MAD

AUGUST 2018

PROJECT ID: 5990-00-34

WITH: N/A

COUNTY: ROCK

ORDER OF SHEETS

TOTAL SHEETS = 196

02

N

DESIGN DESIGNATION

A.A.D.T.	(2018)	=	6,700
A.A.D.T.	(2038)	=	7,500
D.H.V.	(2038)	=	1,150
D.D.		=	59/41
T.		=	3 8%
DESIGN SPEED		=	30 MPH
ESALS		=	860,000

CONVENTIONAL SYMBOLS

PLAN		PROFILE	
CORPORATE LIMITS		GRADE LINE	
PROPERTY LINE		ORIGINAL GROUND	
LOT LINE		MARSH OR ROCK PROFILE (To be noted as such)	ROCK
LIMITED HIGHWAY EASEMENT		SPECIAL DITCH	LABEL
EXISTING RIGHT OF WAY		GRADE ELEVATION	95.36
PROPOSED OR NEW R/W LINE		CULVERT (Profile View)	
SLOPE INTERCEPT		UTILITIES	
REFERENCE LINE	300'EB'	ELECTRIC	E
EXISTING CULVERT		FIBER OPTIC	FO
PROPOSED CULVERT (Box or Pipe)		GAS	G
COMBUSTIBLE FLUIDS	CAUTION	SANITARY SEWER	SAN
		STORM SEWER	SS
		TELEPHONE	T
MARSH AREA		WATER	W
		UTILITY PEDESTAL	
		POWER POLE	
WOODED OR SHRUB AREA		TELEPHONE POLE	

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
5990-00-34	———	—

CITY OF JANESVILLE, WEST MILWAUKEE STREET

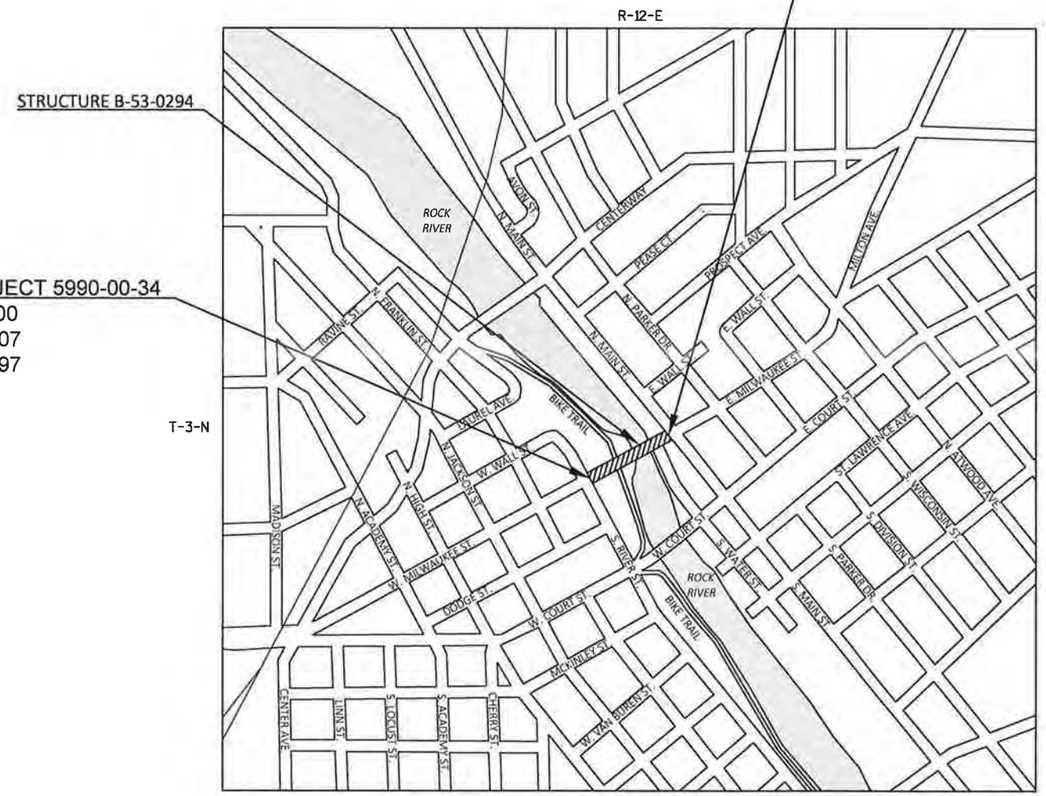
(ROCK RIVER BRIDGE B-53-0294)

LOCAL STREET
ROCK COUNTY

STATE PROJECT NUMBER
5990-00-34

END PROJECT 5990-00-34
STA. 16+77.00

BEGIN PROJECT 5990-00-34
STA. 10+98.00
Y = 268,893.07
X = 492,778.97



LAYOUT

SCALE 0 1,000 FT.

TOTAL NET LENGTH OF CENTERLINE = 0.110 MILE

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COUNTY COORDINATES, ROCK COUNTY, NAVD88 (2011 ADJUSTMENT), IN U S SURVEY FEET VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES GRID DISTANCES MAY BE USED AS GROUND DISTANCES

ACCEPTED FOR
CITY OF JANESVILLE
Date 4-4-18 Paul D. Woodard
(Director of Public Works)

ORIGINAL PLANS PREPARED BY

MSA PROFESSIONAL SERVICES
TRANSPORTATION • MUNICIPAL • REMEDIATION DEVELOPMENT • ENVIRONMENTAL
2901 International Lane, Suite 300 Madison, WI 53704
608-242-7779 1-800-446-0679 Fax: 608-242-5664

WISCONSIN PROFESSIONAL ENGINEER
BRADLEY S. REENTS
E-41069
MADISON
WI
DATE: 4/4/18 Bradley S. Reents
(Professional Engineer Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	COMBS & ASSOCIATES, INC.
Designer	MSA PROFESSIONAL SERVICES, INC.
Management Consultant	KL ENGINEERING

APPROVED FOR THE DEPARTMENT
DATE: 4/26/18 Jeff Melotte
(Management Consultant Signature)

E

2

GENERAL NOTES

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

THE REMOVAL OF CONCRETE DRIVEWAY APRONS, CONCRETE STEPS AND BRICK PAVERS SHALL BE MEASURED AND PAID FOR AS 'REMOVING CONCRETE SIDEWALK'.

TYPICAL FINISHED SECTIONS SHOW THE GENERAL ROADWAY FEATURES THROUGHOUT THE PROJECT. PAVEMENT SLOPES, BORDER SLOPES, ETC., MAY VARY WITHIN THE STATION LIMITS OF EACH SECTION.

CROSS SLOPES AS SHOWN ON THE TYPICAL SECTION WILL VARY AT THE INTERSECTIONS. SEE DETAIL SHEETS AND CROSS SECTIONS FOR SLOPES AND GRADES.

GRADES SHOWN ON THE PLANS MAY BE ADJUSTED BY THE ENGINEER TO FIT EXISTING FIELD CONDITIONS.

EARTHWORK WASTE MATERIAL SHOWN ON THE EARTHWORK SUMMARY SHALL BE HAULED FROM THE PROJECT, EXCEPT AS DIRECTED BY ENGINEER.

EXCAVATION BELOW SUBGRADE (EBS) IS NOT USED TO BALANCE YARDAGE AND IS NOT SHOWN ON THE CROSS SECTIONS, BUT IS MEASURED AND PAID FOR AS 'EXCAVATION COMMON'. THE LOCATION OF EBS WILL BE DETERMINED BY THE ENGINEER. AN UNDISTRIBUTED QUANTITY OF SELECT CRUSHED MATERIAL IS INCLUDED FOR EBS BACKFILL.

PROOF ROLLING OF SUBGRADE IS REQUIRED BEFORE PLACEMENT OF BASE COURSE AND IS INCIDENTAL TO EXCAVATION COMMON. PROOF ROLLING SHALL BE WITNESSED BY THE ENGINEER.

THE LIMITS OF PAVEMENT REMOVAL ON SIDE STREETS ARE APPROXIMATE AND SHALL BE VERIFIED IN THE FIELD BY THE ENGINEER.

RADIUS DIMENSIONS FOR THE CURB AND GUTTER ARE TO THE FACE OF CURB.

EXPANSION JOINTS ARE TO CONSTRUCTED AT ALL RADIUS POINTS IN CURB AND GUTTER OR AT LOCATIONS SHOWN IN THE PLANS. SIDEWALK REPLACEMENT SHOULD BE TO THE NEAREST JOINT. LIMITS ARE APPROXIMATE AND ARE TO VERIFIED IN THE FIELD BY THE ENGINEER.

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

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

EROSION CONTROL DEVICES SHALL BE PLACED IN SEQUENCE OF CONSTRUCTION OPERATIONS AND MAINTAINED AS DETERMINED BY ENGINEER.

ALL DISTURBED AREAS SHALL BE COVERED WITH TOPSOIL, FERTILIZER AND EROSION MAT AS SHOWN IN THE EROSION CONTROL DETAILS. PAYMENT FOR RESTORATION WILL ONLY BE FOR AREAS SHOWN ON THE PLANS WITHIN THE SLOPE INTERCEPTS.

PIPE ELEVATIONS SHOWN ON THE PLANS MAY BE ADJUSTED BY THE ENGINEER TO FIT EXISTING FIELD CONDITIONS.

ALL LENGTHS ARE IN FEET EXCEPT AS SHOWN.

OFFSETS FOR INLETS AND MANHOLES ARE GIVEN TO THE CENTER OF STRUCTURE. STORM SEWER PIPE LENGTHS ARE TO CENTER OF STRUCTURES.

ELEVATIONS SHOWN ON THE STORM SEWER SHEETS ARE AT THE FLANGE OF THE CASTING. A MINIMUM 6" OF ADJUSTMENT RINGS ARE REQUIRED UNLESS OTHERWISE NOTED.

INDEX OF TYPICAL SECTIONS AND DETAIL SHEETS

RUNOFF COEFFICIENT TABLE

	HYDROLOGIC SOIL GROUP											
	A			B			C			D		
	SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)		
LAND USE:	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER
MEDIAN STRIP TURF	0.19	0.20	0.24	0.19	0.22	0.26	0.20	0.23	0.30	0.20	0.25 0.32	0.30 0.40
SIDE SLOPE TURF			0.25			0.27			0.28			0.30 0.38
PAVEMENT:	0.40 - 0.60											
ASPHALT:	0.70 - 0.95											
CONCRETE:	0.80 - 0.95											
BRICK:	0.70 - 0.80											
DRIVES, WALKS:	0.75 - 0.85											
ROOFS:	0.75 - 0.95											
GRAVEL ROADS, SHOULDERS	0.40 - 0.60											

TOTAL PROJECT AREA = 0.935 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES - 0.935 ACRES

UTILITIES

**DENOTES UTILITIES THAT ARE NOT DIGGERS HOTLINE MEMBERS

STORM SEWER:
CITY OF JANESVILLE
ATTN: MATT MCGRATH
18 N. JACKSON STREET
JANESVILLE, WI 53548
PHONE: (608) 755-3168
E-MAIL: mcgrathm@ci.janesville.wi.us

SANITARY SEWER & WATERMAIN:
CITY OF JANESVILLE
ATTN: MATT MCGRATH
18 N. JACKSON STREET
JANESVILLE, WI 53548
PHONE: (608) 755-3168
E-MAIL: mcgrathm@ci.janesville.wi.us

STREET LIGHTING:
CITY OF JANESVILLE
ATTN: MATT GOSLINE
18 N. JACKSON STREET
JANESVILLE, WI 53548
PHONE: (608) 751-5220
E-MAIL: goslinem@ci.janesville.wi.us

TELEPHONE:
AT&T WISCONSIN
ATTN: CAROL ANASON
316 W. WASHINGTON AVENUE
MADISON, WI 53701
PHONE: OFFICE (608) 252-2385
MOBILE (608) 622-2079
E-MAIL: ca2624@att.com

CABLE TELEVISION:
CHARTER SPECTRUM
ATTN: BRANDON OPHEIM
1348 PLAINFIELD AVENUE
JANESVILLE, WI 53545
PHONE: (608) 209-8084
E-MAIL: brandon.opheim@charter.com

GAS AND ELECTRIC:
ALLIANT ENERGY
ATTN: RON ROHM
3730 KENNEDY ROAD
JANESVILLE, WI 53545
PHONE: (608) 757-7514
E-MAIL: ronaldrohm@alliantenergy.com

DESIGN CONTACTS

MSA PROFESSIONAL SERVICES
ATTN: BRAD REENTS
2901 INTERNATIONAL LANE, SUITE 300
MADISON, WI 53704-3133
PHONE: (608) 242-7779
E-MAIL: breents@msa-ps.com

CITY OF JANESVILLE:
ATTN: MATT MCGRATH
18 N. JACKSON STREET
JANESVILLE, WI 53548
PHONE: (608) 755-3168
E-MAIL: mcgrathm@ci.janesville.wi.us

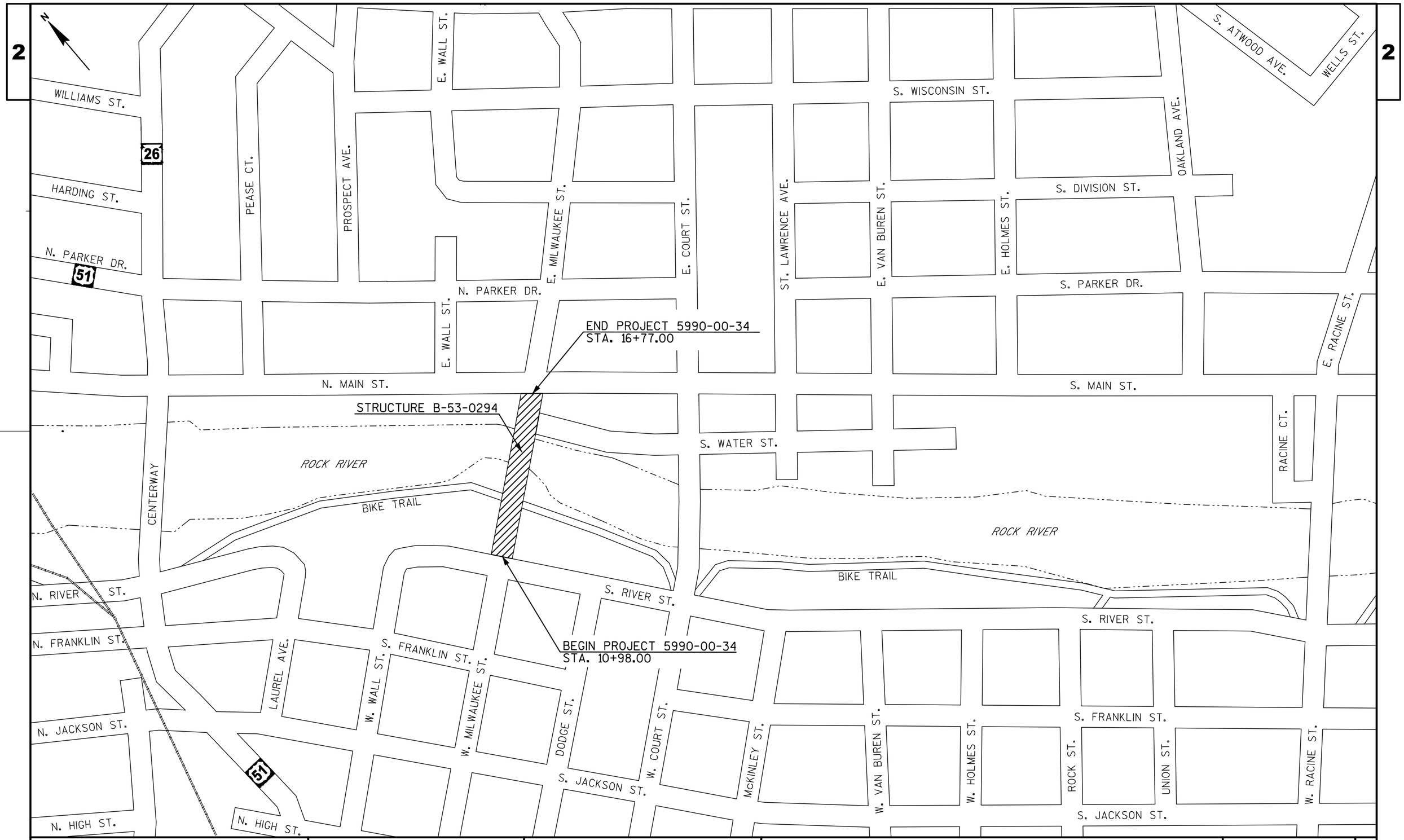
DNR LIAISON

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
ATTN: LAURA BUB
3911 FISH HATCHERY ROAD
FITCHBURG, WI 53711
PHONE: (608) 275-3485
EMAIL: laura.bub@wisconsin.gov

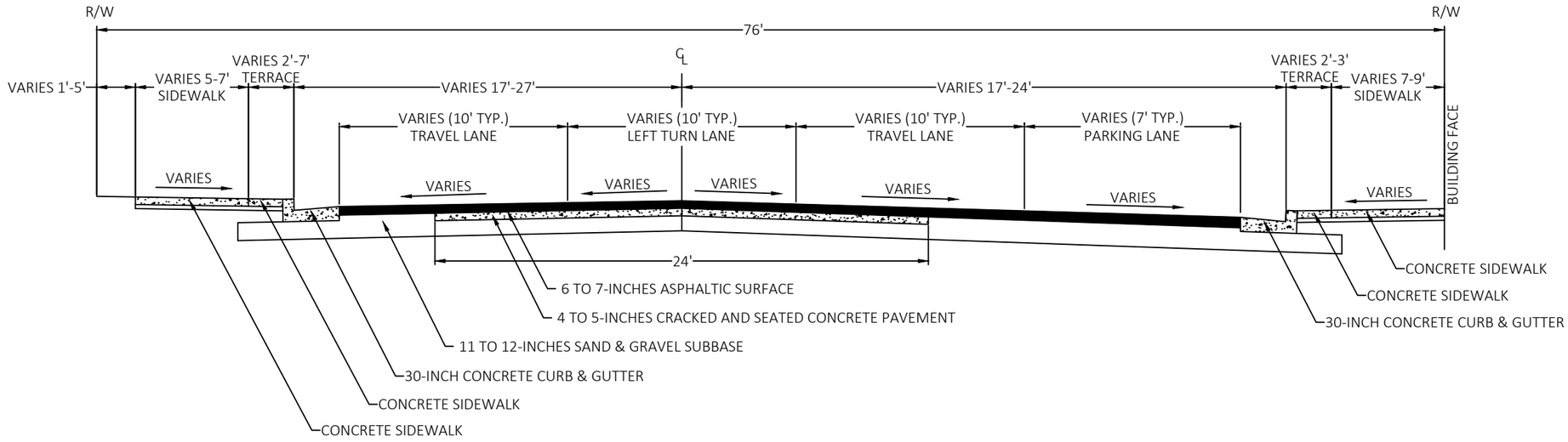
STANDARD ABBREVIATIONS

AC	ACRES
AH	AHEAD
ALUM.	ALUMINUM
A.P.	ACCESS POINT
ASPH	ASPHALT
AVE	AVENUE
BK	BACK
BLK	BLOCK
BM	BENCHMARK
CABC	CRUSHED AGGREGATE BASE COURSE
CL or ℄	CENTERLINE
Δ	CENTRAL ANGLE or DELTA
CONC	CONCRETE
CP	CONTROL POINT
CSM	CERTIFIED SURVEY MAP
D	DEGREE OF CURVE
DIA	DIAMETER
E	EAST
EB	EASTBOUND
ET AL	AND OTHERS
EW	ENDWALL
EXIST	EXISTING
FT	FOOT
FT2	SQUARE FEET
GN	GRID NORTH
HYD	HYDRANT
IN	INCH
INL	INLET
IP	IRON PIPE
L	LENGTH
L	LENGTH OF CURVE
LF	LINEAL FEET
LC	LONG CHORD
LCB	LONG CHORD BEARING
LP	LOW POINT
LT	LEFT
MH	MANHOLE
MI	MILE
MON	MONUMENT
N	NORTH
NB	NORTHBOUND
NO	NUMBER
PB	PULLBOX
PC	POINT OF CURVATURE
PI	POINT OF INTERSECTION
PT	POINT
PT	POINT OF TANGENCY
PL	PROPERTY LINE
PLE	PERMANENT LIMITED EASEMENT
POB	POINT OF BEGINNING
R	RADIUS
R	RANGE
RCP	REINFORCED CONCRETE PIPE
REQ'D	REQUIRED
RL or R/L	REFERENCE LINE
RP	RADIUS POINT
RT	RIGHT
R/W	RIGHT-OF-WAY
RD	ROAD
SAN	SANITARY SEWER
S	SOUTH
SB	SOUTHBOUND
SL	SPECIAL LOGO
SQ	SQUARE
STD	STANDARD
SEC	SECTION
SSPRC	STORM SEWER PIPE REINFORCED CONCRETE
SSPRCHE	STORM SEWER PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL
ST	STREET
STA	STATION
STM	STORM SEWER
STR	STRUCTURE
T	TANGENT
TAN	TANGENT
TEMP	TEMPORARY
TLE	TEMPORARY LIMITED EASEMENT
T or TN	TOWN
TYP	TYPICAL
UD	UNDERDRAIN
WM	WATERMAIN
WV	WATER VALVE
W	WEST
WB	WESTBOUND
X	EAST GRID COORDINATE
Y	NORTH GRID COORDINATE

DIGGERS HOTLINE
Dial 811 or (800) 242-8511
www.DiggersHotline.com
WISCONSIN PUBLIC SERVICE EMERGENCY CONTACT NUMBERS:
ELECTRIC 24-HOUR EMERGENCY SERVICE: 1-800-862-6222
GAS 24-HOUR EMERGENCY SERVICE: 1-800-862-6222

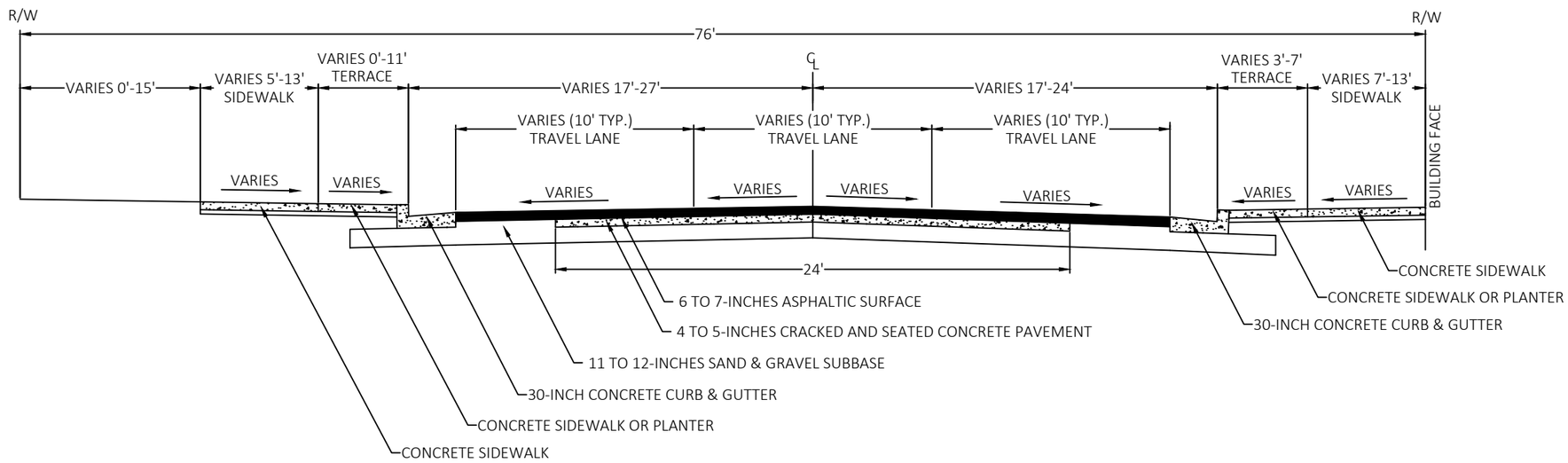


PROJECT NO: 5990-00-34	HWY: MILWAUKEE STREET	COUNTY: ROCK	PROJECT OVERVIEW	SHEET 3	E



EXISTING TYPICAL SECTION - MILWAUKEE STREET

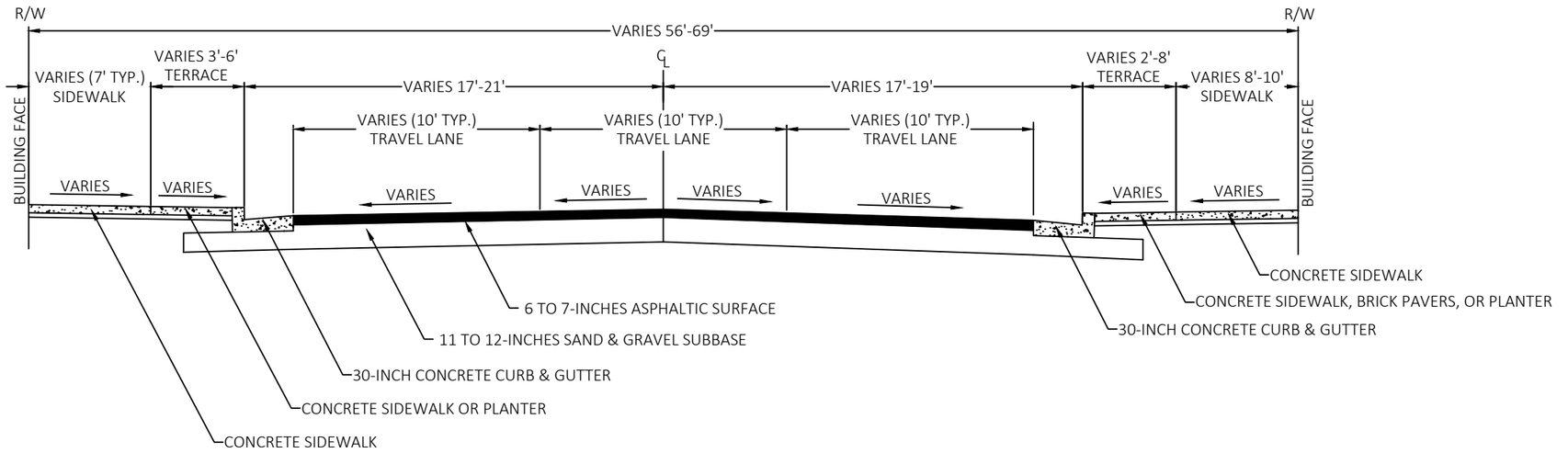
STA. 10+98 TO STA. 12+00



EXISTING TYPICAL SECTION - MILWAUKEE STREET

STA. 12+00 TO STA. 13+42

PROJECT NO: 5990-00-34	HWY: MILWAUKEE STREET	COUNTY: ROCK	TYPICAL SECTIONS	SHEET 4	E

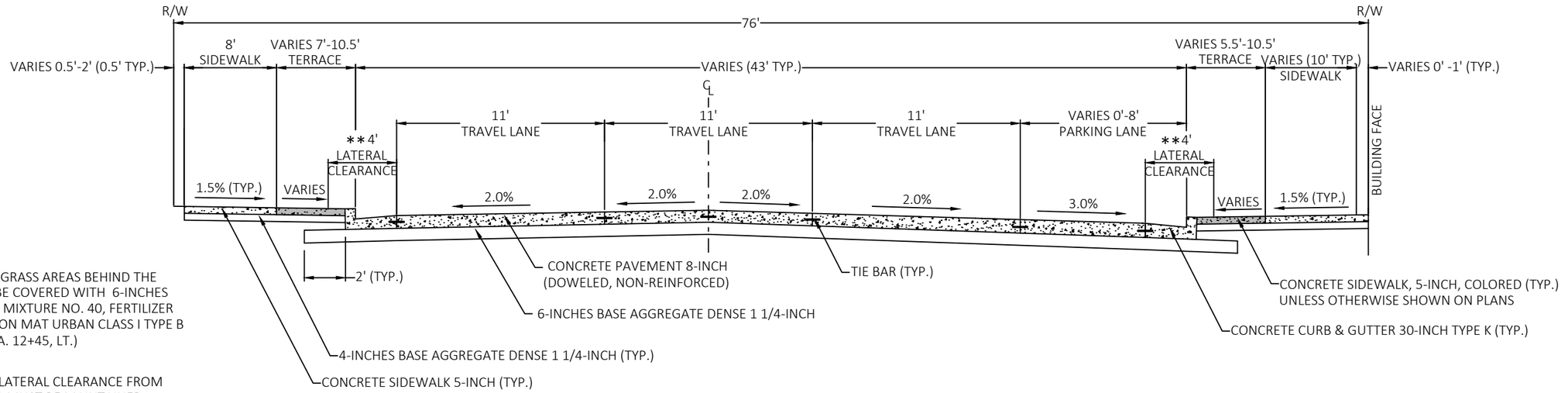


EXISTING TYPICAL SECTION - MILWAUKEE STREET

STA. 15+65 TO STA. 16+77

PROJECT NO: 5990-00-34	HWY: MILWAUKEE STREET	COUNTY: ROCK	TYPICAL SECTIONS	SHEET	E

FILE NAME : P:\870S\879\00879002\C3D\SHEETSPLAN\020301-TS.DWG
LAYOUT NAME - Existing Typical
PLOT DATE : 4/19/2018 8:22 AM PLOT BY : JASON DOLENS PLOT NAME : PLOT SCALE : **********
WISDOT/CADDS SHEET 42

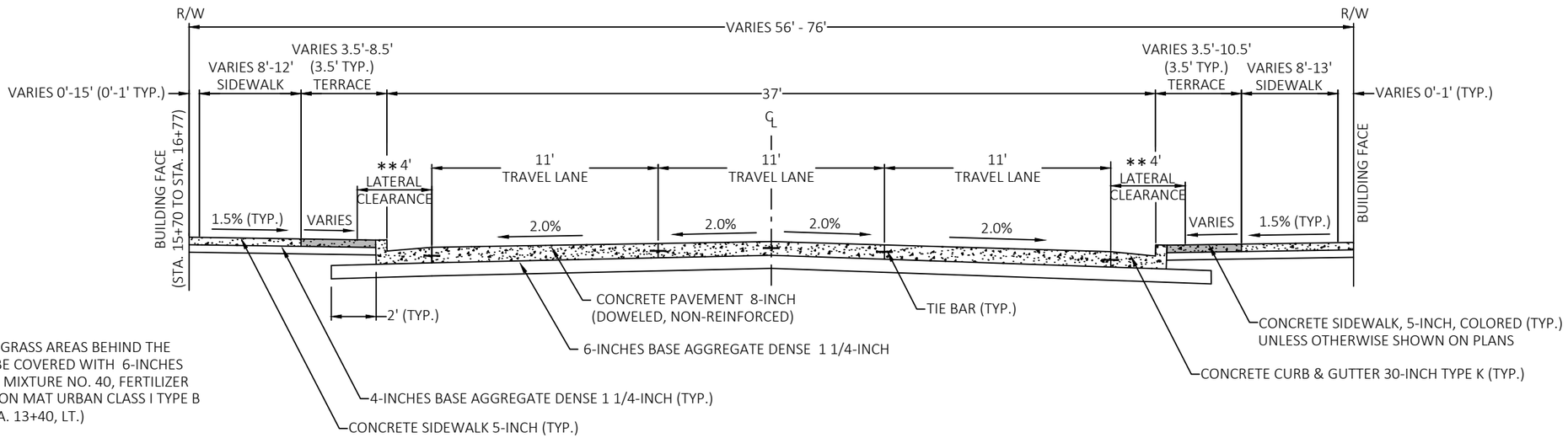


NOTE: DISTURBED GRASS AREAS BEHIND THE SIDEWALK SHALL BE COVERED WITH 6-INCHES TOPSOIL, SEEDING MIXTURE NO. 40, FERTILIZER TYPE B AND EROSION MAT URBAN CLASS I TYPE B (STA. 10+98 TO STA. 12+45, LT.)

** 2' MINIMUM LATERAL CLEARANCE FROM FACE OF CURB MUST BE MAINTAINED

FINISHED TYPICAL SECTION - MILWAUKEE STREET

STA. 10+98 TO STA. 12+45



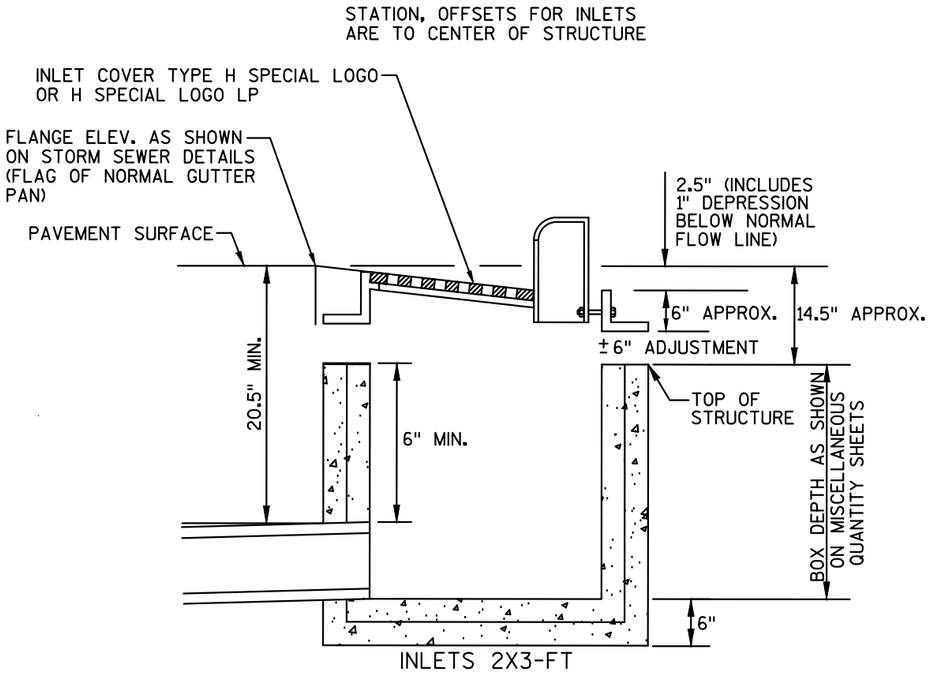
NOTE: DISTURBED GRASS AREAS BEHIND THE SIDEWALK SHALL BE COVERED WITH 6-INCHES TOPSOIL, SEEDING MIXTURE NO. 40, FERTILIZER TYPE B AND EROSION MAT URBAN CLASS I TYPE B (STA. 12+45 TO STA. 13+40, LT.)

