PROJECT ID: WITH: N/A

6-00-

FEB 2017

ORDER OF SHEETS

Section No. 1

Section No. 2 Typical Sections and Details Includes Erosion Control Plans)

Section No. 3 Estimate of Quantities Miscellaneous Quantities Section No. 3

Right of Way Plat

Section No. 9 Computer Earthwork Data

Section No. 9 Cross Sections

PROJECT LOCATION

2036 = 1,111

= 8.5

= 30

= 57/43

= 10.6%

= 240,900

PROFILE GRADE LINE

ORIGINAL GROUND

SPECIAL DITCH

UTILITIES

ELECTRIC

FIBER OPTIC

SANITARY SEWER

UTILITY PEDESTAL

TELEPHONE POLE

Ŀ

STORM SEWER

TELEPHONE

POWER POLE

GRADE ELEVATION

MARSH OR ROCK PROFILE

CULVERT (Profile View)

(To be noted as such)

DESIGN DESIGNATION

CONVENTIONAL SYMBOLS

LIMITED HIGHWAY EASEMENT

PROPOSED OR NEW R/W LINE

EXISTING RIGHT OF WAY

CORPORATE LIMITS

PROPERTY LINE

SLOPE INTERCEPT

REFERENCE LINE

EXISTING CULVERT

(Box or Pipe)

MARSH AREA

PROPOSED CULVERT

COMBUSTIBLE FLUIDS

WOODED OR SHRUB AREA

LOT LINE

A.A.D.T.

A.A.D.T. D.H.V.

DESIGN SPEED

D.D.

ESALS

TOTAL SHEETS = 78

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

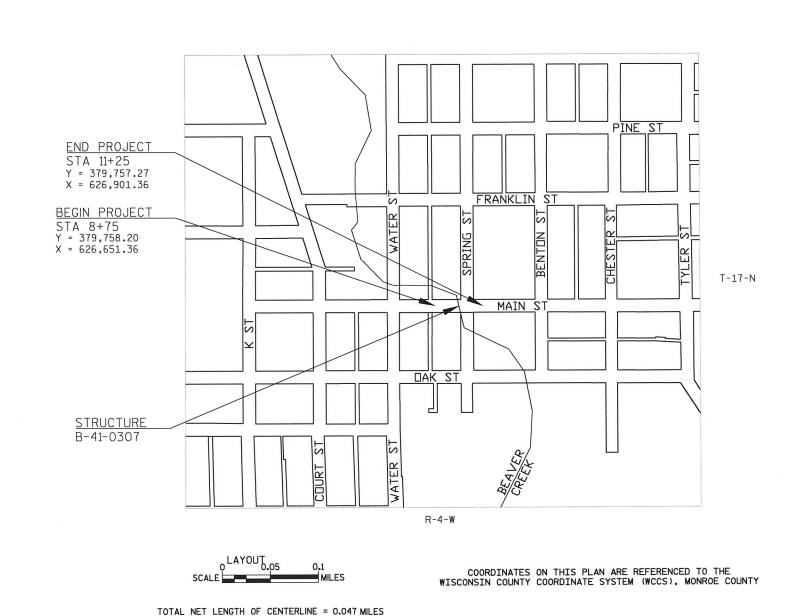
PLAN OF PROPOSED IMPROVEMENT

CITY OF SPARTA, EAST MAIN STREET

(BEAVER CREEK BRIDGE B-41-0307)

LOCAL STREET **MONROE COUNTY**

STATE PROJECT NUMBER 7016-00-73



FEDERAL PROJECT STATE PROJECT PROJECT CONTRACT WISC 2016052 7016-00-73

> ACCEPTED FOR CITY OF SPARTA

ORIGINAL PLANS PREPARED BY

PROFESSIONAL SERVICES

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

PREPARED BY

MSA PROFESSIONAL SERVICES, INC. MSA PROFESSIONAL SERVICES, INC

Management Consultant KL ENGINEERING

STANDARD ABBREVIATIONS

AC	ACRE	F/L	FLOW LINE	SALV	SALVAGED
AGG	AGGREGATE	FT	FOOT	SAN	SANITARY SEWER
AGG <	ANGLE	GN	GRID NORTH	SECT	SECTION
ASPH	· · · · · · · · · · · · · · · · · · ·	HR	HANDICAP RAMP	SHLDR	SHOULDER
ASPH AC	ASPHALTIC	HT	HEIGHT	SW	SIDEWALK
	ASPHALT CEMENT	CWT	HUNDREDWEIGHT	S	SOUTH
ADT	AVERAGE DAILY TRAFFIC	HYD	HYDRANT	SB	
B & B	BALLED AND BURLAPPED	IN DIA	INCH DIAMETER		SOUTHBOUND
ВМ	BENCH MARK	INL	INCH DIAMETER INLET	SPECS	SPECIFICATIONS
CB	CATCH BASIN	ID	INSIDE DIAMETER	SQ	SQUARE
€ OR C/L	CENTER LINE	I	INTERSECTION ANGLE	SF OR SQ FT	SQUARE FEET
C - C	CENTER TO CENTER	IE	INVERT ELEVATION	SY	SQUARE YARD
CONC	CONCRETE	IP		SSPRC	STORM SEWER
CO	COUNTY		IRON PIPE OR PIN		PIPE REINFORCED CONCRETE
CTH	COUNTY TRUNK HIGHWAY	JCT	JUNCTION	STD	STANDARD
CY	CUBIC YARD	L	LENGTH OF CURVE	SDD	STANDARD DETAIL DRAWINGS
CULV	CULVERT	LF	LINEAR FOOT	STH	STATE TRUNK HIGHWAYS
CP	CULVERT PIPE	LC	LONG CHORD OF CURVE	STA	STATION
CPRC	CULVERT PIPE	LCB	LONG CHORD BEARING	SS	STORM SEWER
	REINFORCED CONCRETE	LS	LUMP SUM	Т	TANGENT
C & G	CURB AND GUTTER	MH	MANHOLE	TEL	TELEPHONE
D	DEGREE OF CURVE	N	NORTH	TEMP	TEMPORARY
DHV	DESIGN HOUR VOLUME	Υ	NORTH GRID COORDINATE	TLE	TEMPORARY LIMITED EASEMENT
DTA OR Ø	DIAMETER	0E	OUTLET ELEVATION	Т	TON
DIST	DISTRICT	OL	OUT LOT	TC	TOP OF CURB
DWY	DRIVEWAY	OD	OUTSIDE DIAMETER	TN	TOWN
E	EAST	OH	OVERHEAD LINES	TRANS	TRANSITION
Χ	EAST GRID COORDINATE	PAVT	PAVEMENT	T	TRUCKS (percent of)
EB	EASTBOUND	PLE	PERMANENT LIMITED EASEMENT	TYP	TYPICAL
ELEC	ELECTRIC	PC	POINT OF CURVATURE	UNCL	UNCLASSIFIED
EL OR ELEV	ELEVATION	ΡΙ	POINT OF INTERSECTION	USH	UNITED STATES HIGHWAY
EMB	EMBANKMENT	PT	POINT OF TANGENCY	VAR	VARIABLE
EW	ENDWALL	PCC	PORTLAND CEMENT CONCRETE	VERT	VERTICAL
ESALS	EQUIVALENT SINGLE	LB	POUND	VC	VERTICAL CURVE
	AXLE LOADS	PE	PRIVATE ENTRANCE	VOL	VOLUME
EXC	EXCAVATION	R OR RAD	RADIUS	WM	WATER MAIN
EBS	EXCAVATION BELOW	RR	RAILROAD	WV	WATER VALVE
	SUBGRADE	R	RANGE	W	WEST
EXIST	EXISTING	R OR R/L	REFERENCE LINE	WB	WESTBOUND
EXP	EXPANSION	REQD	REQUIRED	YD	YARD
F-F	FACE TO FACE	RT	RIGHT	10	TAND
FERT	FERTILIZER	R / W	RIGHT-OF-WAY		

MSA DESIGN CONTACT

MSA PROFESSIONAL SERVICES, INC. ATTN: JOSH SWENO. PE 1230 SOUTH BOULEVARD BARABOO, WI 53919 608-355-8852 JSWENO@MSA-PS.COM

CITY OF SPARTA

ATTN: LYNN JEROME, DPW 201 W OAK STREET SPARTA, WI 54656 608-269-4340 EXT. 228 DPW@SPARTAWISCONSIN.ORG

DNR LIAISON

WISCONSIN DEPARTMENT OF NATURAL RESOURCES ATTN: KAREN KALVELAGE DNR SERVICE CENTER 3550 MORMON COULEE ROAD LA CROSSE, WI 54601 608-785-9115 KAREN.KALVELAGE@WISCONSIN.GOV

UTILITIES

COMMUNICATION: **CENTURYLINK** ATTN: BRET CLARK 311 S. COURT STREET SPARTA, WI 54656 608-269-0819 BRET.CLARK@CENTURYLINK.COM

> WATERMAIN, SANITARY SEWER, & STORM SEWER: CITY OF SPARTA ATTN: LYNN JEROME, DPW 201 W OAK STREET SPARTA, WI 54656 608-269-4340 EXT. 228 DPW@SPARTAWISCONSIN.ORG

ELECTRIC:

XCEL ENERGY INC.

SPARTA, WI 54656

608-789-3677 EXT. 14

ATTN: KAYE CROOK

1003 SOUTH BLACK RIVER STREET

KAYE.M.CROOK@XCELENERGY.COM

COMMUNICATION: CHARTER ATTN: PERRY MCCLELLAN 1228 12TH AVENUE SOUTH ONALASKA, WI 54650 715-370-7140 PERRY, MCCLELLAN@CHARTER, COM

GAS:

WE ENERGIES

715-421-7256

ATTN: TRAVIS KAHL

1921 8TH STREET SOUTH

WISCONSIN RAPIDS, WI 54494

TRAVIS.KAHL@WE-ENERGIES.COM

* NOT A MEMBER OF DIGGERS HOTLINE



www.DiggersHotline.com

GENERAL NOTES

THE LOCATIONS OF EXISTING PUBLIC AND PRIVATE UTILITY INSTALLATIONS AND STORM DRAINS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS AND STORM DRAINS IN THE AREA THAT ARE NOT SHOWN. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING THOSE UTILITIES.

ALL OPENINGS OR HOLES BELOW SUBGRADE RESULTING FROM REMOVALS OR ABANDONMENTS SHALL BE BACKFILLED WITH GRANULAR MATERIAL INCIDENTAL TO THE REMOVING BID ITEM.

ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO USGS DATUM NAVD 88 (2007). BENCHMARKS WERE LOCATED IN THE FIELD USING GPS TECHNOLOGY.

ALL CURB & GUTTER RADII ARE MEASURED TO THE FLAG LINE.

CURB & GUTTER PLAN GRADES ARE AT THE FLAG LINE UNLESS OTHERWISE NOTED.

THE 3½" HMA PAVEMENT 4 LT 58-28 S SHALL CONSIST OF A 1½" UPPER LAYER AND A 1¾" LOWER LAYER. USE 12.5MM NOMINAL AGGREGATE.

TRAVERSE CONCRETE JOINT DESIGN AND FIELD LAYOUT TO BE PAID FOR UNDER "CONCRETE PAVEMENT JOINT LAYOUT".

EROSION CONTROL DEVICES AS SHOWN ON THE EROSION CONTROL SHEET ARE AT SUGGESTED LOCATIONS. THE EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER. ALL EROSION CONTROL DEVICES SHALL BE MAINTAINED UNTIL SUCH TIME AS THE ENGINEER DETERMINES THE DEVICE IS NO LONGER NECESSARY.

SILT FENCE AND TURBIDITY BARRIER TO BE PLACED AS SHOWN ON THE PLAN OR AS DIRECTED BY THE ENGINEER AND IN PLACE PRIOR TO CONSTRUCTION OR BRIDGE REMOVAL.

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

DISTURBED AREAS WITHIN THE RIGHT-OF-WAY AND TLE, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS, SHALL EITHER BE REPLACED WITH SOD OR BE FERTILIZED, SEEDED AND MULCHED AS SHOWN ON THE EROSION CONTROL SHEET AND AS DIRECTED BY THE ENGINEER. OVERSOW PERMANENT SEEDING AREAS WITH TEMPORARY SEED AT 1.5 LBS. PER 1000 SQUARE FEET.

PLOT SCALE: 0.100015

RUNOFF COEFFICIENT TABLE

ROAD

		HYDROLOGIC SOIL GROUP											
		Α			В	}		C			D		
	SLOPE	RANGE	(PERCENT)	SLOPE RANGE (PERCENT)		SLOPE	SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			
LAND USE:	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	
ROW CROPS	.08	.16	.22	.12	.20	.27	.15	.24	.33	.19	.28	.38	
	.22	.30	.38	.26	.34	.44	.30	.37	.50	.34	.41	.56	
MEDIAN STRIP-	.19	.20	.24	.19	.22	.26	.20	.23	.30	.20	.25	.30	
TURF	.24	.26	.30	.25	.28	.33	.26	.30	.37	.27	.32	.40	
SIDE SLOPE-			.25			.27			.28			.30	
TURF			.32			.34			.36			.38	
PAVEMENT:						l .	•			•		•	
ASPHALT						.7095							
CONCRETE						.8095							
BRICK						.7080	•	•					
DRIVES, WALKS						.7585							
ROOFS						.7595	·						
GRAVEL ROADS,	SHOULDE	ERS				.4060							

TOTAL PROJECT AREA = 0.39 ACRES TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.39 ACRES ORDER OF TYPICAL SECTION & DETAIL SHEETS

1. GENERAL NOTES

2. TYPICAL SECTIONS

3. CONSTRUCTION DETAILS

4. EROSION CONTROL

5. PAVING, PAVEMENT MARKING AND PERMANENT SIGNING DETAIL PLAN

6. STORM SEWER

7. CONTROL POINT TIES

PROJECT NO: 7016-00-73 HWY: LOCAL STREET COUNTY: MONROE

PLAN: GENERAL NOTES. ABBREVIATIONS & UTILITIES

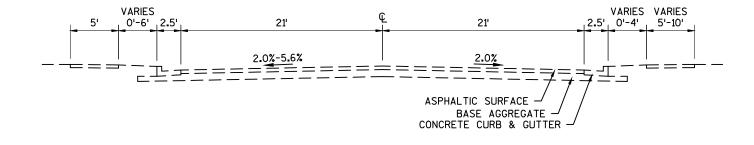
SHEET

FILE NAME : P:\50S\51\00051027\CADD\PLANSHTS\020101_GN.DWG PLOT DATE: 7/19/2016 4:03 PM PLOT BY : JOSHUA SWENO PLOT NAME : E

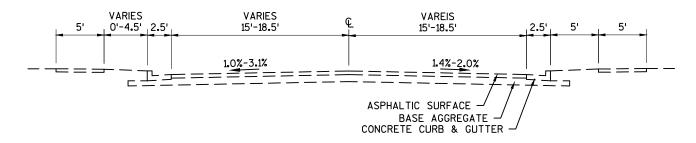
FIELD ENTRANCE

FE

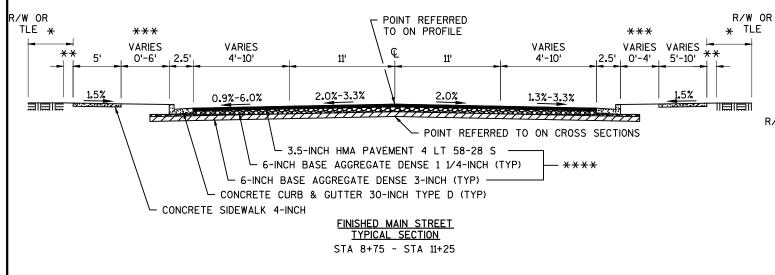




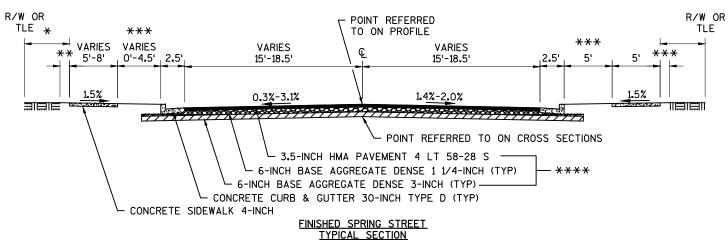
EXISTING MAIN STREET TYPICAL SECTION



EXISTING SPRING STREET TYPICAL SECTION



HWY: LOCAL STREET



STA 20+00.00 - STA 20+85.00

SEEDING TEMPORARY. SEEDING MIXTURE #40. &

FERTILIZER TYPE B LIMITS

* * TOPSOIL, & EROSION MAT URBAN CLASS I, TYPE B

*** SOD

PROJECT NO: 7016-00-73

 $\star\star\star\star$ IN AREAS OF CONCRETE PAVEMENT 8-INCH, USE 3 INCHES OF BASE AGGREGATE DENSE 11/4-INCH OVER 4.5 INCHES OF BASE AGGREGATE DENSE 3-INCH (SEE PAVING PLAN FOR LOCATIONS)

COUNTY: MONROE

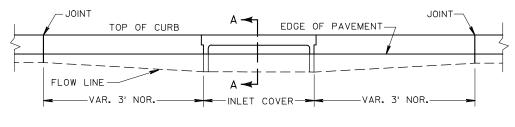
TYPICAL SECTIONS

PLOT BY : JOSHUA SWENO

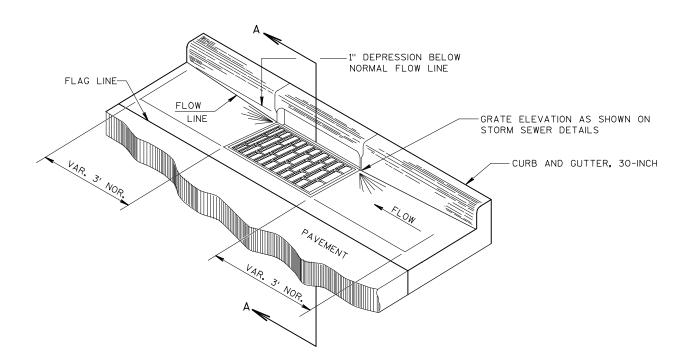
PLOT NAME :

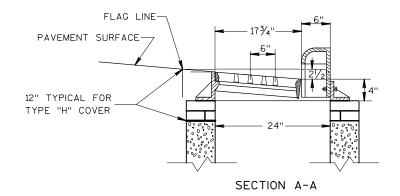
SHEET

E



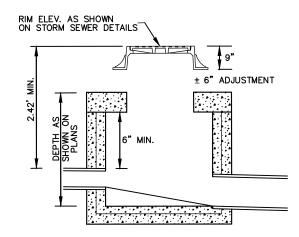
ELEVATION



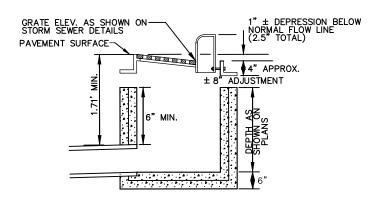


DETAIL OF CURB AND GUTTER AT INLETS

(TYPE 2X3-H INLET SHOWN)



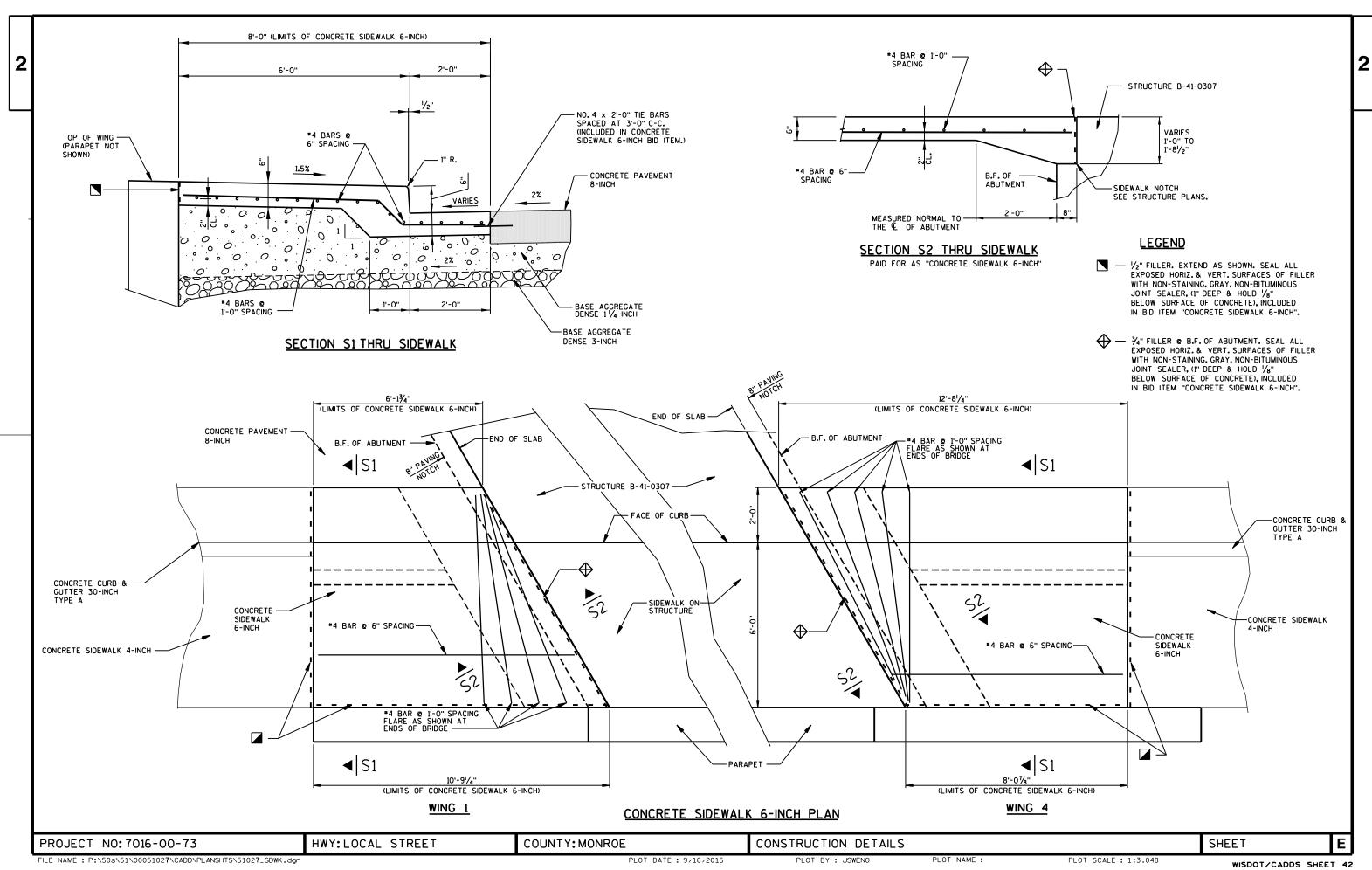
DETAIL FOR COMPUTING MANHOLE ELEVATIONS

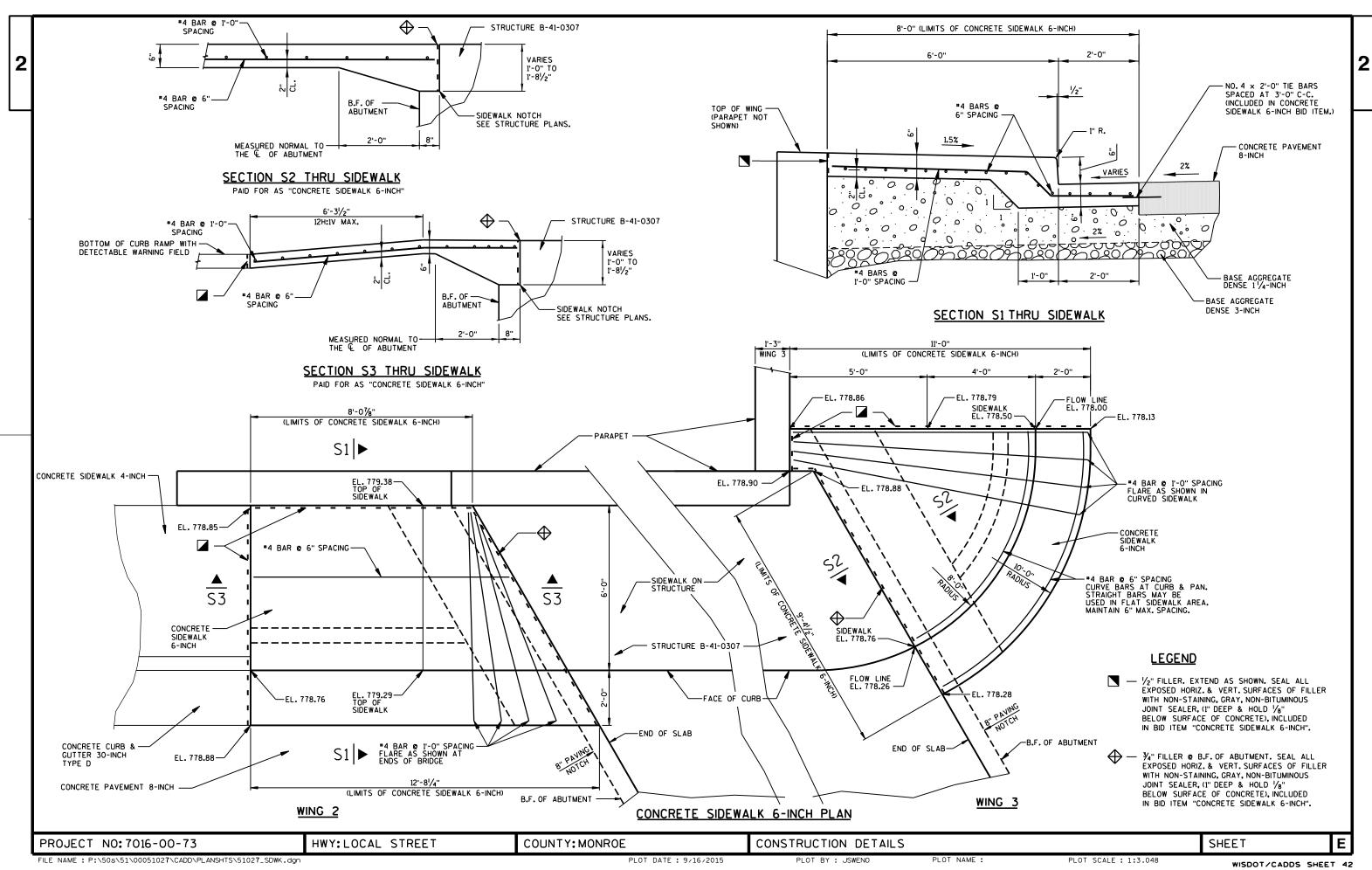


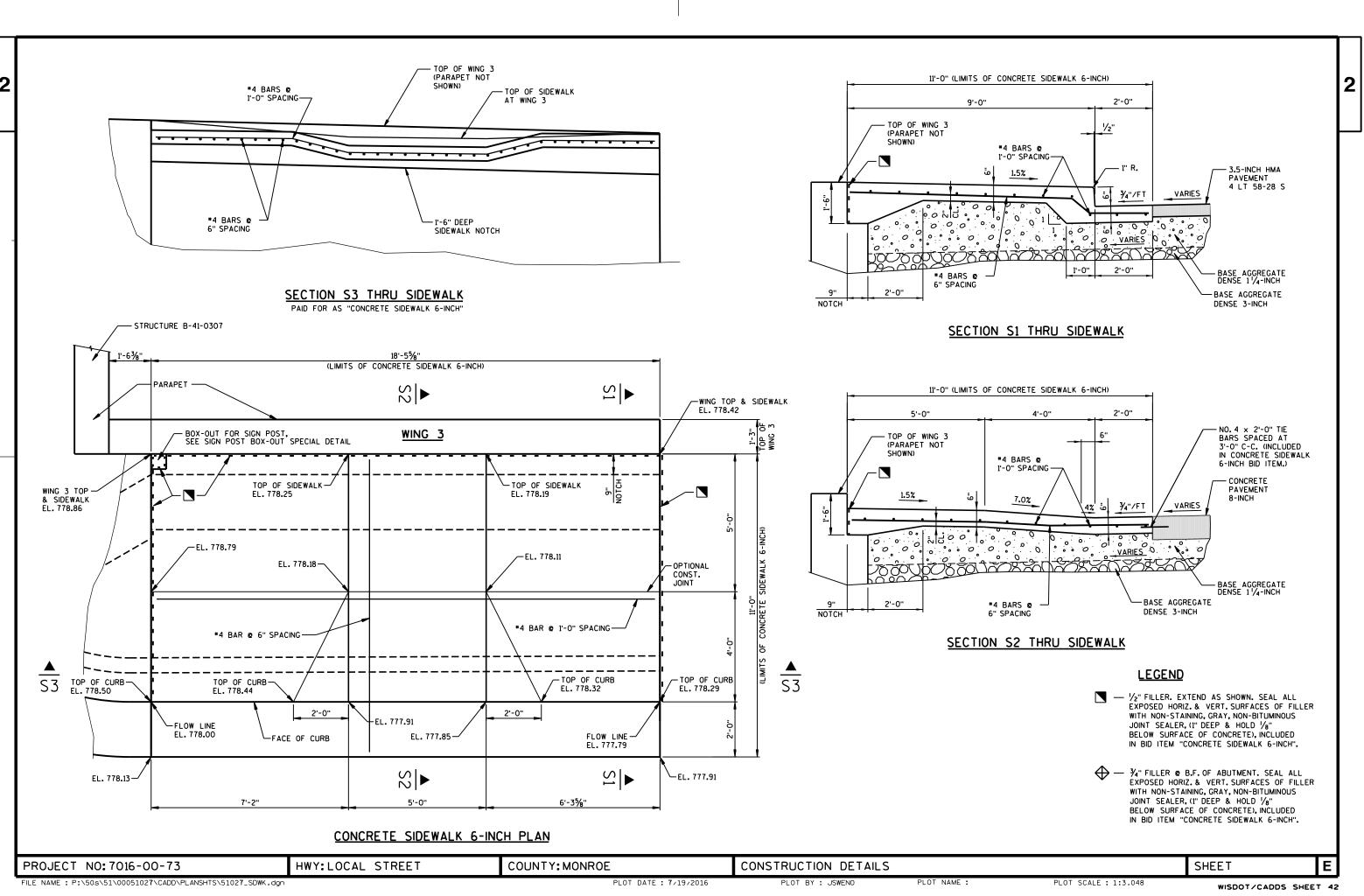
DETAIL FOR COMPUTING INLET ELEVATIONS
INLET COVERS — H

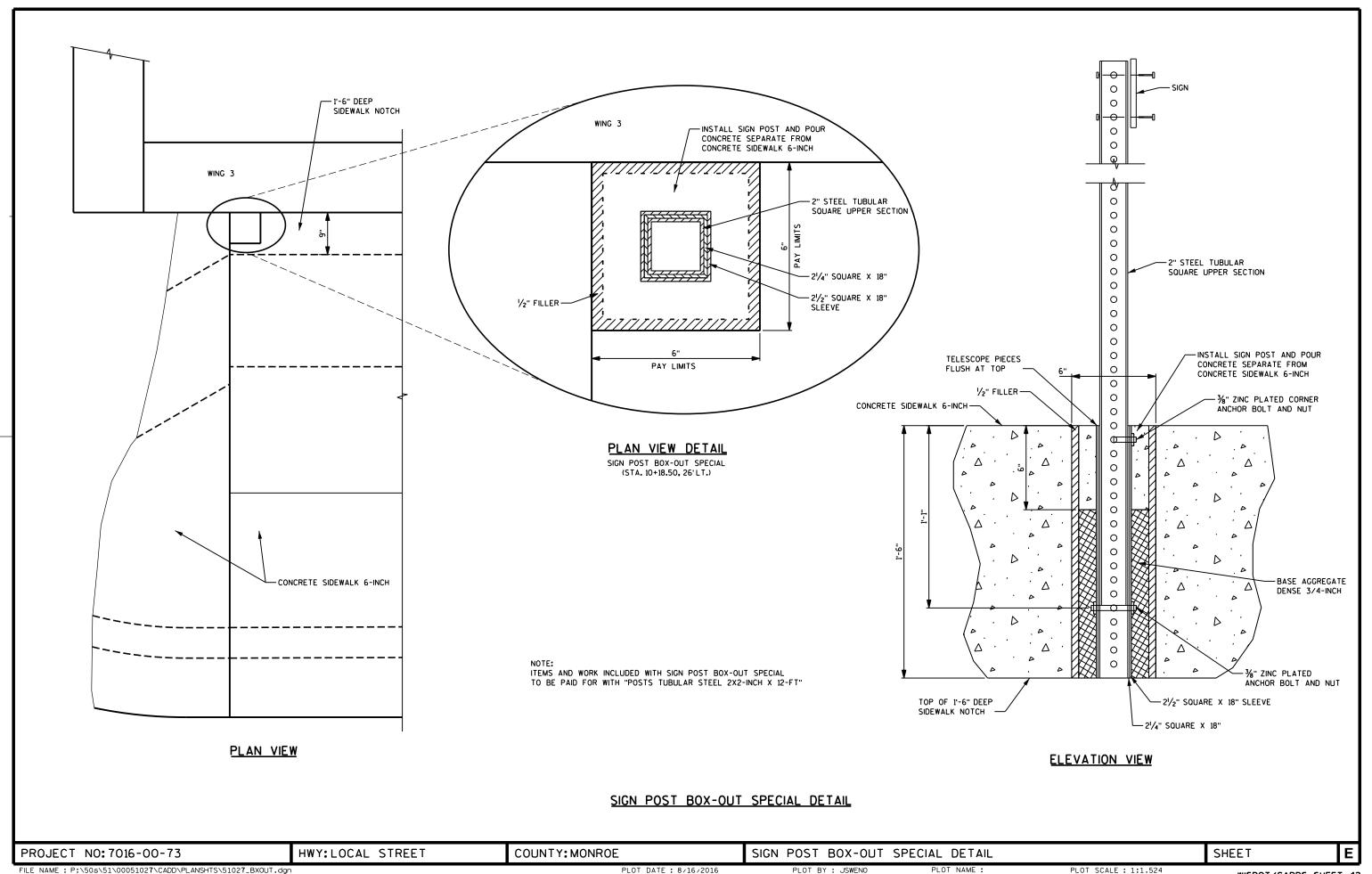
PROJECT NO:7016-00-73 HWY:LOCAL STREET COUNTY:MONROE CONSTRUCTION DETAILS SHEET **E**

FILE NAME : P:\50\$\51\00051027\CADD\PLANSHT\$\021001_CD.DWG PLOT BY : BRAD LEE PLOT NAME : PLOT BY : BRAD LEE PLOT NAME : 42



