RECORDS

3cc

PROJECT ID: 2415-07-70

COUNTY: MILWAUKEE 2415-07-00

+23 D SIZE

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 = 189

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
2415-07-70	STP2006287	1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

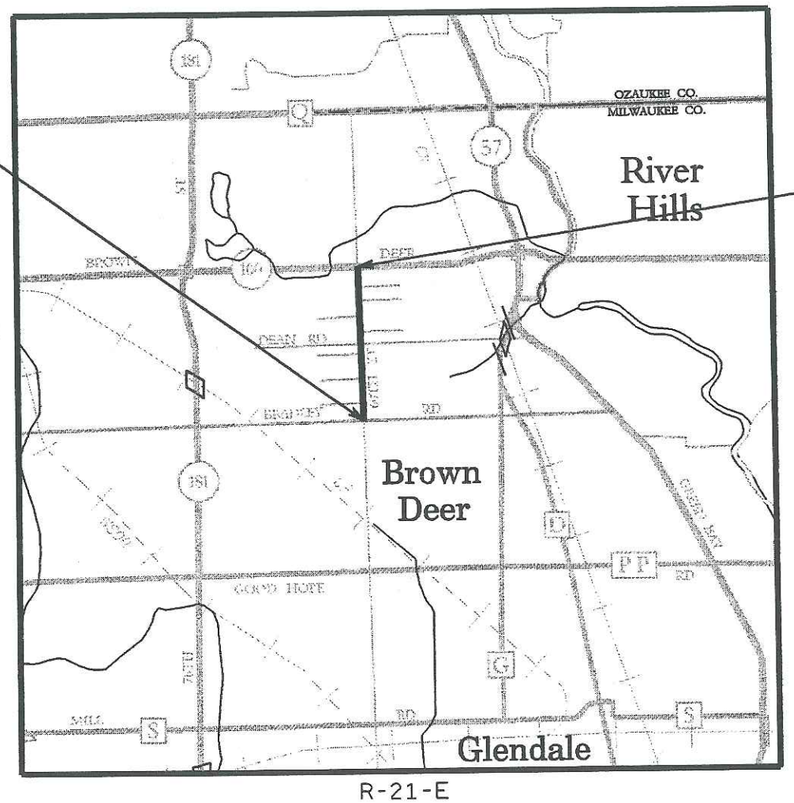
N. 60TH STREET

W. BRADLEY ROAD TO W. BROWN DEER ROAD

VILLAGE OF BROWN DEER
MILWAUKEE COUNTY

STATE PROJECT NUMBER
2415-07-70





BEGIN PROJECT
STA. 103+62
Y = 430,799.770
X = 2,537,674.046

END PROJECT
STA. 152+66
Y = 435,703.514
X = 2,537,623.969

T-8-N

R-21-E

LAYOUT
SCALE 0 1 MI.

"Coordinates on this plan are referenced to the Wisconsin State Plane Coordinate System (WSPCS), 'South' Zone."

TOTAL NET LENGTH OF CENTERLINE = 0.926 MI.

DESIGN DESIGNATION

A.D.T. (2006)	=	8,300
A.D.T. (2026)	=	9,900
D.H.V. (2026)	=	771
D.D.	=	50/50
T.	=	3.8%
DESIGN SPEED	=	40 MPH
ESALS	=	730,000

CONVENTIONAL SYMBOLS

PLAN		PROFILE	
CORPORATE LIMITS		GRADE LINE	
PROPERTY LINE		ORIGINAL GROUND	
LOT LINE		MARSH OR ROCK PROFILE (To be noted as such)	ROCK
LIMITED HIGHWAY EASEMENT		SPECIAL DITCH	LABEL
EXISTING RIGHT OF WAY		GRADE ELEVATION	95.36
PROPOSED OR NEW R/W LINE		CULVERT (Profile View)	
SLOPE INTERCEPT		UTILITIES	
REFERENCE LINE		ELECTRIC	E
EXISTING CULVERT		FIBER OPTIC	FO
PROPOSED CULVERT (Box or Pipe)		GAS	G
COMBUSTIBLE FLUIDS	CAUTION	SANITARY SEWER	SAN
		STORM SEWER	SS
MARSH AREA		TELEPHONE	T
		WATER	W
		UTILITY PEDESTAL	
WOODED OR SHRUB AREA		POWER POLE	
		TELEPHONE POLE	

ACCEPTED FOR
Village of Brown Deer
Russell Van Gompel, Village Manager
1/31/06 (Date)
(Signature & Title of Official)

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
Engineers/Planners
Environmental Scientists
N19 W24075 Riverwood Drive, Suite 300
Waukesha, WI 53188

WILLIAM R. SCHILLING
E-36841-006
WAUKESHA, WI
PROFESSIONAL ENGINEER

DATE: 2/1/06

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY
Surveyor
Designer
Management Consultant: DARR ENGINEERING
C.O. Examiner: C. BUJANOWSKI

APPROVED FOR DISTRICT OFFICE
DATE: 1/31/06 (Management Consultant Signature)

E

2

GENERAL NOTES

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

ALL OPENINGS BELOW SUBGRADE RESULTING FROM REMOVALS OR ABANDONMENTS, SHALL BE BACKFILLED WITH GRANULAR BACKFILL.

THE QUANTITY OF THE ITEM OF LOWER LAYER OR UPPER LAYER OF HMA PAVEMENT, AND BASE AGGREGATE DENSE IS MEASURED FOR PAYMENT BY THE TON. THE DEPTH OR THICKNESS OF THE LAYER SHOWN ON THE PLANS IS APPROXIMATE AND THE ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF MATERIAL AS DIRECTED BY THE ENGINEER.

ALL CURB AND GUTTER RADII DIMENSIONS ON THE PLANS ARE MEASURED TO THE FLANGE LINE.

CURB AND GUTTER GRADES ARE GIVEN TO THE FLANGE LINE.

ALL DISTURBED AREAS SHALL BE TOPSOILED, FERTILIZED, SEEDED AND MULCHED AS NOTED ON THE PLAN OR AS DETERMINED BY THE ENGINEER.

EROSION CONTROL ITEMS SHOWN ON THE PLAN ARE AT SUGGESTED LOCATIONS. THE EXACT LOCATIONS AND DIMENSIONS WILL BE DETERMINED BY THE ENGINEER.

ACCESS SHALL BE MAINTAINED AT ALL TIMES FOR EACH PROPERTY. IF A PROPERTY ONLY HAS ONE DRIVEWAY, THE DRIVEWAY SHALL BE CONSTRUCTED ONE HALF AT A TIME.

EARTHWORK VOLUME WAS ESTIMATED BY EXPANDING THE FILL. AN EXPANSION FACTOR OF 1.30 WAS USED.

DIMENSIONS GIVEN FOR EXISTING FEATURES SHALL BE CONSIDERED AS APPROXIMATE AND SHALL BE MEASURED IN THE FIELD FOR MATCHING PURPOSES.

LOCATION OF UTILITIES AS SHOWN ON THE PLAN ARE APPROXIMATE THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN. THE CONTRACTOR SHALL NOTIFY DIGGERS HOTLINE AND AFFECTED UTILITIES PRIOR TO THE START OF WORK.

LOCATIONS OF SIGNS AND POSTS ARE APPROXIMATE. SIGNS AND POSTS SHALL BE LOCATED AS SHOWN ON THE PLAN USING THE GUIDELINES SET FORTH BY THE MUTCD, THE WISCONSIN DEPARTMENT OF TRANSPORTATION STANDARD SIGN PLATES AND AS APPROVED BY THE ENGINEER.

5-INCH HMA PAVEMENT SHALL BE CONSTRUCTED WITH A 3-INCH, 19-mm LOWER LAYER AND A 2-INCH, 12-mm UPPER LAYER.

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

ALL CURB RAMPS SHALL BE CONSTRUCTED WITH A 6-FOOT OPENING AS OPPOSED TO THE 5-FOOT OPENING SHOWN IN S.D.D CURB RAMP TYPE 1 AND 1-A AND CURB RAMP TYPE 2 AND 3.

INDEX OF DETAIL SHEETS

GENERAL NOTES
TYPICAL SECTIONS
CONSTRUCTION DETAILS
INTERSECTION DETAILS
EROSION CONTROL
STORM SEWER
SIGNING
PAVEMENT MARKING
DETOUR PLAN

WDNR LIAISON

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
SOUTHEAST REGION - MILWAUKEE SERVICE CENTER
2300 N. DR. MARTIN LUTHER KING JR. DRIVE
MILWAUKEE, WI 53212
ATTN: MIKE THOMPSON
(414)263-8613

STANDARD DETAIL DRAWINGS

8A5-16A	INLET COVERS TYPE A, H, A-S, AND H-S
8A5-16B	INLET COVERS TYPE B, B-A, C, MS, MS-A, & WM
8A5-17D	INLET COVER, TYPE Z MANHOLE COVERS, TYPE K, J, J-S, L & M
8B7-4	MANHOLES TYPE 2 AND 3
8C1-5	INLETS TYPE 1, 2, 3, SND 4
8C5-2	INLETS TYPE 8, 9, 10, AND 11
8D1-13	CONCRETE CURB, CONCRETE CURB AND GUTTER & PAVEMENT TIES
8D4-3	CONCRETE SURFACE DRAIN & ASPHALTIC FLUME
8D5-11A	CURB RAMPS TYPES 1 AND 1-A
8D5-11B	CURB RAMPS TYPES 2 AND 3
8D5-11C	CURB RAMPS TYPE 4A
8D5-11D	CURB RAMPS TYPE 4B
8D5-11E	CURB RAMPS TYPES 5, 6, 7A, 7B & 8
8E8-3	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
8E9-6	SILT FENCE
8E10-2	INLET PROTECTION TYPE A, B, C AND D
8F10-1	CONCRETE MASONARY ENDWALLS FOR CULVERT PIPE ARCH
8F1-11	APRON ENDWALLS FOR CULVERT PIPE
8F2-1	APRON ENDWALLS FOR PIPE ARCH AND ELLIPTICAL PIPE
8F4-5	JOINT TIES FOR CONCRETE PIPE
9B2-7	CONDUIT
9B4-8	PULL BOX
9C2-4	CONCRETE BASES, TYPES 1, 2 & 5
9C3-2	TRANSFORMER/PEDESTAL BASES
9E1-5A	POLE MOUNTINGS FOR TRAFFIC SIGNALS TYPE 2
9E1-4G	HARDWARE DETAILS FOR POLE MOUNTINGS
9E3-2	NON-FREEWAY LIGHTING UNIT POLE WIRING
9E7-3	TRAFFIC SIGNAL STANDARD PEDESTRIAN AND FLASHER TYPICAL MOUNTING DETAILS
9F15-2A	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 1)
9G1-1A	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
9G1-1B	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
9G1-1C	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
9G1-1D	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
9G1-1E	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
9G1-1F	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
9G1-1G	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
13C13-4	URBAN DOWELED CONCRETE PAVEMENT
14A1-3	TREE PRESERVATION DETAILS
15C2-4A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C2-4B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C2-4C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C3-1	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C7-8A	PAVEMENT MARKING SYMBOLS
15C7-8B	PAVEMENT MARKING WORDS
15C8-9A	PAVEMENT MARKING (MAINLINE)
15C8-10B	PAVEMENT MARKING (INTERSECTIONS)
15C8-10D	PAVEMENT MARKING (LEFT TURN LANE)
15C8-10E	PAVEMENT MARKING (ISLANDS, STOP LINE & CROSS WALK)
15D30-1	TRAFFIC CONTROL, SIDEWALK CLOSURE
16A1-6	LANDMARK REFERENCE MONUMENTS AND COVERS

CONTACTS

WE ENERGIES - ELECTRIC
333 W. EVERETT ST. - A279
MILWAUKEE, WI 53203
ATTN: MR. DEAN SCHULTZBANK
(414) 221-3927

WE ENERGIES - GAS
1830 S. WEST AVE.
WAUKESHA, WI 53189
ATTN: MR. TOM MINNESAL
(414) 221-3927

SPRINT COMMUNICATIONS, L.P.
5600 N. RIVER ROAD SUITE 500
ROSEMONT, IL 60018
ATTN: MR. JIM BURTON
(800) 788-0751

MILWAUKEE METRO SEWERAGE DIST.
260 W. SEEBOTH ST.
MILWAUKEE, WI 53201
ATTN: MR. JIM SIMONS
(414) 225-2219

SBC
7221 W. FOND DU LAC AVE.
MILWAUKEE, WI 53218
ATTN: MS. MARY DOWDLE
(414) 536-2971

AT&T LOCAL NETWORK SERVICES
2152 S. 114TH STREET, SUITE D
WEST ALLIS, WI 53227
ATTN: MR. DONALD DIETSCH
(414) 290-9832

TIME WARNER CABLE
1320 N. MARTIN LUTHER KING JR. DR.
MILWAUKEE, WI 53212
ATTN: STEVE CRAMER
(414) 227-4045

WISDOT SIGNALS
935 S. 60TH STREET
WEST ALLIS, WI 53214
ATTN: MR. RON RIEPL
(414) 266-1150

WISDOT SIGNALS
141 NS BARSTOW
PO BOX 798
WAUKESHA, WI 53187
ATTN: MR. ANDREW DIRKS
(262) 548-8642

MCLEOD USA
1858 WRIGHT ST.
MADISON, WI 53704
ATTN: MR. JEFF WISWELL
(414) 831-5007

VILLAGE OF BROWN DEER
4800 W. GREEN BROOK DRIVE
BROWN DEER, WI 53233
ATTN: MR. LARRY NEITZEL
(414) 357-0120

VILLAGE OF BROWN DEER
4800 W. GREEN BROOK DRIVE
BROWN DEER, WI 53233
ATTN: MR. JIM BUSKE
(414) 371-3060

VILLAGE OF BROWN DEER
4800 W. GREEN BROOK DRIVE
BROWN DEER, WI 53233
ATTN: MR. RUSSELL VAN GOMPEL
(414) 371-3050

MILWAUKEE COUNTY DPW
2711 W. WELLS STREET, SUITE 300
MILWAUKEE, WI 53208
ATTN: MR. ROBERT SWIDERSKI
(414) 278-4931

AYRES ASSOCIATES
N19 W24075 RIVERWOOD DR. #300
WAUKESHA, WI 53188
ATTN: MR. WILLIAM SCHILLING
(262) 523-4488

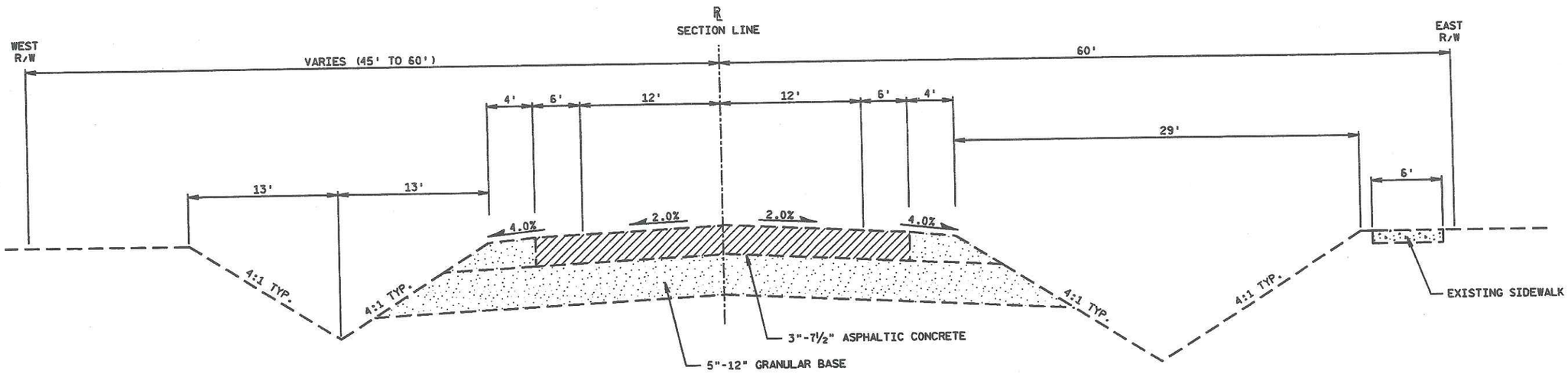
DIGGERS HOTLINE
Toll Free (800) 242-8511
Milwaukee Area (414) 259-1181
Hearing Impaired TDD (800) 542-2289
www.DiggersHotline.com

ABBREVIATIONS

ABUT	ABUTMENT
AC	APSHALTIC CEMENT
ADT	AVERAGE DAILY TRAFFIC
AGG	AGGREGATE
AH	AHEAD
ASPH	ASPHALTIC
BK	BACK
BARR	BARRIER
BL or B/L	BASE LINE
BM	BENCH MARK
C & G	CURB & GUTTER
CL or C/L	CENTERLINE
C	COMMUNICATION LINE
CO	COUNTY
CONC	CONCRETE
CMCP	CORRUGATED METAL CULVERT PIPE
CTH	COUNTY TRUNK HIGHWAY
CY	CUBIC YARD
DHV	DESIGN HOUR VOLUME
DIA	DIAMETER
E	EAST
EB	EASTBOUND
ED	EAST DITCH
EF	EAST FIELD
EOP	EDGE OF PAVEMENT
EL or ELEV	ELEVATION
E	ELECTRIC(AL)
ESALS	EQUIVALENT SINGLE AXLE LOADS
EXIST	EXISTING
EXP	EXPANSION
FL or F/L	FLOW LINE
FT	FOOT
G	GAS
CWT	HUNDRED WEIGHT
HES	HIGH EARLY STRENGTH
SHES	SPECIAL HIGH EARLY STRENGTH
INL	INLET
JT	JOINT
MIN	MINIMUM
NOM	NOMINAL
LF	LINEAR FOOT
LS	LUMP SUM
NW or N/W	NORTHWEST
NB	NORTHBOUND
PVC	POLYVINYL CHLORIDE
ID	INSIDE DIAMETER
LT	LEFT
L	LENGTH OF CURVE
MH	MANHOLE
MAX	MAXIMUM
MED	MEDIAN
N	NORTH
PAVT	PAVEMENT
PI	POINT OF INTERSECTION
PC	POINT OF CURVATURE
PT	POINT OF TANGENCY
LB	POUND
RAD	RADIUS
RR	RAILROAD
RCCP	REINFORCED CONCRETE CULVERT PIPE
RL or R/L	REFERENCE LINE
R/W	RIGHT OF WAY
RD	ROAD
RDWY	ROADWAY
SB	SOUTHBOUND
SDD	STANDARD DETAIL DRAWING
RCP	REINFORCED CONCRETE PIPE
RMP	RAMP
SE	SUPERELEVATION
SS	STORM SEWER
SAN	SANITARY SEWER
SHLDR	SHOULDER
SDWK	SIDEWALK
S	SOUTHBOUND
SPECS	SPECIFICATIONS
SQ	SQUARE
SF or SQ F	SQUARE FOOT
SY or SQ YD	SQUARE YARD
STD	STANDARD
STH	STATE TRUNK HIGHWAY
TEL or T	TELEPHONE
TEMP	TEMPORARY
T	TOWN (SHIP)
T	TRUCKS (PERCENT OF)
TRANS	TRANSITION
TYP	TYPICAL
VERT	VERTICAL
W	WEST
W	WATER
WB	WESTBOUND
WD	WEST DITCH
WF	WEST FRONTAGE ROAD
YD	YARD

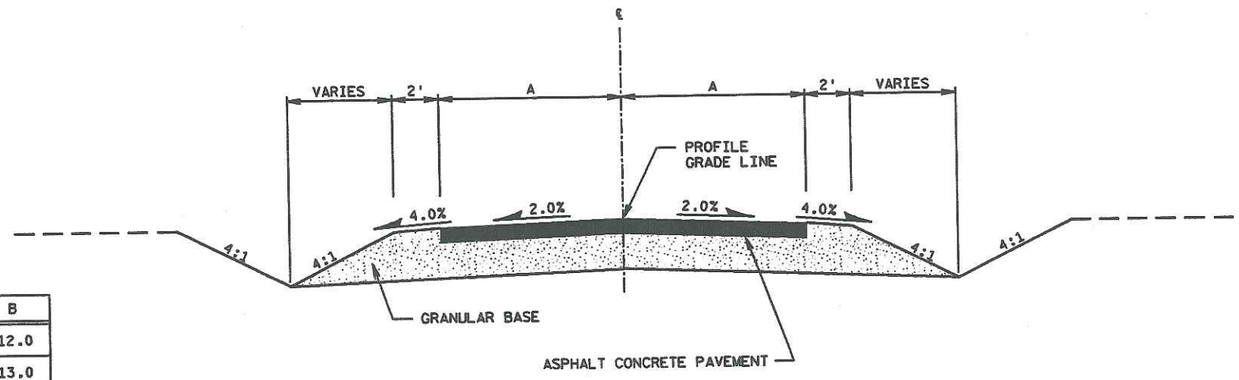
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TYPICAL EXISTING SECTION
60TH STREET

STA. 103+62.00 TO STA. 152+50.00



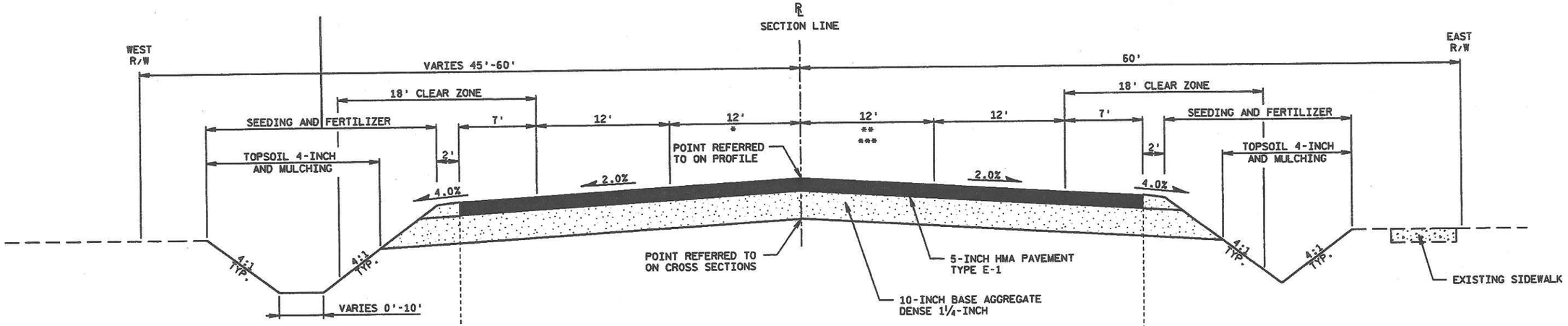
SIDE STREET	BEGIN STA.	END STA.	A	B
W. TOWER DR.	9+40	9+65	12.0	12.0
W. FAIRLANE AVE.	19+40	19+70	13.0	13.0
W. DARNEL AVE.	39+05	39+45	12.0	12.0
W. DONNA DR.	60+19	60+60	12.0	12.0
W. WABASH	69+35	69+81	12.5	12.5
W. RANGE LN.	80+19	80+60	12.5	12.5
W. WAHNER AVE.	90+19	90+63	16.0	16.0

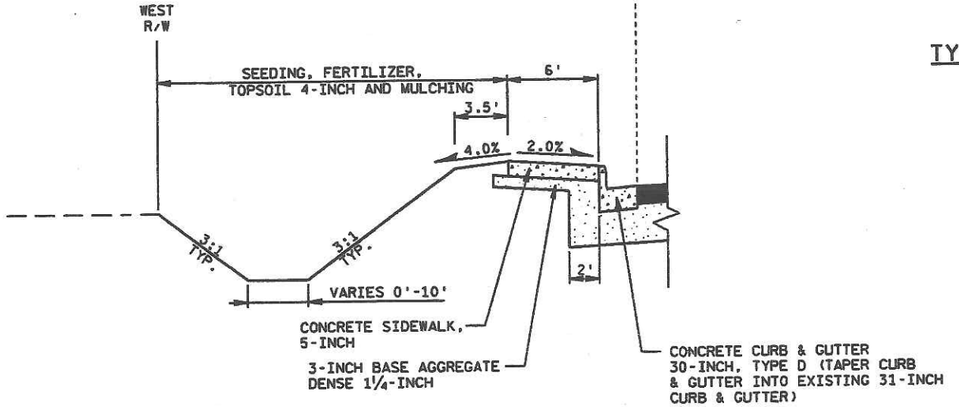
TYPICAL EXISTING SECTION - SIDE ROADS

SEE CHART

PROJECT NO: 2415-07-70	HWY: N. 60TH STREET	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SCALE, FEET 0 N/A N/A	SHEET 3	E

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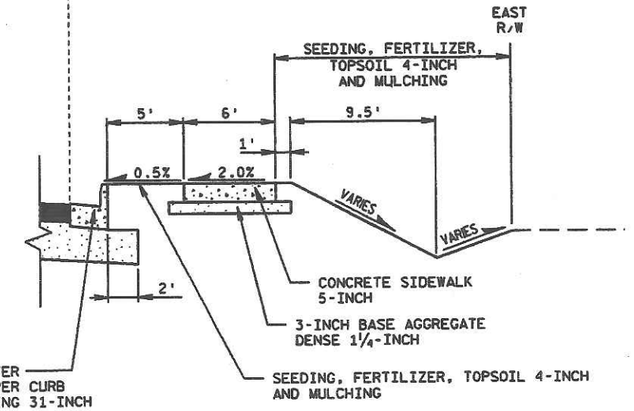




WEST SIDE ONLY
STA. 124+79.00 TO STA. 126+60.00
STA. 49+40.00 TO STA. 49+69.00, RT. (DEAN ROAD)
STA. 50+29.00 TO STA. 50+60.00, LT. (DEAN ROAD)

TYPICAL FINISHED SECTION

STA. 104+40.00 TO STA. 111+00.00
STA. 121+55.00 TO STA. 126+60.00



EAST SIDE ONLY
STA. 122+80.00 TO STA. 126+60.00

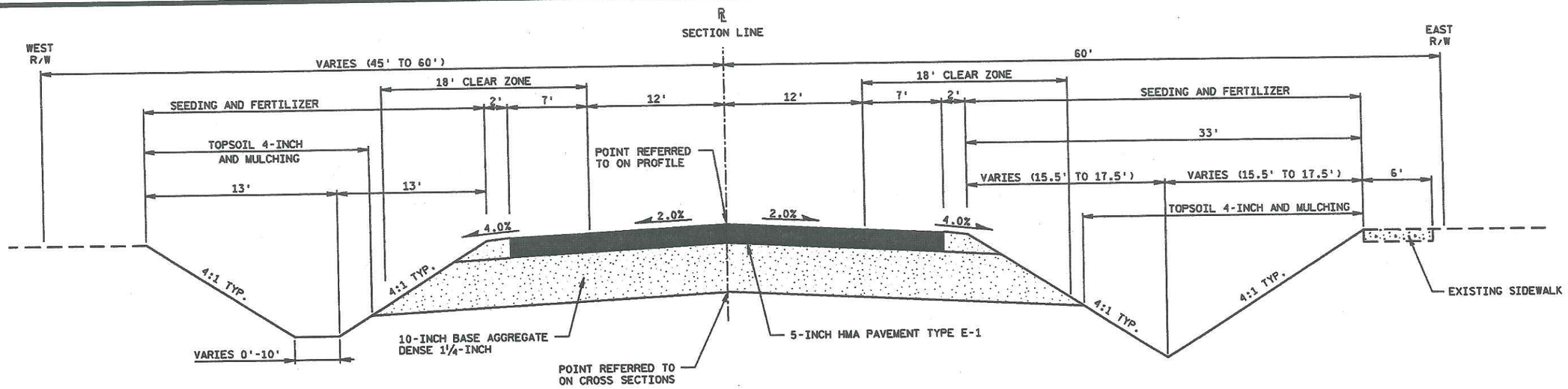
* VARIES 0'-12'
STA. 121+55.00 TO STA. 122+80.00

** 0'
STA. 121+55.00 TO STA. 122+05.00
VARIES 0'-12'
STA. 122+05.00 TO STA. 122+80.00

*** VARIES 0'-12'
STA. 109+00.00 TO STA. 110+25.00
0'
STA. 110+25.00 TO STA. 111+00.00

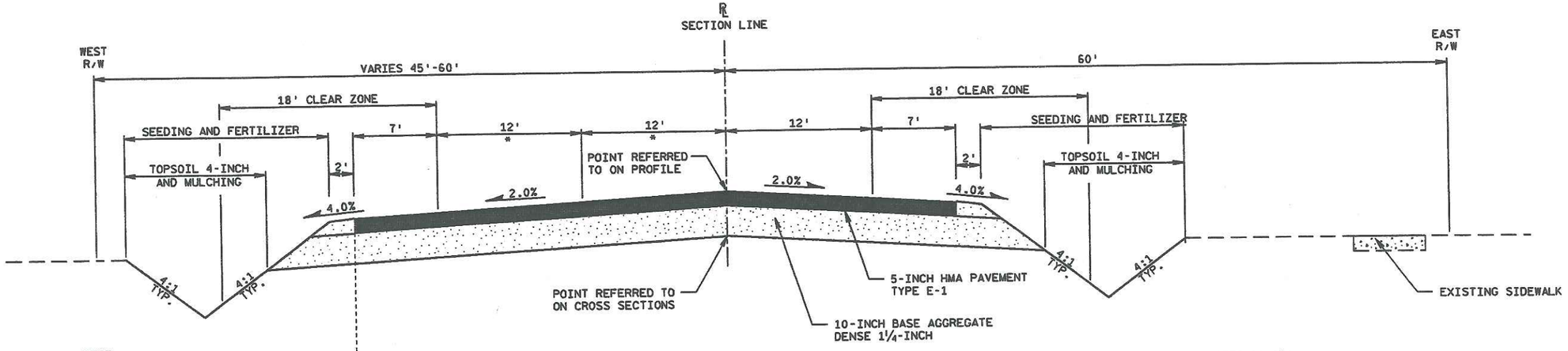
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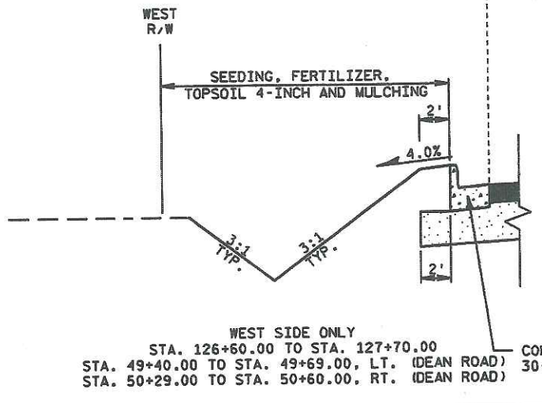


TYPICAL FINISHED SECTION

STA. 111+00.00 TO STA. 121+55.00
STA. 130+11.00 TO STA. 148+60.00



VARIES 0'-12'
* STA. 126+86.00 TO STA. 128+86.00

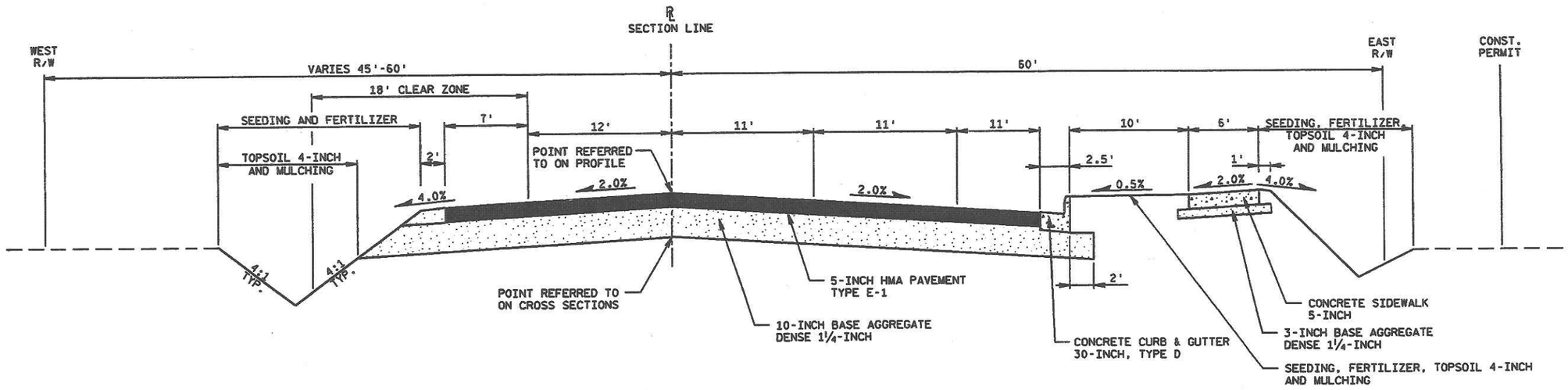


WEST SIDE ONLY
STA. 126+60.00 TO STA. 127+70.00
STA. 49+40.00 TO STA. 49+69.00, LT. (DEAN ROAD)
STA. 50+29.00 TO STA. 50+60.00, RT. (DEAN ROAD)

TYPICAL FINISHED SECTION

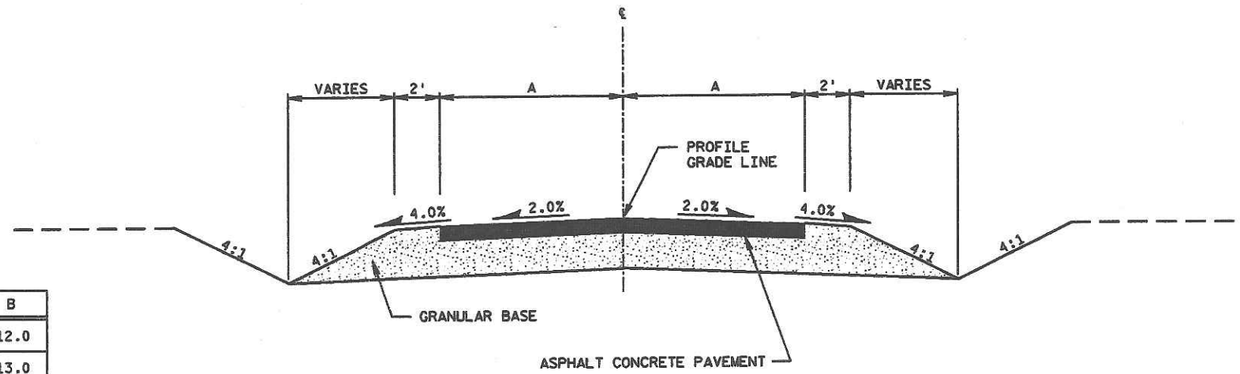
STA. 126+60.00 TO STA. 130+11.00

PROJECT NO: 2415-07-70	HWY: N. 60TH STREET	COUNTY: MILWAUKEE	TYPICAL FINISHED SECTIONS	SCALE, FEET 0 N/A N/A	SHEET 5 E



TYPICAL FINISHED SECTION

STA. 148+60.00 TO STA. 152+64.00



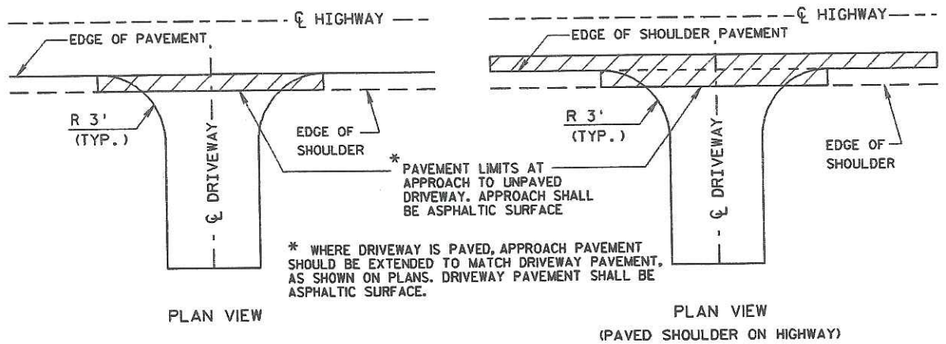
TYPICAL FINISHED SECTION - SIDE ROADS

SEE CHART

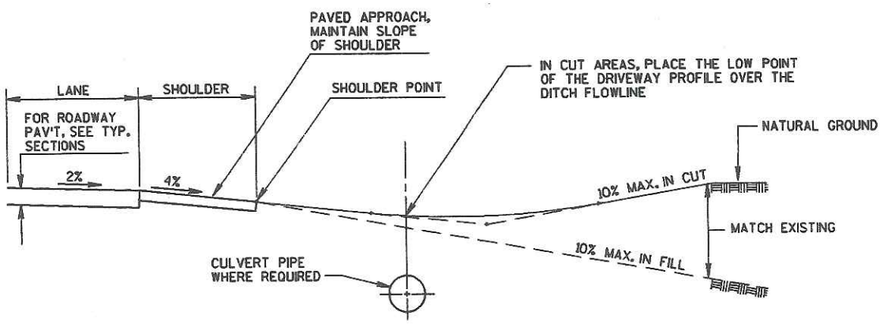
SIDE STREET	BEGIN STA.	END STA.	A	B
W. TOWER DR.	9+40	9+65	12.0	12.0
W. FAIRLANE AVE.	19+40	19+70	13.0	13.0
W. DARNEL AVE.	39+05	39+45	12.0	12.0
W. DONNA DR.	60+19	60+60	12.0	12.0
W. WABASH	69+35	69+81	12.5	12.5
W. RANGE LN.	80+19	80+60	12.5	12.5
W. WAHNER AVE.	90+19	90+63	16.0	16.0

DRIVEWAY WIDTH TABLE

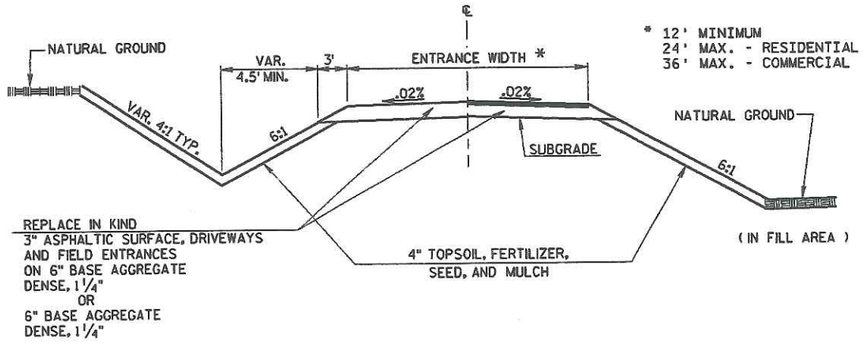
NON-COMMERCIAL	20' MAX., 10' MIN., 15' DESIRABLE
COMMERCIAL	36' MAX., 12' MIN.



RURAL DRIVEWAY INTERSECTION DETAIL

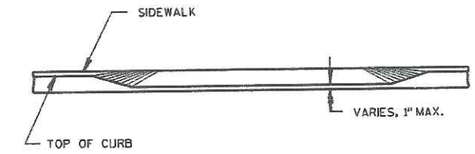


TYPICAL DRIVEWAY PROFILES

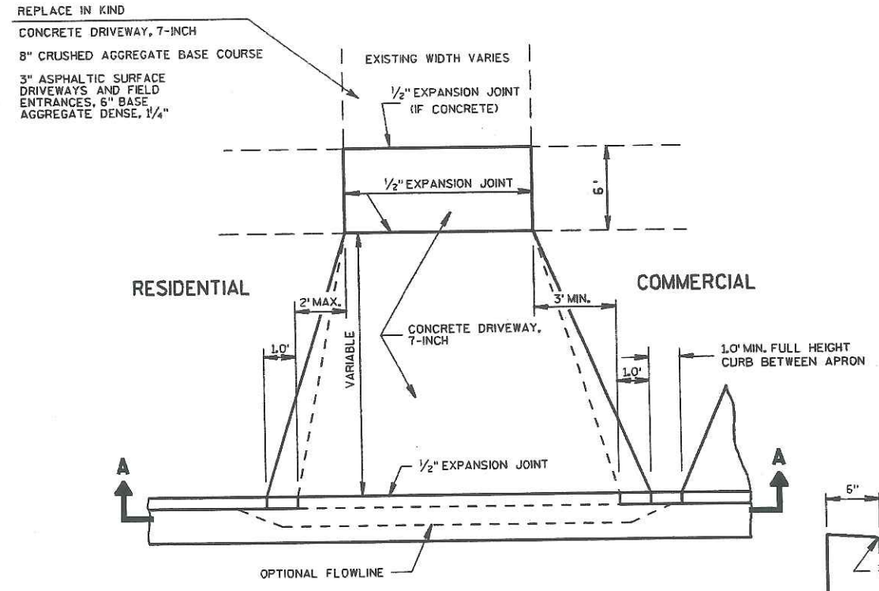


TYPICAL CROSS SECTION FOR PRIVATE ENTRANCE, FIELD ENTRANCE & COMMERCIAL ENTRANCE

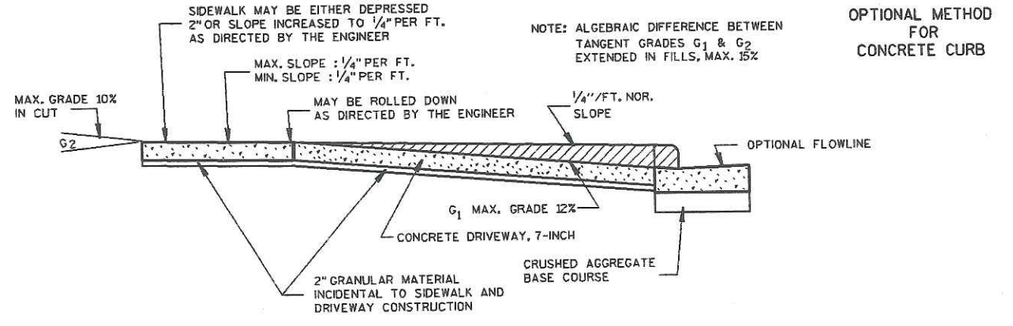
(SURFACE TO BE REPLACED IN KIND)



SECTION A-A



PLAN

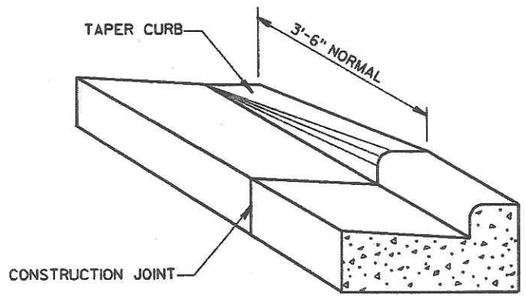


PROFILE

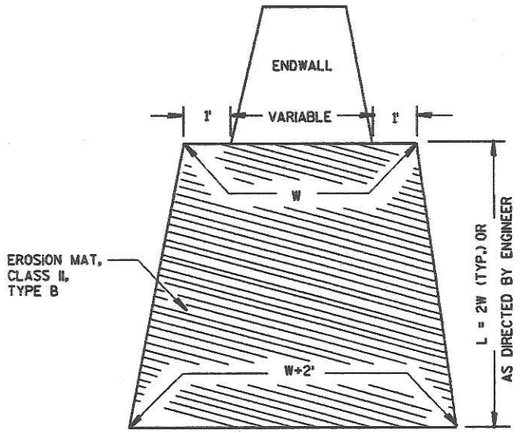
URBAN DRIVEWAY DETAIL

PROJECT NO: 2415-07-70	HWY: N. 60TH STREET	COUNTY: MILWAUKEE	CONSTRUCTION DETAILS	SCALE, FEET 0 N/A N/A	SHEET 7	E

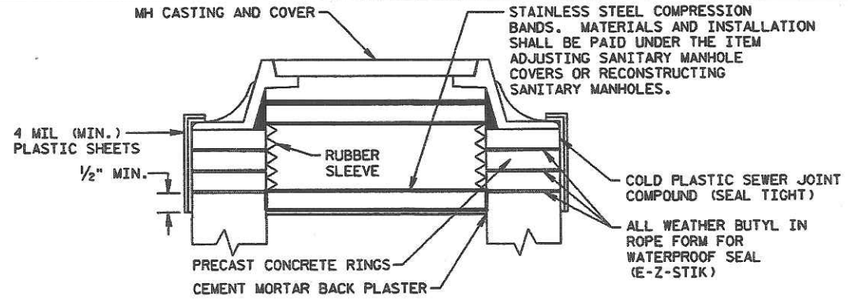
2



DETAIL OF CURB & GUTTER TERMINI



EROSION MAT TREATMENT AT CULVERTS

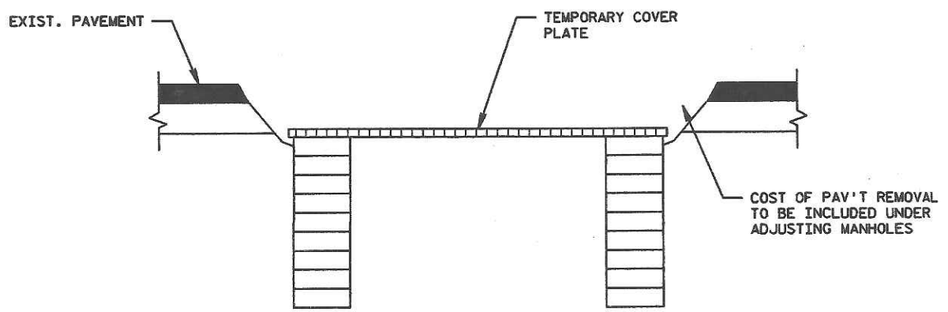


INTERNAL AND EXTERNAL SANITARY MANHOLE SEAL

2

	HYDROLOGIC SOIL GROUP											
	A			B			C			D		
	SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)		
LAND USE:	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER
ROW CROPS	.08 .22	.16 .30	.22 .38	.12 .26	.20 .34	.27 .44	.15 .30	.24 .37	.33 .50	.19 .34	.28 .41	.38 .56
MEDIAN STRIP-TURF	.19 .24	.20 .26	.24 .30	.19 .25	.22 .28	.26 .33	.20 .26	.23 .30	.30 .37	.20 .27	.25 .32	.30 .40
SIDE SLOPE-TURF			.25 .32			.27 .34			.28 .36			.30 .38
PAVEMENT:												
ASPHALT	.70 - .95											
CONCRETE	.80 - .95											
BRICK	.70 - .80											
DRIVES, WALKS	.75 - .85											
ROOFS	.75 - .95											
GRAVEL ROADS, SHOULDERS	.40 - .60											

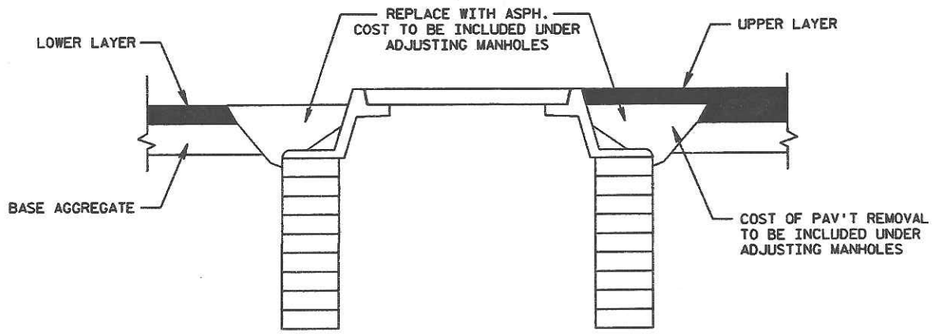
PROJECT I.D. 2415-07-70
TOTAL PROJECT AREA = 13.10 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 10.91 AC.



STEP 1

PRIOR TO GRADING OPERATIONS

A. REMOVE AND STORE MANHOLE FRAME AND COVER
B. FURNISH AND INSTALL TEMPORARY COVER PLATE



STEP 2

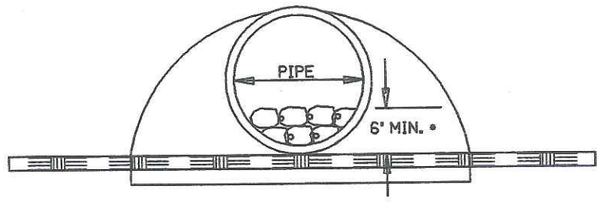
PRIOR TO PAVING UPPER LAYER

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

ADJUSTING MANHOLE COVER AND TEMPORARY COVER PLATE DETAIL

PROJECT NO: 2415-07-70	HWY: N. 60TH STREET	COUNTY: MILWAUKEE	CONSTRUCTION DETAILS	SCALE, FEET 0 N/A N/A	SHEET 8	E

DESIGN FILE IS r:\46028400\Dgn\021002_cd.dgn DATE OF PLOT = 1/26/2006 PLOT NAME = P:\LASER\021002_cd.prf PEN TABLE = \Plot\pen_tables\level.tbl Created By = MKS Plot Scale: 1" = 200.000000 WISDOT/CADDS SHEET 42



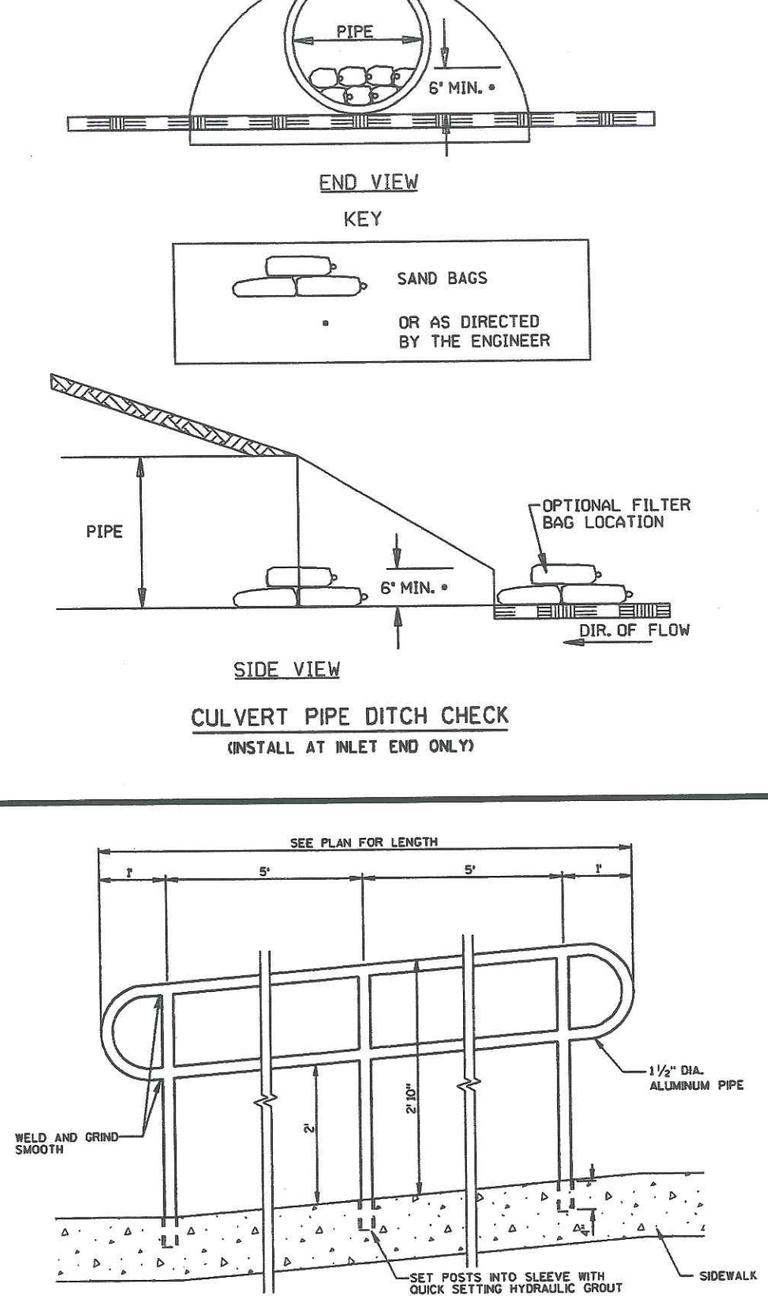
END VIEW

KEY

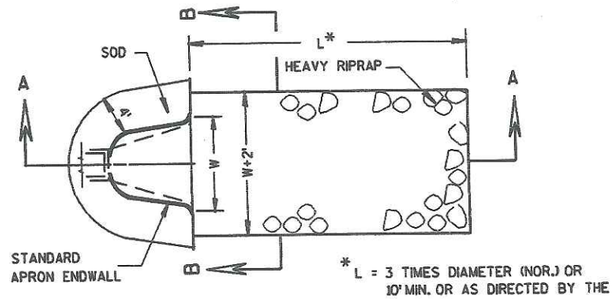
SIDE VIEW

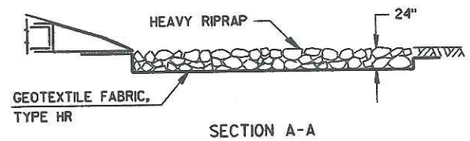
CULVERT PIPE DITCH CHECK

(INSTALL AT INLET END ONLY)

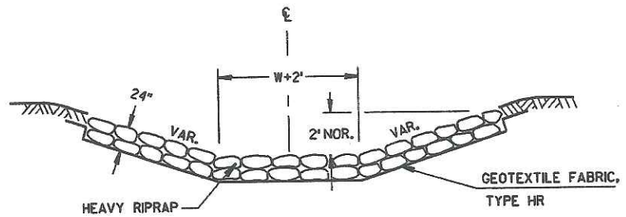


RAILING PIPE DETAIL





SECTION A-A



SECTION B-B

SOD, HEAVY RIPRAP AND GEOTEXTILE FABRIC
DETAIL AT APRON ENDWALLS

PROJECT NO: 2415-07-70	HWY: N. 60TH STREET	COUNTY: MILWAUKEE	CONSTRUCTION DETAILS	SCALE, FEET 0 N/A N/A	SHEET 9	E

2

STA. 123+00

W. DARNEL AVENUE

STA. 124+65
59' LT.

WALL MODULAR BLOCK

STA. 126+00
59' LT.

W. DEAN ROAD

STA. 129+00

2

N

N. 60TH STREET

124+00

125+00

126+00

127+00

128+00

129

MATCH LINE

MATCH LINE

695

690

685

680

675

670

665

TOP OF WALL

STA. 124+65 59.00' LT. EL. 679.60	STA. 125+00 59.00' LT. EL. 679.65	STA. 125+50 59.00' LT. EL. 680.05	STA. 126+00 59.00' LT. EL. 679.85	STA. 126+10 59.00' LT. EL. 679.80
STA. 124+65 59.00' LT. EL. 677.07	STA. 125+00 59.00' LT. EL. 677.25	STA. 125+50 59.00' LT. EL. 677.25	STA. 126+00 59.00' LT. EL. 679.25	STA. 126+10 59.00' LT. EL. 677.30

BOTTOM OF WALL, 18-INCHES BELOW FINISHED GRADE LINE

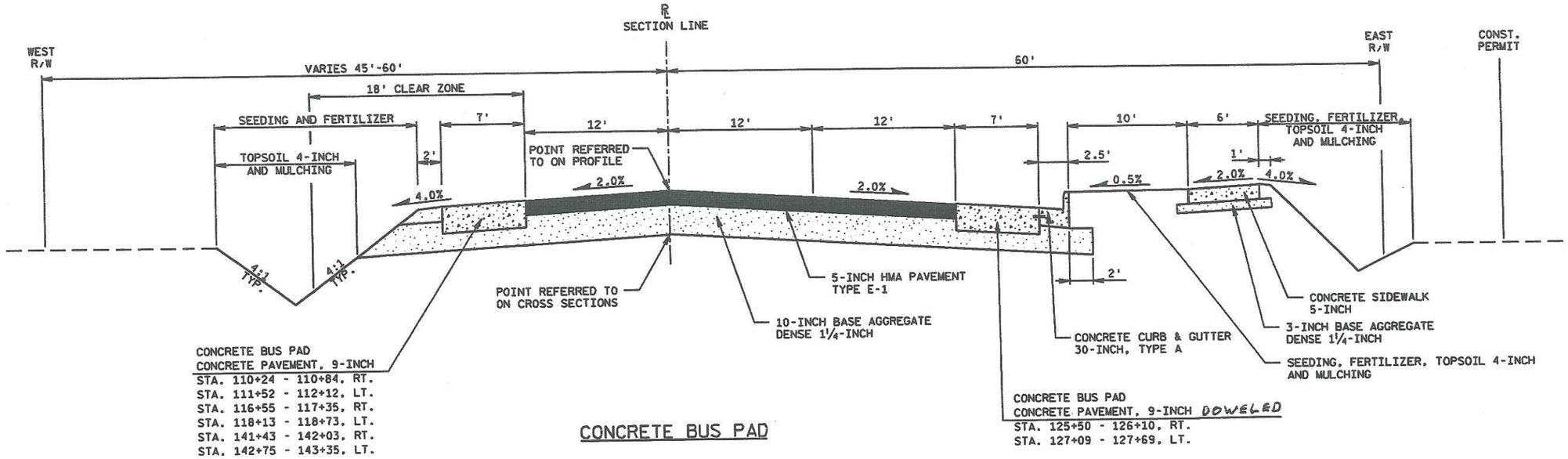
FINISHED GRADE LINE IN FRONT OF WALL (TYP.)

MODULAR BLOCK GRAVITY WALL, STA. 124+65.00 TO STA. 126+10.00 LT.
TOTAL ESTIMATED QUANITITY = 380 FT²

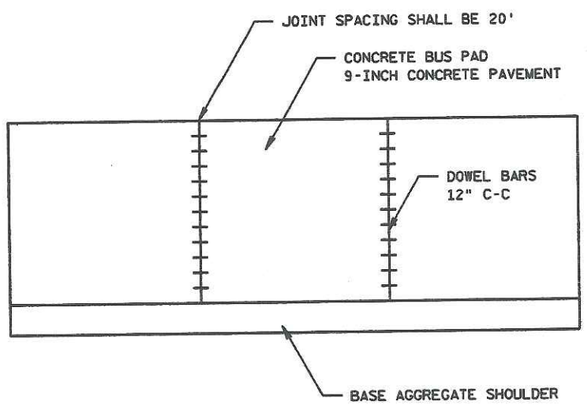
123+00 123+50 124+00 124+50 125+00 125+50 126+00 126+50 127+00 127+50 128+00 128+50 129+00

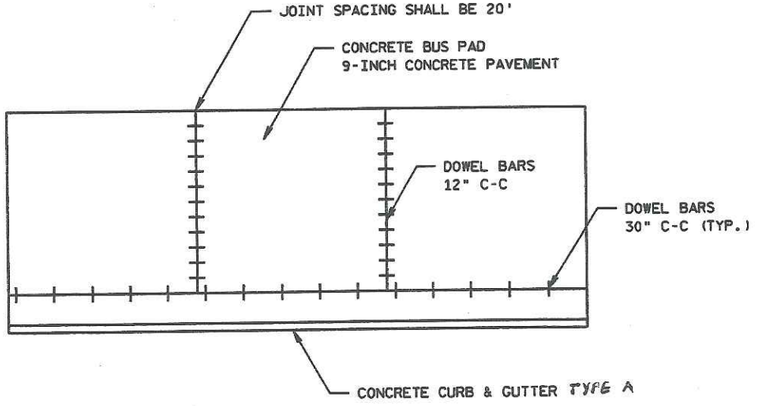
PROJECT NO: 2415-07-70	HWY: N. 60TH STREET	COUNTY: MILWAUKEE	GRAVITY WALL DETAIL	SCALE, FEET 0 20 40	SHEET 10	E

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CONCRETE BUS PAD





PROJECT NO: 2415-07-70	HWY: N. 60TH STREET	COUNTY: MILWAUKEE	CONCRETE BUS PAD	SCALE, FEET 0 N/A N/A	SHEET 11	E

DESIGN FILE IS r:\46028400\Dgn\021005_cd.dgn DATE OF PLOT = 2/28/2006 PLOT NAME = P:\LASER\021005_cd.prf PEN TABLE = \Plot\pen_tables\level.tbl Created By = piojdae Plot Scale: 1" = 200.001000 WISDOT/CADDS SHEET 42

2

2

N

W. DARNEL AVENUE

CTR. 30' R.
STA. 123+84.04, 61' LT.

CTR. 30' R.
STA. 124+69.67, 61' LT.

R/W

SLOPE INTERCEPT

CONCRETE CURB & GUTTER
30-INCH, TYPE D

CONCRETE SIDEWALK, 5-INCH

681.96
682.02
671.70
681.76

6"

2'

31'

123+00

124+00

PT 40+00.000

40+00

125+00

N. 60TH STREET

681.65
681.59
681.66
681.44
681.51
681.59
681.66
681.74
681.81
681.89

682.13
682.11
682.10
682.12
682.18
682.29

680.54

STA. 124+28.12 N. 60TH STREET
STA. 40+00.00 W. DARNEL AVENUE

PROJECT NO: 2415-07-70	HWY: N. 60TH STREET	COUNTY: MILWAUKEE	INTERSECTION DETAIL	SCALE, FEET 0 10 20	SHEET 12	E

DESIGN FILE IS r:\46028400\Dgn\021101_id.dgn DATE OF PLOT = 1/26/2006 PLOT NAME = P:\LASER\021101_id.prf PEN TABLE = \Plot\pen_tables\level.tbl Created By = MKS Plot Scale: 1" = 20.000000 WISDOT/CADDS SHEET 42

CTR. 30' R.
STA. 126+23.07, 61' LT.

R/W

CONCRETE SIDEWALK, 5-INCH

CONCRETE CURB & GUTTER
30-INCH, TYPE D

682.02 682.17 682.36 682.46

681.70 681.76 681.84 681.91 682.00 682.10 682.20

TYPE 2
RAMP

681.24 680.81 681.74

6' 6'

31'

125+00 126+00

N. 60TH STREET

CONCRETE BUS PAD
CONCRETE PAVEMENT 9-INCH

CONCRETE CURB & GUTTER
30-INCH, TYPE D

681.89 681.96 682.04 682.11 682.19 682.10

6'

TYPE 2
RAMP

681.71

682.29 682.43 682.62

CONCRETE SIDEWALK,
5-INCH

R/W

CTR. 30' R.
STA. 126+16.86, 61' RT.

ASPHALTIC
FLUME

TYPE 2
RAMP

9'

680.78

W. DEAN ROAD

PI 126+56.855

PI 50+00.000

ASPHALTIC
FLUME

681.01 680.98

TYPE 2
RAMP

6'

682.05

CTR. 30' R.
STA. 124+74.13, 61' LT.

SLOPE INTERCEPT

R/W

682.63 682.74 682.83 682.93

2'

CONCRETE BUS PAD
CONCRETE PAVEMENT 9-INCH

31'

19'

127+00

N. 60TH STREET

682.63

682.27

681.40

6'

SLOPE INTERCEPT

CTR. 30' R.
STA. 127+09.74, 49' RT.

R/W

STA. 126+56.86 N. 60TH STREET
STA. 50+00.00 W. DEAN ROAD

PROJECT NO: 2415-07-70	HWY: N. 60TH STREET	COUNTY: MILWAUKEE	INTERSECTION DETAIL	SCALE, FEET 0 10 20	SHEET 13	E

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2

2

N

STA. 148+58.77 N. 60TH STREET
STA. 90+00.00 W. WAHNER AVENUE

SLOPE INTERCEPT

SAN

STM

148+00

149+00

150+00

PT 90+00.000

90+00

N. 60TH STREET

N. 60TH STREET

CONCRETE CURB & GUTTER
30-INCH, TYPE D

CONCRETE CURB & GUTTER
30-INCH, TYPE D

2'

19'

31'

669.08

668.56

668.05

677.7

667.87

667.62

667.35

667.09

666.82

666.56

666.32

668.11

668.17

667.90

667.37

666.87

667.84

6'

SLOPE INTERCEPT

CTR. 30' R.
STA. 148+13.67, 49' RT.

TYPE 2
RAMP

TYPE 2
RAMP

CTR. 30' R.
STA. 149+05.66, 61' RT.

CONCRETE SIDEWALK,
5-INCH

S. 16TH STREET

S. WALNUT ROAD

W. WAHNER AVENUE

91+00

PROJECT NO: 2415-07-70	HWY: N. 60TH STREET	COUNTY: MILWAUKEE	INTERSECTION DETAIL	SCALE, FEET 0 10 20	SHEET 19	E

DESIGN FILE IS r:\46028400\Dgn\021103_id.dgn DATE OF PLOT = 1/26/2006 PLOT NAME = P:\LASER\021103_id.prf PEN TABLE = \Plot\pen_tables\level.tbl Created By = MKS Plot Scale: 1" = 20.000000 WISDOT/CADDS SHEET 42

N

R/W

SLOPE INTERCEPT

CTR. 40' R.
STA. 152+25.34, 59' LT.

CTR. 15' R.
STA. 152+26.59, 34' LT.

664.74

664.57

ASPHALTIC FLUME

665.03

665.32

CONCRETE CURB & GUTTER
30-INCH, TYPE D

TYPE 2 RAMP

W. BROWN DEER ROAD

2'

19'

33'

151+00

152+00

153+00

N. 60TH STREET

N. 60TH STREET

PI 153+13.819

CONCRETE CURB & GUTTER
30-INCH, TYPE D

666.60 666.36 661.14 665.93 665.73 665.55 665.39 665.24 665.10

TYPE 2 RAMP

665.29

666.91 666.47 666.10 665.78

CONCRETE SIDEWALK,
5-INCH

R/W

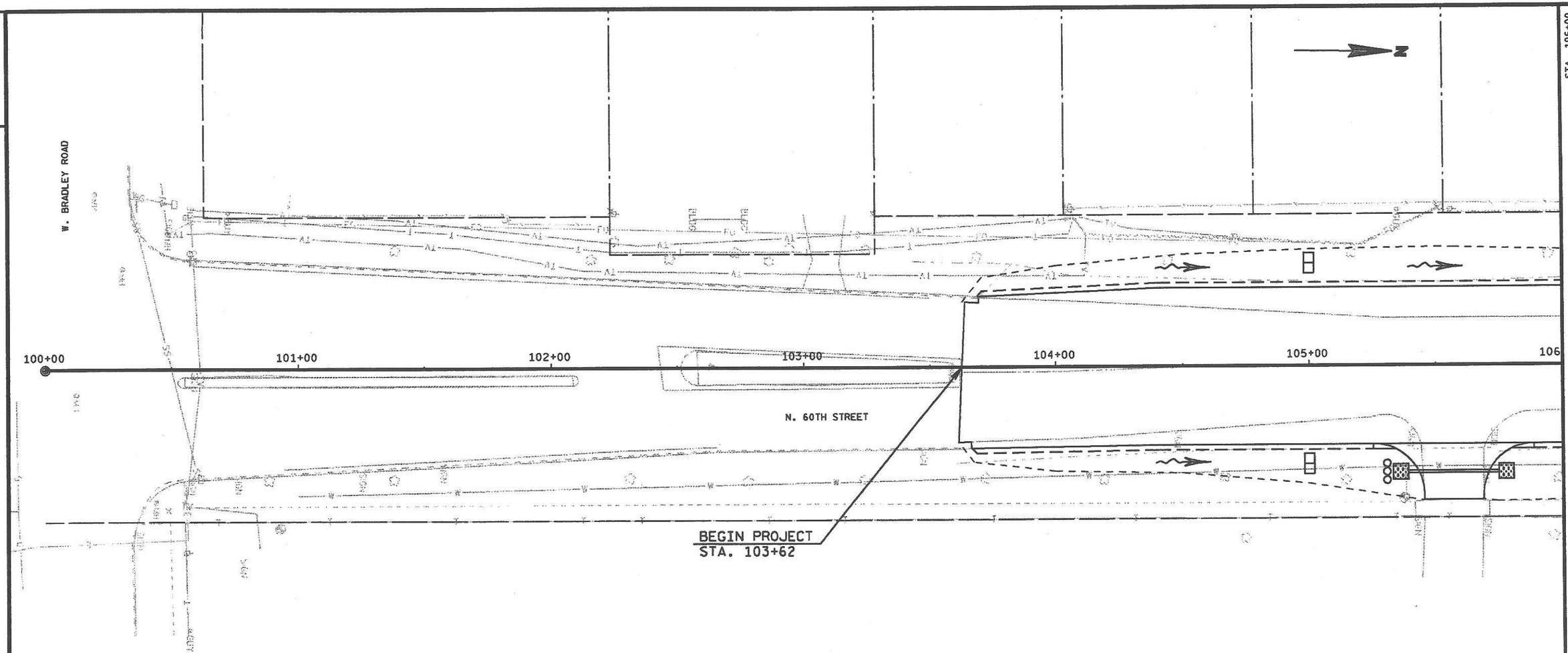
SLOPE INTERCEPT

CTR. 40' R.
STA. 152+24.65, 71' RT.

665.47

PROJECT NO: 2415-07-70	HWY: N. 60TH STREET	COUNTY: MILWAUKEE	INTERSECTION DETAIL	SCALE, FEET 0 10 20	SHEET 15	E

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2

LEGEND

- EROSION MAT CLASS II, TYPE B
- SILT FENCE
- EROSION BALE, BARRIER
- RIP RAP OR STONE DITCH CHECK
- SLOPE INTERCEPT
- ASPH — ASPHALTIC FLUME
- INLET PROTECTION
- TEMPORARY DITCH CHECK
- CULVERT PIPE DITCH CHECK
- SURFACE WATER FLOW

	HYDROLOGIC SOIL GROUP											
	A			B			C			D		
	SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)		
LAND USE:	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER
ROW CROPS	.08 .22	.16 .30	.22 .38	.12 .26	.20 .34	.27 .44	.15 .30	.24 .37	.33 .50	.19 .34	.28 .41	.38 .56
MEDIAN STRIP-TURF	.19 .24	.20 .26	.24 .30	.19 .25	.22 .28	.26 .33	.20 .26	.23 .30	.30 .37	.20 .27	.25 .32	.30 .40
SIDE SLOPE-TURF			.25 .32			.27 .34			.28 .36			.30 .38
PAVEMENT:												
ASPHALT	.70 - .95											
CONCRETE	.80 - .95											
BRICK	.70 - .80											
DRIVES, WALKS	.75 - .85											
ROOFS	.75 - .95											
GRAVEL ROADS, SHOULDERS	.40 - .60											

PROJECT I.D. 2415-07-70
TOTAL PROJECT AREA = 13.10 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 10.91 AC.

MATCH LINE

PROJECT NO: 2415-07-70	HWY: N. 60TH STREET	COUNTY: MILWAUKEE	EROSION CONTROL	SCALE, FEET 0 20 40	SHEET 16	E

STA. 106+00

STA. 112+00

2

N

W. TOWER DRIVE

106+00 107+00 108+00 109+00 110+00 111+00 112

N. 60TH STREET

N. 60TH STREET

MATCH LINE

MATCH LINE

LEGEND

- EROSION MAT CLASS II, TYPE B
- SILT FENCE
- EROSION BALE, BARRIER
- RIP RAP OR STONE DITCH CHECK
- SLOPE INTERCEPT
- ASPH — ASPHALTIC FLUME
- INLET PROTECTION
- TEMPORARY DITCH CHECK
- CULVERT PIPE DITCH CHECK
- SURFACE WATER FLOW

PROJECT NO: 2415-07-70	HWY: N. 60TH STREET	COUNTY: MILWAUKEE	EROSION CONTROL	SCALE, FEET 0 20 40	SHEET 17	E

2

STA. 112+00

STA. 117+00

2

N

+00 113+00 114+00 115+00 116+00 117

N. 60TH STREET

N. 60TH STREET

MATCH LINE

MATCH LINE

LEGEND

- EROSION MAT CLASS II, TYPE B
- SILT FENCE
- EROSION BALE, BARRIER
- RIP RAP OR STONE DITCH CHECK
- SLOPE INTERCEPT
- ASPH — ASPHALTIC FLUME
- INLET PROTECTION
- TEMPORARY DITCH CHECK
- CULVERT PIPE DITCH CHECK
- SURFACE WATER FLOW

PROJECT NO: 2415-07-70	HWY: N. 60TH STREET	COUNTY: MILWAUKEE	EROSION CONTROL	SCALE, FEET 0 20 40	SHEET 18	E

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STA. 117+00

STA. 123+00

2

W. FAIRLANE AVENUE

N

118+00

119+00

120+00

121+00

122+00

123

N. 60TH STREET

N. 60TH STREET

MATCH LINE

MATCH LINE

LEGEND

- EROSION MAT CLASS II, TYPE B
- SILT FENCE
- EROSION BALE, BARRIER
- RIP RAP OR STONE DITCH CHECK
- SLOPE INTERCEPT
- ASPH — ASPHALTIC FLUME
- INLET PROTECTION
- TEMPORARY DITCH CHECK
- CULVERT PIPE DITCH CHECK
- SURFACE WATER FLOW

PROJECT NO: 2415-07-70	HWY: N. 60TH STREET	COUNTY: MILWAUKEE	EROSION CONTROL	SCALE, FEET 0 20 40	SHEET 19	E

DESIGN FILE IS r:\46028400\Dgn\022004_ec.dgn DATE OF PLOT = 1/26/2006 PLOT NAME = P:\LASER\022004_ec.prf PEN TABLE = \Plot\pen_tables\level.tbl Created By = MKS Plot Scale: 1" = 40.000000 WISDOT/CADDS SHEET 42

2

STA. 123+00

W. DARNEL AVENUE

39+00

40+00

124+00

125+00

126+00

W. DEAN ROAD

49+00

127+00

128+00

129

STA. 129+00

2

N

N. 60TH STREET

N. 60TH STREET

NYS

SAN

31+00

MATCH LINE

MATCH LINE

W. DEAN ROAD

LEGEND

- EROSION MAT CLASS II, TYPE B
- SILT FENCE
- EROSION BALE, BARRIER
- RIP RAP OR STONE DITCH CHECK
- SLOPE INTERCEPT
- ASPH — ASPHALTIC FLUME
- INLET PROTECTION
- TEMPORARY DITCH CHECK
- CULVERT PIPE DITCH CHECK
- SURFACE WATER FLOW

PROJECT NO: 2415-07-70	HWY: N. 60TH STREET	COUNTY: MILWAUKEE	EROSION CONTROL	SCALE, FEET 0 20 40	SHEET 20	E

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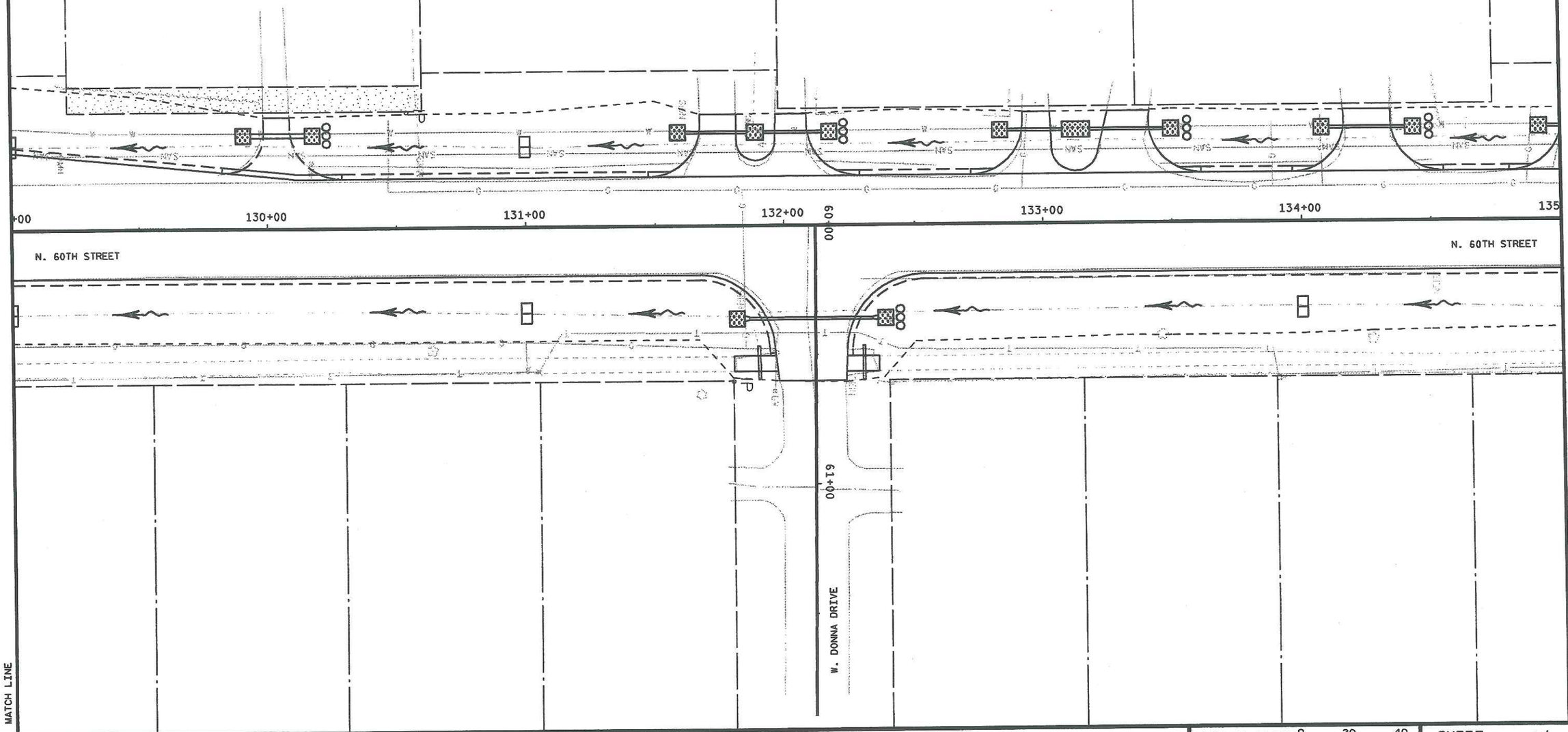
WISDOT/CADDS SHEET 42

STA. 129+00

STA. 135+00

LEGEND

- EROSION MAT CLASS II, TYPE B
- SILT FENCE
- EROSION BALE, BARRIER
- RIP RAP OR STONE DITCH CHECK
- SLOPE INTERCEPT
- ASPH — ASPHALTIC FLUME
- INLET PROTECTION
- TEMPORARY DITCH CHECK
- CULVERT PIPE DITCH CHECK
- SURFACE WATER FLOW

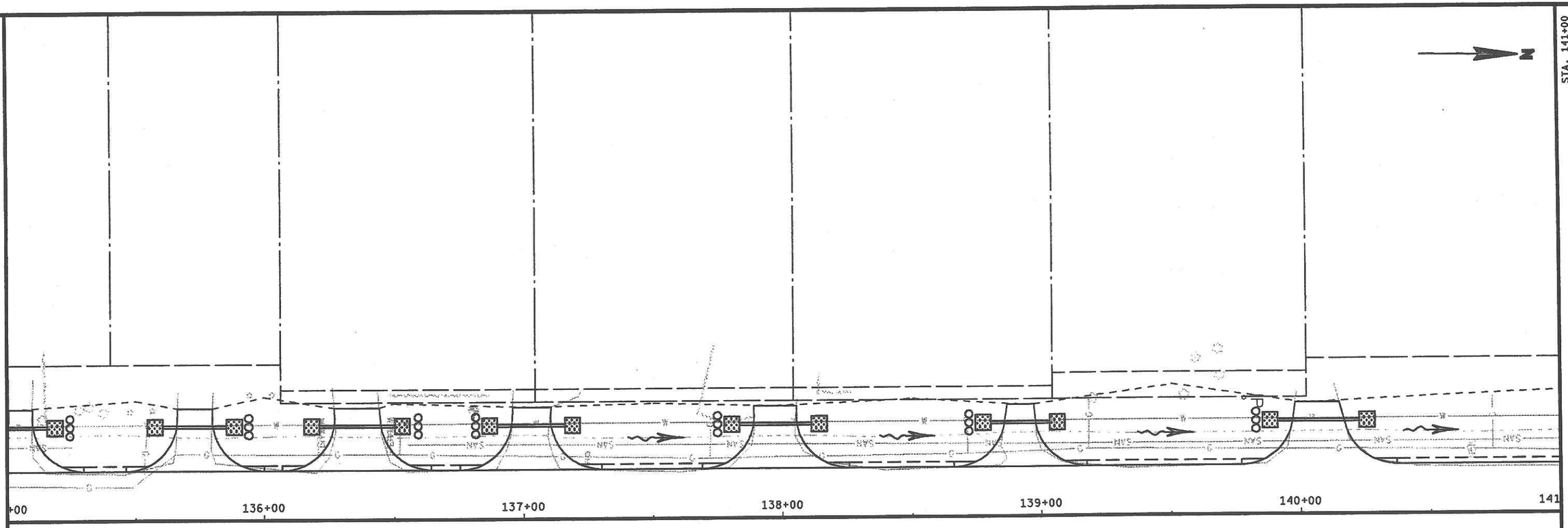


PROJECT NO: 2415-07-70	HWY: N. 60TH STREET	COUNTY: MILWAUKEE	EROSION CONTROL	SCALE, FEET 0 20 40	SHEET 21	E

DESIGN FILE IS r:\46028400\Dgn\022006_ec.dgn DATE OF PLOT = 1/26/2006 PLOT NAME = P:\LASER\022006_ec.prf PEN TABLE = \Plot\pen_tables\level.tbl Created By = MKS Plot Scale: 1" = 40.000000 WISDOT/CADDS SHEET 42

2

STA. 135+00



STA. 141+00

2

PROJECT NO: 2415-07-70	HWY: N. 60TH STREET	COUNTY: MILWAUKEE	EROSION CONTROL	SCALE, FEET 0 20 40	SHEET 22	E

DESIGN FILE IS r:\46028400\Dgn\02200T_ec.dgn DATE OF PLOT = 1/26/2006 PLOT NAME = P:\LASER\02200T_ec.prf PEN TABLE = \Plot\pen_tables\level.tbl Created By = MKS Plot Scale: 1" = 40.000000 WISDOT/CADDS SHEET 42

STA. 141+00

W. WABASH AVENUE

STA. 147+00

2

+00 142+00 70+00 143+00 144+00 145+00 80+00 146+00 147

N. 60TH STREET

N. 60TH STREET

W. RANGE LANE

81+00

MATCH LINE

MATCH LINE

LEGEND

- EROSION MAT CLASS II, TYPE B
- SILT FENCE
- EROSION BALE, BARRIER
- RIP RAP OR STONE DITCH CHECK
- SLOPE INTERCEPT
- ASPH — ASPHALTIC FLUME
- INLET PROTECTION
- TEMPORARY DITCH CHECK
- CULVERT PIPE DITCH CHECK
- SURFACE WATER FLOW

PROJECT NO: 2415-07-70	HWY: N. 60TH STREET	COUNTY: MILWAUKEE	EROSION CONTROL	SCALE, FEET 0 20 40	SHEET 23	E

DESIGN FILE IS r:\46028400\Dgn\022008_ec.dgn DATE OF PLOT = 1/26/2006 PLOT NAME = P:\LASER\022008_ec.prf PEN TABLE = \Plot\pen_tables\level.tbl Created By = MKS Plot Scale: 1" = 40.000000 WISDOT/CADDS SHEET 42

2

STA. 147+00

LEGEND

- EROSION MAT CLASS II, TYPE B
- SILT FENCE
- EROSION BALE, BARRIER
- RIP RAP OR STONE DITCH CHECK
- SLOPE INTERCEPT
- ASPH — ASPHALTIC FLUME
- INLET PROTECTION
- TEMPORARY DITCH CHECK
- CULVERT PIPE DITCH CHECK
- SURFACE WATER FLOW

2

148+00 149+00 150+00 151+00 152+00 153+00

N. 60TH STREET

N. 60TH STREET

W. WAHNER AVENUE

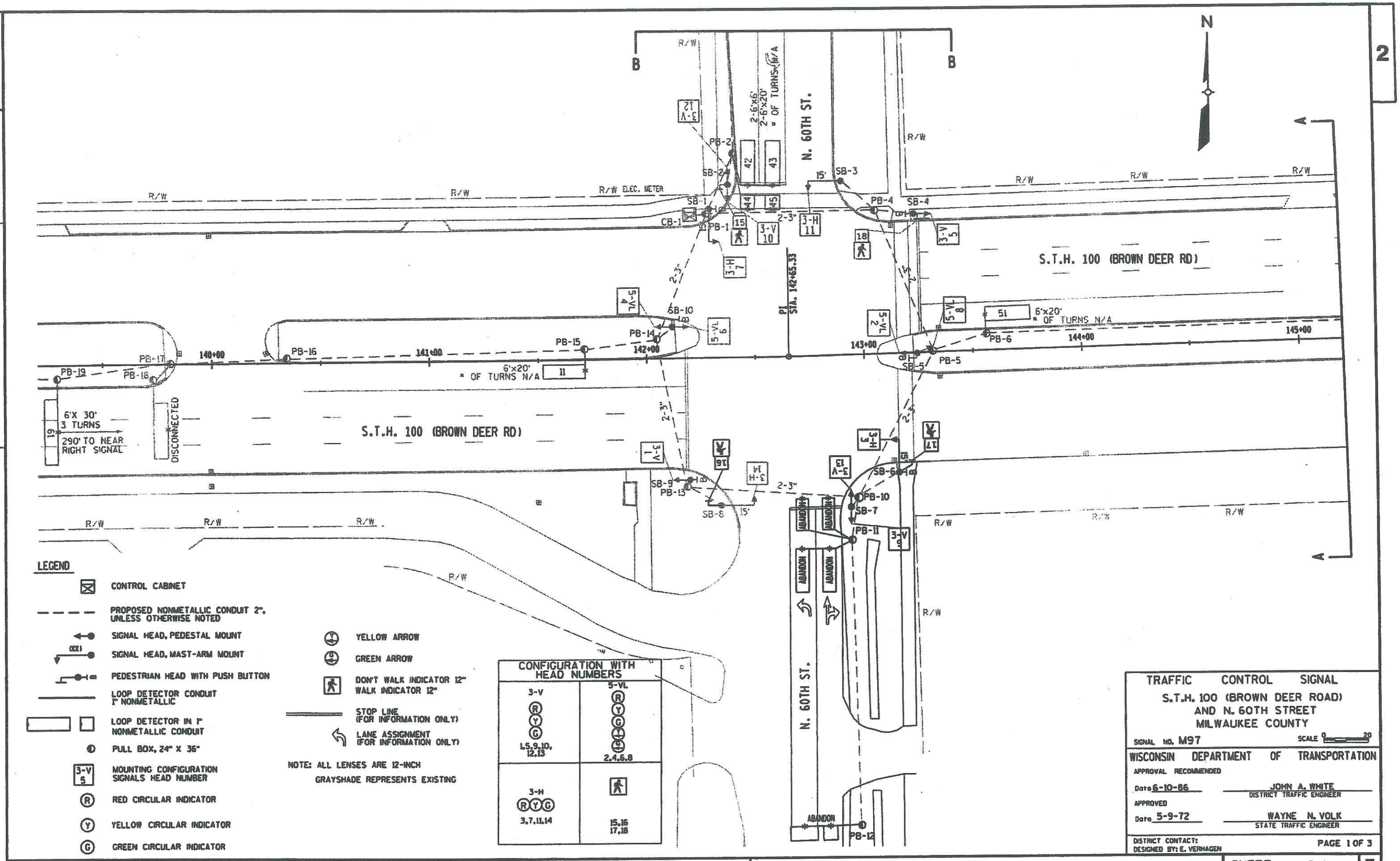
91+00

W. BROWN DEER ROAD

MATCH LINE

PROJECT NO: 2415-07-70	HWY: N. 60TH STREET	COUNTY: MILWAUKEE	EROSION CONTROL	SCALE, FEET 0 20 40	SHEET 24	E

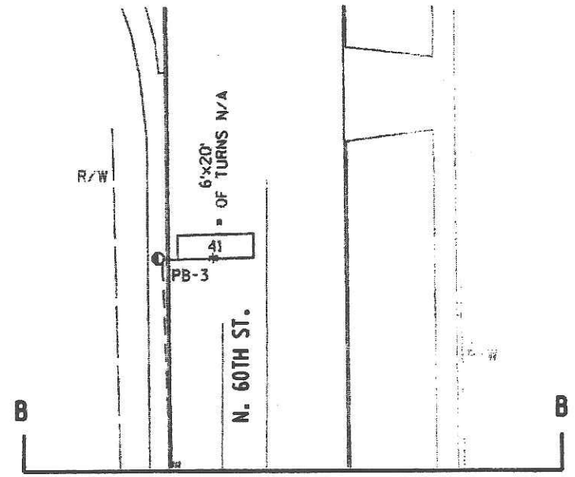
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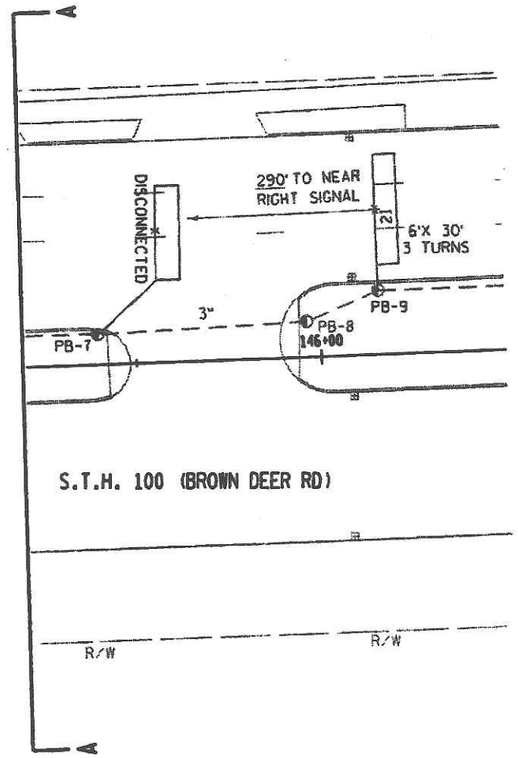


PROJECT NO: 2415-07-70	HWY: STH 100	COUNTY: MILWAUKEE	REMOVAL PLAN	SHEET 25	E

FILE NAME : J:\projects\d2_215004100\signal\removal.dgn PLOT DATE : 26-JAN-2006 13:36 PLOT BY : DOTEJV PLOT NAME : PLOT SCALE : 40:1 WISDOT/CADDS SHEET 42

2





N

TRAFFIC CONTROL SIGNAL
S.T.H. 100 (BROWN DEER ROAD)
AND N. 60TH STREET
MILWAUKEE COUNTY
SIGNAL NO. M97
SCALE 0 20
DISTRICT CONTACT:
DESIGNED BY:
PAGE 2 OF 3

PROJECT NO: 2415-07-70	HWY: STH 100	COUNTY: MILWAUKEE	REMOVAL PLAN	SHEET 2	E

LEGEND

- CONTROL CABINET
- CABLE-OVERHEAD
- SIGNAL HEAD, PEDESTAL MOUNT
- 3-V 5 — MOUNTING CONFIGURATION SIGNALS HEAD NUMBER
- WOOD POLE

N

N. 60TH ST.

S.T.H. 100 (BROWN DEER RD)

R/W

R/W ELEC. METER

CB-1 SB-1 PB-1 SB-2 PB-2 SB-3 PB-4 SB-4 SB-5 PB-5 SB-6 PB-6 SB-8 PB-13 SB-9 SB-10 PB-14 PB-15 PB-16 PB-17 PB-18 PB-19

WP1 WP2 WP3 WP4

P1 STA. 142+65.33

140+00 141+00 142+00 143+00 144+00 145+00

2-6'x6' 2-6'x20' * OF TURNS N/A

6'x20' * OF TURNS N/A

6'X 30' 3 TURNS 290' TO NEAR RIGHT SIGNAL

* DISCONNECTED

OH

2-3"

15'

CONFIGURATION WITH HEAD NUMBERS	
3-V (R Y G) 1,3,5,9 10,12	5-VL (R Y G Y G) 2,4,6,8
3-H (R Y G) 7,11,14	PED HEAD 15,16,18

QTY EACH	DESCRIPTION
4	40' WOOD POLES, CLASS 4
195	SPAN WIRE (TOTAL IN FT)
3	SIGNAL HEADS

NOTE: DOT WILL MAINTAIN THE OPERATION OF PARTIAL TEMPORARY SIGNAL. IF A KNOCKDOWN OCCURS, CONTRACTOR WILL REPAIR.

PHASE 4 AND 8 PED HEADS WILL BE BAGGED BY DOT ELECTRICAL PERSONNEL DURING CONSTRUCTION

PROJECT NO: 2415-07-70	HWY: STH 100	COUNTY: MILWAUKEE	TEMPORARY SIGNAL PLAN	SHEET 27	E

2

N

B — B

N. 60TH ST.

S.T.H. 100 (BROWN DEER RD)

S.T.H. 100 (BROWN DEER RD)

N. 60TH ST.

6'X 30' 3 TURNS 290° TO NEAR RIGHT SIGNAL

DISCONNECTED

6'x20' = OF TURNS N/A

6'x20' = OF TURNS N/A

6-6'x20' 4 TURNS EA.