** 2' MINIMUM LATERAL CLEARANCE FROM FACE OF CURB MUST BE MAINTAINED

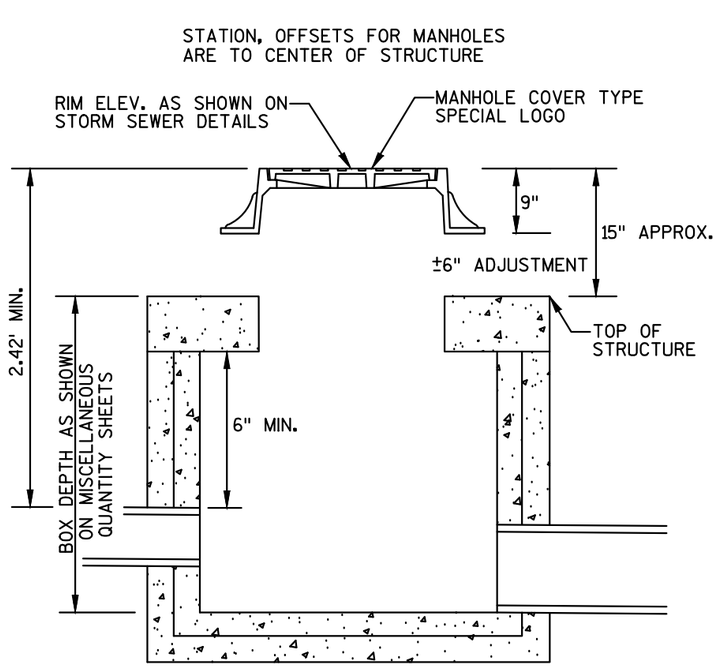
FINISHED TYPICAL SECTION - MILWAUKEE STREET

STA. 12+45 TO STA. 13+40
STA. 15+59 TO STA. 16+77

PROJECT NO: 5990-00-34	HWY: MILWAUKEE STREET	COUNTY: ROCK	TYPICAL SECTIONS	SHEET 6	E



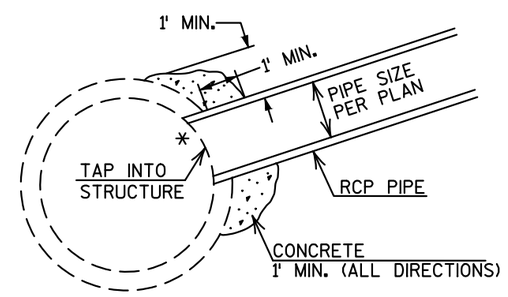
DETAIL FOR COMPUTING INLET ELEVATIONS
SCALE: NONE



DETAIL FOR COMPUTING MANHOLE ELEVATIONS
SCALE: NONE

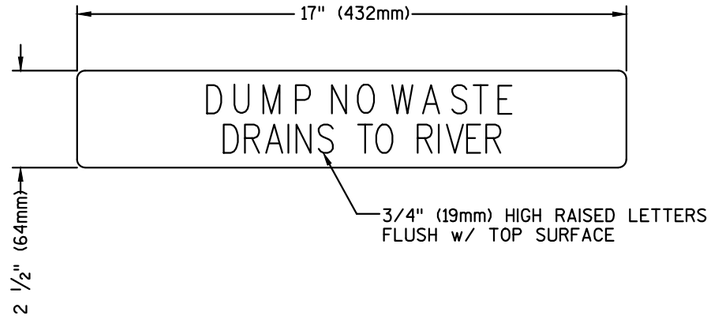
NOTE: CONCRETE INCIDENTAL TO
INSTALLATION OF STORM SEWER PIPE

*NO PIPE TO PROTRUDE INTO MANHOLE

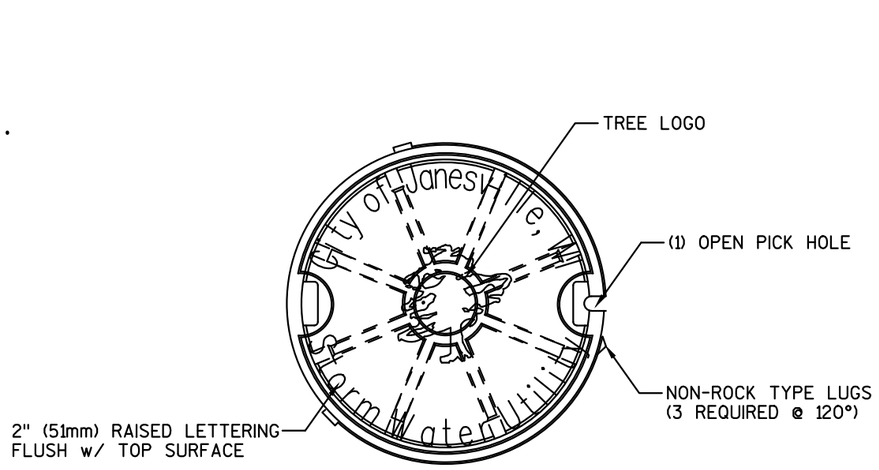


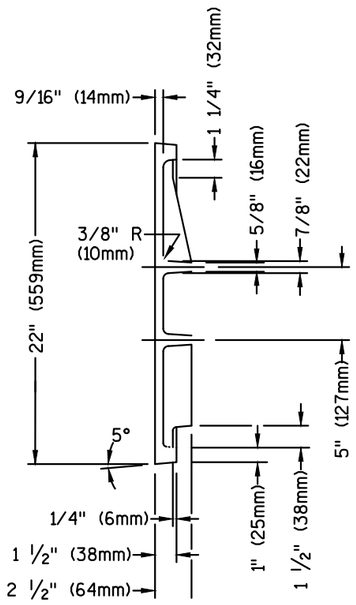
PLAN VIEW

MANHOLE CONNECTION DETAIL
SCALE: NONE



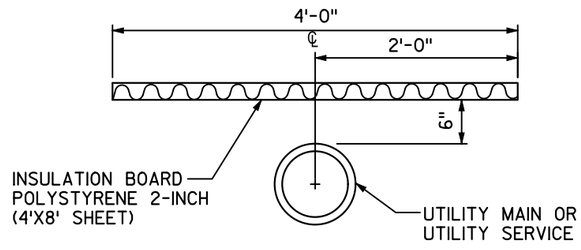
INLET CASTING SPECIAL LOGO DETAIL
SCALE: NONE





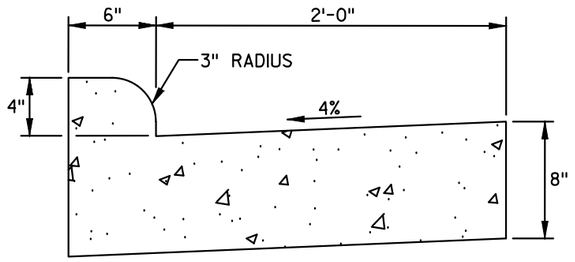
NOTE: ALL DIMENSIONS SHOWN ARE IN ENGLISH AND [METRIC]
MATERIAL: CAST GRAY IRON ASTM A-48, CLASS 35B
FINISH: NO PAINT
WEIGHT: 95#

MANOLE COVER TYPE SPECIAL LOGO DETAIL
SCALE: NONE



PIPE INSULATION DETAIL
SCALE: NONE

PROJECT NO: 5990-00-34	HWY: MILWAUKEE STREET	COUNTY: ROCK	CONSTRUCTION DETAILS	SHEET 8	E

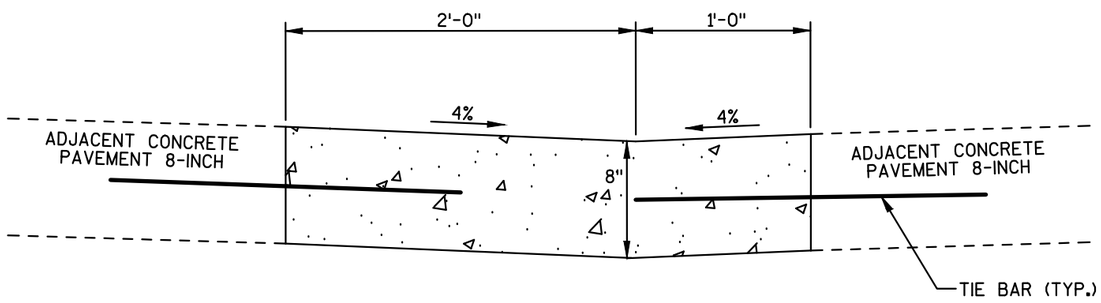


NOTES:

1. TIE BARS ARE INCIDENTAL TO CONCRETE CURB & GUTTER 30-INCH TYPE K SPECIAL.
2. SEE CURB RAMP DETAILS FOR LOCATIONS.
3. IF NOT SHOWN DIFFERENTLY IN CURB RAMP DETAILS, CONSTRUCT CURB & GUTTER WITH 6-INCH CURB HEAD HEIGHT.

CONCRETE CURB & GUTTER 30-INCH TYPE K SPECIAL DETAIL
SCALE: NONE

(STA. 15+60 - STA. 15+90, LT.)
(STA. 15+82 - STA. 16+00, RT.)

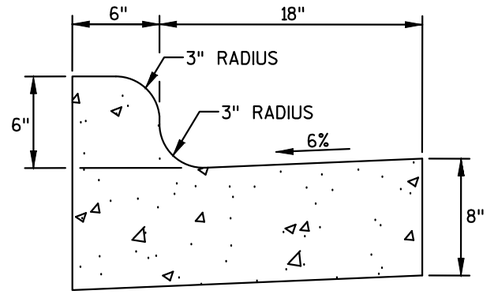


NOTES:

1. TIE BARS ARE INCIDENTAL TO CONCRETE GUTTER 36-INCH SPECIAL.

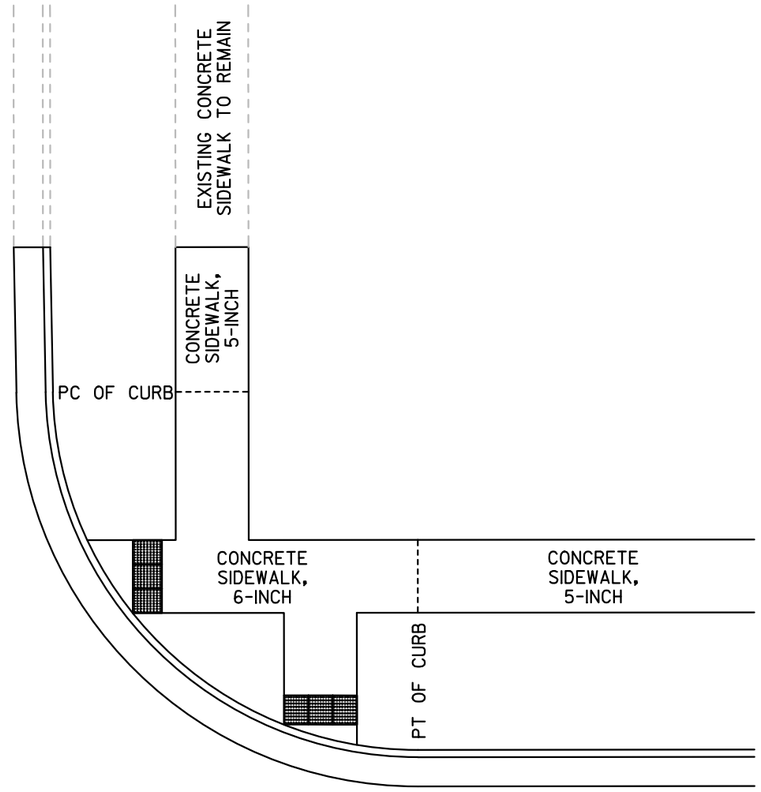
CONCRETE GUTTER 36-INCH SPECIAL DETAIL
SCALE: NONE

(STA. 15+48 - STA. 16+00, RT.)

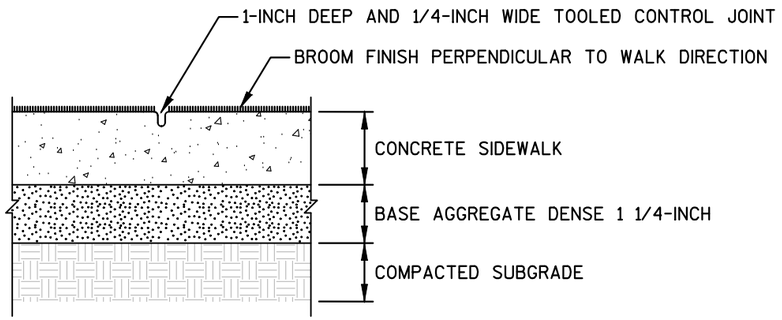


CONCRETE CURB & GUTTER 24-INCH TYPE L SPECIAL DETAIL
SCALE: NONE

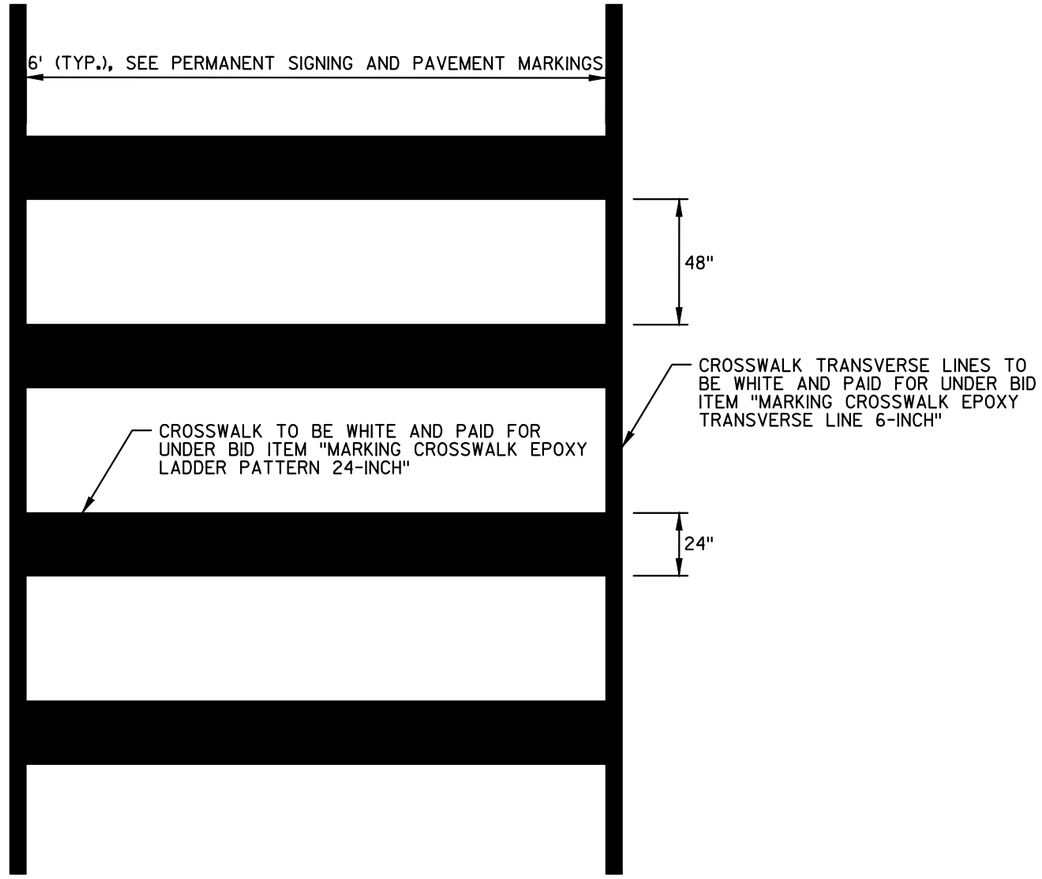
(STA. 15+63, RT.)
(STA. 15+87, RT.)



CONCRETE SIDEWALK, 6-INCH PAY LIMITS DETAIL
SCALE: NONE



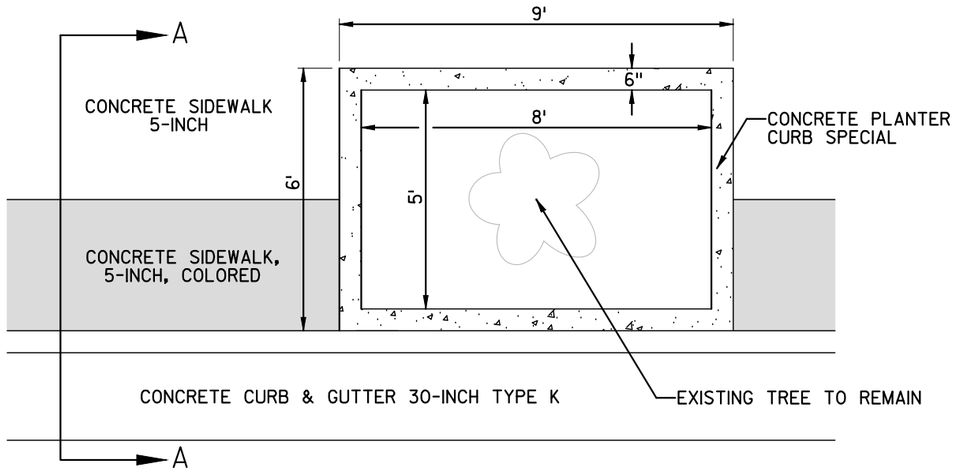
CONCRETE SIDEWALK CONTROL JOINT DETAIL
SCALE: NONE



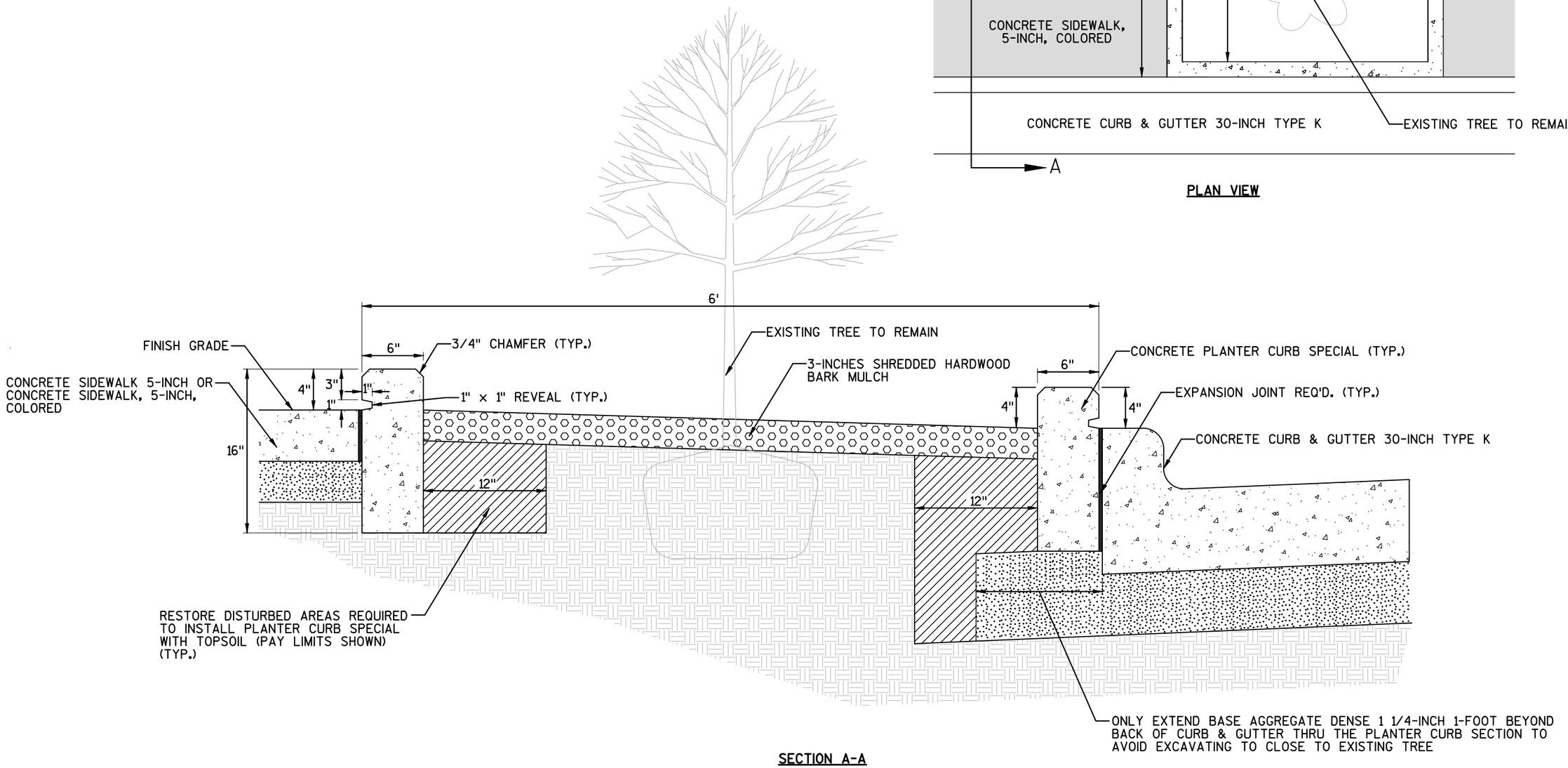
NOTES:

1. CROSSWALKS HAVE 24-INCH WIDE, 6-FOOT (TYP.) LONG CROSSBARS PLACED IN LINE WITH THE TRAFFIC FLOW.
2. THE SPACING OR GAP BETWEEN THE CROSSBARS IS 48-INCHES.
3. THE CROSSBARS SHOULD BE PLACED IN A MATTER THAT MINIMIZES CONTACT WITH VEHICLES TIRES.

CROSSWALK PAVEMENT MARKING DETAIL
SCALE: NONE

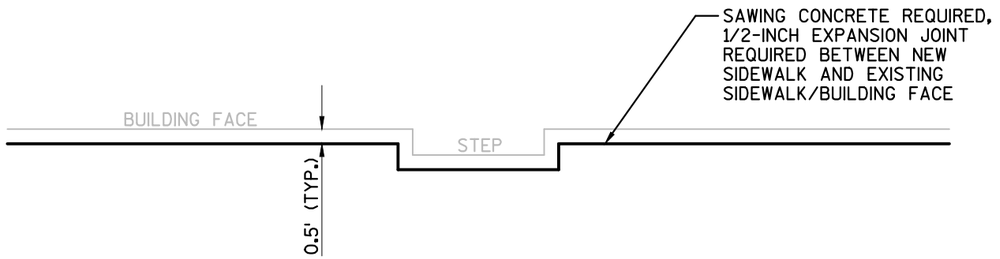


PLAN VIEW



SECTION A-A

CONCRETE PLANTER CURB SPECIAL DETAIL
SCALE: NONE
(STA. 16+63 - STA. 16+72, LT.)



CONCRETE SIDEWALK

CONCRETE CURB & GUTTER

NOTES:

1. REMOVAL OF CONCRETE SIDEWALK WHERE BUILDINGS ABUT THE RIGHT-OF-WAY, OR CONSTRUCTION LIMITS, SHALL INCLUDE PERFORMING A FULL DEPTH SAWCUT APPROXIMATELY 6-INCHES FROM THE BUILDING FACE.

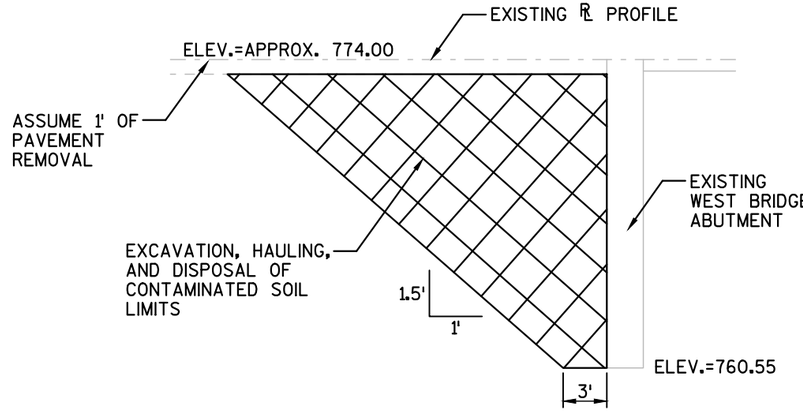
2. IF POSSIBLE, REMOVE THE REMAINING PIECES OF SIDEWALK ADJACENT TO THE BUILDINGS USING METHODS APPROVED BY THE ENGINEER.

3. DURING THE SAW CUTTING AND SIDEWALK REMOVAL, TAKE EXTREME CARE TO NOT DAMAGE THE BUILDINGS. THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY DAMAGE TO THE BUILDINGS.

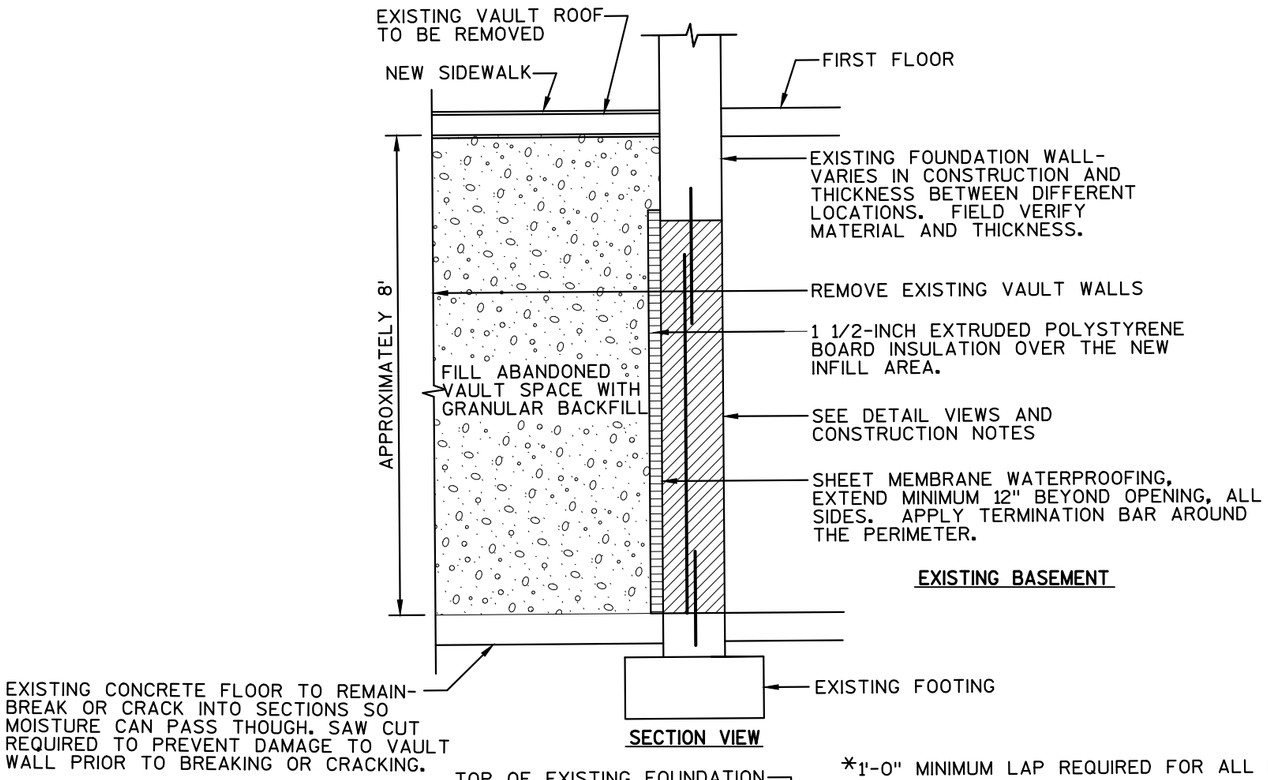
4. SALVAGE REBARS THAT EXTEND INTO THE SIDEWALK FROM THE BUILDINGS, IF ANY, AND INCORPORATE INTO THE NEW SIDEWALK.

5. NEW STEPS OR NEW DROPS BETWEEN ENTRANCES AND SIDEWALK SHALL NOT BE ADDED AT ANY LOCATION WITHIN THE PROJECT, UNLESS APPROVED BY THE ENGINEER.

SAWING CONCRETE ALONG BUILDING DETAIL
SCALE: NONE



CONTAMINATED SOIL REMOVAL LIMITS DETAIL
SCALE: NONE



EXISTING BASEMENT

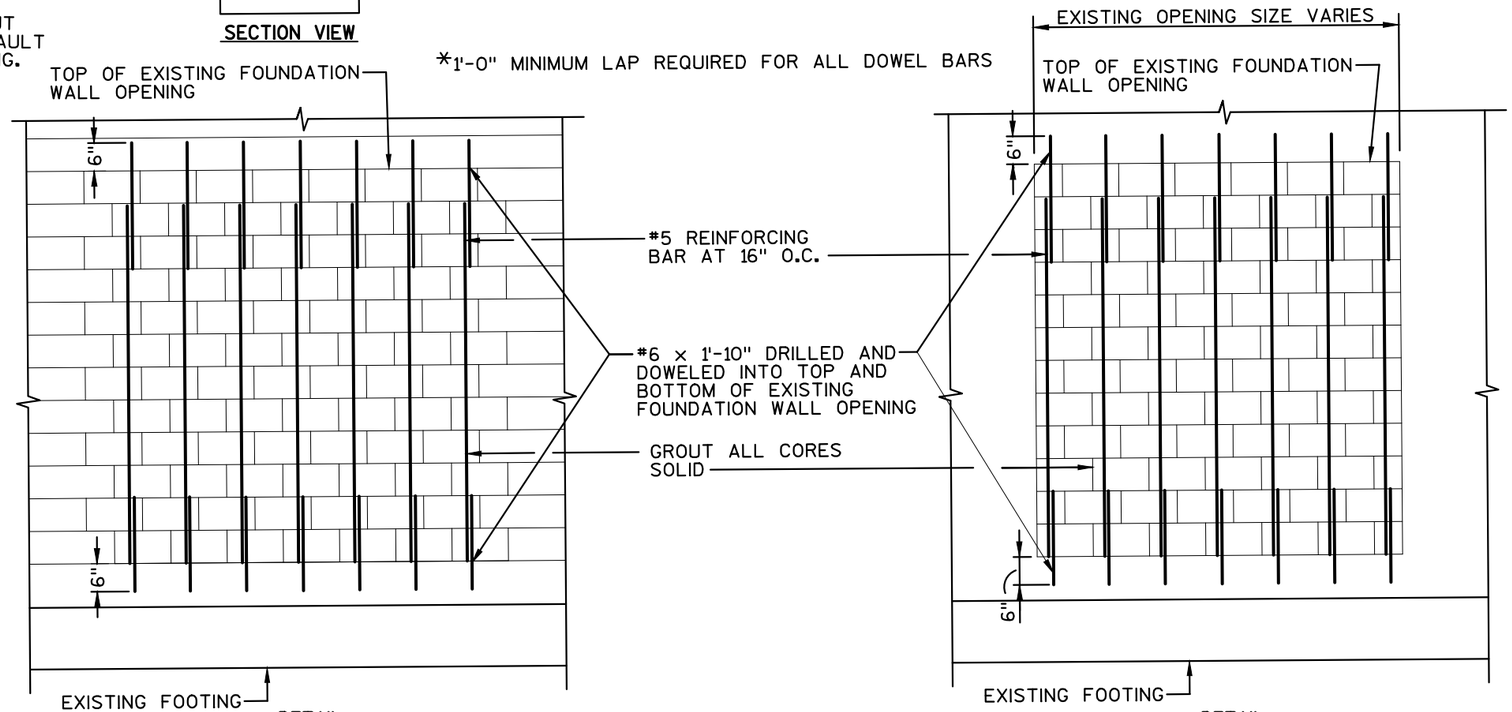
SECTION VIEW

CONSTRUCTION SEQUENCE:

1. REMOVE EXISTING VAULT CONCRETE ROOF, DOOR AND FRAME.
2. DRILL AND DOWEL REBAR INTO THE TOP AND BOTTOM OF FOUNDATION WALL OPENING AND GROUT SOLID.
3. CLOSE DOOR OPENING WITH MASONRY UNITS. MATCH DEPTH OF EXISTING WALL. PER SECTION 519 OF THE STATE OF WISCONSIN STANDARD SPECIFICATIONS. USE HORIZONTAL JOINT REINFORCEMENT AT 16" O.C.
4. THE EXTERIOR SURFACE OF THE MASONRY SHALL HAVE SHEET MEMBRANE WATERPROOFING APPLIED.
5. BREAK/CRACK EXISTING CONCRETE VAULT FLOOR.
6. REMOVE OUTER WALLS OF VAULT.
7. FILL VAULT WITH GRANULAR BACKFILL PER SECTION 209 OF THE STATE OF WISCONSIN STANDARD SPECIFICATIONS.

MATERIAL LIST:

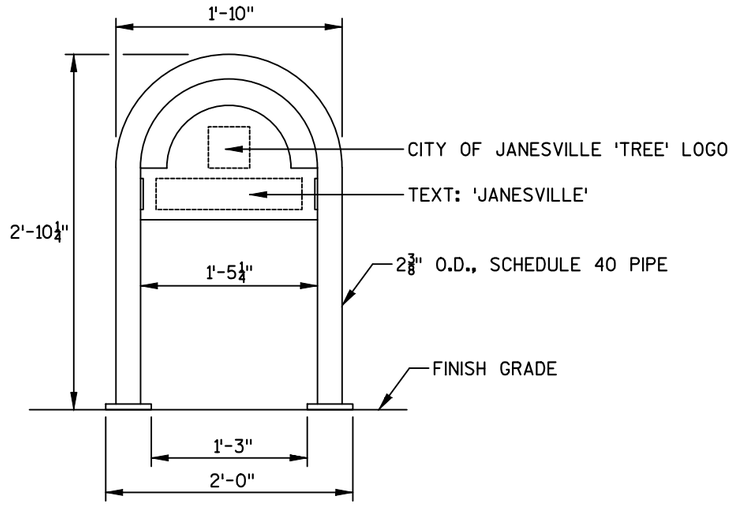
1. STEEL REBAR: ASTM A615, GRADE 60.
2. CONCRETE MASONRY: ASTM C90, GRADE N, TYPE II, NORMAL WEIGHT, 2300 PSI MIN NET COMPRESSIVE STRENGTH.
3. MORTAR: TYPE N PORTLAND AND LIME.
4. HORIZ. REINFORCING: HOT DIPPED GALVANIZED, STANDARD WEIGHT. #120 TRUSS-MESH BY HOHMANN AND BARNARD OR EQUAL BY DUR-O-WALL, HECKMAN, OR MASONRY REINFORCING CORP.
5. GROUT: 3000 PSI AT 28 DAYS, 8"-10" SLUMP. PREMIXED PER ASTM C94 OR SITE MIXED PER ASTM C476 COURSE GROUT.
6. PORTLAND CEMENT: ASTM C150, TYPE I.
7. HYDRATED LIME: ASTM C207, TYPE S.
8. AGGREGATE: MORTAR: ASTM C144. GROUT COURSE: ASTM C404.
9. WATER-PROOFING: GRACE BITUTHENE 3000 OR EQUAL. PRIMER SHALL BE BITUTHENE PRIMER WP-3000 OR PRIMER B2 BY GRACE. OR EQUAL PRODUCTS BY WR MEADOWS OR CARLISLE OR EQUAL.



DETAIL
BLOCK OR STONE FOUNDATION WALL

ABANDONED VAULT & VAULT WALL DETAIL
SCALE: NONE

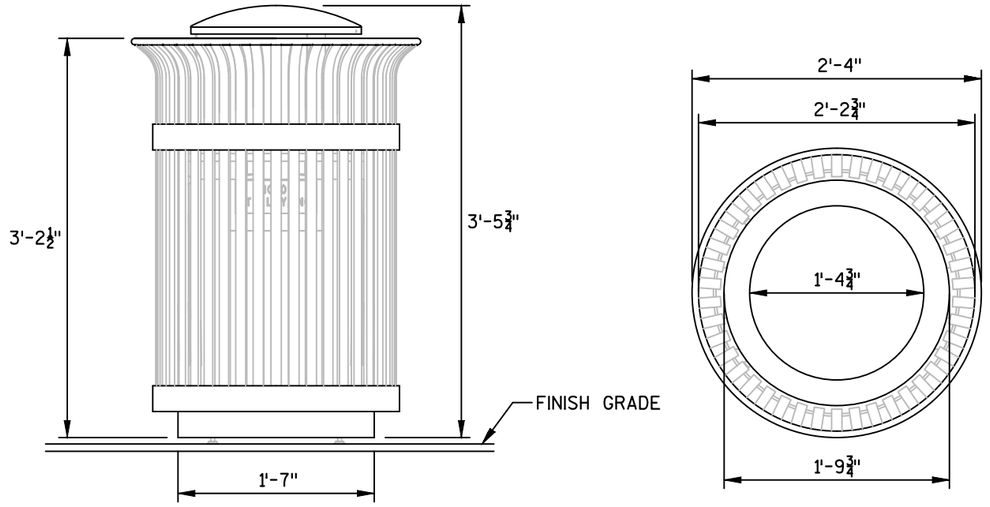
DETAIL
CONCRETE FOUNDATION WALL



NOTE:

1. SURFACE MOUNT ATTACHMENT PER MANUFACTURER'S RECOMMENDATIONS.
2. ALL LOGOS AND TEXT SHALL BE APPROVED VIA A SHOP DRAWING SUBMITTAL BY THE CITY OF JANESVILLE PRIOR TO FABRICATION.