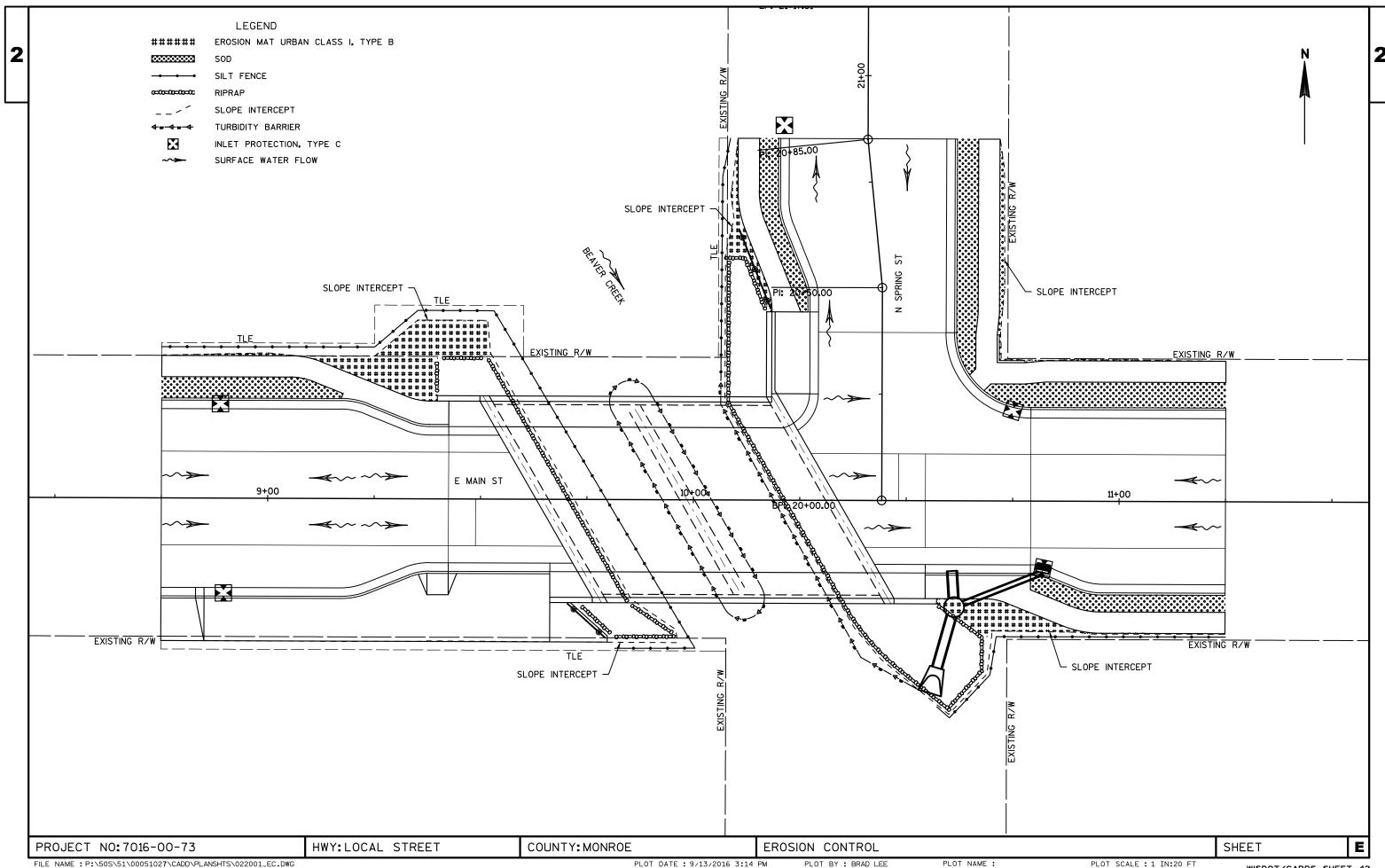


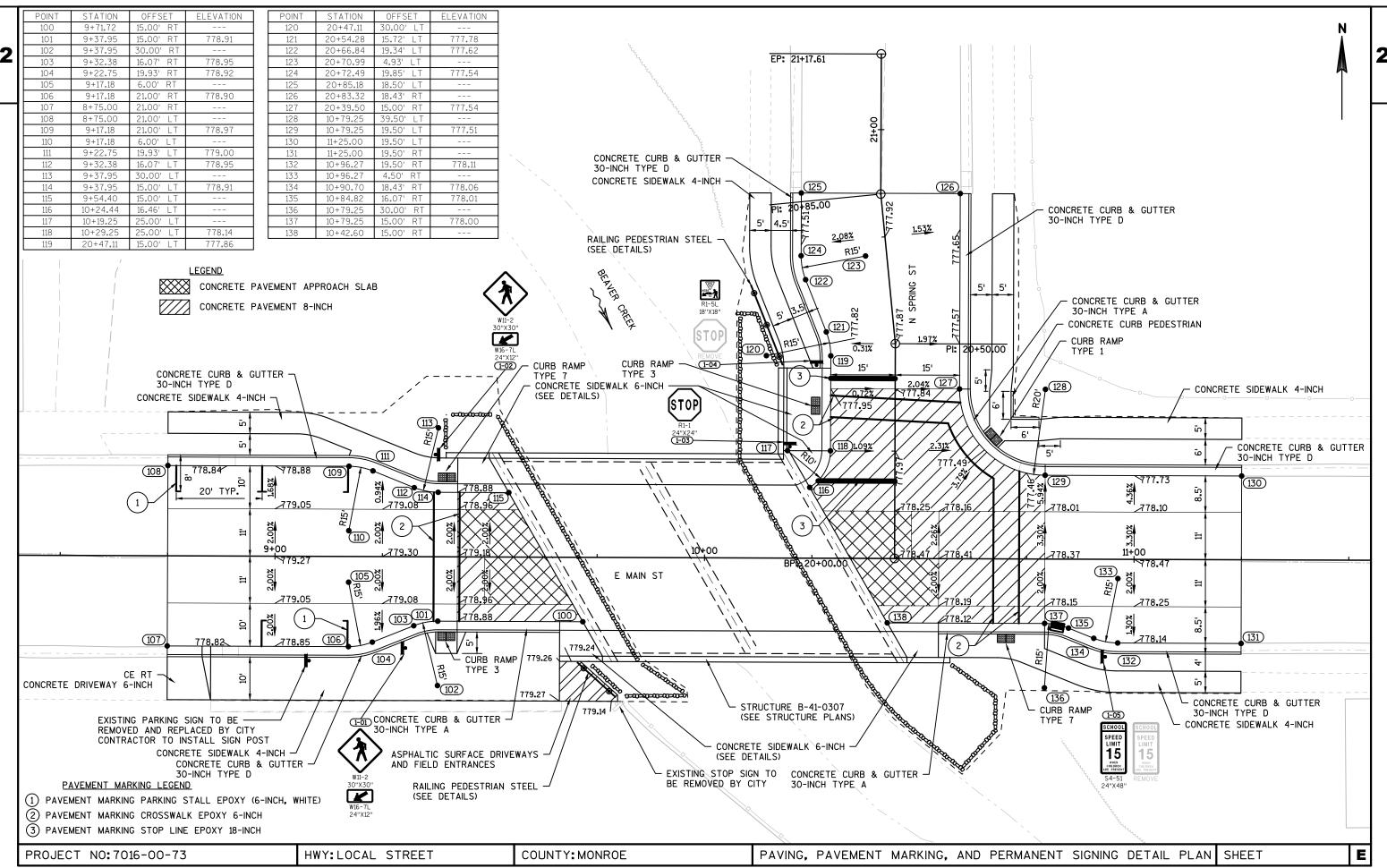


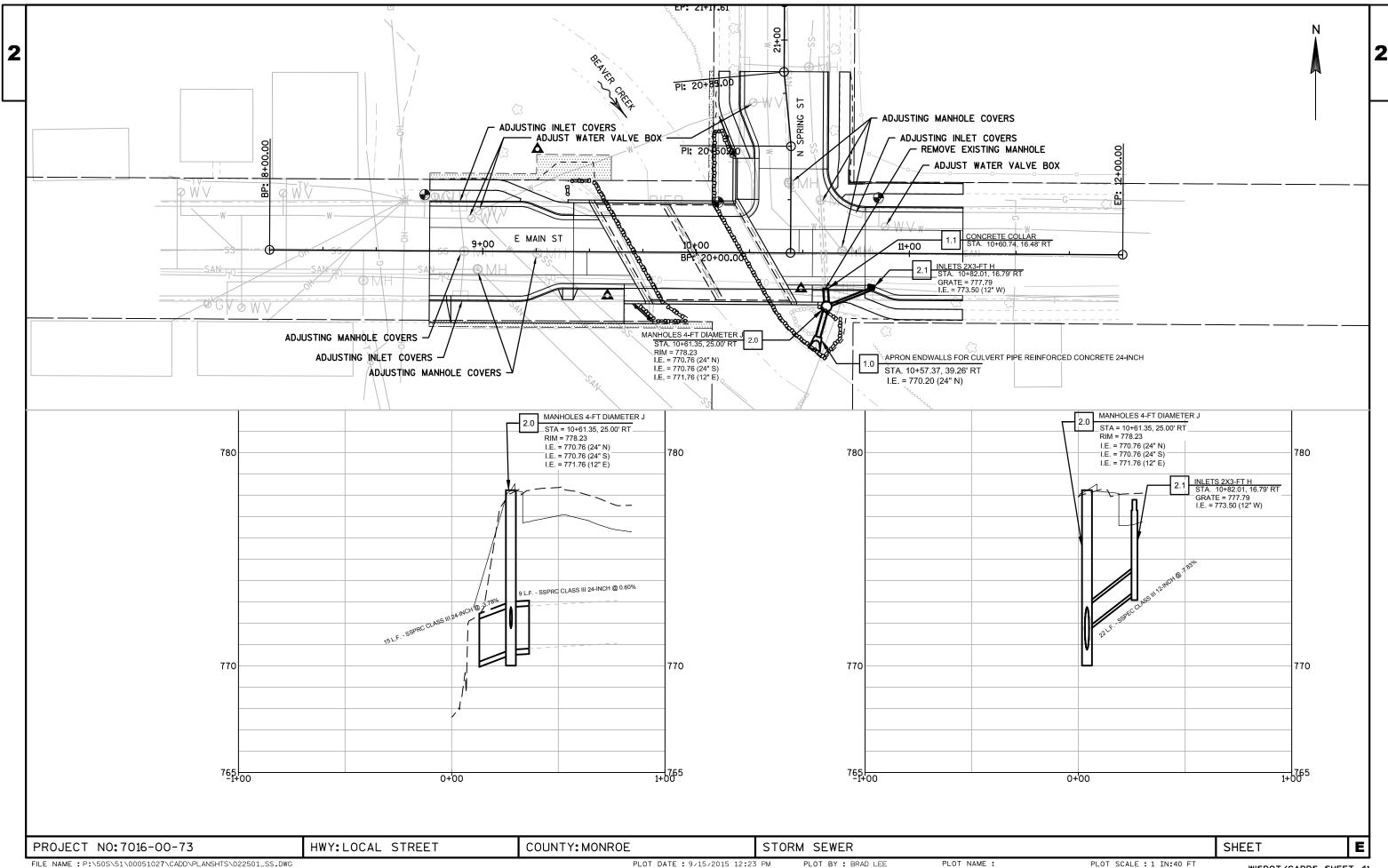


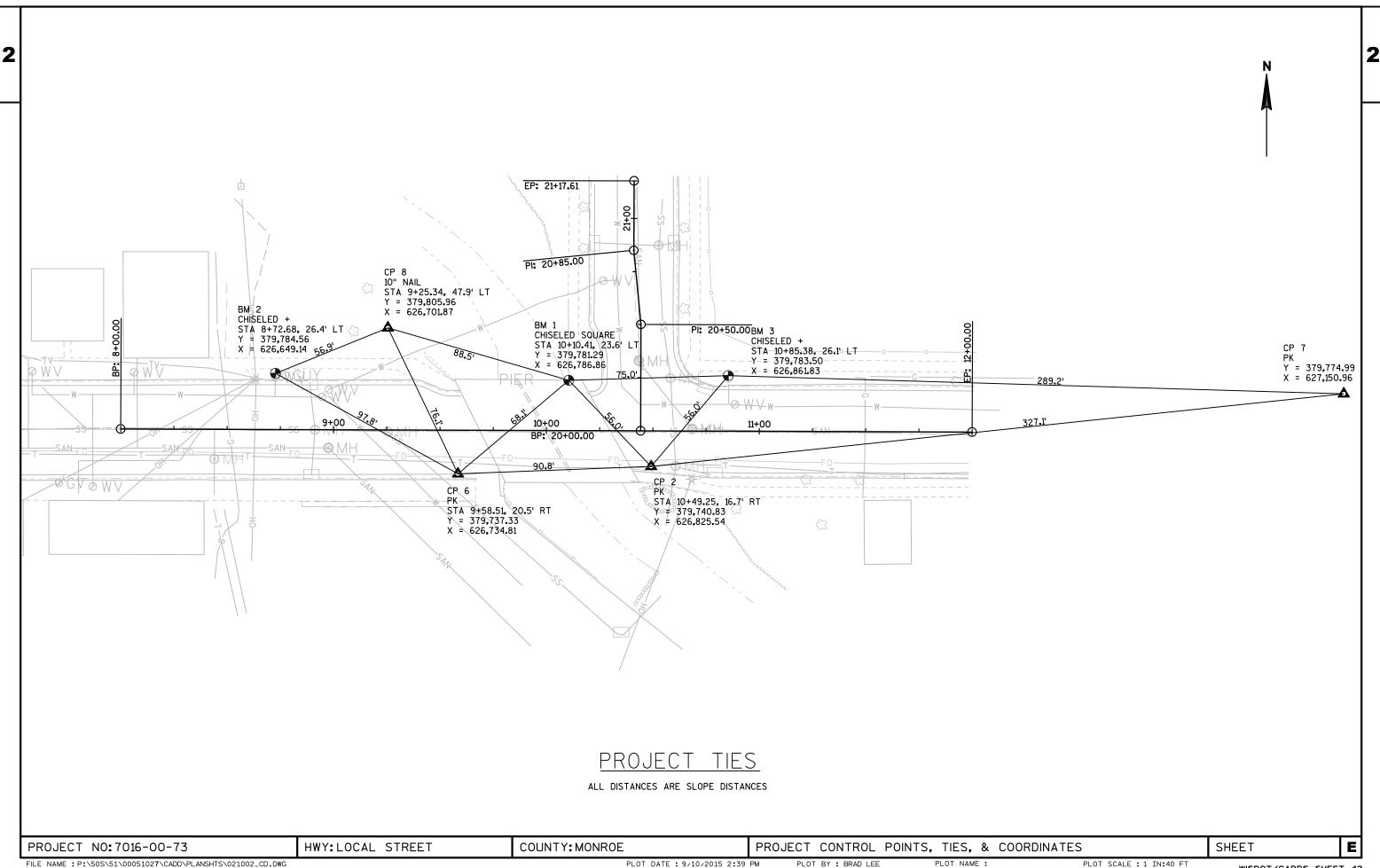
51027_BXOUT.dgn 8/16/2016 10:41:22 AM JSWENO PLUT NAME: PLUT NAME:

20'-0' RAIL PANEL 2'-0" 1) 2" X 11/2" X 36" STRUCTURAL TUBING. BEVEL ENDS AT NO. 6 CONNECTIONS. TYP. END 2" X 2" X $\%_6$ " STRUCTURAL TUBING. CUT BOTTOM OF POST LEVEL. HOLD $\%_6$ " ABOVE BASE PLATE TO ALLOW POST AND BASE PLATE TO BE WELDED TOGETHER. PLACE POST VERTICAL 6 AND CENTERED ON BASE PLATE. (3) BAR 1" X 11/2" PICKETS. PLACE PICKETS VERTICAL, WELD TO NO. 1. (4) BASE PLATE $\frac{1}{2}$ " X 4" X 7" WITH $\frac{3}{4}$ " X $\frac{1}{2}$ " SLOTTED HOLES FOR MASONRY ANCHORS NO. 5. WELD TO NO. 2 AS SHOWN. 6" CENTER TO CENTER \fill masonry anchors type s $\fill \%$, stainless steel anchor bolts, nuts, and washers. Pullout strength shall be 4 kips. Two required per post place normal to plate END OF RAIL STA. 10+10.6, 63.5 LT. $_{\mbox{\scriptsize 6}}$ 2" X 1½" X $_{\mbox{\scriptsize 6}}$ " Structural tubing. Place vertical. Bevel top and bottom ends at 45° and weld to no.1. END OF RAIL—/ STA. 10+18.0, 45.0'LT. 8'-0" 8'-0" CONCRETE BASE FOR -RAILING PEDESTRIAN STEEL (TYP.) GENERAL NOTES ELEVATION - RAILING PEDESTRIAN STEEL RAIL AT END OF WING 3 STRUCTURAL TUBING SHALL CONFORM TO ASTM DESIGNATION A500 GRADE B. PLATES AND BARS SHALL CONFORM TO ASTM DESIGNATION A709 GRADE 36. THE ITEM "RAILING PEDESTRIAN STEEL" SHALL INCLUDE ALL WORK SHOWN, INCLUDING CONCRETE BASES, ANCHORAGES, REINFORCING STEEL, MASONRY ANCHORS TYPE S, GALVANIZING, AND PAINTING. 12'-0" RAIL PANEL FINAL LOCATIONS OF THE "RAILING POSTS", THE CONCRETE BASES FOR STEEL RAILING AND SIDEWALK ELEVATIONS SHALL BE VERIFIED PRIOR TO FABRICATION AND INSTALLATION OF RAILING. 2'-0" 6 TYP. END POST BASE PLATES NO. 4 SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP PANEL AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUT. STEEL SHIMS SHALL BE PROVIDED AND USED UNDER BASE PLATES WHERE REQUIRED FOR ALIGNMENT AND SHALL BE GALVANIZED. PLACE $\frac{1}{4}$ " ϕ vent holes located in bottom of horizontal rails at rail posts and at low end of railing. Vent holes shall be drilled in post and rail members as required to facilitate galvanizing. CENTER TO CENTER FND OF RAII STA. 9+79.4, 32.5' RT. ALL MATERIALS EXCEPT NO.5 SHALL BE GALVANIZED AFTER FABRICATION. PRIOR TO GALVANIZING, THE STEEL RAILING SHALL BE GIVEN A NO.6 BLAST CLEANING PER SSPC SPECIFICATIONS. XXX $\times\!\!\!\times\!\!\!\!\times$ PAINT OVER GLAVANIZING WITH AN APPROVED TIE COAT AND TOP COAT AS SPECIFIED IN THE "RAILING PEDESTRIAN STEEL" SPECIAL PROVISION. THE FINISH COLOR SHALL BE BLACK FEDERAL STANDARD COLOR NO. 27038. AT COMPLETION OF STEEL RAILING INSTALLATION, PAINT THE TOPS OF ANCHOR BOLTS AND NUTS WITH THE TIE COAT. TOUCH-UP PAINT WITH THE TOP COAT ALL DAMAGED AREAS AND THE ANCHOR END OF RAIL 8'-0' STA. 9+70.5, 24.5 RT. BOLTS TO THE SATISFACTION OF THE ENGINEER AT NO EXTRA COST. DO NOT PAINT ANCHORAGE NO. 5 CONCRETE BASE FOR AND SHIMS. RAILING PEDESTRIAN STEEL (TYP.) **ELEVATION - RAILING PEDESTRIAN STEEL** CAULK AROUND PERIMETER OF BASE PLATES, NO. 4 AND FILL BOLT SLOT OPENINGS IN SHIMS AND BASE PLATES WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. RAIL AT END OF WING 1 RAILING PEDESTRIAN STEEL. SEE DETAIL AT RIGHT SET TOP OF CONCRETE BASE AT ELEVATION OF BACK OF SIDEWALK #4 BARS (COATED) EQUALLY SPACED (MAY BE PLACED AFTER CONCRETE HAS BEEN POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE) RAILING BASE PLATE SIDEWALK DRAIN 1'-3" DIA. VARIES ů CONCRETE BASE 1 1/2" 2" 2" 1 1/2" 4 - "4 BARS (COATED) EQUALLY SPACED (MAY BE PLACED AFTER CONCRETE HAS BEEN POURED BUT BEFORE INITIAL SET BACK OF SIDEWALK HAS TAKEN PLACE) -RIPRAP HEAVY 1'-3" DIA. CONCRETE -BASE FOR RAILING PEDESTRIAN STEEL RAILING BASE PLATE - 1'-3" DIA. CONCRETE BASE FOR RAILING PEDESTRIAN DETAIL FOR MOUNTING RAILING PEDESTRIAN STEEL SECTION THROUGH RAILING PLAN ON CONCRETE BASE AT SIDEWALK HWY: LOCAL STREET PROJECT NO: 7016-00-73 COUNTY: MONROE CONSTRUCTION DETAILS - RAILING PEDESTRIAN STEEL SHEET FILE NAME: P:\50s\51\00051027\CADD\PLANSHTS\51027_RAIL.dgn PLOT BY : JSWENO









				7016-00-73
Item	Item Description	Unit	Total	Qty
201.0205	Grubbing	STA	1.000	1.000
203.0600.S	Removing Old Structure Over Waterway With Minimal Debris (station) 01. 10+00	LS	1.000	1.000
204.0150	Removing Curb & Gutter	LF	455.000	455.000
204.0155	Removing Concrete Sidewalk	SY	322.000	322.000
204.0210	Removing Manholes	EACH	1.000	1.000
204.0220	Removing Inlets	EACH	1.000	1.000
204.0245	Removing Storm Sewer (size) 01. 12-Inch	LF	15.000	15.000
204.0245	Removing Storm Sewer (size) 02. 24-Inch	LF	27.000	27.000
205.0100	Excavation Common **P**	CY	565.000	565.000
206.1000	Excavation for Structures Bridges (structure) 01. B-41-307	LS	1.000	1.000
210.1500	Backfill Structure Type A	TON	525.000	525.000
213.0100	Finishing Roadway (project) 01. 7016-00-73	EACH	1.000	1.000
305.0120	Base Aggregate Dense 1 1/4-Inch	TON	312.000	312.000
305.0130		TON	367.000	367.000
415.0080	Concrete Pavement 8-Inch	SY	240.000	240.000
				86.000
	• •			11.000
				48.000
				500.000
	•			133.000
				1.000
	•			384.000
				365.000
				90.000
	-			9,565.000
				45,685.000
				300.000
	, , , , ,			185.000
				32.000
				1,575.000
	307			1,575.000
	•			1.000
522.1024	24-Inch		1.000	1.000
550.1100	Piling Steel HP 10-Inch X 42 Lb	LF	1,455.000	1,455.000
601.0409	Concrete Curb & Gutter 30-Inch Type A	LF	77.000	77.000
601.0411	Concrete Curb & Gutter 30-Inch Type D	LF	319.000	319.000
	* *	LF	13.000	13.000
	201.0205 203.0600.S 204.0150 204.0155 204.0210 204.0220 204.0245 205.0100 206.1000 213.0100 305.0120 305.0130 415.0410 416.0160 455.0605 460.2000 460.5224 465.0120 502.0100 502.3200 502.3210 505.0400 505.0600 511.1200 513.7016 516.0500 517.1015.S 520.8000 522.1024 550.1100 601.0409 601.0411	201.0205 Grubbing 203.0600.S Removing Old Structure Over Waterway With Minimal Debris (station) 01. 10+00 204.0150 Removing Curb & Gutter 204.0155 Removing Concrete Sidewalk 204.0210 Removing Manholes 204.0220 Removing Manholes 204.0224 Removing Storm Sewer (size) 01. 12-Inch 204.0245 Removing Storm Sewer (size) 02. 24-Inch 205.0100 Excavation Common **P** 206.1000 Excavation for Structures Bridges (structure) 01. B-41-307 210.1500 Backfill Structure Type A 213.0100 Finishing Roadway (project) 01. 7016-00-73 305.0120 Base Aggregate Dense 1 1/4-Inch 305.0130 Base Aggregate Dense 3-Inch 415.0080 Concrete Pavement 8-Inch 415.0410 Concrete Pavement Approach Slab 416.0160 Concrete Driveway 6-Inch 455.0605 Tack Coat 460.2000 Incentive Density HMA Pavement 460.5224 HMA Pavement 4 LT 58-28 S 465.0120 Asphaltic Surface Driveways and Field Entrances 502.0100 Concrete Masonry Bridges 502.3200 Protective Surface Treatment 502.3210 Pigmented Surface Sealer 505.0400 Bar Steel Reinforcement HS Structures 505.0600 Bar Steel Reinforcement HS Coated Structures 511.1200 Temporary Shoring (structure) 01. B-41-307 513.7016 Railing Steel Type C3 (structure) 01. B-41-307 517.1050.S Architectural Surface Treatment (structure) 01. B-41-307 522.1024 Apron Endwalls for Culvert Pipe Reinforced Concrete 24-Inch 500.100409 Concrete Curb & Gutter 30-Inch Type A	201.0205 Grubbing STA 203.0600.S Removing Old Structure Over Waterway With Minimal Debris (station) 01. 10+00 LS 204.0150 Removing Curb & Gutter LF 204.0155 Removing Concrete Sidewalk SY 204.0210 Removing Manholes EACH 204.0224 Removing Inlets EACH 204.0245 Removing Storm Sewer (size) 01. 12-Inch LF 204.0245 Removing Storm Sewer (size) 02. 24-Inch LF 205.0100 Excavation Common **P** CY 205.1000 Excavation For Structures Bridges (structure) 01. B-41- LS 307 210.1500 Baschill Structure Type A TON 213.0100 Finishing Roadway (project) 01. 7016-00-73 EACH 305.0120 Base Aggregate Dense 1 1/4-Inch TON 305.0130 Base Aggregate Dense 3-Inch TON 415.0410 Concrete Pavement 8-Inch SY 415.0410 Concrete Pavement Approach Slab SY 416.0160 Concrete Driveway 6-Inch SY 455.0605 Tack Coat GAL	201.0205 Grubbing STA 1.000 203.0600.S Removing Old Structure Over Waterway With Minimal Debris (station) 01. 10+00 LS 1.000 204.0150 Removing Curb & Gutter LF 455.000 204.0151 Removing Curb & Gutter LF 455.000 204.0210 Removing Manholes EACH 1.000 204.0224 Removing Storm Sewer (size) 01. 12-Inch LF 15.000 204.0245 Removing Storm Sewer (size) 02. 24-Inch LF 27.000 205.0100 Excavation Common **P*** CY 565.000 206.1000 Excavation for Structures Bridges (structure) 01. B-41- LS 1.000 307 210.1500 Backfill Structure Type A TON 525.000 213.0100 Finishing Roadway (project) 01. 7016-00-73 EACH 1.000 305.0120 Base Aggregate Dense 1 1/4-Inch TON 367.000 415.0080 Concrete Pavement 8-Inch SY 240.000 415.0410 Concrete Pavement Approach Slab SY 86.000 416.0160 Concrete Pavement Approach Sla

Estimate Of Quantities

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	. 490 -	-
7016-00-73		

					7016-00-73
Line	Item	Item Description	Unit	Total	Qty
0380	602.0405	Concrete Sidewalk 4-Inch	SF	2,558.000	2,558.000
0390	602.0415	Concrete Sidewalk 6-Inch	SF	501.000	501.000
0400	602.0505	Curb Ramp Detectable Warning Field Yellow	SF	40.000	40.000
0410	606.0300	Riprap Heavy	CY	160.000	160.000
0420	608.0312	Storm Sewer Pipe Reinforced Concrete Class III 12-Inch	LF	22.000	22.000
0430	608.0324	Storm Sewer Pipe Reinforced Concrete Class III 24- Inch	LF	24.000	24.000
0440	611.0530	Manhole Covers Type J	EACH	1.000	1.000
0450	611.0624	Inlet Covers Type H	EACH	1.000	1.000
0460	611.2004	Manholes 4-FT Diameter	EACH	1.000	1.000
0470	611.3230	Inlets 2x3-FT	EACH	1.000	1.000
0480	611.8110	Adjusting Manhole Covers	EACH	6.000	6.000
0490	611.8115	Adjusting Inlet Covers	EACH	3.000	3.000
0500	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	230.000	230.000
0510	619.1000	Mobilization	EACH	1.000	1.000
0520	624.0100	Water	MGAL	14.200	14.200
0530	625.0100	Topsoil	SY	73.000	73.000
0540	628.1504	Silt Fence	LF	398.000	398.000
0550	628.1520	Silt Fence Maintenance	LF	398.000	398.000
0560	628.1905	Mobilizations Erosion Control	EACH	2.000	2.000
0570	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0580	628.2008	Erosion Mat Urban Class I Type B	SY	81.000	81.000
0590	628.6005	Turbidity Barriers	SY	243.000	243.000
0600	628.7015	Inlet Protection Type C	EACH	5.000	5.000
0610	629.0210	Fertilizer Type B	CWT	0.700	0.700
0620	630.0140	Seeding Mixture No. 40	LB	4.000	4.000
0630	630.0200	Seeding Temporary	LB	4.000	4.000
0640	631.0300	Sod Water	MGAL	3.000	3.000
0650	631.1000	Sod Lawn	SY	132.000	132.000
0660	634.0812	Posts Tubular Steel 2x2-Inch X 12-FT	EACH	1.000	1.000
0670	634.0814	Posts Tubular Steel 2x2-Inch X 14-FT	EACH	5.000	5.000
0680	637.2210	Signs Type II Reflective H	SF	12.180	12.180
0690	637.2230	Signs Type II Reflective F	SF	17.880	17.880
0700	638.2602	Removing Signs Type II	EACH	2.000	2.000
0710	638.3000	Removing Small Sign Supports	EACH	2.000	2.000
0720	642.5001	Field Office Type B	EACH	1.000	1.000
0730	643.0100	Traffic Control (project) 01. 7016-00-73	EACH	1.000	1.000
0740	645.0120	Geotextile Type HR	SY	335.000	335.000
0750	647.0456	Pavement Marking Curb Epoxy	LF	501.000	501.000
0130	047.0400	i avenient marking outb Epoxy	LI	301.000	301.000

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Line	Item	Item Description	Unit	Total	Qty
0760	647.0566	Pavement Marking Stop Line Epoxy 18-Inch	LF	33.000	33.000
0770	647.0656	Pavement Marking Parking Stall Epoxy	LF	36.000	36.000
0780	647.0766	Pavement Marking Crosswalk Epoxy 6-Inch	LF	204.000	204.000
0790	650.4000	Construction Staking Storm Sewer	EACH	3.000	3.000
0800	650.4500	Construction Staking Subgrade	LF	253.000	253.000
0810	650.5000	Construction Staking Base	LF	253.000	253.000
0820	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	332.000	332.000
0830	650.6500	Construction Staking Structure Layout (structure) 01. B-41-307	LS	1.000	1.000
0840	650.7000	Construction Staking Concrete Pavement	LF	107.000	107.000
0850	650.9910	Construction Staking Supplemental Control (project) 01. 7016-00-73	LS	1.000	1.000
0860	650.9920	Construction Staking Slope Stakes	LF	253.000	253.000
0870	690.0150	Sawing Asphalt	LF	132.000	132.000
0880	690.0250	Sawing Concrete	LF	50.000	50.000
0890	715.0415	Incentive Strength Concrete Pavement	DOL	500.000	500.000
0900	715.0502	Incentive Strength Concrete Structures	DOL	2,304.000	2,304.000
0910	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	600.000	600.000
0920	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	200.000	200.000
0930	SPV.0060	Special 01. Adjust Water Valve Box	EACH	4.000	4.000
0940	SPV.0090	Special 01. Railing Pedestrian Steel	LF	32.000	32.000
0950	SPV.0105	Special 01. Concrete Pavement Joint Layout	LS	1.000	1.000

204.0210 204.0220

204.0245.01

204.0245.02

REMOVING CURB & GUTTER

GRUBBING

			204.0150 REMOVING CURB & GUTTER
CATEGORY	STATION	LOCATION	<u>LF</u>
0010	8+75 - 9+59	LT	85
	8+75 - 9+67	RT	92
	10+40 - 11+25	RT	85
	10+67 - 11+25	LT	59
	20+18 - 20+85	LT	73
	20+26 - 20+83	RT	61
	TOTA	AL.	455

<u>-</u>	CATEGORY	STATION	LOCATION	204.0155 REMOVING CONCRETE SIDEWALK SY
	0010	8+75 - 9+59	LT	53
		8+75 - 9+67	RT	102
		10+41 - 11+25	RT	47
		10+65 - 11+25	LT	33
		20+18 - 20+85	LT	59
		20+33 - 20+83	RT	28
		TOTAL		322

				REMOVING	REMOVING	REMOVING	REMOVING
				MANHOLES	INLETS	STORM SEWER	STORM SEWER
						12-INCH	24-INCH
	CATEGORY	STATION	LOCATION	EACH	EACH	LF	LF
	0010	10+61	RT	1			
		10+79	RT		1		
		10+70	RT			15	
		10+58	RT				27
•		TO	ΓAL	1	1	15	27

EXCAVATION & BORROW

Division	From/To Station	Location	Common Excavation (1)	**P** (ITEM # 205.0100)	Salvaged/Unusable Pavement Material (3)		Unexpanded Fill	Expanded Fill (5)	Mass Ordinate +/- (6)	Waste	Select Borrow	Comment:
			Cut (2)	EBS Excavation				Factor 1.30			(ITEM # 208.1100)	
1	8+75.00 - 9+72.87 10+27.59 - 11+25.00 20+11.00 - 20+85.18	E MAIN ST E MAIN ST N SPRING ST	213 185 166			213 185 166	1 3 2	1 4 3	212 393 557	212 181 163	0 0 0)
Division 1 Subtotal			565	(0	565	6	8	557	557	0	i .
Grand Total Project 7016	6-00-73	PROJECT 7016-00-73 Total Comm.	565	565	0	565	6	8	557	557	0	'

- 1) Common Excavation is the sum of the Cut and EBS Excavation columns. Item number 205.0100
- 2) Salvaged/Unsuable Pavement Material is included in Cut.
- 3) Salvaged/Unusable Pavement Material
- 4) Available Material = Cut Salvaged/Unusuable Pavement Material
- 5) Expanded Fill. Factor = 1.30
- 6) The Mass Ordinate + or Qty calculated for the Division. Plus quantity indicates an excess of material within the Division. Minus indicates a shortage of material within the Division.