6'x15' 5 TURNS

PB-1 PB-2 PB-4 PB-5 PB-6 PB-10 PB-11 PB-12 PB-14 PB-15 PB-16 PB-17 PB-18 PB-19 PB-20 PB-21

SB-1 SB-2 SB-3 SB-4 SB-5 SB-6 SB-7 SB-8 SB-9 SB-10 SB-11

CB-1

10' PED POST

GARDEN

GRASS R/W SAN SS FO W G D E

140+00 141+00 142+00 143+00 144+00 145+00 151+00 152+00 153+00

LEGEND

- CONTROL CABINET
- PROPOSED NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- SIGNAL HEAD, PEDESTAL MOUNT
- SIGNAL HEAD, MAST-ARM MOUNT
- PEDESTRIAN HEAD WITH PUSH BUTTON
- LOOP DETECTOR CONDUIT 1" NONMETALLIC
- LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
- PULL BOX, 24" X 36"
- 3-V / 5 — MOUNTING CONFIGURATION SIGNALS HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- YELLOW ARROW
- GREEN ARROW
- DON'T WALK INDICATOR 12" WALK INDICATOR 12"
- STOP LINE (FOR INFORMATION ONLY)
- LANE ASSIGNMENT (FOR INFORMATION ONLY)

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING

CONFIGURATION WITH HEAD NUMBERS

3-V (R Y G) 1,5,9,10, 12,13	5-VL (R Y G ← ←) 2,4,6,8
3-H (R Y G) 3,7,11,14	DW W 15,16 17,18 19,20

REVISION					
Base Plan No.	Rev. No.	S APPROACH SIGNAL AND GEOMETRIC CHANGES			Cont. Type
		APPROVALS			
		DISTRICT		CENTRAL OFFICE	
		Date	By	Date	By
1	6	1/30/06	DOG		EPAC

PLAN UPDATED TO SHOW LOOPS 85 & 86

REPLACED ALL CONCRETE BASES INSTALLED NEW POLES AND MAST ARMS REPLACED ALL PULL BOXES INSTALL ALL NEW CABLE & WIRE INSTALL NEW CONTROL CABINET 4/11/01

CHANGE YELLOW FLASH TO RED 10-4-99

INSTALL NEW CONTROLLER FOR SIGNAL INTERCONNECT

INSTALL DETECTORS, LT. TURN ARROWS EB & WB, NEW CONTROLLER (DP9000) 7-87

UNKNOWN INITIAL INSTALLATION

TRAFFIC CONTROL SIGNAL

S.T.H. 100 (BROWN DEER ROAD) AND 60TH STREET MILWAUKEE COUNTY

SIGNAL NO. M97 — SCALE 0 20

WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVAL RECOMMENDED
Date 6-10-86 — JOHN A. WHITE, DISTRICT TRAFFIC ENGINEER

APPROVED
Date 5-9-72 — WAYNE N. VOLK, STATE TRAFFIC ENGINEER

DISTRICT CONTACT:
DESIGNED BY: E. VERHAGEN

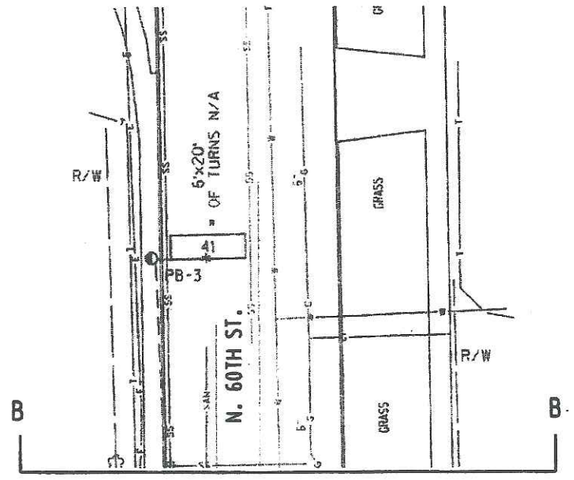
PAGE 1 OF 3

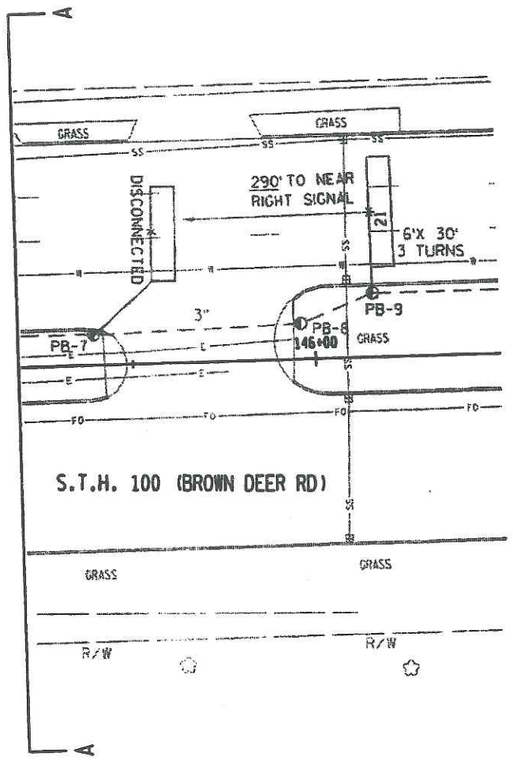
PROJECT NO: 2415-07-70	HWY: STH 100	COUNTY: MILWAUKEE	TRAFFIC SIGNAL PLAN	SHEET 28	E

DATE 1/30/06

FILE NAME : J:\projects\d2_215004100\signal\M97_d.dgn
PLOT DATE : 30-JAN-2006 15:25 PLOT BY : DOTEJV PLOT NAME : PLOT SCALE : 40:1 WISDOT/CADDS SHEET 42

2





N

TRAFFIC CONTROL SIGNAL
S.T.H. 100 (BROWN DEER ROAD)
AND 60TH STREET
MILWAUKEE COUNTY
SIGNAL NO. M97
SCALE 0 20
DISTRICT CONTACT:
DESIGNED BY:
PAGE 2 OF 3

PROJECT NO: 2415-07-70	HWY: STH 100	COUNTY: MILWAUKEE	TRAFFIC SIGNAL PLAN	SHEET 29	E

FILE NAME : J:\projects\d2_215004100\signal\M97_d.dgn PLOT DATE : 26-JAN-2006 13:49 PLOT BY : DOTEJV PLOT NAME : PLOT SCALE : 40:1 WISDOT/CADDS SHEET 42

SEQUENCE OF OPERATION

RING 1

	HEAD NUMBERS	01 R/W	01 CLEAR TO **	02 R/W	02 CLEAR TO **	03 R/W	03 CLEAR TO **	04 R/W	04 CLEAR TO **	FLASH
		G ←	Y →							
01	2,4	-	- -	-	- -			-	- -	-
02	5,6,7,8	R	R R	G	Y R			R	R R	R
03										
04	12,13,14	R	R R	R	R R			G	Y R	R
05	6,8	-	- -	-	- -			-	- -	-
06	1,2,3,4	R	R R	R	R R			R	R R	R
07										
08	9,10,11	R	R R	R	R R			R	R R	R
02P										
04P	15,16	DW	DW DW	DW	DW DW			*	DW DW	
06P	19,20	DW	DW DW	DW	DW DW			DW	DW DW	
08P	17,18	DW	DW DW	DW	DW DW			DW	DW DW	

RING 2

	HEAD NUMBERS	05 R/W	05 CLEAR TO **	06 R/W	06 CLEAR TO **	07 R/W	07 CLEAR TO **	08 R/W	08 CLEAR TO **
01	2,4	-	- -	-	- -			-	- -
02	5,6,7,8	R	R R	R	R R			R	R R
03									
04	12,13,14	R	R R	R	R R			R	R R
05	6,8	G ←	Y → -	-	- -			-	- -
06	1,2,3,4	R	R R	G	Y R			R	R R
07									
08	9,10,11	R	R R	R	R R			G	Y R
02P									
04P	15,16	DW	DW DW	DW	DW DW			DW	DW DW
06P	19,20	DW	DW DW	*	DW DW			DW	DW DW
08P	17,18	DW	DW DW	DW	DW DW			*	DW DW

NOT USED

NOT USED

N

** CLEARANCE TO A PHASE IN CONFLICT WITH THIS PHASE ON (SEE CHART 1)

* WHEN CALLED, TIMED STEADY WALK, THEN FLASHING DON'T WALK, THEN GOES TO STEADY DON'T WALK

BARRIER

CHART 1

PHASE ON	NONCONFLICTING PHASE ALLOWED TO TIME CONCURRENTLY	PHASES IN CONFLICT WITH PHASE ON
01	5 OR 6	2,4,8
02	5 OR 6	1,4,8
03		
04	8	1,2,5,6
05	1 OR 2	4,6,8
06	1 OR 2	4,5,8
07		
08	4	1,2,5,6

DETECTOR LOGIC

DETECTOR NUMBER	AMPLIFIER CHANNEL NUMBER	DETECTOR OPERATION: CALLS AND EXTENDS	DETECTOR OPERATION: CALLS ONLY	DETECTOR OPERATION: EXTENDS ONLY	PHASE CALLED	PHASE EXTENDED	DETECTOR DISCONNECT PHASE	CALLING DELAY	EXTENSION STRETCH	SIZE	NUMBER OF TURNS
11	1	X			1	1				6X20	N/A
21	2	X			2	2				6X30	3
41	3			X		4			X	6X20	N/A
42	4	X			4	4		X		6X20	N/A
43	5	X			4	4				6X20	N/A
44	4	X			4	4		X		6X6	N/A
45	6	X			4	4		X		6X6	N/A
51	7	X			5	5				6X20	N/A
61	8	X			5	5				6X30	3
81	9			X		8			X	6X15	5
82	10	X			8	8		X		6X20	4
83	10	X			8	8		X		6X20	4
84	11	X			8	8				6X20	4
85	11	X			8	8				6X20	4
86	12	X			8	8		X		6X20	4
87	12	X			8	8		X		6X20	4

CONTROLLER LOGIC

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY # / 0	PHASE RECALL	PHASE ACTIVE
1		6		X
2	X	6	MIN.	X
3				
4		8		X
5		2		X
6	X	2	MIN.	X
7				
8		4		X

OVERLAPS

O.L. "A" =
O.L. "B" =
O.L. "C" =
O.L. "D" =

TYPE OF INTERCONNECT	
NONE	
TBC	X
CLOSED LOOP	
HARDWIRE	
TONE (FREQ)	
FIBER OPTIC	

TYPE OF PRE-EMPT	
NONE	X
RAILROAD	
EMERGENCY VEHICLE	

TYPE OF LIGHTING	
NONE	X
IN TRAFFIC CONTROL CABINET	
IN SEPARATE CONTROL CABINET	

GENERAL NOTES:

1. ANY ACTUATED PHASE FOR WHICH THERE IS NO CALL SHALL BE SKIPPED.
2. WHEN ONE PHASE IS ON ALONE, ANY NONCONFLICTING PHASE MAY START TIMING CONCURRENTLY WITHOUT A CLEARANCE INTERVAL. (SEE CHART 1 AT LEFT.)
3. IF ANY OPPOSING THRU PHASES ARE TIMING CONCURRENTLY, THEY SHALL TERMINATE TOGETHER DUE TO PERMISSIVE LEFT TURN CONFLICT.

STH 100 (BROWN DEER RD.)
AND N 60H STREET
MILWAUKEE COUNTY

SIGNAL NO. M97

CONTROLLER TYPE: EPAC

DATE 1-06 PAGE NO. 3 OF 3

1/13/06

FILE NAME : J:\projects\d2_215004100\signal\M97_d.dgn PLOT DATE : 30-JAN-2006 15:26 PLOT BY : DOTEJV PLOT NAME : PLOT SCALE : 40:1 WISDOT/CADDS SHEET 42

SLOPE INTERCEPT

R/W

W. DARNEL AVENUE

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

N. 60TH STREET

30-00 40-00

STA. 126+03, 52' LT.
HEADWALL REQ'D.

(4A) STA. 124+85.00, 47.00' LT.
WALL MODULAR BLOCK

12" SSPRC

STA. 126+23.00, 47.00' LT. (3C)
WALL MODULAR BLOCK

(4) STA. 124+85.00, 32.00' LT.
INLET TYPE 3 REQ'D.

30" SSPRC

W. DEAN ROAD

R/W

2

(1B) STA. 123+50.00, 32.00' RT.
INLET TYPE 3 REQ'D.

12" SSPRC

29" x 45" SSPRCHE

12" SSPRC

(3B) STA. 126+90.00, 39.50' RT.
APRON ENDWALL REQ'D.

18" SSPRC

SLOPE INTERCEPT

SAN

R/W

12" SSPRC

STA. 126+23.00, 36.50' RT. (3)
MANHOLE TYPE 3 REQ'D.

(2B) STA. 124+50.00, 56.00' RT.
INLET TYPE 8 REQ'D.

18" SSPRC

(2) STA. 124+10.00, 36.50 RT.
MANHOLE TYPE 3 REQ'D.

(2A) STA. 124+10.00, 56.00' RT.
INLET TYPE 8 REQ'D.

STA. 126+27.50, 59.50' RT. (3A)
APRON ENDWALL REQ'D.

W. DEAN ROAD

31+00

(1) STA. 123+65.00, 36.50' RT.
MANHOLE TYPE 3 REQ'D.

29" x 45" SSPRCHE

(1A) STA. 122+95.00, 114.00' RT.
APRON ENDWALL REQ'D.

690
685
680
675
670
665

(1)
PROPOSED RIM
ELEV. = 681.43

(2)
PROPOSED RIM
ELEV. = 681.37

PROPOSED PROFILE
ALONG R/L

60' - 29" x 45"
SSPRCHE @ 0.25%

213' - 29" x 45" SSPRCHE @ 0.25%

INV. = 676.35

INV. = 676.50

(3)
PROPOSED RIM
ELEV. = 682.59

(3B)

70' - 18" SSPRC @ 1.5%

INV. = 677.35

INV. = 678.40

INV. = 677.01

NOTE:
SEE PAGE 3 OF STORM SEWER
PLANS FOR MORE DETAILS.

122+00 122+50 123+00 123+50 124+00 124+50 125+00 125+50 126+00 126+50 127+00 127+50 128+00

PROJECT NO: 2415-07-70	HWY: N. 60TH STREET	COUNTY: MILWAUKEE	STORM SEWER	SCALE, FEET 0 20 40	SHEET 3 /	E

DESIGN FILE IS r:\46028400\Dgn\022501_ss.dgn DATE OF PLOT = 1/27/2006 PLOT NAME = P:\LASER\022501_ss.prf PEN TABLE = \Plot\pen_tables\level.tbl Created By = MKS Plot Scale: 1" = 40.000000 WISDOT/CADDS SHEET 42

2

SLOPE INTERCEPT

STA. 150+96.00, 37.00' LT. (6C)
APRON ENDWALL REQ'D.

19" x 30" SSPRCHE

147+00 148+00 149+00 150+00 151+00 152+00 153+00

24" x 38" SSPRCHE

(5) STA. 148+68.42, 39.00' RT.
MANHOLE TYPE 3 REQ'D.

STA. 150+96.00, 32.00' RT. (6B)
INLET TYPE 3 REQ'D.

STA. 152+27.00, 32.00' RT. (7C)
INLET TYPE 3 REQ'D.

STA. 152+27.00, 39.00' RT. (7)
MANHOLE TYPE 3 REQ'D.

12" SSPRC
42" SSPRC
REMOVE INLET

42" SSPRC
19" x 30" SSPRCHE
12" SSPRC
42" SSPRC 12" SSPRC

STA. 148+25.00, 36.00' RT. (5A)
APRON ENDWALL REQ'D.

SLOPE INTERCEPT

24"x38" SSPRCHE

(5B) STA. 148+68.42, 58.62' RT.
EXISTING MANHOLE

STA. 150+96.00, 39.00' RT. (6)
MANHOLE TYPE 3 REQ'D.

STA. 152+27.00, 56.00' RT. (7A)
INLET TYPE 8 REQ'D.

STA. 150+96.00, 56.00' RT. (6A)
INLET TYPE 8 REQ'D.

STA. 152+67.00, 48.00' RT. (7B)
REMOVE INLET
MANHOLE COVER, TYPE 3 REQ'D.

91+00

675 670 665 660 655 650

5A 5 6 7 7B

PROPOSED RIM
ELEV. = 668.20

PROPOSED PROFILE
ALONG R/L

PROPOSED RIM
ELEV. = 666.36

PROPOSED RIM
ELEV. = 665.48

228' - 42" SSPRC @0.40%

130' - 42" SSPRC @0.40%

40' - 42"
SSPRC @ 0.40%

EXISTING

INV. = 665.10

INV. = 661.92

INV. = 663.93

44' - 24" x 38" SSPRCHE @ 2.66%

INV. = 661.01

INV. = 660.49

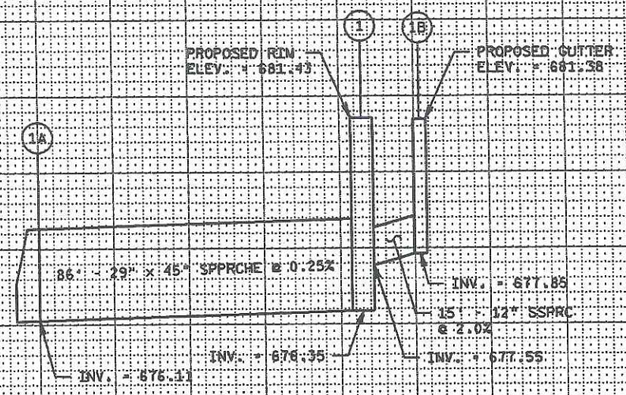
INV. = 660.33

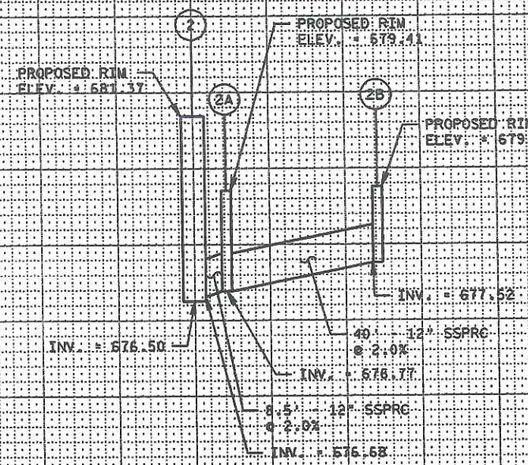
675 670 665 660 655 650

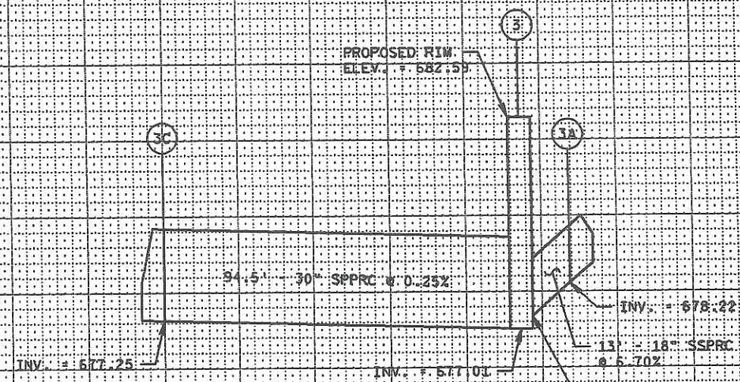
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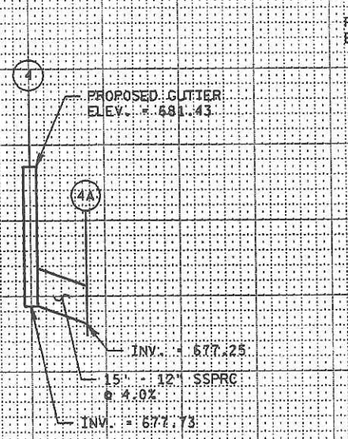
PROJECT NO: 2415-07-70	HWY: N. 60TH STREET	COUNTY: MILWAUKEE	STORM SEWER	SCALE, FEET 0 20 40	SHEET 32	E

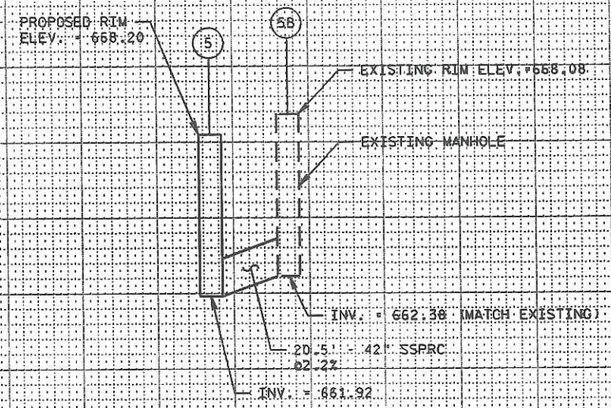
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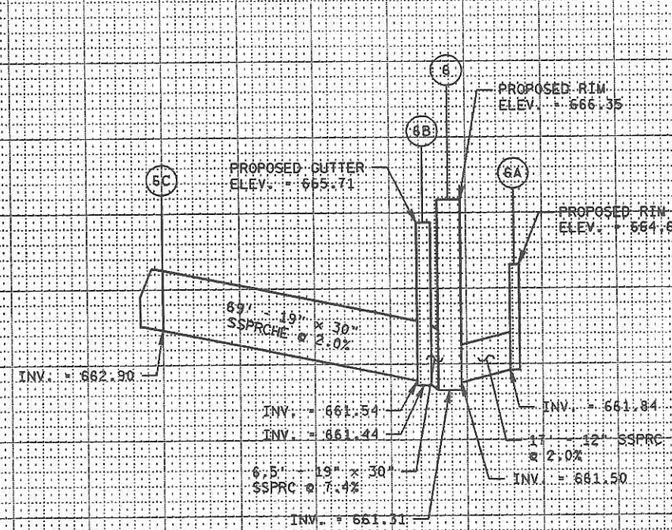


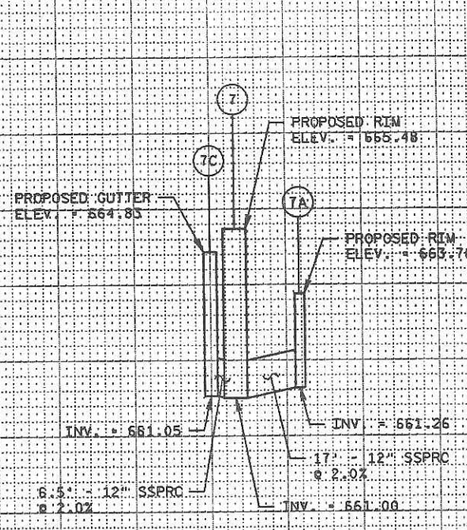












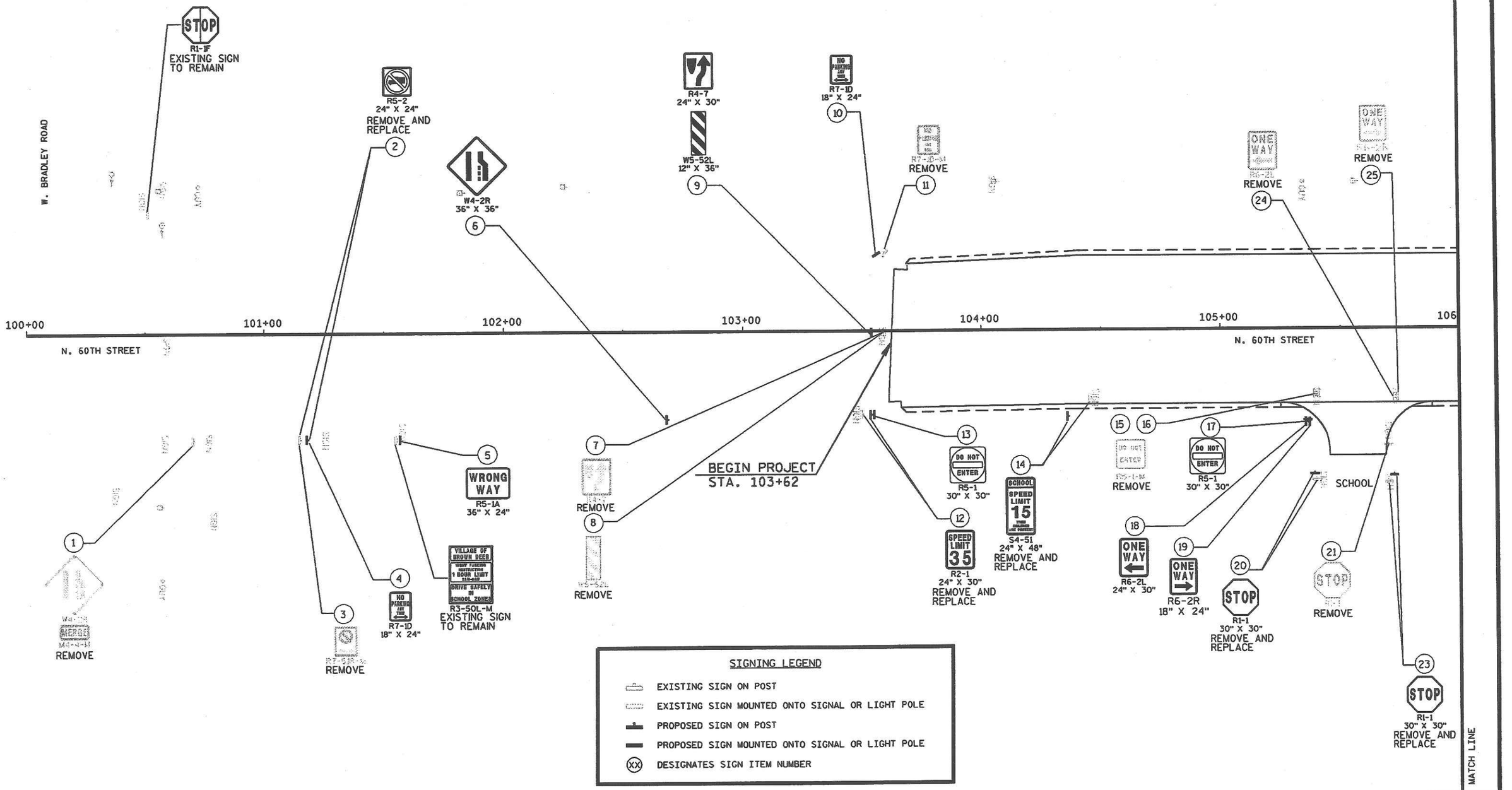
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GENERAL NOTES

THE EXACT LOCATION AND SPACING OF ALL SIGNS SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

SIGNS ARE TYPE II- TYPE H REFLECTIVE - REFERENCE WIS DOT STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION LATEST EDITION.



PROJECT NO: 2415-07-70	HWY: N. 60TH STREET	COUNTY: MILWAUKEE	PERMANENT SIGNING	SCALE, FEET 0 20 40	SHEET 34	E

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STA. 106+00

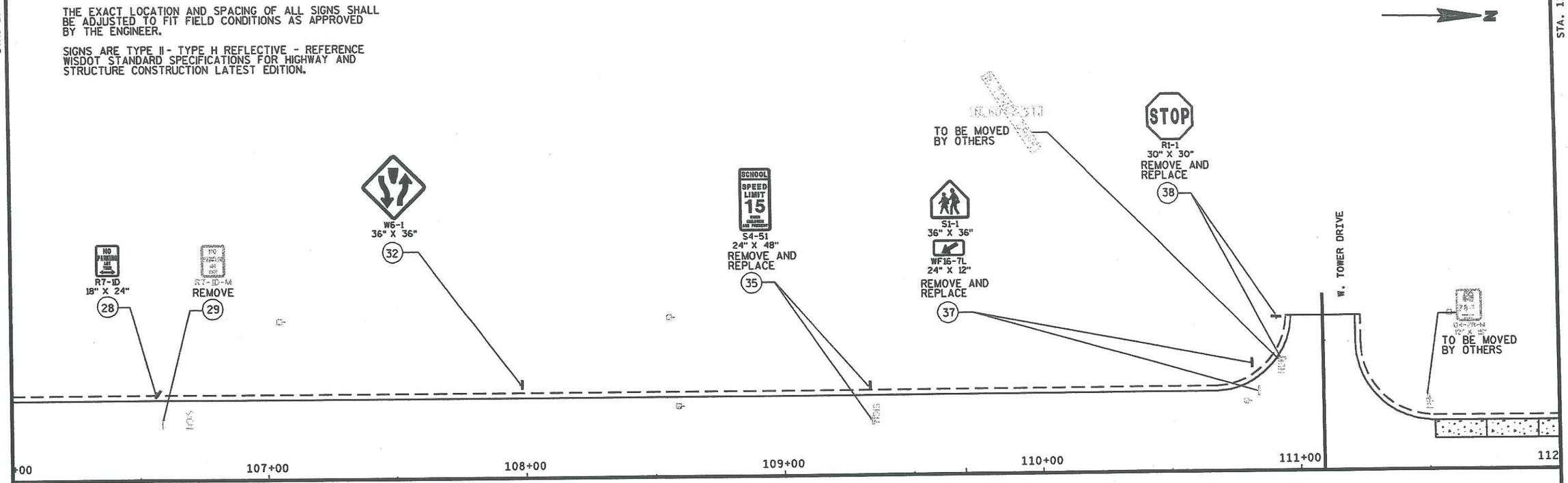
STA. 112+00

2

GENERAL NOTES

THE EXACT LOCATION AND SPACING OF ALL SIGNS SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

SIGNS ARE TYPE II - TYPE H REFLECTIVE - REFERENCE WISDOT STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION LATEST EDITION.



SIGNING LEGEND

- EXISTING SIGN ON POST
- EXISTING SIGN MOUNTED ONTO SIGNAL OR LIGHT POLE
- PROPOSED SIGN ON POST
- PROPOSED SIGN MOUNTED ONTO SIGNAL OR LIGHT POLE
- (XX) DESIGNATES SIGN ITEM NUMBER

MATCH LINE

MATCH LINE

PROJECT NO: 2415-07-70	HWY: N. 60TH STREET	COUNTY: MILWAUKEE	PERMANENT SIGNING	SCALE, FEET 0 20 40	SHEET 35	E

DESIGN FILE IS r:\46028400\Dgn\023202_ps.dgn DATE OF PLOT = 1/26/2006 PLOT NAME = P:\LASER\023202_ps.prf PEN TABLE = \Plot\pen_tables\level.tbl Created By = MKS Plot Scale: 1" = 40.000000 WISDOT/CADDS SHEET 42

2

STA. 112+00

GENERAL NOTES

THE EXACT LOCATION AND SPACING OF ALL SIGNS SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

SIGNS ARE TYPE II - TYPE H REFLECTIVE - REFERENCE WIS DOT STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION LATEST EDITION.

N

R7-7D
18" X 24"
40

REMOVE
41

REMOVE
42

R2-1
24" X 30"
44

R7-1D
18" X 24"
50

S4-51
24" X 48"
REMOVE AND REPLACE
54

113+00

114+00

115+00

116+00

117

N. 60TH STREET

N. 60TH STREET

SCHOOL

SCHOOL

39
R2-1
24" X 30"

43
R1-1
30" X 30"
REMOVE AND REPLACE

46
R7-1D
18" X 24"

47
REMOVE

48
REMOVE

49
R1-1
30" X 30"
REMOVE AND REPLACE

51
R7-1D
18" X 24"

52
REMOVE

53
S4-51
24" X 48"
REMOVE AND REPLACE

SIGNING LEGEND

- EXISTING SIGN ON POST
- EXISTING SIGN MOUNTED ONTO SIGNAL OR LIGHT POLE
- PROPOSED SIGN ON POST
- PROPOSED SIGN MOUNTED ONTO SIGNAL OR LIGHT POLE
- (XX) DESIGNATES SIGN ITEM NUMBER

MATCH LINE

STA. 117+00

MATCH LINE

2

PROJECT NO: 2415-07-70	HWY: N. 60TH STREET	COUNTY: MILWAUKEE	PERMANENT SIGNING	SCALE, FEET 0 20 40	SHEET 36	E

DESIGN FILE IS r:\46028400\Dgn\023203_ps.dgn DATE OF PLOT = 1/26/2006 PLOT NAME = P:\LASER\023203_ps.prf PEN TABLE = \Plot\pen_tables\level.tbl Created By = MKS Plot Scale: 1" = 40.000000 WISDOT/CADDS SHEET 42

STA. 117+00

STA. 123+00

2

STOP
R1-1
30" X 30"
REMOVE AND REPLACE
57

TO BE MOVED BY OTHERS

S1-1
36" X 36"
W16-7L
24" X 12"
REMOVE AND REPLACE
56

W. FAIRLANE AVENUE

TO BE MOVED BY OTHERS

NO PARKING ANY TIME
R7-7D
18" X 24"
60

S1-1
36" X 36"
AHEAD
W16-9P
24" X 8"
REMOVE AND REPLACE
62

REMOVE
64

ST'S' AHEAD
REMOVE
66

NO PARKING ANY TIME
R7-1D
18" X 24"
67

SPEED LIMIT 35
R2-1
24" X 30"
REMOVE AND REPLACE
68

118+00 119+00 120+00 121+00 122+00 123

N. 60TH STREET

N. 60TH STREET

58
NO PARKING ANY TIME
R7-1D
18" X 24"

55
S1-1
36" X 36"
W16-7L
24" X 12"
REMOVE AND REPLACE

TO BE MOVED BY OTHERS

59
REMOVE

61
SPEED LIMIT 35
R2-1
24" X 30"

65
STOP AHEAD
REMOVE

MATCH LINE

MATCH LINE

SIGNING LEGEND

- EXISTING SIGN ON POST
- EXISTING SIGN MOUNTED ONTO SIGNAL OR LIGHT POLE
- PROPOSED SIGN ON POST
- PROPOSED SIGN MOUNTED ONTO SIGNAL OR LIGHT POLE
- (XX) DESIGNATES SIGN ITEM NUMBER

GENERAL NOTES

THE EXACT LOCATION AND SPACING OF ALL SIGNS SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

SIGNS ARE TYPE II - TYPE H REFLECTIVE - REFERENCE WIS DOT STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION LATEST EDITION.

PROJECT NO: 2415-07-70	HWY: N. 60TH STREET	COUNTY: MILWAUKEE	PERMANENT SIGNING	SCALE, FEET 0 20 40	SHEET 37	E

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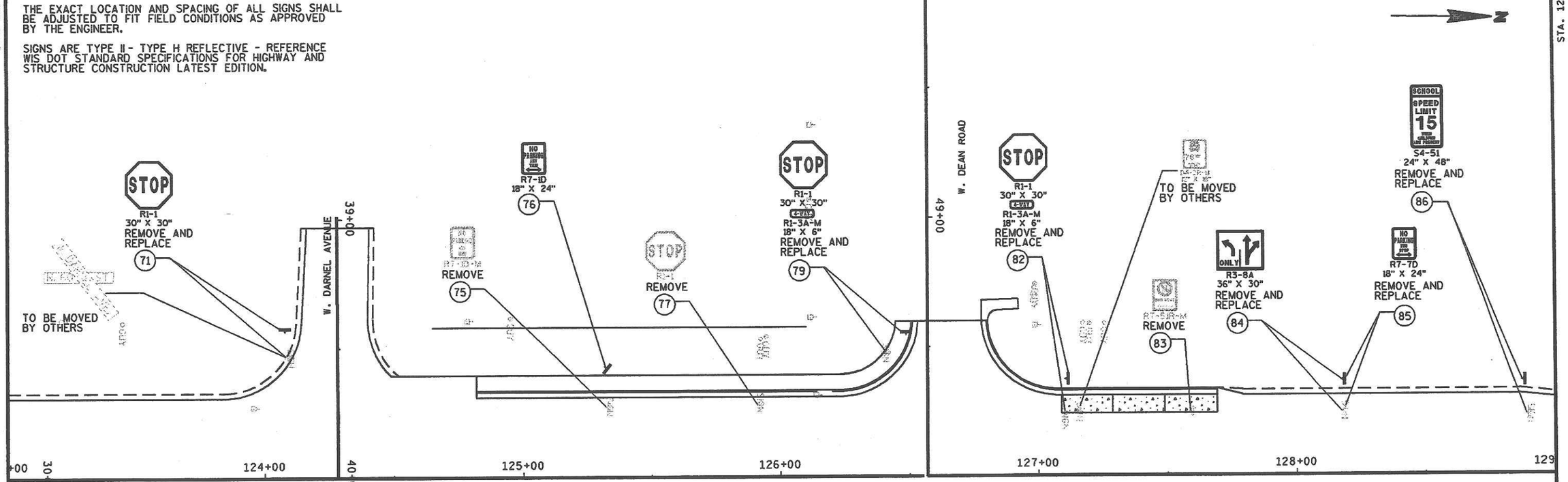
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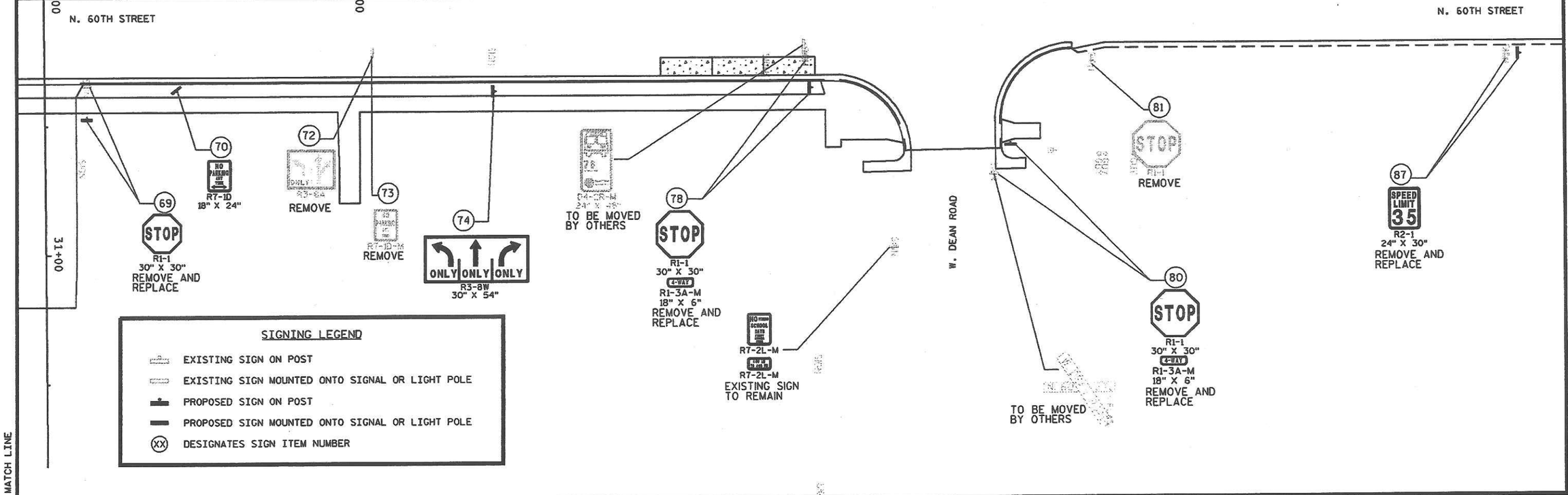
STA. 123+00

GENERAL NOTES

THE EXACT LOCATION AND SPACING OF ALL SIGNS SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

SIGNS ARE TYPE II - TYPE H REFLECTIVE - REFERENCE WIS DOT STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION LATEST EDITION.





PROJECT NO: 2415-07-70	HWY: N. 60TH STREET	COUNTY: MILWAUKEE	PERMANENT SIGNING	SCALE, FEET 0 20 40	SHEET 38	E

DESIGN FILE IS r:\46028400\Dgn\023205_ps.dgn DATE OF PLOT = 1/26/2006 PLOT NAME = P:\LASER\023205_ps.prf PEN TABLE = \Plot\pen_tables\level.tbl Created By = MKS Plot Scale: 1" = 40.000000 WISDOT/CADDS SHEET 42

GENERAL NOTES

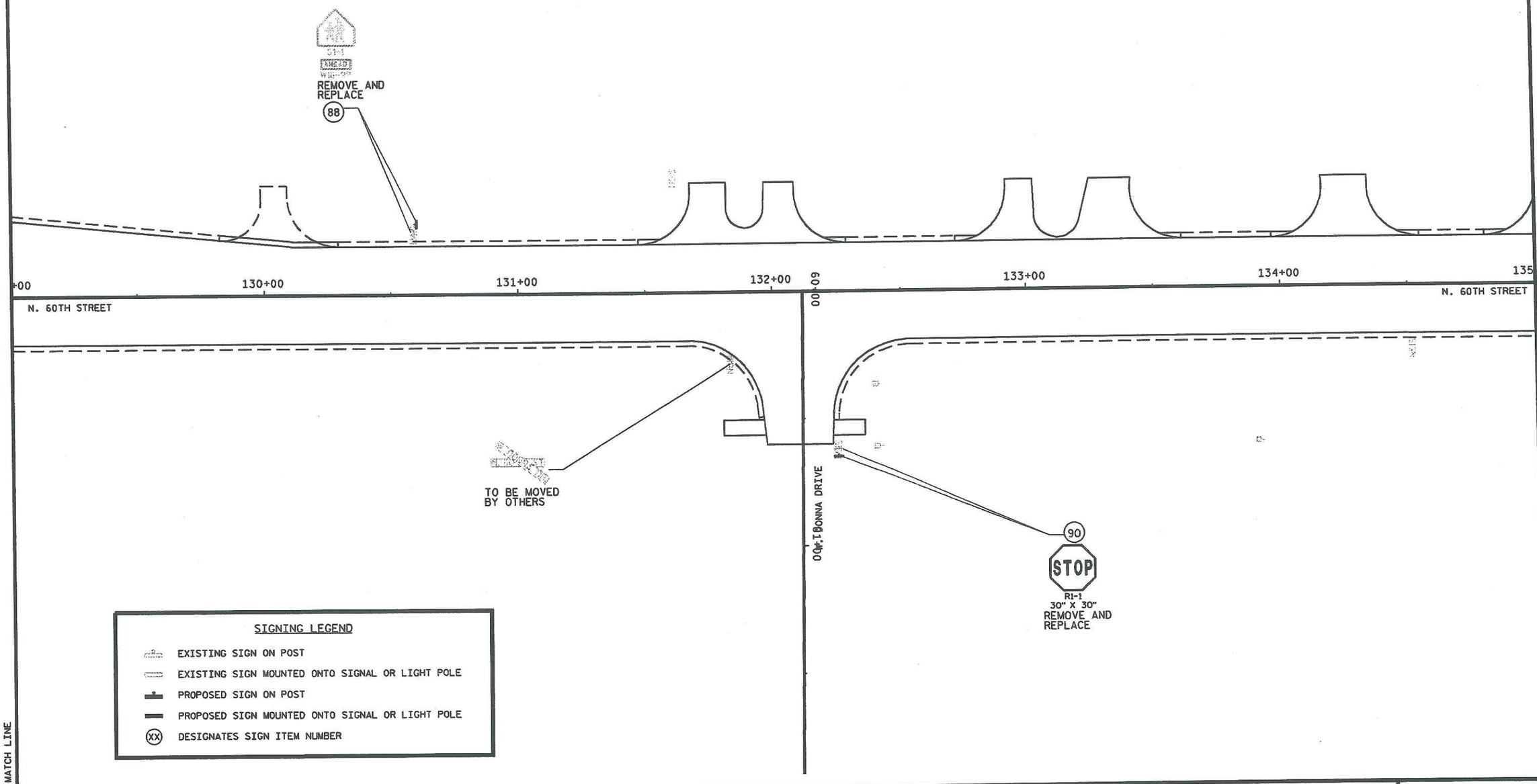
THE EXACT LOCATION AND SPACING OF ALL SIGNS SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

SIGNS ARE TYPE II- TYPE H REFLECTIVE - REFERENCE WIS DOT STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION LATEST EDITION.

STA. 129+00

STA. 135+00

2



SIGNING LEGEND

- EXISTING SIGN ON POST
- EXISTING SIGN MOUNTED ONTO SIGNAL OR LIGHT POLE
- PROPOSED SIGN ON POST
- PROPOSED SIGN MOUNTED ONTO SIGNAL OR LIGHT POLE
- (XX) DESIGNATES SIGN ITEM NUMBER

PROJECT NO: 2415-07-70	HWY: N. 60TH STREET	COUNTY: MILWAUKEE	PERMANENT SIGNING	SCALE, FEET 0 20 40	SHEET 39	E

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2

STA. 135+00

GENERAL NOTES

THE EXACT LOCATION AND SPACING OF ALL SIGNS SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

SIGNS ARE TYPE II - TYPE H REFLECTIVE - REFERENCE WIS DOT STANDARD SPECIFICATION FOR HIGHWAY AND STRUCTURE CONSTRUCTION LATEST EDITION.

N

STA. 141+00

2

SPEED LIMIT 35
R2-1
24" X 30"
REMOVE AND REPLACE
92

+00 136+00 137+00 138+00 139+00 140+00 141

N. 60TH STREET N. 60TH STREET

91
SPEED LIMIT 35
R2-1
24" X 30"

MATCH LINE

MATCH LINE

SIGNING LEGEND

- EXISTING SIGN ON POST
- EXISTING SIGN MOUNTED ONTO SIGNAL OR LIGHT POLE
- PROPOSED SIGN ON POST
- PROPOSED SIGN MOUNTED ONTO SIGNAL OR LIGHT POLE
- (XX) DESIGNATES SIGN ITEM NUMBER

PROJECT NO: 2415-07-70	HWY: N. 60TH STREET	COUNTY: MILWAUKEE	PERMANENT SIGNING	SCALE, FEET 0 20 40	SHEET 40	E

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GENERAL NOTES

THE EXACT LOCATION AND SPACING OF ALL SIGNS SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

SIGNS ARE TYPE II - TYPE H REFLECTIVE - REFERENCE WIS DOT STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION LATEST EDITION.

STA. 141+00

STA. 147+00

2

TO BE MOVED BY OTHERS

STOP
R1-1
30" X 30"
REMOVE AND REPLACE
95

W. WABASH AVENUE

TO BE MOVED BY OTHERS

R7-7L
18" X 24"
96

REMOVE
97

+00

142+00

143+00

144+00

145+00

146+00

147

70+00

80+00

N. 60TH STREET

N. 60TH STREET

TO BE MOVED BY OTHERS

93

REMOVE

94

R7-7L
18" X 24"

TO BE MOVED BY OTHERS

81+00

98

STOP
R1-1
30" X 30"
REMOVE AND REPLACE

MATCH LINE

MATCH LINE

SIGNING LEGEND

- EXISTING SIGN ON POST
- EXISTING SIGN MOUNTED ONTO SIGNAL OR LIGHT POLE
- PROPOSED SIGN ON POST
- PROPOSED SIGN MOUNTED ONTO SIGNAL OR LIGHT POLE
- (XX) DESIGNATES SIGN ITEM NUMBER

PROJECT NO: 2415-07-70	HWY: N. 60TH STREET	COUNTY: MILWAUKEE	PERMANENT SIGNING	SCALE, FEET 0 20 40	SHEET 41	E

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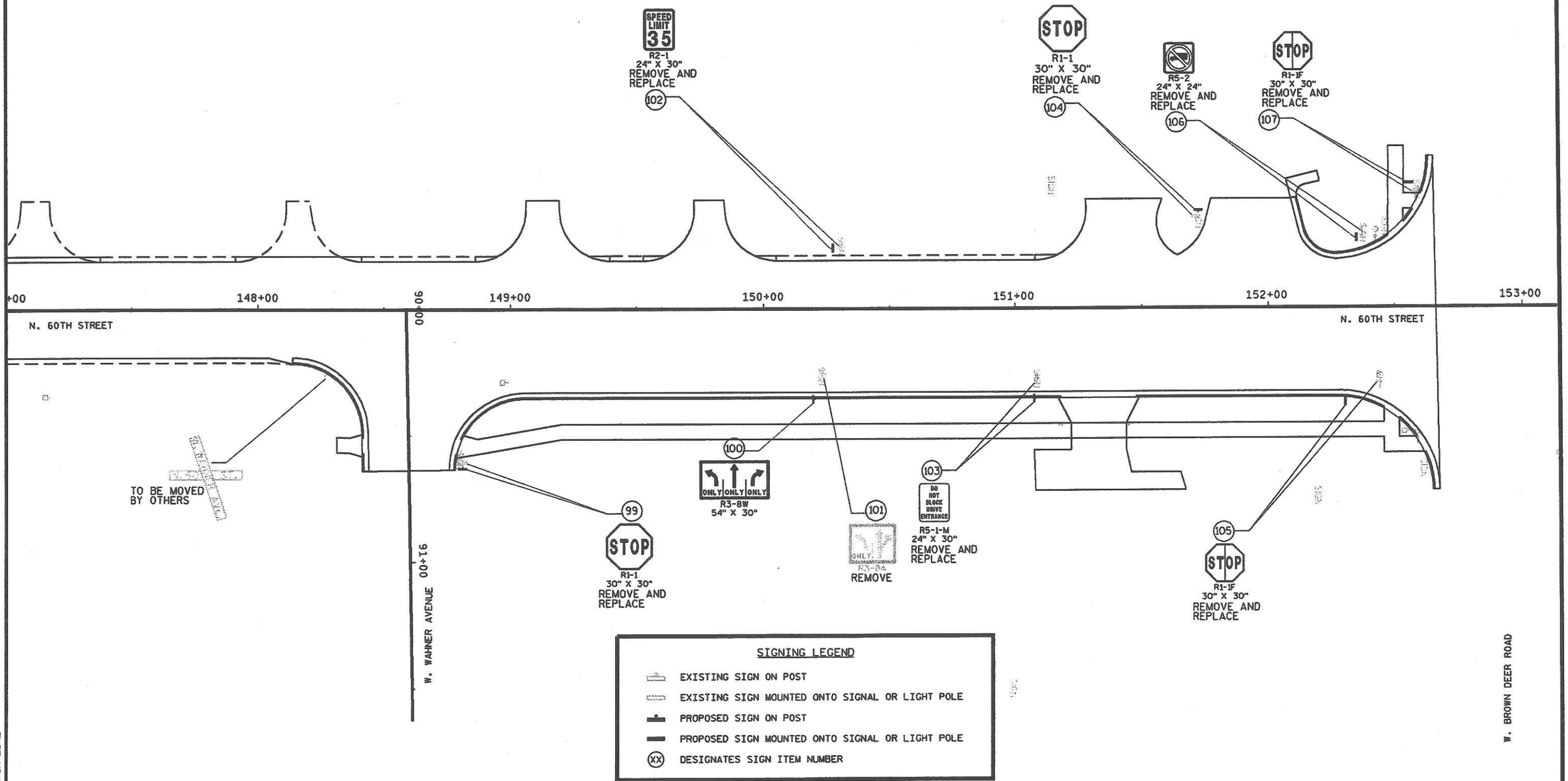
STA. 147+00

GENERAL NOTES

THE EXACT LOCATION AND SPACING OF ALL SIGNS SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

SIGNS ARE TYPE II - TYPE H REFLECTIVE - REFERENCE WIS DOT STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION LATEST EDITION.

N



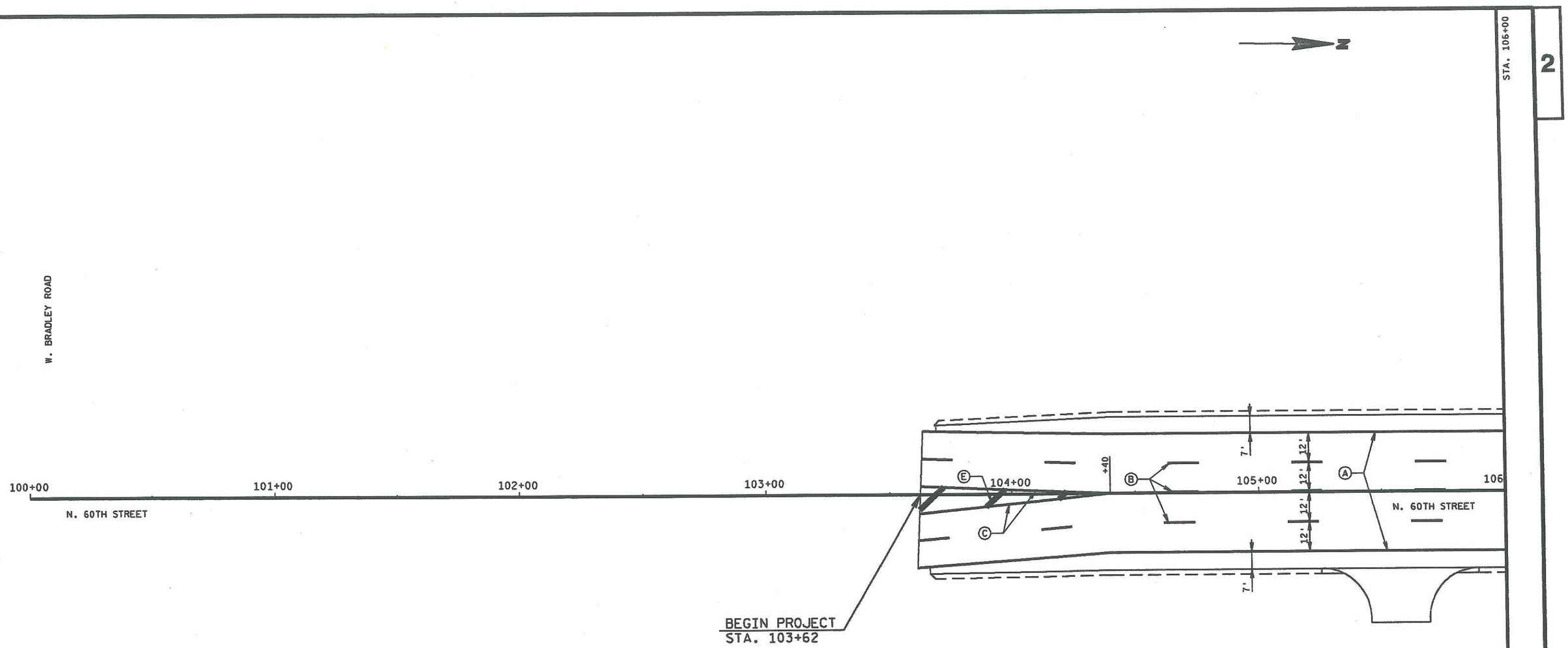
MATCH LINE

2

PROJECT NO: 2415-07-70	HWY: N. 60TH STREET	COUNTY: MILWAUKEE	PERMANENT SIGNING	SCALE, FEET 0 20 40	SHEET 42	E

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W. BRADLEY ROAD



PAVEMENT MARKING LEGEND

- (A) PAVEMENT MARKING EPOXY 4-INCH (EDGE LINE)
- (B) PAVEMENT MARKING EPOXY 4-INCH (DASHED YELLOW)
- (C) PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
- (D) PAVEMENT MARKING EPOXY 8-INCH (WHITE)
- (E) PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (WHITE)
- (F) PAVEMENT MARKING CROSS WALK EPOXY 12-INCH (WHITE)
- (G) PAVEMENT MARKING STOP LINE EPOXY 18-INCH (WHITE)
- (H) PAVEMENT MARKING CURB RAMP EPOXY (YELLOW)
- (I) PAVEMENT MARKING ARROWS TYPE 2 (WHITE)
- (J) PAVEMENT MARKING WORDS EPOXY (WHITE)

PROJECT NO: 2415-07-70	HWY: N. 60TH STREET	COUNTY: MILWAUKEE	PAVEMENT MARKING	SCALE, FEET 0 20 40	SHEET 43	E

2

STA. 106+00

STA. 112+00

2

N

W. TOWER DRIVE

N. 60TH STREET

N. 60TH STREET

+00

107+00

108+00

109+00

110+00

111+00

112

+40

+68

+08

+40

+28

+17

+00

7'

12'

12'

12'

12'

12'

7'

7'

A

B

B

D

F

G

A

MATCH LINE

MATCH LINE

PAVEMENT MARKING LEGEND

- (A) PAVEMENT MARKING EPOXY 4-INCH (EDGE LINE)
- (B) PAVEMENT MARKING EPOXY 4-INCH (DASHED YELLOW)
- (C) PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
- (D) PAVEMENT MARKING EPOXY 8-INCH (WHITE)
- (E) PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (WHITE)
- (F) PAVEMENT MARKING CROSS WALK EPOXY 12-INCH (WHITE)
- (G) PAVEMENT MARKING STOP LINE EPOXY 18-INCH (WHITE)
- (H) PAVEMENT MARKING CURB RAMP EPOXY (YELLOW)
- (I) PAVEMENT MARKING ARROWS TYPE 2 (WHITE)
- (J) PAVEMENT MARKING WORDS EPOXY (WHITE)

PROJECT NO: 2415-07-70	HWY: N. 60TH STREET	COUNTY: MILWAUKEE	PAVEMENT MARKING	SCALE, FEET 0 20 40	SHEET 44	E

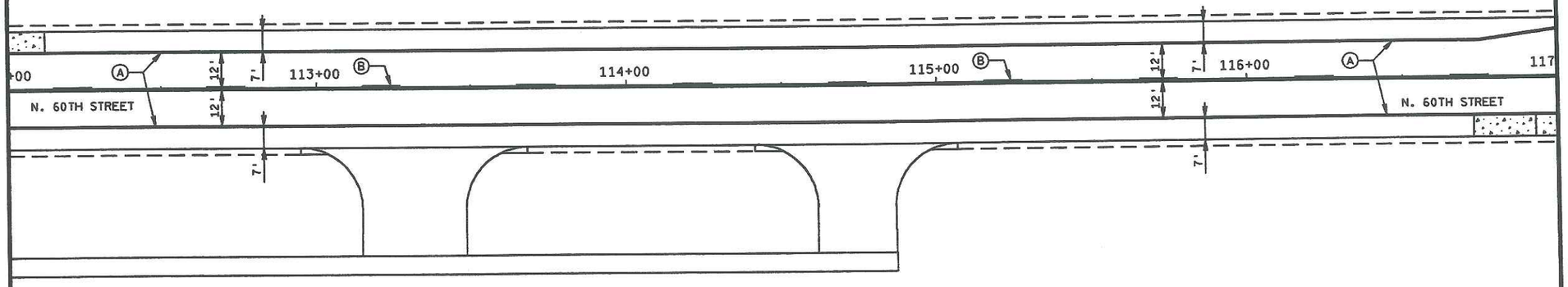
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STA. 112+00

STA. 117+00

2

N



PAVEMENT MARKING LEGEND

- (A) PAVEMENT MARKING EPOXY 4-INCH (EDGE LINE)
- (B) PAVEMENT MARKING EPOXY 4-INCH (DASHED YELLOW)
- (C) PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
- (D) PAVEMENT MARKING EPOXY 8-INCH (WHITE)
- (E) PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (WHITE)
- (F) PAVEMENT MARKING CROSS WALK EPOXY 12-INCH (WHITE)
- (G) PAVEMENT MARKING STOP LINE EPOXY 18-INCH (WHITE)
- (H) PAVEMENT MARKING CURB RAMP EPOXY (YELLOW)
- (I) PAVEMENT MARKING ARROWS TYPE 2 (WHITE)
- (J) PAVEMENT MARKING WORDS EPOXY (WHITE)

MATCH LINE

MATCH LINE

PROJECT NO: 2415-07-70	HWY: N. 60TH STREET	COUNTY: MILWAUKEE	PAVEMENT MARKING	SCALE, FEET 0 20 40	SHEET 45	E

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2

STA. 117+00

STA. 123+00

2

N

W. FAIRLANE AVENUE

N. 60TH STREET

N. 60TH STREET

118+00

119+00

120+00

121+00

122+00

123

12'

12'

7'

7'

7'

+12

+60

+05

+80

20.00

MATCH LINE

MATCH LINE

PAVEMENT MARKING LEGEND

- (A) PAVEMENT MARKING EPOXY 4-INCH (EDGE LINE)
- (B) PAVEMENT MARKING EPOXY 4-INCH (DASHED YELLOW)
- (C) PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
- (D) PAVEMENT MARKING EPOXY 8-INCH (WHITE)
- (E) PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (WHITE)
- (F) PAVEMENT MARKING CROSS WALK EPOXY 12-INCH (WHITE)
- (G) PAVEMENT MARKING STOP LINE EPOXY 18-INCH (WHITE)
- (H) PAVEMENT MARKING CURB RAMP EPOXY (YELLOW)
- (I) PAVEMENT MARKING ARROWS TYPE 2 (WHITE)
- (J) PAVEMENT MARKING WORDS EPOXY (WHITE)

PROJECT NO: 2415-07-70	HWY: N. 60TH STREET	COUNTY: MILWAUKEE	PAVEMENT MARKING	SCALE, FEET 0 20 40	SHEET 46	E

DESIGN FILE IS r:\46028400\Dgn\024504_pm.dgn DATE OF PLOT = 1/26/2006 PLOT NAME = P:\LASER\024504_pm.prf PEN TABLE = \Plot\pen_tables\level.tbl Created By = MKS Plot Scale: 1" = 40.000000 WISDOT/CADDS SHEET 42

STA. 123+00

STA. 129+00

W. DARNEL AVENUE

W. DEAN ROAD

39+00

40+00

49+00

124+00

125+00

126+00

127+00

128+00

N. 60TH STREET

31+00

MATCH LINE

MATCH LINE

PAVEMENT MARKING LEGEND

- (A) PAVEMENT MARKING EPOXY 4-INCH (EDGE LINE)
- (B) PAVEMENT MARKING EPOXY 4-INCH (DASHED YELLOW)
- (C) PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
- (D) PAVEMENT MARKING EPOXY 8-INCH (WHITE)
- (E) PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (WHITE)
- (F) PAVEMENT MARKING CROSS WALK EPOXY 12-INCH (WHITE)
- (G) PAVEMENT MARKING STOP LINE EPOXY 18-INCH (WHITE)
- (H) PAVEMENT MARKING CURB RAMP EPOXY (YELLOW)
- (I) PAVEMENT MARKING ARROWS TYPE 2 (WHITE)
- (J) PAVEMENT MARKING WORDS EPOXY (WHITE)

PROJECT NO: 2415-07-70	HWY: N. 60TH STREET	COUNTY: MILWAUKEE	PAVEMENT MARKING	SCALE, FEET 0 20 40	SHEET 47	E

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2

STA. 129+00

STA. 135+00

2

N

+00 Ⓔ 12' Ⓐ 130+00 Ⓐ 7' 131+00 132+00 Ⓑ 133+00 12' 7' 134+00 Ⓐ 135

N. 60TH STREET 12' 7' 12' 7' N. 60TH STREET

00 60+00

Ⓕ Ⓖ

61+00

W. DONNA DRIVE

MATCH LINE

MATCH LINE

PAVEMENT MARKING LEGEND

- Ⓐ PAVEMENT MARKING EPOXY 4-INCH (EDGE LINE)
- Ⓑ PAVEMENT MARKING EPOXY 4-INCH (DASHED YELLOW)
- Ⓒ PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
- Ⓓ PAVEMENT MARKING EPOXY 8-INCH (WHITE)
- Ⓔ PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (WHITE)
- Ⓕ PAVEMENT MARKING CROSS WALK EPOXY 12-INCH (WHITE)
- Ⓖ PAVEMENT MARKING STOP LINE EPOXY 18-INCH (WHITE)
- Ⓗ PAVEMENT MARKING CURB RAMP EPOXY (YELLOW)
- Ⓘ PAVEMENT MARKING ARROWS TYPE 2 (WHITE)
- Ⓙ PAVEMENT MARKING WORDS EPOXY (WHITE)

PROJECT NO: 2415-07-70	HWY: N. 60TH STREET	COUNTY: MILWAUKEE	PAVEMENT MARKING	SCALE, FEET 0 20 40	SHEET 16	E

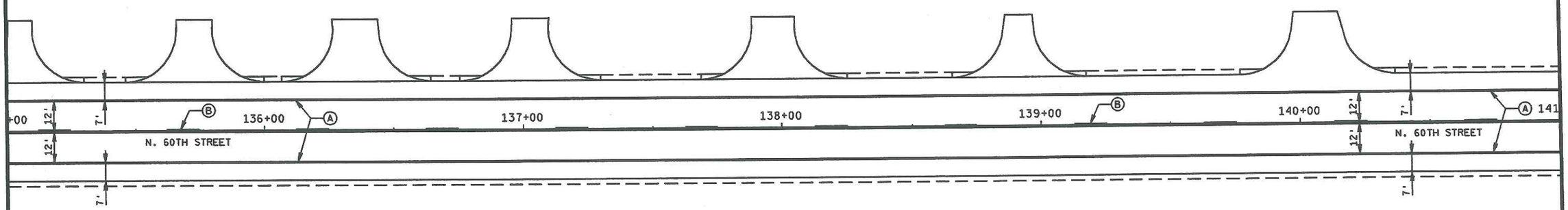
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STA. 135+00

STA. 141+00

2

N



MATCH LINE

MATCH LINE

PAVEMENT MARKING LEGEND

- (A) PAVEMENT MARKING EPOXY 4-INCH (EDGE LINE)
- (B) PAVEMENT MARKING EPOXY 4-INCH (DASHED YELLOW)
- (C) PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
- (D) PAVEMENT MARKING EPOXY 8-INCH (WHITE)
- (E) PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (WHITE)
- (F) PAVEMENT MARKING CROSS WALK EPOXY 12-INCH (WHITE)
- (G) PAVEMENT MARKING STOP LINE EPOXY 18-INCH (WHITE)
- (H) PAVEMENT MARKING CURB RAMP EPOXY (YELLOW)
- (I) PAVEMENT MARKING ARROWS TYPE 2 (WHITE)
- (J) PAVEMENT MARKING WORDS EPOXY (WHITE)

PROJECT NO: 2415-07-70	HWY: N. 60TH STREET	COUNTY: MILWAUKEE	PAVEMENT MARKING	SCALE, FEET 0 20 40	SHEET 17	E

DESIGN FILE IS r:\46028400\Dgn\024507_pm.dgn DATE OF PLOT = 1/26/2006 PLOT NAME = P:\LASER\024507_pm.prf PEN TABLE = \Plot\pen_tables\level.tbl Created By = MKS Plot Scale: 1" = 40.000000 WISDOT/CADDS SHEET 42

2

STA. 141+00

STA. 147+00

2

W. WABASH AVENUE

N. 60TH STREET

N. 60TH STREET

142+00

143+00

144+00

145+00

146+00

147

+00

+39

+75

+02

+38

70+00

80+00

81+00

12'

7'

MATCH LINE

MATCH LINE

PAVEMENT MARKING LEGEND

- (A) PAVEMENT MARKING EPOXY 4-INCH (EDGE LINE)
- (B) PAVEMENT MARKING EPOXY 4-INCH (DASHED YELLOW)
- (C) PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
- (D) PAVEMENT MARKING EPOXY 8-INCH (WHITE)
- (E) PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (WHITE)
- (F) PAVEMENT MARKING CROSS WALK EPOXY 12-INCH (WHITE)
- (G) PAVEMENT MARKING STOP LINE EPOXY 18-INCH (WHITE)
- (H) PAVEMENT MARKING CURB RAMP EPOXY (YELLOW)
- (I) PAVEMENT MARKING ARROWS TYPE 2 (WHITE)
- (J) PAVEMENT MARKING WORDS EPOXY (WHITE)

PROJECT NO: 2415-07-70	HWY: N. 60TH STREET	COUNTY: MILWAUKEE	PAVEMENT MARKING	SCALE, FEET 0 20 40	SHEET 50	E

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STA. 147+00

148+00

149+00

150+00

151+00

152+00

153+00

N. 60TH STREET

N. 60TH STREET

W. WAHNER AVENUE

W. BROWN DEER ROAD

91+00

MATCH LINE

PAVEMENT MARKING LEGEND

- (A) PAVEMENT MARKING EPOXY 4-INCH (EDGE LINE)
- (B) PAVEMENT MARKING EPOXY 4-INCH (DASHED YELLOW)
- (C) PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
- (D) PAVEMENT MARKING EPOXY 8-INCH (WHITE)
- (E) PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (WHITE)
- (F) PAVEMENT MARKING CROSS WALK EPOXY 12-INCH (WHITE)
- (G) PAVEMENT MARKING STOP LINE EPOXY 18-INCH (WHITE)
- (H) PAVEMENT MARKING CURB RAMP EPOXY (YELLOW)
- (I) PAVEMENT MARKING ARROWS TYPE 2 (WHITE)
- (J) PAVEMENT MARKING WORDS EPOXY (WHITE)

PROJECT NO: 2415-07-70	HWY: N. 60TH STREET	COUNTY: MILWAUKEE	PAVEMENT MARKING	SCALE, FEET 0 20 40	SHEET 51	E

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① DETOUR
M04-8
24" X 12"

M05-1R
21" X 21"

② DETOUR
M04-8
24" X 12"

M05-1L
21" X 21"

③ DETOUR
M04-8
24" X 12"

M06-1
21" X 21"

④ END DETOUR
M04-8A
24" X 18"

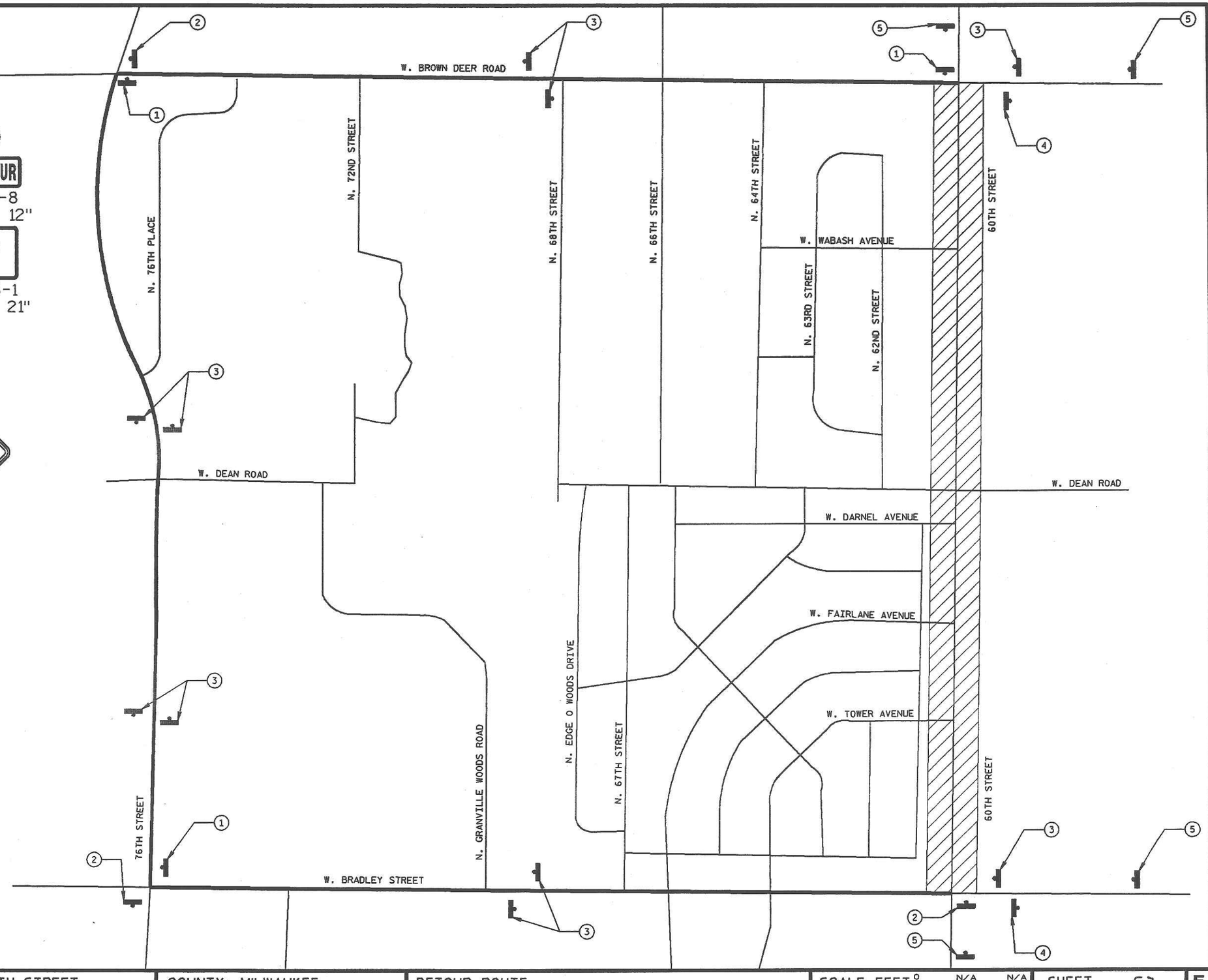
⑤ DETOUR AHEAD
W20-2

LEGEND

- POST MOUNTED SIGN
- WORK ZONE
- DETOUR ROUTE

GENERAL NOTES FOR DETOUR PLAN:

1. SIGN LOCATIONS ARE APPROXIMATE. THE ACTUAL LOCATION AND SPACING OF SIGNS AND TRAFFIC CONTROL DEVICES MAY BE ADJUSTED AS APPROVED BY THE ENGINEER TO MEET FIELD CONDITIONS.
2. CONFLICTING TRAFFIC SIGNS SHALL BE COVERED OR REMOVED AS DIRECTED BY THE ENGINEER. COVERING OR REMOVAL OF SIGNS SHALL BE INCLUDED IN "TRAFFIC CONTROL" ITEM.
3. THE ERECTION AND PLACEMENT OF SIGNS SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
4. "WO" AND "MO" SIGNS ARE THE SAME AS "W" AND "M" SIGNS EXCEPT THE BACK GROUND IS REFLECTIVE ORANGE.
5. ALL ORANGE WARNING SIGNS SHALL INCLUDE ENGINEERS GRADE (NON-FLORESCENT) SHEETING.
6. 60TH ST. WILL BE CLOSED DURING CONSTRUCTION. FOLLOW S.D.D. 15C4B, 15C2-4C, 15C3-1, 15C7-8A, AND 16A1-6 FOR CLOSURES.



PROJECT NO: 2415-07-70	HWY: N. 60TH STREET	COUNTY: MILWAUKEE	DETOUR ROUTE	SCALE, FEET 0 N/A N/A	SHEET 52	E

DATE 02MAR06

ESTIMATE OF QUANTITIES

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	2415-07-70 QUANTITY
0010	201.0105	CLEARING	STA	11.000	11.000
0020	201.0205	GRUBBING	STA	11.000	11.000
0030	203.0100	REMOVING SMALL PIPE CULVERTS	EACH	41.000	41.000
0040	204.0155	REMOVING CONCRETE SIDEWALK	SY	643.000	643.000
0050	204.0195	REMOVING CONCRETE BASES	EACH	2.000	2.000
0060	204.0210	REMOVING MANHOLES	EACH	2.000	2.000
0070	204.0220	REMOVING INLETS	EACH	2.000	2.000
0080	204.0245	REMOVING STORM SEWER (SIZE) 01. 12-INCH	LF	86.000	86.000
0090	204.0245	REMOVING STORM SEWER (SIZE) 02. 15-INCH	LF	68.000	68.000
0100	204.0245	REMOVING STORM SEWER (SIZE) 03. 18-INCH	LF	28.000	28.000
0110	204.0245	REMOVING STORM SEWER (SIZE) 04. 24X36-INCH	LF	29.000	29.000
0120	204.0245	REMOVING STORM SEWER (SIZE) 05. 36-INCH	LF	339.000	339.000
0130	204.0245	REMOVING STORM SEWER (SIZE) 06. 36X54-INCH	LF	363.000	363.000
0140	205.0100	EXCAVATION COMMON	CY	7,497.000	7,497.000
0150	213.0100	FINISHING ROADWAY (PROJECT) 01. 2415-07-70	EACH	1.000	1.000
0160	301.0100.S	QMP BASE AGGREGATE	TON	16,828.000	16,828.000
0170	305.0110	BASE AGGREGATE DENSE 3/4-INCH	TON	639.000	639.000
0180	305.0120	BASE AGGREGATE DENSE 1 1/4-INCH	TON	17,569.000	17,569.000
0190	415.0090	CONCRETE PAVEMENT 9-INCH	SY	376.000	376.000
0200	415.2000.S	INCENTIVE STRENGTH CONCRETE PAVEMENT	DOL	88.000	88.000
0210	415.3000.S	QMP CONCRETE PAVEMENT	DAY	2.000	2.000
0220	416.0170	CONCRETE DRIVEWAY 7-INCH	SY	75.000	75.000
0230	455.0115	ASPHALTIC MATERIAL PG64-22	TON	255.000	255.000
0240	455.0120	ASPHALTIC MATERIAL PG64-28	TON	208.000	208.000
0250	455.0605	TACK COAT	GAL	670.000	670.000
0260	460.1101	HMA PAVEMENT TYPE E-1	TON	7,704.000	7,704.000
0270	460.2000	INCENTIVE DENSITY HMA PAVEMENT	DOL	5,000.000	5,000.000
0280	460.2500.S	QMP HMA PAVEMENT NUCLEAR DENSITY	TON	7,704.000	7,704.000
0290	460.3000	QMP HMA MIXTURE	TON	7,704.000	7,704.000
0300	465.0120	ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES	TON	325.000	325.000
0310	465.0315	ASPHALTIC FLUMES	SY	32.000	32.000
0320	504.1000.S	PRECAST CONCRETE WINGWALLS (STRUCTURE) 01. 122+85	LS	1.000	1.000
0330	504.1000.S	PRECAST CONCRETE WINGWALLS (STRUCTURE) 02. 124+28	LS	1.000	1.000
0340	504.2000.S	PRECAST CONCRETE BOX CULVERT (FT X FT) 01. 3FTX6FT	LF	300.000	300.000
0350	504.2000.S	PRECAST CONCRETE BOX CULVERT (FT X FT) 02. 3FTX8FT	LF	47.000	47.000
0360	513.2050.S	RAILING PIPE	LF	35.000	35.000
0370	522.0312	CULVERT PIPE REINFORCED CONCRETE CLASS IV 12-INCH	LF	137.000	137.000
0380	522.0318	CULVERT PIPE REINFORCED CONCRETE CLASS IV 18-INCH	LF	52.000	52.000
0390	522.0327	CULVERT PIPE REINFORCED CONCRETE CLASS IV 27-INCH	LF	94.000	94.000
0400	522.1012	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 12-INCH	EACH	7.000	7.000
0410	522.1018	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 18-INCH	EACH	1.000	1.000
0420	522.1027	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 27-INCH	EACH	4.000	4.000

DATE 02MAR06 — ESTIMATE OF QUANTITIES

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	2415-07-70 QUANTITY
0430	523.0519	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL 19X30-INCH	EACH	2.000	2.000
0440	523.0524	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL 24X38-INCH	EACH	1.000	1.000
0450	523.0529	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL 29X45-INCH	EACH	1.000	1.000
0460	530.0112	CULVERT PIPE CORRUGATED POLYETHYLENE 12-INCH	LF	470.000	470.000
0470	530.0118	CULVERT PIPE CORRUGATED POLYETHYLENE 18-INCH	LF	349.000	349.000
0480	530.0124	CULVERT PIPE CORRUGATED POLYETHYLENE 24-INCH	LF	16.000	16.000
0490	532.0200.S	WALL MODULAR BLOCK GRAVITY	SF	380.000	380.000
0500	601.0409	CONCRETE CURB & GUTTER 30-INCH TYPE A	LF	120.000	120.000
0510	601.0411	CONCRETE CURB & GUTTER 30-INCH TYPE D	LF	1,239.000	1,239.000
0520	602.0410	CONCRETE SIDEWALK 5-INCH	SF	10,195.000	10,195.000
0530	602.0505	CURB RAMP DETECTABLE WARNING FIELD YELLOW	SF	112.000	112.000
0540	606.0100	RIPRAP LIGHT	CY	3.600	3.600
0550	606.0300	RIPRAP HEAVY	CY	72.000	72.000
0560	608.0312	STORM SEWER PIPE REINFORCED CONCRETE CLASS III 12-INCH	LF	119.000	119.000
0570	608.0418	STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 18-INCH	LF	83.000	83.000
0580	608.0430	STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 30-INCH	LF	94.500	94.500
0590	608.0442	STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 42-INCH	LF	398.000	398.000
0600	610.0129	STORM SEWER PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-III 29X45-INCH	LF	359.000	359.000
0610	611.0210	MANHOLES TYPE 3	EACH	6.000	6.000
0620	611.0303	INLETS TYPE 3	EACH	4.000	4.000
0630	611.0305	INLETS TYPE 8	EACH	4.000	4.000
0640	611.0530	MANHOLE COVERS TYPE J	EACH	7.000	7.000
0650	611.0624	INLET COVERS TYPE H	EACH	4.000	4.000
0660	611.0642	INLET COVERS TYPE MS	EACH	4.000	4.000
0670	611.8110	ADJUSTING MANHOLE COVERS	EACH	13.000	13.000
0680	611.8120.S	COVER PLATES TEMPORARY	EACH	19.000	19.000
0690	619.1000	MOBILIZATION	EACH	1.000	1.000
0700	624.0100	WATER	MGAL	166.000	166.000
0710	625.0100	TOPSOIL	SY	21,800.000	21,800.000
0720	627.0200	MULCHING	SY	21,800.000	21,800.000
0730	628.1104	EROSION BALES	EACH	50.000	50.000
0740	628.1504	SILT FENCE	LF	200.000	200.000
0750	628.1520	SILT FENCE MAINTENANCE	LF	75.000	75.000
0760	628.1905	MOBILIZATIONS EROSION CONTROL	EACH	1.000	1.000
0770	628.1910	MOBILIZATIONS EMERGENCY EROSION CONTROL	EACH	3.000	3.000
0780	628.2023	EROSION MAT CLASS II TYPE B	SY	289.000	289.000
0790	628.7010	INLET PROTECTION TYPE B	EACH	4.000	4.000
0800	628.7015	INLET PROTECTION TYPE C	EACH	4.000	4.000
0810	628.7504	TEMPORARY DITCH CHECKS	LF	100.000	100.000
0820	628.7550	CULVERT PIPE DITCH CHECKS	EACH	35.000	35.000

DATE 02MAR06 — E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	2415-07-70 QUANTITY
0830	629.0210	FERTILIZER TYPE B	CWT	17.500	17.500
0840	630.0130	SEEDING MIXTURE NO. 30	LB	751.000	751.000
0850	637.0202	SIGNS REFLECTIVE TYPE II	SF	393.400	393.400
0860	638.2602	REMOVING SIGNS TYPE II	EACH	74.000	74.000
0870	638.3000	REMOVING SMALL SIGN SUPPORTS	EACH	63.000	63.000
0880	642.5000	FIELD OFFICE TYPE B (PROJECT) 01. 2415-07-70	EACH	1.000	1.000
0890	643.0100	TRAFFIC CONTROL (PROJECT) 01. 2415-07-70	EACH	1.000	1.000
0900	643.0300	TRAFFIC CONTROL DRUMS	DAYS	6,700.000	6,700.000
0910	643.0420	TRAFFIC CONTROL BARRICADES TYPE III	DAYS	1,340.000	1,340.000
0920	643.0705	TRAFFIC CONTROL WARNING LIGHTS TYPE A	DAYS	2,680.000	2,680.000
0930	643.0715	TRAFFIC CONTROL WARNING LIGHTS TYPE C	DAYS	3,350.000	3,350.000
0940	643.0900	TRAFFIC CONTROL SIGNS	DAYS	2,010.000	2,010.000
0950	643.2000	TRAFFIC CONTROL DETOUR (PROJECT) 01. 2415-07-70	EACH	1.000	1.000
0960	643.3000	TRAFFIC CONTROL DETOUR SIGNS	DAYS	2,546.000	2,546.000
0970	645.0120	GEOTEXTILE FABRIC TYPE HR	SY	110.000	110.000
0980	645.0130	GEOTEXTILE FABRIC TYPE R	SY	12.000	12.000
0990	646.0106	PAVEMENT MARKING EPOXY 4-INCH	LF	10,633.000	10,633.000
1000	646.0126	PAVEMENT MARKING EPOXY 8-INCH	LF	1,722.000	1,722.000
1010	647.0166	PAVEMENT MARKING ARROWS EPOXY TYPE 2	EACH	10.000	10.000
1020	647.0356	PAVEMENT MARKING WORDS EPOXY	EACH	8.000	8.000
1030	647.0566	PAVEMENT MARKING STOP LINE EPOXY 18-INCH	LF	224.000	224.000
1040	647.0726	PAVEMENT MARKING DIAGONAL EPOXY 12-INCH	LF	102.000	102.000
1050	647.0776	PAVEMENT MARKING CROSSWALK EPOXY 12-INCH	LF	362.000	362.000
1060	650.4000	CONSTRUCTION STAKING STORM SEWER SYSTEM	EACH	23.000	23.000
1070	650.4500	CONSTRUCTION STAKING SUBGRADE	LF	4,904.000	4,904.000
1080	650.5000	CONSTRUCTION STAKING BASE	LF	4,904.000	4,904.000
1090	650.5500	CONSTRUCTION STAKING CURB GUTTER AND	LF	1,359.000	1,359.000
1100	650.9900	CONSTRUCTION STAKING INITIAL LAYOUT	LF	4,904.000	4,904.000
1110	652.0225	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	LF	175.000	175.000
1120	652.0235	CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH	LF	257.000	257.000
1130	652.0605	CONDUIT SPECIAL 2-INCH	LF	31.000	31.000
1140	652.0800	CONDUIT LOOP DETECTOR	LF	435.000	435.000
1150	652.0900	LOOP DETECTOR SLOTS	LF	449.000	449.000
1160	653.0135	PULL BOXES STEEL 24X36-INCH	EACH	3.000	3.000
1170	653.0140	PULL BOXES STEEL 24X42-INCH	EACH	2.000	2.000
1180	654.0101	CONCRETE BASES TYPE 1	EACH	2.000	2.000
1190	654.0102	CONCRETE BASES TYPE 2	EACH	2.000	2.000
1200	655.0700	LOOP DETECTOR LEAD IN CABLE	LF	2,072.000	2,072.000
1210	655.0800	LOOP DETECTOR WIRE	LF	1,630.000	1,630.000
1220	690.0100	SAWING EXISTING PAVEMENT	LF	945.000	945.000
1230	SPV.0060	SPECIAL 01. MOVING FIRE HYDRANTS	EACH	1.000	1.000
1240	SPV.0060	SPECIAL 02. POST TUBULAR STEEL GALVANIZED 2 3/8 INCH DIAMETER 14-FT	EACH	63.000	63.000
1250	SPV.0060	SPECIAL 03. POST TUBULAR STEEL GALVANIZED 2 3/8-INCH DIAMETER 16-FT	EACH	6.000	6.000
1260	SPV.0060	SPECIAL 04. REMOVING PULL BOXES	EACH	3.000	3.000
1270	SPV.0060	SPECIAL 05. ADJUSTING WATERMAIN VALVE BOXES	EACH	7.000	7.000
1280	SPV.0090	SPECIAL 01. STORM SEWER PIPE REINF. CONC. HEC HE-IV 19X30-INCH	LF	75.500	75.500

DATE 02MAR06 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	2415-07-70 QUANTITY
1290	SPV.0090	SPECIAL 02. STORM SEWER PIPE REINF. CONC. HEC HE-IV 24X38-INCH	LF	44.000	44.000
1300	SPV.0090	SPECIAL 03. CULVERT PIPE REINF. CONC. HEC HE-IV 19X30-INCH	LF	50.000	50.000
1310	SPV.0105	SPECIAL 01. TRAFFIC SIGNALS STH 100 (BROWN DEER RD) & N 60TH STREET	LS	1.000	1.000
1320	SPV.0105	SPECIAL 02. TEMPORARY TRAFFIC SIGNALS STH 100 (BROWN DEER RD) & N 60TH ST	LS	1.000	1.000

3

CLEARING & GRUBBING

STATION	OFFSET	201.0105 CLEARING STA	201.0205 GRUBBING STA
105+00 - 108+00	RT	3	3
122+00 - 123+00	RT	1	1
122+00 - 123+00	LT	1	1
124+00 - 126+00	RT	2	2
125+00 - 126+00	LT	1	1
149+00 - 152+00	RT	3	3
		11	11

REMOVING CONCRETE SIDEWALK

STATION	OFFSET	204.0155 REMOVING CONCRETE SIDEWALK SY
113+59 - 114+61	54' RT	75
122+50 - 126+45	53' RT	294
126+82 - 126+97	50' RT	10
148+31 - 148+41	51' RT	7
148+78 - 152+64	50' RT	257
	TOTAL	643

REMOVING MANHOLES

STATION	OFFSET	204.0210 REMOVING MANHOLES EACH
126+25	34' RT	1
148+90	40' RT	1
	TOTAL	2

REMOVING INLETS

STATION	OFFSET	204.0220 REMOVING INLETS EACH
123+46	34' RT	1
124+44	36' RT	1
	TOTAL	2

REMOVING SMALL PIPE CULVERTS

STATION	OFFSET	203.0100 REMOVING SMALL PIPE CULVERTS EACH
105+57	33' RT	1
108+61	34' RT	1
110+80	33' RT	1
111+09	33' LT	1
113+31	32' RT	1
114+75	33' RT	1
117+30	32' RT	1
117+68	33' LT	1
124+28	40' LT	2
124+51	51' LT	1
126+24	CL	1
126+57	33' LT	1
130+12	32' LT	1
131+75	31' LT	1
131+90	52' RT	1
132+03	31' LT	1
132+12	34' RT	1
132+30	53' RT	1
132+98	32' LT	1
133+32	32' LT	1
134+27	32' LT	1
134+65	32' LT	1
135+05	32' LT	1
135+73	32' LT	1
136+36	32' LT	1
137+02	32' LT	1
137+97	32' LT	1
138+92	32' LT	1
140+06	32' LT	1
142+00	34' RT	1
142+32	32' LT	1
144+25	32' LT	1
145+44	32' RT	1
145+76	32' LT	1
146+52	33' LT	1
147+12	33' LT	1
148+17	32' LT	1
148+59	36' RT	1
149+13	32' LT	1
149+79	32' LT	1
		41

EXCAVATION COMMON

STATION	TO STATION	205.0100 EXCAVATION COMMON CY	
103+62	- 152+66	7,497	(1,440 WASTE)

CONCRETE PAVEMENT 9-INCH

STATION	OFFSET	415.0090 CONCRETE PAVEMENT 9-INCH SY	415.2000.S INCENTIVE STRENGTH CONCRETE PAVEMENT DOL	415.3000.S QMP CONCRETE PAVEMENT DAY
110+24 - 110+84	12' RT	47	–	–
111+52 - 112+12	12' LT	47	–	–
116+55 - 117+35	12' RT	47	–	–
118+13 - 118+73	12' LT	47	–	–
125+50 - 126+10	24' RT	47	–	–
127+09 - 127+69	24' LT	47	–	–
141+43 - 142+03	12' RT	47	–	–
142+75 - 143+35	12' LT	47	–	–
	TOTAL	376	68	2

3

REMOVING STORM SEWER

STATION	OFFSET	TO STATION	OFFSET	204.0245.01 REMOVING STORM 12-INCH LF	204.0245.02 REMOVING STORM 15-INCH LF	204.0245.03 REMOVING STORM 18-INCH LF	204.0245.04 REMOVING STORM SEWER 24X36 INCH LF	204.0245.05 REMOVING STORM 36-INCH LF	204.0245.06 REMOVING STORM 36X54 INCH LF
122+80	34' RT	- 123+66	34' RT	86	-	-	-	-	-
122+89	115' RT	- 123+76	24' RT	-	-	-	-	-	125
122+94	119' RT	- 123+81	26' RT	-	-	-	-	-	129
123+76	24' RT	- 123+75	29' LT	-	-	-	-	-	53
123+81	26' RT	- 123+81	30' LT	-	-	-	-	-	56
123+66	34' RT	- 126+24	35' RT	-	-	-	-	258	-
126+24	46' LT	- 126+24	35' RT	-	-	-	-	81	-
126+24	35' RT	- 126+92	34' RT	-	68	-	-	-	-
126+24	35' RT	- 126+29	62' RT	-	-	28	-	-	-
148+68	59' RT	- 148+90	40' RT	-	-	-	29	-	-
			TOTAL	86	68	28	29	339	363

AGGREGATE ITEMS

STATION	301.0100.S QMP BASE AGGREGATE TON	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON	624.0100 WATER MGAL
ROADWAY				
STA 103+62 TO STA 152+64	14,888	–	14,888	149
SHOULDER				
STA 103+62 TO STA 152+64	1,657	639	1,018	17
SIDEWALK				
STA 103+62 TO STA 152+64	258	–	258	–
CONCRETE DRIVEWAYS				
STA 103+62 TO STA 152+64	25	–	25	–
ASPHALTIC DRIVEWAYS				
STA 103+62 TO STA 152+64	–	–	690	–
TOTAL (0010)	16,828	639	16,879	166

CONCRETE DRIVEWAY 7-INCH

STATION	OFFSET	416.0170 CONCRETE DRIVEWAY 7-INCH SY
123+10	33.5' RT	31
151+33	33.5' RT	44
	TOTAL	75

ASPHALT DRIVEWAYS

STATION	OFFSET	465.0120 ASPHALTIC SURFACE DRIVEWAYS & FIELD ENTRANCES TON	305.0120* BASE AGGREGATE DENSE 1 1/4-INCH TON
105+57	RT	13	26
108+61	RT	15	30
113+31	RT	26	51
114+75	RT	21	40
123+10	RT	34	67
130+04	LT	–	12
131+75	LT	9	18
132+03	LT	9	17
132+98	LT	7	14
133+32	LT	11	21
134+27	LT	12	23
135+05	LT	8	16
135+73	LT	10	19
136+36	LT	12	23
137+02	LT	10	20
137+97	LT	11	22
138+92	LT	9	17
140+06	LT	13	25
144+25	LT	11	22
145+76	LT	18	34
146+52	LT	–	16
147+12	LT	–	14
148+17	LT	–	12
149+13	LT	10	19
149+79	LT	9	18
151+33	RT	14	28
151+42	LT	15	30
151+93	LT	18	36
	TOTAL	325	690

PAVEMENT ITEMS

STATION	455.0115 ASPHALTIC MATERIAL PG64-22 TON	455.0120 ASPHALTIC MATERIAL PG64-28 TON	455.0605 TACK COAT GAL	460.1101 HMA PAVEMENT TYPE E-1 TON	460.2000 INCENTIVE DENSITY HMA PAVEMENT DOL	460.2500.S QMP HMA PAVEMENT NUCLEAR DENSITY TON	460.3000 QMP HMA MIXTURE TON	REMARKS
MAINLINE								
STA 103+62 TO STA 152+64	238	195	628	7,222	4,630	7,222	7,222	N. 60TH STREET
SIDEROADS								
STA 111+09.18, LT	2	2	5	56	40	56	56	W. TOWER AVENUE
STA 117+67.79, LT	2	1	4	48	40	48	48	W. FAIRLANE AVENUE
STA 124+28.12, LT	2	2	6	65	50	65	65	W. DARNEL AVENUE
STA 126+56.86, LT	1	1	3	35	30	35	35	W. DEAN ROAD
STA 126+56.86, RT	2	2	6	67	50	67	67	W. DEAN ROAD
STA 132+12.26, RT	2	1	4	48	40	48	48	W. DONNA DRIVE
STA 142+32.13, LT	2	1	4	50	40	50	50	W. WABASH AVENUE
STA 145+44.01, RT	2	1	4	46	30	46	46	W. RANGE LANE
STA 148+58.77, RT	2	2	6	67	50	67	67	W. WAHNER AVENUE
TOTAL (0010)	255	208	670	7,704	5,000	7,704	7,704	

ASPHALTIC FLUMES

STATION	OFFSET	465.0315 ASPHALTIC FLUMES SY
126+47	61' RT	10
126+78	60' LT	8
126+80	60' RT	7
152+09	43' LT	7
	TOTAL	32

BOX CULVERT

STATION	OFFSET	504.1000.S.01 PRECAST CONCRETE WING WALLS STRUCTURE STATION 122+85 LS	504.1000.S.02 PRECAST CONCRETE WING WALLS STRUCTURE STATION 124+28 LS	504.2000.S.01 PRECAST CONCRETE BOX CULVERT 3 FT X 6 FT LF	504.2000.S.02 PRECAST CONCRETE BOX CULVERT 3 FT X 8 FT LF
122+81	CL			150	-
122+89	CL			150	-
124+28	52' LT			-	47
	TOTAL	1	1	300	47

RAILING PIPE

STATION	OFFSET	513.2050.S RAILING PIPE LF
110+84	19' RT	35
	TOTAL	35

WALL MODULAR BLOCK GRAVITY

STATION	OFFSET	532.0200.S WALL MODULAR BLOCK SF
124+65 - 126+10	58' LT	380
	TOTAL	380

CONCRETE CURB AND GUTTER

STATION	OFFSET	601.0411 CONCRETE CURB & GUTTER 30-INCH TYPE D LF	650.5500 CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER LF	601.0409 CONCRETE CURB & GUTTER 30-INCH TYPE A LF
122+88 - 126+47	31' RT	324	384	60
124+79 - 126+53	31' LT	190	190	–
126+78 - 127+69	31' LT	84	144	60
126+80 - 127+10	19' RT	58	58	–
148+14 - 148+44	19' RT	60	60	–
148+76 - 152+67	31' RT	431	431	–
152+10 - 152+65	19' LT	92	92	–
	TOTAL	1,239	1,359	120

CULVERT PIPES

STATION	OFFSET	522.0312 CULVERT PIPE REINFORCED CONCRETE CLASS IV 12-INCH LF	522.0318 CULVERT PIPE REINFORCED CONCRETE CLASS IV 18-INCH LF	522.0327 CULVERT PIPE REINFORCED CONCRETE CLASS IV 27-INCH LF	522.1012 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 12-INCH EACH	522.1018 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 18-INCH EACH	522.1027 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 27-INCH EACH	523.0519 FOR CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL 19X30-INCH EACH	530.0112 CULVERT PIPE CORRUGATED POLYETHYLENE 12-INCH LF	530.0118 CULVERT PIPE CORRUGATED POLYETHYLENE 18-INCH LF	530.0124 CULVERT PIPE CORRUGATED POLYETHYLENE 24-INCH LF	SPV.0090.03 CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-IV 19X30-INCH LF	NOT A BID ITEM JOINT TIES FOR CONCRETE PIPE EACH
105+57	42' RT	--	--	--	--	--	--	--	36	--	--	--	--
108+61	42' RT	--	--	--	--	--	--	--	--	40	--	--	--
110+80	32' RT	--	--	--	--	--	--	--	--	16	--	--	--
111+09	44' LT	44	--	--	2	--	--	--	44	--	--	--	4
113+31	32' RT	--	--	--	--	--	--	--	--	45	--	--	--
114+75	32' RT	--	--	--	--	--	--	--	--	34	--	--	--
117+30	32' RT	--	--	--	--	--	--	--	--	--	16	--	--
117+68	40.5' LT	--	--	94	--	--	4	--	--	--	--	--	8
126+57	50' LT	--	52	--	--	1	--	--	--	--	--	--	2
130+04	36' LT	--	--	--	--	--	--	--	--	22	--	--	--
131+75	36' LT	--	--	--	--	--	--	--	24	--	--	--	--
132+03	36' LT	--	--	--	--	--	--	--	23	--	--	--	--
132+12	36' RT	47	--	--	2	--	--	--	--	--	--	--	4
132+98	36' LT	--	--	--	--	--	--	--	21	--	--	--	--
133+32	36' LT	--	--	--	--	--	--	--	28	--	--	--	--
134+27	36' LT	--	--	--	--	--	--	--	29	--	--	--	--
135+05	36' LT	--	--	--	--	--	--	--	21	--	--	--	--
135+73	36' LT	--	--	--	--	--	--	--	25	--	--	--	--
136+36	36' LT	--	--	--	--	--	--	--	29	--	--	--	--
137+02	36' LT	--	--	--	--	--	--	--	26	--	--	--	--
137+97	36' LT	--	--	--	--	--	--	--	28	--	--	--	--
138+92	36' LT	--	--	--	--	--	--	--	23	--	--	--	--
140+06	36' LT	--	--	--	--	--	--	--	31	--	--	--	--
142+00	49' RT	--	--	--	--	--	--	--	15	--	--	--	--
142+32	36' LT	46	--	--	2	--	--	--	--	--	--	--	4
144+25	36' LT	--	--	--	--	--	--	--	--	28	--	--	--
145+25	50' RT	--	--	--	--	--	--	--	15	--	--	--	--
145+44	36' RT	--	--	--	--	--	--	1	--	--	--	50	--
145+65	50' RT	--	--	--	--	--	--	--	15	--	--	--	--
145+76	36' LT	--	--	--	--	--	--	--	--	43	--	--	--
146+52	36' LT	--	--	--	--	--	--	--	--	26	--	--	--
147+12	36' LT	--	--	--	--	--	--	--	--	23	--	--	--
148+17	36' LT	--	--	--	--	--	--	--	--	22	--	--	--
149+13	36' LT	--	--	--	--	--	--	--	--	26	--	--	--
149+79	36' LT	--	--	--	--	--	--	--	--	24	--	--	--
151+42	36' LT	--	--	--	--	--	--	--	37	--	--	--	--
	TOTAL	137	52	94	6*	1	4	1*	470	349	16	50	22

