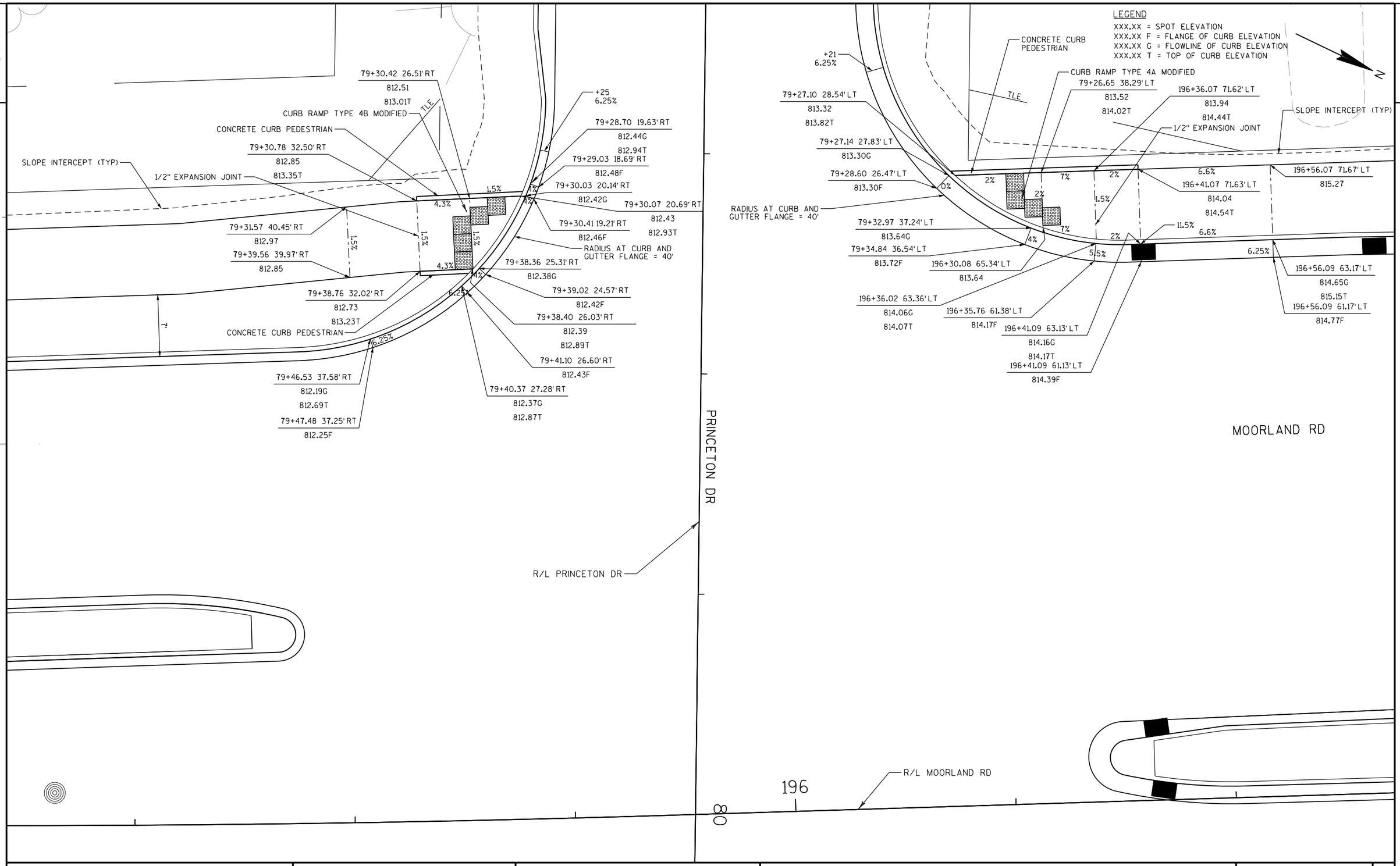
12.5'

SANDALWOOD DR

TLE

SLOPE INTERCEPT (TYP)

PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	PLAN DETAILS - CURB RAMPS	SHEET 54	E



PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	PLAN DETAILS - CURB RAMPS	SHEET 55	E

NOTES:

1) CURB AND GUTTER GRADES ARE GIVEN TO THE FLANGE OF CURB AND GUTTER.

2) FLOWLINE (G) ELEVATIONS ARE SHOWN WHERE GUTTER CROSS SLOPE VARIES FROM STANDARD DETAIL DRAWING.

3) PAVING GRADES ARE SHOWN AT 25'INTERVALS BASED ON REFERENCE LINES FOR EACH DIRECTION OF TRAFFIC ALONG DIVIDED ROADWAYS.

4) SEE "PLAN DETAILS - CURB RAMPS" FOR CURB RAMP AND SIDEWALK INFORMATION.

LEGEND

XXX.XX = SPOT ELEVATION
XXX.XX G = FLOWLINE OF CURB ELEVATION

N

DURHAM DR

BEGIN PROJECT 2723-00-71
STA 148+35.05

R/L DURHAM DR

R/L DURHAM DR SB

STA 149+41.43,
31.0' LT
793.41

R/L DURHAM DR

STA 151+00,
20.8' RT

145 146 147 148 149 150 151

249 250 251

793.10 793.13 793.18 1.72% 793.21 1.79% 793.44 1.51% 793.27 1.58% 793.22 793.22

793.06 793.02 793.03 793.13 793.34 793.64 794.05 794.48 795.05 795.55 796.09 0.5%
793.15 793.10 793.11 793.21 793.42 793.72 794.13 794.56 795.26 795.69 796.17
2% 4%
793.37 793.33 793.34 793.45 793.66 793.97 794.38 794.82 795.35 795.85 796.33
793.36 793.30 793.32 793.44 793.66 793.96 794.36 794.85 795.35 795.85 796.37
1.7% 1.9% 2% 2% 1.9% 1.5% 1.4%
793.18 793.08 793.10 793.22 793.44 793.74 794.14 794.68 795.13 795.82 796.31
793.11 1.8% 793.01 1.8% 793.02 2% 793.14 793.36 793.66 794.06 794.58 4.7%

793.14

796.54 796.40 796.13 796.33 796.29 796.46 796.40

11' 11' 8' 8'

PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	PAVING GRADES	SHEET 56	E

FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\021371_PG.dgn PLOT DATE : 7/26/2017 PLOT BY : wwolak PLOT NAME : PLOT SCALE : 1:40

WISDOT/CADDS SHEET 42

NOTES:

1) CURB AND GUTTER GRADES ARE GIVEN TO THE FLANGE OF CURB AND GUTTER.

2) FLOWLINE (G) ELEVATIONS ARE SHOWN WHERE GUTTER CROSS SLOPE VARIES FROM STANDARD DETAIL DRAWING.

3) PAVING GRADES ARE SHOWN AT 25' INTERVALS BASED ON REFERENCE LINES FOR EACH DIRECTION OF TRAFFIC ALONG DIVIDED ROADWAYS.

4) SEE "PLAN DETAILS - CURB RAMPS" FOR CURB RAMP AND SIDEWALK INFORMATION.

LEGEND

XXX.XX = SPOT ELEVATION
XXX.XX G = FLOWLINE OF CURB ELEVATION

N

R/L WOODS RD

R/L WOODS RD WB

R/L MOORLAND RD SB

R/L MOORLAND RD

STA 10+13.53
19.1' RT
797.11

STA 10+35.17
28.9' RT
796.71

STA 10+40.85
19.1' RT
796.64

STA 10+61.03
29.7' RT
796.44

STA 9+25.00
16.37' LT
797.42

STA 9+31.09
16.60' LT
797.40

STA 12+75.00
24.98' RT
797.49

STA 12+62.50
19.34' RT
797.68

STA 12+50.00
24.03' RT
797.74

STA 252+77.44
18.77' LT
797.71

STA 153+66.37,
38.32' LT
794.53

STA 10+87.44,
0.0' RT
796.31
796.12 G

STA 10+87.44,
19.1' RT
796.37
796.17 G

STA 11+87.50
0.0' RT

STA 11+12.50
26.4' RT
796.39

STA 11+12.50
19.1' RT
796.46

WOODS RD

MOORLAND RD

PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	PAVING GRADES	SHEET 57	E

NOTES:

1) CURB AND GUTTER GRADES ARE GIVEN TO THE FLANGE OF CURB AND GUTTER.

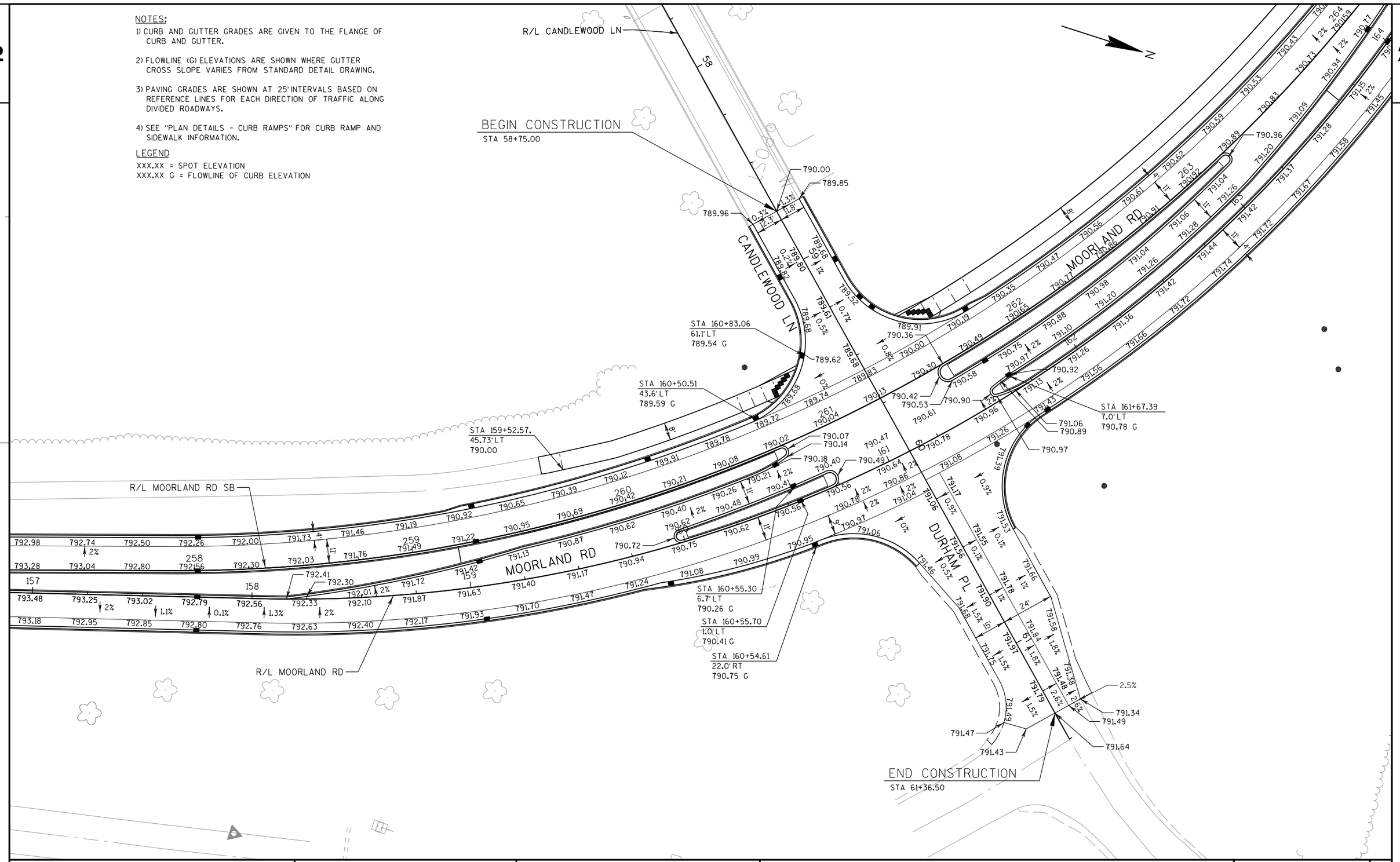
2) FLOWLINE (G) ELEVATIONS ARE SHOWN WHERE GUTTER CROSS SLOPE VARIES FROM STANDARD DETAIL DRAWING.

3) PAVING GRADES ARE SHOWN AT 25' INTERVALS BASED ON REFERENCE LINES FOR EACH DIRECTION OF TRAFFIC ALONG DIVIDED ROADWAYS.

4) SEE "PLAN DETAILS - CURB RAMPS" FOR CURB RAMP AND SIDEWALK INFORMATION.

LEGEND

XXX.XX = SPOT ELEVATION
XXX.XX G = FLOWLINE OF CURB ELEVATION



PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	PAVING GRADES	SHEET 58	E

NOTES:

1) CURB AND GUTTER GRADES ARE GIVEN TO THE FLANGE OF CURB AND GUTTER.

2) FLOWLINE (G) ELEVATIONS ARE SHOWN WHERE GUTTER CROSS SLOPE VARIES FROM STANDARD DETAIL DRAWING.

3) PAVING GRADES ARE SHOWN AT 25' INTERVALS BASED ON REFERENCE LINES FOR EACH DIRECTION OF TRAFFIC ALONG DIVIDED ROADWAYS.

4) SEE "PLAN DETAILS - CURB RAMPS" FOR CURB RAMP AND SIDEWALK INFORMATION.

LEGEND

XXX.XX = SPOT ELEVATION
XXX.XX G = FLOWLINE OF CURB ELEVATION

N

R/L MOORLAND RD

STA 164+03.34,
41.69' LT
790.87

R/L MOORLAND RD SB

MOORLAND RD

PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	PAVING GRADES	SHEET 59	E

2

NOTES:

1) CURB AND GUTTER GRADES ARE GIVEN TO THE FLANGE OF CURB AND GUTTER.

2) FLOWLINE (G) ELEVATIONS ARE SHOWN WHERE GUTTER CROSS SLOPE VARIES FROM STANDARD DETAIL DRAWING.

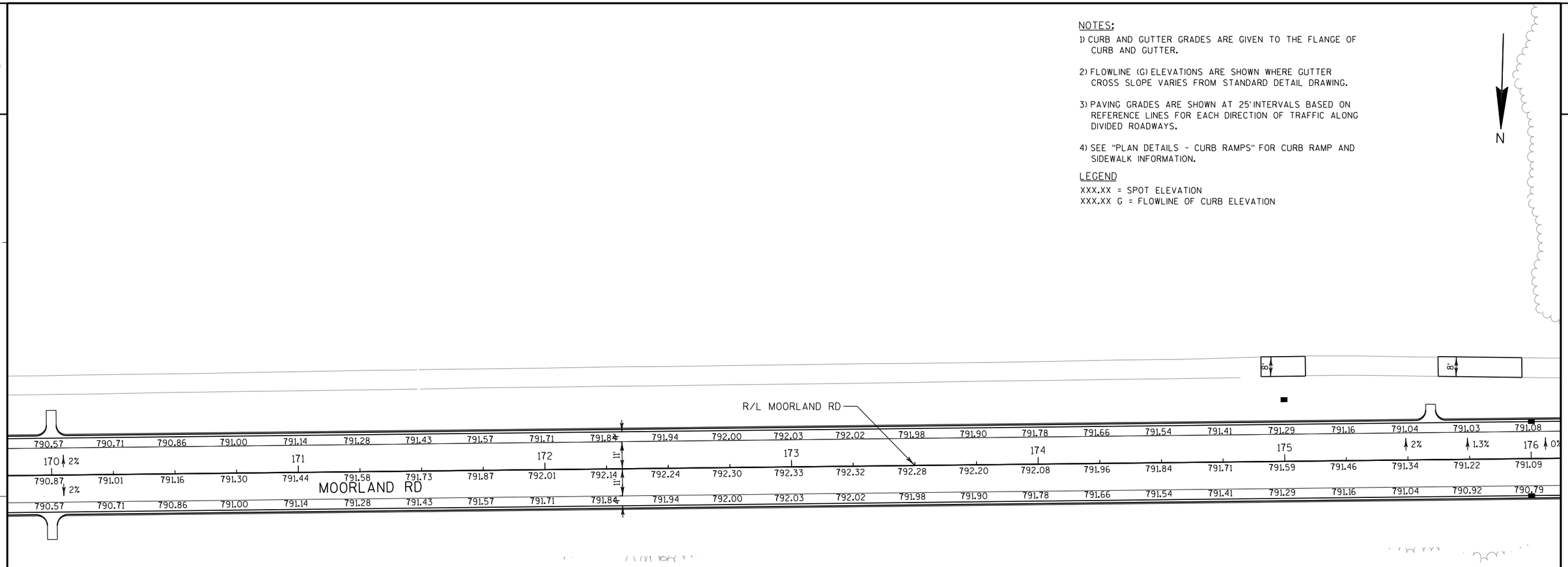
3) PAVING GRADES ARE SHOWN AT 25' INTERVALS BASED ON REFERENCE LINES FOR EACH DIRECTION OF TRAFFIC ALONG DIVIDED ROADWAYS.

4) SEE "PLAN DETAILS - CURB RAMPS" FOR CURB RAMP AND SIDEWALK INFORMATION.

LEGEND

XXX.XX = SPOT ELEVATION
XXX.XX G = FLOWLINE OF CURB ELEVATION

N



PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	PAVING GRADES	SHEET 60	E

2

2

NOTES:

1) CURB AND GUTTER GRADES ARE GIVEN TO THE FLANGE OF CURB AND GUTTER.

2) FLOWLINE (G) ELEVATIONS ARE SHOWN WHERE GUTTER CROSS SLOPE VARIES FROM STANDARD DETAIL DRAWING.

3) PAVING GRADES ARE SHOWN AT 25' INTERVALS BASED ON REFERENCE LINES FOR EACH DIRECTION OF TRAFFIC ALONG DIVIDED ROADWAYS.

4) SEE "PLAN DETAILS - CURB RAMPS" FOR CURB RAMP AND SIDEWALK INFORMATION.

LEGEND

XXX.XX = SPOT ELEVATION
XXX.XX G = FLOWLINE OF CURB ELEVATION

N

R/L MOORLAND RD

MOORLAND RD

STA 178+10.05
16.0' LT
790.42 G

STA 178+10.04
16.0' RT
789.82 G

8'

11'

4'

178 179 180 181 182

176 177

1.3% 0% 1.2% 2% 2% 2% 2.0% 2.0%

791.22 791.03 791.08 791.14 791.14 791.02 790.90 790.77 790.63 790.60 790.56 790.57 790.61 790.69 790.80 790.92 791.05 791.17 791.30 791.42 791.55 791.67 791.80 791.92 792.05 792.17 792.30

790.92 791.09 790.97 790.84 790.72 790.60 790.47 790.37 790.30 790.26 790.27 790.31 790.39 790.50 790.62 790.75 790.87 791.00 791.12 791.25 791.37 791.50 791.62 791.75 791.87 792.00 792.12

790.79 790.67 790.54 790.42 790.30 790.17 790.07 790.00 789.96 789.97 790.01 790.09 790.20 790.32 790.45 790.57 790.70 790.82 790.95 791.07 791.20 791.32 791.45 791.57 791.70 791.82

PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	PAVING GRADES	SHEET 61	E

NOTES:

1) CURB AND GUTTER GRADES ARE GIVEN TO THE FLANGE OF CURB AND GUTTER.

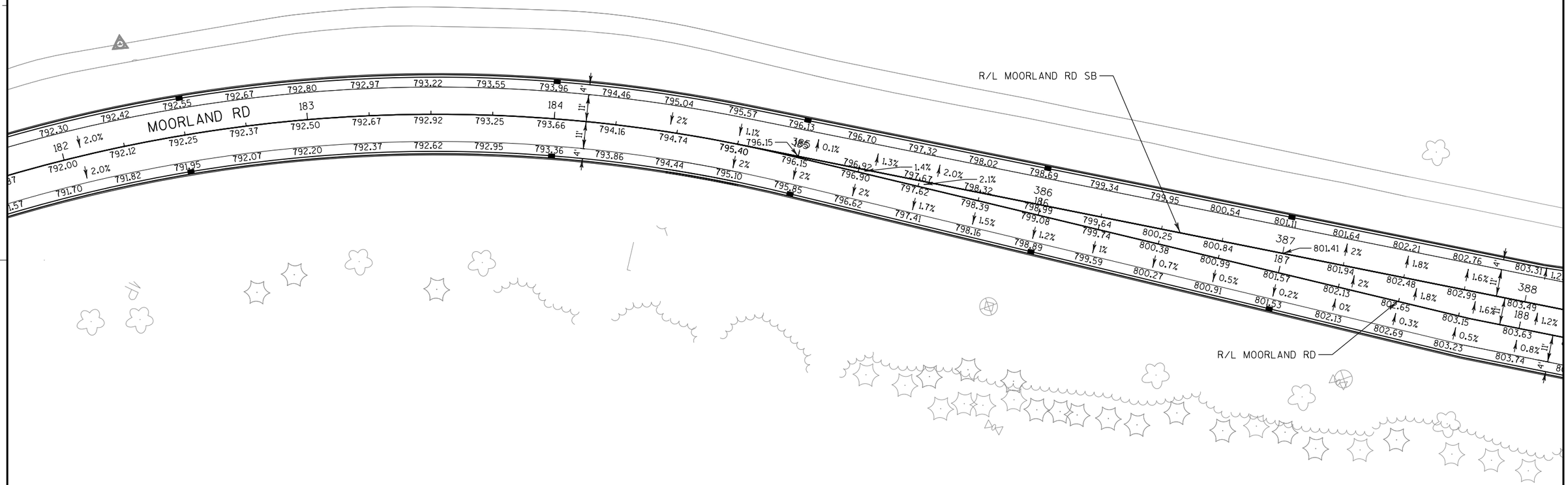
2) FLOWLINE (G) ELEVATIONS ARE SHOWN WHERE GUTTER CROSS SLOPE VARIES FROM STANDARD DETAIL DRAWING.

3) PAVING GRADES ARE SHOWN AT 25' INTERVALS BASED ON REFERENCE LINES FOR EACH DIRECTION OF TRAFFIC ALONG DIVIDED ROADWAYS.

4) SEE "PLAN DETAILS - CURB RAMPS" FOR CURB RAMP AND SIDEWALK INFORMATION.

LEGEND

XXX.XX = SPOT ELEVATION
XXX.XX G = FLOWLINE OF CURB ELEVATION



PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	PAVING GRADES	SHEET 62	E

NOTES:

1) CURB AND GUTTER GRADES ARE GIVEN TO THE FLANGE OF CURB AND GUTTER.

2) FLOWLINE (G) ELEVATIONS ARE SHOWN WHERE GUTTER CROSS SLOPE VARIES FROM STANDARD DETAIL DRAWING.

3) PAVING GRADES ARE SHOWN AT 25' INTERVALS BASED ON REFERENCE LINES FOR EACH DIRECTION OF TRAFFIC ALONG DIVIDED ROADWAYS.

4) SEE "PLAN DETAILS - CURB RAMPS" FOR CURB RAMP AND SIDEWALK INFORMATION.

LEGEND

XXX.XX = SPOT ELEVATION
XXX.XX G = FLOWLINE OF CURB ELEVATION

BEGIN CONSTRUCTION
STA 69+14.92

R/L SANDALWOOD DR

R/L MOORLAND RD SB

MOORLAND RD

STA 188+82.79,
42.64' LT
804.24

STA 189+86.68
30.7' RT
806.08 G

R/L MOORLAND RD

END CONSTRUCTION
STA 70+63.09

SANDALWOOD DR

PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	PAVING GRADES	SHEET 63	E

NOTES:

1) CURB AND GUTTER GRADES ARE GIVEN TO THE FLANGE OF CURB AND GUTTER.

2) FLOWLINE (G) ELEVATIONS ARE SHOWN WHERE GUTTER CROSS SLOPE VARIES FROM STANDARD DETAIL DRAWING.

3) PAVING GRADES ARE SHOWN AT 25' INTERVALS BASED ON REFERENCE LINES FOR EACH DIRECTION OF TRAFFIC ALONG DIVIDED ROADWAYS.

4) SEE "PLAN DETAILS - CURB RAMPS" FOR CURB RAMP AND SIDEWALK INFORMATION.

LEGEND

XXX.XX = SPOT ELEVATION
XXX.XX G = FLOWLINE OF CURB ELEVATION

N

JANESVILLE RD

PRINCETON DR

R/L PRINCETON DR

BEGIN CONSTRUCTION
STA 79+04.56

MOORLAND RD

R/L MOORLAND RD SB

R/L MOORLAND RD

END PROJECT 2723-00-71
STA 199+32.88

END CONSTRUCTION
STA 80+67.46

SIGN

LEGEND

XXX.XX = SPOT ELEVATION
XXX.XX G = FLOWLINE OF CURB ELEVATION

NOTES:

1) CURB AND GUTTER GRADES ARE GIVEN TO THE FLANGE OF CURB AND GUTTER.

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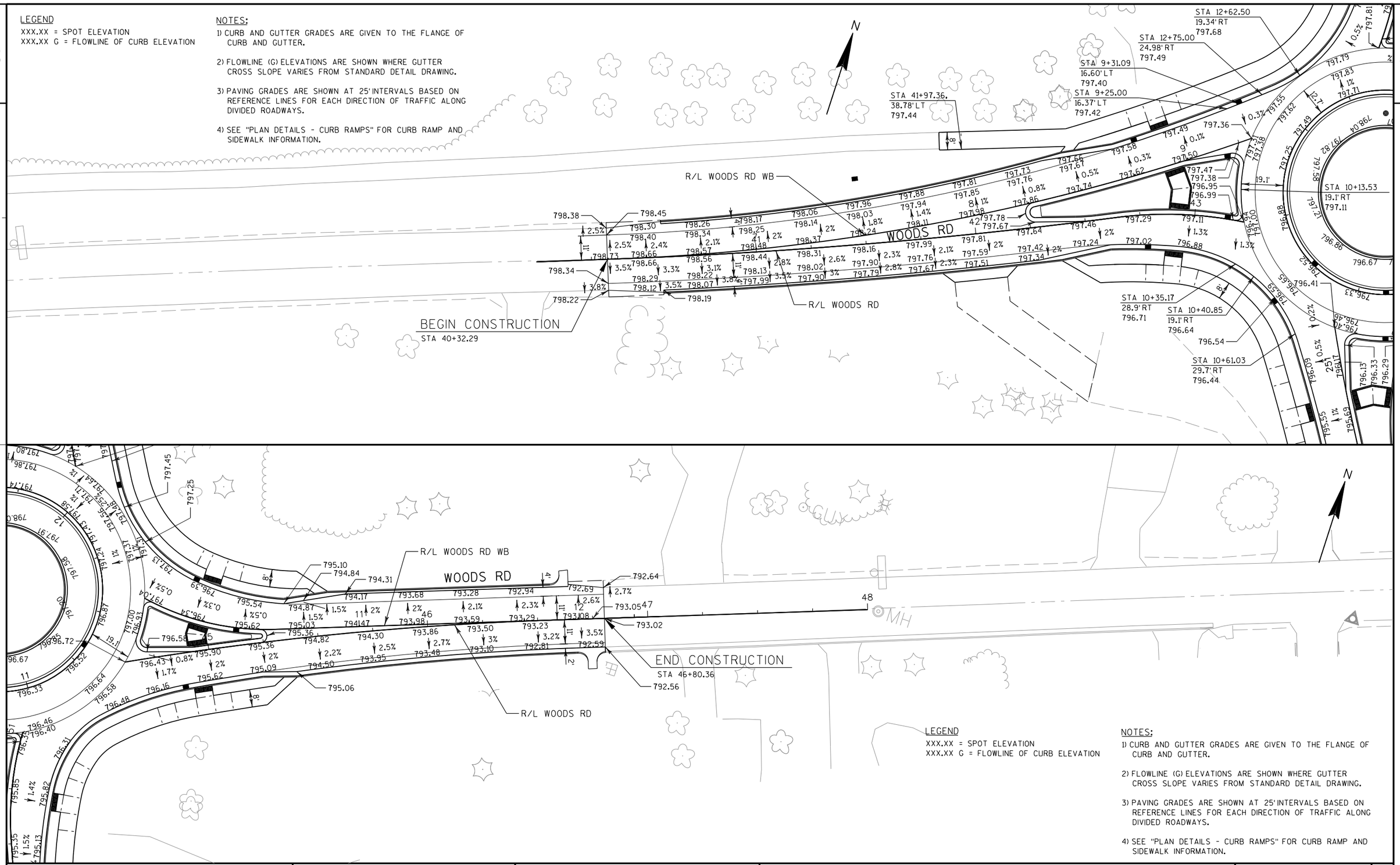
3) PAVING GRADES ARE SHOWN AT 25' INTERVALS BASED ON REFERENCE LINES FOR EACH DIRECTION OF TRAFFIC ALONG DIVIDED ROADWAYS.

4) SEE "PLAN DETAILS - CURB RAMPS" FOR CURB RAMP AND SIDEWALK INFORMATION.



LEGEND

XXX.XX = SPOT ELEVATION
XXX.XX G = FLOWLINE OF CURB ELEVATION

NOTES:

1) CURB AND GUTTER GRADES ARE GIVEN TO THE FLANGE OF CURB AND GUTTER.

2) FLOWLINE (G) ELEVATIONS ARE SHOWN WHERE GUTTER CROSS SLOPE VARIES FROM STANDARD DETAIL DRAWING.

3) PAVING GRADES ARE SHOWN AT 25' INTERVALS BASED ON REFERENCE LINES FOR EACH DIRECTION OF TRAFFIC ALONG DIVIDED ROADWAYS.

4) SEE "PLAN DETAILS - CURB RAMPS" FOR CURB RAMP AND SIDEWALK INFORMATION.

PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	PAVING GRADES	SHEET 65	E

FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\021380_PG.dgn PLOT DATE : 7/26/2017 PLOT BY : wwolak PLOT NAME : PLOT SCALE : 1:40

WISDOT/CADDS SHEET 42

NOTES:

INLET PROTECTION, TYPE A WILL BE PLACED AT ALL NEW INLET LOCATIONS DURING GRADING STAGES.

INLET PROTECTION, TYPE B,C OR D WILL BE PLACED UNDER ALL INLET COVERS LOCATED IN CURB AND GUTTER UNTIL COMPLETION OF THE PROJECT.

CONTRACTOR WILL NOT STORE MATERIALS OR OPERATE EQUIPMENT WITHIN THE WETLAND LIMITS OUTSIDE THE SLOPE INTERCEPTS.

BEGIN CONSTRUCTION
STA 40+32.29

BEGIN PROJECT 2723-00-71
STA 148+35.05

END CONSTRUCTION
STA 46+80.36

WOODS RD

DURHAM DR

MOORLAND RD

R/L WOODS RD

R/L DURHAM DR

R/L RAB

R/L MOORLAND RD

RIPRAP LIGHT

LANDSCAPING BY CITY OF MUSKEGO

R/W

TLE

LEGEND

- EROSION MAT URBAN CLASS I, TYPE B (WITH SEED MIXTURE NO. 30)
- EROSION MAT URBAN CLASS I, TYPE B (WITH SEED MIXTURE NO. 70)
- SILT FENCE
- EROSION BALE
- (A) INLET PROTECTION TYPE A
- (B) INLET PROTECTION TYPE B
- (C) INLET PROTECTION TYPE C
- (D) INLET PROTECTION TYPE D
- (E) TRACKING PAD
- SOD LAWN
- SOIL STABILIZER TYPE B
- RIPRAP MEDIUM (UNLESS NOTED OTHERWISE)
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECKS
- SURFACE WATER FLOW
- SLOPE INTERCEPT
- WETLAND

PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	EROSION CONTROL PLAN	SHEET 66	E

FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\022001_EC.dgn PLOT DATE : 8/29/2017 PLOT BY : wwolak PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 42

NOTES:

INLET PROTECTION, TYPE A WILL BE PLACED AT ALL NEW INLET LOCATIONS DURING GRADING STAGES.

INLET PROTECTION, TYPE B,C OR D WILL BE PLACED UNDER ALL INLET COVERS LOCATED IN CURB AND GUTTER UNTIL COMPLETION OF THE PROJECT.

CONTRACTOR WILL NOT STORE MATERIALS OR OPERATE EQUIPMENT WITHIN THE WETLAND LIMITS OUTSIDE THE SLOPE INTERCEPTS.

N

R/L CANDLEWOOD LN

BEGIN CONSTRUCTION
STA 58+75.00

END CONSTRUCTION
STA 61+15.00

CANDLEWOOD LN

DURHAM PL

R/L MOORLAND RD

MOORLAND RD

RIPRAP LIGHT

PLE

R/W

LEGEND

- EROSION MAT URBAN CLASS I, TYPE B (WITH SEED MIXTURE NO. 30)
- EROSION MAT URBAN CLASS I, TYPE B (WITH SEED MIXTURE NO. 70)
- SILT FENCE
- EROSION BALE
- (A) INLET PROTECTION TYPE A
- (B) INLET PROTECTION TYPE B
- (C) INLET PROTECTION TYPE C
- (D) INLET PROTECTION TYPE D
- (E) TRACKING PAD
- SOD LAWN
- SOIL STABILIZER TYPE B
- RIPRAP MEDIUM (UNLESS NOTED OTHERWISE)
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECKS
- SURFACE WATER FLOW
- SLOPE INTERCEPT
- WETLAND

PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	EROSION CONTROL PLAN	SHEET 67	E

FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\022002_EC.dgn PLOT DATE : 8/29/2017 PLOT BY : wwolak PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 42

NOTES:

INLET PROTECTION, TYPE A WILL BE PLACED AT ALL NEW INLET LOCATIONS DURING GRADING STAGES.

INLET PROTECTION, TYPE B,C OR D WILL BE PLACED UNDER ALL INLET COVERS LOCATED IN CURB AND GUTTER UNTIL COMPLETION OF THE PROJECT.

CONTRACTOR WILL NOT STORE MATERIALS OR OPERATE EQUIPMENT WITHIN THE WETLAND LIMITS OUTSIDE THE SLOPE INTERCEPTS.

DEWATERING FOR STROM SEWER OUTFALLS AT EXISTING DETENTION BASIN

RIPRAP LIGHT

BEGIN CONSTRUCTION
STA 69+14.92

END CONSTRUCTION
STA 70+63.09

R/L MOORLAND RD

R/L SANDALWOOD DR

MOORLAND RD

SANDALWOOD DR

LEGEND

- EROSION MAT URBAN CLASS I, TYPE B (WITH SEED MIXTURE NO. 30)
- EROSION MAT URBAN CLASS I, TYPE B (WITH SEED MIXTURE NO. 70)
- SILT FENCE
- EROSION BALE
- (A) INLET PROTECTION TYPE A
- (B) INLET PROTECTION TYPE B
- (C) INLET PROTECTION TYPE C
- (D) INLET PROTECTION TYPE D
- (E) TRACKING PAD
- SOD LAWN
- SOIL STABILIZER TYPE B
- RIPRAP MEDIUM (UNLESS NOTED OTHERWISE)
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECKS
- SURFACE WATER FLOW
- SLOPE INTERCEPT
- WETLAND

PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	EROSION CONTROL PLAN	SHEET 68	E

FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\022003_EC.dgn PLOT DATE : 8/29/2017 PLOT BY : wwolak PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 42

NOTES:

INLET PROTECTION, TYPE A WILL BE PLACED AT ALL NEW INLET LOCATIONS DURING GRADING STAGES.

INLET PROTECTION, TYPE B,C OR D WILL BE PLACED UNDER ALL INLET COVERS LOCATED IN CURB AND GUTTER UNTIL COMPLETION OF THE PROJECT.

CONTRACTOR WILL NOT STORE MATERIALS OR OPERATE EQUIPMENT WITHIN THE WETLAND LIMITS OUTSIDE THE SLOPE INTERCEPTS.

BEGIN CONSTRUCTION
STA 79+04.56

R/L PRINCETON DR

PRINCETON DR

MOORLAND RD

R/L MOORLAND RD

END CONSTRUCTION
STA 196+75.00

END CONSTRUCTION
STA 80+67.46

END PROJECT 2723-00-71
STA 199+32.88

LEGEND

- EROSION MAT URBAN CLASS I, TYPE B (WITH SEED MIXTURE NO. 30)
- EROSION MAT URBAN CLASS I, TYPE B (WITH SEED MIXTURE NO. 70)
- SILT FENCE
- EROSION BALE
- (A) INLET PROTECTION TYPE A
- (B) INLET PROTECTION TYPE B
- (C) INLET PROTECTION TYPE C
- (D) INLET PROTECTION TYPE D
- (E) TRACKING PAD
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- SOIL STABILIZER TYPE B
- RIPRAP MEDIUM (UNLESS NOTED OTHERWISE)
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECKS
- SURFACE WATER FLOW
- SLOPE INTERCEPT
- WETLAND

PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	EROSION CONTROL PLAN	SHEET 69	E

FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\022004_EC.dgn PLOT DATE : 8/29/2017 PLOT BY : wwolak PLOT NAME : PLOT SCALE : 1:100

2

GENERAL DRAINAGE NOTES

LOCATION OF STRUCTURES IN CURB AND GUTTER REFER TO CURB AND GUTTER FLOW LINE. LOCATION OF STRUCTURES NOT IN CURB AND GUTTER SECTION REFER TO CENTER OF STRUCTURE OR AS NOTED ON PLAN.

RIM ELEVATIONS ARE GIVEN AT FLOW LINE OF INLET OR AT CENTER OF MANHOLE. SEE STRUCTURE LOCATION DETAIL.

ADJUSTMENT RINGS MAY BE USED TO A COMBINED MAXIMUM THICKNESS OF 6-INCHES.

PLAN LENGTH REPRESENTS LENGTH OF PIPE MEASURED FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE AND IS USED FOR ESTIMATING. PIPE LENGTH REPRESENTS LENGTH OF PIPE MEASURED FROM INSIDE FACE OF STRUCTURE TO INSIDE FACE OF STRUCTURE AND IS USED TO COMPUTE PIPE SLOPE.

INLET AND DISCHARGE ELEVATIONS FOR DRAINAGE STRUCTURES AND PIPES SHOWN ON THE PLANS MAY BE ADJUSTED BY THE ENGINEER TO FIT EXISTING FIELD CONDITIONS.

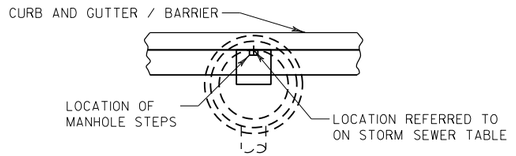
UTILITY INFORMATION SHOWN ON THE PLANS IS APPROXIMATE. LOCATIONS SHOWN ARE TAKEN FROM EXISTING RECORDS AND BEST INFORMATION AVAILABLE FROM EXISTING PLANS. IT IS EXPECTED THAT THERE MAY BE DISCREPANCIES AND OMISSIONS IN THE LOCATION OF UTILITIES AND STRUCTURES SHOWN. VERIFY ALL LOCATIONS IN THE FIELD.

COORDINATE WITH DIGGERS HOTLINE TO FIELD LOCATE UTILITIES. IF SHEETING IS USED, SHEETING SHALL NOT GO THROUGH UTILITIES. ANY UTILITIES DAMAGED DUE TO CONTRACTOR ACTIVITIES SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE TO THE COMPLETE SATISFACTION OF THE UTILITY FACILITY.

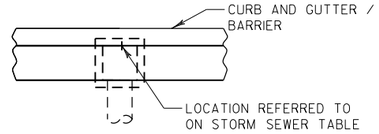
VERIFY THE EXISTING STORM SEWER SYSTEM CONNECTION LOCATIONS AND ELEVATIONS PRIOR TO ORDERING DRAINAGE STRUCTURES AND PIPES. NOTIFY THE ENGINEER OF ANY DEVIATIONS FROM THE INFORMATION SHOWN ON THE PLANS PRIOR TO INSTALLING THE PROPOSED STORM SEWER.

PROVIDE TEMPORARY POSITIVE DRAINAGE THROUGHOUT THE PROJECT DURING ALL PROJECT STAGES. PROVIDING TEMPORARY POSITIVE DRAINAGE IS INCIDENTAL TO CONSTRUCTION.

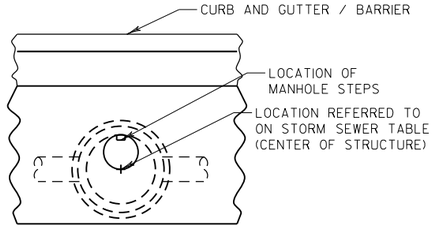
SUPPORTING UTILITIES DURING STORM SEWER CONSTRUCTION IS INCIDENTAL TO STORM SEWER PIPE AND/OR STORM SEWER STRUCTURE.



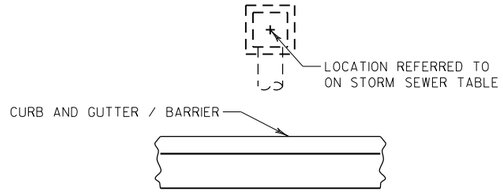
MANHOLE WITH INLET COVER IN CURB AND GUTTER



INLET IN CURB AND GUTTER



MANHOLE NOT IN CURB AND GUTTER



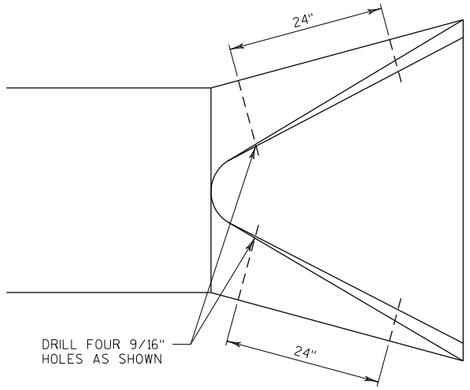
INLET NOT IN CURB AND GUTTER

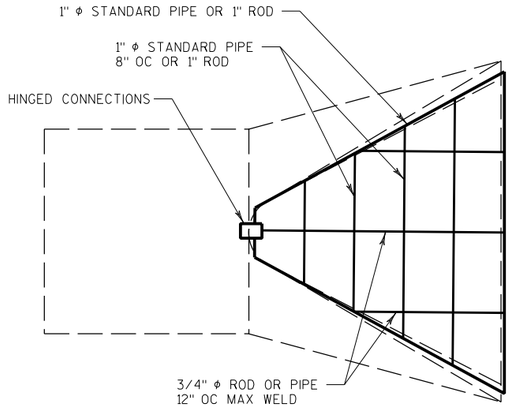
STRUCTURE LOCATION DETAIL

NOTE
1) LOCATION OF STRUCTURE MAY BE ADJUSTED TO FIT FIELD CONDITIONS.
2) LOCATION AND SIZE OF STRUCTURE COVER OPENING DEPENDS ON TYPE OF CASTING. CASTING TYPES ARE SHOWN ON THE STORM SEWER TABLE.

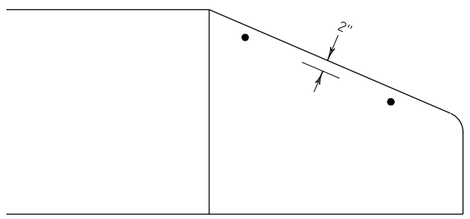
STORM SEWER LEGEND

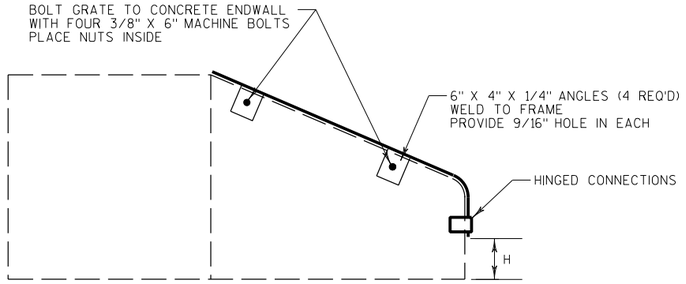
- E### EXISTING STRUCTURE
- ### PROPOSED DRAINAGE STRUCTURE
- PROPOSED MANHOLE
- PROPOSED INLET
- PROPOSED ENDWALL





AT EACH PIPE





GRATE BAR SIZES

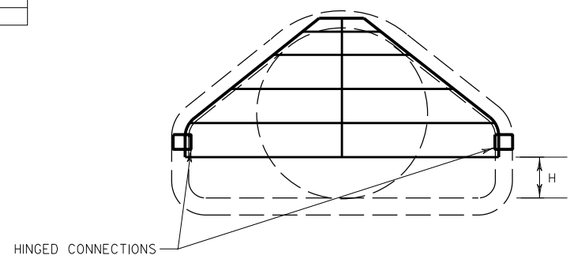
(STANDARD DESIGN)

	PIPE SIZE	HOLE DIAMETER REQUIRED	BOLT DIAMETER	BAR SIZE
ROUND PIPE	12" - 24"	3/4"	5/8"	5/8"
	27" - 48"	7/8"	3/4"	3/4"
	54" - 90"	1 1/8"	1"	1"
ARCH PIPE	22" - 29"	3/4"	5/8"	5/8"
	36" - 59"	7/8"	3/4"	3/4"
	65" - 85"	1 1/8"	1"	1"

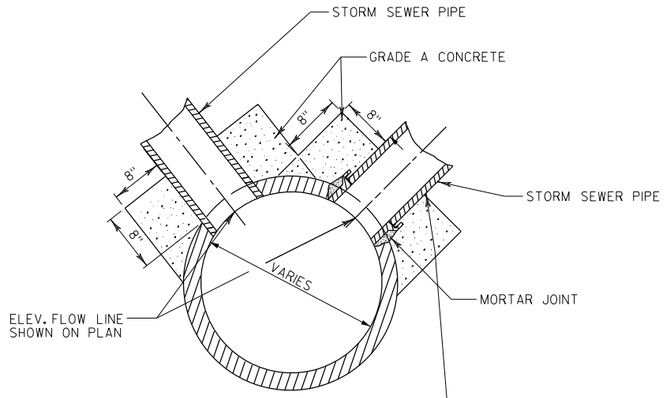
BOLT LENGTH = PIPE WALL THICKNESS + 2 1/2"

GRATE CLEARANCE HEIGHT

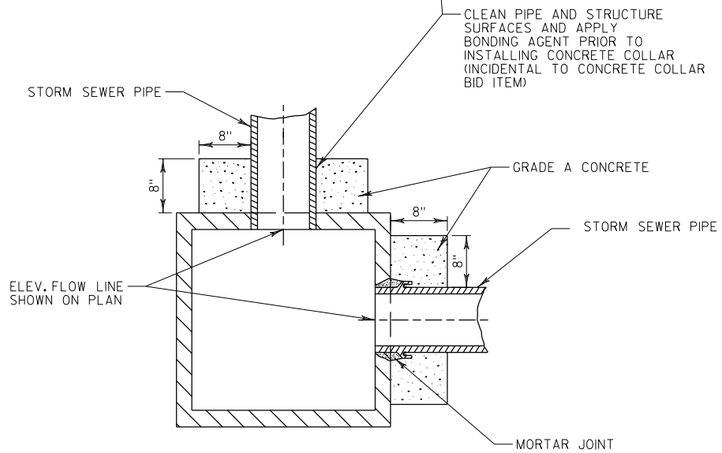
ROUND PIPE		ARCH PIPE	
PIPE SIZE	H	PIPE SIZE	H
12"	2 1/2"	22" - 29"	4"
15"	3"	36" - 44"	5"
18" - 24"	4"	51" - 65"	6"
27" - 36"	5"	73" - 85"	7"
42" - 54"	6"		
60" - 72"	7"		
78" - 90"	8"		



PIPE GRATE DETAIL



AT MANHOLE



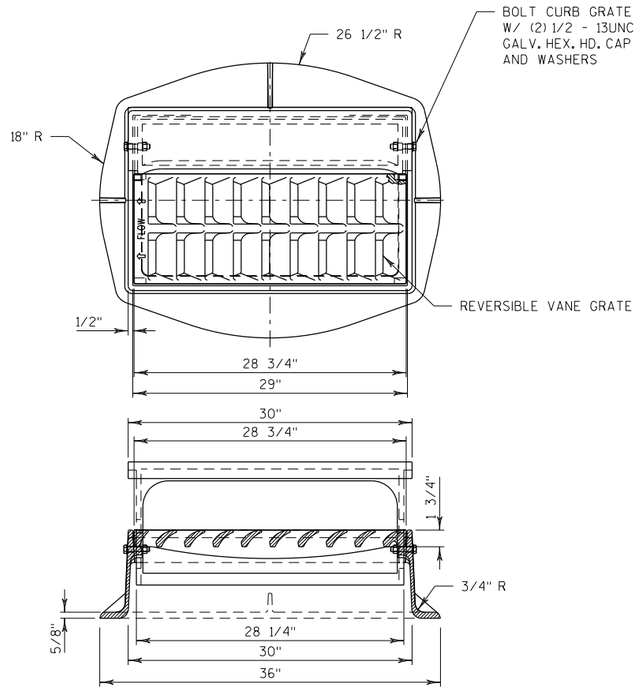
AT STORM SEWER INLET

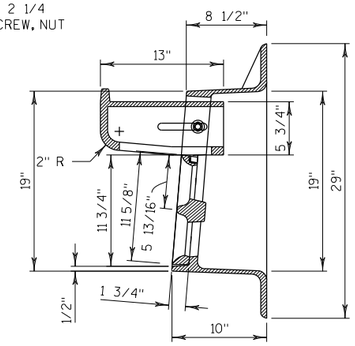
NOTE

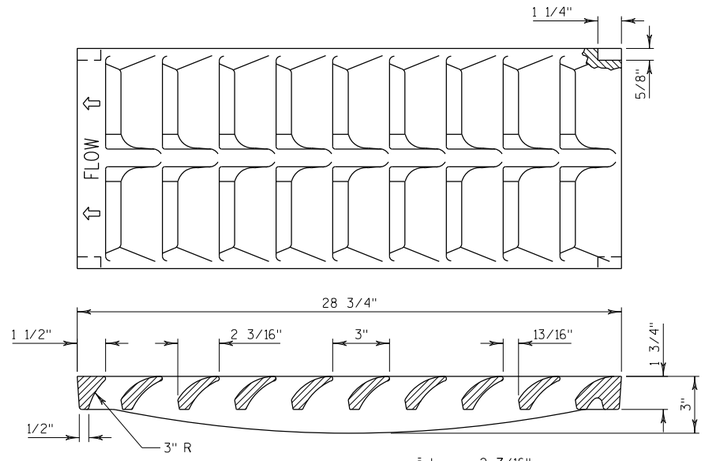
CONCRETE COLLAR TO BE PAID AS A BID ITEM WHEN CONNECTING AN EXISTING PIPE TO A NEW STRUCTURE.

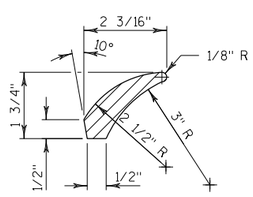
CONCRETE COLLAR DETAIL

FOR LOCATIONS SEE MISCELLANEOUS QUANTITIES SHEETS

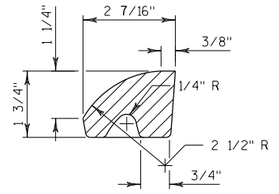




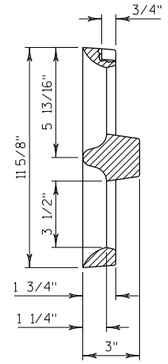


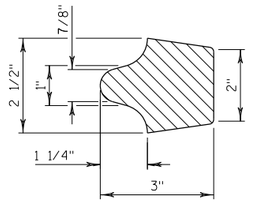


VANE DETAIL

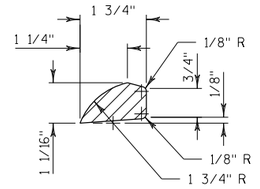


FRONT VANE DETAIL





MIDDLE RIB DETAIL

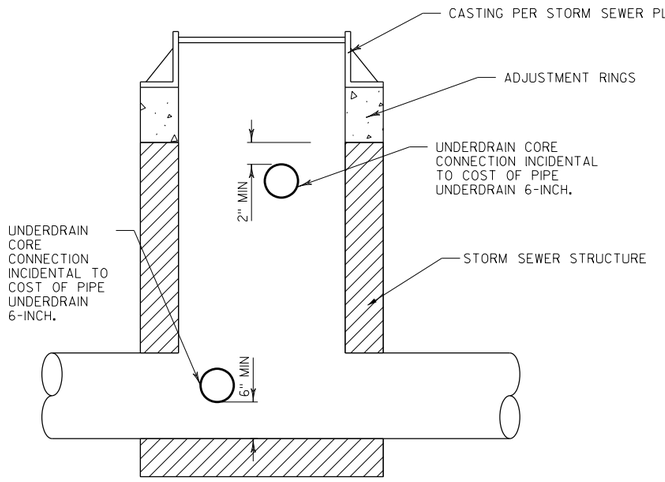


SIDE RIB DETAIL

INLET COVERS TYPE R-SPECIAL

PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	STORM SEWER - CONSTRUCTION DETAILS	SHEET 72	E

2



SECTION A-A

MINIMUM AND MAXIMUM CORED PIPE UNDERDRAIN 6-INCH UNDERDRAIN CORE LOCATIONS WITH CROSSPIPE.

NOTES

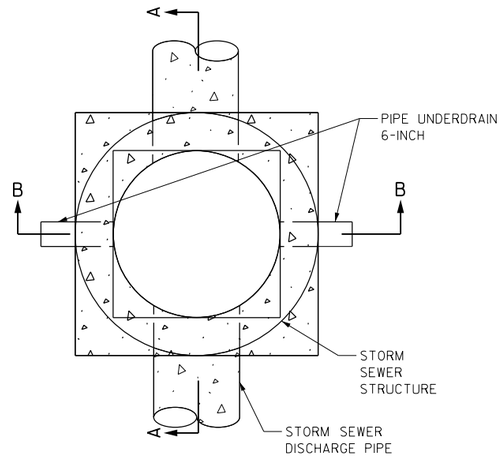
(1) BOTTOM OF CORE PLACED A MINIMUM OF 6" ABOVE THE INVERT OF THE REINFORCED CONCRETE STORM SEWER PIPE.

(2) TOP OF CORE HOLES WILL BE A MINIMUM OF 2" BELOW THE TOP OF THE INLET STRUCTURES (BOTTOM OF RINGS)

(3) PIPE UNDERDRAIN 6-INCH SHALL NOT BE ALLOWED IN THE RING OF THE STRUCTURE OF INLETS OR SEWER ACCESS STRUCTURES.

(4) CORE HOLES SHALL PROVIDE FOR A MINIMUM OF 2" OF CONCRETE BETWEEN THE CUTOUT FOR A CONCRETE PIPE AND THE EDGE OF THE CORE HOLE.

(5) CORE HOLES MAY HAVE 0" CLEARANCE FROM THE INSIDE WALL OF A STRUCTURE.



PLAN VIEW

NOTES

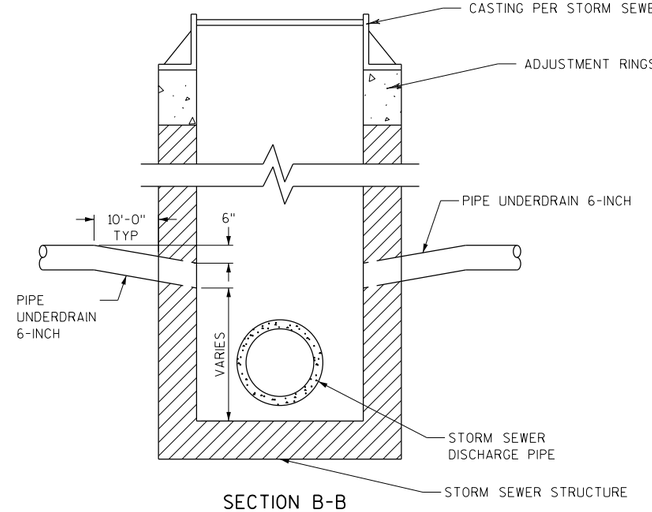
1. CONNECTIONS TO INLETS OR MANHOLES SHALL EXTEND PIPE UNDERDRAIN 6-INCH TO THE INSIDE WALL OF STORM SEWER STRUCTURE.

2. PROVIDE UNDERDRAIN PIPE CORED HOLES AT OR BETWEEN ELEVATIONS SHOWN IN SECTION A-A.

3. SEE STORM SEWER MISCELLANEOUS QUANTITIES FOR PIPE UNDERDRAIN LOCATIONS.

4. PROVIDE POSITIVE DRAINAGE (0.5% MINIMUM GRADE) THROUGH PIPE UNDERDRAIN 6-INCH AND CORE INTO STORM SEWER STRUCTURE.

5. ATTACHMENT OF PIPE UNDERDRAIN 6-INCH TO REAR OF INLET IS SATISFACTORY IF REINFORCED CONCRETE STORM SEWER PIPE SIZE RESTRICTS SPACE FOR UNDERDRAIN CORE.



SECTION B-B

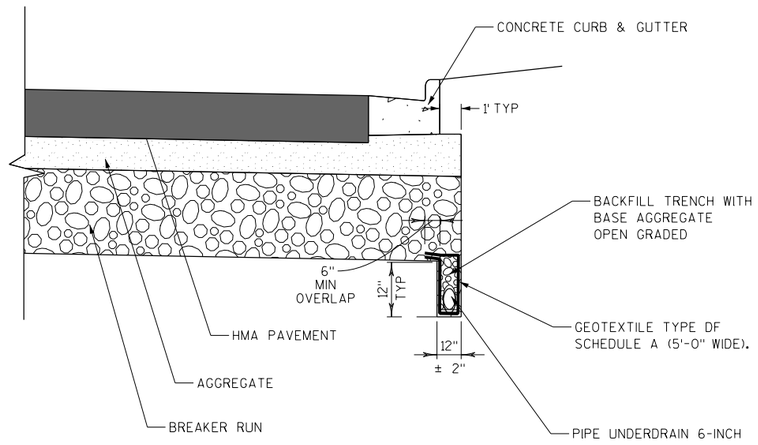
TYPICAL INLET CONFIGURATION WITH UNDERDRAIN CORED INTO WALL

NOTE

(1) TYPICAL ELEVATION OF PIPE UNDERDRAIN 6-INCH SHALL BE PLACED BELOW THE SELECT CRUSHED MATERIAL.

2

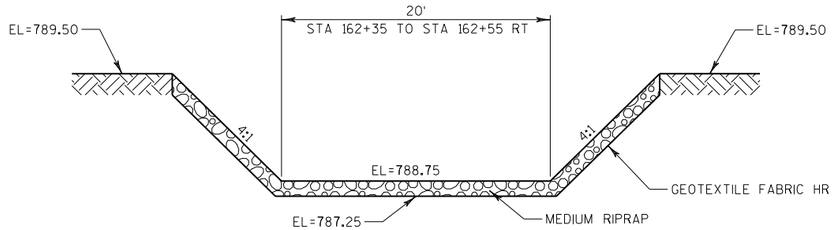
PIPE UNDERDRAIN 6-INCH OUTFALL AT INLET/MANHOLE (ROUND OR SQUARE)



PIPE UNDERDRAIN 6-INCH TRENCH DETAIL - CURB AND GUTTER SECTION

NOTE

1. WHEN INLET DEPTH IS SHALLOW, PIPE UNDERDRAIN 6-INCH MAY BE PLACED AT A DEPTH TO PROVIDE POSITIVE DRAINAGE. TO BE COORDINATED WITH ENGINEER IN FIELD.



BROAD CRESTED WEIR DETAIL

NOT TO SCALE

NOTES

1) REFER TO STANDARD DETAIL DRAWING FOR MANHOLES 6-FT FOR ADDITIONAL INFORMATION.

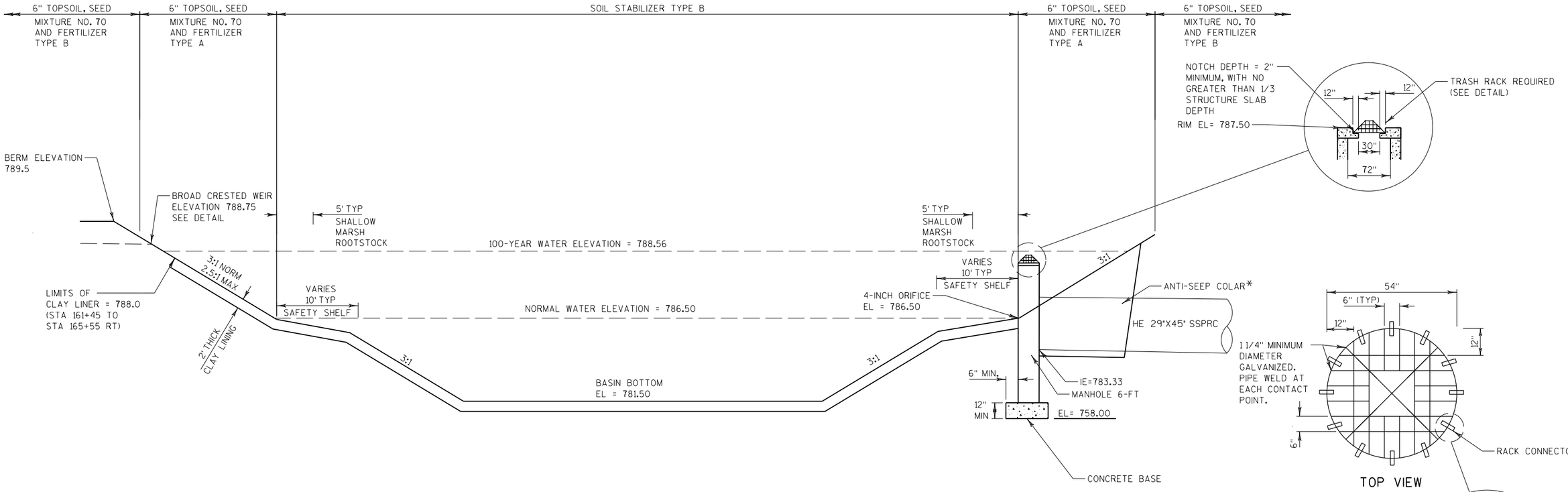
2) OUTLET STRUCTURE WILL BE PAID FOR AS OUTLET STRUCTURE.

3) TRASH RACK WILL BE GALVANIZED OR SIMILARLY PROTECTED FROM CORROSION AND APPROVED BY THE ENGINEER. TRACK RACK IS INCIDENTAL TO OUTLET STRUCTURE.

4) CONNECTOR DEVICE WILL BE REMOVABLE AND APPROVED BY THE ENGINEER.

5) ANTI-SEEP COLLAR OF CLAY OR BENTONITE REQUIRED AROUND POND OUTLET DISCHARGE PIPE TO PREVENT BACKFLOW OF WATER THROUGH THE SEWER TRENCH. ANTI-SEEP COLLARS MUST EXTEND FROM 1-FOOT ABOVE THE TOP OF PIPE TO THE BOTTOM OF EXCAVATED TRENCH AND BE CONNECTED WITH THE POND LINER PER DETAIL. ANTI-SEEP COLLAR IS INCIDENTAL TO PIPE AND INSTALLATION.

* ANTI-SEEP COLLAR TO BE MINIMUM 1-FOOT FROM OUTLET PIPE JOINT. ANTI-SEEP COLLAR MAY COVER JOINT, SO LONG AS END OF COLLAR IS A MINIMUM 1-FOOT PAST JOINT. ANTI-SEEP COLLAR TO BE CONNECTED TO POND LINER.



DETENTION BASIN STA 162+00 RT

TRASH RACK

NTS

POINT TYPE	STATION	X	Y
PI	0+00.00	2508877.65	338844.30
PI	0+82.29	2508959.92	338845.54
PI	0+97.88	2508975.45	338846.87
PI	1+10.48	2508988.03	338847.71
PI	1+64.87	2509042.42	338847.71
PI	2+67.53	2509145.06	338845.71
PI	4+42.09	2509319.47	338852.88
PI	4+75.26	2509352.16	338858.49
PI	4+82.86	2509359.13	338855.43
PI	5+59.23	2509323.80	338787.73
PI	6+14.46	2509278.97	338755.47
PI	6+36.87	2509256.79	338752.28
PI	6+84.76	2509210.68	338765.20
PI	7+44.77	2509157.96	338793.87
PI	8+02.21	2509110.75	338826.60
PI	8+59.99	2509052.98	338827.37
PI	8+80.30	2509037.31	338814.45
PC	8+93.31	2509024.31	338813.89
PT	10+56.50	2508864.18	338843.10
PI	10+57.50	2508864.17	338844.10
PI	10+70.98	2508877.65	338844.30

CURVE 1
PC=8+93.31
X=2509024.31
Y=338813.89
PI=9+75.33
X=2508946.07
Y=338838.47
PT=10+56.50
X=2508864.18
Y=338843.10
R=658.00
DELTA=14°12'35" LT
D=8°42'27"
L=163.19
T=82.01
BK=N 72°33'25" W
AH=N 86°46'01" W

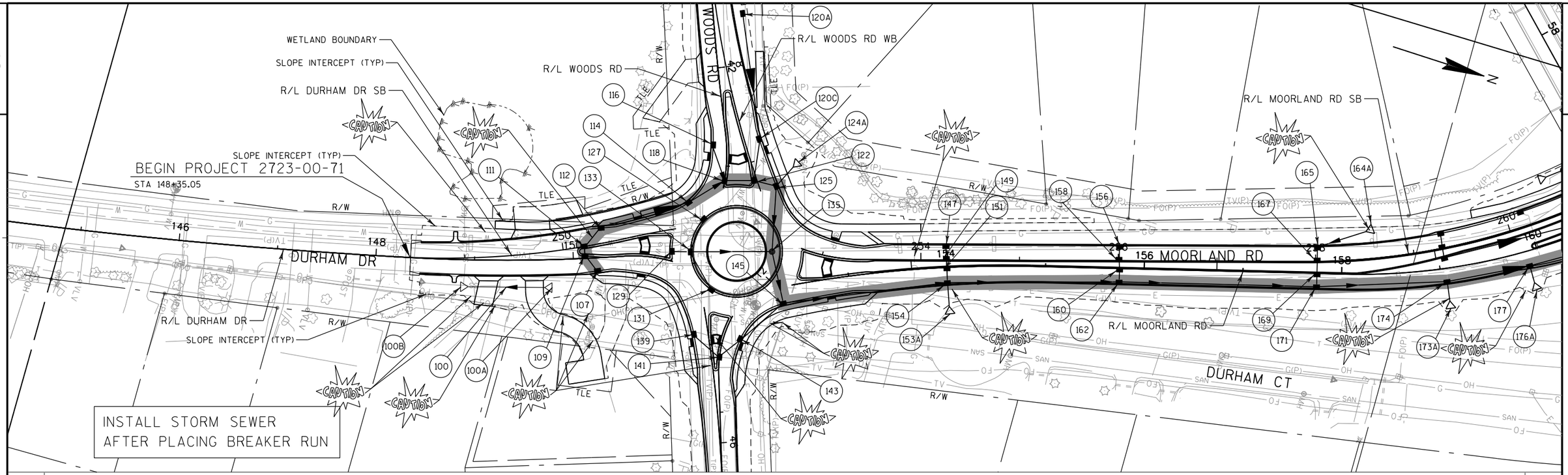
LEGEND
SHALLOW MARSH ROOTSTOCK

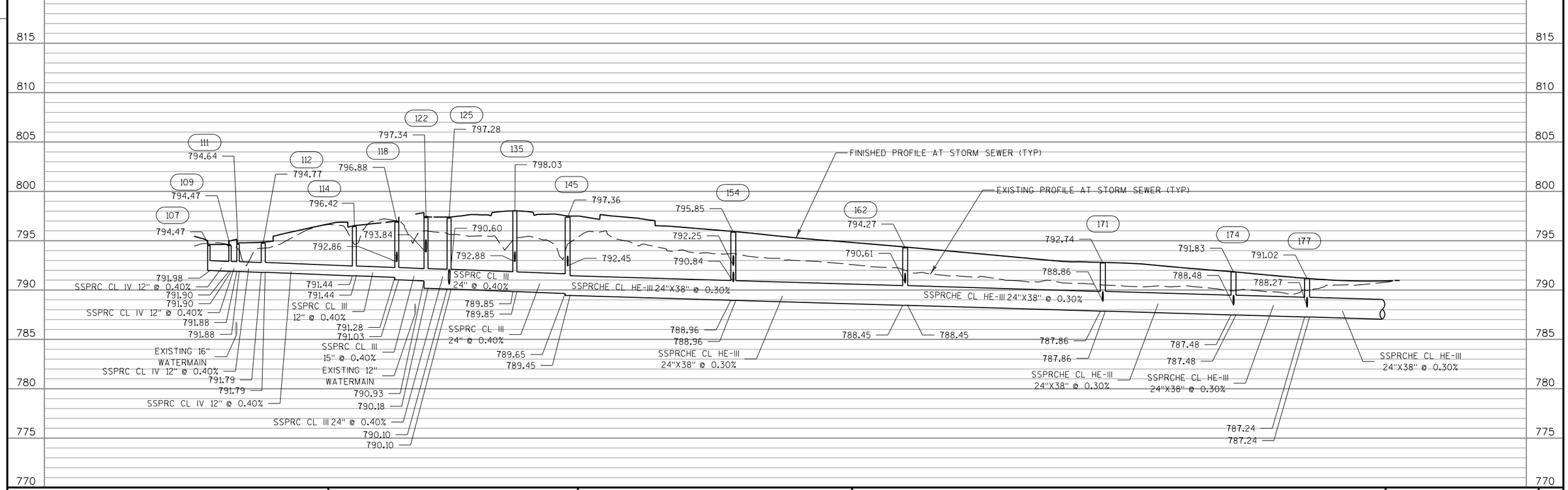
NOTE:
DETENTION BASIN R/L POINTS ARE AT ELEVATION 786.50

N

R/L CANDLEWOOD LN
SLOPE INTERCEPT (TYP)
BROAD CRESTED WEIR
EL=788.75
STA 162+35 TO STA 162+55 RT
OUTLET STRUCTURE
WETLAND BOUNDARY
R/L MOORLAND RD SB
CURVE 1
SLOPE INTERCEPT (TYP)
WETLAND BOUNDARY
R/L MOORLAND RD
PLE
BERM EL=789.50
SAFETY SHELF
DETENTION BASIN
BOTTOM EL=781.50
R/L DETENTION BASIN
MOORLAND RD
DURHAM PL
CANDLEWOOD LN
R/W

PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	STORM SEWER - CONSTRUCTION DETAILS	SHEET 75	E

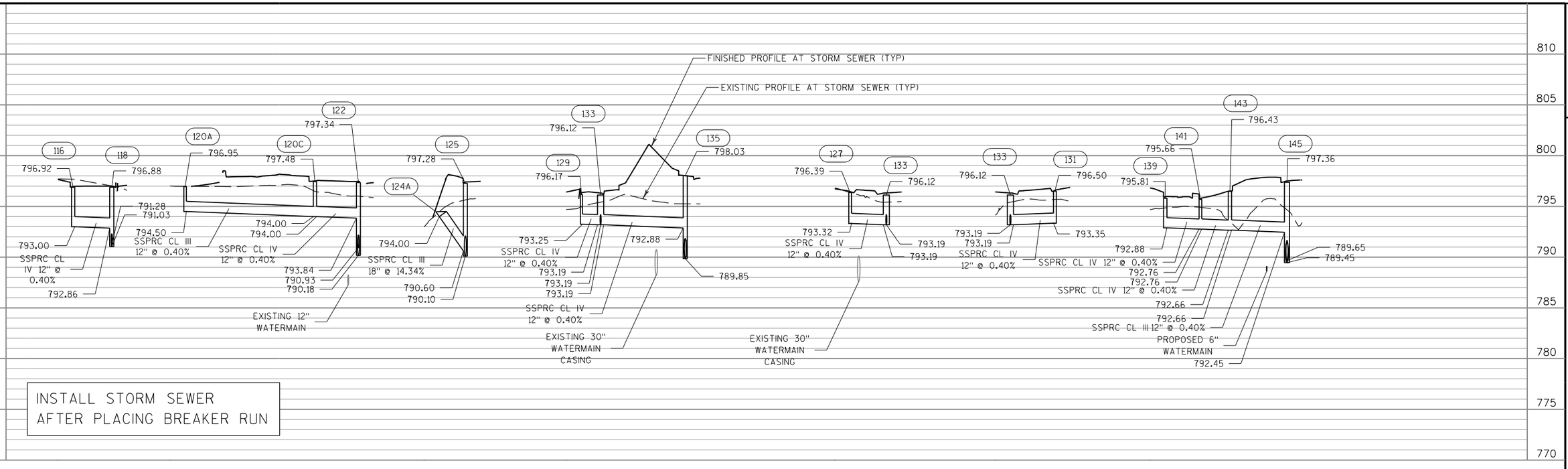


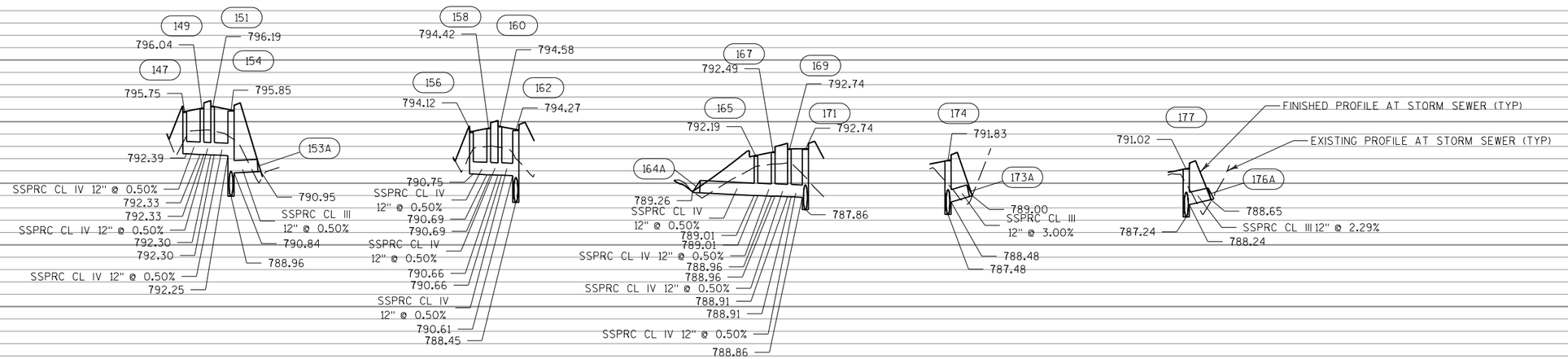


PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	STORM SEWER PLAN AND PROFILE:DURHAM DR/MOORLAND RD	SHEET 76 E

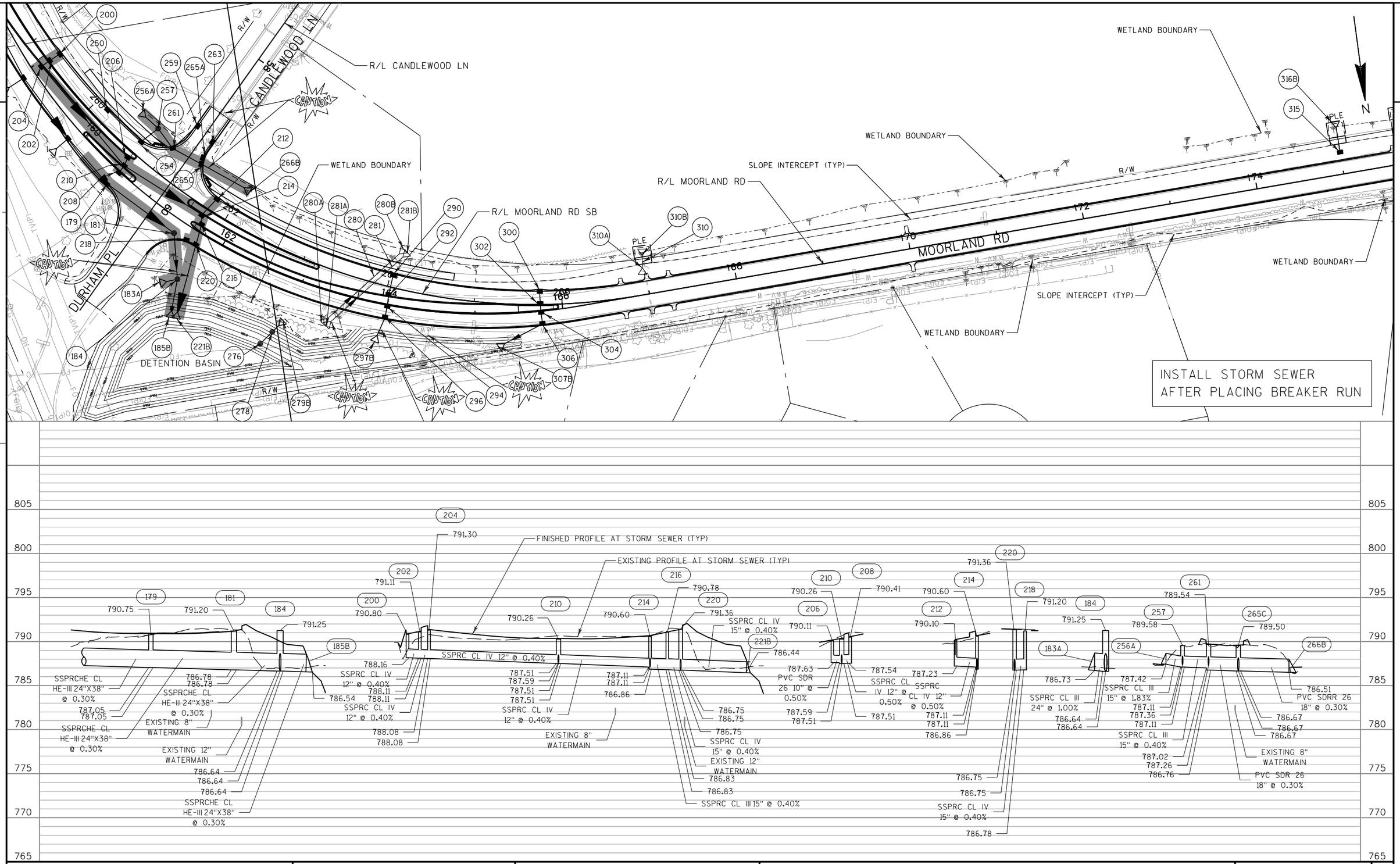
FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\022502_SS.dgn PLOT DATE : 7/26/2017 PLOT BY : wwolak PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 41





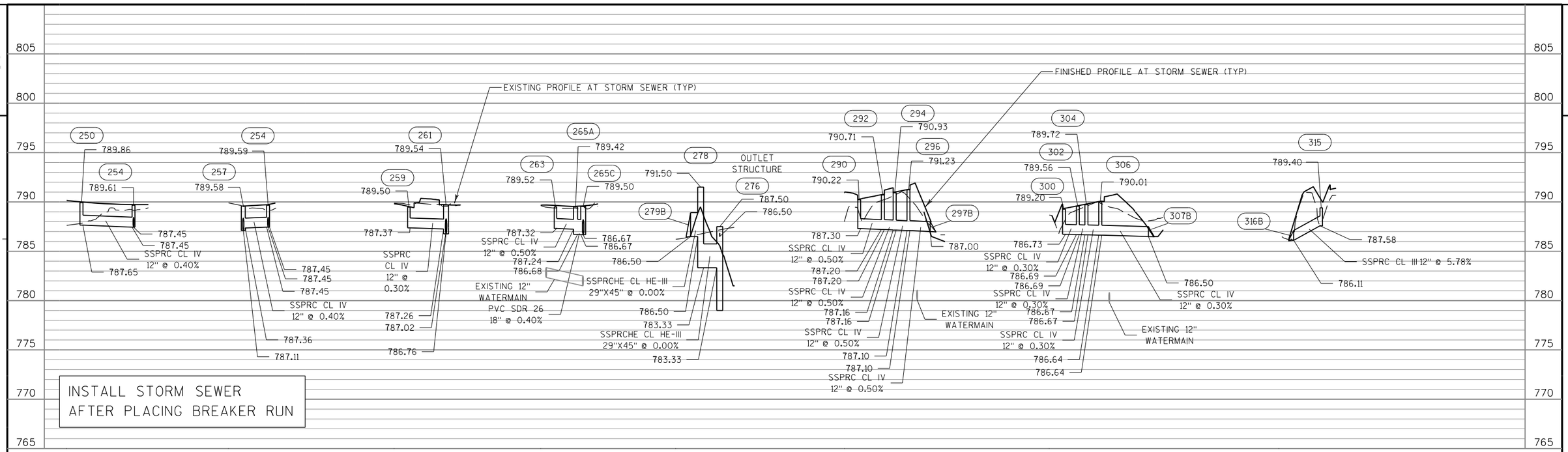
PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	STORM SEWER PROFILE: DURHAM DR/MOORLAND RD	SHEET 77	E



PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	STORM SEWER PLAN AND PROFILE: MOORLAND RD	SHEET 78	E

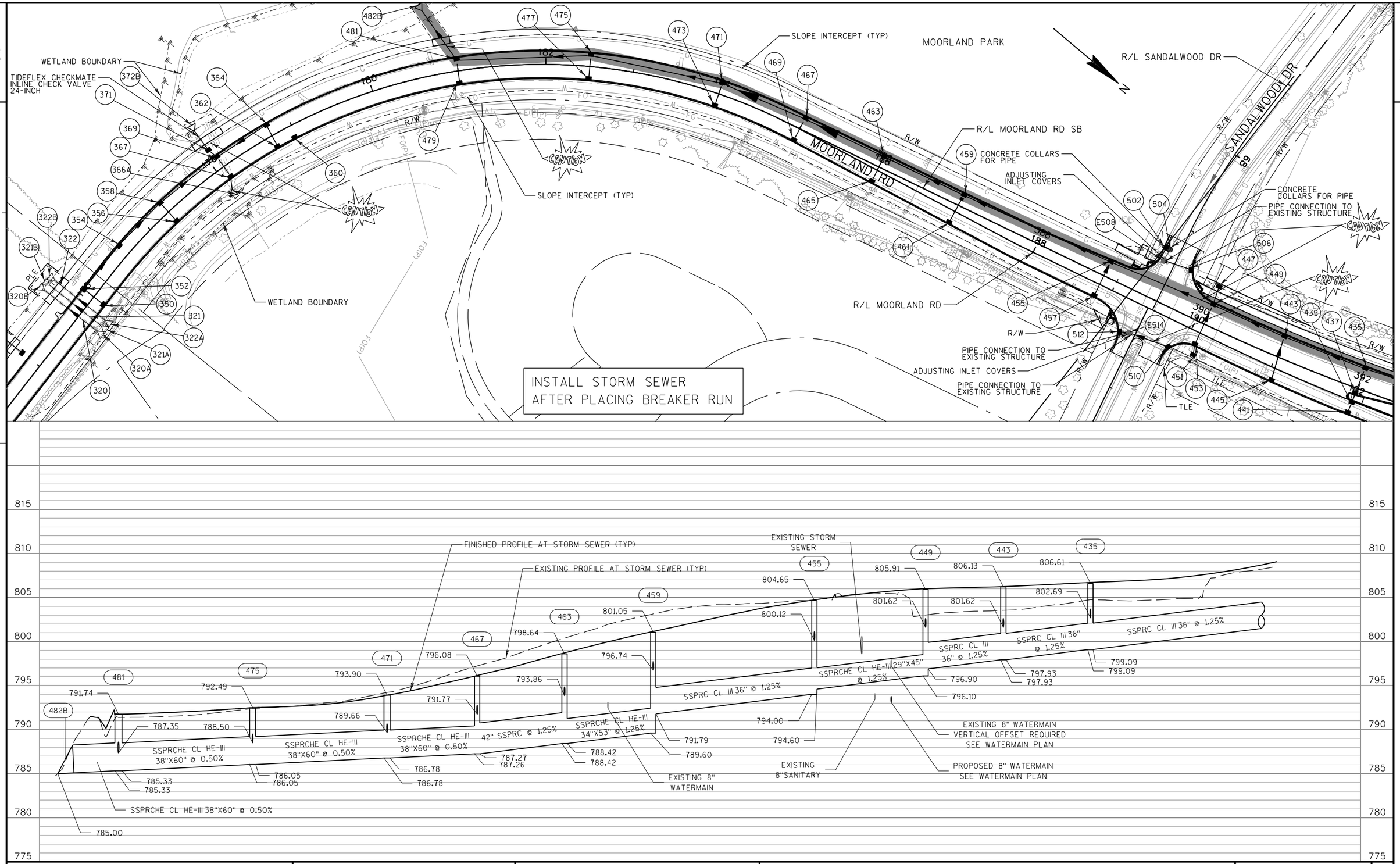
FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\022503_SS.dgn PLOT DATE : 7/26/2017 PLOT BY : wwolak PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 41

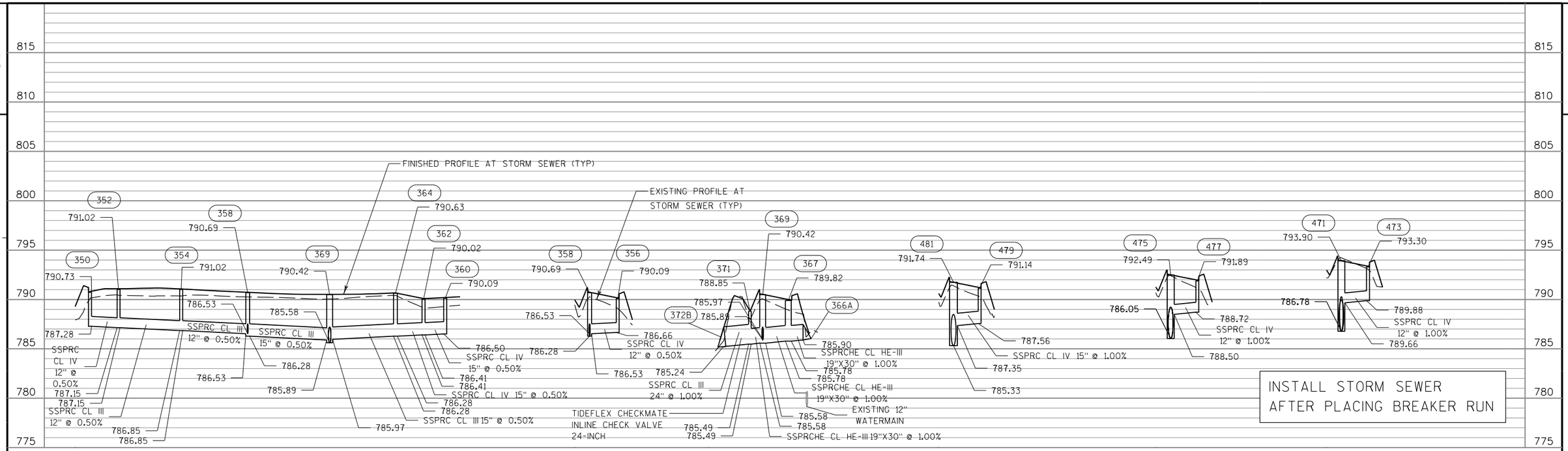


PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	STORM SEWER PROFILE: MOORLAND RD	SHEET 79	E

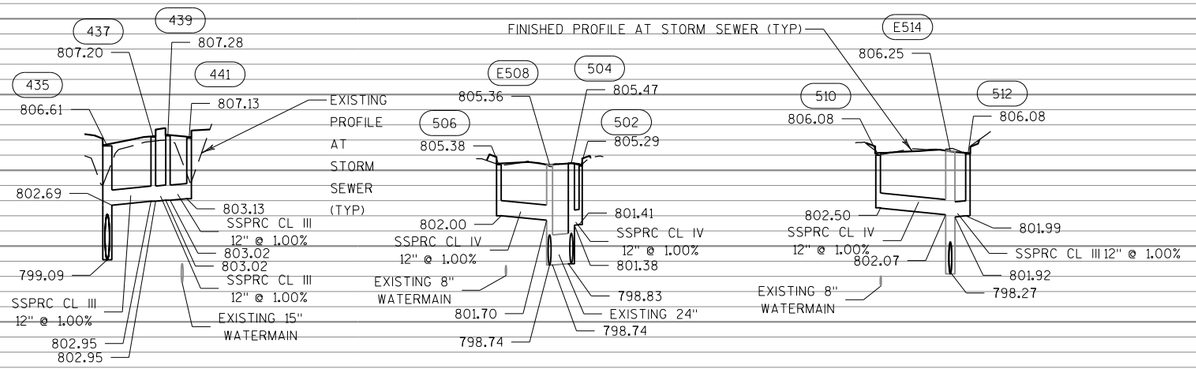
2



PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	STORM SEWER PLAN AND PROFILE: MOORLAND RD	SHEET 80	E



PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	STORM SEWER PROFILE: MOORLAND RD	SHEET 81 E



INSTALL STORM SEWER
AFTER PLACING BREAKER RUN

PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	STORM SEWER PROFILE: MOORLAND RD	SHEET 82	E

R/L SANDALWOOD DR

R/L MOORLAND RD SB

SLOPE INTERCEPT (TYP)

CAUTION

R/L PRINCETON DR

PRINCETON DR

JANESVILLE RD

398 MOORLAND RD

R/W

TLE

FO(P)

SS

SIGN

MH

425 424A 427 429 433 431 420 419 418 406 400 408 410 E417

390 392 394 396 398

190 192 194 196 198 200

END PROJECT 2723-00-71
STA 199+32.88

END CONSTRUCTION
STA 196+75.00

PIPE CONNECTION TO EXISTING STRUCTURE

ADJUSTING INLET COVERS

PIPE CONNECTION TO EXISTING STRUCTURE

TLE

ADJUSTING INLET COVERS

R/L MOORLAND RD

SLOPE INTERCEPT (TYP)

ADJUSTING INLET COVERS

INSTALL STORM SEWER
AFTER PLACING BREAKER RUN

N

2

835 830 825 820 815 810 805 800 795

EXISTING PROFILE AT STORM SEWER (TYP)

FINISHED PROFILE AT STORM SEWER (TYP)

425 808.64 803.48 801.48 801.48

424A 810.83

420 812.12 806.68 802.58 802.58

418 812.83 807.60 806.85 805.41 804.68

E417 814.31 810.11 807.60

EXISTING 36"

SSPRC CL III 36" @ 1.25%

SSPRC CL III 36" @ 1.25%

SSPRC CL III 36" @ 1.25%

SSPRC CL III 36" @ 1.25%

SSPRC CL III 36" @ 1.25%

EXISTING 8" WATERMAIN

EXISTING 15" WATERMAIN

803.12

427 809.66

429 809.25

433 808.87

431 806.50

425 808.64 803.48 801.48

SSPRC CL III 12" @ 1.00%

803.67 803.67

SSPRC CL III 12" @ 1.00%

803.73 803.73

804.40

SSPRC CL III 12" @ 1.00%

804.10 804.10

SSPRC CL III 12" @ 1.00%

EXISTING 15" WATERMAIN

420 812.12 804.68 803.12

419 811.35 806.98 806.68

SSPRC CL III 12" @ 1.00%

EXISTING 15" WATERMAIN

408 815.03

410 815.13

400 814.94 811.24 811.01

406 814.16 811.01 810.49 810.44

E417 814.31 810.11 807.60

SSPRC CL IV 15" @ 1.00%

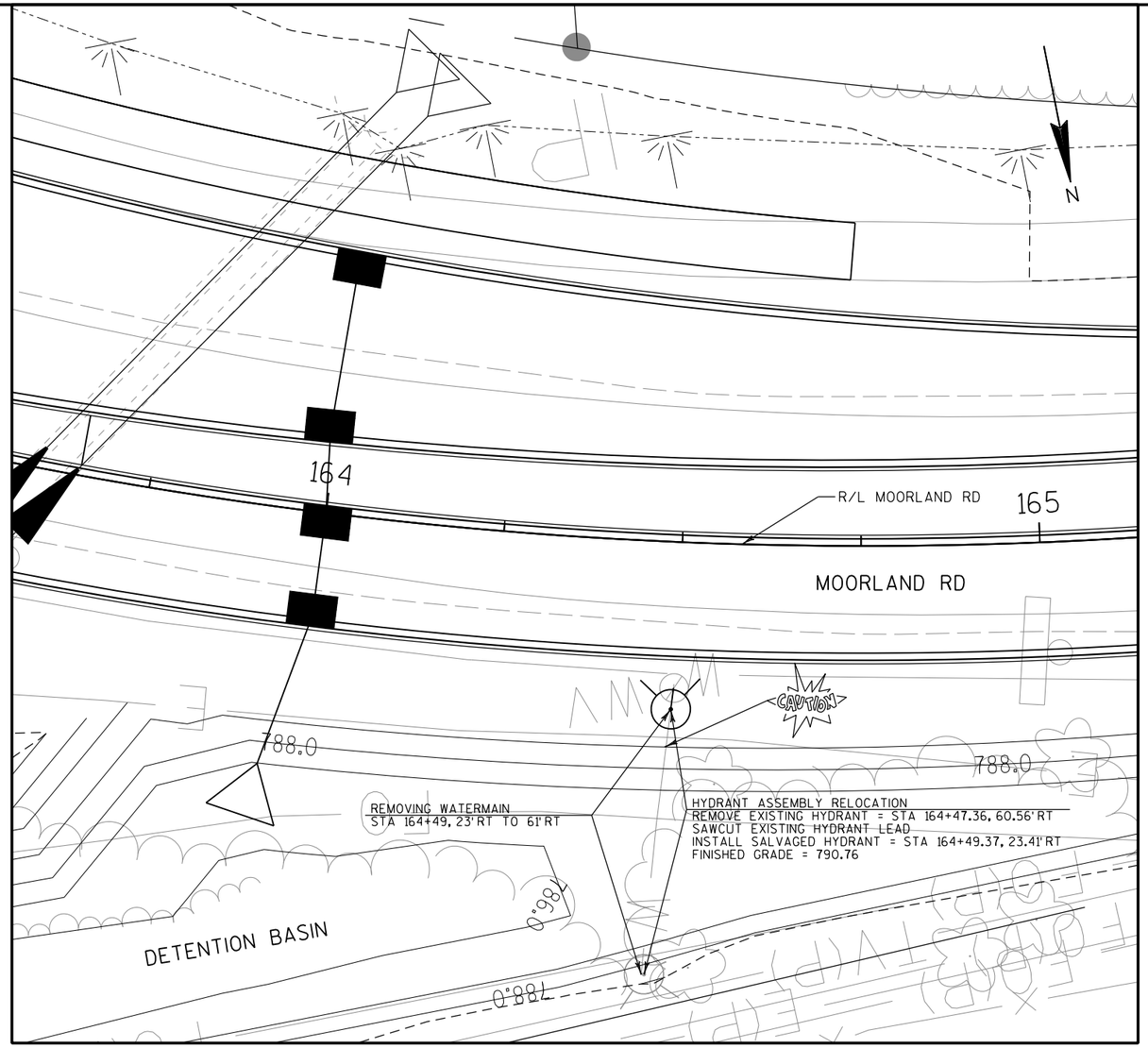
SSPRC CL III 15" @ 1.00%

SSPRC CL III 15" @ 1.00%

SSPRC CL III 15" @ 1.00%

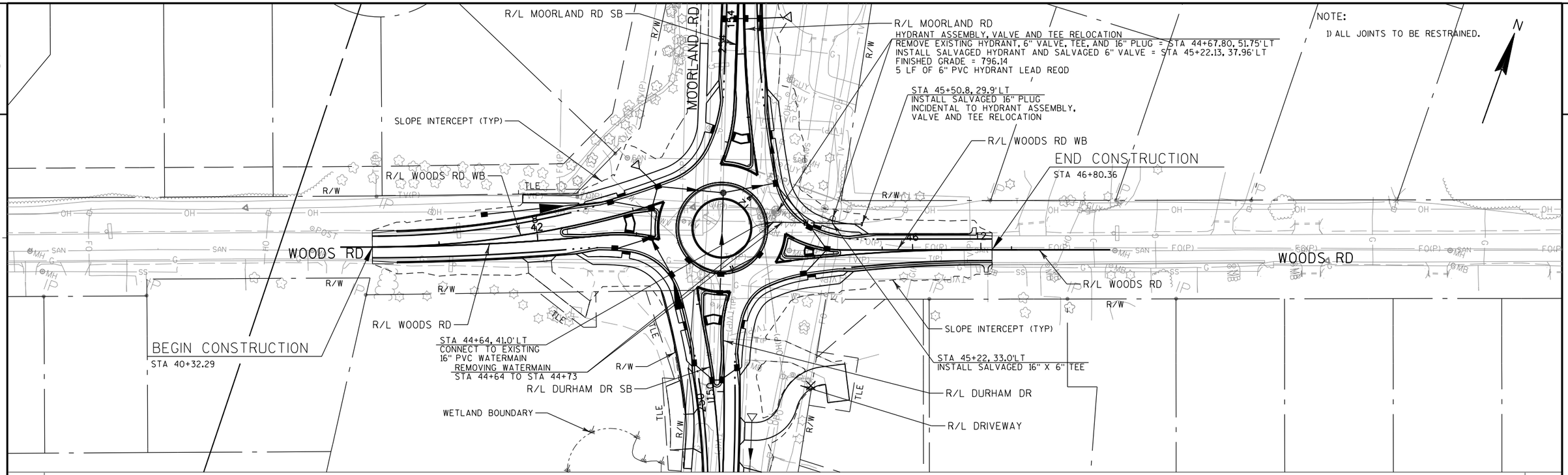
EXISTING 15" WATERMAIN

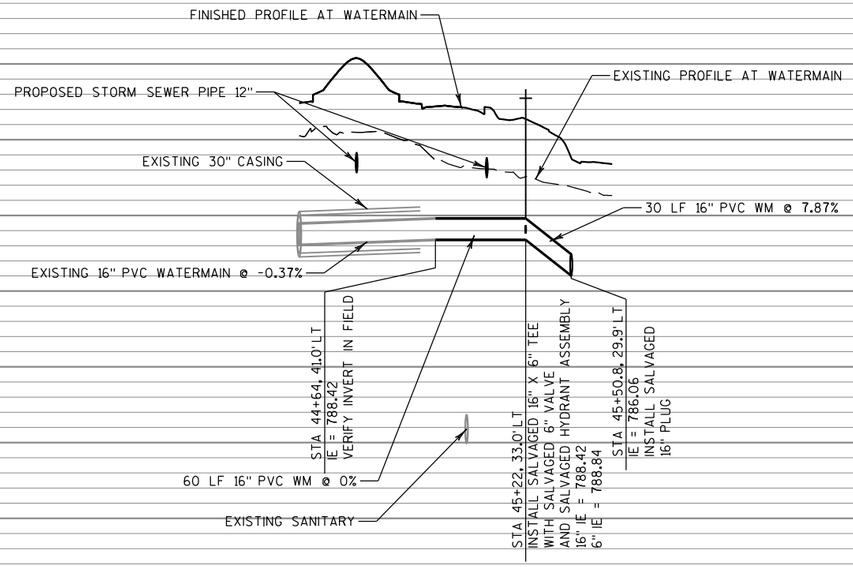
PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	STORM SEWER PLAN AND PROFILE: MOORLAND RD	SHEET 83	E



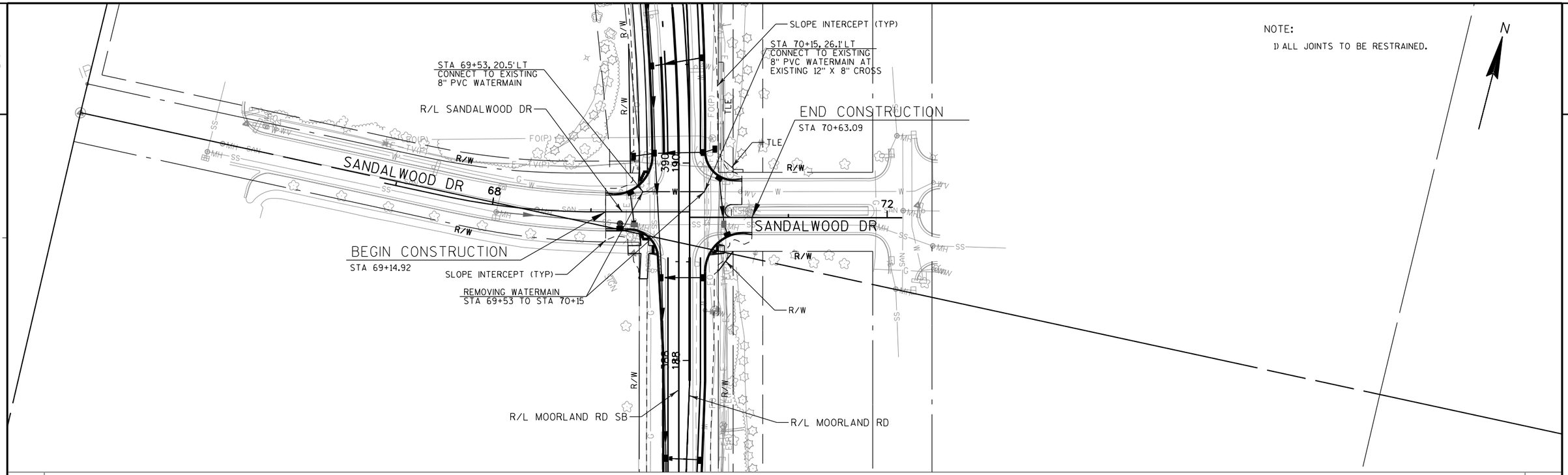
HYDRANT ASSEMBLY RELOCATION

MOORLAND RD AT DETENTION BASIN





PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	WATERMAIN PLAN AND PROFILE: WOODS RD	SHEET 85	E



PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	WATERMAIN PLAN AND PROFILE: SANDALWOOD DR	SHEET 86 E

LEGEND

EXISTING SIGN MOUNTED ON POST(S)

PROPOSED SIGN MOUNTED ON POST(S)

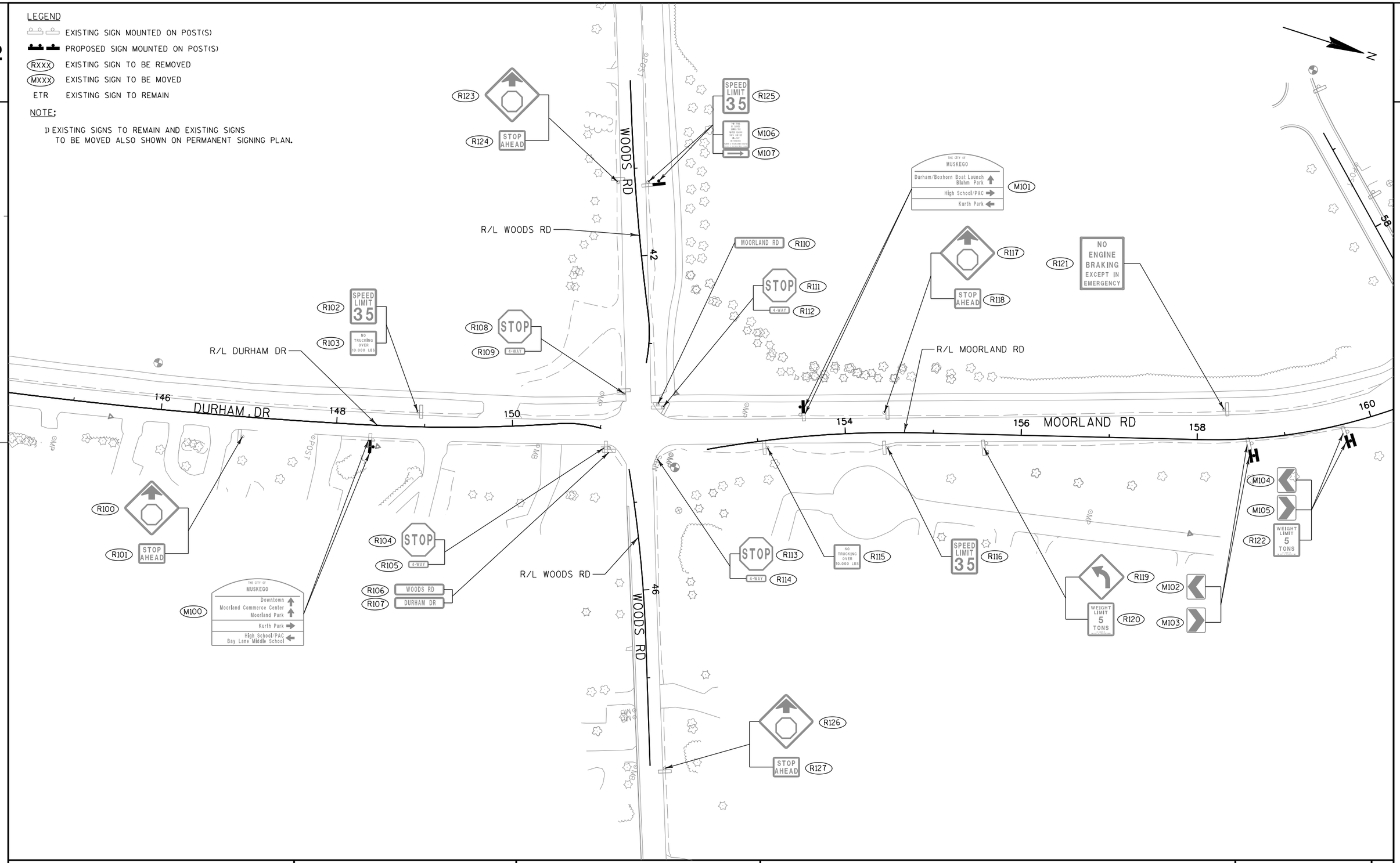
(RXXX) EXISTING SIGN TO BE REMOVED

(MXXX) EXISTING SIGN TO BE MOVED

ETR EXISTING SIGN TO REMAIN

NOTE:

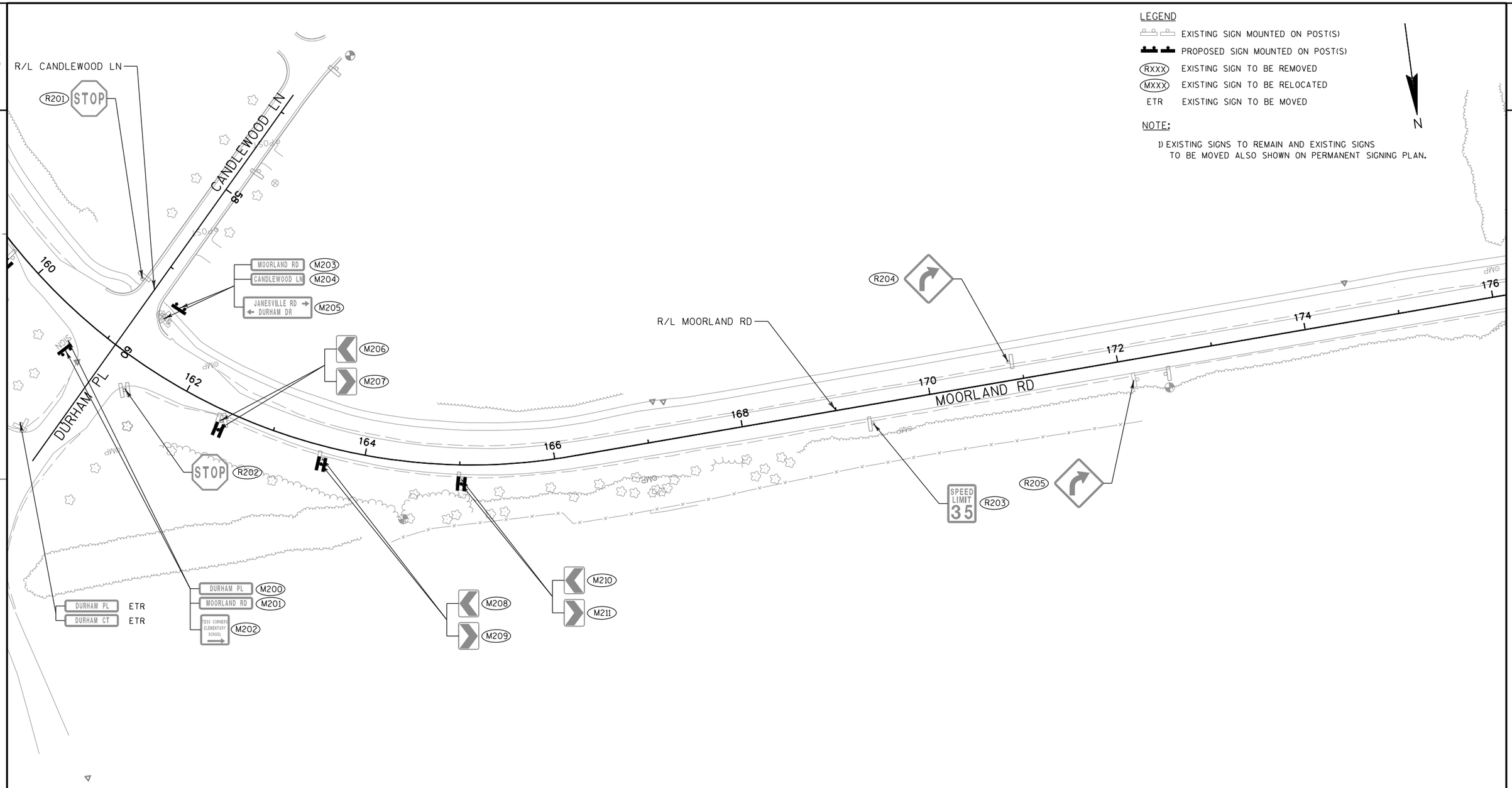
1) EXISTING SIGNS TO REMAIN AND EXISTING SIGNS TO BE MOVED ALSO SHOWN ON PERMANENT SIGNING PLAN.



PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	SIGN REMOVAL PLAN	SHEET 87	E

FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\023201_PS.dgn PLOT DATE : 7/26/2017 PLOT BY : wwolak PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 42



PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	SIGN REMOVAL PLAN	SHEET 88	E

FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\023202_PS.dgn PLOT DATE : 7/26/2017 PLOT BY : wwolak PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 42

LEGEND

EXISTING SIGN MOUNTED ON POST(S)

PROPOSED SIGN MOUNTED ON POST(S)

(RXXX) EXISTING SIGN TO BE REMOVED

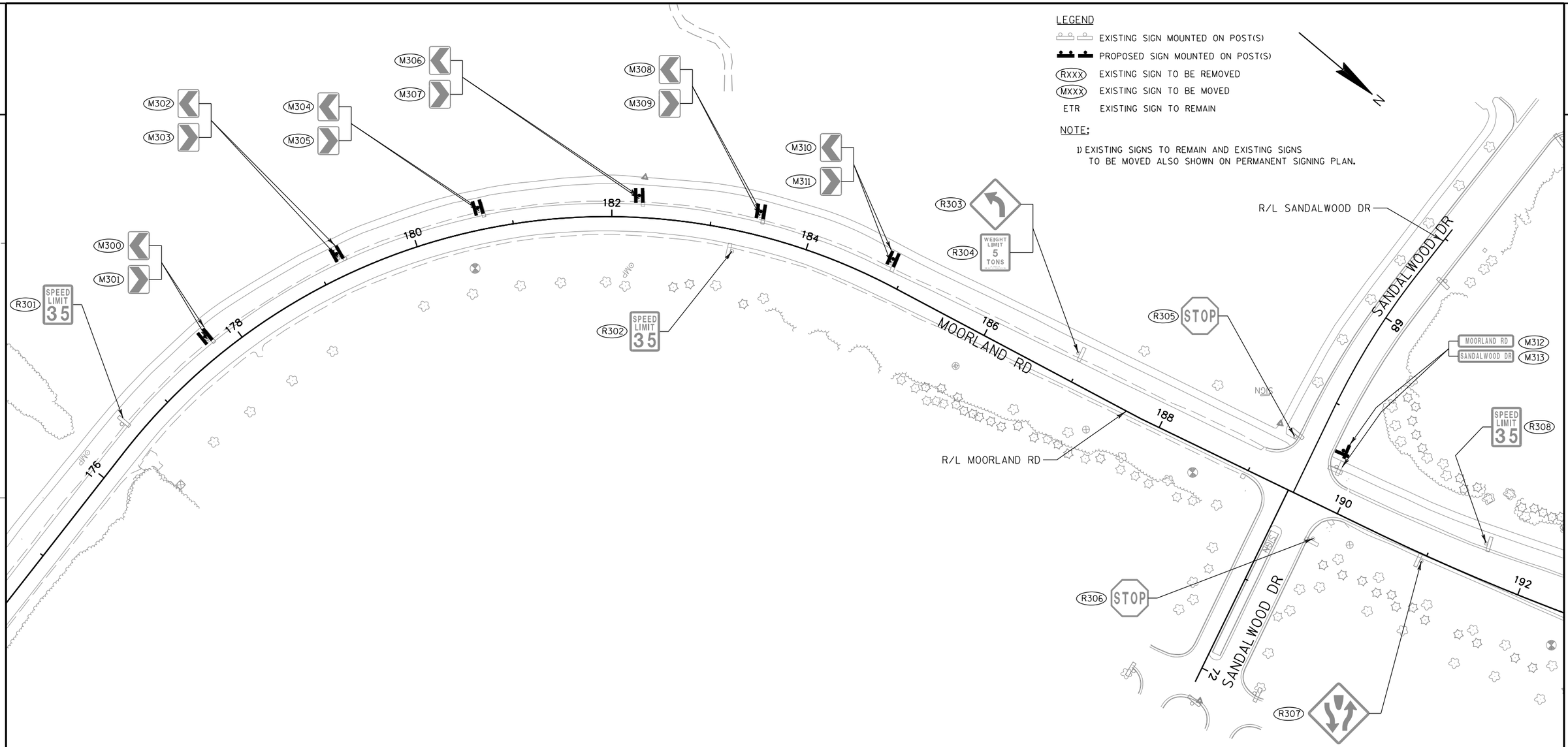
(MXXX) EXISTING SIGN TO BE MOVED

ETR EXISTING SIGN TO REMAIN

N

NOTE:

1) EXISTING SIGNS TO REMAIN AND EXISTING SIGNS TO BE MOVED ALSO SHOWN ON PERMANENT SIGNING PLAN.



PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	SIGN REMOVAL PLAN	SHEET 89	E

FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\023203_PS.dgn PLOT DATE : 7/26/2017 PLOT BY : wwolak PLOT NAME : PLOT SCALE : 1:100

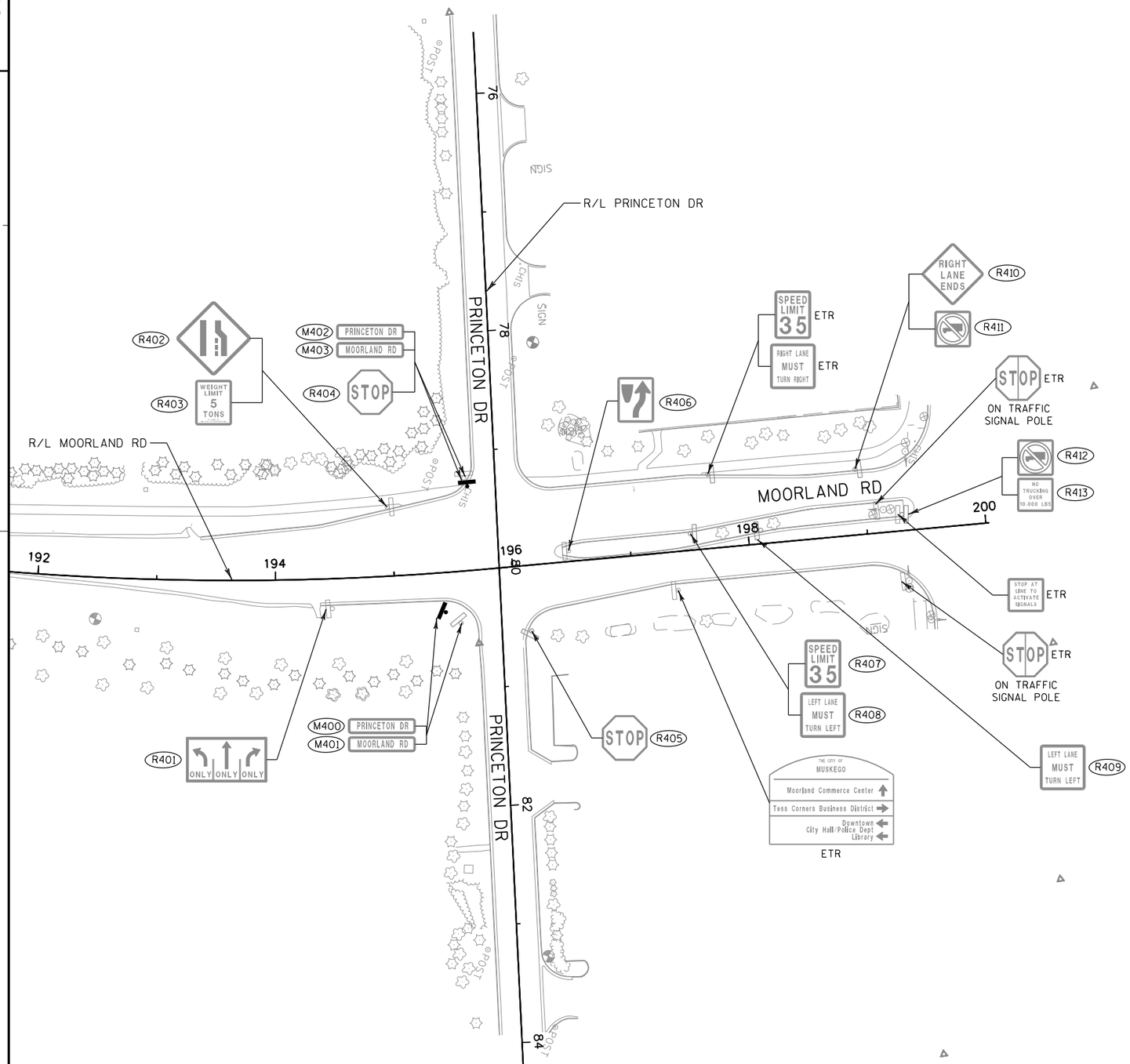
2

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON POST(S)
- (RXXX) EXISTING SIGN TO BE REMOVED
- (MXXX) EXISTING SIGN TO BE MOVED
- ETR EXISTING SIGN TO REMAIN

NOTE:

1) EXISTING SIGNS TO REMAIN AND EXISTING SIGNS TO BE MOVED ALSO SHOWN ON PERMANENT SIGNING PLAN.



PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	SIGN REMOVAL PLAN	SHEET 90	E

FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\023204_PS.dgn PLOT DATE : 7/26/2017 PLOT BY : wwolak PLOT NAME : PLOT SCALE : 1:100

LEGEND

PROPOSED SIGN MOUNTED ON POST(S)

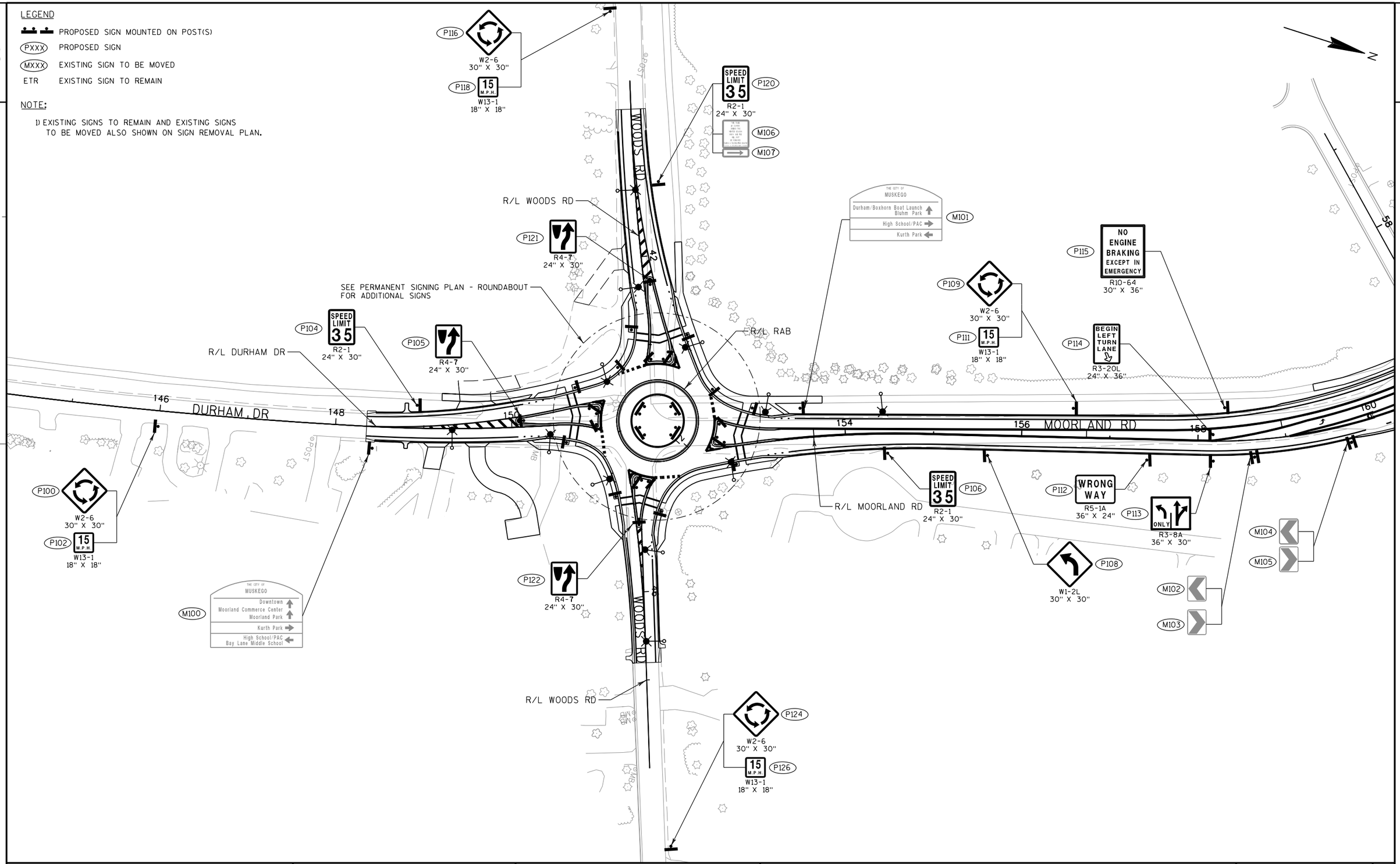
(PXXX) PROPOSED SIGN

(MXXX) EXISTING SIGN TO BE MOVED

ETR EXISTING SIGN TO REMAIN

NOTE:

1) EXISTING SIGNS TO REMAIN AND EXISTING SIGNS TO BE MOVED ALSO SHOWN ON SIGN REMOVAL PLAN.



PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	PERMANENT SIGNING PLAN	SHEET 91	E

2

LEGEND

PROPOSED SIGN MOUNTED ON POST(S)

(PXXX) PROPOSED SIGN

(MXXX) EXISTING SIGN TO BE MOVED

ETR EXISTING SIGN TO REMAIN

NOTE:

1) EXISTING SIGNS TO REMAIN AND EXISTING SIGNS TO BE MOVED ALSO SHOWN ON SIGN REMOVAL PLAN.

N

R/L CANDLEWOOD LN

CANDLEWOOD LN

R/L MOORLAND RD

MOORLAND RD

DURHAM PL

DETENTION BASIN

P200 R4-7 24" X 30"

P201 ONE WAY R6-2L 24" X 30"

P202 STOP R1-1 30" X 30" MOUNT ON LIGHT POLE

M203 MOORLAND RD

M204 CANDLEWOOD LN

M205 JANESVILLE RD / DURHAM DR

P203 P204 P205 P206 DO NOT ENTER R5-1 30" X 30"

M206

M207

P211 WRONG WAY R5-1A 36" X 24"

P213 ONLY R3-8A 36" X 30"

P216 W1-2R 30" X 30"

P218 W6-1 36" X 36"

P219 W6-3 36" X 36"

P217 W1-2R 30" X 30"

P215 SPEED LIMIT 35 R2-1 24" X 30"

P214 R4-7 24" X 30"

P209 R4-7 24" X 30"

P210 W6-2 36" X 36"

M210

M211

P212 BEGIN LEFT TURN LANE R3-20L 24" X 36"

M208

M209

P207 STOP R1-1 30" X 30"

P208 ONE WAY R6-2L 24" X 30"

M200 DURHAM PL

M201 MOORLAND RD

M202 TESS CORNERS ELEMENTARY SCHOOL

DURHAM PL ETR

DURHAM CT ETR

PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	PERMANENT SIGNING PLAN	SHEET 92	E

FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\023212_PS.dgn PLOT DATE : 8/28/2017 PLOT BY : wwolak PLOT NAME : PLOT SCALE : 1:100

LEGEND

PROPOSED SIGN MOUNTED ON POST(S)

(PXXX) PROPOSED SIGN

(MXXX) EXISTING SIGN TO BE MOVED

ETR EXISTING SIGN TO REMAIN

NOTE:

1) EXISTING SIGNS TO REMAIN AND EXISTING SIGNS TO BE MOVED ALSO SHOWN ON SIGN REMOVAL PLAN.

N

(M300) (M301) (P300) SPEED LIMIT 35 R2-1 24" X 30"

(M302) (M303)

(M304) (M305)

(M306) (M307)

(M308) (M309)

(M310) (M311)

(P301) SPEED LIMIT 35 R2-1 24" X 30"

(P303) ONLY R3-8A 36" X 30"

(P304) W1-2L 30" X 30"

(P305) W6-2 36" X 36"

(P308) W11-2 30" X 30"

(P309) W16-7L 24" X 12"

(P302) W6-1 36" X 36"

(P306) W11-2 30" X 30"

(P307) W16-7L 24" X 12"

(P311) STOP R1-1 30" X 30"

(P310) STOP R1-1 30" X 30"

(M312) MOORLAND RD

(M313) SANDALWOOD DR

(P313) RIGHT LANE MUST TURN RIGHT R3-7R 30" X 30"

(P314) SPEED LIMIT 35 R2-1 24" X 30"

(P315) R4-7 24" X 30"

MOORLAND RD

R/L MOORLAND RD

R/L SANDALWOOD DR

SANDALWOOD DR

SANDALWOOD DR

160 162 164 166 168 170 172 174 176 178 180 182 184 186 188 190 192

89 72

2

PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	PERMANENT SIGNING PLAN	SHEET 93	E

FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\023213_PS.dgn PLOT DATE : 8/28/2017 PLOT BY : wwolak PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 42

LEGEND

PROPOSED SIGN MOUNTED ON POST(S)

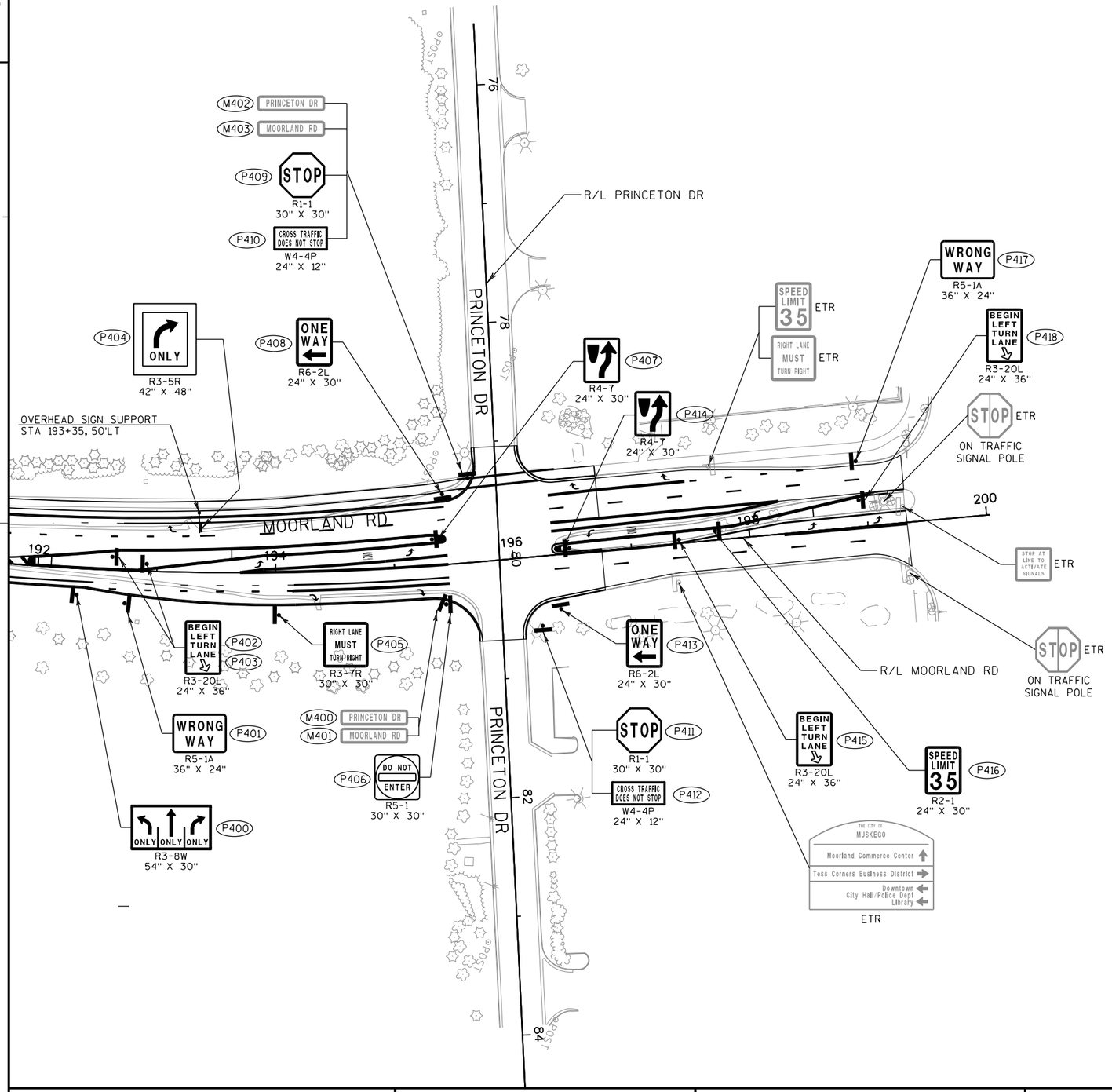
(PXXX) PROPOSED SIGN

(MXXX) EXISTING SIGN TO BE MOVED

ETR EXISTING SIGN TO REMAIN

NOTE:

1) EXISTING SIGNS TO REMAIN AND EXISTING SIGNS TO BE MOVED ALSO SHOWN ON SIGN REMOVAL PLAN.



PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	PERMANENT SIGNING PLAN	SHEET 94	E

FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\023214_PS.dgn PLOT DATE : 7/26/2017 PLOT BY : wwolak PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 42

LEGEND

PROPOSED SIGN MOUNTED ON POST(S)

(PXXX) PROPOSED SIGN

NOTE:

1) SEE SIGN REMOVAL PLAN AND PERMANENT SIGNING PLAN FOR ADDITIONAL SIGNS.

N

R/L WOODS RD

R/L DURHAM DR

R/L MOORLAND RD

R/L RAB

DURHAM DR

MOORLAND RD

WOODS RD

WOODS RD

16" X 16" ORANGE FLAGS (INCIDENTAL)
P529 YIELD
R1-2
36" X 31"
6.5' MOUNTING HEIGHT TO BOTTOM OF YIELD

P530 ONE WAY
R6-2R
24" X 30"

P527 W11-2
30" X 30"
P528 W16-7L
24" X 12"

16" X 16" ORANGE FLAGS (INCIDENTAL)
P531 YIELD
R1-2
36" X 31"
6.5' MOUNTING HEIGHT TO BOTTOM OF YIELD
P532 TO TRAFFIC FROM LEFT
R1-54
24" X 15"

P534 W11-2
30" X 30"
P535 W16-7L
24" X 12"

P533 Durham Dr
D1-1
SEE DETAIL

P524 Woods Rd
D1-1
SEE DETAIL

P525 W11-2
30" X 30"
P526 W16-7L
24" X 12"

P536 P538 P540 P542 ONE WAY
R6-1R
36" X 12"
P537 P539 P541 P543
R6-4B
60" X 24"
(BLACK/WHITE)
3' MOUNTING HEIGHT

16" X 16" ORANGE FLAGS (INCIDENTAL)
P522 YIELD
R1-2
36" X 31"
6.5' MOUNTING HEIGHT TO BOTTOM OF YIELD
P523 TO TRAFFIC FROM LEFT
R1-54
24" X 15"

16" X 16" ORANGE FLAGS (INCIDENTAL)
P520 YIELD
R1-2
36" X 31"
6.5' MOUNTING HEIGHT TO BOTTOM OF YIELD
P521 ONE WAY
R6-2R
24" X 30"

P518 W11-2
30" X 30"
P519 W16-7L
24" X 12"

P500 W11-2
30" X 30"
P501 W16-7L
24" X 12"

16" X 16" ORANGE FLAGS (INCIDENTAL)
P502 YIELD
R1-2
36" X 31"
6.5' MOUNTING HEIGHT TO BOTTOM OF YIELD
P503 ONE WAY
R6-2R
24" X 30"

16" X 16" ORANGE FLAGS (INCIDENTAL)
P504 YIELD
R1-2
36" X 31"
6.5' MOUNTING HEIGHT TO BOTTOM OF YIELD
P505 TO TRAFFIC FROM LEFT
R1-54
24" X 15"

P506 W11-2
30" X 30"
P507 W16-7L
24" X 12"

P508 Woods Rd
D1-1
SEE DETAIL

P509 W11-2
30" X 30"
P510 W16-7L
24" X 12"

Moorland Rd P515
D1-1
SEE DETAIL

16" X 16" ORANGE FLAGS (INCIDENTAL)
P513 YIELD
R1-2
36" X 31"
6.5' MOUNTING HEIGHT TO BOTTOM OF YIELD
P514 TO TRAFFIC FROM LEFT
R1-54
24" X 15"

P516 W11-2
30" X 30"
P517 W16-7L
24" X 12"

16" X 16" ORANGE FLAGS (INCIDENTAL)
P511 YIELD
R1-2
36" X 31"
6.5' MOUNTING HEIGHT TO BOTTOM OF YIELD
P512 ONE WAY
R6-2R
24" X 30"

PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	PERMANENT SIGNING PLAN - ROUNDABOUT	SHEET 95	E

FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\023215_PS.dgn PLOT DATE : 8/28/2017 PLOT BY : wwolak PLOT NAME : PLOT SCALE : 1:40

WISDOT/CADDS SHEET 42

2

LEGEND

- DISTRIBUTION CENTER
- PULL BOX
- CONDUIT
- CONDUIT STUBOUT
- LOCAL MUNI. POLE

N

BEGIN CONSTRUCTION

WOODS RD

STA 41+23.50
20.13' RT
FMW-2

STA 42+94.80
60.99' LT
EMW-1

R/L WOODS RD

R/L RAB

STA 42+34.06
26.98' RT
EMW-2

STA 152+93.08
89.78' LT
LIGHTING CABINET MW

BEGIN PROJECT
2723-00-71
STA 148+35.05

STA 43+06.27
41.94' RT
PB-MW-7

STA 152+91.34
76.16' LT
PB-MW-1

STA 153+18.70
53.12' LT
AMW-1

STA 154+40.76
45.61' LT
BMW-1

STA 155+42.97
48.79' LT
PB-MW-2

STA 150+88.62
72.51' LT
FMW-1

CANDLEWOOD LN

BEGIN CONSTRUCTION
STA 58+75.00

R/L CANDLEWOOD LN

STA 59+23.70
20.52' RT
BMW-2

STA 161+40.82
49.51' RT
AMW-2

DURHAM DR

MOORLAND RD

DURHAM PL

STA 160+84.70
51.38' RT
PB-MW-4

R/L MOORLAND RD

STA 152+66.70
37.57' RT
CMW-1

STA 155+48.22
20.34' RT
PB-MW-3

STA 148+94.34
20.84' RT
CONDUIT STUB
WITH CAP

R/L DURHAM DR

STA 150+40.26
30.25' RT
CMW-3

STA 150+98.13
55.26' RT
PB-MW-6

STA 149+32.02
21.77' RT
DMW-3

STA 45+57.73
26.40' LT
DMW-1

R/L WOODS RD

STA 44+70.86
42.97' RT
DMW-2

STA 45+53.34
33.78' RT
PB-MW-5

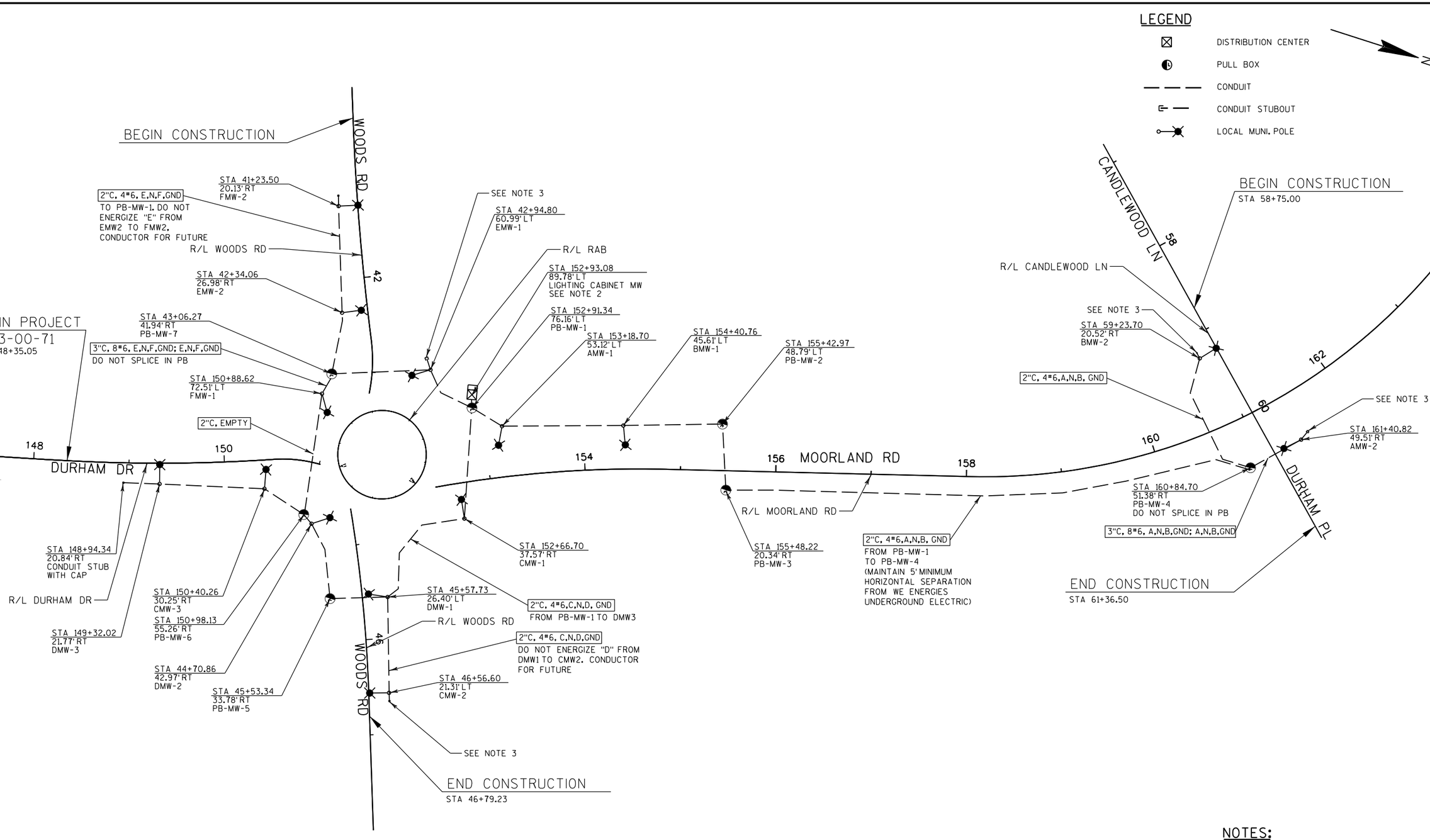
STA 46+56.60
21.31' LT
CMW-2

WOODS RD

END CONSTRUCTION
STA 46+79.23

END CONSTRUCTION
STA 61+36.50

PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	LIGHTING PLAN	SHEET 96	E



NOTES:

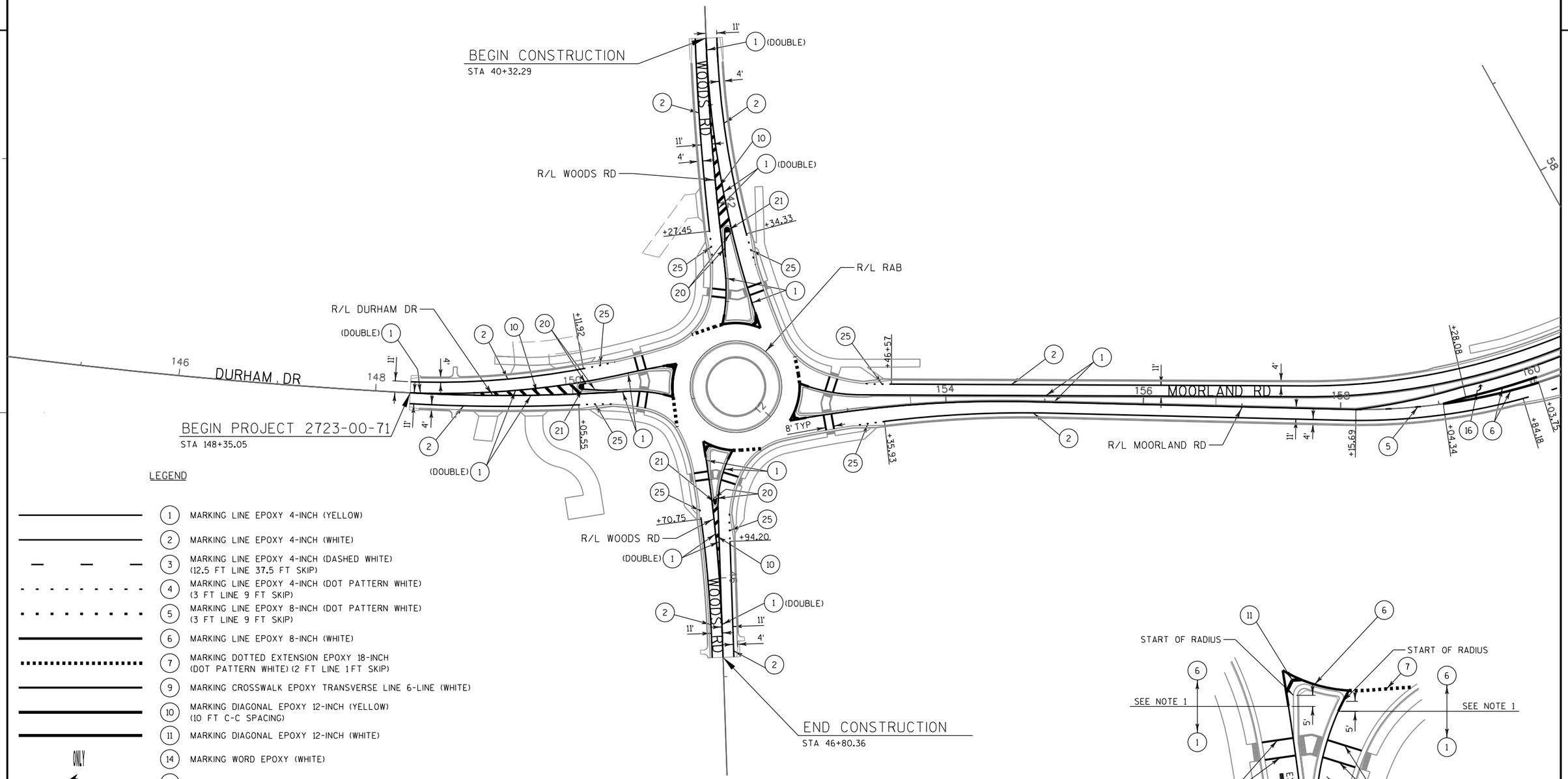
1) NO SPLICING IN PULL BOXES.

2) 3"C,12#6, A,N,B,GND; C,N,D,GND; E,N,F,GND. FROM LCC MW TO PB-MW-1.

3) 2"C, EMPTY. STUB 6'-0" FROM BASE AND CAP.

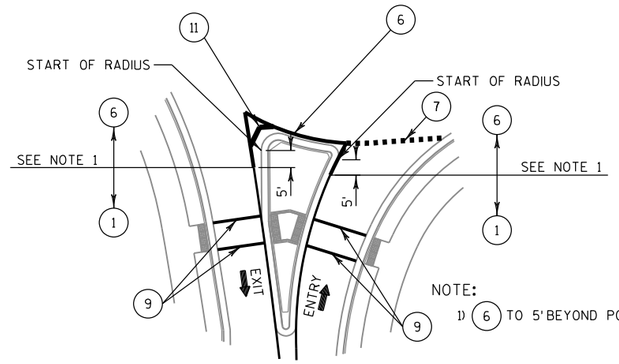
PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	LIGHTING PLAN SCHEMATIC	SHEET 97	E

NOTE:
1) CALLOUTS ARE BASED OFF NORTHBOUND AND EASTBOUND REFERENCE LINES.



LEGEND

———	1	MARKING LINE EPOXY 4-INCH (YELLOW)
———	2	MARKING LINE EPOXY 4-INCH (WHITE)
— — —	3	MARKING LINE EPOXY 4-INCH (DASHED WHITE) (12.5 FT LINE 37.5 FT SKIP)
- - - - - -	4	MARKING LINE EPOXY 4-INCH (DOT PATTERN WHITE) (3 FT LINE 9 FT SKIP)
- - - - - -	5	MARKING LINE EPOXY 8-INCH (DOT PATTERN WHITE) (3 FT LINE 9 FT SKIP)
———	6	MARKING LINE EPOXY 8-INCH (WHITE)
·····	7	MARKING DOTTED EXTENSION EPOXY 18-INCH (DOT PATTERN WHITE) (2 FT LINE 1 FT SKIP)
———	9	MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-LINE (WHITE)
———	10	MARKING DIAGONAL EPOXY 12-INCH (YELLOW) (10 FT C-C SPACING)
———	11	MARKING DIAGONAL EPOXY 12-INCH (WHITE)
ONLY	14	MARKING WORD EPOXY (WHITE)
↰	16	MARKING ARROW EPOXY TYPE 2 (WHITE)
———	20	MARKING CURB EPOXY (YELLOW)
■	21	MARKING ISLAND NOSE EPOXY (YELLOW)
- - - - - -	25	MARKING LINE EPOXY 4-INCH (DOT PATTERN WHITE) (2 FT LINE 6 FT SKIP)

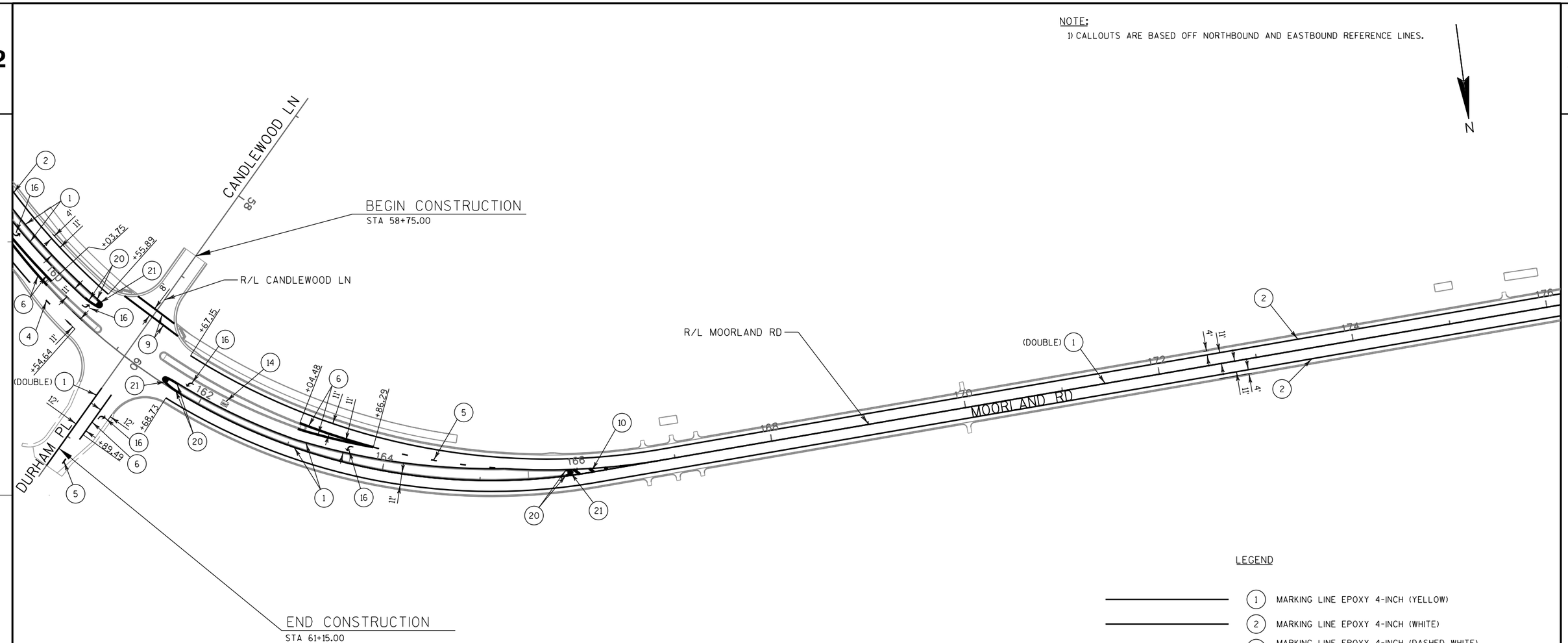


NOTE:
1) 6 TO 5' BEYOND PC

SPLITTER ISLAND DETAIL (TYPICAL)
N.T.S.

PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	PAVEMENT MARKING PLAN	SHEET 98	E

NOTE:
1) CALLOUTS ARE BASED OFF NORTHBOUND AND EASTBOUND REFERENCE LINES.



LEGEND

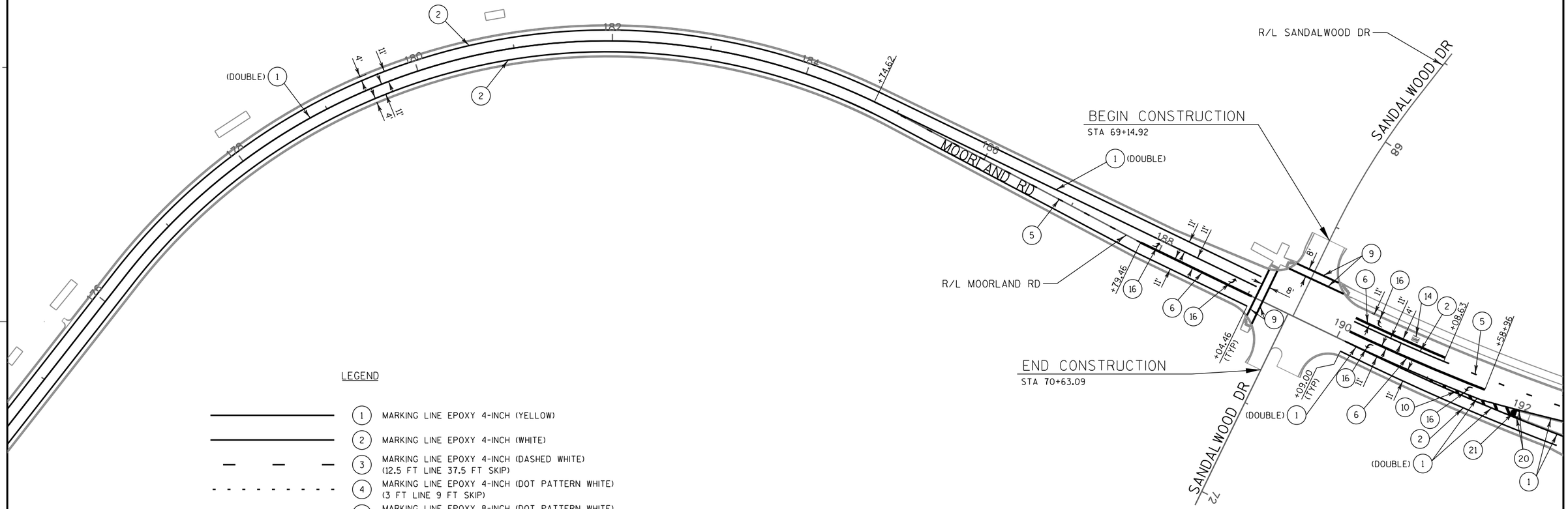
———	1	MARKING LINE EPOXY 4-INCH (YELLOW)
———	2	MARKING LINE EPOXY 4-INCH (WHITE)
— — —	3	MARKING LINE EPOXY 4-INCH (DASHED WHITE) (12.5 FT LINE 37.5 FT SKIP)
- - - - - - - -	4	MARKING LINE EPOXY 4-INCH (DOT PATTERN WHITE) (3 FT LINE 9 FT SKIP)
▪ ▪ ▪ ▪ ▪ ▪ ▪ ▪	5	MARKING LINE EPOXY 8-INCH (DOT PATTERN WHITE) (3 FT LINE 9 FT SKIP)
———	6	MARKING LINE EPOXY 8-INCH (WHITE)
▪▪▪▪▪▪▪▪▪▪▪▪	7	MARKING DOTTED EXTENSION EPOXY 18-INCH (DOT PATTERN WHITE) (2 FT LINE 1 FT SKIP)
———	9	MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-LINE (WHITE)
———	10	MARKING DIAGONAL EPOXY 12-INCH (YELLOW) (10 FT C-C SPACING)
———	11	MARKING DIAGONAL EPOXY 12-INCH (WHITE)
ONLY	14	MARKING WORD EPOXY (WHITE)
↰	16	MARKING ARROW EPOXY TYPE 2 (WHITE)
———	20	MARKING CURB EPOXY (YELLOW)
■	21	MARKING ISLAND NOSE EPOXY (YELLOW)
▪ ▪ ▪ ▪ ▪ ▪ ▪ ▪	25	MARKING LINE EPOXY 4-INCH (DOT PATTERN WHITE) (2 FT LINE 6 FT SKIP)

PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	PAVEMENT MARKING PLAN	SHEET 99	E

FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\024502_PM.dgn PLOT DATE : 7/26/2017 PLOT BY : wwolak PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 42

NOTE:
1) CALLOUTS ARE BASED OFF NORTHBOUND AND EASTBOUND REFERENCE LINES.

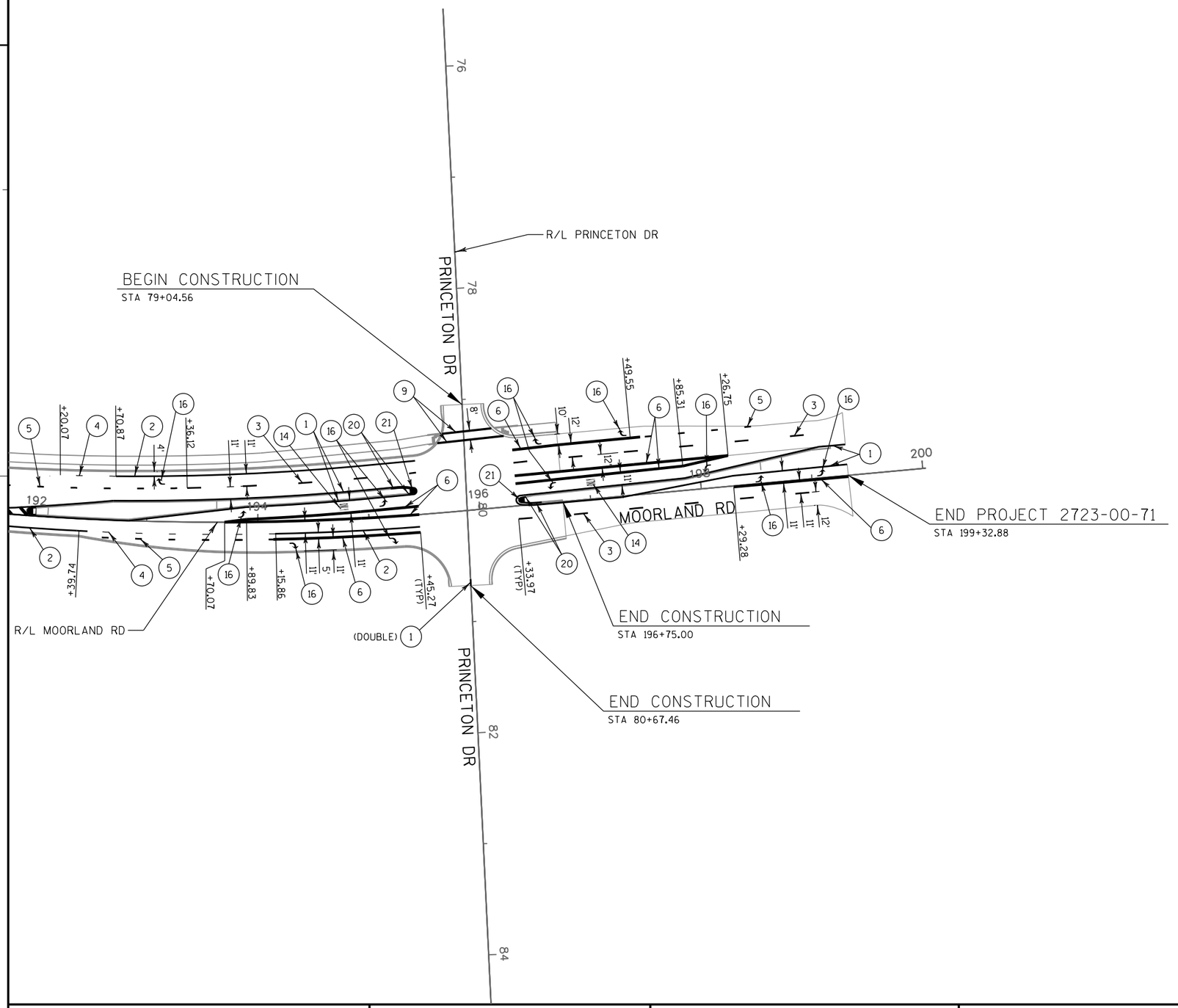


LEGEND

———	1	MARKING LINE EPOXY 4-INCH (YELLOW)
———	2	MARKING LINE EPOXY 4-INCH (WHITE)
— — —	3	MARKING LINE EPOXY 4-INCH (DASHED WHITE) (12.5 FT LINE 37.5 FT SKIP)
- - - - -	4	MARKING LINE EPOXY 4-INCH (DOT PATTERN WHITE) (3 FT LINE 9 FT SKIP)
▪ ▪ ▪ ▪ ▪	5	MARKING LINE EPOXY 8-INCH (DOT PATTERN WHITE) (3 FT LINE 9 FT SKIP)
———	6	MARKING LINE EPOXY 8-INCH (WHITE)
▪▪▪▪▪▪▪▪	7	MARKING DOTTED EXTENSION EPOXY 18-INCH (DOT PATTERN WHITE) (2 FT LINE 1 FT SKIP)
———	9	MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-LINE (WHITE)
———	10	MARKING DIAGONAL EPOXY 12-INCH (YELLOW) (10 FT C-C SPACING)
———	11	MARKING DIAGONAL EPOXY 12-INCH (WHITE)
ONLY	14	MARKING WORD EPOXY (WHITE)
↰	16	MARKING ARROW EPOXY TYPE 2 (WHITE)
———	20	MARKING CURB EPOXY (YELLOW)
■	21	MARKING ISLAND NOSE EPOXY (YELLOW)
- - - - -	25	MARKING LINE EPOXY 4-INCH (DOT PATTERN WHITE) (2 FT LINE 6 FT SKIP)

PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	PAVEMENT MARKING PLAN	SHEET 100	E

NOTE:
1) CALLOUTS ARE BASED OFF NORTHBOUND AND EASTBOUND REFERENCE LINES.



LEGEND

1	MARKING LINE EPOXY 4-INCH (YELLOW)
2	MARKING LINE EPOXY 4-INCH (WHITE)
3	MARKING LINE EPOXY 4-INCH (DASHED WHITE) (12.5 FT LINE 37.5 FT SKIP)
4	MARKING LINE EPOXY 4-INCH (DOT PATTERN WHITE) (3 FT LINE 9 FT SKIP)
5	MARKING LINE EPOXY 8-INCH (DOT PATTERN WHITE) (3 FT LINE 9 FT SKIP)
6	MARKING LINE EPOXY 8-INCH (WHITE)
7	MARKING DOTTED EXTENSION EPOXY 18-INCH (DOT PATTERN WHITE) (2 FT LINE 1FT SKIP)
9	MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-LINE (WHITE
10	MARKING DIAGONAL EPOXY 12-INCH (YELLOW) (10 FT C-C SPACING)
11	MARKING DIAGONAL EPOXY 12-INCH (WHITE)
14	MARKING WORD EPOXY (WHITE)
16	MARKING ARROW EPOXY TYPE 2 (WHITE)
20	MARKING CURB EPOXY (YELLOW)
21	MARKING ISLAND NOSE EPOXY (YELLOW)
25	MARKING LINE EPOXY 4-INCH (DOT PATTERN WHITE) (2 FT LINE 6 FT SKIP)

PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	PAVEMENT MARKING PLAN	SHEET 101	E

FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\024504_PM.dgn PLOT DATE : 7/26/2017 PLOT BY : wwolak PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 42

LEGEND

STAGE 1 WORK ZONE

STAGE 2 WORK ZONE.
CONSTRUCT WITH A FULL CLOSURE TO THROUGH TRAFFIC FOR 35 CONSECUTIVE CALENDAR DAYS WHEN SCHOOL IS NOT IN SESSION. SEE SPECIAL PROVISIONS.

CONSTRUCTION (STAGE 1 & STAGE 2)

-INSTALL EROSION CONTROL DEVICES
-PERFORM ALL CLEARING & GRUBBING IN STAGE 1
-CONSTRUCT NEW DETENTION BASIN IN STAGE 1
-REMOVE EXISTING ROADWAY
-INSTALL STORM SEWER
-RELOCATE HYDRANTS
-BUILD NEW ROADWAY
-CONSTRUCT PERMANENT STREET LIGHTING
-INSTALL PERMANENT SIGNING
-PERFORM FINAL RESTORATION

BEGIN CONSTRUCTION
STA 40+32.29

R/L WOODS RD

STAGE CONSTRUCTION TO MAINTAIN DRIVEWAY ACCESS AT ALL TIMES

R/L DURHAM DR

BEGIN PROJECT
STA 148+35.05

STAGE CONSTRUCTION TO MAINTAIN DRIVEWAY ACCESS AT ALL TIMES

END CONSTRUCTION
STA 46+80.36

R/L CANDLEWOOD LN

BEGIN CONSTRUCTION
STA 58+75.00

DETENTION BASIN

END CONSTRUCTION
STA 61+36.50

WOODS RD
MOORLAND RD
CANDLEWOOD LN
DURHAM PL
DURHAM DR
DURHAM CT
PILGRIM DR
WESTCOT DR
ROSEWOOD DR

145 150 155 160 165 170

N

PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	CONSTRUCTION STAGING PLAN	SHEET 102	E

2

LEGEND

STAGE 1 WORK ZONE

STAGE 3 WORK ZONE.
CONSTRUCT WITH A FULL CLOSURE TO THROUGH TRAFFIC FOR 30 CONSECUTIVE CALENDAR DAYS.
SEE SPECIAL PROVISIONS.

CONSTRUCTION (STAGE 1 & STAGE 3)

-INSTALL EROSION CONTROL DEVICES
-PERFORM ALL CLEARING & GRUBBING IN STAGE 1
-REMOVE EXISTING ROADWAY
-INSTALL STORM SEWER
-RELOCATE HYDRANTS
-BUILD NEW ROADWAY
-INSTALL PERMANENT SIGNING
-PERFORM FINAL RESTORATION

EXISTING DETENTION BASIN

BEGIN CONSTRUCTION
STA 69+14.92

BEGIN CONSTRUCTION
STA 79+04.56

SANDALWOOD DR

JANESVILLE RD

END PROJECT
STA 199+32.88

R/L MOORLAND RD

180

185

190

195

200

175

MOORLAND RD

END CONSTRUCTION
STA 70+63.09

ROSEWOOD DR

R/L SANDALWOOD DR

DO NOT REMOVE EXISTING STORM SEWER TRUNK SYSTEM NORTH OF STA 194+50 UNTIL THE FULL INTERSECTION CLOSURE AT PRINCETON DRIVE.
SEE SPECIAL PROVISIONS.