P - Pay Plan Quantity

BASE AGGREGATE ITEMS

		305.0120	305.0130	**
		BASE	BASE	624.0100
		AGGREGATE	AGGREGATE	WATER
		DENSE	DENSE	
		1 1/4-INCH	3-INCH	
CATEGORY	STATION	TON	TON	MGAL
0010	8+75.00 - 9+72.87	124	137	3.9
	10+27.59 - 11+25.00	108	130	3.6
	20+11.00 - 20+85.18	80	100	2.7
•	TOTAL	312	367	10.2

NOTE: BASE AGGREGATE DENSE (1 1/4-INCH & 3-INCH) WERE CALCULATED USING 2.0 TONS/CY. **ADDITIONAL QUANTITIES LISTED ELSEWHERE

CONCRETE PAVEMENT

		415.0080	415.0410
		CONCRETE	CONCRETE
		PAVEMENT	PAVEMENT
		8-INCH	APPROACH
			SLAB
CATEGORY	STATION - STATION	SY	SY
0010	9+42.48 - 9+71.72	27	
	9+42.48 - 9+69.41		43
	10+27.59 - 10+54.52		43
	10+24.44 - 10+79.25	136	
	20+19.50 - 20+39.50	77	
	TOTAL	240	86

ASPHALT PAVEMENT ITEMS

			455.0605 TACK COAT	460.5224 HMA PAVEMENT 4 LT 58-28 S	465.0120 ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES
CATEGORY	STATION - STATION	THICKNESS	GAL	TON	TON
0010	8+75.00 - 9+42.48	3.5	21	59	
	10+79.25 - 11+25.00	3.5	14	39	
	20+39.50 - 20+85.18	3.5	13	35	
	9+66.40 - 9+79.89	2			1
	TOTAL		48	133	1

PROJECT NO: 7016-00-73 HWY: LOCAL STREET COUNTY: MONROE MISCELLANEOUS QUANTITIES SHEET NO: E

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SHEET NO:

MISCELLANEOUS QUANTITIES

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		CURB	& GUTTER						CON	CRETE SIDEWA	ALK								
			30-INCH	ER CURB & GUTT 30-INCH						416.0160 CONCRETE DRIVEWAY 6-INCH	602.0405 CONCRETE SIDEWALK 4-INCH	602.0415 CONCRETE SIDEWALK 6-INCH	602.0505 CURB RAMP DETECTABLE WARNING FIELI YELLOW						
ORY ST.	TATION	LOCATION	TYPE A LF	TYPE D LF	LF	C	ATEGORY	STATION	LOCATION	SY	SF	SF	SF	_					
	00 - 9+42.48	LT		69		_	0010	8+75.00 - 9+42.48 8+75.00 - 8+85.11	LT RT	 11	356								
	00 - 9+42.48	RT		69				8+85.11 - 9+66.34	RT		1042								
	48 - 9+66.34 52 - 10+79.25	RT RT	24 25					9+39.95	LT				8	_					
	25 - 11+25.00	RT		47				9+39.95 9+42.48 - 9+55.17	RT LT			83	8						
	25 - 10+79.25	LT	28			_		9+66.34 - 9+77.11	RT			68							
	25 - 11+25.00 25 - 20+85.18	LT LT		46 42				10+41.83 - 10+54.52				83		_					
	50 - 20+83.12	RT		46				10+54.52 - 11+25.00 10+64.81 - 11+25.00			383 299								
10+71.25	25 - 10+77.75	LT			13			10+67.20	LT				8						
	TOTAL		77	319	13			10+70.25	RT				8	_					
								20+16.13 - 20+44.25 20+44.25 - 20+85.18			 215	267 							
								20+32.50 - 20+82.57	RT		263								
								20+35.49	LT				8		ć	STORM SEWER			
								TOTAL		11	2558	501	40	_	•	STORINI SEVVER			
												C	ATEGORY STRU	JCTURE - ST	RUCTURE	608.0312 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 12-INCH LF	STORM PIPE REII CONC CLA 24-I	.0324 SEWER NFORCED CRETE SS III INCH .F	J(T EA
				CTODM CEWI	ER STRUCTURES								0010	1.0 - 2.0				<u></u> 15	
				STORW SEVI									0010	1.0 - 2.0)			10	
				520 8000		611 0530	611 062	4 611 2004 6	11 3230				0010	2.0 - 1.1 2.0 - 2.1	Ì	 22	9		
				520.8000 CONCRETE	522.1024 APRON ENDWALLS	611.0530 MANHOLE	611.062 INLET		11.3230 NLETS				0010	2.0 - 1.1 2.0 - 2.1	l I	22	-	9	
				CONCRETE COLLARS	522.1024 APRON ENDWALLS FOR CULVERT PIPE	MANHOLE		MANHOLES I S 4-FT 2						2.0 - 1.1 2.0 - 2.1 TOTAL	! !		-	9	
CATEGORY		E STATION	J LOCATION	CONCRETE COLLARS FOR PIPE	522.1024 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH	MANHOLE COVERS TYPE J	INLET COVER: TYPE F	MANHOLES I S 4-FT : I DIAMETER	NLETS 2X3-FT			(1)	FOR INFORMATION	2.0 - 1.1 2.0 - 2.1 TOTAL	! !	22	-	9	
CATEGORY 0010	1.0	10+57.37	7 39.26' RT	CONCRETE COLLARS FOR PIPE I EACH	522.1024 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH EACH 1	MANHOLE COVERS TYPE J EACH	INLET COVER: TYPE F EACH	MANHOLES I S 4-FT : I DIAMETER EACH	NLETS 2X3-FT EACH			(1)		2.0 - 1.1 2.0 - 2.1 TOTAL N ONLY - NOT	A BID ITEM	22	-	9	
		10+57.37 10+60.74 10+61.35 10+82.01	7 39.26' RT 4 16.48' RT 5 25.00' RT	CONCRETE COLLARS FOR PIPE I EACH	522.1024 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH EACH	MANHOLE COVERS TYPE J EACH	INLET COVER: TYPE F EACH	MANHOLES I S 4-FT : I DIAMETER EACH	NLETS 2X3-FT EACH			(1)		2.0 - 1.1 2.0 - 2.1 TOTAL N ONLY - NOT	A BID ITEM	22 22 M SEWER STRUCTO 611.8110 ADJUSTING MANHOLE	JRES 611.8115 ADJUSTING INLET	9 24 SPV.0060.0 ADJUST WATER)1
	1.0 1.1 2.0	10+57.37 10+60.74 10+61.35 10+82.01	7 39.26' RT 4 16.48' RT 5 25.00' RT 1 16.79' RT	CONCRETE COLLARS FOR PIPE I EACH 1	522.1024 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH EACH 1	MANHOLE COVERS TYPE J EACH 1	INLET COVER: TYPE F EACH 	MANHOLES I S 4-FT : I DIAMETER EACH 1 1	EACH			(1)	FOR INFORMATION	2.0 - 1.1 2.0 - 2.1 TOTAL NONLY-NOT ADJUS STATION	A BID ITEM STING STOR	22 22 M SEWER STRUCTO 611.8110 ADJUSTING MANHOLE COVERS	JRES 611.8115 ADJUSTING	9 24 SPV.0060.0 ADJUST	01
	1.0 1.1 2.0	10+57.37 10+60.74 10+61.35 10+82.01	7 39.26' RT 4 16.48' RT 5 25.00' RT 1 16.79' RT	CONCRETE COLLARS FOR PIPE I EACH 1	522.1024 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH EACH 1	MANHOLE COVERS TYPE J EACH 1	INLET COVER: TYPE F EACH 	MANHOLES I S 4-FT : I DIAMETER EACH 1 1	EACH			(1)	FOR INFORMATION	2.0 - 1.1 2.0 - 2.1 TOTAL N ONLY - NOT ADJUS STATION 8+88.75	A BID ITEM STING STOR LOCATION 22.5' LT	22 22 M SEWER STRUCTO 611.8110 ADJUSTING MANHOLE COVERS N EACH	JRES 611.8115 ADJUSTING INLET COVERS EACH 1	9 24 SPV.0060.0 ADJUST WATER VALVE BO: EACH	01
	1.0 1.1 2.0	10+57.37 10+60.74 10+61.35 10+82.01	7 39.26' RT 4 16.48' RT 5 25.00' RT 1 16.79' RT	CONCRETE COLLARS FOR PIPE I EACH 1	522.1024 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH EACH 1	MANHOLE COVERS TYPE J EACH 1	INLET COVER: TYPE F EACH 	MANHOLES I S 4-FT : I DIAMETER EACH 1 1	EACH			(1)	FOR INFORMATION	2.0 - 1.1 2.0 - 2.1 TOTAL NONLY-NOT ADJUS STATION	A BID ITEM STING STOR	22 22 M SEWER STRUCTO 611.8110 ADJUSTING MANHOLE COVERS N EACH	JRES 611.8115 ADJUSTING INLET COVERS	9 24 SPV.0060.0 ADJUST WATER VALVE BO: EACH)1
	1.0 1.1 2.0	10+57.37 10+60.74 10+61.35 10+82.01	7 39.26' RT 4 16.48' RT 5 25.00' RT 1 16.79' RT	CONCRETE COLLARS FOR PIPE I EACH 1	522.1024 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH EACH 1	MANHOLE COVERS TYPE J EACH 1	INLET COVER: TYPE F EACH 	MANHOLES I S 4-FT : I DIAMETER EACH 1 1	EACH			(1)	FOR INFORMATION	2.0 - 1.1 2.0 - 2.1 TOTAL N ONLY - NOT ADJUS STATION 8+88.75 8+91.28 8+89.57 9+25.56	LOCATION 22.5' LT 0.0' RT 22.5' RT 0.8' RT	22 22 M SEWER STRUCTO 611.8110 ADJUSTING MANHOLE COVERS N EACH 1	JRES 611.8115 ADJUSTING INLET COVERS EACH 1	SPV.0060.0 ADJUST WATER VALVE BO: EACH	01
	1.0 1.1 2.0	10+57.37 10+60.74 10+61.35 10+82.01	7 39.26' RT 4 16.48' RT 5 25.00' RT 1 16.79' RT	CONCRETE COLLARS FOR PIPE I EACH 1 1	522.1024 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH EACH 1	MANHOLE COVERS TYPE J EACH 1	INLET COVER: TYPE F EACH 	MANHOLES I S 4-FT : I DIAMETER EACH 1 1	EACH			(1)	FOR INFORMATION	2.0 - 1.1 2.0 - 2.1 TOTAL N ONLY - NOT ADJUS STATION 8+88.75 8+91.28 8+89.57	LOCATION 22.5' LT 22.5' RT	22 M SEWER STRUCTO 611.8110 ADJUSTING MANHOLE COVERS N EACH 1 1	JRES 611.8115 ADJUSTING INLET COVERS EACH 1 1	SPV.0060.0 ADJUST WATER VALVE BO: EACH	01
	1.0 1.1 2.0	10+57.37 10+60.74 10+61.35 10+82.01	7 39.26' RT 4 16.48' RT 5 25.00' RT 1 16.79' RT	CONCRETE COLLARS FOR PIPE I EACH 1 1	522.1024 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH EACH 1 1 1 AATION ITEMS	MANHOLE COVERS TYPE J I EACH 1 1 1 630.0140	INLET COVER: TYPE F EACH 	MANHOLES I S 4-FT : I DIAMETER EACH 1 1	EACH			(1)	FOR INFORMATION	2.0 - 1.1 2.0 - 2.1 TOTAL N ONLY - NOT ADJUS STATION 8+88.75 8+91.28 8+89.57 9+25.56 10+74.90	LOCATION 22.5' LT 0.0' RT 22.5' RT 21.5' LT 14.0' RT	22 M SEWER STRUCTO 611.8110 ADJUSTING MANHOLE COVERS N EACH 1 1	JRES 611.8115 ADJUSTING INLET COVERS EACH 1 1	SPV.0060.0 ADJUST WATER VALVE BO: EACH	
	1.0 1.1 2.0	10+57.37 10+60.74 10+61.35 10+82.01	7 39.26' RT 4 16.48' RT 5 25.00' RT 1 16.79' RT TOTAL	CONCRETE COLLARS FOR PIPE I EACH 1 1 1 RESTOR	522.1024 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH EACH 1 1 1 RATION ITEMS 0100 629.0210 SOIL FERTILIZER	MANHOLE COVERS TYPE J I EACH 1 1 1 630.0140 SEEDING	INLET COVER: TYPE H EACH 1 1 1 630.020 SEEDIN	MANHOLES I S 4-FT : I DIAMETER EACH 1 1 1 1 SON 631.1000 NG SOD	NLETS 2X3-FT EACH 1 1 1 631.0300 SOD			(1)	FOR INFORMATION	2.0 - 1.1 2.0 - 2.1 TOTAL N ONLY - NOT ADJUS STATION 8+88.75 8+91.28 8+89.57 9+25.56 10+74.90 20+24.80	LOCATION 22.5' LT 0.0' RT 22.5' RT 21.5' LT 14.0' RT	22 22 M SEWER STRUCTO 611.8110 ADJUSTING MANHOLE COVERS N EACH 1 1 1 3	JRES 611.8115 ADJUSTING INLET COVERS EACH 1 1 1	9 24 SPV.0060.0 ADJUST WATER VALVE BO: EACH 	01
0010	1.0 1.1 2.0 2.1	10+57.37 10+60.74 10+61.35 10+82.01	7 39.26' RT 4 16.48' RT 5 25.00' RT 1 16.79' RT TOTAL	CONCRETE COLLARS FOR PIPE I EACH 1 1 1 RESTOR ** 625.0 624.0100 TOPS WATER	522.1024 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH EACH 1 1 1 AATION ITEMS 0100 629.0210 SOIL FERTILIZER TYPE B	MANHOLE COVERS TYPE J EACH 1 1 1 630.0140 SEEDING MIXTURE #40	INLET COVER: TYPE H EACH 1 1 1 630.020 SEEDIN TEMPOR	MANHOLES I S 4-FT H DIAMETER EACH 1 1 1 00 631.1000 NG SOD ARY LAWN	NLETS 2X3-FT EACH 1 1 1 631.0300 SOD WATER			(1)	CATEGORY 0010	2.0 - 1.1 2.0 - 2.1 TOTAL N ONLY - NOT ADJUS STATION 8+88.75 8+89.57 9+25.56 10+74.90 20+24.80 SUBT STATION 8+94.57	LOCATION 22.5' LT 0.0' RT 21.5' LT 14.0' RT TOTAL LOCATION 15.4' LT	22 M SEWER STRUCTO 611.8110 ADJUSTING MANHOLE COVERS N EACH 1 1 3 N EACH	JRES 611.8115 ADJUSTING INLET COVERS EACH 1 1 3 EACH	9 24 SPV.0060.0 ADJUST WATER VALVE BO: EACH)1
	1.0 1.1 2.0 2.1 2.1 5 STATION - S	10+57.37 10+60.74 10+61.35 10+82.01	7 39.26' RT 4 16.48' RT 5 25.00' RT 1 16.79' RT TOTAL LOCATION LT	CONCRETE COLLARS FOR PIPE I EACH 1 1 1 RESTOR ** 625.0 524.0100 TOPS WATER MGAL S' 1.4 ** 43	522.1024 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH EACH 1 1 1 AATION ITEMS 0100 629.0210 SOIL FERTILIZER TYPE B Y CWT 3 0.4	MANHOLE COVERS TYPE J I EACH 1 1 1 630.0140 SEEDING	INLET COVER: TYPE H EACH 1 1 1 630.020 SEEDIN	MANHOLES I S 4-FT H DIAMETER EACH 1 1 1 00 631.1000 NG SOD ARY LAWN SY 22	EACH 1 1 1 631.0300 SOD WATER MGAL 0.5			(1)	CATEGORY CATEGORY CATEGORY	2.0 - 1.1 2.0 - 2.1 TOTAL N ONLY - NOT ADJUS STATION 8+88.75 8+89.57 9+25.56 10+74.90 20+24.80 SUBT STATION 8+94.57 8+97.77	LOCATION 22.5' LT 0.0' RT 21.5' LT 14.0' RT TOTAL LOCATION 15.4' LT 18.8' LT	22 M SEWER STRUCTO 611.8110 ADJUSTING MANHOLE COVERS N EACH 1 1 1 3 N EACH	JRES 611.8115 ADJUSTING INLET COVERS EACH 1 1 1 3 EACH	9 24 SPV.0060.0 ADJUST WATER VALVE BO: EACH)1
0010	1.0 1.1 2.0 2.1 2.1 8+75 - 9 10+57 - 1	10+57.37 10+60.74 10+61.35 10+82.01	7 39.26' RT 4 16.48' RT 5 25.00' RT 1 16.79' RT TOTAL Coloration LT RT	CONCRETE COLLARS FOR PIPE I EACH 1 1 RESTOR ** 625.0 524.0100 TOPS WATER MGAL S' 1.4 44 0.6 20	522.1024 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH EACH 1 1 1 AATION ITEMS 0100 629.0210 SOIL FERTILIZER TYPE B Y CWT 3 0.4 0 0.2	MANHOLE COVERS TYPE J EACH 1 1 1 630.0140 SEEDING MIXTURE #40 LB	INLET COVER: TYPE H EACH 1 1 1 1 630.020 SEEDIN TEMPOR LB	MANHOLES I S 4-FT H DIAMETER EACH 1 1 1 00 631.1000 IG SOD ARY LAWN SY 22 21	EACH 1 1 1 631.0300 SOD WATER MGAL 0.5 0.5			(1)	CATEGORY CATEGORY CATEGORY	2.0 - 1.1 2.0 - 2.1 TOTAL N ONLY - NOT ADJUS STATION 8+88.75 8+91.28 8+89.57 9+25.56 10+74.90 20+24.80 SUBT STATION 8+94.57 8+97.77 8+97.63 10+68.55	LOCATION 22.5' LT 0.0' RT 22.5' RT 14.0' RT TOTAL LOCATION 15.4' LT 18.8' LT 8.5' RT 1.6' LT	22 M SEWER STRUCTO 611.8110 ADJUSTING MANHOLE COVERS N EACH 1 1 3 N EACH	JRES 611.8115 ADJUSTING INLET COVERS EACH 1 1 3 EACH	9 24 SPV.0060.0 ADJUST WATER VALVE BO: EACH 0 EACH 1 1)1
0010	1.0 1.1 2.0 2.1 2.1 5 STATION - S	10+57.37 10+60.74 10+61.35 10+82.01 5 5 5 5 10+82.01 9 9 9 11+25 11+25	7 39.26' RT 4 16.48' RT 5 25.00' RT 1 16.79' RT TOTAL LOCATION LT	CONCRETE COLLARS FOR PIPE I EACH 1 1 1 RESTOR ** 625.0 624.0100 TOPS WATER MGAL S 1.4 44 0.6 20 0.8	522.1024 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH EACH 1 1 1 AATION ITEMS 0100 629.0210 SOIL FERTILIZER TYPE B Y CWT 3 0.4 0 0.2	MANHOLE COVERS TYPE J EACH 1 1 1 630.0140 SEEDING MIXTURE #40 LB	INLET COVER: TYPE H EACH 1 1 1 1 630.020 SEEDIN TEMPOR LB	MANHOLES I S 4-FT H DIAMETER EACH 1 1 1 00 631.1000 NG SOD ARY LAWN SY 22	EACH 1 1 1 631.0300 SOD WATER MGAL 0.5			(1)	CATEGORY CATEGORY CATEGORY	2.0 - 1.1 2.0 - 2.1 TOTAL NONLY - NOT ADJUS STATION 8+88.75 8+91.28 8+89.57 9+25.56 10+74.90 20+24.80 SUBT STATION 8+94.57 8+97.77 8+97.63 10+68.55 10+88.51	LOCATION 22.5' LT 0.0' RT 22.5' RT 21.5' LT 14.0' RT COTAL LOCATION 15.4' LT 18.8' LT 8.5' RT 1.6' LT 12.6' LT	22 M SEWER STRUCTO 611.8110 ADJUSTING MANHOLE COVERS N EACH 1 1 3 N EACH	JRES 611.8115 ADJUSTING INLET COVERS EACH 1 1 3 EACH	9 24 SPV.0060.0 ADJUST WATER VALVE BO: EACH 0 EACH 1 1 1 1)1
0010	1.0 1.1 2.0 2.1 2.1 5 8+75 - 9 10+57 - 1 10+68 - 1	10+57.37 10+60.74 10+61.38 10+82.01 10+82.01 9+53 11+25 11+25 20+85	7 39.26' RT 4 16.48' RT 5 25.00' RT 1 16.79' RT TOTAL LOCATION LT RT LT	CONCRETE COLLARS FOR PIPE I EACH 1 1 1 RESTOR ** 625.0 624.0100 TOPS WATER MGAL S 1.4 44 0.6 20 0.8	522.1024 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH EACH 1 1 1 ATION ITEMS 0100 629.0210 SOIL FERTILIZER TYPE B Y CWT 3 0.4 0 0.2 0 0.1	MANHOLE COVERS TYPE J EACH 1 1 1 630.0140 SEEDING MIXTURE #40 LB	INLET COVER: TYPE H EACH 1 1 1 1 630.020 SEEDIN TEMPOR LB	MANHOLES I S 4-FT : H DIAMETER EACH 1 1 1 1 00 631.1000 IG SOD ARY LAWN SY 22 21 37	EACH 1 1 1 631.0300 SOD WATER MGAL 0.5 0.5 0.8			(1)	CATEGORY CATEGORY CATEGORY	2.0 - 1.1 2.0 - 2.1 TOTAL NONLY - NOT ADJUS STATION 8+88.75 8+91.28 8+89.57 9+25.56 10+74.90 20+24.80 SUBT STATION 8+94.57 8+97.77 8+97.63 10+68.55 10+88.51 20+32.86	LOCATION 22.5' LT 0.0' RT 22.5' RT 21.5' LT 14.0' RT COTAL LOCATION 15.4' LT 18.8' LT 8.5' RT 1.6' LT 12.6' LT 0.9' LT	22 22 M SEWER STRUCTO 611.8110 ADJUSTING MANHOLE COVERS N EACH 1 1 3 N EACH 1 1 1 1	JRES 611.8115 ADJUSTING INLET COVERS EACH 1 1 3 EACH	9 24 SPV.0060.0 ADJUST WATER VALVE BO: EACH 0 EACH 1 1)1
0010	1.0 1.1 2.0 2.1 2.1 8+75 - 9 10+57 - 1 10+68 - 20+44 - 2	10+57.37 10+60.74 10+61.38 10+82.01 10+82.01 9+53 11+25 11+25 20+85	7 39.26' RT 4 16.48' RT 5 25.00' RT 1 16.79' RT TOTAL LOCATION LT RT LT LT LT	CONCRETE COLLARS FOR PIPE I EACH 1 1 1 RESTOR ** 625.0 624.0100 TOPS WATER MGAL S 1.4 44 0.6 20 0.8 0.4 10	522.1024 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH EACH 1 1 AATION ITEMS 0100 629.0210 SOIL FERTILIZER TYPE B Y CWT 3 0.4 0 0.2 0 0.1 0 0.1	MANHOLE COVERS TYPE J BEACH TO SEEDING MIXTURE #40 LB LB TO SEEDING MIXTURE #40 LB TO SEEDING M	INLET COVER: TYPE H EACH 1 1 1 630.020 SEEDIN TEMPOR LB 2 1 1	MANHOLES I S 4-FT : H DIAMETER EACH 1 1 1 1 00 631.1000 IG SOD ARY LAWN SY 22 21 37 18	EACH 1 1 1 631.0300 SOD WATER MGAL 0.5 0.5 0.8 0.4			(1)	CATEGORY CATEGORY CATEGORY	2.0 - 1.1 2.0 - 2.1 TOTAL N ONLY - NOT ADJUS STATION 8+88.75 8+91.28 8+89.57 9+25.56 10+74.90 20+24.80 SUBT STATION 8+94.57 8+97.77 8+97.63 10+68.55 10+88.51 20+32.86 20+72.17	LOCATION 22.5' LT 0.0' RT 22.5' RT 21.5' LT 14.0' RT COTAL LOCATION 15.4' LT 18.8' LT 8.5' RT 1.6' LT 12.6' LT	22 22 M SEWER STRUCTO 611.8110 ADJUSTING MANHOLE COVERS N EACH 1 1 1 1 1 1 1 1 1 1 1 1	JRES 611.8115 ADJUSTING INLET COVERS EACH 1 1 1 1	9 24 SPV.0060.0 ADJUST WATER VALVE BO: EACH 0 EACH 1 1 1 1 1	

COUNTY: MONROE

HWY: LOCAL STREET

PROJECT NO: 7016-00-73

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			EROSIOI	N CONTROL ITEMS							P	AVEMENT MARKI	NG		
CATEGORY	STATION - STATION	LOCATION	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.2008 EROSION MAT URBAN CLASS I TYPE B	628.6005 TURBIDITY BARRIERS	628.7015 INLET PROTECTION TYPE C					647.0456 PAVEMENT MARKING CURB EPOXY	647.0566 PAVEMENT MARKING STOP LINE EPOXY	647.0656 PAVEMENT MARKING PARKING STALL	647.0766 PAVEMENT MARKING CROSSWALK EPOXY
CATEGORY		LOCATION			SY	SY	EACH						18-INCH	EPOXY	6-INCH
0010	8+75 - 10+00 8+75 - 9+53	LT & RT LT	195	195	 41			CAT	EGORY	STATION	LOCATION	LF	LF	LF	LF
	8+88	LT			41		 1		010	8+77 - 9+17	LT			22	
	8+90	RT					1			8+97 - 9+17	RT			14	
	9+80 - 10+17	LT & RT				123				9+20 - 11+25	RT	207			
	10+06 - 10+53	LT & RT				80				9+20 - 10+27	LT	113			
	10+57 - 11+25	RT	81	81	17					9+37	RT & LT				30
	10+82	RT					1			9+43	RT & LT				30
	10+75	LT					1			10+61 - 11+25	LT	74			
	20+29 - 20+85	LT	56	56						10+57 - 10+67	RT & LT				51
-	20+44 - 20+85	LT			9					10+73	RT & LT				36
	20+88	LT					1			20+25 - 20+85	LT	61			
	UNDISTRIBUTED		66	66	13	41				20+39 - 20+83	RT	46			
										20+18	LT		18		
-	TOTAL		398	398	81	243	5			20+32	RT & LT				27
										20+37	RT & LT				30
										20+37	LT		15		
										TOTALS		501	33	36	204
					SIGNING	G									

								637.2210	637.2230	634.0812	634.0814	638.2602	638.3000	
								SIGNS	SIGNS	POST TUBULAR	POST TUBULAR	REMOVING	REMOVING	
								TYPE II	TYPE II	STEEL	STEEL	SIGNS	SMALL SIGN	
				SIGN	S	IGN SI	ZE	REFLECTIVE H	REFLECTIVE F	2X2-INCH X 12-FT	2X2-INCH X 14-FT	TYPE II	SUPPORTS	
CATEGORY	SIGN NO.	STATION	LOCATION	CODE		IN X IN	1	SF	SF	EACH	EACH	EACH	EACH	MESSAGE
0010	1-01	9+30	RT	W11-2	30	Χ	30		6.25		1			PEDESTRIAN CROSSING
				W16-7L	24	X	12		2					ARROW
	1-02	9+37	LT	W11-2	30	X	30		6.25		1			PEDESTRIAN CROSSING
				W16-7L	24	Χ	12		2					ARROW
	1-03	20+26	LT	R1-1	24	Х	24	3.31		1				STOP
	1-04	20+45	LT	R1-5L	18	Χ	18	2.25			1	1	1	YIELD FOR PEDESTRIAN
	1-05	10+93	RT	S4-51	24	X	48	6.62	1.38		1	1	1	SCHOOL SPEED LIMIT
		9+08	RT								1			
				TOTAI				12.18	17.88	1	5	2	2	

SAWING PAVEMENT ITEMS

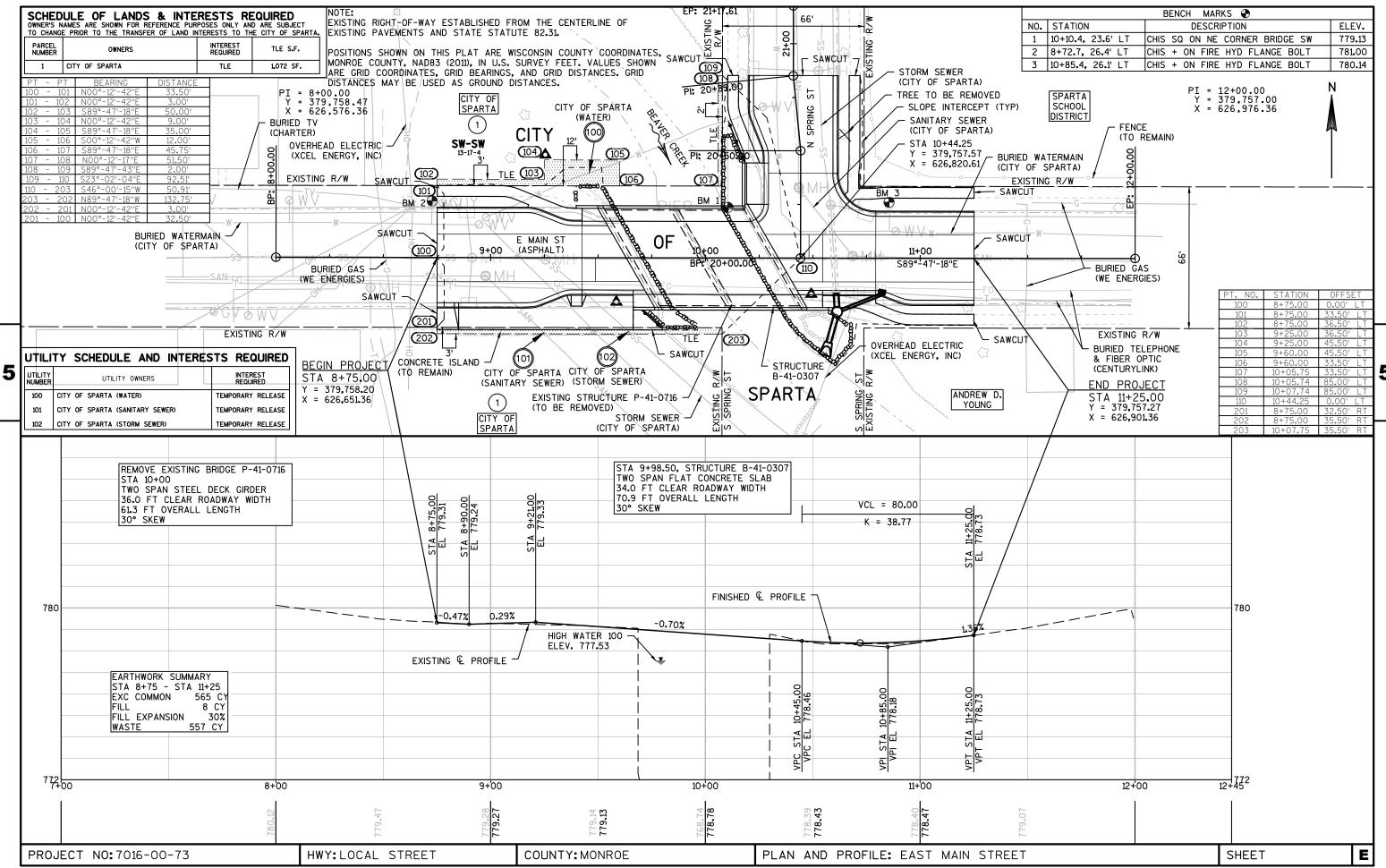
			CONSTRUCTIO	ON STAKING			
		650.4000 CONSTRUCTION STAKING STORM SEWER	650.4500 CONSTRUCTION STAKING SUBGRADE	650.5000 CONSTRUCTION STAKING BASE	650.5500 CONSTRUCTION STAKING CURB & GUTTER	650.7000 CONSTRUCTION STAKING CONCRETE PAVEMENT	650.9920 CONSTRUCTION STAKING SLOPE STAKES
CATEGORY	STATION	EACH	LF	LF	LF	LF	LF
0010	8+75.00 - 9+63.00		88	88		21	88
	8+75.00 - 9+42.48, LT				69		
	8+75.00 - 9+42.48, RT				69		
	10+34.00 - 11+25.00		91	91		46	91
	10+79.25 - 11+25.00, RT				47		
	10+79.25 - 11+25.00, LT				46		
	10+71.25 - 10+77.75, LT				13		
	10+57.37, 39.26' RT	1					
	10+82.01, 16.79' RT	1					
	10+60.74, 16.48' RT	1					
	20+11.00 - 20+85.00		74	74		40	74
	20+44.25 - 20+85.18, LT				42		
	20+39.50 - 20+83.12, RT				46		
	TOTAL	3	253	253	332	107	253

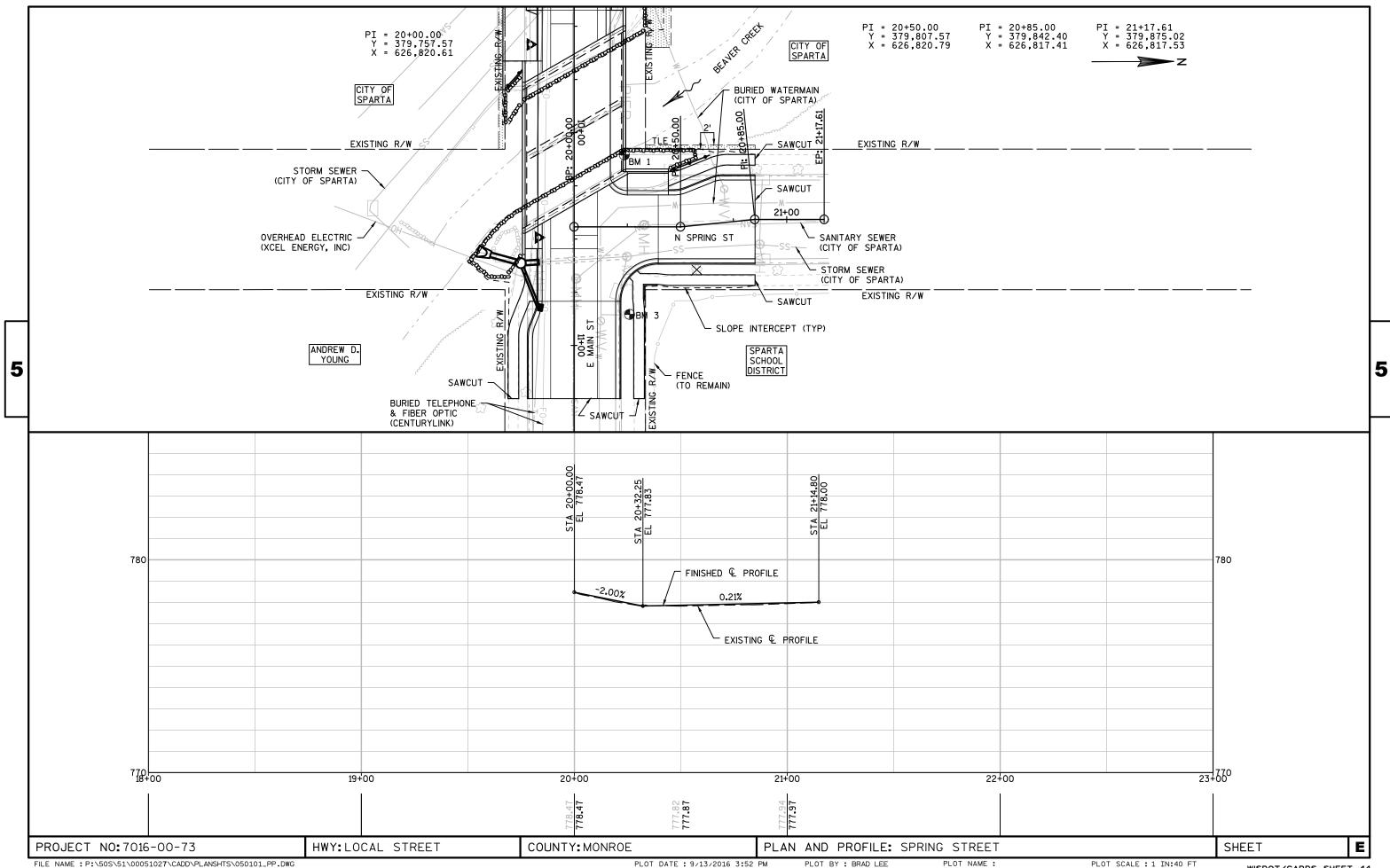
STATION	LOCATION	690.0150 SAWING ASPHALT LF	690.0250 SAWING CONCRETE LF
8+75	RT & LT	42	20
9+75	RT	14	
11+25	RT & LT	39	15
20+85.18	RT & LT	37	15
TOTAL		132	50
	8+75 9+75 11+25 20+85.18	8+75 RT & LT 9+75 RT 11+25 RT & LT 20+85.18 RT & LT	STATION LOCATION LF 8+75 RT & LT 42 9+75 RT 14 11+25 RT & LT 39 20+85.18 RT & LT 37

RAILING

			SPV.0090.01 RAILING PEDESTRIAN STEEL
CATEGORY	STATION	LOCATION	<u>LF</u>
0010	9+70.5 - 9+79.4	24.5' - 32.5' RT	12
	10+18.0 - 10+10.6	45.0' - 63.5' LT	20
		TOTAL	32

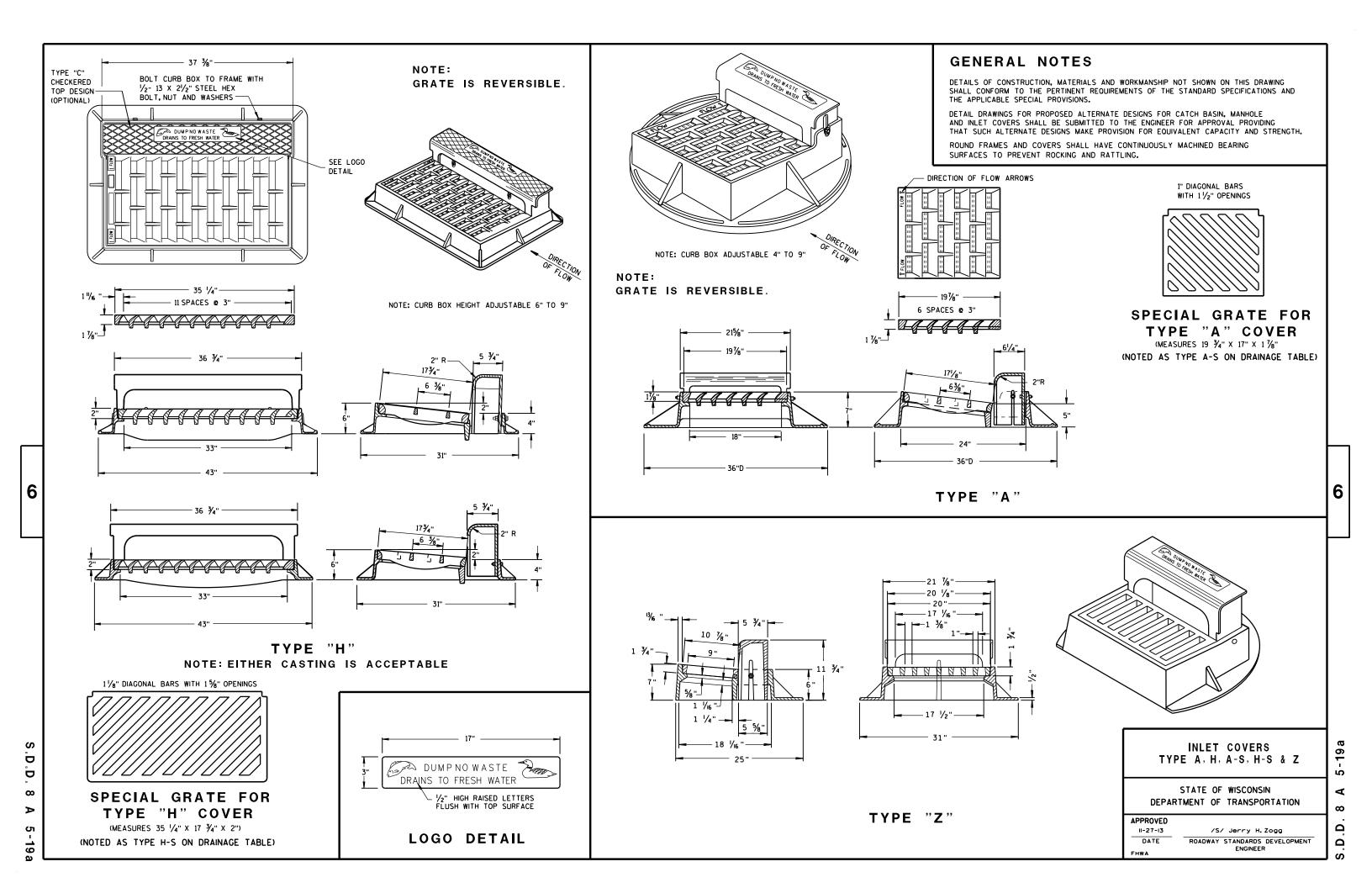
PROJECT NO: 7016-00-73 HWY: LOCAL STREET COUNTY: MONROE MISCELLANEOUS QUANTITIES SHEET NO: E