*-ADDITIONAL QUANTITIES ELSEWHERE

3

3

STORM SEWER

STRUCTURE NO.	(1) STATION/ OFFSET	(2) RIM/ GUTTER ELEVATION	(3) TOP OF STRUCTURE ELEVATION	DISCHARGE INVERT ELEVATION	(4) DEPTH IN FEET	PIPE TO STUCTURE NO.	522.1012 APRON ENDWALLS FOR CPRC 12-INCH EACH	523.0519 ENDWALLS FOR CULVERT PIPE RCHE 19X30-INCH EACH	523.0524 ENDWALLS FOR CULVERT PIPE RCHE 24X38-INCH EACH	523.0529 ENDWALLS FOR CULVERT PIPE RCHE 29X45-INCH EACH	611.0210 MANHOLES TYPE 3 EACH	611.0303 INLETS TYPE 3 EACH	611.0305 INLETS TYPE 8 EACH	611.0530 MANHOLE COVERS TYPE J EACH	611.0624 INLET COVERS TYPE H EACH	611.0642 INLET COVERS TYPE MS EACH	628.7010 INLET PROTECTION TYPE B EACH	628.7015 INLET PROTECTION TYPE C EACH	650.4000 CONSTRUCTION STAKING STORM SEWER EACH
3A	126+27.50, 59.50' RT	-	-	678.22	-	3	-	-	-	-	-	-	-	-	-	-	-	-	1
3B	126+90, 39.50' RT	-	-	678.40	-	3	-	-	-	-	-	-	-	-	-	-	-	-	1
3C	126+23, 47.00' LT	-	-	677.25	-	3	-	-	-	-	-	-	-	-	-	-	-	-	1
3	126+23, 47.50' RT	682.59	681.34	677.01	4.33	2	-	-	-	-	1	-	-	1	-	-	-	-	1
2B	124+50, 56.00' RT	679.52	679.52	677.52	2.00	2A	-	-	-	-	-	-	1	-	-	1	1	-	1
8.5	124+10, 56.00' RT	679.41	679.41	676.77	2.64	2	-	-	-	-	-	-	1	-	-	1	1	-	1
2	124+10, 47.50' RT	681.37	680.12	676.50	3.62	1	-	-	-	-	1	-	-	1	-	-	-	-	1
1B	123+50, 32.00' RT	681.38	680.58	677.85	2.73	1	-	-	-	-	-	1	-	-	1	-	-	1	1
1	123+50, 47.50' RT	681.43	680.18	676.35	3.83	1A	-	-	-	-	1	-	-	1	-	-	-	-	1
1A	122+95, 114.00' RT	-	-	676.11	-	-	-	-	-	1	-	-	-	-	-	-	-	-	1
4	124+85, 32.00' LT	681.43	680.63	677.73	2.90	4A	-	-	-	-	-	1	-	-	1	-	-	1	1
4A	124+85, 47.00' LT	-	-	677.25	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1
5A	148+25, 36.00' RT	-	-	665.10	-	5	-	-	1	-	-	-	-	-	-	-	-	-	1
5B	148+68.42, 58.62' RT	-	-	-	-	5	-	-	-	-	-	-	-	-	-	-	-	-	1
5	148+68.42, 39' RT	668.20	666.95	661.92	5.03	6	-	-	-	-	1	-	-	1	-	-	-	-	1
6A	150+96, 56.00' RT	664.63	664.63	661.84	2.79	6	-	-	-	-	-	-	1	-	-	1	1	-	1
6C	150+96, 37.00' LT	-	-	662.90		6B	-	1	-	-	-	-	-	-	-	-	-	-	1
6B	150+96, 32.00' RT	665.75	664.95	661.44	3.51	6	-	-	-	-	-	1	-	-	1	-	-	1	1
6	150+96, 39.00' RT	666.36	665.11	661.01	4.10	7	-	-	-	-	1	-	-	1	-	-	-	-	1
17	152+27, 56.00' RT	663.76	663.76	661.26	2.50	7	-	-	-	-	-	-	1	-	-	1	1	-	1
7C	152+27, 32.00' RT	664.87	664.07	661.05	3.02	7	-	-	-	-	-	1	-	-	1	-	-	1	1
7	152+27, 39.00' RT	665.48	664.23	660.49	3.74	7B	-	-	-	-	1	-	-	1	-	-	-	-	1
7B	152+67, 48.00' RT	-	-	660.33	-	-	-	-	-	-	-	-	-	1	-	-	-	-	1
TOTAL							1*	1*	1	1	6	4	4	7	4	4	4	4	23

(1) STATION & OFFSET MEASURED TO CENTER OF STRUCTURE OR JOINT OF ENDWALL
(2) ELEVATION MEASURED AT GUTTER (0.2' BELOW FLANGE) OR CENTER OF MANHOLE COVER
(3) RIM/ GUTTER TO TOP OF STRUCTURE MEASURED AS FOLLOWS:
TYPE J = RIM ELEVATION - 9" (CASTING) - 6" (ADJUSTMENT)
TYPE 3 = FLANGE ELEVATION - 6" (CASTING) - 6" (ADJUSTMENT)
TYPE 8 = RIM ELEVATION
(4) DEPTH IS MEASURED FROM TOP OF STRUCTURE MINUS DISCHARGE INVERT

*-ADDITIONAL QUANTITIES ELSEWHERE

3

STORM SEWER

STRUCTURE NO.	(1) STATION/ OFFSET	(2) RIM/ GUTTER ELEVATION	(3) TOP OF STRUCTURE ELEVATION	DISCHARGE INVERT ELEVATION	(4) DEPTH IN FEET	PIPE TO STUCTURE NO.	608.0312 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 12-INCH LF	608.0418 STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 18-INCH LF	608.0430 STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 30-INCH LF	608.0442 SEWER PIPE REINFORCED CONCRETE CLASS IV 42-INCH LF	610.0129 STORM SEWER PIPE REINFORCED CONCRETE HEC HE-III 29X45-INCH LF	SPV.0090.01 STORM SEWER PIPE REINFORCED CONCRETE HEC HE-IV 19X30-INCH LF	SPV.0090.02 STORM SEWER PIPE REINFORCED CONCRETE HEC HE-IV 24X38-INCH LF
3A	126+27.50, 59.50' RT	-	-	678.22	-	3	-	13	-	-	-	-	-
3B	126+90, 39.50' RT	-	-	678.40	-	3	-	70	-	-	-	-	-
3C	126+23, 47.00' LT	-	-	677.25	-	3	-	-	94.5	-	-	-	-
3	126+23, 47.50' RT	682.59	681.34	677.01	4.33	2	-	-	-	-	213	-	-
2B	124+50, 56.00' RT	679.52	679.52	677.52	2.00	2A	40	-	-	-	-	-	-
8.5	124+10, 56.00' RT	679.41	679.41	676.77	2.64	2	8.5	-	-	-	-	-	-
2	124+10, 47.50' RT	681.37	680.12	676.50	3.62	1	-	-	-	-	60	-	-
1B	123+50, 32.00' RT	681.38	680.58	677.85	2.73	1	15	-	-	-	-	-	-
1	123+50, 47.50' RT	681.43	680.18	676.35	3.83	1A	-	-	-	-	86	-	-
1A	122+95, 114.00' RT	-	-	676.11	-	-	-	-	-		-	-	-
4	124+85, 32.00' LT	681.43	680.63	677.73	2.90	4A	15	-	-	-	-	-	-
4A	124+85, 47.00' LT	-	-	677.25	-	-	-	-	-		-	-	-
5A	148+25, 36.00' RT	-	-	665.10	-	5	-	-	-		-	-	44
5B	148+68.42, 58.62' RT	-	-	-	-	5	-	-	-		-	-	-
5	148+68.42, 39' RT	668.20	666.95	661.92	5.03	6	-	-	-	228	-	-	-
6A	150+96, 56.00' RT	664.63	664.63	661.84	2.79	6	17	-	-	-	-	-	-
6C	150+96, 37.00' LT	-	-	662.90		6B		-	-	-	-	69	-
6B	150+96, 32.00' RT	665.75	664.95	661.44	3.51	6	-	-	-	-	-	6.5	-
6	150+96, 39.00' RT	666.36	665.11	661.01	4.10	7	-	-	-	130	-	-	-
17	152+27, 56.00' RT	663.76	663.76	661.26	2.50	7	17	-	-	-	-	-	-
7C	152+27, 32.00' RT	664.87	664.07	661.05	3.02	7	6.5	-	-	-	-	-	-
7	152+27, 39.00' RT	665.48	664.23	660.49	3.74	7B	-	-	-	40	-	-	-
7B	152+67, 48.00' RT	-	-	660.33	-	-	-	-	-	-	-	-	-
TOTAL							119	83	94.5	398	359	75.5	44

(1) STATION & OFFSET MEASURED TO CENTER OF STRUCTURE OR JOINT OF ENDWALL
(2) ELEVATION MEASURED AT GUTTER (0.2' BELOW FLANGE) OR CENTER OF MANHOLE COVER
(3) RIM/ GUTTER TO TOP OF STRUCTURE MEASURED AS FOLLOWS:
TYPE J = RIM ELEVATION - 9" (CASTING) - 6" (ADJUSTMENT)
TYPE 3 = FLANGE ELEVATION - 6" (CASTING) - 6" (ADJUSTMENT)
TYPE 8 = RIM ELEVATION
(4) DEPTH IS MEASURED FROM TOP OF STRUCTURE MINUS DISCHARGE INVERT

3

CONCRETE SIDWALK 5-INCH

STATION	OFFSET	602.0410 CONCRETE SIDEWALK 5-INCH SF
108+48 - 114+87	54' RT	3,834
122+50 - 122+99	38.5' RT	294
123+23 - 126+44	38.5' RT	2,229
124+79 - 126+51	33.5' LT	1,089
126+82 - 126+97	50' RT	98
131+80 - 131+97	50' RT	100
132+24 - 132+36	51' RT	74
145+15 - 145+32	49' RT	103
145+58 - 145+75	49' RT	107
148+31 - 148+41	51' RT	68
148+78 - 151+22	43.5' RT	1,463
151+41 - 152+62	43.5' RT	736
	TOTAL	10,195

RIPRAP AND GEOTEXTILE FABRIC TYPE R

STATION	OFFSET	606.0100 RIPRAP LIGHT CY	606.0300 RIPRAP HEAVY CY	645.0120 GEOTEXTILE FABRIC TYPE HR SY	645.0130 GEOTEXTILE FABRIC TYPE R SY
122+75 - 123+00	47' LT	–	23	35	–
122+75 - 122+95	110' RT	–	23	35	–
123+90 - 124+00	47' LT	–	13	20	–
124+60 - 124+70	47' LT	–	13	20	–
* 127+35	41' LT	1.2	–	–	4
* 128+30	41' LT	1.2	–	–	4
* 128+75	41' LT	1.2	–	–	4
TOTAL		3.6	72	110	12

* TREE ISLAND

ADJUSTING MANHOLE COVERS

STATION	OFFSET	611.8110 ADJUSTING MANHOLE EACH
124+15	44' RT	1
124+15	52' RT	1
124+28	49' RT	1
126+37	49' RT	1
126+47	49' RT	1
126+59	48' RT	1
130+18	25' LT	1
137+24	25' LT	1
141+85	28' LT	1
142+86	29' LT	1
146+05	29' LT	1
148+58	30' LT	1
152+44	29' LT	1
	TOTAL	13

3

CURB RAMP DETECTABLE WARNING FIELD YELLOW

STATION	OFFSET	602.0505 CURB RAMP DETECTABLE WARNING FIELD YELLOW SF
126+17	LT, RT	32
126+41	RT	16
126+84	RT	16
148+39	RT	16
148+81	RT	16
152+59	RT	16
	TOTAL	112

213.0100 FINISHING ROADWAY (2415-07-70) EACH	619.1000 MOBILIZATION EACH	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH	642.5000 FIELD OFFICE TYPE B (2415-07-70) EACH
1	1	1	3	1

RESTORATION

STATION	OFFSET	625.0100 TOPSOIL SY	627.0200 MULCHING SY	629.0210 FERTILIZER TYPE B CWT	630.0130 SEEDING MIXTURE NO. 30 LB
103+62 - 152+66	LT & RT	21,800	21,800	17.5	751

EROSION CONTROL

STATION	OFFSET	628.1104 EROSION BALES EACH	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.2023 EROSION MAT CLASS II TYPE B SY	628.7504 TEMPORARY DITCH CHECKS LF	628.7550 CULVERT PIPE DITCH CHECKS EACH
105+39	42' RT	–	–	–	5	–	1
105+75	42' RT	–	–	–	5	–	–
108+41	42' RT	–	–	–	8	–	1
108+81	42' RT	–	–	–	8	–	–
110+74	31'RT	–	–	–	8	–	1
110+81	43' LT	–	–	–	5	–	1
110+88	31'RT	–	–	–	8	–	–
111+30	43' RT	–	–	–	5	–	–
113+09	30' RT	–	–	–	8	–	1
113+54	30'RT	–	–	–	8	–	–
114+58	32' RT	–	–	–	8	–	1
114+92	32' RT	–	–	–	8	–	–
117+23	33'RT	–	–	–	5	–	1
117+37	33'RT	–	–	–	5	–	–
117+41	36'LT	–	–	–	5	–	1
117+41	42'LT	–	–	–	5	–	1
117+92	36'LT	–	–	–	5	–	–
117+92	42'LT	–	–	–	5	–	–
122+61	44'RT	–	–	–	5	–	1
122+68	55'RT	–	–	–	5	–	–
126+88	50'RT	–	–	–	4	–	–
126+93	46'RT	–	–	–	3	–	1
126+93	62'RT	–	–	–	3	–	1
129+94	36'LT	–	–	–	4	–	–
130+15	36'LT	–	–	–	4	–	1
131+62	36'LT	–	–	–	3	–	–
131+84	36'RT	–	–	–	3	–	–
131+90	36'LT	–	–	–	4	–	–
132+15	36'LT	–	–	–	3	–	1
132+34	36'RT	–	–	–	3	–	1
132+87	36'LT	–	–	–	3	–	–
133+13	36'LT	–	–	–	6	–	–
133+47	36'LT	–	–	–	3	–	1
134+11	36'LT	–	–	–	3	–	–
134+41	36'LT	–	–	–	3	–	1
134+95	36'LT	–	–	–	3	–	–
135+16	36'LT	–	–	–	3	–	1
135+60	36'LT	–	–	–	3	–	–
135+85	36'LT	–	–	–	3	–	1
136+21	36'LT	–	–	–	3	–	–
136+50	36'LT	–	–	–	3	–	1
136+90	36'LT	–	–	–	3	–	1
137+16	36'LT	–	–	–	3	–	–
137+80	36'LT	–	–	–	3	–	1
138+03	36'LT	–	–	–	3	–	–
138+80	36'LT	–	–	–	3	–	1
139+03	36'LT	–	–	–	3	–	–
139+91	36'LT	–	–	–	3	–	1
140+23	36'LT	–	–	–	3	–	–
141+93	36'RT	–	–	–	3	–	1
142+07	36'RT	–	–	–	3	–	–
142+07	36'LT	–	–	–	3	–	1
142+57	36'LT	–	–	–	3	–	1
144+12	36'LT	–	–	–	3	–	–
144+40	36'LT	–	–	–	3	–	–
145+21	33'RT	–	–	–	3	–	1
145+55	36'LT	–	–	–	3	–	–
146+70	33'RT	–	–	–	3	–	–
145+98	36'LT	–	–	–	3	–	–
146+39	36'LT	–	–	–	3	–	1
146+65	36'LT	–	–	–	3	–	–
147+00	36'LT	–	–	–	3	–	1
147+23	36'LT	–	–	–	3	–	–
148+05	36'LT	–	–	–	3	–	1
148+25	36'RT	–	–	–	6	–	–
148+27	36'LT	–	–	–	3	–	–
149+00	36'LT	–	–	–	3	–	1
149+26	36'LT	–	–	–	3	–	–
149+67	36'LT	–	–	–	3	–	1
149+91	36'LT	–	–	–	3	–	–
150+96	37'LT	–	–	–	5	–	1
151+60	36'LT	–	–	–	–	–	1
UNDISTRIBUTED		50	200	75	–	100	–
	TOTAL	50	200	75	289	100	35

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PERMANENT SIGNING

SIGN NO.	SIGN CODE	DESCRIPTION	SIGN SIZE	SIGN SIZE W X H	637.0202 SIGNS REFLEC. TYPE II	638.2602 REMOVING SIGNS TYPE II	638.3000 REMOVING SMALL SIGN SUPPORTS	SPV.0060.02 POSTS STEEL GALVANIZED 2 3/8-INCH DIA. 14 FT	SPV.0060.03 POSTS STEEL GALVANIZED 2 3/8-INCH DIA. 16 FT	
				(IN) X (IN)	(SF)	(EA)	(EA)	(EA)	(EA)	REMARKS
1	W4-2R M4-4-M	RIGHT LANE ENDS SYMBOL MERGE				1 1	1			
2	R5-2	NO TRUCKS	2	24x24	4	1	1	1		
3	R7-51R-M	NO PARKING SYMBOL				1				
4	R7-1D	NO PARKING ANY TIME	2	18x24	3					MOUNT ON SAME POST AS SIGN #2
5	***	***								
6	W4-2R	RIGHT LANE ENDS SYMBOL	2	36X36	9			1		
7	R4-7	KEEP RIGHT SYMBOL				1	1			
8	W5-52L	TIGER BOARD				1				
9	R4-7 W5-52L	KEEP RIGHT SYMBOL TIGER BOARD	2 2	24x30 12x36	5 3			1		
10	R7-1D	NO PARKING ANY TIME	2	18x24	3			1		
11	R7-1D-M	NO PARKING ANY TIME				1	1			
12	R2-1	SPEED LIMIT 35	2	24x30	5	1	1	2		
13	R5-1	DO NOT ENTER	2	30x30	6.25					MOUNT ON SAME POST AS SIGN #12
14	S4-51	SCHOOL SPEED LIMIT 15 WHEN CHILDREN ARE PRESENT	2	24x48	8	1	1	1		
15	R5-1-M	DO NOT ENTER				1	1			
16	R5-1-M	DO NOT ENTER				1				ON SAME POST AS SIGN #15
17	R5-1	DO NOT ENTER	2	30x30	6.25				2	
18	R6-2L	ONE WAY	2	24x30	5					MOUNT ON SAME POST AS SIGN #17
19	R6-2R	ONE WAY	2	24x30	5					MOUNT ON SAME POST AS SIGN #17
20	R1-1	STOP	2	30x30	5.18	1	1	1		
21	R1-1	STOP				1	1			
22	***	***								
23	R1-1	STOP	2	30x30	5.18	1	1		2	
24	R6-2L	ONE WAY				1	1			
25	R6-2R	ONE WAY				1				ON SAME POST AS SIGN #22
26	R7-1D	NO PARKING ANY TIME	2	18x24	3			1		
27	R7-1D-M	NO PARKING ANY TIME				1	1			
28	R7-1D	NO PARKING ANY TIME	2	18x24	3			1		
29	R7-1D-M	NO PARKING ANY TIME				1	1			
30	R3-7R	RIGHT LANE MUST TURN RIGHT	2	30X30	6.25			1		
31	S1-1 W16-9P	ADVANCE SCHOOL ZONE AHEAD	2 2	36x36 24x8	6.75 1.34	1	1	1		
32	W6-1	DIVIDED HIGHWAY AHEAD	2	36x36	9			1		
33	D4-1-M	PARKING	2	30x24	5	1	1	1		
34	R1-1	STOP	2	30x30	5.18	1	1	1		
		SUBTOTAL			112.38	21	16	15	4	

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PERMANENT SIGNING

SIGN NO.	SIGN CODE	DESCRIPTION	SIGN SIZE	SIGN SIZE W X H	637.0202 SIGNS REFLEC. TYPE II	638.2602 REMOVING SIGNS TYPE II	638.3000 REMOVING SMALL SIGN SUPPORTS	SPV.0060.02 POSTS STEEL GALVANIZED 2 3/8-INCH DIA. 14 FT	SPV.0060.03 POSTS STEEL GALVANIZED 2 3/8-INCH DIA. 16 FT	
				(IN) X (IN)	(SF)	(EA)	(EA)	(EA)	(EA)	REMARKS
35	S4-51	SCHOOL SPEED LIMIT 15 WHEN CHILDREN ARE PRESENT	2	24x48	8	1	1	1		
36	S1-1 W16-7L	ADVANCE SCHOOL ZONE ARROW	2 2	36x36 24x12	6.75 2	1	1	1		
37	S1-1 W16-7L	ADVANCE SCHOOL ZONE ARROW	2 2	36x36 24x12	6.75 2	1	1	1		
38	R1-1	STOP	2	30x30	5.18	1	1	1		
39	R2-1	SPEED LIMIT 35	2	24x30	5			1		
40	R7-7D	NO PARKING BUS STOP	2	18x24	3			1		
41	R7-7L	NO PARKING BUS STOP				1	1			
42	R7-7D	NO PARKING ANY TIME				1	1			
43	R1-1	STOP	2	30x30	5.18	1	1	1		
44	R2-1	SPEED LIMIT 35	2	24x30	5			1		
45	***	***								
46	R7-1D	NO PARKING ANY TIME	2	18x24	3					MOUNT ON SAME POST AS SIGN #45
47	W11-1	BICYCLE CROSSING				1	1			
48	R7-1	NO PARKING ANY TIME				1				ON SAME POST AS SIGN #47
49	R1-1	STOP	2	30x30	5.18	1	1	1		
50	R7-1D	NO PARKING ANY TIME	2	18x24	3			1		
51	R7-1D	NO PARKING ANY TIME	2	18x24	3			1		
52	R7-51P-M	NO PARKING SYMBOL				1	1			
53	S4-51	SCHOOL SPEED LIMIT 15 WHEN CHILDREN ARE PRESENT	2	24x48	8	1	1	1		
54	S4-51	SCHOOL SPEED LIMIT 15 WHEN CHILDREN ARE PRESENT	2	24x48	8	1	1	1		
55	S1-1 W16-7L	ADVANCE SCHOOL ZONE ARROW	2 2	36x36 24x12	6.75 2	1	1	1		
56	S1-1 W16-7L	ADVANCE SCHOOL ZONE ARROW	2 2	36x36 24x12	6.75 2	1	1	1		
57	R1-1	STOP	2	30x30	5.18	1	1	1		
58	R7-1D	NO PARKING ANY TIME	2	18x24	3			1		
59	R7-1D	NO PARKING ANY TIME				1	1			
60	R7-7D	NO PARKING ANY TIME	2	18x24	3			1		
61	R2-1	SPEED LIMIT 35	2	24x30	5			1		
62	S1-1 W16-7L	ADVANCE SCHOOL ZONE WHEN CHILDREN ARE PRESENT	2 2	36x36 24x12	6.75 2	1	1	1		
63	***	***								
64	R7-1D	NO PARKING ANY TIME				1	1			
65	W3-1	STOP AHEAD				1	1			
66	W3-1	STOP AHEAD				1	1			
		SUBTOTAL			121.47	21	20	20	0	

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PERMANENT SIGNING

SIGN NO.	SIGN CODE	DESCRIPTION	SIGN SIZE	SIGN SIZE W X H	637.0202 SIGNS REFLEC. TYPE II	638.2602 REMOVING SIGNS TYPE II	638.3000 REMOVING SMALL SIGN SUPPORTS	SPV.0060.02 POSTS STEEL GALVANIZED 2 3/8-INCH DIA. 14 FT	SPV.0060.03 POSTS STEEL GALVANIZED 2 3/8-INCH DIA. 16 FT	
				(IN) X (IN)	(SF)	(EA)	(EA)	(EA)	(EA)	REMARKS
67	R7-1D	NO PARKING ANY TIME	2	18x24	3			1		
68	R2-1	SPEED LIMIT 35	2	24x30	5			1		
69	R1-1	STOP	2	30x30	5.18	1	1	1		
70	R7-1D	NO PARKING ANY TIME	2	18x24	3			1		
71	R1-1	STOP	2	30x30	5.18	1	1	1		
72	R3-8A	VARIOUS ONLYS				1	1			
73	R7-1D-M	NO PARKING ANY TIME				1				ON SAME POST AS SIGN #72
74	R3-8W	VARIOUS ONLYS	2	54x30	11.25			2		
75	R7-1D-M	NO PARKING ANY TIME				1	1			
76	R7-1D	NO PARKING ANY TIME	2	18x24	3			1		
77	R1-1	STOP				1	1			
78	R1-1 R1-3A-M	STOP 4-WAY	2 1	30x30 18x6	5.18 0.75	1	1	1		
79	R1-1 R1-3A-M	STOP 4-WAY	2 1	30x30 18x6	5.18 0.75	1	1	1		
80	R1-1 R1-3A-M	STOP 4-WAY	2 1	30x30 18x6	5.18 0.75	1	1	1		
81	R1-1	STOP				1	1			
82	R1-1 R1-3A-M	STOP 4-WAY	2 1	30x30 18x6	5.18 0.75	1	1	1		
83	R7-51R-M	NO PARKING SYMBOL BUS STOP				1	1			
84	R3-8A	VARIOUS ONLYS	2	36x30	7.5	1	1		2	
85	R7-7D	NO PARKING BUS STOP	2	18x24	3	1				MOUNT ON SAME POST AS SIGN #84
86	S4-51	SCHOOL SPEED LIMIT 15 WHEN CHILDREN ARE PRESENT	2	24x48	8	1	1	1		
87	R2-1	SPEED LIMIT 35	2	24x30	5	1	1	1		
88	S1-1 W16-9P	ADVANCE SCHOOL ZONE ARROW				1 1	1			
89	***	***								
90	R1-1	STOP	2	30x30	5.18	1	1	1		
91	R2-1	SPEED LIMIT 35	2	24x30	5			1		
92	R2-1	SPEED LIMIT 35	2	24x30	5	1	1	1		
93	R7-51R-M	NO PARKING SYMBOL BUS STOP				1	1			
94	R7-7L	NO PARKING BUS STOP	2	18x24	3			1		
95	R1-1	STOP	2	30x30	5.18	1	1	1		
96	R7-7L	NO PARKING BUS STOP	2	18x24	3			1		
97	R7-51R-M	NO PARKING SYMBOL BUS STOP				1	1			
98	R1-1	STOP	2	30x30	5.18	1	1	1		
99	R1-1	STOP	2	30x30	5.18	1	1	1		
100	R3-8A	VARIOUS ONLYS	2	36x30	7.5			1		
		SUBTOTAL			127.05	25	22	23	2	

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PERMANENT SIGNING

SIGN NO.	SIGN CODE	DESCRIPTION	SIGN SIZE	SIGN SIZE W X H	637.0202 SIGNS REFLEC. TYPE II	638.2602 REMOVING SIGNS TYPE II	638.3000 REMOVING SMALL SIGN SUPPORTS	SPV.0060.02 POSTS STEEL GALVANIZED 2 3/8-INCH DIA. 14 FT	SPV.0060.03 POSTS STEEL GALVANIZED 2 3/8-INCH DIA. 16 FT	REMARKS
				(IN) X (IN)	(SF)	(EA)	(EA)	(EA)	(EA)	
101	R3-8A	VARIOUS ONLYS				1	1			
102	R2-1	SPEED LIMIT 35	2	24x30	5	1	1	1		
103	R5-1-M	DO NOT BLOCK DRIVE ENTRANCE	2	24x30	5	1	1	1		
104	R1-1	STOP	2	30x30	5.18	1	1	1		
105	R-1-F	FOLDING STOP	2	30x30	5.18	1				MOUNT ON SIGNAL POLE
106	R5-2	NO TRUCKS	2	24x24	4	1	1	1		
107	R1-1F	FOLDING STOP	2	30x30	5.18	1				MOUNT ON SIGNAL POLE
110	RD-1D	NO PARKING	2	18x24	3			1		
		SUBTOTAL			32.54	7	5	5	0	
		TOTALS			**393.44**	**74**	**63**	**63**	6	

TRAFFIC CONTROL

DAYS DURATION	643.0100 TRAFFIC CONTROL (2415-07-70) EACH	643.0300 DRUMS NUMBER	DAYS	643.0420 BARRICADES TYPE III NUMBER	DAYS	643.0705 WARNING LIGHTS TYPE A NUMBER	DAYS	643.0715 WARNING LIGHTS TYPE C NUMBER	DAYS	643.0900 SIGNS NUMBER	DAYS	643.2000 TRAFFIC CONTROL DETOUR (2415-07-70) EACH	643.3000 DETOUR SIGNS NUMBER	DAYS
67	1	100	6,700	20	1,340	40	2,680	50	3,350	30	2,010	1	38	2,546

CONSTRUCTION STAKING

STATION	LOCATION	650.4500 CONSTRUCTION STAKING SUBGRADE LF	650.5000 CONSTRUCTION STAKING BASE LF	650.9900 CONSTRUCTION STAKING INITIAL LAYOUT LF
103+62 - 152+66	MAINLINE	4904	4,904	4904

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PAVEMENT MARKING, EPOXY

STATION	LOCATION	646.0106 EPOXY 4-INCH LF	646.0126 EPOXY 8-INCH LF	647.0166 ARROWS EPOXY TYPE 2 EACH	647.0356 WORDS EPOXY EACH	647.0566 STOP LINE EPOXY 18-INCH LF	647.0726 DIAGONAL EPOXY 12-INCH LF	647.0776 CROSSWALK EPOXY 12-INCH LF	REMARKS
103+62 - 152+66	LT & RT	8,741	-	-	-	-	-	-	EDGELINE
103+62 - 104+40	CL	155	-	-	-	-	-	-	CL SOLID
103+62 - 110+67	LT	176	-	-	-	-	-	-	CL SKIPS
103+62 - 107+40	RT	95	-	-	-	-	-	-	CL SKIPS
104+40 - 121+60	CL	430	-	-	-	-	-	-	CL SKIPS
103+62 - 104+40	MEDIAN	-	-	-	-	-	28	-	
107+40 - 109+00	RT	-	160	-	-	-	-	-	
107+68	RT	-	-	-	1	-	-	-	
108+08	RT	-	-	1	-	-	-	-	
110+91 - 111+09	LT	-	-	-	-	18	-	-	
117+49 - 117+68	LT	-	-	-	-	19	-	-	
121+60 - 123+84	LT	224	-	-	-	-	-	-	CL SOLID
122+80 - 126+10	RT & CL	-	660	-	-	-	-	-	
123+08	LT & RT	-	-	-	2	-	-	-	
123+48	RT	-	-	1	-	-	-	-	
123+64	LT & RT	-	-	1	-	-	-	-	
124+08 - 124+28	LT	-	-	-	-	20	-	-	
124+74 - 126+10	LT	136	-	-	-	-	-	-	CL SOLID
124+82	LT	-	-	1	-	-	-	-	
125+36	LT	-	-	-	1	-	-	-	
125+50	RT	-	-	-	1	-	-	-	
125+90	LT & RT	-	-	2	-	-	-	-	
126+10		-	-	-	-	36	-	-	
126+17	LT & RT	-	-	-	-	-	-	124	
126+41	RT	-	-	-	-	-	-	-	
126+45 - 126+80	RT	-	-	-	-	-	-	68	
126+63 - 126+80	RT	-	-	-	-	17	-	-	
126+84	RT	-	-	-	-	-	-	-	
127+09		-	-	-	-	24	-	-	
127+09 - 128+11	LT	-	102	-	-	-	-	-	
127+29	LT	-	-	2	-	-	-	-	
127+83	LT	-	-	-	1	-	-	-	
128+11 - 130+11	LT	202	-	-	-	-	74	-	CL SOLID
130+11 - 149+06	CL	474	-	-	-	-	-	-	CL SKIPS
131+96 - 132+24	RT	-	-	-	-	-	-	53	
132+12 - 132+23	RT	-	-	-	-	11	-	-	
142+13 - 142+32	LT	-	-	-	-	19	-	-	
145+32 - 145+58	RT	-	-	-	-	-	-	51	
145+45 - 145+58	RT	-	-	-	-	13	-	-	
148+39	RT	-	-	-	-	-	-	-	
148+44 - 148+77	RT	-	-	-	-	-	-	66	
148+60 - 148+76	RT	-	-	-	-	16	-	-	
148+81	RT	-	-	-	-	-	-	-	
147+65 - 152+25	RT	-	800	-	-	-	-	-	
149+38	RT	-	-	-	1	-	-	-	
149+66	RT	-	-	1	-	-	-	-	
151+65	RT	-	-	-	1	-	-	-	
152+05	RT	-	-	1	-	-	-	-	
152+25	RT	-	-	-	-	31	-	-	
152+59	RT	-	-	-	-	-	-	-	
TOTAL		10,633	1,722	10	8	224	102	362	

SAWCUTS

STATION	LOCATION	690.0100 SAWING EXISTING PAVEMENT LF
103+62	CL	55
105+57	RT	23
108+61	RT	26
111+09	LT	25
113+31	RT	34
114+75	RT	26
117+30	RT	6
117+68	LT	27
122+50	RT	6
123+11	RT	24
124+28	LT	24
126+17	RT	6
126+57	RT	25
126+63	RT	33
131+75	LT	14
132+03	LT	12
132+12	RT	26
132+98	LT	11
133+32	LT	17
134+27	LT	18
135+05	LT	9
135+73	LT	14
136+36	LT	18
137+02	LT	15
137+97	LT	17
138+92	LT	10
140+06	LT	17
142+00	RT	6
142+32	LT	25
144+25	LT	16
145+44	RT	25
145+76	LT	11
146+52	LT	11
148+31	RT	6
148+60	RT	32
149+13	LT	13
149+79	LT	12
151+33	RT	59
151+42	LT	30
151+93	LT	31
152+66	CL	130
	TOTAL	945

MOVING FIRE HYDRANTS

STATION	OFFSET	SPV.0060.01 MOVING FIRE HYDRANTS EACH
152+22	39' RT	1
		1

TEMP. COVER PLATES

STATION	OFFSET	611.8120.S TEMPORARY COVER PLATES EACH
123+50	47.50' RT	1
124+10	47.50' RT	1
124+15	44' RT	1
124+15	52' RT	1
124+28	49' RT	1
126+23	47.50' RT	1
126+37	49' RT	1
126+47	49' RT	1
126+59	48' RT	1
130+18	25' LT	1
137+24	25' LT	1
141+85	28' LT	1
142+86	29' LT	1
146+05	29' LT	1
148+58	30' LT	1
148+68.42	39.00' RT	1
150+96	39.00' RT	1
152+27	39.00' RT	1
152+44	29' LT	1
TOTAL		19

ADJ. WATERMAIN VALVE BOXES

STATION	OFFSET	SPV.0060.05 ADJUSTING WATERMAIN VALVE BOXES EACH
131+86	40.0' LT	1
131+91	36.5' LT	1
145+54	54.0' RT	1
147+23	7.5' RT	1
148+52	59.5' RT	1
151+70	13.0' RT	1
152+30	8.0' RT	1
TOTAL		7

SPV.0105.xx SUMMARY OF STATE FURNISHED MATERIALS
TRAFFIC SIGNALS STH 100 (BROWN DEER RD) & 60TH ST.
1 - LUMP SUM

QUANT. EACH	DESCRIPTION
2	PEDESTAL BASES
1	TRANSFORMER BASES, STANDARD, 11 1/2" BOLT CIRCLE
1	POLES, TYPE 2
1	TRAFFIC SIGNAL STANDARDS, ALUMINUM, 10'
1	TRAFFIC SIGNAL STANDARDS, ALUMINUM, 13'
1	TROMBONE ARMS, 28'
2	TRAFFIC SIGNAL FACES, 3-12" VERTICAL, LED MODULES*
1	TRAFFIC SIGNAL FACES, 3-12" HORIZONTAL, LED MODULES*
3	BACKPLATES, 3 SECTION, 12" SIGNAL FACES
4	PEDESTRIAN SIGNAL FACES, 12", LED MODULES*
3	PEDESTRIAN PUSH BUTTONS
1	TRAFFIC SIGNAL MOUNTING HARDWARE, STH 100 (BROWN DEER RD) & N. 60TH ST.

NOTE: THIS TABLE IS FOR INFORMATION ONLY

TRAFFIC SIGNAL FACES 3-12 INCH VERTICAL, LED MODULES*
TRAFFIC SIGNAL FACES 3-12 INCH HORIZONTAL, LED MODULES*
BACKPLATES, 3 SECTION, 12-INCH SIGNAL FACES*
PEDESTRIAN SIGNAL FACES 12-INCH, LED MODULES*

SIG. HEAD NO.	SIG. BASE NO.	3-12" VERT. EACH	3-12" HORZ. EACH	BCKPLT 3-SEC. EACH	PED. FACE EACH
3	SB6		1.0	1.0	
9	SB7	1.0		1.0	
13	SB7	1.0		1.0	
16	SB9				1.0
17	SB11				1.0
19	SB8				1.0
20	SB7				1.0
T		2.0	1.0	3.0	4.0

* INCIDENTAL TO ITEM "TRAFFIC SIGNALS, STH 100 (BROWN DEER RD) & N 60TH ST

NOTE: THIS TABLE IS FOR INFORMATION ONLY

PEDESTAL BASES*
TRANSFORMER BASES, BREAKAWAY, 11 1/2 INCH BOLT CIRCLE*
POLES, TYPE 2 - ALUMINUM*
TRAFFIC SIGNAL STANDARDS, ALUMINUM, 10-FOOT*
TRAFFIC SIGNAL STANDARDS, ALUMINUM, 13-FOOT*
TROMBONE ARMS, 28-FOOT*
PEDESTRIAN PUSH BUTTONS*

SIG. BASE NO.	PED. BASE EACH	TRANS. BASE EACH	POLE TYPE 2 EACH	10-FOOT STAND. EACH	13-FOOT STAND. EACH	28-FOOT TROMB. EACH	PUSH BUTTON EACH
6		1.0	1.0		1.0	1.0	1.0
7	1.0						1.0
8							1.0
11	1.0			1.0			1.0
TOTAL	2.0	1.0	1.0		1.0	1.0	4.0

* INCIDENTAL TO ITEM TRAFFIC SIGNALS, STH 100 (BROWN DEER RD) & N. 60TH ST.

653.0135 PULL BOXES STEEL 24X36-INCH 653.0140 PULL BOXES STEEL 24X42-INCH			
PULL BOX NO.	LOCATION*	24"x36" EACH	24"x42" EACH
10	152+58, 68.2' RT	1.0	
11	152+27.6, 37.4' RT	1.0	
12	151+98, 38.4' RT	1.0	
20	143+3.4, 5.9' RT		1.0
21	143+3.5, 54.6' RT		1.0
	TOTAL	3.0	2.0

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD.

204.0195 REMOVING CONCRETE BASES		
SIGNAL BASE NO.	LOCATION*	EACH
SB6	152+59.4, 49.7' RT	1.0
SB7	152+44.3, 27.8' RT	1.0
	TOTAL	2.0

SPV.0060 REMOVE PULL BOX		
PB NO.	LOCATION	REM. PB EACH
PB10	152+58, 32.3' RT	1.0
PB11	152+29.8, 27.9' RT	1.0
PB12	151+98, 38.6' RT	1.0
	TOTAL	3.0

SPV.0105.02 TEMPORARY TRAFFIC SIGNALS	
LOCATION	L.S.
STH 100 (BROWN DEER RD) & 60TH ST.	1
TOTAL	1.0

SPV.0105.01 TRAFFIC SIGNALS	
LOCATION	L.S.
STH 100 (BROWN DEER RD) & 60TH ST.	1
TOTAL	1.0

ALL ITEMS ON THIS SHEET ARE CAT 0010

652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH
652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH
652.0605 CONDUIT, SPECIAL, 2-INCH

LOC.	TO	LOC.	NONMET. 2-INCH	NONMET. 3-INCH	SPECIAL 2-INCH
PB5	TO	PB20		34.00	
PB20	TO	PB21		97.00	
PB21	TO	PB10		50.00	
PB10	TO	SB6	17.00		
PB10	TO	SB7	19.00		
PB10	TO	SB11	7.00		
PB10	TO	EXT1		76.00	
PB10	TO	PB11	32.00		
PB11	TO	PB12	100.00		31.00
		TOTAL	175.0	257.0	31.0

654.0101 CONCRETE BASES, TYPE 1
654.0102 CONCRETE BASES, TYPE 2

SIGNAL BASE NO.	LOCATION*	TYPE 1 EACH	TYPE 2 EACH
6	152+61.4,72.5' RT		1.0
7	152+44.4,41.8' RT	1.0	
11	152+57.89,59.1 RT	1.0	
	TOTAL	2.0	1.0

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD.

SUMMARY OF ITEMS FOR TRAFFIC DETECTOR LOOPS

ITEM		QTY.	
652.0800	CONDUIT LOOP DETECTOR	435.0	LF
652.0900	LOOP DETECTOR SLOTS	449.0	LF
655.0700	LOOP DETECTOR LEAD IN CABLE	2072.0	LF
655.0800	LOOP DETECTOR WIRE	1630.0	LF

NOTE: THIS TABLE IS FOR INFORMATION ONLY

TRAFFIC DETECTOR LOOPS

LOOP NO.	HOME RUN PB	LOCATION*	SIZE (FT)x(FT)	NO. OF TURNS	PAVEMENT TYPE	SDD INSTALLATION REFERENCE
B1	PB12	151+00, 22.3' RT	6x15	5	CONCRETE	LOOP DECTECTOR PLACED IN CRUSHED AGGREGATE BASE (NEW CONCRETE PAVEMENT)
B2	PB11	152+22, 28.6 RT	6x20	4	CONCRETE	LOOP DECTECTOR PLACED IN CRUSHED AGGREGATE BASE (NEW CONCRETE PAVEMENT)
B3	PB11	152+58.28.6 RT	6x20	4	CONCRETE	LOOP DECTECTOR PLACED IN CRUSHED AGGREGATE BASE (NEW CONCRETE PAVEMENT)
B4	PB11	152+22.15.6' RT	6x20	4	CONCRETE	LOOP DECTECTOR PLACED IN CRUSHED AGGREGATE BASE (NEW CONCRETE PAVEMENT)
B5	PB11	152+58.15.6 RT	6x20	4	CONCRETE	LOOP DECTECTOR PLACED IN CRUSHED AGGREGATE BASE (NEW CONCRETE PAVEMENT)
B6	PB11	152+22.2.6 RT	6x20	4	CONCRETE	LOOP DECTECTOR PLACED IN CRUSHED AGGREGATE BASE (NEW CONCRETE PAVEMENT)
B7	PB11	152+58.2.6 RT	6x20	4	CONCRETE	LOOP DECTECTOR PLACED IN CRUSHED AGGREGATE BASE (NEW CONCRETE PAVEMENT)

* LOCATION IS TO FRONT CENTER OF DETECTOR LOOP

ALL ITEMS ON THIS SHEET ARE CAT 0010.

BRASS CAP
Y = 430,437.675
X = 2,537,677.815

W. BRADLEY ROAD

R/W

SLOPE INTERCEPT

GRADE TO SAVE TREE

SAWCUT & MATCH EXISTING

71'

31'

2'

N. 60TH STREET

100+00

101+00

102+00

N 0°35'28" W
2656.86'

103+00

104+00

105+00

106

PI 100+00.000

74'

SLOPE INTERCEPT

GRADE TO SAVE TREE

BM

SAWCUT

STA. 106+00

MATCH LINE

5

5

BENCH MARKS

NO.	STATION	DESCRIPTION	ELEV.
7	105+37.48, 52.31' RT.	TOP CENTER NUT OF FIRE HYD.	700.51

BEGIN PROJECT
STA. 103+62

STA. 105+57 RT.
CONST. CE (HMA)
MATCH 53' RT.
1 - 12"x36' CPCP REO'D.

710
705
700
695
690
685
680

EXISTING PROFILE ALONG R/L

+0.6023 %

K = 219.26
VCL 300.00

VPC STA 104+25.000
VPC EL698.18

VPI STA 105+75.000
VPI EL698.93

PROPOSED PROFILE ALONG R/L

VPOT STA 103+62.000
VPOT EL697.186

105+35.145
698.45

PROPOSED PROFILE
EXISTING PROFILE

695.01
695.95
696.23
696.55
697.01
697.52
697.81
698.04
698.05
698.17
698.29
698.28
698.42
698.40
698.45
698.18
698.36

100+00 100+50 101+00 101+50 102+00 102+50 103+00 103+50 104+00 104+50 105+00 105+50 106+00

PROJECT NO: 2415-07-70	HWY: N. 60TH STREET	COUNTY: MILWAUKEE	PLAN AND PROFILE	SCALE, FEET 0 20 40	SHEET 7/	E

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WISDOT/CADDS SHEET 40

STA. 106+00

STA. 112+00

W. TOWER DRIVE

N 89°16'51" E

STA. 111+09
MATCH EXISTING 60' LT.
1 - 12"x44' CPRC CLASS IV REQ'D.
2 - APRON ENDWALLS REQ'D.

SAWCUT

PI 9+31.766

CTR. 30' R.
STA. 110+66.76, 61' LT.

CTR. 30' R.
STA. 111+51.58,
49' LT.

R/W

GRADE TO SAVE TREE

SLOPE INTERCEPT

GRADE TO SAVE TREE

2'

31'

CONCRETE PAVEMENT, 9-INCH

19'

+52

10'

+00

107+00

108+00

N 0°35'28" W
2656.86'

109+00

110+00

111+00

112

N. 60TH STREET

N. 60TH STREET

CONCRETE PAVEMENT, 9-INCH

GRADE TO SAVE TREE

+24

+84

120'

6'

33'

+00

+48

SAWCUT

5' CONST. PERMIT

HAND RAILING

STA. 111+09.18 N. 60TH STREET =
STA. 10+00.00 W. TOWER AVENUE

SLOPE INTERCEPT

STA. 108+61 RT.
CONST, CE (HMA)
MATCH 53' RT.
1 - 18"x40' CPCP REQ'D.

CONCRETE SIDEWALK, 5-INCH

STA. 110+80 RT.
CONST. CONCRETE SIDEWALK 5-INCH
MATCH 40' RT.
1 - 18"x16' CPCP RE'D.

MATCH LINE

MATCH LINE

BENCH MARKS

NO.	STATION	DESCRIPTION	ELEV.
7	105+37.48, 52.31' RT.	TOP CENTER NUT OF FIRE HYD.	700.51
5	114+93.72, 53.04' RT.	TOP CENTER NUT OF FIRE HYD.	688.68	

K = 219.26
VCL 300.00

VPT STA 107+25.000
VPT EL697.68

-0.8659 %

EXISTING PROFILE ALONG R/L

VPC STA 109+50.000
VPC EL695.68

K = 133.94
VCL 100.00

VPI STA 110+00.000
VPI EL695.25

VPT STA 110+50.000
VPT EL694.44

PROPOSED PROFILE ALONG R/L

-1.6125 %

EXISTING PROFILE
PROPOSED PROFILE

710
705
700
695
690
685
680

| | | |

STA. 112+00

STA. 117+00

STA. 112+00 TO STA. 117+00 LT.
COORDINATE WITH VILLAGE OF
BROWN DEER TO GRADE TO
SAVE TREES.

R/W

SLOPE INTERCEPT

7'

19'

2'

+00

+12

113+00

114+00

N 0°35'28" W
2656.86'

115+00

116+00

117

N. 60TH STREET

+55

33'

CONCRETE SIDEWALK,
5-INCH

BM #5

5' CONST.
PERMIT

6'

BENCH MARKS

SAWCUT

REMOVE CONCRETE
SIDEWALK

+87

+00

CAUTION!

STA. 113+31 RT.
CONST. CE (HMA)
MATCH 60' RT.
1 - 18"x45' CPCP REQ'D.

STA. 114+75 RT.
CONST. CE (HMA)
MATCH 60' RT.
1 - 18"x34' CPCP REQ'D.

NO.	STATION	DESCRIPTION	ELEV.
5	114+93.72, 53.04'RT.	TOP CENTER NUT OF FIRE HYD.	688.68

MATCH LINE

MATCH LINE

5

5

700
695
690
685
680
675
670

1.6025 %

1.0200 %

VPC STA 113+50.000
VPC EL689.61

VPT STA 114+00.000
VPT EL688.80

VPT STA 114+50.000
VPT EL688.29

VCL = 100.00
K = 168.79

PROPOSED PROFILE
ALONG R/L

EXISTING PROFILE
ALONG R/L

EXISTING PROFILE
PROPOSED PROFILE

691.55
692.02

690.56
691.22

689.54
690.41

688.68
689.61

688.09
688.87

687.60
688.29

686.94
687.78

686.27
687.27

685.59
686.76

684.90
686.25

684.31
685.74

685.23

684.72

112+00 112+50 113+00 113+50 114+00 114+50 115+00 115+50 116+00 116+50 117+00

PROJECT NO: 2415-07-70	HWY: N. 60TH STREET	COUNTY: MILWAUKEE	PLAN AND PROFILE	SCALE, FEET 0 20 40	SHEET 73	E

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WISDOT/CADDS SHEET 40

STA. 117+00

STA. 123+00

MATCH LINE

MATCH LINE

5

5

STA. 117+68
MATCH EXISTING 60' LT.
2 - 27"x47' CPRC CLASS IV REQ'D.
4 - APRON ENDWALLS REQ'D.

STA. 122+85.00
2 - PRECAST CONCRETE BOX CULVERT 6 FT X 3 FT REQ'D.
2 - PRECAST WINGWALLS REQ'D.

N

CTR. 30' R.
STA. 117+25.00, 49' LT.

SAWCUT

W. FAIRLANE AVENUE

CTR. 30' R.
STA. 118+42.14, 49' LT.

R/W

R/W

GRADE TO SAVE TREE

SLOPE INTERCEPT

GRADE TO SAVE TREE

125'

2'

7'

19'

2'

19'

31'

47'

28'

CONCRETE PAVEMENT, 9-INCH

S 89°45'43" E

00-02

118+00

+13

+73

119+00

N 0°35'28" W
2656.86'

120+00

121+00

122+00

N. 60TH STREET

N. 60TH STREET

CONCRETE PAVEMENT, 9-INCH

19'

19'

CONCRETE SIDEWALK, 5-INCH

+35

7'

2'

2'

1 - 24" x 14' CPCP REQ'D.

CAUTION!

SLOPE INTERCEPT

GRADE TO SAVE TREE

SAWCUT

REMOVE CONCRETE SIDEWALK

R/W

R/W

SAWCUT

STA. 117+67.79 N. 60TH STREET
STA. 20+00.00 W. FAIRLANE AVENUE

GRADE TO DRAIN

CONST. PERMIT

+50

REGRADE

BENCH MARKS

NO.	STATION	DESCRIPTION	ELEV.
5	114+93.72, 53.04' RT.	TOP CENTER NUT OF FIRE HYD.	688.68

STA. 117+30 RT.
CONST. CONCRETE SIDEWALK 5-INCH
MATCH 50' RT.
1 - 24"x16' CPCP REQ'D.

695
690
685
680
675
670
665

EXISTING PROFILE ALONG R/L

PROPOSED PROFILE ALONG R/L

-0.5000 %

VPC STA 118+50.000
VPC EL684.21

VPI STA 119+00.000
VPI EL683.70

VPT STA 119+50.000
VPT EL683.45

VPC STA 120+50.000
VPC EL682.95

VCL 100.00
K = 192.31

VCL 800.00
K = 600.00

EXISTING PROFILE
PROPOSED PROFILE

684.31 685.74 | 683.74 685.23 | 683.24 684.72 | 682.79 684.21 | 682.35 683.77 | 681.93 683.45 | 681.63 683.20 | 681.33 682.95 | 681.06 682.72 | 680.75 682.53 | 680.49 682.39 | 680.25 682.28 | 680.18 682.22

117+00 117+50 118+00 118+50 119+00 119+50 120+00 120+50 121+00 121+50 122+00 122+50 123+00

PROJECT NO: 2415-07-70	HWY: N. 60TH STREET	COUNTY: MILWAUKEE	PLAN AND PROFILE	SCALE, FEET 0 20 40	SHEET 74	E

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WISDOT/CADDS SHEET 40

STA. 124+28
MATCH EXISTING 95' LT.
1 - PRECAST CONCRETE BOX CULVERT 8 FT X 3 FT REQ'D.
2 - PRECAST WINGWALLS REQ'D

10' CONST. PERMIT

SAWCUT

RELOCATE WV (BY OTHERS)

STA. 124+28.12 N. 60TH STREET = STA. 40+00.00 W. DARNEL AVE.

CONCRETE SIDEWALK, 5-INCH

WALL MODULAR BLOCK

ADJUST MH

5-INCH HMA PAVEMENT, TYPE E-1

CONCRETE CURB & GUTTER 30-INCH, TYPE D

TYPE 1-A RAMP

REMOVE EXISTING STORM SEWER

W. DARNEL AVENUE

N 89°13'22" E 2646.49'

W. DEAN ROAD

STA. 126+57
MATCH EXISTING 60' LT.,RT.
1 - 18"x52' CPRC CLASS IV REQ'D.
2 - APRON ENDWALL REQ'D.

SAWCUT

ASPHALTIC FLUME

CONCRETE CURB & GUTTER 30-INCH, TYPE D

GRADE TO SAVE TREE TREE ISLAND REQUIRED

SLOPE INTERCEPT

CONCRETE PAVEMENT, 9-INCH

CONCRETE CURB & GUTTER 30-INCH, TYPE A

N 0°34'47" W 2656.96'

N. 60TH STREET

REMOVE EXISTING STORM SEWER

ADJUST WV

ADJUST MH

CONCRETE CURB & GUTTER 30-INCH, TYPE D

CONCRETE CURB & GUTTER 30-INCH, TYPE A

REMOVE EXISTING MANHOLE

TYPE 2 RAMP

CONCRETE SIDEWALK, 5-INCH

CONCRETE PAVEMENT, 9-INCH

REMOVE CONCRETE SIDEWALK

REMOVE EXISTING STORM SEWER

ASPHALTIC FLUME

CONCRETE SIDEWALK, 5-INCH

1 - 12" x 16' CPCP REQ'D.

STA. 126+56.86 N. 60TH STREET = STA. 50+00.00 W. DEAN RD.

BRASS CAP
Y = 433,094.503
X = 2,537,650.370

MATCH LINE

CONST. PERMIT

SAWCUT

BENCH MARKS

NO.	STATION	DESCRIPTION	ELEV.
9	131+86.21, 41.96'LT.	TOP CENTER NUT OF FIRE HYD.	687.04

EXISTING PROFILE

PROPOSED PROFILE ALONG R/L

VPI STA 123+50.000
VPI EL 681.46

VCL 600.00
K = 600.00

VPI STA 123+50.000
VPI EL 682.20

VPI STA 126+50.000
VPI EL 682.95

+0.3000 %

EXISTING PROFILE

PROPOSED PROFILE

680.18 682.22
680.14 682.20
680.10 682.22
680.15 682.28
680.33 682.39
680.59 682.53
680.98 682.72
681.50 682.95
681.87 683.20
682.16 683.45
682.01 683.70
682.22 683.95
682.50 684.20

695 690 685 680 675 670 665

123+00 123+50 124+00 124+50 125+00 125+50 126+00 126+50 127+00 127+50 128+00 128+50 129+00

PROJECT NO: 2415-07-70	HWY: N. 60TH STREET	COUNTY: MILWAUKEE	PLAN AND PROFILE	SCALE, FEET 0 20 40	SHEET 75	E

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STA. 130+04 LT.
CONST. PE (BASE AGG.)
MATCH 43' LT.
1 - 18"x22' CPCP REQ'D.

STA. 131+75 LT.
CONST PE (HMA)
MATCH 43' LT.
1 - 12"x24' CPCP REQ'D.

STA. 132+03 LT.
CONST. PE (HMA)
MATCH 43' LT.
1 - 12"x23' CPCP REQ'D.

STA. 132+98 LT.
CONST. PE (HMA)
MATCH 43' LT.
1 - 12"x21' CPCP REQ'D.

STA. 133+32 LT.
CONST. PE (HMA)
MATCH 43' LT.
1 - 12"x28' CPCP REQ'D.

STA. 134+27 LT.
CONST. PE (HMA)
MATCH 43' LT.
1 - 12"x29' CPCP REQ'D.

*8503 *8507 *8511 *8513

STA. 129+00 STA. 135+00

R/W SLOPE INTERCEPT 10' CONST. PERMIT ADJUST MH ADJUST MH 125' 2' 19' NYS

SAWCUT ADJUST WV SAWCUT BM 99 ADJUST MH SAWCUT SAWCUT

STA. 132+12.26 N. 60TH STREET =
STA. 60+00.00 W. DONNA DRIVE

CAPTION

130+00 131+00 132+00 133+00 134+00 135

N 0°34'47" W 2656.96'

N. 60TH STREET 19' 2'

N 89°52'47" E 2656.09

CTR. 30' R. STA. 131+66.12, 49' RT. 6' 1 - 12" x 14' CPCP REQ'D. SAWCUT

W. DONNA DRIVE 61+00

CTR. 30' R. STA. 132+53.81, 49' RT. 6' 1 - 12" x 14' CPCP REQ'D.

REPLACE ASPHALT WITH CONCRETE SIDEWALK, 5-INCH

STA. 132+12
MATCH EXISTING 60' RT.
1 - 12"x47' CPRC REQ'D.
2 - APRON ENDWALLS REQ'D

GRADE TO SAVE TREE SLOPE INTERCEPT

MATCH LINE MATCH LINE

5 5

BENCH MARKS

NO.	STATION	DESCRIPTION	ELEV.
9	131+86.21, 41.96'LT.	TOP CENTER NUT OF FIRE HYD.	687.04

695 690 685 680 675 670 665

EXISTING PROFILE ALONG R/L

VPC STA 130+75.000
VPC EL685.08

VPI STA 132+00.000
VPI EL685.70

VCL 250.00
K = 361.27

PROPOSED PROFILE ALONG R/L

+1.1920 %

VPT STA 133+25.000
VPT EL687.19

VPC STA 134+50.000
VPC EL688.68

K = 147.87
VCL 250.00

EXISTING PROFILE
PROPOSED PROFILE

| | | |

STA. 135+00

STA. 135+05 LT.
CONST. PE (HMA)
MATCH 43' LT.
1 - 12"x21' CPCP REQ'D.

STA. 135+73 LT.
CONST. PE (HMA)
MATCH 43' LT.
1 - 12"x25' CPCP REQ'D.

STA. 136+36 LT.
CONST. PE (HMA)
MATCH 43' LT.
1 - 12"x29' CPCP REQ'D.

STA. 137+02 LT.
CONST. PE (HMA)
MATCH 43' LT.
1 - 12"x26' CPCP REQ'D.

STA. 137+97 LT.
CONST. PE (HMA)
MATCH 43' LT.
1 - 12"x28' CPCP REQ'D.

STA. 138+92 LT.
CONST. PE (HMA)
MATCH 43' LT.
1 - 12"x23' CPCP REQ'D.

STA. 140+06 LT.
CONST. PE (HMA)
MATCH 43' LT.
1 - 12"x31' CPCP REQ'D.

STA. 141+00

#8517 #8527 #8575 #8595 #8607 #8613

10' CONST. PERMIT

5' CONST. PERMIT

R/W

SAWCUT ADJUST MH SAWCUT SAWCUT SAWCUT SAWCUT SAWCUT SLOPE INTERCEPT SAWCUT SAWCUT ADJUST MH

BM #10

CAUTION

ADJUST MH ADJUST MH

19' 2' 2' 19'

136+00 137+00 138+00 139+00 140+00 141

N 0°34'47" W
2656.96'

N. 60TH STREET N. 60TH STREET

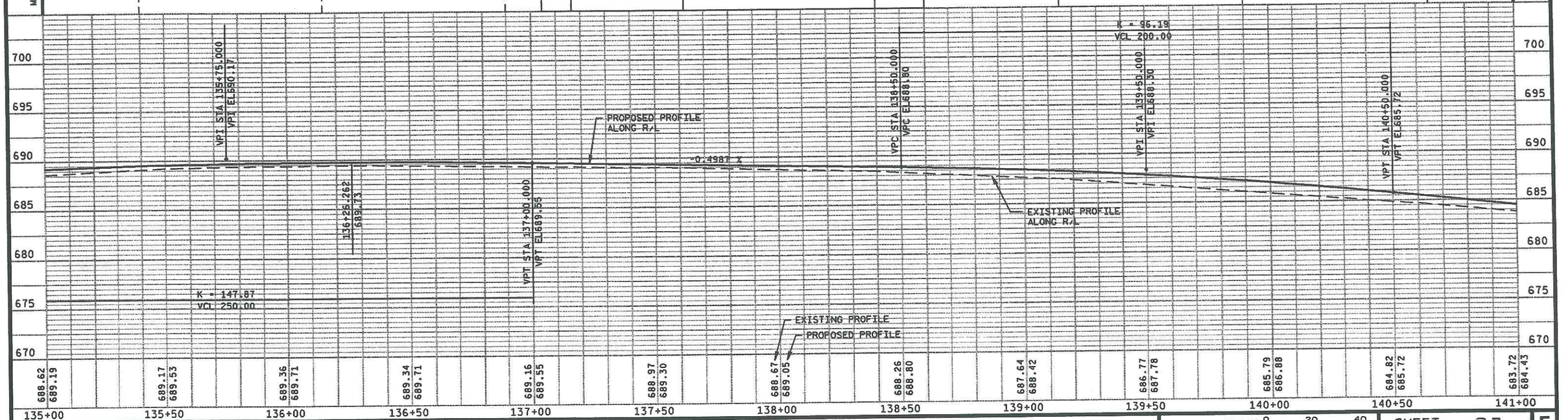
SLOPE INTERCEPT

R/W R/W

MATCH LINE MATCH LINE

BENCH MARKS

NO.	STATION	DESCRIPTION	ELEV.
10	136+80.81, 42.08' LT.	TOP CENTER NUT OF FIRE HYD.	693.20



PROJECT NO: 2415-07-70	HWY: N. 60TH STREET	COUNTY: MILWAUKEE	PLAN AND PROFILE	SCALE, FEET 0 20 40	SHEET 77	E

DESIGN FILE IS r:\46028400\Dgn\050107_pp.dgn DATE OF PLOT = 1/26/2006 PLOT NAME = P:\LASER\050107_pp.prf PEN TABLE = \Plot\pen_tables\level.tbl Created By = MKS Plot Scale: 1" = 40.000000

WISDOT/CADDS SHEET 40

STA. 142+32
MATCH EXISTING 65' LT.
1 - 12"x46' CPRC CLASS IV REQ'D.
2 - APRON ENDWALLS

STA. 144+25 LT.
CONST. PE (HMA)
MATCH 43' LT.
1 - 18"x20'CPCP REQ'D.

STA. 145+76 LT.
CONST. PE (HMA)
MATCH 43' LT.
1 - 18"x43' CPCP REQ'D.

STA. 146+52 LT.
CONST. PE (HMA)
MATCH 43' LT.
1 - 18"x26' CPCP REQ'D.

*8663 *8671 *8681 *8703

STA. 141+00 MATCH LINE

W. WABASH AVENUE

CTR. 30' R.
STA. 141+89.07, 49' LT.

R/W

SAWCUT

CTR. 30' R.
STA. 142+74.70, 49' LT.

SLOPE INTERCEPT

CONCRETE PAVEMENT, 9-INCH

ADJUST MH

BM #11

STA. 145+44.01 N. 60TH STREET =
STA. 80+00.00 W. RANGE LANE

CAUTION

SAWCUT

SAWCUT

SAWCUT

ADJUST MH

R/W

19'

141+00 142+00 143+00 144+00 145+00 146+00 147

N 89°27'15" E 70.00

+75 +35

N 0°34'47" W 2656.96'

+43 +03

N. 60TH STREET

7"

STA. 142+32.13 N. 60TH STREET =
STA. 70+00.00 W. WABASH AVENUE

CONCRETE PAVEMENT, 9-INCH

R/W

GRADE TO SAVE TREE

GRADE TO SAVE TREE

CTR. 30' R.
STA. 145+02.33, 49' RT.

W. RANGE LANE

N. 60TH STREET

2'

SLOPE INTERCEPT

6'

6'

SAWCUT

CTR. 30' R.
STA. 145+87.70, 49' RT.

R/W

GRADE TO SAVE TREE

REPLACE ASPHALT WITH CONCRETE SIDEWALK, 5-INCH
2-12"x15' CPLS REQ'D.

N 88°13'36" E 81.00

STA. 145+44
MATCH EXISTING 60' RT.
1 - 19"x30"x50' CPRCHE CLASS IV REQ'D.
2 - APRON ENDWALLS REQ'D.

STA. 142+00 RT.
CONST. SIDEWALK (HMA)
MATCH 49.25' RT.
1 - 12"x15' CPCS REQ'D.

BENCH MARKS

NO.	STATION	DESCRIPTION	ELEV.
11	142+76.96, 42.06'LT.	TOP CENTER NUT OF FIRE HYD.	681.63

690 685 680 675 670 665 660

VCL 100.00
K = 264.71

VPC STA 143+50.000
VPC ELEV 677.59

VPI STA 144+00.000
VPI ELEV 676.70

VPT STA 144+50.000
VPT ELEV 675.60

VPC STA 145+00.000
VPC ELEV 674.50

VCL 300.00
K = 553.5

VPI STA 146+50.000
VPI ELEV 671.20

-2.5778 %

-2.2000 %

PROPOSED PROFILE ALONG R/L

EXISTING PROFILE ALONG R/L

EXISTING PROFILE

PROPOSED PROFILE

683.72 684.43 | 682.54 683.14 | 681.23 681.86 | 679.93 680.57 | 678.66 679.28 | 677.36 677.99 | 676.03 676.75 | 674.80 675.60 | 673.02 674.50 | 672.89 673.45 | 672.05 672.49 | 671.23 671.63 | 670.41 670.86

141+00 141+50 142+00 142+50 143+00 143+50 144+00 144+50 145+00 145+50 146+00 146+50 147+00

PROJECT NO: 2415-07-70	HWY: N. 60TH STREET	COUNTY: MILWAUKEE	PLAN AND PROFILE	SCALE, FEET 0 20 40	SHEET 78	E

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WISDOT/CADDS SHEET 40

STA. 147+00

STA. 147+12 LT.
CONST. PE (BASE AGG.)
MATCH 43' LT.
1 - 18"x23' CPCP REQ'D.

#8703

#8719

STA. 148+17 LT.
CONST. PE (BASE AGG.)
MATCH 43' LT.
1 - 18"x22' CPCP REQ'D.

STA. 149+13 LT.
CONST. PE (HMA)
MATCH 43' LT.
1 - 18"x26' CPCP REQ'D.

#8731

STA. 149+79 LT.
CONST. PE (HMA)
MATCH 43' LT.
1 - 18"x24' CPCP REQ'D.

#8749

STA. 151+42 LT.
CONST. PE (HMA)
MATCH 43' LT.
1 - 12"x37' CPCP REQ'D.

STA. 151+93
MATCH EXISTING 43' LT.

N

T8 N
R21 E
3 2 11 10

CONCRETE CURB & GUTTER
30-INCH, TYPE D

ASPHALTIC FLUME

BRASS CAP
Y = 435,751.331
X = 2,537,623.485

SAWCUT & MATCH EXISTING

SLOPE INTERCEPT

SAWCUT

GRADE TO SAVE TREE

SAWCUT

SAWCUT

R/W

R/W

ADJUST MH

ADJUST MH

EXISTING SIGNAL LOOP TO BE RELOCATED DURING CONSTRUCTION (BY OTHERS; WDOT)

+00

148+00

N 0°34'47" W
2656.96'

149+00

150+00

151+00

N. 60TH STREET

152+00

153+00

ADJUST WV

N. 60TH STREET

2'

19'

19'

2'

10'

CAUTION

REMOVE EXISTING STORM SEWER

REMOVE EXISTING MANHOLE

80+06

33'

+20

+36

+31

6'

REMOVE CONCRETE SIDEWALK

CONCRETE CURB & GUTTER 30-INCH, TYPE D

10'

6'

ADJUST WV

CONCRETE SIDEWALK, 5-INCH

SIGNAL TO BE RELOCATED BY OTHERS PRIOR TO CONSTRUCTION (WDOT)

TYPE 2 RAMP

BM #12

R/W

SAWCUT

GRADE TO SAVE TREE

SLOPE INTERCEPT

BENCH MARKS

NO.	STATION	DESCRIPTION	ELEV.
12	147+11.36, 56.31' RT.	TOP CENTER NUT OF FIRE HYD.	672.45

15' CONST. PERMIT

SAWCUT

STA. 152+22, 39 RT.
MOVE FIRE HYDRANT
TO STA. 152+34, 58' RT.

R/W

STA. 148+58.77
MATCH EXISTING
65' RT.

REPLACE ASPHALT WITH CONCRETE SIDEWALK, 5-INCH

SAWCUT

TYPE 2 RAMP

W. WAHNER AVENUE

91+00

STA. 151+33 RT.
CONST. PE (HMA)
MATCH 50' RT.

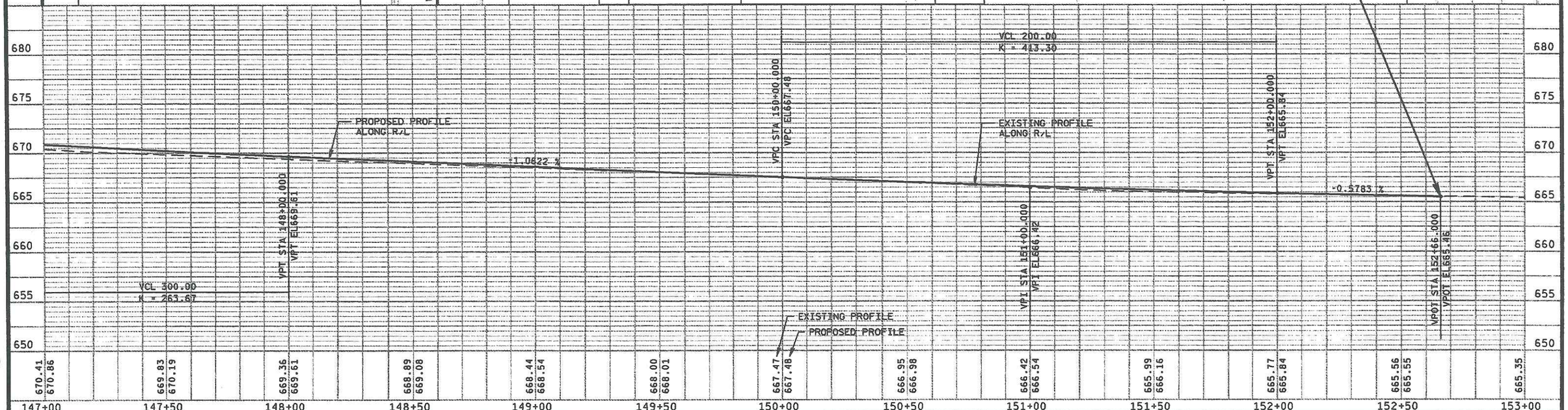
END PROJECT
STA. 152+66

W. BROWN DEER ROAD

MATCH LINE

5

5

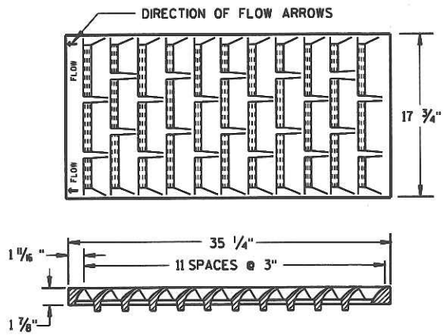


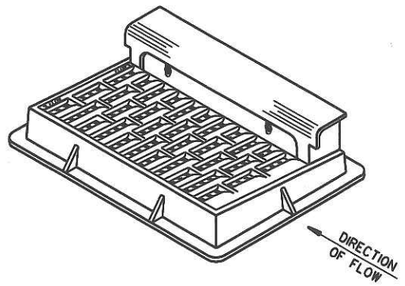
PROJECT NO: 2415-07-70	HWY: N. 60TH STREET	COUNTY: MILWAUKEE	PLAN AND PROFILE	SCALE, FEET 0 20 40	SHEET 79	E

DESIGN FILE IS r:\46028400\Dgn\050109_pp.dgn DATE OF PLOT = 1/27/2006 PLOT NAME = P:\LASER\050109_pp.prf PEN TABLE = \Plot\pen_tables\level.tbl Created By = MKS Plot Scale: 1" = 40.000000

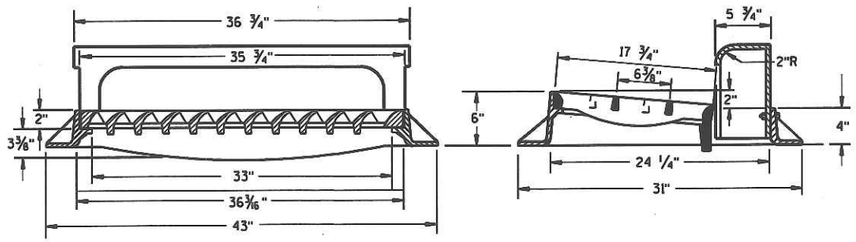
WISDOT/CADDS SHEET 40

NOTE:
GRATE IS REVERSIBLE.





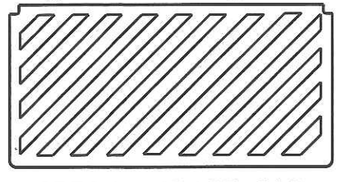
NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"



TYPE "H"

(APPROXIMATE WEIGHT 422 LBS.)
FRAME..... 175 LBS.
GRATE..... 138 LBS.
CURB BOX..... 109 LBS.

1 1/8" DIAGONAL BARS WITH 1 5/8" OPENINGS



SPECIAL GRATE FOR TYPE "H" COVER

(MEASURES 35 1/4" X 17 ¾" X 2")
(APPROXIMATE WEIGHT 172 LBS.)
GRATE..... 172 LBS.

(NOTED AS TYPE H-S ON DRAINAGE TABLE)

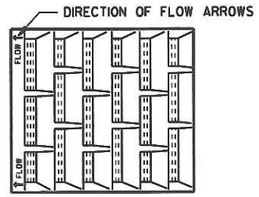
GENERAL NOTES

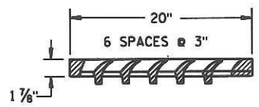
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

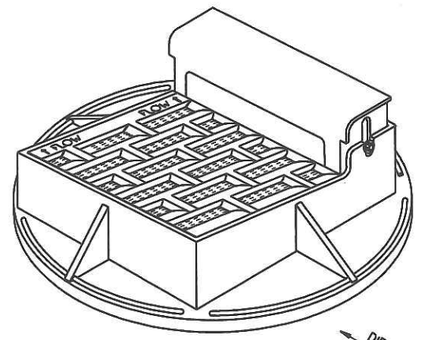
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR CATCH BASIN, MANHOLE AND INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.

THE ACTUAL WEIGHT OF COVERS MAY VARY WITHIN 5 PERCENT, PLUS OR MINUS, OF THE APPROXIMATE WEIGHT.

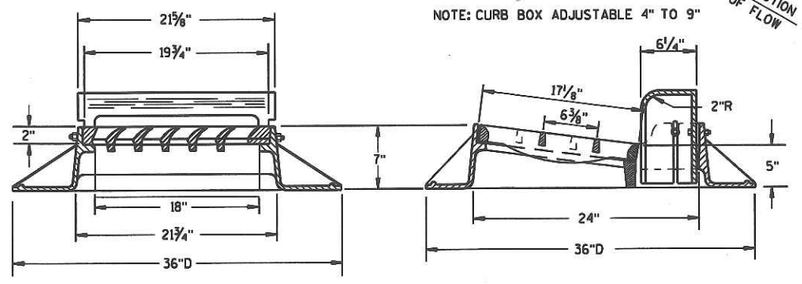






NOTE: CURB BOX ADJUSTABLE 4" TO 9"

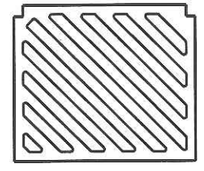
NOTE:
GRATE IS REVERSIBLE.



TYPE "A"

(APPROXIMATE WEIGHT 325 LBS.)
FRAME..... 157 LBS.
GRATE..... 84 LBS.
CURB BOX..... 84 LBS.

1" DIAGONAL BARS WITH 1½" OPENINGS



SPECIAL GRATE FOR TYPE "A" COVER

(MEASURES 19 ¾" X 17" X 1 7/8"
GRATE..... 84 LBS.

(NOTED AS TYPE A-S ON DRAINAGE TABLE)

INLET COVERS
TYPE A, H, A-S, & H-S

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

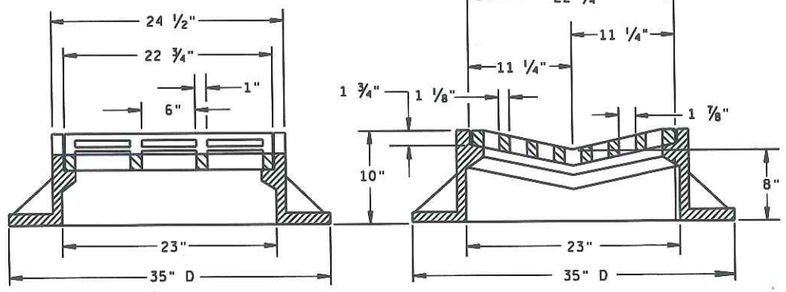
APPROVED
10/1/99
DATE
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

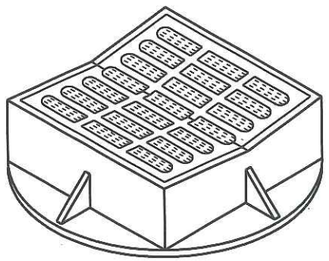
6

S.D.D. 8 A 5-16a

6

S.D.D. 8 A 5-16a

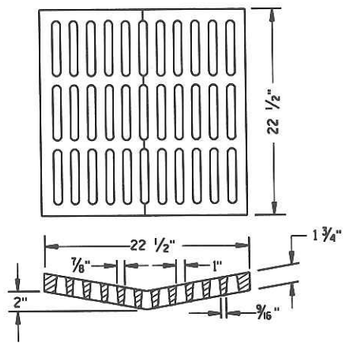




TYPE "B"

(APPROXIMATE WEIGHT 395 LBS.)

FRAME..... 285 LBS.
GRATE..... 110 LBS.

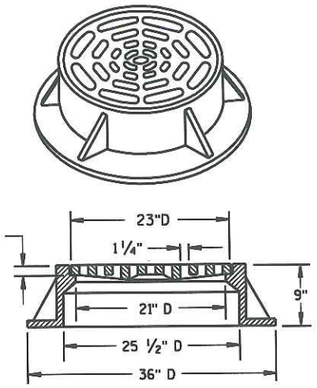


ALTERNATIVE GRATE FOR TYPE "B" COVER

(APPROXIMATE GRATE WEIGHT 125 LBS.)
GRATE.....125 LBS.

USE WHERE PEDESTRIAN OR BICYCLE TRAFFIC IS POSSIBLE.

NOTED AS TYPE B-A ON THE DRAINAGE TABLE



TYPE "C"

(APPROXIMATE WEIGHT 340 LBS.)

FRAME..... 235 LBS.
GRATE..... 105 LBS.

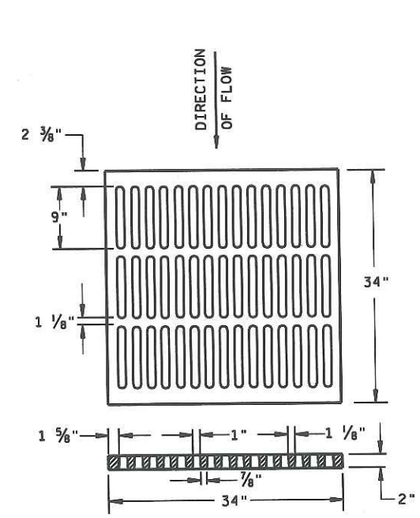
GENERAL NOTES

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.

THE ACTUAL WEIGHT OF COVERS MAY VARY WITHIN 5 PERCENT, PLUS OR MINUS, OF THE APPROXIMATE WEIGHT.

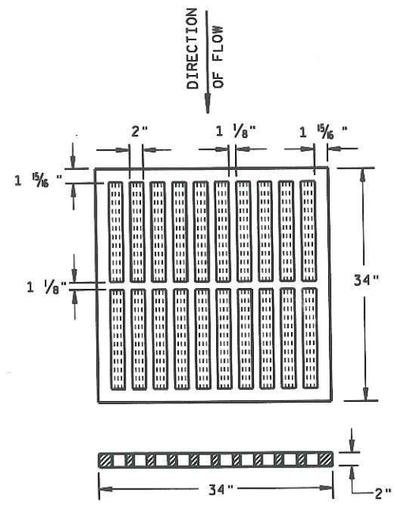


ALTERNATIVE TYPE "MS"

(APPROXIMATE GRATE WEIGHT 365 LBS.)
GRATE.....365 LBS.

USE WHERE PEDESTRIAN OR BICYCLE TRAFFIC IS PERMITTED

NOTED AS TYPE MS-A ON THE DRAINAGE TABLE

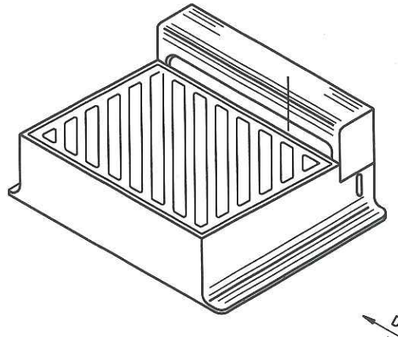


TYPE "MS"

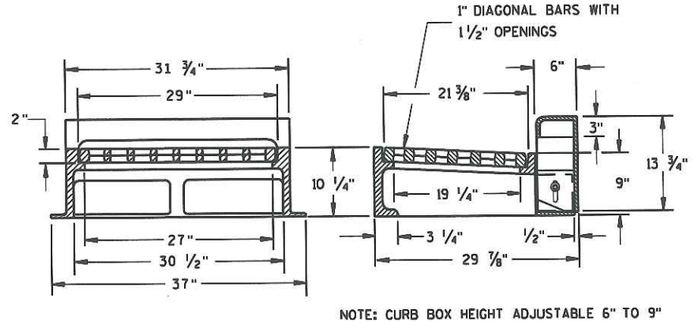
(APPROXIMATE GRATE WEIGHT 270 LBS.)
GRATE.....270 LBS.

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"

(APPROXIMATE WEIGHT 670 LBS.)

FRAME..... 360 LBS.
GRATE..... 160 LBS.
CURB BOX..... 150 LBS.

INLET COVERS
TYPE B, B-A, C, MS, MS-A, & WM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/4/99
DATE

CHIEF ROADWAY DEVELOPMENT ENGINEER

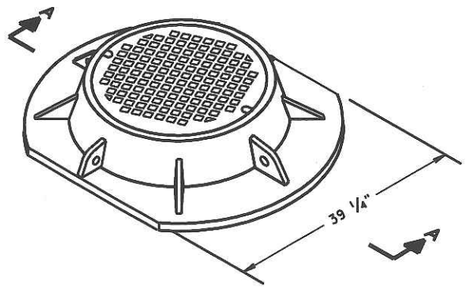
FHWA

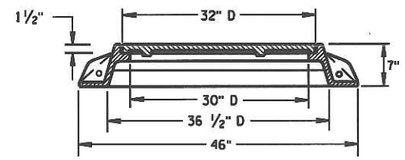
6

S.D.D. 8 A 5-16b

6

S.D.D. 8 A 5-16b



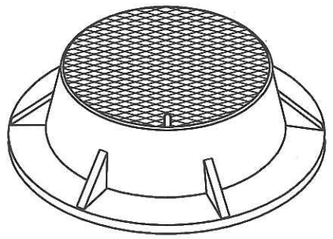


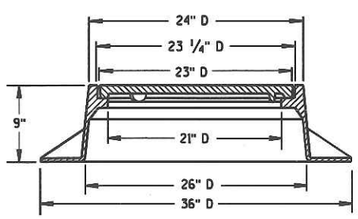
SECTION A-A

TYPE "K"

(APPROXIMATE WEIGHT 415 LBS.)

FRAME.....210 LBS.
LID.....205 LBS.

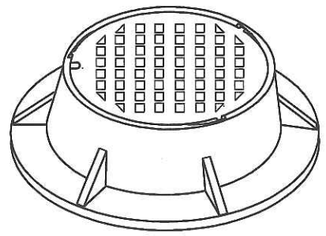


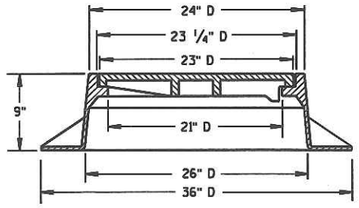


TYPE "J"

(APPROXIMATE WEIGHT 250 LBS.)

FRAME.....135 LBS.
LID.....115 LBS.





TYPE "J" SPECIAL

TYPE "B" NON-ROCKING SELF-SEAL LID

(APPROXIMATE WEIGHT 245 LBS.)

FRAME.....145 LBS.
LID.....100 LBS.

(NOTED AS TYPE J-S ON THE DRAINAGE TABLE)

GENERAL NOTES

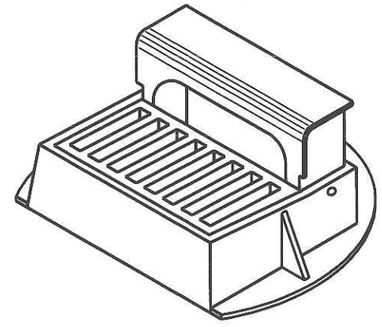
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

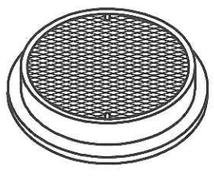
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR MANHOLE COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

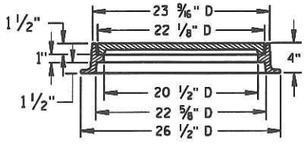
ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.

THE ACTUAL WEIGHT OF COVERS MAY VARY WITHIN 5 PERCENT, PLUS OR MINUS, OF THE APPROXIMATE WEIGHT.

(1) MANUFACTURER MAY PROVIDE ADDITIONAL SEALS OR GASKETS.



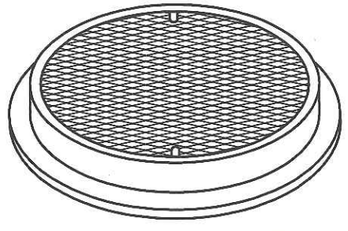


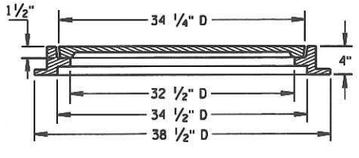


TYPE "L"

(APPROXIMATE WEIGHT 145 LBS.)

FRAME.....75*
LID.....70*

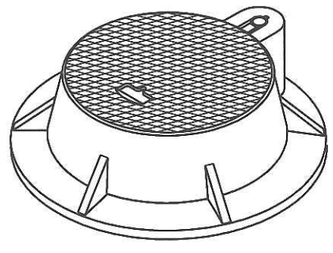


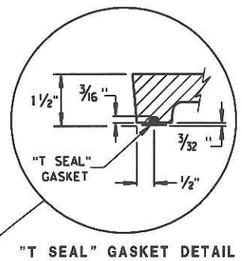


TYPE "M"

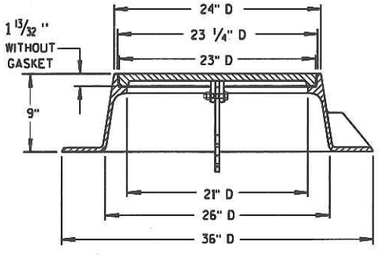
(APPROXIMATE WEIGHT 385 LBS.)

FRAME..... 125*
LID..... 260*





"T SEAL" GASKET DETAIL



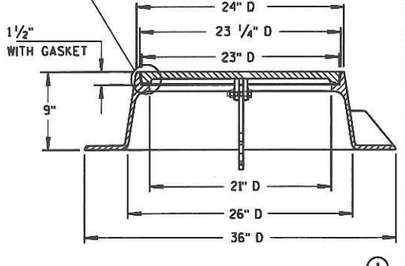
TYPE "J" HINGED

LID WITHOUT "T SEAL" GASKET

(APPROXIMATE WEIGHT 310 LBS.)

FRAME.....190 LBS.
LID.....120 LBS.

(NOTED AS TYPE J-H ON THE DRAINAGE TABLE)



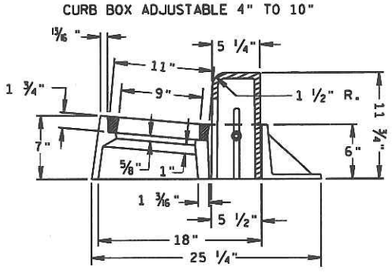
TYPE "J" HINGED-SPECIAL (1)

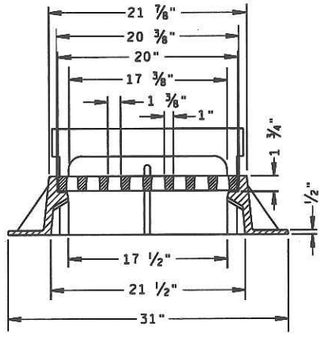
LID WITH "T SEAL" GASKET

(APPROXIMATE WEIGHT 310 LBS.)

FRAME.....190 LBS.
LID.....120 LBS.

(NOTED AS TYPE J-S-H ON THE DRAINAGE TABLE)





INLET COVER TYPE "Z"

(APPROXIMATE WEIGHT 340 LBS.)

FRAME.....198 LBS.
GRATE..... 50 LBS.
CURB BOX..... 92 LBS.

INLET COVER, TYPE Z
MANHOLE COVERS, TYPE
K, J, J-S, J-H, J-H-S, L & M

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4-29-05
DATE
FHWA

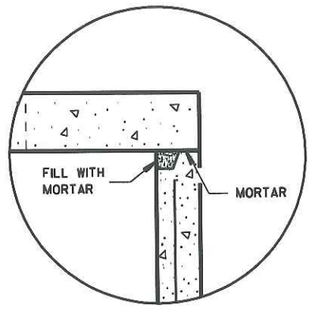
CHIEF ROADWAY DEVELOPMENT ENGINEER

6

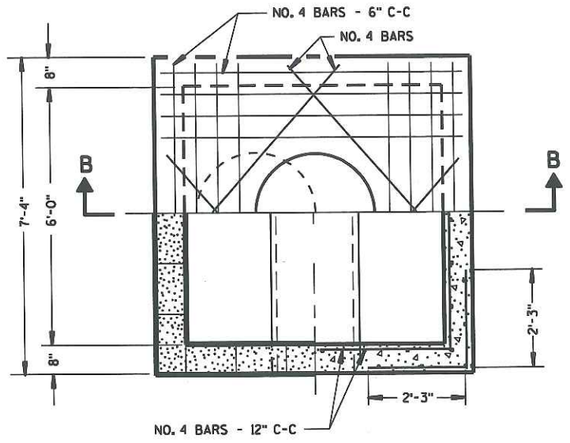
S.D.D. 8 A 5-17d

6

S.D.D. 8 A 5-17d



DETAIL "A"



HALF 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.

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 1-C", "CATCH BASINS 1-B", "INLETS 3-H", ETC. THE FIRST DIGIT DESIGNATES THE MASONRY PORTION OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

PRECAST REINFORCED BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF GRANULAR BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

STEPS CONFORMING TO AASHTO M 199 SHALL BE INSTALLED IN ALL STRUCTURES OVER 5 FEET IN DEPTH.

SOLID ALUMINUM STEPS SHALL HAVE A MINIMUM CROSS SECTIONAL DIMENSION OF 0.75 INCH. ALUMINUM SURFACES TO BE EMBEDDED IN CONCRETE SHALL BE GIVEN ONE COAT OF SUITABLE QUALITY PAINT, SUCH AS ZINC CHROMATE PRIMER CONFORMING TO FEDERAL SPECIFICATION TT-P-645 OR EQUIVALENT.

ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

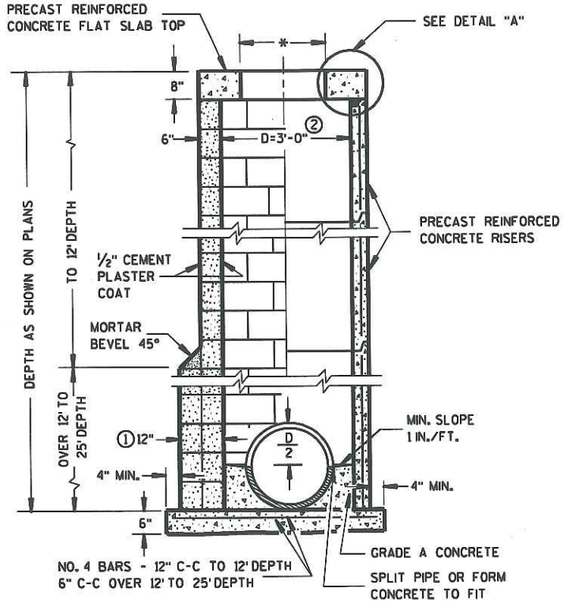
PRECAST REINFORCED CONCRETE RISERS MAY BE PLACED WITH TONGUE UP OR DOWN.

ALL PRECAST INLET UNITS AND MANHOLES SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M 199.

* USE 2'-0" DIAMETER OPENING WITH TYPE "C", "L" AND "J" COVERS, OR 3'-0" DIAMETER WITH TYPE "K" AND "M" COVERS.

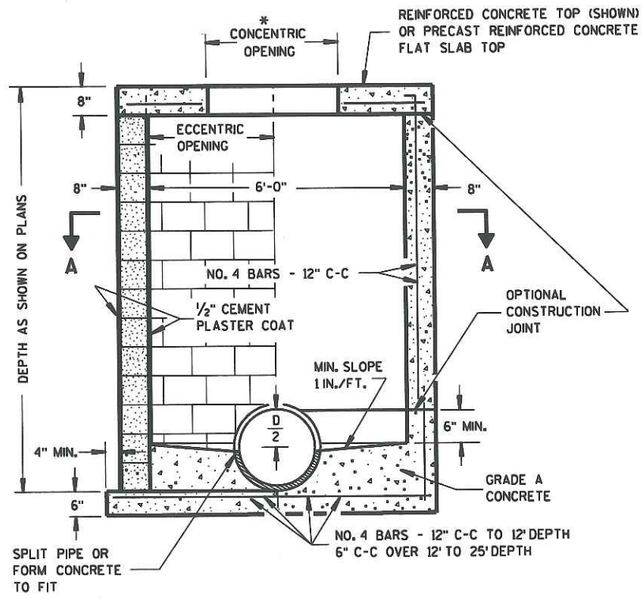
① 2 COURSES 6" BLOCK.

② WHEN CONNECTING PIPES ARE 24" OR LARGER THE PRECAST MANHOLES MAY BE INCREASED TO 42" DIAMETER.



CONCRETE BLOCK ② PRECAST REINFORCED CONCRETE

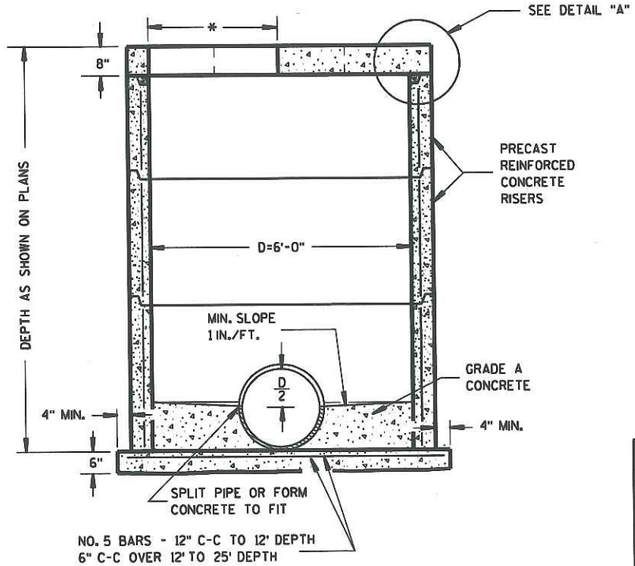
MANHOLES TYPE 2



SECTION B-B

CONCRETE BLOCK REINFORCED CONCRETE

MANHOLES TYPE 3



PRECAST REINFORCED CONCRETE

MANHOLES TYPE 2 & 3

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

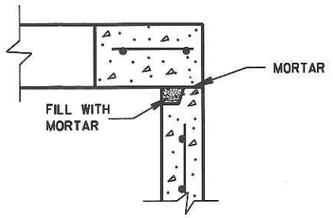
APPROVED 9/9/05 DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 8 B 7-4

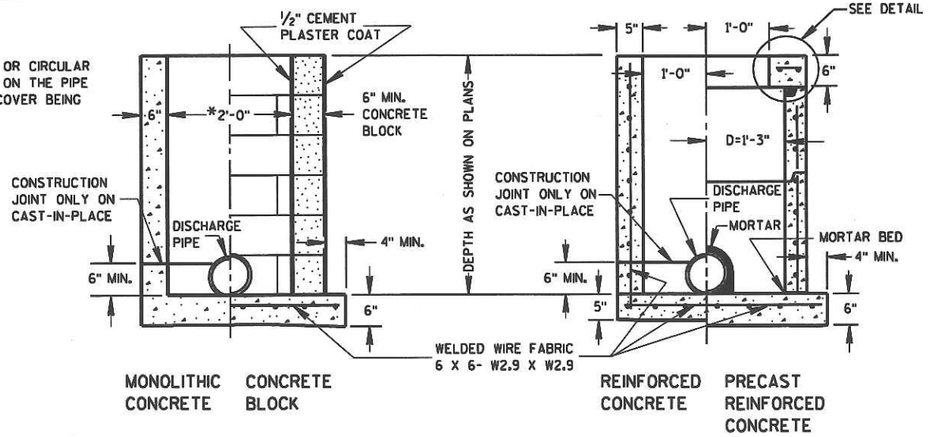
6

S.D.D. 8 B 7-4



DETAIL "A"

*SELECTION OF SQUARE OR CIRCULAR DESIGN WILL BE BASED ON THE PIPE SIZES AND THE INLET COVER BEING UTILIZED



INLETS TYPE 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.

