

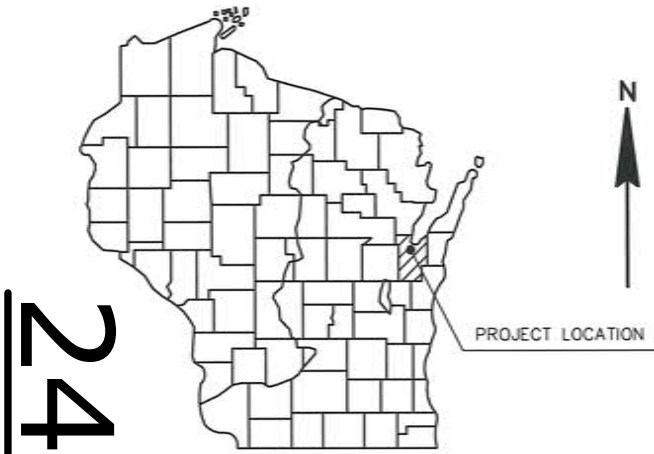
PROJECT ID: 4985-00-52
WITH: 4985-00-54 & 4985-00-58

COUNTY: BROWN

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 Plot
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 = 40



DESIGN DESIGNATION

AADT (2018)	=	1900
AADT (2038)	=	2100
DHV (2038)	=	2.8
D (%)	=	59/41
T (% OF ADT)	=	3.3%
DESIGN SPEED	=	30 MPH
ESALS	=	175,000

CONVENTIONAL SYMBOLS

PLAN

FENCE	
CORPORATE LIMITS	
RIPRAP	
PROPERTY LINE	
LOT LINE	
LIMITED HIGHWAY EASEMENT	
EXISTING RIGHT OF WAY	
PROPOSED OR NEW R/W LINE	
SLOPE INTERCEPT	
REFERENCE LINE	
EXISTING CULVERT	
PROPOSED CULVERT (Box or Pipe)	
COMBUSTIBLE FLUIDS	
HIGH VOLTAGE	
MARSH AREA	
WOODED OR SHRUB AREA	
RIGHT-OF-WAY MARKERS	

PROFILE

GRADE LINE	
ORIGINAL GROUND	
MARSH OR ROCK PROFILE (To be noted as such)	
SPECIAL DITCH	

GRADE ELEVATION

CULVERT (Profile View)

UTILITIES

ELECTRIC	
OVERHEAD ELECTRIC	
FIBER OPTIC	
GAS	
SANITARY SEWER	
STORM SEWER	
TELEPHONE	
WATER	
UTILITY PEDESTAL	
POWER POLE	
TELEPHONE POLE	

ROCK	
LABEL	
95.36	
E	
OE	
FO	
GAS	
SAN	
STM	
TEL	
WTR	
□	
⊗	
⊗	

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

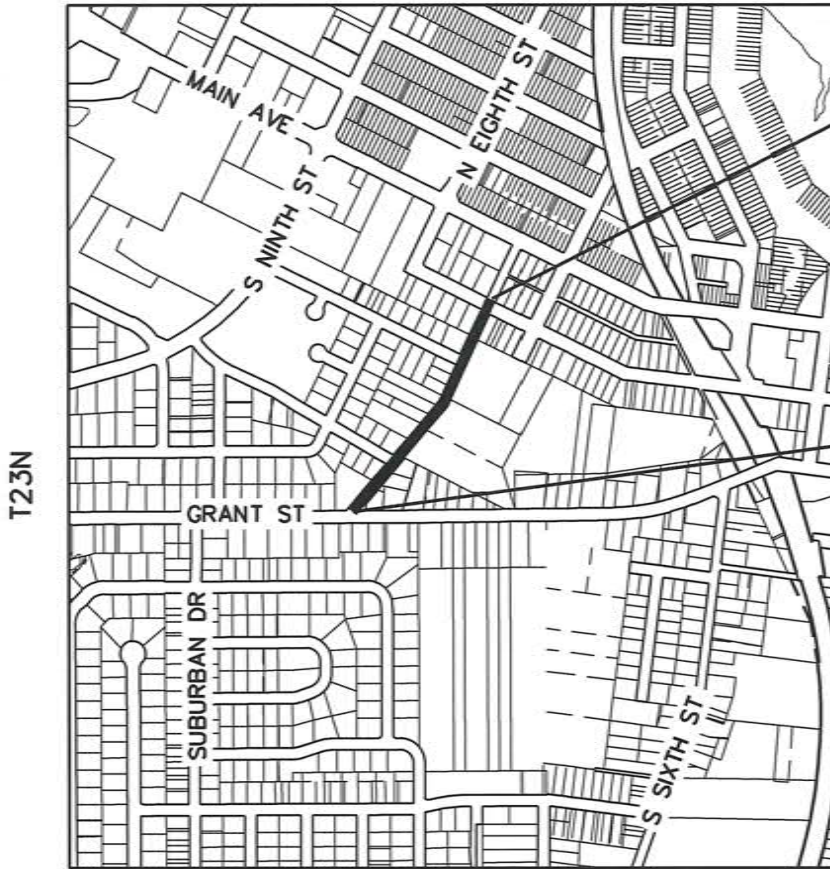
PLAN OF PROPOSED IMPROVEMENT

C. DE PERE, ALLARD ST

GRANT ST TO REID ST

LOCAL STREET
BROWN COUNTY

STATE PROJECT NUMBER
4985-00-52



END PROJECT
STA 23+46.65

BEGIN PROJECT
STA 10+20.48
Y = 541905.734
X = 82052.361

R20E

LAYOUT
SCALE 0 500 FT

TOTAL NET LENGTH OF CENTERLINE = 0.251 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), BROWN COUNTY. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
4985-00-52	WISC 2017278	1

ACCEPTED FOR
CITY OF DE PERE
1/23/17
DATE
CITY ENGINEER

ORIGINAL PLANS PREPARED BY

Cedar
corporation

MENOMONIE - MADISON - GREEN BAY
www.cedarcorp.com
800-472-7372



1/18/17
DATE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor CEDAR CORPORATION

Designer CEDAR CORPORATION

Management Consultant SHORT ELLIOT HENDRICKSON, INC

APPROVED FOR THE DEPARTMENT

1/27/16
DATE
Alex J. Stauder
(Management Consultant Signature)

GENERAL NOTES

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

NO TREES OR SHRUBS ARE TO BE REMOVED UNLESS SUCH TREES OR SHRUBS HAVE FIRST BEEN INDICATED FOR REMOVAL BY THE ENGINEER IN THE FIELD.

BEARINGS REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), BROWN COUNTY.

DISTURBED AREAS WITHIN THE RIGHT OF WAY, EXCEPT THE AREAS WITHIN THE FINISHED BACK OF CURB POINTS, ARE TO BE FERTILIZED, SEEDED, AND MULCHED AS DIRECTED BY THE ENGINEER. USE SEED MIX NO. 40.

WHEN THE QUANTITY OF THE ITEM OF BASE LAYER OR SURFACE LAYER IS MEASURED FOR PAYMENT BY THE TON, THE DEPTH OF THICKNESS OF THE LAYER SHOWN ON THE PLANS IS APPROXIMATE AND THE ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF THE MATERIAL AS DIRECTED BY THE ENGINEER.

THE BENCHMARK IS REFERENCED TO THE CITY OF DE PERE BENCHMARK SYSTEM.

NO MILLINGS SHALL ENTER STORM SEWER SYSTEM. PREVENT SEDIMENT TRANSPORT DURING CONSTRUCTION OF STORM SEWER. CONTRACTOR SHALL CONDUCT OPERATIONS TO PREVENT MILLINGS FROM ENTERING THE STORM SEWER SYSTEM.

UTILITIES

AT&T WISCONSIN
205 SOUTH JEFFERSON STREET
GREEN BAY, WI 54313
(920) 433-4200
JOE KASSAB
JK572K@ATT.COM

CENTRAL BROWN COUNTY
WATER AUTHORITY
1303 S. 8TH STREET
MANITOWOC, WI 54220
(920) 686-4354
ROB MICHAELSON
RMICHAELSON@MPU.ORG

CITY OF DE PERE (WATER)
925 S 6TH STREET
DE PERE, WI 54115
(920) 339-4072
ERIC ZYGARLICHE
EZYGARLICHE@MAIL.DE-PERE.ORG

CITY OF DE PERE (SEWER)
925 S 6TH STREET
DE PERE, WI 54115
(920) 339-8304
ERIC RAKERS
ERAKERS@MAIL.DE-PERE.ORG

NET LEC
1700 INDUSTRIAL DRIVE
GREEN BAY, WI 54302
(920) 619-9774
DENNIS LAFAVE
DLAFAVE@MI.TECH.US

CHARTER COMMUNICATIONS
3520 DESTINATION DRIVE
APPLETON, WI 54915
(920) 831-9249
VINCE ALBIN
VINCE.ALBIN@CHARTER.COM

WISCONSIN PUBLIC SERVICE (ELECTRIC)
700 N. ADAMS STREET
P.O. BOX 19001
GREEN BAY, WI 54307-9001
(920) 655-1596
RANDY STEIER
RDSTEIER@WISCONSINPUBLICSERVICE.COM

WISCONSIN PUBLIC SERVICE (GAS)
2850 S. ASHLAND AVENUE
P.O. BOX 19001
GREEN BAY, WI 54132
(920) 617-5132
DAVID CZARNECKI
DFCZARNECKI@WISCONSINPUBLICSERVICE.COM



Dial 811 or (800) 242-8511

www.DiggersHotline.com

** DENOTES UTILITIES THAT ARE NOT DIGGERS HOTLINE MEMBERS

STANDARD ABBREVIATIONS

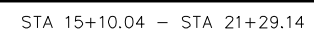
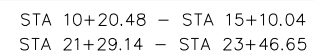
ABUT	ABUTMENT	OFF	OFFSET
AGG	AGGREGATE	PC	POINT OF CURVATURE
ET AL	AND OTHERS	PI	POINT OF INTERSECTION
AADT	ANNUAL AVERAGE DAILY TRAFFIC	PT	POINT OF TANGENCY
BF	BACK FACE	POL	POINT ON LINE
BM	BENCHMARK	PE	PRIVATE ENTRANCE
C/L OR ☉	CENTERLINE	PL	PROPERTY LINE
Δ	CENTRAL ANGLE OR DELTA	PSI	POUNDS/SQUARE INCH
CLR	CLEAR	PROP	PROPOSED
CONC	CONCRETE	R	RADIUS
CONST	CONSTRUCTION	RR	RAILROAD
COR	CORNER	REBAR	REINFORCEMENT BAR
CMP	CORRUGATED METAL PIPE	REQD	REQUIRED
CTH	COUNTY TRUNK HIGHWAY	RT	RIGHT
CR	CREEK	RHF	RIGHT-HAND FORWARD
CFS	CUBIC FEET/SECOND	R/W	RIGHT-OF-WAY
CULV	CULVERT	RD	ROAD
D	DEGREE OF CURVE	SEC	SECTION
DHV	DESIGN HOUR VOLUME	S	SOUTH
DIA	DIAMETER	SE	SOUTHEAST
E	EAST	SW	SOUTHWEST
EL	ELEVATION	STH	STATE TRUNK HIGHWAY
EST	ESTIMATED	STA	STATION
FPS	FEET PER SECOND	SE	SUPER ELEVATION
FE	FIELD ENTRANCE	T	TANGENT
FT	FOOT (FEET)	TEL	TELEPHONE
FTG	FOOTING	TEMP	TEMPORARY
FDN	FOUNDATION	TI	TEMPORARY INTEREST
FF	FRONT FACE	TLE	TEMPORARY LIMITED EASEMENT
IP	IRON PIN	TL OR T/L	TRANSIT LINE
LT	LEFT	T	TRUCKS
LHF	LEFT-HAND FORWARD	TYP	TYPICAL
L	LENGTH OF CURVE	U/G	UNDERGROUND
LF	LINEAR FOOT	USH	UNITED STATES HIGHWAY
MAX	MAXIMUM	VAR	VARIABLE
MI	MILE	V	VELOCITY
MIN	MINIMUM	VPC	VERTICAL POINT OF CURVATURE
NC	NORMAL CROWN	VPI	VERTICAL POINT OF INTERSECTION
N	NORTH	VPT	VERTICAL POINT OF TANGENCY
NE	NORTHEAST	W	WEST
NW	NORTHWEST	YD	YARD
NO	NUMBER		

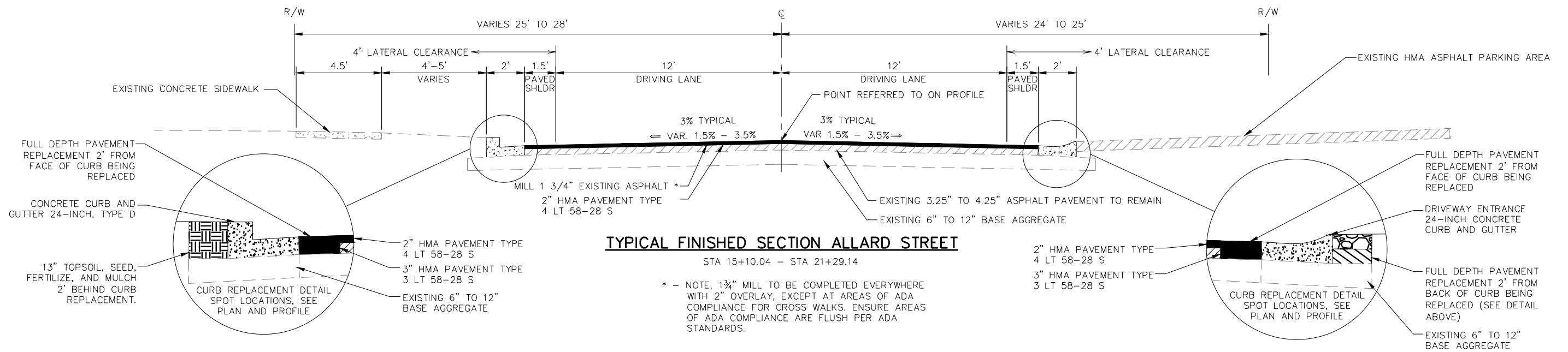
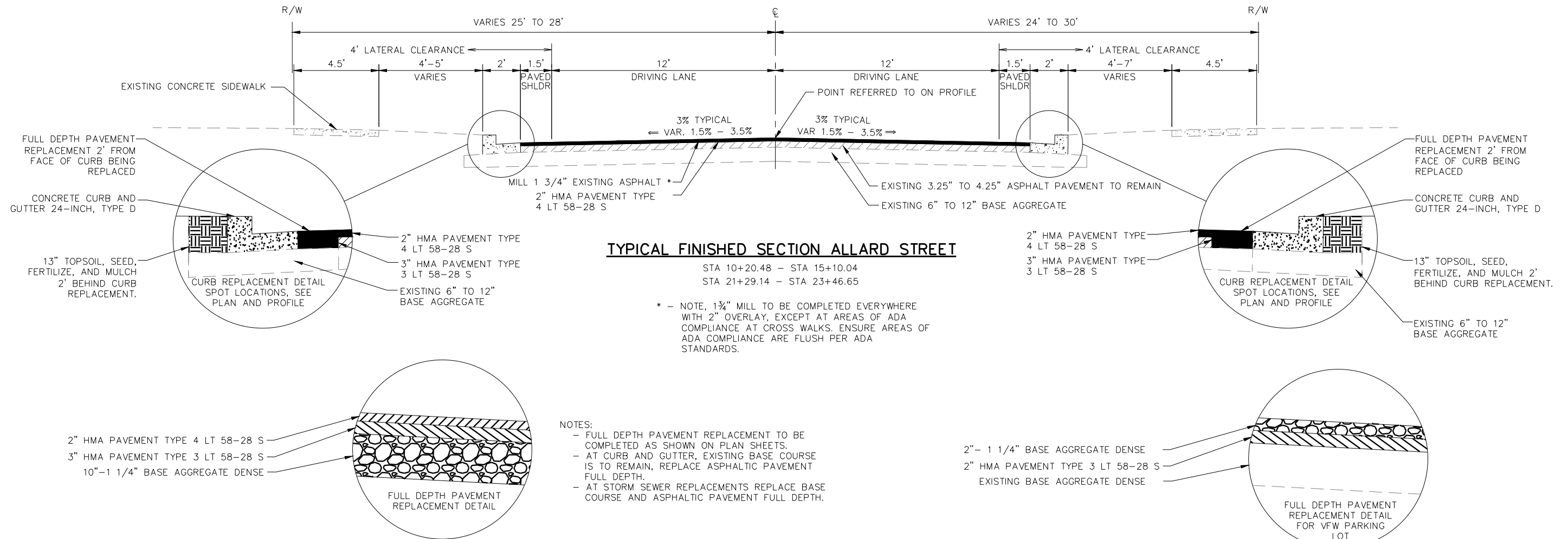
CITY OF DE PERE

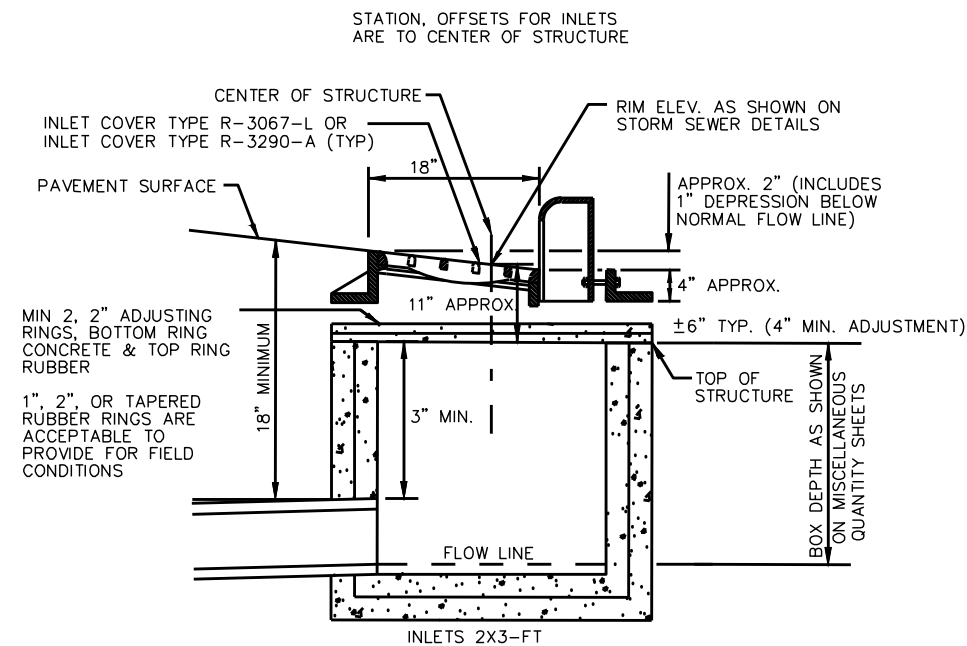
CITY OF DE PERE
PUBLIC WORKS BUILDING
925 S 6TH STREET
DE PERE, WI 54115
(920) 339-8304
ERIC RAKERS
erakers@mail.de-pere.org

DNR LIAISON

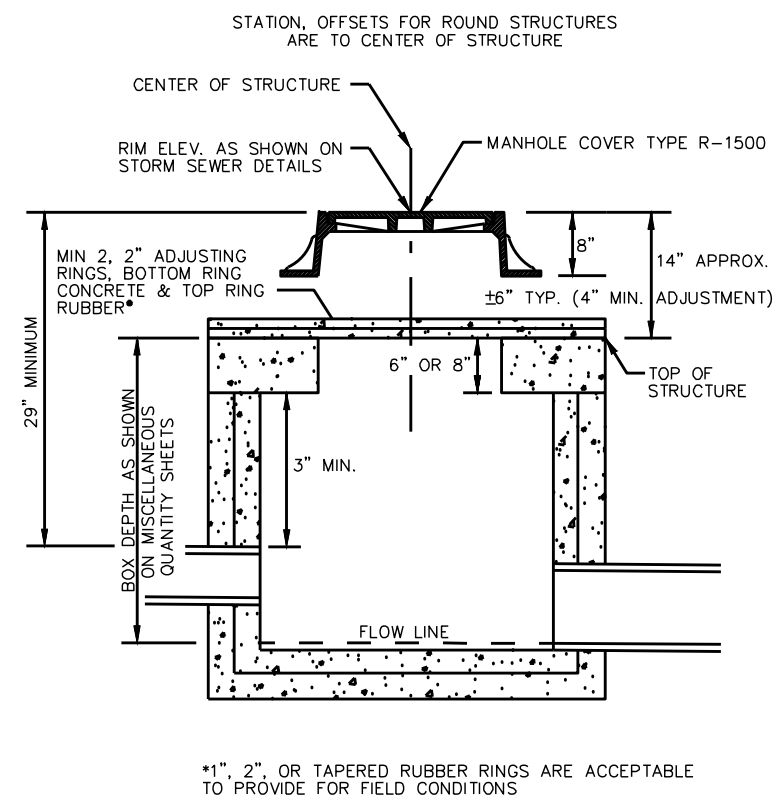
DNR NORTHEAST REGIONAL HQ
2984 SHAWANO AVENUE
GREEN BAY, WI 54313
(920) 662-5119
JIM DOPERALSKI
james.doperalski@wisconsin.gov





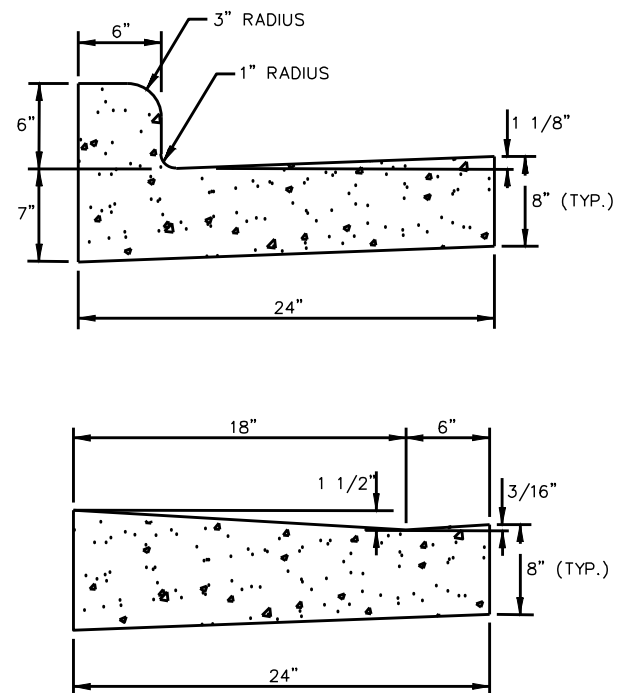


DETAIL FOR COMPUTING INLET ELEVATIONS
SCALE: NONE



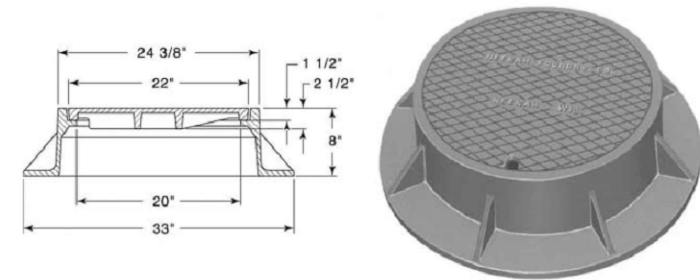
*1", 2", OR TAPERED RUBBER RINGS ARE ACCEPTABLE
TO PROVIDE FOR FIELD CONDITIONS

DETAIL FOR COMPUTING ROUND STRUCTURE ELEVATIONS
SCALE: NONE

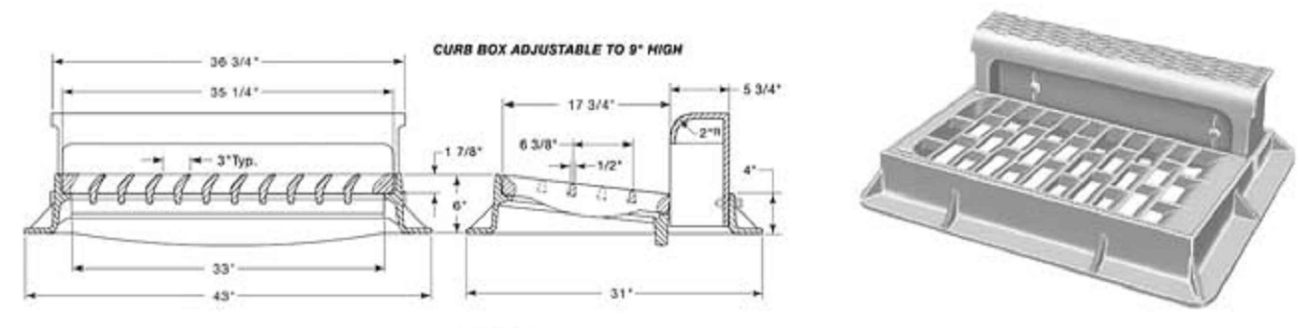
**NOTES:**

ALL EXPOSED EDGES OF CONCRETE SHALL BE FINISHED WITH AN EDGING TOOL HAVING A RADIUS OF 1/4-INCH UNLESS OTHERWISE NOTED.

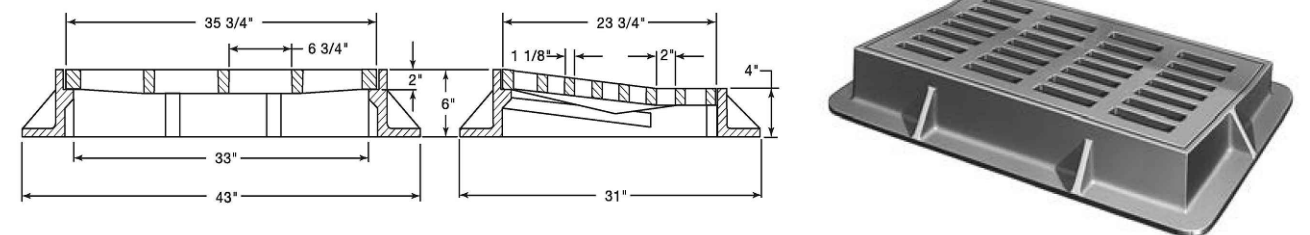
CONCRETE CURB & GUTTER 24-INCH TYPE D, SPECIAL DETAIL
SCALE: NONE



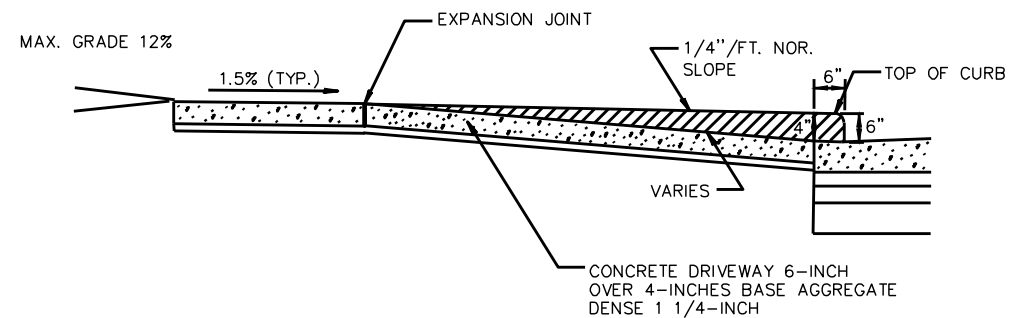
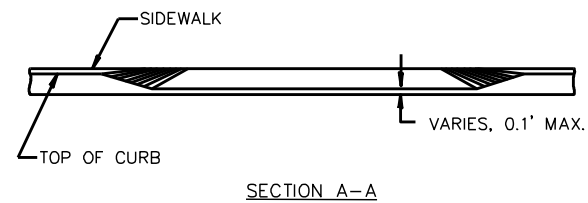
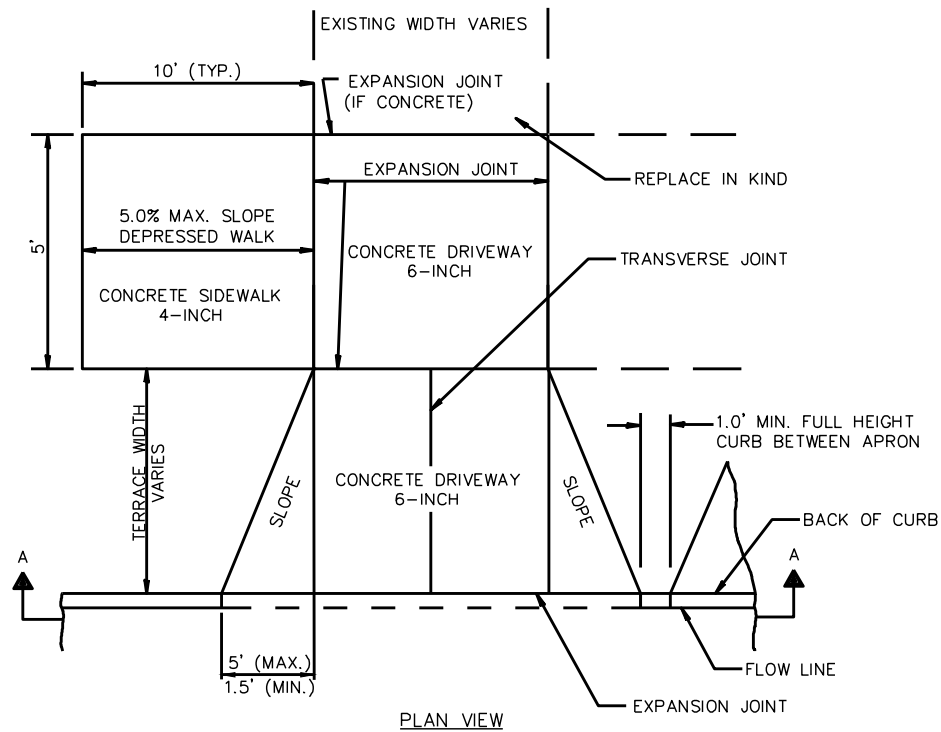
MANHOLE COVER TYPE R-1500 DETAIL
SCALE: NONE



INLET COVER TYPE R-3067-L DETAIL
SCALE: NONE



INLET COVER TYPE R-3290-A DETAIL
SCALE: NONE

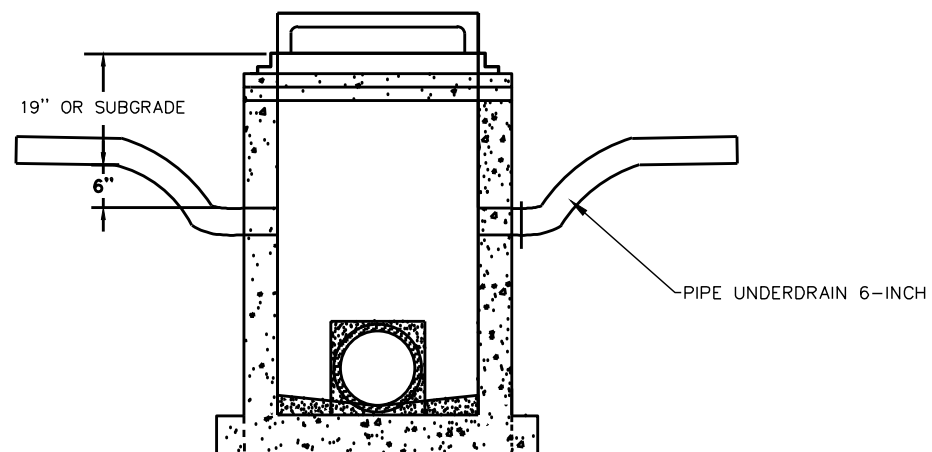
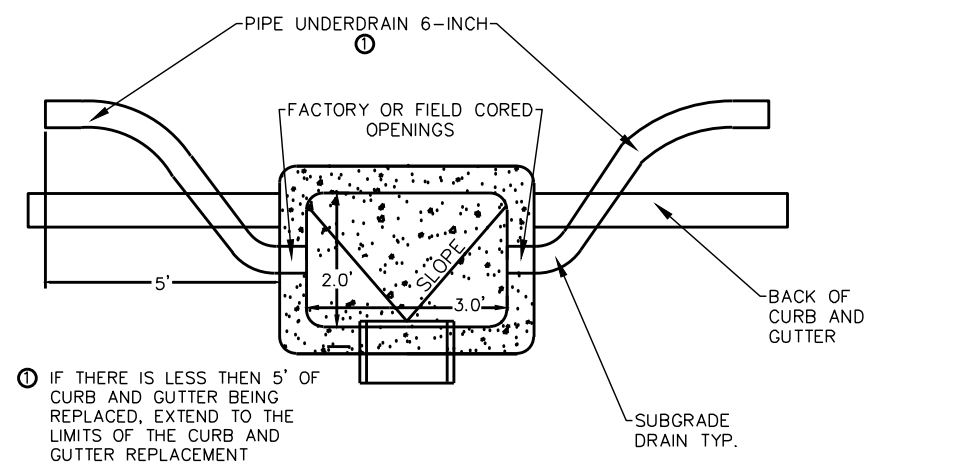


CITY OF DE PERE DRIVEWAY WIDTH RESTRICTIONS
RESIDENTIAL 25' MAX AT ROW
35' MAX AT CURB
INDUSTRIAL 35' MAX AT ROW
75' MAX AT CURB

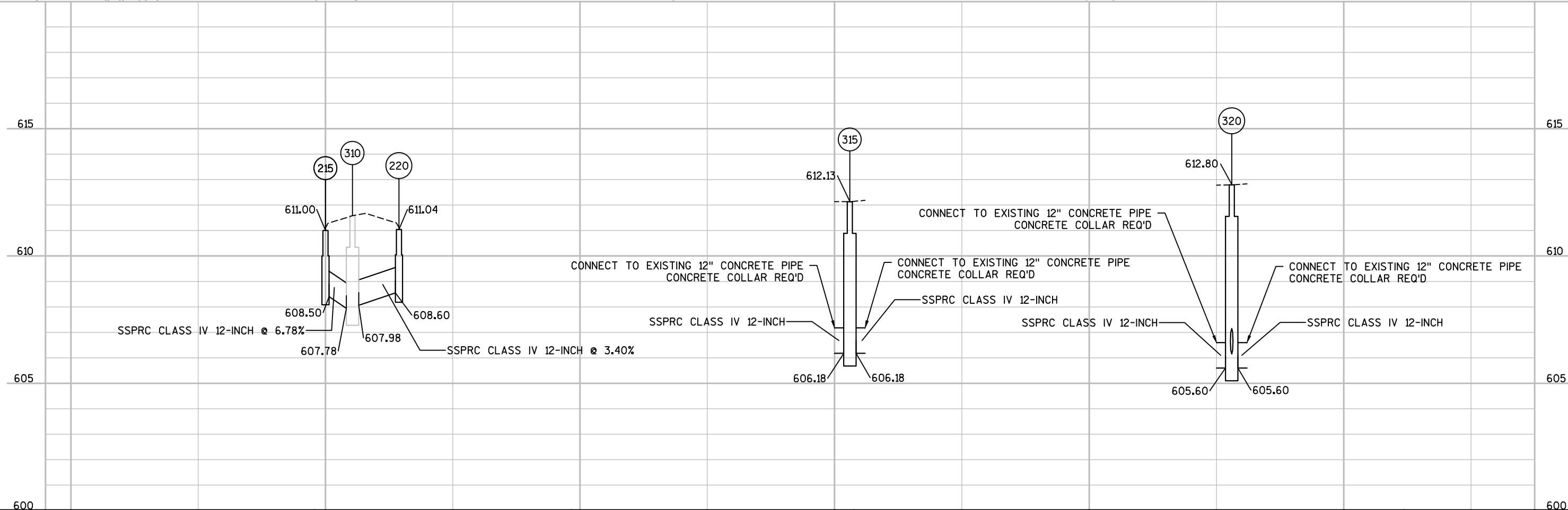
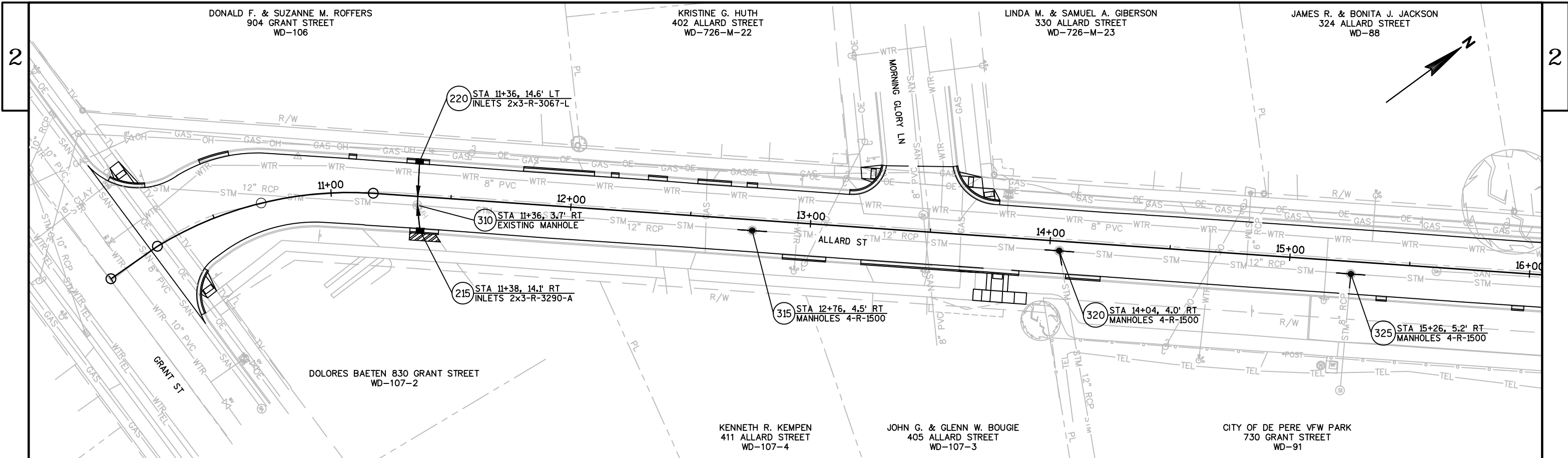
DRIVEWAYS TO BE REPLACED AT EXISTING WIDTHS
UNLESS ABOVE CODE.

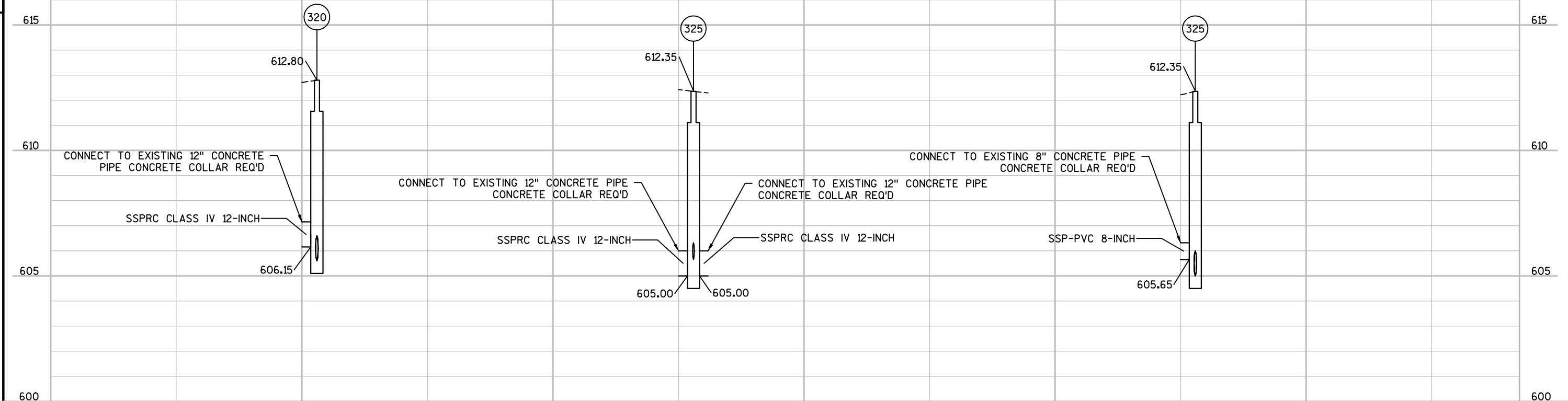
EXISTING DRIVEWAYS STEEPER THAN 8% MAX. MAY
BE REINSTALLED GREATER THAN 8% MAX.

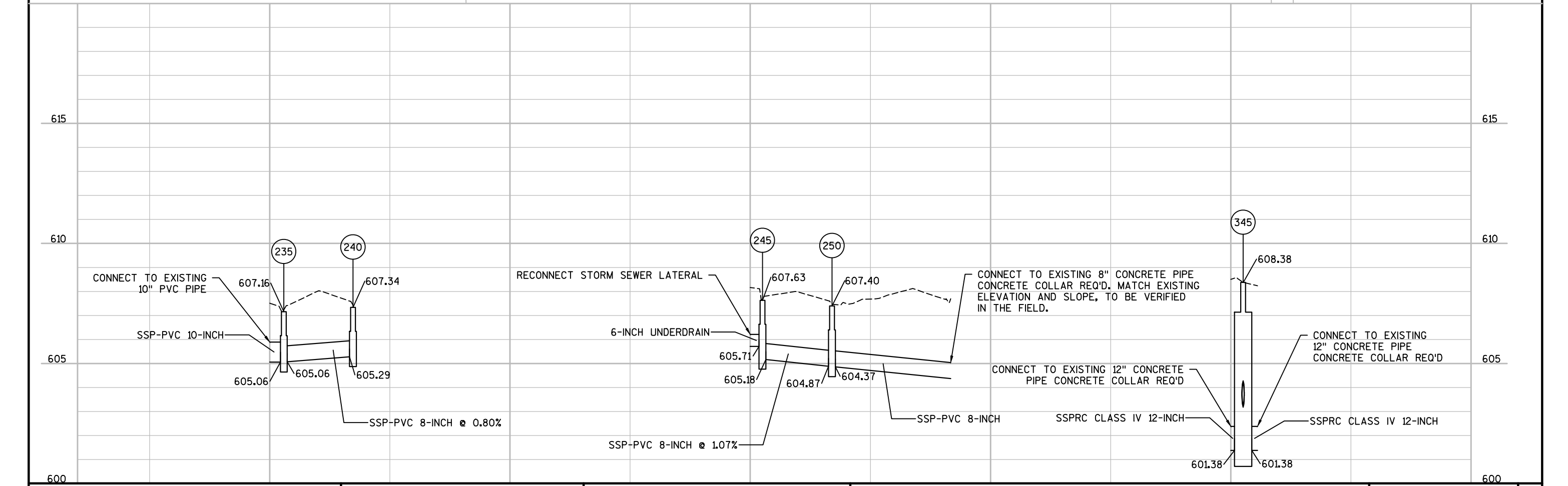
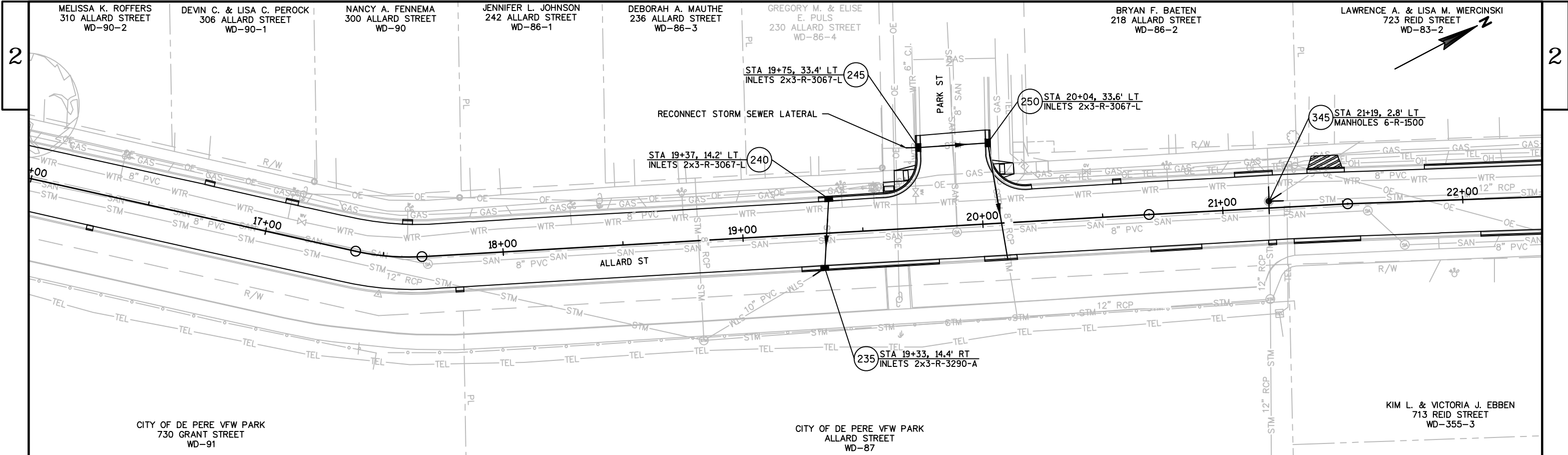
URBAN DRIVEWAY DETAIL
SCALE: NONE



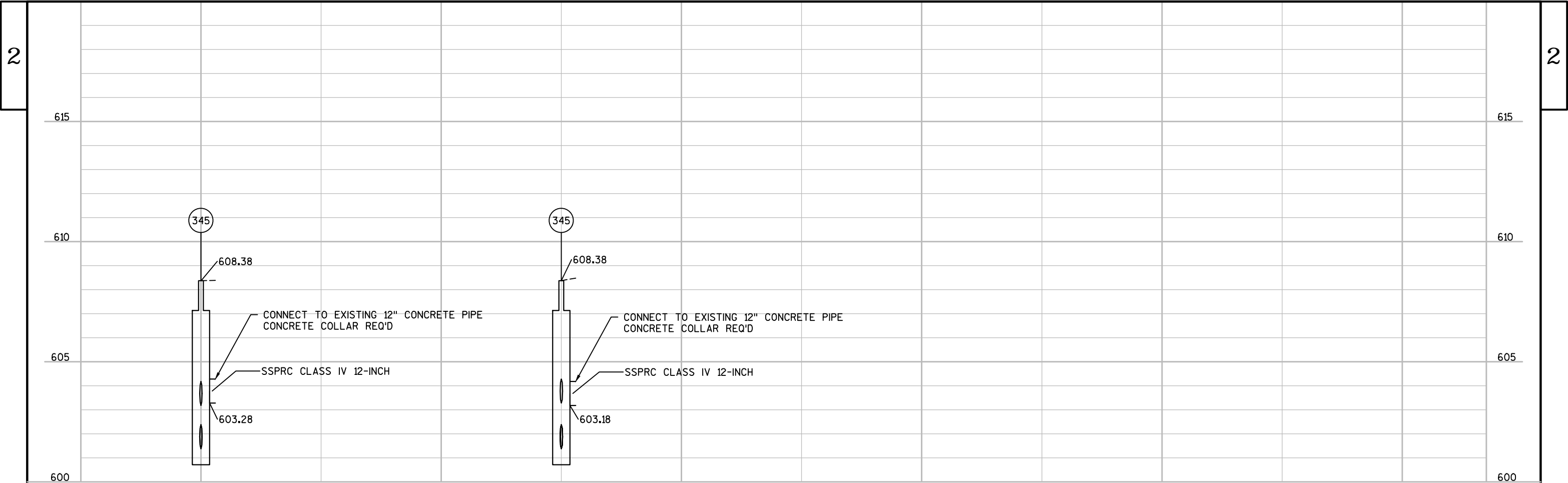
PIPE UNDERDRAIN 6-INCH DETAIL
SCALE: NONE







PROJECT NO: 4985-00-52	HWY: ALLARD ST	COUNTY: BROWN	STORM SEWER	SHEET	E
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Estimate Of Quantities By Plan Sets

4985-00-52					
Line	Item	Item Description	Unit	Total	Qty
0010	204.0100	Removing Pavement	SY	546.000	546.000
0020	204.0120	Removing Asphaltic Surface Milling	SY	4,405.000	4,405.000
0030	204.0150	Removing Curb & Gutter	LF	908.000	908.000
0040	204.0210	Removing Manholes	EACH	4.000	4.000
0050	204.0220	Removing Inlets	EACH	6.000	6.000
0060	204.0245	Removing Storm Sewer (size) 01. 8-Inch	LF	84.000	84.000
0070	204.0245	Removing Storm Sewer (size) 02. 10-Inch	LF	63.000	63.000
0080	204.0245	Removing Storm Sewer (size) 03. 12-Inch	LF	33.000	33.000
0150	205.0100	Excavation Common **P**	CY	86.000	86.000
0170	213.0100	Finishing Roadway (project) 01. 4985-00-52	EACH	1.000	1.000
0200	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	249.000	249.000
0210	416.0160	Concrete Driveway 6-Inch	SY	21.000	21.000
0240	455.0605	Tack Coat	GAL	310.000	310.000
0250	460.2000	Incentive Density HMA Pavement	DOL	390.000	390.000
0260	460.5223	HMA Pavement 3 LT 58-28 S	TON	87.000	87.000
0270	460.5224	HMA Pavement 4 LT 58-28 S	TON	515.000	515.000
0280	520.8000	Concrete Collars for Pipe	EACH	13.000	13.000
0290	602.0405	Concrete Sidewalk 4-Inch	SF	20.000	20.000
0300	602.0415	Concrete Sidewalk 6-Inch	SF	695.000	695.000
0310	602.0505	Curb Ramp Detectable Warning Field Yellow	SF	136.000	136.000
0330	608.0412	Storm Sewer Pipe Reinforced Concrete Class IV 12-Inch	LF	62.000	62.000
0400	611.2004	Manholes 4-FT Diameter	EACH	3.000	3.000
0420	611.2006	Manholes 6-FT Diameter	EACH	1.000	1.000
0450	611.3230	Inlets 2x3-FT	EACH	6.000	6.000
0460	612.0106	Pipe Underdrain 6-Inch	LF	60.000	60.000
0470	619.1000	Mobilization	EACH	0.120	0.120
0480	624.0100	Water	MGAL	5.000	5.000
0490	625.0100	Topsoil	SY	187.000	187.000
0500	627.0200	Mulching	SY	187.000	187.000
0510	628.1905	Mobilizations Erosion Control	EACH	2.000	2.000
0520	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0530	628.7010	Inlet Protection Type B	EACH	2.000	2.000
0540	628.7015	Inlet Protection Type C	EACH	5.000	5.000
0550	629.0210	Fertilizer Type B	CWT	3.300	3.300
0560	630.0140	Seeding Mixture No. 40	LB	5.000	5.000
0570	642.5001	Field Office Type B	EACH	0.120	0.120
0580	643.0100	Traffic Control (project) 01. 4985-00-52	EACH	1.000	1.000
0610	643.0420	Traffic Control Barricades Type III	DAY	720.000	720.000
0620	643.0705	Traffic Control Warning Lights Type A	DAY	1,440.000	1,440.000

Estimate Of Quantities By Plan Sets

4985-00-52

Line	Item	Item Description	Unit	Total	Qty
0630	643.0900	Traffic Control Signs	DAY	720.000	720.000
0640	646.0106	Pavement Marking Epoxy 4-Inch	LF	315.000	315.000
0650	647.0556	Pavement Marking Stop Line Epoxy 12-Inch	LF	112.000	112.000
0660	647.0766	Pavement Marking Crosswalk Epoxy 6-Inch	LF	609.000	609.000
0670	650.4000	Construction Staking Storm Sewer	EACH	10.000	10.000
0680	650.5000	Construction Staking Base	LF	200.000	200.000
0690	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	823.000	823.000
0700	650.9910	Construction Staking Supplemental Control (project) 01. 4985-00-52	LS	1.000	1.000
0730	690.0150	Sawing Asphalt	LF	1,791.000	1,791.000
0740	690.0250	Sawing Concrete	LF	184.000	184.000
0750	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	1,200.000	1,200.000
0760	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	1,200.000	1,200.000
0770	SPV.0060	Special 01. Reconnect Storm Sewer Laterals	EACH	1.000	1.000
0780	SPV.0060	Special 02. Manhole Covers Type R-1500	EACH	4.000	4.000
0790	SPV.0060	Special 03. Inlet Covers Type R-3067-L	EACH	4.000	4.000
0800	SPV.0060	Special 04. Inlet Covers Type R-3290-A	EACH	2.000	2.000
0810	SPV.0060	Special 05. Rubber Adjusting Rings	EACH	10.000	10.000
0820	SPV.0060	Special 06. Construction Staking Curb Ramps	EACH	11.000	11.000
0840	SPV.0075	Special 01. Street Sweeping	HRS	40.000	40.000
0850	SPV.0090	Special 01. Concrete Curb & Gutter 24-Inch Type D	LF	908.000	908.000
0860	SPV.0090	Special 02. Storm Sewer Pipe PVC 8-Inch	LF	110.000	110.000
0870	SPV.0090	Special 03. Storm Sewer Pipe PVC 10-Inch	LF	3.000	3.000

REMOVING PAVEMENT

STATION - STATION	LOCATION	204.0100 SY	REMARKS
10+22 - 10+31	LT	4	CURB R&R
10+22 - 10+37	RT	5	CURB R&R
10+52 - 10+63	LT	3	CURB R&R
11+07 - 11+10	LT	1	CURB R&R
11+31 - 11+46	RT/LT	30	STORM R&R
11+79 - 12+09	LT	7	CURB R&R
12+16 - 12+19	LT	1	CURB R&R
12+31 - 12+39	LT	2	CURB R&R
12+52 - 12+66	LT	3	CURB R&R
12+72 - 12-80	RT	7	STORM R&R
12+73 - 12+77	LT	1	CURB R&R
12+89 - 13+07	RT	4	CURB R&R
13+15 - 13+30	LT	5	CURB R&R
13+22 - 13+88	RT	15	CURB R&R
13+58 -13+78	LT	5	CURB R&R
14+00 - 14+08	RT	7	STORM R&R
14+07 - 14+22	RT	3	CURB R&R
15+22 - 15+30	RT	7	STORM R&R
15+37 - 15+41	RT	2	CURB R&R
15+94 - 15+99	RT	2	CURB R&R
16+27 - 16+30	RT	1	CURB R&R
16+71 - 16+75	LT	1	CURB R&R
17+06 - 17+11	LT	1	CURB R&R
17+58 - 17+63	LT	1	CURB R&R
17+79 - 17+83	RT	2	CURB R&R
19+24 - 19+81	RT	23	CURB R&R
19+30 - 19+41	RT/LT	21	STORM R&R
19+32 - 19+76	LT	14	CURB R&R
19+78 - 20+01	LT	21	STORM R&R
20+00 - 20+10	RT	4	CURB R&R
20+03 - 20+21	LT	8	CURB R&R
20+08	RT/LT	28	STORM R&R
20+55 - 20+58	LT	1	CURB R&R
20+69 - 20+91	RT	10	CURB R&R
21+02 - 22+75	RT	197	FULL DEPTH
21+06 - 21+21	LT	3	CURB R&R
21+15 - 21+23	LT	7	STORM R&R
21+36 - 21+51	LT	3	CURB R&R
21+85 - 22+90	LT	26	CURB R&R
22+75 - 22+93	RT	6	CURB R&R
23+21 - 23+47	RT	7	CURB R&R
23+31 - 23+47	LT	6	CURB R&R
UNDISTRIBUTED		41	
ITEM TOTAL		546	

REMOVING CURB & GUTTER

STATION - STATION	LOCATION	204.0150 LF	REMARKS
10+22 - 10+31	LT	15	SW QUAD
10+22 - 10+37	RT	19	SE QUAD
10+52 - 10+63	LT	13	
11+07 - 11+10	LT	3	
11+31 - 11+40	LT	9	
11+34 - 11+46	RT	12	
11+79 - 12+09	LT	30	
12+16 - 12+19	LT	3	
12+31 - 12+39	LT	8	
12+52 - 12+66	LT	14	
12+73 - 12+77	LT	4	
12+89 - 13+07	RT	18	
13+15 - 13+30	LT	20	SW QUAD
13+22 - 13+88	RT	66	
13+58 -13+78	LT	25	NW QUAD
14+07 - 14+22	RT	15	
15+37 - 15+41	RT	4	
15+94 - 15+99	RT	5	
16+27 - 16+30	RT	3	
16+71 - 16+75	LT	4	
17+06 - 17+11	LT	5	
17+58 - 17+63	LT	5	
17+79 - 17+83	RT	4	
19+24 - 19+81	RT	57	
19+32 - 19+76	LT	60	SW QUAD
20+00 - 20+13	RT	14	
20+03 - 20+21	LT	35	NW QUAD
20+55 - 20+58	LT	4	
20+69 - 20+91	RT	22	
21+06 - 21+21	LT	16	
21+18 - 21+22	RT	4	
21+29 - 21+57	RT	28	
21+36 - 21+51	LT	16	
21+85 - 22+90	LT	113	SW QUAD
22+07 - 22+93	RT	93	SE QUAD
23+21 - 23+47	RT	33	NE QUAD
23+31 - 23+47	LT	24	NW QUAD
UNDISTRIBUTED		85	
ITEM TOTAL		908	

REMOVING ASPHALTIC SURFACE MILLING

STATION - STATION	LOCATION	204.0120 SY
10+20 - 23+47	ALLARD ST	4405
ITEM TOTAL		4405

3

REMOVING STORM SEWER STRUCTURES

STATION	LOCATION	204.0210	204.0220
		REMOVING MANHOLES EACH	REMOVING INLETS EACH
11+36	LT	-	1
11+36	RT	-	1
12+76	RT	1	-
14+04	RT	1	-
15+26	RT	1	-
19+33	RT	-	1
19+37	LT	-	1
19+75	LT	-	1
20+04	LT	-	1
21+19	LT	1	-
ITEM TOTAL		4	6

EXCAVATION COMMON **P**

STATION - STATION	LOCATION	205.0100 CY	USABLE CUT	WASTE	REMARKS
10+20 - 23+47	RT/LT	32	-	32	FOR CURB R&R
10+25	LT	1	-	1	CURB RAMP
10+34	RT	1	-	1	CURB RAMP
13+20	LT	1	-	1	CURB RAMP
13+71	LT	2	-	2	CURB RAMP
13+80	RT	4	-	4	CURB RAMP
19+64	LT	2	-	2	CURB RAMP
20+14	LT	1	-	1	CURB RAMP
21+02 - 22+75	RT	36	-	36	FULL DEPTH
22+79	RT	2	-	2	CURB RAMP
22+80	LT	1	-	1	CURB RAMP
23+39	RT	2	-	2	CURB RAMP
22+41	LT	1	-	1	CURB RAMP
ITEM TOTALS		86	0	86	

REMOVING STORM SEWER

STATION - STATION	LOCATION	204.0245.01	204.0245.02	204.0245.03	REMARKS
		8-INCH LF	10-INCH LF	12-INCH LF	
11+36 - 11+36	LT	18	-	-	
11+36 - 11+38	RT	11	-	-	
12+76	RT	-	-	6	TO RECONNECT MH 315
14+04	RT	-	-	9	TO RECONNECT MH 320
15+26	RT	3	-	6	TO RECONNECT MH 325
19+33	RT	-	3	-	TO RECONNECT INL 235
19+33 - 19+37	RT/LT	-	30	-	CONFLICTING RECORDS ON SIZE
19+75 - 20+04	LT	-	30	-	CONFLICTING RECORDS ON SIZE
20+04	LT	3	-	-	TO RECONNECT INL 250
20+08	RT/LT	49	-	-	
21+19	LT	-	-	12	TO RECONNECT MH 345
ITEM TOTAL		84	63	33	

FINISHING ROADWAY

PROJECT	213.0100.01	REMARKS
	EA	
4985-00-52	1	
ITEM TOTAL		1

BASE AGGREGATE DENSE

STATION - STATION	LOCATION	305.0120	REMARKS
		1 1/4-INCH TON	
11+31 - 11+46	RT/LT	18	STORM R&R
12+72 - 12-80	RT	4	STORM R&R
14+00 - 14+08	RT	4	STORM R&R
15+22 - 15+30	RT	4	STORM R&R
15+37 - 21+22	RT	3	BASE COURSE BEHIND CURB IN PARKING LOT
19+30 - 19+41	RT/LT	18	STORM R&R
19+78 - 20+01	LT	18	STORM R&R
20+00 - 20+13	RT/LT	16	STORM R&R
21+02 - 22+75	RT	110	FULL DEPTH
21+15 - 21+23	LT	4	STORM R&R
UNDISTRIBUTED		50	CURB AND PED RAMP
ITEM TOTALS		249	

3

3

CONCRETE DRIVEWAY

STATION - STATION	LOCATION	416.0160 6 INCH SY	REMARKS
11+34 - 11+45	RT	4	
21+36 - 21+51	LT	7	
UNDISTRIBUTED		10	
ITEM TOTALS		21	

CONCRETE SIDEWALK

STATION - STATION	LOCATION	602.0405 4-INCH SF	602.0415 6-INCH SF	602.0505 CURB RAMP DETECTABLE WARNING FIELD YELLOW SF
10+25	LT	20	50	8
10+34	RT	—	38	8
13+20	LT	—	43	8
13+71	LT	—	79	16
13+80	RT	—	62	8
19+64	LT	—	77	16
20+ 14	LT	—	43	8
22+79	RT	—	90	16
22+80	LT	—	57	16
23+39	RT	—	106	16
22+41	LT	—	50	16
ITEM TOTAL		20	695	136

3

ASPHALTIC PAVEMENT ITEMS

STATION - STATION	LOCATION	455.0605 TACK COAT GAL	460.5223 HMA PAVEMENT 3 LT 58-28 S TON	460.5224 HMA PAVEMENT 4 LT 58-28 S TON
10+20 - 23+47	ALLARD STREET	310	87	515
ITEM TOTALS		310	87	515

CONCRETE COLLARS FOR PIPE

STATION -STATION	LOCATION	520.8000 EA
12+71	RT	1
12+81	RT	1
13+99	RT	1
14+04	RT	1
14+09	RT	1
15+21	RT	1
15+26	RT	1
15+31	RT	1
20+09	RT	1
21+19	RT	1
21+19	LT	1
21+25	LT	1
21+26	LT	1
ITEM TOTALS		13

3

3

STORM SEWER STRUCTURE ITEMS

STRUCTURE NUMBER	STATION	OFFSET	TOP STRUCTURE ELEV	CASTING ELEV	BOTTOM STRUCTURE ELEV	DEPTH	611.2004	611.2006	SPV.0060.02	611.3230	SPV.0060.03		SPV.0060.04	SPV.0060.05	612.0106	REMARKS
							MANHOLES	MANHOLES	MANHOLE	INLET	INLET COVERS		RUBBER	RUBBER	PIPE	
							4-FT DIAMETER	6-FT DIAMETER	COVERS	2x3-FT	TYPE R-3067-L	TYPE R-3290-A	ADJUSTING	ADJUSTING	UNDERDRAIN	
							EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	6-INCH	LF
220	11+35.92	14.6' LT	610.38	611.04	608.60	2.44	--	--	--	1	1	--	1		10	
215	11+38.04	14.1' RT	610.34	611.00	608.50	2.50	--	--	--	1	--	1	1		10	
315	12+76.01	4.5' RT	611.47	612.13	606.18	5.95	1	--	1	--	--	--	1		--	
320	14+04.08	4.0' RT	612.14	612.80	605.60	7.20	1	--	1	--	--	--	1		--	
325	15+25.81	5.2' RT	611.69	612.35	605.00	7.35	1	--	1	--	--	--	1		--	
235	19+33.24	14.4' RT	606.50	607.16	605.06	2.10	--	--	--	1	--	1	1		10	
240	19+36.54	14.2' LT	606.68	607.34	605.29	2.05	--	--	--	1	1	--	1		10	
245	19+74.50	33.4' LT	606.97	607.63	605.18	2.45	--	--	--	1	1	--	1		10	
250	20+04.44	33.6' LT	606.74	607.40	604.87	2.53	--	--	--	1	1	--	1		10	
345	21+19.43	2.8' LT	607.72	608.38	601.38	7.00	--	1	1	--	--	--	1		--	
ITEM TOTAL							3	1	4	6	4	2	10		60	

*VERIFY ELEVATIONS IN THE FIELD

STORM SEWER PIPE

PIPE NUMBER	STATION - STATION	INLET ELEV	PIPE OUTLET ELEV	SLOPE %	SPV.0090.02	SPV.0090.03	608.0412
					STORM SEWER PIPE PVC 8-INCH LF	STORM SEWER PIPE PVC 10-INCH LF	REINFORCED CONCRETE CLASS IV 12-INCH LF
220-310	11+36	608.60	607.98	3.40	-	-	18
215-310	11+36 - 11+38	608.50	607.78	6.78	-	-	11
-	12+71		MATCH EXISTING		-	-	3
-	12+81		MATCH EXISTING		-	-	3
-	13+99		MATCH EXISTING		-	-	3
-	14+04		MATCH EXISTING		-	-	3
-	14+09		MATCH EXISTING		-	-	3
-	15+21		MATCH EXISTING		-	-	3
-	15+26		MATCH EXISTING		3	-	-
-	15+31		MATCH EXISTING		-	-	3
-	19+28		MATCH EXISTING		-	3	-
240-235	19+33 - 19+37	605.29	605.06	0.80	29	-	-
245-250	19+75 - 20+04	605.18	604.87	1.07	29	-	-
-	20+04		MATCH EXISTING		49	-	-
-	21+19 LT		MATCH EXISTING		-	-	3
-	21+19 RT		MATCH EXISTING		-	-	3
-	21+25		MATCH EXISTING		-	-	3
-	21+26		MATCH EXISTING		-	-	3
ITEM TOTAL					110	3	62

WATER

STATION -STATION	LOCATION	624.0100 MGAL	REMARKS
10+20 - 23+47	ALLARD STREET	5	BASE COMPACTION DUST CONTROL
ITEM TOTALS		5	

FIELD OFFICE TYPE B

STATION	624.5001 EACH	REMARKS
4985-00-52	0.12	
ITEM TOTAL		0.12

3

TOPSOIL, SALVAGED TOPSOIL, MULCHING, FERTILIZER, AND SEEDING

STATION - STATION	LOCATION	625.0100 TOPSOIL SY	627.0200 MULCHING SY	629.0210 FERTILIZER TYPE B CWT	630.0140 SEEDING MIXTURE NO. 40 LB
10+22 - 10+31	LT	3	3	0.1	0.1
10+22 - 10+37	RT	3	3	0.1	0.1
10+52 - 10+63	LT	2	2	0.1	0.1
11+07 - 11+10	LT	1	1	0.1	0.1
11+31 - 11+40	LT	2	2	0.1	0.1
11+34 - 11+46	RT	3	3	0.1	0.1
11+79 - 12+09	LT	7	7	0.1	0.2
12+16 - 12+19	LT	1	1	0.1	0.1
12+31 - 12+39	LT	2	2	0.1	0.1
12+52 - 12+66	LT	3	3	0.1	0.1
12+89 - 13+07	RT	4	4	0.1	0.1
13+15 - 13+30	LT	4	4	0.1	0.1
13+22 - 13+88	RT	15	15	0.1	0.3
13+58 -13+78	LT	3	3	0.1	0.1
14+07 - 14+22	RT	3	3	0.1	0.1
16+71 - 16+75	LT	1	1	0.1	0.1
17+06 - 17+11	LT	1	1	0.1	0.1
17+58 - 17+63	LT	1	1	0.1	0.1
19+32 - 19+76	LT	10	10	0.1	0.2
20+03 - 20+21	LT	4	4	0.1	0.1
20+55 - 20+58	LT	1	1	0.1	0.1
21+06 - 21+21	LT	3	3	0.1	0.1
21+29 - 21+57	RT	6	6	0.1	0.2
21+36 - 21+51	LT	3	3	0.1	0.1
21+85 - 22+90	LT	24	24	0.1	0.5
22+07 - 22+93	RT	19	19	0.1	0.4
23+21 - 23+47	RT	4	4	0.1	0.1
23+31 - 23+47	LT	4	4	0.1	0.1
UNDISTRIBUTED		50	50	0.5	1
ITEM TOTALS		187	187	3.3	5.0

EROSION CONTROL

STATION	LOCATION	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH	628.7010 INLET PROTECTION TYPE B EACH	628.7015 INLET PROTECTION TYPE C EACH
10+20	LT	--	--	--	1
11+36	LT	--	--	--	1
11+38	RT	--	--	1	--
19+33	RT	--	--	1	--
19+37	LT	--	--	--	1
19+75	LT	--	--	--	1
20+04	LT	--	--	--	1
PROJECT 4985-00-52		2	2	--	--
ITEM TOTALS		2	2	2	5

TRAFFIC CONTROL

LOCATION	643.0100.01 PROJECT 4985-00-52 EACH	643.0420 BARRICADES TYPE III DAYS	643.0705 WARNING LIGHTS TYPE A DAYS	643.0900 SIGNS DAYS
ALLARD ST - BEGINNING OF PROJECT	--	120	240	120
MORNING GLORY DRIVE	--	120	240	120
PARK STREET	--	120	240	120
ALLARD ST - END OF PROJECT	--	360	720	360
PROJECT 4985-00-52	1	--	--	--
ITEM TOTALS	1	720	1440	720

PAVEMENT MARKING

STATION - STATION	LOCATION	646.0106 EPOXY 4-INCH LF	647.0556 STOP LINE EPOXY 12-INCH LF	647.0766 CROSSWALK EPOXY 6-INCH LF	REMARKS
10+20 - 22+75	CL	315	--	--	CENTERLINE
10+30	RT/LT	--	--	96	
10+40	LT	--	21	--	
13+28 - 13+62	LT	--	15	63	
13+76	RT/LT	--	--	55	
19+63	RT/LT	--	--	55	
19+73 - 20+06	LT	--	15	64	
22+80	RT/LT	--	15	65	
22+87 - 23+34	LT	--	21	92	
22+91 - 23+23	RT	--	13	63	
23+44	RT/LR	--	12	56	
ITEM TOTALS		315	112	609	

3

3

CONSTRUCTION STAKING

STATION - STATION	650.4000 STORM SEWER EA	650.5000 BASE LF	650.5500 CURB & GUTTER LF	650.9910.01 SUPPLEMENTAL CONTROL (4985-00-52) LS	SPV.0060.06 CURB RAMP EA
10+20 - 23+47	10	200	823	1	11
ITEM TOTALS	10	200	823	1	11

RECONNECT STORM SEWER LATERALS

STATION	LOCATION	SPV.0060.01 EACH	REMARKS
19+75	LT	1	
ITEM TOTAL		1	

STREET SWEEPING

STATION	SPV.0075.01 HRS	REMARKS
4985-00-52	40	
ITEM TOTAL	40	

SAWING

STATION	LOCATION	690.0150 ASPHALT LF	690.0250 CONCRETE LF	REMARKS
10+20	RT/LT	82	--	PAVING LIMITS
10+22 - 10+31	LT	22	4	CURB R&R
10+22 - 10+37	RT	24	4	CURB R&R
10+52 - 10+63	LT	16	4	CURB R&R
11+07 - 11+10	LT	7	4	CURB R&R
11+31 - 11+46	RT/LT	53	24	STORM R&R
11+79 - 12+09	LT	34	4	CURB R&R
12+16 - 12+19	LT	8	4	CURB R&R
12+31 - 12+39	LT	12	4	CURB R&R
12+52 - 12+66	LT	18	4	CURB R&R
12+72 - 12-80	RT	32	--	STORM R&R
12+73 - 12+77	LT	9	4	CURB R&R
12+89 - 13+07	RT	22	4	CURB R&R
13+15 - 13+30	LT	30	4	CURB R&R
13+22 - 13+88	RT	65	4	CURB R&R
13+30 - 13+58	LT	28	--	PAVING LIMITS
13+58 -13+78	LT	34	4	CURB R&R
14+00 - 14+08	RT	32	--	STORM R&R
14+07 - 14+22	RT	19	4	CURB R&R
15+22 - 15+30	RT	32	--	STORM R&R
15+37 - 15+41	RT	16	4	CURB R&R
15+94 - 15+99	RT	12	4	CURB R&R
16+27 - 16+30	RT	14	4	CURB R&R
16+71 - 16+75	LT	8	4	CURB R&R
17+06 - 17+11	LT	10	4	CURB R&R
17+58 - 17+63	LT	8	4	CURB R&R
17+79 - 17+83	RT	14	4	CURB R&R
19+24 - 19+81	RT	106	4	CURB R&R
19+30 - 19+41	RT/LT	48	--	STORM R&R
19+32 - 19+76	LT	51	4	CURB R&R
19+76 - 20+03	LT	27	--	PAVING LIMITS
19+78 - 20+01	LT	46	--	STORM R&R
20+00 - 20+14	RT / LT	93	4	STORM R&R
20+03 - 20+21	LT	16	4	CURB R&R
20+55 - 20+58	LT	8	4	CURB R&R
20+69 - 20+91	RT	52	4	CURB R&R
21+02 - 22+75	RT	192	10	FULL DEPTH
21+06 - 21+21	LT	20	4	CURB R&R
21+15 - 21+23	LT	32	--	STORM R&R
21+36 - 21+51	LT	19	4	CURB R&R
21+85 - 22+90	LT	120	4	CURB R&R
22+75 - 22+93	RT	30	2	CURB R&R
22+90 - 23+31	LT	41	--	PAVING LIMITS
22+93 - 23+21	RT	27	--	PAVING LIMITS
23+21 - 23+47	RT	40	4	CURB R&R
23+31 - 23+47	LT	35	4	CURB R&R
23+47	RT/LT	27	--	PAVING LIMITS
UNDISTRIBUTED		100	20	
ITEM TOTAL		1791	184	

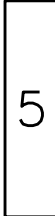
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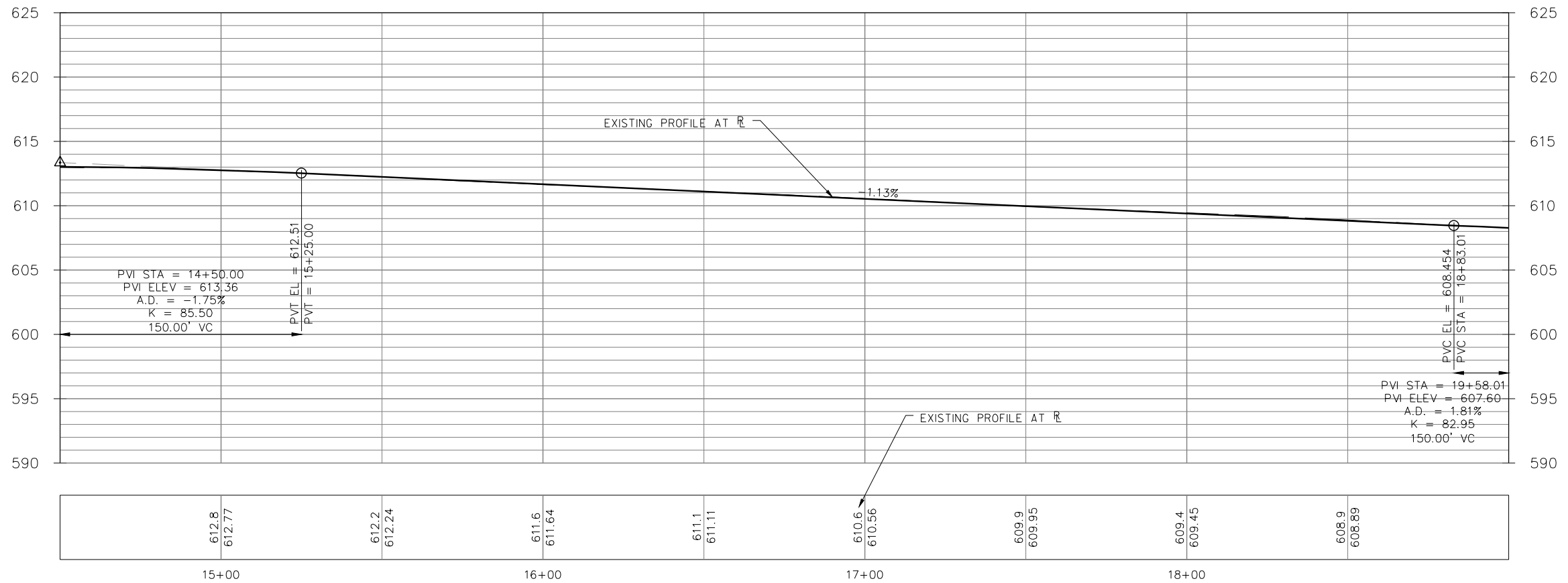
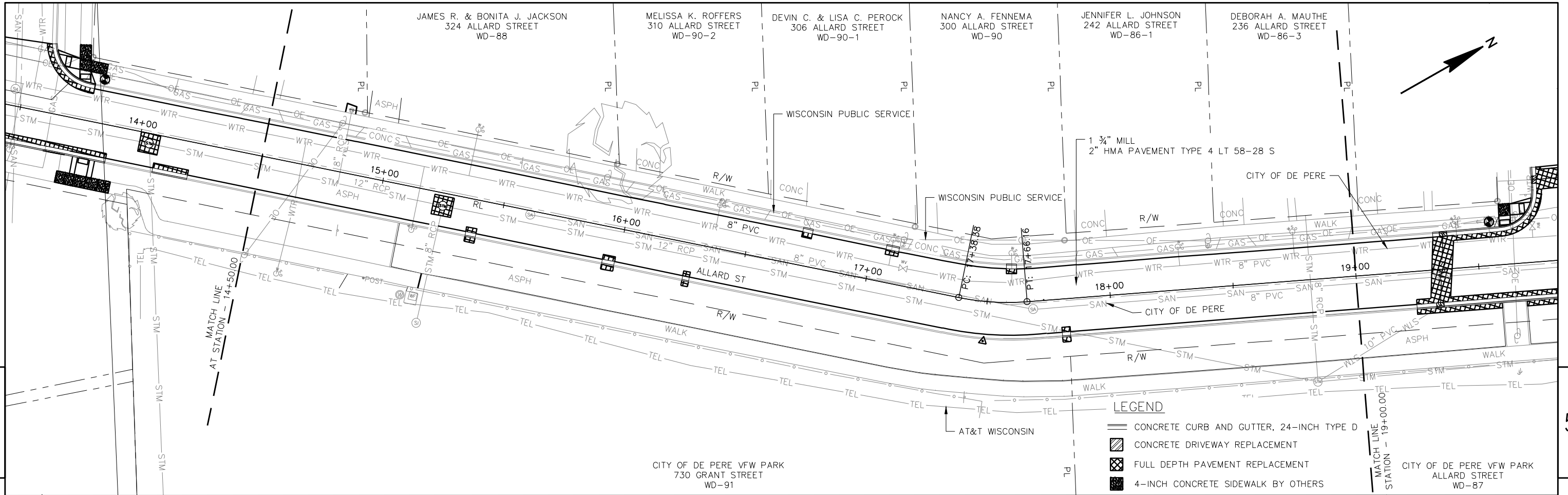
CONCRETE CURB & GUTTER

SPV.0090.01
24-INCH
TYPE D

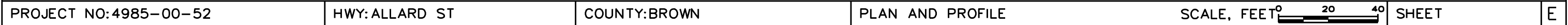
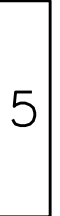
STATION - STATION	LOCATION	LF	REMARKS
10+22 - 10+31	LT	15	CURB RAMP
10+22 - 10+37	RT	19	CURB RAMP
10+52 - 10+63	LT	13	
11+07 - 11+10	LT	3	
11+31 - 11+40	LT	9	
11+34 - 11+46	RT	12	DRIVEWAY
11+79 - 12+09	LT	30	DRIVEWAY
12+16 - 12+19	LT	3	
12+31 - 12+39	LT	8	
12+52 - 12+66	LT	14	DRIVEWAY
12+73 - 12+77	LT	4	DRIVEWAY
12+89 - 13+07	RT	18	
13+15 - 13+30	LT	20	CURB RAMP
13+22 - 13+88	RT	66	DRIVEWAY & CURB RAMP
13+58 -13+78	LT	25	CURB RAMP
14+07 - 14+22	RT	15	
15+37 - 15+41	RT	4	DRIVEWAY
15+94 - 15+99	RT	5	DRIVEWAY
16+27 - 16+30	RT	3	DRIVEWAY
16+71 - 16+75	LT	4	DRIVEWAY
17+06 - 17+11	LT	5	
17+58 - 17+63	LT	5	
17+79 - 17+83	RT	4	DRIVEWAY
19+24 - 19+81	RT	57	DRIVEWAY
19+32 - 19+76	LT	60	CURB RAMP
20+00 - 20+13	RT	14	DRIVEWAY
20+03 - 20+21	LT	35	CURB RAMP
20+55 - 20+58	LT	4	
20+69 - 20+91	RT	22	DRIVEWAY
21+06 - 21+21	LT	16	DRIVEWAY
21+18 - 21+22	RT	4	
21+29 - 21+57	RT	28	
21+36 - 21+51	LT	16	DRIVEWAY
21+85 - 22+90	LT	113	DRIVEWAY & CURB RAMP
22+07 - 22+93	RT	93	DRIVEWAY & CURB RAMP
23+21 - 23+47	RT	33	CURB RAMP
23+31 - 23+47	LT	24	CURB RAMP
UNDISTRIBUTED		85	
ITEM TOTAL		908	

DONALD F. & SUZANNE M. ROFFERS
904 GRANT STREET
WD-106



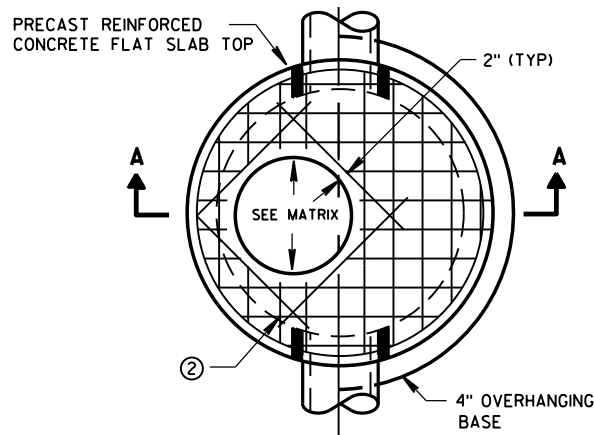


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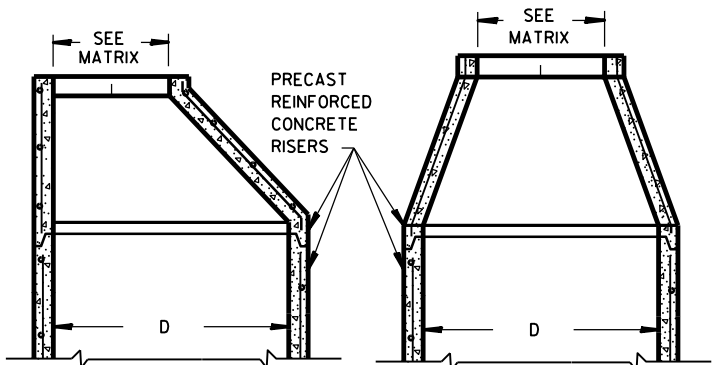


Standard Detail Drawing List

08B09-02	MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER
08C07-02	INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT
08D05-18A	CURB RAMPS TYPES 1 AND 1-A
08D05-18B	CURB RAMPS TYPES 2 AND 3
08D05-18C	CURB RAMPS TYPES 4A AND 4A1
08D05-18D	CURB RAMPS TYPE 4B AND 4B1
08D05-18E	CURB RAMPS TYPES 5, 6, 7A, 7B & 8
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
15C02-06A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-06B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C03-03	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C08-17A	LONGITUDINAL MARKING (MAINLINE)
15C33-02	STOP LINE AND CROSSWALK PAVEMENT MARKING

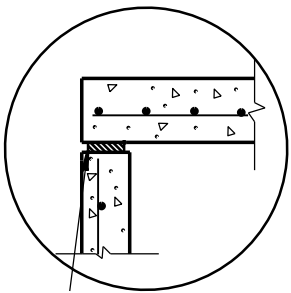


PLAN VIEW CIRCULAR OPENING

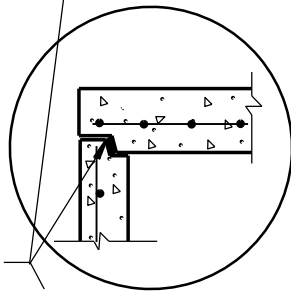


OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP

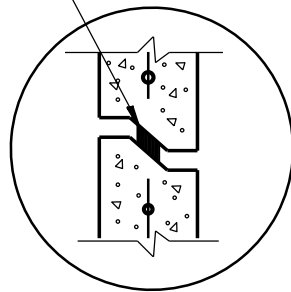
OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP



TOP WITH PLAIN END JOINT

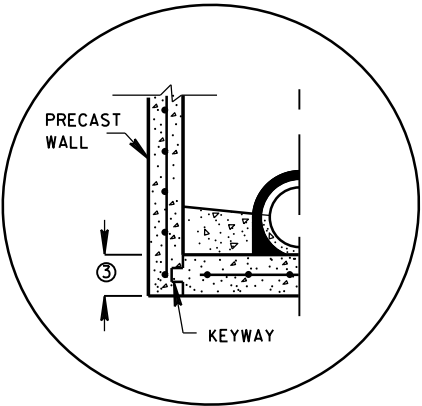


TOP WITH TONGUE AND GROOVE JOINT

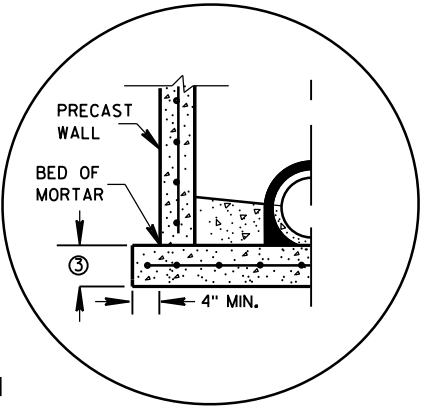


DETAIL "B"

JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C990 (TYP)

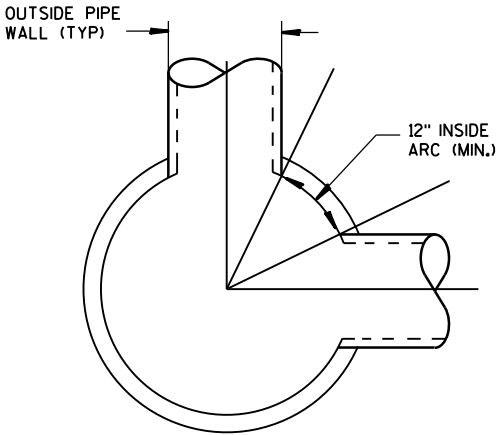


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION

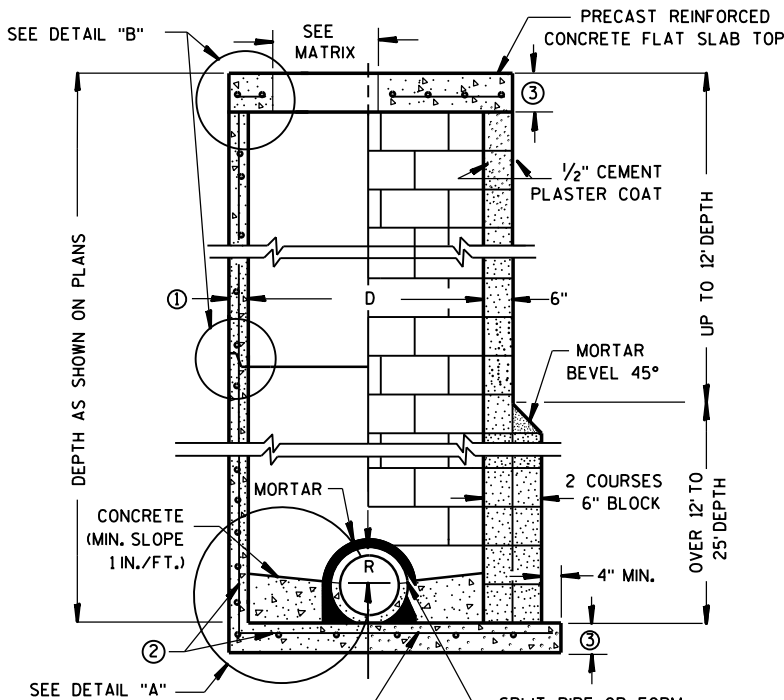


SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "A"



DETAIL "C"



CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES

PRECAST REINFORCED CONCRETE BLOCK WITH CONCRETE WITH MONOLITHIC BASE CAST-IN-PLACE OR PRECAST REINFORCED CONCRETE BASE ②

MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS. UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST MANHOLE UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR UNDERGROUND DRAINAGE STRUCTURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATE THE SIZE OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

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

PRECAST REINFORCED CONE TOPS (ECCENTRIC OR CONCENTRIC) OR PRECAST REINFORCED FLAT SLAB TOPS MAY BE USED ON CONCRETE BLOCK STRUCTURES.