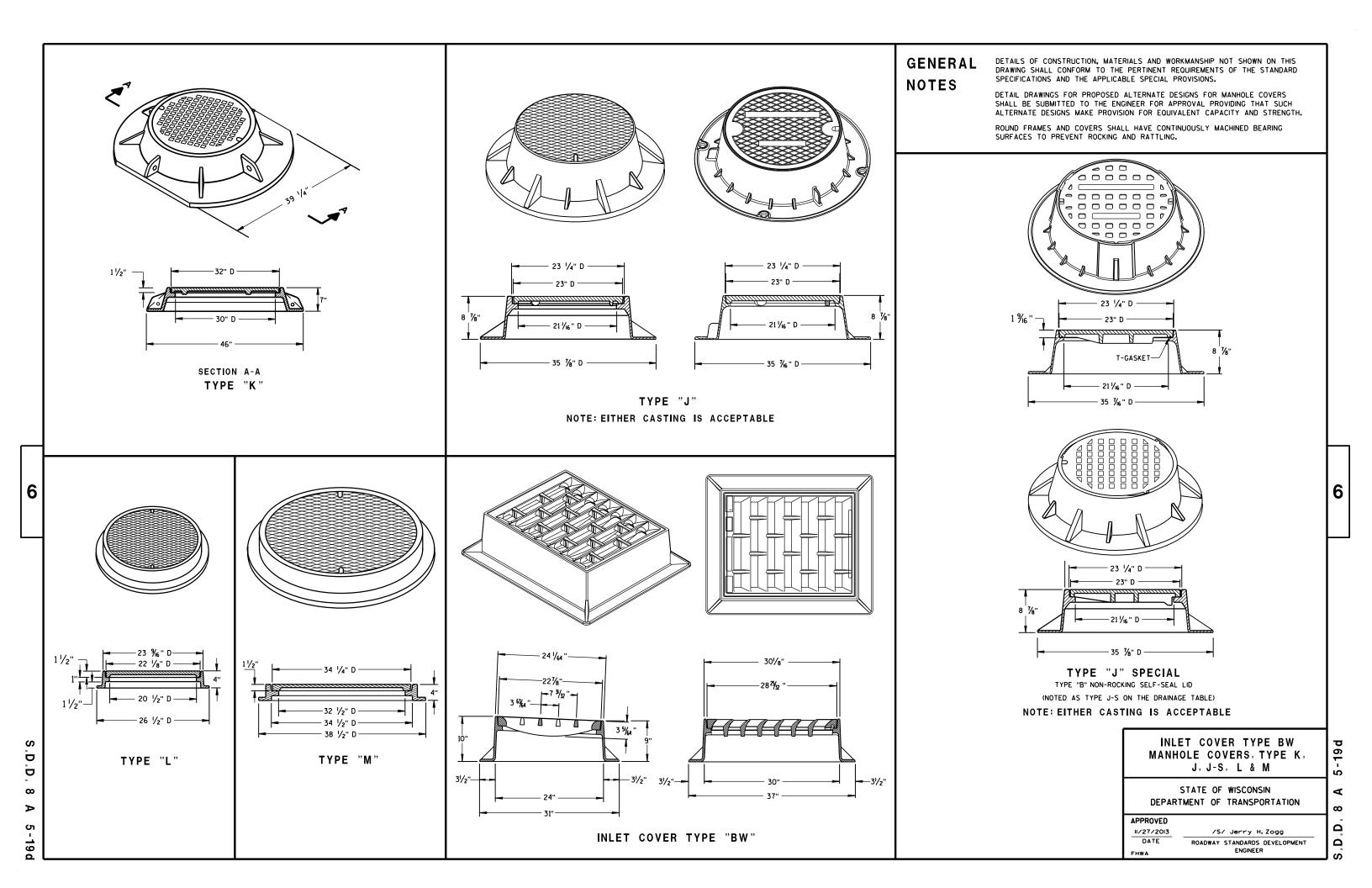




Standard Detail Drawing List

08A05-19A 08A05-19D 08B09-01 08C07-01 08D01-19 08D05-17A 08D05-17C 08D05-17C 08D05-17C 08E05-17C 08E05-17C 08E01-02 08E11-02 08E11-02 08F01-11 08F04-07 12A03-10 13B02-08A 13C01-18 13C04-16 13C18-03A 13C18-03B 13C18-03C 13C18-03D 15C02-06A 15C02-06B	INLET COVERS TYPE A, H, A-S, H-S & Z INLET COVER TYPE BW, MANHOLE COVERS, TYPE K, J, J-S, L & M MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT CONCRETE CURB, CONCRETE CURB AND GUTTER AND TIES CURB RAMPS TYPES 1 AND 1-A CURB RAMPS TYPES 2 AND 3 CURB RAMPS TYPES 4A AND 4A1 CURB RAMPS TYPES 5, 6, 7A, 7B & 8 SILT FENCE INLET PROTECTION TYPE A, B, C AND D TURBIDITY BARRIER APRON ENDWALLS FOR CULVERT PIPE JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL NAME PLATE (STRUCTURES) CONCRETE PAVEMENT APPROACH SLAB CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES URBAN NON-DOWELED CONCRETE PAVEMENT CONCRETE PAVEMENT STEEL REINFORCEMENT CONCRETE PAVEMENT STEEL REINFORCEMENT CONCRETE PAVEMENT JOINTING CONCRETE PAVEMENT JOINTING AT UTILITY FIXTURES BARRICADES AND SIGNS FOR MAINLINE CLOSURES BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-06A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
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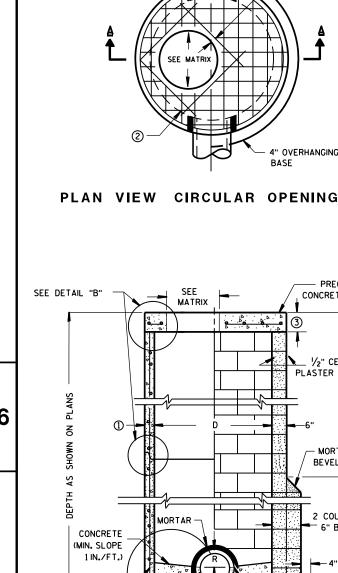






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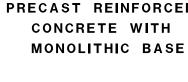
SEE

MORTAR -

MATRIX

• 4° • •

PRECAST REINFORCED — CONCRETE FLAT SLAB TOP



②-

CONTRACTOR TO PROVIDE DRAWING(S)

STAMPED BY A PROFESSIONAL ENGINEER

SEE DETAIL "A"

(I)·

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

2" (TYP)

" OVERHANGING

- PRECAST REINFORCED

CONCRETE FLAT SLAB TOP

1/2" CEMENT

- MORTAR

BEVEL 45°

2 COURSES 으는

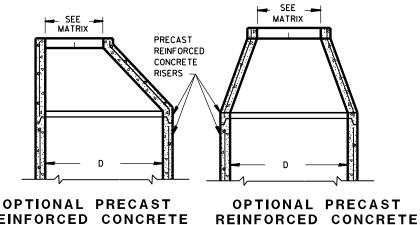
12'. EPT

6" BLOCK

4" MIN

SPLIT PIPE OR FORM CONCRETE TO FIT

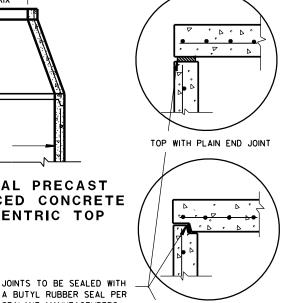
PLASTER COAT



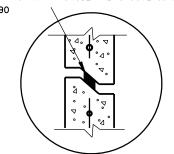
REINFORCED CONCRETE **ECCENTRIC TOP** CONCENTRIC TOP

PRECAST

WALL

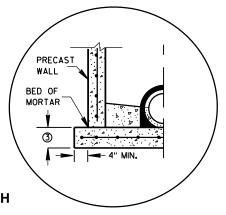


A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS TOP WITH TONGUE AND GROOVE JOINT RECOMMENDATIONS CONFORMING TO ASTM C990



RISER WITH TONGUE AND GROOVE JOINT

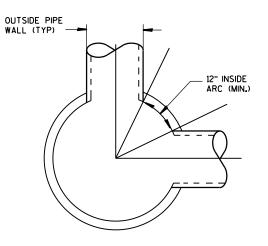
DETAIL "B"



PRECAST REINFORCED

CONCRETE WITH INTEGRAL BASE OPTION

SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION DETAIL "A"



DETAIL "C"

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

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

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

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

PRECAST REINFORCED CONE TOPS (ECCENTRIC OR CONCENTRIC) OR PRECAST REINFORCED FLAT SLAB TOPS MAY BE USED ON CONCRETE BLOCK STRUCTURES. THE CONE TOPS SHALL BE INSTALLED ON A BED OF MORTAR.

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

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

STEPS OF APPROVED POLYPROPYLENE PLASTIC COATED REINFORCEMENT BAR ARE ACCEPTABLE. REINFORCING BAR MUST BE A MINIMUM OF 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 PERMITED FOR STRUCTURES GREATER THAN 4 FEET IN DIAMETER.

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

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

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

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

- 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

MANHOLE COVER OPENING MATRIX

MANHOLE COVER TYPE	С	ALL J'S	К	L	M
OPENING SIZE (FT)					
2 DIA.	х	х		х	
3 DIA.			×		Х

PIPE MATRIX

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

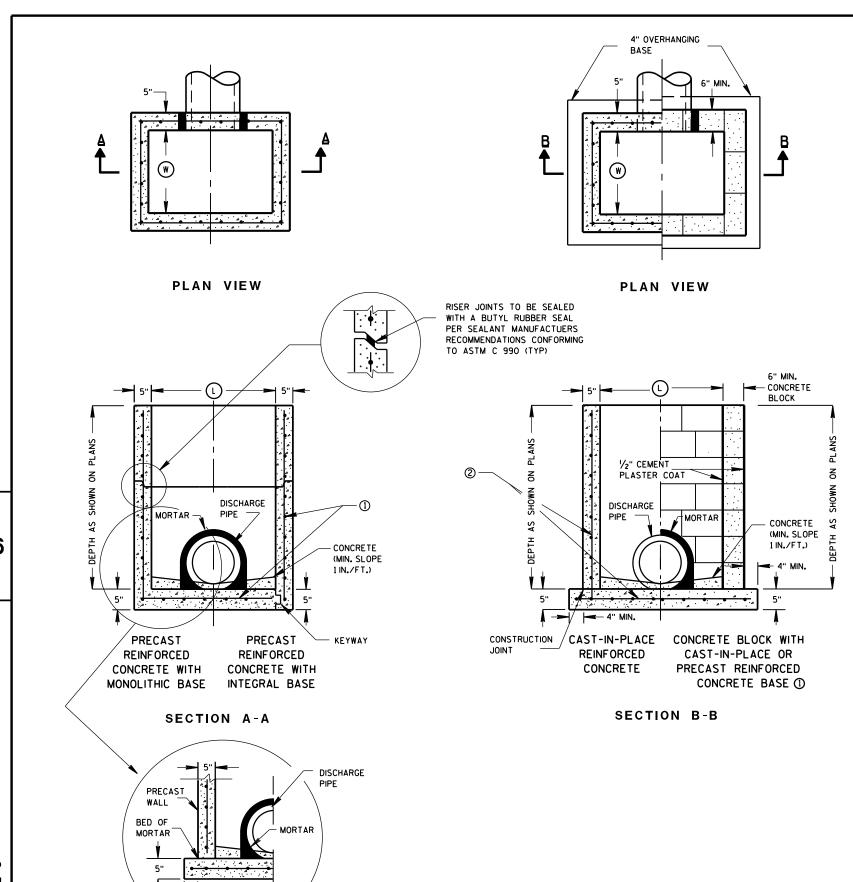
MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER

> STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVED	
6/5/2012	/S/ Jerry H.Zogg
DATE	ROADWAY STANDARDS DEVELOPMENT
FHWA	ENGINEER

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GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

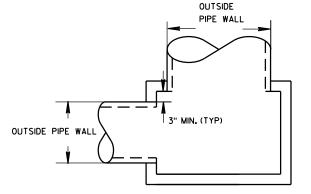
- 1) FOR PRECAST INLETS PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913.
- (2) CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

INLET COVER MATRIX

	INLET SIZE		INLET COVER TYPE	ALL A'S	ALL B'S	BW	F	ALL H'S	s	т	v	WM
		WIDTH (W) (FT)	LENGTH (L) (FT)									
	2X2-FT	2	2	X	х				Х		Х	
ſ	2X2.5-FT	2	2.5			Х			Х	Х	Х	Х
[2X3-FT	2	3					Х				
	2.5X3-FT	2.5	3				Х					

PIPE MATRIX

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



DETAIL "A"

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

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVED 6/5/2012 DATE

FHWA

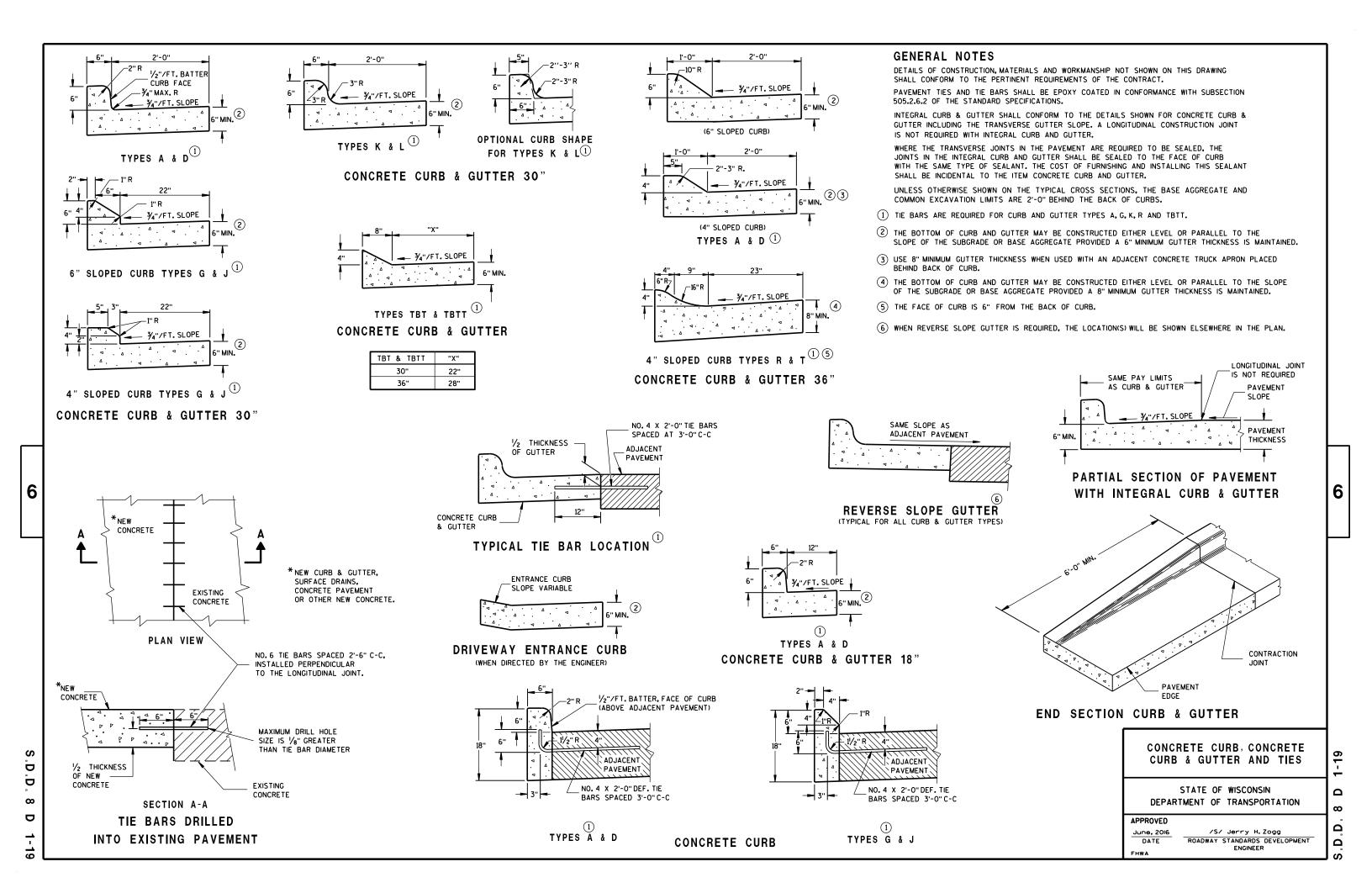
/S/ Jerry H. Zogg ROADWAY STANDARDS DEVELOPMENT

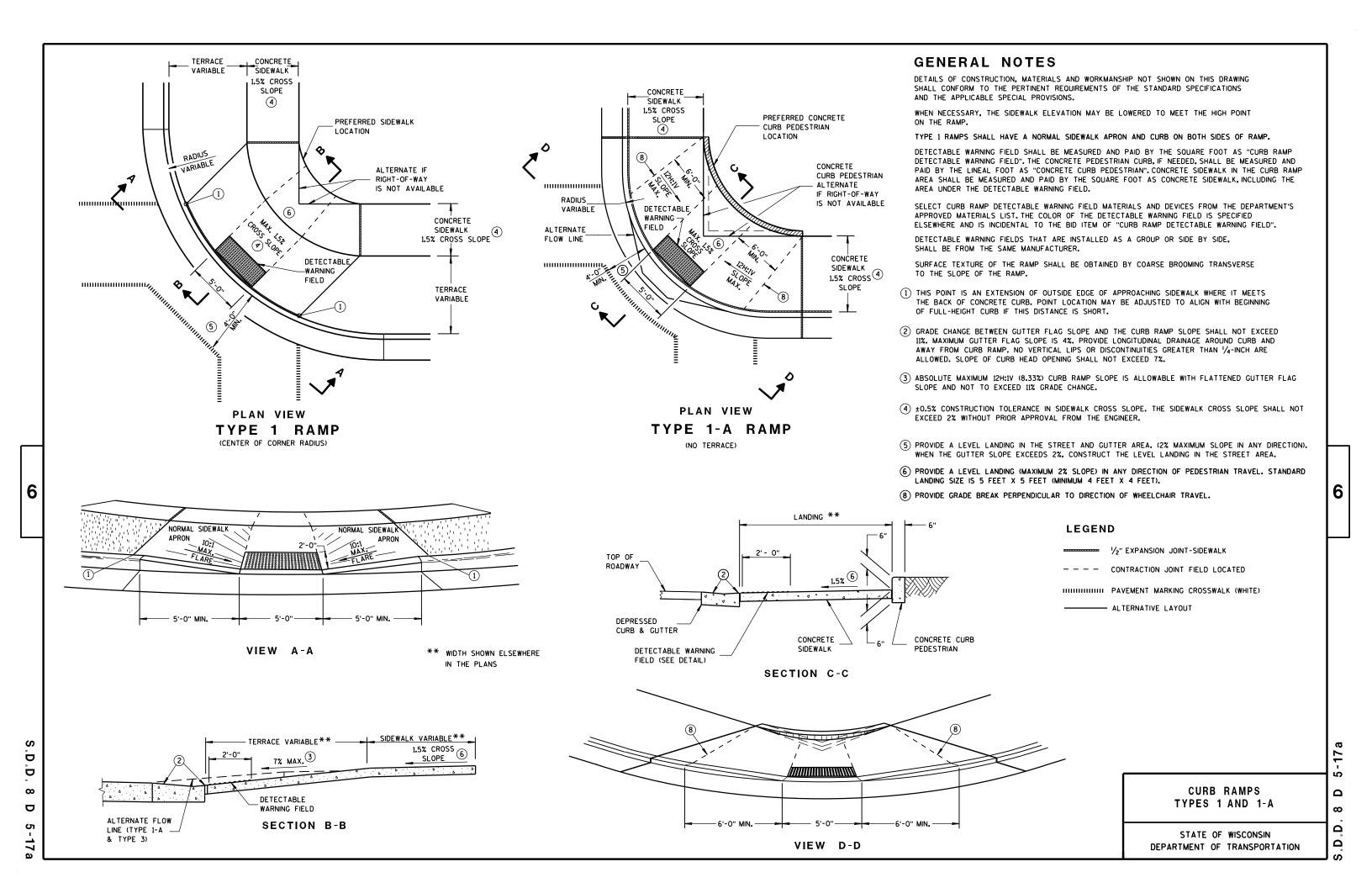
ENGINEER

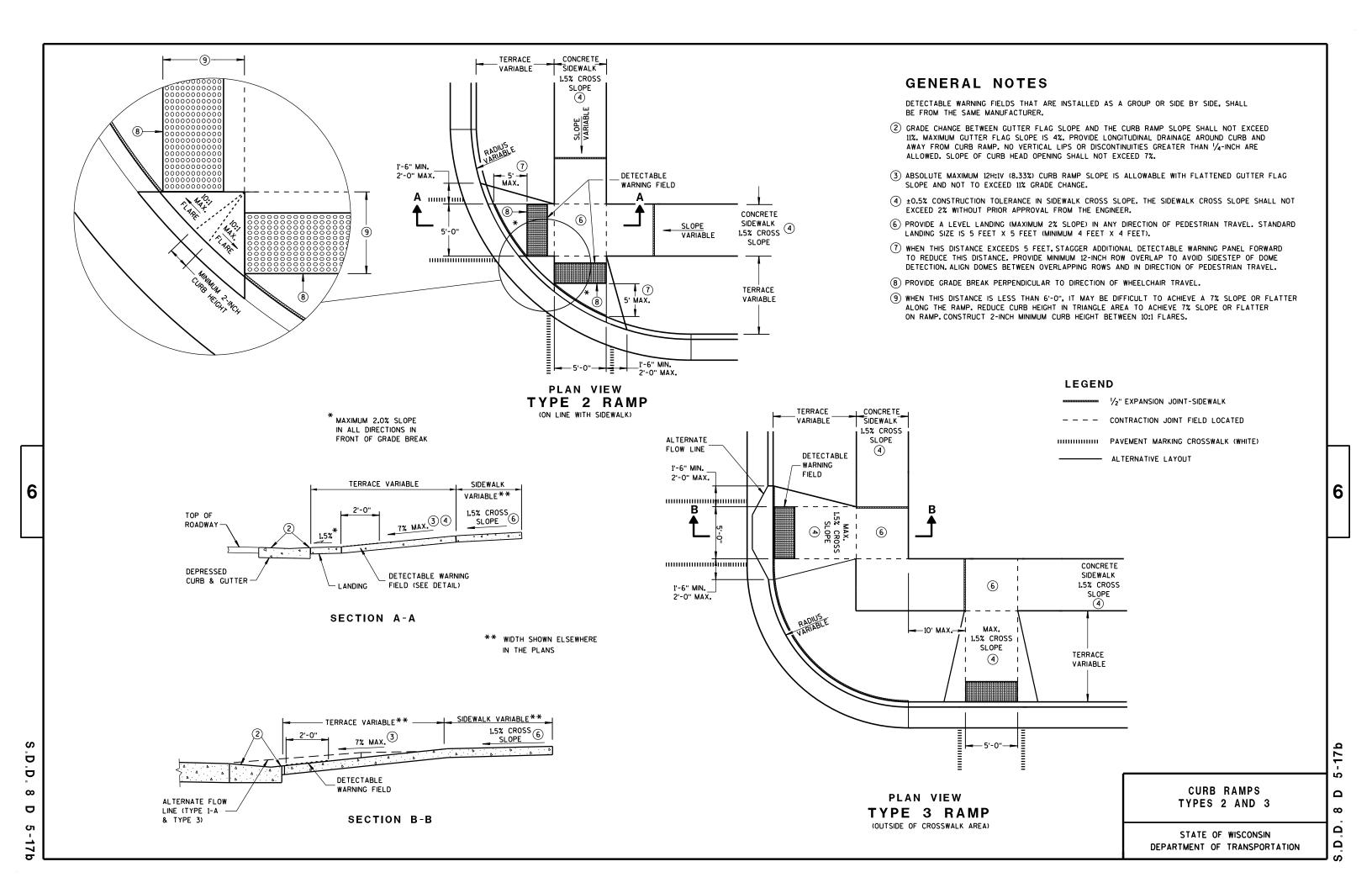
INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT

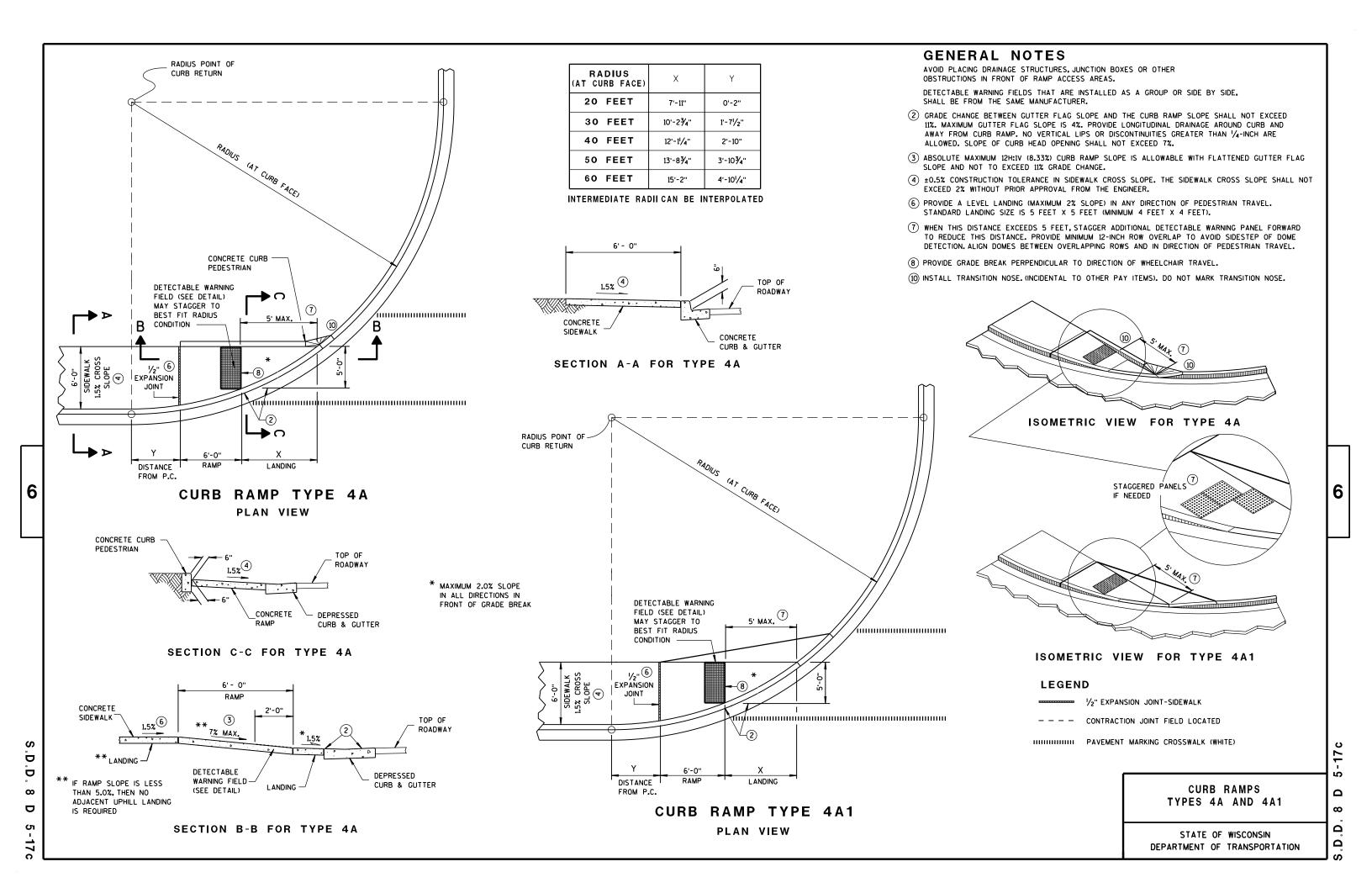
SEPARATE PRECAST REINFORCED

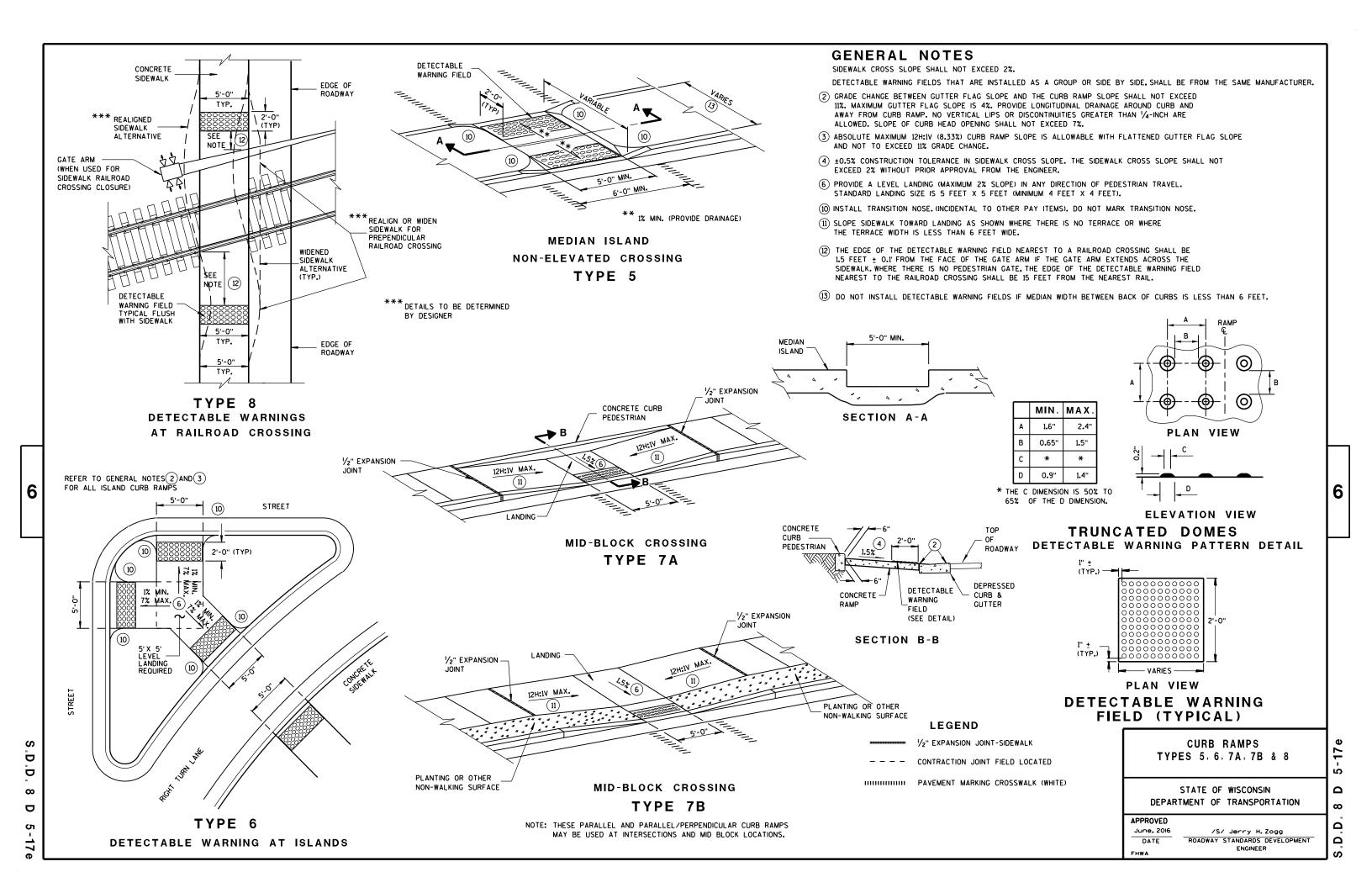
CONCRETE BASE OPTION











TYPICAL APPLICATION OF SILT FENCE

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PLAN VIEW SILT FENCE AT MEDIAN SURFACE DRAINS



GENERAL NOTES

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

- \bigcirc HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
- ② FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
- 3 WOOD POSTS SHALL BE A MINIMUM SIZE OF 11/8" X 11/8" OF OAK OR HICKORY.
- 4) SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.
- (5) CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



TRENCH DETAIL



SILT FENCE TIE BACK
(WHEN REQUIRED BY THE ENGINEER)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4-29-05 /S/ Beth Cannestra

29-05 /S/ Beth Cannestra
DATE CHIEF ROADWAY DEVELOPMENT ENGINEER

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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

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 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 A, B, C, AND D

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVED

10/16/02

/S/ Beth Cannestra CHIEF ROADWAY DEVELOPMENT ENGINEER 6

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GENERAL NOTES

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

TURBIDITY BARRIER MAY BE REMOVED AT THE ENGINEERS DISCRETION, WHEN PERMANENT EROSION CONTROL MEASURES HAVE BEEN ESTABLISHED.

- ① DRIVEN STEEL POSTS, PIPES, OR CHANNELS. LENGTH SHALL BE SUFFICIENT TO SECURELY SUPPORT BARRIER AT HIGH WATER ELEVATIONS.
- 2 SANDBAGS TO BE USED AS ADDITIONAL BALLAST WHEN ORDERED BY THE ENGINEER TO MEET ADVERSE FIELD CONDITIONS. SPACE AS APPROPRIATE FOR SITE CONDITIONS.
- (3) WHEN BARRIER HEIGHT, H. EXCEEDS 8 FT., POST SPACING MAY NEED TO BE DECREASED.
- 4 IN WATERWAYS SUBJECT TO FLUCTUATING WATER ELEVATIONS, PROVISIONS SHOULD BE MADE TO ALLOW THE WATER TO EQUALIZE ON EACH SIDE OF THE BARRIER. THIS MAY BE ACCOMPLISHED BY LEAVING A PORTION OF THE BARRIER OPEN ON THE UPSTREAM END.
- (5) ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION PERIOD. MIMIMUM BARRIER HEIGHT SHALL BE 2'GREATER THAN EITHER THE 02 ELEVATION OR THE ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION, WICHEVER IS GREATER.
- (6) FLOAT ALTERNATIVE WILL ONLY BE ALLOWED WITH WRITTEN APPROVAL OF THE ENGINEER, AND IS MEANT FOR LOCATIONS WHERE BED ROCK PREVENTS THE INSTALLATION OF POSTS.
- (7) ALLOW SUFFICIENT SLACK VERTICALLY AND HORIZONTALLY SO THAT SEDIMENT BUILD UP WILL NOT SEPARATE OR LOWER THE TURBIDITY BARRIER.
- (8) USE AS DIRECTED BY COAST GUARD OR DNR PERMIT WHEN WORKING IN NAVIGABLE WATERWAYS.





SECTION C-C

TURBIDITY BARRIER DETAIL SHOWING TYPICAL PLACEMENT AT STRUCTURES

TURBIDITY BARRIER

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVED

6/04/02 /S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER ∞

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METAL APRON ENDWALLS												
PIPE	MIN. 1	THICK.	DIMENSIONS (Inches)									
DIA.	(Inches)		A	В	Н	L	Γį	L ₂	W	APPROX. SLOPE	BODY	
(IN.)	STEEL	ALUM.	(±1")	(MAX.)	(±1")	(±1 ½")	①	0	(±2")	320.2		
12	.064	.060	6	6	6	21	12	171/2	24	2½+o 1	1Pc.	
15	.064	.060	7	8	6	26	14	213/4	30	21/2+o 1	1Pc.	
18	.064	.060	8	10	6	31	15	281/4	36	21/2+o 1	1Pc.	
21	.064	.060	9	12	6	36	18	295/8	42	21/2+o 1	1Pc.	
24	.064	.075	10	13	6	41	18	371/4	48	21/2+o 1	1Pc.	
30	.079	.075	12	16	8	51	18	521/4	60	21/2+0 1	1Pc.	
36	.079	. 105	14	19	9	60	24	59¾	72	21/2+o 1	2 Pc.	
42	.109	.105	16	22	11	69	24	75%	84	21/2 to 1	2 Pc.	
48	.109	.105	18	27	12	78	24	81	90	2 ¹ / ₄ +o 1	3 Pc.	
54	.109	.105	18	30	12	84	30	851/2	102	2 ¹ / ₄ †o 1	3 Pc.	
60	.109×	.105×	18	33	12	87	_	_	114	2 to 1	3 Pc.	
66	.109×	.105×	18	36	12	87	_	_	120	2 to 1	3 Pc.	
72	.109×	.105×	18	39	12	87	_	_	126	2 to 1	3 Pc.	
78	.109×	.105×	18	42	12	87	_	_	132	11/2+0 1	3 Pc.	
84	.109×	.105×	18	45	12	87	_	_	138	11/2 to 1	3 Pc.	
90	.109×	.105×	18	37	12	87	_	_	144	11/2+0 1	3 Pc.	
96	.109×	.105×	18	35	12	87	_	_	150	1/2+0 1	3 Pc.	