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 AASHTO DESIGNATION M 199.

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 1-C", "CATCH BASINS 1-B", "INLETS 3-H", ETC. THE FIRST DIGIT DESIGNATES THE MASONRY PORTION OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

PRECAST REINFORCED BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF GRANULAR BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

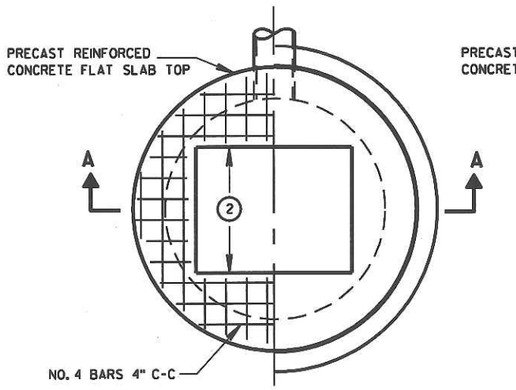
PRECAST REINFORCED CONCRETE FLAT SLAB TOPS MAY BE USED ON THE STRUCTURES. THE TOPS SHALL BE INSTALLED ON A BED OF MORTAR.

ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

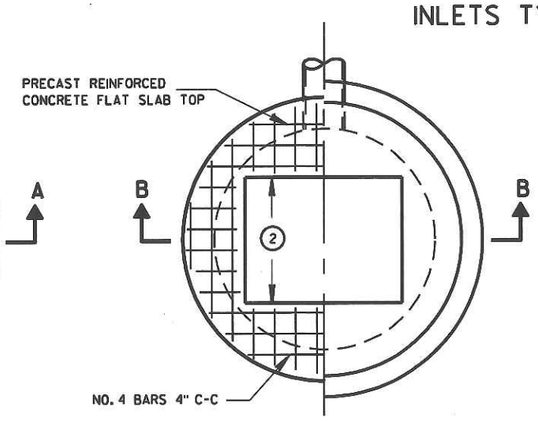
PRECAST REINFORCED CONCRETE RISERS SHALL BE PLACED WITH TONGUE DOWN.

(1) USE 2'-6" OPENING FOR TYPE 2 INLETS, 3'-0" OPENING FOR TYPE 3 INLETS, AND 2'-11" FOR TYPE 4 INLETS.

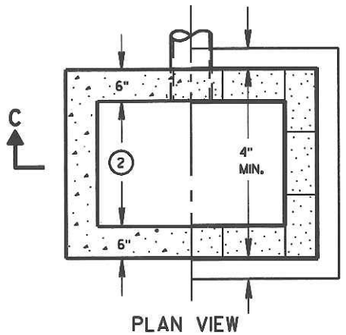
(2) USE 2'-0" OPENING FOR TYPE 1, 2 & 3 INLETS, 2'-6½" OPENING FOR TYPE 4 INLETS.



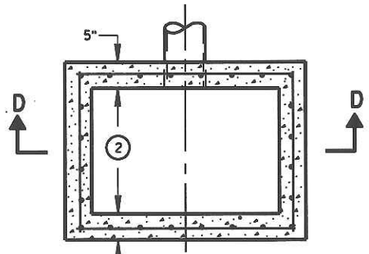
PLAN VIEW



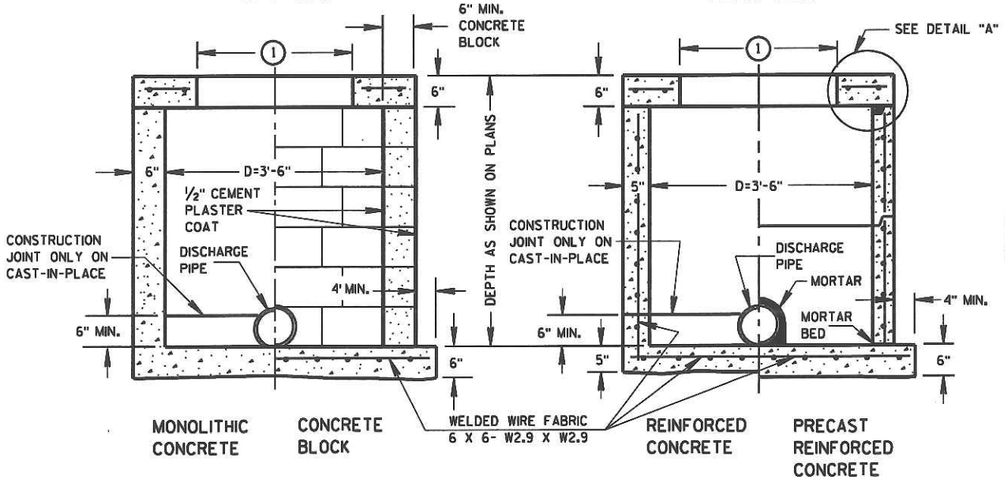
PLAN VIEW



PLAN VIEW

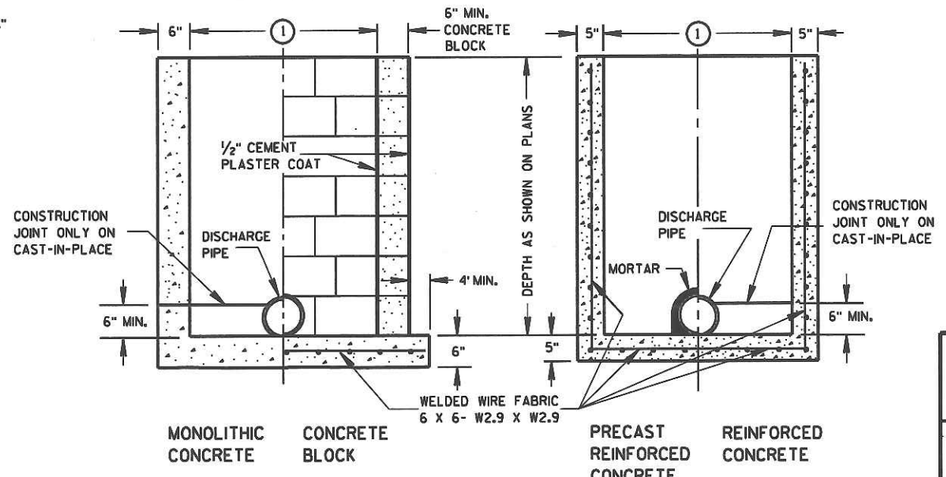


PLAN VIEW



SECTION A-A

SECTION B-B



SECTION C-C

SECTION D-D

INLETS TYPE 2, 3 & 4

INLETS TYPE 1, 2, 3 & 4

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

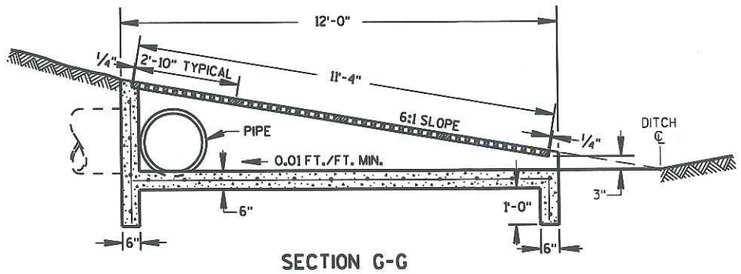
APPROVED 8/26/94 DATE

CHIEF ROADWAY DEVELOPMENT ENGINEER

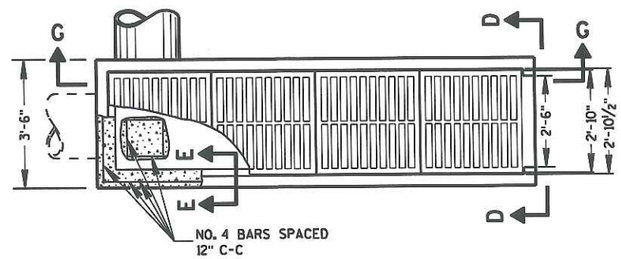
FHWA

6

S.D.D. 8 C 1-5

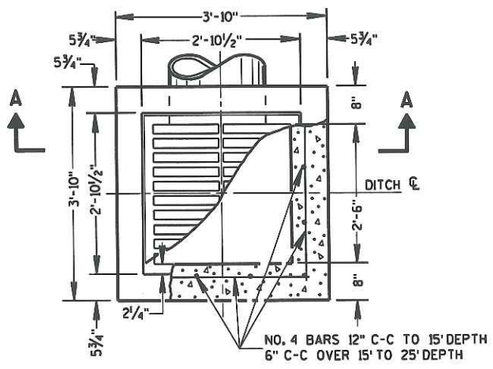


SECTION G-G

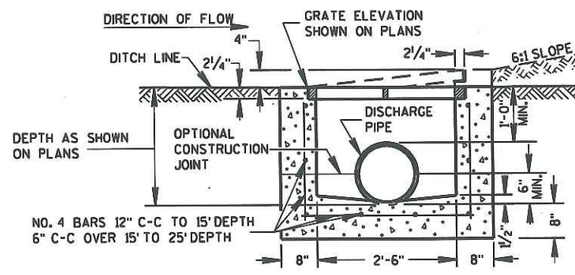


PLAN VIEW

REINFORCED CONCRETE INLET TYPE 11

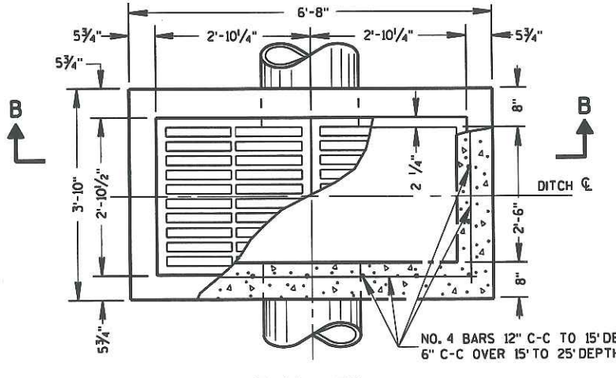


PLAN VIEW

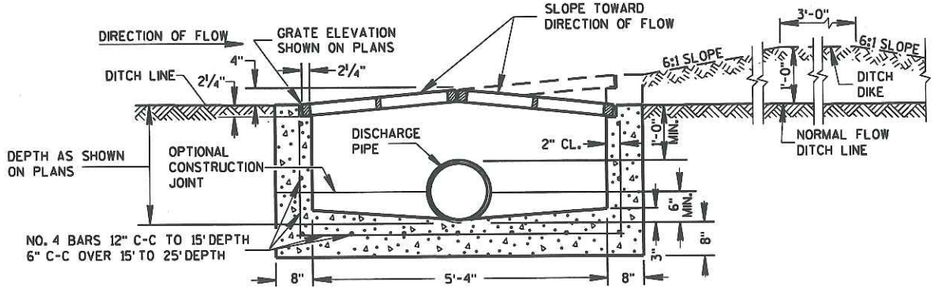


SECTION A-A

REINFORCED CONCRETE INLET TYPE 8



PLAN VIEW



SECTION B-B

REINFORCED CONCRETE INLET TYPE 9

GENERAL NOTES

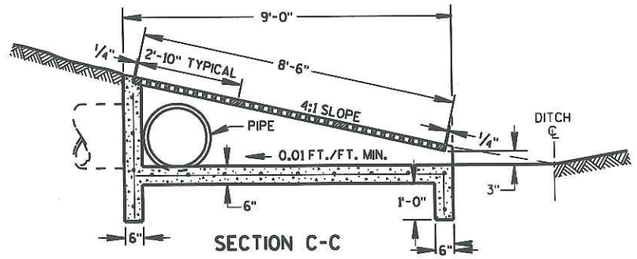
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

DETAILED DRAWINGS 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.

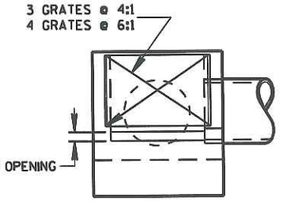
PRECAST REINFORCED CONCRETE INLET UNITS, IF USED, SHALL CONFORM TO THE REQUIREMENTS OF THE CATCH BASINS, MANHOLES AND INLETS SECTION OF THE STANDARD SPECIFICATIONS. UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST INLET UNITS REQUIRED FOR THE PROJECT UNTIL A CORRECTED LIST OF SIZES IS FURNISHED BY THE ENGINEER.

ALL INLETS ARE DESIGNATED ON THE PLANS AS "INLETS, 8-MS", ETC. THIS DESIGNATION IS INTERPRETED TO MEAN THAT THE NUMBER, OR FIRST DIGIT DESIGNATES THE MASONRY PORTION OF THE STRUCTURE AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER OR IRON CASTING TO BE USED THEREWITH TO COMPRISE THE COMPLETE UNIT.

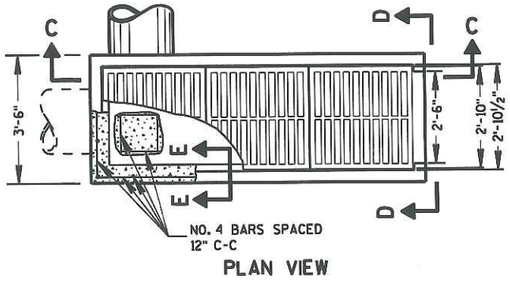
ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.



SECTION C-C

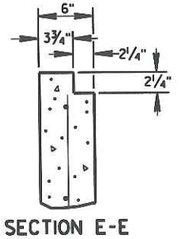


SECTION D-D



PLAN VIEW

REINFORCED CONCRETE INLET TYPE 10



SECTION E-E

INLETS TYPE 8, 9, 10 AND 11

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

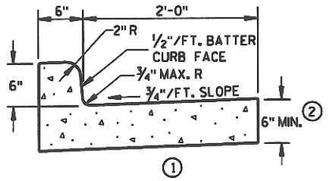
APPROVED
8/10/94
DATE
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

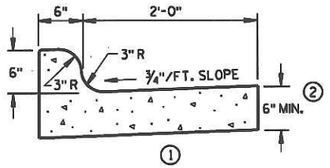
S.D.D. 8 C 5-2

6

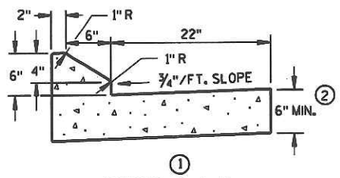
S.D.D. 8 C 5-2



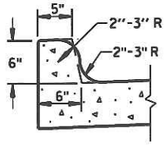
1
TYPES A & D



1
TYPES K & L

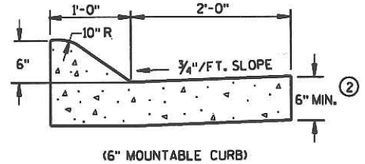


1
TYPES G & J

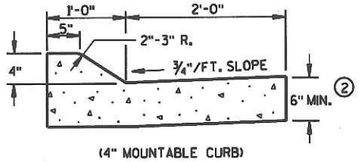


OPTIONAL CURB SHAPE
1
FOR TYPES K & L

CONCRETE CURB & GUTTER 30"



(6" MOUNTABLE CURB)



(4" MOUNTABLE CURB)

1
TYPES A & D

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.

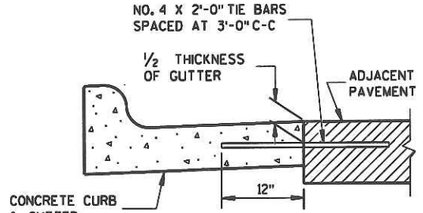
WHERE THE TRANSVERSE JOINTS IN THE PAVEMENT ARE REQUIRED TO BE SEALED, THE JOINTS IN THE INTEGRAL CURB AND GUTTER SHALL BE SEALED TO THE FACE OF CURB WITH THE SAME TYPE OF SEALANT. THE COST OF FURNISHING AND INSTALLING THIS SEALANT SHALL BE INCIDENTAL TO THE ITEM CONCRETE CURB AND GUTTER.

UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE COURSE AND UNCLASSIFIED EXCAVATION LIMITS ARE 2'-0" BEHIND THE BACK OF CURBS.

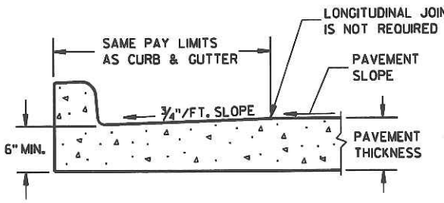
(1) TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G AND K.

(2) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE COURSE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.

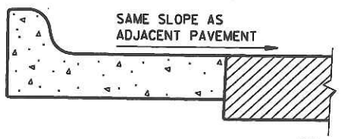
(3) WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.



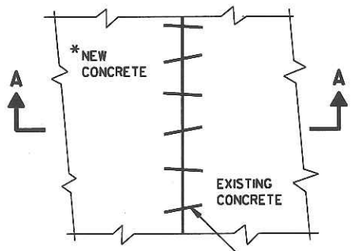
1
TYPICAL TIE BAR LOCATION



PARTIAL SECTION OF PAVEMENT WITH INTEGRAL CURB & GUTTER

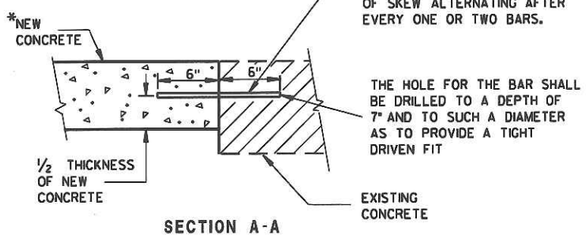


3
REVERSE SLOPE GUTTER
(TYPICAL FOR ALL CURB & GUTTER TYPES)



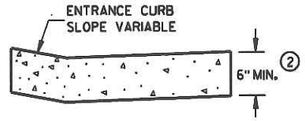
PLAN VIEW

*NEW CURB & GUTTER, SURFACE DRAINS, CONCRETE PAVEMENT OR OTHER NEW CONCRETE.

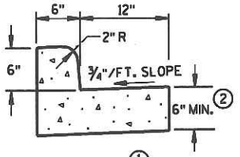


SECTION A-A

PAVEMENT TIES

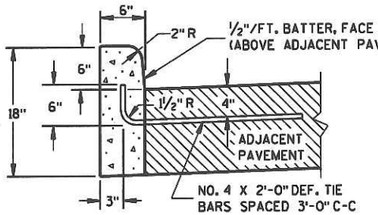


DRIVEWAY ENTRANCE CURB
(WHEN DIRECTED BY THE ENGINEER)

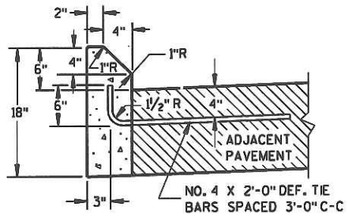


1
TYPES A & D

CONCRETE CURB & GUTTER 18"



1
TYPES A & D



1
TYPES G & J

CONCRETE CURB

CONCRETE CURB, CONCRETE CURB & GUTTER AND PAVEMENT TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4/16/99
DATE
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

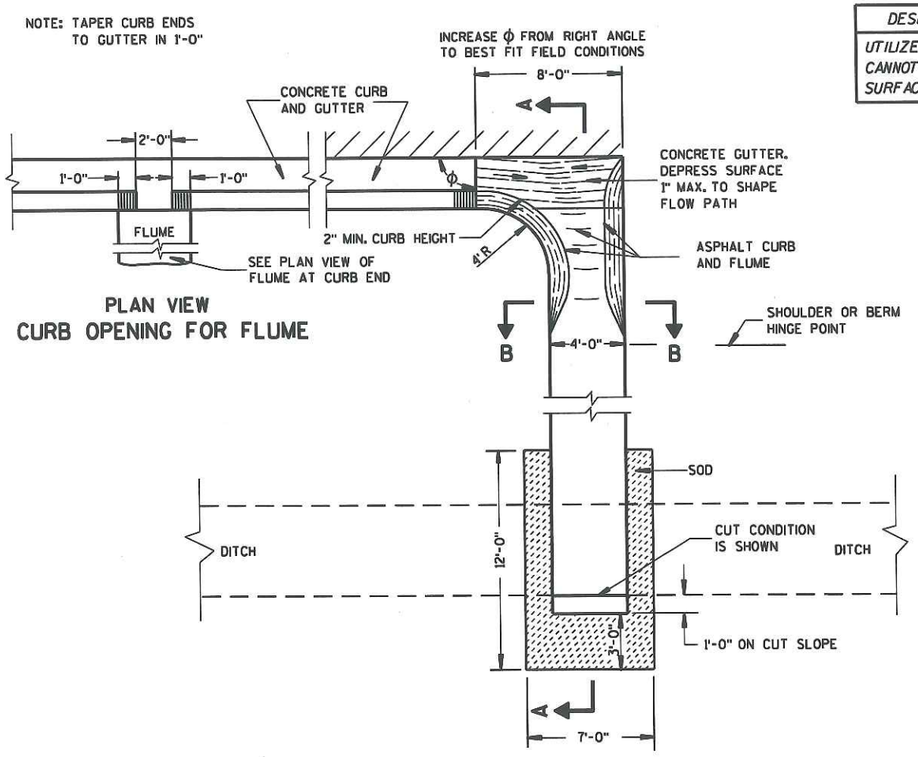
6

S.D.D. 8 D 1-13

6

S.D.D. 8 D 1-13

ASPHALTIC FLUME

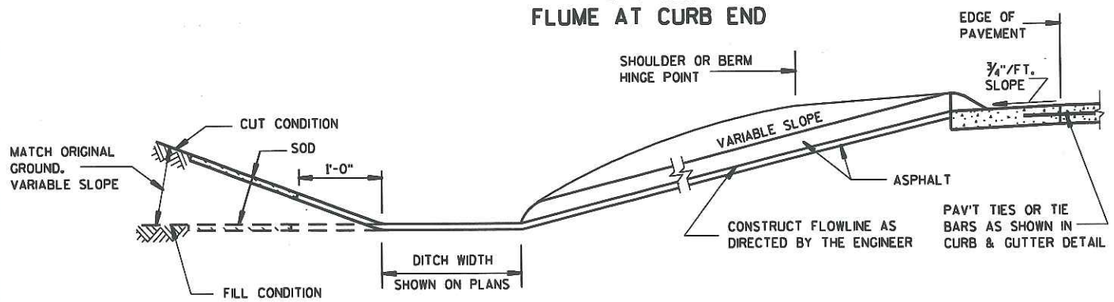


PLAN VIEW
CURB OPENING FOR FLUME

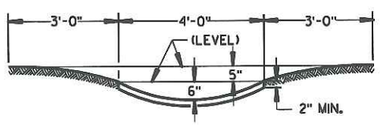
PLAN VIEW
FLUME AT CURB END

DESIGN NOTES: (WILL NOT APPEAR IN CONTRACT PLANS)

UTILIZE INLETS WHERE STORM WATER VOLUME AND VELOCITY CANNOT BE ACCOMODATED EFFECTIVELY WITH A FLUME OR SURFACE DRAIN.



SECTION A-A



SECTION B-B

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

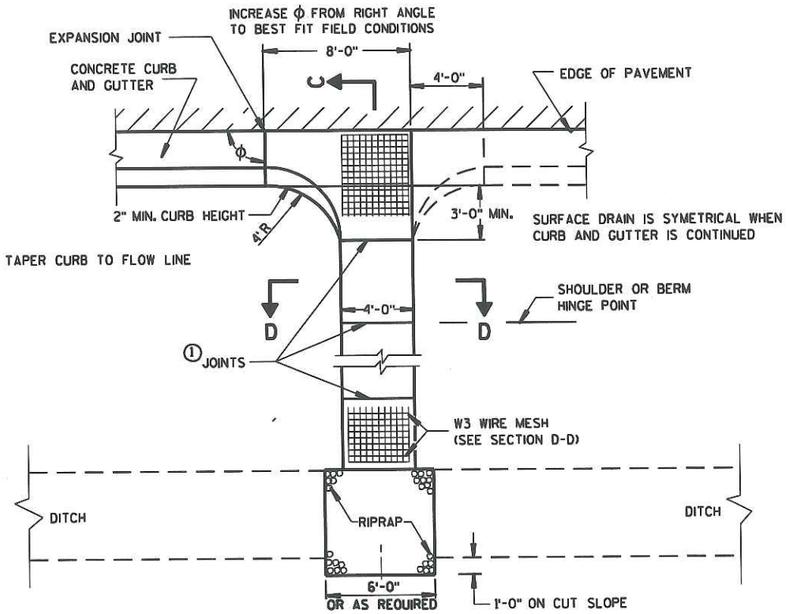
WELDED STEEL WIRE FABRIC SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

① JOINTS SHALL BE ⅛ TO ¼ INCH WIDE BY 1½ INCHES DEEP AND SPACED AT UNIFORM INTERVALS OF APPROXIMATELY 4 FEET.

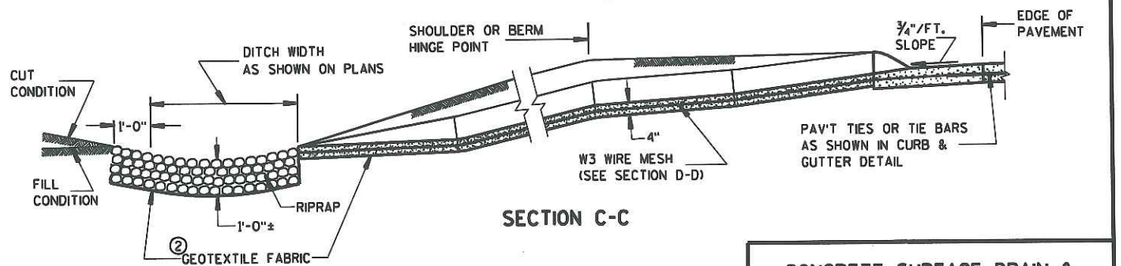
② GEOTEXTILE FABRIC TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.

③ CONCRETE SURFACE DRAIN WITHOUT CURB AND GUTTER MAY BE USED ON BACKSLOPES WHEN SPECIFIED

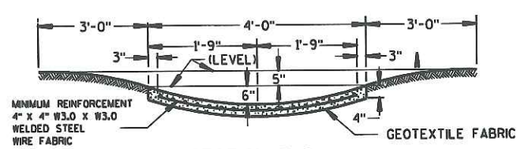
③ CONCRETE SURFACE DRAIN



PLAN VIEW



SECTION C-C



SECTION D-D

CONCRETE SURFACE DRAIN & ASPHALTIC FLUME

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/23/89
DATE
STATE DESIGN ENGINEER FOR HWYS

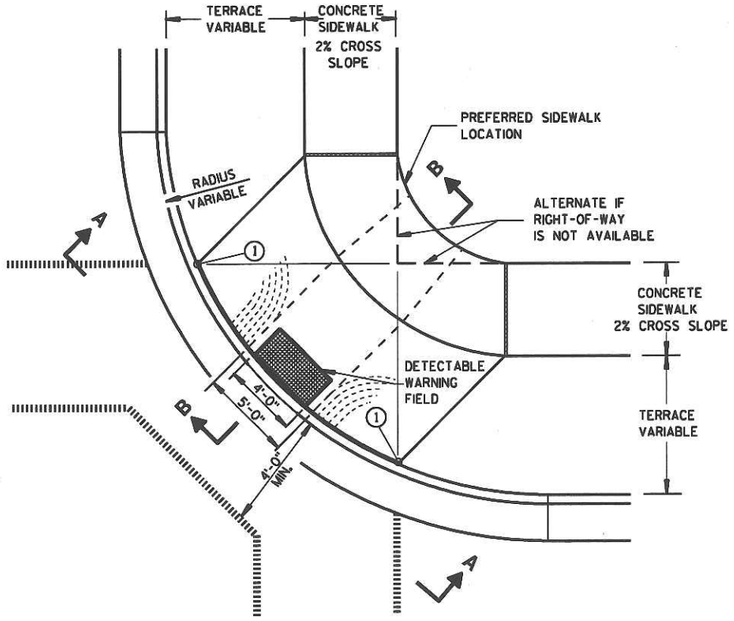
FHWA

6

S.D.D. 8 D 4-3

6

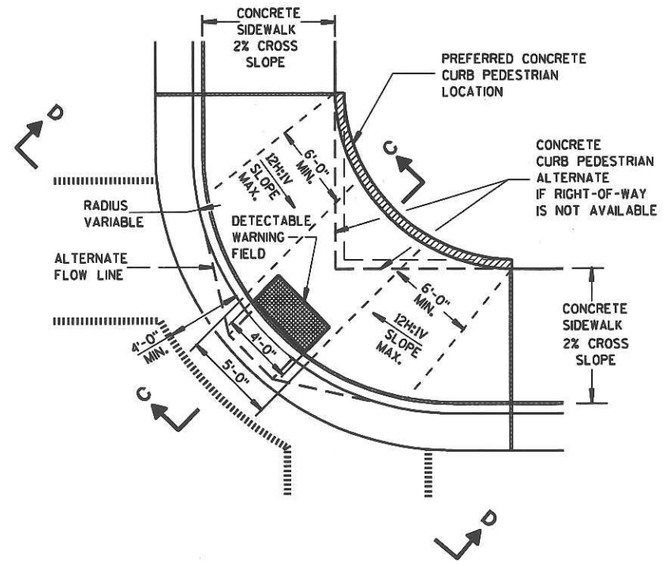
S.D.D. 8 D 4-3



PLAN VIEW

TYPE 1 RAMP

(CENTER OF CORNER RADIUS)



PLAN VIEW

TYPE 1-A RAMP

(NO TERRACE)

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

RAMPS SHALL BE BUILT AT 12H:1V OR FLATTER. WHEN NECESSARY, THE SIDEWALK ELEVATION MAY BE LOWERED TO MEET THE HIGH POINT ON THE RAMP.

TYPE 1 RAMPS SHALL HAVE A NORMAL SIDEWALK APRON AND CURB ON BOTH SIDES OF RAMP.

DETECTABLE WARNING FIELD SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS "CURB RAMP DETECTABLE WARNING FIELD". THE CONCRETE PEDESTRIAN CURB, IF NEEDED, SHALL BE MEASURED AND PAID BY THE LINEAL FOOT AS "CONCRETE CURB PEDESTRIAN". CONCRETE SIDEWALK IN THE CURB RAMP AREA SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS CONCRETE SIDEWALK, INCLUDING THE AREA UNDER THE DETECTABLE WARNING FIELD.

SELECT CURB RAMP DETECTABLE WARNING FIELD MATERIALS AND DEVICES FROM THE DEPARTMENT'S APPROVED MATERIALS LIST. THE COLOR OF THE DETECTABLE WARNING FIELD IS SPECIFIED ELSEWHERE AND IS INCIDENTAL TO THE BID ITEM OF "CURB RAMP DETECTABLE WARNING FIELD".

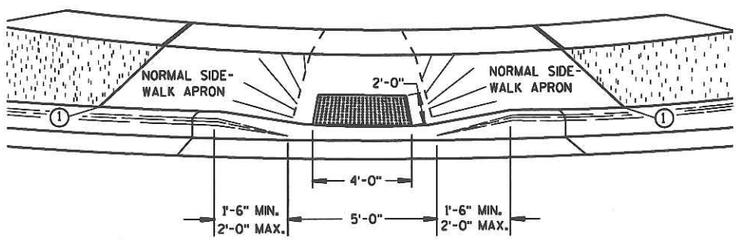
SURFACE TEXTURE OF THE RAMP SHALL BE OBTAINED BY COARSE BROOMING TRANSVERSE TO THE SLOPE OF THE RAMP.

(1) THIS POINT IS AN EXTENSION OF OUTSIDE EDGE OF APPROACHING SIDEWALK WHERE IT MEETS THE BACK OF CONCRETE CURB.

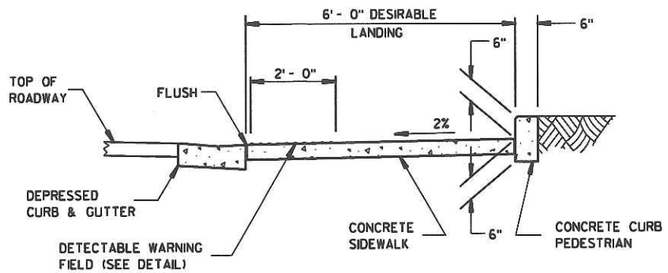
(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. PROVIDE DRAINAGE AWAY FROM CURB RAMP AT GUTTER FLAG INTERFACE.

LEGEND

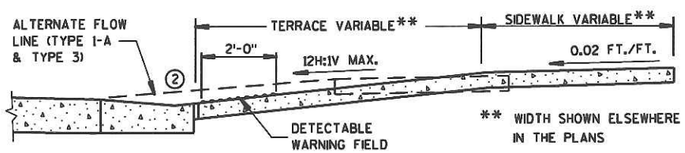
- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)
- ALTERNATIVE LAYOUT



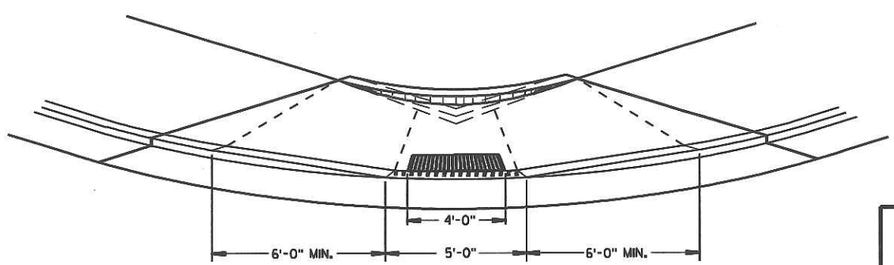
VIEW A-A



SECTION C-C



SECTION B-B



VIEW D-D

CURB RAMPS
TYPES 1 AND 1-A

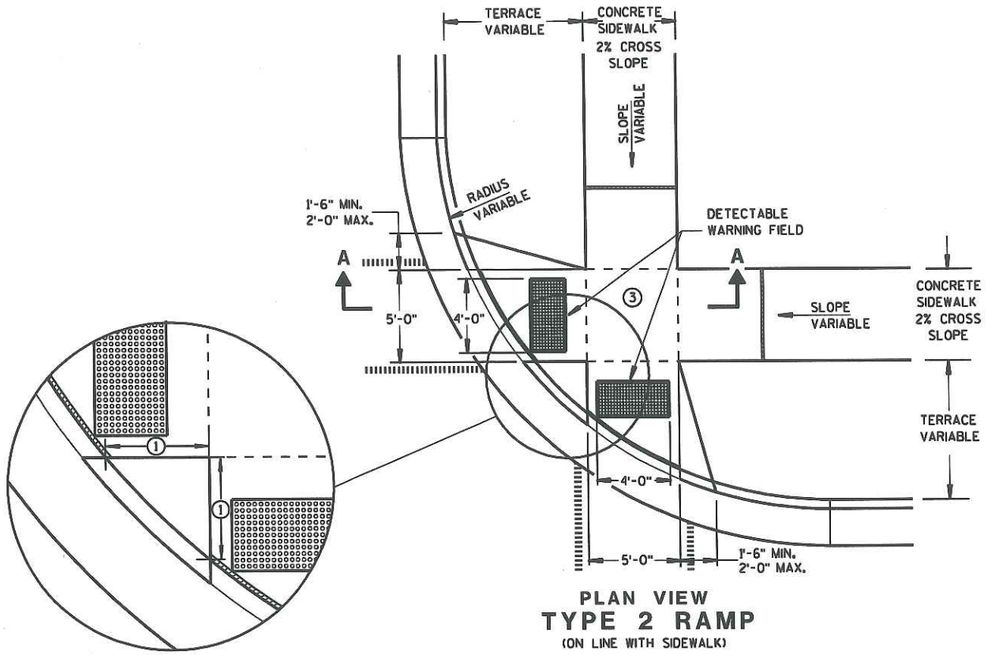
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

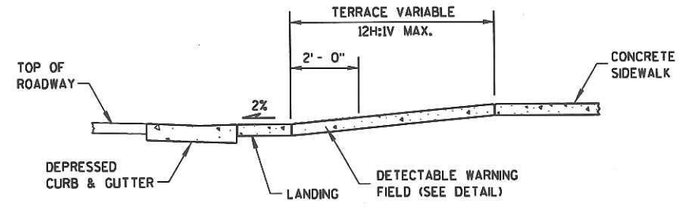
S.D.D. 8 D 5-11a

6

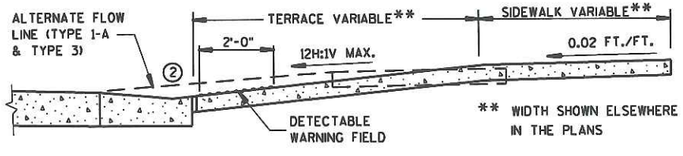
S.D.D. 8 D 5-11a



PLAN VIEW
TYPE 2 RAMP
(ON LINE WITH SIDEWALK)



SECTION A-A



SECTION B-B

GENERAL NOTES

USE THE TYPE 3 RAMP ONLY WHEN A TYPE 1 OR TYPE 2 CANNOT BE ACHIEVED BECAUSE OF FIELD CONDITIONS.

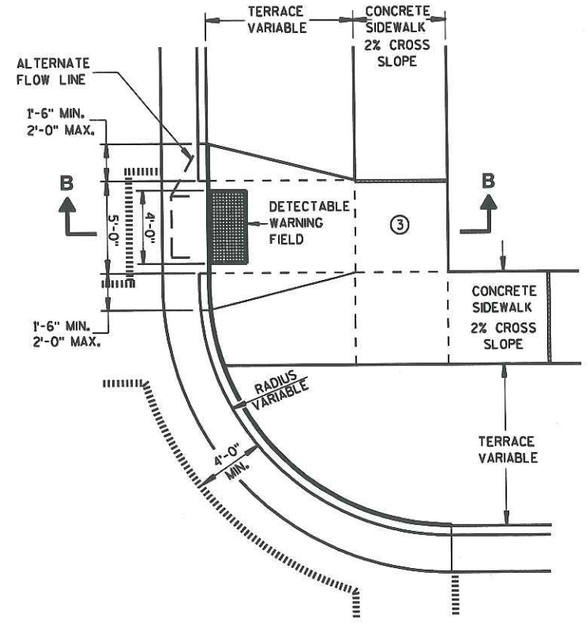
(1) WHEN THIS DISTANCE IS LESS THAN 6'-0" IT MAY BE DIFFICULT TO ACHIEVE A 12H:1V SLOPE. OR FLATTER, ON THE RAMP. REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 12H:1V SLOPE, OR FLATTER, ON RAMP. 2" MINIMUM CURB HEIGHT.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. PROVIDE DRAINAGE AWAY FROM CURB RAMP AT GUTTER FLAG INTERFACE.

(3) PROVIDE LANDING AT TOP OF RAMP WITH NO MORE THAN 2% SLOPE IN ANY DIRECTION.

LEGEND

- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)
- ALTERNATIVE LAYOUT



PLAN VIEW
TYPE 3 RAMP
(OUTSIDE OF CROSSWALK AREA)

CURB RAMPS
TYPES 2 AND 3

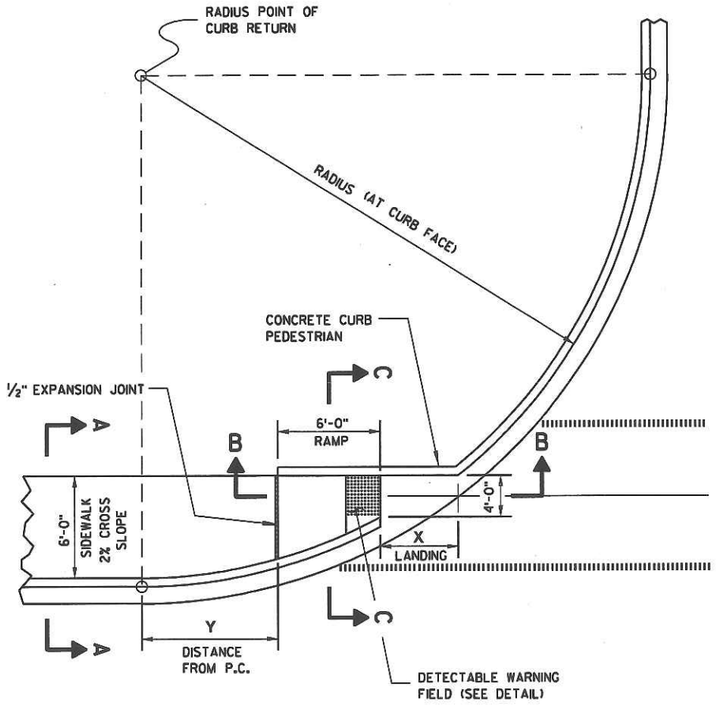
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

S.D.D. 8 D 5-11b

6

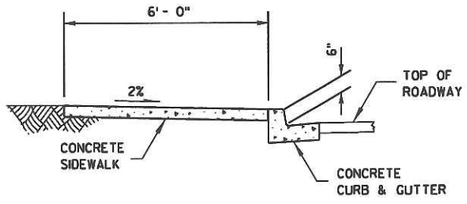
S.D.D. 8 D 5-11b



CURB RAMP TYPE 4A
PLAN VIEW

RADIUS (AT CURB FACE)	X	Y
20 FEET	6'-1¾"	2'-7¼"
30 FEET	7'-11¾"	4'-8¼"
40 FEET	9'-5¼"	6'-5"
50 FEET	10'-8¾"	7'-11¼"
60 FEET	11'-10¼"	9'-3½"

INTERMEDIATE RADII CAN BE INTERPOLATED



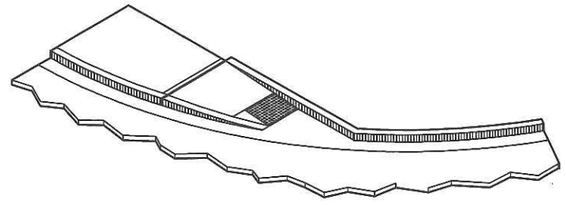
SECTION A-A

GENERAL NOTES

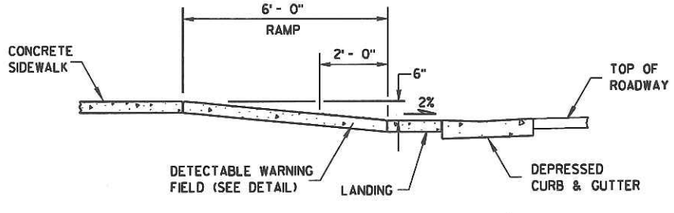
AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

RAMP SLOPES SHALL NOT BE STEEPER THAN 12:1.

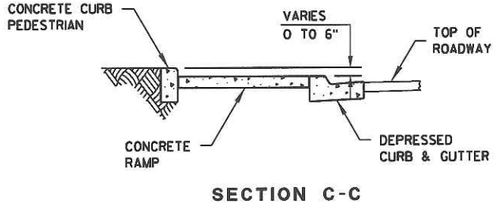
SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.



ISOMETRIC VIEW



SECTION B-B



SECTION C-C

LEGEND

½" EXPANSION JOINT-SIDEWALK

CONTRACTION JOINT FIELD LOCATED

PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS
TYPE 4A

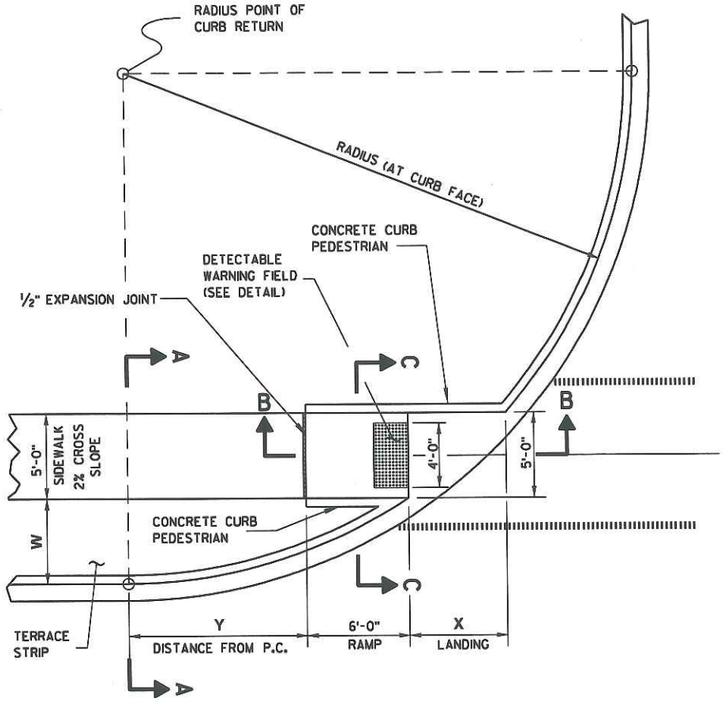
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

S.D.D. 8 D 5-11c

6

S.D.D. 8 D 5-11c



CURB RAMP TYPE 4B
PLAN VIEW

GENERAL NOTES

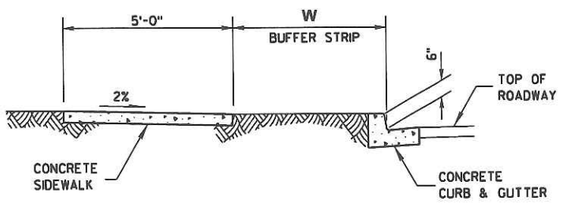
AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

RAMP SLOPES SHALL NOT BE STEEPER THAN 12:1.

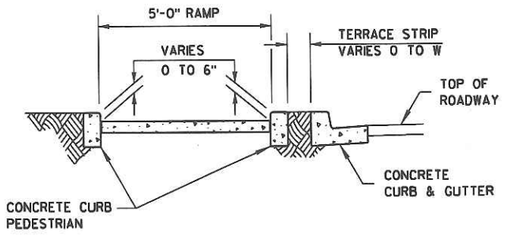
SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.

RADIUS (AT CURB FACE)	W = 3'-0"		W = 4'-0"		W = 5'-0"		W = 6'-0"		W = 7'-0"	
	X	Y	X	Y	X	Y	X	Y	X	Y
20 FEET	5'-5½"	4'-6½"	4'-8½"	6'-0"	4'-1"	7'-2¾"	3'-7"	8'-3½"	3'-1½"	9'-2½"
30 FEET	7'-3¾"	7'-1"	6'-5½"	8'-11½"	5'-9¼"	10'-7"	5'-2½"	12'-0"	4'-8¾"	13'-3¼"
40 FEET	8'-9½"	9'-2½"	7'-10"	11'-5¼"	7'-1"	13'-4½"	6'-5¾"	15'-¾"	5'-11½"	16'-7¼"
50 FEET	10'-¾"	11'-¾"	9'-¼"	13'-7¼"	8'-2½"	15'-9½"	7'-6½"	17'-9"	6'-11¾"	19'-6¼"
60 FEET	11'-2½"	12'-8¾"	10'-¾"	15'-6½"	9'-2¼"	17'-11¾"	8'-5¾"	20'-1¾"	7'-10½"	22'-1½"
70 FEET	12'-2¾"	14'-3¼"	11'-¼"	17'-4"	10'-1"	19'-11¾"	9'-3¾"	22'-4¼"	8'-8¼"	24'-6¼"
80 FEET	13'-2"	15'-8½"	11'-10½"	18'-11¾"	10'-10¾"	21'-10"	10'-1"	24'-4¾"	9'-5"	26'-8¾"
90 FEET	14'-½"	17'-½"	12'-8¼"	20'-6½"	11'-7¾"	23'-7"	10'-9¾"	26'-3¾"	10'-1¼"	28'-9½"
100 FEET	14'-10½"	18'-3¾"	13'-5½"	22'-0"	12'-4¼"	25'-2¾"	11'-5¾"	28'-1½"	10'-9"	30'-9"

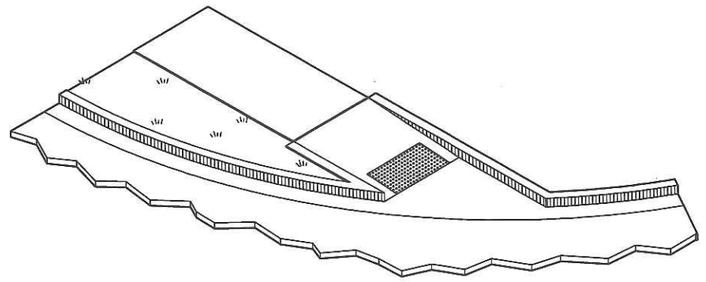
INTERMEDIATE RADII CAN BE INTERPOLATED



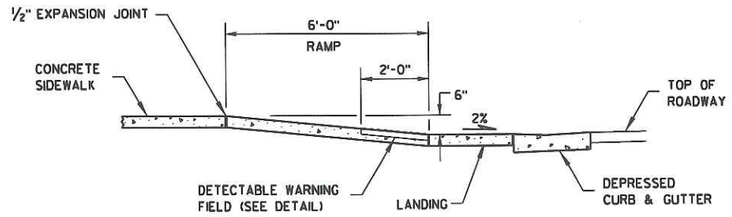
SECTION A-A



SECTION C-C



ISOMETRIC VIEW



SECTION B-B

LEGEND

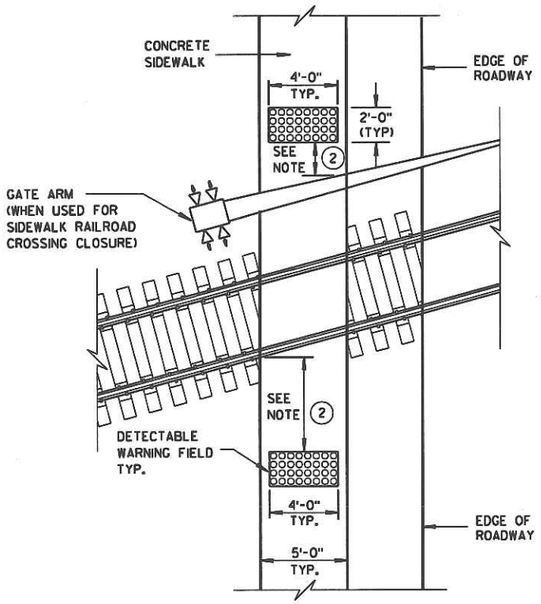
- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS TYPE 4B

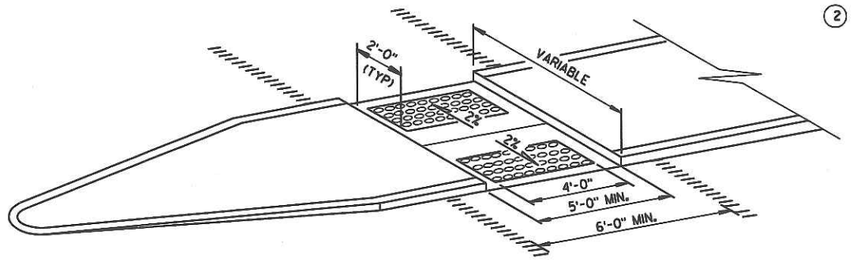
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

S.D.D. 8 D 5-11d



TYPE 8
DETECTABLE WARNINGS AT RAILROAD CROSSING



MEDIAN ISLAND
NON-ELEVATED CROSSING
TYPE 5

GENERAL NOTES

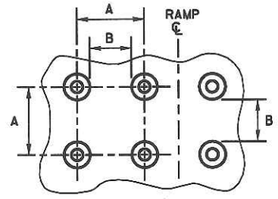
SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.

(1) SLOPE SIDEWALK TOWARD LANDING AS SHOWN WHERE THERE IS NO TERRACE OR WHERE THE TERRACE WIDTH IS LESS THAN 6 FEET WIDE.

(2) THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO A RAILROAD CROSSING SHALL BE 1.5 FEET ± 0.1' FROM THE FACE OF THE GATE ARM IF THE GATE ARM EXTENDS ACROSS THE SIDEWALK. WHERE THERE IS NO PEDESTRIAN GATE, THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO THE RAILROAD CROSSING SHALL BE 15 FEET FROM THE NEAREST RAIL.

LEGEND

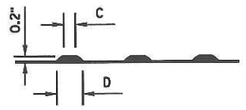
- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)



PLAN VIEW

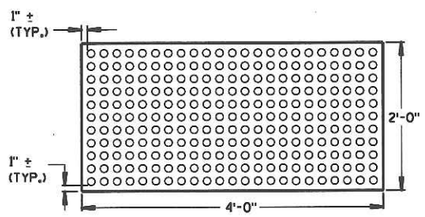
	MIN.	MAX.
A	1.6"	2.4"
B	0.65"	1.5"
C	*	*
D	0.9"	1.4"

* THE C DIMENSION IS 50% TO 65% OF THE D DIMENSION.



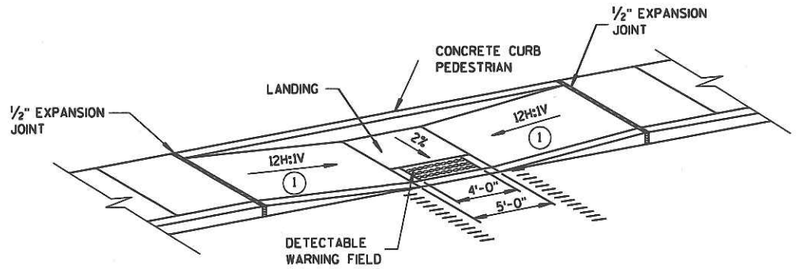
ELEVATION VIEW

TRUNCATED DOMES
DETECTABLE WARNING PATTERN DETAIL

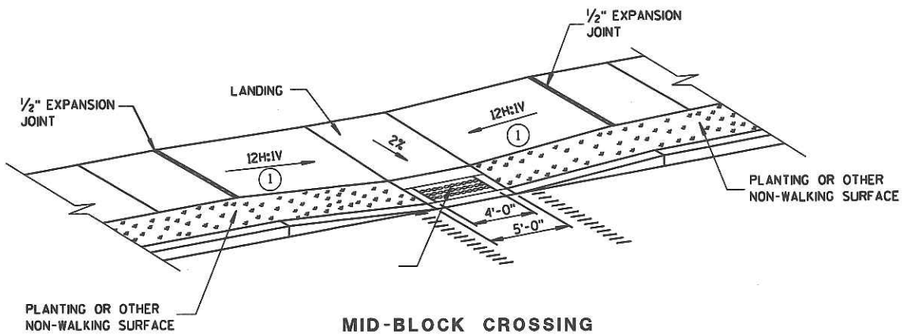


PLAN VIEW

DETECTABLE WARNING FIELD (TYPICAL)

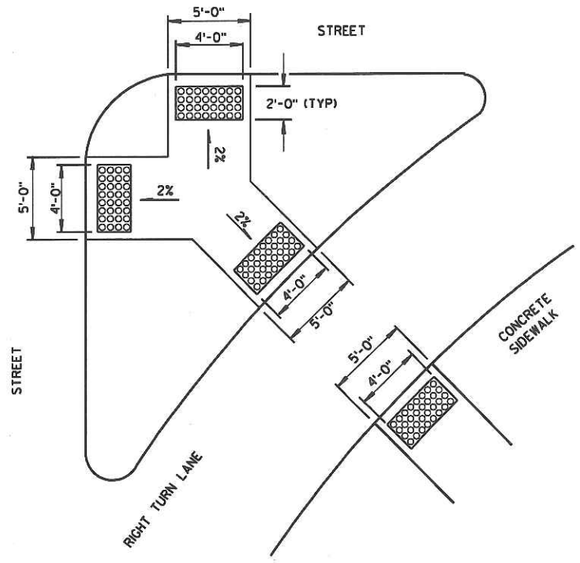


MID-BLOCK CROSSING
TYPE 7A



MID-BLOCK CROSSING
TYPE 7B

NOTE: THESE PARALLEL AND PARALLEL/PERPENDICULAR CURB RAMPS MAY BE USED AT INTERSECTIONS AND MID BLOCK LOCATIONS.



TYPE 6
DETECTABLE WARNING AT ISLANDS

CURB RAMPS
TYPES 5, 6, 7A, 7B & 8

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DEPARTMENT OF TRANSPORTATION

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9/9/05 — DATE — FHWA

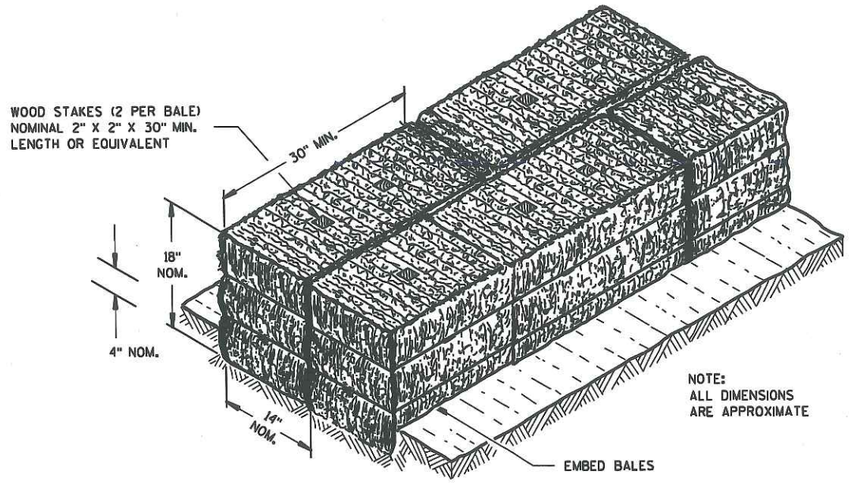
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER

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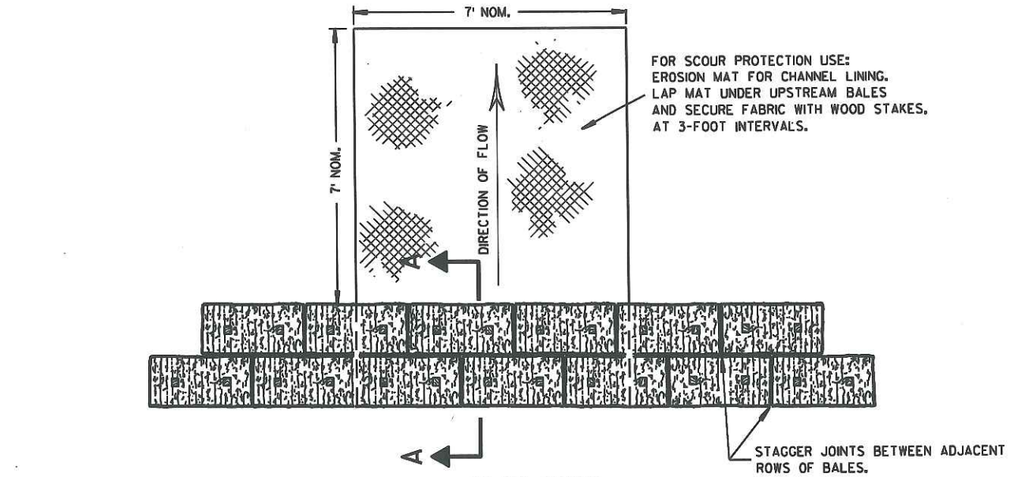
S.D.D. 8 D 5-11e

6

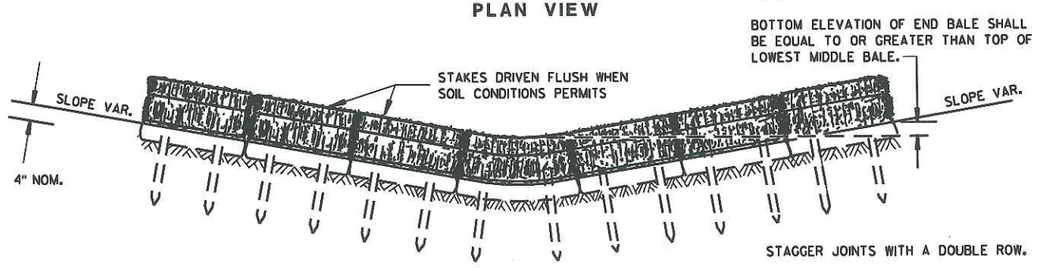
S.D.D. 8 D 5-11e



SECTION A-A



PLAN VIEW



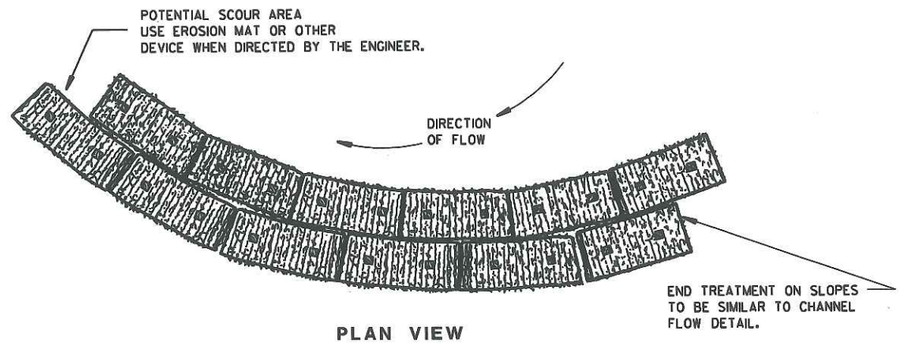
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES ①

GENERAL NOTES

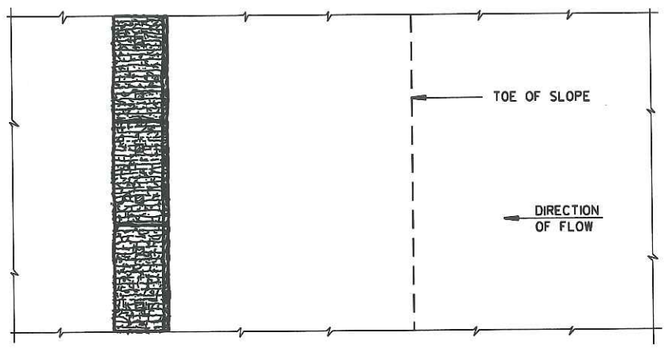
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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.

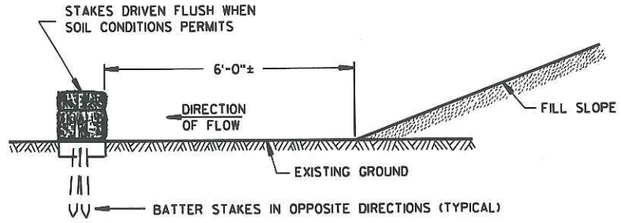


PLAN VIEW

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

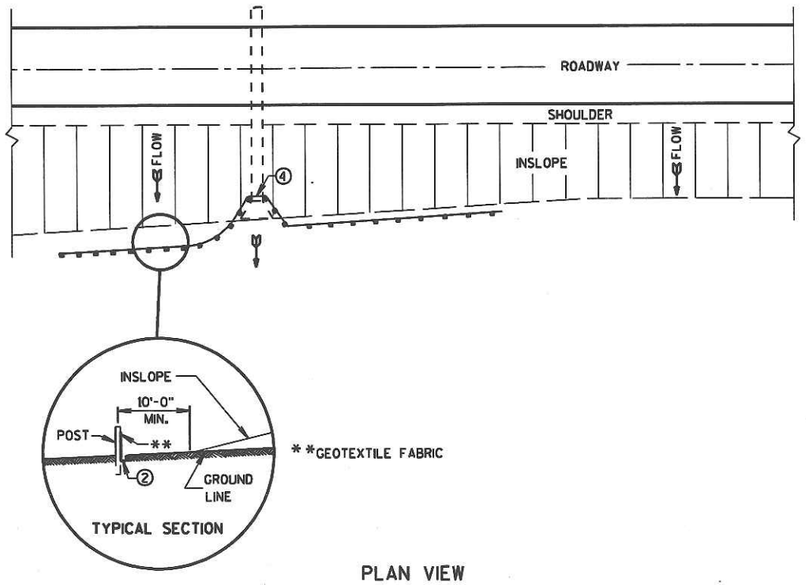
APPROVED
6/04/02
DATE
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 8 E 8-3

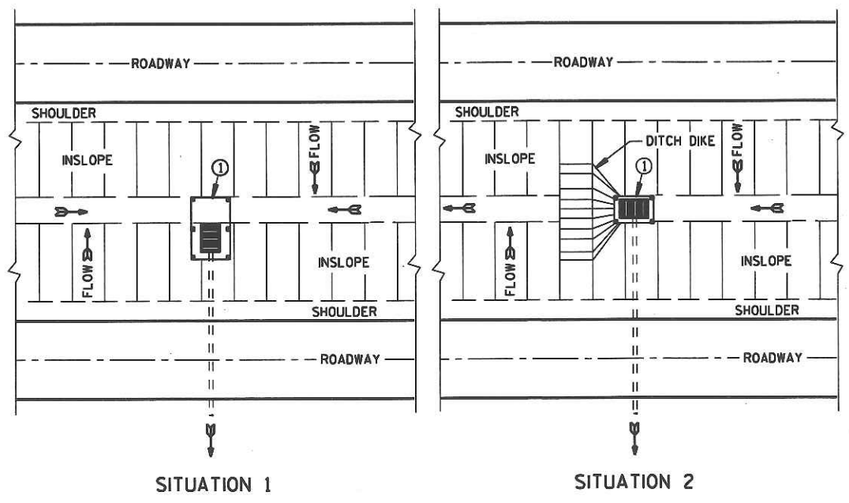
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S.D.D. 8 E 8-3



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

GENERAL NOTES

DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

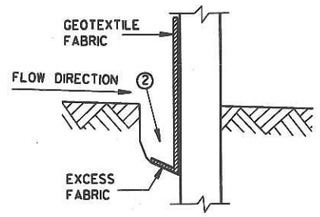
① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.

② FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.

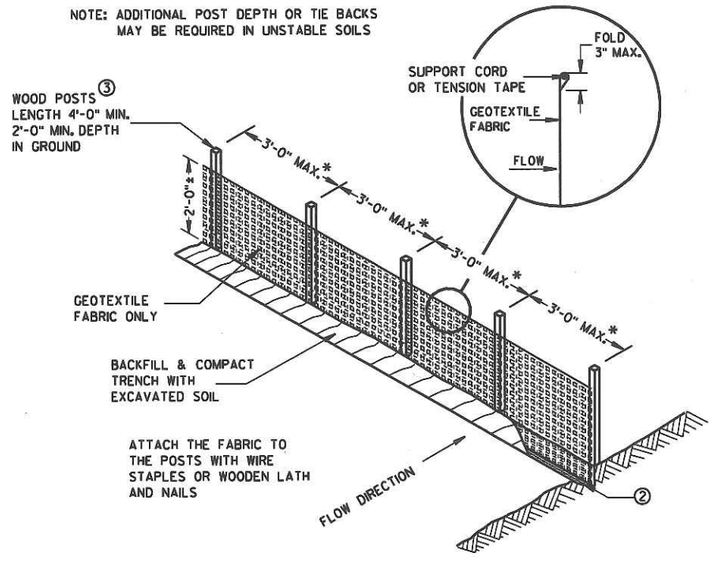
③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.

④ SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.

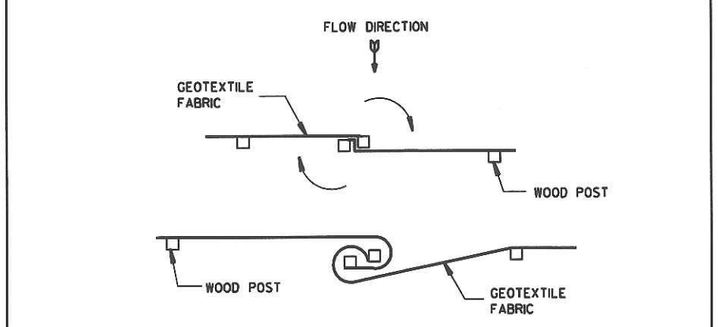
⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



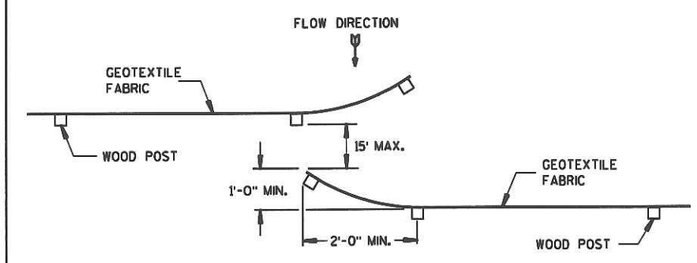
TRENCH DETAIL



SILT FENCE

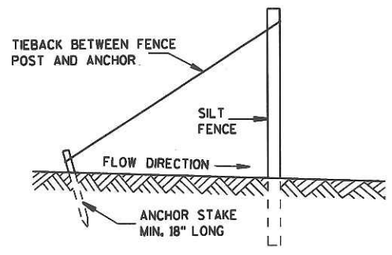


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE ⑤



SILT FENCE TIE BACK
(WHEN REQUIRED BY THE ENGINEER)

6

SILT FENCE

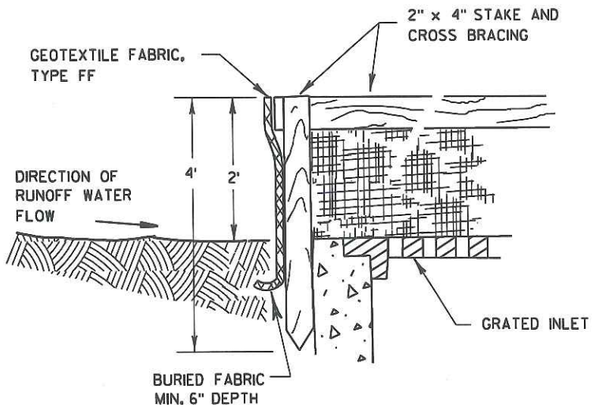
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

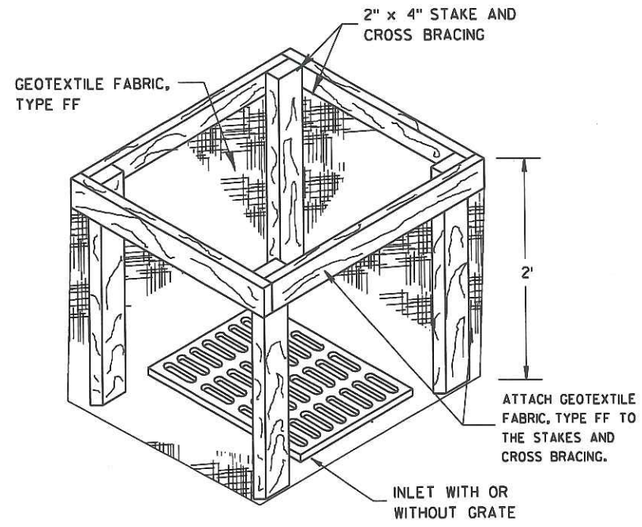
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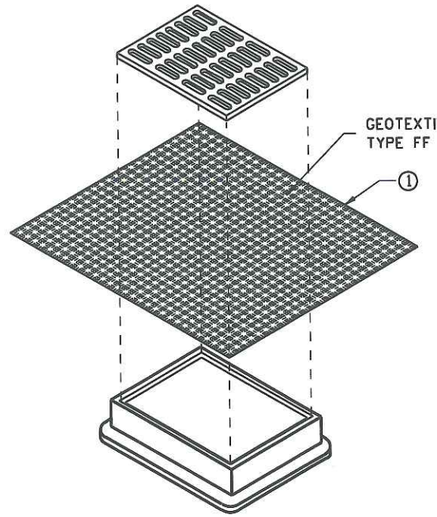
S.D.D. 8 E 9-6

S.D.D. 8 E 9-6



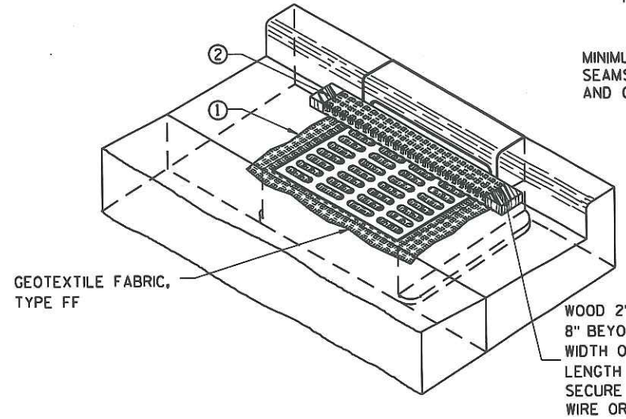


INLET PROTECTION, TYPE A

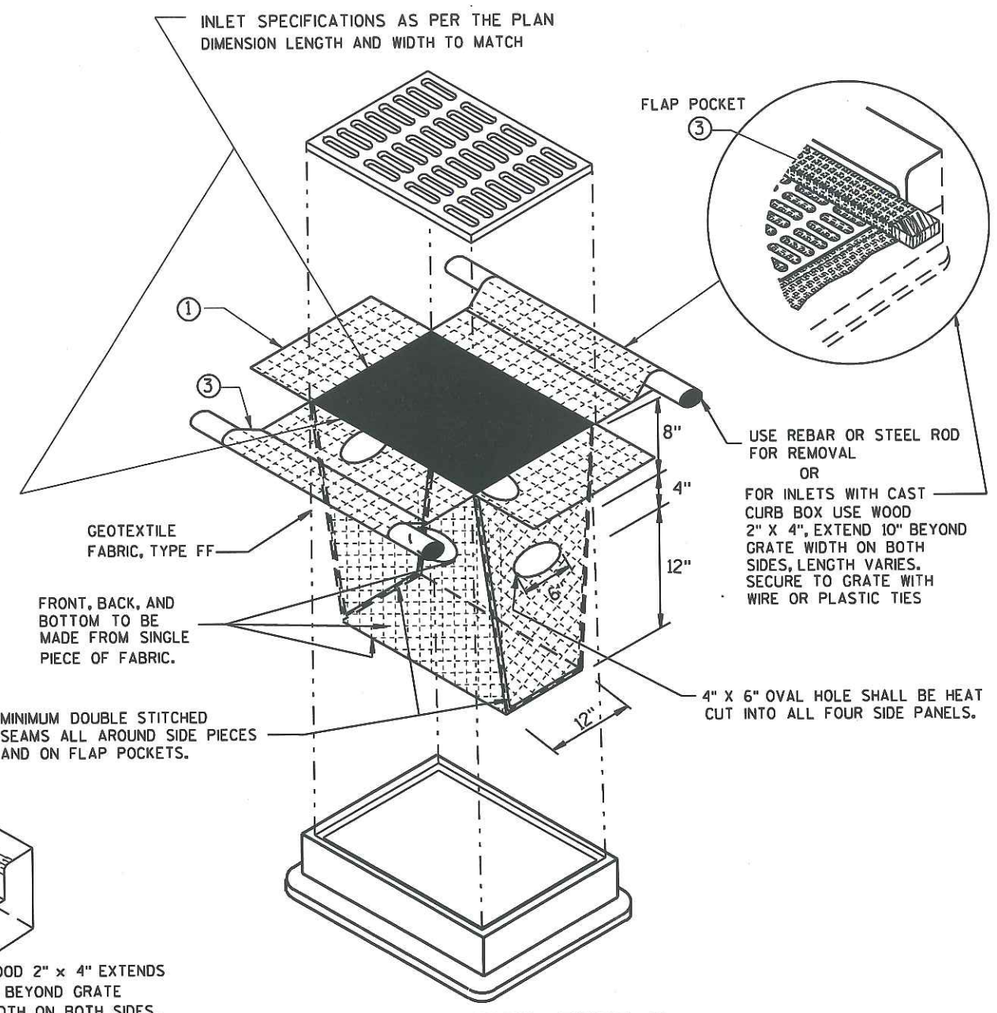


INLET PROTECTION, TYPE B (WITHOUT CURB BOX)

(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

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DATE
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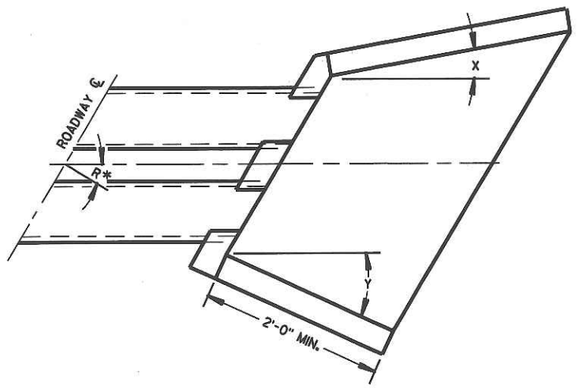
CHIEF, ROADWAY DEVELOPMENT ENGINEER

6

S.D.D. 8 E 10-2

6

S.D.D. 8 E 10-2



WINGWALL ANGLE DETAILS

INLET			OUTLET		
R*	X	Y	R*	X	Y
0 - 7°	30°	30°	0 - 15°	15°	15°
8 - 22°	25°	"	16 - 45°	10°	"
23 - 37°	20°	"	46 - 75°	5°	"
38 - 52°	15°	"	OVER 75°	0°	"
53 - 67°	10°	"			
68 - 82°	5°	"			
OVER 82°	0°	"			

*R = NUMBER OF DEGREES RIGHT OR LEFT HAND FORWARD

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.

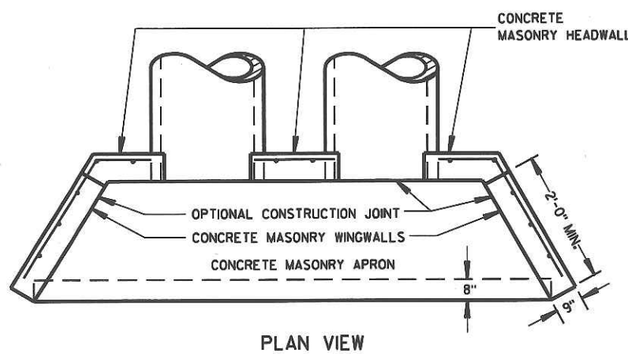
FILL SLOPES FLATTER THAN 2 ½:1 SHALL BE WARPED TO MEET THE TOP OF THE WINGWALLS.

ALL STEEL REINFORCEMENT AND WELDED STEEL WIRE FABRIC SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE NOTED.

(1) MINIMUM REINFORCEMENT SHALL BE 6" X 6" - W4.0 X W4.0 OR NO. 3 BARS SPACED 12" C-C IN BOTH DIRECTIONS.

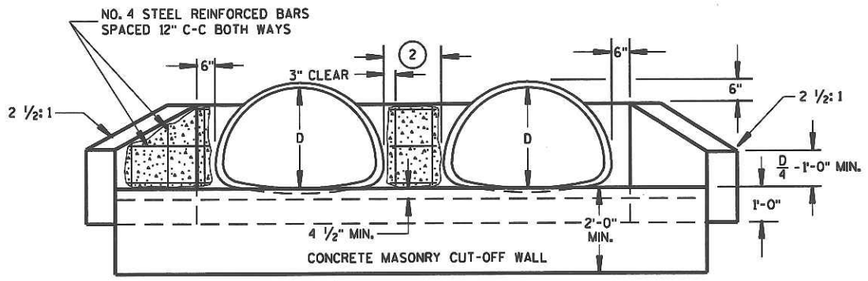
(2) THE SPACE BETWEEN PIPES SHALL BE AS FOLLOWS:

DIAMETER OR SPAN	SPACE
UP TO AND INCLUDING 48"	2'-0"
OVER 48" TO 72"	½ DIA. OR SPAN
OVER 72"	3'-0"



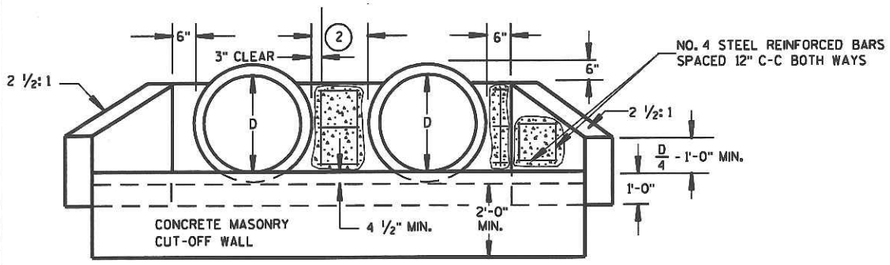
PLAN VIEW

CULVERT PIPE AND PIPE ARCH



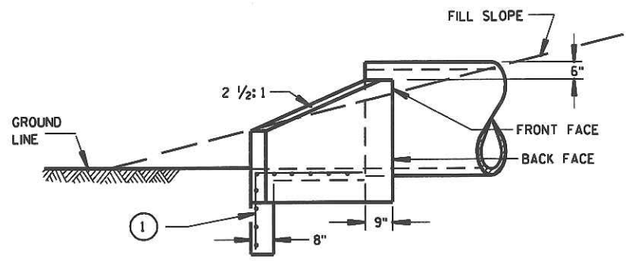
END ELEVATION

PIPE ARCH



END ELEVATION

CULVERT PIPE



SIDE ELEVATION

CULVERT PIPE AND PIPE ARCH

CONCRETE MASONRY ENDWALLS FOR CULVERT PIPE AND PIPE ARCH

STATE OF WISCONSIN
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APPROVED
9/14/98
DATE

CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA

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S.D.D. 8 F 10-1

6

S.D.D. 8 F 10-1

METAL APRON ENDWALLS

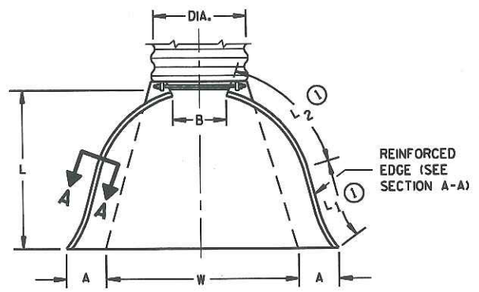
PIPE DIA. (IN.)	MIN. THICK. (inches) STEEL	MIN. THICK. (inches) ALUM.	DIMENSIONS (inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4	36	2 1/2 to 1	1 Pc.
21	.064	.060	9	12	6	36	18	29 3/8	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

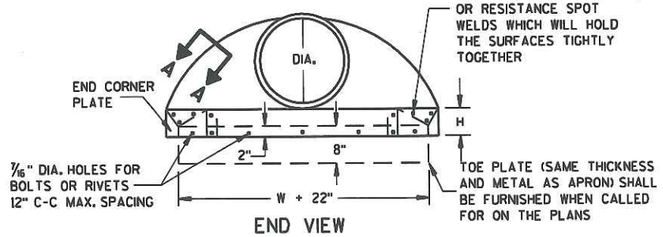
PIPE DIA. (IN.)	DIMENSIONS (inches) T	A	B	C	D	E	G	APPROX. SLOPE
12	2	4	24	48 1/8	72 1/8	24	2	3 to 1
15	2 1/4	6	27	46	73	30	2 1/4	3 to 1
18	2 1/2	9	27	46	73	36	2 1/2	3 to 1
21	2 3/4	9	36	37 1/2	73 1/2	42	2 3/4	3 to 1
24	3	9 1/2	43 1/2	30	73 1/2	48	3	3 to 1
27	3 1/4	10 1/2	49 1/2	24	73 1/2	54	3 1/4	3 to 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 1/4	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

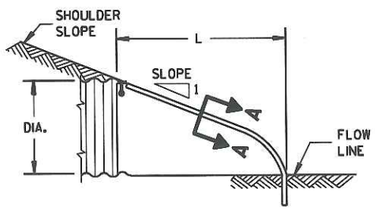
REINFORCED EDGE (SEE SECTION A-A)



END VIEW

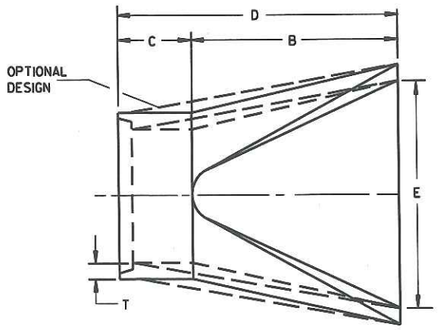
END CORNER PLATES MAY BE FASTENED TO APRON PROPER BY BOLTS, RIVETS, OR RESISTANCE SPOT WELDS WHICH WILL HOLD THE SURFACES TIGHTLY TOGETHER

TOE PLATE (SAME THICKNESS AND METAL AS APRON) SHALL BE FURNISHED WHEN CALLED FOR ON THE PLANS

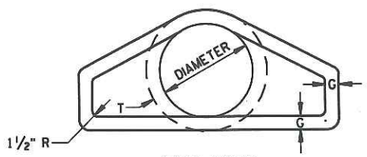


SIDE ELEVATION

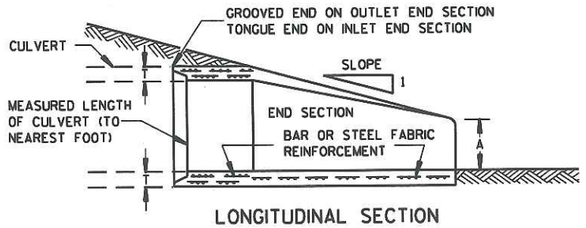
METAL ENDWALLS



PLAN

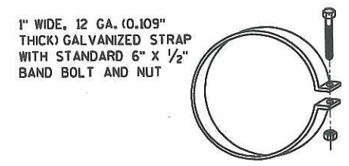


END VIEW



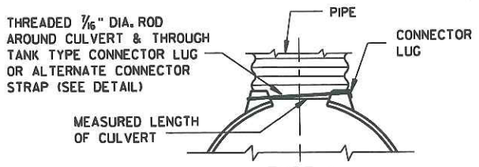
LONGITUDINAL SECTION

CONCRETE ENDWALLS

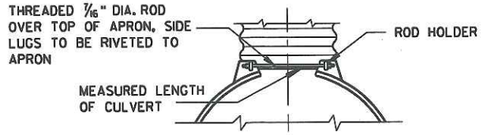


ALTERNATE FOR TYPE 1 CONNECTION

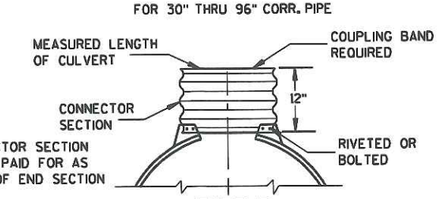
END SECTION CONNECTOR STRAP



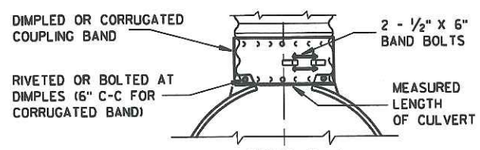
TYPE 1
FOR 12" THRU 24" CORR. PIPE



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

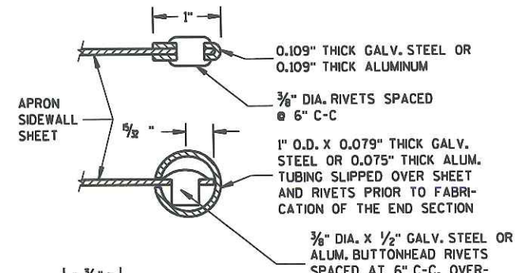
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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

CHIEF ROADWAY DEVELOPMENT ENGINEER

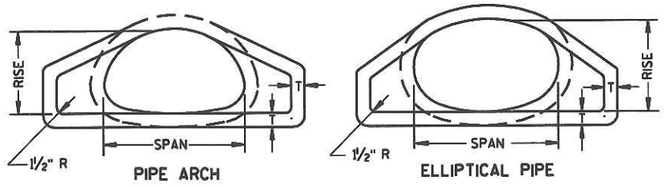
FHWA

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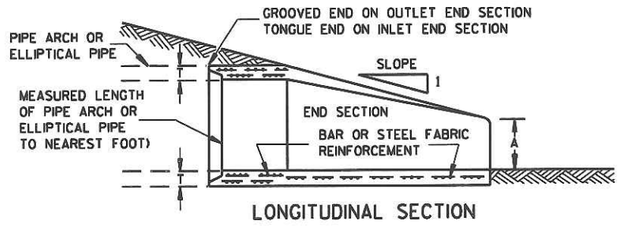
S.D.D. 8 F 1-11

6

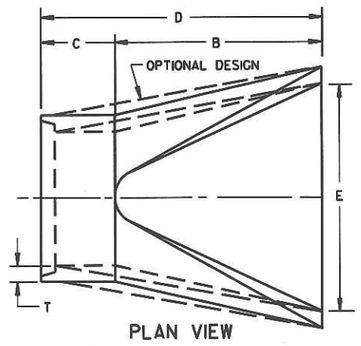
S.D.D. 8 F 1-11



END VIEW

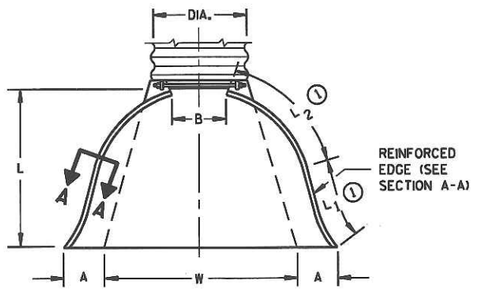


LONGITUDINAL SECTION

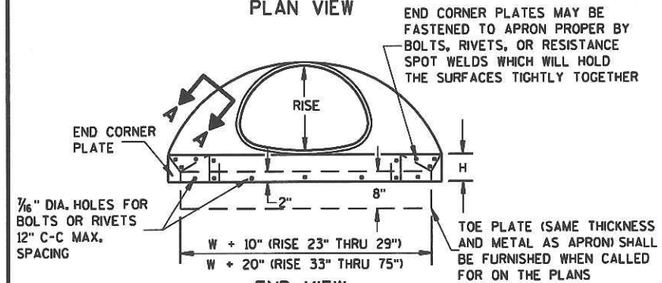


PLAN VIEW

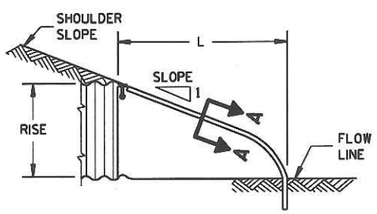
CONCRETE ENDWALLS



PLAN VIEW

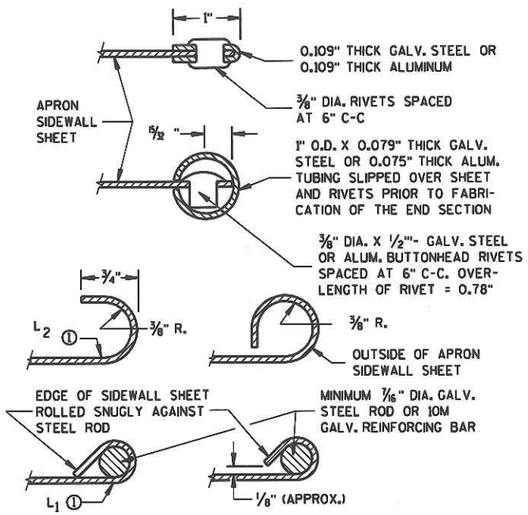


END VIEW



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 (±1½")	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	45⅝	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 (±1½")	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

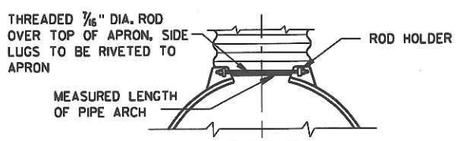
REINFORCED CONCRETE PIPE ARCH

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	15⅜	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

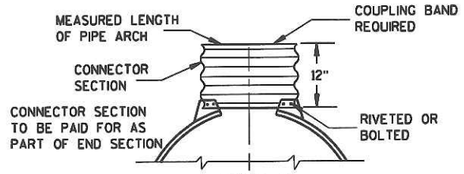
EQUIV. DIA. (Inches)	DIMENSIONS (Inches) ** SPAN	** RISE	T	A	B	C	D	E	APPROX. SLOPE
24	30	19	3¼	8½	39	33	72	48	3 to 1
30	38	24	3¾	9½	54	18	72	60	3 to 1
36	45	29	4½	11⅛	60	24	84	72	2½ to 1
42	53	34	5	15¾	60	36	96	78	2½ to 1
48	60	38	5½	21	60	36	96	84	2½ to 1
54	68	43	6	25½	60	36	96	90	2½ to 1
60	76	48	6½	30	60	36	96	96	2½ to 1

** NOMINAL SIZE



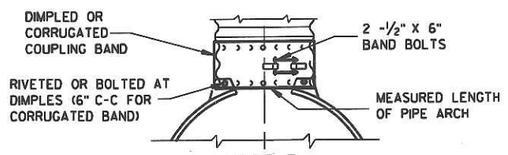
TYPE 2

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

CHIEF ROADWAY DEVELOPMENT ENGINEER

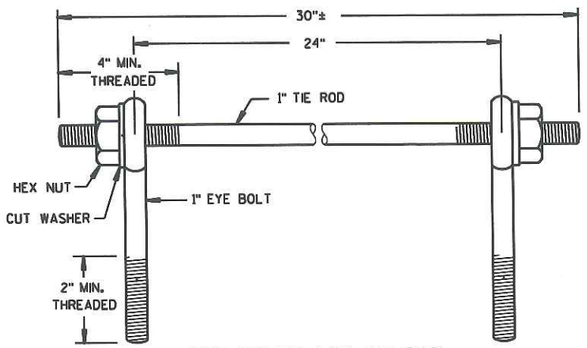
FHWA

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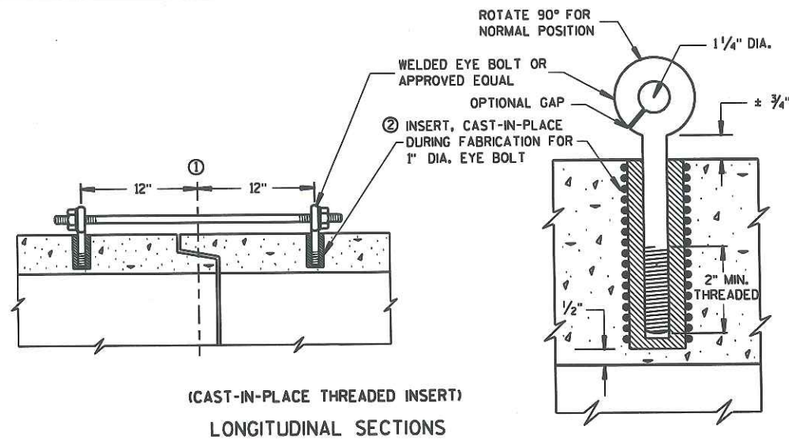
S.D.D. 8 F 2-1

6

S.D.D. 8 F 2-1



EYE BOLTS AND TIE ROD



(CAST-IN-PLACE THREADED INSERT)

LONGITUDINAL SECTIONS

GENERAL NOTES

CONCRETE CULVERT PIPE SHALL BE TIED TOGETHER IN THE MANNER ILLUSTRATED BY THIS DETAIL AT LOCATIONS DESIGNATED ON 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 CULVERT PIPE AS INDICTED ON THE PLANS AND BY THIS DETAIL WILL BE CONSIDERED INCIDENTAL TO CILVERT PIPE, REINFORCED CONCRETE CULVERT PIPE, OR REINFORCED CONCRETE PIPE CATTLE PASS.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR JOINT TIES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

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.

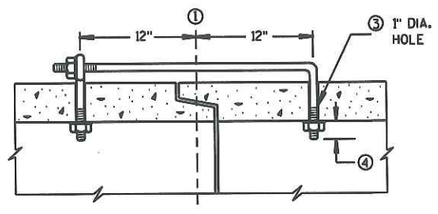
③ HOLES SHALL BE CAST-IN-PLACE OR DRILLED 12" FROM ℄ OF TONGUE AND GROOVE.

④ BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2".

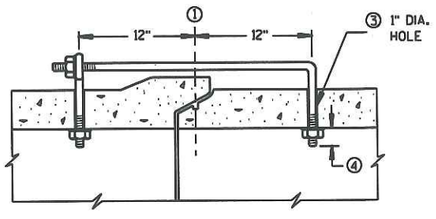
⑤ ROD DIAMETER + 1 INCH.

⑥ LENGTH ADEQUATE TO EXTEND TO WITHIN 1/2 INCH OF THE INNER SURFACE OF THE PIPE.

EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 1)



(TONGUE & GROOVE PIPE)



(MODIFIED BELL PIPE)

LONGITUDINAL SECTION

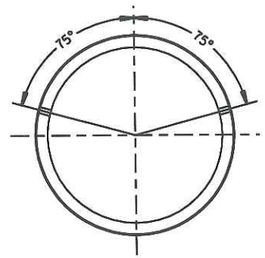
EYE BOLT DIMENSION TABLE

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"	

ADJUSTABLE TIE ROD TABLE

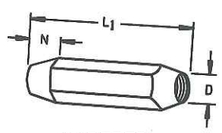
PIPE DIAMETER	TIE ROD DIAMETER	D	L_1	N
12-60	5/8	5/8	5	1/2
66-84	3/4	3/4	5	1/2
90-108	1	1	7	1 1/16

DIMENSIONS SHOWN ARE IN INCHES

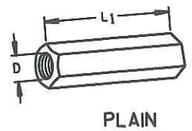


PLACEMENT OF (2) CAST-IN-PLACE INSERTS OR HOLES DURING FABRICATION FOR PIPE SECTIONS REQUIRING TIE RODS

TRANSVERSE SECTION



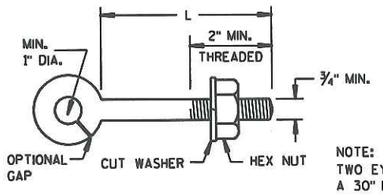
TAPERED



PLAIN

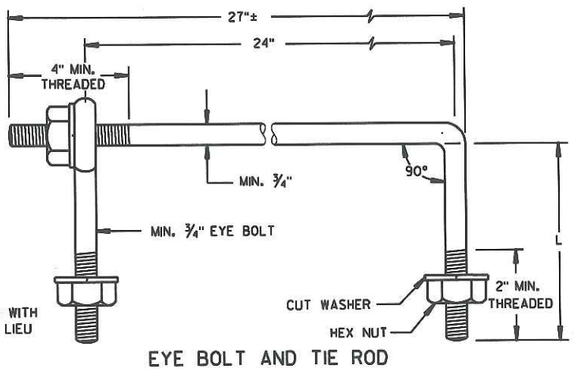
RIGHT AND LEFT THREADS

SLEEVE NUTS



EYE BOLT

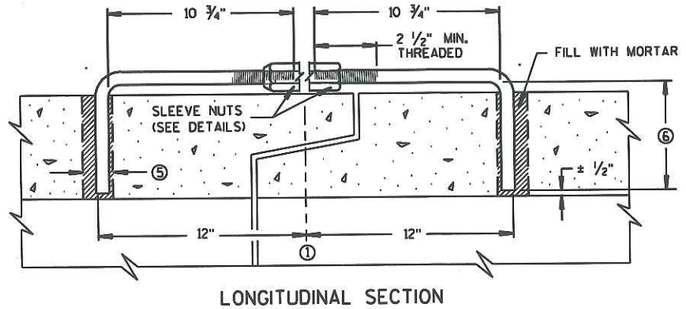
NOTE:
TWO EYE BOLTS MAY BE USED WITH A 30" LONG THREADED ROD IN LIEU OF THE 90° BENT TIE ROD.



EYE BOLT AND TIE ROD

(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 2)



LONGITUDINAL SECTION

(JOINT TIES FOR 12" TO 108" DIA. CONCRETE PIPE)

ADJUSTABLE TIE ROD (ALTERNATE NO. 3)

DESIGN NOTE:

THE NUMBER OF PIPE TIES REQUIRED SHOULD BE INCLUDED ON THE MISCELLANEOUS QUANTITIES SHEET WITH THE CULVERT PIPE LISTING.

NOTE:
DESIGN NOTE WILL NOT APPEAR ON THE CONTRACT PLAN.

JOINT TIES FOR CONCRETE PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/18/92
DATE

STATE DESIGN ENGINEER FOR HWYS

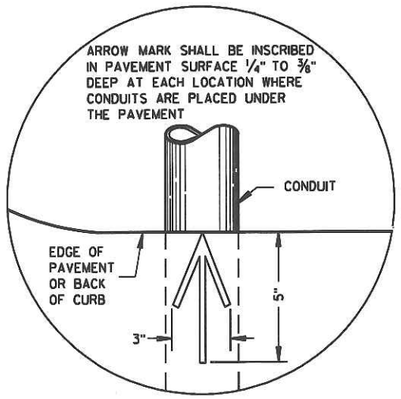
FHWA

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S.D.D. 8 F 4-5

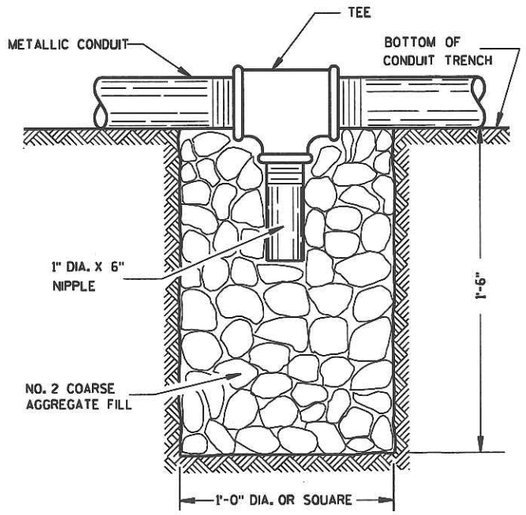
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S.D.D. 8 F 4-5



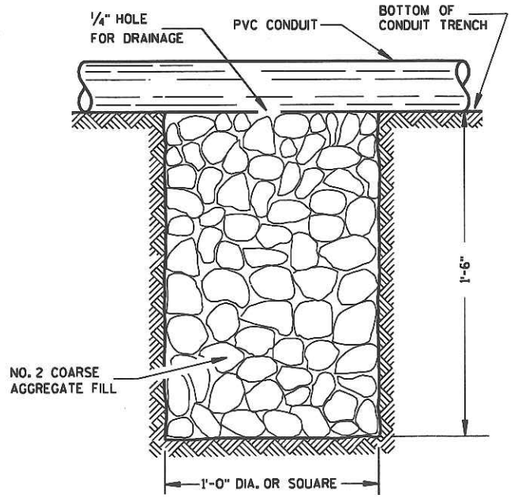
PLAN VIEW

ARROW MARK



NOTE: INSTALL AT LOCATIONS WHERE METALLIC CONDUITS CANNOT BE PITCHED TO DRAIN INTO A PULL BOX.

DRAIN SUMP FOR METALLIC CONDUIT



NOTE: INSTALL AT LOCATIONS WHERE PVC CONDUITS CANNOT BE PITCHED TO DRAIN INTO A PULL BOX.

DRAIN SUMP FOR PVC CONDUIT

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

METALLIC (STANDARD SPECIFICATION 652.2.2) OR NONMETALLIC (STANDARD SPECIFICATION 652.2.3) CONDUIT SHALL BE FURNISHED AND PLACED AS SHOWN.

DEPTH OF CONDUIT INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES MINIMUM AND 36 INCHES MAXIMUM.

DEPTH OF CONDUIT INSTALLED THAT IS NOT BELOW THE TRAVELED WAY SHALL BE 18 INCHES MINIMUM AND 36 INCHES MAXIMUM.

ANY EXCEPTION TO THE MAXIMUM DEPTH SHALL BE ONLY WITH THE WRITTEN APPROVAL OF THE ENGINEER.

THE TRENCH SHALL NOT BE BACKFILLED PRIOR TO INSPECTION OF THE CONDUIT.

ALL METALLIC CONDUIT RACEWAY ENDS SHALL BE REAMED AND THREADED.

ALL METALLIC CONDUIT IN WHICH WIRE OR CABLE IS TO BE INSTALLED SHALL BE BUSHED WITH APPROVED THREADED BUSHINGS BEFORE INSTALLATION OF THE WIRE OR CABLE.

ALL METALLIC CONDUITS IN WHICH WIRE OR CABLE IS NOT TO BE INSTALLED SHALL BE CAPPED WITH THREADED PROTECTIVE CAPS, AS APPROVED BY THE ENGINEER.

ALL NONMETALLIC CONDUIT SHALL BE CAPPED OR PLUGGED IMMEDIATELY AFTER INSTALLATION AND SHALL REMAIN CAPPED OR PLUGGED UNTIL WIRE/CABLES ARE INSTALLED.

NONMETALLIC CONDUITS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

BENDING OF PVC ELECTRICAL CONDUIT SHALL BE ACCOMPLISHED BY USING A BLANKET OR EMERSION TYPE TANK DESIGNED FOR THE PURPOSE OF BENDING PVC ELECTRICAL CONDUIT.

ALL CUT ENDS SHALL BE TRIMMED INSIDE AND OUTSIDE TO REMOVE ALL ROUGH EDGES ON NONMETALLIC CONDUIT. (SEE NEC 347.5)

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY U.L. LISTED ADAPTER FITTINGS SHALL BE USED.

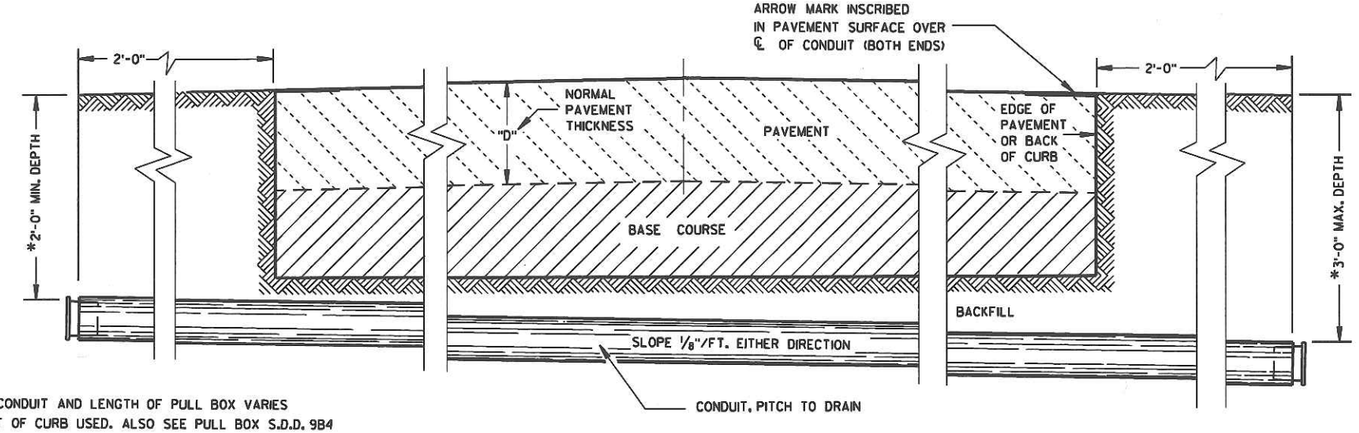
PRIOR TO CONDUIT ACCEPTANCE, CONDUIT CAPS OR PLUGS SHALL BE REMOVED, AND THE CAPS, PLUGS AND CONDUIT ENDS SHALL BE THOROUGHLY CLEANED AND THEN THE CAPS OR PLUGS REINSTALLED TO ENSURE THAT THE CAPS OR PLUGS CAN BE EASILY REMOVED IN THE FUTURE.

ALL CONDUIT BEING FURNISHED AND INSTALLED SHALL HAVE THE U.L. LABEL FIRMLY ATTACHED.

CONDUIT RUNS SHALL BE THE SAME SIZE OF CONDUIT FROM ONE END TO THE OTHER (FROM PULL BOX TO PULL BOX-OR-JUNCTION BOX TO JUNCTION BOX-OR-BASE TO BASE, ETC.).

POLY ROPE OR A PULL WIRE SHALL BE INSTALLED AS STATED IN THE STANDARD SPECIFICATION, ITEM 652.3.1.1.

ALL CONDUIT RUNS SHALL BE STRAIGHT (WITHOUT BENDS) FROM PULL BOX TO PULL BOX, PULL BOX TO BASE AND BASE TO BASE AS SHOWN ON THE PLANS.



*DEPTH OF CONDUIT AND LENGTH OF PULL BOX VARIES WITH HEIGHT OF CURB USED. ALSO SEE PULL BOX S.D.D. 9B4

SIDE ELEVATION

DETAIL FOR CONDUIT UNDER PAVED HIGHWAYS

CONDUIT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/23/03
DATE

STATE ELECTRICAL ENGINEER FOR HIGHWAYS

FHWA

6

S.D.D. 9 B 2-7

6

S.D.D. 9 B 2-7

TABLE OF NOMINAL DIMENSIONS AND WEIGHTS

DIMENSION IN INCHES		TYPE OF PIPE									
		CORRUGATED STEEL									POLYETHYLENE SDR 32.5
PIPE DIAMETER (INSIDE)	A	12	12	12	18	18	18	24	24	24	12
PIPE LENGTH **	B	24	30	36	24	30	36	36	42	48	24
WALL THICKNESS	C	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.4
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	10 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	14 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	8 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	11 1/2
WEIGHT IN POUNDS *											
FRAME AND COVER		60	60	60	110	110	110	155	155	155	60

* 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.

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. THE MECHANICAL CONNECTION (INSIDE AND OUTSIDE) TO THE PULL BOX, SHALL BE TOTALLY AND PERMANENTLY SEALED WITH A SILICONE OR RUBBERIZED CAULKING COMPOUND AS APPROVED BY THE ENGINEER.

GROUNDING LUGS ARE NOT REQUIRED IN PULL BOXES WHEN VOLTAGES OF LESS THAN 50 VOLTS AC ARE THE ONLY VOLTAGES ENCOUNTERED IN THE BOXES.

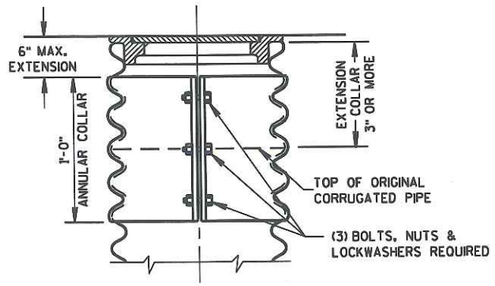
RODENT WIRE SCREEN SHALL BE 1/8" STAINLESS STEEL MESH AND BE INSTALLED WITH A STAINLESS STEEL HOSE CLAMP OF SUFFICIENT SIZE.

ALL METALLIC CONDUIT IN WHICH WIRE AND/OR CABLE IS TO BE INSTALLED, SHALL BE BUSHED BEFORE INSTALLATION OF THE WIRE AND/OR CABLE.

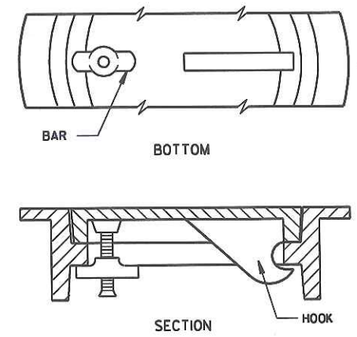
S.D.D. 9B2, "CONDUIT", APPLIES TO THIS DRAWING.

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.

IF PULL BOX EQUIPMENT GROUNDING IS REQUIRED USING AN EQUIPMENT GROUNDING ELECTRODE IN EACH PULL BOX, THE EQUIPMENT GROUNDING ELECTRODE SHALL BE 5/8" X 8'-0", COPPERCLAD AND BE EXOTHERMICALLY WELDED TO A #4 AWG, COPPER, STRANDED WIRE (BARE OR GREEN INSULATED). THE #4 AWG WIRE SHALL BE 4 FEET IN LENGTH, NEATLY COILED, TAPED AND AVAILABLE FOR USE WHEN REQUIRED.

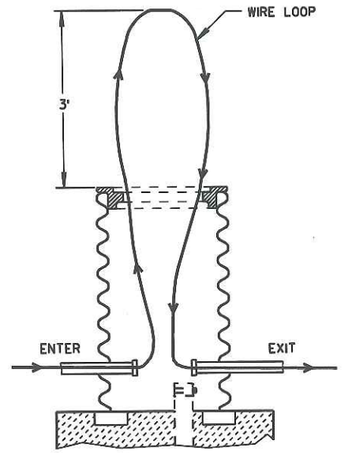


CORRUGATED PIPE EXTENDER

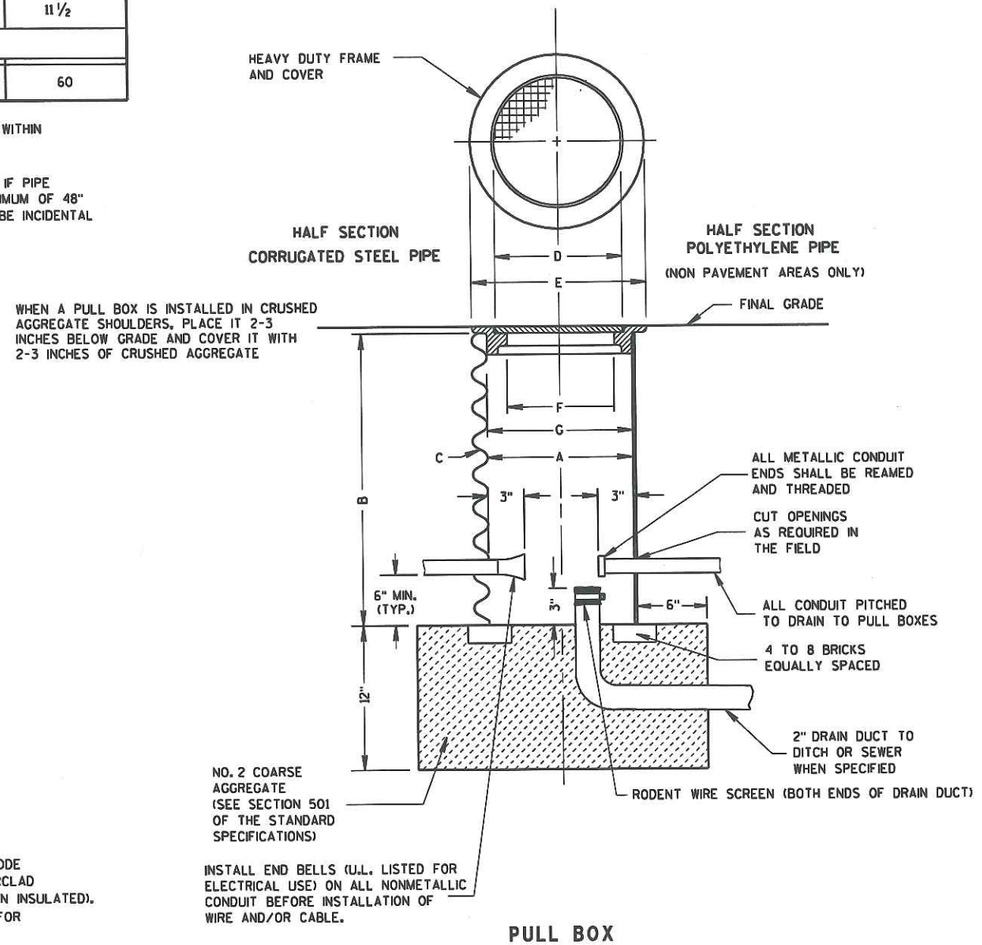


ALTERNATE COVER (LOCKING)

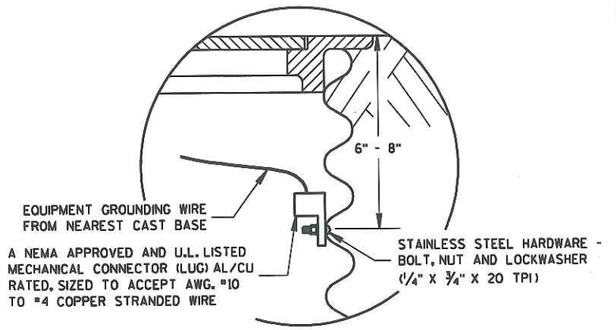
TIGHTENING BAR TYPE



MEASUREMENT DETAIL FOR WIRE/CABLE IN THE PULL BOX



PULL BOX



EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES

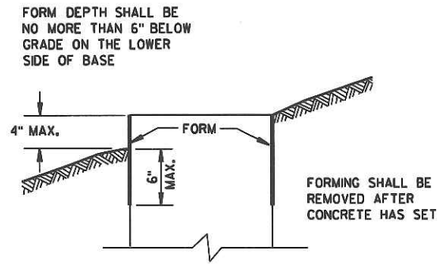
PULL BOX

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
5/26/05 DATE
/S/ Balu Ananthanarayanan
STATE ELECTRICAL ENGINEER FOR HIGHWAYS
FHWA

6

S.D.D. 9 B 4-8



FORMING DETAIL

QUANTITY REQUIREMENTS	CONCRETE BASE TYPE		
	1	2	5
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 2 AND TYPE 5 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 AND 641.2.2 OF THE STANDARD SPECIFICATIONS, ASTM A-449, OR ASTM A-687 (GRADE 105).

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 PER SECTION 5.17.6.3, AASHTO 2001 4TH EDITION STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINARIES AND TRAFFIC SIGNALS.

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.

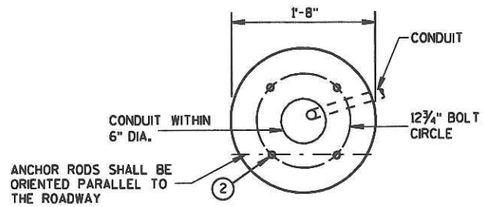
(4) (6) NO. 6 X 6'-8" BAR STEEL REINFORCEMENT.

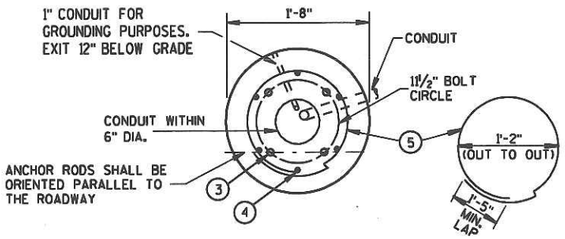
(5) (7) NO. 4 X 5'-1" BAR STEEL REINFORCEMENT @ 1'-0" C-C.

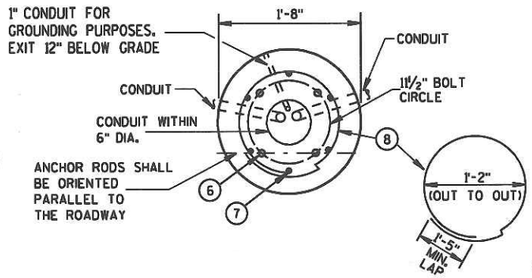
(6) (4) 1" DIA. X 3'-6" ANCHOR RODS.

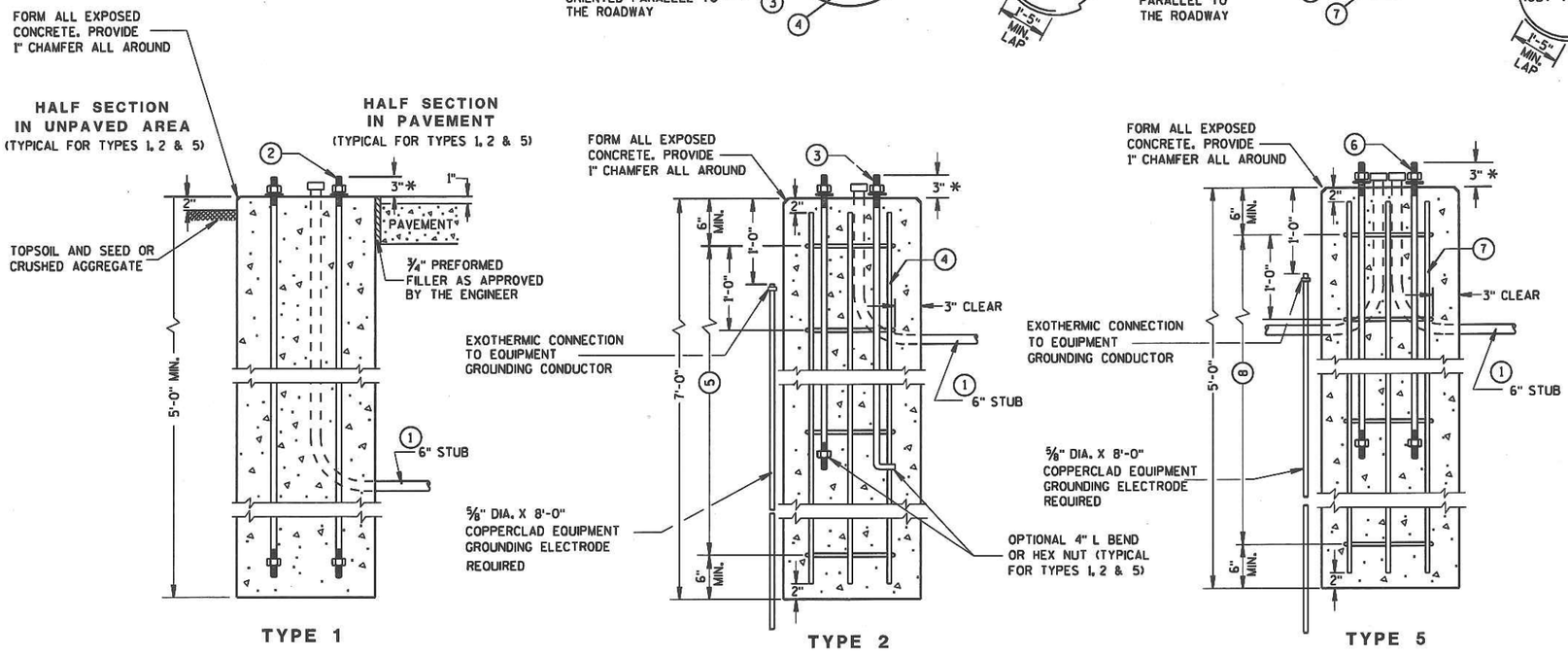
(7) (6) NO.4 X 4'-8" BAR STEEL REINFORCEMENT

(8) (5) NO. 4 X 5'-1" BAR STEEL REINFORCEMENT @ 1'-0" C-C.









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.

CONCRETE BASES, TYPES 1, 2 & 5

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED 1/12/05 DATE
FHWA

STATE ELECTRICAL ENGINEER FOR HIGHWAYS

S.D.D. 9 C 2-4

6

S.D.D. 9 C 2-4

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, ASTM A-325, (92,000 YIELD) HEAVY HEX NUT AND BE GALVANIZED IN ACCORDANCE WITH ASTM A-153, CLASS C.

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 AND U.L. LISTED MECHANICAL CONNECTOR (LUG) AL/CU RATED AND SIZED TO ACCEPT #10 AWG STRANDED WIRE, SHALL BE FURNISHED AND INSTALLED IN THE PEDESTAL AND TRANSFORMER BASES.

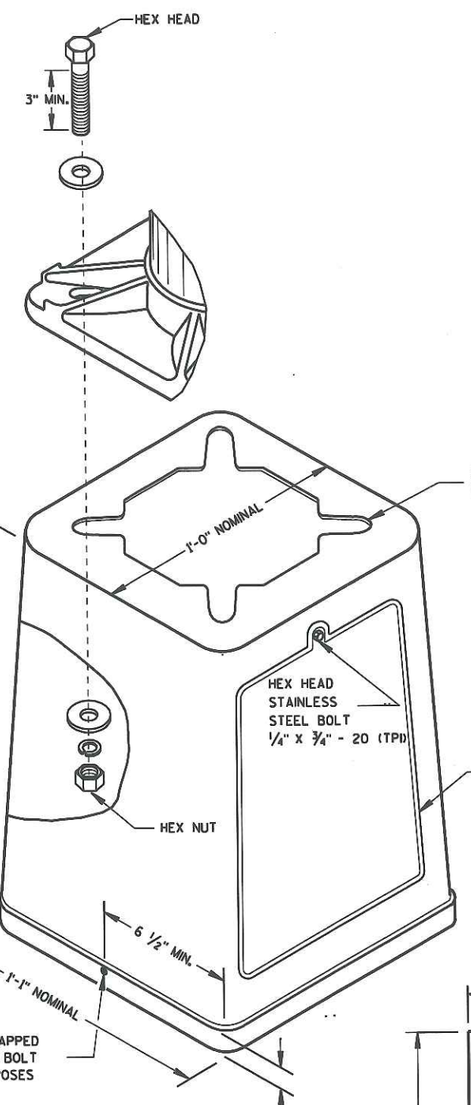
THE MECHANICAL CONNECTOR SHALL BE INSTALLED USING A 1/4" - 20 (TPI) STAINLESS STEEL HEX HEAD BOLT OF SUFFICIENT LENGTH TO FIRMLY ATTACH THE LUG TO THE BASE.

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.

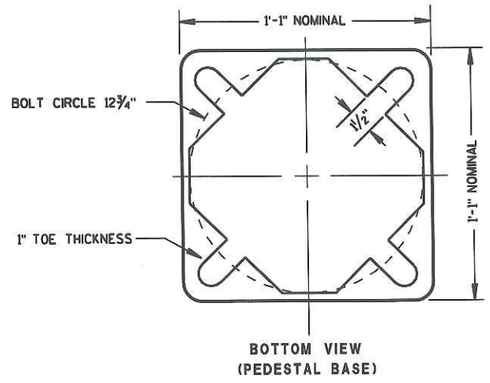
PEDESTAL BASE COLLAR THREADING SHALL BE TAPERED AND IN ACCORDANCE WITH NATIONAL PIPE THREADING DIMENSIONS.

BASE COLLAR THREADING SHALL EXTEND INTO THE BASE COLLAR WITH SUFFICIENT DEPTH TO ACCEPT THE INSTALLATION OF TRAFFIC SIGNAL STANDARDS TO A DEPTH OF 1½", THEN TIGHTENING TO A POINT OF BEING IMMOVABLE.

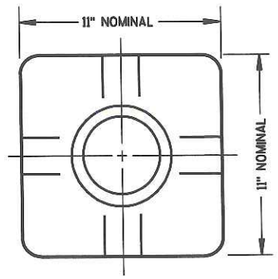
THE ACCESS DOOR SHALL BE OF THE SAME MATERIAL AS THE BASE.



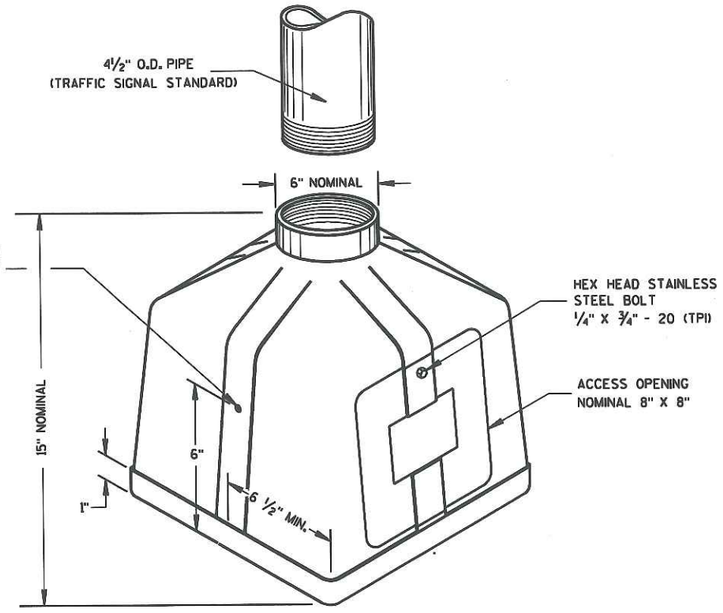
ISOMETRIC VIEW



BOTTOM VIEW
(PEDESTAL BASE)

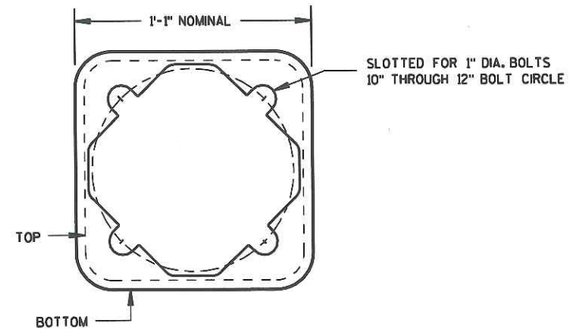


TOP VIEW
(PEDESTAL BASE)

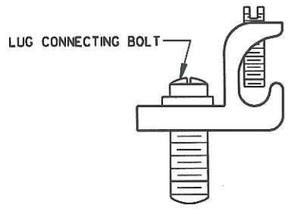


ISOMETRIC VIEW

PEDESTAL BASE



BOTTOM VIEW
(TRANSFORMER BASE)

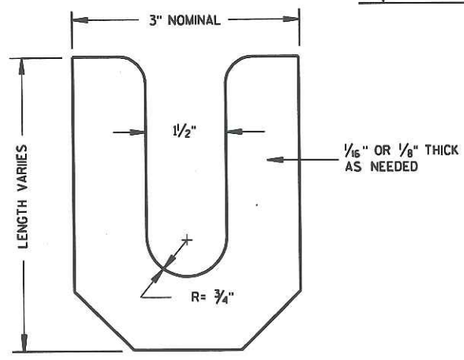


TYPICAL MECHANICAL CONNECTOR LUG

TO BE FURNISHED WITH EACH BASE

TRANSFORMER BASE

INTENDED FOR USE WITH TYPE 2, 3, 4, 5 & 6 POLES



LEVELING SHIM

TRANSFORMER/PEDESTAL BASES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/21/96
DATE

STATE ELECTRICAL ENGINEER FOR HIGHWAYS

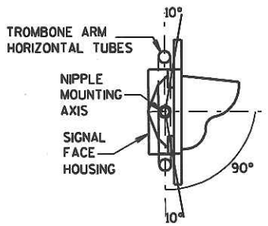
FHWA

6

S.D.D. 9 C 3-2

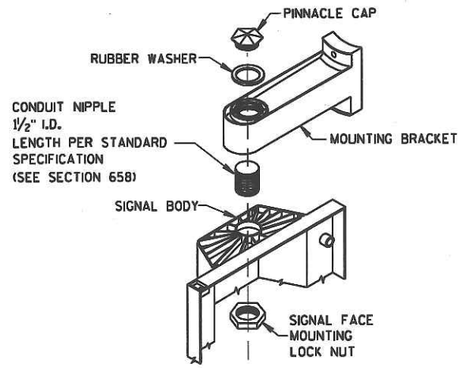
6

S.D.D. 9 C 3-2



SECTION A-A

(10 DEGREES TILT REQUIREMENT OF FACE(S) IN THE TROMBONE MOUNTING)



SIGNAL FACE MOUNTING DETAIL

(BANDED)

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

POLES SHALL BE EITHER ALUMINUM OR GALVANIZED STEEL AS CALLED FOR IN THE CONTRACT.

SECTION 657, POLES, OF THE STANDARD SPECIFICATIONS SHALL APPLY TO THIS DRAWING.

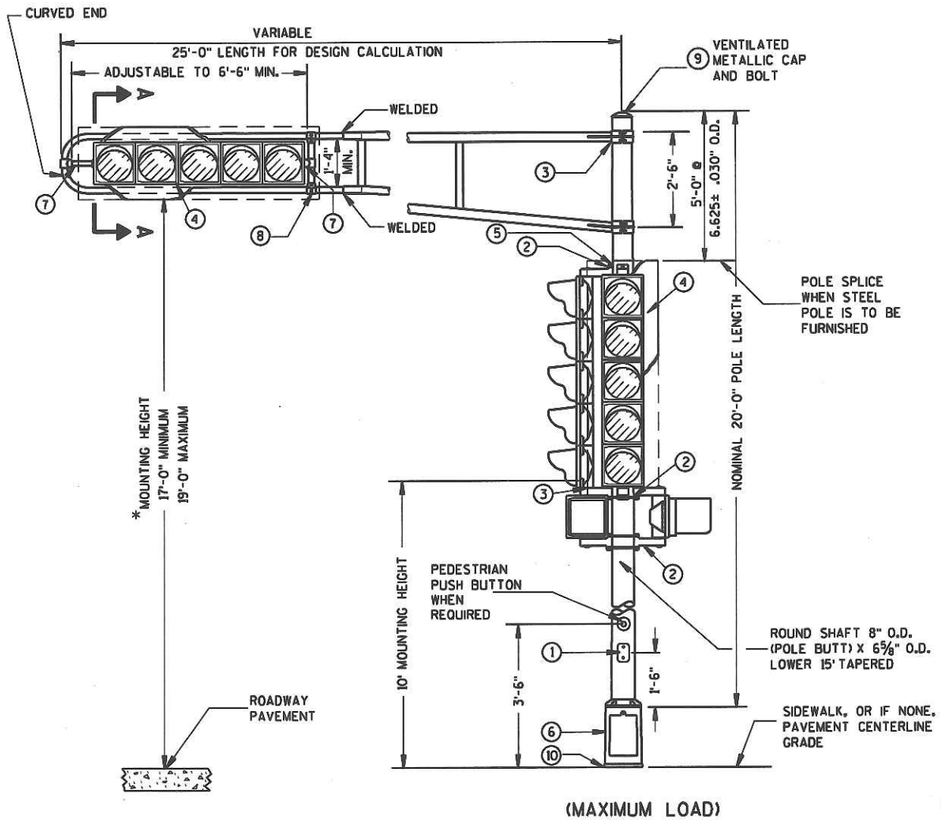
A PULL WIRE/ROPE IN ACCORDANCE WITH STANDARD SPECIFICATION 652 SHALL BE INSTALLED IN EACH TROMBONE ARM RACEWAY DURING THE MANUFACTURING PROCESS.

TYPE 2 ALUMINUM POLES SHALL BE CONSTRUCTED OF 6063-T6 ALUMINUM ALLOY. SLEEVING INSIDE THE POLE IS NOT ACCEPTABLE.

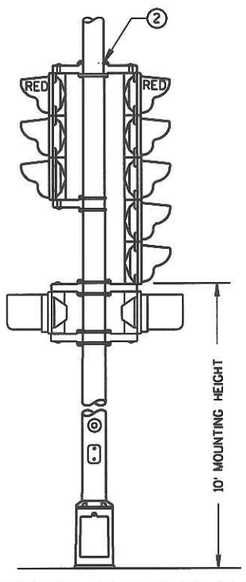
WHEN TRANSFORMER BASES ARE USED, WIRE CONNECTIONS SHALL BE MADE IN THE TRANSFORMER BASE.

1. 4" X 6" REINFORCED HANDHOLE & COVER ASSEMBLY WITH 2 (TWO) ¼" X ¾" - 20 TPI HEX HEAD STAINLESS STEEL BOLTS.
2. SIGNAL FACE MOUNTING BRACKETS. MOUNT WITH CAP SCREWS AND BANDING. (SEE STANDARD SPECIFICATIONS - SEC. 658)
3. GROMMETS, 1" CHASE NIPPLES OR 1" CLOSE CONDUIT NIPPLES WITH BUSHINGS SHALL BE PROVIDED FOR 1⅜" HOLE IN POLE SHAFT FOR WIRING.
4. SECURELY MOUNT DULL BLACK POLYCARBONATE BACKPLATES, PROJECTING 5" BEYOND ALL SIDES OF THE SIGNAL FACE HOUSING, WITH SELF-TAPPING STAINLESS STEEL SCREWS.
5. POLE MOUNTED SIGNAL FACES SHALL REQUIRE 1 OR MORE MOUNTING SPACERS UNDER THE TOP MOUNTING BRACKET(S) AS REQUIRED, TO PLUMB THE SIGNAL FACES.
6. CAST ALUMINUM TRANSFORMER BASE, WHEN REQUIRED.
7. MOUNTING BRACKET NIPPLES FOR THE SIGNAL FACE(S) SHALL BE 2 INCHES IN LENGTH AND 1½ INCHES IN DIAMETER. (SEE STANDARD SPECIFICATION - SECTION 658).
8. VERTICAL STRUT (ADJUSTABLE). ONE (1) SET SCREW (¼" X ¾" LONG- 20 TPI, STAINLESS STEEL, HEX HEAD) INTO EACH ARM MEMBER IF STRUT IS THE SLIDING TYPE.
9. FURNISH AND INSTALL VENTILATED, CAST, METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) ¼" X ¾" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.
10. SHIMMING, IF NEEDED, SHALL BE LOCATED BETWEEN THE CONCRETE FOUNDATION AND THE TRANSFORMER BASE.

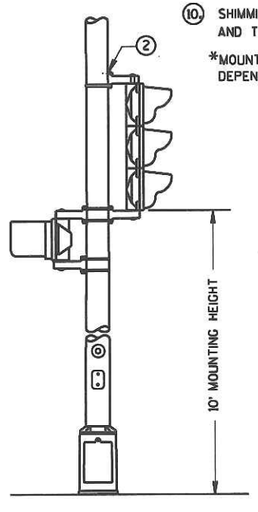
*MOUNTING HEIGHT LIMITATION DIMENSIONS OF THE TROMBONE MAST ARM WILL BE DEPENDENT UPON THE USE/NON-USE OF A TRANSFORMER BASE.



(MAXIMUM LOAD)



TYPICAL MOUNTING OF BACK TO BACK 3 AND 5 SECTION SIGNAL FACES

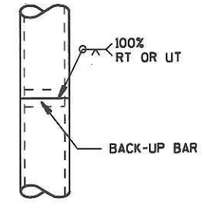


TYPICAL MOUNTING OF 3 SECTION SIGNAL FACE

TYPE 2 POLE MOUNTING CONFIGURATION

FOR MANUFACTURERS USE ONLY

WELD TO BE 100% R.T. OR U.T. TESTED AS PER THE REQUIREMENTS OF AWS D 1.5-88. RECORDS OF COMPLIANCE OF SUCH TESTING SHALL BE FURNISHED TO THE OFFICE OF DESIGN/BRIDGE FOR VERIFICATION AND APPROVAL.



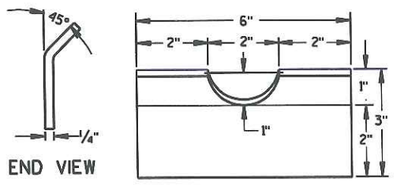
POLE SPLICE DETAIL

POLE MOUNTINGS FOR TRAFFIC SIGNALS TYPE 2

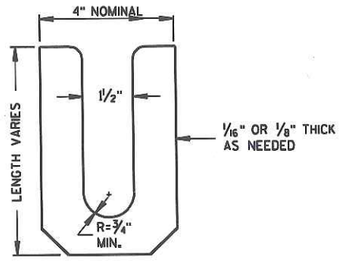
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

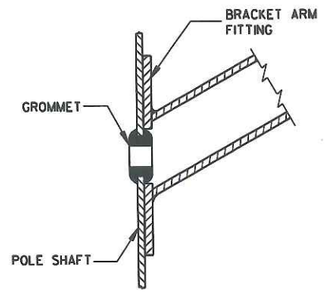
S.D.D. 9 E 1-5a



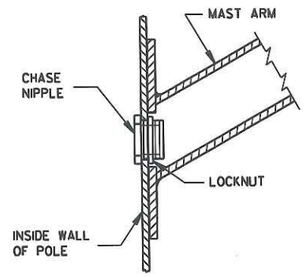
RECTANGULAR CLAMP SHIM
(4 TO A SET)



LEVELING SHIM (15)
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.) OUTSIDE SHIM DIAMETER - (4.5" O.D. FOR LUMINAIRE MAST ARM)
(6.625" O.D. FOR TROMBONE MAST ARM)

(14.) VARIABLE SHIM THICKNESS - (0.10", 0.25", 0.35", 0.53" OR 0.70")

SHIM THICKNESS FOR TROMBONE MAST ARMS MAY BE TYPICALLY 0.25", 0.35", 0.53" OR 0.70".

SHIM THICKNESS FOR LUMINAIRE MAST ARMS MAY BE TYPICALLY 0.10", 0.25" OR 0.35".

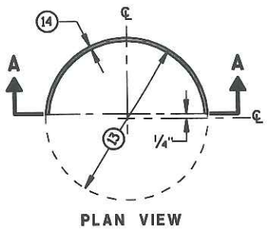
SHIM MATERIAL SHALL BE ALUMINUM ALLOY.

SHIM THICKNESS SHALL BE IMPRESSED INTO EACH SHIM. NUMERALS SHALL BE 1/4" HIGH AND LEGIBLE.

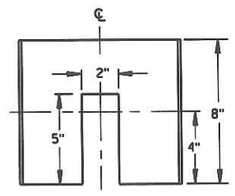
THE CONTRACTOR SHALL SUBMIT TWO COPIES OF ALL SHIM SHOP DRAWINGS TO THE ENGINEER FOR APPROVAL.

(15.) 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.

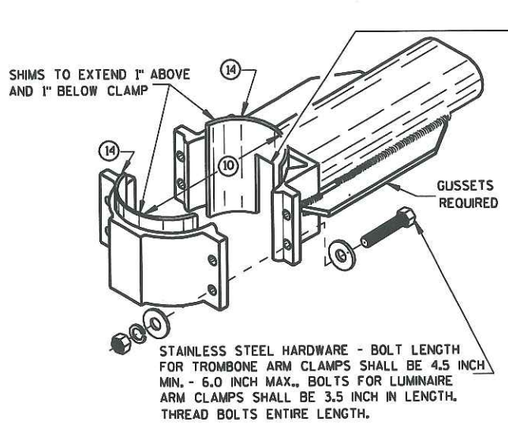
SHIMS SHALL BE LONG ENOUGH AND WIDE ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.



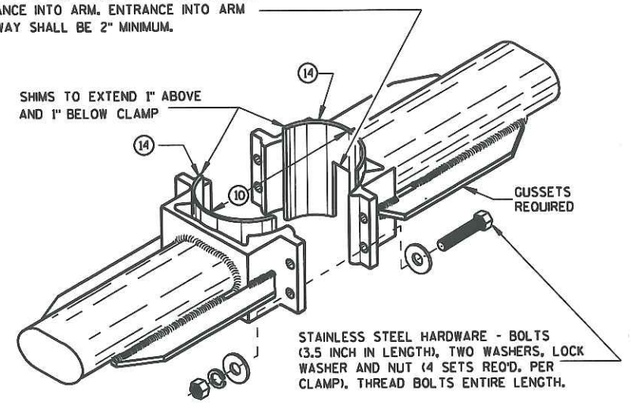
PLAN VIEW



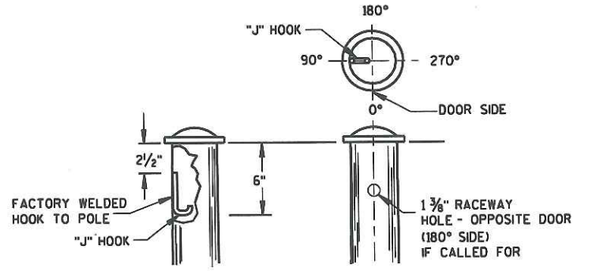
SECTION A-A
CIRCULAR CLAMP SHIM
(2 TO A SET)



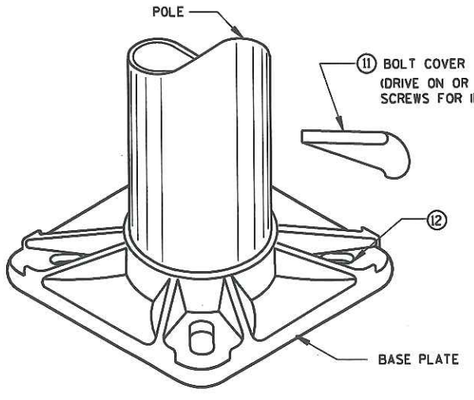
TYPICAL TROMBONE MAST ARM AND SINGLE LUMINAIRE MAST ARM MOUNTING CLAMP



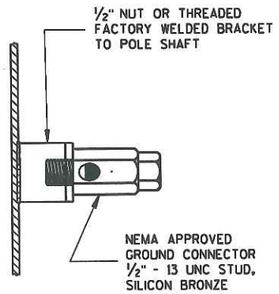
TYPICAL LUMINAIRE MAST ARM (DOUBLE) MOUNTING BRACKETS

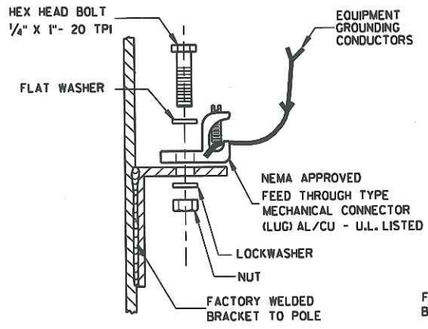


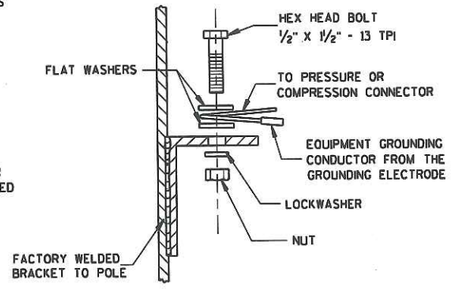
TYPICAL "J" HOOK LOCATION



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
3/5/01
DATE
FHWA

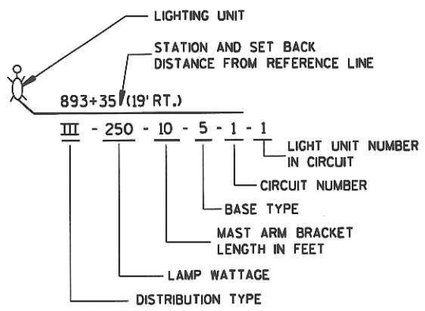
STATE ELECTRICAL ENGINEER FOR HIGHWAYS

S.D.D. 9 E 1-49

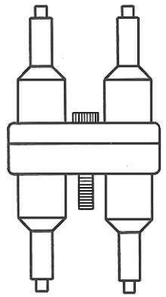
S.D.D. 9 E 1-49

6

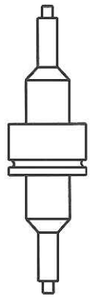
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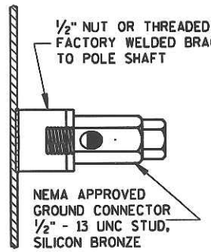
LIGHTING UNIT CODE
(TYPICAL)

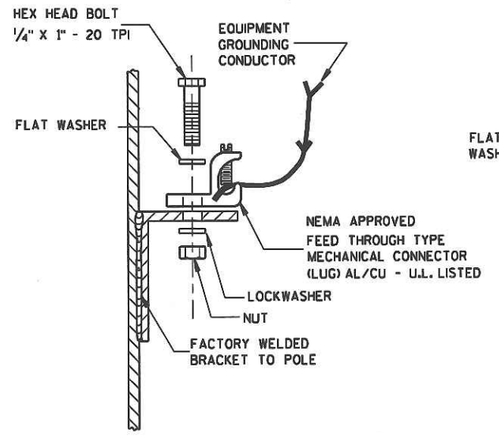


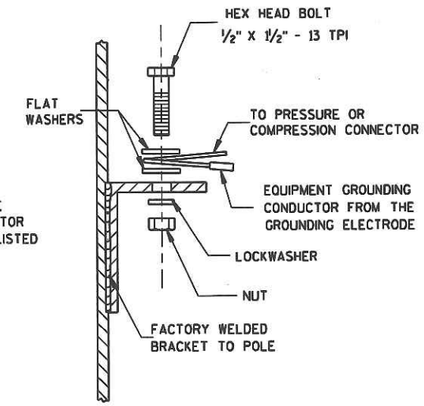
DETAIL "A"
DOUBLE POLE



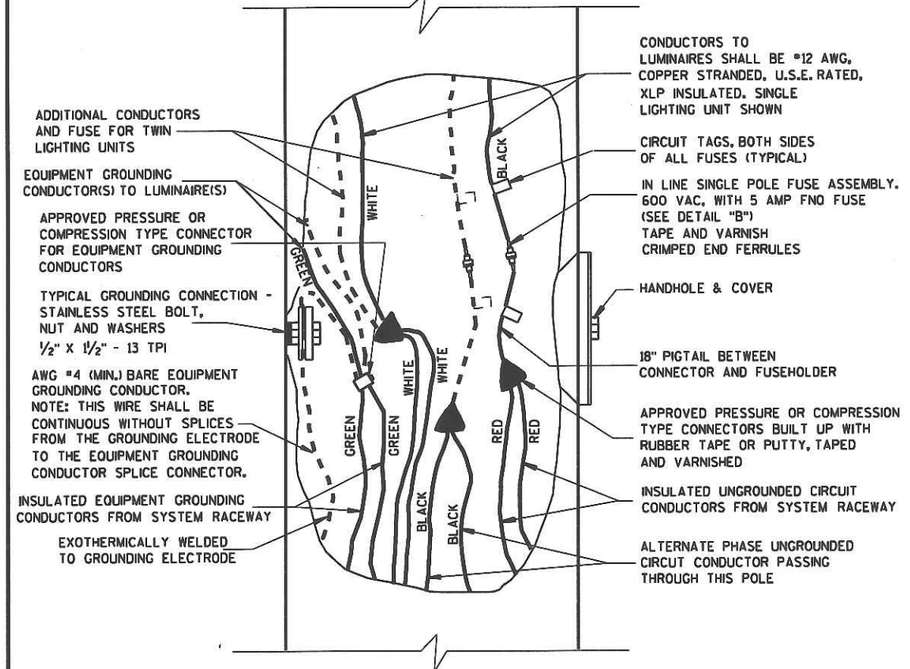
DETAIL "B"
SINGLE POLE



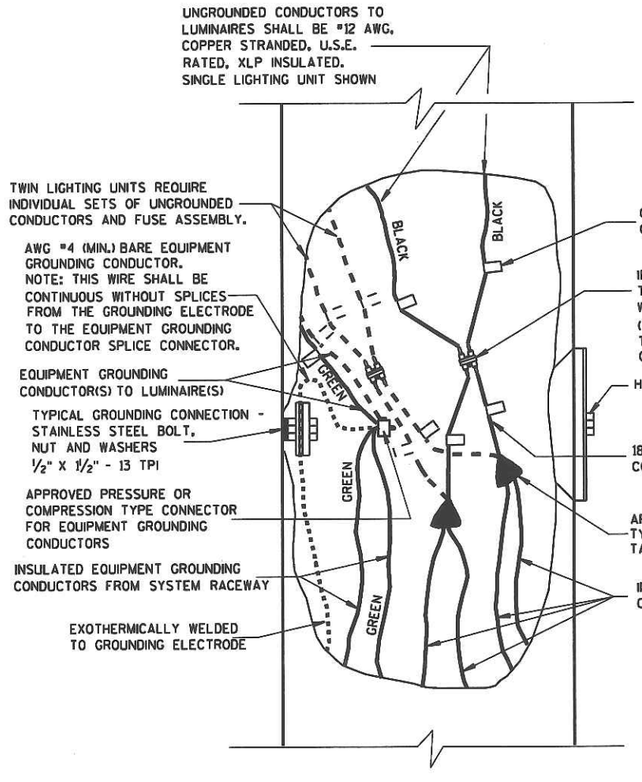




TYPICAL GROUNDING CONNECTIONS
NUT, BOLT, WASHERS AND LOCKWASHERS SHALL BE STAINLESS STEEL



3 WIRE - 120, 240 OR 480 VAC (UNGROUNDED CONDUCTOR) WITH GROUNDED CONDUCTOR AND WITH EQUIPMENT GROUNDING CONDUCTOR



2 WIRE - 240 OR 480 VAC (UNGROUNDED CONDUCTORS) WITH EQUIPMENT GROUNDING CONDUCTOR

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

THE EQUIPMENT GROUNDING CONNECTOR SHALL BE TAPED WITH 3 WRAPS (MINIMUM) OF APPROVED RUBBER TAPE AND THEN 3 WRAPS (MINIMUM) OF APPROVED VINYL TAPE TO COVER SHARP WIRE ENDS AFTER THE CONNECTION IS COMPLETED.

NON-FREEWAY LIGHTING UNIT POLE WIRING

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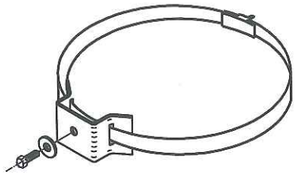
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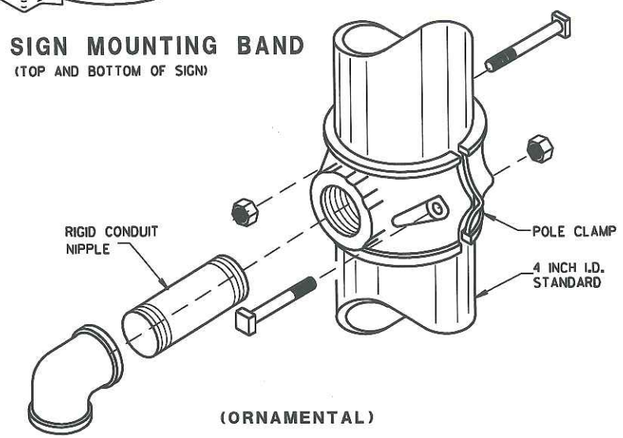
S.D.D. 9 E 3-2

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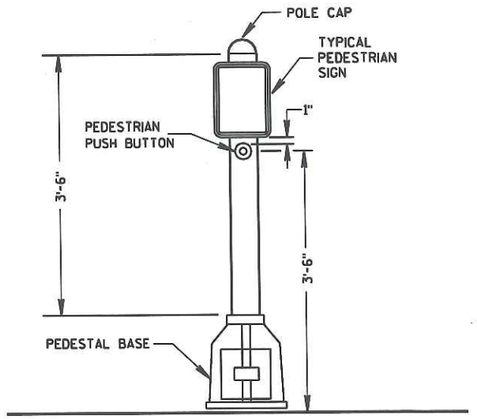
S.D.D. 9 E 3-2



TYPICAL SIGN MOUNTING BAND
(TOP AND BOTTOM OF SIGN)



SIGNAL FACE MOUNTING DETAILS



PEDESTRIAN PUSH BUTTON TYPICAL MOUNTING

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

SEE THE SIGNAL PLAN FOR REQUIRED SIGNAL FACE SIZES.

LOCATIONS SHALL BE AS SHOWN ON THE PLANS.

ALL PEDESTAL BASES SHALL BE MOUNTED ON CONCRETE BASE - TYPE 1.

FOR APPROVED MOUNTING HARDWARE, SEE THE CONTRACT SPECIFICATIONS.

POLYCARBONATE SIGNAL FACE MOUNTING BRACKETS SHALL BE USED UNLESS ORNAMENTAL POLE CLAMPS ARE SPECIFIED.

LENGTH OF TRAFFIC STANDARDS SHALL BE AS SHOWN ON THE PLANS.

MOUNTINGS AND BRACKETS SHALL BE AS SHOWN ON THE PLANS OR DESCRIBED IN THE SPECIAL PROVISIONS (BY THE DISTRICT TRAFFIC ENGINEER).

PEDESTRIAN SIGNS SHALL BE AS DESIGNATED IN THE PLANS.

PEDESTRIAN FACE STANDARD-10 FT.
(WALK-DON'T WALK)

STANDARD FLASHER.
10 FOOT, 13 FOOT OR 15 FOOT AS REQUIRED

SINGLE
(OFFSET-SERRATED MOUNTING)

DOUBLE
(SERRATED MOUNTING)

SLIPFITTERS

TRAFFIC SIGNAL STANDARD
PEDESTRIAN AND FLASHER
TYPICAL MOUNTING DETAILS

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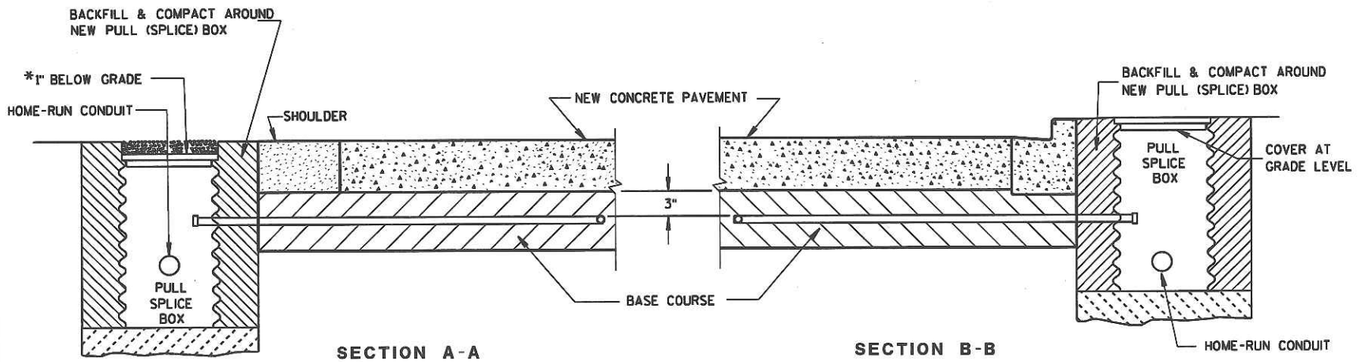
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S.D.D. 9 E 7-3

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S.D.D. 9 E 7-3



SECTION A-A
NO CURB & GUTTER

SECTION B-B
CURB & GUTTER

*RECESS PULL (SPLICE) BOX SO THAT THE COVER IS 3" BELOW GRADE IN SHOULDER AREAS OF CRUSHED AGGREGATE. BACKFILL OVER COVER WITH THE CRUSHED AGGREGATE TO BRING THE AREA TO GRADE LEVEL.

LOOP DETECTOR INSTALLATION DETAIL

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

LOOP SIZE, CONFIGURATION LOCATION, NUMBER OF TURNS OF WIRE AND ASSOCIATED SIGNAL PHASE SHALL BE AS SHOWN ON THE PLANS.

PITCH LEAD OUT CONDUIT TO DRAIN TO ROADSIDE PULL (SPLICE) BOX.

SPLICES SHALL BE INSTALLED BY USING CAST IN PLACE SPLICE KITS SUCH AS 3M TYPE 82A1 OR 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.

THE GROUND RESISTANCE READING OF THE LOOP SHALL READ "INFINITY" TO GROUND ON AN OHMMETER USING A MULTIPLIER SCALE OF 1 MEGOHM AND AN INPUT RESISTANCE OF 11 MEGOHMS MINIMUM BEFORE SPLICING THE LOOP TO THE LEAD-IN CABLE.

AFTER SPLICING THE LOOP WIRE TO THE LOOP LEAD-IN CABLE, THE CONTRACTOR SHALL MEASURE INDUCTANCE, GROUND RESISTANCE AND WIRE RESISTANCE AT THE CABINET END OF THE LEAD-IN CABLE AND FURNISH A COPY OF THE READINGS TO THE PROJECT ENGINEER FOR EVALUATION.

LOOP DETECTOR LEADS SHALL BE IDENTIFIED WITH THEIR ASSOCIATED LOOP BY USE OF WATERPROOF TAGS AT BOTH ENDS OF THE CABLE. A LISTING OF THE CABLE IDENTIFICATION PER INDIVIDUAL LOOP LEAD-IN SHALL BE PLACED IN THE CABINET.

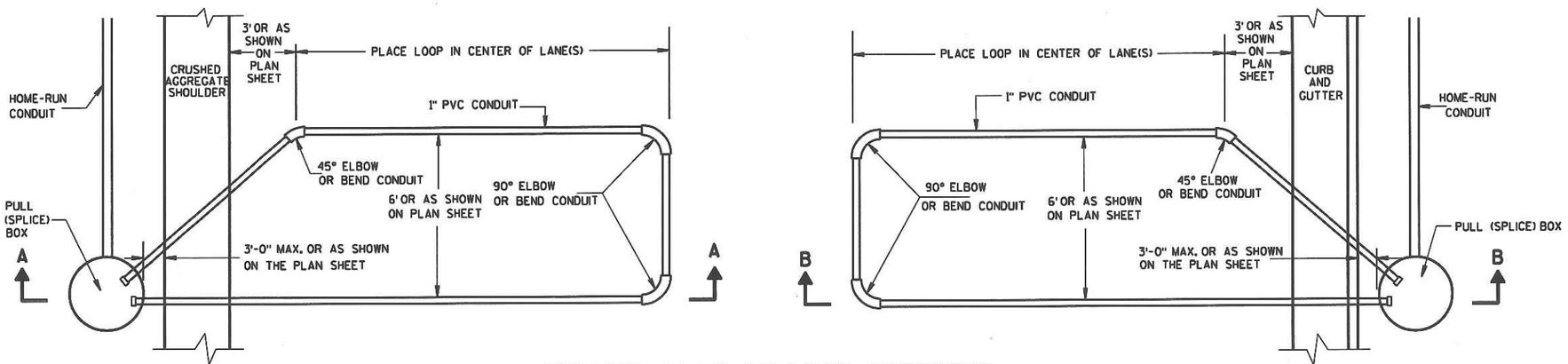
THE #12 AWG. LOOP WIRE IN THE PULL (SPLICE) BOX SHALL BE HAND TWISTED AT LEAST 3 TWISTS PER FOOT BEFORE BEING SPLICED TO THE LOOP LEAD-IN CABLE.

SPLICES OF LOOP WIRE TO LEAD-IN CABLE SHALL BE MADE ONLY IN PULL (SPLICE) BOXES AT THE SIDE OF THE ROAD.

THE #12 AWG LOOP WIRE SHALL BE INSTALLED FROM THE ROADSIDE PULL (SPLICE) BOX THROUGH THE LOOP CONDUIT, BACK TO THE ROADSIDE PULL (SPLICE) BOX, AND BE INSTALLED IN ONE, NON-SPLICE CONTINUOUS LENGTH.

PROTECTION OF THE CONDUIT IN THE BASE COURSE, SHALL BE REQUIRED AFTER INSTALLATION AND BEFORE NEW PAVEMENT IS INSTALLED.

SHOULD INSTALLATION REPAIR BE REQUIRED, IT SHALL BE DONE UNDER THE DIRECTION OF THE PROJECT ENGINEER.



TYPICAL PLAN OF LOOP DETECTOR WITH 18" OR 24" PULL (SPLICE) BOX

LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION I)

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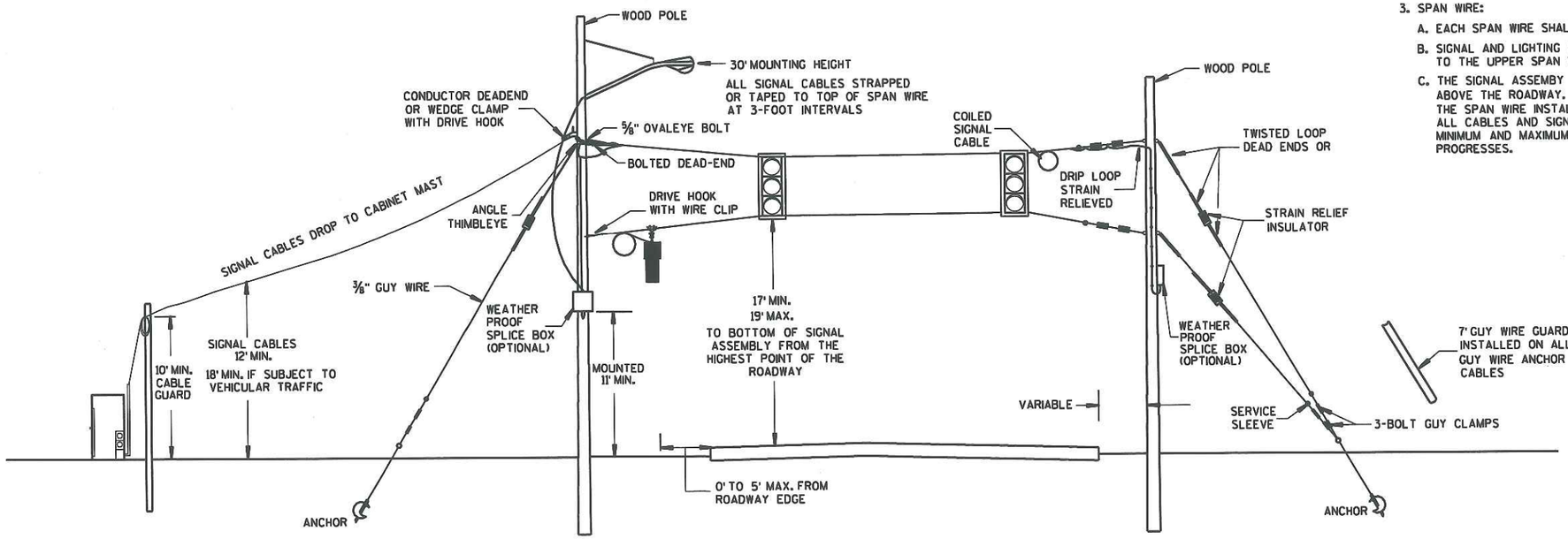
GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

1. WOOD POLES SHALL BE CLASS 4. LENGTH DETERMINED BY SIGNAL PLAN.

2. SIGNAL FACES:
   A. ALL SECTIONS SHALL BE 12" AND POLYCARBONATE.
   B. EACH SHALL CONTAIN A 5" WIDE DULL BLACK POLYCARBONATE BACKPLATE.
   C. EACH SHALL BE WIRED FROM THE TOP SIGNAL MOUNTING BRACKET.
   D. NEAR RIGHT SIGNAL FACE SUSPENDED ON THE TETHER (NO BACKPLATE) SHALL NOT BE OVER THE TRAVELED WAY. IF THE POLE IS WITHIN 5 FEET OF THE TRAVELED WAY MOUNT THE SIGNAL FACE ON THE WOOD POLE WITH BACKPLATE.

3. SPAN WIRE:
   A. EACH SPAN WIRE SHALL BE INDIVIDUALLY DOWN GUYED.
   B. SIGNAL AND LIGHTING CABLES SHALL ONLY BE ATTACHED TO THE UPPER SPAN WIRE.
   C. THE SIGNAL ASSEMBY SHALL HAVE A 17' MIN. HEIGHT ABOVE THE ROADWAY. THIS SHALL BE MEASURED AFTER THE SPAN WIRE INSTALLATION IS COMPLETED WITH ALL CABLES AND SIGNAL FACES IN PLACE. MAINTAIN MINIMUM AND MAXIMUM HEIGHTS AS ROADWAY WORK PROGRESSES.



SPAN WIRE
TEMPORARY SIGNALS

MINIMUM POLE LENGTHS	POLE BURIEL DEPTHS
25'	5'
30'	6'
35'	7'
40'	8'
45'	9'

SPAN WIRE
TEMPORARY TRAFFIC SIGNAL

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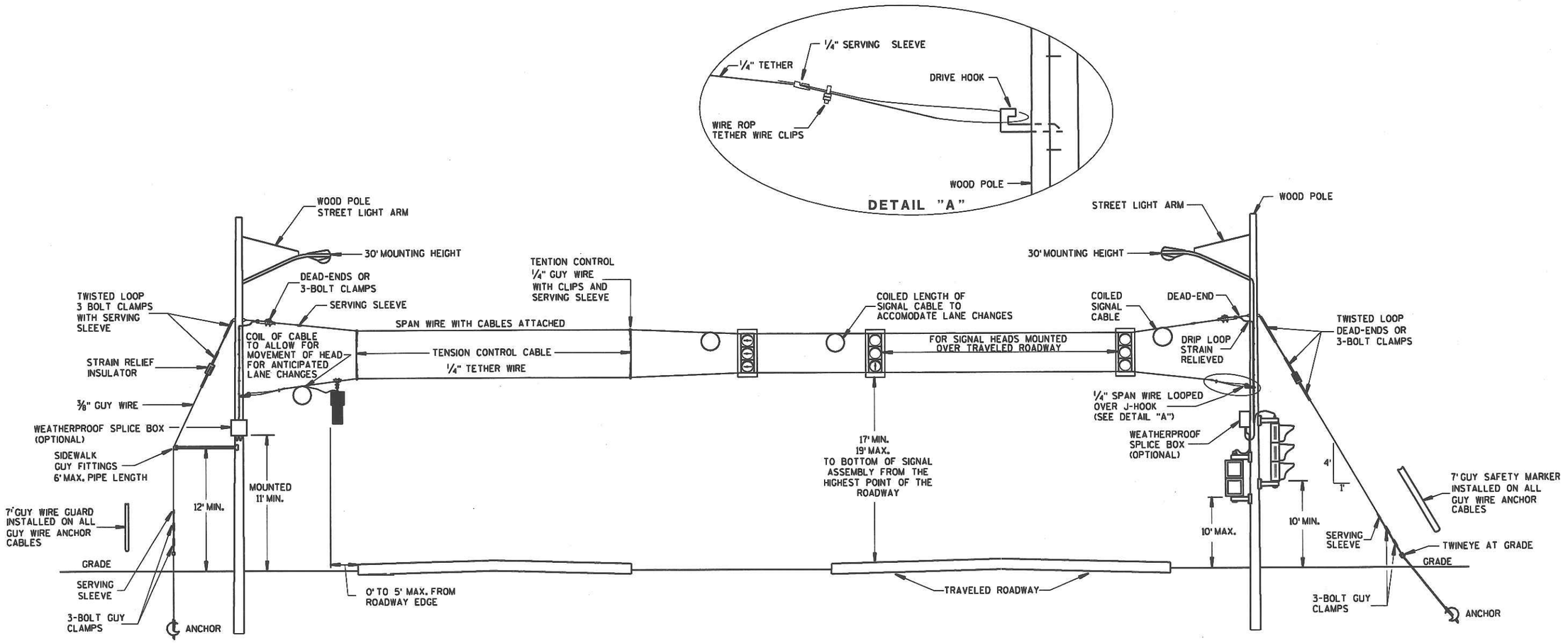
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S.D.D. 9 G 1-1a

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S.D.D. 9 G 1-1a



GENERAL NOTES

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   E. FAR INDICATION SHALL BE MAINTAINED OVER CENTER OF TRAFFIC LANE.
3. SPAN WIRE:
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SPAN WIRE
TEMPORARY SIGNALS
4 LANE ROADWAYS

MINIMUM POLE LENGTHS	CLASS	MIN. BURIAL DEPTHS
25'	V	5'
30'	V	6'
35'	IV	7'
40'	IV	8'
45'	IV	9'

SPAN WIRE TEMPORARY TRAFFIC SIGNAL

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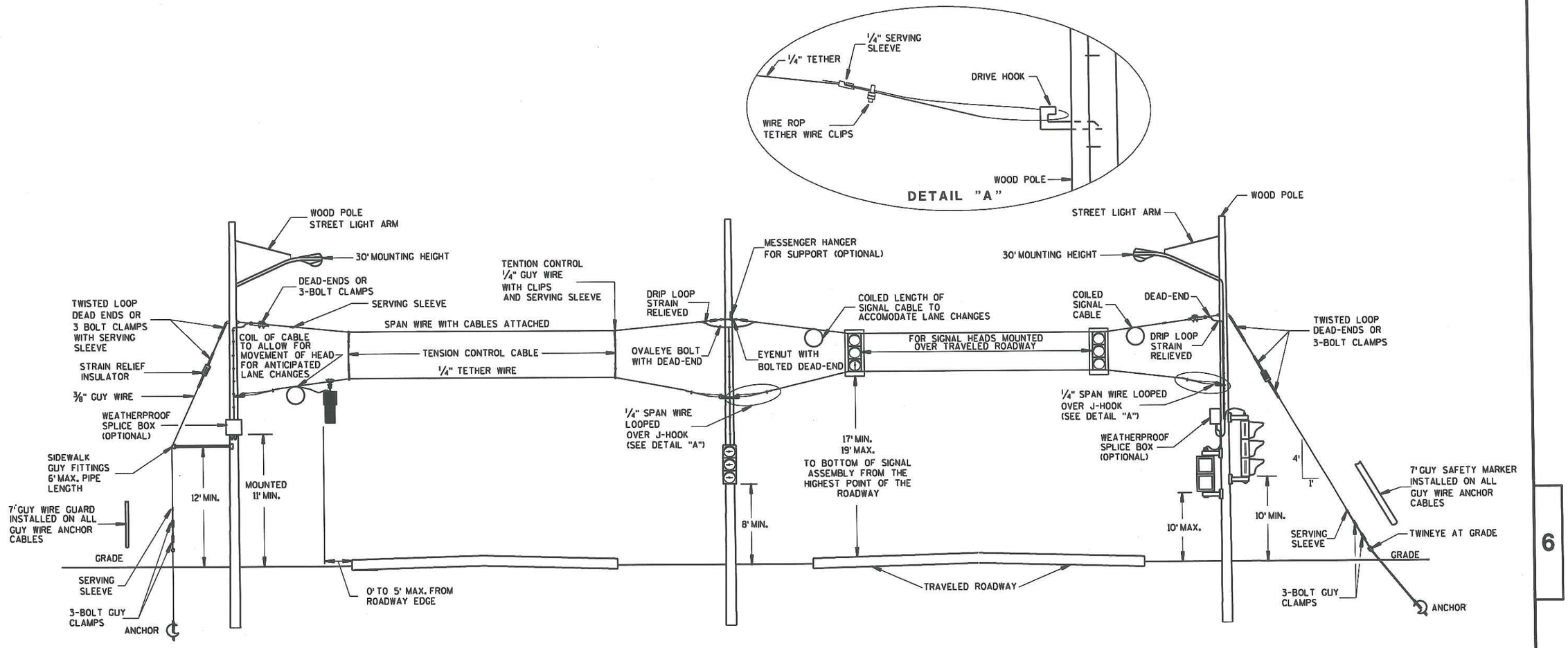
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S.D.D. 9 G 1-1b

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S.D.D. 9 G 1-1b



SPAN WIRE
TEMPORARY SIGNALS
4 LANE ROADWAYS

GENERAL NOTES

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MINIMUM POLE LENGTHS	CLASS	MIN. BURIAL DEPTHS
25'	V	5'
30'	V	6'
35'	IV	7'
40'	IV	8'
45'	IV	9'

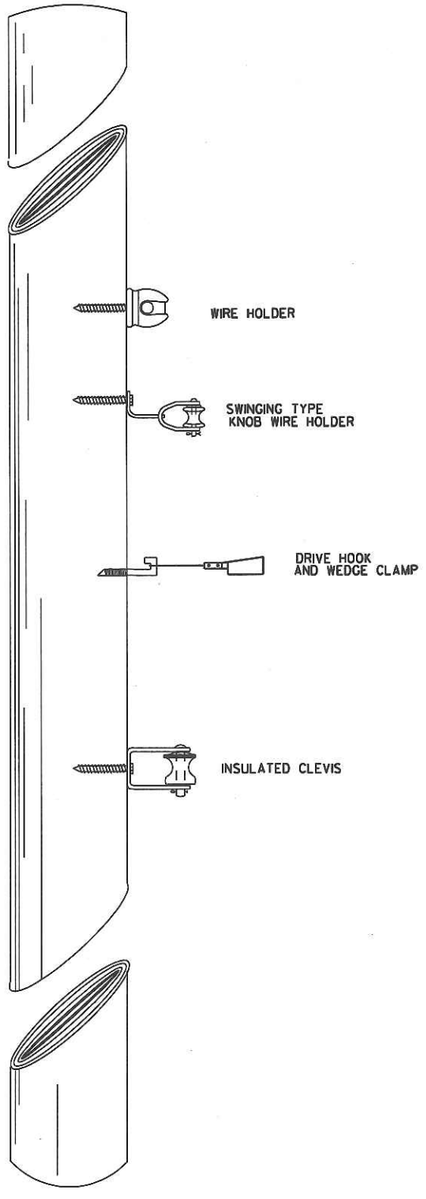
SPAN WIRE
TEMPORARY TRAFFIC SIGNAL

STATE OF WISCONSIN
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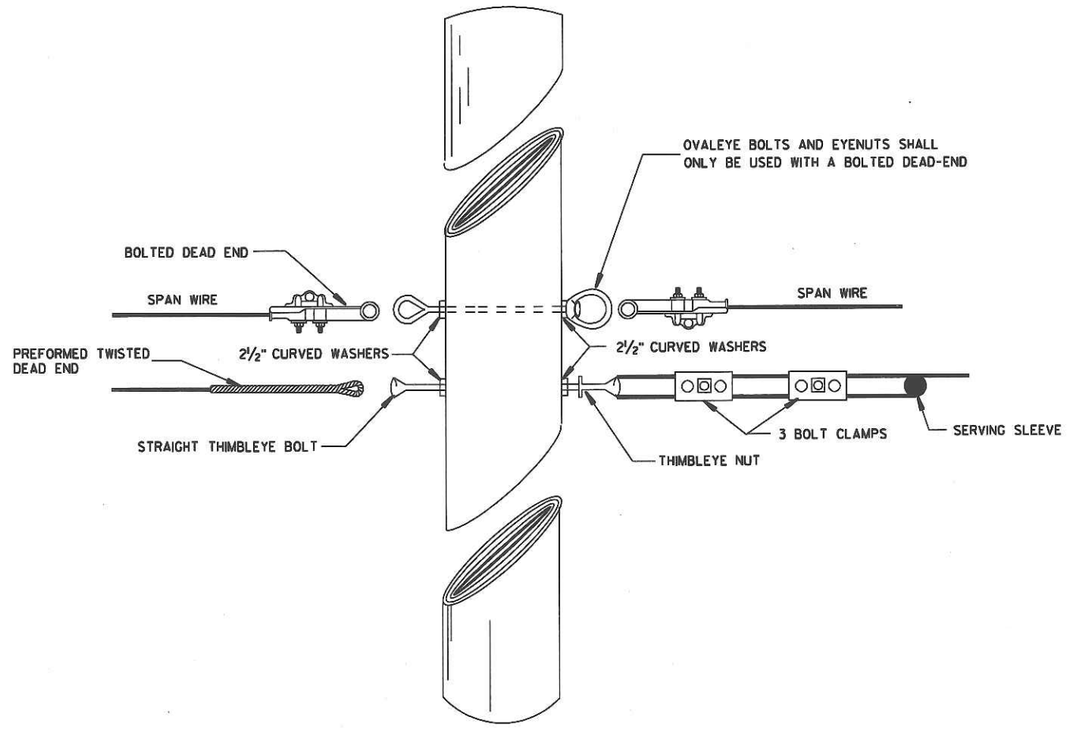
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TYPICAL CABLE HANGERS



TYPICAL DEAD-ENDING

SPAN WIRE
TEMPORARY TRAFFIC SIGNAL

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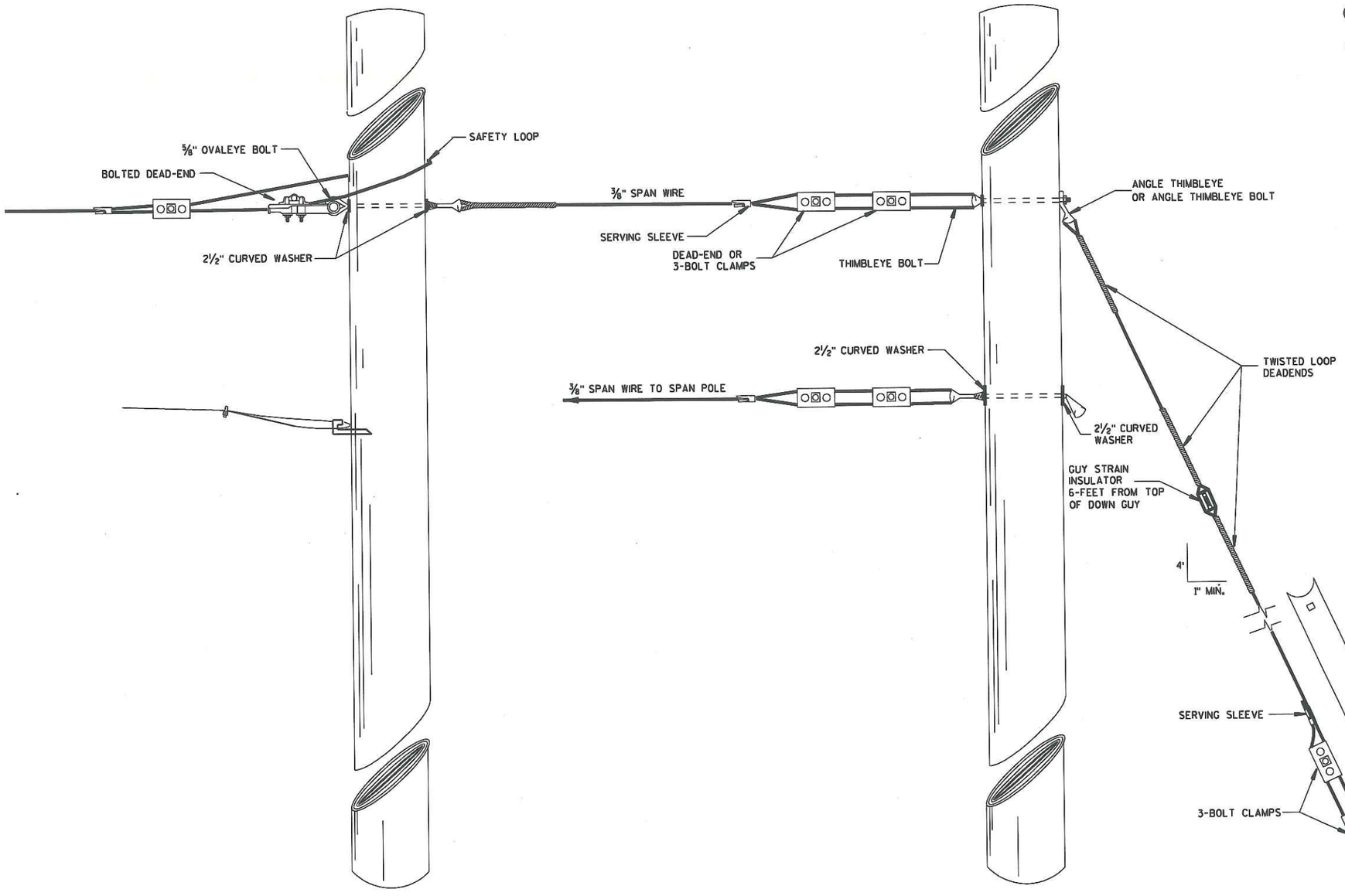
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S.D.D. 9 G 1-1d

GENERAL NOTES

1. USE ¾" DRILL IN WOOD POLE TO PROVIDE HOLE FOR ⅝" BOLTS.
2. SAFTY LOOP REQUIRED ON EACH END OF ALL SPAN WIRES.



SPAN WIRE POLE

GUY POLE

TYPICAL DEAD-ENDINGS OR GUYING

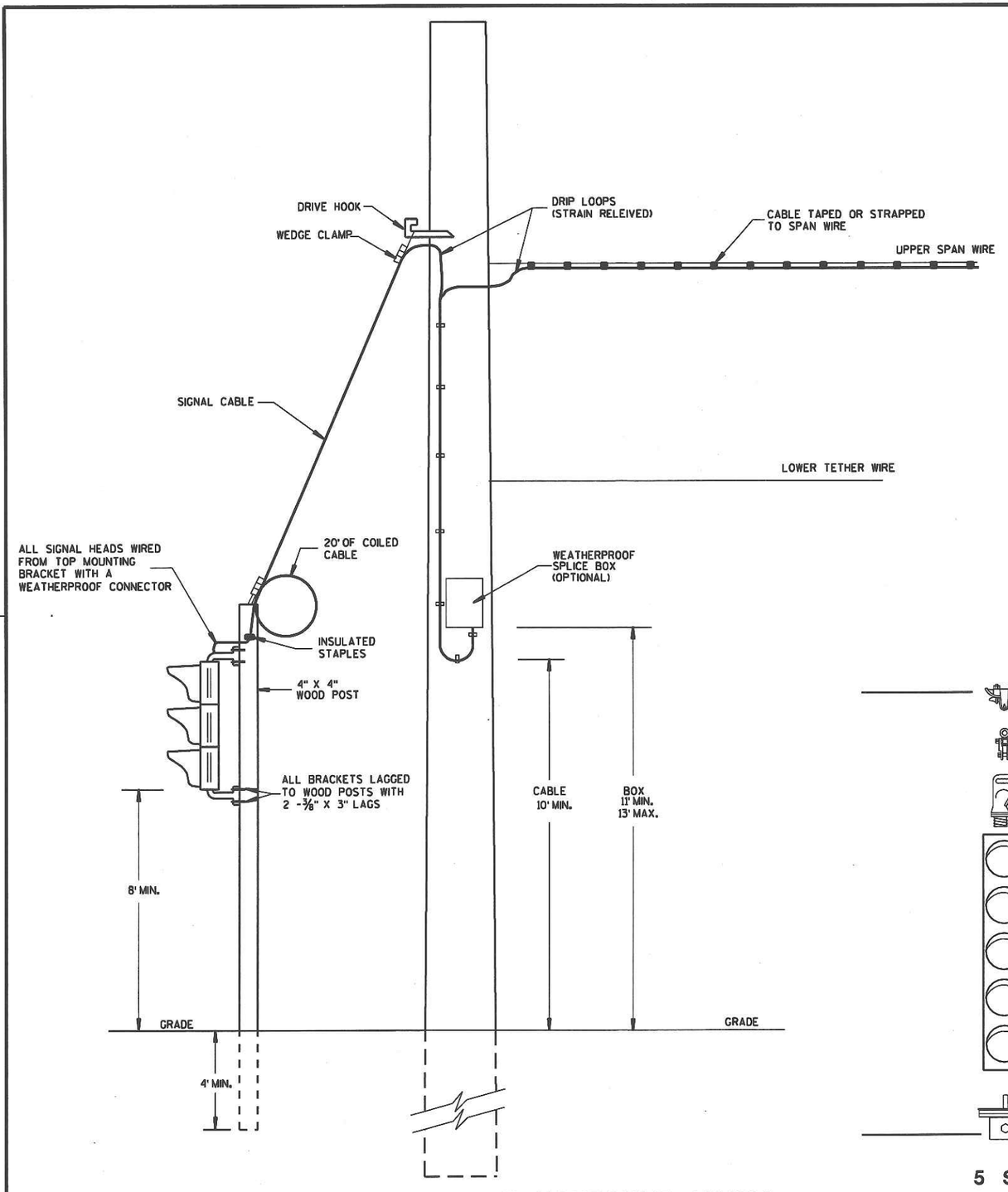
SPAN WIRE TEMPORARY TRAFFIC SIGNAL
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION
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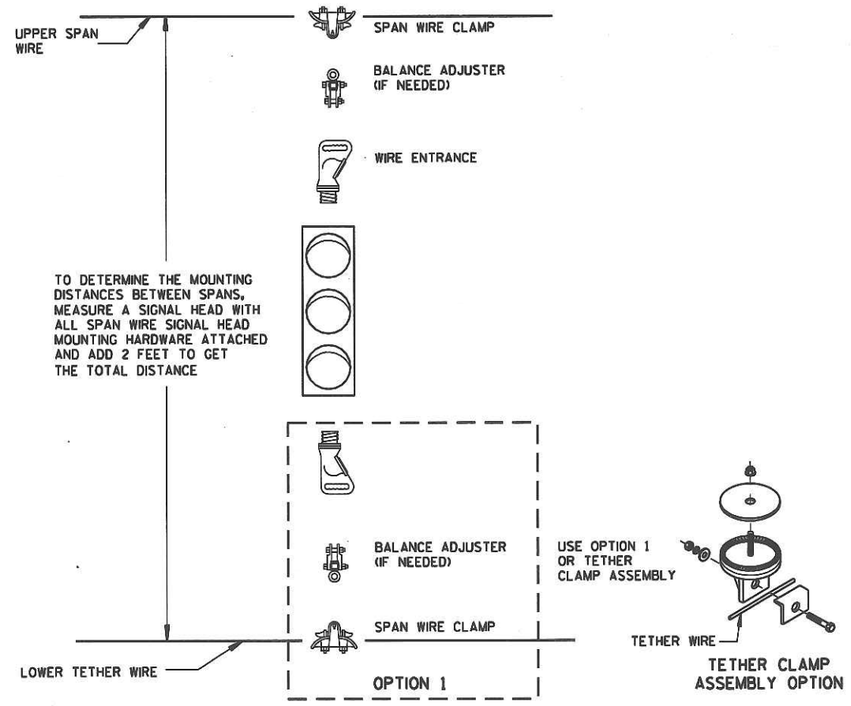
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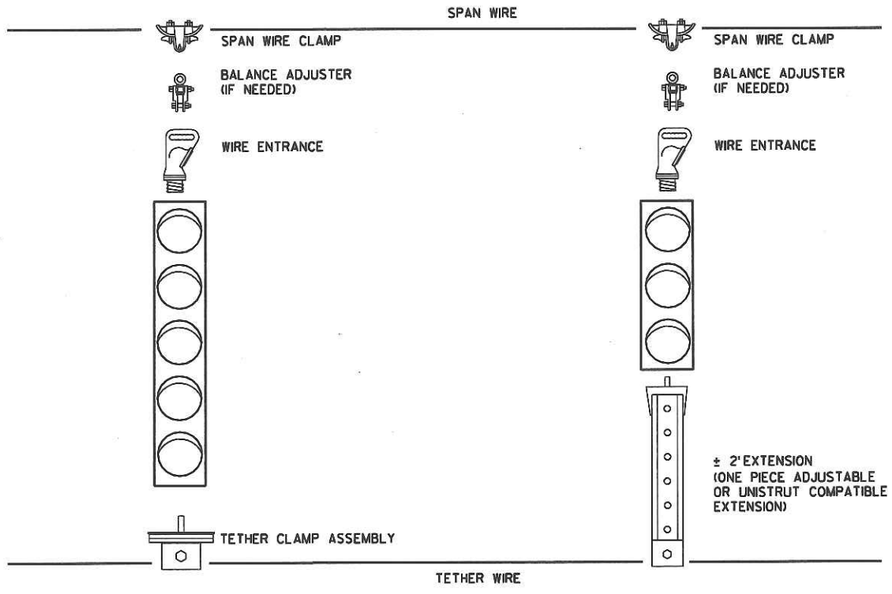
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TYPICAL DROP TO TEMPORARY MOVEABLE SIGNAL



TYPICAL SPAN WIRE MOUNTING HARDWARE



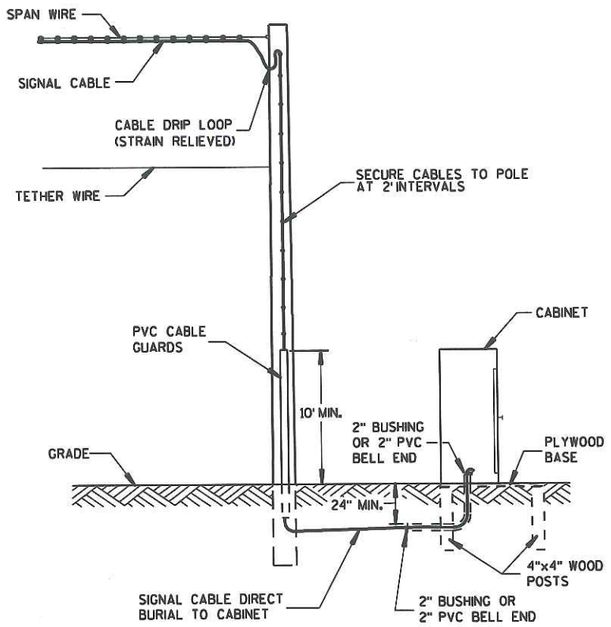
5 SECTION VERTICAL WITH 3 SECTION VERTICAL ON ONE SPAN WIRE

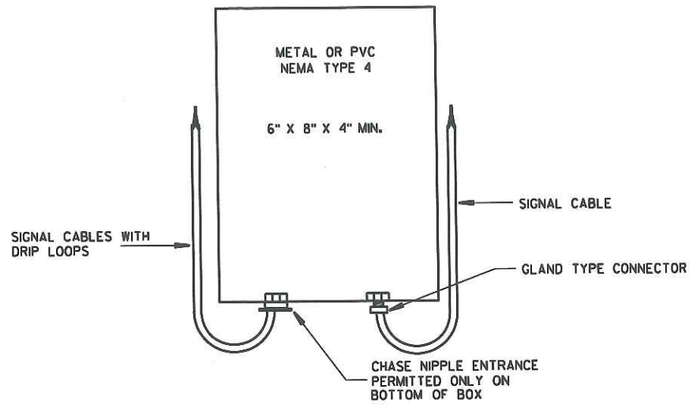
SPAN WIRE
TEMPORARY TRAFFIC SIGNAL

STATE OF WISCONSIN
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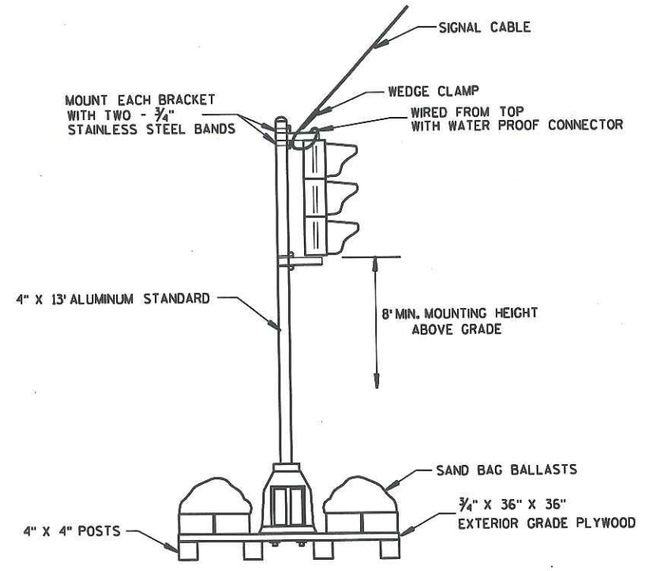
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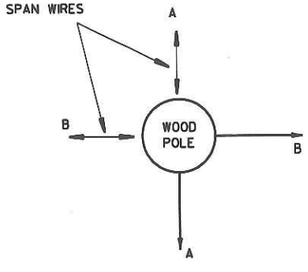




SPLICE BOX

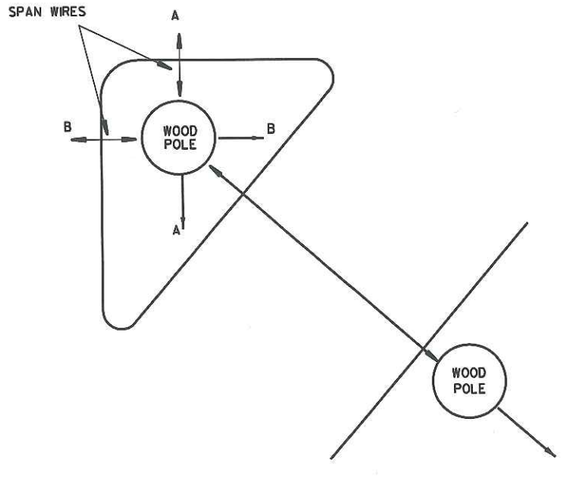


TYPICAL SKID TYPE TEMPORARY

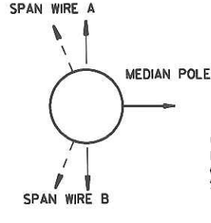


ALL DOWN OR SIDEWALK GUYS SHALL BE INSTALLED IN THE OPPOSITE DIRECTION OF THE STRAIN OF THE SPAN WIRE

CORNER POLES



ISLAND POLES



GUY AWAY FROM INTERSECTION OR IN OPPOSITE DIRECTION OF THE SPAN LOADING

MEDIAN POLES

SPAN WIRE
TEMPORARY TRAFFIC SIGNAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

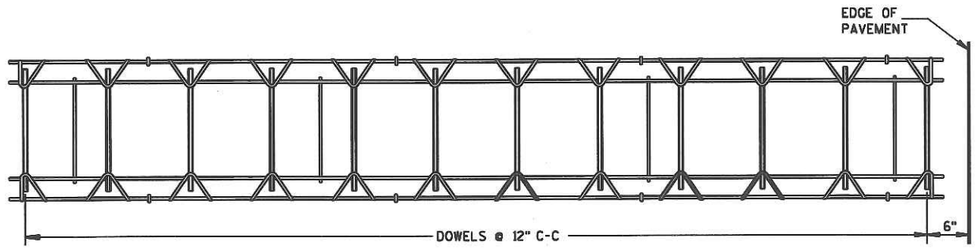
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S.D.D. 9 G 1-19



PLAN VIEW

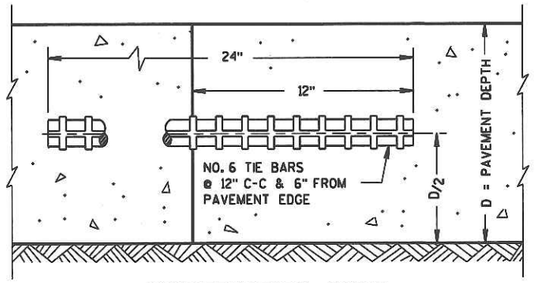


SIDE VIEW

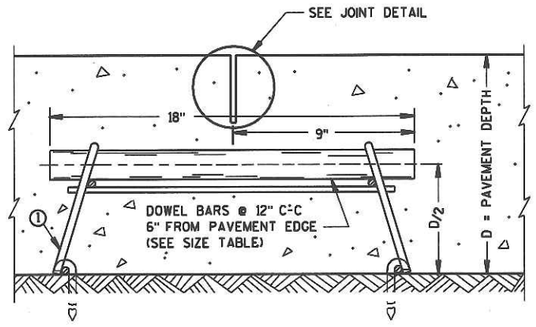
CONTRACTION JOINT DOWEL ASSEMBLY ①

PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

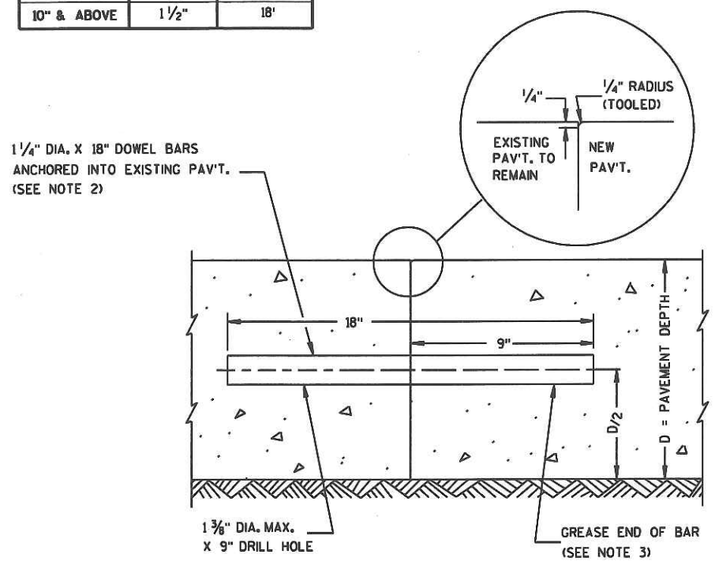
PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
6",6 ½"	1¼"	12'
7",7 ½"	1¼"	14'
8",8 ½"	1¼"	15'
9",9 ½"	1¼"	15'
10" & ABOVE	1½"	18'



CONSTRUCTION JOINT

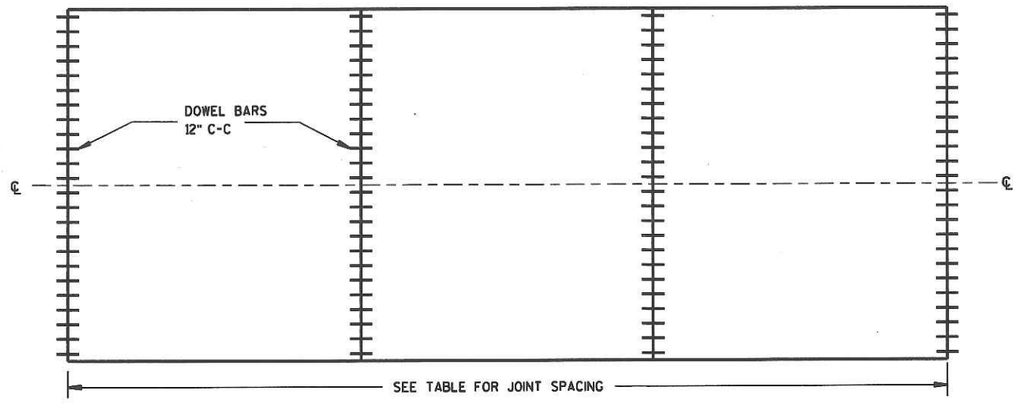


DOWELED CONTRACTION JOINT



TRANSVERSE CONTRACTION JOINTS ABUTTING EXISTING PAVEMENT

④ DOWEL BAR DETAIL



CONTRACTION JOINT LOCATIONS

GENERAL NOTES

DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.