ECCENTRIC CONE TOPS MAY BE USED ON ALL STRUCTURES, AND CONCENTRIC CONE TOPS SHALL BE USED ONLY ON STRUCTURES 5 FEET OR LESS IN DEPTH, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

STEPS MEETING AASHTO M199 AND THE FOLLOWING REQUIREMENTS SHALL BE INSTALLED IN ALL STRUCTURES OVER 5 FEET IN DEPTH: 16 INCH C-C MAXIMUM SPACING; PROJECT A MINIMUM CLEAR DISTANCE OF 4 INCHES FROM THE WALL AT THE POINT OF EMBEDMENT; MINIMUM LENGTH OF 10 INCHES; MINIMUM WALL EMBEDMENT OF 3 INCHES. FERROUS METAL STEPS NOT PAINTED OR TREATED TO RESIST CORROSION SHALL HAVE A MINIMUM CROSS SECTIONAL DIMENSION OF 1 INCH.

STEPS OF APPROVED POLYPROPYLENE PLASTIC COATED REINFORCEMENT BAR ARE ACCEPTABLE. REINFORCING BAR MUST BE A MINIMUM OF 1/2" AND MEET THE REQUIREMENTS OF ASTM A615.

CERTIFICATION SHALL BE PROVIDED THAT INSTALLED STEPS WHEN TESTED IN ACCORDANCE WITH SECTION 10 OF AASHTO T280 CAN WITHSTAND A VERTICAL LOAD OF 800 LBS. AND A HORIZONTAL LOAD OF 400 LBS.

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

CONCRETE BLOCK WILL NOT BE PERMITTED FOR STRUCTURES GREATER THAN 4 FEET IN DIAMETER.

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

ALL PRECAST MANHOLE UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M 199.

4" OVERHANGING BASES ARE REQUIRED FOR ALL CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

FOR ADDITIONAL CONFIGURATIONS, MAINTAIN A MINIMUM OF 12 INCHES AS MEASURED FROM THE INSIDE OF THE STRUCTURE WALL BETWEEN THE OUTSIDE PIPE WALLS OF ADJACENT PIPES. SEE DETAIL "C".

- ① MINIMUM WALL THICKNESS SHALL BE 4 INCHES FOR 3-FT, 5 INCHES FOR 4-FT, 6 INCHES FOR 5-FT, 7 INCHES FOR 6-FT, 8 INCHES FOR 7-FT AND 9 INCHES FOR 8-FT DIAMETER PRECAST MANHOLES.
- ② FOR PRECAST MANHOLES PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.
- ③ PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER OF 48" AND LESS SHALL HAVE A MINIMUM THICKNESS OF 6". PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER LARGER THAN 48" SHALL HAVE A MINIMUM THICKNESS OF 8".

MANHOLE COVER OPENING MATRIX

MANHOLE COVER TYPE	C	ALL J'S	K	L	M
OPENING SIZE (FT)					
2 DIA.	X	X		X	
3 DIA.			X		X

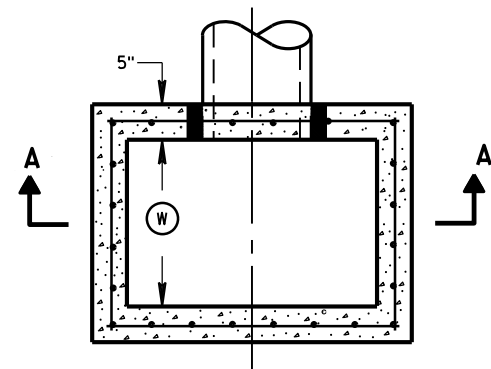
PIPE MATRIX

MANHOLE SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	180° SEPARATION (IN)	90° SEPARATION (IN)
3-FT	15	12
4-FT	24	18
5-FT	36	24
6-FT	42	36
7-FT	48	36
8-FT	60	42

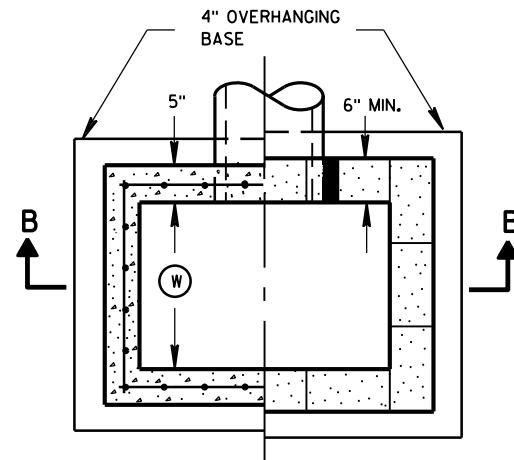
MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

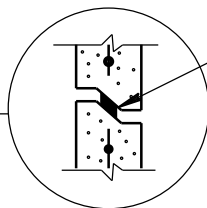
APPROVED
DATE: Sept., 2016
FOR: /S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR
FHWA



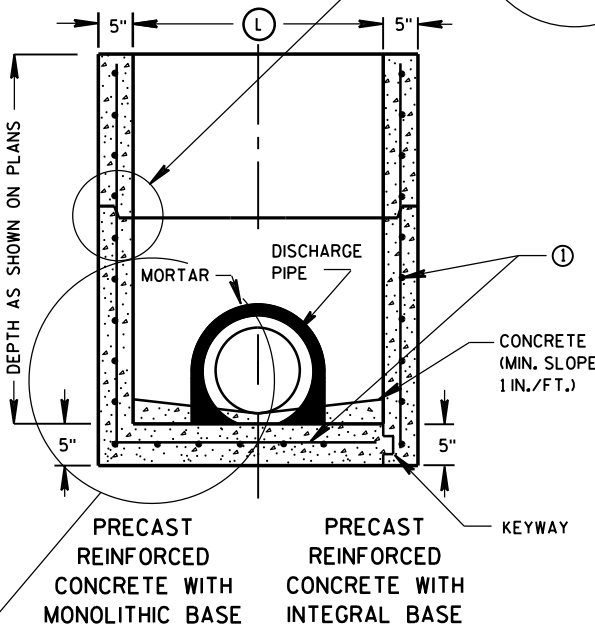
PLAN VIEW



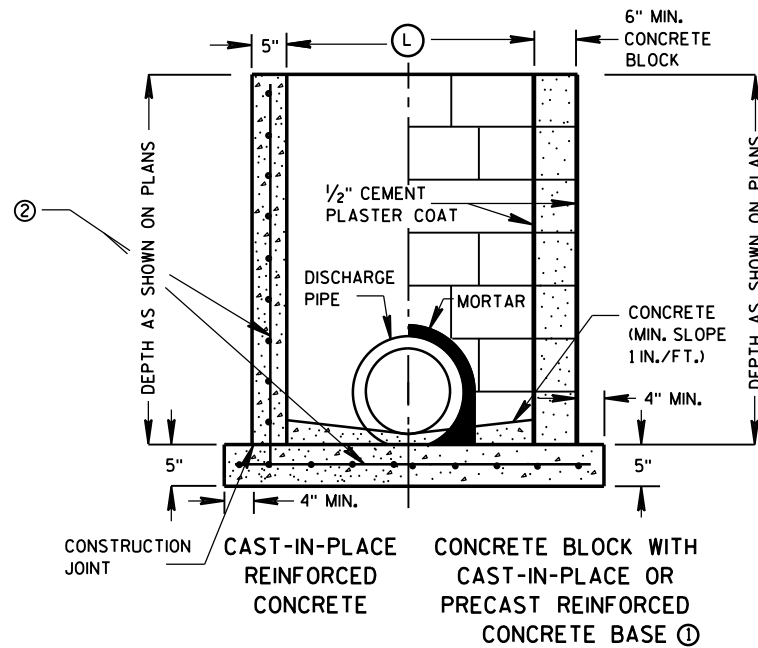
PLAN VIEW



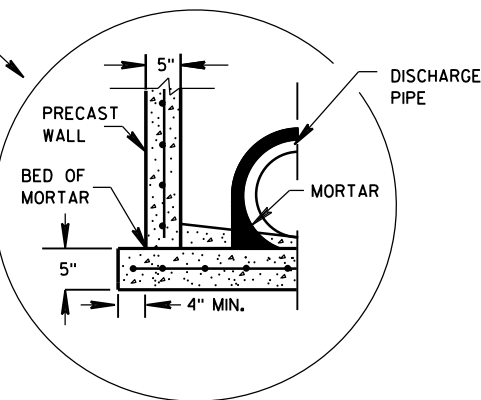
RISER JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C 990 (TYP)



SECTION A-A



SECTION B-B



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT

GENERAL NOTES

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

UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST INLET UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR UNDERGROUND DRAINAGE STRUCTURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF ASTM C 913.

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATES THE SIZE OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

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

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

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

4" OVERHANGING BASES ARE REQUIRED FOR CAST-IN-PLACE REINFORCED CONCRETE AND CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

MAXIMUM INSIDE PIPE DIAMETER DETERMINED BY 3 INCH CLEARANCE ON EACH SIDE OF THE OUTSIDE WALL OF THE PIPE. SEE DETAIL "A". ASSUMES PIPE ENTERS PERPENDICULAR TO THE STRUCTURE.

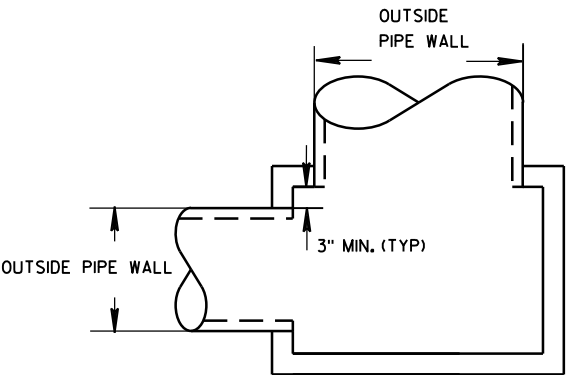
- ① FOR PRECAST INLETS PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913.
- ② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

INLET COVER MATRIX

INLET SIZE		INLET COVER TYPE	ALL A'S	ALL B'S	BW	F	ALL H'S	S	T	V	WM
	WIDTH ① (FT)	LENGTH ② (FT)									
2X2-FT	2	2	X	X				X		X	
2X2.5-FT	2	2.5			X			X	X	X	X
2X3-FT	2	3					X				
2.5X3-FT	2.5	3				X					

PIPE MATRIX

INLET SIZE	MAXIMUM INSIDE PIPE DIAMETER	
	WIDTH (IN)	LENGTH (IN)
2X2-FT	12	12
2X2.5-FT	12	18
2X3-FT	12	24
2.5X3-FT	18	24

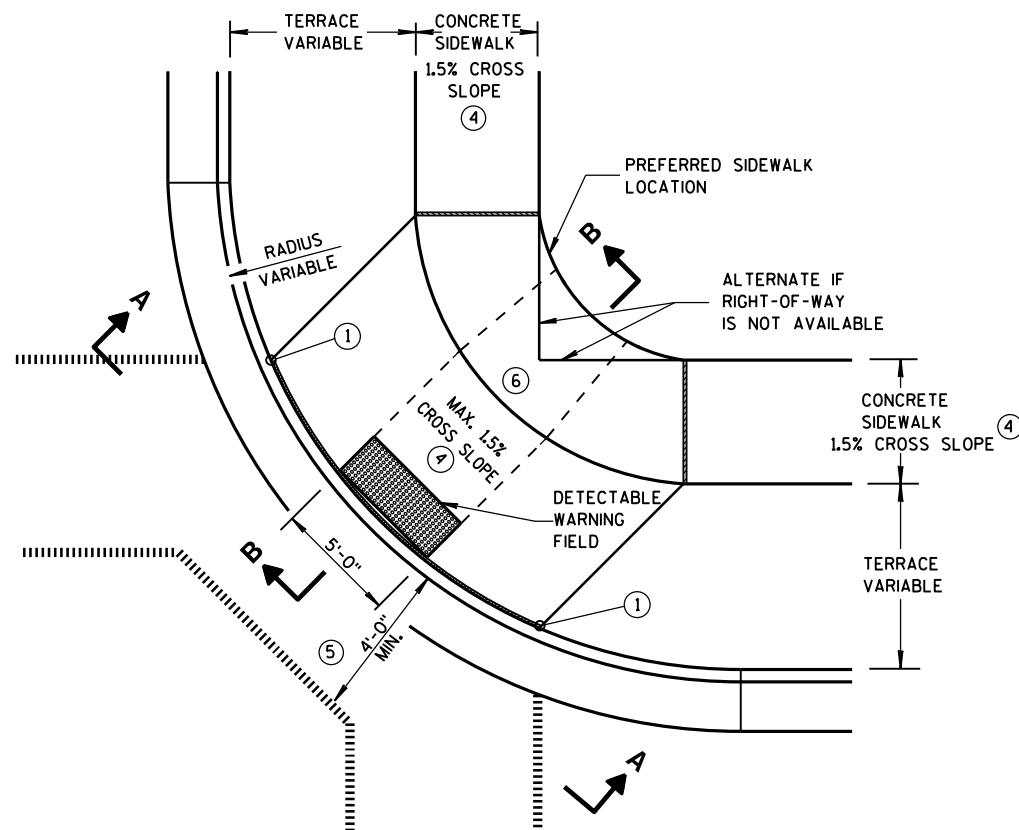


DETAIL "A"

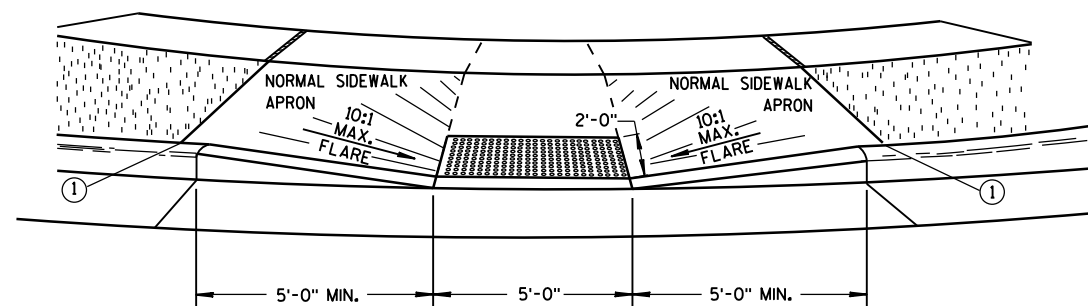
INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept., 2016 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT
FHWA UNIT SUPERVISOR

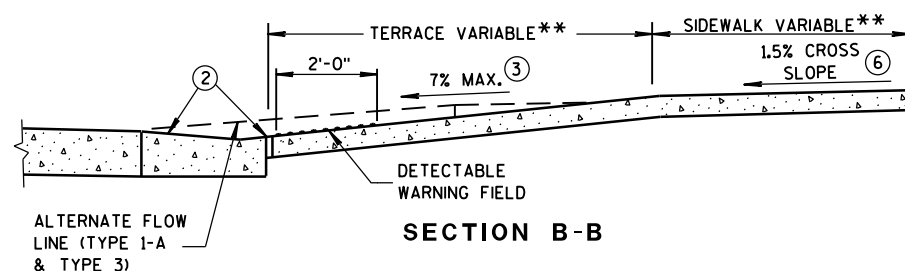


PLAN VIEW
TYPE 1 RAMP
(CENTER OF CORNER RADIUS)

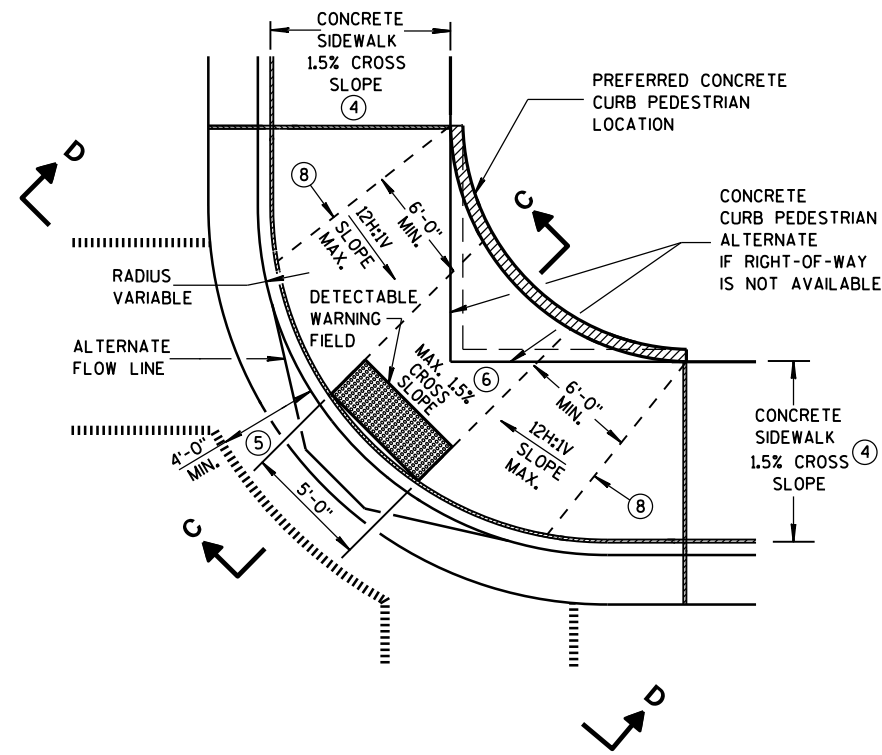


VIEW A-A

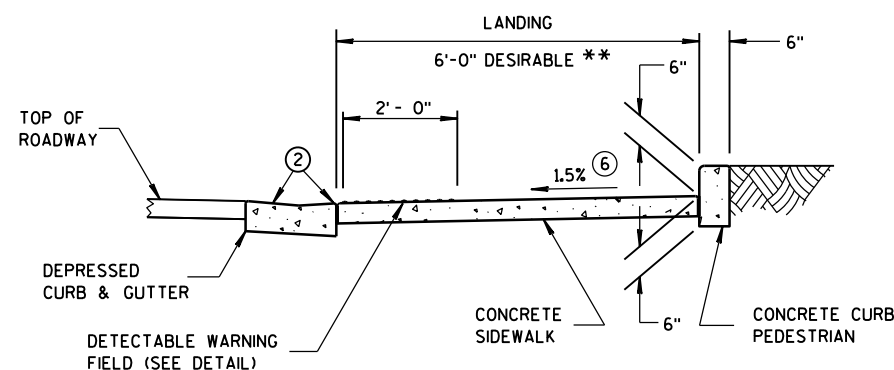
** WIDTH SHOWN ELSEWHERE
IN THE PLANS



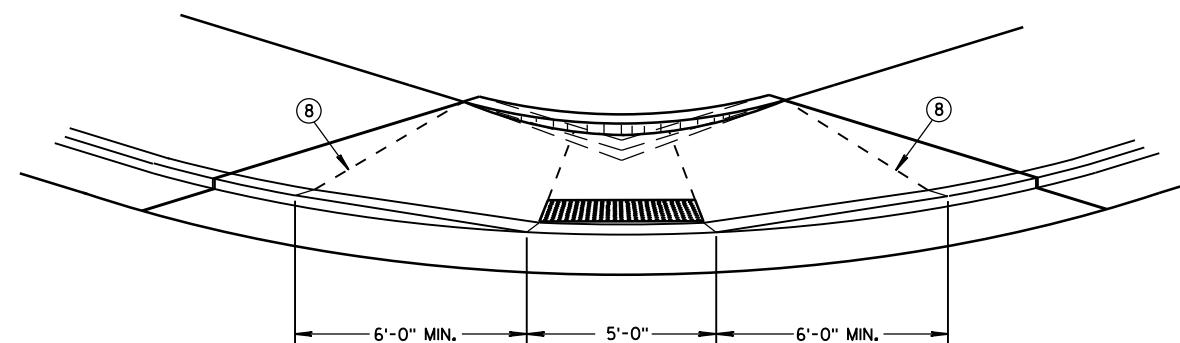
SECTION B-B



PLAN VIEW
TYPE 1-A RAMP
(NO TERRACE)



SECTION C-C



VIEW D-D

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.

WHEN NECESSARY, THE SIDEWALK ELEVATION MAY BE LOWERED TO MEET THE HIGH POINT ON THE RAMP.

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

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





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

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

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

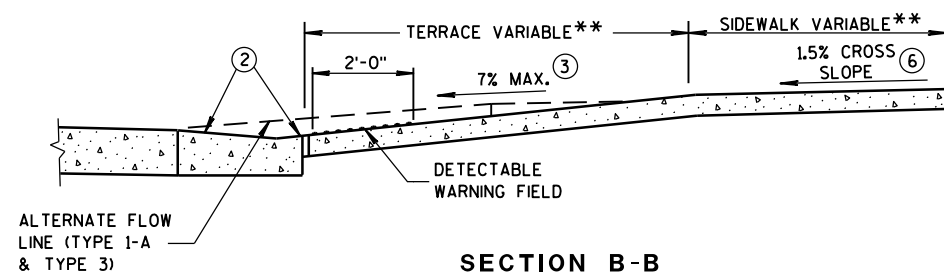
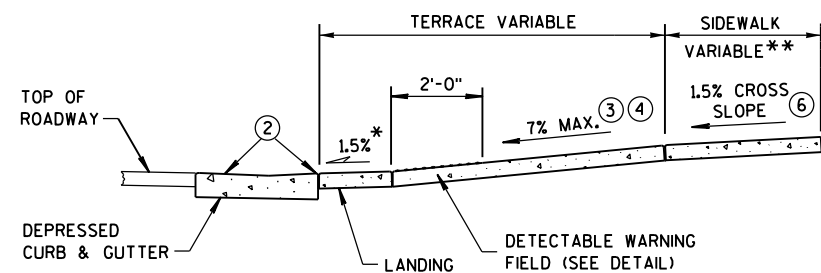
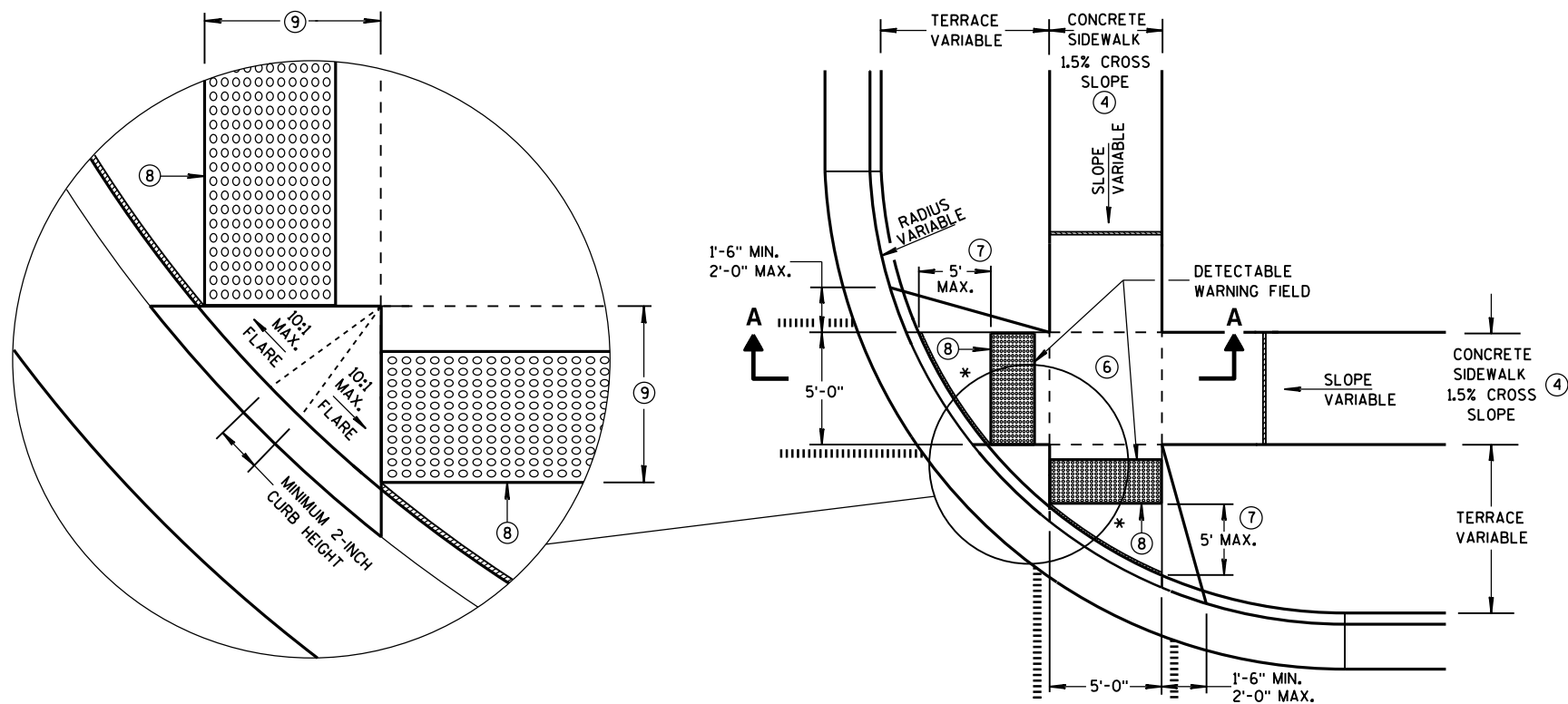
- ① THIS POINT IS AN EXTENSION OF OUTSIDE EDGE OF APPROACHING SIDEWALK WHERE IT MEETS THE BACK OF CONCRETE CURB. POINT LOCATION MAY BE ADJUSTED TO ALIGN WITH BEGINNING OF FULL-HEIGHT CURB IF THIS DISTANCE IS SHORT.
- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL NOT EXCEED 7%.
- ③ ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- ④ $\pm 0.5\%$ CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- ⑤ PROVIDE A LEVEL LANDING IN THE STREET AND GUTTER AREA. (2% MAXIMUM SLOPE IN ANY DIRECTION). WHEN THE GUTTER SLOPE EXCEEDS 2%, CONSTRUCT THE LEVEL LANDING IN THE STREET AREA.
- ⑥ PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.
- ⑧ PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

LEGEND

-  1/2" EXPANSION JOINT-SIDEWALK
 CONTRACTION JOINT FIELD LOCATED
 PAVEMENT MARKING CROSSWALK (WHITE)
 ALTERNATIVE LAYOUT

CURB RAMPS TYPES 1 AND 1-A

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



** WIDTH SHOWN ELSEWHERE
IN THE PLANS

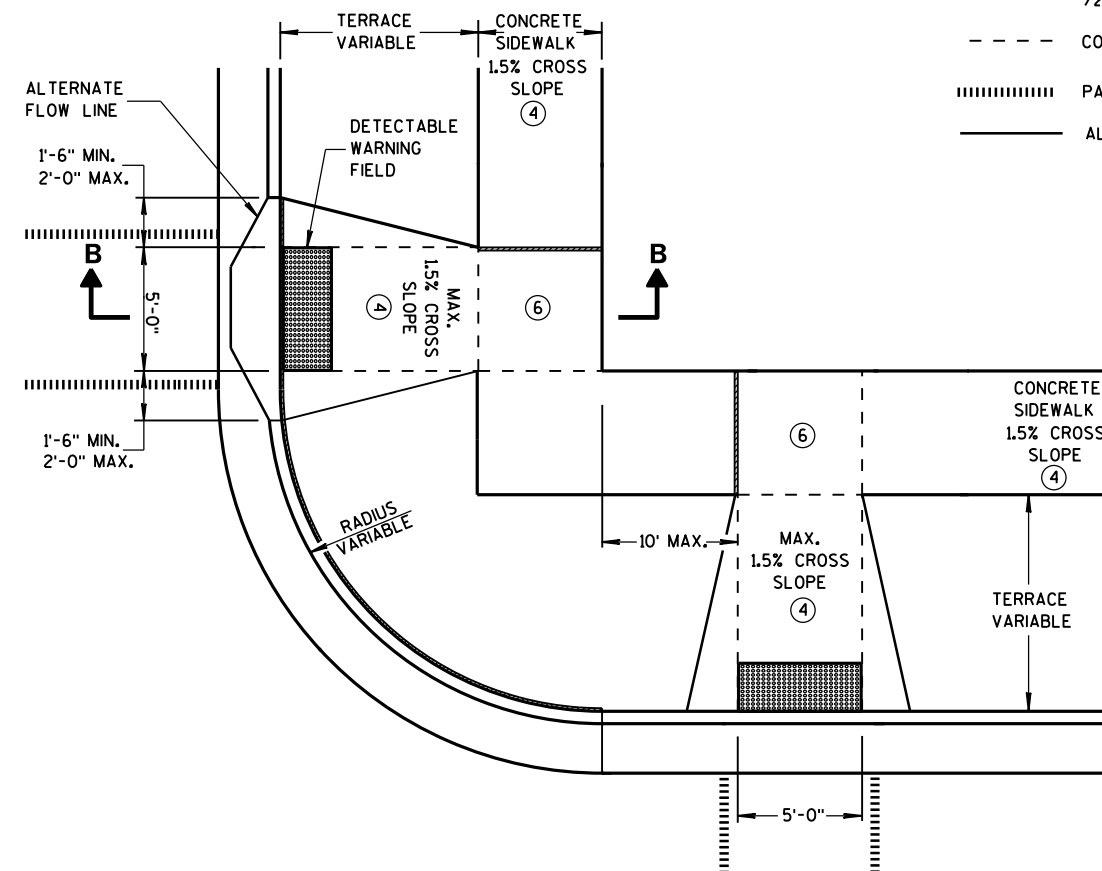
GENERAL NOTES

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL NOT EXCEED 7%.
- ③ ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- ④ $\pm 0.5\%$ CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- ⑥ PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.
- ⑦ WHEN THIS DISTANCE EXCEEDS 5 FEET, STAGGER ADDITIONAL DETECTABLE WARNING PANEL FORWARD TO REDUCE THIS DISTANCE. PROVIDE MINIMUM 12-INCH ROW OVERLAP TO AVOID SIDESTEP OF DOME DETECTION. USE EQUAL-SIZE PANELS TO DEVELOP OVERLAPPING, STAGGERED ROWS. ALIGN DOMES BETWEEN OVERLAPPING ROWS AND IN DIRECTION OF PEDESTRIAN TRAVEL.
- ⑧ PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- ⑨ WHEN THIS DISTANCE IS LESS THAN 6'-0", IT MAY BE DIFFICULT TO ACHIEVE A 7% SLOPE OR FLATTER ALONG THE RAMP. REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 7% SLOPE OR FLATTER ON RAMP. CONSTRUCT 2-INCH MINIMUM CURB HEIGHT BETWEEN 10:1 FLARES.

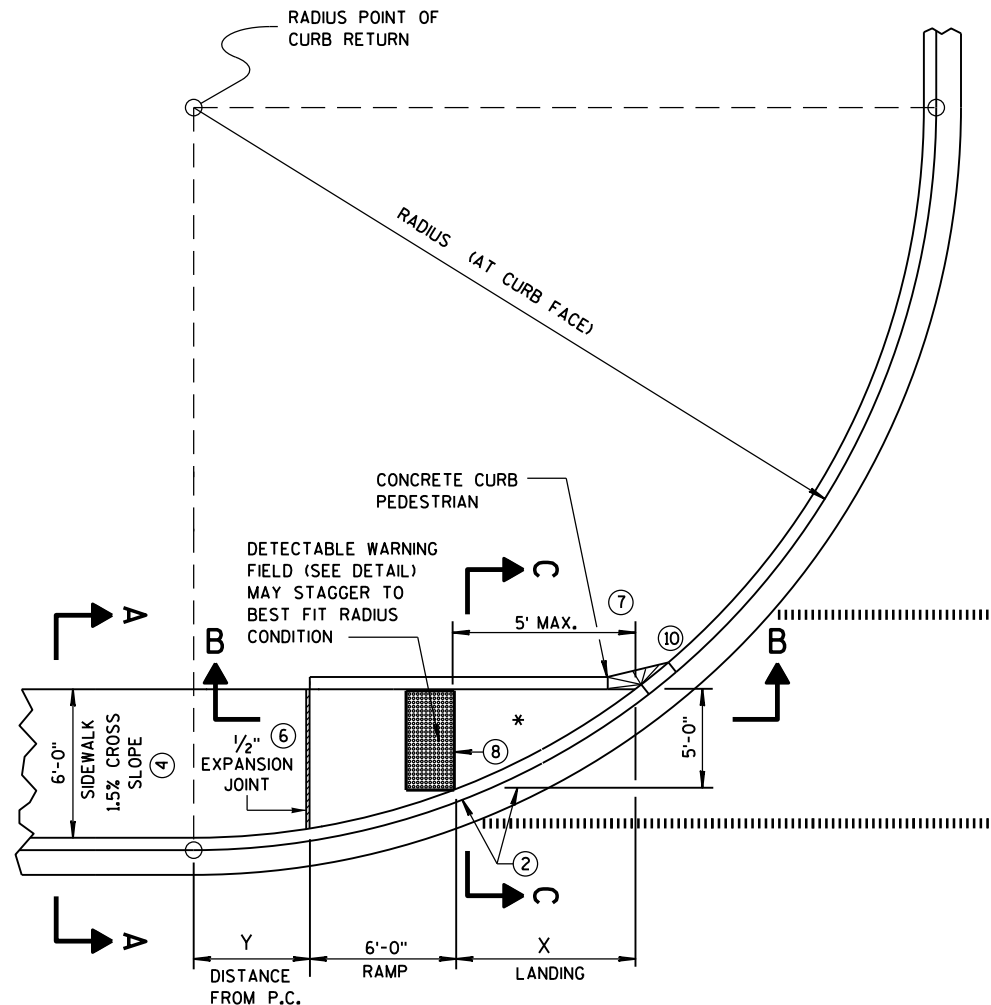
LEGEND

- 1/2" EXPANSION JOINT-SIDEWALK
- - - CONTRACTION JOINT FIELD LOCATED
- ||||| PAVEMENT MARKING CROSSWALK (WHITE)
- ALTERNATIVE LAYOUT

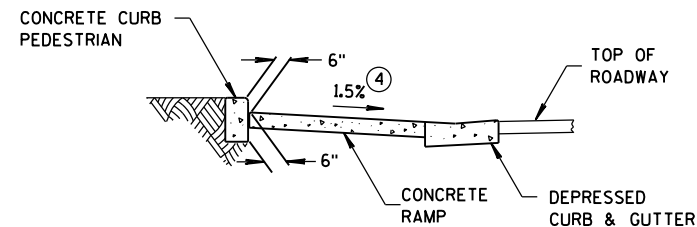


CURB RAMPS
TYPES 2 AND 3

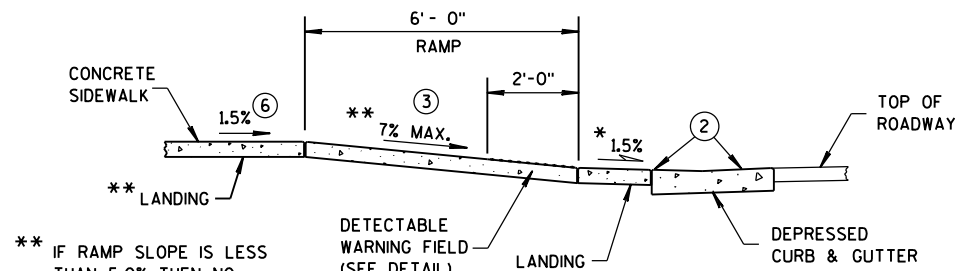
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



CURB RAMP TYPE 4A
PLAN VIEW



SECTION C-C FOR TYPE 4A



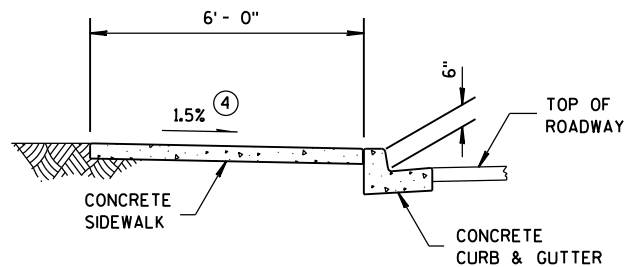
SECTION B-B FOR TYPE 4A

** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

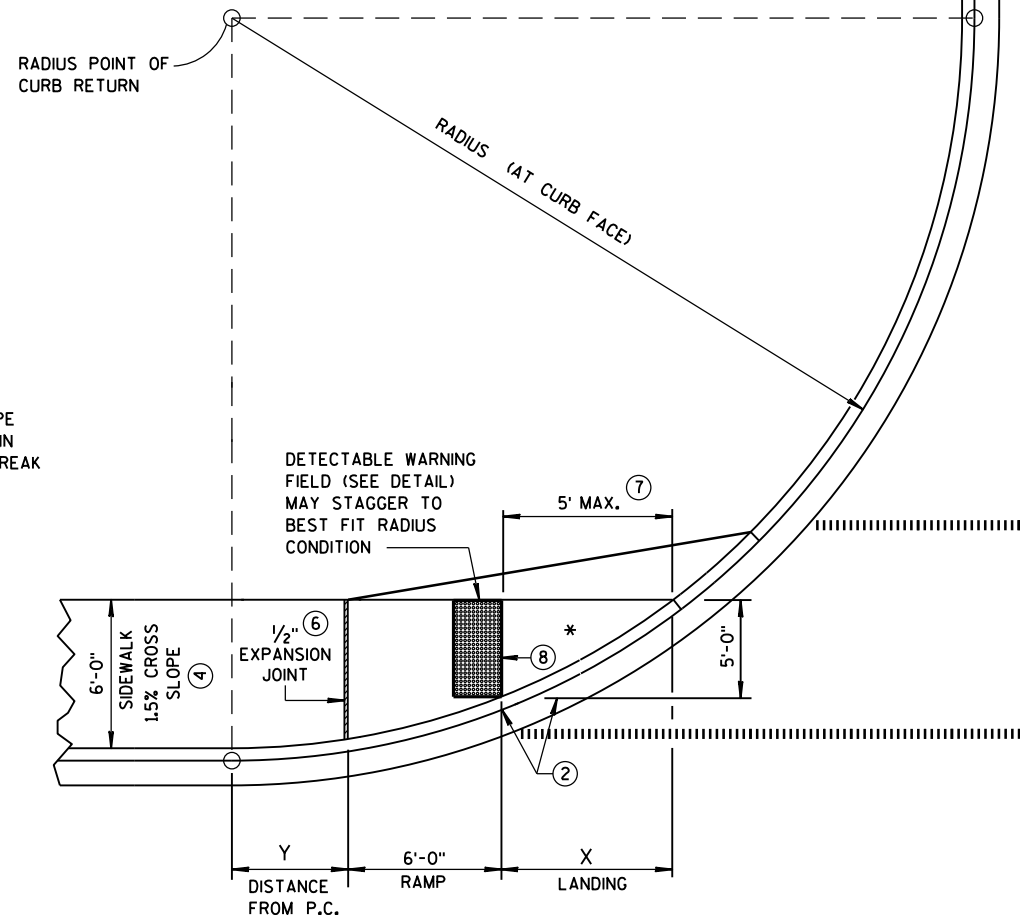
* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK

RADIUS (AT CURB FACE)	X	Y
20 FEET	7'-11"	0'-2"
30 FEET	10'-2 3/4"	1'-7 1/2"
40 FEET	12'-1 1/4"	2'-10"
50 FEET	13'-8 3/4"	3'-10 3/4"
60 FEET	15'-2"	4'-10 1/4"

INTERMEDIATE RADII CAN BE INTERPOLATED



SECTION A-A FOR TYPE 4A



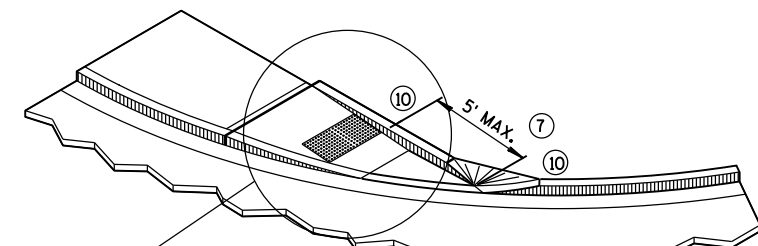
CURB RAMP TYPE 4A1
PLAN VIEW

GENERAL NOTES

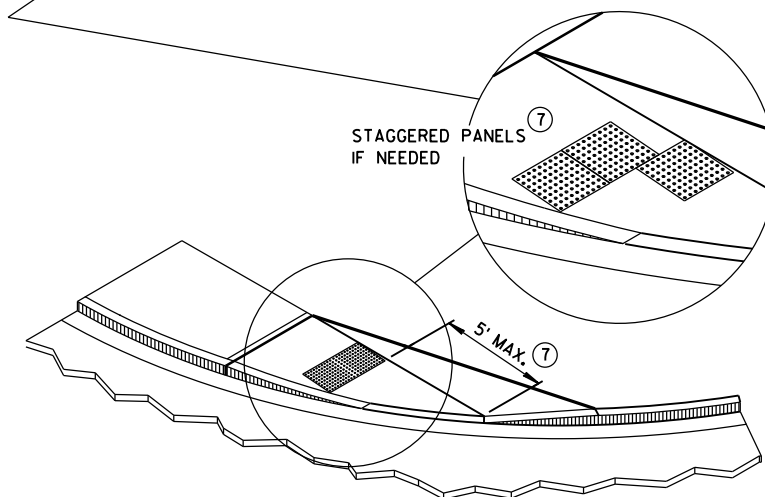
AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

- GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL NOT EXCEED 7%.
- ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.
- WHEN THIS DISTANCE EXCEEDS 5 FEET, STAGGER ADDITIONAL DETECTABLE WARNING PANEL FORWARD TO REDUCE THIS DISTANCE. PROVIDE MINIMUM 12-INCH ROW OVERLAP TO AVOID SIDESTEP OF DOME DETECTION. USE EQUAL-SIZE PANELS TO DEVELOP OVERLAPPING, STAGGERED ROWS. ALIGN DOMES BETWEEN OVERLAPPING ROWS AND IN DIRECTION OF PEDESTRIAN TRAVEL.
- PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.



ISOMETRIC VIEW FOR TYPE 4A



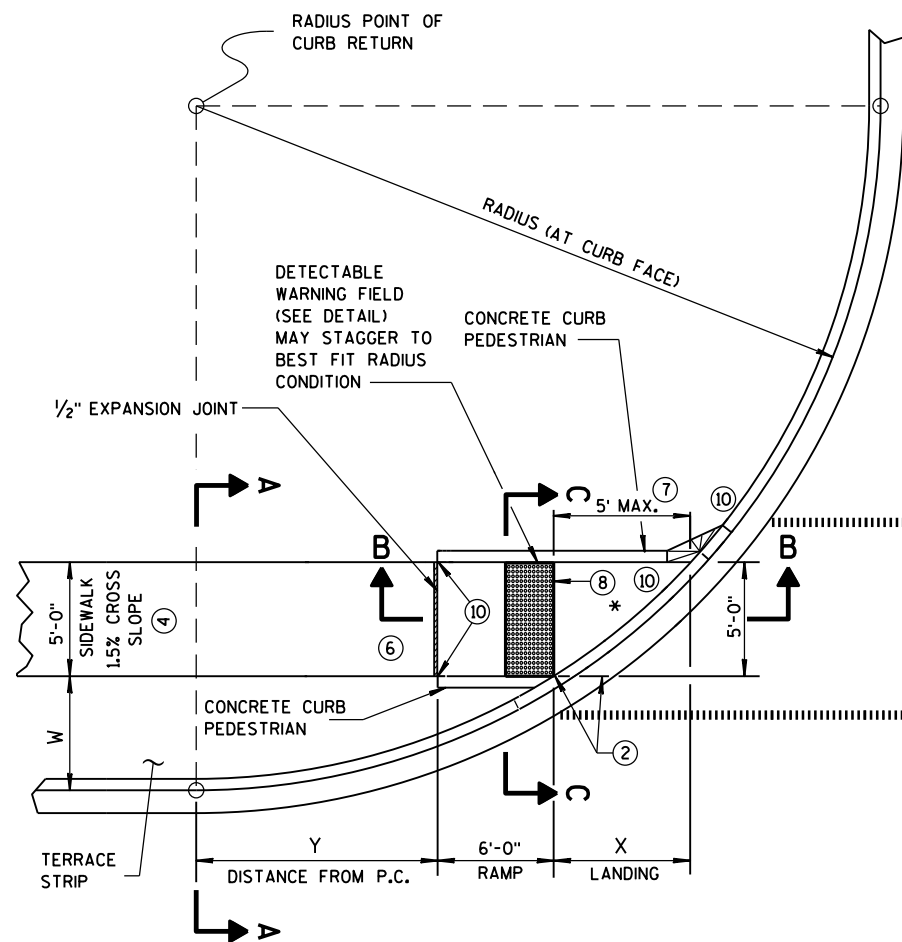
ISOMETRIC VIEW FOR TYPE 4A1

LEGEND

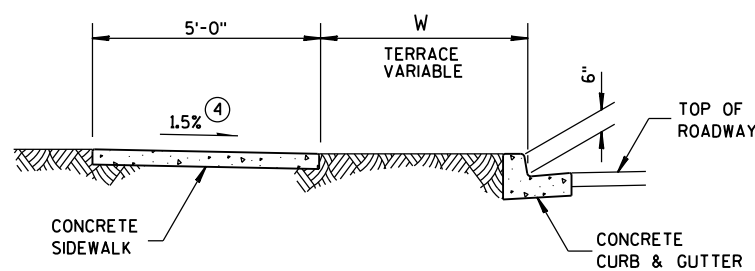
- 1/2" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS
TYPES 4A AND 4A1

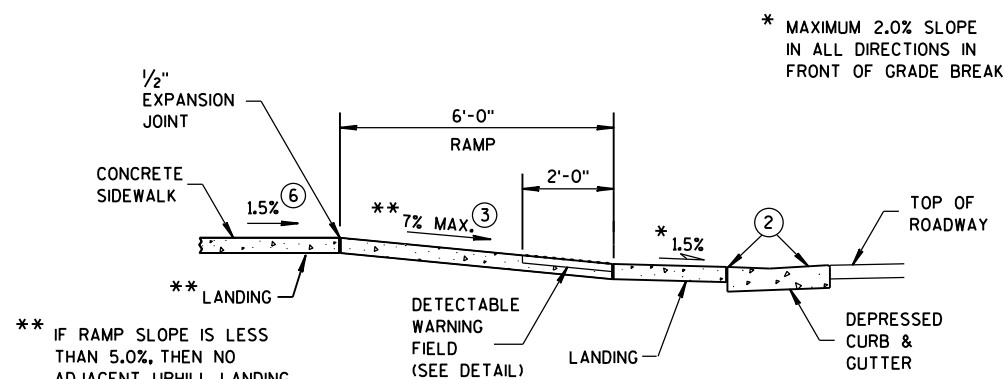
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



CURB RAMP TYPE 4B
PLAN VIEW

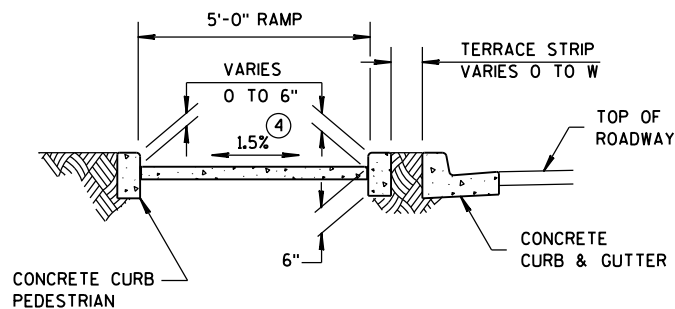


SECTION A-A FOR TYPE 4B

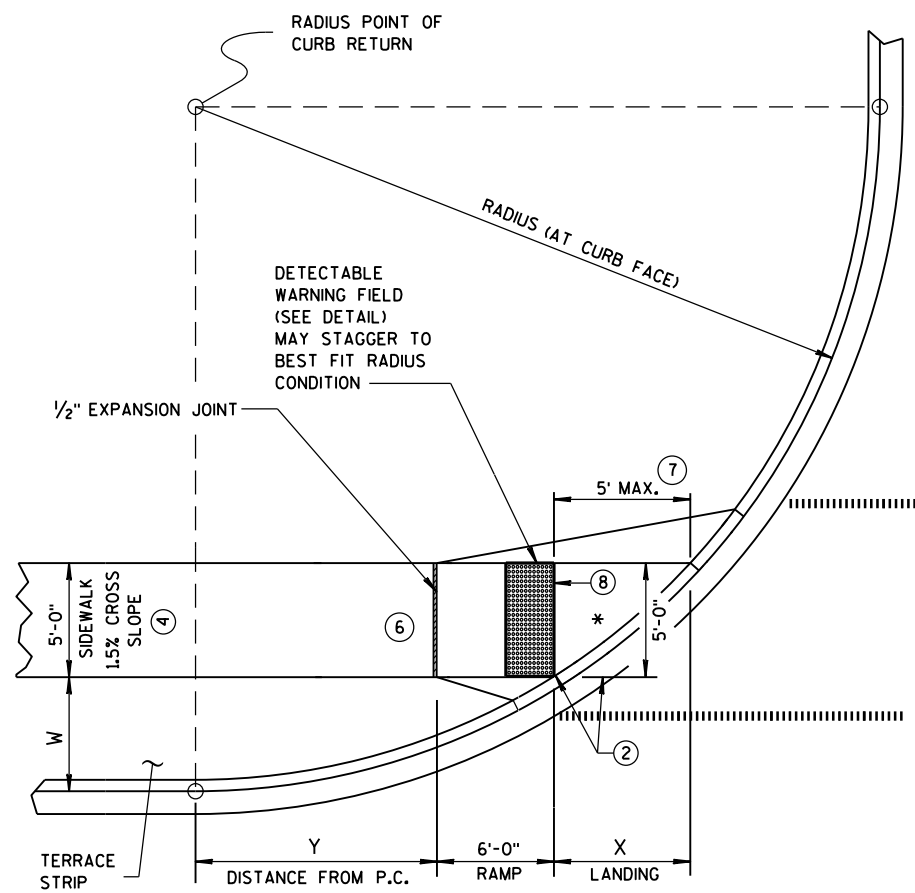


SECTION B-B FOR TYPE 4B

- LEGEND**
- 1/2" EXPANSION JOINT-SIDEWALK
 - CONTRACTION JOINT FIELD LOCATED
 - PAVEMENT MARKING CROSSWALK (WHITE)



SECTION C-C FOR TYPE 4B



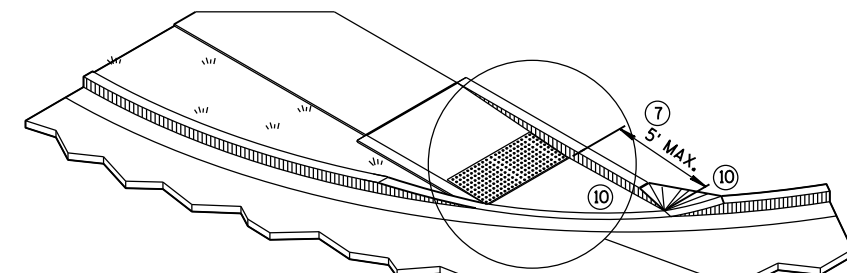
CURB RAMP TYPE 4B1
PLAN VIEW

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'-9 3/4"	3'-6 1/2"	4'-11 1/2"	5'-1 3/4"	4'-3 3/4"	6'-5 1/2"	3'-8 3/4"	7'-6 3/4"	3'-3"	8'-6 1/4"
30 FEET	7'-9 1/4"	5'-10 1/2"	6'-9 1/2"	7'-11 1/4"	6'-0 1/4"	9'-8"	5'-5"	11'-1 3/4"	4'-10 3/4"	12'-5 3/4"
40 FEET	9'-4"	7'-10"	8'-2 3/4"	10'-3"	7'-4 3/4"	12'-3 3/4"	6'-8 1/2"	14'-1 1/4"	6'-1 3/4"	15'-8 1/2"
50 FEET	10'-8"	9'-6 1/2"	9'-5 1/2"	12'-3 1/4"	8'-6 1/2"	14'-7 1/2"	7'-9 3/4"	16'-8 1/4"	7'-2 1/2"	18'-6 1/4"
60 FEET	11'-10 1/4"	11'-0 3/4"	10'-6 1/2"	14'-1 1/4"	9'-6 1/2"	16'-8 1/2"	8'-9 1/4"	18'-11 3/4"	8'-1 1/2"	21'-0 1/2"

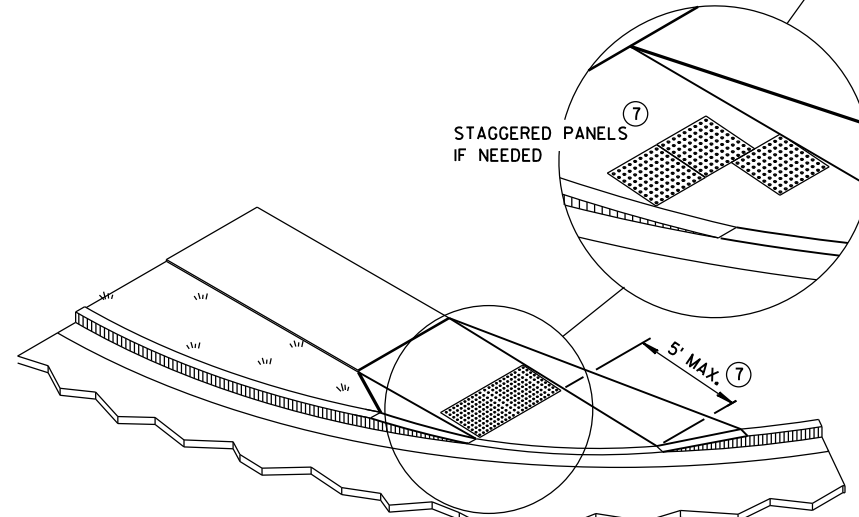
GENERAL NOTES

INTERMEDIATE RADII CAN BE INTERPOLATED

- AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS. DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.
- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL NOT EXCEED 7%.
 - ③ ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
 - ④ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
 - ⑥ PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.
 - ⑦ WHEN THIS DISTANCE EXCEEDS 5 FEET, STAGGER ADDITIONAL DETECTABLE WARNING PANEL FORWARD TO REDUCE THIS DISTANCE. PROVIDE MINIMUM 12-INCH ROW OVERLAP TO AVOID SIDESTEP OF DOME DETECTION. USE EQUAL-SIZE PANELS TO DEVELOP OVERLAPPING, STAGGERED ROWS. ALIGN DOMES BETWEEN OVERLAPPING ROWS AND IN DIRECTION OF PEDESTRIAN TRAVEL.
 - ⑧ PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
 - ⑩ INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.



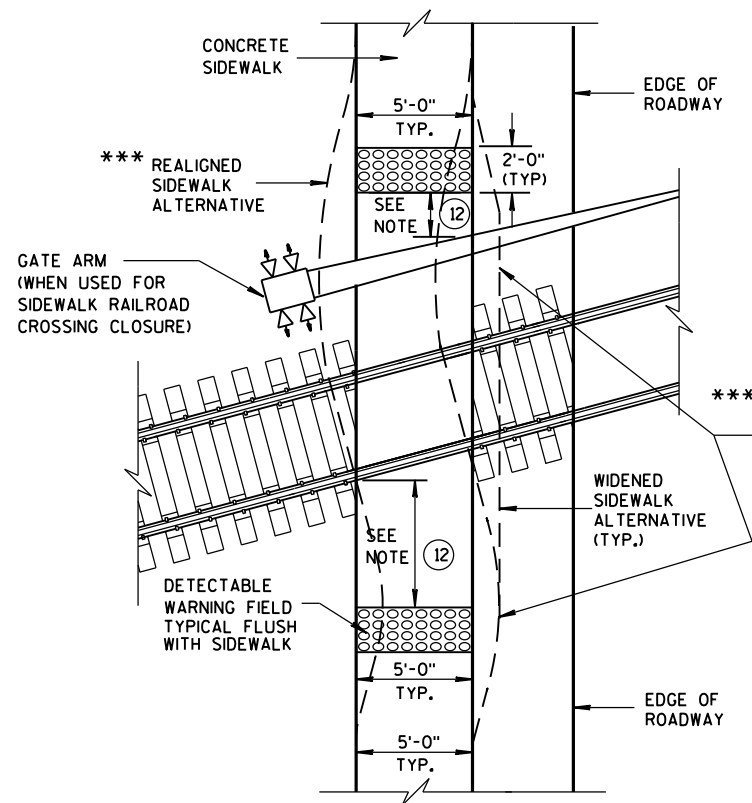
ISOMETRIC VIEW FOR TYPE 4B



ISOMETRIC VIEW FOR TYPE 4B1

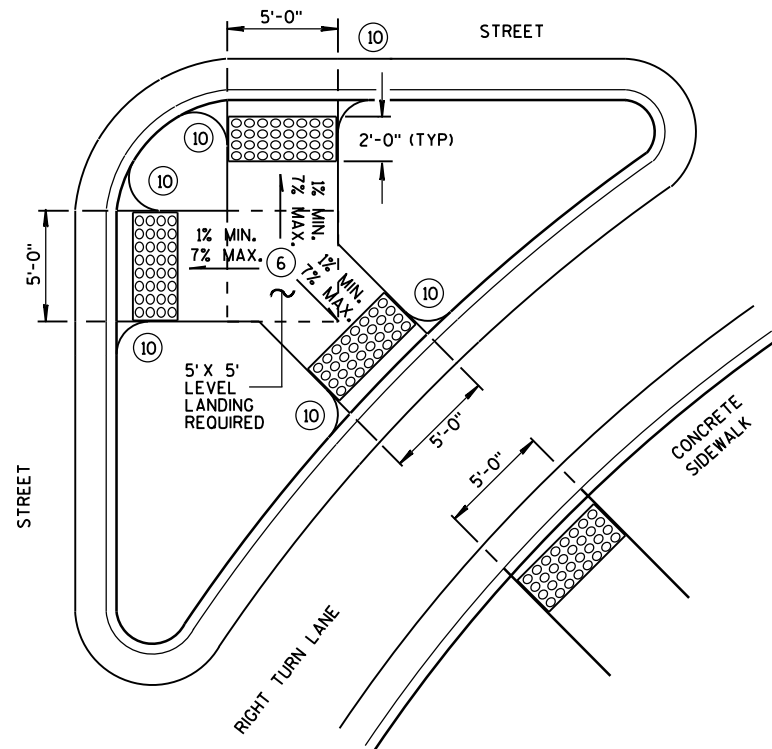
CURB RAMPS
TYPE 4B AND 4B1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

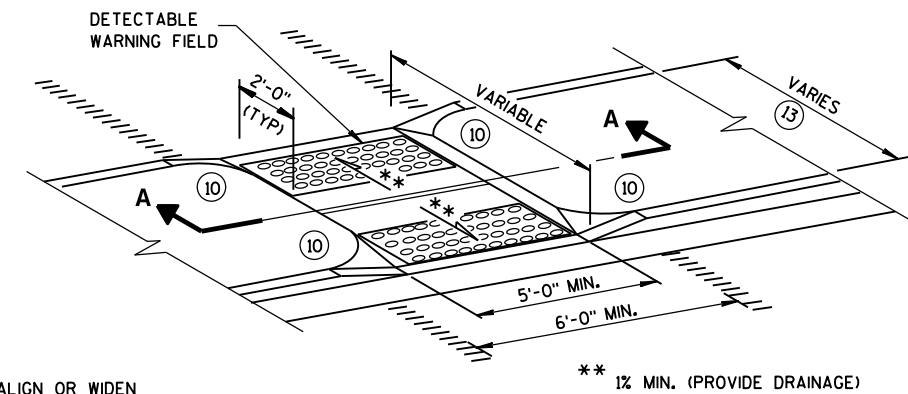


TYPE 8
DETECTABLE WARNINGS
AT RAILROAD CROSSING

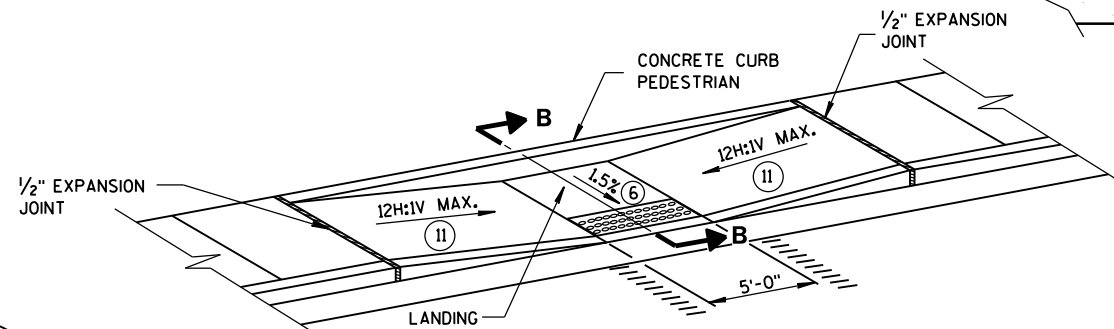
REFER TO GENERAL NOTES ② AND ③
FOR ALL ISLAND CURB RAMPS



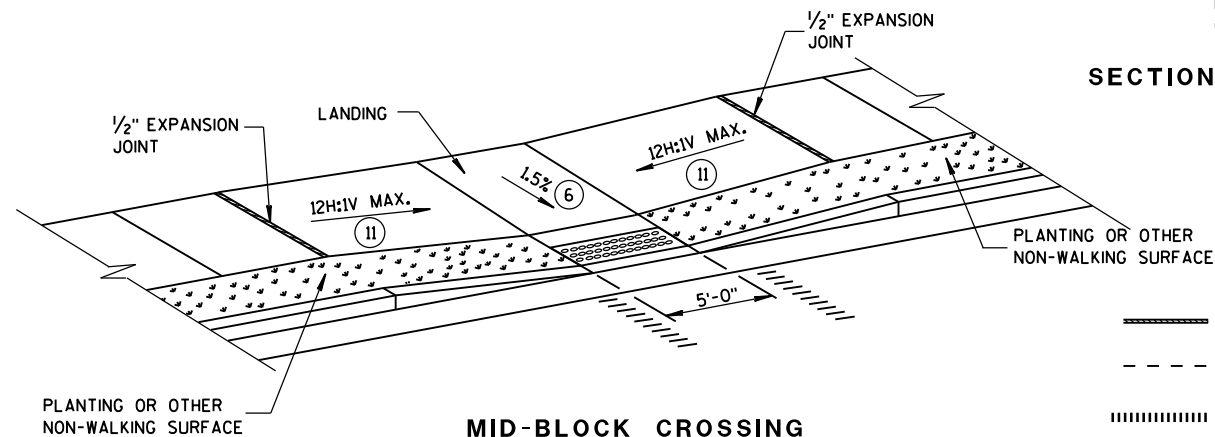
TYPE 6
DETECTABLE WARNING AT ISLANDS



MEDIAN ISLAND
NON-ELEVATED CROSSING
TYPE 5



MID-BLOCK CROSSING
TYPE 7A

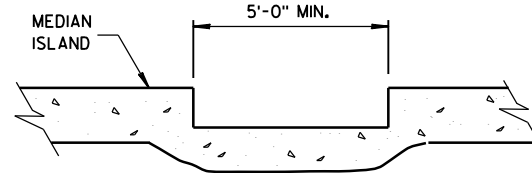


MID-BLOCK CROSSING
TYPE 7B

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

GENERAL NOTES

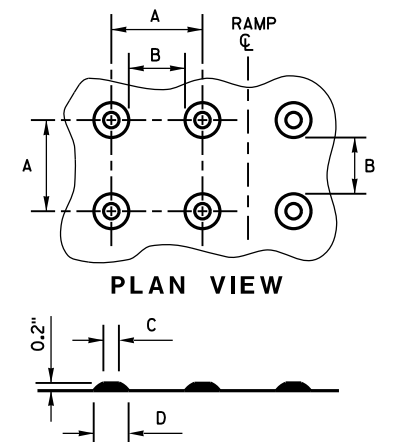
- SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.
- DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.
- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL NOT EXCEED 7%.
- ③ ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- ④ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- ⑥ PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.
- ⑩ INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.
- ⑪ SLOPE SIDEWALK TOWARD LANDING AS SHOWN WHERE THERE IS NO TERRACE OR WHERE THE TERRACE WIDTH IS LESS THAN 6 FEET WIDE.
- ⑫ THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO A RAILROAD CROSSING SHALL BE 1.5 FEET ± 0.1' FROM THE FACE OF THE GATE ARM IF THE GATE ARM EXTENDS ACROSS THE SIDEWALK. WHERE THERE IS NO PEDESTRIAN GATE, THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO THE RAILROAD CROSSING SHALL BE 15 FEET FROM THE NEAREST RAIL.
- ⑬ DO NOT INSTALL DETECTABLE WARNING FIELDS IF MEDIAN WIDTH BETWEEN BACK OF CURBS IS LESS THAN 6 FEET.



SECTION A-A

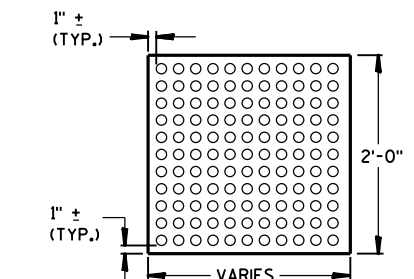
	MIN.	MAX.
A	1.6"	2.4"
B	0.65"	1.5"
C	*	*
D	0.9"	1.4"

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



ELEVATION VIEW

TRUNCATED DOMES
DETECTABLE WARNING PATTERN DETAIL



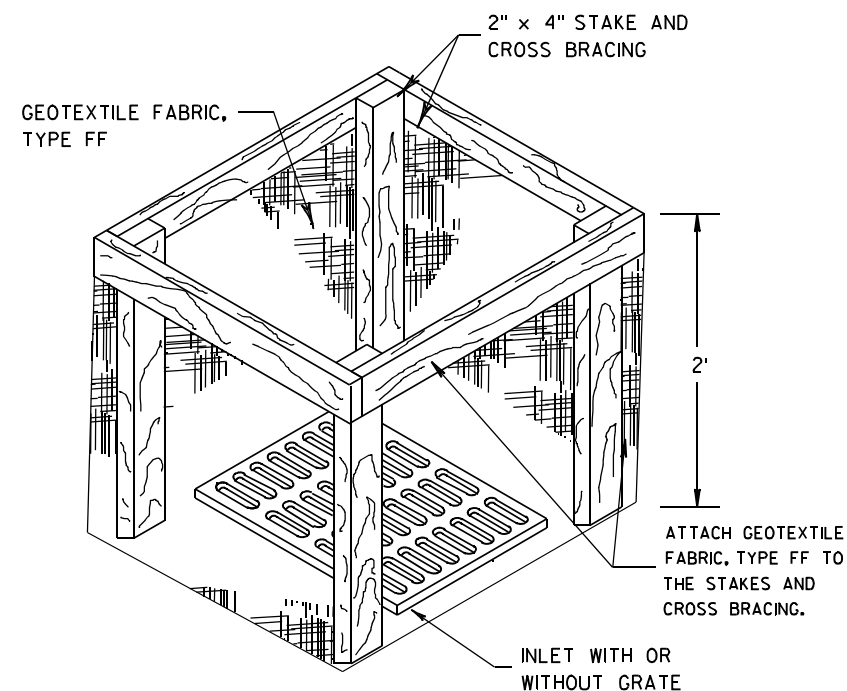
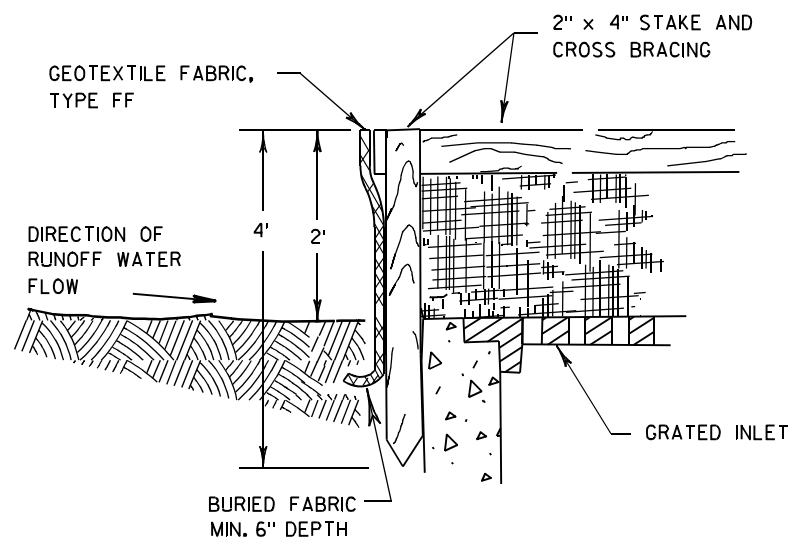
PLAN VIEW
DETECTABLE WARNING
FIELD (TYPICAL)

- LEGEND**
- 1/2" EXPANSION JOINT-SIDEWALK
 - CONTRACTION JOINT FIELD LOCATED
 - PAVEMENT MARKING CROSSWALK (WHITE)

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept., 2016 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT
FHWA UNIT SUPERVISOR



INLET PROTECTION, TYPE A

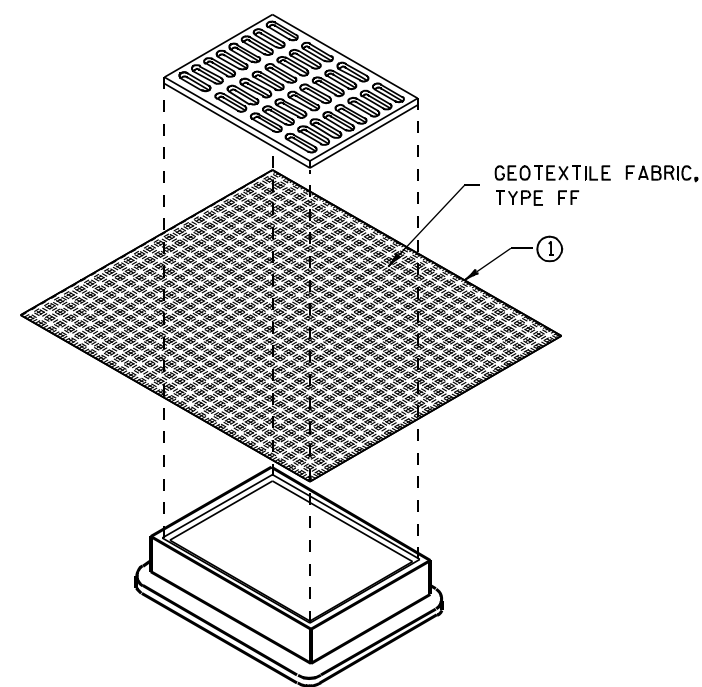
GENERAL NOTES

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.

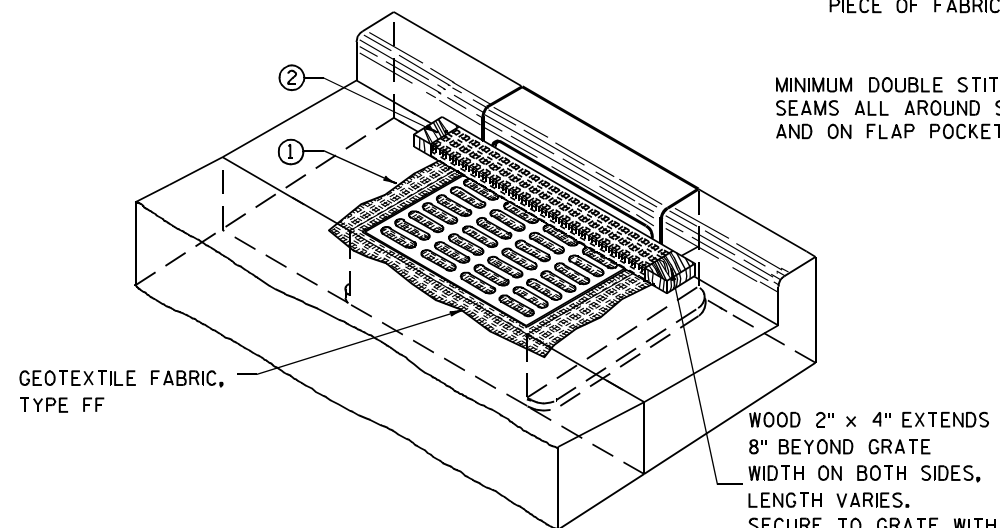
WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

- 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.



**INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)**

(CAN BE INSTALLED IN ANY INLET WITHOUT A CURB BOX)



INLET PROTECTION, TYPE C (WITH CURB BOX)

INSTALLATION NOTES

TYPE B & C

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

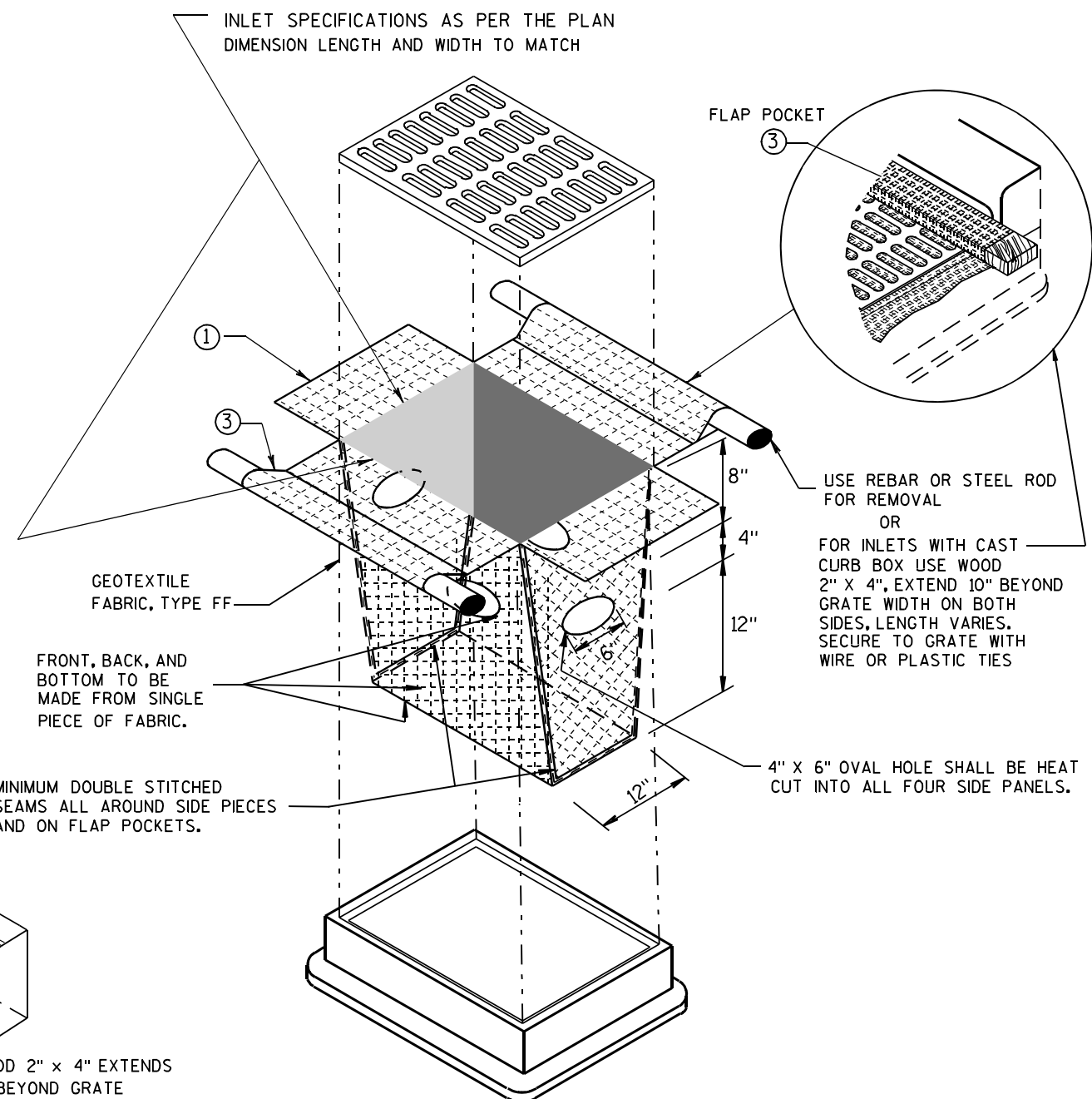
THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

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.