END CONSTRUCTION
STA 80+67.46

PRINCETON DR

R/L PRINCETON DR

85

WESTCOT DR

ROSEWOOD DR

N

2

PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	CONSTRUCTION STAGING PLAN	SHEET 103	E

FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\025002_CS.dgn PLOT DATE : 7/26/2017 PLOT BY : wwolak PLOT NAME : PLOT SCALE : 1:200

WISDOT/CADDS SHEET 42

2

NOTES:

1) SEE STANDARD DETAIL DRAWINGS FOR ADDITIONAL INFORMATION.

2) SEE DETOUR PLAN AND PEDESTRIAN DETOUR FOR ADDITIONAL SIGNING.

3) PLACE PCMS SIGN FOR 5 DAYS PRIOR TO CLOSURE.

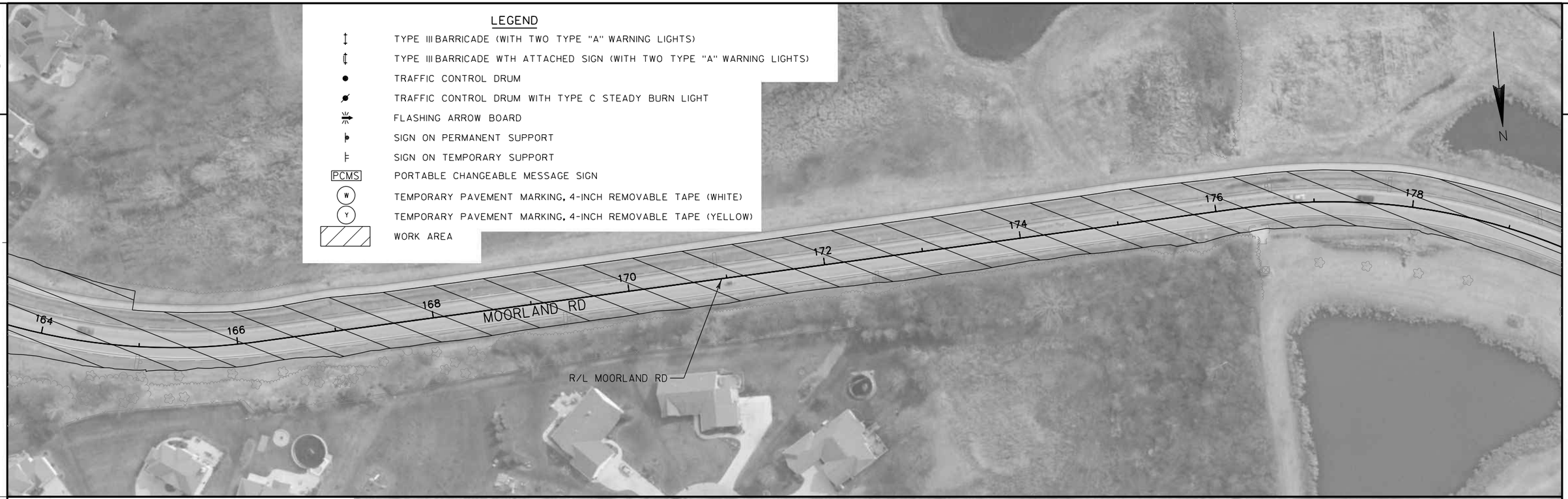
LEGEND

‡	TYPE III BARRICADE (WITH TWO TYPE "A" WARNING LIGHTS)
‡	TYPE III BARRICADE WTH ATTACHED SIGN (WITH TWO TYPE "A" WARNING LIGHTS)
●	TRAFFIC CONTROL DRUM
	TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
	FLASHING ARROW BOARD
	SIGN ON PERMANENT SUPPORT
	SIGN ON TEMPORARY SUPPORT
PCMS	PORTABLE CHANGEABLE MESSAGE SIGN
W	TEMPORARY PAVEMENT MARKING, 4-INCH REMOVABLE TAPE (WHITE)
Y	TEMPORARY PAVEMENT MARKING, 4-INCH REMOVABLE TAPE (YELLOW)
	WORK AREA

PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	TRAFFIC CONTROL - STAGE 1	SHEET 104	E

LEGEND

- TYPE III BARRICADE (WITH TWO TYPE "A" WARNING LIGHTS)
- TYPE III BARRICADE WTH ATTACHED SIGN (WITH TWO TYPE "A" WARNING LIGHTS)
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- PCMS — PORTABLE CHANGEABLE MESSAGE SIGN
- (W) — TEMPORARY PAVEMENT MARKING, 4-INCH REMOVABLE TAPE (WHITE)
- (Y) — TEMPORARY PAVEMENT MARKING, 4-INCH REMOVABLE TAPE (YELLOW)
- WORK AREA



NOTES:

1) SEE STANDARD DETAIL DRAWINGS FOR ADDITIONAL INFORMATION.
2) SEE DETOUR PLAN AND PEDESTRIAN DETOUR FOR ADDITIONAL SIGNING.
3) PLACE PCMS SIGN FOR 5 DAYS PRIOR TO CLOSURE.

PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	TRAFFIC CONTROL - STAGE 1	SHEET 105	E

FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\025101a_TC.dgn PLOT DATE : 7/26/2017 PLOT BY : wwolak PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 42

NOTES:

1) SEE STANDARD DETAIL DRAWINGS FOR ADDITIONAL INFORMATION.

2) SEE DETOUR PLAN AND PEDESTRIAN DETOUR FOR ADDITIONAL SIGNING.

3) PLACE PCMS SIGN FOR 5 DAYS PRIOR TO CLOSURE.

4) DO NOT REMOVE EXISTING STORM SEWER TRUNK SYSTEM NORTH OF STA 194+50 UNTIL THE FULL INTERSECTION CLOSURE AT PRINCETON DRIVE. SEE SPECIAL PROVISIONS.

ROAD CLOSED
R11-2
48" X 30"

SANDALWOOD DR

SIDEWALK CLOSED
R9-9
24" X 12"

ROAD CLOSED
R11-2
48" X 30"

END ROAD WORK
G20-2A
48" X 24"

PRINCETON DR

W JANESVILLE RD

END ROAD WORK
G20-2A
48" X 24"

N

RIGHT LANE MUST TURN RIGHT
EXISTING SIGN TO REMAIN

WO12-1D
24" X 24"

WO1-6
48" X 24"

LANE CLOSED
R11-2(MOD)
48" X 30"

ROAD CLOSED
R11-2
48" X 30"

PCMS

25' TYP

305'

MOORLAND RD

END PROJECT 2723-00-71
STA 199+32.88

R/L MOORLAND RD

R/L PRINCETON DR

ROAD CLOSED
R11-2
48" X 30"

LANE CLOSED
R11-2(MOD)
48" X 30"

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

END ROAD WORK
G20-2A
48" X 24"

END ROAD WORK
G20-2A
48" X 24"

LANE CLOSED
R11-2(MOD)
48" X 30"

LEGEND

- TYPE III BARRICADE (WITH TWO TYPE "A" WARNING LIGHTS)
- TYPE III BARRICADE WTH ATTACHED SIGN (WITH TWO TYPE "A" WARNING LIGHTS)
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- PCMS — PORTABLE CHANGEABLE MESSAGE SIGN
- (W) — TEMPORARY PAVEMENT MARKING, 4-INCH REMOVABLE TAPE (WHITE)
- (Y) — TEMPORARY PAVEMENT MARKING, 4-INCH REMOVABLE TAPE (YELLOW)
- WORK AREA

PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	TRAFFIC CONTROL - STAGE 1	SHEET 106	E

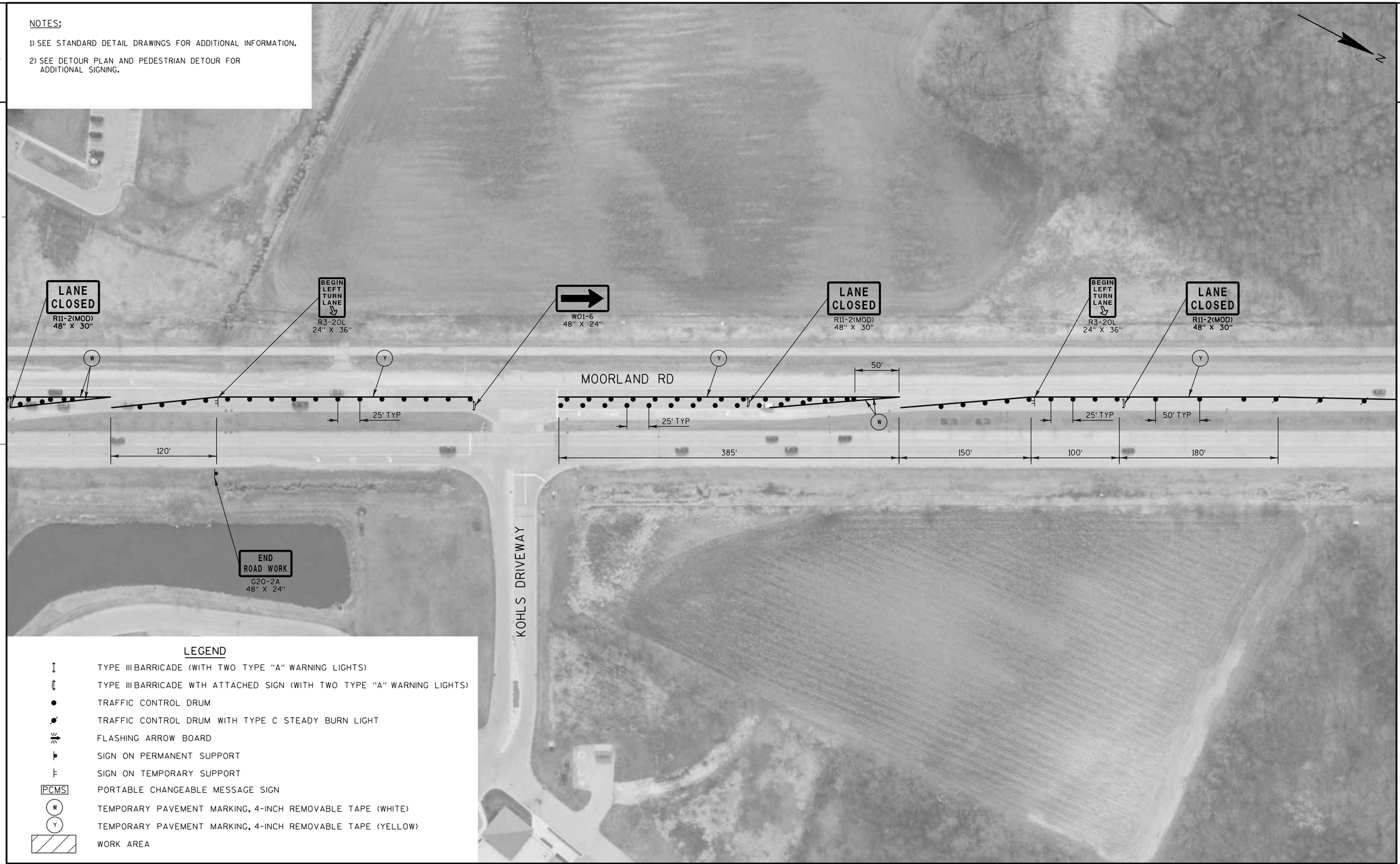
FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\025102_TC.dgn PLOT DATE : 7/26/2017 PLOT BY : wwolak PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 42

NOTES:

1) SEE STANDARD DETAIL DRAWINGS FOR ADDITIONAL INFORMATION.

2) SEE DETOUR PLAN AND PEDESTRIAN DETOUR FOR ADDITIONAL SIGNING.



LEGEND

- TYPE III BARRICADE (WITH TWO TYPE "A" WARNING LIGHTS)
- TYPE III BARRICADE WTH ATTACHED SIGN (WITH TWO TYPE "A" WARNING LIGHTS)
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- PCMS — PORTABLE CHANGEABLE MESSAGE SIGN
- (W) — TEMPORARY PAVEMENT MARKING, 4-INCH REMOVABLE TAPE (WHITE)
- (Y) — TEMPORARY PAVEMENT MARKING, 4-INCH REMOVABLE TAPE (YELLOW)
- WORK AREA

PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	TRAFFIC CONTROL - STAGE 1	SHEET 107	E

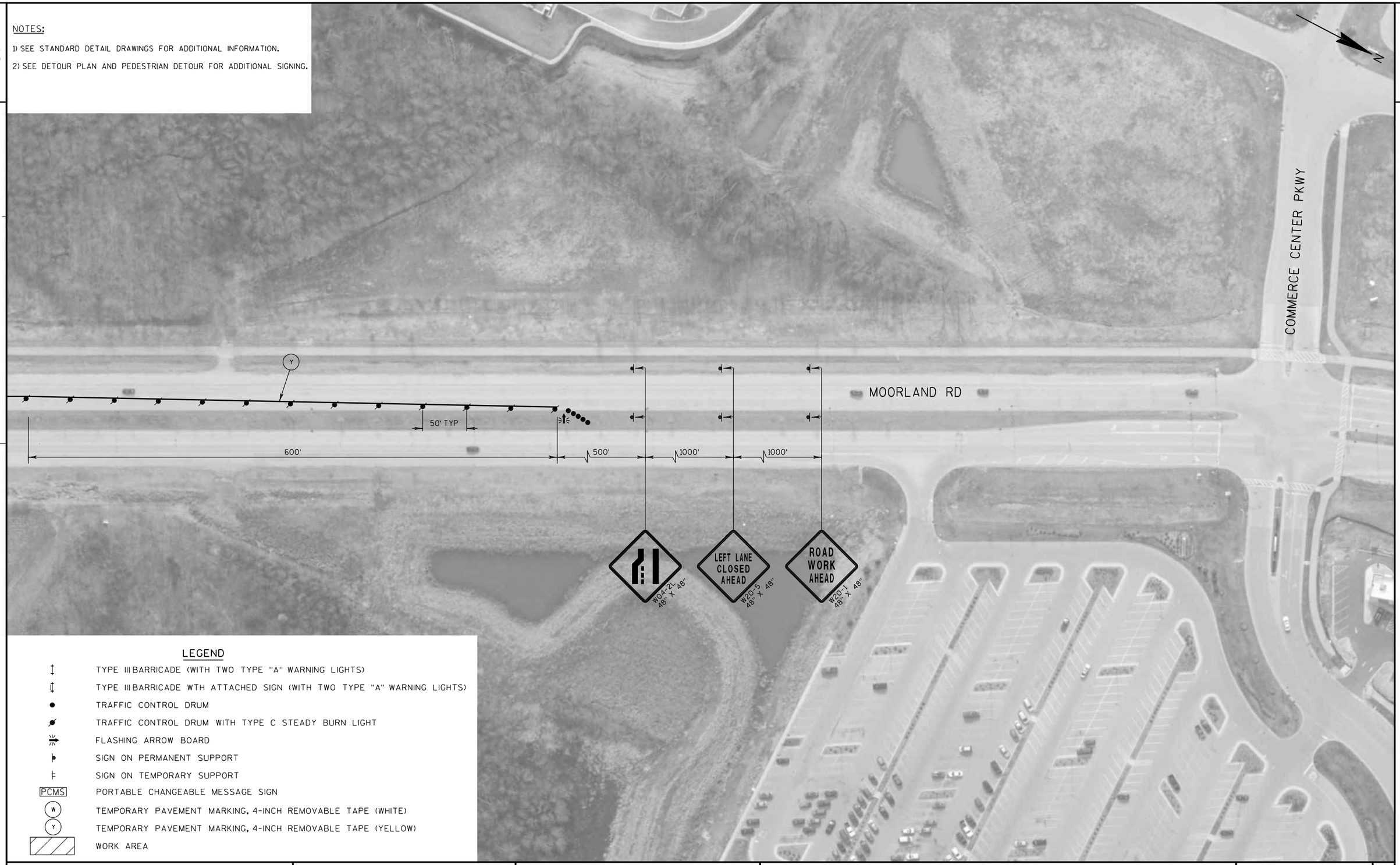
FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\025103_TC.dgn PLOT DATE : 7/26/2017 PLOT BY : wwolak PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 42

NOTES:

1) SEE STANDARD DETAIL DRAWINGS FOR ADDITIONAL INFORMATION.

2) SEE DETOUR PLAN AND PEDESTRIAN DETOUR FOR ADDITIONAL SIGNING.



LEGEND

	TYPE III BARRICADE (WITH TWO TYPE "A" WARNING LIGHTS)
	TYPE III BARRICADE WTH ATTACHED SIGN (WITH TWO TYPE "A" WARNING LIGHTS)
●	TRAFFIC CONTROL DRUM
	TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
	FLASHING ARROW BOARD
	SIGN ON PERMANENT SUPPORT
	SIGN ON TEMPORARY SUPPORT
PCMS	PORTABLE CHANGEABLE MESSAGE SIGN
W	TEMPORARY PAVEMENT MARKING, 4-INCH REMOVABLE TAPE (WHITE)
Y	TEMPORARY PAVEMENT MARKING, 4-INCH REMOVABLE TAPE (YELLOW)
	WORK AREA

PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	TRAFFIC CONTROL - STAGE 1	SHEET 108	E

NOTES:

1) SEE STANDARD DETAIL DRAWINGS FOR ADDITIONAL INFORMATION.

2) SEE DETOUR PLAN AND PEDESTRIAN DETOUR FOR ADDITIONAL SIGNING.

3) SEE STAGE 1 TRAFFIC CONTROL SHEETS FOR TRAFFIC CONTROL NORTH OF CANDLEWOOD LN/DURHAM PL.

4) STAGE 2 CLOSURE LIMITED TO 35 CONSECUTIVE CALENDAR DAYS WHEN SCHOOL IS NOT IN SESSION. SEE SPECIAL PROVISIONS.

5) PLACE PCMS SIGNS FOR 5 DAYS PRIOR TO CLOSURE.

LEGEND

- TYPE III BARRICADE (WITH TWO TYPE "A" WARNING LIGHTS)
- TYPE III BARRICADE WTH ATTACHED SIGN (WITH TWO TYPE "A" WARNING LIGHTS)
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- PCMS — PORTABLE CHANGEABLE MESSAGE SIGN
- W — TEMPORARY PAVEMENT MARKING, 4-INCH REMOVABLE TAPE (WHITE)
- Y — TEMPORARY PAVEMENT MARKING, 4-INCH REMOVABLE TAPE (YELLOW)
- WORK AREA

PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	TRAFFIC CONTROL - STAGE 2	SHEET 109	E

NOTES:

1) SEE STANDARD DETAIL DRAWINGS FOR ADDITIONAL INFORMATION.

2) SEE DETOUR PLAN AND PEDESTRIAN DETOUR FOR ADDITIONAL SIGNING.

3) STAGE 3 CLOSURE LIMITED TO 30 CONSECUTIVE CALENDAR DAYS. SEE SPECIAL PROVISIONS.

LEGEND

- TYPE III BARRICADE (WITH TWO TYPE "A" WARNING LIGHTS)
- TYPE III BARRICADE WTH ATTACHED SIGN (WITH TWO TYPE "A" WARNING LIGHTS)
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- PCMS — PORTABLE CHANGEABLE MESSAGE SIGN
- (W) — TEMPORARY PAVEMENT MARKING, 4-INCH REMOVABLE TAPE (WHITE)
- (Y) — TEMPORARY PAVEMENT MARKING, 4-INCH REMOVABLE TAPE (YELLOW)
- WORK AREA

PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	TRAFFIC CONTROL - STAGE 3	SHEET 110	E

NOTES:

1) SEE STANDARD DETAIL DRAWINGS FOR ADDITIONAL INFORMATION.

2) SEE DETOUR PLAN AND PEDESTRIAN DETOUR FOR ADDITIONAL SIGNING.

3) STAGE 3 CLOSURE LIMITED TO 30 CONSECUTIVE CALENDAR DAYS. SEE SPECIAL PROVISIONS.

4) PLACE PCMS SIGN FOR 5 DAYS PRIOR TO CLOSURE.

SEE TRAFFIC CONTROL - STAGE 1 FOR STA 164+00 TO STA 189+00

ROAD CLOSED R11-2 48" X 30"

SIDEWALK CLOSED R9-9 24" X 12"

STAGE 1 WORK AREA

SANDALWOOD DR

PRINCETON DR

W JANESVILLE RD

MOORLAND RD

R3-1 24" X 24"

PCMS

END ROAD WORK G20-2A 48" X 24"

LANE CLOSED R11-2(MOD) 48" X 30"

RIGHT LANE MUST TURN RIGHT

EXISTING SIGN TO REMAIN

END PROJECT 2723-00-71

STA 199+32.88

25' TYP

305'

WO1-6 48" X 24"

R3-2 24" X 24"

25' TYP

LANE CLOSED R11-2(MOD) 48" X 30"

R/L MOORLAND RD

R/L PRINCETON DR

ROAD CLOSED R11-2 48" X 30"

END ROAD WORK G20-2A 48" X 24"

LEGEND

- TYPE III BARRICADE (WITH TWO TYPE "A" WARNING LIGHTS)
- TYPE III BARRICADE WTH ATTACHED SIGN (WITH TWO TYPE "A" WARNING LIGHTS)
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- PCMS — PORTABLE CHANGEABLE MESSAGE SIGN
- (W) — TEMPORARY PAVEMENT MARKING, 4-INCH REMOVABLE TAPE (WHITE)
- (Y) — TEMPORARY PAVEMENT MARKING, 4-INCH REMOVABLE TAPE (YELLOW)
- WORK AREA

PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	TRAFFIC CONTROL - STAGE 3	SHEET 111	E

FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\025122_TC.dgn PLOT DATE : 7/26/2017 PLOT BY : wwolak PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 42

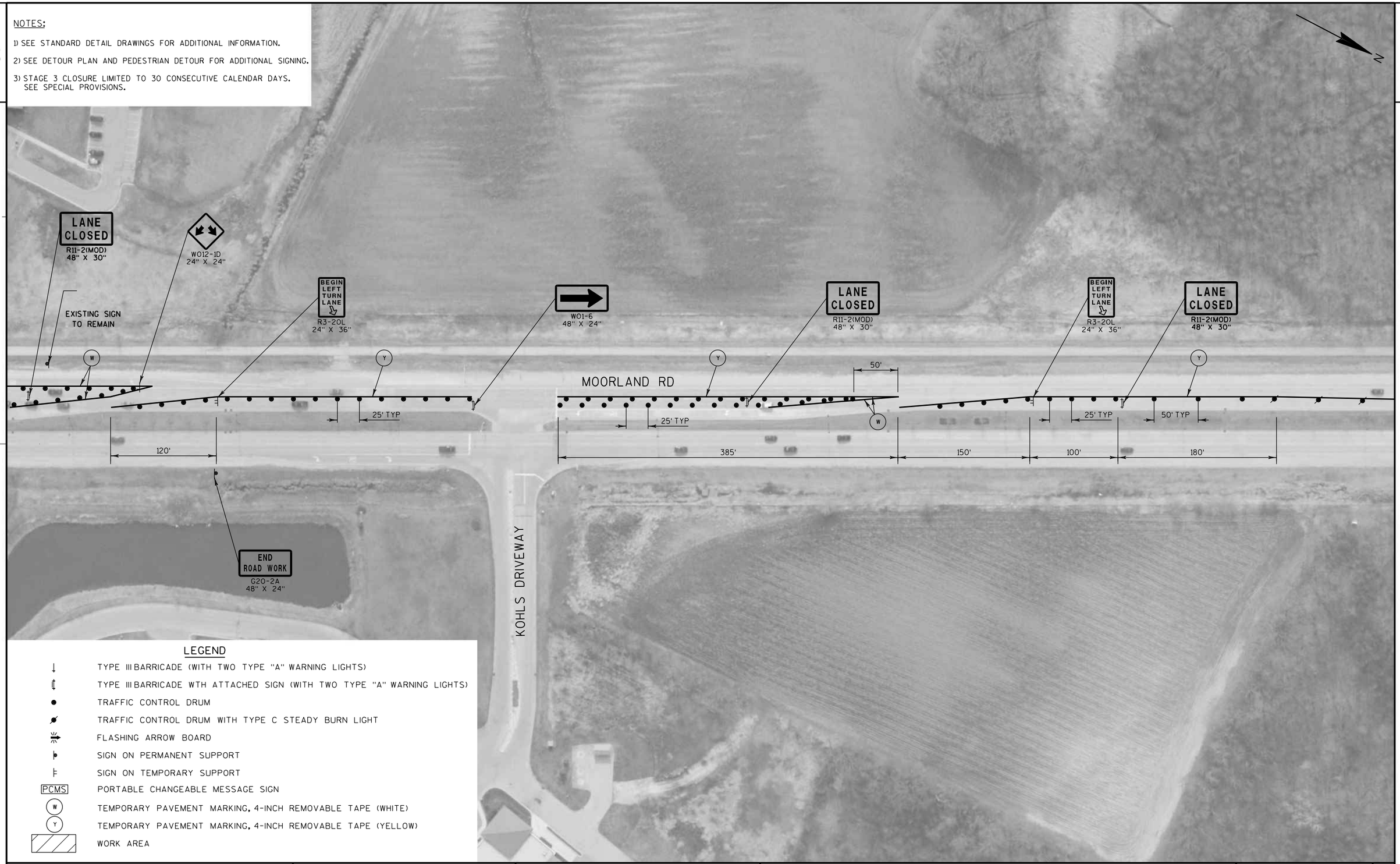
2

NOTES:

1) SEE STANDARD DETAIL DRAWINGS FOR ADDITIONAL INFORMATION.

2) SEE DETOUR PLAN AND PEDESTRIAN DETOUR FOR ADDITIONAL SIGNING.

3) STAGE 3 CLOSURE LIMITED TO 30 CONSECUTIVE CALENDAR DAYS. SEE SPECIAL PROVISIONS.



LEGEND

↓	TYPE III BARRICADE (WITH TWO TYPE "A" WARNING LIGHTS)
⇩	TYPE III BARRICADE WTH ATTACHED SIGN (WITH TWO TYPE "A" WARNING LIGHTS)
●	TRAFFIC CONTROL DRUM
●	TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
	FLASHING ARROW BOARD
	SIGN ON PERMANENT SUPPORT
	SIGN ON TEMPORARY SUPPORT
PCMS	PORTABLE CHANGEABLE MESSAGE SIGN
W	TEMPORARY PAVEMENT MARKING, 4-INCH REMOVABLE TAPE (WHITE)
Y	TEMPORARY PAVEMENT MARKING, 4-INCH REMOVABLE TAPE (YELLOW)
	WORK AREA

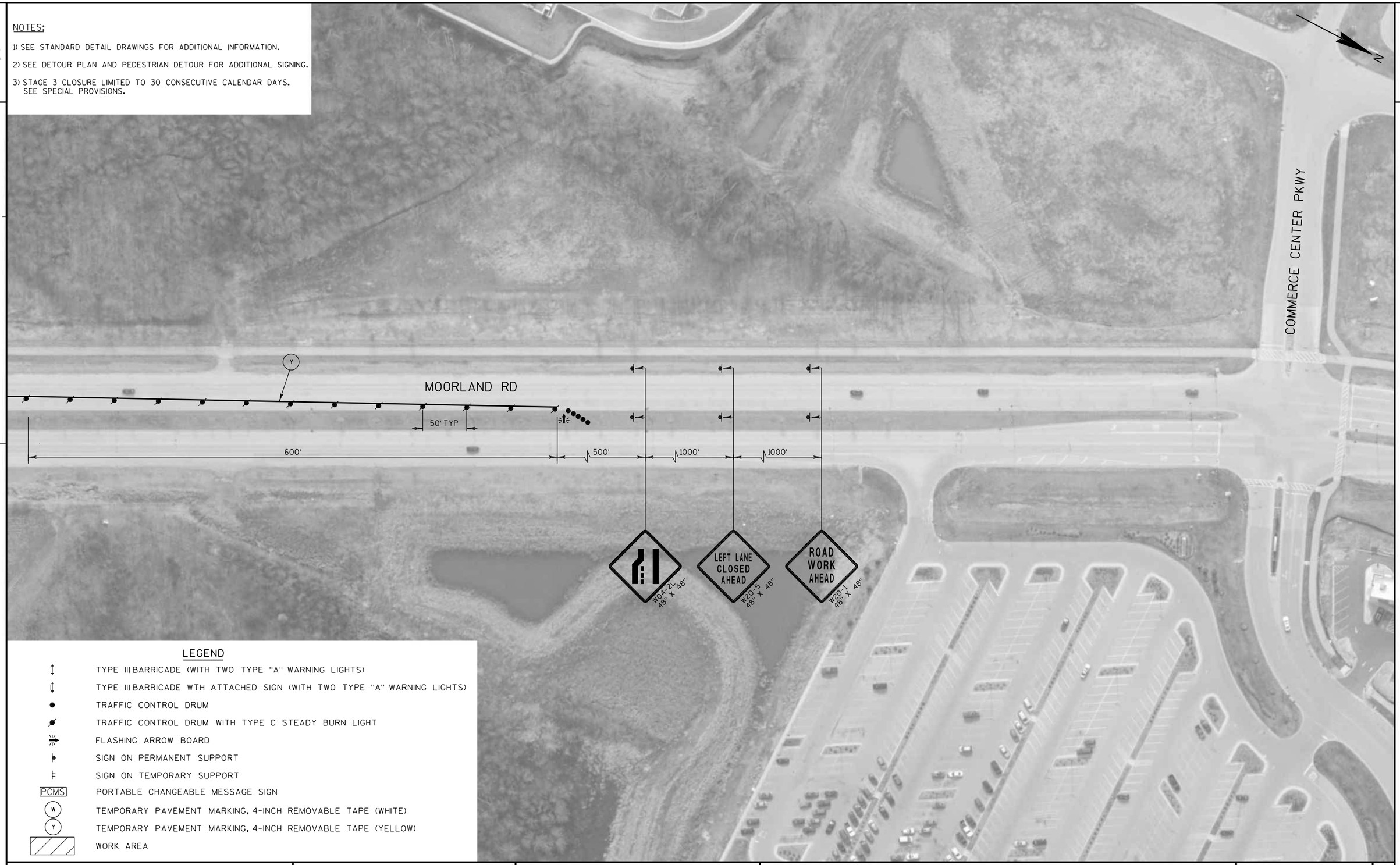
PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	TRAFFIC CONTROL - STAGE 3	SHEET 112	E

NOTES:

1) SEE STANDARD DETAIL DRAWINGS FOR ADDITIONAL INFORMATION.

2) SEE DETOUR PLAN AND PEDESTRIAN DETOUR FOR ADDITIONAL SIGNING.

3) STAGE 3 CLOSURE LIMITED TO 30 CONSECUTIVE CALENDAR DAYS. SEE SPECIAL PROVISIONS.



LEGEND

- TYPE III BARRICADE (WITH TWO TYPE "A" WARNING LIGHTS)
- TYPE III BARRICADE WTH ATTACHED SIGN (WITH TWO TYPE "A" WARNING LIGHTS)
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- PCMS — PORTABLE CHANGEABLE MESSAGE SIGN
- (W) — TEMPORARY PAVEMENT MARKING, 4-INCH REMOVABLE TAPE (WHITE)
- (Y) — TEMPORARY PAVEMENT MARKING, 4-INCH REMOVABLE TAPE (YELLOW)
- WORK AREA

PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	TRAFFIC CONTROL - STAGE 3	SHEET 113	E

LEGEND

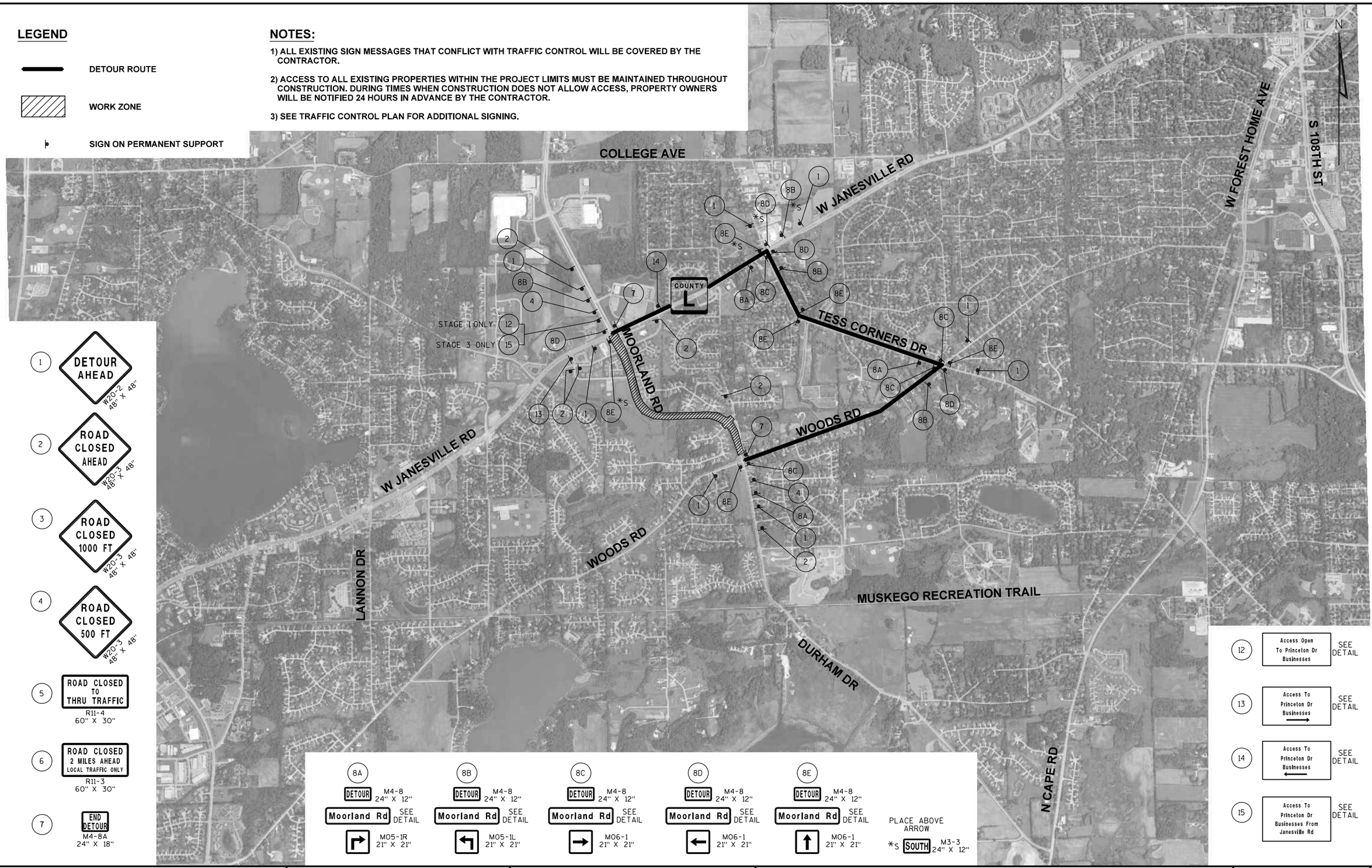
- DETOUR ROUTE
- WORK ZONE
- SIGN ON PERMANENT SUPPORT

NOTES:

1) ALL EXISTING SIGN MESSAGES THAT CONFLICT WITH TRAFFIC CONTROL WILL BE COVERED BY THE CONTRACTOR.

2) ACCESS TO ALL EXISTING PROPERTIES WITHIN THE PROJECT LIMITS MUST BE MAINTAINED THROUGHOUT CONSTRUCTION. DURING TIMES WHEN CONSTRUCTION DOES NOT ALLOW ACCESS, PROPERTY OWNERS WILL BE NOTIFIED 24 HOURS IN ADVANCE BY THE CONTRACTOR.

3) SEE TRAFFIC CONTROL PLAN FOR ADDITIONAL SIGNING.



1 DETOUR AHEAD — W20-2 48" X 48"

2 ROAD CLOSED AHEAD — W20-3 48" X 48"

3 ROAD CLOSED 1000 FT — W20-3 48" X 48"

4 ROAD CLOSED 500 FT — W20-3 48" X 48"

5 ROAD CLOSED TO THRU TRAFFIC — R11-4 60" X 30"

6 ROAD CLOSED 2 MILES AHEAD LOCAL TRAFFIC ONLY — R11-3 60" X 30"

7 END DETOUR — M4-8A 24" X 18"

8A DETOUR M4-8 24" X 12" / Moorland Rd SEE DETAIL / M05-1R 21" X 21"

8B DETOUR M4-8 24" X 12" / Moorland Rd SEE DETAIL / M05-1L 21" X 21"

8C DETOUR M4-8 24" X 12" / Moorland Rd SEE DETAIL / M06-1 21" X 21"

8D DETOUR M4-8 24" X 12" / Moorland Rd SEE DETAIL / M06-1 21" X 21"

8E DETOUR M4-8 24" X 12" / Moorland Rd SEE DETAIL / M06-1 21" X 21"

PLACE ABOVE ARROW

*S SOUTH M3-3 24" X 12"

12 Access Open To Princeton Dr Businesses — SEE DETAIL

13 Access To Princeton Dr Businesses → — SEE DETAIL

14 Access To Princeton Dr Businesses ← — SEE DETAIL

15 Access To Princeton Dr Businesses From Janesville Rd — SEE DETAIL

PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	DETOUR PLAN - STAGES 1 & 3 (WOODS RD OPEN)	SHEET 114	E

FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\027001_DT.dgn PLOT DATE : 7/26/2017 PLOT BY : wwolak PLOT NAME : PLOT SCALE : 1:2000

WISDOT/CADDS SHEET 42

LEGEND

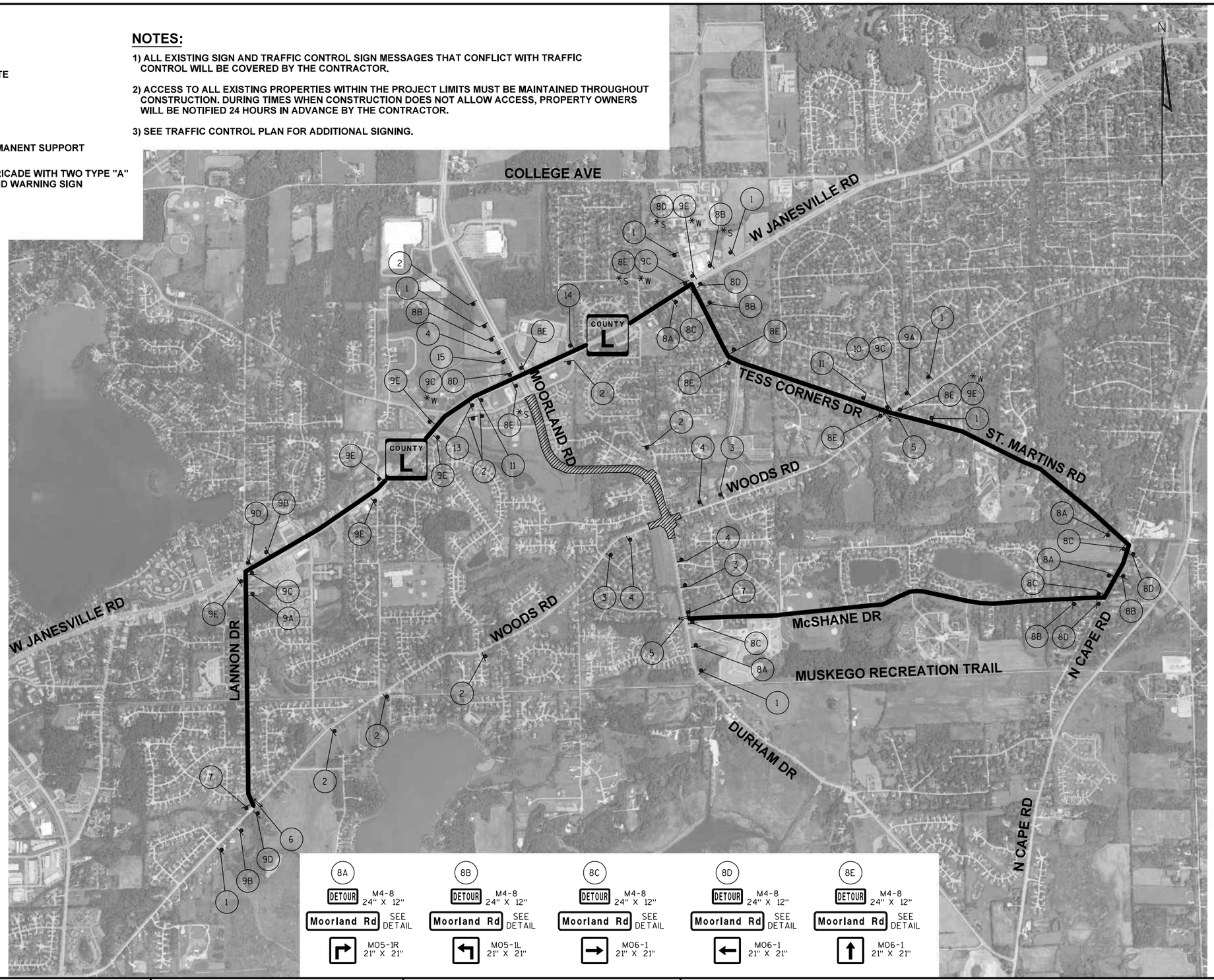
- DETOUR ROUTE
- WORK ZONE
- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE WITH TWO TYPE "A" FLASHERS AND WARNING SIGN

NOTES:

1) ALL EXISTING SIGN AND TRAFFIC CONTROL SIGN MESSAGES THAT CONFLICT WITH TRAFFIC CONTROL WILL BE COVERED BY THE CONTRACTOR.

2) ACCESS TO ALL EXISTING PROPERTIES WITHIN THE PROJECT LIMITS MUST BE MAINTAINED THROUGHOUT CONSTRUCTION. DURING TIMES WHEN CONSTRUCTION DOES NOT ALLOW ACCESS, PROPERTY OWNERS WILL BE NOTIFIED 24 HOURS IN ADVANCE BY THE CONTRACTOR.

3) SEE TRAFFIC CONTROL PLAN FOR ADDITIONAL SIGNING.



1. DETOUR AHEAD — W20-2 48" X 48"
2. ROAD CLOSED AHEAD — W20-3 48" X 48"
3. ROAD CLOSED 1000 FT — W20-3 48" X 48"
4. ROAD CLOSED 500 FT — W20-3 48" X 48"
5. ROAD CLOSED TO THRU TRAFFIC — R11-4 60" X 30"
6. ROAD CLOSED 2 MILES AHEAD LOCAL TRAFFIC ONLY — R11-3 60" X 30"
7. END DETOUR — M4-8A 24" X 18"

9A. DETOUR M4-8 24" X 12" / Woods Rd SEE DETAIL / M05-1R 21" X 21"

9B. DETOUR M4-8 24" X 12" / Woods Rd SEE DETAIL / M05-1L 21" X 21"

9C. DETOUR M4-8 24" X 12" / Woods Rd SEE DETAIL / M06-1 21" X 21"

9D. DETOUR M4-8 24" X 12" / Woods Rd SEE DETAIL / M06-1 21" X 21"

9E. DETOUR M4-8 24" X 12" / Woods Rd SEE DETAIL / M06-1 21" X 21"

8A. DETOUR M4-8 24" X 12" / Moorland Rd SEE DETAIL / M05-1R 21" X 21"

8B. DETOUR M4-8 24" X 12" / Moorland Rd SEE DETAIL / M05-1L 21" X 21"

8C. DETOUR M4-8 24" X 12" / Moorland Rd SEE DETAIL / M06-1 21" X 21"

8D. DETOUR M4-8 24" X 12" / Moorland Rd SEE DETAIL / M06-1 21" X 21"

8E. DETOUR M4-8 24" X 12" / Moorland Rd SEE DETAIL / M06-1 21" X 21"

10. DETOUR M4-8 24" X 12" / TO M4-5 24" X 12" / Durham Dr SEE DETAIL / M06-1 21" X 21"

11. To Woods Rd Follow Moorland Rd Detour — SEE DETAIL

13. Access To Princeton Dr Businesses → — SEE DETAIL

14. Access To Princeton Dr Businesses ← — SEE DETAIL

15. Access To Princeton Dr Businesses From Janesville Rd — SEE DETAIL

PLACE ABOVE ARROW

*S SOUTH M3-3 24" X 12"

*W WEST M3-4 24" X 12"

PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	DETOUR PLAN - STAGE 2 (WOODS RD CLOSED)	SHEET 115 E

FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\027002B_DT.dgn PLOT DATE : 7/26/2017 PLOT BY : wwolak PLOT NAME : PLOT SCALE : 1:2000

WISDOT/CADDS SHEET 42

LEGEND

- PEDESTRIAN DETOUR ROUTE
- WORK ZONE
- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE WITH TWO TYPE "A" FLASHERS AND SIGN

P1 — TRAIL CLOSED
R11-2 (MOD)
48" X 30"

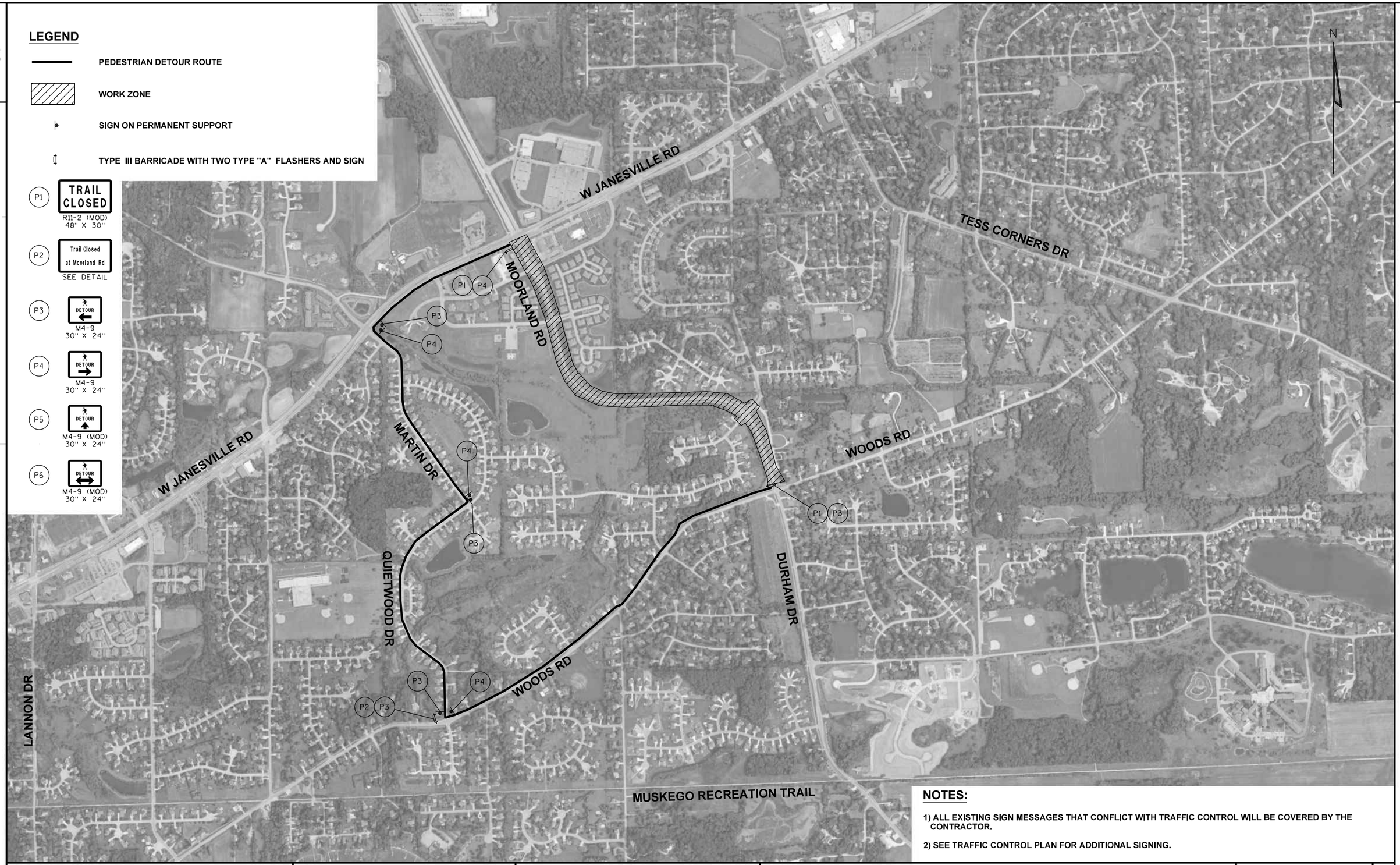
P2 — Trail Closed at Moorland Rd
SEE DETAIL

P3 — DETOUR
M4-9
30" X 24"

P4 — DETOUR
M4-9
30" X 24"

P5 — DETOUR
M4-9 (MOD)
30" X 24"

P6 — DETOUR
M4-9 (MOD)
30" X 24"



NOTES:

1) ALL EXISTING SIGN MESSAGES THAT CONFLICT WITH TRAFFIC CONTROL WILL BE COVERED BY THE CONTRACTOR.

2) SEE TRAFFIC CONTROL PLAN FOR ADDITIONAL SIGNING.

PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	DETOUR PLAN - PEDESTRIAN - STAGES 1& 3 (WOODS ROAD OPEN)	SHEET 116	E

FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\027004_DT.dgn PLOT DATE : 7/26/2017 PLOT BY : wwolak PLOT NAME : PLOT SCALE : 1:1000

WISDOT/CADDS SHEET 42

2

LEGEND

PEDESTRIAN DETOUR ROUTE

WORK ZONE

SIGN ON PERMANENT SUPPORT

TYPE III BARRICADE WITH TWO TYPE "A" FLASHERS AND SIGN

P1 — TRAIL CLOSED — R11-2 (MOD) 48" X 30"

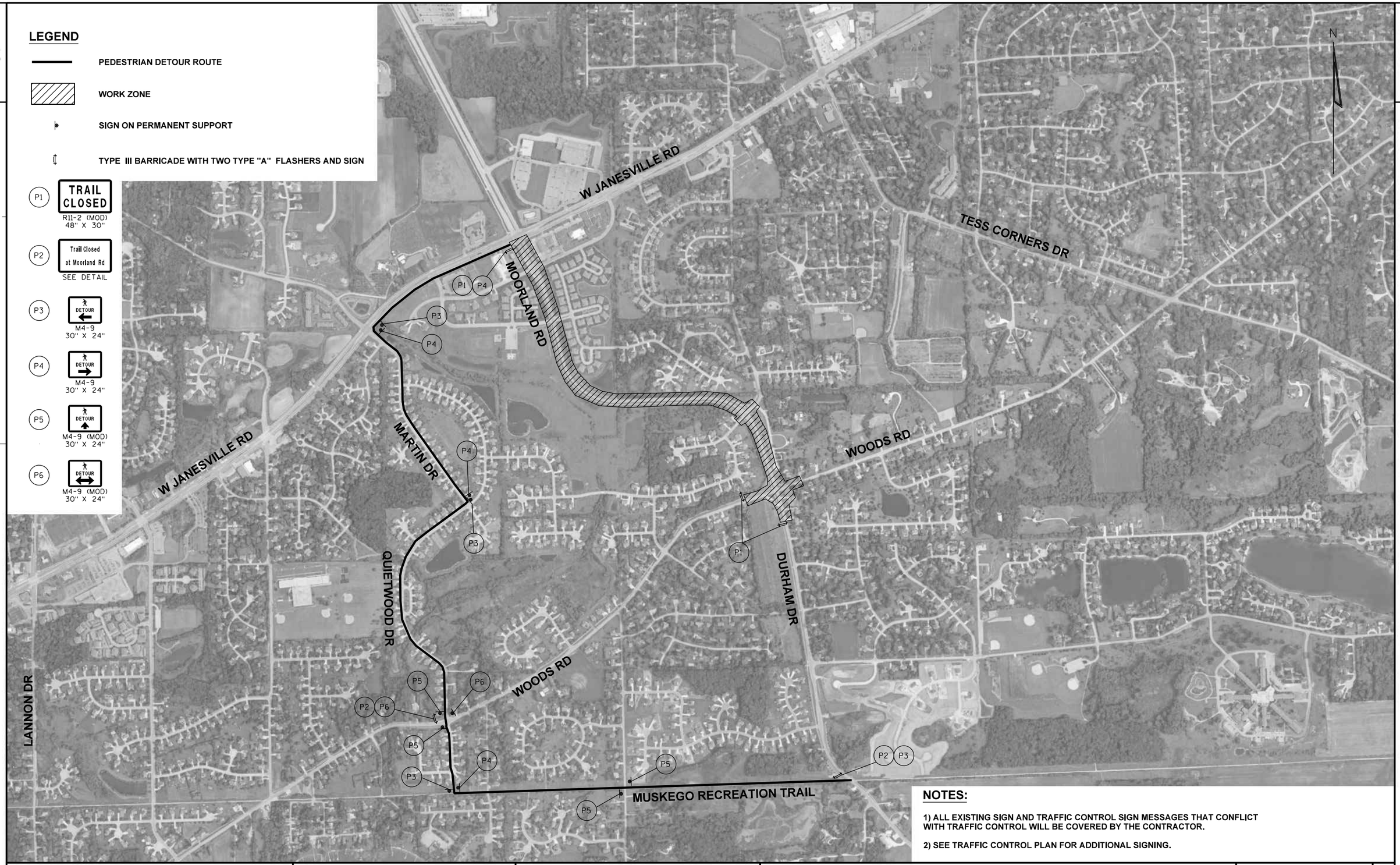
P2 — Trail Closed at Moorland Rd — SEE DETAIL

P3 — DETOUR — M4-9 30" X 24"

P4 — DETOUR — M4-9 30" X 24"

P5 — DETOUR — M4-9 (MOD) 30" X 24"

P6 — DETOUR — M4-9 (MOD) 30" X 24"



NOTES:

1) ALL EXISTING SIGN AND TRAFFIC CONTROL SIGN MESSAGES THAT CONFLICT WITH TRAFFIC CONTROL WILL BE COVERED BY THE CONTRACTOR.

2) SEE TRAFFIC CONTROL PLAN FOR ADDITIONAL SIGNING.

PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	DETOUR PLAN - PEDESTRIAN - STAGE 2 (WOODS ROAD CLOSED)	SHEET 117	E

FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\027005_DT.dgn PLOT DATE : 7/26/2017 PLOT BY : wwolak PLOT NAME : PLOT SCALE : 1:1000

WISDOT/CADDS SHEET 42

BENCHMARKS			
NUMBER	LOCATION	DESCRIPTION	ELEVATION
408	STA 11+75.96, 11.40	SE BOLT OF HYDRANT	795.09
409	STA 145+94.10, -52.50	NE BOLT OF HYDRANT	796.04

MON. 2001
CHISELED CROSS
Y 337097.61
X 2509167.53
N 337121.310
E 2509343.937

NOTE:
1) SEE ALIGNMENT PLANS - SUPPLEMENTAL ALIGNMENTS FOR ADDITIONAL ALIGNMENT INFORMATION.

1/4 S/L N01°06'13"W 2648.34'

POB 40+00.00
X=2509216.08
Y=337626.55
N70°1'9"E 37.29'

BEGIN CONSTRUCTION
STA 40+32.29
X=2509246.43
Y=337637.58

PC 40+37.29
PC 6+37.29
STA 6+37.29 R/L WOODS RD WB =
STA 40+37.29 R/L WOODS RD

WOODS RD

CURVE 13
CURVE 16
PI 41+51.11
R/L WOODS RD
PI 7+85.31
PRC 42+64.78
R/L WOODS RD WB
CURVE 8
STA 149+60.33 R/L MOORLAND RD =
STA 1+00.00 R/L DWY
PI 42+93.97
PT 9+31.09
R/L RAB
CURVE 9
CURVE 14
PT 43+22.63
CURVE 10
R/L DURHAM DR SB
PC 252+77.44
PC 248+32.78
PCC 148+41.54
PI 249+50.89
PI 150+76.78
PRC 250+67.50
PI 250+91.91
PT 253+39.78
PI 153+64.29
R/L MOORLAND RD SB
PC 257+89.83
CURVE 11
1/4 S/L N87°48'04"E 2671.12'
BM 409
146
DURHAM DR
148
250
150
CURVE 19
254
154
N17°35'52"W 450.05'
256
156
MOORLAND RD
258
158
260
160
CURVE 1
CURVE 3
PI 251+16.29
PT 251+01.28
PRC 150+51.75
PC 44+61.61
PT 151+01.28
PC 10+00.00
CURVE 4
PC 152+41.78
PI 253+08.94
PT 154+85.96
R/L MOORLAND RD
PC 158+04.74
CURVE 5
PI 145+74.43
CURVE 2
PI 149+46.77
BM 408
CURVE 17
PT 10+61.71
PI 45+58.86
R/L WOODS RD WB
N70°14'47"E 174.69'
R/L DRIVEWAY
SEE INSET FOR
ADDITIONAL
INFORMATION
PI 10+31.61
R/L WOODS RD
CURVE 15
46
WOODS RD
12
STA 11+86.88 R/L WOODS RD WB =
STA 46+55.84 R/L WOODS RD
PT 46+55.84
END CONSTRUCTION
STA 46+80.36
X=2509838.52
Y=337846.30
POE 12+36.40
X=2509862.05
Y=337854.75
N70°14'47"E 144.16'
POE 48+00.00
X=2509951.11
Y=337886.74

BEGIN PROJECT 2723-00-71
STA 148+35.05
X=2509680.54
Y=337462.23
STA 148+41.54 R/L DURHAM RD =
STA 248+51.50 R/L DURHAM DR SB
R/L DURHAM DR

MON. 2000
CONC. MON.
W/ BRASS CAP
Y 337200.09
X 2511836.49
N 337223.797
E 2512013.085

POB 1+00.00
X=2509644.52
Y=337582.25
PC 1+31.18
N71°32'01"E 31.18'
PRC 1+76.92
PI 2+04.98
CURVE 20
CURVE 21
PI 1+58.26
PT 2+26.13
N63°13'50"E 24.18'
POE 2+50.31
X=2509741.09
Y=337679.11
R/L DRIVEWAY
DRIVEWAY INSET

N

CURVE 1
PC=143+06.90
X=2509791.01
Y=336946.03
PI=145+74.43
X=2509747.54
Y=337210.00
PCC=148+41.54
X=2509678.88
Y=337468.56
R=5550.00
DELTA=5°31'10" LT
D=1°01'56"
L=534.64
T=267.53
BK=N 9°21'09" W
AH=N 14°52'19" W

CURVE 2
PCC=148+41.54
X=2509678.88
Y=337468.56
PI=149+46.77
X=2509651.87
Y=337570.27
PRC=150+51.75
X=2509612.86
Y=337668.01
R=1750.00
DELTA=6°52'57" LT
D=3°16'27"
L=210.21
T=105.23
BK=N 14°52'19" W
AH=N 21°45'16" W

CURVE 3
PRC=150+51.75
X=2509612.86
Y=337668.01
PI=150+76.78
X=2509603.59
Y=337691.25
PT=151+01.28
X=2509602.94
Y=337716.27
R=140.00
DELTA=20°16'12" RT
D=40°55'32"
L=49.53
T=25.03
BK=N 21°45'16" W
AH=N 1°29'03" W

CURVE 4
PC=152+41.78
X=2509588.75
Y=337838.41
PI=153+64.29
X=2509531.03
Y=337946.47
PT=154+85.96
X=2509496.34
Y=338063.97
R=1200.00
DELTA=11°39'31" RT
D=4°46'29"
L=244.18
T=122.51
BK=N 28°06'31" W
AH=N 16°27'00" W

CURVE 5
PC=158+04.74
X=2509406.07
Y=338369.70
PI=162+82.50
X=2509270.77
Y=338827.90
PT=166+17.10
X=2508793.35
Y=338810.12
R=615.00
DELTA=75°40'59" LT
D=9°18'59"
L=812.37
T=477.76
BK=N 16°27'00" W
AH=S 87°52'01" W

CURVE 8
PC=248+32.78
X=2509683.65
Y=337450.46
PI=249+50.89
X=2509653.72
Y=337564.72
PRC=250+67.50
X=2509593.77
Y=337666.49
R=850.00
DELTA=15°49'19" LT
D=6°44'26"
L=234.72
T=118.11
BK=N 14°40'43" W
AH=N 30°30'02" W

CURVE 9
PRC=250+67.50
X=2509593.77
Y=337666.49
PI=250+91.91
X=2509581.39
Y=337687.51
PT=251+16.29
X=2509570.39
Y=337709.30
R=750.00
DELTA=3°43'38" RT
D=7°38'22"
L=48.79
T=24.40
BK=N 30°30'02" W
AH=N 26°46'24" W

CURVE 10
PC=252+77.44
X=2509550.53
Y=337836.11
PI=253+08.94
X=2509552.08
Y=337867.57
PT=253+39.78
X=2509542.56
Y=337897.60
R=175.00
DELTA=20°24'35" LT
D=32°44'26"
L=62.34
T=31.50
BK=N 2°48'45" E
AH=N 17°35'50" W

CURVE 11
PC=257+89.83
X=2509406.49
Y=338326.59
PI=263+14.85
X=2509247.76
Y=338827.04
PT=266+87.44
X=2508723.10
Y=338807.50
R=690.00
DELTA=74°32'07" LT
D=8°18'13"
L=897.61
T=525.02
BK=N 17°35'52" W
AH=S 87°52'01" W

CURVE 13
PC=40+37.29
X=2509251.13
Y=337639.29
PI=41+51.11
X=2509358.10
Y=337678.19
PRC=42+64.78
X=2509461.10
Y=337726.64
R=2500.00
DELTA=5°12'49" LT
D=2°17'31"
L=227.49
T=113.82
BK=N 70°01'09" E
AH=N 64°48'20" E

CURVE 14
PRC=42+64.78
X=2509461.09
Y=337726.64
PI=42+93.97
X=2509487.51
Y=337739.06
PT=43+22.63
X=2509516.52
Y=337742.24
R=175.0000
DELTA=18°56'20" RT
D=32°44'25"
L=57.84
T=29.18
BK=N 64°48'19" E
AH=N 83°44'40" E

CURVE 15
PC=44+61.61
X=2509637.39
Y=337760.74
PI=45+58.86
X=2509723.91
Y=337805.15
PT=46+55.84
X=2509815.44
Y=337838.02
R=1500.00
DELTA=7°25'08" RT
D=3°49'11"
L=194.23
T=97.25
BK=N 62°49'39" E
AH=N 70°14'47" E

CURVE 16
PC=6+37.29
X=2509251.13
Y=337639.29
PI=7+85.31
X=2509390.24
Y=337689.87
PT=9+31.09
X=2509508.07
Y=337779.46
R=975.00
DELTA=17°15'55" LT
D=5°52'35"
L=293.80
T=148.02
BK=N 70°01'09" E
AH=N 52°45'14" E

CURVE 17
PC=10+00.00
X=2509636.84
Y=337791.05
PI=10+31.61
X=2509667.87
Y=337785.02
PT=10+61.71
X=2509697.63
Y=337795.71
R=115.00
DELTA=30°44'35" LT
D=49°49'21"
L=61.71
T=31.61
BK=S 79°00'38" E
AH=N 70°14'47" E

CURVE 19
PC=10+00.00
X=2509526.99
Y=337774.73
PCC=11+45.82
X=2509619.82
Y=337774.73
PT=12+91.64
X=2509526.99
Y=337774.73
R=46.4167
DELTA=180°00'00" LT
D=123°26'16"
L=145.8224
T=-1.0000
BK=N 0°00'00" E
AH=S 0°00'00" W

CURVE 20
PC=1+31.18
X=2509674.09
Y=337592.12
PI=1+58.26
X=2509699.78
Y=337600.70
PRC=1+76.92
X=2509697.16
Y=337627.65
R=34.00
DELTA=77°04'39" LT
D=168°31'01"
L=45.74
T=27.08
BK=N 71°32'01" E
AH=N 5°32'38" W

CURVE 21
PRC=1+76.92
X=2509697.16
Y=337627.65
PI=2+04.98
X=2509694.45
Y=337655.58
PT=2+26.13
X=2509719.50
Y=337668.22
R=41.00
DELTA=68°46'28" RT
D=139°44'45"
L=49.21
T=28.06
BK=N 5°32'38" W
AH=N 63°13'50" E

PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	ALIGNMENT PLANS	SHEET 118	E

BENCHMARKS			
NUMBER	LOCATION	DESCRIPTION	ELEVATION
405	STA 172+45.13, 35.65	SW BOLT OF HYDRANT	792.36
406	STA 164+42.69, 60.65	E BOLT OF HYDRANT	790.76

N

PI 56+77.98
X=2509031.45
Y=338394.91

POB 56+77.98

CANDLEWOOD LN

BEGIN CONSTRUCTION
STA 58+75.00
X=2509166.31
Y=338538.54

R/L CANDLEWOOD LN

STA 261+25.28 R/L MOORLAND RD SB =
STA 59+72.42 R/L CANDLEWOOD LN

R/L MOORLAND RD

CURVE 11

R/L MOORLAND RD SB

PT 266+87.44

MOORLAND RD

S87°52'11"W 1015.72'

BM 405

N43°08'25"E 472.30'

DURHAM PL

STA 161+10.43 R/L MOORLAND RD =
STA 60+00.00 R/L CANDLEWOOD LN

STA 166+87.40 R/L MOORLAND RD =
STA 266+87.44 R/L MOORLAND RD SB

END CONSTRUCTION
STA 61+36.50
X=2509344.98
Y=338729.48

POE 61+50.28
X=2509354.41
Y=338739.54

BM 406

PT 166+17.10

CURVE 5

PI 162+82.50

PI 263+14.85

1/4 S/L N01°06'13"W 2648.34'

CURVE 5	CURVE 11
PC=158+04.74	PC=257+89.83
X=2509406.07	X=2509406.49
Y=338369.70	Y=338326.59
PI=162+82.50	PI=263+14.85
X=2509270.77	X=2509247.76
Y=338827.90	Y=338827.04
PT=166+17.10	PT=266+87.44
X=2508793.35	X=2508723.10
Y=338810.12	Y=338807.50
R=615.00	R=690.00
DELTA=75°40'59" LT	DELTA=74°32'07" LT
D=9°18'59"	D=8°18'13"
L=812.37	L=897.61
T=477.76	T=525.02
BK=N 16°27'00" W	BK=N 17°35'52" W
AH=S 87°52'01" W	AH=S 87°52'01" W

T 05 N
R 20 E
0.2 | 0.2
1.1 | 1.1

MON. 2002
CONC. MON.
W/ BRASS CAP
Y 339745.27
X 2509116.53
N 339769.156
E 2509292.933

PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	ALIGNMENT PLANS	SHEET 119	E

PI 181+52.53

BENCHMARKS			
NUMBER	LOCATION	DESCRIPTION	ELEVATION
402	STA 192+45.52, 35.08	N BOLT OF HYDRANT	812.26
403	STA 188+45.91, 26.07	N BOLT OF HYDRANT	808.28
404	STA 180+47.77, 36.80	SE BOLT OF HYDRANT	793.03

MON. 2003
CONC. MON.
W/ BRASS CAP
Y 339646.44
X 2506424.64
N 339670.319
E 2506600.854

T 05 N
R 20 E
0.3 02
1.0 11

CURVE 6
PC 176+32.83
S87°52'01"W 1015.72'
PT 184+97.88
BM 404
STA 184+74.62 R/L MOORLAND RD =
STA 384+74.62 R/L MOORLAND RD SB
N14°20'28"W 481.25'
MOORLAND RD
N12°11'28"W 281.57'
R/L MOORLAND RD
R/L MOORLAND RD SB
BEGIN CONSTRUCTION
STA 69+14.92
X=2506964.95
Y=339680.92
PI 187+79.46
BM 403
PI 70+00.00
X=2507048.76
Y=339696.58
N14°20'28"W 257.01'
STA 189+45.01 R/L MOORLAND RD =
STA 70+00.00 R/L SANDALWOOD DR
PI 70+00.00
X=2507047.39
Y=339701.95
END CONSTRUCTION
STA 70+63.09
X=2507109.92
Y=339712.10
PI 72+15.30
X=2507257.44
Y=339749.55
POE 72+15.30
SANDALWOOD DR
PI 389+55.88
N75°45'24"E
215.30'
S/L N87°53'51"E 2693.89'
R/L SANDALWOOD DR
SANDALWOOD DR
POB 66+88.06
N87°53'51"E
59.19'
PI 68+25.98
PT 69+04.11
PC 67+47.25
CURVE 18
STA 389+50.35 R/L MOORLAND RD SB =
STA 69+89.00 R/L SANDALWOOD DR
N14°20'28"W
32.55'
N75°39'32"E
95.89'
PC 389+88.43
PC 190+36.47
CURVE 12
CURVE 7
BM 402
POB 384+74.62

MON. 2002
CONC. MON.
W/ BRASS CAP
Y 339745.27
X 2509116.53
N 339769.156
E 2509292.933

T 05 N
R 20 E
02 02
11 11

CURVE 6	CURVE 7	CURVE 12	CURVE 18
PC=176+32.83	PC=190+36.47	PC=389+88.43	PC=67+47.25
X=2507778.33	X=2507026.11	X=2507027.30	X=2506799.54
Y=338772.31	Y=339785.19	Y=339736.11	Y=339655.81
PI=181+52.53	PI=193+11.96	PI=392+43.88	PI=68+25.98
X=2507258.98	X=2506957.87	X=2506964.03	X=2506878.21
Y=338752.97	Y=340052.09	Y=339983.60	Y=339658.70
PT=184+97.88	PT=195+85.05	PT=394+97.06	PT=69+04.11
X=2507149.23	X=2506830.93	X=2506845.72	X=2506954.49
Y=339260.96	Y=340296.59	Y=340210.02	Y=339678.20
R=620.00	R=2400.00	R=2200.00	R=734.34
DELTA=79°56'31" RT	DELTA=13°05'47" LT	DELTA=13°14'48" LT	DELTA=12°14'19" LT
D=9°14'29"	D=2°23'14"	D=2°36'16"	D=7°48'08"
L=865.06	L=548.57	L=508.64	L=156.86
T=519.71	T=275.49	T=255.46	T=78.73
BK=S 87°52'01" W	BK=N 14°20'28" W	BK=N 14°20'28" W	BK=N 87°53'51" E
AH=N 12°11'28" W	AH=N 27°26'15" W	AH=N 27°35'16" W	AH=N 75°39'32" E

PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	ALIGNMENT PLANS	SHEET 120	E

FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\027203_AD.dgn
PLOT DATE : 7/26/2017
PLOT BY : wwolak
PLOT NAME :
PLOT SCALE : 1:100

WISDOT/CADDS SHEET 42

BENCHMARKS			
NUMBER	LOCATION	DESCRIPTION	ELEVATION
401	STA 78+11.62, -37.38	SE BOLT OF HYDRANT	812.73
402	STA 192+45.52, 35.08	N BOLT OF HYDRANT	812.26

MON. 2003
CONC. MON.
W/ BRASS CAP
Y 339646.44
X 2506424.64
N 339670.319
E 2506600.854

T 05 N
R 10 03 02 11 E
20

PI 75+48.60
X=2506419.93
Y=340109.51

POB 75+48.60

76

N65°04'34"E 437.54'

S/L N0°34'56"W 2655.70'

R/L PRINCETON DR

PRINCETON DR

78

BM 401

BEGIN CONSTRUCTION
STA 79+04.56
X=2506742.75
Y=340259.52

CURVE 12

R/L MOORLAND RD SB

STA 395+85.44 R/L MOORLAND RD SB =
STA 79+72.98 R/L PRINCETON DR

POE 399+67.78

POE 200+02.68

200

398

396

N27°35'16"W 470.71'

MOORLAND RD

198

PI 79+86.14

196

80

N27°26'15"W 417.62'

392
192

394
194

PI 392+43.88

PT 394+97.06

CURVE 7

BM 402

PI 193+11.96

R/L MOORLAND RD

PT 195+85.05

END CONSTRUCTION
STA 196+75.00
X=2506789.49
Y=340376.42

END PROJECT 2723-00-71
STA 199+32.88
X=2506670.66
Y=340605.29

STA 195+88.60 R/L MOORLAND RD =
STA 80+00.00 R/L PRINCETON DR

END CONSTRUCTION
STA 80+67.46
X=2506890.47
Y=340328.17

PRINCETON DR

82

N65°04'34"E 792.19'

84

MON. 2004
CONC. MON.
W/ BRASS CAP
Y 342301.82
X 2506397.66
N 342325.886
E 2506573.872

T 05 N
R 03 02 03 02 E
20

CURVE 7	CURVE 12
PC=190+36.47	PC=389+88.43
X=2507026.11	X=2507027.30
Y=339785.19	Y=339736.11
PI=193+11.96	PI=392+43.88
X=2506957.87	X=2506964.03
Y=340052.09	Y=339983.60
PT=195+85.05	PT=394+97.06
X=2506830.93	X=2506845.72
Y=340296.59	Y=340210.02
R=2400.00	R=2200.00
DELTA=13°05'47" LT	DELTA=13°14'48" LT
D=2°23'14"	D=2°36'16"
L=548.57	L=508.64
T=275.49	T=255.46
BK=N 14°20'28" W	BK=N 14°20'28" W
AH=N 27°26'15" W	AH=N 27°35'16" W

PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	ALIGNMENT PLANS	SHEET 121	E

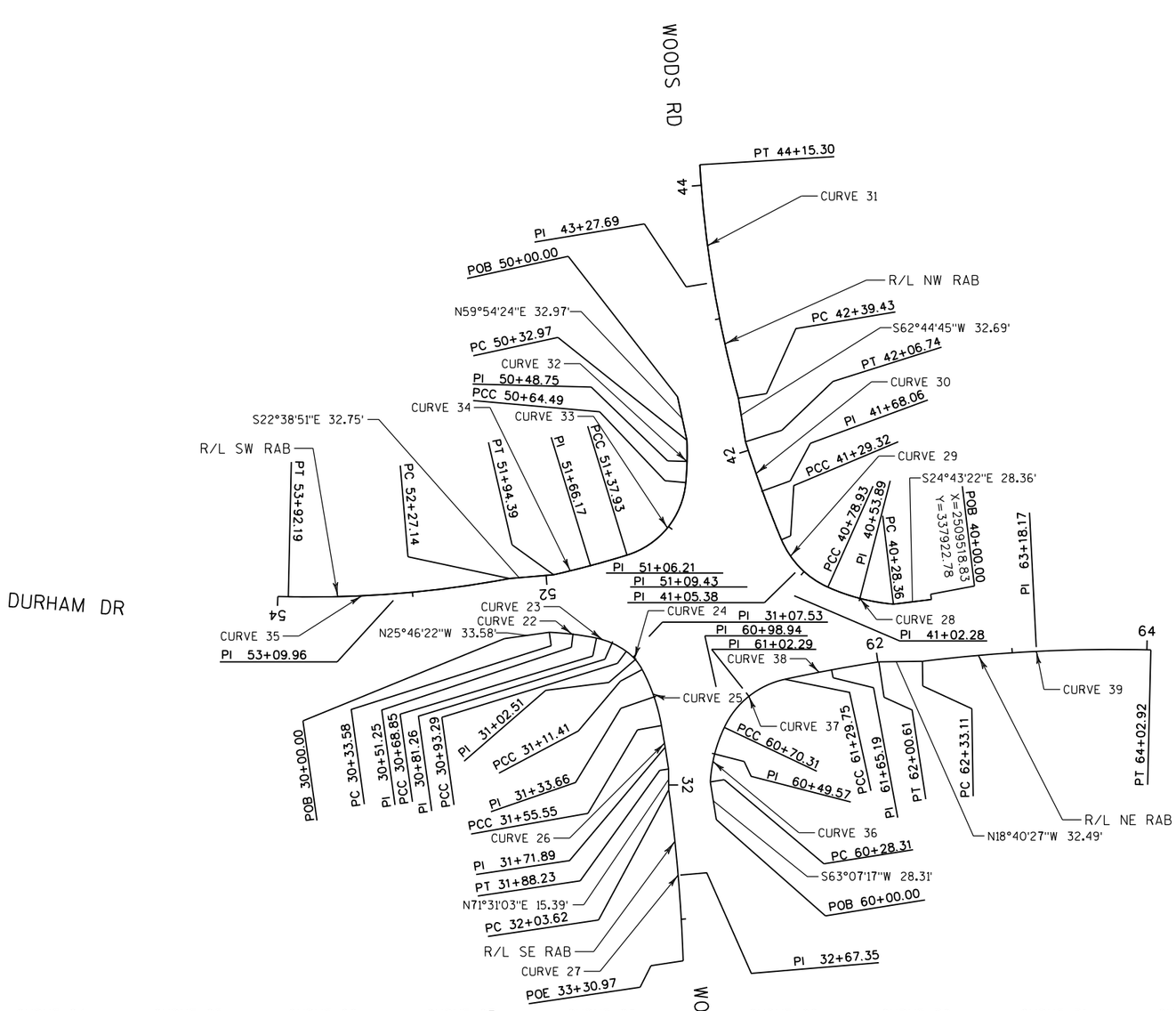
FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\027204_AD.dgn PLOT DATE : 7/26/2017 PLOT BY : wwolak PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 42

NOTE:

1) SEE ALIGNMENT PLANS FOR ADDITIONAL ALIGNMENT INFORMATION.

2) SUPPLEMENTAL ALIGNMENTS ARE LOCATED ON THE FLANGE OF CURB AND GUTTER.



CURVE 37	CURVE 38	CURVE 39
PCC=60+70.31	PCC=61+29.75	PC=62+33.11
X=2509656.21	X=2509608.48	X=2509564.47
Y=337805.52	Y=337837.38	Y=337930.54
PI=61+02.29	PI=61+65.19	PI=63+18.17
X=2509624.51	X=2509590.71	X=2509528.60
Y=337809.71	Y=337868.05	Y=338007.67
PCC=61+29.75	PT=62+00.61	PT=64+02.92
X=2509608.48	X=2509574.87	X=2509504.51
Y=337837.38	Y=337899.76	Y=338089.25
R=65.00	R=1150.00	R=1146.00
DELTA=52°23'48" RT	DELTA=3°31'50" RT	DELTA=8°29'24" RT
D=88°08'50"	D=4°58'56"	D=4°59'59"
L=59.44	L=70.86	L=169.81
T=31.98	T=35.44	T=85.06
BK=N 82°28'35" W	BK=N 30°04'47" W	BK=N 24°56'24" W
AH=N 30°04'47" W	AH=N 26°32'58" W	AH=N 16°27'00" W

CURVE 22	CURVE 23	CURVE 24	CURVE 25	CURVE 26	CURVE 27	CURVE 28
PC=30+33.58	PCC=30+68.85	PCC=30+93.29	PCC=31+11.41	PCC=31+55.55	PC=32+03.62	PC=40+28.36
X=2509628.89	X=2509622.25	X=2509624.74	X=2509634.04	X=2509669.22	X=2509712.92	X=2509530.70
Y=337660.30	Y=337694.90	Y=337719.03	Y=337734.40	Y=337760.75	Y=337780.49	Y=337897.02
PI =30+51.25	PI=30+81.26	PI=31+02.51	PI=31+33.66	PI=31+71.89	PI=32+67.35	PI=40+53.89
X=2509624.21	X=2509620.87	X=2509627.62	X=2509649.53	X=2509683.68	X=2509770.40	X=2509536.44
Y=337677.34	Y=337707.24	Y=337727.78	Y=337750.37	Y=337768.37	Y=337808.03	Y=337872.15
PCC=30+68.85	PCC=30+93.29	PCC=31+11.41	PCC=31+55.55	PT=31+88.23	PT=33+30.97	PCC=40+78.93
X=2509622.25	X=2509624.74	X=2509634.04	X=2509669.22	X=2509698.33	X=2509830.38	X=2509533.63
Y=337694.90	Y=337719.03	Y=337734.40	Y=337760.75	Y=337775.61	Y=337829.57	Y=337846.78
R=225.00	R=57.00	R=40.00	R=140.00	R=1250.00	R=1248.00	R=150.00
DELTA=8°58'51" RT	DELTA=24°34'06" RT	DELTA=25°57'08" RT	DELTA=18°03'51" RT	DELTA=1°29'53" RT	DELTA=5°50'48" RT	DELTA=19°18'53" RT
D=25°27'53"	D=100°31'08"	D=143°14'22"	D=40°55'32"	D=4°35'01"	D=4°35'28"	D=38°11'50"
L=35.26	L=24.44	L=18.11	L=44.13	L=32.68	L=127.35	L=50.56
T=17.67	T=12.41	T=9.21	T=22.25	T=16.34	T=63.73	T=25.52
BK=N 15°21'50" W	BK=N 6°22'59" W	BK=N 18°11'07" E	BK=N 44°08'14" E	BK=N 62°12'06" E	BK=N 64°23'59" E	BK=S 13°00'09" E
AH=N 6°22'59" W	AH=N 18°11'07" E	AH=N 44°08'14" E	AH=N 62°12'06" E	AH=N 63°41'59" E	AH=N 70°14'47" E	AH=S 6°18'45" W

CURVE 29	CURVE 30	CURVE 31	CURVE 32	CURVE 33	CURVE 34	CURVE 35	CURVE 36
PCC=40+78.93	PCC=41+29.32	PC=42+39.43	PC=50+32.97	PCC=50+64.49	PCC=51+37.93	PC=52+27.14	PC=60+28.31
X=2509533.63	X=2509510.64	X=2509420.58	X=2509461.91	X=2509492.13	X=2509556.67	X=2509599.90	X=2509697.88
Y=337846.78	Y=337803.27	Y=337740.66	Y=337713.87	Y=337722.73	Y=337697.71	Y=337620.07	Y=337808.01
PI=41+05.38	PI=41+68.06	PI=43+27.69	PI=50+48.75	PI=51+06.21	PI=51+66.17	PI=53+09.96	PI=60+49.57
X=2509530.72	X=2509481.22	X=2509346.72	X=2509476.74	X=2509532.82	X=2509587.29	X=2509639.41	X=2509677.29
Y=337820.48	Y=337778.06	Y=337692.36	Y=337719.25	Y=337731.94	Y=337674.54	Y=337547.28	Y=337802.74
PCC=41+29.32	PT=42+06.74	PT=44+15.30	PCC=50+64.49	PT=51+37.93	PT=51+94.39	PT=53+92.19	PCC=60+70.31
X=2509510.64	X=2509449.64	X=2509264.48	X=2509492.13	X=2509556.67	X=2509587.29	X=2509467.91	X=2509656.21
Y=337803.27	Y=337755.63	Y=337660.33	Y=337722.73	Y=337697.71	Y=337650.29	Y=337467.91	Y=337805.52
R=67.00	R=850.00	R=846.00	R=250.00	R=62.00	R=800.00	R=796.00	R=110.00
DELTA=43°05'27" RT	DELTA=5°13'08" RT	DELTA=11°54'40" RT	DELTA=7°13'25" RT	DELTA=67°52'08" RT	DELTA=4°02'37" RT	DELTA=11°52'48" RT	DELTA=21°52'34" RT
D=85°30'58"	D=6°44'26"	D=6°46'21"	D=22°55'06"	D=92°24'45"	D=7°09'43"	D=7°11'52.66"	D=52°05'13"
L=50.38	L=77.42	L=175.87	L=31.51	L=73.44	L=56.45	L=165.04	L=41.99
T=26.45	T=38.73	T=88.25	T=15.78	T=41.71	T=28.24	T=82.82	T=21.25
BK=S 6°18'45" W	BK=S 49°24'12" W	BK=S 56°48'52" W	BK=N 70°02'05" E	BK=N 77°15'30" E	BK=S 34°52'22" E	BK=S 28°29'44.68" E	BK=S 75°38'50" W
AH=S 49°24'12" W	AH=S 54°37'20" W	AH=S 68°43'32" W	AH=N 77°15'30" E	AH=S 34°52'22" E	AH=S 30°49'46" E	AH=S 16°36'56.15" E	AH=N 82°28'35" W

PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	ALIGNMENT PLAN - SUPPLEMENTAL ALIGNMENTS	SHEET 122 E

2723-00-71

Line	Item	Item Description	Unit	Total	Qty
0002	108.3100.S	Incentive/Disincentive for Interim Completion of Work 0001. Woods Road	CD	10.000	10.000
0004	108.3100.S	Incentive/Disincentive for Interim Completion of Work 0002. Princeton Drive	CD	10.000	10.000
0006	201.0105	Clearing	STA	13.000	13.000
0008	201.0110	Clearing	SY	965.000	965.000
0010	201.0120	Clearing	ID	126.000	126.000
0012	201.0205	Grubbing	STA	13.000	13.000
0014	201.0210	Grubbing	SY	965.000	965.000
0016	201.0220	Grubbing	ID	126.000	126.000
0018	203.0100	Removing Small Pipe Culverts	EACH	17.000	17.000
0020	204.0100	Removing Pavement	SY	278.000	278.000
0022	204.0120	Removing Asphaltic Surface Milling	SY	1,998.000	1,998.000
0024	204.0150	Removing Curb & Gutter	LF	1,558.000	1,558.000
0026	204.0155	Removing Concrete Sidewalk	SY	10.000	10.000
0028	204.0195	Removing Concrete Bases	EACH	3.000	3.000
0030	204.0210	Removing Manholes	EACH	1.000	1.000
0032	204.0220	Removing Inlets	EACH	14.000	14.000
0034	204.0245	Removing Storm Sewer (size) 0001. 12-Inch	LF	272.000	272.000
0036	204.0245	Removing Storm Sewer (size) 0002. 15-Inch	LF	306.000	306.000
0038	204.0245	Removing Storm Sewer (size) 0003. 18-Inch	LF	323.000	323.000
0040	204.0245	Removing Storm Sewer (size) 0004. 36-Inch	LF	178.000	178.000
0042	204.0245	Removing Storm Sewer (size) 0005. 42x24-Inch	LF	84.000	84.000
0044	204.9060.S	Removing (item description) 0001. Apron Endwall	EACH	10.000	10.000
0046	205.0100	Excavation Common	CY	27,931.000	27,931.000
0048	213.0100	Finishing Roadway (project) 0001. 2723-00-71	EACH	1.000	1.000
0050	305.0110	Base Aggregate Dense 3/4-Inch	TON	12.000	12.000
0052	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	26,380.000	26,380.000
0054	310.0110	Base Aggregate Open-Graded	TON	24.000	24.000
0056	311.0110	Breaker Run	TON	26,113.000	26,113.000
0058	405.0100	Coloring Concrete WisDOT Red	CY	374.000	374.000
0060	416.0260	Concrete Driveway HES 6-Inch	SY	318.000	318.000
0062	416.0512	Concrete Truck Apron 12-Inch	SY	335.000	335.000
0064	416.0610	Drilled Tie Bars	EACH	42.000	42.000
0066	416.1010	Concrete Surface Drains	CY	39.000	39.000
0068	440.4410	Incentive IRI Ride	DOL	4,000.000	4,000.000
0070	455.0605	Tack Coat	GAL	3,747.000	3,747.000
0072	460.2000	Incentive Density HMA Pavement	DOL	7,011.000	7,011.000
0074	460.5224	HMA Pavement 4 LT 58-28 S	TON	374.000	374.000
0076	460.6223	HMA Pavement 3 MT 58-28 S	TON	6,399.000	6,399.000

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Line	Item	Item Description	Unit	Total	Qty
0078	460.6224	HMA Pavement 4 MT 58-28 S	TON	2,768.000	2,768.000
0080	460.7223	HMA Pavement 3 HT 58-28 S	TON	1,040.000	1,040.000
0082	460.7424	HMA Pavement 4 HT 58-28 H	TON	414.000	414.000
0084	520.8000	Concrete Collars for Pipe	EACH	2.000	2.000
0086	522.0112	Culvert Pipe Reinforced Concrete Class III 12-Inch	LF	92.000	92.000
0088	522.1012	Apron Endwalls for Culvert Pipe Reinforced Concrete 12-Inch	EACH	12.000	12.000
0090	522.1015	Apron Endwalls for Culvert Pipe Reinforced Concrete 15-Inch	EACH	2.000	2.000
0092	522.1018	Apron Endwalls for Culvert Pipe Reinforced Concrete 18-Inch	EACH	1.000	1.000
0094	522.1024	Apron Endwalls for Culvert Pipe Reinforced Concrete 24-Inch	EACH	1.000	1.000
0096	522.1030	Apron Endwalls for Culvert Pipe Reinforced Concrete 30-Inch	EACH	1.000	1.000
0098	522.2324	Culvert Pipe Reinforced Concrete Horizontal Elliptical Class HE-III 24x38-Inch	LF	444.000	444.000
0100	522.2619	Apron Endwalls for Culvert Pipe Reinforced Concrete Horizontal Elliptical 19x30-Inch	EACH	2.000	2.000
0102	522.2624	Apron Endwalls for Culvert Pipe Reinforced Concrete Horizontal Elliptical 24x38-Inch	EACH	11.000	11.000
0104	522.2638	Apron Endwalls for Culvert Pipe Reinforced Concrete Horizontal Elliptical 38x60-Inch	EACH	1.000	1.000
0106	601.0405	Concrete Curb & Gutter 18-Inch Type A	LF	185.000	185.000
0108	601.0407	Concrete Curb & Gutter 18-Inch Type D	LF	12,330.000	12,330.000
0110	601.0411	Concrete Curb & Gutter 30-Inch Type D	LF	2,492.000	2,492.000
0112	601.0582	Concrete Curb & Gutter 4-Inch Sloped 36-Inch Type T	LF	280.000	280.000
0114	601.0600	Concrete Curb Pedestrian	LF	165.000	165.000
0116	602.0410	Concrete Sidewalk 5-Inch	SF	1,673.000	1,673.000
0118	602.0515	Curb Ramp Detectable Warning Field Natural Patina	SF	420.000	420.000
0120	606.0100	Riprap Light	CY	20.000	20.000
0122	606.0200	Riprap Medium	CY	59.000	59.000
0124	608.0312	Storm Sewer Pipe Reinforced Concrete Class III 12-Inch	LF	879.000	879.000
0126	608.0315	Storm Sewer Pipe Reinforced Concrete Class III 15-Inch	LF	360.000	360.000
0128	608.0318	Storm Sewer Pipe Reinforced Concrete Class III 18-Inch	LF	26.000	26.000
0130	608.0324	Storm Sewer Pipe Reinforced Concrete Class III 24-Inch	LF	181.000	181.000
0132	608.0336	Storm Sewer Pipe Reinforced Concrete Class III 36-Inch	LF	841.000	841.000

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Line	Item	Item Description	Unit	Total	Qty
0134	608.0342	Storm Sewer Pipe Reinforced Concrete Class III 42-Inch	LF	99.000	99.000
0136	608.0412	Storm Sewer Pipe Reinforced Concrete Class IV 12-Inch	LF	1,497.000	1,497.000
0138	608.0415	Storm Sewer Pipe Reinforced Concrete Class IV 15-Inch	LF	195.000	195.000
0140	610.0119	Storm Sewer Pipe Reinforced Concrete Horizontal Elliptical Class HE-III 19x30-Inch	LF	54.000	54.000
0142	610.0124	Storm Sewer Pipe Reinforced Concrete Horizontal Elliptical Class HE-III 24x38-Inch	LF	1,010.000	1,010.000
0144	610.0129	Storm Sewer Pipe Reinforced Concrete Horizontal Elliptical Class HE-III 29x45-Inch	LF	155.000	155.000
0146	610.0134	Storm Sewer Pipe Reinforced Concrete Horizontal Elliptical Class HE-III 34x53-Inch	LF	101.000	101.000
0148	611.0420	Reconstructing Manholes	EACH	1.000	1.000
0150	611.0535	Manhole Covers Type J-Special	EACH	8.000	8.000
0152	611.0624	Inlet Covers Type H	EACH	22.000	22.000
0154	611.0642	Inlet Covers Type MS	EACH	7.000	7.000
0156	611.0651	Inlet Covers Type S	EACH	7.000	7.000
0158	611.0652	Inlet Covers Type T	EACH	6.000	6.000
0160	611.2004	Manholes 4-FT Diameter	EACH	3.000	3.000
0162	611.2005	Manholes 5-FT Diameter	EACH	8.000	8.000
0164	611.2006	Manholes 6-FT Diameter	EACH	15.000	15.000
0166	611.2007	Manholes 7-FT Diameter	EACH	4.000	4.000
0168	611.2008	Manholes 8-FT Diameter	EACH	1.000	1.000
0170	611.3003	Inlets 3-FT Diameter	EACH	48.000	48.000
0172	611.3004	Inlets 4-FT Diameter	EACH	10.000	10.000
0174	611.3225	Inlets 2x2.5-FT	EACH	12.000	12.000
0176	611.3230	Inlets 2x3-FT	EACH	12.000	12.000
0178	611.3901	Inlets Median 1 Grate	EACH	5.000	5.000
0180	611.3902	Inlets Median 2 Grate	EACH	1.000	1.000
0182	611.8110	Adjusting Manhole Covers	EACH	1.000	1.000
0184	611.8115	Adjusting Inlet Covers	EACH	5.000	5.000
0186	611.9800.S	Pipe Grates	EACH	16.000	16.000
0188	612.0106	Pipe Underdrain 6-Inch	LF	300.000	300.000
0190	612.0204	Pipe Underdrain Unperforated 4-Inch	LF	50.000	50.000
0192	612.0700	Drain Tile Exploration	LF	250.000	250.000
0194	612.0902.S	Insulation Board Polystyrene (inch) 0001. 2-Inch	SY	24.000	24.000
0196	616.0700.S	Fence Safety	LF	500.000	500.000
0198	618.0100	Maintenance And Repair of Haul Roads (project) 0001. 2723-00-71	EACH	1.000	1.000

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Line	Item	Item Description	Unit	Total	Qty
0200	619.1000	Mobilization	EACH	1.000	1.000
0202	620.0300	Concrete Median Sloped Nose	SF	643.000	643.000
0204	623.0200	Dust Control Surface Treatment	SY	31,637.000	31,637.000
0206	624.0100	Water	MGAL	170.000	170.000
0208	625.0100	Topsoil	SY	22,084.000	22,084.000
0210	627.0200	Mulching	SY	6,363.000	6,363.000
0212	628.1104	Erosion Bales	EACH	333.000	333.000
0214	628.1504	Silt Fence	LF	2,678.000	2,678.000
0216	628.1520	Silt Fence Maintenance	LF	2,678.000	2,678.000
0218	628.1905	Mobilizations Erosion Control	EACH	2.000	2.000
0220	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0222	628.2008	Erosion Mat Urban Class I Type B	SY	13,775.000	13,775.000
0224	628.6510	Soil Stabilizer Type B	ACRE	0.500	0.500
0226	628.7005	Inlet Protection Type A	EACH	114.000	114.000
0228	628.7010	Inlet Protection Type B	EACH	6.000	6.000
0230	628.7015	Inlet Protection Type C	EACH	99.000	99.000
0232	628.7020	Inlet Protection Type D	EACH	16.000	16.000
0234	628.7504	Temporary Ditch Checks	LF	66.000	66.000
0236	628.7555	Culvert Pipe Checks	EACH	122.000	122.000
0238	628.7560	Tracking Pads	EACH	4.000	4.000
0240	628.7570	Rock Bags	EACH	100.000	100.000
0242	629.0205	Fertilizer Type A	CWT	1.600	1.600
0244	629.0210	Fertilizer Type B	CWT	12.900	12.900
0246	630.0130	Seeding Mixture No. 30	LB	202.000	202.000
0248	630.0170	Seeding Mixture No. 70	LB	12.000	12.000
0250	630.0200	Seeding Temporary	LB	205.000	205.000
0252	630.0400	Seeding Nurse Crop	LB	17.000	17.000
0254	631.0300	Sod Water	MGAL	167.000	167.000
0256	631.1000	Sod Lawn	SY	7,451.000	7,451.000
0258	633.5200	Markers Culvert End	EACH	31.000	31.000
0260	634.0810	Posts Tubular Steel 2x2-Inch X 10-FT	EACH	8.000	8.000
0262	634.0814	Posts Tubular Steel 2x2-Inch X 14-FT	EACH	56.000	56.000
0264	634.0816	Posts Tubular Steel 2x2-Inch X 16-FT	EACH	30.000	30.000
0266	634.0818	Posts Tubular Steel 2x2-Inch X 18-FT	EACH	1.000	1.000
0268	637.2210	Signs Type II Reflective H	SF	438.750	438.750
0270	637.2230	Signs Type II Reflective F	SF	190.500	190.500
0272	638.2102	Moving Signs Type II	EACH	38.000	38.000
0274	638.2602	Removing Signs Type II	EACH	54.000	54.000
0276	638.3000	Removing Small Sign Supports	EACH	35.000	35.000
0278	641.8100	Overhead Sign Support (structure) 0001. Sta 193+35.5	LS	1.000	1.000

2723-00-71

Line	Item	Item Description	Unit	Total	Qty
		Lt			
0280	642.5201	Field Office Type C	EACH	1.000	1.000
0282	643.0300	Traffic Control Drums	DAY	15,990.000	15,990.000
0284	643.0420	Traffic Control Barricades Type III	DAY	4,975.000	4,975.000
0286	643.0705	Traffic Control Warning Lights Type A	DAY	9,950.000	9,950.000
0288	643.0715	Traffic Control Warning Lights Type C	DAY	1,690.000	1,690.000
0290	643.0800	Traffic Control Arrow Boards	DAY	130.000	130.000
0292	643.0900	Traffic Control Signs	DAY	16,385.000	16,385.000
0294	643.0920	Traffic Control Covering Signs Type II	EACH	5.000	5.000
0296	643.1000	Traffic Control Signs Fixed Message	SF	267.000	267.000
0298	643.1050	Traffic Control Signs PCMS	DAY	30.000	30.000
0300	643.5000	Traffic Control	EACH	1.000	1.000
0302	645.0111	Geotextile Type DF Schedule A	SY	167.000	167.000
0304	645.0120	Geotextile Type HR	SY	453.000	453.000
0306	645.0130	Geotextile Type R	SY	170.000	170.000
0308	645.0140	Geotextile Type SAS	SY	8,000.000	8,000.000
0310	646.1020	Marking Line Epoxy 4-Inch	LF	20,803.000	20,803.000
0312	646.3020	Marking Line Epoxy 8-Inch	LF	2,378.000	2,378.000
0314	646.5020	Marking Arrow Epoxy	EACH	21.000	21.000
0316	646.5120	Marking Word Epoxy	EACH	4.000	4.000
0318	646.6320	Marking Dotted Extension Epoxy 18-Inch	LF	82.000	82.000
0320	646.7120	Marking Diagonal Epoxy 12-Inch	LF	260.000	260.000
0322	646.7420	Marking Crosswalk Epoxy Transverse Line 6-Inch	LF	677.000	677.000
0324	646.8120	Marking Curb Epoxy	LF	155.000	155.000
0326	646.8220	Marking Island Nose Epoxy	EACH	9.000	9.000
0328	649.0150	Temporary Marking Line Removable Tape 4-Inch	LF	3,143.000	3,143.000
0330	650.4000	Construction Staking Storm Sewer	EACH	119.000	119.000
0332	650.4500	Construction Staking Subgrade	LF	5,967.000	5,967.000
0334	650.5000	Construction Staking Base	LF	5,967.000	5,967.000
0336	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	15,452.000	15,452.000
0338	650.6000	Construction Staking Pipe Culverts	EACH	7.000	7.000
0340	650.8500	Construction Staking Electrical Installations (project) 0001. 2723-00-71	LS	1.000	1.000
0342	650.9000	Construction Staking Curb Ramps	EACH	24.000	24.000
0344	650.9910	Construction Staking Supplemental Control (project) 0001. 2723-00-71	LS	1.000	1.000
0346	650.9920	Construction Staking Slope Stakes	LF	5,967.000	5,967.000
0348	652.0225	Conduit Rigid Nonmetallic Schedule 40 2-Inch	LF	2,925.000	2,925.000
0350	652.0235	Conduit Rigid Nonmetallic Schedule 40 3-Inch	LF	95.000	95.000
0352	652.0800	Conduit Loop Detector	LF	156.000	156.000

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Line	Item	Item Description	Unit	Total	Qty
0354	652.0900	Loop Detector Slots	LF	104.000	104.000
0356	653.0135	Pull Boxes Steel 24x36-Inch	EACH	1.000	1.000
0358	653.0140	Pull Boxes Steel 24x42-Inch	EACH	7.000	7.000
0360	653.0900	Adjusting Pull Boxes	EACH	1.000	1.000
0362	654.0105	Concrete Bases Type 5	EACH	14.000	14.000
0364	654.0230	Concrete Control Cabinet Bases Type L30	EACH	1.000	1.000
0366	655.0610	Electrical Wire Lighting 12 AWG	LF	1,764.000	1,764.000
0368	655.0625	Electrical Wire Lighting 6 AWG	LF	10,540.000	10,540.000
0370	655.0700	Loop Detector Lead In Cable	LF	700.000	700.000
0372	655.0800	Loop Detector Wire	LF	730.000	730.000
0374	656.0400	Electrical Service Main Lugs Only Meter Pedestal (location) 0001. Sta 152+93.08 89.78' Lt	LS	1.000	1.000
0376	657.0255	Transformer Bases Breakaway 11 1/2-Inch Bolt Circle	EACH	14.000	14.000
0378	657.0322	Poles Type 5-Aluminum	EACH	14.000	14.000
0380	657.0615	Luminaire Arms Single Member 4 1/2-Inch Clamp 8-FT	EACH	14.000	14.000
0382	659.2230	Lighting Control Cabinets 240/480 30-Inch	EACH	1.000	1.000
0384	690.0150	Sawing Asphalt	LF	835.000	835.000
0386	690.0250	Sawing Concrete	LF	77.000	77.000
0388	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	1,600.000	1,600.000
0390	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	2,000.000	2,000.000
0392	SPV.0005	Special 0005. Rootstock Protection	ACRE	0.300	0.300
0394	SPV.0035	Special 0081. Detention Basin Clay Lining	CY	1,890.000	1,890.000
0396	SPV.0060	Special 0005. Shallow Marsh Rootstock	EACH	150.000	150.000
0398	SPV.0060	Special 0011. Plaques Sequence Identification	EACH	14.000	14.000
0400	SPV.0060	Special 0012. LED Roadway Luminaire	EACH	14.000	14.000
0402	SPV.0060	Special 0050. Hydrant Assembly Relocation	EACH	1.000	1.000
0404	SPV.0060	Special 0051. Hydrant Assembly Valve & Tee Relocation	EACH	1.000	1.000
0406	SPV.0060	Special 0055. Adjusting Water Valves	EACH	25.000	25.000
0408	SPV.0060	Special 0056. Sanitary Manhole Seal External	EACH	2.000	2.000
0410	SPV.0060	Special 0080. Tideflex Checkmate Inline Check Valve 24-Inch	EACH	1.000	1.000
0412	SPV.0060	Special 0081. Pipe Connection to Existing Structure	EACH	5.000	5.000
0414	SPV.0060	Special 0086. Inlet Covers Type R Special	EACH	70.000	70.000
0416	SPV.0060	Special 0088. Outlet Structure	EACH	1.000	1.000
0418	SPV.0090	Special 0050. Removing Water Main	LF	109.000	109.000
0420	SPV.0090	Special 0051. PVC Hydrant Lead 6-Inch	LF	5.000	5.000
0422	SPV.0090	Special 0052. PVC Water Main 8-Inch	LF	62.000	62.000
0424	SPV.0090	Special 0053. PVC Water Main 16-Inch	LF	90.000	90.000
0426	SPV.0090	Special 0083. Storm Sewer Pipe Reinforced Concrete Horiz Elliptical Class HE-IV 38x60	LF	476.000	476.000

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Line	Item	Item Description	Unit	Total	Qty
0428	SPV.0090	Special 0084. Storm Sewer Pipe PVC SDR-26 10-Inch	LF	11.000	11.000
0430	SPV.0090	Special 0085. Storm Sewer Pipe PVC SDR-26 18-Inch	LF	101.000	101.000
0432	SPV.0105	Special 0003. Construction Staking Detention Basin	LS	1.000	1.000
0434	SPV.0105	Special 0081. Dewatering for Detention Basin Construction	LS	1.000	1.000
0436	SPV.0120	Special 0001. Water for Seeded Areas	MGAL	406.000	406.000
0438	SPV.0120	Special 0080. Detention Basin Water	MGAL	400.000	400.000
0440	SPV.0165	Special 0001. Concrete Sidewalk 5-Inch Special	SF	11,283.000	11,283.000
0442	SPV.0165	Special 0002. Concrete Sidewalk 12-Inch Special	SF	2,025.000	2,025.000

CLEARING AND GRUBBING ITEMS

ROADWAY	STATION	TO	STATION	OFFSET	201.0105 CLEARING STA	201.0205 GRUBBING STA	201.0110 CLEARING SY	201.0210 GRUBBING SY	201.0120 CLEARING ID	201.0220 GRUBBING ID
DURHAM DRIVE / MOORLAND ROAD										
			150+05	88' RT	--	--	--	--	11	11
			152+52	44' RT	--	--	--	--	3	3
			152+72	43' RT	--	--	--	--	5	5
			153+07	44' RT	--	--	--	--	6	6
			153+16	28' RT	--	--	--	--	5	5
			162+14	63' RT	--	--	--	--	4	4
	164+00	-	177+00	RT	13	13	--	--	--	--
WOODS ROAD										
			45+90	26' RT	--	--	--	--	36	36
			46+26	28' RT	--	--	--	--	36	36
DURHAM PLACE										
			60+63	60' LT	--	--	--	--	6	6
			61+18	58' LT	--	--	--	--	8	8
			61+60	56' LT	--	--	--	--	6	6
DETENTION BASIN										
					--	--	965	965	--	--
TOTALS CATEGORY 0010					**13**	**13**	**965**	**965**	**126**	**126**

REMOVING CURB & GUTTER

ROADWAY	FROM STATION	FROM OFFSET	TO STATION	TO OFFSET	204.0150 REMOVING CURB & GUTTER LF
MOORLAND ROAD					
	193+37	36' LT	195+52	65' LT	213
	194+38	22' RT	195+42	24' RT	106
	196+31	38' RT	196+75	33' RT	44
	196+37	63' LT	196+75	63' LT	38
	196+42	6' LT	196+75	1' LT	33
	196+43	13' LT	199+19	26' LT	277
WOODS ROAD					
	45+03	8' RT	45+80	15' RT	176
CANDLEWOOD LANE					
	58+75	14' RT	59+57	42' RT	98
	58+75	14' LT	59+61	40' LT	99
SANDALWOOD DRIVE					
	69+15	19' RT	69+71	44' RT	70
	69+15	19' LT	69+73	48' LT	75
	70+04	66' LT	70+53	39' LT	64
	70+05	50' RT	70+63	17' RT	79
PRINCETON DRIVE					
	79+05	19' RT	79+36	39' RT	41
	79+05	19' LT	79+35	46' LT	45
	80+25	46' RT	80+67	19' RT	56
	80+36	45' LT	80+67	19' LT	44
TOTAL CATEGORY 0010					**1,558**

REMOVING PAVEMENT

ROADWAY	STATION	TO	STATION	OFFSET	204.0100 REMOVING PAVEMENT SY
DURHAM DRIVE					
			150+40	RT	278
TOTAL CATEGORY 0010					**278**

REMOVING ASPHALTIC SURFACE MILLING

ROADWAY	STATION	TO	STATION	OFFSET	204.0120 REMOVING ASPHALTIC SURFACE MILLING SY	COMMENTS
ROUNDABOUT						
	10+27	-	12+33		279	
MOORLAND ROAD						
	196+75	-	199+33		1,719	
TOTAL CATEGORY 0010					**1,998**	

REMOVING CONCRETE SIDEWALK

ROADWAY	STATION	OFFSET	204.0155 REMOVING CONCRETE SIDEWALK SY
CANDLEWOOD LANE			
	59+38	RT	5
	59+38	LT	5
TOTAL CATEGORY 0010			**10**

REMOVING SMALL PIPE CULVERTS

ROADWAY	FROM STATION	FROM OFFSET	TO STATION	TO OFFSET	203.0100 REMOVING SMALL PIPE CULVERTS EACH
DURHAM DRIVE / MOORLAND ROAD					
	148+48	25' RT	149+26	26' RT	1
	149+67	20' LT	150+07	18' LT	1
	150+30	32' RT	150+54	34' RT	1
	151+00	30' LT	151+00	44' LT	1
	163+45	20' RT	163+98	54' LT	1
	163+49	23' RT	164+02	51' LT	1
	167+00	23' RT	167+00	26' LT	1
	167+00	31' LT	167+00	48' LT	1
	174+99	29' LT	175+00	53' LT	1
	175+72	22' RT	175+72	56' LT	1
	175+79	23' RT	175+80	55' LT	1
	175+87	24' RT	175+88	54' LT	1
	178+01	31' LT	178+07	52' LT	1
	178+01	29' RT	178+20	51' LT	1
	178+07	30' RT	178+25	50' LT	1
WOODS ROAD					
	42+47	34' RT	42+92	37' RT	1
ROUNDABOUT					
	10+10	16' LT	12+67	26' LT	1
TOTAL CATEGORY 0010					**17**

REMOVING CONCRETE BASES

ROADWAY	STATION	OFFSET	204.0195 REMOVING CONCRETE BASES EACH
MOORLAND ROAD			
	151+10	34' LT	1
	160+84	53' LT	1
WOODS ROAD			
	45+13	32' LT	1
TOTAL CATEGORY 0010			**3**

REMOVING MANHOLES

ROADWAY	STATION	OFFSET	204.0210 REMOVING MANHOLES EACH
MOORLAND ROAD			
	160+74	37' RT	1
TOTAL CATEGORY 0010			**1**

REMOVING INLETS

ROADWAY	STATION	OFFSET	204.0220 REMOVING INLETS EACH
MOORLAND ROAD			
	160+01	26' RT	1
	160+92	68' LT	1
	160+92	73' LT	1
	161+23	69' LT	1
	161+23	74' LT	1
	189+28	36' RT	1
	189+32	57' LT	1
	189+69	58' LT	1
	189+84	37' RT	1
	194+36	45' LT	1
	196+41	63' LT	1
	196+62	15' LT	1
	196+67	63' LT	1
	196+68	1' LT	1
TOTAL CATEGORY 0010			**14**

REMOVING STORM SEWER

ROADWAY	FROM STATION	FROM OFFSET		TO STATION	TO OFFSET	204.0245.0001 REMOVING STORM SEWER 12-INCH LF	204.0245.0002 REMOVING STORM SEWER 15-INCH LF	204.0245.0003 REMOVING STORM SEWER 18-INCH LF	204.0245.0004 REMOVING STORM SEWER 36-INCH LF	204.0245.0005 REMOVING STORM SEWER 42x24-INCH LF	204.9060.S REMOVING APRON ENDWALL EACH
MOORLAND ROAD											
	159+87	28' RT	-	160+01	26' RT	15	--	--	--	--	1
	160+01	26' RT	-	160+02	35' LT	61	--	--	--	--	1
	160+01	26' RT	-	160+74	37' RT	--	--	77	--	--	--
	160+36	63' LT	-	160+92	68' LT	--	--	50	--	--	1
	160+74	37' RT	-	160+79	58' RT	--	--	22	--	--	1
	160+74	37' RT	-	161+56	39' RT	--	--	87	--	--	1
	160+92	68' LT	-	160+92	73' LT	5	--	--	--	--	--
	160+92	68' LT	-	161+23	69' LT	--	--	27	--	--	--
	161+23	69' LT	-	161+23	74' LT	5	--	--	--	--	--
	161+23	69' LT	-	161+90	69' LT	--	--	60	--	--	1
	189+13	18' RT	-	189+97	17' RT	--	--	--	--	84	2
	189+28	36' RT	-	189+37	34' RT	10	--	--	--	--	--
	189+31	57' LT	-	189+37	56' LT	6	--	--	--	--	--
	189+37	34' RT	-	189+84	37' RT	46	--	--	--	--	--
	189+37	56' LT	-	189+69	58' LT	32	--	--	--	--	--
	193+31	47' LT	-	194+36	45' LT	--	103	--	--	--	1
	194+36	45' LT	-	196+41	63' LT	--	203	--	--	--	--
	194+54	44' RT	-	196+30	38' RT	--	--	--	178	--	1
	196+41	63' LT	-	196+67	63' LT	25	--	--	--	--	--
	196+41	63' LT	-	196+62	15' LT	52	--	--	--	--	--
	196+62	15' LT	-	196+67	1' LT	15	--	--	--	--	--
TOTALS CATEGORY 0010						**272**	**306**	**323**	**178**	**84**	**10**

EARTH WORK SUMMARY

Division	From/To Station	Location	205.0100 Excavation Common (CY) (1)		Salvaged/ Unusable Pavement Material (CY) (2)	Available Material (4)	EBS Backfill (CY) (3)	Unexpanded Fill	Expanded Fill (5)	Mass Ordinate +/- (6)	Waste (7)	Borrow	Comment:
			Cut (2)	EBS Excavation (3)			Factor 1.15		Factor 1.15			Item 208.0100	
1													
	152+42 TO 195+00	MOORLAND ROAD	19,100	1,910	2,564	16,536	2,197	6,135	7,055	9,481	11,391	0	
	58+75 TO 61+37	CANDLEWOOD LANE/DURHAM PLACE	1,190	119	141	1,049	137	89	103	946	1,065	0	
	69+15 TO 70+63	SANDALWOOD DR	564	56	68	496	65	25	29	467	523	0	
Division 1 Subtotal Stage 1			20,854	2,085	2,773	18,081	2,398	6,250	7,187	10,894	12,980	0	
2													
	148+35 TO 151+01	MOORLAND ROAD	670	67	174	495	77	161	185	310	377	0	
	40+32 TO 46+80	WOODS ROAD	1,059	106	277	782	122	443	509	273	379	0	
	10+00 TO 12+92	ROUNDABOUT	139	14	79	60	16	1,425	1,639	-1,579	-1,565	0	
	1+21 TO 2+50	DRIVEWAY	53	5	0	53	6	6	7	46	51	0	
Division 2 Subtotal Stage 2			1,920	192	530	1,390	221	2,035	2,340	-950	-758	0	
3													
	195+00 TO 199+32	MOORLAND ROAD	2,296	230	285	2,011	264	20	22	1,989	2,219	0	
	79+05 TO 80+67	PRINCETON DRIVE	321	32	59	262	37	11	13	249	282	0	
Division 3 Subtotal Stage 3			2,617	262	344	2,273	301	30	35	2,238	2,500	0	
Total			25,392	2,539	3,647	21,745	2,920	8,315	9,562	12,183	14,722	0	
Grand Total Category 0010			27,931		3,647	21,745	2,920	8,315	9,562	12,183	14,722	0	

NOTES:

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 (CY) to be backfilled with Breaker Run. EBS Excavation volume assumed as 10% of total excavation common volume.
   All EBS Excavation to be wasted offsite. EBS Backfill Factor = 1.15.
   Actual extents and depths of EBS Excavation will be determined by the engineer in the field.
4) Available Material = Cut - Salvaged/Unusuable Pavement Material
5) Expanded Fill. Factor = 1.15 Expanded Fill = Unexpanded Fill * Fill Factor
   Due to potential soil variability, actual quantities may vary. No quantity adjustments will be made for differing soil expansion factors encountered in the field.
6) 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.
7) The storm sewer excavation is not included in this table and should be considered additional waste and are considered incidental to the storm sewer items.

FINISHING ROADWAY

ROADWAY	213.0100 FINISHING ROADWAY (2723-00-71) EACH
MOORLAND ROAD	1
TOTAL CATEGORY 0010	**1**

BASE AGGREGATE ITEMS

ROADWAY	STATION	TO	STATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON	311.0110 BREAKER RUN TON
DURHAM DRIVE / MOORLAND ROAD						
	148+35	-	149+90	1	689	--
	149+90	-	151+01	--	684	--
	152+43	-	153+47	--	528	505
	153+47	-	196+75	--	18,823	21,755
	196+75	-	199+33	--	425	461
WOODS ROAD						
	40+32	-	43+22	--	1,417	--
	44+63	-	46+64	1	886	--
ROUNDABOUT						
	10+00	-	12+92	--	1,040	--
CANDLEWOOD LANE						
	58+75	-	59+57	--	325	381
DURHAM PLACE						
	60+16	-	61+37	10	778	615
SANDALWOOD DRIVE						
	69+15	-	69+62	--	223	258
	70+15	-	70+63	--	254	302
PRINCETON DRIVE						
	79+05	-	79+37	--	158	183
	80+36	-	80+67	--	150	181
UNDISTRIBUTED**						
				--	--	1,472
TOTALS CATEGORY 0010				**12**	**26,380**	**26,113**

**TO BE USED AS EBS BACKFILL AT LOCATIONS DETERMINED BY THE ENGINEER

DRIVEWAYS

ROADWAY	STATION	OFFSET	416.0260 CONCRETE DRIVEWAY HES 6-INCH SY	460.5224* HMA PAVEMENT 4LT 58-28S TON
DURHAM DRIVE				
	149+15	RT	--	20
	149+59	LT	--	18
	149+60	RT	318	--
WOODS ROAD				
	42+00	16' RT	--	4
TOTALS CATEGORY 0010			318	42

*ADDITIONAL QUANTITIES LISTED ELSEWHERE

DRILLED BAR ITEMS

ROADWAY	STATION	OFFSET	416.0610 DRILLED TIE BARS EACH
MOORLAND ROAD			
	196+75	LT/RT	9
	199+19	LT	3
CANDLEWOOD LANE			
	58+75	LT/RT	6
SANDALWOOD DRIVE			
	69+15	LT/RT	6
	70+53	LT	3
	70+63	RT	3
PRINCETON DRIVE			
	79+05	LT/RT	6
	80+67	LT/RT	6
TOTAL CATEGORY 0010			**42**

CONCRETE SURFACE DRAINS

ROADWAY	STATION	OFFSET	416.1010 CONCRETE SURFACE DRAINS CY
DURHAM DRIVE / MOORLAND ROAD			
	148+75	LT	3
	148+75	RT	3
	166+70	LT	3
	166+70	RT	3
	167+00	LT	3
	167+00	RT	3
	167+25	LT	3
	167+25	RT	3
	170+00	LT	3
	170+00	RT	3
	175+60	LT	3
WOODS ROAD			
	46+60	LT	3
	46+75	RT	3
TOTAL CATEGORY 0010			**39**

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ASPHALTIC PAVEMENT ITEMS

ROADWAY	STATION	TO	STATION	455.0605 TACK COAT GAL	460.5224* HMA PAVEMENT 4LT 58-28S TON	460.6223 HMA PAVEMENT 3MT 58-28S TON	460.6224 HMA PAVEMENT 4MT 58-28S TON	460.7223 HMA PAVEMENT 3HT 58-28S TON	460.7424 HMA PAVEMENT 4HT 58-28H TON
DURHAM DRIVE / MOORLAND ROAD									
	148+35	-	149+90	87	5	178	71	--	--
	149+90	-	151+01	64	35	--	--	131	52
	152+43	-	153+47	49	35	--	--	101	40
	153+47	-	196+75	2,729	191	5,605	2,242	--	--
	196+75	-	198+91	48	--	98	39	--	--
	196+75	-	199+58	126	--	--	208	--	--
WOODS ROAD									
	40+32	-	43+22	161	40	--	--	331	132
	44+63	-	46+64	107	26	--	--	221	88
ROUNDABOUT									
	10+00	-	12+92	125	--	--	--	256	102
CANDLEWOOD LANE									
	58+75	-	59+57	45	--	93	37	--	--
DURHAM PLACE									
	60+16	-	61+15	87	--	179	72	--	--
SANDALWOOD DRIVE									
	69+15	-	69+62	33	--	69	28	--	--
	70+15	-	70+63	40	--	82	33	--	--
PRINCETON DRIVE									
	79+05	-	79+39	23	--	47	19	--	--
	80+36	-	80+77	23	--	48	19	--	--
TOTALS CATEGORY 0010				**3,747**	**332**	**6,399**	**2,768**	**1,040**	**414**

*ADDITIONAL QUANTITIES LISTED ELSEWHERE

CONCRETE CURB & GUTTER

ROADWAY	STATION	TO	STATION	OFFSET	601.0405 CONCRETE CURB & GUTTER 18-INCH TYPE A LF	601.0407 CONCRETE CURB & GUTTER 18-INCH TYPE D LF	601.0411 CONCRETE CURB & GUTTER 30-INCH TYPE D LF	601.0582 CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE T LF	601.0600 CONCRETE CURB PEDESTRIAN LF
DURHAM DRIVE / MOORLAND ROAD									
	148+45	-	151+01	LT	--	153	99	--	--
	148+45	-	151+01	RT	--	150	100	--	--
	150+11	-	151+01	MEDIAN	--	--	172	--	34
	152+49	-	160+48	LT	--	544	241	--	--
	152+49	-	160+70	MEDIAN	--	1,578	145	--	37
	152+49	-	160+58	RT	--	643	185	--	--
	161+44	-	165+90	MEDIAN	--	1,161	--	--	--
	161+70	-	189+05	LT	--	2,643	21	--	--
	161+73	-	188+90	RT	--	2,660	--	--	--
	190+08	-	195+44	LT	--	527	--	--	--
	190+12	-	195+30	RT	--	528	--	--	--
	191+98	-	195+38	MEDIAN	--	679	--	--	--
	196+30	-	196+75	RT	--	--	45	--	--
	196+40	-	196+75	LT	--	--	35	--	--
	196+40	-	199+19	MEDIAN		262	51		
WOODS ROAD									
	40+57	-	43+18	LT	--	176	102	--	--
	40+57	-	43+22	RT	--	171	98	--	--
	42+16	-	43+22	MEDIAN	--	--	178	--	37
	44+62	-	46+68	RT	--	--	214	--	--
	44+70		45+20	MEDIAN	--	--	95	--	18
	44+80	-	46+57	LT	--	93	93	--	--
ROUNDABOUT									
	10+00	-	12+92	LT	185	--	--	280	--
	10+00	-	12+92	RT	--	--	193	--	--
CANDLEWOOD LANE									
	58+75	-	59+55	LT	--	--	114	--	--
	58+75	-	59+53	RT	--	--	103	--	--
DURHAM PLACE									
	60+15	-	60+53	LT	--	59	--	--	--
	60+17	-	60+47	RT	--	--	47	--	--
SANDALWOOD DRIVE									
	69+15	-	69+62	LT	--	62	8	--	--
	69+15	-	69+73	RT	--	44	24	--	--
	70+16	-	70+53	LT	--	40	8	--	--
	70+16	-	70+63	RT	--	61	8	--	--
PRINCETON DRIVE									
	79+05	-	79+35	LT	--	--	47	--	21
	79+05	-	79+48	RT	--	44	15	--	18
	80+36	-	80+67	LT	--	--	43	--	--
	80+30	-	80+67	RT	--	52	8	--	--
TOTALS CATEGORY 0010					**185**	**12,330**	**2,492**	**280**	**165**

CONCRETE SIDEWALK

ROADWAY	STATION	TO	STATION	OFFSET	602.0410 CONCRETE SIDEWALK 5-INCH SF	SPV.0165.0001 CONCRETE SIDEWALK 5-INCH SPECIAL SF	SPV.0165.0002 CONCRETE SIDEWALK 12-INCH SPECIAL SF	416.0512 CONCRETE TRUCK APRON 12-INCH SY	405.0100 COLORING CONCRETE WISDOT RED CY
DURHAM DRIVE / MOORLAND ROAD									
	149+77	-	150+72	LT	52	362	--	--	6
	150+12	-	150+97	MEDIAN	138	1,013	--	--	16
	150+22	-	150+75	RT	36	163	--	--	3
	152+51	-	156+74	MEDIAN	149	1,940	--	--	30
	152+88	-	153+34	LT	78	381	--	--	6
	152+76	-	153+21	RT	36	141	--	--	2
	158+96	-	160+70	MEDIAN	--	1,062	--	--	16
	161+45	-	163+65	MEDIAN	--	1,831	--	--	28
	165+50	-	165+90	MEDIAN	--	206	--	--	3
	191+97	-	192+11	MEDIAN	--	83	--	--	1
	193+63	-	195+38	MEDIAN	--	892	--	--	14
	196+41	-	198+55	MEDIAN	--	1,054	--	--	16
ROUNDABOUT									
	10+00	-	12+92	RT	--	--	2,025	--	75
	10+00	-	12+92	LT	--	--	--	335	124
WOODS ROAD									
	42+30	-	43+19	MEDIAN	148	1,102	--	--	17
	42+48	-	42+88	LT	36	139	--	--	2
	42+44	-	42+95	RT	52	230	--	--	4
	44+70	-	45+20	MEDIAN	73	353	--	--	5
	45+02	-	45+51	LT	37	172	--	--	3
	44+91	-	45+32	RT	36	135	--	--	2
CANDLEWOOD LANE									
	59+43	-	59+54	LT	117	--	--	--	--
	49+43	-	59+52	RT	118	--	--	--	--
SANDALWOOD DRIVE									
	69+49	-	69+60	LT	111	--	--	--	--
	69+48	-	69+67	RT	157	24	--	--	1
	70+21	-	70+35	RT	106	--	--	--	--
PRINCETON DRIVE									
	79+29	-	79+34	LT	118	--	--	--	--
	79+30	-	79+39	RT	75	--	--	--	--
TOTALS CATEGORY 0010					**1,673**	**11,283**	**2,025**	**335**	**374**

3

CURB RAMP DETECTABLE WARNING FIELD

ROADWAY	STATION	OFFSET	602.0515 CURB RAMP DETECTABLE WARNING FIELD NATURAL PATINA SF
DURHAM DRIVE / MOORLAND ROAD			
	150+65	LT/RT	64
	152+80	LT/RT	64
WOODS ROAD			
	42+86	LT/RT	64
	45+00	LT/RT	64
CANDLEWOOD LANE			
	59+50	LT/RT	48
SANDALWOOD DRIVE			
	69+50	LT/RT	60
	70+50	RT	20
PRINCETON DRIVE			
	79+30	LT/RT	36
TOTAL CATEGORY 0010			**420**

CONCRETE MEDIAN SLOPED NOSE

ROADWAY	STATION	OFFSET	620.0300 CONCRETE MEDIAN SLOPED NOSE TYPE 1 SF	TYPE 2 SF
DURHAM DRIVE / MOORLAND ROAD				
	150+09	MEDIAN	54	--
	150+94	MEDIAN	--	30
	152+56	MEDIAN	--	31
	159+99	MEDIAN	32	--
	160+56	MEDIAN	33	--
	160+72	MEDIAN	41	--
	161+44	MEDIAN	44	--
	161+58	MEDIAN	30	--
	163+10	MEDIAN	32	--
	165+93	MEDIAN	32	--
	191+95	MEDIAN	41	--
	195+42	MEDIAN	33	--
	196+37	MEDIAN	54	--
WOODS ROAD				
	42+28	MEDIAN	54	--
	43+15	MEDIAN	--	31
	44+75	MEDIAN	--	32
	45+24	MEDIAN	39	--
TOTAL CATEGORY 0010			**643**	

DRAIN TILE EXPLORATION

LOCATION	612.0700 DRAIN TILE EXPLORATION LF	612.0204 PIPE UNDERDRAIN UNPERFORATED 4-INCH LF
UNDISTRIBUTED		
	250	50
TOTALS CATEGORY 0010	**250**	**50**

FENCE SAFETY

LOCATION	616.0700.S FENCE SAFETY LF
UNDISTRIBUTED	
	500
TOTAL CATEGORY 0010	**500**

STORM SEWER STRUCTURES										STORM SEWER PIPES										
ROADWAY	STRUCTURE NO.	STATION	OFFSET (FT)	LOCATION	RIM OR FLOW ELEV	STRUCTURE TYPE	INLET/MANHOLE COVERS TYPE	DEPTH[1] (FT)	STRUCTURE COMMENTS	PIPE ID	FROM STR	TO STR	INLET ELEV	DISCH ELEV	SLOPE[A] %	PIPE LENGTH[B] (FT)	PLAN LENGTH[C] (FT)	PIPE CLASS	PIPE SIZE (INCH)	PIPE COMMENTS
DURHAM DRIVE	107	150+24.12	15.3	RT	794.47	INLETS 2x2.5-FT	S	2.49		P108	107	109	791.98	791.90	0.40	19	22	IV	12	
DURHAM DRIVE	109	150+11.94	4.5	LT	794.47	INLETS 2x3-FT	H	2.57		P110	109	111	791.90	791.88	0.40	6	8	IV	12	
DURHAM DRIVE	111	150+11.94	10.1	LT	794.64	INLETS 2x3-FT	H	2.76		P111A	111	112	791.88	791.79	0.40	22	26	IV	12	
DURHAM DRIVE	112	150+29.59	32.0	LT	794.77	INLETS 2x2.5-FT	S	2.98		P113	112	114	791.79	791.44	0.40	88	92	IV	12	
DURHAM DRIVE	114	150+99.11	63.0	LT	796.42	INLETS 4-FT DIAMETER	H	4.98		P115	114	118	791.44	791.28	0.40	39	43	III	12	
ROUND ABOUT	116	10+25.34	64.3	RT	796.92	INLETS 2x3-FT	H	3.92		P117	116	118	793.00	792.86	0.40	35	38	IV	12	
ROUND ABOUT	118	10+21.00	25.7	RT	796.88	INLETS 4-FT DIAMETER	H	5.85		P119	118	122	791.03	790.93	0.40	26	30	III	15	
ROUND ABOUT	120A	10+13.27	194.6	RT	796.95	INLETS MEDIAN 1 GRATE	MS	2.45		P120B	120A	120C	794.50	794.00	0.40	125	128	III	12	
ROUND ABOUT	120C	10+04.57	70.8	RT	797.48	INLETS 2x3-FT	H	3.48		P121	120C	122	794.00	793.84	0.40	39	43	IV	12	
ROUND ABOUT	122	10+04.55	26.7	RT	797.34	INLETS 4-FT DIAMETER	H	7.16		P123	122	125	790.18	790.10	0.40	19	23	III	24	
MOORLAND ROAD	---	---	---	---	---	---	---	--		P124	ENDWALL	125	794.00	790.60	14.34	24	26	III	18	
MOORLAND ROAD	125	152+45.79	102.0	LT	797.28	INLETS 4-FT DIAMETER	H	7.18		P126	125	135	790.10	789.85	0.40	63	67	III	24	
MOORLAND ROAD	127	10+51.10	1.9	LT	796.39	INLETS 2x2.5-FT	T	3.07		P128	127	133	793.32	793.19	0.40	31	36	IV	12	
DURHAM DRIVE	129	150+96.10	8.9	LT	796.17	INLETS 2x3-FT	H	2.92	DEPRESSED	P130	129	133	793.25	793.19	0.40	15	19	IV	12	
ROUND ABOUT	131	11+33.37	1.9	LT	796.50	INLETS 2x2.5-FT	T	3.15		P132	131	133	793.35	793.19	0.40	40	44	IV	12	
ROUND ABOUT	133	10+87.64	1.9	LT	796.12	MANHOLES 6-FT DIAMETER	T	2.93	DEPRESSED	P134	133	135	793.19	792.88	0.40	78	83	IV	12	
ROUND ABOUT	135	12+32.88	10.5	LT	798.03	MANHOLES 4-FT DIAMETER	J-SPECIAL	8.18		P136	135	145	789.85	789.65	0.40	49	53	III	24	
ROUND ABOUT	139	11+37.43	49.2	RT	795.81	INLETS 2x2.5-FT	S	2.93		P140	139	141	792.88	792.76	0.40	32	35	IV	12	
ROUND ABOUT	141	11+51.98	62.3	RT	795.66	INLETS 2x3-FT	H	2.90		P142	141	143	792.76	792.66	0.40	26	29	IV	12	
ROUND ABOUT	143	11+63.13	43.3	RT	796.43	INLETS 2x2.5-FT	S	3.77		P144	143	145	792.66	792.45	0.40	52	56	III	12	
ROUND ABOUT	145	11+93.52	26.3	RT	797.36	MANHOLES 5-FT DIAMETER	H	7.91		P146	145	154	789.45	788.96	0.30	163	168	HE-III	24x38	
MOORLAND ROAD	147	154+00.00	23.6	LT	795.75	INLETS 3-FT DIAMETER	R-SPECIAL	3.36		P148	147	149	792.39	792.33	0.50	11	14	IV	12	
MOORLAND ROAD	149	154+00.00	6.6	LT	796.04	INLETS 3-FT DIAMETER	R-SPECIAL	3.71		P150	149	151	792.33	792.30	0.50	6	9	IV	12	
MOORLAND ROAD	151	154+00.00	1.0	LT	796.19	INLETS 3-FT DIAMETER	R-SPECIAL	3.89		P152	151	154	792.30	792.25	0.50	11	15	IV	12	
MOORLAND ROAD	---	---	---	---	---	---	---	--		P153	ENDWALL	154	790.95	790.84	0.50	22	24	III	12	
MOORLAND ROAD	154	154+00.00	17.9	RT	795.85	MANHOLES 5-FT DIAMETER	R-SPECIAL	6.89		P155	154	162	788.96	788.45	0.30	169	174	HE-III	24x38	

TOP SLAB OPENINGS FOR INLET COVERS TYPE R-SPECIAL SHALL BE 1'-7" x 2'-6"

[1]DEPTH = RIM OR FLOW ELEV - LOWEST PIPE INVERT ELEVATION.

[A] SLOPE CALCULATED BASED ON PIPE LENGTH. PIPE LENGTH REPRESENTS LENGTH OF PIPE MEASURED FROM INSIDE FACE OF STRUCTURE TO INSIDE FACE OF STRUCTURE

[B]PIPE LENGTH SHOWN FOR SLOPE CALCULATION ONLY. NOT INTENDED FOR PAY QUANTITY.

[C]PLAN LENGTH SHOWN FOR PAY QUANTITY.

ALL ITEMS CATEGORY 0010

STORM SEWER STRUCTURES										STORM SEWER PIPES										
ROADWAY	STRUCTURE NO.	STATION	OFFSET (FT)	LOCATION	RIM OR FLOW ELEV	STRUCTURE TYPE	INLET/MANHOLE COVERS TYPE	DEPTH[1] (FT)	STRUCTURE COMMENTS	PIPE ID	FROM STR	TO STR	INLET ELEV	DISCH ELEV	SLOPE[A] %	PIPE LENGTH[B] (FT)	PIPE LENGTH[C] (FT)	PIPE CLASS	PIPE SIZE (INCH)	PIPE COMMENTS
MOORLAND ROAD	156	155+74.33	24.0	LT	794.12	INLETS 3-FT DIAMETER	R-SPECIAL	3.37		P157	156	158	790.75	790.69	0.50	11	14	IV	12	
MOORLAND ROAD	158	155+74.37	7.0	LT	794.42	INLETS 3-FT DIAMETER	R-SPECIAL	3.73		P159	158	160	790.69	790.66	0.50	6	9	IV	12	
MOORLAND ROAD	160	155+74.96	1.0	LT	794.58	INLETS 3-FT DIAMETER	R-SPECIAL	3.92		P161	160	162	790.66	790.61	0.50	9	13	IV	12	
MOORLAND ROAD	162	155+74.98	16.0	RT	794.27	MANHOLES 5-FT DIAMETER	R-SPECIAL	5.82		P163	162	171	788.45	787.86	0.30	195	200	HE-III	24x38	
MOORLAND ROAD	---	---	---	---	---	---	---	--		P164	ENDWALL	165	789.26	789.01	0.50	50	52	IV	12	
MOORLAND ROAD	165	157+74.73	28.1	LT	792.19	INLETS 3-FT DIAMETER	R-SPECIAL	3.18		P166	165	167	789.01	788.96	0.50	11	14	IV	12	
MOORLAND ROAD	167	157+75.08	11.1	LT	792.49	INLETS 3-FT DIAMETER	R-SPECIAL	3.53		P168	167	169	788.96	788.91	0.50	10	13	IV	12	
MOORLAND ROAD	169	157+75.00	1.0	LT	792.74	INLETS 3-FT DIAMETER	R-SPECIAL	3.83		P170	169	171	788.91	788.86	0.50	9	13	IV	12	
MOORLAND ROAD	171	157+75.04	16.0	RT	792.74	MANHOLES 5-FT DIAMETER	R-SPECIAL	4.88		P172	171	174	787.86	787.48	0.30	127	132	HE-III	24x38	
MOORLAND ROAD	---	---	---	---	---	---	---	--		P173	ENDWALL	174	789.00	788.48	3.00	17	20	III	12	
MOORLAND ROAD	174	159+05.34	16.0	RT	791.83	MANHOLES 5-FT DIAMETER	R-SPECIAL	4.35	34" HIGH HOLE FOR PIPE	P175	174	177	787.48	787.24	0.30	80	85	HE-III	24x38	
MOORLAND ROAD	---	---	---	---	---	---	---	--		P176	ENDWALL	177	788.65	788.24	2.29	15	18	III	12	
MOORLAND ROAD	177	159+88.52	17.5	RT	791.02	MANHOLES 5-FT DIAMETER	H	3.78	31" HIGH HOLE FOR PIPE	P178	177	179	787.24	787.05	0.30	63	68	HE-III	24x38	
MOORLAND ROAD	179	160+54.61	22.0	RT	790.75	MANHOLES 5-FT DIAMETER	H	3.70	DEPRESSED, 31" HIGH HOLE FOR PIPE	P180	179	181	787.05	786.78	0.30	89	94	HE-III	24x38	
MOORLAND ROAD	181	161+46.36	16.4	RT	791.20	MANHOLES 6-FT DIAMETER	J-SPECIAL	4.42		P182	181	184	786.78	786.64	0.30	46	52	HE-III	24x38	
MOORLAND ROAD	---	---	---	---	---	---	---	--		P183	ENDWALL	184	786.73	786.64	1.00	9	12	III	24	
MOORLAND ROAD	184	161+76.02	58.3	RT	791.25	MANHOLES 7-FT DIAMETER	J-SPECIAL	4.61		P185	184	ENDWALL	786.64	786.54	0.30	33	37	HE-III	24x38	
MOORLAND ROAD	200	159+05.34	37.7	LT	790.80	INLETS 2x3-FT	H	2.64		P201	200	202	788.16	788.11	0.40	13	15	IV	12	
MOORLAND ROAD	202	159+05.34	19.7	LT	791.11	INLETS 3-FT DIAMETER	R-SPECIAL	3.00	6" TOP SLAB	P203	202	204	788.11	788.08	0.40	7	10	IV	12	
MOORLAND ROAD	204	159+05.35	12.2	LT	791.30	INLETS 3-FT DIAMETER	R-SPECIAL	3.22		P205	204	210	788.08	787.51	0.40	143	147	IV	12	
MOORLAND ROAD	206	160+50.94	20.4	LT	790.11	INLETS 3-FT DIAMETER	R-SPECIAL	2.48	6" TOP SLAB & 14" HOLE FOR PIPE	P207	206	210	787.63	787.59	0.50	7	11	PVC SDR 26	10	
MOORLAND ROAD	208	160+55.70	1.0	LT	790.41	INLETS 3-FT DIAMETER	R-SPECIAL	2.87	DEPRESSED, 6" TOP SLAB & 18" HOLE FOR PIPE	P209	208	210	787.54	787.51	0.50	6	10	IV	12	
MOORLAND ROAD	210	160+55.30	6.7	LT	790.26	INLETS 4-FT DIAMETER	R-SPECIAL	2.75	DEPRESSED; 6" TOP SLAB & 17" HOLE FOR PIPE	P211	210	214	787.51	787.11	0.40	100	104	IV	12	
MOORLAND ROAD	212	161+66.72	44.8	LT	790.10	INLETS 2x3-FT	H	2.87	18" HOLE FOR PIPE	P213	212	214	787.23	787.11	0.50	23	26	IV	12	
MOORLAND ROAD	214	161+61.39	20.0	LT	790.98	INLETS 3-FT DIAMETER	R-SPECIAL	4.12		P215	214	216	786.86	786.83	0.40	9	12	III	15	
MOORLAND ROAD	216	161+67.39	7.0	LT	790.78	INLETS 3-FT DIAMETER	R-SPECIAL	3.95	DEPRESSED	P217	216	220	786.83	786.75	0.40	20	23	III	15	
MOORLAND ROAD	218	161+62.55	17.0	RT	791.20	INLETS 3-FT DIAMETER	R-SPECIAL	4.42		P219	218	220	786.78	786.75	0.40	8	12	IV	15	
MOORLAND ROAD	220	161+73.63	16.0	RT	791.36	INLETS 4-FT DIAMETER	R-SPECIAL	4.61		P221	220	ENDWALL	786.75	786.44	0.40	77	79	IV	15	
MOORLAND ROAD	250	159+94.13	41.9	LT	789.86	INLETS 2x3-FT	H	2.21		P251	250	254	787.65	787.45	0.40	50	53	IV	12	
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MOORLAND ROAD	254	160+50.51	43.6	LT	789.59	INLETS 2x3-FT	H	2.14		P255	254	257	787.45	787.36	0.40	21	24	IV	12	
MOORLAND ROAD	---	---	---	---	---	---	---	--		P256	ENDWALL	257	787.42	787.11	1.83	17	19	III	15	

TOP SLAB OPENINGS FOR INLET COVERS TYPE R-SPECIAL SHALL BE 1'-7" x 2'-6"

[1]DEPTH = RIM OR FLOW ELEV - LOWEST PIPE INVERT ELEVATION.

[A] SLOPE CALCULATED BASED ON PIPE LENGTH. PIPE LENGTH REPRESENTS LENGTH OF PIPE MEASURED FROM INSIDE FACE OF STRUCTURE TO INSIDE FACE OF STRUCTURE

[B]PIPE LENGTH SHOWN FOR SLOPE CALCULATION ONLY. NOT INTENDED FOR PAY QUANTITY.

[C]PLAN LENGTH SHOWN FOR PAY QUANTITY.

ALL ITEMS CATEGORY 0010

PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	MISCELLANEOUS QUANTITIES	SHEET:	E

FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\Quantity\DRAINAGE\030202_mq_dra.ppt PLOT DATE : 6/29/2017 3:35:59 PM PLOT BY : USER1 PLOT NAME : 030202_mq_dra2 PLOT SCALE : 1:1

STORM SEWER STRUCTURES										STORM SEWER PIPES										
ROADWAY	STRUCTURE NO.	STATION	OFFSET (FT)	LOCATION	RIM OR FLOW ELEV	STRUCTURE TYPE	INLET/MANHOLE COVERS TYPE	DEPTH[1] (FT)	STRUCTURE COMMENTS	PIPE ID	FROM STR	TO STR	INLET ELEV	DISCH ELEV	SLOPE[A] %	PIPE LENGTH[B] (FT)	PLAN LENGTH[C] (FT)	PIPE CLASS	PIPE SIZE (INCH)	PIPE COMMENTS
MOORLAND ROAD	257	160+54.77	66.0	LT	789.58	MANHOLES 4-FT DIAMETER	J-SPECIAL	2.47	6" TOP SLAB, 34" HOLE FOR PIPE IN HEIGHT	P258	257	261	787.11	787.02	0.40	24	28	III	15	
MOORLAND ROAD	259	160+89.61	97.1	LT	789.50	INLETS 2x2.5-FT	T	2.13	18" HOLE FOR PIPE	P260	259	261	787.37	787.26	0.30	34	38	IV	12	
MOORLAND ROAD	261	160+83.06	61.1	LT	789.54	INLETS 4-FT DIAMETER	H	2.78	6" TOP SLAB, 20" HOLE FOR PIPE	P262	261	265C	786.76	786.67	0.30	31	36	PVC SDR 26	18	
MOORLAND ROAD	263	161+22.95	93.3	LT	789.52	INLETS 2x2.5-FT	T	2.20	18" HOLE FOR PIPE	P264	263	265A	787.32	787.24	0.50	17	21	IV	12	
MOORLAND ROAD	265A	161+24.70	73.3	LT	789.42	INLETS 4-FT DIAMETER	H	2.74	6" TOP SLAB, 20" HOLE FOR PIPE	P265B	265A	265C	786.68	786.67	0.40	3	9	PVC SDR 26	18	
MOORLAND ROAD	265C	161+27.50	67.3	LT	789.50	MANHOLES 5-FT DIAMETER	H	2.83	20" HOLE FOR PIPE	P265D	265C	ENDWALL	786.67	786.51	0.30	54	56	PVC SDR 26	18	
MOORLAND ROAD	276	162+80.96	82.4	RT	787.50	MANHOLES 6-FT DIAMETER	---	4.17	PAID FOR AS OUTLET STRUCTURE SEE DETAIL FOR COVER / TRASH RACK	P277	276	278	783.33	783.33	0.00	13	19	HE-III	29x45	
MOORLAND ROAD	278	162+88.01	64.7	RT	791.50	MANHOLES 6-FT DIAMETER	J-SPECIAL	5.00		P279	278	ENDWALL	786.50	786.50	0.00	7	10	HE-III	29x45	
MOORLAND ROAD	290	164+00.46	36.9	LT	790.22	INLETS 3-FT DIAMETER	R-SPECIAL	2.92	6" TOP SLAB, 18" HOLE FOR PIPE	P291	290	292	787.30	787.20	0.50	21	24	IV	12	
MOORLAND ROAD	292	163+99.24	9.9	LT	790.71	INLETS 3-FT DIAMETER	R-SPECIAL	3.51		P293	292	294	787.20	787.16	0.50	9	12	IV	12	
MOORLAND ROAD	294	164+00.00	1.0	LT	790.93	INLETS 3-FT DIAMETER	R-SPECIAL	3.77		P295	294	296	787.16	787.10	0.50	11	14	IV	12	
MOORLAND ROAD	296	163+99.83	16.0	RT	791.23	INLETS 3-FT DIAMETER	R-SPECIAL	4.13		P297	296	ENDWALL	787.10	787.00	0.50	21	22	IV	12	
MOORLAND ROAD	300	165+75.94	24.7	LT	789.20	INLETS 2x3-FT	H	2.47		P301	300	302	786.73	786.69	0.30	13	15	IV	12	
MOORLAND ROAD	302	165+75.05	6.7	LT	789.56	INLETS 3-FT DIAMETER	R-SPECIAL	2.87	6" TOP SLAB, 18" HOLE FOR PIPE	P303	302	304	786.69	786.67	0.30	6	9	IV	12	
MOORLAND ROAD	304	165+75.03	1.0	LT	789.72	INLETS 3-FT DIAMETER	R-SPECIAL	3.05	6" TOP SLAB	P305	304	306	786.67	786.64	0.30	11	14	IV	12	
MOORLAND ROAD	306	165+75.53	16.0	RT	790.01	INLETS 3-FT DIAMETER	R-SPECIAL	3.37		P307	306	ENDWALL	786.64	786.50	0.30	47	49	IV	12	
MOORLAND ROAD	315	175+00.00	25.0	LT	789.40	INLETS MEDIAN 1 GRATE	MS	1.82		P316	315	ENDWALL	787.58	786.11	5.78	27	28	III	12	
MOORLAND ROAD	350	176+00.02	16.0	RT	790.73	INLETS 3-FT DIAMETER	R-SPECIAL	3.45		P351	350	352	787.28	787.15	0.50	26	29	IV	12	
MOORLAND ROAD	352	176+00.13	16.0	LT	791.02	INLETS 3-FT DIAMETER	R-SPECIAL	3.87		P353	352	354	787.15	786.85	0.50	60	63	III	12	
MOORLAND ROAD	354	176+62.88	16.0	LT	791.02	INLETS 3-FT DIAMETER	R-SPECIAL	4.17		P355	354	358	786.85	786.53	0.50	64	67	III	12	
MOORLAND ROAD	356	177+28.48	16.0	RT	790.09	INLETS 3-FT DIAMETER	R-SPECIAL	3.43		P357	356	358	786.66	786.53	0.50	25	29	IV	12	
MOORLAND ROAD	358	177+28.75	16.0	LT	790.69	INLETS 4-FT DIAMETER	R-SPECIAL	4.41		P359	358	369	786.28	785.89	0.50	78	83	III	15	
MOORLAND ROAD	360	178+97.06	16.0	RT	790.09	INLETS 3-FT DIAMETER	R-SPECIAL	3.59		P361	360	362	786.50	786.41	0.50	19	22	IV	15	
MOORLAND ROAD	362	178+74.65	16.0	RT	790.02	INLETS 3-FT DIAMETER	R-SPECIAL	3.61		P363	362	364	786.41	786.28	0.50	25	29	IV	15	

TOP SLAB OPENINGS FOR INLET COVERS TYPE R-SPECIAL SHALL BE 1'-7" x 2'-6"

[1]DEPTH = RIM OR FLOW ELEV - LOWEST PIPE INVERT ELEVATION.

[A] SLOPE CALCULATED BASED ON PIPE LENGTH. PIPE LENGTH REPRESENTS LENGTH OF PIPE MEASURED FROM INSIDE FACE OF STRUCTURE TO INSIDE FACE OF STRUCTURE

[B]PIPE LENGTH SHOWN FOR SLOPE CALCULATION ONLY. NOT INTENDED FOR PAY QUANTITY.

[C]PLAN LENGTH SHOWN FOR PAY QUANTITY.

ALL ITEMS CATEGORY 0010

STORM SEWER STRUCTURES										STORM SEWER PIPES										
ROADWAY	STRUCTURE NO.	STATION	OFFSET (FT)	LOCATION	RIM OR FLOW ELEV	STRUCTURE TYPE	INLET/MANHOLE COVERS TYPE	DEPTH[1] (FT)	STRUCTURE COMMENTS	PIPE ID	FROM STR	TO STR	INLET ELEV	DISCH ELEV	SLOPE[A] %	PIPE LENGTH[B] (FT)	PLAN LENGTH[C] (FT)	PIPE CLASS	PIPE SIZE (INCH)	PIPE COMMENTS
MOORLAND ROAD	364	178+75.30	16.0	LT	790.63	INLETS 4-FT DIAMETER	R-SPECIAL	4.35		P365	364	369	786.28	785.97	0.50	62	67	III	15	
MOORLAND ROAD	---	---	---	---	---	---	---	--		P366	ENDWALL	367	785.90	785.78	1.00	12	15	HE-III	19x30	
MOORLAND ROAD	367	178+10.04	16.0	RT	789.82	MANHOLES 6-FT DIAMETER	R-SPECIAL	4.04	DEPRESSED	P368	367	369	785.78	785.58	1.00	20	26	HE-III	19x30	
MOORLAND ROAD	369	178+10.05	16.0	LT	790.42	MANHOLES 6-FT DIAMETER	R-SPECIAL	4.84	DEPRESSED	P370	369	371	785.58	785.49	1.00	9	13	HE-III	19x30	
MOORLAND ROAD	371	178+06.71	25.5	LT	788.85	INLETS MEDIAN 2 GRATE	MS	3.36		P372	371	ENDWALL	785.49	785.24	1.00	25	26	III	24	
MOORLAND ROAD	400	196+67.52	63.0	LT	814.94	INLETS 2x3-FT	H	3.70		P401	400	406	811.24	811.01	1.00	23	26	IV	15	
MOORLAND ROAD	406	196+41.41	63.1	LT	814.16	INLETS 2x2.5-FT	S	3.15	DEPRESSED	P407	406	408	811.01	810.49	1.00	52	54	III	15	
MOORLAND ROAD	408	196+41.30	7.3	LT	815.03	INLETS 2x2.5-FT	S	4.54		P409	408	410	810.49	810.44	1.00	5	7	III	15	
MOORLAND ROAD	410	196+41.80	2.1	LT	815.13	INLETS 2x2.5-FT	S	4.69		P411	410	E417	810.44	810.11	1.00	33	37	III	15	
MOORLAND ROAD	E417	196+29.94	37.8	RT	814.31	---	---	---		P417A	E417	418	807.60	806.85	1.25	60	66	III	36	
MOORLAND ROAD	418	195+63.48	38.8	RT	812.83	MANHOLES 6-FT DIAMETER	J-SPECIAL	7.42		P418A	418	420	805.41	804.68	1.25	58	64	III	36	
MOORLAND ROAD	419	194+99.09	28.0	RT	811.35	INLETS 3-FT DIAMETER	R-SPECIAL	4.37	4-INCH THICK 4'X4' INSULATION	P419A	419	420	806.98	806.68	1.00	30	35	III	12	
MOORLAND ROAD	420	195+15.92	3.7	LT	812.12	MANHOLES 6-FT DIAMETER	J-SPECIAL	9.00		P420A	420	424A	803.12	802.58	1.25	44	50	III	36	
MOORLAND ROAD	424A	194+96.06	52.1	LT	810.83	MANHOLES 6-FT DIAMETER	R-SPECIAL	8.25		P424B	424A	425	802.58	801.48	1.25	88	94	III	36	
MOORLAND ROAD	425	194+00.14	48.7	LT	808.66	MANHOLES 6-FT DIAMETER	R-SPECIAL	7.18		P434	425	435	801.48	799.09	1.25	191	197	III	36	
MOORLAND ROAD	427	194+00.00	20.7	LT	809.16	INLETS 3-FT DIAMETER	R-SPECIAL	5.49		P426	427	425	803.67	803.48	1.00	19	24	III	12	
MOORLAND ROAD	429	194+00.14	14.7	LT	809.25	INLETS 3-FT DIAMETER	R-SPECIAL	5.52		P428	429	427	803.73	803.67	1.00	6	9	III	12	
MOORLAND ROAD	431	194+24.99	47.0	RT	806.50	INLETS MEDIAN 1 GRATE	MS	2.10		P432	431	433	804.40	804.10	1.00	30	33	III	12	
MOORLAND ROAD	433	193+99.89	27.9	RT	808.87	INLETS 3-FT DIAMETER	R-SPECIAL	4.77	4-INCH THICK 4'X4' INSULATION	P430	433	429	804.10	803.73	1.00	37	40	III	12	
MOORLAND ROAD	435	191+99.62	42.5	LT	806.61	MANHOLES 6-FT DIAMETER	R-SPECIAL	7.52		P442	435	443	799.09	797.93	1.25	93	99	III	36	
MOORLAND ROAD	437	192+00.00	7.6	LT	807.20	INLETS 3-FT DIAMETER	R-SPECIAL	4.25		P436	437	435	802.95	802.69	1.00	26	30	III	12	
MOORLAND ROAD	439	191+99.91	1.0	LT	807.28	INLETS 3-FT DIAMETER	R-SPECIAL	4.26		P438	439	437	803.02	802.95	1.00	7	10	III	12	
MOORLAND ROAD	441	191+99.98	16.0	RT	807.13	INLETS 3-FT DIAMETER	R-SPECIAL	4.00	4-INCH THICK 4'X4' INSULATION	P440	441	439	803.13	803.02	1.00	11	14	III	12	
MOORLAND ROAD	443	190+99.13	40.0	LT	806.13	MANHOLES 6-FT DIAMETER	R-SPECIAL	8.20		P446	443	449	797.93	796.90	1.25	82	88	III	36	
MOORLAND ROAD	445	191+06.48	16.0	RT	806.81	INLETS 3-FT DIAMETER	R-SPECIAL	4.72	4-INCH THICK 4'X4' INSULATION	P444	445	443	802.09	801.62	1.00	47	52	III	12	
MOORLAND ROAD	447	190+07.02	56.9	LT	805.30	INLETS MEDIAN 1 GRATE	MS	3.50		P448	447	449	801.80	801.62	1.00	18	22	IV	12	
MOORLAND ROAD	449	190+09.88	38.1	LT	805.91	MANHOLES 6-FT DIAMETER	R-SPECIAL	9.81		P454	449	455	796.10	794.60	1.25	120	126	HE-III	29x45	
MOORLAND ROAD	451	190+14.29	25.6	RT	807.00	INLETS MEDIAN 1 GRATE	MS	4.84		P452	451	453	802.16	802.07	1.00	9	12	III	12	
MOORLAND ROAD	453	190+10.89	16.0	RT	806.44	INLETS 3-FT DIAMETER	R-SPECIAL	4.37	4-INCH THICK 4'X4' INSULATION	P450	453	449	802.07	801.62	1.00	45	50	III	12	

TOP SLAB OPENINGS FOR INLET COVERS TYPE R-SPECIAL SHALL BE 1'-7" x 2'-6"

[1]DEPTH = RIM OR FLOW ELEV - LOWEST PIPE INVERT ELEVATION.

[A] SLOPE CALCULATED BASED ON PIPE LENGTH. PIPE LENGTH REPRESENTS LENGTH OF PIPE MEASURED FROM INSIDE FACE OF STRUCTURE TO INSIDE FACE OF STRUCTURE

[B]PIPE LENGTH SHOWN FOR SLOPE CALCULATION ONLY. NOT INTENDED FOR PAY QUANTITY.

[C]PLAN LENGTH SHOWN FOR PAY QUANTITY.

ALL ITEMS CATEGORY 0010

STORM SEWER STRUCTURES										STORM SEWER PIPES										
ROADWAY	STRUCTURE NO.	STATION	OFFSET (FT)	LOCATION	RIM OR FLOW ELEV	STRUCTURE TYPE	INLET/MANHOLE COVERS TYPE	DEPTH[1] (FT)	STRUCTURE COMMENTS	PIPE ID	FROM STR	TO STR	INLET ELEV	DISCH ELEV	SLOPE[A] %	PIPE LENGTH[B] (FT)	PLAN LENGTH[C] (FT)	PIPE CLASS	PIPE SIZE (INCH)	PIPE COMMENTS
MOORLAND ROAD	455	188+83.90	31.3	LT	804.65	MANHOLES 6-FT DIAMETER	R-SPECIAL	10.65	4-INCH THICK 4'X4' INSULATION	P458	455	459	794.00	791.79	1.25	177	183	III	36	
MOORLAND ROAD	457	188+83.85	16.0	RT	805.10	INLETS 3-FT DIAMETER	R-SPECIAL	4.60		P456	457	455	800.50	800.12	1.00	38	43	III	12	
MOORLAND ROAD	459	187+00.00	24.0	LT	801.05	MANHOLES 6-FT DIAMETER	R-SPECIAL	11.45		P462	459	463	789.60	788.42	1.25	95	101	HE-III	34x53	
MOORLAND ROAD	461	186+99.86	16.0	RT	801.47	INLETS 3-FT DIAMETER	R-SPECIAL	4.42		P460	461	459	797.05	796.74	1.00	31	36	III	12	
MOORLAND ROAD	463	185+99.32	20.3	LT	798.64	MANHOLES 6-FT DIAMETER	R-SPECIAL	10.22		P466	463	467	788.42	787.27	1.25	93	99	III	42	
MOORLAND ROAD	465	186+00.68	16.0	RT	798.85	INLETS 3-FT DIAMETER	R-SPECIAL	4.72		P464	465	463	794.13	793.86	1.00	27	32	III	12	
MOORLAND ROAD	467	185+00.35	16.5	LT	796.08	MANHOLES 7-FT DIAMETER	R-SPECIAL	8.82		P470	467	471	787.26	786.78	0.50	96	102	HE-III	38x60	
MOORLAND ROAD	469	185+00.35	16.0	RT	795.80	INLETS 3-FT DIAMETER	R-SPECIAL	3.80		P468	469	467	792.00	791.77	1.00	24	28	IV	12	
MOORLAND ROAD	471	183+99.97	16.0	LT	793.90	MANHOLES 7-FT DIAMETER	R-SPECIAL	7.12		P474	471	475	786.78	786.05	0.50	146	153	HE-III	38x60	
MOORLAND ROAD	473	184+00.10	16.0	RT	793.30	INLETS 3-FT DIAMETER	R-SPECIAL	3.42		P472	473	471	789.88	789.66	1.00	22	27	IV	12	
MOORLAND ROAD	475	182+50.00	16.0	LT	792.49	MANHOLES 7-FT DIAMETER	R-SPECIAL	6.44		P478	475	481	786.05	785.33	0.50	145	152	HE-III	38x60	
MOORLAND ROAD	477	182+50.00	16.0	RT	791.89	INLETS 3-FT DIAMETER	R-SPECIAL	3.17		P476	477	475	788.72	788.50	1.00	22	27	IV	12	
MOORLAND ROAD	479	180+99.62	16.0	RT	791.14	INLETS 3-FT DIAMETER	R-SPECIAL	3.58		P480	479	481	787.56	787.35	1.00	21	27	IV	15	
MOORLAND ROAD	481	181+00.25	16.0	LT	791.74	MANHOLES 8-FT DIAMETER	R-SPECIAL	6.41		P482	481	ENDWALL	785.33	785.00	0.50	65	69	HE-III	38x60	
MOORLAND ROAD	---	---	---	---	---	---	---	--		PE501	---	504	---	798.85	---	---	---	---	24	
MOORLAND ROAD	502	189+30.60	70.4	LT	805.29	INLETS 2x2.5-FT	T	3.88		P503	502	504	801.41	801.38	1.00	3	6	IV	12	
MOORLAND ROAD	504	189+38.72	70.6	LT	805.47	MANHOLES 4-FT DIAMETER	J-SPECIAL	6.64		PE505	504	E508	798.83	798.74	---	---	---	---	24	
MOORLAND ROAD	506	189+72.03	61.0	LT	805.38	INLETS 3-FT DIAMETER	R-SPECIAL	3.38		P507	506	E508	802.00	801.70	1.00	30	33	IV	12	
MOORLAND ROAD	E508	189+37.47	56.2	LT	805.36	---	---	---		PE509	E508	E514	798.74	---	---	---	---	---	24	
MOORLAND ROAD	510	189+86.68	30.7	RT	806.08	INLETS 3-FT DIAMETER	R-SPECIAL	3.58	DEPRESSED	P511	510	E514	802.50	802.07	1.00	43	48	IV	12	
MOORLAND ROAD	512	189+25.63	39.3	RT	806.08	INLETS 3-FT DIAMETER	R-SPECIAL	4.09		P513	512	E514	801.99	801.92	1.00	7	12	III	12	
MOORLAND ROAD	E514	189+37.91	34.7	RT	806.25	---	---	---		PE515	E514	---	798.27	---	---	---	---	---	24	

[1]DEPTH = RIM OR FLOW ELEV - LOWEST PIPE INVERT ELEVATION.

TOP SLAB OPENINGS FOR INLET COVERS TYPE R-SPECIAL SHALL BE 1'-7" x 2'-6"

[A] SLOPE CALCULATED BASED ON PIPE LENGTH. PIPE LENGTH REPRESENTS LENGTH OF PIPE MEASURED FROM INSIDE FACE OF STRUCTURE TO INSIDE FACE OF STRUCTURE

[B]PIPE LENGTH SHOWN FOR SLOPE CALCULATION ONLY. NOT INTENDED FOR PAY QUANTITY.

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STORM SEWER PIPE SUMMARY

608.0312 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 12-INCH LF	608.0315 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 15-INCH LF	608.0318 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 18-INCH LF	608.0324 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 24-INCH LF	608.0336 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 36-INCH LF	608.0342 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 42-INCH LF	608.0412 STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 12-INCH LF	608.0415 STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 15-INCH LF	608.2319 STORM SEWER PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-III 19X30-INCH LF	608.2324 STORM SEWER PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-III 24X38-INCH LF	608.2329 STORM SEWER PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-III 29X45-INCH LF	608.2334 STORM SEWER PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-III 34X53-INCH LF	SPV.0090.0083 STORM SEWER PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-IV 38X60-INCH LF	SPV.0090.0084 STORM SEWER PIPE PVC SDR-26 10-INCH LF	SPV.0090.0085 STORM SEWER PIPE PVC SDR-26 18-INCH LF
879	360	26	181	841	99	1497	195	54	1010	155	101	476	11	101

STORM SEWER STRUCTURE SUMMARY

611.2004 MANHOLES 4-FT DIAMETER EACH	611.2005 MANHOLES 5-FT DIAMETER EACH	611.2006 MANHOLES 6-FT DIAMETER EACH	611.2007 MANHOLES 7-FT DIAMETER EACH	611.2008 MANHOLES 8-FT DIAMETER EACH	611.3003 INLETS 3-FT DIAMETER EACH	611.3004 INLETS 4-FT DIAMETER EACH	611.3225 INLETS 2x2.5-FT EACH	611.3230 INLETS 2x3-FT EACH	611.3901 INLETS MEDIAN 1 GRATE EACH	611.3902 INLETS MEDIAN 2 GRATE EACH	611.0535 MANHOLE COVERS TYPE J SPECIAL EACH	611.0642 INLET COVERS TYPE MS EACH	611.0624 INLET COVERS TYPE H EACH	611.0651 INLET COVERS TYPE S EACH	611.0652 INLET COVERS TYPE T EACH	SPV.0060.0086 INLET COVERS TYPE R^2- SPECIAL EACH	SPV.0060.0088 OUTLET STRUCTURE EACH
3	8	15	4	1	48	10	12	12	5	1	8	7	22	7	6	70	1

[1]DEPTH = RIM OR FLOW ELEV - LOWEST PIPE INVERT ELEVATION.