	REINFORCED CONCRETE APRON ENDWALLS											
PIPE		APPROX.										
DIA.	T A		В	С	D	Ε	G	SLOPE				
12	2	4	24	48 1/8	721/8	24	2	3 to 1				
15	21/4	6	27	46	73	30	21/4	3 to 1				
18	21/2	9	27	46	73	36	21/2	3 to 1				
21	23/4	9	36	371/2	731/2	42	23/4	3 to 1				
24	3	91/2	431/2	30	731/2	48	3	3 to 1				
27	31/4	101/2	491/2	24	731/2	54	31/4	3 to 1				
30	$3\frac{1}{2}$	12	54	193/4	731/2	60	31/2	3 to 1				
36	4	15	63	34¾	97¾	72	4	3 to 1				
42	$4\frac{1}{2}$	21	63	35	98	78	41/2	3 to 1				
48	5	24	72	26	98	84	5	3 to 1				
54	51/2		65	**************************************	8 ¹ / ₄ - 100	90	51/2	2% to 1				
60	6	* ** 30-35	60	39	99	96	5	2 to 1				
66	61/2	* ** 24-30	* * * 72-78	* * * 21-27	99	102	51/2	2 to 1				
72	7	* ** 24-36	78	21	99	108	6	2 to 1				
78	71/2	* ** 24-36	78	21	99	114	61/2	2 to 1				
84	8	36	901/2	21	1111/2	120	61/2	1½+o 1				
90	81/2	41	871/2	24	1111/2	132	61/2	11/2+0 1				

THREADED %6" DIA. ROD CONNECTOR AROUND CULVERT & THROUGH TANK TYPE CONNECTOR LUG LUG OR ALTERNATE CONNECTOR STRAP (SEE DETAIL) MEASURED LENGTH OF CULVERT TYPE 1 FOR 12" THRU 24" CORR. PIPE







NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL.

CORRUGATED PIPE. FOR CIRCUMFERENTIALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2, 3 OR 5

DIMPLED BAND MAY BE USED WITH HELICALLY

FOR HELICALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2 OR 5.

FOR HELICALLY CORRUGATED PIPES WITH TWO CIRCUMFERENTIAL CORRUGATIONS AT EACH END USE ENDWALL CONNECTION DETAILS 1, 2 OR 3.

1" WIDE, 12 GA. (0.109" THICK) GALVANIZED STRAP WITH STANDARD 6" X 1/2" BAND BOLT AND NUT ALTERNATE FOR TYPE 1 CONNECTION END SECTION CONNECTOR STRAP

* EXCEPT CENTER PANEL SEE GENERAL NOTES





SHOULDER

SLOPE



SIDE ELEVATION METAL ENDWALLS



**MAXIMUM





CONCRETE ENDWALLS

CONNECTION DETAILS



SECTION A-A

GENERAL NOTES

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

CONCRETE CULVERT ENDWALLS MAY NOT BE USED WITH GALVANIZED STEEL OR ALUMINUM CULVERT PIPE OR VISE VERSA, GALVANIZED STEEL OR ALUMINUM ENDWALLS SHALL NORMALLY BE INSTALLED ON CULVERT PIPE OF THE SAME METAL.

ALL THREE PIECE STEEL APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT OF THE PIPE

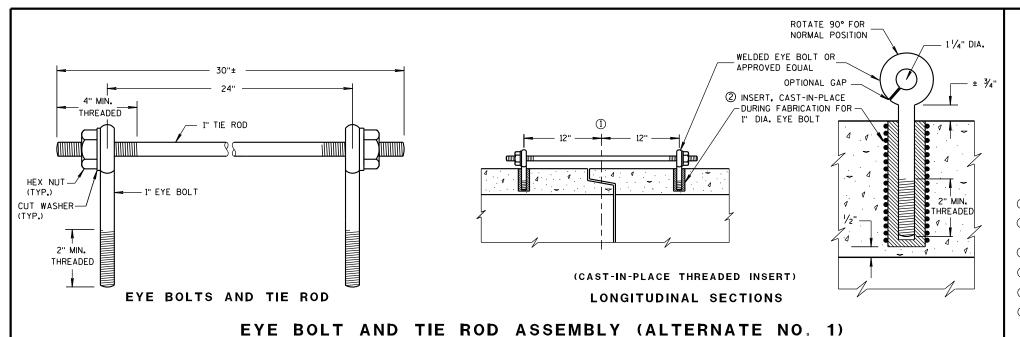
LAP SEAMS SHALL BE TIGHTLY JOINED BY GALVANIZED RIVETS OR BOLTS FOR STEEL UNITS AND ALUMINUM RIVETS AND BOLTS FOR ALUMINUM UNITS. FOR THE 60" THROUGH 96" DIAMETER APRON ENDWALL SIZES. THE REINFORCED EDGES AND CENTER PANEL SEAMS SHALL BE FURTHER REINFORCED WITH GALVANIZED STEEL OR ALUMINUM STIFFENER ANGLES. THE ANGLES SHALL BE ATTACHED BY GALVANIZED NUTS AND BOLTS FOR STEEL UNITS AND ALUMINUM NUTS AND BOLTS FOR ALUMINUM UNITS.

WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

(1) FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.



11/30/94 /S/ Rory L. Rhinesmith CHIEF ROADWAY DEVELOPMENT ENGINEER



GENERAL NOTES

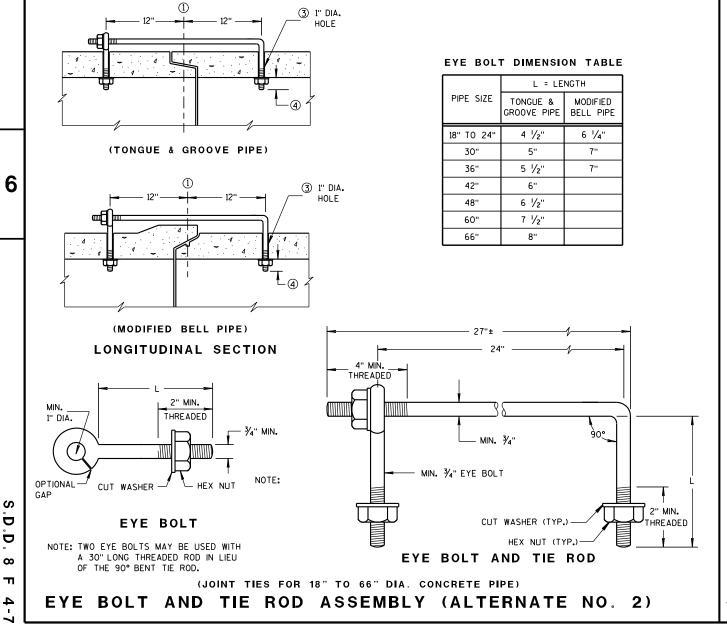
DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

CONCRETE CULVERT AND STORM SEWER PIPE SHALL BE TIED TOGETHER IN THE MANNER ILLUSTRATED BY THIS DETAIL AT LOCATIONS DESIGNATED IN THE STANDARD SPECIFICATIONS AND THE PLAN. THE CONTRACTOR MAY USE EITHER ALTERNATE 1, 2 OR 3 FOR DRAINAGE STRUCTURES, ONLY ALTERNATE 1 AND 3 MAY BE USED FOR CATTLE PASSES, UNLESS OTHERWISE STATED IN THE CONTRACT. THE MATERIALS, FABRICATION AND WORK NECESSARY TO TIE THE PIPE BY THIS DETAIL WILL BE CONSIDERED INCIDENTAL TO THE PIPE AND APRON ENDWALLS IF REQUIRED.

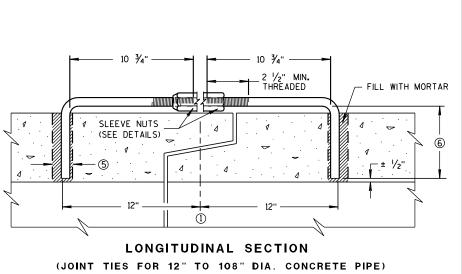
DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR JOINT TIES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

JOINT TIES TO BE HOT-DIP GALVANIZED PER ASTM A 153.

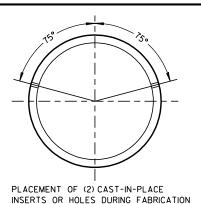
- (1) & OF TONGUE AND GROOVE OR BELL AND SPIGOT JOINTS.
- THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE
- ${\mathfrak S}$ HOLES SHALL BE CAST-IN-PLACE OR DRILLED 12 INCHES FROM ${\mathfrak L}$ OF TONGUE AND GROOVE.
- 4 BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.
- (5) OPENING TO BE ROD DIAMETER PLUS 1 INCH.
- ⑥ LENGTH ADEQUATE TO EXTEND TO WITHIN $rac{1}{2}$ INCH OF THE INNER SURFACE OF THE PIPE.



ADJUSTABLE TIE ROD TABLE 5/8 5 12-60 3/4 5 1/2 3/4 90-108 DIMENSIONS SHOWN ARE IN INCHES **TAPERED** PLAIN RIGHT AND LEFT THREADS **SLEEVE NUTS** 2 1/2" MIN. THREADED

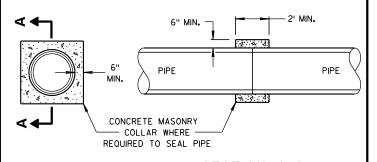


ADJUSTABLE TIE ROD (ALTERNATE NO. 3)



FOR PIPE SECTIONS REQUIRING TIE RODS

TRANSVERSE SECTION



SECTION A-A

CONCRETE COLLAR DETAIL

JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

6/5/2012 /S/ Jerry H. Zogg DATE ROADWAY STANDARDS DEVELOPMENT ENGINEER

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TYPICAL NAME PLATE

(BRIDGES, CULVERTS, AND RETAINING WALLS)



NUMBERING DESIGNATION MULTI-UNIT STRUCTURES

GENERAL NOTES

NAME PLATES TO BE INSTALLED ON BRIDGES, CULVERTS, AND RETAINING WALLS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS.

THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

- 1 EPOXY RESIN SHALL BE FROM AN APPROVED MANUFACTURER AND USED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- (2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



SPREAD OPEN SO THE TOP OF LUG IS 11/4" WIDE

SECTION A-A

ALTERNATE LUG



ALTERNATE LUG

(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE (STRUCTURES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

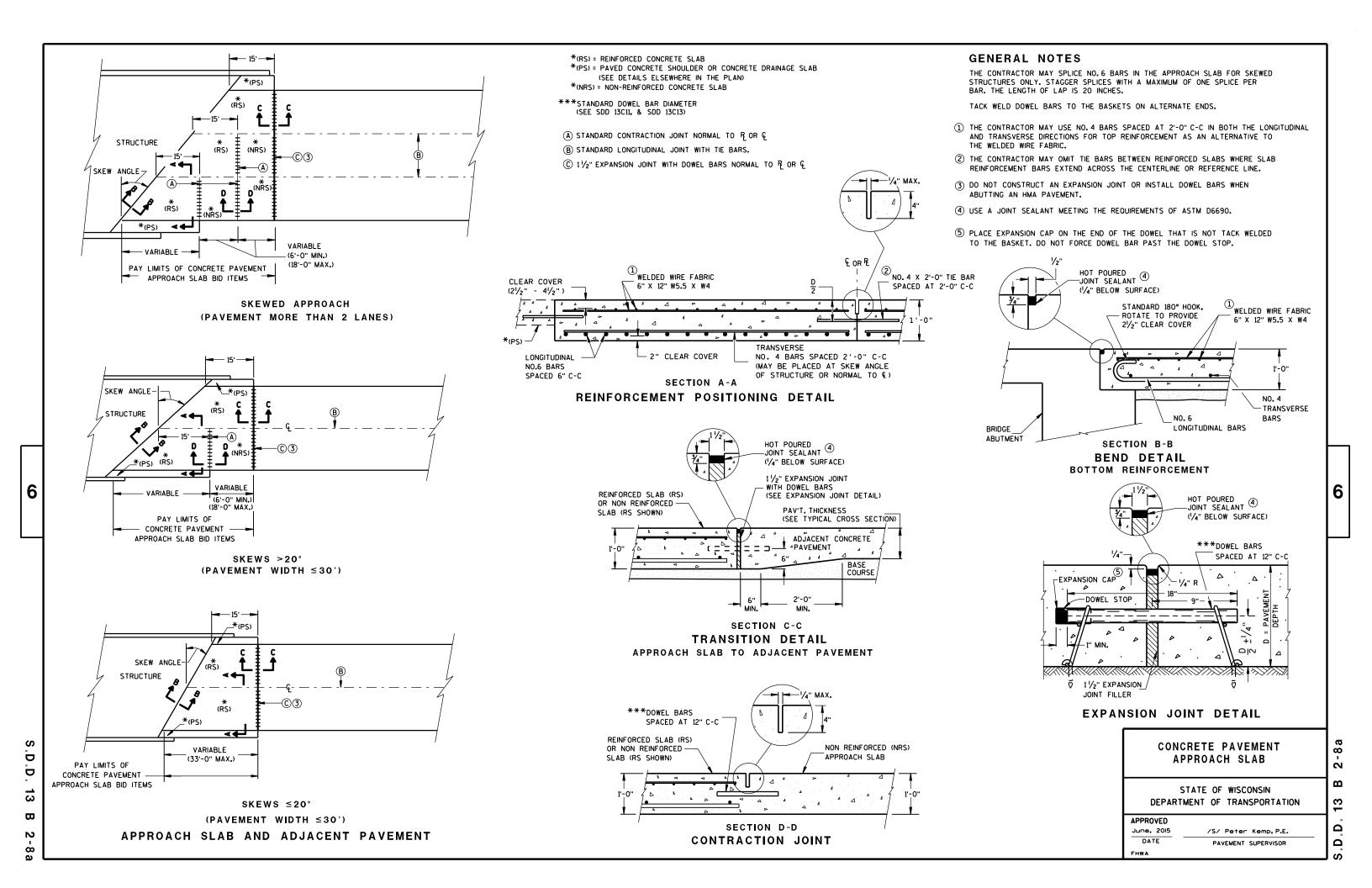
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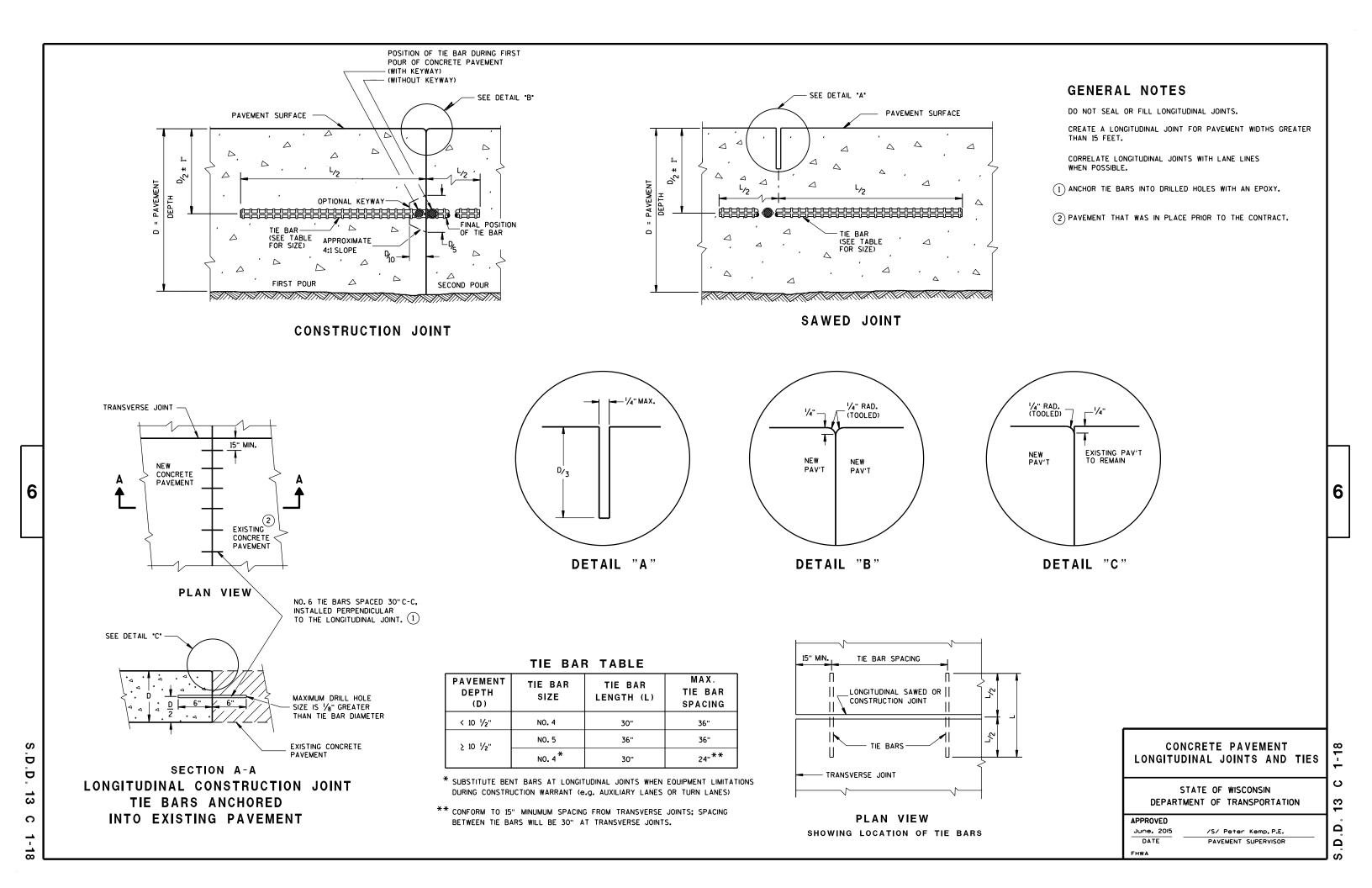
3/26/IO /S/ SCOT BECKET

CHIEF STRUCTURAL DEVELOPMENT ENGINEER

D.D. 12 A

3-10

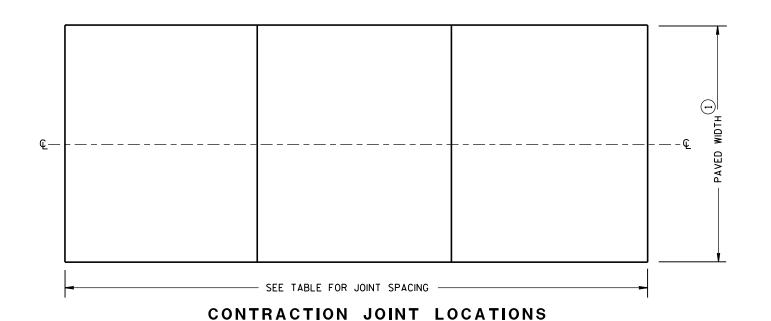




PAVEMENT DEPTH AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	CONTRACTION JOINT SPACING
6", 6 ½"	12'
7", 7 ½"	14'
8" & ABOVE	15'

CONTRACTION JOINT



GENERAL NOTES

CONTRACTION JOINTS

CONSTRUCT TRANSVERSE CONTRACTION JOINTS NORMAL TO THE CENTERLINE.

LOCATE AND ORIENT CONTRACTION JOINTS THROUGH INTERSECTIONS AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

DO NOT SEAL OR FILL CONTRACTION JOINTS.

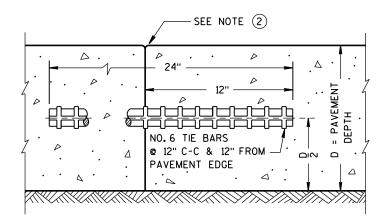
CONSTRUCTION JOINTS

LOCATE CONSTRUCTION JOINTS A MINIMUM OF 6 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO THE CONTRACTION JOINTS.

FORM OR SAW CONSTRUCTION JOINTS.

THE CONTRACTOR MAY INSERT TIE BARS THROUGH THE HEADER BOARD AFTER THE CONCRETE HAS BEEN PLACED.

- 1) REFER TO TYPICAL CROSS SECTIONS FOR PAVED WIDTH AND LOCATION OF LONGITUDINAL JOINTS.
- (2) PROVIDE A SMOOTH VERTICAL FACE FOR THE ENTIRE DEPTH OF THE PAVEMENT WHEN FORMING CONSTRUCTION JOINTS. PROVIDE A 1/4-INCH RADIUS AT FORMED JOINTS.



TIED TRANSVERSE CONSTRUCTION JOINT

URBAN NON-DOWELED CONCRETE **PAVEMENT** STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVED 5-3-2013 DATE

FHWA

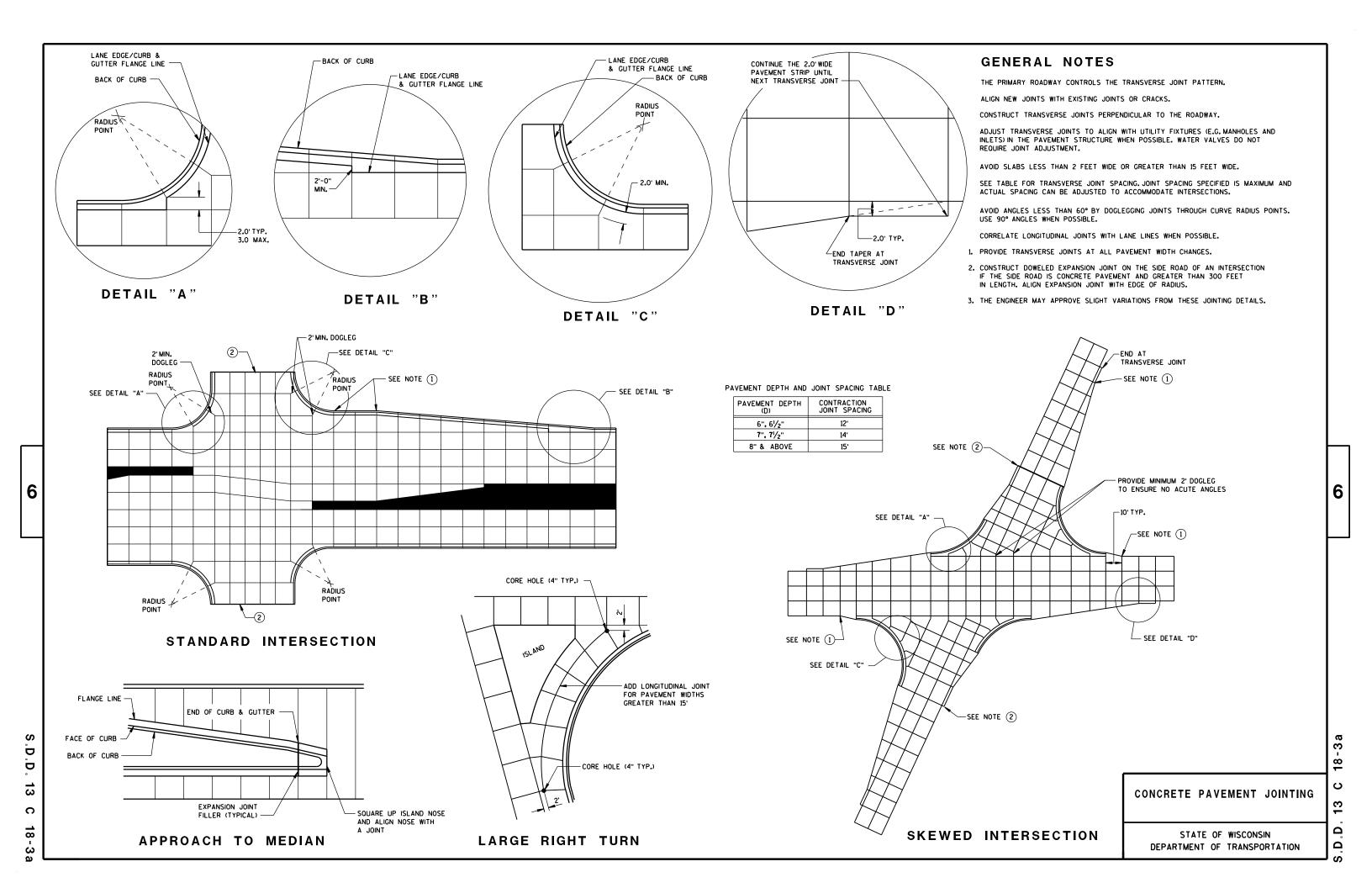
/S/ Deb Bischoff PAVEMENT POLICY & DESIGN ENGINEER

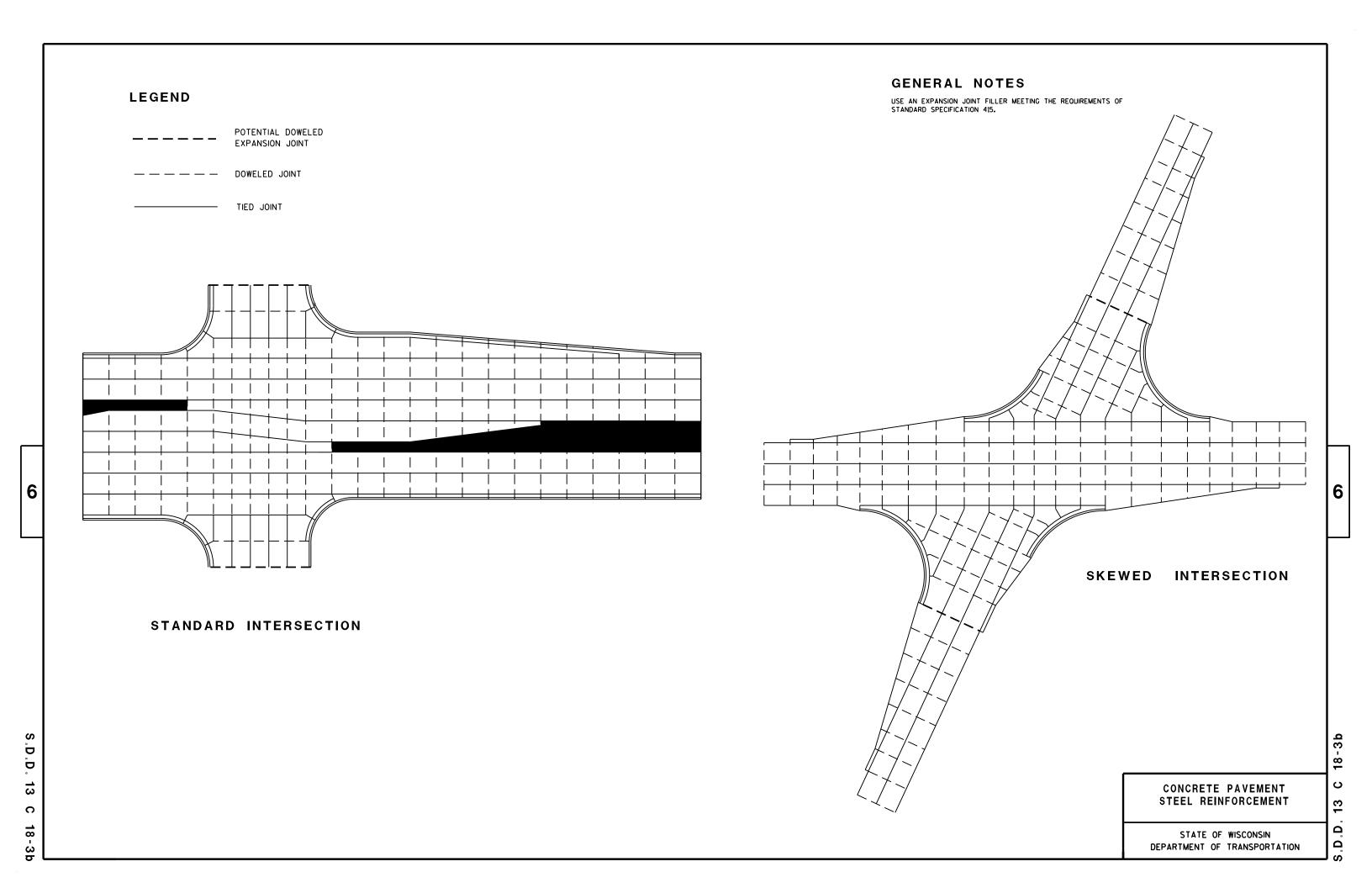
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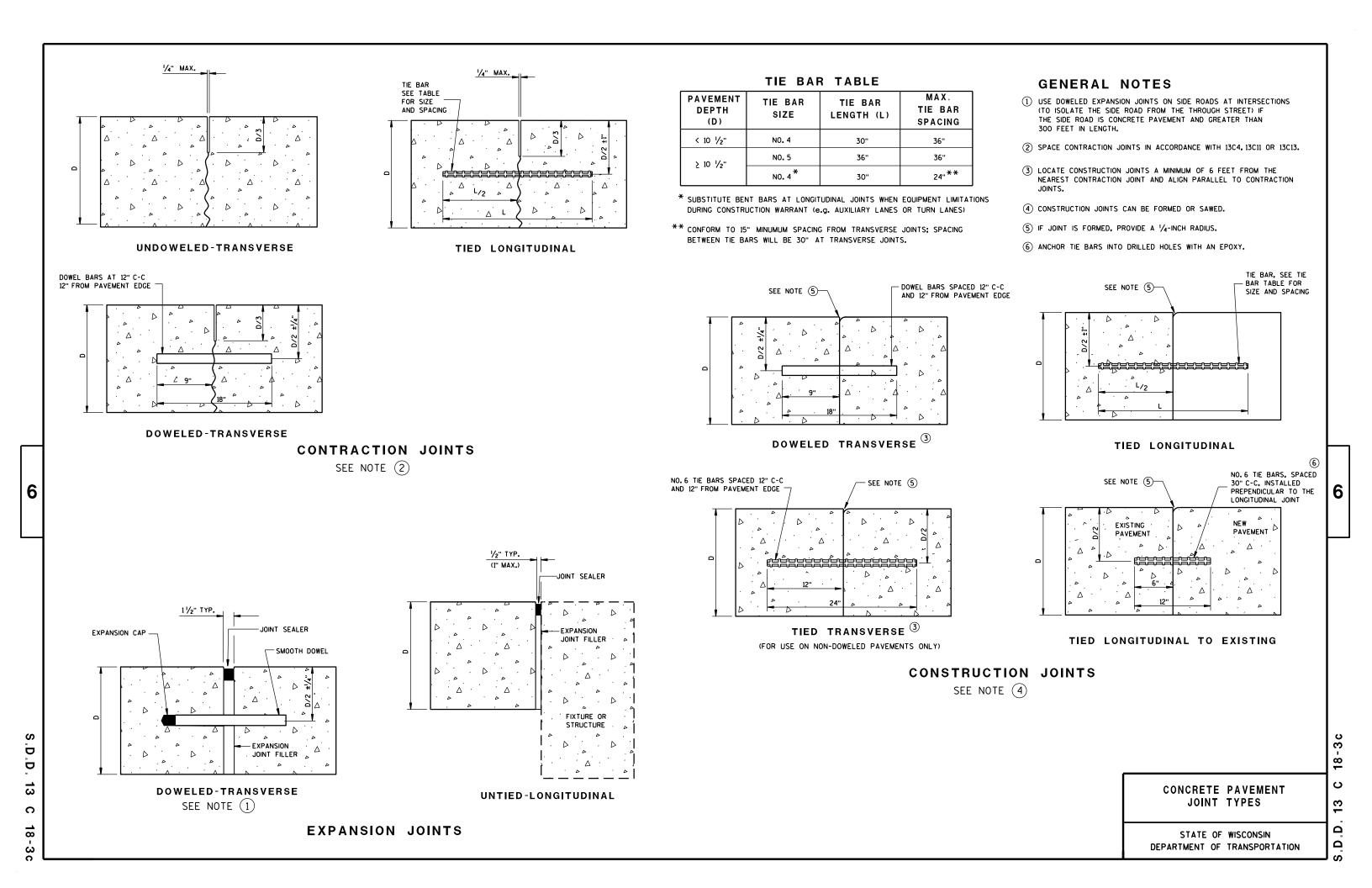
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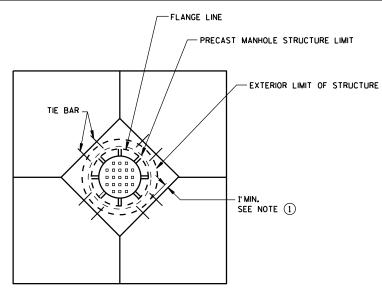
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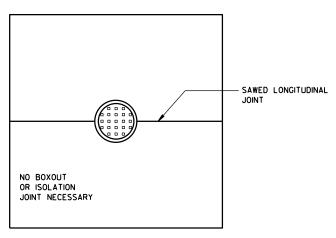




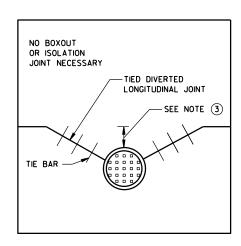




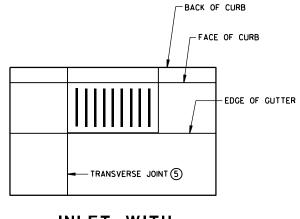
DIAGONAL MANHOLE BOXOUT FOR CONSTRUCTION JOINTS



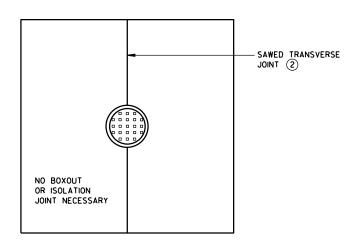
MANHOLE WITH LONGITUDINAL JOINT



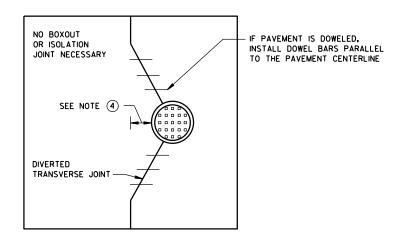
MANHOLE WITH DIVERTED LONGITUDINAL CONTRACTION JOINT



INLET WITH TRANSVERSE JOINT



MANHOLE WITH TRANSVERSE JOINT



MANHOLE WITH DIVERTED TRANSVERSE CONTRACTION JOINT

GENERAL NOTES

- 1 USE BOXOUTS WHEN UTILITY STRUCTURE IS IN THE PATH OF CONSTRUCTION JOINTS. PROVIDE A 1-FOOT MINIMUM CLEARANCE BETWEEN THE EXTERIOR LIMIT OF THE STRUCTURE TO THE DIAMOND BOXOUT.
- 2 ADJUST TRANSVERSE JOINT TO INTERSECT MANHOLE IF POSSIBLE.
- (3) IF DISTANCE BETWEEN THE LONGITUDINAL JOINT AND THE EDGE OF MANHOLE IS 2 FEET OR LESS. DIVERT THE LONGITUDIAL JOINT AT A 2:1 TAPER RATE TO THE CENTER OF THE MANHOLE. IF THE DISTANCE IS GREATER THAN 2 FEET, DO NOT DIVERT THE JOINT AND SAW AS NORMAL. PLACE REBAR REINFORCEMENT AROUND THE MANHOLE.
- (4) IF DISTANCE FROM THE EDGE OF THE MANHOLE TO THE NEAREST TRANSVERSE JOINT IS 4 FEET OR LESS. REDIRECT JOINT TO INTERSECT THE CENTER OF THE MANHOLE. IF DISTANCE IS GREATER THAN 4 FEET, DO NOT DIVERT THE JOINT AND SAW AS NORMAL. PLACE REBAR REINFORCEMENT AROUND THE MANHOLE.
- (5) ALIGN TRANSVERSE JOINT WITH ONE EDGE OF INLET WHEN PRACTICAL.

CONCRETE PAVEMENT JOINTING AT UTILITY FIXTURES

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVED DATE

/S/ Peter Kemp, P.E. PAVEMENT SUPERVISOR FHWA

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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

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.) MO5-1 AND MO6-1 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
- THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT INTERSECTION.
- FOR ROAD CLOSURE WITHOUT LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL D.
- FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT, SEE LANE CLOSURE BARRICADE DETAIL E.
- FOR BRIDGE OR CULVERT REPLACEMENTS, SUBSTITUTE "BRIDGE OUT" INSTEAD OF "ROAD CLOSED" ON R11-2 AND R11-3 SIGNS.
- 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.
- "EAST" CARDINAL DIRECTION MARKERS AND RIGHT TURN ARROWS ARE SHOWN. USE OTHER CARDINAL DIRECTIONS AND ARROWS AS APPROPRIATE.