BICYCLE RACK DETAIL
SCALE: NONE

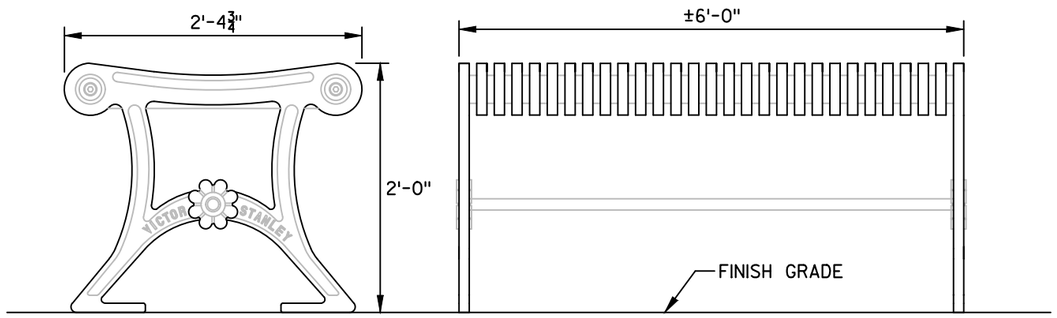


ELEVATION **PLAN**

NOTE:

1. SURFACE MOUNT ATTACHMENT PER MANUFACTURER'S RECOMMENDATIONS.

TRASH RECEPTACLE DETAIL
SCALE: NONE

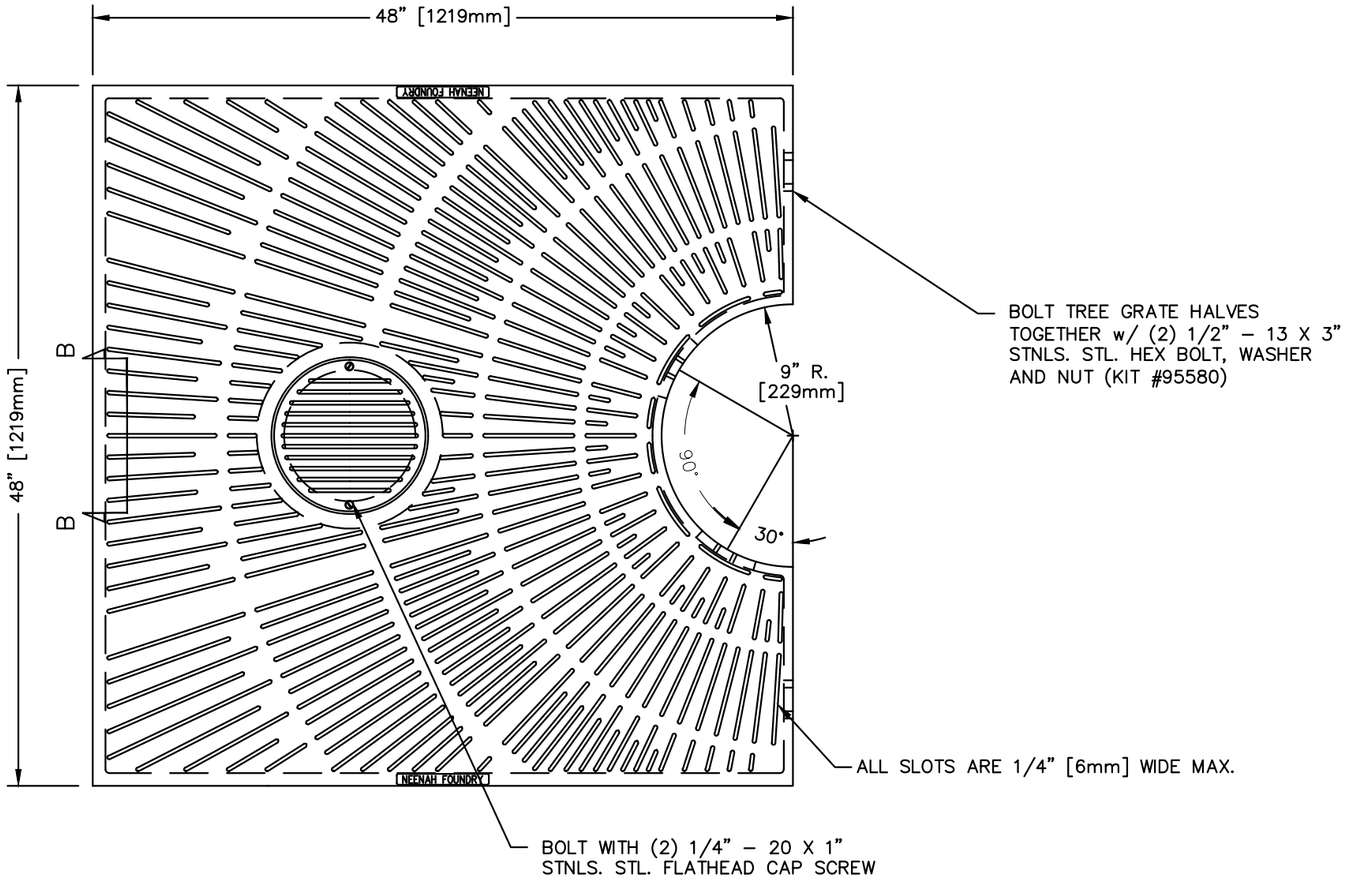


SECTION **ELEVATION**

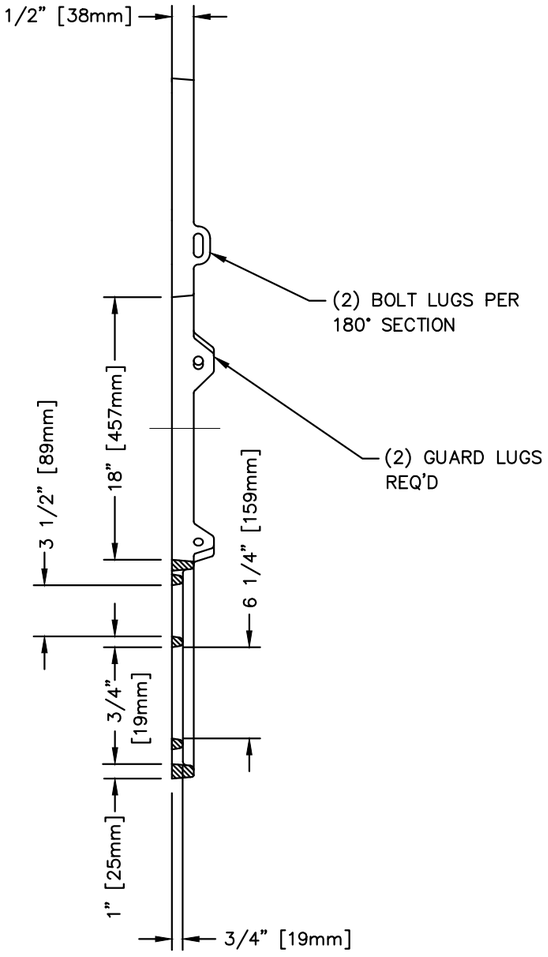
NOTE:

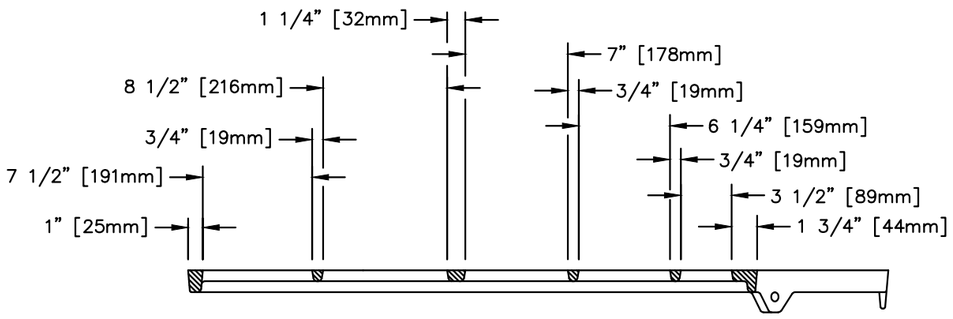
1. SURFACE MOUNT ATTACHMENT PER MANUFACTURER'S RECOMMENDATIONS.

BENCH, 6-FOOT, BACKLESS DETAIL
SCALE: NONE

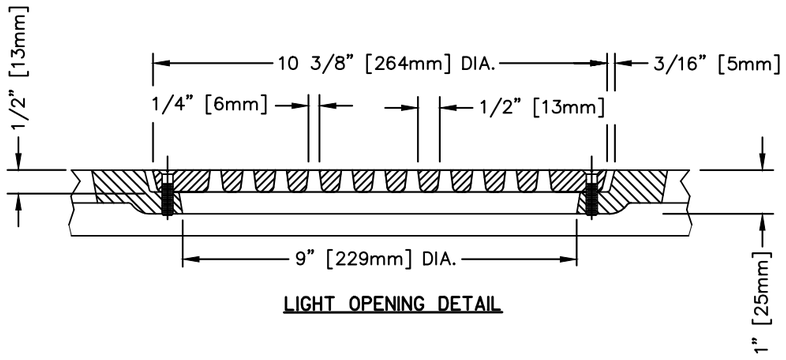


PLAN VIEW

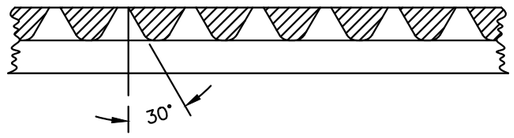




PROFILE VIEW



LIGHT OPENING DETAIL



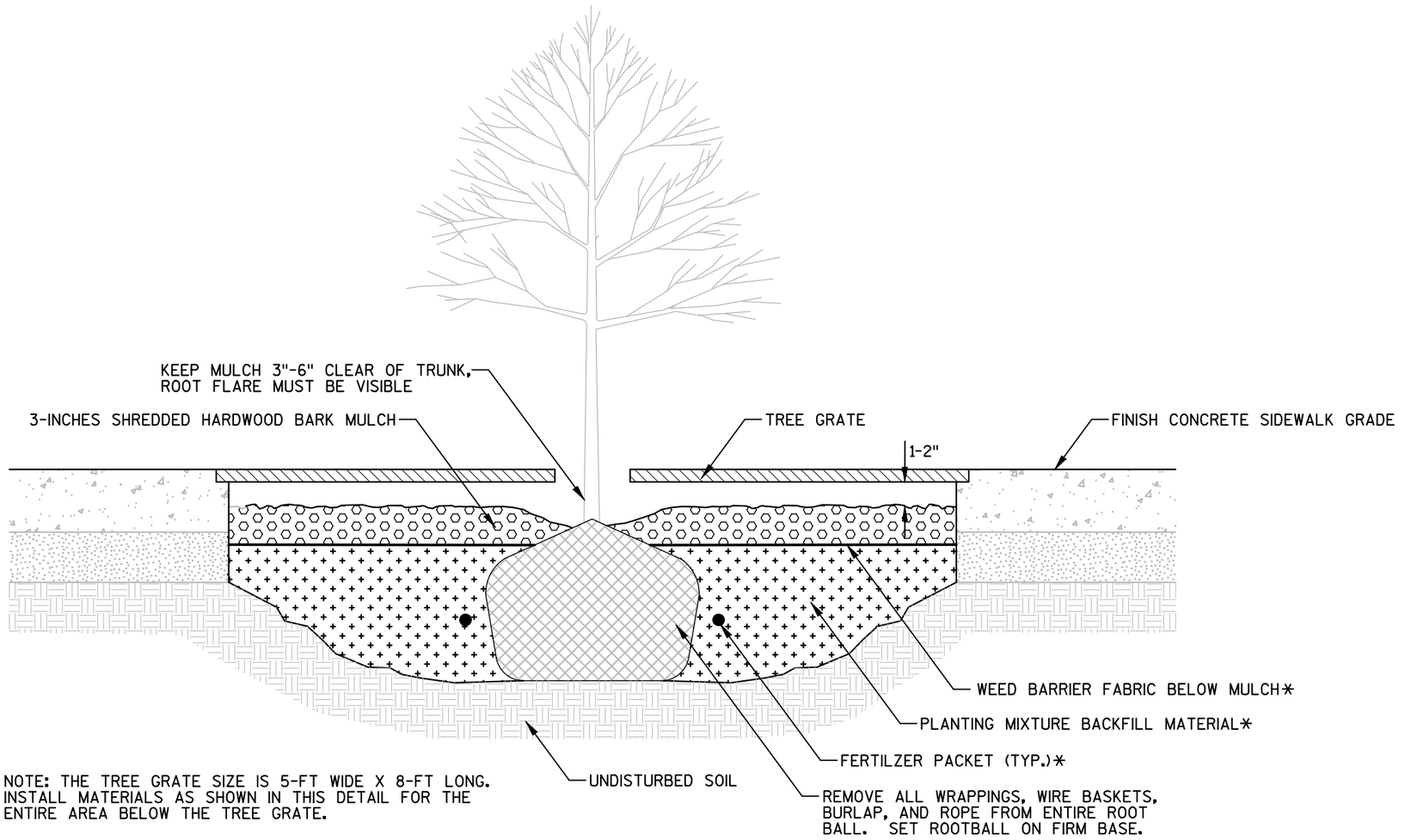
SECTION B-B

NOTE: ALL DIMENSIONS SHOWN ARE IN ENGLISH AND [METRIC]
MATERIAL: CAST GRAY IRON ASTM A-48, CLASS 35B
FINISH: NO PAINT
WEIGHT: TREE GRATE 323#; LT. OPENING GRATE 7#

TREE GRATE DETAIL
SCALE: NONE

PROJECT NO: 5990-00-34	HWY: MILWAUKEE STREET	COUNTY: ROCK	CONSTRUCTION DETAILS	SHEET 15	E

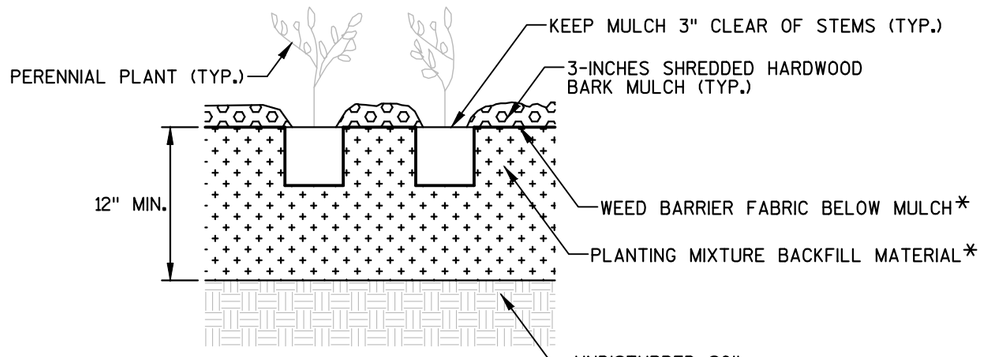
2



NOTE: THE TREE GRATE SIZE IS 5-FT WIDE X 8-FT LONG. INSTALL MATERIALS AS SHOWN IN THIS DETAIL FOR THE ENTIRE AREA BELOW THE TREE GRATE.

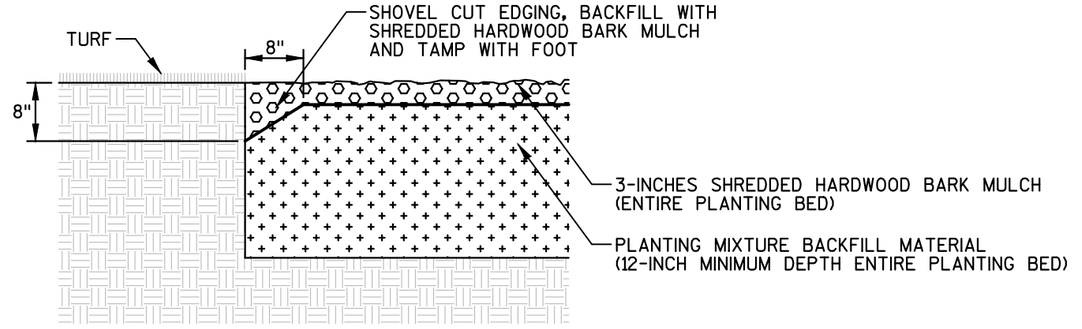
TREE PLANTING DETAIL
SCALE: NONE

*INCIDENTAL TO 'TREE' BID ITEMS



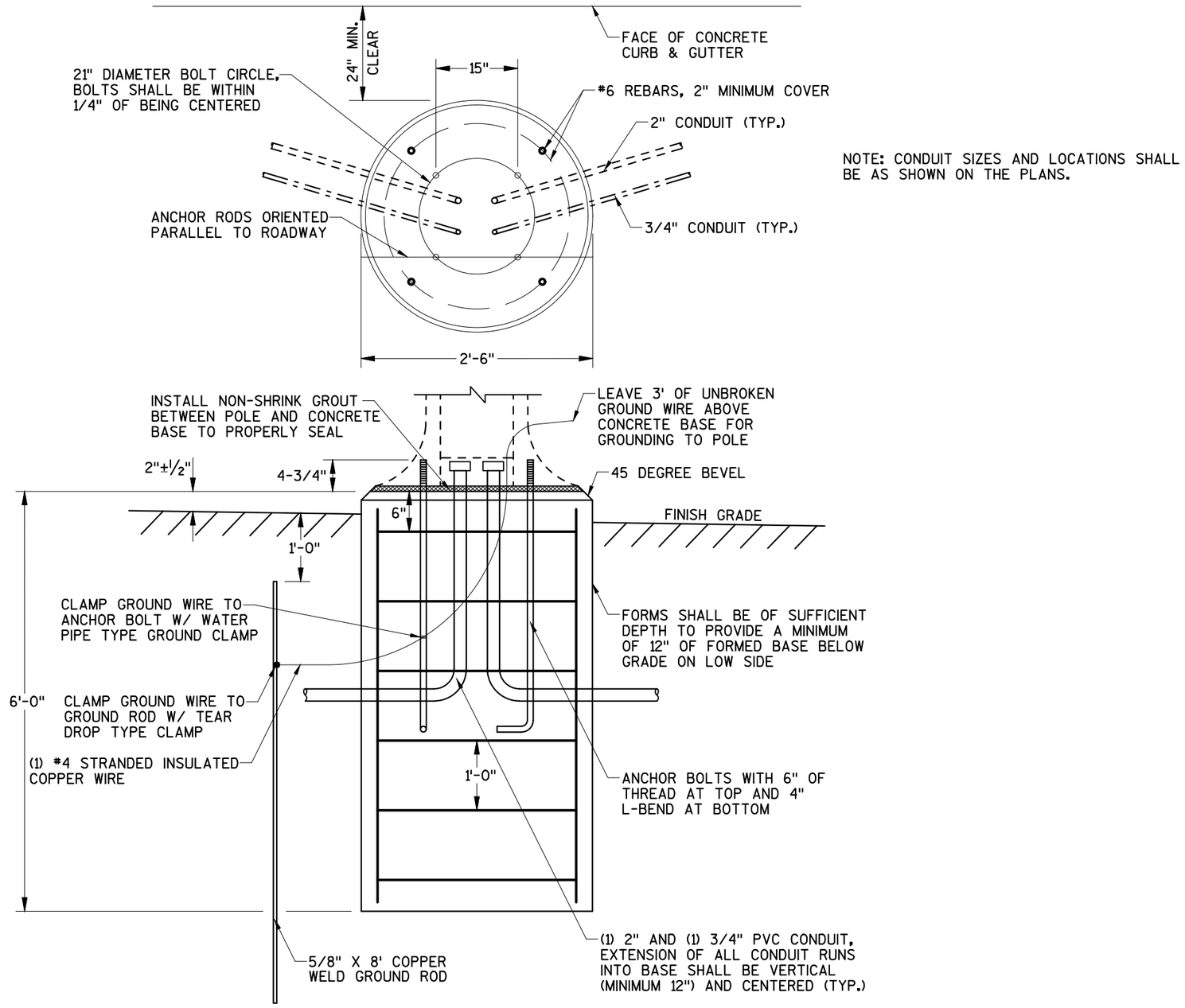
PERENNIAL PLANTING DETAIL
SCALE: NONE
(STA. 13+11 - STA. 13+23, LT.)

*INCIDENTAL TO 'PERENNIAL' BID ITEMS



SHOVEL CUT EDGING DETAIL
SCALE: NONE
(STA. 13+11 - STA. 13+23, LT.)

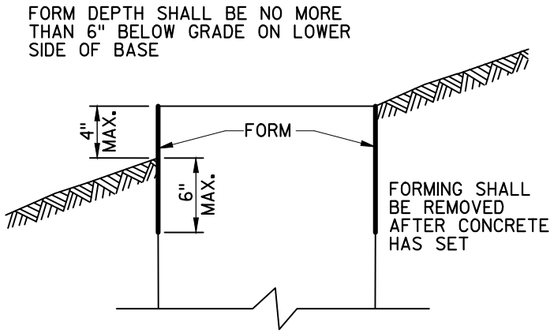
NOTE: REMOVE ALL DEBRIS, SLAG PILES, AND TRASH FROM PLANTING BEDS PRIOR TO PLACING PLANTING MIXTURE BACKFILL MATERIAL.



NOTE: CONDUIT SIZES AND LOCATIONS SHALL BE AS SHOWN ON THE PLANS.

CONCRETE BASE TYPE 3 SPECIAL DETAIL
SCALE: NONE

PROJECT NO: 5990-00-34	HWY: MILWAUKEE STREET	COUNTY: ROCK	CONSTRUCTION DETAILS	SHEET 17	E



FORMING DETAIL

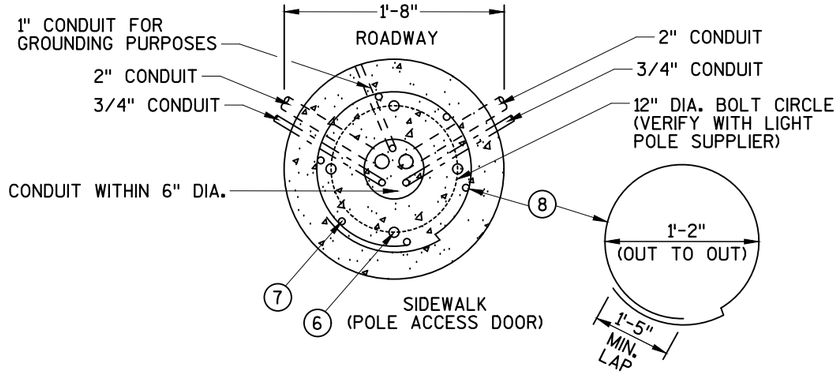
QUANTITY REQUIREMENTS	
APPROX. CUBIC YARDS OF CONCRETE	0.40
LBS. OF HOOP BAR STEEL	16
LBS. OF VERTICAL BAR STEEL	18

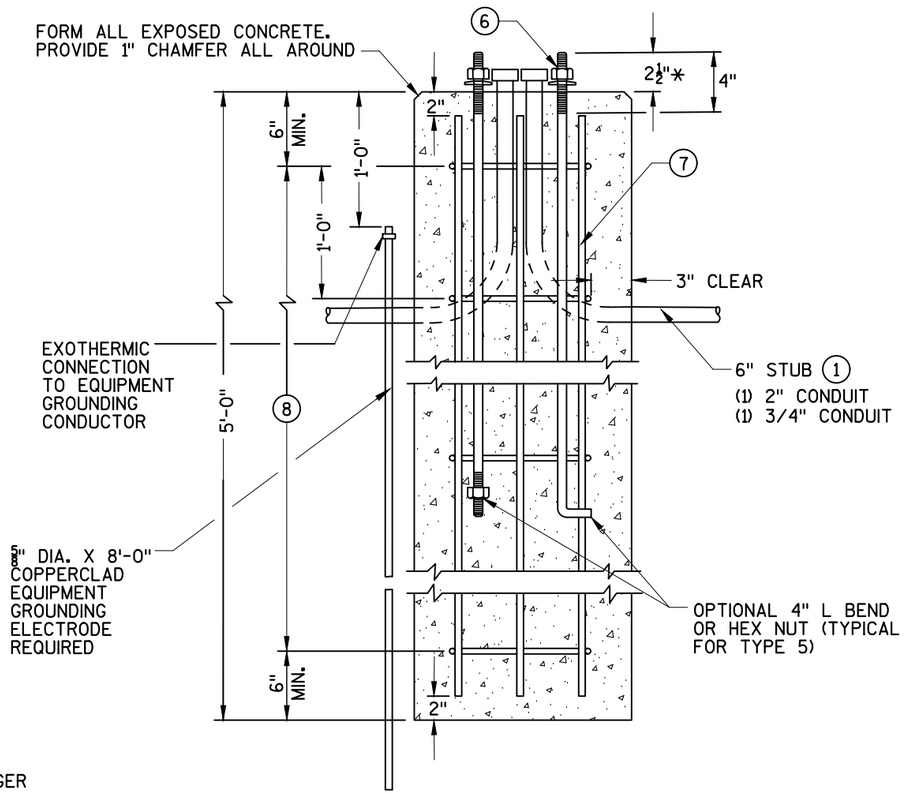
(1) THE MINIMUM DEPTH OF CONDUIT EXISTING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18 INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36 INCHES EXCEPT WITH WRITTEN APPROVAL BY THE ENGINEER.

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

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

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





CONCRETE BASE TYPE 5 SPECIAL DETAIL
SCALE: NONE

* ANY ANCHOR ROD PROJECTION SHORTER THAN 2¼" OR LONGER THAN 2¾" SHALL REQUIRE THE BASE TO BE REMOVED AND REPLACED AT THE CONTRACTORS EXPENSE.

GENERAL NOTES

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

BASES SHALL BE EXCAVATED BY USE OF A CIRCULAR AUGER.

TOP SURFACES OF CONCRETE BASES SHALL BE TROWEL FINISHED SMOOTH AND LEVEL.

CONDUIT SIZES AND LOCATIONS SHALL BE AS SHOWN ON THE PLANS.

THE FINAL OR TERMINATING CONCRETE BASE IN A CONDUIT RUN SHALL HAVE A 6" EXIT STUB INSTALLED FOR FUTURE CABLING USE. THE EXIT STUB SHALL BE SIZED AS USED THROUGHOUT THE CONDUIT RUN AS SHOWN AT THE ENTRANCE OF THE BASE.

MINIMUM BENDING RADIUS OF CONDUIT IS EQUAL TO 6 X THE DIAMETER.

CONDUIT HEIGHT ABOVE CONCRETE BASES SHALL BE 1 INCH. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF CONCRETE BASES BEFORE INSTALLATION OF CABLE OR WIRE.

ENDS OF CONDUIT INSTALLED BELOW GRADE FOR FUTURE USE SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC.

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

IF A BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE DIRT OR FILL, THE FORM SHALL BE REMOVED BEFORE BACKFILLING AROUND THE BASE. BACKFILL SHALL BE TAMPED TIGHT AGAINST THE BARE CONCRETE BASE IN LAYERS OF 1 FOOT OR LESS.

A NO. 4 AWG STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD) FOR TYPE 5 BASES.

THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE FURNISHED AND INSTALLED TO ENTER THE BASE OF THE TYPE 5 BASE THROUGH A 1 INCH CONDUIT INSTALLED FOR GROUNDING PURPOSES, LEAVING A 4 FOOT COIL OF WIRE ABOVE THE CONCRETE BASE. THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE NEATLY COILED AND THE COILS TIED TOGETHER.

ANCHOR RODS SHALL BE THREADED 12" IN LENGTH ON EACH END OF THE ROD. ANCHOR RODS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 654.2.1 OF THE STANDARD SPECIFICATIONS.

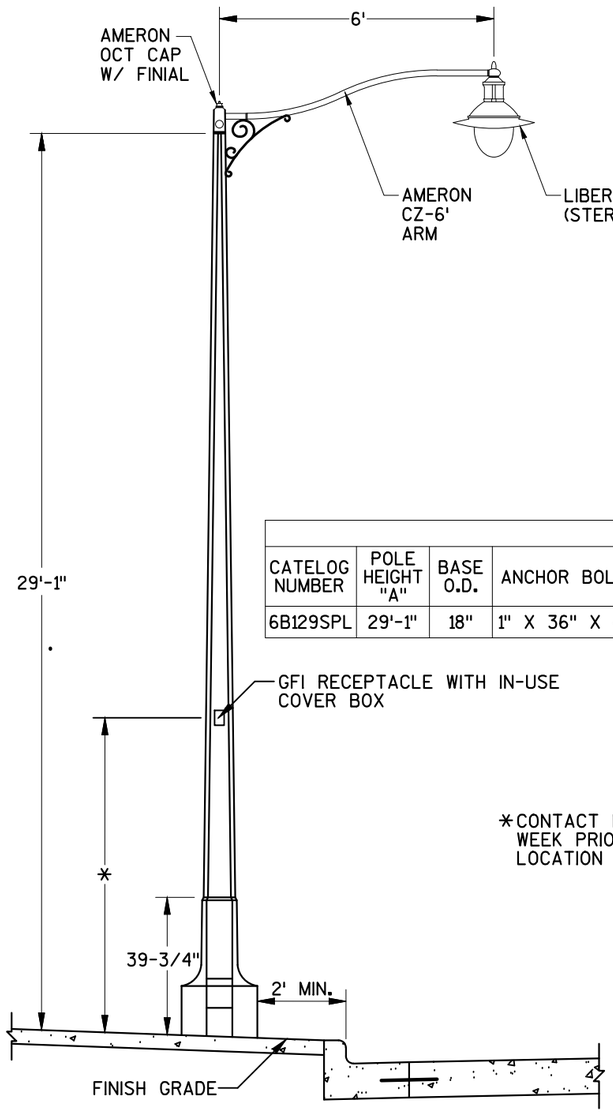
WASHERS AND LOCK WASHERS ARE REQUIRED ON ALL ANCHOR RODS.

WHEN ANCHOR RODS USING THE ALTERNATE "L" BEND ARE FURNISHED, THE 4" "L" BEND SHALL BE IN ADDITION TO THE SPECIFIED ANCHOR ROD BAR LENGTH. THE "L" BEND END SHALL NOT BE THREADED.

ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

WELDING OF THE ANCHOR RODS TO THE CAGE IS UNACCEPTABLE. TIE WIRES SHALL BE USED.

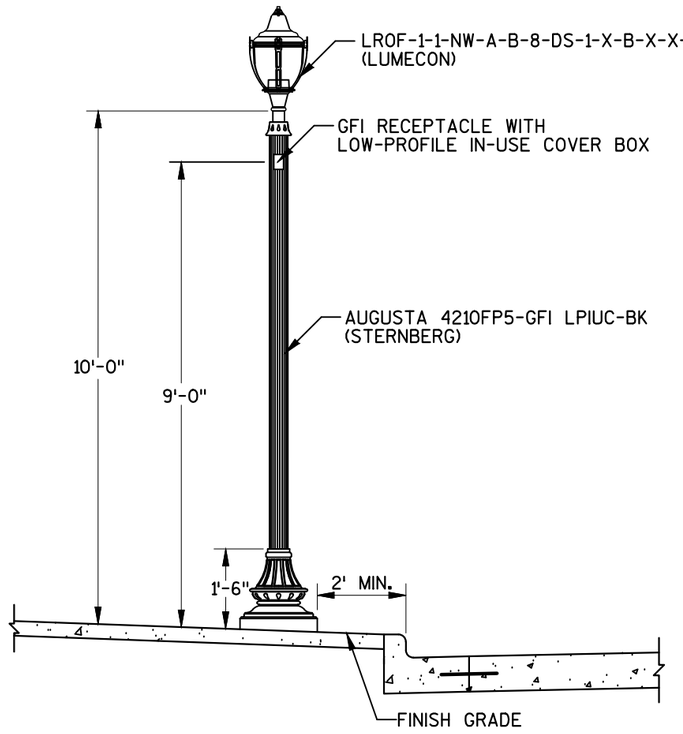
BAR STEEL REINFORCEMENT SHALL BE COATED WITH POWDERED EPOXY RESIN IN ACCORDANCE WITH SECTION 505 OF THE STANDARD SPECIFICATIONS (LATEST EDITION)



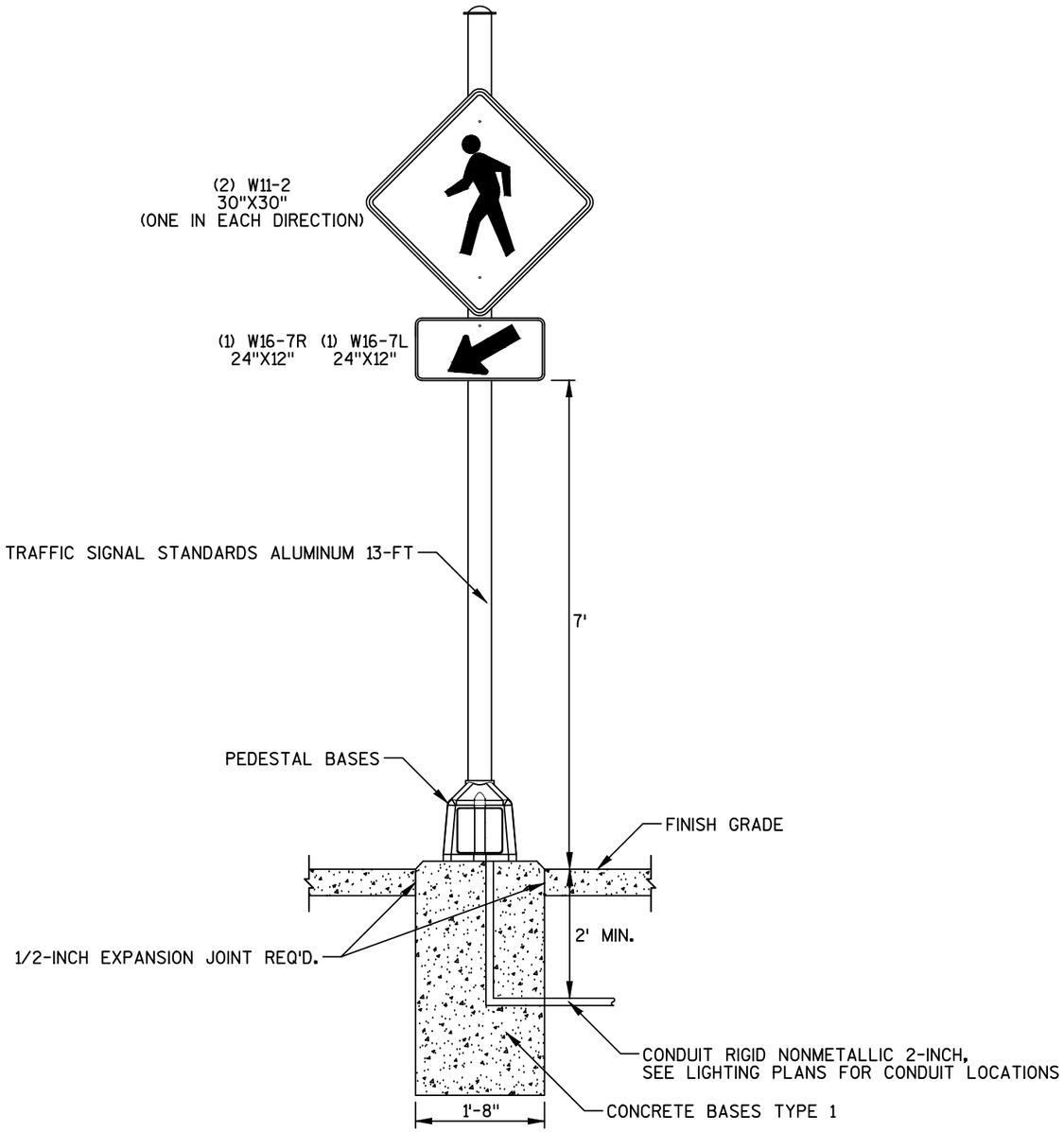
BASE PLATE STYLE										
CATELOG NUMBER	POLE HEIGHT "A"	BASE O.D.	ANCHOR BOLT	BOLT CIRCLE	BASE PLATE (SQ)	ULTIMATE G.L. MOMENT (FT. LBS.)	WEIGHT (LBS.)	MAXIMUM EPA/MPH (SQ. FT.)		
								80	90	100
6B129SPL	29'-1"	18"	1" X 36" X 4"	21"	20"	25,400	1,580	7.5	4.5	2.5

*CONTACT MATT GOSLINE, CITY OF JANESVILLE, ONE WEEK PRIOR TO INSTALLING OUTLETS FOR FINAL OUTLET LOCATION OF GFCI RECEPTACLES.