TOP SLAB OPENINGS FOR INLET COVERS TYPE R-SPECIAL SHALL BE 1'-7" x 2'-6"

[A] SLOPE CALCULATED BASED ON PIPE LENGTH. PIPE LENGTH REPRESENTS LENGTH OF PIPE MEASURED FROM INSIDE FACE OF STRUCTURE TO INSIDE FACE OF STRUCTURE

[B]PIPE LENGTH SHOWN FOR SLOPE CALCULATION ONLY. NOT INTENDED FOR PAY QUANTITY.

[C]PLAN LENGTH SHOWN FOR PAY QUANTITY.

ALL ITEMS CATEGORY 0010

CULVERTS & APRON ENDWALLS

ROADWAY	PIPE ID	PIPE END STATION UPSTREAM	PIPE END OFFSET UPSTREAM	PIPE INVERT UPSTREAM	PIPE END STATION DOWNSTREAM	PIPE END OFFSET DOWNSTREAM	PIPE INVERT DOWNSTREAM	522.0112 CULVERT PIPE REINFORCED CONCRETE CLASS III 12-INCH LF	522.1012* APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 12-INCH EACH	522.2324 CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-III 24x38-INCH LF	522.2624* APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL 24x38-INCH EACH	611.9800.S* PIPE GRATES EACH	633.5200* MARKERS CULVERT END EACH
DURHAM DRIVE/MOORLAND ROAD													
	100	149+70.29	28.15	791.05	148+93.84	27.32	790.66	78	2	--	--	--	2
	280	163+41.40	38.51	786.30	164+02.43	-53.18	786.00	--	--	110	2	2	2
	281	163+45.96	40.29	786.30	164+07.67	-50.50	786.00	--	--	109	2	2	2
	310	166+97.06	-30.68	787.14	166+99.10	-44.03	785.37	14	2	--	--	--	2
	320	175+72.04	27.24	787.22	175+71.60	-48.64	785.70	--	--	76	2	2	2
	321	175+79.44	27.16	787.19	175+79.65	-47.59	785.70	--	--	75	2	2	2
	322	175+87.30	26.95	787.17	175+87.60	-46.68	785.70	--	--	74	2	2	2
TOTALS								92	4	444	10	10	14

* ADDITIONAL QUANTITIES LISTED ELSEWHERE

NOTES

1) ELEVATION / STATION / OFFSET ARE TO PIPE END WITHOUT ENDWALL
2) PIPE LENGTHS ARE MEASURED TO THE END OF PIPE

PIPE UNDERDRAIN

ROADWAY	ALIGNMENT	PIPE UNDERDRAIN END STATION UPSTREAM	PIPE UNDERDRAIN END STATION DOWNSTREAM	OFFSET	CONNECTING STRUCTURE	310.0110 BASE AGGREGATE OPEN GRADED TON	612.0106 PIPE UNDERDRAIN 6-INCH LF	645.0111 GEOTEXTILE TYPE DF SCHEDULE A SY
MOORLAND ROAD								
	ROUNDABOUT	12+40	10+05	LT	125	8	100	56
	MOORLAND	178+60	177+60	LT	369	8	100	56
	MOORLAND	178+60	177+60	RT	367	8	100	56
TOTALS						24	300	167

INSULATION BOARD POLYSTYRENE

LOCATION	612.0902.S INSULATION BOARD POLYSTYRENE (2-INCH) SY	REMARKS
MOORLAND ROAD		
INL 419	4	2 LAYERS 4' x 4'
INL 433	4	2 LAYERS 4' x 4'
INL 441	4	2 LAYERS 4' x 4'
INL 445	4	2 LAYERS 4' x 4'
INL 453	4	2 LAYERS 4' x 4'
INL 457	4	2 LAYERS 4' x 4'
TOTAL	**24**	

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CHECK VALVE 24-INCH

ROADWAY	PIPE ID	UPSTREAM STRUCTURE	SPV.0060.0080 TIDEFLEX CHECKMATE INLINE CHECK VALVE 24-INCH EACH
MOORLAND			
	372	371	1
TOTAL			1

PIPE CONNECTION TO EXISTING STRUCTURE

ROADWAY	STATION	OFFSET	SPV.0060.0081 PIPE CONNECTION TO EXISTING STRUCTURE EACH
MOORLAND			
	189+34.69	36'RT	1
	189+39.76	57'LT	1
	189+41.54	34'RT	1
	196+25.65	35'RT	1
	196+30.74	31'RT	1
TOTAL			5

ADJUSTING STRUCTURES

LOCATION	STATION	OFFSET FT	EXISTING RIM ELEVATION	TO	PROPOSED RIM ELEVATION	611.8115 ADJUSTING INLET COVERS EACH
MOORLAND						
	189+37.02	56'LT	805.24		805.36	1
	189+38.25	34'RT	806.43		806.25	1
	195+67.88	66'RT	812.78		812.78	1
	196+02.95	68'RT	813.11		813.21	1
	196+29.84	34'RT	814.52		814.77	1
TOTAL						5

CONCRETE COLLARS FOR PIPE

ROADWAY	STATION	OFFSET	520.8000 CONCRETE COLLARS FOR PIPE EACH
MOORLAND			
	189+38.47	68'LT	1
	189+38.89	73'LT	1
TOTAL			2

ALL ITEMS CATEGORY 0010

APRON ENDWALLS

ROADWAY	PIPE ID	PIPE END STATION	PIPE END OFFSET	PIPE INVERT	522.1012* APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 12-INCH EACH	522.1015 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 15-INCH EACH	522.1018 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 18-INCH EACH	522.1024 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH EACH	522.1030 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 30-INCH EACH	522.2619 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL 19x30-INCH EACH	522.2624* APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL 24x38-INCH EACH	522.2638 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL 38x60-INCH EACH	611.9800.S* PIPE GRATES EACH	633.5200* MARKERS CULVERT END EACH
MOORLAND ROAD														
	124	152+62.42	-117.5	794.00	1	--	--	--	--	--	--	--	--	1
	153	154+00.65	39.6	790.95	1	--	--	--	--	--	--	--	--	1
	164	158+25.00	-43.2	789.26	1	--	--	--	--	--	--	--	--	1
	173	159+05.34	33.3	789.00	1	--	--	--	--	--	--	--	--	1
	176	159+88.62	32.8	788.65	1	--	--	--	--	--	--	--	--	1
	183	161+67.89	67.0	786.73	--	--	--	1	--	--	--	--	1	1
	185	161+87.29	92.7	786.54	--	--	--	--	--	--	1	--	1	1
	221	161+92.98	90.3	786.44	--	1	--	--	--	--	--	--	--	1
	256	160.33.73	-65.6	787.42	--	1	--	--	--	--	--	--	--	1
	265D	161+88.28	-69.6	786.51	--	--	1	--	--	--	--	--	--	1
	279	162+91.87	55.4	786.50	--	--	--	--	1	--	--	--	1	1
	297	163+95.00	36.0	787.00	1	--	--	--	--	--	--	--	--	1
	307	165+32.48	33.9	786.50	1	--	--	--	--	--	--	--	--	1
	316	175+00.28	-53.0	786.11	1	--	--	--	--	--	--	--	--	1
	366	178+02.61	26.0	785.90	--	--	--	--	--	1	--	--	1	1
	372	178+06.64	-51.9	785.24	--	--	--	--	--	1	--	--	1	1
	482	180+73.02	-74.5	785.00	--	--	--	--	--	--	--	1	1	1
TOTALS					8	2	1	1	1	2	1	1	6	17

* ADDITIONAL QUANTITIES LISTED ELSEWHERE

ALL ITEMS CATEGORY 0010

REMOVING SIGNS

SIGN #	DESCRIPTION	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	SIGN MOUNTED ON SAME POST AS SIGN #	REMARKS
R100	STOP AHEAD SYMBOL	1	1	--	
R101	STOP AHEAD	1	--	R100	
R102	SPEED LIMIT 35	1	1	--	
R103	NO TRUCKING OVER 10,000 LBS	1	--	R100	
R104	STOP	1	1	--	
R105	4-WAY	1	--	R104	
R106	WOODS RD	1	1	--	
R107	DURHAM DR	1	--	R106	
R108	STOP	1	1	--	
R109	4-WAY	1	--	R108	
R110	MOORLAND RD	1	1	--	
R111	STOP	1	1	--	
R112	4-WAY	1	--	R111	
R113	STOP	1	1	--	
R114	4-WAY	1	--	R113	
R115	NO TRUCKING OVER 10,000 LBS	1	1	--	
R116	SPEED LIMIT 35	1	1	--	
R117	STOP AHEAD SYMBOL	1	1	--	
R118	STOP AHEAD	1	--	R117	
R119	CURVE LEFT AHEAD	1	1	--	
R120	WEIGHT LIMIT 5 TONS	1	--	R119	
R121	NO ENGINE BRAKING EXCEPT IN EMERGENCY	1	1	--	
R122	WEIGHT LIMIT 5 TONS	1	--	M104	
R123	STOP AHEAD SYMBOL	1	1	--	
R124	STOP AHEAD	1	--	R123	
R125	SPEED LIMIT 35	1	1	M106	
R126	STOP AHEAD SYMBOL	1	1	--	
R127	STOP AHEAD	1	--	R126	
R201	STOP	1	1	--	
R202	STOP	1	1	--	
R203	SPEED LIMIT 35	1	1	--	
R204	CURVE RIGHT AHEAD	1	1	--	
R205	CURVE RIGHT AHEAD	1	1	--	
R301	SPEED LIMIT 35	1	1	--	
R302	SPEED LIMIT 35	1	1	--	
R303	CURVE LEFT AHEAD	1	1	--	
R304	WEIGHT LIMIT 5 TONS	1	--	R303	
R305	STOP	1	1	--	
R306	STOP	1	1	--	
R307	BEGIN DIVIDED HIGHWAY	1	1	--	
R308	SPEED LIMIT 35	1	1	--	
R401	LANE DESIGNATION ARROWS	1	1	--	
R402	RIGHT LANE ENDS	1	1	--	
R403	WEIGHT LIMIT 5 TONS	1	--	R402	
R404	STOP	1	--	M402	
R405	STOP	1	1	--	
R406	KEEP RIGHT ARROW	1	1	--	
R407	SPEED LIMIT 35	1	1	--	
R408	LEFT LANE MUST TURN LEFT	1	--	R407	
R409	LEFT LANE MUST TURN LEFT	1	1	--	
R410	RIGHT LANE ENDS	1	1	--	
R411	NO TRUCKING	1	--	R410	
R412	NO TRUCKING	1	--	--	EXISTING POST TO REMAIN
R413	NO TRUCKING OVER 10,000 LBS	1	--	R412	EXISTING POST TO REMAIN
TOTALS CATEGORY 0010		**54**	**35**		

MOVING SIGNS

SIGN #	DESCRIPTION	638.2102 MOVING SIGNS TYPE II EACH	SIGN MOUNTED ON SAME POST AS SIGN #	REMARKS
M100	MUSKEGO GUIDE SIGN	1	--	REUSE EXISTING POST
M101	MUSKEGO GUIDE SIGN	1	--	REUSE EXISTING POST
M102	CHEVRON LEFT	1	--	REUSE EXISTING POST
M103	CHEVRON RIGHT	1	M102	
M104	CHEVRON LEFT	1	--	REUSE EXISTING POST
M105	CHEVRON RIGHT	1	M104	
M106	TRAIL CLOSED IN WINTER	1	R124 / P120	MOUNT ON NEW POST WITH P120
M107	ARROW RIGHT	1	M106	
M200	DURHAM PL	1	--	REUSE EXISTING POSTS
M201	MOORLAND RD	1	M200	
M202	TESS CORNERS ELEMENTARY SCHOOL	1	M200	
M203	MOORLAND RD	1	--	REUSE EXISTING POSTS
M204	CANDLEWOOD LN	1	M203	
M205	JANESVILLE RD / DURHAM DR	1	M203	
M206	CHEVRON LEFT	1	--	REUSE EXISTING POST
M207	CHEVRON RIGHT	1	M206	
M208	CHEVRON LEFT	1	--	REUSE EXISTING POST
M209	CHEVRON RIGHT	1	M208	
M210	CHEVRON LEFT	1	--	REUSE EXISTING POST
M211	CHEVRON RIGHT	1	M210	
M300	CHEVRON LEFT	1	--	REUSE EXISTING POST
M301	CHEVRON RIGHT	1	M300	
M302	CHEVRON LEFT	1	--	REUSE EXISTING POST
M303	CHEVRON RIGHT	1	M302	
M304	CHEVRON LEFT	1	--	REUSE EXISTING POST
M305	CHEVRON RIGHT	1	M304	
M306	CHEVRON LEFT	1	--	REUSE EXISTING POST
M307	CHEVRON RIGHT	1	M306	
M308	CHEVRON LEFT	1	--	REUSE EXISTING POST
M309	CHEVRON RIGHT	1	M308	
M310	CHEVRON LEFT	1	--	REUSE EXISTING POST
M311	CHEVRON RIGHT	1	M310	
M312	MOORLAND RD	1	--	REUSE EXISTING POST
M313	SANDALWOOD DR	1	M312	
M400	PRINCETON DR	1	P406	REUSE EXISTING POST
M401	MOORLAND RD	1	M400	
M402	PRINCETON DR	1	R404 / P409	REUSE EXISTING POST
M403	MOORLAND RD	1	M402	
TOTAL CATEGORY 0010		**38**		

OVERHEAD SIGN SUPPORT

LOCATION	641.8100.0001 OVERHEAD SIGN SUPPORT LS
MOORLAND ROAD	1
TOTAL CATEGORY 0010	**1**

PERMANENT SIGNING

SIGN #	SIGN CODE	DESCRIPTION	SIGN SIZE IN	637.2210 SIGNS TYPE II REFLECTIVE H SF	637.2230 SIGNS TYPE II REFLECTIVE F SF	634.0810 POSTS TUBULAR STEEL 2-IN X 2-IN X 10 FT EACH	634.0814 POSTS TUBULAR STEEL 2-IN X 2-IN X 14 FT EACH	634.0816 POSTS TUBULAR STEEL 2-IN X 2-IN X 16 FT EACH	634.0818 POSTS TUBULAR STEEL 2-IN X 2-IN X 18 FT EACH	SIGN MOUNTED ON SAME POST AS SIGN #	REMARKS
P100	W2-6	ROUNDABOUT ARROWS	30 X 30	--	6.25	--	--	1	--	--	
P102	W13-1	15 MPH	18 X 18	--	2.25	--	--	--	--	P100	
P104	R2-1	SPEED LIMIT 35	24 X 30	5.00	--	--	1	--	--	--	
P105	R4-7	KEEP RIGHT ARROW	24 X 30	5.00	--	--	1	--	--	--	BOX-OUT REQUIRED
P106	R2-1	SPEED LIMIT 35	24 X 30	5.00	--	--	1	--	--	--	
P108	W1-2L	CURVE LEFT AHEAD	30 X 30	--	6.25	--	--	1	--	--	
P109	W2-6	ROUNDABOUT ARROWS	30 X 30	--	6.25	--	--	1	--	--	
P111	W13-1	15 MPH	18 X 18	--	2.25	--	--	--	--	P109	
P112	R5-1A	WRONG WAY	36 X 24	6.00	--	--	1	--	--	--	
P113	R3-8A	LANE DESIGNATION ARROWS	36 X 30	7.50	--	--	1	--	--	--	
P114	R3-20L	BEGIN LEFT TURN LANE	24 X 36	6.00	--	--	--	1	--	--	
P115	R10-64	NO ENGINE BRAKING EXCEPT IN EMERGENCY	30 X 36	7.50	--	--	--	1	--	--	
P116	W2-6	ROUNDABOUT ARROWS	30 X 30	--	6.25	--	--	1	--	--	
P118	W13-1	15 MPH	18 X 18	--	2.25	--	--	--	--	P116	
P120	R2-1	SPEED LIMIT 35	24 X 30	5.00	--	--	--	1	--	M106	
P121	R4-7	KEEP RIGHT ARROW	24 X 30	5.00	--	--	1	--	--	--	BOX-OUT REQUIRED
P122	R4-7	KEEP RIGHT ARROW	24 X 30	5.00	--	--	1	--	--	--	BOX-OUT REQUIRED
P124	W2-6	ROUNDABOUT ARROWS	30 X 30	--	6.25	--	--	1	--	--	
P126	W13-1	15 MPH	18 X 18	--	2.25	--	--	--	--	P124	
P200	R4-7	KEEP RIGHT ARROW	24 X 30	5.00	--	--	1	--	--	--	BOX-OUT REQUIRED
P201	R6-2L	ONE WAY LEFT	24 X 30	5.00	--	--	1	--	--	--	
P202	R1-1	STOP	30 X 30	5.18	--	--	1	--	--	--	
P203	R5-1	DO NOT ENTER	30 X 30	6.25	--	--	1	--	--	--	
P204	R5-1	DO NOT ENTER	30 X 30	6.25	--	--	1	--	--	--	BOX-OUT REQUIRED
P205	R5-1	DO NOT ENTER	30 X 30	6.25	--	--	1	--	--	--	BOX-OUT REQUIRED
P206	R5-1	DO NOT ENTER	30 X 30	6.25	--	--	1	--	--	--	
P207	R1-1	STOP	30 X 30	5.18	--	--	1	--	--	--	
P208	R6-2L	ONE WAY LEFT	24 X 30	5.00	--	--	1	--	--	--	
P209	R4-7	KEEP RIGHT ARROW	24 X 30	5.00	--	--	1	--	--	--	BOX-OUT REQUIRED
P210	W6-2	DIVIDED HIGHWAY ENDS	36 X 36	--	9.00	--	--	1	--	--	
P211	R5-1A	WRONG WAY	36 X 24	6.00	--	--	1	--	--	--	
P212	R3-20L	BEGIN LEFT TURN LANE	24 X 36	6.00	--	--	--	1	--	--	
P213	R3-8A	LANE DESIGNATION ARROWS	36 X 30	7.50	--	--	1	--	--	--	
P214	R4-7	KEEP RIGHT ARROW	24 X 30	5.00	--	--	1	--	--	--	BOX-OUT REQUIRED
P215	R2-1	SPEED LIMIT 35	24 X 30	5.00	--	--	1	--	--	--	
P216	W1-2R	CURVE RIGHT AHEAD	30 X 30	--	6.25	--	--	1	--	--	
P217	W1-2R	CURVE RIGHT AHEAD	30 X 30	--	6.25	--	--	1	--	--	
P218	W6-1	BEGIN DIVIDED HIGHWAY	36 X 36	--	9.00	--	--	1	--	--	
P219	W6-3	TWO WAY TRAFFIC	36 X 36	--	9.00	--	--	1	--	--	

PERMANENT SIGNING (CONTINUED)

SIGN #	SIGN CODE	DESCRIPTION	SIGN SIZE IN	637.2210 SIGNS TYPE II REFLECTIVE H SF	637.2230 SIGNS TYPE II REFLECTIVE F SF	634.0810 POSTS TUBULAR STEEL 2-IN X 2-IN X 10 FT EACH	634.0814 POSTS TUBULAR STEEL 2-IN X 2-IN X 14 FT EACH	634.0816 POSTS TUBULAR STEEL 2-IN X 2-IN X 16 FT EACH	634.0818 POSTS TUBULAR STEEL 2-IN X 2-IN X 18 FT EACH	SIGN MOUNTED ON SAME POST AS SIGN #	REMARKS
P300	R2-1	SPEED LIMIT 35	24 X 30	5.00	--	--	1	--	--	--	
P301	R2-1	SPEED LIMIT 35	24 X 30	5.00	--	--	1	--	--	--	
P302	W6-1	BEGIN DIVIDED HIGHWAY	36 X 36	--	9.00	--	--	1	--	--	
P303	R3-8A	LANE DESIGNATION ARROWS	36 X 30	7.50	--	--	1	--	--	--	
P304	W1-2L	CURVE LEFT AHEAD	30 X 30	--	6.25	--	--	1	--	--	
P305	W6-2	DIVIDED HIGHWAY ENDS	36 X 36	--	9.00	--	--	1	--	--	
P306	W11-2	PEDESTRIAN CROSSING	30 X 30	--	6.25	--	--	1	--	--	
P307	W16-7L	DIAGONAL DOWN ARROW LEFT	24 X 12	--	2.00	--	--	--	--	P306	
P308	W11-2	PEDESTRIAN CROSSING	30 X 30	--	6.25	--	--	1	--	--	BOX-OUT REQUIRED
P309	W16-7L	DIAGONAL DOWN ARROW LEFT	24 X 12	--	2.00	--	--	--	--	P308	
P310	R1-1	STOP	30 X 30	5.18	--	--	1	--	--	--	
P311	R1-1	STOP	30 X 30	5.18	--	--	1	--	--	--	
P313	R3-7R	RIGHT LANE MUST TURN RIGHT	30 X 30	6.25	--	--	1	--	--	--	
P314	R2-1	SPEED LIMIT 35	24 X 30	5.00	--	--	1	--	--	--	
P315	R4-7	KEEP RIGHT ARROW	24 X 30	5.00	--	--	1	--	--	--	BOX-OUT REQUIRED
P400	R3-8W	LANE DESIGNATION ARROWS	54 X 30	11.25	--	--	2	--	--	--	
P401	R5-1A	WRONG WAY	36 X 24	6.00	--	--	1	--	--	--	
P402	R3-20L	BEGIN LEFT TURN LANE	24 X 36	6.00	--	--	--	1	--	--	
P403	R3-20L	BEGIN LEFT TURN LANE	24 X 36	6.00	--	--	--	1	--	--	
P404	R3-5R	RIGHT TURN ONLY ARROW	42 X 48	14.00	--	--	--	--	--	--	MOUNT ON OVERHEAD SIGN SUPPORT
P405	R3-7R	RIGHT LANE MUST TURN RIGHT	30 X 30	6.25	--	--	1	--	--	--	
P406	R5-1	DO NOT ENTER	30 X 30	6.25	--	--	--	--	--	M400	REUSE EXISTING POST FROM M400
P407	R4-7	KEEP RIGHT ARROW	24 X 30	5.00	--	--	1	--	--	--	BOX-OUT REQUIRED
P408	R6-2L	ONE WAY LEFT	24 X 30	5.00	--	--	1	--	--	--	
P409	R1-1	STOP	30 X 30	5.18	--	--	--	--	--	M402	REUSE EXISTING POST FROM M402
P410	W4-4P	CROSS TRAFFIC DOES NOT STOP	24 X 12	--	2.00	--	--	--	--	P409	
P411	R1-1	STOP	30 X 30	5.18	--	--	1	--	--	--	
P412	W4-4P	CROSS TRAFFIC DOES NOT STOP	24 X 12	--	2.00	--	--	--	--	P411	
P413	R6-2L	ONE WAY LEFT	24 X 30	5.00	--	--	1	--	--	--	
P414	R4-7	KEEP RIGHT ARROW	24 X 30	5.00	--	--	1	--	--	--	BOX-OUT REQUIRED
P415	R3-20L	BEGIN LEFT TURN LANE	24 X 36	6.00	--	--	--	1	--	--	BOX-OUT REQUIRED
P416	R2-1	SPEED LIMIT 35	24 X 30	5.00	--	--	1	--	--	--	BOX-OUT REQUIRED
P417	R5-1A	WRONG WAY	36 X 24	6.00	--	--	1	--	--	--	
P418	R3-20L	BEGIN LEFT TURN LANE	24 X 36	6.00	--	--	--	1	--	--	

PERMANENT SIGNING (CONTINUED)

SIGN #	SIGN CODE	DESCRIPTION	SIGN SIZE IN	637.2210 SIGNS TYPE II REFLECTIVE H SF	637.2230 SIGNS TYPE II REFLECTIVE F SF	634.0810 POSTS TUBULAR STEEL 2-IN X 2-IN X 10 FT EACH	634.0814 POSTS TUBULAR STEEL 2-IN X 2-IN X 14 FT EACH	634.0816 POSTS TUBULAR STEEL 2-IN X 2-IN X 16 FT EACH	634.0818 POSTS TUBULAR STEEL 2-IN X 2-IN X 18 FT EACH	SIGN MOUNTED ON SAME POST AS SIGN #	REMARKS
P500	W11-2	PEDESTRIAN CROSSING	30 X 30	--	6.25	--	--	1	--	--	
P501	W16-7L	DIAGONAL DOWN ARROW LEFT	24 X 12	--	2.00	--	--	--	--	P500	
P502	R1-2	YIELD	36 X 31	3.88	--	--	1	--	--	--	2 - 16"x16" ORANGE FLAGS; BOX-OUT REQUIRED
P503	R6-2R	ONE WAY RIGHT	24 X 30	5.00	--	--	--	--	--	P502	
P504	R1-2	YIELD	36 X 31	3.88	--	--	1	--	--	--	2 - 16"x16" ORANGE FLAGS; BOX-OUT REQUIRED
P505	R1-54	TO TRAFFIC FROM LEFT	24 X 15	2.50	--	--	--	--	--	P504	
P506	W11-2	PEDESTRIAN CROSSING	30 X 30	--	6.25	--	--	--	1	--	BOX-OUT REQUIRED
P507	W16-7L	DIAGONAL DOWN ARROW LEFT	24 X 12	--	2.00	--	--	--	--	P506	
P508	D1-1	WOODS RD	66 X 15	6.88	--	--	2	--	--	--	BOX-OUT REQUIRED
P509	W11-2	PEDESTRIAN CROSSING	30 X 30	--	6.25	--	--	1	--	--	
P510	W16-7L	DIAGONAL DOWN ARROW LEFT	24 X 12	--	2.00	--	--	--	--	P509	
P511	R1-2	YIELD	36 X 31	3.88	--	--	1	--	--	--	2 - 16"x16" ORANGE FLAGS; BOX-OUT REQUIRED
P512	R6-2R	ONE WAY RIGHT	24 X 30	5.00	--	--	--	--	--	P511	
P513	R1-2	YIELD	36 X 31	3.88	--	--	1	--	--	--	2 - 16"x16" ORANGE FLAGS; BOX-OUT REQUIRED
P514	R1-54	TO TRAFFIC FROM LEFT	24 X 15	2.50	--	--	--	--	--	P513	
P515	D1-1	MOORLAND RD	84 X 15	8.75	--	--	2	--	--	--	BOX-OUT REQUIRED
P516	W11-2	PEDESTRIAN CROSSING	30 X 30	--	6.25	--	--	1	--	--	BOX-OUT REQUIRED
P517	W16-7L	DIAGONAL DOWN ARROW LEFT	24 X 12	--	2.00	--	--	--	--	P516	
P518	W11-2	PEDESTRIAN CROSSING	30 X 30	--	6.25	--	--	1	--	--	
P519	W16-7L	DIAGONAL DOWN ARROW LEFT	24 X 12	--	2.00	--	--	--	--	P518	
P520	R1-2	YIELD	36 X 31	3.88	--	--	1	--	--	--	2 - 16"x16" ORANGE FLAGS; BOX-OUT REQUIRED
P521	R6-2R	ONE WAY RIGHT	24 X 30	5.00	--	--	--	--	--	P520	
P522	R1-2	YIELD	36 X 31	3.88	--	--	1	--	--	--	2 - 16"x16" ORANGE FLAGS; BOX-OUT REQUIRED
P523	R1-54	TO TRAFFIC FROM LEFT	24 X 15	2.50	--	--	--	--	--	P522	
P524	D1-1	WOODS RD	66 X 15	6.88	--	--	2	--	--	--	BOX-OUT REQUIRED
P525	W11-2	PEDESTRIAN CROSSING	30 X 30	--	6.25	--	--	1	--	--	BOX-OUT REQUIRED
P526	W16-7L	DIAGONAL DOWN ARROW LEFT	24 X 12	--	2.00	--	--	--	--	P525	
P527	W11-2	PEDESTRIAN CROSSING	30 X 30	--	6.25	--	--	1	--	--	
P528	W16-7L	DIAGONAL DOWN ARROW LEFT	24 X 12	--	2.00	--	--	--	--	P527	
P529	R1-2	YIELD	36 X 31	3.88	--	--	1	--	--	--	2 - 16"x16" ORANGE FLAGS; BOX-OUT REQUIRED
P530	R6-2R	ONE WAY RIGHT	24 X 30	5.00	--	--	--	--	--	P529	
P531	R1-2	YIELD	36 X 31	3.88	--	--	1	--	--	--	2 - 16"x16" ORANGE FLAGS; BOX-OUT REQUIRED
P532	R1-54	TO TRAFFIC FROM LEFT	24 X 15	2.50	--	--	--	--	--	P531	
P533	D1-1	DURHAM DR	78 X 15	8.13	--	--	2	--	--	--	BOX-OUT REQUIRED
P534	W11-2	PEDESTRIAN CROSSING	30 X 30	--	6.25	--	--	1	--	--	BOX-OUT REQUIRED
P535	W16-7L	DIAGONAL DOWN ARROW LEFT	24 X 12	--	2.00	--	--	--	--	P534	
P536	R6-1R	ONE WAY RIGHT	36 X 12	3.00	--	2	--	--	--	--	3' MOUNTING HEIGHT
P537	R6-4B	BLACK & WHITE CHEVRONS RIGHT	60 X 24	10.00	--	--	--	--	--	P536	
P538	R6-1R	ONE WAY RIGHT	36 X 12	3.00	--	2	--	--	--	--	3' MOUNTING HEIGHT
P539	R6-4B	BLACK & WHITE CHEVRONS RIGHT	60 X 24	10.00	--	--	--	--	--	P538	
P540	R6-1R	ONE WAY RIGHT	36 X 12	3.00	--	2	--	--	--	--	3' MOUNTING HEIGHT
P541	R6-4B	BLACK & WHITE CHEVRONS RIGHT	60 X 24	10.00	--	--	--	--	--	P540	
P542	R6-1R	ONE WAY RIGHT	36 X 12	3.00	--	2	--	--	--	--	3' MOUNTING HEIGHT
P543	R6-4B	BLACK & WHITE CHEVRONS RIGHT	60 X 24	10.00	--	--	--	--	--	P542	
TOTALS CATEGORY 0010				**438.75**	**190.50**	**8**	**56**	**30**	**1**		

RIPRAP ITEMS

LOCATION	STATION	OFFSET	606.0100 RIPRAP LIGHT CY	606.0200 RIPRAP MEDIUM CY	645.0120* GEOTEXTILE TYPE HR SY	645.0130 GEOTEXTILE TYPE R SY
DURHAM DRIVE / MOORLAND ROAD						
CONCRETE SURFACE DRAIN	148+75	LT	2	--	--	17
APRON ENDWALL 266	161+88	70' LT	--	2	10	--
APRON ENDWALL 280B / 281B	164+05	53' LT	--	7	29	--
APRON ENDWALL 297	163+95	36' RT	--	1	7	--
APRON ENDWALL 307	165+32	34' RT	--	1	7	--
CONCRETE SURFACE DRAIN	166+70	LT	2	--	--	17
CONCRETE SURFACE DRAIN	166+70	RT	2	--	--	17
APRON ENDWALL 310B	166+99	44' LT	--	1	7	--
CONCRETE SURFACE DRAIN	167+00	LT	2	--	--	17
CONCRETE SURFACE DRAIN	167+00	RT	2	--	--	17
CONCRETE SURFACE DRAIN	167+25	LT	2	--	--	17
CONCRETE SURFACE DRAIN	167+25	RT	2	--	--	17
CONCRETE SURFACE DRAIN	170+00	LT	2	--	--	17
CONCRETE SURFACE DRAIN	170+00	RT	2	--	--	17
APRON ENDWALL 316	175+00	53' LT	--	1	7	--
CONCRETE SURFACE DRAIN	175+60	LT	2	--	--	17
APRON ENDWALL 320B / 321B / 322B	175+80	48' LT	--	12	49	--
APRON ENDWALL 372	178+07	52' LT	--	3	14	--
APRON ENDWALL 482	180+73	75' LT	--	6	27	--
PROPOSED DETENTION BASIN						
APRON ENDWALL 185	161+87	93' RT	--	4	19	--
APRON ENDWALL 221	161+93	90' RT	--	3	14	--
APRON ENDWALL 279	162+92	55' RT	--	4	18	--
BROAD CRESTED WEIR			--	14	41	--
TOTALS CATEGORY 0010			**20**	**59**	**249**	**170**

* ADDITIONAL ITEMS LISTED ELSEWHERE

INLET PROTECTION

LOCATION	STATION	TO	STATION	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
DURHAM DRIVE / MOORLAND ROAD							
	148+35	-	151+01	4	--	4	--
	152+43	-	196+75	84	5	72	7
	196+75	-	199+33	--	--	1	--
WOODS ROAD							
	40+32	-	43+22	6	1	5	--
	44+63	-	46+64	3	--	3	--
ROUNDABOUT							
	10+00	-	12+92	6	--	4	2
CANDLEWOOD LANE							
	58+75	-	59+57	5	--	3	2
SANDALWOOD DRIVE							
	69+15	-	69+62	3	--	1	2
	70+15	-	70+63	3	--	--	3
PRINCETON DRIVE							
	79+05	-	79+37	--	--	2	--
	80+36	-	80+67	--	--	4	--
TOTALS CATEGORY 0010				**114**	**6**	**99**	**16**

GEOTEXTILE

LOCATION	645.0120* GEOTEXTILE TYPE HR SY	645.0140 GEOTEXTILE TYPE SAS SY	REMARKS
TEMPORARY SETTLING BASINS	204	--	AS NEEDED
UNDISTRIBUTED	--	8,000	FOR EBS AS NEEDED
TOTAL CATEGORY 0010	**204**	**8,000**	

*ADDITIONAL ITEMS LISTED ELSEWHERE

EROSION CONTROL & RESTORATION ITEMS

LOCATION	STA	TO	STA	SPV.0120.0001 WATER FOR SEEDED AREAS MGAL	625.0100 TOPSOIL SY	627.0200 MULCHING SY	628.1104 EROSION BALES EACH	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH	628.2008 EROSION MAT URBAN CLASS I TYPE B SY	628.6510 SOIL STABILIZER TYPE B ACRE	628.7504 TEMPORARY DITCH CHECKS LF	628.7555 CULVERT PIPE CHECKS EACH	628.7560 TRACKING PADS EACH	628.7570 ROCK BAGS EACH	629.0205 FERTILIZER TYPE A CWT	629.0210 FERTILIZER TYPE B CWT	630.0130 SEEDING MIXTURE NO. 30 LB	630.0170 SEEDING MIXTURE NO. 70 LB	630.0200 SEEDING TEMPORARY LB	630.0400 SEEDING NURSE CROP LB	631.0300 SOD WATER MGAL	631.1000 SOD LAWN SY
DURHAM DRIVE / MOORLAND ROAD																									
	148+35	-	151+01	7	1,147	119	--	156	156	--	--	238	--	--	12	--	--	--	.7	5	--	4	--	20.4	909
	152+43	-	196+75	255	13,776	4,540	203	1,652	1,652	--	--	9,079	--	60	78	2	--	--	8.7	164	--	123	--	105.4	4,697
	196+75	-	199+33	--	96	--	--		--	--	--	--	--	--	--	--	--	--	.1	--	--	--	--	2.2	96
WOODS ROAD																									
	40+32	-	43+22	23	1,063	403	--	407	407	--	--	806	--	--	6	--	--	--	.7	15	--	11	--	5.8	257
	44+63	-	46+64	--	706	--	--	335	335	--	--	--	--	--	6	--	--	--	.4	--	--	--	--	15.8	706
ROUNDABOUT																									
	10+00	-	12+92	--	292	--	--	--	--	--	--	--	--	--	--	--	--	--	.1	--	--	--	--	2.4	109
PROPOSED DETENTION BASIN																									
	-	-	-	84	2,996	998	--	--	--	--	--	2,996	.5	--	--	1	--	.6	1.3	--	11	27	15	--	--
SUBTOTAL				369	20,076	6,060	203	2,550	2,550	--	--	13,119	.5	60	102	3	--	.6	11.9	184	11	165	15	152.0	6,774
UNDISTRIBUTED				37	2,008	303	130	128	128	2	2	656	--	6	20	1	100	1.0	1.0	18	1	40	2	15.0	677
TOTALS CATEGORY 0010				**406**	**22,084**	**6,363**	**333**	**2,678**	**2,678**	**2**	**2**	**13,775**	**.5**	**66**	**122**	**4**	**100**	**1.6**	**12.9**	**202**	**12**	**205**	**17**	**167.0**	**7,451**

NOTE - UNDISTRIBUTED EROSION BALES TO BE USED FOR TEMPORARY SETTLING BASINS
- MULCHING TO BE USED FOR SEEDING TEMPORARY

ROOTSTOCK

LOCATION	SPV.0060.0005 SHALLOW MARSH ROOTSTOCK EACH	SPV.0005.0005 ROOTSTOCK PROTECTION ACRE
PROPOSED DETENTION BASIN	150	0.3
TOTALS CATEGORY 0010	**150**	**0.3**

CLAY LINING & DETENTION BASIN WATER

LOCATION	SPV.0035.0081 DETENTION BASIN CLAY LINING CY	SPV.0120.0080 DETENTION BASIN WATER MGAL
PROPOSED DETENTION BASIN	1890	400
TOTAL CATEGORY 0010	**1890**	**400**

DEWATERING

LOCATION	SPV.0105.0081 DEWATERING FOR DETENTION BASIN CONSTRUCTION LS
PROPOSED DETENTION BASIN	1
TOTAL CATEGORY 0010	**1**

3

TRAFFIC CONTROL

ROADWAY	643.5000 TRAFFIC CONTROL EACH
MOORLAND ROAD	1
TOTALS CATEGORY 0010	**1**

TRAFFIC CONTROL SIGNS PCMS

STAGE	LOCATION	DURATION DAYS	643.1050 TRAFFIC CONTROL SIGNS PCMS EACH	DAYS
1	MOORLAND ROAD	5	2	10
2	MOORLAND ROAD AT WOODS ROAD	5	3	15
3	MOORLAND ROAD AT PRINCETON DRIVE	5	1	5
	TOTAL CATEGORY 0010			**30**

TRAFFIC CONTROL DETOUR ITEMS

STAGE	LOCATION	STAGE DURATION DAYS	643.0420* TRAFFIC CONTROL BARRICADES TYPE III EACH	DAYS	643.0705* TRAFFIC CONTROL WARNING LIGHTS TYPE A EACH	DAYS	643.0900* TRAFFIC CONTROL SIGNS EACH	DAYS
1	MOORLAND ROAD DETOUR	67	--	--	--	--	64	4,288
1	PEDESTRIAN DETOUR	67	3	105	6	210	11	737
2	MOORLAND ROAD DETOUR	35	3	90	6	180	122	4,270
2	PEDESTRIAN DETOUR	35	5	175	10	350	17	595
3	MOORLAND ROAD DETOUR	30	--	--	--	--	64	1,920
3	PEDESTRIAN DETOUR	30	3	90	6	180	11	330
	TOTALS CATEGORY 0010			**370**		**740**		**11,810**

*ADDITIONAL QUANTITIES LISTED ELSEWHERE

TRAFFIC CONTROL ITEMS

STAGE	LOCATION	STAGE DURATION DAYS	643.0300 TRAFFIC CONTROL DRUMS EACH	DAYS	643.0420* TRAFFIC CONTROL BARRICADES TYPE III EACH	DAYS	643.0705* TRAFFIC CONTROL WARNING LIGHTS TYPE A EACH	DAYS	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C EACH	DAYS	643.0800 TRAFFIC CONTROL ARROW BOARDS EACH	DAYS	643.0900* TRAFFIC CONTROL SIGNS EACH	DAYS
1	MOORLAND ROAD	95	123	11,685	33	3,135	66	6,270	13	1,235	1	95	36	3,420
2	MOORLAND ROAD	35	123	4,305	42	1,470	84	2,940	13	455	1	35	33	1,155
3	MOORLAND ROAD	30	113	3,390	38	1,140	76	2,280	13	390	1	95	36	1,080
	UNDISTRIBUTED[1]	--	--	250	--	--	--	--	--	--	--	--	--	20
	TOTALS CATEGORY 0010			**15,990**		**4,605**		**9,210**		**1,690**		**130**		**4,575**

*ADDITIONAL QUANTITIES LISTED ELSEWHERE

[1] FOR SEALING NEW COLORED CONCRETE AT ROUNDABOUT

TRAFFIC CONTROL COVERING SIGNS

LOCATION	643.0920 TRAFFIC CONTROL COVERING SIGNS TYPE II CYCLES	SIGNS	EACH
UNDISTRIBUTED	1	5	5
TOTAL CATEGORY 0010			5

TRAFFIC CONTROL SIGNS FIXED MESSAGE

DESCRIPTION	SIZE IN x IN	NUMBER OF SIGNS REQUIRED	643.1000 TRAFFIC CONTROL SIGNS FIXED MESSAGE SF
MOORLAND RD	12 x 40	25	83
WOODS RD	12 x 32	17	45
DURHAM DR	12 x 36	1	3
TO WOODS RD FOLLOW MOORLAND RD DETOUR	36 x 84	2	42
ACCESS OPEN TO PRINCETON DR BUSINESSES	36 x 72	1	18
ACCESS TO PRINCETON DR BUSINESSES (RIGHT ARROW)	42 x 60	1	18
ACCESS TO PRINCETON DR BUSINESSES (LEFT ARROW)	42 x 60	1	18
ACCESS TO PRINCETON DR BUSINESSES FROM JANESVILLE RD	42 x 70	1	20
TRAIL CLOSED AT MOORLAND RD	24 x 60	2	20
TOTAL CATEGORY 0010			**267**

PAVEMENT MARKING ITEMS

LOCATION	STATION	TO	STATION	646.1020 MARKING LINE EPOXY 4-INCH SOLID WHITE LF	646.1020 SOLID YELLOW LF	646.1020 2 FT LINE 6 FT SKIP WHITE LF	646.1020 3 FT LINE 9 FT SKIP WHITE LF	646.1020 12.5 FT LINE 37.5 SKIP WHITE LF	646.3020 MARKING LINE EPOXY 8-INCH 3 FT LINE 9 FT SKIP WHITE LF	646.3020 SOLID WHITE LF	646.5020 MARKING ARROW EPOXY WHITE EACH	646.5120 MARKING WORD EPOXY WHITE EACH	646.6320 MARKING DOTTED EXTENSION EPOXY 18-INCH 2 FT LINE 1 FT SKIP WHITE LF	646.7120 MARKING DIAGONAL EPOXY 12-INCH YELLOW LF	646.7120 WHITE LF	646.7420 MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH WHITE LF	646.8120 MARKING CURB EPOXY YELLOW LF	646.8220 MARKING ISLAND NOSE EPOXY YELLOW EACH
DURHAM DRIVE / MOORLAND ROAD																		
	148+35	-	149+90	348	620	--	--	--	--	--	--	--	--	43	--	--	--	--
	149+90	-	151+01	--	274	17	--	--	--	59	--	--	21	26	11	62	36	1
	152+43	-	153+47	--	182	15	--	--	--	67	--	--	19	--	9	61	--	--
	153+47	-	196+75	7,547	8,483	--	73	72	225	1,332	16	3	--	56	--	110	90	6
	196+75	-	199+33	--	517	--	--	129	25	483	4	1	--	--	--	--	--	--
WOODS ROAD																		
	40+32	-	43+22	398	967	17	--	--	--	67	--	--	22	69	12	59	27	1
	44+63	-	46+64	258	669	11	--	--	--	58	--	--	20	24	10	59	2	1
CANDLEWOOD LANE																		
	58+75	-	59+57	--	--	--	--	--	--	--	--	--	--	--	--	115	--	--
DURHAM PLACE																		
	60+16	-	61+37	--	194	--	--	--	12	50	1	--	--	--	--	--	--	--
SANDALWOOD DRIVE																		
	69+15	-	69+62	--	--	--	--	--	--	--	--	--	--	--	--	107	--	--
PRINCETON DRIVE																		
	79+05	-	79+37	--	--	--	--	--	--	--	--	--	--	--	--	104	--	--
	80+36	-	80+67	--	12	--	--	--	--	--	--	--	--	--	--	--	--	--
SUBTOTAL				8,551	11,918	60	73	201	262	2,116	21	4	82	218	42	677	155	9
TOTALS CATEGORY 0010						**20,803**			**2,378**		**21**	**4**	**82**	**260**		**677**	**155**	**9**

TEMPORARY PAVEMENT MARKING

STAGE	LOCATION	649.0150 TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH WHITE LF	649.0150 TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH YELLOW LF	COMMENTS
1	MOORLAND ROAD	771	1,856	
2	MOORLAND ROAD	--	--	APPLICABLE MARKINGS TO REMAIN FROM STAGE 1
3	MOORLAND ROAD	516	--	APPLICABLE MARKINGS TO REMAIN FROM STAGE 1
	TOTAL CATEGORY 0010	**3,143**		

LOOP DETECTOR ITEMS

LOCATION	652.0225*[1] CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH LF	652.0800[1] CONDUIT LOOP DETECTOR LF	652.0900[1] LOOP DETECTOR SLOTS LF	653.0135[1] PULL BOXES STEEL 24X36-INCH EACH	653.0900[1] ADJUSTING PULL BOXES EACH	655.0700[1] LOOP DETECTOR LEAD IN CABLE LF	655.0800[1] LOOP DETECTOR WIRE LF
MOORLAND RD							
196+75 TO 199+32	235	156	104	1	1	700	730
TOTALS CATEGORY 0010	**235**	**156**	**104**	**1**	**1**	**700**	**730**

*ADDITIONAL QUANTITIES LISTED ELSEWHERE

[1] TO BE USED FOR THE REPAIR OF EXISTING WAUKESHA COUNTY TRAFFIC SIGNAL LOOP DETECTORS AS DIRECTED BY THE ENGINEER. SEE SPECIAL PROVISIONS.

MOBILIZATION

PROJECT ID	DESCRIPTION	619.1000 MOBILIZATION EACH
2723-00-71	MOORLAND RD	1
TOTAL CATEGORY 0010		**1**

FIELD OFFICE TYPE C

PROJECT ID	DESCRIPTION	642.5201 FIELD OFFICE TYPE C EACH
2723-00-71	MOORLAND RD	1
TOTAL CATEGORY 0010		**1**

SAWING

ROADWAY	STATION	TO	STATION	OFFSET	690.0150 SAWING ASPHALT LF	690.0250 SAWING CONCRETE LF
DURHAM DRIVE / MOORLAND ROAD						
			148+35	LT/RT	28	--
	149+00	-	149+18	RT	19	--
			149+21	LT	8	--
	149+91	-	150+25	RT	--	37
			153+76	LT	8	--
			159+42	LT	8	--
			165+00	LT	8	--
			166+91	LT	8	--
			167+09	LT	8	--
			174+91	LT	8	--
			175+09	LT	8	--
			175+63	LT	8	--
			175+97	LT	8	--
			177+95	LT	8	--
			178+31	LT	8	--
			180+78	LT	8	--
			180+96	LT	8	--
			188+83	LT	8	--
			196+75	LT/RT	72	8
	196+75	-	199+19	LT	244	3
			199+33	LT/RT	76	--
WOODS ROAD						
			40+32	RT	28	--
			41+88	LT	8	--
			46+80	LT/RT	27	3
CANDLEWOOD LANE						
			58+75	LT/RT	24	5
DURHAM DRIVE						
			61+37	LT/RT	39	--
SANDALWOOD DRIVE						
			69+15	LT/RT	34	5
			69+37	RT	8	--
			70+53	LT	24	3
			70+63	RT	15	3
PRINCETON DRIVE						
			79+05	LT/RT	34	5
			80+67	LT/RT	35	5
TOTALS CATEGORY 0010					**835**	**77**

WATER

LOCATION	624.0100 WATER MGAL
PROJECT-BASE AGGREGATE	53
PROJECT- EXCAVATION	117
TOTAL CATEGORY 0010	**170**

DUST CONTROL SURFACE TREATMENT

LOCATION	623.0200 DUST CONTROL SURFACE TREATMENT SY
MOOORLAND ROAD	31,637
TOTALS CATEGORY 0010	**31,637**

INCENTIVE/DISINCENTIVE

LOCATION	108.3100.S.0001 CD	108.3100.S.0002 CD
WOODS ROAD (STAGE 2)	10	--
PRINCETON DRIVE (STAGE 3)	--	10
TOTALS CATEGORY 0010	**10**	**10**

MAINTENANCE AND REPAIR OF HAUL ROADS

PROJECT ID	DESCRIPTION	618.0100 MAINTENANCE AND REPAIR OF HAUL ROADS (2723-00-71) EACH
2723-00-71	MOOORLAND RD	1
TOTALS CATEGORY 0030		**1**

3

CONSTRUCTION STAKING

STATION	-	STATION	LOCATION	LENGTH LF	650.4000 CONSTRUCTION STAKING STORM SEWER EACH	650.4500 CONSTRUCTION STAKING SUBGRADE LF	650.5000 CONSTRUCTION STAKING BASE LF	650.5500 CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER LF	650.6000 CONSTRUCTION STAKING PIPE CULVERTS EACH	650.9920 CONSTRUCTION STAKING SLOPE STAKES LF
148+35	-	199+32	DURHAM DRIVE/MOORLAND ROAD	5,097	107	5,097	5,097	12,693	7	5,097
40+32	-	43+22	WOODS ROAD	290	--	290	290	762	--	290
44+62	-	46+80	WOODS ROAD	218	--	218	218	513	--	218
			ROUNDABOUT	--	12	--	--	658	--	--
58+75	-	59+55	CANDLEWOOD LANE	80	--	80	80	217	--	80
60+15	-	61+36	DURHAM PLACE	121	--	121	121	106	--	121
69+15	-	69+62	SANDALWOOD DRIVE	47	--	47	47	138	--	47
70+16	-	70+63	SANDALWOOD DRIVE	47	--	47	47	117	--	47
79+05	-	79+35	PRINCETON DRIVE	30	--	30	30	145	--	30
80+30	-	80+67	PRINCETON DRIVE	37	--	37	37	103	--	37
TOTALS CATEGORY 0010				**5,967**	**119**	**5,967**	**5,967**	**15,452**	**7**	**5,967**

CONSTRUCTION STAKING

PROJECT ID	DESCRIPTION	650.8500 CONSTRUCTION STAKING ELECTRICAL INSTALLATIONS (2723-00-71) LS	650.9000 CONSTRUCTION STAKING CURB RAMPS EACH	650.9910 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (2723-00-71) LS	SPV.0105.0003 CONSTRUCTION STAKING DETENTION BASIN LS
2723-00-71	MOORLAND ROAD	1	24	1	1
TOTALS CATEGORY 0010		**1**	**24**	**1**	**1**

LIGHTING AND MISCELLANEOUS

DESCRIPTION	LOCATION	653.0140 PULL BOXES STEEL 24x42-INCH EACH	654.0105 CONCRETE BASES TYPE 5 EACH	654.0230 CONCRETE CONTROL CABINET BASES TYPE L30 EACH	655.0610 ELECTRICAL WIRE LIGHTING 12 AWG LF	657.0255 TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE EACH	657.0322 POLES TYPE 5-ALUMINUM EACH	657.0615 LUMINAIRE ARMS SINGLE MEMBER 4 1/2-INCH CLAMP 8-FT EACH	659.2230 LIGHTING CONTROL CABINETS 240/480 30-INCH EACH	SPV.0060.0011 PLAQUES SEQUENCE IDENTIFICATION EACH	SPV.0060.0012 LED ROADWAY LUMINAIRE EACH	REMARKS
DMW-3	STA 149+32.02, 21.77' RT	--	1	--	126	1	1	1	--	1	1	
CMW-3	STA 150+40.26, 30.25' RT	--	1	--	126	1	1	1	--	1	1	
PB-MW-6	STA 150+98.13, 55.26' RT	1	--	--	--	--	--	--	--	--	--	
DMW-2	STA 44+70.86, 42.97' RT	--	1	--	126	1	1	1	--	1	1	
PB-MW-5	STA 45+53.34, 33.78' RT	1	--	--	--	--	--	--	--	--	--	
CMW-2	STA 46+56.60, 21.31' LT	--	1	--	126	1	1	1	--	1	1	
DMW-1	STA 45+57.73, 26.40' LT	--	1	--	126	1	1	1	--	1	1	
CMW-1	STA 152+66.70, 37.57' RT	--	1	--	126	1	1	1	--	1	1	
PB-MW-1	STA 152+91.34, 76.16' LT	1	--	--	--	--	--	--	--	--	--	
LIGHTING CABINET MW	STA 152+93.08, 89.78' LT	--	--	1	--	--	--	--	1	--	--	
EMW-1	STA 42+94.80, 60.99' LT	--	1	--	126	1	1	1	--	1	1	
PB-MW-7	STA 43+06.27, 41.94' RT	1	--	--	--	--	--	--	--	--	--	
FMW-1	STA 150+88.62, 72.51' LT	--	1	--	126	1	1	1	--	1	1	
EMW-2	STA 42+34.06, 26.98' RT	--	1	--	126	1	1	1	--	1	1	
FMW-2	STA 41+23.50, 20.13' RT	--	1	--	126	1	1	1	--	1	1	
BMW-2	STA 59+23.70, 20.52' RT	--	1	--	126	1	1	1	--	1	1	
PB-MW-4	STA 160+84.70, 51.38' RT	1	--	--	--	--	--	--	--	--	--	
AMW-2	STA 161+40.82, 49.51' RT	--	1	--	126	1	1	1	--	1	1	
PB-MW-3	STA 155+48.22, 20.34' RT	1	--	--	--	--	--	--	--	--	--	
PB-MW-2	STA 155+42.97, 48.79' LT	1	--	--	--	--	--	--	--	--	--	
BMW-1	STA 154+40.76, 45.61' LT	--	1	--	126	1	1	1	--	1	1	
AMW-1	STA 153+18.70, 53.12' LT	--	1	--	126	1	1	1	--	1	1	
	TOTALS CATEGORY 0010	**7**	**14**	**1**	**1764**	**14**	**14**	**14**	**1**	**14**	**14**	

LIGHTING -DISTRIBUTION CENTERS - ELECTRICAL SERVICE

DESCRIPTION	LOCATION	656.0400.0001 ELECTRIC SERVICE MAIN LUGS ONLY LS	REMARKS
LIGHTING CABINET MW	STA 152+93.08, 89.78' LT	1	240/480V,100A, 1PH. 3W. (NOTE 1)
	TOTAL CATEGORY 0010	**1**	

3

LIGHTING - WIRE AND CONDUIT

FROM	TO	652.0225* CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH LF	652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH LF	655.0625 ELECTRICAL WIRE LIGHTING 6 AWG LF	REMARKS
STUB	DMW-3	45	--	--	
DMW-3	CMW-3	115	--	488	
CMW-3	PB-MW-6	55	--	248	
PB-MW-6	DMW-2	20	--	108	
DMW-2	PB-MW-5	95	--	408	
PB-MW-5	DMW-1	70	--	308	
STUB	CMW-2	45	--	--	
DMW-1	CMW-2	110	--	468	
DMW-1	CMW-1	130	--	548	
CMW-1	PB-MW-1	120	--	508	
PB-MW-1	LIGHTING CABINET MW	--	15	264	
PB-MW-1	LIGHTING CABINET MW	--	15	--	
PB-MW-6	FMW-1	135	--	--	
FMW-1	PB-MW-7	25	--	128	
STUB	EMW-1	45	--	--	
PB-MW-7	EMW-1	115	--	488	
EMW-1	PB-MW-1	70	--	308	
STUB	FMW-2	45	--	--	
FMW-2	EMW-2	120	--	508	
EMW-2	PB-MW-7	75	--	328	
PB-MW-4	BMW-2	45	--	--	
BMW-2	PB-MW-4	155	--	648	
STUB	AMW-2	45	--	--	
PB-MW-4	AMW-2	--	65	576	
PB-MW-4	PB-MW-8	320	--	1308	
PB-MW-8	PB-MW-3	320	--	1308	
PB-MW-3	PB-MW-2	80	--	348	
PB-MW-2	BMW-1	110	--	468	
BMW-1	AMW-1	135	--	568	
AMW-1	PB-MW-1	45	--	208	
	TOTALS CATEGORY 0010	**2,690**	**95**	**10,540**	

*ADDITIONAL QUANTITIES LISTED ELSEWHERE

3

WATER MAIN ITEMS

LOCATION	SPV.0060.0050 HYDRANT ASSEMBLY RELOCATION EACH	SPV.0060.0051 HYDRANT ASSEMBLY VALVE & TEE RELOCATION EACH	SPV.0060.0055 ADJUSTING WATER VALVES EACH	SPV.0090.0050 REMOVING WATER MAIN LF	SPV.0090.0051 PVC HYDRANT LEAD 6-INCH LF	SPV.0090.0052 PVC WATER MAIN 8-INCH LF	SPV.0090.0053 PVC WATER MAIN 16-INCH LF
MOORLAND RD	1	--	--	38	--	--	--
WOODS RD	--	1	--	9	5	--	90
SANDALWOOD DR	--	--	--	62	--	62	--
PROJECT	--	--	25	--	--	--	--
TOTALS CATEGORY 0020	**1**	**1**	**25**	**109**	**5**	**62**	**90**

SANITARY SEWER ITEMS

LOCATION	STA	OFFSET	EXIST ELEV	PROP ELEV	611.0420 RECONSTRUCTING MANHOLES EACH	611.8110 ADJUSTING MANHOLE COVERS EACH	SPV.0060.0056 SANITARY MANHOLE SEAL EXTERNAL EACH
WOODS ROAD							
	44+76	10' LT	795.44	797.01	1	--	1
CANDLEWOOD LANE							
	59+25	1' RT	789.64	789.61	--	1	1
TOTAL CATEGORY 0020					**1**	**1**	**2**

TRANSPORTATION PROJECT PLAT NO: 2723-00-01 - 4.01

PART OF LOT 1, OF DURHAMSWOOD SUBDIVISION, PART OF PARCEL 1, OF CSM NO.9347, AND PART OF LOT 38, OF CANDLEWOOD CREEK SUBDIVISION, ALL LOCATED IN THE SW 1/4 OF THE NE 1/4 OF SECTION 11, IN TOWNSHIP 05 NORTH, RANGE 20 EAST, SITUATED IN THE CITY OF MUSKEGO, WAUKESHA COUNTY, WISCONSIN.

RELOCATION ORDER MOORLAND ROAD WAUKESHA COUNTY

TO PROPERLY ESTABLISH, LAY OUT, WIDEN, ENLARGE, EXTEND, CONSTRUCT, RECONSTRUCT, IMPROVE, OR MAINTAIN A PORTION OF THE HIGHWAY DESIGNATED ABOVE, THE CITY OF MUSKEGO DEEMS IT NECESSARY TO RELOCATE OR CHANGE SAID HIGHWAY AND ACQUIRE CERTAIN LANDS AND INTERESTS OR RIGHTS IN LANDS FOR THE ABOVE NAMED PROJECT.

TO EFFECT THIS CHANGE, PURSUANT TO AUTHORITY GRANTED UNDER SUBSECTION 62.22, WISCONSIN STATUTES, THE CITY OF MUSKEGO HEREBY ORDERS THAT:
1. THAT PORTION OF SAID HIGHWAY AS SHOWN ON THIS PLAT IS LAID OUT AND ESTABLISHED TO THE LINES AND WIDTHS AS SO SHOWN FOR THE ABOVE NAMED PROJECT.
2. THE LANDS OR INTERESTS OR RIGHTS IN LANDS AS SHOWN ON THIS PLAT ARE REQUIRED BY THE CITY OF MUSKEGO FOR THE ABOVE PROJECT AND SHALL BE ACQUIRED IN THE NAME OF THE CITY OF MUSKEGO, PURSUANT TO THE PROVISIONS OF SUBSECTION 62.22, WISCONSIN STATUTES.

4250756
REGISTER OF DEEDS
WAUKESHA COUNTY, WI
RECORDED ON
December 09, 2016 12:31 PM
James R Behrend
Register of Deeds
1 PG
TOTAL FEE:$25.00
TRANS FEE:$0.00
Book 1 Page 100-100

RESERVED FOR REGISTER OF DEEDS
PROJECT NUMBER 2723-00-01 - 4.01
AMENDMENT NO:...

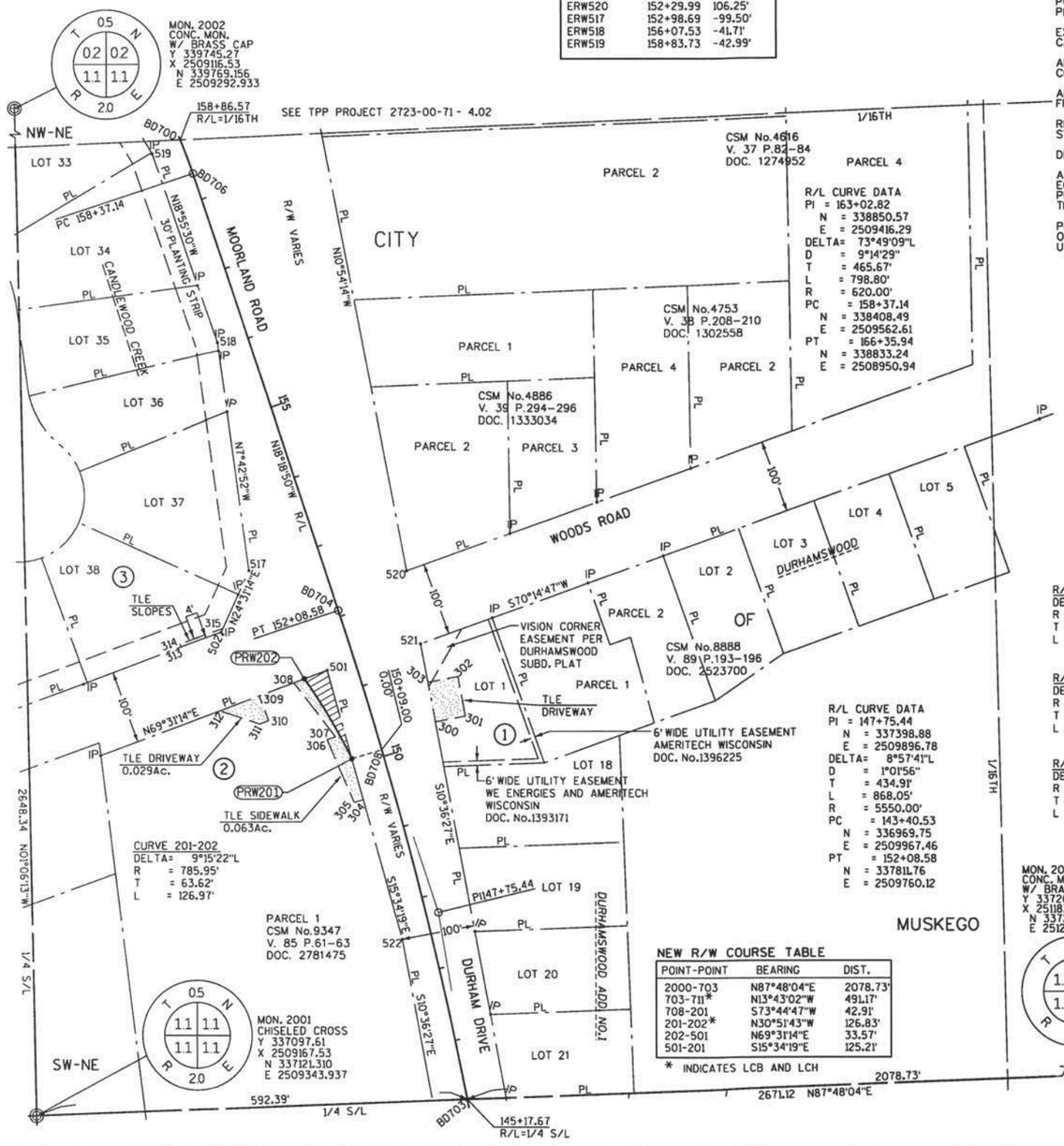
SCHEDULE OF LANDS & INTERESTS REQUIRED

OWNER'S NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY, AND ARE SUBJECT TO CHANGE PRIOR TO TRANSFER OF LAND INTERESTS TO THE CITY OF MUSKEGO.

PARRCEL NUMBER	OWNER(S)	INTEREST REQUIRED	NEW R/W ACRES	PLE ACRES	TLE ACRES
1	TERRANCE R. AND JOAN L. SIEFERT	TLE	0.00	0.00	0.053
2	GLORIA E. BARTZ	FEE, TLE	0.043	0.00	0.092
3	DENNIS A. AND MARY B. PIEKARSKI	TLE	0.00	0.00	0.006

STATION OFFSET TABLE

POINT No.	STATION	OFFSET
PRW201	150+09.00	-42.91'
PRW202	151+33.39	-73.52'
ERW501	151+35.12	-39.99'
ERW502	152+31.13	-162.14
TLE304	149+50.00	-43.29'
TLE305	149+50.00	-56.29'
TLE301	150+20.52	123.24'
TLE300	150+24.68	81.45'
TLE306	150+44.00	-68.22'
TLE307	150+44.00	-56.00'
TLE302	150+74.00	129.03'
TLE303	150+78.55	87.28'
TLE308	151+32.58	-88.93'
TLE311	150+92.26	-150.49'
TLE310	150+93.04	-137.52'
TLE312	151+26.79	-197.43'
TLE309	151+29.91	-139.51'
TLE313	152+28.91	-220.77'
TLE314	152+32.91	-220.93'
TLE315	152+35.27	-158.30'
ERW522	147+50.90	-40.00'
ERW521	151+30.93	93.48'
ERW520	152+29.99	106.25'
ERW517	152+98.69	-99.50'
ERW518	156+07.53	-41.71'
ERW519	158+83.73	-42.99'



NOTES:

POSITIONS SHOWN ON THIS PLAT ARE BASED ON THE WISCONSIN STATE PLANE COORDINATE SYSTEM, SOUTH ZONE (NAD-27) IN U.S. SURVEY FEET. ALL PLAT DISTANCES ARE GROUND LENGTH AND MAY BE CONVERTED TO GRID LENGTH BY MULTIPLYING THE DISTANCE BY THE GRID FACTOR OF 0.9999297.

EXISTING RIGHT-OF-WAY WAS RE-ESTABLISHED UNDER PROJECT: DURHAMSWOOD SUBDIVISION PLAT, DURHAMSWOOD ADDITION NO.1 SUBDIVISION PLAT, CANDLEWOOD CREEK SUBDIVISION PLAT, CSM NO.4616, CSM NO.4753, CSM NO.4886, CSM NO.9347, AND DEEDS OF RECORD.

ALL NEW RIGHT-OF-WAY MONUMENTS WILL BE TYPE 2 (TYPICALLY 1"X24" IRON PIPE), UNLESS OTHERWISE NOTED, AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

ALL RIGHT-OF-WAY LINES DEPICTED IN THE NON-ACQUISITION AREAS ARE INTENDED TO RE-ESTABLISH EXISTING RIGHT-OF-WAY LINES AS DETERMINED FROM PREVIOUS PROJECTS, OTHER RECORDED DOCUMENTS, OR FROM CENTERLINE OF EXISTING PAVEMENTS.

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.

DIMENSIONING FOR THE NEW RIGHT-OF-WAY IS MEASURED ALONG AND PERPENDICULAR TO THE NEW REFERENCE LINES.

A TEMPORARY LIMITED EASEMENT (TLE) IS A RIGHT FOR CONSTRUCTION PURPOSES, AS DEFINED HEREIN, INCLUDING THE RIGHT TO OPERATE NECESSARY EQUIPMENT THEREON, THE RIGHT OF INGRESS AND EGRESS, AS LONG AS REQUIRED FOR SUCH PUBLIC PURPOSE, INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE, OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES MAY DEEM DESIRABLE. ALL (TLEs) ON THIS PLAT EXPIRE AT THE COMPLETION OF THE CONSTRUCTION PROJECT FOR WHICH THIS INSTRUMENT IS GIVEN.

PROPERTY LINES SHOWN ON THIS PLAT ARE DRAWN FROM DATA DERIVED FROM MAPS AND DOCUMENTS OF PUBLIC RECORD AND/OR EXISTING OCCUPATIONAL LINES. THIS PLAT MAY NOT BE A TRUE REPRESENTATION OF EXISTING PROPERTY LINES, EXCLUDING RIGHT-OF-WAY, AND SHOULD NOT BE USED AS A SUBSTITUTE FOR AN ACCURATE FIELD SURVEY.

COURSE TABLE

POINT TO POINT	BEARING	DIST.
PARCEL 1		
300-303	N10°36'27"W	55.00'
303-302	N79°23'33"E	42.00'
302-301	S10°36'27"E	55.00'
301-300	S79°23'33"W	42.00'
PARCEL 2		
501-201	S15°34'19"E	125.21'
201-202*	N30°51'43"W	126.83'
202-501	N69°31'14"E	33.57'
201-304	N15°34'19"W	58.54'
304-305	S74°21'20"W	13.00'
305-306	N23°26'28"W	93.71'
306-307	N73°23'07"E	12.22'
307-308	N37°42'39"W	93.42'
308-202	N69°31'14"E	15.43'
309-310	S20°28'46"E	36.00'
310-311	S69°31'14"W	13.00'
311-312	N7°49'11"W	57.63'
312-309	N69°31'14"E	58.00'
703-708*	N13°43'02"W	491.17'
708-201	S73°44'47"W	42.91'
PARCEL 3		
502-313	S69°31'14"W	58.67'
313-314	N20°28'46"W	4.00'
314-315	N69°31'14"E	62.67'
315-502	S24°31'14"W	5.66'

* INDICATES LCB AND LCH

COURSE TABLE R/L ALIGNMENT

POINT TO POINT	BEARING	DISTANCE
703-704*	N14°44'51"W	690.47'
704-706	N18°18'50"W	628.56'
706-700*	N20°35'52"W	49.41'

* INDICATES LCB AND LCH

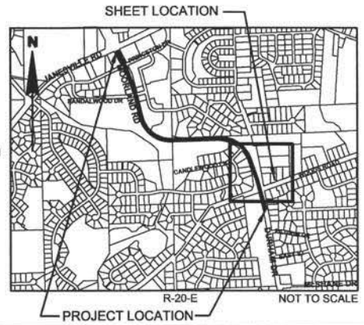
CONVENTIONAL SYMBOLS AND ABBREVIATIONS

STATE, COUNTY, or TOWN LINE		ACCESS POINT/ DRIVEWAY CONNECTION	AP
SECTION LINE		ACCESS RIGHTS	AR
QUARTER LINE		ACRES	AC.
SIXTEENTH LINE		AND OTHERS	ET.AL.
PROPOSED REFERENCE LINE		CENTERLINE	C/L
PROPOSED R/W LINE		CERTIFIED SURVEY MAP	CSM
EXISTING H.E. LINE		DOCUMENT	DOC.
PROPERTY LINE		HIGHWAY EASEMENT	H.E.
EASEMENT LINE		LAND CONTRACT	LC
CORPORATE LIMITS		MONUMENT	MON.
EXISTING CENTERLINE		PAGE	P.
LOT & TIE LINES		PERMANENT LIMITED EASEMENT	PLE
UTILITIES	FO (TYPE)	PROPERTY LINE	PL
(TELEPHONE,GAS,ELECTRIC,CABLE TV,FIBER OPTIC)		RECORDED AS	(100')
NO ACCESS (BY PREVIOUS ACQUISITION/CONTROL)		REFERENCE LINE	R/L
NO ACCESS (BY ACQUISITION)		REMAINING	REM.
NO ACCESS (BY STATUTORY AUTHORITY)		RIGHT-OF-WAY	R/W
FEE (HATCH VARIES)		SECTION	SEC.
TEMPORARY LIMITED EASEMENT		SQUARE FEET	SQ.FT.
PERMANENT LIMITED EASEMENT		STATION	STA.
PARCEL NUMBER	102	TEMPORARY LIMITED EASEMENT	TLE
UTILITY PARCEL NUMBER	92	VOLUME	V.
SIGN NUMBER (OFF PREMISE)	21-0		
BUILDING			
FOUND IRON PIPE/PIN	LP (1" UNLESS NOTED)		
R/W MONUMENT	●(SET)		
R/W STANDARD	▲(SET)		
SIGN	ISIGN		
SECTION CORNER SYMBOL			

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

	NON COMPENSABLE	COMPENSABLE
POWER POLE	⏚	⏚
TELEPHONE POLE	⌀	⌀
TELEPHONE PEDESTAL	⌧	⌧



0 100 200
SCALE, FEET

KAPUR & ASSOCIATES, INC.
CONSULTING ENGINEERS
MILWAUKEE, WISCONSIN
414.351.6668

CITY OF MUSKEGO

I, ERIK A. GUSTAFSON PROFESSIONAL LAND SURVEYOR, HEREBY CERTIFY THAT IN FULL COMPLIANCE WITH THE PROVISIONS OF SECTION 84.095 OF THE WISCONSIN STATUTES AND UNDER THE DIRECTION OF THE CITY OF MUSKEGO, I HAVE MAPPED THIS TRANSPORTATION PROJECT PLAT AND SUCH PLAT CORRECTLY REPRESENTS ALL EXTERIOR BOUNDARIES OF THE SURVEYED LAND.

SIGNATURE: Erik A. Gustafson DATE: 11/11/2016
PRINT NAME: ERIK A. GUSTAFSON
REGISTRATION NUMBER: S-2329

WISCONSIN ERIK A. GUSTAFSON S-2329 HOWARDS GROVE, WISCONSIN LAND SURVEYOR

THIS PLAT AND RELOCATION ORDER ARE APPROVED FOR THE CITY OF MUSKEGO

SIGNATURE: _____ DATE: 12/1/16
PRINT NAME: Kathy Chaverott

FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Survey\RW_PLAT\150245_TPP-01.dgn PLOT DATE : 11/14/2016 PLOT BY : swarther PLOT NAME : PLOT SCALE : 1:100 PROJECT 2723-00-01 - 4.01

TRANSPORTATION PROJECT PLAT NO: 2723-00-01 - 4.02

PART OF OUTLOT 3, OF CANDLEWOOD CREEK SUBDIVISION, LOCATED IN THE NE 1/4 OF THE NW 1/4 OF SECTION 11, IN TOWNSHIP 05 NORTH, RANGE 20 EAST, SITUATED IN THE CITY OF MUSKEGO, WAUKESHA COUNTY, WISCONSIN.

RELOCATION ORDER MOORLAND ROAD WAUKESHA COUNTY

TO PROPERLY ESTABLISH, LAY OUT, WIDEN, ENLARGE, EXTEND, CONSTRUCT, RECONSTRUCT, IMPROVE, OR MAINTAIN A PORTION OF THE HIGHWAY DESIGNATED ABOVE, THE CITY OF MUSKEGO DEEMS IT NECESSARY TO RELOCATE OR CHANGE SAID HIGHWAY AND ACQUIRE CERTAIN LANDS AND INTERESTS OR RIGHTS IN LANDS FOR THE ABOVE NAMED PROJECT.

TO EFFECT THIS CHANGE, PURSUANT TO AUTHORITY GRANTED UNDER SUBSECTION 62.22, WISCONSIN STATUTES, THE CITY OF MUSKEGO HEREBY ORDERS THAT:
1. THAT PORTION OF SAID HIGHWAY AS SHOWN ON THIS PLAT IS LAID OUT AND ESTABLISHED TO THE LINES AND WIDTHS AS SO SHOWN FOR THE ABOVE NAMED PROJECT.
2. THE LANDS OR INTERESTS OR RIGHTS IN LANDS AS SHOWN ON THIS PLAT ARE REQUIRED BY THE CITY OF MUSKEGO FOR THE ABOVE PROJECT AND SHALL BE ACQUIRED IN THE NAME OF THE CITY OF MUSKEGO, PURSUANT TO THE PROVISIONS OF SUBSECTION 62.22, WISCONSIN STATUTES.

4250757
REGISTER OF DEEDS
WAUKESHA COUNTY, WI
RECORDED ON
December 09, 2016 12:31 PM
James R Behrend
Register of Deeds
1 PG
TOTAL FEE:$25.00
TRANS FEE:$0.00
Book 1 Page 181-181

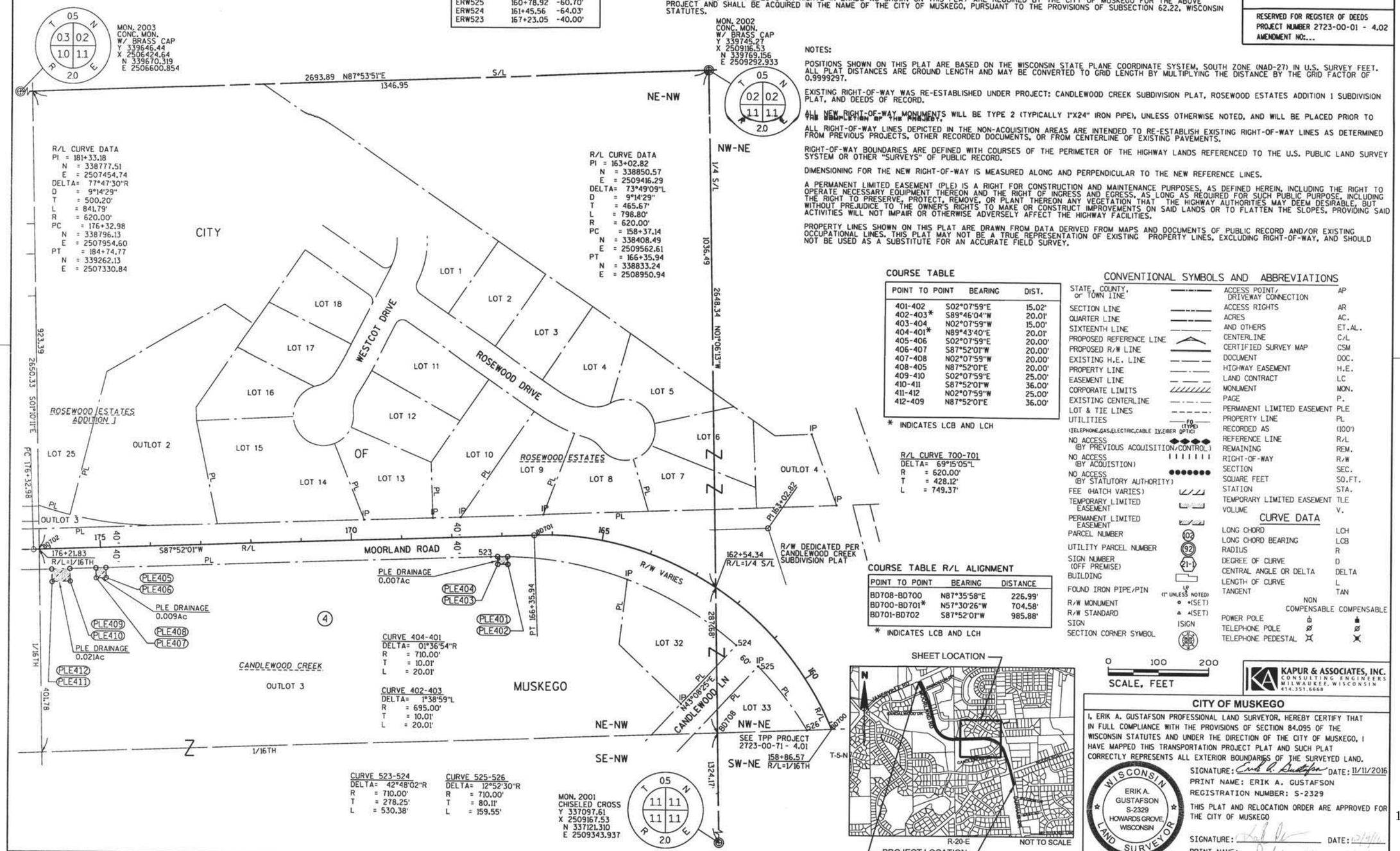
RESERVED FOR REGISTER OF DEEDS
PROJECT NUMBER 2723-00-01 - 4.02
AMENDMENT NO:...

SCHEDULE OF LANDS & INTERESTS REQUIRED

OWNER'S NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY, AND ARE SUBJECT TO CHANGE PRIOR TO TRANSFER OF LAND INTERESTS TO THE CITY OF MUSKEGO.

PARRCEL NUMBER	OWNER(S)	INTEREST REQUIRED	NEW R/W ACRES	PLE ACRES	TLE ACRES
4	CANDLEWOOD CREEK HOMEOWNERS ASSOCIATION	PLE	0.000	0.037	0.000

STATION OFFSET TABLE		
POINT No.	STATION	OFFSET
PLE401	166+90.00	-40.77'
PLE402	166+90.00	-55.79'
PLE403	167+10.00	-55.12'
PLE404	167+10.00	-40.12'
PLE405	174+90.00	-40.00'
PLE406	174+90.00	-60.00'
PLE407	175+10.00	-60.00'
PLE408	175+10.00	-40.00'
PLE409	175+62.00	-40.00'
PLE410	175+62.00	-65.00'
PLE411	175+98.00	-65.00'
PLE412	175+98.00	-40.00'
ERW526	159+05.01	-45.49'
ERW525	160+78.92	-60.70'
ERW524	161+45.56	-64.03'
ERW523	167+23.05	-40.00'



NOTES:

POSITIONS SHOWN ON THIS PLAT ARE BASED ON THE WISCONSIN STATE PLANE COORDINATE SYSTEM, SOUTH ZONE (NAD-27) IN U.S. SURVEY FEET. ALL PLAT DISTANCES ARE GROUND LENGTH AND MAY BE CONVERTED TO GRID LENGTH BY MULTIPLYING THE DISTANCE BY THE GRID FACTOR OF 0.9999297.

EXISTING RIGHT-OF-WAY WAS RE-ESTABLISHED UNDER PROJECT: CANDLEWOOD CREEK SUBDIVISION PLAT, ROSEWOOD ESTATES ADDITION 1 SUBDIVISION PLAT, AND DEEDS OF RECORD.

ALL NEW RIGHT-OF-WAY MONUMENTS WILL BE TYPE 2 (TYPICALLY 1"X24" IRON PIPE), UNLESS OTHERWISE NOTED, AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

ALL RIGHT-OF-WAY LINES DEPICTED IN THE NON-ACQUISITION AREAS ARE INTENDED TO RE-ESTABLISH EXISTING RIGHT-OF-WAY LINES AS DETERMINED FROM PREVIOUS PROJECTS, OTHER RECORDED DOCUMENTS, OR FROM CENTERLINE OF EXISTING PAVEMENTS.

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.

DIMENSIONING FOR THE NEW RIGHT-OF-WAY IS MEASURED ALONG AND PERPENDICULAR TO THE NEW REFERENCE LINES.

A PERMANENT LIMITED EASEMENT (PLE) IS A RIGHT FOR CONSTRUCTION AND MAINTENANCE PURPOSES, AS DEFINED HEREIN, INCLUDING THE RIGHT TO OPERATE NECESSARY EQUIPMENT THEREON AND THE RIGHT OF INGRESS AND EGRESS, AS LONG AS REQUIRED FOR SUCH PUBLIC PURPOSE, INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE, OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES MAY DEEM DESIRABLE, BUT WITHOUT PREJUDICE TO THE OWNER'S RIGHTS TO MAKE OR CONSTRUCT IMPROVEMENTS ON SAID LANDS OR TO FLATTEN THE SLOPES, PROVIDING SAID ACTIVITIES WILL NOT IMPAIR OR OTHERWISE ADVERSELY AFFECT THE HIGHWAY FACILITIES.

PROPERTY LINES SHOWN ON THIS PLAT ARE DRAWN FROM DATA DERIVED FROM MAPS AND DOCUMENTS OF PUBLIC RECORD AND/OR EXISTING OCCUPATIONAL LINES. THIS PLAT MAY NOT BE A TRUE REPRESENTATION OF EXISTING PROPERTY LINES, EXCLUDING RIGHT-OF-WAY, AND SHOULD NOT BE USED AS A SUBSTITUTE FOR AN ACCURATE FIELD SURVEY.

COURSE TABLE

POINT TO POINT	BEARING	DIST.
401-402	S02°07'59"E	15.02'
402-403*	S89°46'04"W	20.01'
403-404	N02°07'59"W	15.00'
404-401*	N89°43'40"E	20.01'
405-406	S02°07'59"E	20.00'
406-407	S87°52'01"W	20.00'
407-408	N02°07'59"W	20.00'
408-405	N87°52'01"E	20.00'
409-410	S02°07'59"E	25.00'
410-411	S87°52'01"W	36.00'
411-412	N02°07'59"W	25.00'
412-409	N87°52'01"E	36.00'

* INDICATES LCB AND LCH

COURSE TABLE R/L ALIGNMENT

POINT TO POINT	BEARING	DISTANCE
BD708-BD700	N87°35'58"E	226.99'
BD700-BD701*	N57°30'26"W	704.58'
BD701-BD702	S87°52'01"W	985.88'

* INDICATES LCB AND LCH

CONVENTIONAL SYMBOLS AND ABBREVIATIONS

STATE, COUNTY, or TOWN LINE		ACCESS POINT/ DRIVEWAY CONNECTION	AP
SECTION LINE		ACCESS RIGHTS	AR
QUARTER LINE		ACRES	AC.
SIXTEENTH LINE		AND OTHERS	ET.AL.
PROPOSED REFERENCE LINE		CENTERLINE	C/L
PROPOSED R/W LINE		CERTIFIED SURVEY MAP	CSM
EXISTING H.E. LINE		DOCUMENT	DOC.
PROPERTY LINE		HIGHWAY EASEMENT	H.E.
EASEMENT LINE		LAND CONTRACT	LC
CORPORATE LIMITS		MONUMENT	MON.
EXISTING CENTERLINE		PAGE	P.
LOT & TIE LINES		PERMANENT LIMITED EASEMENT	PLE
UTILITIES (TELEPHONE,GAS,ELECTRIC,CABLE TV,FIBER OPTIC)	FO (TYPE) OPTIC	PROPERTY LINE	PL
NO ACCESS (BY PREVIOUS ACQUISITION/CONTROL)		RECORDED AS	(100')
NO ACCESS (BY ACQUISITION)		REFERENCE LINE	R/L
NO ACCESS (BY STATUTORY AUTHORITY)		REMAINING	REM.
FEE (HATCH VARIES)		RIGHT-OF-WAY	R/W
TEMPORARY LIMITED EASEMENT		SECTION	SEC.
PERMANENT LIMITED EASEMENT		SQUARE FEET	SQ.FT.
PARCEL NUMBER	(02)	STATION	STA.
UTILITY PARCEL NUMBER	(92)	TEMPORARY LIMITED EASEMENT	TLE
SIGN NUMBER (OFF PREMISE)	(21-1)	VOLUME	V.
BUILDING		FOUND IRON PIPE/PIN (1" UNLESS NOTED)	⌀
R/W MONUMENT	●(SET)		
R/W STANDARD	▲(SET)		
SIGN	ISIGN		
SECTION CORNER SYMBOL			

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

	NON COMPENSABLE	COMPENSABLE
POWER POLE	⏚	⏚
TELEPHONE POLE	⌀	⌀
TELEPHONE PEDESTAL	⌧	⌧

0 100 200
SCALE, FEET

KAPUR & ASSOCIATES, INC.
CONSULTING ENGINEERS
MILWAUKEE, WISCONSIN
414.351.6668

CITY OF MUSKEGO

I, ERIK A. GUSTAFSON PROFESSIONAL LAND SURVEYOR, HEREBY CERTIFY THAT IN FULL COMPLIANCE WITH THE PROVISIONS OF SECTION 84.095 OF THE WISCONSIN STATUTES AND UNDER THE DIRECTION OF THE CITY OF MUSKEGO, I HAVE MAPPED THIS TRANSPORTATION PROJECT PLAT AND SUCH PLAT CORRECTLY REPRESENTS ALL EXTERIOR BOUNDARIES OF THE SURVEYED LAND.

SIGNATURE: Erik A. Gustafson DATE: 11/11/2016
PRINT NAME: ERIK A. GUSTAFSON
REGISTRATION NUMBER: S-2329

WISCONSIN ERIK A. GUSTAFSON S-2329 HOWARDS GROVE, WISCONSIN LAND SURVEYOR

THIS PLAT AND RELOCATION ORDER ARE APPROVED FOR THE CITY OF MUSKEGO

SIGNATURE: _____ DATE: 12/9/16
PRINT NAME: Kathy Chiaverotti

FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Survey\RW_PLAT\150245_TPP-02.dgn
PLOT DATE : 11/11/2016
PLOT BY : rkhaytinc
PLOT NAME :
PLOT SCALE : 1:100

182

TRANSPORTATION PROJECT PLAT NO: 2723-00-01 - 4.03

PART OF LOTS 2 AND 3, OF CSM NO.9463, PART OF LOT 1, OF CSM NO. 9464, AND PART OF LOT 1, OF CSM NO.9578, LOCATED IN THE SW 1/4 OF THE SW 1/4 OF SECTION 2, AND PART OF LOT 2, OF CSM NO.9462, LOCATED IN THE SW 1/4 OF THE SW 1/4 OF SECTION 2, AND THE NW 1/4 OF THE NW 1/4 OF SECTION 11, ALL IN TOWNSHIP 05 NORTH, RANGE 20 EAST, SITUATED IN THE CITY OF MUSKEGO, WAUKESHA COUNTY, WISCONSIN.

RELOCATION ORDER MOORLAND ROAD WAUKESHA COUNTY

TO PROPERLY ESTABLISH, LAY OUT, WIDEN, ENLARGE, EXTEND, CONSTRUCT, RECONSTRUCT, IMPROVE, OR MAINTAIN A PORTION OF THE HIGHWAY DESIGNATED ABOVE, THE CITY OF MUSKEGO DEEMS IT NECESSARY TO RELOCATE OR CHANGE SAID HIGHWAY AND ACQUIRE CERTAIN LANDS AND INTERESTS OR RIGHTS IN LANDS FOR THE ABOVE NAMED PROJECT.

TO EFFECT THIS CHANGE, PURSUANT TO AUTHORITY GRANTED UNDER SUBSECTION 62.22, WISCONSIN STATUTES, THE CITY OF MUSKEGO HEREBY ORDERS THAT:
1. THAT PORTION OF SAID HIGHWAY AS SHOWN ON THIS PLAT IS LAID OUT AND ESTABLISHED TO THE LINES AND WIDTHS AS SO SHOWN FOR THE ABOVE NAMED PROJECT.
2. THE LANDS OR INTERESTS OR RIGHTS IN LANDS AS SHOWN ON THIS PLAT ARE REQUIRED BY THE CITY OF MUSKEGO FOR THE ABOVE PROJECT AND SHALL BE ACQUIRED IN THE NAME OF THE CITY OF MUSKEGO, PURSUANT TO THE PROVISIONS OF SUBSECTION 62.22, WISCONSIN STATUTES.

4250756
REGISTER OF DEEDS
WAUKESHA COUNTY, WI
RECORDED ON
December 09, 2016 12:31 PM
James R Behrend
Register of Deeds
1 PG
TOTAL FEE: 25.00
TRANS FEE: 30.00
Book 1 Page 182-182

RESERVED FOR REGISTER OF DEEDS
PROJECT NUMBER 2723-00-01 - 4.03
AMENDMENT NO:...

SCHEDULE OF LANDS & INTERESTS REQUIRED

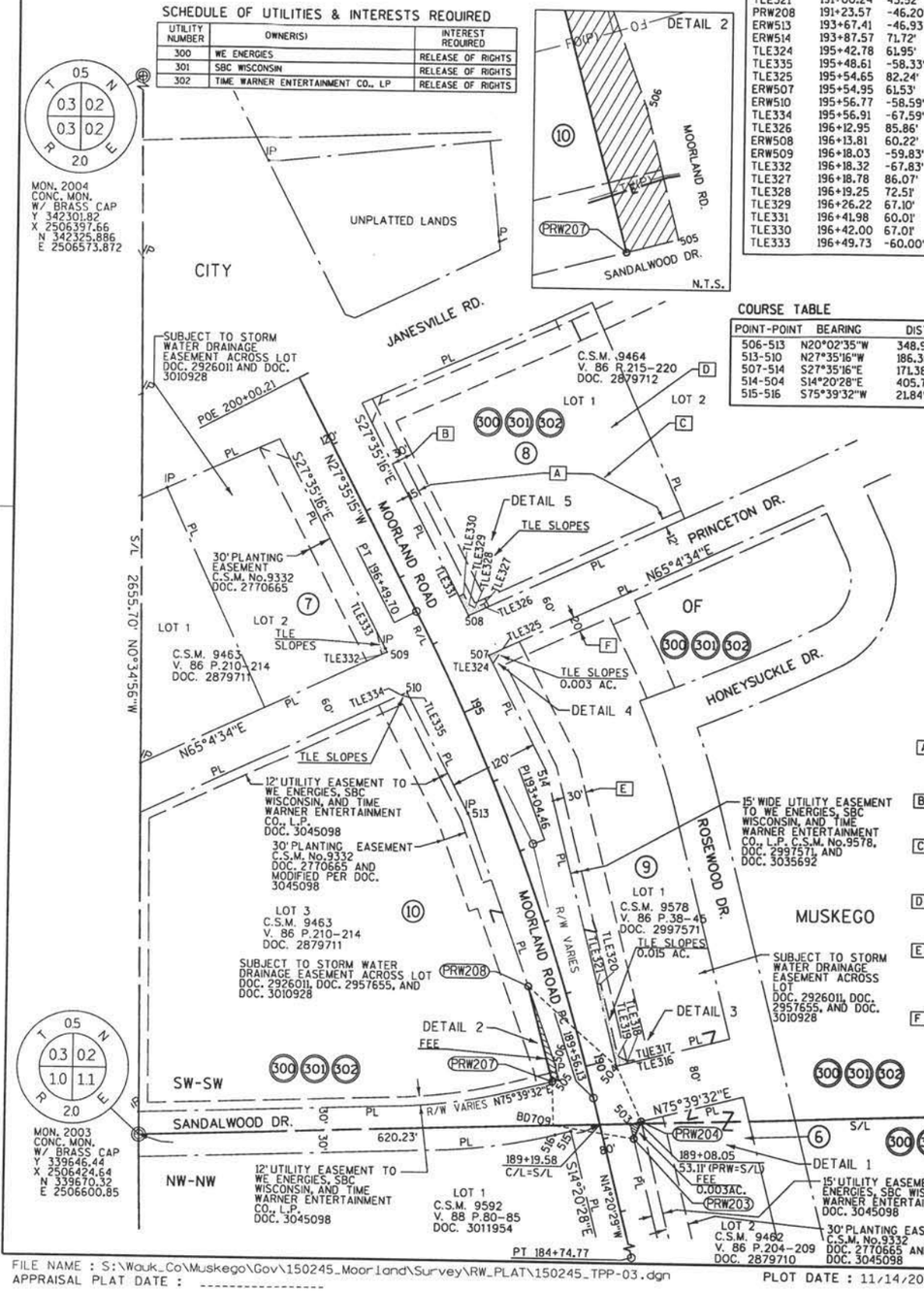
OWNER'S NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY, AND ARE SUBJECT TO CHANGE PRIOR TO TRANSFER OF LAND INTERESTS TO THE CITY OF MUSKEGO.

PARRCEL NUMBER	OWNER(S)	INTEREST REQUIRED	NEW R/W ACRES	PLE ACRES	TLE ACRES
6	CANDLEWOOD VILLAGE CONDOMINIUM OWNERS ASSOCIATION, INC.	FEE	0.003	0.000	0.000
7	M&I MARSHALL & ILSLEY BANK NOW KNOWN AS BMO HARRIS BANK N.A.	TLE	0.000	0.000	0.003
8	JETZ MUSKEGO PROPERTIES, LLC	TLE	0.000	0.000	0.008
9	CANDLEWOOD VILLAGE CONDOMINIUM OWNERS ASSOCIATION, INC.	TLE	0.000	0.000	0.018
10	CANDLEWOOD VILLAGE CONDOMINIUM OWNERS ASSOCIATION, INC.	FEE, TLE	0.016	0.000	0.001

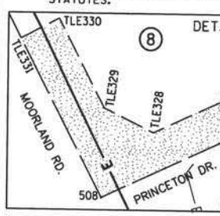
SCHEDULE OF UTILITIES & INTERESTS REQUIRED

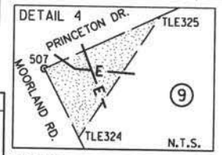
UTILITY NUMBER	OWNER(S)	INTEREST REQUIRED
300	WE ENERGIES	RELEASE OF RIGHTS
301	SBC WISCONSIN	RELEASE OF RIGHTS
302	TIME WARNER ENTERTAINMENT CO., LP	RELEASE OF RIGHTS

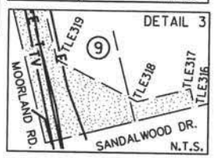
STATION OFFSET TABLE		
POINT No.	STATION	OFFSET
PRW203	188+90.57	40.00'
PRW204	189+10.57	55.00'
ERW515	189+19.97	-40.00'
ERW516	189+19.97	-61.84'
TLE316	189+89.84	65.20'
ERW503	189+10.57	40.00'
ERW504	189+90.12	40.20'
ERW505	189+90.42	-39.77'
PRW207	189+90.53	-48.77'
TLE317	189+92.78	65.23'
TLE318	189+92.88	56.36'
TLE319	190+02.51	45.37'
ERW506	190+13.20	-39.43'
TLE320	191+00.00	48.52'
TLE321	191+00.24	43.52'
PRW208	191+23.57	-46.20'
ERW513	193+67.41	-46.93
ERW514	193+87.57	71.72'
TLE324	195+42.78	61.95'
TLE335	195+48.61	-58.33'
TLE325	195+54.65	82.24'
ERW507	195+54.95	61.53'
ERW510	195+56.77	-58.59'
TLE334	195+56.91	-67.59'
TLE326	196+12.95	85.86'
ERW508	196+13.81	60.22'
ERW509	196+18.03	-59.83'
TLE332	196+18.32	-67.83'
TLE327	196+18.78	86.07'
TLE328	196+19.25	72.51'
TLE329	196+26.22	67.10'
TLE331	196+41.98	60.01'
TLE330	196+42.00	67.01'
TLE333	196+49.73	-60.00'

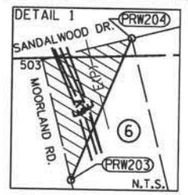


COURSE TABLE		
POINT-POINT	BEARING	DIST.
506-513	N20°02'35"W	348.99'
513-510	N27°35'16"W	186.36'
507-514	S27°35'16"E	171.38'
514-504	S14°20'28"E	405.79'
515-516	S75°39'32"W	21.84'









R/L CURVE DATA
PI = 193+04.46
N = 340065.97
E = 2507125.33
DELTA= 13°14'46"L
D = 1°54'35"
T = 348.34'
L = 693.57'
R = 3000.00'
PC = 189+56.13
N = 339728.49
E = 2507211.61
PT = 196+49.70
N = 340374.70
E = 2506964.01
LCB = N20°57'52"W
LCH = 692.03'

R/L CURVE DATA
PI = 181+33.18
N = 338777.51
E = 2507454.74
DELTA= 77°47'30"R
D = 9°14'29"
T = 500.20'
L = 841.79'
R = 620.00'
PC = 176+32.98
N = 338796.13
E = 2507954.60
PT = 184+74.77
N = 339262.13
E = 2507330.84

COURSE TABLE		
POINT-POINT	BEARING	DIST.
PARCEL 6 PRW		
503-204	N75°39'32"E	15.00'
204-203	S22°31'44"W	25.00'
203-503	N14°20'28"W	20.00'
PARCEL 7 TLE		
509-332	S65°04'34"W	8.00'
332-333	N12°59'51"W	31.72'
333-509	S27°35'16"E	31.07'
PARCEL 8 TLE		
508-326	N65°04'34"E	25.65'
326-327	N24°55'26"W	6.00'
327-328	S65°04'34"W	13.57'
328-329	N64°16'43"W	8.95'
329-330	N27°35'16"W	16.13'
330-331	S62°24'44"W	7.00'
331-508	S27°35'16"E	28.74'
PARCEL 9 TLE		
504-321	N14°20'28"W	111.70'
321-320	N75°39'32"E	5.00'
320-319	S14°20'28"E	99.06'
319-318	S63°25'36"E	14.71'
318-317	N75°39'32"E	8.87'
317-316	S14°20'28"E	3.00'
316-504	S75°39'32"W	24.99'
507-325	N65°04'34"E	20.72'
325-324	S33°25'14"W	23.66'
324-507	N27°35'16"W	12.43'
PARCEL 10 PRW		
505-207	S75°39'32"W	9.00'
207-208	N15°08'30"W	130.95'
208-506	S20°02'35"E	109.00'
506-505	S14°20'28"E	22.48'
PARCEL 10 TLE		
510-335	S27°35'16"E	8.00'
335-334	N74°28'11"W	12.32'
334-510	N65°04'34"E	9.00'

NEW R/W COURSE TABLE		
POINT-POINT	BEARING	DIST.
2003-709	N87°53'51"E	557.45'
709-207	N2°06'09"W	58.41'
207-208	N15°08'30"W	130.95'
208-504	S49°12'27"E	158.85'
504-204	S24°57'21"E	81.39'
204-203	S22°31'44"W	25.00'
203-709	N81°40'56"W	109.83'

NOTES:

POSITIONS SHOWN ON THIS PLAT ARE BASED ON THE WISCONSIN STATE PLANE COORDINATE SYSTEM, SOUTH ZONE (NAD-27) IN U.S. SURVEY FEET. ALL PLAT DISTANCES ARE GROUND LENGTH AND MAY BE CONVERTED TO GRID LENGTH BY MULTIPLYING THE DISTANCE BY THE GRID FACTOR OF 0.9999297.

EXISTING RIGHT-OF-WAY WAS RE-ESTABLISHED UNDER PROJECT: CSM NO.9462, CSM NO.9463, CSM NO.9464, CSM NO.9578, CSM NO.9592, AND DEEDS OF RECORD.

ALL NEW RIGHT-OF-WAY MONUMENTS WILL BE TYPE 2 (TYPICALLY 1"X24" IRON PIPE), UNLESS OTHERWISE NOTED, AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

ALL RIGHT-OF-WAY LINES DEPICTED IN THE NON-ACQUISITION AREAS ARE INTENDED TO RE-ESTABLISH EXISTING RIGHT-OF-WAY LINES AS DETERMINED FROM PREVIOUS PROJECTS, OTHER RECORDED DOCUMENTS, OR FROM CENTERLINE OF EXISTING PAVEMENTS.

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.

DIMENSIONING FOR THE NEW RIGHT-OF-WAY IS MEASURED ALONG AND PERPENDICULAR TO THE NEW REFERENCE LINES.

A TEMPORARY LIMITED EASEMENT (TLE) IS A RIGHT FOR CONSTRUCTION PURPOSES, AS DEFINED HEREIN, INCLUDING THE RIGHT TO OPERATE NECESSARY EQUIPMENT THEREON, THE RIGHT OF INGRESS AND EGRESS, AS LONG AS REQUIRED FOR SUCH PUBLIC PURPOSE, INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE, OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES MAY DEEM DESIRABLE. ALL (TLEs) ON THIS PLAT EXPIRE AT THE COMPLETION OF THE CONSTRUCTION PROJECT FOR WHICH THIS INSTRUMENT IS GIVEN.

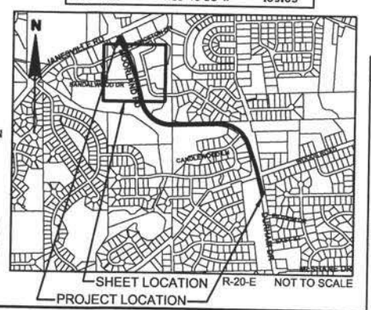
PROPERTY LINES SHOWN ON THIS PLAT ARE DRAWN FROM DATA DERIVED FROM MAPS AND DOCUMENTS OF PUBLIC RECORD AND/OR EXISTING OCCUPATIONAL LINES. THIS PLAT MAY NOT BE A TRUE REPRESENTATION OF EXISTING PROPERTY LINES, EXCLUDING RIGHT-OF-WAY, AND SHOULD NOT BE USED AS A SUBSTITUTE FOR AN ACCURATE FIELD SURVEY.

CONVENTIONAL SYMBOLS AND ABBREVIATIONS

STATE, COUNTY, or TOWN LINE		ACCESS POINT/ DRIVEWAY CONNECTION	AP
SECTION LINE		ACCESS RIGHTS	AR
QUARTER LINE		ACRES	AC.
SIXTEENTH LINE		AND OTHERS	ET.AL.
PROPOSED REFERENCE LINE		CENTERLINE	C/L
PROPOSED R/W LINE		CERTIFIED SURVEY MAP	CSM
EXISTING H.E. LINE		DOCUMENT	DOC.
PROPERTY LINE		HIGHWAY EASEMENT	H.E.
EASEMENT LINE		LAND CONTRACT	LC
CORPORATE LIMITS		MONUMENT	MON.
EXISTING CENTERLINE		PAGE	P.
LOT & TIE LINES		PERMANENT LIMITED EASEMENT	PLE
UTILITIES (TELEPHONE,GAS,ELECTRIC,CABLE TV,FIBER OPTIC)	FO (TYPE)	PROPERTY LINE	PL
NO ACCESS (BY PREVIOUS ACQUISITION/CONTROL)		RECORDED AS	(100')
NO ACCESS (BY ACQUISITION)		REFERENCE LINE	R/L
NO ACCESS (BY STATUTORY AUTHORITY)		REMAINING	REM.
FEE (HATCH VARIES)		RIGHT-OF-WAY	R/W
TEMPORARY LIMITED EASEMENT		SECTION	SEC.
PERMANENT LIMITED EASEMENT		SQUARE FEET	SQ.FT.
PARCEL NUMBER	102	STATION	STA.
UTILITY PARCEL NUMBER	92	TEMPORARY LIMITED EASEMENT	TLE
SIGN NUMBER (OFF PREMISE)	21-1	VOLUME	V.
BUILDING			
FOUND IRON PIPE/PIN	LP (1" UNLESS NOTED)		
R/W MONUMENT	●(SET)		
R/W STANDARD	▲(SET)		
SIGN	SIGN		
SECTION CORNER SYMBOL			

CURVE DATA

		NON COMPENSABLE
LONG CHORD	LCH	
LONG CHORD BEARING	LCB	
RADIUS	R	
DEGREE OF CURVE	D	
CENTRAL ANGLE OR DELTA	DELTA	
LENGTH OF CURVE	L	
TANGENT	TAN	
POWER POLE		
TELEPHONE POLE		
TELEPHONE PEDESTAL		



0 100 200
SCALE, FEET

KAPUR & ASSOCIATES, INC.
CONSULTING ENGINEERS
MILWAUKEE, WISCONSIN
414.351.6668

CITY OF MUSKEGO

I, ERIK A. GUSTAFSON PROFESSIONAL LAND SURVEYOR, HEREBY CERTIFY THAT IN FULL COMPLIANCE WITH THE PROVISIONS OF SECTION 84.095 OF THE WISCONSIN STATUTES AND UNDER THE DIRECTION OF THE CITY OF MUSKEGO, I HAVE MAPPED THIS TRANSPORTATION PROJECT PLAT AND SUCH PLAT CORRECTLY REPRESENTS ALL EXTERIOR BOUNDARIES OF THE SURVEYED LAND.

SIGNATURE: Erik A Gustafson DATE: 11/11/2016
PRINT NAME: ERIK A. GUSTAFSON
REGISTRATION NUMBER: S-2329

WISCONSIN ERIK A. GUSTAFSON S-2329 HOWARDS GROVE, WISCONSIN LAND SURVEYOR

THIS PLAT AND RELOCATION ORDER ARE APPROVED FOR THE CITY OF MUSKEGO

SIGNATURE: DATE: 12/9/16
PRINT NAME: Kathy Chiaverotti

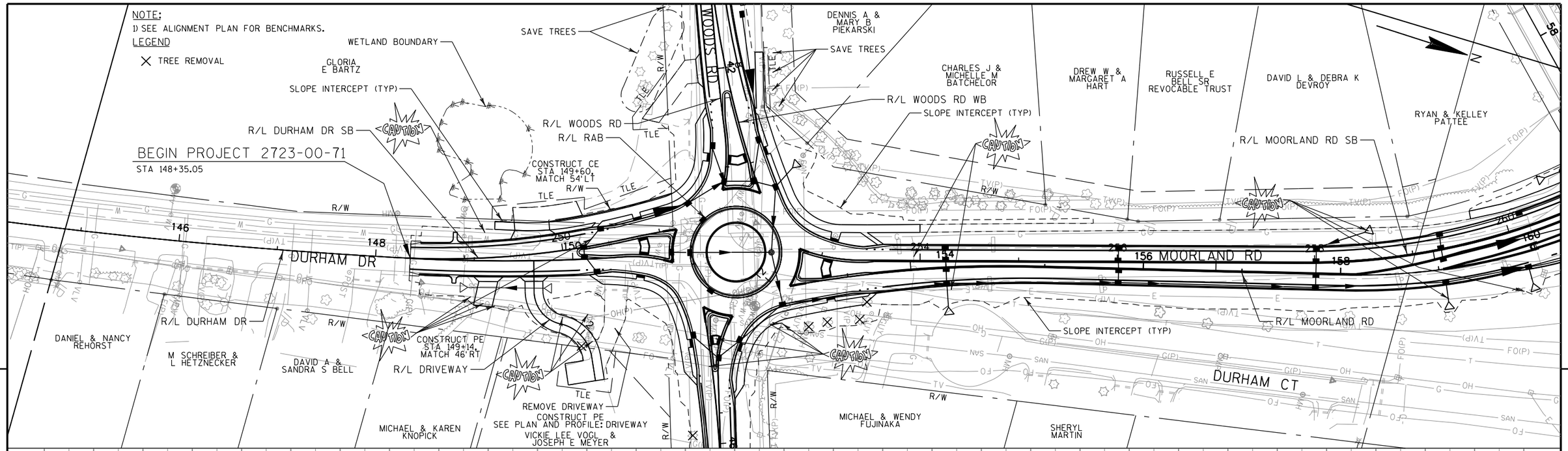
FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Survey\RW_PLAT\150245_TPP-03.dgn
APPRAISAL PLAT DATE : ----------
PLOT DATE : 11/14/2016
PLOT BY : swarther
PLOT NAME :
PLOT SCALE : 1:100

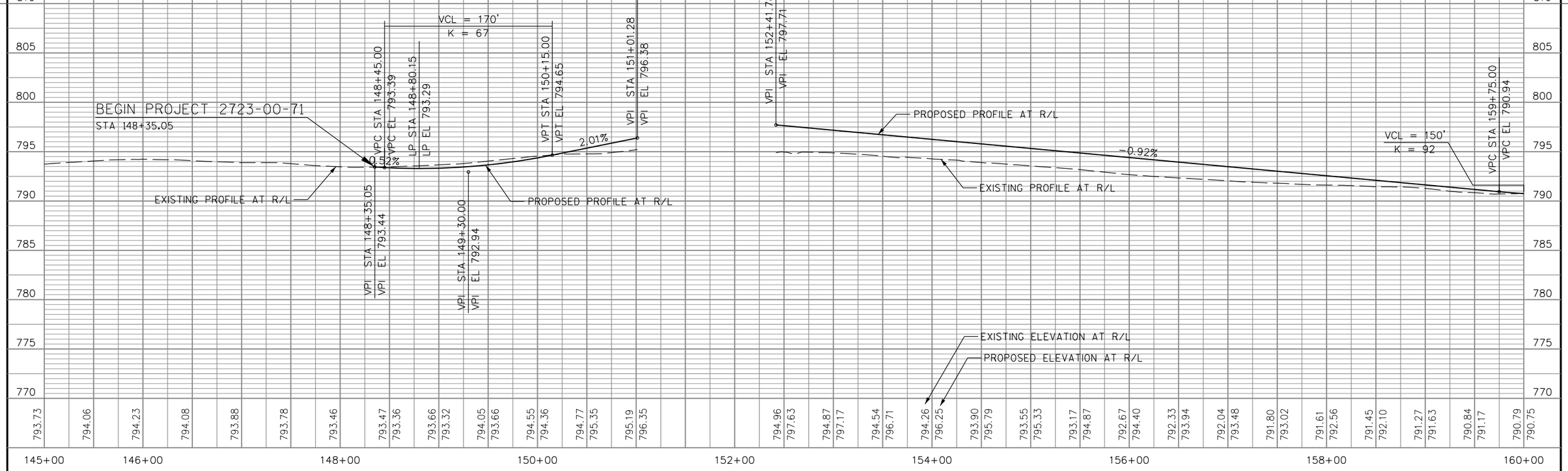
161

PROJECT 2723-00-01 - 4.03

NOTE:
1) SEE ALIGNMENT PLAN FOR BENCHMARKS.

LEGEND
X TREE REMOVAL





PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	PLAN AND PROFILE: DURHAM DR/MOORLAND RD	SHEET 162 E

NOTE:
1) SEE ALIGNMENT PLAN FOR BENCHMARKS.
2) STA 162+63, RT TO STA 168+44, RT.

LEGEND
X TREE REMOVAL

R/L CANDLEWOOD LN
CANDLEWOOD CREEK HOMEOWNERS ASSOCIATION
W SCOTT & SHERRY L BOYD
WETLAND BOUNDARY
SAVE TREE
R/L MOORLAND RD SB
R/L MOORLAND RD
SLOPE INTERCEPT (TYP)
DURHAM PL
MOORLAND RD
DETENTION BASIN
SAVE TREES OUTSIDE SLOPE INTERCEPT SEE NOTE 2.
AARON E & JENNIER A BLOCK
ERIC J & PATRICIA A JOHNSON
BRENDA B VIDMAR
HENRY J & BARBARA A HUMMEL
ROSEWOOD ESTATES HOMEOWNERS
RAYMOND R & JUDITH A ROBERTS
PLE
R/W
CAUTION

VCL = 150'
K = 92
LP STA 160+59.73
LP EL 790.55
VPT STA 161+25.00
VPT EL 790.78
0.71%
VPI STA 160+50.00
VPI EL 790.25
VPC STA 161+57.50
VPC EL 791.01

VCL = 235'
K = 168
VPI STA 162+75.00
VPI EL 791.85
HP STA 162+76.66
HP EL 791.44
VPT STA 163+92.50
VPT EL 791.04
-0.69%
STA 163+61
2 - 24" X 38" RCP
4 - 24" X 38" APRON ENDWALLS REQD

VCL = 120'
K = 95
VPC STA 166+20.00
VPC EL 789.46
LP STA 166+85.81
LP EL 789.24
VPT STA 167+40.00
VPT EL 789.39
VPI STA 166+80.00
VPI EL 789.05

PROPOSED PROFILE AT R/L
0.57%
EXISTING PROFILE AT R/L

VCL = 190'
K = 178
VPC STA 172+05.00
VPC EL 792.04
VPI STA 173+00.00
VPI EL 792.58
HP STA 173+06.54
HP EL 792.33
VPT STA 173+95.00
VPT EL 792.11
-0.50%

EXISTING ELEVATION AT R/L
PROPOSED ELEVATION AT R/L

160+00	162+00	164+00	166+00	168+00	170+00	172+00	174+00	175+00
790.79 / 790.75	791.04 / 790.56	791.00 / 790.64	791.30 / 790.96	791.46 / 791.26	791.37 / 791.42	791.11 / 791.42	790.88 / 791.28	790.66 / 790.99
790.30 / 790.64	789.93 / 790.29	789.70 / 789.95	789.43 / 789.60	789.05 / 789.30	788.92 / 789.25	789.06 / 789.45	789.24 / 789.73	789.50 / 790.02
789.76 / 790.30	790.08 / 790.59	790.42 / 790.87	790.61 / 791.16	790.82 / 791.44	791.07 / 791.73	791.36 / 792.01	791.61 / 792.24	791.68 / 792.33
791.57 / 792.28	791.33 / 792.08	791.06 / 791.84	790.77 / 791.59					

PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	PLAN AND PROFILE: MOORLAND RD	SHEET 163	E

FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\050103_PP.dgn
PLOT DATE : 7/26/2017 PLOT BY : wwolak PLOT NAME : PLOT SCALE : 1:100
WISDOT/CADDS SHEET 45

NOTE:
1) SEE ALIGNMENT PLAN FOR BENCHMARKS.

LEGEND
X TREE REMOVAL

EXISTING DETENTION BASIN
WETLAND BOUNDARY
STA 178+01.03
66.98'LT
CONSTRUCTION
PERMIT=0.021 AC
STA 177+93.54
40.00'LT
STA 178+36.53
57.99'LT
STA 178+33.15
40.00'LT
STA 180+61.38
79.85'LT
STA 180+76.67
40.00'LT
STA 180+77.62
87.62'LT
CONSTRUCTION
PERMIT=0.022 AC
STA 180+97.31
40.00'LT
SLOPE INTERCEPT (TYP)
MOORLAND PARK
CITY OF
MUSKEGO
R/L SANDALWOOD DR
CONSTRUCTION
PERMIT=0.011 AC
R/L MOORLAND RD SB
STA 188+81.87
63.61'LT
STA 188+81.87
50.99'LT
STA 189+19.95
63.61'LT
STA 189+19.95
50.99'LT
CANDLEWOOD VILLAGE
2ND AMENDMENT
ADDENDUM 1
R/L MOORLAND RD
EXISTING SIGN AND
PLANTING TO REMAIN
RAYMOND R
& JUDITH A
ROBERTS
CAUTION
R/W
MOORLAND RD
SANDALWOOD DR

STA 175+79
3 – 24" X 38" RCP
6 – 24" X 38" APRON ENDWALLS REQD

0.50%
VCL = 170'
K = 171
VPC STA 177+25.00
VPC EL 790.47
LP STA 178+09.67
LP EL 790.26
VPT STA 178+95.00
VPT EL 790.47
VPI STA 178+10.00
VPI EL 790.05
PROPOSED PROFILE AT R/L
EXISTING PROFILE AT R/L
EXISTING ELEVATION AT R/L
PROPOSED ELEVATION AT R/L
VCL = 200'
K = 76
VPC STA 183+00.00
VPC EL 792.50
VPI STA 184+00.00
VPI EL 793.00
VPRC STA 185+00.00
VPRC EL 796.15
VCL = 380'
K = 229
VPI STA 186+90.00
VPI EL 802.13
VPCC STA 188+80.00
VPCC EL 805
VCL = 160'
K = 161
VPI STA 189+60.00
VPI EL 806.15

790.77 791.59 | 790.66 791.34 | 790.38 791.09 | 790.17 790.84 | 789.93 790.60 | 789.66 790.37 | 789.49 790.26 | 789.69 790.31 | 789.93 790.50 | 790.25 790.75 | 790.51 791.00 | 790.64 791.25 | 790.84 791.50 | 791.17 791.75 | 791.43 792.00 | 791.79 792.25 | 792.30 792.50 | 792.83 792.92 | 793.70 793.66 | 795.15 794.74 | 796.76 796.15 | 798.39 797.67 | 800.08 799.08 | 801.68 800.38 | 802.91 801.57 | 803.87 802.65 | 804.55 803.63 | 805.17 804.49 | 805.53 805.24 | 805.88 805.85 | 806.00 806.30

175+00 176+00 178+00 180+00 182+00 184+00 186+00 188+00 190+00

PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	PLAN AND PROFILE: MOORLAND RD	SHEET 164 E

NOTE:
1) SEE ALIGNMENT PLAN FOR BENCHMARKS.

CANDLEWOOD VILLAGE
2ND AMENDMENT
ADDENDUM 1

R/L SANDALWOOD DR

R/L MOORLAND RD SB

OVERHEAD SIGN SUPPORT
STA 193+35.50'LT

SLOPE INTERCEPT (TYP)

CAUTION

R/L PRINCETON DR

M & I
MARSHALL &
ILSLEY BANK

MILL AND OVERLAY

MOORLAND RD

TLE

R/L MOORLAND RD

SLOPE INTERCEPT (TYP)

CANDLEWOOD VILLAGE
2ND AMENDMENT
ADDENDUM 1

END CONSTRUCTION
STA 196+75.00

JETZ MUSKEGO
PROPERTIES LLC

JANESVILLE RD

END PROJECT 2723-00-71
STA 199+32.88

COORDINATE MILLING NEAR TRAFFIC
SIGNAL LOOPS WITH WAUKUSHA COUNTY
(SEE SPECIAL PROVISIONS)

NOTE:
1) SEE ALIGNMENT PLAN FOR BENCHMARKS.

LEGEND
X TREE REMOVAL

N

VPT STA 190+40.00
VPT EL 806.55

VCL = 160'
K = 161

0.50%

VPC STA 192+50.00
VPC EL 807.59

PROPOSED PROFILE AT R/L
VCL = 200'
K = 102

VPT STA 194+50.00
VPT EL 810.55

VPI STA 193+50.00
EL 808.09

2.46%

EXISTING PROFILE AT R/L

VPI STA 196+75.00
EL 816.08

MILL AND OVERLAY

END CONSTRUCTION
STA 196+75.00

END PROJECT 2723-00-71
STA 199+32.88

EXISTING ELEVATION AT R/L
PROPOSED ELEVATION AT R/L

| | | |

NOTE:
1) SEE ALIGNMENT PLAN FOR BENCHMARKS.

LEGEND
X TREE REMOVAL

BEGIN CONSTRUCTION
STA 40+32.29

END CONSTRUCTION
STA 46+80.36

R/L MOORLAND RD SB
R/L MOORLAND RD
MOORLAND RD
DENNIS A & MARY B PIEKARSKI
SLOPE INTERCEPT (TYP)
SAVE TREES
R/L WOODS RD WB
WOODS RD
MICHAEL & WENDY FUJINAKA
CAUTION
NICKOLAS & PAULA POPOUTSIS
MICHAEL & DAWN METZELFELD
RECONSTRUCTING MANHOLES
STA 44+76, 10'LT
VICKIE LEE VOGL & JOSEPH E MEYER
RUSSEL J & ANGELA A MEDENBLIK
DEBORAH PROHASKA
MICHAEL & ANN MALINOWSKI
REMOVE DRIVEWAY
CONSTRUCT CE
STA 42+00,
MATCH 42'RT
GLORIA E BARTZ
R/L DURHAM DR SB
R/L DURHAM DR
WETLAND BOUNDARY
R/L DRIVEWAY
R/W
TLE
OH
SAN
TV(P)
F.O.(P)
POST
MH
SS
IP
MB
42
48
1150
1230

EXISTING PROFILE AT R/L
PROPOSED PROFILE AT R/L
BEGIN CONSTRUCTION
STA 40+32.29
END CONSTRUCTION
STA 46+80.36
VPI STA 40+32.29
VPI EL 798.73
VPC STA 40+56.74
VPC EL 798.63
VPI STA 41+16.74
VPI EL 798.40
VPT STA 41+76.74
VPT EL 797.98
VPI STA 43+22.63
VPI EL 796.95
VPI STA 44+61.61
VPI EL 796.72
VPC STA 45+60.00
VPC EL 794.61
VPI STA 46+20.00
VPI EL 793.32
VPI STA 46+80.00
VPI EL 793.02
VPT STA 46+80.36
VPT EL 793.02
0.39%
-0.70%
2.15%
0.50%
VCL = 120'
K = 381
VCL = 120'
K = 73
EXISTING ELEVATION AT R/L
PROPOSED ELEVATION AT R/L

	37+00	38+00	40+00	42+00	44+00	46+00	48+00	50+00	52+00
EXISTING ELEVATION AT R/L			798.70	798.74 / 798.66	798.73 / 798.44	798.41 / 798.16	798.06 / 797.81	797.65 / 797.46	797.11 / 797.11
PROPOSED ELEVATION AT R/L						795.05 / 795.90	794.26 / 794.82	793.52 / 793.86	793.04 / 793.23	793.09	793.33	793.49	

PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	PLAN AND PROFILE: WOODS ROAD	SHEET 166 E

FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\050106_PP.dgn PLOT DATE : 7/26/2017 PLOT BY : wwolak PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 45

NOTE:
1) SEE ALIGNMENT PLAN FOR BENCHMARKS.

LEGEND
× TREE REMOVAL

N

R/L MOORLAND RD SB
R/L MOORLAND RD
MOORLAND RD
CAUTION
CAUTION
BEGIN CONSTRUCTION
STA 10+00.00
DENNIS A & MARY B PIEKARSKI
SLOPE INTERCEPT (TYP)
SAVE TREES
MICHAEL & WENDY FUJINAKA
NICKOLAS & PAULA POPOUTSIS
MICHAEL & DAWN METZELFELD
R/L WOODS RD WB
R/W
TLE
WOODS RD
R/L WOODS RD
SAVE TREES
R/L WOODS RD
R/L RAB
VICKIE LEE VOGL & JOSEPH E MEYER
SLOPE INTERCEPT (TYP)
MICHAEL & ANN MALINOWSKI
RUSSEL J & ANGELA A MEDENBLIK
DEBORAH PROHASKA
GLORIA E BARTZ
R/L DURHAM DR SB
R/L DURHAM DR
WETLAND BOUNDARY
R/L DRIVEWAY

PROPOSED PROFILE AT R/L

VCL = 100'
K = 33

VPI STA 10+00.00
VPI EL 797.25
VPC STA 10+37.71
VPC EL 796.68
LP STA 10+87.71
LP EL 796.31
VPT STA 11+37.71
VPT EL 796.68
VPI STA 12+33.53
VPI EL 798.12
VPT STA 12+83.53
VPT EL 797.37
VPI STA 12+91.64
VPI EL 797.25

1.50%
1.50%
1.50%

BEGIN CONSTRUCTION
STA 10+00.00

EXISTING PROFILE AT R/L

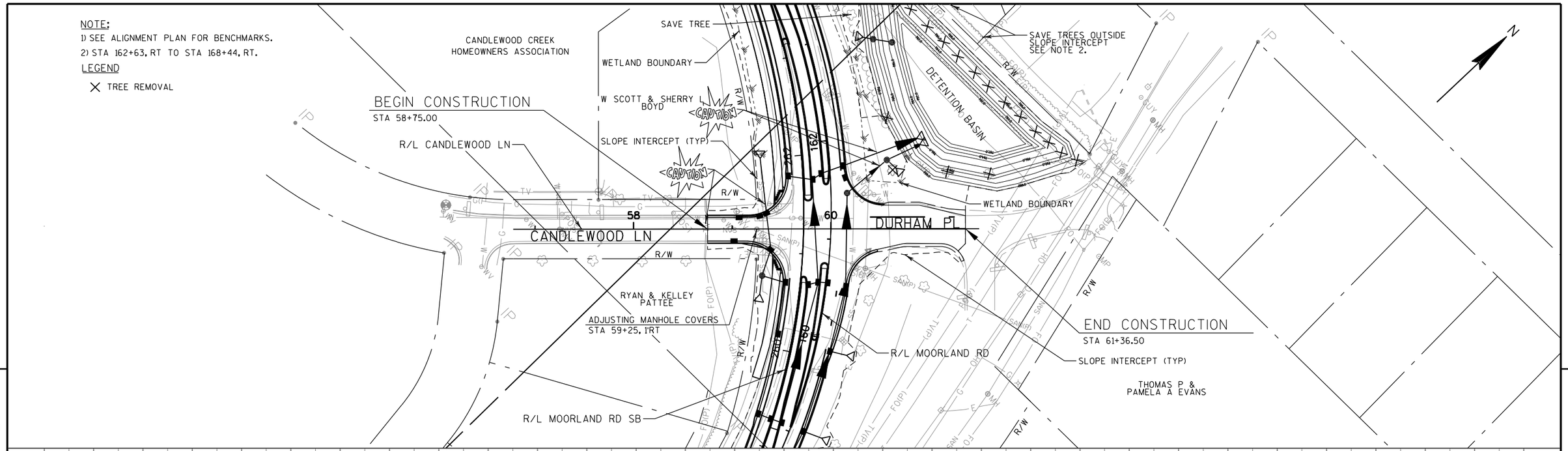
VPI STA 10+87.71
VPI EL 795.93
VPC STA 11+83.53
VPC EL 797.37
HP STA 12+33.53
HP EL 797.75
VCL = 100'
K = 33

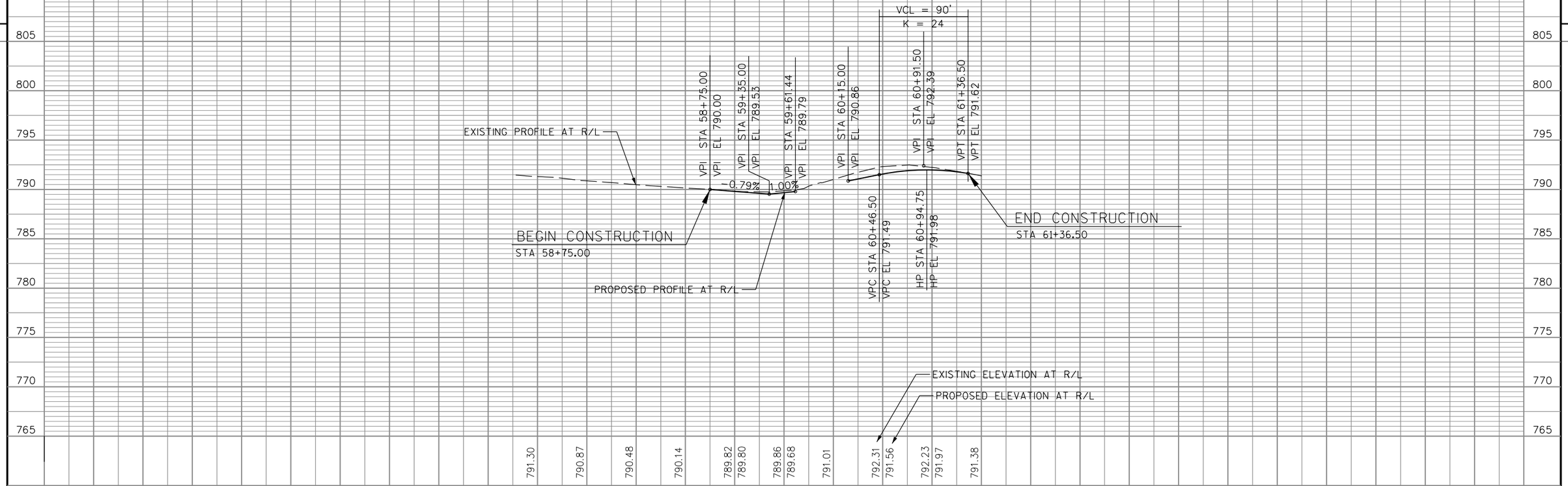
EXISTING ELEVATION AT R/L
PROPOSED ELEVATION AT R/L

| | | |

NOTE:
1) SEE ALIGNMENT PLAN FOR BENCHMARKS.
2) STA 162+63, RT TO STA 168+44, RT.

LEGEND
X TREE REMOVAL

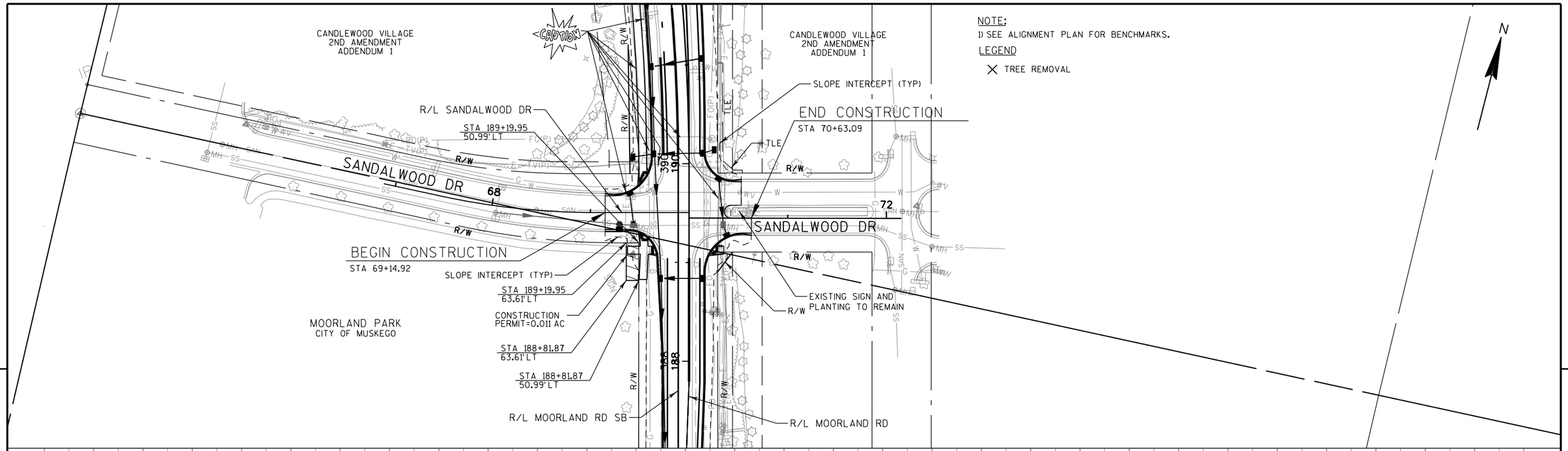




PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	PLAN AND PROFILE: CANDLEWOOD LN/DURHAM PL	SHEET 168	E

FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\050107_PP.dgn PLOT DATE : 7/26/2017 PLOT BY : wwolak PLOT NAME : PLOT SCALE : 1:100

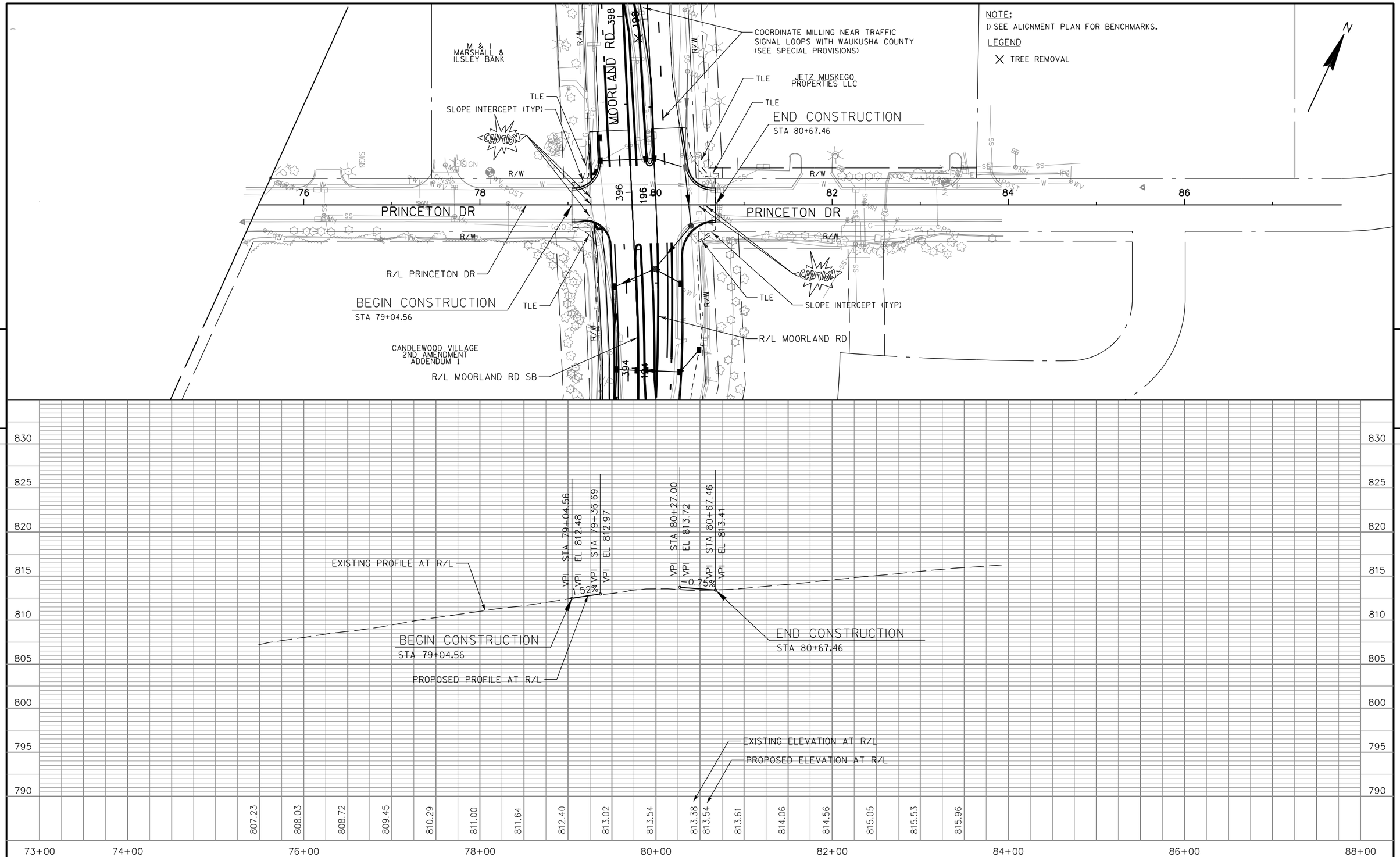
WISDOT/CADDS SHEET 45



PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	PLAN AND PROFILE:SANDALWOOD DR	SHEET 169	E

FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\050108_PP.dgn PLOT DATE : 7/26/2017 PLOT BY : wwolak PLOT NAME : PLOT SCALE : 1:100

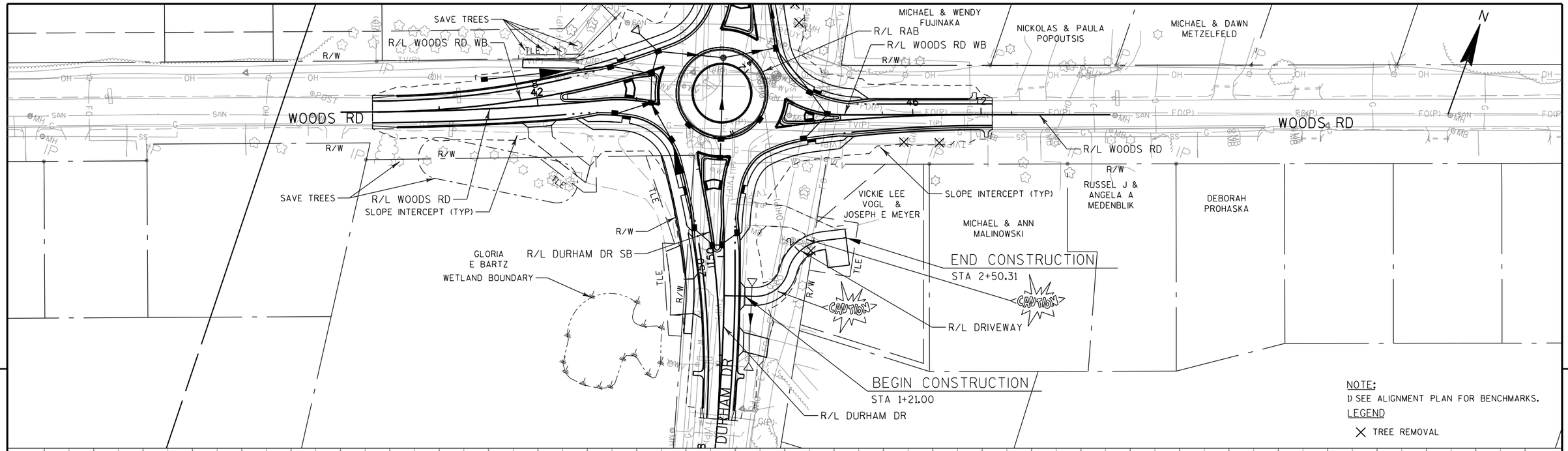
WISDOT/CADDS SHEET 45

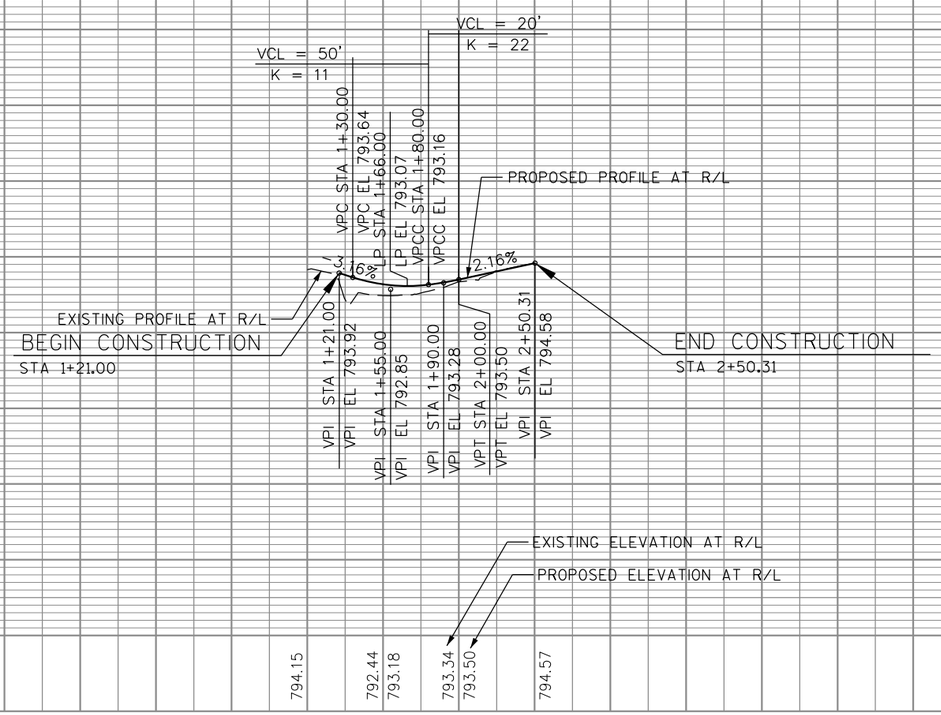


PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	PLAN AND PROFILE: PRINCETON DR	SHEET 170	E

FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\050109_PP.dgn PLOT DATE : 7/26/2017 PLOT BY : wwolak PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 45



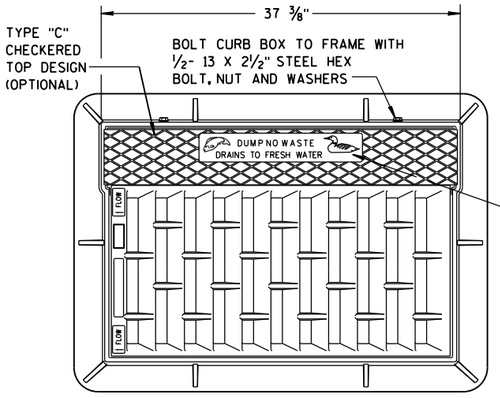


PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	PLAN AND PROFILE: DRIVEWAY	SHEET 171	E

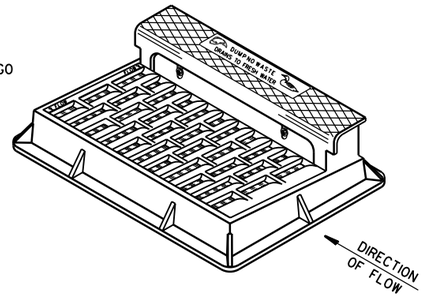
Standard Detail Drawing List

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
08A05-19C	INLET COVERS TYPE F, HM, HM-S, S, T, V, HM-GJ, & HM-GJ-S
08A05-19D	INLET COVER TYPE BW, MANHOLE COVERS, TYPE K, J, J-S, L & M
08B09-02	MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER
08C06-02	INLETS 3-FT AND 4-FT DIAMETER
08C07-02	INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT
08C08-02	INLETS MEDIAN 1 AND 2 GRATE
08D01-19	CONCRETE CURB, CONCRETE CURB AND GUTTER AND TIES
08D04-05	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
08D05-18B	CURB RAMPS TYPES 2 AND 3
08D05-18C	CURB RAMPS TYPES 4A AND 4A1
08D05-18D	CURB RAMPS TYPE 4B AND 4B1
08D05-18E	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
08E14-01	TRACKING PAD
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F02-01	APRON ENDWALLS FOR PIPE ARCH AND ELLIPTICAL PIPE
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
09B02-10	CONDUIT
09B04-11	PULL BOX
09C02-07	CONCRETE BASES, TYPES 1, 2, 5, & 6
09C03-04	TRANSFORMER/PEDESTAL BASES
09C14-02	CONCRETE CONTROL CABINET BASE, TYPE L
09D03-02	POST MOUNTED CONTROLLER SERVICE INSTALLATION
09D05-01	L30 LIGHTING CONTROL CABINET 240/480 VOLT
09E01-14D	POLE MOUNTINGS FOR LIGHTING UNITS, TYPE 5 (30 FEET)
09E01-14G	HARDWARE DETAILS FOR POLE MOUNTINGS
09F10-04	LOOP DETECTOR INSTALLED IN EXISTING OR NEW ASPHALTIC PAVEMENT WITH NEW ASPHALTIC OVERLAY
10A01-03	ELECTRICAL HANDHOLE WIRING
10A02-03	IDENTIFICATION PLAQUES LIGHT POLES
10A05-02	ELECTRICAL DETAILS GROUND MOUNT LIGHT POLES ISOLATED NEUTRAL SYSTEMS
11B02-02	CONCRETE MEDIAN NOSE
12A04-03	STRUCTURE IDENTIFICATION PLAQUES, RAMP GATES, SIGN BRIDGES & OVERHEAD SIGN SUPPORTS & TRAFFIC SIGNALS
13C04-16	URBAN NON-DOWELED CONCRETE PAVEMENT
13C18-05A	CONCRETE PAVEMENT JOINTING
13C18-05B	CONCRETE PAVEMENT STEEL REINFORCEMENT
13C18-05C	CONCRETE PAVEMENT JOINT TYPES
13C18-05D	CONCRETE PAVEMENT JOINTING AT UTILITY FIXTURES
13C18-05E	CONCRETE PAVEMENT JOINTING AND STEEL REINFORCEMENT IN ROUNDABOUTS
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15C02-06A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-06B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-06C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C03-03	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C05-03	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS
15C07-13B	PAVEMENT MARKING WORDS
15C07-13C	PAVEMENT MARKING ARROWS
15C08-17A	LONGITUDINAL MARKING (MAINLINE)
15C08-17B	PAVEMENT MARKING (TURN LANES)
15C08-17C	PAVEMENT MARKING (ISLANDS)
15C22-04	24" DIAMETER CANTILEVER OVERHEAD SIGN SUPPORT BASE
15C33-02	STOP LINE AND CROSSWALK PAVEMENT MARKING
15C35-01A	PAVEMENT MARKING (INTERSECTIONS)
15D12-06A	TRAFFIC CONTROL, LANE CLOSURE
15D20-04	TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY
15D21-04	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE
15D28-03	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
15D38-01A	TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS
15D38-01B	ATTACHMENT OF SIGNS TO POSTS

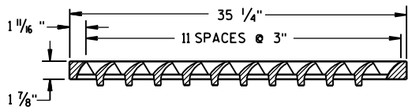
6

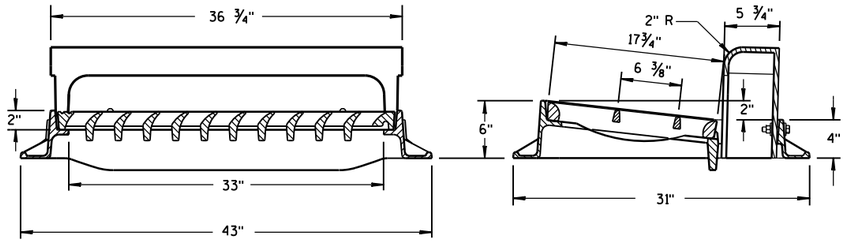


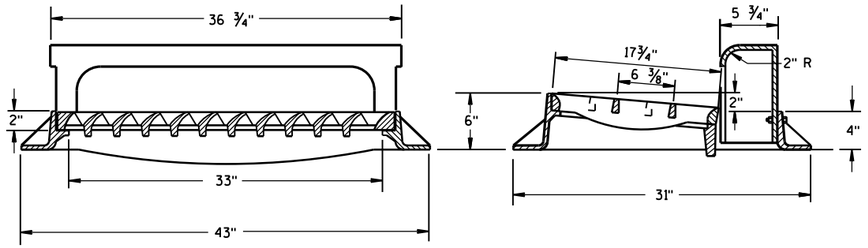
NOTE:
GRATE IS REVERSIBLE.



NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

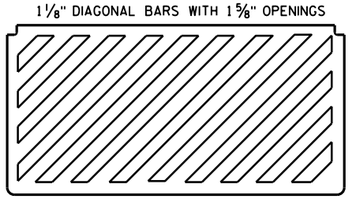






TYPE "H"

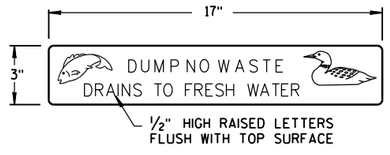
NOTE: EITHER CASTING IS ACCEPTABLE



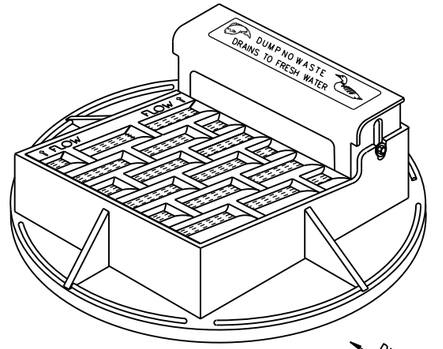
SPECIAL GRATE FOR TYPE "H" COVER

(MEASURES 35 1/4" X 17 3/4" X 2")

(NOTED AS TYPE H-S ON DRAINAGE TABLE)

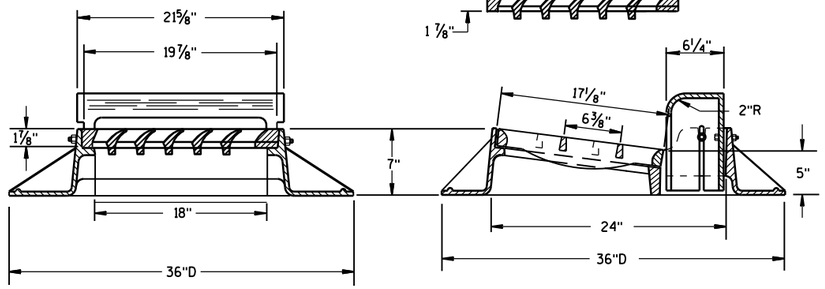


LOGO DETAIL



NOTE: CURB BOX ADJUSTABLE 4" TO 9"

NOTE:
GRATE IS REVERSIBLE.



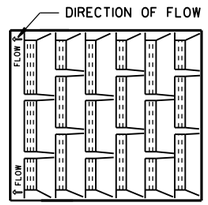
TYPE "A"

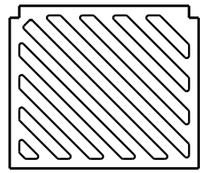
GENERAL NOTES

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.

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.

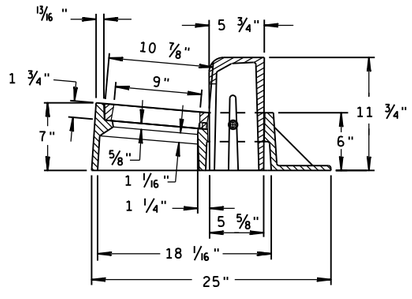


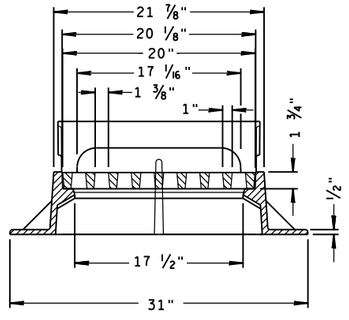


SPECIAL GRATE FOR TYPE "A" COVER

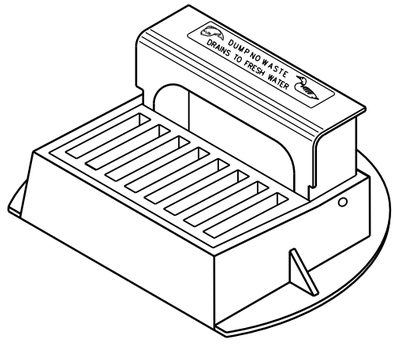
(MEASURES 19 3/4" X 17" X 1 7/8")

(NOTED AS TYPE A-S ON DRAINAGE TABLE)





TYPE "Z"



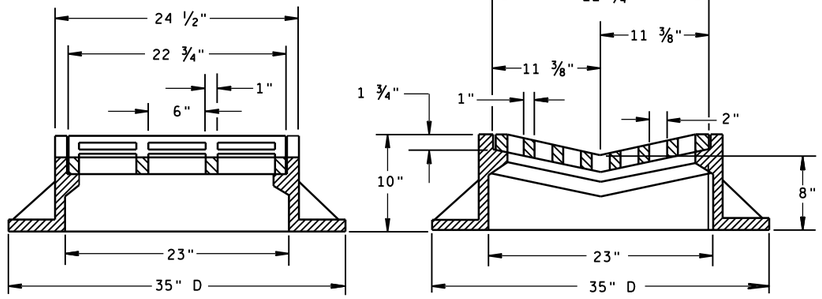
INLET COVERS TYPE A, H, A-S, H-S & Z

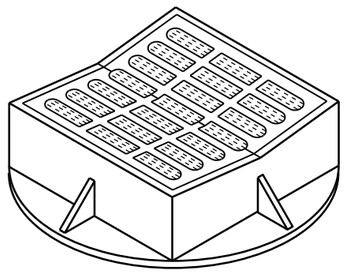
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11-27-13 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

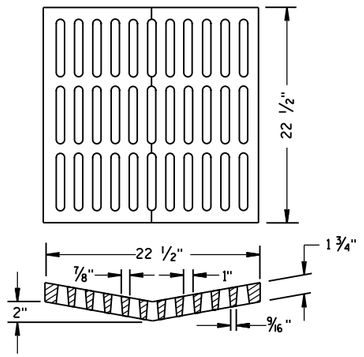
6

S.D.D. 8 A 5-19a



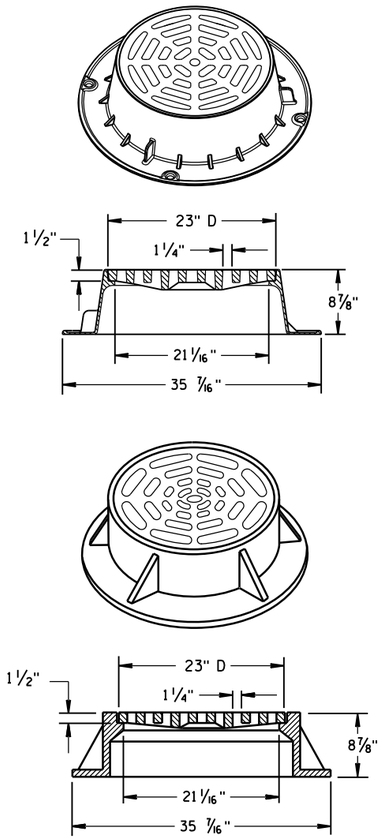


TYPE "B"



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"

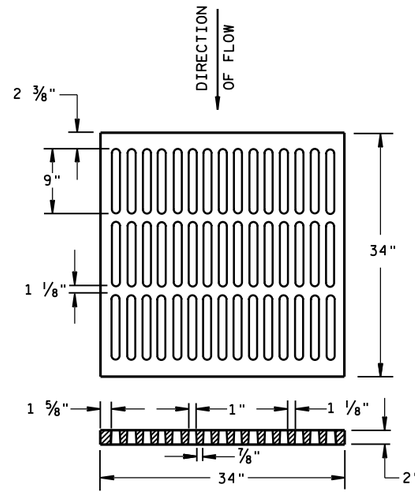
NOTE: EITHER CASTING IS ACCEPTABLE

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.

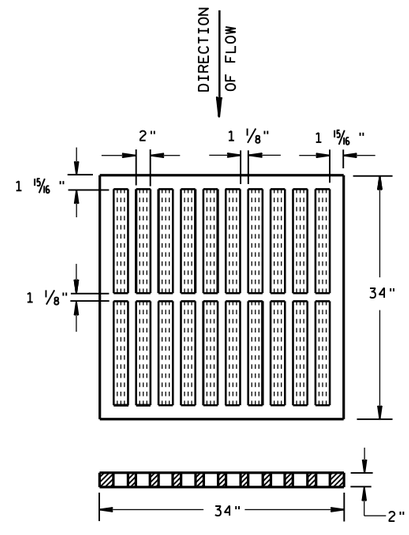
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR CATCH BASIN, MANHOLE AND INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.



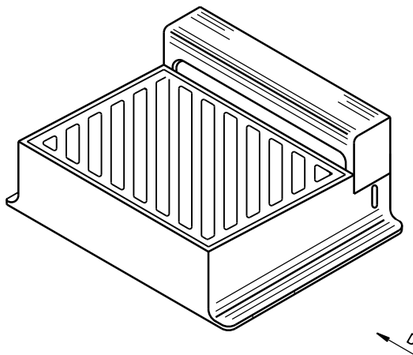
ALTERNATIVE TYPE "MS"

USE WHERE PEDESTRIAN OR BICYCLE TRAFFIC IS PERMITTED
NOTED AS TYPE MS-A ON THE DRAINAGE TABLE

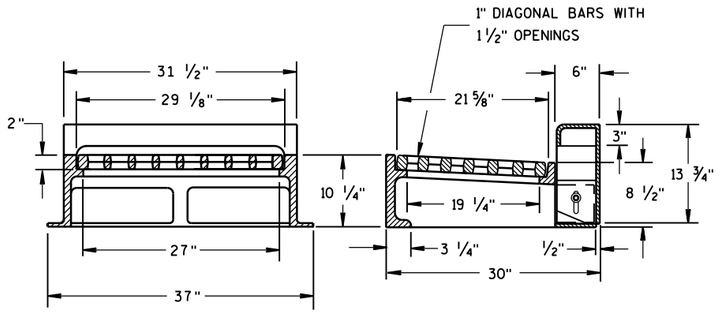


TYPE "MS"

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"

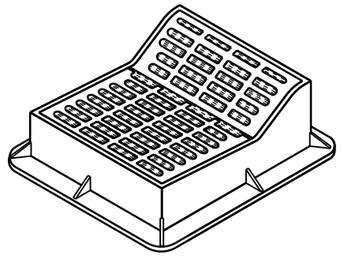
INLET COVERS
TYPE B, B-A, C,
MS, MS-A, & WM

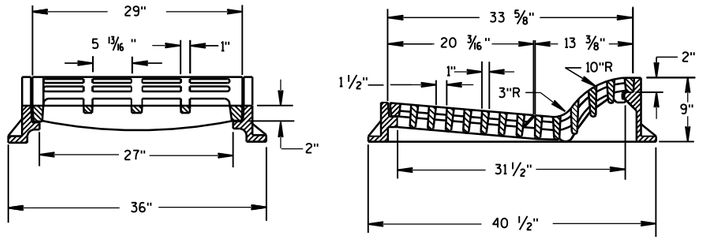
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/27/2013
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6

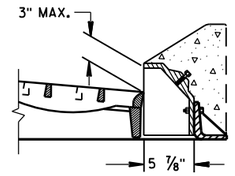
S.D.D. 8 A 5-19b





TYPE "F"

USE WITH TYPES A & D CONCRETE CURB & GUTTER, 36 INCH.



ALTERNATIVE CURB BOX FOR TYPE "HM" COVER

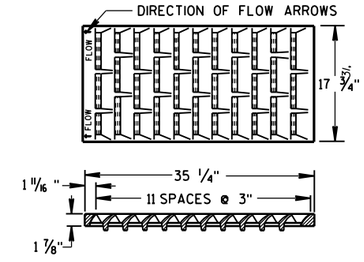
USE WITH TYPES G & J CONCRETE CURB & GUTTER, 30 INCH
NOTED AS TYPE HM-GJ ON DRAINAGE TABLE

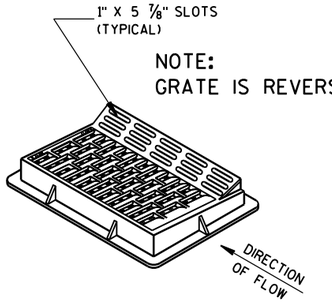
NOTE:
SPECIAL GRATE FOR THE
TYPE "H" COVER MAY ALSO BE
USED FOR THE TYPE "HM-GJ" COVER
NOTED AS TYPE HM-GJ-S ON DRAINAGE TABLE

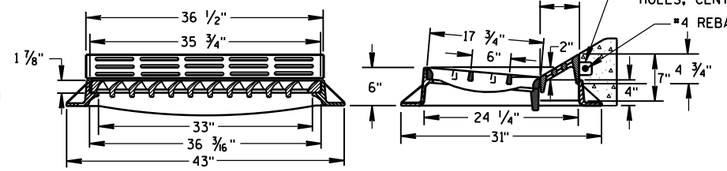
GENERAL NOTES

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 INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.



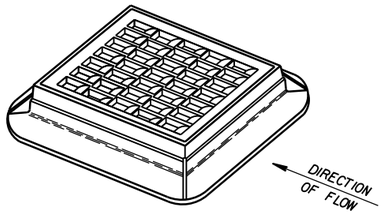


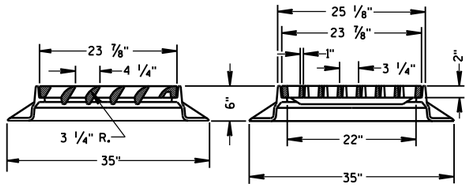


TYPE "HM"

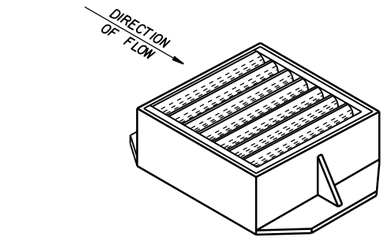
USE WITH TYPES A & D CONCRETE CURB & GUTTER, 36 INCH.

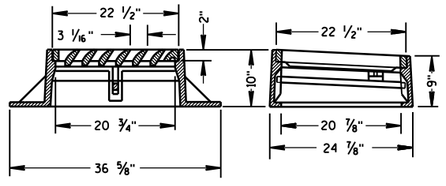
NOTE:
SPECIAL GRATE FOR THE
TYPE "H" COVER MAY ALSO BE
USED FOR THE TYPE "HM" COVER
NOTED AS TYPE HM-S ON DRAINAGE TABLE



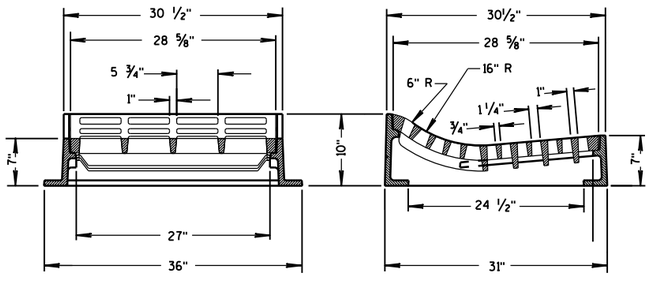


TYPE "S"



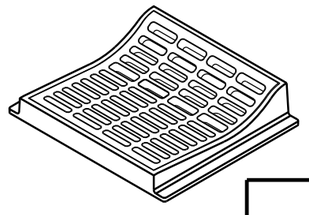


TYPE "V"



TYPE "T"

USE WITH TYPES R & T CONCRETE CURB & GUTTER, 36 INCH.