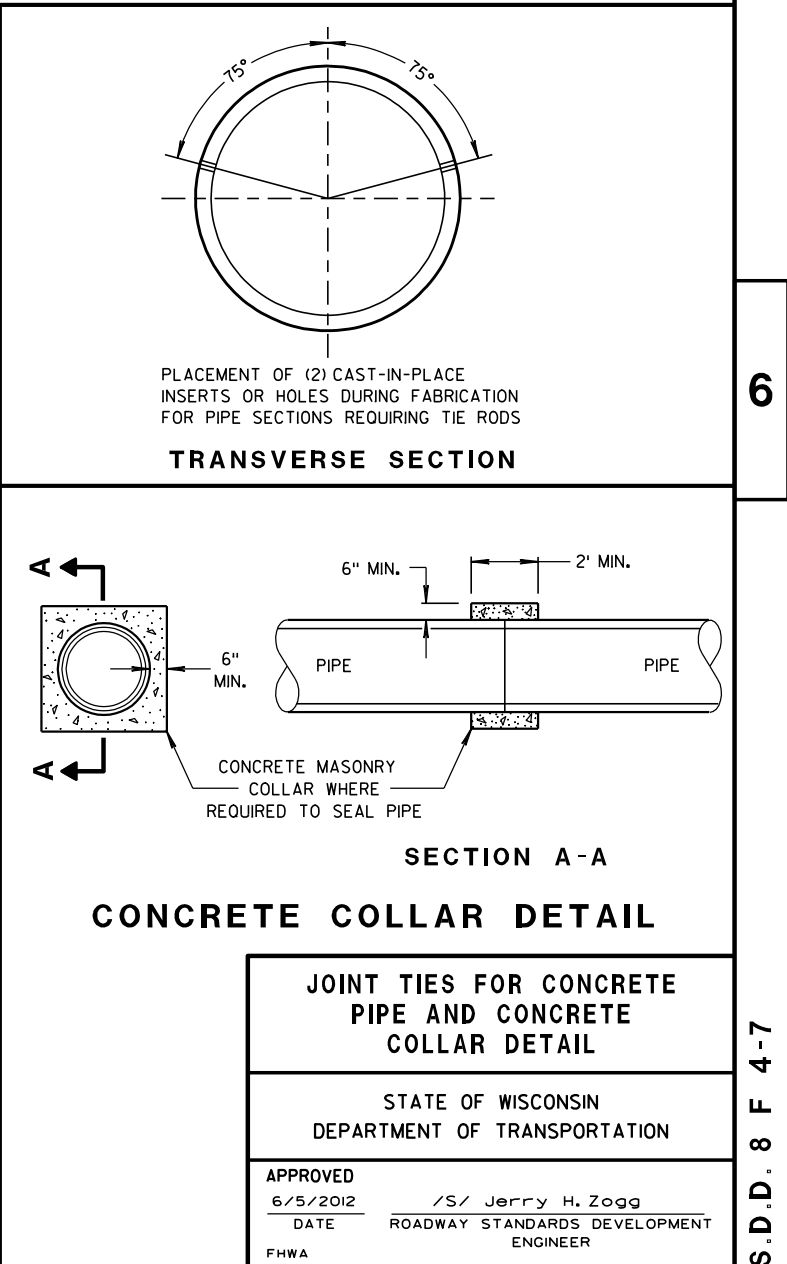
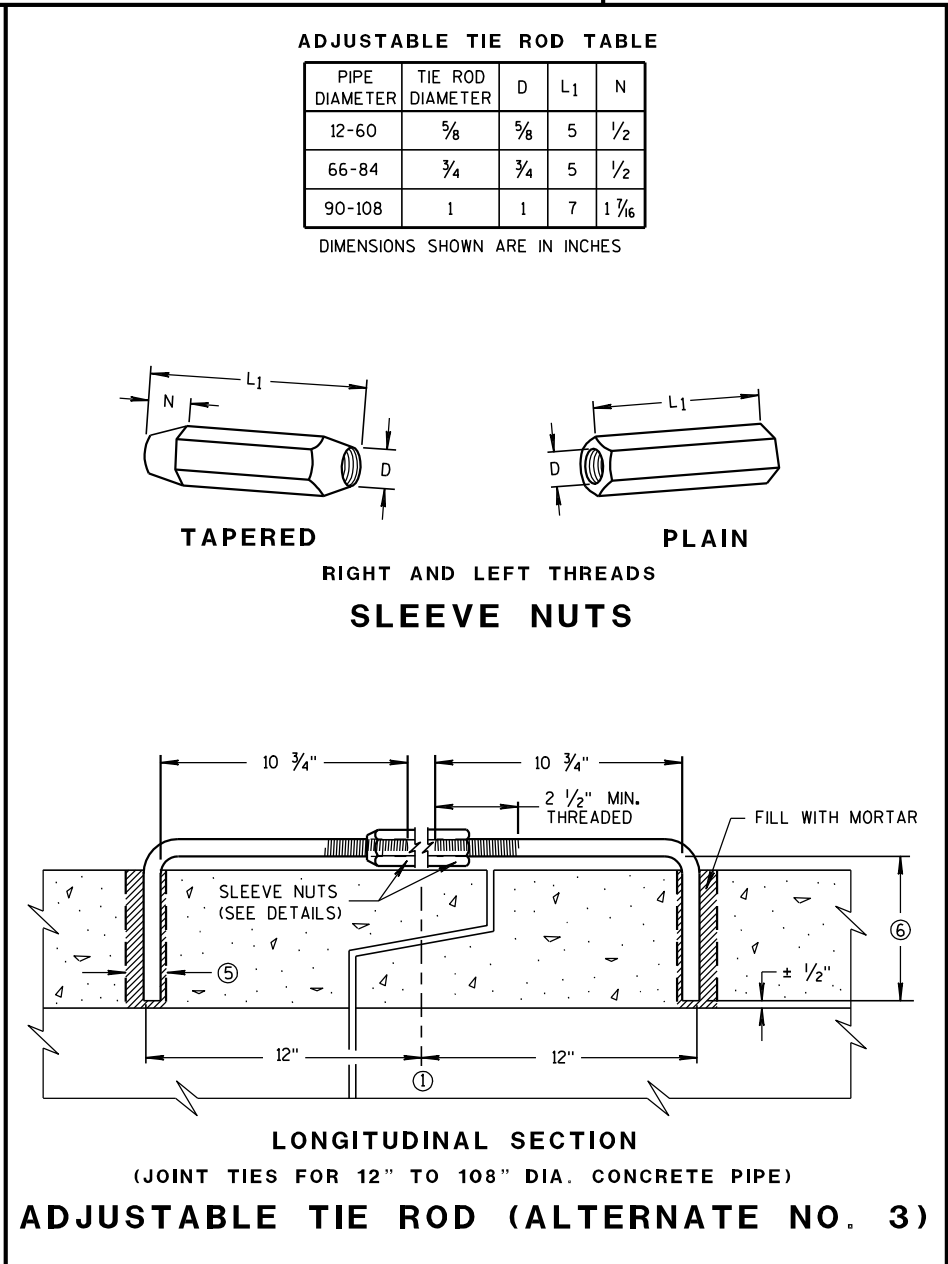
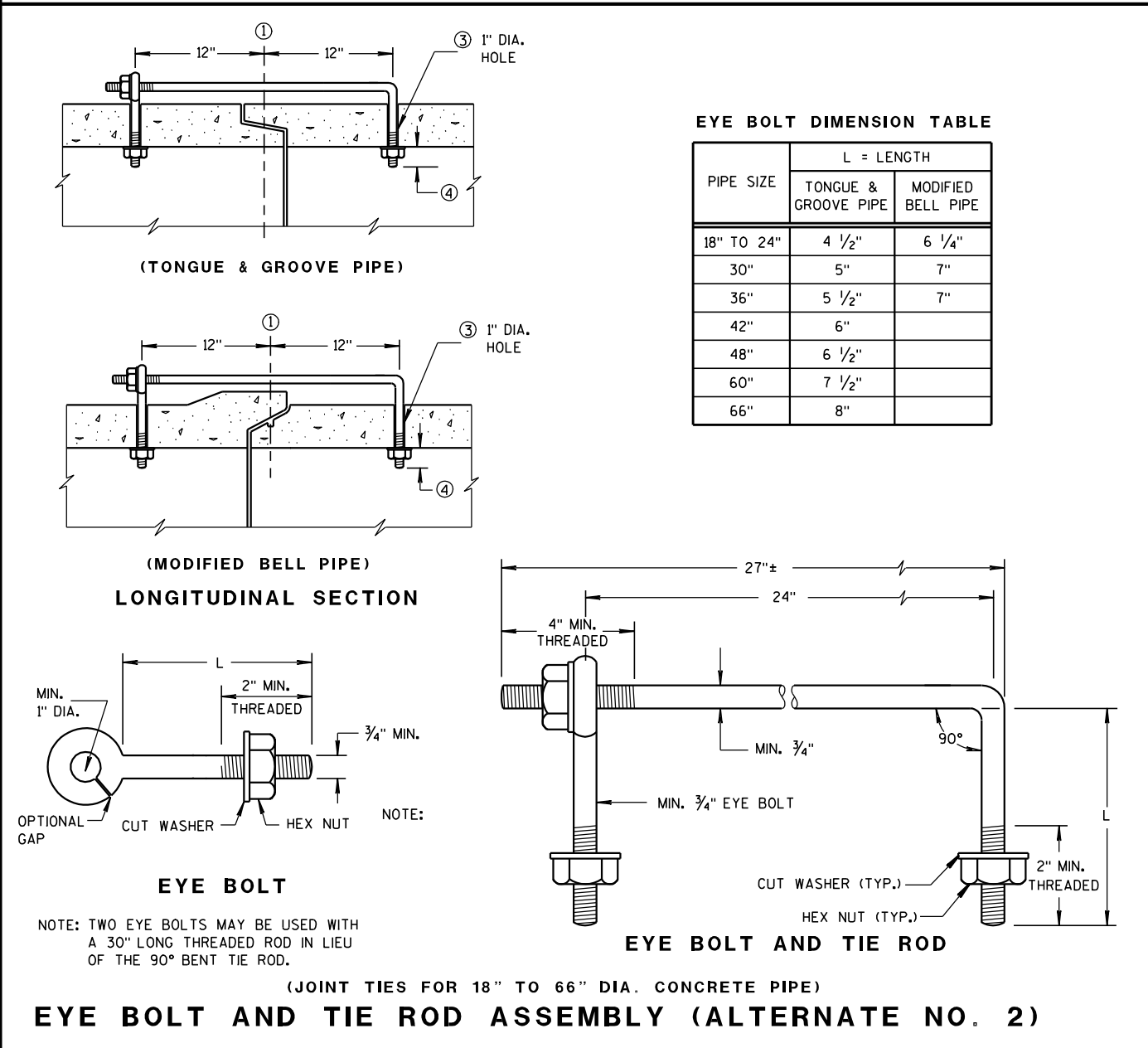
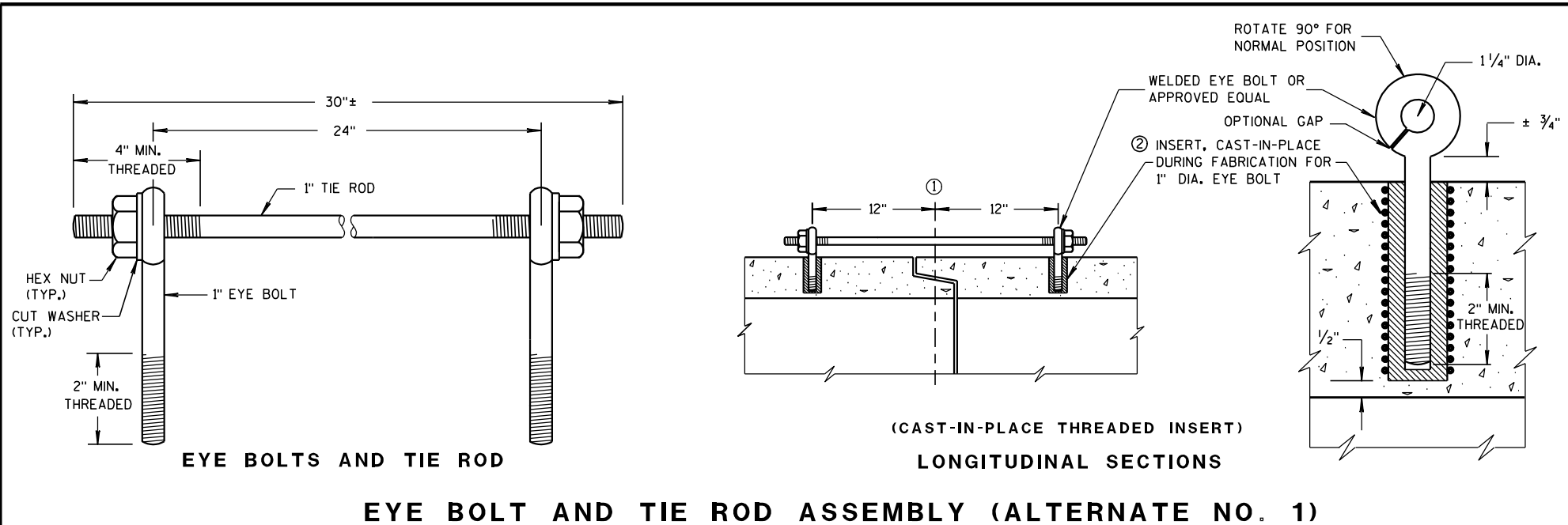
INLET PROTECTION, TYPE D

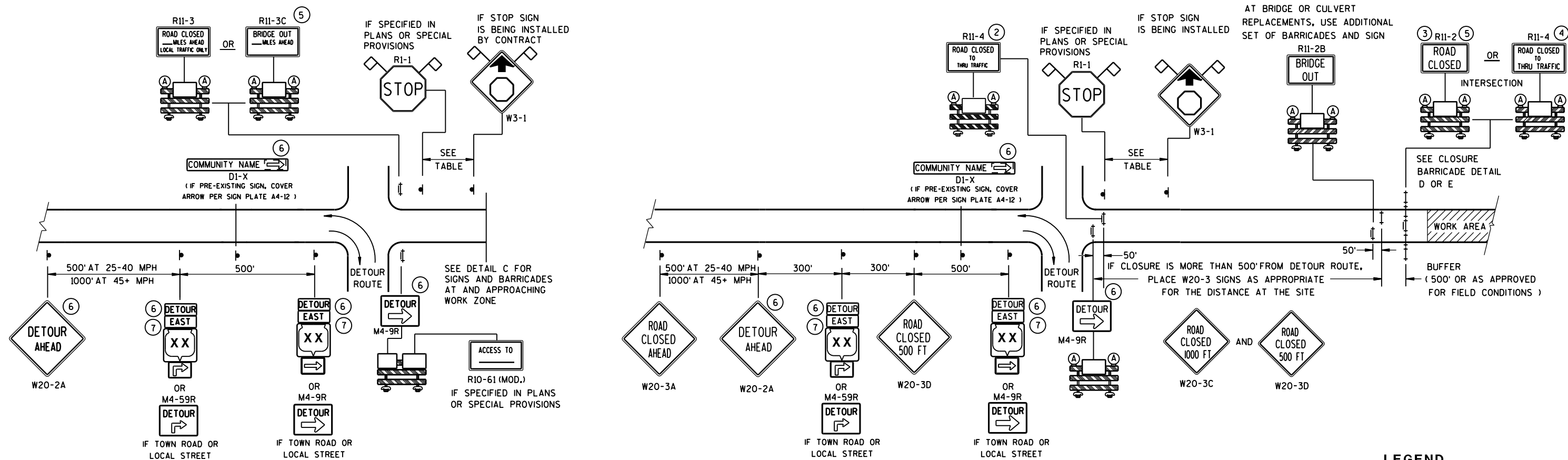
(CAN BE INSTALLED IN ANY INLET TYPE WITH OR WITHOUT A CURB BOX AS PER NOTE ②)

**INLET PROTECTION
TYPE A, B, C, AND D**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/16/02 /S/ Beth Cannestra
DATE
FHWA CHIEF ROADWAY DEVELOPMENT ENGINEER

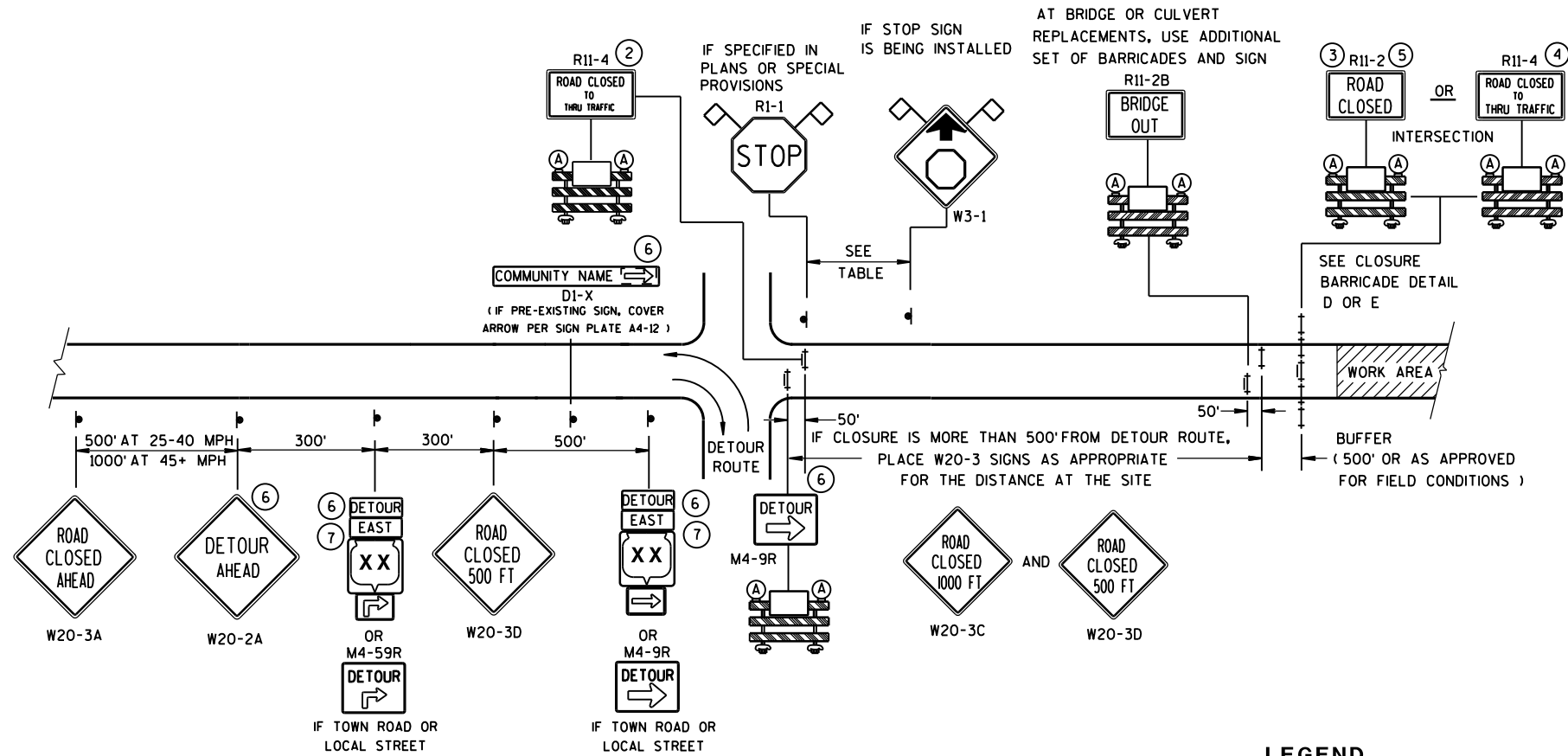




DETAIL A

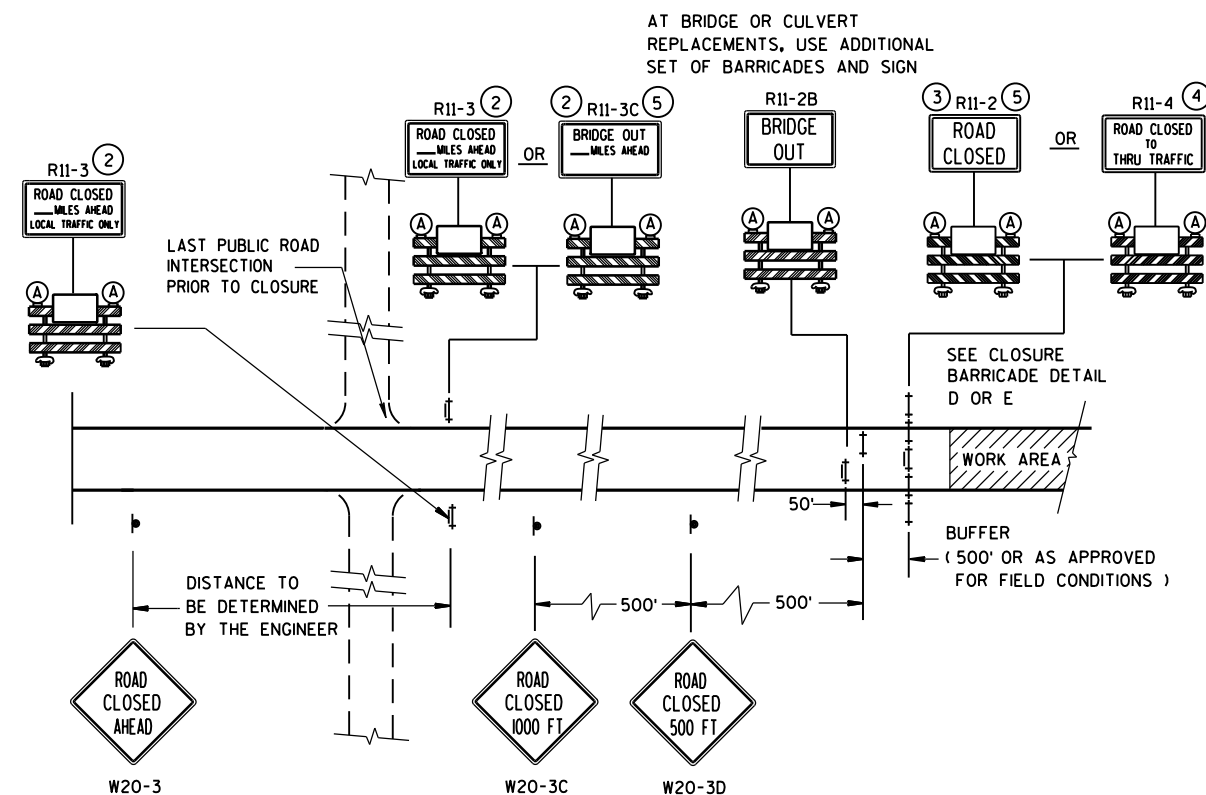
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE GREATER THAN 1/2 MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)







DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR


WORK ZONE LESS THAN 1/2 MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)










DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

LEGEND

- | | |
|---|---------------------------------------|
|  | SIGN ON PERMANENT SUPPORT |
|  | TYPE III BARRICADE |
|  | TYPE III BARRICADE WITH ATTACHED SIGN |
|  | TYPE "A" WARNING LIGHT (FLASHING) |

 WORK AREA

 M4-8
 M3-X
 M1-4
OR
 M1-5A
OR
 M1-6

 OR 

M05-1 M06-1

 FLAGS, 16" X 16" MIN., (ORANGE)

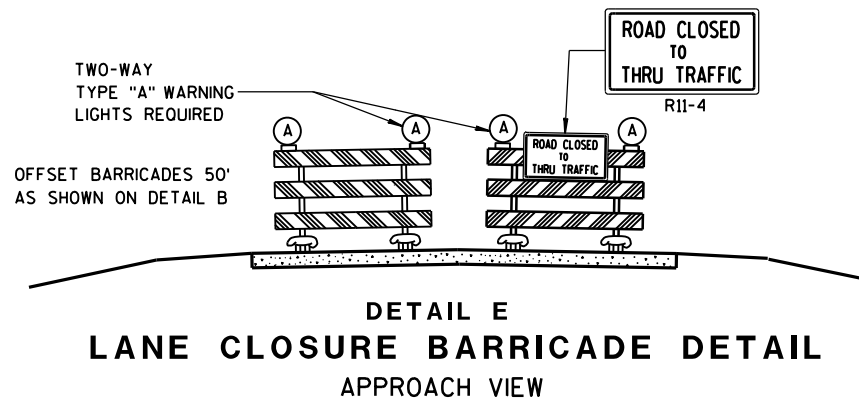
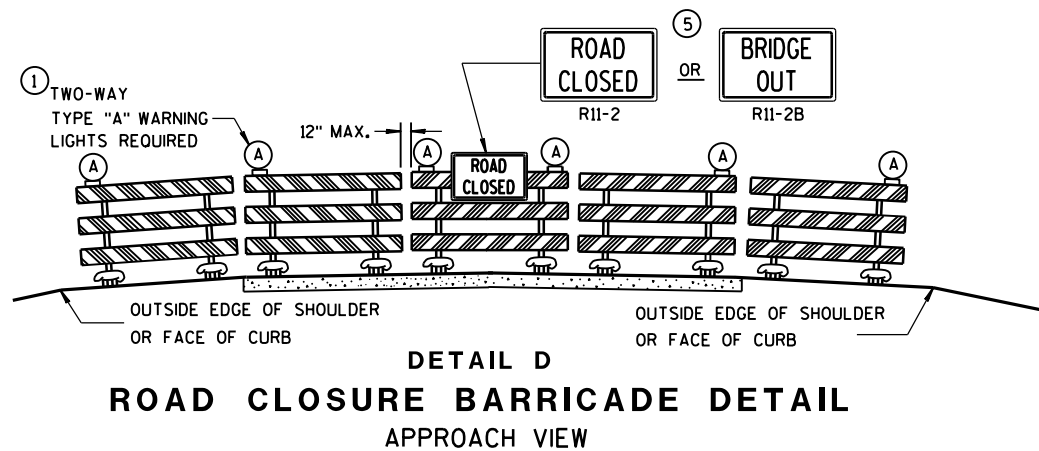
SPEED LIMIT (MPH)	"STOP AHEAD" ADVANCE WARNING DISTANCE (FT)
25	200
30	200
35	350
40	350
45	500
50	550
55	750

SEE SDD 15C2-SHEET "b"
FOR GENERAL NOTES
AND FOOTNOTES ① THROUGH ⑦

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

Sept. 2015	/S/ Peter Amakobe Atepe
DATE	STATEWIDE WORK ZONE TRAFFIC
FHWA	SAFETY ENGINEER



SEE SDD 15C2-SHEET "a" FOR LEGEND

GENERAL NOTES

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

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

BARRICADES THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED UPON COMPLETION OF THE OPERATION OR, FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

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

ALL TYPE III BARRICADES SHALL HAVE RAILS REFLECTORIZED ON BOTH FACES. STRIPES SHALL BE PROPERLY SLOPED DOWN TOWARD THE TRAFFIC SIDE OR AS SHOWN IN THE ROAD CLOSURE BARRICADE DETAIL D FOR FULL ROAD CLOSURES.

TYPE "A" LOW-INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

THE R11-2, R11-3, M4-9, R11-4 AND R10-61 SIGNS PLACED ON BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE OR BOTTOM RAILS.

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

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:

R11-2 SHALL BE 48" X 30".

R11-3, R11-4 AND R10-61 SHALL BE 60" X 30".

M4-9 SHALL BE 30" X 24".

M3-X SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS.)

M4-8 SHALL BE 24" X 12". (30" X 15" IF NEEDED TO MATCH EXISTING SIGNS.)

M1-4, M1-5A, AND M1-6 SHALL BE 24" X 24". (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS.)

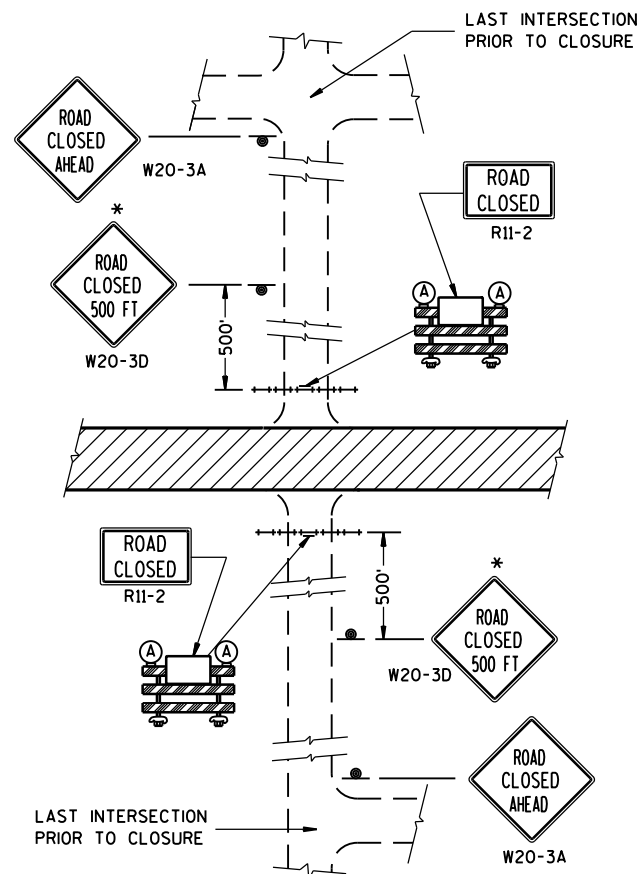
M05-1 AND M06-1 SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)

D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.

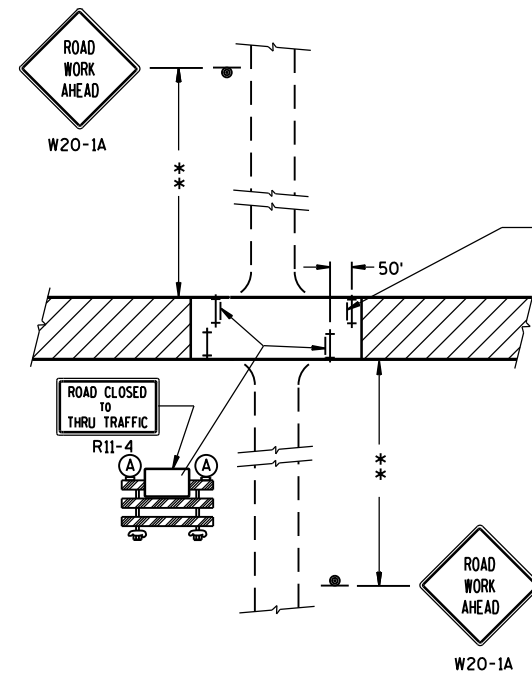
R1-1 SHALL BE 36" X 36".

- 1 TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8-FOOT LIGHT SPACING).
- 2 THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT INTERSECTION.
- 3 FOR ROAD CLOSURE WITHOUT LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL D.
- 4 FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT, SEE LANE CLOSURE BARRICADE DETAIL E.
- 5 FOR BRIDGE OR CULVERT REPLACEMENTS, SUBSTITUTE "BRIDGE OUT" INSTEAD OF "ROAD CLOSED" ON R11-2 AND R11-3 SIGNS.
- 6 INSTALL DETOUR AND COMMUNITY GUIDE SIGNS AND ARROWS ONLY IF SPECIFIED IN THE CONTRACT. IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. MODIFY EXISTING SIGNS WHERE POSSIBLE. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. IF DETOUR SIGNS ARE BEING INSTALLED BY OTHERS, PLACE THE CONTRACTED TRAFFIC CONTROL SIGNS TO ALLOW FOR PLACEMENT OF ALL WARNING, DETOUR AND GUIDE SIGNS AS SHOWN.
- 7 "EAST" CARDINAL DIRECTION MARKERS AND RIGHT TURN ARROWS ARE SHOWN. USE OTHER CARDINAL DIRECTIONS AND ARROWS AS APPROPRIATE.

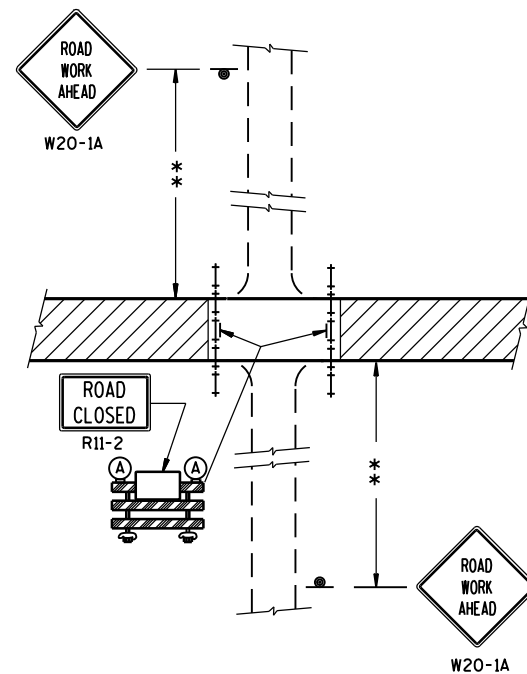
BARRICADES AND SIGNS FOR MAINLINE CLOSURES	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
Sept. 2015 DATE	/S/ Peter Amokobe Atepe STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER
FHWA	



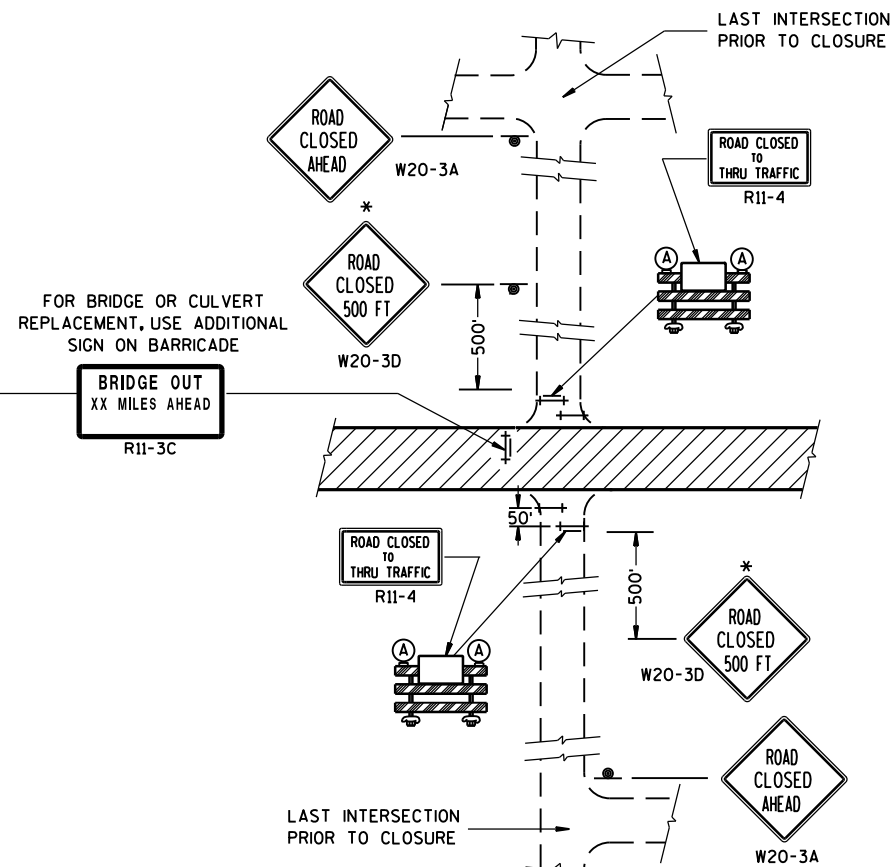
DETAIL 1
(NO ACCESS TO PROJECT)



DETAIL 3
(PUBLIC CROSS-TRAFFIC MAINTAINED. CONTRACTOR, LOCAL BUSINESS AND RESIDENT ACCESS).



DETAIL 2
(PUBLIC CROSS-TRAFFIC MAINTAINED.
NO ACCESS TO PROJECT).



DETAIL 4
(CONTRACTOR, LOCAL BUSINESS AND
RESIDENT ACCESS TO PROJECT)

GENERAL NOTES

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

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

IF A "STOP" SIGN MUST BE REMOVED FOR A WORK OPERATION, A TEMPORARY "STOP" SIGN SHALL BE PLACED PRIOR TO THE SIGN REMOVAL, OR A FLAGGER SHALL BE PROVIDED UNTIL THE SIGN IS RE-ESTABLISHED.

BARRICADES THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED UPON COMPLETION OF THE OPERATION OR, FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

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

ALL TYPE III BARRICADES SHALL HAVE RAILS REFLECTORIZED ON BOTH FACES. STRIPES SHALL BE PROPERLY SLOPED DOWN TOWARD THE TRAFFIC SIDE OR AS SHOWN IN THE ROAD CLOSURE BARRICADE DETAIL D FOR FULL ROAD CLOSURES.

TYPE "A" LOW-INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

THE R11-2, R11-3 AND R11-4 SIGNS PLACED ON BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE OR BOTTOM RAILS.

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:

R11-2 SHALL BE 48" X 30".

R11-4 AND R11-3 SHALL BE 60" X 30".

*OMIT THE "ROAD CLOSED 500 FT." SIGN IF THE LAST INTERSECTION IS 500 FT. OR LESS FROM THE WORK ZONE.

**500' MAX. OR AT LAST INTERSECTION WHICHEVER IS CLOSER.

LEGEND

- ⊙ SIGN ON PERMANENT SUPPORT
- ⊢ TYPE III BARRICADE
- ⊢ TYPE III BARRICADE WITH ATTACHED SIGN
- (A) TYPE "A" WARNING LIGHT (FLASHING)
- ▨ WORK AREA

BARRICADES AND SIGNS FOR SIDEROAD CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

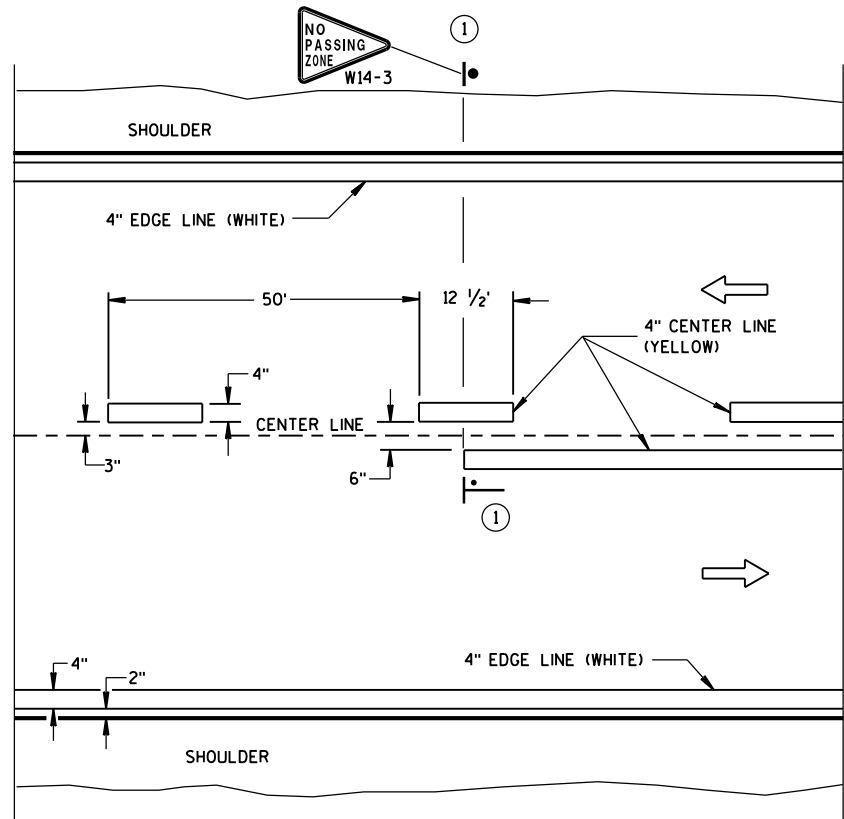
APPROVED

Sept. 2015

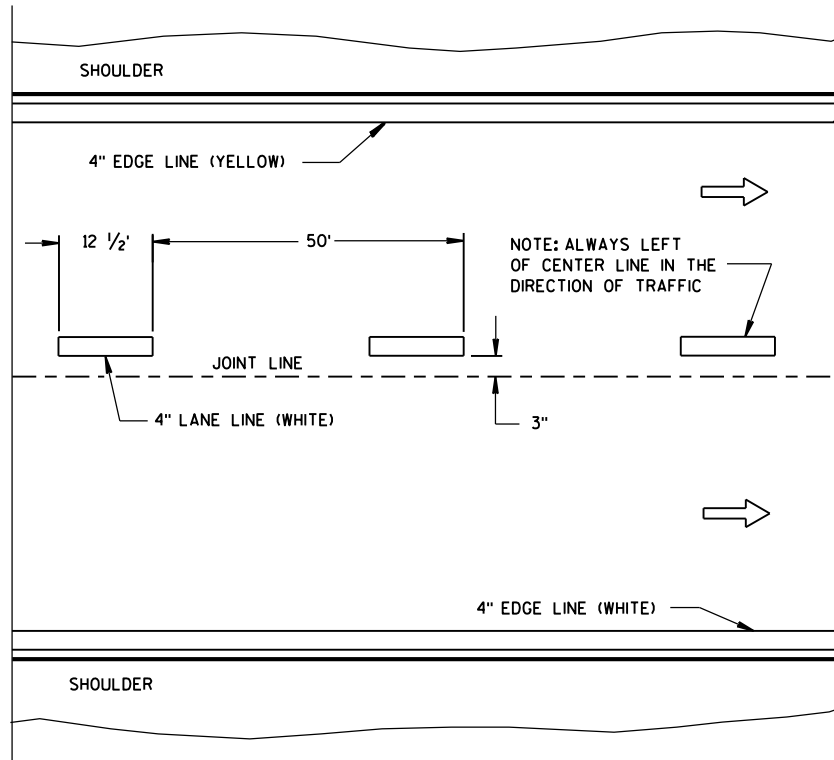
DATE

FHWA

/S/ Peter Amakobe Atepe
STATEWIDE WORK ZONE TRAFFIC
SAFETY ENGINEER

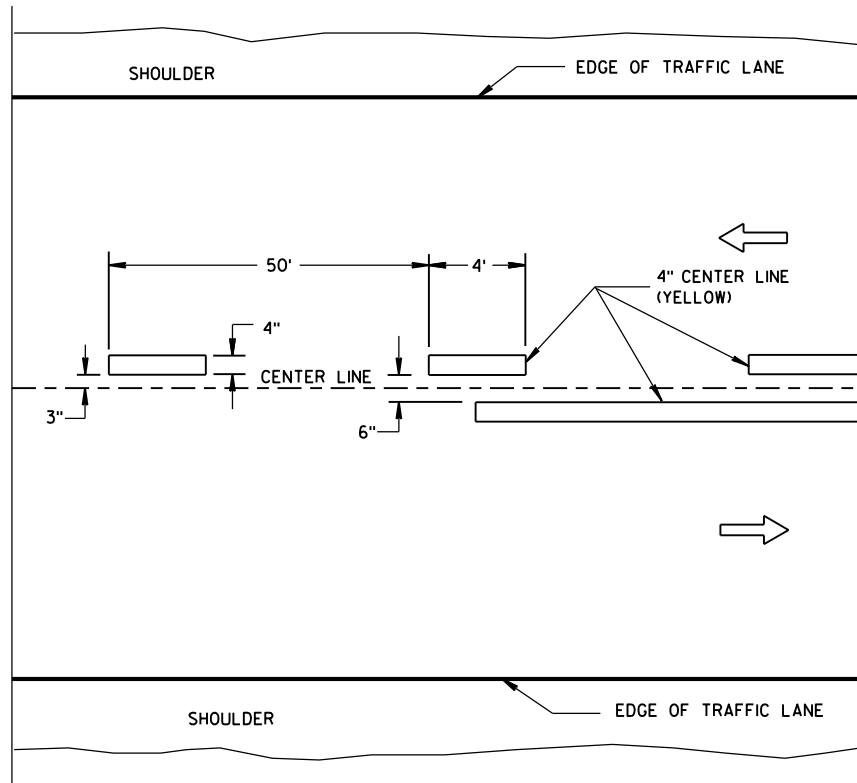


TWO WAY TRAFFIC

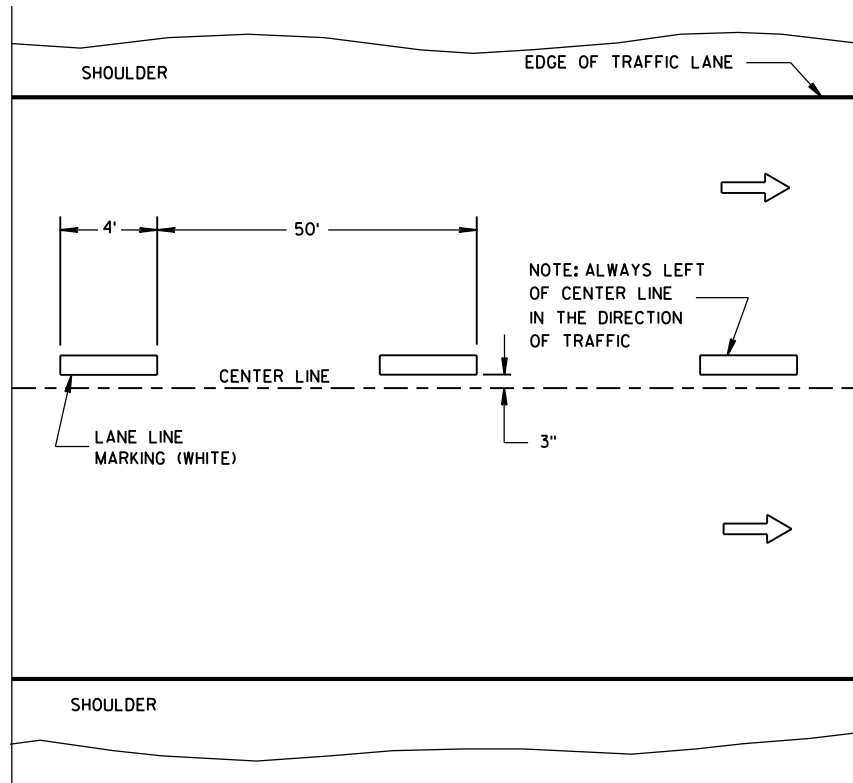


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

GENERAL NOTES

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

① NO PASSING ZONE W14-3 SIGN SHALL BE LOCATED WITHIN 50 FEET OF THE "T" MARKING.

NOTE

ARROW SYMBOL (→) SHOWS DIRECTION OF TRAVEL

LEGEND

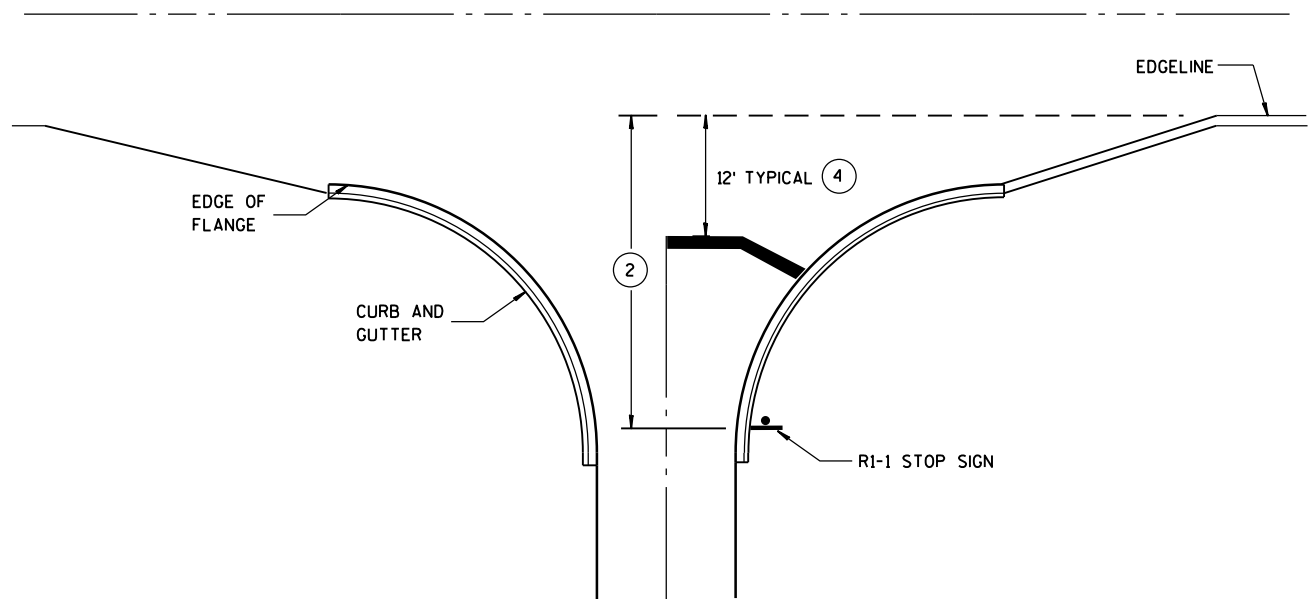
├── "T" MARKING

● POST MOUNTED SIGN

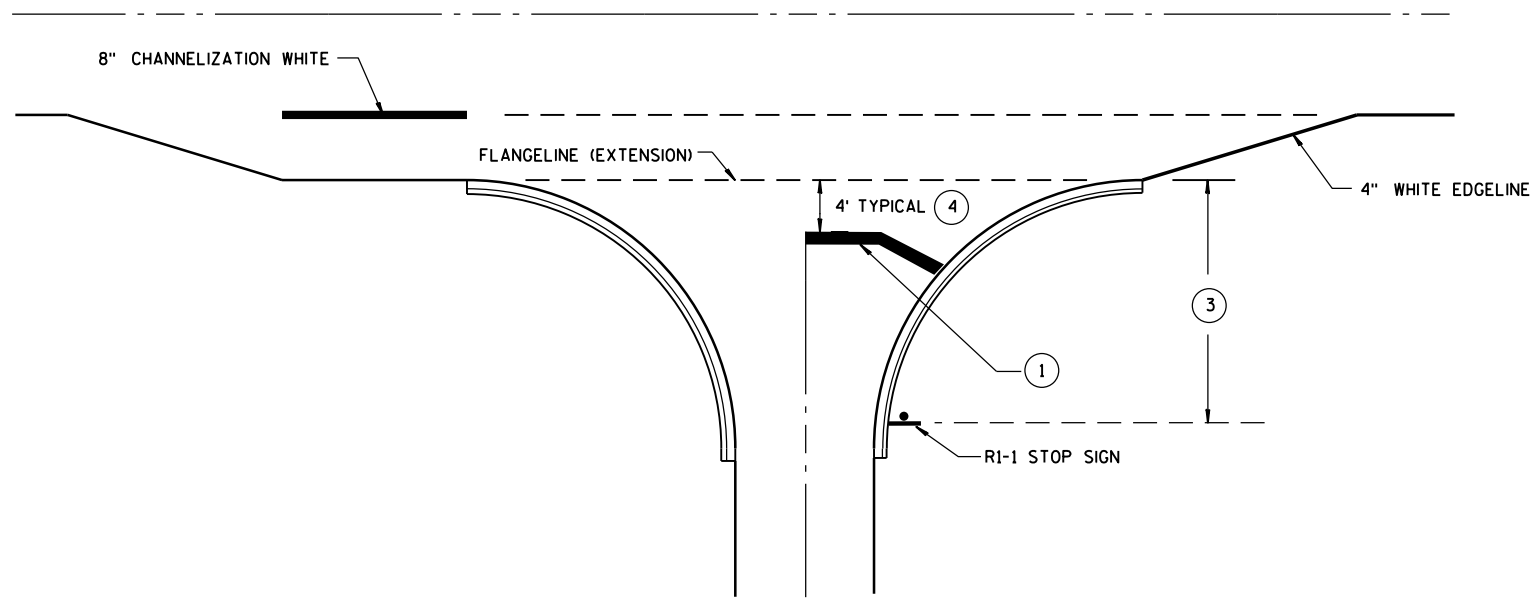
LONGITUDINAL MARKING
(MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

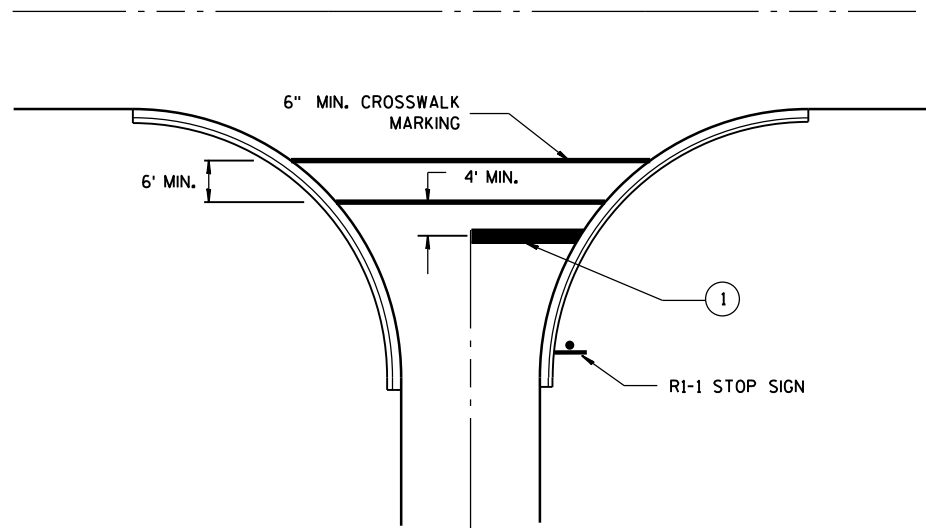
APPROVED
Sept., 2016 /S/ Matthew R. Rauch
DATE STATE SIGNING AND MARKING ENGINEER
FHWA



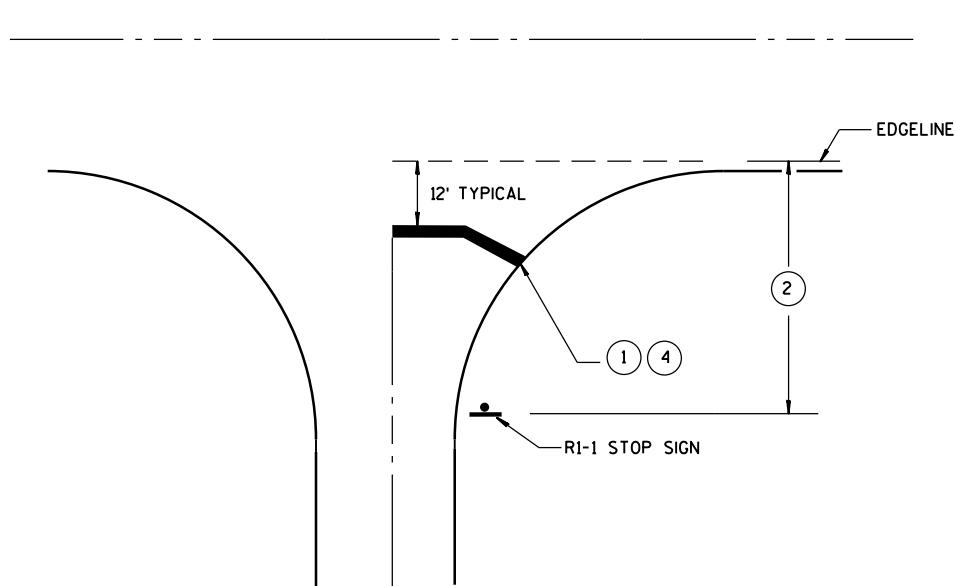
TYPICAL STOP LINE PAVEMENT MARKING
WITH CURB AND GUTTER



TYPICAL STOP LINE PAVEMENT MARKING
FOR SIDEROADS WITH RIGHT TURN LANE



TYPICAL STOP LINE PAVEMENT MARKING
FOR SIDEROADS WITH CROSSWALK MARKING



TYPICAL STOP LINE PAVEMENT MARKING
WITHOUT CURB AND GUTTER

GENERAL NOTES

- 1 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE PROJECT ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
- 2 IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGE LINE THAN NO STOP LINE IS REQUIRED.
- 3 IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGELINE EXTENSION THAN NO STOP LINE IS REQUIRED.
- 4 MOVE CLOSER TO EDGE OF TRAVEL LANE AS NEEDED FOR VISIBILITY AND SIGHT LINES. (NO CLOSER THAN 4 FEET).

STOP LINE AND CROSSWALK
PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4-18-2016 /S/ Matthew R. Rauch
DATE STATE SIGNING AND MARKING ENGINEER
FHWA



Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

<http://www.dot.wisconsin.gov>

PROJECT ID: 4985-00-54
WITH: 4985-00-52 & 4985-00-58

COUNTY: BROWN

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 = 42



DESIGN DESIGNATION

AADT (2018) = 1900
AADT (2038) = 2600
DHV (2038) = 2.8
D (%) = 59/41
T (% OF ADT) = 3.3%
DESIGN SPEED = 30 MPH
ESALS = 210,000

CONVENTIONAL SYMBOLS

PLAN

FENCE	
CORPORATE LIMITS	
RIPRAP	
PROPERTY LINE	
LOT LINE	
LIMITED HIGHWAY EASEMENT	
EXISTING RIGHT OF WAY	
PROPOSED OR NEW R/W LINE	
SLOPE INTERCEPT	
REFERENCE LINE	
EXISTING CULVERT	
PROPOSED CULVERT (Box or Pipe)	
COMBUSTIBLE FLUIDS	
HIGH VOLTAGE	
MARSH AREA	
WOODED OR SHRUB AREA	
RIGHT-OF-WAY MARKERS	

PROFILE

GRADE LINE	
ORIGINAL GROUND	
MARSH OR ROCK PROFILE (To be noted as such)	
SPECIAL DITCH	
GRADE ELEVATION	
CULVERT (Profile View)	
UTILITIES	
ELECTRIC	
OVERHEAD ELECTRIC	
FIBER OPTIC	
GAS	
SANITARY SEWER	
STORM SEWER	
TELEPHONE	
WATER	
UTILITY PEDESTAL	
POWER POLE	
TELEPHONE POLE	

ROCK	
LABEL	
95.36	
E	
OE	
FO	
GAS	
SAN	
STM	
TEL	
WTR	
□	
⊙	
⊗	

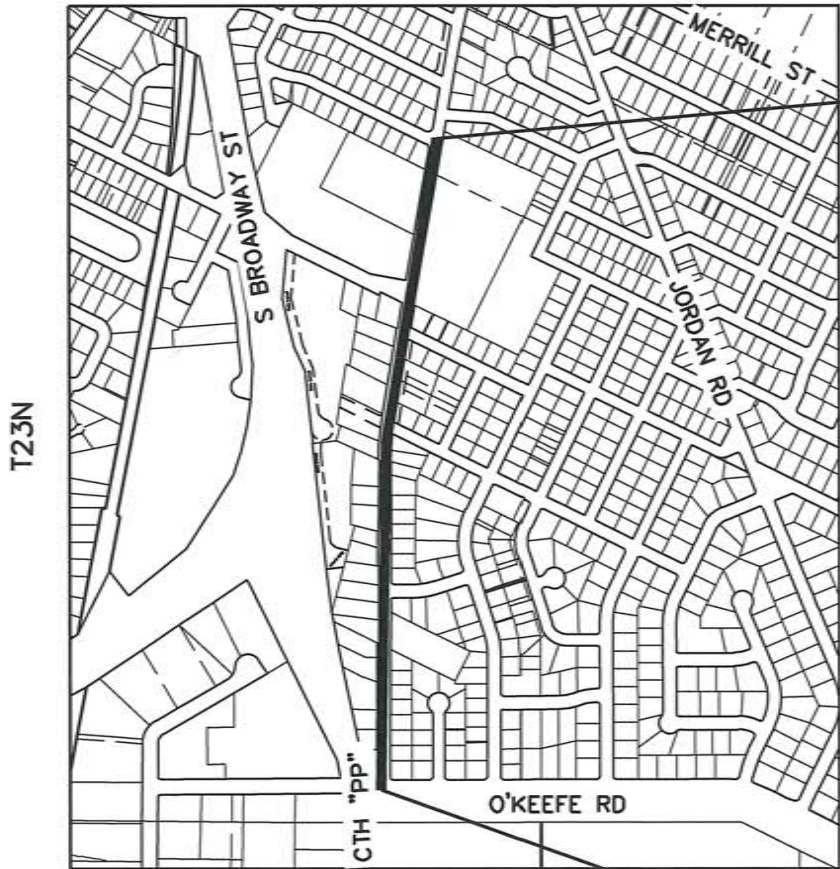
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT
C. DE PERE, ERIE ST

O' KEEFE RD TO VIRGINIA DR

LOCAL STREET
BROWN COUNTY

STATE PROJECT NUMBER
4985-00-54



END PROJECT
STA 134+70.30

BEGIN PROJECT
STA 100+33.57

Y = 536710.687
X = 88910.476

LAYOUT
SCALE 0 500 FT

TOTAL NET LENGTH OF CENTERLINE = 0.651 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), BROWN COUNTY. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
4985-00-54	WISC 2017279	1

ACCEPTED FOR
CITY OF DE PERE
1/23/17
DATE
CITY ENGINEER

ORIGINAL PLANS PREPARED BY
Cedar corporation
MENOMONIE - MADISON - GREEN BAY
www.cedarcorp.com
800-472-7372



1/18/17
DATE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
PREPARED BY
Surveyor CEDAR CORPORATION
Designer CEDAR CORPORATION
Management Consultant SHORT ELLIOT HENDRICKSON, INC

APPROVED FOR THE DEPARTMENT
1/27/16
DATE
(Management Consultant Signature)

GENERAL NOTES

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

NO TREES OR SHRUBS ARE TO BE REMOVED UNLESS SUCH TREES OR SHRUBS HAVE FIRST BEEN INDICATED FOR REMOVAL BY THE ENGINEER IN THE FIELD.

BEARINGS REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), BROWN COUNTY.

DISTURBED AREAS WITHIN THE RIGHT OF WAY, EXCEPT THE AREAS WITHIN THE FINISHED BACK OF CURB POINTS, ARE TO BE FERTILIZED, SEEDED, AND MULCHED AS DIRECTED BY THE ENGINEER. USE SEED MIX NO. 40.

WHEN THE QUANTITY OF THE ITEM OF BASE LAYER OR SURFACE LAYER IS MEASURED FOR PAYMENT BY THE TON, THE DEPTH OF THICKNESS OF THE LAYER SHOWN ON THE PLANS IS APPROXIMATE AND THE ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF THE MATERIAL AS DIRECTED BY THE ENGINEER.

THE BENCHMARK IS REFERENCED TO THE CITY OF DE PERE BENCHMARK SYSTEM.

PREVENT SEDIMENT TRANSPORT DURING CONSTRUCTION OF STORM SEWER. CONTRACTOR SHALL CONDUCT OPERATIONS TO PREVENT MILLINGS FROM ENTERING THE STORM SEWER SYSTEM.

UTILITIES

AT&T WISCONSIN
205 SOUTH JEFFERSON STREET
GREEN BAY, WI 54313
(920) 433-4200
JOE KASSAB
JK572K@ATT.COM

CENTRAL BROWN COUNTY
WATER AUTHORITY
1303 S. 8TH STREET
MANITOWOC, WI 54220
(920) 686-4354
ROB MICHAELSON
RMICHAELSON@MPU.ORG

CITY OF DE PERE (WATER)
925 S 6TH STREET
DE PERE, WI 54115
(920) 339-4072
ERIC ZYGARLICKE
EZYGARLICKE@MAIL.DE--PERE.ORG

CITY OF DE PERE (SEWER)
925 S 6TH STREET
DE PERE, WI 54115
(920) 339-8304
ERIC RAKERS
ERAKERS@MAIL.DE--PERE.ORG

NET LEC
1700 INDUSTRIAL DRIVE
P.O. BOX 19079
GREEN BAY, WI 54302
(920) 619-9774
DENNIS LAFAVE
DLAFAVE@MI.TECH.US

CHARTER COMMUNICATIONS
3520 DESTINATION DRIVE
APPLETON, WI 54915
(920) 831-9249
VINCE ALBIN
VINCE.ALBIN@CHARTER.COM

WISCONSIN PUBLIC SERVICE (ELECTRIC)
700 N. ADAMS STREET
P.O. BOX 19001
GREEN BAY, WI 54307-9001
(920) 655-1596
RANDY STEIER
RDSTEIER@WISCONSINPUBLICSERVICE.COM

WISCONSIN PUBLIC SERVICE (GAS)
2850 S. ASHLAND AVENUE
P.O. BOX 19001
GREEN BAY, WI 54132
(920) 617-5132
DAVID CZARNECKI
DFCZARNECKI@WISCONSINPUBLICSERVICE.COM



Dial 811 or (800) 242-8511

www.DiggersHotline.com

** DENOTES UTILITIES THAT ARE NOT DIGGERS HOTLINE MEMBERS

STANDARD ABBREVIATIONS

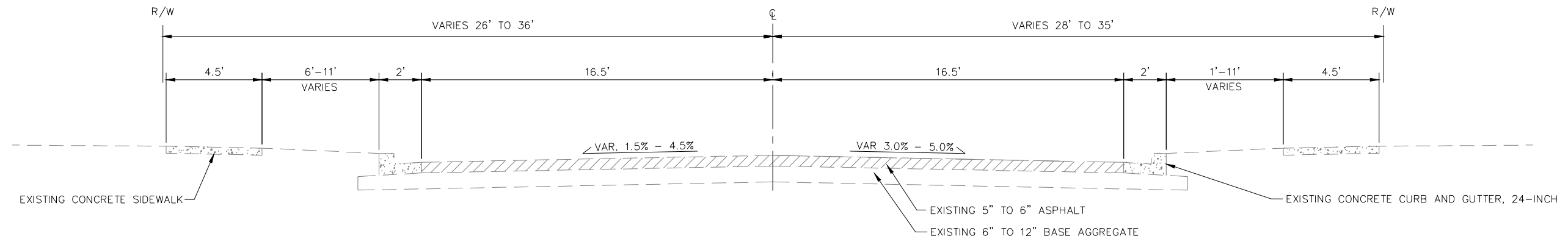
ABUT	ABUTMENT	OFF	OFFSET
AGG	AGGREGATE	PC	POINT OF CURVATURE
ET AL	AND OTHERS	PI	POINT OF INTERSECTION
AADT	ANNUAL AVERAGE DAILY TRAFFIC	PT	POINT OF TANGENCY
BF	BACK FACE	POL	POINT ON LINE
BM	BENCHMARK	PE	PRIVATE ENTRANCE
C/L OR ¢	CENTERLINE	PL	PROPERTY LINE
Δ	CENTRAL ANGLE OR DELTA	PSI	POUNDS/SQUARE INCH
CLR	CLEAR	PROP	PROPOSED
CONC	CONCRETE	R	RADIUS
CONST	CONSTRUCTION	RR	RAILROAD
COR	CORNER	REBAR	REINFORCEMENT BAR
CMP	CORRUGATED METAL PIPE	REQD	REQUIRED
CTH	COUNTY TRUNK HIGHWAY	RT	RIGHT
CR	CREEK	RHF	RIGHT-HAND FORWARD
CFS	CUBIC FEET/SECOND	R/W	RIGHT-OF-WAY
CULV	CULVERT	RD	ROAD
D	DEGREE OF CURVE	SEC	SECTION
DHV	DESIGN HOUR VOLUME	S	SOUTH
DIA	DIAMETER	SE	SOUTHEAST
E	EAST	SW	SOUTHWEST
EL	ELEVATION	STH	STATE TRUNK HIGHWAY
EST	ESTIMATED	STA	STATION
FPS	FEET PER SECOND	SE	SUPER ELEVATION
FE	FIELD ENTRANCE	T	TANGENT
FT	FOOT (FEET)	TEL	TELEPHONE
FTG	FOOTING	TEMP	TEMPORARY
FDN	FOUNDATION	TI	TEMPORARY INTEREST
FF	FRONT FACE	TLE	TEMPORARY LIMITED EASEMENT
IP	IRON PIN	TL OR T/L	TRANSIT LINE
LT	LEFT	T	TRUCKS
LHF	LEFT-HAND FORWARD	TYP	TYPICAL
L	LENGTH OF CURVE	U/G	UNDERGROUND
LF	LINEAR FOOT	USH	UNITED STATES HIGHWAY
MAX	MAXIMUM	VAR	VARIABLE
MI	MILE	V	VELOCITY
MIN	MINIMUM	VPC	VERTICAL POINT OF CURVATURE
NC	NORMAL CROWN	VPI	VERTICAL POINT OF INTERSECTION
N	NORTH	VPT	VERTICAL POINT OF TANGENCY
NE	NORTHEAST	W	WEST
NW	NORTHWEST	YD	YARD
NO	NUMBER		

CITY OF DE PERE

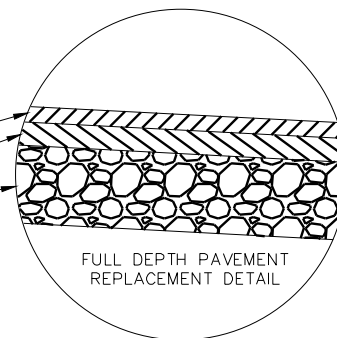
CITY OF DE PERE
PUBLIC WORKS BUILDING
925 S 6TH STREET
DE PERE, WI 54115
(920) 339-8304
ERIC RAKERS
erakers@mail.de--pere.org

DNR LIAISON

DNR NORTHEAST REGIONAL HQ
2984 SHAWANO AVENUE
GREEN BAY, WI 54313
(920) 662-5119
JIM DOPERALSKI
james.doperalski@wisconsin.gov

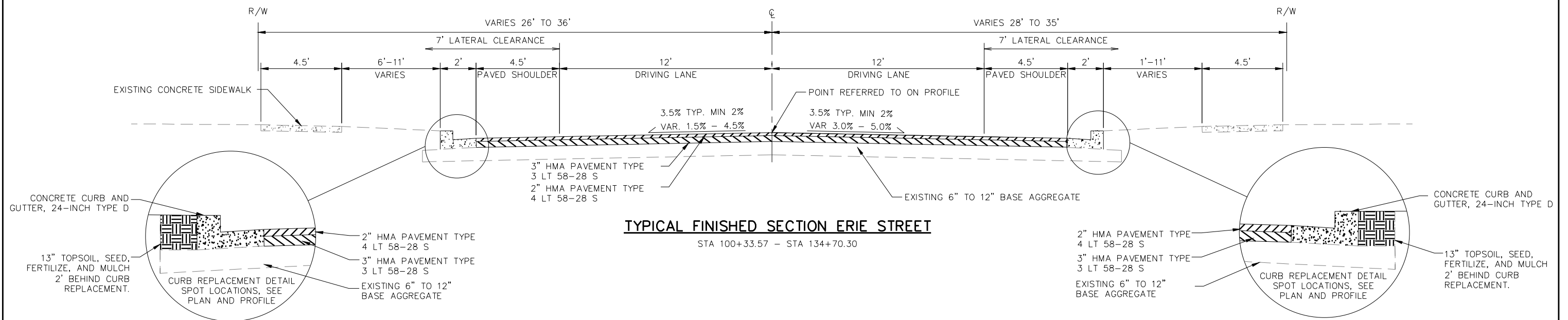


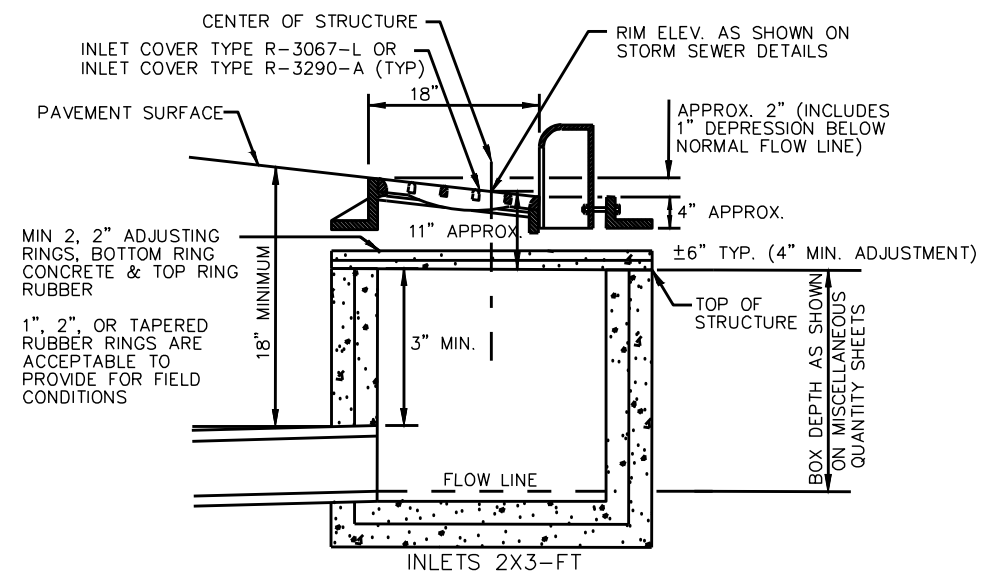
2" HMA PAVEMENT TYPE 4 LT 58-28 S
3" HMA PAVEMENT TYPE 3 LT 58-28 S
10"-1 1/4" BASE AGGREGATE DENSE
NOTE: IN WATER MAIN TRENCH BASE COURSE
TO BE COMPLETED PRIOR TO PROJECT BY
OTHERS



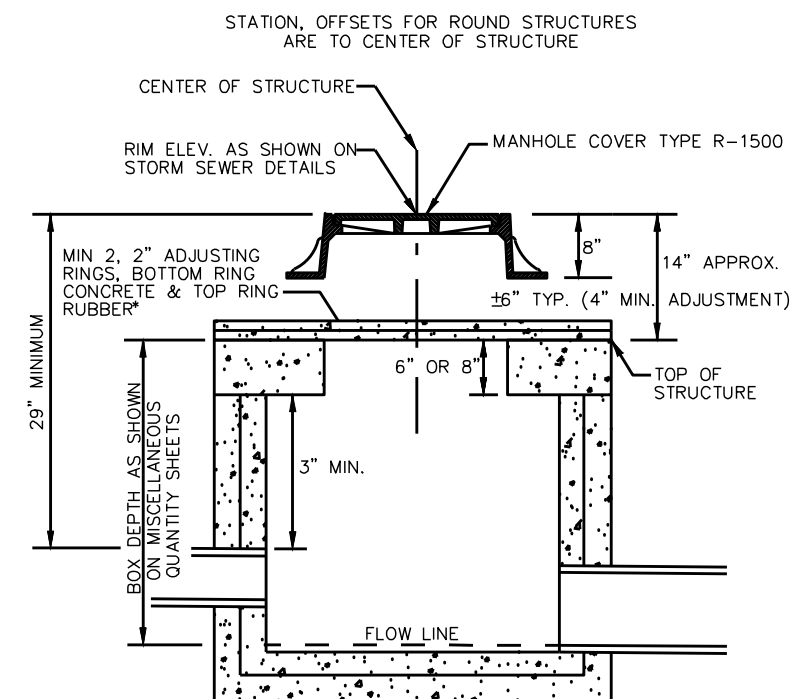
NOTES:

- FULL DEPTH PAVEMENT REPLACEMENT TO BE COMPLETED AT STORM SEWER TRENCHES
- AT CURB AND GUTTER, EXISTING BASE COURSE IS TO REMAIN, REPLACE ASPHALTIC PAVEMENT FULL DEPTH.
- AT STORM SEWER REPLACEMENTS REPLACE BASE COURSE AND ASPHALTIC PAVEMENT FULL DEPTH.
- AT WATER MAIN TRENCHES, BASE COURSE TO BE COMPLETED BY OTHERS.



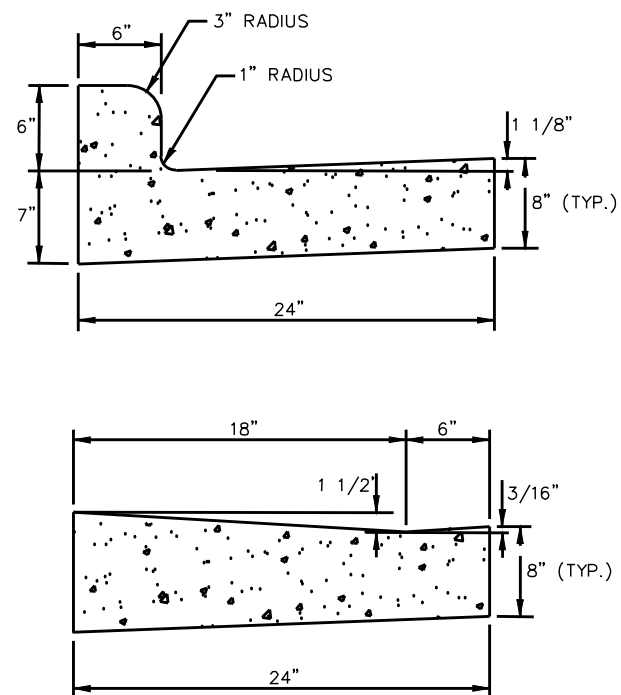


DETAIL FOR COMPUTING INLET ELEVATIONS
SCALE: NONE



*1", 2", OR TAPERED RUBBER RINGS ARE ACCEPTABLE
TO PROVIDE FOR FIELD CONDITIONS

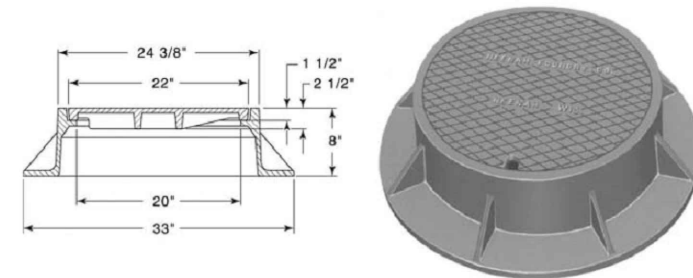
DETAIL FOR COMPUTING ROUND STRUCTURE ELEVATIONS
SCALE: NONE



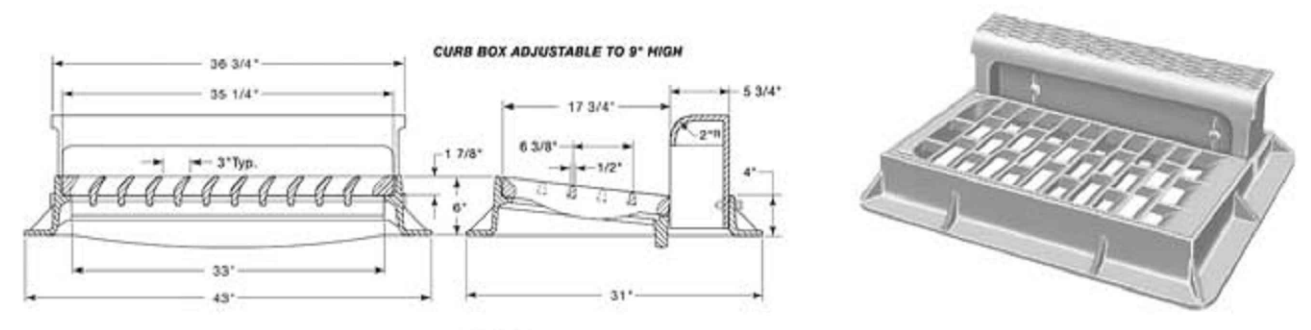
NOTES:

ALL EXPOSED EDGES OF CONCRETE SHALL BE FINISHED WITH AN EDGING TOOL HAVING A RADIUS OF 1/4-INCH UNLESS OTHERWISE NOTED.

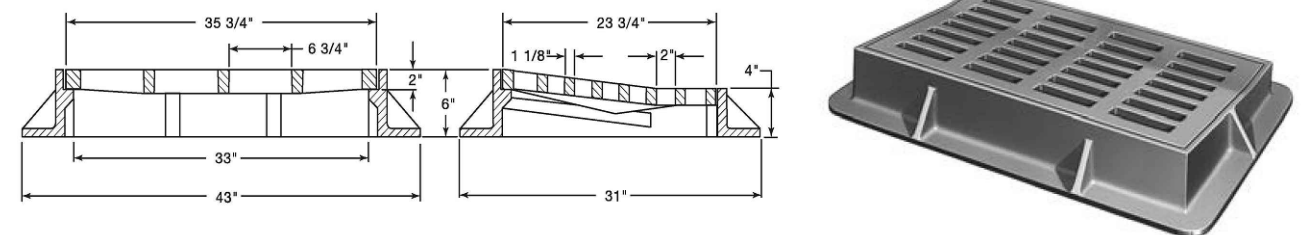
CONCRETE CURB & GUTTER 24-INCH TYPE D, SPECIAL DETAIL
SCALE: NONE



MANHOLE COVER TYPE R-1500 DETAIL
SCALE: NONE

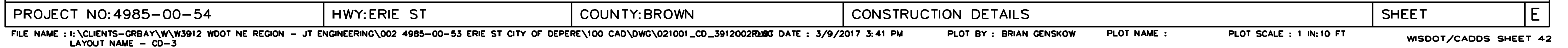


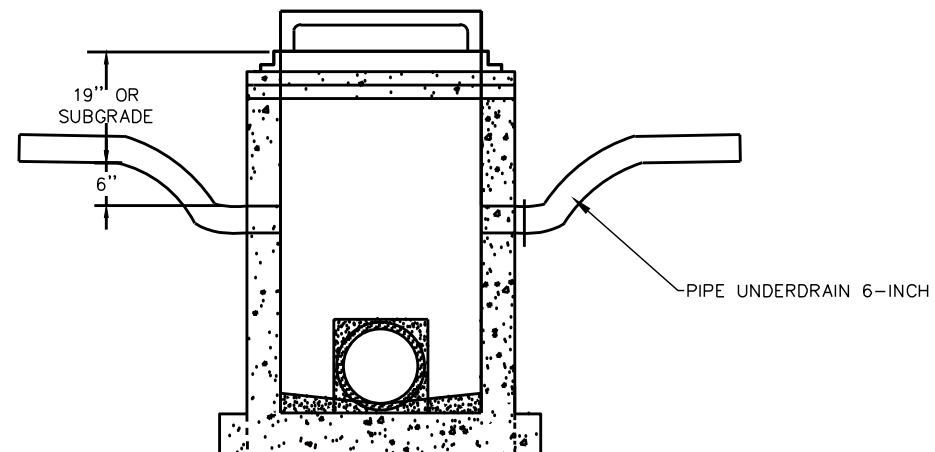
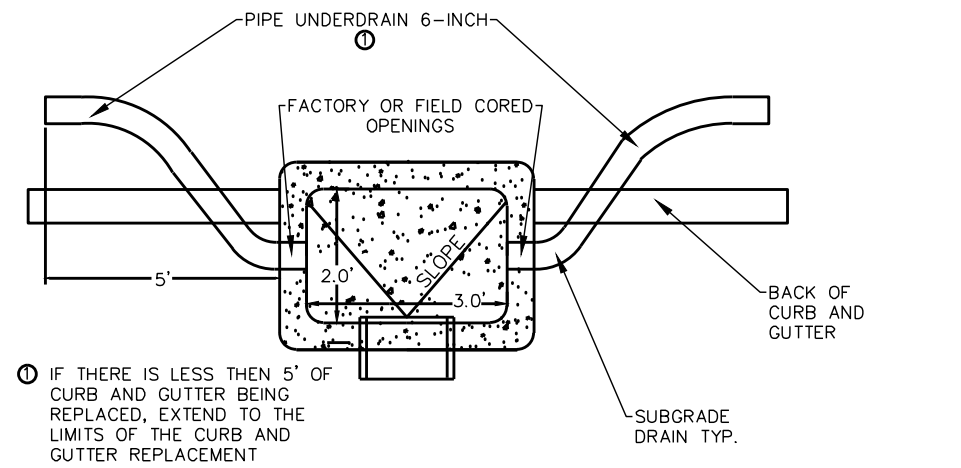
INLET COVER TYPE R-3067-L DETAIL
SCALE: NONE



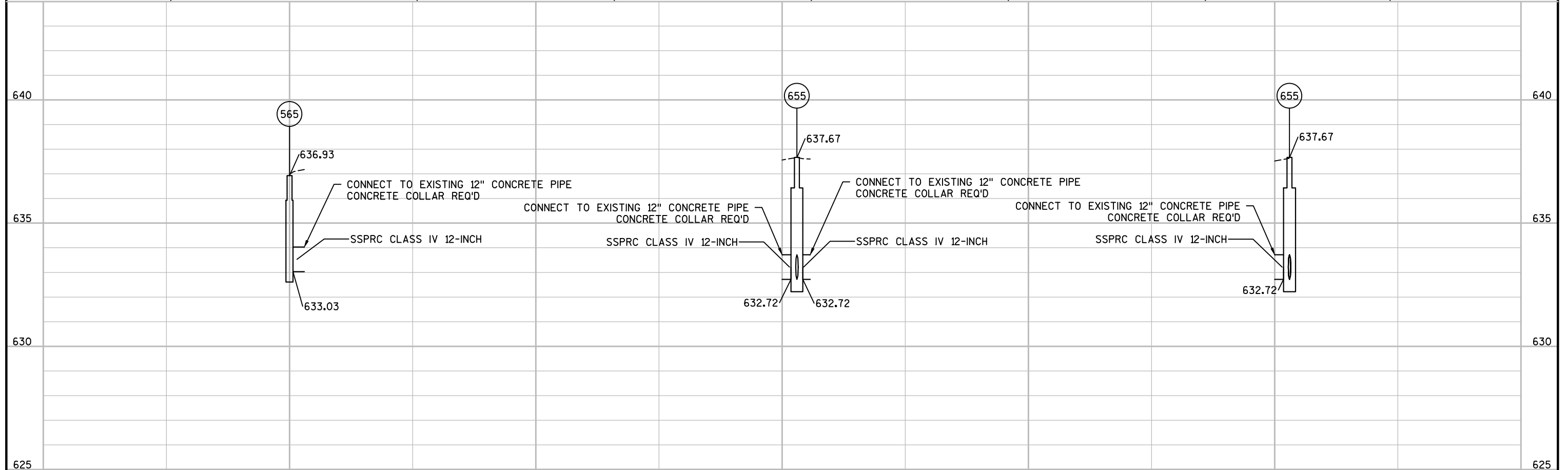
INLET COVER TYPE R-3290-A DETAIL
SCALE: NONE

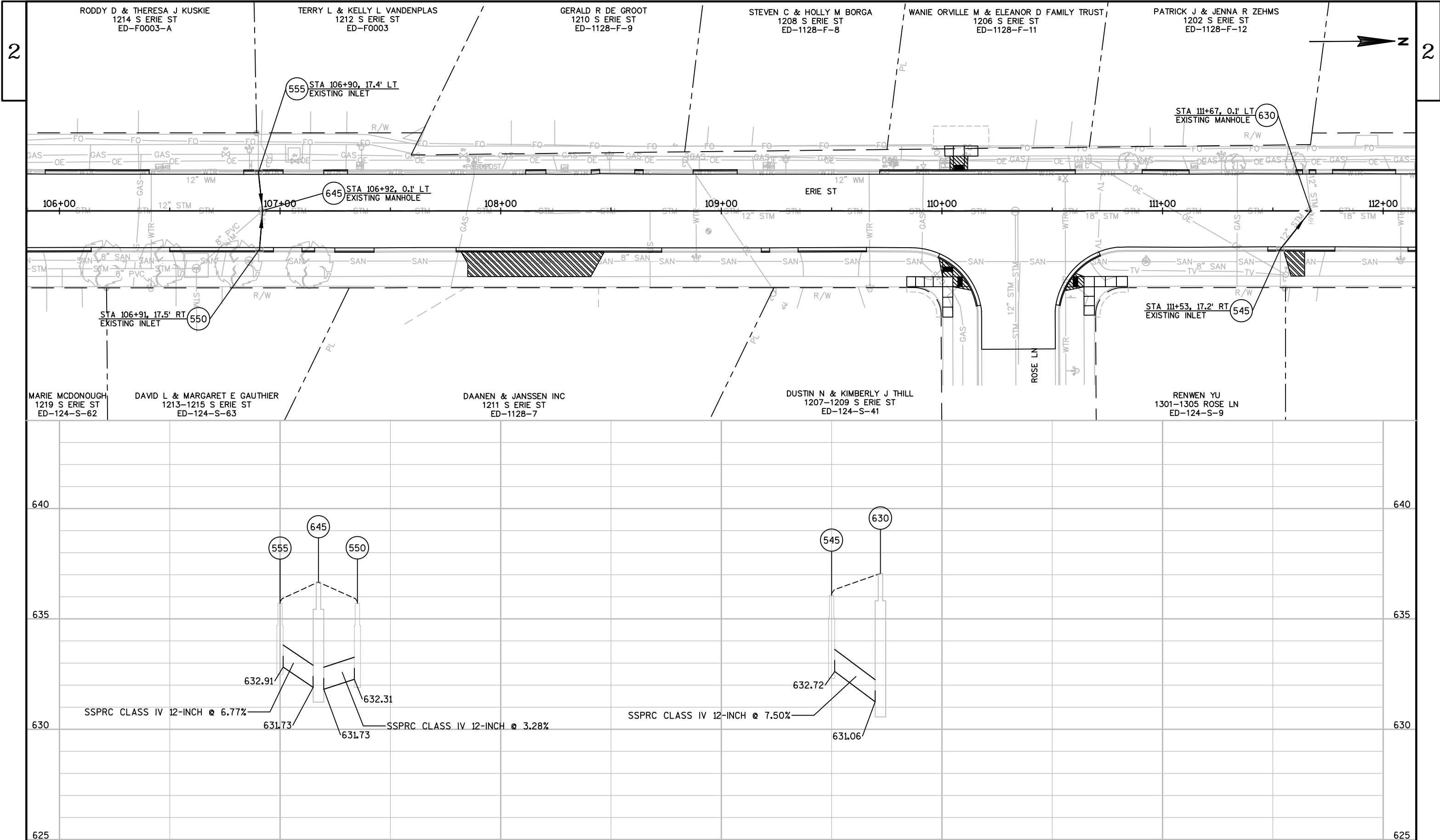
8-INCH COMMERCIAL <u>DRIVEWAYS</u>
STA 108+25 RT

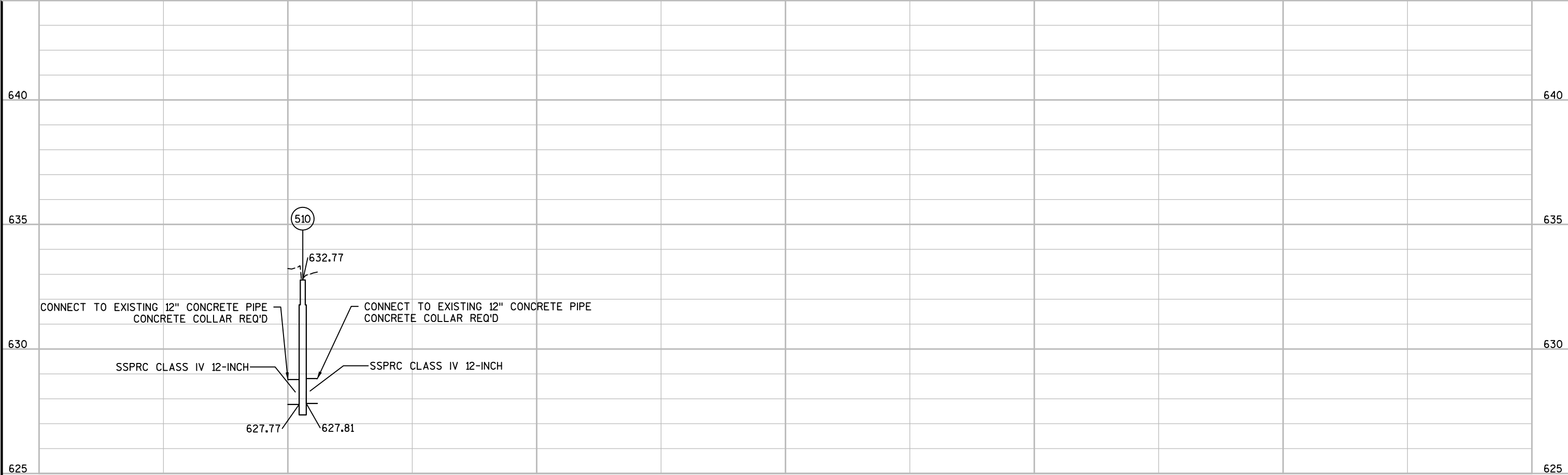
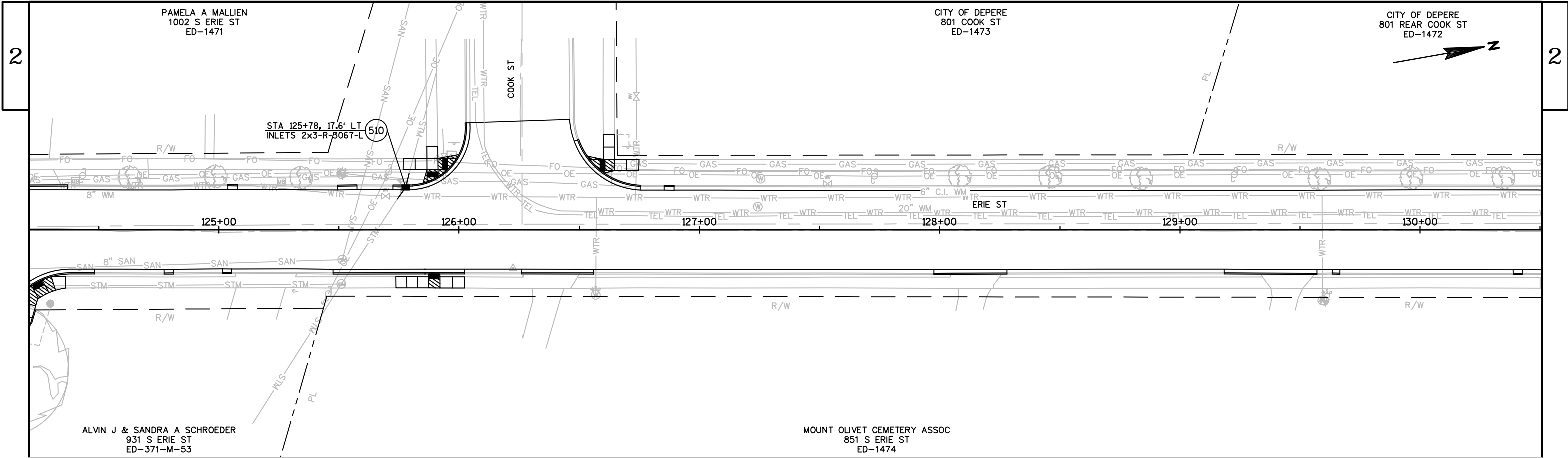