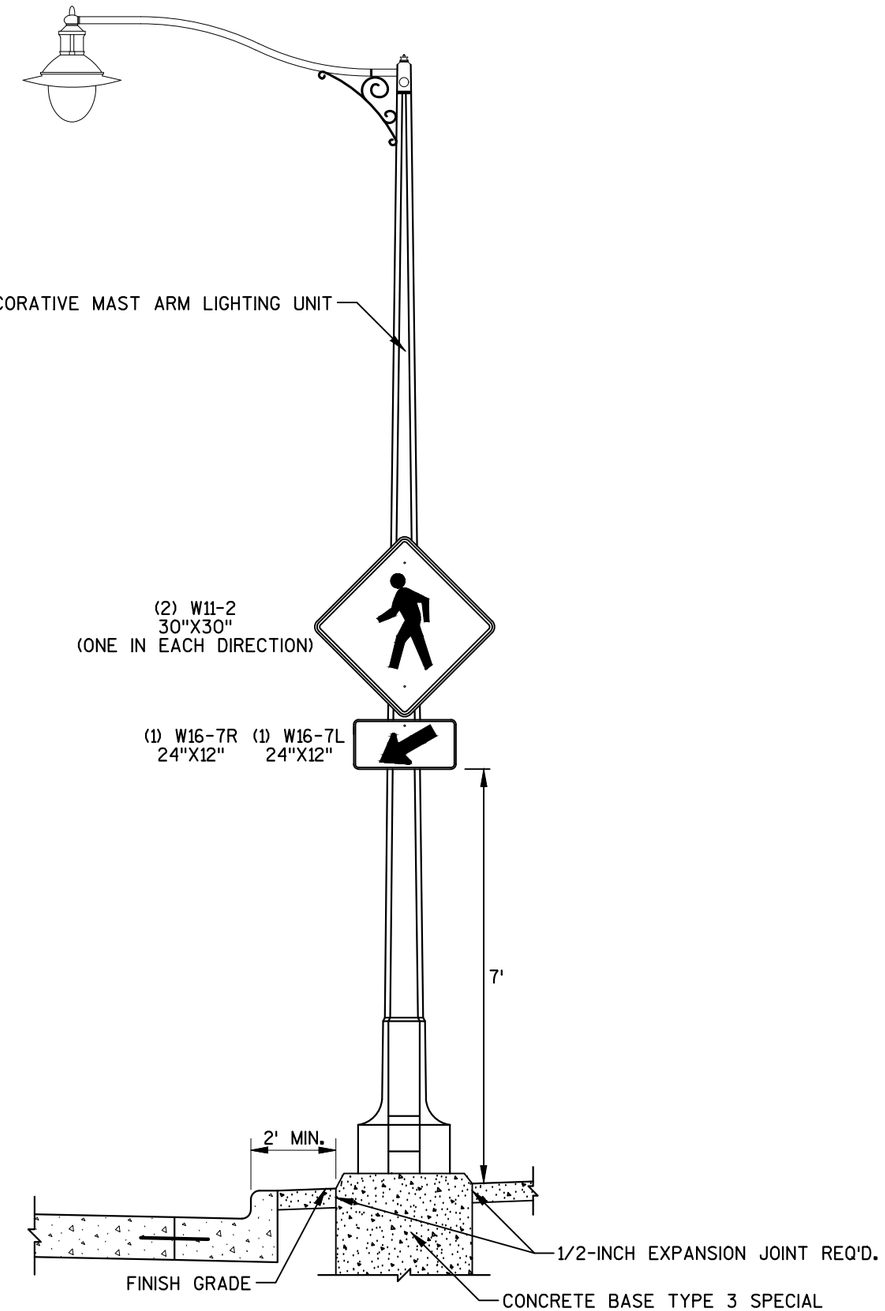
DECORATIVE MAST ARM LIGHTING UNIT DETAIL
SCALE: NONE



DECORATIVE POLE TOP LIGHTING UNIT DETAIL
SCALE: NONE

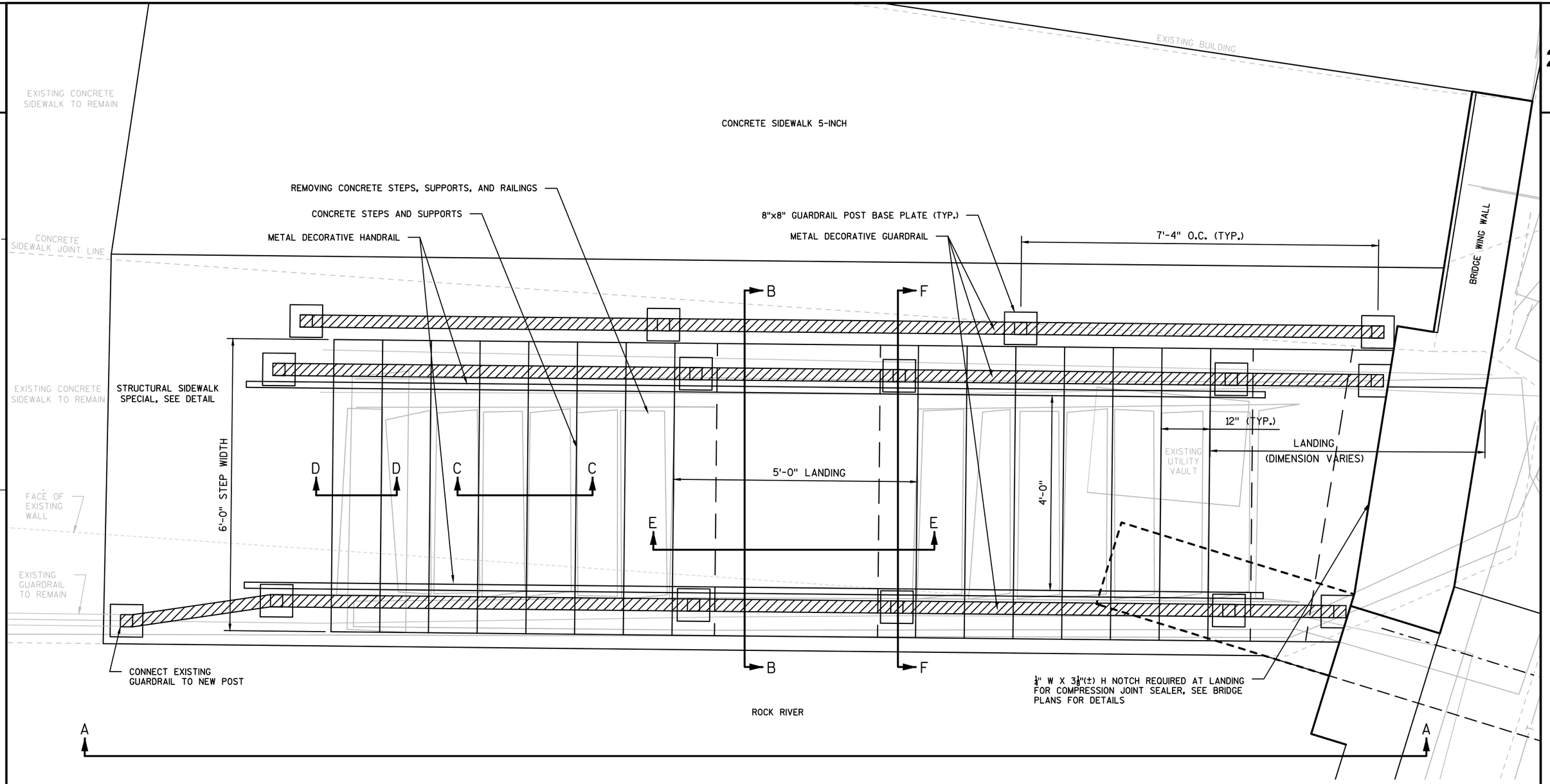


STA. 13+15.00, 22.50' LT.



STA. 13+29.00, 21.50' RT. (LP8)

MULTI-USE PATH CROSSING SIGNAGE DETAIL
SCALE: NONE



PLAN VIEW

CONCRETE STEPS AND SUPPORTS DETAIL

NOTES:

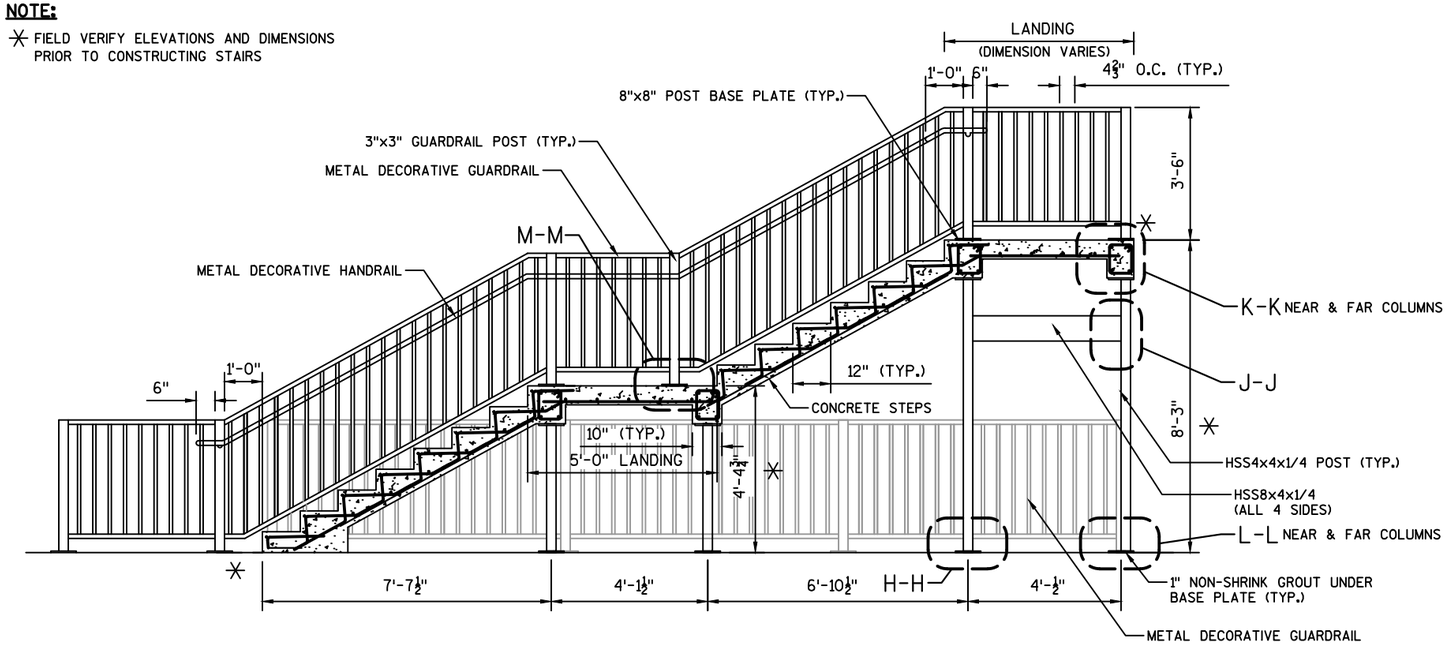
1. CONCRETE:
   a. NORMAL WEIGHT
   b. f'c = 4000 PSI
   c. AIR CONTENT = 6%
   d. FINISH: BROOM: PARALLEL TO RUN
2. REINFORCEMENT
   a. fy = 60,000 PSI
   b. EPOXY COAT
3. STRUCTURAL STEEL
   a. TUBES: ASTM A500, GRADE B, fy = 46 KSI
   b. PLATES, ANGLES: ASTM A36, fy = 36 KSI
   c. ALL STEEL SHALL BE HOT DIPPED GALVANIZED AND THEN PAINTED AS PER SPECIFICATION.
4. WELDS
   a. ALL WELDS SHALL USE E70 ELECTRODES
   b. ALL WELDS SHALL BE SHOP DONE IN THE SHOP.

PROJECT NO: 5990-00-34	HWY: MILWAUKEE STREET	COUNTY: ROCK	CONSTRUCTION DETAILS	SHEET	E

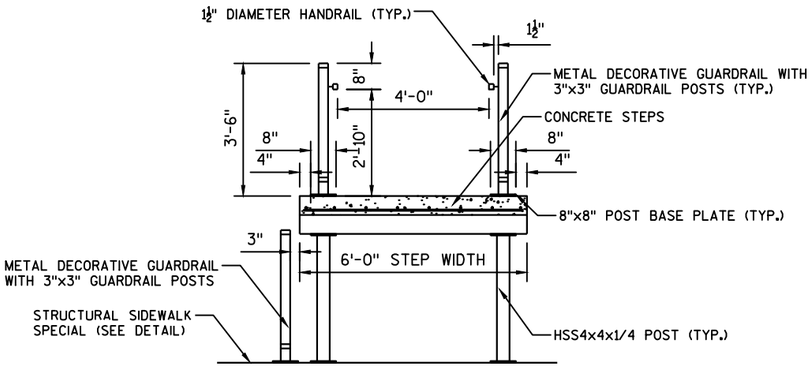
FILE NAME : P:\870S\879\00879002\C3D\SHEETSPLAN\STAIR PLAN.DWG
LAYOUT NAME - Stair Detail
PLOT DATE : 5/1/2018 3:25 PM PLOT BY : JASON DOLENS PLOT NAME : PLOT SCALE : **********
WISDOT/CADDS SHEET 42

NOTE:

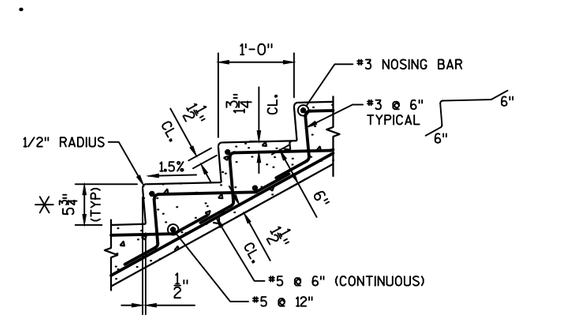
✳ FIELD VERIFY ELEVATIONS AND DIMENSIONS PRIOR TO CONSTRUCTING STAIRS



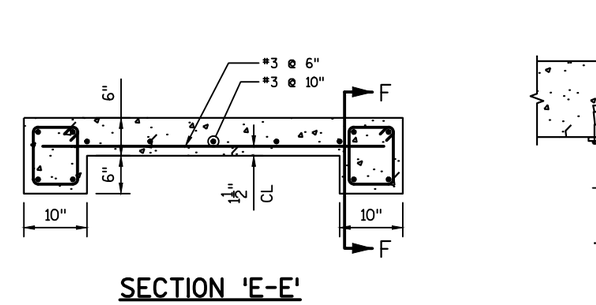
SECTION 'A-A'



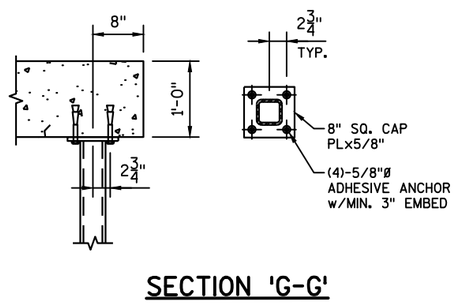
SECTION 'B-B'



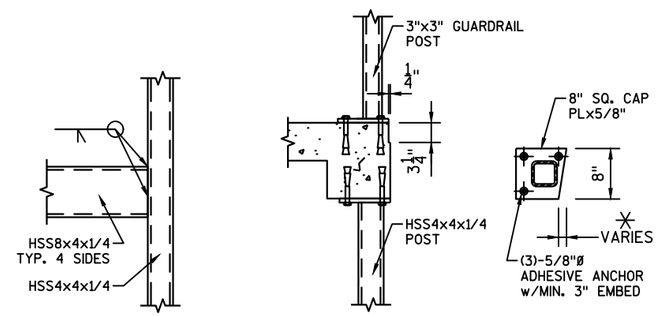
SECTION 'C-C'



SECTION 'E-E'

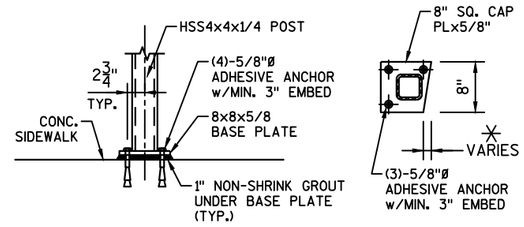


SECTION 'G-G'



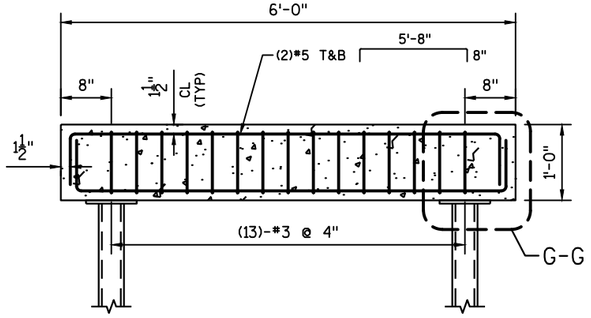
SECTION 'J-J'

SECTION 'K-K'

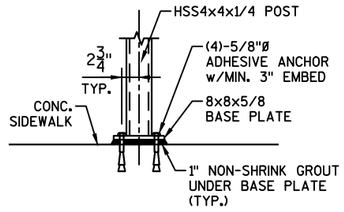


SECTION 'L-L'

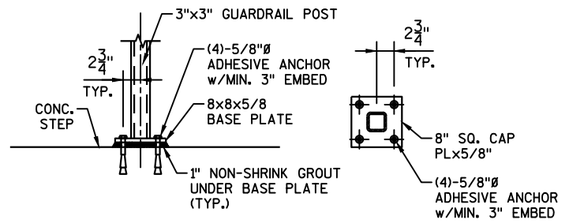
SECTION 'D-D'



SECTION 'F-F'



SECTION 'H-H'



SECTION 'M-M'

PROJECT NO: 5990-00-34	HWY: MILWAUKEE STREET	COUNTY: ROCK	CONSTRUCTION DETAILS	SHEET 22	E

NOTES:

1. EXPANSION JOINT FILLER BASE ON SECTION 602.3.2.5(4) OF STANDARD SPECIFICATIONS.
2. DO NOT SEAL JOINTS PER SECTION 602.3.2.5(14) OF STANDARD SPECIFICATIONS.

EXISTING BUILDING

STA. 15+66.10, 52.81' LT.
ELEV.=767.64

STA. 15+66.88, 47.70' LT.
ELEV.=767.65

SAWING CONCRETE REQ'D., 1" EXPANSION JOINT FILLER AT BUILDING FACE

STA. 15+68.06, 40.64' LT.
ELEV.=767.66

STA. 15+68.53, 37.75' LT.
ELEV.=767.66

EXISTING DOOR

EXISTING BUILDING

ELEV.=767.69

EXISTING CONCRETE SIDEWALK TO REMAIN

SAWING CONCRETE REQ'D., 1/2-INCH EXPANSION JOINT FILLER

1.1%

1.2%

CONCRETE SIDEWALK 5-INCH

1.25%

1.3%

0.5%

1.5%

1/2" EXPANSION JOINT FILLER

BRIDGE WING WALL

1/2" EXPANSION JOINT FILLER

STA. 15+59.16, 52.81' LT.
ELEV.=767.56

STA. 15+60.67, 47.70' LT.
ELEV.=767.58

STA. 15+62.77, 40.64' LT.
ELEV.=767.59

STA. 15+63.63, 37.75' LT.
ELEV.=767.60

S

ELEV.=767.64

CONCRETE SIDEWALK JOINT LINE

STRUCTURAL SIDEWALK SPECIAL, SEE DETAIL

ELEV.=767.62

ELEV.=767.62

8'-0" STRUCTURAL SIDEWALK

SAWING CONCRETE REQ'D. AT FIRST SIDEWALK JOINT BEYOND END OF EXISTING CONCRETE STAIRS, 1/2-INCH EXPANSION JOINT FILLER

1.1%

1.2%

1.25%

1.3%

EXISTING UTILITY VAULT

FACE OF EXISTING WALL

STA. 15+50.81, 52.81' LT.
ELEV.=767.47

STA. 15+52.33, 47.70' LT.
ELEV.=767.48

STA. 15+54.43, 40.64' LT.
ELEV.=767.49

STA. 15+55.28, 37.75' LT.
ELEV.=767.49

S

ELEV.=767.50

STRUCTURAL SIDEWALK SPECIAL, MATCH EXISTING EDGE OF SIDEWALK SEE SECTION S-S DETAIL

ROCK RIVER

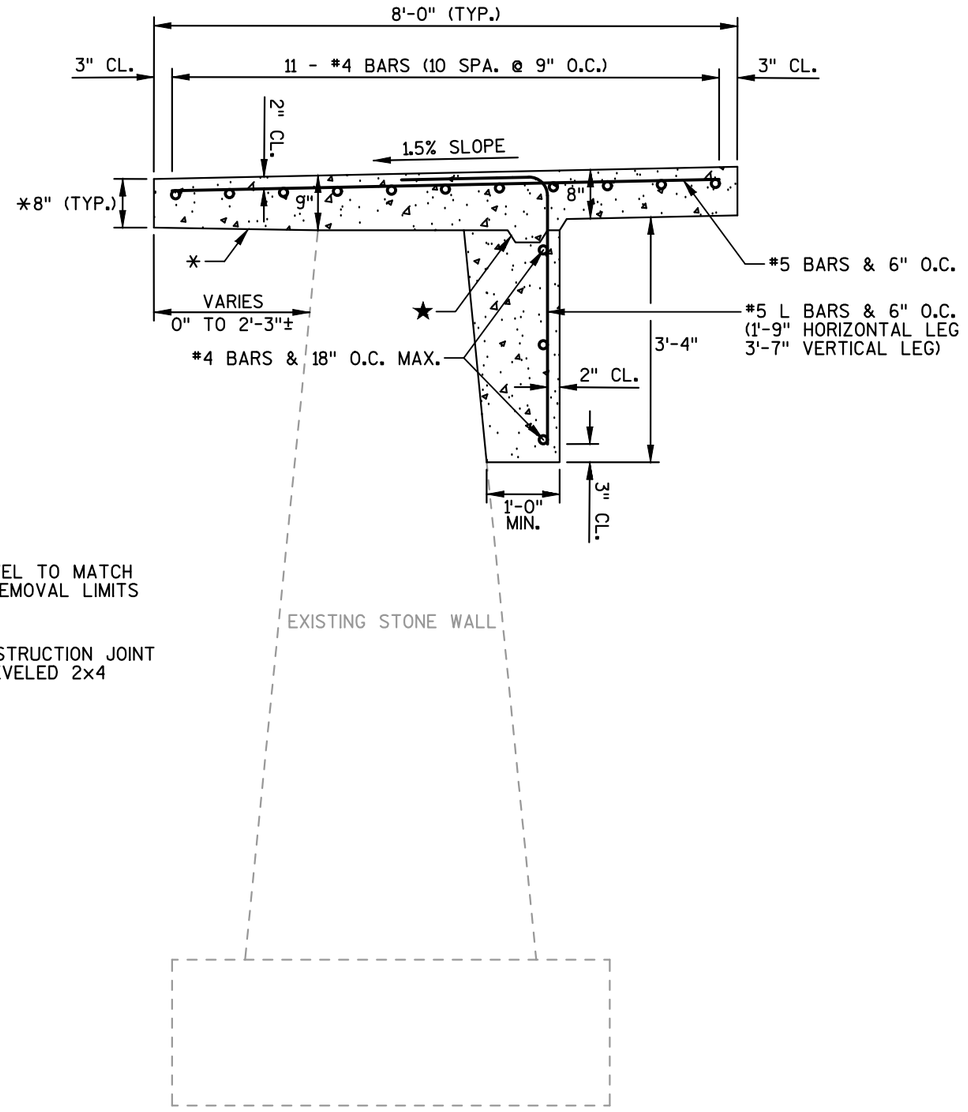
N

CONCRETE SIDEWALK UNDER STAIRS DETAIL

PROJECT NO: 5990-00-34	HWY: MILWAUKEE STREET	COUNTY: ROCK	CONSTRUCTION DETAILS	SHEET E

FILE NAME : P:\870S\879\00879002\C3D\SHEETSPLAN\SIDEWALK UNDER STAIRS DETAIL.DWG
LAYOUT NAME - Stair Detail
PLOT DATE : 4/19/2018 11:11 AM PLOT BY : JASON DOLENS PLOT NAME : PLOT SCALE : **********
WISDOT/CADDS SHEET 42

2



* TAPER OR BEVEL TO MATCH EXISTING AT REMOVAL LIMITS

★ OPTIONAL CONSTRUCTION JOINT FORMED BY BEVELED 2x4

SECTION S-S

STRUCTURAL SIDEWALK SPECIAL DETAIL
SCALE: NONE
(STA. 15+50 - STA. 15+66, LT.)

2

2

136100325
BRENNAN STEIL SC
1 E. MILWAUKEE ST

ROCK RIVER

STAIRS

AT&T (TELEPHONE)

ALLIANT ENERGY
(ELECTRIC)

PI: 13+32.58

MILWAUKEE STREET

14+00

15+00

PC: 15+67.04

16+00

PT: 16+26.57

42"x60"

12"

AT&T (TELEPHONE)

10' (TYP.)

EXISTING CONCRETE BARRIER TO BE REMOVED, SALVAGED AND REINSTALLED AT WATER STREET AS SHOWN ON THIS PLAN (NOTE: THE TWO END BARRIERS HAVE BRIDGE HASH MARK SIGNS ATTACHED TO THEM AND ARE TO BE INSTALLED AT THE SPECIFIC LOCATIONS SHOWN ON THIS PLAN) THE REMAINING CONCRETE BARRIERS NOT REINSTALLED WILL BE PAID FOR UNDER BID ITEM "REMOVE AND SALVAGE CONCRETE BARRIER".

ROCK RIVER

INSTALL THREE CONCRETE BARRIERS ALONG THE EDGE OF THE CANTILEVER WALK (PAID FOR UNDER BID ITEM "REMOVE, SALVAGE AND REINSTALL CONCRETE BARRIER")

INSTALL TWO CONCRETE BARRIERS WITH BRIDGE HASH MARK SIGNS ATTACHED TO THEM FACING EACH DIRECTION OF TRAVEL (PAID FOR UNDER BID ITEM "REMOVE, SALVAGE AND REINSTALL CONCRETE BARRIER")

WATER STREET

36"

RIVERWALK

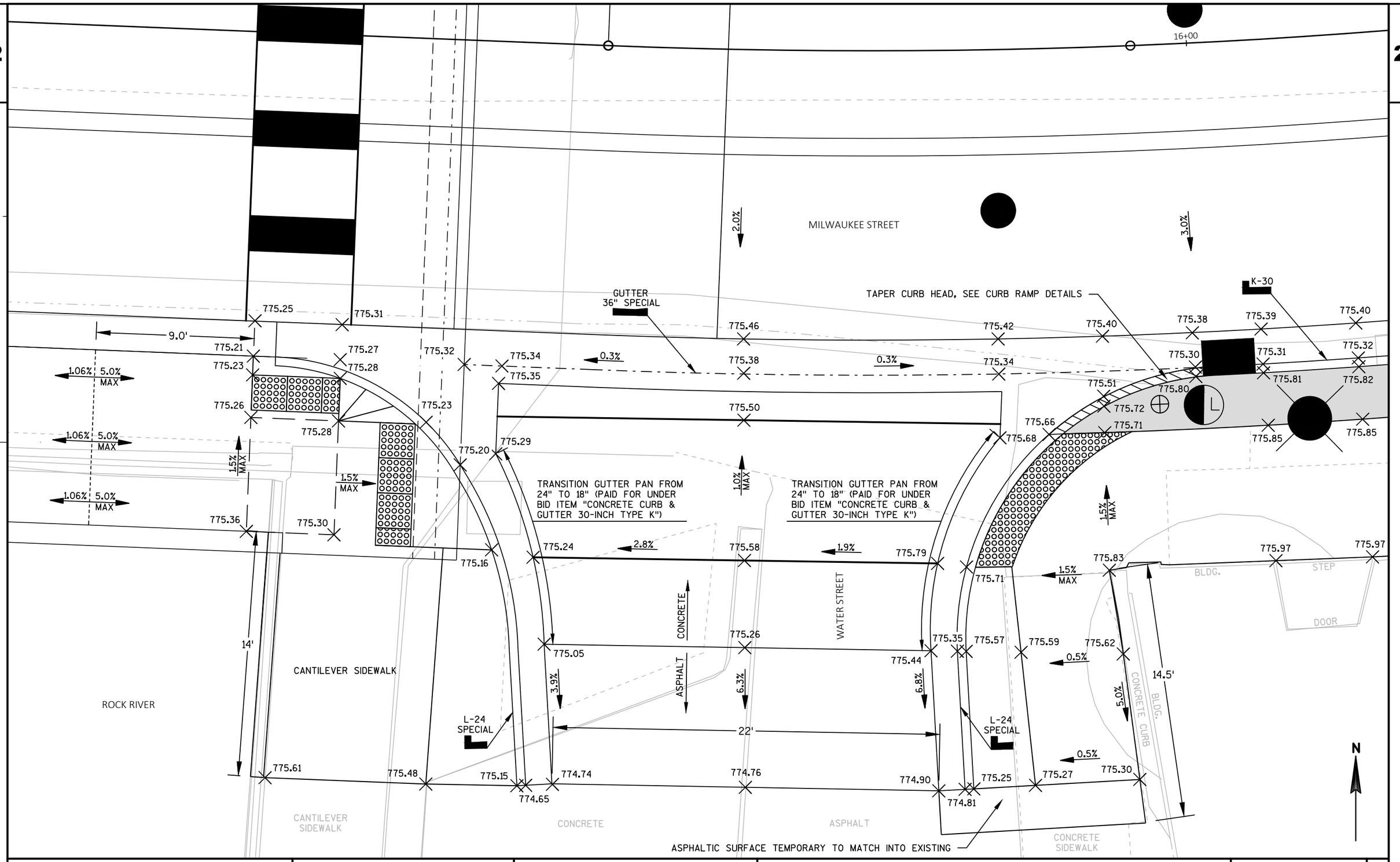
136
JAM
TRU
20 E

CONCRETE BARRIER DETAIL

PROJECT NO: 5990-00-34	HWY: MILWAUKEE STREET	COUNTY: ROCK	CONSTRUCTION DETAILS	SHEET 25	E

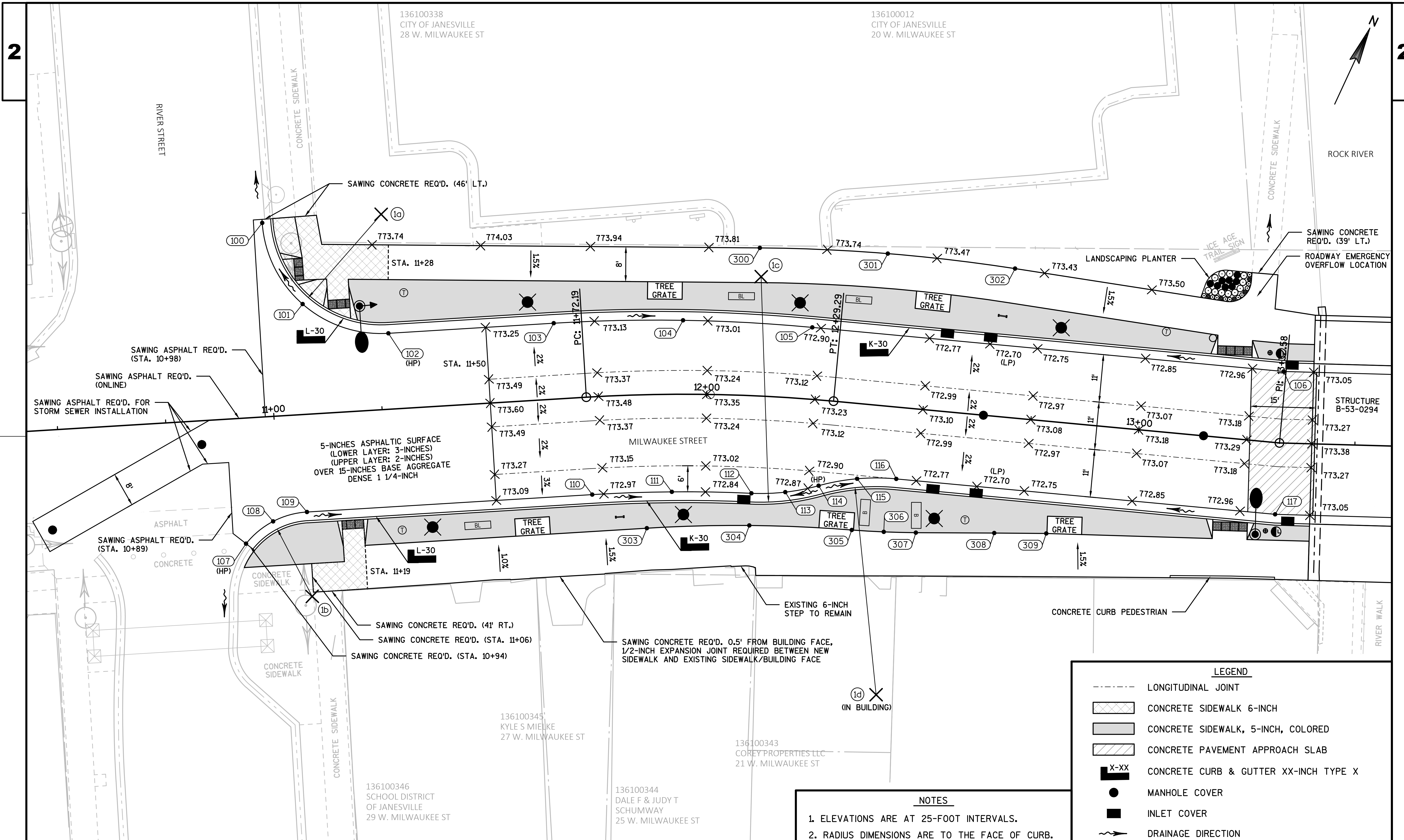
FILE NAME : P:\870S\879\00879002\C3D\SHEETSPLAN\CONCRETE BARRIER DETAIL.DWG
LAYOUT NAME - 022001-ec

PLOT DATE : 4/19/2018 11:13 AM PLOT BY : JASON DOLENS PLOT NAME : PLOT SCALE : 1 IN:20 FT_2



PROJECT NO: 5990-00-34	HWY: MILWAUKEE STREET	COUNTY: ROCK	INTERSECTION DETAILS: MILWAUKEE STREET & WATER STREET	SHEET	E

FILE NAME : P:\870S\879\00879002\C3D\SHEETSPLAN\021102-ID.DWG
LAYOUT NAME - 022001-ec
PLOT DATE : 4/20/2018 8:46 AM PLOT BY : JASON DOLENS PLOT NAME : PLOT SCALE : **********