INLET COVERS
TYPE F, HM, HM-S, S, T, V, HM-GJ, & HM-GJ-S

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

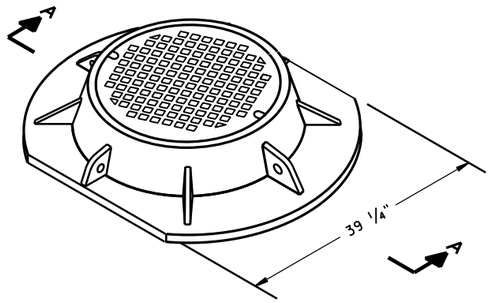
APPROVED
11/27/2013
DATE

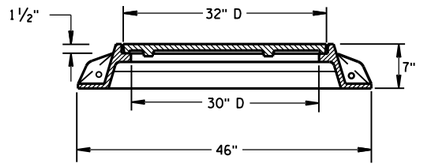
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER

FHWA

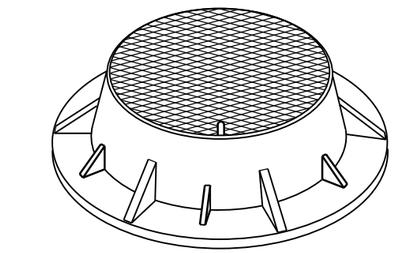
6

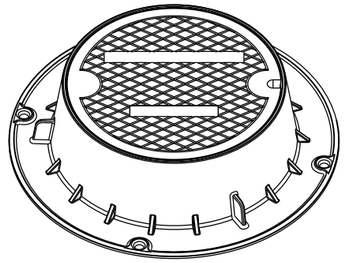
S.D.D. 8 A 5-19c

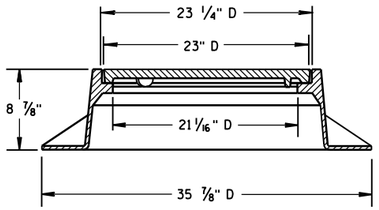


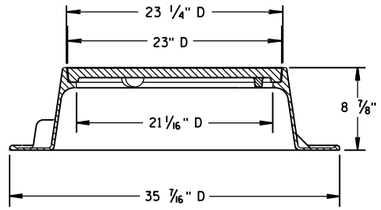


SECTION A-A
TYPE "K"









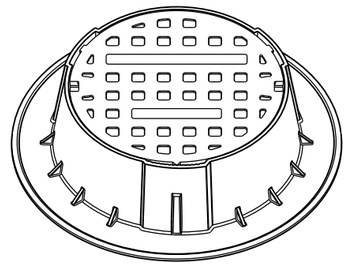
TYPE "J"
NOTE: EITHER CASTING IS ACCEPTABLE

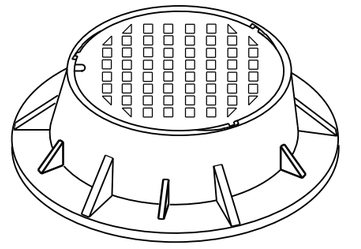
GENERAL NOTES

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.

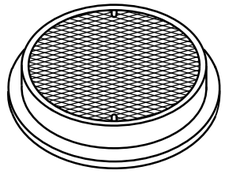
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR MANHOLE COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

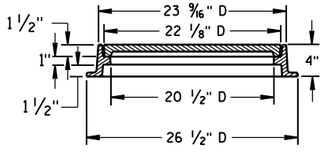
ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.



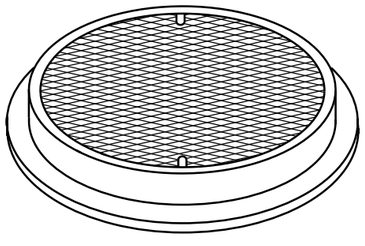


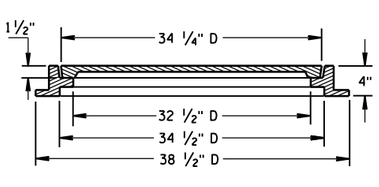
TYPE "J" SPECIAL
TYPE "B" NON-ROCKING SELF-SEAL LID
(NOTED AS TYPE J-S ON THE DRAINAGE TABLE)
NOTE: EITHER CASTING IS ACCEPTABLE



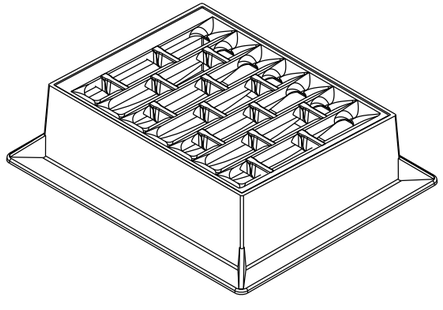


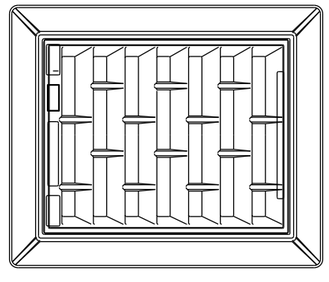
TYPE "L"

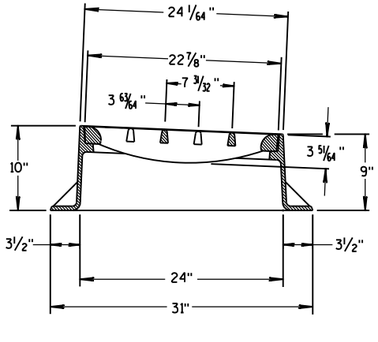


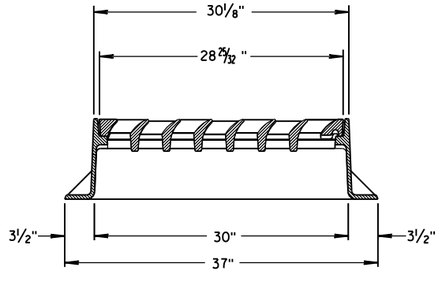


TYPE "M"









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

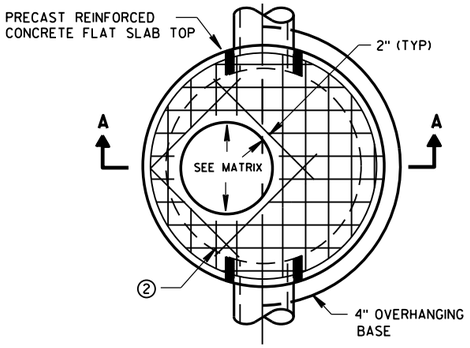
/S/ Jerry H. Zogg
ROADWAY STANDARDS D ENGINEER

6

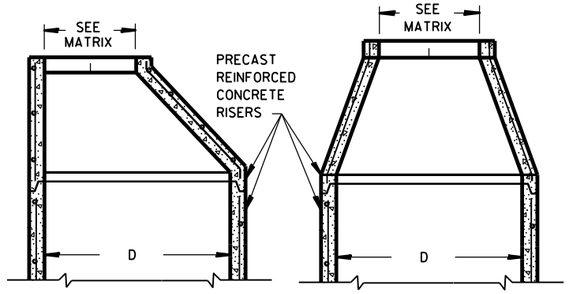
S.D.D. 8 A 5-19d

6

S.D.D. 8 A 5-19d

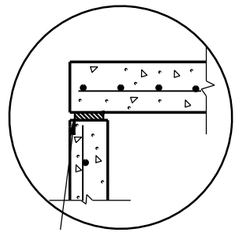


PLAN VIEW CIRCULAR OPENING

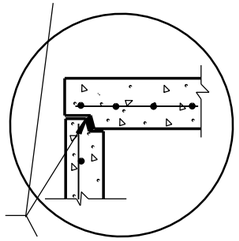


OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP

OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP

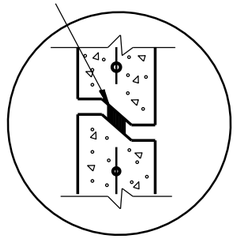


TOP WITH PLAIN END JOINT



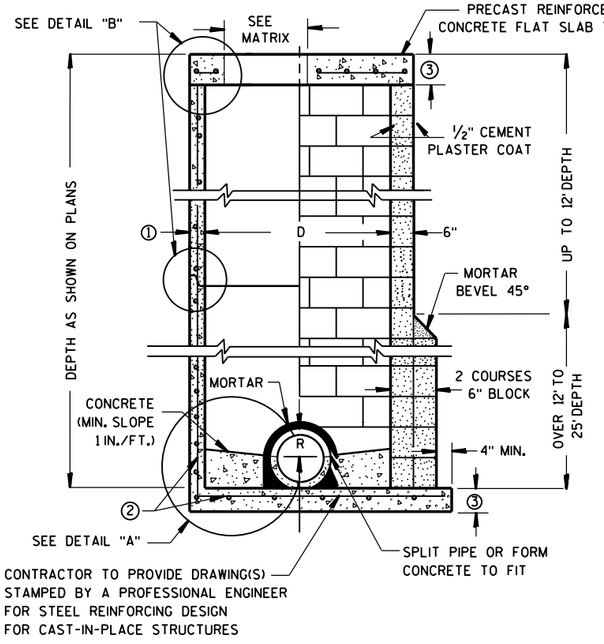
JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C990 (TYP)

TOP WITH TONGUE AND GROOVE JOINT



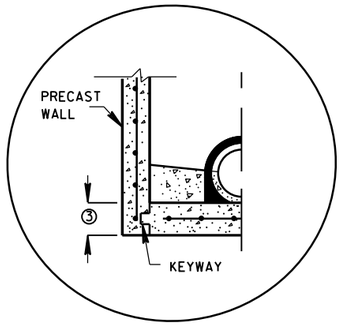
RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B"

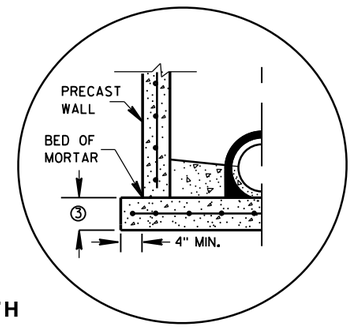


PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

CONCRETE BLOCK WITH CAST-IN-PLACE OR PRECAST REINFORCED CONCRETE BASE ②

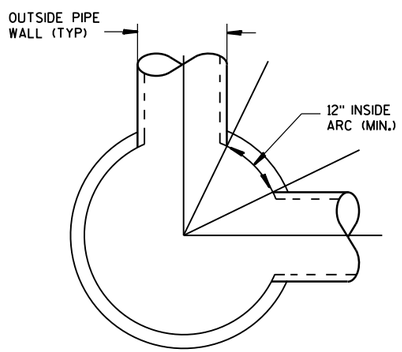


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "A"



DETAIL "C"

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 FOUNDATION 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.

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

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DEPARTMENT OF TRANSPORTATION

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Sept., 2016
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
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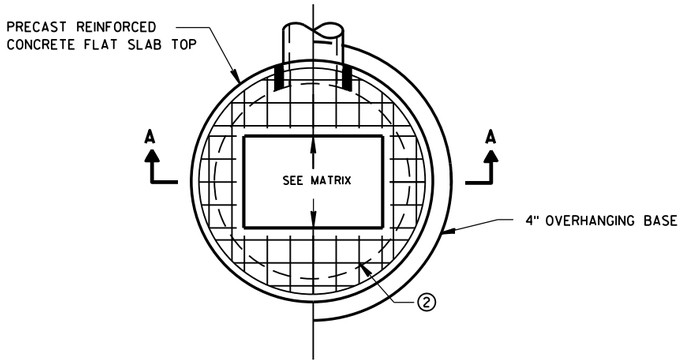
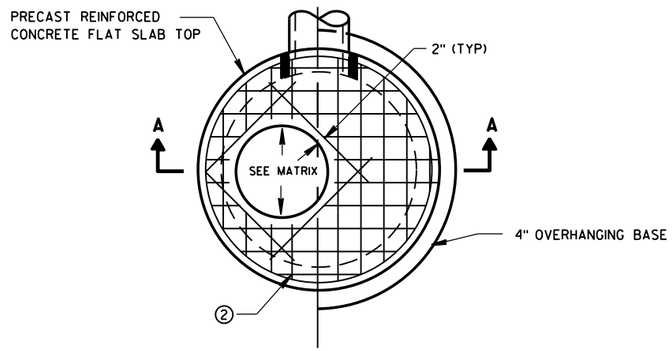
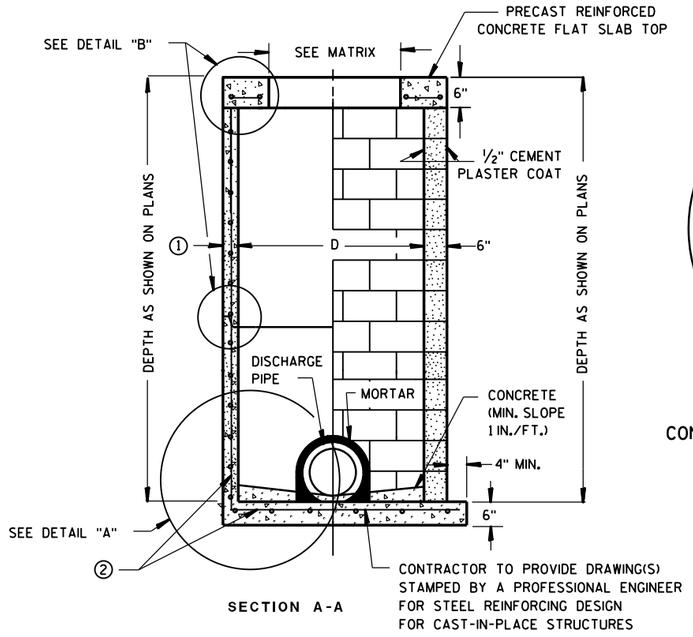


PLAN VIEW RECTANGULAR OPENING



PLAN VIEW CIRCULAR OPENING

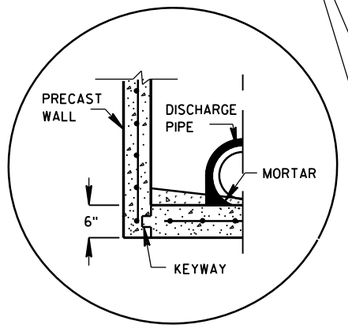


SECTION A-A

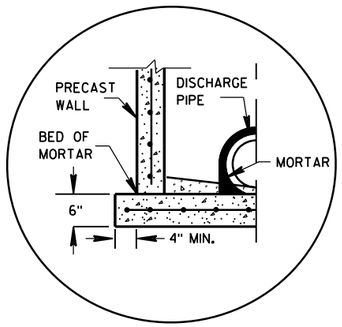
PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

CONCRETE BLOCK WITH CAST-IN-PLACE OR PRECAST REINFORCED CONCRETE BASE ②

CIRCULAR INLETS W/ FLAT TOP

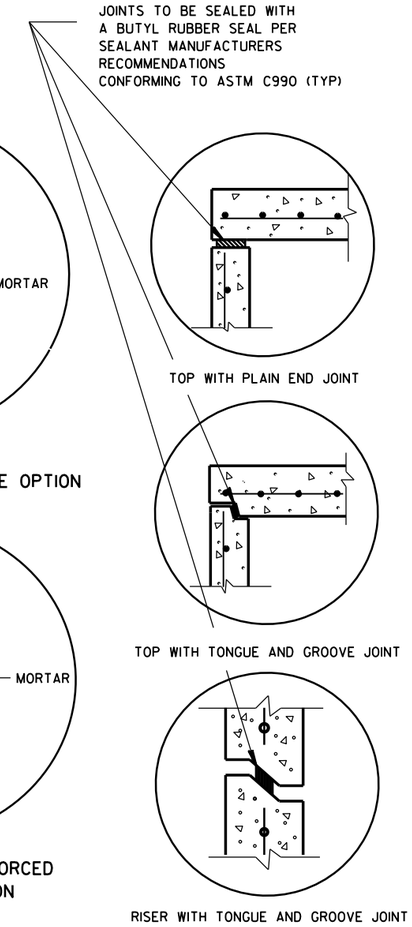


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "A"



TOP WITH PLAIN END JOINT

TOP WITH TONGUE AND GROOVE JOINT

RISER WITH TONGUE AND GROOVE JOINT

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 FOUNDATION 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.

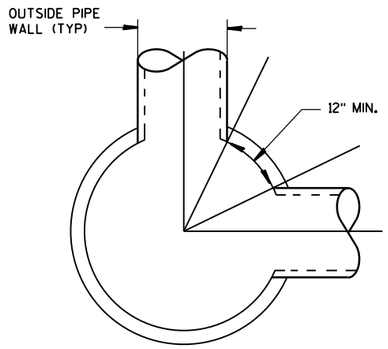
FOR ADDITIONAL CONFIGURATIONS, MAINTAIN A MINIMUM OF 12 INCHES AS MEASURED FROM THE INSIDE OF THE STRUCTURE WALL BETWEEN THE OUTSIDE PIPE WALLS OF ADJACENT PIPES. SEE DETAIL "C".

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

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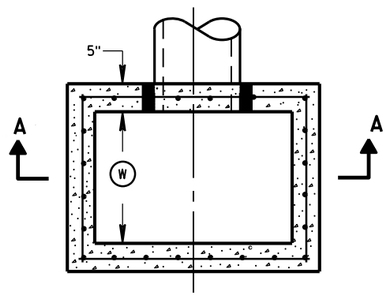
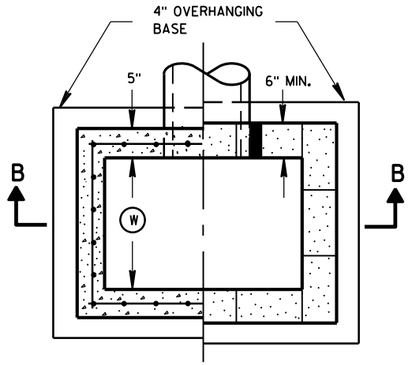
INLETS 3-FT AND 4-FT DIAMETER

6

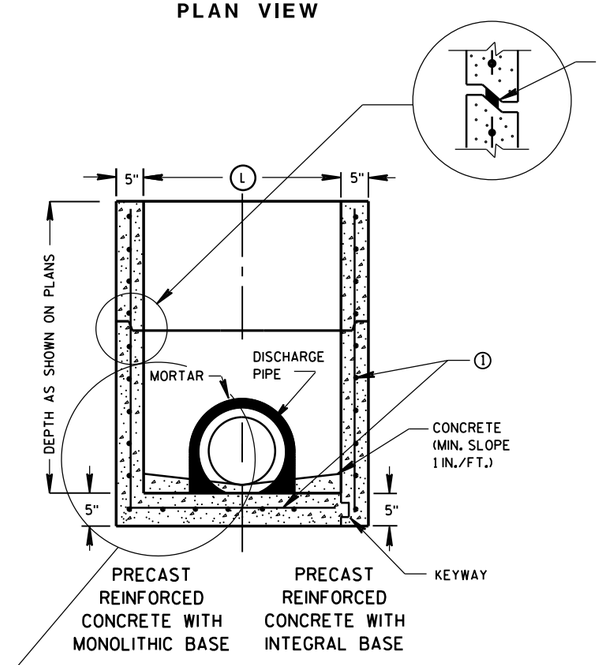
S.D.D. 8 C 6-2



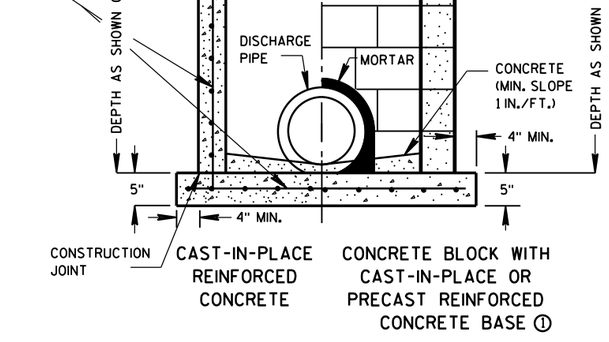
PLAN VIEW



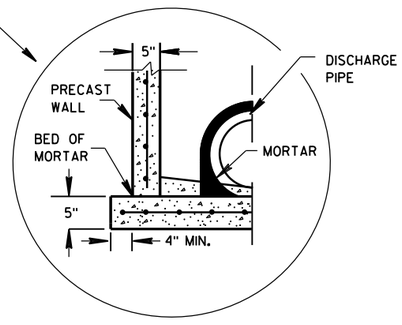
PLAN VIEW



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 FOUNDATION 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.

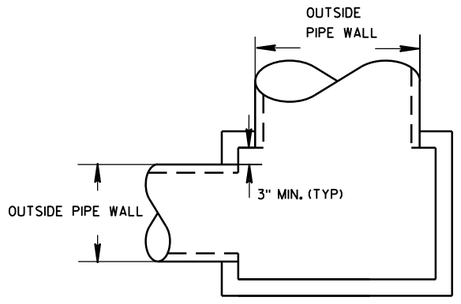
② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

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

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DATE
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ROADWAY STANDARDS D IT
UNIT SUPERVIS
FHWA

INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT

6

S.D.D. 8 C 7-2

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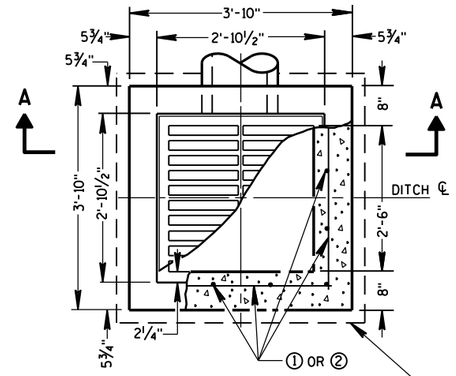
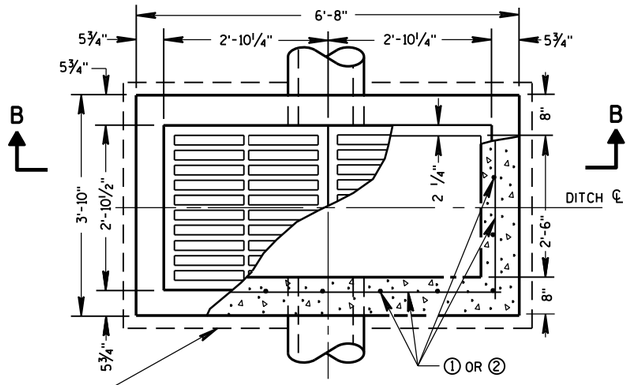
S.D.D. 8 C 7-2

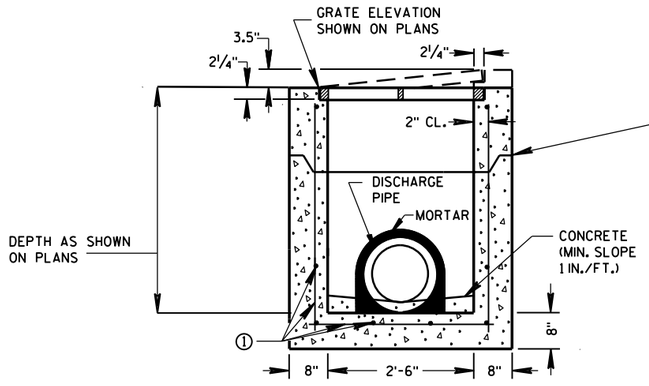


PLAN VIEW

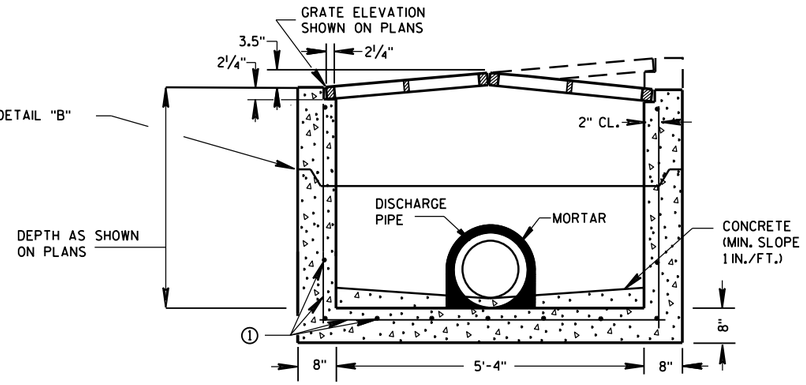


PLAN VIEW

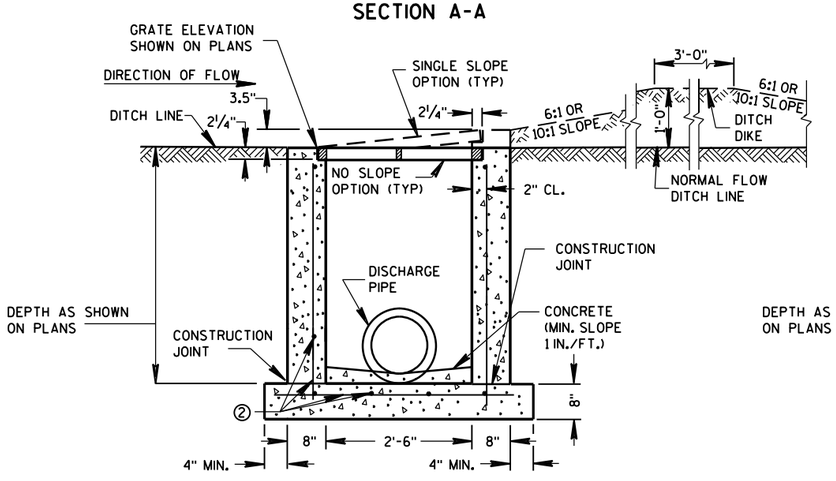
4" OVERHANGING BASE ON REINFORCED CAST-IN-PLACE CONCRETE INLETS



PRECAST REINFORCED CONCRETE SECTION A-A

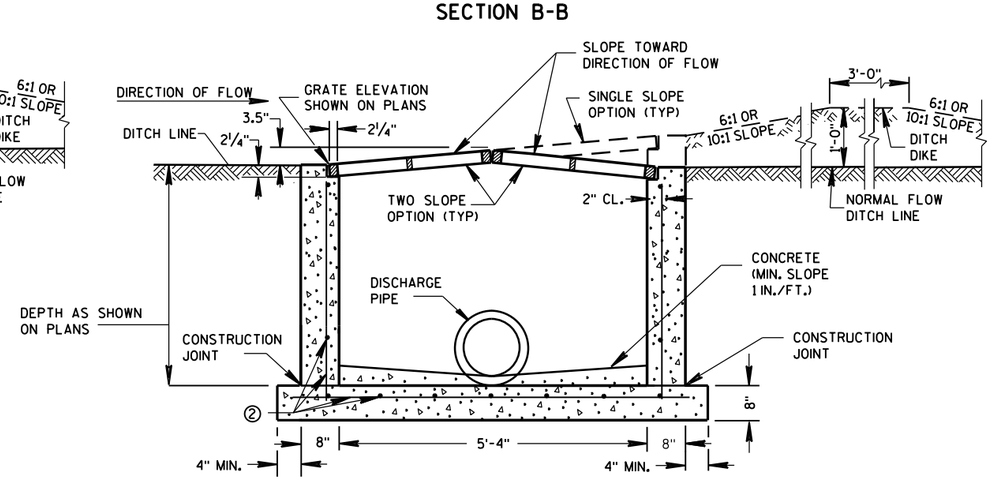


PRECAST REINFORCED CONCRETE SECTION B-B



REINFORCED CAST-IN-PLACE CONCRETE SECTION A-A

INLETS MEDIAN 1 GRATE



REINFORCED CAST-IN-PLACE CONCRETE SECTION B-B

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.

BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF FOUNDATION 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.

ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF ASTM C 913.

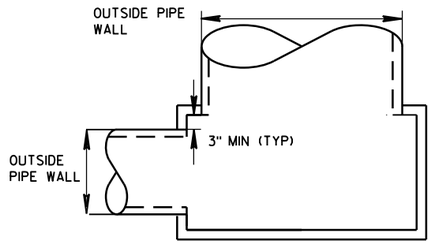
MAXIMUM INSIDE PIPE DIAMETER DETERMINED BY 3" CLEARANCE ON EACH SIDE OF THE OUTSIDE WALL OF THE PIPE. SEE DETAIL "A". ASSUMES PIPE ENTERS PERPENDICULAR TO THE STRUCTURE.

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.

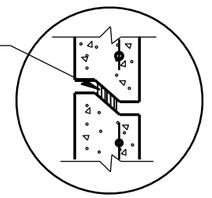
PIPE MATRIX

	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
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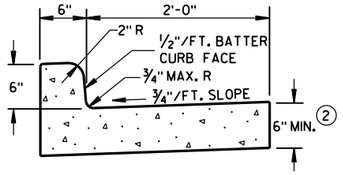
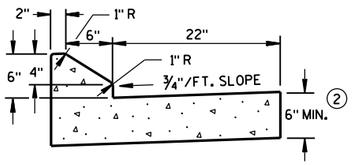
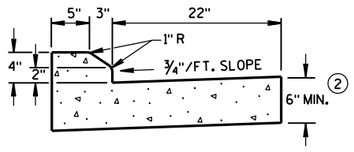


TYPES A & D ①

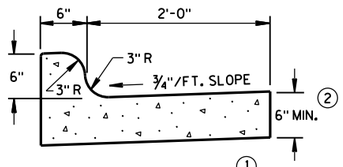


6" SLOPED CURB TYPES G & J ①

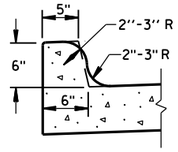


4" SLOPED CURB TYPES G & J ①

CONCRETE CURB & GUTTER 30"

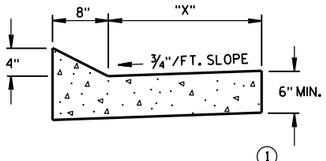


TYPES K & L ①



OPTIONAL CURB SHAPE FOR TYPES K & L ①

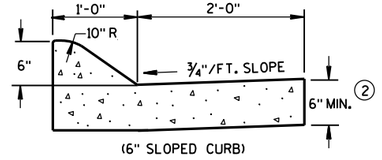
CONCRETE CURB & GUTTER 30"



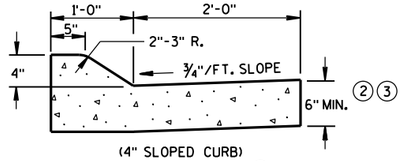
TYPES TBT & TBTT ①

CONCRETE CURB & GUTTER

TBT & TBTT	"X"
30"	22"
36"	28"

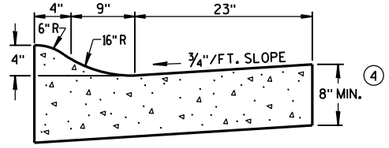


(6" SLOPED CURB)



(4" SLOPED CURB)

TYPES A & D ①



4" SLOPED CURB TYPES R & T ①⑤

CONCRETE CURB & GUTTER 36"

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, R AND TBTT.

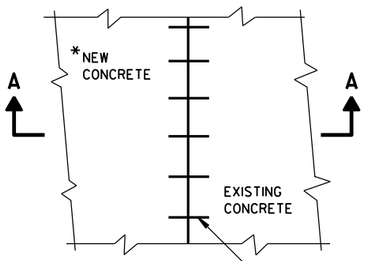
② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.

③ USE 8" MINIMUM GUTTER THICKNESS WHEN USED WITH AN ADJACENT CONCRETE TRUCK APRON PLACED BEHIND BACK OF CURB.

④ 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.

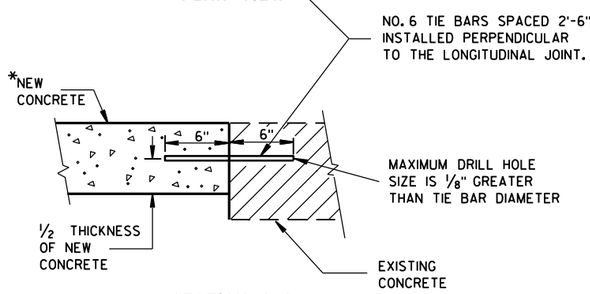
⑤ THE FACE OF CURB IS 6" FROM THE BACK OF CURB.

⑥ WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.



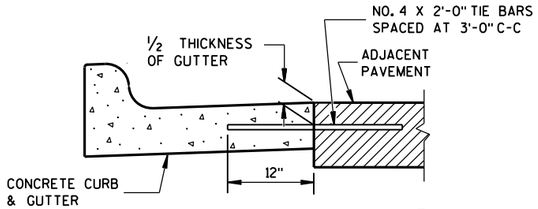
PLAN VIEW

*NEW CURB & GUTTER, SURFACE DRAINS, CONCRETE PAVEMENT OR OTHER NEW CONCRETE.

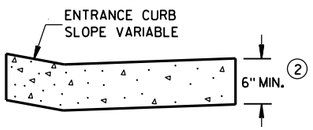


SECTION A-A

TIE BARS DRILLED INTO EXISTING PAVEMENT

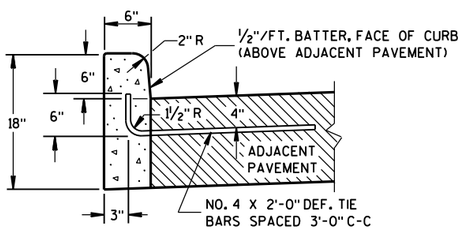


TYPICAL TIE BAR LOCATION ①

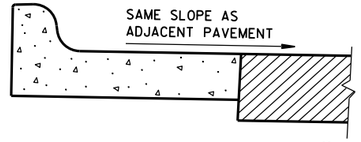


DRIVEWAY ENTRANCE CURB

(WHEN DIRECTED BY THE ENGINEER)

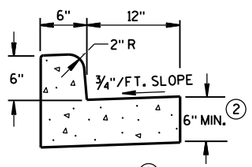


① TYPES A & D



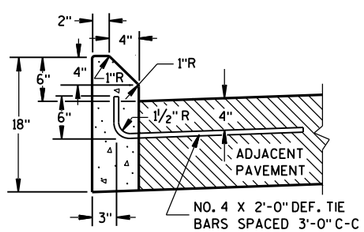
⑥ REVERSE SLOPE GUTTER

(TYPICAL FOR ALL CURB & GUTTER TYPES)



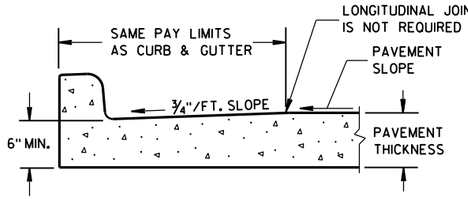
① TYPES A & D

CONCRETE CURB & GUTTER 18"

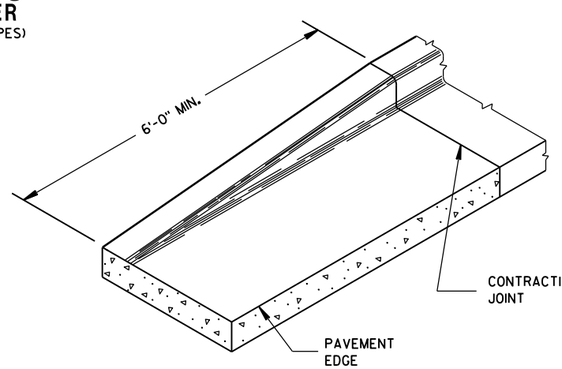


① TYPES G & J

CONCRETE CURB



PARTIAL SECTION OF PAVEMENT WITH INTEGRAL CURB & GUTTER



END SECTION CURB & GUTTER

CONCRETE CURB, CONCRETE CURB & GUTTER AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

June, 2016 — DATE

/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA

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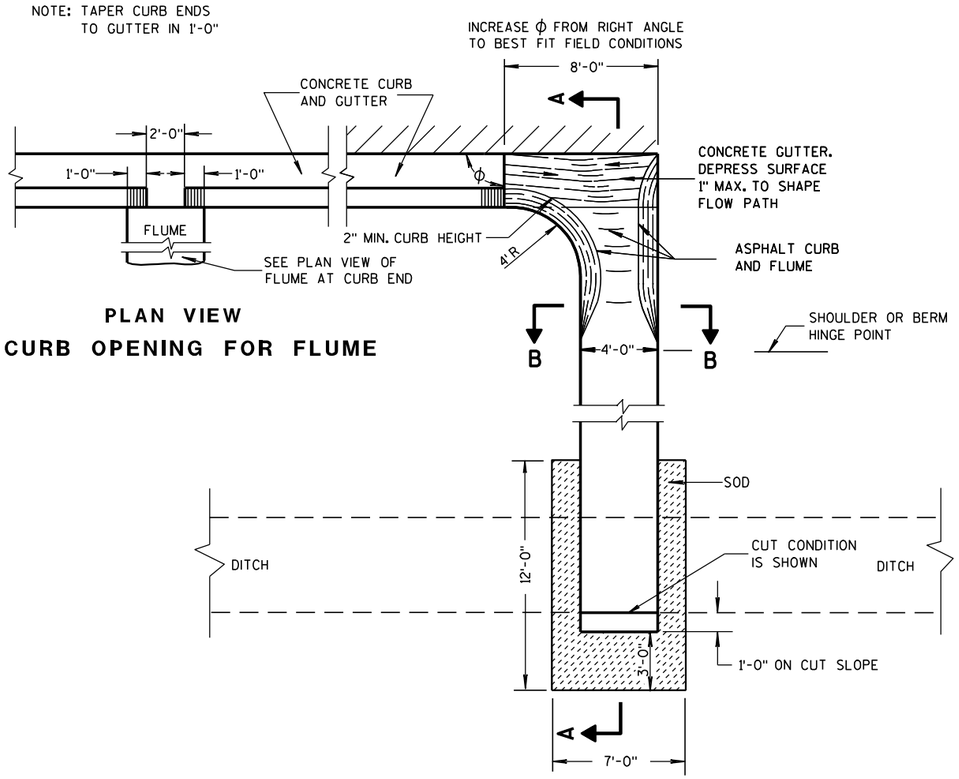
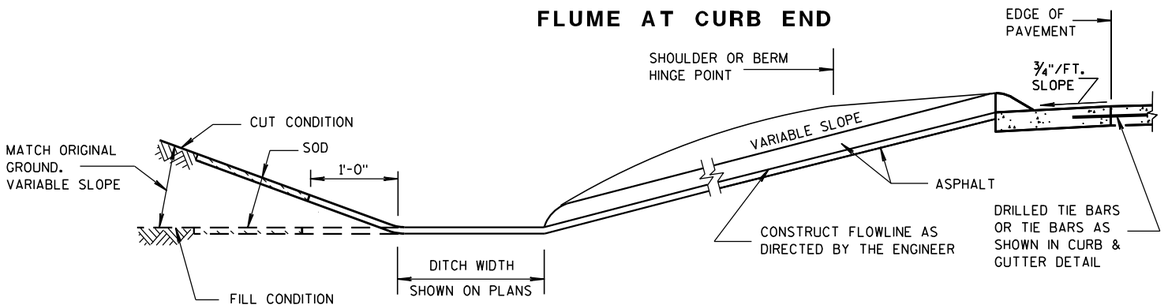
S.D.D. 8 D 1-19

ASPHALTIC FLUME

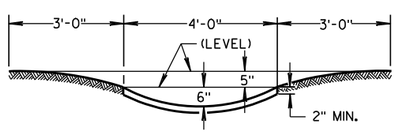


PLAN VIEW
CURB OPENING FOR FLUME

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.

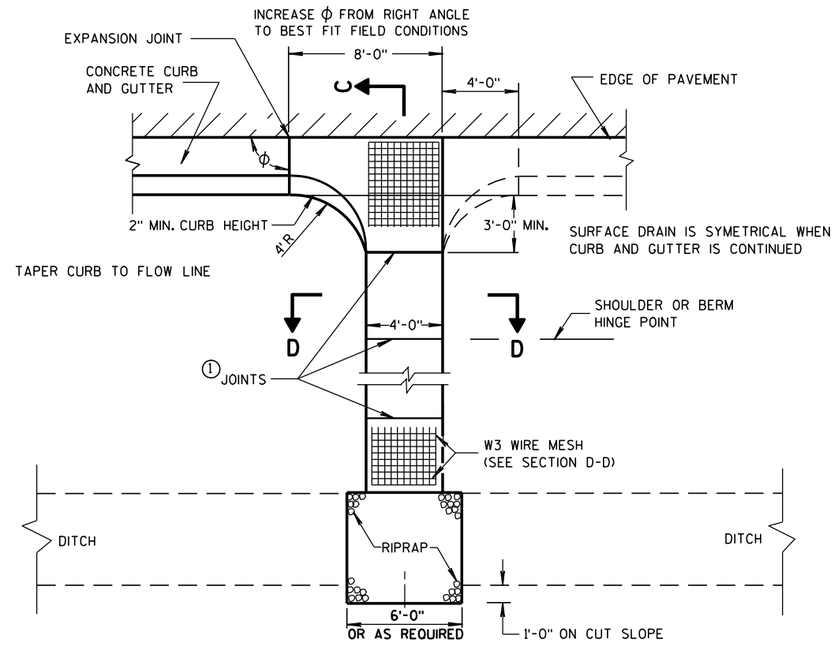
WELDED STEEL WIRE FABRIC SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

① JOINTS SHALL BE $\frac{1}{8}$ TO $\frac{1}{4}$ INCH WIDE BY $1\frac{1}{2}$ INCHES DEEP AND SPACED AT UNIFORM INTERVALS OF APPROXIMATELY 4 FEET.

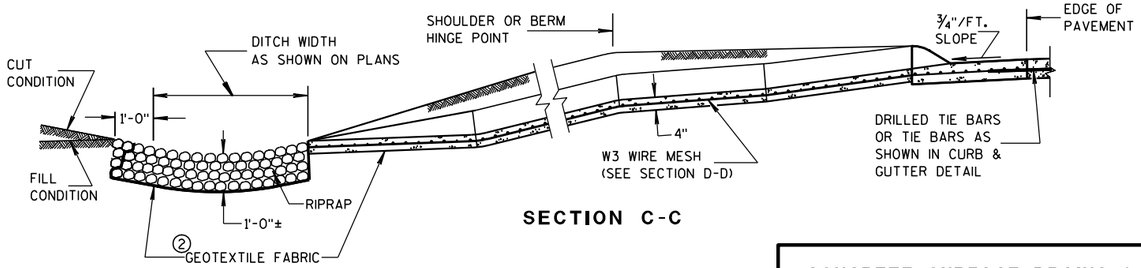
② GEOTEXTILE FABRIC TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.

③ CONCRETE SURFACE DRAIN WITHOUT CURB AND GUTTER MAY BE USED ON BACKSLOPES WHEN SPECIFIED

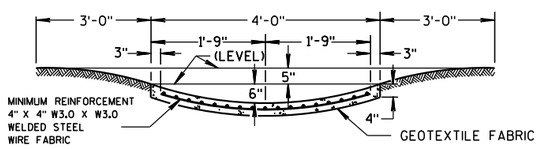
③ CONCRETE SURFACE DRAIN



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
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MENT
FHWA

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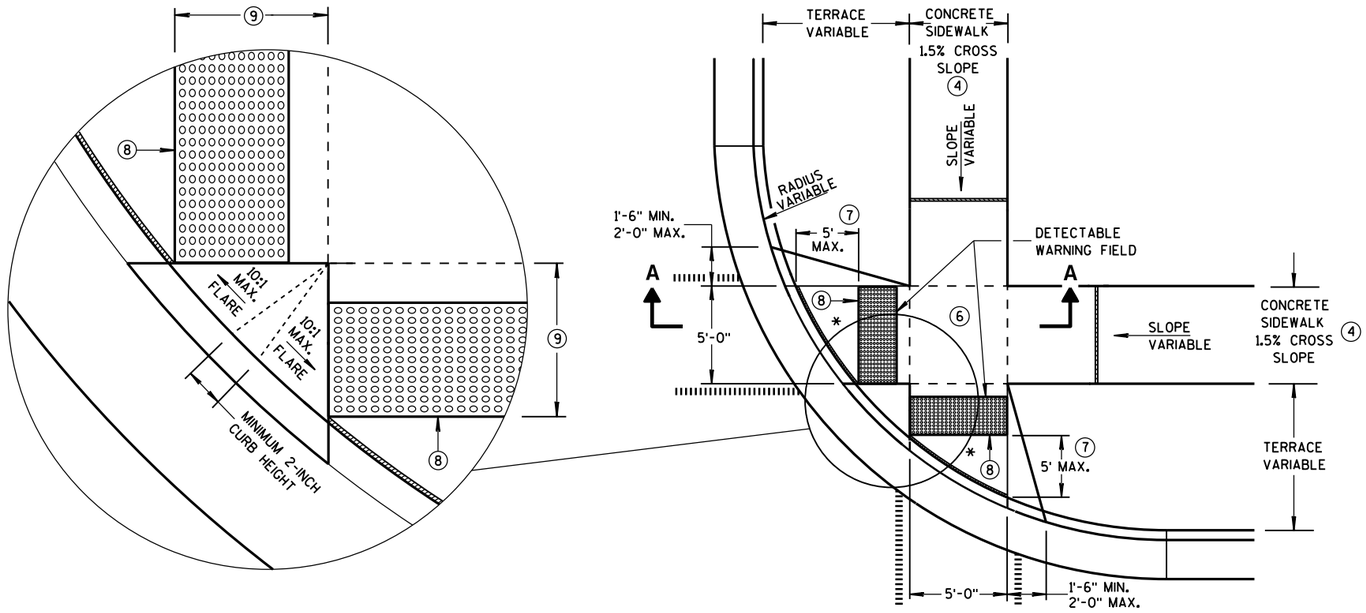
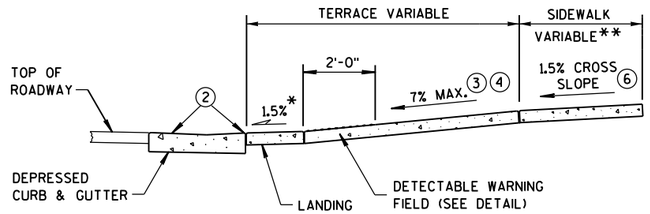


PLAN VIEW

TYPE 2 RAMP

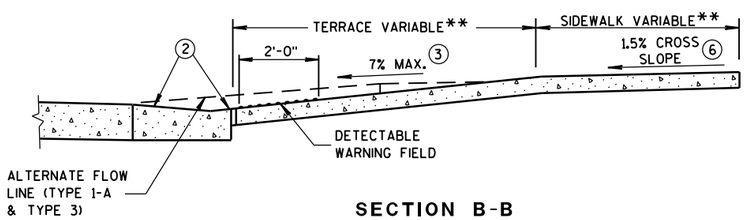
(ON LINE WITH SIDEWALK)

* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK

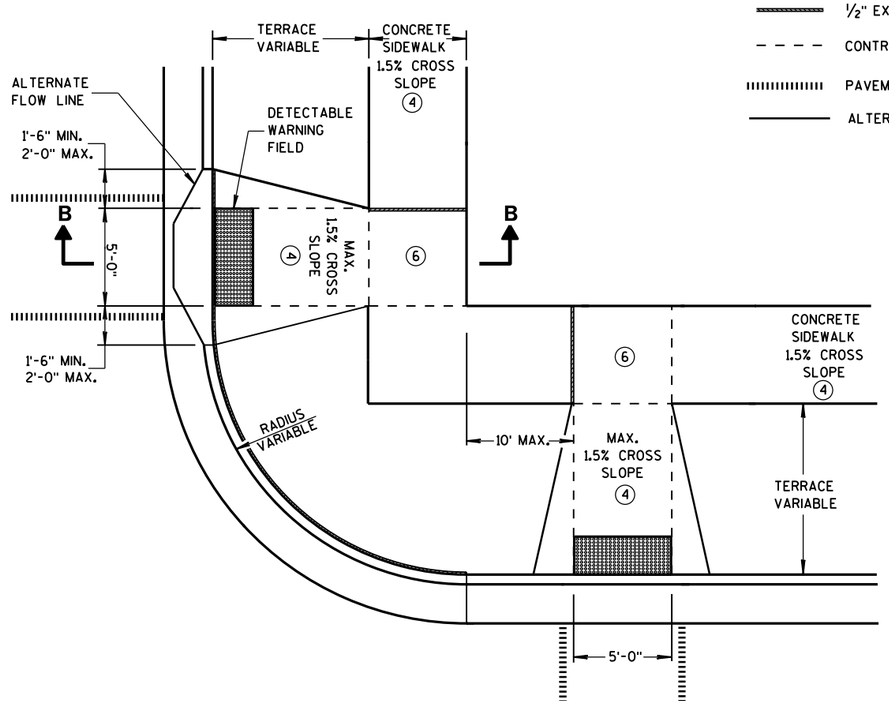


SECTION A-A

** WIDTH SHOWN ELSEWHERE IN THE PLANS



SECTION B-B



PLAN VIEW

TYPE 3 RAMP

(OUTSIDE OF CROSSWALK AREA)

GENERAL NOTES

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL NOT EXCEED 7%.

(3) ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.

(7) WHEN THIS DISTANCE EXCEEDS 5 FEET, STAGGER ADDITIONAL DETECTABLE WARNING PANEL FORWARD TO REDUCE THIS DISTANCE. PROVIDE MINIMUM 12-INCH ROW OVERLAP TO AVOID SIDESTEP OF DOME DETECTION. USE EQUAL-SIZE PANELS TO DEVELOP OVERLAPPING, STAGGERED ROWS. ALIGN DOMES BETWEEN OVERLAPPING ROWS AND IN DIRECTION OF PEDESTRIAN TRAVEL.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

(9) WHEN THIS DISTANCE IS LESS THAN 6'-0", IT MAY BE DIFFICULT TO ACHIEVE A 7% SLOPE OR FLATTER ALONG THE RAMP. REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 7% SLOPE OR FLATTER ON RAMP. CONSTRUCT 2-INCH MINIMUM CURB HEIGHT BETWEEN 10:1 FLARES.

LEGEND

- 1/2" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)
- ALTERNATIVE LAYOUT

6

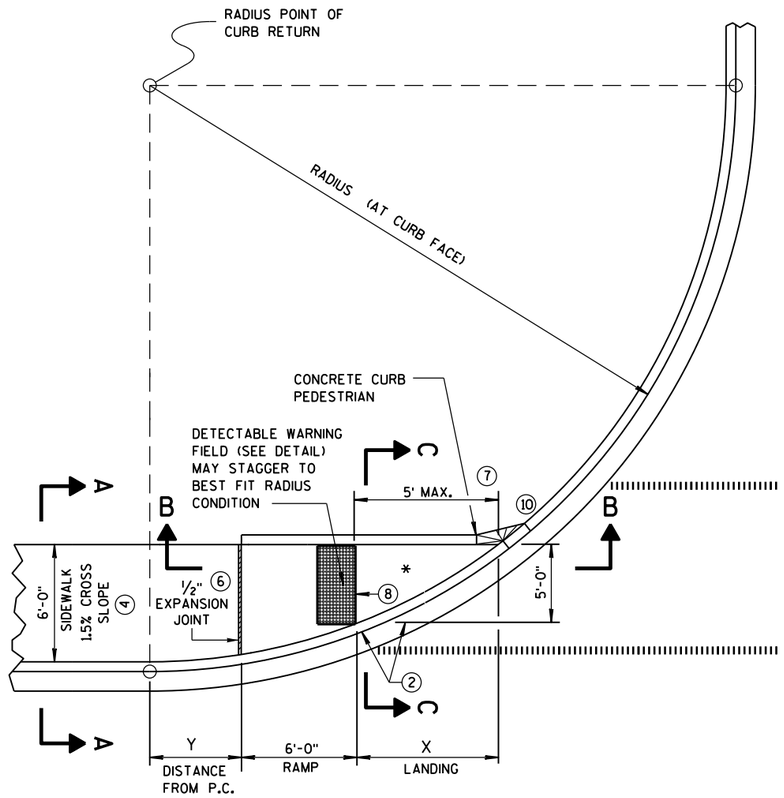
S.D.D. 8 D 5-18b

6

S.D.D. 8 D 5-18b

CURB RAMPS
TYPES 2 AND 3

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

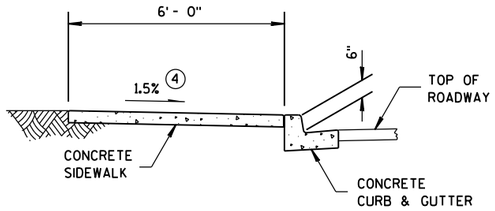


CURB RAMP TYPE 4A

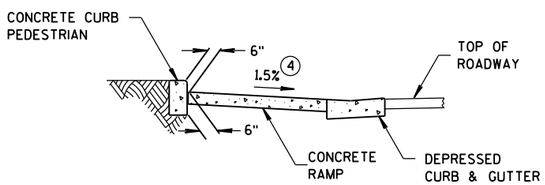
PLAN VIEW

RADIUS (AT CURB FACE)	X	Y
20 FEET	7'-11"	0'-2"
30 FEET	10'-2¾"	1'-7½"
40 FEET	12'-1¼"	2'-10"
50 FEET	13'-8¾"	3'-10¾"
60 FEET	15'-2"	4'-10¼"

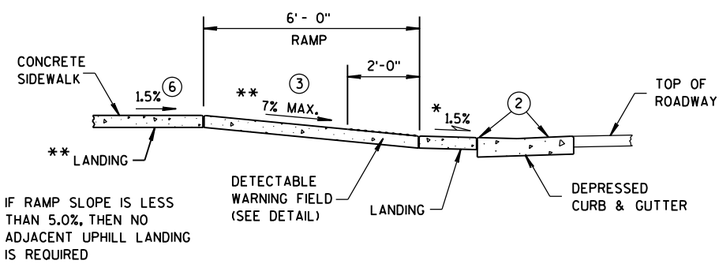
INTERMEDIATE RADII CAN BE INTERPOLATED



SECTION A-A FOR TYPE 4A

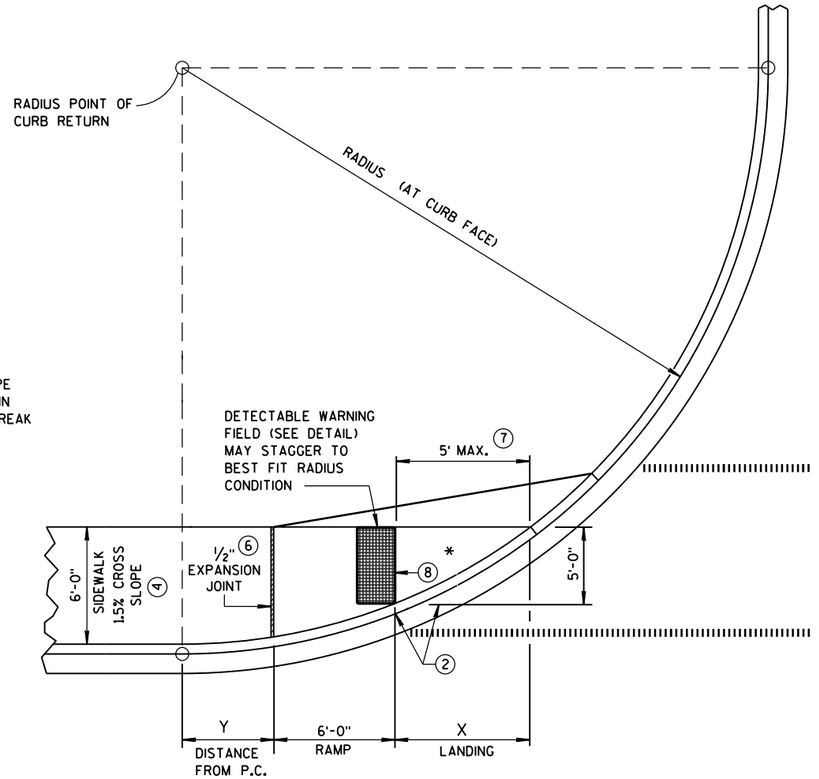


SECTION C-C FOR TYPE 4A



** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

SECTION B-B FOR TYPE 4A



* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK

CURB RAMP TYPE 4A1

PLAN VIEW

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL NOT EXCEED 7%.

(3) ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

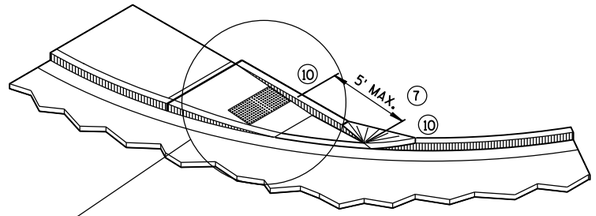
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.

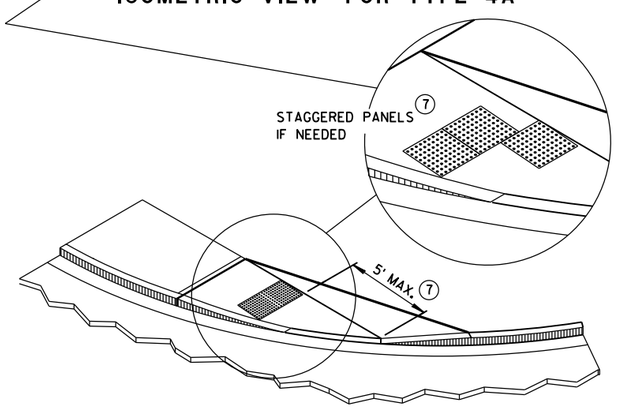
(7) WHEN THIS DISTANCE EXCEEDS 5 FEET, STAGGER ADDITIONAL DETECTABLE WARNING PANEL FORWARD TO REDUCE THIS DISTANCE. PROVIDE MINIMUM 12-INCH ROW OVERLAP TO AVOID SIDESTEP OF DOME DETECTION. USE EQUAL-SIZE PANELS TO DEVELOP OVERLAPPING, STAGGERED ROWS. ALIGN DOMES BETWEEN OVERLAPPING ROWS AND IN DIRECTION OF PEDESTRIAN TRAVEL.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

(10) INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.



ISOMETRIC VIEW FOR TYPE 4A



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 TRANSPO

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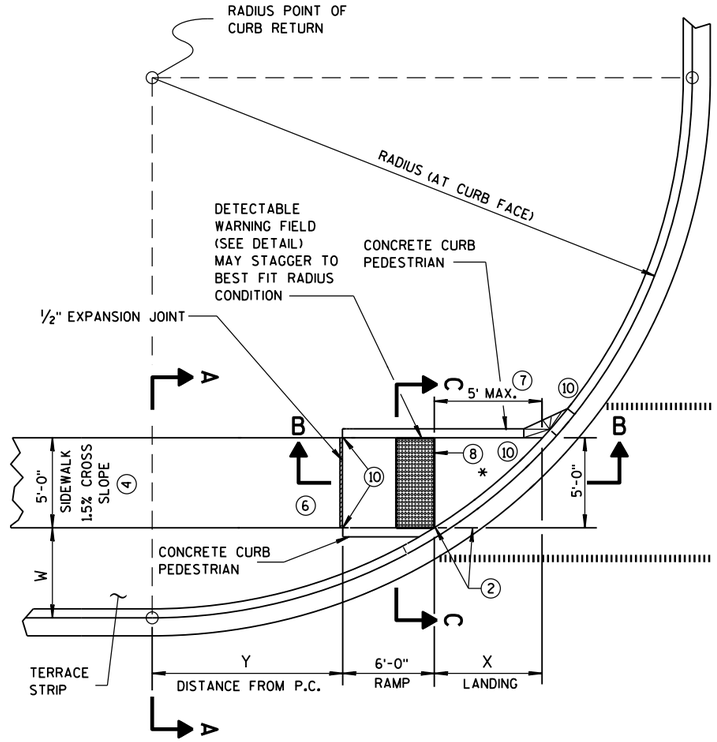
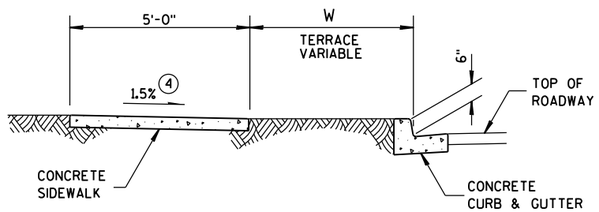
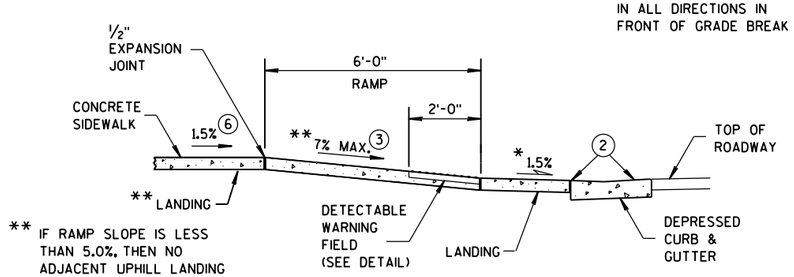
S.D.D. 8 D 5-18c



CURB RAMP TYPE 4B
PLAN VIEW



SECTION A-A FOR TYPE 4B



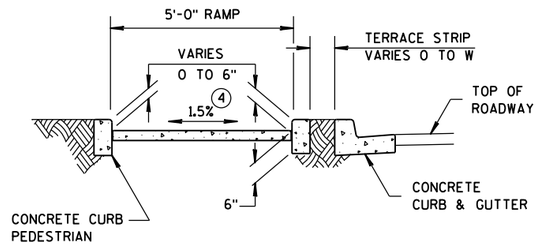
SECTION B-B FOR TYPE 4B

LEGEND

½" EXPANSION JOINT-SIDEWALK

CONTRACTION JOINT FIELD LOCATED

PAVEMENT MARKING CROSSWALK (WHITE)



SECTION C-C FOR TYPE 4B

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'-9¾"	3'-6½"	4'-11½"	5'-1¾"	4'-3¼"	6'-5½"	3'-8¾"	7'-6¾"	3'-3"	8'-6¼"
30 FEET	7'-9¼"	5'-10½"	6'-9½"	7'-11¼"	6'-0¼"	9'-8"	5'-5"	11'-1¾"	4'-10¾"	12'-5¾"
40 FEET	9'-4"	7'-10"	8'-2¾"	10'-3"	7'-4¾"	12'-3¾"	6'-8½"	14'-1¼"	6'-1¾"	15'-8½"
50 FEET	10'-8"	9'-6½"	9'-5½"	12'-3¼"	8'-6½"	14'-7½"	7'-9¾"	16'-8¼"	7'-2½"	18'-6¼"
60 FEET	11'-10¼"	11'-0¾"	10'-6½"	14'-1¼"	9'-6½"	16'-8½"	8'-9¼"	18'-11¾"	8'-1½"	21'-0½"

INTERMEDIATE RADII CAN BE INTERPOLATED

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL NOT EXCEED 7%.

(3) ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

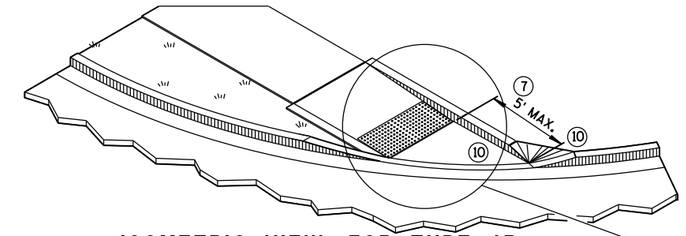
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.

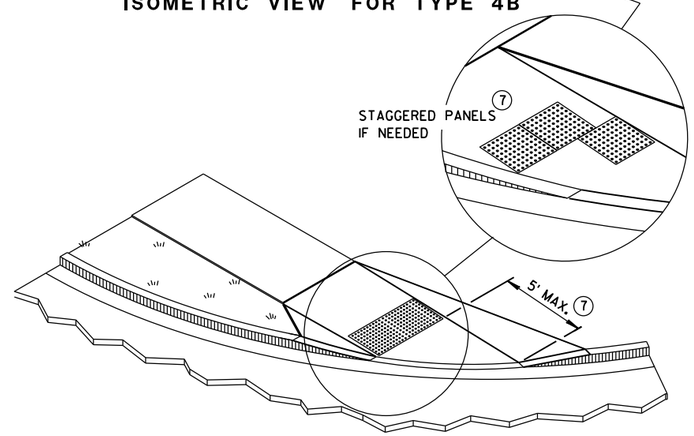
(7) WHEN THIS DISTANCE EXCEEDS 5 FEET, STAGGER ADDITIONAL DETECTABLE WARNING PANEL FORWARD TO REDUCE THIS DISTANCE. PROVIDE MINIMUM 12-INCH ROW OVERLAP TO AVOID SIDESTEP OF DOME DETECTION. USE EQUAL-SIZE PANELS TO DEVELOP OVERLAPPING, STAGGERED ROWS. ALIGN DOMES BETWEEN OVERLAPPING ROWS AND IN DIRECTION OF PEDESTRIAN TRAVEL.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

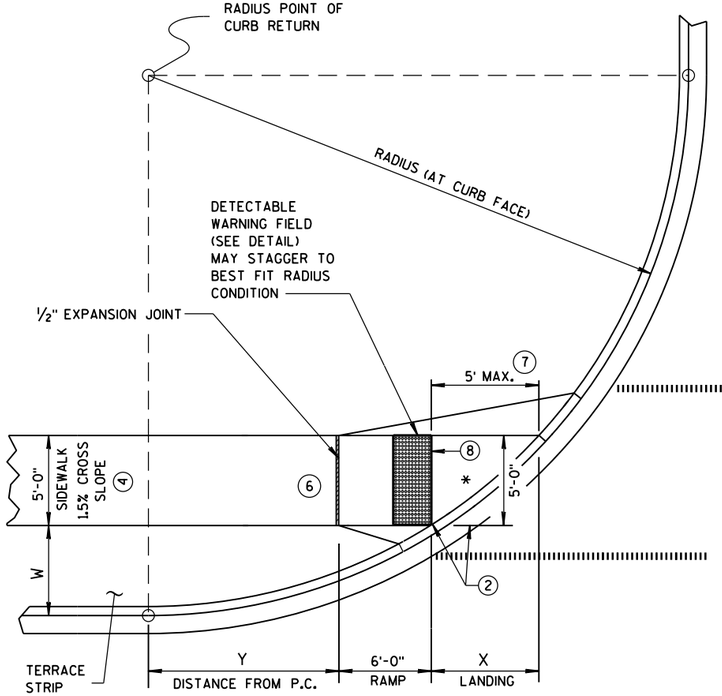
(10) INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.



ISOMETRIC VIEW FOR TYPE 4B



ISOMETRIC VIEW FOR TYPE 4B1



CURB RAMP TYPE 4B1
PLAN VIEW

CURB RAMPS
TYPE 4B AND 4B1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 8 D 5-18d

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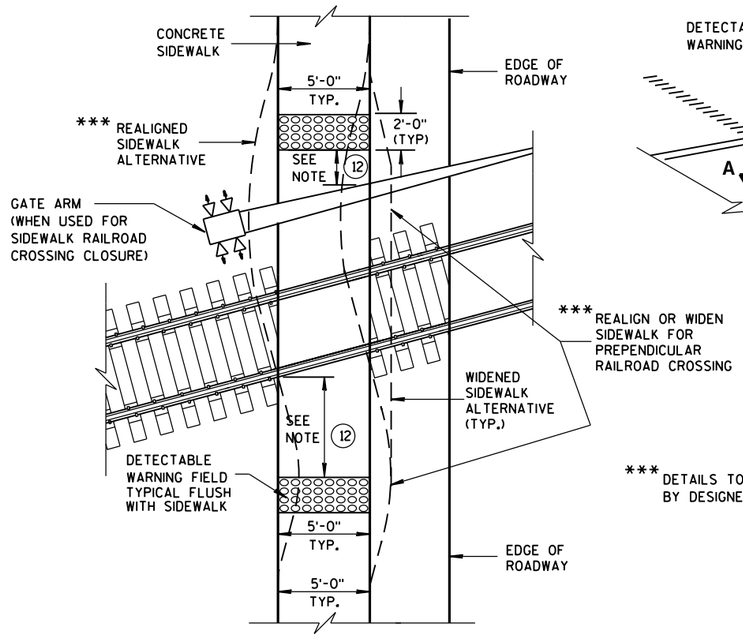
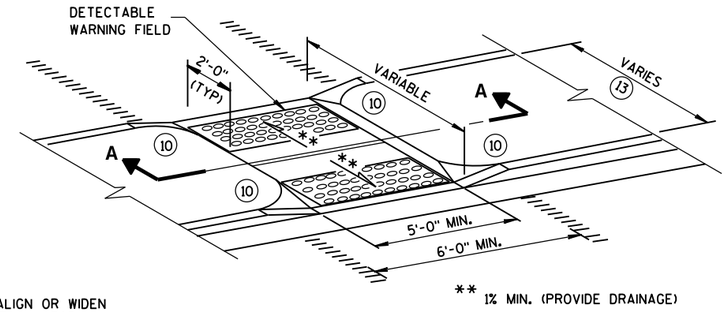
S.D.D. 8 D 5-18d



*** DETAILS TO BE DETERMINED BY DESIGNER

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.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL NOT EXCEED 7%.

(3) ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

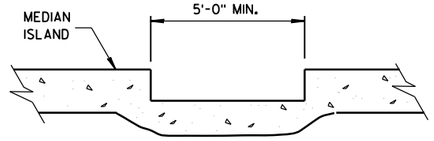
(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.

(10) INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.

(11) SLOPE SIDEWALK TOWARD LANDING AS SHOWN WHERE THERE IS NO TERRACE OR WHERE THE TERRACE WIDTH IS LESS THAN 6 FEET WIDE.

(12) 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.

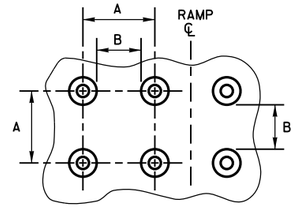
(13) DO NOT INSTALL DETECTABLE WARNING FIELDS IF MEDIAN WIDTH BETWEEN BACK OF CURBS IS LESS THAN 6 FEET.



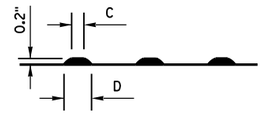
SECTION A-A

	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.

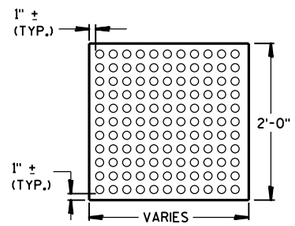


PLAN VIEW



ELEVATION VIEW

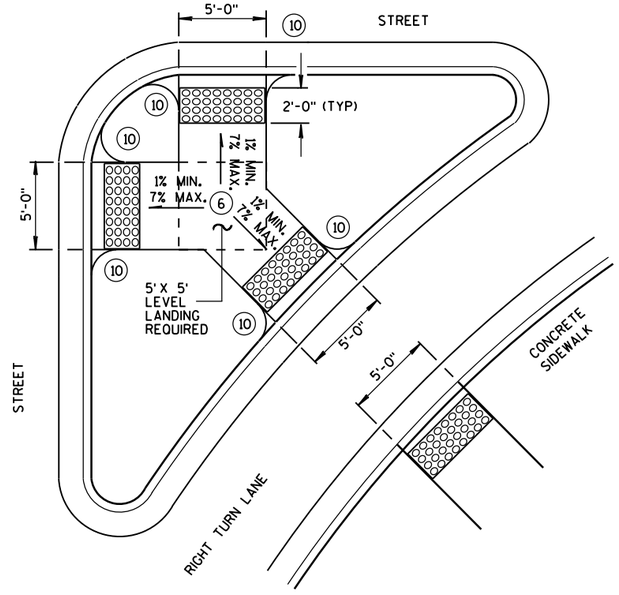
TRUNCATED DOMES
DETECTABLE WARNING PATTERN DETAIL



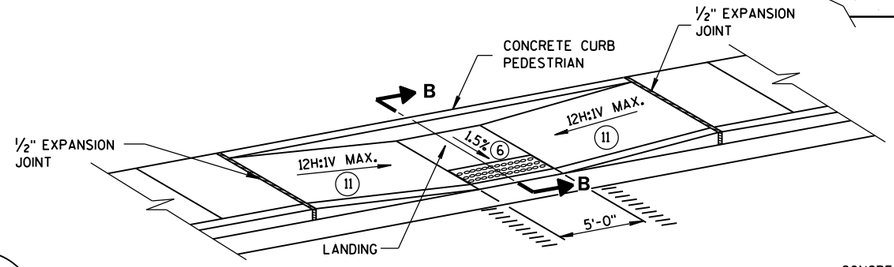
PLAN VIEW

DETECTABLE WARNING FIELD (TYPICAL)

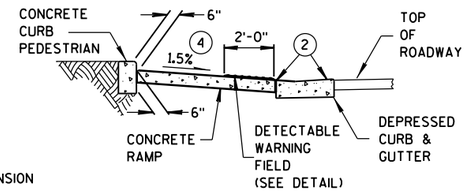
REFER TO GENERAL NOTES (2) AND (3) FOR ALL ISLAND CURB RAMPS



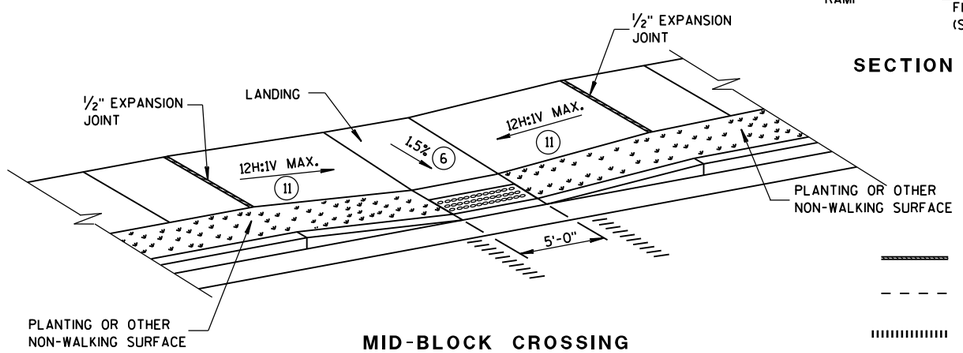
TYPE 6
DETECTABLE WARNING AT ISLANDS



MID-BLOCK CROSSING
TYPE 7A



SECTION B-B



MID-BLOCK CROSSING
TYPE 7B

NOTE: THESE PARALLEL AND PARALLEL/PERPENDICULAR CURB RAMPS MAY BE USED AT INTERSECTIONS AND MID BLOCK LOCATIONS.

LEGEND

- 1/2" 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
Sept., 2016
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS UNIT SUPERV
FHWA

6

S.D.D. 8 D 5-18e

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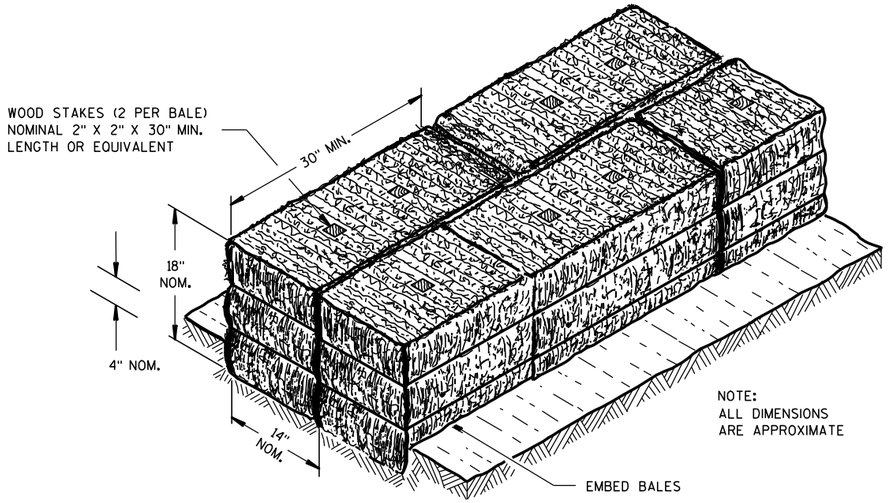
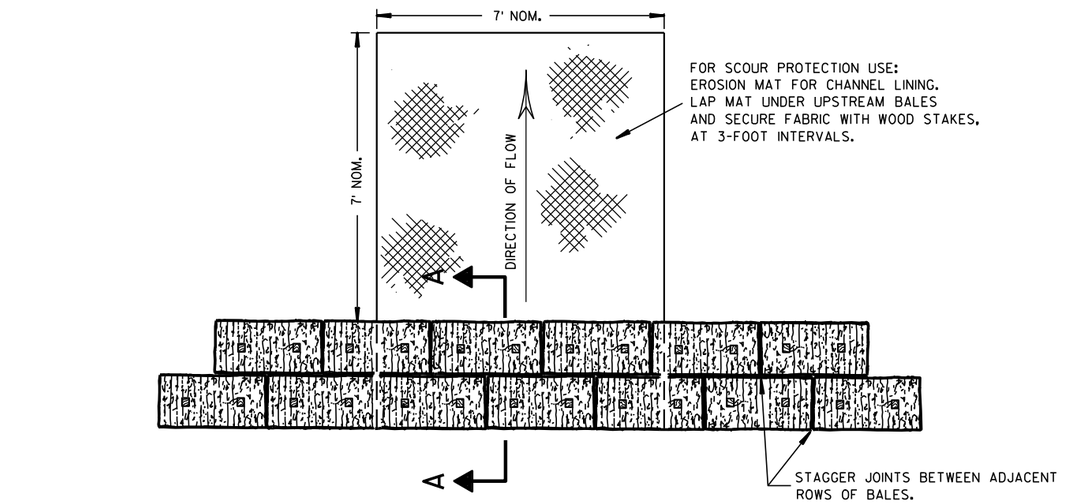
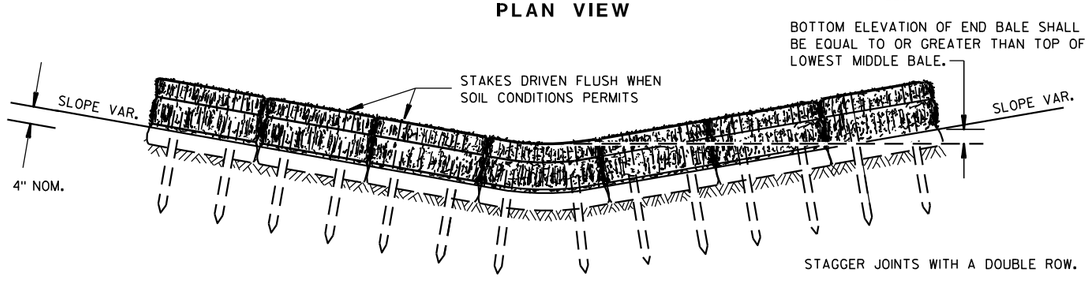
S.D.D. 8 D 5-18e



SECTION A-A



PLAN VIEW



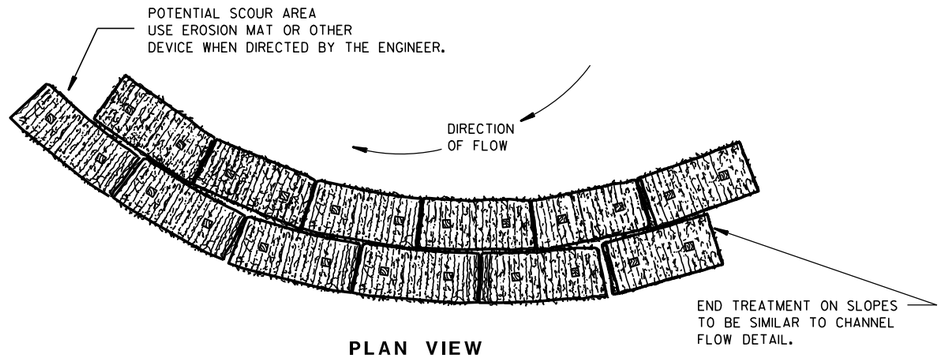
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES ①

GENERAL NOTES

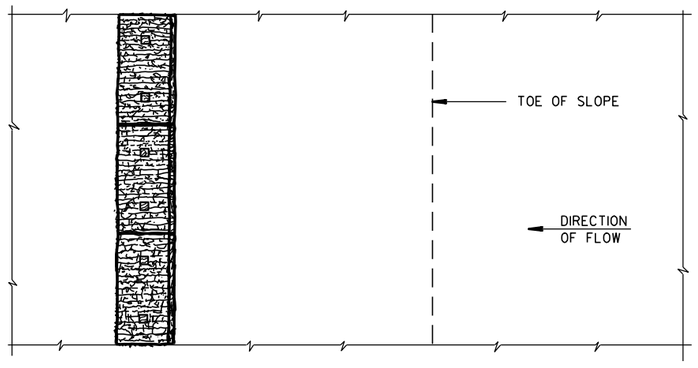
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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.

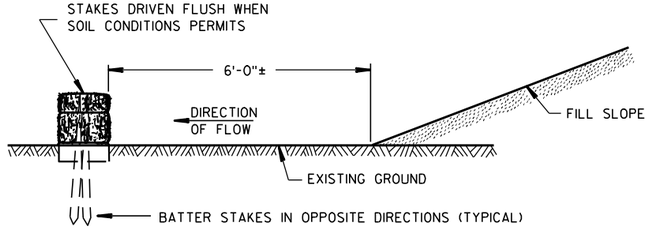


PLAN VIEW

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

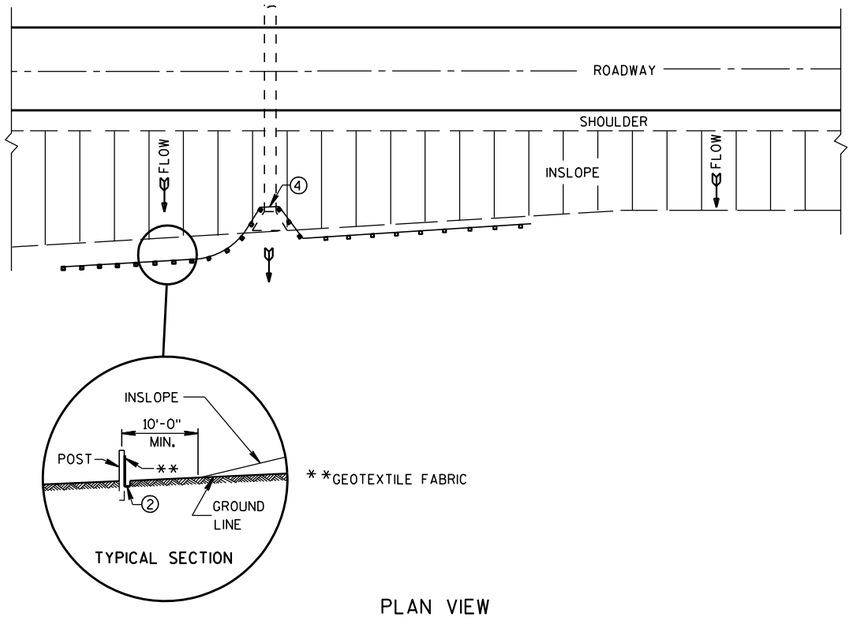
APPROVED
6/04/02 DATE
/S/ Beth Cannestra CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 8 E 8-3

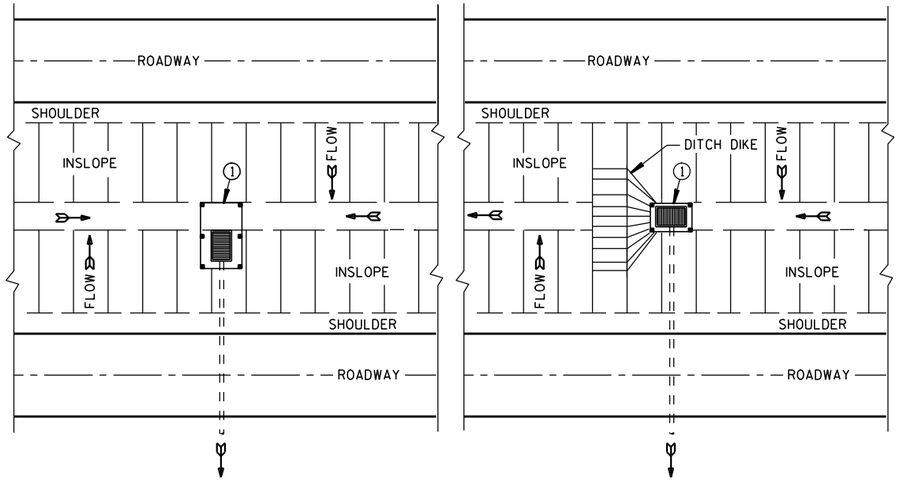
6

S.D.D. 8 E 8-3



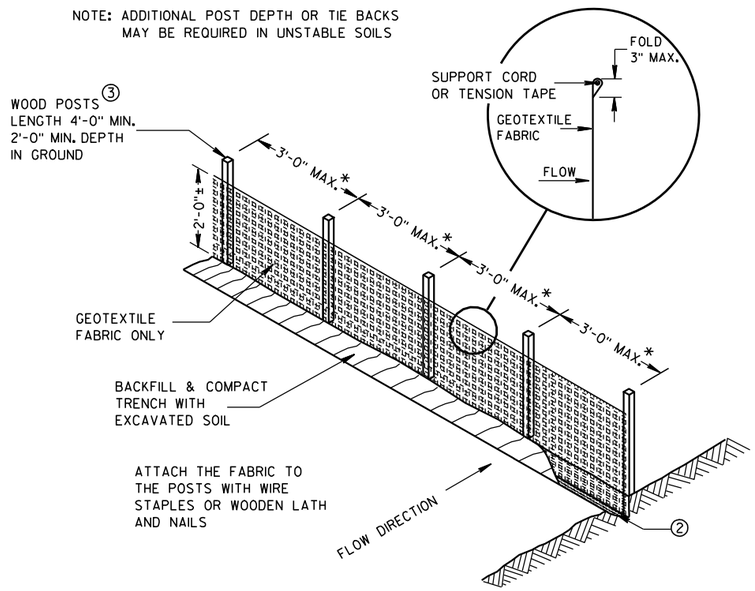
PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



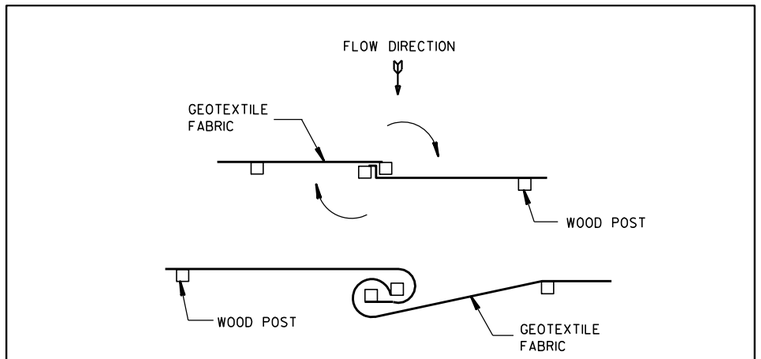
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS



*NOTE: 8'-0" POST SPACING ALLOWED IF A WOVEN GEOTEXTILE FABRIC IS USED.

SILT FENCE

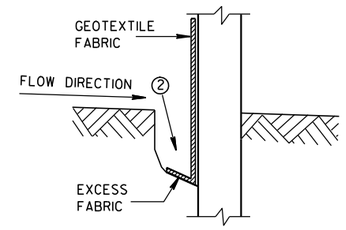


JOINING TWO LENGTHS OF SILT FENCE 5

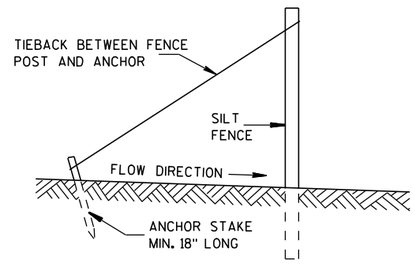
GENERAL NOTES

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 TIE BACK

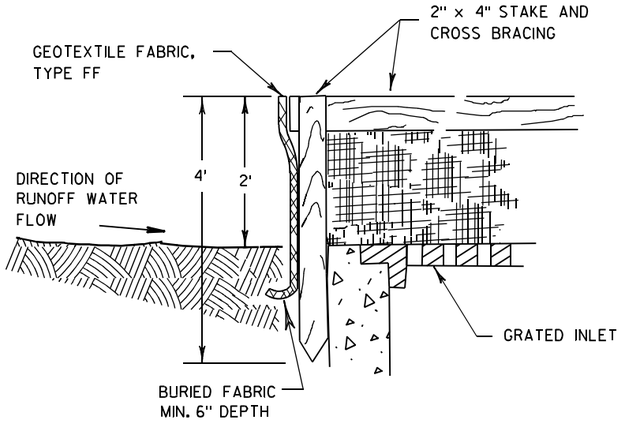
(WHEN REQUIRED BY THE ENGINEER)

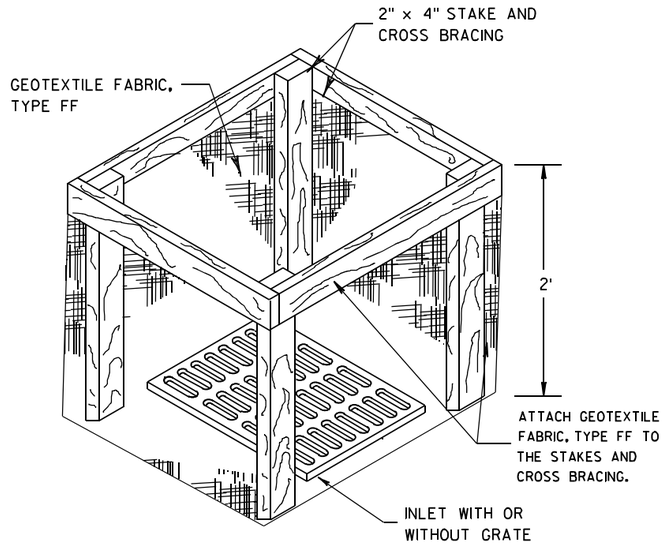
SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

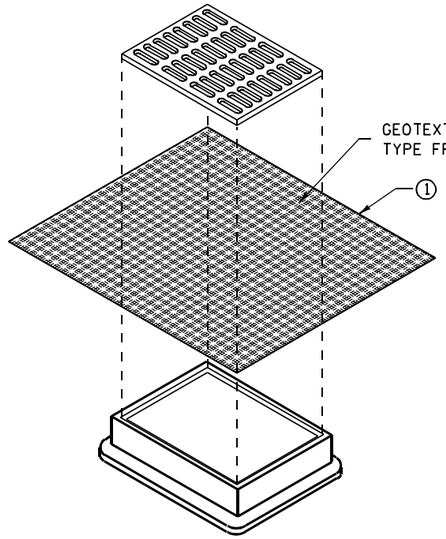
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6
S.D.D. 8 E 9-6



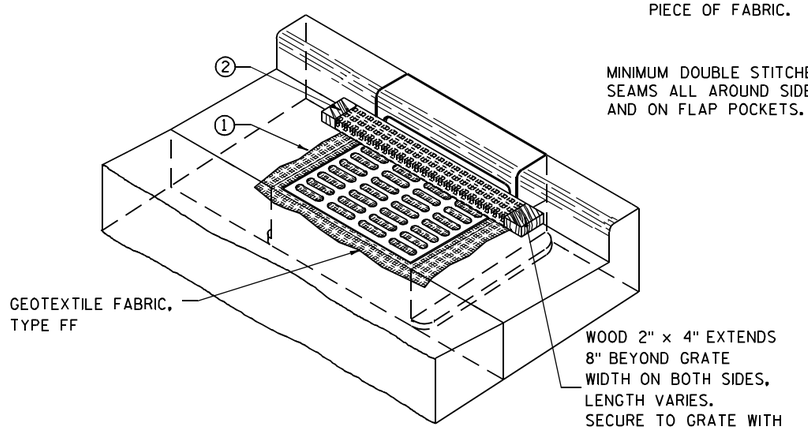


INLET PROTECTION, TYPE A

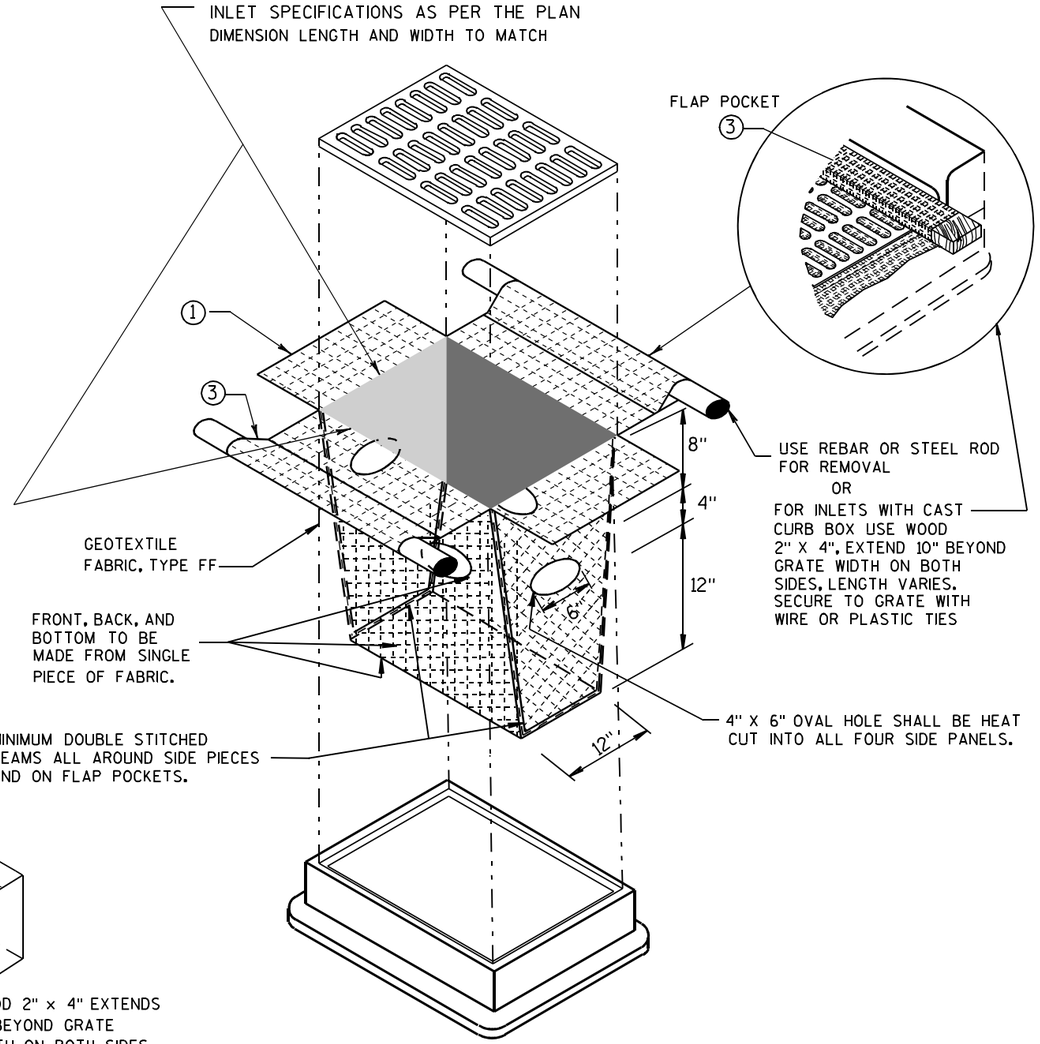


INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

(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

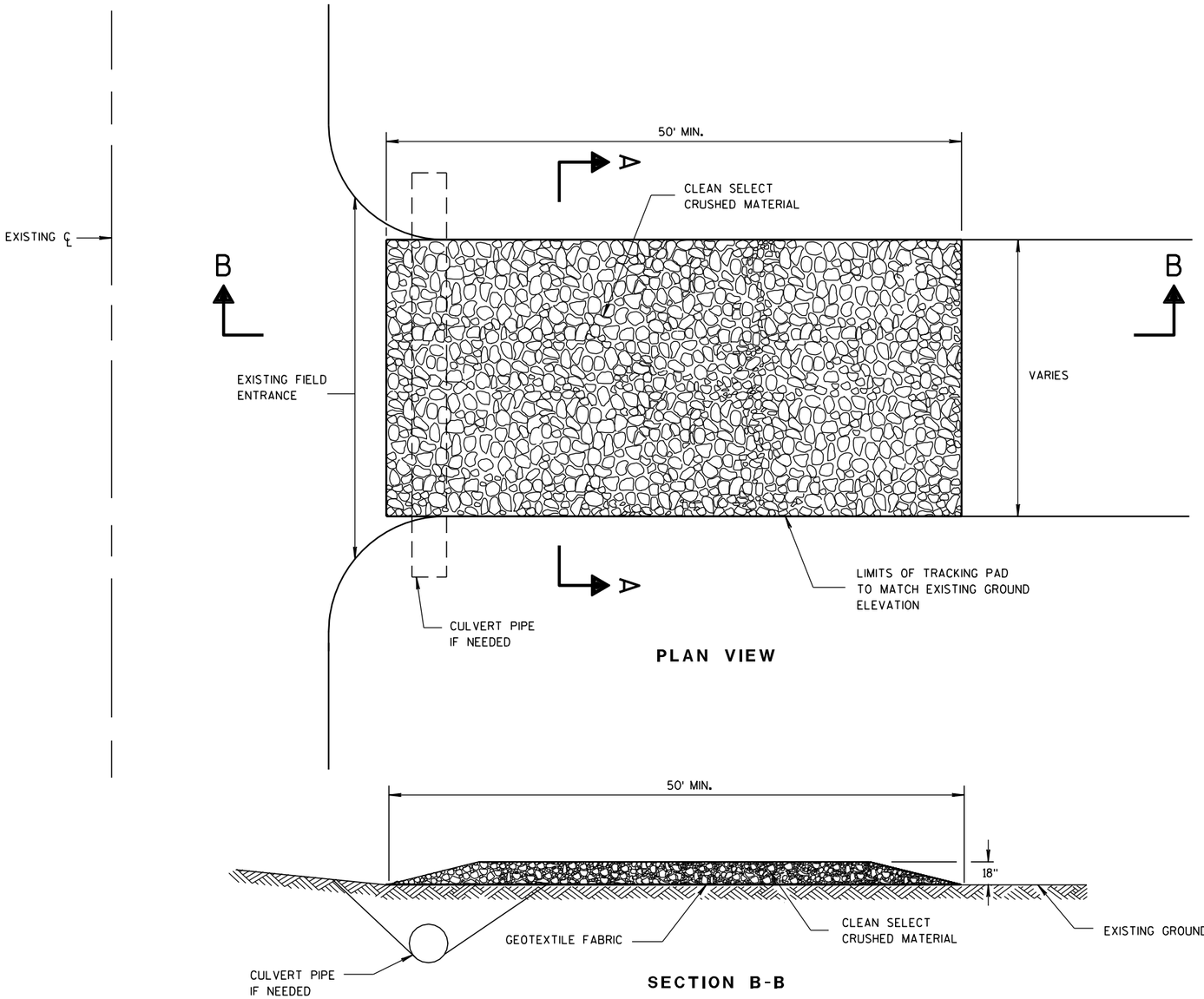
APPROVED
10/16/02
DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 8 E 10-2

6

S.D.D. 8 E 10-2



PLAN VIEW

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.

TRACKING PAD SHALL BE INSPECTED DAILY. DEFICIENT AREAS SHALL BE REPAIRED OR REPLACED IMMEDIATELY.

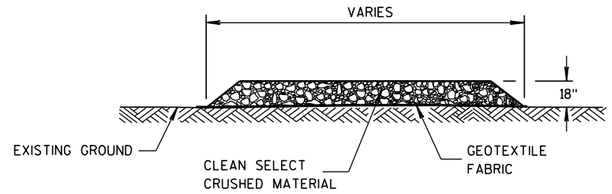
TRACKING PAD TO BE REMOVED AFTER CONSTRUCTION IS COMPLETED.

TRACKING PAD SHALL BE THE FULL WIDTH OF THE EGRESS POINT.

SURFACE WATER MUST BE PREVENTED FROM PASSING THROUGH THE TRACKING PAD. FLOWS SHALL BE DIVERTED AWAY, AROUND OR CONVEYED UNDER THE TRACKING PAD.

CULVERT PIPE OR OTHER BMP USED TO DIVERT WATER AWAY, AROUND OR UNDER THE TRACKING PAD SHALL BE DESIGNED TO CONVEY THE 2 YEAR - 24 HOUR EVENT.

THE COST OF ADDITIONAL BMP TO DIVERT WATER ARE INCIDENTAL TO THE TRACKING PAD BID ITEM.



SECTION A-A

TRACKING PAD

TRACKING PAD	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 3/24/2011 DATE FHWA	/S/ Jerry H. Zoda ROADWAY STANDARDS ENGINEER
	190
	ENT

6

S.D.D. 8 E 14-1

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S.D.D. 8 E 14-1

METAL APRON ENDWALLS

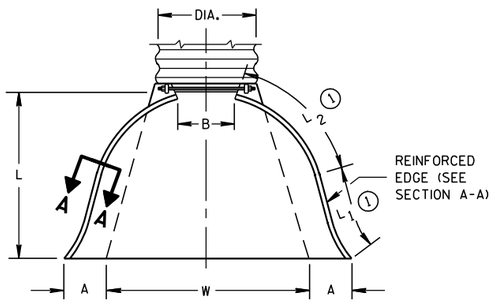
PIPE DIA. (IN.)	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4	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

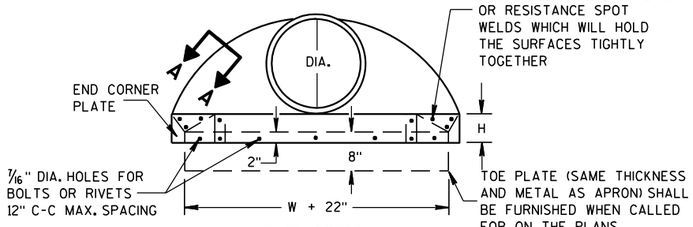
REINFORCED CONCRETE APRON ENDWALLS

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

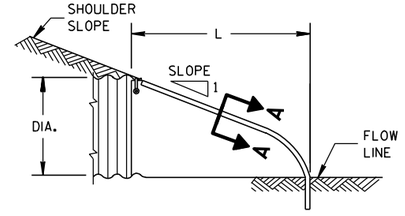
*MINIMUM
**MAXIMUM



PLAN VIEW

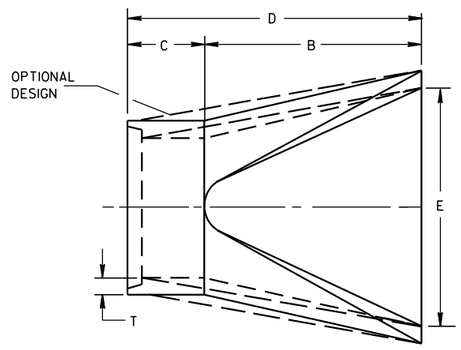


END VIEW

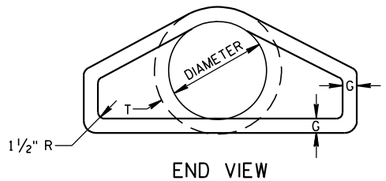


SIDE ELEVATION

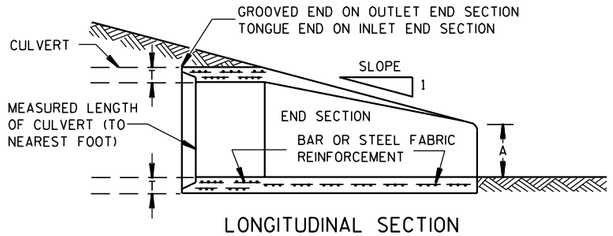
METAL ENDWALLS



PLAN

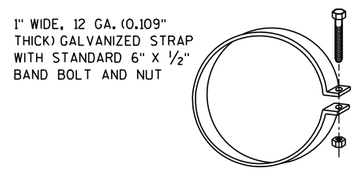


END VIEW



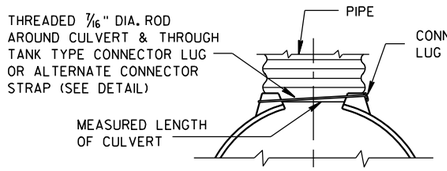
LONGITUDINAL SECTION

CONCRETE ENDWALLS

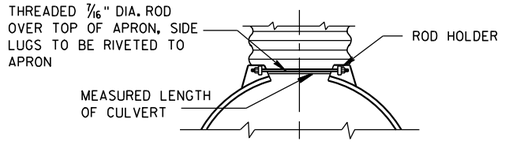


ALTERNATE FOR TYPE 1 CONNECTION

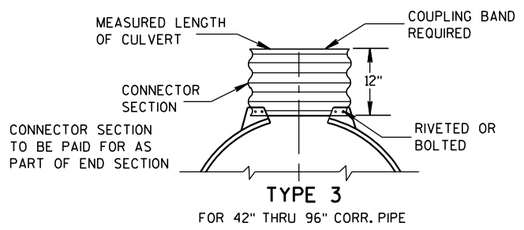
END SECTION CONNECTOR STRAP



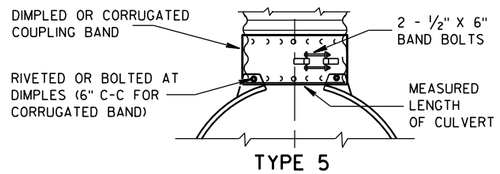
TYPE 1
FOR 12" THRU 24" CORR. PIPE



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

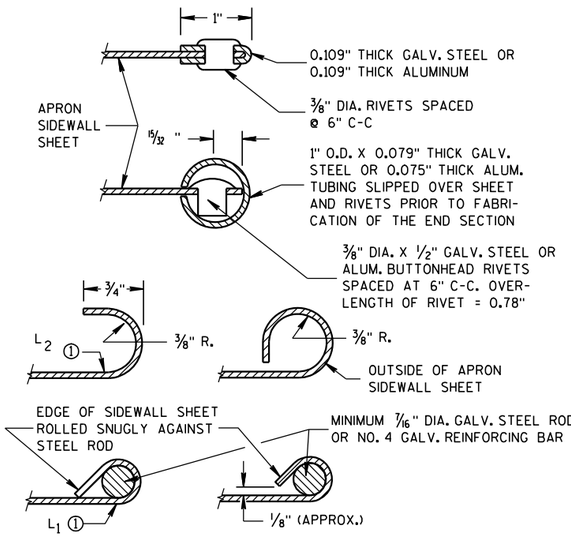
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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.

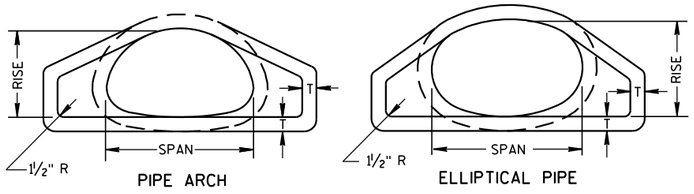
① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR CULVERT PIPE

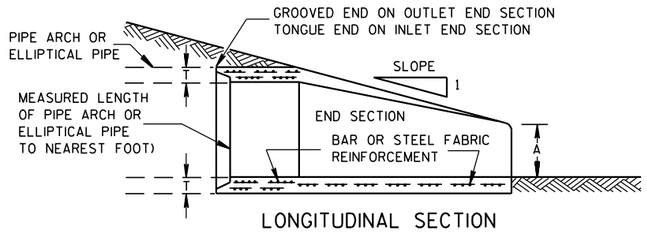
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/30/94 DATE
/S/ Rory L. Rhinesmith
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

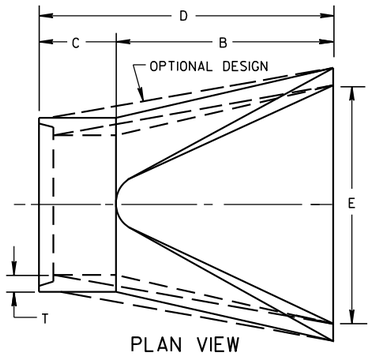
6
S.D.D. 8 F 1-11



END VIEW

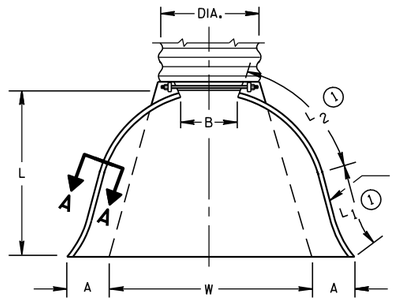


LONGITUDINAL SECTION

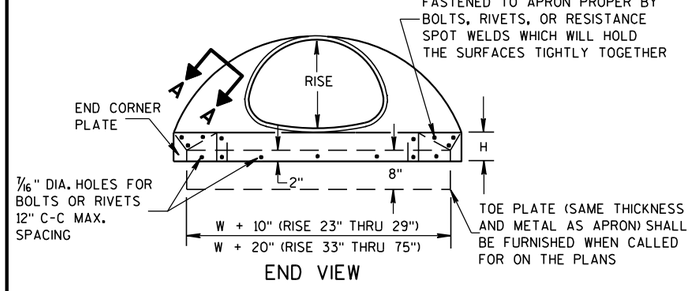


PLAN VIEW

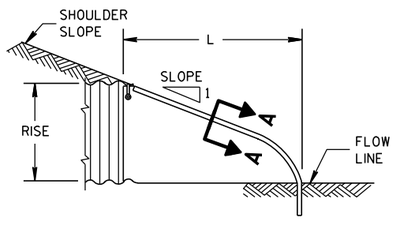
CONCRETE ENDWALLS



PLAN VIEW

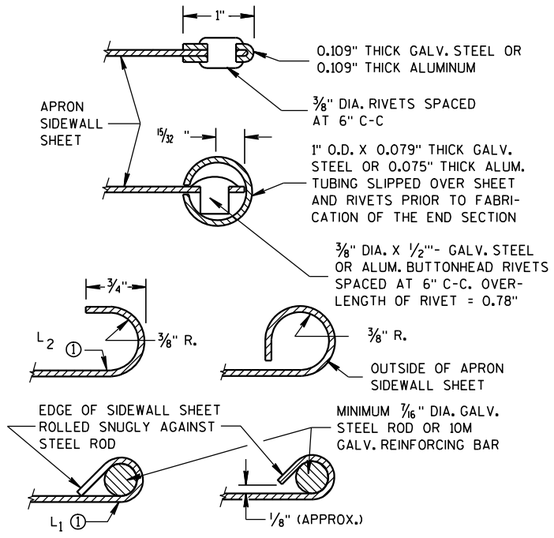


END VIEW



SIDE ELEVATION

METAL ENDWALLS



SECTION A-A

2- 2/3" X 1/2" CORRUGATIONS

EQUIV. DIA. (Inches)	(Inches) SPAN	(Inches) RISE	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
15	17	13	.064	.060	7	9	6	19	14	16	30	2½ to 1	1 Pc.
18	21	15	.064	.060	7	10	6	23	14	19⅜	36	2½ to 1	1 Pc.
21	24	18	.064	.060	8	12	6	28	18	21¾	42	2½ to 1	1 Pc.
24	28	20	.064	.060	9	14	6	32	18	27½	48	2½ to 1	1 Pc.
30	35	24	.079	.075	10	16	6	39	18	37⅝	60	2½ to 1	1 Pc.
36	42	29	.079	.075	12	18	8	46	24	45⅜	75	2½ to 1	1 Pc.
42	49	33	.109	.105	13	21	9	53	24	54¾	85	2½ to 1	2 Pc.
48	57	38	.109	.105	18	26	12	63	24	68	90	2½ to 1	3 Pc.
54	64	43	.109	.105	18	30	12	70	24	72¾	102	2¼ to 1	3 Pc.
60	71	47	.109*	.105*	18	33	12	77	30	82¼	114	2¼ to 1	3 Pc.
66	77	52	.109*	.105*	18	36	12	77	—	—	126	2 to 1	3 Pc.
72	83	57	.109*	.105*	18	39	12	77	—	—	138	2 to 1	3 Pc.

3" X 1" CORRUGATIONS

EQUIV. DIA. (Inches)	(Inches) SPAN	(Inches) RISE	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
48	53	41	.109	.105	18	26	12	63	24	72¾	90	2½ to 1	2 Pc.
54	60	46	.109	.105	18	30	12	70	30	82¼	102	2 to 1	2 Pc.
60	66	51	.109*	.105*	18	33	12	77	—	—	114	1½ to 1	3 Pc.
66	73	55	.109*	.105*	18	36	12	77	—	—	126	1½ to 1	3 Pc.
72	81	59	.109*	.105*	18	39	12	77	—	—	138	2 to 1	3 Pc.
78	87	63	.109*	.105*	22	38	12	77	—	—	148	1½ to 1	3 Pc.
84	95	67	.109*	.105*	22	34	12	77	—	—	162	1½ to 1	3 Pc.
90	103	71	.109*	.105*	22	38	12	77	—	—	174	1½ to 1	3 Pc.
96	112	75	.109*	.105*	24	40	12	77	—	—	174	1½ to 1	3 Pc.

NOTE: ALL SPLICES TO BE LAP RIVETED OR BOLTED.

* EXCEPT CENTER PANEL SEE GENERAL NOTES

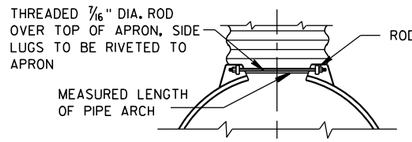
REINFORCED CONCRETE PIPE ARCH

EQUIV. DIA. (Inches)	DIMENSIONS (Inches) ** SPAN	** RISE	T	A	B	C	D	E	APPROX. SLOPE
24	29	18	3	8½	39	33	72	48	3 to 1
30	36	22	3½	9½	50	46	96	60	3 to 1
36	44	27	4	11⅛	60	36	96	72	3 to 1
42	51	31	4½	15 13/16	60	36	96	78	3 to 1
48	58	36	5	21	60	36	96	84	3 to 1
54	65	40	5½	25½	60	36	96	90	3 to 1
60	73	45	6	31	60	36	96	96	3 to 1
72	88	54	7	31	60	39	99	120	2 to 1
84	102	62	8	28½	83	19	102	144	2 to 1

REINFORCED CONCRETE ELLIPTICAL PIPE

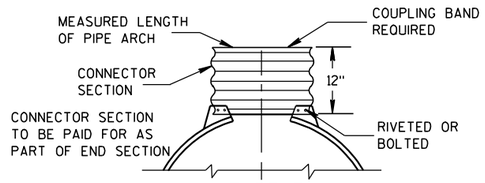
EQUIV. DIA. (Inches)	DIMENSIONS (Inches) ** SPAN	** RISE	T	A	B	C	D	E	APPROX. SLOPE
24	30	19	3¼	8½	39	33	72	48	3 to 1
30	38	24	3¾	9½	54	18	72	60	3 to 1
36	45	29	4½	11⅛	60	24	84	72	2½ to 1
42	53	34	5	15¾	60	36	96	78	2½ to 1
48	60	38	5½	21	60	36	96	84	2½ to 1
54	68	43	6	25½	60	36	96	90	2½ to 1
60	76	48	6½	30	60	36	96	96	2½ to 1

**NOMINAL SIZE



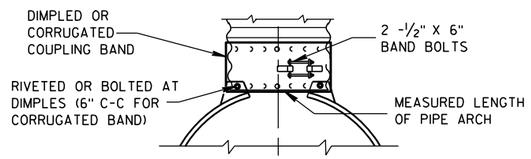
TYPE 2

FOR 17" X 13" THRU 112" X 75" PIPE ARCH



TYPE 3

FOR 64" X 43" THRU 112" X 75" PIPE ARCH



TYPE 5

ALTERNATE FOR:

ALL SIZES CORRUGATED PIPE ARCHES

NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL, AND CORRUGATED BAND FITS INSIDE ENDWALL.

CONNECTION DETAILS

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 APRON ENDWALLS MAY NOT BE USED WITH GALVANIZED STEEL OR ALUMINUM CULVERT PIPE OR VISE VERSA. GALVANIZED STEEL OR ALUMINUM APRON ENDWALLS SHALL NORMALLY BE INSTALLED ON CULVERT PIPE OF THE SAME METAL.

ALL THREE PIECE STEEL APRON ENDWALLS FOR 66" X 51" PIPE ARCH AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 66" X 51" PIPE ARCH 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 ARCH 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 77" X 52" THROUGH 112" X 75" 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 ARCH SIZES UP TO 73" X 55" A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR PIPE ARCH AND ELLIPTICAL PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

11/30/94 — DATE

/S/ Rory L. Rhinesmith — CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA

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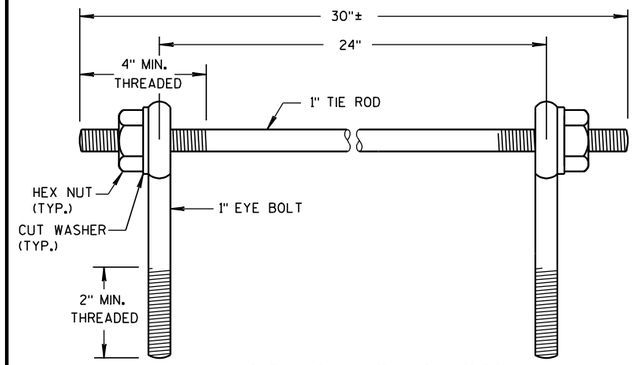
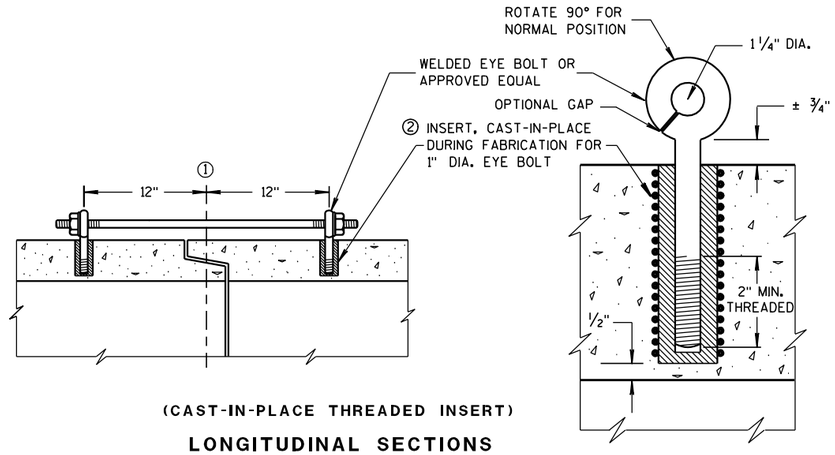
S.D.D. 8 F 2-1



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.

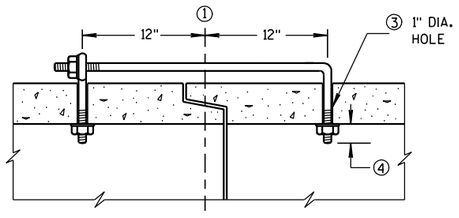
② THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.

③ HOLES SHALL BE CAST-IN-PLACE OR DRILLED 12 INCHES FROM ℄ OF TONGUE AND GROOVE.

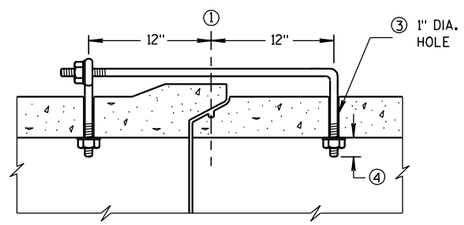
④ BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.

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)

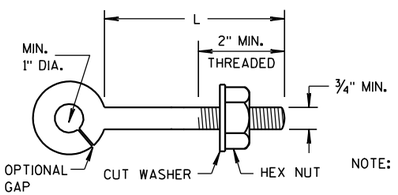


(MODIFIED BELL PIPE)

LONGITUDINAL SECTION

EYE BOLT DIMENSION TABLE

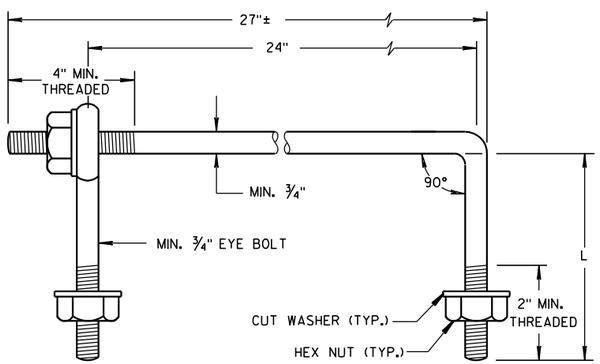
PIPE SIZE	L = LENGTH	
	TONGUE & GROOVE PIPE	MODIFIED BELL PIPE
18" TO 24"	4 1/2"	6 1/4"
30"	5"	7"
36"	5 1/2"	7"
42"	6"	
48"	6 1/2"	
60"	7 1/2"	
66"	8"	



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

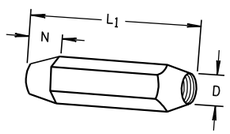
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

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



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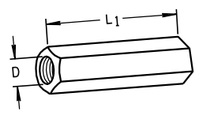
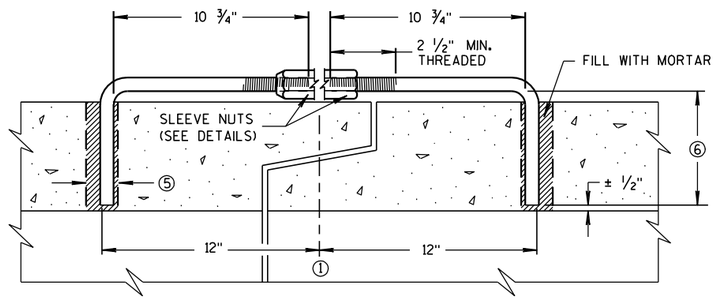


PLAIN

RIGHT AND LEFT THREADS

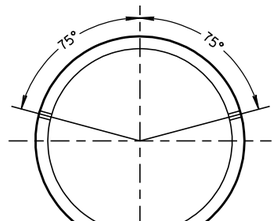
SLEEVE NUTS



LONGITUDINAL SECTION

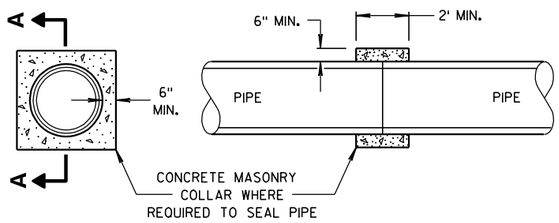
(JOINT TIES FOR 12" TO 108" DIA. CONCRETE PIPE)

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
193
FHWA

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S.D.D. 8 F 4-7

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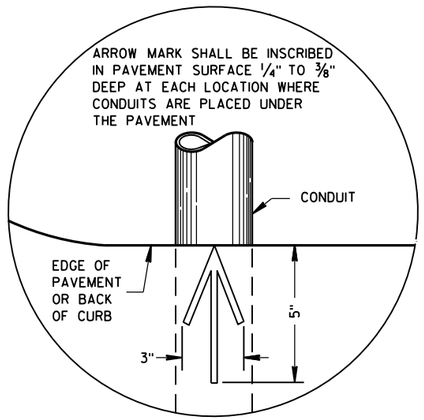
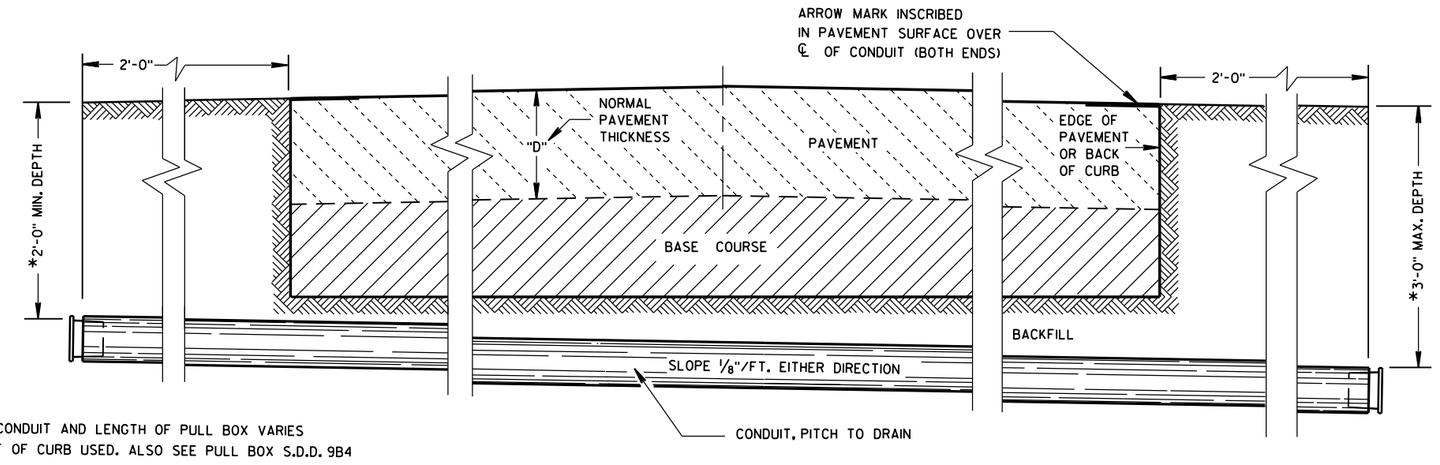
S.D.D. 8 F 4-7



PLAN VIEW

ARROW MARK



*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

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.).

TRACER 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.

CONDUIT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March, 2017 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

6

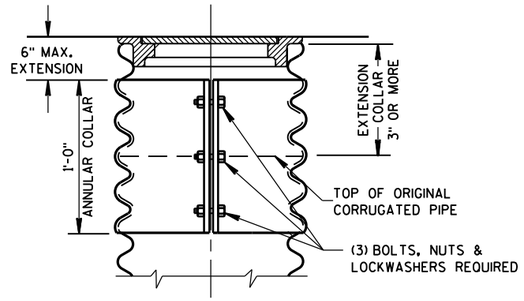
S.D.D. 9 B 2-10

TABLE OF NOMINAL DIMENSIONS AND WEIGHTS

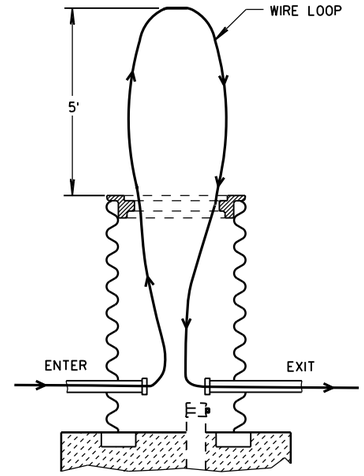
DIMENSION IN INCHES		CORRUGATED STEEL PIPE								
PIPE DIAMETER (INSIDE)	A	12	12	12	18	18	18	24	24	24
PIPE LENGTH **	B	24	30	36	24	30	36	36	42	48
WALL THICKNESS	C	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064
COVER	D	10 1/4	10 1/4	10 1/4	16 1/4	16 1/4	16 1/4	22 1/4	22 1/4	22 1/4
FRAME	E	14 1/2	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.

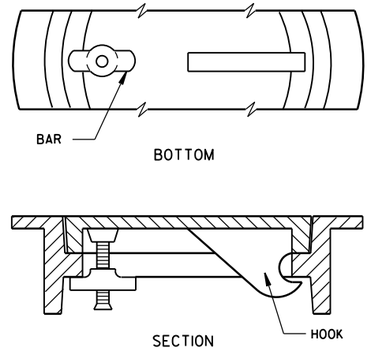
** NORMALLY USED LENGTHS. THE PROJECT ENGINEER SHALL DETERMINE IF PIPE LENGTHS, OTHER THAN THOSE SPECIFIED, SHALL BE USED, TO A MAXIMUM OF 48" (CONTINUOUS LENGTH, NON-SPLICED). THE ADDITIONAL LENGTH SHALL BE INCIDENTAL TO THE PULL BOX BID PRICE.



CORRUGATED PIPE EXTENDER

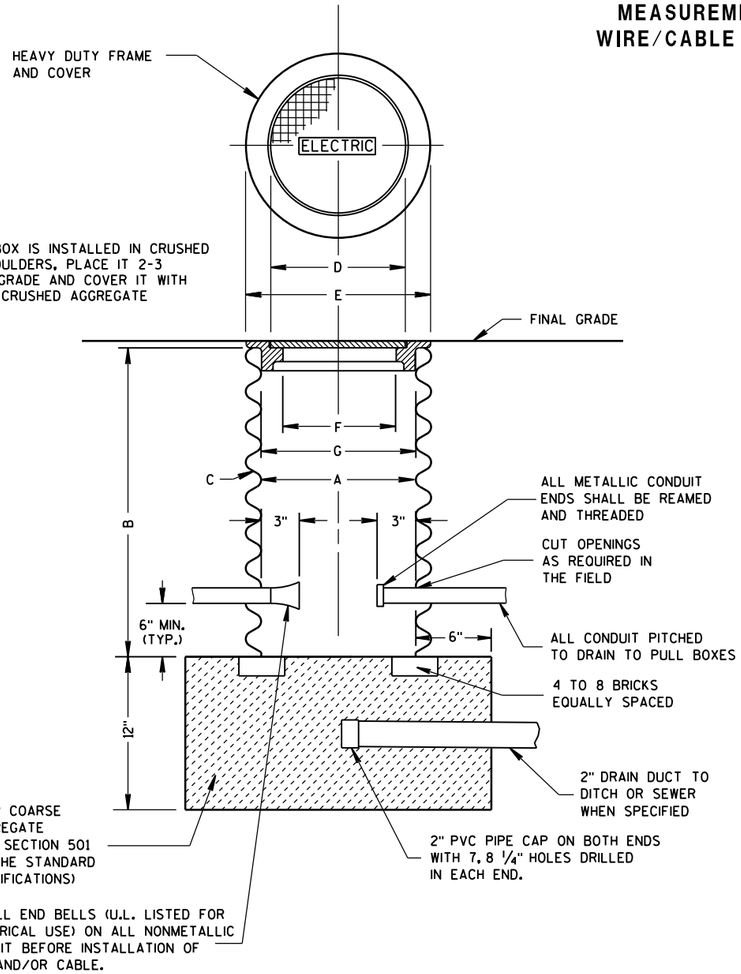


MEASUREMENT DETAIL FOR WIRE/CABLE IN THE PULL BOX



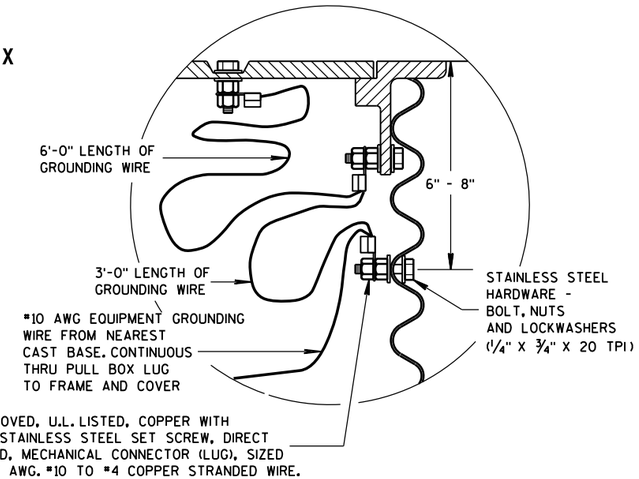
ALTERNATE COVER (LOCKING)

TIGHTENING BAR TYPE

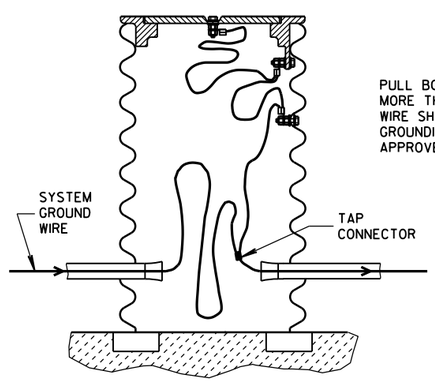


WHEN A PULL BOX IS INSTALLED IN CRUSHED AGGREGATE SHOULDERS, PLACE IT 2-3 INCHES BELOW GRADE AND COVER IT WITH 2-3 INCHES OF CRUSHED AGGREGATE

PULL BOX



EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES



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

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014
DATE
/S/ Ahmet Demirbilek
STATE ELECTRICAL

FHWA

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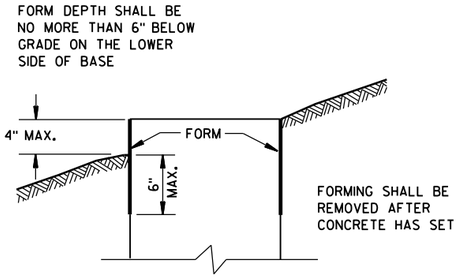
S.D.D. 9 B 4-11



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.

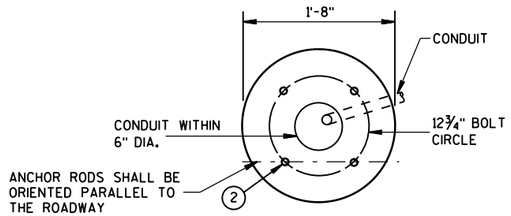
(4) (6) NO. 6 X 6'-8" BAR STEEL REINFORCEMENT.

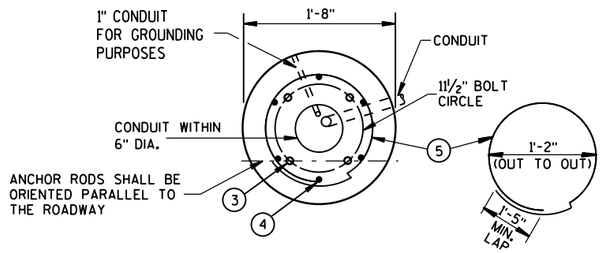
(5) (7) NO. 4 X 5'-1" BAR STEEL REINFORCEMENT @ 1'-0" C-C.

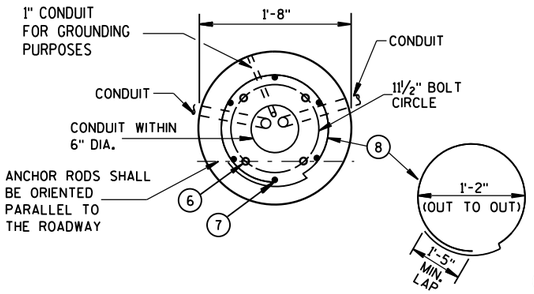
(6) (4) 1" DIA. X 3'-6" ANCHOR RODS.

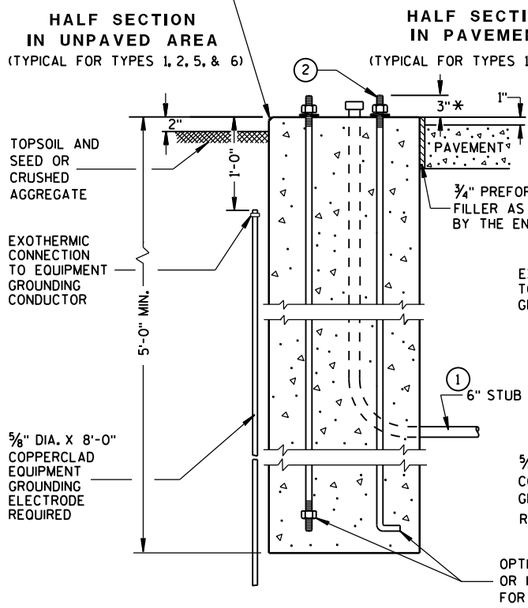
(7) (6) NO.4 X 4'-8" BAR STEEL REINFORCEMENT.

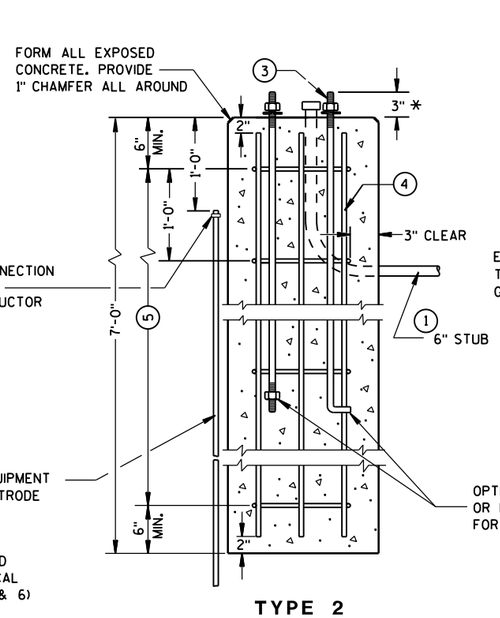
(8) (5) NO. 4 X 5'-1" BAR STEEL REINFORCEMENT @ 1'-0" C-C.



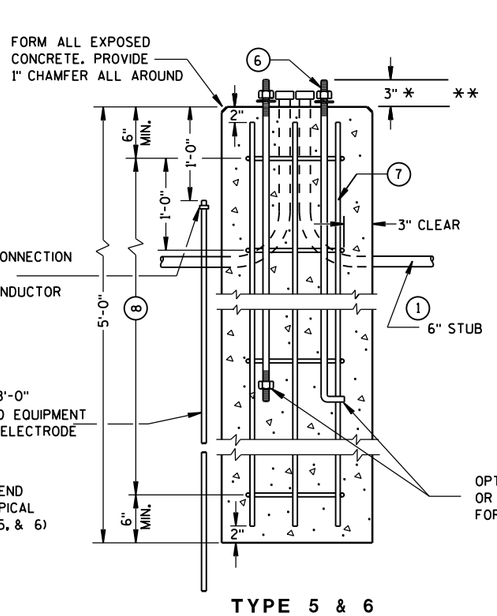








TYPE 2



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
FHWA

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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.

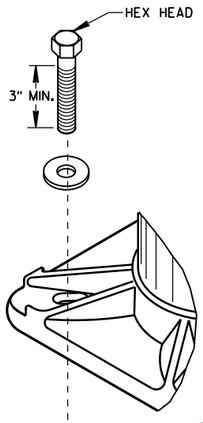
THE MECHANICAL CONNECTOR SHALL BE INSTALLED USING A 1/4" - 20 (TPI) STAINLESS STEEL HEX HEAD BOLT OF SUFFICIENT LENGTH TO FIRMLY ATTACH THE LUG TO THE BASE.

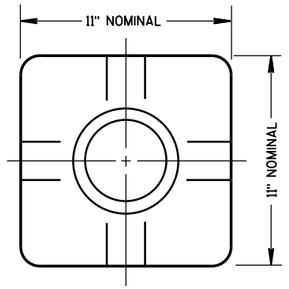
SHOULD THE MANNER OF ATTACHMENT OF THE LUG REQUIRE WASHERS, HEX NUTS, LOCK WASHER - THEY SHALL BE STAINLESS STEEL AS IS THE BOLT. THE MANNER OF ATTACHMENT SHALL NOT BLOCK ACCESSIBILITY TO WIRE PLACEMENT IN THE CONNECTOR.

PEDESTAL BASE COLLAR THREADING SHALL BE TAPERED AND IN ACCORDANCE WITH NATIONAL PIPE THREADING DIMENSIONS.

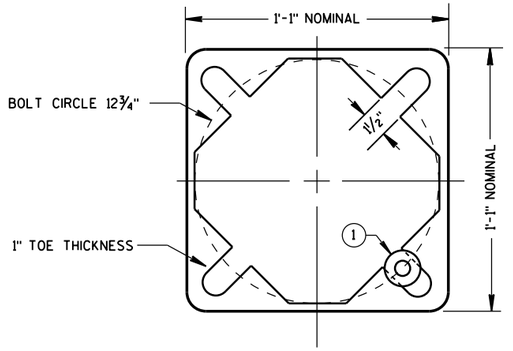
BASE COLLAR THREADING SHALL EXTEND INTO THE BASE COLLAR WITH SUFFICIENT DEPTH TO ACCEPT THE INSTALLATION OF TRAFFIC SIGNAL STANDARDS TO A DEPTH OF 1 1/2", THEN TIGHTENING TO A POINT OF BEING IMMOVABLE.

THE ACCESS DOOR SHALL BE OF THE SAME MATERIAL AS THE BASE.

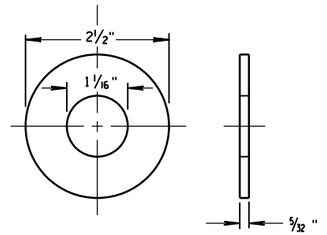




TOP VIEW
(PEDESTAL BASE)

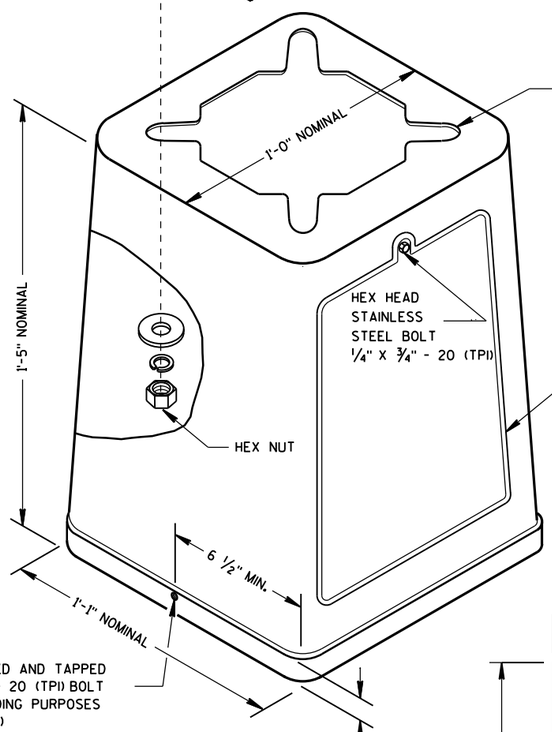


BOTTOM VIEW
(PEDESTAL BASE)

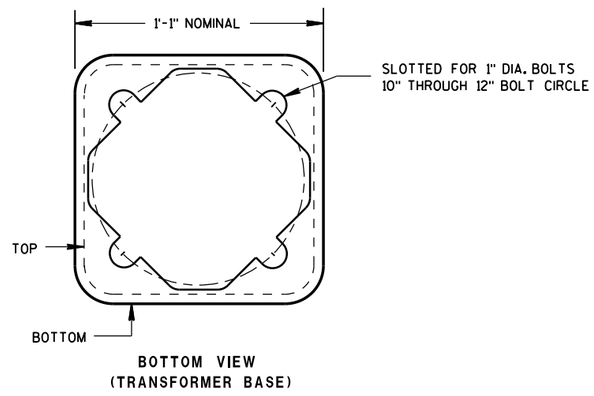


ZINC COATED STEEL WASHER
TO BE PROVIDED BY THE CONTRACTOR

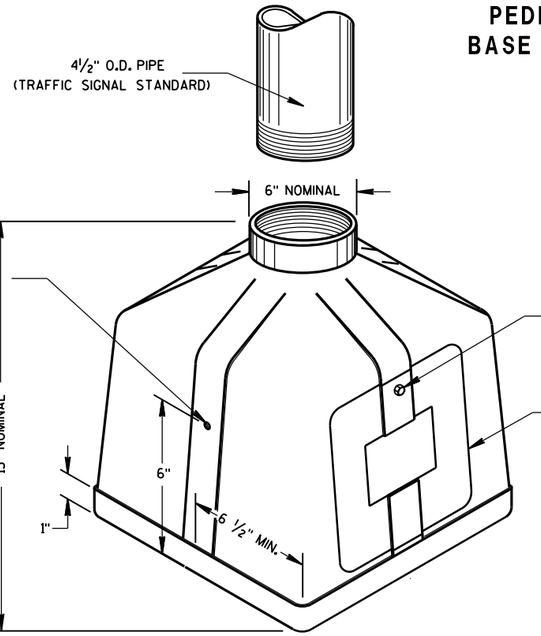
PEDESTAL BASE WASHER (1)



ISOMETRIC VIEW

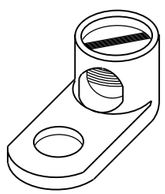


BOTTOM VIEW
(TRANSFORMER BASE)



ISOMETRIC VIEW

PEDESTAL BASE

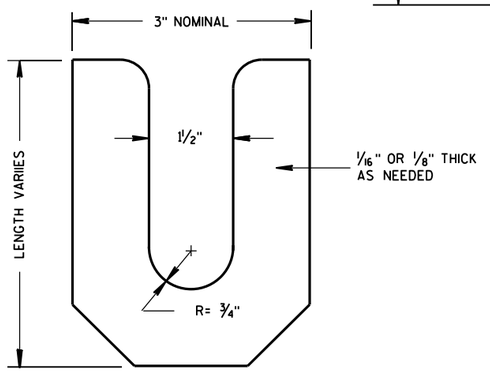


TYPICAL MECHANICAL CONNECTOR LUG

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

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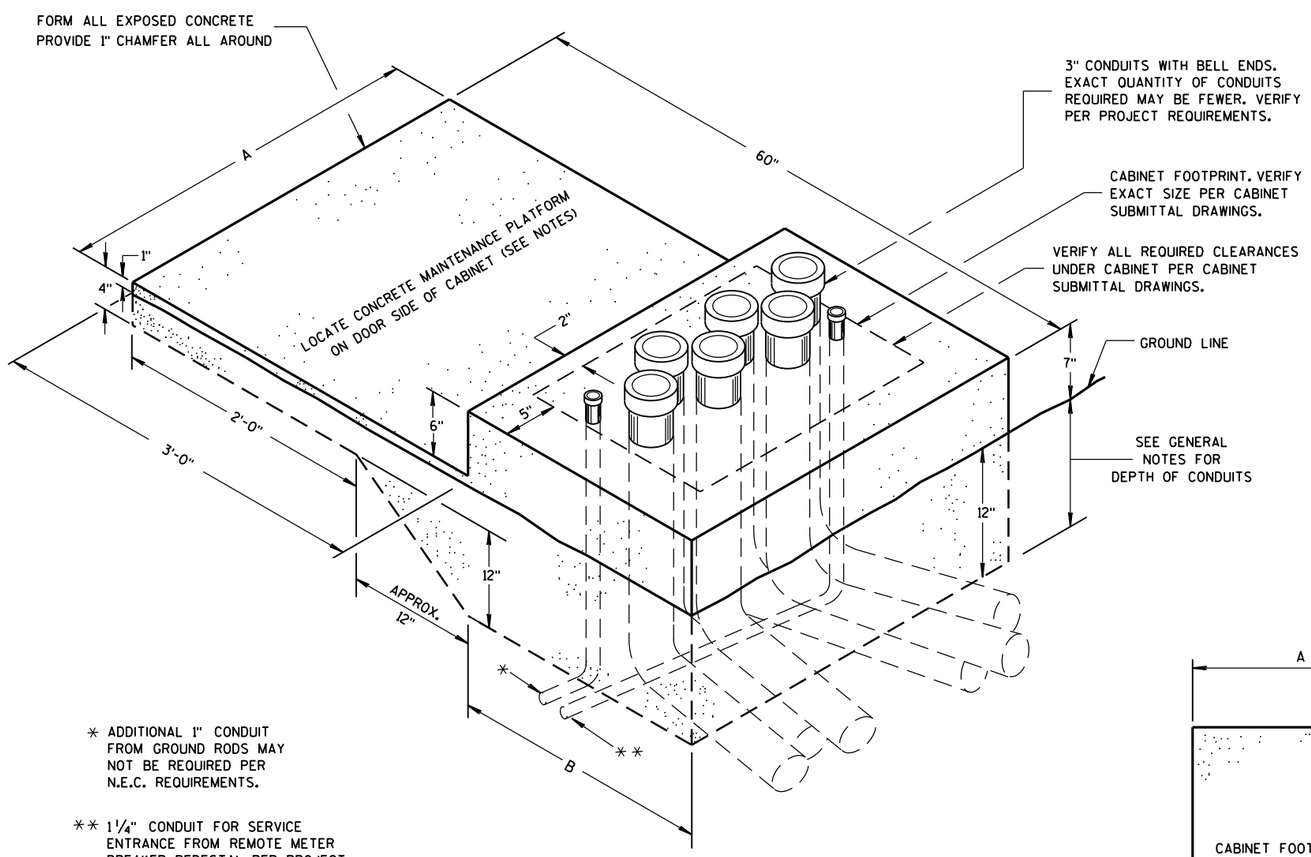


* ADDITIONAL 1" CONDUIT FROM GROUND RODS MAY NOT BE REQUIRED PER N.E.C. REQUIREMENTS.

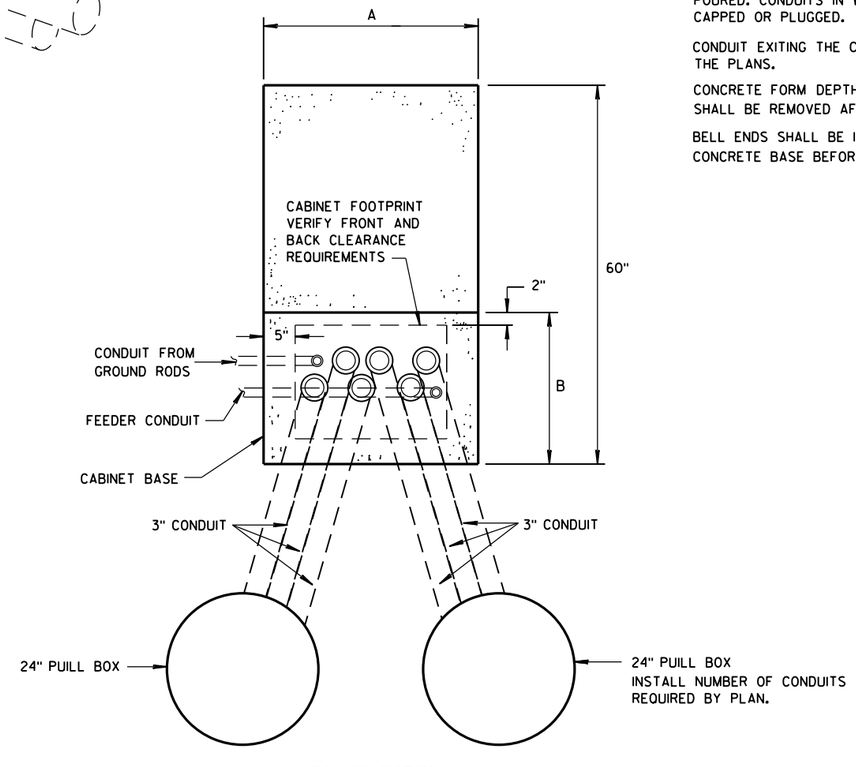
** 1¼" CONDUIT FOR SERVICE ENTRANCE FROM REMOTE METER BREAKER PEDESTAL PER PROJECT REQUIREMENTS. VERIFY LOCATION OF CONDUIT DEPENDENT UPON LOCATION OF INCOMING FEEDER AND FOR EASE OF CONNECTION TO LOAD CENTER.

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
198
WYS
FHWA

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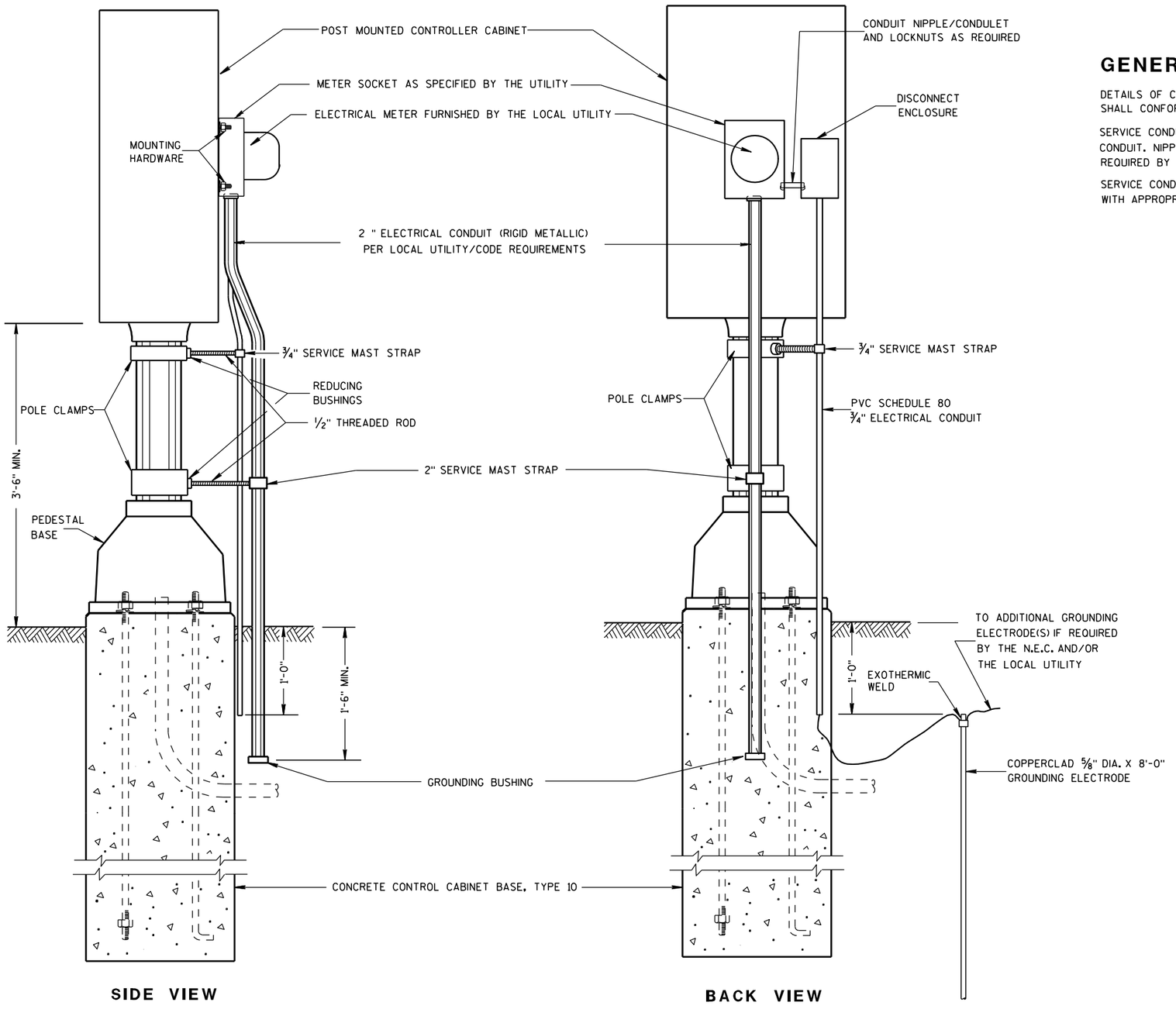
S.D.D. 9 C 14-2



POST MOUNTED CONTROLLER SERVICE INSTALLATION

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

SERVICE CONDUCTOR ENTRANCES SHALL BE RIGID STEEL OR SCHEDULE 80 PVC ELECTRICAL CONDUIT. NIPPLES AND/OR CONDULETS, WITH LOCK NUTS AND GROUNDING BUSHINGS AS REQUIRED BY THE N.E.C. OR THE LOCAL UTILITY.

SERVICE CONDUCTOR ENTRANCES SHALL BE SIZED AS REQUIRED AND IN ACCORDANCE WITH APPROPRIATE ARTICLES OF THE LATEST ACCEPTED ELECTRICAL CODE.

POST MOUNTED CONTROLLER SERVICE INSTALLATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
3/24/2003 DATE
/S/ Balu Ananthanarayanan
STATE ELECTRICAL ENGI
FHWA

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S.D.D. 9 D 3-2

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.

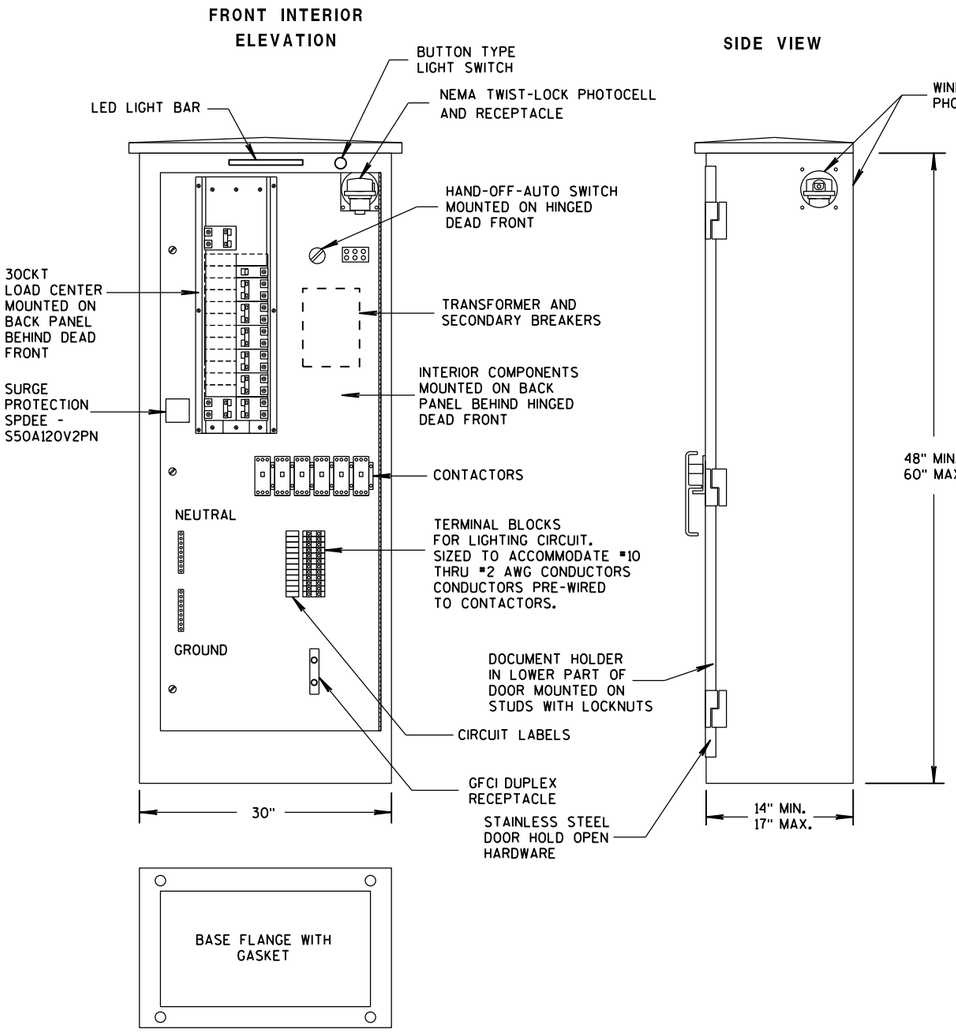
ALL INTERNAL ELECTRICAL COMPONENTS WILL BE PRE-WIRED BY THE CABINET FABRICATOR.

ALL CONDUIT ENTRIES SHALL BE SEALED WITH AN APPROPRIATE DUCT SEALING COMPOUND.

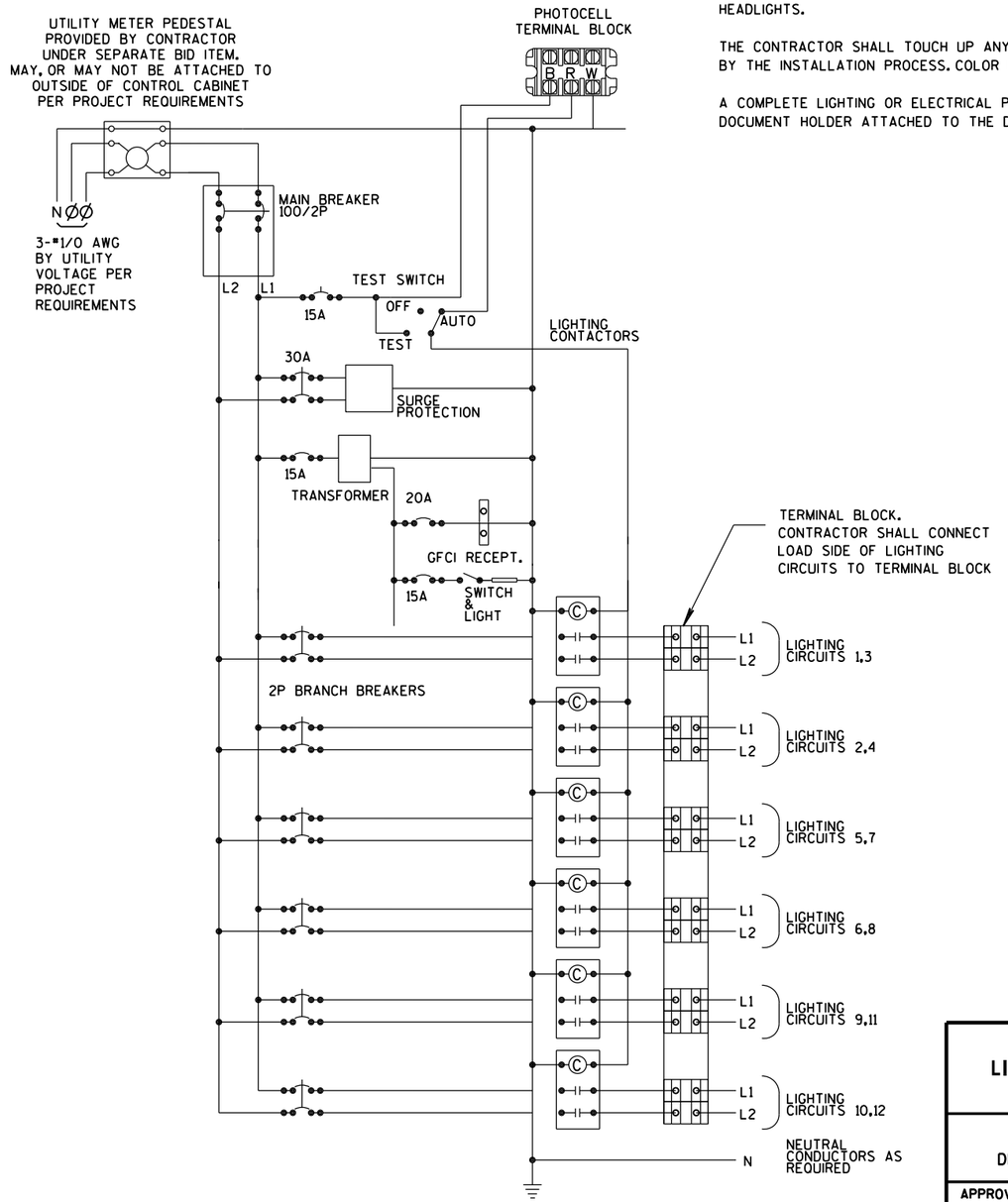
ORIENT PHOTOCELL AWAY FROM AMBIENT LIGHT SOURCES AND ONCOMING TRAFFIC HEADLIGHTS.

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.