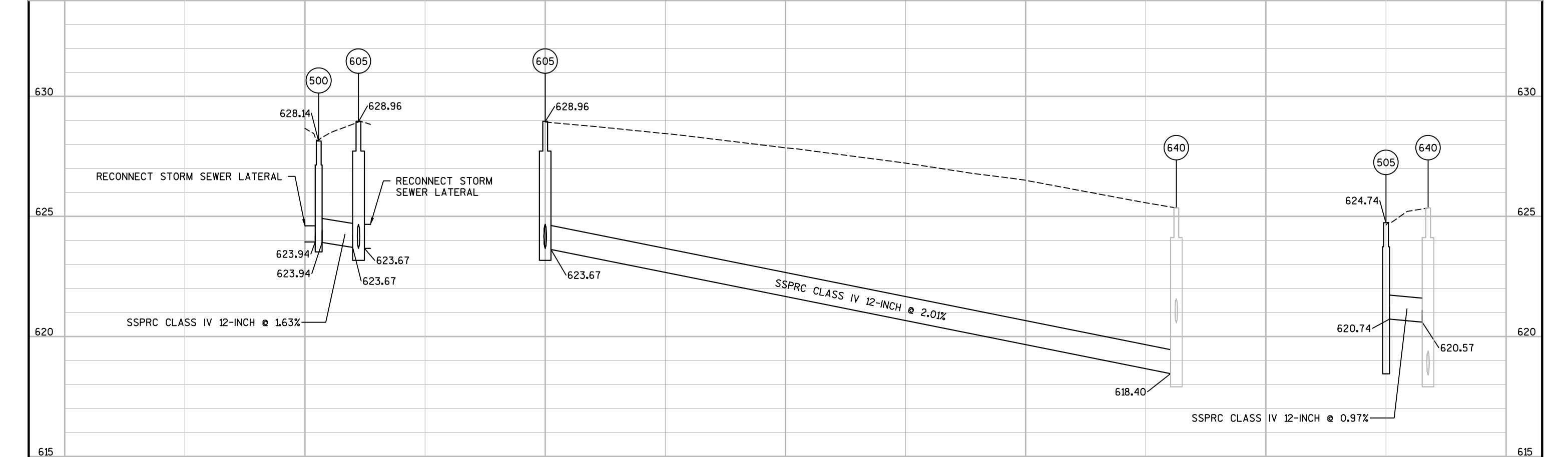
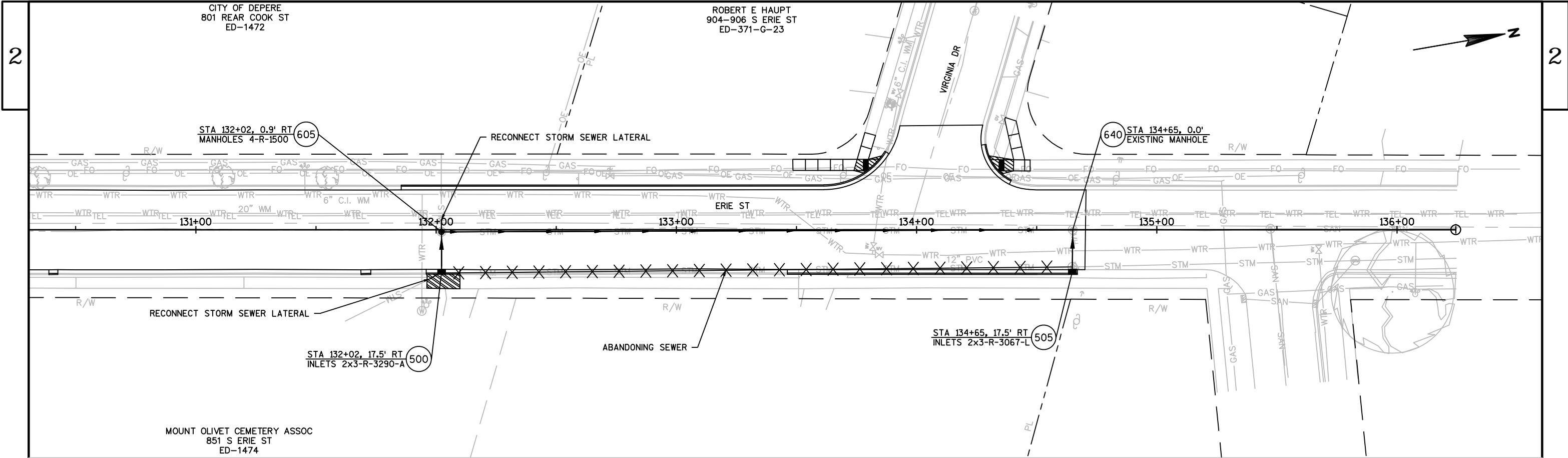
PIPE UNDERDRAIN 6-INCH DETAIL
SCALE: NONE







PROJECT NO:4985-00-54	HWY:ERIE ST	COUNTY:BROWN	STORM SEWER	SHEET	E
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Estimate Of Quantities By Plan Sets

4985-00-54

Line	Item	Item Description	Unit	Total	Qty
0010	204.0100	Removing Pavement	SY	10,130.000	10,130.000
0030	204.0150	Removing Curb & Gutter	LF	2,738.000	2,738.000
0040	204.0210	Removing Manholes	EACH	2.000	2.000
0050	204.0220	Removing Inlets	EACH	7.000	7.000
0070	204.0245	Removing Storm Sewer (size) 02. 10-Inch	LF	58.000	58.000
0080	204.0245	Removing Storm Sewer (size) 03. 12-Inch	LF	120.000	120.000
0140	204.0291.S	Abandoning Sewer	CY	4.000	4.000
0150	205.0100	Excavation Common **P**	CY	398.000	398.000
0160	211.0100	Prepare Foundation for Asphaltic Paving (project) 01. 4985-00-54	LS	1.000	1.000
0180	213.0100	Finishing Roadway (project) 02. 4985-00-54	EACH	1.000	1.000
0200	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	602.000	602.000
0210	416.0160	Concrete Driveway 6-Inch	SY	69.000	69.000
0220	416.0180	Concrete Driveway 8-Inch	SY	75.000	75.000
0230	440.4410	Incentive IRI Ride	DOL	2,604.000	2,604.000
0240	455.0605	Tack Coat	GAL	952.000	952.000
0250	460.2000	Incentive Density HMA Pavement	DOL	2,540.000	2,540.000
0260	460.5223	HMA Pavement 3 LT 58-28 S	TON	2,377.000	2,377.000
0270	460.5224	HMA Pavement 4 LT 58-28 S	TON	1,587.000	1,587.000
0280	520.8000	Concrete Collars for Pipe	EACH	8.000	8.000
0300	602.0415	Concrete Sidewalk 6-Inch	SF	917.000	917.000
0310	602.0505	Curb Ramp Detectable Warning Field Yellow	SF	160.000	160.000
0330	608.0412	Storm Sewer Pipe Reinforced Concrete Class IV 12-Inch	LF	452.000	452.000
0400	611.2004	Manholes 4-FT Diameter	EACH	2.000	2.000
0420	611.2006	Manholes 6-FT Diameter	EACH	1.000	1.000
0450	611.3230	Inlets 2x3-FT	EACH	7.000	7.000
0460	612.0106	Pipe Underdrain 6-Inch	LF	70.000	70.000
0470	619.1000	Mobilization	EACH	0.370	0.370
0480	624.0100	Water	MGAL	20.000	20.000
0490	625.0100	Topsoil	SY	550.000	550.000
0500	627.0200	Mulching	SY	550.000	550.000
0510	628.1905	Mobilizations Erosion Control	EACH	2.000	2.000
0520	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0530	628.7010	Inlet Protection Type B	EACH	1.000	1.000
0540	628.7015	Inlet Protection Type C	EACH	13.000	13.000
0550	629.0210	Fertilizer Type B	CWT	11.000	11.000
0560	630.0140	Seeding Mixture No. 40	LB	15.000	15.000
0570	642.5001	Field Office Type B	EACH	0.370	0.370
0590	643.0100	Traffic Control (project) 02. 4985-00-54	EACH	1.000	1.000

Estimate Of Quantities By Plan Sets

4985-00-54

Line	Item	Item Description	Unit	Total	Qty
0610	643.0420	Traffic Control Barricades Type III	DAY	840.000	840.000
0620	643.0705	Traffic Control Warning Lights Type A	DAY	1,680.000	1,680.000
0630	643.0900	Traffic Control Signs	DAY	840.000	840.000
0650	647.0556	Pavement Marking Stop Line Epoxy 12-Inch	LF	21.000	21.000
0660	647.0766	Pavement Marking Crosswalk Epoxy 6-Inch	LF	843.000	843.000
0670	650.4000	Construction Staking Storm Sewer	EACH	10.000	10.000
0680	650.5000	Construction Staking Base	LF	180.000	180.000
0690	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	2,678.000	2,678.000
0710	650.9910	Construction Staking Supplemental Control (project) 02. 4985-00-54	LS	1.000	1.000
0730	690.0150	Sawing Asphalt	LF	320.000	320.000
0740	690.0250	Sawing Concrete	LF	455.000	455.000
0750	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	1,200.000	1,200.000
0760	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	1,200.000	1,200.000
0770	SPV.0060	Special 01. Reconnect Storm Sewer Laterals	EACH	2.000	2.000
0780	SPV.0060	Special 02. Manhole Covers Type R-1500	EACH	3.000	3.000
0790	SPV.0060	Special 03. Inlet Covers Type R-3067-L	EACH	7.000	7.000
0800	SPV.0060	Special 04. Inlet Covers Type R-3290-A	EACH	1.000	1.000
0810	SPV.0060	Special 05. Rubber Adjusting Rings	EACH	10.000	10.000
0820	SPV.0060	Special 06. Construction Staking Curb Ramps	EACH	16.000	16.000
0840	SPV.0075	Special 01. Street Sweeping	HRS	100.000	100.000
0850	SPV.0090	Special 01. Concrete Curb & Gutter 24-Inch Type D	LF	2,935.000	2,935.000

3

REMOVING PAVEMENT

STATION - STATION	LOCATION	204.0100 SY	REMARKS
100+33 - 134+70	RT/LT	10060	FULL REMOVAL
UNDISTRIBUTED		70	
ITEM TOTAL		10130	

REMOVING STORM SEWER STRUCTURES

STATION	LOCATION	204.0210 REMOVING MANHOLES EACH	204.0220 REMOVING INLETS EACH
103+89	LT	-	1
104+17	LT	1	-
118+24	LT	-	1
123+71	RT	-	1
124+05	RT	1	-
124+09	RT	-	1
125+78	LT	-	1
132+02	RT	-	1
134+65	RT	-	1
ITEM TOTAL		2	7

BASE AGGREGATE DENSE

STATION - STATION	LOCATION	305.0120 1 1/4-INCH TON	REMARKS
106+87 - 106+96	RT/LT	13	STORM R&R
111+50 - 111+73	RT/LT	19	STORM R&R
112+75 - 112+86	LT	7	FULL DEPTH
118+22 - 118+47	LT	12	STORM R&R
123+74 - 124+13	RT	28	STORM R&R
131+98 - 134+69	RT	48	STORM R&R
UNDISTRIBUTED		475	GRADING
ITEM TOTALS		602	

REMOVING CURB & GUTTER

STATION - STATION	LOCATION	204.0150 LF	REMARKS
100+36 - 100+59	LT	32	NW QUAD
100+37 - 100+67	RT	37	NE QUAD
100+75 - 100+84	RT	9	
101+71 - 101+82	RT	11	
101+94 - 102+08	RT	8	
102+08 - 102+23	LT	15	
102+16 - 102+62	RT	40	
102+63 - 102+84	LT	21	
102+79 - 102+83	RT	4	
102+96 - 103+21	LT	25	
103+16 - 103+21	RT	5	
103+35 - 103+50	RT	15	
103+41 - 103+95	LT	54	
103+60 - 103+83	RT	23	
103+92 -104+22	RT	30	
104+09 - 104+41	LT	32	
104+57 - 104+62	RT	5	
105+14 - 105+40	RT	26	
105+57 - 105+62	RT	5	
105+68 - 105+72	LT	4	
105+76 - 106+14	RT	32	
105+94 - 106+41	LT	47	
106+50 - 106+97	RT	41	
106+84 - 107+01	LT	11	
107+10 - 107+16	RT	6	
107+20 - 107+31	LT	11	
107+25 - 107+43	RT	12	
107+80 - 108+73	RT	87	
108+11 - 108+21	LT	10	
108+41 - 108+45	LT	4	
108+61 - 108+65	LT	4	
108+87 - 109+07	LT	20	
109+18 - 109+22	RT	4	
109+35 - 109+66	RT	31	
109+72 - 110+61	LT	80	
109+98 - 110+16	RT	30	SE QUAD
110+53 - 110+72	RT	25	NE QUAD
110+91 - 111+12	LT	17	
111+48 - 111+78	RT	30	
111+60 - 111+69	LT	9	
111+77 - 112+06	LT	29	
112+11 - 112+16	RT	5	
112+24 - 112+28	LT	4	
112+34 - 112+39	RT	5	
112+46 - 112+67	RT	21	
112+65 - 112+70	LT	5	
112+82 - 112+86	LT	1	
112+87 - 113+02	RT	12	
113+17 - 113+48	LT	25	
113+19 - 113+40	RT	21	
113+55 - 113+60	LT	5	
113+88 - 113+92	LT	4	
113+98 - 114+20	RT	18	
114+36 - 114+62	RT	26	
114+44 - 114+49	LT	5	

REMOVING CURB & GUTTER

STATION - STATION	LOCATION	204.0150 LF	REMARKS
114+62 - 114+66	LT	4	
114+77 - 114+82	RT	5	
114+87 - 114+92	LT	5	
115+00 - 115+52	RT	42	
116+08 - 116+75	RT	55	
116+84 - 116+89	LT	5	
116+89 - 117+12	RT	23	
117+19 - 117+43	LT	24	
117+32 - 117+36	RT	1	
117+54 - 117+72	RT	18	
117+82 - 118+17	RT	24	
118+01 - 118+75	LT	56	
118+30 - 118+34	RT	4	
118+42 - 118+50	RT	8	
118+61 - 118+68	RT	15	SE QUAD
119+09 - 119+40	RT	37	NE QUAD
119+16 - 119+52	LT	36	
119+69 - 120+03	RT	34	
119+72 - 120+07	LT	35	
120+27 - 120+77	LT	34	
120+29 - 120+50	RT	25	
120+96 - 121+22	RT	26	
121+70 - 121+96	LT	26	
121+99 - 122+51	RT	44	
122+43 - 122+51	LT	3	
122+69 - 123+00	LT	31	
122+89 - 122+93	RT	4	
123+44 - 123+56	LT	12	
123+47 - 123+69	RT	50	
123+60 - 123+86	LT	26	
124+08 - 124+48	RT	44	
124+12 - 124+37	LT	25	
124+77 - 124+81	RT	4	
125+01 - 125+05	RT	4	
125+04 - 125+08	LT	4	
125+48 - 126+02	RT	54	
125+50 - 125+58	LT	8	
125+73 - 126+03	LT	47	SW QUAD
126+26 - 126+56	RT	28	
126+49 - 126+75	LT	29	
126+85 - 126+89	LT	4	
127+98 - 128+28	RT	30	
129+18 - 129+57	RT	38	
129+63 - 129+67	RT	4	
130+39 - 130+43	RT	4	
131+69 - 131+73	RT	4	
131+85 - 133+87	LT	197	SW QUAD
131+96 - 132+10	RT	12	
133+46 - 134+67	RT	121	
134+28 - 134+39	LT	19	NW QUAD
UNDISTRIBUTED		248	
ITEM TOTAL		2738	

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PROJECT NO:4985-00-54

HWY:ERIE ST

COUNTY:BROWN

MISCELLANEOUS QUANTITIES

SHEET

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EXCAVATION COMMON **P**					
STATION -STATION	LOCATION	205.0100 CY	USABLE CUT	WASTE	REMARKS
100+36 - 134+67	RT/LT	136	--	136	FOR CURB R&R
100+48	LT	1	--	1	CURB RAMP
100+48	RT	1	--	1	CURB RAMP
101+91 - 133+74	RT/LT	195	--	195	REMOVAL OF AGG IN TRENCH
107+82 - 108+47	RT	16	--	16	DRIVEWAY
110+05	RT	2	--	2	CURB RAMP
110+08	LT	3	--	3	CURB RAMP
110+61	RT	1	--	1	CURB RAMP
112+75 - 112+86	LT	6	--	6	FULL DEPTH
116+47 - 116+61	RT	3	--	3	DRIVEWAY
116+90 - 117+06	RT	3	--	3	DRIVEWAY
117+26 - 117+41	LT	2	--	2	DRIVEWAY
118+62	RT	1	--	1	CURB RAMP
119+15	RT	1	--	1	CURB RAMP
119+36	LT	4	--	4	CURB RAMP
119+36	RT	5	--	5	CURB RAMP
123+51	LT	4	--	4	CURB RAMP
123+51	RT	5	--	5	CURB RAMP
123+68	RT	1	--	1	CURB RAMP
124+24	RT	2	--	2	CURB RAMP
125+90	RT	2	--	2	CURB RAMP
125+92	LT	1	--	1	CURB RAMP
126+61	LT	1	--	1	CURB RAMP
133+79	LT	1	--	1	CURB RAMP
134+35	LT	1	--	1	CURB RAMP
ITEM TOTALS		398	0	398	

REMOVING STORM SEWER					
STATION - STATION	LOCATION	204.0245.02 10-INCH LF	204.0245.03 12-INCH LF	204.0291.S ABANDONING SEWER CY	REMARKS
103+89	LT	--	3	--	TO RECONNECT INL 565
104+17	LT	--	9	--	TO RECONNECT MH 655
106+92	LT	--	18	--	
106+92	RT	--	18	--	
111+53 - 111+67	RT	--	22	--	
118+24 - 118+41	LT	--	20	--	CONFLICTING RECORDS ON SIZE
123+71 - 124+05	RT	40	--	--	
124+05 - 124+09	RT	18	--	--	
124+05	RT	--	6	--	TO RECONNECT MH 610
125+78	LT	--	6	--	TO RECONNECT INL 510
132+02	RT	--	18	--	
132+02 - 134+65	RT	--	--	4	
ITEM TOTAL		58	120	4	

FINISHING ROADWAY		
PROJECT	213.0100.02 EA	REMARKS
4985-00-54	1	
ITEM TOTAL		1

CONCRETE DRIVEWAY				
STATION - STATION	LOCATION	416.0160 6 INCH SY	416.0180 8 INCH SY	REMARKS
107+82 - 108+47	RT	--	75	
111+55 - 111+64	RT	10	--	
116+47 - 116+62	RT	14	--	
116+90 - 117+06	RT	16	--	
117+26 - 117+41	LT	10	--	
131+96 - 132+10	RT	9	--	
UNDISTRIBUTED		10	--	
ITEM TOTALS		69	75	

ASPHALTIC PAVEMENT ITEMS				
STATION - STATION	LOCATION	455.0605 TACK COAT GAL	460.5223 HMA PAVEMENT 3 LT 58-28 S TON	460.5224 HMA PAVEMENT 4 LT 58-28 S TON
100+34 - 134+68	ERIE STREET	952	2377	1587
ITEM TOTALS		952	2377	1587

CONCRETE COLLARS FOR PIPE		
STATION -STATION	LOCATION	520.8000 EA
103+89	LT	1
104+17	LT	3
124+05	RT	2
125+78	LT	2
ITEM TOTALS		8

PROJECT NO: 4985-00-54	HWY: ERIE ST	COUNTY: BROWN	MISCELLANEOUS QUANTITIES	SHEET	E
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CONCRETE SIDEWALK

STATION - STATION		LOCATION	602.0415 6-INCH SF	602.0505 CURB RAMP DETECTABLE WARNING FIELD YELLOW SF
100+48	100+48	LT	41	8
100+48	100+48	RT	39	8
110+05	110+05	RT	78	16
110+08	110+08	LT	49	8
110+61	110+61	RT	41	8
118+62	118+62	RT	36	8
119+15	119+15	RT	23	8
119+36	119+36	LT	82	8
119+36	119+36	RT	60	8
123+51	123+51	LT	82	8
123+51	123+51	RT	57	8
123+68	123+68	RT	22	8
124+24	124+24	RT	81	8
125+90	125+90	RT	27	8
125+92	125+92	LT	64	16
126+61	126+61	LT	45	8
133+79	133+79	LT	41	8
134+35	134+35	LT	49	8
ITEM TOTAL			917	160

FIELD OFFICE TYPE B

STATION	624.5001 EACH	REMARKS
4985-00-54	0.37	
ITEM TOTAL	0.37	

STORM SEWER PIPE

PIPE NUMBER	STATION - STATION	INLET ELEV	PIPE		SLOPE %	608.0412 REINFORCED CONCRETE CLASS IV 12-INCH LF
			OUTLET ELEV			
-	103+89			MATCH EXISTING		3
-	104+17			MATCH EXISTING		9
555-645	106+90 - 106+92 LT	632.91	631.73	6.77		16
550-645	106+91 - 106+92 RT	632.31	631.73	3.28		16
545-630	111+53 - 111+67 RT	632.72	631.06	7.50		22
535-620	118+24 - 118+41 LT	632.29	632.10	0.99		20
520-610	123+71 - 124+05 RT	631.96	630.70	3.19		40
-	124+05 RT			MATCH EXISTING		6
515-610	124+09 - 124+05	631.46	630.70	4.29		18
-	125+78 LT			MATCH EXISTING		6
500-605	132+02 RT	623.94	623.67	1.63		16
605-640	132+02 - 134+65	623.67	618.40	2.01		263
505-640	134+65	620.74	620.57	0.97		17
ITEM TOTAL						452

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STORM SEWER STRUCTURE ITEMS

STRUCTURE NUMBER	STATION	OFFSET	TOP STRUCTURE ELEV	CASTING ELEV	BOTTOM STRUCTURE ELEV	DEPTH	611.2004	611.2006	SPV.0060.02	611.3230	SPV.0060.03	SPV.0060.04	SPV.0060.05	612.0106	REMARKS
							MANHOLES	MANHOLES	MANHOLE	INLET	INLET COVERS		RUBBER	PIPE	
							4-FT DIAMETER EACH	6-FT DIAMETER EACH	COVERS TYPE R-1500 EACH	2x3-FT EACH	R-3067-L EACH	R-3290-A EACH	ADJUSTING RINGS EACH	UNDERDRAIN 6-INCH LF	
565	103+89	17.5' LT	636.27	636.93	633.03	3.90	--	--	--	1	1	--	1	10	CASTING ONLY
655	104+17	0.6' LT	637.01	637.67	632.72	4.95	1	--	1	--	--	--	1	--	
540	111+65	17.5' LT	MATCH EXISTING				--	--	--	--	1	--	--	--	
535	118+24	18.1' LT	635.63	636.29	632.29	4.00	--	--	--	1	1	--	1	10	
520	123+71	44.3' RT	634.40	635.06	631.96	3.10	--	--	--	1	1	--	1	10	
610	124+05	23.6' RT	634.39	635.05	630.70	4.35	--	1	1	--	--	--	1	--	
515	124+09	40.9' RT	634.20	634.86	631.46	3.40	--	--	--	1	1	--	1	10	
510	125+78	17.6' LT	632.11	632.77	627.77	5.00	--	--	--	1	1	--	1	10	
605	132+02	0.9' RT	628.30	628.96	623.67	5.29	1	--	1	--	--	--	1	--	
500	132+02	17.5' RT	627.48	628.14	623.94	4.20	--	--	--	1	--	1	1	10	
505	134+65	17.5' RT	624.08	624.74	620.74	4.00	--	--	--	1	1	--	1	10	
ITEM TOTAL							2	1	3	7	7	1	10	70	

*VERIFY ELEVATIONS IN THE FIELD

PROJECT NO: 4985-00-54

HWY: ERIE ST

COUNTY: BROWN

MISCELLANEOUS QUANTITIES

SHEET

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TOPSOIL, SALVAGED TOPSOIL, MULCHING, FERTILIZER, AND SEEDING

STATION - STATION	LOCATION	625.0100	627.0200	629.0210	630.0140
		TOPSOIL SY	MULCHING SY	FERTILIZER TYPE B CWT	SEEDING MIXTURE NO. 40 LB
100+36 - 100+59	LT	7	7	0.1	0.1
100+37 - 100+67	RT	8	8	0.1	0.1
101+71 - 101+82	RT	2	2	0.1	0.1
101+94 - 102+08	RT	3	3	0.1	0.1
102+08 - 102+23	LT	2	2	0.1	0.1
102+16 - 102+62	RT	6	6	0.1	0.1
102+63 - 102+84	LT	5	5	0.1	0.1
102+79 - 102+83	RT	1	1	0.1	0.1
102+96 - 103+21	LT	2	2	0.1	0.1
103+16 - 103+21	RT	1	1	0.1	0.1
103+35 - 103+50	RT	3	3	0.1	0.1
103+41 - 103+95	LT	12	12	0.1	0.2
103+60 - 103+83	RT	2	2	0.1	0.1
103+92 -104+22	RT	7	7	0.1	0.1
104+09 - 104+41	LT	7	7	0.1	0.1
104+57 - 104+62	RT	1	1	0.1	0.1
105+14 - 105+40	RT	2	2	0.1	0.1
105+57 - 105+62	RT	1	1	0.1	0.1
105+68 - 105+72	LT	1	1	0.1	0.1
105+76 - 106+14	RT	5	5	0.1	0.1
105+94 - 106+41	LT	9	9	0.1	0.2
106+50 - 106+97	RT	6	6	0.1	0.1
106+84 - 107+01	LT	4	4	0.1	0.1
107+10 - 107+16	RT	1	1	0.1	0.1
107+20 - 107+31	LT	1	1	0.1	0.1
107+25 - 107+43	RT	4	4	0.1	0.1
107+80 - 108+73	RT	11	11	0.1	0.2
108+41 - 108+45	LT	1	1	0.1	0.1
108+61 - 108+65	LT	1	1	0.1	0.1
108+87 - 109+07	LT	1	1	0.1	0.1
109+18 - 109+22	RT	1	1	0.1	0.1
109+35 - 109+66	RT	2	2	0.1	0.1
109+72 - 110+61	LT	20	20	0.1	0.4
109+98 - 110+16	RT	3	3	0.1	0.1
110+53 - 110+72	RT	7	7	0.1	0.1
110+91 - 111+12	LT	2	2	0.1	0.1
111+48 - 111+78	RT	4	4	0.1	0.1
111+77 - 112+06	LT	3	3	0.1	0.1
112+11 - 112+16	RT	1	1	0.1	0.1
112+24 - 112+28	LT	1	1	0.1	0.1
112+34 - 112+39	RT	1	1	0.1	0.1
112+46 - 112+67	RT	5	5	0.1	0.1
112+65 - 112+70	LT	1	1	0.1	0.1
112+82 - 112+86	LT	1	1	0.1	0.1
112+87 - 113+02	RT	3	3	0.1	0.1
113+17 - 113+48	LT	3	3	0.1	0.1
113+19 - 113+40	RT	5	5	0.1	0.1
113+55 - 113+60	LT	1	1	0.1	0.1
113+98 - 114+20	RT	5	5	0.1	0.1
114+36 - 114+62	RT	2	2	0.1	0.1

TOPSOIL, SALVAGED TOPSOIL, MULCHING, FERTILIZER, AND SEEDING

STATION - STATION	LOCATION	625.0100	627.0200	629.0210	630.0140
		TOPSOIL SY	MULCHING SY	FERTILIZER TYPE B CWT	SEEDING MIXTURE NO. 40 LB
114+44 - 114+49	LT	1	1	0.1	0.1
114+62 - 114+66	LT	1	1	0.1	0.1
114+77 - 114+82	RT	1	1	0.1	0.1
114+87 - 114+92	LT	1	1	0.1	0.1
115+00 - 115+52	RT	12	12	0.1	0.2
116+08 - 116+75	RT	15	15	0.1	0.3
116+89 - 117+12	RT	6	6	0.1	0.1
117+19 - 117+43	LT	5	5	0.1	0.1
117+32 - 117+36	RT	1	1	0.1	0.1
117+54 - 117+72	RT	3	3	0.1	0.1
117+82 - 118+17	RT	8	8	0.1	0.1
118+01 - 118+75	LT	12	12	0.1	0.2
118+30 - 118+34	RT	1	1	0.1	0.1
118+42 - 118+50	RT	2	2	0.1	0.1
118+61 - 118+68	RT	3	3	0.1	0.1
119+09 - 119+40	RT	10	10	0.1	0.2
119+16 - 119+52	LT	10	10	0.1	0.2
119+69 - 120+03	RT	3	3	0.1	0.1
119+72 - 120+07	LT	4	4	0.1	0.1
120+27 - 120+77	LT	11	11	0.1	0.2
120+29 - 120+50	RT	7	7	0.1	0.1
120+96 - 121+22	RT	2	2	0.1	0.1
121+70 - 121+96	LT	2	2	0.1	0.1
121+99 - 122+51	RT	8	8	0.1	0.1
122+43 - 122+51	LT	2	2	0.1	0.1
122+69 - 123+00	LT	4	4	0.1	0.1
122+89 - 122+93	RT	1	1	0.1	0.1
123+44 - 123+56	LT	4	4	0.1	0.1
123+47 - 123+69	RT	13	13	0.1	0.2
123+60 - 123+86	LT	2	2	0.1	0.1
124+08 - 124+48	RT	8	8	0.1	0.1
124+12 - 124+37	LT	2	2	0.1	0.1
124+77 - 124+81	RT	1	1	0.1	0.1
125+01 - 125+05	RT	1	1	0.1	0.1
125+04 - 125+08	LT	1	1	0.1	0.1
125+48 - 126+02	RT	12	12	0.1	0.2
125+50 - 125+58	LT	2	2	0.1	0.1
125+73 - 126+03	LT	9	9	0.1	0.2
126+26 - 126+56	RT	3	3	0.1	0.1
126+49 - 126+75	LT	8	8	0.1	0.1
126+85 - 126+89	LT	1	1	0.1	0.1
127+98 - 128+28	RT	3	3	0.1	0.1
129+18 - 129+57	RT	5	5	0.1	0.1
129+63 - 129+67	RT	1	1	0.1	0.1
130+39 - 130+43	RT	1	1	0.1	0.1
131+69 - 131+73	RT	1	1	0.1	0.1
131+85 - 133+87	LT	46	46	0.1	0.8
133+46 - 134+67	RT	22	22	0.1	0.4
134+28 - 134+39	LT	5	5	0.1	0.1
UNDISTRIBUTED		75	75	1.5	2.3
ITEM TOTALS		550	550	11	15

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WATER

STATION -STATION	LOCATION	624.0100 MGAL	REMARKS
100+34 - 134+68	ERIE STREET	20	BASE COMPACTION DUST CONTROL
ITEM TOTALS		20	

EROSION CONTROL

STATION	LOCATION	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH	628.7010 INLET PROTECTION TYPE B EACH	628.7015 INLET PROTECTION TYPE C EACH
103+89	LT	--	--	--	1
103+91	RT	--	--	--	1
106+90	LT	--	--	--	1
106+90	RT	--	--	--	1
111+53	RT	--	--	--	1
111+65	LT	--	--	--	1
118+24	LT	--	--	--	1
118+45	RT	--	--	--	1
123+56	RT	--	--	--	1
123+71	RT	--	--	--	1
124+09	RT	--	--	--	1
125+78	LT	--	--	--	1
132+02	RT	--	--	1	--
134+65	RT	--	--	--	1
PROJECT 4985-00-54		2	2	--	--
ITEM TOTALS		2	2	1	13

TRAFFIC CONTROL

LOCATION	643.0100.02 PROJECT 4985-00-54 EACH	643.0420 BARRICADES TYPE III DAYS	643.0705 WARNING LIGHTS TYPE A DAYS	643.0900 SIGNS DAYS
ERIE ST - BEGINNING OF PROJECT	--	120	240	120
ROSE LANE	--	120	240	120
HOCKERS STREET	--	120	240	120
COOK STREET EAST	--	120	240	120
COOK STREET WEST	--	120	240	120
VIRGINIA DRIVE	--	120	240	120
ERIE ST - END OF PROJECT	--	120	240	120
PROJECT 4985-00-54				
	1	--	--	--
ITEM TOTALS				
	1	840	1680	840

PAVEMENT MARKING

STATION - STATION	LOCATION	647.0556 STOP LINE EPOXY 12-INCH LF	647.0766 CROSSWALK EPOXY 6-INCH LF	REMARKS
100+48	RT/LT	--	86	
110+08	RT/LT	--	77	
110+13 - 110+56	RT	--	85	
118+68 - 119+12	RT	--	86	
119+36	RT/LT	--	66	
123+51	RT/LT	--	66	
123+72 - 124+24	RT	--	108	
125+90	RT/LT	--	70	
125+97 - 126+54	LT	21	108	
133+85 - 134+30	LT	--	91	
ITEM TOTALS				
		21	843	

CONSTRUCTION STAKING

STATION - STATION	650.4000 STORM SEWER EA	650.5000 BASE LF	650.5500 CURB & GUTTER LF	650.9910.02 SUPPLEMENTAL CONTROL (4985-00-54) LS	SPV.0060.06 CURB RAMP EA
100+34 - 134+70	10	180	2678	1	16
ITEM TOTALS					
	10	180	2678	1	16

PROJECT NO:4985-00-54

HWY:ERIE ST

COUNTY:BROWN

MISCELLANEOUS QUANTITIES

SHEET

E

3

SAWING

STATION	LOCATION	690.0150	690.0250	REMARKS
		ASPHALT LF	CONCRETE LF	
100+34	RT/LT	84	--	PAVING LIMITS
100+36 - 100+59	LT	--	4	CURB R&R
100+37 - 100+67	RT	--	4	CURB R&R
100+75 - 100+84	RT	--	4	CURB R&R
101+71 - 101+82	RT	--	4	CURB R&R
101+94 - 102+08	RT	--	4	CURB R&R
102+08 - 102+23	LT	--	4	CURB R&R
102+16 - 102+62	RT	--	4	CURB R&R
102+63 - 102+84	LT	--	4	CURB R&R
102+79 - 102+83	RT	--	4	CURB R&R
102+96 - 103+21	LT	--	4	CURB R&R
103+16 - 103+21	RT	--	4	CURB R&R
103+35 - 103+50	RT	--	4	CURB R&R
103+41 - 103+95	LT	--	4	CURB R&R
103+60 - 103+83	RT	--	4	CURB R&R
103+92 -104+22	RT	--	4	CURB R&R
104+09 - 104+41	LT	--	4	CURB R&R
104+57 - 104+62	RT	--	4	CURB R&R
105+14 - 105+40	RT	--	4	CURB R&R
105+57 - 105+62	RT	--	4	CURB R&R
105+68 - 105+72	LT	--	4	CURB R&R
105+76 - 106+14	RT	--	4	CURB R&R
105+94 - 106+41	LT	--	4	CURB R&R
106+50 - 106+97	RT	--	4	CURB R&R
106+84 - 107+01	LT	--	4	CURB R&R
107+10 - 107+16	RT	--	4	CURB R&R
107+20 - 107+31	LT	--	4	CURB R&R
107+25 - 107+43	RT	--	4	CURB R&R
107+80 - 108+73	RT	--	4	CURB R&R
108+11 - 108+21	LT	--	4	CURB R&R
108+41 - 108+45	LT	--	4	CURB R&R
108+61 - 108+65	LT	--	4	CURB R&R
108+87 - 109+07	LT	--	4	CURB R&R
109+18 - 109+22	RT	--	4	CURB R&R
109+35 - 109+66	RT	--	4	CURB R&R
109+72 - 110+61	LT	--	4	CURB R&R
109+98 - 110+16	RT	--	4	CURB R&R
110+18 - 110+51	RT	33	--	PAVING LIMITS
110+53 - 110+72	RT	--	4	CURB R&R
110+91 - 111+12	LT	--	4	CURB R&R
111+48 - 111+78	RT	--	4	CURB R&R
111+77 - 112+06	LT	--	4	CURB R&R
112+11 - 112+16	RT	--	4	CURB R&R
112+24 - 112+28	LT	--	4	CURB R&R
112+34 - 112+39	RT	--	4	CURB R&R
112+46 - 112+67	RT	--	4	CURB R&R
112+65 - 112+70	LT	--	4	CURB R&R
112+82 - 112+86	LT	--	4	CURB R&R
112+87 - 113+02	RT	--	4	CURB R&R
113+17 - 113+48	LT	--	4	CURB R&R

SAWING

STATION	LOCATION	690.0150	690.0250	REMARKS
		ASPHALT LF	CONCRETE LF	
113+19 - 113+40	RT	--	4	CURB R&R
113+55 - 113+60	LT	--	4	CURB R&R
113+88 - 113+92	LT	--	4	CURB R&R
113+98 - 114+20	RT	--	4	CURB R&R
114+36 - 114+62	RT	--	4	CURB R&R
114+44 - 114+49	LT	--	4	CURB R&R
114+62 - 114+66	LT	--	4	CURB R&R
114+77 - 114+82	RT	--	4	CURB R&R
114+87 - 114+92	LT	--	4	CURB R&R
115+00 - 115+52	RT	--	4	CURB R&R
116+08 - 116+75	RT	--	4	CURB R&R
116+84 - 116+89	LT	--	4	CURB R&R
116+89 - 117+12	RT	--	4	CURB R&R
117+19 - 117+43	LT	--	4	CURB R&R
117+32 - 117+36	RT	--	4	CURB R&R
117+54 - 117+72	RT	--	4	CURB R&R
117+82 - 118+17	RT	--	4	CURB R&R
118+01 - 118+75	LT	--	4	CURB R&R
118+30 - 118+34	RT	--	4	CURB R&R
118+42 - 118+50	RT	--	4	CURB R&R
118+61 - 118+68	RT	--	4	CURB R&R
118+65 - 118+99	RT	33	--	PAVING LIMITS
119+09 - 119+40	RT	--	4	CURB R&R
119+16 - 119+52	LT	--	4	CURB R&R
119+69 - 120+03	RT	--	4	CURB R&R
119+72 - 120+07	LT	--	4	CURB R&R
120+27 - 120+77	LT	--	4	CURB R&R
120+29 - 120+50	RT	--	4	CURB R&R
120+96 - 121+22	RT	--	4	CURB R&R
121+70 - 121+96	LT	--	4	CURB R&R
121+99 - 122+51	RT	--	4	CURB R&R
122+43 - 122+51	LT	--	4	CURB R&R
122+69 - 123+00	LT	--	4	CURB R&R
122+89 - 122+93	RT	--	4	CURB R&R
123+44 - 123+56	LT	--	4	CURB R&R
123+47 - 123+69	RT	--	4	CURB R&R
123+60 - 123+86	LT	--	4	CURB R&R
123+71 - 124+04	RT	33	--	PAVING LIMITS
124+08 - 124+48	RT	--	4	CURB R&R
124+12 - 124+37	LT	--	4	CURB R&R
124+77 - 124+81	RT	--	4	CURB R&R
125+01 - 125+05	RT	--	4	CURB R&R
125+04 - 125+08	LT	--	4	CURB R&R
125+48 - 126+02	RT	--	4	CURB R&R
125+50 - 125+58	LT	--	4	CURB R&R
125+73 - 126+03	LT	--	4	CURB R&R
126+05 - 126+46	LT	41	--	PAVING LIMITS
126+49 - 126+75	LT	--	4	CURB R&R
126+85 - 126+89	LT	--	4	CURB R&R
127+98 - 128+28	RT	--	4	CURB R&R

SAWING

STATION	LOCATION	690.0150	690.0250	REMARKS
		ASPHALT LF	CONCRETE LF	
129+18 - 129+57	RT	--	4	CURB R&R
129+63 - 129+67	RT	--	4	CURB R&R
130+39 - 130+43	RT	--	4	CURB R&R
131+69 - 131+73	RT	--	4	CURB R&R
131+85 - 133+87	LT	--	4	CURB R&R
131+96 - 132+10	RT	--	4	CURB R&R
133+46 - 134+67	RT	--	4	CURB R&R
133+93 - 134+28	LT	34	--	PAVING LIMITS
134+28 - 134+39	LT	--	4	CURB R&R
134+70	RT/LT	33	--	PAVING LIMITS
UNDISTRIBUTED		29	43	
ITEM TOTAL		320	455	

RECONNECT STORM SEWER LATERALS

STATION	LOCATION	SPV.0060.01	REMARKS
		EACH	
132+02	LT & RT	2	
ITEM TOTAL		2	

STREET SWEEPING

STATION	SPV.0075.01	REMARKS
	HRS	
4985-00-54	100	
ITEM TOTAL		100

3

PROJECT NO:4985-00-54

HWY:ERIE ST

COUNTY:BROWN

MISCELLANEOUS QUANTITIES

SHEET

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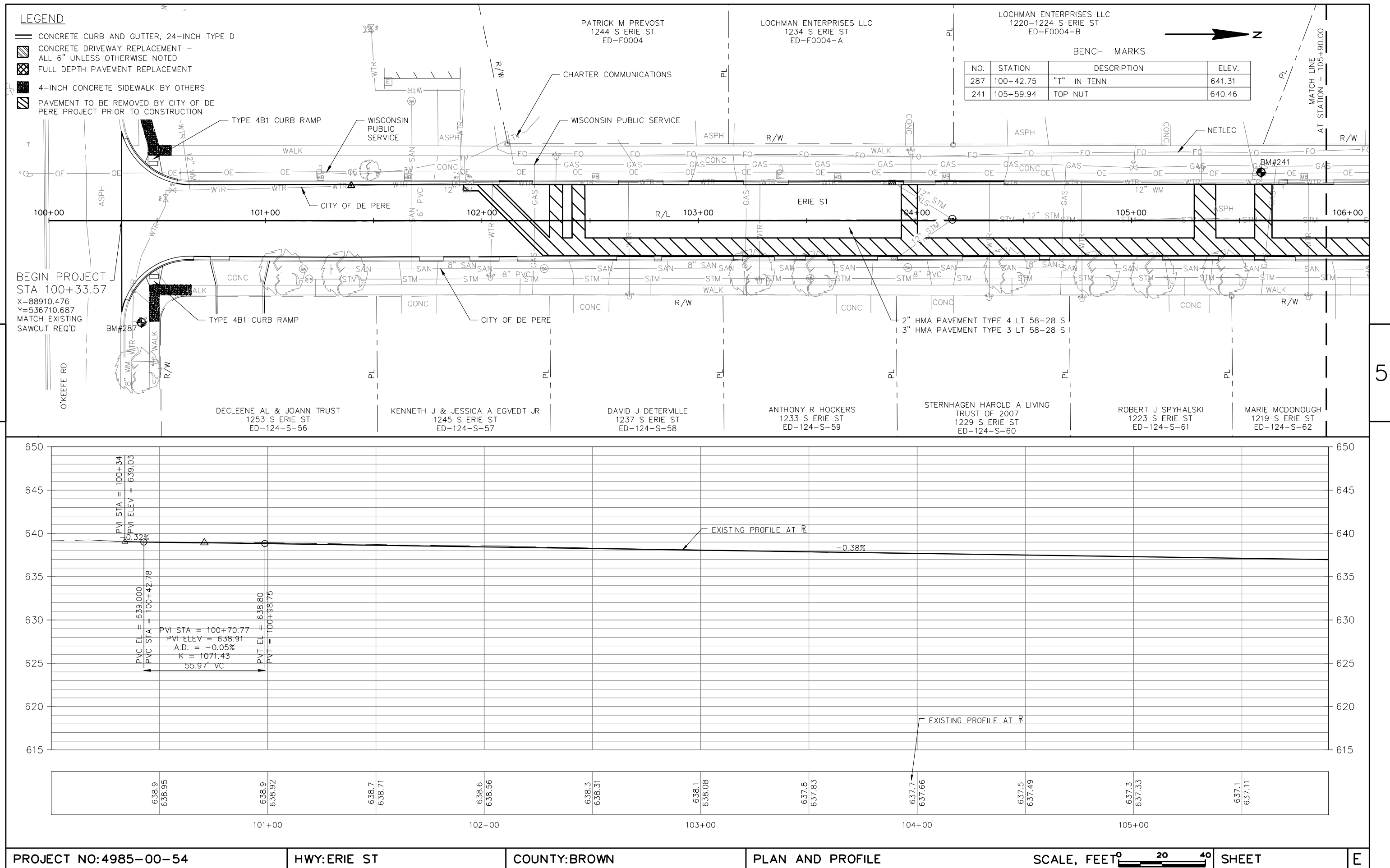
CONCRETE CURB & GUTTER

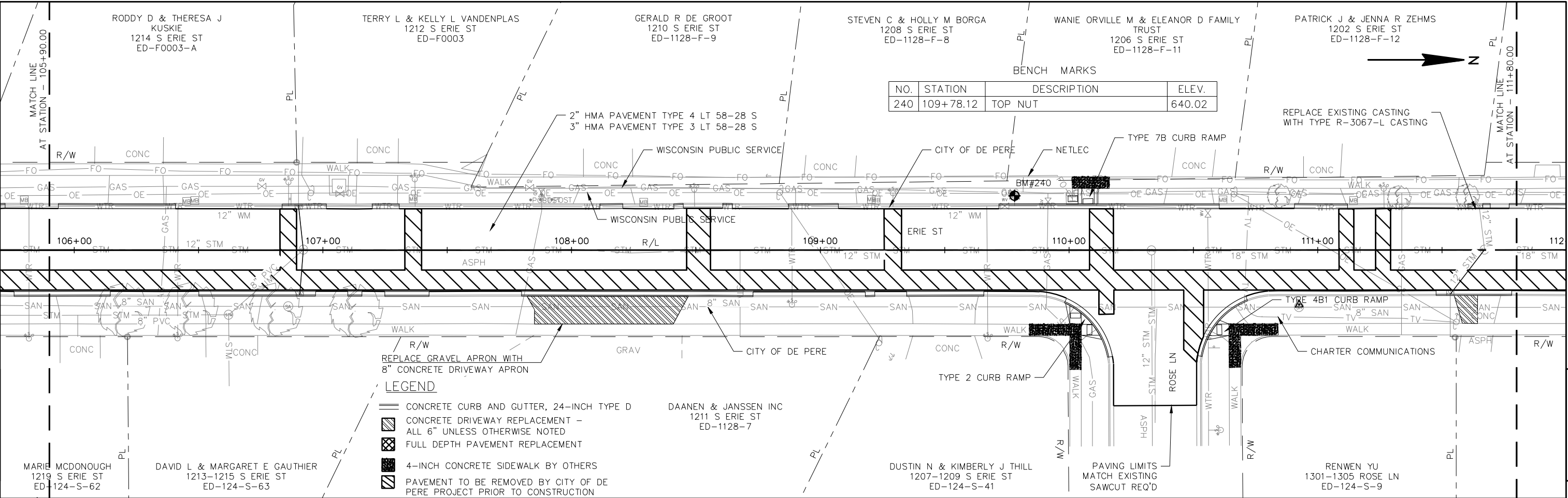
SPV.0090.01 24-INCH TYPE D			
STATION - STATION	LOCATION	LF	REMARKS
100+36 - 100+59	LT	32	CURB RAMP
100+37 - 100+67	RT	38	CURB RAMP
100+75 - 100+84	RT	9	DRIVEWAY
101+71 - 101+82	RT	11	DRIVEWAY
101+94 - 102+08	RT	14	
102+08 - 102+23	LT	16	
102+16 - 102+62	RT	46	DRIVEWAY
102+63 - 102+84	LT	21	
102+79 - 102+83	RT	4	
102+96 - 103+21	LT	25	DRIVEWAY
103+16 - 103+21	RT	5	
103+35 - 103+50	RT	15	
103+41 - 103+95	LT	54	
103+60 - 103+83	RT	23	DRIVEWAY
103+92 -104+22	RT	30	DRIVEWAY
104+09 - 104+41	LT	32	
104+57 - 104+62	RT	5	
105+14 - 105+40	RT	26	DRIVEWAY
105+57 - 105+62	RT	5	
105+68 - 105+72	LT	4	
105+76 - 106+14	RT	39	DRIVEWAY
105+94 - 106+41	LT	47	DRIVEWAY
106+50 - 106+97	RT	47	DRIVEWAY
106+84 - 107+01	LT	18	
107+10 - 107+16	RT	6	
107+20 - 107+31	LT	11	DRIVEWAY
107+25 - 107+43	RT	18	
107+80 - 108+73	RT	93	DRIVEWAY
108+11 - 108+21	LT	10	DRIVEWAY
108+41 - 108+45	LT	4	
108+61 - 108+65	LT	4	
108+87 - 109+07	LT	20	DRIVEWAY
109+18 - 109+22	RT	4	
109+35 - 109+66	RT	31	DRIVEWAY
109+72 - 110+61	LT	89	DRIVEWAY
109+98 - 110+16	RT	30	CURB RAMP
110+53 - 110+72	RT	31	CURB RAMP
110+91 - 111+12	LT	22	DRIVEWAY
111+48 - 111+78	RT	31	DRIVEWAY
111+60 - 111+69	LT	9	
111+77 - 112+06	LT	29	DRIVEWAY
112+11 - 112+16	RT	5	
112+24 - 112+28	LT	4	
112+34 - 112+39	RT	5	
112+46 - 112+67	RT	21	
112+65 - 112+70	LT	5	
112+82 - 112+86	LT	3	
112+87 - 113+02	RT	16	DRIVEWAY
113+17 - 113+48	LT	30	DRIVEWAY
113+19 - 113+40	RT	21	DRIVEWAY
113+55 - 113+60	LT	5	
113+88 - 113+92	LT	4	DRIVEWAY
113+98 - 114+20	RT	22	
114+36 - 114+62	RT	26	DRIVEWAY
114+44 - 114+49	LT	5	

CONCRETE CURB & GUTTER

SPV.0090.01 24-INCH TYPE D			
STATION - STATION	LOCATION	LF	REMARKS
114+62 - 114+66	LT	4	
114+77 - 114+82	RT	5	
114+87 - 114+92	LT	5	DRIVEWAY
115+00 - 115+52	RT	52	DRIVEWAY
116+08 - 116+75	RT	67	DRIVEWAY
116+84 - 116+89	LT	5	DRIVEWAY
116+89 - 117+12	RT	23	DRIVEWAY
117+19 - 117+43	LT	24	DRIVEWAY
117+32 - 117+36	RT	4	
117+54 - 117+72	RT	18	DRIVEWAY
117+82 - 118+17	RT	35	
118+01 - 118+75	LT	75	DRIVEWAY
118+30 - 118+34	RT	4	
118+42 - 118+50	RT	8	
118+61 - 118+68	RT	15	CURB RAMP
119+09 - 119+40	RT	37	CURB RAMP
119+16 - 119+52	LT	36	CURB RAMP
119+69 - 120+03	RT	34	DRIVEWAY
119+72 - 120+07	LT	35	DRIVEWAY
120+27 - 120+77	LT	50	
120+29 - 120+50	RT	20	
120+96 - 121+22	RT	27	DRIVEWAY
121+70 - 121+96	LT	26	DRIVEWAY
121+99 - 122+51	RT	52	DRIVEWAY
122+43 - 122+51	LT	8	
122+69 - 123+00	LT	32	DRIVEWAY
122+89 - 122+93	RT	4	
123+44 - 123+56	LT	12	CURB RAMP
123+47 - 123+69	RT	50	CURB RAMP
123+60 - 123+86	LT	26	DRIVEWAY
124+08 - 124+48	RT	55	CURB RAMP
124+12 - 124+37	LT	25	DRIVEWAY
124+77 - 124+81	RT	4	
125+01 - 125+05	RT	4	
125+04 - 125+08	LT	4	
125+48 - 126+02	RT	55	CURB RAMP
125+50 - 125+58	LT	8	
125+73 - 126+03	LT	47	CURB RAMP
126+26 - 126+56	RT	30	DRIVEWAY
126+49 - 126+75	LT	35	CURB RAMP
126+85 - 126+89	LT	4	
127+98 - 128+28	RT	31	DRIVEWAY
129+18 - 129+57	RT	39	DRIVEWAY
129+63 - 129+67	RT	4	
130+39 - 130+43	RT	4	
131+69 - 131+73	RT	4	
131+85 - 133+87	LT	207	CURB RAMP
131+96 - 132+10	RT	14	
133+46 - 134+67	RT	121	DRIVEWAY
134+28 - 134+39	LT	19	CURB RAMP
UNDISTRIBUTED		248	
ITEM TOTAL		2935	

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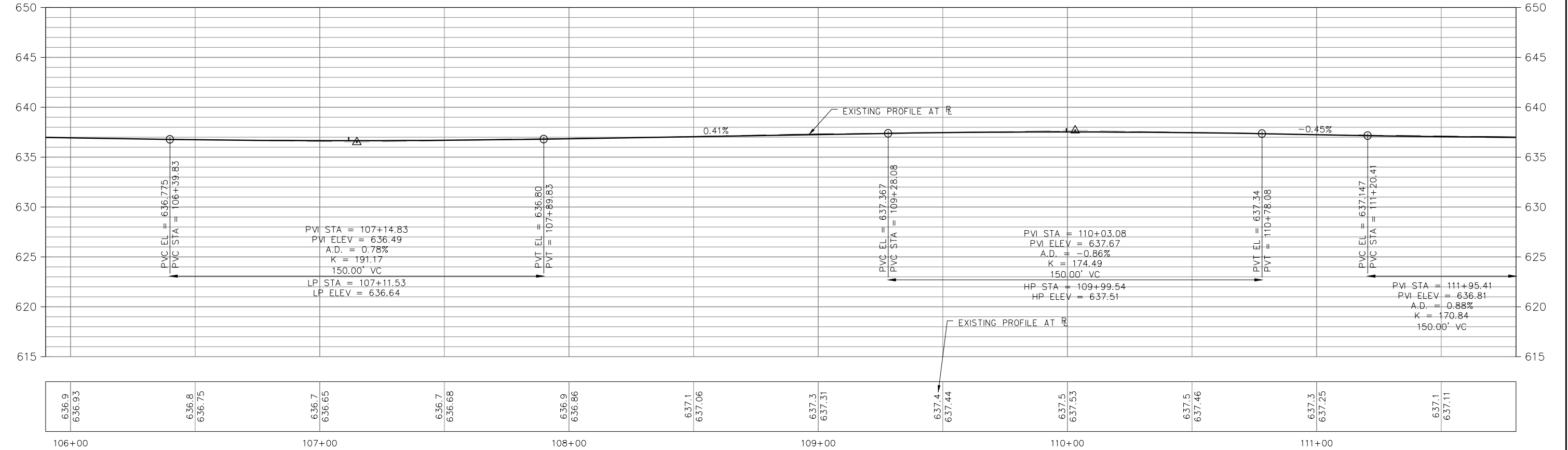


NO.	STATION	DESCRIPTION	ELEV.
240	109+78.12	TOP NUT	640.02

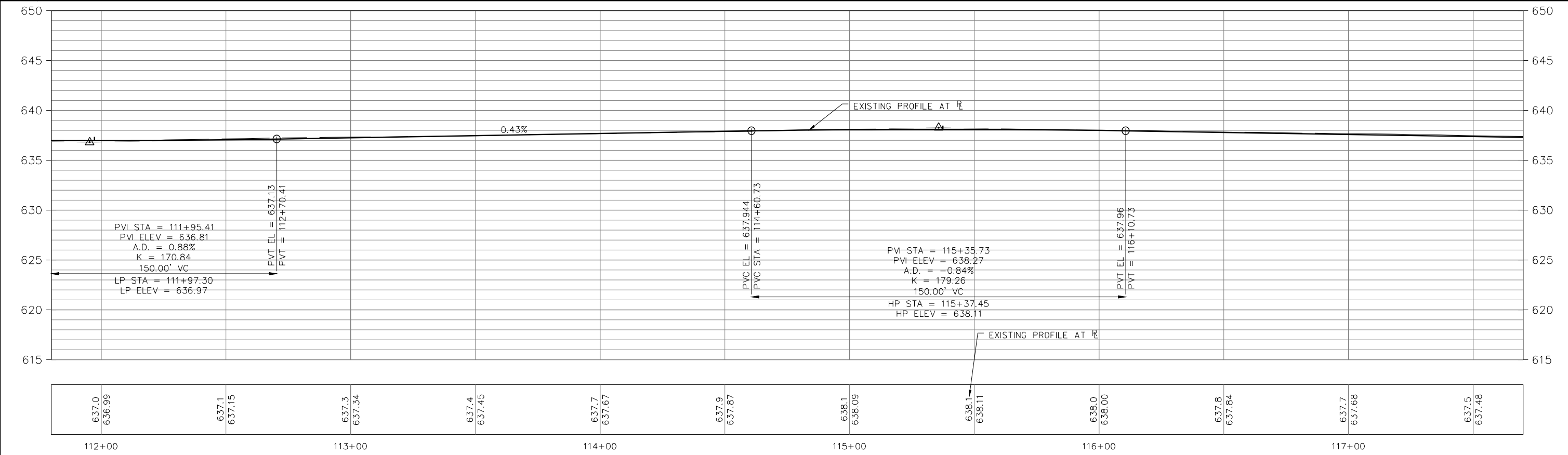
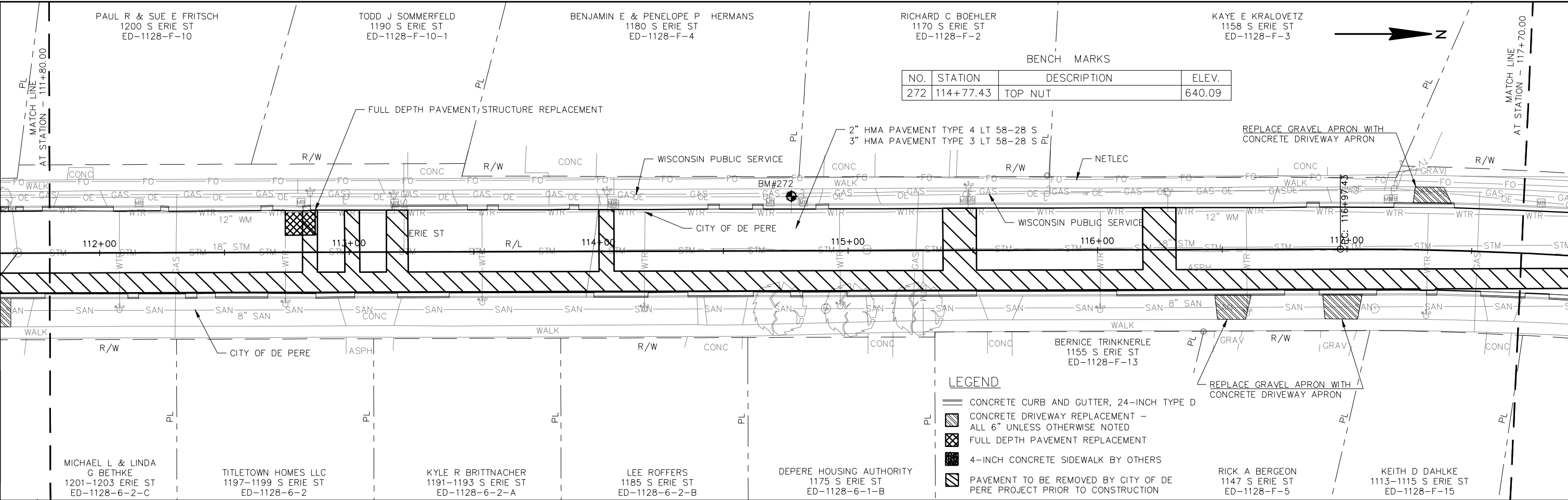
LEGEND

- CONCRETE CURB AND GUTTER, 24-INCH TYPE D
- CONCRETE DRIVEWAY REPLACEMENT - ALL 6" UNLESS OTHERWISE NOTED
- FULL DEPTH PAVEMENT REPLACEMENT
- 4-INCH CONCRETE SIDEWALK BY OTHERS
- PAVEMENT TO BE REMOVED BY CITY OF DE PERE PROJECT PRIOR TO CONSTRUCTION

DAANEN & JANSSEN INC
1211 S ERIE ST
ED-1128-7

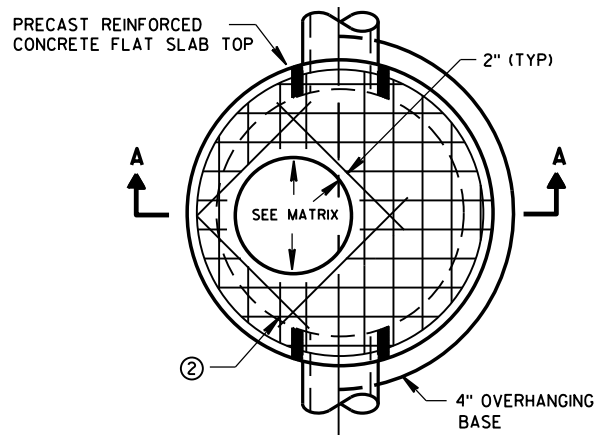


636.9 636.93	636.8 636.75	636.7 636.65	636.7 636.68	636.9 636.86	637.1 637.06	637.3 637.31	637.4 637.44	637.5 637.53	637.5 637.46	637.3 637.25	637.1 637.11
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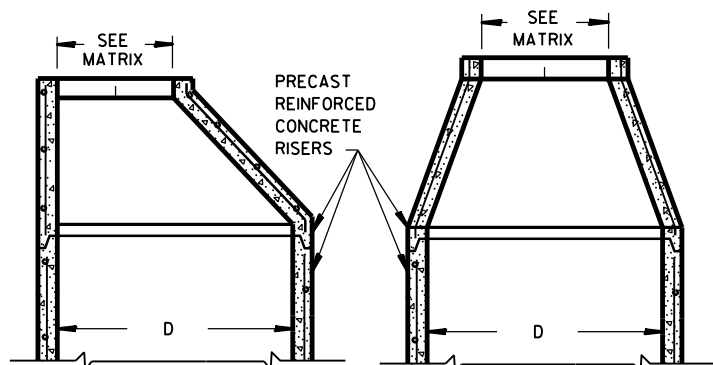


Standard Detail Drawing List

08B09-02	MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER
08C07-02	INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT
08D05-18A	CURB RAMPS TYPES 1 AND 1-A
08D05-18B	CURB RAMPS TYPES 2 AND 3
08D05-18C	CURB RAMPS TYPES 4A AND 4A1
08D05-18D	CURB RAMPS TYPE 4B AND 4B1
08D05-18E	CURB RAMPS TYPES 5, 6, 7A, 7B & 8
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
15C02-06A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-06B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C03-03	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C33-02	STOP LINE AND CROSSWALK PAVEMENT MARKING

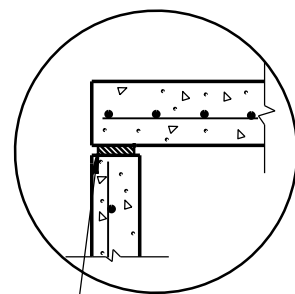


PLAN VIEW CIRCULAR OPENING

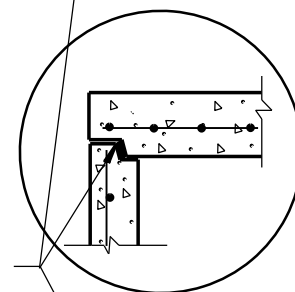


OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP

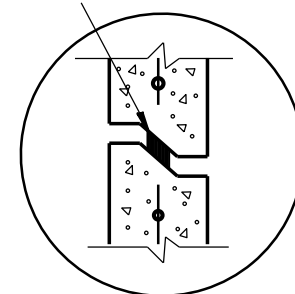
OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP



TOP WITH PLAIN END JOINT



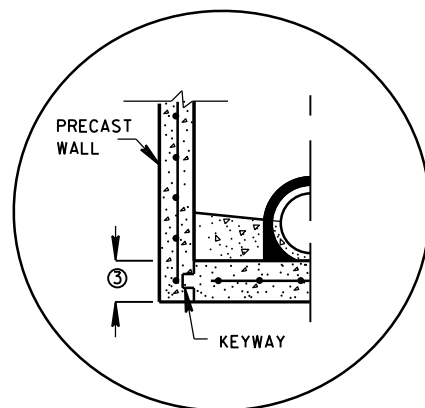
TOP WITH TONGUE AND GROOVE JOINT



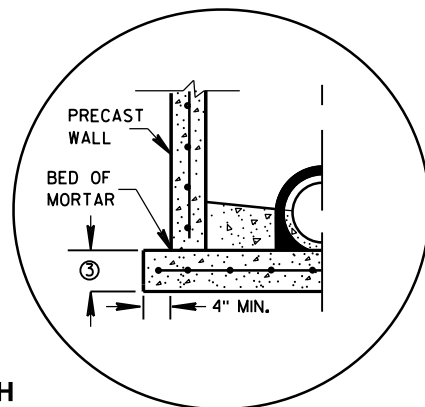
RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B"

JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C990 (TYP)

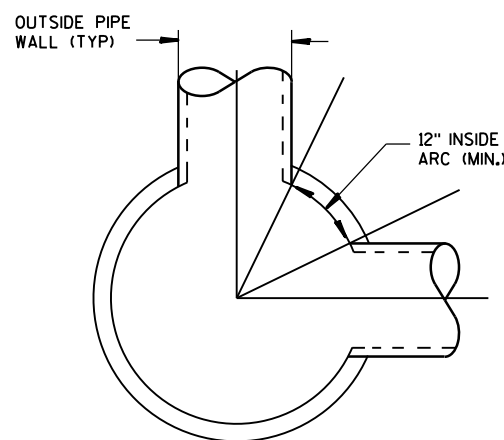


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION

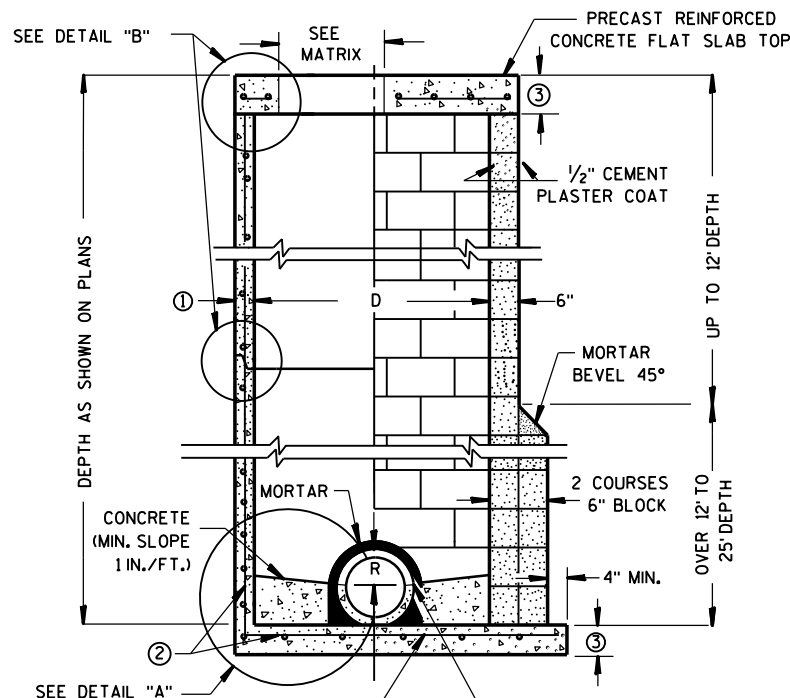


SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "A"



DETAIL "C"



CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES

PRECAST REINFORCED CONCRETE BLOCK WITH CONCRETE WITH MONOLITHIC BASE CAST-IN-PLACE OR PRECAST REINFORCED CONCRETE BASE ②

MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS. UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST MANHOLE UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR UNDERGROUND DRAINAGE STRUCTURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATE THE SIZE OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

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

PRECAST REINFORCED CONE TOPS (ECCENTRIC OR CONCENTRIC) OR PRECAST REINFORCED FLAT SLAB TOPS MAY BE USED ON CONCRETE BLOCK STRUCTURES.

ECCENTRIC CONE TOPS MAY BE USED ON ALL STRUCTURES, AND CONCENTRIC CONE TOPS SHALL BE USED ONLY ON STRUCTURES 5 FEET OR LESS IN DEPTH, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

STEPS MEETING AASHTO M199 AND THE FOLLOWING REQUIREMENTS SHALL BE INSTALLED IN ALL STRUCTURES OVER 5 FEET IN DEPTH: 16 INCH C-C MAXIMUM SPACING; PROJECT A MINIMUM CLEAR DISTANCE OF 4 INCHES FROM THE WALL AT THE POINT OF EMBEDMENT; MINIMUM LENGTH OF 10 INCHES; MINIMUM WALL EMBEDMENT OF 3 INCHES. FERROUS METAL STEPS NOT PAINTED OR TREATED TO RESIST CORROSION SHALL HAVE A MINIMUM CROSS SECTIONAL DIMENSION OF 1 INCH.

STEPS OF APPROVED POLYPROPYLENE PLASTIC COATED REINFORCEMENT BAR ARE ACCEPTABLE. REINFORCING BAR MUST BE A MINIMUM OF 1/2" AND MEET THE REQUIREMENTS OF ASTM A615.

CERTIFICATION SHALL BE PROVIDED THAT INSTALLED STEPS WHEN TESTED IN ACCORDANCE WITH SECTION 10 OF AASHTO T280 CAN WITHSTAND A VERTICAL LOAD OF 800 LBS. AND A HORIZONTAL LOAD OF 400 LBS.

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

CONCRETE BLOCK WILL NOT BE PERMITTED FOR STRUCTURES GREATER THAN 4 FEET IN DIAMETER.

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

ALL PRECAST MANHOLE UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M 199.

4" OVERHANGING BASES ARE REQUIRED FOR ALL CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

FOR ADDITIONAL CONFIGURATIONS, MAINTAIN A MINIMUM OF 12 INCHES AS MEASURED FROM THE INSIDE OF THE STRUCTURE WALL BETWEEN THE OUTSIDE PIPE WALLS OF ADJACENT PIPES. SEE DETAIL "C".

- ① MINIMUM WALL THICKNESS SHALL BE 4 INCHES FOR 3-FT, 5 INCHES FOR 4-FT, 6 INCHES FOR 5-FT, 7 INCHES FOR 6-FT, 8 INCHES FOR 7-FT AND 9 INCHES FOR 8-FT DIAMETER PRECAST MANHOLES.
- ② FOR PRECAST MANHOLES PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.
- ③ PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER OF 48" AND LESS SHALL HAVE A MINIMUM THICKNESS OF 6". PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER LARGER THAN 48" SHALL HAVE A MINIMUM THICKNESS OF 8".

MANHOLE COVER OPENING MATRIX

MANHOLE COVER TYPE	C	ALL J'S	K	L	M
OPENING SIZE (FT)					
2 DIA.	X	X		X	
3 DIA.			X		X

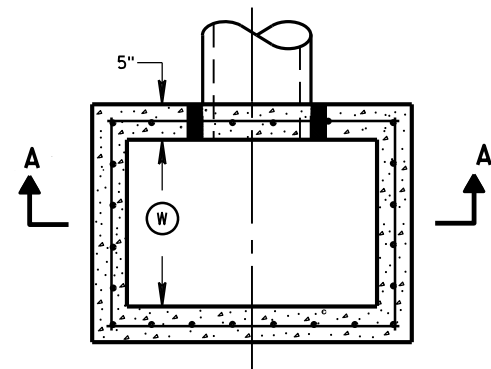
PIPE MATRIX

MANHOLE SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	180° SEPARATION (IN)	90° SEPARATION (IN)
3-FT	15	12
4-FT	24	18
5-FT	36	24
6-FT	42	36
7-FT	48	36
8-FT	60	42

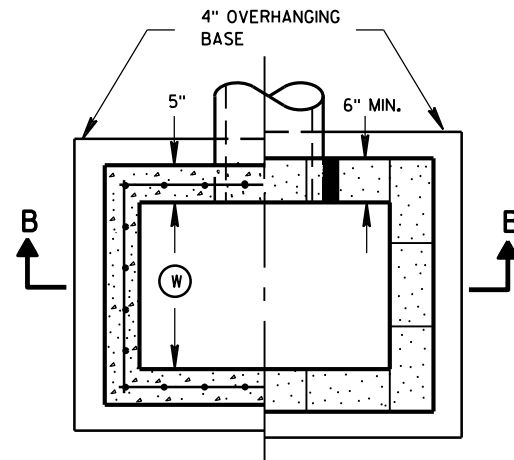
MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

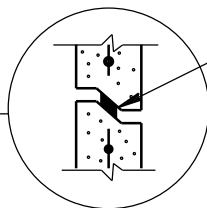
APPROVED
Sep 11, 2016 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT
FHWA UNIT SUPERVISOR



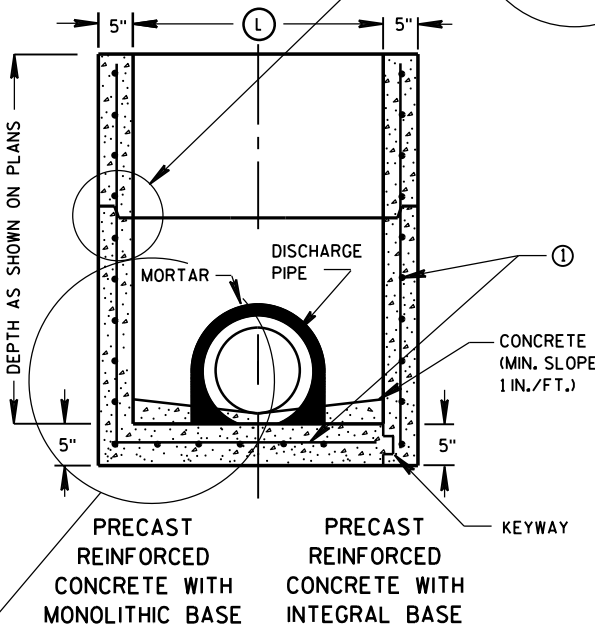
PLAN VIEW



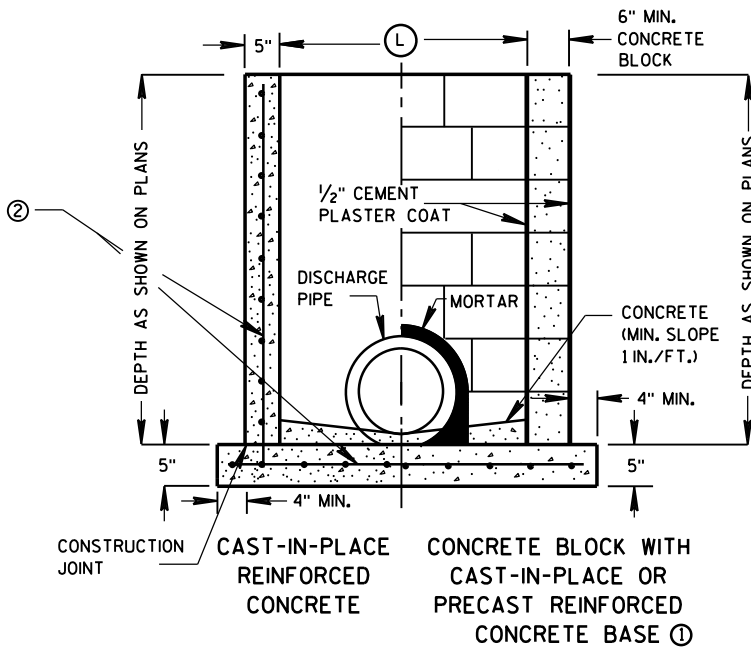
PLAN VIEW



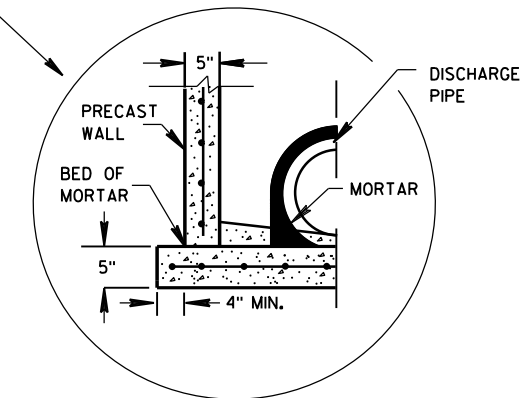
RISER JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C 990 (TYP)



SECTION A-A



SECTION B-B



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT

GENERAL NOTES

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

UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST INLET UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR UNDERGROUND DRAINAGE STRUCTURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF ASTM C 913.

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATES THE SIZE OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

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

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

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

4" OVERHANGING BASES ARE REQUIRED FOR CAST-IN-PLACE REINFORCED CONCRETE AND CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

MAXIMUM INSIDE PIPE DIAMETER DETERMINED BY 3 INCH CLEARANCE ON EACH SIDE OF THE OUTSIDE WALL OF THE PIPE. SEE DETAIL "A". ASSUMES PIPE ENTERS PERPENDICULAR TO THE STRUCTURE.

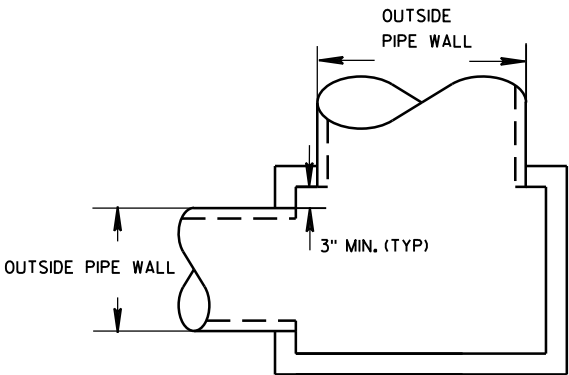
- ① FOR PRECAST INLETS PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913.
- ② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

INLET COVER MATRIX

INLET SIZE	WIDTH ① (FT)	INLET COVER TYPE	ALL A'S	ALL B'S	BW	F	ALL H'S	S	T	V	WM
		LENGTH ② (FT)									
2X2-FT	2	2	X	X				X		X	
2X2.5-FT	2	2.5			X			X	X	X	X
2X3-FT	2	3					X				
2.5X3-FT	2.5	3				X					

PIPE MATRIX

INLET SIZE	MAXIMUM INSIDE PIPE DIAMETER	
	WIDTH (IN)	LENGTH (IN)
2X2-FT	12	12
2X2.5-FT	12	18
2X3-FT	12	24
2.5X3-FT	18	24

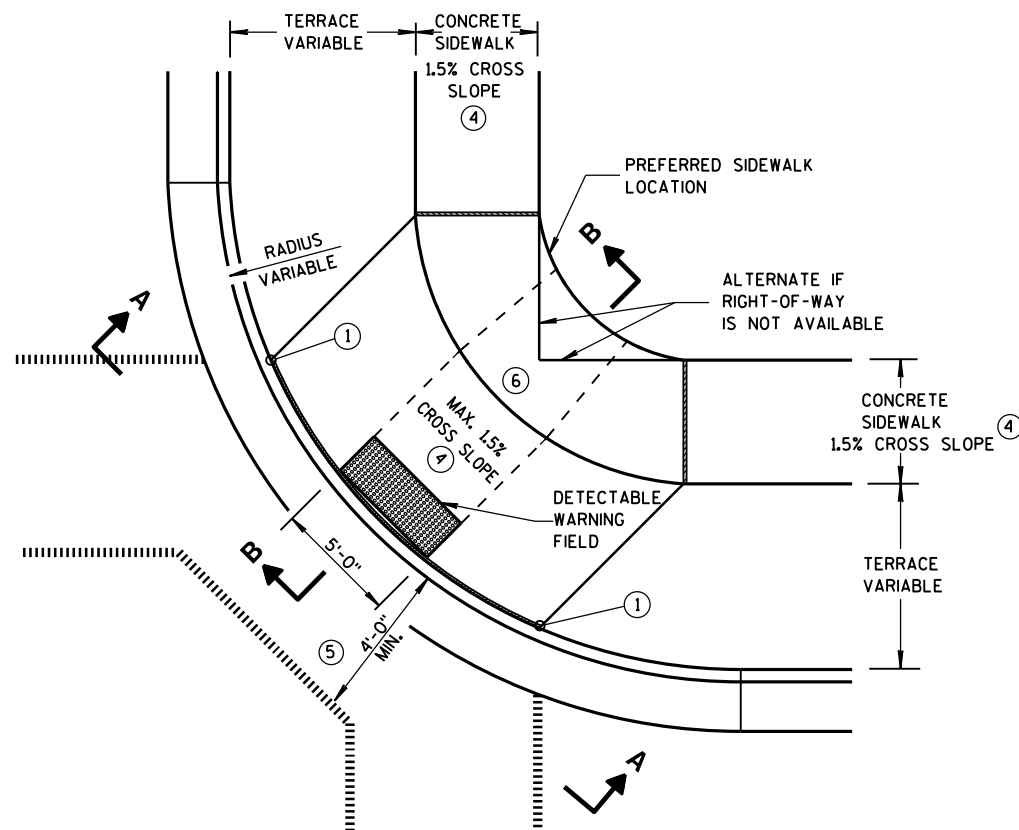


DETAIL "A"

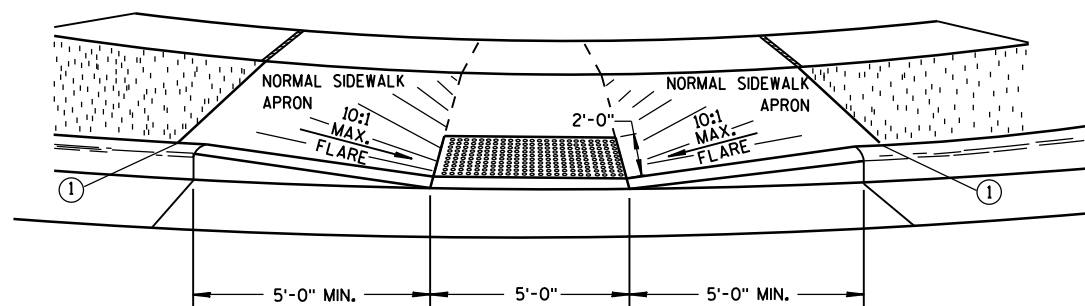
INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept., 2016 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT
FHWA UNIT SUPERVISOR

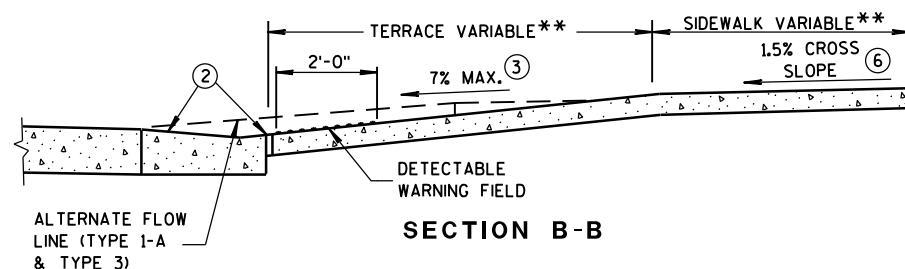


**PLAN VIEW
TYPE 1 RAMP**
(CENTER OF CORNER RADIUS)

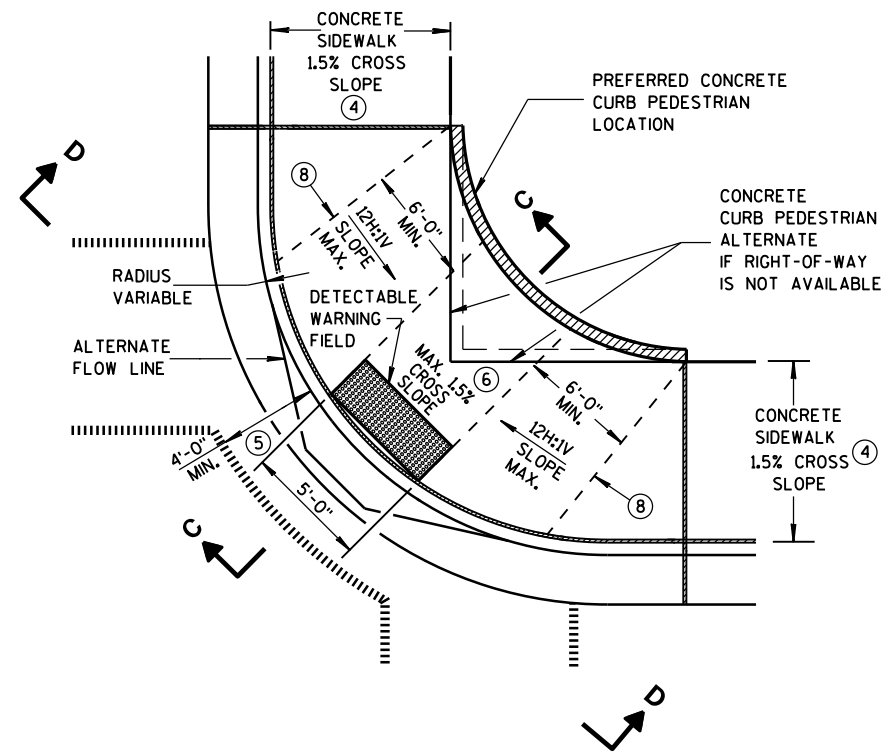


VIEW A-A

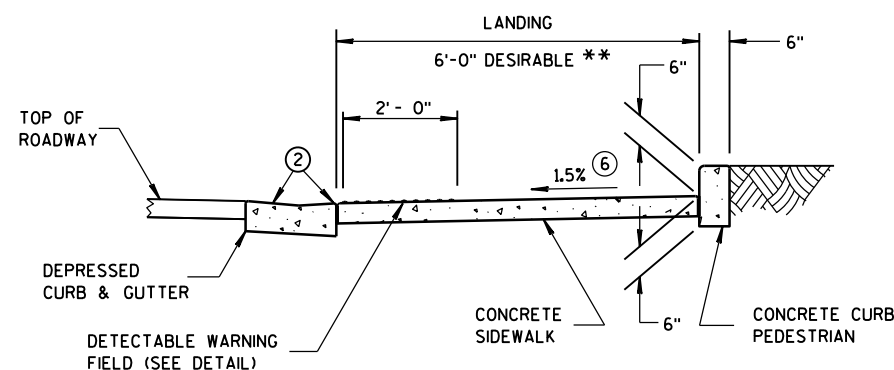
** WIDTH SHOWN ELSEWHERE
IN THE PLANS



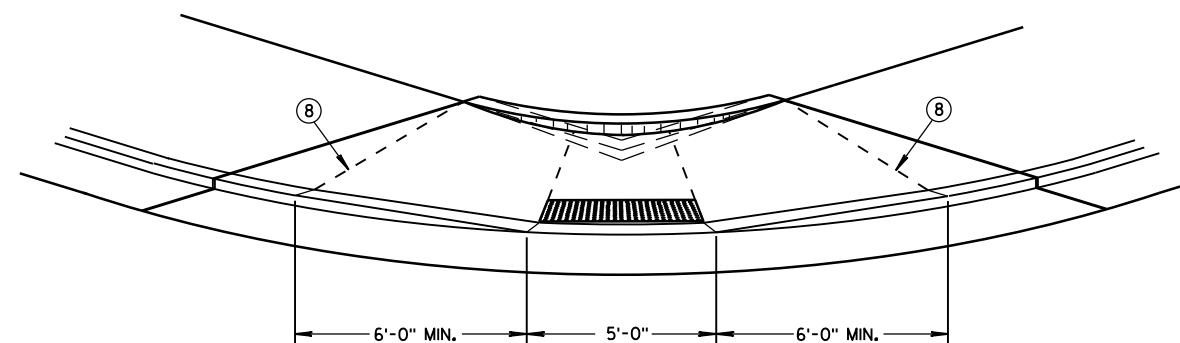
SECTION B-B



**PLAN VIEW
TYPE 1-A RAMP**
(NO TERRACE)



SECTION C-C



VIEW D-D

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.