2
136100338
CITY OF JANESVILLE
28 W. MILWAUKEE ST
136100012
CITY OF JANESVILLE
20 W. MILWAUKEE ST
RIVER STREET
CONCRETE SIDEWALK
ROCK RIVER
SAWING CONCRETE REQ'D. (46' LT.)
SAWING CONCRETE REQ'D. (39' LT.)
ROADWAY EMERGENCY OVERFLOW LOCATION
LANDSCAPING PLANTER
ICE AGE TRAIL SIGN
STA. 11+28
STA. 11+50
STA. 11+19
PC: 11+72.19
PT: 12+29.29
PI: 13+42.58
TREE GRATE
L-30
K-30
SAWING ASPHALT REQ'D. (STA. 10+98)
SAWING ASPHALT REQ'D. (ONLINE)
SAWING ASPHALT REQ'D. FOR STORM SEWER INSTALLATION
SAWING ASPHALT REQ'D. (STA. 10+89)
5-INCHES ASPHALTIC SURFACE
(LOWER LAYER: 3-INCHES)
(UPPER LAYER: 2-INCHES)
OVER 15-INCHES BASE AGGREGATE
DENSE 1 1/4-INCH
MILWAUKEE STREET
11+00
12+00
13+00
STRUCTURE B-53-0294
ASPHALT
CONCRETE
CONCRETE SIDEWALK
SAWING CONCRETE REQ'D. (41' RT.)
SAWING CONCRETE REQ'D. (STA. 11+06)
SAWING CONCRETE REQ'D. (STA. 10+94)
SAWING CONCRETE REQ'D. 0.5' FROM BUILDING FACE, 1/2-INCH EXPANSION JOINT REQUIRED BETWEEN NEW SIDEWALK AND EXISTING SIDEWALK/BUILDING FACE
EXISTING 6-INCH STEP TO REMAIN
CONCRETE CURB PEDESTRIAN
(IN BUILDING)
RIVER WALK
136100346
SCHOOL DISTRICT
OF JANESVILLE
29 W. MILWAUKEE ST
136100345
KYLE S MIELKE
27 W. MILWAUKEE ST
136100344
DALE F & JUDY T
SCHUMWAY
25 W. MILWAUKEE ST
136100343
COREY PROPERTIES LLC
21 W. MILWAUKEE ST

NOTES

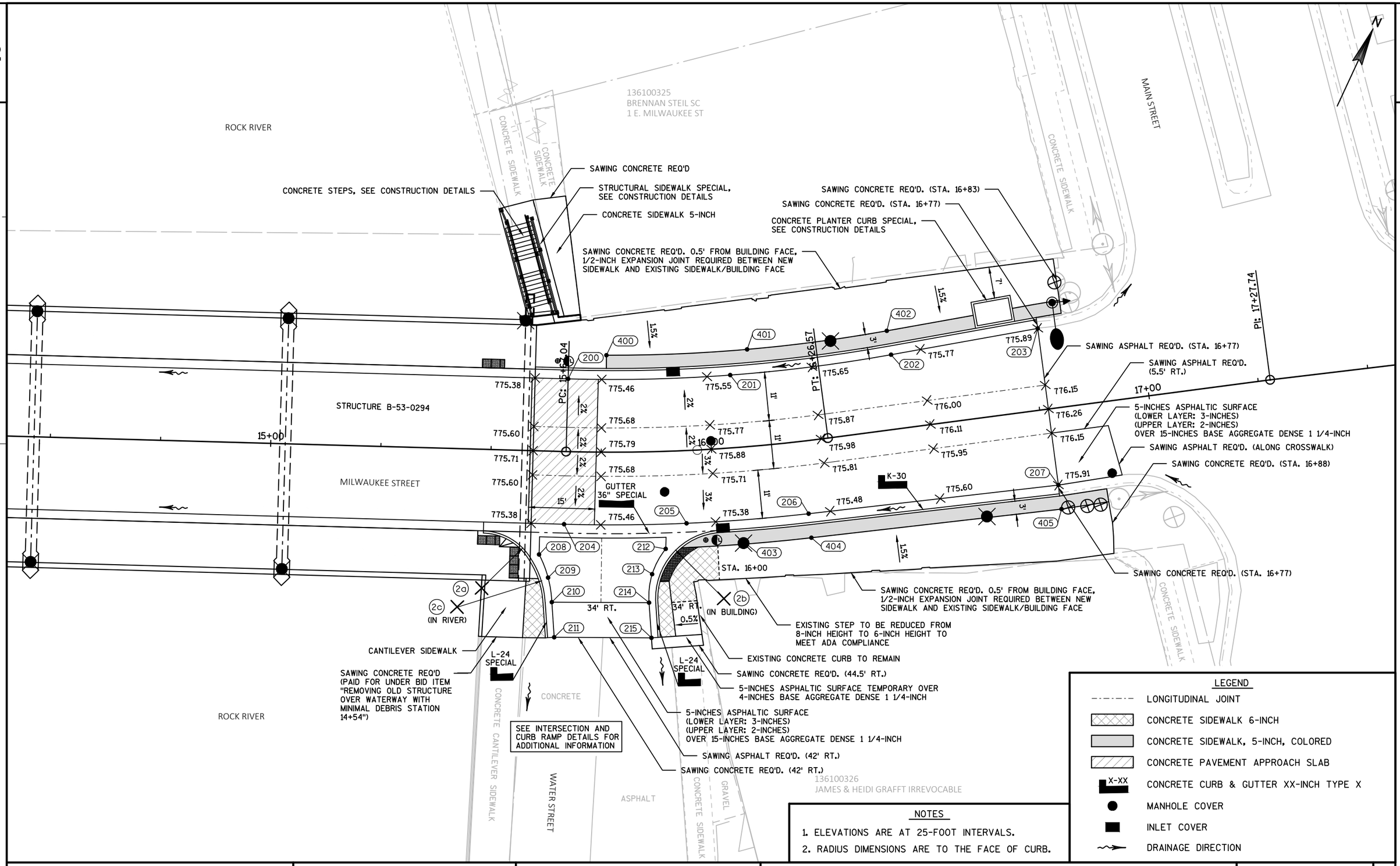
1. ELEVATIONS ARE AT 25-FOOT INTERVALS.
2. RADIUS DIMENSIONS ARE TO THE FACE OF CURB.

LEGEND

- LONGITUDINAL JOINT
- CONCRETE SIDEWALK 6-INCH
- CONCRETE SIDEWALK, 5-INCH, COLORED
- CONCRETE PAVEMENT APPROACH SLAB
- X-XX CONCRETE CURB & GUTTER XX-INCH TYPE X
- MANHOLE COVER
- INLET COVER
- DRAINAGE DIRECTION

PROJECT NO:5990-00-34	HWY:MILWAUKEE STREET	COUNTY:ROCK	PAVING DETAILS	SHEET 27	E

2



LEGEND

- LONGITUDINAL JOINT
- CONCRETE SIDEWALK 6-INCH
- CONCRETE SIDEWALK, 5-INCH, COLORED
- CONCRETE PAVEMENT APPROACH SLAB
- X-XX CONCRETE CURB & GUTTER XX-INCH TYPE X
- MANHOLE COVER
- INLET COVER
- DRAINAGE DIRECTION

NOTES

1. ELEVATIONS ARE AT 25-FOOT INTERVALS.
2. RADIUS DIMENSIONS ARE TO THE FACE OF CURB.

PROJECT NO: 5990-00-34	HWY: MILWAUKEE STREET	COUNTY: ROCK	PAVING DETAILS	SHEET 28	E

2

CURB AND GUTTER STAKING INFORMATION					
POINT NO.	DESCRIPTION	STATION	OFFSET	RADIUS	FLAG ELEV.
100	PC/MATCH EXISTING	11+00.03	44.68' LT	27.5'	772.82
101	MID PT.	11+08.19	25.44' LT	27.5'	773.14
102	PT	11+27.52	17.50' LT	27.5'	773.36
103	PC	11+65.72	17.50' LT	387.0'	773.18
104	MID PT.	11+94.54	17.05' LT	387.0'	773.04
105	PT	12+23.10	16.55' LT	387.0'	772.91
106	PI	13+33.12	16.50' LT	-	772.99
107	PC/MATCH EXISTING	10+91.80	28.93' RT	19.5'	773.44
108	MID PT.	10+98.35	24.18' RT	19.5'	773.38
109	PT	11+06.27	22.50' RT	19.5'	773.31
110	PC	11+72.19	22.50' RT	347.5'	772.98
111	MID PT.	11+91.75	22.50' RT	347.5'	772.89
112	PT/PC	12+11.31	22.50' RT	347.5'/50.0'	772.79
113	MID PT.	12+19.59	21.80' RT	50.0'	772.84
114	PT/PC	12+27.58	19.73' RT	50.0'/50.0'	772.88
115	MID PT.	12+36.37	17.32' RT	50.0'	772.84
116	PT	12+45.36	16.50' RT	50.0'	772.80
117	PI	13+33.12	16.50' RT	-	772.99

CURB AND GUTTER RADIUS STAKING INFORMATION			
POINT NO.	STATION	OFFSET	RADIUS
1a	11+27.52	45.00' LT	25.5'
1b	11+06.27	42.00' RT	17.5'
1c	12+11.31	27.50' LT	52.0'
1d	12+45.36	66.50' RT	48.0'

SIDEWALK STAKING INFORMATION					
POINT NO.	DESCRIPTION	STATION	OFFSET	RADIUS	FLAG ELEV.
300	PC	12+10.77	34.13' LT	405.0'	773.79
301	MID PT.	12+38.58	35.06' LT	405.0'	773.69
302	PT	12+68.12	34.35' LT	405.0'	773.41
303	PC	11+85.39	30.78' RT	338.5'	773.71
304	MID PT.	12+11.14	29.94' RT	338.5'	773.45
305	PT/PC	12+36.24	29.18' RT	338.5'/200.0'	773.37
306	MID PT.	12+43.63	28.94' RT	200.0'	773.46
307	PT	12+51.02	28.42' RT	200.0'	773.54
308	PI	12+69.02	26.83' RT	-	773.61
309	PI	12+80.98	25.81' RT	-	773.69

2

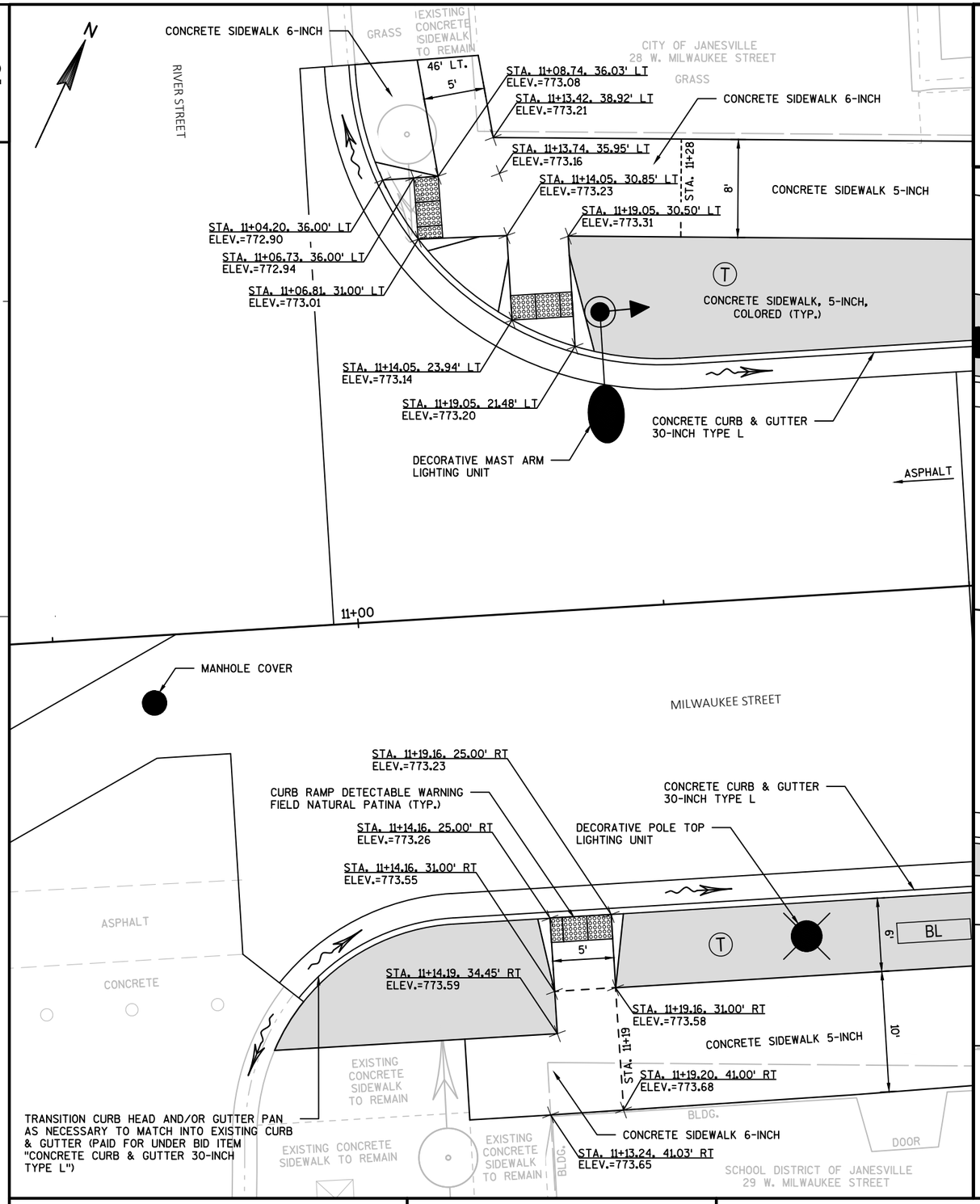
CURB AND GUTTER STAKING INFORMATION					
POINT NO.	DESCRIPTION	STATION	OFFSET	RADIUS	FLAG ELEV.
200	PC	15+67.04	16.50' LT	358.5'	775.44
201	MID PT.	16+05.52	16.50' LT	358.5'	775.56
202	PT	16+43.23	16.89' LT	358.5'	775.74
203	MATCH EXISTING	16+77.00	18.46' LT	-	775.89
204	PC	15+67.04	16.50' RT	391.5'	775.44
205	MID PT.	15+93.65	16.50' RT	391.5'	775.41
206	PT	16+20.27	16.50' RT	391.5'	775.46
207	MATCH EXISTING	16+77.00	17.40' RT	-	775.91
208	PC	15+61.55	23.52' RT	25.7'	775.29
209	MID PT.	15+63.74	28.71' RT	25.7'	775.24
210	PT	15+64.74	34.26' RT	25.7'	775.05
211	END C&G	15+65.50	42.19' RT	-	774.74
212	PC	15+88.96	22.13' RT	17.0'	775.68
213	MID PT.	15+85.93	27.78' RT	17.0'	775.77
214	PT	15+85.15	34.23' RT	17.0'	775.44
215	END C&G	15+85.49	42.22' RT	-	774.90

CURB AND GUTTER RADIUS STAKING INFORMATION			
POINT NO.	STATION	OFFSET	RADIUS
2a	15+48.77	31.50' RT	13.0'
2b	16+00.73	34.00' RT	15.5'
2c	15+43.30	35.92' RT	20.0'

SIDEWALK STAKING INFORMATION					
POINT NO.	DESCRIPTION	STATION	OFFSET	RADIUS	FLAG ELEV.
400	PC	15+76.09	22.00' LT	353.0'	775.78
401	MID PT.	16+10.05	22.00' LT	353.0'	776.10
402	PT	16+42.98	22.38' LT	353.0'	776.31
403	MID PT.	16+06.29	22.00' RT	397.0'	775.90
404	PT	16+20.27	22.00' RT	397.0'	775.98
405	PI	16+77.00	22.90' RT	-	776.34

NOTES

1. ALL CURB AND GUTTER ELEVATIONS ARE PROVIDED ON THE PAVING DETAIL SHEETS.
2. ALL LANDINGS SHALL BE 5'X5' MINIMUM IN AREA. CROSS SLOPE SHALL BE 1.5% IN ALL DIRECTIONS.
3. SLOPE PERCENTS SHOWN ARE FOR GENERAL GUIDANCE OF THE CONTRACTOR AND TO ALLOW FOR ADJUSTMENT IN THE FIELD WITHIN THE 8.33% MAXIMUM.



PROJECT NO: 5990-00-34	HWY: MILWAUKEE STREET	COUNTY: ROCK	CURB RAMP DETAILS	SHEET 30	E

FILE NAME : P:\870S\879\00879002\C3D\SHEETSPLAN\021301_CR.DWG
LAYOUT NAME - 022001-ec
PLOT DATE : 4/20/2018 7:14 AM PLOT BY : JASON DOLENS PLOT NAME : PLOT SCALE : 1 IN: 10 FT
WISDOT/CADDS SHEET 42

2

N

ROCK RIVER

CONCRETE STEPS

STRUCTURAL SIDEWALK SPECIAL

CONCRETE SIDEWALK 5-INCH

BRENNAN STEIL SC
1 E. MILWAUKEE STREET

BLDG.

BLDG.

BLDG.

STA. 15+47.45, 28.50' LT
ELEV.=773.36

STA. 15+52.51, 28.50' LT
ELEV.=775.42

STA. 15+47.52, 20.50' LT
ELEV.=775.24

5'

STA. 15+52.52, 20.50' LT
ELEV.=775.30

PULL BOXES STEEL 12x36-INCH (TYP.)

PULL BOXES STEEL 24x42-INCH (TYP.)

STA. 15+80

CONCRETE SIDEWALK 5-INCH

10'

3'

CONCRETE SIDEWALK, 5-INCH, COLORED (TYP.)

DECORATIVE POLE TOP LIGHTING UNIT (TYP.)

STA. 15+47.52, 18.50' LT
ELEV.=775.21

STA. 15+52.52, 18.50' LT
ELEV.=775.27

STRUCTURE B-53-0294

INLET COVER (TYP.)

CONCRETE CURB & GUTTER 30-INCH TYPE K

10' TRANSITION FROM 4-INCH TO 6-INCH CURB HEAD HEIGHT (PAID FOR UNDER BID ITEM "CONCRETE CURB & GUTTER 30-INCH TYPE K SPECIAL")

PC: 15+67.04

PT: 16+26.57

CONCRETE CURB & GUTTER 30-INCH TYPE K SPECIAL (4-INCH CURB HEAD HEIGHT)

15+00

16+00

MILWAUKEE STREET

MANHOLE COVER (TYP.)

TRANSITION CURB HEAD HEIGHT FROM CURB RAMP TO 6-INCH CURB HEAD HEIGHT (PAID FOR UNDER BID ITEM "CONCRETE CURB & GUTTER 30-INCH TYPE K SPECIAL")

CONCRETE GUTTER 36-INCH SPECIAL

CONCRETE CURB & GUTTER 30-INCH TYPE K

STA. 15+52.52, 19.57' RT
ELEV.=775.28

STA. 15+52.52, 22.00' RT
ELEV.=775.28

CURB RAMP DETECTABLE WARNING FIELD NATURAL PATINA (TYP.)

STA. 15+47.52, 18.50' RT
ELEV.=775.21

STA. 15+56.90, 22.00' RT
ELEV.=775.23

STA. 15+92.35, 22.00' RT
ELEV.=773.68

CONCRETE SIDEWALK, 5-INCH, COLORED (TYP.)

3'

STA. 15+47.52, 22.00' RT
ELEV.=775.26

5'

7'

CURB RAMP DETECTABLE WARNING FIELD RADIAL NATURAL PATINA

STA. 16+03.22, 29.73' RT
ELEV.=775.97

CONCRETE SIDEWALK 5-INCH

STA. 15+47.52, 28.50' RT
ELEV.=775.36

STA. 15+61.53, 29.00' RT
ELEV.=775.16

CONCRETE SIDEWALK 6-INCH

7.5'

STA. 16+00

EXISTING STEP TO BE REDUCED FROM 8-INCH HEIGHT TO 6-INCH HEIGHT TO MEET ADA COMPLIANCE

BLDG.

STEP

DOOR

DOOR

BLDG.

CONCRETE

ASPHALT

CONCRETE SIDEWALK 6-INCH

34' RT.

6'

STA. 15+52.52, 28.50' RT
ELEV.=775.30

CANTILEVER SIDEWALK

STA. 15+87.54, 29.50' RT
ELEV.=775.71

STA. 15+94.60, 29.85' RT
ELEV.=775.83

STA. 15+89.45, 29.50' RT
ELEV.=775.75

DETECTABLE WARNING FIELD RADIAL INFORMATION:
BACK OF CURB RADIUS = 15.0'
CURB RAMP LANDING LENGTH 'XR' = 9.31'
RADIAL WARNING FIELD AREA = 19.6 S.F.
RADIAL LONG CHORD DIMENSION = 9.10'

EXISTING CONCRETE CURB TO REMAIN

CONCRETE SIDEWALK 5-INCH

TRANSITION GUTTER PAN FROM 24" TO 18" (PAID FOR UNDER BID ITEM "CONCRETE CURB & GUTTER 30-INCH TYPE K")

EXISTING CANTILEVER SIDEWALK TO REMAIN

CONCRETE

WATER STREET

ASPHALT

CONCRETE CURB & GUTTER 24-INCH TYPE L SPECIAL

CONCRETE SIDEWALK 6-INCH

EXISTING CONCRETE SIDEWALK TO REMAIN

GRAVEL

BLDG.

TRANSITION GUTTER PAN FROM 24" TO 18" (PAID FOR UNDER BID ITEM "CONCRETE CURB & GUTTER 30-INCH TYPE K")

CONCRETE CURB & GUTTER 24-INCH TYPE L SPECIAL

5-INCHES ASPHALTIC SURFACE TEMPORARY OVER 4-INCHES BASE AGGREGATE DENSE 1 1/4-INCH

JAMES & HEIDI GRAFFT IRREVOCABLE TRUST
20 W. MILWAUKEE STREET

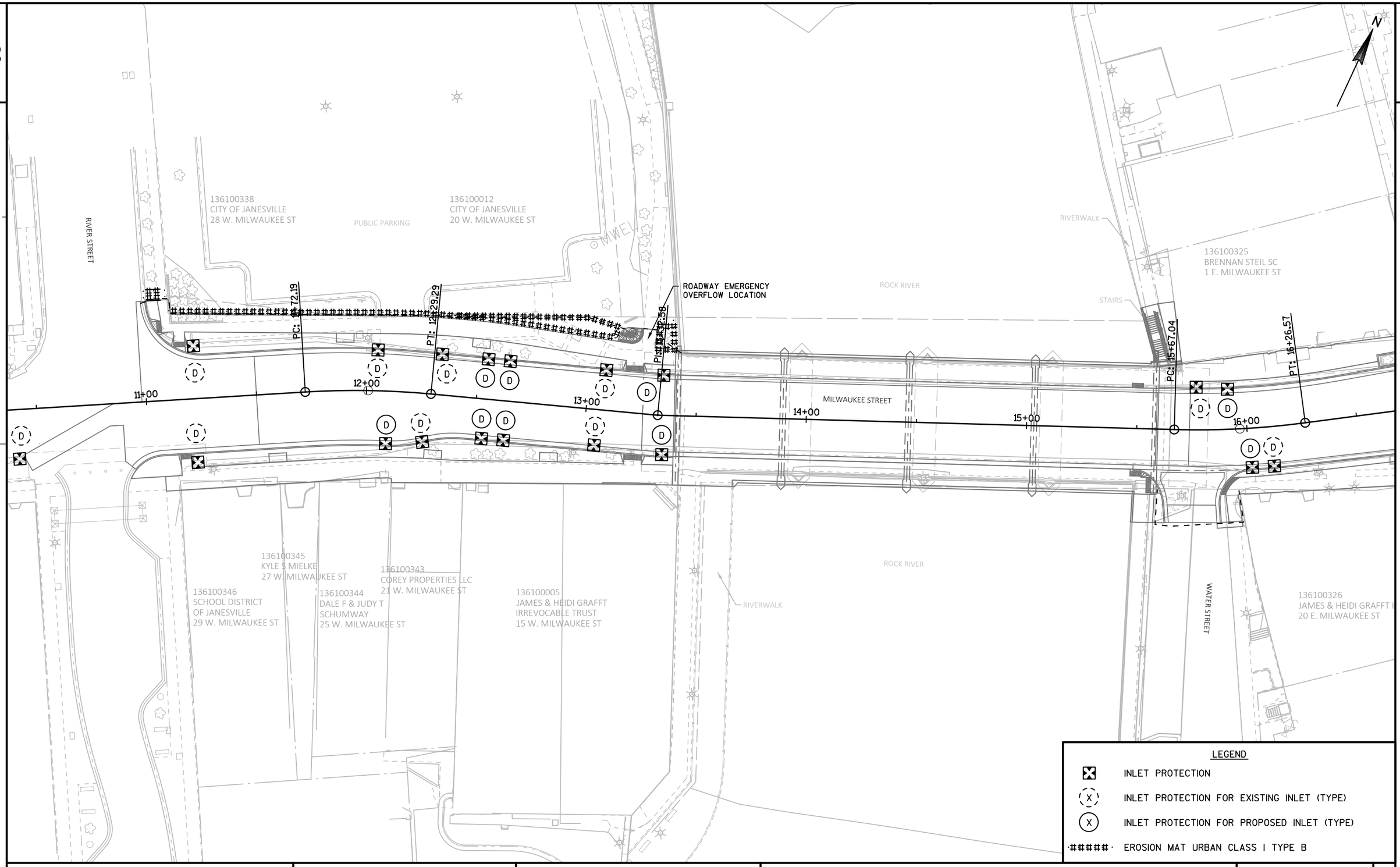
ROCK RIVER

NOTES

1. ALL CURB AND GUTTER ELEVATIONS ARE PROVIDED ON THE PAVING DETAIL SHEETS.
2. ALL LANDINGS SHALL BE 5'X5' MINIMUM IN AREA. CROSS SLOPE SHALL BE 1.5% IN ALL DIRECTIONS.
3. SLOPE PERCENTS SHOWN ARE FOR GENERAL GUIDANCE OF THE CONTRACTOR AND TO ALLOW FOR ADJUSTMENT IN THE FIELD WITHIN THE 8.33% MAXIMUM.

PROJECT NO: 5990-00-34	HWY: MILWAUKEE STREET	COUNTY: ROCK	CURB RAMP DETAILS	SHEET 31	E

2



PROJECT NO: 5990-00-34	HWY: MILWAUKEE STREET	COUNTY: ROCK	EROSION CONTROL	SHEET 32	E

FILE NAME : P:\870S\879\00879002\C3D\SHEETSPLAN\022001-EC.DWG
LAYOUT NAME - 022001-ec

PLOT DATE : 4/19/2018 10:49 AM PLOT BY : JASON DOLENS PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

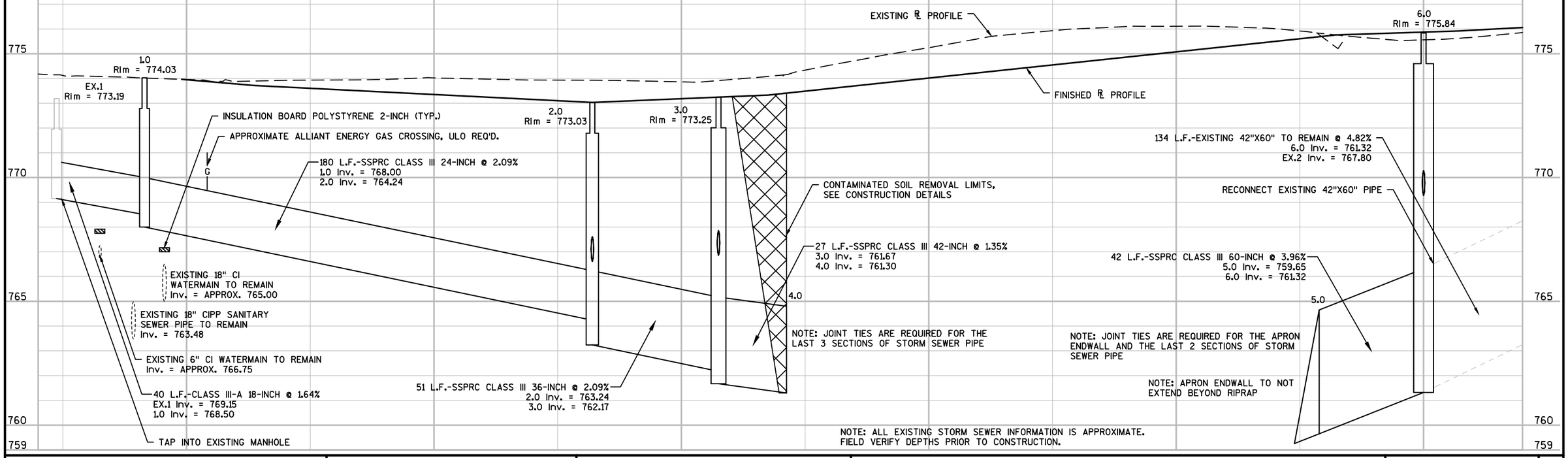
BENCHMARKS

NO.	STATION	LOCATION	DESCRIPTION	ELEV.
BM#1	12+86.2	23.4' LT.	TOP NUT OF FIRE HYDRANT	776.39
BM#2	14+53.6	27.7' LT.	CHISELED SQUARE	779.38

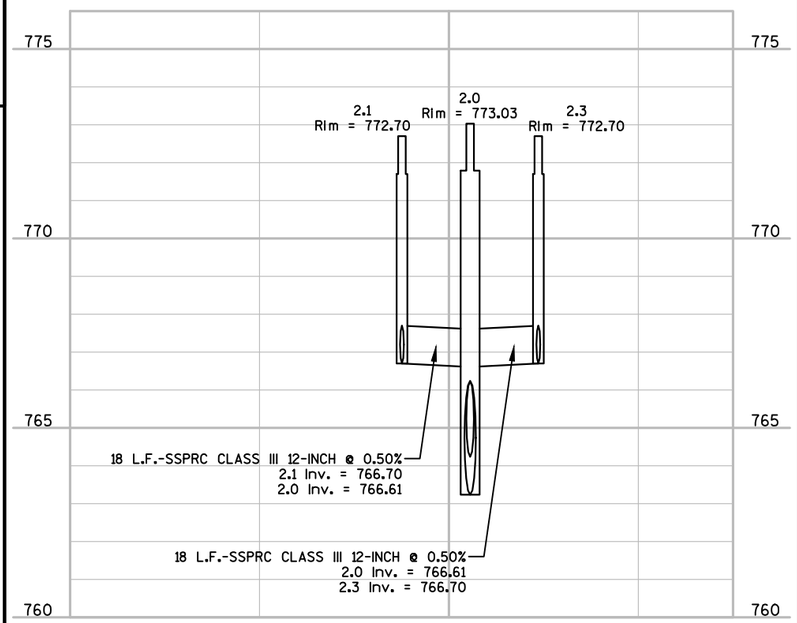
REMOVING STORM SEWER, 15-INCH (ABANDONED) AS NECESSARY TO INSTALL NEW STORM SEWER PIPE
INSULATION BOARD POLYSTYRENE 2-INCH (TYP.)
REMOVING INLETS
REMOVING STORM SEWER, 10-INCH
SEALING PIPES REQ'D. AT PROJECT LIMITS
REMOVING STORM SEWER, 12-INCH (ABANDONED)
REMOVING INLETS
REMOVING STORM SEWER, 12-INCH
REMOVING INLETS
REMOVING STORM SEWER, 12-INCH
PC: 11+72.19
PT: 12+29.29
PI: 13+32.58
CAUTION
REMOVING STORM SEWER, 12-INCH
ULO (GAS)
REMOVING INLETS (SADDLE)
REMOVING STORM SEWER, 24-INCH
REMOVING STORM SEWER, 12-INCH
REMOVING INLETS
REMOVING MANHOLES
REMOVING STORM SEWER, 12-INCH
REMOVING INLETS
REMOVING STORM SEWER, 36-INCH
CONTAMINATED SOIL REMOVAL LIMITS, SEE CONSTRUCTION DETAILS
ABANDONING SEWER (18-INCH)
TAP INTO EXISTING MANHOLE
BM#1
BM#2
MILWAUKEE STREET
ROCK RIVER
RIVERWALK
STAIRS
WATER STREET
ALLIANT ENERGY (ELECTRIC)
ALLIANT ENERGY (GAS)
AT&T (TELEPHONE)
CITY OF JANESVILLE (WATERMAIN)
CITY OF JANESVILLE (ELECTRIC)
CITY OF JANESVILLE (SANITARY SEWER)
CITY OF JANESVILLE (STORM SEWER)
RIVER STREET
11+00
12+00
13+00
14+00
15+00
16+00
N

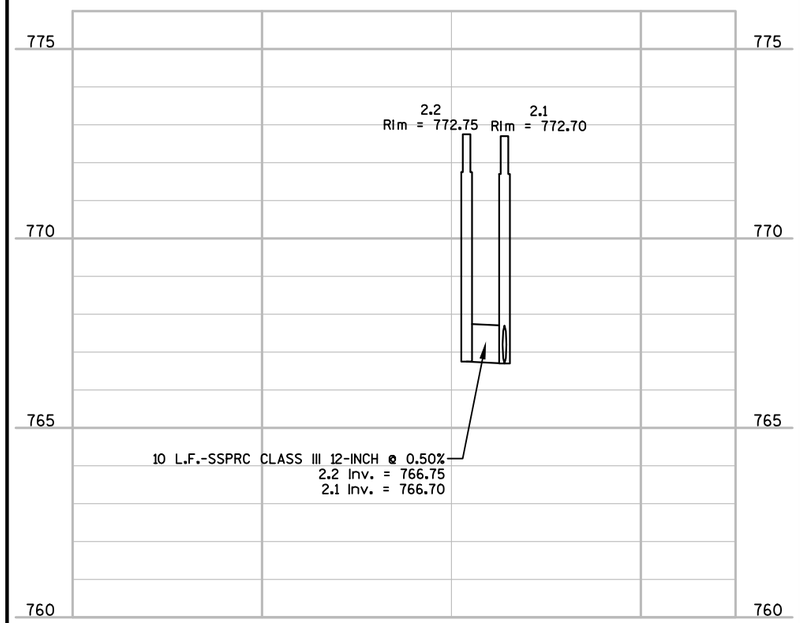
1.0 STA 10+83.00, 5.50' RT. — MANHOLES 4-SL
EX.1 STA 10+47.44, 23.07' RT. — EXISTING MANHOLE TO REMAIN
2.0 STA 12+64.00, 0.00' RT. — MANHOLES 5-SL
2.1 STA 12+64.00, 18.00' LT. — INLETS 2X3-H-SL LP
2.2 STA 12+54.00, 18.00' LT. — INLETS 2X3-H-SL LP
2.3 STA 12+64.00, 18.00' RT. — INLETS 2X3-H-SL LP
2.4 STA 12+54.00, 18.00' RT. — INLETS 2X3-H-SL LP
2.5 STA 12+09.50, 24.00' RT. — INLETS 2X3-H-SL LP
3.0 STA 13+15.00, 0.00' RT. — MANHOLES 6-SL
3.1 STA 13+35.00, 18.00' LT. — INLETS 2X3-H-SL
3.2 STA 13+35.00, 18.00' RT. — INLETS 2X3-H-SL
4.0 STA 13+42.50, 0.00' RT. — SSPRC 42-INCH OUTFALL
5.0 STA 15+57.80, 0.00' RT. — APRON ENDWALLS FOR CPRC 60-INCH
6.0 STA 16+00.00, 1.90' LT. — MANHOLES 8X8-SL
6.1 STA 15+92.00, 18.00' LT. — INLETS 2X3-H-SL
6.2 STA 16+01.50, 18.00' RT. — INLETS 2X3-H-SL