CONTRACTION JOINTS

CONTRACTION JOINTS SHALL BE NORMAL TO THE CENTERLINE. THE LOCATION OF CONTRACTION JOINTS THROUGH INTERSECTIONS SHALL BE SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

CONTRACTION JOINTS SHALL NOT BE SEALED OR FILLED.

DOWEL BARS SHALL BE INSTALLED PARALLEL TO THE PAVEMENT CENTERLINE AND SURFACE.

CONSTRUCTION JOINTS

CONSTRUCTION JOINTS SHALL BE A MINIMUM OF 4 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGNED EITHER PARALLEL TO CONTRACTION JOINTS OR AT 90° TO THE CENTERLINE.

TIE BARS MAY BE INSERTED THROUGH THE HEADER BOARD AFTER THE CONCRETE HAS BEEN PLACED.

① ALTERNATIVE DESIGNS OF THE DOWEL ASSEMBLY MAY BE USED WHEN APPROVED BY THE ENGINEER. MECHANICAL DOWEL BAR IMPLANTERS MAY BE USED INSTEAD OF DOWEL ASSEMBLIES.

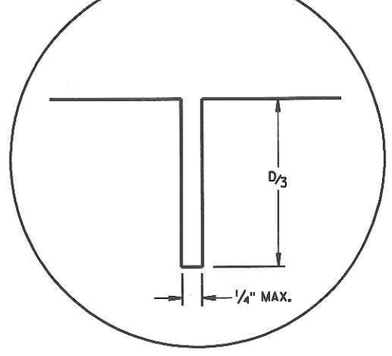
② DOWEL BARS SHALL BE ANCHORED INTO DRILL HOLES WITH AN APPROVED EPOXY GROUT.

③ THE FREE END OF DOWEL BARS SHALL RECEIVE A THIN UNIFORM COATING OF BOND BREAKING GREASE.

④ DOWEL BARS INSTALLED BY DRILLING SHALL BE SPACED 1'-3" ON CENTER. THE GROUPING OF DOWEL BARS SHALL BE CENTERED INSIDE THE SLAB BASED ON ALL THE FOLLOWING SITUATIONS:

BETWEEN THE EDGES OF PAVEMENTS WITHOUT LONGITUDINAL JOINTS OR BETWEEN THE EDGE OF PAVEMENT AND NEAREST LONGITUDINAL JOINT OR BETWEEN TWO ADJACENT LONGITUDINAL JOINTS.

THE CLEAR DISTANCE FROM THE EDGE OF PAVEMENT OR LONGITUDINAL JOINT TO THE NEAR EDGE OF DOWEL BAR NEAREST THAT EDGE OR JOINT SHALL BE A MINIMUM OF 6 INCHES AND A MAXIMUM OF 14 INCHES.



JOINT DETAIL

URBAN DOWELED CONCRETE PAVEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

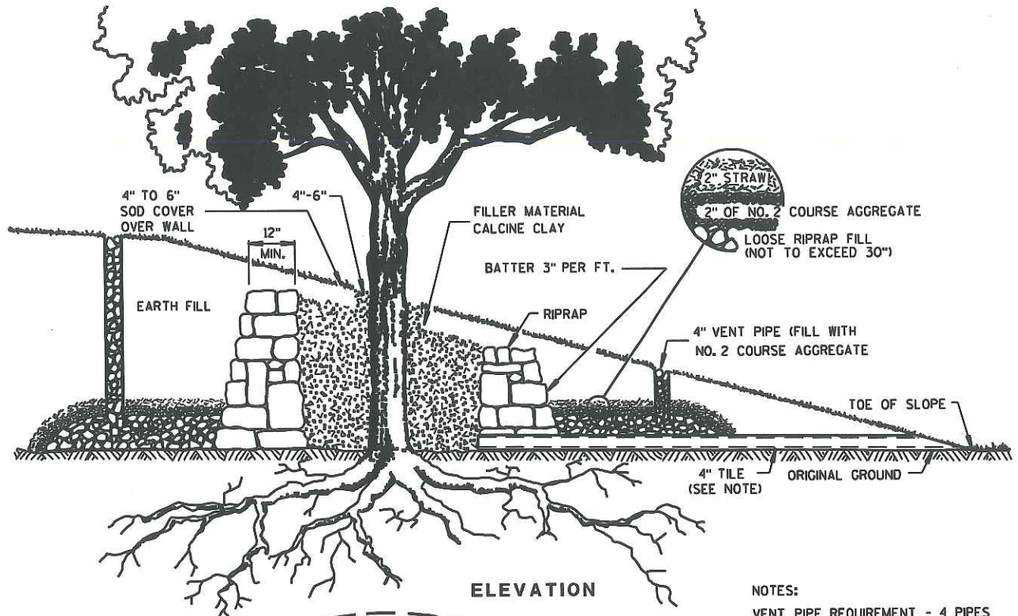
APPROVED
6/6/02 DATE
Bill Duckett PAVEMENT ENGINEER
FHWA

6

S.D.D. 13 C 13-4

6

S.D.D. 13 C 13-4



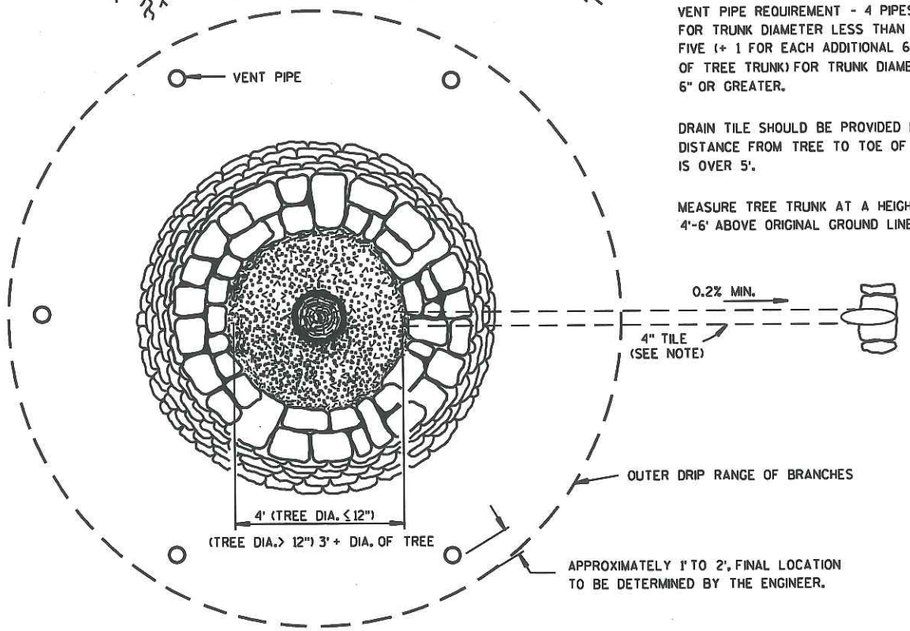
ELEVATION

NOTES:

VENT PIPE REQUIREMENT - 4 PIPES FOR TRUNK DIAMETER LESS THAN 6". FIVE (+ 1 FOR EACH ADDITIONAL 6" OF TREE TRUNK) FOR TRUNK DIAMETER 6" OR GREATER.

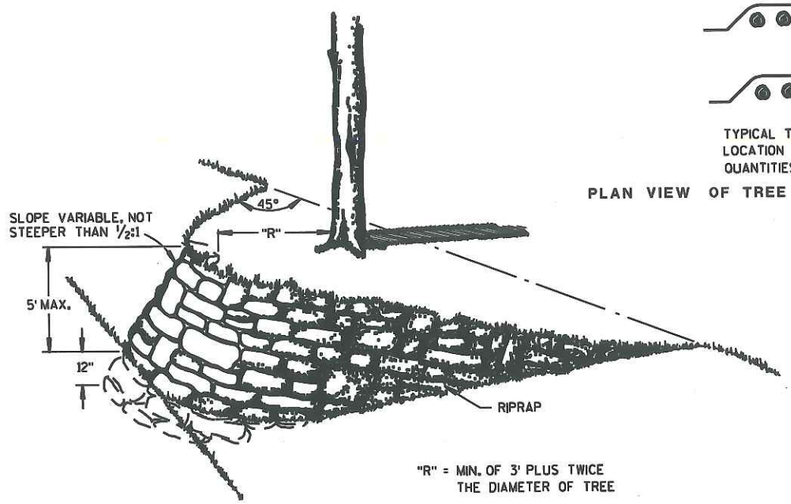
DRAIN TILE SHOULD BE PROVIDED IF DISTANCE FROM TREE TO TOE OF SLOPE IS OVER 5'.

MEASURE TREE TRUNK AT A HEIGHT 4'-6' ABOVE ORIGINAL GROUND LINE.



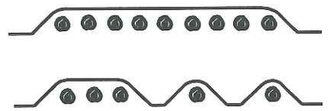
PLAN

FULL TREE WELL WITH RIPRAP WALL



"R" = MIN. OF 3' PLUS TWICE THE DIAMETER OF TREE

DETAILS OF TREE ISLAND AND ROOT PROTECTION



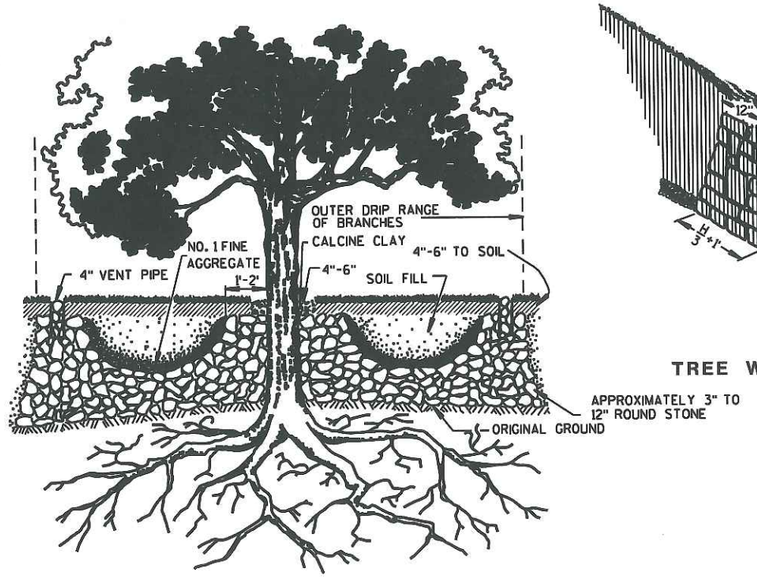
TYPICAL TREATMENTS OF ROOT PROTECTION. LOCATION SHOWN ON MISCELLANEOUS QUANTITIES SHEET.

PLAN VIEW OF TREE ISLANDS FOR ONE OR MORE TREES

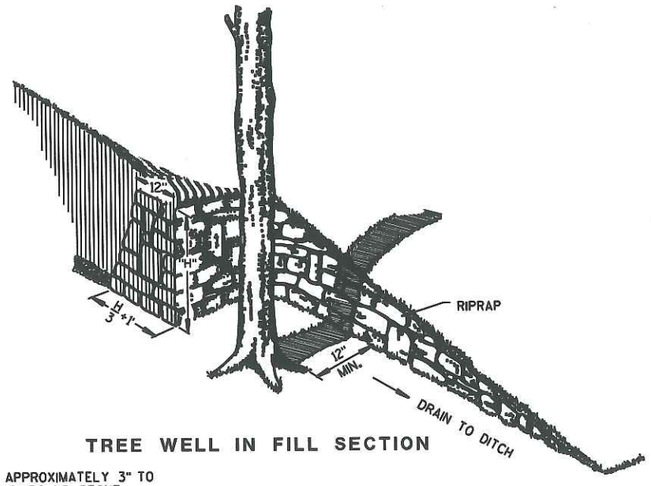
GENERAL NOTES

WALLS TO BE BUILT TO APPROXIMATE SHAPE AND DIMENSIONS SHOWN. STONE TO CONFORM TO SPECIFICATIONS FOR RIPRAP.

DETAILED DRAWINGS OF PROPOSED ALTERNATE DESIGNS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.



TREE WELL WITHOUT WALL



TREE WELL IN FILL SECTION

DETAILS FOR TREE WELLS

TREE PRESERVATION DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/25/76
DATE
STATE HIGHWAY ENGINEER

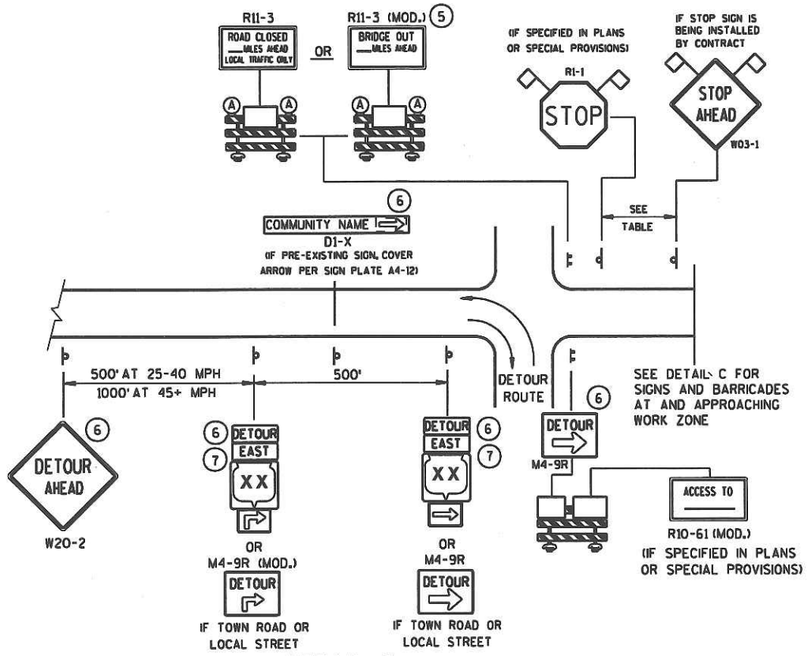
FHWA

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S.D.D. 14A1-3

6

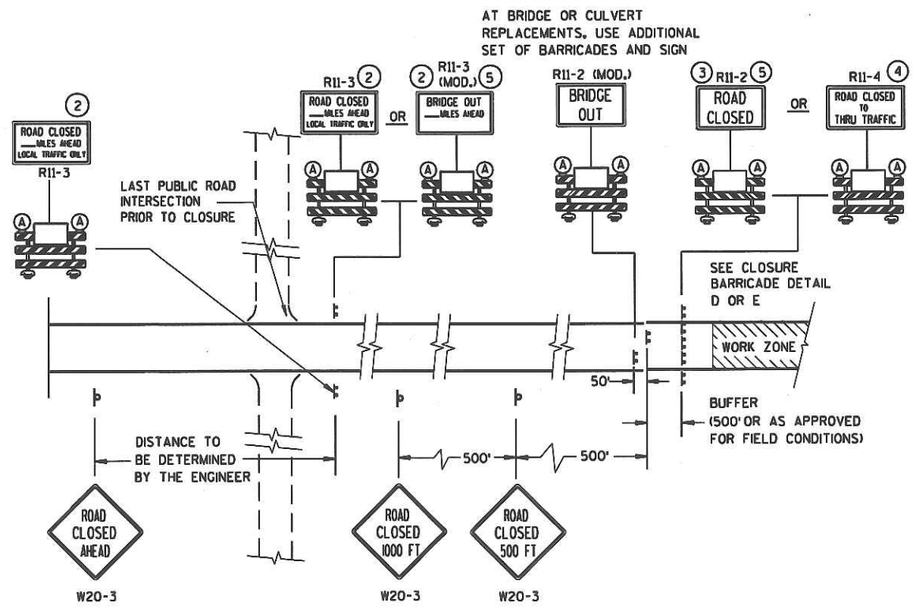
S.D.D. 14A1-3



DETAIL A

MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE GREATER THAN ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)

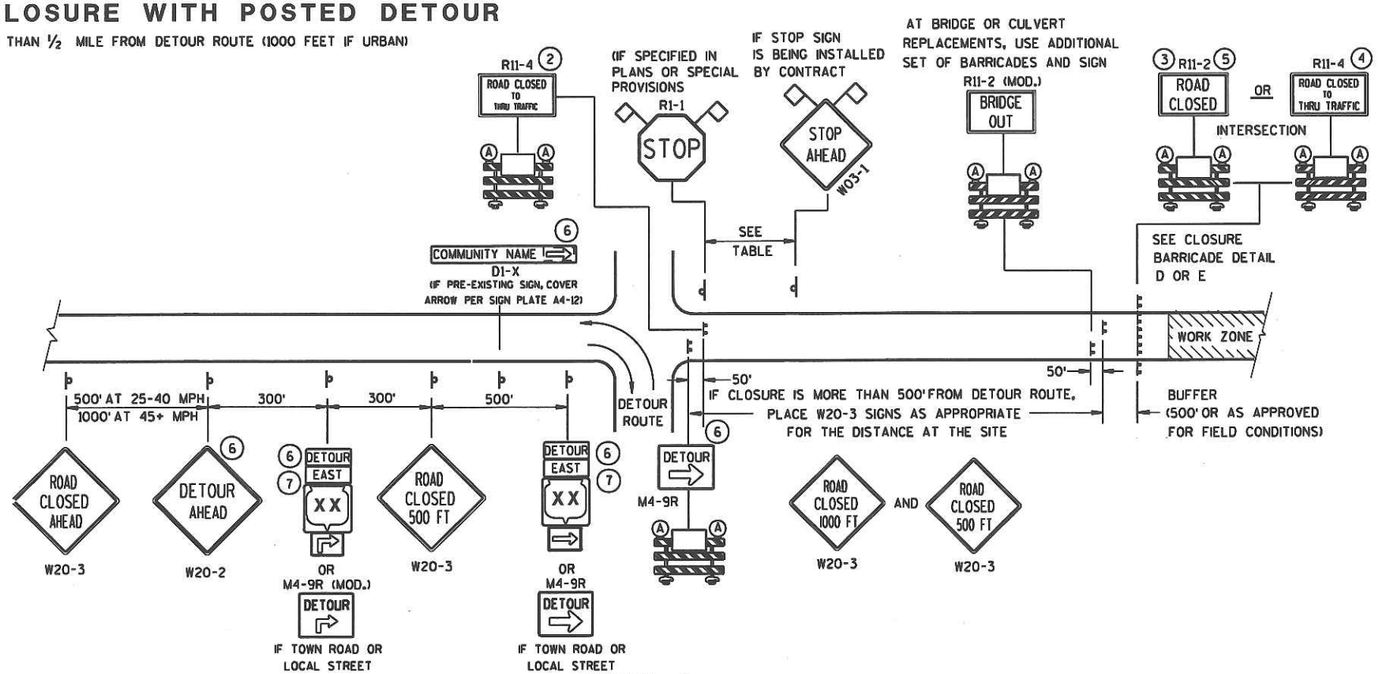


DETAIL C

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 15C2-4b
FOR GENERAL NOTES
AND FOOTNOTES ① THROUGH ⑦



DETAIL B

MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE LESS THAN ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)

LEGEND

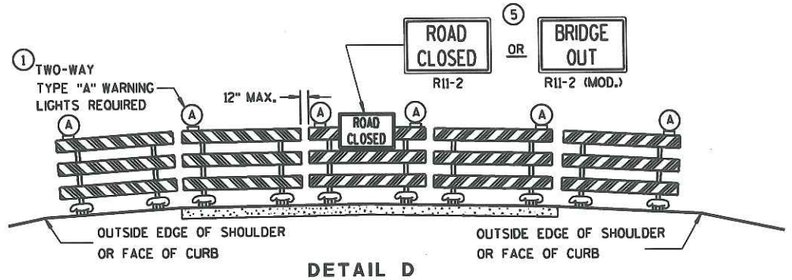
- POST MOUNTED SIGN
- TYPE III BARRICADES
- (A) TYPE "A" LOW INTENSITY FLASHING WARNING LIGHT (FOR NIGHT USE)
- WORK ZONE
- DETOUR EAST — M4-8, M3-X
- XX — M1-4; COUNTY XX — M1-5A; XX — M1-6
- M05-1 OR M06-1
- FLAGS, 16" X 16" MIN., (ORANGE)

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

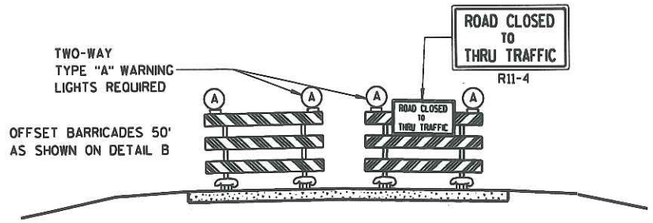
S.D.D. 15 C 2-4a



DETAIL D

ROAD CLOSURE BARRICADE DETAIL

APPROACH VIEW



DETAIL E

LANE CLOSURE BARRICADE DETAIL

APPROACH VIEW

SEE SDD 15C2-4a 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.

THE REFLECTIVE SHEETING USED ON R11-2, R11-3, R11-4, R10-61 AND R1-1 SIGNS SHALL COMPLY WITH SUBSECTION 637.2.2.2 OF THE STANDARD SPECIFICATIONS.

"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 AND 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

APPROVED
9/16/03
DATE

Thomas N. Nottom for
CHIEF SIGNS AND MARKING ENGINEER

FHWA

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.

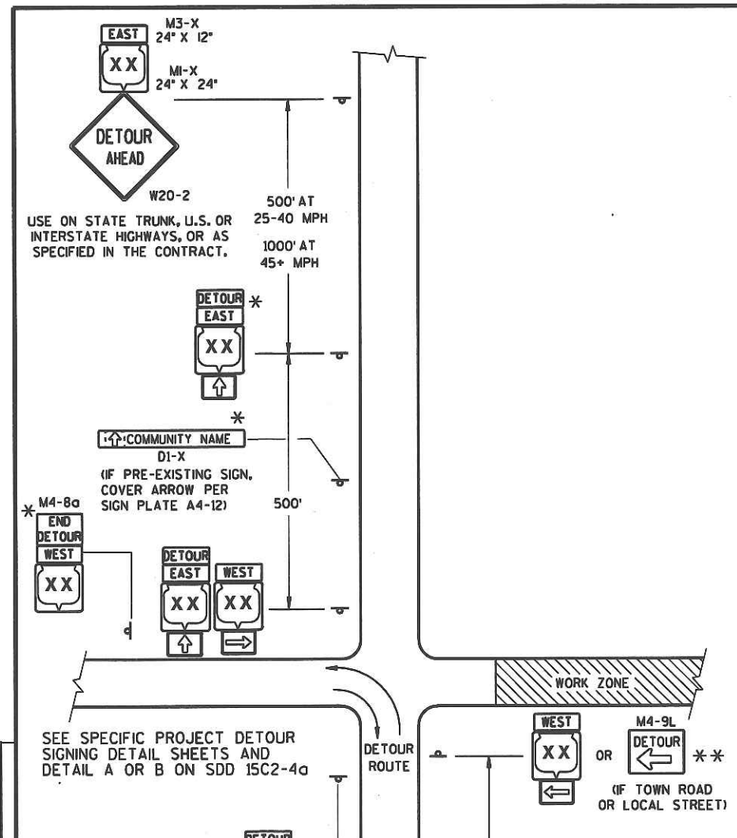
"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

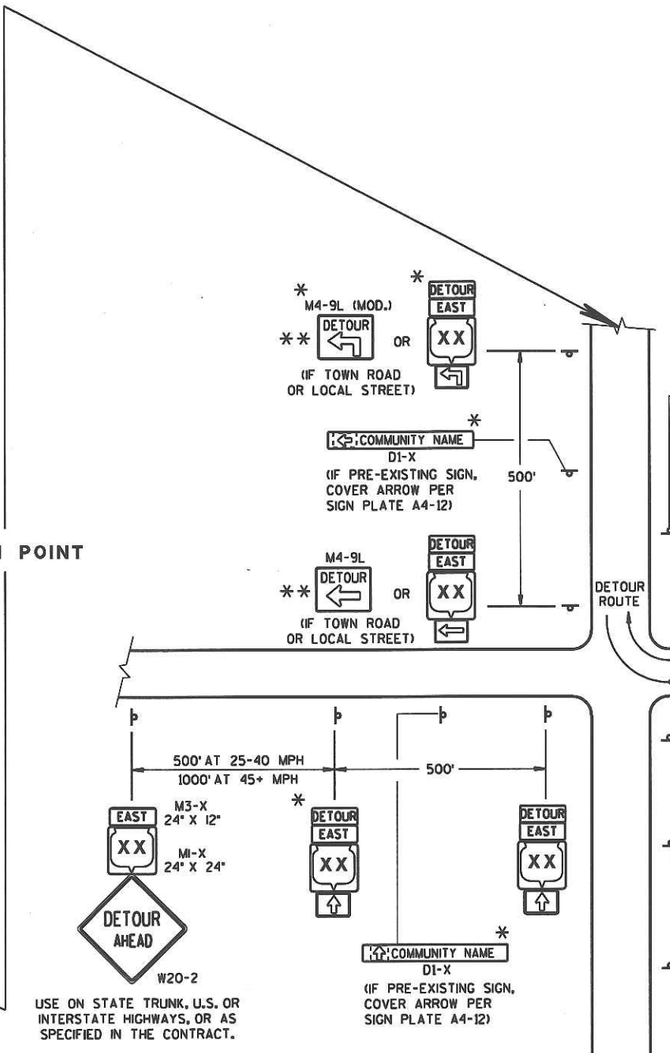
SIGN SIZES SHALL BE AS FOLLOWS:

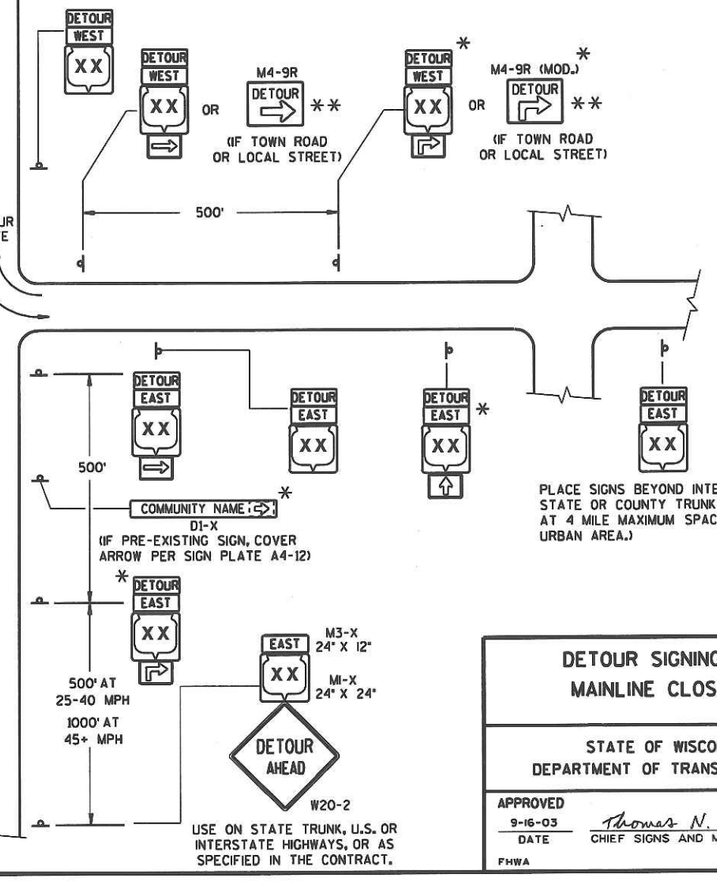
M3-X AND M4-8 SHALL BE 24" X 12". (30" X 15" IF NEEDED TO MATCH EXISTING SIGNS.)
M1-4, M1-5A, AND M1-6 SHALL BE 24" X 24". (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS.)
M05-1 AND M06-1 SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)
M4-9 SHALL BE 30" X 24".
M4-8a SHALL BE 24" X 18".
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

- POST MOUNTED SIGN
- WORK ZONE
- DETOUR EAST M4-8 M3-X
- XX M1-4 | COUNTY XX M1-5A | XX M1-6
- M05-1 | M06-1 | M06-1

DETAIL F
DETOUR SIGNING

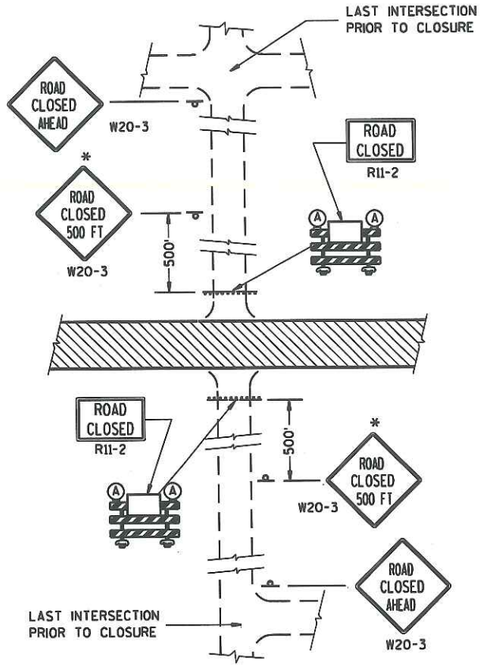
DETOUR SIGNING FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
9-16-03 DATE
Thomas N. Nottom for
CHIEF SIGNS AND MARKING ENGINEER
FHWA

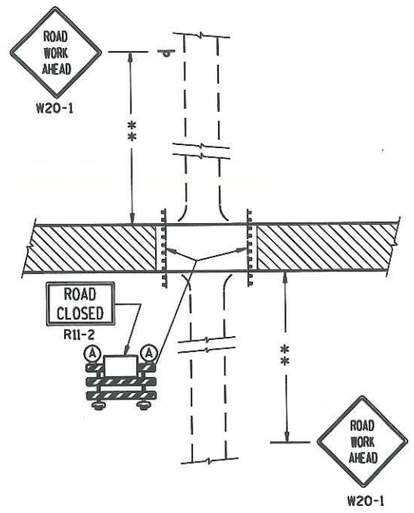
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S.D.D. 15 C 2-4c



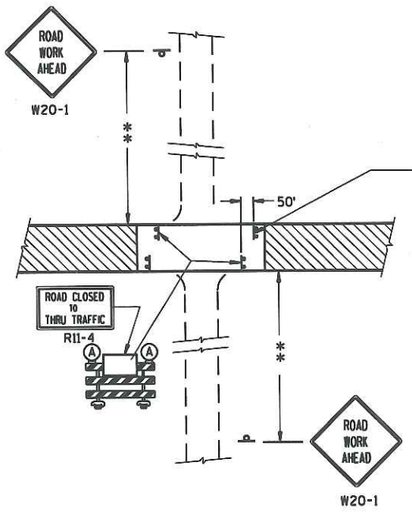
DETAIL 1

(NO ACCESS TO PROJECT)



DETAIL 2

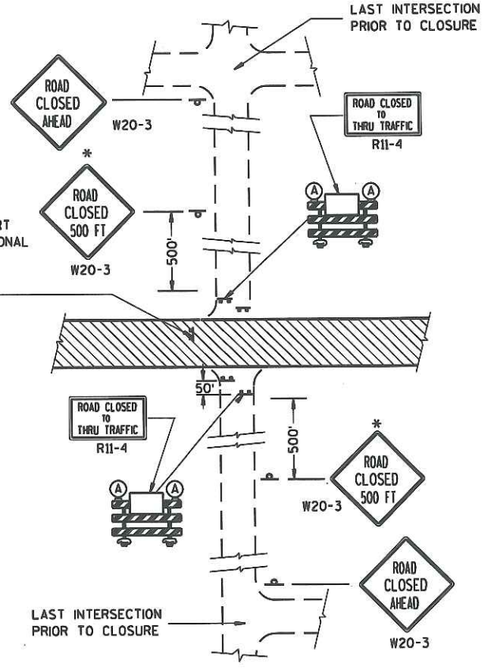
(PUBLIC CROSS-TRAFFIC MAINTAINED. NO ACCESS TO PROJECT).





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.

THE REFLECTIVE SHEETING USED ON R11-2, R11-3 AND R11-4 SIGNS SHALL COMPLY WITH SUBSECTION 637.2.2.2 OF THE STANDARD SPECIFICATIONS.

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

- POST MOUNTED WARNING SIGN
- TYPE III BARRICADES
- (A) TYPE "A" LOW INTENSITY FLASHING WARNING LIGHT (FOR NIGHT USE)
- WORK AREA

BARRICADES AND SIGNS FOR SIDEROAD CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
9-16-03
DATE

Thomas N. Notbohm for
CHIEF SIGNS AND MARKING ENGINEER

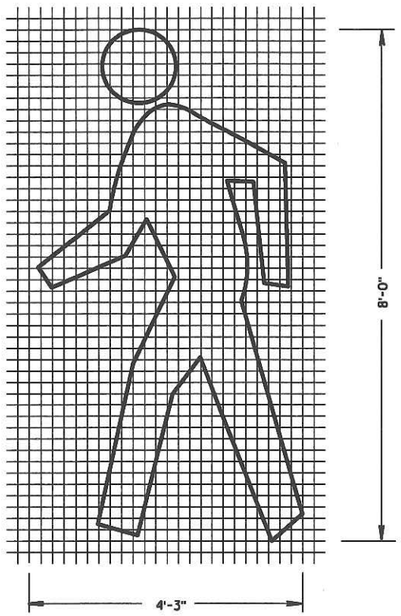
FHWA

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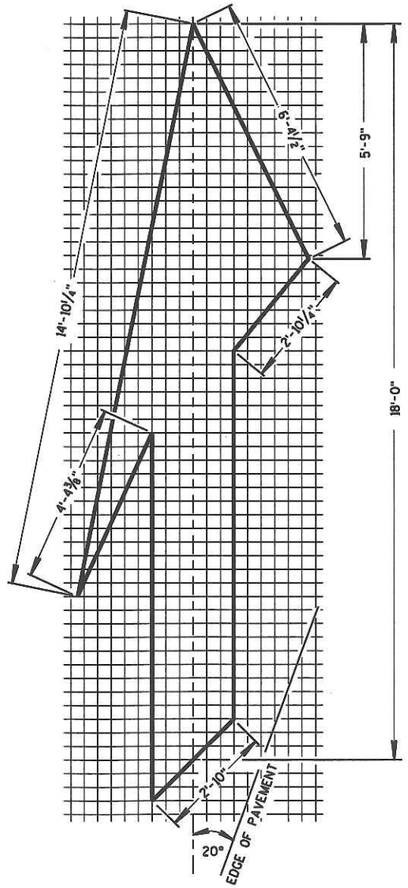
S.D.D. 15 C 3-1

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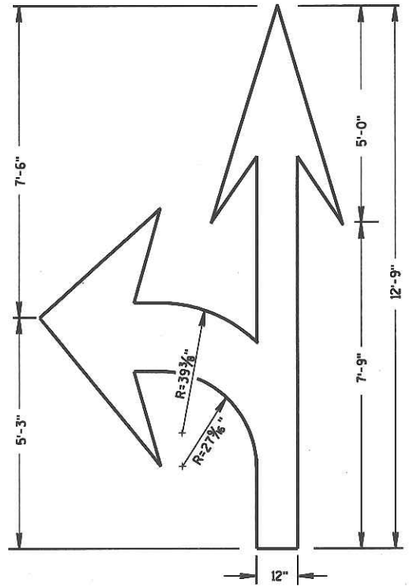
S.D.D. 15 C 3-1



PEDESTRIAN SYMBOL



TYPE 5 LANE DROP ARROW



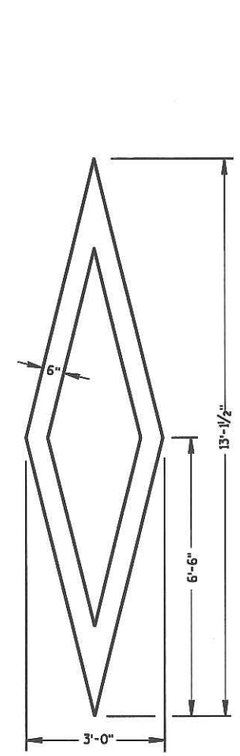
TYPE 3

GENERAL NOTES

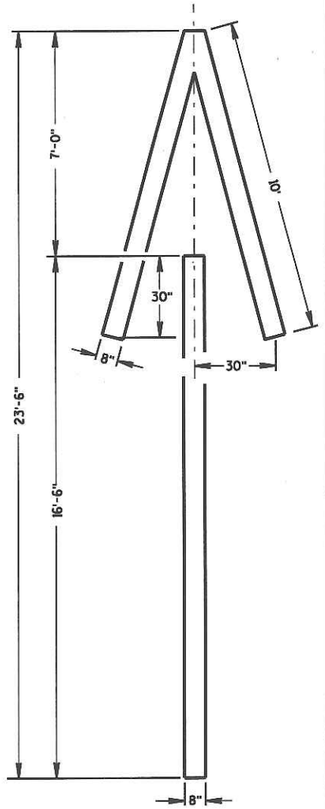
DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

ALL LETTERS AND SYMBOLS SHALL BE IN CONFORMANCE WITH REQUIREMENTS INCLUDED IN "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKING" BY THE FEDERAL HIGHWAY ADMINISTRATION. ALL LETTERS, ARROWS AND SYMBOLS SHALL BE WHITE AND REFLECTORIZED.

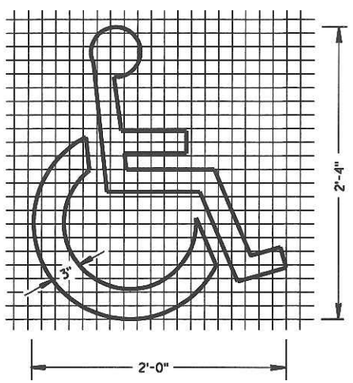
A DETAILED DRAWING OF THE HANDICAPPED PARKING SYMBOL IS ILLUSTRATED IN THE "STANDARD HIGHWAY SIGNS MANUAL" BY THE FEDERAL HIGHWAY ADMINISTRATION.

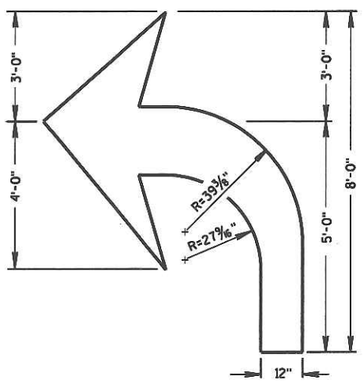


PREFERENTIAL LANE SYMBOL

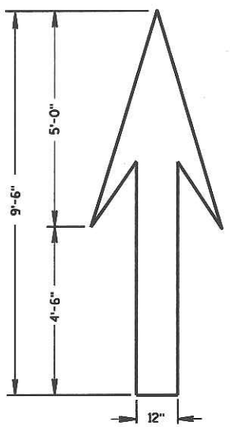


TYPE 4





TYPE 2



TYPE 1

PAVEMENT MARKING SYMBOLS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
2/22/05
DATE

Thomas N. Notbohm
STATE TRAFFIC ENGINEER OF DESIGN

FHWA

6

S.D.D. 15 C 7-80a

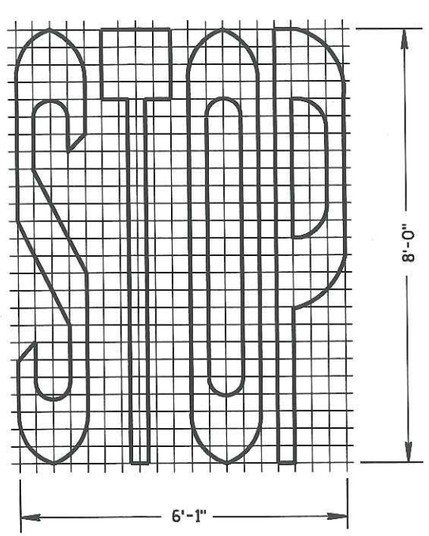
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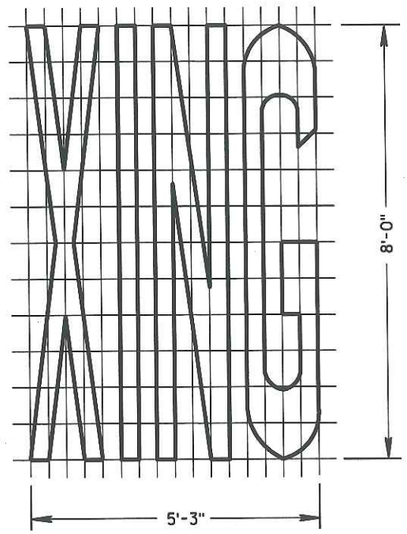
S.D.D. 15 C 7-80a

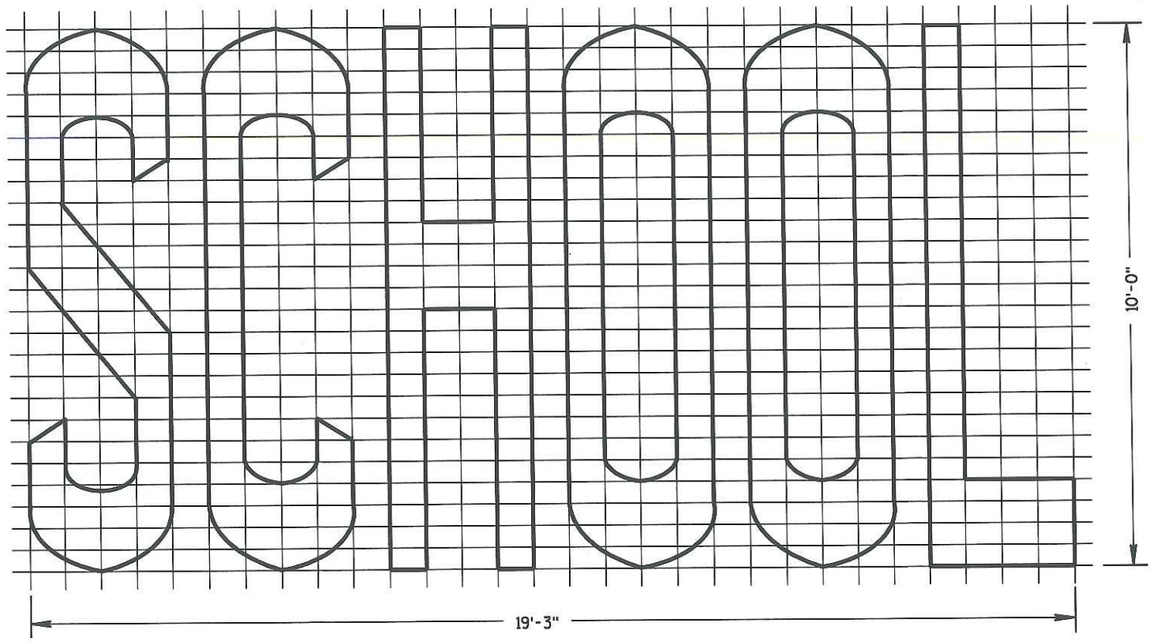
GENERAL NOTES

DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

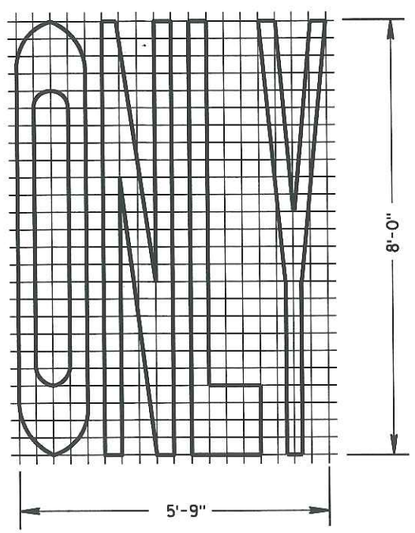
ALL LETTERS, ARROWS AND SYMBOLS SHALL BE IN CONFORMANCE WITH REQUIREMENTS INCLUDED IN "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKING" BY THE FEDERAL HIGHWAY ADMINISTRATION. ALL LETTERS, ARROWS AND SYMBOLS SHALL BE WHITE AND REFLECTORIZED.

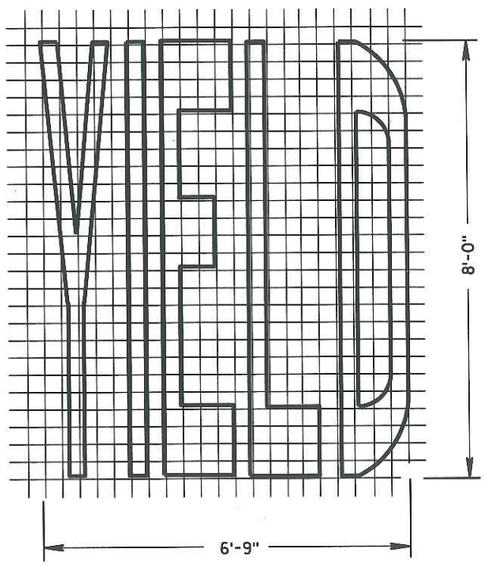


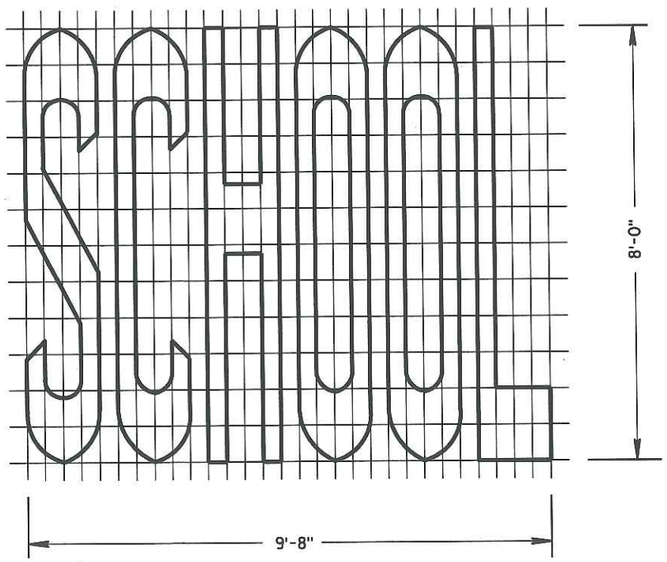




TWO-LANE







SINGLE-LANE

PAVEMENT MARKING WORDS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
2-22-05
DATE

Thomas N. Notbohm
STATE TRAFFIC ENGINEER OF DESIGN

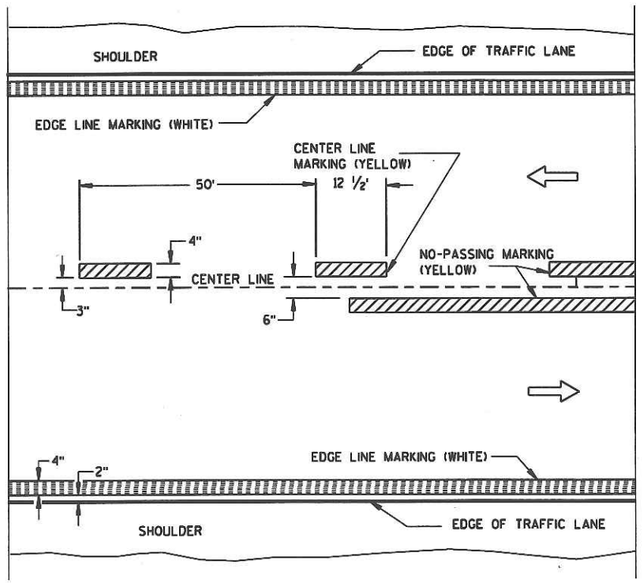
FHWA

6

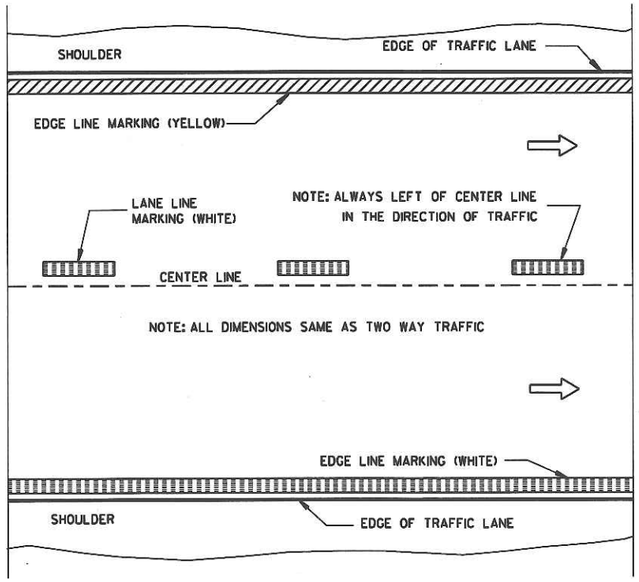
S.D.D. 15 C 7-8b

6

S.D.D. 15 C 7-8b

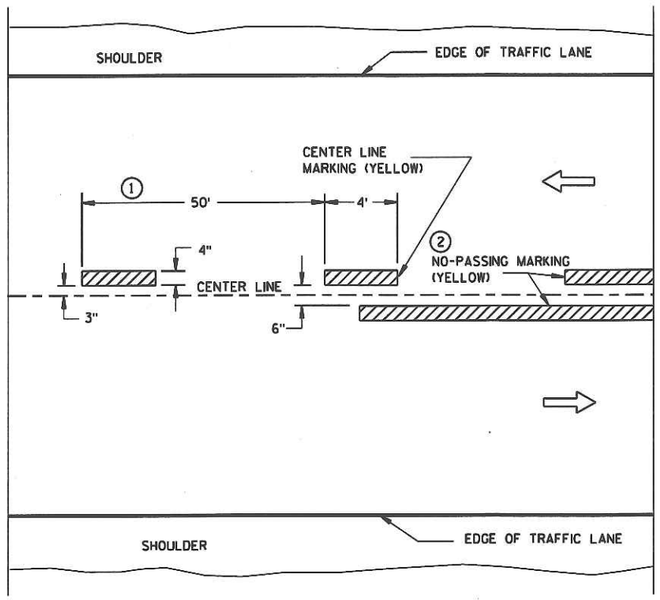


TWO WAY TRAFFIC

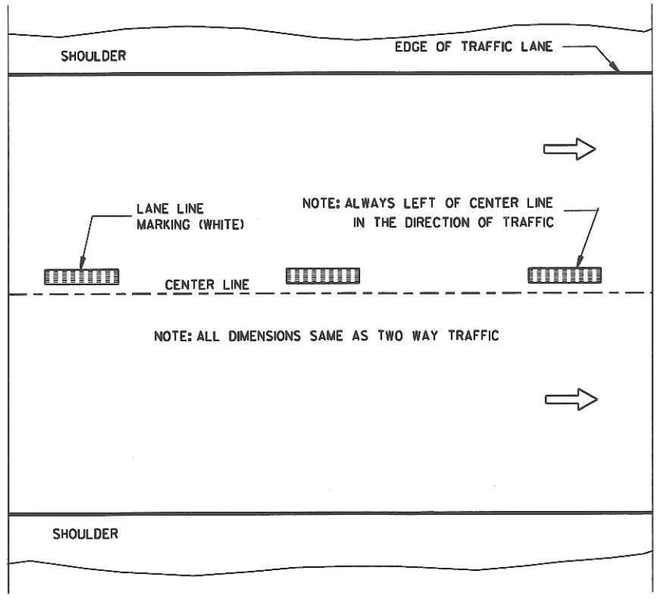


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY (INTERMEDIATE) PAVEMENT MARKING

(SHOWS CYCLE FOR TEMPORARY CENTER LINE OR TEMPORARY LANE LINE MARKING)

GENERAL NOTES

DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.

① HALF CYCLE LENGTHS (25'±) WITH 2' MINIMUM STRIPE LENGTHS SHALL BE PROVIDED ON ROADWAYS (INCLUDING TEMPORARY TRAVELED WAYS) WITH REVERSE CURVATURE, CURVATURE OF OVER 5 DEGREES OR WHEN DIRECTED BY THE ENGINEER TO MARK UNUSUAL ALIGNMENT OF THE TRAVELED WAY.

② NO PASSING ZONE TEMPORARY PAVEMENT MARKING IS REQUIRED TO BE PLACED, WHERE APPROPRIATE, ALONG WITH CENTERLINE TEMPORARY PAVEMENT MARKING WHEN A SAME DAY PERMANENT PAVEMENT MARKING ITEM IS INCLUDED IN THE CONTRACT.

NOTE

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL

PAVEMENT MARKING
(MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
3/6/00
DATE

Chester J. Seyfarth
CHIEF SIGNS AND MARKING ENGINEER

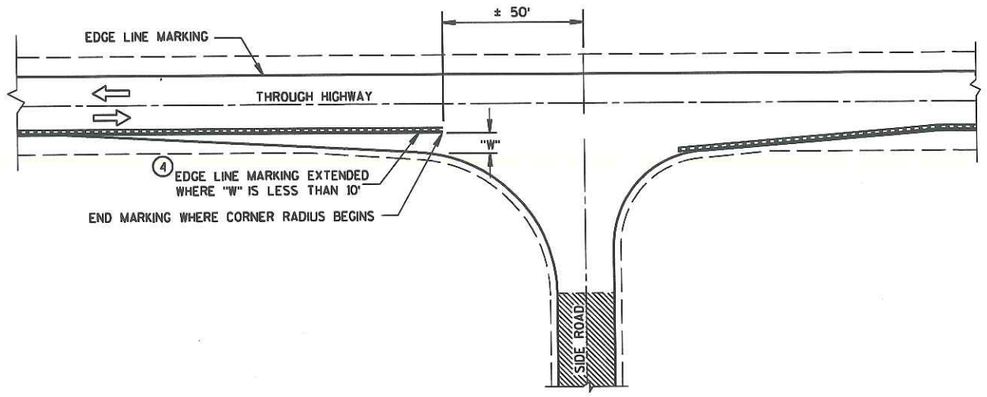
FHWA

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S.D.D. 15 C 8-96

6

S.D.D. 15 C 8-96



MINOR INTERSECTION WITHOUT CURBS

GENERAL NOTES

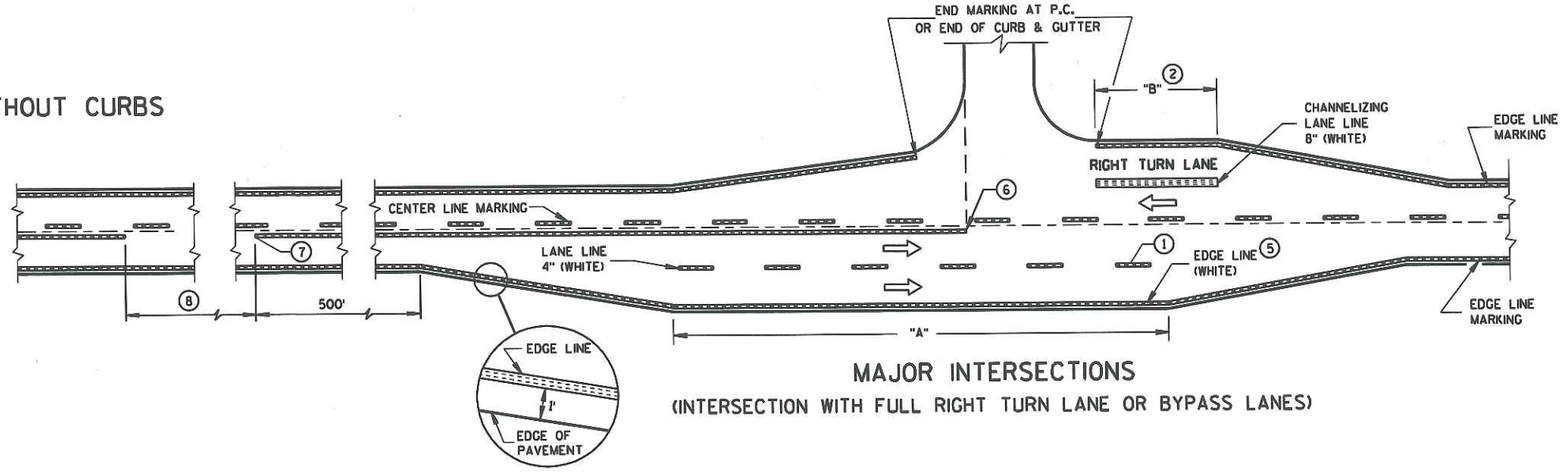
EDGE LINES SHALL BE OMITTED THROUGH INTERSECTIONS. EDGE LINES SHALL BE CONTINUED THROUGH DRIVEWAYS.

1. WHEN DISTANCE "A" IS LESS THAN 250 FEET, OMIT LANE LINE.
2. WHEN DISTANCE "B" IS LESS THAN 100 FEET, OMIT CHANNELIZING LANE LINE.
3. ALTERNATIVE MARKING SHALL BE PROVIDED WHEN SPECIFIED IN THE CONTRACT. TYPICAL SITUATIONS WHERE THIS MARKING MAY BE REQUIRED ARE WHERE THE INTERSECTION IS ON A SHARP HORIZONTAL CURVE OR CREST VERTICAL CURVE IN AN UNLIGHTED AREA SUCH THAT THE EDGE LINE MAY BE MISLEADING TO THE MOTORIST OR DISAPPEAR FROM SIGHT.
4. LOCATE THE EDGE LINE ALONG THE TAPER WHERE "W" IS 10' OR MORE.
5. THE EDGE LINE IN THE TAPER AREAS OF THE BYPASS LANE AND THE BYPASS LANE SHALL BE LOCATED 1-FOOT FROM EDGE OF PAVEMENT TO THE OUTSIDE EDGE OF EDGE LINE.
6. BARRIER LINE ENDS AT SIDE ROAD PAVEMENT/SURFACE EDGE EXTENSION.
7. BARRIER LINE STARTS 500 FEET PRIOR TO THE BYPASS TAPER.
8. IF THE DISTANCE BETWEEN 2 SUCCESSIVE NO-PASSING ZONES IS LESS THAN THE MINIMUM DISTANCE BETWEEN ZONES, CONNECT THE 2 ZONES.

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL

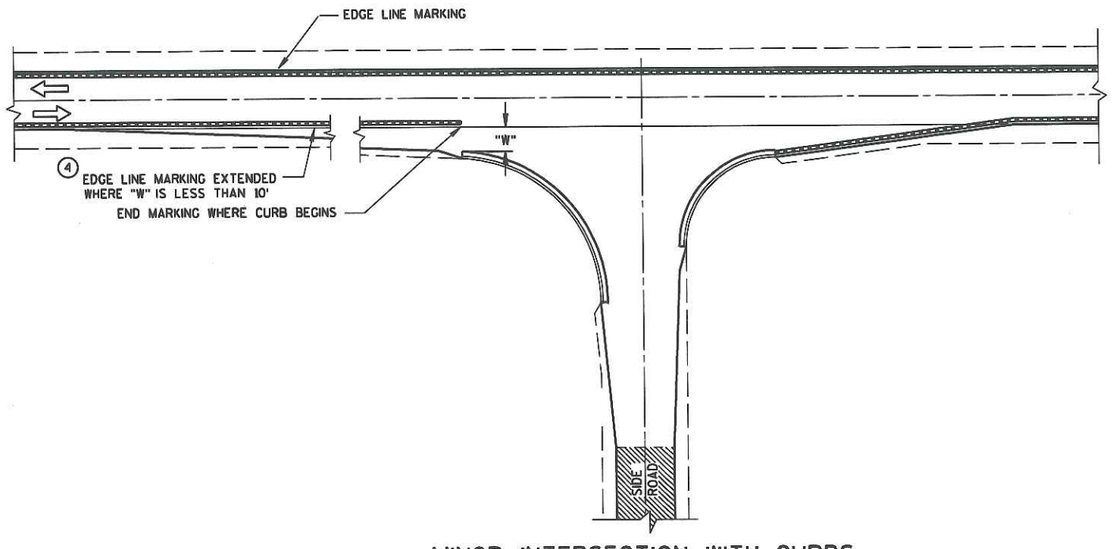
POSTED SPEED (MPH)	MINIMUM DISTANCE BETWEEN ZONES (FEET)
25 - 30	528
35 - 40	528
45 - 50	686
55	792

(8)



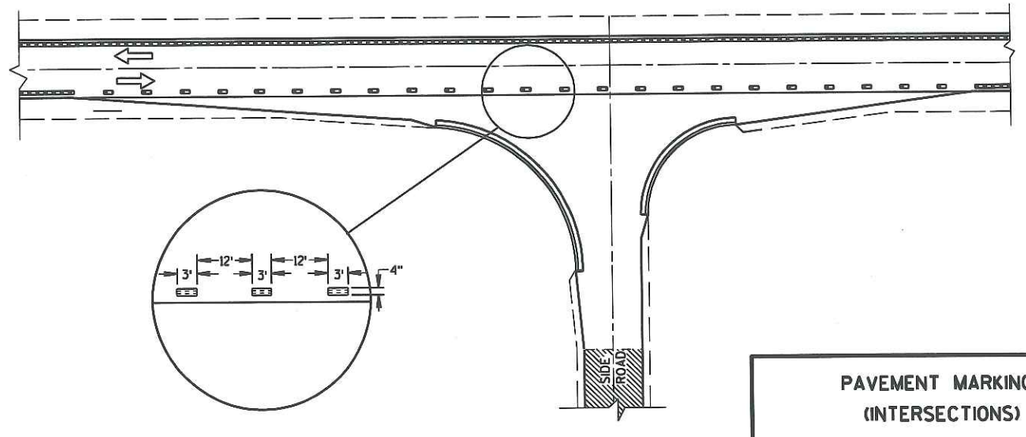
MAJOR INTERSECTIONS

(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANES)



MINOR INTERSECTION WITH CURBS

(TYPICAL MARKING)



MINOR INTERSECTION WITH CURBS

(3) (FOR SPECIAL CONDITIONS AS SPECIFIED)

PAVEMENT MARKING (INTERSECTIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED 3/15/05 DATE — Thomas N. Nottestad, STATE TRAFFIC ENGINEER OF DESIGN

FHWA

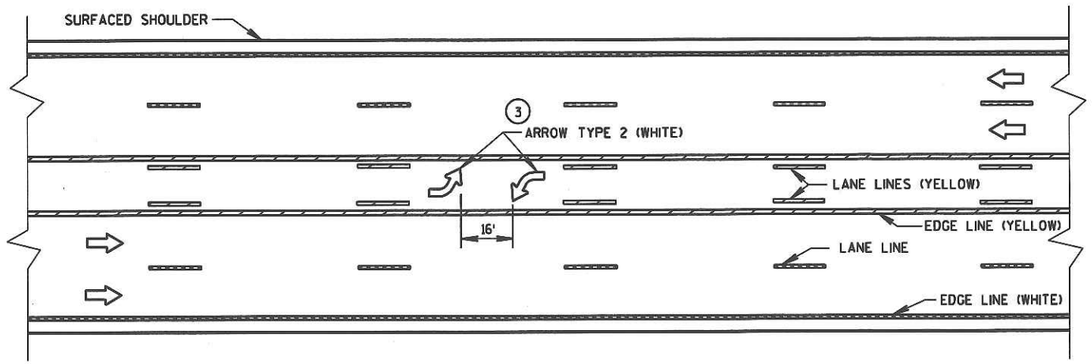
6

S.D.D. 15 C 8-10b

6

S.D.D. 15 C 8-10b

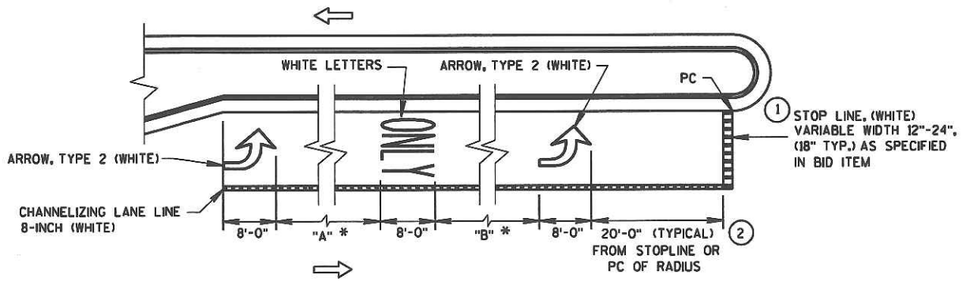
NOTE:
ARROW SYMBOL (⇨)
SHOWS DIRECTION OF TRAVEL



TWO WAY LEFT TURN LANE

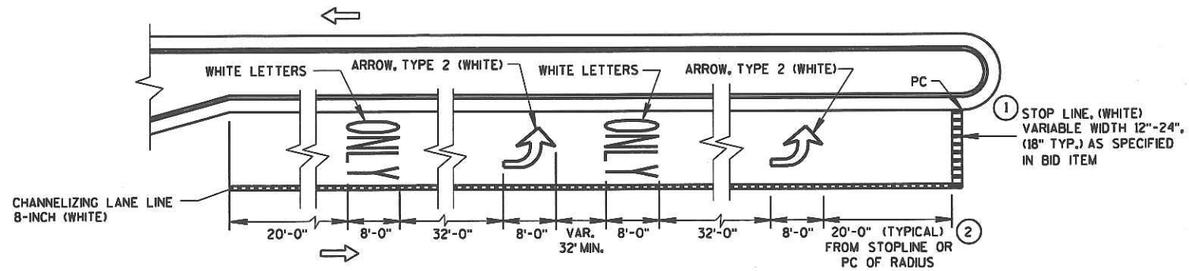
NOTES:

1. STOP BAR IS REQUIRED ONLY WHEN SPECIFIED IN THE CONTRACT.
2. DISTANCE MAY BE ADJUSTED TO ACCOMODATE SHORT LEFT TURN LANES. AS APPROVED BY THE ENGINEER.
3. A SET OF ARROWS IS REQUIRED EVERY 400' OR NEAR INTERSECTIONS OR DRIVEWAYS WITH TURNING TRAFFIC.

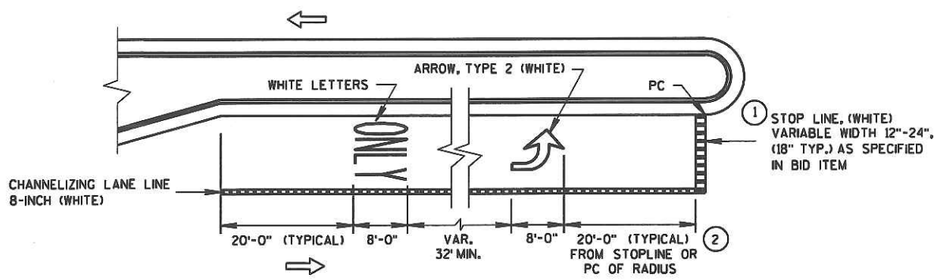


*VARIABLE, 32' MIN.
"A" = "B" (TYPICAL)

LEFT TURN LANE
(LENGTH 108' TO 167')



LEFT TURN LANE
(LENGTH OVER 167')



LEFT TURN LANE
(LENGTH UNDER 108')

PAVEMENT MARKING
(LEFT TURN LANE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

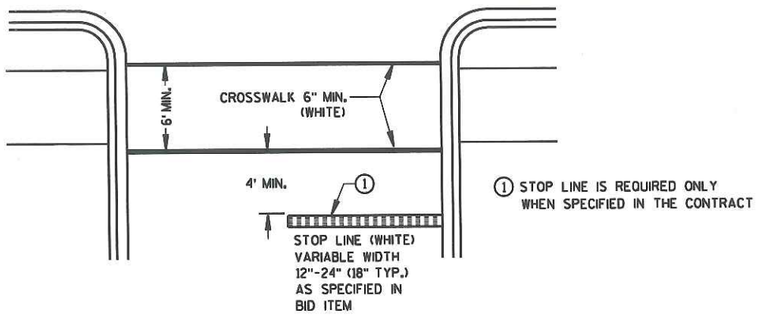
APPROVED
8/1/05 — DATE
/S/ Thomas N. Notbohm — STATE TRAFFIC ENGINEER OF DESIGN
FHWA

6

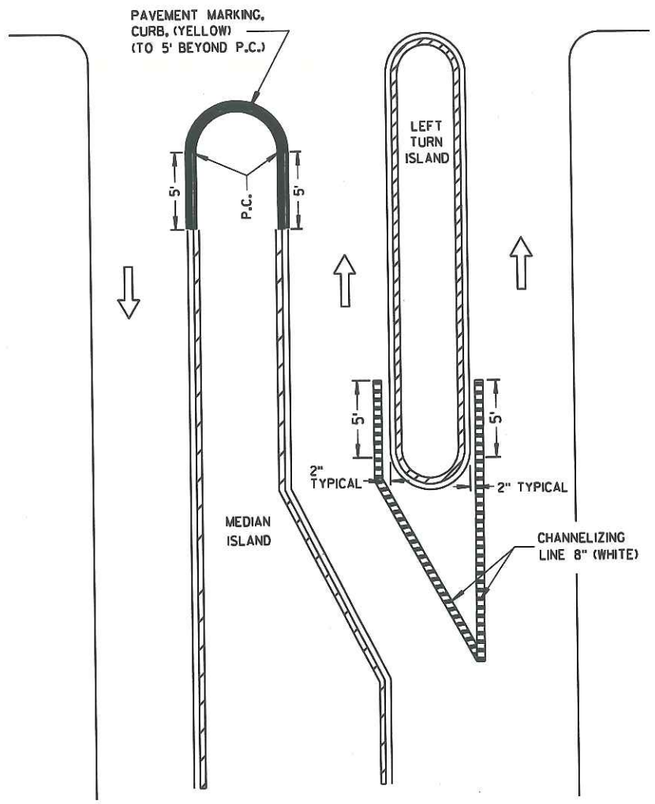
S.D.D. 15 C 8-10d

6

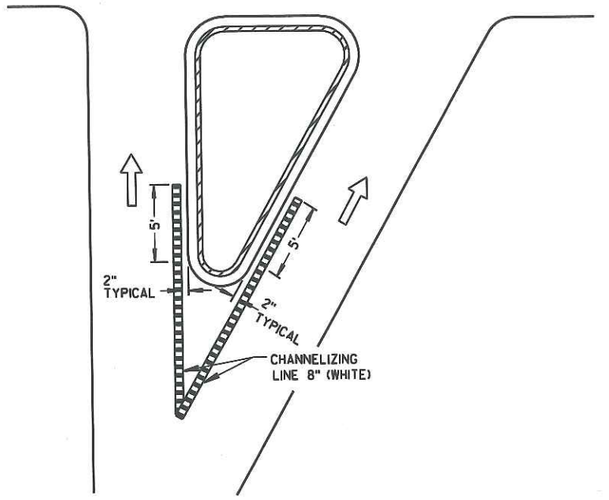
S.D.D. 15 C 8-10d



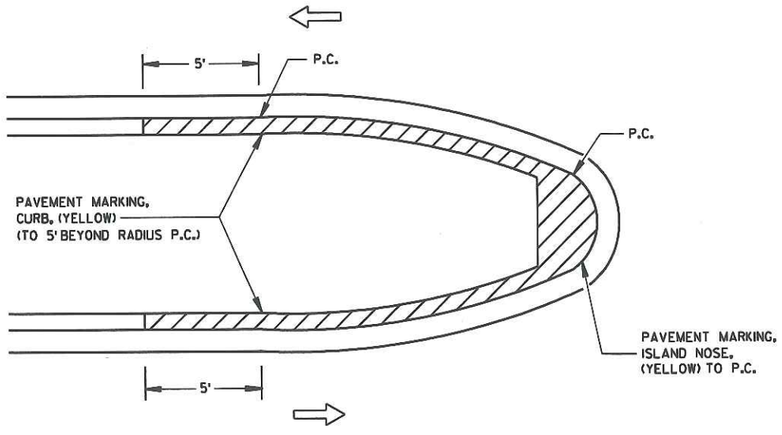
STOP LINE AND CROSSWALK



LEFT TURN & MEDIAN ISLAND



RIGHT TURN ISLAND



MEDIAN ISLAND WITH SLOPED NOSE

NOTE:
ARROW SYMBOL (⇨)
SHOWS DIRECTION OF TRAVEL

PAVEMENT MARKING (ISLANDS, STOP LINE & CROSS WALK)	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
1-16-03 DATE	Deborah T. Kopel for CHIEF SIGNS AND MARKING ENGINEER
FHWA	

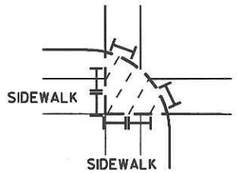
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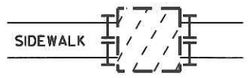
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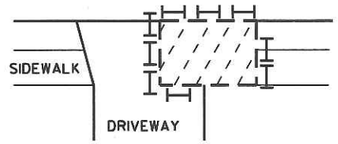
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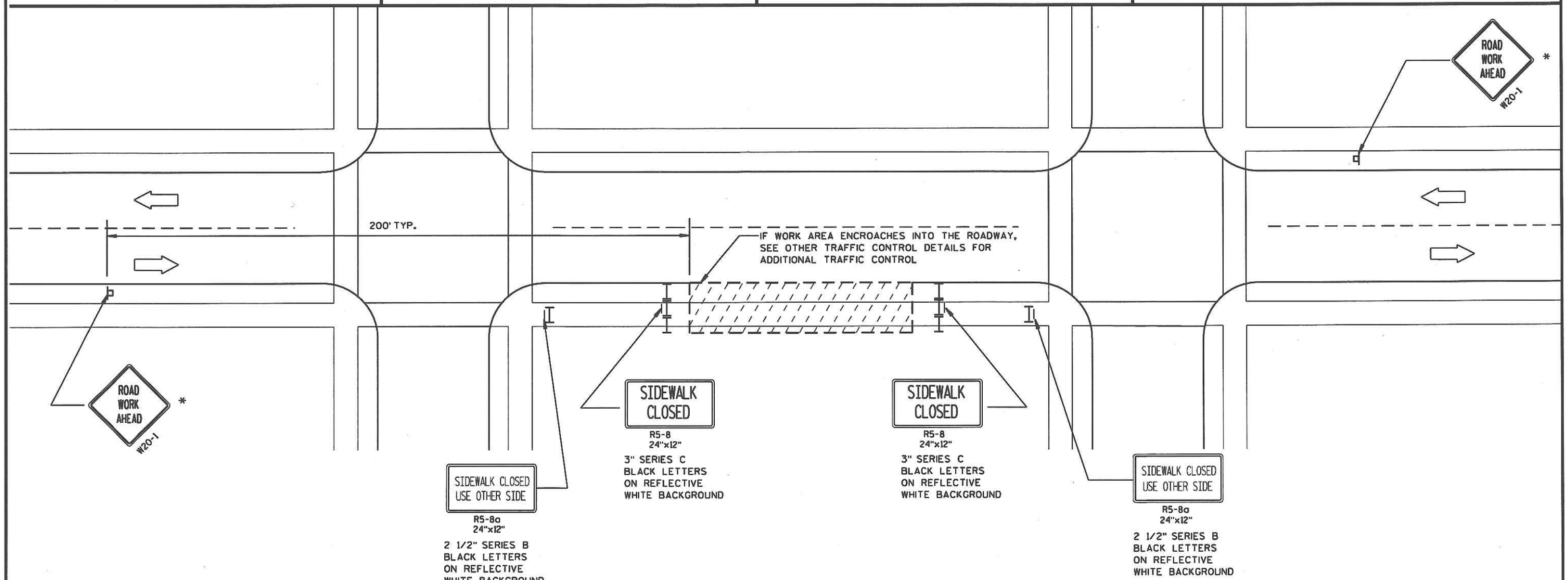
S.D.D. 15 C 8-10e

WARNING OF LOCALIZED SIDEWALK WORK AREAS









LEGEND

- POST MOUNTED SIGN
- TYPE II BARRICADE WITH/WITHOUT SIGN (ALL WITH ONE WARNING LIGHT, TYPE A, LOW-INTENSITY FLASHING)
- WORK AREA
- DIRECTION OF TRAFFIC FLOW

GENERAL NOTES :

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, IF APPROVED BY DISTRICT TRAFFIC UNIT.

THE EXACT LOCATION AND PLACEMENT OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS.

"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

* "ROAD WORK AHEAD" SIGNS ARE NOT REQUIRED IF THE SIDEWALK CLOSURE OCCURS WITHIN A LARGER WORK ZONE WHERE ADVANCE WARNING SIGNS ARE ALREADY PRESENT, OR IF THE WORK AREA AND EQUIPMENT ARE MORE THAN 2 FEET BEHIND THE CURB.

WARNING SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

TRAFFIC CONTROL. SIDEWALK CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
5/23/00
DATE

Chester J. Spang
CHIEF SIGNS AND MARKING ENGINEER

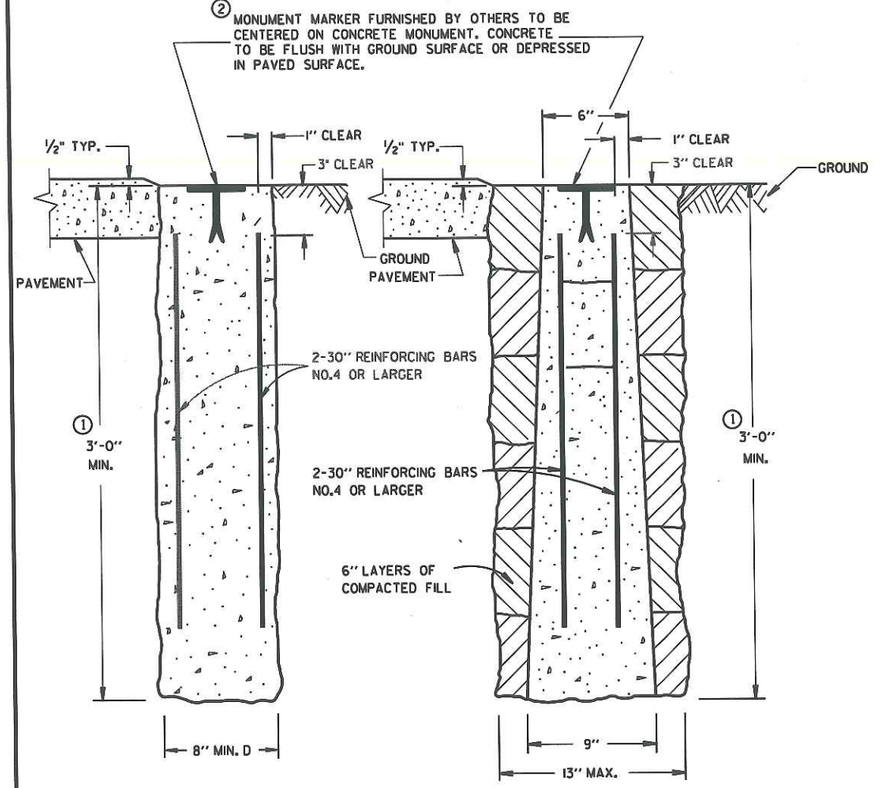
FHWA

6

S.D.D. 15 D 30-1

6

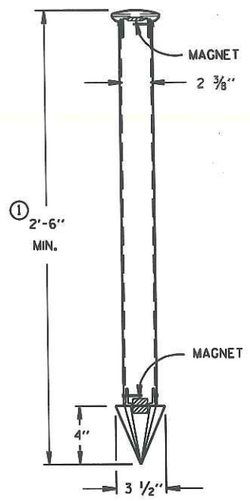
S.D.D. 15 D 30-1



CAST-IN-PLACE PRECAST

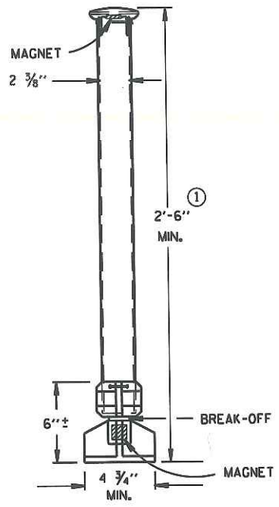
CONCRETE MONUMENTS

TYPE A



TYPE C

DRIVE-IN MONUMENT



TYPE D

BREAK-OFF MONUMENT

ALUMINUM MONUMENTS

(INCLUDES MARKER)

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

DETAILED DRAWINGS OF PROPOSED ALTERNATE DESIGNS FOR METAL MONUMENTS OR MONUMENT COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

INSTALLED METAL MONUMENTS MUST BE EASILY DETECTED WITH A DIP NEEDLE. INSERT PERMANENT MAGNETS SHALL BE ATTACHED NEAR THE TOP AND BOTTOM OF THOSE MONUMENTS CONSTRUCTED OF A METAL ALLOY WHICH IS NOT ATTRACTIVE TO A DIP NEEDLE.

THE CAST IRON MONUMENT COVER SHALL BE A "NON-ROCKING" TYPE. ADJUSTMENT OF THE COVER TO GRADE MAY BE ACCOMPLISHED BY THE USE OF MORTAR AND BRICK, OR BY EITHER PRECAST OR CAST-IN-PLACE REINFORCED CONCRETE GRADE RINGS.

MONUMENTS SHALL BE LOCATED AND PLACED AT THE DIRECTION OF THE ENGINEER.

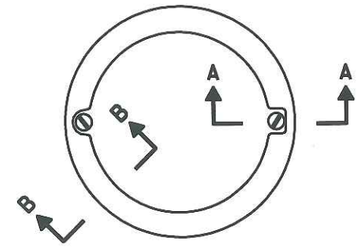
ALUMINUM MONUMENTS AND MONUMENT COVERS SHALL BE MADE FROM AN ALUMINUM AND MAGNESIUM ALLOY AS DETERMINED BY THE MANUFACTURER.

THE MONUMENT COVERS DETAILED ON THIS DRAWING ARE NOT EQUAL ALTERNATES. MONUMENT COVERS SHALL BE CAST IRON UNLESS ALUMINUM IS SPECIFIED ELSEWHERE IN THE CONTRACT.

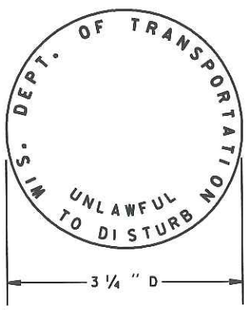
MONUMENT SHALL BE CAST-IN-PLACE CONCRETE UNLESS PRECAST CONCRETE OR ALUMINUM MONUMENTS ARE SPECIFIED IN THE CONTRACT OR PERMITTED BY THE ENGINEER.

① MINIMUM LENGTH SHALL BE 4'-0" FOR MONUMENTS INSTALLED IN PAVED AREAS.

② AN OFFICIAL COUNTY MONUMENT MARKER SUPPLIED BY A COUNTY MAY BE REQUIRED FOR SOME SECTION CORNERS AND WITNESS MONUMENTS INSTEAD OF THIS WIS DOT MARKER.

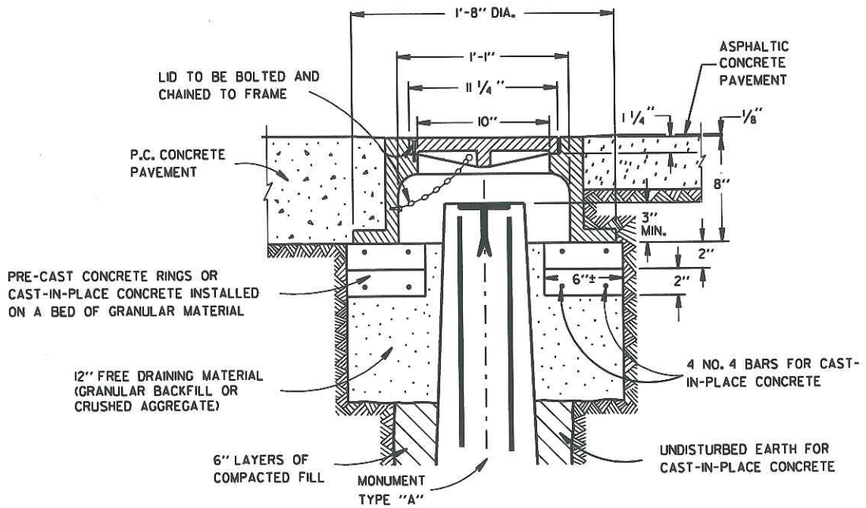


TOP VIEW



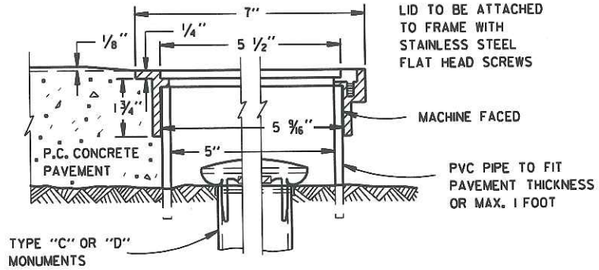
② WIS DOT MONUMENT MARKER LOGO

FOR TYPES "A", "C" & "D"



CAST IRON MONUMENT COVER

(APPROXIMATE WEIGHT - 95 LBS.)



SECTION B-B SECTION A-A

ALUMINUM MONUMENT COVER

(APPROXIMATE WEIGHT 2 LBS)

(FOR CONCRETE PAVEMENT ONLY)

LANDMARK REFERENCE MONUMENTS AND COVERS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED 9/22/99 DATE

CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA

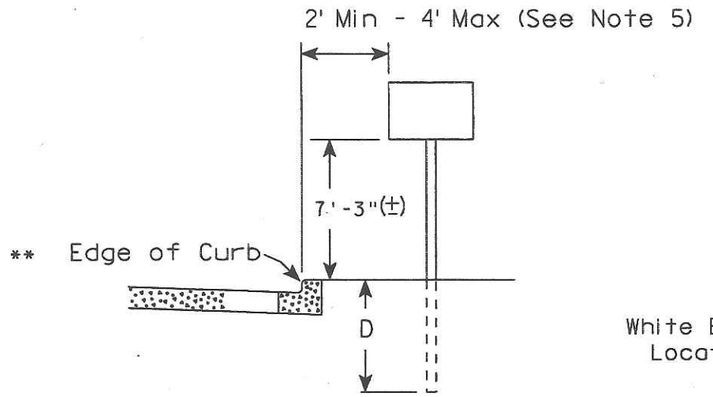
6

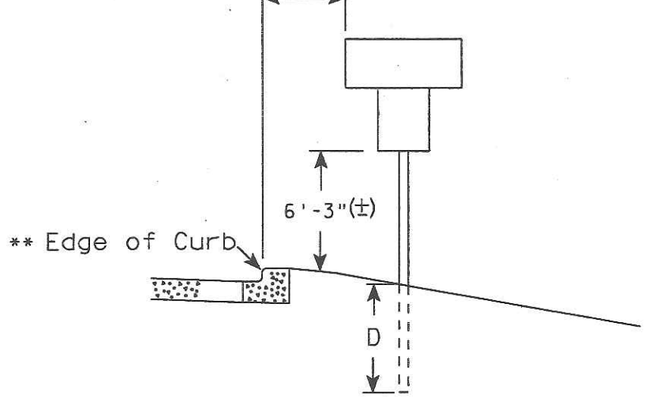
S.D.D. 16 A 1-6

6

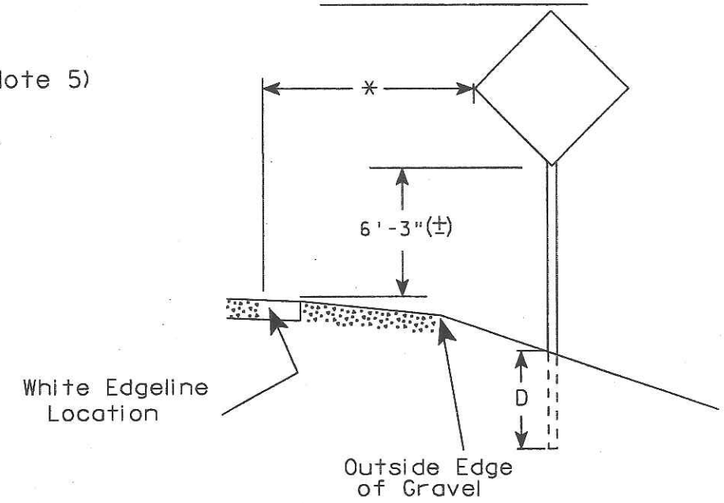
S.D.D. 16 A 1-6

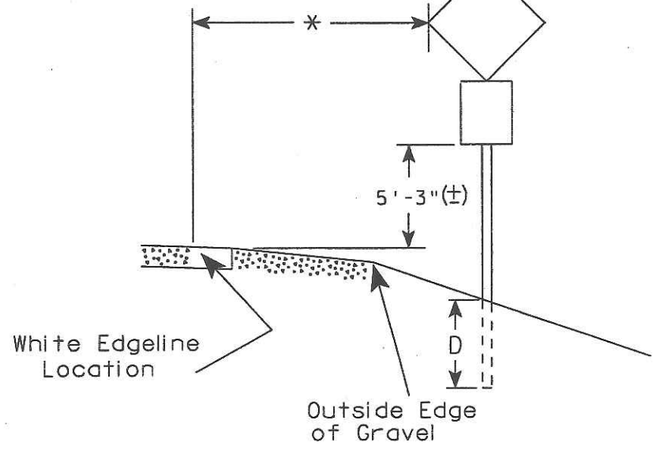
URBAN AREA





RURAL AREA (See Note 2)





** The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically where there is sidewalk adjacent to the roadway or parking is permitted. This same criteria applies to mountable curb as well and measurement shall be taken from 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.

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. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
3. Minimum mounting height for J assemblies (A4-5) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
4. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
5. Offset distance shall be consistent with existing signs or consistent throughout length of project.
6. The (±) tolerance for mounting height is 3 inches.
7. Folding stop signs (R1-1F) 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 (W1-8A), Clearance Markers (W5-52), Mile Markers (D10 series) & End of Road Markers (W5-56 & W5-56A) shall be mounted at a height of 4'-3" (±).