WHEN NECESSARY, THE SIDEWALK ELEVATION MAY BE LOWERED TO MEET THE HIGH POINT ON THE RAMP.

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

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

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

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

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

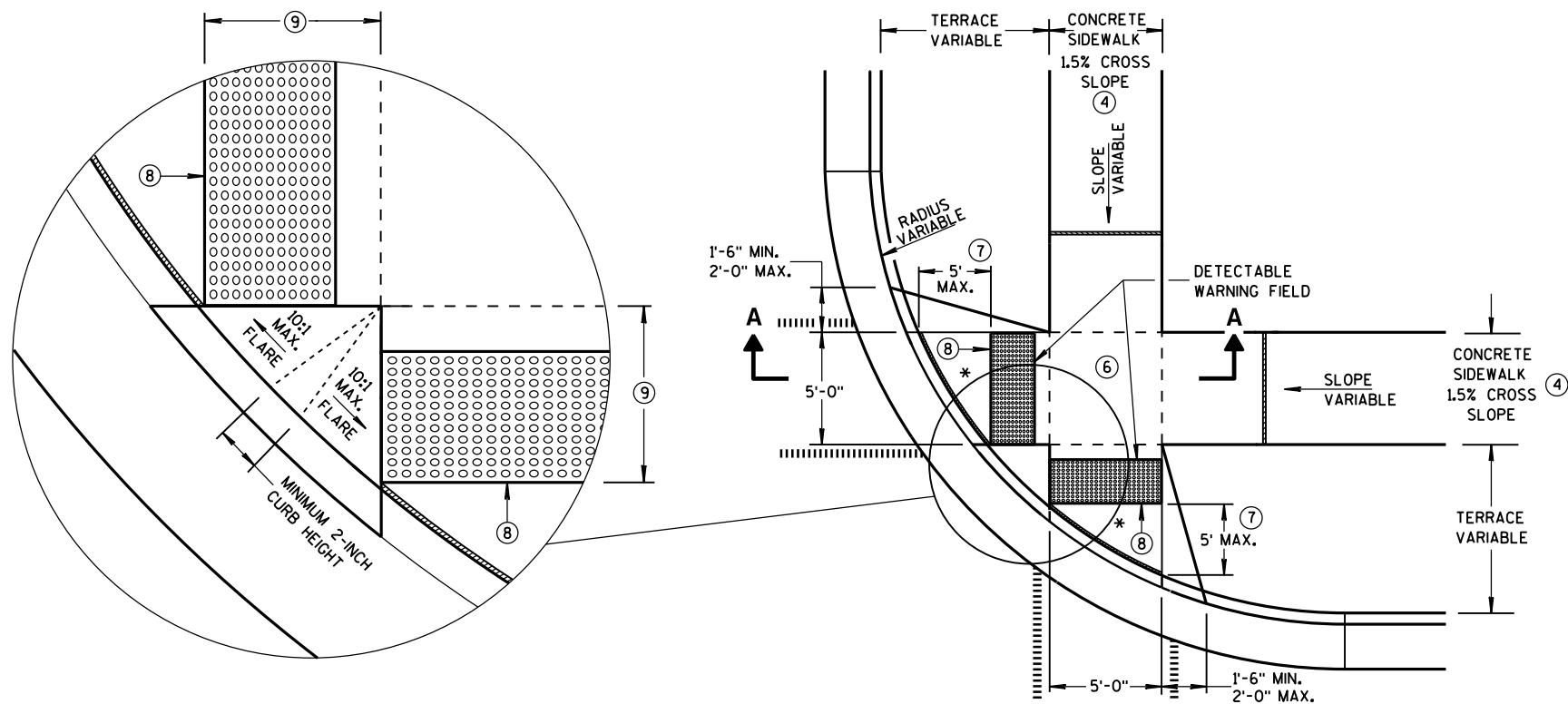
- ① THIS POINT IS AN EXTENSION OF OUTSIDE EDGE OF APPROACHING SIDEWALK WHERE IT MEETS THE BACK OF CONCRETE CURB. POINT LOCATION MAY BE ADJUSTED TO ALIGN WITH BEGINNING OF FULL-HEIGHT CURB IF THIS DISTANCE IS SHORT.
- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL NOT EXCEED 7%.
- ③ ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- ④ $\pm 0.5\%$ CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- ⑤ PROVIDE A LEVEL LANDING IN THE STREET AND GUTTER AREA. (2% MAXIMUM SLOPE IN ANY DIRECTION). WHEN THE GUTTER SLOPE EXCEEDS 2%, CONSTRUCT THE LEVEL LANDING IN THE STREET AREA.
- ⑥ PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.
- ⑧ PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

LEGEND

- 1/2" EXPANSION JOINT-SIDEWALK
- - - - - CONTRACTION JOINT FIELD LOCATED
- ||||| PAVEMENT MARKING CROSSWALK (WHITE)
- ALTERNATIVE LAYOUT

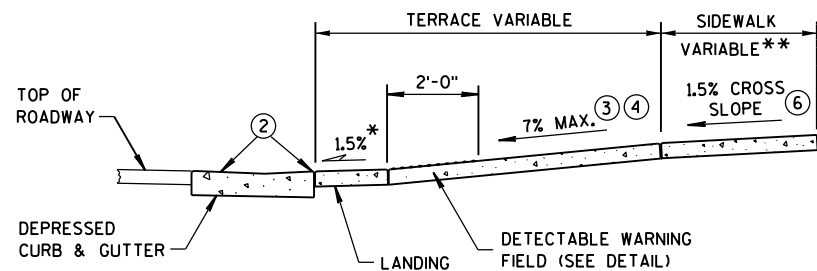
**CURB RAMPS
TYPES 1 AND 1-A**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



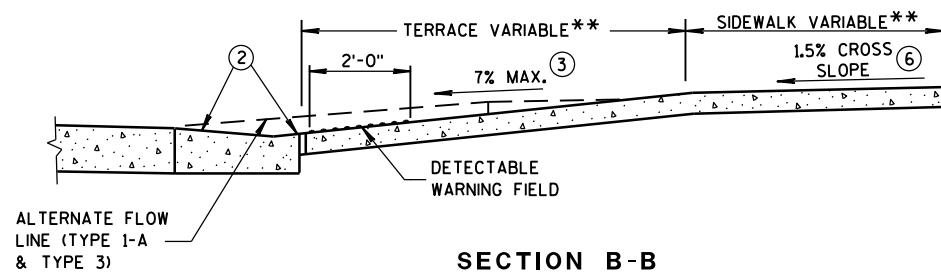
**PLAN VIEW
TYPE 2 RAMP**
(ON LINE WITH SIDEWALK)

* MAXIMUM 2.0% SLOPE
IN ALL DIRECTIONS IN
FRONT OF GRADE BREAK



SECTION A-A

** WIDTH SHOWN ELSEWHERE
IN THE PLANS



SECTION B-B

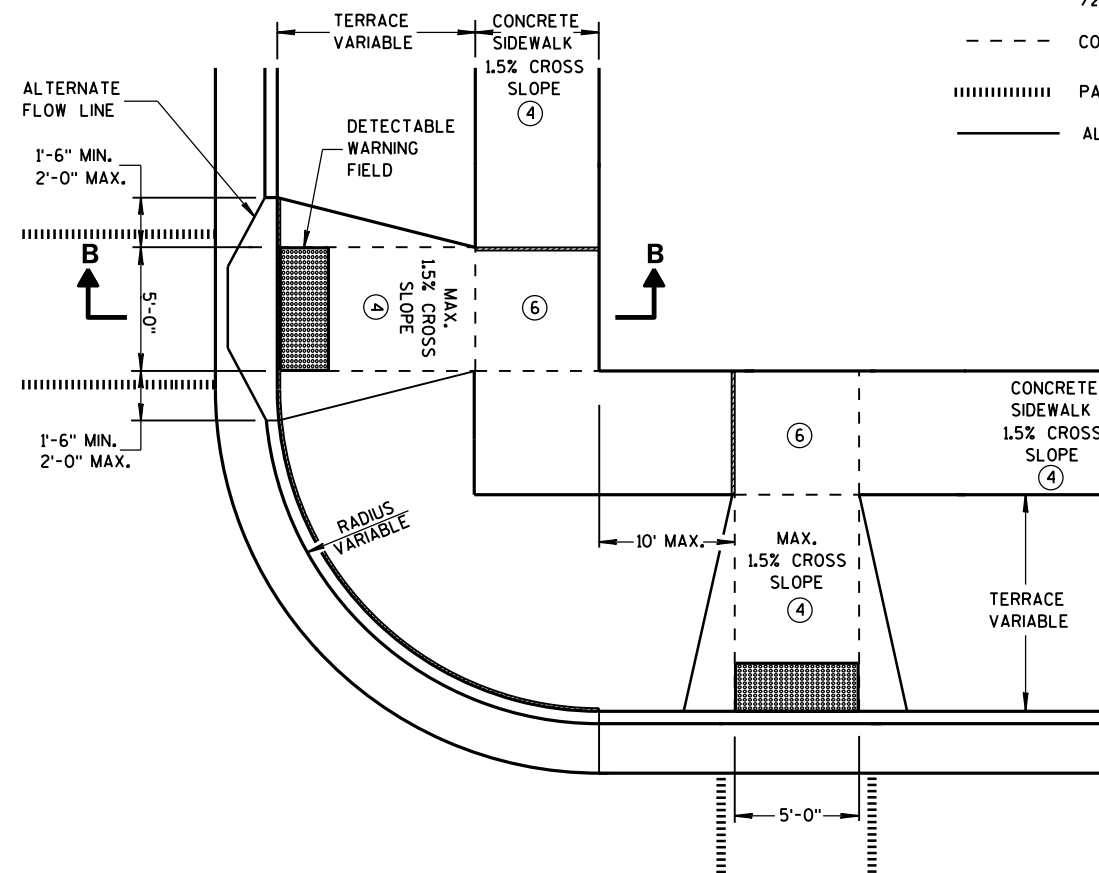
GENERAL NOTES

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL NOT EXCEED 7%.
- ③ ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- ④ $\pm 0.5\%$ CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- ⑥ PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.
- ⑦ WHEN THIS DISTANCE EXCEEDS 5 FEET, STAGGER ADDITIONAL DETECTABLE WARNING PANEL FORWARD TO REDUCE THIS DISTANCE. PROVIDE MINIMUM 12-INCH ROW OVERLAP TO AVOID SIDESTEP OF DOME DETECTION. USE EQUAL-SIZE PANELS TO DEVELOP OVERLAPPING, STAGGERED ROWS. ALIGN DOMES BETWEEN OVERLAPPING ROWS AND IN DIRECTION OF PEDESTRIAN TRAVEL.
- ⑧ PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- ⑨ WHEN THIS DISTANCE IS LESS THAN 6'-0", IT MAY BE DIFFICULT TO ACHIEVE A 7% SLOPE OR FLATTER ALONG THE RAMP. REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 7% SLOPE OR FLATTER ON RAMP. CONSTRUCT 2-INCH MINIMUM CURB HEIGHT BETWEEN 10:1 FLARES.

LEGEND

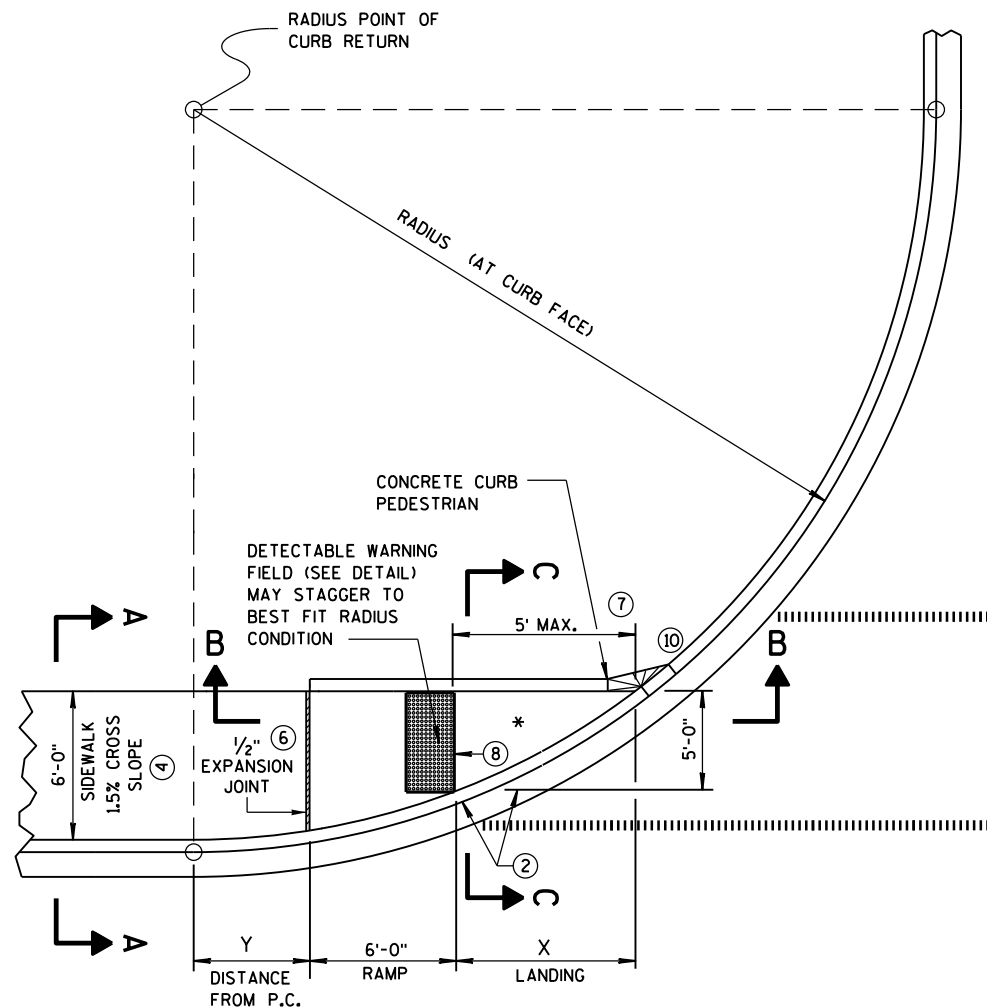
- 1/2" EXPANSION JOINT-SIDEWALK
- - - CONTRACTION JOINT FIELD LOCATED
- ||||| PAVEMENT MARKING CROSSWALK (WHITE)
- ALTERNATIVE LAYOUT



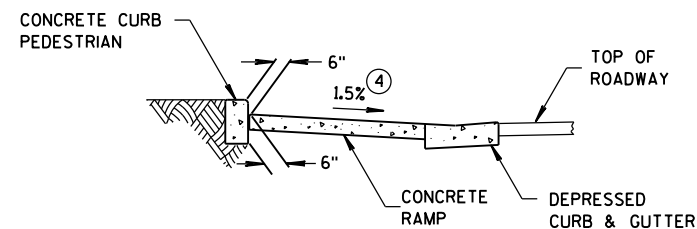
**PLAN VIEW
TYPE 3 RAMP**
(OUTSIDE OF CROSSWALK AREA)

**CURB RAMPS
TYPES 2 AND 3**

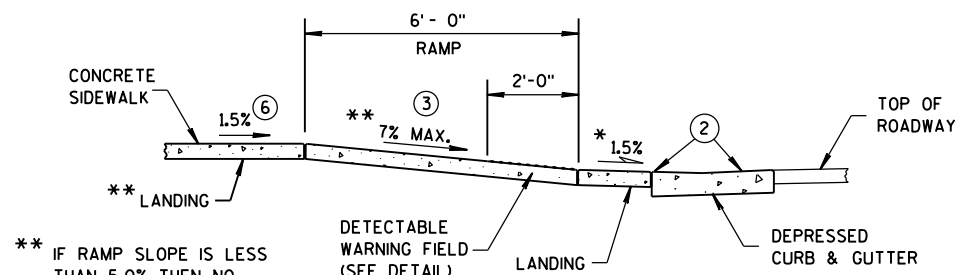
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



CURB RAMP TYPE 4A
PLAN VIEW



SECTION C-C FOR TYPE 4A



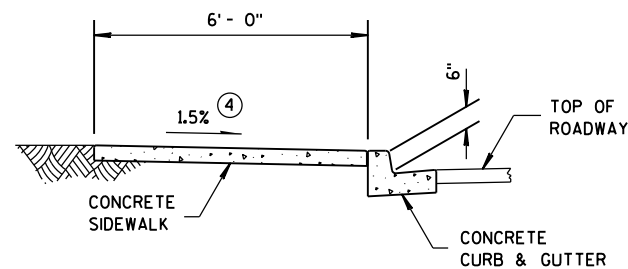
SECTION B-B FOR TYPE 4A

** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

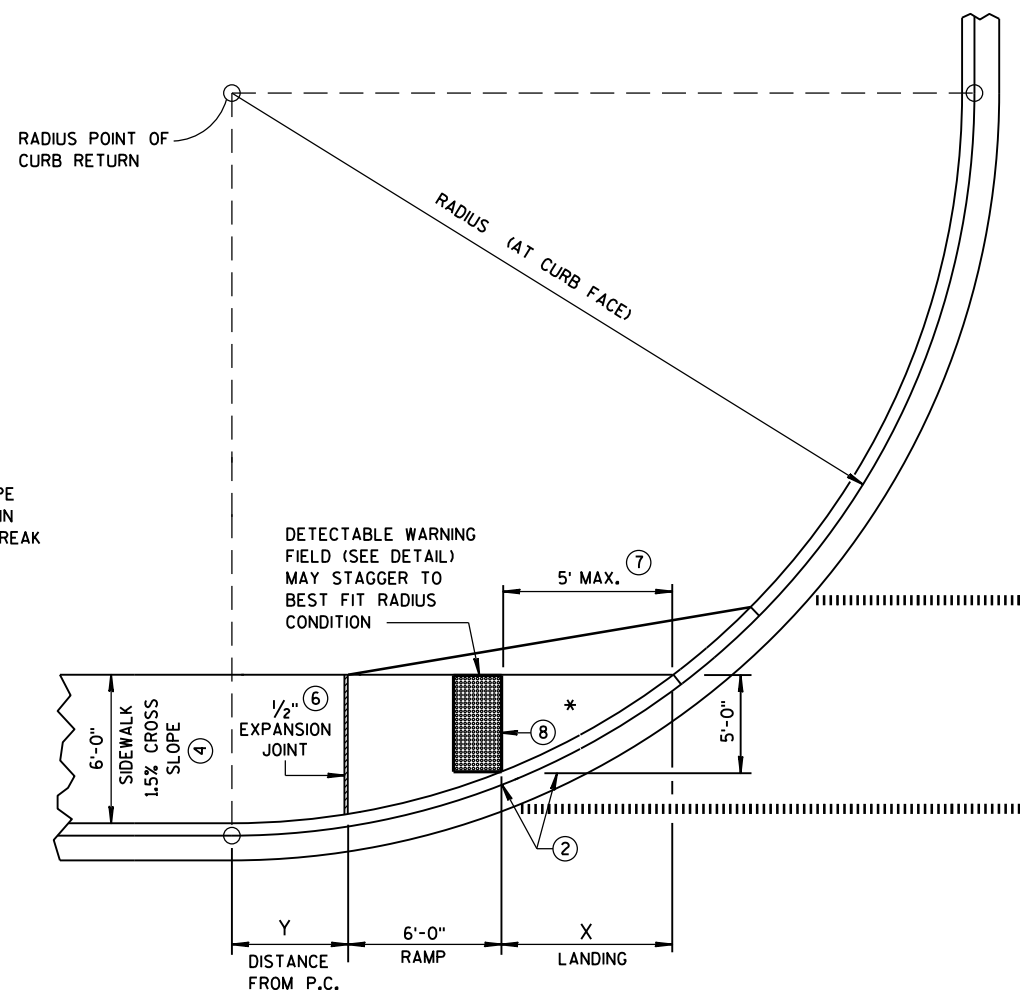
* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK

RADIUS (AT CURB FACE)	X	Y
20 FEET	7'-11"	0'-2"
30 FEET	10'-2 $\frac{3}{4}$ "	1'-7 $\frac{1}{2}$ "
40 FEET	12'-1 $\frac{1}{4}$ "	2'-10"
50 FEET	13'-8 $\frac{3}{4}$ "	3'-10 $\frac{3}{4}$ "
60 FEET	15'-2"	4'-10 $\frac{1}{4}$ "

INTERMEDIATE RADII CAN BE INTERPOLATED



SECTION A-A FOR TYPE 4A



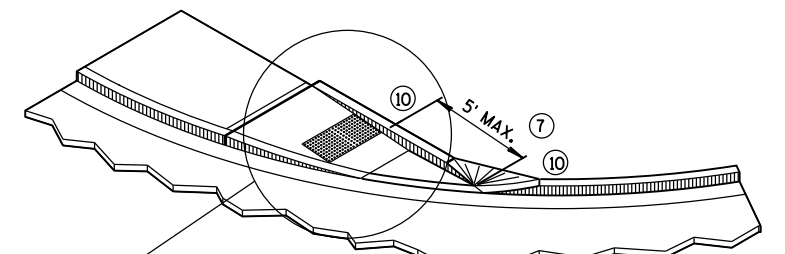
CURB RAMP TYPE 4A1
PLAN VIEW

GENERAL NOTES

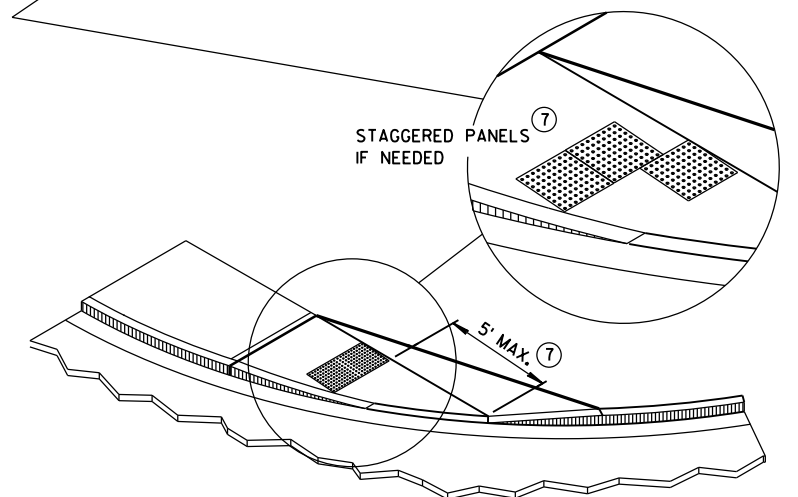
AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL NOT EXCEED 7%.
- ③ ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- ④ $\pm 0.5\%$ CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- ⑥ PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.
- ⑦ WHEN THIS DISTANCE EXCEEDS 5 FEET, STAGGER ADDITIONAL DETECTABLE WARNING PANEL FORWARD TO REDUCE THIS DISTANCE. PROVIDE MINIMUM 12-INCH ROW OVERLAP TO AVOID SIDESTEP OF DOME DETECTION. USE EQUAL-SIZE PANELS TO DEVELOP OVERLAPPING, STAGGERED ROWS. ALIGN DOMES BETWEEN OVERLAPPING ROWS AND IN DIRECTION OF PEDESTRIAN TRAVEL.
- ⑧ PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- ⑩ INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.



ISOMETRIC VIEW FOR TYPE 4A



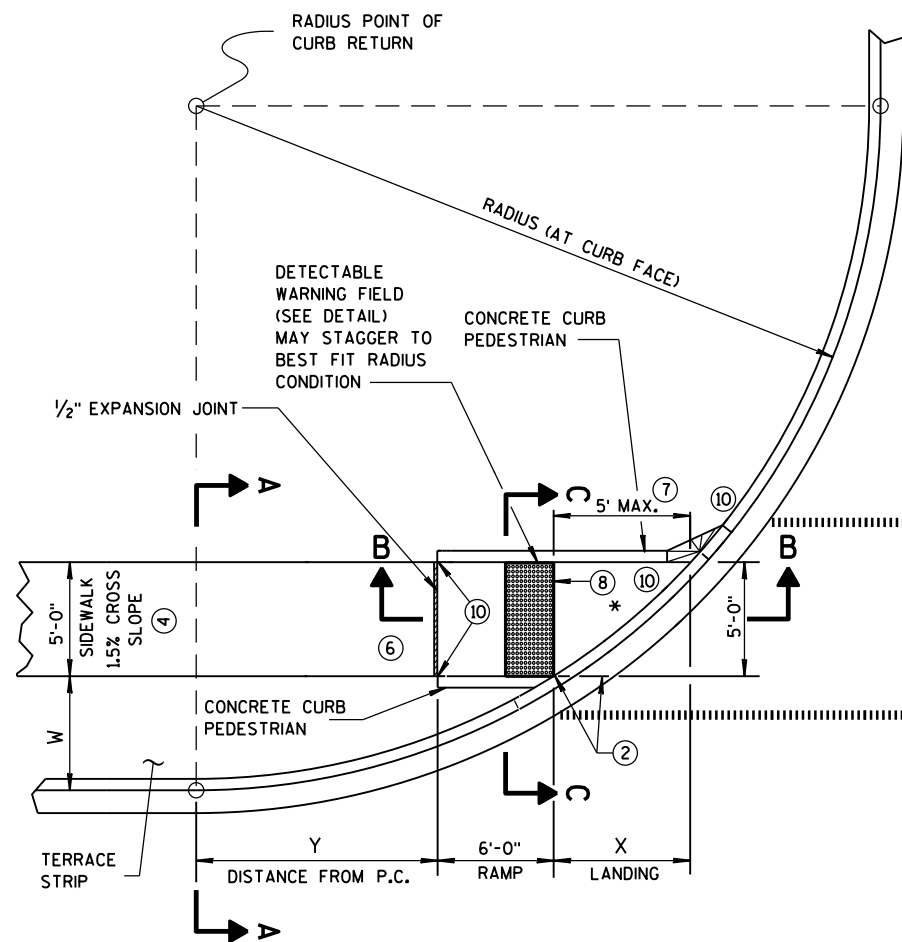
ISOMETRIC VIEW FOR TYPE 4A1

LEGEND

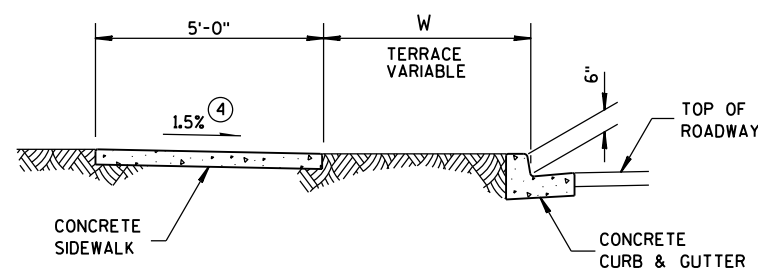
- 1/2" EXPANSION JOINT-SIDEWALK
- - - CONTRACTION JOINT FIELD LOCATED
- ||||| PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS
TYPES 4A AND 4A1

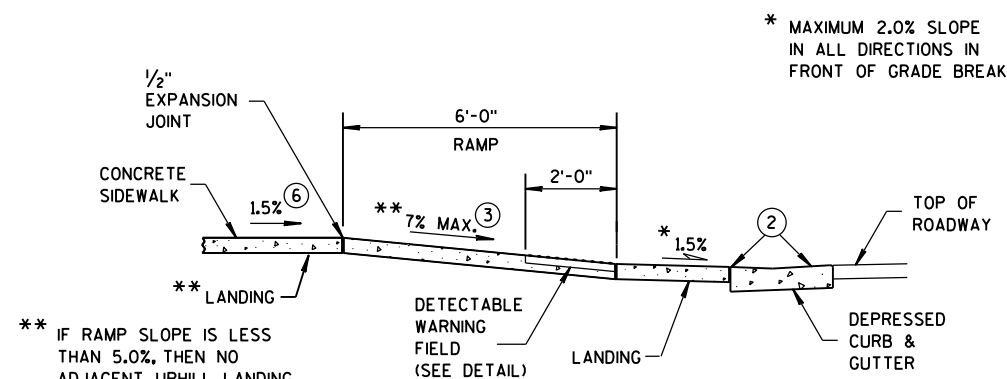
STATE OF WISCONSIN
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CURB RAMP TYPE 4B
PLAN VIEW

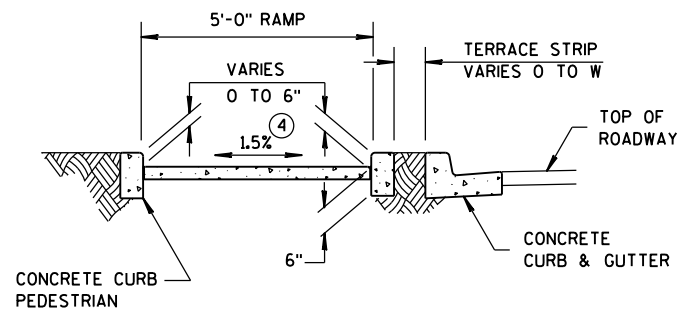


SECTION A-A FOR TYPE 4B

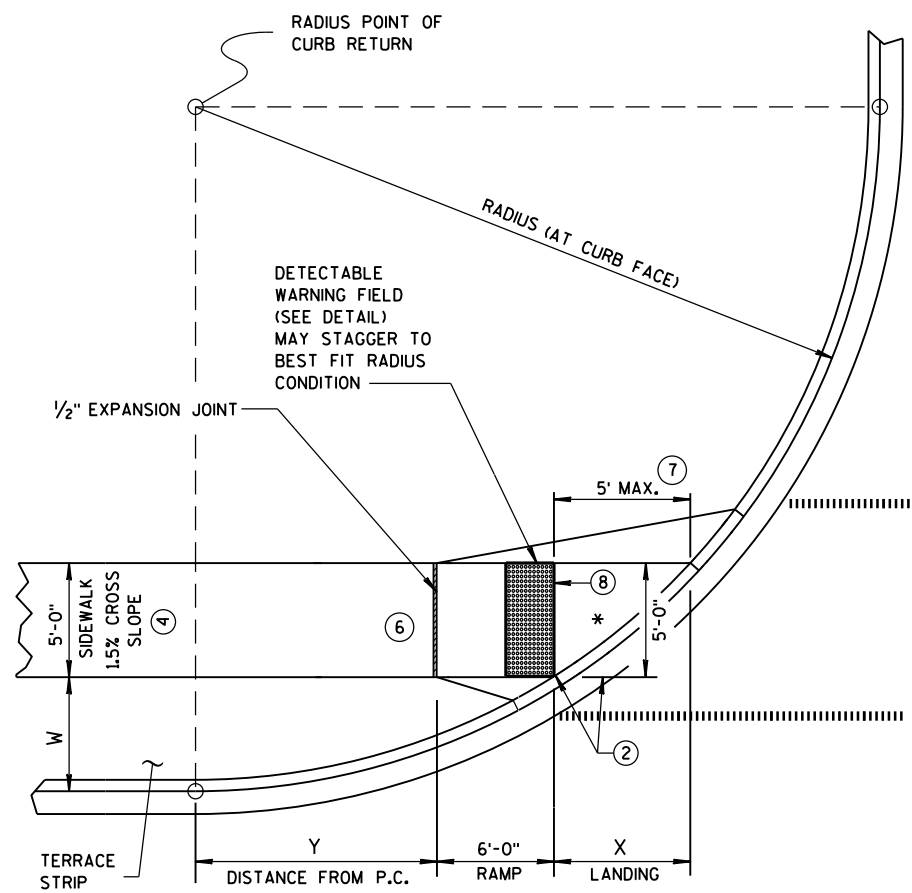


SECTION B-B FOR TYPE 4B

- LEGEND**
- 1/2" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)



SECTION C-C FOR TYPE 4B



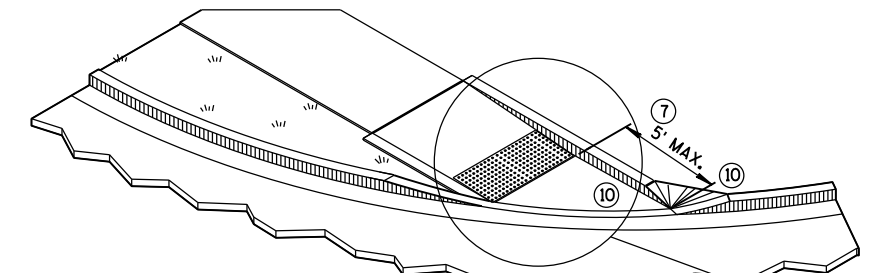
CURB RAMP TYPE 4B1
PLAN VIEW

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'-9 3/4"	3'-6 1/2"	4'-11 1/2"	5'-1 3/4"	4'-3 3/4"	6'-5 1/2"	3'-8 3/4"	7'-6 3/4"	3'-3"	8'-6 1/4"
30 FEET	7'-9 1/4"	5'-10 1/2"	6'-9 1/2"	7'-11 1/4"	6'-0 1/4"	9'-8"	5'-5"	11'-1 3/4"	4'-10 3/4"	12'-5 3/4"
40 FEET	9'-4"	7'-10"	8'-2 3/4"	10'-3"	7'-4 3/4"	12'-3 3/4"	6'-8 1/2"	14'-1 1/4"	6'-1 3/4"	15'-8 1/2"
50 FEET	10'-8"	9'-6 1/2"	9'-5 1/2"	12'-3 1/4"	8'-6 1/2"	14'-7 1/2"	7'-9 3/4"	16'-8 1/4"	7'-2 1/2"	18'-6 1/4"
60 FEET	11'-10 1/4"	11'-0 3/4"	10'-6 1/2"	14'-1 1/4"	9'-6 1/2"	16'-8 1/2"	8'-9 1/4"	18'-11 3/4"	8'-1 1/2"	21'-0 1/2"

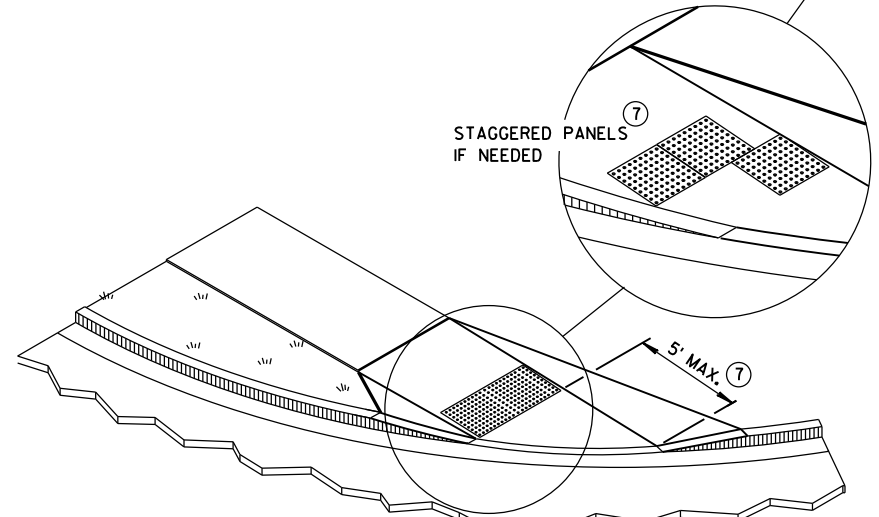
GENERAL NOTES

INTERMEDIATE RADII CAN BE INTERPOLATED

- AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.
- DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.
- (2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL NOT EXCEED 7%.
- (3) ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- (4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- (6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.
- (7) WHEN THIS DISTANCE EXCEEDS 5 FEET, STAGGER ADDITIONAL DETECTABLE WARNING PANEL FORWARD TO REDUCE THIS DISTANCE. PROVIDE MINIMUM 12-INCH ROW OVERLAP TO AVOID SIDESTEP OF DOME DETECTION. USE EQUAL-SIZE PANELS TO DEVELOP OVERLAPPING, STAGGERED ROWS. ALIGN DOMES BETWEEN OVERLAPPING ROWS AND IN DIRECTION OF PEDESTRIAN TRAVEL.
- (8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- (10) INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.



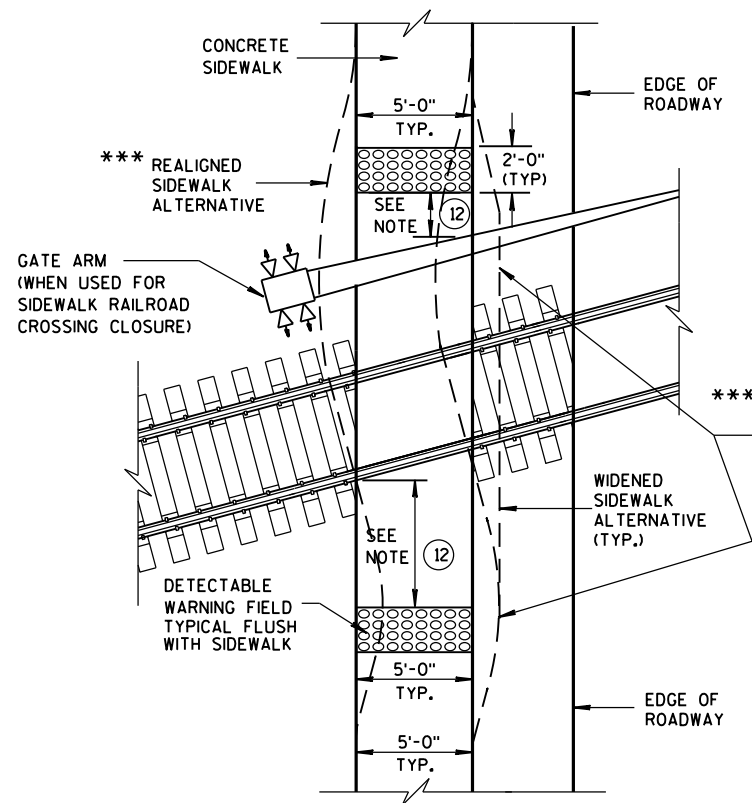
ISOMETRIC VIEW FOR TYPE 4B



ISOMETRIC VIEW FOR TYPE 4B1

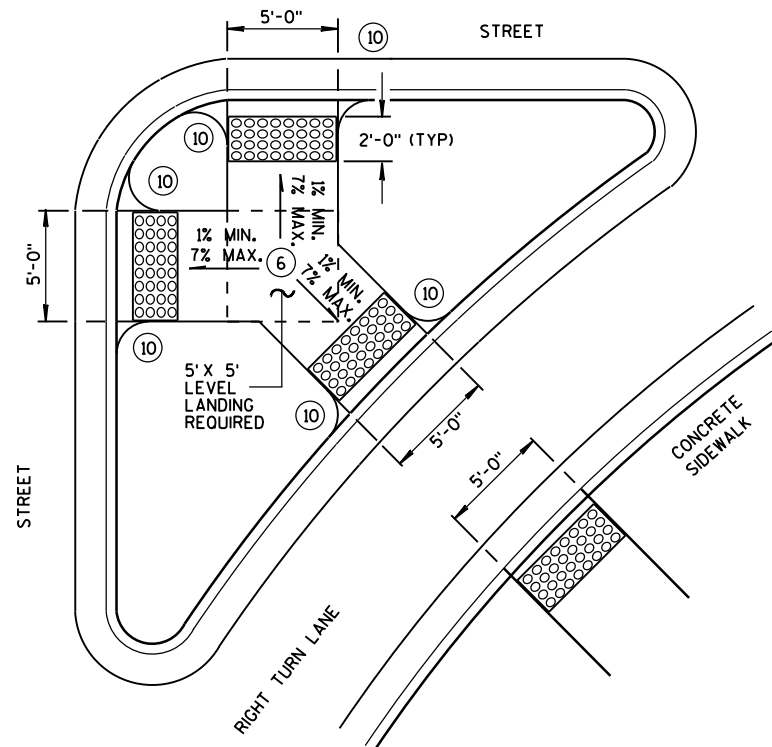
CURB RAMPS
TYPE 4B AND 4B1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

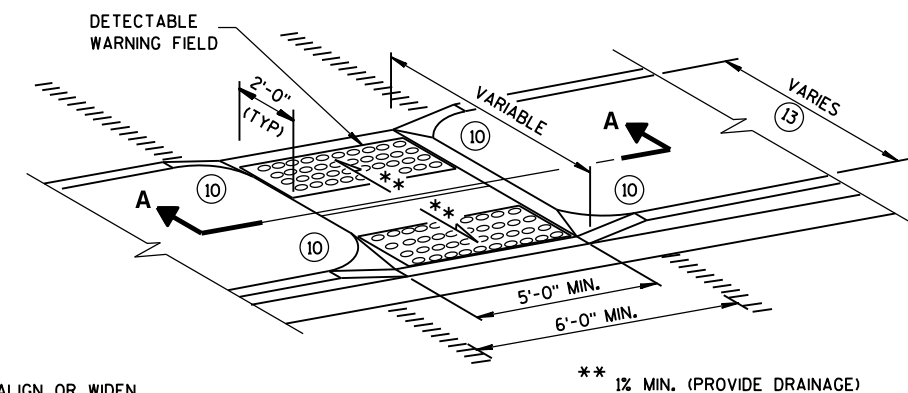


TYPE 8
DETECTABLE WARNINGS
AT RAILROAD CROSSING

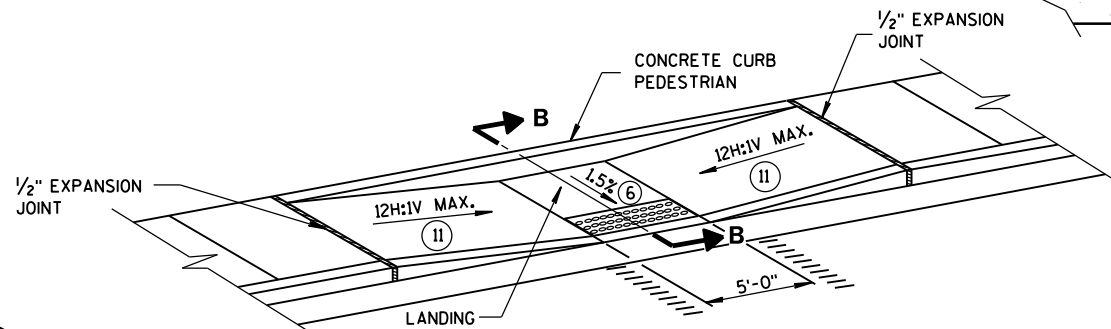
REFER TO GENERAL NOTES ② AND ③
FOR ALL ISLAND CURB RAMPS



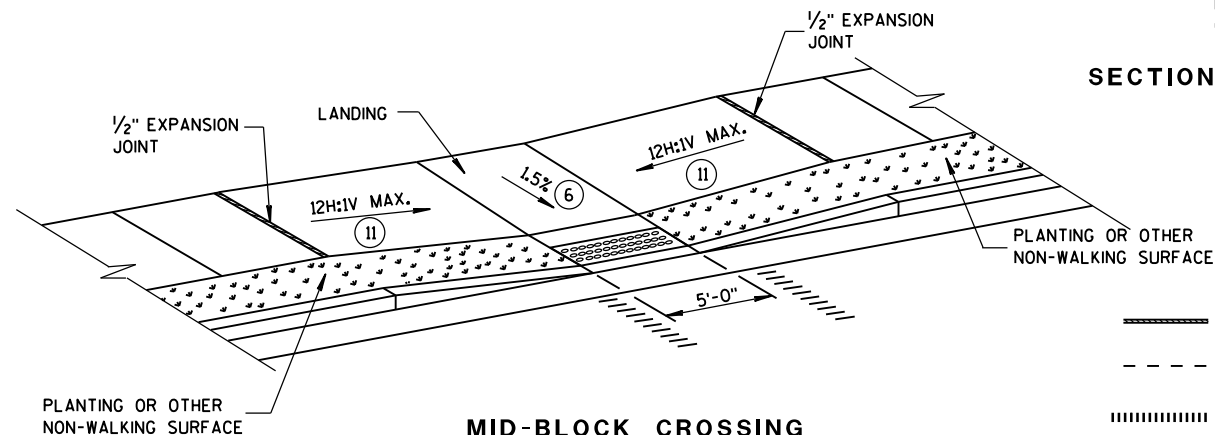
TYPE 6
DETECTABLE WARNING AT ISLANDS



MEDIAN ISLAND
NON-ELEVATED CROSSING
TYPE 5



MID-BLOCK CROSSING
TYPE 7A

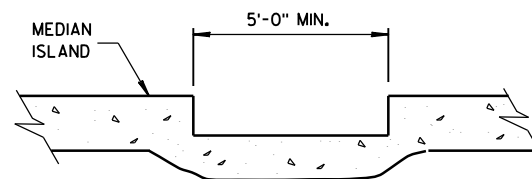


MID-BLOCK CROSSING
TYPE 7B

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

GENERAL NOTES

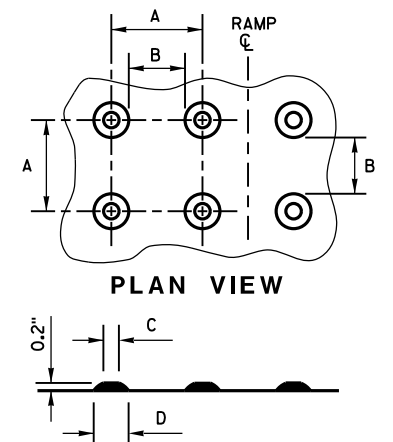
- SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.
- DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.
- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL NOT EXCEED 7%.
- ③ ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- ④ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- ⑥ PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.
- ⑩ INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.
- ⑪ SLOPE SIDEWALK TOWARD LANDING AS SHOWN WHERE THERE IS NO TERRACE OR WHERE THE TERRACE WIDTH IS LESS THAN 6 FEET WIDE.
- ⑫ THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO A RAILROAD CROSSING SHALL BE 1.5 FEET ± 0.1' FROM THE FACE OF THE GATE ARM IF THE GATE ARM EXTENDS ACROSS THE SIDEWALK. WHERE THERE IS NO PEDESTRIAN GATE, THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO THE RAILROAD CROSSING SHALL BE 15 FEET FROM THE NEAREST RAIL.
- ⑬ DO NOT INSTALL DETECTABLE WARNING FIELDS IF MEDIAN WIDTH BETWEEN BACK OF CURBS IS LESS THAN 6 FEET.



SECTION A-A

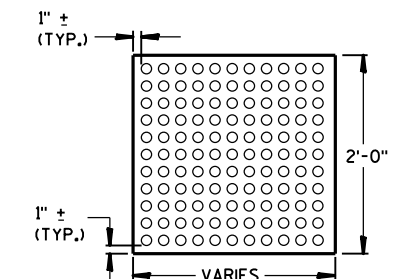
	MIN.	MAX.
A	1.6"	2.4"
B	0.65"	1.5"
C	*	*
D	0.9"	1.4"

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



ELEVATION VIEW

TRUNCATED DOMES
DETECTABLE WARNING PATTERN DETAIL



PLAN VIEW
DETECTABLE WARNING
FIELD (TYPICAL)

- LEGEND**
- 1/2" EXPANSION JOINT-SIDEWALK
 - - - CONTRACTION JOINT FIELD LOCATED
 - ||||| PAVEMENT MARKING CROSSWALK (WHITE)

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept., 2016 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT
FHWA UNIT SUPERVISOR



INLET PROTECTION, TYPE A

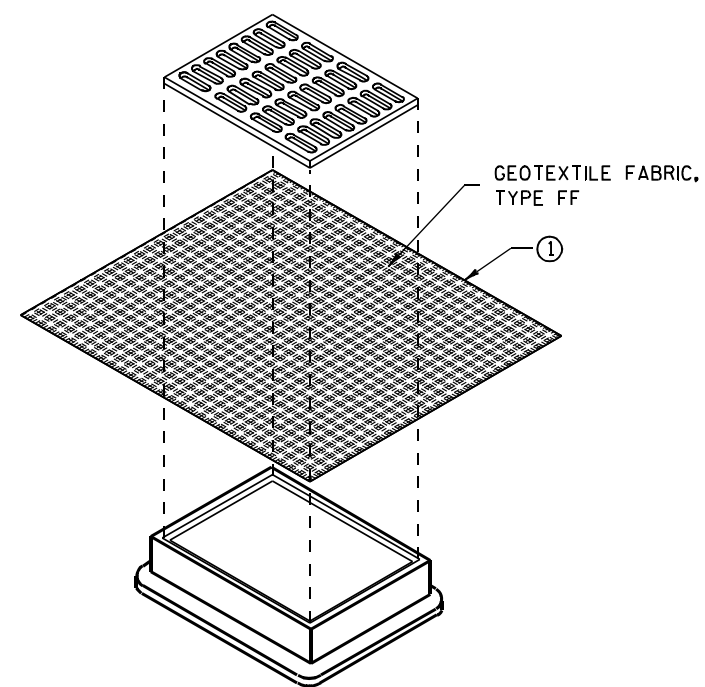
GENERAL NOTES

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.

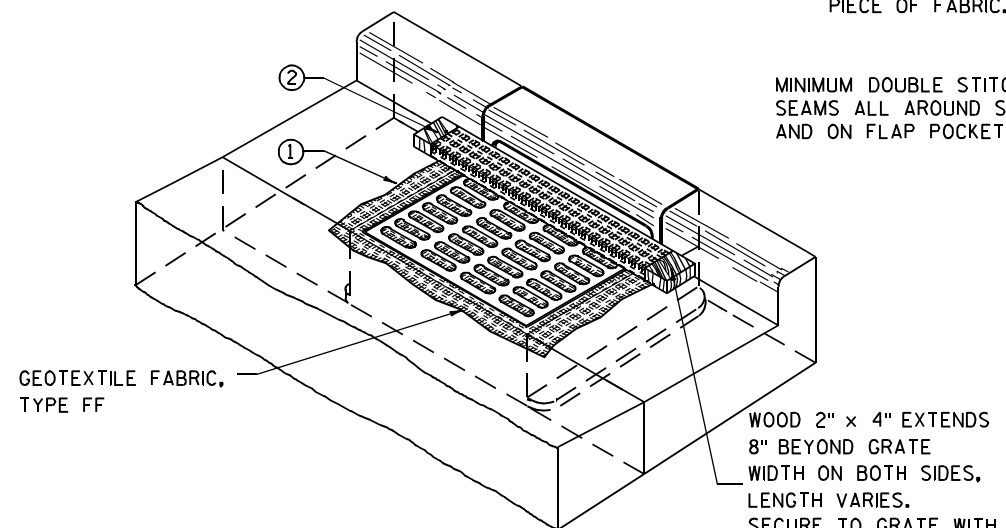
WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

- 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.



**INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)**

(CAN BE INSTALLED IN ANY INLET WITHOUT A CURB BOX)



INLET PROTECTION, TYPE C (WITH CURB BOX)

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.



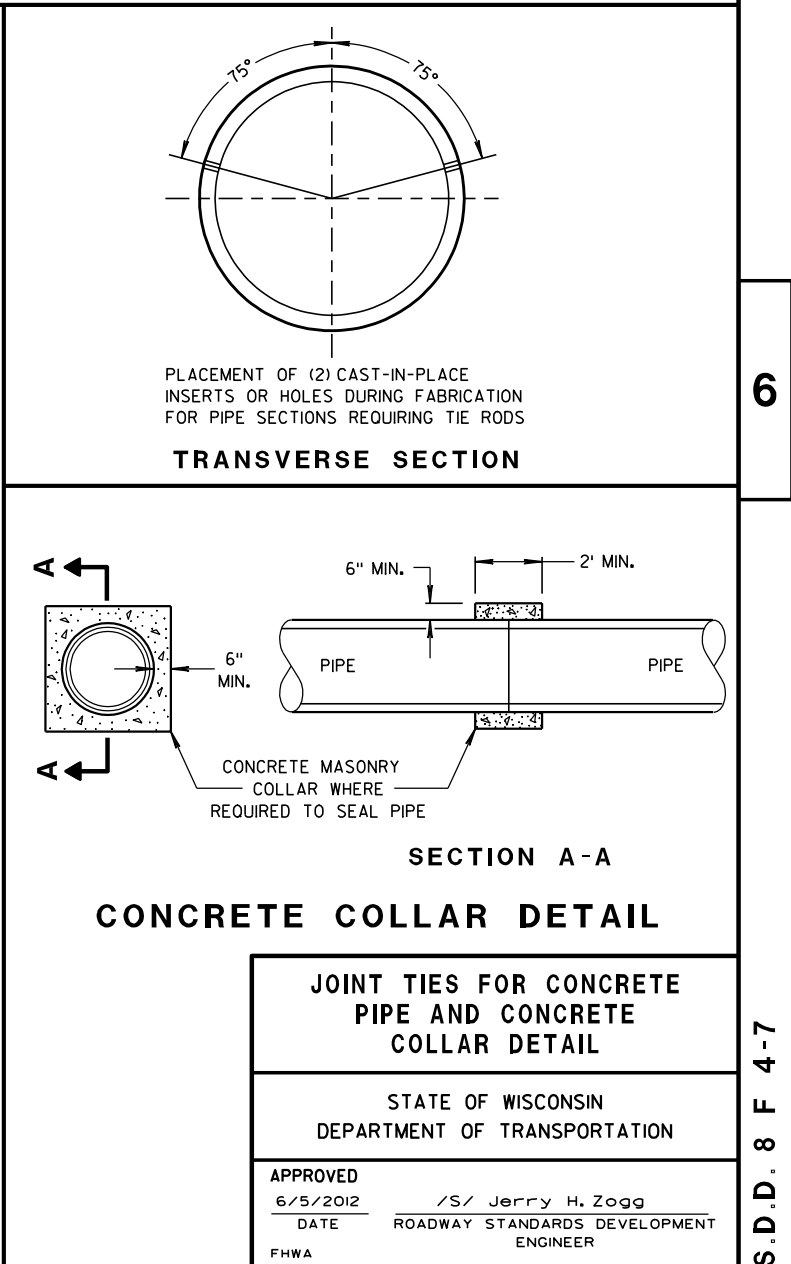
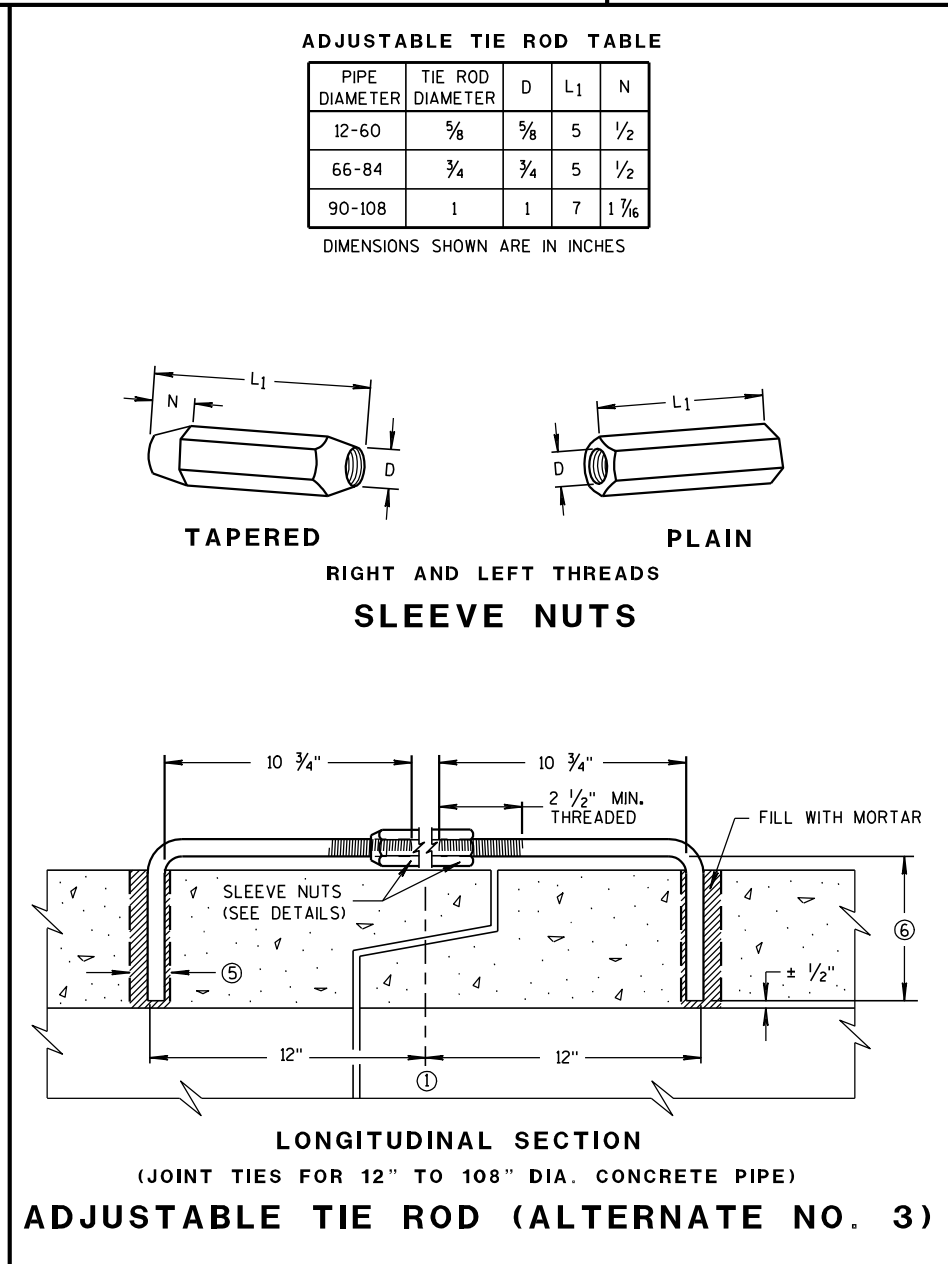
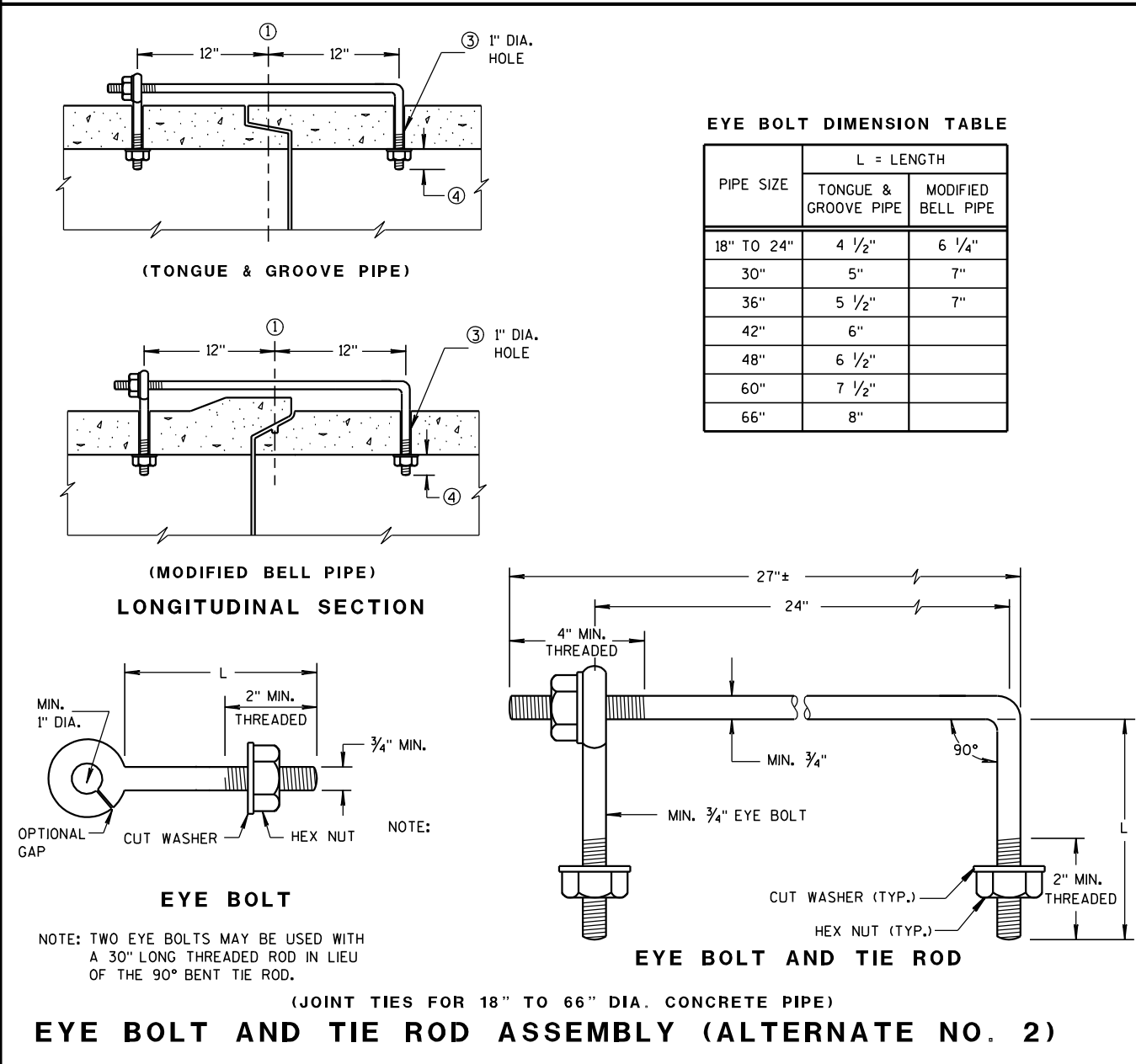
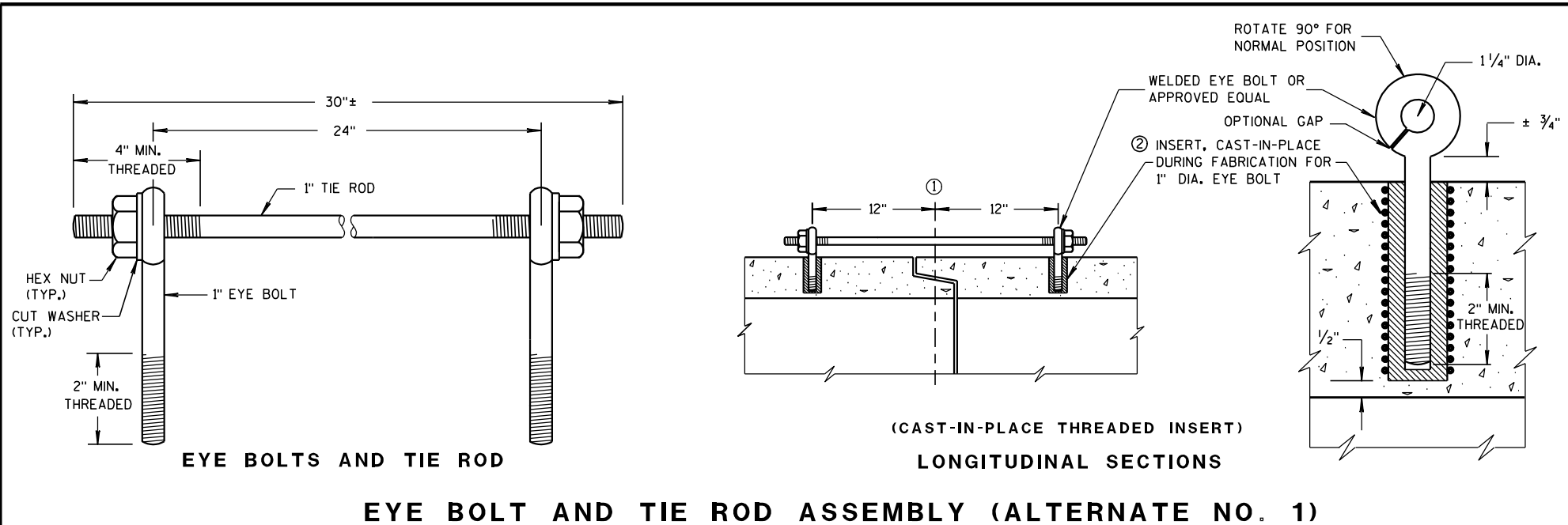
INLET PROTECTION, TYPE D

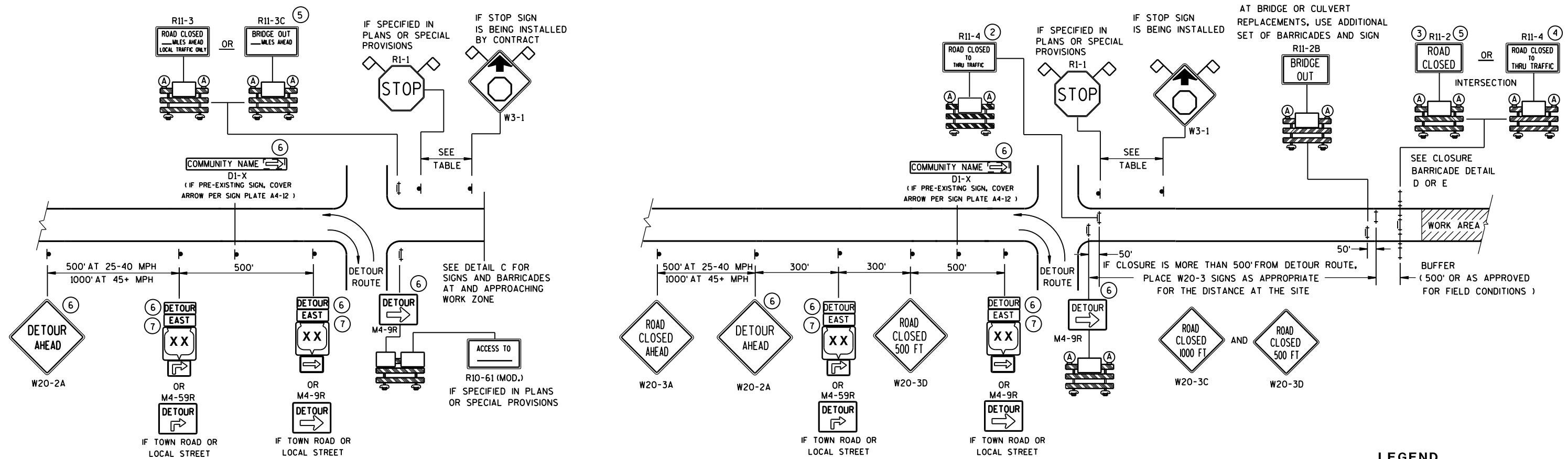
(CAN BE INSTALLED IN ANY INLET TYPE WITH OR WITHOUT A CURB BOX AS PER NOTE ②)

**INLET PROTECTION
TYPE A, B, C, AND D**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/16/02 /S/ Beth Cannestra
DATE
FHWA CHIEF ROADWAY DEVELOPMENT ENGINEER

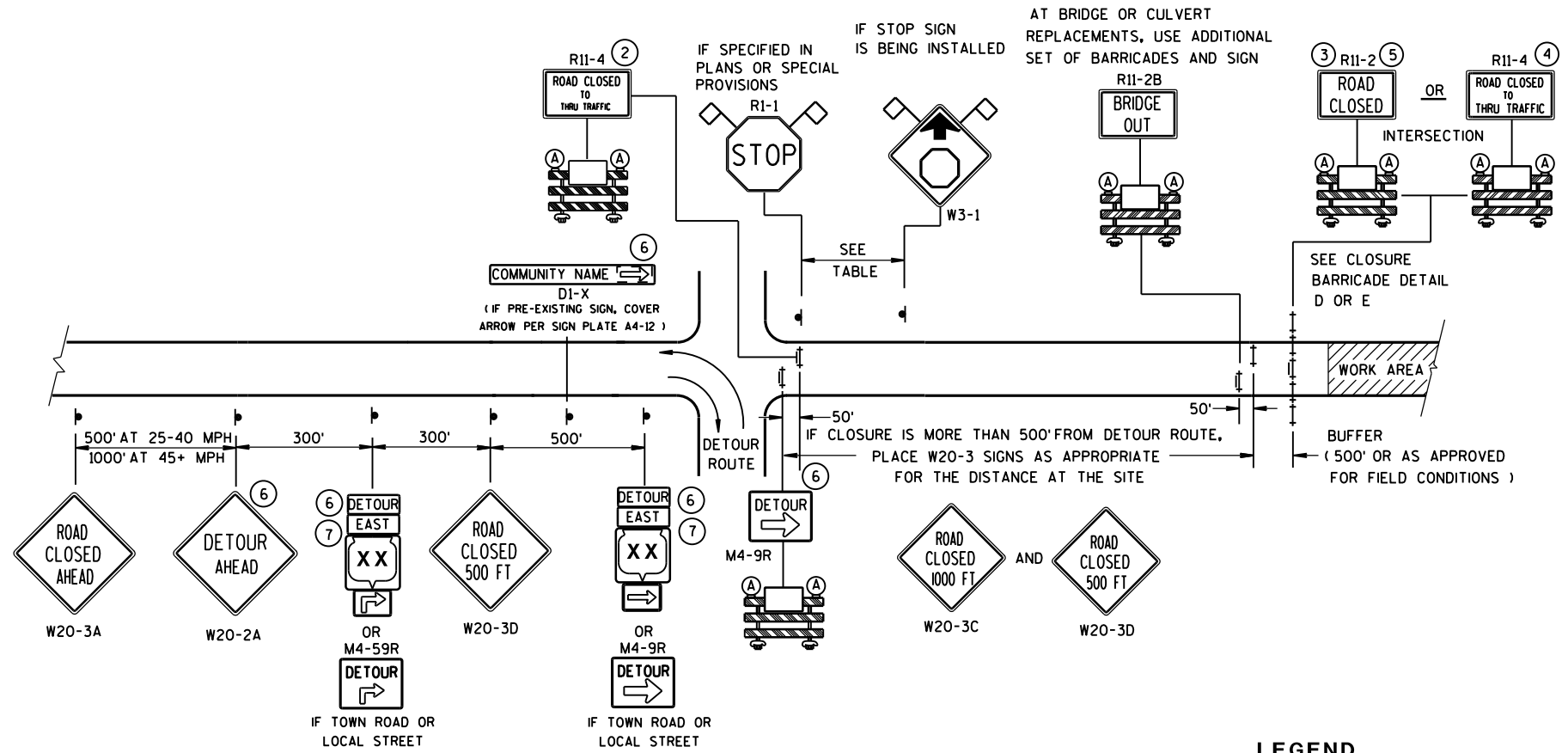




DETAIL A

MAINLINE CLOSURE WITH POSTED DETOUR

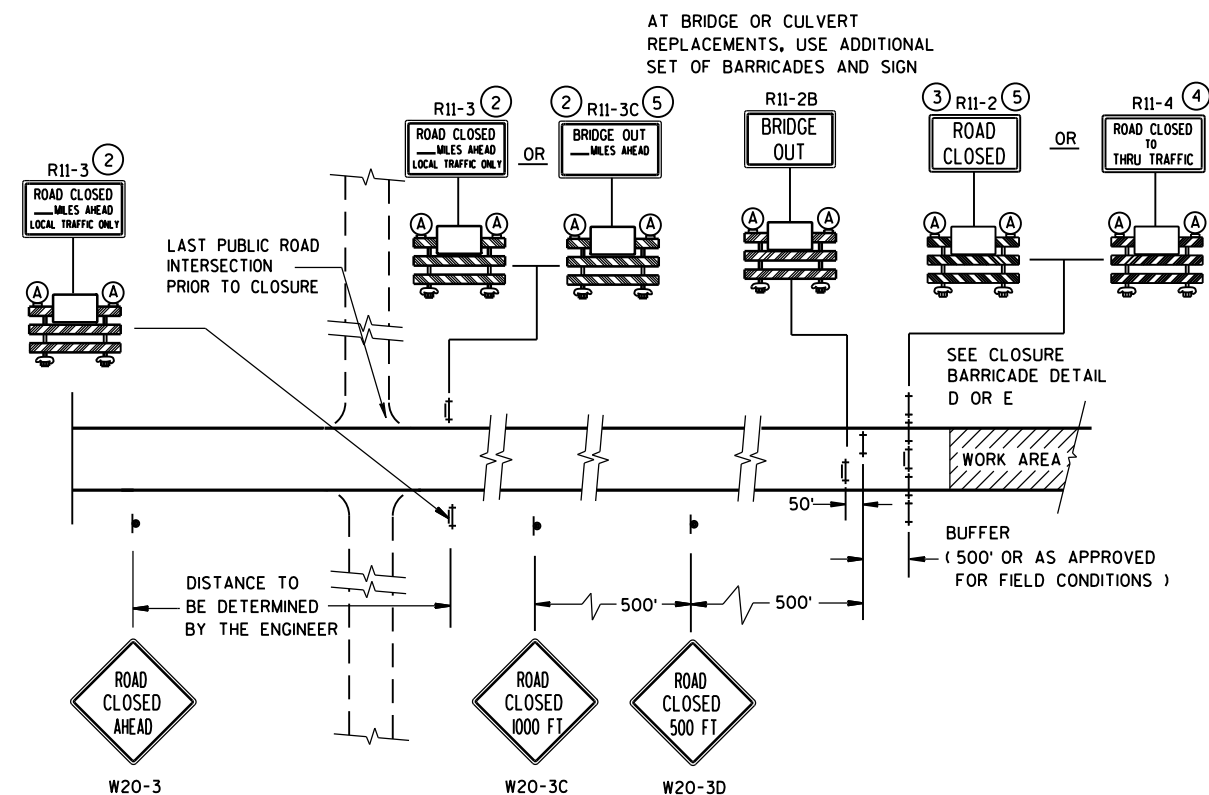
WORK ZONE GREATER THAN 1/2 MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL B














MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE LESS THAN 1/2 MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

SPEED LIMIT (MPH)	"STOP AHEAD" ADVANCE WARNING DISTANCE (F T)
25	200
30	200
35	350
40	350
45	500
50	550
55	750

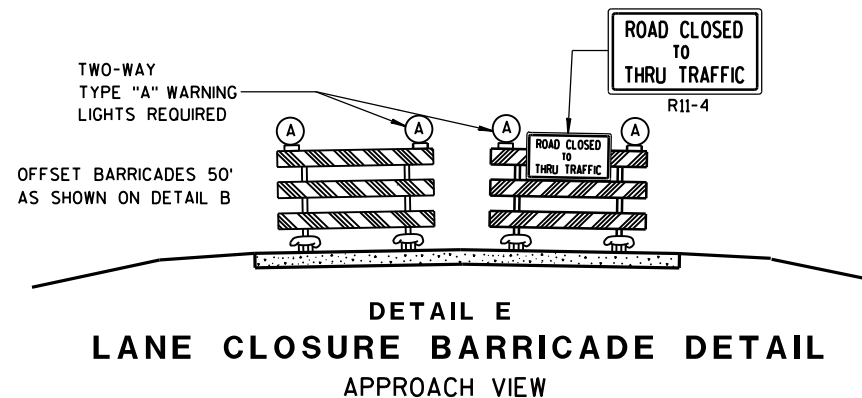
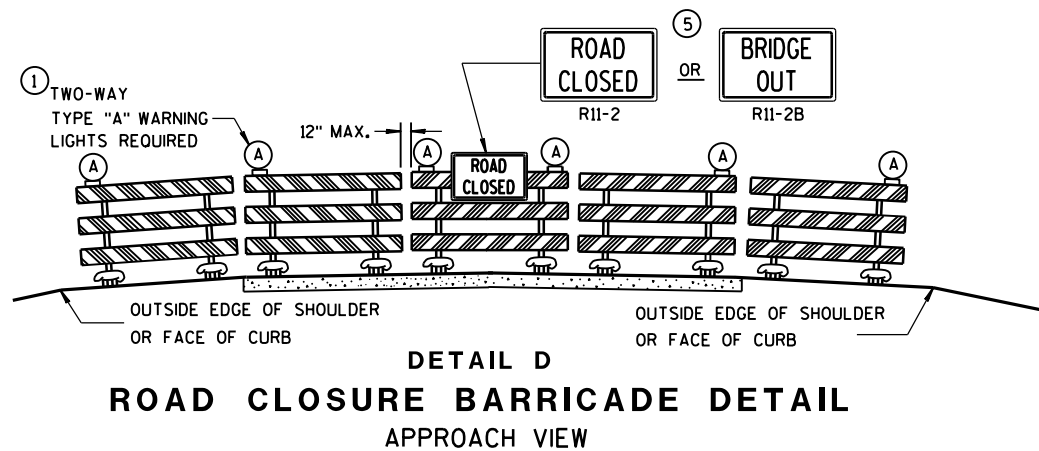
- # LEGEND
-  SIGN ON PERMANENT SUPPORT
-  TYPE III BARRICADE
-  TYPE III BARRICADE WITH ATTACHED SIGN
-  TYPE "A" WARNING LIGHT (FLASHING)
-  WORK AREA
-  M4-8
-  M3-X
-  M1-4
- OR
-  M1-5A
- OR
-  M1-6
-  M05-1
- OR
-  M06-1
-  FLAGS, 16" X 16" MIN., (ORANGE)

SEE SDD 15C2-SHEET "b"
FOR GENERAL NOTES
AND FOOTNOTES ① THROUGH ⑦

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

Sept. 2015	/S/ Peter Amakobe Atepe
DATE	STATEWIDE WORK ZONE TRAFFIC
FHWA	SAFETY ENGINEER



SEE SDD 15C2-SHEET "a" FOR LEGEND

GENERAL NOTES

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

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

BARRICADES THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED UPON COMPLETION OF THE OPERATION OR, FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

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

ALL TYPE III BARRICADES SHALL HAVE RAILS REFLECTORIZED ON BOTH FACES. STRIPES SHALL BE PROPERLY SLOPED DOWN TOWARD THE TRAFFIC SIDE OR AS SHOWN IN THE ROAD CLOSURE BARRICADE DETAIL D FOR FULL ROAD CLOSURES.

TYPE "A" LOW-INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

THE R11-2, R11-3, M4-9, R11-4 AND R10-61 SIGNS PLACED ON BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE OR BOTTOM RAILS.

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

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:

R11-2 SHALL BE 48" X 30".

R11-3, R11-4 AND R10-61 SHALL BE 60" X 30".

M4-9 SHALL BE 30" X 24".

M3-X SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS.)

M4-8 SHALL BE 24" X 12". (30" X 15" IF NEEDED TO MATCH EXISTING SIGNS.)

M1-4, M1-5A, AND M1-6 SHALL BE 24" X 24". (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS.)

M05-1 AND M06-1 SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)

D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.

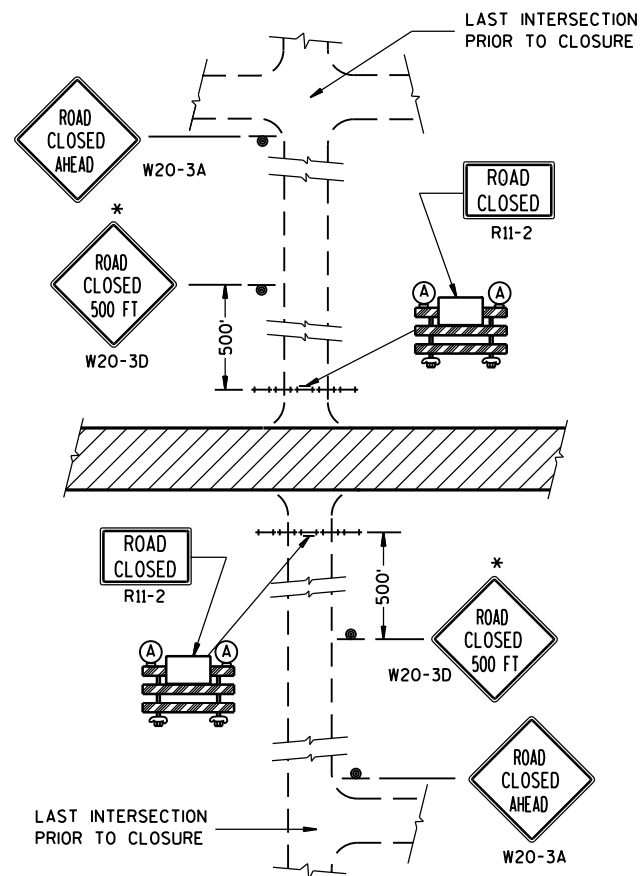
R1-1 SHALL BE 36" X 36".

- ① TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8-FOOT LIGHT SPACING).
- ② THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT INTERSECTION.
- ③ FOR ROAD CLOSURE WITHOUT LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL D.
- ④ FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT, SEE LANE CLOSURE BARRICADE DETAIL E.
- ⑤ FOR BRIDGE OR CULVERT REPLACEMENTS, SUBSTITUTE "BRIDGE OUT" INSTEAD OF "ROAD CLOSED" ON R11-2 AND R11-3 SIGNS.
- ⑥ INSTALL DETOUR AND COMMUNITY GUIDE SIGNS AND ARROWS ONLY IF SPECIFIED IN THE CONTRACT. IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. MODIFY EXISTING SIGNS WHERE POSSIBLE. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. IF DETOUR SIGNS ARE BEING INSTALLED BY OTHERS, PLACE THE CONTRACTED TRAFFIC CONTROL SIGNS TO ALLOW FOR PLACEMENT OF ALL WARNING, DETOUR AND GUIDE SIGNS AS SHOWN.
- ⑦ "EAST" CARDINAL DIRECTION MARKERS AND RIGHT TURN ARROWS ARE SHOWN. USE OTHER CARDINAL DIRECTIONS AND ARROWS AS APPROPRIATE.