LIGHTING CONTROL CABINET



CONTROL CABINET SCHEMATIC

L30
LIGHTING CONTROL CABINET 240/480 VOLT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

Sept. 2015 — DATE

/S/ Thomas Gonring — STATE LIGHTING ENGINEER

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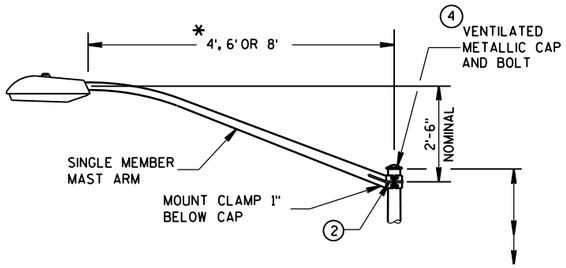
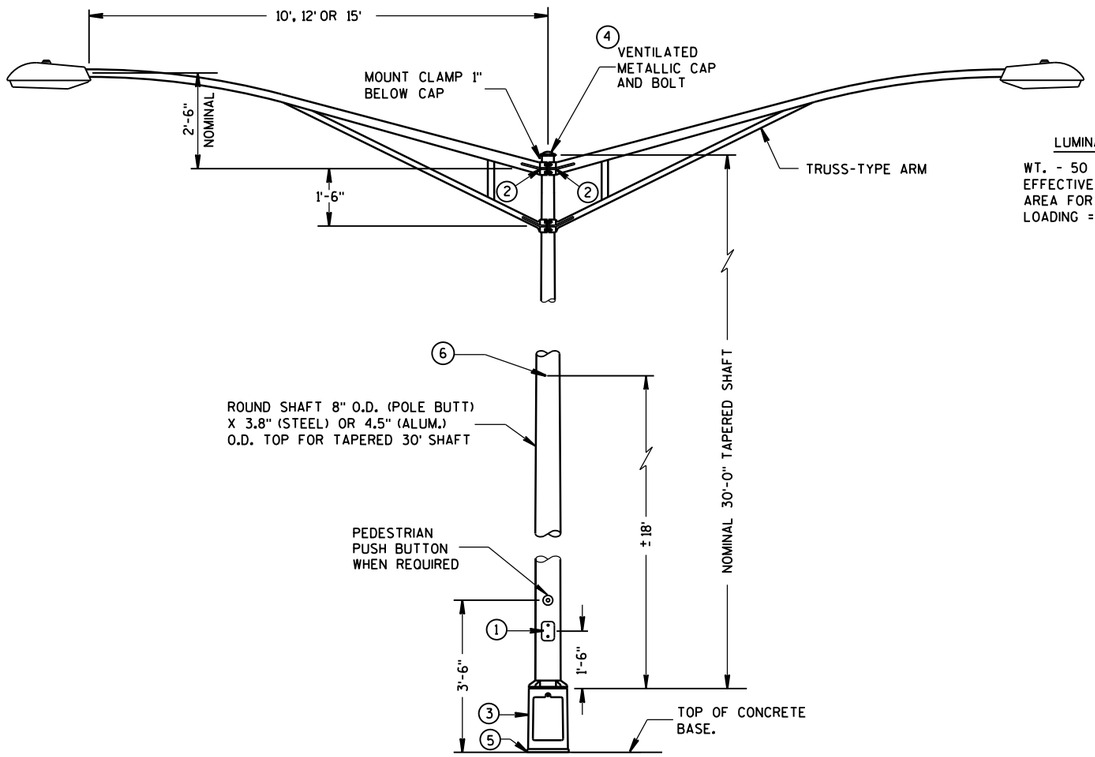
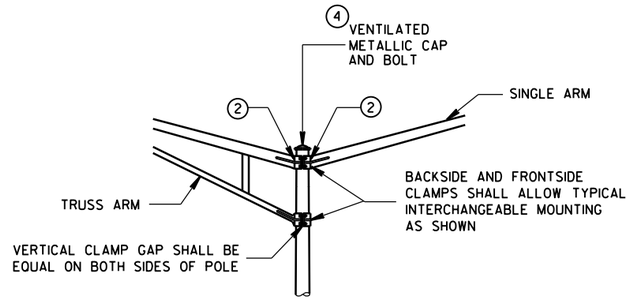
S.D.D. 9 D 5-1

*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.

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S.D.D. 9 E 1-14d

POLE MONTINGS FOR
LIGHTING UNITS, TYPE 5
(30 FEET)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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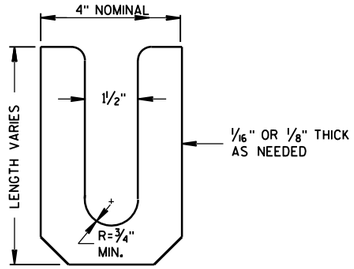
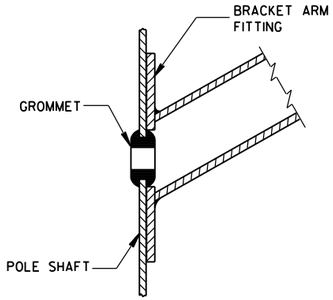
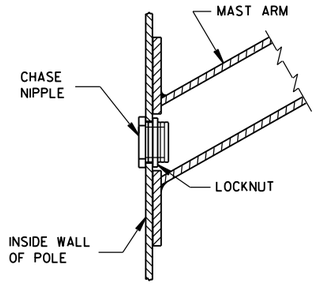


LEVELING SHIM (13)

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.

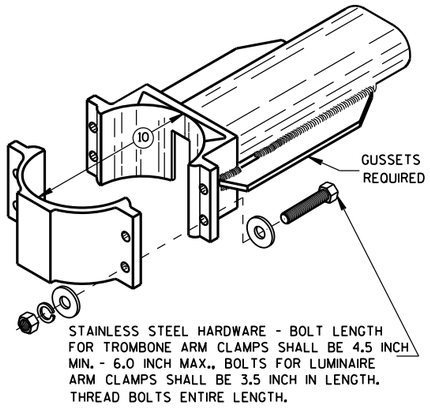
(10) 4.5" I.D. FOR LUMINAIRE MAST ARM CLAMP.
6.625" I.D. FOR TROMBONE MAST ARM CLAMP.

(11) INDIVIDUAL BASE PLATE ANCHOR ROD COVERS. (4 REQUIRED)

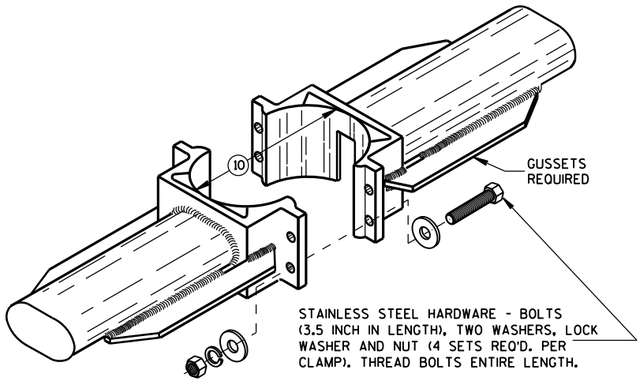
(12) BASE PLATE SLOTTED TO ACCEPT 11" THROUGH 12" BOLT CIRCLE USING 1" DIAMETER ANCHOR RODS.

(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.

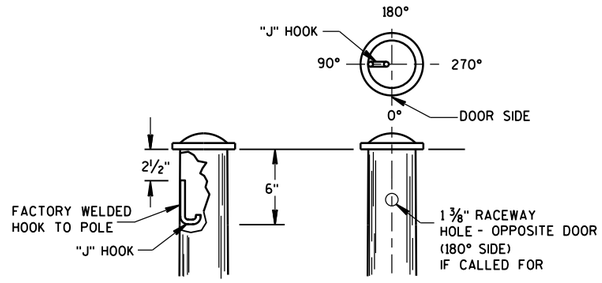
SHIMS SHALL BE LONG ENOUGH AND WIDE ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.



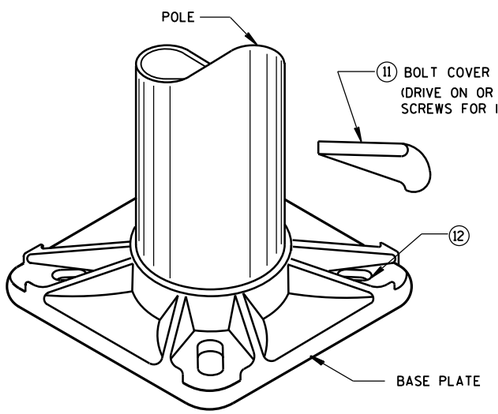
TYPICAL TROMBONE MAST ARM AND SINGLE LUMINAIRE MAST ARM MOUNTING CLAMP



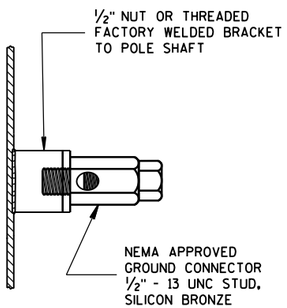
TYPICAL LUMINAIRE MAST ARM (DOUBLE) MOUNTING BRACKETS

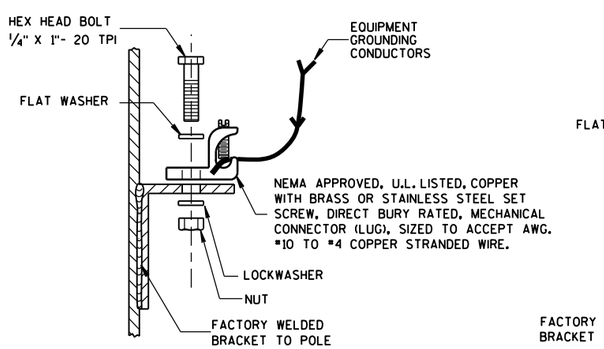


TYPICAL "J" HOOK LOCATION



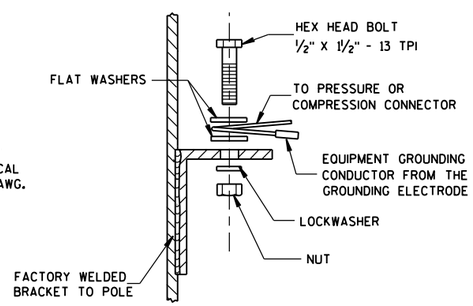
BASE PLATE





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

FHWA

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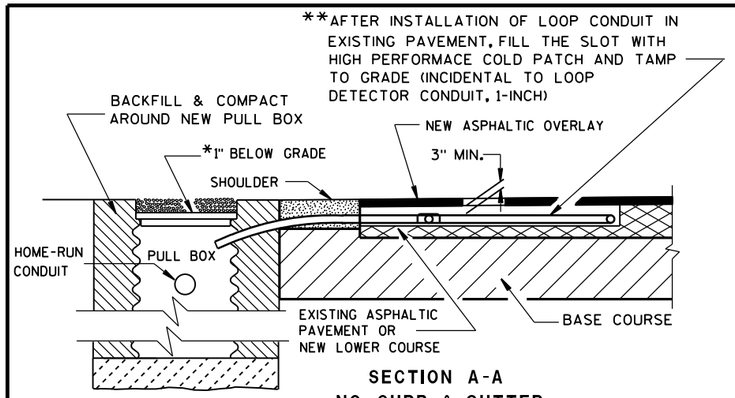
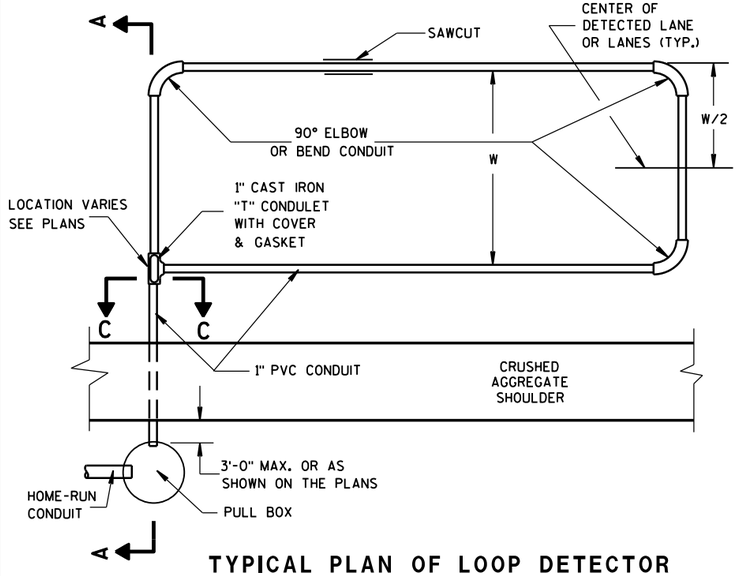


SECTION A-A

NO CURB & GUTTER

LOOP DETECTOR INSTALLATION DETAIL

*RECESS PULL 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.



TYPICAL PLAN OF LOOP DETECTOR

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

LOOP SIZE, 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 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.

BEFORE PLACING THE 1 INCH CONDUIT IN THE CLEANED OUT SLOT, PLACE SOME OF THE TAR OR EPOXY SEALANT IN THE SLOT TO A DEPTH OF APPROXIMATELY ½ INCH. IF THE CONDUIT MUST BE PLACED IN THE BASE COURSE, DO NOT PLACE THE TAR OR EPOXY SEALANT IN THE SLOT.

ONCE THE 2" LOOP SLOT HAS BEEN CHIPPED OUT, THE LOOP INSTALLATION SHALL BE COMPLETED PRIOR TO OPENING THE LANE(S) TO TRAFFIC.

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.

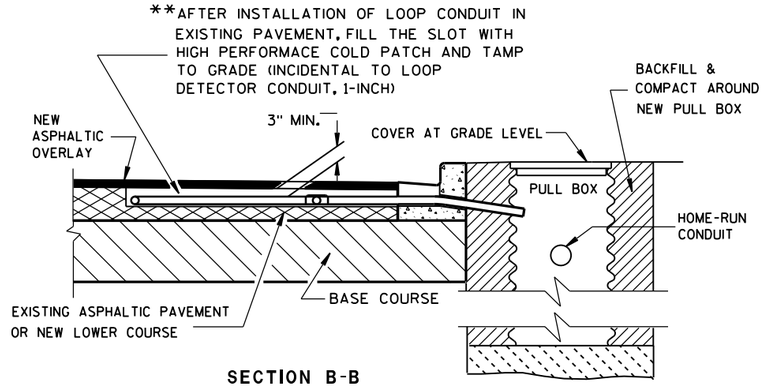
THE #12 AWG LOOP WIRE FROM THE LOOP TO THE ROADSIDE PULL BOX, SHALL BE HAND TWISTED AT LEAST 3 TWISTS PER FOOT BEFORE INSTALLATION.

SPLICES OF LOOP WIRE TO LEAD-IN CABLE SHALL BE MADE ONLY IN PULL BOXES AT THE SIDE OF THE ROAD.

THE #12 AWG LOOP WIRE SHALL BE INSTALLED FROM THE ROADSIDE PULL BOX, THROUGH THE LOOP CONDUIT, BACK TO THE ROADSIDE PULL BOX, AND BE INSTALLED IN ONE, NON-SPLICED, CONTINUOUS LENGTH.

** AFTER THE HIGH PERFORMANCE COLD PATCH HAS BEEN TAMPED, SEAL THE SLOT/HIGH PERFORMANCE COLD PATCH/ PAVEMENT OPENING WITH HOT POURED ELASTIC TYPE MATERIAL CONFORMING TO THE REQUIREMENTS OF THE "SPECIFICATION FOR JOINT SEALANTS, HOT POURED, FOR CONCRETE AND ASPHALT PAVEMENTS, ASTM DESIGNATION: D3405".

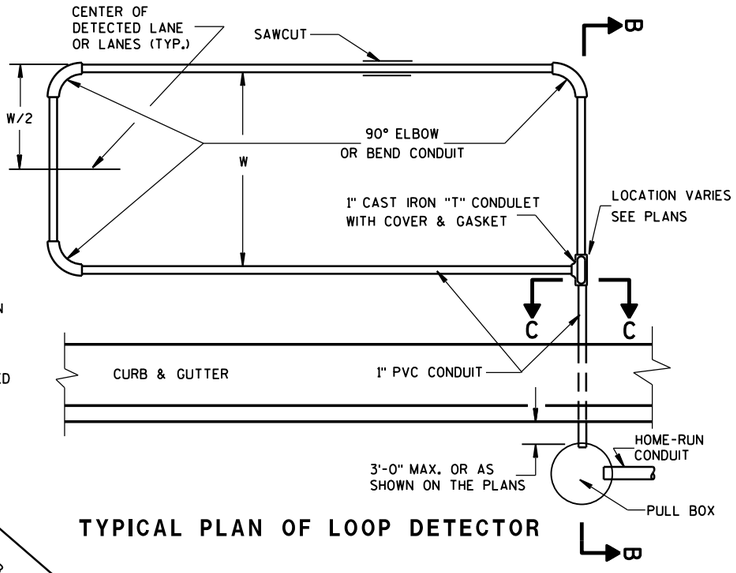
IN THE EVENT HIGH PERFORMANCE COLD PATCH IS NOT AVAILABLE, AND FLEXIBLE TYPE EPOXY IS USED AS A LOOP SLOT FILLER, THE 2 INCH SLOT SHALL BE TOTALLY CLEAN AND DRY BEFORE ITS INSTALLATION. EPOXY USE SHALL BE APPROVED BY THE DISTRICT TRAFFIC ENGINEER AND THE FURNISHED EPOXY SHALL BE INSTALLED AFTER WRITTEN APPROVAL BY THE PROJECT ENGINEER.



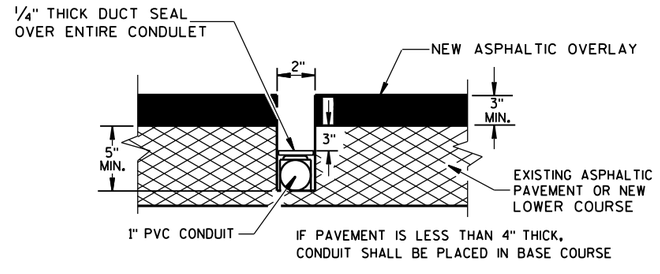
SECTION B-B

CURB & GUTTER

LOOP DETECTOR INSTALLATION DETAIL



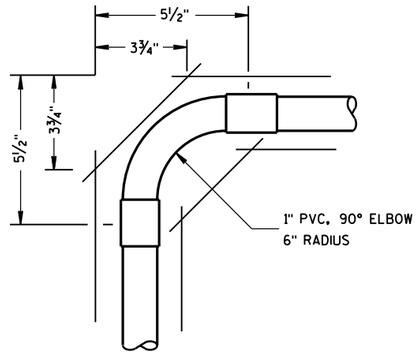
TYPICAL PLAN OF LOOP DETECTOR



SIDE VIEW

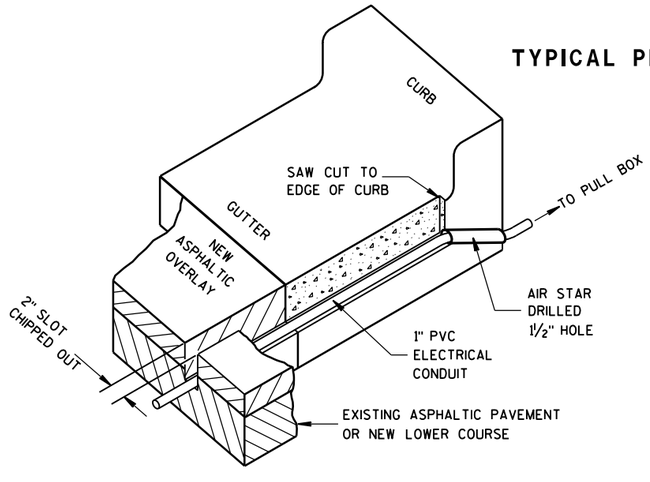
SECTION C-C

LOOP DETECTOR SLOT DETAIL



TOP VIEW

CORNER SAW SLOT DETAIL



ISOMETRIC VIEW

TYPICAL SAW CUT DETAIL FOR LEAD-IN CONDUIT

LOOP DETECTOR INSTALLED IN EXISTING OR NEW ASPHALTIC PAVEMENT WITH NEW ASPHALTIC OVERLAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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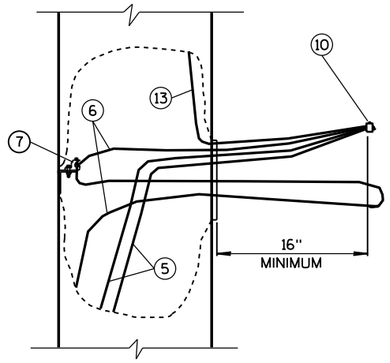
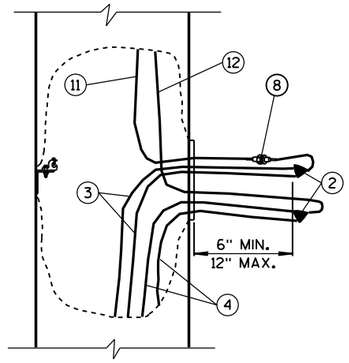
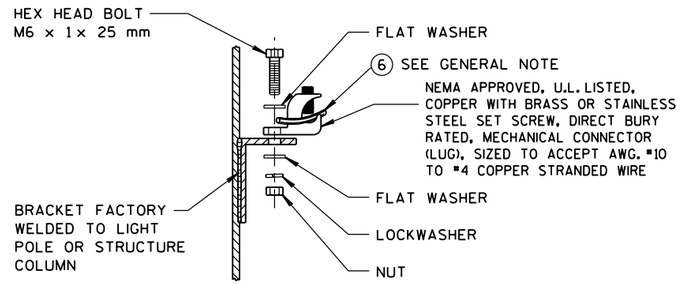


EQUIPMENT GROUNDING CONDUCTOR SLACK



UNGROUNDED CONDUCTOR SLACK (AND GROUNDED NEUTRAL SLACK IN GROUNDED NEUTRAL SYSTEM)

TYPICAL CONDUCTOR SLACK AT HANDHOLES



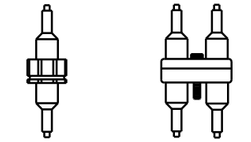
HANDHOLE GROUNDING LUG

(NUT, BOLT, WASHERS, AND LOCK WASHERS SHALL BE STAINLESS STEEL)

CONDUCTOR COLOR CODES

KEY	CONDUCTOR	COLOR
3	UNGROUNDED LINE WIRE	*
4	GROUNDED LINE WIRE	WHITE
5	SYSTEM GROUNDING LINE WIRE	GREEN
6	GROUNDING ELECTRODE CONDUCTOR	BARE
11	UNGROUNDED POLE WIRE	*
12	GROUNDED POLE WIRE	WHITE
13	EQUIPMENT GROUNDING POLE WIRE	GREEN

* FOLLOW COLOR CODING SHOWN IN THE PLANS. WHERE THE PLANS DO NOT SHOW COLOR CODING, USE BLACK FOR SINGLE LUMINAIRE POLES; BLACK AND RED FOR TWIN LUMINAIRE POLES.



1 POLE (1P) 2 POLE (2P)

FUSE ASSEMBLIES

GENERAL NOTES

DETAILS OF CONSTRUCTION AND WORKMANSHIP NOT SHOWN IN THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

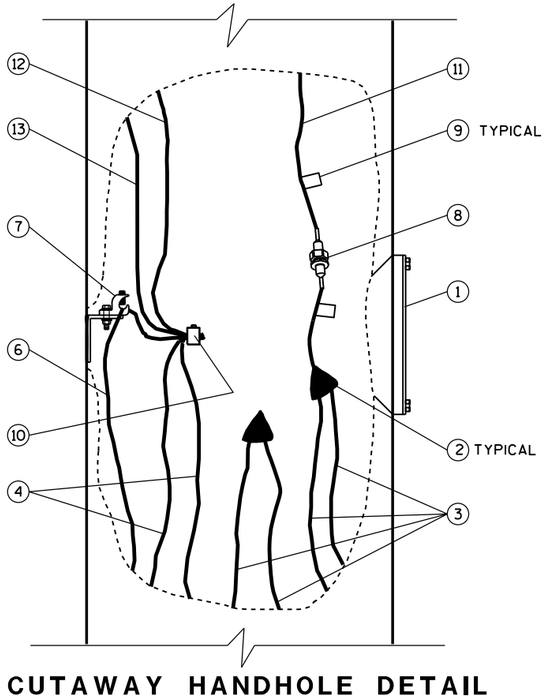
USE THIS DETAIL IN CONJUNCTION WITH THE ELECTRICAL DETAILS FOR THE APPLICATION, WHICH MAY BE A LIGHT POLE, SIGN BRIDGE, ETC.

THE GROUNDING ELECTRODE CONDUCTOR SHALL BE CONTINUOUS WITHOUT SPLICES FROM THE GROUNDING ELECTRODE THROUGH THE HANDHOLE GROUNDING LUG TO THE CONNECTOR.

THREE POLE WIRES ARE SHOWN FOR A SINGLE LUMINAIRE LIGHT POLE. THREE ADDITIONAL POLE WIRES REQUIRED FOR TWIN LUMINAIRE LIGHT POLES ARE OMITTED FROM THE DRAWING FOR CLARITY. IN THE TWIN POLE CASE, BUNDLE EACH SET OF THREE WIRES WITH A NYLON CABLE TIE.

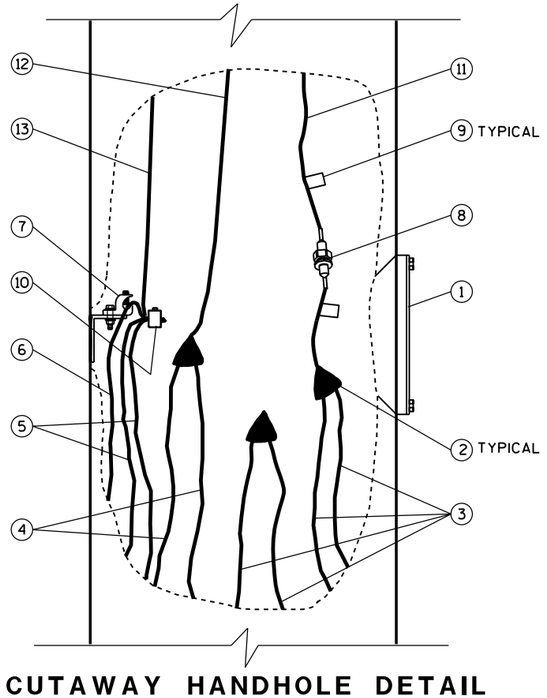
IN 3-PHASE SYSTEMS, THERE WILL BE ONE MORE UNGROUNDED LINE WIRE, WHICH IS OMITTED FROM THE DRAWING FOR CLARITY.

CIRCUIT TAGS SHALL BE INSTALLED ONLY WHERE REQUIRED IN THE SPECIAL PROVISIONS.



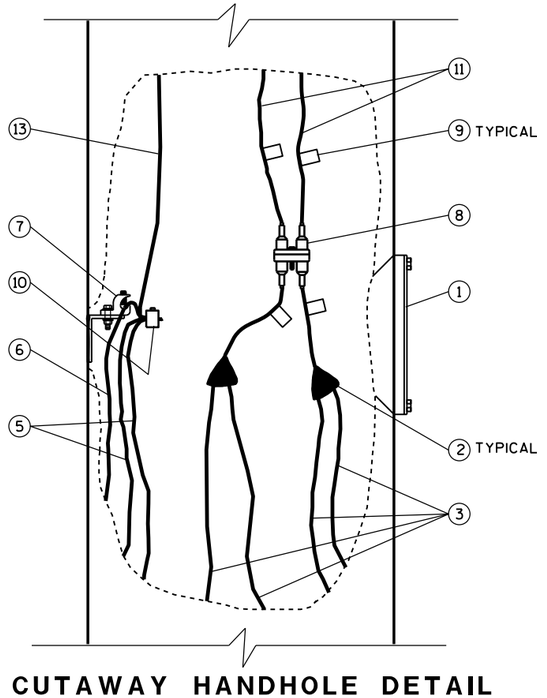
CUTAWAY HANDHOLE DETAIL

GROUNDED NEUTRAL SYSTEMS
1-Φ



CUTAWAY HANDHOLE DETAIL

ISOLATED NEUTRAL SYSTEMS
1-Φ SHOWN; 3-Φ WYE SIMILAR
(SEE GENERAL NOTE)



CUTAWAY HANDHOLE DETAIL

PHASE-TO-PHASE SYSTEMS
1-Φ SHOWN; 3-Φ DELTA SIMILAR
(SEE GENERAL NOTE)

NOTE: REQUIRED CONDUCTOR SLACK NOT SHOWN ON "CUTAWAY HAND HOLE" DETAILS FOR DRAWING CLARITY, SEE "TYPICAL CONDUCTOR SLACK AT HANDHOLES" ON THIS SHEET.

(1) HANDHOLE AND COVER
(2) INSULATED SPLICE
(3) UNGROUNDED LINE WIRE
(4) GROUNDED LINE WIRE
(5) SYSTEM GROUNDING LINE WIRE
(6) GROUNDING ELECTRODE CONDUCTOR
(7) HANDHOLE GROUNDING LUG
(8) FUSE ASSEMBLY, 1P OR 2P AS REQUIRED
(9) CIRCUIT TAG (SEE GENERAL NOTE)
(10) REVERSIBLE PRESSURE OR COMPRESSION GROUNDING CONNECTOR (NOT INSULATED)
(11) UNGROUNDED POLE WIRE
(12) GROUNDED POLE WIRE
(13) EQUIPMENT GROUNDING POLE WIRE

ELECTRICAL HANDHOLE WIRING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
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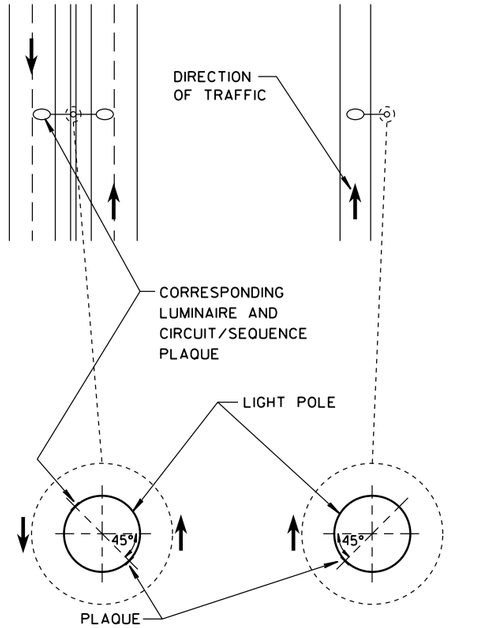


MEDIAN POLE SINGLE ARM POLE

LOCATION OF LIGHT POLE CIRCUIT/SEQUENCE PLAQUE

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.

WHERE SHOWN IN THE PLANS, REPLACEMENT PLAQUES WILL BE MEASURED AND PAID SEPARATELY.

FASTEN TOP, CENTER AND BOTTOM OF PLAQUE TO POLE OR OTHER LOCATION AS FOLLOWS:

GALVANIZED STEEL SHAFT - STAINLESS STEEL POP RIVETS

A588 STEEL SHAFT - SHIM FOR DRAINAGE WITH STAINLESS WASHERS; FASTEN WITH STAINLESS SELF-TAPPING SCREWS

ALUMINUM SHAFTS - 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-RETRORFLECTIVE

LINES - BLACK, 1/2" WIDE, SELF-ADHESIVE

CHARACTERS - BLACK, SELF-ADHESIVE, SERIES "D", SIZE AS SHOWN

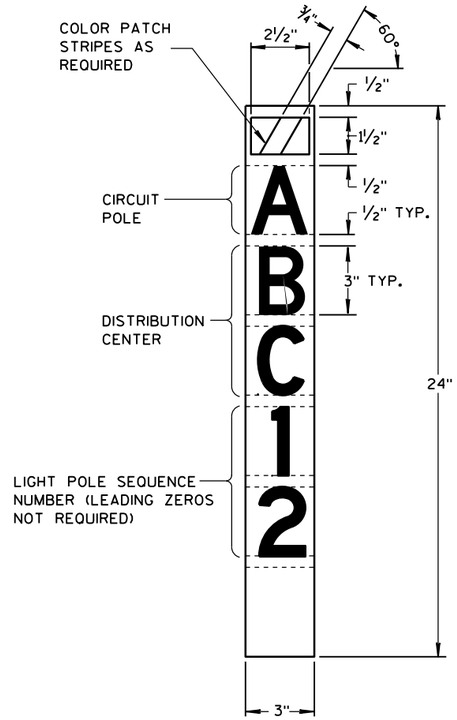
COLOR PATCHES - VARIOUS COLORS, SELF-ADHESIVE VINYL SHEETING

WITH THE APPROVAL OF THE ENGINEER, THE BASE MATERIAL MAY BE OMITTED AND THE FACE ADHERED DIRECTLY TO THE SURFACE, IN CASES SUCH AS SMOOTH, CLEAN ALUMINUM POLES.

ALTERNATIVE COMPUTER-GENERATED SIGN LETTERING MAY BE ACCEPTED IF THE ENGINEER FINDS IT TO BE EQUIVALENT.

COLOR PATCH CODE FOR HPS AND LED LUMINAIRES

HPS	LED	COLOR PATCH CODE
1000 WATT		NO PATCH
400 WATT	CATEGORY D	ORANGE
310 WATT		BLUE
250 WATT	CATEGORY C	ORANGE WITH WHITE STRIPE
200 WATT		RED
150 WATT	CATEGORY B	GREEN
100 WATT	CATEGORY A	BROWN
70 WATT	CATEGORY UDL	BROWN WITH WHITE STRIPE



LIGHT POLE CIRCUIT/SEQUENCE PLAQUE

IDENTIFICATION PLAQUES LIGHT POLES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Feb. 2015 DATE
/S/ Ahmet Demirbilek STATE ELECTRICAL
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GENERAL NOTES

DETAILS OF CONSTRUCTION AND WORKMANSHIP NOT SHOWN IN THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

USE THIS DETAIL IN CONJUNCTION WITH THE DETAIL FOR ELECTRICAL HANDHOLE WIRING.

THE GROUNDING ELECTRODE CONDUCTOR SHALL BE CONTINUOUS WITHOUT SPLICES FROM THE GROUNDING ELECTRODE THROUGH THE HANDHOLE GROUNDING LUG TO THE CONNECTOR.

WIRING FOR SINGLE LUMINAIRE POLES IS SHOWN WITH SOLID LINES. WIRING FOR THE SECOND LUMINAIRE OF TWIN LUMINAIRE POLES IS SHOWN WITH DOTTED LINES.

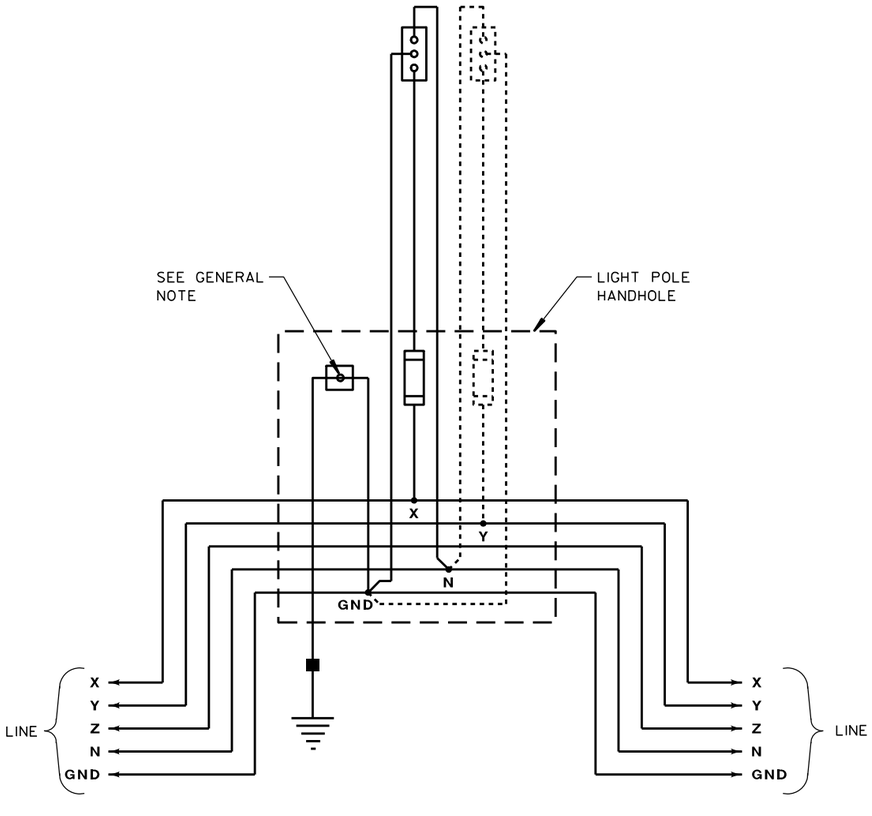
THE PLANS WILL SHOW WHICH CIRCUIT LEG(S) ARE CONNECTED TO EACH INSTALLATION.

HANDHOLE FUSE SCHEDULES

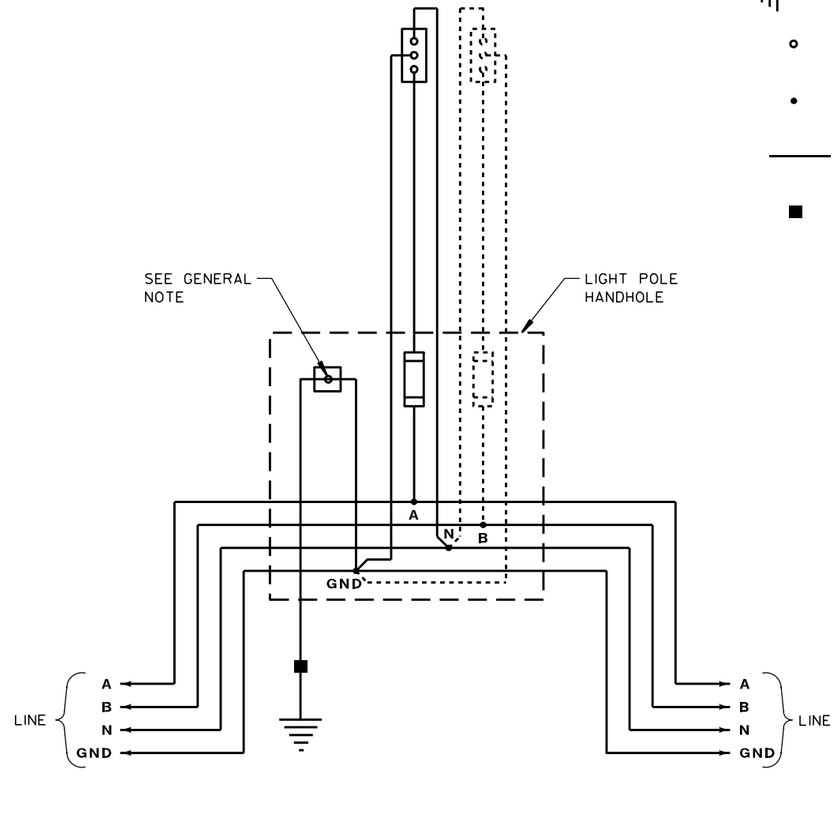
LINE VOLTAGE	BALLAST WATTAGE	
φ-GROUND	70-200 W	250-400 W
120 VAC	5 A	10 A
240 VAC	5 A	5 A
277 VAC	5 A	5 A
480 VAC	3 A	5 A

LEGEND

A,B,X,Y,Z	UNGROUNDED CIRCUIT CONDUCTORS
N	GROUNDED CIRCUIT CONDUCTORS
GND	EQUIPMENT GROUNDING CONDUCTOR
P	POLE (ELECTRICAL CIRCUIT)
φ	PHASE (ELECTRICAL CURRENT)
	HANDHOLE GROUND LUG
	SINGLE-POLE (1P) FUSE ASSEMBLY
	TWO-POLE (2P) FUSE ASSEMBLY
	UNFUSED LUMINAIRE
	EQUIPMENT GROUNDING ELECTRODE
	TERMINAL
	SPLICE
	CONDUCTOR
	EXOTHERMIC WELD



TYPICAL WIRING DIAGRAM
ISOLATED NEUTRAL SYSTEM
3-φ 208Y/120VAC OR 480Y/277VAC 4 WIRE



TYPICAL WIRING DIAGRAM
ISOLATED NEUTRAL SYSTEM
1-φ 120/240VAC OR 240/480VAC 3 WIRE

ELECTRICAL DETAILS
GROUND MOUNT LIGHT POLES
ISOLATED NEUTRAL SYSTEM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/25/2010 DATE
/S/ John Corbin STATE ELECTRICAL ENGI
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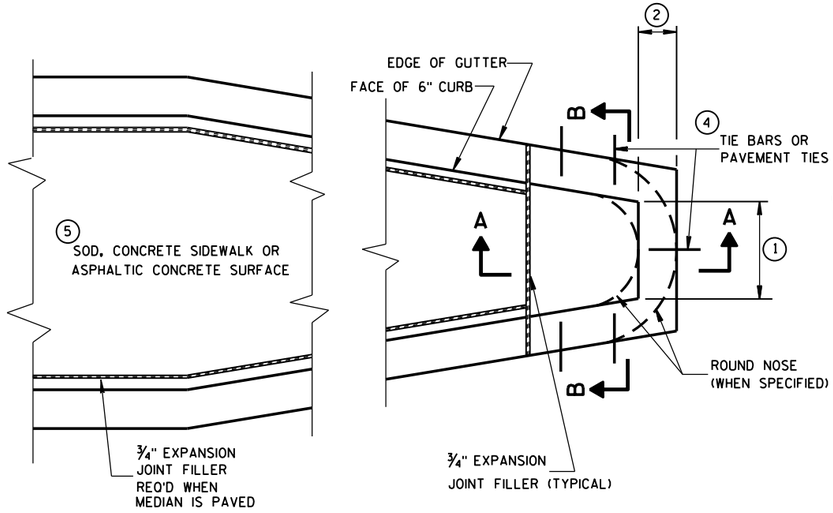
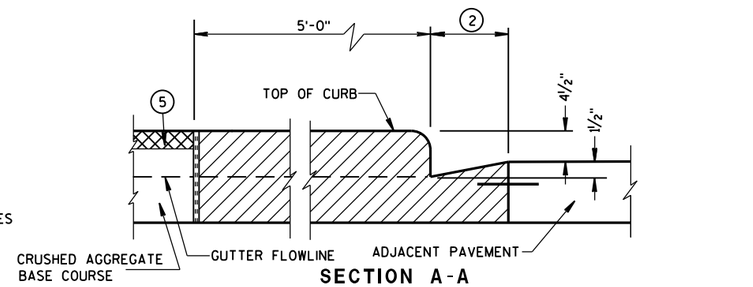
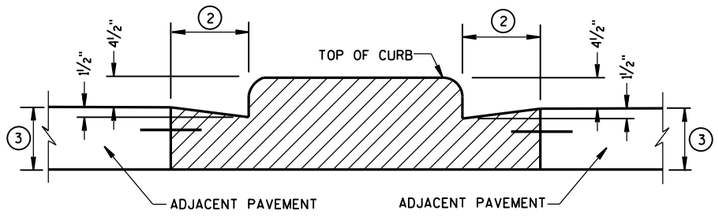






CONCRETE MEDIAN BLUNT NOSE DETAIL

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.

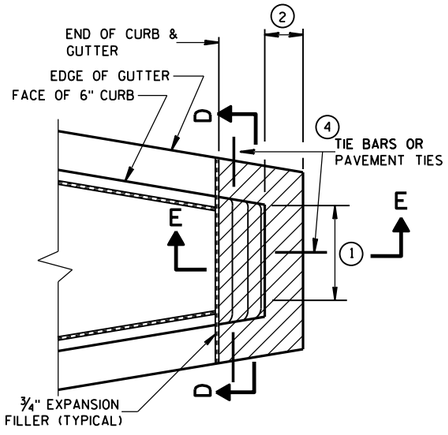
(2) ASPHALTIC CONCRETE PAVEMENT OVER NEW OR EXISTING CONCRETE BASE COURSE.

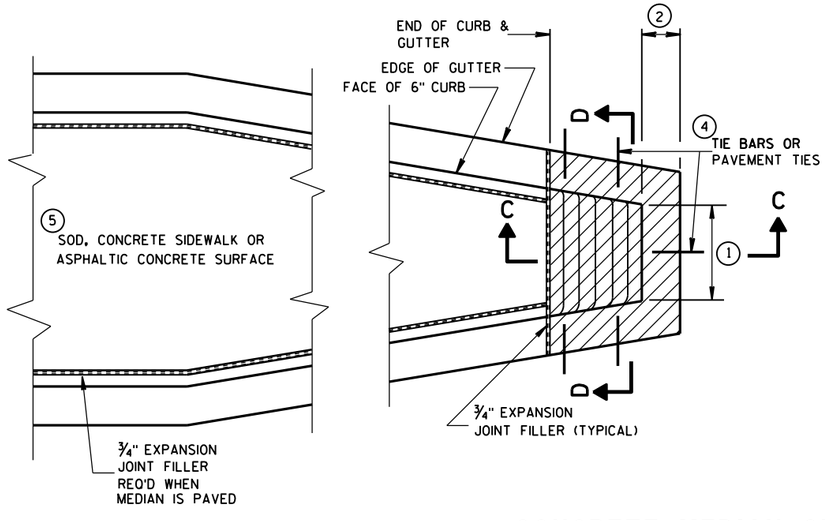
(3) ASPHALTIC CONCRETE PAVEMENT OVER CRUSHED AGGREGATE BASE COURSE.

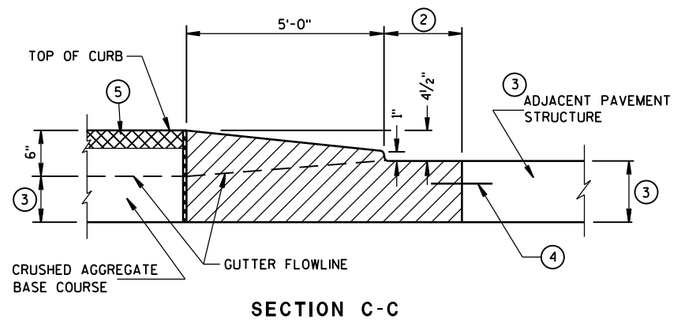
(4) TIE BARS OR PAVEMENT TIES REQUIRED IN NEW CONCRETE PAVEMENT OR CONCRETE BASE COURSE. TIE BARS SHALL BE NO. 4 X 2'-0" SPACED AT 2'-0" C-C.

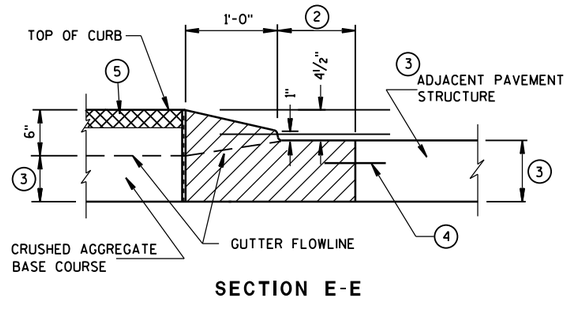
PAVEMENT TIES REQUIRED IN EXISTING CONCRETE BASE COURSE. PAVEMENT TIES SHALL BE NO. 6 X 1'-0" SPACED AT 3'-0" C-C INSTALLED ON A HORIZONTAL SKEW OF 6:1. THE DIRECTION OF SKEW SHALL ALTERNATE AFTER EVERY ONE OR TWO BARS.

(5) SURFACE TYPE AND DETAILS ARE SHOWN ELSEWHERE IN THE PLAN.



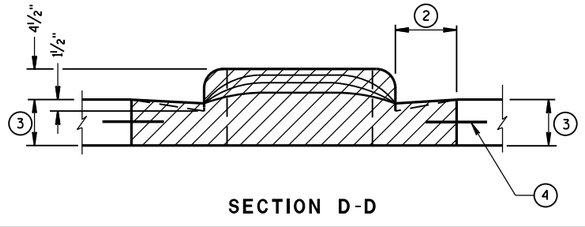






CONCRETE MEDIAN SLOPED NOSE TYPE 2

CONCRETE MEDIAN SLOPED NOSE TYPE 1



CONCRETE MEDIAN NOSE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

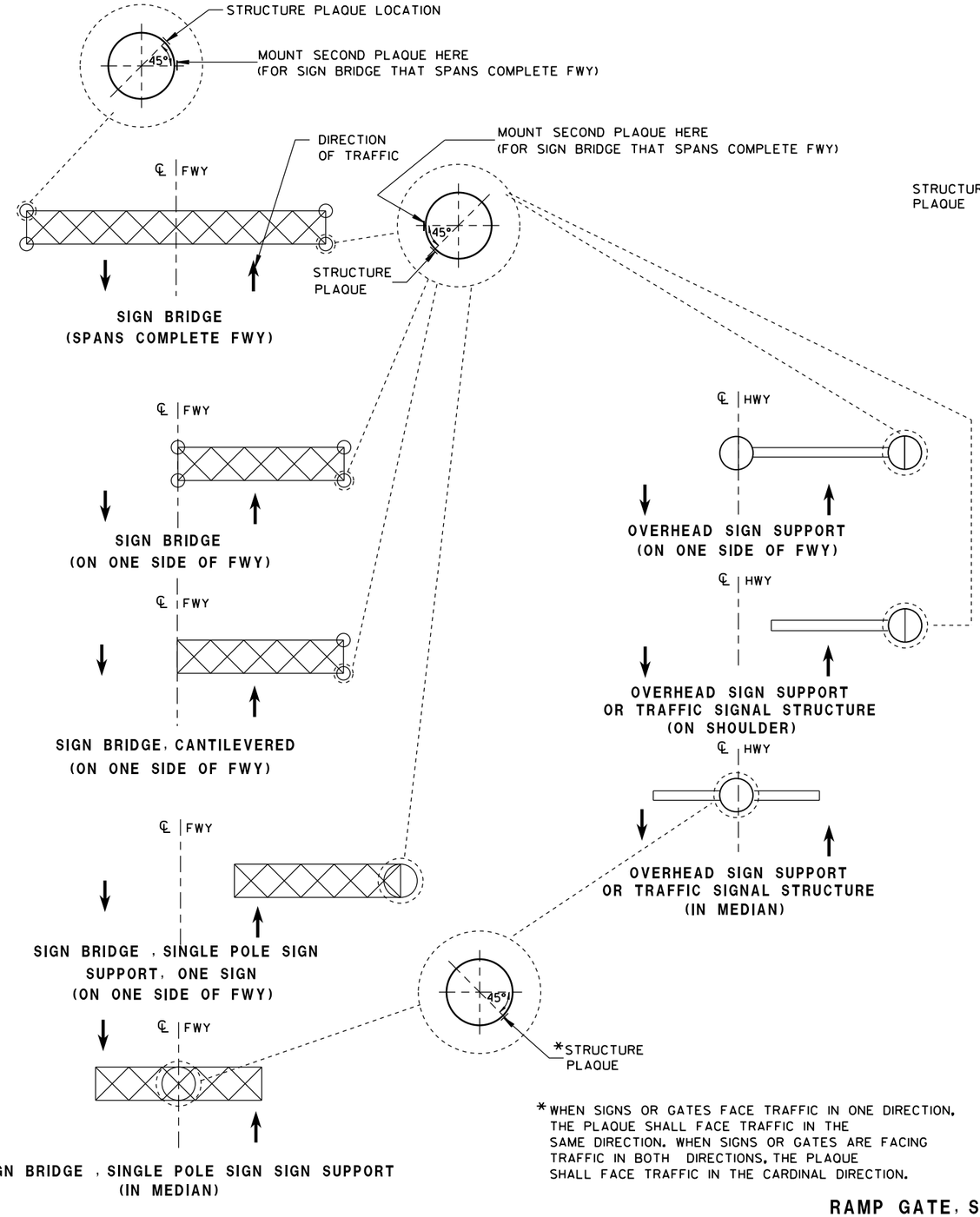
APPROVED
6/8/2006
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS D ENGINEER
FHWA

6

S.D.D. 11 B 2-2

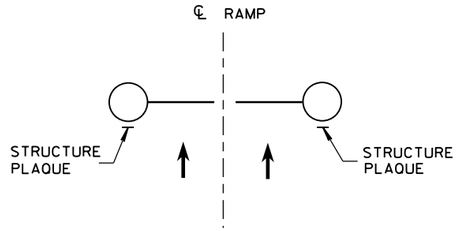
6

S.D.D. 11 B 2-2

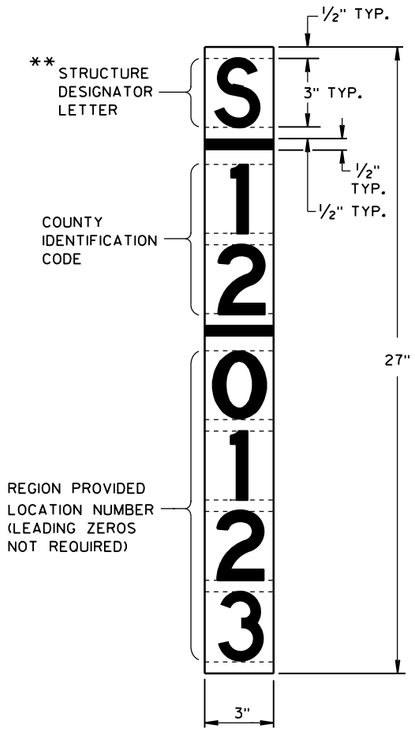


*WHEN SIGNS OR GATES FACE TRAFFIC IN ONE DIRECTION, THE PLAQUE SHALL FACE TRAFFIC IN THE SAME DIRECTION. WHEN SIGNS OR GATES ARE FACING TRAFFIC IN BOTH DIRECTIONS, THE PLAQUE SHALL FACE TRAFFIC IN THE CARDINAL DIRECTION.

LOCATION OF RAMP GATE, SIGN BRIDGE, OVERHEAD SIGN SUPPORT & TRAFFIC SIGNAL STRUCTURE PLAQUES



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.

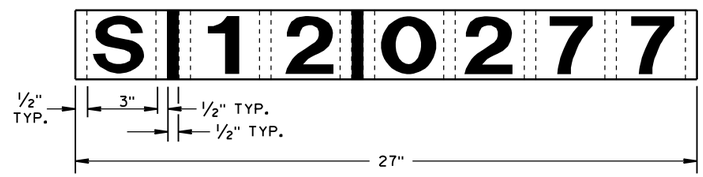
FACE - WHITE, SELF-ADHESIVE VINYL SHEETING, NON-RETROREFLECTIVE

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

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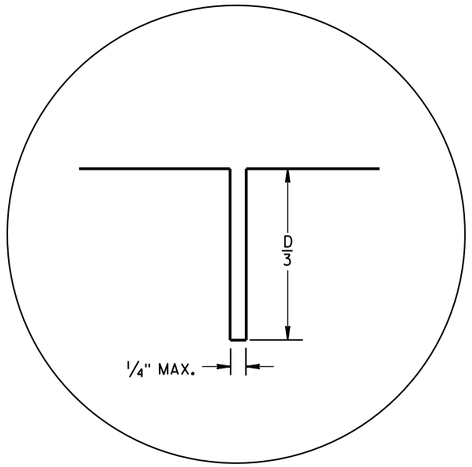
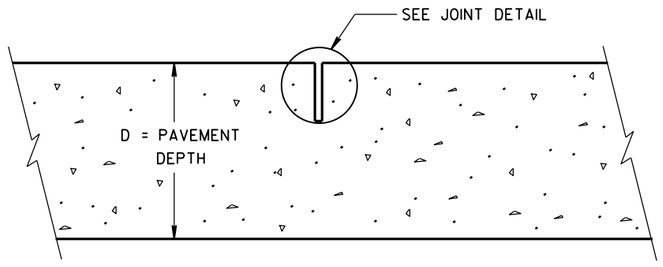
S.D.D. 12 A 4-3



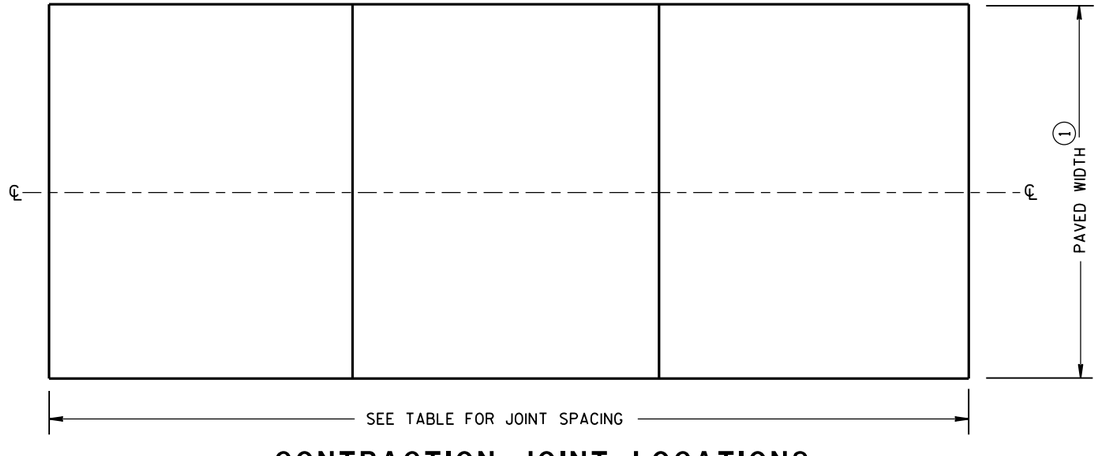
JOINT DETAIL



CONTRACTION JOINT

PAVEMENT DEPTH AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	CONTRACTION JOINT SPACING
6", 6 1/2"	12'
7", 7 1/2"	14'
8" & ABOVE	15'



CONTRACTION JOINT LOCATIONS

GENERAL NOTES

CONTRACTION JOINTS

CONSTRUCT TRANSVERSE CONTRACTION JOINTS NORMAL TO THE CENTERLINE.

LOCATE AND ORIENT CONTRACTION JOINTS THROUGH INTERSECTIONS AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

DO NOT SEAL OR FILL CONTRACTION JOINTS.

CONSTRUCTION JOINTS

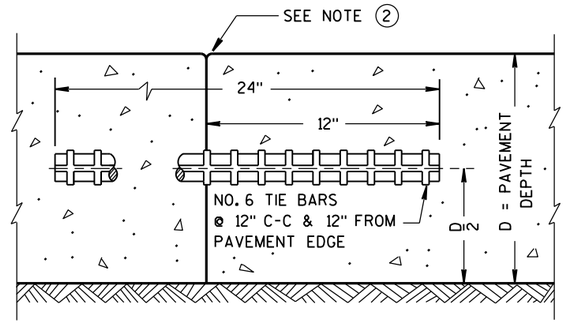
LOCATE CONSTRUCTION JOINTS A MINIMUM OF 6 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO THE CONTRACTION JOINTS.

FORM OR SAW CONSTRUCTION JOINTS.

THE CONTRACTOR MAY INSERT TIE BARS THROUGH THE HEADER BOARD AFTER THE CONCRETE HAS BEEN PLACED.

(1) REFER TO TYPICAL CROSS SECTIONS FOR PAVED WIDTH AND LOCATION OF LONGITUDINAL JOINTS.

(2) PROVIDE A SMOOTH VERTICAL FACE FOR THE ENTIRE DEPTH OF THE PAVEMENT WHEN FORMING CONSTRUCTION JOINTS. PROVIDE A 1/4-INCH RADIUS AT FORMED JOINTS.



TIED TRANSVERSE CONSTRUCTION JOINT

6

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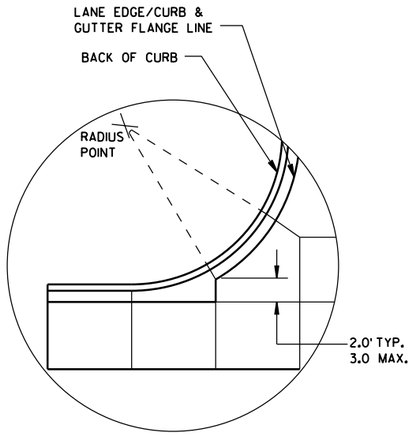
S.D.D. 13 C 4-16

S.D.D. 13 C 4-16

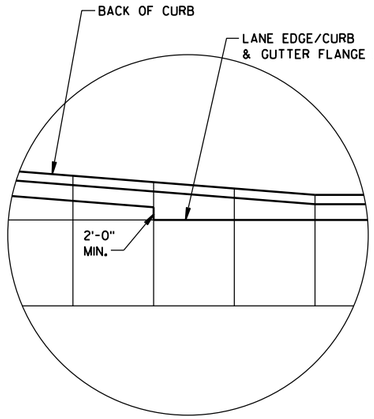
URBAN NON-DOWELED CONCRETE PAVEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

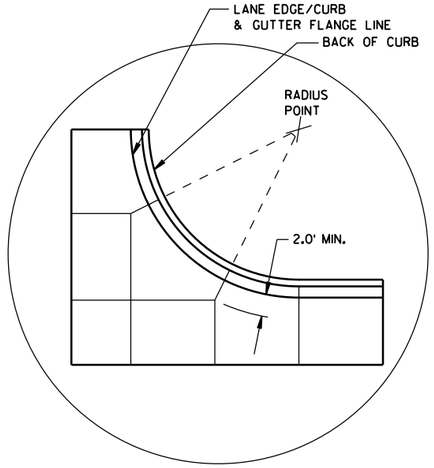
APPROVED
5-3-2013 DATE
/S/ Deb Bischoff PAVEMENT POLICY & DE
IEER
FHWA



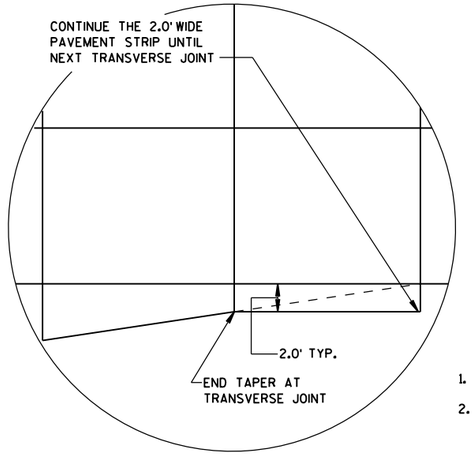
DETAIL "A"



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.

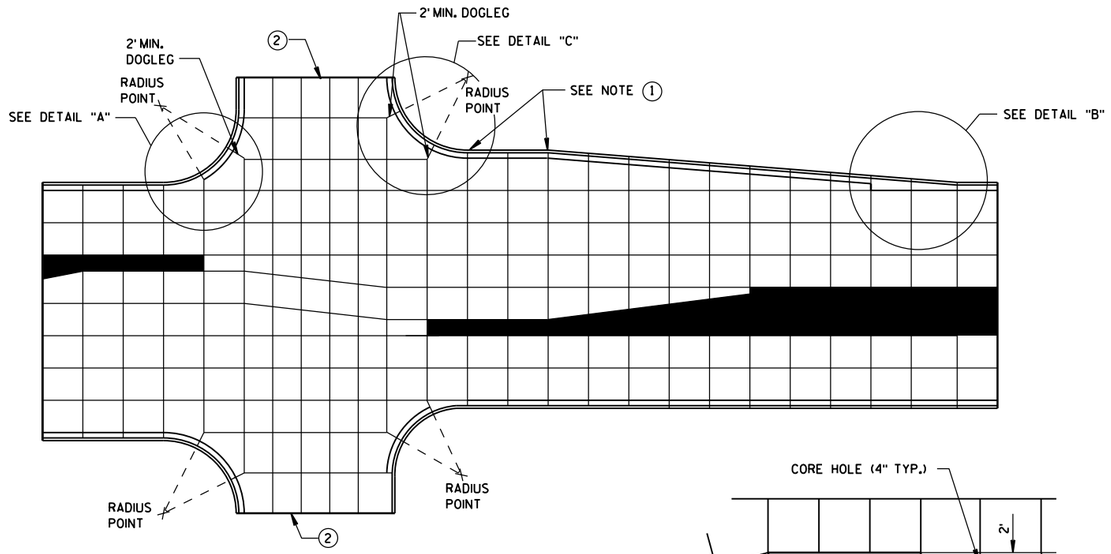
AVOID SLABS LESS THAN 2 FEET WIDE OR GREATER THAN 15 FEET WIDE.

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.

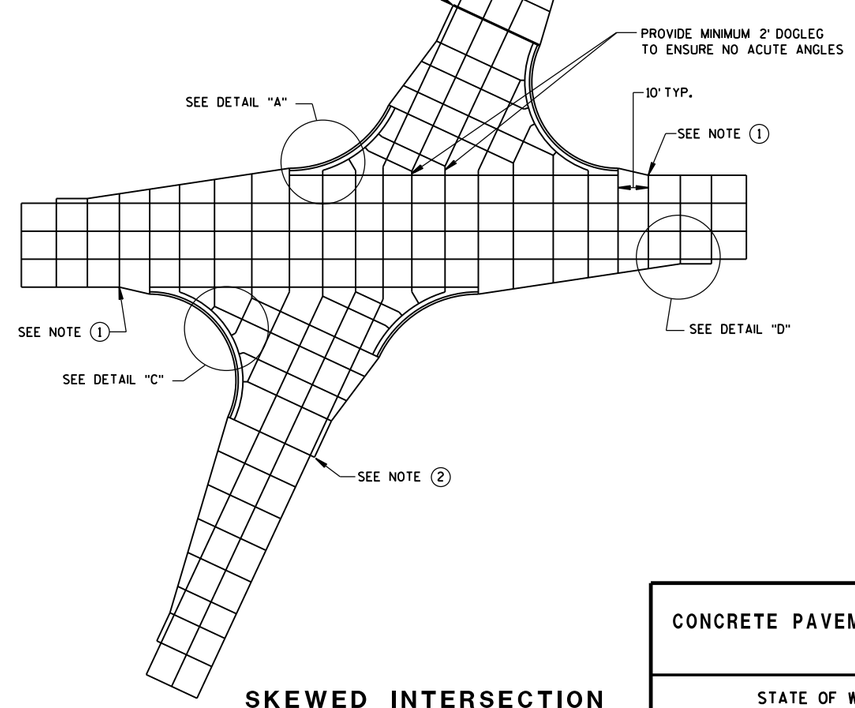
1. PROVIDE TRANSVERSE JOINTS AT ALL PAVEMENT WIDTH CHANGES.
2. CONSTRUCT DOWELED EXPANSION JOINT ON THE SIDE ROAD OF AN INTERSECTION IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH. ALIGN EXPANSION JOINT WITH EDGE OF RADIUS.
3. THE ENGINEER MAY APPROVE SLIGHT VARIATIONS FROM THESE JOINTING DETAILS.



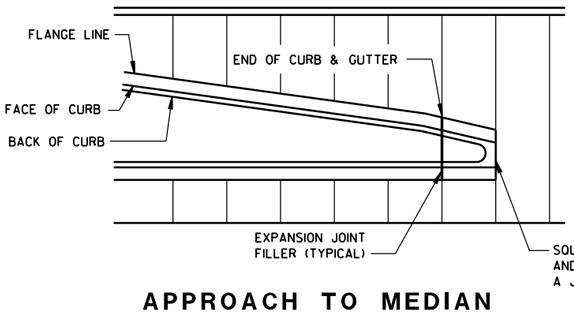
STANDARD INTERSECTION

PAVEMENT DEPTH AND JOINT SPACING TABLE

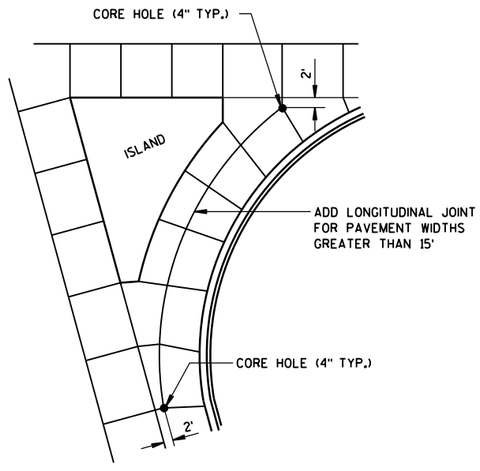
PAVEMENT DEPTH (D)	CONTRACTION JOINT SPACING
6", 6½"	12'
7", 7½"	14'
8" & ABOVE	15'



SKEWED INTERSECTION



APPROACH TO MEDIAN



LARGE RIGHT TURN

CONCRETE PAVEMENT JOINTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

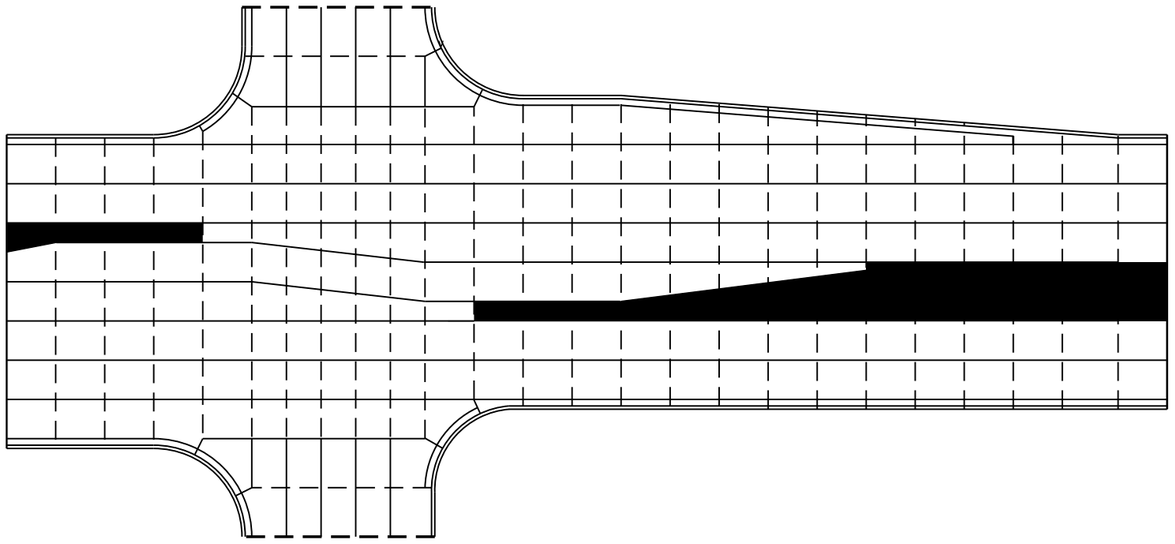
6
S.D.D. 13 C 18-5a

LEGEND

POTENTIAL DOWELED EXPANSION JOINT

DOWELED JOINT

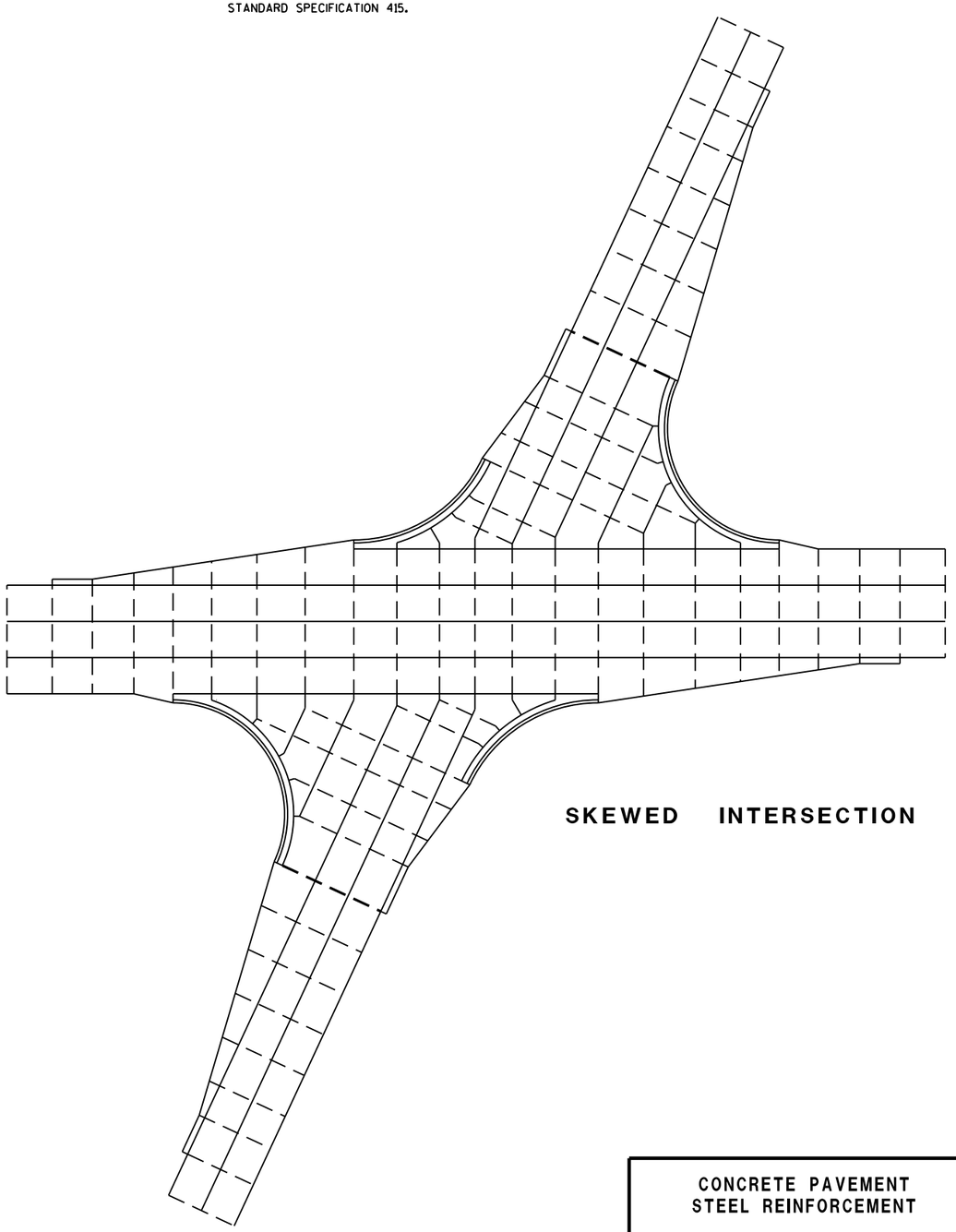
TIED JOINT



STANDARD INTERSECTION

GENERAL NOTES

USE AN EXPANSION JOINT FILLER MEETING THE REQUIREMENTS OF STANDARD SPECIFICATION 415.



SKEWED INTERSECTION

CONCRETE PAVEMENT
STEEL REINFORCEMENT

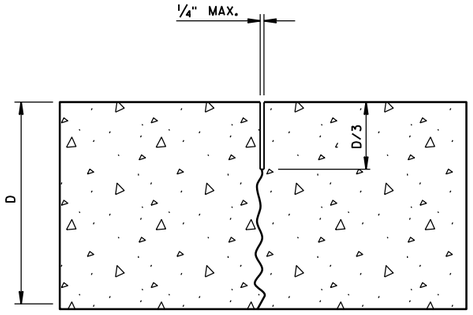
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

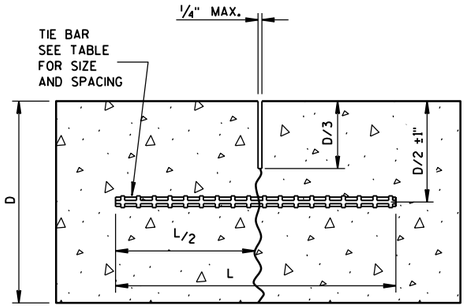
S.D.D. 13 C 18-5b

6

S.D.D. 13 C 18-5b



UNDOWELED-TRANSVERSE



TIED LONGITUDINAL

TIE BAR TABLE

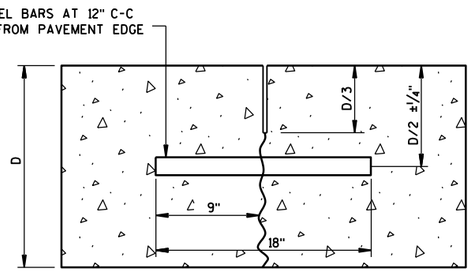
PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 1/2"	NO. 4	30"	36"
≥ 10 1/2"	NO. 5	36"	36"
	NO. 4*	30"	24"**

* SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)

** CONFORM TO 15" MINUMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.

GENERAL NOTES

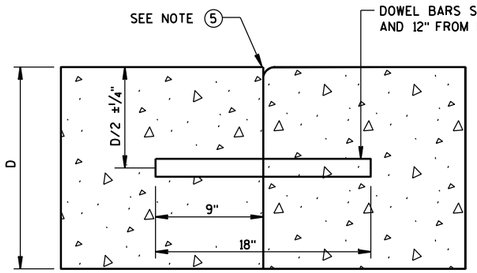
1. USE DOWELED EXPANSION JOINTS ON SIDE ROADS AT INTERSECTIONS (TO ISOLATE THE SIDE ROAD FROM THE THROUGH STREET) IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH.
2. SPACE CONTRACTION JOINTS IN ACCORDANCE WITH 13C4, 13C11 OR 13C13.
3. LOCATE CONSTRUCTION JOINTS A MINIMUM OF 6 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO CONTRACTION JOINTS.
4. CONSTRUCTION JOINTS CAN BE FORMED OR SAWED.
5. IF JOINT IS FORMED, PROVIDE A 1/4-INCH RADIUS.
6. ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.



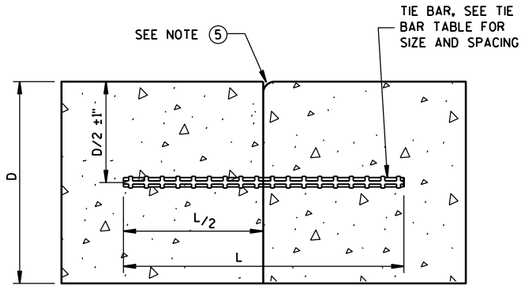
DOWELED-TRANSVERSE

CONTRACTION JOINTS

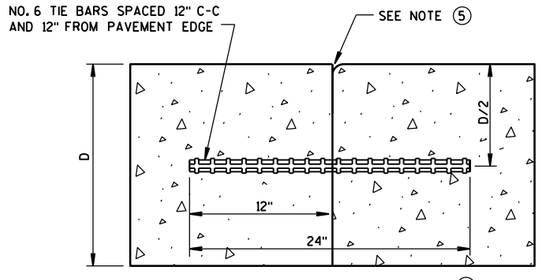
SEE NOTE (2)



DOWELED TRANSVERSE (3)

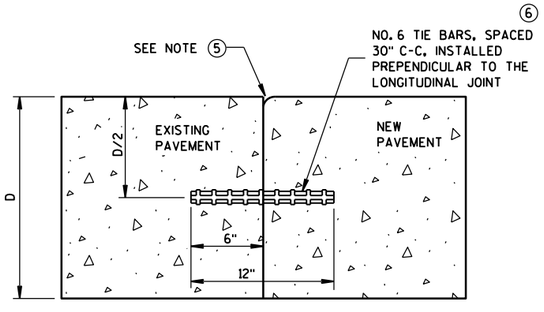


TIED LONGITUDINAL



TIED TRANSVERSE (3)

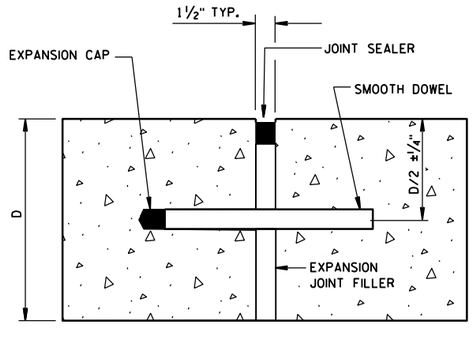
(FOR USE ON NON-DOWELED PAVEMENTS ONLY)



TIED LONGITUDINAL TO EXISTING

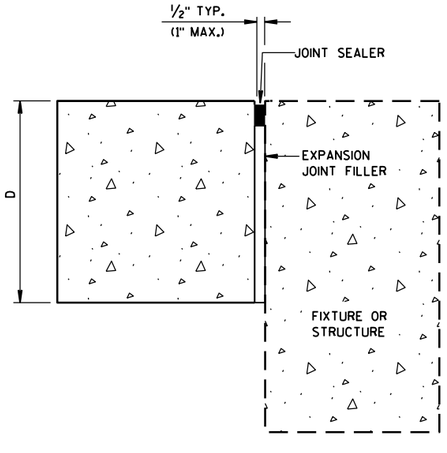
CONSTRUCTION JOINTS

SEE NOTE (4)



DOWELED-TRANSVERSE

SEE NOTE (1)



UNTIED-LONGITUDINAL

EXPANSION JOINTS

CONCRETE PAVEMENT
JOINT TYPES

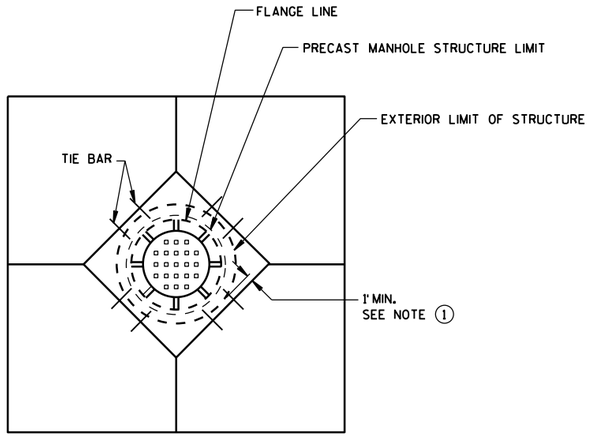
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI 212

6

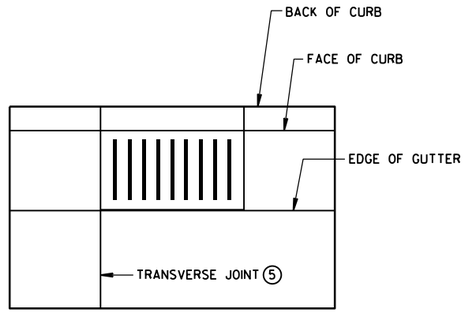
S.D.D. 13 C 18-5c

6

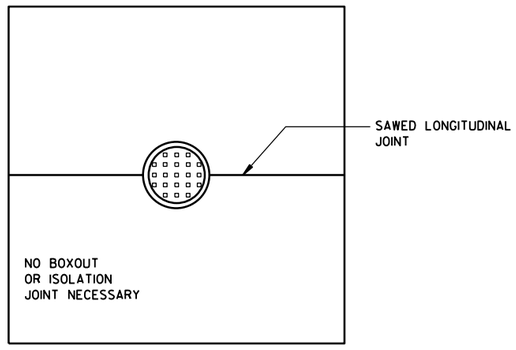
S.D.D. 13 C 18-5c



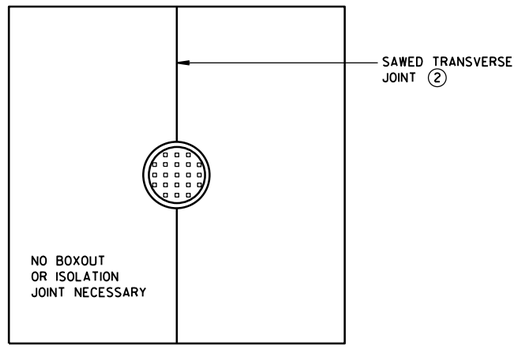
DIAGONAL MANHOLE BOXOUT FOR CONSTRUCTION JOINTS



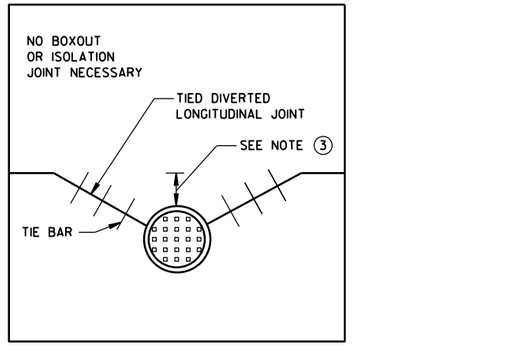
INLET WITH TRANSVERSE JOINT



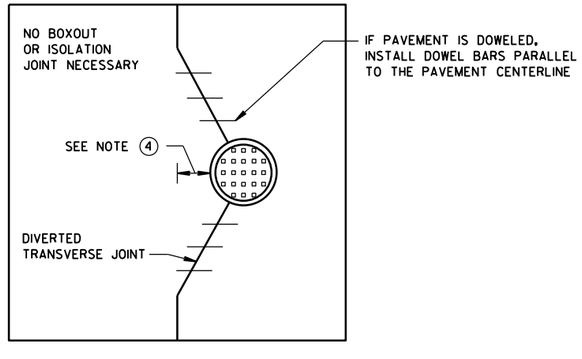
MANHOLE WITH LONGITUDINAL JOINT



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
December, 2016 /S/ Peter Kemp, P.E.
DATE PAVEMENT SUPEF
FHWA

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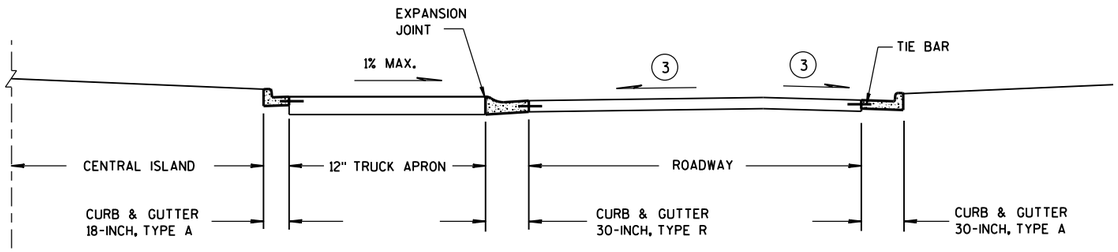
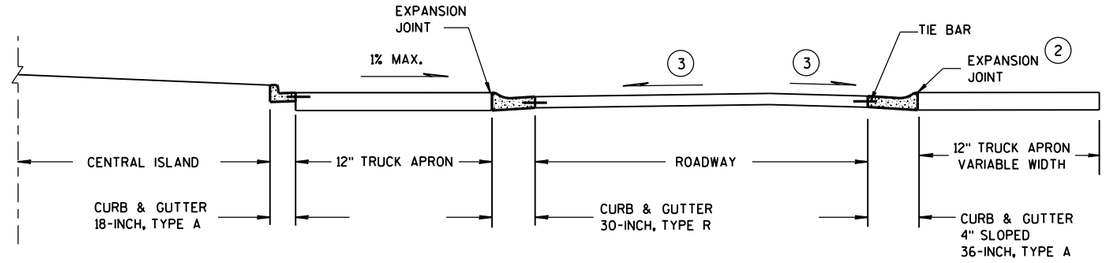
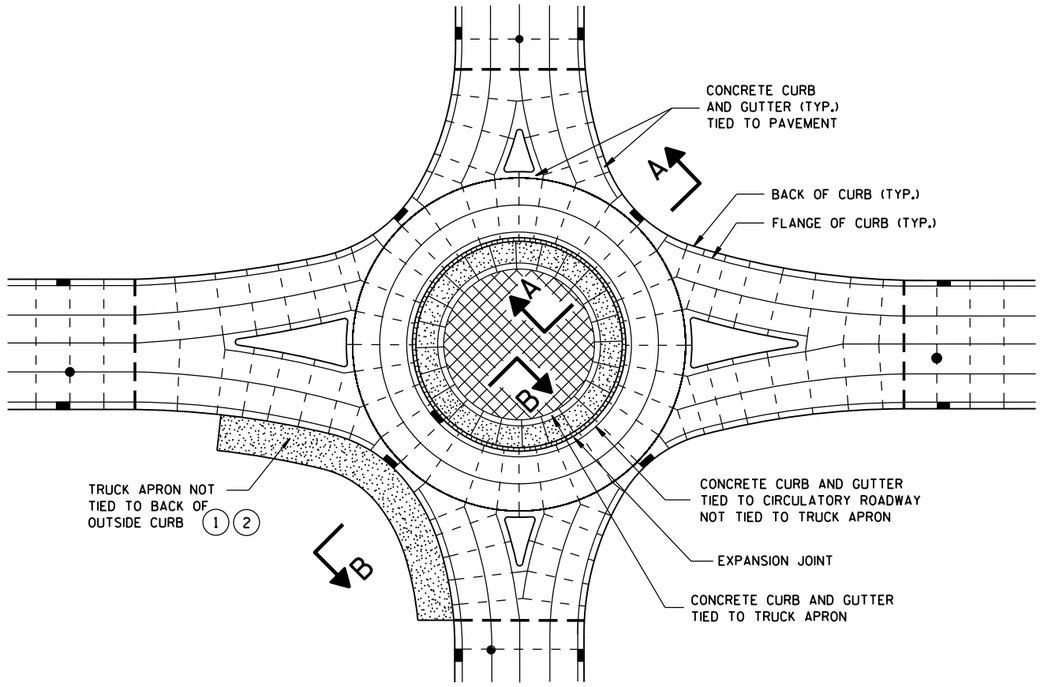
S.D.D. 13 C 18-5d



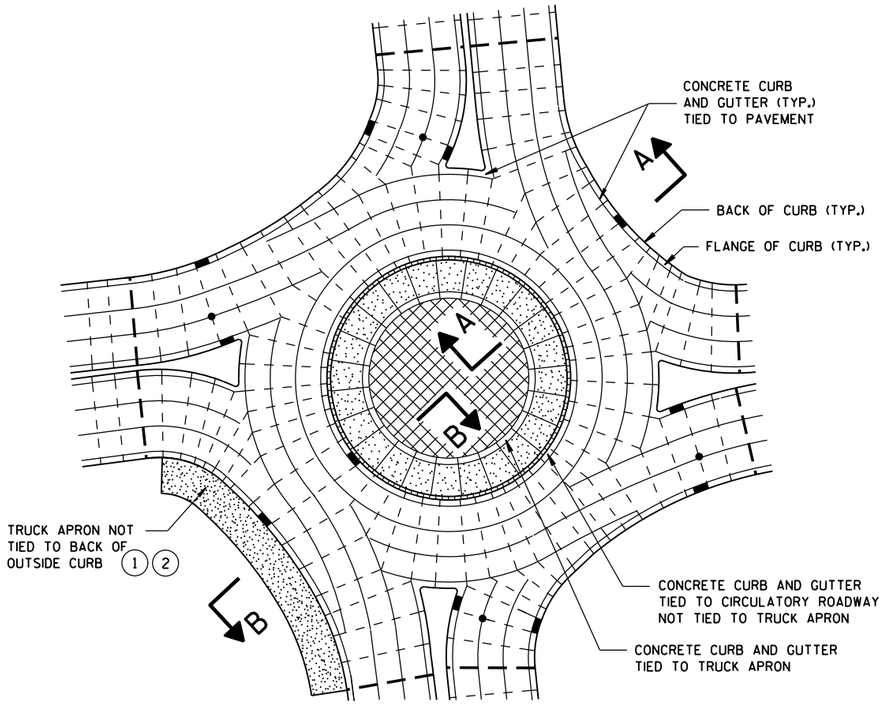
SECTION A-A



SECTION B-B



ISOLATED CIRCLE JOINT LAYOUT FOR ROUNDABOUTS



PINWHEEL JOINT LAYOUT FOR ROUNDABOUTS

GENERAL NOTES

MAXIMUM JOINT SPACING IS IN ACCORDANCE WITH THE TABLE SHOWN ON SDD 13C18 SHEET "a".

USE AN EXPANSION JOINT FILLER MEETING THE REQUIREMENTS OF STANDARD SPECIFICATION 415.

DO NOT DOWEL OR TIE THE TRUCK APRON TRANSVERSE JOINTS.

(1) DESIGNER DETERMINES SIZE AND LOCATION(S) OF TRUCK APRON TO ACCOMMODATE TRACKING OF OVERSIZE/OVERWEIGHT VEHICLES.

(2) TIE THE OUTSIDE TRUCK APRON TO THE BACK SIDE OF CURB ONLY WHEN ENTIRE TRUCK APRON WIDTH IS LESS THAN 3 FEET.

(3) CONFORM TO PLAN CONSTRUCTION DETAILS FOR CIRCULATORY ROADWAY CROSS SLOPE.

LEGEND

- DOWELED JOINT
- TIED JOINT
- EXPANSION JOINT
- POTENTIAL DOWELED EXPANSION JOINT
- TRUCK APRON
- CENTRAL ISLAND
- UTILITY STRUCTURES

CONCRETE PAVEMENT JOINTING AND STEEL REINFORCEMENT IN ROUNDABOUTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
December, 2016 — DATE
/S/ Peter Kemp, P.E. — PAVEMENT SUPE
FHWA

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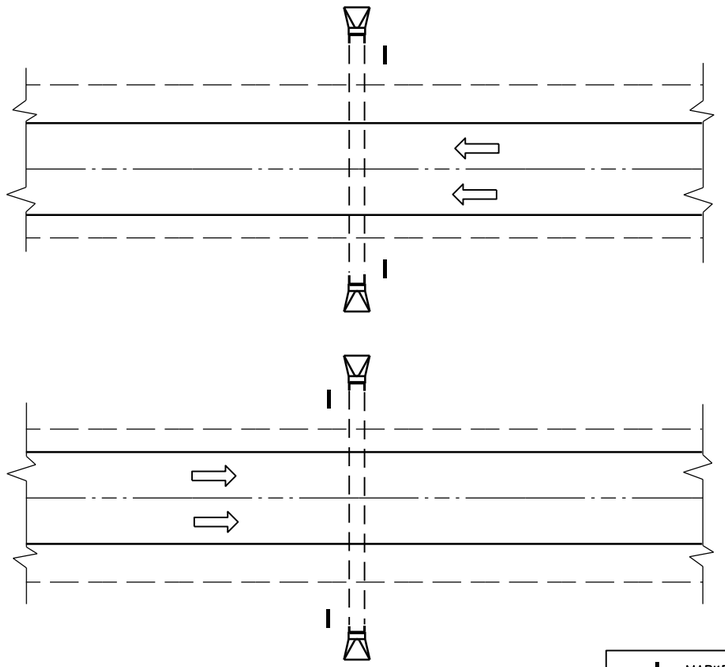
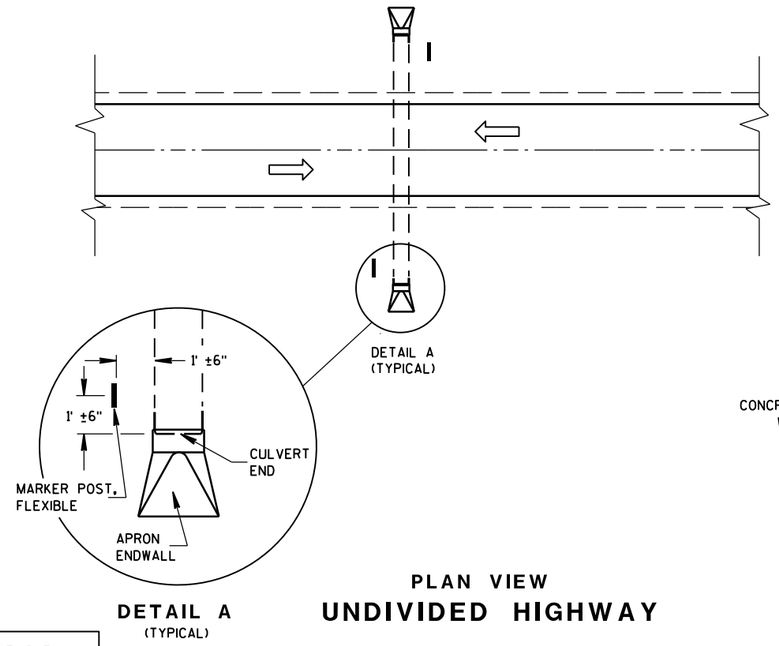
S.D.D. 13 C 18-5e



PLAN VIEW

DIVIDED HIGHWAY



DETAIL A
(TYPICAL)

PLAN VIEW

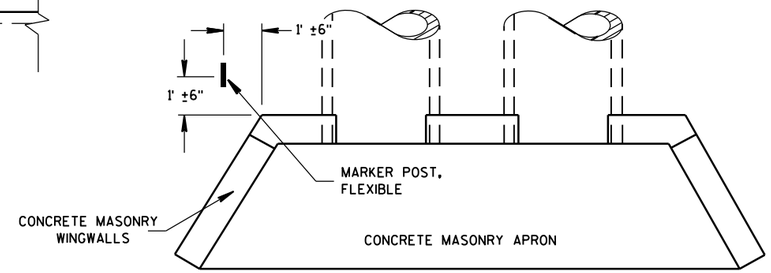
UNDIVIDED HIGHWAY

MARKER POST, FLEXIBLE

DIRECTION OF TRAFFIC FLOW

GENERAL NOTES

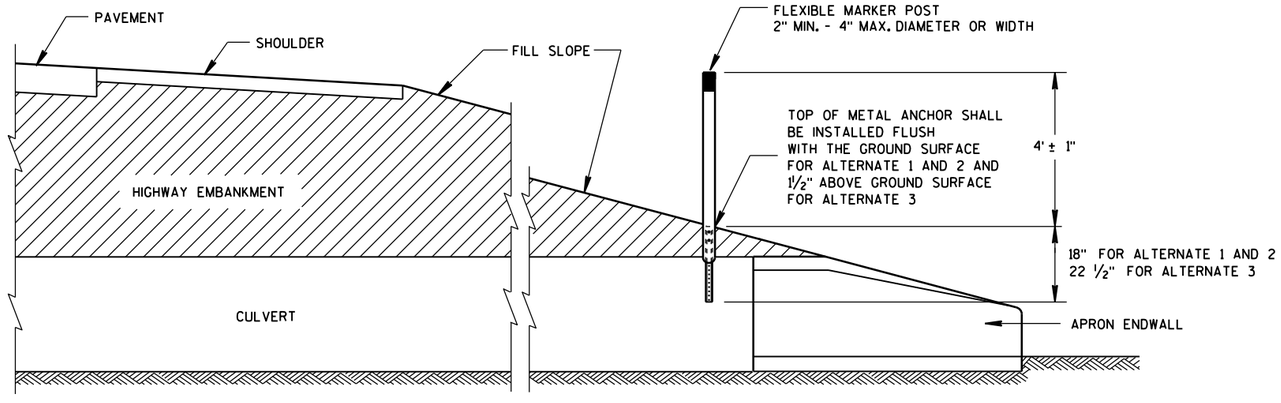
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.



PLAN VIEW

CONCRETE MASONRY ENDWALLS FOR CULVERT PIPE AND PIPE ARCH

FLEXIBLE MARKER POST LOCATION



CROSS SECTION

FLEXIBLE MARKER POST

FLEXIBLE MARKER POST FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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S.D.D. 15 A 3-2a

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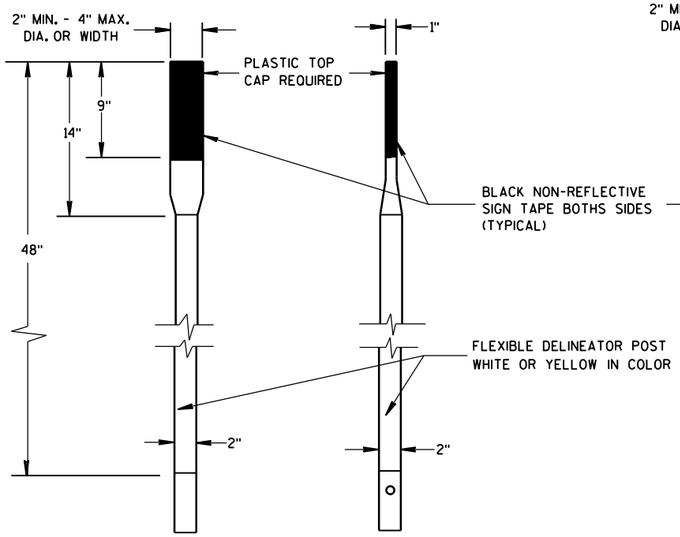
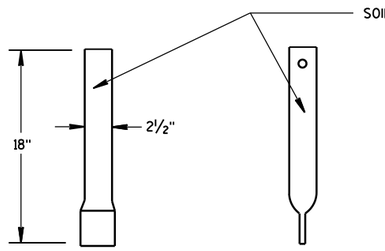
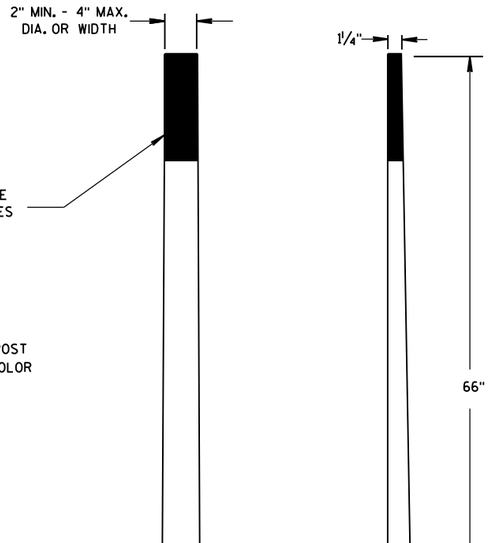
S.D.D. 15 A 3-2a





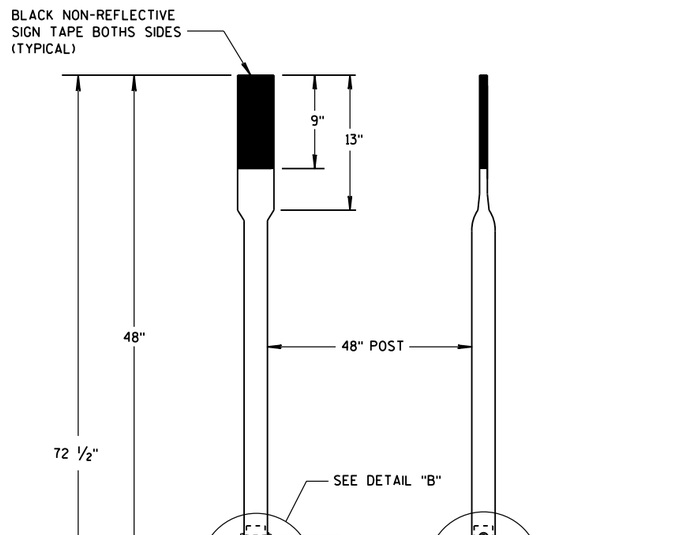
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

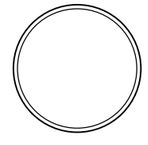
ALTERNATE 2



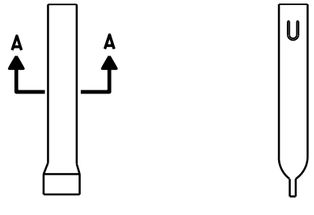
FRONT VIEW SIDE VIEW

ALTERNATE 3

FLEXIBLE MARKER POSTS

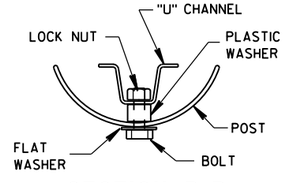


SECTION A-A

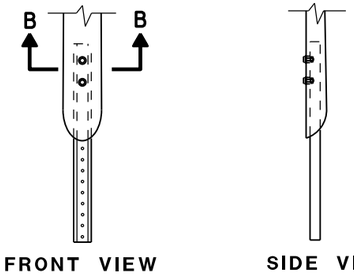


FRONT VIEW SIDE VIEW

ALTERNATE 1

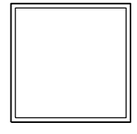


SECTION B-B

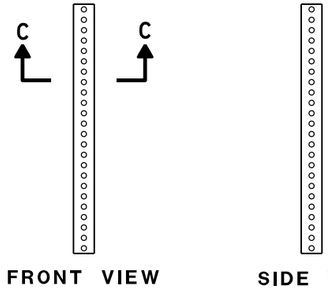


FRONT VIEW SIDE VIEW

ALTERNATE 2



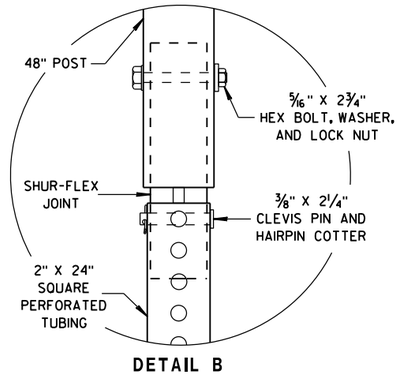
SECTION C-C



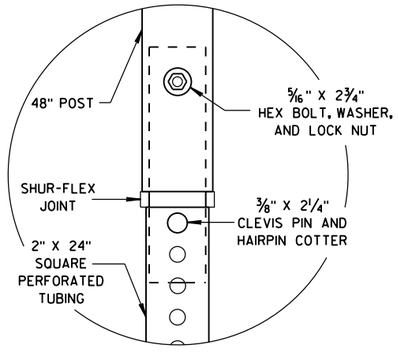
FRONT VIEW SIDE VIEW

ALTERNATE 3

FLEXIBLE MARKER POST ANCHORS



DETAIL B



DETAIL C

FLEXIBLE MARKER POST
FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/1/2012 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

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S.D.D. 15 A 3-2b

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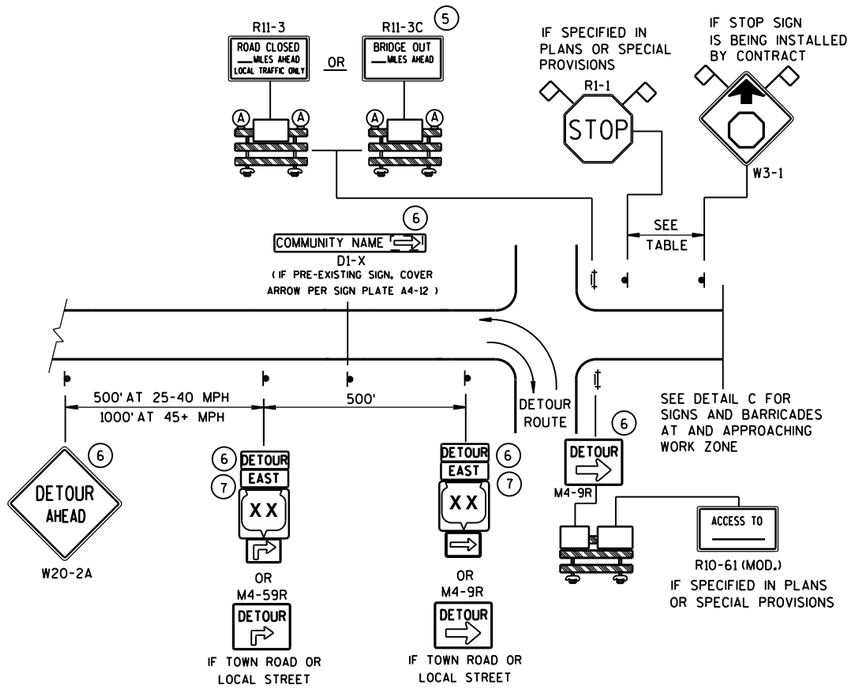
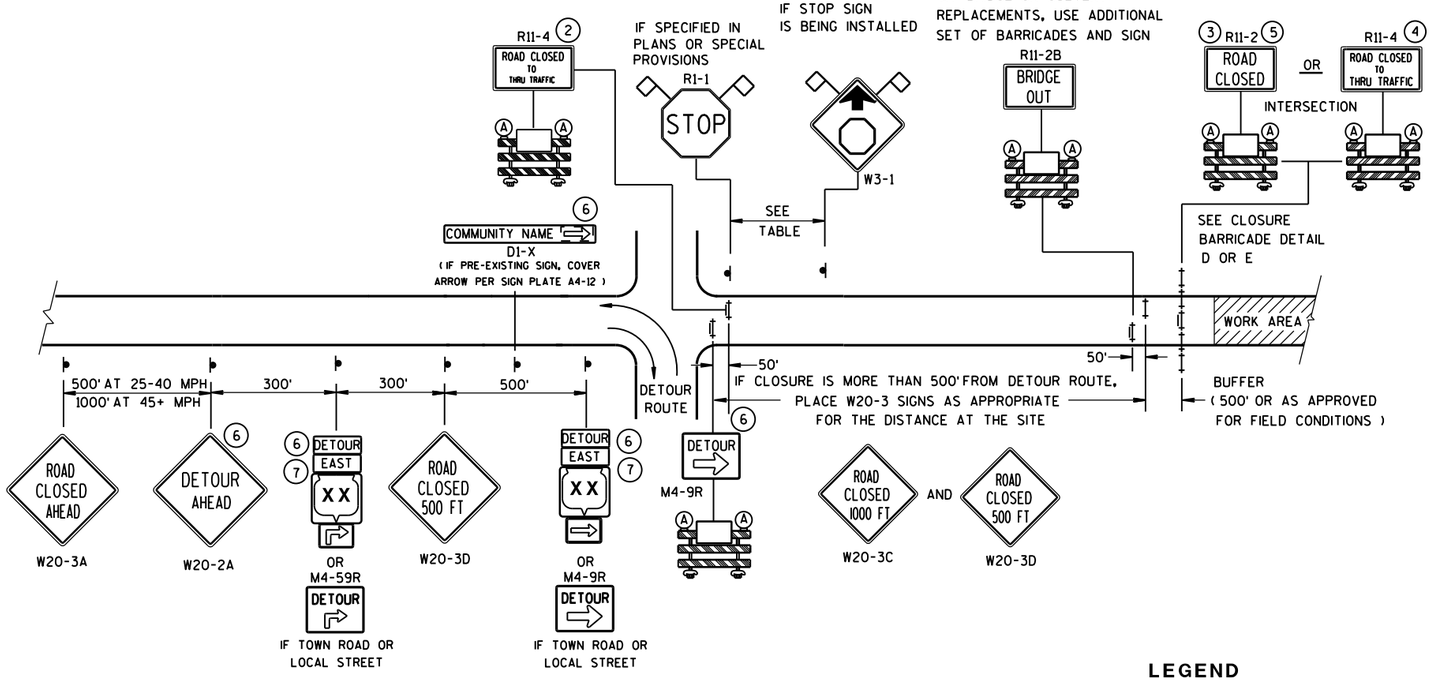
S.D.D. 15 A 3-2b



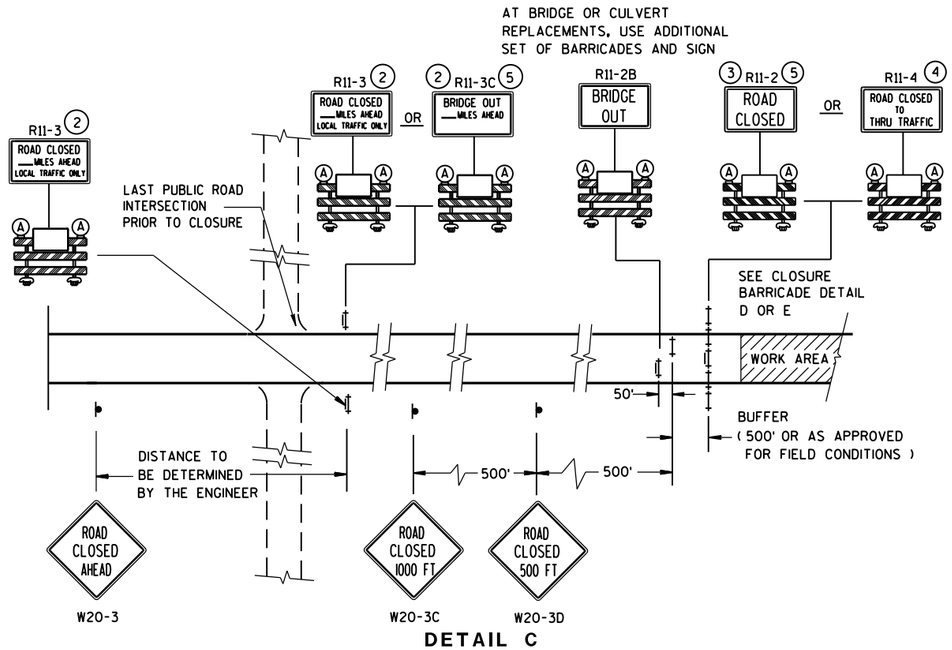
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE GREATER THAN ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE LESS THAN ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

SPEED LIMIT (MPH)	"STOP AHEAD" ADVANCE WARNING DISTANCE (FT)
25	200
30	200
35	350
40	350
45	500
50	550
55	750

SEE SDD 15C2-SHEET "**b**" FOR GENERAL NOTES AND FOOTNOTES (1) THROUGH (7)

LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- (A) TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA
- DETOUR / EAST — M4-8 / M3-X
- XX — M1-4; COUNTY XX — M1-5A; XX — M1-6
- M05-1 OR M06-1
- FLAGS, 16" X 16" MIN., (ORANGE)

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

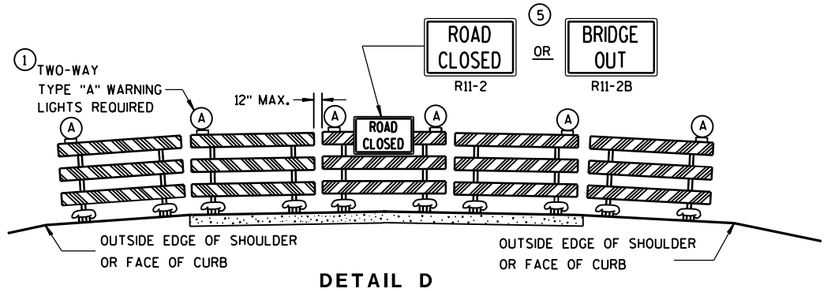
Sept. 2015 — DATE
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER
FHWA

6

S.D.D. 15 C 2-6a

6

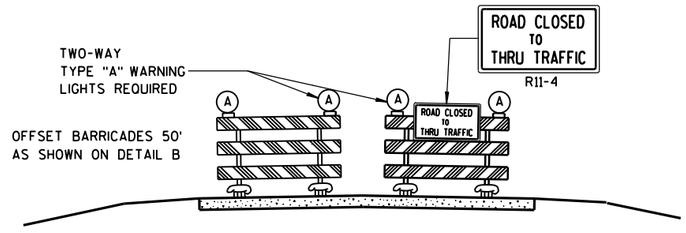
S.D.D. 15 C 2-6a



DETAIL D

ROAD CLOSURE BARRICADE DETAIL

APPROACH VIEW



DETAIL E

LANE CLOSURE BARRICADE DETAIL

APPROACH VIEW

SEE SDD 15C2-SHEET "**a**" FOR LEGEND

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.

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, M4-9, R11-4 AND R10-61 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.

"WO AND "MO" SIGNS ARE THE SAME AS "W" AND "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
- R11-2 SHALL BE 48" X 30".
- R11-3, R11-4 AND R10-61 SHALL BE 60" X 30".
- M4-9 SHALL BE 30" X 24".
- M3-X SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS.)
- M4-8 SHALL BE 24" X 12". (30" X 15" IF NEEDED TO MATCH EXISTING SIGNS.)
- M1-4, M1-5A, AND M1-6 SHALL BE 24" X 24". (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS.)
- M05-1 AND M06-1 SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)
- D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.
- R1-1 SHALL BE 36" X 36".

(1) TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8-FOOT LIGHT SPACING).

(2) THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT INTERSECTION.

(3) FOR ROAD CLOSURE WITHOUT LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL D.

(4) FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT, SEE LANE CLOSURE BARRICADE DETAIL E.

(5) FOR BRIDGE OR CULVERT REPLACEMENTS, SUBSTITUTE "BRIDGE OUT" INSTEAD OF "ROAD CLOSED" ON R11-2 AND R11-3 SIGNS.

(6) INSTALL DETOUR AND COMMUNITY GUIDE SIGNS AND ARROWS ONLY IF SPECIFIED IN THE CONTRACT. IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. MODIFY EXISTING SIGNS WHERE POSSIBLE. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. IF DETOUR SIGNS ARE BEING INSTALLED BY OTHERS, PLACE THE CONTRACTED TRAFFIC CONTROL SIGNS TO ALLOW FOR PLACEMENT OF ALL WARNING, DETOUR AND GUIDE SIGNS AS SHOWN.

(7) "EAST" CARDINAL DIRECTION MARKERS AND RIGHT TURN ARROWS ARE SHOWN. USE OTHER CARDINAL DIRECTIONS AND ARROWS AS APPROPRIATE.

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

Sept. 2015 — DATE
/S/ Peter Amakobe Atepe — STATEWIDE WORK ZO SAFETY ENGI
FHWA

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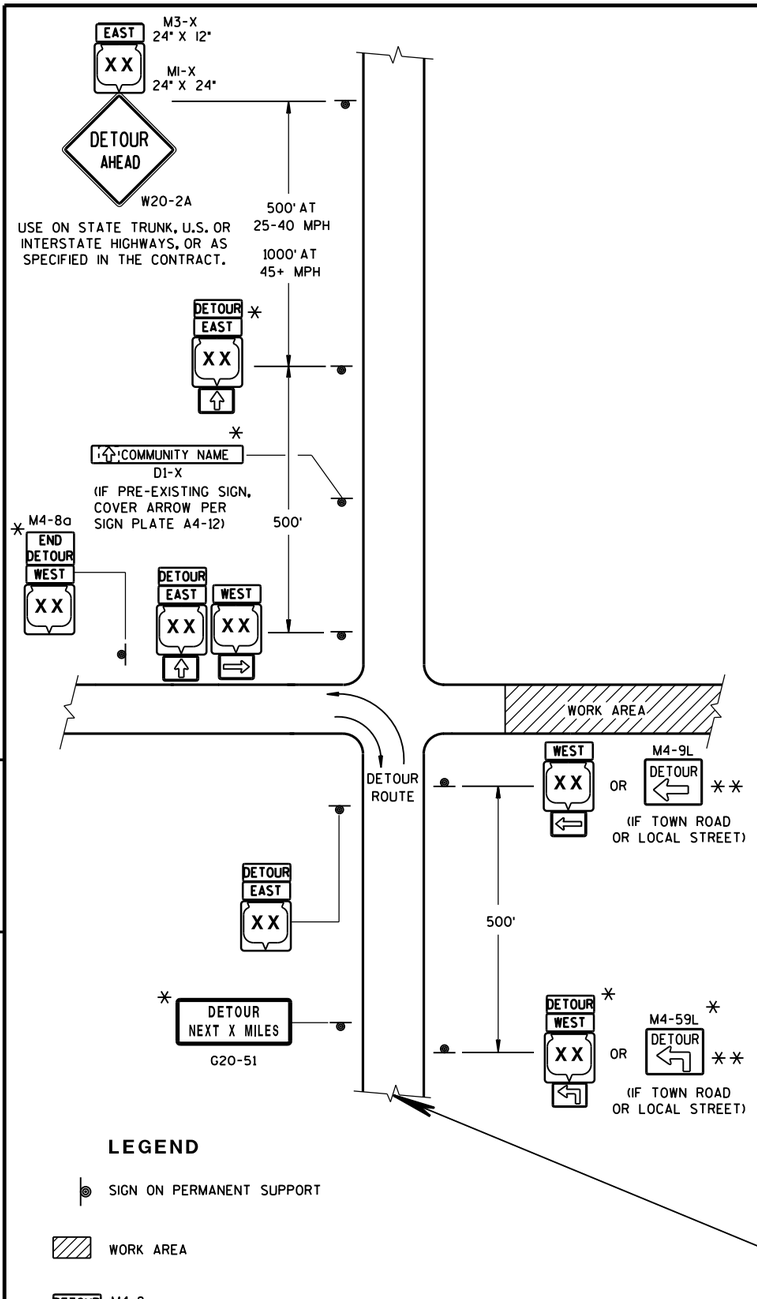
S.D.D. 15 C 2-6b



THIS DRAWING PROVIDES GENERAL GUIDANCE ON TYPICAL DETOUR SIGN LAYOUT AND SPACING. SEE PROJECT DETOUR SIGNING SHEETS FOR SPECIFIC DETAILS FOR EACH PROJECT.

GENERAL NOTES

THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. MODIFY EXISTING SIGNS WHERE POSSIBLE.

THE SPACING BETWEEN TRAFFIC CONTROL AND DETOUR SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

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.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

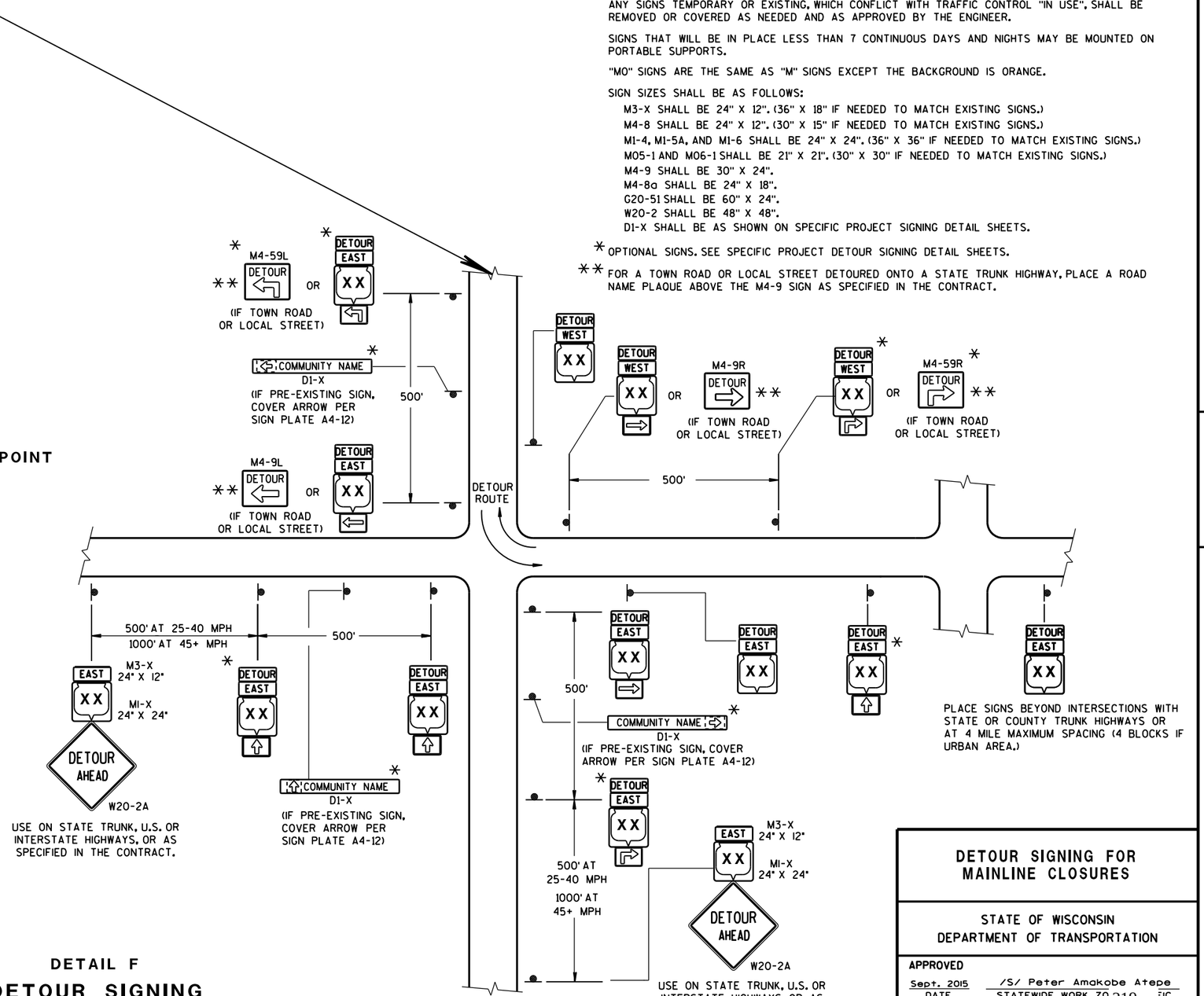
"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

SIGN SIZES SHALL BE AS FOLLOWS:

- M3-X SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS.)
- M4-8 SHALL BE 24" X 12". (30" X 15" IF NEEDED TO MATCH EXISTING SIGNS.)
- M1-4, M1-5A, AND M1-6 SHALL BE 24" X 24". (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS.)
- MO5-1 AND MO6-1 SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)
- M4-9 SHALL BE 30" X 24".
- M4-8a SHALL BE 24" X 18".
- G20-51 SHALL BE 60" X 24".
- W20-2 SHALL BE 48" X 48".
- D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.

* OPTIONAL SIGNS. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS.

** FOR A TOWN ROAD OR LOCAL STREET DETOURED ONTO A STATE TRUNK HIGHWAY, PLACE A ROAD NAME PLAQUE ABOVE THE M4-9 SIGN AS SPECIFIED IN THE CONTRACT.



LEGEND

- SIGN ON PERMANENT SUPPORT
- WORK AREA
- DETOUR / EAST — M4-8 / M3-X
- XX OR COUNTY XX OR XX — M1-4, M1-5A, M1-6
- MO5-1 OR MO6-1 OR MO6-1

SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS AND DETAIL A OR B ON SDD 15C2-SHEET "a"

DETAIL F

DETOUR SIGNING

DETOUR SIGNING FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

Sept. 2015 — DATE

/S/ Peter Amakobe Atepe
STATEWIDE WORK ZO SAFETY ENGI

FHWA

S.D.D. 15 C 2-6c

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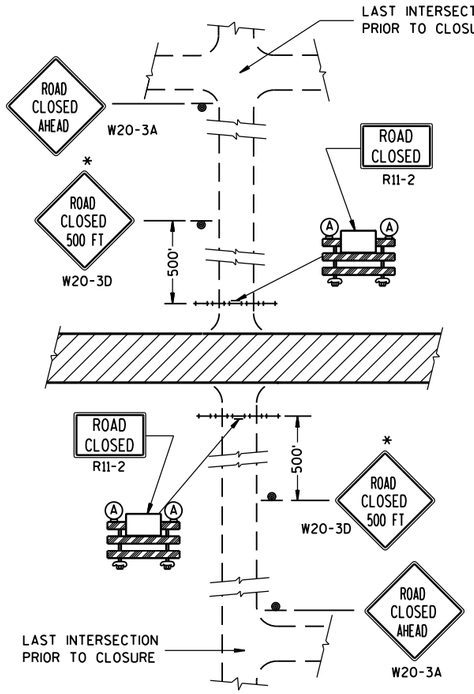
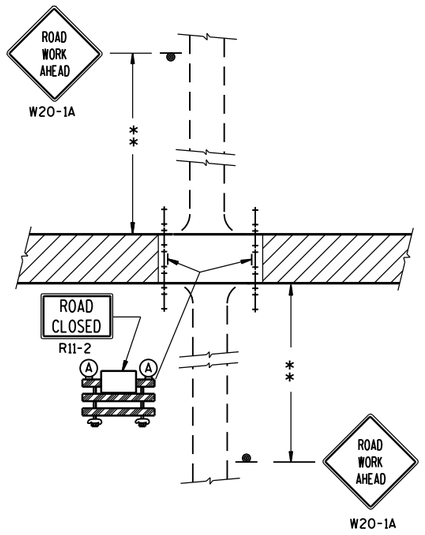


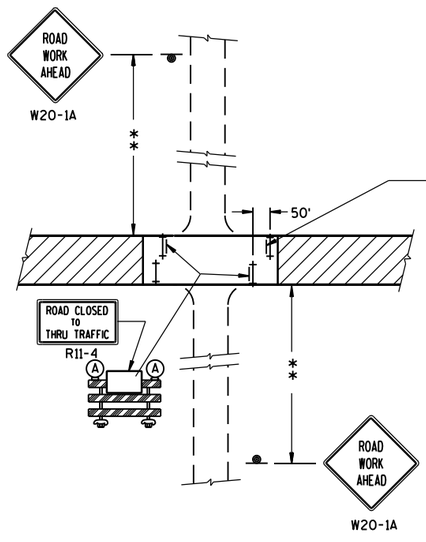
DETAIL 1

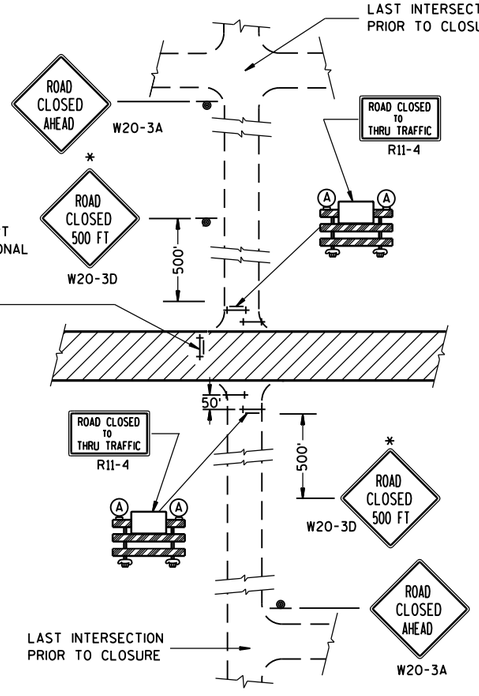
(NO ACCESS TO PROJECT)



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
Sept. 2015 — DATE
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZO... SAFETY ENGI... FIC
FHWA

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S.D.D. 15 C 3-3

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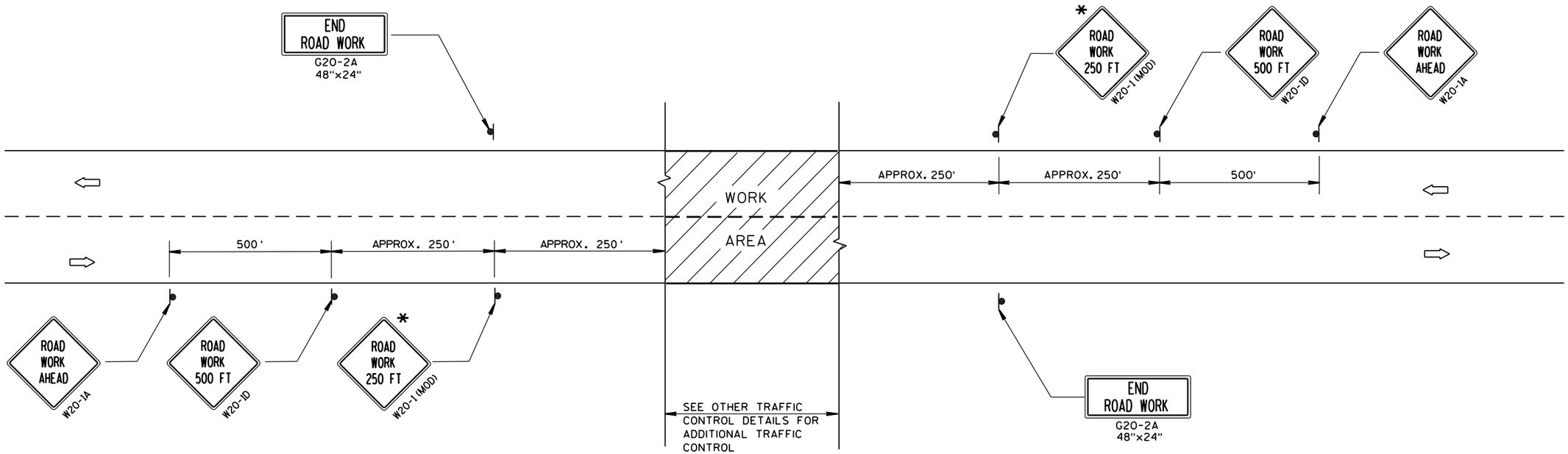
S.D.D. 15 C 3-3

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.

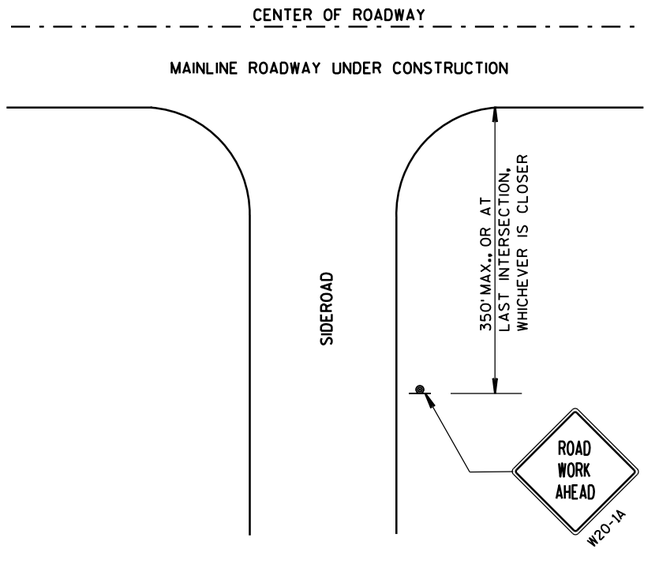
THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

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

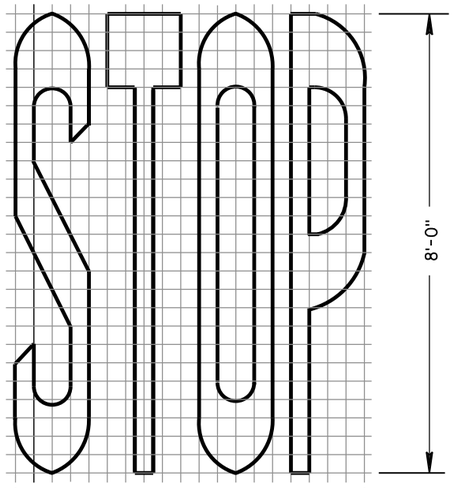
APPROVED
Sept. 2015 — DATE
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZONE SAFETY ENGINEER
FHWA

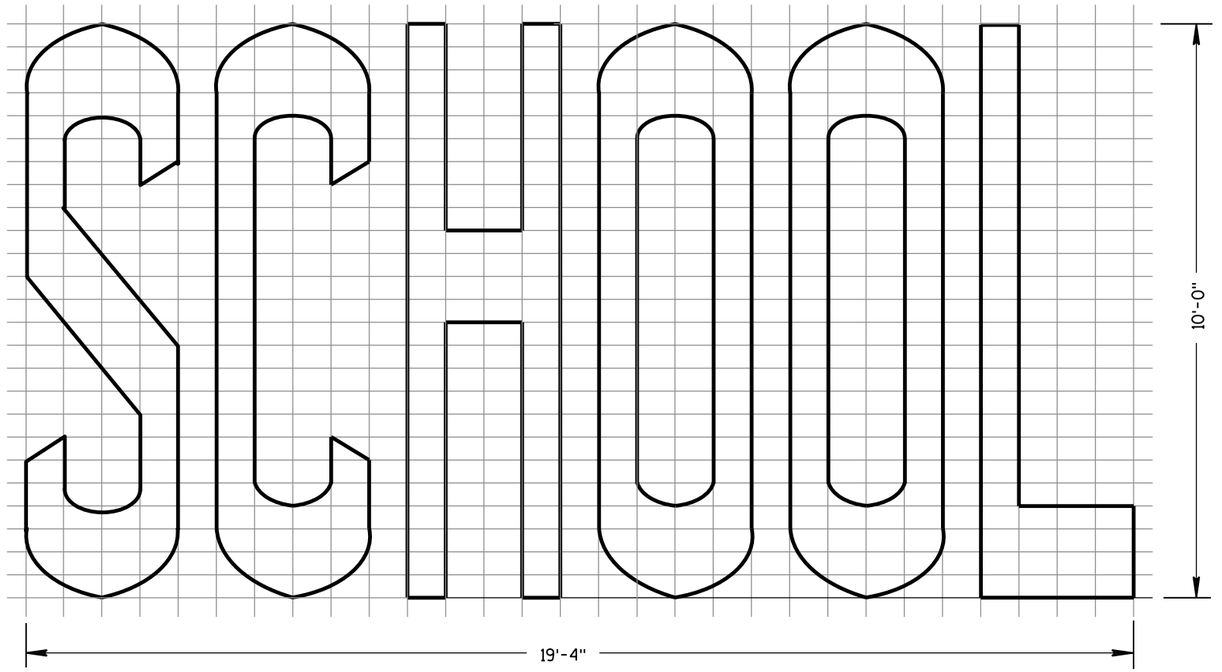
6

S.D.D. 15 C 5-3

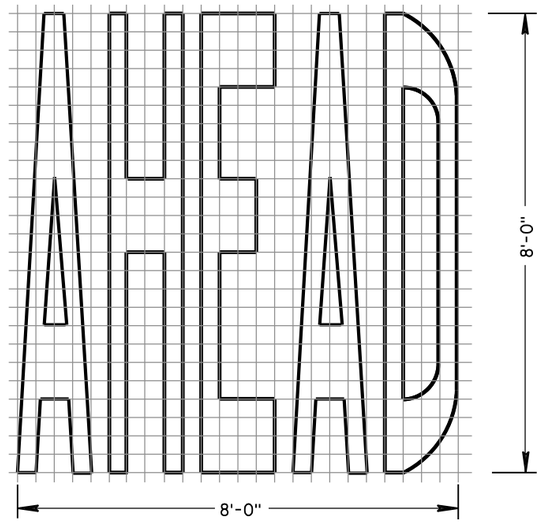
GENERAL NOTES

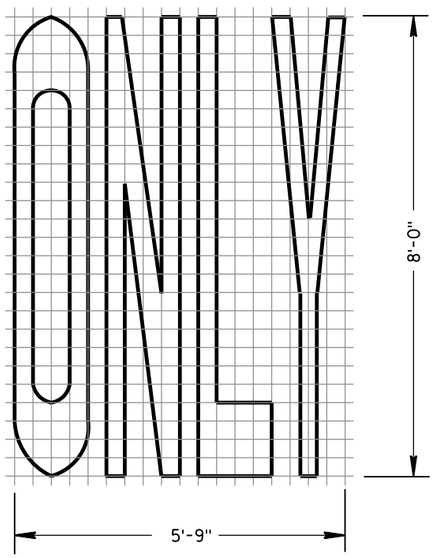
DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

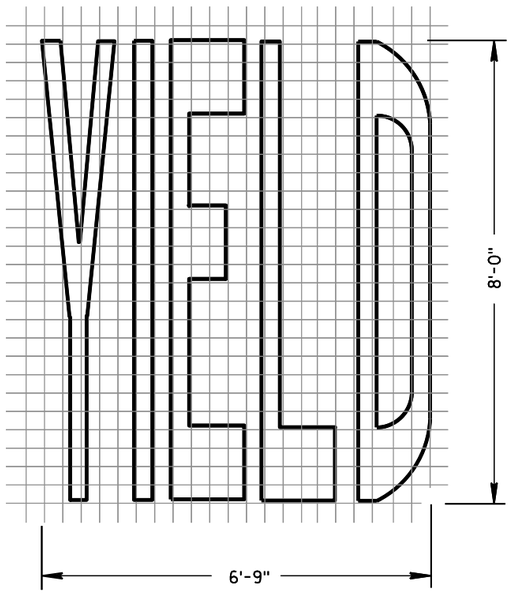


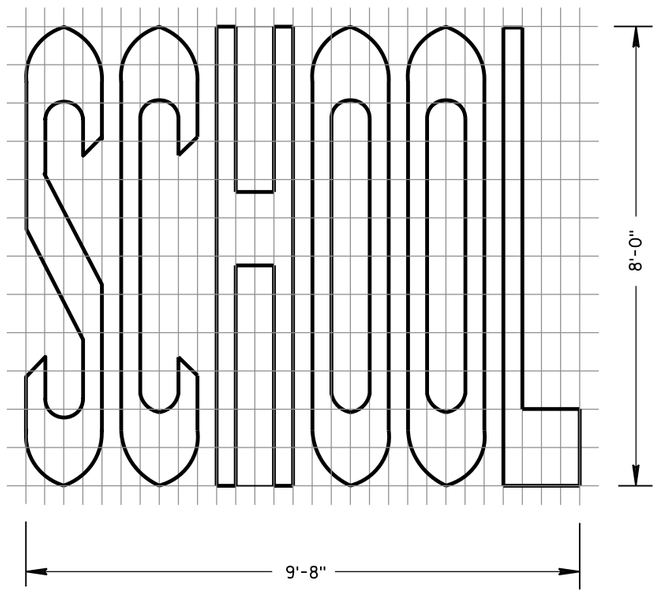


TWO-LANE









SINGLE-LANE

PAVEMENT MARKING WORDS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

4-18-16 — DATE

/S/ Matthew R. Rauch — STATE SIGNING AND MARK

FHWA

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S.D.D. 15 C 7-13b

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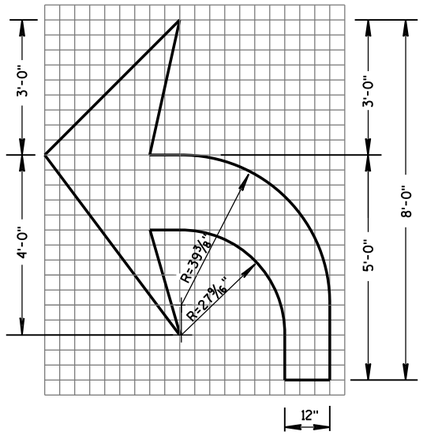
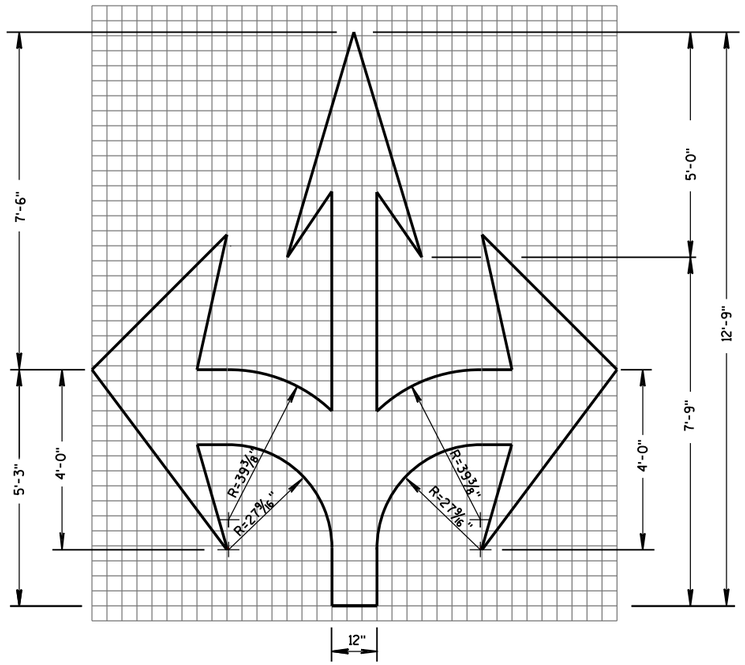
S.D.D. 15 C 7-13b

GENERAL NOTES

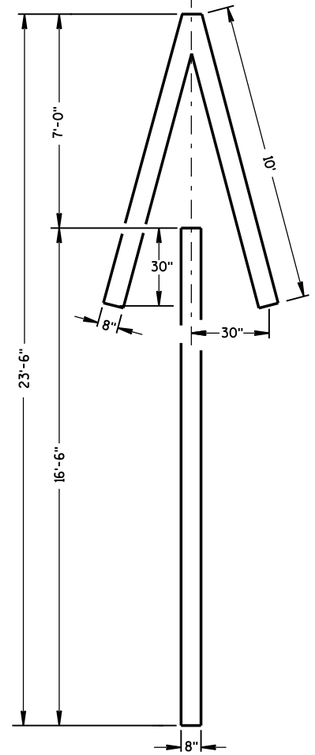
DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.



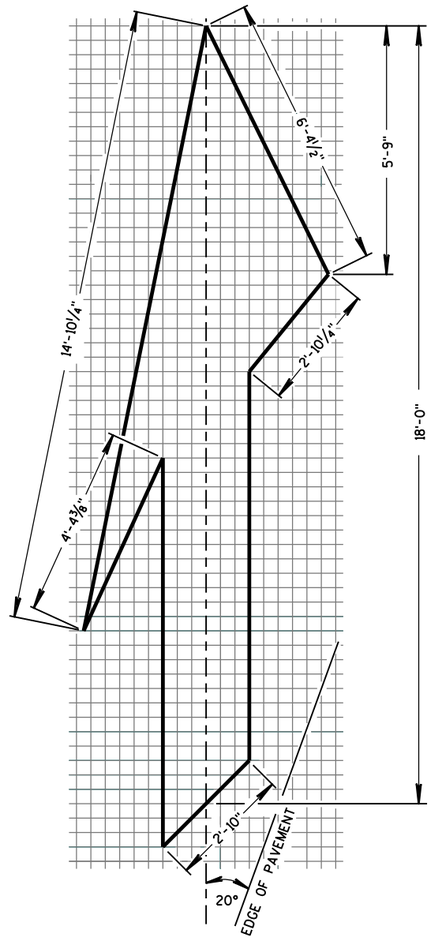
TYPE 2



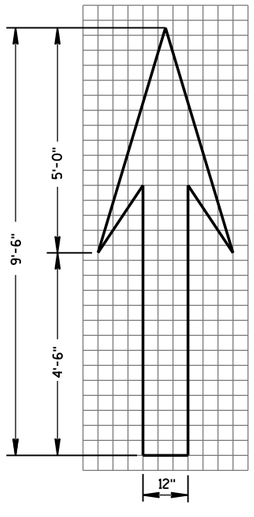
TYPE 6



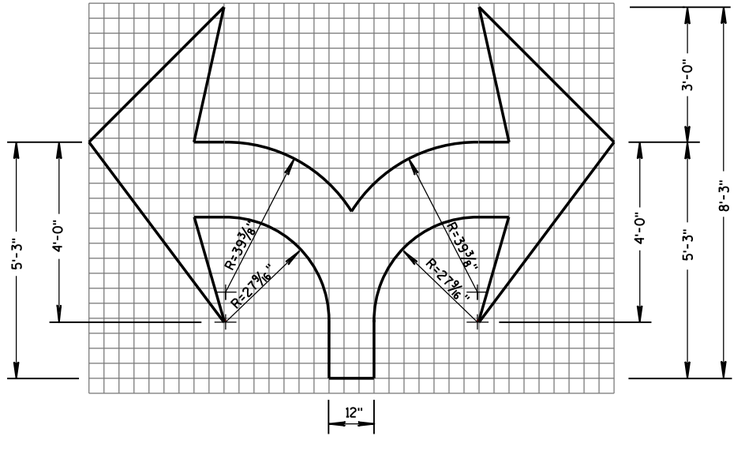
TYPE 4



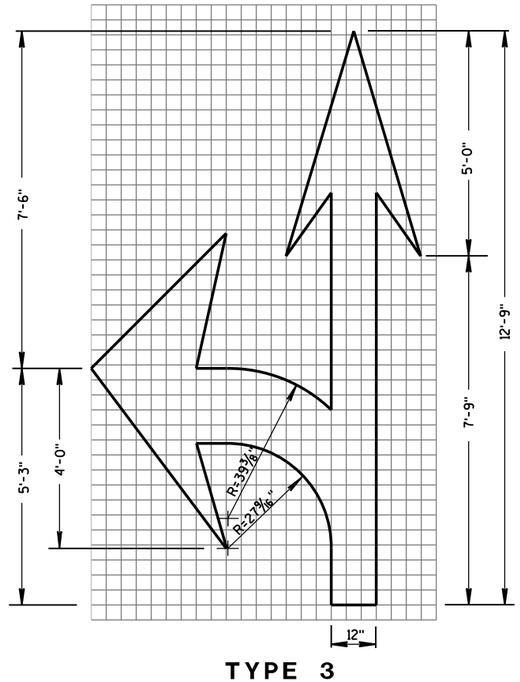
TYPE 5 LANE DROP ARROW



TYPE 1



TYPE 7



TYPE 3

PAVEMENT MARKING ARROWS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4-18-16
DATE
/S/ Matthew R. Rauch
STATE SIGNING AND MAR 223 NEER
FHWA

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S.D.D. 15 C 7-13c

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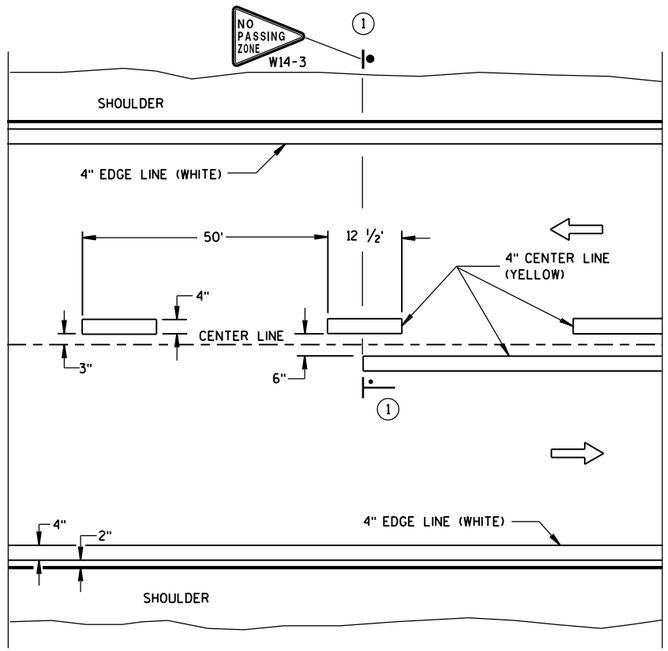
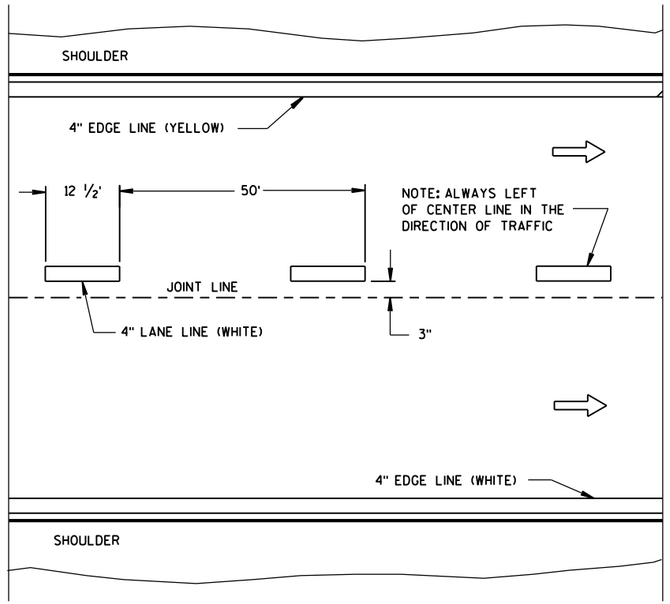
S.D.D. 15 C 7-13c



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

GENERAL NOTES

DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.

(1) NO PASSING ZONE W14-3 SIGN SHALL BE LOCATED WITHIN 50 FEET OF THE "T" MARKING.

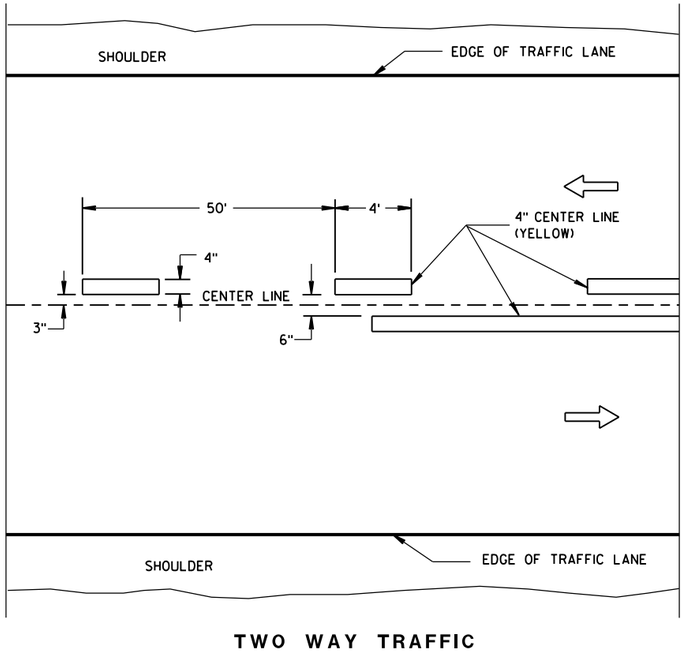
NOTE

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL

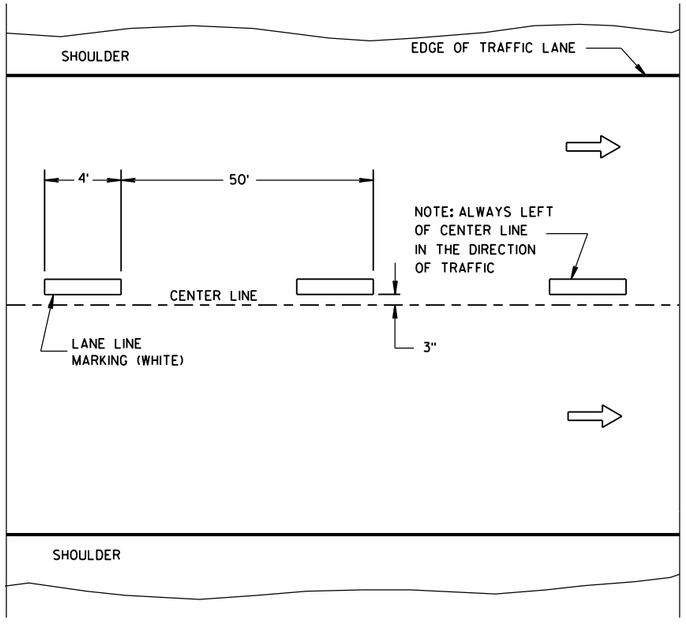
LEGEND

"T" MARKING

POST MOUNTED SIGN



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

LONGITUDINAL MARKING (MAINLINE)	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
Sept., 2016	/S/ Matthew R. Rauch
DATE	STATE SIGNING AND MARKING ENGINEER
FHWA	

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S.D.D. 15 C 8-17a

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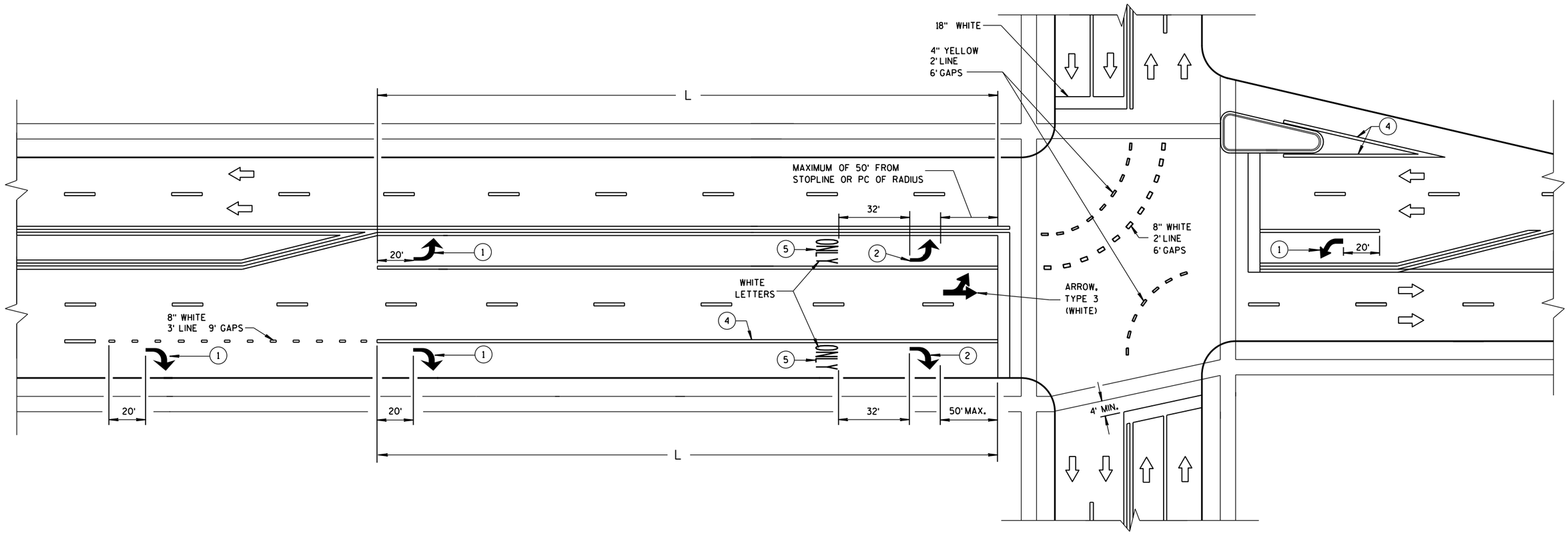
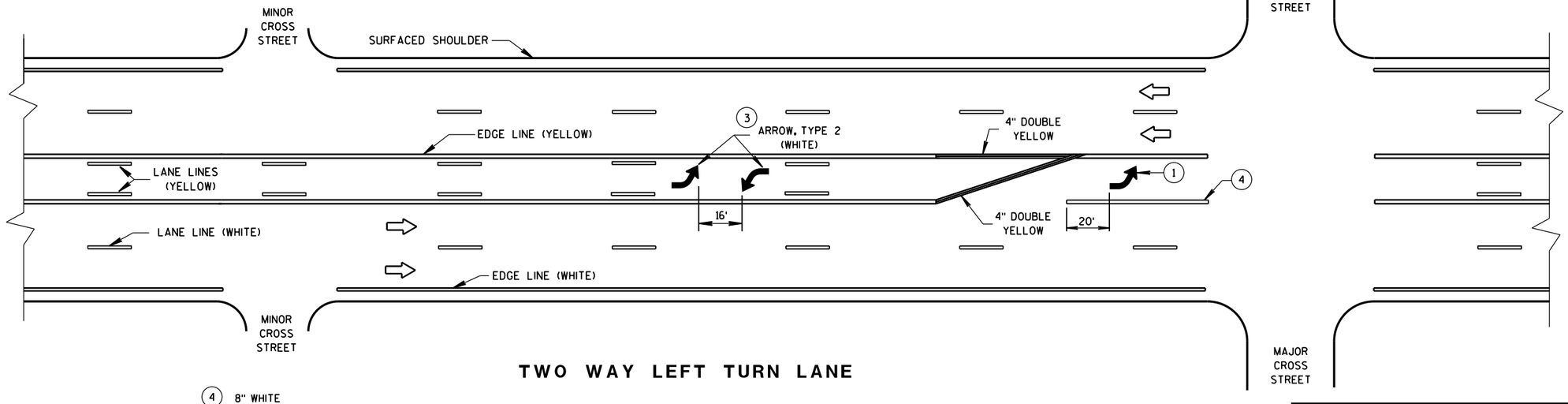
S.D.D. 15 C 8-17a





TWO WAY LEFT TURN LANE

GENERAL NOTES

(1) REQUIRED ARROW, TYPE 2 (WHITE).

(2) REQUIRED ARROW, TYPE 2 (WHITE) WHEN L IS GREATER THAN 78 FEET AND LESS THAN OR EQUAL TO 166 FEET.

(3) A SET OF ARROWS IS REQUIRED EVERY 400 FEET OR NEAR INTERSECTIONS OR DRIVEWAYS WITH TURNING TRAFFIC.

(4) 8" WHITE

(5) REQUIRED WORD ONLY WHEN L IS GREATER THAN 166 FEET.

NOTE:
ARROW SYMBOL (⇨)
SHOWS DIRECTION OF TRAVEL

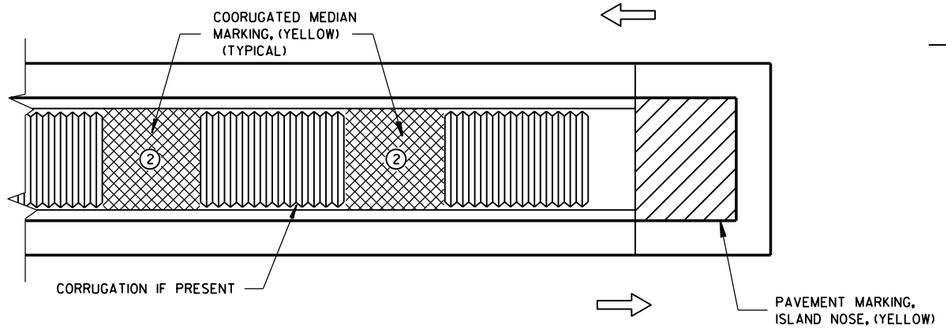
L = LENGTH OF TURN BAY

PAVEMENT MARKING (TURN LANES)

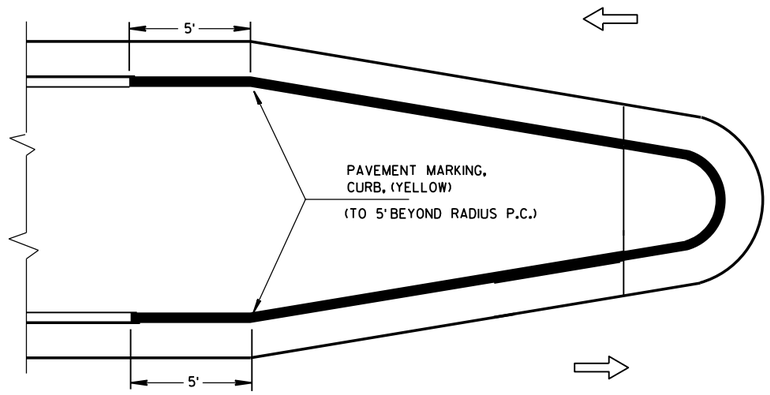
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

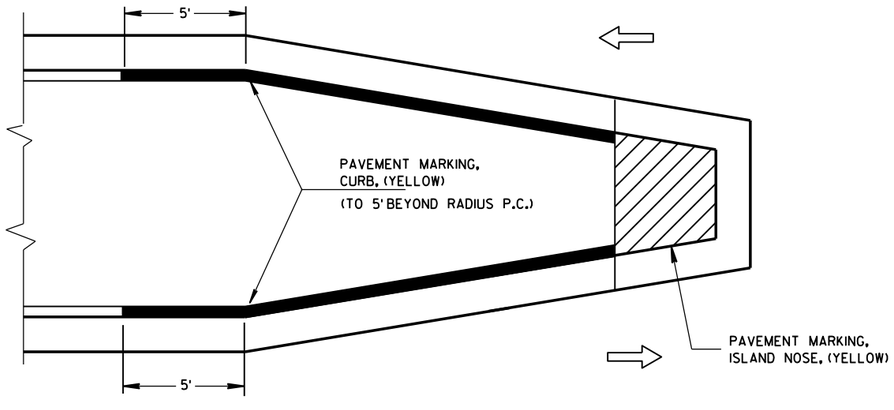
S.D.D. 15 C 8-17b



MEDIAN ISLAND WITH SQUARE BLUNT NOSE

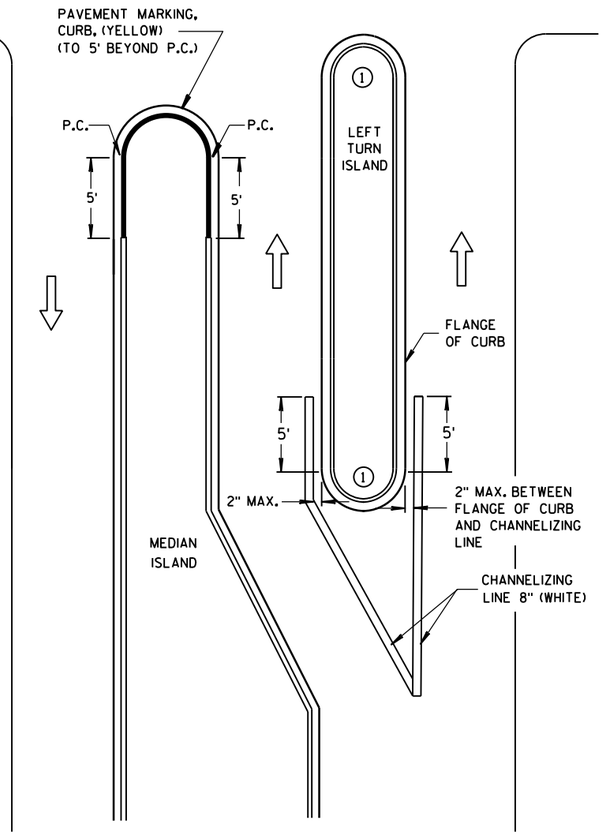


MEDIAN ISLAND WITH ROUND BLUNT NOSE



MEDIAN ISLAND WITH SLOPED NOSE

TYPICAL PLACEMENT OF PAVEMENT MARKING ON MEDIAN ISLANDS

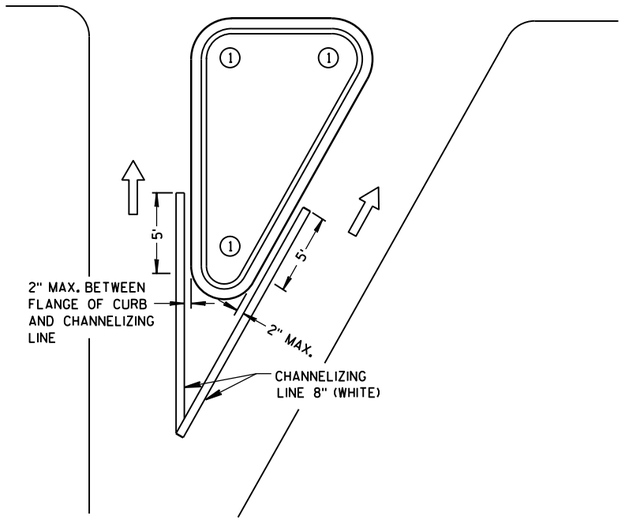


LEFT TURN & MEDIAN ISLAND

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 TRANSPOR

6

S.D.D. 15 C 8-17c

GENERAL NOTES

ORIENT ANCHOR RODS IN FOOTING AND PROVIDE ANCHOR ROD 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 RODS 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.