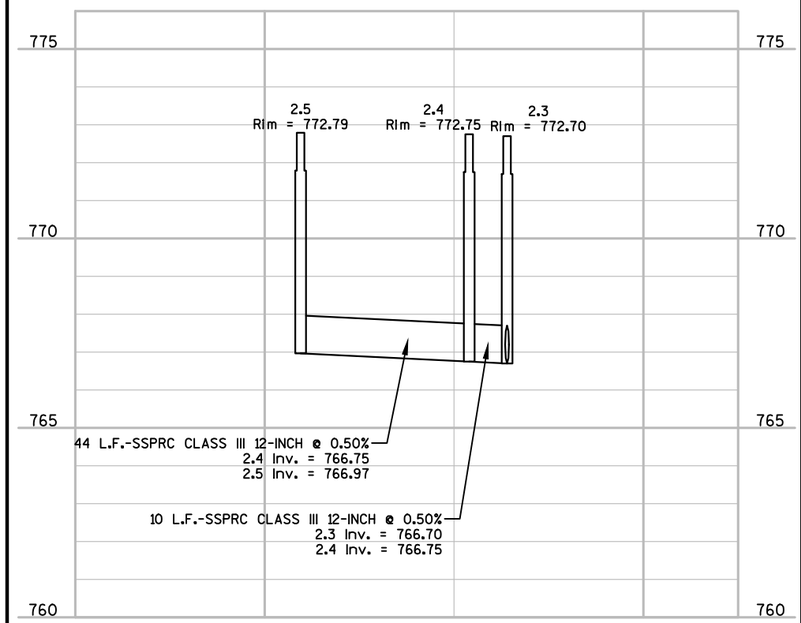
REMOVING INLETS
REMOVING STORM SEWER, 12-INCH
REMOVING STORM SEWER, 42X60-INCH
PC: 15+67.04
PT: 16+26.57
CAUTION
RECONNECT EXISTING 42"X60" PIPE
REMOVING INLETS
REMOVING STORM SEWER, 12-INCH
REMOVING MANHOLES
REMOVING STORM SEWER, 12-INCH

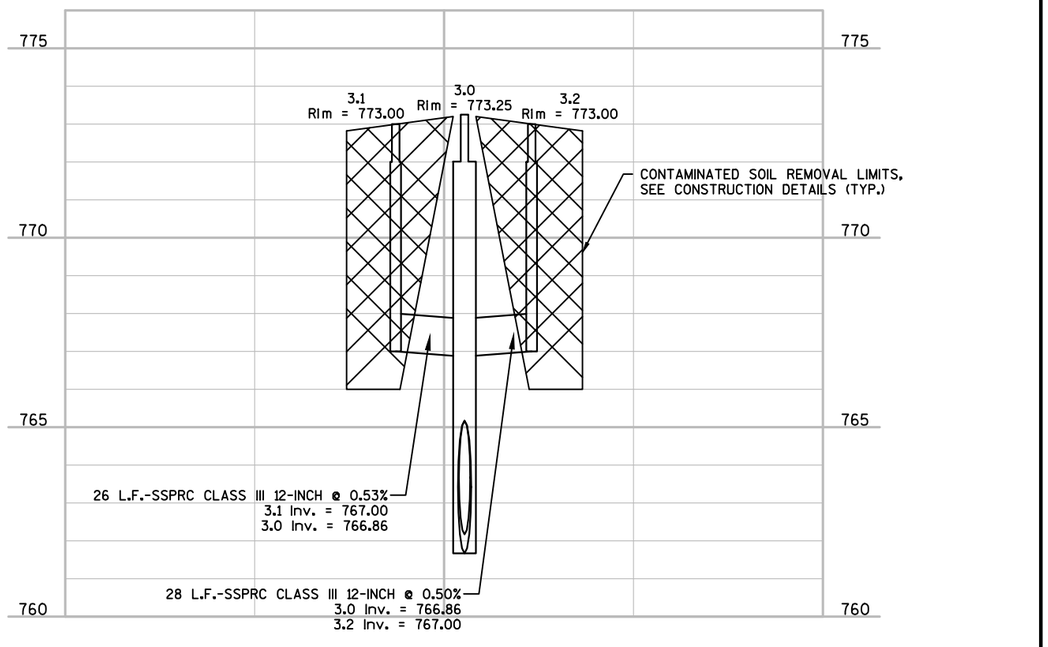


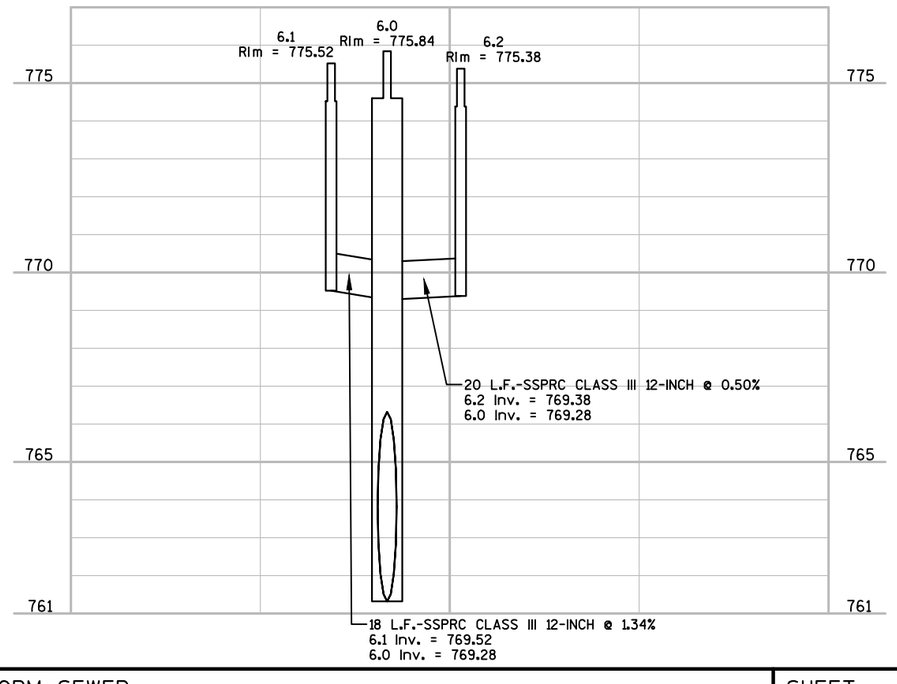
PROJECT NO: 5990-00-34	HWY: MILWAUKEE STREET	COUNTY: ROCK	STORM SEWER	SHEET 33	E











PROJECT NO: 5990-00-34	HWY: MILWAUKEE STREET	COUNTY: ROCK	STORM SEWER	SHEET 34	E

2

2

EXISTING WATER MANHOLE TO BE REMOVED BY OTHERS DURING CONSTRUCTION

EXISTING 10" WATERMAIN TO BE ABANDONED IN PLACE BY OTHERS DURING CONSTRUCTION

EXISTING HYDRANT AND VALVE STRUCTURE TO BE REMOVED BY OTHERS DURING CONSTRUCTION

EXISTING WATER MANHOLE TO BE REMOVED BY OTHERS DURING CONSTRUCTION

EXISTING SANITARY SEWER MANHOLE TO REMAIN

EXISTING SANITARY SEWER MANHOLE TO REMAIN, COVER PLATES TEMPORARY, ADJUSTING MANHOLE COVERS, EXISTING RIM ELEV. = 775.22 FINISHED RIM ELEV. = 775.65

PC: 11+72.19

PT: 12+29.29

PI: 13+32.58

PC: 15+67.04

PT: 16+26.57

11+00 12+00 13+00 14+00 15+00 16+00 17+00

MILWAUKEE STREET

WATER STREET

MAIN STREET

RIVER STREET

ROCK RIVER

RIVERWALK

STAIRS

PUBLIC PARKING

136100338
CITY OF JANESVILLE
28 W. MILWAUKEE ST

136100012
CITY OF JANESVILLE
20 W. MILWAUKEE ST

136100325
BRENNAN STEIL SC
1 E. MILWAUKEE ST

136100345
KYLE S MIELKE
27 W. MILWAUKEE ST

136100343
COREY PROPERTIES LLC
21 W. MILWAUKEE ST

136100346
SCHOOL DISTRICT
OF JANESVILLE
29 W. MILWAUKEE ST

136100344
DALE F & JUDY T
SCHUMWAY
25 W. MILWAUKEE ST

136100005
JAMES & HEIDI GRAFFT
IRREVOCABLE TRUST
15 W. MILWAUKEE ST

136100326
JAMES & HEIDI GRAFFT IRREVOCABLE TRUST
20 E. MILWAUKEE ST

CITY OF JANESVILLE (WATERMAIN)
CITY OF JANESVILLE (ELECTRIC)
CITY OF JANESVILLE (STORM SEWER)
CITY OF JANESVILLE (SANITARY SEWER)
AT&T (TELEPHONE)
ALLIANT ENERGY (ELECTRIC)
ALLIANT ENERGY (GAS)

PROJECT NO: 5990-00-34	HWY: MILWAUKEE STREET	COUNTY: ROCK	SANITARY SEWER AND WATERMAIN	SHEET 35	E

FILE NAME : P:\870S\879\00879002\C3D\SHEETSPLAN\023001-UP.DWG
LAYOUT NAME - 022001-ec

PLOT DATE : 4/19/2018 10:53 AM PLOT BY : JASON DOLENS PLOT NAME : PLOT SCALE : 1 IN:40 FT

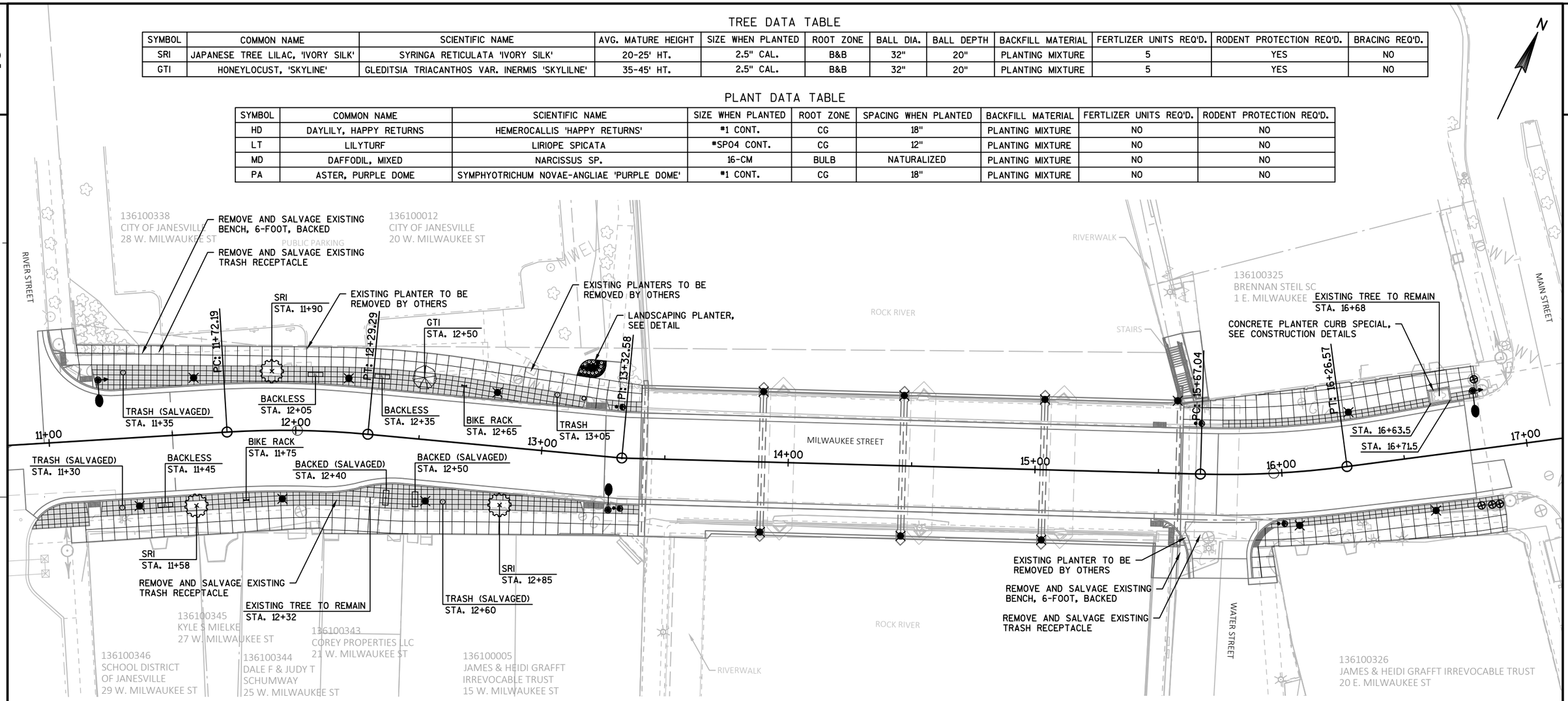
WISDOT/CADDS SHEET 42

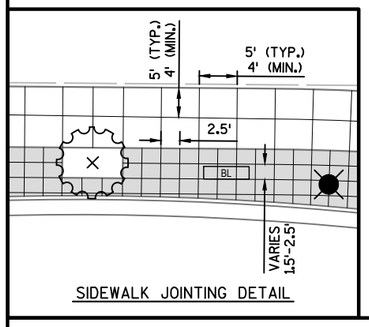
TREE DATA TABLE

SYMBOL	COMMON NAME	SCIENTIFIC NAME	AVG. MATURE HEIGHT	SIZE WHEN PLANTED	ROOT ZONE	BALL DIA.	BALL DEPTH	BACKFILL MATERIAL	FERTLIZER UNITS REQ'D.	RODENT PROTECTION REQ'D.	BRACING REQ'D.
SRI	JAPANESE TREE LILAC, 'IVORY SILK'	SYRINGA RETICULATA 'IVORY SILK'	20-25' HT.	2.5" CAL.	B&B	32"	20"	PLANTING MIXTURE	5	YES	NO
GTI	HONEYLOCUST, 'SKYLINE'	GLEDITSIA TRIACANTHOS VAR. INERMIS 'SKYLILNE'	35-45' HT.	2.5" CAL.	B&B	32"	20"	PLANTING MIXTURE	5	YES	NO

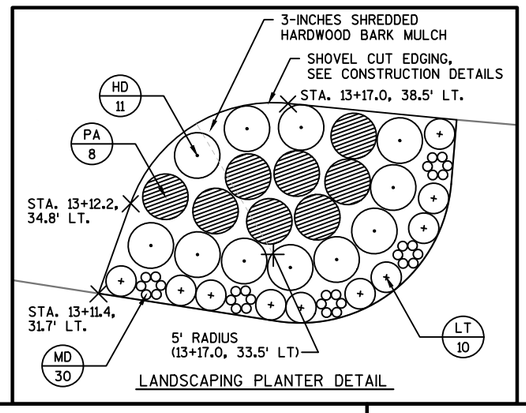
PLANT DATA TABLE

SYMBOL	COMMON NAME	SCIENTIFIC NAME	SIZE WHEN PLANTED	ROOT ZONE	SPACING WHEN PLANTED	BACKFILL MATERIAL	FERTLIZER UNITS REQ'D.	RODENT PROTECTION REQ'D.
HD	DAYLILY, HAPPY RETURNS	HEMEROCALLIS 'HAPPY RETURNS'	#1 CONT.	CG	18"	PLANTING MIXTURE	NO	NO
LT	LILYTURF	LIRIOPE SPICATA	#SP04 CONT.	CG	12"	PLANTING MIXTURE	NO	NO
MD	DAFFODIL, MIXED	NARCISSUS SP.	16-CM	BULB	NATURALIZED	PLANTING MIXTURE	NO	NO
PA	ASTER, PURPLE DOME	SYMPHYOTRICHUM NOVAE-ANGLIAE 'PURPLE DOME'	#1 CONT.	CG	18"	PLANTING MIXTURE	NO	NO





SIDEWALK JOINTING DETAIL



LANDSCAPING PLANTER DETAIL

LEGEND

- CONCRETE SIDEWALK, 5-INCH, COLORED
- BENCH, 6-FOOT, BACKED
- BENCH, 6-FOOT, BACKLESS
- BICYCLE RACK
- TRASH RECEPTACLE
- PROPOSED STREET LIGHT POLES
- EXISTING TREE TO REMAIN
- PROPOSED TREE WITH TREE GRATE

PROJECT NO: 5990-00-34	HWY: MILWAUKEE STREET	COUNTY: ROCK	STREETSCAPING PLAN	SHEET 36	E

NOTE: ALL EXISTING SIGNS AND POSTS WITHIN THE PROJECT LIMITS ARE TO BE REMOVED BY THE CONTRACTOR UNLESS OTHERWISE NOTED. EXISTING SIGNS ARE TO BE SALVAGED AND STOCKPILED FOR CITY PICKUP.

EXISTING WOOD ICE AGE TRAIL SIGN TO REMAIN

1.1 R3-8A 36"X30"

1.2 1.3 (2) W11-2 30"X30"

1.4 (1) W16-7L 24"X12"

1.5 (1) W16-7R 24"X12"

*7' MOUNTING HEIGHT (SEE CONSTRUCTION DETAILS)

TO BE REMOVED BY OTHERS

REMOVING FLASHING BEACON ASSEMBLY

1.6 1.7 (2) W11-2 30"X30"

1.8 (1) W16-7L 24"X12"

1.9 (1) W16-7R 24"X12"

*7' MOUNTING HEIGHT (SEE CONSTRUCTION DETAILS)

1.10 R3-7L 30"X30"

(TO REMAIN)

(ON EXISTING MARKINGS)

MATCH INTO EXISTING PAVEMENT MARKINGS

RIVER STREET

MILWAUKEE STREET

MAIN STREET

WATER STREET

ROCK RIVER

RIVERWALK

136100338 CITY OF JANESVILLE 28 W. MILWAUKEE ST (ON SIGNAL POLE)

136100012 CITY OF JANESVILLE 20 W. MILWAUKEE ST

136100325 BRENNAN STEIL SC

136100346 SCHOOL DISTRICT OF JANESVILLE 29 W. MILWAUKEE ST

136100344 DALE F & JUDY T SCHUMWAY 25 W. MILWAUKEE ST

136100343 COREY PROPERTIES LLC 21 W. MILWAUKEE ST

136100005 JAMES & HEIDI GRAFFT IRREVOCABLE TRUST 15 W. MILWAUKEE ST

136100326 JAMES & HEIDI GRAFFT IRREVOCABLE TRUST 20 E. MILWAUKEE ST

PC: 11+72.19 PT: 12+29.29 PI: 13+32.58 PC: 15+67.04 PT: 16+26.57

11+00 12+00 13+00 14+00 15+00 16+00 17+00

30' 20' 22' 20'

PAVEMENT MARKING LEGEND

A	MARKING LINE EPOXY 4-INCH, DOUBLE YELLOW
B	MARKING LINE EPOXY 4-INCH, WHITE, 12.5' LINE, 37.5' GAP
C	MARKING PARKING STALL EPOXY, 4-INCH, WHITE
D	MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH, WHITE
E	MARKING LINE EPOXY 8-INCH, WHITE
F	MARKING STOP LINE EPOXY 18-INCH, WHITE
G	MARKING ARROW EPOXY, TYPE 2, WHITE
H	MARKING CROSSWALK EPOXY LADDER PATTERN 24-INCH, WHITE

PROJECT NO: 5990-00-34	HWY: MILWAUKEE STREET	COUNTY: ROCK	PERMANENT SIGNING AND PAVEMENT MARKINGS	SHEET 37	E

FILE NAME : P:\870S\879\00879002\C3D\SHEETSPLAN\023201-PS PM.DWG
LAYOUT NAME - 023201-ps pm

PLOT DATE : 4/19/2018 10:56 AM PLOT BY : JASON DOLENS PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

WIRING LEGEND

1 — 2 10 LIGHT | 1 10 GRD | 3 2 FEST | 1 2 | 2 10 | 1 10 GRD

2 — 2 10 LIGHT | 1 10 GRD | 3 4 FEST | 1 4 GRD

3 — 1 2" | 2 10 LIGHT | 1 10 GRD | 3 4 FEST | 1 4 | 2 10 | 1 10 GRD

4 — 1 2" | 2 10 LIGHT | 1 10 GRD | 3 4 FEST | 1 4 GRD

5 — 2 12 LIGHT | 1 12 GRD | 3 4 FEST | 1 4 | 2 10 | 1 10 GRD

6 — 2 12 LIGHT | 1 12 GRD | 3 4 FEST | 1 4 GRD

7 — 2 12 LIGHT | 1 12 GRD | 3 6 FEST | 1 6 | 2 10 | 1 10 GRD

8 — 2 12 LIGHT | 1 12 GRD | 3 6 FEST | 1 6 GRD

9 — 1 2" | 2 12 LIGHT | 1 12 GRD | 3 6 FEST | 1 6 | 2 10 | 1 10 GRD

10 — 1 2" | 2 12 LIGHT | 1 12 GRD | 3 6 FEST | 1 6 GRD

11 — 1 2" | 2 12 LIGHT | 1 12 GRD | 3 4 FEST | 1 4 GRD

12 — 1 2" | 2 12 LIGHT | 1 12 GRD | 2 6 FEST | 1 6 GRD

13 — 1 2" | 2 12 LIGHT | 1 12 GRD | 3 4 FEST | 1 4 | 2 10 | 1 10 GRD

14 — 2 12 LIGHT | 1 12 GRD | 2 12 FEST | 1 12 GRD

15 — 1 2" | 2 12 LIGHT | 1 12 GRD | 2 12 FEST | 1 12 GRD

N

EXSC1-1
STA. 11+21.25, 24.25' LT.

EXSC1

EXLC1-3-(Y,Y)-(B)
STA. 11+60.00, 22.75' LT.

EXLC1-5-(Y,Y)-(A)
STA. 12+20.00, 22.00' LT.

EXLC1-7-(Y,Y)-(B)
STA. 12+80.00, 21.75' LT.

PEDESTRIAN CROSSING SIGN (SEE CONSTRUCTION DETAILS)
STA. 13+15.00, 22.50' LT.

PB5
STA. 13+28.50, 20.50' LT.

PB1
STA. 13+31.00, 20.50' LT.

CONNECT TO CONDUITS INSTALLED AS PART OF BRIDGE STRUCTURE - (2) 2-INCH & (1) 3/4-INCH

EXLC1-9-(Y,Y)-(A)
SEE BRIDGE PLANS

EXLC1-11-(Y,Y)-(B)
SEE BRIDGE PLANS

SEE TRAFFIC SIGNAL MODIFICATIONS PLAN SHEET

BP: 10+00.00

PC: 11+72.19

PT: 12+29.29

PC: 13+32.58

11+00

12+00

13+00

14+00

SEE DETAIL 'A'

SEE DETAIL 'B'

MILWAUKEE STREET

MATCHLINE STA. 14+75

(PEDESTAL BASE)

EXLC1-2-(Y,Y)-(B)
STA. 11+35.00, 27.75' RT.

EXLC1-4-(Y,Y)-(A)
STA. 11+95.00, 27.75' RT.

EXLC1-6-(Y,Y)-(B)
STA. 12+55.00, 24.75' RT.

EXLC1-10-(Y,Y)-(B)
SEE BRIDGE PLANS

EXLC1-12-(Y,Y)-(A)
SEE BRIDGE PLANS

CONNECT TO CONDUITS INSTALLED AS PART OF BRIDGE STRUCTURE - (2) 2-INCH & (1) 3/4-INCH

PB2
STA. 13+32.50, 20.50' RT.

PB6
STA. 13+31.25, 20.50' RT.

EXLC1-8-(Y,Y)-(A) WITH PEDESTRIAN CROSSING SIGN (SEE CONSTRUCTION DETAILS)
STA. 13+29.00, 21.50' RT.

ROCK RIVER

RIVERWALK

RIVER STREET

136100345
KYLE S MIELKE
27 W. MILWAUKEE ST

136100343
COREY PROPERTIES LLC
21 W. MILWAUKEE ST

136100005
JAMES & HEIDI GRAFFT
IRREVOCABLE TRUST
15 W. MILWAUKEE ST

LEGEND

- DECORATIVE MAST ARM LIGHTING UNIT
- DECORATIVE POLE TOP LIGHTING UNIT
- CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH (SCHEDULE 80 BELOW ROADWAY)
- CONDUIT RIGID NONMETALLIC SCHEDULE 40 3/4-INCH (SCHEDULE 80 BELOW ROADWAY)
- PULL BOXES STEEL 24x42-INCH
- PULL BOXES STEEL 12x36-INCH
- REMOVAL AND SALVAGE OF LIGHT POLE ASSEMBLIES, REMOVING CONCRETE BASES
- EXISTING LIGHTING CONTROL CABINET TO REMAIN
- EXISTING PULL BOX TO REMAIN

X-X-(Y,Y)-(A OR B)
- LIGHTING CONTROL CABINET DESIGNATION (EX=EXISTING)
- POLE NUMBER
- LIGHTING CIRCUIT (CONNECT TO EXISTING LIGHTING CONTACTOR'S SPARE CIRCUIT TERMINALS AND LABEL PER BREAKER ASSIGNMENTS)
- FESTOON CIRCUIT (CONNECT TO TWO SEPARATE EXISTING RECEPTACLE CONTACTOR'S SPARE CIRCUIT TERMINALS AND LABEL EACH CONDUCTOR PER BREAKER ASSIGNMENTS)

STA. XX+XX.XX, XX.XX' RT./LT. — LOCATION (TO CENTER OF POLE)

- CONDUIT QUANTITY/SIZE
- PHASE CONDUCTOR QUANTITY/SIZE (AWG) FOR LIGHTING
- EQUIPMENT GROUNDING CONDUCTOR QUANTITY/SIZE (AWG) FOR LIGHTING
- PHASE CONDUCTOR QUANTITY/SIZE (AWG) FOR FESTOON RECEPTACLE
- EQUIPMENT GROUNDING CONDUCTOR QUANTITY/SIZE (AWG) FOR FESTOON RECEPTACLE

1 2" | 2 8 LIGHT | 1 1 GRD | 2 2 FEST | 1 2 GRD

DETAIL 'A'

INSTALL AN ADDITIONAL 2" CONDUIT FOR FUTURE UNDERDECK LIGHTING

PEDESTRIAN CROSSING SIGN

PB1

PB5

DETAIL 'B'

LP-8

PB6

PB2

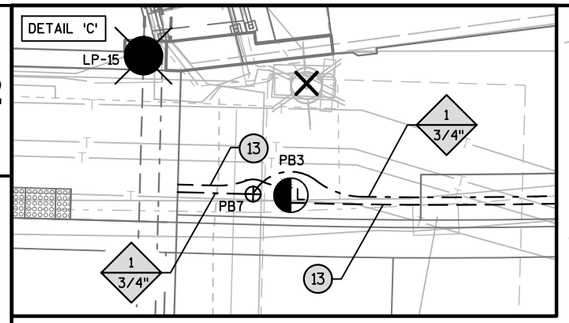
INSTALL AN ADDITIONAL 2" CONDUIT FOR FUTURE UNDERDECK LIGHTING

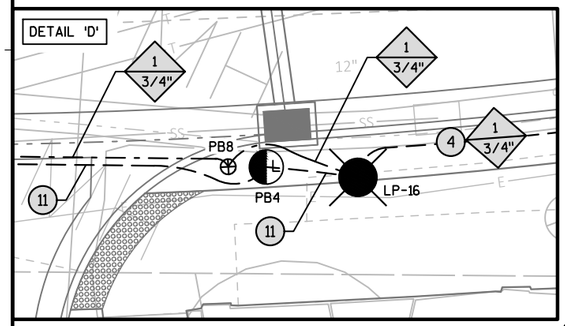
PROJECT NO: 5990-00-34	HWY: MILWAUKEE STREET	COUNTY: ROCK	LIGHTING PLAN	SHEET 38	E

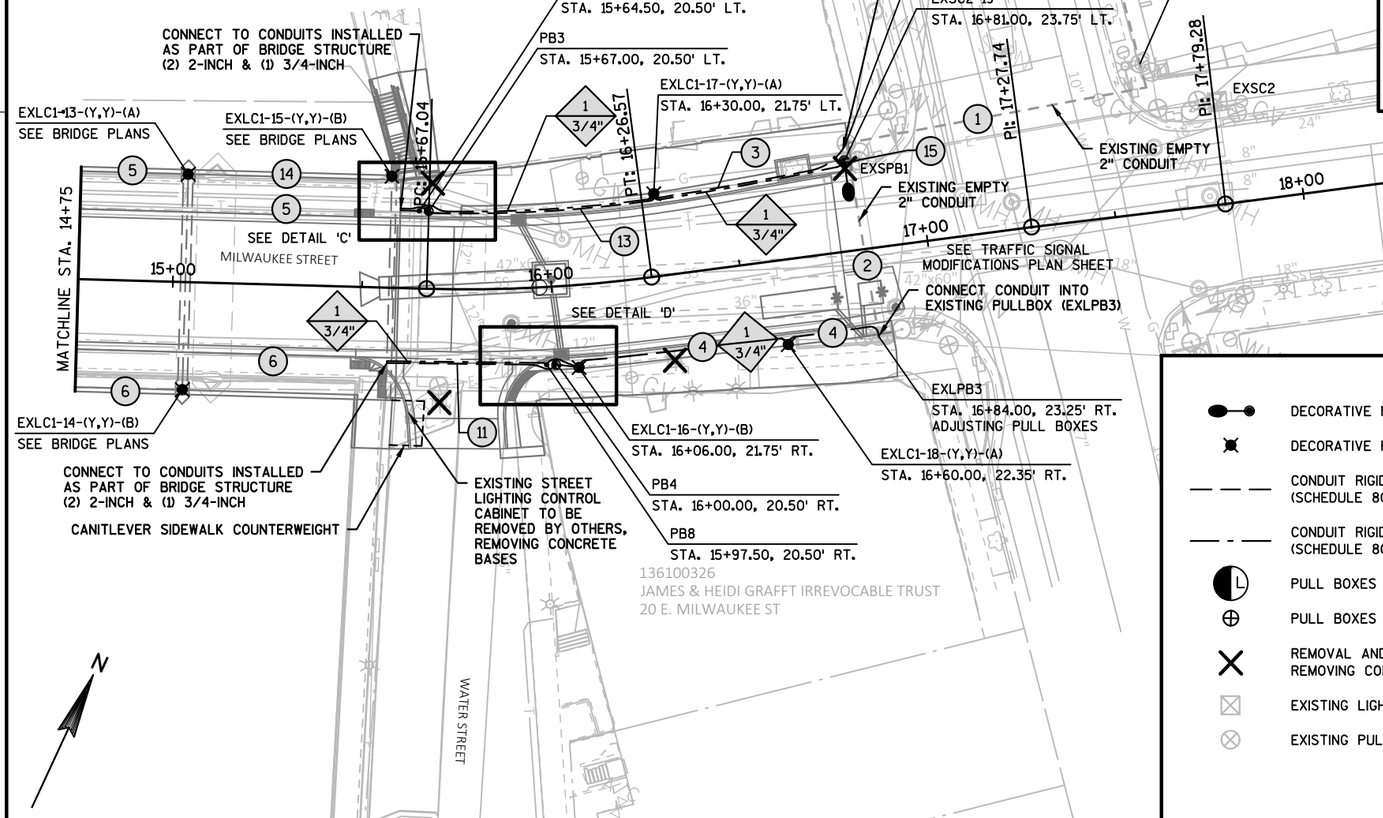
FILE NAME : P:\870S\879\00879002\C3D\SHEETSPLAN\023601-LP.DWG
LAYOUT NAME - 023601-lp

PLOT DATE : 4/19/2018 10:58 AM PLOT BY : JASON DOLENS PLOT NAME : PLOT SCALE : 1 IN:40 FT

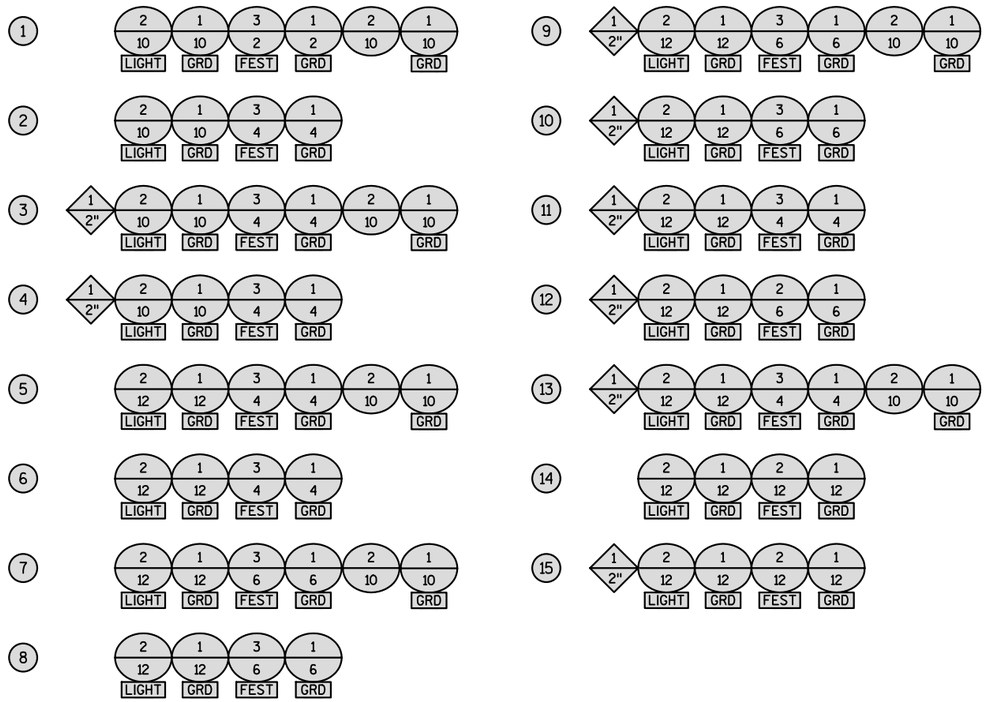
WISDOT/CADDS SHEET 42





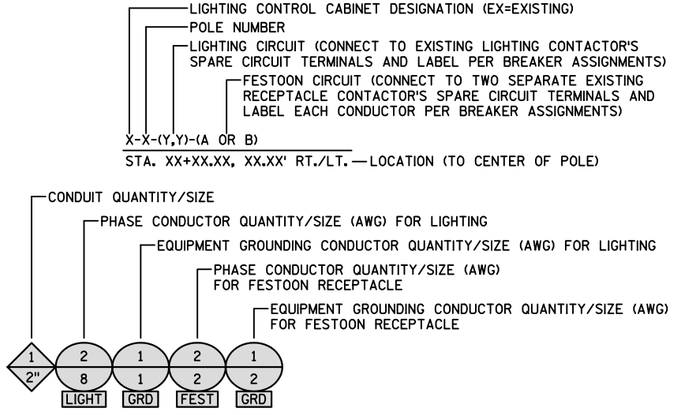


WIRING LEGEND



LEGEND

- DECORATIVE MAST ARM LIGHTING UNIT
- DECORATIVE POLE TOP LIGHTING UNIT
- CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH (SCHEDULE 80 BELOW ROADWAY)
- CONDUIT RIGID NONMETALLIC SCHEDULE 40 3/4-INCH (SCHEDULE 80 BELOW ROADWAY)
- PULL BOXES STEEL 24x42-INCH
- PULL BOXES STEEL 12x36-INCH
- REMOVAL AND SALVAGE OF LIGHT POLE ASSEMBLIES, REMOVING CONCRETE BASES
- EXISTING LIGHTING CONTROL CABINET TO REMAIN
- EXISTING PULL BOX TO REMAIN



PROJECT NO: 5990-00-34	HWY: MILWAUKEE STREET	COUNTY: ROCK	LIGHTING PLAN	SHEET 39	E

CITY OF JANESVILLE
28 W. MILWAUKEE ST

EXISTING CONTROL CABINET MOUNTED TO TRAFFIC SIGNAL POLE

CONNECT TO EXISTING CONDUIT AT TRAFFIC SIGNAL CONCRETE BASE

SALVAGE AND REINSTALL EXISTING PEDESTRIAN INDICATOR ON EXSB1

SALVAGE AND REINSTALL EXISTING PEDESTRIAN INDICATOR AND TRAFFIC SIGNAL HEADS ON LP-1

REMOVE AND SALVAGE TRAFFIC SIGNAL POLE ASSEMBLY, REMOVING CONCRETE BASES

SALVAGE AND REINSTALL EXISTING EVP DETECTOR AND CONFIRMATION HEAD ON LP-1

EMPTY 2" & 3/4" CONDUITS FOR FUTURE LIGHTING AND SPEAKER CONNECTIONS

RIVER STREET

EXSC1

EXSB1

LP-1

LP-3

LP-2

2A

8A

PC: 11+72.19

11+00

ASPHALT CONCRETE

MILWAUKEE STREET

EMPTY 3/4" CONDUIT FOR FUTURE SPEAKER CONNECTION

SALVAGE AND REINSTALL EXISTING TRAFFIC SIGNAL HEADS ON LP-19

CONNECT CONDUIT INTO EXISTING TRAFFIC SIGNAL PULLBOX (EXSPB1)

EXLPB2

LP-19

EXSPB1

PI: 17+27.74

PI: 17+79.28

EXSC2

SALVAGE AND REINSTALL EXISTING EVP DETECTOR AND CONFIRMATION HEAD ON LP-19

REMOVAL AND SALVAGE OF LIGHT POLE ASSEMBLIES, REMOVING CONCRETE BASES

CONCRETE ASPHALT

17+00

MAIN STREET

MILWAUKEE STREET

EX21

22

21

EXSPB2 (ADJUSTING PULL BOXES)

EXLPB3

LP-18

EXSPB3 (ADJUSTING PULL BOXES)

CONNECT CONDUIT INTO EXISTING TRAFFIC SIGNAL PULLBOX (EXSPB3)

TRAFFIC SIGNAL MODIFICATION NOTES:

1. THE LOCATION OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN ON THE PLANS.
2. THE ENGINEER SHALL ADJUST THE LOCATIONS UNDER THIS CONTRACT TO AVOID CONFLICTS WITH EXISTING UTILITY FACILITIES.
3. ALL EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE SALVAGED AND DELIVERED TO THE CITY OF JANESVILLE IF NOT OTHERWISE BEING REINSTALLED.
4. INSPECT THE PULL BOXES AND CONDUIT RUNS 3 DAYS PRIOR TO PLACING SIGNAL CABLE AND ELECTRICAL WIRE INTO THE SYSTEM.
5. PEDESTRIAN INDICATOR HEADS SHALL FACE IN LINE WITH CROSSWALKS.