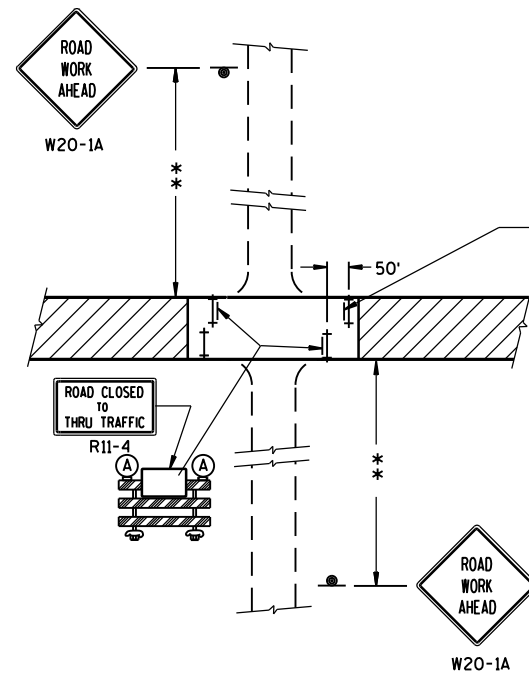
BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

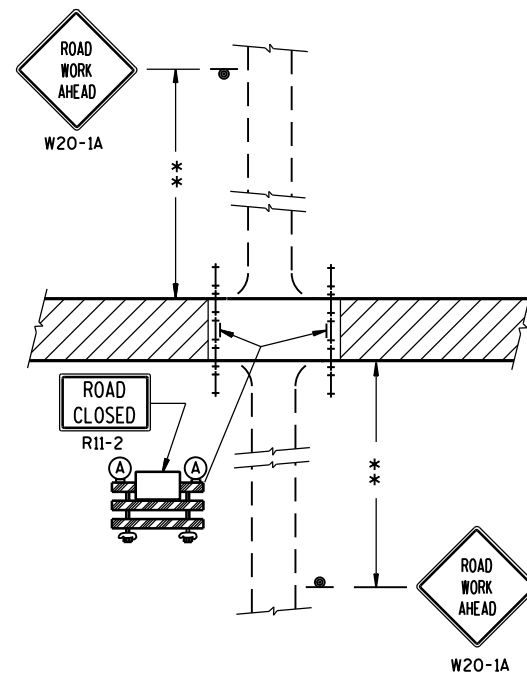
Sept. 2015 /S/ Peter Amokobe Atepe
DATE STATEWIDE WORK ZONE TRAFFIC
FHWA SAFETY ENGINEER

**DETAIL 1**

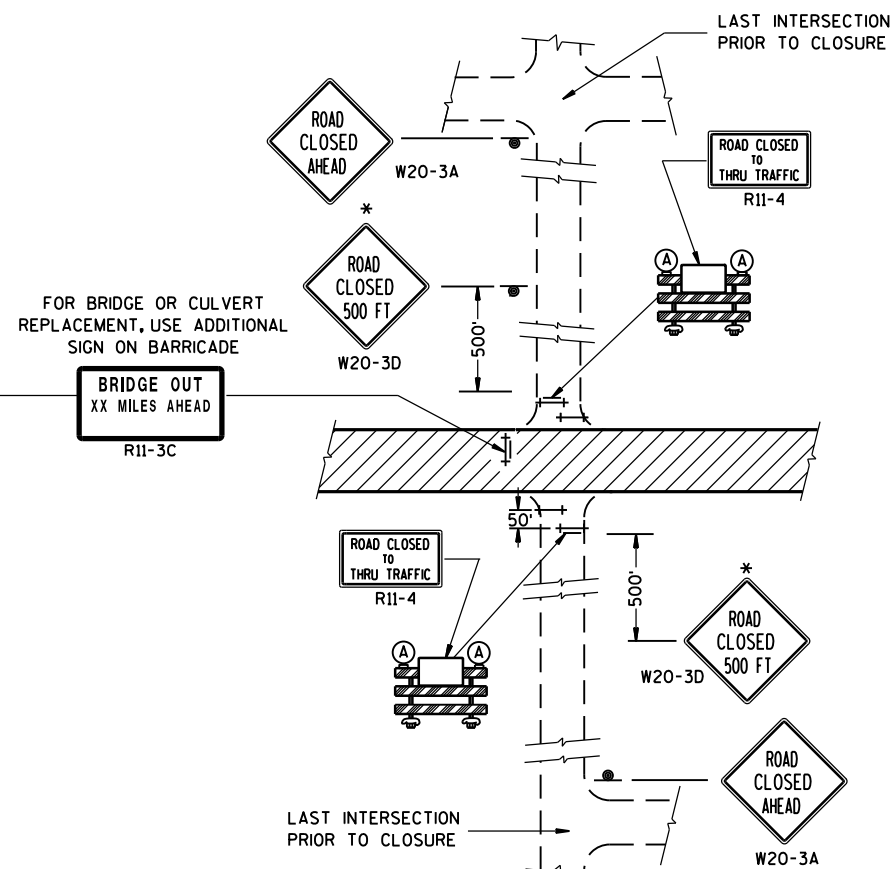
(NO ACCESS TO PROJECT)

**DETAIL 3**

(PUBLIC CROSS-TRAFFIC MAINTAINED. CONTRACTOR, LOCAL BUSINESS AND RESIDENT ACCESS).

**DETAIL 2**

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

**DETAIL 4**

(CONTRACTOR, LOCAL BUSINESS AND RESIDENT ACCESS TO PROJECT)

GENERAL NOTES

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

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

IF A "STOP" SIGN MUST BE REMOVED FOR A WORK OPERATION, A TEMPORARY "STOP" SIGN SHALL BE PLACED PRIOR TO THE SIGN REMOVAL, OR A FLAGGER SHALL BE PROVIDED UNTIL THE SIGN IS RE-ESTABLISHED.

BARRICADES THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED UPON COMPLETION OF THE OPERATION OR, FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

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

ALL TYPE III BARRICADES SHALL HAVE RAILS REFLECTORIZED ON BOTH FACES. STRIPES SHALL BE PROPERLY SLOPED DOWN TOWARD THE TRAFFIC SIDE OR AS SHOWN IN THE ROAD CLOSURE BARRICADE DETAIL D FOR FULL ROAD CLOSURES.

TYPE "A" LOW-INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

THE R11-2, R11-3 AND R11-4 SIGNS PLACED ON BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE OR BOTTOM RAILS.

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:

R11-2 SHALL BE 48" X 30".

R11-4 AND R11-3 SHALL BE 60" X 30".

*OMIT THE "ROAD CLOSED 500 FT." SIGN IF THE LAST INTERSECTION IS 500 FT. OR LESS FROM THE WORK ZONE.

**500' MAX. OR AT LAST INTERSECTION WHICHEVER IS CLOSER.

LEGEND

- ⊙ SIGN ON PERMANENT SUPPORT
- ⊥ TYPE III BARRICADE
- ⊥ TYPE III BARRICADE WITH ATTACHED SIGN
- Ⓐ TYPE "A" WARNING LIGHT (FLASHING)
- ▨ WORK AREA

**BARRICADES AND SIGNS
FOR
SIDEROAD CLOSURES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

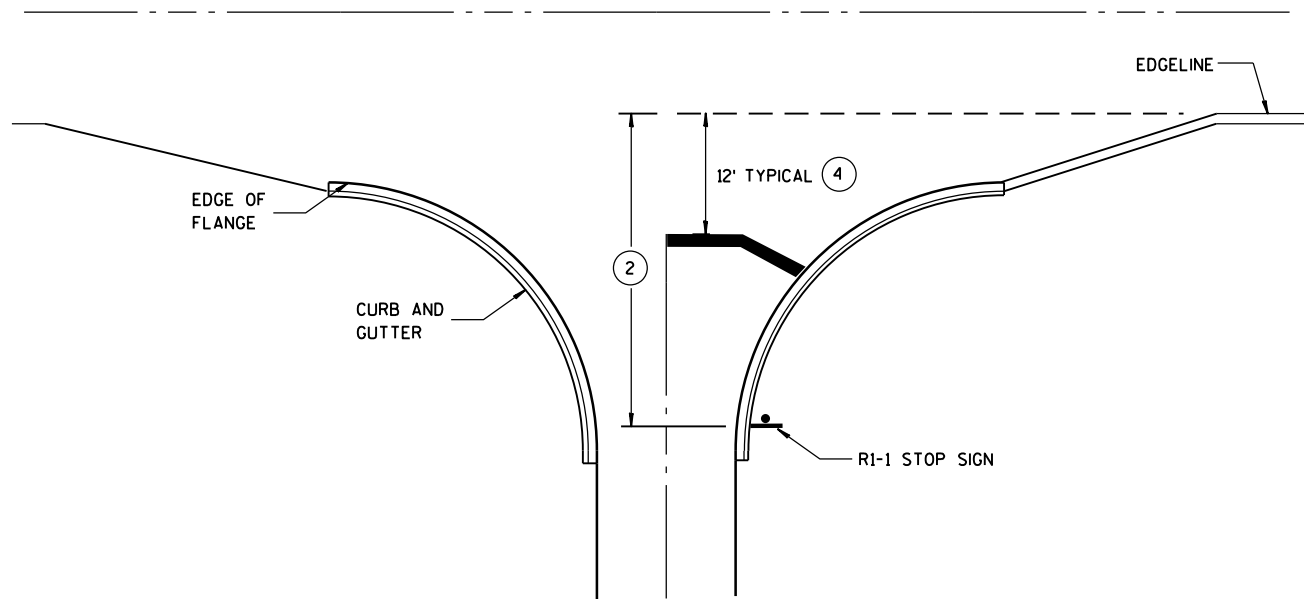
APPROVED

Sept. 2015

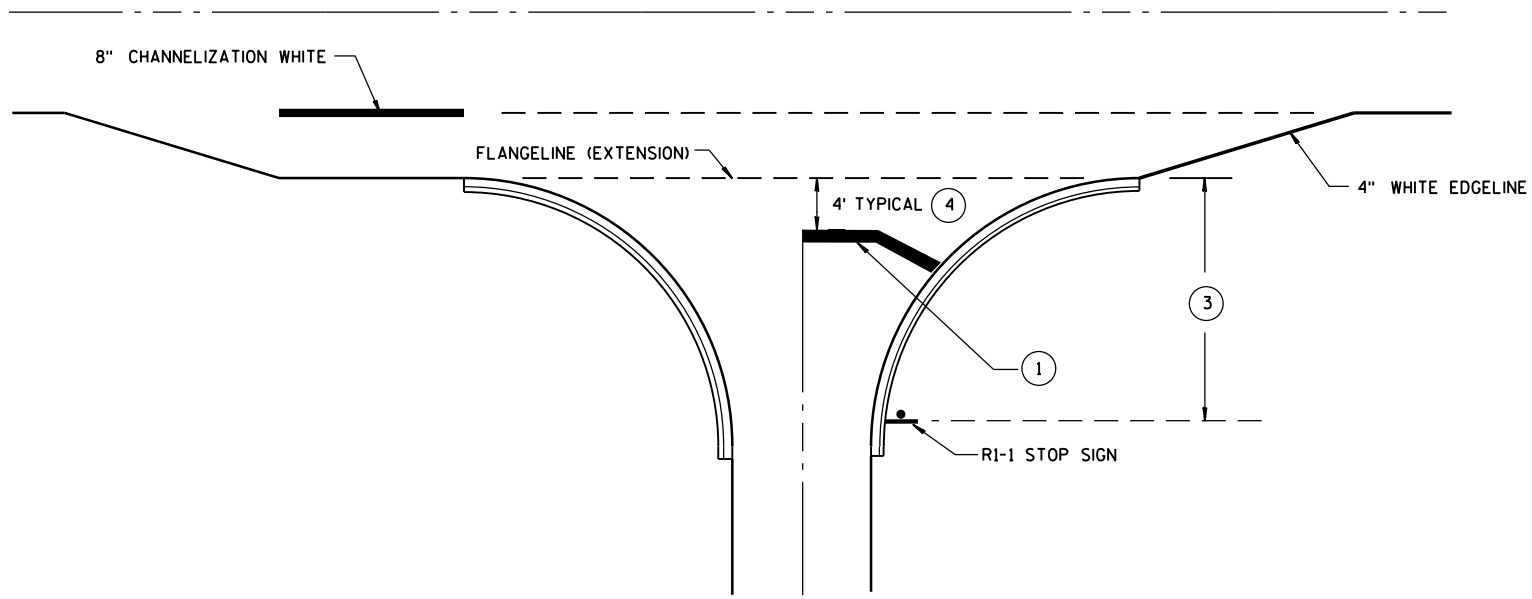
DATE

FHWA

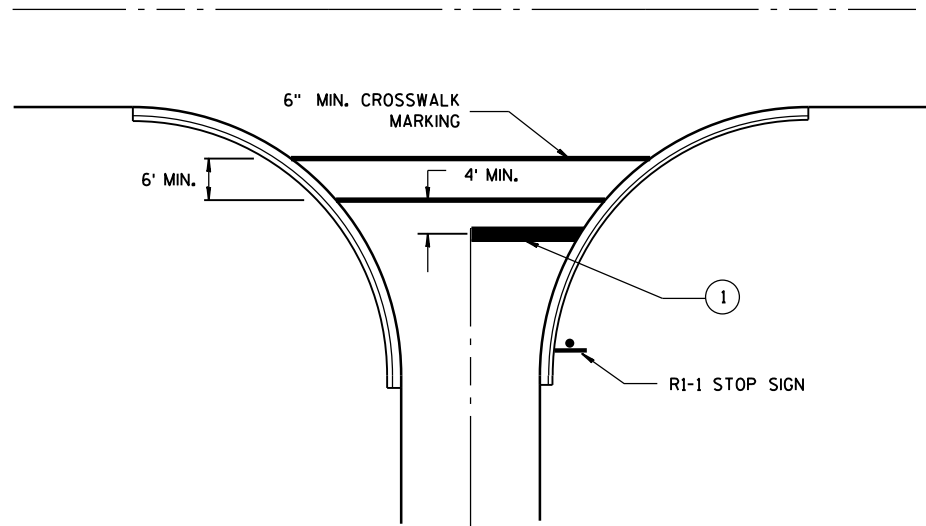
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZONE TRAFFIC
SAFETY ENGINEER



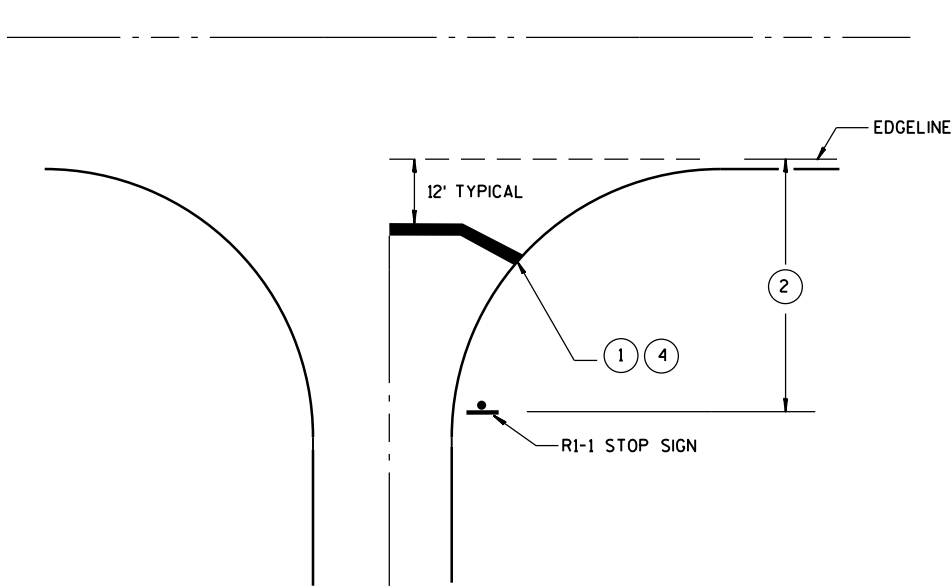
TYPICAL STOP LINE PAVEMENT MARKING
WITH CURB AND GUTTER



TYPICAL STOP LINE PAVEMENT MARKING
FOR SIDEROADS WITH RIGHT TURN LANE



TYPICAL STOP LINE PAVEMENT MARKING
FOR SIDEROADS WITH CROSSWALK MARKING



TYPICAL STOP LINE PAVEMENT MARKING
WITHOUT CURB AND GUTTER

GENERAL NOTES

- 1 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE PROJECT ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
- 2 IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGE LINE THAN NO STOP LINE IS REQUIRED.
- 3 IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGELINE EXTENSION THAN NO STOP LINE IS REQUIRED.
- 4 MOVE CLOSER TO EDGE OF TRAVEL LANE AS NEEDED FOR VISIBILITY AND SIGHT LINES. (NO CLOSER THAN 4 FEET).

STOP LINE AND CROSSWALK
PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4-18-2016 /S/ Matthew R. Rauch
DATE STATE SIGNING AND MARKING ENGINEER
FHWA



Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

<http://www.dot.wisconsin.gov>

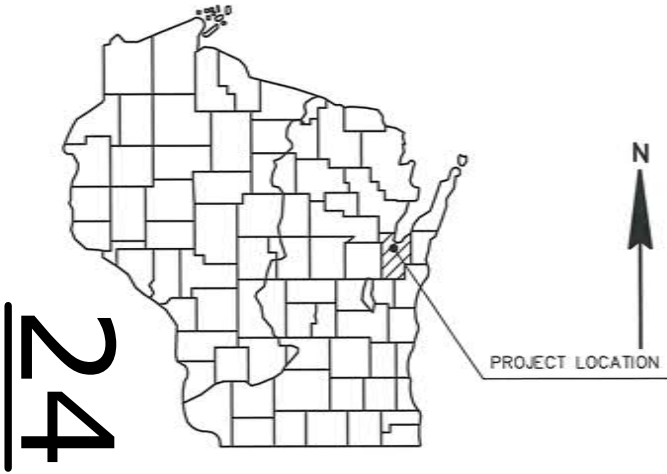
PROJECT ID: 4985-00-58
WITH: 4985-00-52 & 4985-00-54

COUNTY: BROWN

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 = 50



DESIGN DESIGNATION

AADT (2017) = 900
AADT (2037) = 990
DHV (2037) = 2.8
D (%) = 59/41
T (% OF ADT) = 3.3
DESIGN SPEED = 30 MPH
ESALS = 120,000

CONVENTIONAL SYMBOLS

PLAN

FENCE	
CORPORATE LIMITS	
RIPRAP	
PROPERTY LINE	
LOT LINE	
LIMITED HIGHWAY EASEMENT	
EXISTING RIGHT OF WAY	
PROPOSED OR NEW R/W LINE	
SLOPE INTERCEPT	
REFERENCE LINE	
EXISTING CULVERT	
PROPOSED CULVERT (Box or Pipe)	
COMBUSTIBLE FLUIDS	
HIGH VOLTAGE	
MARSH AREA	
WOODED OR SHRUB AREA	
RIGHT-OF-WAY MARKERS	

PROFILE

GRADE LINE	
ORIGINAL GROUND	
MARSH OR ROCK PROFILE (To be noted as such)	
SPECIAL DITCH	
GRADE ELEVATION	
CULVERT (Profile View)	
UTILITIES	
ELECTRIC	
OVERHEAD ELECTRIC	
FIBER OPTIC	
GAS	
SANITARY SEWER	
STORM SEWER	
TELEPHONE	
WATER	
UTILITY PEDESTAL	
POWER POLE	
TELEPHONE POLE	

BEGIN PROJECT
STA 200+37.64
Y = 540358.650
X = 81162.706



END PROJECT
STA 224+42.43

LAYOUT
SCALE 0 500 FT
TOTAL NET LENGTH OF CENTERLINE = 0.455 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), BROWN COUNTY. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT
C. DE PERE, HELENA ST
SEVENTH ST TO SIXTH ST
LOCAL STREET
BROWN COUNTY

STATE PROJECT NUMBER
4985-00-58

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
4985-00-58	WISC 2017280	1

ACCEPTED FOR
CITY OF DE PERE
1/23/17
DATE
E. P. Peterson
CITY ENGINEER

ORIGINAL PLANS PREPARED BY
Cedar
corporation
MENOMONIE - MADISON - GREEN BAY
www.cedarcorp.com
800-472-7372



1/18/17
DATE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
PREPARED BY
Surveyor CEDAR CORPORATION
Designer CEDAR CORPORATION
Management Consultant SHORT ELLIOT HENDRICKSON, INC

APPROVED FOR THE DEPARTMENT
1/27/16
DATE
Alex J. Saunders
(Management Consultant Signature)

GENERAL NOTES

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

NO TREES OR SHRUBS ARE TO BE REMOVED UNLESS SUCH TREES OR SHRUBS HAVE FIRST BEEN INDICATED FOR REMOVAL BY THE ENGINEER IN THE FIELD.

BEARINGS REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), BROWN COUNTY.

DISTURBED AREAS WITHIN THE RIGHT OF WAY, EXCEPT THE AREAS WITHIN THE FINISHED BACK OF CURB POINTS, ARE TO BE FERTILIZED, SEEDED, AND MULCHED AS DIRECTED BY THE ENGINEER. USE SEED MIX NO. 40.

WHEN THE QUANTITY OF THE ITEM OF BASE LAYER OR SURFACE LAYER IS MEASURED FOR PAYMENT BY THE TON, THE DEPTH OF THICKNESS OF THE LAYER SHOWN ON THE PLANS IS APPROXIMATE AND THE ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF THE MATERIAL AS DIRECTED BY THE ENGINEER.

THE BENCHMARK IS REFERENCED TO THE CITY OF DE PERE BENCHMARK SYSTEM.

NO MILLINGS SHALL ENTER STORM SEWER SYSTEM. PREVENT SEDIMENT TRANSPORT DURING CONSTRUCTION OF STORM SEWER. CONTRACTOR SHALL CONDUCT OPERATIONS TO PREVENT MILLINGS FROM ENTERING THE STORM SEWER SYSTEM.

UTILITIES

AT&T WISCONSIN
205 SOUTH JEFFERSON STREET
GREEN BAY, WI 54313
(920) 433-4200
JOE KASSAB
JK572K@ATT.COM

CITY OF DE PERE (WATER)
925 S 6TH STREET
DE PERE, WI 54115
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ERIC ZYGARLICHE
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925 S 6TH STREET
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(920) 339-8304
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CHARTER COMMUNICATIONS
3520 DESTINATION DRIVE
APPLETON, WI 54915
(920) 831-9249
VINCE ALBIN
VINCE.ALBIN@CHARTER.COM

WISCONSIN PUBLIC SERVICE (ELECTRIC)
700 N. ADAMS STREET
P.O. BOX 19001
GREEN BAY, WI 54307-9001
(920) 655-1596
RANDY STEIER
RDSTEIER@WISCONSINPUBLICSERVICE.COM

WISCONSIN PUBLIC SERVICE (GAS)
2850 S. ASHLAND AVENUE
P.O. BOX 19001
GREEN BAY, WI 54132
(920) 617-5132
DAVID CZARNECKI
DFCZARNECKI@WISCONSINPUBLICSERVICE.COM



Dial 811 or (800) 242-8511

www.DiggersHotline.com

** DENOTES UTILITIES THAT ARE NOT DIGGERS HOTLINE MEMBERS

STANDARD ABBREVIATIONS

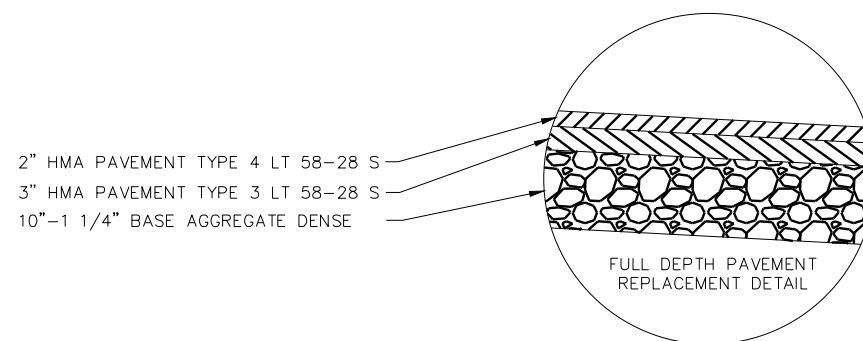
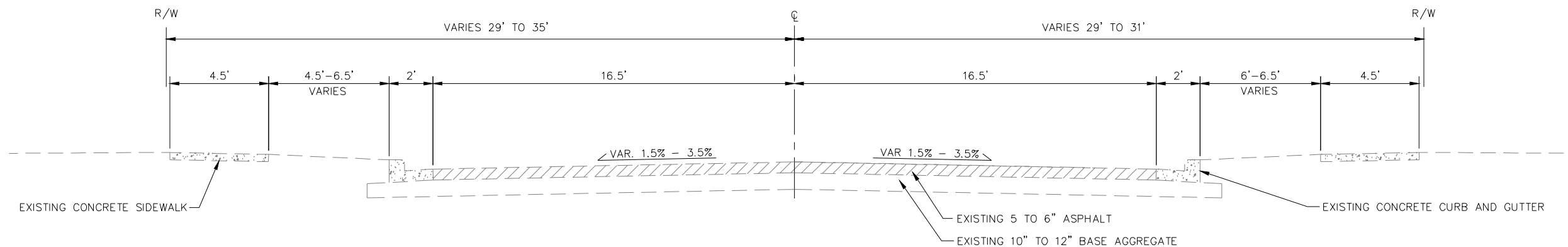
ABUT	ABUTMENT	OFF	OFFSET
AGG	AGGREGATE	PC	POINT OF CURVATURE
ET AL	AND OTHERS	PI	POINT OF INTERSECTION
AADT	ANNUAL AVERAGE DAILY TRAFFIC	PT	POINT OF TANGENCY
BF	BACK FACE	POL	POINT ON LINE
BM	BENCHMARK	PE	PRIVATE ENTRANCE
C/L OR ☿	CENTERLINE	PL	PROPERTY LINE
△	CENTRAL ANGLE OR DELTA	PSI	POUNDS/SQUARE INCH
CLR	CLEAR	PROP	PROPOSED
CONC	CONCRETE	R	RADIUS
CONST	CONSTRUCTION	RR	RAILROAD
COR	CORNER	REBAR	REINFORCEMENT BAR
CMP	CORRUGATED METAL PIPE	REQD	REQUIRED
CTH	COUNTY TRUNK HIGHWAY	RT	RIGHT
CR	CREEK	RHF	RIGHT-HAND FORWARD
CFS	CUBIC FEET/SECOND	R/W	RIGHT-OF-WAY
CULV	CULVERT	RD	ROAD
D	DEGREE OF CURVE	SEC	SECTION
DHV	DESIGN HOUR VOLUME	S	SOUTH
DIA	DIAMETER	SE	SOUTHEAST
E	EAST	SW	SOUTHWEST
EL	ELEVATION	STH	STATE TRUNK HIGHWAY
EST	ESTIMATED	STA	STATION
FPS	FEET PER SECOND	SE	SUPER ELEVATION
FE	FIELD ENTRANCE	T	TANGENT
FT	FOOT (FEET)	TEL	TELEPHONE
FTG	FOOTING	TEMP	TEMPORARY
FDN	FOUNDATION	TI	TEMPORARY INTEREST
FF	FRONT FACE	TLE	TEMPORARY LIMITED EASEMENT
IP	IRON PIN	TL OR T/L	TRANSIT LINE
LT	LEFT	T	TRUCKS
LHF	LEFT-HAND FORWARD	TYP	TYPICAL
L	LENGTH OF CURVE	U/G	UNDERGROUND
LF	LINEAR FOOT	USH	UNITED STATES HIGHWAY
MAX	MAXIMUM	VAR	VARIABLE
MI	MILE	V	VELOCITY
MIN	MINIMUM	VPC	VERTICAL POINT OF CURVATURE
NC	NORMAL CROWN	VPI	VERTICAL POINT OF INTERSECTION
N	NORTH	VPT	VERTICAL POINT OF TANGENCY
NE	NORTHEAST	W	WEST
NW	NORTHWEST	YD	YARD
NO	NUMBER		

CITY OF DE PERE

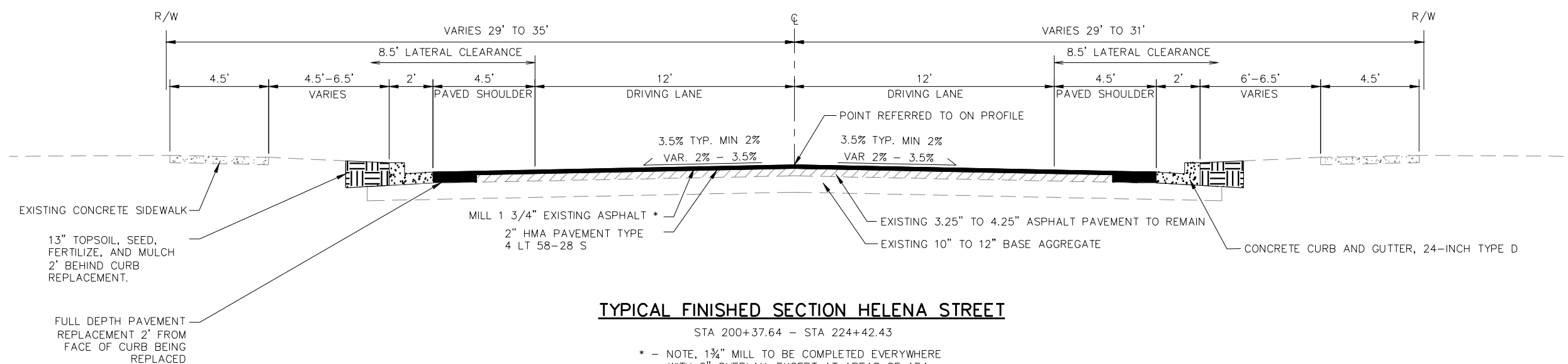
CITY OF DE PERE
PUBLIC WORKS BUILDING
925 S 6TH STREET
DE PERE, WI 54115
(920) 339-8304
ERIC RAKERS
erakers@mail.de-pere.org

DNR LIAISON

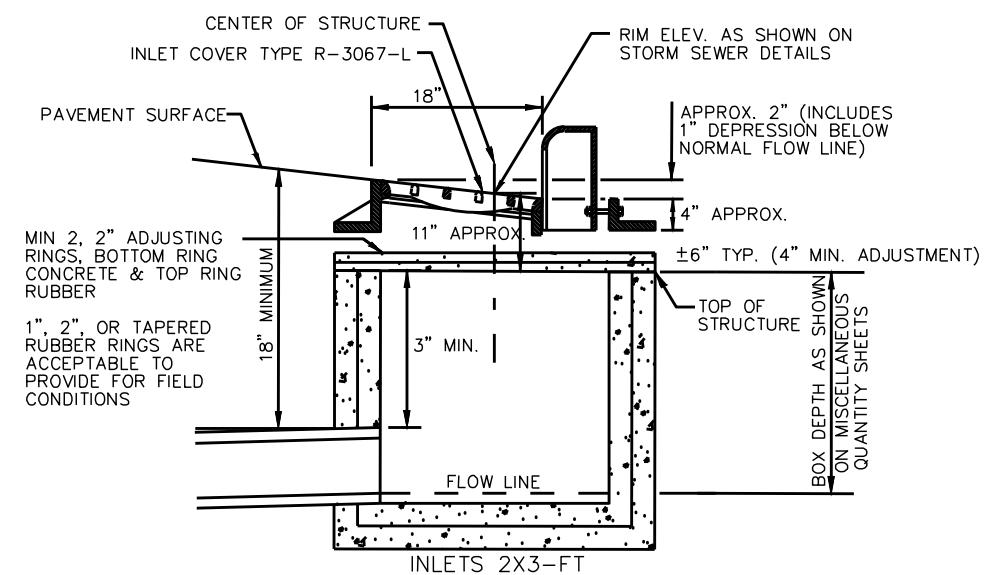
DNR NORTHEAST REGIONAL HQ
2984 SHAWANO AVENUE
GREEN BAY, WI 54313
(920) 662-5119
JIM DOPERALSKI
james.doperalski@wisconsin.gov



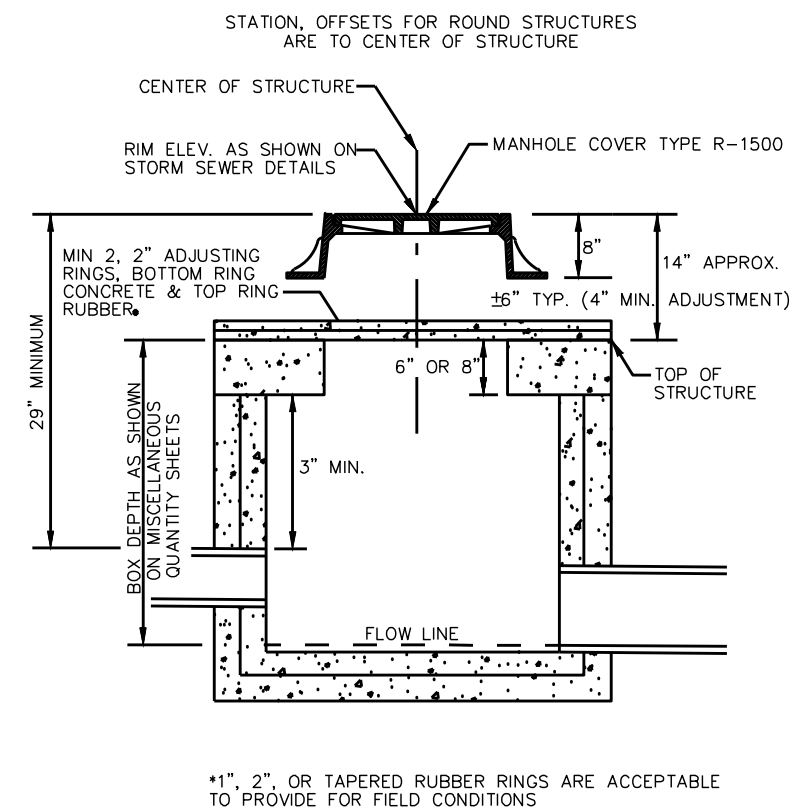
- NOTES:
- FULL DEPTH PAVEMENT REPLACEMENT TO BE COMPLETED AS SHOWN ON PLAN SHEETS.
 - AT CURB AND GUTTER, EXISTING BASE COURSE IS TO REMAIN, REPLACE ASPHALTIC PAVEMENT FULL DEPTH.
 - AT STORM SEWER REPLACEMENTS REPLACE BASE COURSE AND ASPHALTIC PAVEMENT FULL DEPTH.



* - NOTE, 1 3/4" MILL TO BE COMPLETED EVERYWHERE WITH 2" OVERLAY, EXCEPT AT AREAS OF ADA COMPLIANCE AT CROSS WALKS. ENSURE AREAS OF ADA COMPLIANCE ARE FLUSH PER ADA STANDARDS.

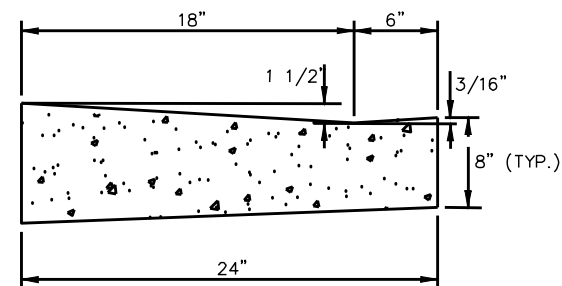
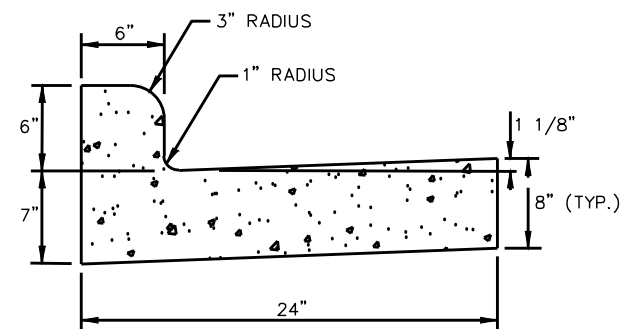


DETAIL FOR COMPUTING INLET ELEVATIONS
SCALE: NONE



*1", 2", OR TAPERED RUBBER RINGS ARE ACCEPTABLE TO PROVIDE FOR FIELD CONDITIONS

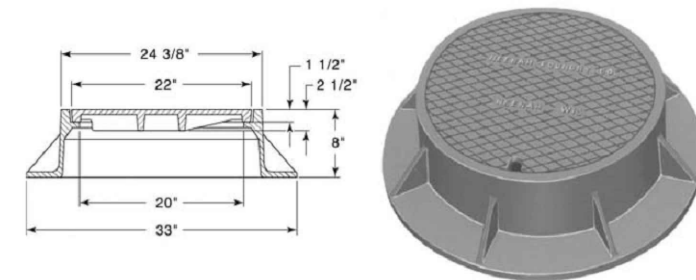
DETAIL FOR COMPUTING ROUND STRUCTURE ELEVATIONS
SCALE: NONE



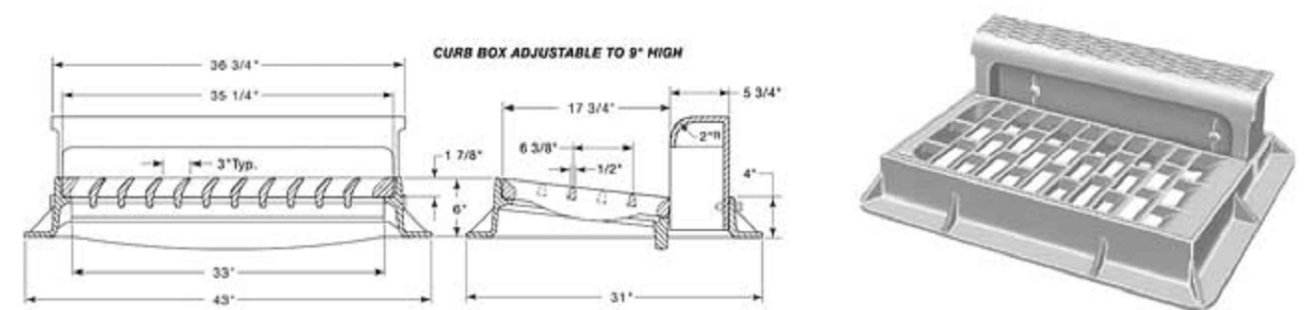
NOTES:

ALL EXPOSED EDGES OF CONCRETE SHALL BE FINISHED WITH AN EDGING TOOL HAVING A RADIUS OF 1/4-INCH UNLESS OTHERWISE NOTED.

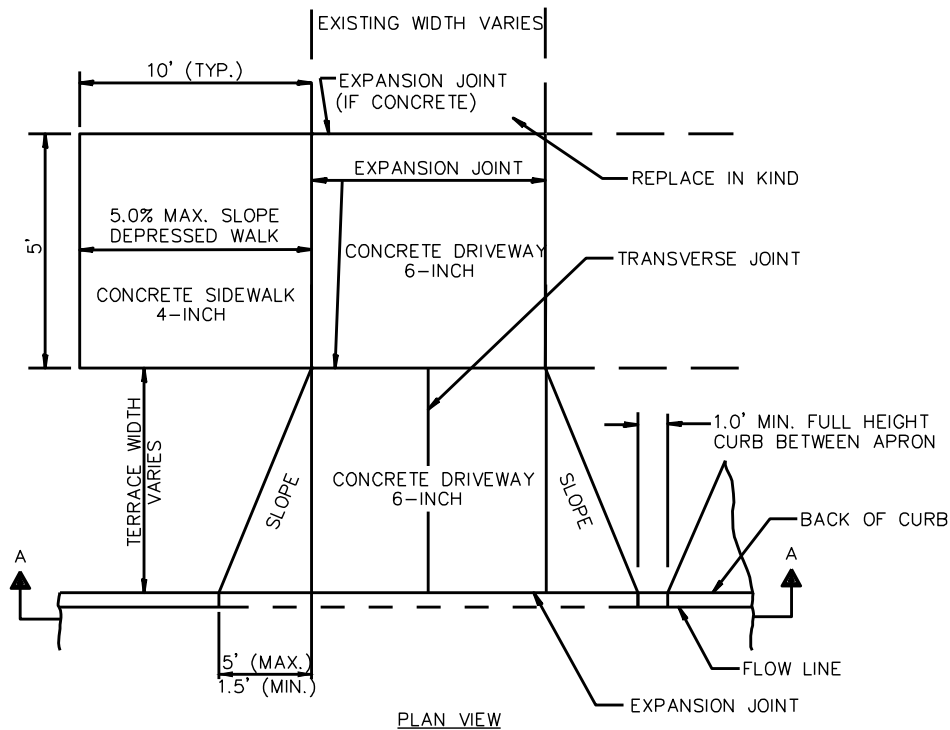
CONCRETE CURB & GUTTER 24-INCH TYPE D, SPECIAL DETAIL
SCALE: NONE



MANHOLE COVER TYPE R-1500 DETAIL
SCALE: NONE



INLET COVER TYPE R-3067-L DETAIL
SCALE: NONE

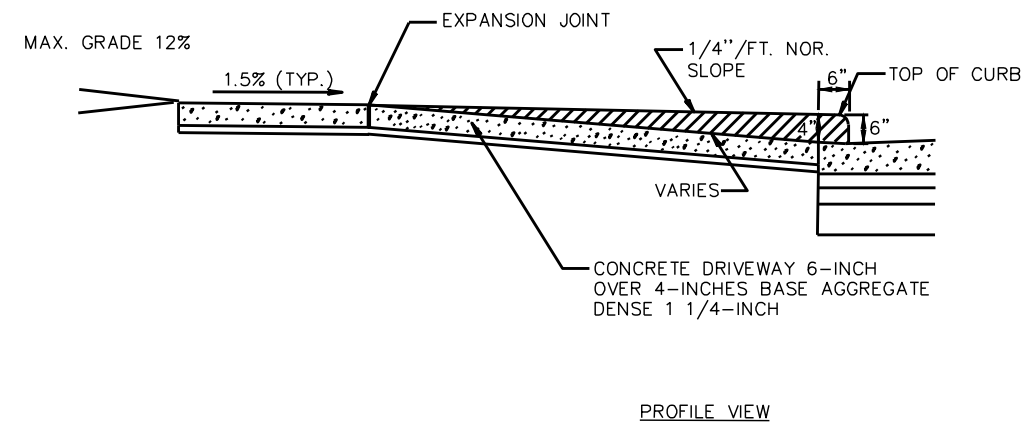
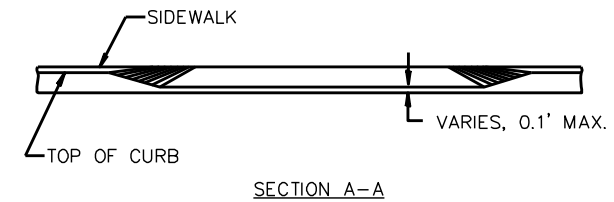


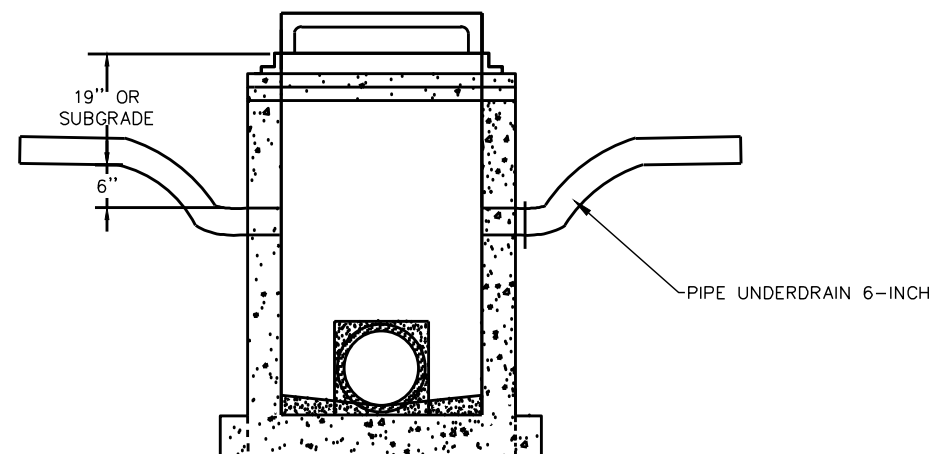
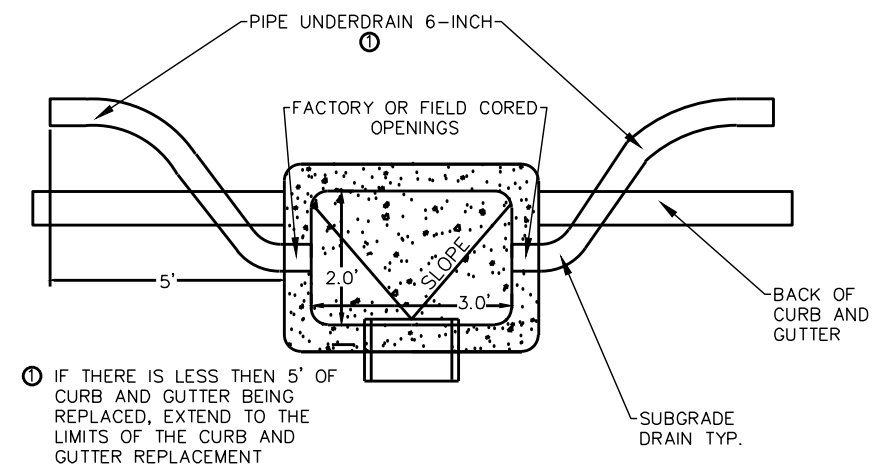
CITY OF DE PERE DRIVEWAY WIDTH RESTRICTIONS
RESIDENTIAL 25' MAX AT ROW
35' MAX AT CURB
INDUSTRIAL 35' MAX AT ROW
75' MAX AT CURB

DRIVEWAYS TO BE REPLACED AT EXISTING WIDTHS
UNLESS ABOVE CODE.

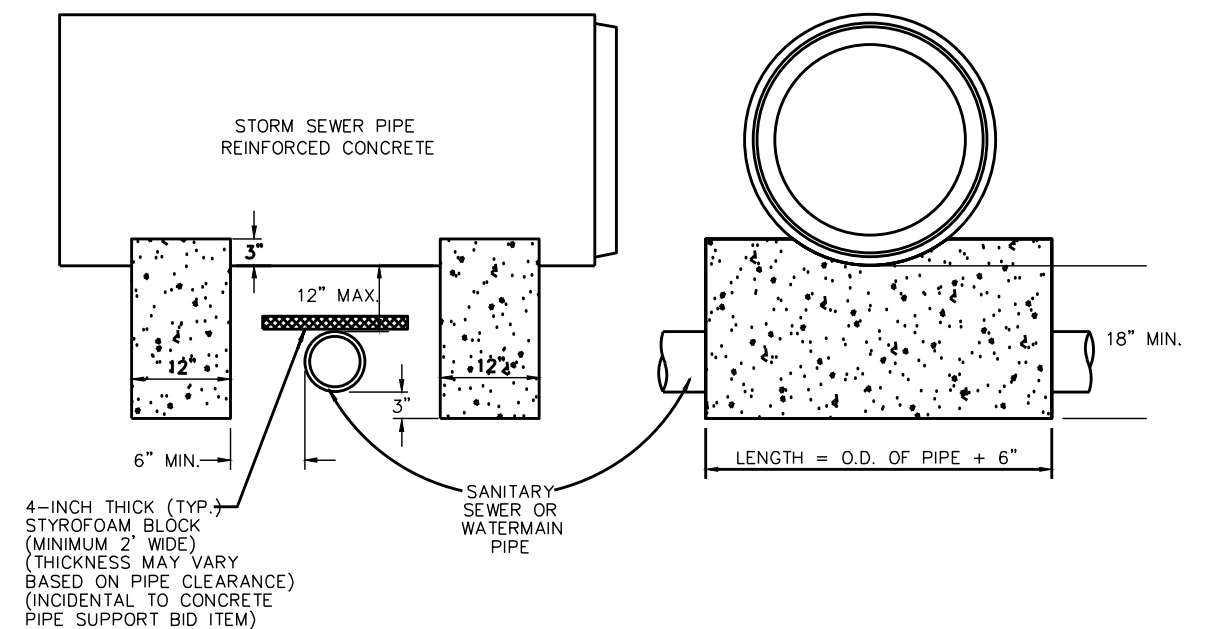
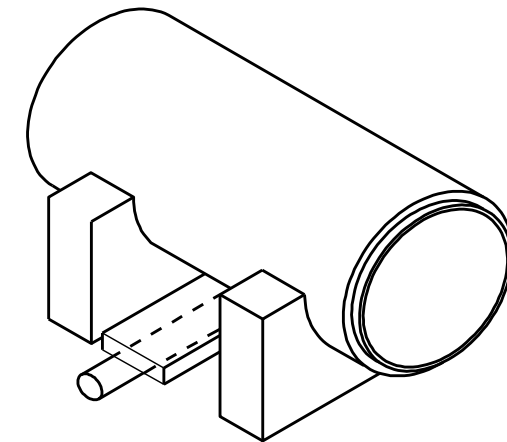
EXISTING DRIVEWAYS STEEPER THAN 8% MAX. MAY
BE REINSTALLED GREATER THAN 8% MAX.

URBAN DRIVEWAY DETAIL
SCALE: NONE



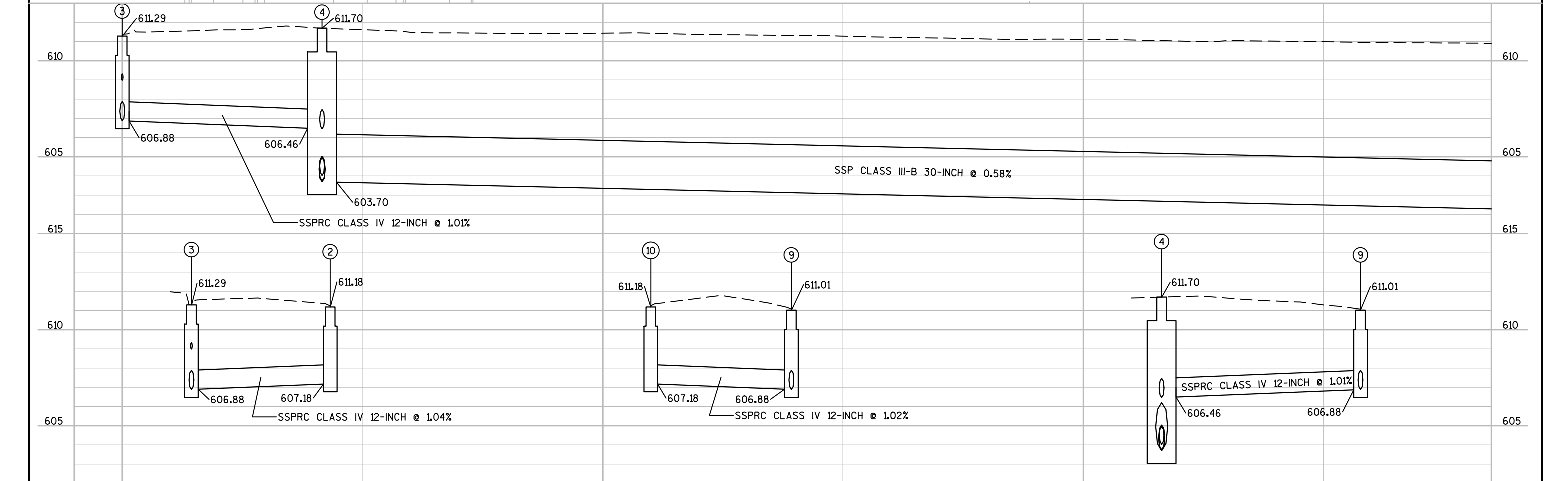
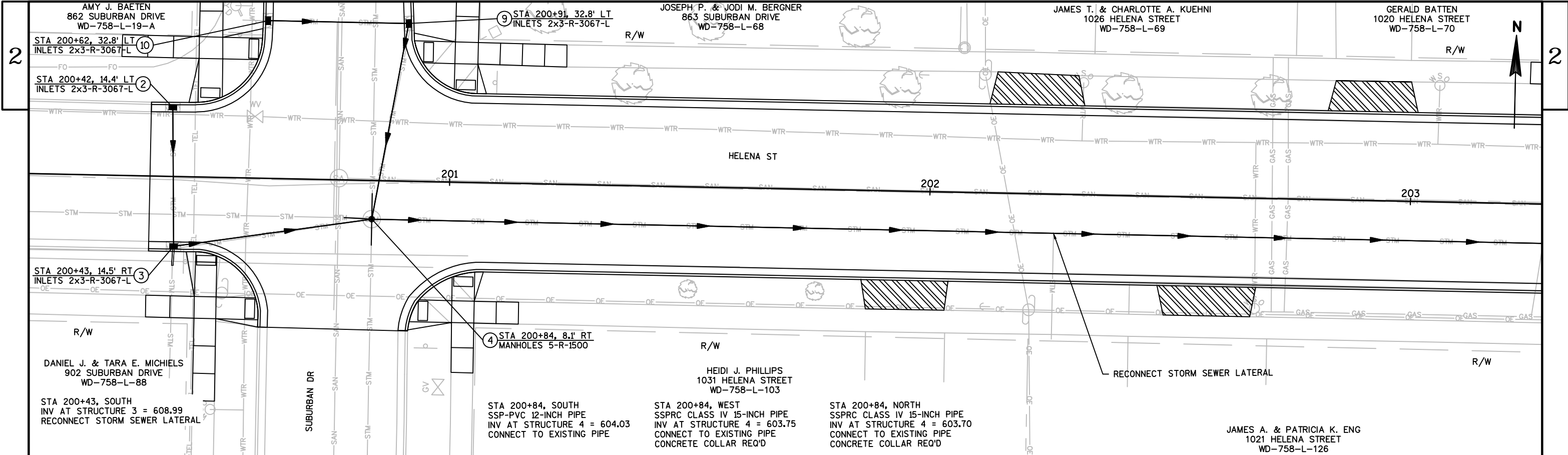


PIPE UNDERDRAIN 6-INCH DETAIL
SCALE: NONE

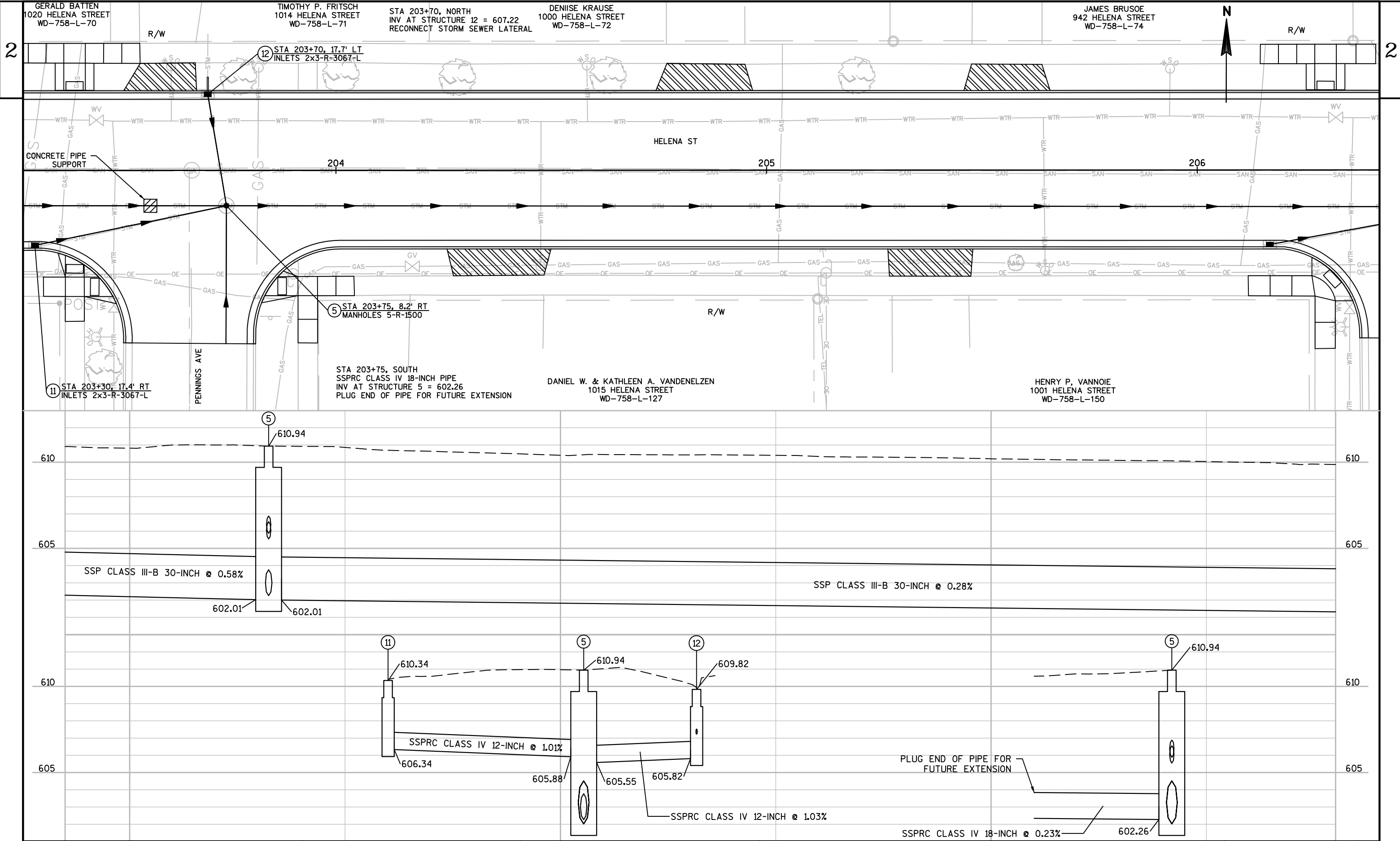


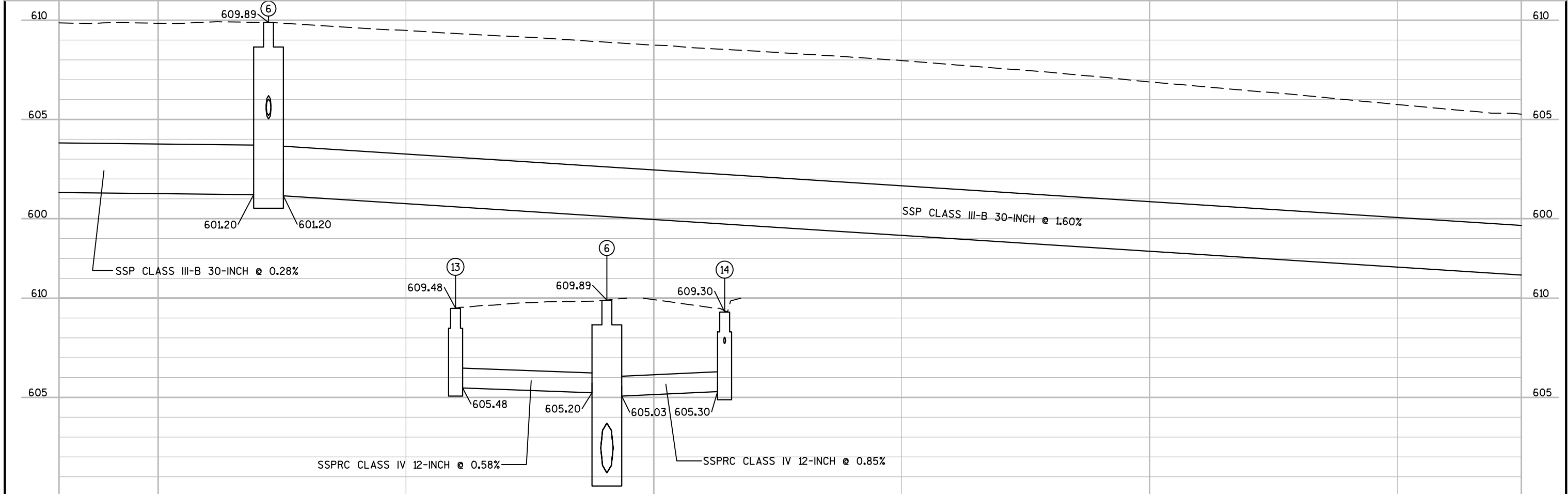
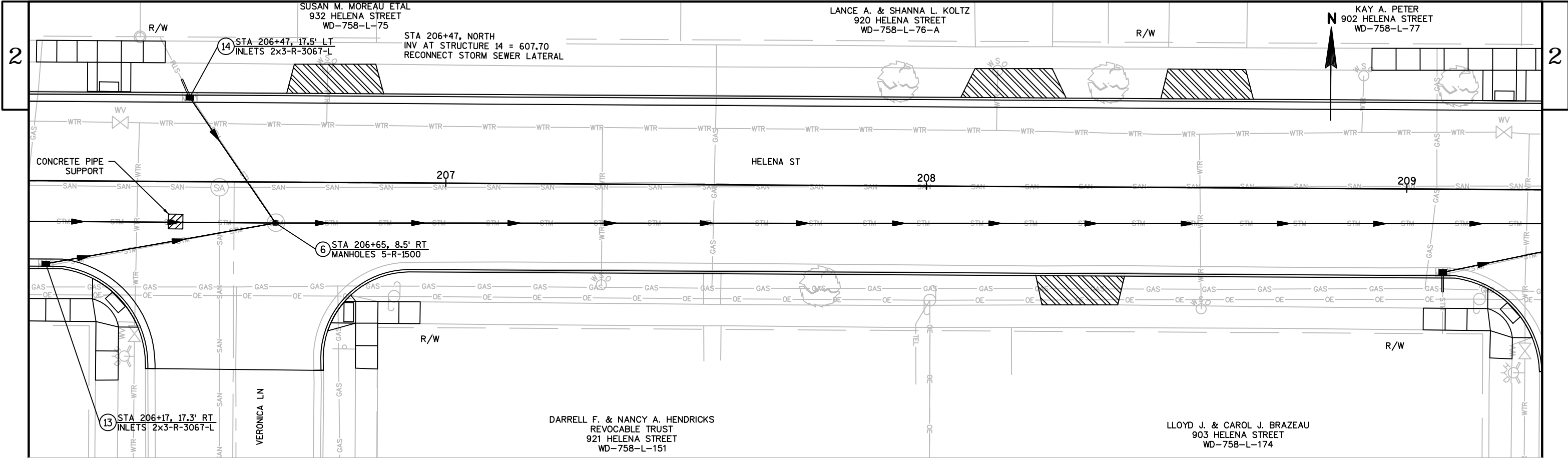
NOTE:
1. FIELD POURED, CONCRETE PIPE SUPPORT SHALL BE INSTALLED FOR STORM SEWERS WHEN CLEARANCE BETWEEN BOTTOM OF PIPE AND TOP OF SANITARY SEWER OR WATERMAIN PIPE IS 12-INCHES OR LESS.

CONCRETE PIPE SUPPORT DETAIL
SCALE: NONE

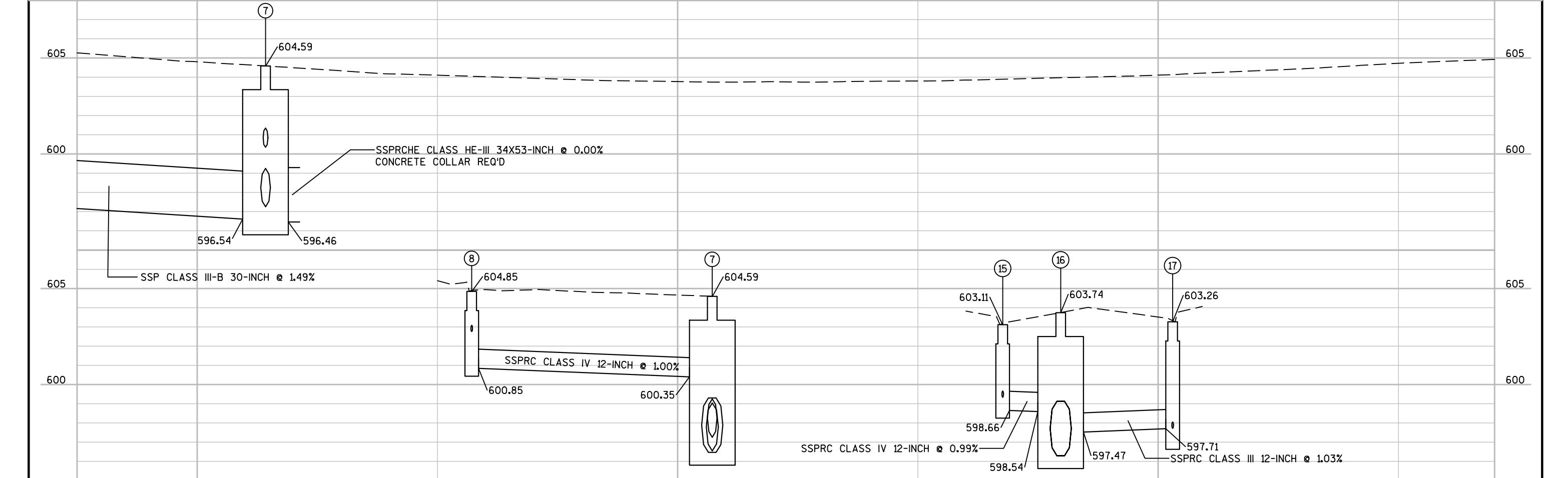
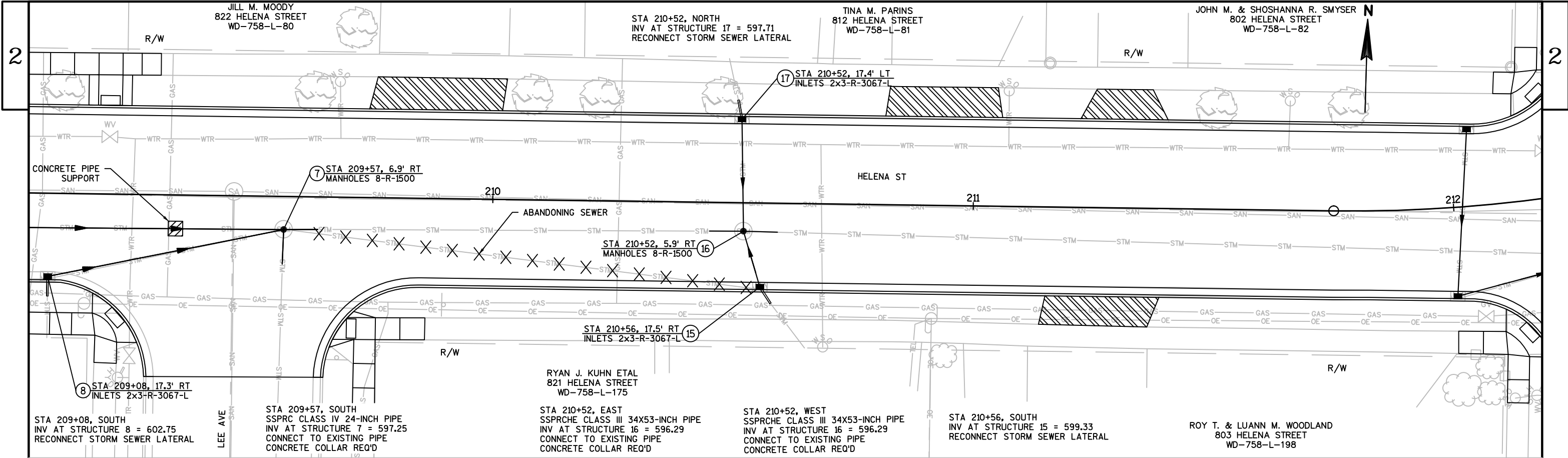


PROJECT NO: 4985-00-58	HWY: HELENA ST	COUNTY: BROWN	STORM SEWER	SHEET	E
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PROJECT NO: 4985-00-58	HWY: HELENA ST	COUNTY: BROWN	STORM SEWER	SHEET	E
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STA 212+31, NORTH
SSPRC CLASS HE-III 34X53-INCH PIPE
INV AT STRUCTURE 20 = 596.26
CONNECT TO EXISTING PIPE
CONCRETE COLLAR REQ'D

STA 212+31, WEST
SSPRC CLASS HE-III 34X53-INCH PIPE
INV AT STRUCTURE 20 = 596.26
CONNECT TO EXISTING PIPE
CONCRETE COLLAR REQ'D

STA 212+45, SOUTH
SSPRC CLASS III 12-INCH PIPE
INV AT STRUCTURE 27 = 598.15
PLUG END OF PIPE FOR FUTURE EXTENSION

STA 212+52, EAST
INV AT STRUCTURE 28 = 602.40
RECONNECT STORM SEWER LATERAL

STA 212+52, SOUTHEAST
INV AT STRUCTURE 28 = 602.40
RECONNECT STORM SEWER LATERAL

STA 212+00, 18.5' RT
INLETS 2x3-R-3067-L

STA 212+18, 37.1' RT
INLETS 2x3-R-3067-L

STA 212+45, 40.6' RT
MANHOLES 4-R-1500

STA 212+52, 37.7' RT
INLETS 2x3-R-3067-L

NICHOLAS G EVENSON
905 OUTWARD AVENUE
WD-708-J-3

JOHN M. & SHOSHANNA R. SMYER
802 HELENA STREET
WD-758-L-82

STA 212+04, 16.0' LT
INLETS 2x3-R-3067-L

STA 212+31, 13.8' RT
MANHOLES 6x6-R-1500

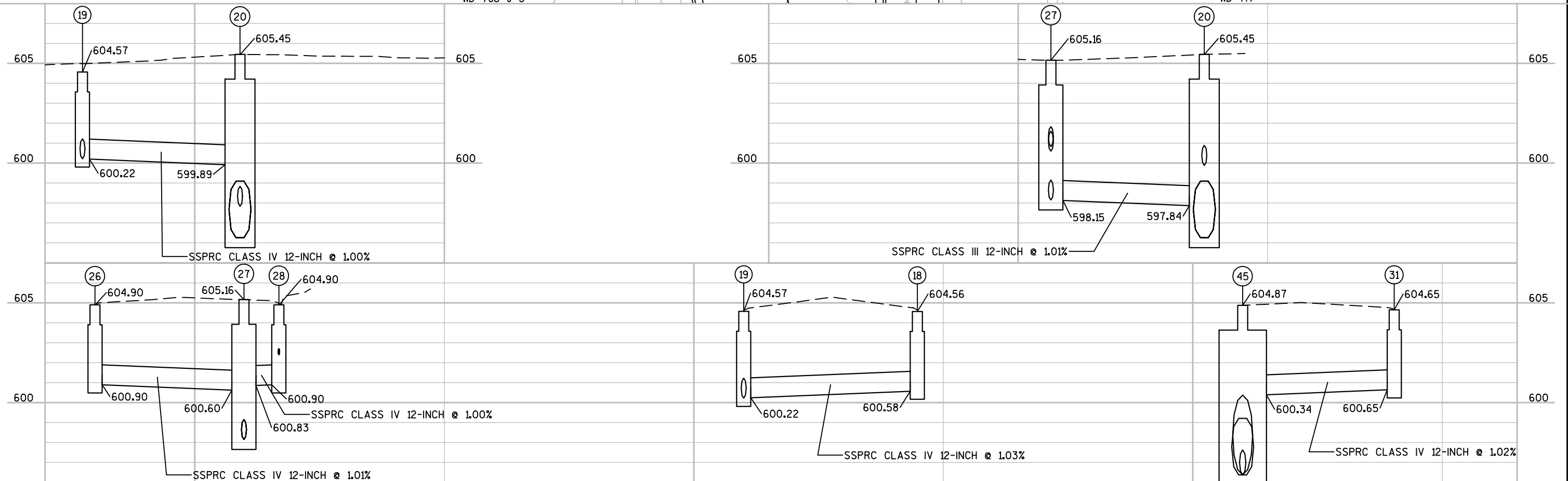
STA 212+41, 45.1' LT
MANHOLES 8-R-1500

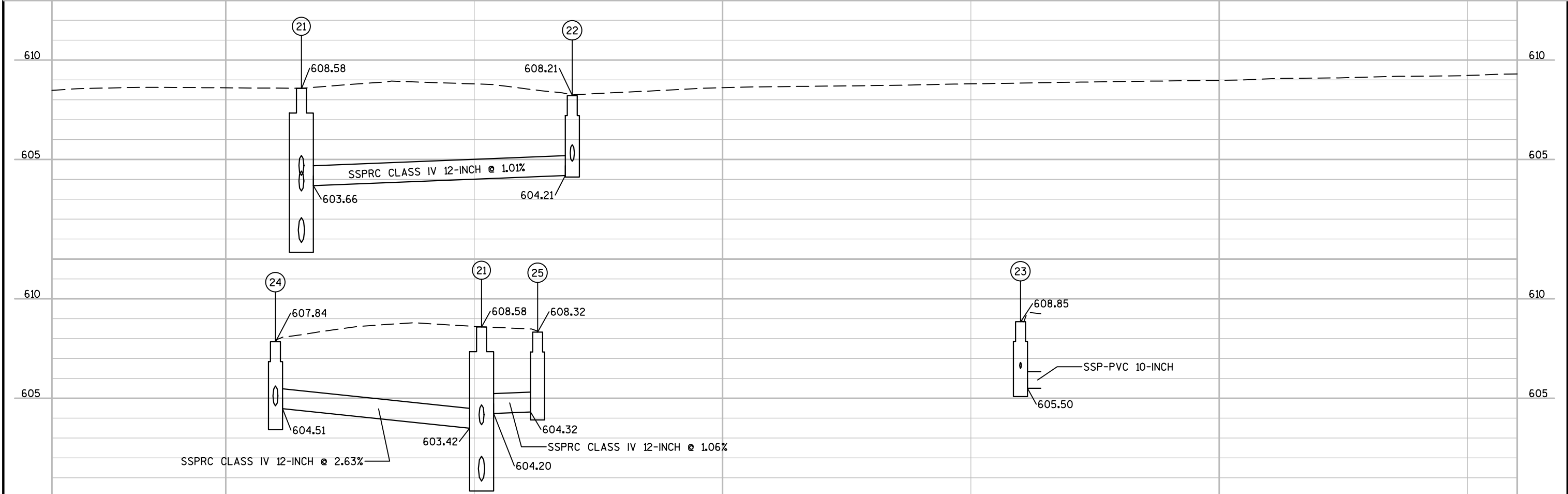
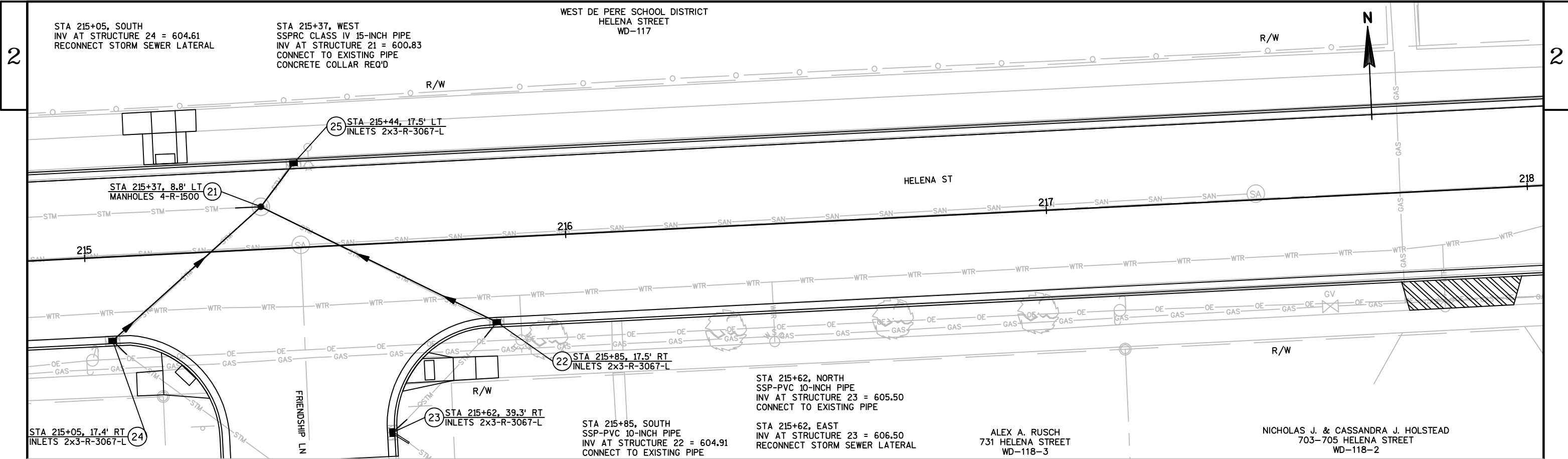
STA 212+71, 49.5' LT
INLETS 2x3-R-3067-L

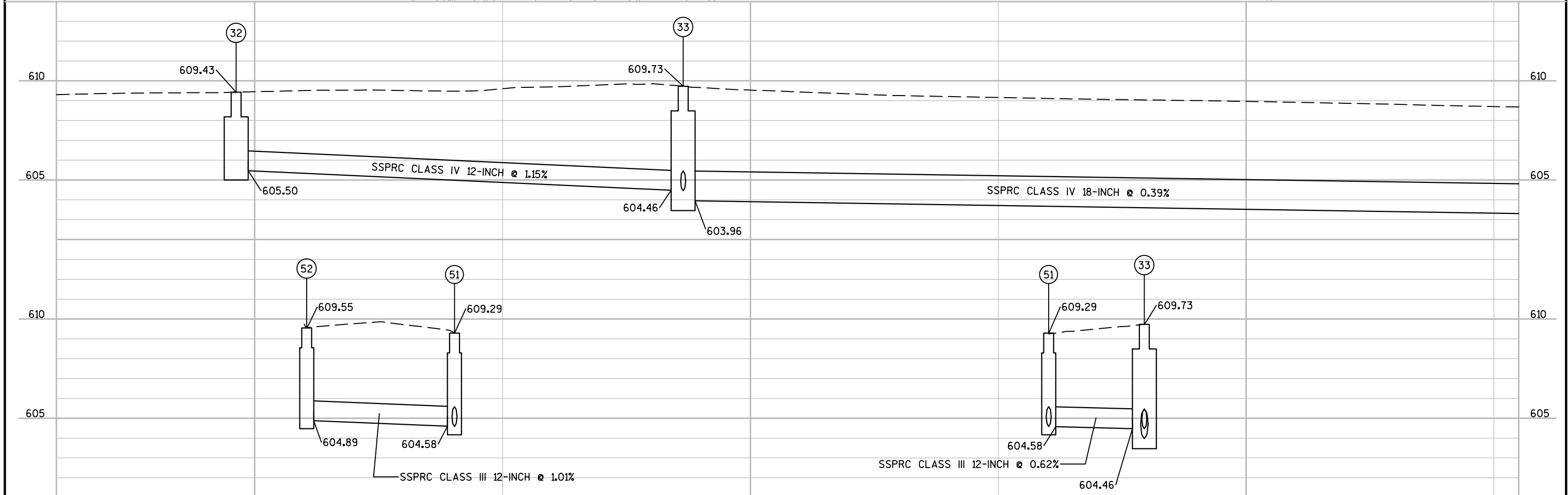
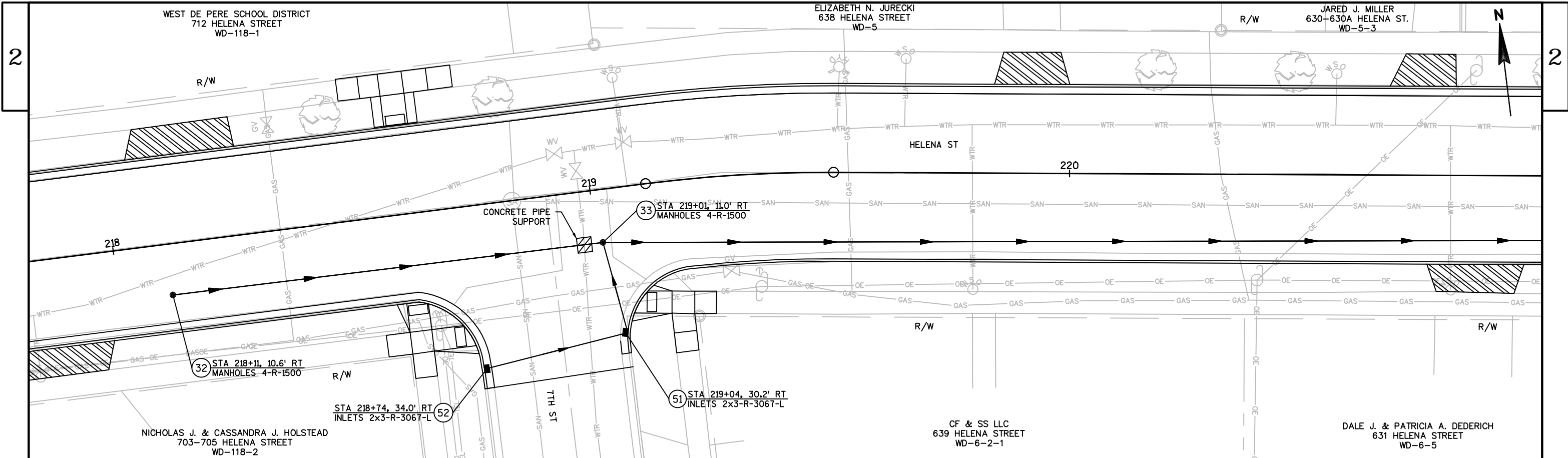
STA 212+41, NORTH
SSPRC CLASS IV 48-INCH PIPE
INV AT STRUCTURE 45 = 596.37
CONNECT TO EXISTING PIPE
CONCRETE COLLAR REQ'D

STA 212+41, EAST
SSPRC CLASS IV 15-INCH PIPE
INV AT STRUCTURE 45 = VERIFY ELEVATION IN FIELD
CONNECT TO EXISTING PIPE
CONCRETE COLLAR REQ'D

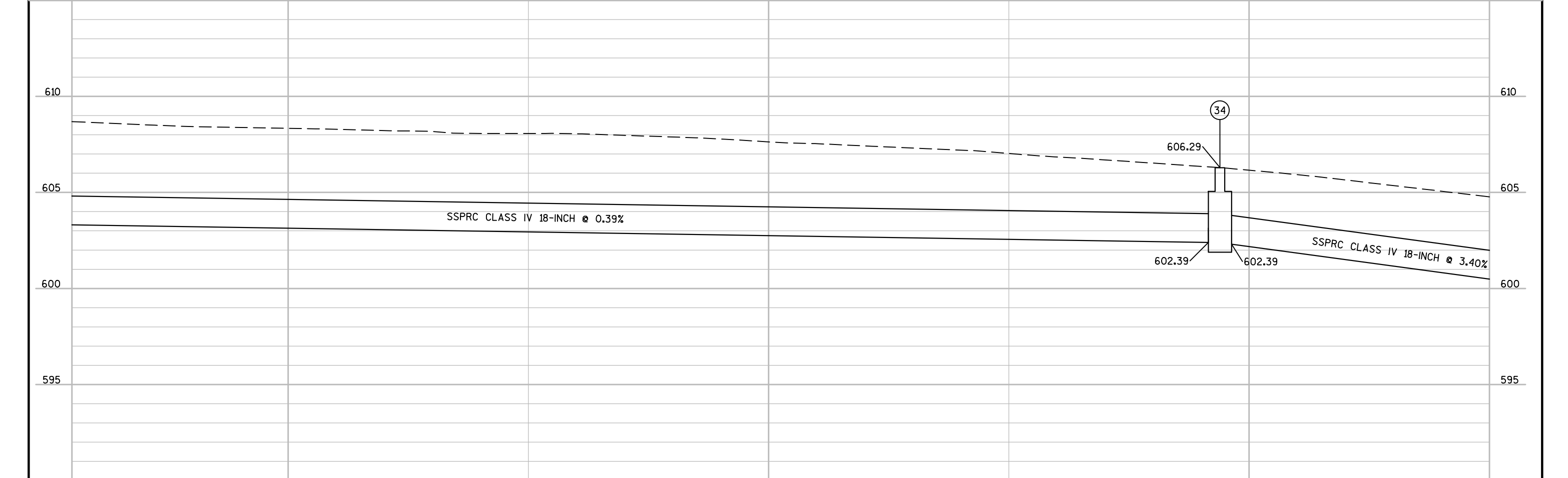
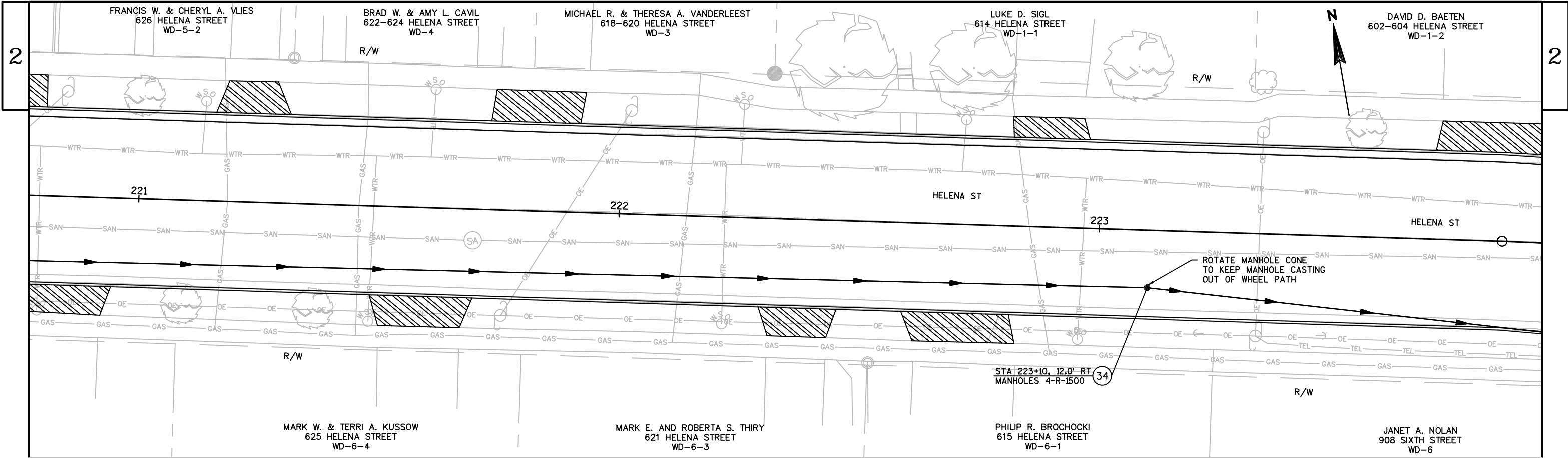
STA 212+41, SOUTH
SSPRC CLASS HE-III 34X53-INCH PIPE
INV AT STRUCTURE 45 = 596.37
CONNECT TO EXISTING PIPE
CONCRETE COLLAR REQ'D