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 SINGLE POSTS

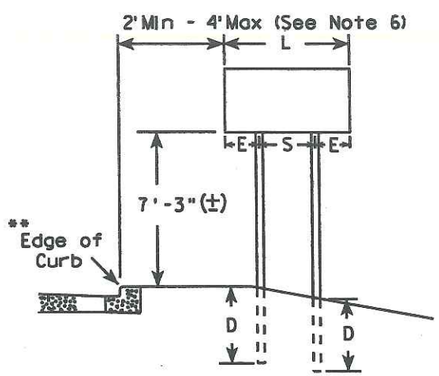
WISCONSIN DEPT OF TRANSPORTATION

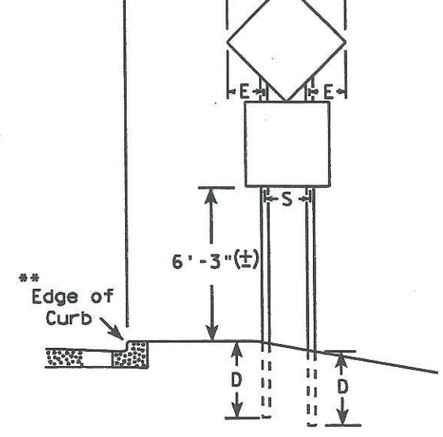
APPROVED Matthew R Rauch for State Traffic Engineer

DATE 10/25/05 PLATE NO. A4-3.13

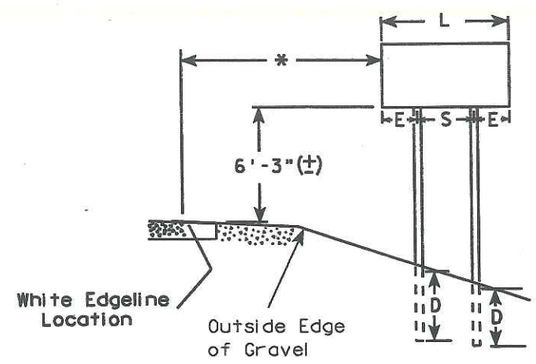
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 130	E

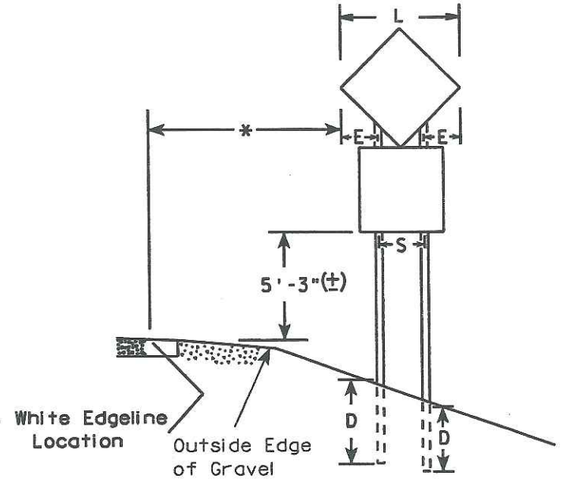
URBAN AREA

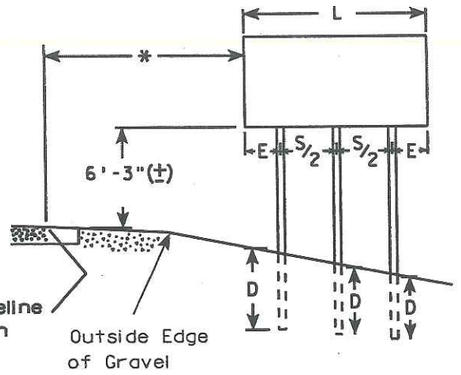




RURAL AREA (See Note 3)







DIAMOND SHAPED SIGNS		
L	S	E
Less than 60"	20"	L/2 - 10
60"--72"	32"	L/2 - 16
Greater than 72"	3 L/5	L/5

SIGN SHAPE OTHER THAN DIAMOND (Two Post Installations)		
L	S	E
Less than 60"	L-24"	12"
60" or more	3 L/5	L/5

GENERAL NOTES

1. For 3 post installations, spacing is S/2 and S must be greater than 7'-0".
2. For 4 post installations, spacing is S/3 and S must be greater than 10'-6".
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 (A4-5) 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 stop signs (R1-1F) 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 (W1-8A), Clearance Markers (W5-52), Mile Markers (D10 series) & End of Road Markers (W5-56 & W5-56A) 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 where there is sidewalk adjacent to the roadway or parking is permitted. This same criteria applies to mountable curb as well and measurement shall be from the flow line.

POST EMBEDMENT DEPTH

Area of Sign Installation (Sq. Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

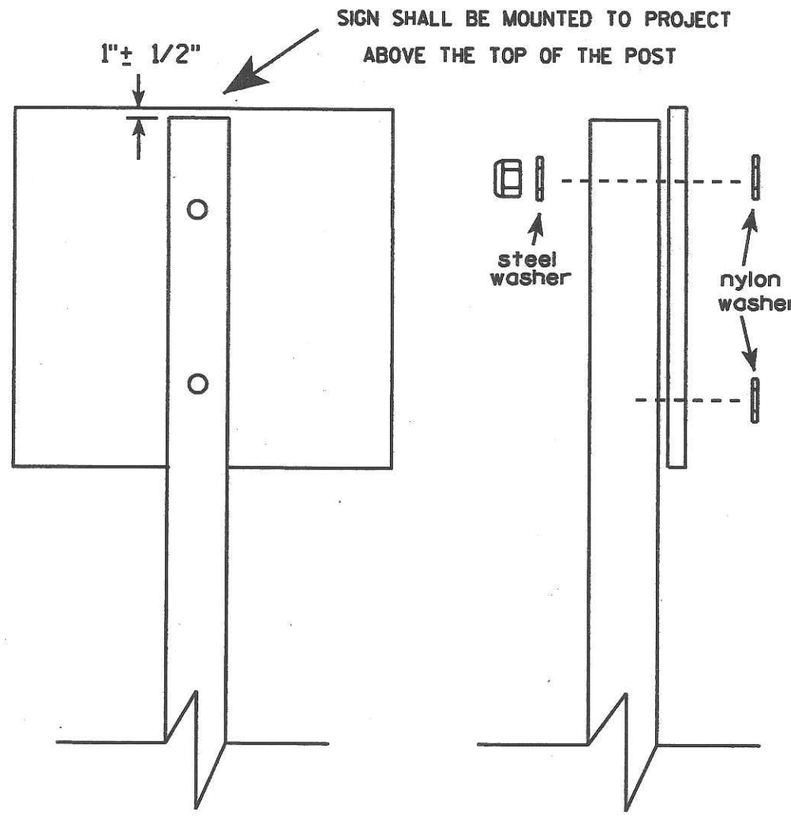
TYPICAL INSTALLATION
OF TYPE II SIGNS
ON MULTIPLE POSTS

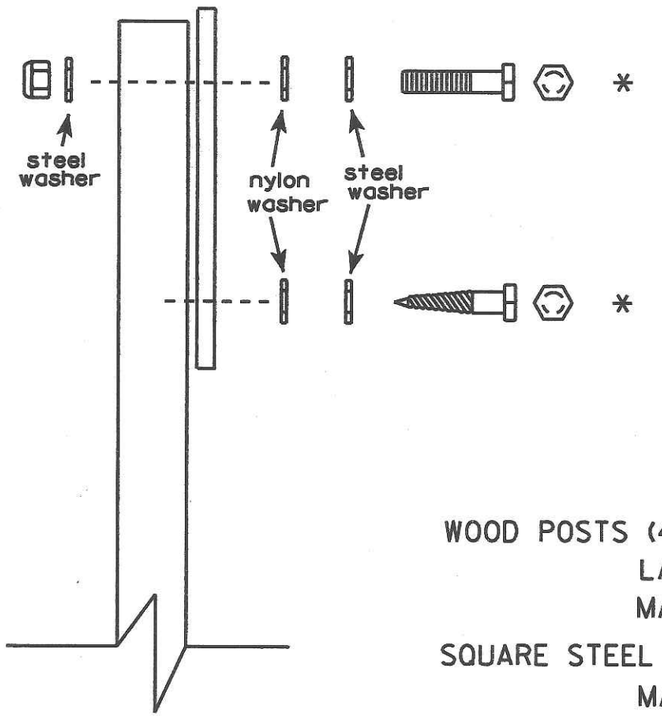
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/17/05 PLATE NO. A4-4.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 131	E





Nuts, bolts and lags used for mounting signs shall have hexagonal heads and shall be either :

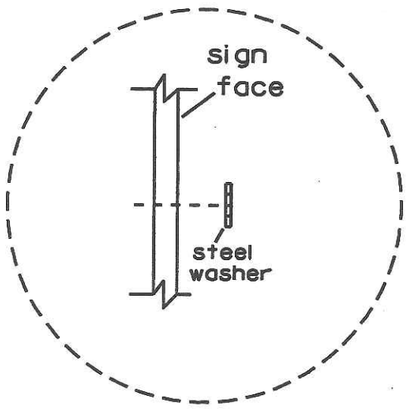
a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D, or
b. Cadmium plated in accordance with ASTM Designation : B 766 TYPE 3, Class 12, or
c. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

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

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 9 sq. ft. or larger require the use of 3 fasteners.

ATTACHMENT OF SIGNS TO POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang for State Traffic Engineer

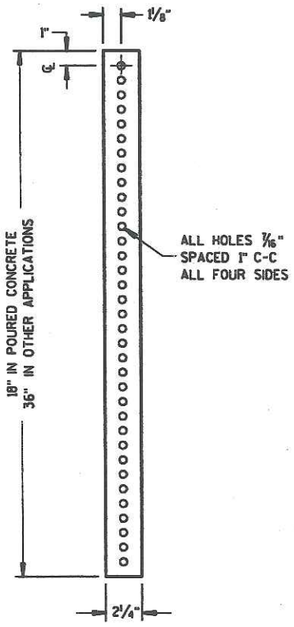
DATE 4/03/02 PLATE NO. A4-8.5

STATE PROJECT NUMBER:	HWY:	COUNTY:			SHEET NO: 132	E

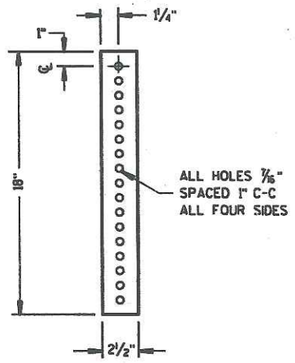
58,59,60,61, 63
LEVELS ON • 2, 5, 10,
7
7
FILE NAME : d:\Users\Projects\tr_stdplate\A48.DGN PLOT DATE : 03-APR-2002 10:50 ORG DATE : 1980 PLOT NAME : Originator : Sandy Anderson PLOT SCALE : 3.978764:1.000000
WISDOT/CADDS SHEET 42

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

2 1/4" SQUARE 12 GAUGE PERFORATED GALVANIZED FINISH

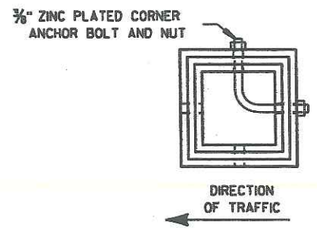


2 1/2" SQUARE 12 GAUGE PERFORATED GALVANIZED FINISH

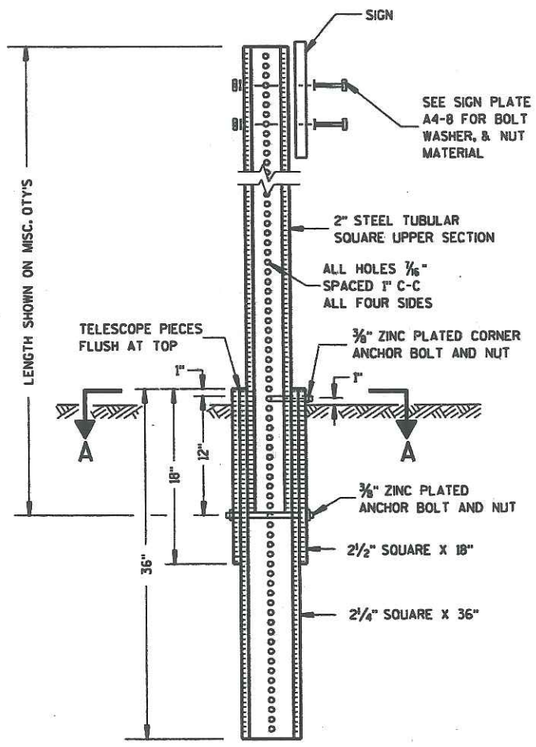


Area of Sign Installation (Sq. Ft.)	Number of Required Posts
9 or less	1
Greater than 9 less than or equal to 18	2
Greater than 18 less than or equal to 27	3

Signs wider than 3 feet or larger than 9 sq. ft shall be mounted on multiple posts (see above table).

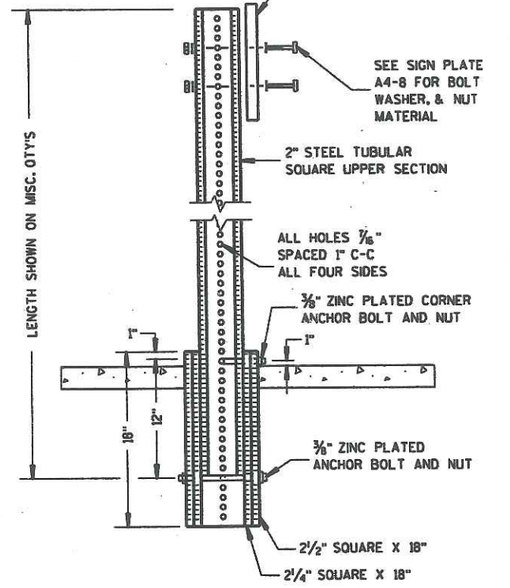


SECTION A-A



DETAIL OF TUBULAR STEEL SIGN POST
(IN OTHER INSTALLATIONS)

NOTE:
BOTH THE ANCHOR SECTION AND OUTER SLEEVE SHALL BE LEFT A MAXIMUM OF 2" ABOVE THE SURFACE.



DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE)

TUBULAR STEEL
SIGN POST
A4-9

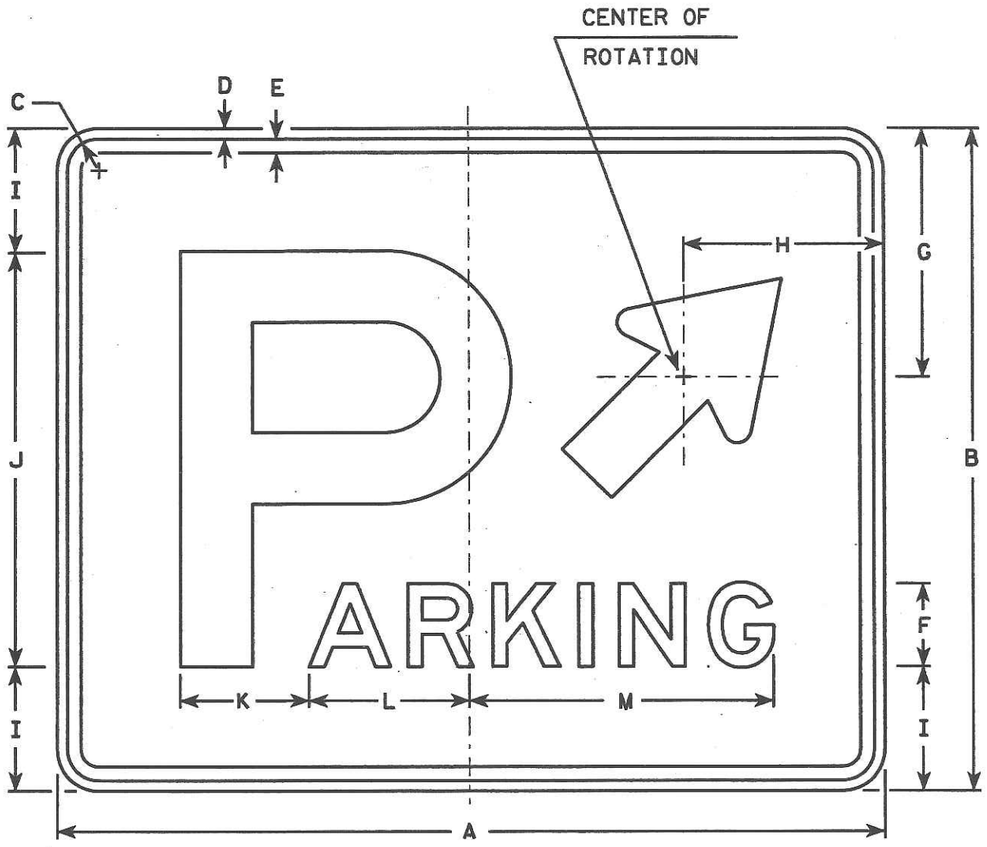
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer
DATE 1/7/04 PLATE NO. A4-9.1

7

7

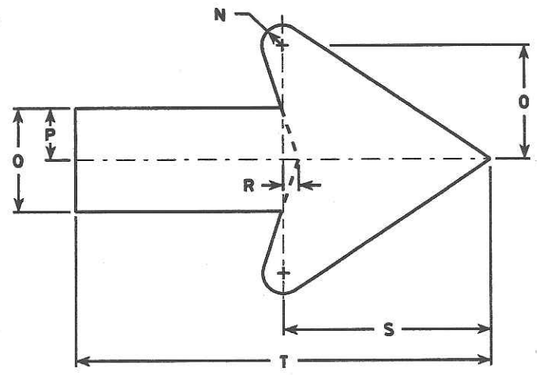
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 133	E



D4-1

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 - Green
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. Arrow shall be rotated as required.



Arrow Detail

Metric equivalent for this sign is:

SIZE	
1	450 mm X 375 mm
2	750 mm X 600 mm
3	1200 mm X 900 mm
4	
5	

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m2
1	18	15	1 1/8	3/8	3/8	2	7	4 3/8	2 1/2	10	3 1/8	4	7 1/4	3/8	1 5/8	3/4	1 1/2	1/4	3	6							1.88	0.17
2	30	24	1 1/8	3/8	1/2	3	9	7 1/4	4 1/2	15	4 5/8	5 7/8	11	1/2	2 3/4	1 1/4	2 1/2	3/8	5	10							5.0	0.45
3	48	36	1 3/4	1/2	5/8	5	11	12	5 1/2	25	7 3/4	9 3/4	18 1/4	3/4	3 7/8	1 7/8	3 3/4	5/8	7 1/2	15							12.0	1.08
4																												
5																												

STANDARD SIGN
D4-1

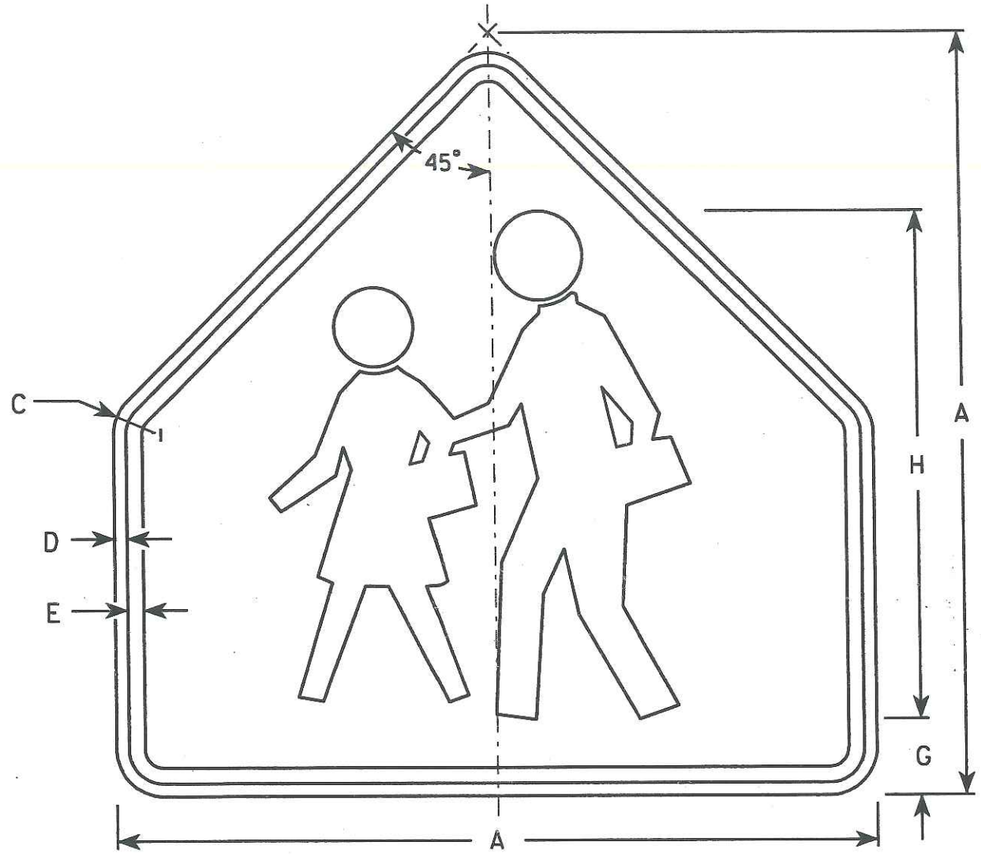
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang for State Traffic Engineer

DATE 1/09/02 PLATE NO. D4-1.7

PROJECT NO:

SHEET NO: 134 E



S1-1

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow-Green
   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.

Metric equivalent for this sign is:

SIZE	
1	750 mm X 750 mm
2	900 mm X 900 mm
3	900 mm X 900 mm
4	
5	

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m2
1	30		1 3/8	1/2	5/8		3	20																			4.69	0.44
2	36		1 5/8	5/8	3/4		3 1/2	24																			6.75	0.63
3	36		1 5/8	5/8	3/4		3 1/2	24																			6.75	0.63
4																												
5																												

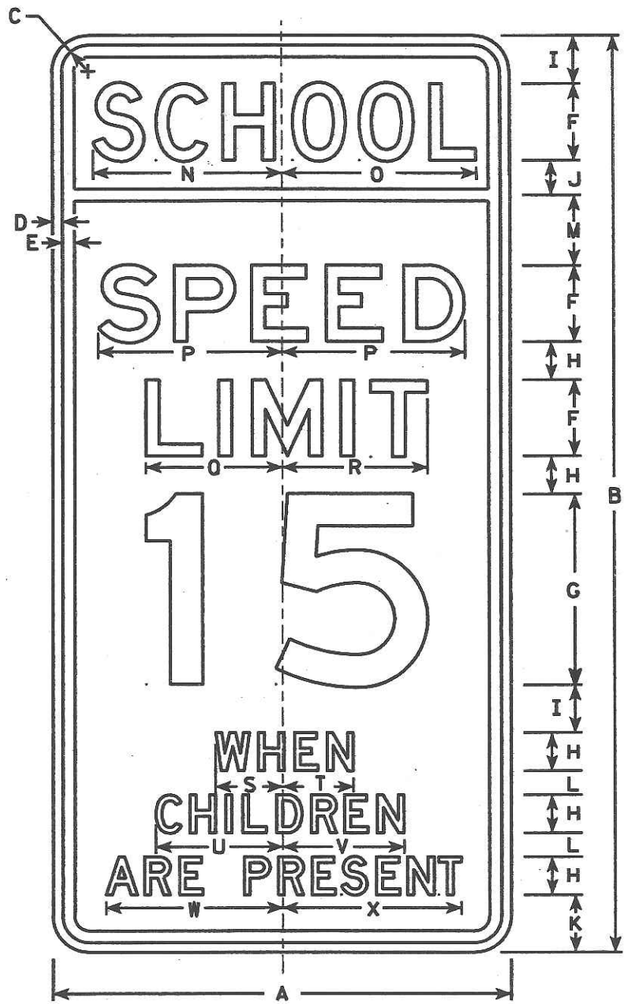
STANDARD SIGN
S1-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/30/05 PLATE NO. S1-1.8

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 135 | E



S4-51

NOTES

1. Sign is Type II - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition. (See note 5).
2. Color:
   Background - See note 5
   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. Top panel (SCHOOL) background - Yellow Green -Type F Reflective.
   Lower panel background - White -Type H Reflective.
6. From top to bottom:
   Lines 1, 5, 6 & 7 are series D
   Lines 2, 3 & 4 are series E
7. Line 4 substitute appropriate numerals and adjust spacing to achieve proper balance.

Metric equivalent for this sign is:

SIZE	
1	
2	600 mm X 1200 mm
3	
4	
5	

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m2
1																												
2	24	48	1 3/8	1/2	5/8	4	10	2	2 1/2	1 3/4	3	1 1/4	3 3/4	9 7/8	10 1/4	9 5/8	7 1/8	7 5/8	3 1/2	3 3/8	6 5/8	6 3/8	9 1/4	9 3/8			8.00	0.72
3																												
4																												
5																												

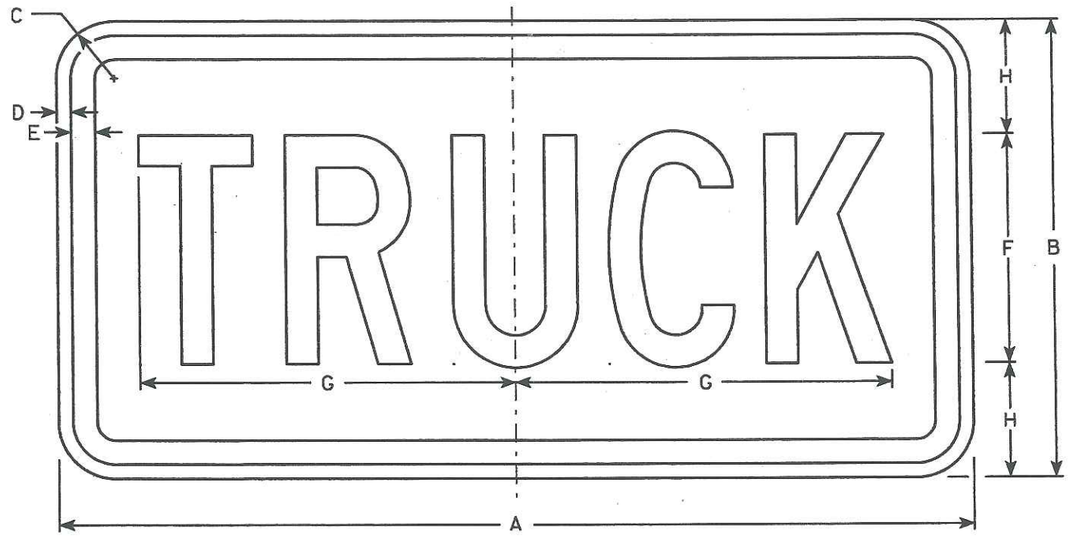
STANDARD SIGN
S4-51

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 08/24/05 PLATE NO. S4-51.8

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 136 | E



M4-4

NOTES

1. Sign is Type II - See Note 5 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White - See Note 5
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Permanent Signs
   Background - Type H Reflective
   Temporary or other temporary Signs
   Background - Reflective

Metric equivalent for this sign is:

SIZE	
1	
2	600 mm X 300 mm
3	750 mm X 375 mm
4	
5	

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area sq. m.
1																												
2	24	12	1 1/2	3/8	5/8	6	9 7/8	3																			2.0	.18
3	30	15	1 1/2	3/8	5/8	8	12 1/4	3 1/2																			3.1	.28
4																												
5																												

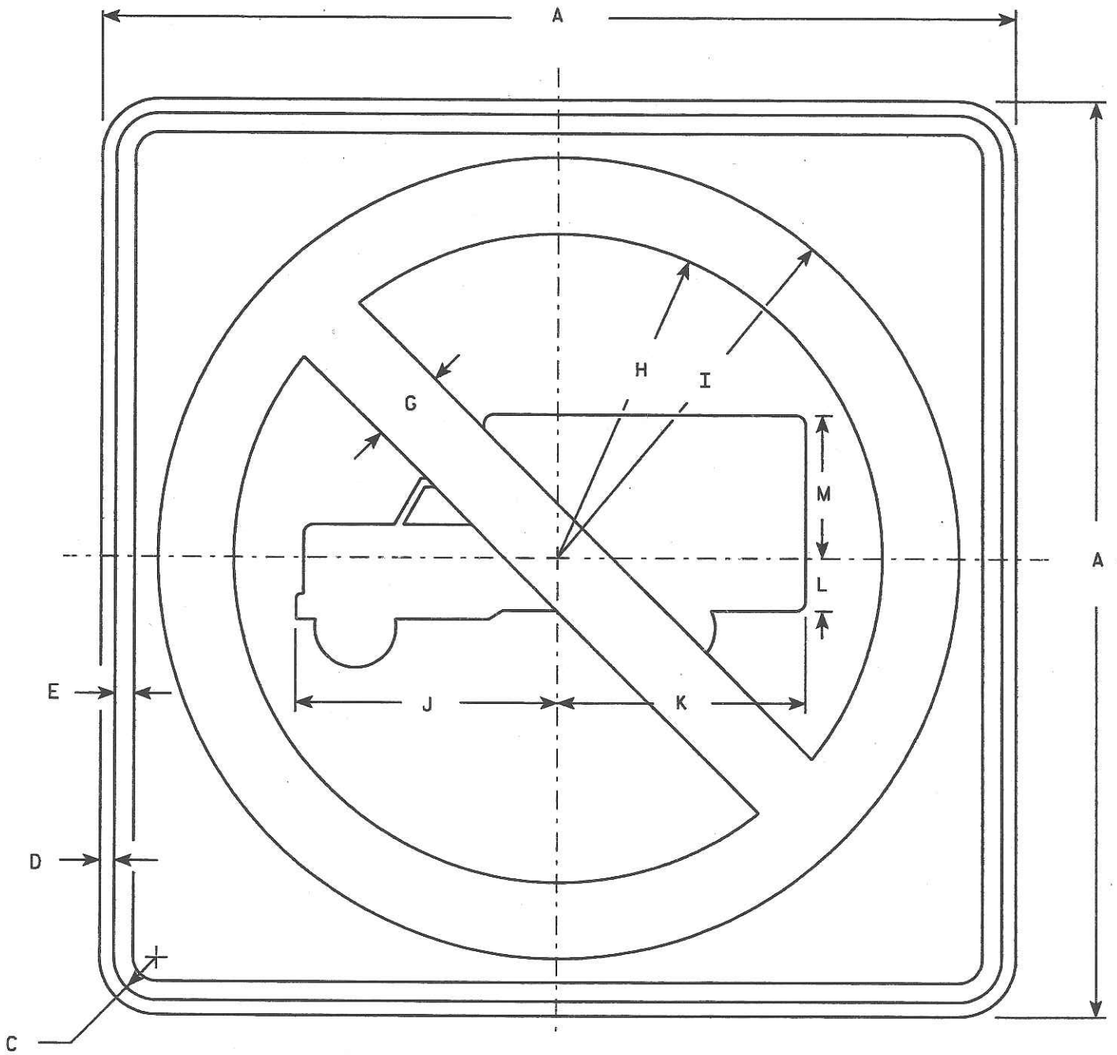
STANDARD SIGN
M4-4

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang for State Traffic Engineer

DATE 3/20/02 PLATE NO. M4-4.2

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 137 | E



R5-2

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - See Note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. Circle & Diagonal - Reflective red.
   Truck Symbol & Border - Non-reflective black.

Metric equivalent for this sign is:

SIZE	
1	
2	600 mm X 600 mm
3	750 mm X 750 mm
4	900 mm X 900 mm
5	1200 mm X 1200 mm

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m2
1																												
2	24		1 1/8	3/8	1/2		2	8 1/2	10 1/2	6 7/8	6 1/2	1 3/8	3 3/4														4.0	0.36
3	30		1 3/8	1/2	5/8		2 1/2	10 5/8	13 1/8	8 1/2	8 1/8	1 5/8	4 3/4														6.25	0.56
4	36		1 5/8	5/8	3/4		3	12 3/4	15 3/4	10 1/4	9 3/4	2	5 3/4														9.0	0.81
5	48		2 1/4	3/4	1		4	17	21	13 5/8	13	2 5/8	7 5/8														16.0	1.44

STANDARD SIGN
R5-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spagg for State Traffic Engineer

DATE 2/6/02 PLATE NO. R5-2.5

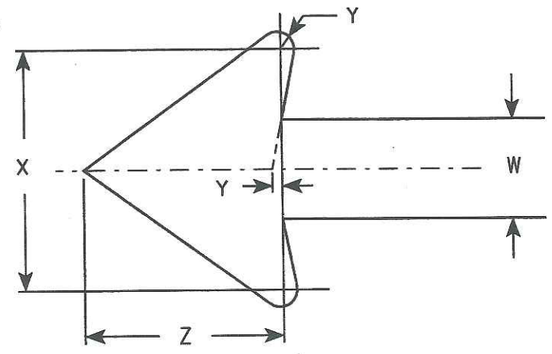
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 138 E



R7-51

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Red
3. Message Series - See Note 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. R7-51D (double arrow)
   R7-51R (right arrow)
   R7-51L (left arrow)
6. Lines 1, 3 and 4 are Series C.
   Line 2 is Series B.



ARROW DETAIL

Metric equivalent for this sign is:

SIZE	
1	300 mm X 450 mm
2	450 mm X 600 mm
3	600 mm X 750 mm
4	
5	

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m2
1	12	18	1 1/8	3/8	3/8	3	1 7/8	2	7/8	5/8	1 1/2	2 1/2	2	2	4 7/8	4 7/8	4 7/8	5/8	1 3/4	2 1/2	4 3/8	3 7/8	3/4	1 3/4	1/8	1 1/2	1.5	0.14
2	18	24	1 1/8	3/8	1/2	4	2 1/2	2 1/2	1 1/4	1	2	3 1/4	2 3/4	2 5/8	7 1/8	7	5 3/4	1 1/8	1 1/2	3 1/8	5 1/2	5 7/8	1 1/8	2 5/8	1/4	2 1/4	3.0	0.27
3	24	30	1 1/8	3/8	1/2	5	3	3	2	1 1/4	2 1/2	4	3 1/4	3 3/8	9 1/4	9 1/4	7 1/8	1 1/4	2	3 3/4	6 1/2	7 3/4	1 1/2	3 1/2	1/4	3	5.0	0.45
4																												
5																												

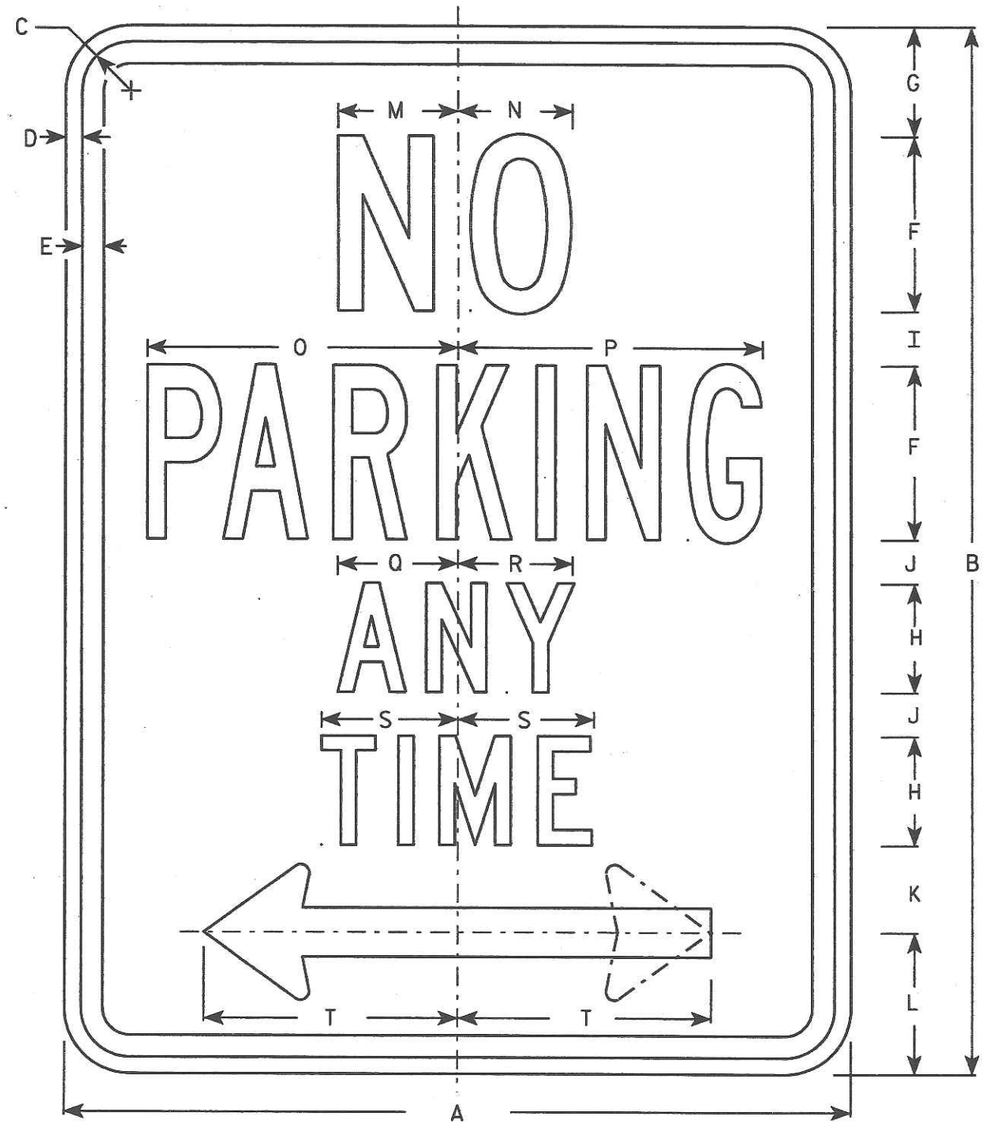
STANDARD SIGN
R7-51

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spenz
for State Traffic Engineer

DATE 2/7/02 PLATE NO. R7-51.5

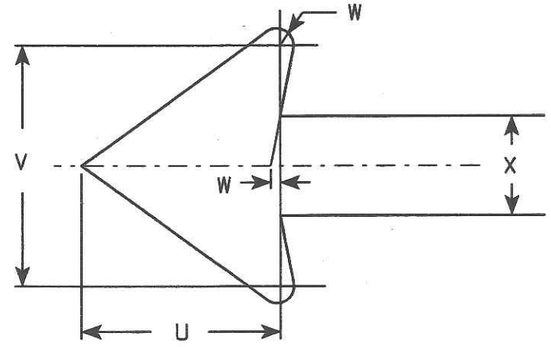
PROJECT NO:	HWY:	COUNTY:			SHEET NO: 139	E



R7-1

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Red
3. Message Series - See Note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Lines 1, 3 and 4 are series C, line 2 is series B.
6. R7-1D (double arrow)
   R7-1L (left arrow)
   R7-1R (right arrow)



Metric equivalent for this sign is:

SIZE	
1	300 mm X 450 mm
2	450 mm X 600 mm
3	600 mm X 750 mm
4	
5	

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m2
1	12	18	1 1/8	3/8	3/8	3	1 7/8	2	1/8	5/8	1 1/2	2 1/2	2	2	4 7/8	4 7/8	2 1/4	2 1/8	2 1/2	3 7/8	1 1/2	1 3/4	1/8	3/4			1.5	0.14
2	18	24	1 1/8	3/8	1/2	4	2 1/2	2 1/2	1 1/4	1	2	3 1/4	2 3/4	2 5/8	7 1/8	7	2 3/4	2 5/8	3 1/8	5 7/8	2 1/4	2 5/8	1/4	1 1/8			3.0	0.27
3	24	30	1 1/8	3/8	1/2	5	3	3	2	1 1/4	2 1/2	4	3 1/4	3 3/8	9 1/4	9 1/4	3 1/4	3 1/4	3 3/4	7 3/4	3	3 1/2	1/4	1 1/2			5.0	0.45
4																												
5																												

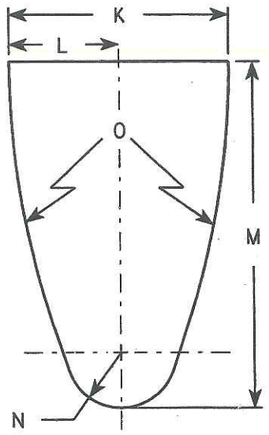
STANDARD SIGN
R7-1

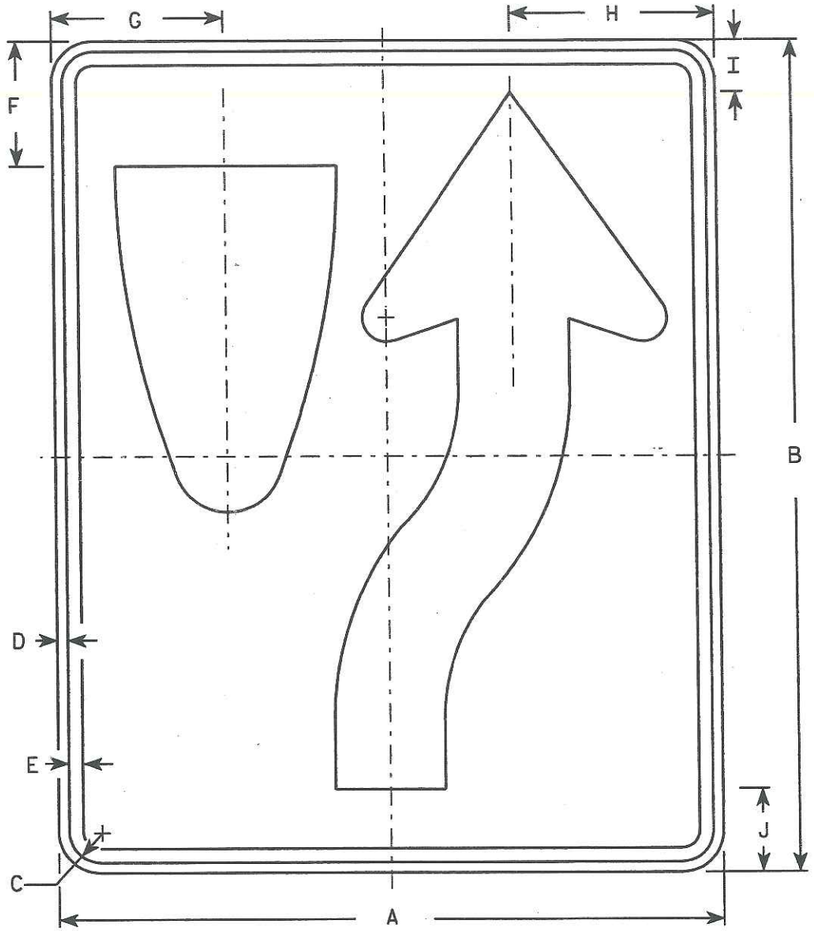
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang for State Traffic Engineer

DATE 2/7/02 PLATE NO. R7-1.8

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 140 E

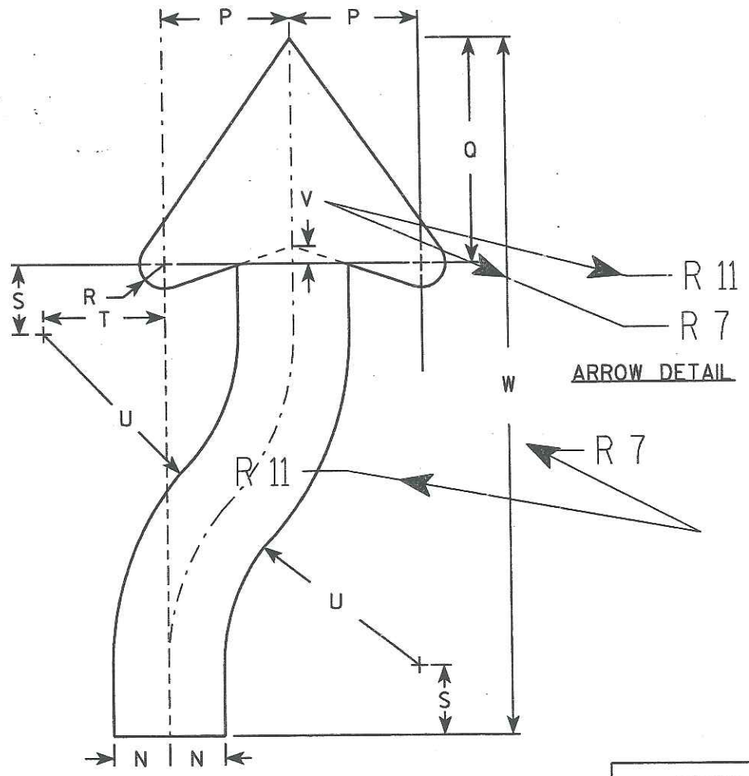




R4-7

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

7

Metric equivalent for this sign is:

SIZE	
1	450 mm X 600 mm
2	600 mm X 750 mm
3	900 mm X 1200 mm
4	900 mm X 1200 mm
5	900 mm X 1200 mm

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m2
1	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	.27
2	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	.45
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	1.08
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	1.08
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	1.08

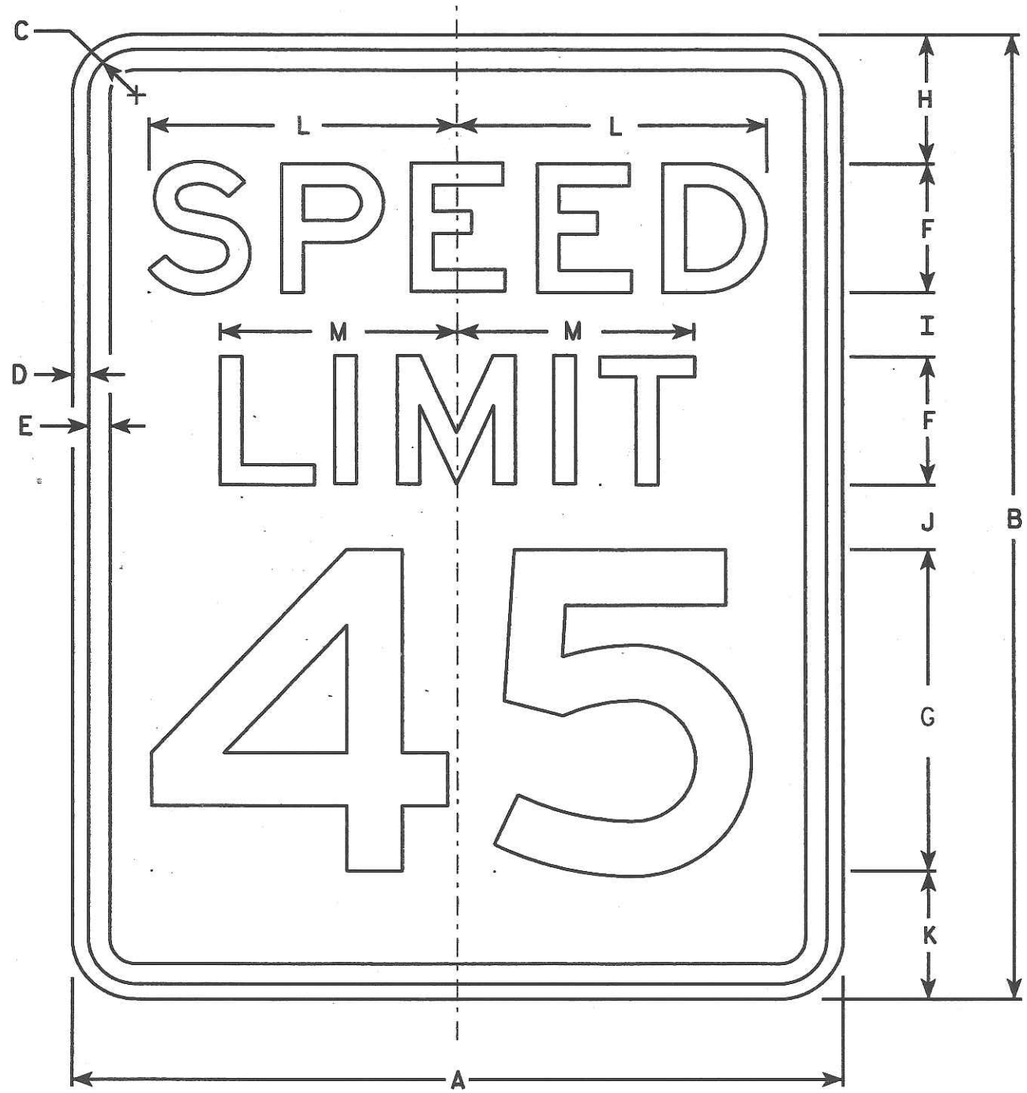
STANDARD SIGN
R4-7 & R4-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang for State Traffic Engineer

DATE 2/6/02 PLATE NO. R4-7.7

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 141 | 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.

Metric equivalent for this sign is:

SIZE	
1	450 mm X 600 mm
2	600 mm X 750 mm
3	900 mm X 1200 mm
4	900 mm X 1200 mm
5	1200 mm X 1500 mm

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m2
1	18	24	1 1/8	3/8	1/2	3	8	3	2	2	3	7 1/4	5 1/2														3.0	.28
2	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	.46
3	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0	1.11
4	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0	1.11
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	1.86

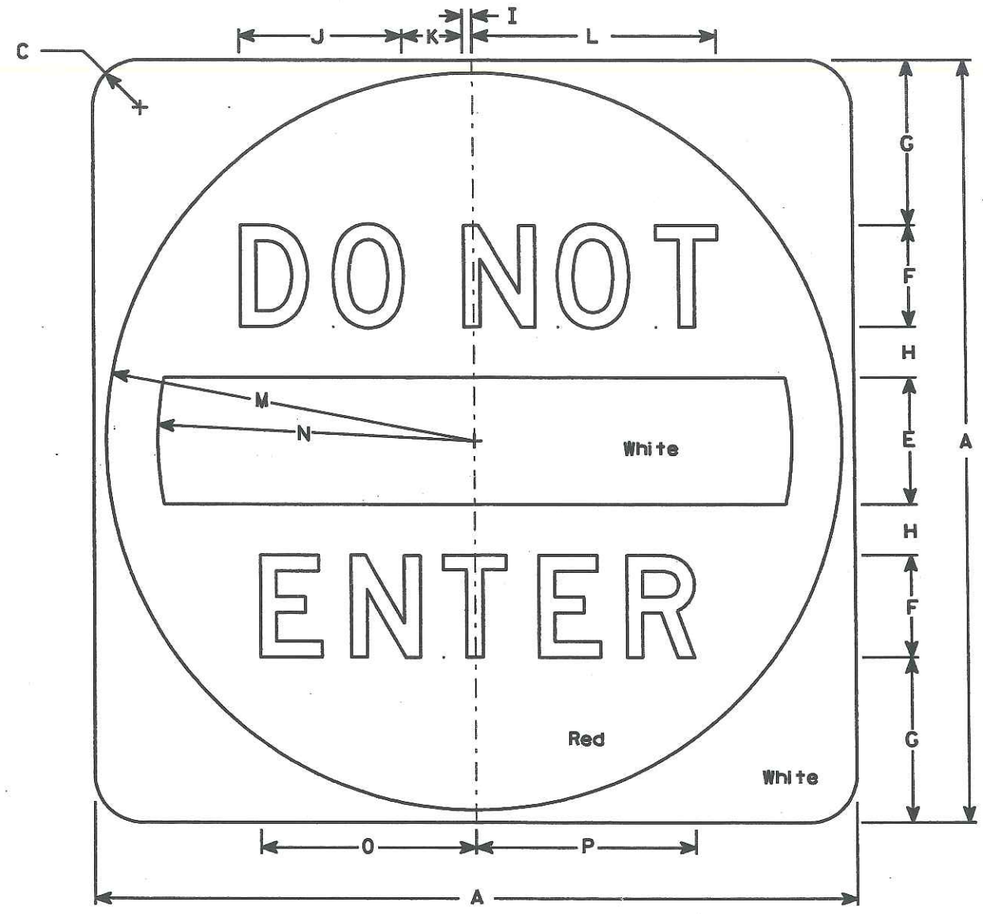
STANDARD SIGN
R2-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 7/05/05 PLATE NO. R2-1.12

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 142 E



R5-1

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - See detail
   Message - White - Type H Reflective
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but when base material is metal, the cornors shall be rounded.

Metric equivalent for this sign is:

SIZE	
1	
2	750 mm X 750 mm
3	900 mm X 900 mm
4	900 mm X 900 mm
5	1200 mm X 1200 mm

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m2
1																												
2	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	0.56
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	0.81
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	0.81
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	1.44

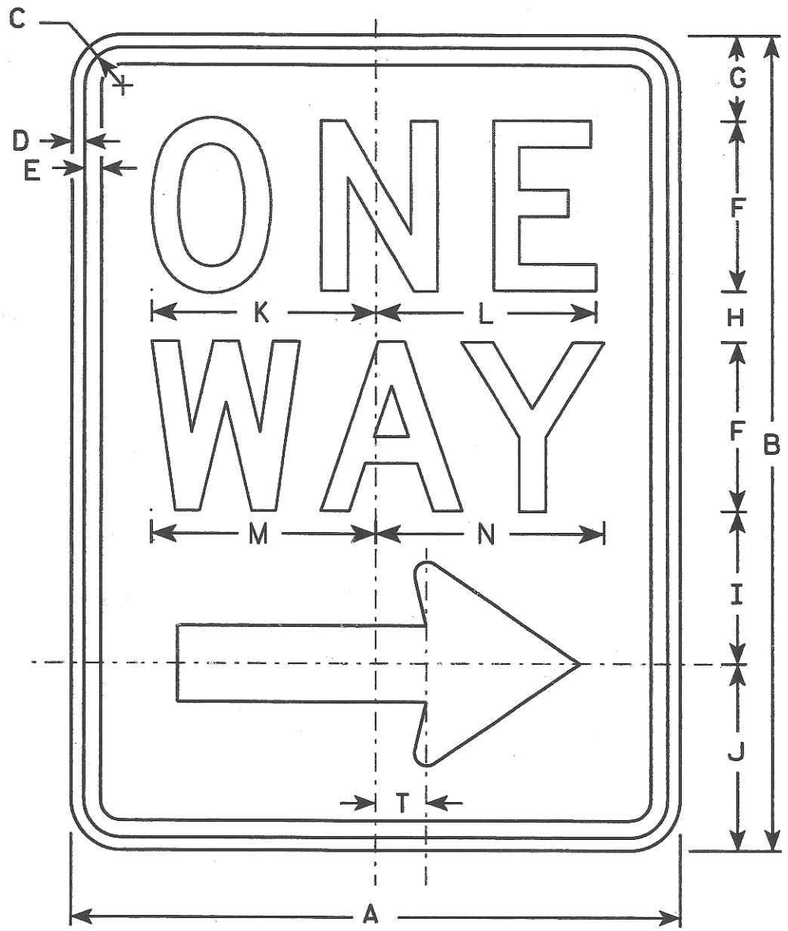
STANDARD SIGN
R5-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 7/05/05 PLATE NO. R5-1.14

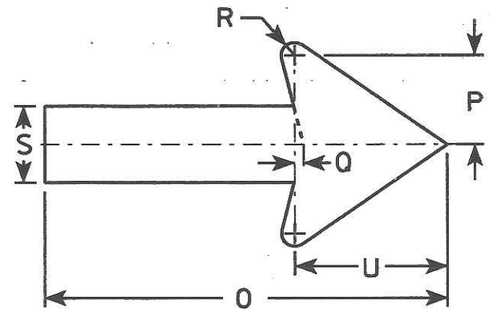
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 143 E



R6-2R

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. R6-2L same as R6-2R except arrow points to the left.



Metric equivalent for this sign is:

SIZE	
1	450 mm X 600 mm
2	600 mm X 750 mm
3	900 mm X 1200 mm
4	900 mm X 1200 mm
5	900 mm X 1200 mm

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m²
1	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						3.0	0.27
2	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						5.0	0.45
3	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						5.0	0.45
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						12.0	1.08
5	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						12.0	1.08

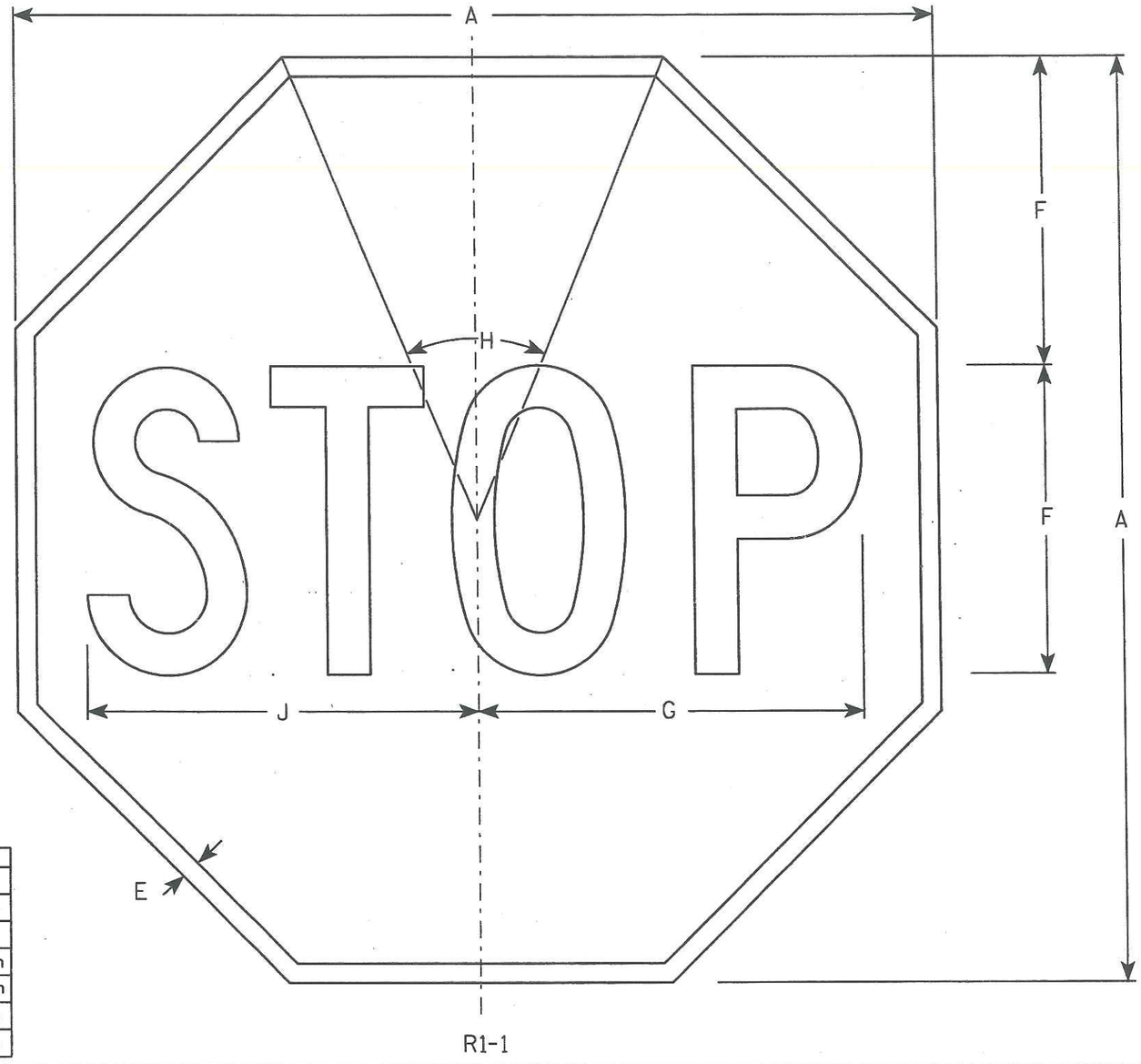
STANDARD SIGN
R6-2 R&L

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/18/05 PLATE NO. R6-2.7

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 144	E



NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Red
   Message - White
3. Message Series - C

Metric equivalent for this sign is:

SIZE	
1	600 mm X 600 mm
2	750 mm X 750 mm
3	900 mm X 900 mm
4	1200 mm X 1200 mm
5	1200 mm X 1200 mm
6	450 mm X 450 mm
7	300 mm X 300 mm

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m2
1	24				3/8	8	10	45°		10 1/4																	3.31	0.31
2	30				5/8	10	12 1/2	45°		12 3/4																	5.18	0.48
3	36				3/4	12	15	45°		15 3/8																	7.46	0.69
4	48				1	16	20	45°		20 1/2																	13.25	1.23
5	48				1	16	20	45°		20 1/2																	13.25	1.23
6	18				3/8	6	7 3/4	45°		7 3/4																	1.86	0.17
7	12				1/4	4	5	45°		5 1/8																	0.78	0.07

STANDARD SIGN
R1-1

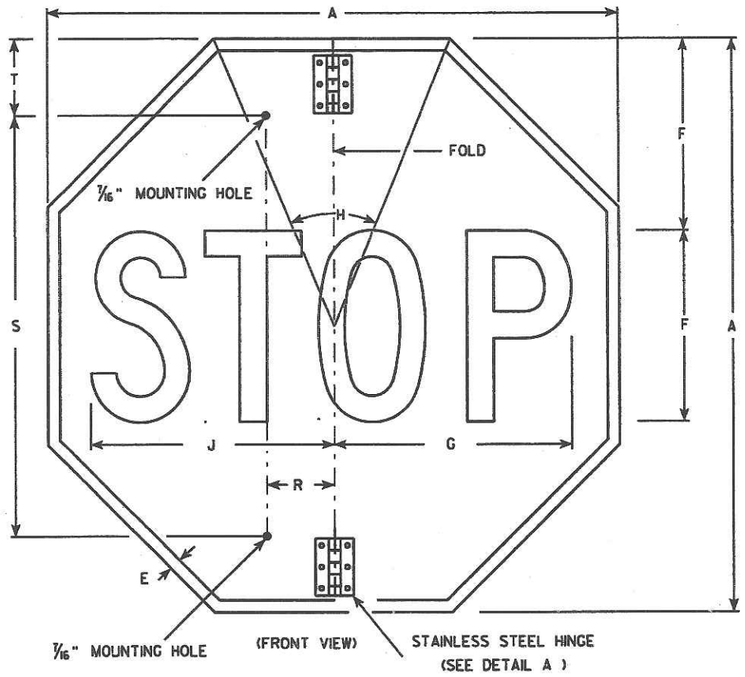
WISCONSIN DEPT OF TRANSPORTATION

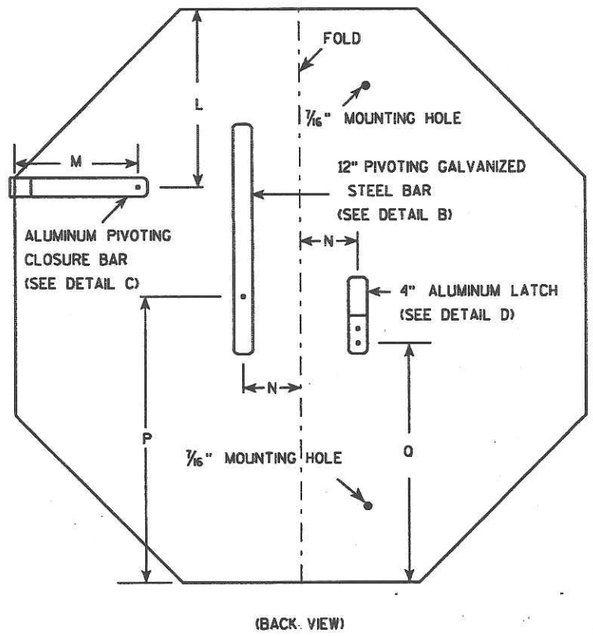
APPROVED Chester J Spang
for State Traffic Engineer

DATE 10/15/98 PLATE NO. R1-1.11

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 195 | E

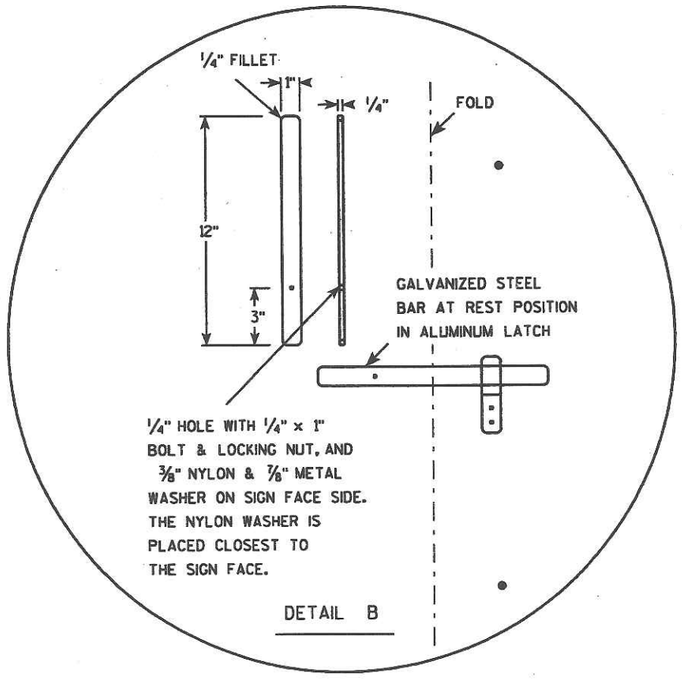
7

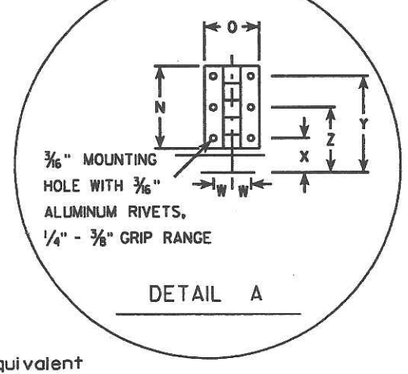


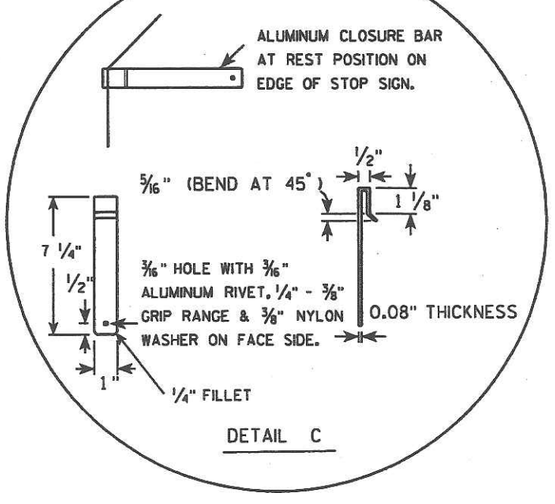


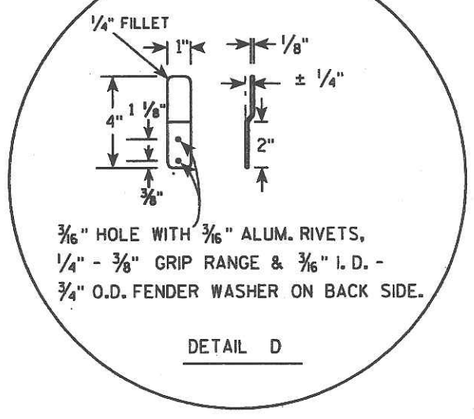
NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Red
   Message - White
3. Message Series - C
4. All hardware used on the folding STOP sign installation shall conform to 637.2.4 of the WIS DOT Standard Specification.









Metric equivalent for this sign is:

SIZE	
1	
2	750 mm X 750 mm
3	900 mm X 900 mm
4	
5	

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m²
1																												
2	30				5/8	10	12 1/2	45		12 3/4		9 1/4	6 1/2	3	2	15	12 3/8	2 1/2	22	5			11/16	1 1/4	3 1/2	2 3/8	5.18	0.48
3	36				3/4	12	15	45		15 3/8		11	6 1/2	3	2	18	15 3/8	2 1/2	26	5			11/16	1 1/4	3 1/2	2 3/8	7.46	0.69
4																												
5																												

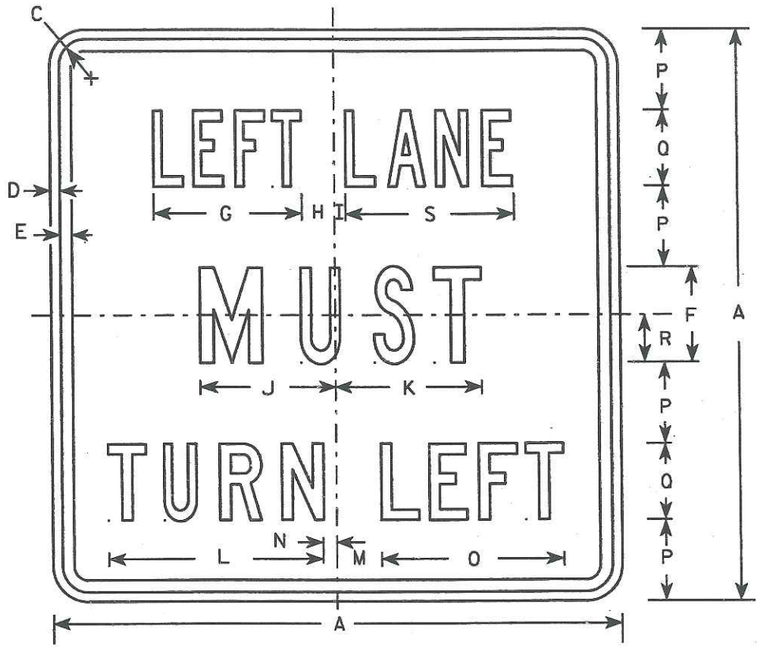
STANDARD SIGN
R1-1F

WISCONSIN DEPT OF TRANSPORTATION

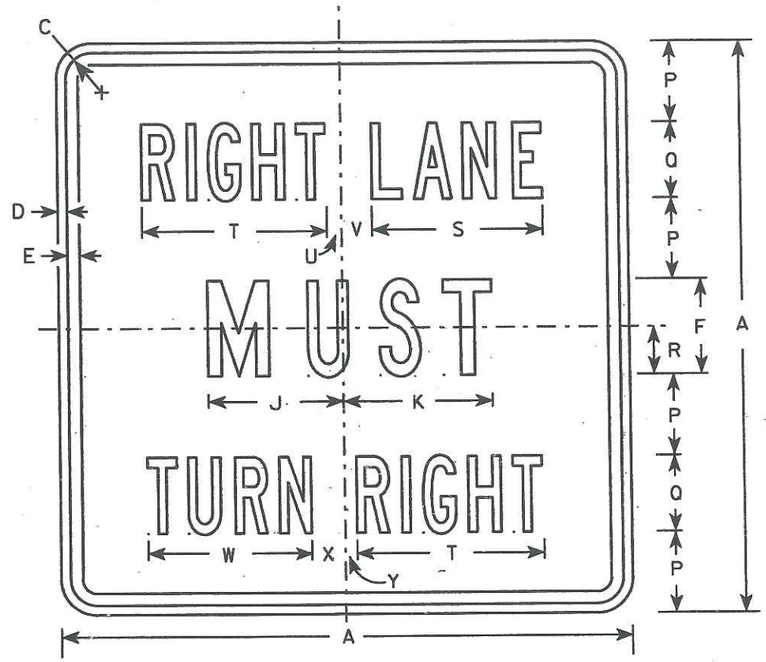
APPROVED Chester J Spagg
for State Traffic Engineer

DATE 2/18/00 PLATE NO. R1-1F.2

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 196 | E



R3-7L



R3-7R

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - Line 1 is Series B.
   Line 2 is Series C.
   Line 3 on plate R3-7R is Series B and Series C on plate R3-7L.
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

Metric equivalent for this sign is:

SIZE	
1	750 mm X 750 mm
2	750 mm X 750 mm
3	900 mm X 900 mm
4	1200 mm X 1200 mm
5	

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m2
1	30		1 3/8	1/2	5/8	5	7 3/4	1 3/4	5/8	7 1/8	7 3/4	11 1/4	2 3/8	3/4	9 5/8	4 1/4	4	2 1/2	8 7/8	9 3/4	3/4	1 5/8	8 5/8	1 5/8	5/8		6.25	0.56
2	30		1 3/8	1/2	5/8	5	7 3/4	1 3/4	5/8	7 1/8	7 3/4	11 1/4	2 3/8	3/4	9 5/8	4 1/4	4	2 1/2	8 7/8	9 3/4	3/4	1 5/8	8 5/8	1 5/8	5/8		6.25	0.56
3	36		1 5/8	5/8	3/4	6	9 5/8	2	1 1/8	8 3/4	9	13 1/2	3 1/8	1 1/2	12 1/2	5	5	3	10 5/8	12	7/8	2 1/4	10 5/8	2 1/8	1		9.00	0.81
4	48		2 1/4	3/4	1	8	13 1/2	2 3/8	1 1/2	11 1/2	11 7/8	17 3/4	3 5/8	2 1/2	16 3/8	6 1/2	7	4	14 3/8	16 7/8	5/8	3 1/4	15 1/8	2 3/4	1 1/8		16.00	1.44
5																												

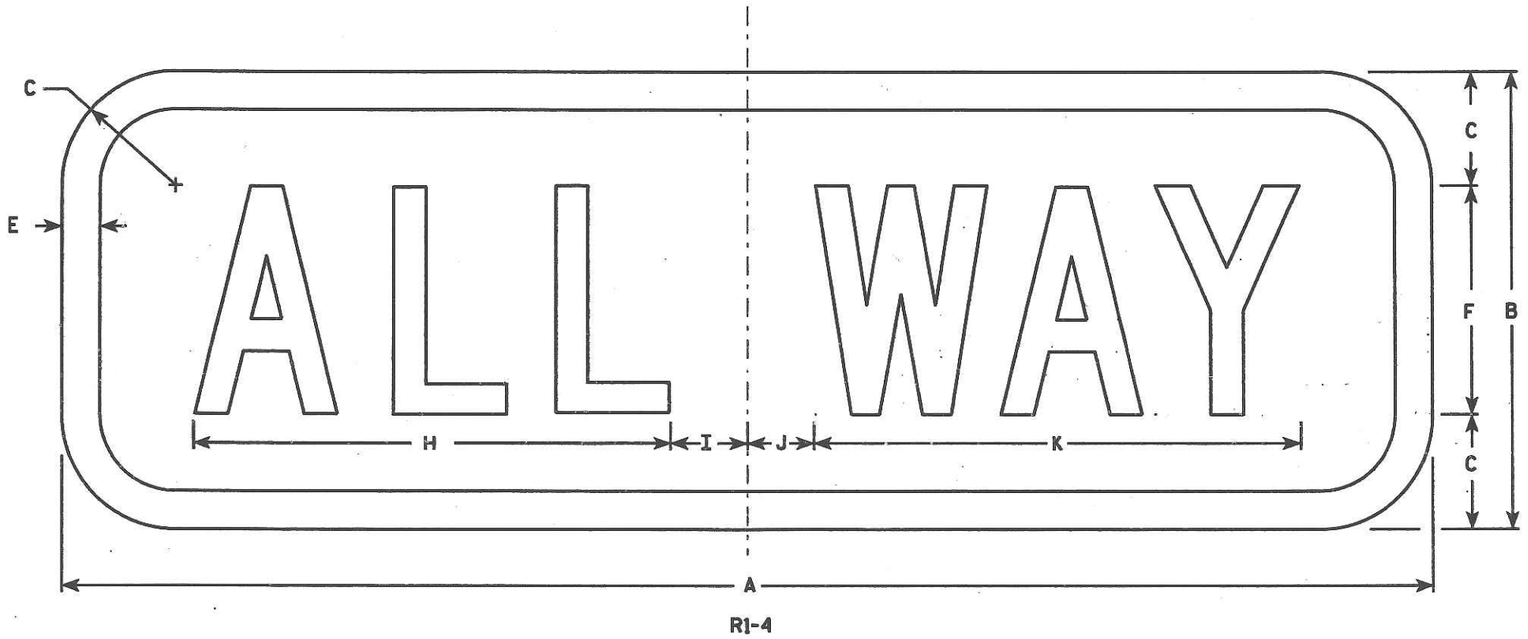
STANDARD SIGN
R3-7L & R3-7R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang for State Traffic Engineer

DATE 2/05/02 PLATE NO. R3-7.3

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 147 | E



R1-4

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Red
   Message - White
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.

7

7

Metric equivalent for this sign is:

SIZE	
1	450 mm X 150 mm
2	450 mm X 150 mm
3	
4	
5	

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area sq
1	18	6	1 1/2		1/2	3		6 1/4	1 1/4	7/8	6 3/8																0.75	0.07
2	18	6	1 1/2		1/2	3		6 1/4	1 1/4	7/8	6 3/8																0.75	0.07
3																												
4																												
5																												

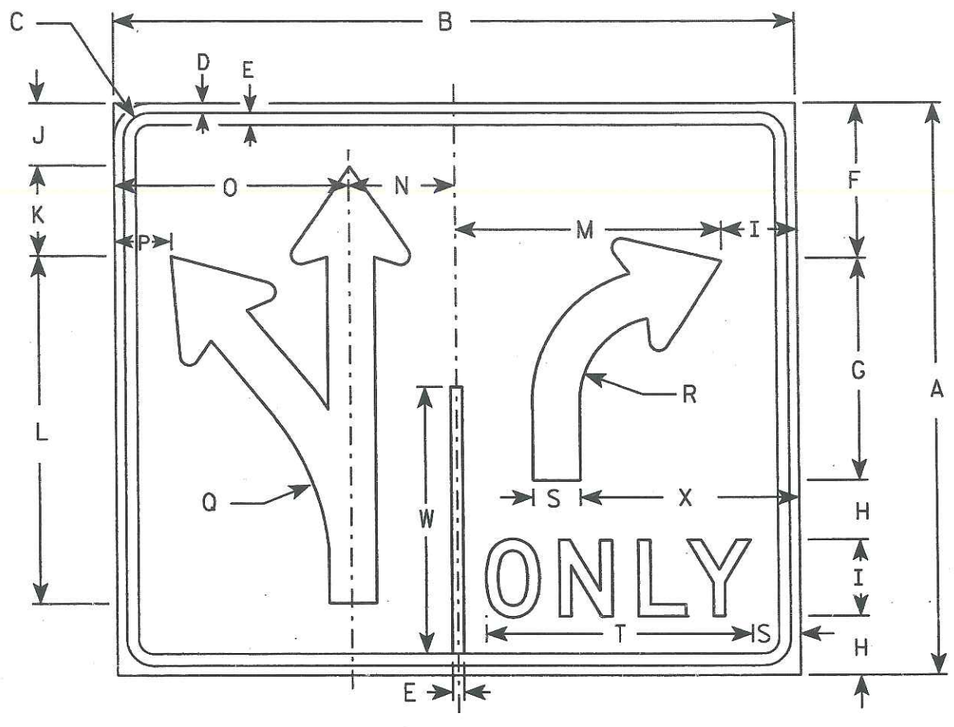
STANDARD SIGN
R1-4

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Cheryl J Spangler for State Traffic Engineer

DATE 2/4/98 PLATE NO. R1-4.4

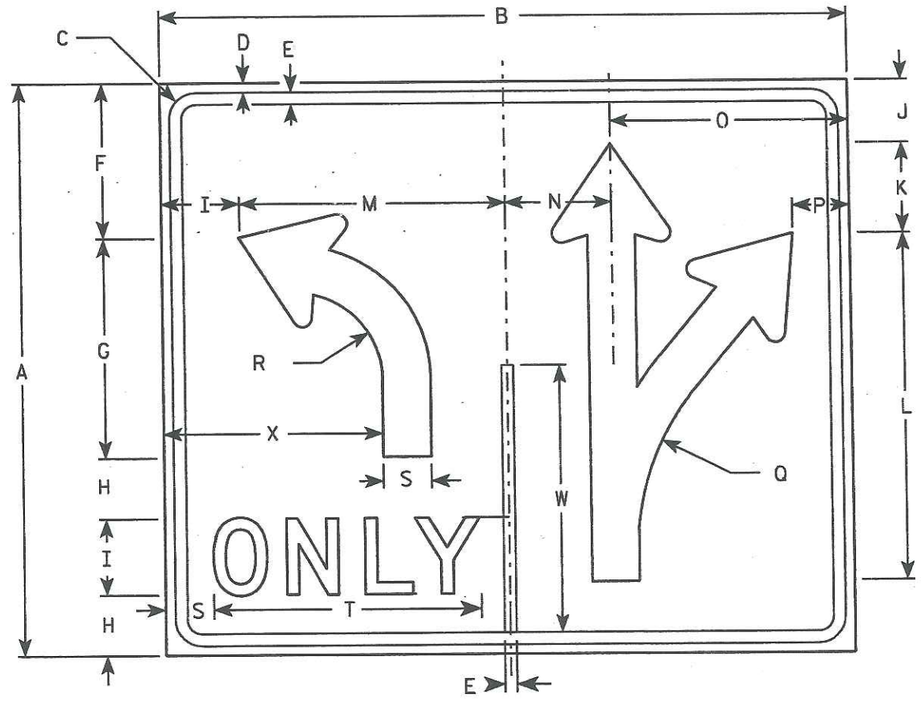
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 148	E



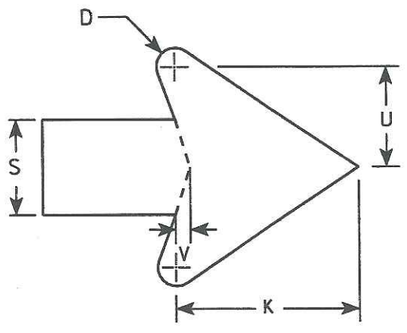
R3-8

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.



R3-8A



ARROW DETAIL

Metric equivalent for this sign is:

SIZE	
1	
2	750 mm X 900 mm
3	
4	1200 mm X 1350 mm
5	1200 mm X 1350 mm

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area sq.
1																												
2	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	0.68
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	1.62
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	1.62

STANDARD SIGN
R3-8 & R3-8A

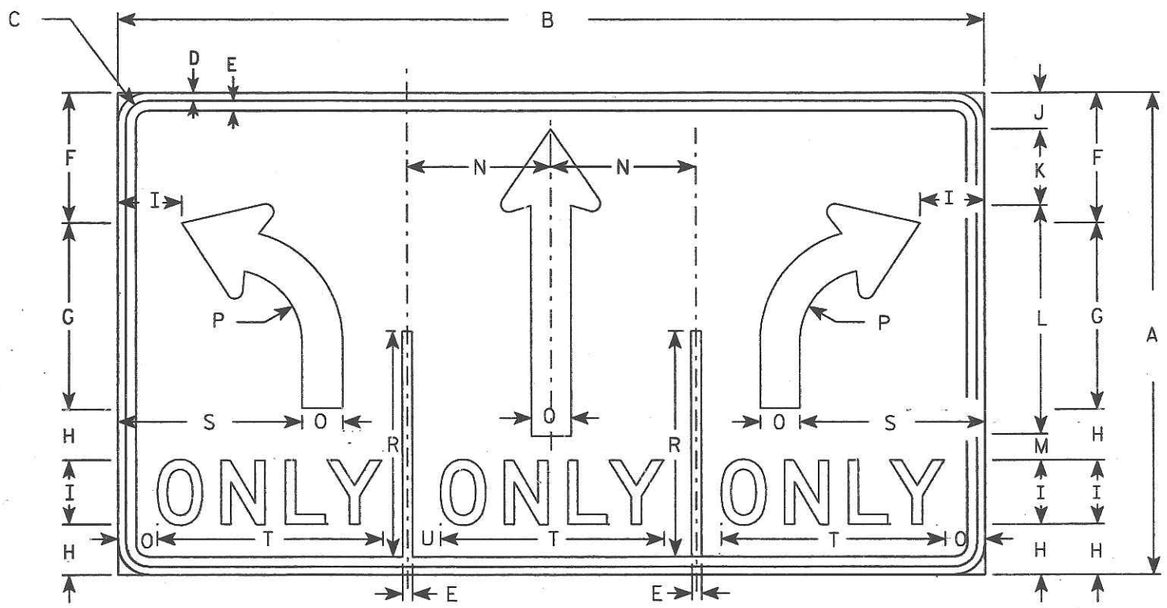
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/23/04 PLATE NO. R3-8.4

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 199 | E

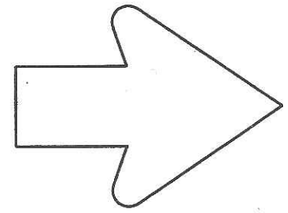
7



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

Metric equivalent for this sign is:

SIZE	
1	
2	750 mm X 1350 mm
3	
4	1200 mm X 2100 mm
5	1200 mm X 2100 mm

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m2
1																												
2	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	1.01
3																												
4	48	84	2 1/4	3/4	1	13 1/4	18 1/2	5 1/8	6	3 1/2	7	29 1/8	2 7/8	14	3 3/4	7 1/4		22 3/8	17 1/4	20 5/8	3 1/4						28.0	2.52
5	48	84	2 1/4	3/4	1	13 1/4	18 1/2	5 1/8	6	3 1/2	7	29 1/8	2 7/8	14	3 3/4	7 1/4		22 3/8	17 1/4	20 5/8	3 1/4						28.0	2.52

STANDARD SIGN
R3-8W

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/11/04 PLATE NO. R3-8W.1

PROJECT NO:

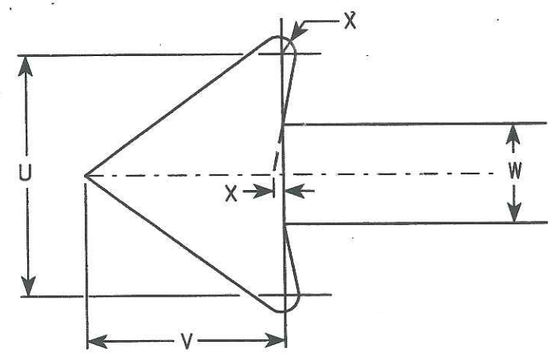
SHEET NO: 150 E



R7-7

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Red
3. Message Series - See Note 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. R7-7D (double arrow)
   R7-7R (right arrow)
   R7-7L (left arrow)
6. Lines 1, 3 and 4 are Series C.
   Line 2 is Series B.



ARROW DETAIL

Metric equivalent for this sign is:

SIZE	
1	300 mm X 450 mm
2	450 mm X 600 mm
3	600 mm X 750 mm
4	
5	

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m2
1	12	18	1 1/8	3/8	3/8	3	2	1 7/8	7/8	5/8	1 1/2	2 1/2	2	2	4 7/8	4 7/8	2	2 3/4	2 5/8	3 7/8	1 3/4	1 1/2	3/4	1/8			1.50	0.14
2	18	24	1 1/8	3/8	1/2	4	2 1/2	2 1/2	1 1/4	1	2	3 1/4	2 3/4	2 5/8	7 1/8	7	2 1/2	3 3/8	3 3/8	5 7/8	2 5/8	2 1/4	1 1/8	1/4			3.00	0.27
3	24	30	1 1/8	3/8	1/2	5	3	3	2	1 1/4	2 1/2	4	3 1/4	3 3/8	9 1/4	9 1/4	3	4 1/8	4	7 3/4	3 1/2	3	1 1/2	1/4			5.00	0.45
4																												
5																												

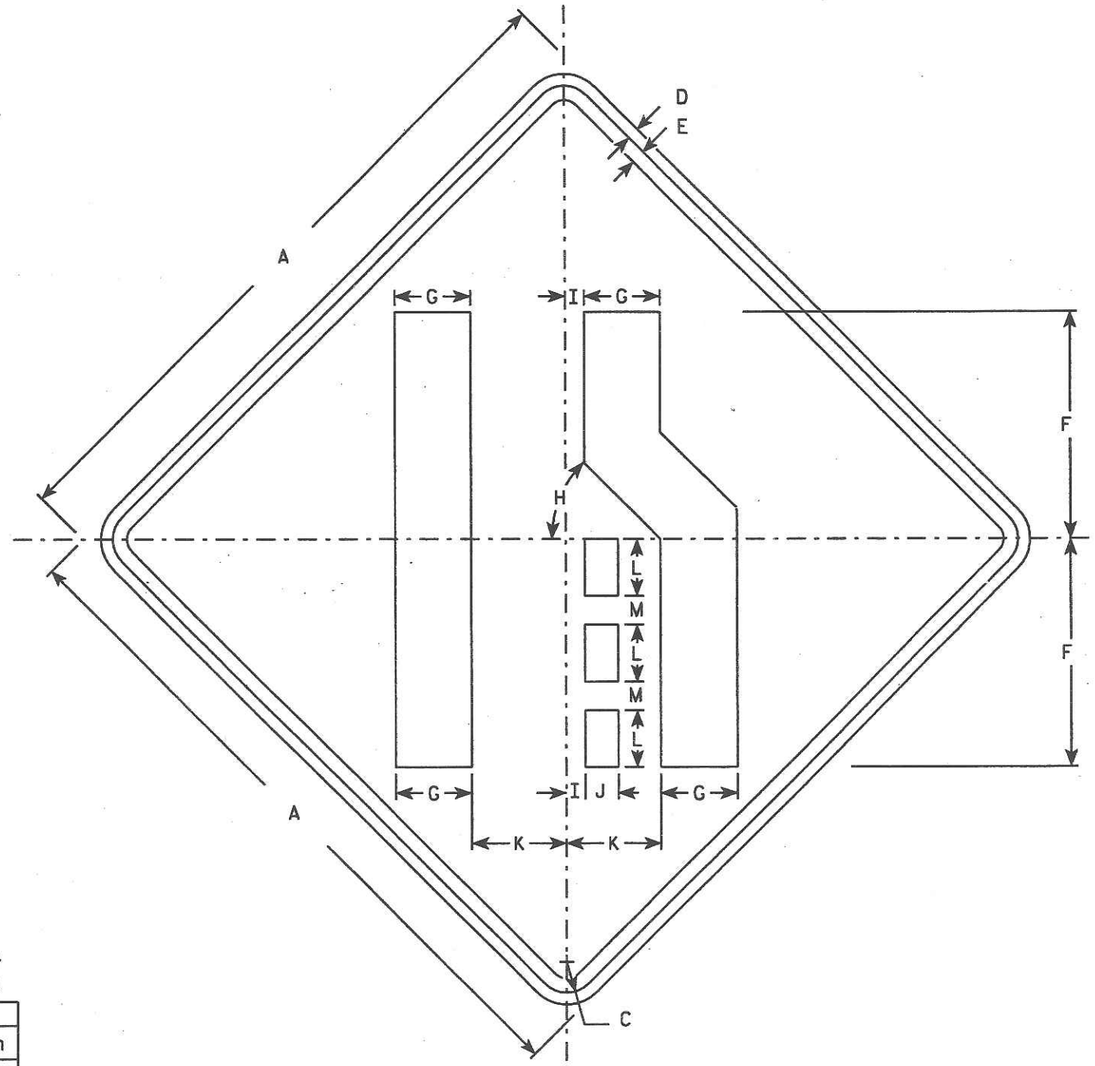
STANDARD SIGN
R7-7

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang for State Traffic Engineer

DATE 2/7/02 PLATE NO. R7-7.7

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 151 E



W4-2R

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W4-2L is the same as W4-2R except the message is reversed along the vertical centerline.

Metric equivalent for this sign is:

SIZE	
1	750 mm X 750 mm
2	900 mm X 900 mm
3	1200 mm X 1200 mm
4	1200 mm X 1200 mm
5	1200 mm X 1200 mm

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m2
1	30		1 3/8	1/2	5/8	10	3 3/8	45°	7/8	1 1/2	4 1/4	2 1/2	1 1/4														6.25	0.56
2	36		1 5/8	5/8	3/4	12	4	45°	1	1 3/4	5	3	1 1/2														9.0	0.81
3	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0	1.44
4	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0	1.44
5	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0	1.44

STANDARD SIGN
W4-2

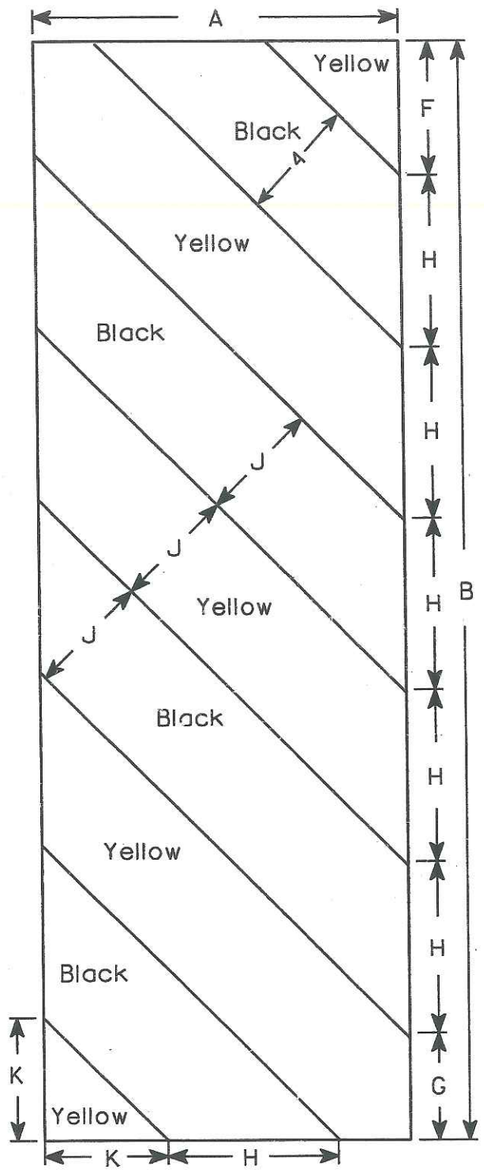
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

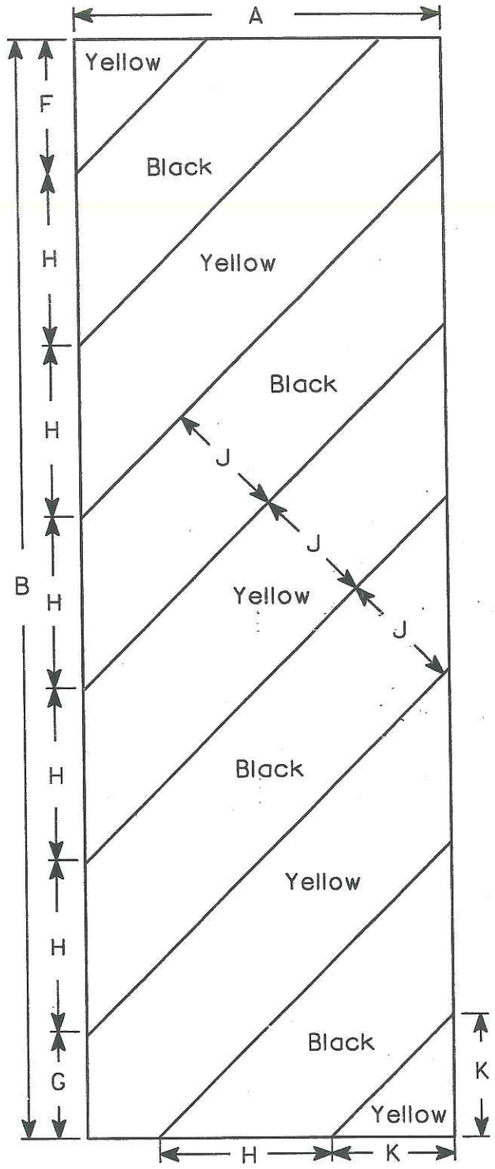
DATE 2/08/05 PLATE NO. W4-2.11

PROJECT NO:

SHEET NO: 152 E



W5-52L



W5-52R

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. Alternate colors of stripes as shown.