136100345
KYLE S MIELKE
27 W. MILWAUKEE ST

LEGEND

- DECORATIVE MAST ARM LIGHTING UNIT WITH TRAFFIC SIGNAL HEAD
- CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH
- XX — TRAFFIC SIGNAL HEAD NUMBER
- R — EXISTING RED CIRCULAR INDICATOR TO BE REINSTALLED
- Y — EXISTING YELLOW CIRCULAR INDICATOR TO BE REINSTALLED
- G — EXISTING GREEN CIRCULAR INDICATOR TO BE REINSTALLED
- EXISTING PEDESTRIAN INDICATOR TO BE REINSTALLED
- EXISTING EVP DETECTOR HEAD & CONFIRMATION HEAD TO BE REINSTALLED
- EXISTING PEDESTRIAN HEAD TO BE REINSTALLED
- 6'x20' / 6'x6' — LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
- EXISTING LOOP DETECTOR
- EXISTING TRAFFIC SIGNAL CONTROL CABINET TO REMAIN
- EXISTING TRAFFIC SIGNAL POLE & HEAD
- EXISTING PULL BOX TO REMAIN

TRAFFIC CONTROL SIGNAL
MILWAUKEE STREET & RIVER STREET
CITY OF JANESVILLE
ROCK COUNTY

SIGNAL NO.

REGION CONTACT:
DESIGNED BY: JAD
REVISED BY: BGH

TRAFFIC CONTROL SIGNAL
MILWAUKEE STREET & MAIN STREET
CITY OF JANESVILLE
ROCK COUNTY

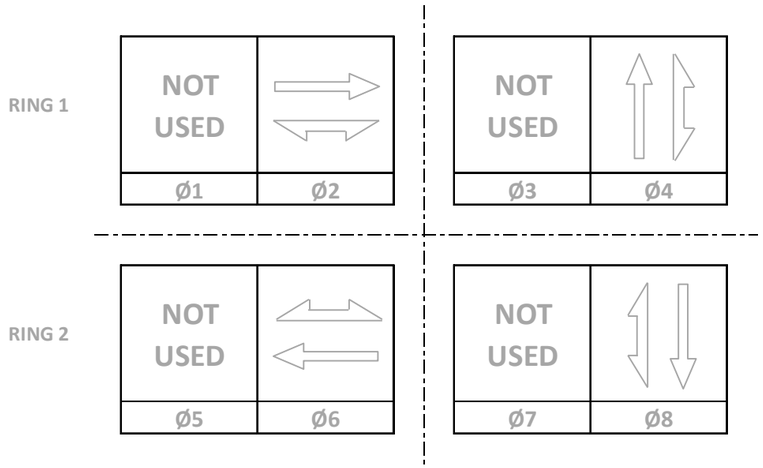
SIGNAL NO.

REGION CONTACT:
DESIGNED BY: JAD
REVISED BY: BGH

PAGE 1 OF 1

PROJECT NO: 5990-00-34	HWY: MILWAUKEE STREET	COUNTY: ROCK	TRAFFIC SIGNAL MODIFICATIONS	SHEET 40	E

	HEAD NUMBERS	FLASH
Ø1		
Ø2	2A, 2B, 2C	R
Ø3		
Ø4	4A, 4B, 4C	R
Ø5		
Ø6	6A, 6B, 6C	R
Ø7		
Ø8	8A, 8B, 8C	R
Ø2P	2-1, 2-2	
Ø4P	4-1, 4-2	
Ø6P	6-1, 6-2	
Ø8P	8-1, 8-2	
OLA		
OLB		
OLC		
OLD		



CONTROLLER LOGIC

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / Ø	PHASE RECALL	PHASE ACTIVE
1				
2			MAX	X
3				
4			--	X
5				
6		2	MAX	X
7				
8		4	--	X

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE PREEMPTOR	A	B	C	D
MOVEMENT	← →	← →	↓ ↑	↓ ↑
PHASE	2+6	6+2	4+8	8+4

AFTER PREEMPTION SEQUENCE 2+6 OR 6+2, CONTROLLER SHALL RETURN TO PHASES 2+6.
AFTER PREEMPTION SEQUENCE 4+8 OR 8+4, CONTROLLER SHALL RETURN TO PHASES 4+8.

TYPE OF INTERCONNECT/COMMUNICATION	
NONE	
CLOSED LOOP	
TWISTED PAIR	
FIBER OPTIC*	
FIBER OPTIC (ETHERNET)	
RADIO	X
CELL MODEM	

TYPE OF COORDINATION	
NONE	
TBC	X
TRAFFIC RESPONSIVE	
ADAPTIVE	
*LOCATION OF MASTER CONTROLLER NO:	S-
SIGNAL SYSTEM NO:	SS-

TYPE OF LIGHTING	
BY OTHER AGENCY	
IN TRAFFIC CABINET	X
IN SEPARATE DOT LIGHTING CABINET	

TYPE OF PRE-EMPT	
NONE	
RAILROAD	
EMERGENCY VEHICLE	X
GTT	X
TOMAR	
HARDWIRE	
OTHER	
LIFT BRIDGE	
QUEUE DETECTION	

DETECTOR LOGIC

DETECTOR INPUT	3	1	7	5	11	9	15 ***	13
PLAN LOOP DETECTOR*(S)	EX 21	42	44	46	82	84	22	
ASSIGNED PHASE	~~2~~	4	4	4	8	8	2	
OPERATION MODE	~~VEH~~	VEH	VEH	VEH	VEH	VEH	VEH	VEH
SWITCH								
EXTEND			X					
DELAY								

DETECTOR INPUT	19	17	23	21	27	25	31	29
PLAN LOOP DETECTOR*(S)								
ASSIGNED PHASE								
OPERATION MODE	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH
SWITCH								
EXTEND								
DELAY								

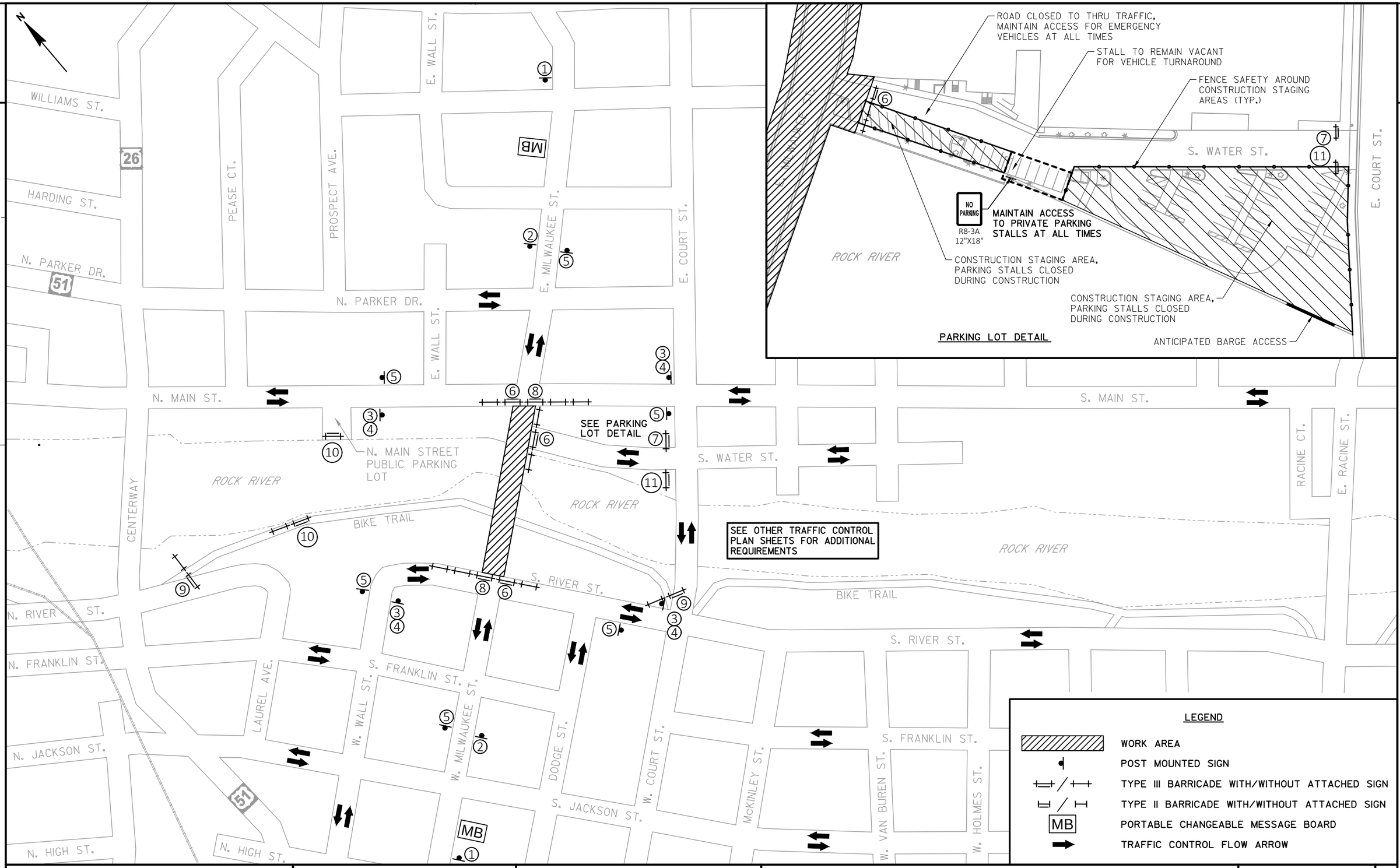
DETECTOR INPUT	4	2	8	6	12	10	16	14
PLAN LOOP DETECTOR*(S)	41	43	45	81	83	21		
ASSIGNED PHASE	4	4	4	8	8	2		
OPERATION MODE	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH
SWITCH								
EXTEND	X			X				
DELAY					X			

DETECTOR INPUT	20	18	24	22	28	26	32	30
PLAN LOOP DETECTOR*(S)								
ASSIGNED PHASE								
OPERATION MODE	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH
SWITCH								
EXTEND								
DELAY								

GENERAL NOTES:

1. SIGNAL WILL DWELL ON PHASE 6
2. ANY ACTUATED PHASE FOR WHICH THERE IS NO CALL SHALL BE SKIPPED.
3. WHEN ONE PHASE IS ON ALONE, ANY NONCONFLICTING PHASE MAY START TIMING CONCURRENTLY WITHOUT A CLEARANCE INTERVAL.

* Greyscale indicates existing conditions implemented in City of Janesville *Milwaukee Street Two Way Conversion* project (2016).
** Maintain existing traffic signal operations and logic. EX Loop 21 will be removed and replaced with Loop 21 and 22.
*** Contractor may utilize Detector 3 if preferred.



PROJECT NO: 5990-00-34	HWY: MILWAUKEE STREET	COUNTY: ROCK	TRAFFIC CONTROL	SHEET 42	E

FILE NAME : P:\870S\879\00879002\C3D\SHEETSPLAN\025001-TC.DWG
LAYOUT NAME - 025001-tc
PLOT DATE : 4/19/2018 11:02 AM PLOT BY : JASON DOLENS PLOT NAME : PLOT SCALE : **********

2

① 

② 

③ 

④ 

TRAFFIC CONTROL
SIGNS FIXED MESSAGE
48"X24" (8 S.F.)

⑤ 

G20-2A
48"X24"

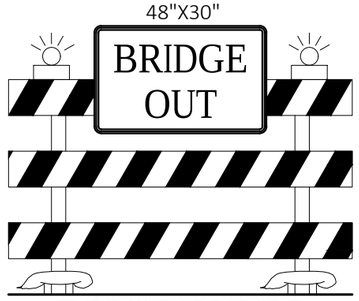
⑥ R11-2
48"X30"

TYPE III BARRICADE

⑦ R11-4
60"X30"

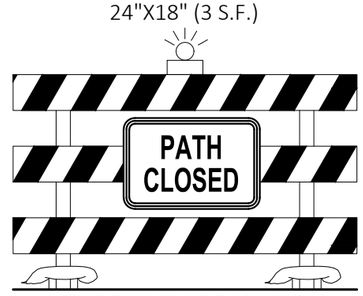
TYPE III BARRICADE

⑧ R11-2B
48"X30"



TYPE III BARRICADE

⑨ TRAFFIC CONTROL
SIGNS FIXED MESSAGE
24"X18" (3 S.F.)



TYPE III BARRICADE

⑩ TRAFFIC CONTROL
SIGNS FIXED MESSAGE
24"X18" (3 S.F.)

TYPE III BARRICADE

⑪ TRAFFIC CONTROL
SIGNS FIXED MESSAGE
60"X30" (12.5 S.F.)

TYPE III BARRICADE

LEGEND

WORK AREA

POST MOUNTED SIGN

TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN

TRAFFIC CONTROL FLOW ARROW

① ROAD CLOSED AHEAD — W20-3A 48"X48"

② ROAD CLOSED 500 FT — W20-3D 48"X48"

③ R11-2 48"X30" — ROAD CLOSED — TYPE III BARRICADE

④ R11-4 60"X30" — ROAD CLOSED TO THRU TRAFFIC — TYPE III BARRICADE

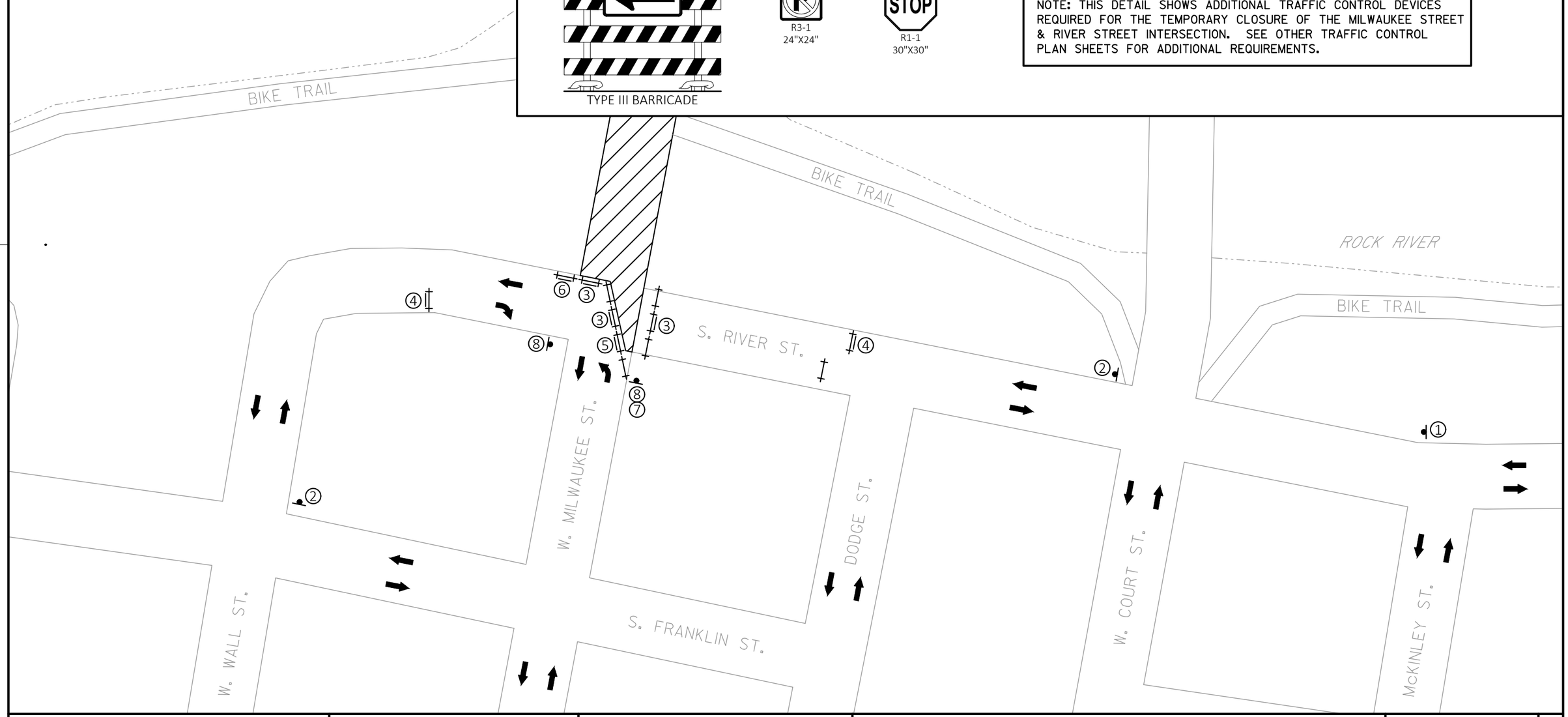
⑤ WO1-6 48" X 24" — TYPE III BARRICADE

⑥ WO1-6 48" X 24" — TYPE III BARRICADE

⑦ R3-1 24"X24"

⑧ STOP — R1-1 30"X30"

NOTE: THIS DETAIL SHOWS ADDITIONAL TRAFFIC CONTROL DEVICES REQUIRED FOR THE TEMPORARY CLOSURE OF THE MILWAUKEE STREET & RIVER STREET INTERSECTION. SEE OTHER TRAFFIC CONTROL PLAN SHEETS FOR ADDITIONAL REQUIREMENTS.



PROJECT NO: 5990-00-34	HWY: MILWAUKEE STREET	COUNTY: ROCK	TRAFFIC CONTROL: RIVER STREET INTERSECTION CLOSURE	SHEET 44	E

FILE NAME : P:\870S\879\00879002\C3D\SHEETSPLAN\025001-TC_INTERSECTION CLOSURE.DWG
LAYOUT NAME - 025001-tc

PLOT DATE : 4/19/2018 11:02 AM PLOT BY : JASON DOLENS PLOT NAME : PLOT SCALE : **********

WISDOT/CADDS SHEET 42

2

LEGEND

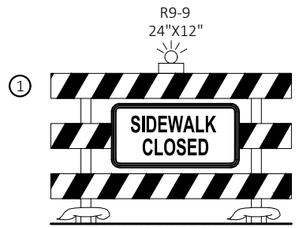
TEMPORARY PEDESTRIAN SAFETY FENCE

TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN

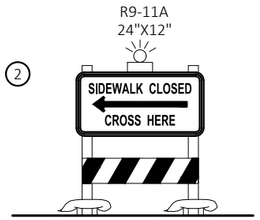
TYPE II BARRICADE WITH/WITHOUT ATTACHED SIGN

TRAFFIC CONTROL DRUM WITH LIGHT TYPE C

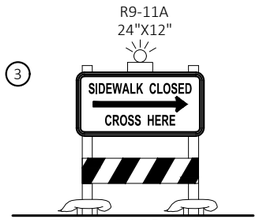
WORK AREA



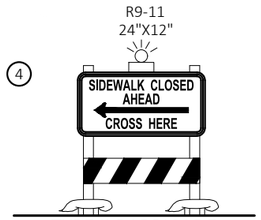
① TYPE III BARRICADE



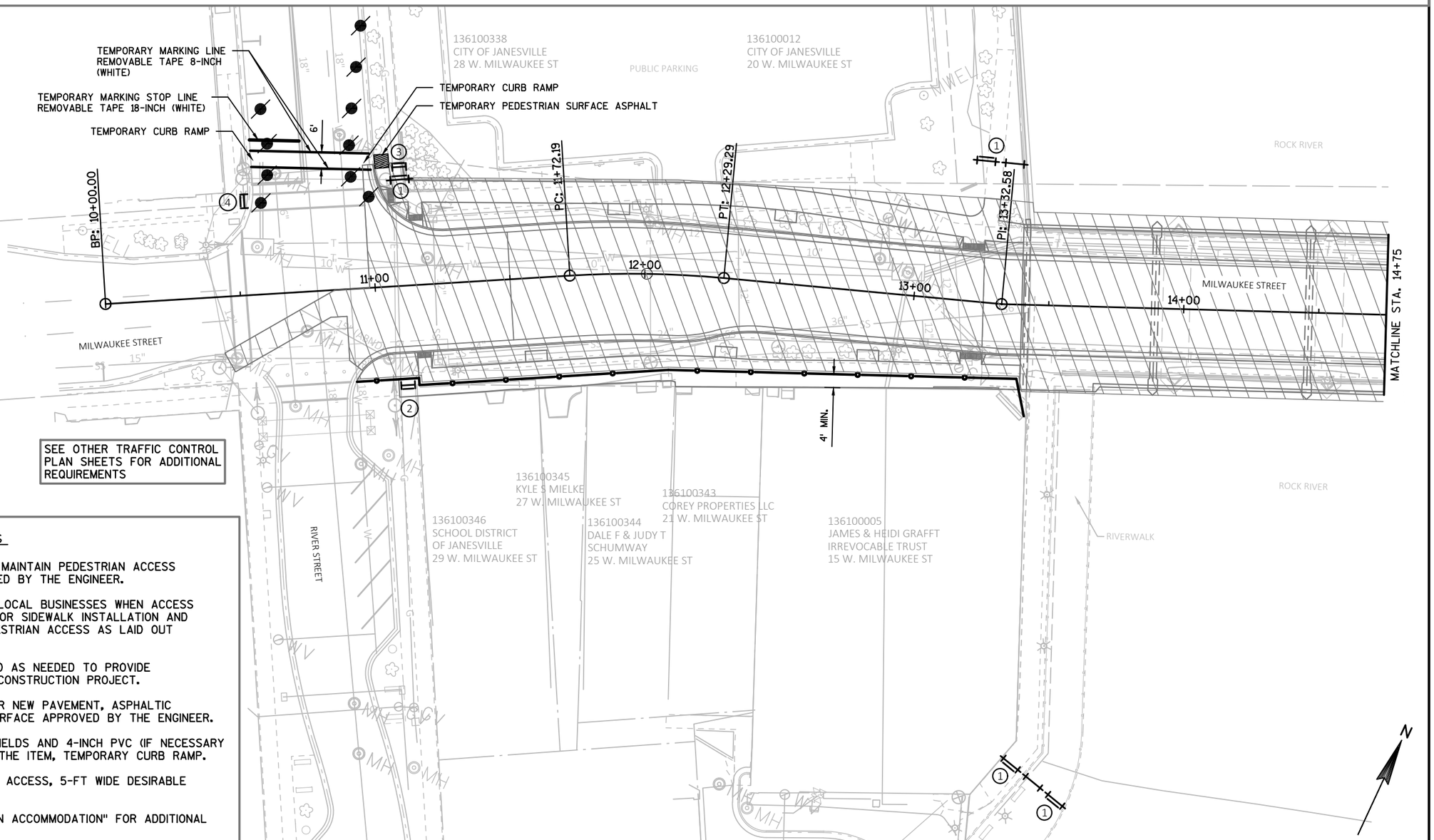
② TYPE II BARRICADE



③ TYPE II BARRICADE



④ TYPE II BARRICADE



SEE OTHER TRAFFIC CONTROL PLAN SHEETS FOR ADDITIONAL REQUIREMENTS

NOTES

COORDINATE ALL SIDEWALK REMOVALS TO MAINTAIN PEDESTRIAN ACCESS TO BUSINESSES AND SCHOOLS, AS DIRECTED BY THE ENGINEER.

THE CONTRACTOR WILL COORDINATE WITH LOCAL BUSINESSES WHEN ACCESS TO THE BUSINESS WILL BE CLOSED OFF FOR SIDEWALK INSTALLATION AND ANY OTHER WORK THAT MAY IMPACT PEDESTRIAN ACCESS AS LAID OUT IN THE PLAN.

TEMPORARY CROSSWALKS SHALL BE MOVED AS NEEDED TO PROVIDE CONTINUOUS ACCESS THROUGHOUT THE RECONSTRUCTION PROJECT.

TEMPORARY SIDEWALK MAY BE EXISTING OR NEW PAVEMENT, ASPHALTIC SURFACE TEMPORARY, OR OTHER HARD SURFACE APPROVED BY THE ENGINEER.

SURFACE APPLIED DETECTABLE WARNING FIELDS AND 4-INCH PVC (IF NECESSARY FOR DRAINAGE) SHALL BE INCIDENTAL TO THE ITEM, TEMPORARY CURB RAMP.

MAINTAIN AN ADA ACCESSIBLE PEDESTRIAN ACCESS, 5-FT WIDE DESIRABLE (4-FT MINIMUM).

SEE S.D.D. "TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION" FOR ADDITIONAL INFORMATION.

PROJECT NO: 5990-00-34	HWY: MILWAUKEE STREET	COUNTY: ROCK	TRAFFIC CONTROL: PEDESTRIAN ACCESS	SHEET 45	E

2

LEGEND

TEMPORARY PEDESTRIAN SAFETY FENCE

TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN

TYPE II BARRICADE WITH/WITHOUT ATTACHED SIGN

TRAFFIC CONTROL DRUM WITH LIGHT TYPE C

WORK AREA

① R9-9 24"X12"

TYPE III BARRICADE

② R9-11A 24"X12"

TYPE II BARRICADE

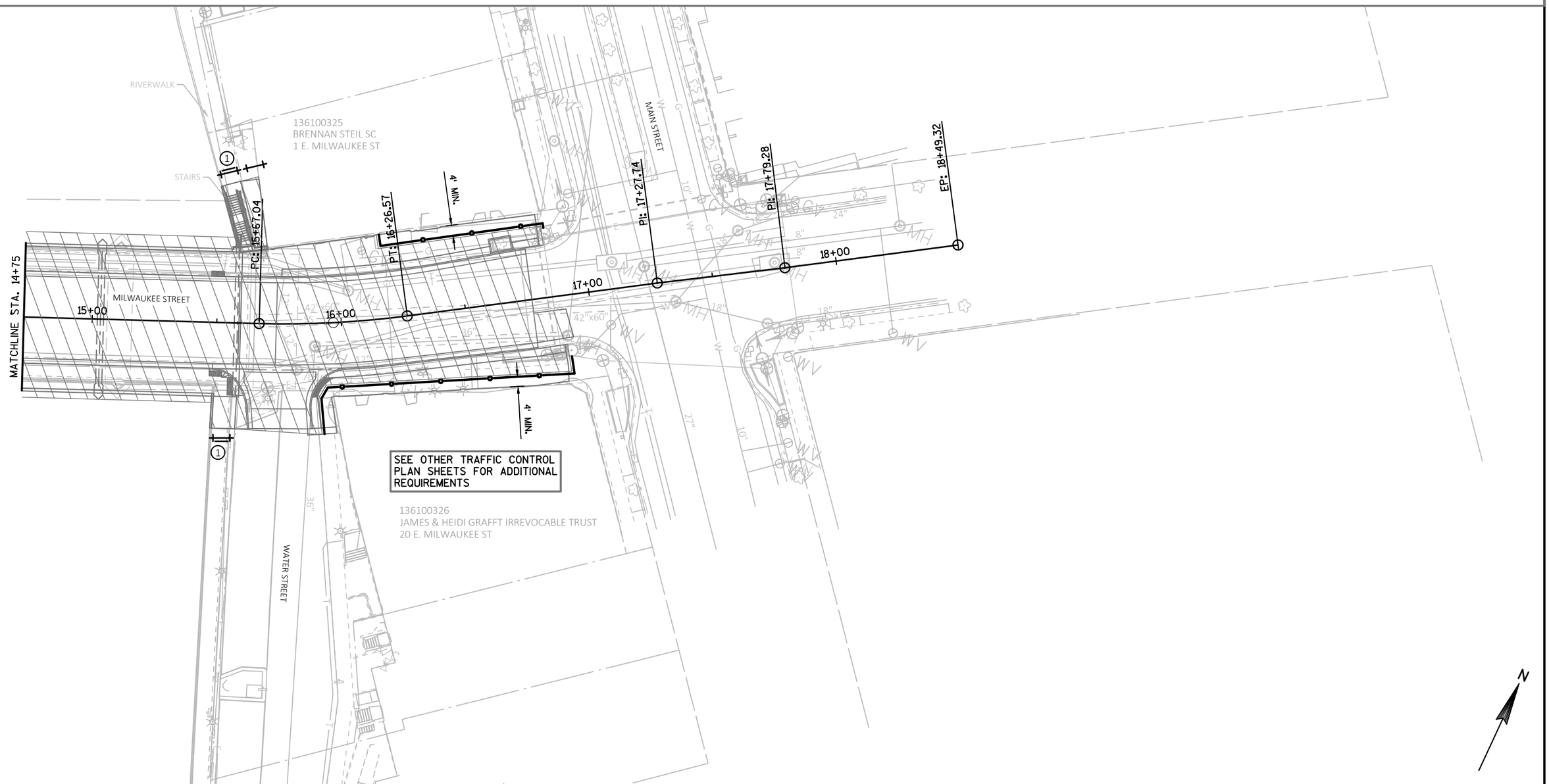
③ R9-11A 24"X12"

TYPE II BARRICADE

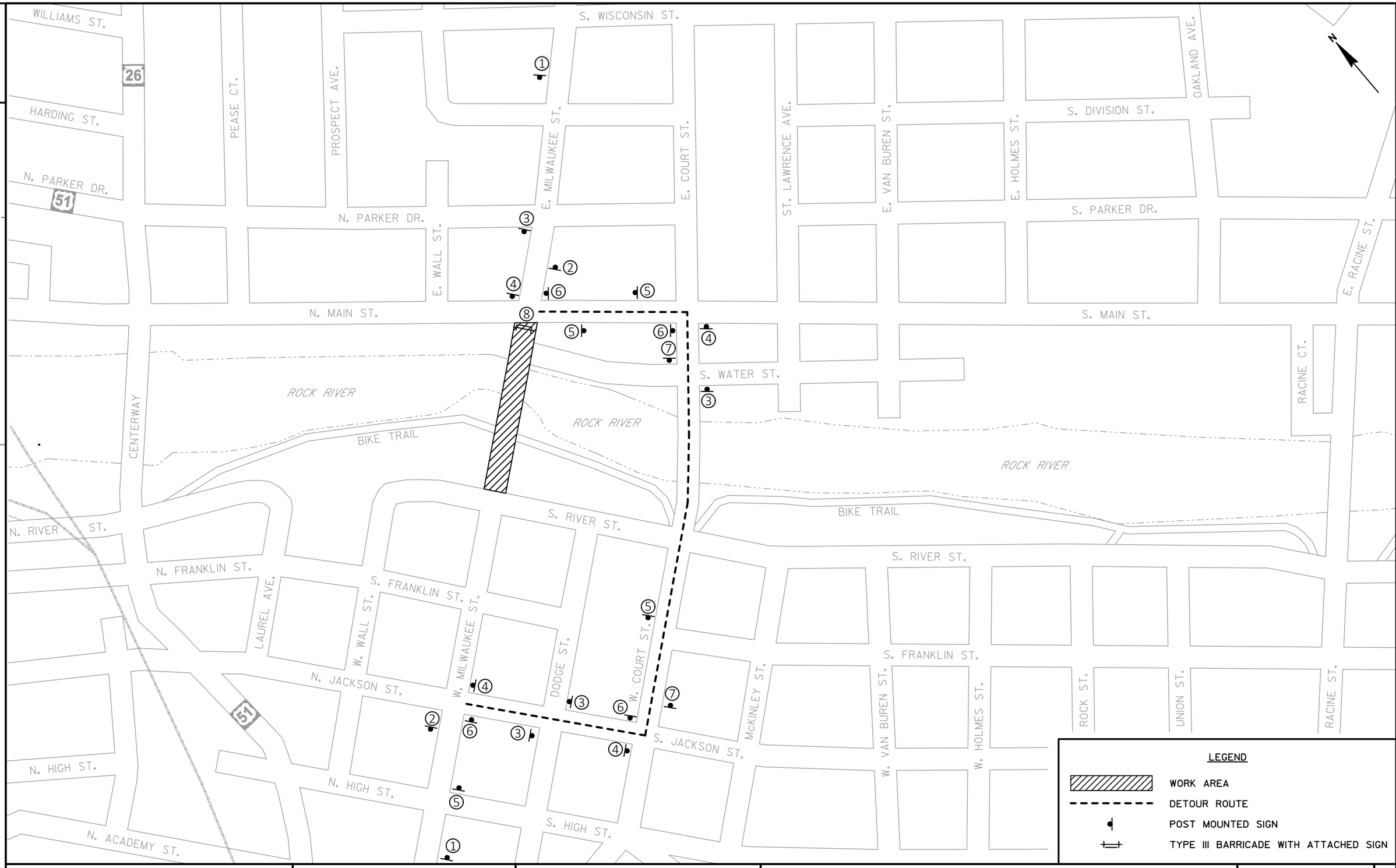
④ R9-11 24"X12"

TYPE II BARRICADE

2



PROJECT NO:5990-00-34	HWY: MILWAUKEE STREET	COUNTY: ROCK	TRAFFIC CONTROL: PEDESTRIAN ACCESS	SHEET 46	E



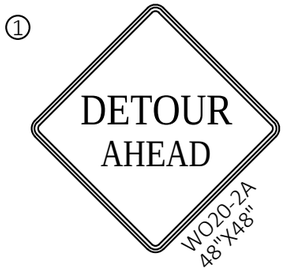
PROJECT NO: 5990-00-34	HWY: MILWAUKEE STREET	COUNTY: ROCK	DETOUR ROUTE	SHEET 47 E

FILE NAME : P:\870S\879\00879002\C3D\SHEETSPLAN\027001-DT.DWG
LAYOUT NAME - 027001-dt

PLOT DATE : 2/6/2018 3:26 PM PLOT BY : JASON DOLENS PLOT NAME : PLOT SCALE : **********

WISDOT/CADDS SHEET 42

2

① 

② 

M4-8A
24"X18"

③ 

M4-8
24"X12"

TRAFFIC CONTROL
SIGNS FIXED MESSAGE
48"X24" (8 S.F.)