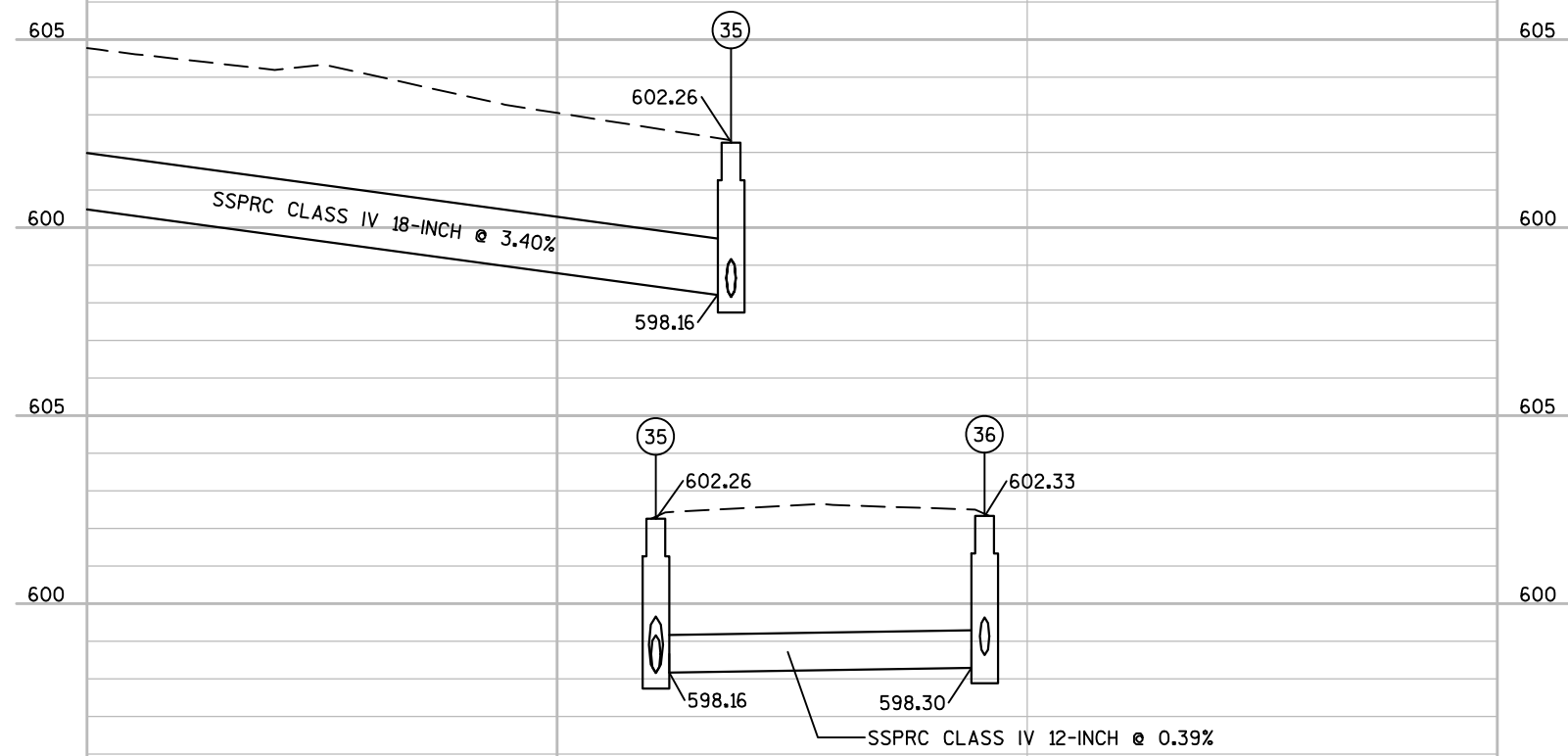
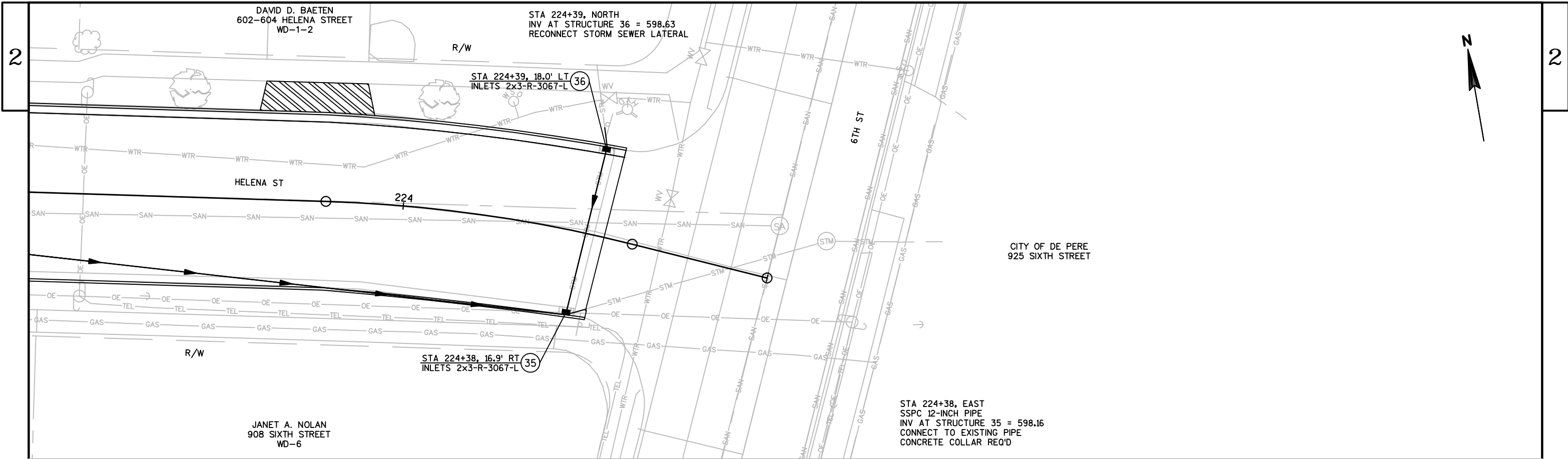






PROJECT NO: 4985-00-58	HWY: HELENA ST	COUNTY: BROWN	STORM SEWER	SHEET	E
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Estimate Of Quantities By Plan Sets

4985-00-58

Line	Item	Item Description	Unit	Total	Qty
0010	204.0100	Removing Pavement	SY	3,293.000	3,293.000
0020	204.0120	Removing Asphaltic Surface Milling	SY	9,740.000	9,740.000
0030	204.0150	Removing Curb & Gutter	LF	4,174.000	4,174.000
0040	204.0210	Removing Manholes	EACH	8.000	8.000
0050	204.0220	Removing Inlets	EACH	21.000	21.000
0060	204.0245	Removing Storm Sewer (size) 01. 8-Inch	LF	59.000	59.000
0070	204.0245	Removing Storm Sewer (size) 02. 10-Inch	LF	351.000	351.000
0080	204.0245	Removing Storm Sewer (size) 03. 12-Inch	LF	244.000	244.000
0090	204.0245	Removing Storm Sewer (size) 04. 15-Inch	LF	12.000	12.000
0100	204.0245	Removing Storm Sewer (size) 05. 18-Inch	LF	291.000	291.000
0110	204.0245	Removing Storm Sewer (size) 06. 24-Inch	LF	585.000	585.000
0120	204.0245	Removing Storm Sewer (size) 07. 48 -Inch	LF	3.000	3.000
0130	204.0245	Removing Storm Sewer (size) 08. 34-Inch x 53-Inch	LF	18.000	18.000
0140	204.0291.S	Abandoning Sewer	CY	4.000	4.000
0150	205.0100	Excavation Common **P**	CY	354.000	354.000
0190	213.0100	Finishing Roadway (project) 03. 4985-00-58	EACH	1.000	1.000
0200	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	1,636.000	1,636.000
0210	416.0160	Concrete Driveway 6-Inch	SY	387.000	387.000
0230	440.4410	Incentive IRI Ride	DOL	1,820.000	1,820.000
0240	455.0605	Tack Coat	GAL	682.000	682.000
0250	460.2000	Incentive Density HMA Pavement	DOL	1,130.000	1,130.000
0260	460.5223	HMA Pavement 3 LT 58-28 S	TON	618.000	618.000
0270	460.5224	HMA Pavement 4 LT 58-28 S	TON	1,136.000	1,136.000
0280	520.8000	Concrete Collars for Pipe	EACH	13.000	13.000
0300	602.0415	Concrete Sidewalk 6-Inch	SF	1,439.000	1,439.000
0310	602.0505	Curb Ramp Detectable Warning Field Yellow	SF	232.000	232.000
0320	608.0312	Storm Sewer Pipe Reinforced Concrete Class III 12-Inch	LF	106.000	106.000
0330	608.0412	Storm Sewer Pipe Reinforced Concrete Class IV 12-Inch	LF	732.000	732.000
0340	608.0415	Storm Sewer Pipe Reinforced Concrete Class IV 15-Inch	LF	12.000	12.000
0350	608.0418	Storm Sewer Pipe Reinforced Concrete Class IV 18-Inch	LF	564.000	564.000
0360	608.0424	Storm Sewer Pipe Reinforced Concrete Class IV 24-Inch	LF	3.000	3.000
0370	608.0448	Storm Sewer Pipe Reinforced Concrete Class IV 48-Inch	LF	3.000	3.000
0380	608.3630	Storm Sewer Pipe Class III-B 30-Inch	LF	871.000	871.000
0390	610.0134	Storm Sewer Pipe Reinforced Concrete Horizontal Elliptical Class HE-III 34x53-Inch	LF	18.000	18.000

Estimate Of Quantities By Plan Sets

4985-00-58

Line	Item	Item Description	Unit	Total	Qty
0400	611.2004	Manholes 4-FT Diameter	EACH	5.000	5.000
0410	611.2005	Manholes 5-FT Diameter	EACH	3.000	3.000
0430	611.2008	Manholes 8-FT Diameter	EACH	3.000	3.000
0440	611.2066	Manholes 6x6-FT	EACH	1.000	1.000
0450	611.3230	Inlets 2x3-FT	EACH	24.000	24.000
0460	612.0106	Pipe Underdrain 6-Inch	LF	240.000	240.000
0470	619.1000	Mobilization	EACH	0.510	0.510
0480	624.0100	Water	MGAL	30.000	30.000
0490	625.0100	Topsoil	SY	1,165.000	1,165.000
0500	627.0200	Mulching	SY	1,165.000	1,165.000
0510	628.1905	Mobilizations Erosion Control	EACH	2.000	2.000
0520	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0540	628.7015	Inlet Protection Type C	EACH	24.000	24.000
0550	629.0210	Fertilizer Type B	CWT	2.300	2.300
0560	630.0140	Seeding Mixture No. 40	LB	21.200	21.200
0570	642.5001	Field Office Type B	EACH	0.510	0.510
0600	643.0100	Traffic Control (project) 03. 4985-00-58	EACH	1.000	1.000
0610	643.0420	Traffic Control Barricades Type III	DAY	1,320.000	1,320.000
0620	643.0705	Traffic Control Warning Lights Type A	DAY	2,640.000	2,640.000
0630	643.0900	Traffic Control Signs	DAY	1,320.000	1,320.000
0650	647.0556	Pavement Marking Stop Line Epoxy 12-Inch	LF	154.000	154.000
0660	647.0766	Pavement Marking Crosswalk Epoxy 6-Inch	LF	1,312.000	1,312.000
0670	650.4000	Construction Staking Storm Sewer	EACH	36.000	36.000
0680	650.5000	Construction Staking Base	LF	2,400.000	2,400.000
0690	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	4,778.000	4,778.000
0720	650.9910	Construction Staking Supplemental Control (project) 03. 4985-00-58	LS	1.000	1.000
0730	690.0150	Sawing Asphalt	LF	6,193.000	6,193.000
0740	690.0250	Sawing Concrete	LF	628.000	628.000
0750	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	1,200.000	1,200.000
0760	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	1,200.000	1,200.000
0770	SPV.0060	Special 01. Reconnect Storm Sewer Laterals	EACH	38.000	38.000
0780	SPV.0060	Special 02. Manhole Covers Type R-1500	EACH	12.000	12.000
0790	SPV.0060	Special 03. Inlet Covers Type R-3067-L	EACH	24.000	24.000
0810	SPV.0060	Special 05. Rubber Adjusting Rings	EACH	36.000	36.000
0820	SPV.0060	Special 06. Construction Staking Curb Ramps	EACH	23.000	23.000
0830	SPV.0060	Special 07. Concrete Pipe Support	EACH	4.000	4.000
0840	SPV.0075	Special 01. Street Sweeping	HRS	70.000	70.000
0850	SPV.0090	Special 01. Concrete Curb & Gutter 24-Inch Type D	LF	4,778.000	4,778.000
0870	SPV.0090	Special 03. Storm Sewer Pipe PVC 10-Inch	LF	6.000	6.000

Estimate Of Quantities By Plan Sets

4985-00-58					
0880	SPV.0090	Special 04. Storm Sewer Pipe PVC 12-Inch	LF	6.000	6.000

REMOVING PAVEMENT

STATION - STATION	LOCATION	204.0100 SY	REMARKS
200+38 - 200+63	LT	9	CURB R&R
200+38 - 200+61	RT	7	CURB R&R
200+38 - 209+63	RT/LT	1033	STORM R&R
200+90 - 212+38	LT	207	CURB R&R
200+90 - 203+53	RT	53	CURB R&R
201+95	RT	12	DRIVEWAY
202+22	LT	13	DRIVEWAY
202+58	RT	13	DRIVEWAY
202+92	LT	12	DRIVEWAY
203+60	LT	11	DRIVEWAY
203+79 - 206+40	RT	53	CURB R&R
204+38	RT	15	DRIVEWAY
204+85	LT	14	DRIVEWAY
205+38	RT	14	DRIVEWAY
205+55	LT	12	DRIVEWAY
206+73 - 209+30	RT	58	CURB R&R
208+18	LT	13	DRIVEWAY
208+31	RT	11	DRIVEWAY
208+58	LT	12	DRIVEWAY
209+63 - 212+19	RT	60	CURB R&R
209+90	LT	20	DRIVEWAY
210+46 - 210+59	RT/LT	32	STORM R&R
210+95	LT	16	DRIVEWAY
211+25	RT	16	DRIVEWAY
211+30	LT	10	DRIVEWAY
211+96 - 212+50	RT/LT	133	STORM R&R
212+36 - 212+68	LT	49	STORM R&R
212+49 - 215+28	RT	64	CURB R&R
212+70 - 224+43	LT	230	CURB R&R
214+10	RT	15	DRIVEWAY
215+00 - 215+90	RT/LT	151	STORM R&R
215+61 - 218+75	RT	74	CURB R&R
217+85	RT	15	DRIVEWAY
218+06 - 224+43	RT/LT	367	STORM R&R
218+15	LT	15	DRIVEWAY
219+02 - 224+42	RT	89	CURB R&R
219+93	LT	10	DRIVEWAY
220+75	LT	9	DRIVEWAY
220+85	RT	12	DRIVEWAY
221+25	LT	10	DRIVEWAY
221+60	RT	13	DRIVEWAY
221+85	LT	14	DRIVEWAY
222+38	RT	10	DRIVEWAY
222+70	RT	14	DRIVEWAY
222+90	LT	7	DRIVEWAY
223+80	LT	16	DRIVEWAY
UNDISTRIBUTED		250	
ITEM TOTAL		3293	

REMOVING ASPHALTIC SURFACE MILLING

STATION - STATION	LOCATION	204.0120 SY
200+38 - 224+42	HELENA STREET	9740
ITEM TOTAL		9740

REMOVING CURB & GUTTER

STATION - STATION	LOCATION	204.0150 LF	REMARKS
200+38 - 200+63	LT	40	NW QUAD
200+38 - 200+61	RT	33	SW QUAD
200+90 - 212+38	LT	1015	
200+90 - 203+53	RT	250	
203+79 - 206+40	RT	244	
206+73 - 209+30	RT	250	
209+63 - 212+19	RT	265	
212+49 - 215+28	RT	280	
212+70 - 224+43	LT	1046	
215+61 - 218+75	RT	318	
219+02 - 224+42	RT	433	
ITEM TOTAL		4174	

REMOVING STORM SEWER STRUCTURES

STATION	LOCATION	204.0210 REMOVING MANHOLES EACH	204.0220 REMOVING INLETS EACH
200+42	LT	--	1
200+43	RT	--	1
200+61	LT	--	1
200+84	RT	1	--
200+91	LT	--	1
203+30	RT	--	1
203+71	LT	--	1
203+75	RT	1	--
206+17	RT	--	1
206+47	LT	--	1
206+65	RT	1	--
209+08	RT	--	1
209+57	RT	1	--
210+51	LT	--	1
210+52	RT	1	--
210+56	RT	--	1
212+00	RT	--	1
212+04	LT	--	1
212+31	RT	1	--
212+41	LT	1	--
212+52	RT	--	1
212+71	LT	--	1
215+05	RT	--	1
215+37	LT	1	--
215+44	LT	--	1
215+63	RT	--	1
215+85	RT	--	1
224+38	RT	--	1
224+39	LT	--	1
ITEM TOTAL		8	21

REMOVING STORM SEWER

STATION - STATION	LOCATION	204.0245.01	204.0245.02	204.0245.03	204.0245.04	204.0245.05	204.0245.06	204.0245.07	204.0245.08	204.0291.S	REMARKS
		8-INCH LF	10-INCH LF	12-INCH LF	15-INCH LF	18-INCH LF	24-INCH LF	48-INCH LF	34X53-INCH LF	ABANDONING SEWER CY	
200+43	RT/LT	--	30	--	--	--	--	--	--	--	
200+43 - 200+84	RT	--	--	42	--	--	--	--	--	--	
200+61 - 200+91	LT	--	30	--	--	--	--	--	--	--	CONFLICTING RECORDS ON SIZE
200+84 - 200+91	RT/LT	--	--	42	--	--	--	--	--	--	CONFLICTING RECORDS ON SIZE
200+84	LT	--	--	3	6	--	--	--	--	--	TO RECONNECT MH 4
200+84 - 203+75	RT	--	--	--	--	291	--	--	--	--	
203+30 - 203+75	RT	--	46	--	--	--	--	--	--	--	
203+70 - 203+75	RT/LT	--	27	--	--	--	--	--	--	--	
203+75 - 209+57	RT	--	--	--	--	--	582	--	--	--	
206+17 - 206+65	RT	49	--	--	--	--	--	--	--	--	CONFLICTING RECORDS ON SIZE
206+47 - 206+65	RT/LT	--	--	32	--	--	--	--	--	--	
209+07 - 209+57	RT	--	50	--	--	--	--	--	--	--	
209+57	RT	--	--	--	--	--	3	--	3	--	TO RECONNECT MH 7
209+57 - 210+56	RT	--	--	--	--	--	--	--	--	3	
210+52	RT/LT	--	--	22	--	--	--	--	--	--	
210+52	RT	--	--	--	--	--	--	--	6	--	TO RECONNECT MH 16
212+02	RT/LT	--	36	--	--	--	--	--	--	--	CONFLICTING RECORDS ON SIZE
212+00 - 212+31	RT	--	33	--	--	--	--	--	--	--	
212+31	RT	--	--	--	--	--	--	--	6	--	TO RECONNECT MH 27
212+31 - 212+52	RT	--	--	--	--	--	--	--	--	1	
212+41	LT	--	--	--	3	--	--	3	3	--	TO RECONNECT MH 45
212+41 - 212+71	LT	--	31	--	--	--	--	--	--	--	
215+05	RT	--	3	--	--	--	--	--	--	--	TO RECONNECT INL 24
215+05 - 215+37	RT/LT	--	--	42	--	--	--	--	--	--	
215+37	LT	--	--	--	3	--	--	--	--	--	TO RECONNECT MH 21
215+37 - 215+44	LT	--	--	12	--	--	--	--	--	--	
215-37 - 215+85	RT/LT	--	55	--	--	--	--	--	--	--	
224+38	RT/LT	--	--	36	--	--	--	--	--	--	
224+38	RT	--	--	3	--	--	--	--	--	--	TO RECONNECT INL 35
UNDISTRIBUTED		10	10	10	--	--	--	--	--	--	
ITEM TOTAL		59	351	244	12	291	585	3	18	4	

3

EXCAVATION COMMON **P**					
STATION -STATION	LOCATION	205.0100 CY	USABLE CUT	WASTE	REMARKS
200+38 - 224+42	RT/LT	314	--	314	FOR CURB R&R
200+52	RT	3	--	3	CURB RAMP
200+52	LT	2	--	2	CURB RAMP
201+01	RT	2	--	2	CURB RAMP
201+01	LT	2	--	2	CURB RAMP
203+39	LT	3	--	3	CURB RAMP
203+42	RT	1	--	1	CURB RAMP
203+91	RT	1	--	1	CURB RAMP
206+30	RT	1	--	1	CURB RAMP
206+30	LT	3	--	3	CURB RAMP
206+81	RT	1	--	1	CURB RAMP
209+20	RT	1	--	1	CURB RAMP
209+20	LT	3	--	3	CURB RAMP
209+71	RT	1	--	1	CURB RAMP
212+11	RT	1	--	1	CURB RAMP
212+18	LT	1	--	1	CURB RAMP
212+63	RT	1	--	1	CURB RAMP
212+83	LT	1	--	1	CURB RAMP
215+15	RT	1	--	1	CURB RAMP
215+17	LT	4	--	4	CURB RAMP
215+75	RT	1	--	1	CURB RAMP
218+62	LT	3	--	3	CURB RAMP
218+64	RT	2	--	2	CURB RAMP
219+14	RT	1	--	1	CURB RAMP
ITEM TOTALS		354	0	354	

FINISHING ROADWAY		
PROJECT	213.0100.03 EA	REMARKS
4985-00-58	1	
ITEM TOTAL	1	

BASE AGGREGATE DENSE

STATION - STATION	LOCATION	305.0120 1 1/4-INCH TON	REMARKS
		TON	
200+38 - 209+63	RT/LT	780	STORM R&R
210+46 - 210+59	RT/LT	21	STORM R&R
211+96 - 212+50	LT	83	STORM R&R
212+36 - 212+68	RT/LT	28	STORM R&R
215+00 - 215+90	RT/LT	84	STORM R&R
218+06 - 224+43	RT/LT	350	STORM R&R
UNDISTRIBUTED		290	CURB & PED RAMPS
ITEM TOTALS		1636	

CONCRETE DRIVEWAY

STATION - STATION	LOCATION	416.0160 6 INCH SY	REMARKS
		SY	
201+95	RT	12	
202+22	LT	13	
202+58	RT	13	
202+92	LT	12	
203+60	LT	11	
204+38	RT	15	
204+85	LT	14	
205+38	RT	14	
205+55	LT	12	
206+78	LT	13	
208+18	LT	13	
208+31	RT	11	
208+58	LT	12	
209+90	LT	20	
210+95	LT	16	
211+25	RT	16	
211+30	LT	10	
214+10	RT	15	
217+85	RT	15	
218+15	LT	15	
219+93	LT	10	
220+75	LT	9	
220+85	RT	12	
221+25	LT	10	
221+60	RT	13	
221+85	LT	14	
222+38	RT	10	
222+70	RT	14	
222+90	LT	7	
223+80	LT	16	
ITEM TOTALS		387	

3

ASPHALTIC PAVEMENT ITEMS

STATION - STATION	LOCATION	455.0605	460.5223	460.5224
		TACK COAT GAL	HMA PAVEMENT 3 LT 58-28 S TON	HMA PAVEMENT 4 LT 58-28 S TON
200+38 - 224+42	HELENA STREET	682	618	1136
ITEM TOTALS		682	618	1136

CONCRETE COLLARS FOR PIPE

STATION -STATION	LOCATION	520.8000 EA
200+84	RT	2
209+57	RT	2
210+53	RT	2
212+31	RT	2
212+41	LT	3
215+37	LT	1
224+38	RT	1
ITEM TOTALS		13

CONCRETE SIDEWALK

STATION - STATION	LOCATION	602.0415	602.0505
		6-INCH SF	CURB RAMP DETECTABLE WARNING FIELD YELLOW SF
200+52	RT	141	16
200+52	LT	132	16
201+01	RT	95	16
201+01	LT	97	16
203+39	LT	57	8
203+42	RT	56	16
203+91	RT	37	8
206+30	RT	37	8
206+30	LT	54	8
206+81	RT	23	8
209+20	RT	36	8
209+20	LT	57	8
209+71	RT	42	8
212+11	RT	43	8
212+18	LT	44	8
212+63	RT	51	8
212+83	LT	80	8
215+15	RT	53	8
215+17	LT	58	8
215+75	RT	52	8
218+62	LT	57	8
218+64	RT	97	16
219+14	RT	40	8
ITEM TOTAL		1439	232

3

STORM SEWER PIPE														
PIPE NUMBER	STATION - STATION	INLET ELEV	PIPE OUTLET ELEV	SLOPE %	SPV.0090.03	SPV.0090.04	608.0312	608.0412	608.0415	608.0418	608.0424	608.0448	610.0134	608.3630
					STORM SEWER PIPE PVC 10-INCH LF	STORM SEWER PIPE PVC 12-INCH LF	REINFORCED CONCRETE CLASS III 12-INCH LF	REINFORCED CONCRETE CLASS IV 12-INCH LF	REINFORCED CONCRETE CLASS IV 15-INCH LF	REINFORCED CONCRETE CLASS IV 18-INCH LF	REINFORCED CONCRETE CLASS IV 24-INCH LF	REINFORCED CONCRETE CLASS IV 48-INCH LF	REINFORCED CONCRETE CLASS HE-III 34X53-INCH LF	STORM SEWER PIPE CLASS III-B 30-INCH LF
2-3	200+42	607.18	606.88	1.04	--	--	--	30	--	--	--	--	--	--
3-4	200+43 - 200+84	606.88	606.46	1.01	--	--	--	42	--	--	--	--	--	--
10-9	200+62 - 200+91	607.18	606.88	1.02	--	--	--	29	--	--	--	--	--	--
9-4	200+91 - 200+84	606.88	606.46	1.01	--	--	--	42	--	--	--	--	--	--
--	200+84		MATCH EXISTING		--	3	--	--	6	--	--	--	--	--
4-5	200+84 - 203+75	603.70	602.01	0.58	--	--	--	--	--	--	--	--	--	291
11-5	203+30 - 203+75	606.34	605.88	1.01	--	--	--	46	--	--	--	--	--	--
12-5	203+70 - 203+75	605.82	605.55	1.03	--	--	--	27	--	--	--	--	--	--
--	203+75	602.58	602.26	0.23	--	--	--	--	--	32	--	--	--	--
5-6	203+75 - 206+44	602.01	601.20	0.28	--	--	--	--	--	--	--	--	--	290
13-6	206+17 - 206+65	605.48	605.20	0.58	--	--	--	49	--	--	--	--	--	--
14-6	206+47 - 206+65	605.30	605.03	0.85	--	--	--	32	--	--	--	--	--	--
6-7	206+44 - 209+57	601.20	596.54	1.60	--	--	--	--	--	--	--	--	--	290
8-7	209+08 - 209+57	600.85	600.35	1.00	--	--	--	50	--	--	--	--	--	--
--	209+57		MATCH EXISTING		--	--	--	--	--	--	3	--	3	--
17-16	210+52	597.71	597.47	1.03	--	--	22	--	--	--	--	--	--	--
15-16	210+56 - 210+52	598.66	598.54	0.99	--	--	--	13	--	--	--	--	--	--
--	210+52		MATCH EXISTING		--	--	--	--	--	--	--	--	6	--
18-19	212+04 - 212+00	600.58	600.22	1.03	--	--	--	36	--	--	--	--	--	--
19-20	212+00 - 212+31	600.22	599.89	1.00	--	--	--	33	--	--	--	--	--	--
26-27	212+18 - 212+45	600.90	600.60	1.01	--	--	--	30	--	--	--	--	--	--
28-27	212+52 - 212+45	600.90	600.83	1.00	--	--	--	7	--	--	--	--	--	--
--	212+45	598.18	598.15	0.40	--	--	3	--	--	--	--	--	--	--
27-20	212+45 - 212+31	598.15	597.84	1.01	--	--	31	--	--	--	--	--	--	--
--	212+31		MATCH EXISTING		--	--	--	--	--	--	--	--	6	--
31-45	212+71 - 212+41	600.65	600.34	1.02	--	--	--	31	--	--	--	--	--	--
--	212+41		MATCH EXISTING		--	--	--	--	3	--	--	3	3	--
24-21	215+05 - 215+37	604.51	603.42	2.63	--	--	--	42	--	--	--	--	--	--
25-21	215+44 - 215+37	604.32	604.20	1.06	--	--	--	12	--	--	--	--	--	--
22-21	215+85 - 215+37	604.21	603.66	1.01	--	--	--	55	--	--	--	--	--	--
--	215+37		MATCH EXISTING		--	--	--	--	3	--	--	--	--	--
--	215+62		MATCH EXISTING		3	--	--	--	--	--	--	--	--	--
--	215+85		MATCH EXISTING		3	--	--	--	--	--	--	--	--	--
32-33	218+11 - 219+01	605.50	604.46	1.15	--	--	--	90	--	--	--	--	--	--
52-51	218+74 - 219+04	604.89	604.58	1.01	--	--	31	--	--	--	--	--	--	--
51-33	219+04 - 219+01	604.58	604.46	0.62	--	--	19	--	--	--	--	--	--	--
33-34	219+01 - 223+10	603.96	602.39	0.39	--	--	--	--	--	407	--	--	--	--
34-35	223+10 - 224+38	602.39	598.16	3.40	--	--	--	--	--	125	--	--	--	--
36-35	224+39 - 224+38	598.30	598.16	0.39	--	--	--	36	--	--	--	--	--	--
--	224+38		MATCH EXISTING		--	3	--	--	--	--	--	--	--	--
ITEM TOTAL					6	6	106	732	12	564	3	3	18	871
PROJECT NO: 4985-00-58		HWY: HELENA ST			COUNTY: BROWN			MISCELLANEOUS QUANTITIES					SHEET	

3

STORM SEWER STRUCTURE ITEMS

STRUCTURE NUMBER	STATION	OFFSET	TOP STRUCTURE ELEV	CASTING ELEV	BOTTOM STRUCTURE ELEV	DEPTH	611.2004 MANHOLES 4-FT DIAMETER EACH	611.2005 MANHOLES 5-FT DIAMETER EACH	611.2008 MANHOLES 8-FT DIAMETER EACH	611.2066 MANHOLES 6x6-FT EACH	SPV.0060.02 MANHOLE COVERS TYPE R-1500 EACH	611.3230 INLET 2x3-FT EACH	SPV.0060.03 INLET COVERS TYPE R-3067-L EACH	SPV.0060.05 RUBBER ADJUSTING RINGS EACH	650.4000 CONSTRUCTION STAKING STORM SEWER EACH	612.0106 PIPE UNDERDRAIN 6-INCH LF	REMARKS
2	200+42	14.4' LT	610.52	611.18	607.18	4.00	--	--	--	--	--	1	1	1	1	10	
3	200+43	14.5' RT	610.63	611.29	606.88	4.41	--	--	--	--	--	1	1	1	1	10	
10	200+62	32.8' LT	610.52	611.18	607.18	4.00	--	--	--	--	--	1	1	1	1	10	
4	200+84	8.1' RT	611.04	611.70	603.70	8.00	--	1	--	--	1	--	--	1	1	--	
9	200+91	32.8' LT	610.35	611.01	606.88	4.13	--	--	--	--	--	1	1	1	1	10	
11	203+30	17.4' RT	609.68	610.34	606.34	4.00	--	--	--	--	--	1	1	1	1	10	
12	203+70	17.7' LT	609.16	609.82	605.82	4.00	--	--	--	--	--	1	1	1	1	10	
5	203+75	8.2' RT	610.28	610.94	602.01	8.93	--	1	--	--	1	--	--	1	1	--	
13	206+17	17.3' RT	608.82	609.48	605.48	4.00	--	--	--	--	--	1	1	1	1	10	
6	206+65	8.5' RT	609.23	609.89	601.20	8.69	--	1	--	--	1	--	--	1	1	--	
14	206+47	17.5' LT	608.64	609.30	605.30	4.00	--	--	--	--	--	1	1	1	1	10	
8	209+08	17.3' RT	604.19	604.85	600.85	4.00	--	--	--	--	--	1	1	1	1	10	
7	209+57	6.9' RT	603.93	604.59	596.46	8.13	--	--	1	--	1	--	--	1	1	--	
16	210+52	5.9' RT	603.08	603.74	596.29	7.45	--	--	1	--	1	--	--	1	1	--	
17	210+52	17.4' LT	602.60	603.26	597.71	5.55	--	--	--	--	--	1	1	1	1	10	
15	210+56	17.5' RT	602.45	603.11	598.66	4.45	--	--	--	--	--	1	1	1	1	10	
19	212+00	18.5' RT	603.91	604.57	600.22	4.35	--	--	--	--	--	1	1	1	1	10	
18	212+04	16.0' LT	603.90	604.56	600.58	3.98	--	--	--	--	--	1	1	1	1	10	
26	212+18	37.1' RT	604.24	604.90	600.90	4.00	--	--	--	--	--	1	1	1	1	10	
20	212+31	13.8' RT	604.79	605.45	596.26	9.19	--	--	--	1	1	--	--	1	1	--	
45	212+41	45.1' LT	604.21	604.87	596.37	8.50	--	--	1	--	1	--	--	1	1	--	
27	212+45	40.6' RT	604.50	605.16	598.15	7.01	1	--	--	--	1	--	--	1	1	--	
28	212+52	37.7' RT	604.24	604.90	600.90	4.00	--	--	--	--	--	1	1	1	1	10	
31	212+71	49.5' LT	603.99	604.65	600.65	4.00	--	--	--	--	--	1	1	1	1	10	
24	215+04	17.4' RT	607.18	607.84	603.84	4.00	--	--	--	--	--	1	1	1	1	10	
21	215+37	8.8' LT	607.92	608.58	600.83	7.75	1	--	--	--	1	--	--	1	1	--	
25	215+44	17.5' LT	607.66	608.32	604.32	4.00	--	--	--	--	--	1	1	1	1	10	
23	215+62	39.3' RT	608.19	608.85	604.85	4.00	--	--	--	--	--	1	1	1	1	10	
22	215+85	17.5' RT	607.55	608.21	604.21	4.00	--	--	--	--	--	1	1	1	1	10	
32	218+11	10.6' RT	608.77	609.43	605.50	3.93	1	--	--	--	1	--	--	1	1	--	
52	218+74	34.0' RT	608.89	609.55	604.89	4.66	--	--	--	--	--	1	1	1	1	10	
33	219+01	11.0' RT	609.07	609.73	603.96	5.77	1	--	--	--	1	--	--	1	1	--	
51	219+04	30.2' RT	608.63	609.29	604.58	4.71	--	--	--	--	--	1	1	1	1	10	
34	223+10	12.0' RT	605.63	606.29	602.39	3.90	1	--	--	--	1	--	--	1	1	--	
35	224+38	16.9' RT	601.60	602.26	598.16	4.10	--	--	--	--	--	1	1	1	1	10	
36	224-39	18.0' LT	601.67	602.33	598.30	4.03	--	--	--	--	--	1	1	1	1	10	
ITEM TOTAL							5	3	3	1	12	24	24	36	36	240	

*VERIFY ELEVATIONS IN THE FIELD

WATER

STATION -STATION	LOCATION	624.0100 MGAL	REMARKS
200+38 - 224+42	HELENA STREET	30	BASE COMPACTION DUST CONTROL
ITEM TOTALS		30	

TOPSOIL, SALVAGED TOPSOIL, MULCHING, FERTILIZER, AND SEEDING

STATION - STATION	LOCATION	625.0100 TOPSOIL SY	627.0200 MULCHING SY	629.0210 FERTILIZER TYPE B CWT	630.0140 SEEDING MIXTURE NO. 40 LB
200+38 - 200+63	LT	9	9	0.1	0.2
200+38 - 200+61	RT	7	7	0.1	0.1
200+90 - 212+38	LT	264	264	0.2	4.8
200+90 - 203+53	RT	62	62	0.1	1.1
203+79 - 206+40	RT	63	63	0.1	1.1
206+73 - 209+30	RT	62	62	0.1	1.1
209+63 - 212+19	RT	62	62	0.1	1.1
212+49 - 215+28	RT	70	70	0.1	1.3
212+70 - 224+43	LT	268	268	0.2	4.8
215+61 - 218+75	RT	77	77	0.1	1.4
219+02 - 224+42	RT	121	121	0.1	2.2
UNDISTRIBUTED		100	100	1.0	2.0
ITEM TOTALS		1165	1165	2.3	21.2

FIELD OFFICE TYPE B

STATION	624.5001 EACH	REMARKS
4985-00-58	0.51	
ITEM TOTAL		0.51

EROSION CONTROL

STATION	LOCATION	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH	628.7015 INLET PROTECTION TYPE C EACH
200+42	LT	--	--	1
200+43	RT	--	--	1
200+62	LT	--	--	1
200+91	LT	--	--	1
203+30	RT	--	--	1
203+71	LT	--	--	1
206+17	RT	--	--	1
206+47	LT	--	--	1
209+08	RT	--	--	1
210+51	LT	--	--	1
210+56	RT	--	--	1
212+00	RT	--	--	1
212+04	LT	--	--	1
212+18	RT	--	--	1
212+52	RT	--	--	1
212+71	LT	--	--	1
215+05	RT	--	--	1
215+44	LT	--	--	1
215+63	RT	--	--	1
215+85	RT	--	--	1
218+74	RT	--	--	1
219+04	RT	--	--	1
224+38	RT	--	--	1
224+39	LT	--	--	1
PROJECT 4985-00-58		2	2	--
ITEM TOTALS		2	2	24

3

TRAFFIC CONTROL

LOCATION	643.0100.03	643.0420	643.0705	643.0900
	PROJECT 4985-00-58 EACH	BARRICADES TYPE III DAYS	WARNING LIGHTS TYPE A DAYS	SIGNS DAYS
HELENA ST - BEGINNING OF PROJECT	--	360	720	360
PENNINGS AVENUE	--	120	240	120
VERONICA LANE	--	120	240	120
LEE AVENUE	--	120	240	120
OUTWARD AVENUE	--	240	480	240
FRIENDSHIP LANE	--	120	240	120
S SEVENTH STREET	--	120	240	120
ALLARD ST - END OF PROJECT	--	120	240	120
PROJECT 4985-00-58	1	--	--	--
ITEM TOTALS	1	1320	2640	1320

CONSTRUCTION STAKING

STATION - STATION	650.5000	650.5500	650.9910.03	SPV.0060.06
	BASE LF	CURB & GUTTER LF	SUPPLEMENTAL CONTROL (4985-00-58) LS	CURB RAMP EA
200+38 - 224+42	2400	4778	1	23
ITEM TOTALS	2400	4778	1	23

PAVEMENT MARKING

STATION - STATION	LOCATION	647.0556	647.0766	REMARKS
		STOP LINE EPOXY 12-INCH LF	CROSSWALK EPOXY 6-INCH LF	
200+50	RT/LT	14	56	
200+62 - 200+92	RT	--	58	
200+62 - 200+92	LT	14	58	
201+03	RT/LT	16	68	
203+39	RT/LT	--	70	
203+48 - 203+84	RT	13	69	
206+29	RT/LT	--	76	
206+34 - 206+77	RT	17	74	
209+20	RT/LT	--	77	
209+25 - 209+67	RT	17	77	
212+17	RT/LT	--	85	
212+18 - 212+70	RT	17	77	
212+18 - 212+70	LT	16	86	
212+70	RT/LT	--	91	
215+18	RT/LT	--	79	
215+23 - 215+67	RT	--	79	
218+62	RT/LT	--	67	
218+73 - 219+06	RT	12	65	
224+41	RT/LT	18	--	
ITEM TOTALS		154	1312	

CONCRETE PIPE SUPPORT

STATION	LOCATION	SPV.0060.07	REMARKS
		EACH	
203+57	RT	1	
206+44	RT	1	
209+34	RT	1	
218+97	RT	1	
ITEM TOTAL		4	

3

3

SAWING					SAWING					RECONNECT STORM SEWER LATERALS			
STATION	LOCATION	690.0150	690.0250	REMARKS	STATION	LOCATION	690.0150	690.0250	REMARKS	STATION	LOCATION	SPV.0060.01	REMARKS
		ASPHALT LF	CONCRETE LF				ASPHALT LF	CONCRETE LF				EACH	
200+38	RT/LT	27	4	PAVING LIMITS	212+50 - 215+00	RT	256	--	CURB R&R	200+43	RT	1	INTO STRUCTURE
200+46 - 200+86	RT/LT	138	--	STORM R&R	212+67 - 215+32	LT	283	--	CURB R&R	201+58	RT	1	INTO MAIN
200+60 - 200+92	LT	27	4	PAVING LIMITS	213+99 - 214+17	RT	--	16	DRIVEWAY	201+67	RT	1	INTO MAIN
200+61 - 200+92	RT	27	4	PAVING LIMITS	215+00 - 215+32	RT/LT	49	--	STORM R&R	202+26	RT	1	INTO MAIN
200+65 - 200+99	RT	74	--	STORM R&R	215+18 - 215+74	RT/LT	140	--	STORM R&R	202+43	RT	1	INTO MAIN
200+89 - 200+92	RT/LT	20	--	STORM R&R	215+26 - 215+63	RT	33	4	PAVING LIMITS	202+79	RT	1	INTO MAIN
200+91 - 200+70	RT	279	--	STORM R&R	215+29 - 215+59	RT	47	--	STORM R&R	203+20	RT	1	INTO MAIN
200+92 - 203+67	LT	275	--	CURB R&R	215+49 - 215+90	RT	56	--	STORM R&R	203+70	LT	1	INTO STRUCTURE
201+87 - 202+04	RT	--	17	DRIVEWAY	215+49 - 224+35	LT	890	--	CURB R&R	204+61	RT	1	INTO MAIN
202+14 - 202+31	LT	--	17	DRIVEWAY	215+90 - 218+06	RT	216	--	CURB R&R	204+65	RT	1	INTO MAIN
202+49 - 202+67	RT	--	18	DRIVEWAY	217+74 - 217+96	RT	--	22	DRIVEWAY	205+76	RT	1	INTO MAIN
202+84 - 203+00	LT	--	16	DRIVEWAY	218+06 - 224+34	RT	637	--	STORM R&R	205+82	RT	1	INTO MAIN
203+51 - 203+82	RT	27	4	PAVING LIMITS	218+07 - 218+27	LT	--	20	DRIVEWAY	206+47	LT	1	INTO STRUCTURE
203+52 - 203+71	RT	68	--	STORM R&R	218+73 - 219+04	RT	27	4	PAVING LIMITS	207+06	RT	1	INTO MAIN
203+55 - 203+68	LT	--	13	DRIVEWAY	219+86 - 219+98	LT	--	12	DRIVEWAY	207+47	RT	1	INTO MAIN
203+67 - 203+70	RT/LT	19	--	STORM R&R	220+70 - 220+80	LT	--	10	DRIVEWAY	208+06	RT	1	INTO MAIN
203+75 - 203+78	RT/LT	19	--	STORM R&R	220+76 - 220+93	RT	--	17	DRIVEWAY	208+82	RT	1	INTO MAIN
203+75 - 206+42	LT	267	--	CURB R&R	221+18 - 221+28	LT	--	10	DRIVEWAY	209+08	RT	1	INTO STRUCTURE
203+78 - 206+57	RT	279	--	STORM R&R	221+50 - 221+68	RT	--	18	DRIVEWAY	209+52	RT	1	INTO MAIN
204+27 - 204+48	RT	--	21	DRIVEWAY	221+74 - 221+92	LT	--	18	DRIVEWAY	210+52	LT	1	INTO STRUCTURE
204+77 - 204+95	LT	--	18	DRIVEWAY	222+31 - 222+44	RT	--	13	DRIVEWAY	210+56	RT	1	INTO STRUCTURE
205+29 - 205+48	RT	--	19	DRIVEWAY	222+62 - 222+83	RT	--	21	DRIVEWAY	212+52	RT	2	INTO STRUCTURE
205+48 - 205+64	LT	--	16	DRIVEWAY	222+81 - 222+96	LT	--	15	DRIVEWAY	215+05	RT	1	INTO STRUCTURE
206+35 - 206+83	RT	104	--	STORM R&R	223+70 - 223+91	LT	--	21	DRIVEWAY	215+63	RT	1	INTO STRUCTURE
206+38 - 206+75	RT	33	4	PAVING LIMITS	224+34	RT/LT	29	--	STORM R&R	218+18	RT	1	INTO STRUCTURE
206+44 - 206+57	RT/LT	23	--	STORM R&R	22+42	RT/LT	--	36	PAVING LIMITS	219+61	RT	1	INTO MAIN
206+54 - 206+67	RT/LT	23	--	STORM R&R						219+66	RT	1	INTO MAIN
206+67 - 209+63	RT	367	--	STORM R&R						220+62	RT	1	INTO MAIN
206+50 - 210+48	LT	398	--	CURB R&R						220+73	RT	1	INTO MAIN
206+68 - 206+85	LT	--	17	DRIVEWAY						221+11	RT	1	INTO MAIN
208+10 - 208+26	LT	--	16	DRIVEWAY						221+46	RT	1	INTO MAIN
208+24 - 208+40	RT	--	16	DRIVEWAY						221+56	RT	1	INTO MAIN
208+50 - 208+66	LT	--	16	DRIVEWAY						222+08	RT	1	INTO MAIN
209+28 - 209+65	RT	33	4	PAVING LIMITS						222+26	RT	1	INTO MAIN
209+61 - 210+46	RT	98	--	CURB R&R						222+77	RT	1	INTO MAIN
209+74 - 210+03	LT	--	29	DRIVEWAY						223+00	RT	1	INTO MAIN
210+46 - 210+48	RT/LT	30	--	STORM R&R						224+39	LT	1	INTO STRUCTURE
210+56 - 210+59	RT/LT	31	--	STORM R&R									
210+56 - 212+00	LT	143	--	CURB R&R									
210+59 - 211+97	RT	138	--	CURB R&R									
210+82 - 211+05	LT	--	23	DRIVEWAY									
211+14 - 211+39	RT	--	25	DRIVEWAY									
211+25 - 211+37	LT	--	12	DRIVEWAY									
211+96 - 212+00	RT/LT	29	--	STORM R&R									
212+04 - 212+08	RT/LT	25	--	STORM R&R									
212+04 - 212+54	RT	67	--	STORM R&R									
212+08 - 212+37	LT	42	--	CURB R&R									
212+16 - 212+49	RT	33	4	PAVING LIMITS									
212+36 - 212+72	LT	33	4	PAVING LIMITS									
212+36 - 212+67	LT	34	--	STORM R&R									

5

LEGEND

- CONCRETE CURB AND GUTTER, 24-INCH TYPE D
- CONCRETE DRIVEWAY REPLACEMENT - ALL 6" UNLESS OTHERWISE NOTED
- FULL DEPTH PAVEMENT REPLACEMENT
- 4-INCH CONCRETE SIDEWALK BY OTHERS
- PAVEMENT REMOVAL AREAS BY CITY OF DE PERE PRIOR TO CONSTRUCTION

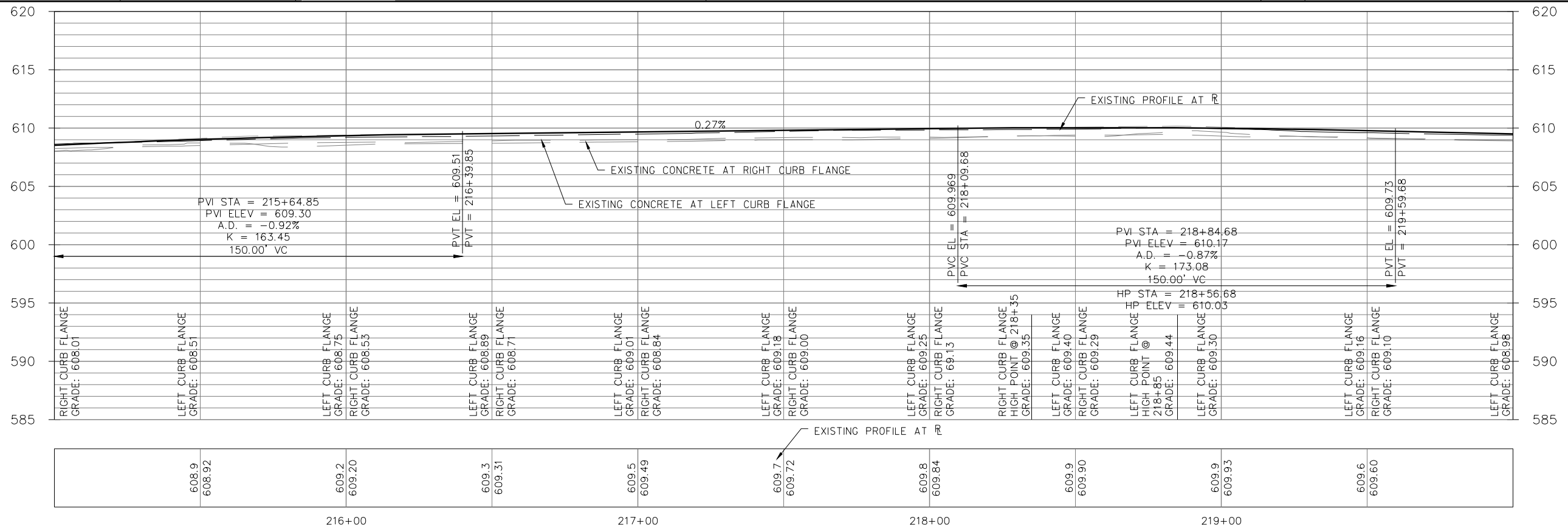
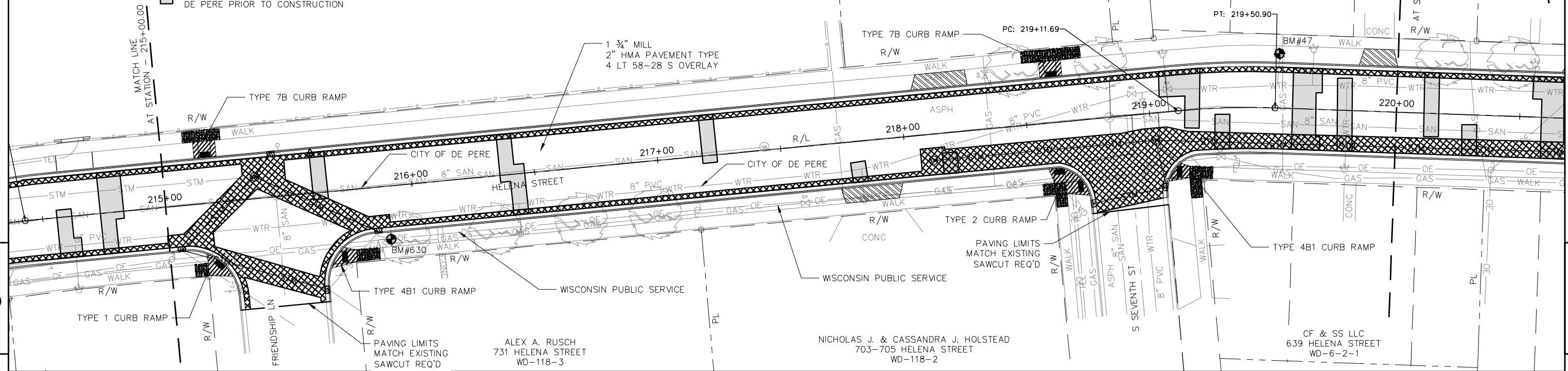
WEST DE PERE SCHOOL DISTRICT
HELENA STREET
WD-117

BENCH MARKS

NO.	STATION	DESCRIPTION	ELEV.
630	215+89.7	TOP NUT	611.81
47	219+51.9	TOP NUT	612.63

WEST DE PERE SCHOOL DISTRICT
712 HELENA STREET
WD-118-1

ELIZABETH N. JURECKI
638 HELENA STREET
WD-5



PROJECT NO:4985-00-58

HWY:HELENA ST

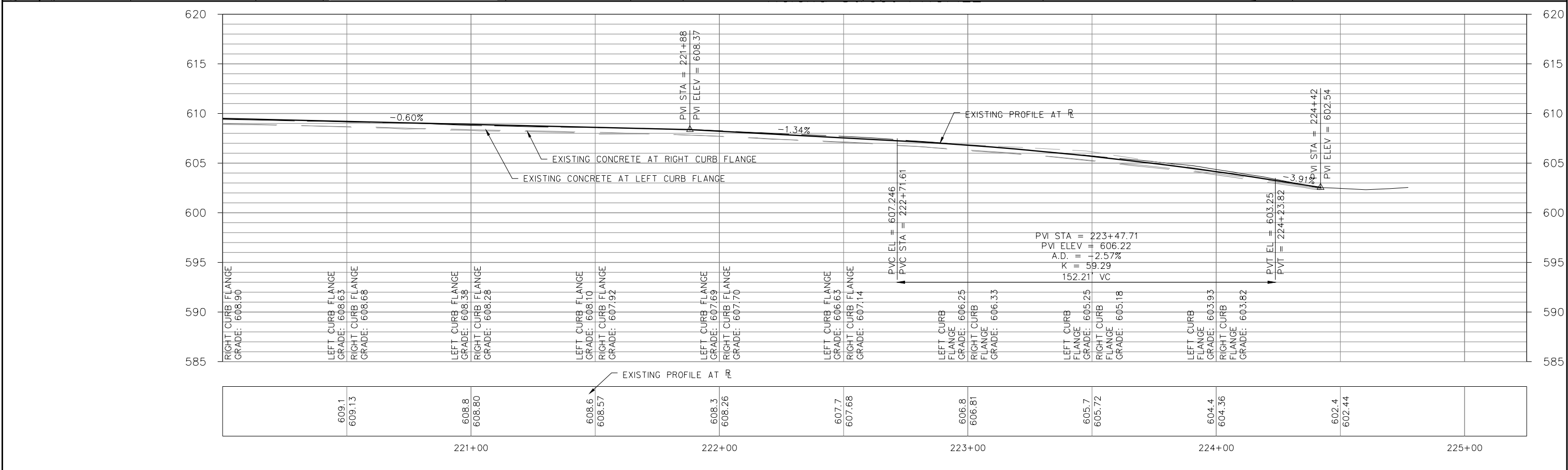
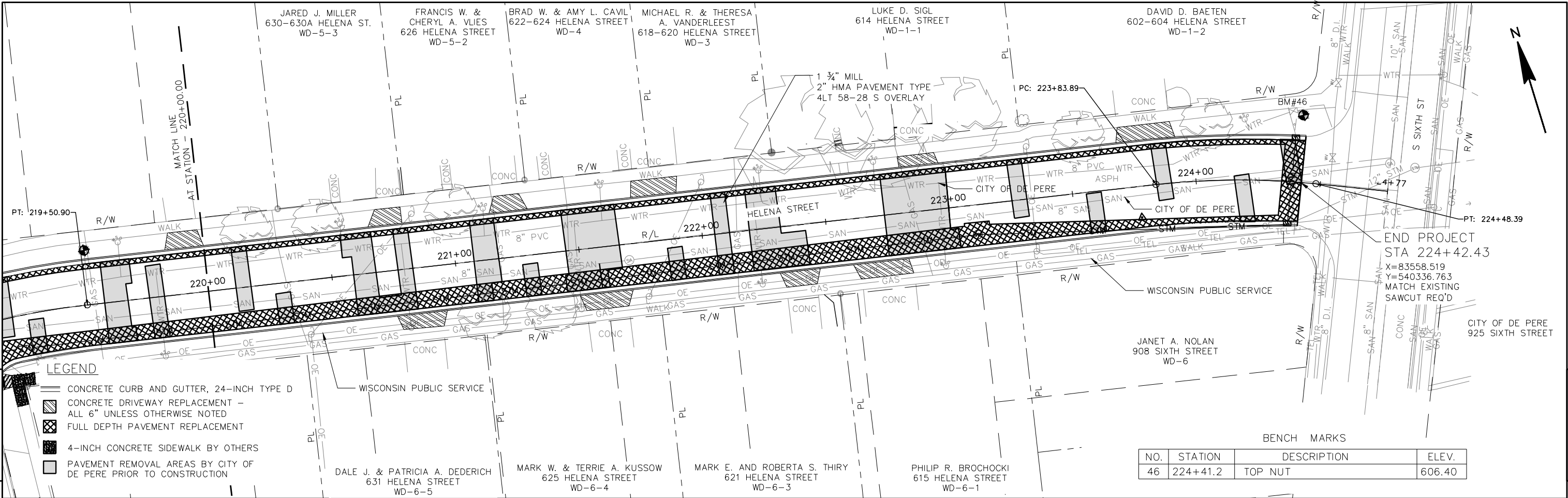
COUNTY:BROWN

PLAN AND PROFILE

SCALE, FEET 0 20 40

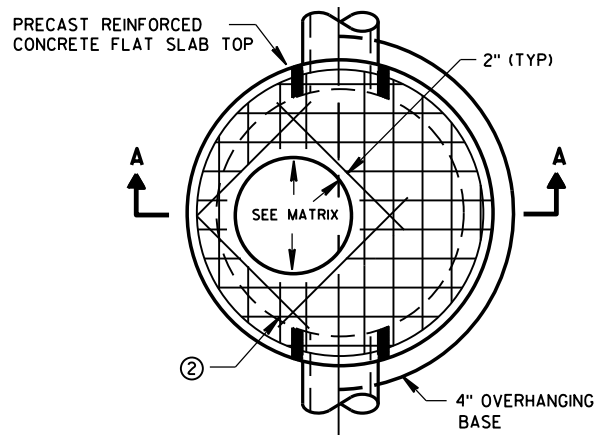
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E

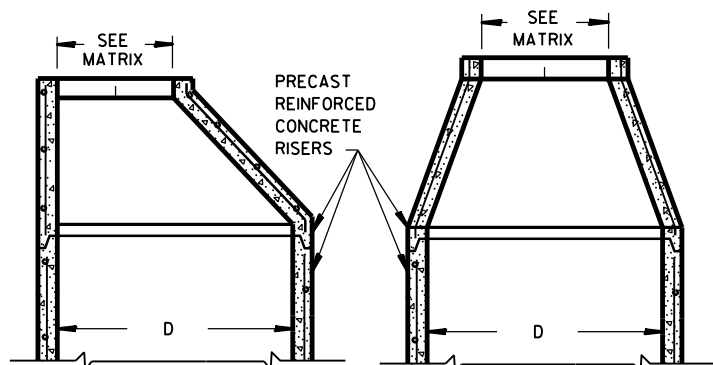


Standard Detail Drawing List

08B09-02	MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER
08B10-02	MANHOLES 3X3-FT, 4X4-FT, 5X5-FT AND 6X6-FT
08C07-02	INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT
08D05-18A	CURB RAMPS TYPES 1 AND 1-A
08D05-18B	CURB RAMPS TYPES 2 AND 3
08D05-18C	CURB RAMPS TYPES 4A AND 4A1
08D05-18D	CURB RAMPS TYPE 4B AND 4B1
08D05-18E	CURB RAMPS TYPES 5, 6, 7A, 7B & 8
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
15C02-06A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-06B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C03-03	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C33-02	STOP LINE AND CROSSWALK PAVEMENT MARKING

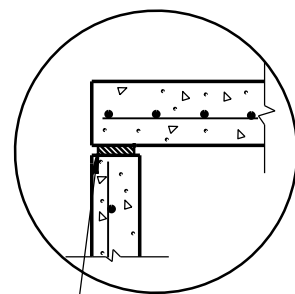


PLAN VIEW CIRCULAR OPENING

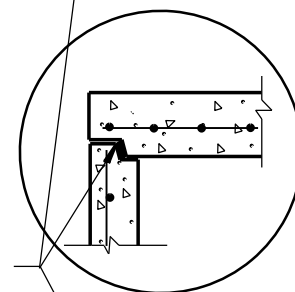


OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP

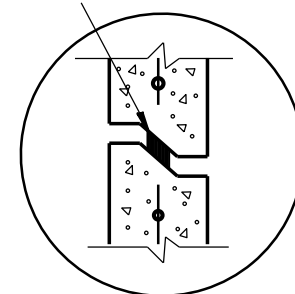
OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP



TOP WITH PLAIN END JOINT



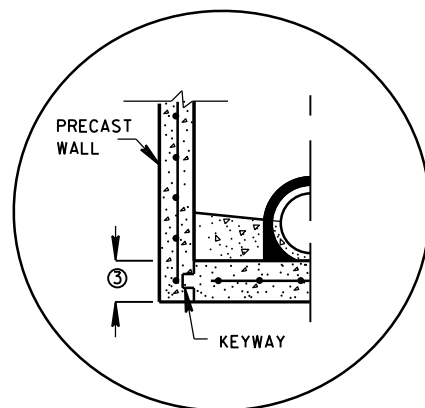
TOP WITH TONGUE AND GROOVE JOINT



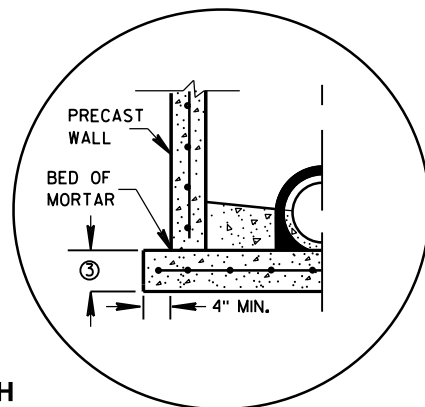
RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B"

JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C990 (TYP)

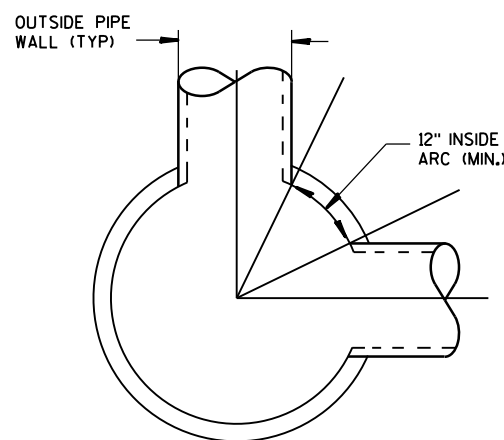


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION

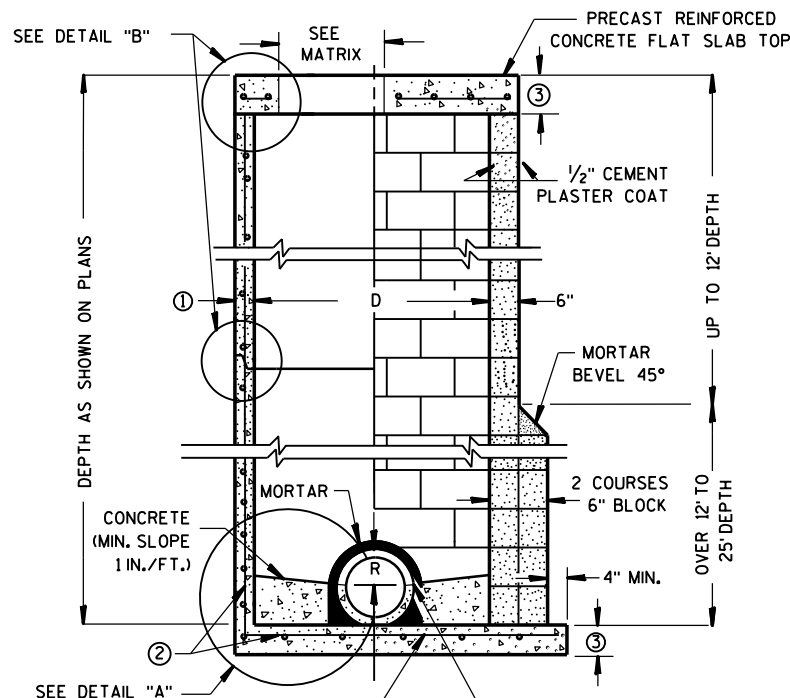


SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "A"



DETAIL "C"



CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES

PRECAST REINFORCED CONCRETE BLOCK WITH CONCRETE WITH MONOLITHIC BASE CAST-IN-PLACE OR PRECAST REINFORCED CONCRETE BASE ②

MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS. UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST MANHOLE UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR UNDERGROUND DRAINAGE STRUCTURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATE THE SIZE OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

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

PRECAST REINFORCED CONE TOPS (ECCENTRIC OR CONCENTRIC) OR PRECAST REINFORCED FLAT SLAB TOPS MAY BE USED ON CONCRETE BLOCK STRUCTURES.

ECCENTRIC CONE TOPS MAY BE USED ON ALL STRUCTURES, AND CONCENTRIC CONE TOPS SHALL BE USED ONLY ON STRUCTURES 5 FEET OR LESS IN DEPTH, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

STEPS MEETING AASHTO M199 AND THE FOLLOWING REQUIREMENTS SHALL BE INSTALLED IN ALL STRUCTURES OVER 5 FEET IN DEPTH: 16 INCH C-C MAXIMUM SPACING; PROJECT A MINIMUM CLEAR DISTANCE OF 4 INCHES FROM THE WALL AT THE POINT OF EMBEDMENT; MINIMUM LENGTH OF 10 INCHES; MINIMUM WALL EMBEDMENT OF 3 INCHES. FERROUS METAL STEPS NOT PAINTED OR TREATED TO RESIST CORROSION SHALL HAVE A MINIMUM CROSS SECTIONAL DIMENSION OF 1 INCH.

STEPS OF APPROVED POLYPROPYLENE PLASTIC COATED REINFORCEMENT BAR ARE ACCEPTABLE. REINFORCING BAR MUST BE A MINIMUM OF 1/2" AND MEET THE REQUIREMENTS OF ASTM A615.

CERTIFICATION SHALL BE PROVIDED THAT INSTALLED STEPS WHEN TESTED IN ACCORDANCE WITH SECTION 10 OF AASHTO T280 CAN WITHSTAND A VERTICAL LOAD OF 800 LBS. AND A HORIZONTAL LOAD OF 400 LBS.

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

CONCRETE BLOCK WILL NOT BE PERMITTED FOR STRUCTURES GREATER THAN 4 FEET IN DIAMETER.

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

ALL PRECAST MANHOLE UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M 199.

4" OVERHANGING BASES ARE REQUIRED FOR ALL CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

FOR ADDITIONAL CONFIGURATIONS, MAINTAIN A MINIMUM OF 12 INCHES AS MEASURED FROM THE INSIDE OF THE STRUCTURE WALL BETWEEN THE OUTSIDE PIPE WALLS OF ADJACENT PIPES. SEE DETAIL "C".

- ① MINIMUM WALL THICKNESS SHALL BE 4 INCHES FOR 3-FT, 5 INCHES FOR 4-FT, 6 INCHES FOR 5-FT, 7 INCHES FOR 6-FT, 8 INCHES FOR 7-FT AND 9 INCHES FOR 8-FT DIAMETER PRECAST MANHOLES.
- ② FOR PRECAST MANHOLES PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.
- ③ PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER OF 48" AND LESS SHALL HAVE A MINIMUM THICKNESS OF 6". PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER LARGER THAN 48" SHALL HAVE A MINIMUM THICKNESS OF 8".

MANHOLE COVER OPENING MATRIX

MANHOLE COVER TYPE	C	ALL J'S	K	L	M
OPENING SIZE (FT)					
2 DIA.	X	X		X	
3 DIA.			X		X

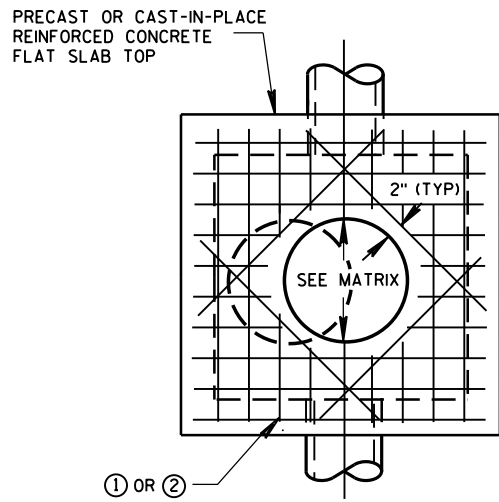
PIPE MATRIX

MANHOLE SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	180° SEPARATION (IN)	90° SEPARATION (IN)
3-FT	15	12
4-FT	24	18
5-FT	36	24
6-FT	42	36
7-FT	48	36
8-FT	60	42

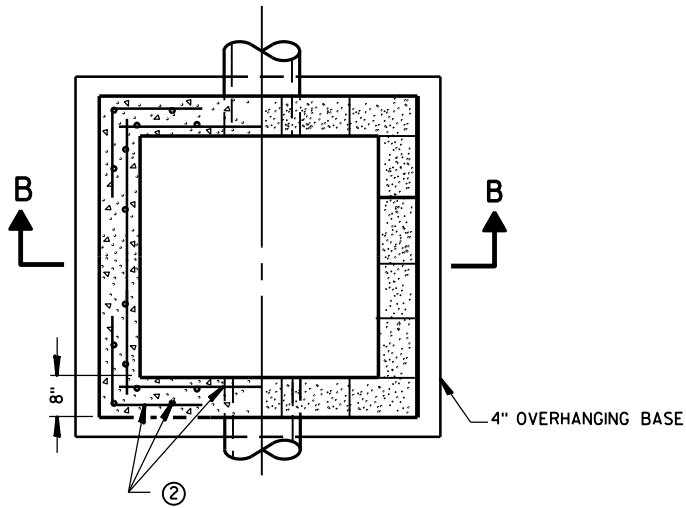
MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

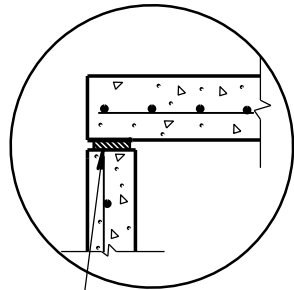
APPROVED
Sep 11, 2016 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT
FHWA UNIT SUPERVISOR



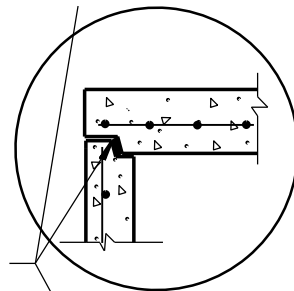
PLAN VIEW
CIRCULAR OPENING



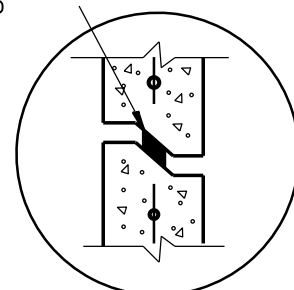
SECTION A-A
PLAN VIEW



TOP WITH PLAIN END JOINT

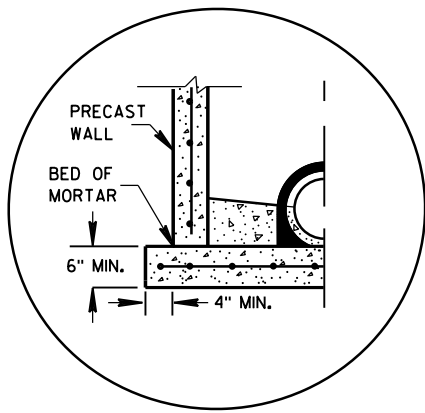


TOP WITH TONGUE AND GROOVE JOINT



RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B"



SEPARATE PRECAST REINFORCED
CONCRETE BASE OPTION

DETAIL "A"

GENERAL NOTES

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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.

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

PRECAST REINFORCED FLAT SLAB TOPS MAY BE USED ON CONCRETE BLOCK STRUCTURES.

STEPS MEETING AASHTO M199 AND THE FOLLOWING REQUIREMENTS SHALL BE INSTALLED IN ALL STRUCTURES OVER 5 FEET IN DEPTH: 16 INCH C-C MAXIMUM SPACING; PROJECT A MINIMUM CLEAR DISTANCE OF 4 INCHES FROM THE WALL AT THE POINT OF EMBEDMENT; MINIMUM LENGTH OF 10 INCHES; MINIMUM WALL EMBEDMENT OF 3 INCHES. FERROUS METAL STEPS NOT PAINTED OR TREATED TO RESIST CORROSION SHALL HAVE A MINIMUM CROSS SECTIONAL DIMENSION OF 1 INCH.

STEPS OF APPROVED POLYPROPYLENE PLASTIC COATED REINFORCEMENT BAR ARE ACCEPTABLE. REINFORCING BAR MUST BE A MINIMUM OF 1/2 INCH AND MEET THE REQUIREMENTS OF ASTM A615.

CERTIFICATION SHALL BE PROVIDED THAT INSTALLED STEPS WHEN TESTED IN ACCORDANCE WITH SECTION 10 OF AASHTO T280 CAN WITHSTAND A VERTICAL LOAD OF 800 LBS. AND A HORIZONTAL LOAD OF 400 LBS.

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

CONCRETE BLOCK WILL NOT BE PERMITTED FOR STRUCTURES GREATER THAN 4 FEET IN WIDTH.

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

ALL PRECAST MANHOLE UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF ASTM C 913.

4" OVERHANGING BASES ARE REQUIRED FOR ALL CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

MAXIMUM PIPE DIAMETER DETERMINED BY 3 INCH CLEARANCE ON EACH SIDE OF THE OUTSIDE WALL OF THE PIPE. SEE DETAIL "C". ASSUMES PIPE ENTERS PERPENDICULAR TO THE STRUCTURE.

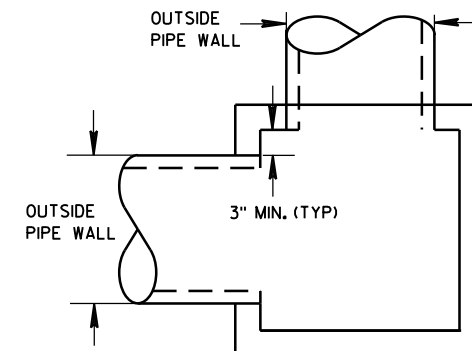
- ① FOR PRECAST MANHOLES PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913.
- ② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

MANHOLE COVER OPENING MATRIX

MANHOLE COVER TYPE	C	ALL J'S	K	L	M
OPENING SIZE (FT)					
2 DIA.	X	X		X	
3 DIA.			X		X

PIPE MATRIX

MANHOLE SIZE	MAXIMUM INSIDE PIPE DIAMETER	
	WIDTH (W) (IN)	LENGTH (L) (IN)
3X3-FT	24	24
4X4-FT	30	30
5X5-FT	42	42
6X6-FT	54	54



DETAIL "C"

PRECAST REINFORCED
CONCRETE WITH
MONOLITHIC BASE

PRECAST REINFORCED
CONCRETE WITH
INTEGRAL BASE

CAST-IN-PLACE
REINFORCED
CONCRETE

CONCRETE BLOCK WITH
CAST-IN-PLACE OR
PRECAST REINFORCED
CONCRETE BASE

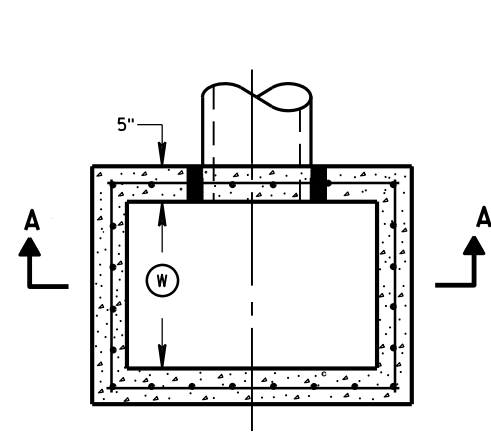
SQUARE MANHOLES W/ FLAT TOP

MANHOLES 3X3-FT, 4X4-FT, 5X5-FT AND 6X6-FT

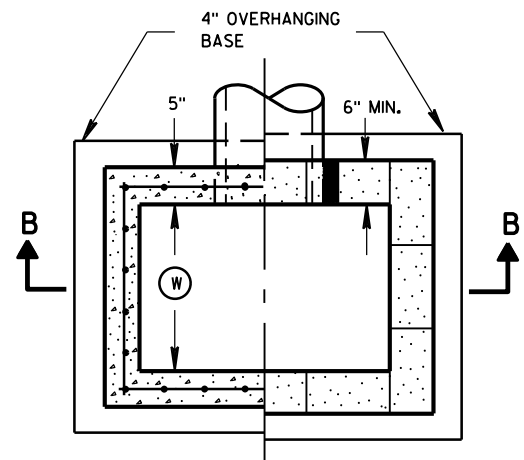
MANHOLES 3X3-FT, 4X4-FT
5X5-FT AND 6X6-FT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

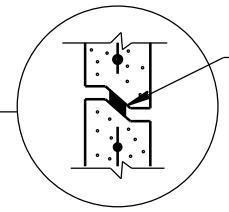
APPROVED
Sep., 2016 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT
FHWA UNIT SUPERVISOR



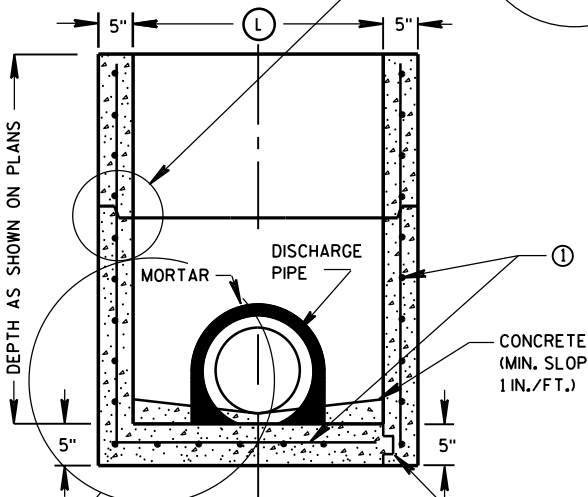
PLAN VIEW



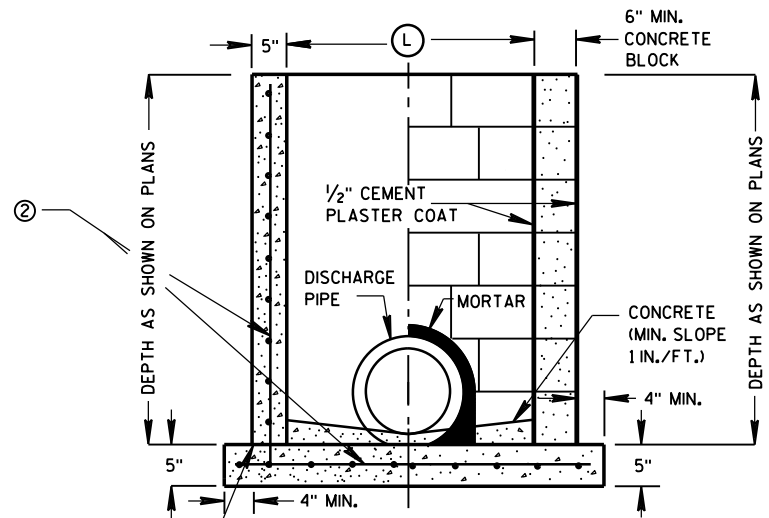
PLAN VIEW



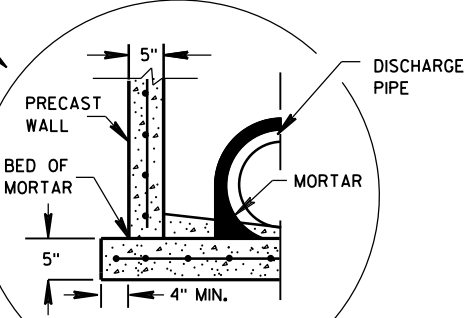
RISER JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C 990 (TYP)



SECTION A-A



SECTION B-B



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

GENERAL NOTES

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

UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST INLET UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR UNDERGROUND DRAINAGE STRUCTURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF ASTM C 913.

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATES THE SIZE OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

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

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

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

4" OVERHANGING BASES ARE REQUIRED FOR CAST-IN-PLACE REINFORCED CONCRETE AND CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

MAXIMUM INSIDE PIPE DIAMETER DETERMINED BY 3 INCH CLEARANCE ON EACH SIDE OF THE OUTSIDE WALL OF THE PIPE. SEE DETAIL "A". ASSUMES PIPE ENTERS PERPENDICULAR TO THE STRUCTURE.

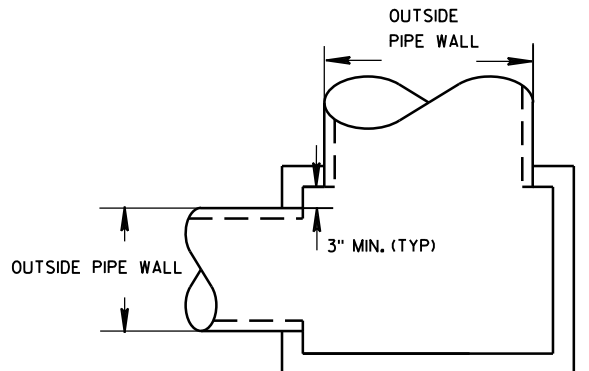
- ① FOR PRECAST INLETS PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913.
- ② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

INLET COVER MATRIX

INLET SIZE	WIDTH ① (FT)	INLET COVER TYPE	ALL A'S	ALL B'S	BW	F	ALL H'S	S	T	V	WM
		LENGTH ② (FT)									
2X2-FT	2	2	X	X				X		X	
2X2.5-FT	2	2.5			X			X	X	X	X
2X3-FT	2	3					X				
2.5X3-FT	2.5	3				X					

PIPE MATRIX

INLET SIZE	MAXIMUM INSIDE PIPE DIAMETER	
	WIDTH (IN)	LENGTH (IN)
2X2-FT	12	12
2X2.5-FT	12	18
2X3-FT	12	24
2.5X3-FT	18	24



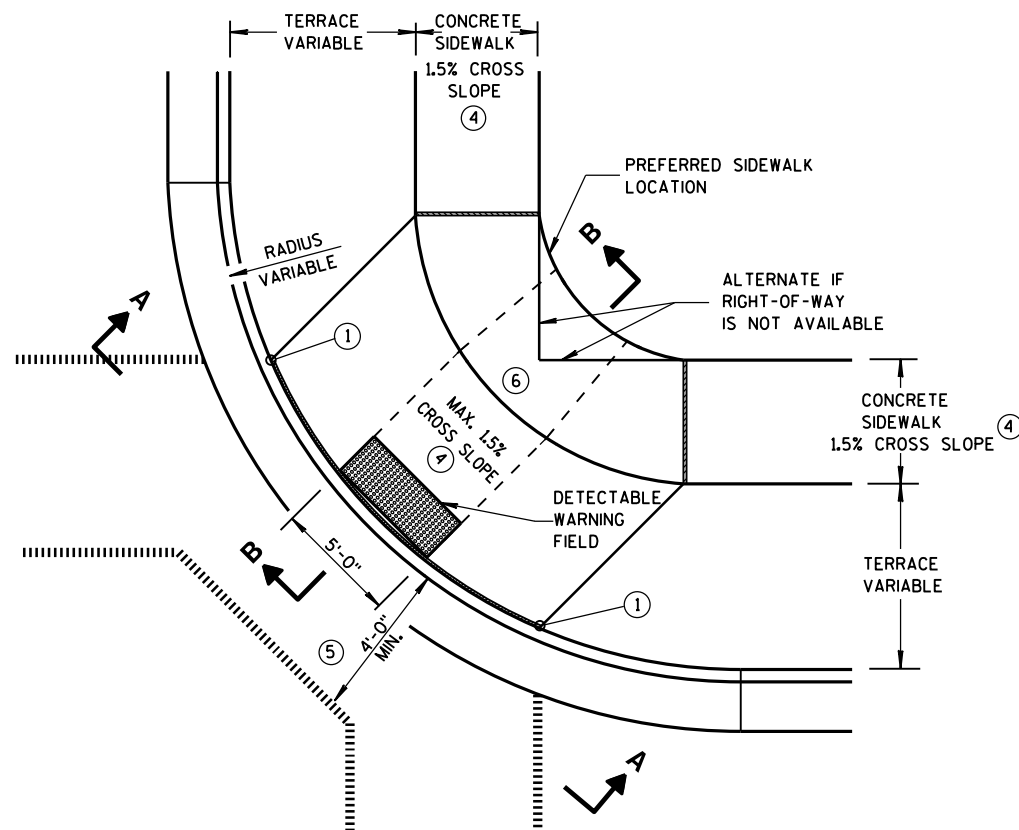
DETAIL "A"

INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT

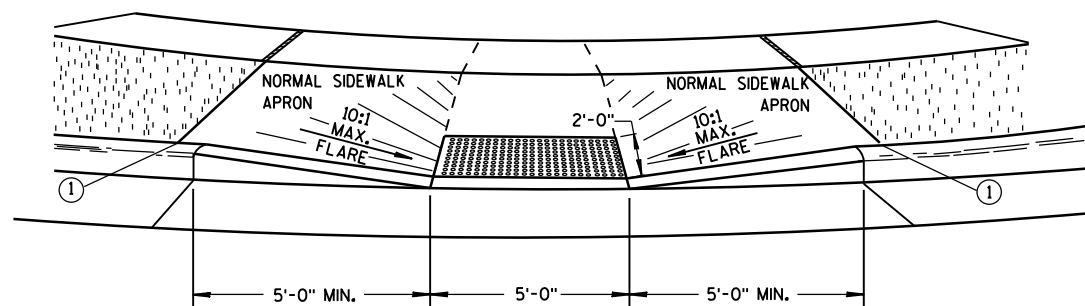
INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept., 2016 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT
FHWA UNIT SUPERVISOR

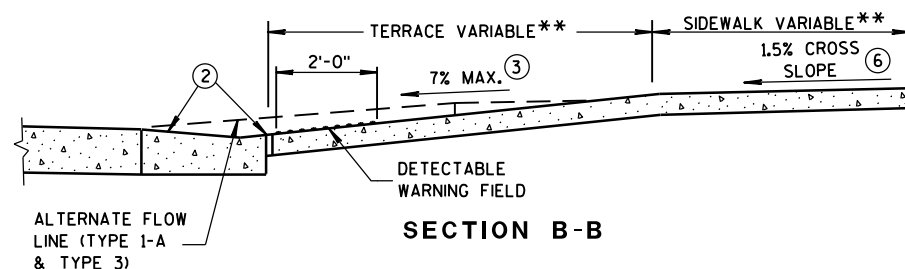


**PLAN VIEW
TYPE 1 RAMP**
(CENTER OF CORNER RADIUS)

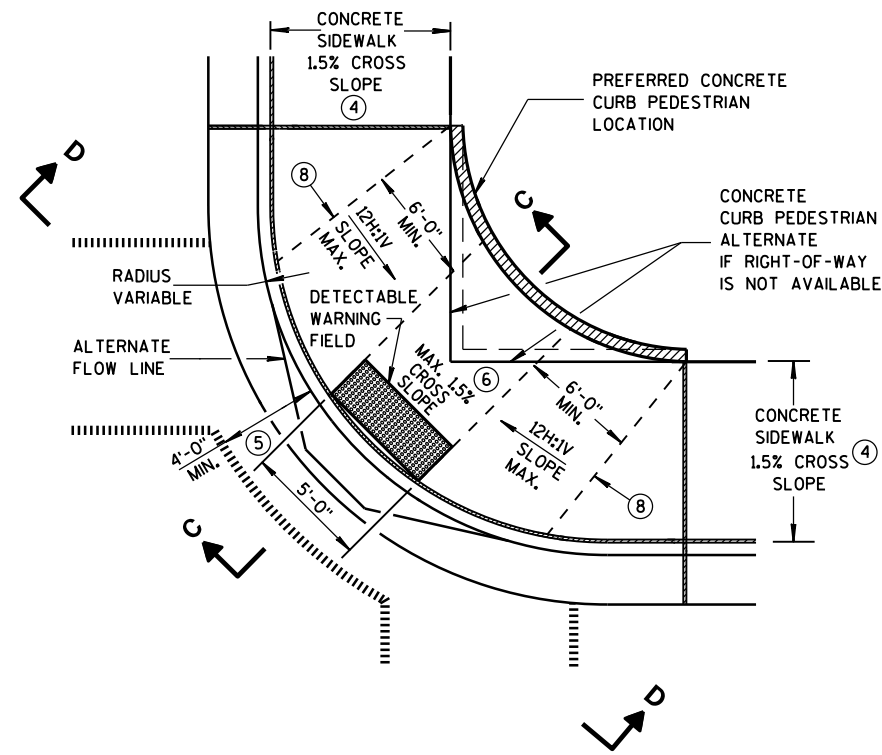


VIEW A-A

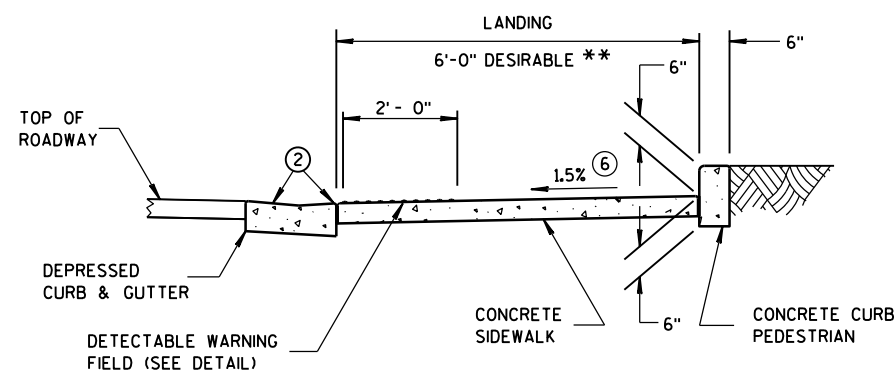
** WIDTH SHOWN ELSEWHERE
IN THE PLANS



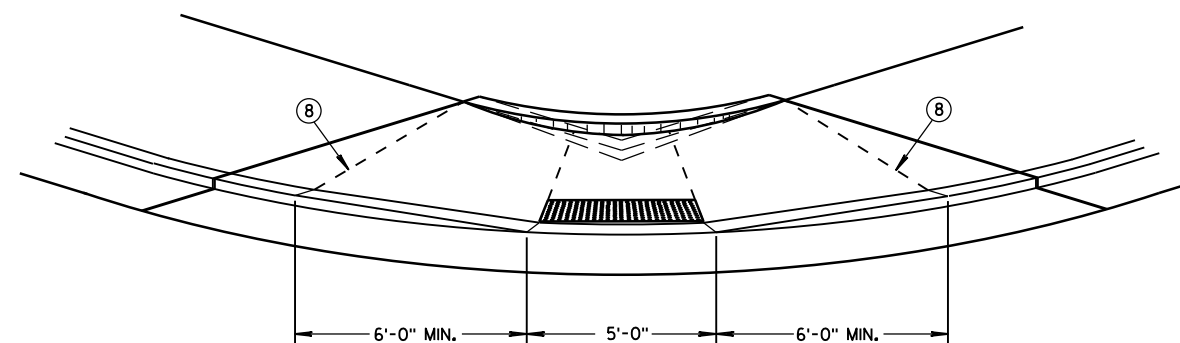
SECTION B-B



**PLAN VIEW
TYPE 1-A RAMP**
(NO TERRACE)



SECTION C-C



VIEW D-D

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.