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

2

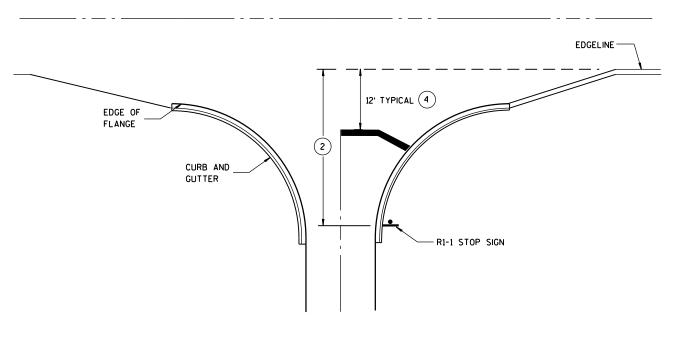
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STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

/S/ Peter Amakobe Atepe

STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER



8" CHANNELIZATION WHITE

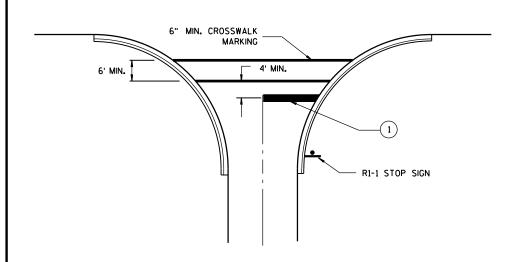
FLANGELINE (EXTENSION)

4" WHITE EDGELINE

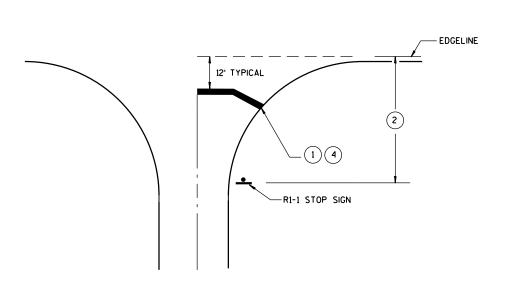
RI-1 STOP SIGN

TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER

TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH RIGHT TURN LANE



TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH CROSSWALK MARKING



TYPICAL STOP LINE PAVEMENT MARKING WITHOUT CURB AND GUTTER

GENERAL NOTES

- 1 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE PROJECT ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
- (2) IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGELINE THAN NO STOP LINE IS REQUIRED.
- (3) IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGELINE EXTENSION THAN NO STOP LINE IS REQUIRED.
- 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

.D.D. 15 C 33-2

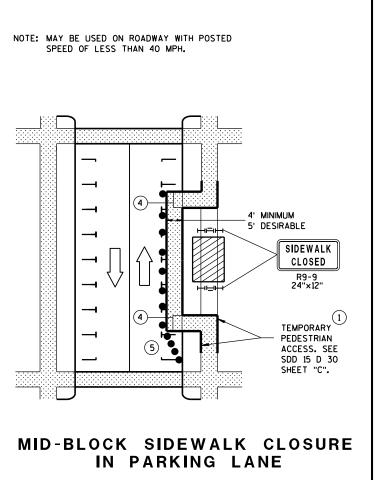
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NOTE: LAYOUT SAME AS ABOVE. 4' MINIMUM 5' DESIRABLE SIDEWALK CLOSED RQ-Q TEMPORARY PEDESTRIAN ACCESS. SEE SDD 15 D 30 SHEET "C". SIDEWALK DIVERSION

6

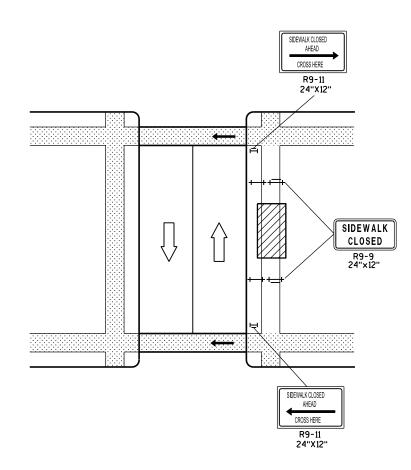
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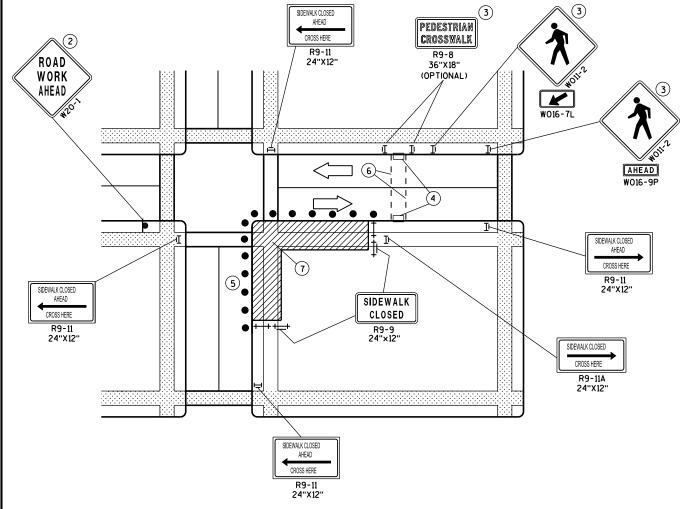
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MID-BLOCK SIDEWALK CLOSURE



CORNER SIDEWALK CLOSURE WITH TEMPORARY CROSSWALK

GENERAL NOTES

WHEN CLOSING OR RELOCATING CROSSWALKS OR SIDEWALKS, PROVIDE DETECABLE TEMPORARY FACILITIES AND INCLUDE ACCESSIBILITY FEATURES CONSISTENT WITH EXISTING PEDESTRIAN FACILITIES.

TEMPORARY TRAFFIC CONTROL DEVICES FOR PEDESTRIANS ARE SHOWN. OTHER DEVICES MAY BE NECESSARY TO CONTROL VEHICULAR TRAFFIC. STAGE WORK, AS NECESSARY, TO PROVIDE A TEMPORARY PEDESTRIAN ACCESS ROUTE AT ALL TIMES. FOR ROADWAYS WITH NO AVAILABLE DETOURS, MAINTAIN ONE OPEN SIDEWALK AT ALL TIMES.

"WO" SIGN IS THE SAME AS "W" SIGN EXCEPT THE BACKGROUND IS ORANGE.

FOR NIGHTTIME CLOSURE USE TYPE "A" FLASHING WARNING LIGHTS ON BARRICADES, SUPPORTING SIGNS AND CLOSING SIDEWALK. USE TYPE "C" STEADY BURN LIGHTS ON CHANNELIZING DEVICES SEPARATING THE WORK AREA FROM VEHICULAR TRAFFIC.

PEDESTRIAN TRAFFIC SIGNAL DISPLAY CONTROLLING CLOSED CROSSWALK SHALL BE COVERED OR DEACTIVATED.

POST MOUNTED SIGNS LOCATED ADJACENT TO A SIDEWALK SHALL HAVE A 7 FOOT MINIMUM CLEARANCE FROM THE BOTTOM OF THE SIGN TO THE SIDEWALK SURFACE.

ALTERNATE SIDEWALK WORK BETWEEN LEFT AND RIGHT SIDE OF ROADWAY TO MAINTAIN PEDESTRIAN ACCESS.

- 1) IF SIDEWALK CLOSURE AFFECTS AN ACCESSIBLE AND DETECTABLE FACILITY, MAINTAIN ACCESSIBILITY AND DETECTABILITY ALONG THE ALTERNATE PEDESTRIAN ROUTE.
- (2) "ROAD WORK AHEAD" SIGNS ARE NOT REQUIRED IF THE SIDEWALK CLOSURE OCCURS WITHIN A LARGER WORK ZONE WHERE ADVANCE WARNING SIGNS ARE ALREADY PRESENT, OR IF THE WORK AREA AND EQUIPMENT ARE MORE THAN 2 FEET BEHIND THE CURB.
- (3) IF TEMPORARY PEDESTRIAN CROSSWALK IS NOT PROVIDED, OMIT R9-8 AND WO11-2 SIGN ASSEMBLIES. IF PROVIDED INCLUDE ON BOTH SIDES OF THE CROSSWALK.
- (4) TEMPORARY CURB RAMPS. SEE SDD 15 D 30 SHEET "B".
- (5) DRUMS OR BARRICADES AT 25 FOOT SPACING. STREET PARKING SHALL BE PROHIBITED FOR AT LEAST 50 FEET IN ADVANCE OF THE MID-BLOCK CROSSWALK.
- (6) TEMPORARY PAVEMENT MARKING FOR CROSSWALK LINES.
- (7) LIMIT WORK TO ONE QUADRANT AT A TIME TO MINIMIZE PEDESTRIAN

LEGEND

SIGN ON PERMANENT SUPPORT

UNDER PEDESTRIAN TRAFFIC

TRAFFIC TRAFFIC CONTOL DRUM

DIRECTION OF

WORK AREA PEDESTRIAN

CHANNELIZATION DEVICE

TYPE II BARRICADE WITH/WITHOUT SIGN (ALL WITH ONE WARNING LIGHT, TYPE A. LOW-INTENSITY FLASHING)

TYPE III BARRICADE WITH/WITHOUT SIGN (ALL WITH ONE WARNING LIGHT, TYPE A, LOW-INTENSITY FLASHING)

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

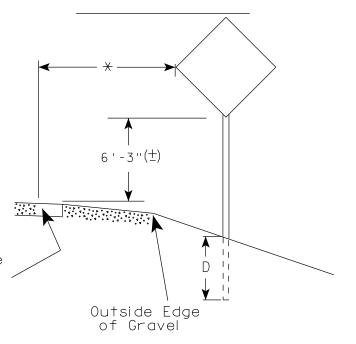
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION က 0 က Ω Ω

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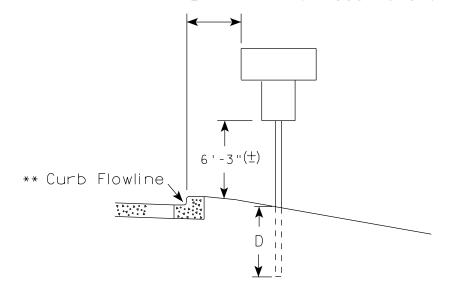
URBAN ARFA

2' Min - 4' Max (See Note 6) 7'-3"(士) ** Curb Flowline. White Edgeline Location

RURAL AREA (See Note 2)



2' Min - 4' Max (See Note 6)



5'-3"(生) D^{-1} Outside Edae of Gravel

White Edgeline Location

** The existence of curb and gutter does not in itself mandate the vertical clearance illustrated.

HWY:

That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.

* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

PLOT DATE: 12-NOV-2014 14:03

GENERAL NOTES

- 1. Signs wider than 4 feet, 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
- 2. If signs are mounted on barrier wall, see A4-10 sign plate.
- 3. For expressways and freeways, mounting height is $7'-3''(\pm)$ or 6'-3" (±) depending upon existence of a sub-sign.
- 4. Minimum mounting height for J assemblies (A2-1S) is $7'-3''(\pm)$ or $6'-3''(\pm)$ per urban or rural detail respectively.
- 5. Minimum mounting height for signs mounted on traffic signal poles is 5' - 3'' (\pm).
- 6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
- 7. The (+) tolerance for mounting height is 3 inches.
- 8. Folding signs shall be mounted at a height of 5'-3'' (\pm) or as directd by the Engineer.
- 9. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (\pm) . The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Enhanced Reference Markers, Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3'' (\pm).

POST EMBEDMENT DEPTH

D
(Min)
4'
5'

TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

SHEET NO:

APPROVED

for State Traffic Engineer

DATE 11/12/14

PROJECT NO: FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43.DGN COUNTY:

PLOT BY: mscsja

PLOT NAME :

WISDOT/CADDS SHEET 42

PLOT SCALE: 99.237937:1.000000



NOTES: 1. ALL MATERIAL TO BE APPROVED

BY ENGINEER PRIOR TO INSTALLATION

- 2. SEE SIGN PLATE A4-8 FOR SIGN HARDWARE REQUIREMENTS
- 3. 18 INCH X 18 INCH SQUARE BOX-OUTS MAY BE USED FOR INSTALLATIONS IN EXISTING CONCRETE OR ASPHALT LOCATIONS.



ELEVATION VIEW

DETAIL OF STEEL 2 X 2 SIGN POST IN BOX-OUT



DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

HWY:



PLAN VIEW

COUNTY:

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST BOX-OUTS A4-3B

WISCONSIN DEPT OF TRANSPORTATION

For State Traffic Engineer

DATE 1/27/14 PLATE NO. A4-3B.1

SHEET NO:

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43B.DGN

PROJECT NO:

PLOT DATE: 27-JAN-2014 09:48

PLOT NAME :

PLOT BY: mscsja

PLOT SCALE: 13.659812:1.000000

APPROVED

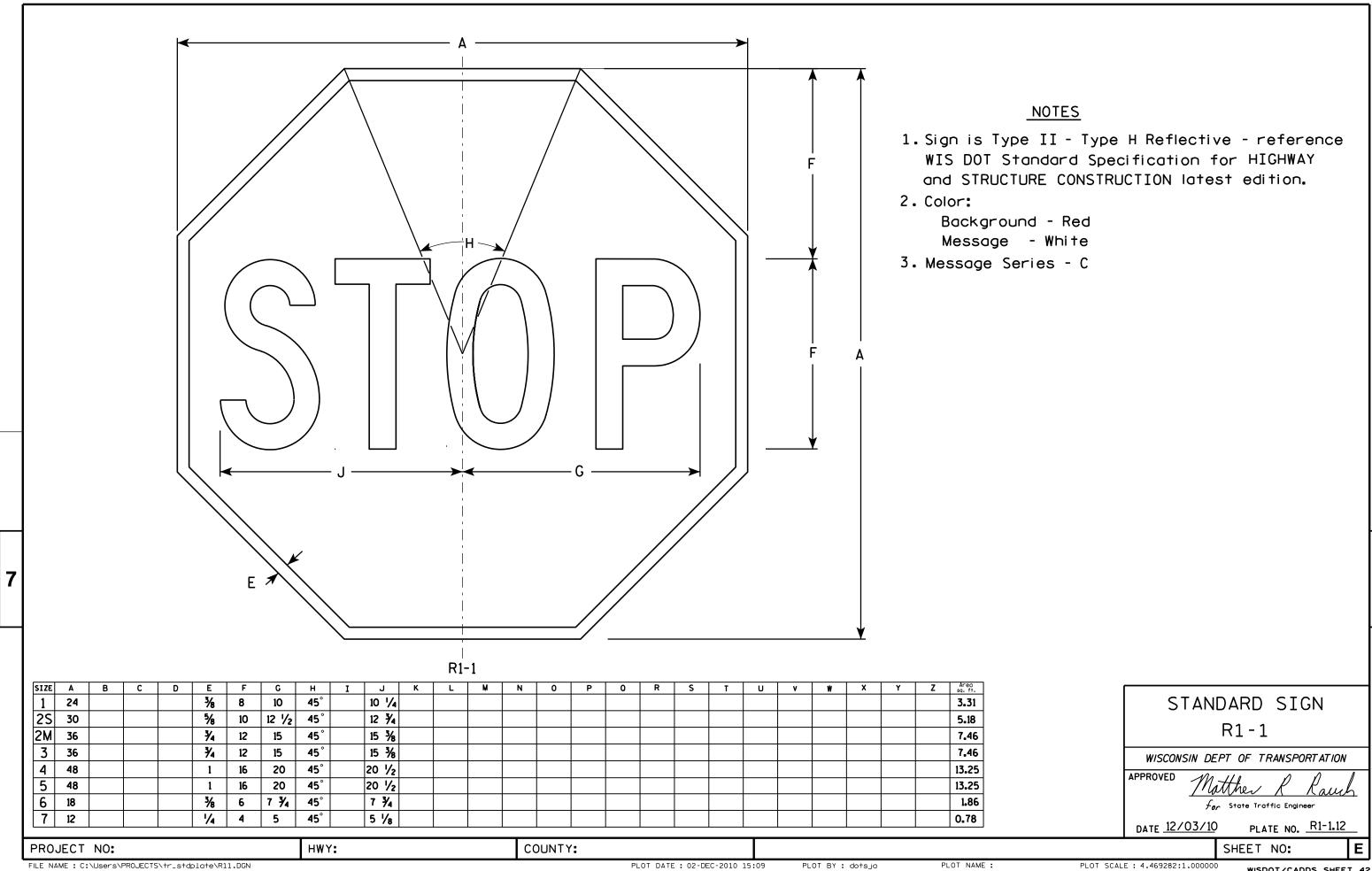


PROJECT NO: HWY: COUNTY: SHEET NO: FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A49.DGN PLOT DATE: 05-FEB-2015 17:09 PLOT BY: mscsja PLOT NAME : PLOT SCALE: 13.659812:1.000000

DATE 2/05/15

PLATE NO. <u>A4-9.9</u>

For State Traffic Engineer



NOTES

- 1. Sign is Type II reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition. (See note 5).
- 2. Color:

Background - See note 5 Message - Black

- 3. Message Series See note 6
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- 5. Top panel (SCHOOL) background Yellow Green -Type F Reflective. Lower panel background - White -Type H Reflective.
- 6. From top to bottom: Lines 1, 5, 6 & 7 are series D Lines 2,3 & 4 are series E
- 7. Line 4 substitute appropriate numerals and adjust spacing to achieve proper balance.

Metric equivalent for this sign is:

SIZE					
1					
2	600	mm	X	1200	mm
3	900	mm	X	1800	mm
4					
5					

PROJECT NO:

С D Ε 2 1 3/8 1 1/4 | 3 3/4 | 9 1/8 | 10 1/4 | 9 5/8 | 7 1/8 | 7 5/8 | 3 1/2 | 3 3/8 | 6 5/8 | 6 3/8 | 9 1/4 | 9 3/8 24 1/2 5/8 8.00 0.72 48 3 36 2 1/4 ₹4 5 1/2 15 1/4 14 1/2 11 1/4 11 1/2 5 1/2 5 3/4 14 1/8 18.00 1.62 72 15 4 5

STANDARD SIGN S4-51

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Racel DATE 4/26/10 PLATE NO. 54-51.9

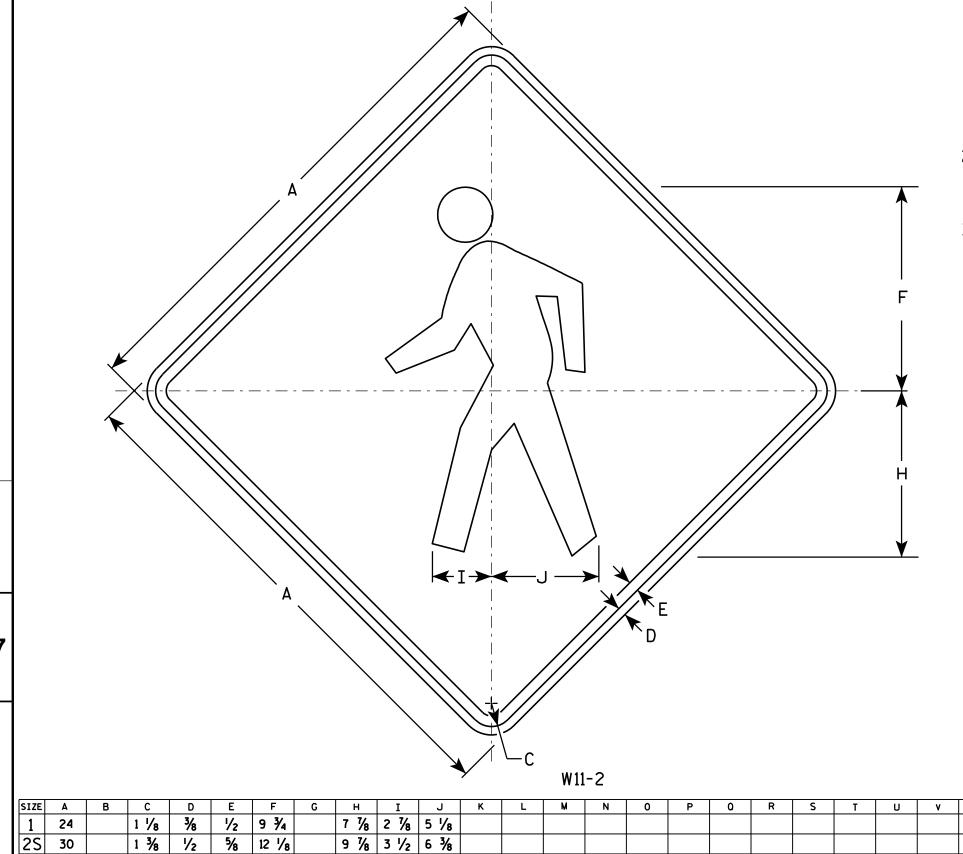
SHEET NO:

HWY:

COUNTY:

PLOT NAME :

PLOT SCALE: 7.945391:1.000000



<u>NOTES</u>

- 1. Sign is Type II Type F Reflective reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:

Background - Yellow Message - Black

3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

STANDARD SIGN W11-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

For State Traffic Engineer

DATE 6/7/10

PLATE NO. W11-2.7

SHEET NO:

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W112.DGN

1 1/8

1 %

2 1/4 3/4

2M

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4 48

5

PROJECT NO:

5/8

5/8

3/4

14 1/2

3/4 14 1/2

1 19 3/8

11 1/8 4 1/4 7 5/8

11 1/8 4 1/4 7 5/8

15 3/4 5 5/8 10 1/4

HWY:

PLOT DATE: 07-JUN-2010 13:29

COUNTY:

PLOT NAME :

PLOT BY: ditjph

4.0

6.25

9.0

9.0

16.0

PLOT SCALE: 5.700818:1.000000

<u>NOTES</u>

- 1. Sign is Type II Type F Reflective reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:

Background - Yellow Message - Black

- 3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- 4. W16-7R is the same as W16-L except the arrow is reversed along the vertical centerline.

E-			
C →		H	
	T K		B B
•	 	7	→
	W16	-7L	

SIZE	Α	В	С	D	Ε	F	G	Н	I	J	K	L	М	N	0	Р	0	R	S	Т	U	٧	₩	Х	Y	Z	Area sq. ft.
1																											
25	24	12	3/8	3/8	1 1/8	3	30°	5 ¾	4	1/2	7																2.0
2M	30	18	3/8	1/2	1 1/8	4 1/2	30°	8 1/2	6	5/8	10 1/4																3.75
3	30	18	3/8	1/2	1 1/8	4 1/2	30°	8 1/2	6	5/8	10 1/4																3.75
4																											8
5																											8
PRO.	PROJECT NO: HWY:								COUN	TY:																	

STANDARD SIGN W16-7

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew & Law

For State Traffic Engineer

DATE 11/02/10 PLATE NO. W16-7.5

SHEET NO:

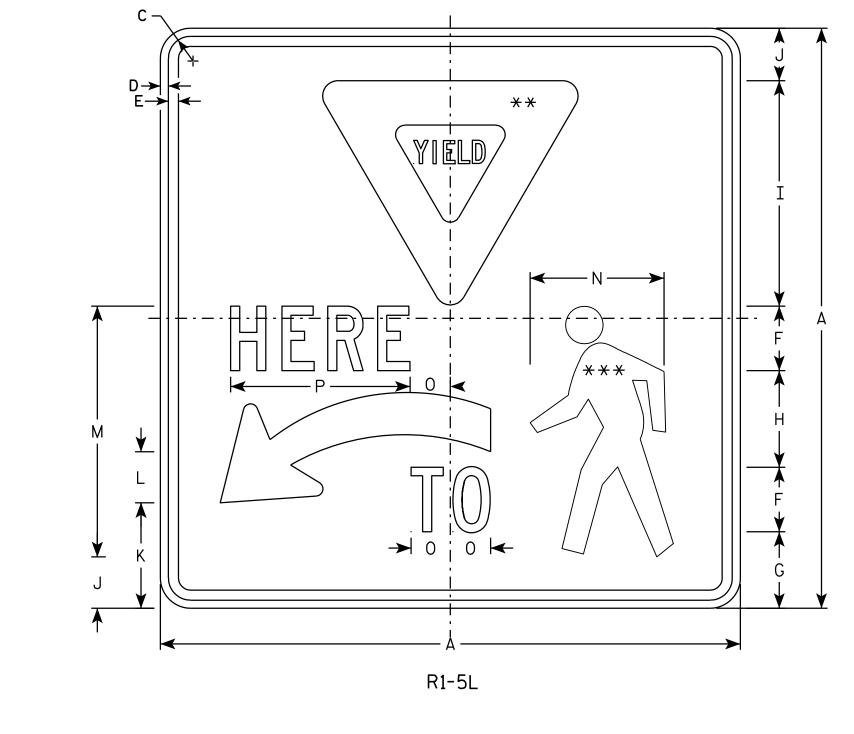
FILE NAME : C:\Users\PROJECTS\tr_stdplate\W167.DGN

PLOT DATE: 02-NOV-2010 09:34

PLOT BY : dotsja

PLOT NAME :

PLOT SCALE: 3.972696:1.000000



<u>NOTES</u>

- 1. All Signs Type II Type H Reflective reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:

Background - WHITE

Message - BLACK

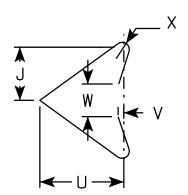
YIELD SYMBOL - RED ON WHITE

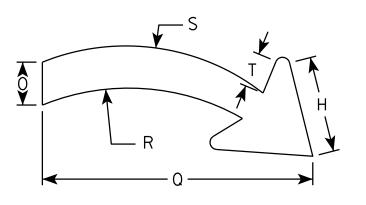
PED SYMBOL - BLACK ON WHITE

- 3. Message Series D
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

** INSERT R1-2 AND SIZE TO FIT

*** INSERT W11-2 AND SIZE TO FIT





Arrow Detail

SIZE	Α	В	С	D	E	F	G	Н	I	J	K	L	M	N	0	Р	0	R	S	T	U	٧	W	X	Y	Z	Area sq. ft.
1																											
2S	18		1 1/8	3/8	3/8	2	2 3/8	3	7	1 5/8	3 1/4	1 %	7 3/4	4 1/8	1 1/4	5 %	1 3/8	14 1/4	13 ¾	1 1/8	2 5/8	1/8	1	1/2			2.25
2M	18		1 1/8	3/8	3/8	2	2 %	3	7	1	3 1/4	1 %	7 3/4	4 1/8	1 1/4	5 %	1 3/8	14 1/4	13 ¾	1 1/8	2 %	1/8	1	1/2			2.25
3	30		1 3/8	1/2	5/8	3	4	5	12	2 3/4	5 ½	2 %	13	6 %	1 %	8 3/8	14	23 ¾	23	1 3/4	4 3/8	1/4	1 3/4	3/4			6.25
4	36		1 3/8	1/2	5/8	4	4 3/4	6	14	3 1/4	6 1/2	3 1/8	15	8 1/4	2 1/2	11 1/8	16 ¾	28 1/2	27 ¾	2 1/8	5 1/4	3/8	2	1			9.0
5																											

COUNTY:

STANDARD SIGN
R1-5L
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew & Rauch

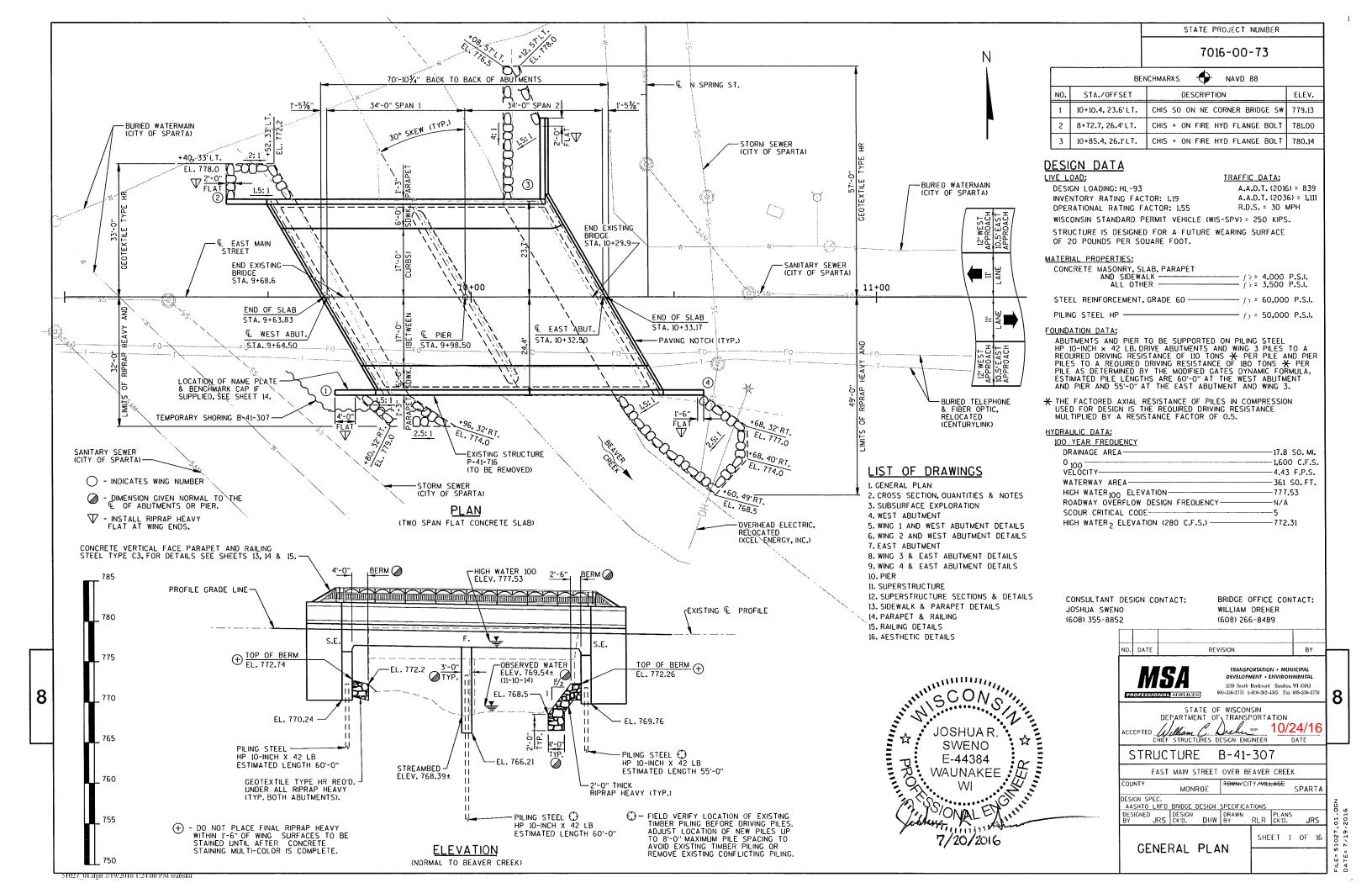
DATE 12/03/10 PLATE NO. R1-5L.3

SHEET NO:

PLOT NAME :

PROJECT NO:

HWY:



GENERAL NOTES

7016-00-73

DRAWINGS SHALL NOT BE SCALED.

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

THE FIRST DIGIT OF A THREE DIGIT BAR MARK SIGNIFIEES THE BAR SIZE.

THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH RIPRAP HEAVY AND GEOTEXTILE TYPE HR TO THE LIMITS SHOWN ON SHEET 1 AND ON THE ABUTMENT SHEETS OR AS DIRECTED BY THE ENGINEER.

THE EXISTING GROUNDLINE SHALL BE THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES" FOR THE ABUTMENTS AND PIER.

SLAB FALSEWORK SHALL BE SUPPORTED ON PILES OR THE SUBSTRUCTURE, UNLESS AN ALTERNATE METHOD IS APPROVED BY THE ENGINEER.

THIS STRUCTURE WILL REPLACE EXISTING STRUCTURE P-41-716, A 48' WIDE, 61.3 FT. LONG TWO SPAN STEEL DECK GIRDER BRIDGE SET ON TIMBER BACKED/TIMBER PILE ABUTMENTS AND ON A TIMBER PILE BENT PIER.

AT THE BACKFACE OF ABUTMENTS ALL EXCAVATED VOLUME NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH BACKFILL STRUCTURE TYPE A. THE QUANTITY FOR "BACKFILL STRUCTURE TYPE A" IS CALCULATED BASED ON FIGURE 12.6-1 IN THE WISDOT BRIDGE MANUAL

PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE TOP OF SLAB, AND FACE AND TOP OF SIDEWALK.

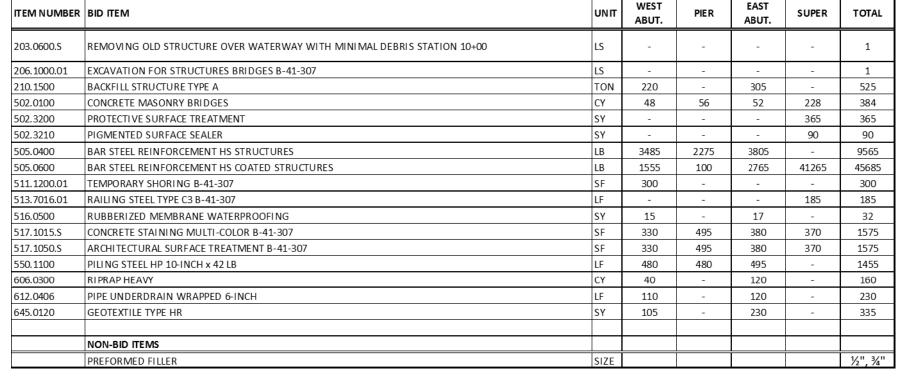
PIGMENTED SURFACE SEALER SHALL BE APPLIED TO THE INSIDE FACES, THE TOP FACES, AND THE VERTICAL ENDS OF THE PARAPETS, AND TO THE EXPOSED INSIDE FACE OF THE WING AT THE WING 2 & 3 SIDEWALK RAMPS.

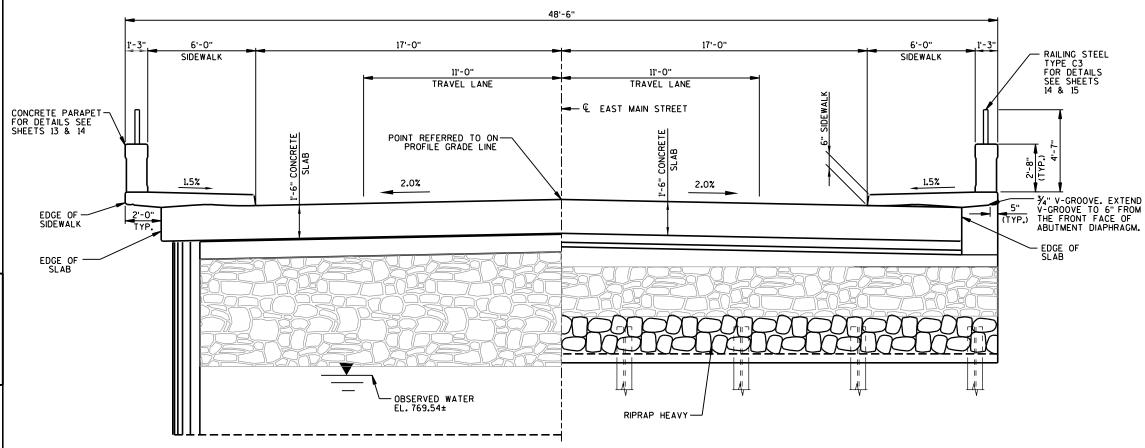
ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO NAVD 88 DATUM AND WERE ESTABLISHED AT THE SITE USING GPS TECHNOLOGY.

CONCRETE POURED UNDER WATER WILL BE ALLOWED AND SHALL BE DONE IN ACCORDANCE WITH SECTION 502.3.5.3 OF THE STANDARD SPECIFICATIONS.

PARAPETS AND SIDEWALKS ON TOP OF THE SLAB SHALL BE POURED AFTER FALSEWORK HAS BEEN RELEASED.

AS DETAILED ON SHEET 16, APPLY AN ARCHITECTURAL SURFACE TREATMENT AND CONCRETE STAINING MULTI-COLOR TO THE ABUTMENTS, WINGS, BOTH FACES OF THE PIER, AND THE OUTSIDE FACE OF THE PARAPETS. SEE SPECIAL PROVISIONS FOR FORMLINER PATTERN AND CONCRETE STAINING DETAILS.