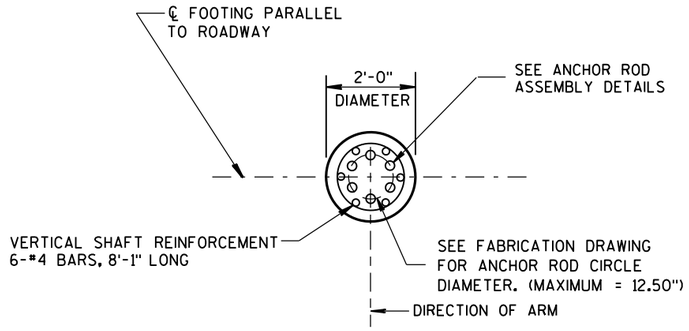
THE REINFORCEMENT AND ANCHOR RODS SHALL BE ADEQUATELY SUPPORTED IN THE PROPER POSITIONS SO NO MOVEMENT OCCURS DURING CONCRETE PLACEMENT.

FORM ALL EXPOSED CONCRETE CORNERS WITH ¾" CHAMFER ALL AROUND. TOP OF THE CONCRETE BASE SHALL BE TROWEL FINISHED AND LEVEL.

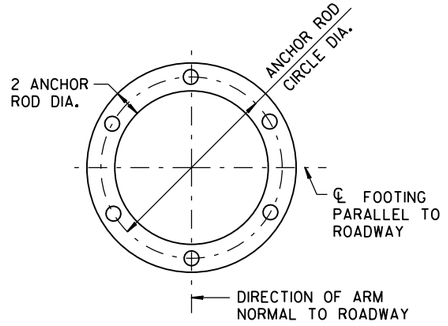
ANY DAMAGE TO THE CONCRETE BASE AND ANCHOR RODS DURING CONSTRUCTION OPERATIONS SHALL BE REPAIRED AT THE ENGINEER'S DIRECTION, AT THE EXPENSE OF THE CONTRACTOR.

CONCRETE MASONRY	fc=3,500 p.s.i.
HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60	fy=60,000 p.s.i.
ANCHOR RODS, ASTM F1554, GRADE 55	fy=55,000 p.s.i.
ASTM A563A HEAVY HEX NUTS, AND ASTM F436 WASHERS.	
PLATES, ASTM A709, GRADE 36	fy=36,000 p.s.i.

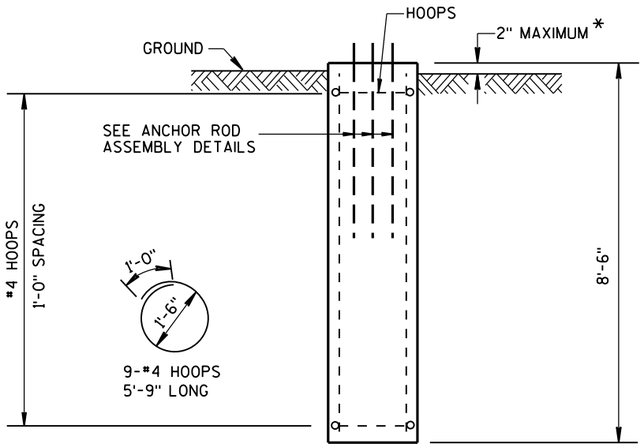
THIS FOOTING HAS BEEN DESIGNED FOR SITES WHERE SOILS EXHIBIT A PHI-ANGLE GREATER THAN OR EQUAL TO 20 DEGREES (GRANULAR SOILS), OR A COHESION VALUE GREATER THAN OR EQUAL TO 350 PSF (COHESIVE SOILS).



PLAN VIEW

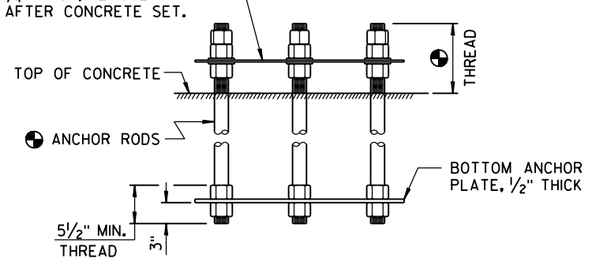


TOP TEMPLATE AND BOTTOM ANCHOR PLATE



ELEVATION VIEW

* FOR OVERHEAD SIGN SUPPORTS THAT ARE INSTALLED ADJACENT TO SIDEWALKS, THE TOP OF THE BASE SHALL BE POURED FLUSH WITH THE GROUND.



ANCHOR ROD ASSEMBLY DETAILS

⊕ MINIMUM OF 6 ANCHOR RODS, EXACT NUMBER, SIZE, DIMENSION AND ORIENTATION AS SHOWN ON FABRICATION DRAWING.

CONCRETE - 1.0 C.Y. PER FOOTING
H.S. REINFORCEMENT - 67 LBS. PER FOOTING

24" DIAMETER CANTILEVER OVERHEAD SIGN SUPPORT BASE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2016 — DATE
/S/ Vu Thao — WIND LOADED STRL PROGRAM LEAD
FHWA

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S.D.D. 15 C 22-4

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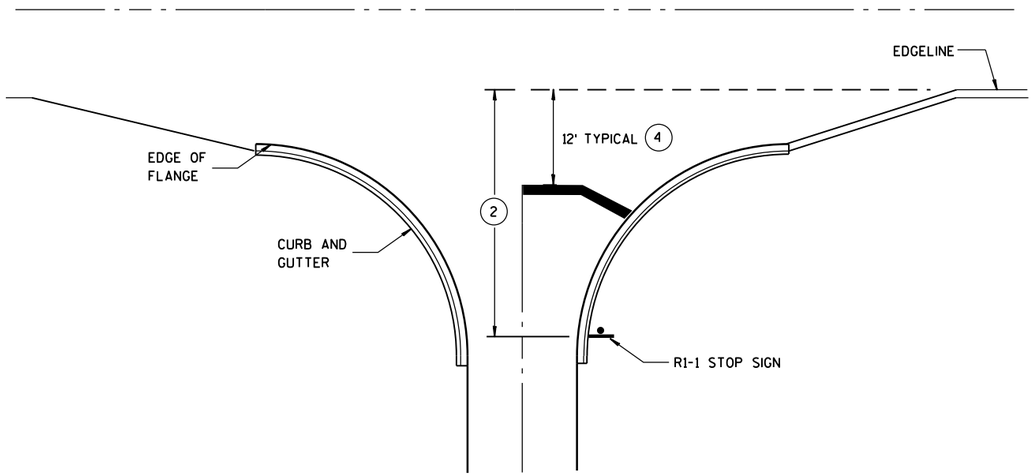
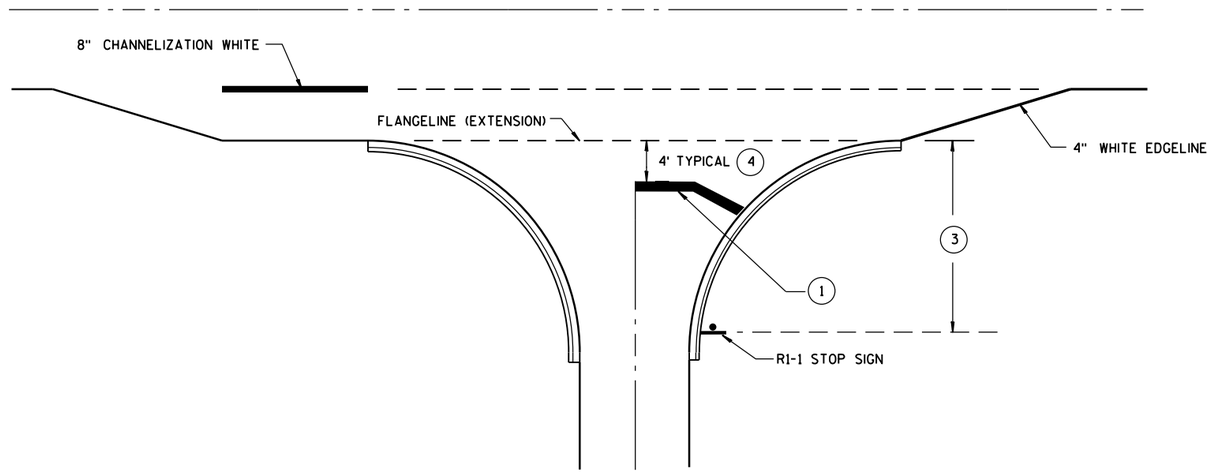
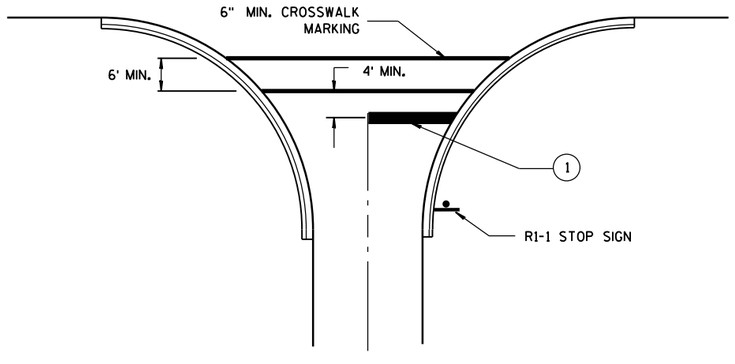
S.D.D. 15 C 22-4



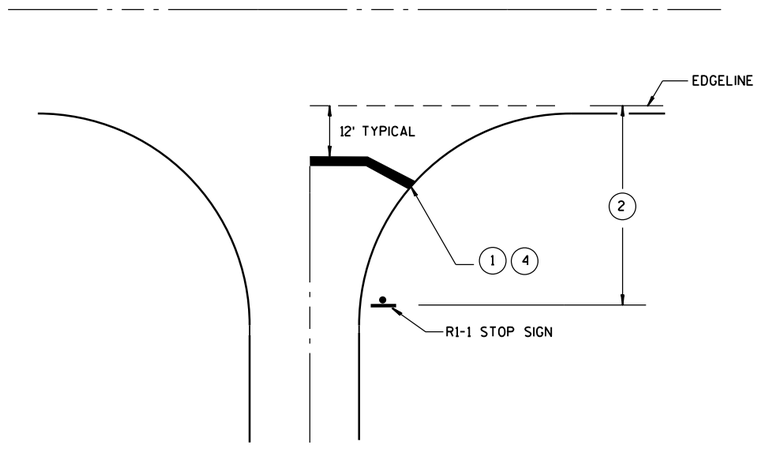
TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER



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. (NO CLOSER THAN 4 FEET).

STOP LINE AND CROSSWALK PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

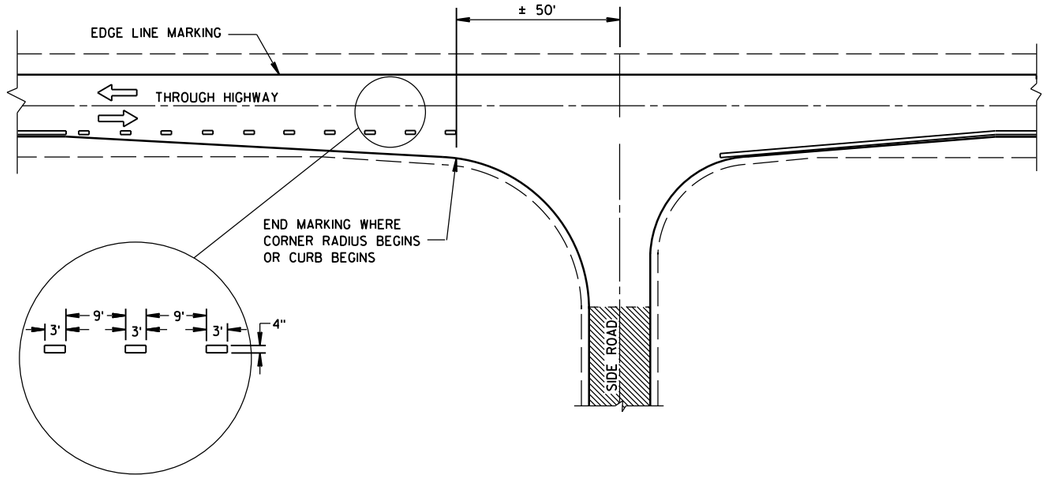
4-18-2016
DATE

/S/ Matthew R. Rauch
STATE SIGNING AND MAR 228 NEER

FHWA

6

S.D.D. 15 C 33-2



MINOR INTERSECTION WITHOUT CURBS

GENERAL NOTES

EDGE LINES SHALL BE OMITTED THROUGH INTERSECTIONS. EDGE LINES SHALL BE CONTINUED THROUGH DRIVEWAYS.

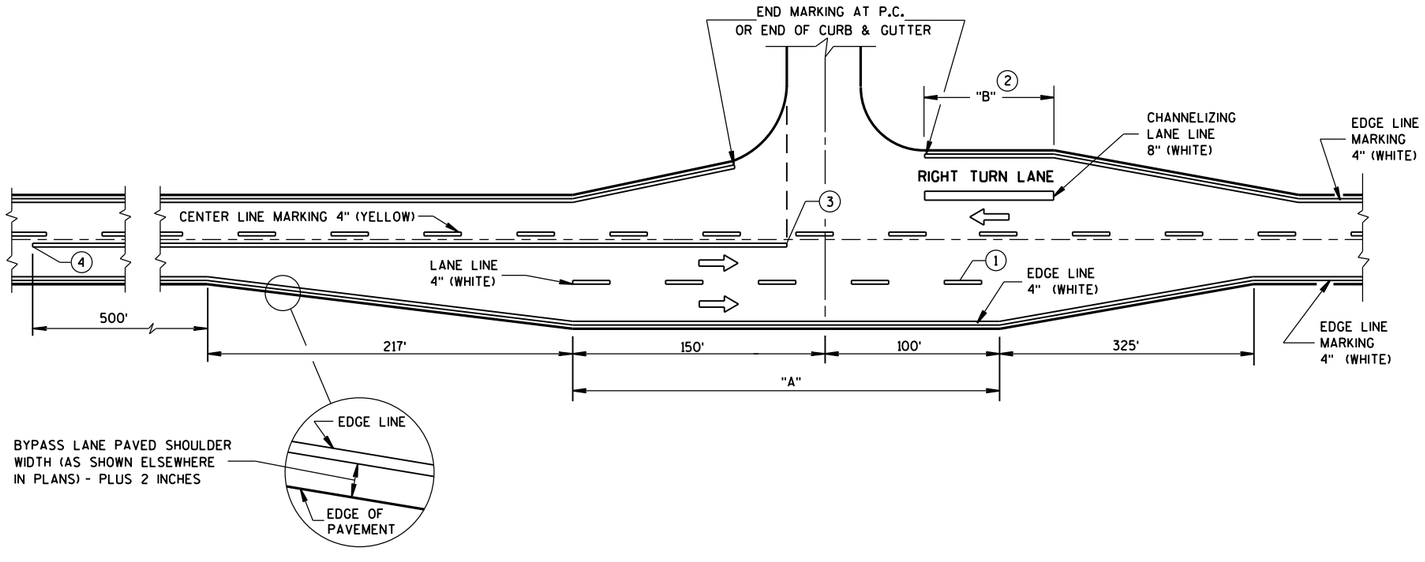
(1) WHEN DISTANCE "A" IS LESS THAN 250 FEET, OMIT LANE LINE.

(2) WHEN DISTANCE "B" IS LESS THAN 100 FEET, OMIT CHANNELIZING LANE LINE.

(3) BARRIER LINE ENDS AT SIDE ROAD PAVEMENT/SURFACE EDGE EXTENSION.

(4) BARRIER LINE STARTS 500 FEET PRIOR TO THE BYPASS TAPER.

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL



MAJOR INTERSECTIONS

(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANES)

PAVEMENT MARKING
(INTERSECTIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 15 C 35-1a

LEGEND

- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMENENT SUPPORT
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL DRUM
- FLASHING ARROW BOARD
- (A) TYPE "A" WARNING LIGHT (FLASHING)
- REMOVING PAVEMENT MARKING
- DIRECTION OF TRAFFIC
- WORK AREA

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 TO PROVIDE A MINIMUM OF 200 FEET, (500 FEET DESIREABLE) DISTANCE TO EXISTING SIGNS.

THIS LANE CLOSURE IS TYPICAL FOR CLOSING RIGHT LANE - REVERSE FOR CLOSING LEFT LANE.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

"WO" IS THE SAME AS "W" EXCEPT THE BACKGROUND IS ORANGE.

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. NO WARNING LIGHTS SHALL BE WORKING ON "COVERED" OR "DOWNED" SIGNS.

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS FOR A MINIMUM 1500 FEET IN FRONT OF DRUMS.

FOR A LANE CLOSURE THAT IS IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS.

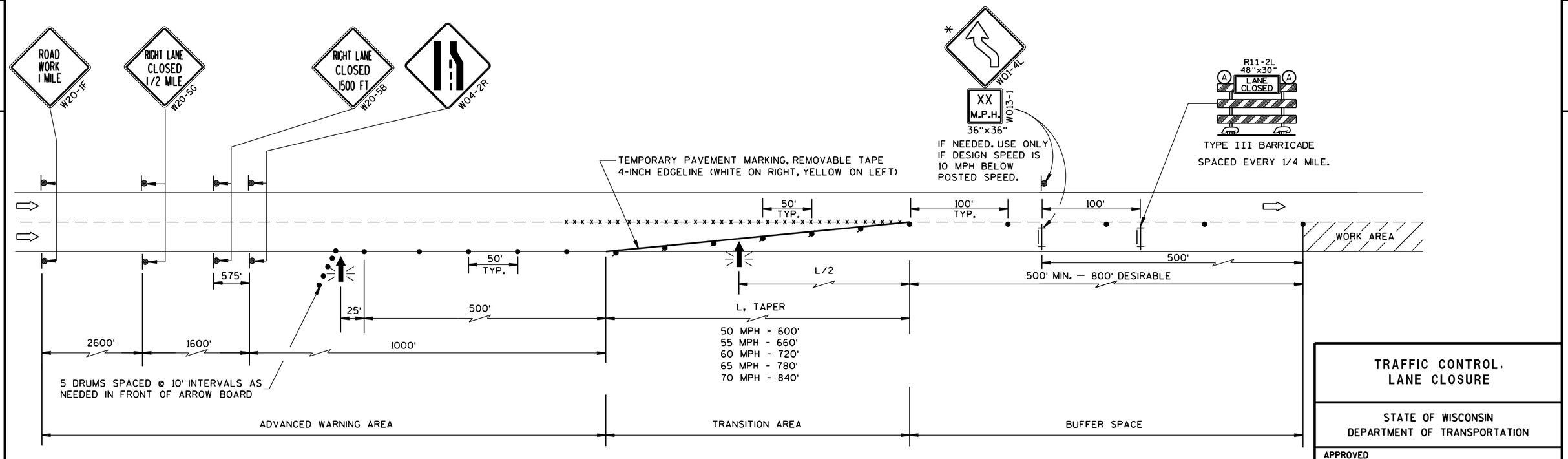
REMOVE PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE FOR LONGER THAN 4 OR MORE DAYS AND NIGHTS.

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP. THE LANE CLOSURE MUST MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP SHOULD BE 1/2 THE LENGTH OF THE TRANSITION AREA. THE ENTRANCE RAMP SHOULD BE FOLLOWED BY THE ORIGINAL BUFFER SPACE LENGTH OF 800 FEET DESIRABLE PRIOR TO ANOTHER TRAFFIC CONTROL CHANGE SUCH AS A CROSSOVER MANEUVER.

* THE LEFT REVERSE CURVE SIGN (WO1-4L) IS ONLY REQUIRED WHEN THIS DETAIL IS USED IN COMBINATION WITH "SINGLE LANE CROSSOVER" DETAIL.



TRAFFIC CONTROL, LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2016 — DATE
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZONE SAFETY ENGINEER
FHWA

6

S.D.D. 15 D 12-6a

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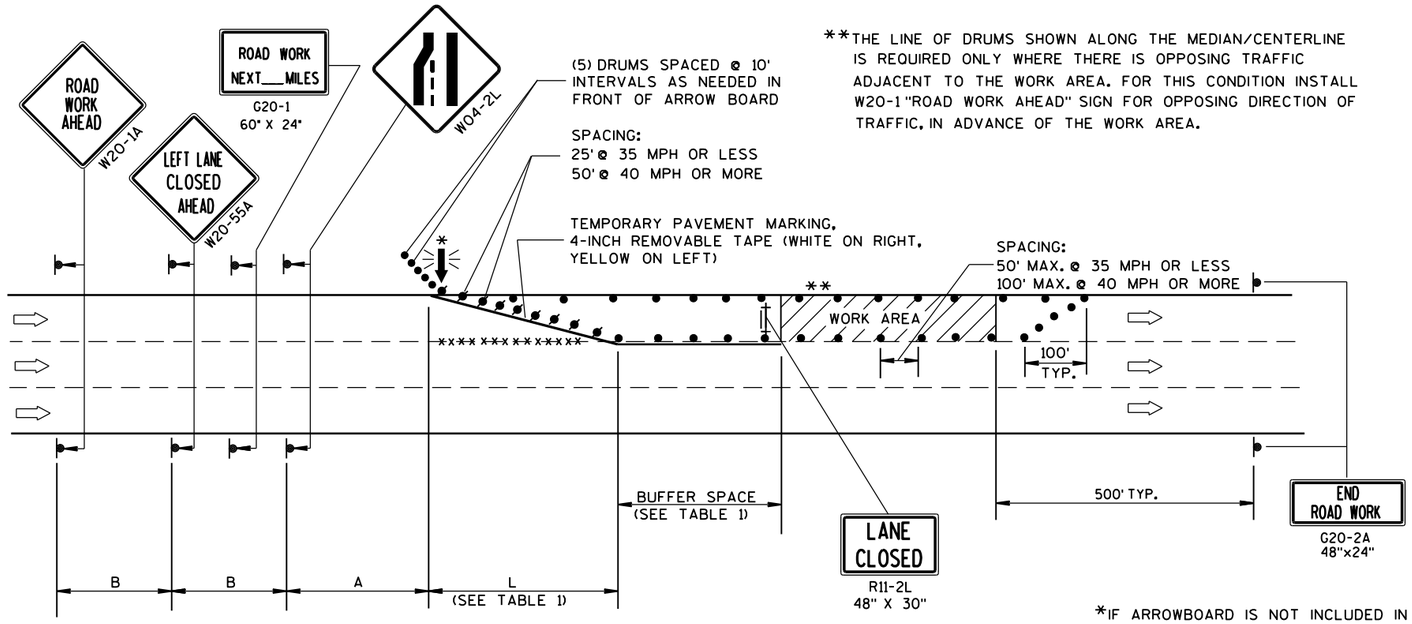
S.D.D. 15 D 12-6a



**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"

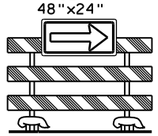


TABLE 1
TAPER AND BUFFER SPACE
FOR 12' LANE WIDTH

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.

W20-1A, 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.

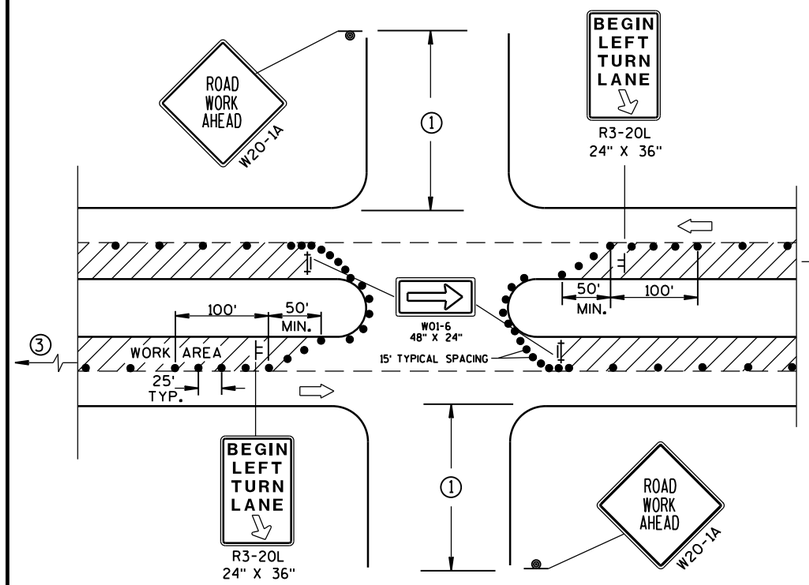
TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2016 — DATE
/S/ Peter Amakobe Atepe — STATEWIDE WORK ZONE SAFETY ENGINEER
FHWA

6

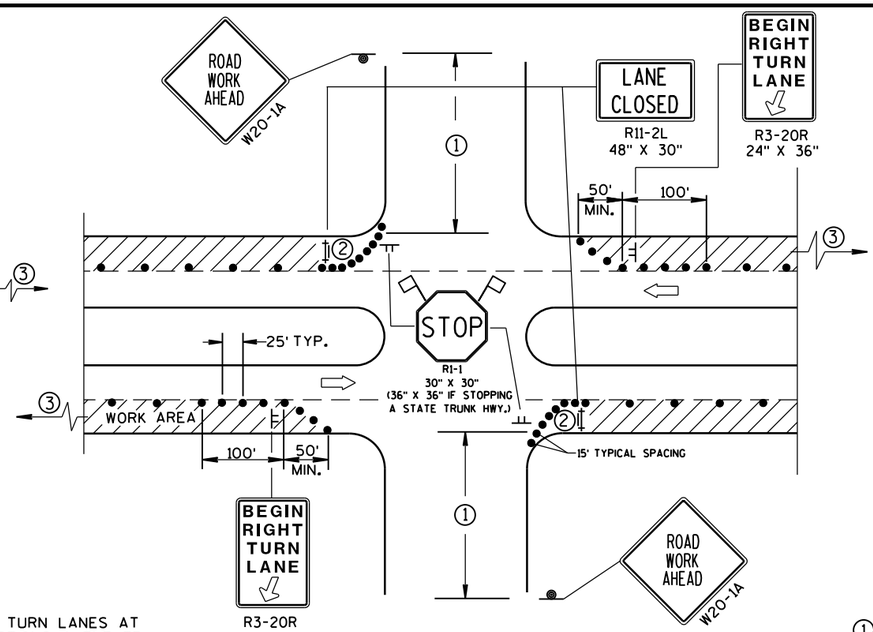
S.D.D. 15 D 20-4



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.

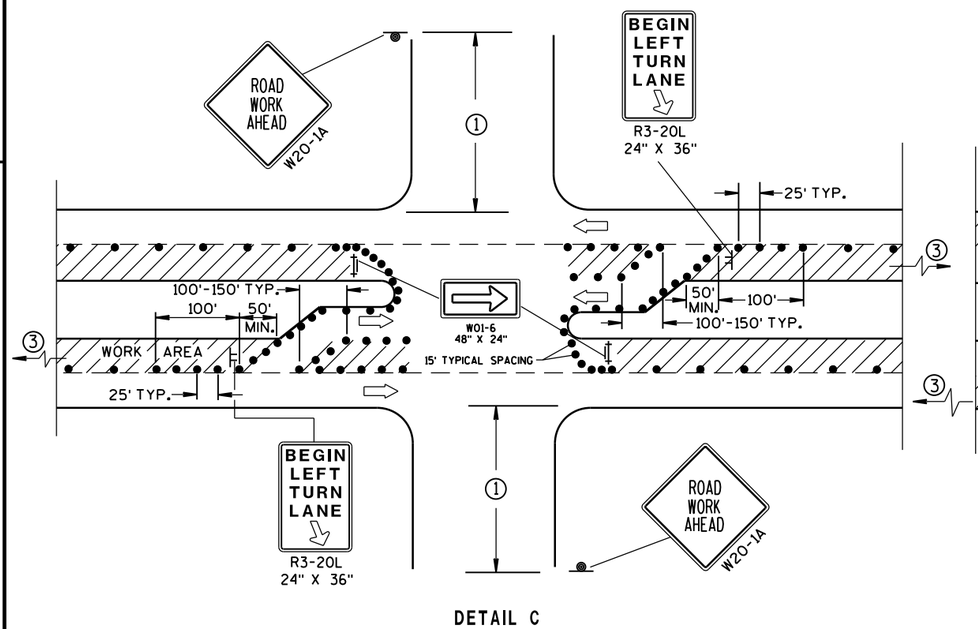
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

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.

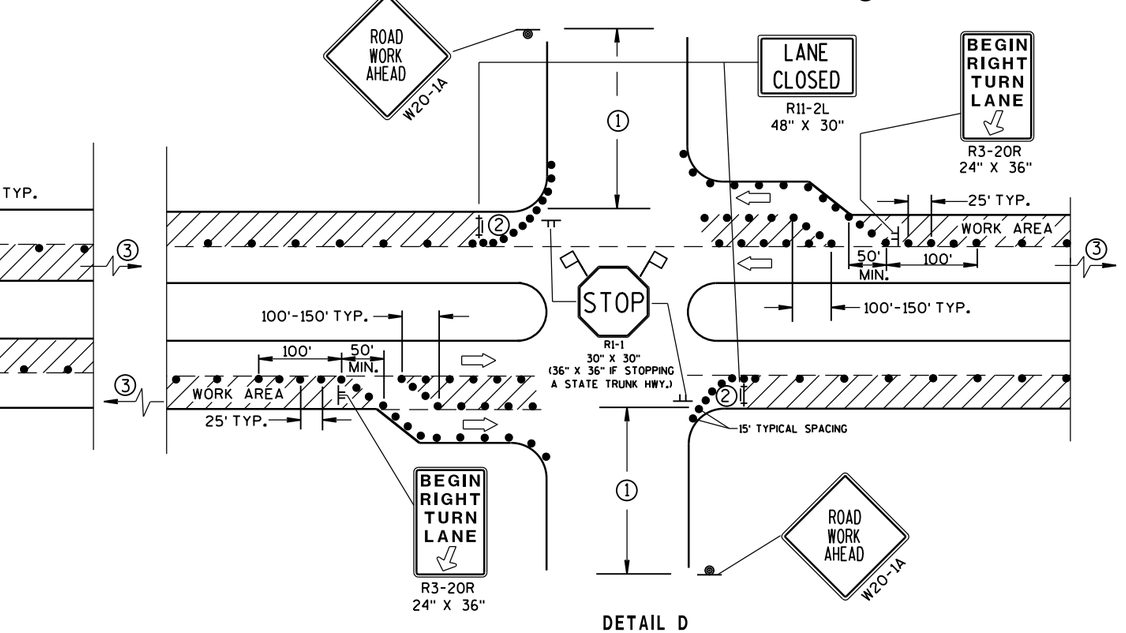
② ALSO USE BARRICADE AND 15-FOOT TYPICAL DRUM SPACING AT COMMERCIAL DRIVEWAYS.

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
June 2016
DATE
/S/ Peter Anakobe Atepe
STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER
FHWA

6

S.D.D. 15 D 21-4

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S.D.D. 15 D 21-4

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.

ALL SIGNS ARE 48" X 48" 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 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.

W20-1A AND G20-2A SIGNS ARE NOT REQUIRED IF THE WORK AREA IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT. G20-2A SIGNS MAY ALSO BE OMITTED IF DURATION OF WORK IS LESS THAN 7 CONTINUOUS DAYS AND NIGHTS.

CHANNELIZING DEVICES PLACED ADJACENT TO THE WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

TABLE A

S \ W	SHOULDER TAPER LENGTH (FEET) 4	6	8	10	BUFFER SPACE (FEET)
30	20	30	40	50	200
35	30	45	55	70	250
40	40	55	75	90	305
45	60	90	120	150	360
50	70	100	135	170	425
55	75	110	150	185	495

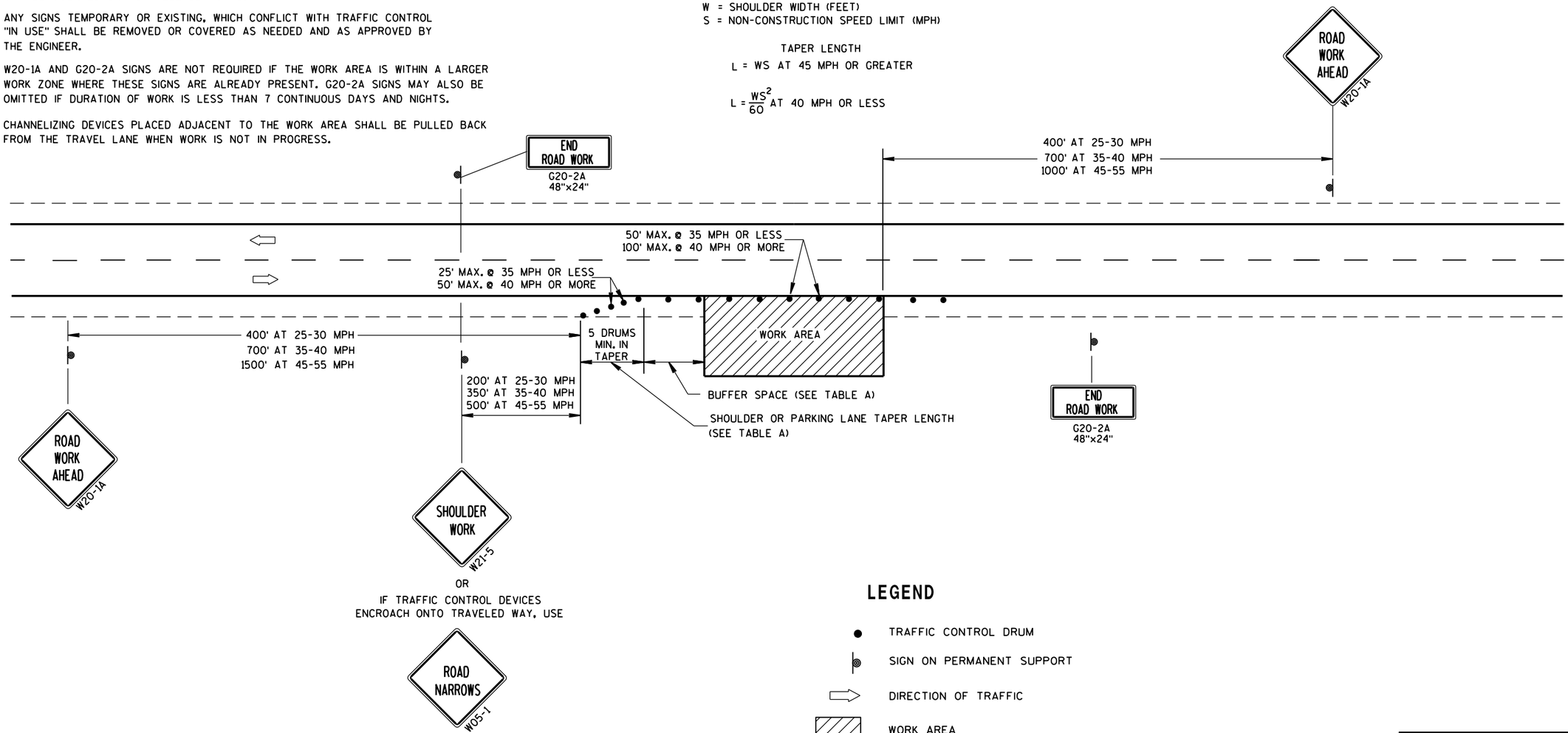
W = SHOULDER WIDTH (FEET)
S = NON-CONSTRUCTION SPEED LIMIT (MPH)

TAPER LENGTH

L = WS AT 45 MPH OR GREATER

$L = \frac{WS^2}{60}$ AT 40 MPH OR LESS

SHOULDER TAPER LENGTH = $\frac{1}{3}L$



LEGEND

- TRAFFIC CONTROL DRUM
- SIGN ON PERMANENT SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA

TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

July 14, 2015 — DATE

/S/ Peter Amakobe Atepe — STATEWIDE WORK ZO SAFETY ENGI FIC

FHWA

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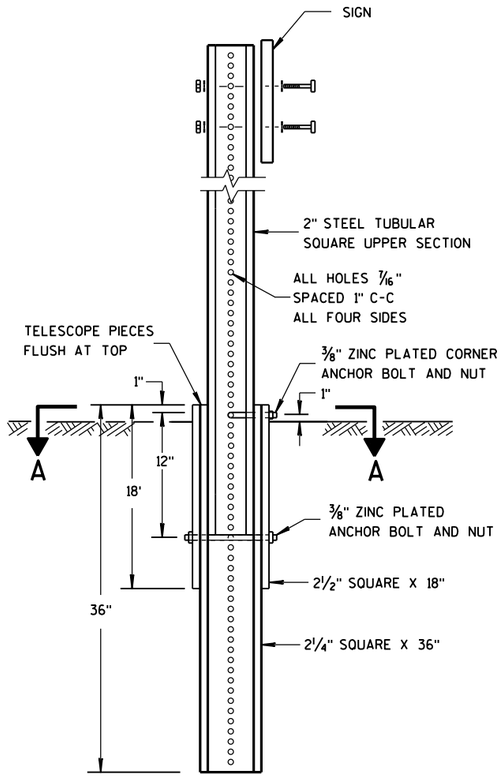
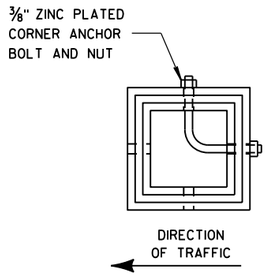
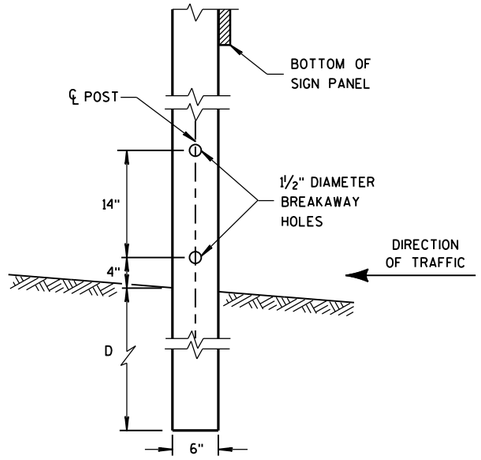


DETAIL OF TUBULAR STEEL SIGN POST



SECTION A-A



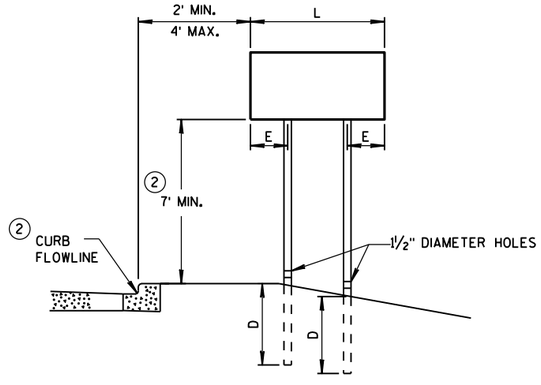
4"x6" WOOD POST MODIFICATION

GENERAL NOTES

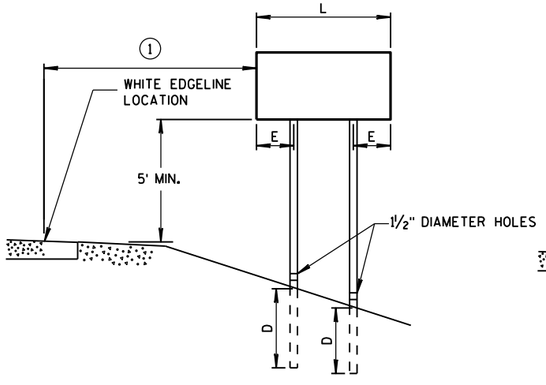
(1) 6 FEET FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER. LATERAL OFFSET SHOULD BE ADJUSTED TO AVOID THE DITCH FLOWLINE.

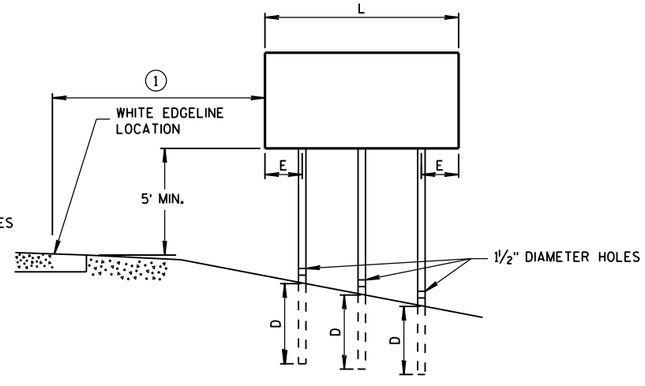
(2) THE EXISTENCE OF CURB AND GUTTER DOES NOT IN ITSELF MANDATE THE VERTICAL CLEARANCE ILLUSTRATED. THAT HEIGHT IS TYPICALLY MEASURED WHERE THERE IS SIDEWALK ADJACENT TO THE ROADWAY OR PARKING IS PERMITTED. IN THE ABSENCE OF SIDEWALK, VERTICAL CLEARANCE IS MEASURED FROM THE TOP OF THE CURB. IF NO SIDEWALK AND NO PARKING, VERTICAL CLEARANCE MAY BE REDUCED TO 5 FOOT MINIMUM. OFFSET OF SIGNS IS MEASURED FROM THE CURB FLOWLINE.

(3) FOR SIGNS REQUIRING 4 POSTS, SPACE INTERMEDIATE POSTS EVENLY.



URBAN AREA





RURAL AREA

POST MOUNTING DETAIL FOR TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

TUBULAR STEEL POSTS

AREA OF SIGN INSTALLATION (SQ. FT.)	NUMBER OF REQUIRED TUBULAR STEEL 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).

SIGNS LARGER THAN 27 SQ. FT. SHALL NOT BE MOUNTED ON TUBULAR STEEL POSTS.

WOOD POST EMBEDMENT DEPTH

AREA OF SIGN INSTALLATION (SQ. FT.)	D (MIN)
20 OR LESS	4'
GREATER THAN 20	5'

4" X 6" WOOD POST

POST SPACING REQUIREMENTS		NUMBER OF WOOD POSTS REQUIRED
L	E	
48" OR LESS AND LESS THAN 20 SQ. FT.	-	1
LESS THAN 60"	12"	2
60" TO 120"	L/5	2
GREATER THAN 120" LESS THAN 168"	12"	3
168" AND GREATER	12"	4

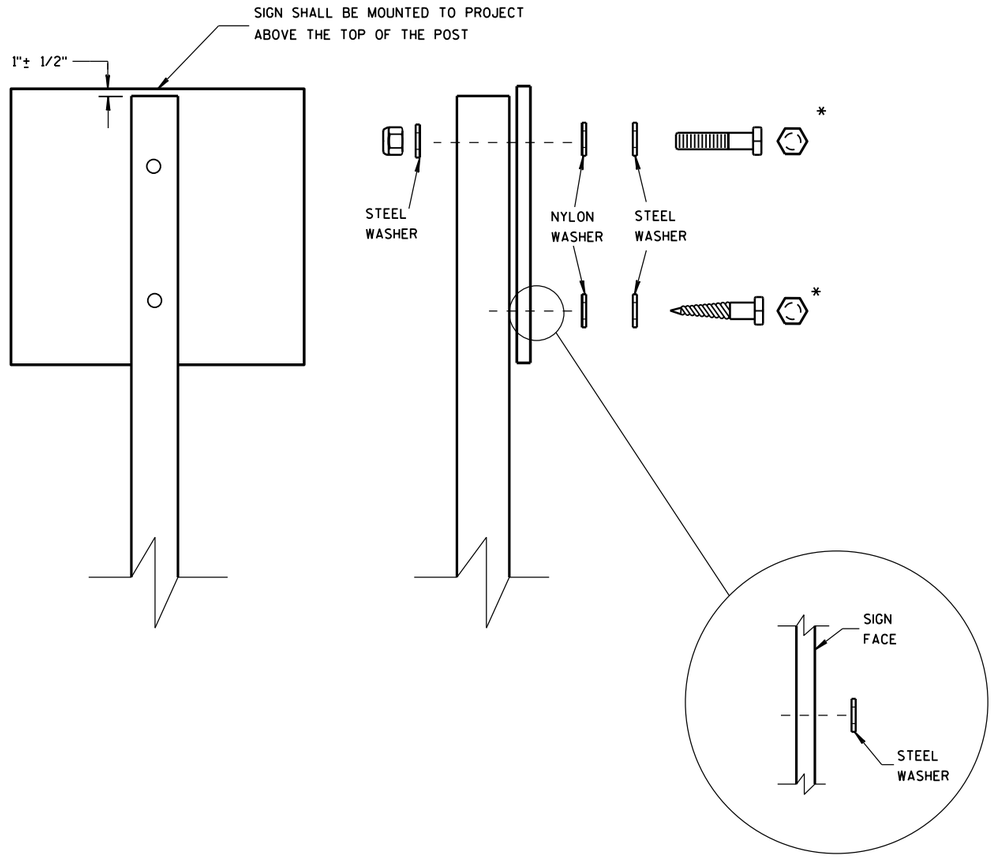
SEE NOTE (3)

TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 15 D 38-1a



WASHER PLACEMENT WHEN SIGN HAS OTHER THAN TYPE H OR TYPE F FACE

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

* 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. FOR A SINGLE POST INSTALLATION, ALL SIGNS GREATER THAN 9 SQ. FT. REQUIRE THE USE OF 3 FASTENERS.

6

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S.D.D. 15 D 38-1b

S.D.D. 15 D 38-1b

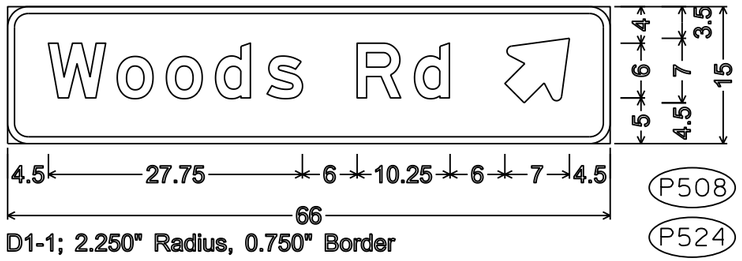
ATTACHMENT OF SIGNS TO POSTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

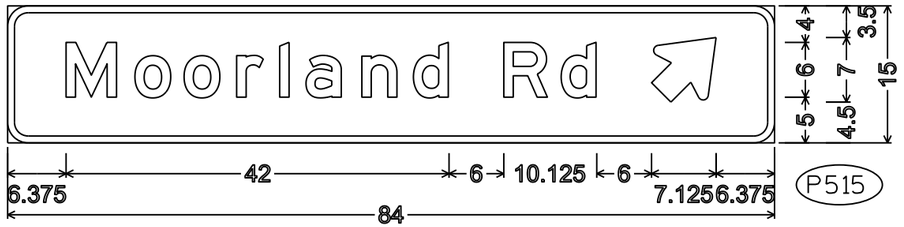
APPROVED
Feb. 2015 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

NOTES

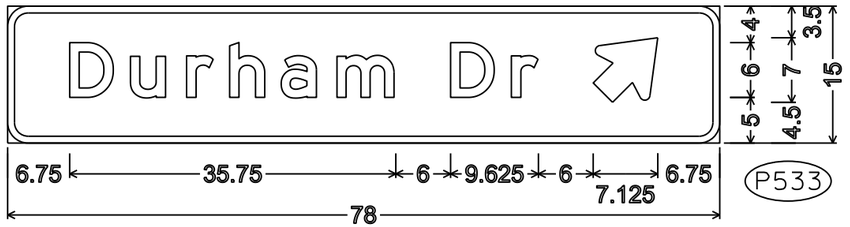
1. All Signs Type II - Type H Reflective
2. Color:
   Background - Green
   Message - White
3. Message Series - E



D1-1; 2.250" Radius, 0.750" Border



D1-1; 2.250" Radius, 0.750" Border



D1-1; 2.250" Radius, 0.750" Border

7

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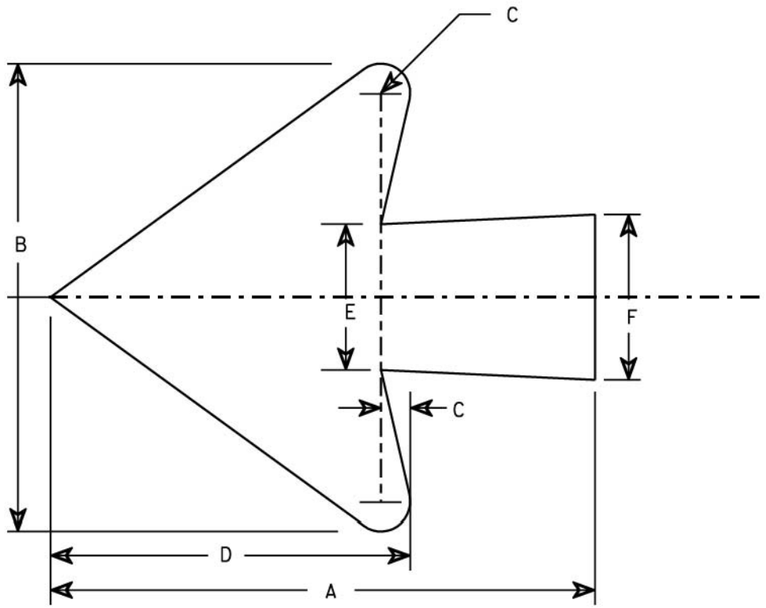
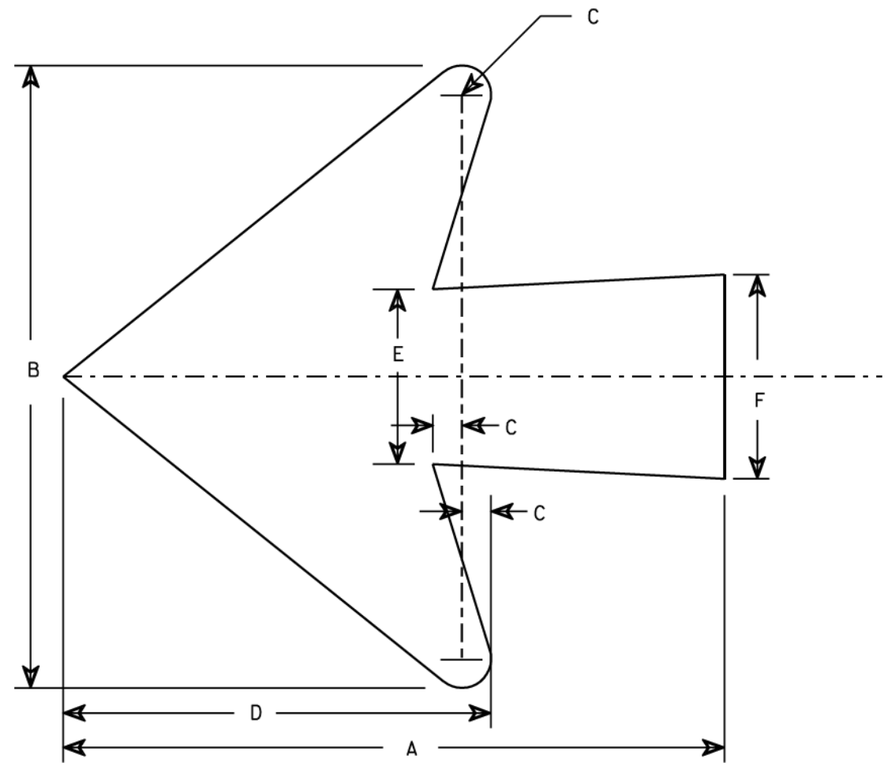
PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	PERMANENT SIGNING	SHEET NO: 236	E



Lower Case Copy Size	A Right or Left	A * 2 Town	A * 3 Town	B	C	D	E	F
3¾ Series C	7	11	18	6	⅜	4⅝	1⅞	2⅛

* Indicates Ahead and Tilt for 2 & 3 Town applications.



Lower Case Copy Size	A Right or Left	A * 2 Town	A * 3 Town	B	C	D	E	F
4½ Series D&E	8½	11	18	8	⅜	5½	2¼	2⅝
6 Series D&E	12	18	24	10¾	½	7⅜	3¼	3½
8 Series E	15½	24	30	14¼	¾	9¾	4¼	4½

* Indicates Ahead and Tilt for 2 & 3 Town applications.

7

7

STANDARD ARROWS
FOR D1 GUIDE SIGNS

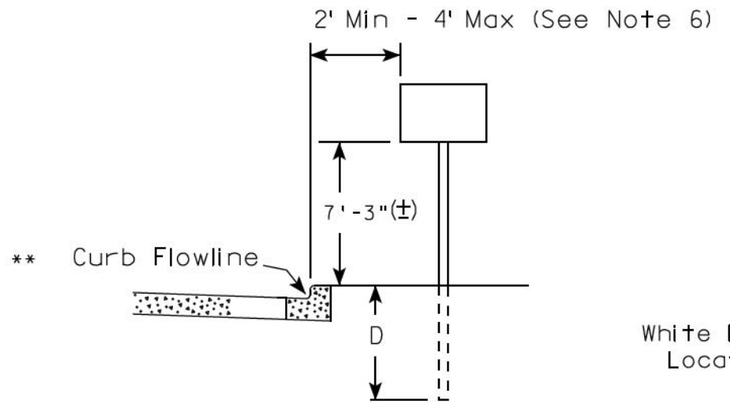
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spagg for State Traffic Engineer

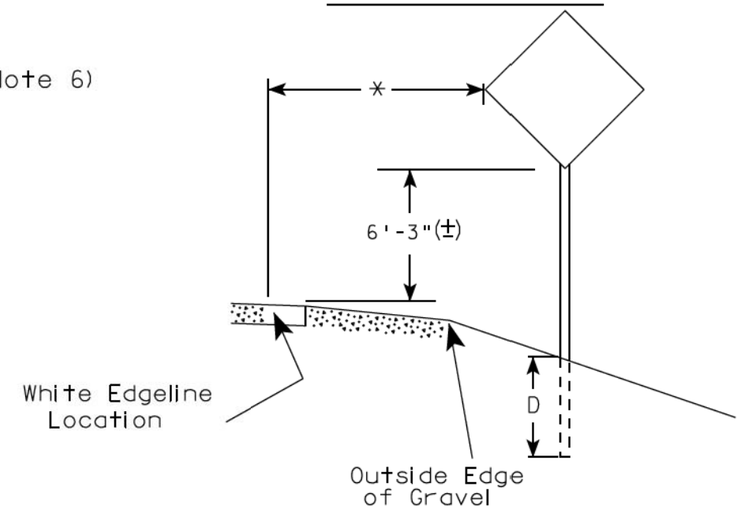
DATE 8/10/92 PLATE NO. A1-2.3

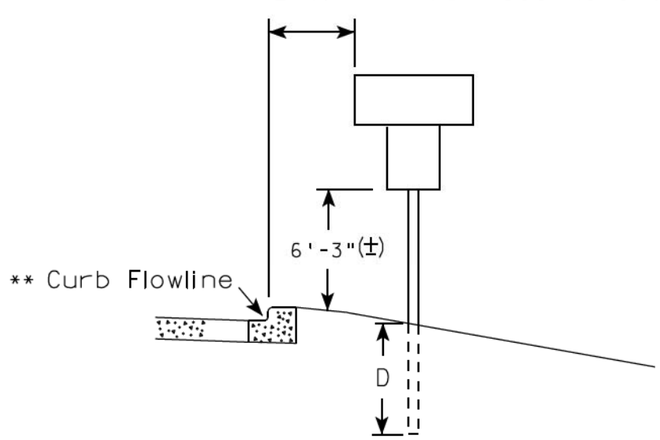
PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	SIGN DETAILS	SHEET NO: 237	E

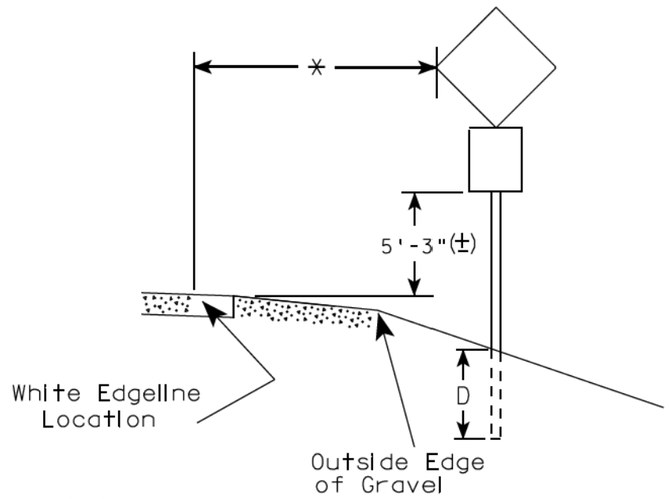
URBAN AREA



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 or 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

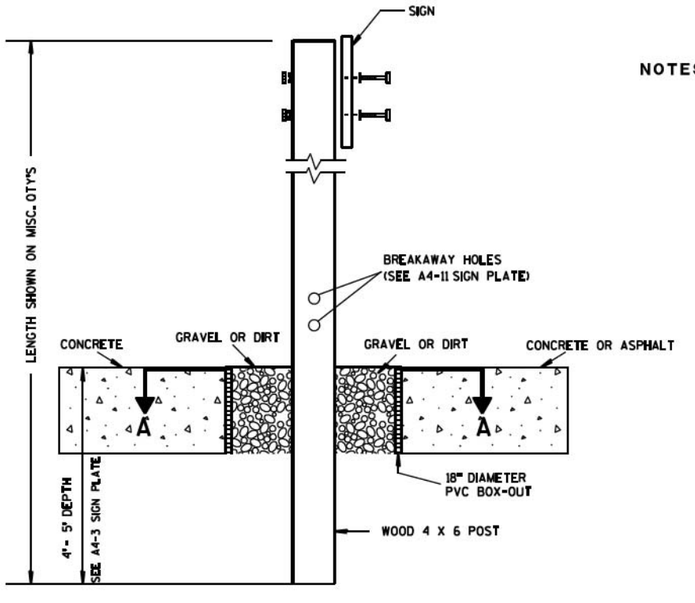
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 7/23/15 PLATE NO. A4-3.20

PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	SIGN DETAILS	SHEET NO:	E

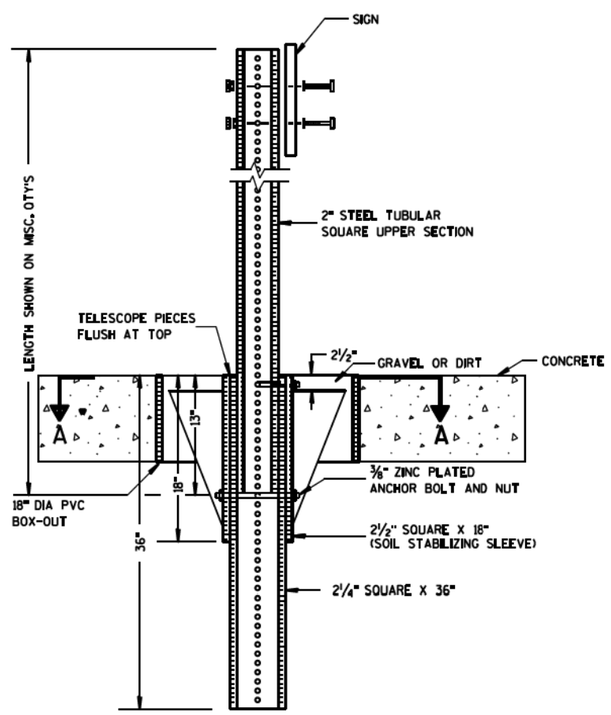
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A43.DGN PLOT DATE : 23-JUL-2015 15:21 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 99.237937:1.000000 WISDOT/CADDS SHEET 42



ELEVATION VIEW

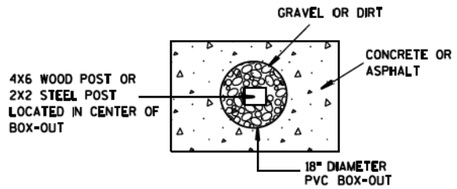
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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

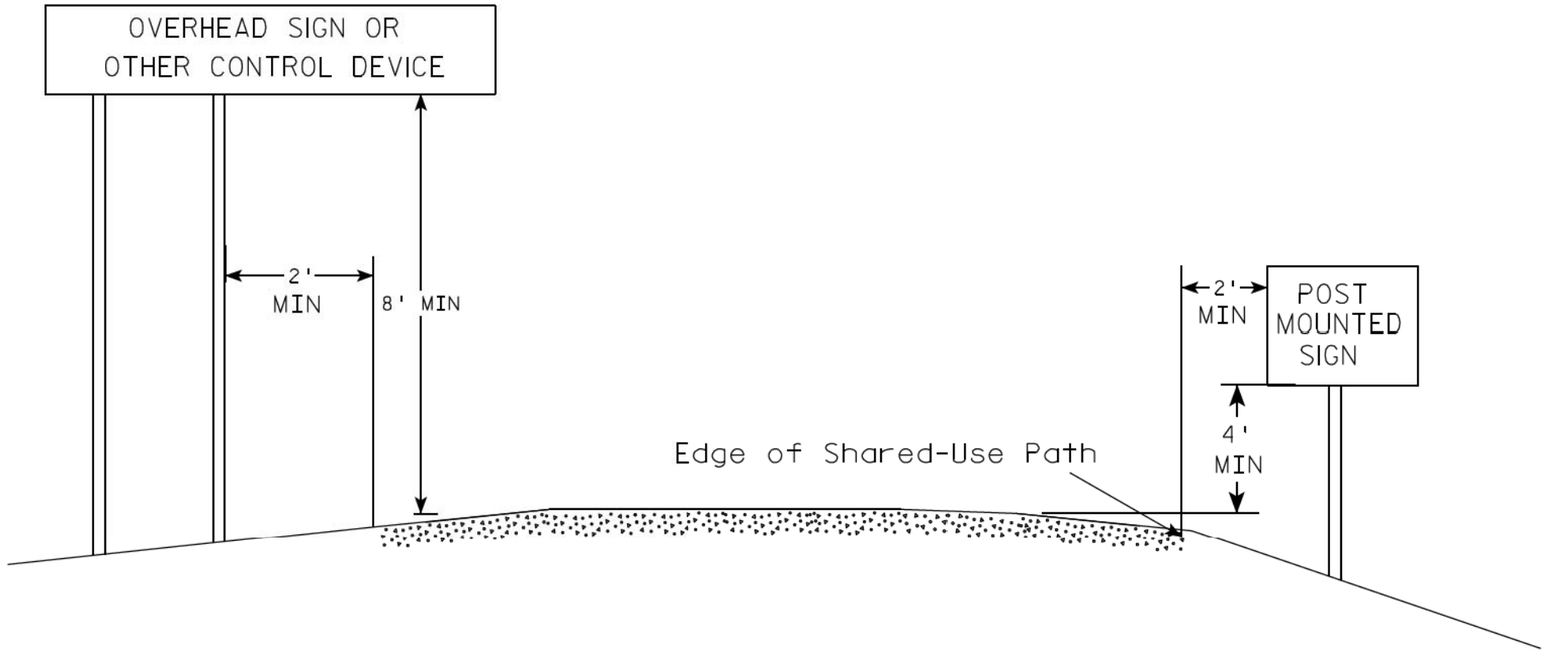
DATE 1/27/14 PLATE A4-3B.1

PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	SIGN DETAILS	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

GENERAL NOTES

1. Signs wider than 4 feet or larger than 20 sq. ft. shall be mounted on multiple posts. Refer to plate A4-4.
2. Offset distance shall be consistent with existing signs or consistent throughout length of project.



POST EMBEDMENT DEPTH

Area of Sign Installation (Sq. Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

TYPICAL INSTALLATION
OF PERMANENT TYPE II
SIGNS ON MULTI USE PATHS

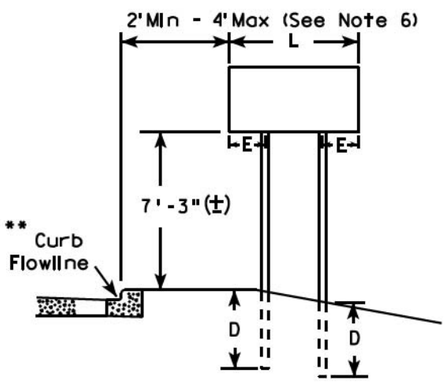
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

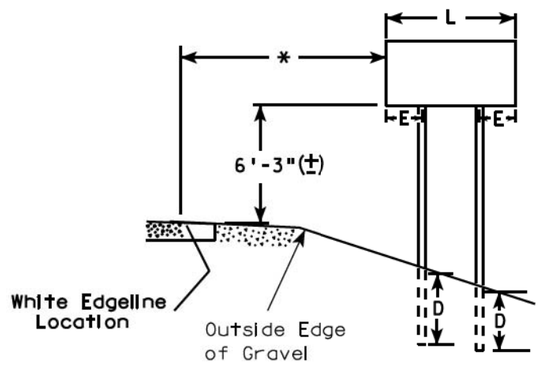
DATE 3/5/2012 PLATE NO. A4-3S.1

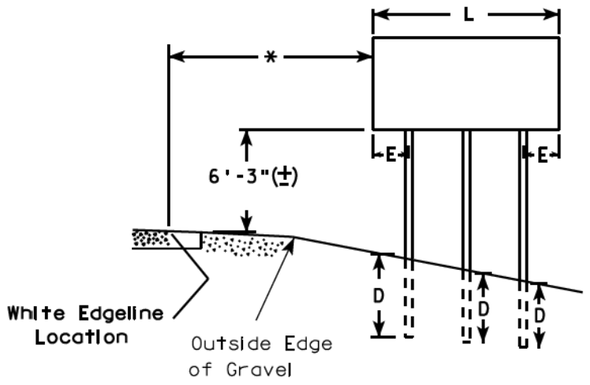
PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	SIGN DETAILS	SHEET NO: 240	E

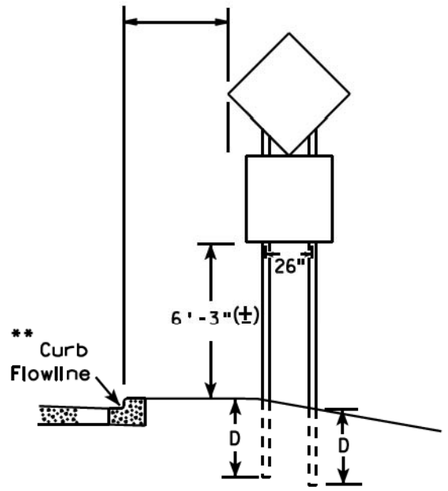
URBAN AREA



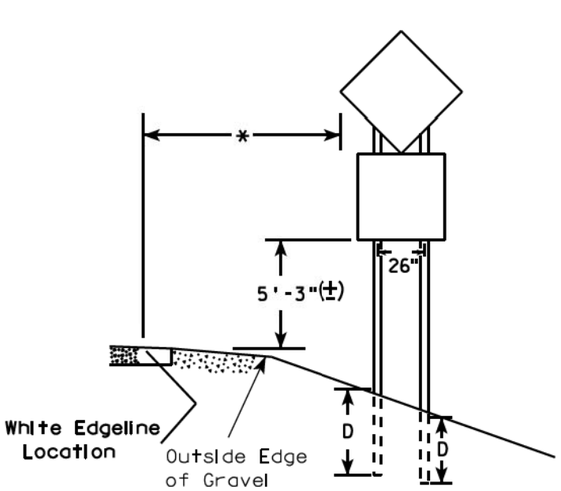
RURAL AREA (See Note 3)







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 and 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'

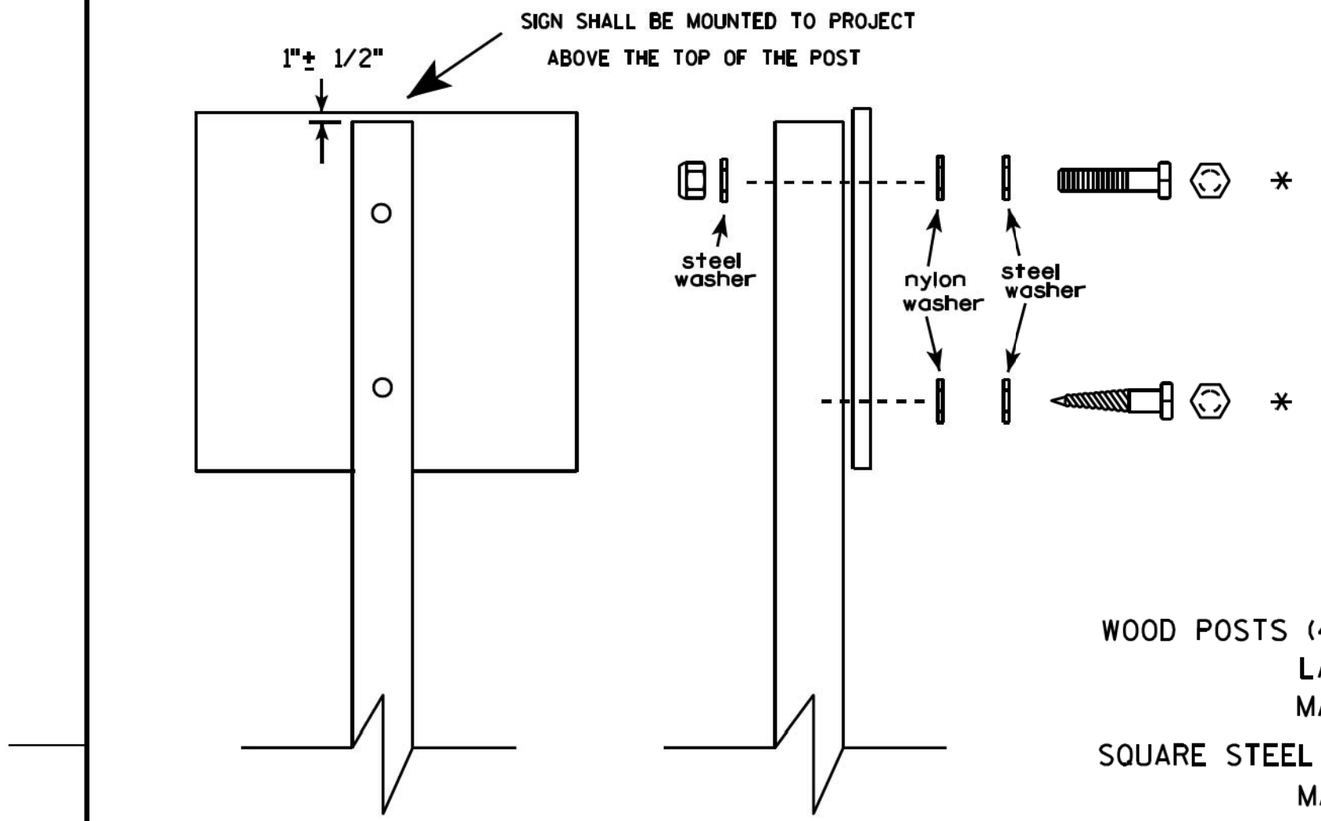
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/23/15 PLATE NO. A4-4 241 14

PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	SIGN DETAILS	SHEET NO:	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

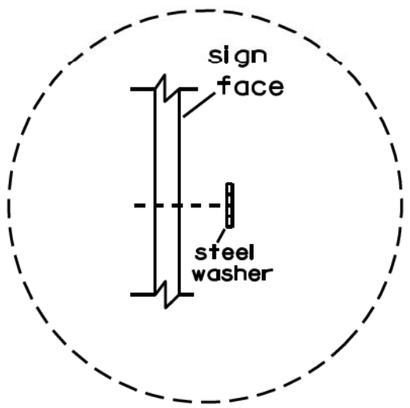
b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

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

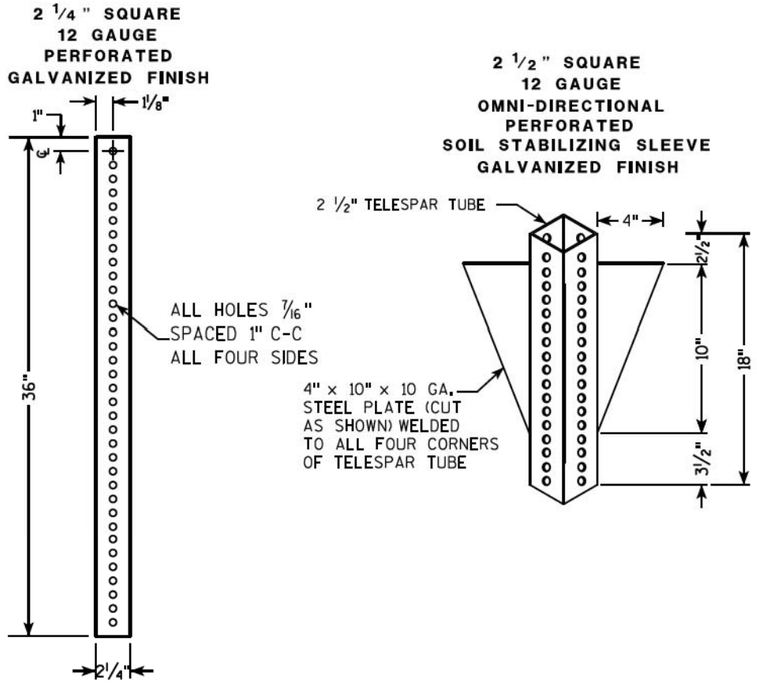
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

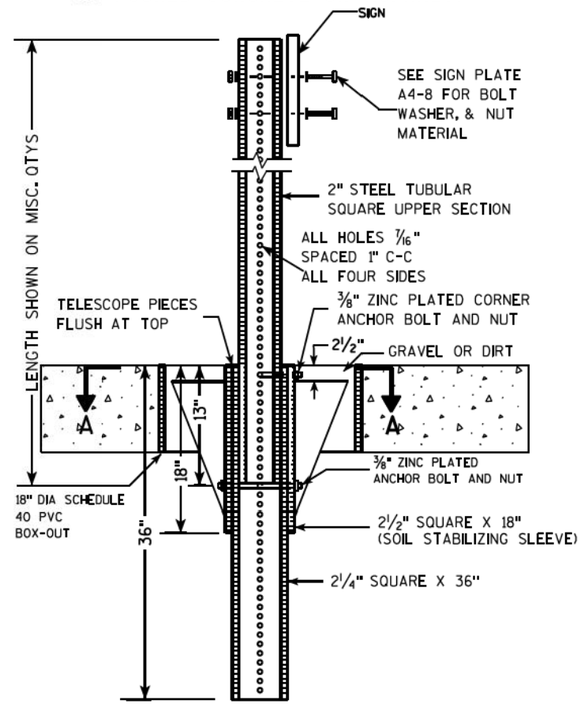
DATE 3/23/10 PLATE NO. A4-8.7

PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	SIGN DETAILS	SHEET NO: 242	E

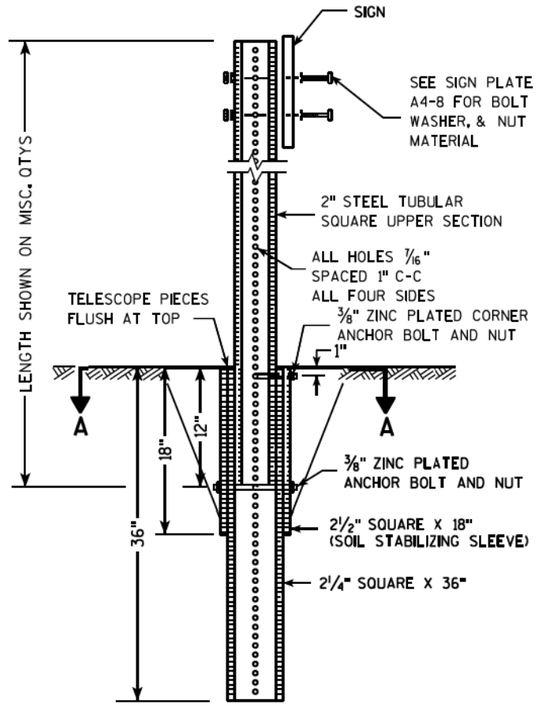
TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

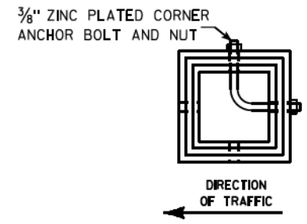


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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

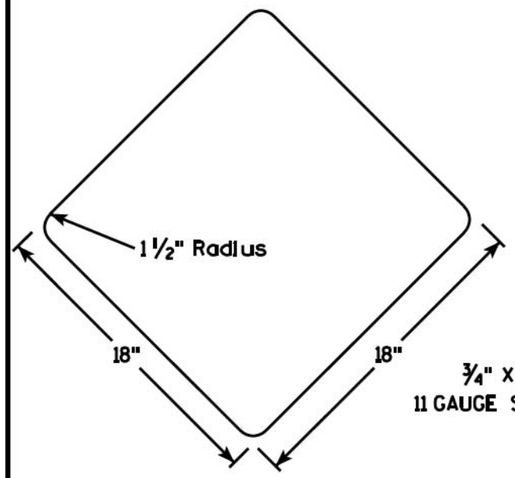
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

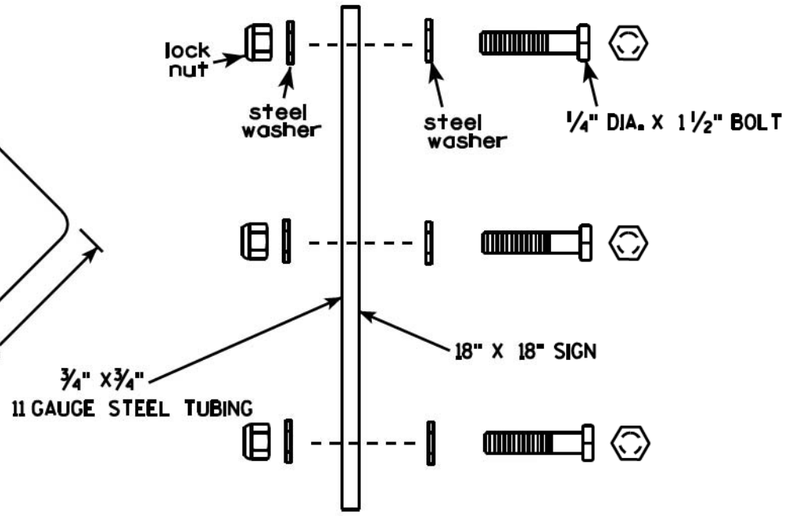
DATE 2/05/15 PLATE A4-9.9

PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	SIGN DETAILS	SHEET NO:	E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A49.DGN PLOT DATE : 05-FEB-2015 17:09 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000 WISDOT/CADDS SHEET 42



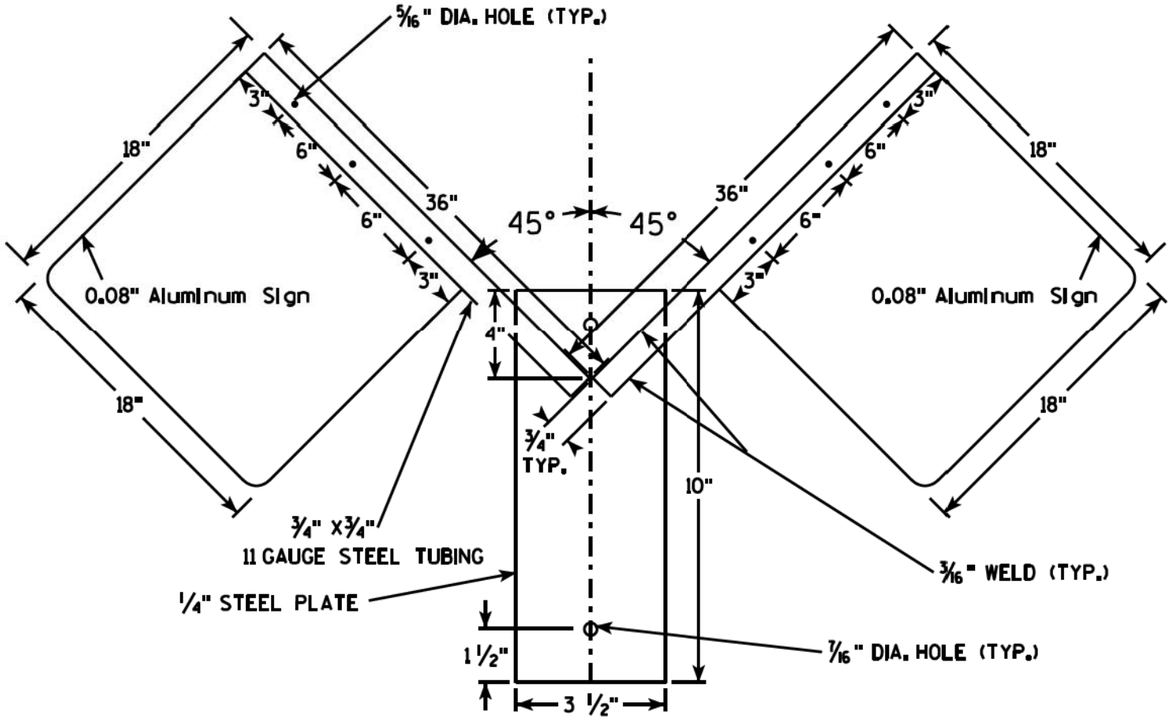
SIGN DETAIL



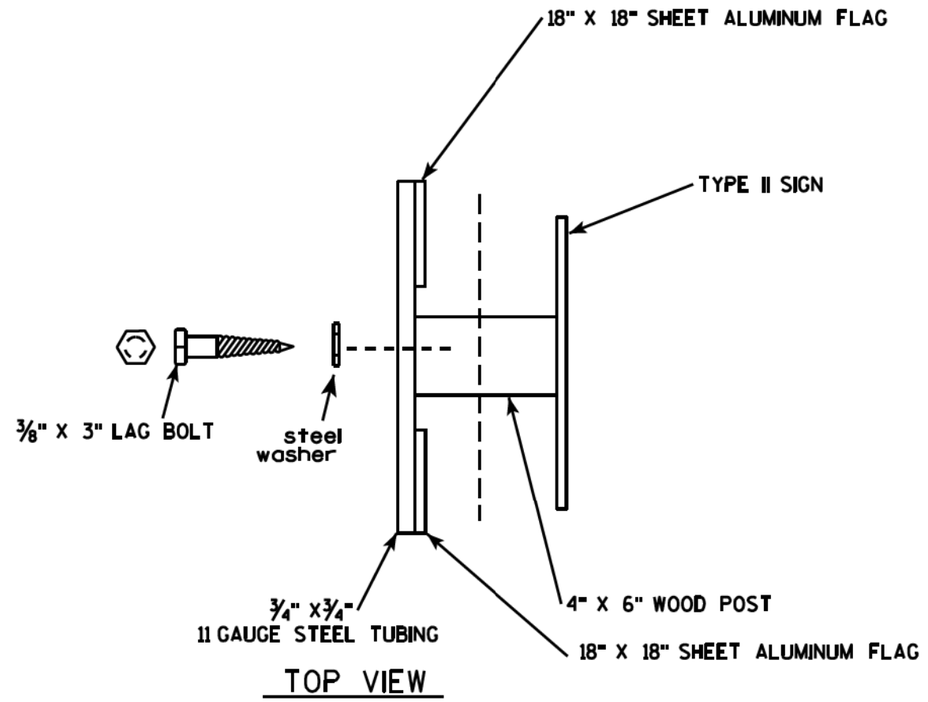
FLAG BOLTING PROCEDURE

GENERAL NOTES

1. ALL MATERIAL TO BE APPROVED BY ENGINEER BEFORE INSTALLATION.
2. SEE SIGN PLATE A4-8 FOR HARDWARE REQUIREMENTS.
3. SIGN IS TYPE II, TYPE F REFLECTIVE- REFERENCE WISDOT STANDARD. SPECIFICATION FOR HIGHWAY AND STRUCTURE CONSTRUCTION LATEST EDITION.
4. SIGN COLOR - ORANGE
5. SIGN CORNERS SHALL BE ROUNDED
6. BRACKET SHALL BE ENTIRELY PRIMED AND PAINTED WITH TWO COATS OF A BLACK POWDER COATED ENAMEL PAINT.



BACK VIEW



TOP VIEW

TYPICAL INSTALLATION OF PERMANENT TYPE II SIGN FLAGS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 5/15/13 PLATE NO. A4-15.3

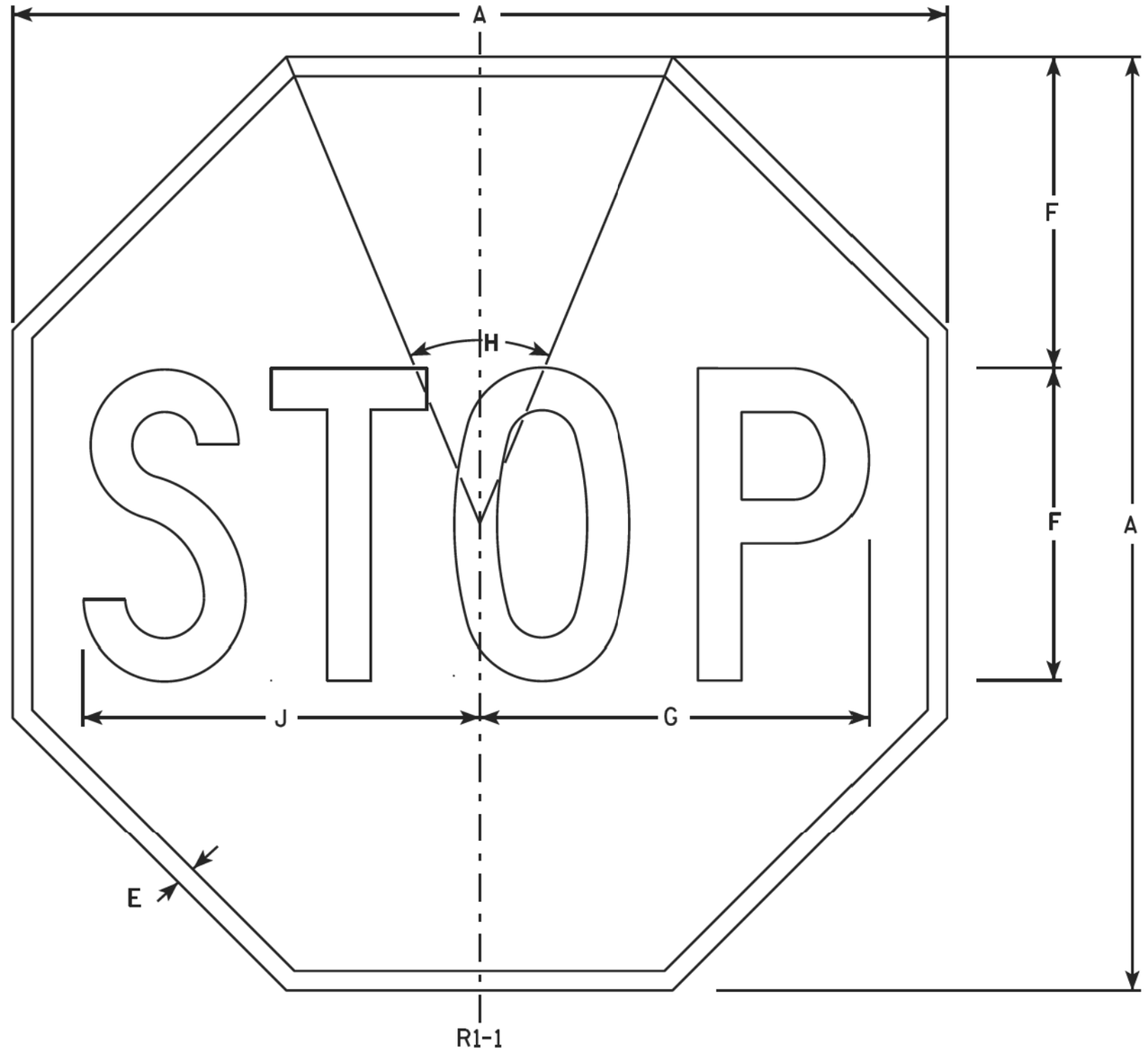
7

7

PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	SIGN DETAILS	SHEET NO: 244	E

FILE NAME : C:\CAEFiles\Projects\fr_stdplate\A415.DGN PLOT DATE : 15-MAY-2013 14:58 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 4.056814:1.000000

WISDOT/CADDS SHEET 42



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	30				5/8	10	12 1/2	45°		12 3/4																	5.18
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

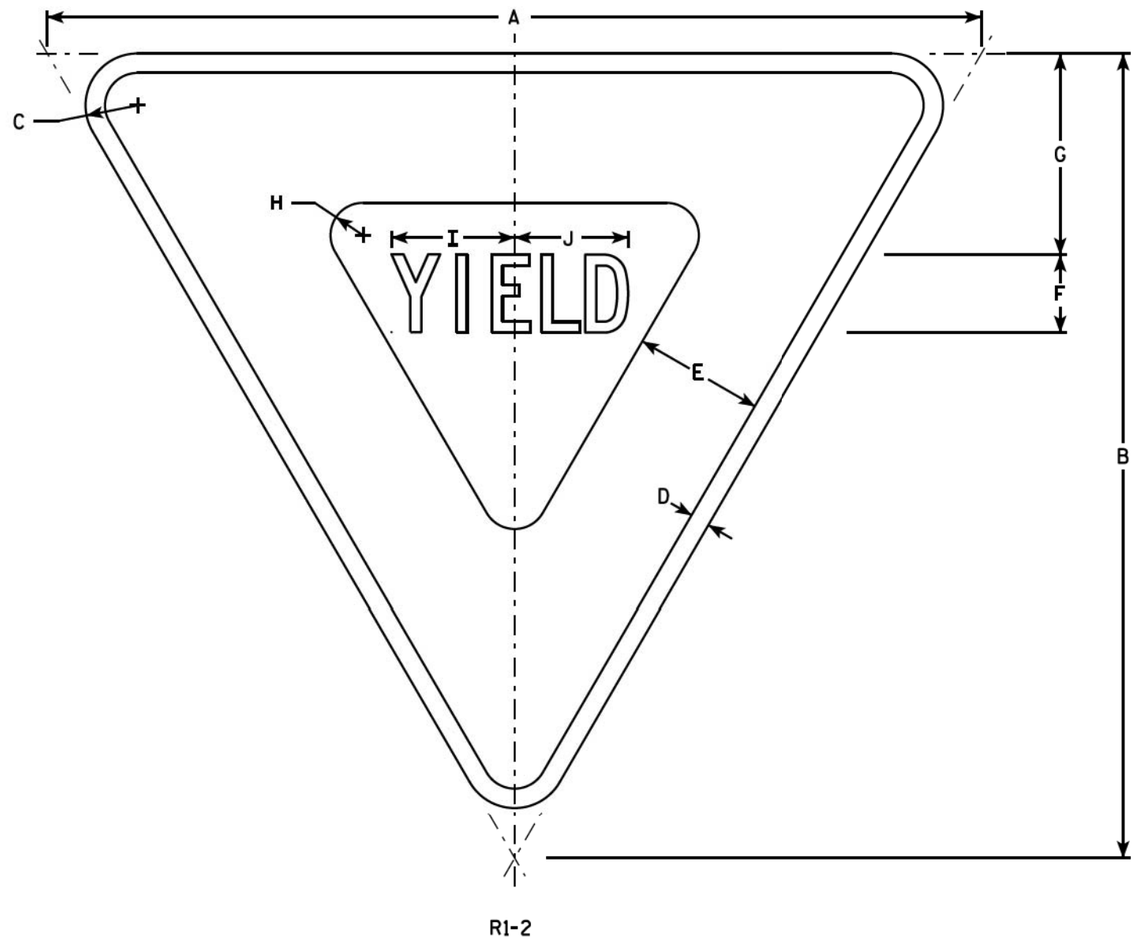
STANDARD SIGN
R1-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/12/15 PLATE NO. R1-1.12

PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	SIGN DETAILS	SHEET NO. 245	E



R1-2

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 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. The border strip and word message are reflectorized 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	30	26	1 1/2	5/8	4	2 1/2	6 3/8	7/8	4	3 5/8																	2.71
2S	36	31	2	3/4	5	3	7 3/4	1 1/4	4 3/4	4 3/8																	3.88
2M	48	42	3	1	6	4	9 3/4	2	6 1/4	5 7/8																	7.00
3	48	42	3	1	6	4	9 3/4	2	6 1/4	5 7/8																	7.00
4	48	42	3	1	6	4	9 3/4	2	6 1/4	5 7/8																	7.00
5	60	52	3	1 1/2	8	5	13	2 1/2	7 7/8	7 1/4																	10.83
6																											
7	18	15 1/2	1	3/8	2 1/2	1 1/2	3 7/8	5/8	2 3/8	2 1/4																	0.97

STANDARD SIGN
R1-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/13/14 PLATE R1-2.12

PROJECT NO: 2723-00-71 | HWY: MOORLAND RD | COUNTY: WAUKESHA | SIGN DETAILS | SHEET NO: E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\R12.DGN PLOT DATE : 13-OCT-2014 15:12 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 5.837526:1.000000 WISDOT/CADDS SHEET 42

R1-54

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

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	15	1 1/8	3/8	3/8	4	2 5/8	1 3/4	3 3/4	2	4 1/8	9 3/4	8 7/8	5/8	1 7/8	7 3/4											2.5
2M	24	15	1 1/8	3/8	3/8	4	2 5/8	1 3/4	3 3/4	2	4 1/8	9 3/4	8 7/8	5/8	1 7/8	7 3/4											2.5
3																											
4																											
5																											

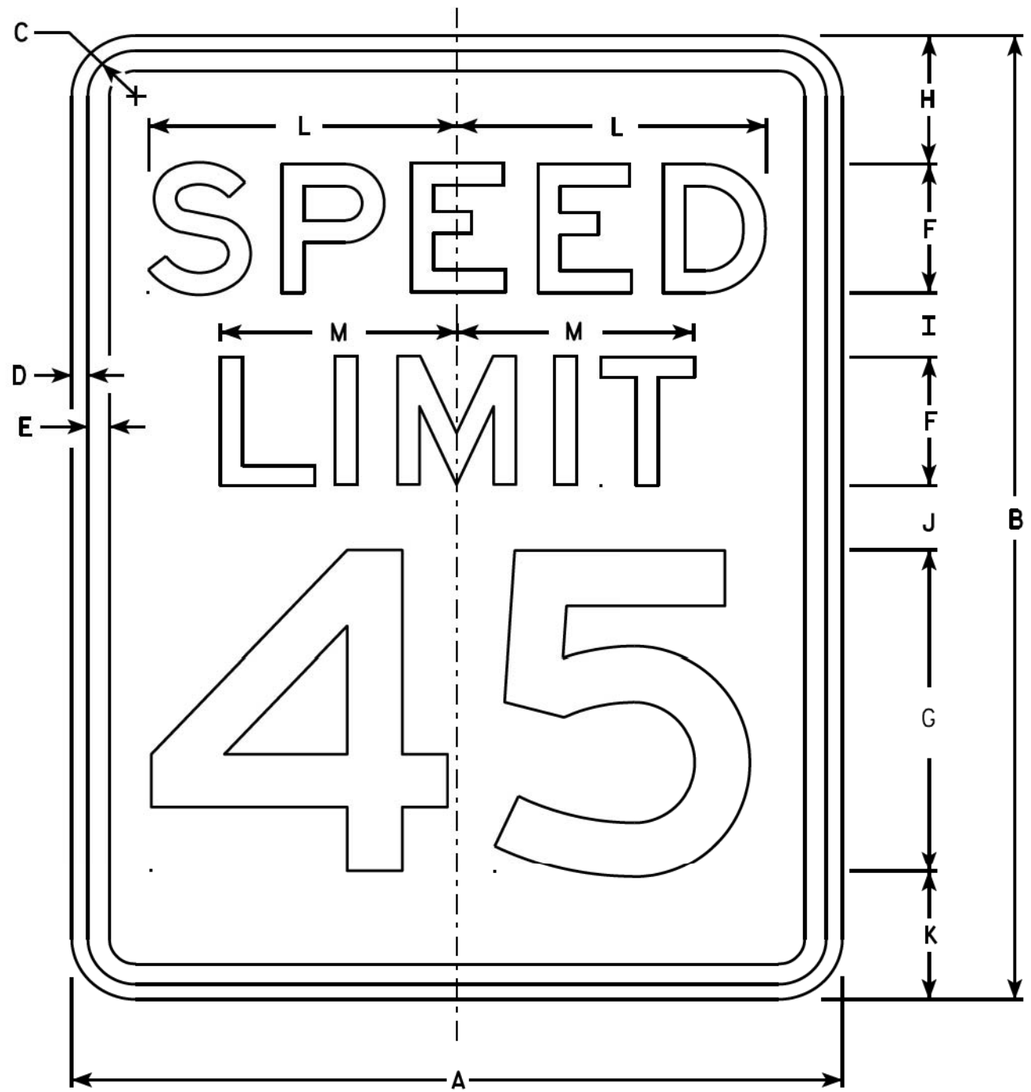
STANDARD SIGN
R1-54

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew L Rauch
for State Traffic Engineer

DATE 12/03/10 PLATE NO. R1-54.2

PROJECT NO: 2723-00-71 | HWY: MOORLAND RD | COUNTY: WAUKESHA | SIGN DETAILS | SHEET NO: 247 | 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

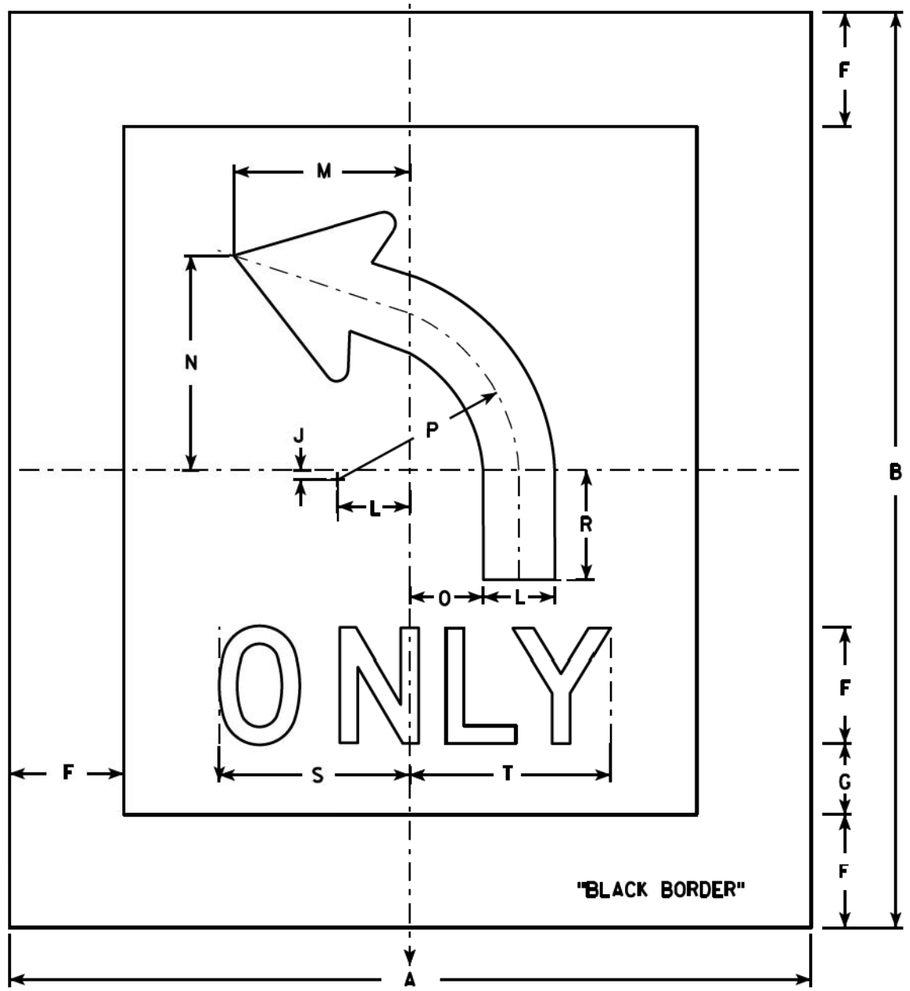
STANDARD SIGN
R2-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/26/10 PLATE NO. R2-1.13

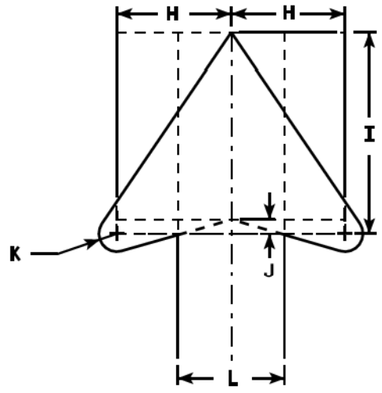
PROJECT NO: 2723-00-71 | HWY: MOORLAND RD | COUNTY: WAUKESHA | SIGN DETAILS | SHEET NO: 248 | E



R3-5L

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. When base material is metal, the corners shall be rounded.
5. R3-5R is the same as R3-5L except curved portion of arrow points right.
6. 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	3 3/4	4	7	1/2	5/8	3 3/4	9 1/4	11 1/4	3 7/8	9 1/2		5 3/4	10	10 1/2							1.26
2M	42	48				6	3 3/4	4	7	1/2	5/8	3 3/4	9 1/4	11 1/4	3 7/8	9 1/2		5 3/4	10	10 1/2							1.26
3																											
4																											
5																											

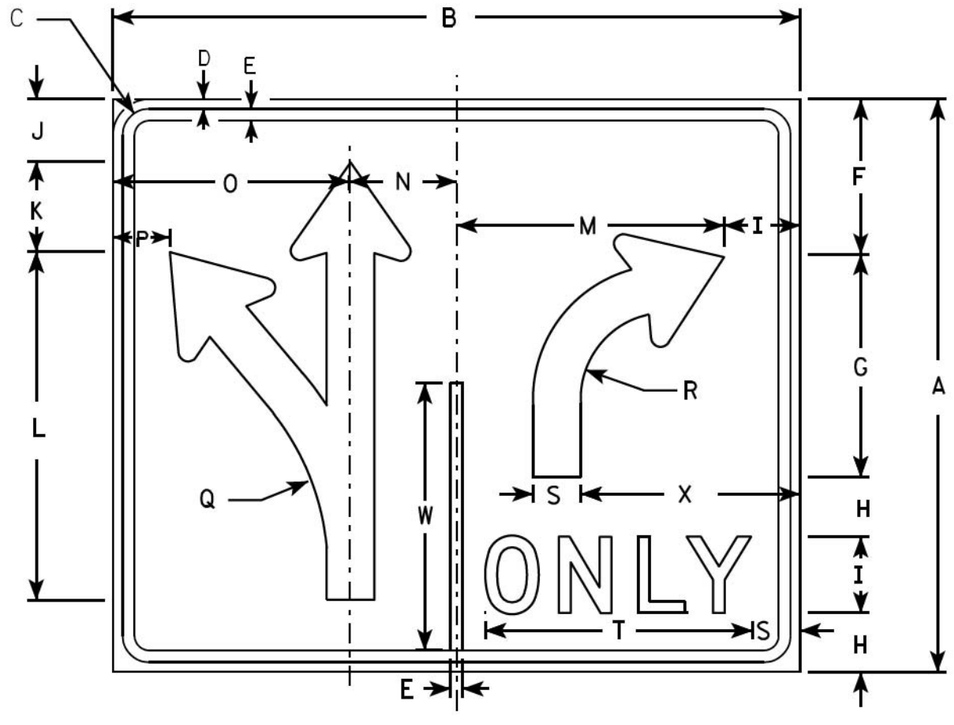
STANDARD SIGN
R3-5

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/24/11 PLATE NO. R3-5.6

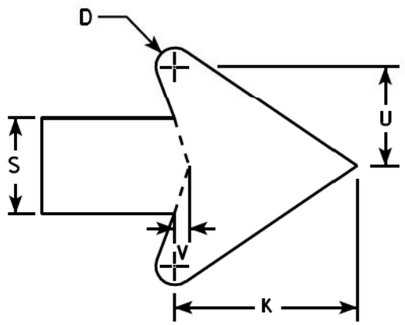
PROJECT NO: 2723-00-71 | HWY: MOORLAND RD | COUNTY: WAUKESHA | SIGN DETAILS | SHEET NO: 249 | E



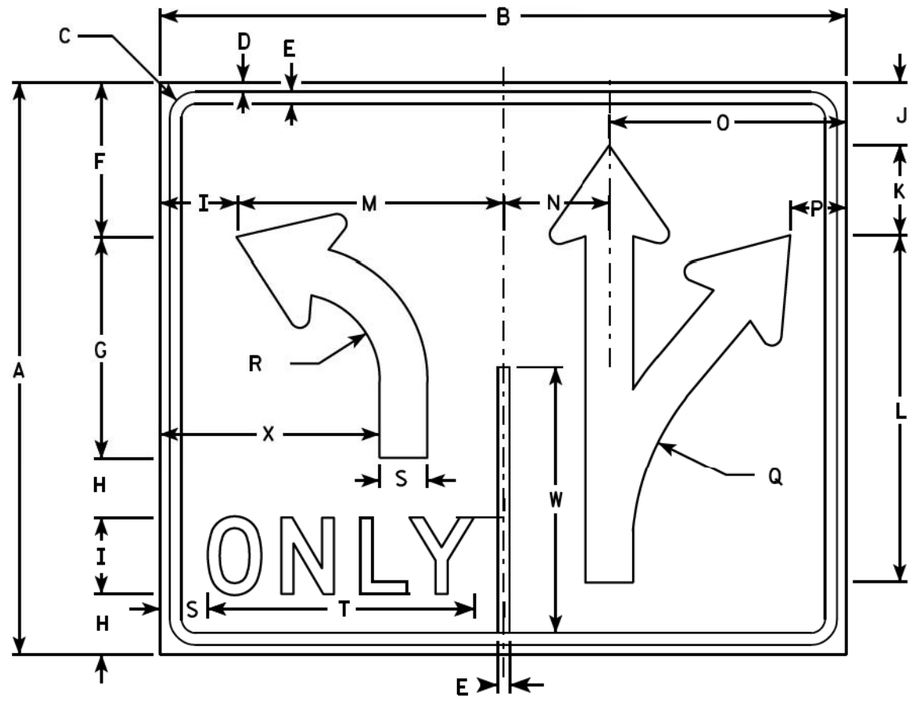
R3-8

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



R3-8A

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

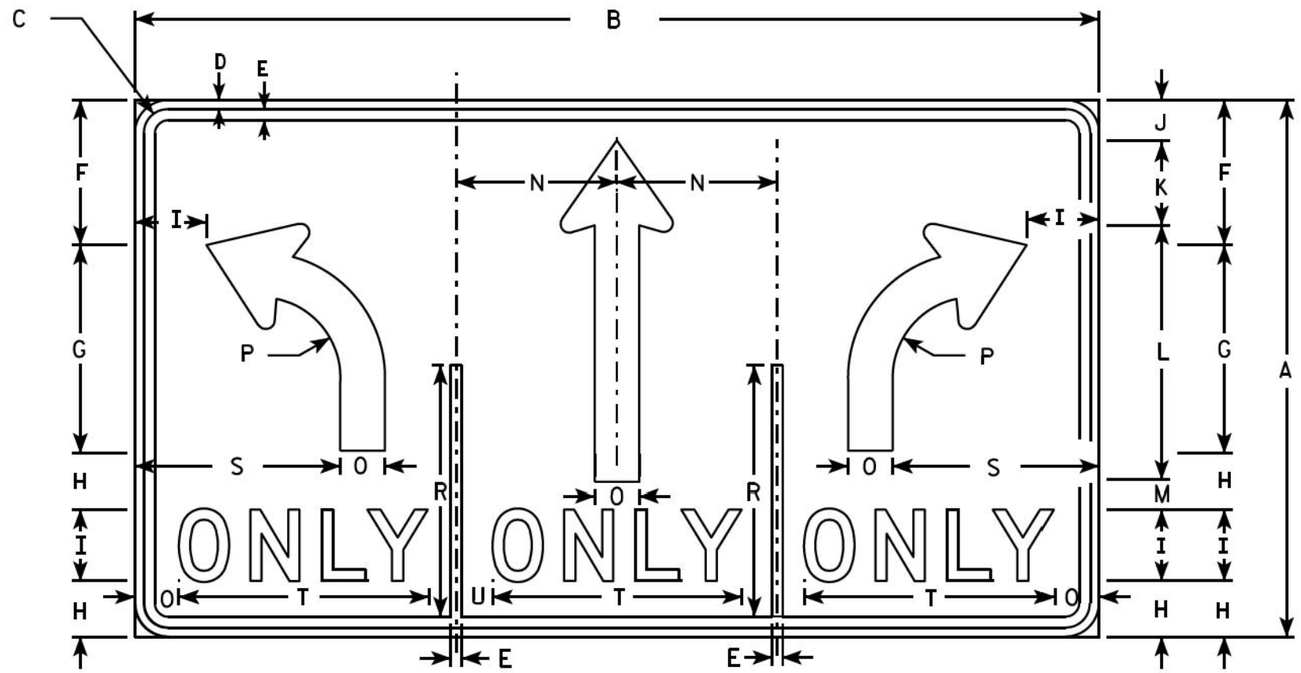
STANDARD SIGN
R3-8 & R3-8A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/2011 PLATE NO. R3-8.5

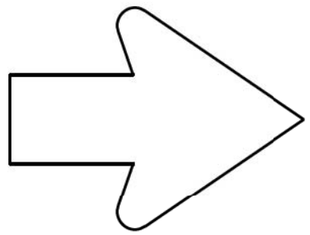
PROJECT NO: 2723-00-71 | HWY: MOORLAND RD | COUNTY: WAUKESHA | SIGN DETAILS | SHEET NO: 250 | E



R3-8W

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.



SEE R3-8 FOR 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	30	54	1 3/8	1/2	5/8	8 1/8	11 5/8	3 1/8	4	2 1/4	4 3/4	14 1/4	1 5/8	9	2 1/2	4 1/2		14	11 1/2	14	2						11.25
2M	30	54	1 3/8	1/2	5/8	8 1/8	11 5/8	3 1/8	4	2 1/4	4 3/4	14 1/4	1 5/8	9	2 1/2	4 1/2		14	11 1/2	14	2						11.25
3																											
4	48	84	2 1/4	3/4	1	13	18 1/2	5 1/4	6	3 3/4	7	29 1/8	2 3/8	14	3 3/4	7 1/4		22 3/8	17 1/4	20 1/2	3 1/4						28.0
5	48	84	2 1/4	3/4	1	13	18 1/2	5 1/4	6	3 3/4	7	29 1/8	2 7/8	14	3 3/4	7 1/4		22 3/8	17 1/4	20 1/2	3 1/4						28.0

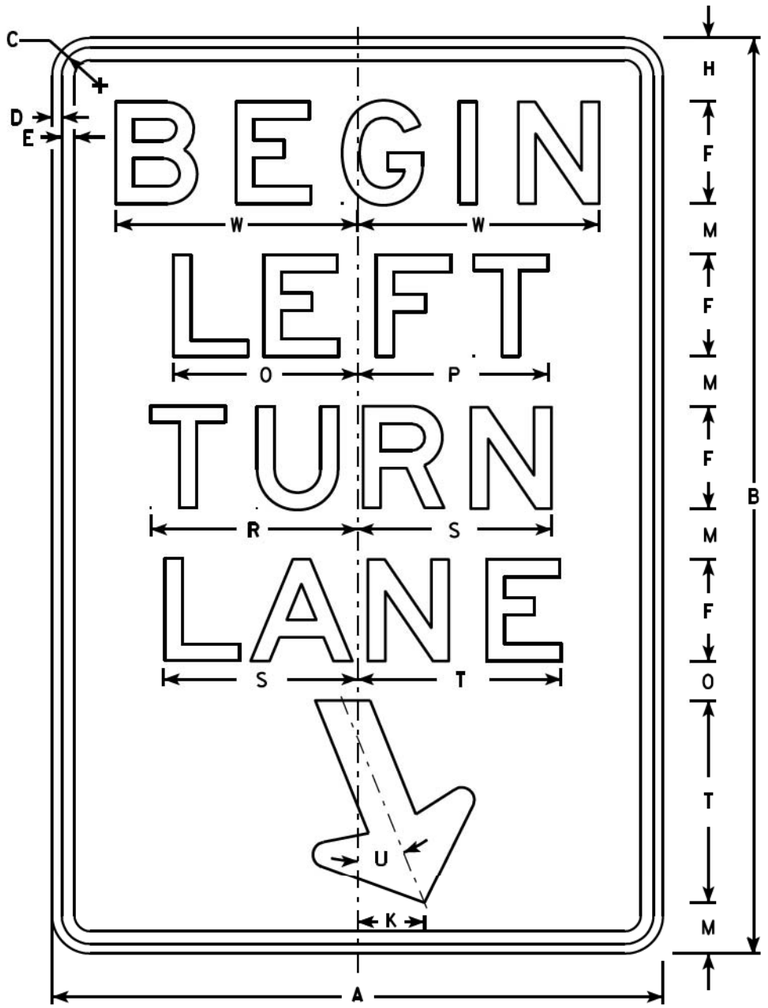
STANDARD SIGN
R3-8W

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 3/24/2011 PLATE NO. R3-8W.4

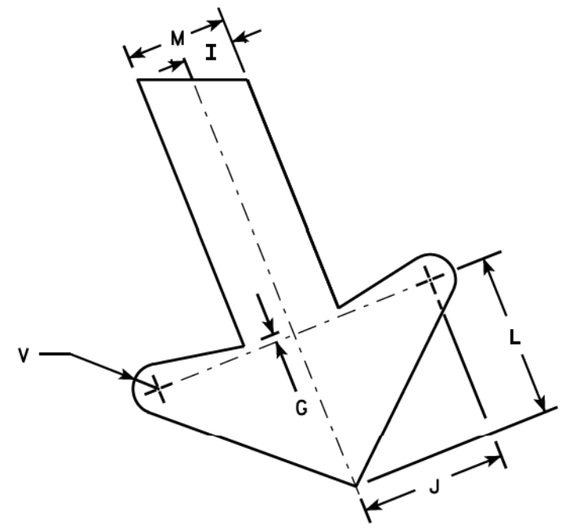
PROJECT NO: 2723-00-71 | HWY: MOORLAND RD | COUNTY: WAUKESHA | SIGN DETAILS | SHEET NO: 251 | E



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																											

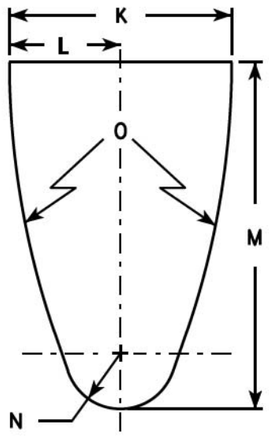
STANDARD SIGN
R3-20L

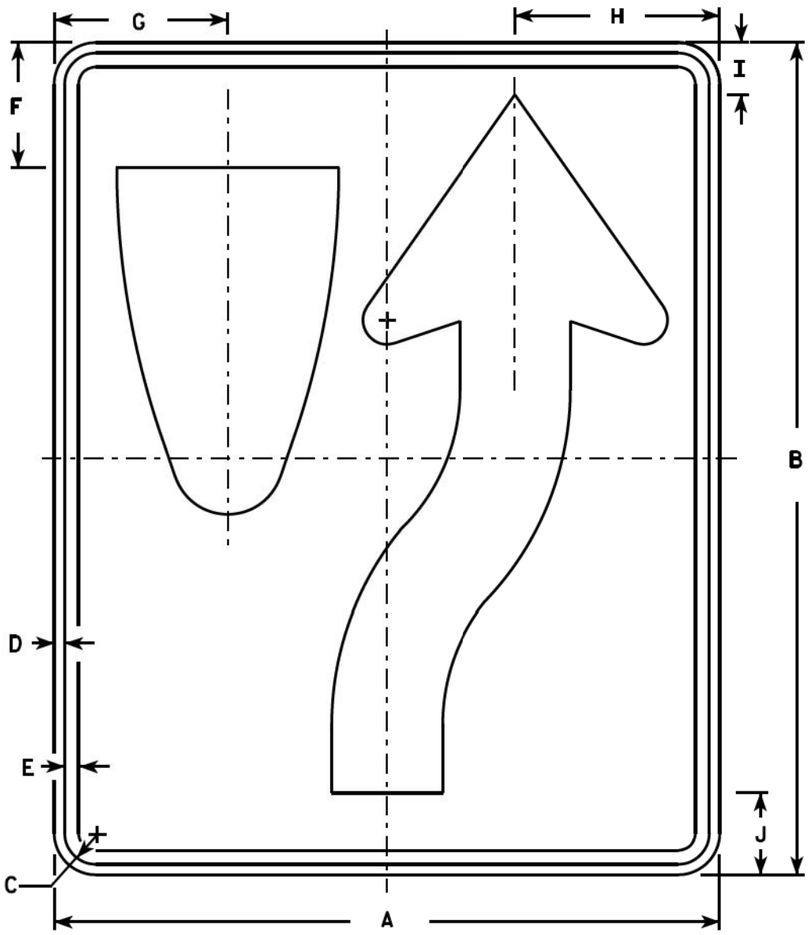
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/18/10 PLATE NO. R3-20L.7

PROJECT NO: 2723-00-71 | HWY: MOORLAND RD | COUNTY: WAUKESHA | SIGN DETAILS | SHEET NO: 252 | E

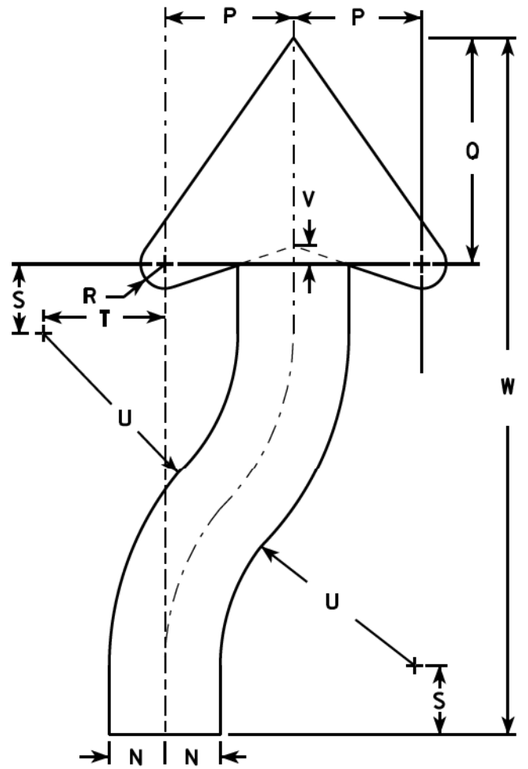




R4-7

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

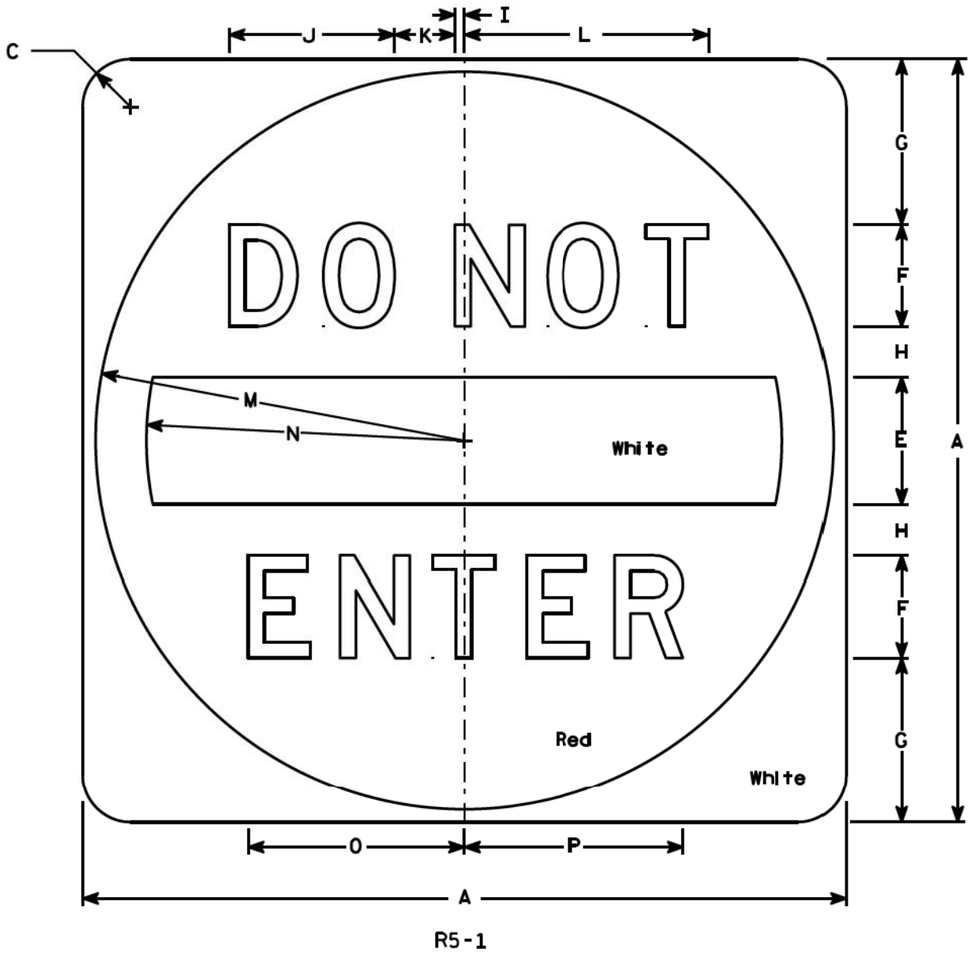
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 3/25/2011 PLATE NO. R4-7.8

PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	SIGN DETAILS	SHEET NO: 253	E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R47.DGN PLOT DATE : 25-MAR-2011 14:10 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 5.462457:1.000000 WISDOT/CADDS SHEET 42



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 shallbe 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

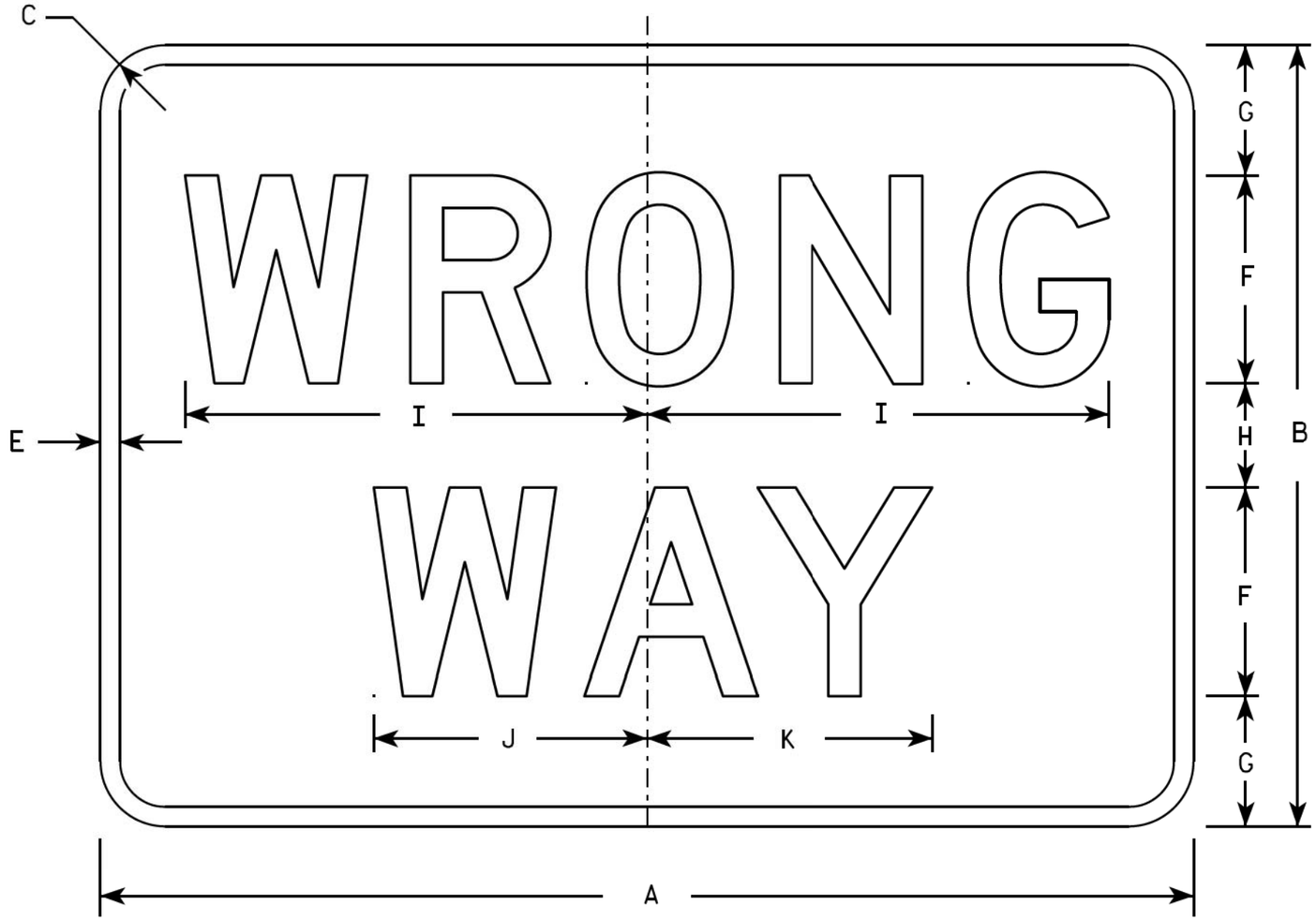
STANDARD SIGN
R5-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/17/10 PLATE NO. R5-1.15

PROJECT NO: 2723-00-71 | HWY: MOORLAND RD | COUNTY: WAUKESHA | SIGN DETAILS | SHEET NO: 254 | E



R5-1A

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 - 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	30	18	1 1/2		1/2	5	3	2	11	6 1/2	6 7/8																3.75
2S	36	24	2		5/8	6	4 1/2	3	13 1/4	7 7/8	8 1/4																6.00
2M	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
3	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
4	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
5	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75

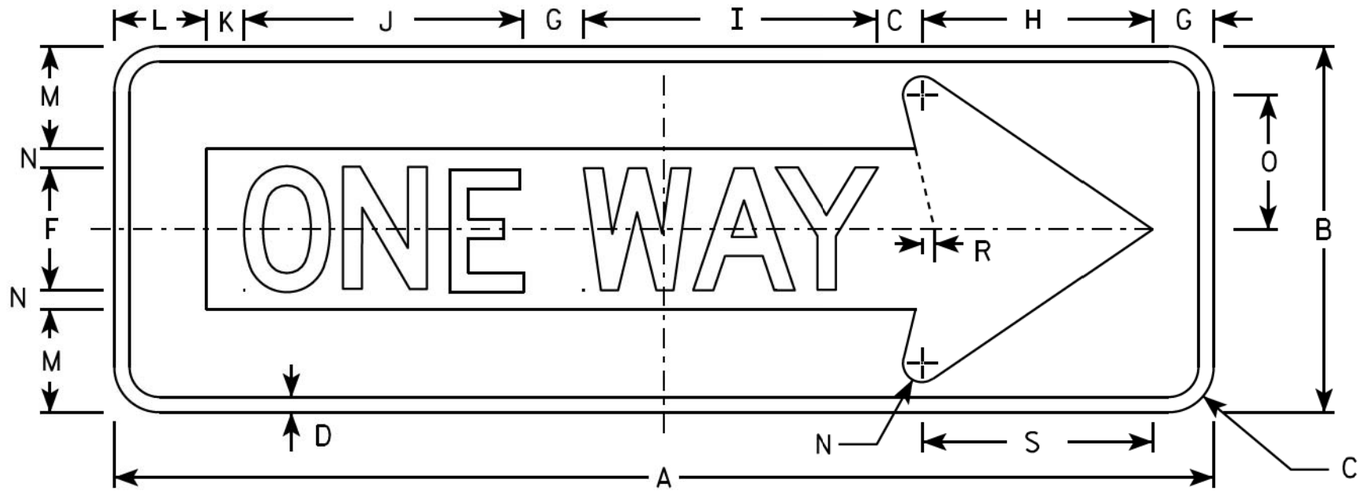
STANDARD SIGN
R5-1A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/17/10 PLATE NO. R5-1A.2

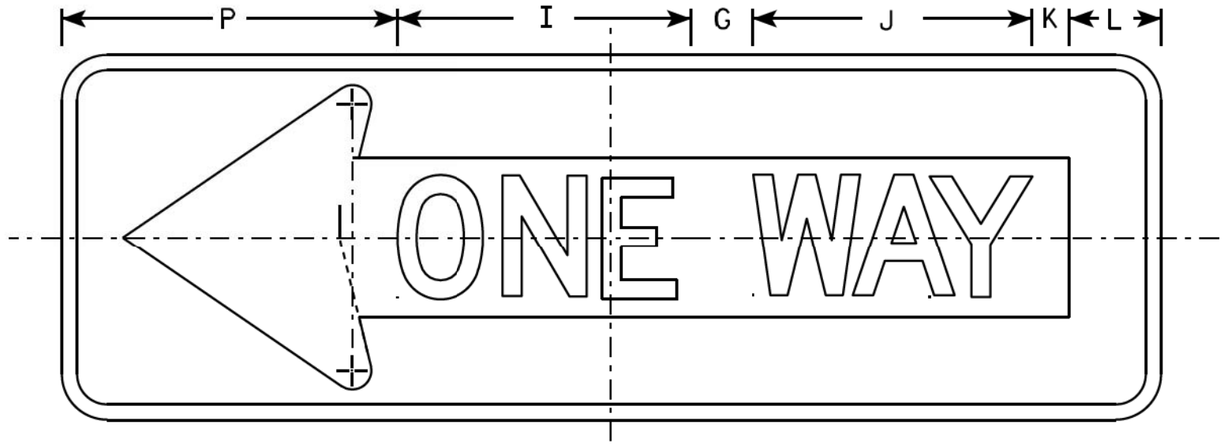
PROJECT NO: 2723-00-71 | HWY: MOORLAND RD | COUNTY: WAUKESHA | SIGN DETAILS | SHEET NO: 255 | E



R6-1R

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - BLACK
   Message - BLACK LEGEND & WHITE ARROW & BORDER
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.



R6-1L

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	36	12	1 ½	½		4	2	7 ½	9 ⅝	9 ⅛	1 ¼	3	3 ⅜	⅝	4 ⅜	11		⅜	7 ½								3.0
2M	54	18	2 ¼	¾		6	3	11 ¼	14 ½	13 ⅝	1 ⅛	4 ½	5	1	6 ½	16 ½		⅝	11 ¼								6.75
3	54	18	2 ¼	¾		6	3	11 ¼	14 ½	13 ⅝	1 ⅛	4 ½	5	1	6 ½	16 ½		⅝	11 ¼								6.75
4	54	18	2 ¼	¾		6	3	11 ¼	14 ½	13 ⅝	1 ⅛	4 ½	5	1	6 ½	16 ½		⅝	11 ¼								6.75
5																											

STANDARD SIGN
R6-1 L & R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/17/10 PLATE NO R6-1.2

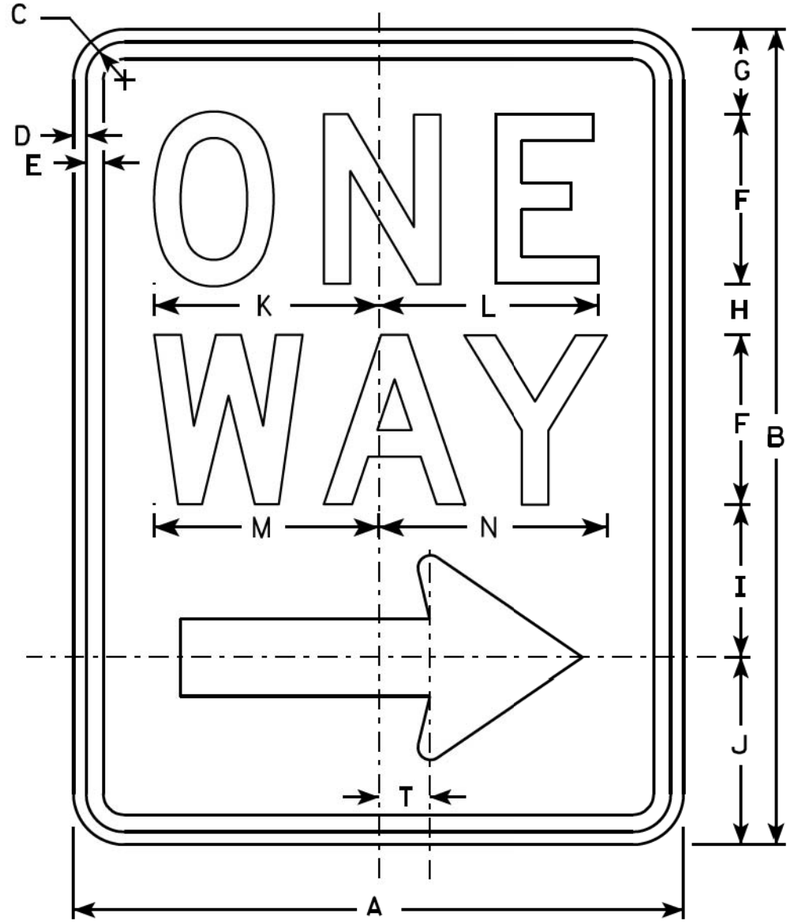
PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	SIGN DETAILS	SHEET NO: 256	E

FILE NAME : C:\Users\PROJECTS\fr_stdplate\R61.DGN PLOT DATE : 17-DEC-2010 14:11 PLOT BY : dotsja

WISDOT/CADDS SHEET 42

7

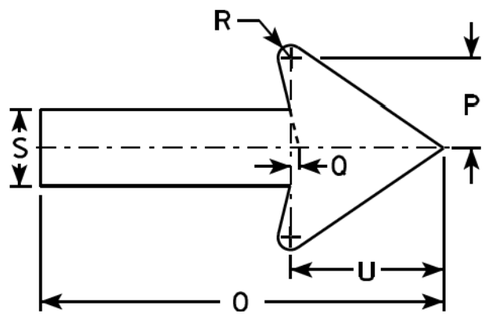
7



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

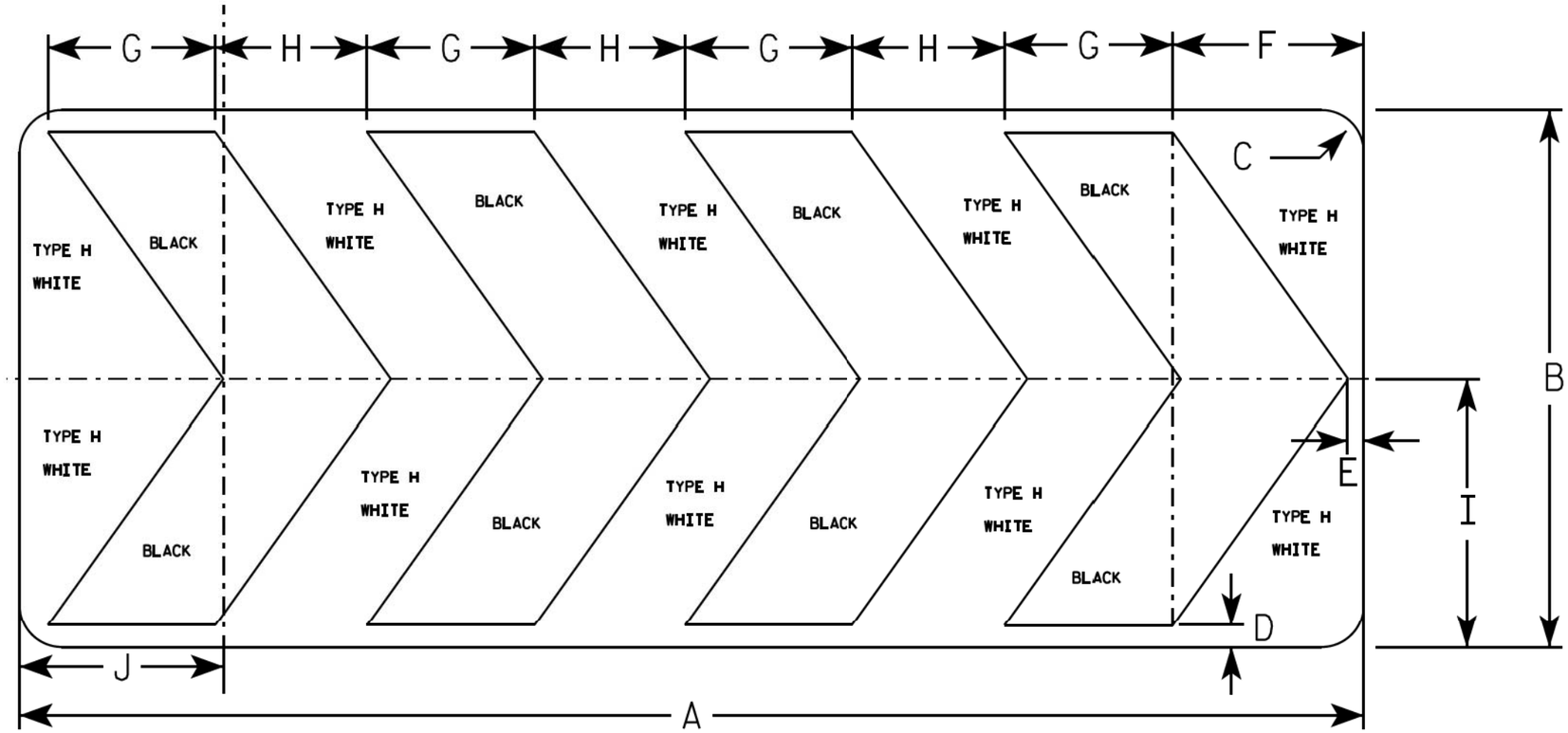
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/2/10 PLATE NO. R6-2.8

PROJECT NO: 2723-00-71 | HWY: MOORLAND RD | COUNTY: WAUKESHA | SIGN DETAILS | SHEET NO: 257 | E

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - WHITE
   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.



R6-4B

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	24	1 7/8	1	3/4	8 1/2	7 1/2	6 3/4	12	9 1/8																	10.0
2M	60	24	1 7/8	1	3/4	8 1/2	7 1/2	6 3/4	12	9 1/8																	10.0
3																											
4																											
5																											

STANDARD SIGN
R6-4B

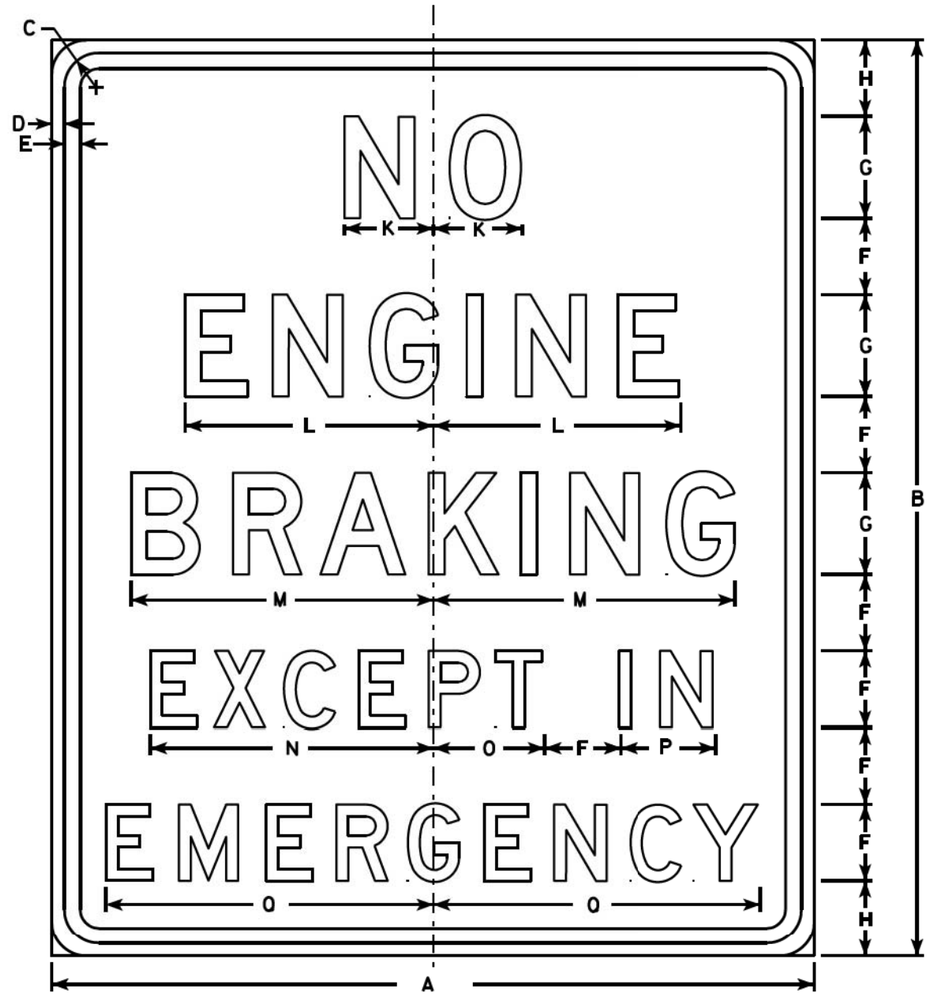
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

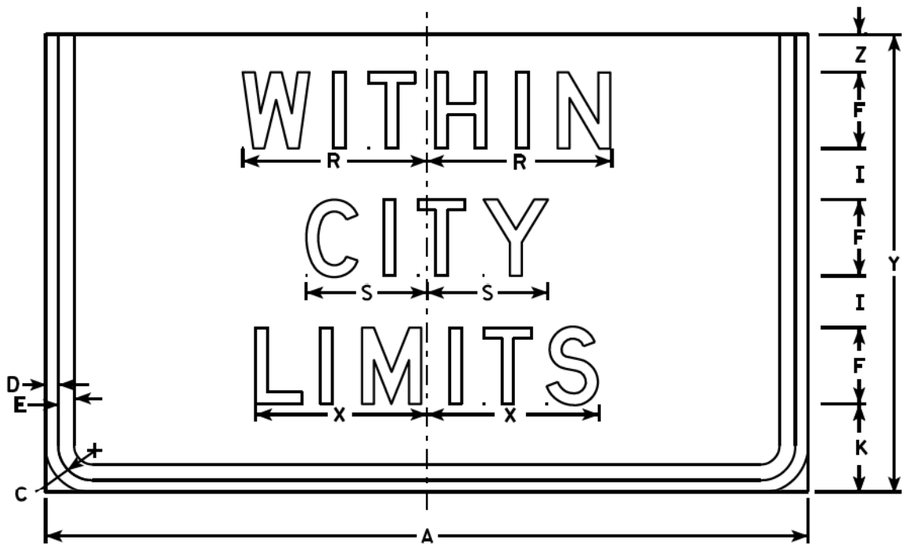
DATE 8/21/14 PLATE R6-4.3

PROJECT NO: 2723-00-71 | HWY: MOORLAND RD | COUNTY: WAUKESHA | SIGN DETAILS | SHEET NO: E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\R64B.DGN PLOT DATE : 21-AUG-2014 15:01 PLOT BY : mscsja
WISDOT/CADDS SHEET 42

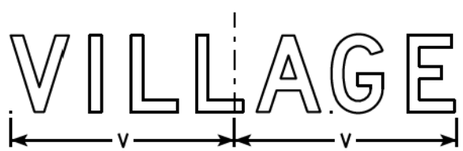


R10-64



R10-64F

Area sq. ft.
3.75
7.0



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

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

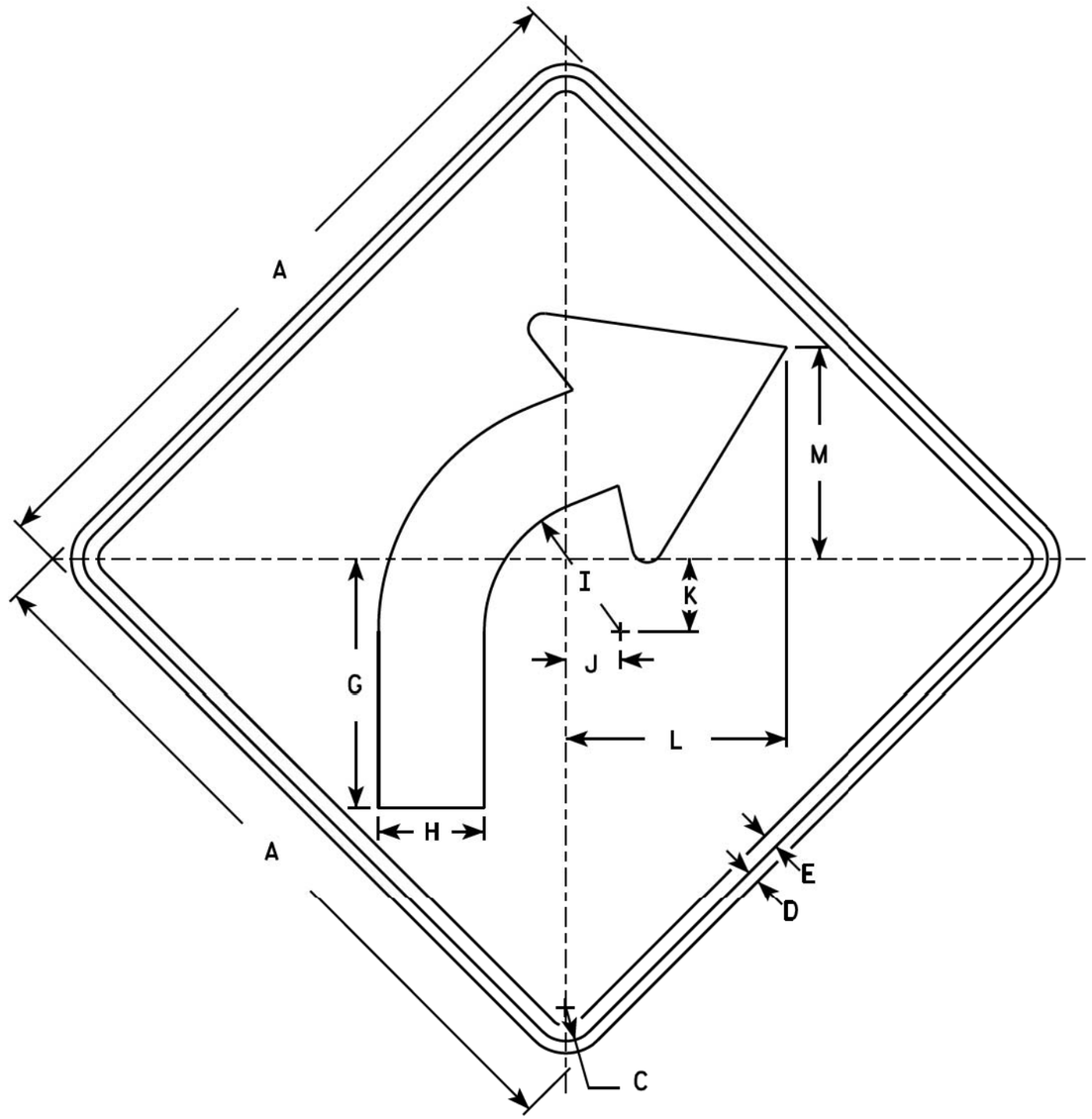
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/4/11 PLATE NO. R10-64.7

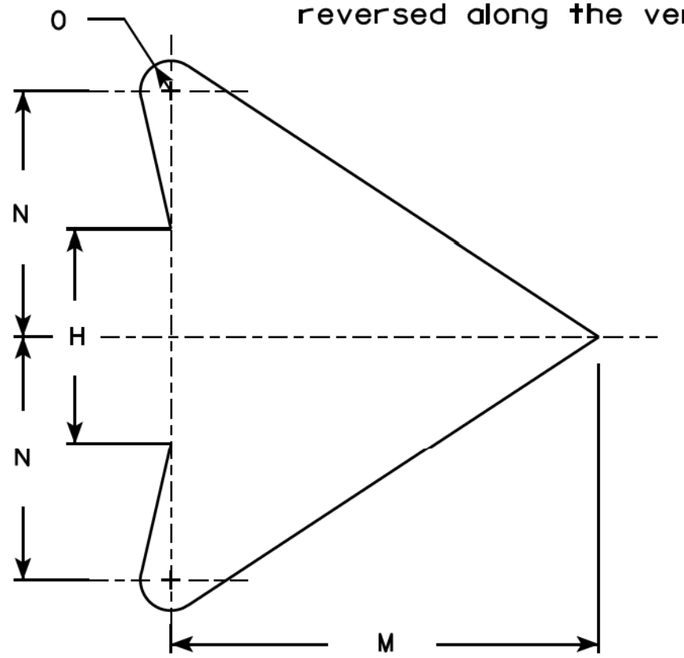
PROJECT NO: 2723-00-71 | HWY: MOORLAND RD | COUNTY: WAUKESHA | SIGN DETAILS | SHEET NO: 259 | E

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.
4. W1-2L is the same as W1-2R except the arrow is reversed along the vertical centerline.



W1-2R



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		8 1/4	3 1/2	4 1/2	1 3/4	2 3/8	7 1/4	7	4	1/2												4.0
2S	30		1 3/8	1/2	5/8		10 1/4	4 3/8	5 5/8	2 1/4	3	9 1/8	8 3/4	5	5/8												6.25
2M	36		1 5/8	5/8	3/4		12 3/8	5 1/4	6 3/4	2 5/8	3 1/2	10 7/8	10 1/2	6	3/4												9.0
3	36		1 5/8	5/8	3/4		12 3/8	5 1/4	6 3/4	2 5/8	3 1/2	10 7/8	10 1/2	6	3/4												9.0
4	36		1 5/8	5/8	3/4		12 3/8	5 1/4	6 3/4	2 5/8	3 1/2	10 7/8	10 1/2	6	3/4												9.0
5	48		2 1/4	3/4	1		16 1/2	7	9	3 1/2	4 5/8	14 1/2	14	8	1												16.0

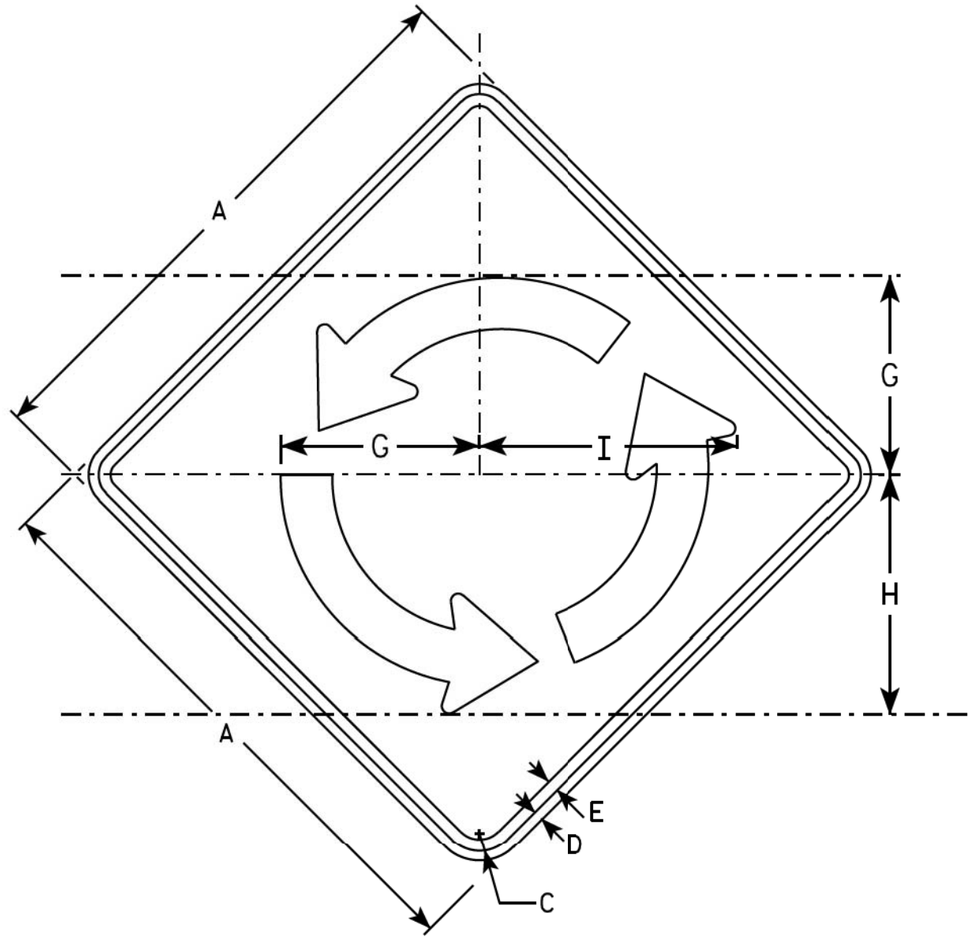
STANDARD SIGN
W1-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/15/12 PLATE NO. W1-2.10

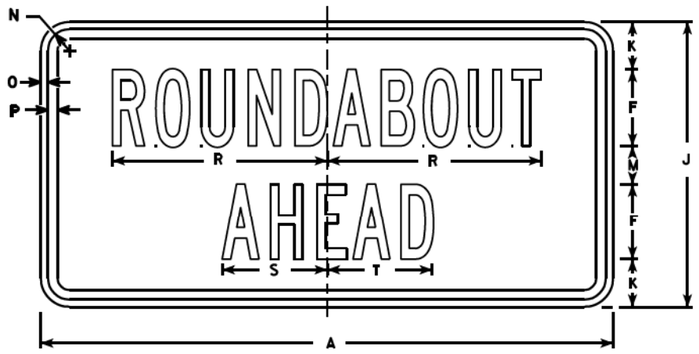
PROJECT NO: 2723-00-71 | HWY: MOORLAND RD | COUNTY: WAUKESHA | SIGN DETAILS | SHEET NO: 260 | E



W2-6

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - YELLOW
   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.



W2-6P

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	W2-6 Area sq. ft.	W2-6P Area sq. ft.
1																										
2S	30		1 3/8	1/2	5/8	4	10 3/8	12 1/2	13 1/2	15	2 1/2		2	1 1/8	3/8	1/2		11 1/4	5 1/2	5 1/2					6.25	3.12
2M	30		1 3/8	1/2	5/8	4	10 3/8	12 1/2	13 1/2	15	2 1/2		2	1 1/8	3/8	1/2		11 1/4	5 1/2	5 1/2					6.25	3.12
3	36		1 5/8	5/8	3/4	5	12 1/2	15	16 1/4	18	2 5/8		2 3/4	1 1/8	3/8	1/2		14	7	6 3/4					9.00	4.50
4	48		2 1/4	3/4	1	6	16 5/8	20	16 1/4	24	4 3/8		3 5/8	1 3/8	1/2	5/8		17	8 1/4	8 1/4					16.0	8.0
5																										

STANDARD SIGN
W2-6

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/29/12 PLATE NO. W2-6.5

PROJECT NO: 2723-00-71 | HWY: MOORLAND RD | COUNTY: WAUKESHA | SIGN DETAILS | SHEET NO: 261 | E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W26.DGN PLOT DATE : 29-JUN-2012 10:15 PLOT BY : mscsja

WISDOT/CADDS SHEET 42

7

7

W4-4P

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. 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																											
2S	24	12	1 1/8	3/8	3/8	3	2 1/4	1 1/2	8	1 1/2	3/8	10	6 1/4	2 1/4	2 1/4	6 1/4											2.0
2M	24	12	1 1/8	3/8	3/8	3	2 1/4	1 1/2	8	1 1/2	3/8	10	6 1/4	2 1/4	2 1/4	6 1/4											2.0
3	36	15	1 1/8	3/8	1/2	4	2 5/8	1 3/4	10 3/4	2 3/8	3/8	13 1/2	8 3/8	3	3 1/8	8 3/8											3.75
4	42	18	1 1/8	3/8	1/2	5	3	2	13 3/8	3 1/8	3/8	16 7/8	10 1/2	3 5/8	3 7/8	10 3/8											5.25
5																											

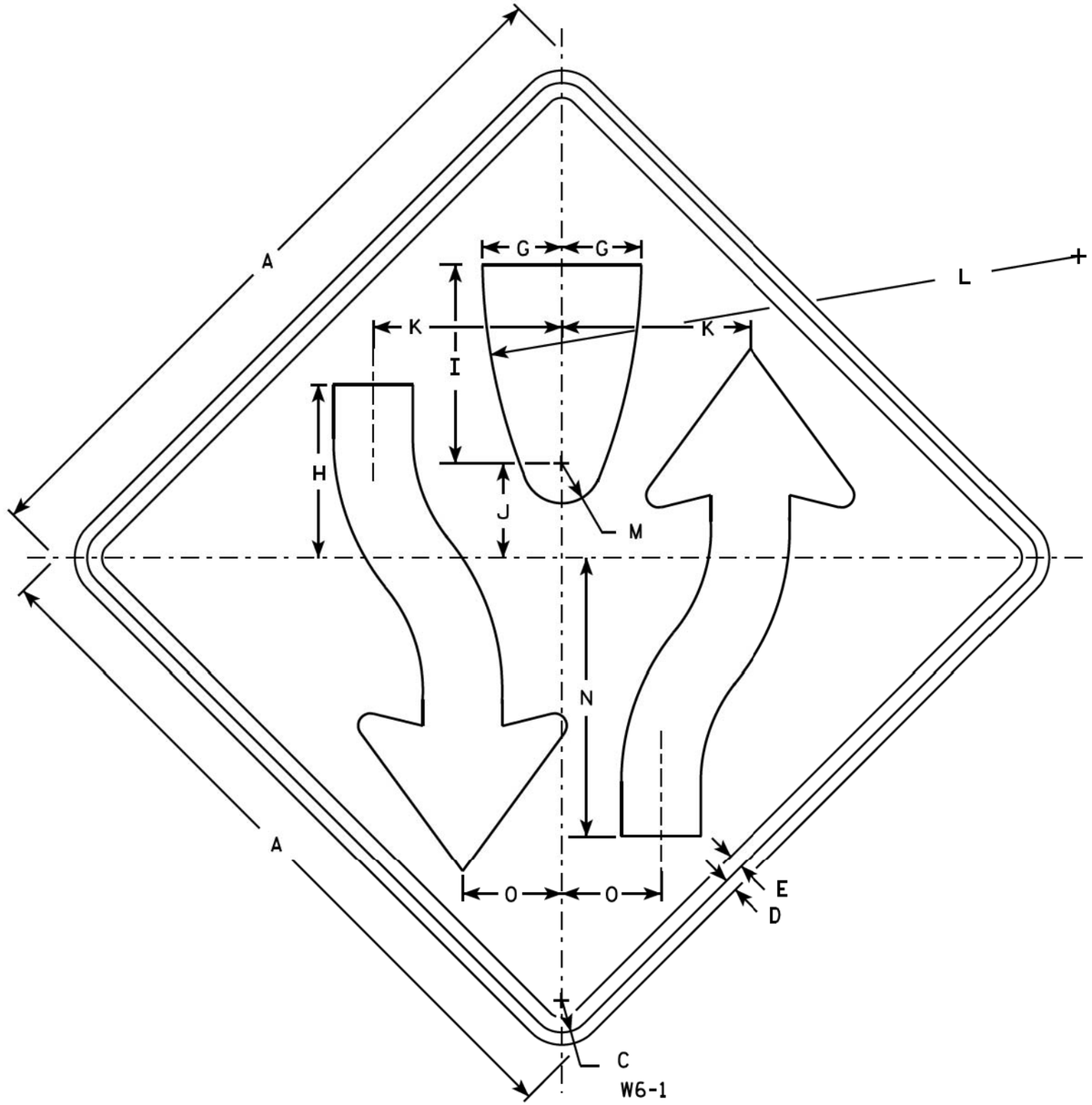
STANDARD SIGN
W4-4P

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

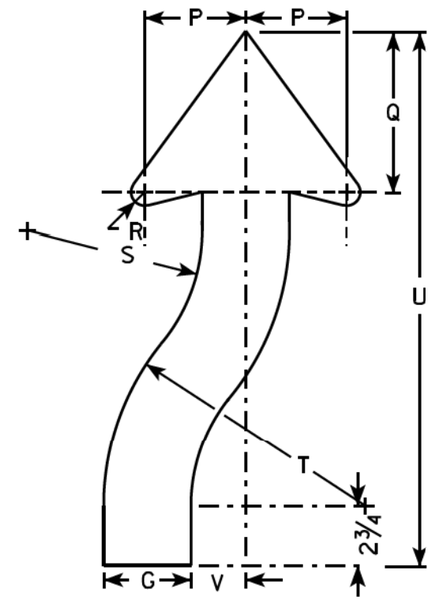
DATE 03/12/13 PLATE NO. W4-4P.2

PROJECT NO: 2723-00-71 | HWY: MOORLAND RD | COUNTY: WAUKESHA | SIGN DETAILS | SHEET NO: 262 | 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.
4. W6-2 same as W6-1 but is rotated 180° when mounted.