Metric equivalent for this sign is:

SIZE	
1	
2	300 mm X 900 mm
3	450 mm X 1350 mm
4	
5	

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m2
1																												
2	12	36				4 3/8	3 1/2	5 5/8	45°	4	4																3.0	0.27
3	18	54				6	5 1/2	8 1/2	45°	6	6 9/16																6.75	0.61
4																												
5																												

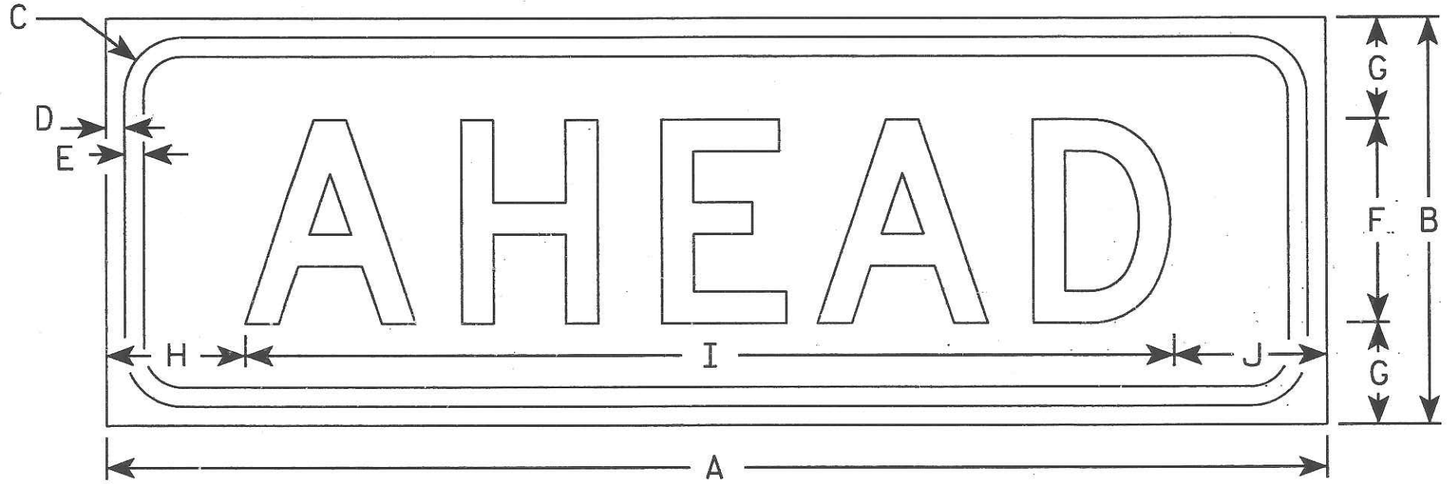
STANDARD SIGN
W5-52L & W5-52R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang
for State Traffic Engineer

DATE 8/13/97 PLATE NO. W5-52.7

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 153	E



W16-9P
WF16-9P

NOTES

1. Sign is Type II - See Note 5 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - See Note 5
   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. W16-9P
   Background - Type H Reflective Yellow
   WF16-9P
   Background - Type F Reflective Yellow-Green

Metric equivalent for this sign is:

SIZE	
1	
2	600 mm X 200 mm
3	900 mm X 350 mm
4	1200 mm X 450 mm
5	

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m2
1																												
2	24	8	1 1/8	3/8	3/8	4	2	2 3/4	18 1/4	3																	1.34	0.12
3	36	14	1 1/8	3/8	1/2	7	3 1/2	2 1/4	31	2 3/4																	3.5	0.32
4	48	18	1 3/8	1/2	5/8	9	4 1/2	3 3/4	40 1/4	4																	6.0	0.54
5																												

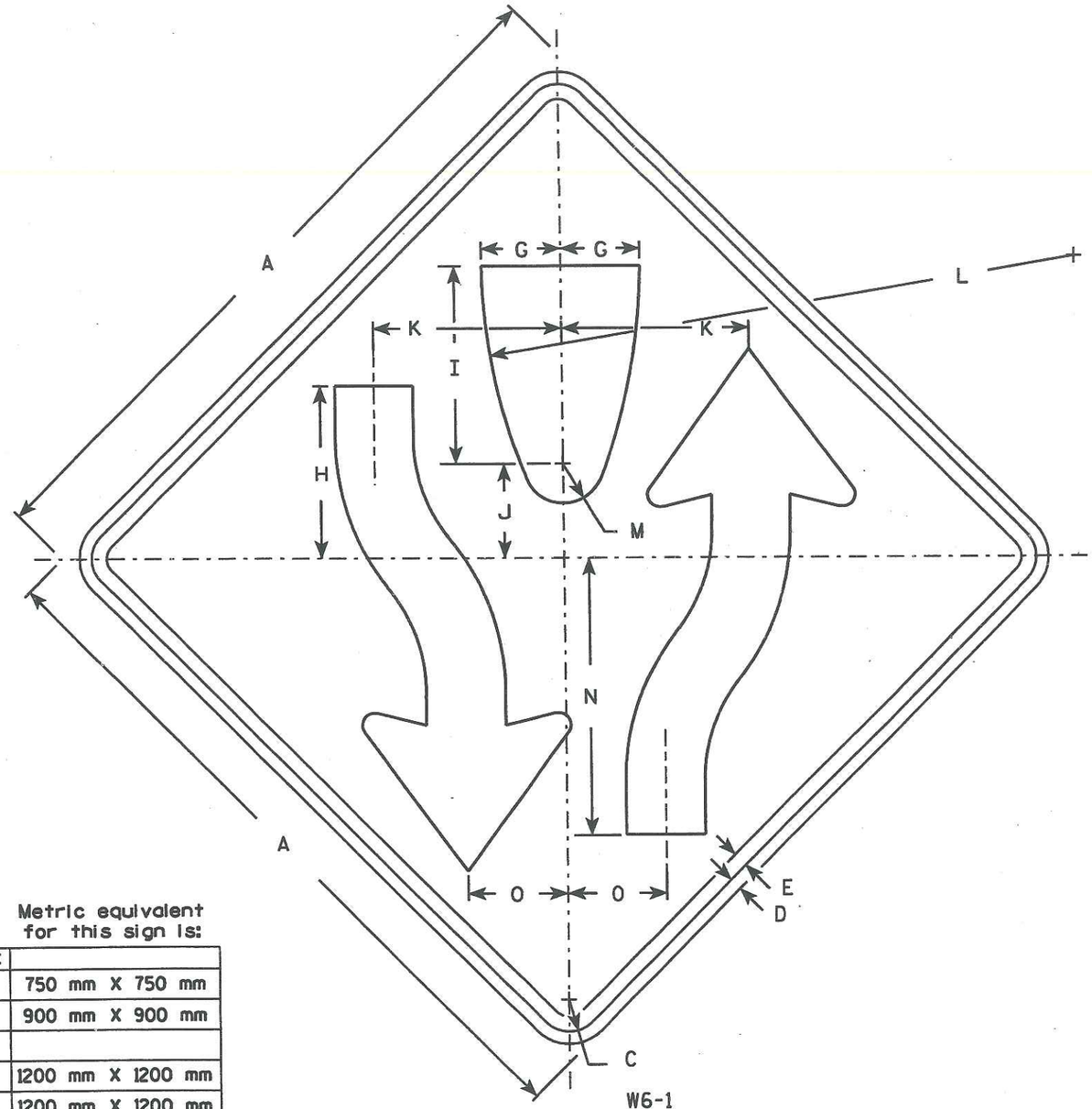
STANDARD SIGN
W16-9P

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang for State Traffic Engineer

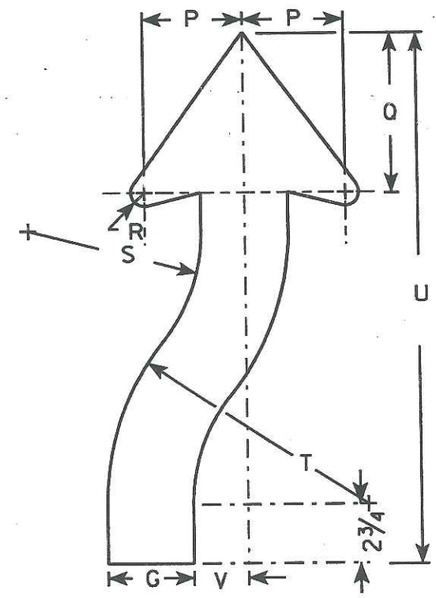
DATE 4/24/02 PLATE NO. W16-9P.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 154	E



NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - 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

Metric equivalent for this sign is:

SIZE	
1	750 mm X 750 mm
2	900 mm X 900 mm
3	
4	1200 mm X 1200 mm
5	1200 mm X 1200 mm

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m²
1	30		1 3/8	1/2	5/8		3 1/4	8	8 1/4	4 1/8	7 1/8	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	0.56
2	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	0.81
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	1.44
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	1.44

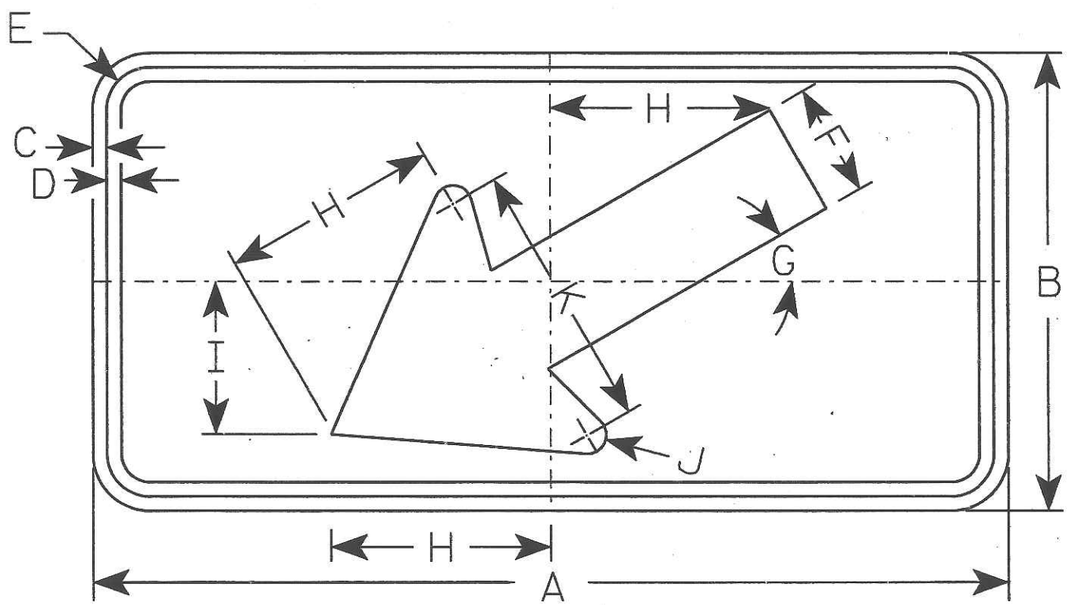
STANDARD SIGN
W6-1 & W6-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/01/05 PLATE NO. W6-1.12

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 155	E



W16-7L
WF16-7L

NOTES

1. Sign is Type II - Reflective or Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - See Note 5
   Message - See Note 5
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 & WF16-7R are the same as W16-L & WF-16-7L except the arrow is reversed along the vertical centerline.
5. W16-7R & W16-7L
   Background - Reflective Yellow
   Message - Black
   WF16-7R & WF16-7L
   Background - Type F Reflective Yellow-Green
   Message - Black

Metric equivalent for this sign is:

SIZE	
1	
2	600 mm X 300 mm
3	750 mm X 450 mm
4	
5	

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m2
1																												
2	24	12	3/8	3/8	1 1/8	3	30°	5 3/4	4	1/2	7																2.0	0.18
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	0.34
4																												
5																												

STANDARD SIGN
W16-7

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang for State Traffic Engineer

DATE 10/2/01 PLATE NO. W16-7.1

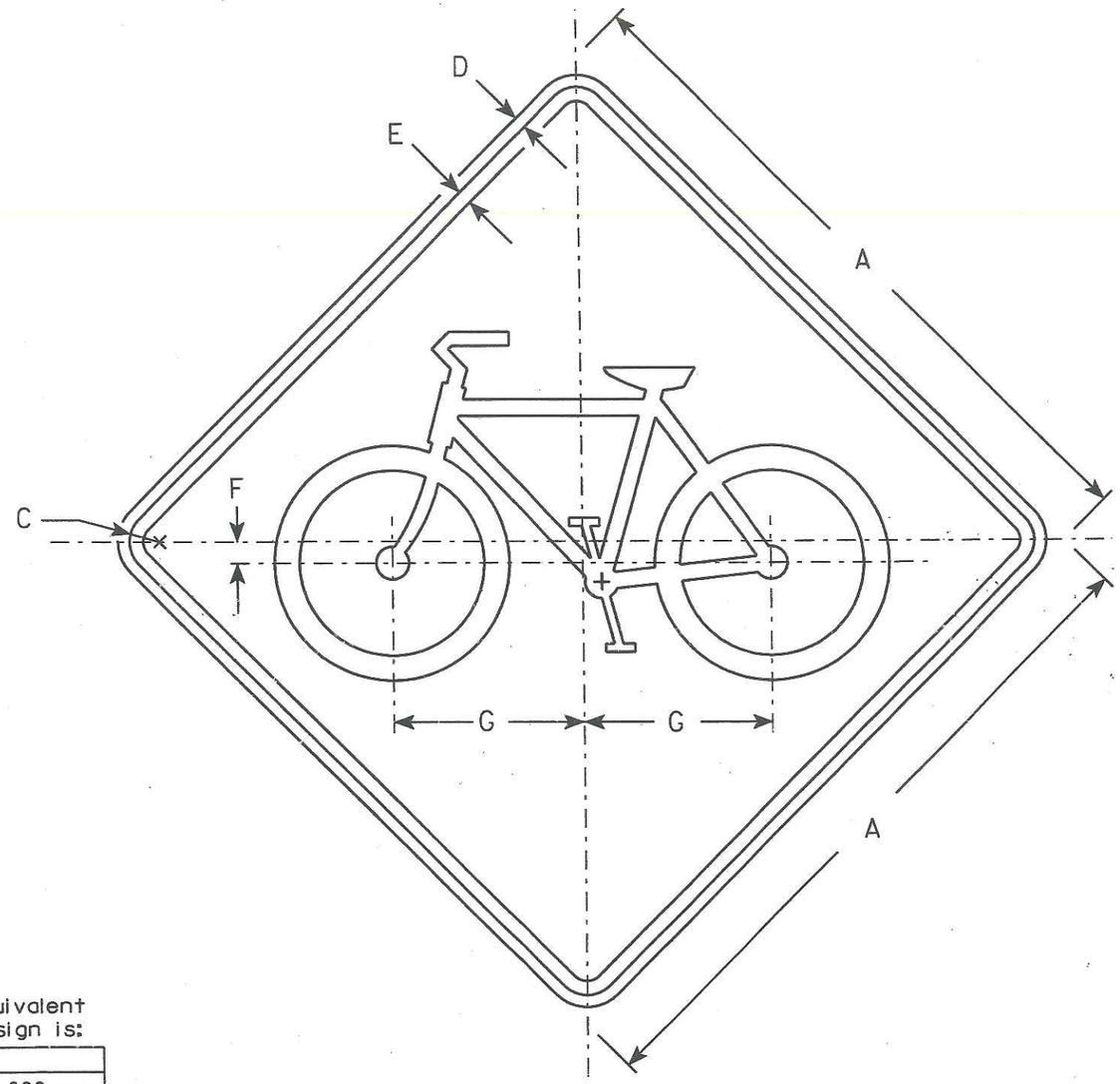
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 156	E

FILE NAME : C:\Users\Projects\tr_stdplate\W167.DGN PLOT DATE : 06-OCT-2005 14:22 PLOT BY : DITJPH PLOT NAME : PLOT SCALE : 3.973889:1.000000

WISDOT/CADDS SHEET 42

7

7



W11-1

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - 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.

Metric equivalent for this sign is:

SIZE	
1	600 mm X 600 mm
2	750 mm X 750 mm
3	
4	900 mm X 900 mm
5	1200 mm X 1200 mm

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m2
1	24		1 1/8	3/4	1/2	3/4	6 5/8																				4.0	0.36
2	30		1 3/8	1/2	5/8	1	8 1/2																				6.25	0.56
3																												
4	36		1 5/8	5/8	3/4	1 1/4	10																				9.0	0.81
5	48		2 1/4	3/4	1	1 5/8	13 3/8																				16.0	1.44

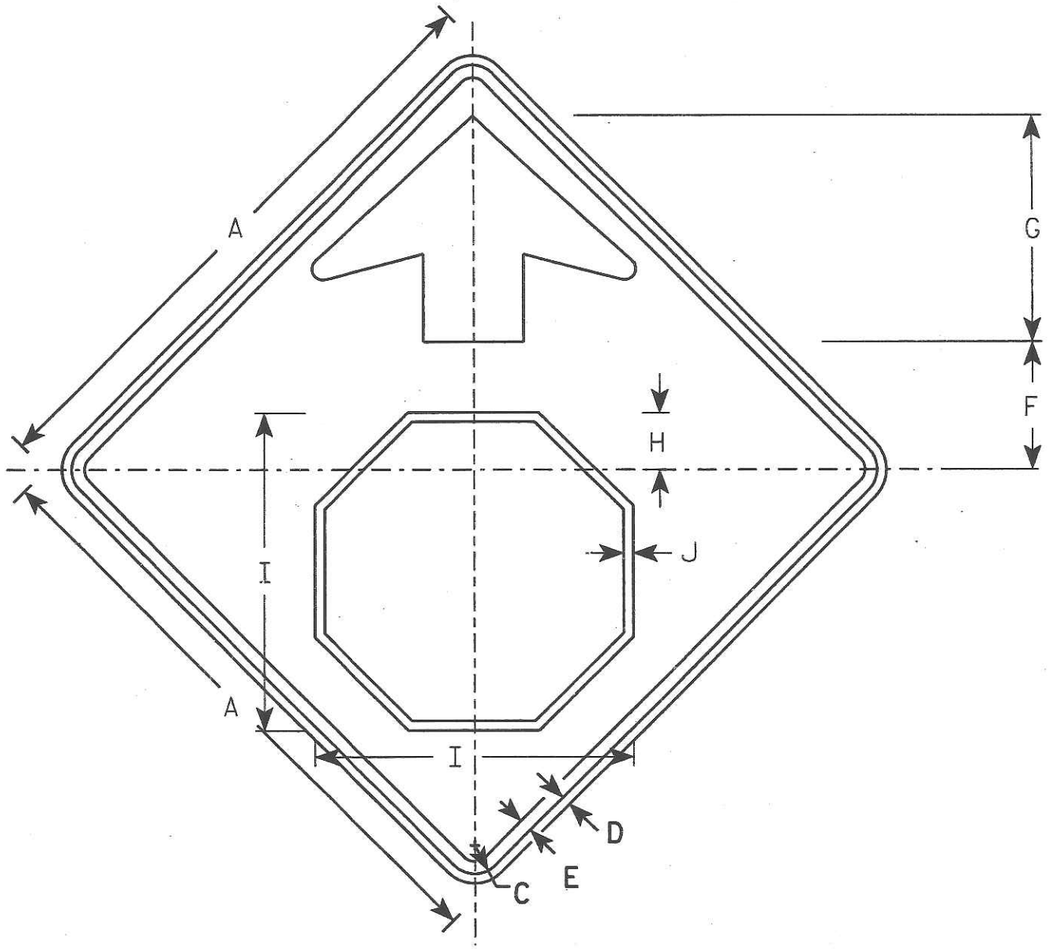
STANDARD SIGN
W11-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spay
for State Traffic Engineer

DATE 01/16/02 PLATE NO. W11-1.7

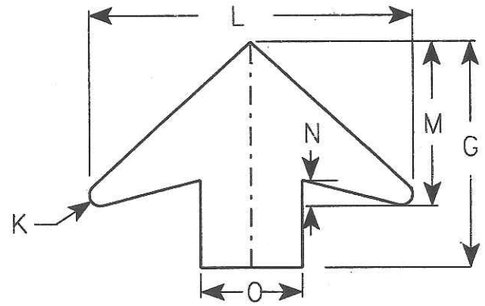
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 157	E



W3-1

NOTES

1. All Signs Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - YELLOW
   Arrow & Border - BLACK
   Stop Symbol - WHITE BORDER ON RED BACKGROUND



ARROW DETAIL

Metric equivalent for this sign is:

SIZE	
1	750 mm X 750 mm
2	900 mm X 900 mm
3	900 mm X 900 mm
4	1200 mm X 1200 mm
5	1200 mm X 1200 mm

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m²
1	30		1 3/8	1/2	5/8	6 1/4	11 1/4	2 7/8	15 3/4	1/2	1/2	16	8	1 1/4	5												6.25	0.56
2	36		1 5/8	5/8	3/4	7 1/2	13 1/2	3 1/2	19	5/8	5/8	19 1/4	9 3/4	1 5/8	6												9.0	0.81
3	36		1 5/8	5/8	3/4	7 1/2	13 1/2	3 1/2	19	5/8	5/8	19 1/4	9 3/4	1 5/8	6												9.0	0.81
4	48		2 1/4	3/4	1	10	17 7/8	4 1/2	25 1/8	3/4	7/8	25 5/8	13	2	8												16.0	1.44
5	48		2 1/4	3/4	1	10	17 7/8	4 1/2	25 1/8	3/4	7/8	25 5/8	13	2	8												16.0	1.44

STANDARD SIGN
W3-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/27/05 PLATE NO. W3/1.11

PROJECT NO:

SHEET NO: 150 E

EARTHWORK SUMMARY

STATION	AREA		VOLUME			CUM. VOLUME		MASS HAUL
	CUT SF	FILL SF	CUT CY	FILL CY	EXP. FILL CY	CUT CY	EXP. FILL CY	
103+62	70.8	0	0	0	0	0	0.0	0.0
104+00	82.1	0	107.6	0.0	0.0	107.6	0.0	107.6
104+50	67.7	3.9	138.7	3.6	4.7	246.3	4.7	241.6
105+00	66.2	10.3	124.0	13.1	17.0	370.3	21.7	348.6
105+50	90.6	6.9	145.2	15.9	20.7	515.5	42.4	473.1
105+57	90.9	7.5	23.5	1.9	2.5	539.0	44.9	494.1
106+00	57.7	26.9	118.3	27.4	35.6	657.3	80.5	576.8
106+50	49.5	31.2	99.3	53.8	69.9	756.6	150.4	606.2
107+00	43.1	31.3	85.7	57.9	75.3	842.3	225.7	616.6
107+50	40.1	31	77.0	57.7	75.0	919.3	300.7	618.6
108+00	38.1	27.8	72.4	54.4	70.7	991.7	371.4	620.3
108+50	50.3	17.8	81.9	42.2	54.9	1073.6	426.3	647.3
108+61	45.9	17.8	19.6	7.3	9.5	1093.2	435.8	657.4
109+00	24.8	25.8	51.1	31.5	41.0	1144.3	476.8	667.5
109+50	16.8	30	38.5	51.7	67.2	1182.8	544.0	638.8
110+00	15.3	27.7	29.7	53.4	69.4	1212.5	613.4	599.1
110+50	28.1	17.3	40.2	41.7	54.2	1252.7	667.6	585.1
110+80	22.7	37.9	28.2	30.7	39.9	1280.9	707.5	573.4
111+00	64.1	6.4	32.1	16.4	21.3	1313.0	728.8	584.2
111+09	65	6	21.5	2.1	2.7	1334.5	731.5	603.0
111+50	72.2	6.3	104.2	9.3	12.1	1438.7	743.6	695.1
112+00	86	6.3	146.5	11.7	15.2	1585.2	758.8	826.4
112+50	90.5	5.2	163.4	10.6	13.8	1748.6	772.6	976.0
113+00	99	0.7	175.5	5.5	7.2	1924.1	779.8	1144.3
113+31	79.9	0.3	102.7	0.6	0.8	2026.8	780.6	1246.2
113+50	78.4	6.4	55.7	2.4	3.1	2082.5	783.7	1298.8
114+00	80.1	6.4	146.8	11.9	15.5	2229.3	799.2	1430.1
114+50	77.9	0.1	146.3	6.0	7.8	2375.6	807.0	1568.6
114+75	61	0	64.3	0.0	0.0	2439.9	807.0	1632.9
115+00	49.1	1.1	51.0	0.5	0.7	2490.9	807.7	1683.2
115+50	36	2.7	78.8	3.5	4.6	2569.7	812.3	1757.4
116+00	25.1	5	56.6	7.1	9.2	2626.3	821.5	1804.8
116+50	19	14.6	40.8	18.1	23.5	2667.1	845.0	1822.1
117+00	17.4	22.1	33.7	34.0	44.2	2700.8	889.2	1811.6
117+30	16.5	29.2	18.8	28.5	37.1	2719.6	926.3	1793.3
117+50	1.8	39.7	6.8	25.5	33.2	2726.4	959.5	1766.9
117+68	20.5	18.2	7.4	19.3	25.1	2733.8	984.6	1749.2
118+00	17.6	24.5	22.6	25.3	32.9	2756.4	1017.5	1738.9
118+50	15.1	14.6	30.3	36.2	47.1	2786.7	1064.6	1722.1
119+00	14.2	15.3	27.1	27.7	36.0	2813.8	1100.6	1713.2
119+50	12.7	22.9	24.9	35.4	46.0	2838.7	1146.6	1692.1
120+00	11.8	28.4	22.7	47.5	61.8	2861.4	1208.4	1653.0
120+50	11	34.8	21.1	58.5	76.1	2882.5	1284.5	1598.0
121+00	8.7	38.4	18.2	67.8	88.1	2900.7	1372.6	1528.1
121+50	6.6	45.3	14.2	77.5	100.8	2914.9	1473.4	1441.5

EARTHWORK SUMMARY

STATION	AREA		VOLUME			CUM. VOLUME		MASS HAUL
	CUT SF	FILL SF	CUT CY	FILL CY	EXP. FILL CY	CUT CY	EXP. FILL CY	
122+00	7.7	66.6	13.2	103.6	134.7	2928.1	1608.1	1320.0
122+50	22.1	102.8	27.6	156.9	204.0	2955.7	1812.1	1143.6
122+85	33.9	157.8	36.3	168.9	219.6	2992.0	2031.7	960.3
123+00	46.8	109.2	22.4	74.2	96.5	3014.4	2128.2	886.2
123+10	42.1	90.8	16.5	37.0	48.1	3030.9	2176.3	854.6
123+50	14.7	139.2	42.1	170.4	221.5	3073.0	2397.8	675.2
124+00	2.1	130.8	15.6	250.0	325.0	3088.6	2722.8	365.8
124+28	18.3	118.2	10.6	129.1	167.8	3099.2	2890.6	208.6
124+50	0.2	115.5	7.5	95.2	123.8	3106.7	3014.4	92.3
125+00	19.2	122.7	18.0	220.6	286.8	3124.7	3301.2	-176.5
125+50	23.4	128.4	39.4	232.5	302.3	3164.1	3603.5	-439.4
126+00	26.3	103.5	46.0	214.7	279.1	3210.1	3882.6	-672.5
126+23	2.8	116.5	12.4	93.7	121.8	3222.5	4004.4	-781.9
126+50	36	14.3	19.4	65.4	85.0	3241.9	4089.4	-847.5
126+57	44.8	7.8	10.5	2.9	3.8	3252.4	4093.2	-840.8
127+00	6.6	36.6	40.9	35.4	46.0	3293.3	4139.2	-845.9
127+50	9.3	31.2	14.7	62.8	81.6	3308.0	4220.8	-912.8
128+00	11.6	47.7	19.4	73.1	95.0	3327.4	4315.8	-988.4
128+50	21.6	36.5	30.7	78.0	101.4	3358.1	4417.2	-1059.1
129+00	25.2	31.3	43.3	62.8	81.6	3401.4	4498.8	-1097.4
129+50	27.8	22.7	49.1	50.0	65.0	3450.5	4563.8	-1113.3
130+04	12	22.5	39.8	45.2	58.8	3490.3	4622.6	-1132.3
130+50	15.6	18.8	23.5	35.2	45.8	3513.8	4668.4	-1154.6
131+00	20	16.1	33.0	32.3	42.0	3546.8	4710.4	-1163.6
131+50	30	15.3	46.3	29.1	37.8	3593.1	4748.2	-1155.1
131+75	17.9	15.9	22.2	14.4	18.7	3615.3	4766.9	-1151.6
132+03	40.8	15.9	30.4	16.5	21.5	3645.7	4788.4	-1142.7
132+12	52.2	12.5	15.5	4.7	6.1	3661.2	4794.5	-1133.3
132+50	37.5	13.1	63.1	18.0	23.4	3724.3	4817.9	-1093.6
132+98	29.1	14.2	59.2	24.3	31.6	3783.5	4849.5	-1066.0
133+32	28.7	16.7	36.4	19.5	25.4	3819.9	4874.9	-1055.0
133+50	33.8	17.5	20.8	11.4	14.8	3840.7	4889.7	-1049.0
134+00	32.8	15.4	61.7	30.5	39.7	3902.4	4929.4	-1027.0
134+27	24.4	12	28.6	13.7	17.8	3931.0	4947.2	-1016.2
134+50	40.6	8.5	27.7	8.7	11.3	3958.7	4958.5	-999.8
135+00	44.5	0.5	78.8	8.3	10.8	4037.5	4969.3	-931.8
135+05	44.9	0.4	8.3	0.1	0.1	4045.8	4969.4	-923.6
135+50	61.5	0	88.7	0.3	0.4	4134.5	4969.8	-835.3
135+73	61.5	0.5	52.4	0.2	0.3	4186.9	4970.1	-783.2
136+00	65.7	1.4	63.6	1.0	1.3	4250.5	4971.4	-720.9
136+36	58.4	2	82.7	2.3	3.0	4333.2	4974.4	-641.2
136+50	66.5	2.1	32.4	1.1	1.4	4365.6	4975.8	-610.2
137+02	53.8	0	115.8	2.0	2.6	4481.4	4978.4	-497.0
137+50	62.8	0	103.6	0.0	0.0	4585.0	4978.4	-393.4
137+97	58.4	0	105.5	0.0	0.0	4690.5	4978.4	-287.9

EARTHWORK SUMMARY

STATION	AREA		VOLUME			CUM. VOLUME		MASS HAUL
	CUT SF	FILL SF	CUT CY	FILL CY	EXP. FILL CY	CUT CY	EXP. FILL CY	
138+50	43.2	1.7	99.7	1.7	2.2	4790.2	4980.6	-190.4
138+92	27.3	3.6	54.8	4.1	5.3	4845.0	4985.9	-140.9
139+00	53	4.1	11.9	1.1	1.4	4856.9	4987.3	-130.4
139+50	37.2	6.7	83.5	10.0	13.0	4940.4	5000.3	-59.9
140+00	15.6	6.4	48.9	12.1	15.7	4989.3	5016.0	-26.7
140+06	16	6.5	3.5	1.4	1.8	4992.8	5017.8	-25.0
140+50	8.5	4.8	20.0	9.2	12.0	5012.8	5029.8	-17.0
141+00	8.9	2.4	16.1	6.7	8.7	5028.9	5038.5	-9.6
141+50	41.5	0.5	46.7	2.7	3.5	5075.6	5042.0	33.6
142+00	52.8	0	87.3	0.5	0.7	5162.9	5042.7	120.2
142+32	76.8	0.1	76.8	0.1	0.1	5239.7	5042.8	196.9
142+50	45.9	0.3	40.9	0.1	0.1	5280.6	5042.9	237.7
143+00	42.5	1.3	81.9	1.5	2.0	5362.5	5044.9	317.6
143+50	37.5	3.5	74.1	4.4	5.7	5436.6	5050.6	386.0
144+00	41.2	1.7	72.9	4.8	6.2	5509.5	5056.8	452.7
144+25	31.6	0	33.7	0.8	1.0	5543.2	5057.8	485.4
144+50	11.2	3.5	19.8	1.6	2.1	5563.0	5059.9	503.1
145+00	32.5	1.6	40.5	4.7	6.1	5603.5	5066.0	537.5
145+44	83.1	0.1	94.2	1.4	1.8	5697.7	5067.8	629.9
145+50	84	0	18.6	0.0	0.0	5716.3	5067.8	648.5
145+76	40.3	4.1	59.8	2.0	2.6	5776.1	5070.4	705.7
146+00	52.7	2	41.3	2.7	3.5	5817.4	5073.9	743.5
146+52	45.8	3	94.9	4.8	6.2	5912.3	5080.1	832.2
147+00	65.1	1.4	98.6	3.9	5.1	6010.9	5085.2	925.7
147+12	44	1.5	24.2	0.6	0.8	6035.1	5086.0	949.1
147+50	64.9	2.2	76.6	2.6	3.4	6111.7	5089.4	1022.3
148+00	25.5	4.1	83.7	5.8	7.5	6195.4	5096.9	1098.5
148+17	53.2	0	24.8	1.3	1.7	6220.2	5098.6	1121.6
148+50	107.9	0	98.5	0.0	0.0	6318.7	5098.6	1220.1
148+59	110.3	0	36.4	0.0	0.0	6355.1	5098.6	1256.5
149+00	73.5	121.9	139.6	92.6	120.4	6494.7	5219.0	1275.7
149+13	60	104.9	32.1	54.6	71.0	6526.8	5290.0	1236.8
149+50	79	71.1	95.2	120.6	156.8	6622.0	5446.8	1175.2
149+79	73.2	58.5	81.7	69.6	90.5	6703.7	5537.3	1166.4
150+00	77.4	54	58.6	43.8	56.9	6762.3	5594.2	1168.1
150+50	78.3	46	144.2	92.6	120.4	6906.5	5714.6	1191.9
150+96	75	21.3	130.6	57.3	74.5	7037.1	5789.1	1248.0
151+00	73.9	47.4	11.0	5.1	6.6	7048.1	5795.7	1252.4
151+33	61.6	21.1	82.8	41.9	54.5	7130.9	5850.2	1280.7
151+42	63.3	22.7	20.8	7.3	9.5	7151.7	5859.7	1292.0
151+50	56.2	53.3	17.7	11.3	14.7	7169.4	5874.4	1295.0
151+93	67.9	48.1	98.8	80.7	104.9	7268.2	5979.3	1288.9
152+00	69.4	46	17.8	12.2	15.9	7286.0	5995.2	1290.8
152+50	85.8	4.2	143.7	46.5	60.5	7429.7	6055.7	1374.0
152+66	140.3	0	67.0	1.2	1.6	7496.7	6057.3	1439.4

STA. 105+57 RT
CONST CE (HMA)
MATCH 53.00' RT
1 - 12" X 36.0" CPCP REQ'D

105+57
105+50
105+00
104+50
104+00
103+62

STA. 103+62
MATCH EXISTING
BEGIN PROJECT

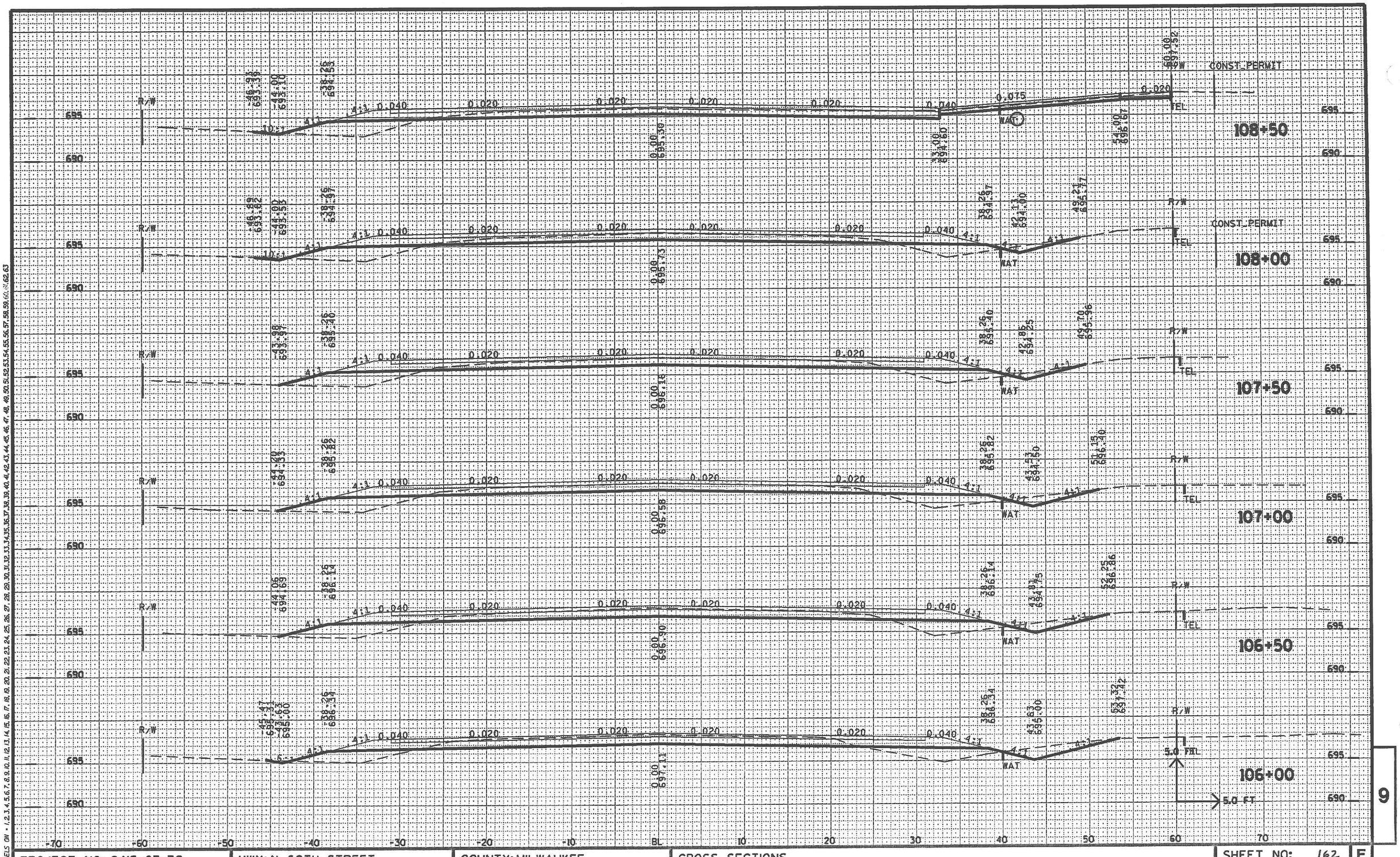
5.0 FT
5.0 FT

9

PROJECT NO: 2415-07-70	HWY: N. 60TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS	SHEET NO: 161	E

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PROJECT NO: 2415-07-70	HWY: N. 60TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS	SHEET NO: 162	E

9

LEVELS ON • 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60,62,63

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110+50

110+00

109+50

109+00

108+61

STA. 108+61 RT
CONST. CE (HMA)
MATCH 60.00' RT
1 - 18"X40.0' CPCP REQ'D

CONST_PERMIT

R/W

WAT

TEL

5.0 FT

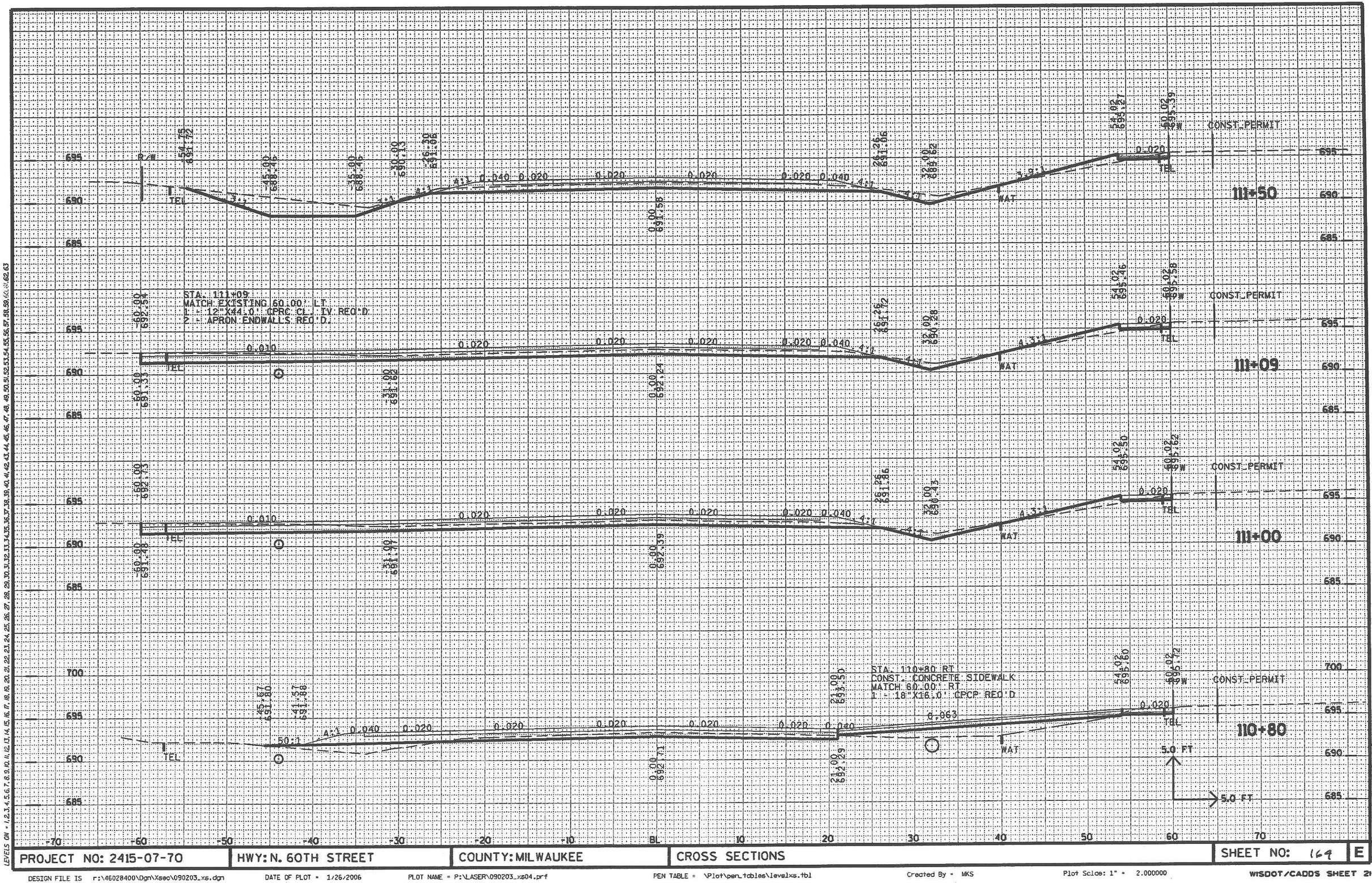
-70 -60 -50 -40 -30 -20 -10 BL 10 20 30 40 50 60 70

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PROJECT NO: 2415-07-70	HWY: N. 60TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS	SHEET NO: 163	E

9

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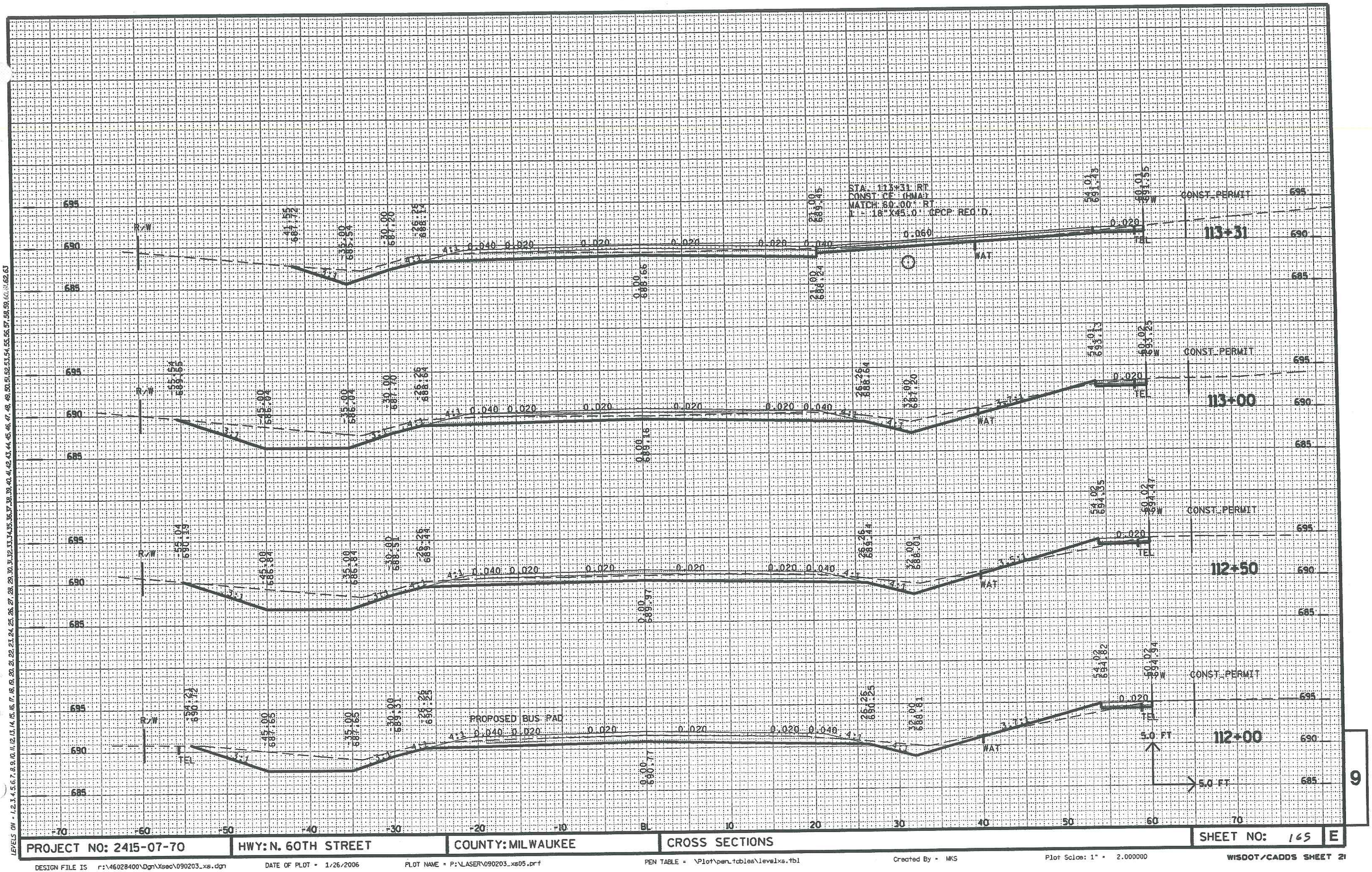


PROJECT NO: 2415-07-70	HWY: N. 60TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS	SHEET NO: 169	E

9

LEVELS ON - 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60,61,62,63

DESIGN FILE IS r:\46028400\Dgn\Xsec\090203_xs.dgn DATE OF PLOT = 1/26/2006 PLOT NAME = P:\LASER\090203_xs04.prf PEN TABLE = \Plot\pen_tables\levelxs.tbl Created By = MKS Plot Scale: 1" = 2.000000 WISDOT/CADDS SHEET 21

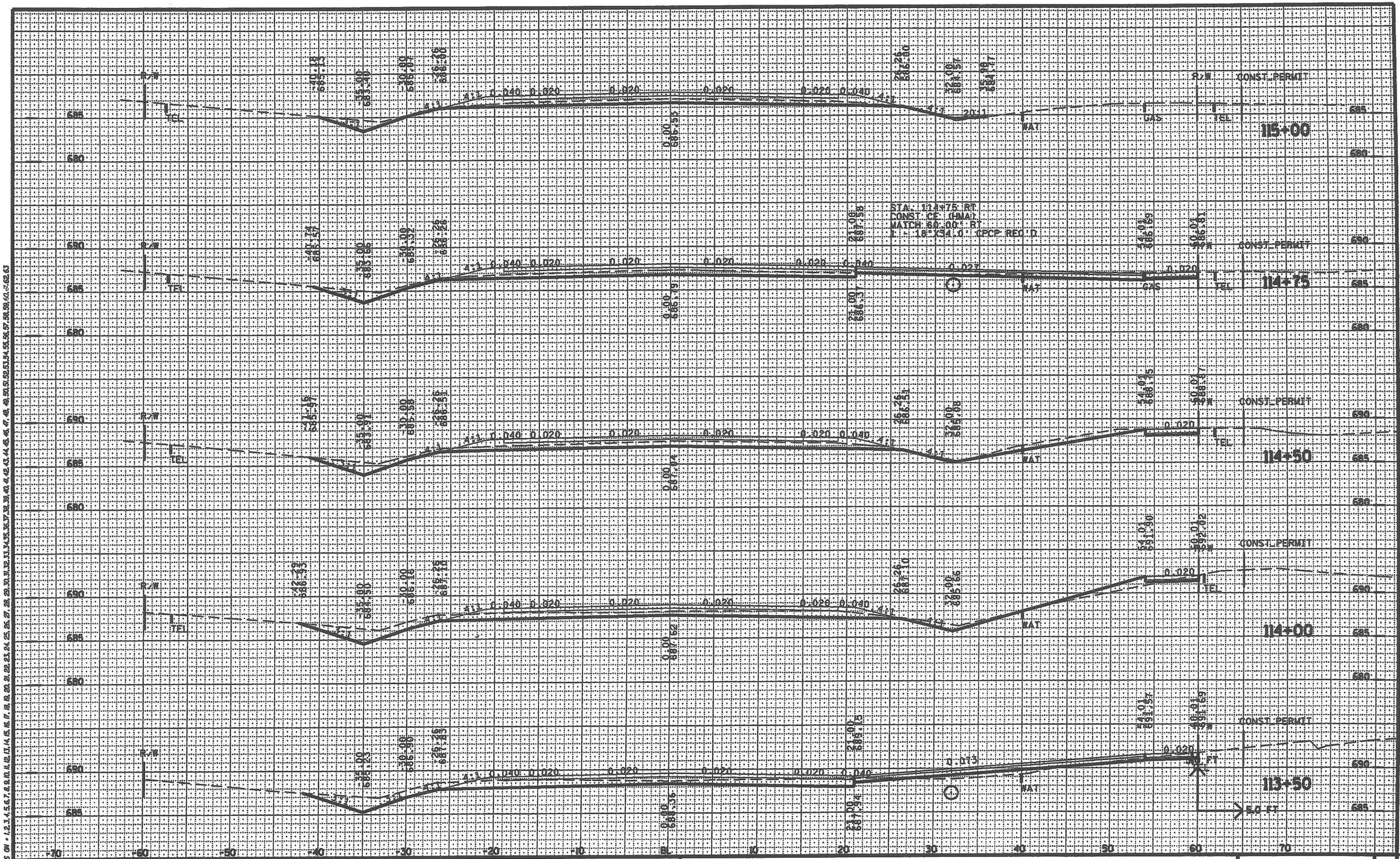


PROJECT NO: 2415-07-70	HWY: N. 60TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS	SHEET NO: 165	E

9

DESIGN FILE IS r:\46028400\Dgn\Xsec\090203_xs.dgn | DATE OF PLOT = 1/26/2006 | PLOT NAME = P:\LASER\090203_xs05.prf | PEN TABLE = \Plot\pen_tables\levelxs.tbl | Created By - MKS | Plot Scale: 1" = 2.000000 | WISDOT/CADDS SHEET 21

LEVELS ON - 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60,61,62,63



LEVELS ON • 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60,61,62,63

PROJECT NO: 2415-07-70	HWY: N. 60TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS	SHEET NO: 166	E

9

DESIGN FILE IS r:\46028400\Dgn\Xsec\090203_xs.dgn DATE OF PLOT = 2/28/2006 PLOT NAME = P:\LASER\090203_xs06.prf PEN TABLE = \Plot\pen_tables\levelxs.tbl Created by = MKS Plot Scale: 1" = 2.000000 WISDOT/CADDS SHEET 28

LEVELS ON = 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60,61,62,63

STA. 117+30 RT
CONST. SIDEWALK (HMA)
MATCH 54.00' RT
1 - 24"X16.0' CPCP REQ'D

117+30

117+00

PROPOSED BUS PAD

116+50

116+00

115+50

5.0 FT

PROJECT NO: 2415-07-70	HWY: N. 60TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS	SHEET NO: 167	E

9

DESIGN FILE IS r:\46028400\Dgn\Xsec\090203_xs.dgn DATE OF PLOT = 1/25/2006 PLOT NAME = P:\LASER\090203_xs07.prf PEN TABLE = \Plot\pen_tables\levelxs.tbl Created By = MKS Plot Scale: 1" = 2.000000

WISDOT/CADDS SHEET 21

119+50

119+00

118+50

118+00

117+68

117+50

PROPOSED BUS PAD

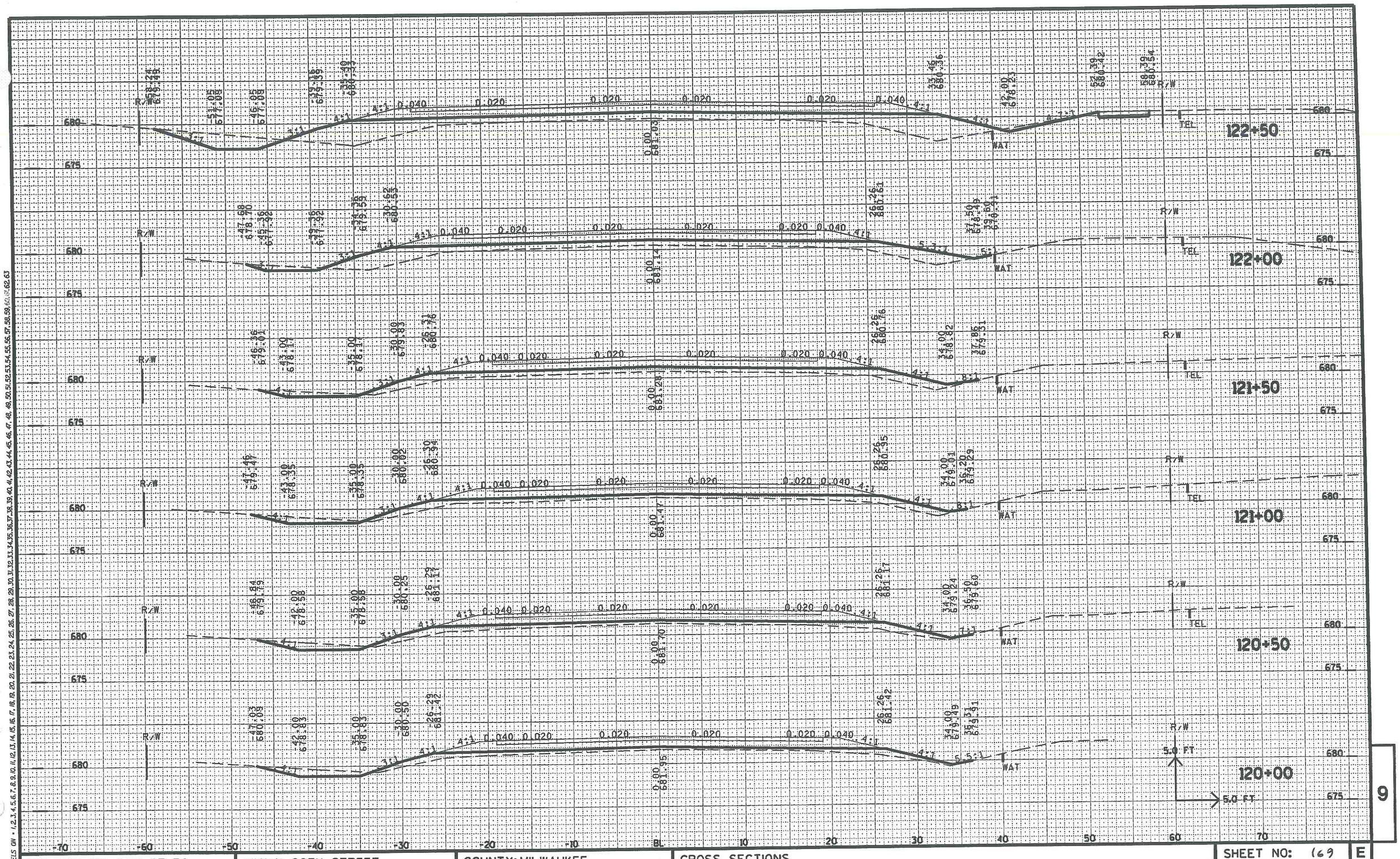
STA. 117+68
MATCH EXISTING 60.00' LT.
2 - 27"X47.0' CPRC CL. IV REQ'D.
4 APRON ENDWALLS REQ'D.

PROJECT NO: 2415-07-70	HWY: N. 60TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS	SHEET NO: 168	E

9

DESIGN FILE IS r:\46028400\Dgn\Xsec\090203_xs.dgn DATE OF PLOT = 1/26/2006 PLOT NAME = P:\LASER\090203_xs08.prf PEN TABLE = \Plot\pen_tables\levelxs.tbl Created By = MKS Plot Scale: 1" = 2.000000 WISDOT/CADDS SHEET 21

LEVELS ON = 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60,61,62,63



PROJECT NO: 2415-07-70	HWY: N. 60TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS	SHEET NO: 69	E

9

DESIGN FILE IS r:\46028400\Dgn\Xsec\090203_xs.dgn | DATE OF PLOT = 1/26/2006 | PLOT NAME = P:\LASER\090203_xs09.prf | PEN TABLE = \Plot\pen_tables\levelxs.tbl | Created By = MKS | Plot Scale: 1" = 2.000000 | WISDOT/CADDS SHEET 21

LEVELS ON = 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60,61,62,63

STA. 124+28
MATCH EXISTING 95.00' LT
1 - 3' X 8' BOX CULVERT REQ'D
STA. 124+50 LT I.E.=677.10
STA. 124+28 LT I.E.=677.03
S=0.30%

124+28

124+00

123+50

123+10

123+00

122+85

S=0.30%

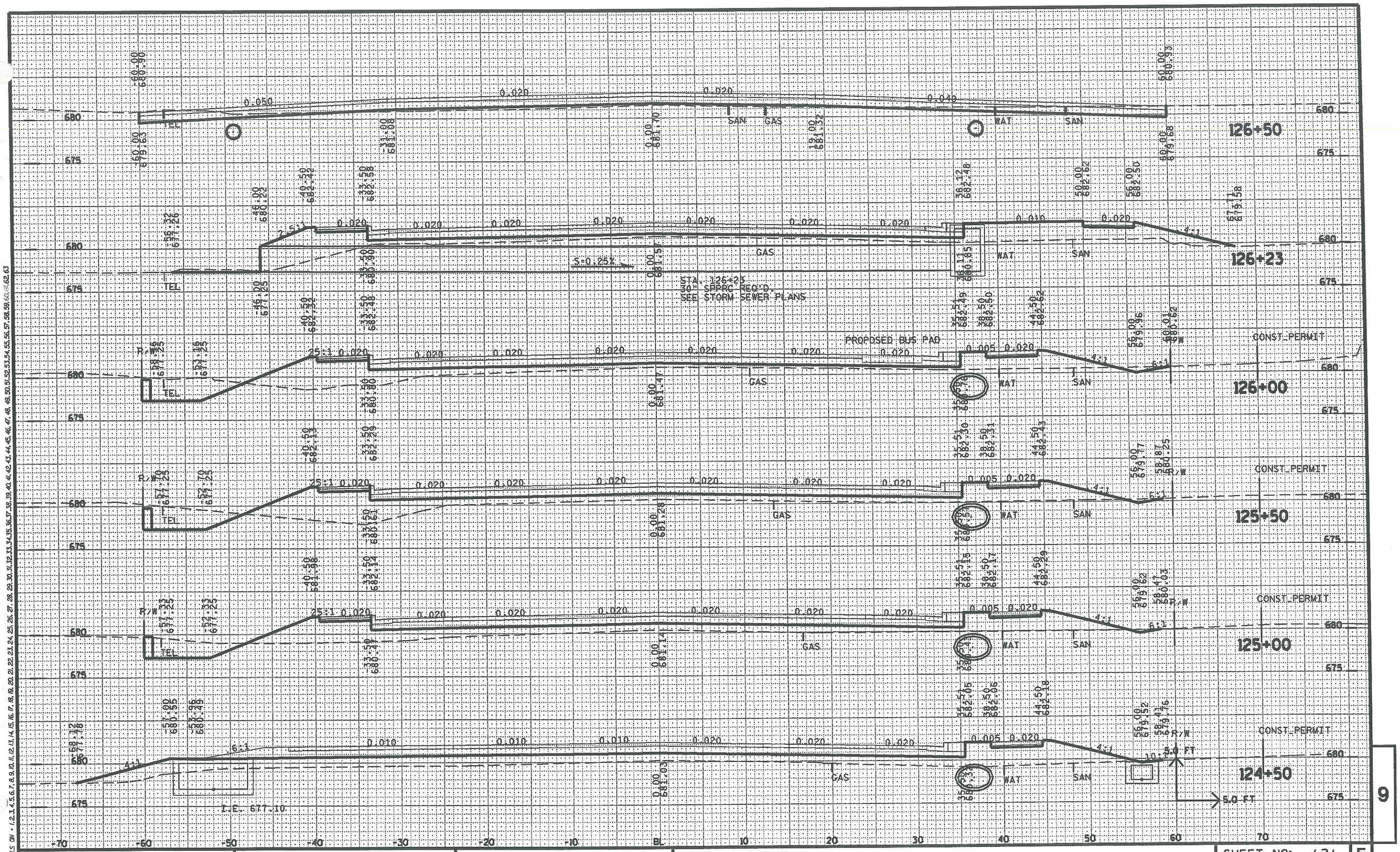
STA. 122+85
2 - 3' X 3' PRECAST CONCRETE BOX CULVERT REQ'D.
41.00 RT I.E.=676.57
111.00 RT I.E.=676.10

PROJECT NO: 2415-07-70	HWY: N. 60TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS	SHEET NO: 170	E

9

DESIGN FILE IS r:\46028400\Dgn\Xsec\090203_xs.dgn DATE OF PLOT = 1/26/2006 PLOT NAME = P:\LASER\090203_xs10.prf PEN TABLE = \Plot\pen_tables\levelxs.tbl Created By = MKS Plot Scale: 1" = 2.000000

WISDOT/CADDS SHEET 21



PROJECT NO: 2415-07-70	HWY: N. 60TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS	SHEET NO: 171	E

9

DESIGN FILE IS r:\46028400\Dgn\Xsec\090203_xs.dgn DATE OF PLOT = 1/26/2006 PLOT NAME = P:\LASER\090203_xs11.prf PEN TABLE = \Plot\pen_tables\levelxs.tbl Created By - MKS Plot Scale: 1" = 2.000000 WISDOT/CADDS SHEET 21

LEVELS ON - 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60,61,62,63

129+00

128+50

128+00

127+50

127+00

126+57

PROPOSED BUS PAD

STA. 126+57
MATCH EXISTING 60.00' LT.
1 - 18"X51.0' CPRC CL. IV REQ'D
1 - APRON ENDWALL REQ'D

STA. 126+57 RT.
CONST STREET (HMA)
MATCH 60.00' RT

PROJECT NO: 2415-07-70	HWY: N. 60TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS	SHEET NO: 172	E

9

DESIGN FILE IS r:\46028400\Dgn\Xsec\090203_xs.dgn DATE OF PLOT = 1/26/2006 PLOT NAME = P:\LASER\090203_xs12.prf PEN TABLE = \Plot\pen_tables\levelxs.tbl Created By = MKS Plot Scale: 1" = 2.000000 WISDOT/CADDS SHEET 21

LEVELS ON = 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60,61,62,63

STA. 131+75 LT
CONST. PE (HMA)
MATCH 43.00' LT.
1 - 12" X 24.0' CPCP REQ'D.

131+75

STA. 131+50

131+50

STA. 131+00

131+00

STA. 130+50

130+50

STA. 130+04 LT
CONST. PE (BASE AGG.)
MATCH 40.00' LT.
1 - 18"X22.0' CPCP REQ'D.

130+04

129+50

R/W 5.0 FT

5.0 FT

CONST. PERMIT

R/W

WAT

SAN

GAS

TEL

0.065

0.040 0.020

0.020

4:1

4.1:1

4.6:1

4.7:1

-70 -60 -50 -40 -30 -20 -10 BL 10 20 30 40 50 60 70

LEVELS ON = 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60,61,62,63

PROJECT NO: 2415-07-70	HWY: N. 60TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS	SHEET NO: 173	E

9

DESIGN FILE IS r:\46028400\Dgn\Xsec\090203_xs.dgn DATE OF PLOT = 1/26/2006 PLOT NAME = P:\LASER\090203_xs13.prf PEN TABLE = \Plot\pen_tables\levelxs.tbl Created By = MKS Plot Scale: 1" = 2.000000 WISDOT/CADDS SHEET 21

STA. 133+32 LT
CONST PE (HMA)
MATCH 40.00' LT
1 - 12" X 28.0' CPCP REQ'D

133+32

STA. 132+98 LT
CONST PE (HMA)
MATCH 45.00' LT
1 - 12" X 21.0' CPCP REQ'D

132+98

132+50

STA. 132+12
MATCH EXISTING 60.00' RT
1 - 12"X50.0' CPRC REQ'D

132+12

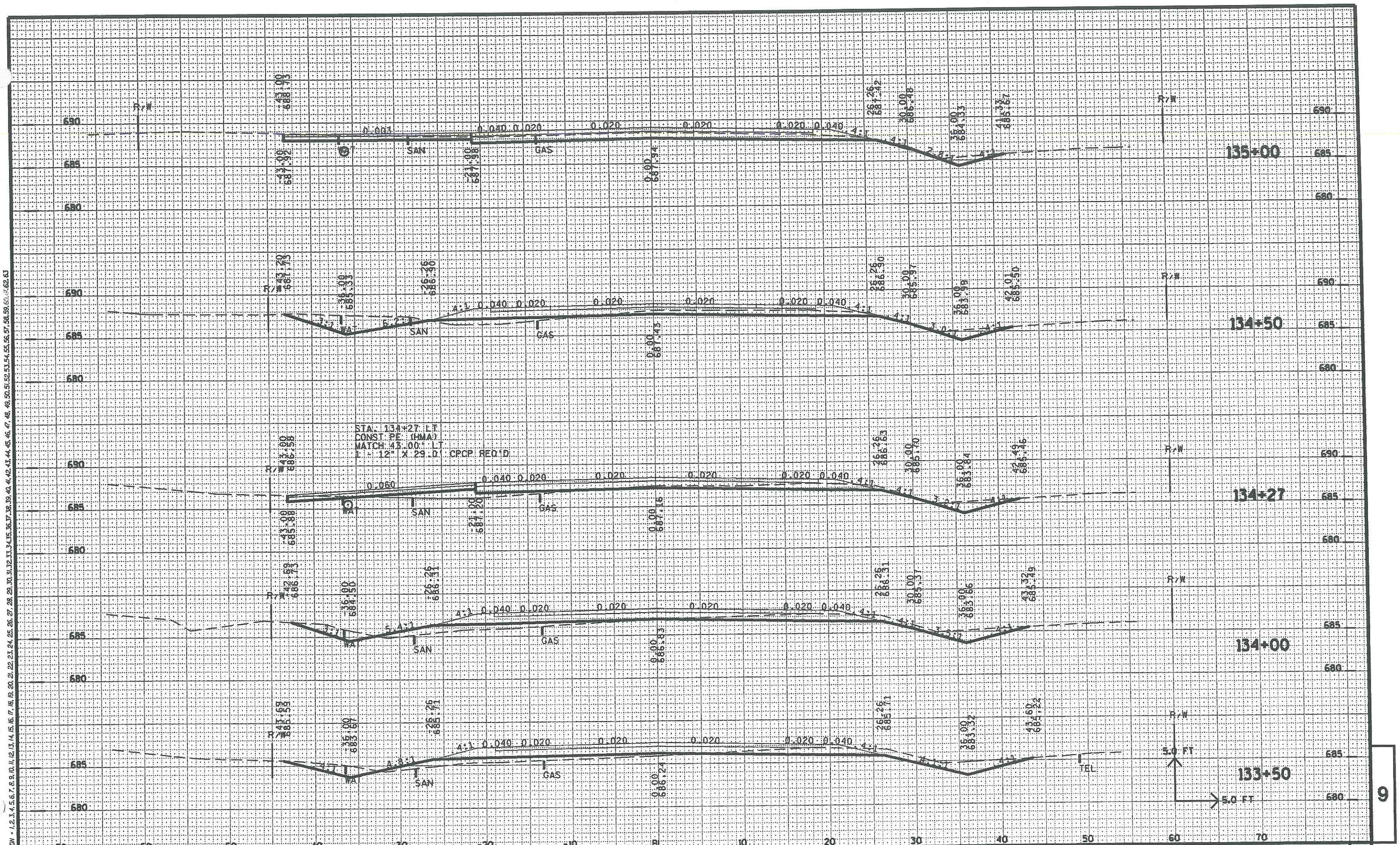
STA. 132+03 LT
CONST PE (HMA)
MATCH 43.00' LT
1 - 12" X 23.0' CPCP REQ'D

132+03

LEVELS ON = 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60,61,62,63

PROJECT NO: 2415-07-70	HWY: N. 60TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS	SHEET NO: 174	E

DESIGN FILE IS r:\46028400\Dgn\Xsec\090203_xs.dgn DATE OF PLOT = 1/26/2006 PLOT NAME = P:\LASER\090203_xs14.prf PEN TABLE = \Plot\pen_tables\levelxs.tbl Created By = MKS Plot Scale: 1" = 2.000000 WISDOT/CADDS SHEET 21



9

PROJECT NO: 2415-07-70	HWY: N. 60TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS	SHEET NO: 175	E

DESIGN FILE IS r:\46028400\Dgn\Xsec\090203_xs.dgn | DATE OF PLOT = 1/26/2006 | PLOT NAME = P:\LASER\090203_xs15.prf | PEN TABLE = \Plot\pen_tables\levelxs.tbl | Created By = MKS | Plot Scale: 1" = 2.000000 | WISDOT/CADDS SHEET 21

LEVELS ON = 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60,61,62,63

LEVELS ON • 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60,61,62,63

136+00

STA. 135+73 LT
CONST PE (HMA)
MATCH 43.00' LT
1 - 12" X 25.0' CPCP REQ'D

135+73

STA. 135+05 LT
CONST PE (HMA)
MATCH 43.00' LT
1 - 12" X 21.0' CPCP REQ'D

135+50

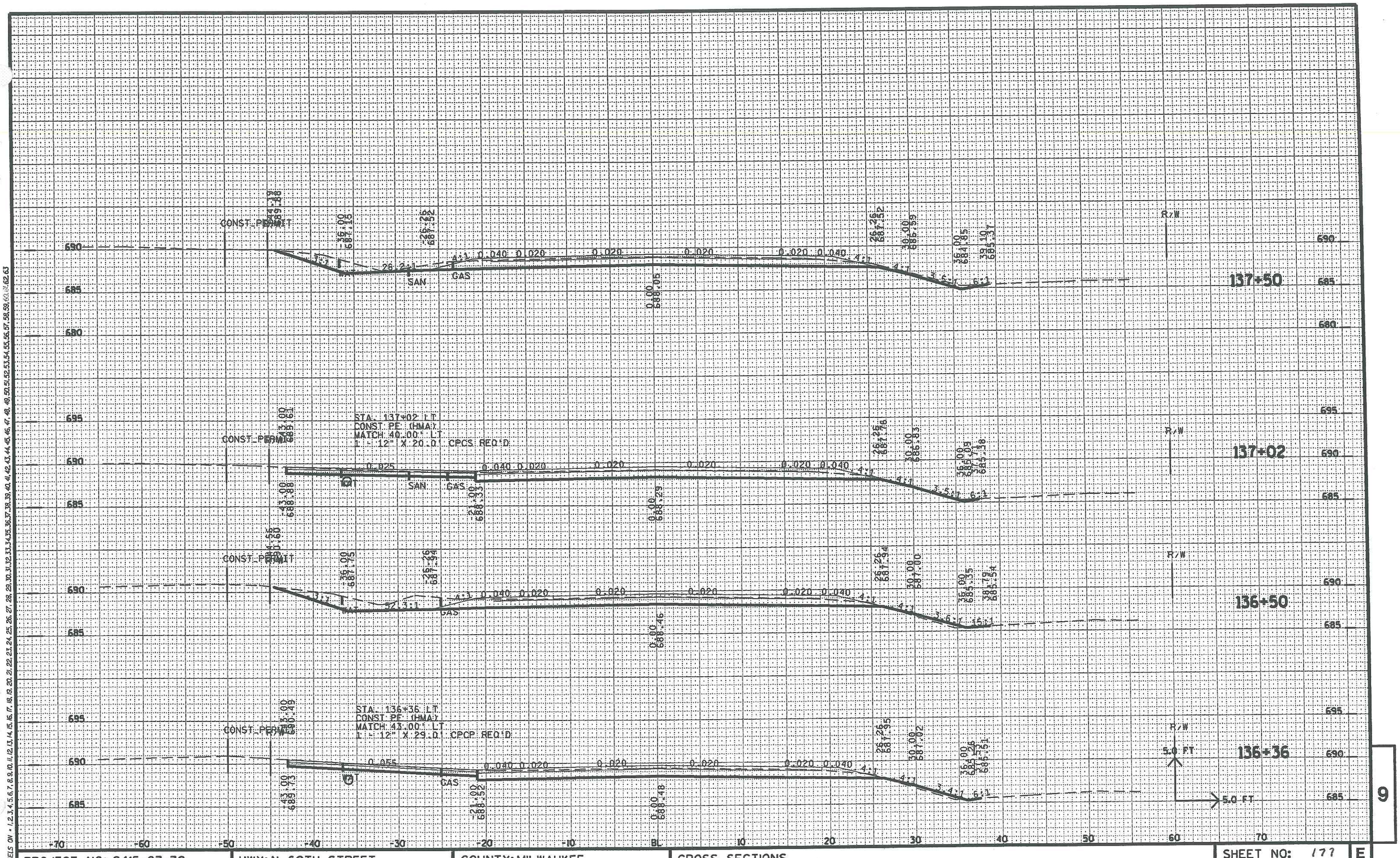
135+05

5.0 FT

5.0 FT

PROJECT NO: 2415-07-70	HWY: N. 60TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS	SHEET NO: 176	E

DESIGN FILE IS r:\46028400\Dgn\Xsec\090203_xs.dgn DATE OF PLOT = 1/26/2006 PLOT NAME = P:\LASER\090203_xs16.prf PEN TABLE = \Plot\pen_tables\levelxs.tbl Created By = MKS Plot Scale: 1" = 2.000000 WISDOT/CADDS SHEET 21

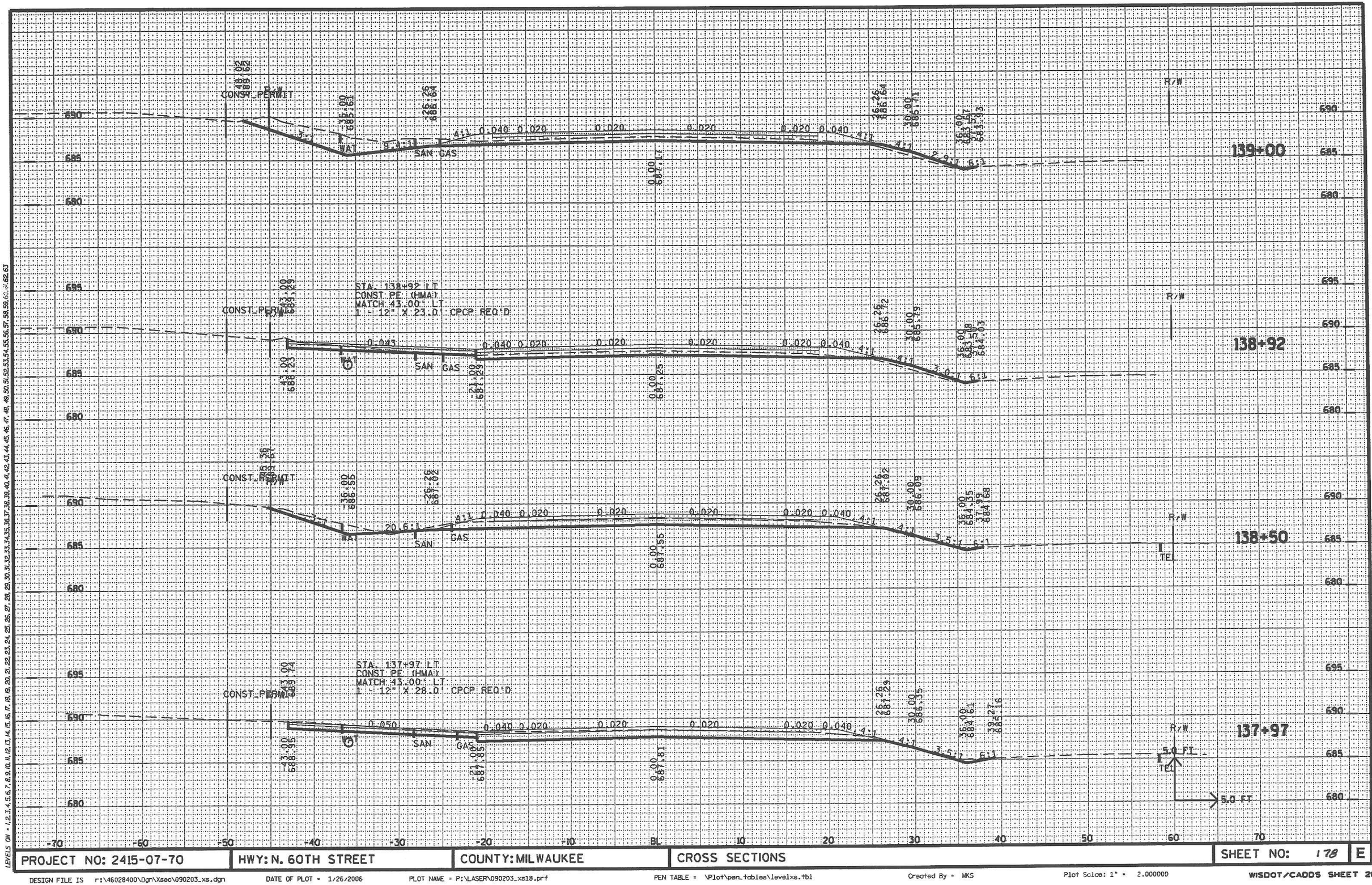


PROJECT NO: 2415-07-70	HWY: N. 60TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS	SHEET NO: 177	E

9

DESIGN FILE IS r:\46028400\Dgn\Xsec\090203_xs.dgn | DATE OF PLOT = 1/26/2006 | PLOT NAME = P:\LASER\090203_xs17.prf | PEN TABLE = \Plot\pen_tables\levelxs.tbl | Created By = MKS | Plot Scale: 1" = 2.000000 | WISDOT/CADDS SHEET 21

LEVELS ON = 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,61,62,63



PROJECT NO: 2415-07-70	HWY: N. 60TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS	SHEET NO: 178	E

9

LEVELS ON = 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60,61,62,63

DESIGN FILE IS r:\46028400\Dgn\Xsec\090203_xs.dgn DATE OF PLOT = 1/26/2006 PLOT NAME = P:\LASER\090203_xs18.prf PEN TABLE = \Plot\pen_tables\levelxs.tbl Created By = MKS Plot Scale: 1" = 2.000000 WISDOT/CADDS SHEET 21

LEVELS ON • 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60,61,62,63

141+00

140+50

140+06

140+00

139+50

STA. 140+06 LT
CONST PE (HMA)
MATCH 43.00' LT
1 - 12" X 31.0' CPCP REQ'D

CONST. PERMIT

CONST. PERMIT

5.0 FT

5.0 FT

PROJECT NO: 2415-07-70	HWY: N. 60TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS	SHEET NO: 179	E

9

DESIGN FILE IS r:\46028400\Dgn\Xsec\090203_xs.dgn DATE OF PLOT = 1/26/2006 PLOT NAME = P:\LASER\090203_xs19.prf PEN TABLE = \Plot\pen_tables\levelxs.tbl Created By = MKS Plot Scale: 1" = 2.000000 WISDOT/CADDS SHEET 2

143+00

142+50

142+32

STA. 142+32
MATCH EXISTING 60.00' LT
1 - 12"X50.0' CPRC CL. IV REQ'D

142+00

STA. 142+00 RT
CONST SIDEWALK (HMA)
MATCH 49.25' RT
1 - 12" X 15.0' CPCS REQ'D

PROPOSED BUS PAD

141+50

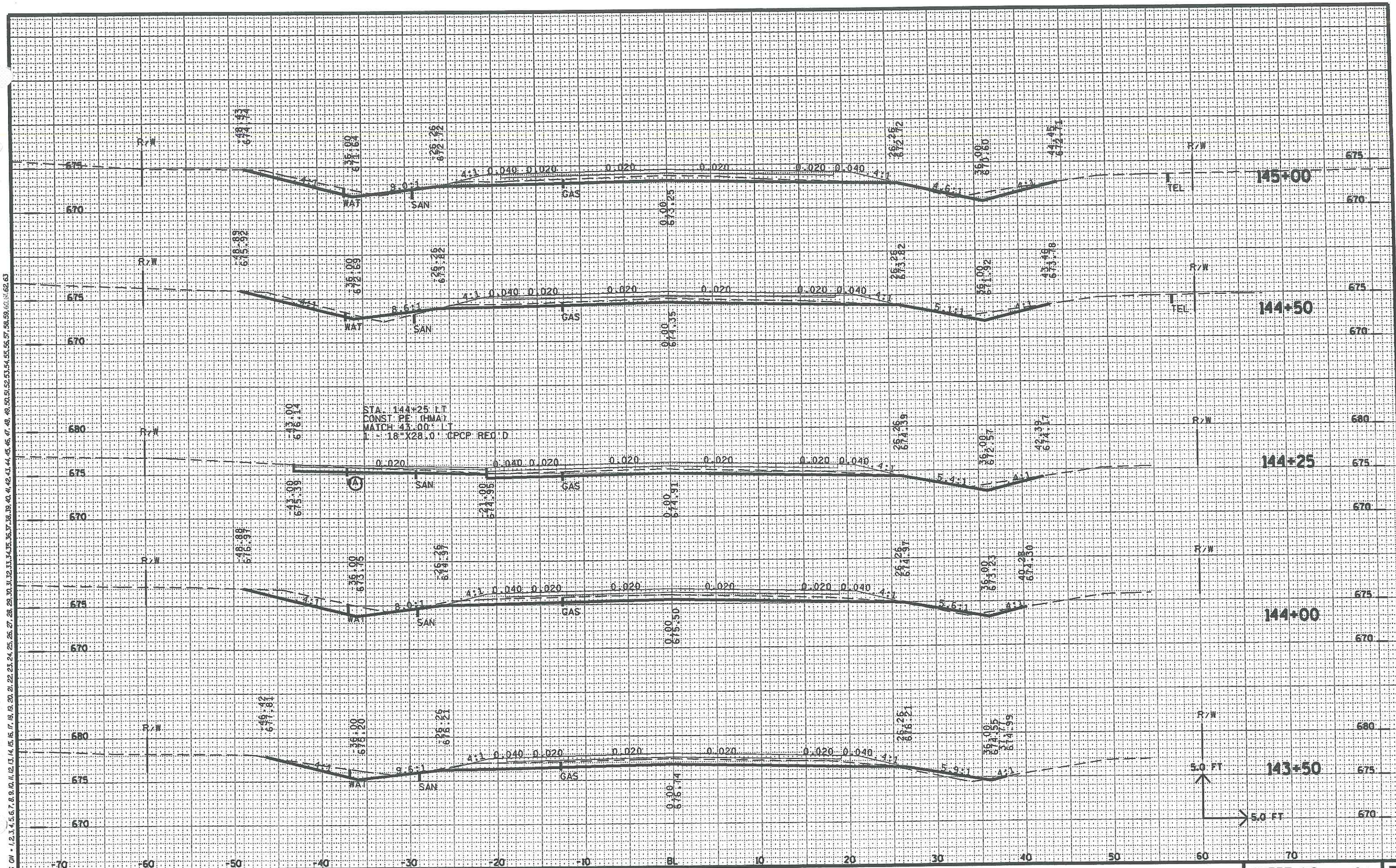
5.0 FT

5.0 FT

9

PROJECT NO: 2415-07-70	HWY: N. 60TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS	SHEET NO: 180	E

DESIGN FILE IS r:\46028400\Dgn\Xsec\090203_xs.dgn DATE OF PLOT = 1/26/2006 PLOT NAME = P:\LASER\090203_xs20.prf PEN TABLE = \Plot\pen_tables\levelxs.tbl Created By = MKS Plot Scale: 1" = 2.000000 WISDOT/CADDS SHEET 21

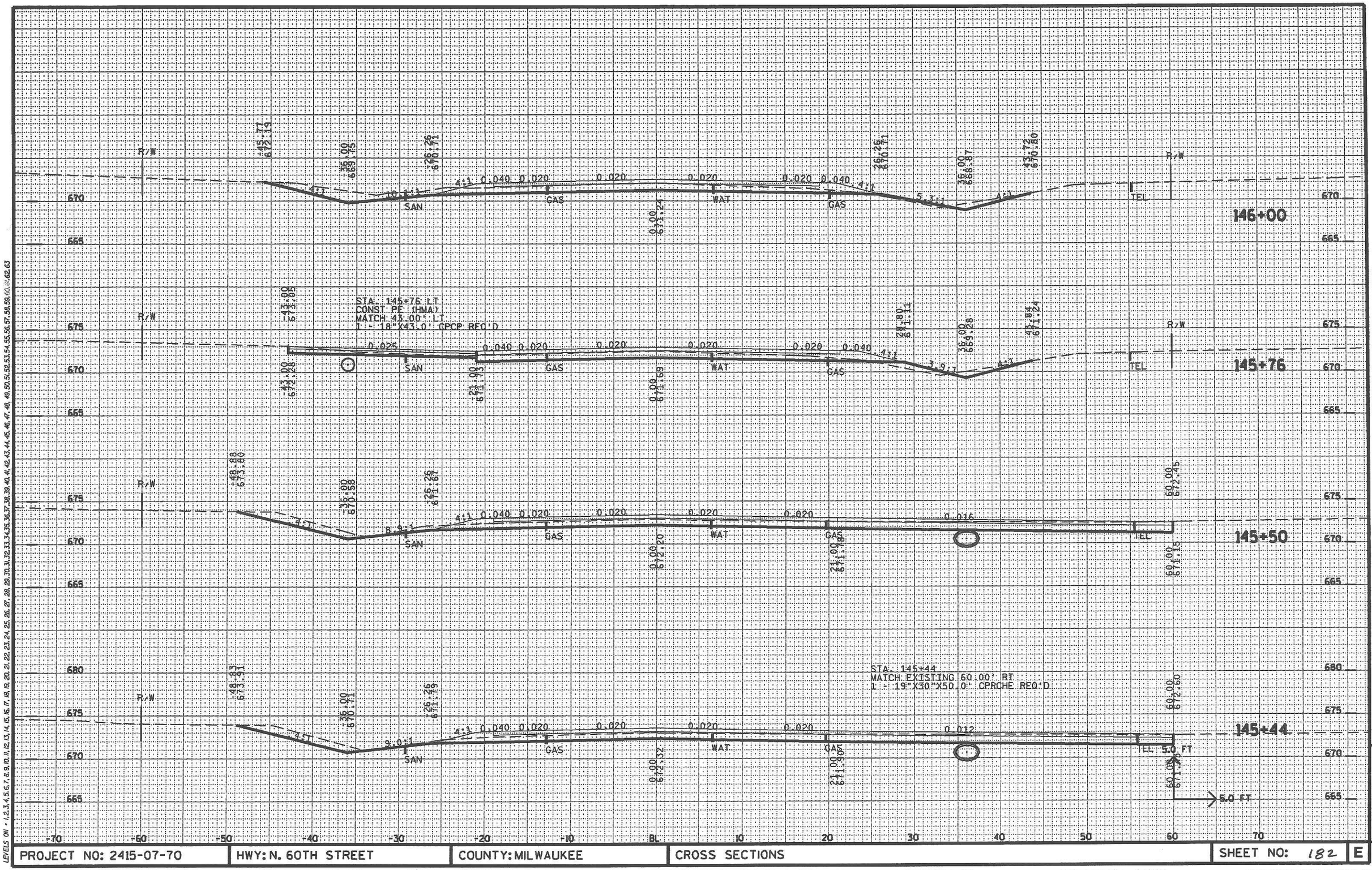


LEVELS ON • 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60,61,62,63

PROJECT NO: 2415-07-70	HWY: N. 60TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS	SHEET NO: 181	E

9

DESIGN FILE IS r:\46028400\Dgn\Xsec\090203_xs.dgn | DATE OF PLOT = 1/26/2006 | PLOT NAME = P:\LASER\090203_xs21.prf | PEN TABLE = \Plot\pen_tables\levelxs.tbl | Created By = MKS | Plot Scale: 1" = 2.000000 | WISDOT/CADDS SHEET 21



LEVELS ON = 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60,61,62,63

PROJECT NO: 2415-07-70	HWY: N. 60TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS	SHEET NO: 182	E

9

DESIGN FILE IS r:\46028400\Dgn\Xsec\090203_xs.dgn DATE OF PLOT = 1/26/2006 PLOT NAME = P:\LASER\090203_xs22.prf PEN TABLE = \Plot\pen_tables\levelxs.tbl Created By = MKS Plot Scale: 1" = 2.000000 WISDOT/CADDS SHEET 21

148+00

147+50

147+12

147+00

146+52

STA. 147+12 LT
CONST PE (BASE AGG.)
MATCH 43.00' LT
1 - 18"X23.0' CPCP REQ'D

STA. 146+52 LT
CONST PE (BASE AGG.)
MATCH 43.00' LT
1 - 18"X26.0' CPCP REQ'D

SAN
WAT
GAS
R/W
TEL
5.0 FT

LEVELS ON - 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60,61,62,63

PROJECT NO: 2415-07-70	HWY: N. 60TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS	SHEET NO: 183	E

9

DESIGN FILE IS r:\46028400\Dgn\Xsec\090203_xs.dgn | DATE OF PLOT = 1/26/2006 | PLOT NAME = P:\LASER\090203_xs23.prf | PEN TABLE = \Plot\pen_tables\levelxs.tbl | Created By = MKS | Plot Scale: 1" = 2.000000 | WISDOT/CADDS SHEET 21

149+00

148+59

STA. 148+59
MATCH EXISTING 61.50' RT

148+50

148+17

STA. 148+17 LT
CONST PE (BASE AGG)
MATCH 43.00' LT
1 - 18"X22.0' CPCP REQ'D

5.0 FT

5.0 FT

PROJECT NO: 2415-07-70	HWY: N. 60TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS	SHEET NO: 184 E

9

DESIGN FILE IS r:\46028400\Dgn\Xsec\090203_xs.dgn DATE OF PLOT = 1/26/2006 PLOT NAME = P:\LASER\090203_xs24.prf PEN TABLE = \Plot\pen_tables\levelxs.tbl Created By = MKS Plot Scale: 1" = 2.000000 WISDOT/CADDS SHEET 21

150+50

150+00

STA. 149+79 LT
CONST PE (HMA)
MATCH 45.00' LT
1 - 18"X24.0' CPCP REQ'D

149+79

149+50

STA. 149+13 LT
CONST PE (HMA)
MATCH 43.00' LT
1 - 18"X26.0' CPCP REQ'D

149+13

5.0 FT

5.0 FT

9

PROJECT NO: 2415-07-70	HWY: N. 60TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS	SHEET NO: 105	E

DESIGN FILE IS r:\46028400\Dgn\Xsec\090203_xs.dgn DATE OF PLOT = 1/26/2006 PLOT NAME = P:\LASER\090203_xs25.prf PEN TABLE = \Plot\pen_tables\levelxs.tbl Created By = MKS Plot Scale: 1" = 2.000000 WISDOT/CADDS SHEET 21

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STA. 151+42 LT
CONST. CE (HMA)
MATCH 43.00' LT.
1 - 12" X37.0" CPCP REQ'D

STA. 151+33 RT
CONST. CE (HMA)
MATCH 72.00' RT.

STA. 150+96
19" X30" SSPRCHE REQ'D.
SEE STORM SEWER PLANS

PROJECT NO: 2415-07-70	HWY: N. 60TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS	SHEET NO: 186	E

DESIGN FILE IS r:\46028400\Dgn\Xsec\090203_xs.dgn DATE OF PLOT = 1/26/2006 PLOT NAME = P:\LASER\090203_xs26.prf PEN TABLE = \Plot\pen_tables\levelxs.tbl Created By = MKS Plot Scale: 1" = 2.000000 WISDOT/CADDS SHEET 21

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670
665
660

-57.00 664.83
-57.00 665.53
STA. 152+66
MATCH EXISTING
END PROJECT
70.00 665.43
152+66
70.00 664.22

-43.18 665.60
-33.67 665.38
42.82 665.65
51.50 665.78
54.65 665.75
R/W
0.020 100:1
25:1
0.016 0.016 0.016 0.007 0.007
-33.67 665.76
0.00 664.50
42.82 665.80
152+50

-40.00 664.13
37.51 665.67
45.50 665.61
51.50 665.73
58.00 665.95
R/W
63.99 664.25
0.035 0.020 0.020 0.020 0.020 0.020 0.005 0.020
5:1
SAN
WAT
GAS
-40.00 664.59
-21.00 664.17
0.00 664.59
37.50 665.84
152+00

-40.00 664.81
-40.00 665.51
STA. 151+93 LT.
CONST STREET (HMA)
MATCH 40.00' LT.
37.51 665.61
45.50 665.65
51.50 665.77
58.00 665.89
R/W
63.98 664.23
0.035 0.020 0.020 0.020 0.020 0.020 0.005 0.020
5.0 FT
5:1
SAN
WAT
GAS
-40.00 664.95
-21.00 664.21
0.00 664.63
37.50 665.88
151+93
5.0 FT

-70 -60 -50 -40 -30 -20 -10 BL 10 20 30 40 50 60 70

PROJECT NO: 2415-07-70	HWY: N. 60TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS	SHEET NO: 187	E

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DESIGN FILE IS r:\46028400\Dgn\Xsec\090203_xs.dgn DATE OF PLOT = 1/26/2006 PLOT NAME = P:\LASER\090203_xs27.prf PEN TABLE = \Plot\pen_tables\levelxs.tbl Created By = MKS Plot Scale: 1" = 2.000000

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31+20

31+00

30+75

30+50

GAS

0.025 0.040

0.020 0.020

5.0 FT

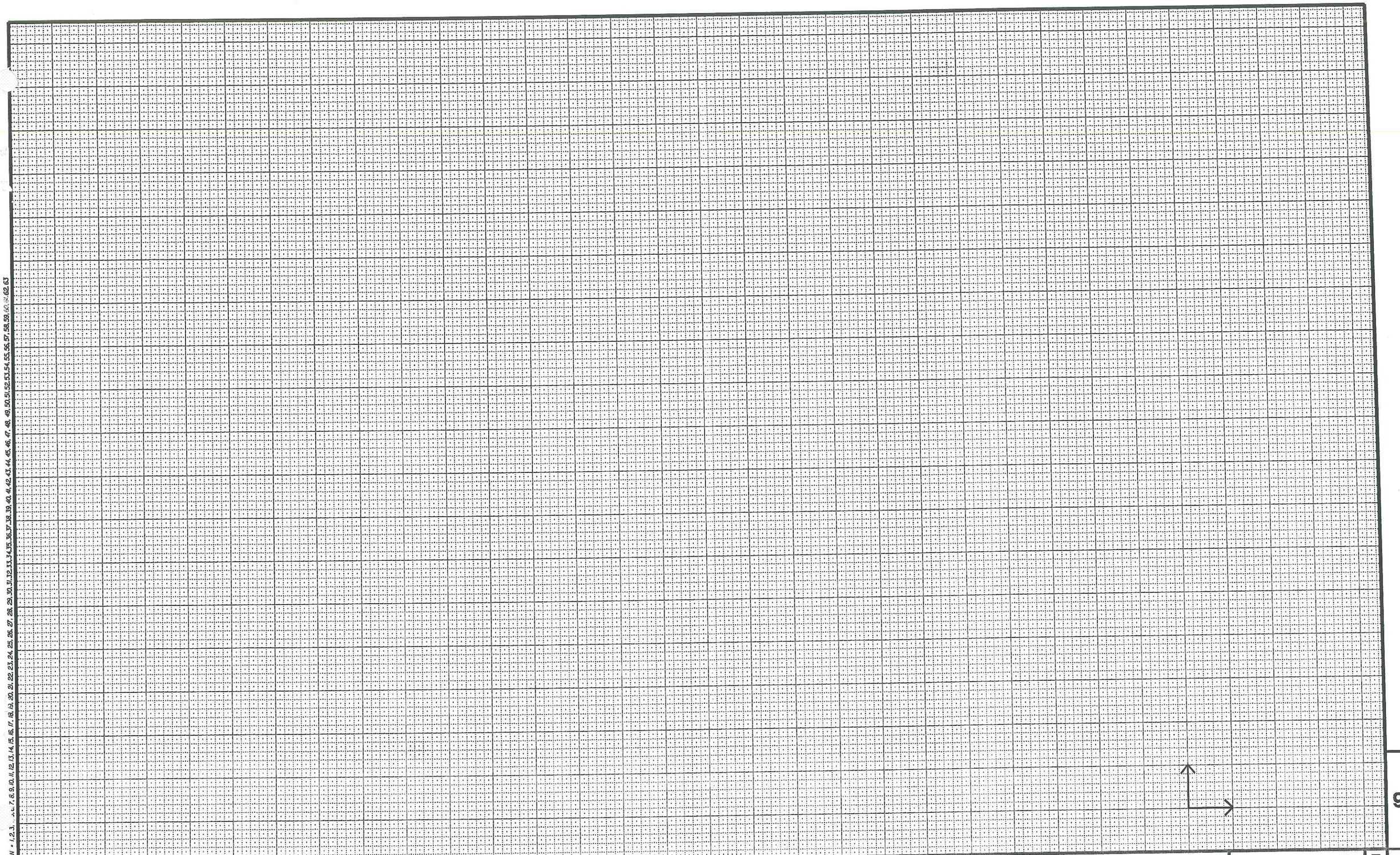
5.0 FT

PROJECT NO: 2415-07-70	HWY: SCHOOL DRIVEWAY	COUNTY: MILWAUKEE	CROSS SECTIONS	SHEET NO: 188	E

9

DESIGN FILE IS r:\46028400\Dgn\Xsec\090202_xs.dgn DATE OF PLOT = 1/26/2006 PLOT NAME = P:\LASER\090202_xs01.prf PEN TABLE = \Plot\pen_tables\levelxs.tbl Created By = MKS Plot Scale: 1" = 2.000000 WISDOT/CADDS SHEET 21

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PROJECT NO: 2415-07-70	HWY: N. 60TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS	SHEET NO: 109	E

DESIGN FILE IS r:\46028400\Dgn\Xsec\090202_xs.dgn | DATE OF PLOT = 1/26/2006 | PLOT NAME = P:\LASER\090202_xs02.prf | PEN TABLE = \Plot\pen_tables\levelxs.tbl | Created By = MKS | Plot Scale: 1" = 2.000000 | WISDOT/CADDS SHEET 21