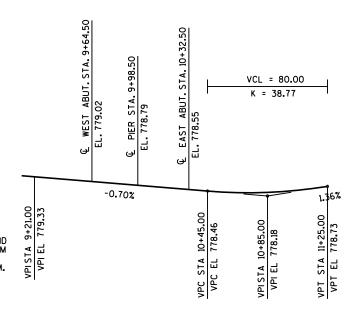




CROSS SECTION THRU BRIDGE

(LOOKING EAST)

AT ABUTMENT



PROFILE GRADE LINE - EAST MAIN STREET

NO. DATE REVISION BY STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION STRUCTURE B-41-307 DRAWN BY RLR JRS

CROSS SECTION, QUANTITIES & NOTES

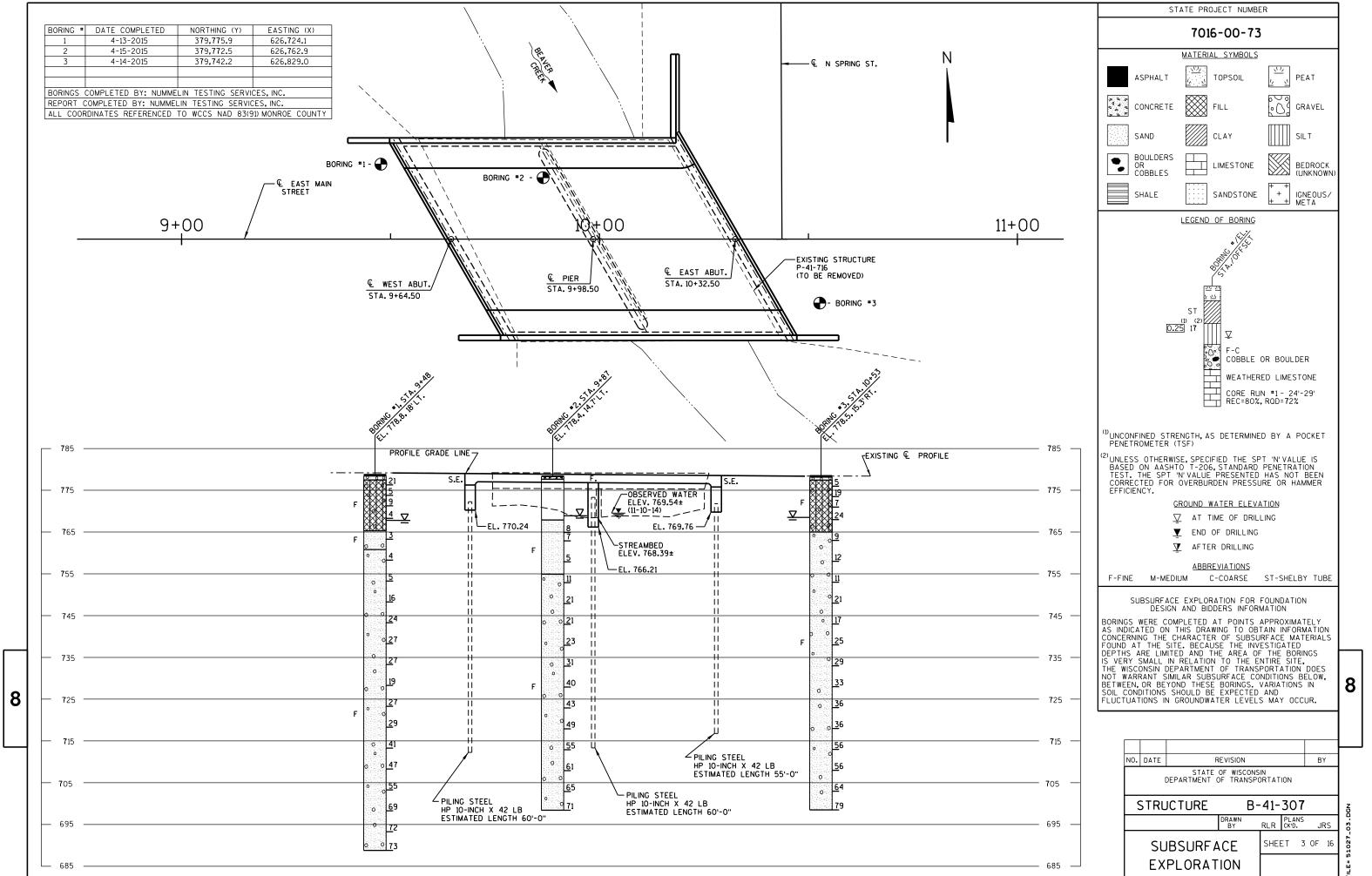
SHEET 2 OF

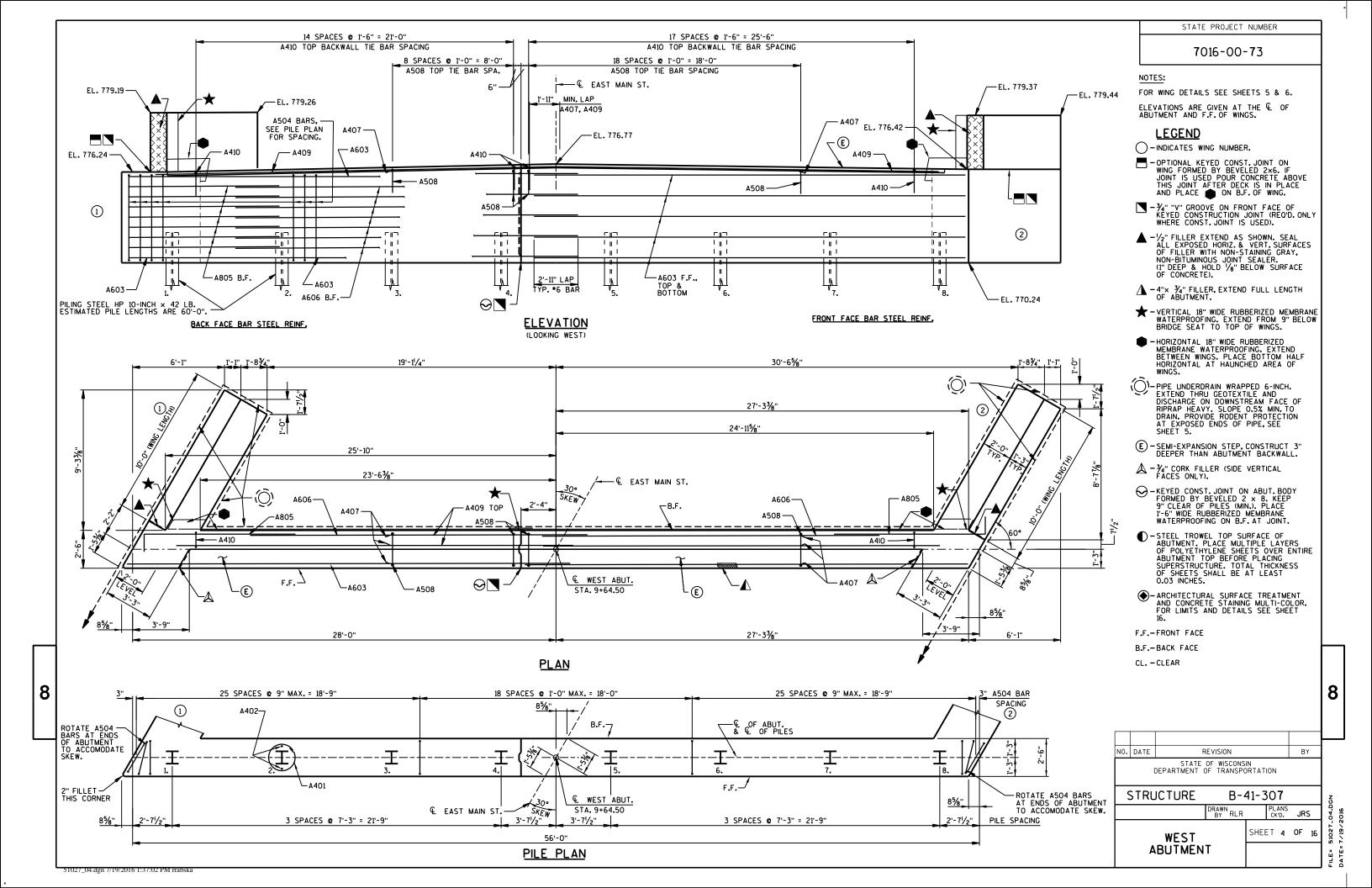
8

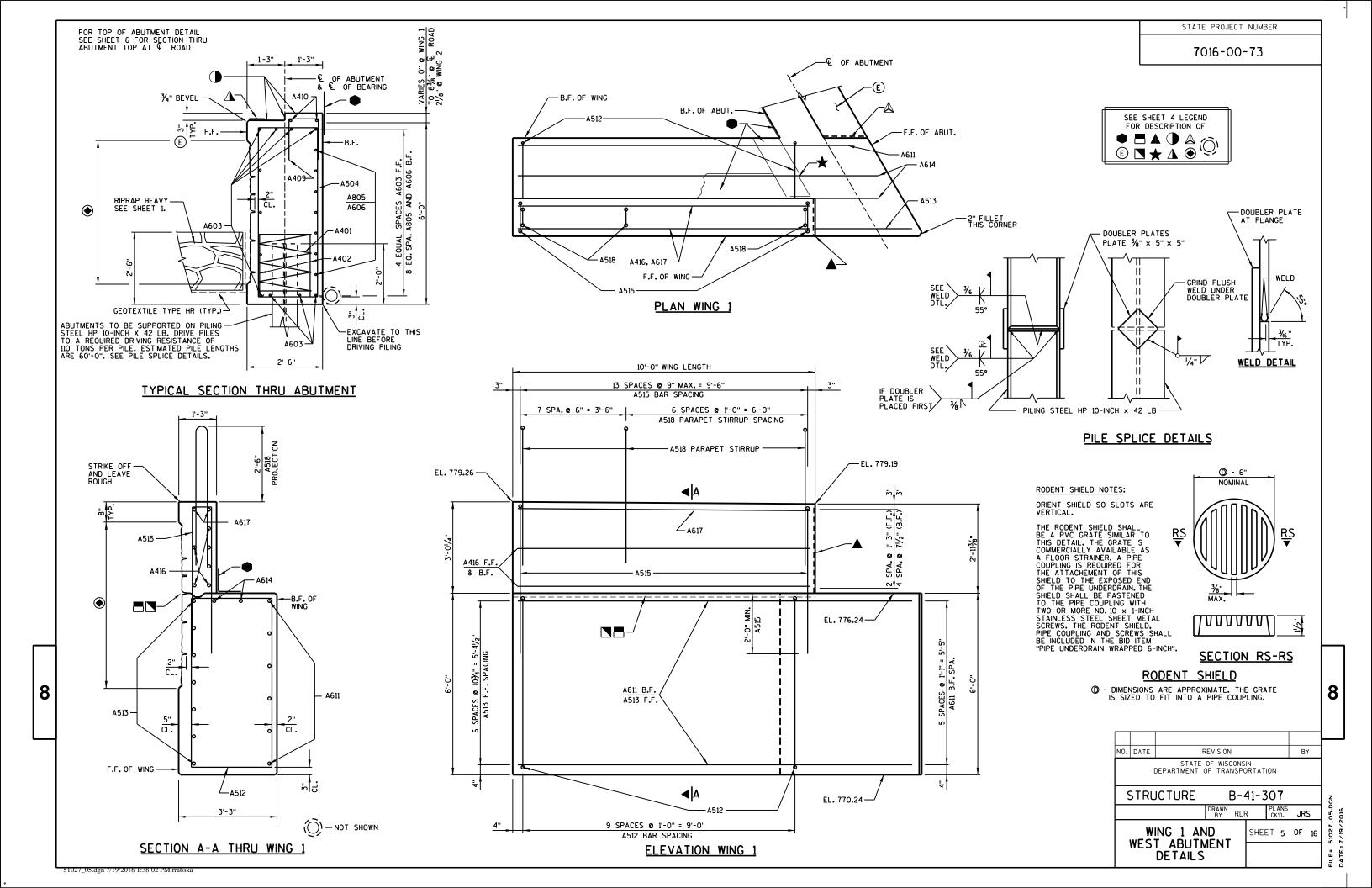
AT PIER

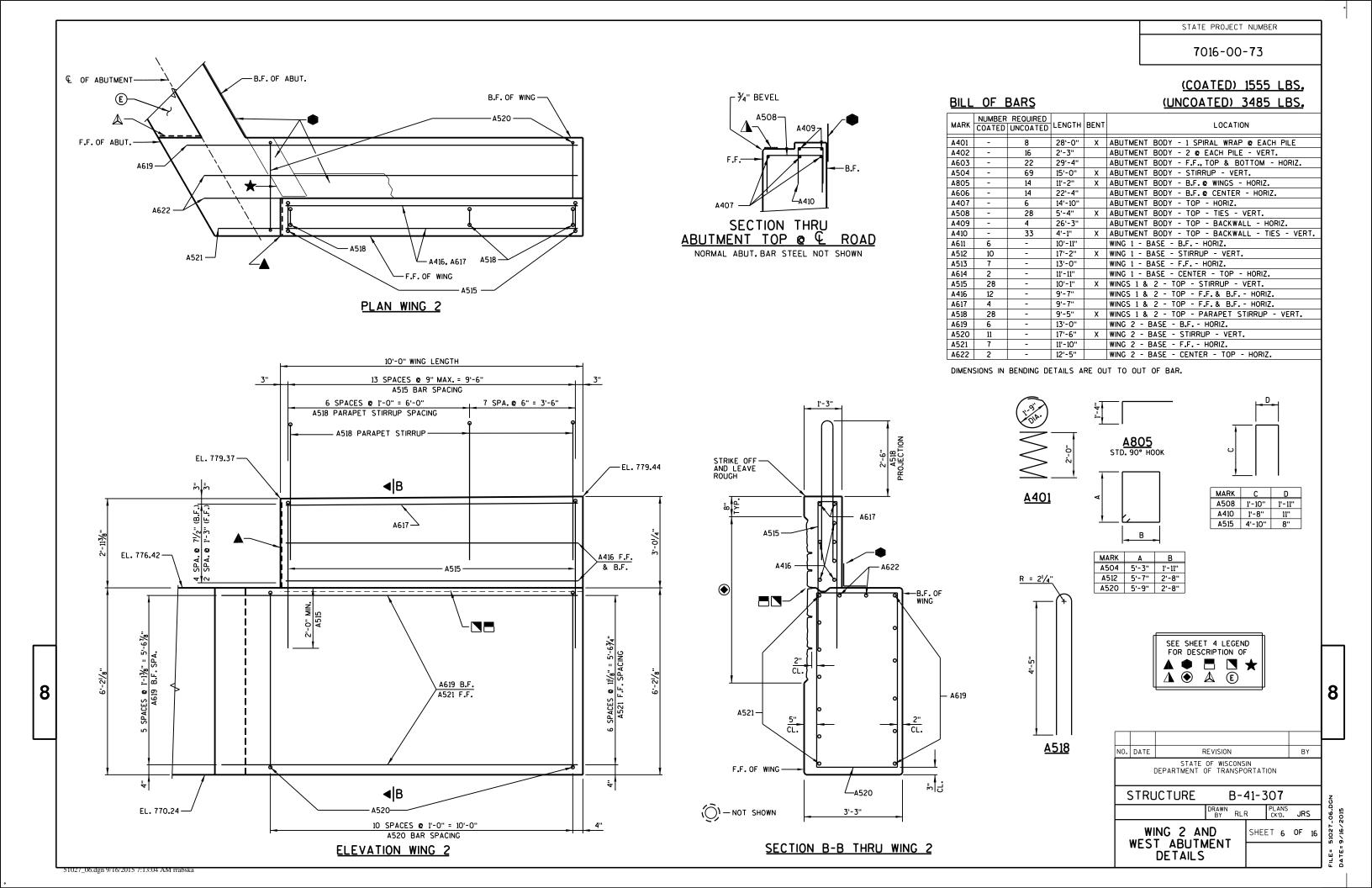
(PILING NOT SHOWN)

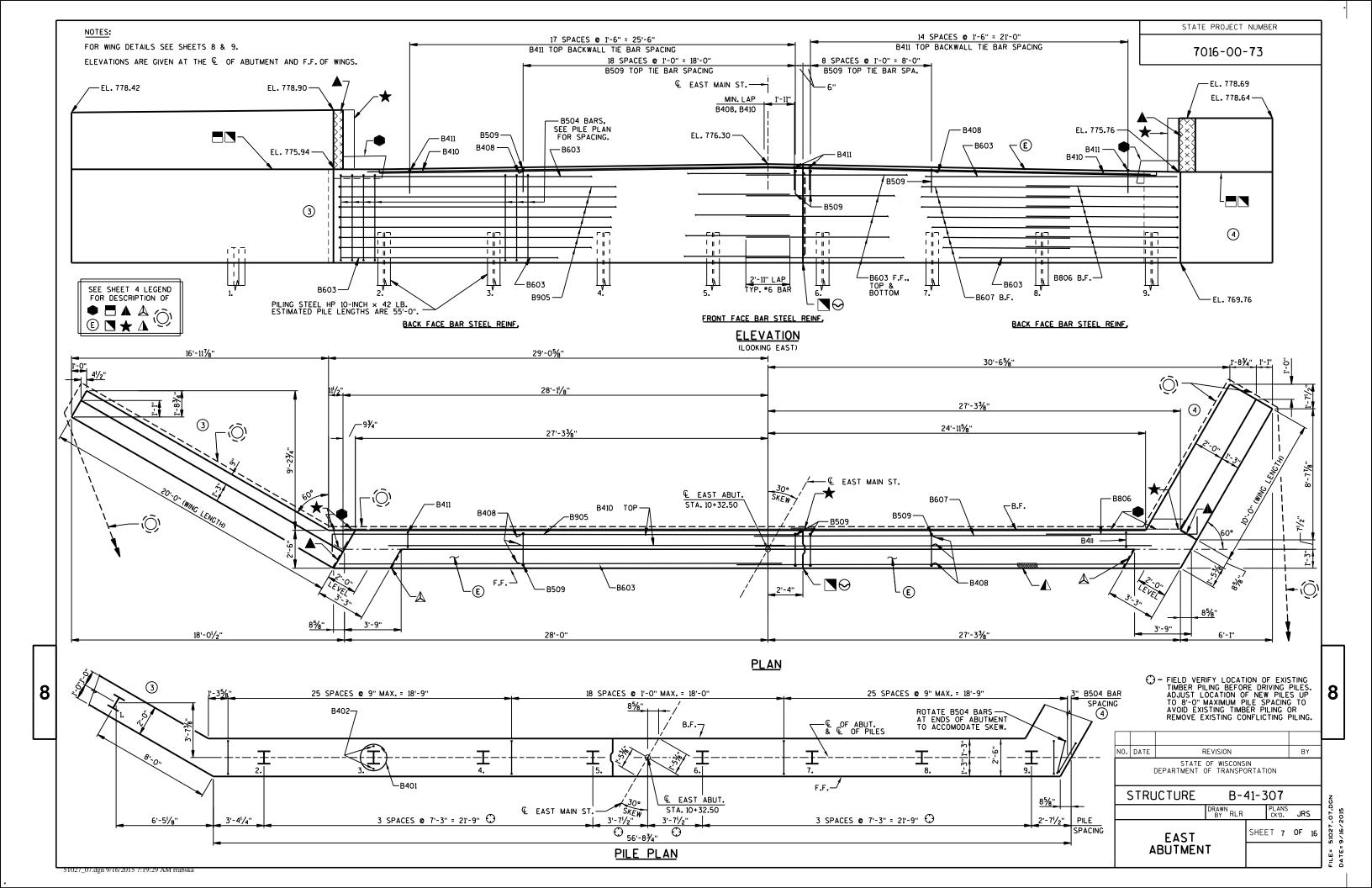
TOTAL ESTIMATED QUANTITIES

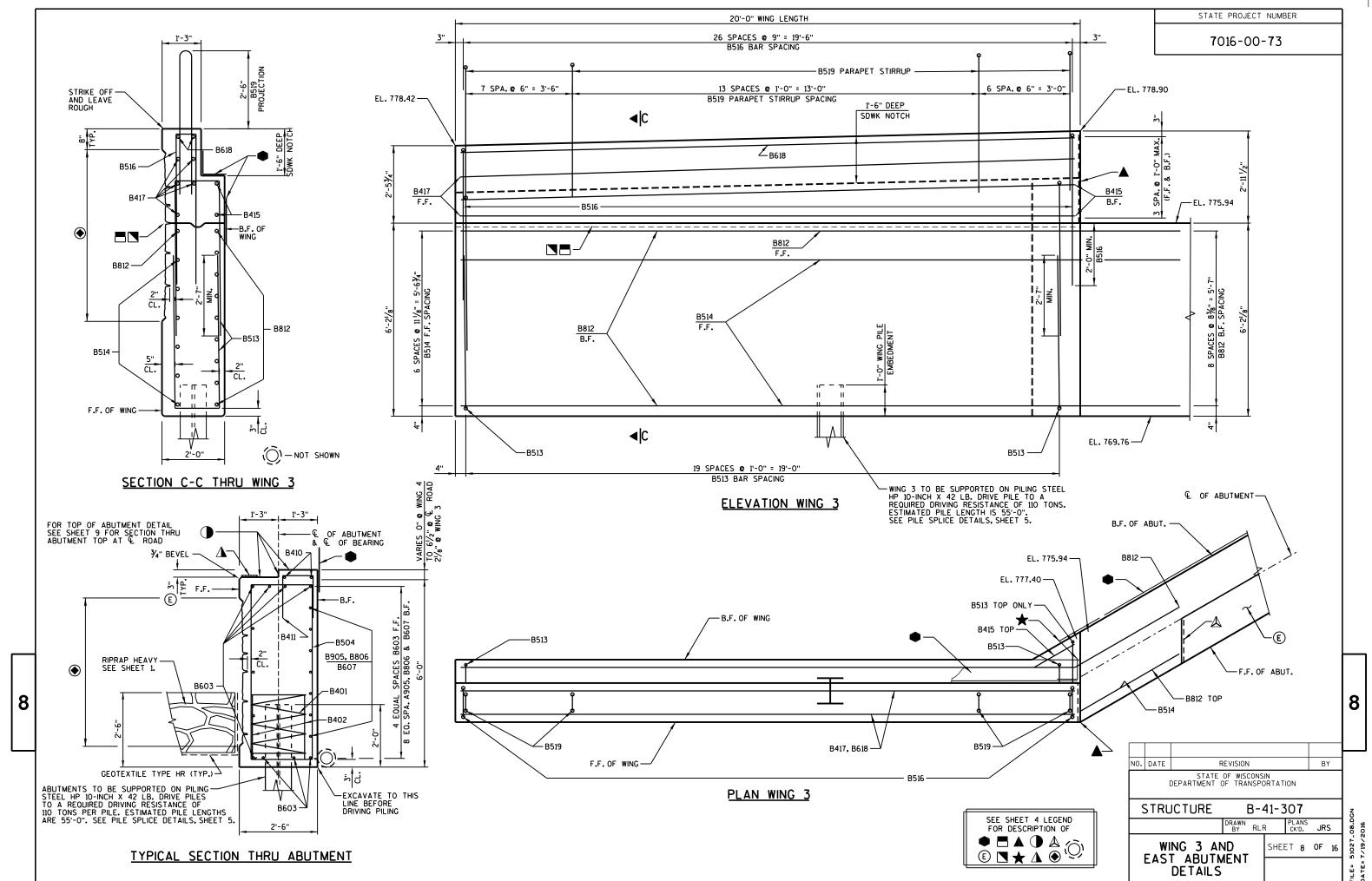


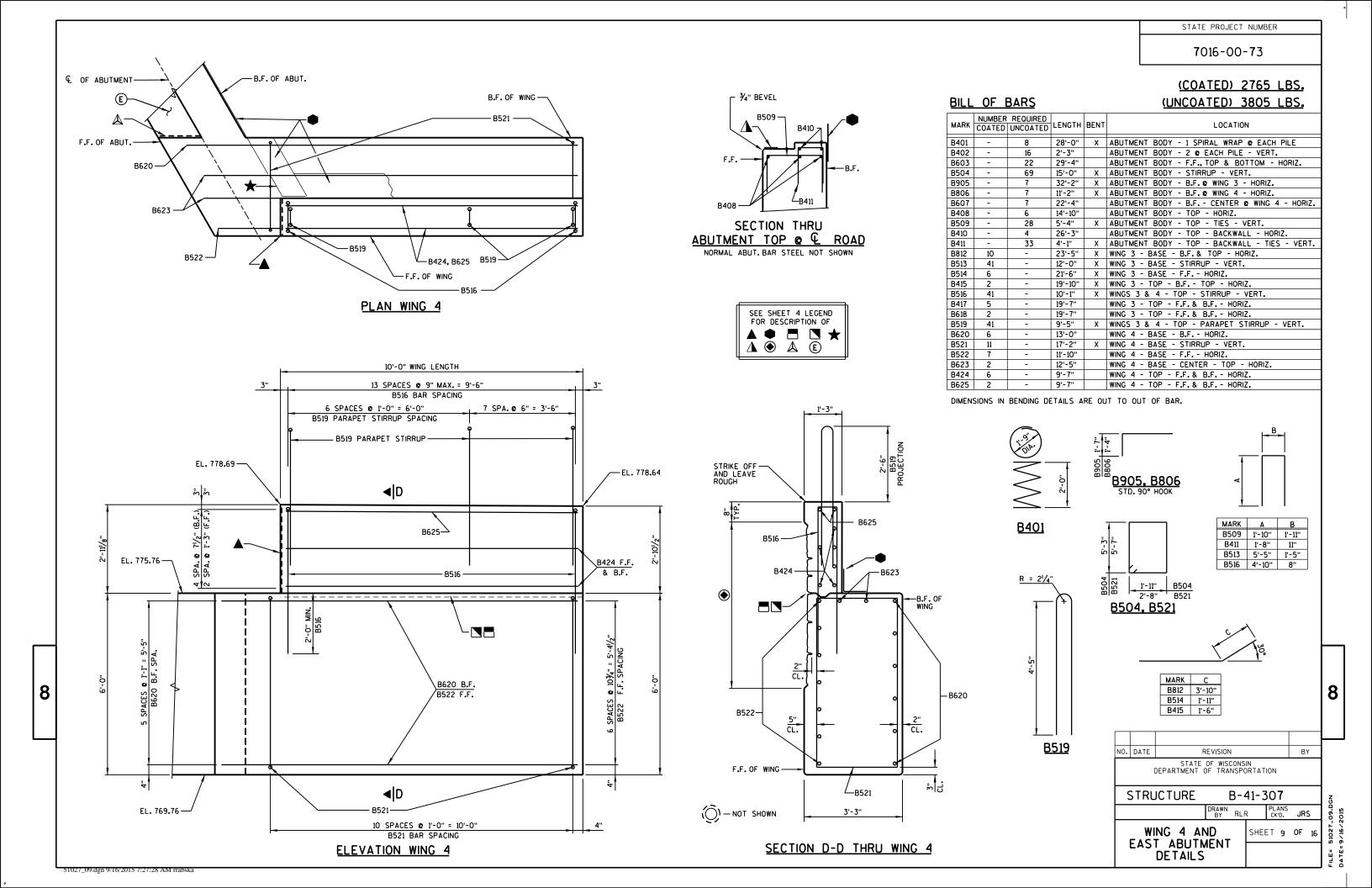


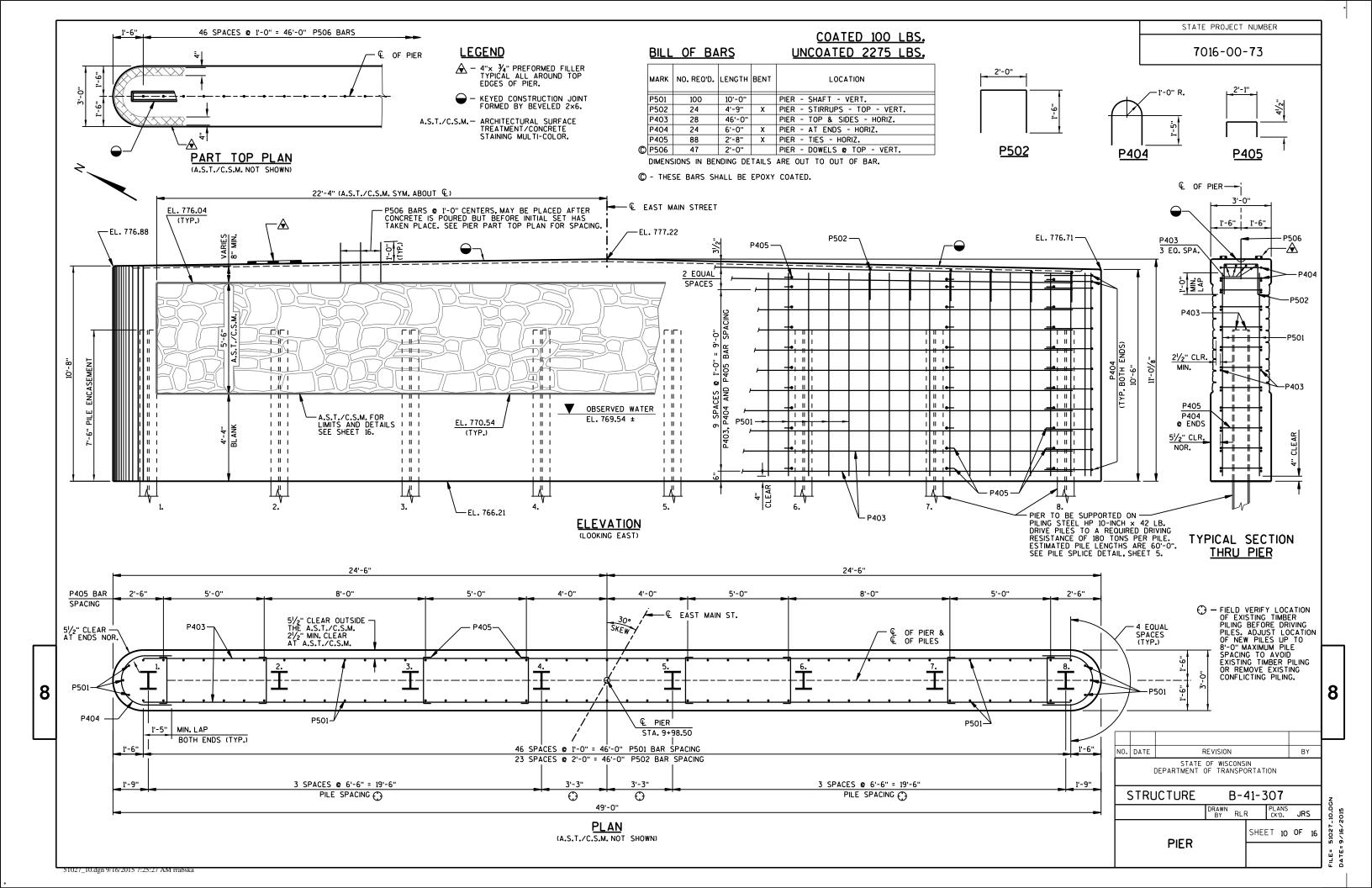


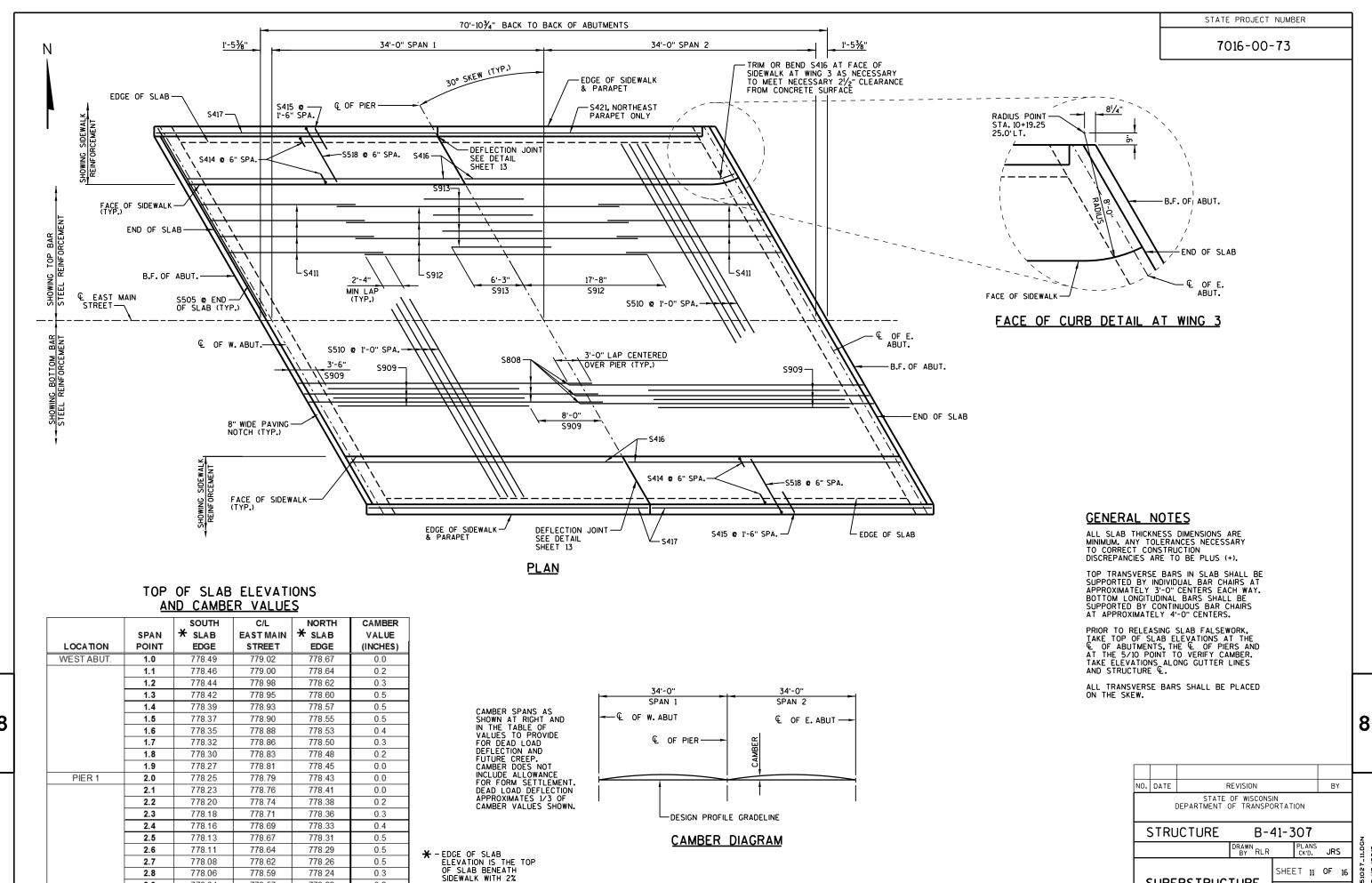












EAST ABUT.