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	30		1 3/8	1/2	5/8		3 1/4	8	8 1/4	4 1/8	7 7/8	25	1 3/4	11 5/8	4 1/8	3 7/8	6 3/4	5/8	6 5/8	9 7/8	21 5/8	2					6.25
2S	36		1 5/8	5/8	3/4		4	8 3/4	10	4 3/4	9 1/2	30	2	14	5	4 5/8	7 3/8	7/8	8	12	24 1/2	2 1/2					9.0
2M	36		1 5/8	5/8	3/4		4	8 3/4	10	4 3/4	9 1/2	30	2	14	5	4 5/8	7 3/8	7/8	8	12	24 1/2	2 1/2					9.0
3																											
4	48		2 1/4	3/4	1		5 3/8	11 5/8	13 3/8	6 3/8	12 5/8	40	2 5/8	18 5/8	6 5/8	6 1/4	9 7/8	1 1/4	10 5/8	16	32 5/8	3 3/8					16.0
5	48		2 1/4	3/4	1		5 3/8	11 5/8	13 3/8	6 3/8	12 5/8	40	2 5/8	18 5/8	6 5/8	6 1/4	9 7/8	1 1/4	10 5/8	16	32 5/8	3 3/8					16.0

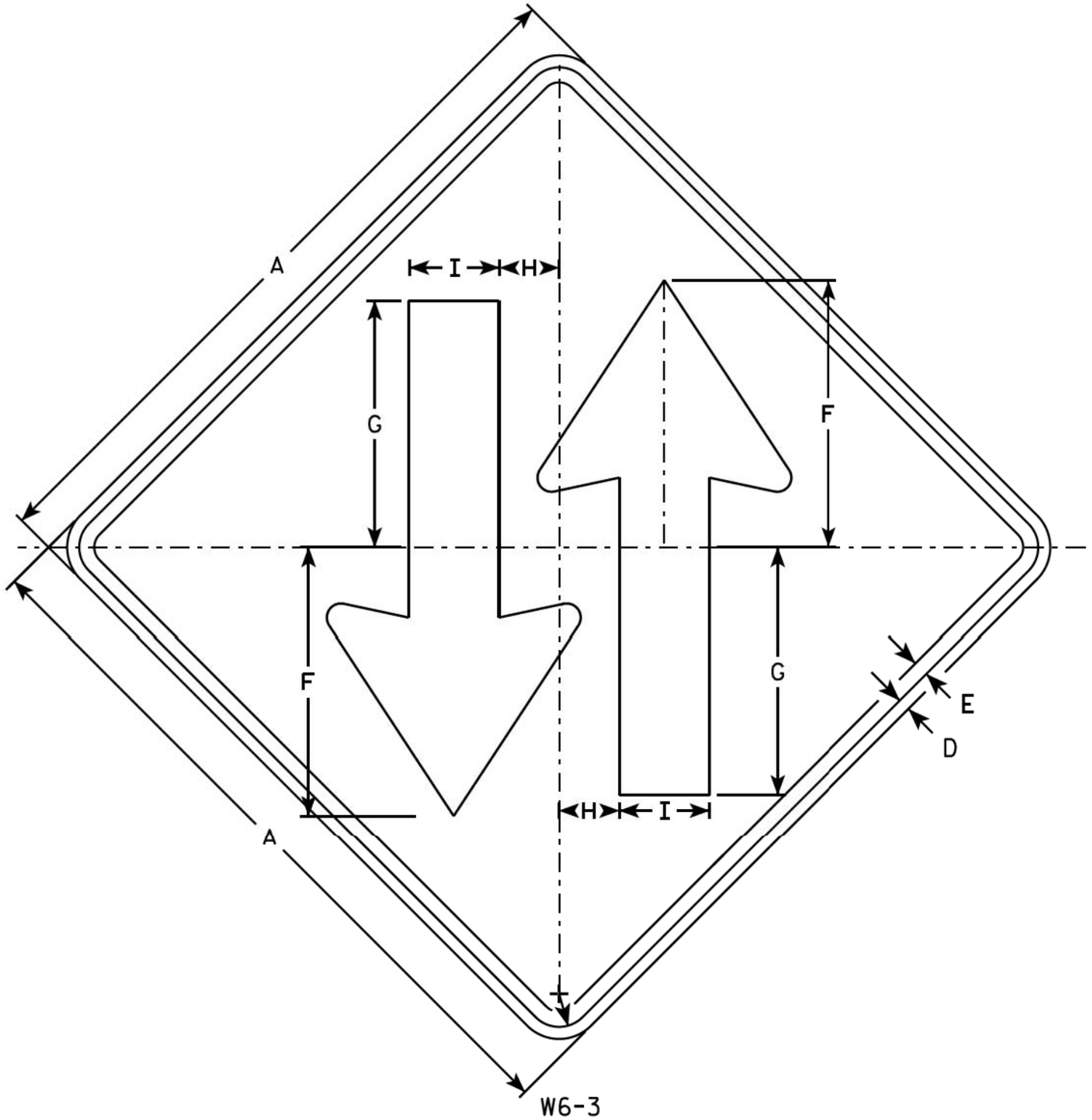
STANDARD SIGN
W6-1 & W6-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 03/12/13 PLATE NO. W6-1.14

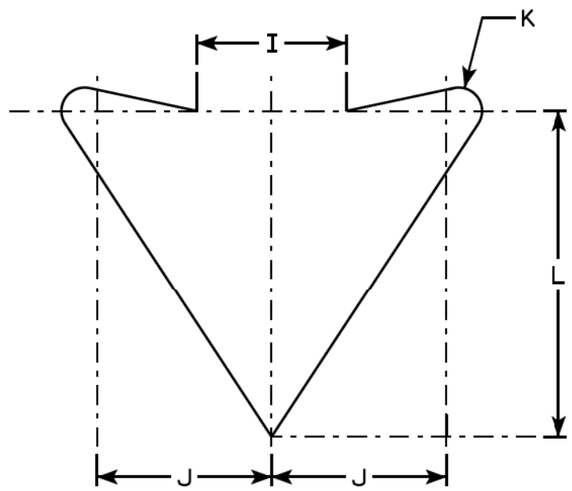
PROJECT NO: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	SIGN DETAILS	SHEET NO: 263	E



W6-3

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 - 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	30		1 3/8	1/2	5/8	11 1/8	10 1/4	2 1/2	3 3/4	4 3/8	5/8	8 1/4															6.25
2S	36		1 5/8	5/8	3/4	13 3/8	12 1/4	3	4 1/2	5 1/4	3/4	9 7/8															9.0
2M	36		1 5/8	5/8	3/4	13 3/8	12 1/4	3	4 1/2	5 1/4	3/4	9 7/8															9.0
3																											
4	48		2 1/4	3/4	1	17 3/4	16 3/8	4	6	7	1	13 1/8															16.0
5	48		2 1/4	3/4	1	17 3/4	16 3/8	4	6	7	1	13 1/8															16.0

STANDARD SIGN
W6-3

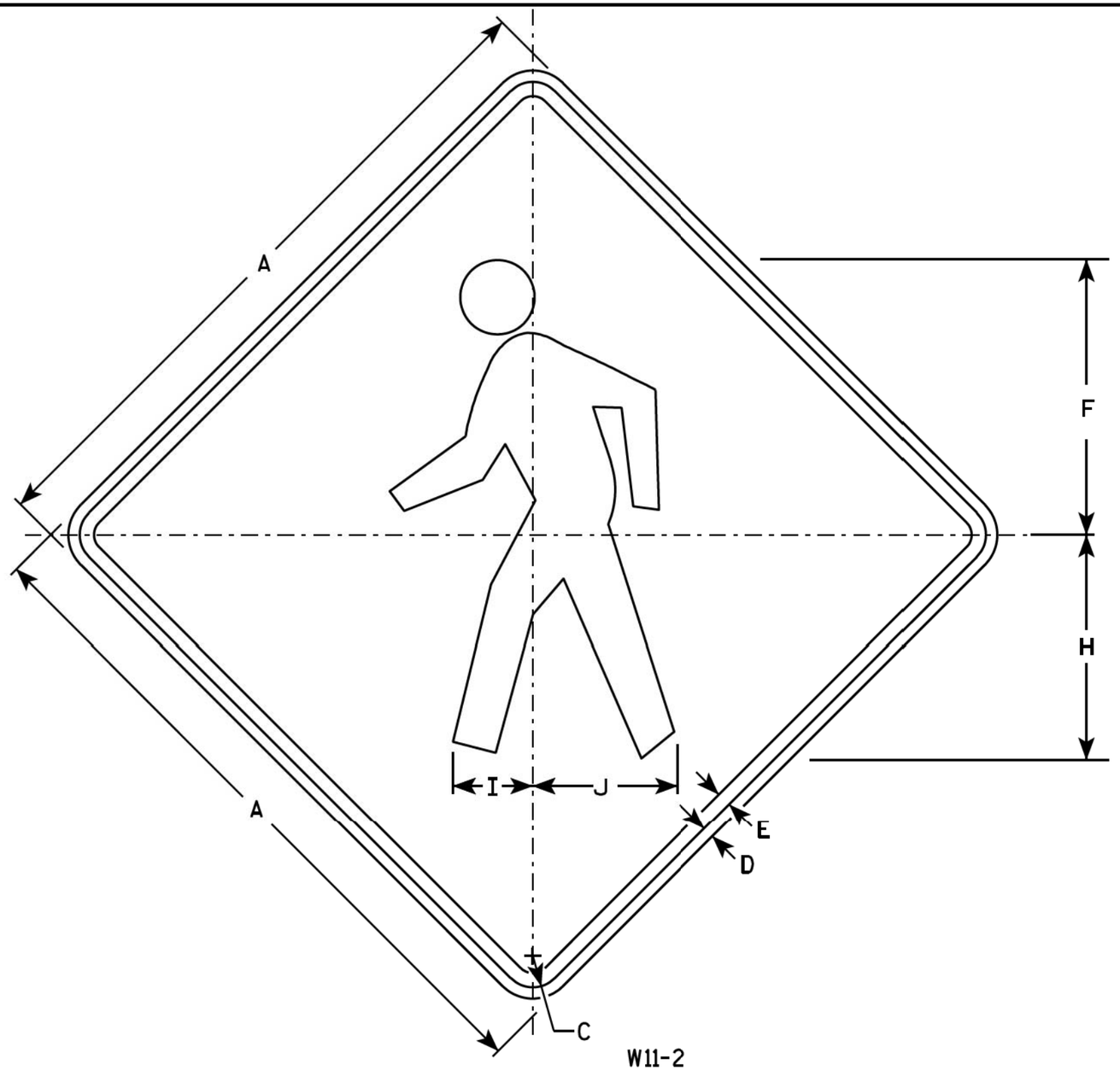
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/10/16 PLATE 16-3.11

PROJECT NO: 2723-00-71 | HWY: MOORLAND RD | COUNTY: WAUKESHA | SIGN DETAILS | SHEET NO: E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W63.DGN PLOT DATE : 10-MAR-2016 14:01 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 6.080757:1.000000 WISDOT/CADDS SHEET 42



W11-2

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.

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	9 3/4		7 7/8	2 7/8	5 1/8																	4.0
2S	30		1 3/8	1/2	5/8	12 1/8		9 7/8	3 1/2	6 3/8																	6.25
2M	36		1 5/8	5/8	3/4	14 1/2		11 7/8	4 1/4	7 5/8																	9.0
3	36		1 5/8	5/8	3/4	14 1/2		11 7/8	4 1/4	7 5/8																	9.0
4	48		2 1/4	3/4	1	19 3/8		15 3/4	5 5/8	10 1/4																	16.0
5																											

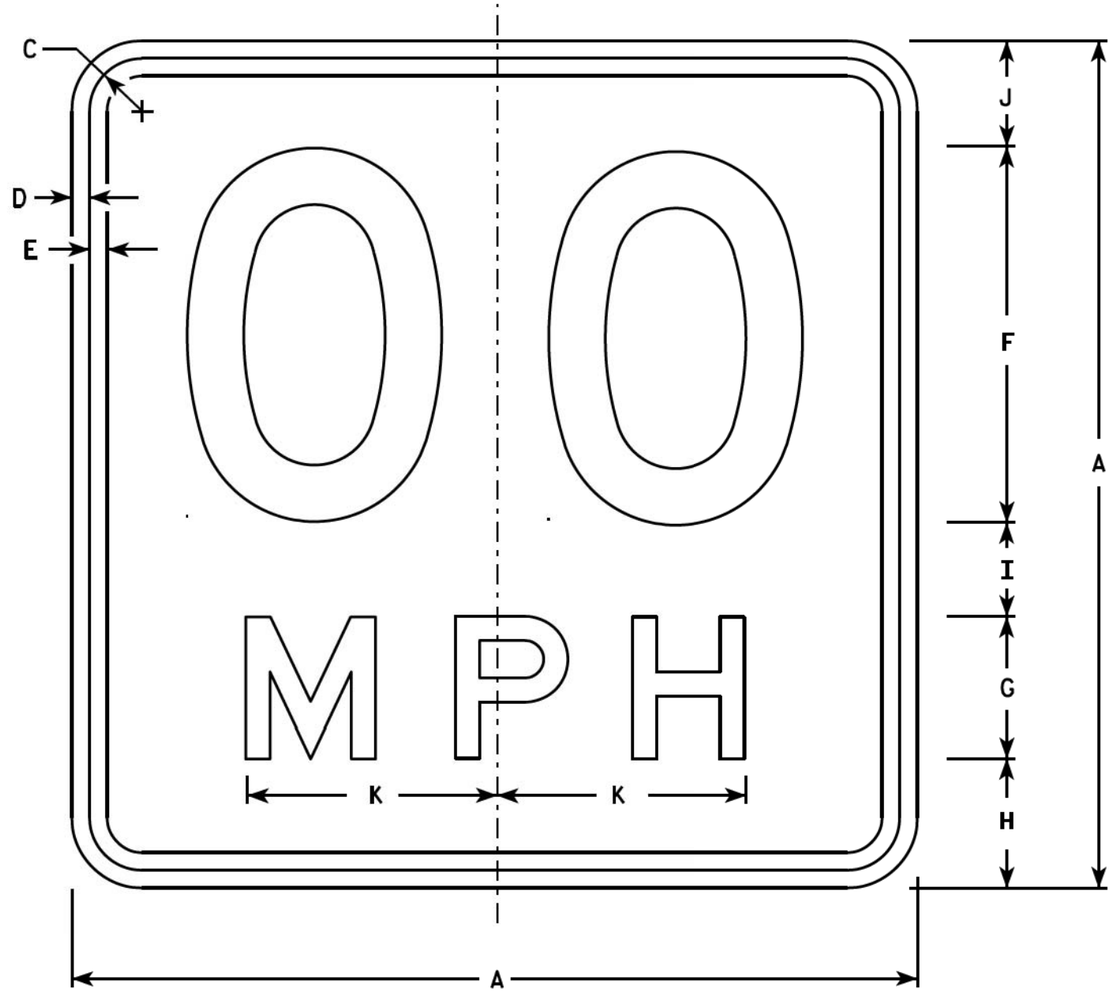
STANDARD SIGN
W11-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/7/10 PLATE NO. W11-2.7

PROJECT NO: 2723-00-71 | HWY: MOORLAND RD | COUNTY: WAUKESHA | SIGN DETAILS | SHEET NO: 265 | E



W13-1

* For 30" x 30" Warning Signs, use 18" x 18" W13-1 signs.
For 36" x 36" Warning Signs, use 24" x 24" W13-1 signs.

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. 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	18		1 1/8	3/8	3/8	8	3	2 3/4	2	2 1/4	5 3/8																2.25
*	2S	18		1 1/8	3/8	3/8	8	3	2 3/4	2	2 1/4	5 3/8																2.25
*	2M	18		1 1/8	3/8	3/8	8	3	2 3/4	2	2 1/4	5 3/8																2.25
	3	24		1 1/8	3/8	1/2	10	4	4	2 3/4	3 1/4	6 5/8																4.00
	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

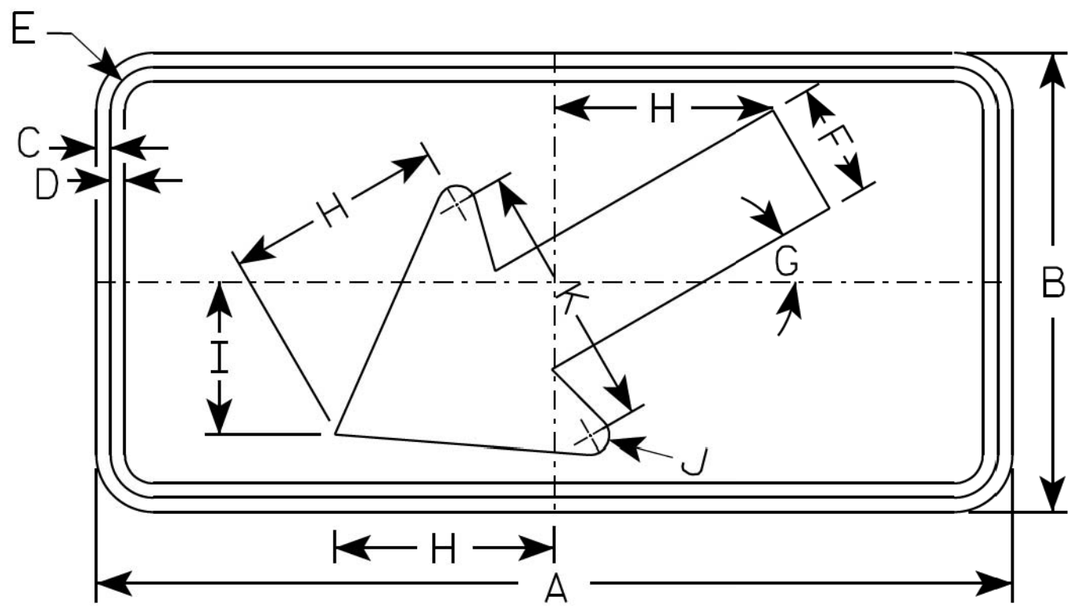
STANDARD SIGN
W13-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/31/12 PLATE NO. W13-1.16

PROJECT NO: 2723-00-71 | HWY: MOORLAND RD | COUNTY: WAUKESHA | SIGN DETAILS | SHEET NO: 266 | E



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: 2723-00-71	HWY: MOORLAND RD	COUNTY: WAUKESHA	SIGN DETAILS	SHEET NO: 267	E

DIVISION 1 MOORLAND ROAD

STATION	Real Station	Distance	AREA (SF)				Incremental Vol (CY) (Unadjusted)				Cumulative Vol (CY)				Mass Ordinate
			Cut	Salvaged / Unusable Pavement Material	Fill	EBS	Cut	Salvaged / Unusable Pavement Material	Fill	EBS	Cut	Expanded Fill	Expanded EBS Backfill	Reduced EBS In Fill	
							Note 1	Note 2	Note 3		1.0	1.2	1.3 Note 4	0.8 Note 5	Note 6
152+42 AH	15242.00	0.00	6.84	0.00	14.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
152+50	15250.00	8.00	11.43	0.00	51.34	0.00	2.71	0.00	9.69	0.00	2.71	11.63	0.00	0.00	-8.92
153+00	15300.00	50.00	32.23	0.00	116.03	0.00	31.17	0.00	112.00	0.00	31.17	134.40	0.00	0.00	-103.23
153+50	15350.00	50.00	42.97	0.00	51.97	0.00	69.63	0.00	155.56	0.00	100.80	321.07	0.00	0.00	-220.26
154+00	15400.00	50.00	47.27	0.00	43.10	0.00	83.56	0.00	88.03	0.00	184.36	426.70	0.00	0.00	-242.34
154+50	15450.00	50.00	48.06	0.00	54.82	0.00	88.27	0.00	90.67	0.00	272.63	535.50	0.00	0.00	-262.87
155+00	15500.00	50.00	52.68	0.00	54.59	0.00	93.28	0.00	101.31	0.00	365.90	657.07	0.00	0.00	-291.16
155+50	15550.00	50.00	58.37	0.00	57.53	0.00	102.82	0.00	103.81	0.00	468.73	781.64	0.00	0.00	-312.92
156+00	15600.00	50.00	58.83	0.00	69.50	0.00	108.52	0.00	117.62	0.00	577.25	922.79	0.00	0.00	-345.54
156+50	15650.00	50.00	58.32	0.00	80.46	0.00	108.47	0.00	138.85	0.00	685.72	1089.41	0.00	0.00	-403.69
157+00	15700.00	50.00	62.83	0.00	79.58	0.00	112.18	0.00	148.19	0.00	797.90	1267.23	0.00	0.00	-469.34
157+50	15750.00	50.00	69.83	0.00	75.72	0.00	122.83	0.00	143.80	0.00	920.73	1439.79	0.00	0.00	-519.06
158+00	15800.00	50.00	69.57	0.00	74.44	0.00	129.07	0.00	139.04	0.00	1049.80	1606.63	0.00	0.00	-556.83
158+50	15850.00	50.00	83.37	0.00	60.10	0.00	141.61	0.00	124.57	0.00	1191.41	1756.12	0.00	0.00	-564.71
159+00	15900.00	50.00	102.81	0.00	50.95	0.00	172.39	0.00	102.82	0.00	1363.80	1879.51	0.00	0.00	-515.71
159+50	15950.00	50.00	123.44	0.00	48.67	0.00	209.49	0.00	92.24	0.00	1573.29	1990.20	0.00	0.00	-416.91
160+00	16000.00	50.00	154.97	0.00	27.18	0.00	257.79	0.00	70.23	0.00	1831.08	2074.48	0.00	0.00	-243.40
160+50	16050.00	50.00	198.37	0.00	8.07	0.00	327.17	0.00	32.64	0.00	2158.25	2113.64	0.00	0.00	44.60
161+00	16100.00	50.00	196.59	0.00	0.00	0.00	365.70	0.00	7.47	0.00	2523.95	2122.61	0.00	0.00	401.34
161+50	16150.00	50.00	180.62	0.00	0.00	0.00	349.27	0.00	0.00	0.00	2873.22	2122.61	0.00	0.00	750.61
162+00	16200.00	50.00	181.23	0.00	172.40	0.00	335.05	0.00	159.63	0.00	3208.27	2314.17	0.00	0.00	894.10
162+50	16250.00	50.00	690.97	0.00	90.18	0.00	807.59	0.00	243.13	0.00	4015.86	2605.92	0.00	0.00	1409.94
163+00	16300.00	50.00	339.33	0.00	107.11	0.00	953.98	0.00	182.68	0.00	4969.84	2825.13	0.00	0.00	2144.71
163+50	16350.00	50.00	206.77	0.00	134.81	0.00	505.65	0.00	224.00	0.00	5475.49	3093.93	0.00	0.00	2381.55
164+00	16400.00	50.00	248.65	0.00	74.57	0.00	421.69	0.00	193.87	0.00	5897.17	3326.58	0.00	0.00	2570.60
164+50	16450.00	50.00	183.10	0.00	34.28	0.00	399.77	0.00	100.79	0.00	6296.94	3447.52	0.00	0.00	2849.42
165+00	16500.00	50.00	145.70	0.00	29.61	0.00	304.44	0.00	59.16	0.00	6601.39	3518.51	0.00	0.00	3082.87
165+50	16550.00	50.00	108.45	0.00	24.42	0.00	235.32	0.00	50.03	0.00	6836.71	3578.54	0.00	0.00	3258.17
166+00	16600.00	50.00	112.95	0.00	20.51	0.00	205.00	0.00	41.60	0.00	7041.71	3628.47	0.00	0.00	3413.24
166+50	16650.00	50.00	107.85	0.00	15.66	0.00	204.44	0.00	33.49	0.00	7246.15	3668.66	0.00	0.00	3577.50
167+00	16700.00	50.00	107.26	0.00	31.04	0.00	199.18	0.00	43.24	0.00	7445.33	3720.54	0.00	0.00	3724.79
167+50	16750.00	50.00	97.75	0.00	22.32	0.00	189.82	0.00	49.41	0.00	7635.15	3779.83	0.00	0.00	3855.32
168+00	16800.00	50.00	92.31	0.00	27.15	0.00	175.98	0.00	45.81	0.00	7811.14	3834.80	0.00	0.00	3976.34
168+50	16850.00	50.00	89.28	0.00	30.44	0.00	168.14	0.00	53.32	0.00	7979.27	3898.79	0.00	0.00	4080.49
169+00	16900.00	50.00	89.63	0.00	26.47	0.00	165.66	0.00	52.69	0.00	8144.93	3962.02	0.00	0.00	4182.91
169+50	16950.00	50.00	89.47	0.00	25.37	0.00	165.83	0.00	48.00	0.00	8310.77	4019.62	0.00	0.00	4291.14
170+00	17000.00	50.00	91.77	0.00	27.66	0.00	167.81	0.00	49.10	0.00	8478.58	4078.54	0.00	0.00	4400.04
170+50	17050.00	50.00	89.25	0.00	29.83	0.00	167.61	0.00	53.23	0.00	8646.19	4142.42	0.00	0.00	4503.77
171+00	17100.00	50.00	85.84	0.00	36.64	0.00	162.12	0.00	61.55	0.00	8808.31	4216.28	0.00	0.00	4592.03
171+50	17150.00	50.00	85.86	0.00	35.58	0.00	158.98	0.00	66.87	0.00	8967.29	4296.52	0.00	0.00	4670.77
172+00	17200.00	50.00	88.25	0.00	34.15	0.00	161.21	0.00	64.56	0.00	9128.51	4374.00	0.00	0.00	4754.51
172+50	17250.00	50.00	86.01	0.00	35.37	0.00	161.35	0.00	64.37	0.00	9289.86	4451.24	0.00	0.00	4838.61
173+00	17300.00	50.00	86.14	0.00	38.58	0.00	159.40	0.00	68.47	0.00	9449.26	4533.41	0.00	0.00	4915.85
173+50	17350.00	50.00	83.17	0.00	48.73	0.00	156.77	0.00	80.84	0.00	9606.02	4630.42	0.00	0.00	4975.60
174+00	17400.00	50.00	81.47	0.00	41.23	0.00	152.44	0.00	83.30	0.00	9758.47	4730.38	0.00	0.00	5028.09
174+50	17450.00	50.00	79.57	0.00	33.25	0.00	149.11	0.00	68.96	0.00	9907.58	4813.13	0.00	0.00	5094.45

DIVISION 1 MOORLAND ROAD

STATION	Real Station	Distance	AREA (SF)				Incremental Vol (CY) (Unadjusted)				Cumulative Vol (CY)				Mass Ordinate
			Cut	Salvaged / Unusable Pavement Material	Fill	EBS	Cut	Salvaged / Unusable Pavement Material	Fill	EBS	Cut 1.0	Expanded Fill 1.2	Expanded EBS Backfill 1.3	Reduced EBS In Fill 0.8	
							Note 1	Note 2	Note 3				Note 4	Note 5	Note 6
175+00	17500.00	50.00	85.95	0.00	61.55	0.00	153.26	0.00	87.78	0.00	10060.84	4918.47	0.00	0.00	5142.37
175+50	17550.00	50.00	84.51	0.00	50.88	0.00	157.83	0.00	104.10	0.00	10218.67	5043.39	0.00	0.00	5175.28
176+00	17600.00	50.00	83.23	0.00	43.05	0.00	155.31	0.00	86.97	0.00	10373.99	5147.76	0.00	0.00	5226.23
176+50	17650.00	50.00	80.15	0.00	38.13	0.00	151.28	0.00	75.17	0.00	10525.27	5237.96	0.00	0.00	5287.31
177+00	17700.00	50.00	80.89	0.00	35.38	0.00	149.11	0.00	68.06	0.00	10674.38	5319.63	0.00	0.00	5354.74
177+50	17750.00	50.00	82.18	0.00	33.13	0.00	150.99	0.00	63.44	0.00	10825.37	5395.76	0.00	0.00	5429.61
178+00	17800.00	50.00	86.07	0.00	34.07	0.00	155.79	0.00	62.22	0.00	10981.15	5470.42	0.00	0.00	5510.73
178+50	17850.00	50.00	84.26	0.00	32.90	0.00	157.71	0.00	62.01	0.00	11138.87	5544.83	0.00	0.00	5594.03
179+00	17900.00	50.00	86.25	0.00	33.99	0.00	157.88	0.00	61.94	0.00	11296.75	5619.16	0.00	0.00	5677.59
179+50	17950.00	50.00	88.69	0.00	33.51	0.00	161.98	0.00	62.50	0.00	11458.73	5694.16	0.00	0.00	5764.57
180+00	18000.00	50.00	89.01	0.00	31.72	0.00	164.54	0.00	60.40	0.00	11623.27	5766.63	0.00	0.00	5856.63
180+50	18050.00	50.00	85.46	0.00	35.28	0.00	161.55	0.00	62.04	0.00	11784.81	5841.08	0.00	0.00	5943.73
181+00	18100.00	50.00	84.64	0.00	33.83	0.00	157.50	0.00	63.99	0.00	11942.31	5917.87	0.00	0.00	6024.45
181+50	18150.00	50.00	85.94	0.00	31.60	0.00	157.94	0.00	60.58	0.00	12100.26	5990.57	0.00	0.00	6109.69
182+00	18200.00	50.00	87.25	0.00	30.71	0.00	160.36	0.00	57.69	0.00	12260.62	6059.80	0.00	0.00	6200.82
182+50	18250.00	50.00	91.49	0.00	28.02	0.00	165.50	0.00	54.38	0.00	12426.12	6125.06	0.00	0.00	6301.06
183+00	18300.00	50.00	98.84	0.00	32.57	0.00	176.23	0.00	56.10	0.00	12602.35	6192.38	0.00	0.00	6409.97
183+50	18350.00	50.00	103.18	0.00	22.26	0.00	187.06	0.00	50.77	0.00	12789.40	6253.30	0.00	0.00	6536.10
184+00	18400.00	50.00	107.54	0.00	22.12	0.00	195.11	0.00	41.09	0.00	12984.52	6302.61	0.00	0.00	6681.90
184+50	18450.00	50.00	120.45	0.00	15.09	0.00	211.10	0.00	34.45	0.00	13195.62	6343.96	0.00	0.00	6851.66
185+00	18500.00	50.00	133.85	0.00	15.15	0.00	235.46	0.00	28.00	0.00	13431.08	6377.56	0.00	0.00	7053.52
185+50	18550.00	50.00	149.65	0.00	14.77	0.00	262.50	0.00	27.70	0.00	13693.58	6410.80	0.00	0.00	7282.78
186+00	18600.00	50.00	167.21	0.00	9.56	0.00	293.39	0.00	22.53	0.00	13986.97	6437.83	0.00	0.00	7549.14
186+50	18650.00	50.00	184.98	0.00	10.73	0.00	326.10	0.00	18.79	0.00	14313.07	6460.38	0.00	0.00	7852.69
187+00	18700.00	50.00	191.36	0.00	12.34	0.00	348.46	0.00	21.36	0.00	14661.53	6486.01	0.00	0.00	8175.52
187+50	18750.00	50.00	189.60	0.00	12.27	0.00	352.74	0.00	22.79	0.00	15014.27	6513.36	0.00	0.00	8500.92
188+00	18800.00	50.00	170.07	0.00	14.91	0.00	333.03	0.00	25.17	0.00	15347.30	6543.56	0.00	0.00	8803.75
188+50	18850.00	50.00	157.64	0.00	22.00	0.00	303.44	0.00	34.18	0.00	15650.74	6584.57	0.00	0.00	9066.17
189+00	18900.00	50.00	144.85	0.00	30.90	0.00	280.08	0.00	48.98	0.00	15930.82	6643.34	0.00	0.00	9287.48
189+50	18950.00	50.00	161.48	0.00	0.00	0.00	283.64	0.00	28.61	0.00	16214.46	6677.68	0.00	0.00	9536.78
190+00	19000.00	50.00	115.38	0.00	0.77	0.00	256.35	0.00	0.71	0.00	16470.81	6678.53	0.00	0.00	9792.28
190+50	19050.00	50.00	110.67	0.00	39.55	0.00	209.31	0.00	37.33	0.00	16680.12	6723.33	0.00	0.00	9956.78
191+00	19100.00	50.00	113.01	0.00	29.51	0.00	207.11	0.00	63.94	0.00	16887.23	6800.07	0.00	0.00	10087.16
191+50	19150.00	50.00	122.93	0.00	26.36	0.00	218.46	0.00	51.73	0.00	17105.69	6862.14	0.00	0.00	10243.55
192+00	19200.00	50.00	131.74	0.00	31.40	0.00	235.81	0.00	53.48	0.00	17341.50	6926.32	0.00	0.00	10415.17
192+50	19250.00	50.00	111.51	0.00	35.55	0.00	225.23	0.00	61.99	0.00	17566.73	7000.71	0.00	0.00	10566.02
193+00	19300.00	50.00	118.74	0.00	35.61	0.00	213.19	0.00	65.89	0.00	17779.92	7079.78	0.00	0.00	10700.15
193+50	19350.00	50.00	165.01	0.00	31.08	0.00	262.73	0.00	61.75	0.00	18042.65	7153.88	0.00	0.00	10888.78
194+00	19400.00	50.00	190.84	0.00	35.94	0.00	329.49	0.00	62.06	0.00	18372.15	7228.34	0.00	0.00	11143.80
194+50	19450.00	50.00	193.77	0.00	33.76	0.00	356.12	0.00	64.54	0.00	18728.27	7305.79	0.00	0.00	11422.48
195+00 BK	19500.00	50.00	205.13	0.00	6.40	0.00	369.35	0.00	37.19	0.00	19097.62	7350.41	0.00	0.00	11747.21
						Column totals	19100.32	0.00	6135.03	0.00					

DIVISION 1 CANDLEWOOD LANE / DURHAM PLACE

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged / Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged / Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.0	Cumulative Vol (CY) Expanded Fill 1.2	Cumulative Vol (CY) Expanded EBS Backfill 1.3 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.8 Note 5	Mass Ordinate Note 6
58+75 AH	5875.00	0.00	96.07	0.00	1.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
59+00	5900.00	25.00	94.29	0.00	2.97	0.00	88.13	0.00	2.16	0.00	88.13	2.59	0.00	0.00	85.54
59+50	5950.00	50.00	235.81	0.00	9.72	0.00	305.65	0.00	11.75	0.00	393.78	16.69	0.00	0.00	377.08
59+53	5953.48	3.48	265.50	0.00	0.00	0.00	32.31	0.00	0.63	0.00	426.08	17.45	0.00	0.00	408.64
59+55 BK	5955.00	1.52	122.06	0.00	0.00	0.00	10.91	0.00	0.00	0.00	436.99	17.45	0.00	0.00	419.55
60+16 AH	6016.00	62.52	346.83	0.00	6.70	0.00	0.00	0.00	0.00	0.00	426.08	17.45	0.00	0.00	408.64
60+50	6050.00	34.00	182.13	0.00	39.69	0.00	333.05	0.00	29.21	0.00	759.13	52.50	0.00	0.00	706.64
61+00	6100.00	50.00	156.49	0.00	5.29	0.00	313.54	0.00	41.65	0.00	1072.67	102.47	0.00	0.00	970.20
61+37 BK	6136.50	36.50	0.59	0.00	0.26	0.00	106.17	0.00	3.75	0.00	1178.84	106.98	0.00	0.00	1071.87
					Column totals		1189.75	0.00	89.15	0.00					

DIVISION 1 SANDALWOOD DRIVE

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged / Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged / Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.0	Cumulative Vol (CY) Expanded Fill 1.2	Cumulative Vol (CY) Expanded EBS Backfill 1.3 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.8 Note 5	Mass Ordinate Note 6
69+15 AH	6914.95	0.00	127.24	0.00	1.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
69+50	6950.00	35.05	158.71	0.00	13.50	0.00	185.60	0.00	9.96	0.00	185.60	11.96	0.00	0.00	173.65
69+63 BK	6962.90	12.90	217.71	0.00	0.00	0.00	89.92	0.00	3.22	0.00	275.53	15.83	0.00	0.00	259.70
70+15 AH	7015.00	0.00	253.99	0.00	17.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
70+50	7050.00	35.00	138.77	0.00	0.80	0.00	254.57	0.00	11.84	0.00	254.57	14.20	0.00	0.00	240.36
70+53	7052.88	2.88	139.40	0.00	1.02	0.00	14.84	0.00	0.10	0.00	269.40	14.32	0.00	0.00	255.08
70+53	7052.88	0.00	54.02	0.00	0.96	0.00	0.00	0.00	0.00	0.00	269.40	14.32	0.00	0.00	255.08
70+63 BK	7063.08	10.20	48.50	0.00	0.00	0.00	19.36	0.00	0.25	0.00	288.77	14.62	0.00	0.00	274.15
					Column totals		564.29	0.00	25.37	0.00					

DIVISION 2 DURHAM DRIVE

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged / Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged / Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.0	Cumulative Vol (CY) Expanded Fill 1.2	Cumulative Vol (CY) Expanded EBS Backfill 1.3 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.8 Note 5	Mass Ordinate Note 6
148+35 AH	14835.00	0.00	67.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
148+45	14845.00	10.00	75.11	0.00	1.01	0.00	26.32	0.00	0.19	0.00	26.32	0.22	0.00	0.00	26.09
148+45	14845.00	0.00	70.76	0.00	10.47	0.00	0.00	0.00	0.00	0.00	26.32	0.22	0.00	0.00	26.09
148+50	14850.00	5.00	79.14	0.00	5.25	0.00	13.88	0.00	1.46	0.00	40.20	1.97	0.00	0.00	38.23
149+00	14900.00	50.00	74.05	0.00	9.50	0.00	141.84	0.00	13.66	0.00	182.04	18.36	0.00	0.00	163.68
149+50	14950.00	50.00	87.74	0.00	23.09	0.00	149.81	0.00	30.18	0.00	331.85	54.57	0.00	0.00	277.28
150+00	15000.00	50.00	84.66	0.00	7.75	0.00	159.63	0.00	28.56	0.00	491.48	88.84	0.00	0.00	402.64
150+50	15050.00	50.00	45.80	0.00	11.40	0.00	120.80	0.00	17.73	0.00	612.27	110.12	0.00	0.00	502.16
150+96	15096.00	46.00	18.21	0.00	58.07	0.00	54.53	0.00	59.18	0.00	666.80	181.13	0.00	0.00	485.67
151+01 BK	15101.00	5.00	11.24	0.00	50.51	0.00	2.73	0.00	10.05	0.00	669.53	193.19	0.00	0.00	476.33
Column totals							669.53	0.00	160.99	0.00					

DIVISION 2 WOODS ROAD

STATION		Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged / Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged / Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.00 Note 1	Cumulative Vol (CY) Fill 1.2	Cumulative Vol (CY) Expanded EBS Backfill 1.30 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.80 Note 5	Mass Ordinate Note 6
40+32	AH	4032.00	0.00	58.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
40+50		4050.00	18.00	62.12	0.00	0.00	0.00	40.34	0.00	0.00	0.00	40.34	0.00	0.00	0.00	40.34
41+00		4100.00	50.00	73.16	0.00	16.12	0.00	125.26	0.00	14.93	0.00	165.60	17.91	0.00	0.00	147.68
41+50		4150.00	50.00	73.70	0.00	16.91	0.00	135.98	0.00	30.58	0.00	301.58	54.61	0.00	0.00	246.97
42+00		4200.00	50.00	92.28	0.00	10.56	0.00	153.69	0.00	25.44	0.00	455.26	85.13	0.00	0.00	370.13
42+50		4250.00	50.00	72.21	0.00	5.95	0.00	152.31	0.00	15.29	0.00	607.57	103.48	0.00	0.00	504.09
43+00		4300.00	50.00	62.06	0.00	27.92	0.00	124.32	0.00	31.36	0.00	731.89	141.11	0.00	0.00	590.78
43+12		4312.00	12.00	60.39	0.00	16.85	0.00	27.21	0.00	9.95	0.00	759.10	153.05	0.00	0.00	606.05
43+22	BK	4322.00	10.00	45.52	0.00	0.00	0.00	19.61	0.00	3.12	0.00	778.72	156.79	0.00	0.00	621.92
44+62	AH	4462.00	0.00	4.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
44+75		4475.00	13.00	29.72	0.00	18.46	0.00	8.17	0.00	4.44	0.00	8.17	5.33	0.00	0.00	2.83
45+00		4500.00	25.00	28.76	0.00	99.80	0.00	27.07	0.00	54.75	0.00	35.24	71.03	0.00	0.00	-35.79
45+50		4550.00	50.00	34.41	0.00	43.85	0.00	58.49	0.00	133.01	0.00	93.73	230.64	0.00	0.00	-136.91
46+00		4600.00	50.00	49.24	0.00	23.82	0.00	77.45	0.00	62.66	0.00	171.18	305.83	0.00	0.00	-134.65
46+50		4650.00	50.00	22.76	0.00	22.76	0.00	66.67	0.00	43.13	0.00	237.85	357.59	0.00	0.00	-119.74
46+80	BK	4680.00	30.00	53.74	0.00	2.21	0.00	42.50	0.00	13.87	0.00	280.35	374.24	0.00	0.00	-93.88
							Column totals	1059.07	0.00	442.52	0.00					

DIVISION 2 ROUNDABOUT

STATION	Real Station	Distance	AREA (SF)				Incremental Vol (CY) (Unadjusted)				Cumulative Vol (CY)				Mass Ordinate
			Cut	Salvaged / Unusable Pavement Material	Fill	EBS	Cut	Salvaged / Unusable Pavement Material	Fill	EBS	Cut	Expanded Fill	Expanded EBS Backfill	Reduced EBS In Fill	
											1.0	1.2	1.3	0.8	
							Note 1	Note 2	Note 3				Note 4	Note 5	Note 6
10+00 AH	1000.00	0.00	6.77	0.00	115.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10+50	1050.00	50.00	40.11	0.00	85.01	0.00	43.41	0.00	185.74	0.00	43.41	222.89	0.00	0.00	-179.48
11+00	1100.00	50.00	24.47	0.00	83.38	0.00	59.80	0.00	155.92	0.00	103.20	409.99	0.00	0.00	-306.79
11+50	1150.00	50.00	4.04	0.00	110.60	0.00	26.40	0.00	179.61	0.00	129.60	625.52	0.00	0.00	-495.92
12+00	1200.00	50.00	0.00	0.00	210.27	0.00	3.74	0.00	297.10	0.00	133.34	982.04	0.00	0.00	-848.70
12+50	1250.00	50.00	0.00	0.00	189.23	0.00	0.00	0.00	369.90	0.00	133.34	1425.92	0.00	0.00	-1292.58
12+92 BK	1292.00	42.00	6.76	0.00	115.58	0.00	5.26	0.00	237.07	0.00	138.60	1710.41	0.00	0.00	-1571.81
		Column totals					138.60	0.00	1425.34	0.00					

DIVISION 2 DRIVEWAY

STATION	Real Station	Distance	AREA (SF)				Incremental Vol (CY) (Unadjusted)				Cumulative Vol (CY)				Mass Ordinate
			Cut	Salvaged / Unusable Pavement Material	Fill	EBS	Cut	Salvaged / Unusable Pavement Material	Fill	EBS	Cut	Expanded Fill	Expanded EBS Backfill	Reduced EBS In Fill	
											1.0	1.2	1.3	0.8	
							Note 1	Note 2	Note 3				Note 4	Note 5	Note 6
1+21	121.00	0.00	4.35	0.00	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1+50	150.00	29.00	4.01	0.00	2.55	0.00	4.49	0.00	2.59	0.00	4.49	3.11	0.00	0.00	1.38
2+00	200.00	50.00	15.74	0.00	0.10	0.00	18.29	0.00	2.45	0.00	22.78	6.05	0.00	0.00	16.73
2+28	228.31	28.31	17.77	0.00	0.00	0.00	17.57	0.00	0.05	0.00	40.34	6.11	0.00	0.00	34.23
2+28	228.31	0.00	31.08	0.00	0.25	0.00	0.00	0.00	0.00	0.00	40.34	6.11	0.00	0.00	34.23
2+50	250.00	21.69	0.14	0.00	2.60	0.00	12.54	0.00	1.14	0.00	52.88	7.49	0.00	0.00	45.40
2+50	250.31	0.31	0.03	1.00	3.02	0.00	0.00	0.00	0.03	0.00	52.89	7.53	0.00	0.00	45.36
		Column totals					52.89	0.00	6.27	0.00					

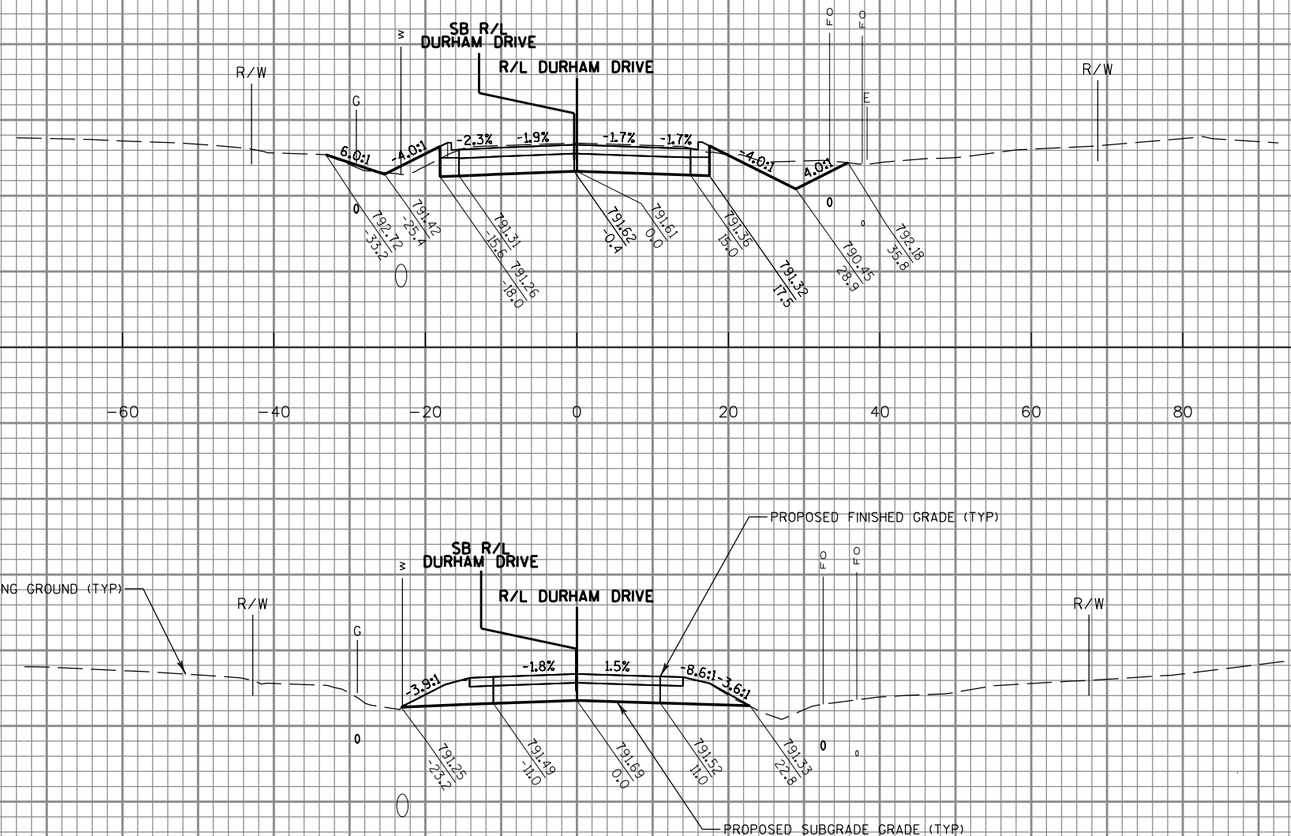
DIVISION 3 MOORLAND ROAD

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged / Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged / Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.0	Cumulative Vol (CY) Expanded Fill 1.2	Cumulative Vol (CY) Expanded EBS Backfill 1.3 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.8 Note 5	Mass Ordinate Note 6
195+00 AH	19500.00	0.00	205.13	0.00	6.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
195+50	19550.00	50.00	213.55	0.00	6.70	0.00	395.46	0.00	12.41	0.00	395.46	14.89	0.00	0.00	380.57
196+00	19600.00	50.00	262.10	0.00	0.00	0.00	440.42	0.00	6.20	0.00	835.88	22.33	0.00	0.00	813.55
196+50	19650.00	50.00	315.59	0.00	0.60	0.00	534.90	0.00	0.56	0.00	1370.78	23.00	0.00	0.00	1347.78
196+75	19675.00	25.00	114.22	0.00	0.00	0.00	198.99	0.00	0.28	0.00	1569.76	23.33	0.00	0.00	1546.43
196+75	19675.00	0.00	83.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
197+00	19700.00	25.00	97.59	0.00	0.00	0.00	84.01	0.00	0.00	0.00	84.01	0.00	0.00	0.00	84.01
197+50	19750.00	50.00	92.65	0.00	0.00	0.00	176.15	0.00	0.00	0.00	260.16	0.00	0.00	0.00	260.16
198+00	19800.00	50.00	77.81	0.00	0.00	0.00	157.83	0.00	0.00	0.00	418.00	0.00	0.00	0.00	418.00
198+50	19850.00	50.00	66.20	0.00	0.00	0.00	133.34	0.00	0.00	0.00	551.34	0.00	0.00	0.00	551.34
199+00	19900.00	50.00	66.27	0.00	0.00	0.00	122.66	0.00	0.00	0.00	674.00	0.00	0.00	0.00	674.00
199+32 BK	19932.00	32.00	21.89	0.00	0.18	0.00	52.24	0.00	0.11	0.00	726.24	0.13	0.00	0.00	726.11
		Column totals					2296.00	0.00	19.55	0.00					

DIVISION 3 PRINCETON DRIVE

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged / Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged / Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.2	Cumulative Vol (CY) Expanded EBS Backfill 1.30 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.80 Note 5	Mass Ordinate Note 6
79+05 AH	7905.00	0.00	127.92	0.00	1.25	0.00	0.00	0.00	1.07	0.00	0.00	0.00	0.00	0.00	0.00
79+37	7937.00	32.00	77.84	0.00	1.49	0.00	121.93	0.00	0.87	0.00	121.93	1.04	0.00	0.00	120.89
79+39 BK	7939.00	2.00	74.18	0.00	0.02	0.00	5.63	0.00	0.00	0.00	127.56	1.04	0.00	0.00	126.52
80+30 AH	8030.00	0.00	159.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	127.56	1.04	0.00	0.00	0.00
80+34	8034.00	4.00	130.03	0.00	4.53	0.00	21.44	0.00	5.94	0.00	149.00	8.17	0.00	0.00	14.31
80+50	8050.00	16.00	148.73	0.00	2.35	0.00	82.60	0.00	2.46	0.00	231.60	11.12	0.00	0.00	93.95
80+67 BK	8067.46	17.46	128.20	0.00	0.30	0.00	89.54	0.00	0.56	0.00	321.14	11.80	0.00	0.00	182.82
		Column totals					321.14	0.00	10.90	0.00					

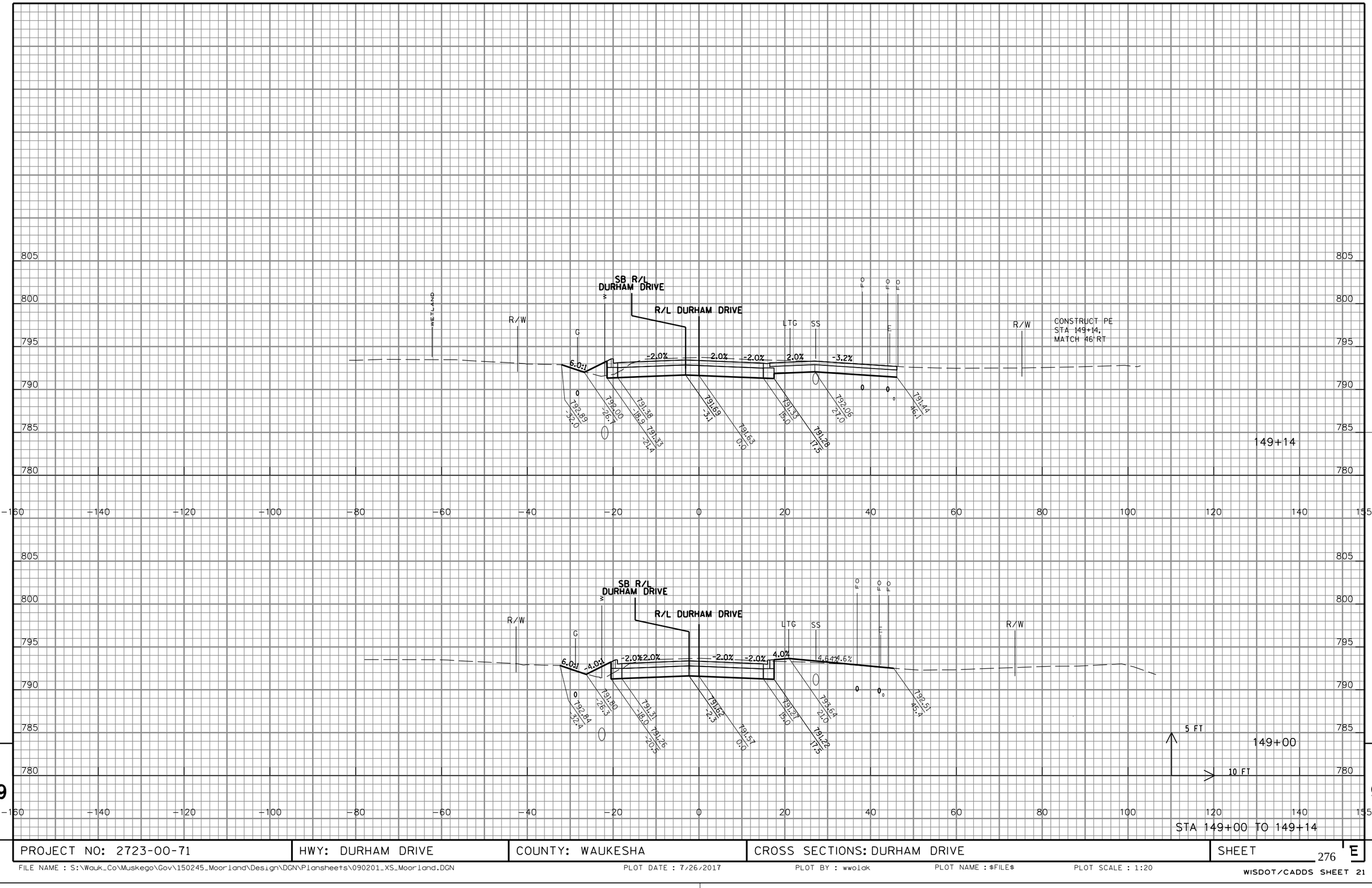
NOTE:
THE LOCATION OF EXISTING UTILITIES AS SHOWN ON THE CROSS SECTIONS IS APPROXIMATE.



PROJECT NO: 2723-00-71	HWY: DURHAM DRIVE	COUNTY: WAUKESHA	CROSS SECTIONS: DURHAM DRIVE	SHEET 275 E

FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\090201_XS_Moorland.DGN PLOT DATE : 7/26/2017 PLOT BY : wwolak PLOT NAME : $FILE$ PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21



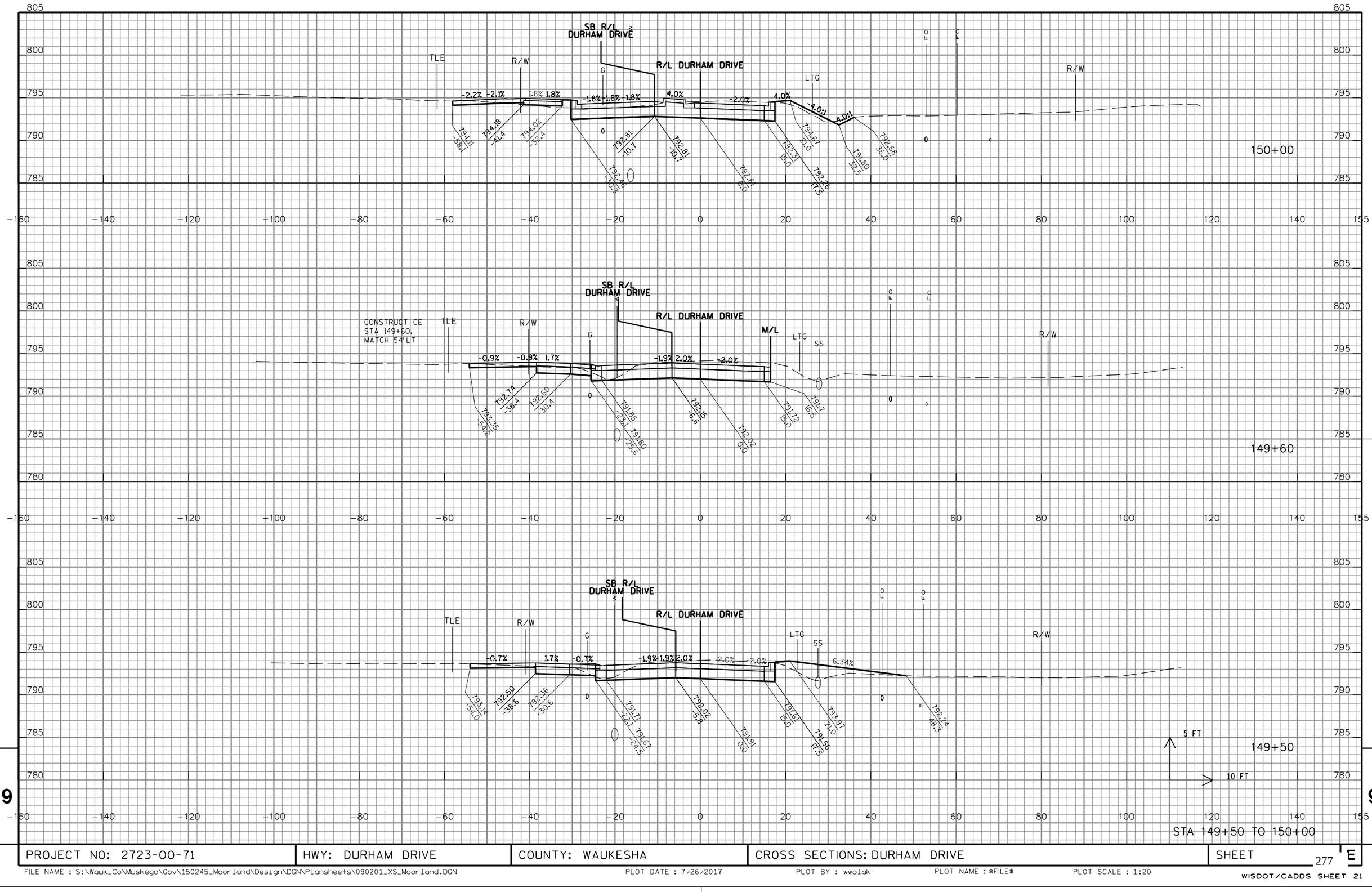
9

9

PROJECT NO: 2723-00-71	HWY: DURHAM DRIVE	COUNTY: WAUKESHA	CROSS SECTIONS: DURHAM DRIVE	SHEET 276 E

FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\090201_XS_Moorland.DGN | PLOT DATE : 7/26/2017 | PLOT BY : wwolak | PLOT NAME : $FILE$ | PLOT SCALE : 1:20

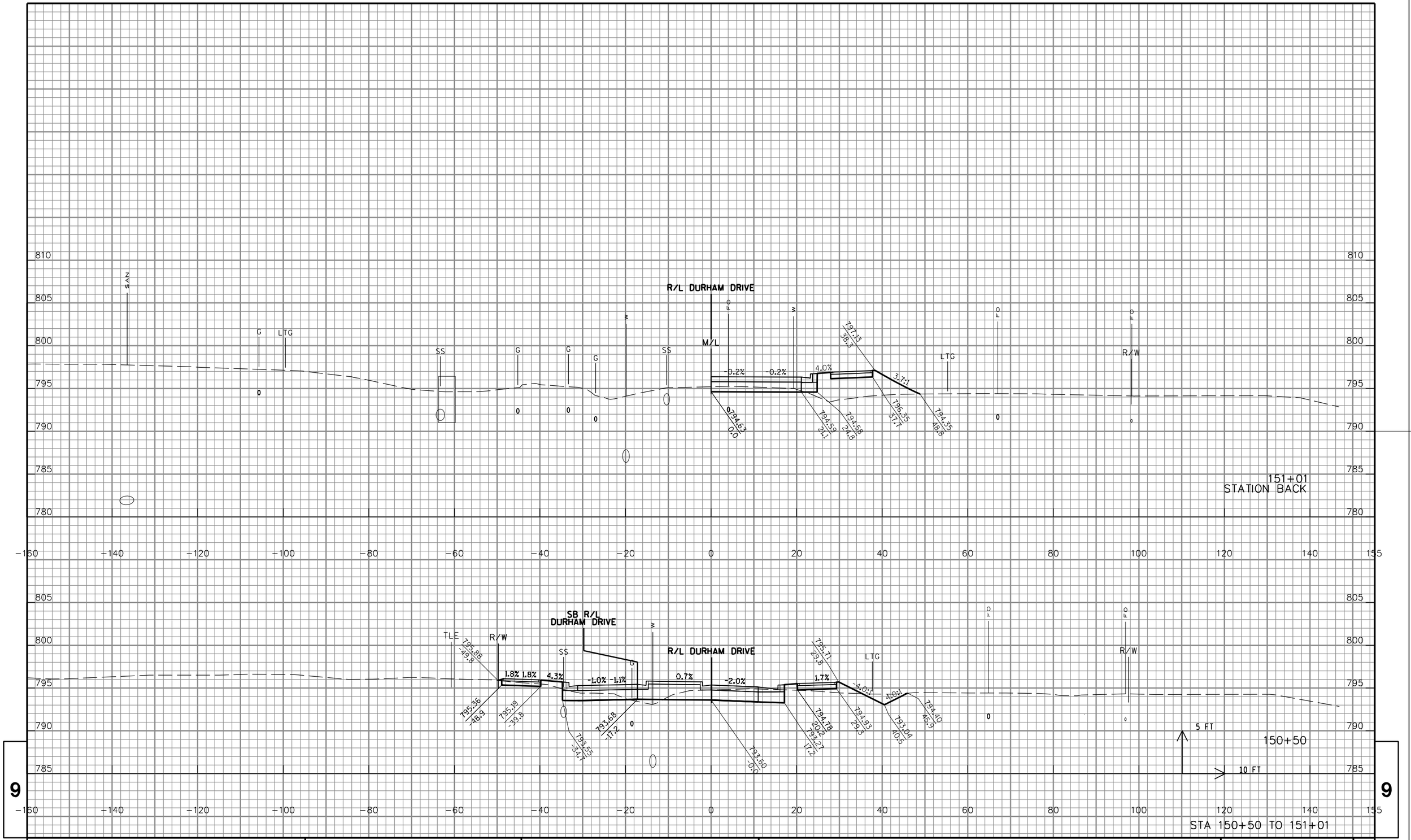
WISDOT/CADDS SHEET 21



PROJECT NO: 2723-00-71	HWY: DURHAM DRIVE	COUNTY: WAUKESHA	CROSS SECTIONS: DURHAM DRIVE	SHEET 277 E

FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\090201_XS_Moorland.DGN | PLOT DATE : 7/26/2017 | PLOT BY : wwolak | PLOT NAME : $FILE$ | PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21



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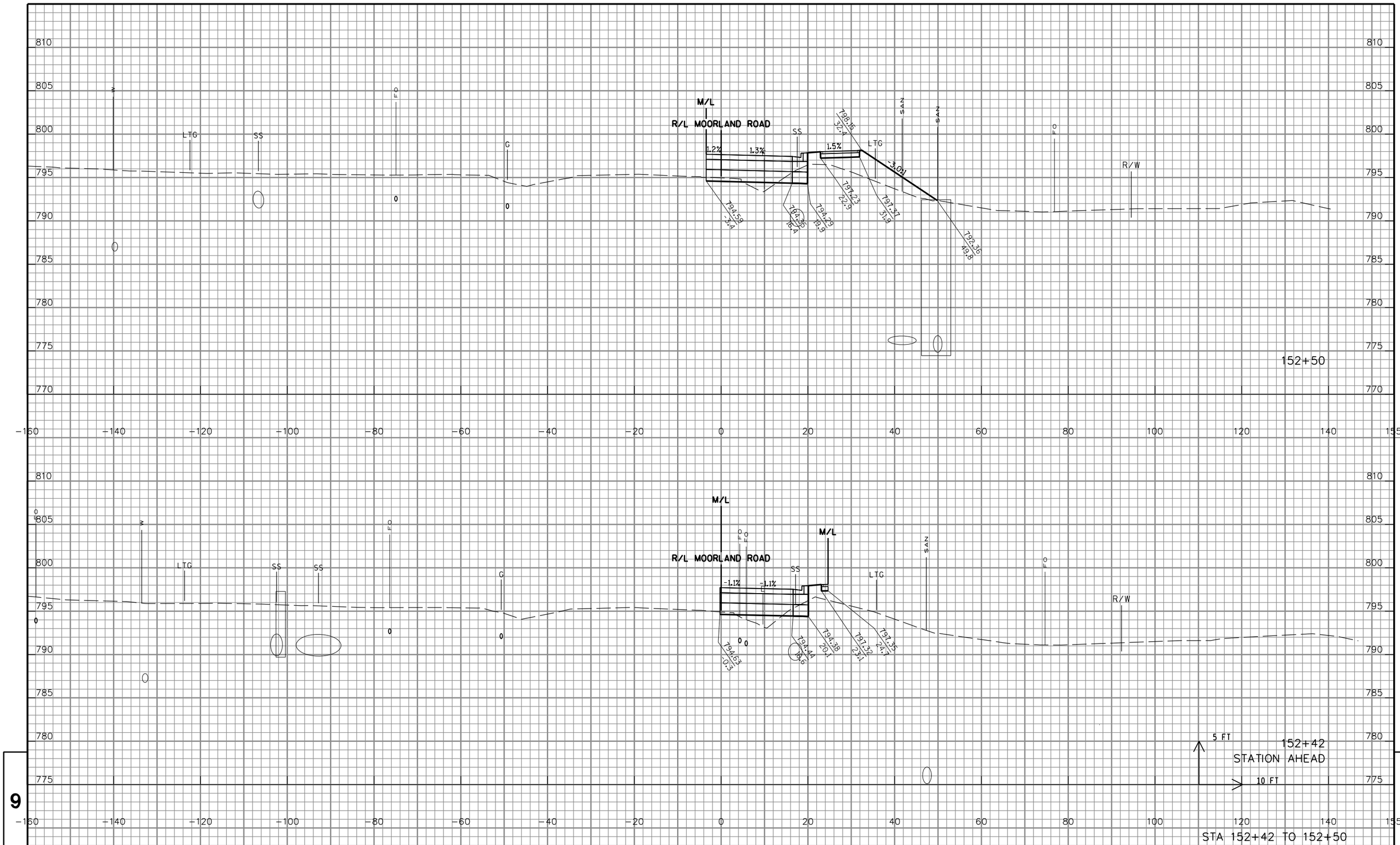
9

PROJECT NO: 2723-00-71	HWY: DURHAM DRIVE	COUNTY: WAUKESHA	CROSS SECTIONS: DURHAM DRIVE	SHEET 278 E

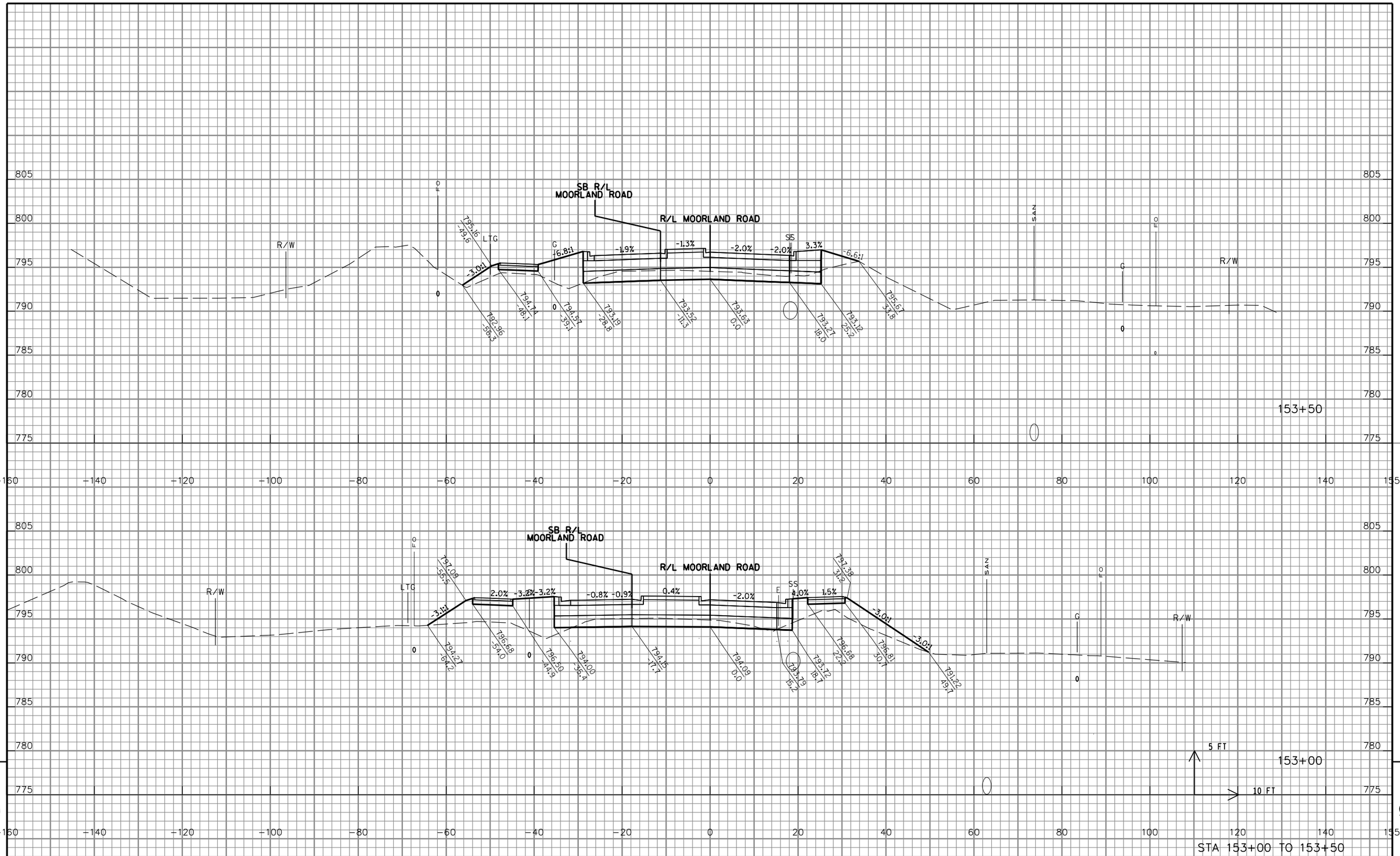
FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\090201_XS_Moorland.DGN | PLOT DATE : 7/26/2017 | PLOT BY : wwolak | PLOT NAME : $FILE$ | PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21



PROJECT NO: 2723-00-71	HWY: MOORLAND ROAD	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD	SHEET 279 E

FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\090201_XS_Moorland.DGN
PLOT DATE : 7/26/2017
PLOT BY : wwolak
PLOT NAME : $FILE$
PLOT SCALE : 1:20
WISDOT/CADDS SHEET 21



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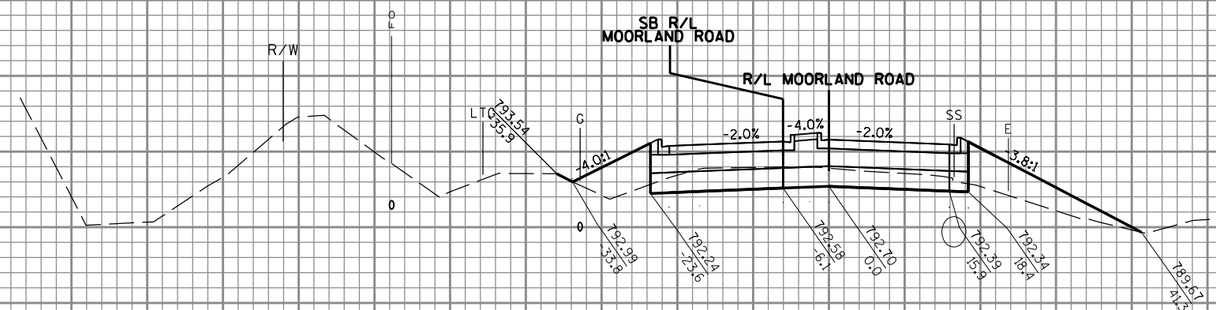
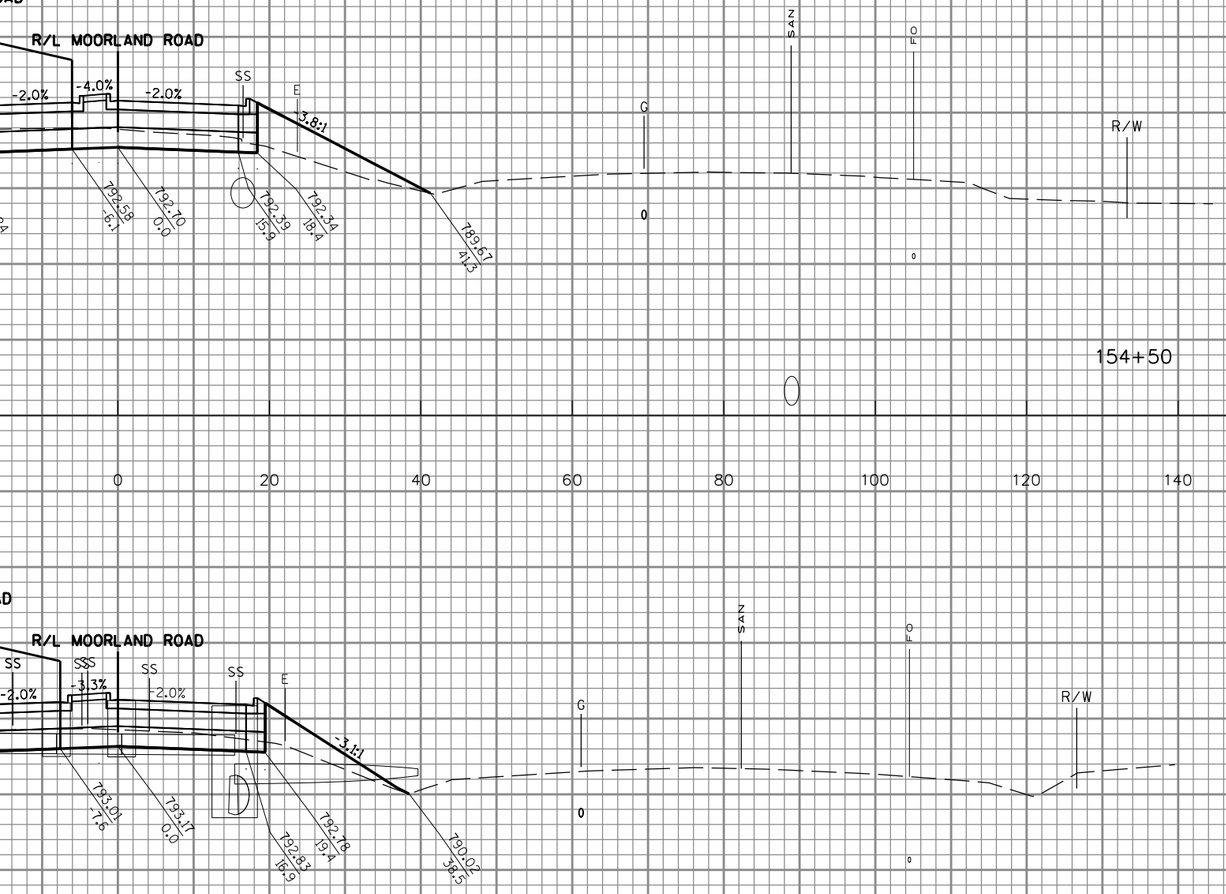
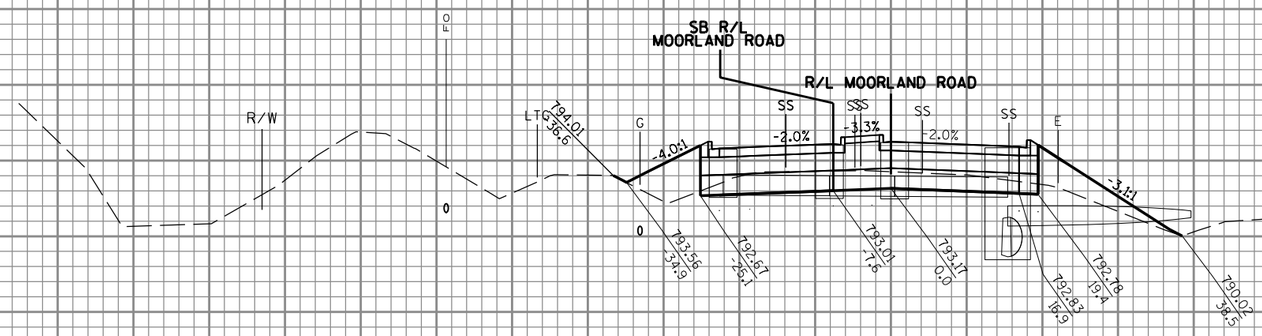
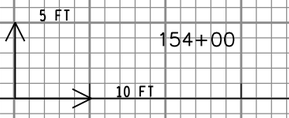
PROJECT NO: 2723-00-71	HWY: MOORLAND ROAD	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD	SHEET 280 E









-160 -140 -120 -100 -80 -60 -40 -20 0 20 40 60 80 100 120 140 155

STA 154+00 TO 154+50

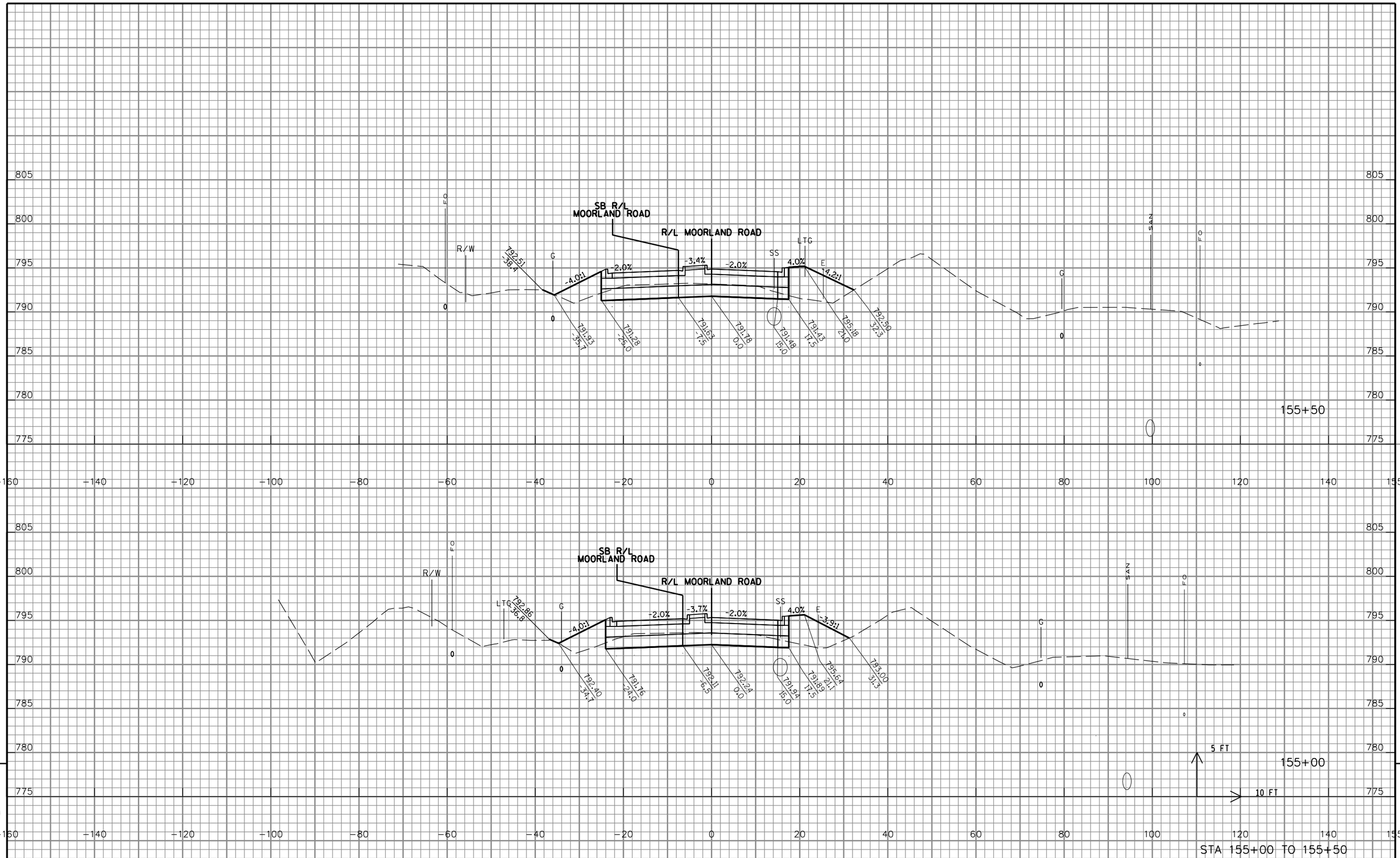
9

9

PROJECT NO: 2723-00-71	HWY: MOORLAND ROAD	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD	SHEET 281 E

FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\090201_XS_Moorland.DGN PLOT DATE : 7/26/2017 PLOT BY : wwolak PLOT NAME : $FILE$ PLOT SCALE : 1:20

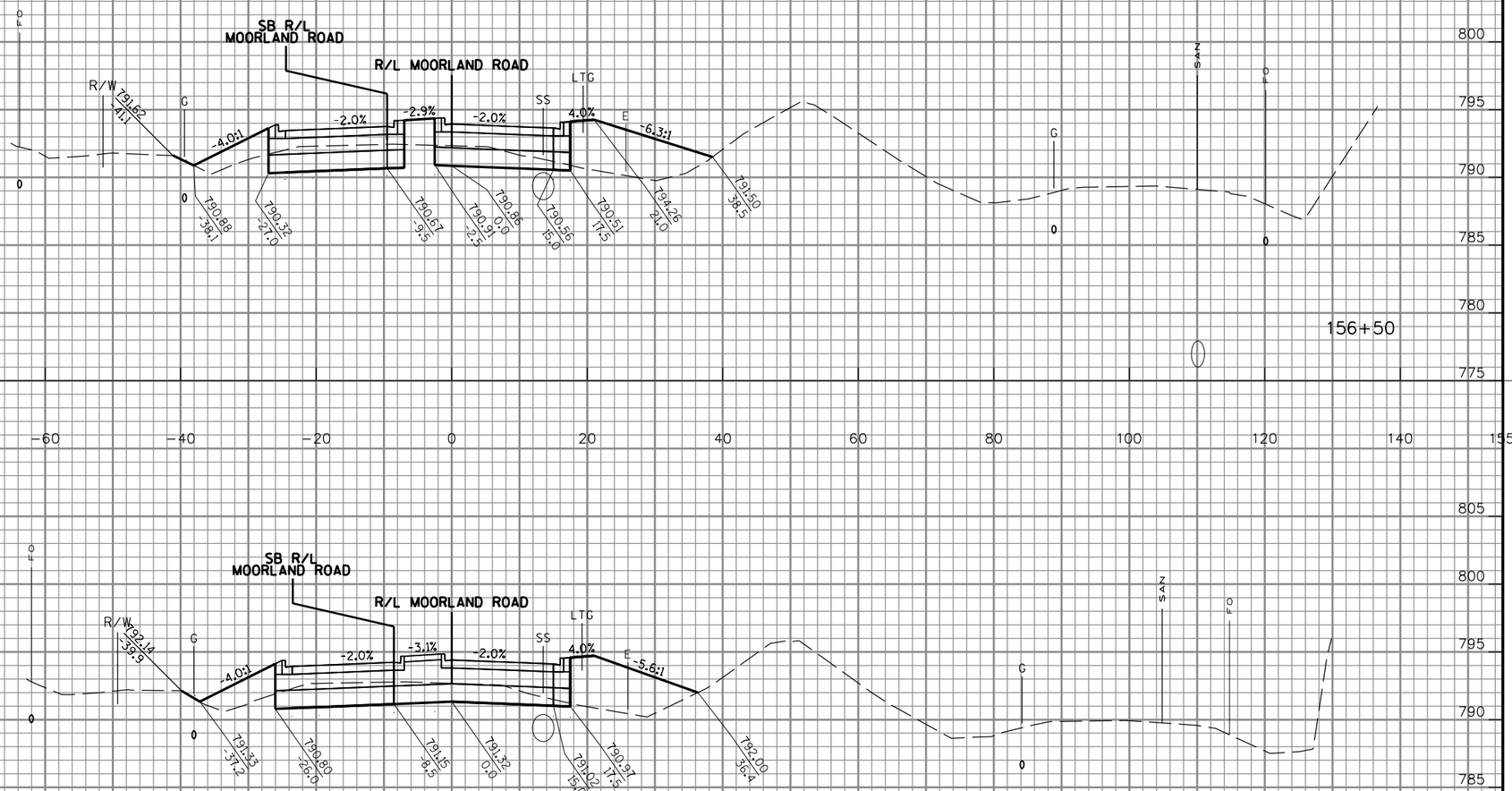
WISDOT/CADDS SHEET 21



PROJECT NO: 2723-00-71	HWY: MOORLAND ROAD	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD	SHEET 282 E

FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\090201_XS_Moorland.DGN PLOT DATE : 7/26/2017 PLOT BY : wwolak PLOT NAME : $FILE$ PLOT SCALE : 1:20

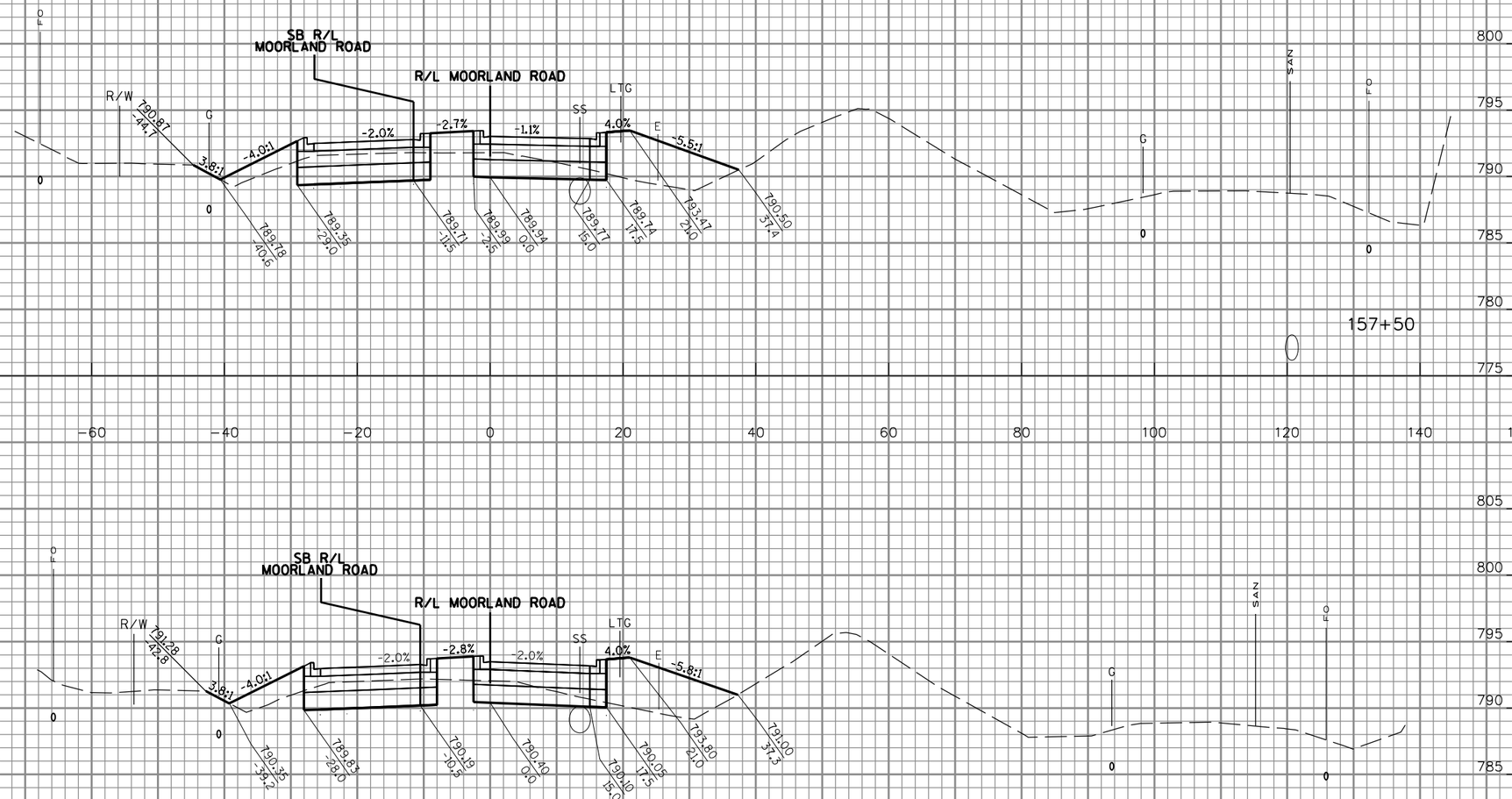
WISDOT/CADDS SHEET 21



PROJECT NO: 2723-00-71	HWY: MOORLAND ROAD	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD	SHEET 283 E

FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\090201_XS_Moorland.DGN | PLOT DATE : 7/26/2017 | PLOT BY : wwolak | PLOT NAME : $FILE$ | PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21



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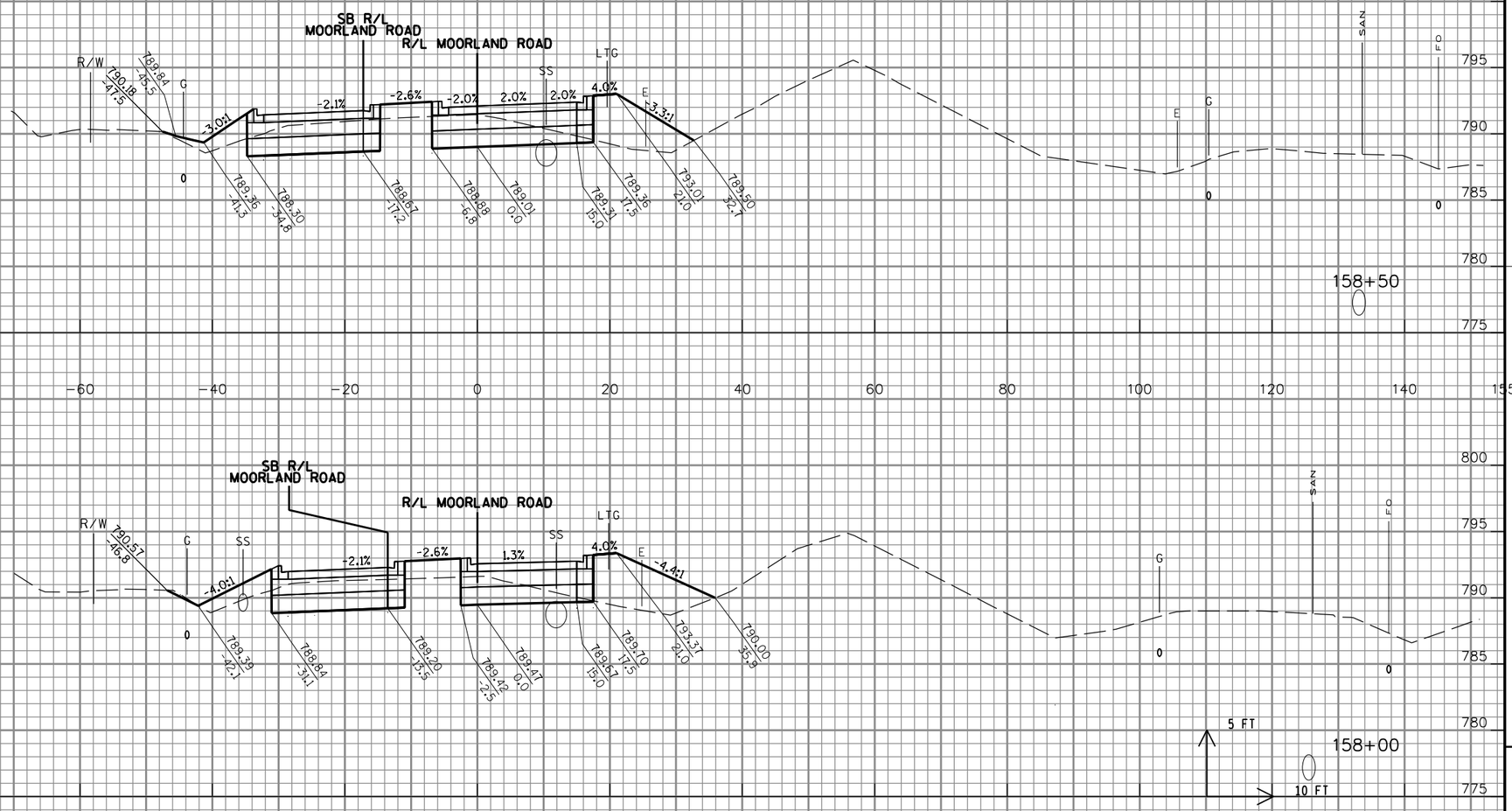
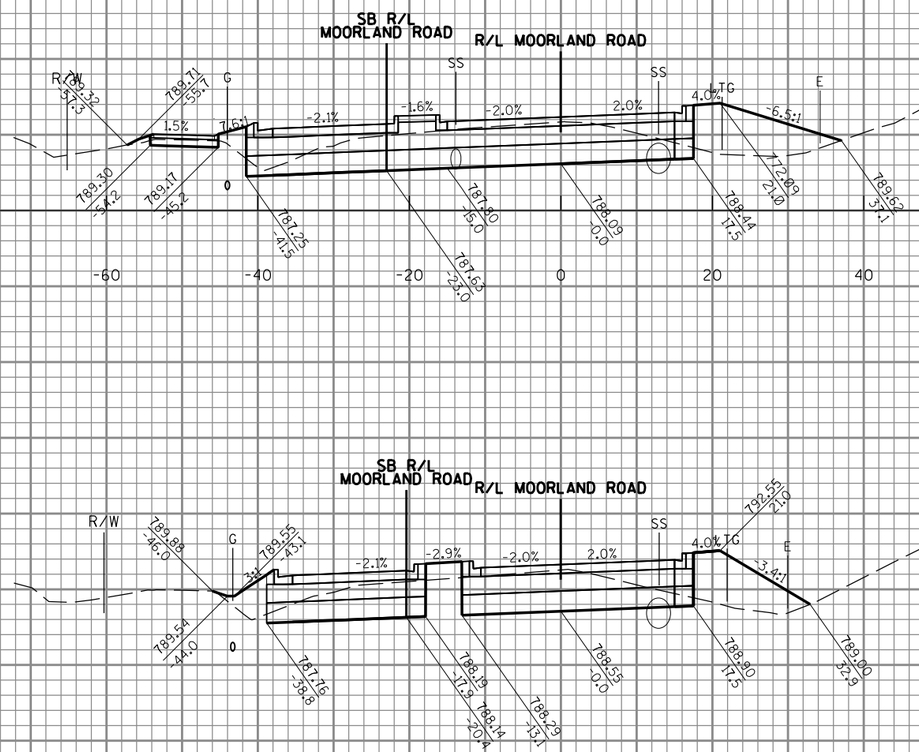
PROJECT NO: 2723-00-71	HWY: MOORLAND ROAD	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD	SHEET 284 E



PROJECT NO: 2723-00-71	HWY: MOORLAND ROAD	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD	SHEET 285 E

FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\090201_XS_Moorland.DGN | PLOT DATE : 7/26/2017 | PLOT BY : wwolak | PLOT NAME : $FILE$ | PLOT SCALE : 1:20

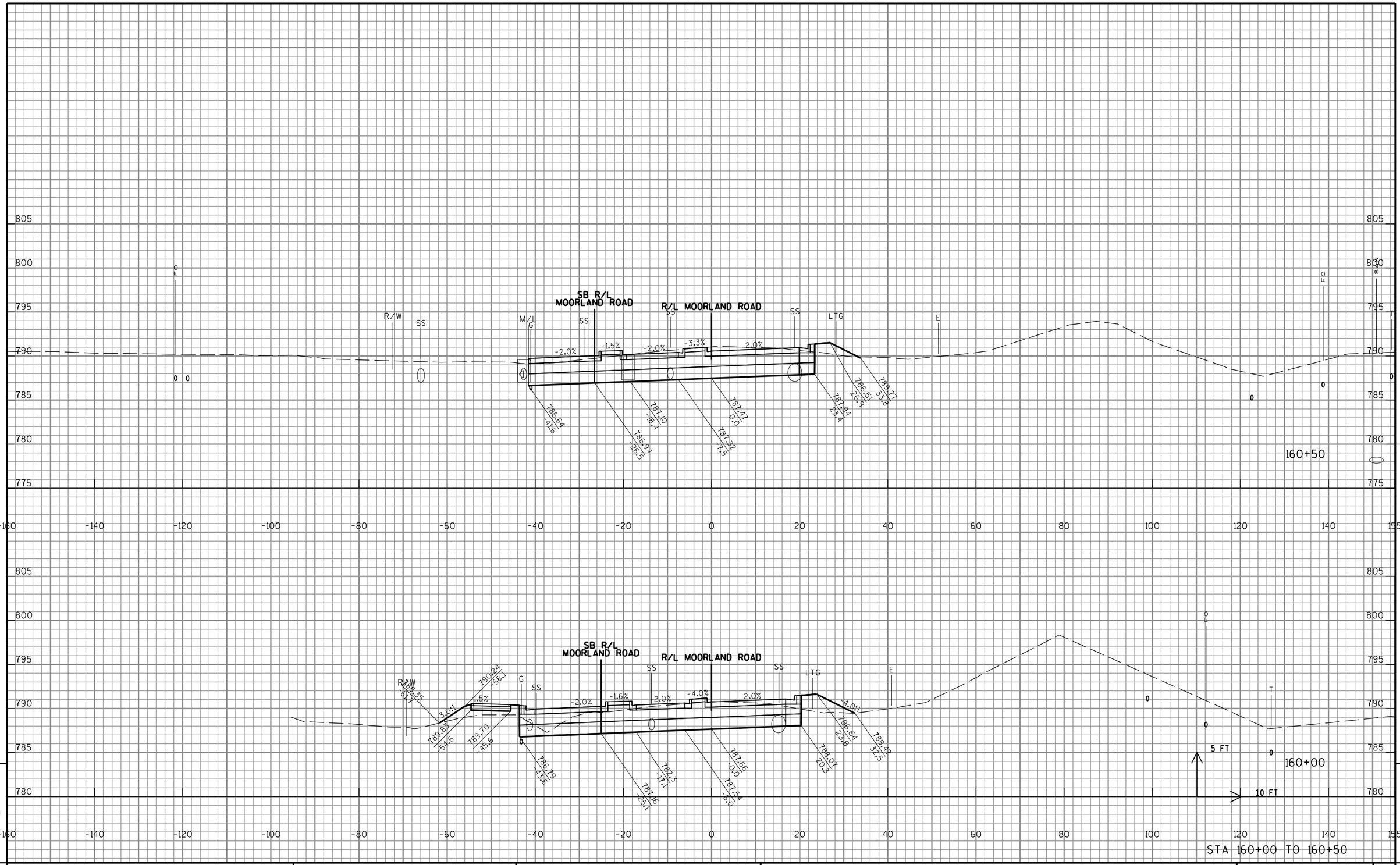
WISDOT/CADDS SHEET 21



PROJECT NO: 2723-00-71	HWY: MOORLAND ROAD	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD	SHEET 286 E

FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\090201_XS_Moorland.DGN PLOT DATE : 7/26/2017 PLOT BY : wwolak PLOT NAME : $FILE$ PLOT SCALE : 1:20

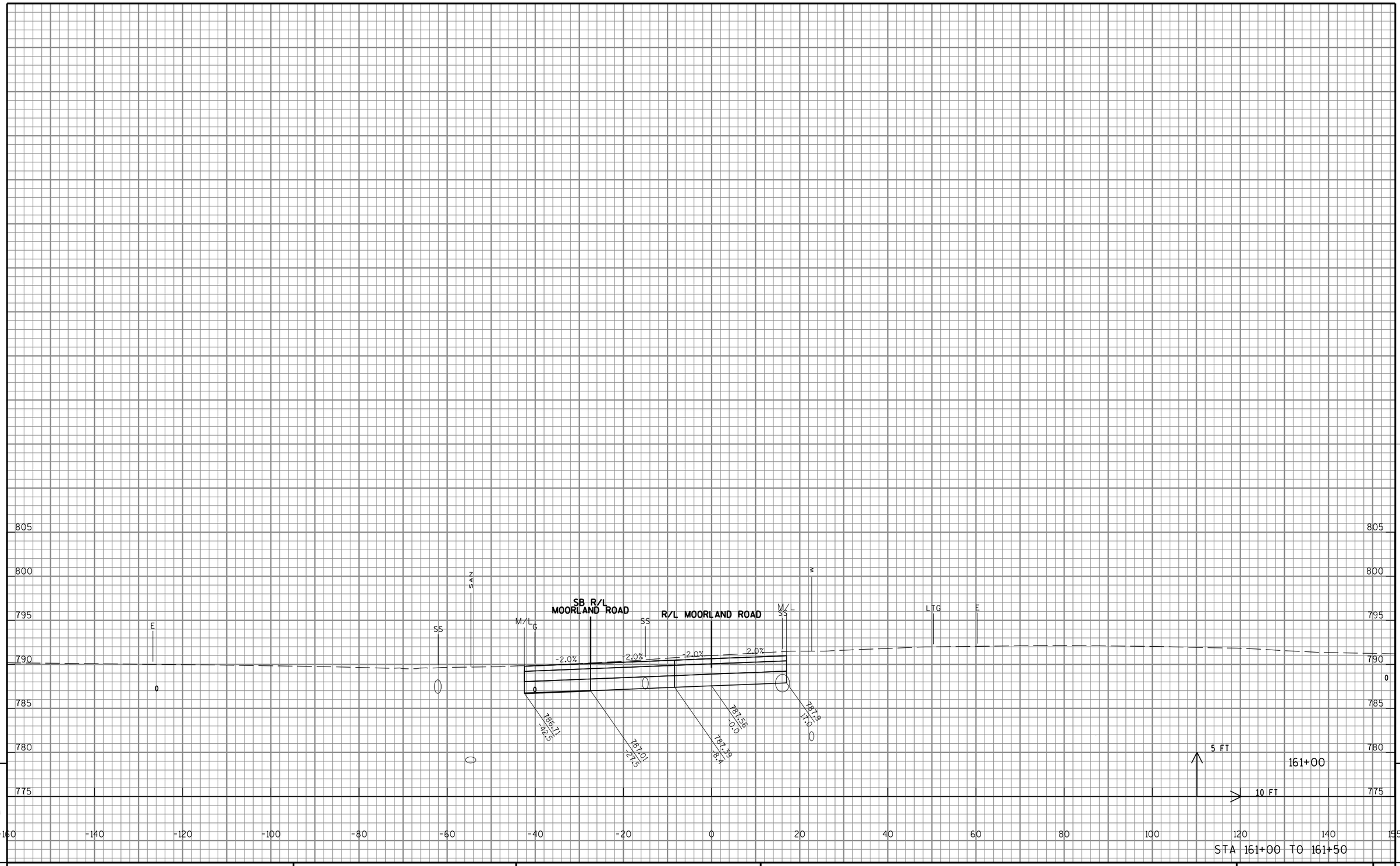
WISDOT/CADDS SHEET 21



PROJECT NO: 2723-00-71	HWY: MOORLAND ROAD	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD	SHEET 287 E

FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\090201_XS_Moorland.DGN | PLOT DATE : 7/26/2017 | PLOT BY : wwolak | PLOT NAME : $FILE$ | PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21



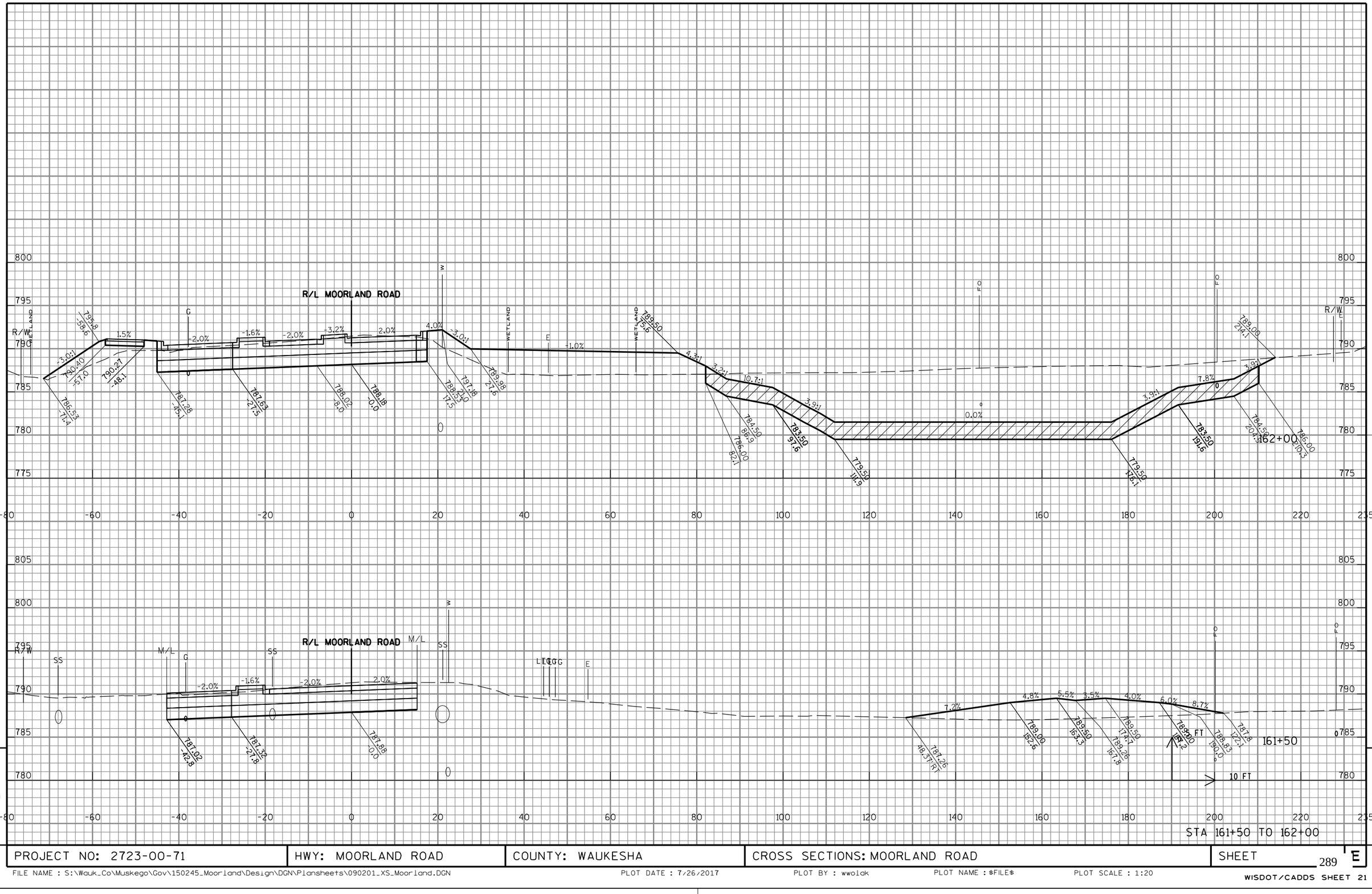
9

9

PROJECT NO: 2723-00-71	HWY: MOORLAND ROAD	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD	SHEET 288 E

FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\090201_XS_Moorland.DGN | PLOT DATE : 7/26/2017 | PLOT BY : wwolak | PLOT NAME : $FILE$ | PLOT SCALE : 1:20

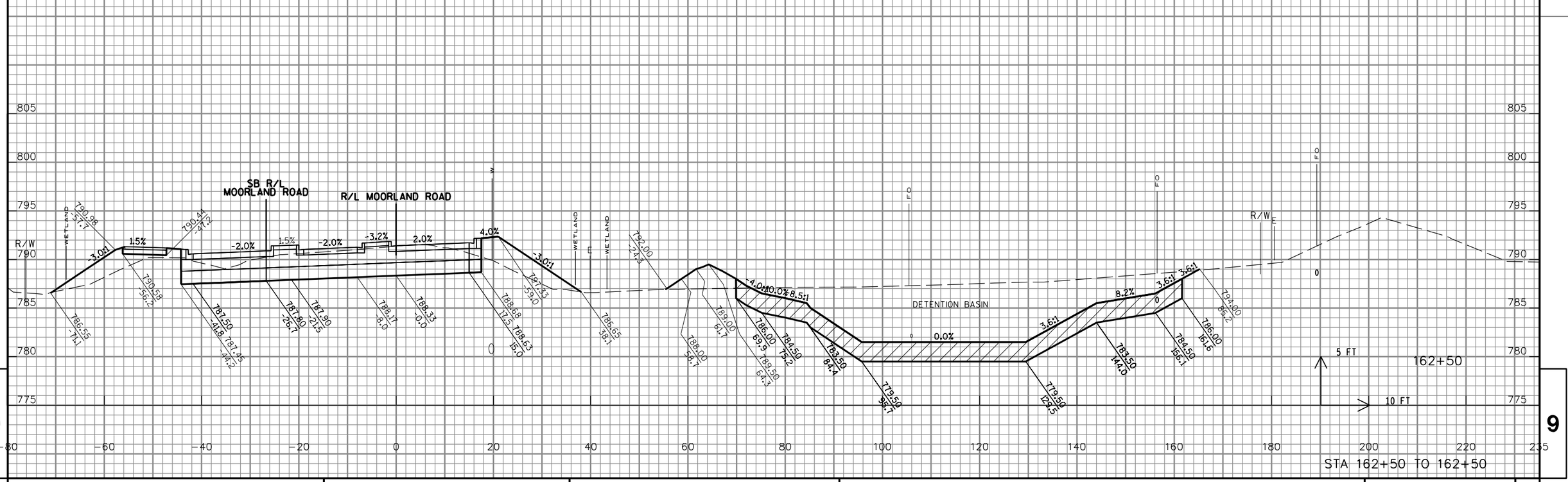
WISDOT/CADDS SHEET 21



PROJECT NO: 2723-00-71	HWY: MOORLAND ROAD	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD	SHEET 289 E

FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\090201_XS_Moorland.DGN | PLOT DATE : 7/26/2017 | PLOT BY : wwolak | PLOT NAME : $FILE$ | PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

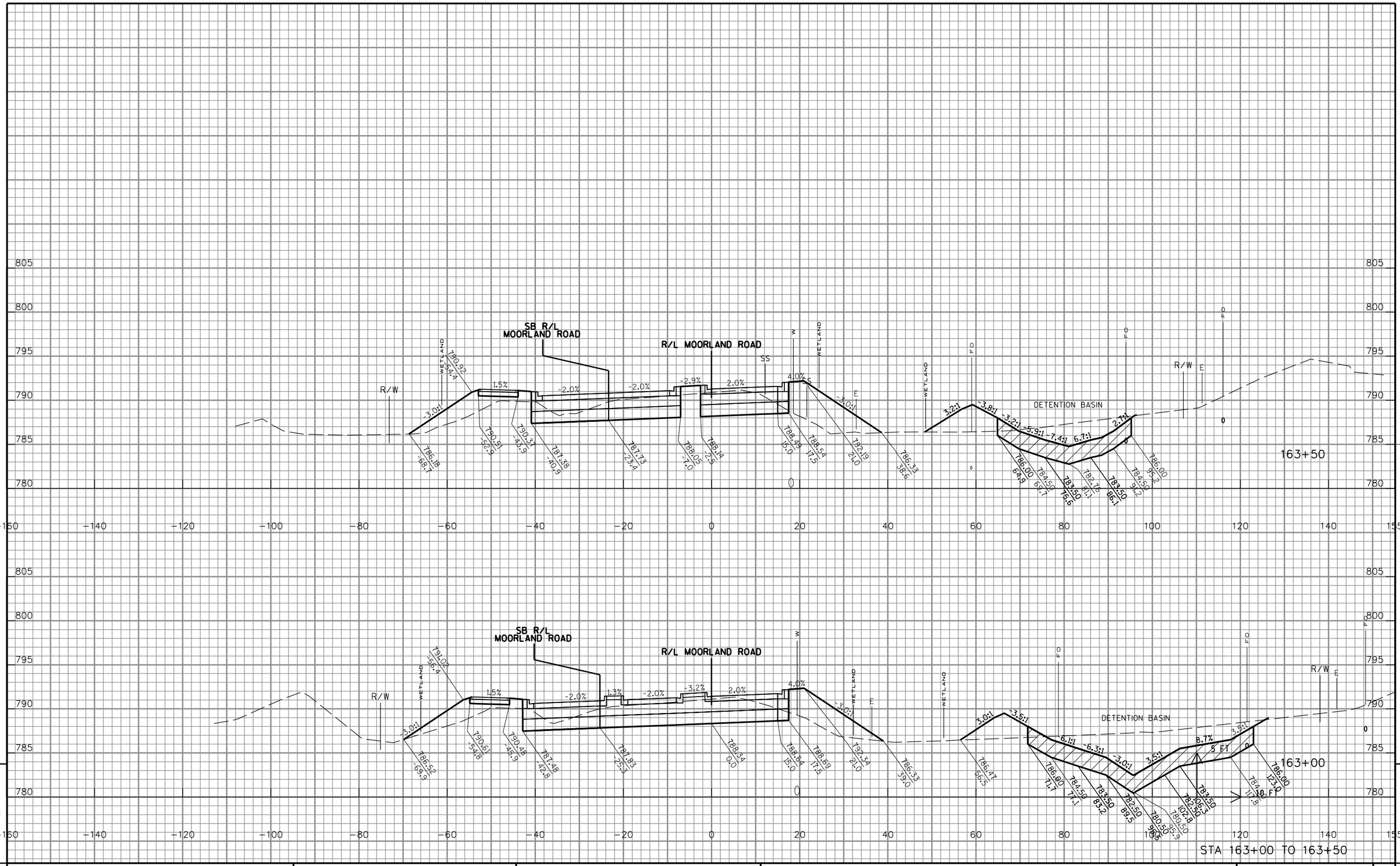


STA 162+50 TO 162+50

PROJECT NO: 2723-00-71	HWY: MOORLAND ROAD	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD	SHEET 290 E

FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\090201_XS_Moorland.DGN PLOT DATE : 7/26/2017 PLOT BY : wwolak PLOT NAME : $FILE$ PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

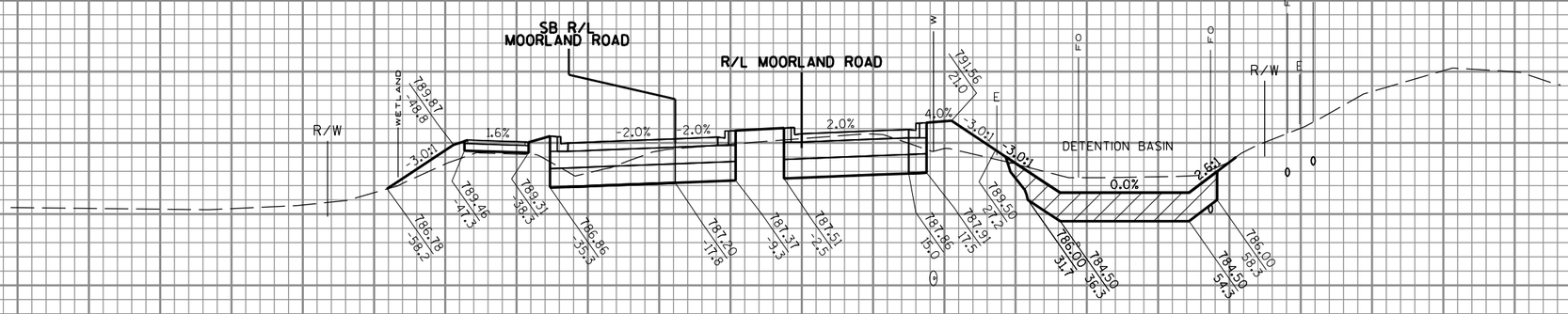


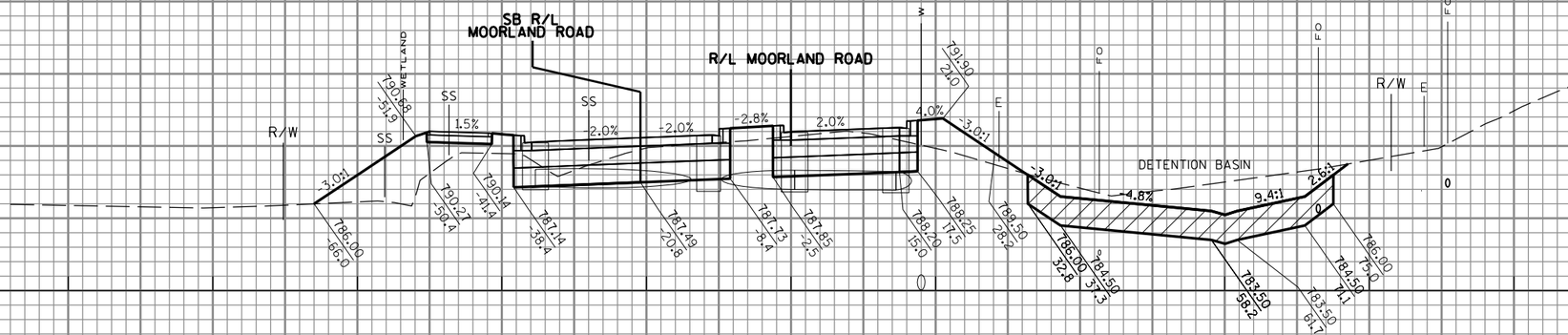
STA 163+00 TO 163+50

PROJECT NO: 2723-00-71	HWY: MOORLAND ROAD	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD	SHEET 291

FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\090201_XS_Moorland.DGN | PLOT DATE : 7/26/2017 | PLOT BY : wwolak | PLOT NAME : $FILE$ | PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21



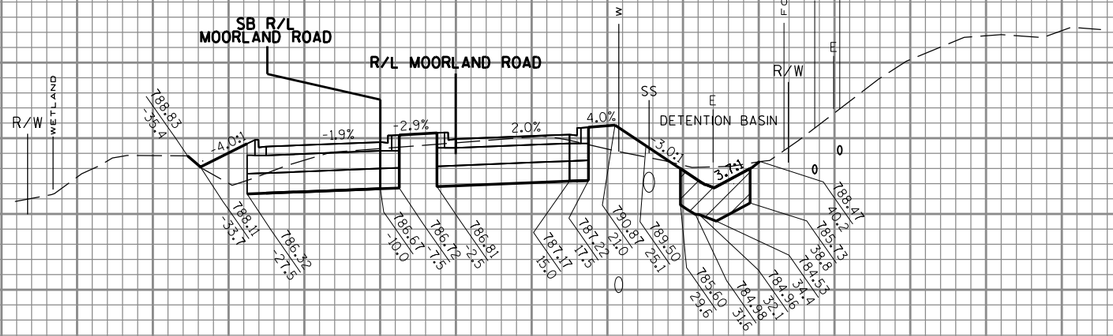


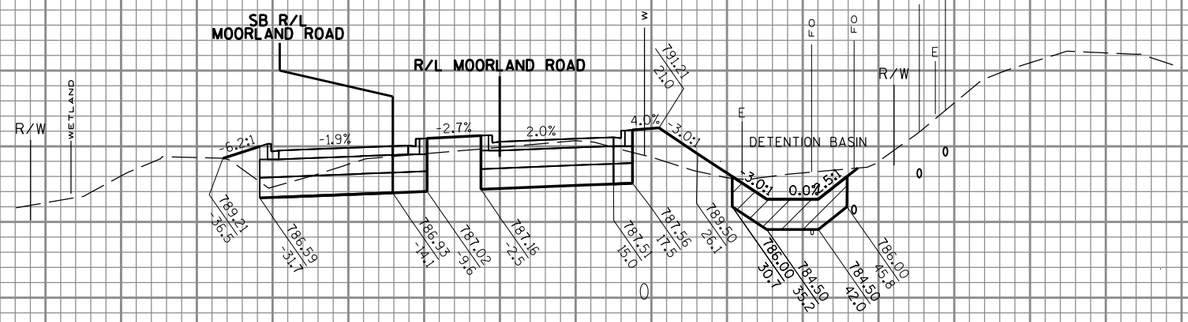
STA 164+00 TO 164+50

PROJECT NO: 2723-00-71	HWY: MOORLAND ROAD	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD	SHEET 292 E

FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\090201_XS_Moorland.DGN | PLOT DATE : 7/26/2017 | PLOT BY : wwolak | PLOT NAME : $FILE$ | PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21



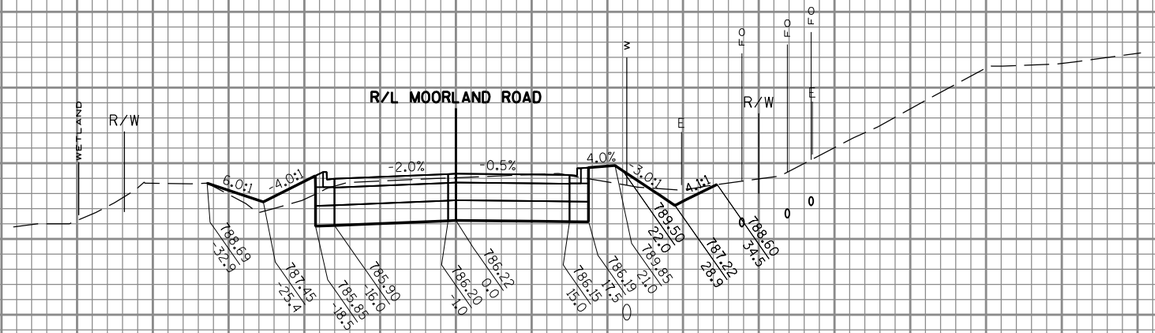


STA 165+00 TO 165+50

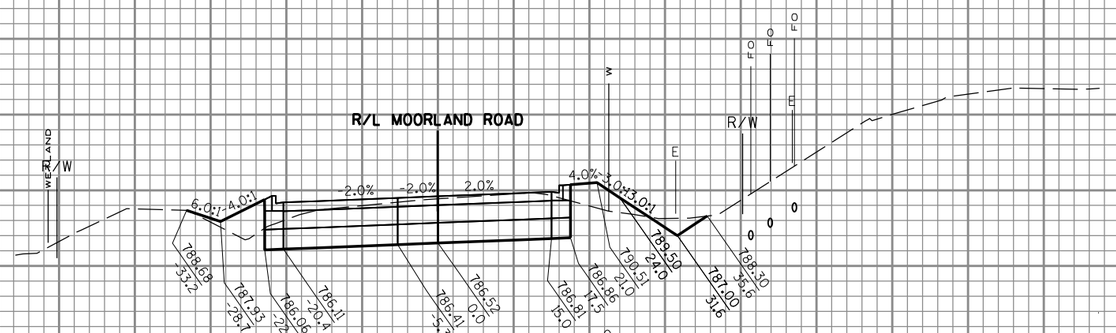
PROJECT NO: 2723-00-71	HWY: MOORLAND ROAD	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD	SHEET 293 E

FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\090201_XS_Moorland.DGN | PLOT DATE : 7/26/2017 | PLOT BY : wwolak | PLOT NAME : $FILE$ | PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21



166+50



166+00

5 FT

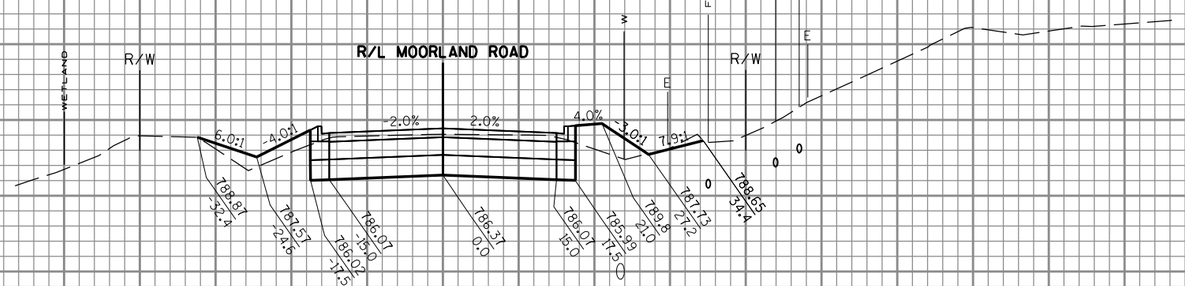
10 FT

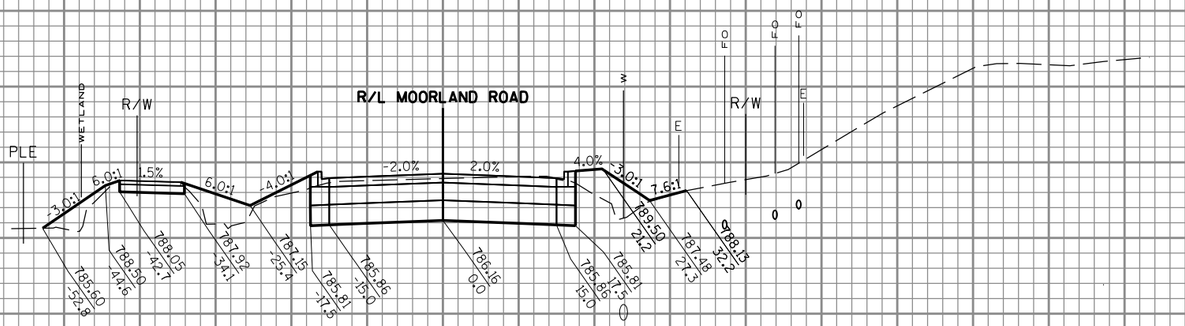
STA 166+00 TO 166+50

PROJECT NO: 2723-00-71	HWY: MOORLAND ROAD	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD	SHEET 294 E

FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\090201_XS_Moorland.DGN PLOT DATE : 7/26/2017 PLOT BY : wwolak PLOT NAME : $FILE$ PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21



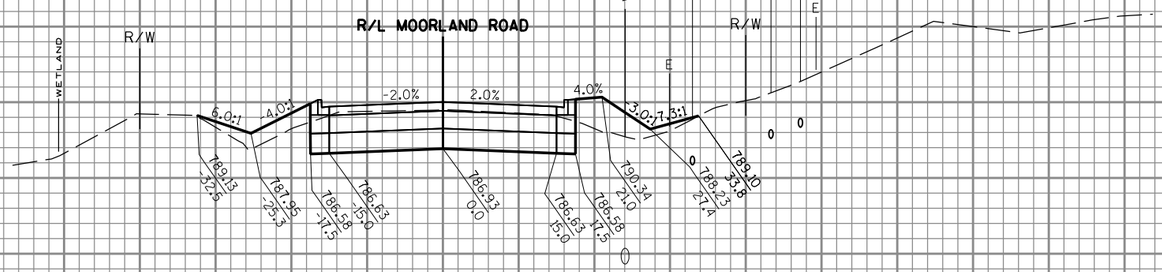


STA 167+00 TO 167+50

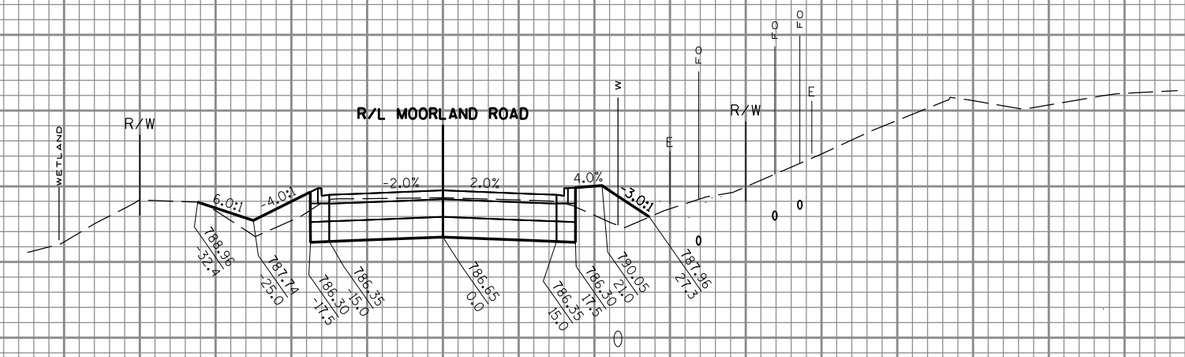
PROJECT NO: 2723-00-71	HWY: MOORLAND ROAD	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD	SHEET 295 E

FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\090201_XS_Moorland.DGN | PLOT DATE : 7/26/2017 | PLOT BY : wwolak | PLOT NAME : $FILE$ | PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21



168+50



168+00

5 FT

10 FT

STA 168+00 TO 168+50

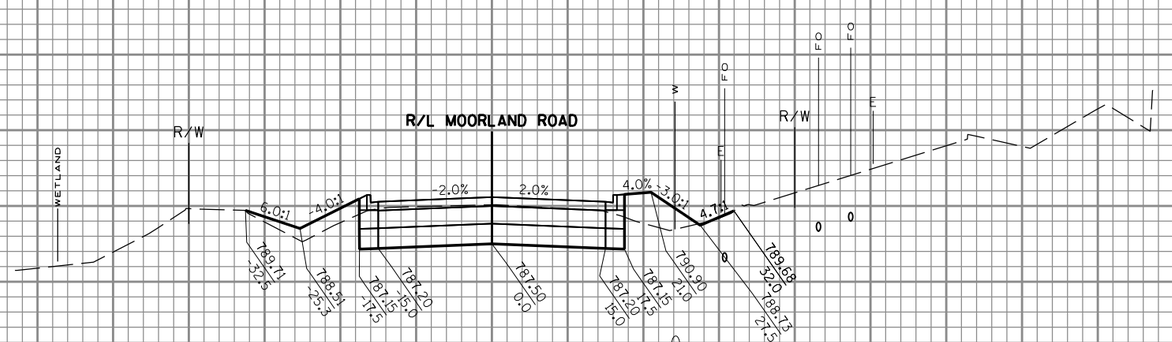
9

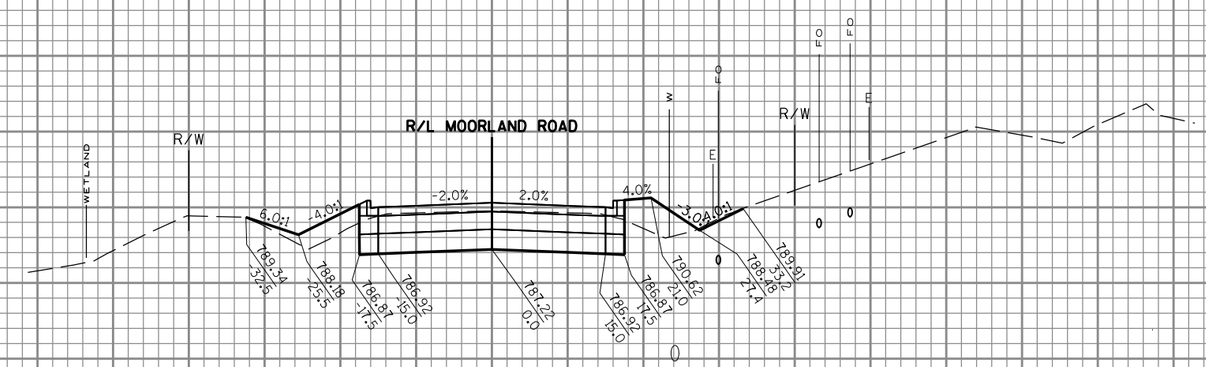
9

PROJECT NO: 2723-00-71	HWY: MOORLAND ROAD	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD	SHEET 296 E

FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\090201_XS_Moorland.DGN PLOT DATE : 7/26/2017 PLOT BY : wwolak PLOT NAME : $FILE$ PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21





STA 169+00 TO 169+50

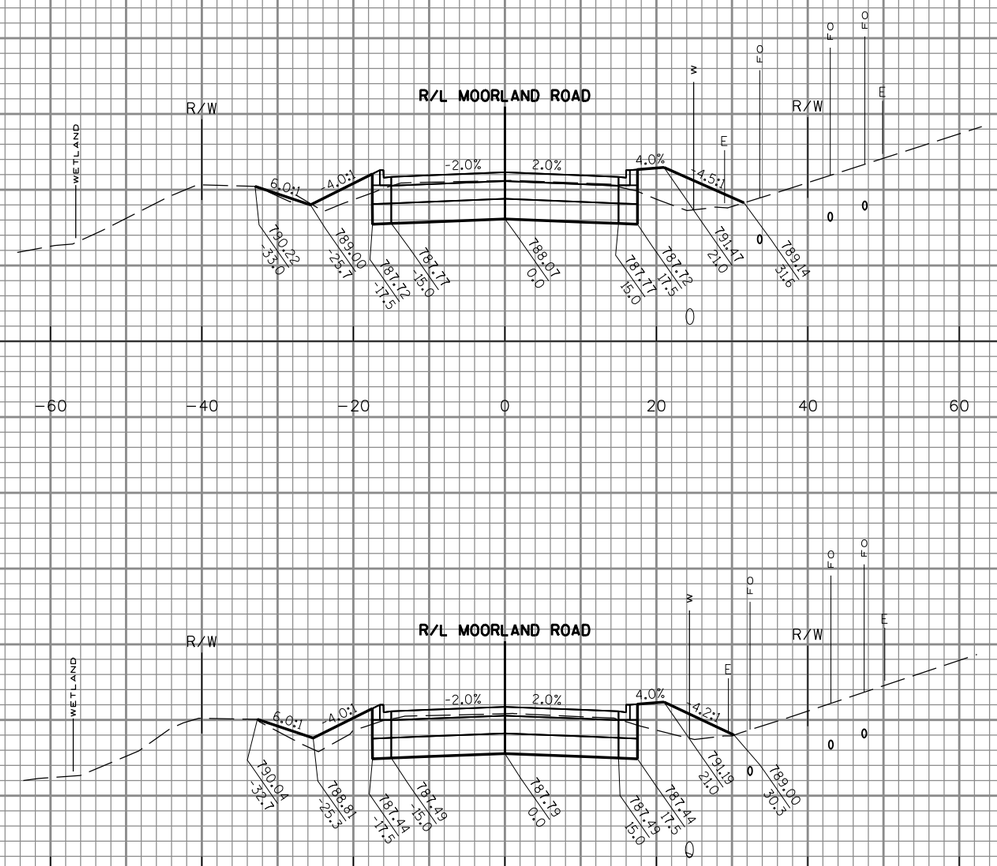
9

9

PROJECT NO: 2723-00-71	HWY: MOORLAND ROAD	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD	SHEET 297 E

FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\090201_XS_Moorland.DGN PLOT DATE : 7/26/2017 PLOT BY : wwolak PLOT NAME : $FILE$ PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

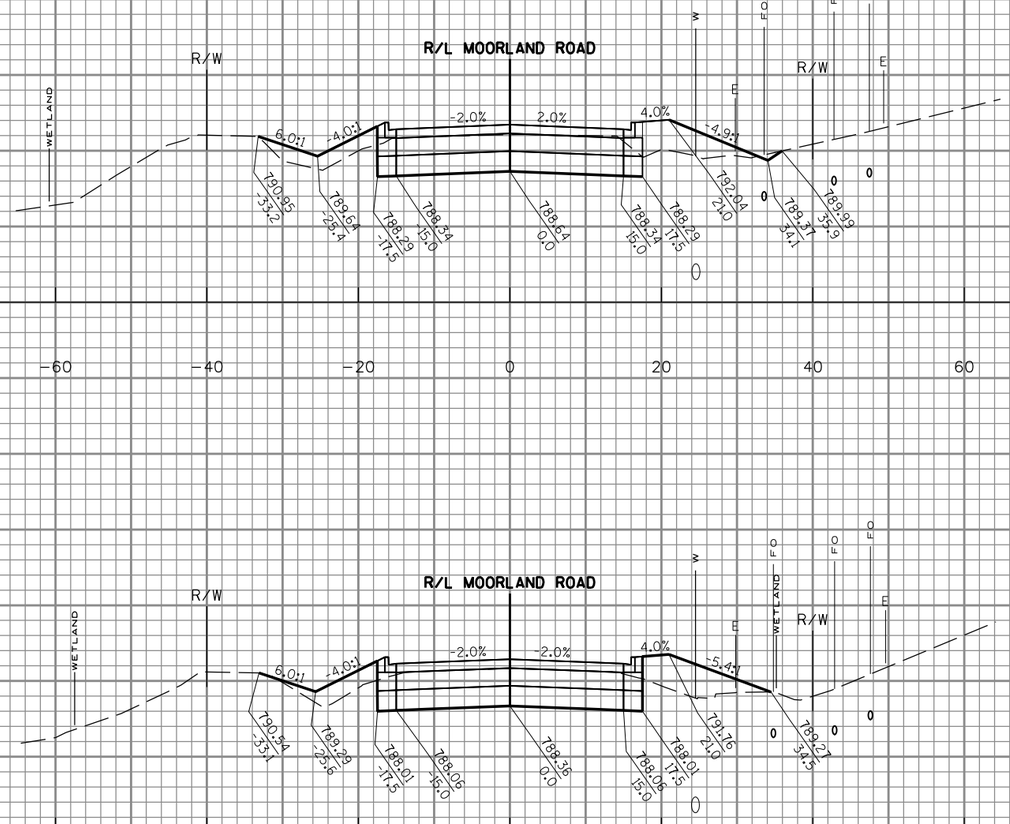


STA 170+00 TO 170+50

PROJECT NO: 2723-00-71	HWY: MOORLAND ROAD	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD	SHEET 298 E

FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\090201_XS_Moorland.DGN | PLOT DATE : 7/26/2017 | PLOT BY : wwolak | PLOT NAME : $FILE$ | PLOT SCALE : 1:20

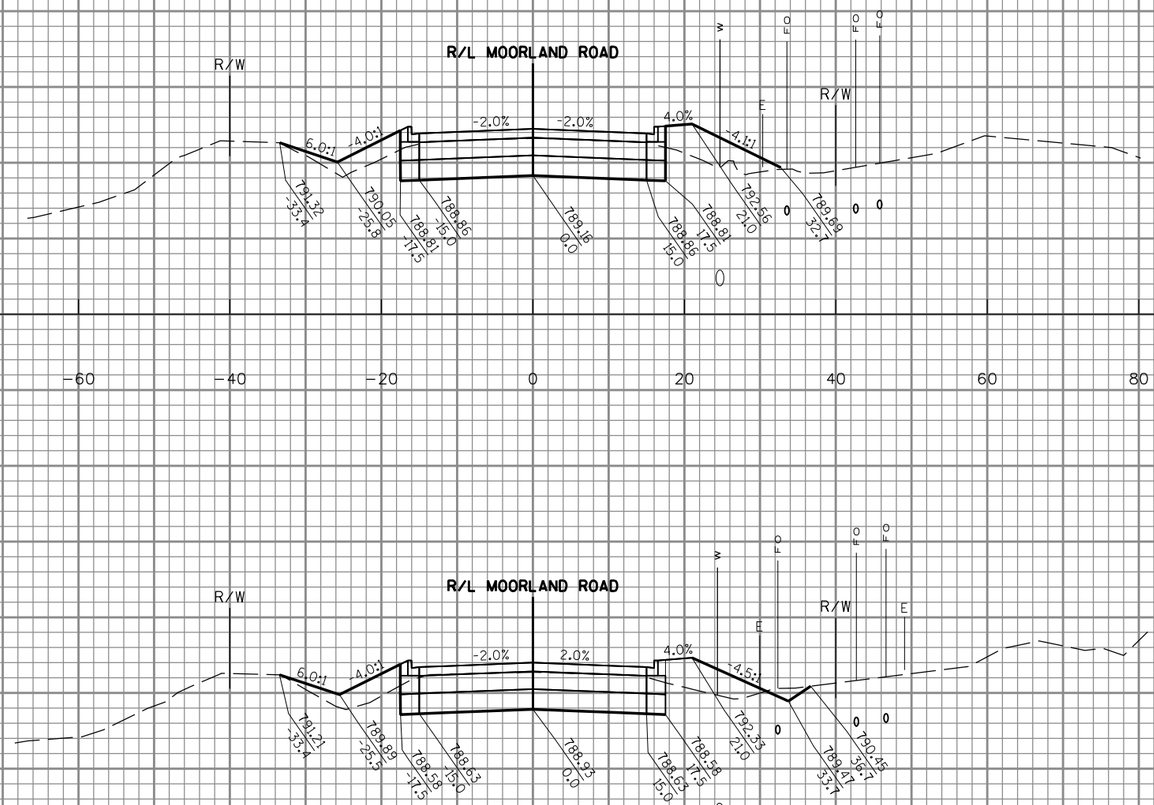
WISDOT/CADDS SHEET 21



PROJECT NO: 2723-00-71	HWY: MOORLAND ROAD	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD	SHEET 299 E

FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\090201_XS_Moorland.DGN | PLOT DATE : 7/26/2017 | PLOT BY : wwolak | PLOT NAME : $FILE$ | PLOT SCALE : 1:20

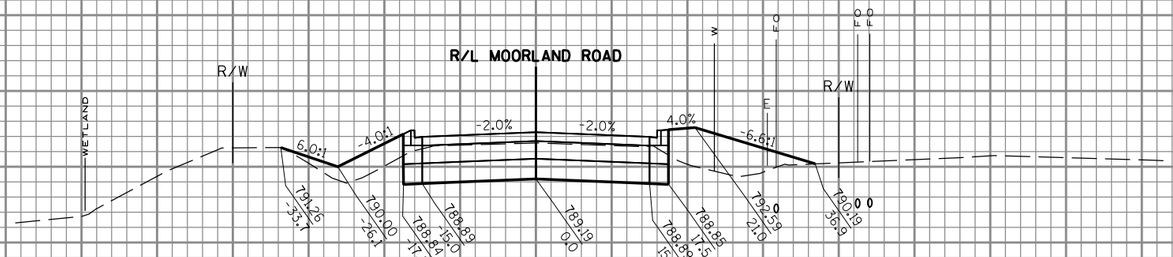
WISDOT/CADDS SHEET 21



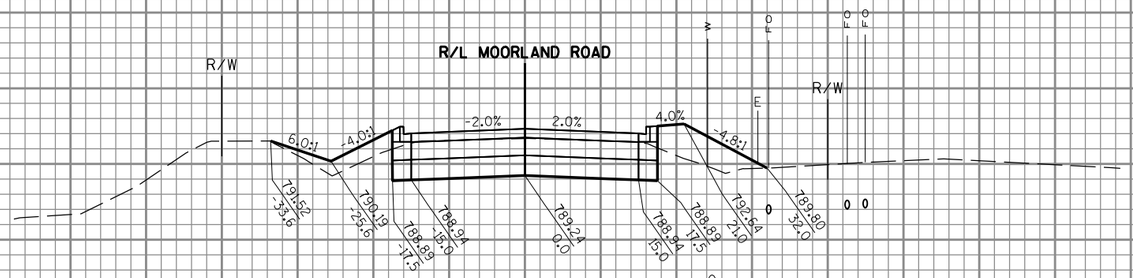
PROJECT NO: 2723-00-71	HWY: MOORLAND ROAD	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD	SHEET 300 E

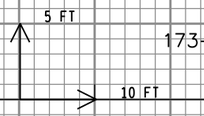
FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\090201_XS_Moorland.DGN | PLOT DATE : 7/26/2017 | PLOT BY : wwolak | PLOT NAME : $FILE$ | PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21



173+50





173+00

STA 173+00 TO 173+50

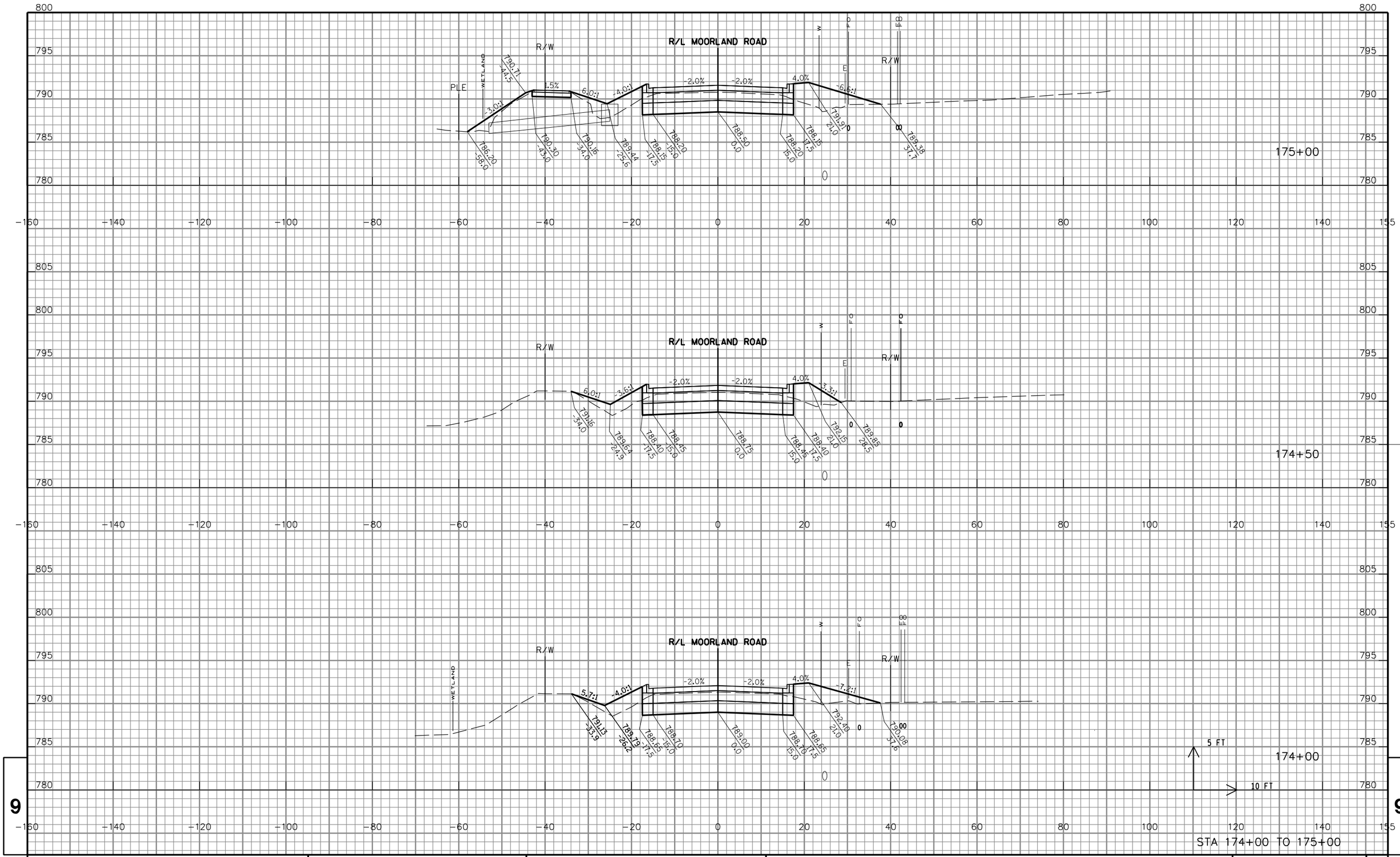
9

9

PROJECT NO: 2723-00-71	HWY: MOORLAND ROAD	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD	SHEET 301 E

FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\090201_XS_Moorland.DGN PLOT DATE : 7/26/2017 PLOT BY : wwolak PLOT NAME : $FILE$ PLOT SCALE : 1:20

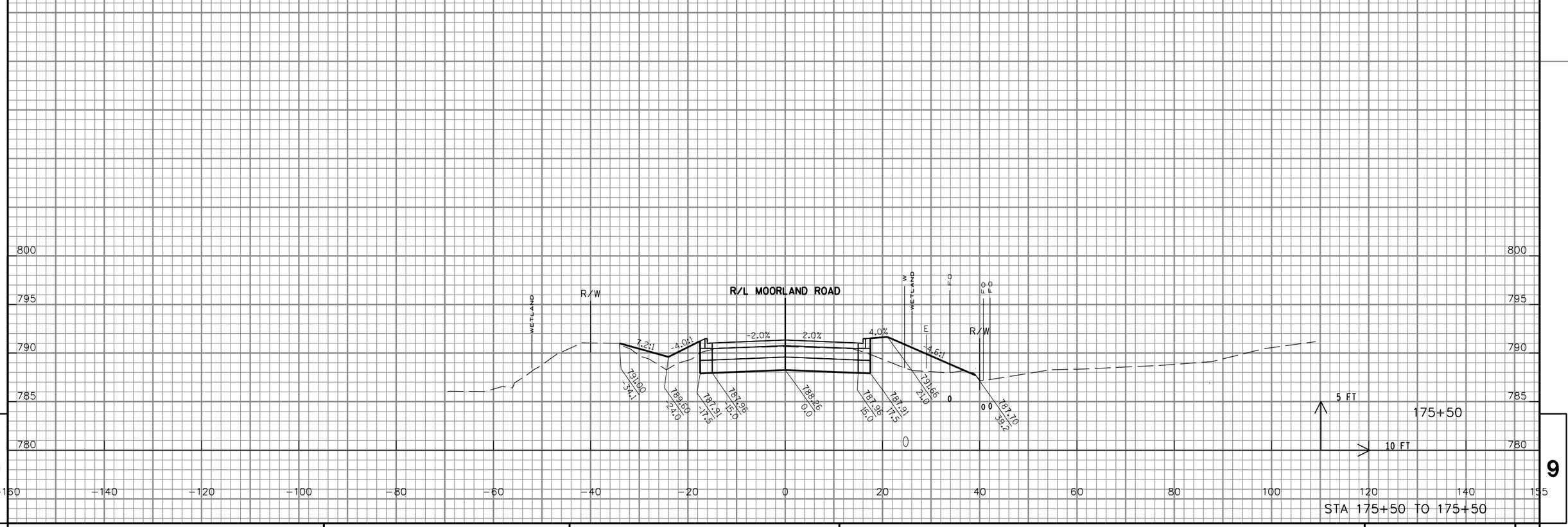
WISDOT/CADDS SHEET 21



PROJECT NO: 2723-00-71	HWY: MOORLAND ROAD	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD	SHEET 302 E

FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\090201_XS_Moorland.DGN | PLOT DATE : 7/26/2017 | PLOT BY : wwolak | PLOT NAME : $FILE$ | PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21



9

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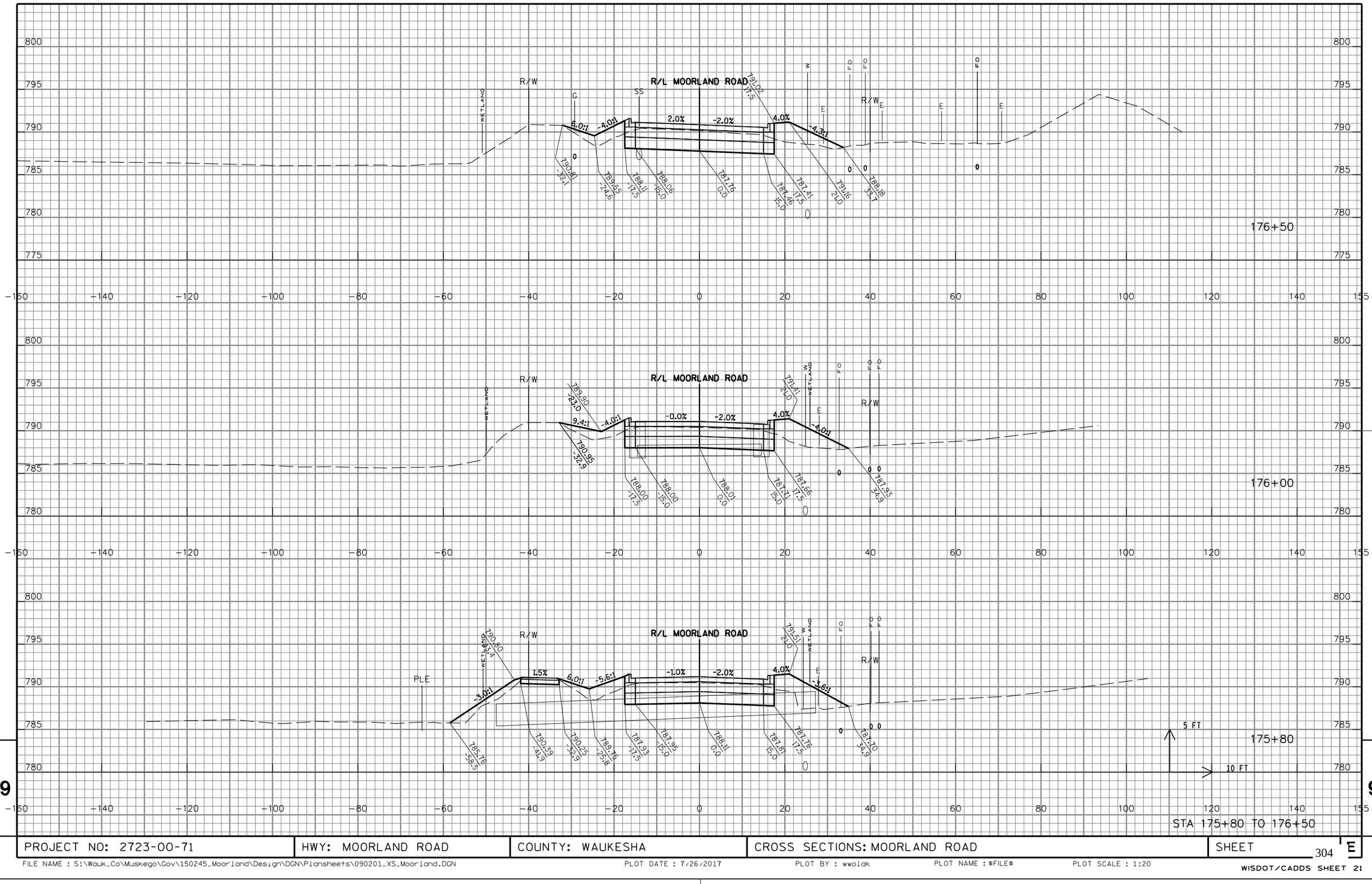
PROJECT NO: 2723-00-71	HWY: MOORLAND ROAD	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD	SHEET 303 E

FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\090201_XS_Moorland.DGN PLOT DATE : 7/26/2017 PLOT BY : wwolak PLOT NAME : $FILE$ PLOT SCALE : 1:20

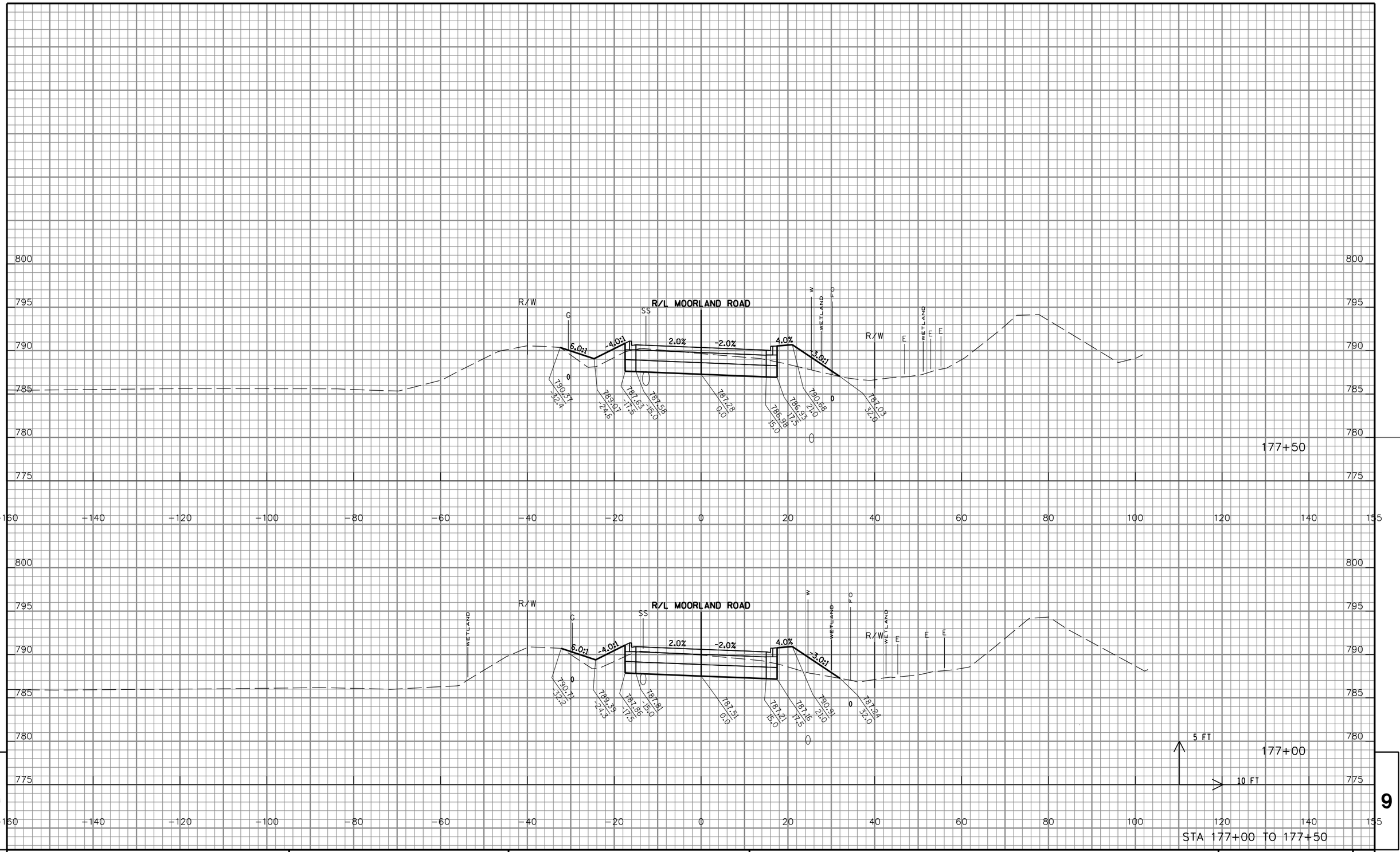
WISDOT/CADDS SHEET 21



PROJECT NO: 2723-00-71	HWY: MOORLAND ROAD	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD	SHEET 304 E

FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\090201_XS_Moorland.DGN | PLOT DATE : 7/26/2017 | PLOT BY : wwolak | PLOT NAME : $FILE$ | PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21



9

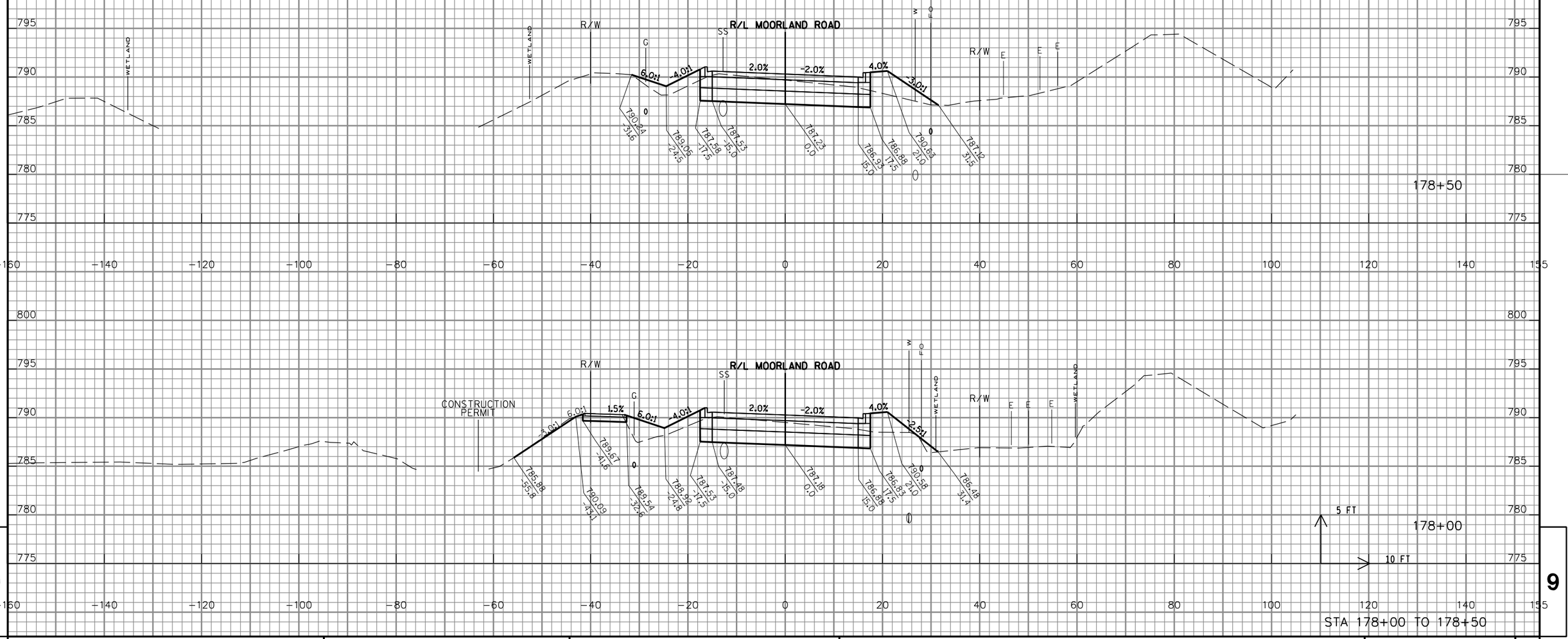
9

STA 177+00 TO 177+50

PROJECT NO: 2723-00-71	HWY: MOORLAND ROAD	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD	SHEET 305 E

FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\090201_XS_Moorland.DGN PLOT DATE : 7/26/2017 PLOT BY : wwolak PLOT NAME : $FILE$ PLOT SCALE : 1:20

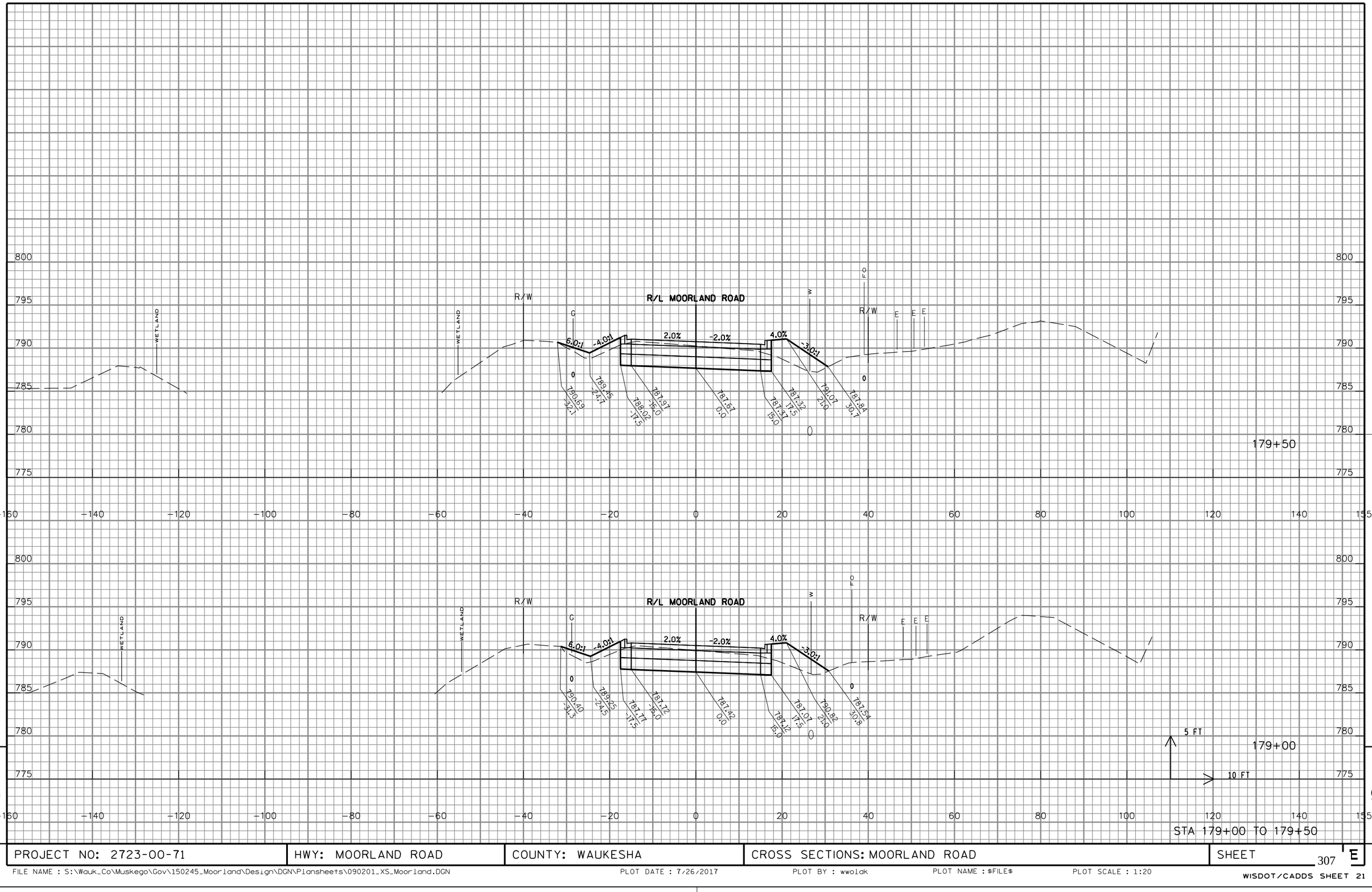
WISDOT/CADDS SHEET 21



PROJECT NO: 2723-00-71	HWY: MOORLAND ROAD	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD	SHEET 306 E

FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\090201_XS_Moorland.DGN | PLOT DATE : 7/26/2017 | PLOT BY : wwolak | PLOT NAME : $FILE$ | PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21