WHEN NECESSARY, THE SIDEWALK ELEVATION MAY BE LOWERED TO MEET THE HIGH POINT ON THE RAMP.

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

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

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

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

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

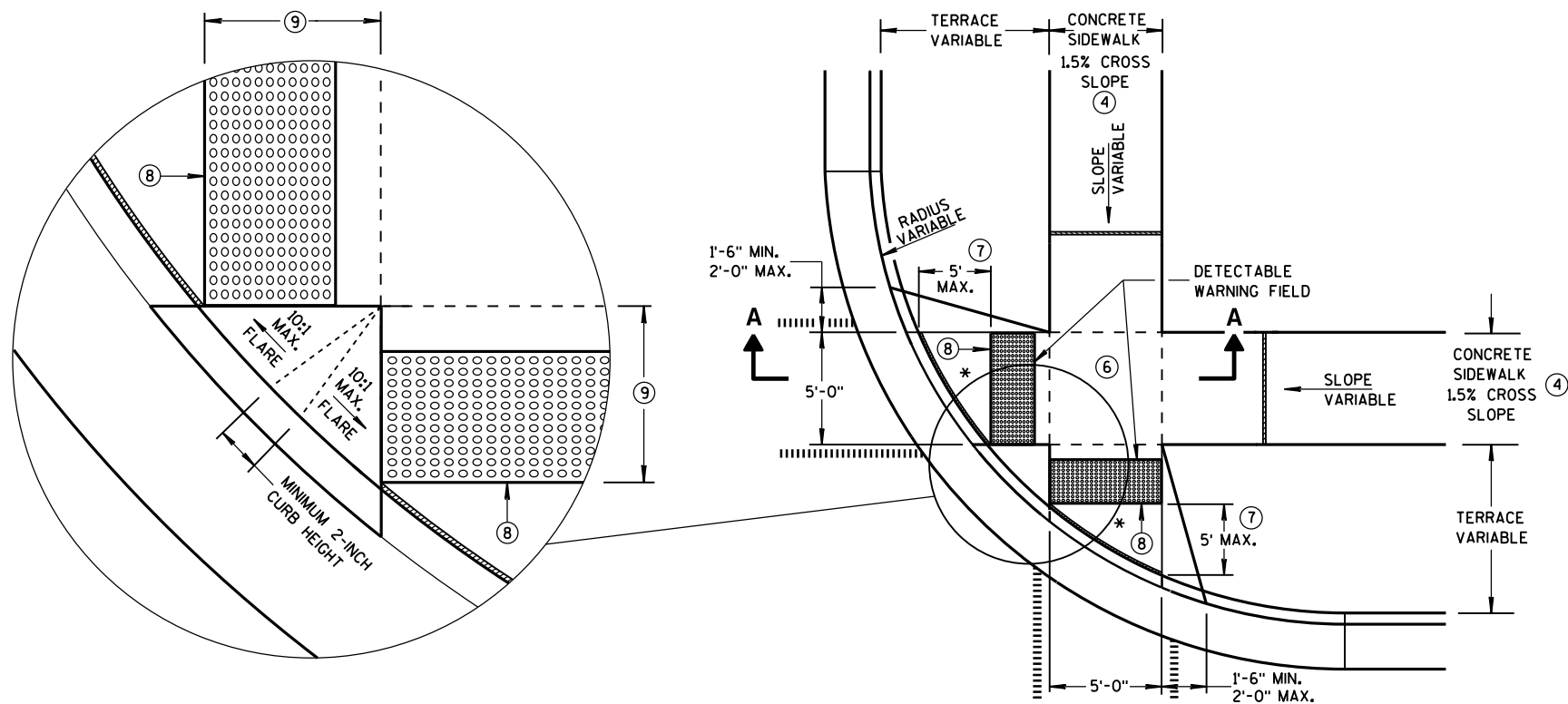
- ① THIS POINT IS AN EXTENSION OF OUTSIDE EDGE OF APPROACHING SIDEWALK WHERE IT MEETS THE BACK OF CONCRETE CURB. POINT LOCATION MAY BE ADJUSTED TO ALIGN WITH BEGINNING OF FULL-HEIGHT CURB IF THIS DISTANCE IS SHORT.
- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL NOT EXCEED 7%.
- ③ ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- ④ $\pm 0.5\%$ CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- ⑤ PROVIDE A LEVEL LANDING IN THE STREET AND GUTTER AREA. (2% MAXIMUM SLOPE IN ANY DIRECTION). WHEN THE GUTTER SLOPE EXCEEDS 2%, CONSTRUCT THE LEVEL LANDING IN THE STREET AREA.
- ⑥ PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.
- ⑧ PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

LEGEND

- 1/2" EXPANSION JOINT-SIDEWALK
- - - - CONTRACTION JOINT FIELD LOCATED
- ||||| PAVEMENT MARKING CROSSWALK (WHITE)
- ALTERNATIVE LAYOUT

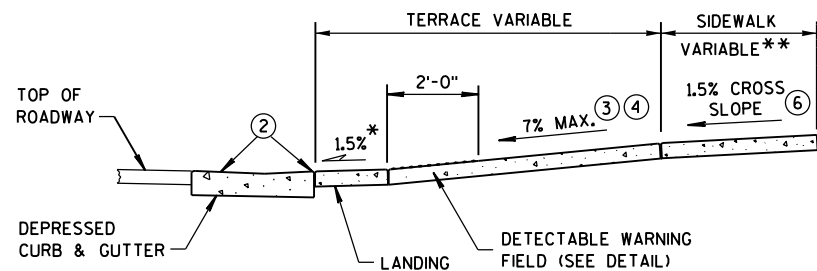
**CURB RAMPS
TYPES 1 AND 1-A**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



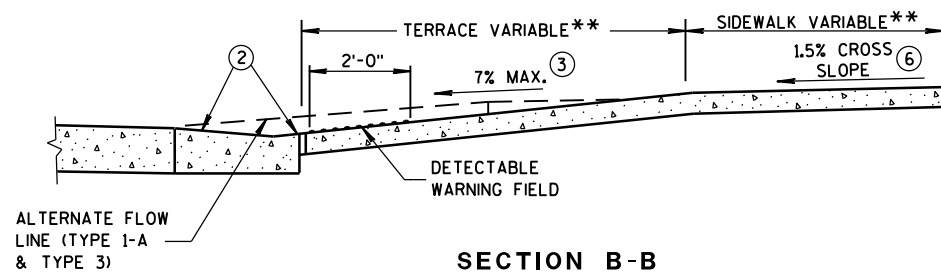
**PLAN VIEW
TYPE 2 RAMP**
(ON LINE WITH SIDEWALK)

* MAXIMUM 2.0% SLOPE
IN ALL DIRECTIONS IN
FRONT OF GRADE BREAK



SECTION A-A

** WIDTH SHOWN ELSEWHERE
IN THE PLANS



SECTION B-B

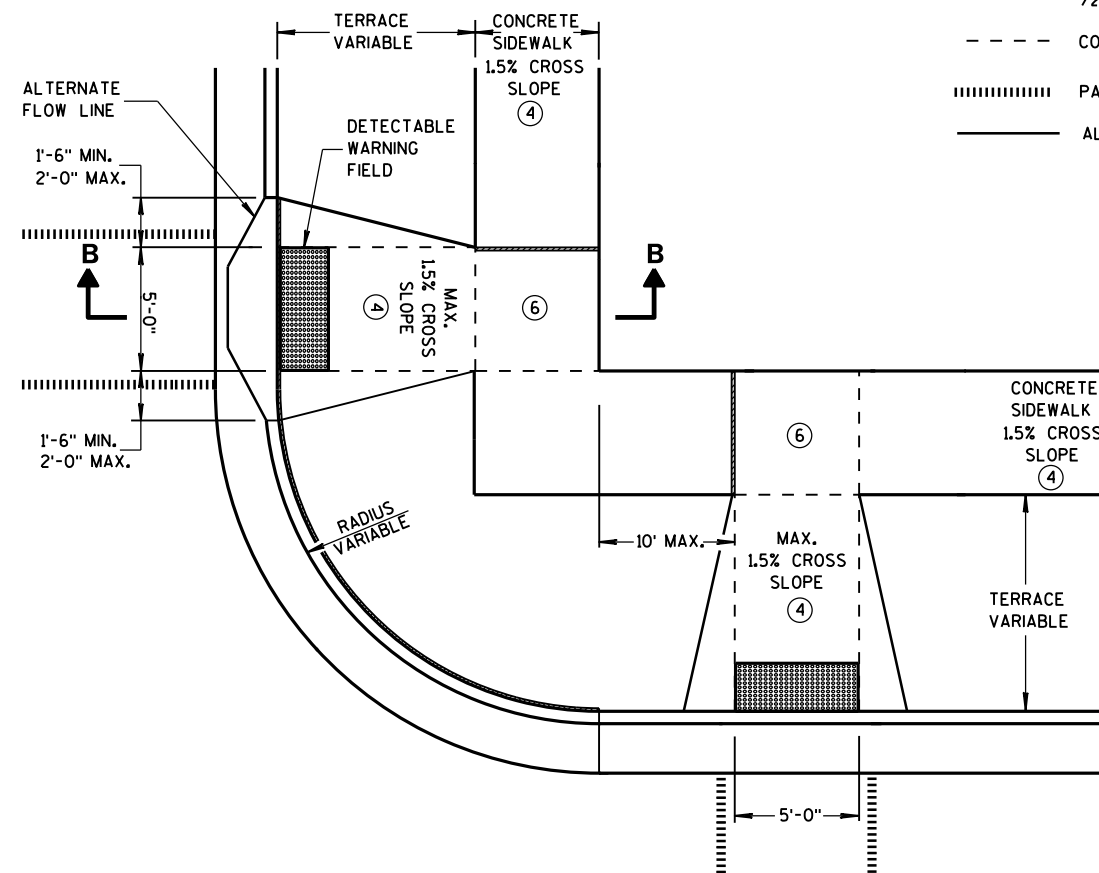
GENERAL NOTES

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL NOT EXCEED 7%.
- ③ ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- ④ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- ⑥ PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.
- ⑦ WHEN THIS DISTANCE EXCEEDS 5 FEET, STAGGER ADDITIONAL DETECTABLE WARNING PANEL FORWARD TO REDUCE THIS DISTANCE. PROVIDE MINIMUM 12-INCH ROW OVERLAP TO AVOID SIDESTEP OF DOME DETECTION. USE EQUAL-SIZE PANELS TO DEVELOP OVERLAPPING, STAGGERED ROWS. ALIGN DOMES BETWEEN OVERLAPPING ROWS AND IN DIRECTION OF PEDESTRIAN TRAVEL.
- ⑧ PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- ⑨ WHEN THIS DISTANCE IS LESS THAN 6'-0", IT MAY BE DIFFICULT TO ACHIEVE A 7% SLOPE OR FLATTER ALONG THE RAMP. REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 7% SLOPE OR FLATTER ON RAMP. CONSTRUCT 2-INCH MINIMUM CURB HEIGHT BETWEEN 10:1 FLARES.

LEGEND

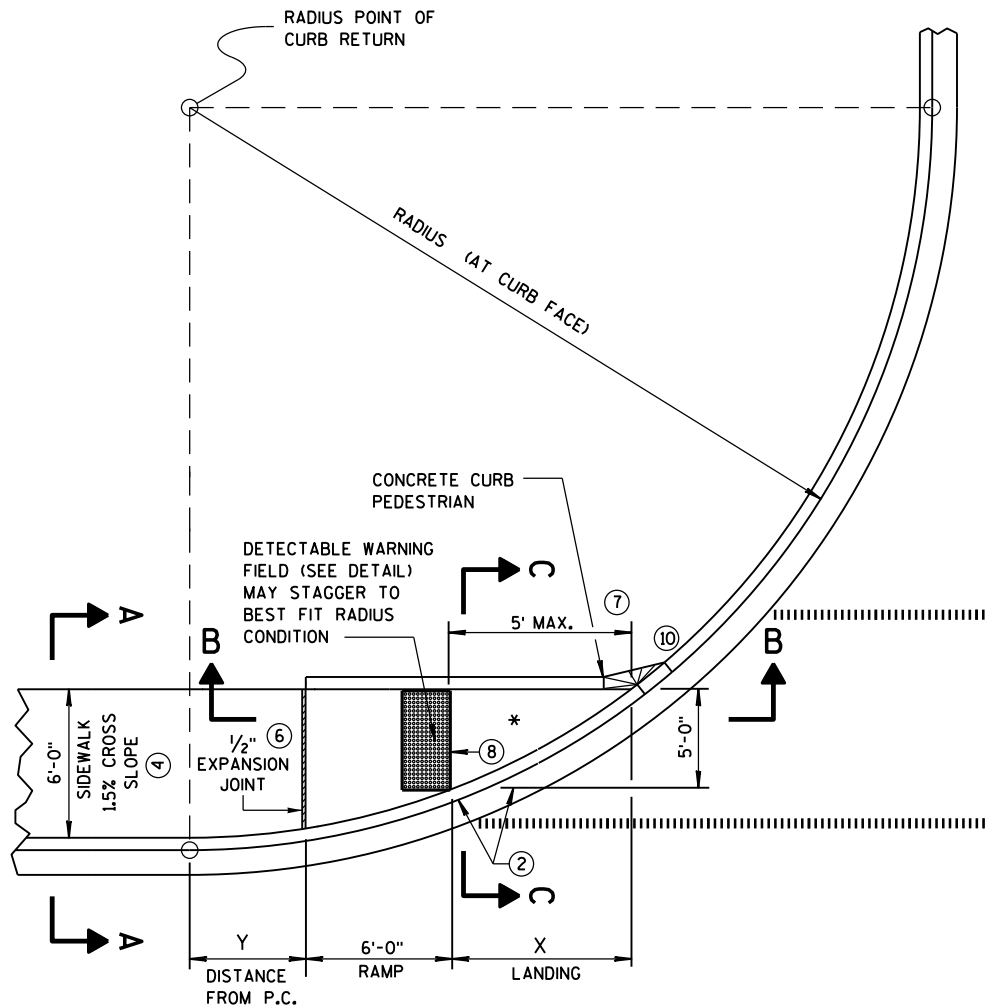
- 1/2" EXPANSION JOINT-SIDEWALK
- - - CONTRACTION JOINT FIELD LOCATED
- ||||| PAVEMENT MARKING CROSSWALK (WHITE)
- ALTERNATIVE LAYOUT



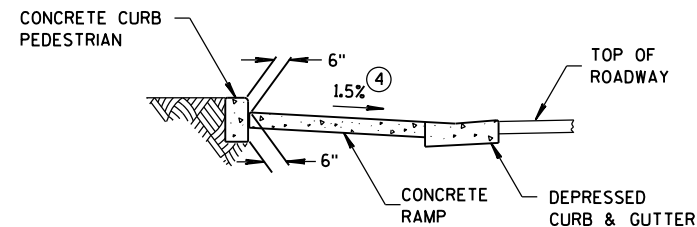
**PLAN VIEW
TYPE 3 RAMP**
(OUTSIDE OF CROSSWALK AREA)

**CURB RAMPS
TYPES 2 AND 3**

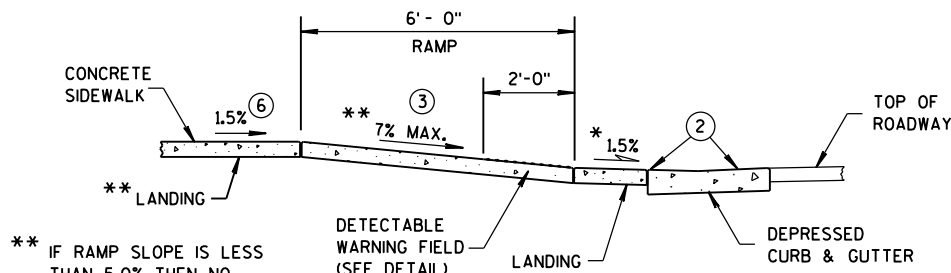
STATE OF WISCONSIN
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CURB RAMP TYPE 4A
PLAN VIEW



SECTION C-C FOR TYPE 4A



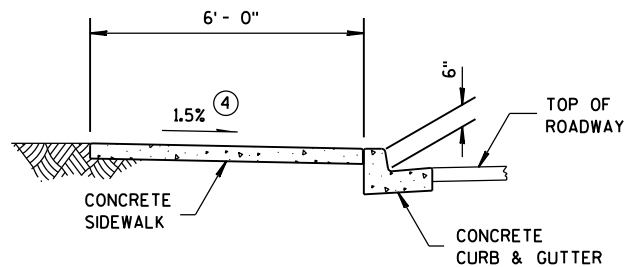
SECTION B-B FOR TYPE 4A

** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

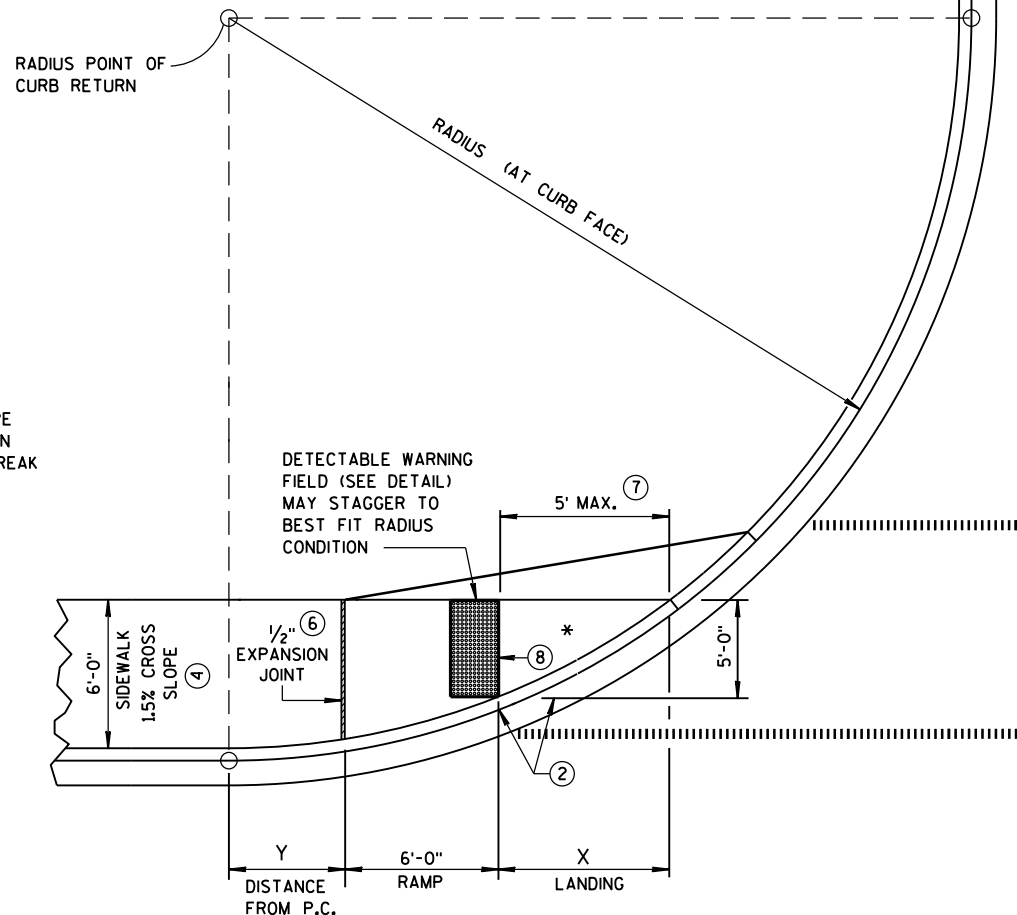
* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK

RADIUS (AT CURB FACE)	X	Y
20 FEET	7'-11"	0'-2"
30 FEET	10'-2 3/4"	1'-7 1/2"
40 FEET	12'-1 1/4"	2'-10"
50 FEET	13'-8 3/4"	3'-10 3/4"
60 FEET	15'-2"	4'-10 1/4"

INTERMEDIATE RADII CAN BE INTERPOLATED



SECTION A-A FOR TYPE 4A



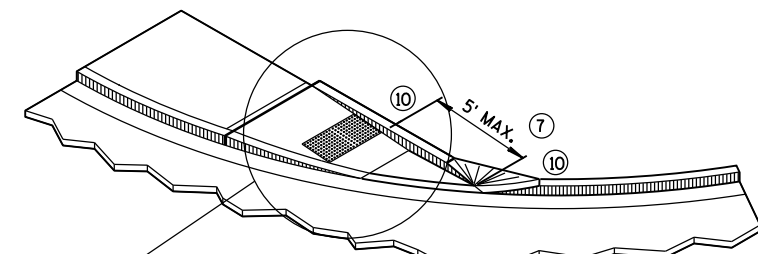
CURB RAMP TYPE 4A1
PLAN VIEW

GENERAL NOTES

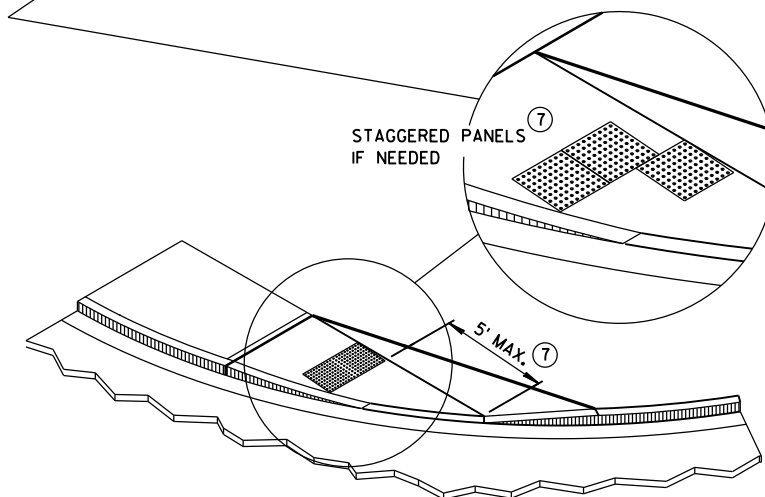
AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

- GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL NOT EXCEED 7%.
- ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.
- WHEN THIS DISTANCE EXCEEDS 5 FEET, STAGGER ADDITIONAL DETECTABLE WARNING PANEL FORWARD TO REDUCE THIS DISTANCE. PROVIDE MINIMUM 12-INCH ROW OVERLAP TO AVOID SIDESTEP OF DOME DETECTION. USE EQUAL-SIZE PANELS TO DEVELOP OVERLAPPING, STAGGERED ROWS. ALIGN DOMES BETWEEN OVERLAPPING ROWS AND IN DIRECTION OF PEDESTRIAN TRAVEL.
- PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.



ISOMETRIC VIEW FOR TYPE 4A



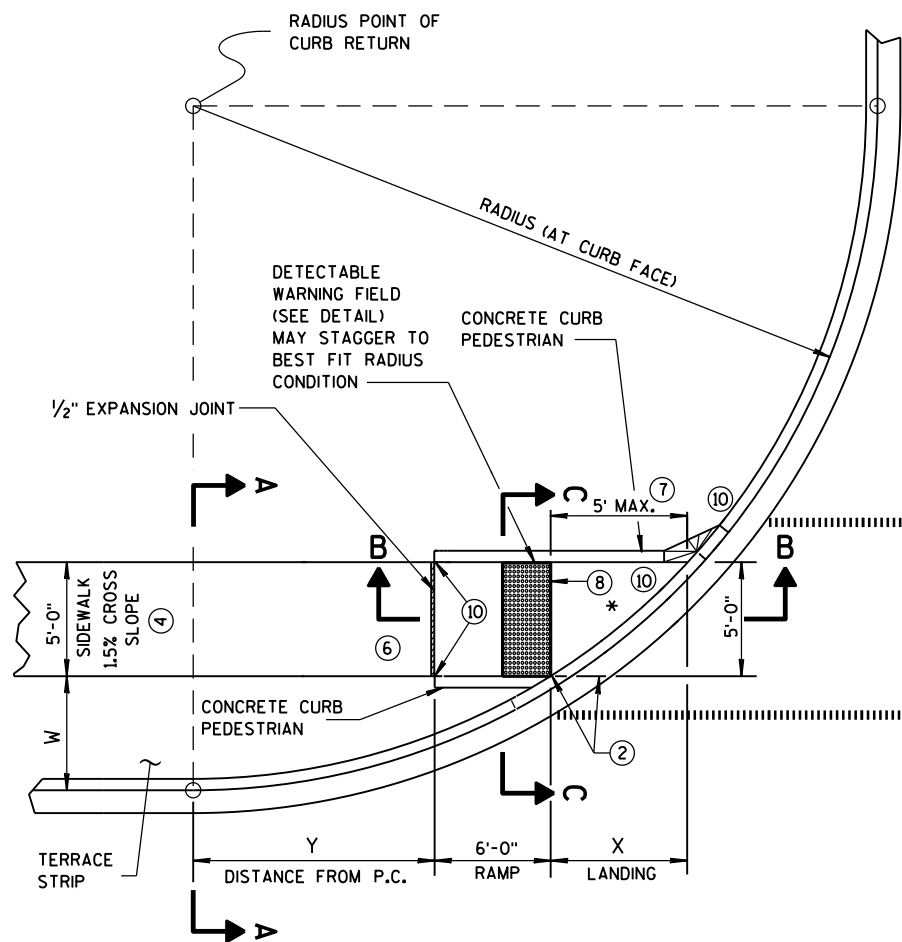
ISOMETRIC VIEW FOR TYPE 4A1

LEGEND

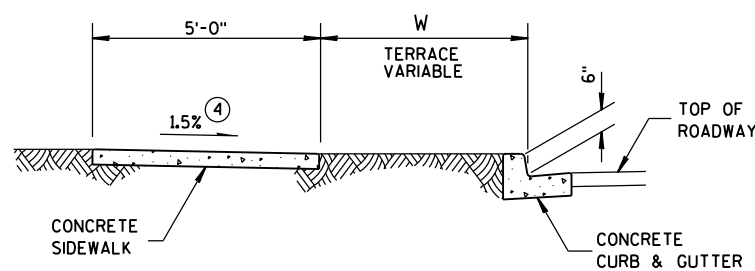
- 1/2" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS
TYPES 4A AND 4A1

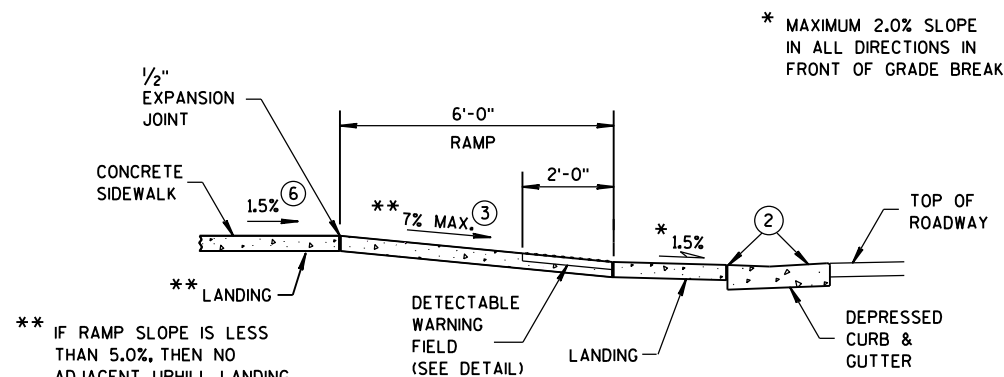
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



CURB RAMP TYPE 4B
PLAN VIEW

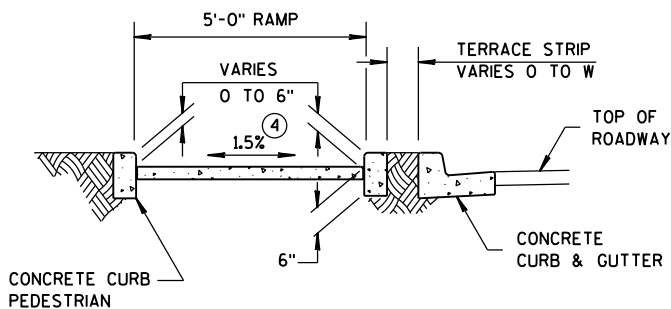


SECTION A-A FOR TYPE 4B

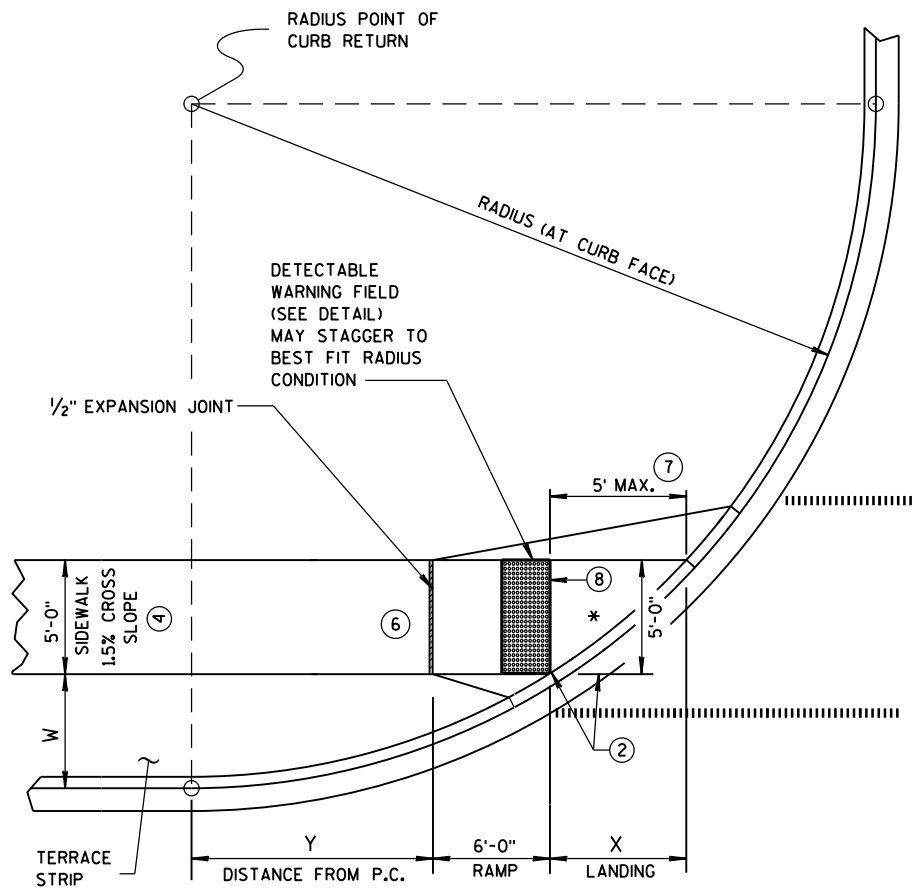


SECTION B-B FOR TYPE 4B

- LEGEND**
- 1/2" EXPANSION JOINT-SIDEWALK
 - CONTRACTION JOINT FIELD LOCATED
 - PAVEMENT MARKING CROSSWALK (WHITE)



SECTION C-C FOR TYPE 4B



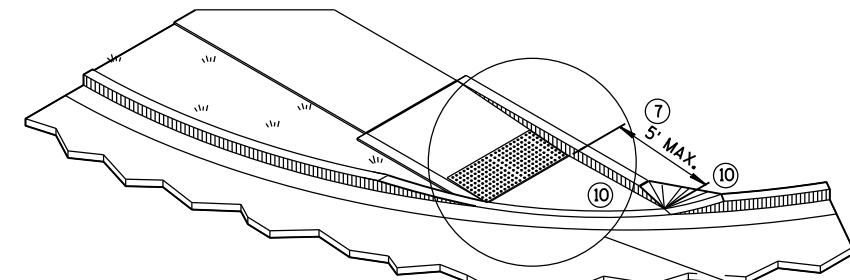
CURB RAMP TYPE 4B1
PLAN VIEW

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'-9 3/4"	3'-6 1/2"	4'-11 1/2"	5'-1 3/4"	4'-3 3/4"	6'-5 1/2"	3'-8 3/4"	7'-6 3/4"	3'-3"	8'-6 1/4"
30 FEET	7'-9 1/4"	5'-10 1/2"	6'-9 1/2"	7'-11 1/4"	6'-0 1/4"	9'-8"	5'-5"	11'-1 3/4"	4'-10 3/4"	12'-5 3/4"
40 FEET	9'-4"	7'-10"	8'-2 3/4"	10'-3"	7'-4 3/4"	12'-3 3/4"	6'-8 1/2"	14'-1 1/4"	6'-1 3/4"	15'-8 1/2"
50 FEET	10'-8"	9'-6 1/2"	9'-5 1/2"	12'-3 1/4"	8'-6 1/2"	14'-7 1/2"	7'-9 3/4"	16'-8 1/4"	7'-2 1/2"	18'-6 1/4"
60 FEET	11'-10 1/4"	11'-0 3/4"	10'-6 1/2"	14'-1 1/4"	9'-6 1/2"	16'-8 1/2"	8'-9 1/4"	18'-11 3/4"	8'-1 1/2"	21'-0 1/2"

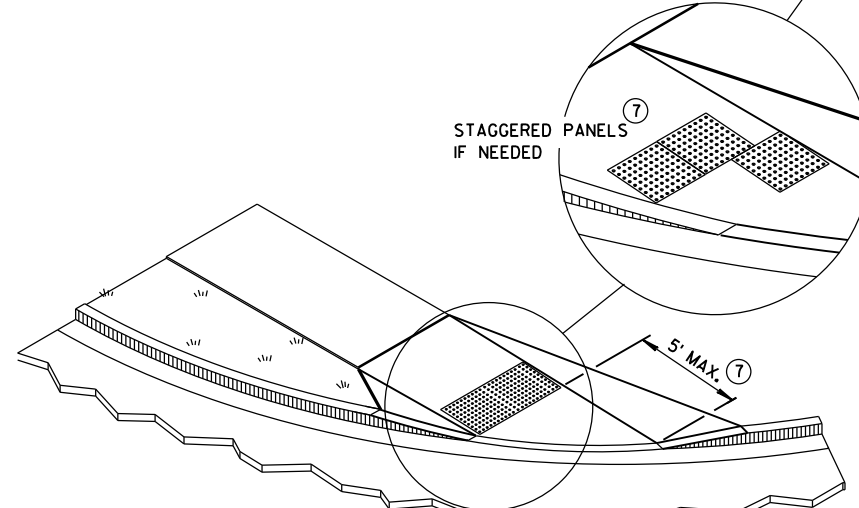
GENERAL NOTES

INTERMEDIATE RADII CAN BE INTERPOLATED

- AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS. DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.
- GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL NOT EXCEED 7%.
 - ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
 - ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
 - PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.
 - WHEN THIS DISTANCE EXCEEDS 5 FEET, STAGGER ADDITIONAL DETECTABLE WARNING PANEL FORWARD TO REDUCE THIS DISTANCE. PROVIDE MINIMUM 12-INCH ROW OVERLAP TO AVOID SIDESTEP OF DOME DETECTION. USE EQUAL-SIZE PANELS TO DEVELOP OVERLAPPING, STAGGERED ROWS. ALIGN DOMES BETWEEN OVERLAPPING ROWS AND IN DIRECTION OF PEDESTRIAN TRAVEL.
 - PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
 - INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.



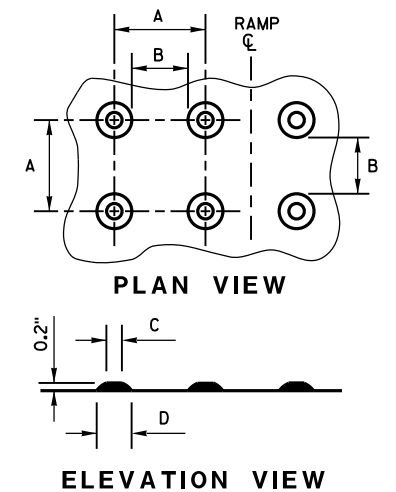
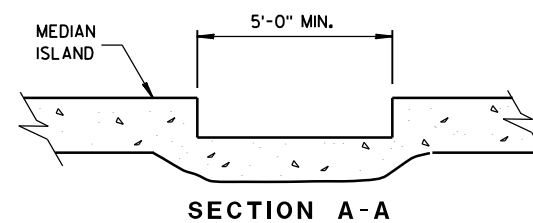
ISOMETRIC VIEW FOR TYPE 4B



ISOMETRIC VIEW FOR TYPE 4B1

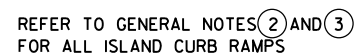
CURB RAMPS
TYPE 4B AND 4B1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

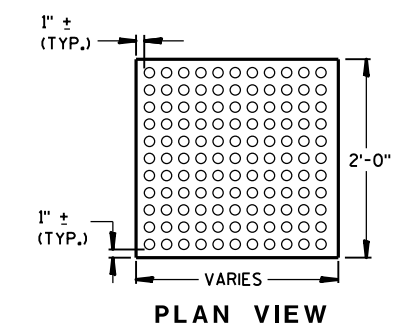


	MIN.	MAX.
A	1.6"	2.4"
B	0.65"	1.5"
C	*	*
D	0.9"	1.4"

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



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



DETECTABLE WARNING FIELD (TYPICAL)

LEGEND

- | | |
|---------|------------------------------------|
| ===== | 1/2" EXPANSION JOINT-SIDEWALK |
| - - - - | CONTRACTION JOINT FIELD LOCATED |
| | PAVEMENT MARKING CROSSWALK (WHITE) |

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept., 2016
DATE
FHWA

/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR



INLET PROTECTION, TYPE A

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.



**INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)**

(CAN BE INSTALLED IN ANY INLET WITHOUT A CURB BOX)



INLET PROTECTION, TYPE C (WITH CURB BOX)

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.



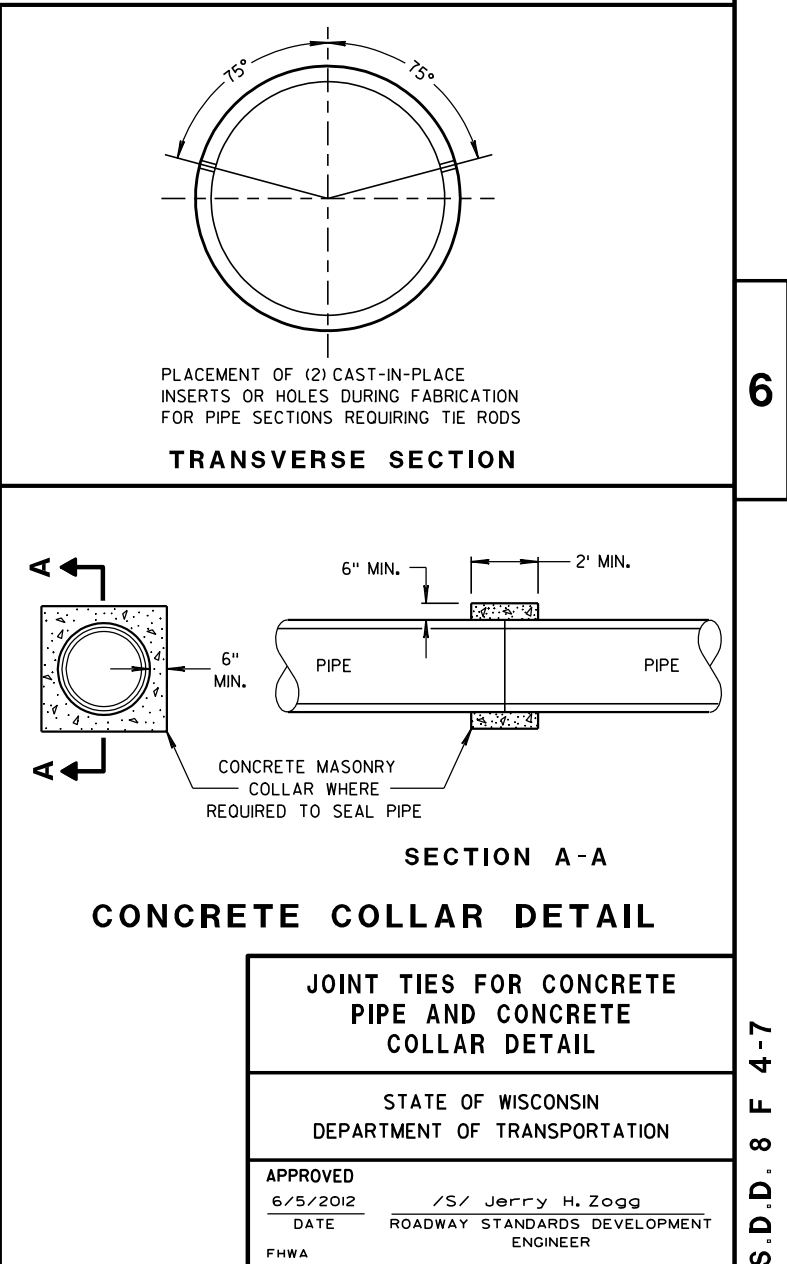
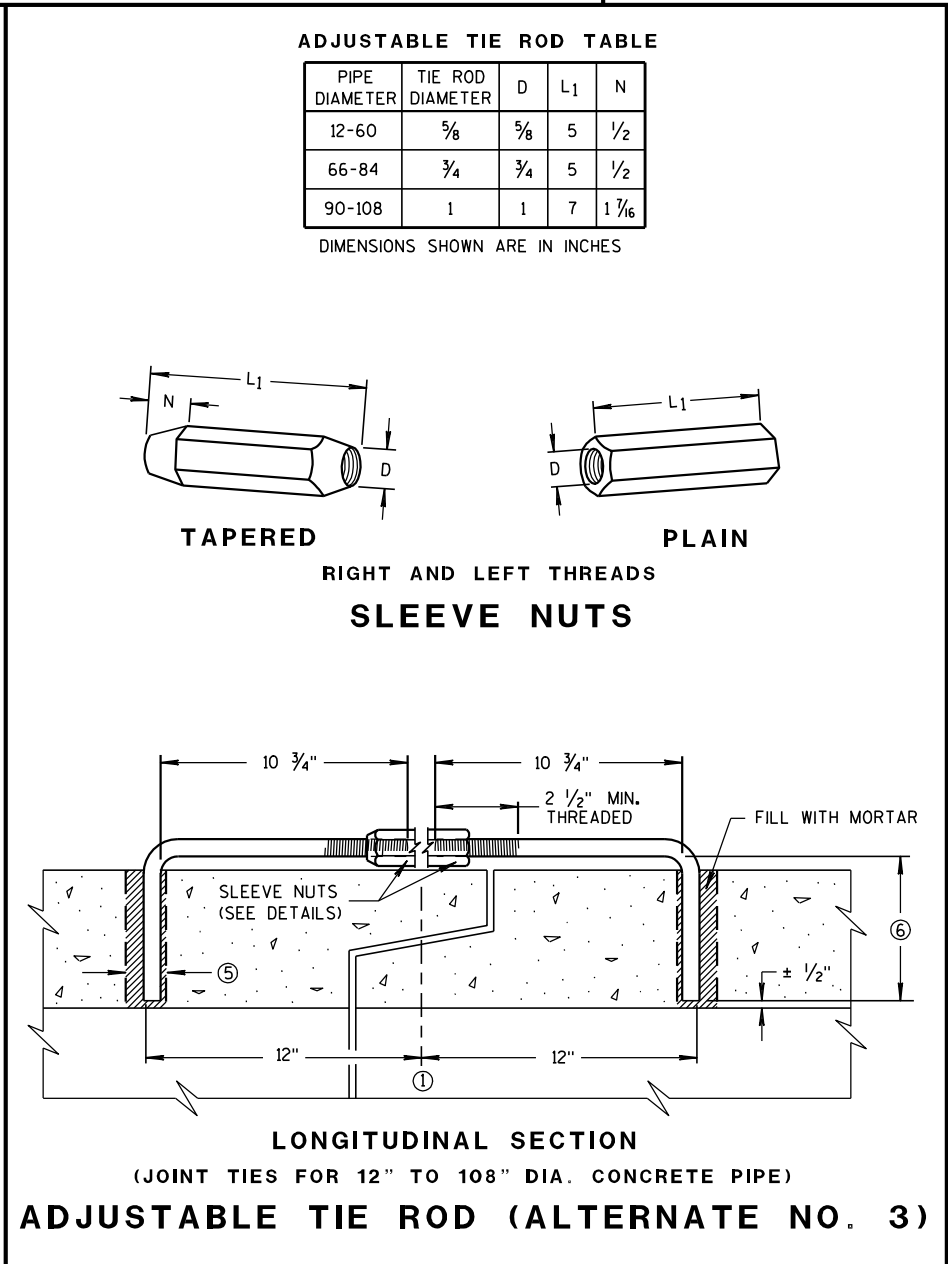
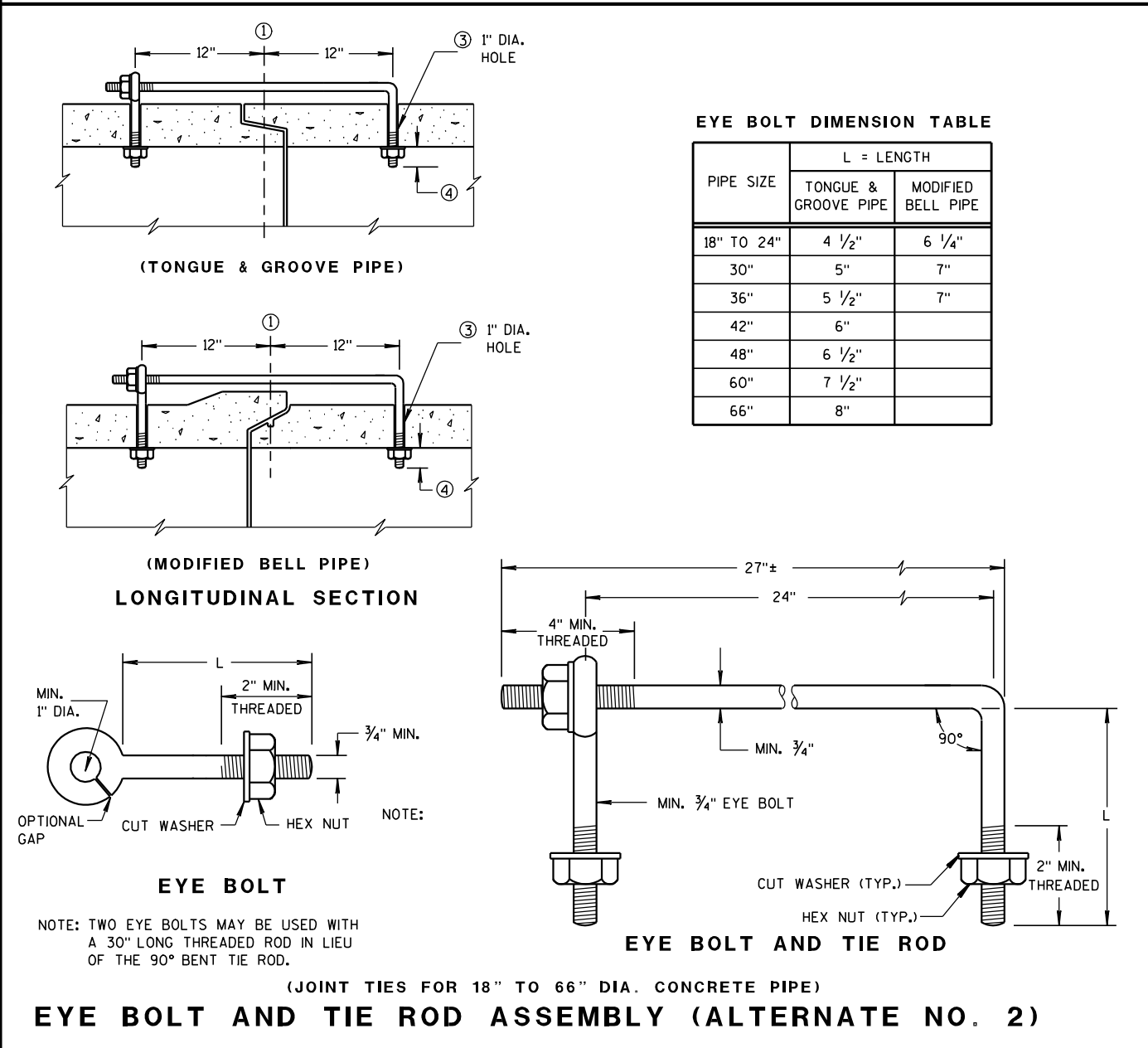
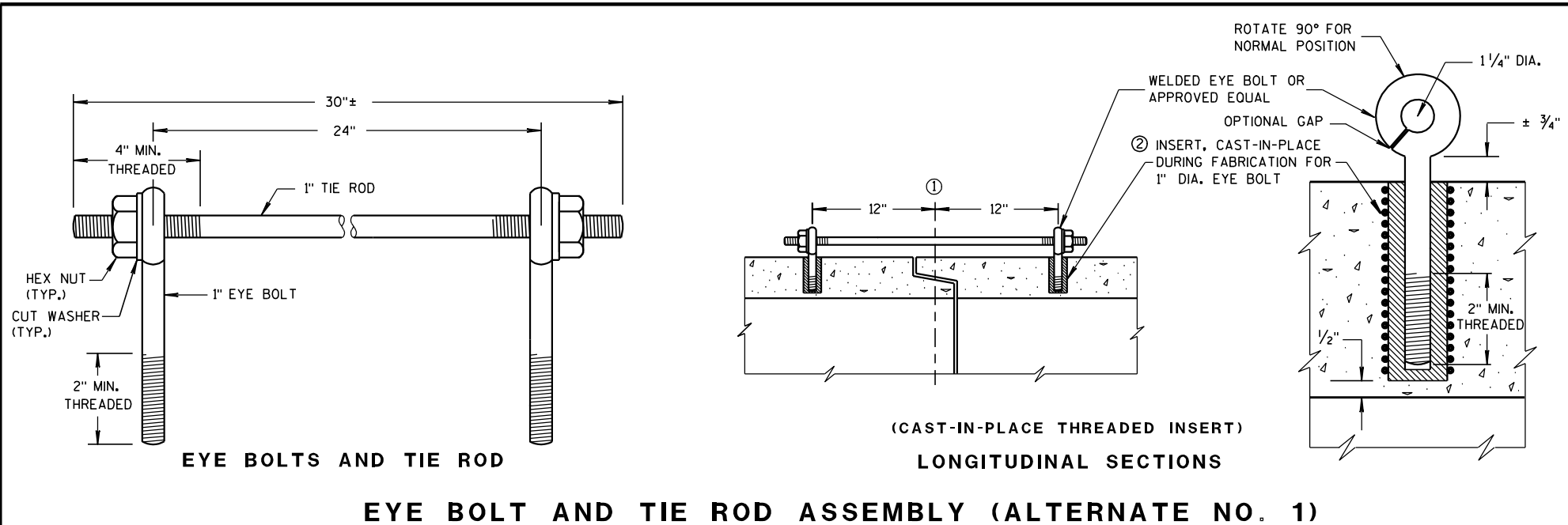
INLET PROTECTION, TYPE D

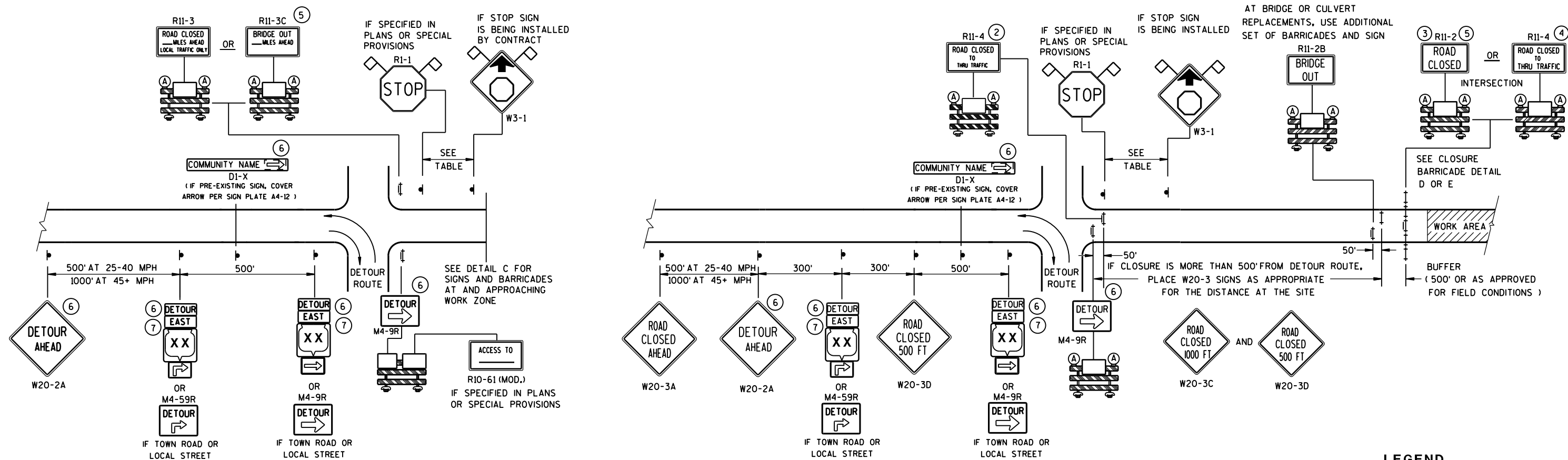
(CAN BE INSTALLED IN ANY INLET TYPE WITH OR WITHOUT A CURB BOX AS PER NOTE ②)

**INLET PROTECTION
TYPE A, B, C, AND D**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/16/02 /S/ Beth Cannestra
DATE
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA





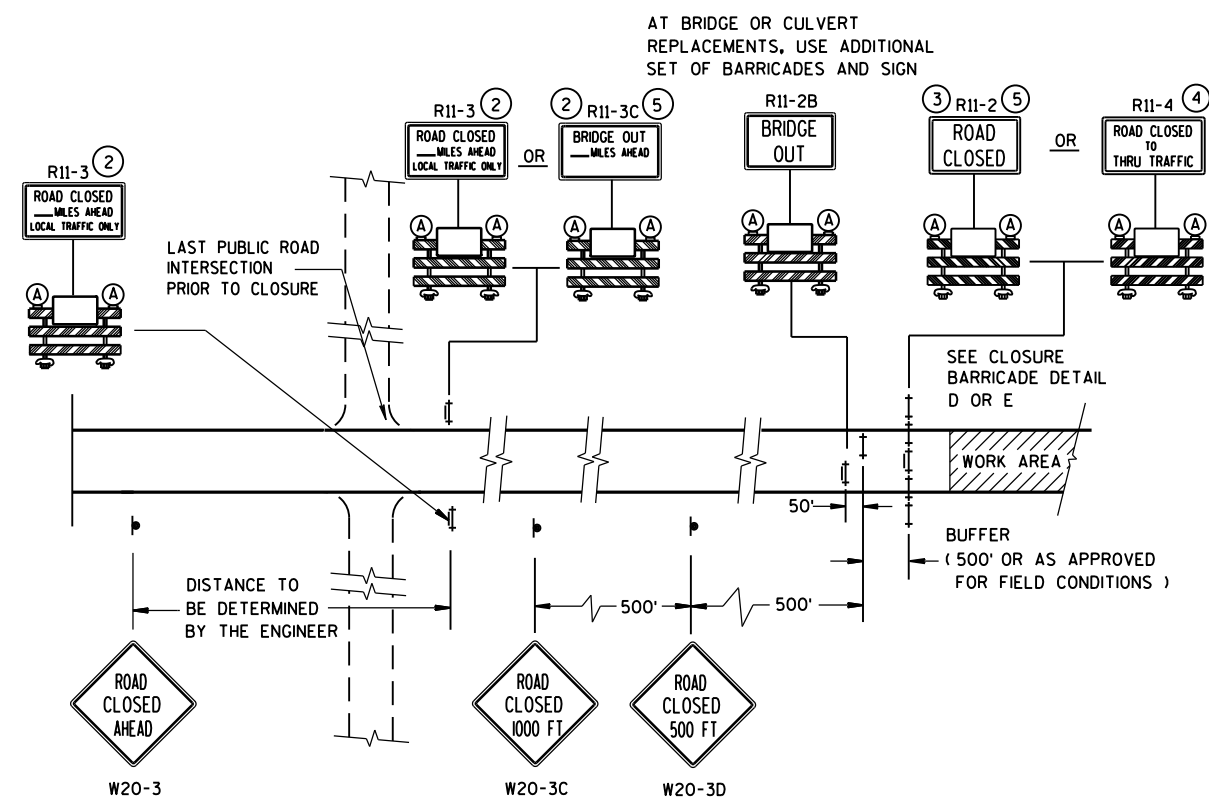
DETAIL A

MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE GREATER THAN 1/2 MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)
















WORK ZONE LESS THAN 1/2 MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

SPEED LIMIT (MPH)	"STOP AHEAD" ADVANCE WARNING DISTANCE (F T)
25	200
30	200
35	350
40	350
45	500
50	550
55	750

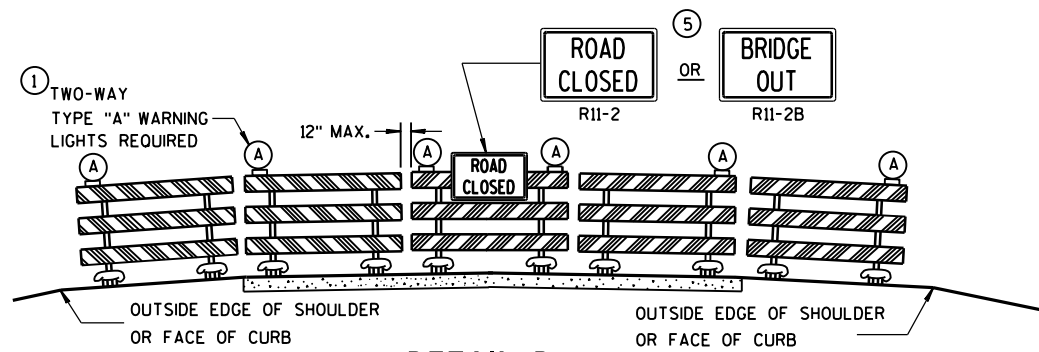
- # LEGEND
-  SIGN ON PERMANENT SUPPORT
-  TYPE III BARRICADE
-  TYPE III BARRICADE WITH ATTACHED SIGN
-  TYPE "A" WARNING LIGHT (FLASHING)
-  WORK AREA
-  M4-8
 M3-X
-  M1-4 OR  M1-5A OR  M1-6
-  M05-1 OR  M06-1
-  FLAGS, 16" X 16" MIN., (ORANGE)

SEE SDD 15C2-SHEET "b"
FOR GENERAL NOTES
AND FOOTNOTES ① THROUGH ⑦

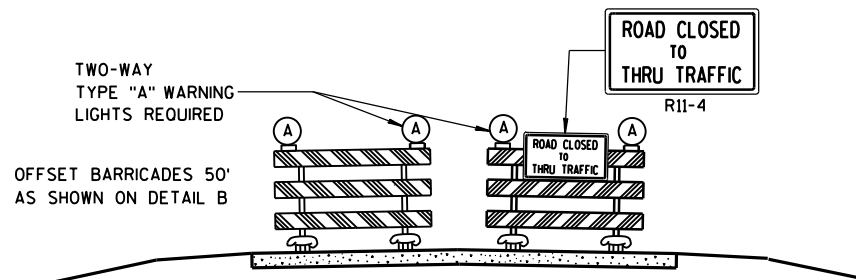
BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

Sept. 2015	/S/ Peter Amakobe Atepe
DATE	STATEWIDE WORK ZONE TRAFFIC
FHWA	SAFETY ENGINEER



DETAIL D
ROAD CLOSURE BARRICADE DETAIL
APPROACH VIEW



DETAIL E
LANE CLOSURE BARRICADE DETAIL
APPROACH VIEW

SEE SDD 15C2-SHEET "a" FOR LEGEND

GENERAL NOTES

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

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

BARRICADES THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED UPON COMPLETION OF THE OPERATION OR, FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

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

ALL TYPE III BARRICADES SHALL HAVE RAILS REFLECTORIZED ON BOTH FACES. STRIPES SHALL BE PROPERLY SLOPED DOWN TOWARD THE TRAFFIC SIDE OR AS SHOWN IN THE ROAD CLOSURE BARRICADE DETAIL D FOR FULL ROAD CLOSURES.

TYPE "A" LOW-INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

THE R11-2, R11-3, M4-9, R11-4 AND R10-61 SIGNS PLACED ON BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE OR BOTTOM RAILS.

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

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:

R11-2 SHALL BE 48" X 30".

R11-3, R11-4 AND R10-61 SHALL BE 60" X 30".

M4-9 SHALL BE 30" X 24".

M3-X SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS.)

M4-8 SHALL BE 24" X 12". (30" X 15" IF NEEDED TO MATCH EXISTING SIGNS.)

M1-4, M1-5A, AND M1-6 SHALL BE 24" X 24". (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS.)

M05-1 AND M06-1 SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)

D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.

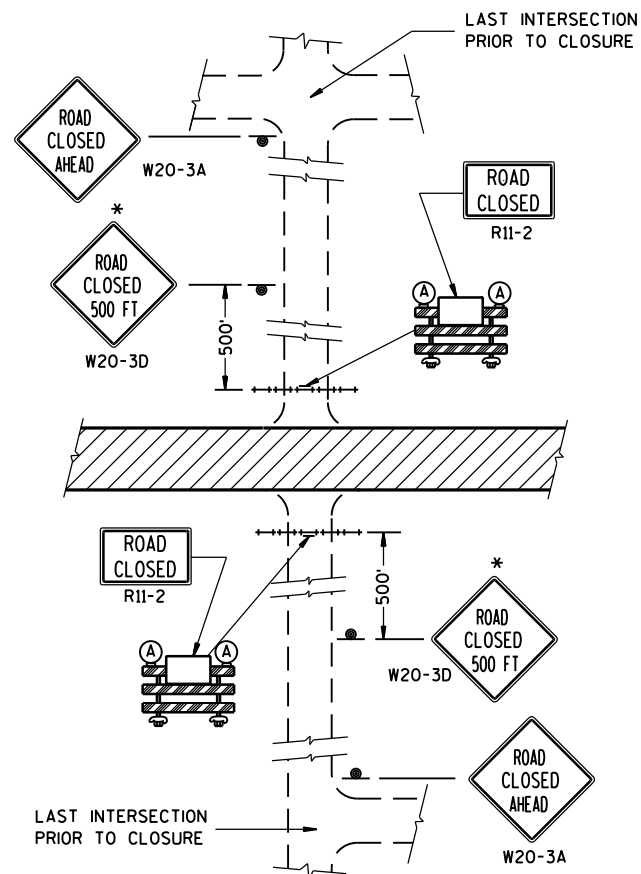
R1-1 SHALL BE 36" X 36".

- 1 TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8-FOOT LIGHT SPACING).
- 2 THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT INTERSECTION.
- 3 FOR ROAD CLOSURE WITHOUT LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL D.
- 4 FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT, SEE LANE CLOSURE BARRICADE DETAIL E.
- 5 FOR BRIDGE OR CULVERT REPLACEMENTS, SUBSTITUTE "BRIDGE OUT" INSTEAD OF "ROAD CLOSED" ON R11-2 AND R11-3 SIGNS.
- 6 INSTALL DETOUR AND COMMUNITY GUIDE SIGNS AND ARROWS ONLY IF SPECIFIED IN THE CONTRACT. IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. MODIFY EXISTING SIGNS WHERE POSSIBLE. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. IF DETOUR SIGNS ARE BEING INSTALLED BY OTHERS, PLACE THE CONTRACTED TRAFFIC CONTROL SIGNS TO ALLOW FOR PLACEMENT OF ALL WARNING, DETOUR AND GUIDE SIGNS AS SHOWN.
- 7 "EAST" CARDINAL DIRECTION MARKERS AND RIGHT TURN ARROWS ARE SHOWN. USE OTHER CARDINAL DIRECTIONS AND ARROWS AS APPROPRIATE.

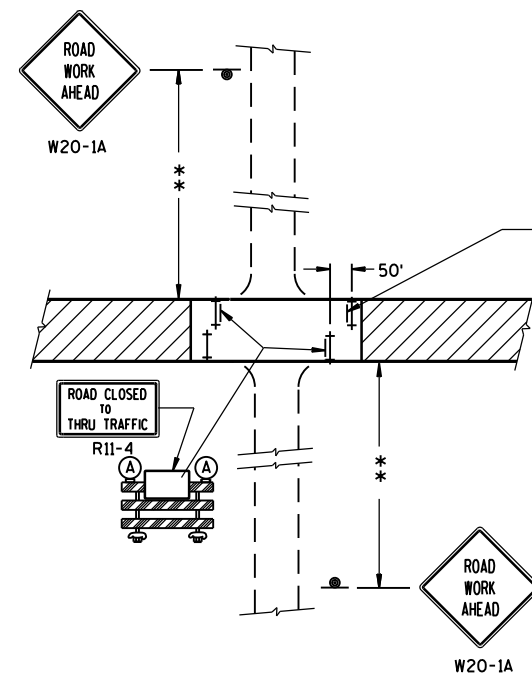
BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

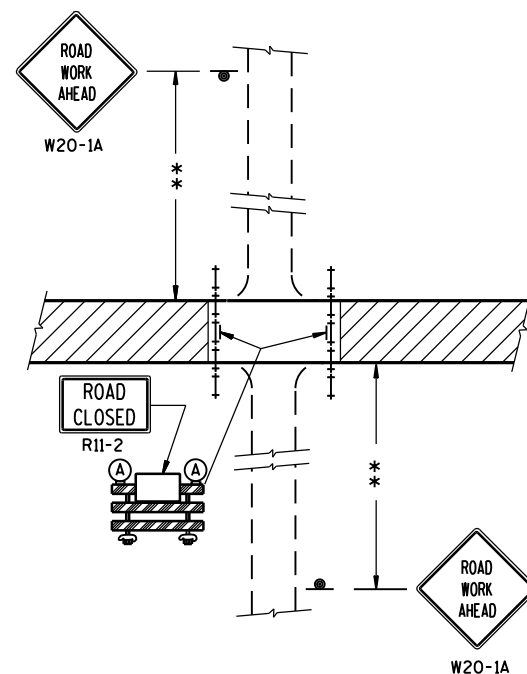
Sept. 2015 /S/ Peter Amokobe Atepe
DATE STATEWIDE WORK ZONE TRAFFIC
FHWA SAFETY ENGINEER



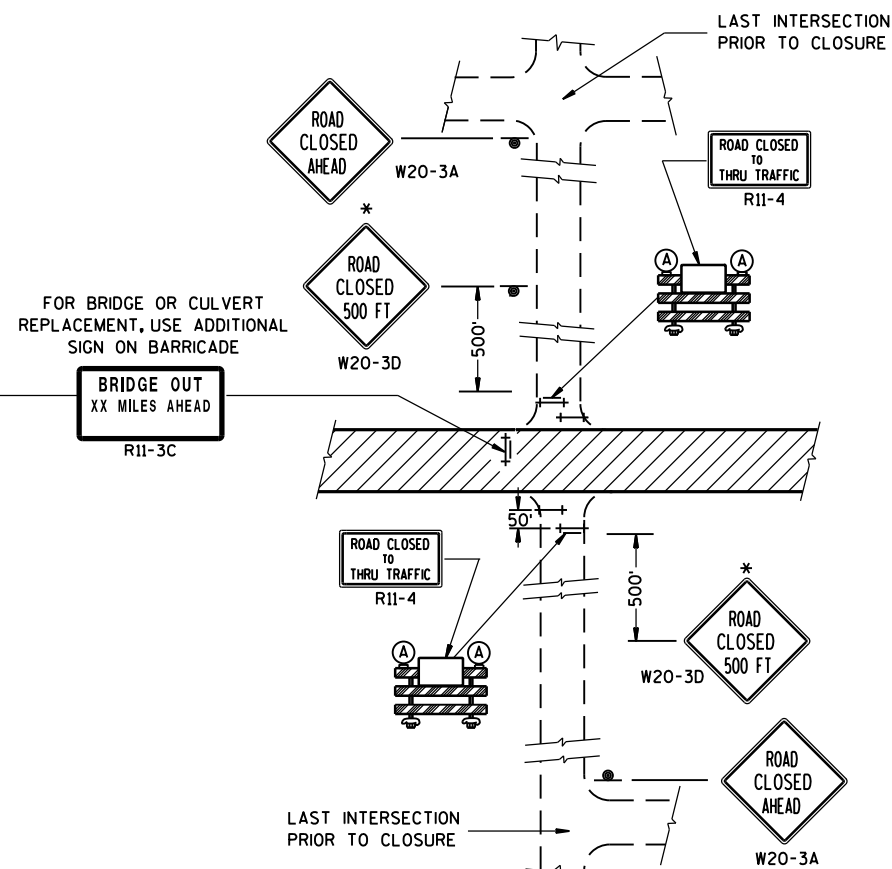
DETAIL 1
(NO ACCESS TO PROJECT)



DETAIL 3
(PUBLIC CROSS-TRAFFIC MAINTAINED. CONTRACTOR, LOCAL BUSINESS AND RESIDENT ACCESS).



DETAIL 2
(PUBLIC CROSS-TRAFFIC MAINTAINED.
NO ACCESS TO PROJECT).



DETAIL 4
(CONTRACTOR, LOCAL BUSINESS AND
RESIDENT ACCESS TO PROJECT)

GENERAL NOTES

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

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

IF A "STOP" SIGN MUST BE REMOVED FOR A WORK OPERATION, A TEMPORARY "STOP" SIGN SHALL BE PLACED PRIOR TO THE SIGN REMOVAL, OR A FLAGGER SHALL BE PROVIDED UNTIL THE SIGN IS RE-ESTABLISHED.

BARRICADES THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED UPON COMPLETION OF THE OPERATION OR, FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

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

ALL TYPE III BARRICADES SHALL HAVE RAILS REFLECTORIZED ON BOTH FACES. STRIPES SHALL BE PROPERLY SLOPED DOWN TOWARD THE TRAFFIC SIDE OR AS SHOWN IN THE ROAD CLOSURE BARRICADE DETAIL D FOR FULL ROAD CLOSURES.

TYPE "A" LOW-INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

THE R11-2, R11-3 AND R11-4 SIGNS PLACED ON BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE OR BOTTOM RAILS.

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:

R11-2 SHALL BE 48" X 30".

R11-4 AND R11-3 SHALL BE 60" X 30".

*OMIT THE "ROAD CLOSED 500 FT." SIGN IF THE LAST INTERSECTION IS 500 FT. OR LESS FROM THE WORK ZONE.

**500' MAX. OR AT LAST INTERSECTION WHICHEVER IS CLOSER.

LEGEND

- ⊙ SIGN ON PERMANENT SUPPORT
- ⊢ TYPE III BARRICADE
- ⊢ TYPE III BARRICADE WITH ATTACHED SIGN
- Ⓐ TYPE "A" WARNING LIGHT (FLASHING)
- ▨ WORK AREA

BARRICADES AND SIGNS FOR SIDEROAD CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

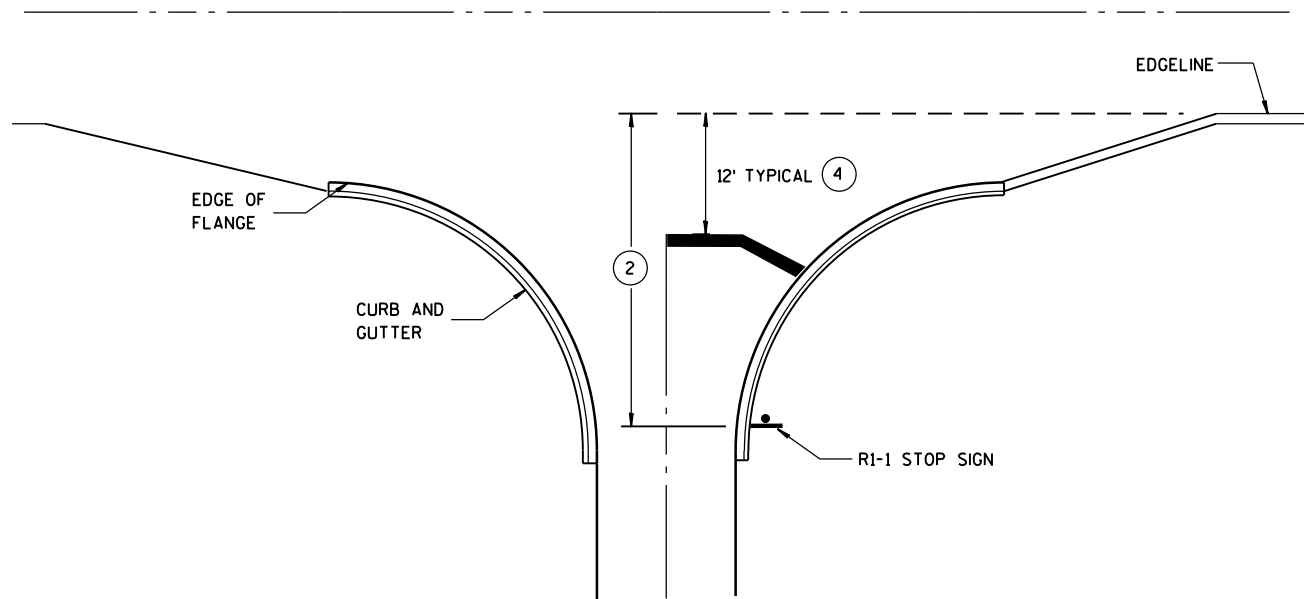
APPROVED

Sept. 2015

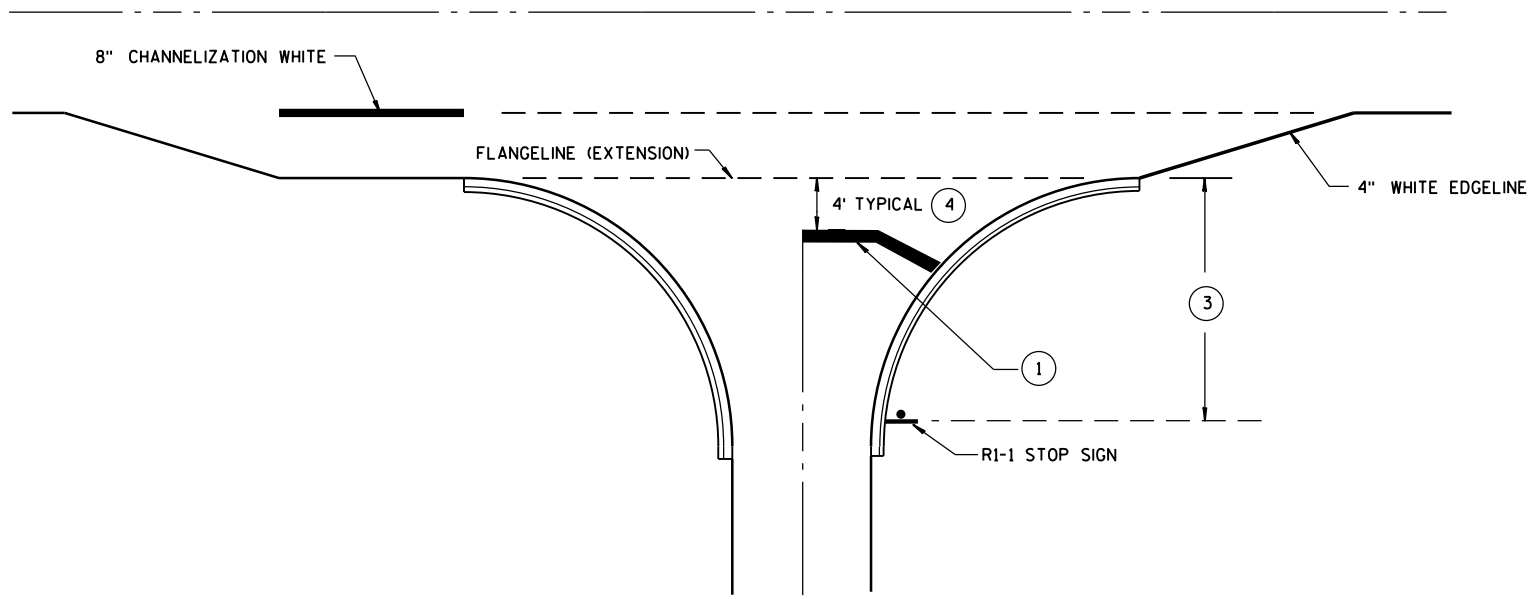
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FHWA

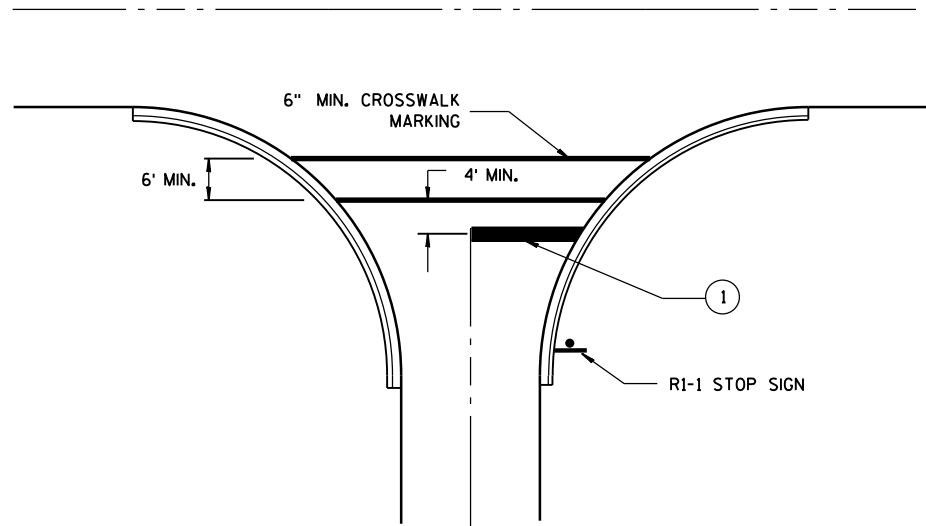
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZONE TRAFFIC
SAFETY ENGINEER



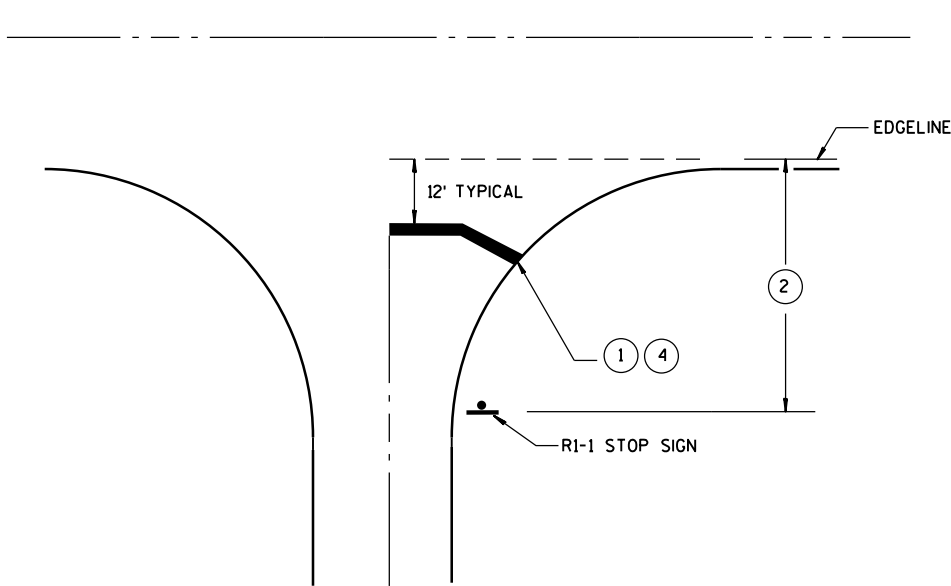
TYPICAL STOP LINE PAVEMENT MARKING
WITH CURB AND GUTTER



TYPICAL STOP LINE PAVEMENT MARKING
FOR SIDEROADS WITH RIGHT TURN LANE



TYPICAL STOP LINE PAVEMENT MARKING
FOR SIDEROADS WITH CROSSWALK MARKING



TYPICAL STOP LINE PAVEMENT MARKING
WITHOUT CURB AND GUTTER

GENERAL NOTES

- 1 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE PROJECT ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
- 2 IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGE LINE THAN NO STOP LINE IS REQUIRED.
- 3 IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGELINE EXTENSION THAN NO STOP LINE IS REQUIRED.
- 4 MOVE CLOSER TO EDGE OF TRAVEL LANE AS NEEDED FOR VISIBILITY AND SIGHT LINES. (NO CLOSER THAN 4 FEET).

STOP LINE AND CROSSWALK
PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4-18-2016 /S/ Matthew R. Rauch
DATE STATE SIGNING AND MARKING ENGINEER
FHWA

Notes



Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

<http://www.dot.wisconsin.gov>