2.8

2.9

3.0

778.06

778 04

778.01

778.59

778 57

778.55

778.24

778.22

778.19

0.3

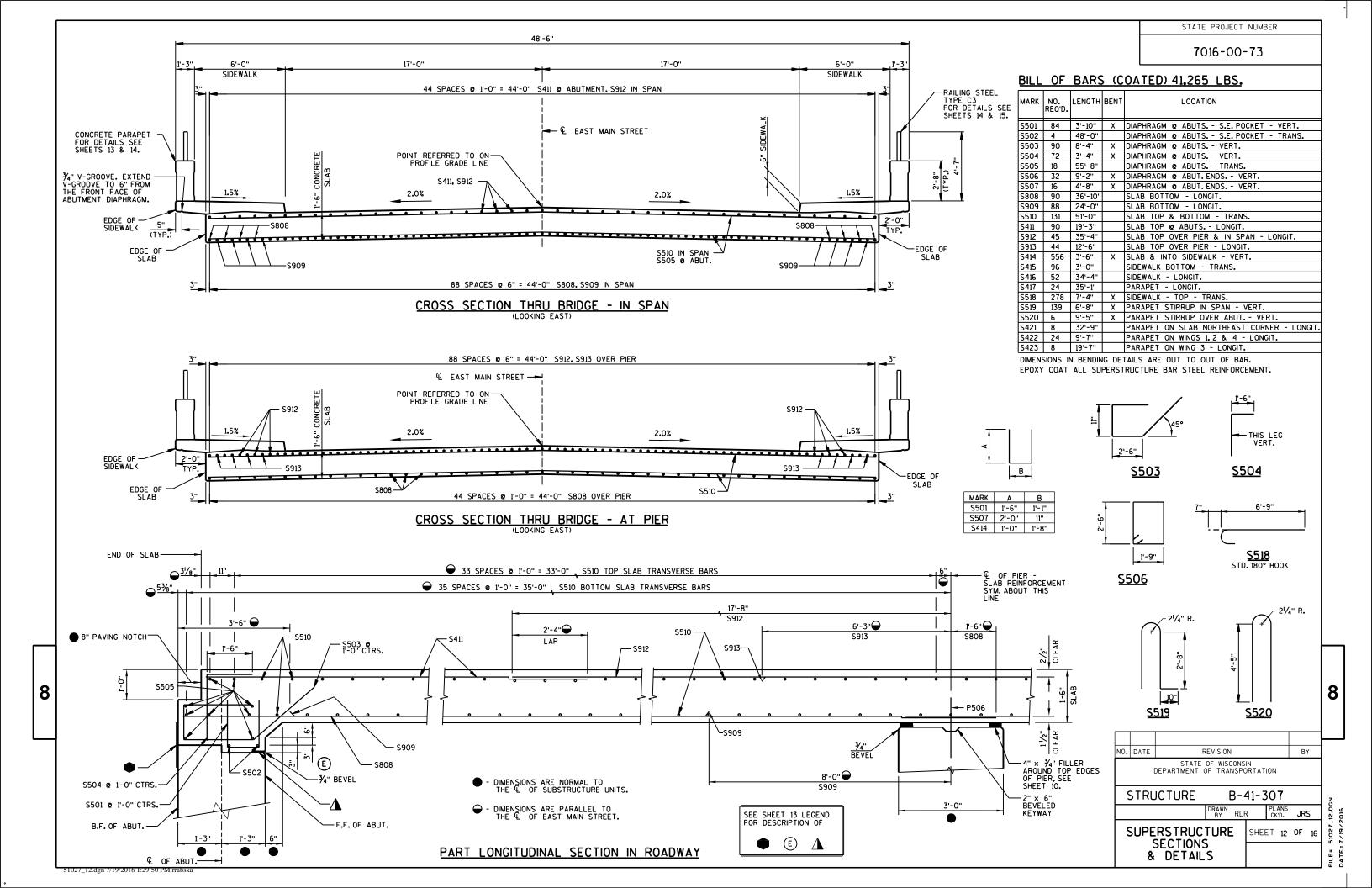
0.2

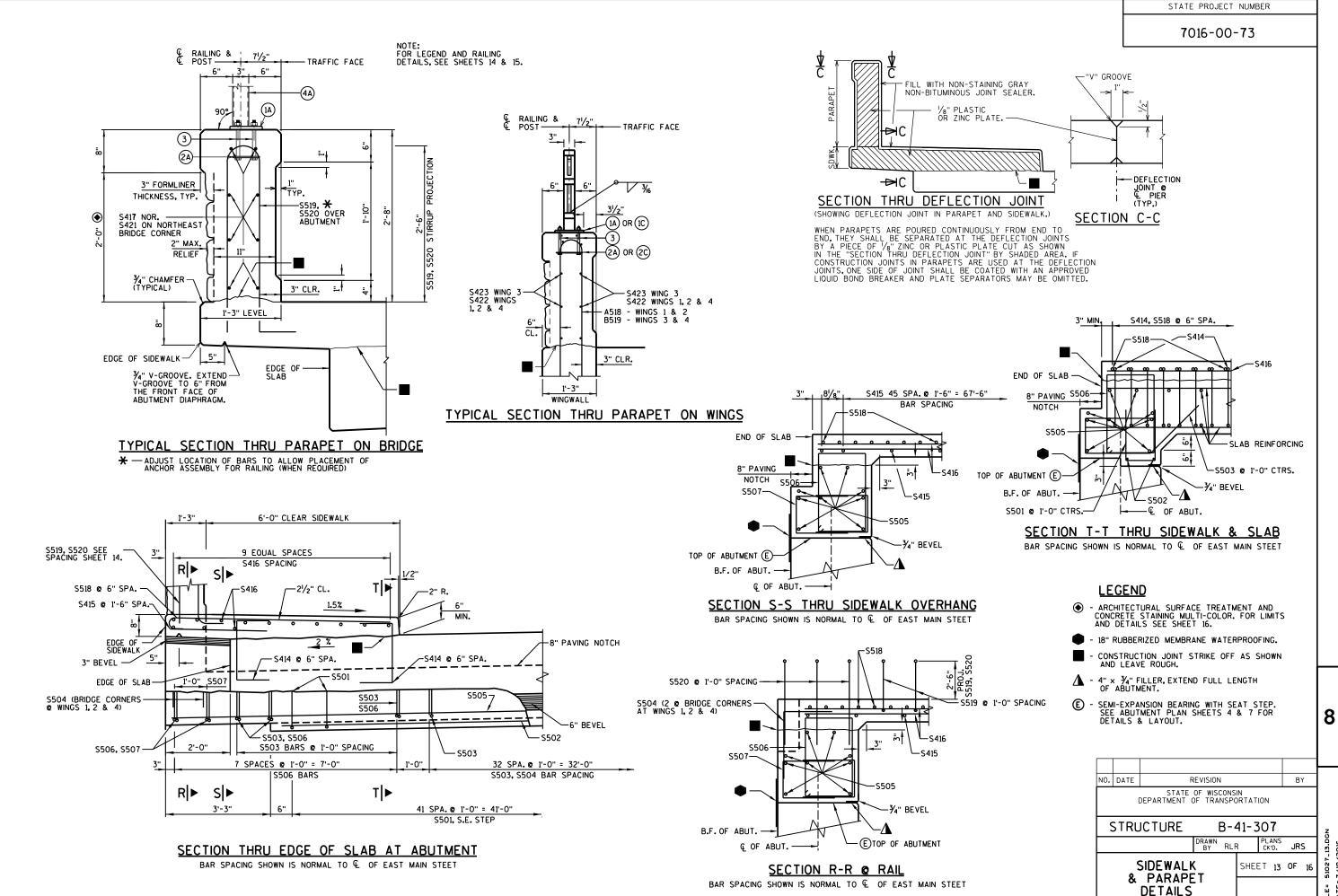
0.0

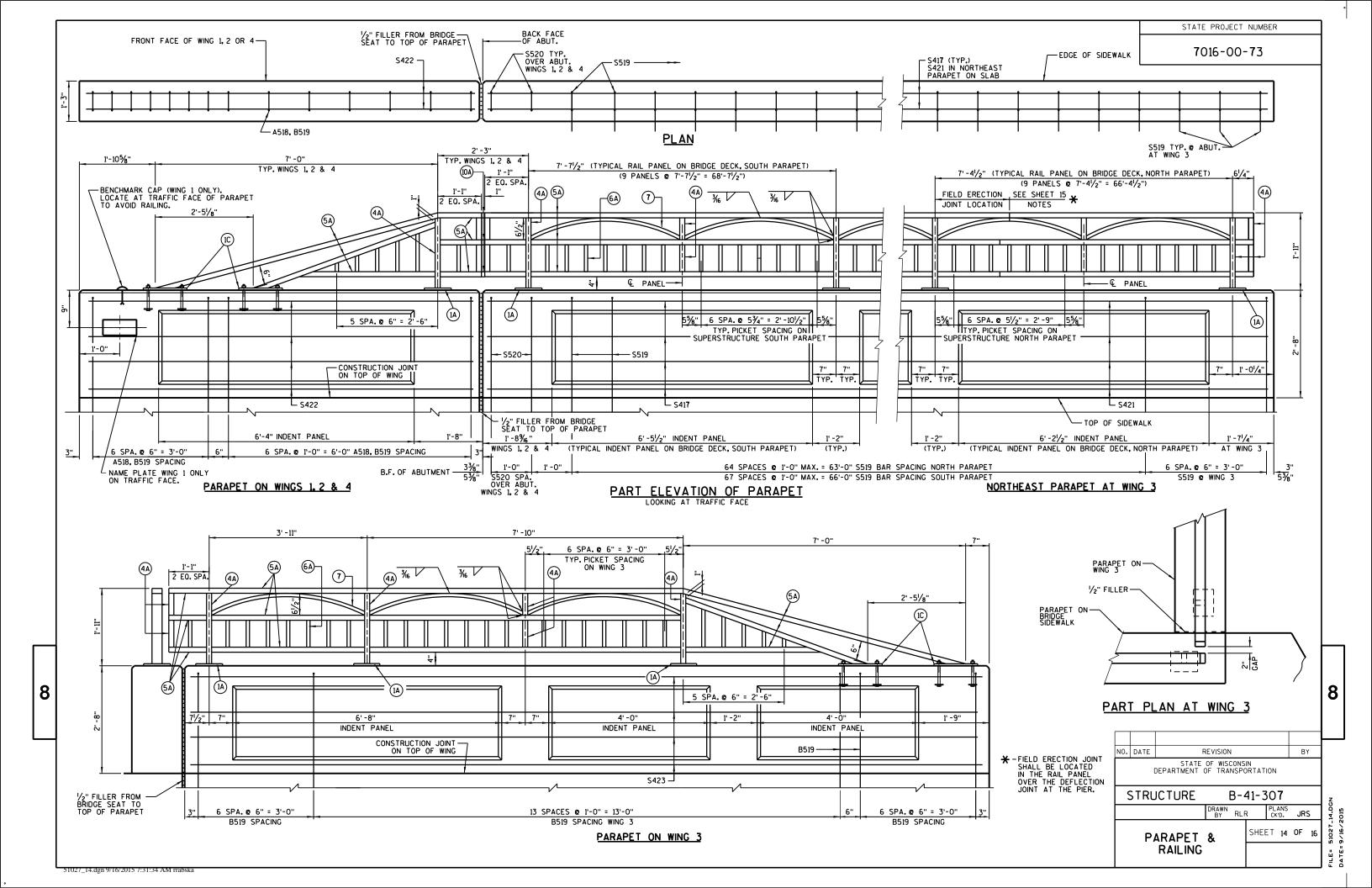
CROWN FULL WIDTH.

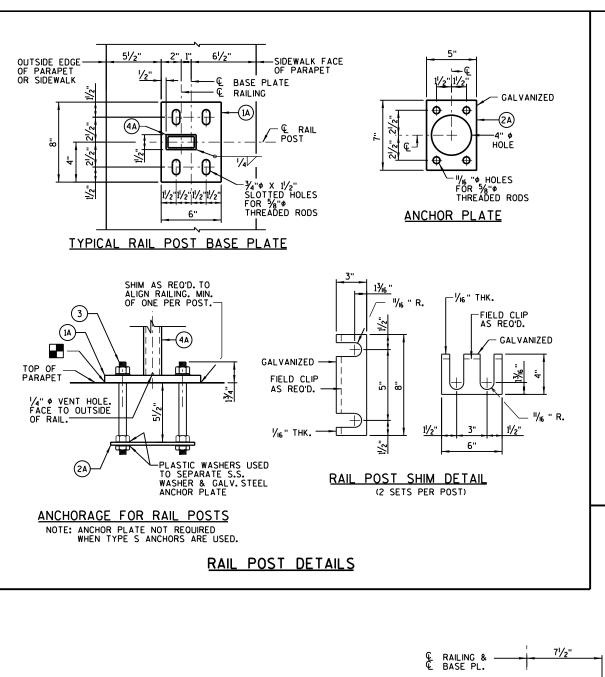
SHEET 11 OF 16

SUPERSTRUCTURE









-¼₆" THK.

END RAIL SHIM DETAIL

(2 SETS PER POST)

GALVANIZED FIELD CLIP AS REO'D.

松

THIS FACE TO BE VERTICAL

(20)-

PLASTIC WASHERS USED TO SEPARATE S.S.

WASHER & GALV. STEEL ANCHOR PLATE

(5A)

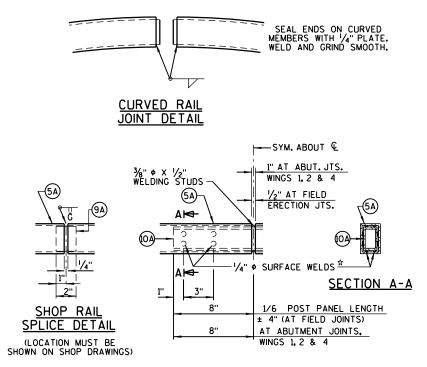
ANCHORAGE FOR END RAIL

END RAIL DETAILS

1/2" SO. 316 S.S. BARS, WELD TO THREADED RODS.

SIDEWALK FACE

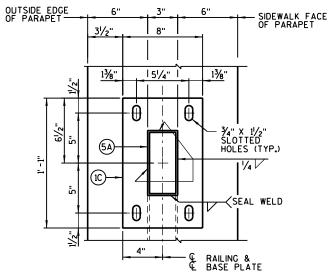
OF PARAPET



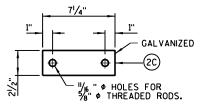
FIELD ERECTION JOINT DETAIL

*MIN. %" FLAT SURFACE DIA. PUNCHINGS OR
STUDS MAY BE USED AS AN ALTERNATE.

JOINT DETAILS



END RAIL BASE PLATE



END RAIL ANCHOR PLATE

FOR END RAIL BASE PLATES
2 REO'D. PER END RAIL BASE PLATE

STATE PROJECT NUMBER

7016-00-73

LEGEND

- $_{
 m 1A}$ PLATE $rac{1}{8}$ " X 6" X 8" WITH $rac{3}{4}$ " X $rac{1}{2}$ " SLOTTED HOLES.
- (IC) PLATE 58" X 8" X 1'-1" WITH 34" X 11/2" SLOTTED HOLES.
- (2A) 1/4" X 5" X 7" ANCHOR PLATE WITH 1/16" \$ HOLES FOR THREADED RODS NO. 3.
- (2C) 1/4" X 21/2" X 71/4" ANCHOR PLATE WITH 1/16" # HOLES FOR THREADED RODS NO. 3.
- 3 %" DIA. X 9" LONG, TYPE 316 STAINLESS STEEL THREADED RODS (MIN. TENSILE STRENGTH = 70 KSI) WITH NUT AND WASHERS OF SAME ALLOY GROUP. (ALTERNATE RAIL POST ANCHORAGE: 4 EQUIVALENT STAINLESS STEEL CONCRETE MASONRY ANCHORS TYPE S %-INCH. EMBED 7" IN CONCRETE FOR RAIL POSTS. EMBED 5" IN CONCRETE FOR END RAILS.)
- $\stackrel{\textstyle \leftarrow}{\text{\tiny 4A}}$ Structural tubing 3" x $1\!\!\!/_2$ " x $3\!\!\!/_6$ ". Place vertical. Place normal to grade line. Weld to no.1 & 5.
- $_{\mbox{5A}}$ STRUCTURAL TUBING 3" X $1\!\!1\!\!/_2$ " X $3\!\!/_6$ " RAILS. WELD TO NO.1 & NO.4. INSIDE OF TUBE TO BE PAINTED AT ALL FIELD ERECTION JOINTS.
- (6A) BAR 1" X 1" PICKETS. WELD TO NO. 5. PLACE NORMAL TO HORIZONTAL RAILS NO. 5.
- (7) BAR 1" X 1". BEND TO REQUIRED RADIUS. WELD TO NO. 4 & 5.
- (9A) RECTANGULAR SLEEVE FABRICATED FROM 36" PLATES. PROVIDE "SLIDING FIT".
- (OA) RECTANGULAR SLEEVE FABRICATED FROM 3/6" PLATES. (1'-4" @ FIELD ERECTION JTS.)

<u>NOTES</u>

BID ITEM SHALL BE "RAILING STEEL TYPE C3 B-41-307", WHICH SHALL INCLUDE ALL STEEL ITEMS SHOWN.

POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUTS.

ALL PLATES, BARS AND RECTANGUALR SLEEVES SHALL CONFORM TO ASTM A709 GRADE 36. ALL STRUCTURAL TUBING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A500 GRADE B.

ANCHORAGES SHALL BE ACCURATELY PLACED TO PROVIDE CORRECT ALIGNMENT OF RAILING. SET NORMAL TO GRADE.

CUT BOTTOM OF POST TO MAKE POST VERTICAL IN BOTH TRANSVERSE AND LONGITUDINAL DIRECTION.

STEEL SHIMS SHALL BE PROVIDED & USED UNDER BASE PLATES WHERE REQUIRED FOR ALIGNMENT AND SHALL BE GALVANIZED.

VENT HOLES SHALL BE DRILLED IN POST AND RAIL MEMBERS AS REQUIRED TO FACILITATE GALVANIZING AND DRAINAGE.

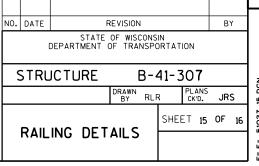
RAILING SHALL BE FABRICATED IN LENGTHS THAT INCLUDE 3 OR 4 POSTS.

ALL MATERIAL EXCEPT NO. 3 SHALL BE GALVANIZED AFTER FABRICATION. PRIOR TO GALVANIZING, THE STEEL RAILING SHALL BE GIVEN A NO. 6 BLAST CLEANING PER SSPC SPECIFICATIONS.

PAINT OVER CALVANIZING WITH AN APPROVED TIE COAT AND TOP COAT AS SPECIFIED IN THE "BRIDGE SPECIAL PROVISIONS". THE FINISH COLOR SHALL BE BLACK FEDERAL STANDARD COLOR NO. 27038. AT COMPLETION OF STEEL RAILING INSTALLATION, PAINT THE TOPS OF ANCHOR BOLTS AND NUTS WITH THE TIE COAT. TOUCH-UP PAINT WITH THE TOP COAT ALL DAMAGED AREAS AND THE ANCHOR BOLTS TO THE SATISFACTION OF THE ENGINEER AT NO EXTRA COST. DO NOT PAINT ANCHORAGE (NO. 2 & 3) & SHIMS.

ANCHOR PLATES NO. 2 ARE NOT REQUIRED WHEN TYPE S ANCHORS ARE USED.

CAULK AROUND PERIMETER OF BASE PLATES, NO. 1, AND FILL BOLT SLOT OPENINGS IN SHIMS AND BASE PLATES WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.

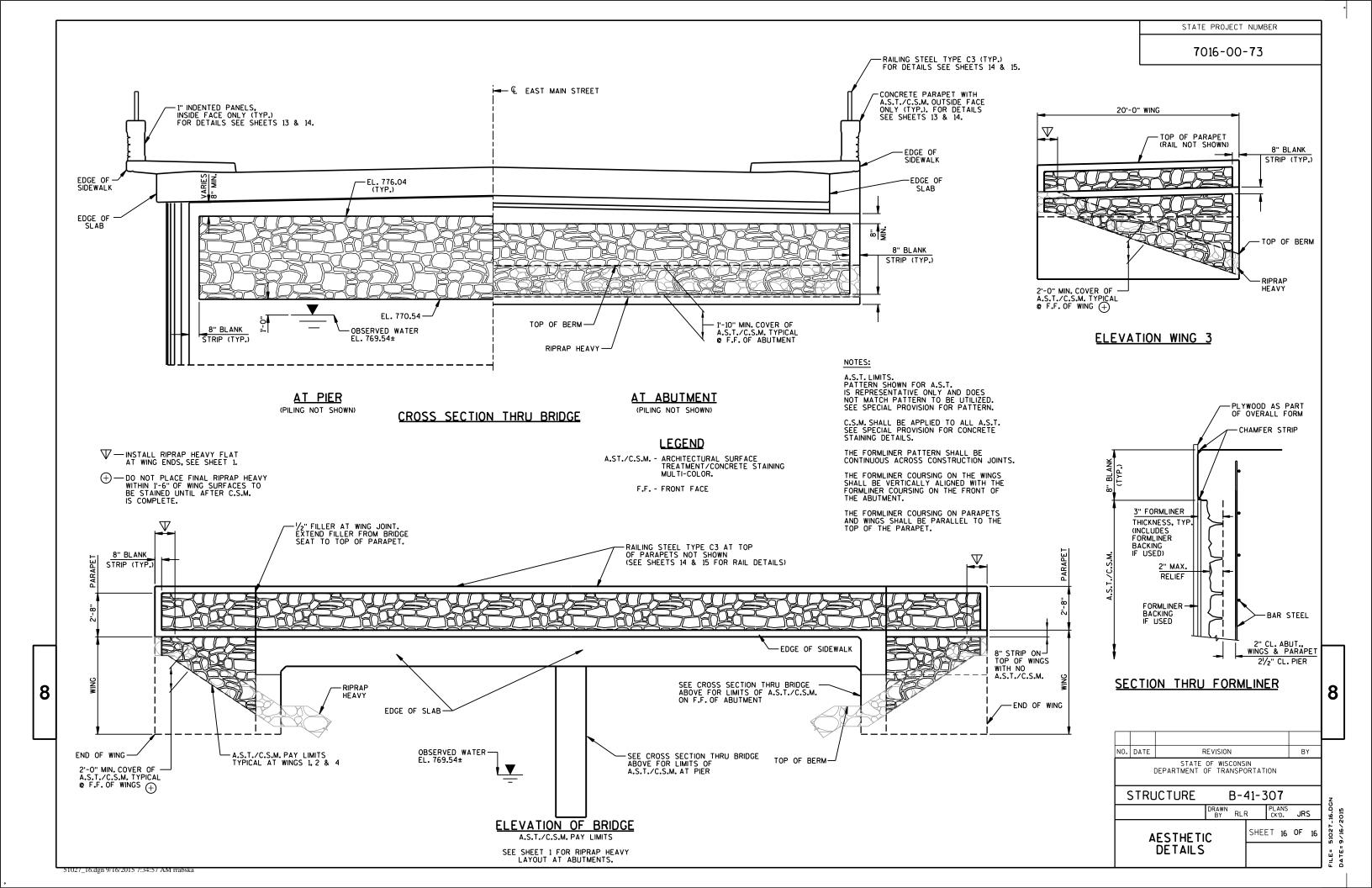


8

FILE= 51027_15.DGN DATE=9/15/2015

GALVANIZED

AS REQ'D.



PROJECT NO: 7016-00-73 HWY: LOCAL STREET COUNTY: MONROE EARTHWORK SHEET NO: E

 8+75.00
 71

 9+00.00
 25.00
 73

 9+25.00
 63

 9+50.00
 25.00
 55

 9+66.34
 16.34
 27

 9+72.87
 0

E MAIN ST

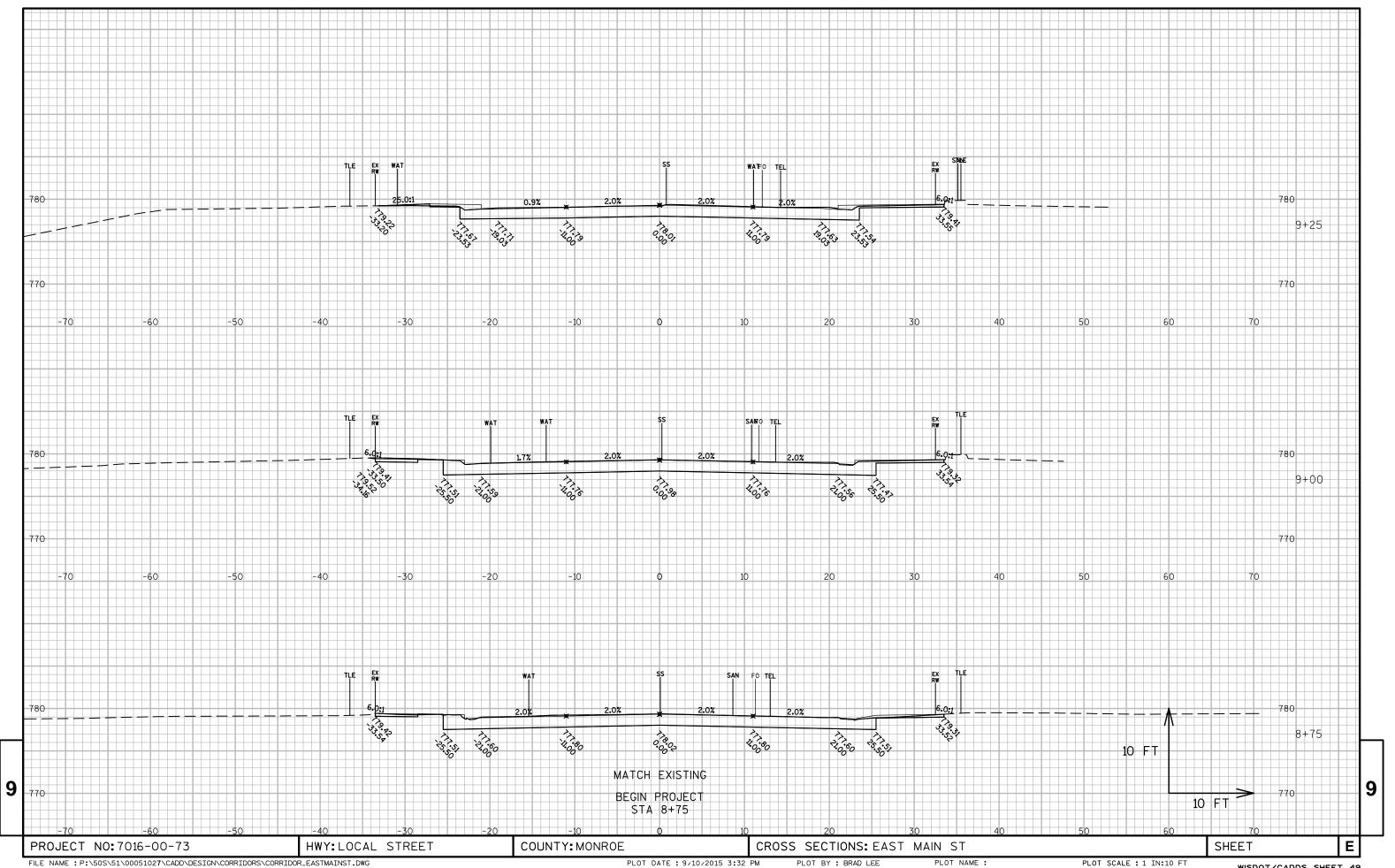
MASS HAUL

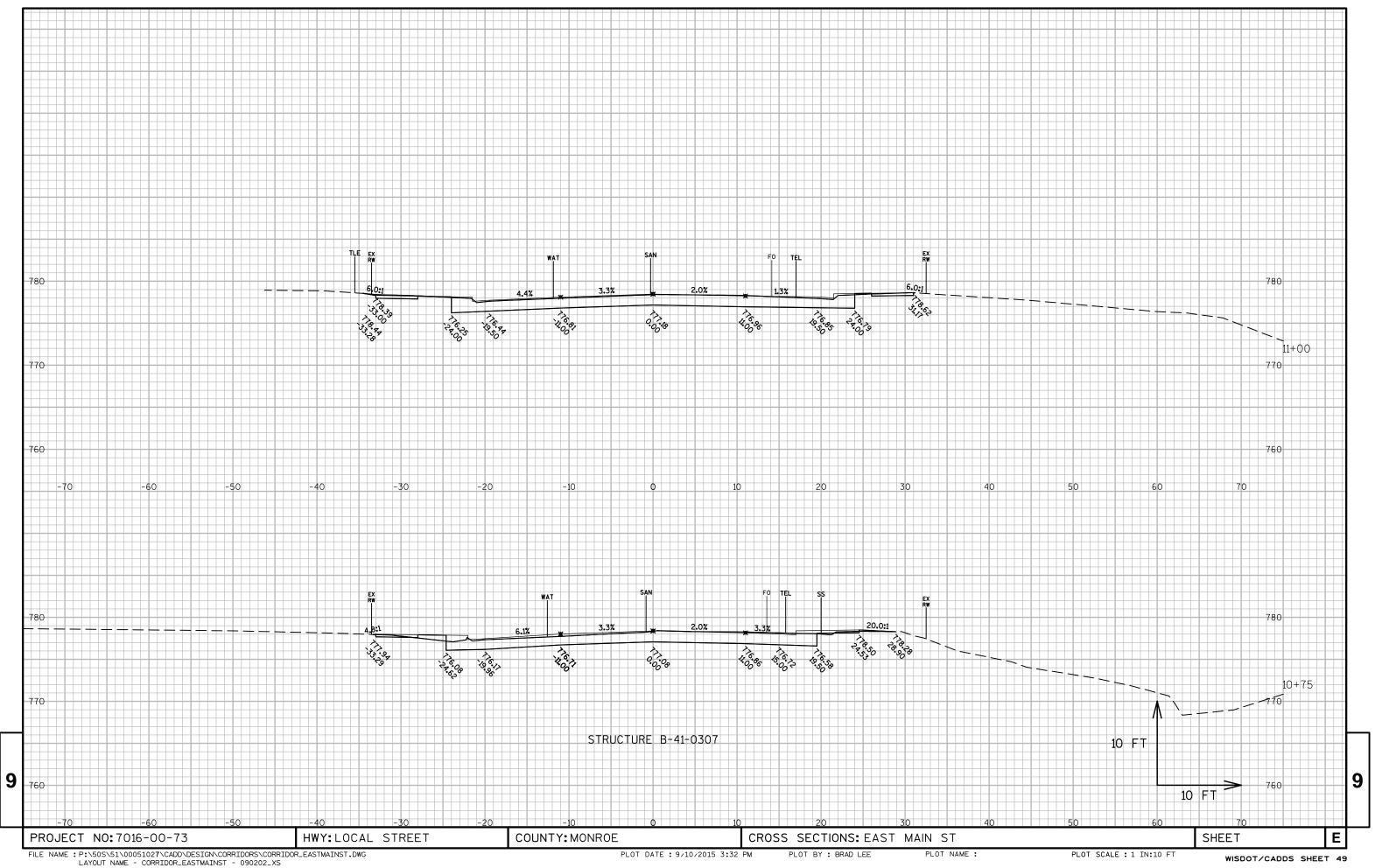
JDES 1.30 EXPANSION FACTOR

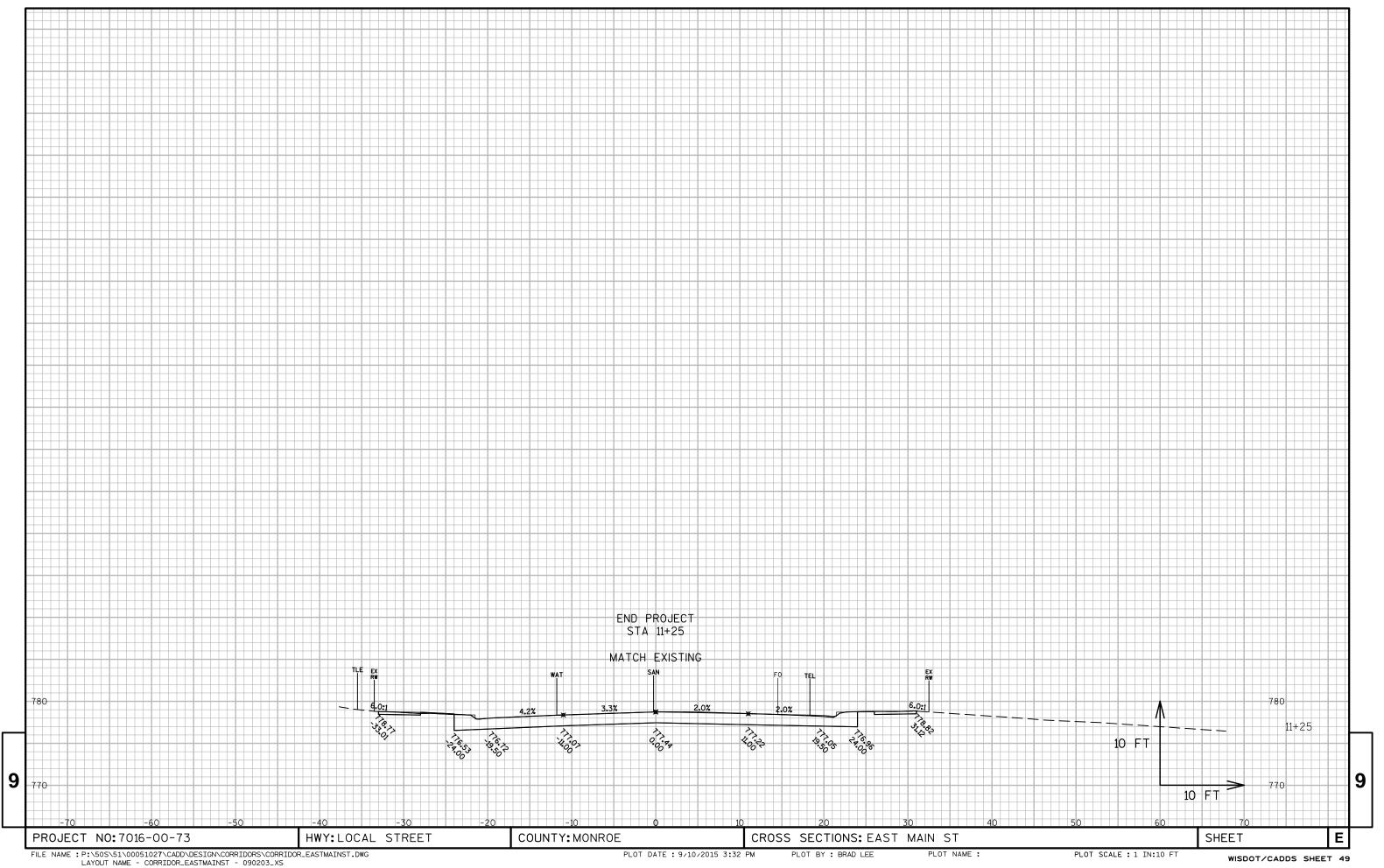
E MAIN ST

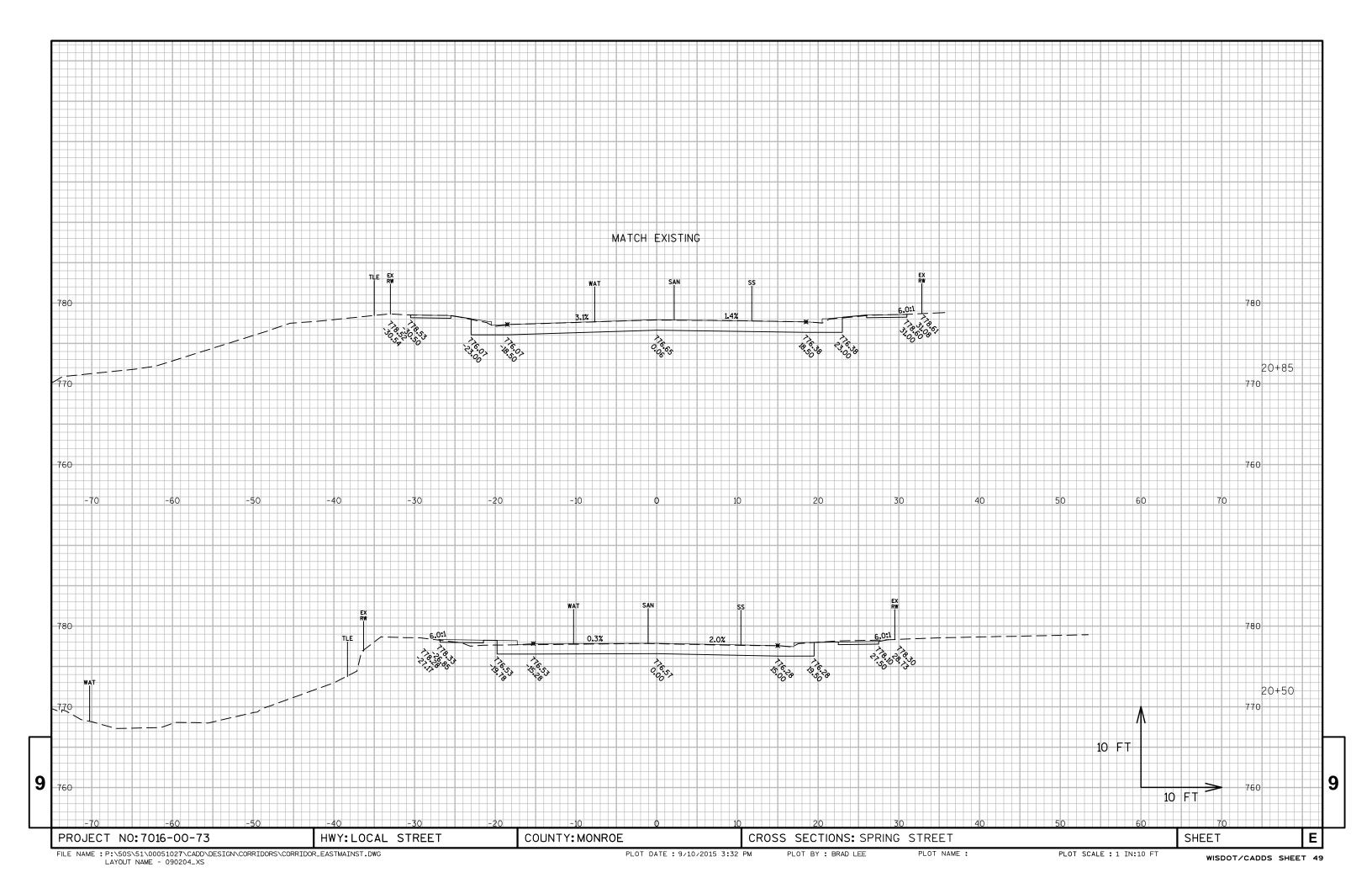
UDES 1.30 EXPANSION FACTOR

FILE NAME : N:\pds\design_id\ PLOT DATE : _____ PLOT BY : ____ ORG DATE : _SEPT. 2015 ORIGINATOR : PLOT SCALE : 1:1











Wisconsin Department of Transportation

Dedicated people creating transportation solutions through innovation and exceptional service.

http://www.dot.wisconsin.gov