9

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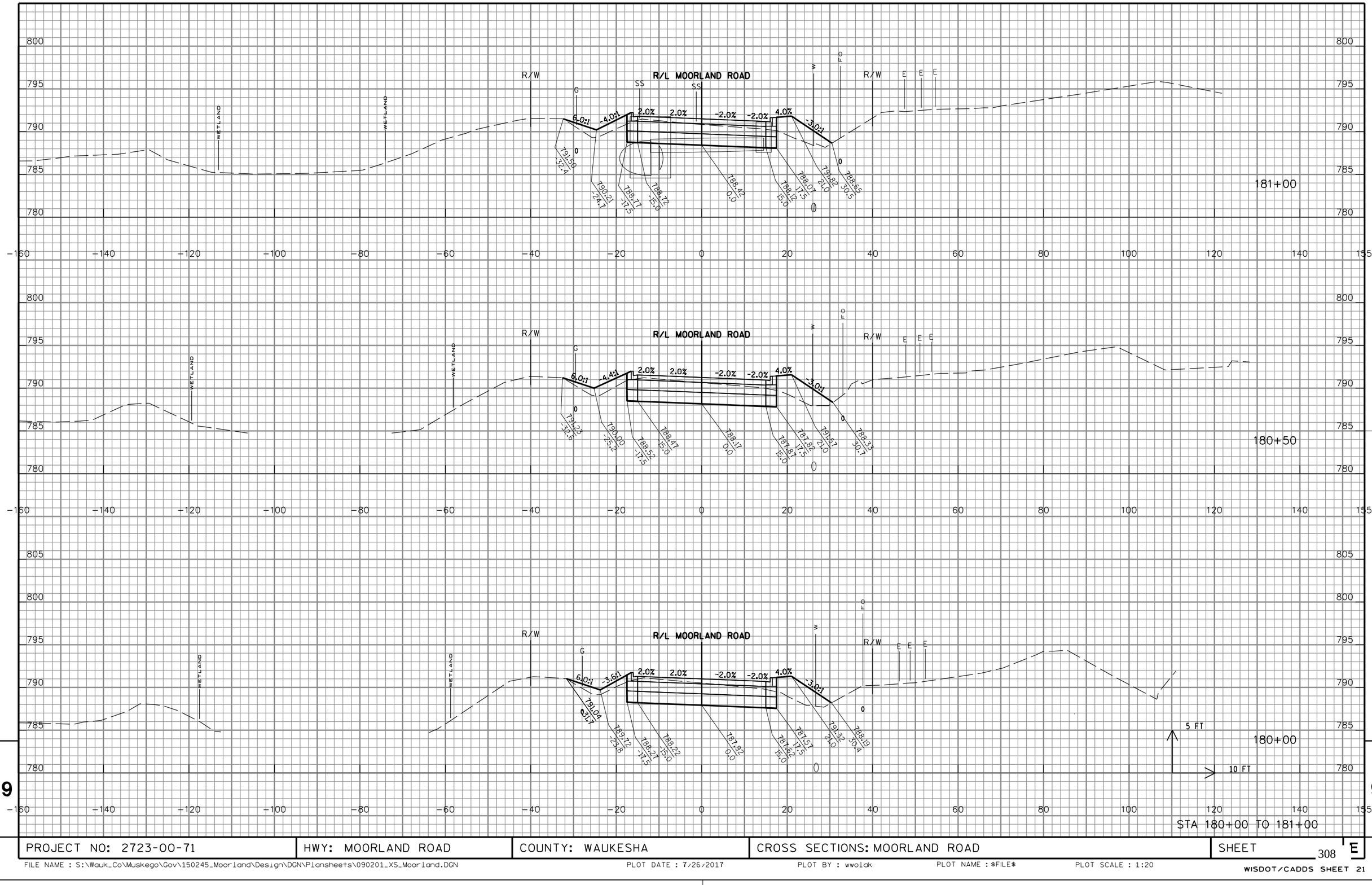
PROJECT NO: 2723-00-71	HWY: MOORLAND ROAD	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD	SHEET 307 E

FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\090201_XS_Moorland.DGN | PLOT DATE : 7/26/2017 | PLOT BY : wwolak | PLOT NAME : $FILE$ | PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21



9

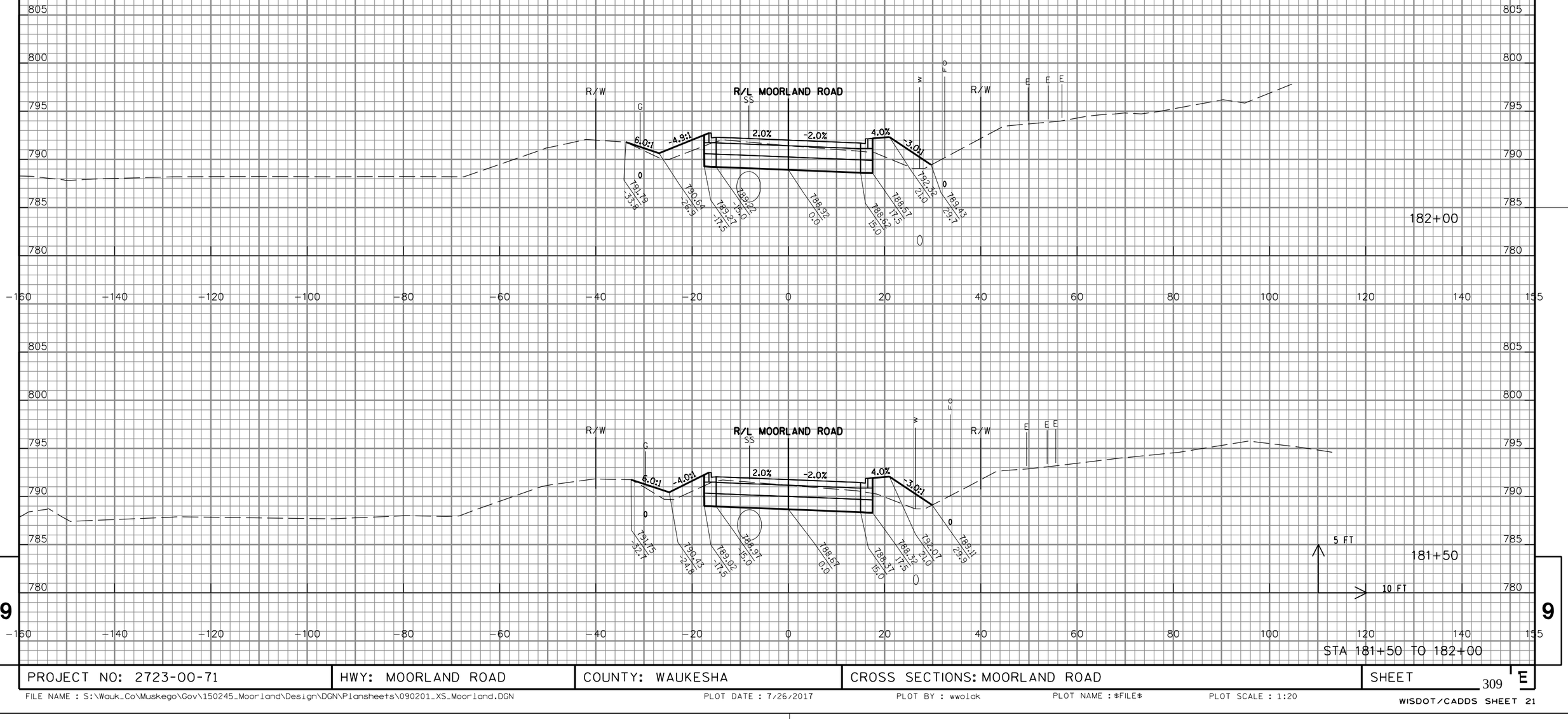
9

STA 180+00 TO 181+00

PROJECT NO: 2723-00-71	HWY: MOORLAND ROAD	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD	SHEET 308 E

FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\090201_XS_Moorland.DGN PLOT DATE : 7/26/2017 PLOT BY : wwolak PLOT NAME : $FILE$ PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21



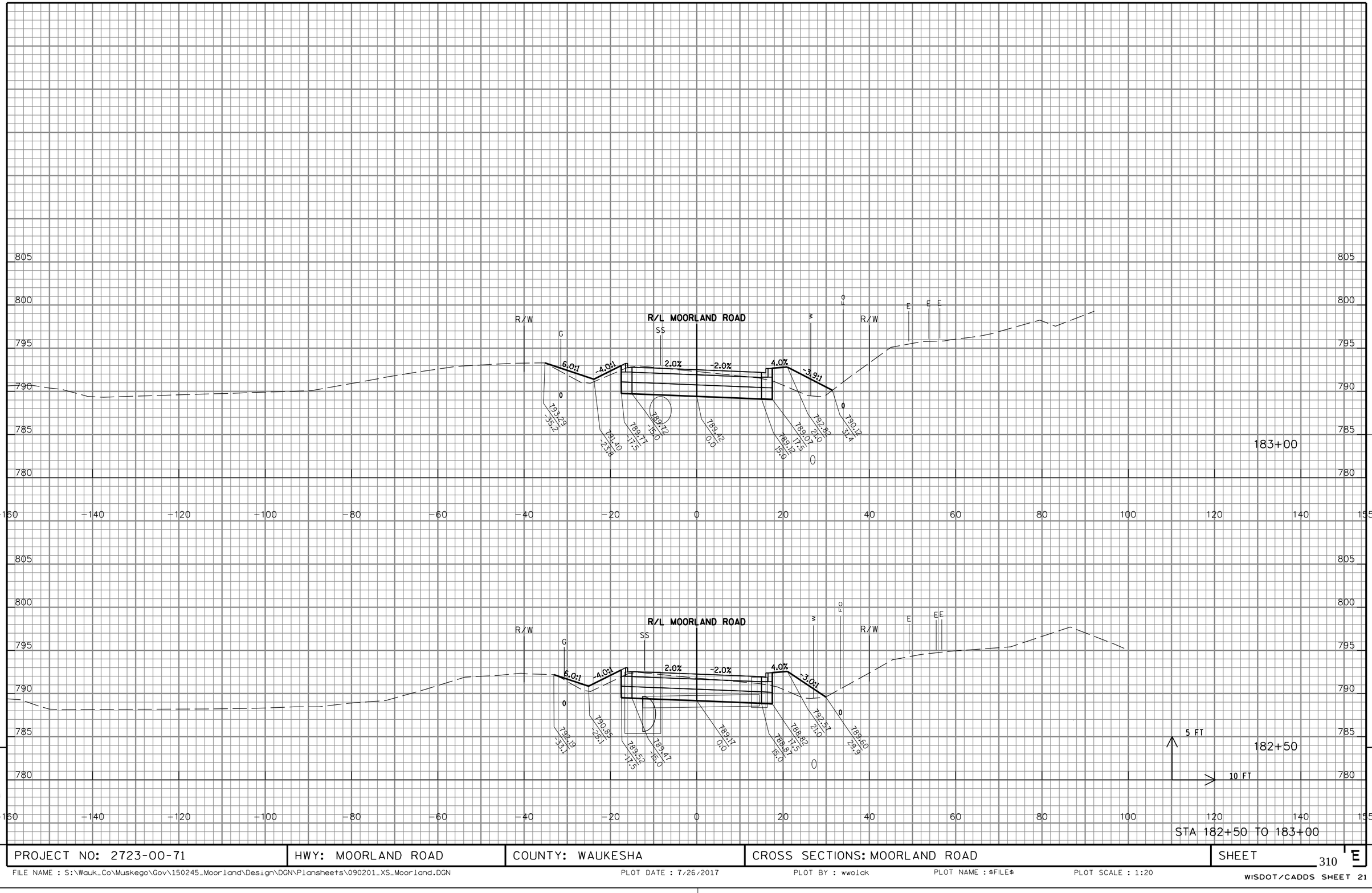
9

9

PROJECT NO: 2723-00-71	HWY: MOORLAND ROAD	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD	SHEET 309 E

FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\090201_XS_Moorland.DGN | PLOT DATE : 7/26/2017 | PLOT BY : wwolak | PLOT NAME : $FILE$ | PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21



9

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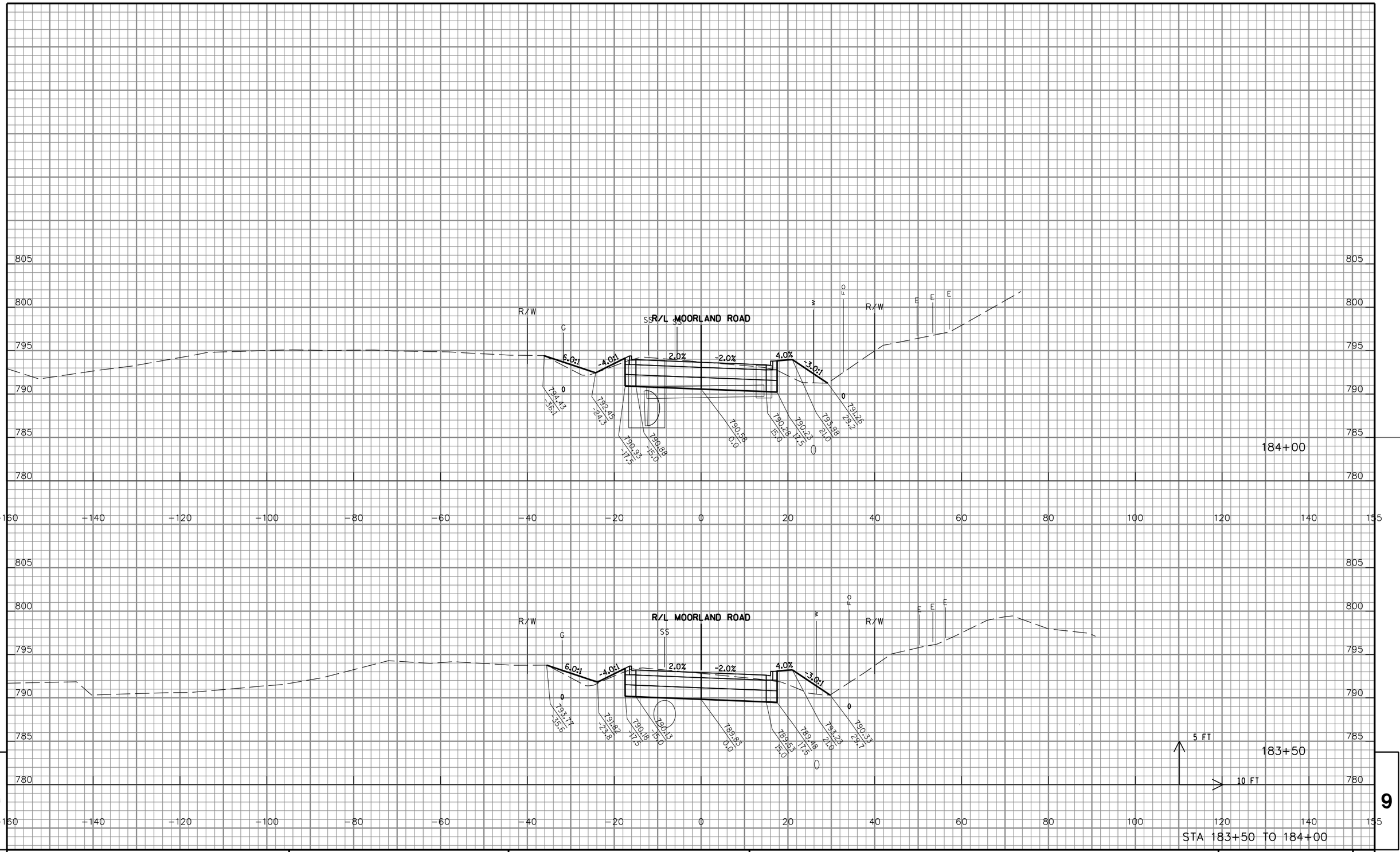
PROJECT NO: 2723-00-71	HWY: MOORLAND ROAD	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD	SHEET 310 E

FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\090201_XS_Moorland.DGN | PLOT DATE : 7/26/2017 | PLOT BY : wwolak | PLOT NAME : $FILE$ | PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21



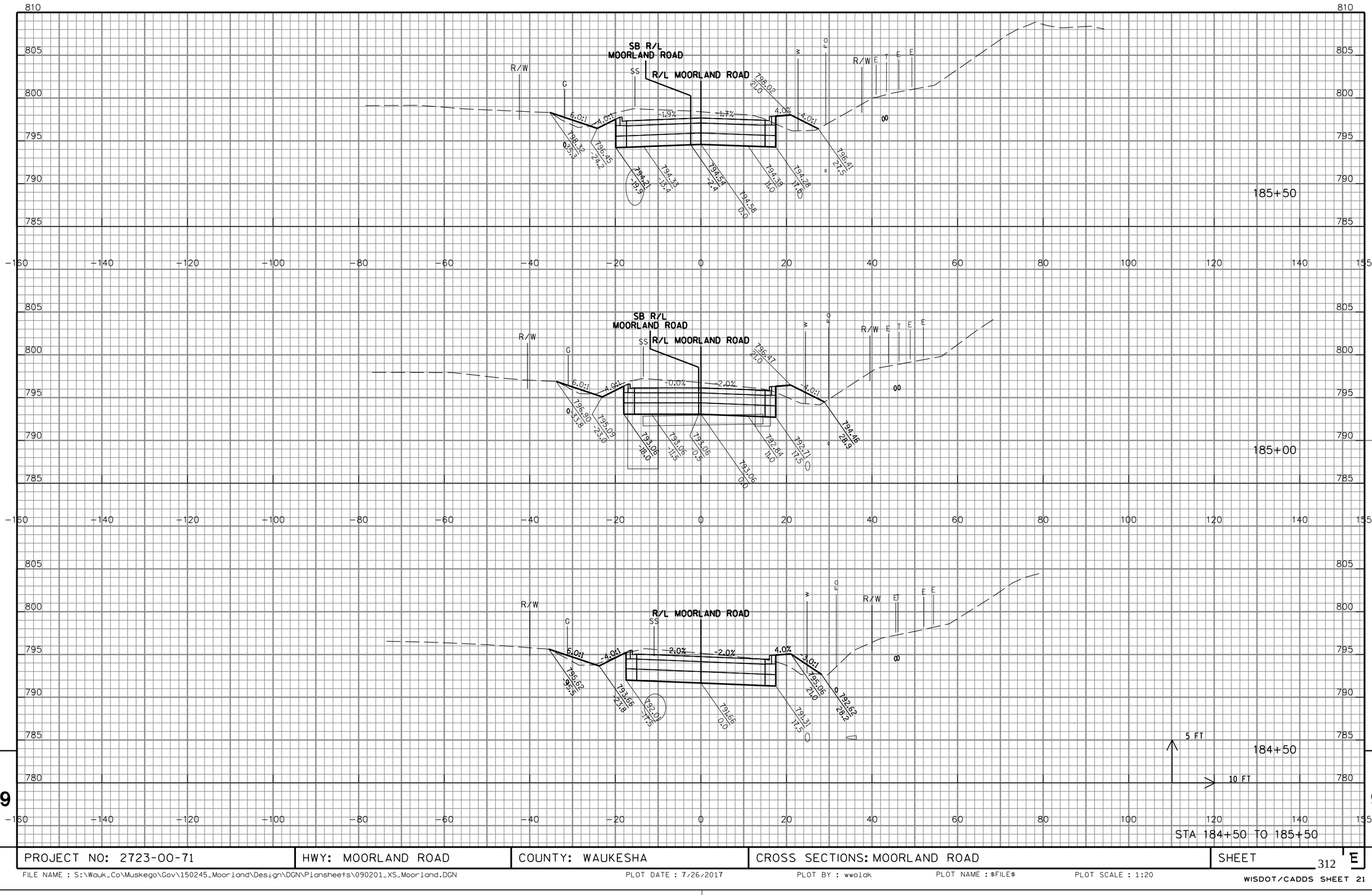
9

9

PROJECT NO: 2723-00-71	HWY: MOORLAND ROAD	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD	SHEET

FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\090201_XS_Moorland.DGN | PLOT DATE : 7/26/2017 | PLOT BY : wwolak | PLOT NAME : $FILE$ | PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21



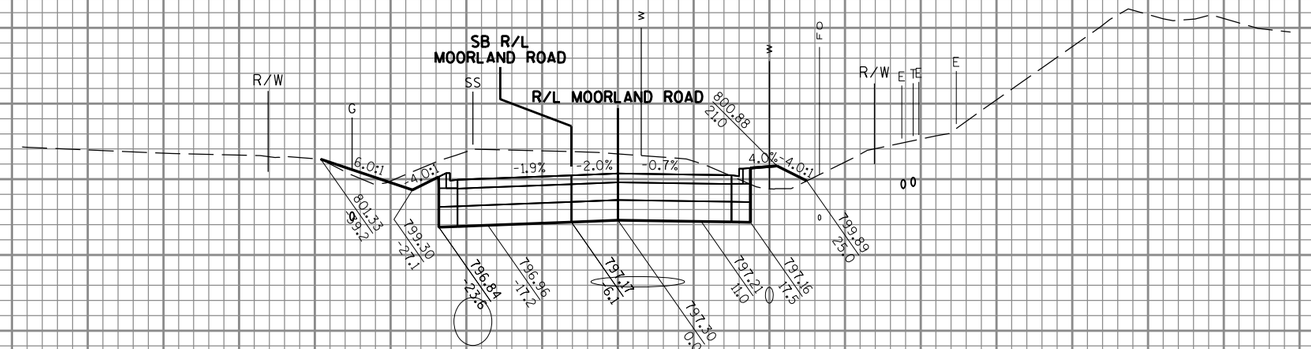
9

9

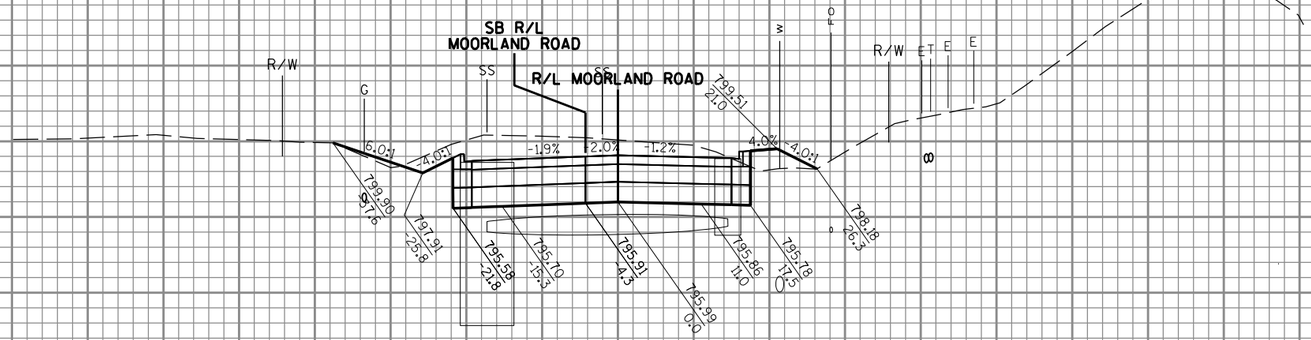
PROJECT NO: 2723-00-71	HWY: MOORLAND ROAD	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD	SHEET 312 E

FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\090201_XS_Moorland.DGN PLOT DATE : 7/26/2017 PLOT BY : wwolak PLOT NAME : $FILE$ PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21



186+50



186+00

5 FT

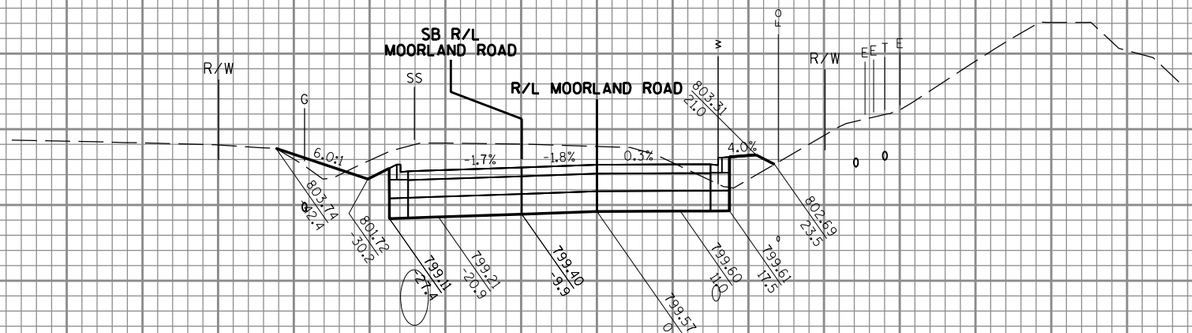
10 FT

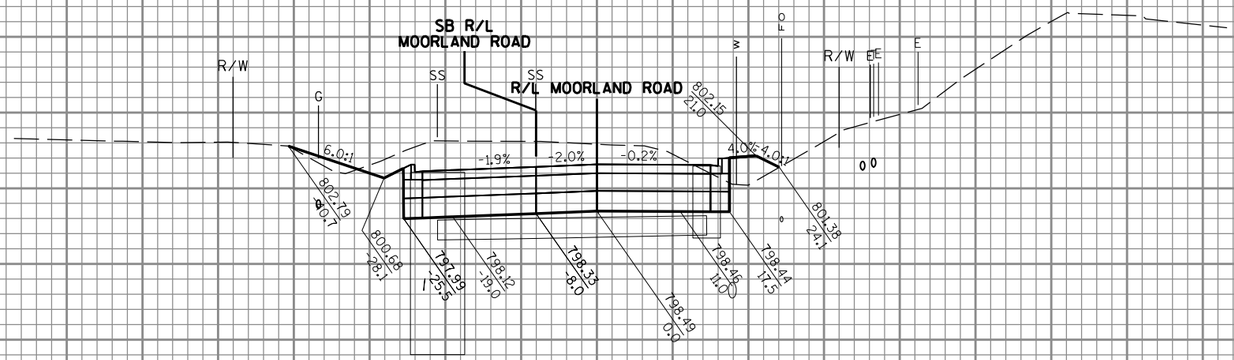
STA 186+00 TO 186+50

9

9

PROJECT NO: 2723-00-71	HWY: MOORLAND ROAD	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD	SHEET 313 E



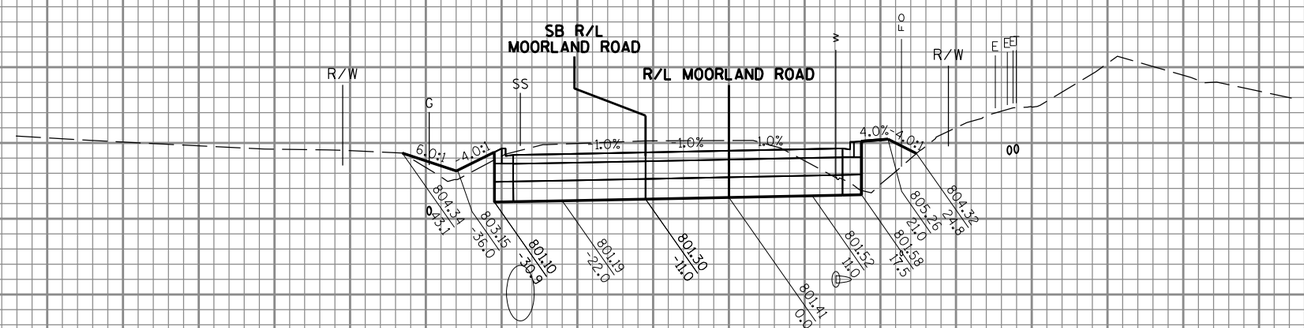


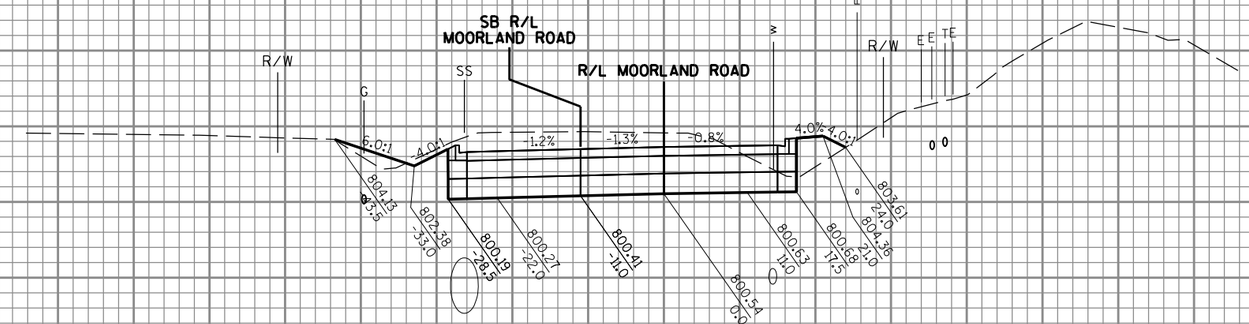
STA 187+00 TO 187+50

PROJECT NO: 2723-00-71	HWY: MOORLAND ROAD	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD	SHEET 314 E

FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\090201_XS_Moorland.DGN PLOT DATE : 7/26/2017 PLOT BY : wwolak PLOT NAME : $FILE$ PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21





188+50

188+00

5 FT

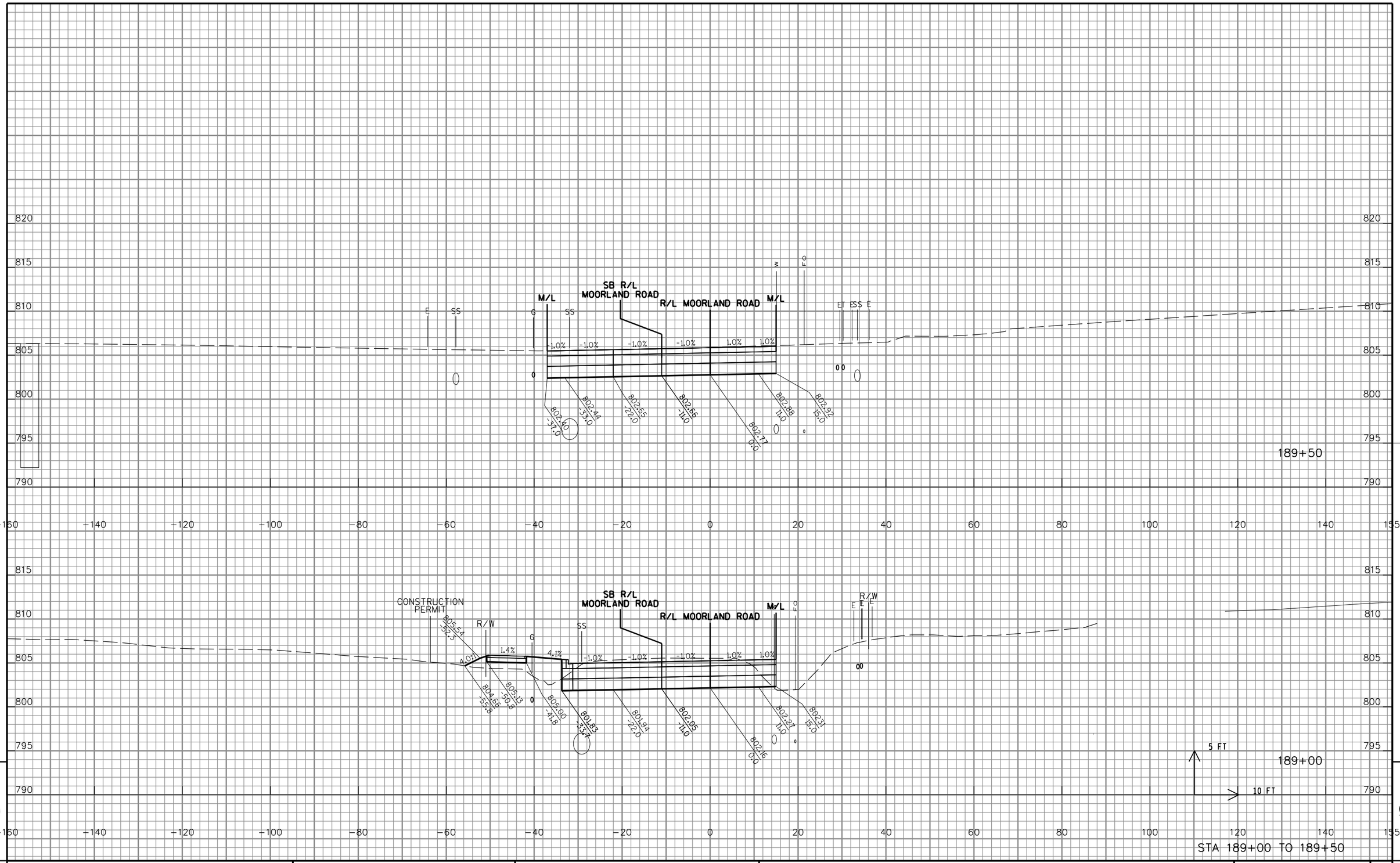
10 FT

STA 188+00 TO 188+50

PROJECT NO: 2723-00-71	HWY: MOORLAND ROAD	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD	SHEET 315 E

FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\090201_XS_Moorland.DGN | PLOT DATE : 7/26/2017 | PLOT BY : wwolak | PLOT NAME : $FILE$ | PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21



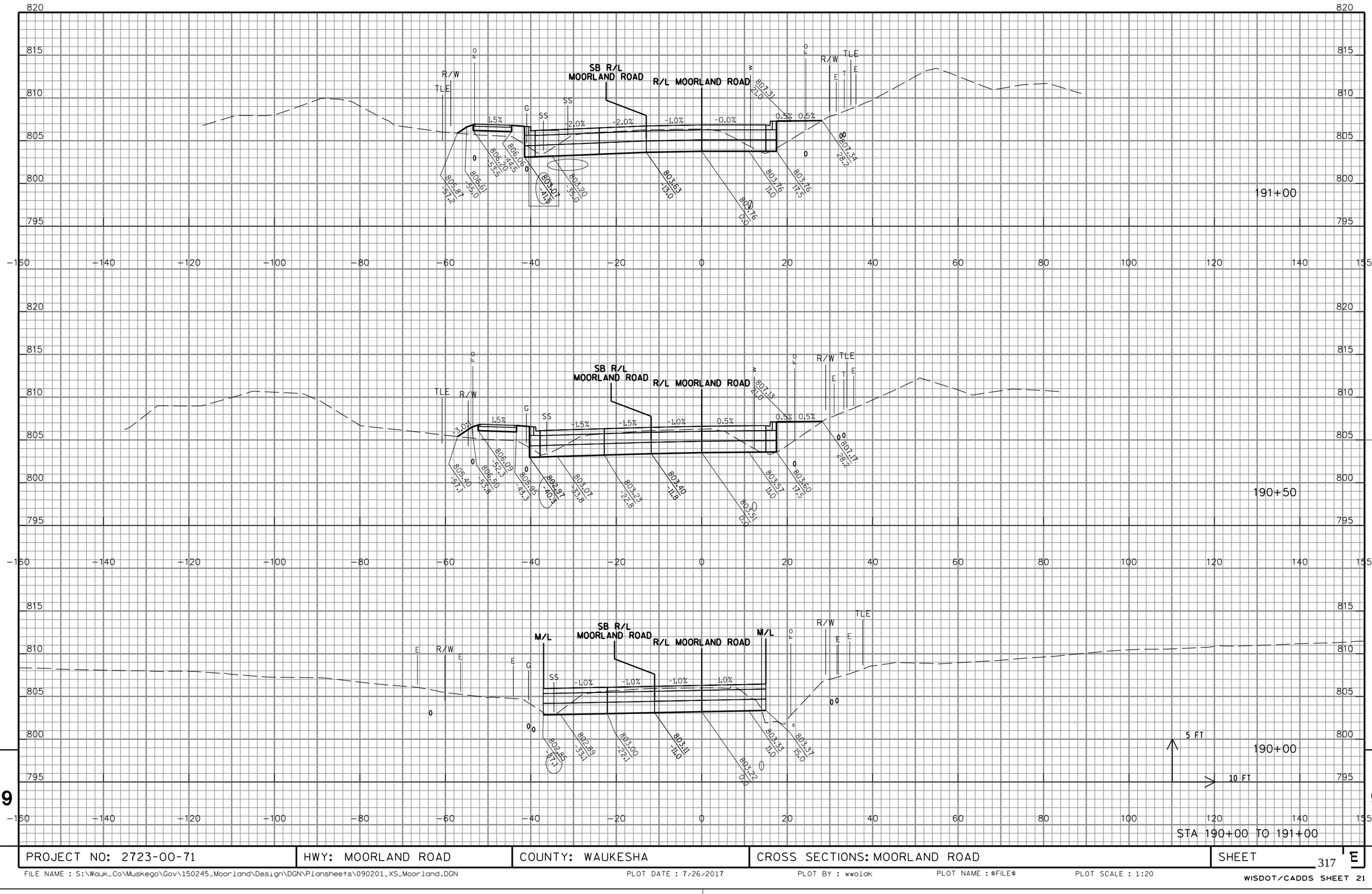
9

9

PROJECT NO: 2723-00-71	HWY: MOORLAND ROAD	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD	SHEET 316 E

FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\090201_XS_Moorland.DGN PLOT DATE : 7/26/2017 PLOT BY : wwolak PLOT NAME : $FILE$ PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

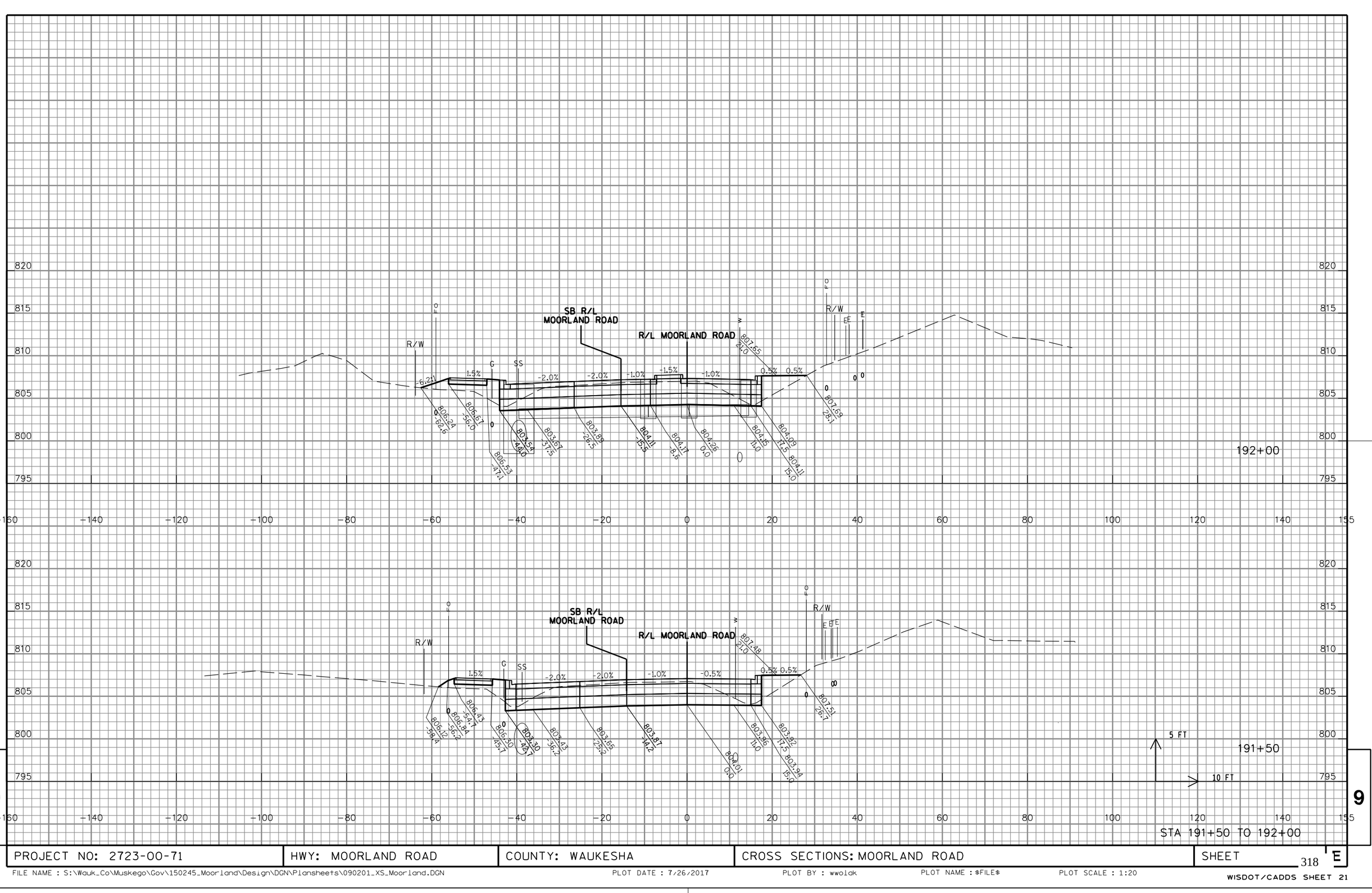


STA 190+00 TO 191+00

PROJECT NO: 2723-00-71	HWY: MOORLAND ROAD	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD	SHEET 317 E

FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\090201_XS_Moorland.DGN PLOT DATE : 7/26/2017 PLOT BY : wwolak PLOT NAME : $FILE$ PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

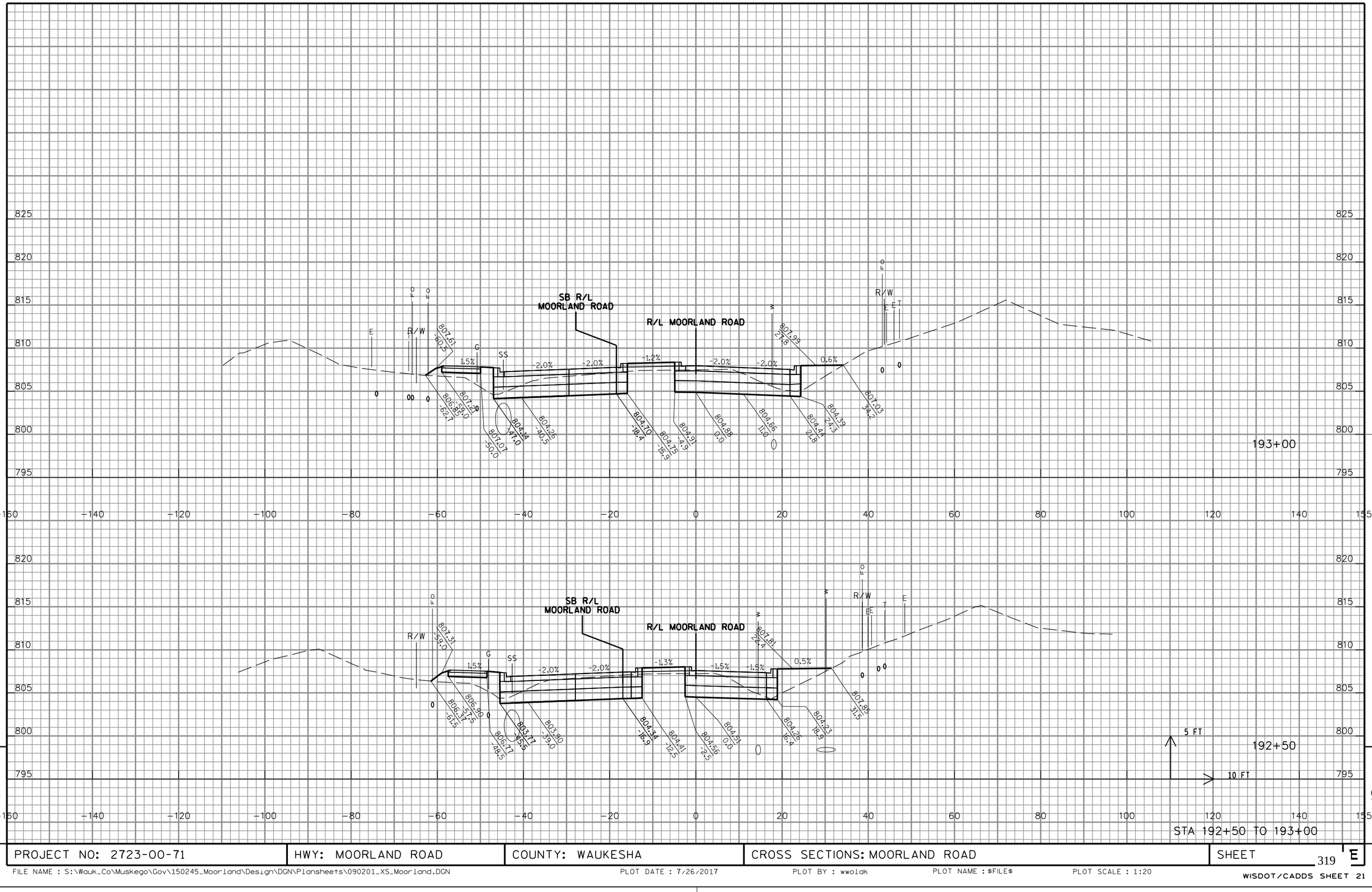


9

PROJECT NO: 2723-00-71	HWY: MOORLAND ROAD	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD	SHEET 318 E

FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\090201_XS_Moorland.DGN | PLOT DATE : 7/26/2017 | PLOT BY : wwolak | PLOT NAME : $FILE$ | PLOT SCALE : 1:20

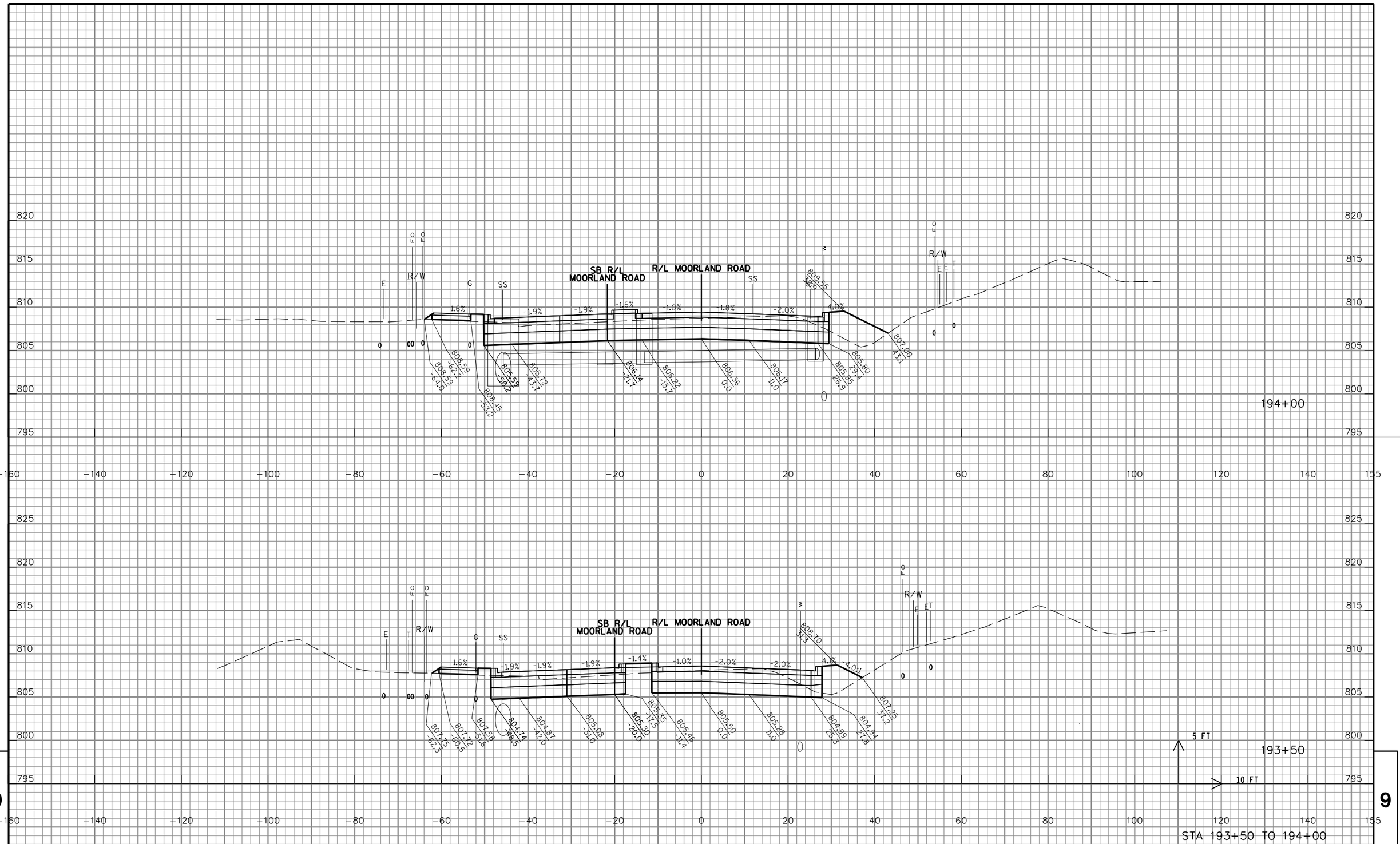
WISDOT/CADDS SHEET 21



PROJECT NO: 2723-00-71	HWY: MOORLAND ROAD	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD	SHEET 319 E

FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\090201_XS_Moorland.DGN | PLOT DATE : 7/26/2017 | PLOT BY : wwolak | PLOT NAME : $FILE$ | PLOT SCALE : 1:20

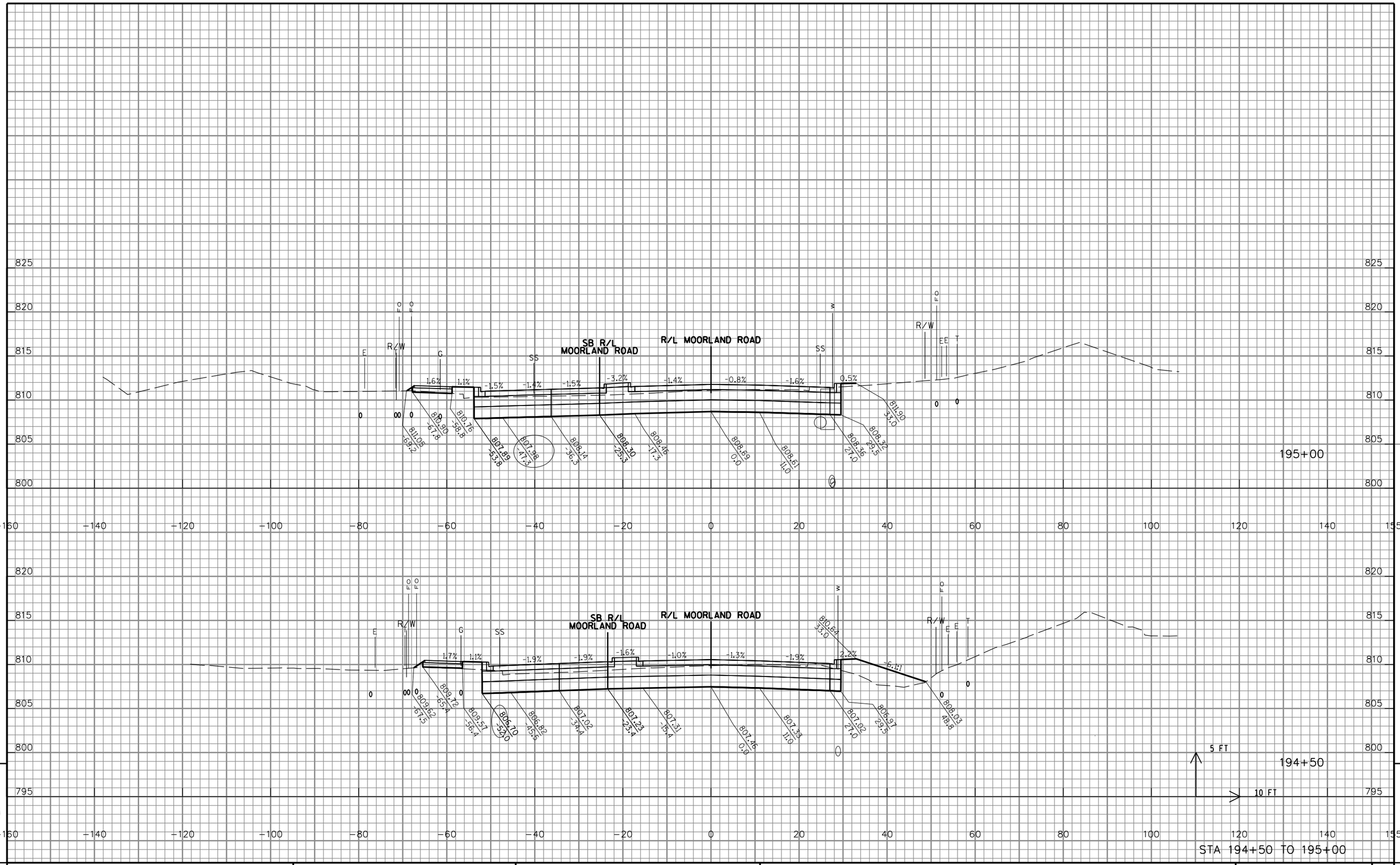
WISDOT/CADDS SHEET 21



PROJECT NO: 2723-00-71	HWY: MOORLAND ROAD	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD	SHEET 320 E

FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\090201_XS_Moorland.DGN | PLOT DATE : 7/26/2017 | PLOT BY : wwolak | PLOT NAME : $FILE$ | PLOT SCALE : 1:20

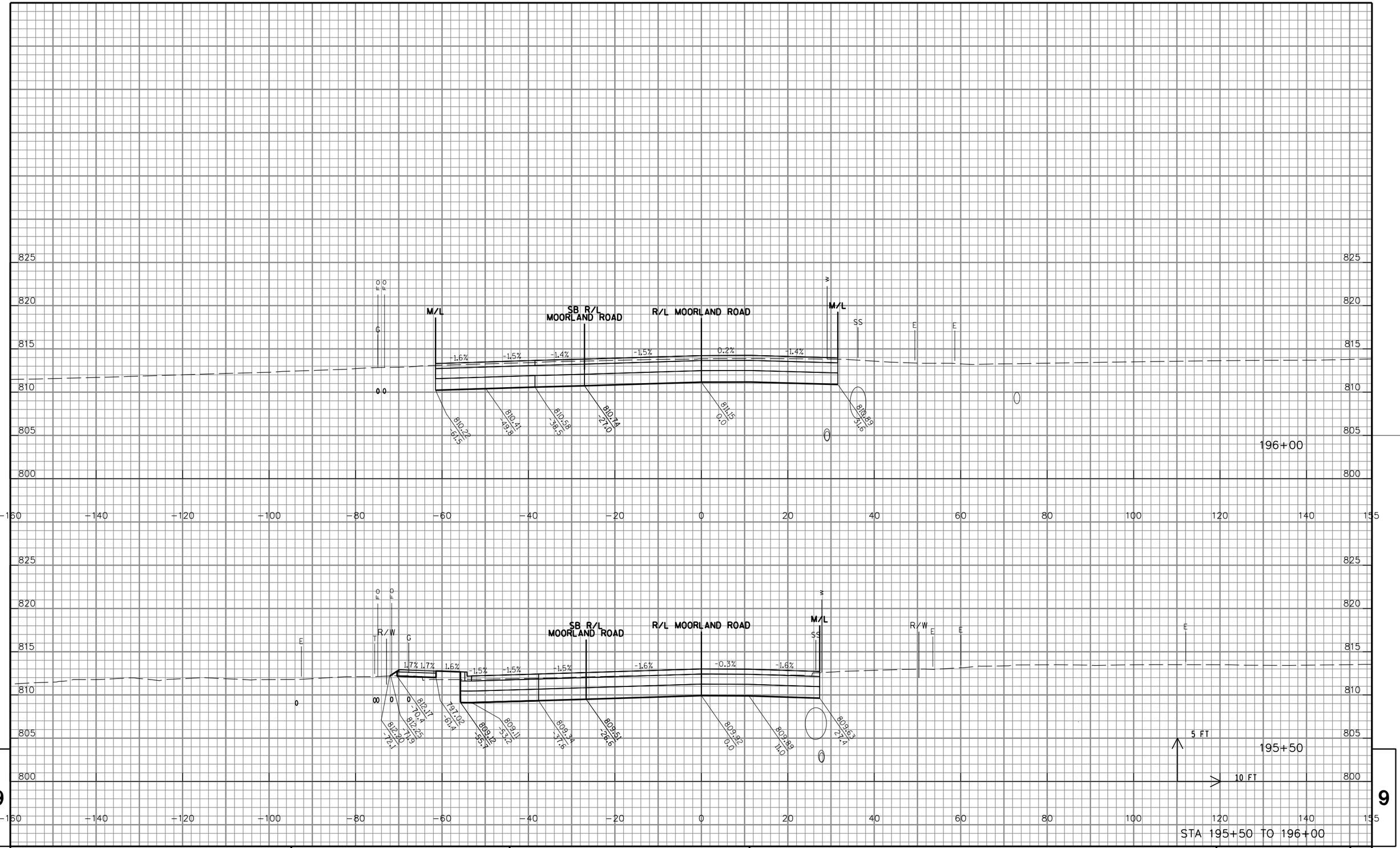
WISDOT/CADDS SHEET 21



PROJECT NO: 2723-00-71	HWY: MOORLAND ROAD	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD	SHEET 321 E

FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\090201_XS_Moorland.DGN | PLOT DATE : 7/26/2017 | PLOT BY : wwolak | PLOT NAME : $FILE$ | PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21



9

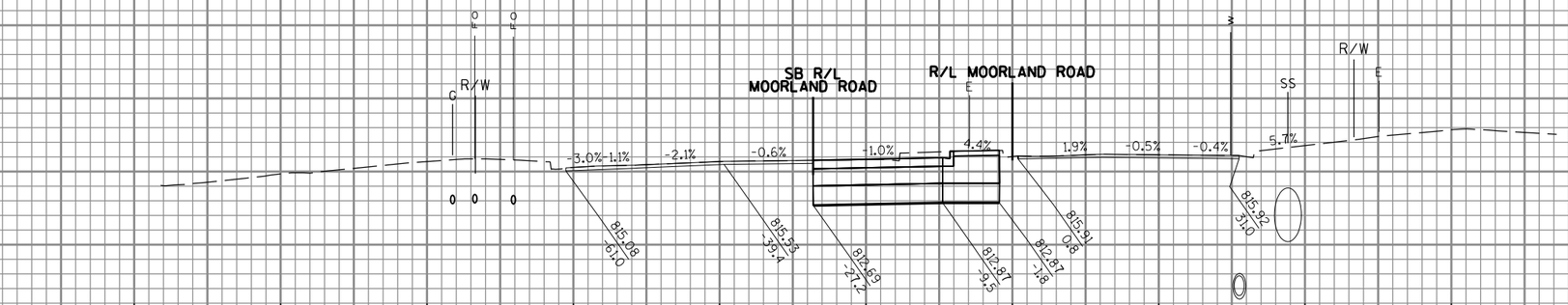
9

PROJECT NO: 2723-00-71	HWY: MOORLAND ROAD	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD	SHEET 322 E

FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\090201_XS_Moorland.DGN | PLOT DATE : 7/26/2017 | PLOT BY : wwolak | PLOT NAME : $FILE$ | PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

END CONSTRUCTION STA 196+75.00



196+75

196+50

5 FT

10 FT

STA 196+50 TO 196+75

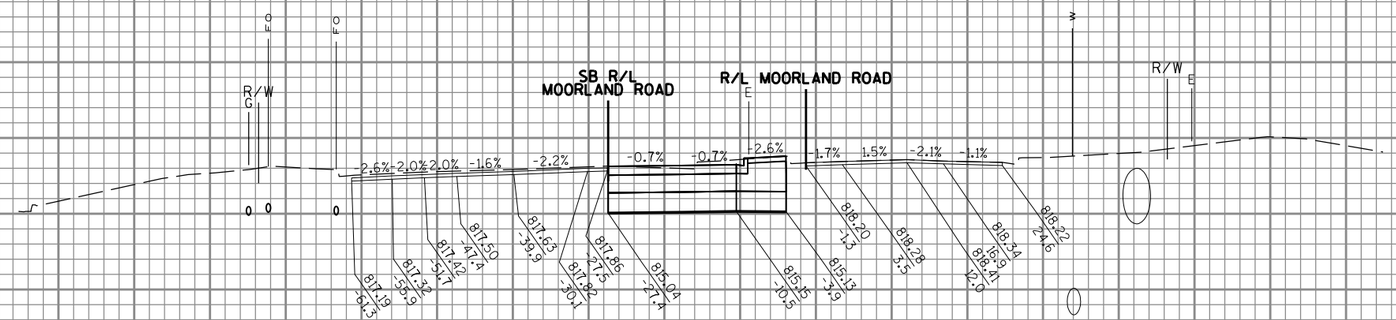
9

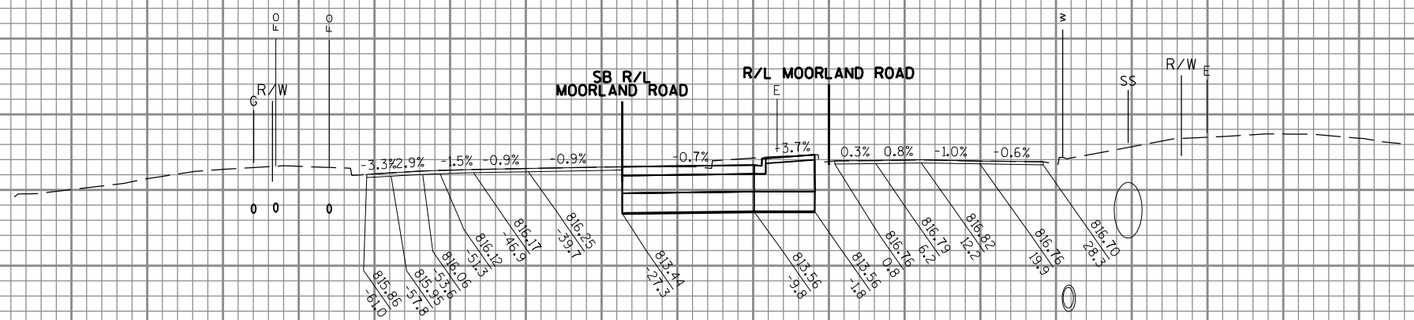
9

PROJECT NO: 2723-00-71	HWY: MOORLAND ROAD	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD	SHEET 323 E

FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\090201_XS_Moorland.DGN PLOT DATE : 7/26/2017 PLOT BY : wwolak PLOT NAME : $FILE$ PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21



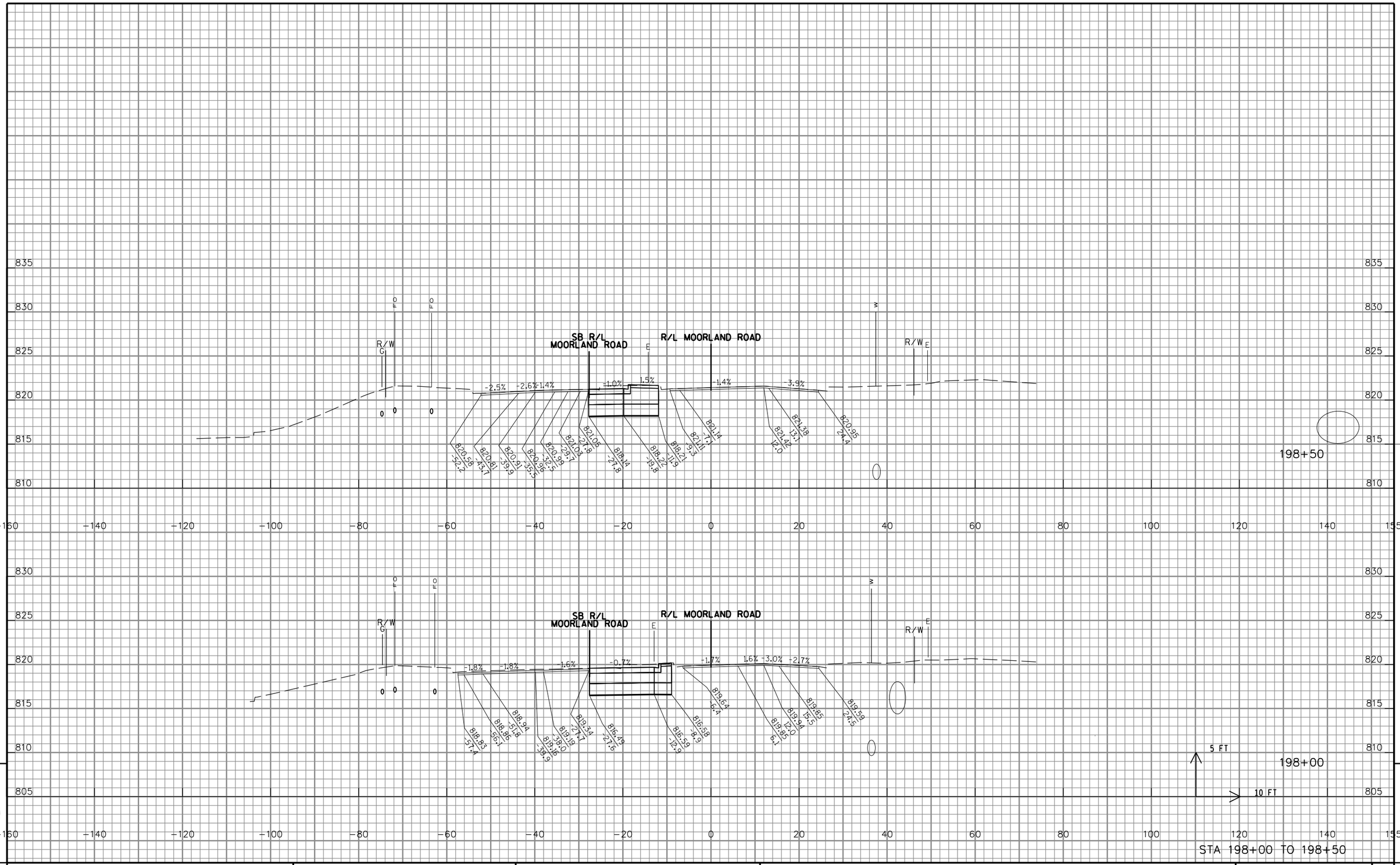


9

9

PROJECT NO: 2723-00-71	HWY: MOORLAND ROAD	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD	SHEET 324 E

FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\090201_XS_Moorland.DGN
PLOT DATE : 7/26/2017
PLOT BY : wwolak
PLOT NAME : $FILE$
PLOT SCALE : 1:20
WISDOT/CADDS SHEET 21



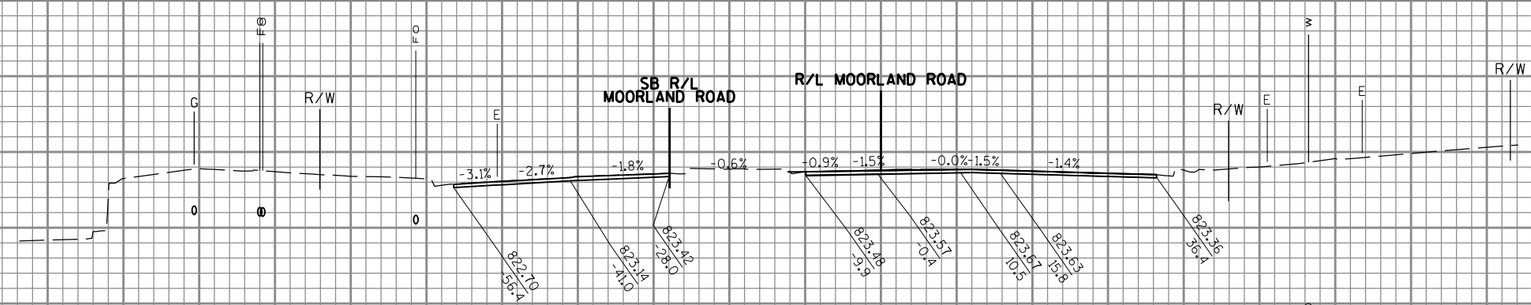
STA 198+00 TO 198+50

PROJECT NO: 2723-00-71	HWY: MOORLAND ROAD	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD	SHEET 325 E

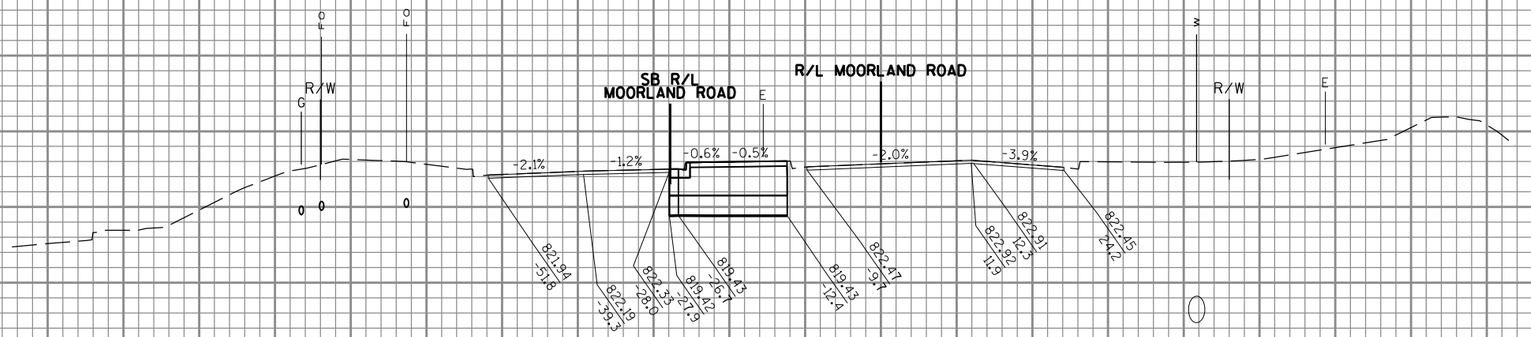
FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\090201_XS_Moorland.DGN | PLOT DATE : 7/26/2017 | PLOT BY : wwolak | PLOT NAME : $FILE$ | PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

END PROJECT STA 199+32.88



199+33
STATION BACK



199+00

STA 199+00 TO 199+33

9

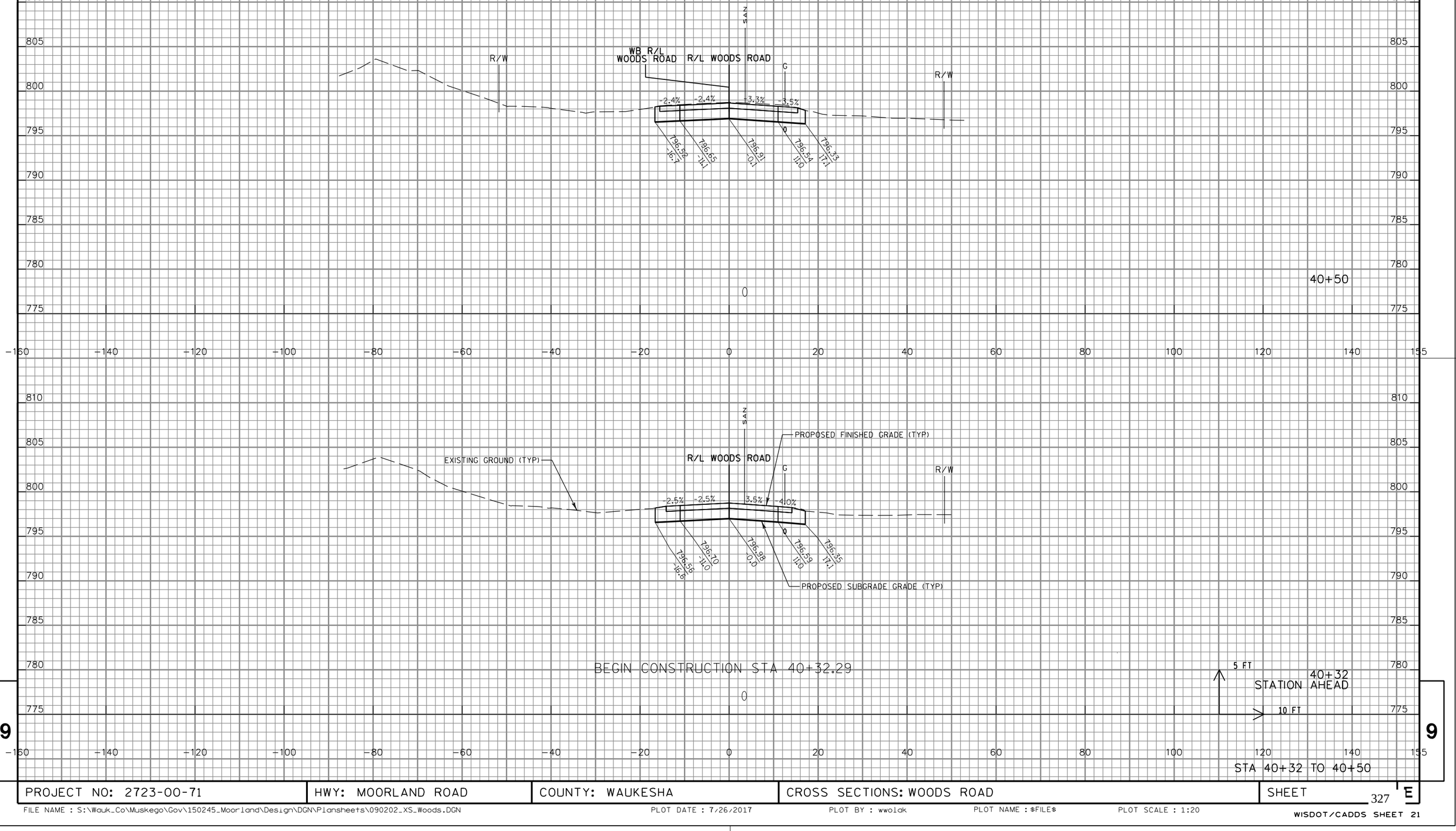
9

PROJECT NO: 2723-00-71	HWY: MOORLAND ROAD	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD	SHEET 326 E

FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\090201_XS_Moorland.DGN PLOT DATE : 7/26/2017 PLOT BY : wwolak PLOT NAME : $FILE$ PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

NOTE:
THE LOCATION OF EXISTING UTILITIES AS SHOWN ON THE CROSS SECTIONS IS APPROXIMATE.

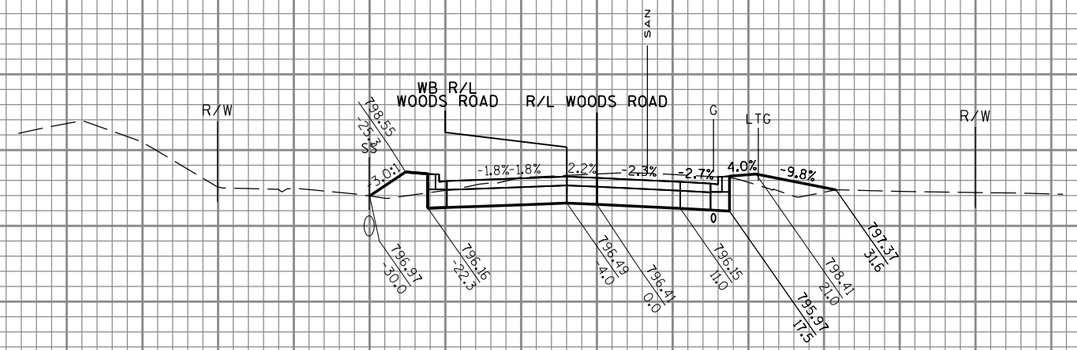


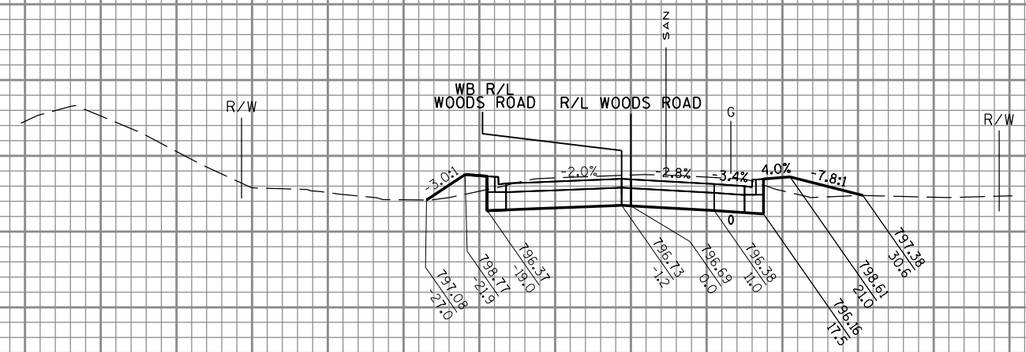
9

PROJECT NO: 2723-00-71	HWY: MOORLAND ROAD	COUNTY: WAUKESHA	CROSS SECTIONS: WOODS ROAD	SHEET 327 E

FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\090202_XS_Woods.DGN PLOT DATE : 7/26/2017 PLOT BY : wwolak PLOT NAME : $FILE$ PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21





41+50

41+00

5 FT

10 FT

STA 41+00 TO 41+50

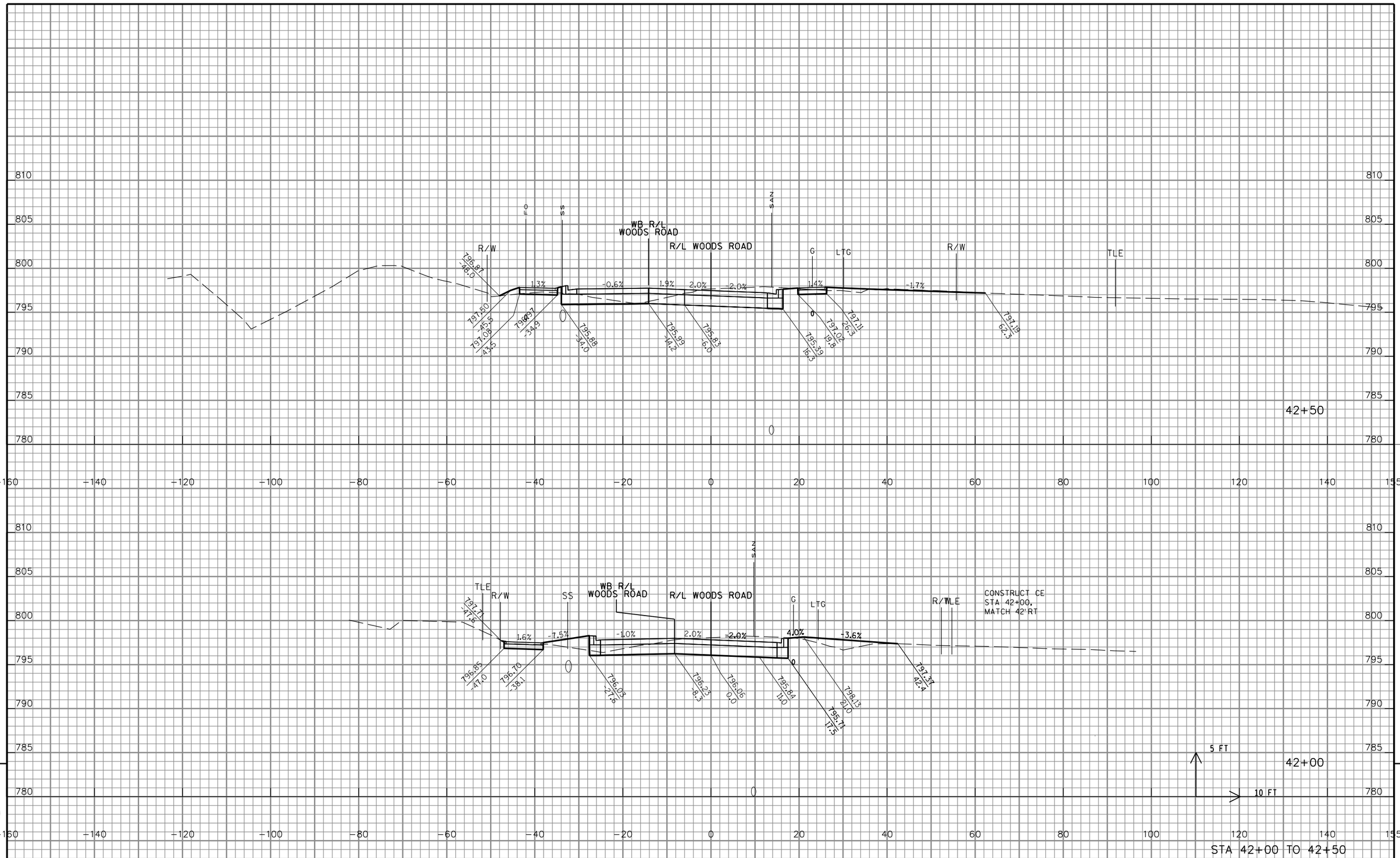
9

9

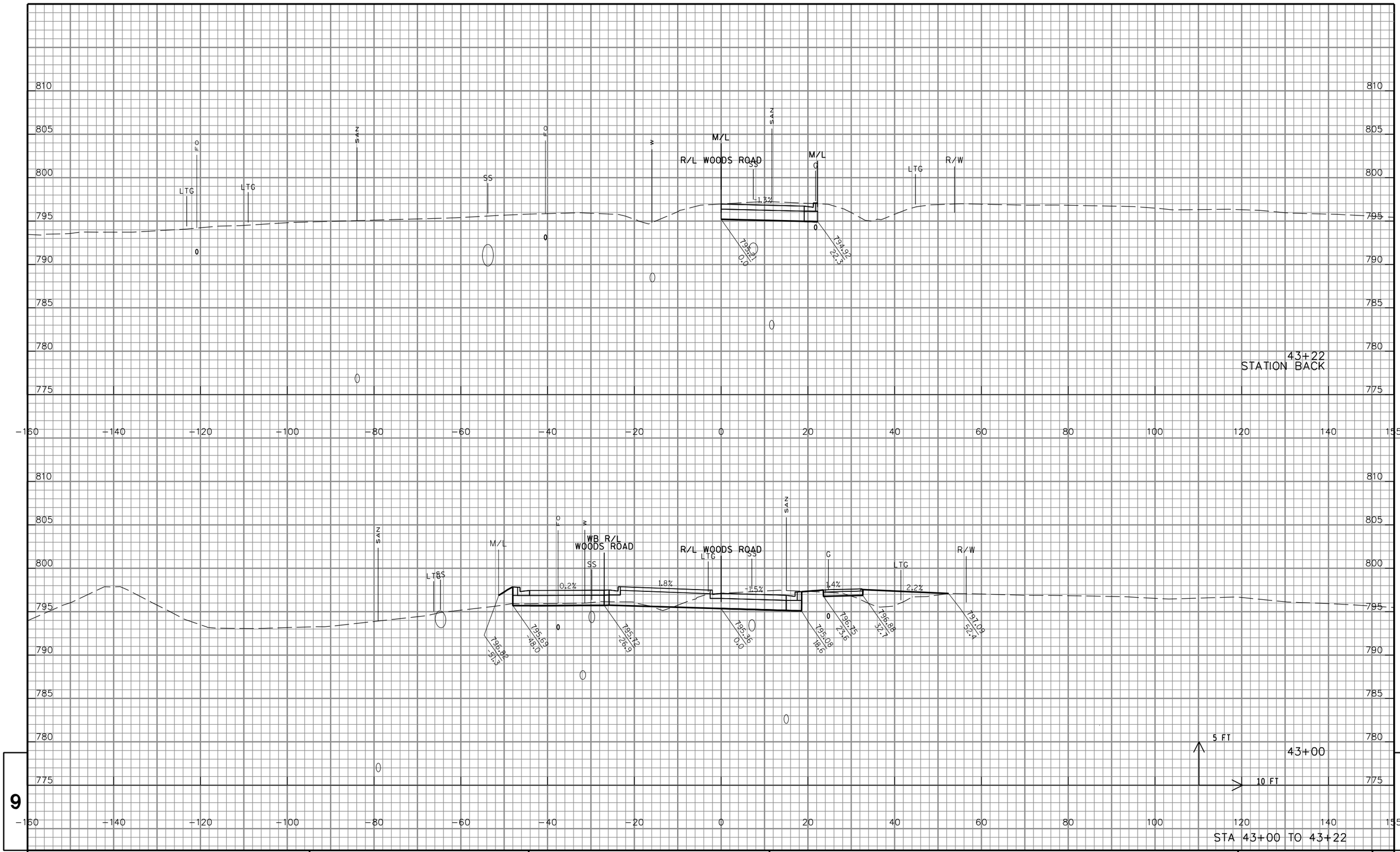
PROJECT NO: 2723-00-71	HWY: MOORLAND ROAD	COUNTY: WAUKESHA	CROSS SECTIONS: WOODS ROAD	SHEET 328 E

FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\090202_XS_Woods.DGN PLOT DATE : 7/26/2017 PLOT BY : wwolak PLOT NAME : $FILE$ PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21



PROJECT NO: 2723-00-71	HWY: MOORLAND ROAD	COUNTY: WAUKESHA	CROSS SECTIONS: WOODS ROAD	SHEET 329 E



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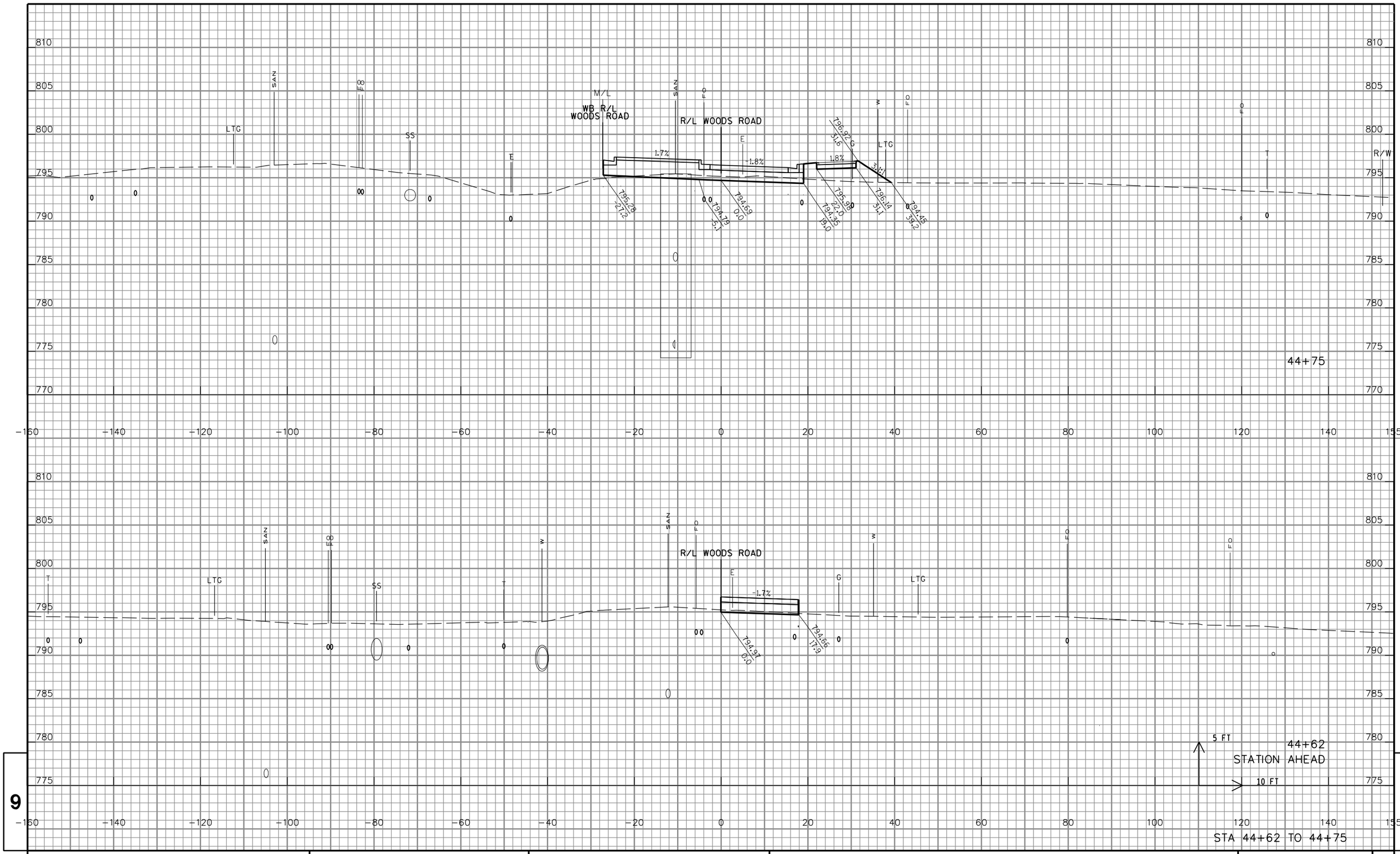
PROJECT NO: 2723-00-71	HWY: MOORLAND ROAD	COUNTY: WAUKESHA	CROSS SECTIONS: WOODS ROAD	SHEET 330 E

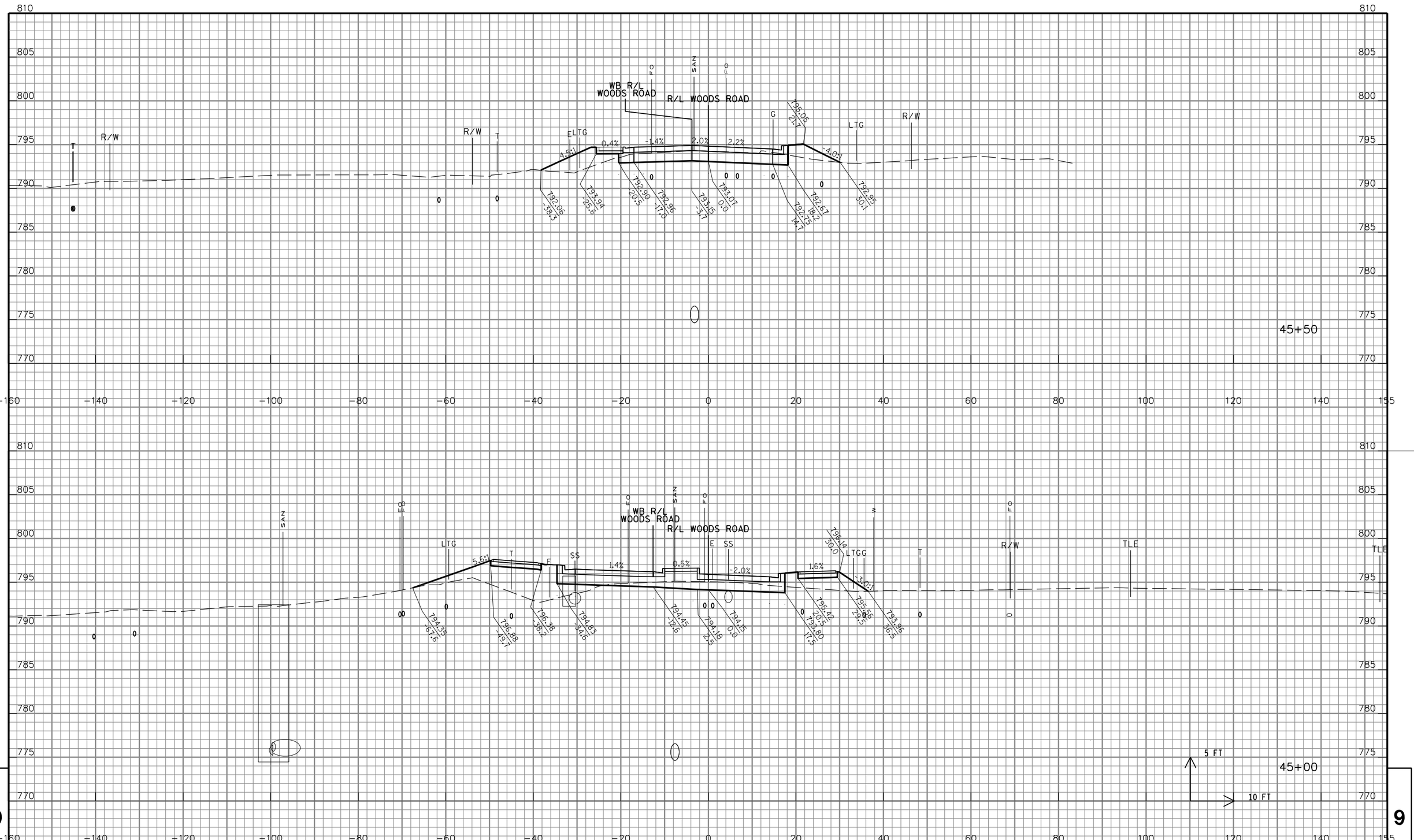
FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\090202_XS_Woods.DGN | PLOT DATE : 7/26/2017 | PLOT BY : wwolak | PLOT NAME : $FILE$ | PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21



PROJECT NO: 2723-00-71	HWY: MOORLAND ROAD	COUNTY: WAUKESHA	CROSS SECTIONS: WOODS ROAD	SHEET 331 E

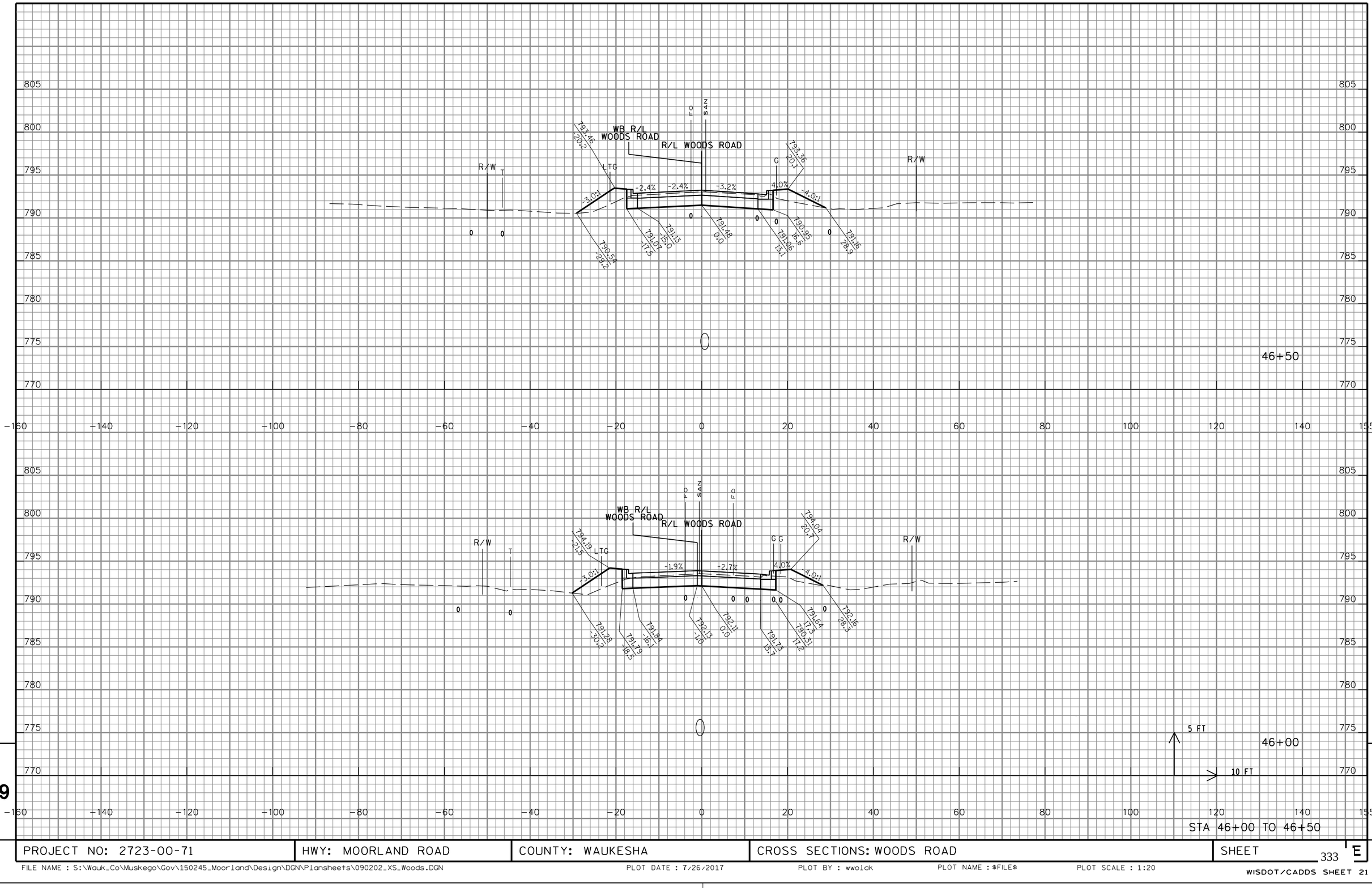
FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\090202_XS_Woods.DGN
PLOT DATE : 7/26/2017
PLOT BY : wwolak
PLOT NAME : $FILE$
PLOT SCALE : 1:20
WISDOT/CADDS SHEET 21



PROJECT NO: 2723-00-71	HWY: MOORLAND ROAD	COUNTY: WAUKESHA	CROSS SECTIONS: WOODS ROAD	SHEET 332 E

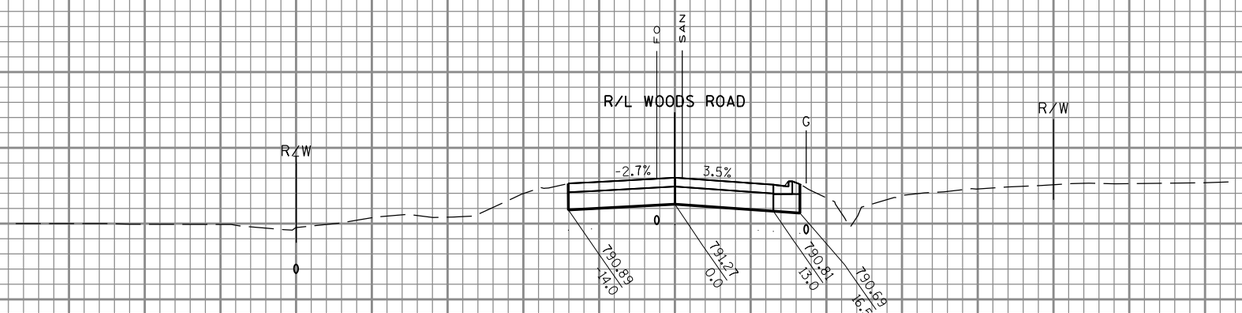
FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\090202_XS_Woods.DGN | PLOT DATE : 7/26/2017 | PLOT BY : wwolak | PLOT NAME : $FILE$ | PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21



PROJECT NO: 2723-00-71	HWY: MOORLAND ROAD	COUNTY: WAUKESHA	CROSS SECTIONS: WOODS ROAD	SHEET 333 E

END CONSTRUCTION STA 46+80.36



805 800 795 790 785 780 775 770

5 FT
46+80
STATION BACK
10 FT

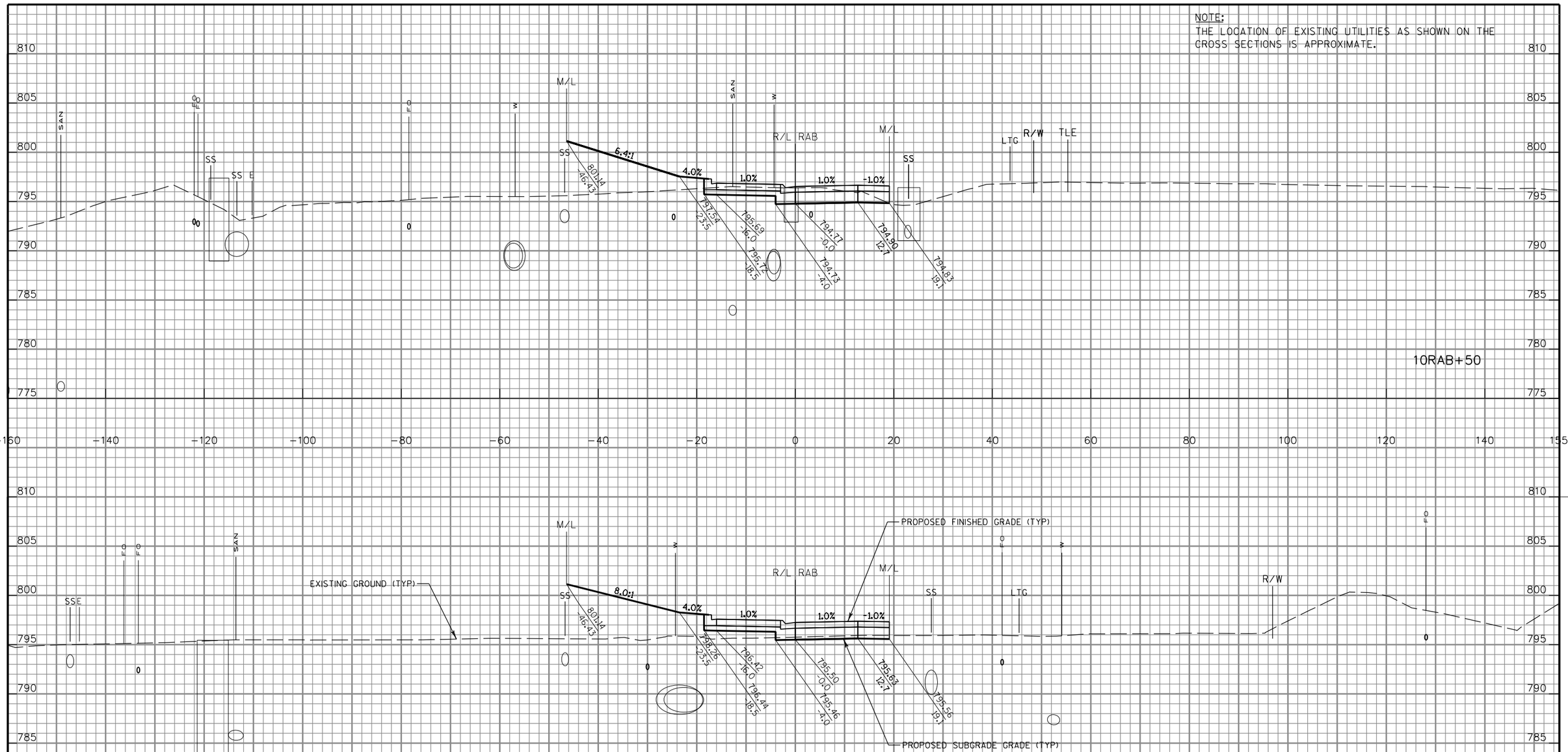
-160 -140 -120 -100 -80 -60 -40 -20 0 20 40 60 80 100 120 140 155

STA 46+80 TO 46+80

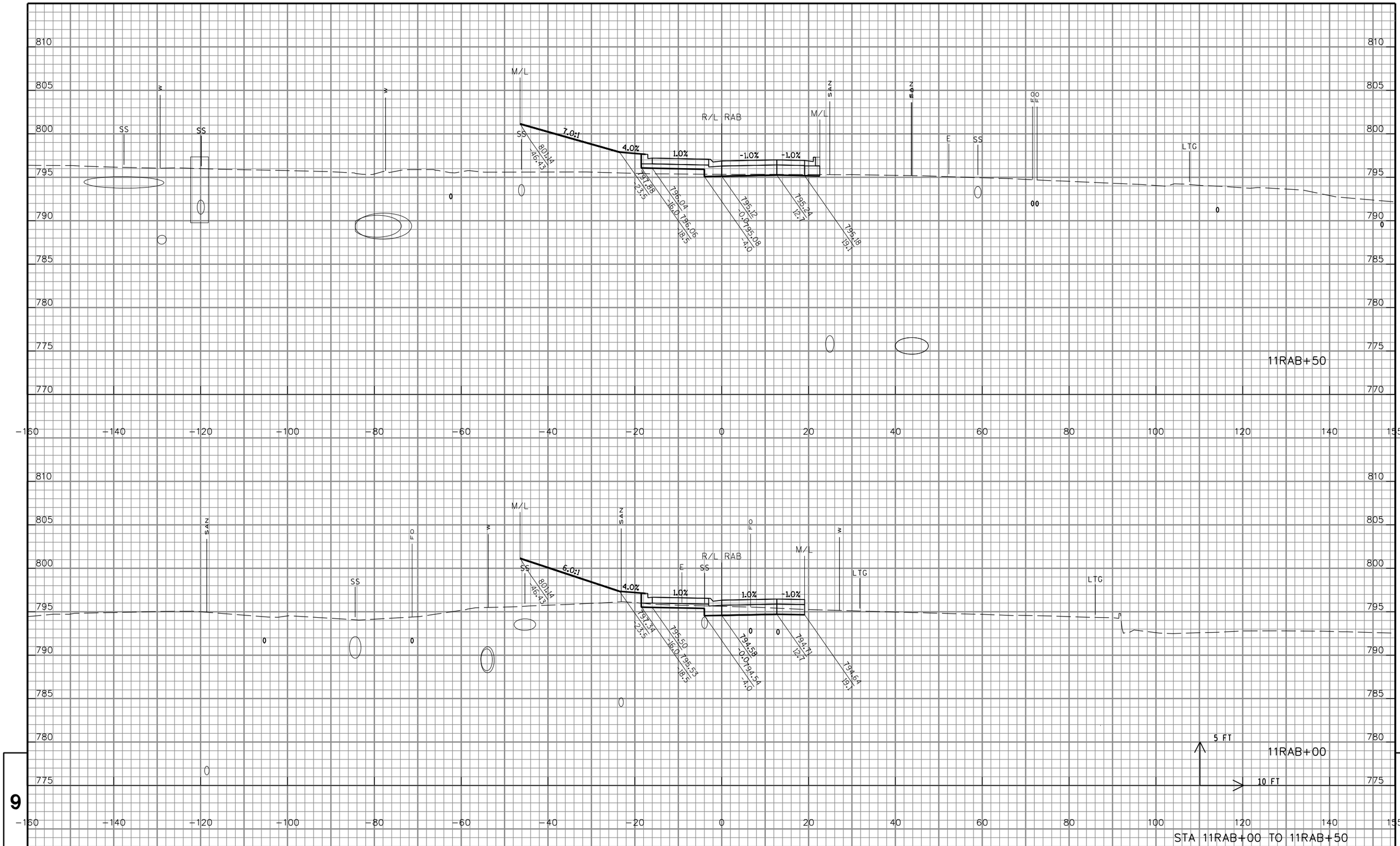
9 9

PROJECT NO: 2723-00-71	HWY: MOORLAND ROAD	COUNTY: WAUKESHA	CROSS SECTIONS: WOODS ROAD	SHEET 334 E

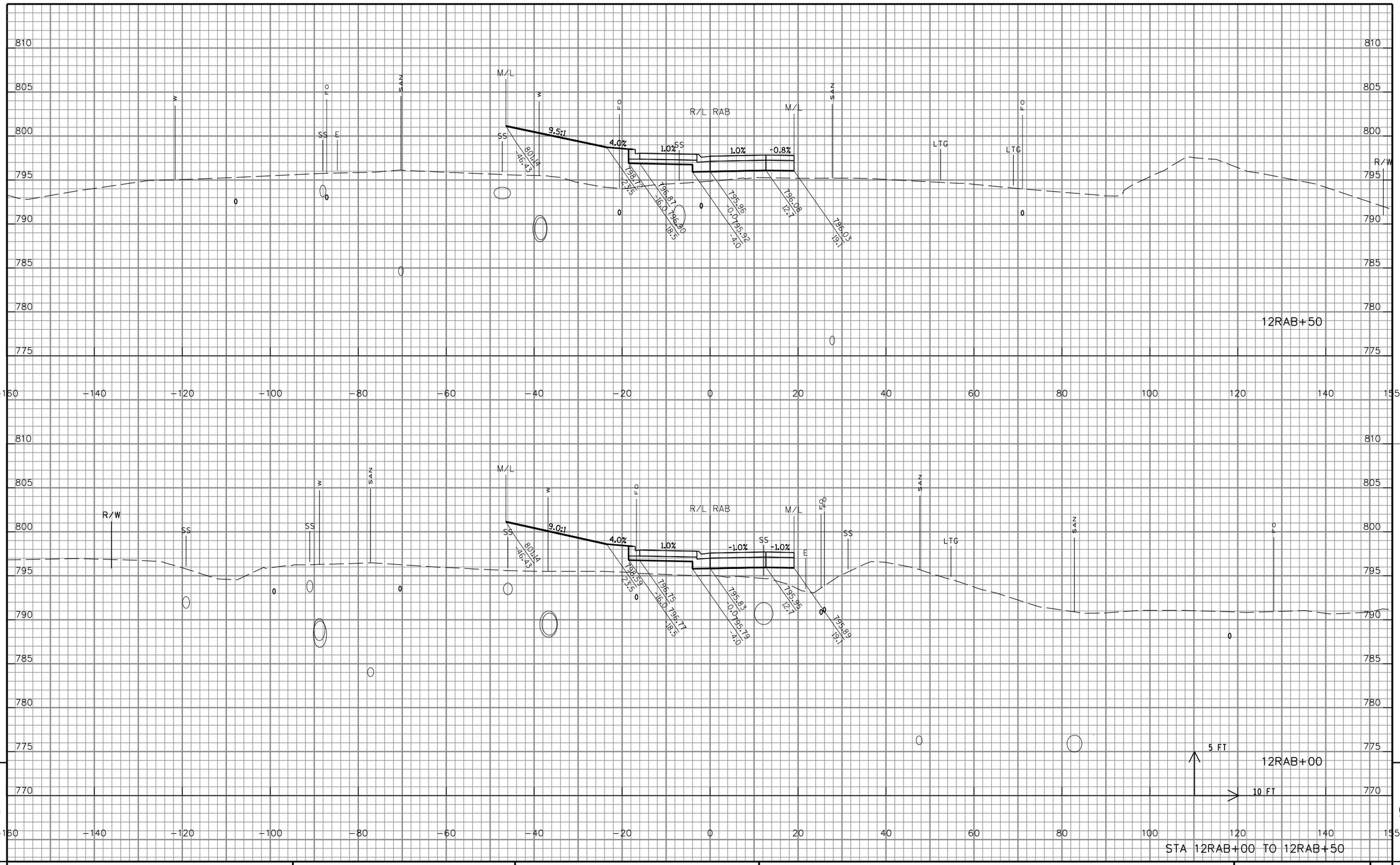
NOTE:
THE LOCATION OF EXISTING UTILITIES AS SHOWN ON THE CROSS SECTIONS IS APPROXIMATE.



PROJECT NO: 2723-00-71	HWY: MOORLAND ROAD	COUNTY: WAUKESHA	CROSS SECTIONS: ROUNDABOUT	SHEET 335 E



PROJECT NO: 2723-00-71	HWY: MOORLAND ROAD	COUNTY: WAUKESHA	CROSS SECTIONS: ROUNDABOUT	SHEET 336 E



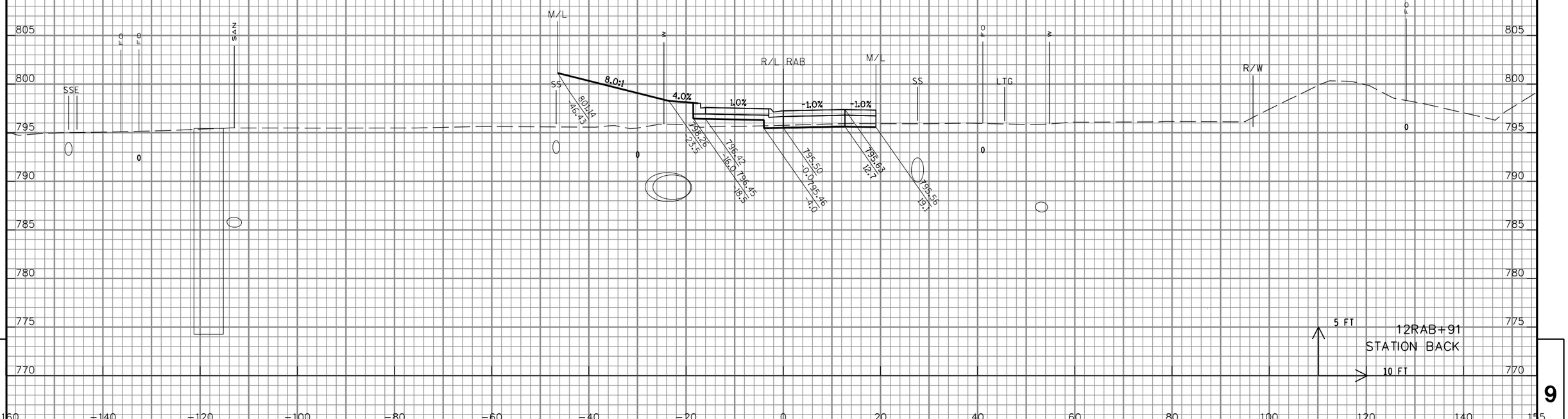
STA 12RAB+00 TO 12RAB+50

PROJECT NO: 2723-00-71	HWY: MOORLAND ROAD	COUNTY: WAUKESHA	CROSS SECTIONS: ROUNDABOUT	SHEET 337 E

FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\090203_XS_RAB.DGN PLOT DATE : 7/26/2017 PLOT BY : wwolak PLOT NAME : $FILE$ PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

END CONSTRUCTION STA 12RAB+91.64



STA 12RAB+91 TO 12RAB+91

9

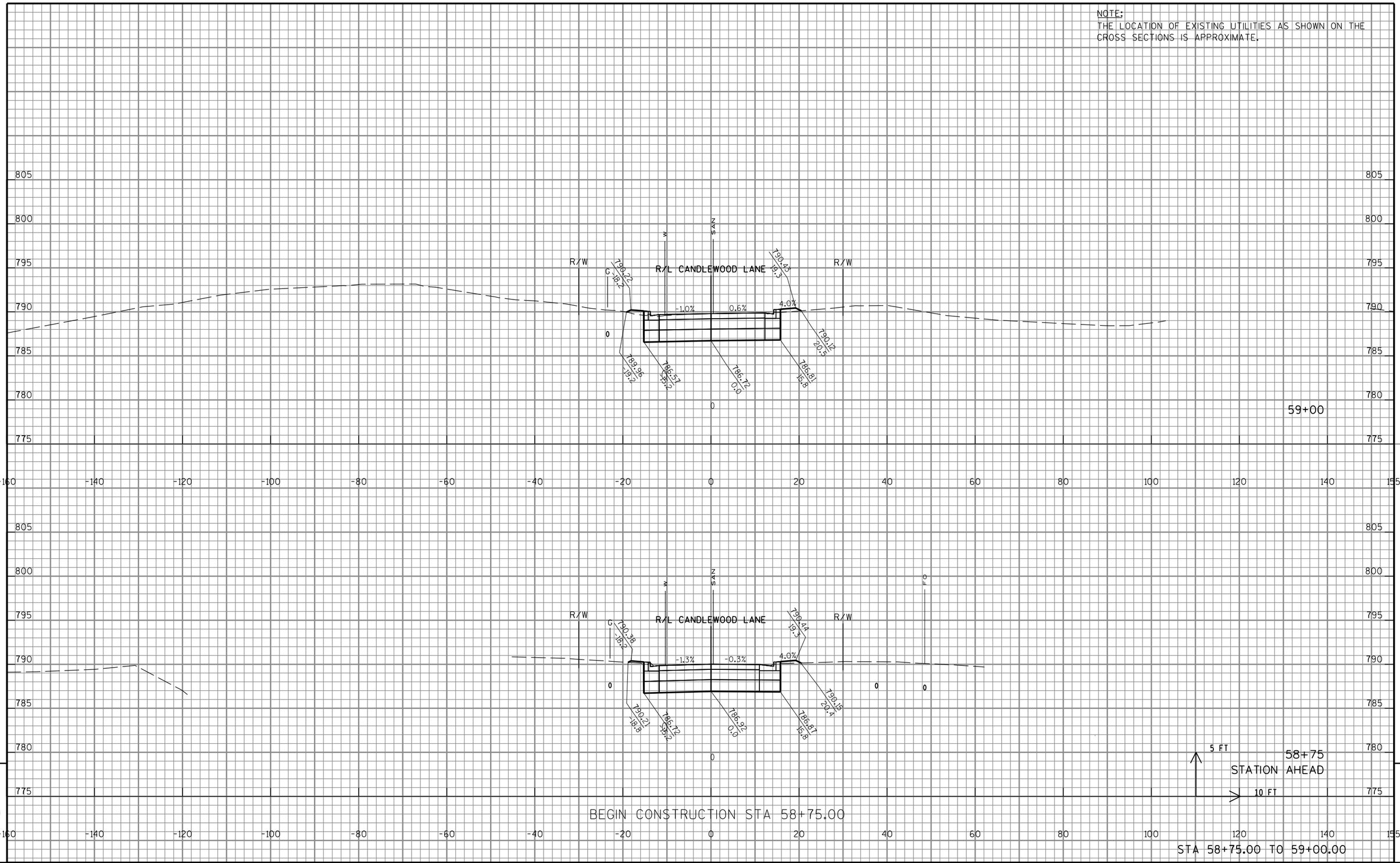
9

PROJECT NO: 2723-00-71	HWY: MOORLAND ROAD	COUNTY: WAUKESHA	CROSS SECTIONS: ROUNDABOUT	SHEET 338 E

FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\090203_XS_RAB.DGN PLOT DATE : 7/26/2017 PLOT BY : wwolak PLOT NAME : $FILE$ PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

NOTE:
THE LOCATION OF EXISTING UTILITIES AS SHOWN ON THE CROSS SECTIONS IS APPROXIMATE.



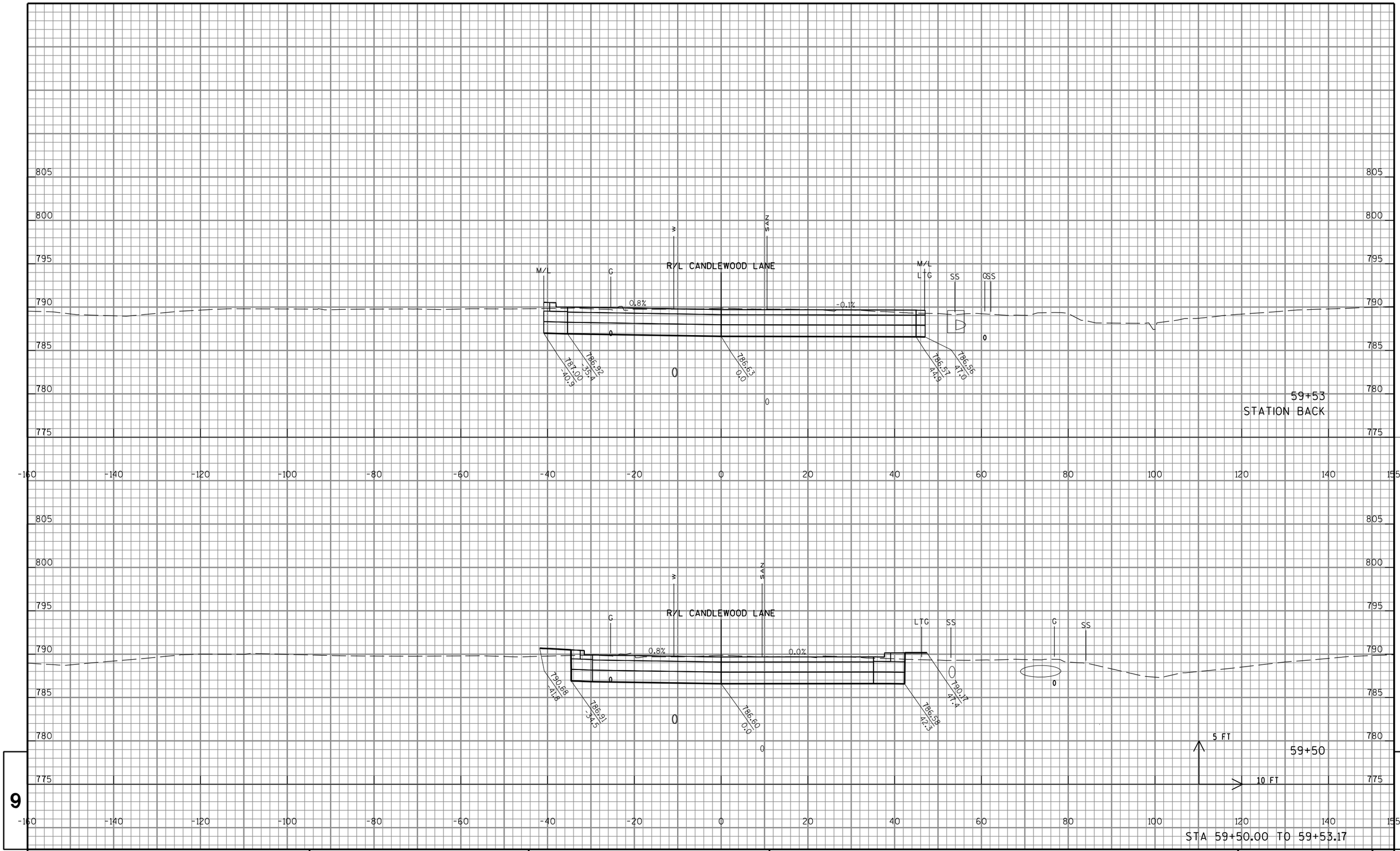
9

9

PROJECT NO: 2723-00-71	HWY: MOORLAND ROAD	COUNTY: WAUKESHA	CROSS SECTIONS: CANDLEWOOD LANE	SHEET 339 E

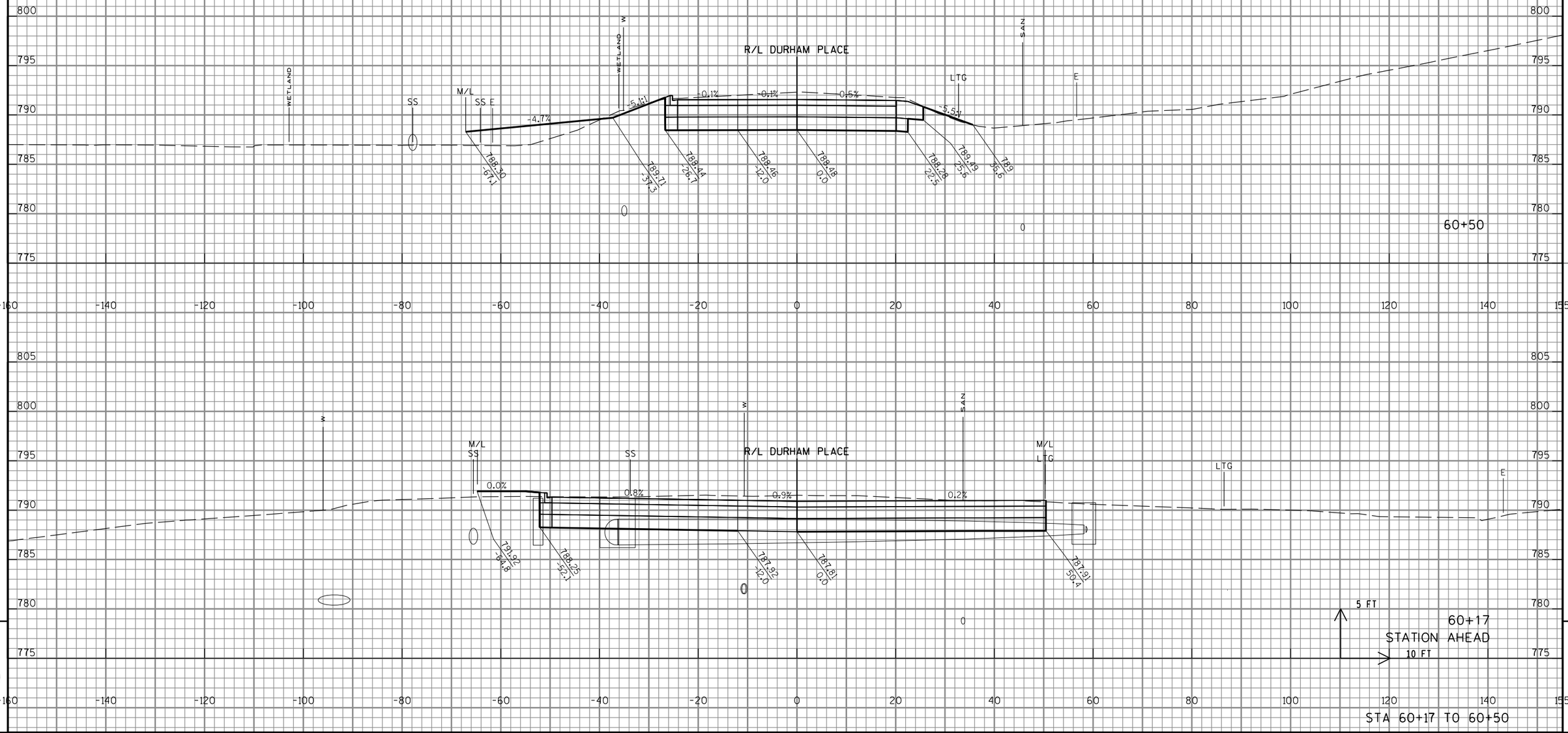
FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\090204_XS_Candlewood.DGN PLOT DATE : 7/26/2017 PLOT BY : wwolak PLOT NAME : $FILE$ PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21



PROJECT NO: 2723-00-71	HWY: MOORLAND ROAD	COUNTY: WAUKESHA	CROSS SECTIONS: CANDLEWOOD LANE	SHEET 340 E

NOTE:
THE LOCATION OF EXISTING UTILITIES AS SHOWN ON THE CROSS SECTIONS IS APPROXIMATE.

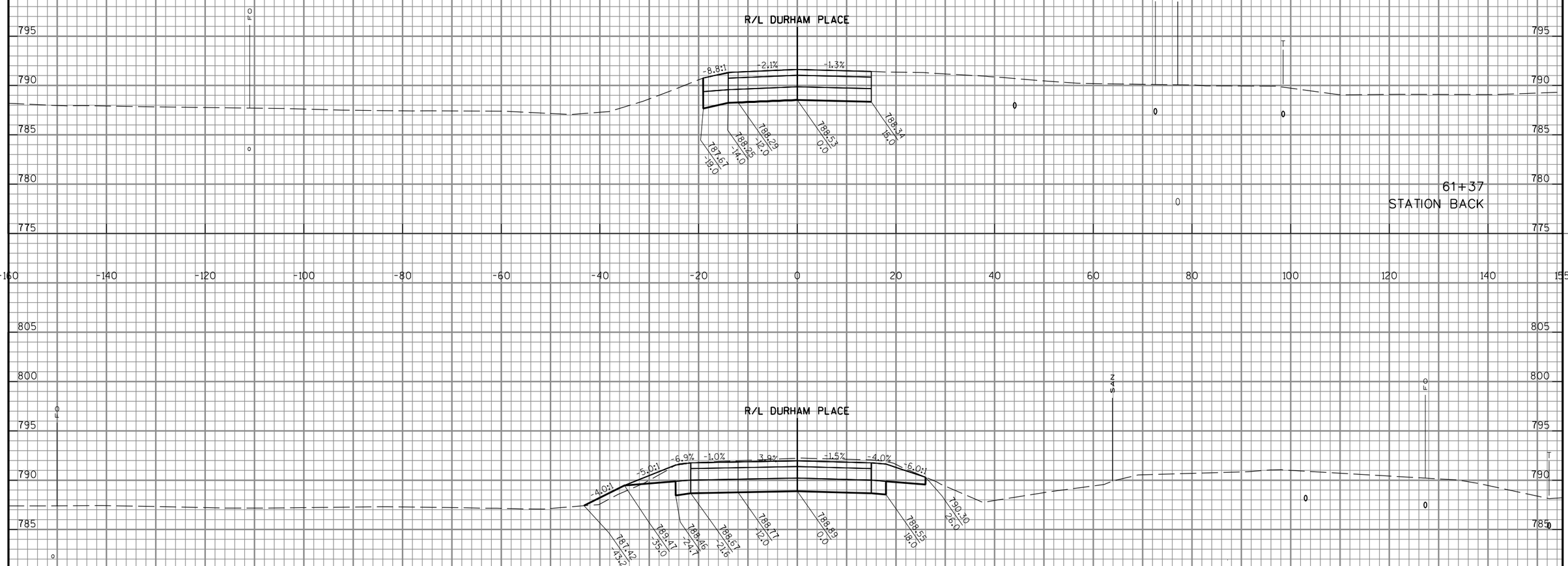


PROJECT NO: 2723-00-71	HWY: MOORLAND ROAD	COUNTY: WAUKESHA	CROSS SECTIONS: DURHAM PLACE	SHEET 341 E

FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\090204_XS_Candlewood.DGN PLOT DATE : 7/26/2017 PLOT BY : wwolak PLOT NAME : $FILE$ PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

END CONSTRUCTION STA 61+36.50

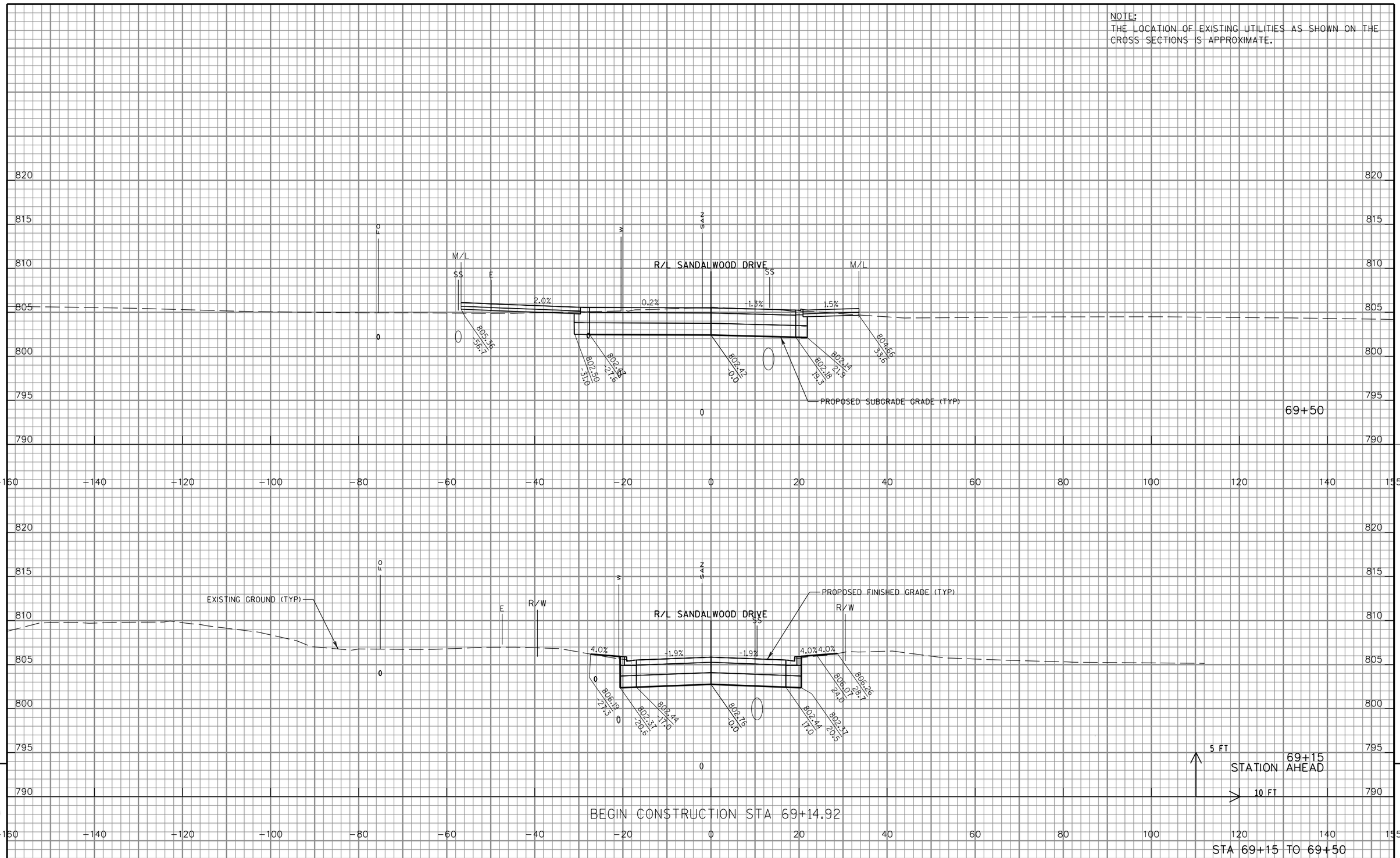


PROJECT NO: 2723-00-71	HWY: MOORLAND ROAD	COUNTY: WAUKESHA	CROSS SECTIONS: DURHAM PLACE	SHEET 342 E

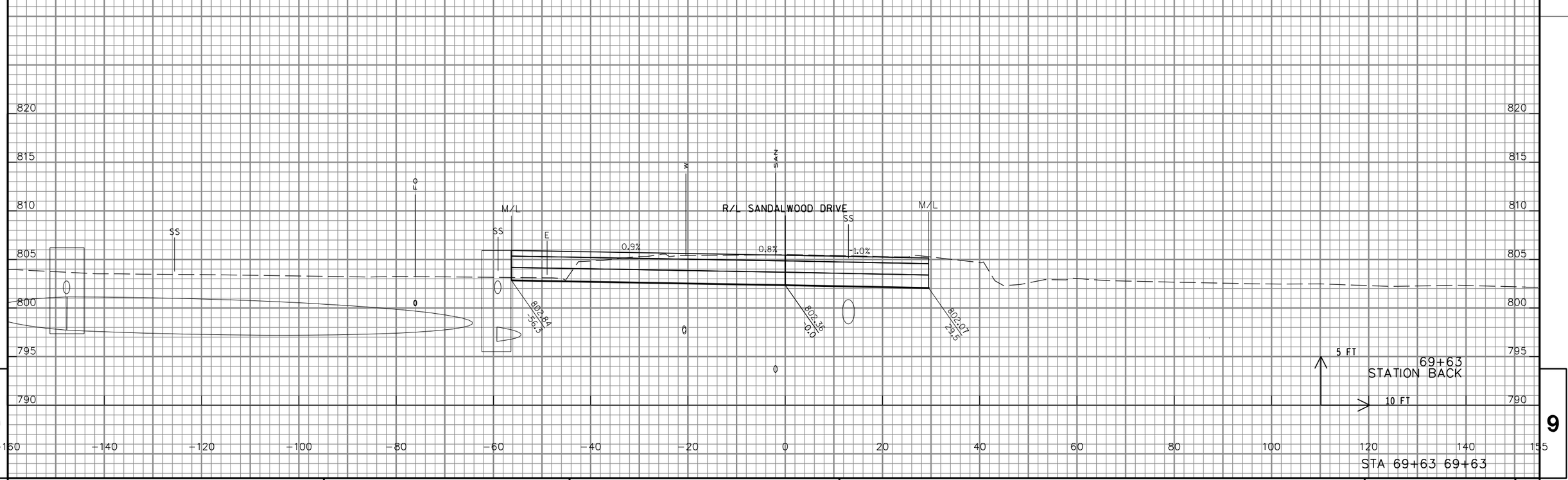
FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\090204_XS_Candlewood.DGN PLOT DATE : 7/26/2017 PLOT BY : wwolak PLOT NAME : $FILE$ PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

NOTE:
THE LOCATION OF EXISTING UTILITIES AS SHOWN ON THE CROSS SECTIONS IS APPROXIMATE.



PROJECT NO: 2723-00-71	HWY: MOORLAND ROAD	COUNTY: WAUKESHA	CROSS SECTIONS: SANDALWOOD DRIVE	SHEET 343 E



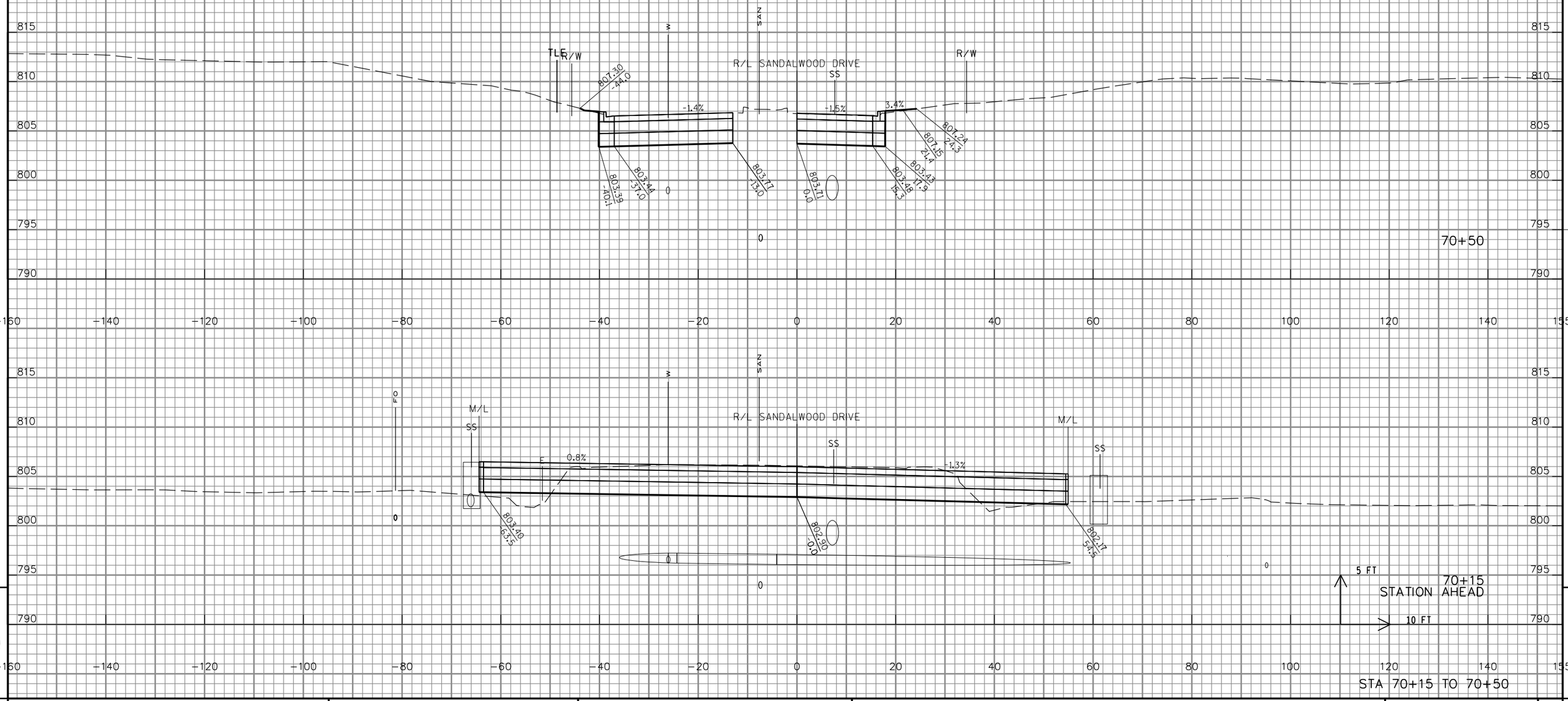
9

9

PROJECT NO: 2723-00-71	HWY: MOORLAND ROAD	COUNTY: WAUKESHA	CROSS SECTIONS: SANDALWOOD DRIVE	SHEET 344 E

FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\090205_XS_Sandalwood.DGN PLOT DATE : 7/26/2017 PLOT BY : wwolak PLOT NAME : $FILE$ PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

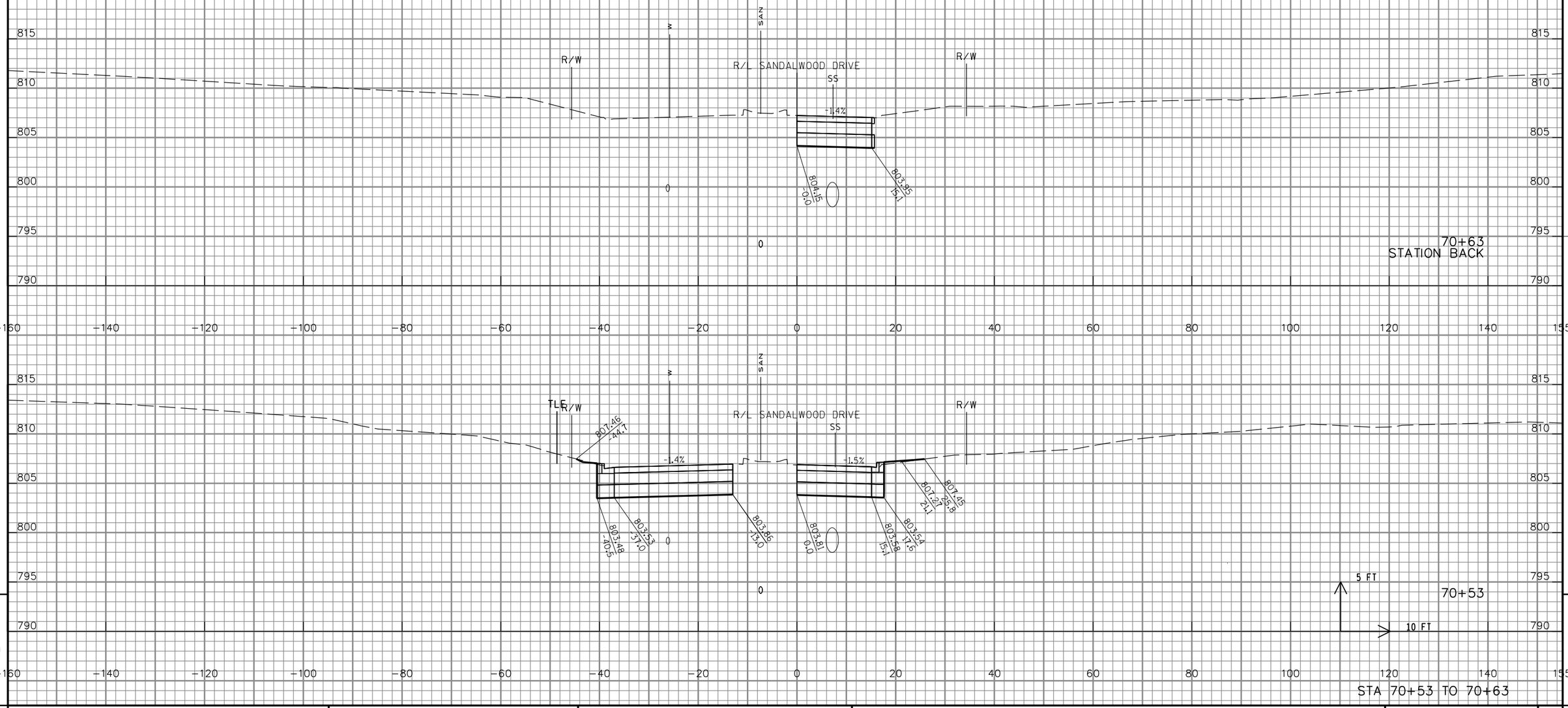


PROJECT NO: 2723-00-71	HWY: MOORLAND ROAD	COUNTY: WAUKESHA	CROSS SECTIONS: SANDALWOOD DRIVE	SHEET 345 E

FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\090205_XS_Sandalwood.DGN | PLOT DATE : 7/26/2017 | PLOT BY : wwolak | PLOT NAME : $FILE$ | PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

END CONSTRUCTION STA 70+63.09



9

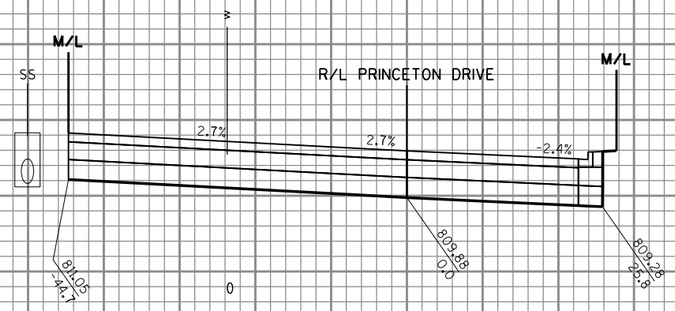
9

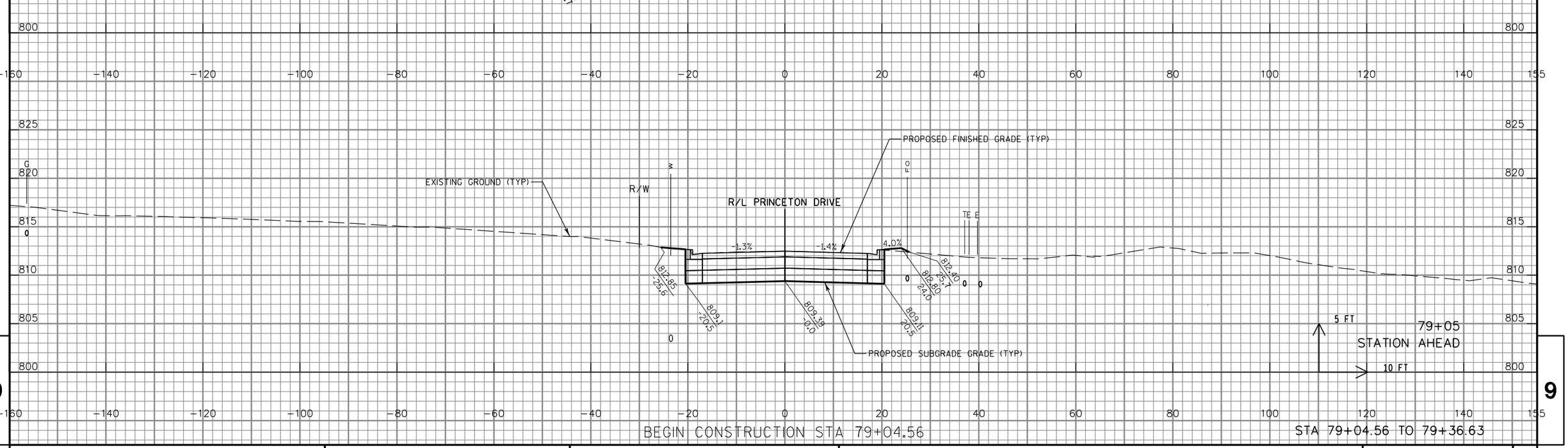
PROJECT NO: 2723-00-71	HWY: MOORLAND ROAD	COUNTY: WAUKESHA	CROSS SECTIONS: SANDALWOOD DRIVE	SHEET 346 E

FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\090205_XS_Sandalwood.DGN PLOT DATE : 7/26/2017 PLOT BY : wwolak PLOT NAME : $FILE$ PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

NOTE:
THE LOCATION OF EXISTING UTILITIES AS SHOWN ON THE CROSS SECTIONS IS APPROXIMATE.





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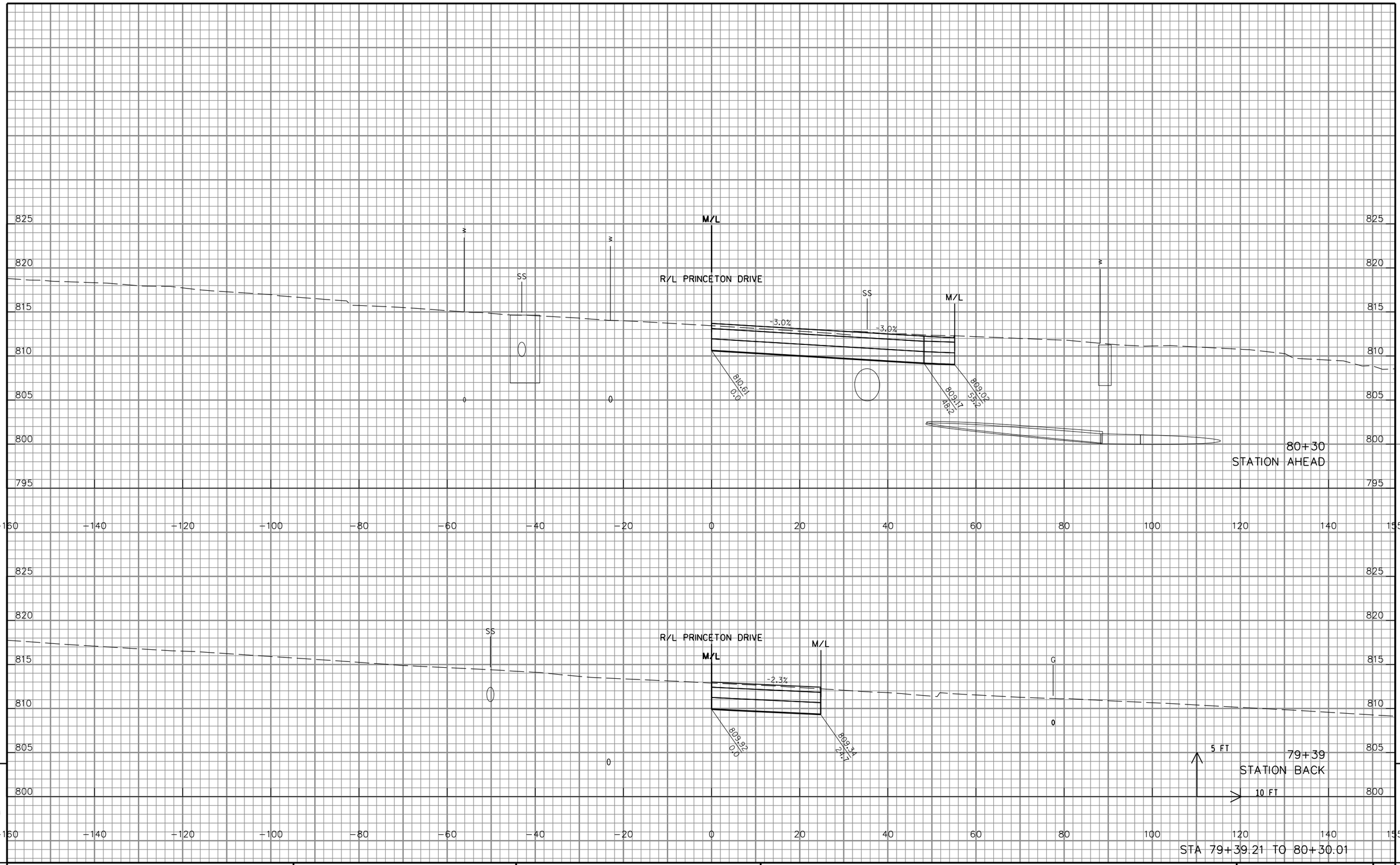
PROJECT NO: 2723-00-71	HWY: MOORLAND ROAD	COUNTY: WAUKESHA	CROSS SECTIONS: PRINCETON DRIVE	SHEET 347 E

FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\090206_XS_Princeton.DGN | PLOT DATE : 7/26/2017 | PLOT BY : wwolak | PLOT NAME : $FILE$ | PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21



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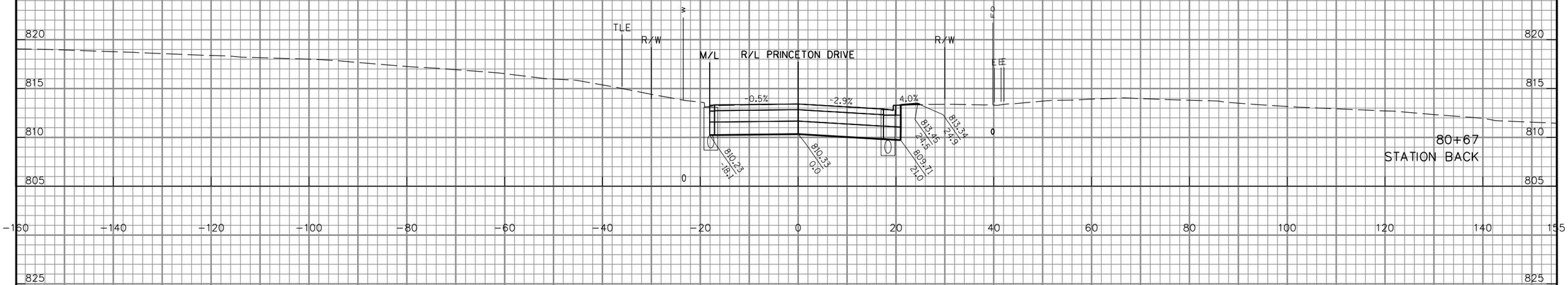
STA 79+39.21 TO 80+30.01

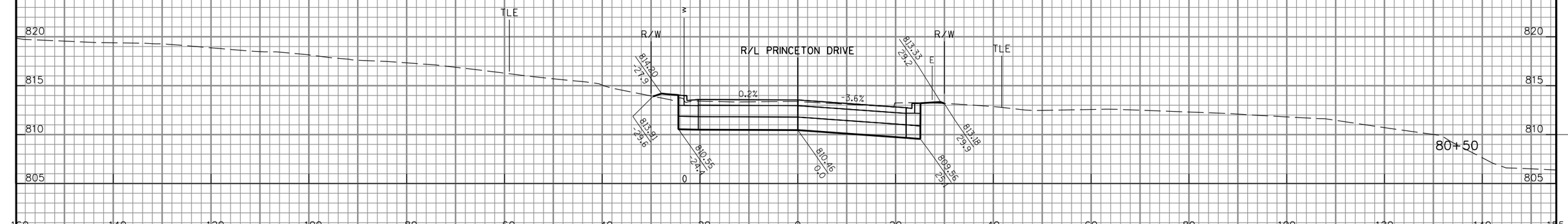
PROJECT NO: 2723-00-71	HWY: MOORLAND ROAD	COUNTY: WAUKESHA	CROSS SECTIONS: PRINCETON DRIVE	SHEET 348 E

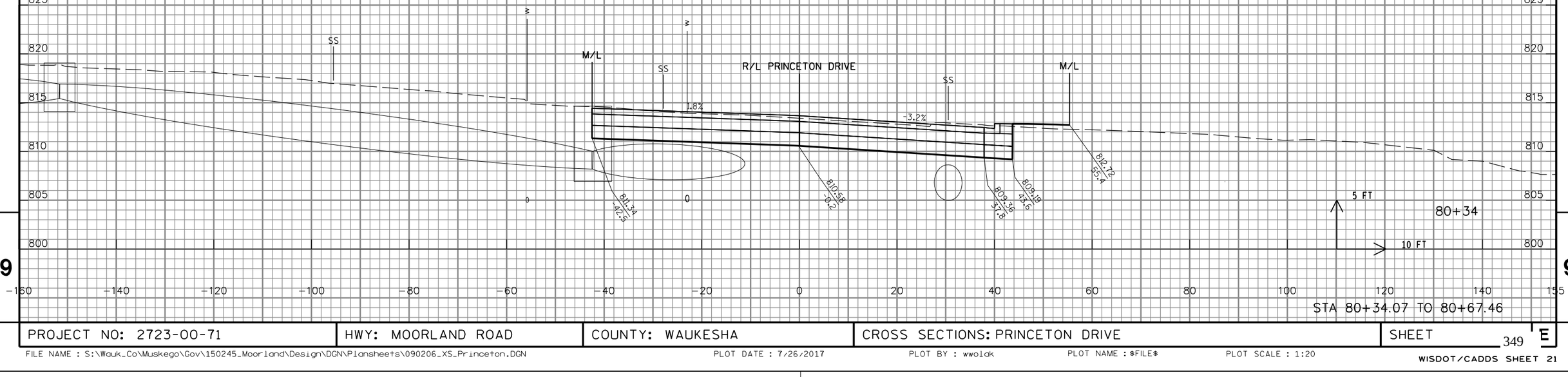
FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\090206_XS_Princeton.DGN PLOT DATE : 7/26/2017 PLOT BY : wwolak PLOT NAME : $FILE$ PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

END CONSTRUCTION STA 80+67.46





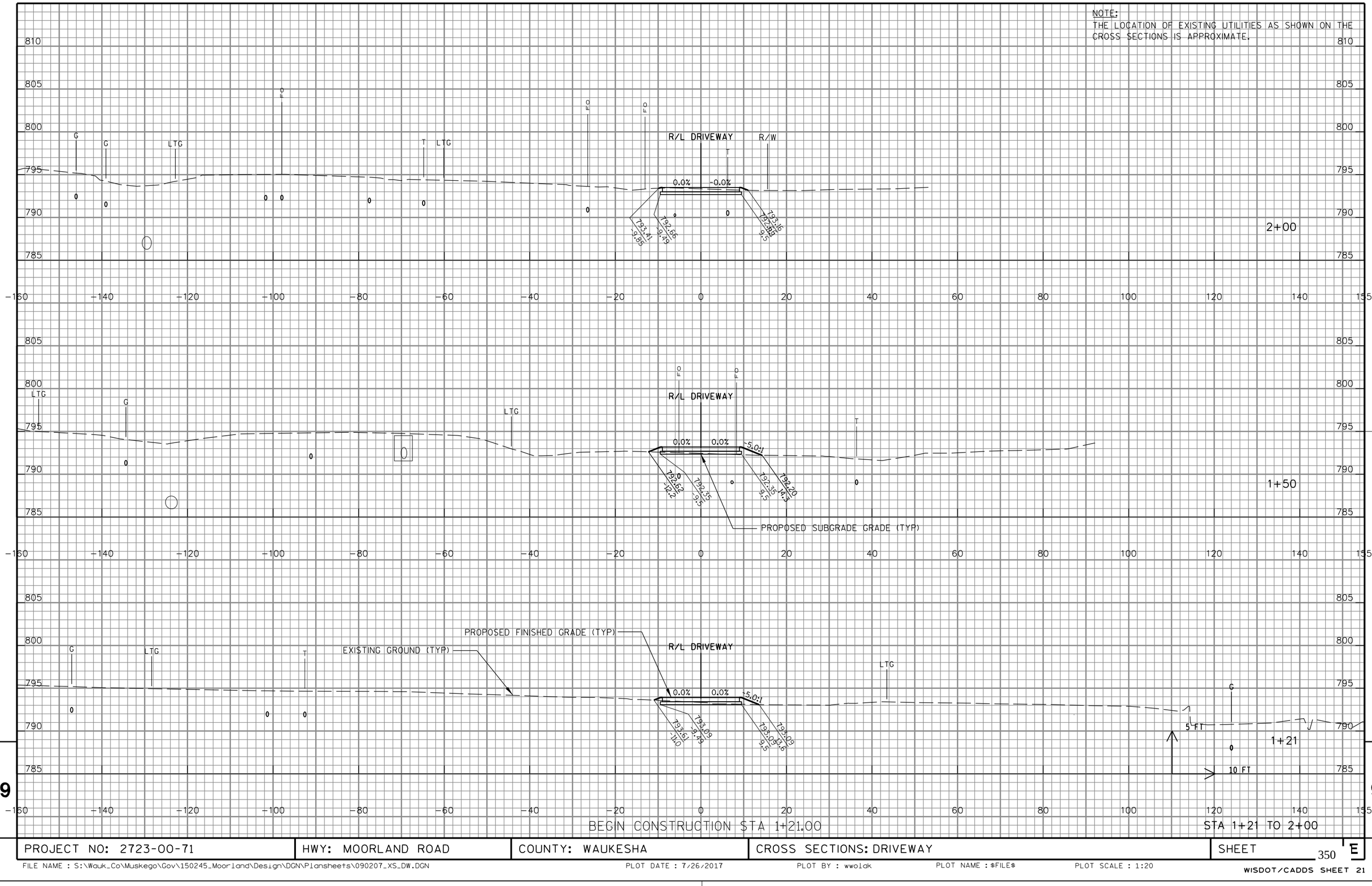


PROJECT NO: 2723-00-71	HWY: MOORLAND ROAD	COUNTY: WAUKESHA	CROSS SECTIONS: PRINCETON DRIVE	SHEET 349 E

FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\090206_XS_Princeton.DGN PLOT DATE : 7/26/2017 PLOT BY : wwolak PLOT NAME : $FILE$ PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

NOTE:
THE LOCATION OF EXISTING UTILITIES AS SHOWN ON THE CROSS SECTIONS IS APPROXIMATE.



BEGIN CONSTRUCTION STA 1+21.00

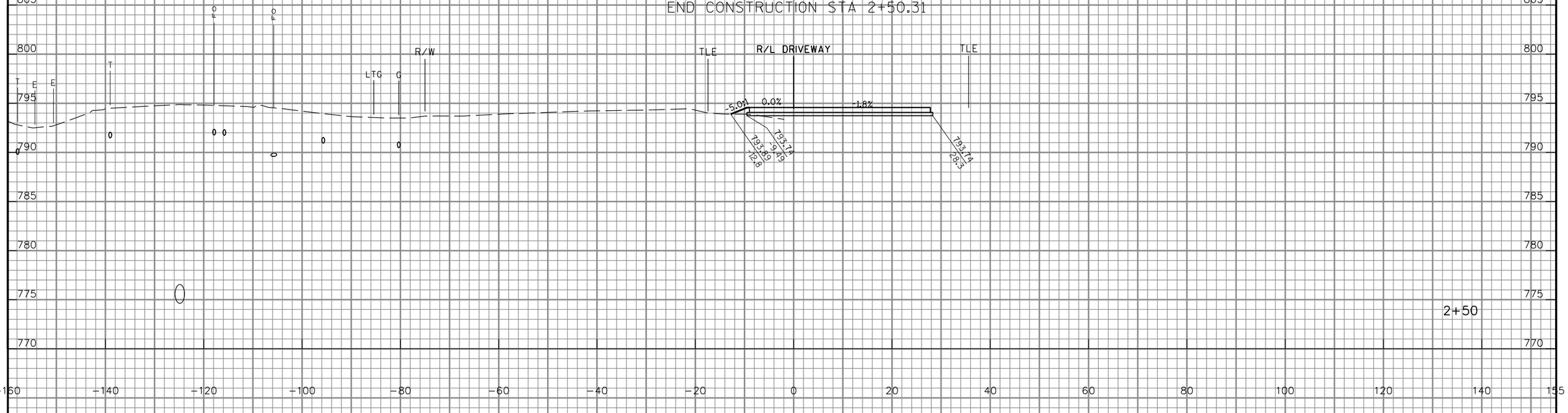
STA 1+21 TO 2+00

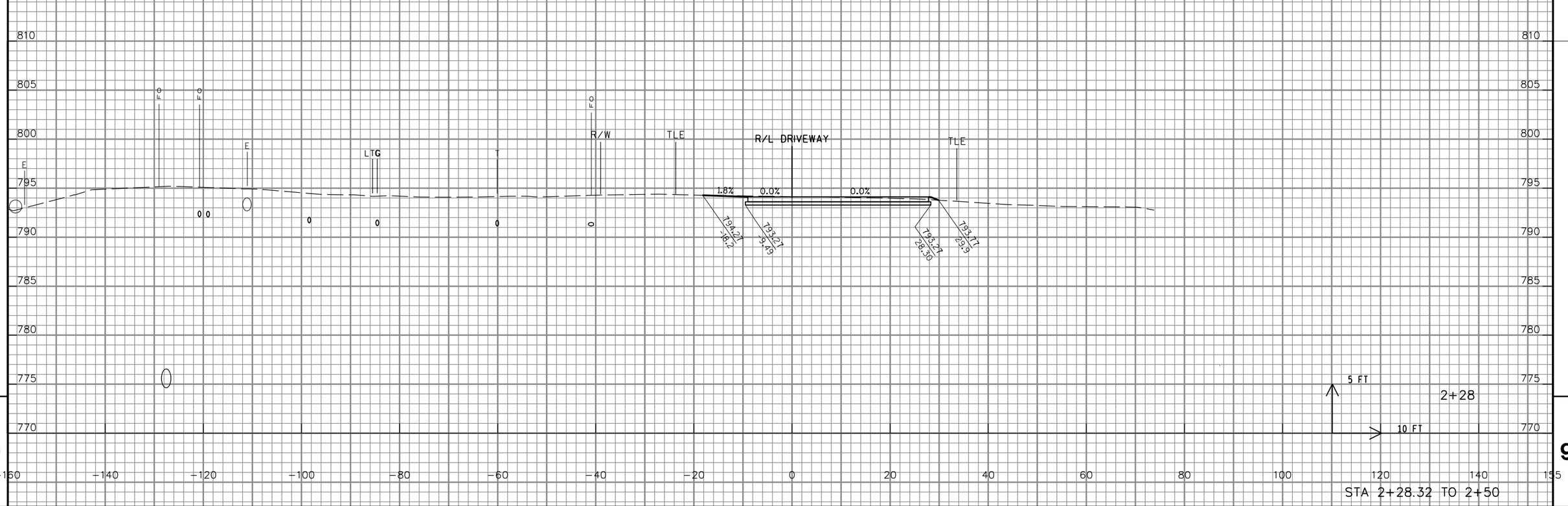
PROJECT NO: 2723-00-71	HWY: MOORLAND ROAD	COUNTY: WAUKESHA	CROSS SECTIONS: DRIVEWAY	SHEET 350 E

FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\090207_XS_DW.DGN | PLOT DATE : 7/26/2017 | PLOT BY : wwolak | PLOT NAME : $FILE$ | PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

END CONSTRUCTION STA 2+50.31





STA 2+28.32 TO 2+50

9

9

PROJECT NO: 2723-00-71	HWY: MOORLAND ROAD	COUNTY: WAUKESHA	CROSS SECTIONS: DRIVEWAY	SHEET 351 E

FILE NAME : S:\Wauk_Co\Muskego\Gov\150245_Moorland\Design\DGN\Plansheets\090207_XS_DW.DGN PLOT DATE : 7/26/2017 PLOT BY : wwolak PLOT NAME : $FILE$ PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
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