MO5-1L
21"X21"

④ 

M4-8
24"X12"

TRAFFIC CONTROL
SIGNS FIXED MESSAGE
48"X24" (8 S.F.)


MO6-1L
21"X21"

⑤ 

M4-8
24"X12"

TRAFFIC CONTROL
SIGNS FIXED MESSAGE
48"X24" (8 S.F.)


MO5-1R
21"X21"

⑥ 

M4-8
24"X12"

TRAFFIC CONTROL
SIGNS FIXED MESSAGE
48"X24" (8 S.F.)


M06-1R
21"X21"

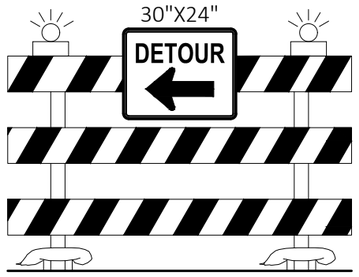
⑦ 

M4-8
24"X12"

TRAFFIC CONTROL
SIGNS FIXED MESSAGE
48"X24" (8 S.F.)


M06-1
21"X21"

M4-9L
30"X24"

⑧ 

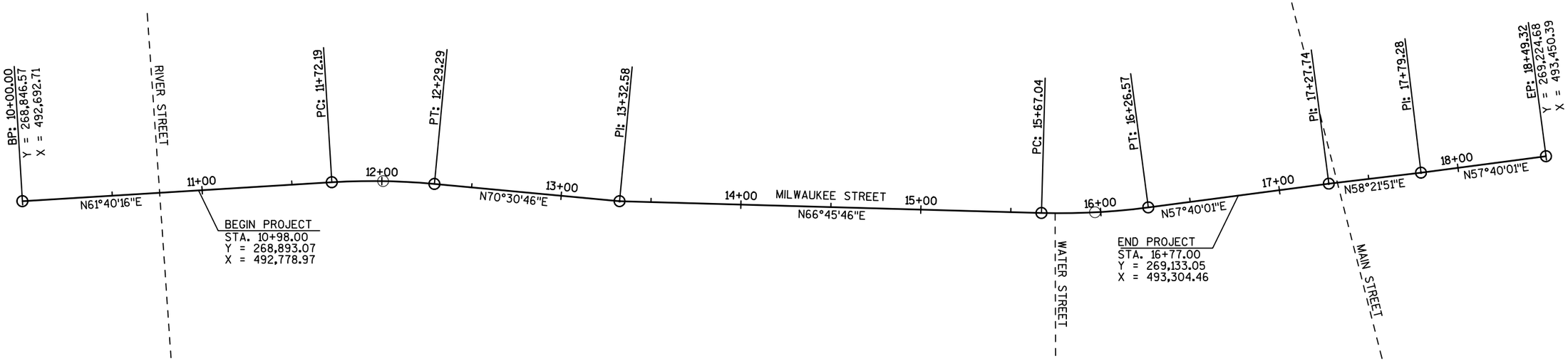
TYPE III BARRICADE

PROJECT NO: 5990-00-34	HWY: MILWAUKEE STREET	COUNTY: ROCK	DETOUR ROUTE	SHEET	E

FILE NAME : P:\870S\879\00879002\C3D\SHEETSPLAN\027001-DT.DWG
LAYOUT NAME - 027002-dt

PLOT DATE : 2/6/2018 3:26 PM PLOT BY : JASON DOLENS PLOT NAME : PLOT SCALE : **********

2



MILWAUKEE STREET CURVE AND P.I. DATA

P.I. STA. = 12+00.80
Y = 268,941.86
X = 492,869.46
DELTA = 08°50'30"
D = 15°29'07"
T = 28.60'
L = 57.10'
R = 370.00'
P.C. STA. = 11+72.19
Y = 268,928.28
X = 492,844.28
P.T. STA. = 12+29.29
Y = 268,951.40
X = 492,896.42

P.I. STA. = 13+32.58
Y = 268,985.86
X = 492,993.80
Δ. = 03°45'00"

P.I. STA. = 15+96.86
Y = 269,090.13
X = 493,236.64
DELTA = 09°05'45"
D = 15°16'44"
T = 29.83'
L = 59.53'
R = 375.00'
P.C. STA. = 15+67.04
Y = 269,078.36
X = 493,209.23
P.T. STA. = 16+26.57
Y = 269,106.08
X = 493,261.85

P.I. STA. = 17+27.74
Y = 269,160.19
X = 493,347.33
Δ. = 00°41'50"

P.I. STA. = 17+79.28
Y = 269,187.22
X = 493,391.22
Δ. = 00°41'50"

PROJECT NO: 5990-00-34	HWY: MILWAUKEE STREET	COUNTY: ROCK	ALIGNMENT OVERVIEW	SHEET 49	E

FILE NAME : P:\870S\879\00879002\C3D\SHEETSPLAN\027201-AD.DWG
LAYOUT NAME - 023201-ps pm
PLOT DATE : 2/26/2018 12:13 PM PLOT BY : JASON DOLENS PLOT NAME : PLOT SCALE : 1 IN:60 FT
WISDOT/CADDS SHEET 42

2

METAL RAILING CORNER POST
STREET LIGHT POLE 19.09' 8.73' 8.89'
METAL RAILING CORNER POST
CP*4
PK NAIL
Y=269,169.47
X=492,902.29

CENTER OF CIRCULAR STORM SEWER CASTING
16.17'
CENTER OF SANITARY SEWER MANHOLE 38.56'
CP*2
SPIKE
Y=269,020.01
X=492,727.80
CENTER OF WATER MANHOLE 33.84'

136100338
CITY OF JANESVILLE
28 W. MILWAUKEE ST

PUBLIC PARKING

136100012
CITY OF JANESVILLE
20 W. MILWAUKEE ST

BACK OF CURB CORNER
CENTER OF MONITORING WELL 7.64' 8.28' 21.18'
CP*3
3/4" REBAR
Y=269,042.55
X=492,943.39
BACK OF CURB CORNER

RIVER STREET

BUILDING CORNER 29.41' 10.55'
CENTER OF WATER MANHOLE
CP*1
PK NAIL
Y=268,892.20
X=492,713.13
11.00' STREET LIGHT POLE

PC: 11+72.19
PT: 12+29.29
PI: 13+32.58

11+00 12+00 13+00

MILWAUKEE STREET

136100345
KYLE S MIELKE
27 W. MILWAUKEE ST

136100343
COREY PROPERTIES LLC
21 W. MILWAUKEE ST

136100346
SCHOOL DISTRICT
OF JANESVILLE
29 W. MILWAUKEE ST

136100344
DALE F & JUDY T
SCHUMWAY
25 W. MILWAUKEE ST

136100005
JAMES & HEIDI GRAFFT
IRREVOCABLE TRUST
15 W. MILWAUKEE ST

ROCK RIVER

RIVERWALK

STREET LIGHT POLE BUILDING CORNER 9.85' 4.10'
CP*5
PK NAIL
Y=269,135.11
X=493,175.50
STAIRS 13.37'
METAL RAILING END POST

136100325
BRENNAN STEIL SC
1 E. MILWAUKEE ST

PC: 15+67.04
PT: 16+26.57

TRAFFIC SIGNAL POLE 9.61' 7.83'
CENTER OF PULL BOX 8.48'
CENTER OF PULL BOX
CP*6
PK NAIL
Y=269,164.63
X=493,301.93

PI: 17+27.74
PI: 17+79.28

MAIN STREET

15+00 16+00 17+00 18+0

MILWAUKEE STREET

ROCK RIVER

WATER STREET

136100326
JAMES & HEIDI GRAFFT IRREVOCABLE TRUST
20 E. MILWAUKEE ST

PROJECT NO: 5990-00-34	HWY: MILWAUKEE STREET	COUNTY: ROCK	CONTROL POINT TIES	SHEET 50	E

FILE NAME : P:\870S\879\00879002\C3D\SHEETSPLAN\027301-CP.DWG
LAYOUT NAME - 024201-sp

PLOT DATE : 2/14/2018 2:46 PM PLOT BY : JASON DOLENS PLOT NAME : PLOT SCALE : 1 IN:40 FT

5990-00-34

Line	Item	Item Description	Unit	Total	Qty
0002	201.0120	Clearing	ID	30.000	30.000
0004	201.0220	Grubbing	ID	46.000	46.000
0006	204.0100	Removing Pavement	SY	700.000	700.000
0008	204.0150	Removing Curb & Gutter	LF	695.000	695.000
0010	204.0155	Removing Concrete Sidewalk	SY	900.000	900.000
0012	204.0195	Removing Concrete Bases	EACH	11.000	11.000
0014	204.0210	Removing Manholes	EACH	2.000	2.000
0016	204.0220	Removing Inlets	EACH	9.000	9.000
0018	204.0245	Removing Storm Sewer (size) 01. 15-Inch or Less	LF	268.000	268.000
0020	204.0245	Removing Storm Sewer (size) 02. 24-Inch	LF	120.000	120.000
0022	204.0245	Removing Storm Sewer (size) 03. 36-Inch	LF	118.000	118.000
0024	204.0245	Removing Storm Sewer (size) 04. 42x60-Inch	LF	35.000	35.000
0026	204.0280	Sealing Pipes	EACH	1.000	1.000
0028	204.0291.S	Abandoning Sewer	CY	3.750	3.750
0030	204.9060.S	Removing (item description) 01. Flashing Beacon Assembly	EACH	2.000	2.000
0032	204.9090.S	Removing (item description) 01. Concrete Planter Curb	LF	82.000	82.000
0034	204.9105.S	Removing (item description) 01. Concrete Steps, Supports, and Railings	LS	1.000	1.000
0036	205.0100	Excavation Common	CY	1,327.000	1,327.000
0038	206.1000	Excavation for Structures Bridges (structure) 01. B-53-294	LS	1.000	1.000
0040	206.5000	Cofferdams (structure) 01. B-53-294	LS	1.000	1.000
0042	210.1500	Backfill Structure Type A	TON	1,230.000	1,230.000
0044	213.0100	Finishing Roadway (project) 01. 5990-00-34	EACH	1.000	1.000
0046	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	1,146.000	1,146.000
0048	312.0110	Select Crushed Material	TON	221.000	221.000
0050	415.0080	Concrete Pavement 8-Inch	SY	1,126.000	1,126.000
0052	415.0410	Concrete Pavement Approach Slab	SY	110.000	110.000
0054	415.4100	Concrete Pavement Joint Filling	SY	1,346.000	1,346.000
0056	455.0605	Tack Coat	GAL	18.000	18.000
0058	465.0105	Asphaltic Surface	TON	102.000	102.000
0060	465.0125	Asphaltic Surface Temporary	TON	1.000	1.000
0062	502.0100	Concrete Masonry Bridges	CY	1,726.000	1,726.000
0064	502.2000	Compression Joint Sealer Preformed Elastomeric (width) 01. 2 1/4-Inch	LF	24.000	24.000
0066	502.3200	Protective Surface Treatment	SY	1,450.000	1,450.000
0068	502.3210	Pigmented Surface Sealer	SY	450.000	450.000
0070	505.0400	Bar Steel Reinforcement HS Structures	LB	28,200.000	28,200.000
0072	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	183,390.000	183,390.000
0074	506.2605	Bearing Pads Elastomeric Non-Laminated	EACH	6.000	6.000

5990-00-34

Line	Item	Item Description	Unit	Total	Qty
0076	511.1200	Temporary Shoring (structure) 01. B-53-294	SF	300.000	300.000
0078	516.0500	Rubberized Membrane Waterproofing	SY	40.000	40.000
0080	522.1060	Apron Endwalls for Culvert Pipe Reinforced Concrete 60-Inch	EACH	1.000	1.000
0082	550.0010	Pre-Boring Unconsolidated Materials	LF	320.000	320.000
0084	550.0500	Pile Points	EACH	55.000	55.000
0086	550.2146	Piling CIP Concrete 14 X 0.375-Inch	LF	5,020.000	5,020.000
0088	601.0417	Concrete Curb & Gutter 30-Inch Type K	LF	585.000	585.000
0090	601.0419	Concrete Curb & Gutter 30-Inch Type L	LF	125.000	125.000
0092	601.0600	Concrete Curb Pedestrian	LF	25.000	25.000
0094	602.0410	Concrete Sidewalk 5-Inch	SF	6,295.000	6,295.000
0096	602.0415	Concrete Sidewalk 6-Inch	SF	680.000	680.000
0098	602.0515	Curb Ramp Detectable Warning Field Natural Patina	SF	96.000	96.000
0100	602.0615	Curb Ramp Detectable Warning Field Radial Natural Patina	SF	19.600	19.600
0102	606.0300	Riprap Heavy	CY	155.000	155.000
0104	606.0700	Grouted Riprap Heavy	CY	30.000	30.000
0106	608.0312	Storm Sewer Pipe Reinforced Concrete Class III 12-Inch	LF	192.000	192.000
0108	608.0324	Storm Sewer Pipe Reinforced Concrete Class III 24-Inch	LF	180.000	180.000
0110	608.0336	Storm Sewer Pipe Reinforced Concrete Class III 36-Inch	LF	51.000	51.000
0112	608.0342	Storm Sewer Pipe Reinforced Concrete Class III 42-Inch	LF	27.000	27.000
0114	608.0360	Storm Sewer Pipe Reinforced Concrete Class III 60-Inch	LF	42.000	42.000
0116	608.3018	Storm Sewer Pipe Class III-A 18-Inch	LF	40.000	40.000
0118	611.2004	Manholes 4-FT Diameter	EACH	1.000	1.000
0120	611.2005	Manholes 5-FT Diameter	EACH	1.000	1.000
0122	611.2006	Manholes 6-FT Diameter	EACH	1.000	1.000
0124	611.3230	Inlets 2x3-FT	EACH	9.000	9.000
0126	611.8110	Adjusting Manhole Covers	EACH	1.000	1.000
0128	611.8120.S	Cover Plates Temporary	EACH	1.000	1.000
0130	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	135.000	135.000
0132	612.0902.S	Insulation Board Polystyrene (inch) 01. 2-Inch	SY	8.000	8.000
0134	616.0700.S	Fence Safety	LF	1,200.000	1,200.000
0136	618.0100	Maintenance And Repair of Haul Roads (project) 01. 5990-00-34	EACH	1.000	1.000
0138	619.1000	Mobilization	EACH	1.000	1.000
0140	624.0100	Water	MGAL	12.000	12.000

5990-00-34

Line	Item	Item Description	Unit	Total	Qty
0142	625.0100	Topsoil	SY	62.000	62.000
0144	628.1104	Erosion Bales	EACH	50.000	50.000
0146	628.1504	Silt Fence	LF	100.000	100.000
0148	628.1520	Silt Fence Maintenance	LF	100.000	100.000
0150	628.1905	Mobilizations Erosion Control	EACH	9.000	9.000
0152	628.1910	Mobilizations Emergency Erosion Control	EACH	6.000	6.000
0154	628.2008	Erosion Mat Urban Class I Type B	SY	60.000	60.000
0156	628.6005	Turbidity Barriers	SY	100.000	100.000
0158	628.7020	Inlet Protection Type D	EACH	19.000	19.000
0160	628.7560	Tracking Pads	EACH	3.000	3.000
0162	629.0210	Fertilizer Type B	CWT	0.050	0.050
0164	630.0140	Seeding Mixture No. 40	LB	1.000	1.000
0166	632.0101	Trees (species) (size) (root) 01. Japanese Tree Lilac, 'Ivory Silk', 2.5" Cal., B&B	EACH	3.000	3.000
0168	632.0101	Trees (species) (size) (root) 02. Honeylocust, 'Skyline', 2.5" Cal., B&B	EACH	1.000	1.000
0170	632.9101	Landscape Planting Surveillance and Care Cycles	EACH	10.000	10.000
0172	637.2210	Signs Type II Reflective H	SF	13.750	13.750
0174	637.2230	Signs Type II Reflective F	SF	33.000	33.000
0176	638.2602	Removing Signs Type II	EACH	9.000	9.000
0178	638.3000	Removing Small Sign Supports	EACH	3.000	3.000
0180	642.5001	Field Office Type B	EACH	1.000	1.000
0182	643.0300	Traffic Control Drums	DAY	3,140.000	3,140.000
0184	643.0410	Traffic Control Barricades Type II	DAY	1,392.000	1,392.000
0186	643.0420	Traffic Control Barricades Type III	DAY	9,293.000	9,293.000
0188	643.0705	Traffic Control Warning Lights Type A	DAY	11,287.000	11,287.000
0190	643.0715	Traffic Control Warning Lights Type C	DAY	3,140.000	3,140.000
0192	643.0900	Traffic Control Signs	DAY	19,319.000	19,319.000
0194	643.1000	Traffic Control Signs Fixed Message	SF	200.500	200.500
0196	643.1050	Traffic Control Signs PCMS	DAY	14.000	14.000
0198	643.5000	Traffic Control	EACH	1.000	1.000
0200	644.1410.S	Temporary Pedestrian Surface Asphalt	SF	75.000	75.000
0202	644.1420.S	Temporary Pedestrian Surface Plywood	SF	50.000	50.000
0204	644.1430.S	Temporary Pedestrian Surface Plate	SF	50.000	50.000
0206	644.1601.S	Temporary Curb Ramp	EACH	4.000	4.000
0208	644.1616.S	Temporary Pedestrian Safety Fence	LF	700.000	700.000
0210	645.0111	Geotextile Type DF Schedule A	SY	120.000	120.000
0212	645.0120	Geotextile Type HR	SY	370.000	370.000
0214	646.1020	Marking Line Epoxy 4-Inch	LF	1,215.000	1,215.000
0216	646.3020	Marking Line Epoxy 8-Inch	LF	100.000	100.000

5990-00-34

Line	Item	Item Description	Unit	Total	Qty
0218	646.5020	Marking Arrow Epoxy	EACH	2.000	2.000
0220	646.6120	Marking Stop Line Epoxy 18-Inch	LF	35.000	35.000
0222	646.7420	Marking Crosswalk Epoxy Transverse Line 6-Inch	LF	360.000	360.000
0224	646.7520	Marking Crosswalk Epoxy Ladder Pattern 24-Inch	LF	112.000	112.000
0226	646.8320	Marking Parking Stall Epoxy	LF	36.000	36.000
0228	649.0250	Temporary Marking Line Removable Tape 8-Inch	LF	90.000	90.000
0230	649.0850	Temporary Marking Stop Line Removable Tape 18-Inch	LF	20.000	20.000
0232	650.4000	Construction Staking Storm Sewer	EACH	15.000	15.000
0234	650.4500	Construction Staking Subgrade	LF	322.000	322.000
0236	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	200.000	200.000
0238	650.6500	Construction Staking Structure Layout (structure) 01. B-53-294	LS	1.000	1.000
0240	650.7000	Construction Staking Concrete Pavement	LF	322.000	322.000
0242	650.8500	Construction Staking Electrical Installations (project) 01. 5990-00-34	LS	1.000	1.000
0244	650.9000	Construction Staking Curb Ramps	EACH	9.000	9.000
0246	650.9910	Construction Staking Supplemental Control (project) 01. 5990-00-34	LS	1.000	1.000
0248	650.9920	Construction Staking Slope Stakes	LF	227.000	227.000
0250	652.0105	Conduit Rigid Metallic 3/4-Inch	LF	16.000	16.000
0252	652.0125	Conduit Rigid Metallic 2-Inch	LF	20.000	20.000
0254	652.0205	Conduit Rigid Nonmetallic Schedule 40 3/4-Inch	LF	1,183.000	1,183.000
0256	652.0225	Conduit Rigid Nonmetallic Schedule 40 2-Inch	LF	1,401.000	1,401.000
0258	652.0235	Conduit Rigid Nonmetallic Schedule 40 3-Inch	LF	21.000	21.000
0260	652.0305	Conduit Rigid Nonmetallic Schedule 80 3/4-Inch	LF	83.000	83.000
0262	652.0325	Conduit Rigid Nonmetallic Schedule 80 2-Inch	LF	175.000	175.000
0264	652.0700.S	Install Conduit into Existing Item	EACH	5.000	5.000
0266	652.0800	Conduit Loop Detector	LF	112.000	112.000
0268	653.0115	Pull Boxes Steel 12x36-Inch	EACH	4.000	4.000
0270	653.0140	Pull Boxes Steel 24x42-Inch	EACH	4.000	4.000
0272	653.0222	Junction Boxes 18x12x6-Inch	EACH	7.000	7.000
0274	653.0900	Adjusting Pull Boxes	EACH	3.000	3.000
0276	653.0905	Removing Pull Boxes	EACH	3.000	3.000
0278	654.0101	Concrete Bases Type 1	EACH	1.000	1.000
0280	655.0210	Cable Traffic Signal 3-14 AWG	LF	36.000	36.000
0282	655.0230	Cable Traffic Signal 5-14 AWG	LF	40.000	40.000
0284	655.0260	Cable Traffic Signal 12-14 AWG	LF	30.000	30.000
0286	655.0610	Electrical Wire Lighting 12 AWG	LF	6,330.000	6,330.000
0288	655.0615	Electrical Wire Lighting 10 AWG	LF	4,020.000	4,020.000
0290	655.0625	Electrical Wire Lighting 6 AWG	LF	2,525.000	2,525.000

5990-00-34

Line	Item	Item Description	Unit	Total	Qty
0292	655.0630	Electrical Wire Lighting 4 AWG	LF	3,472.000	3,472.000
0294	655.0635	Electrical Wire Lighting 2 AWG	LF	1,196.000	1,196.000
0296	655.0700	Loop Detector Lead In Cable	LF	143.000	143.000
0298	655.0800	Loop Detector Wire	LF	376.000	376.000
0300	657.0100	Pedestal Bases	EACH	1.000	1.000
0302	657.0420	Traffic Signal Standards Aluminum 13-FT	EACH	1.000	1.000
0304	657.6005	Anchor Assemblies Light Poles on Structures	EACH	7.000	7.000
0306	658.5069	Signal Mounting Hardware (location) 01. Milwaukee Street & River Street	LS	1.000	1.000
0308	658.5069	Signal Mounting Hardware (location) 02. Milwaukee Street & Main Street	LS	1.000	1.000
0310	690.0150	Sawing Asphalt	LF	275.000	275.000
0312	690.0250	Sawing Concrete	LF	715.000	715.000
0314	715.0415	Incentive Strength Concrete Pavement	DOL	500.000	500.000
0316	715.0502	Incentive Strength Concrete Structures	DOL	10,356.000	10,356.000
0318	999.1000.S	Seismograph	LS	1.000	1.000
0320	999.1500.S	Crack and Damage Survey	LS	1.000	1.000
0322	SPV.0060	Special 01. Manholes 8x8-FT Special	EACH	1.000	1.000
0324	SPV.0060	Special 02. Manhole Cover Type Special Logo	EACH	4.000	4.000
0326	SPV.0060	Special 03. Inlet Cover Type H Special Logo	EACH	4.000	4.000
0328	SPV.0060	Special 04. Inlet Cover Type H Special Logo LP	EACH	5.000	5.000
0330	SPV.0060	Special 05. Utility Line Opening (ULO)	EACH	1.000	1.000
0332	SPV.0060	Special 06. Concrete Base Type 3 Special	EACH	3.000	3.000
0334	SPV.0060	Special 07. Concrete Base Type 5 Special	EACH	9.000	9.000
0336	SPV.0060	Special 08. Remove and Salvage Light Pole Assembly	EACH	9.000	9.000
0338	SPV.0060	Special 09. Decorative Mast Arm Lighting Unit	EACH	3.000	3.000
0340	SPV.0060	Special 10. Decorative Pole Top Lighting Unit	EACH	16.000	16.000
0342	SPV.0060	Special 11. Tree Grate	EACH	5.000	5.000
0344	SPV.0060	Special 12. Root Pruning Existing Terrace Trees	EACH	2.000	2.000
0346	SPV.0060	Special 13. Remove, Salvage and Reinstall Trash Receptacle	EACH	3.000	3.000
0348	SPV.0060	Special 14. Remove, Salvage and Reinstall Bench, 6-Foot, Backed	EACH	2.000	2.000
0350	SPV.0060	Special 15. Bicycle Rack	EACH	2.000	2.000
0352	SPV.0060	Special 16. Trash Receptacle	EACH	1.000	1.000
0354	SPV.0060	Special 17. Bench, 6-Foot, Backless	EACH	3.000	3.000
0356	SPV.0060	Special 18. Perennials, Daylily, Happy Returns, CG, #1	EACH	11.000	11.000
0358	SPV.0060	Special 19. Perennials, Aster, Purple Dome, CG, #1	EACH	8.000	8.000
0360	SPV.0060	Special 20. Perennials, Lilyturf, CG, #SP04	EACH	10.000	10.000
0362	SPV.0060	Special 21. Bulbs, Daffodil, Mixed	EACH	30.000	30.000
0364	SPV.0060	Special 22. Sidewalk Cover Plate	EACH	1.000	1.000

5990-00-34

Line	Item	Item Description	Unit	Total	Qty
0366	SPV.0090	Special 01. Concrete Planter Curb Special	LF	30.000	30.000
0368	SPV.0090	Special 02. Concrete Curb & Gutter 30-Inch Type K Special	LF	40.000	40.000
0370	SPV.0090	Special 03. Concrete Curb & Gutter 24-Inch Type L Special	LF	20.000	20.000
0372	SPV.0090	Special 04. Concrete Gutter 36-Inch Special	LF	55.000	55.000
0374	SPV.0090	Special 05. Metal Decorative Handrail	LF	42.000	42.000
0376	SPV.0090	Special 06. Metal Decorative Guardrail	LF	70.000	70.000
0378	SPV.0090	Special 07. Remove, Salvage and Reinstall Concrete Barrier	LF	50.000	50.000
0380	SPV.0090	Special 08. Remove and Salvage Concrete Barrier	LF	20.000	20.000
0382	SPV.0090	Special 09. Parapet Concrete Type 'TX'	LF	407.000	407.000
0384	SPV.0090	Special 10. Shovel Cut Edging	LF	15.000	15.000
0386	SPV.0105	Special 01. Remove, Salvage, & Reinstall Traffic Signal Eqpt (Milwaukee St & River St)	LS	1.000	1.000
0388	SPV.0105	Special 02. Remove, Salvage, & Reinstall Traffic Signal Eqpt (Milwaukee St & Main St)	LS	1.000	1.000
0390	SPV.0105	Special 03. Concrete Steps and Supports	LS	1.000	1.000
0392	SPV.0105	Special 04. Construction Access	LS	1.000	1.000
0394	SPV.0105	Special 05. Removing Old Structure Over Waterway with Minimal Debris Station 14+54	LS	1.000	1.000
0396	SPV.0105	Special 06. Locate and Reference Property Corners	LS	1.000	1.000
0398	SPV.0105	Special 07. Reset Property Corners	LS	1.000	1.000
0400	SPV.0105	Special 08. Remove and Reattach Existing Railing	LS	1.000	1.000
0402	SPV.0105	Special 09. Remove, Salvage, Modify, and Reattach Existing Railing	LS	1.000	1.000
0404	SPV.0105	Special 10. Reconstruct Cantilever Sidewalk	LS	1.000	1.000
0406	SPV.0105	Special 11. Remove, Salvage and Reinstall Awning Side Panels	LS	1.000	1.000
0408	SPV.0165	Special 01. Concrete Sidewalk, 5-Inch, Colored	SF	3,405.000	3,405.000
0410	SPV.0165	Special 02. Vault Wall	SF	50.000	50.000
0412	SPV.0165	Special 03. Abandoned Vault Removal Masonry, Depth to 5'	SF	50.000	50.000
0414	SPV.0165	Special 04. Abandoned Vault Removal Masonry, Depth Over 5'	SF	50.000	50.000
0416	SPV.0165	Special 05. Abandoned Vault Removal Reinforced Concrete 0"-10", Depth to 5'	SF	50.000	50.000
0418	SPV.0165	Special 06. Abandoned Vault Removal Reinforced Concrete 0"-10", Depth Over 5'	SF	50.000	50.000
0420	SPV.0165	Special 07. Abandoned Vault Removal Reinforced Concrete 10"+, Depth to 5'	SF	50.000	50.000
0422	SPV.0165	Special 08. Abandoned Vault Removal Reinforced	SF	50.000	50.000

5990-00-34

Line	Item	Item Description	Unit	Total	Qty
		Concrete 10"+, Depth Over 5'			
0424	SPV.0165	Special 09. Structural Sidewalk Special	SF	210.000	210.000
0426	SPV.0165	Special 10. Construction Staking Sidewalk	SF	150.000	150.000
0428	SPV.0180	Special 01. Shredded Hardwood Bark Mulch	SY	28.000	28.000
0430	SPV.0195	Special 01. Excavation, Hauling, and Disposal of PAH Contaminated Soil	TON	400.000	400.000

3

CLEARING & GRUBBING

CATEGORY	STATION	LOCATION	(201.0120) CLEARING ID	(201.0220) GRUBBING ID
0010	12+37	LT	10	10
	12+76	RT	10	10
	13+13	RT	10	10
	15+66	RT	-	16
	PROJECT TOTALS		**30**	**46**

REMOVING CONCRETE PAVEMENT

CATEGORY	STATION	TO STATION	LOCATION	(204.0100) REMOVING PAVEMENT SY	* (690.0250) SAWING CONCRETE LF
0010	10+55	13+42	LT & RT	693	80
	15+58	15+76	RT	7	19
	PROJECT TOTALS			**700**	**99**

*ADDITIONAL QUANTITIES FOUND ELSEWHERE
NOTE: CONCRETE PAVEMENT FROM STA. 10+55 TO STA. 13+42 IS CRACKED AND SEATED

REMOVING CURB & GUTTER

CATEGORY	STATION	TO STATION	LOCATION	(204.0150) REMOVING CURB & GUTTER LF	* (690.0250) SAWING CONCRETE LF
0010	11+02	13+43	LT	255	5
	11+26	13+43	RT	215	3
	15+65	16+77	LT	110	5
	15+65	16+77	RT	115	5
	PROJECT TOTALS			**695**	**18**

*ADDITIONAL QUANTITIES FOUND ELSEWHERE

REMOVING CONCRETE SIDEWALK

CATEGORY	STATION	TO STATION	LOCATION	(204.0155) REMOVING CONCRETE SIDEWALK SY	* (690.0250) SAWING CONCRETE LF
0010	11+03	13+39	LT	308	20
	11+07	13+43	RT	282	256
	15+56	16+88	RT	159	153
	15+58	15+70	LT	20	40
	15+70	16+83	LT	131	129
	PROJECT TOTALS			**900**	**598**

*ADDITIONAL QUANTITIES FOUND ELSEWHERE
NOTE: THE REMOVAL OF BRICK PAVERS AND CONCRETE DRIVEWAY APRONS SHALL BE PAID AS REMOVING CONCRETE SIDEWALK

REMOVING CONCRETE PLANTER CURB

CATEGORY	STATION	TO STATION	LOCATION	(204.9090.S.01) LF
0010	16+62	16+88	RT	35
	16+64	16+83	LT	47
	PROJECT TOTAL			**82**

REMOVING CONCRETE STEPS, SUPPORTS, AND RAILINGS

CATEGORY	STATION	TO STATION	LOCATION	(204.9105.S.01) LS
0010	15+52	15+64	LT	1
	PROJECT TOTAL			**1**

REMOVE, SALVAGE AND REINSTALL AWNING SIDE PANELS

CATEGORY	STATION	LOCATION	(SPV.0105.11) LS
0030	16+17 & 16+32	LT	1
	PROJECT TOTAL		**1**

REMOVE, SALVAGE AND REINSTALL CONCRETE BARRIER

CATEGORY	STATION TO STATION	LOCATION	TO STATION	LOCATION	(SPV.0090.07) LF
0010	13+95 - 14+65	RT	15+49 - 15+70	RT	50
	PROJECT TOTAL				**50**

REMOVE AND SALVAGE CONCRETE BARRIER

CATEGORY	STATION TO STATION	TO STATION	LOCATION	(SPV.0090.08) LF
0030	13+95	14+65	RT	20
	PROJECT TOTAL			**20**

ABANDONING SEWER

CATEGORY	STATION	TO STATION	LOCATION	(204.0291.S) CY	NOTES
0010	10+47	11+04	RT	3.75	18-INCH PIPE
	PROJECT TOTAL			**3.75**	

3

3

REMOVING STORM SEWER STRUCTURES

CATEGORY	STATION	LOCATION	(204.0210) REMOVING MANHOLES EACH	(204.0220) REMOVING INLETS EACH
0010	11+04	27' RT	1	-
	11+21	29' RT	-	1
	11+23	24' LT	-	1
	12+05	18' LT	-	1
	12+27	22' RT	-	1
	12+33	18' LT	-	1
	13+05	17' RT	-	1
	13+08	18' LT	-	1
	15+77	19' LT	-	1
	15+82	18' RT	1	-
	16+11	18' RT	-	1
	PROJECT TOTALS		**2**	**9**

REMOVING STORM SEWER

CATEGORY	STATION	TO STATION	LOCATION	SIZE 01. (204.0245.01) 15-INCH OR LESS LF	SIZE 02. (204.0245.02) 24-INCH LF	SIZE 03. (204.0245.03) 36-INCH LF	SIZE 04. (204.0245.04) 42X60-INCH LF	(204.0280) SEALING PIPES EACH	NOTES
0010	10+72	10+82	RT	10	-	-	-	-	
	11+04	12+27	RT	-	120	-	-	-	
	11+21	11+21	RT	3	-	-	-	-	
	11+21	11+23	RT & LT	50	-	-	-	-	
	11+23	11+36	LT	15	-	-	-	1	10-INCH
	12+02	12+05	LT	20	-	-	-	-	
	12+05	12+33	LT	29	-	-	-	-	
	12+27	13+43	RT	-	-	118	-	-	
	12+33	12+37	LT &RT	38	-	-	-	-	
	13+04	13+05	RT	8	-	-	-	-	
	13+09	13+12	LT & RT	26	-	-	-	-	
	15+65	16+00	LT	-	-	-	35	-	
	15+74	15+77	LT	18	-	-	-	-	
	15+74	15+82	LT & RT	21	-	-	-	-	
	15+82	16+11	RT	30	-	-	-	-	
		PROJECT TOTALS		**268**	**120**	**118**	**35**	**1**	

EXISTING VAULTS

CATEGORY	DESCRIPTION	(SPV.0165.02) VAULT WALL SF	ABANDONED VAULT REMOVAL (SPV.0165.03) MASONRY, DEPTH TO 5' SF	(SPV.0165.04) MASONRY, DEPTH OVER 5' SF	(SPV.0165.05) REINFORCED CONCRETE 0"-10", DEPTH TO 5' SF	(SPV.0165.06) REINFORCED CONCRETE 0"-10", DEPTH OVER 5' SF	(SPV.0165.07) REINFORCED CONCRETE 10"+, DEPTH TO 5' SF	(SPV.0165.08) REINFORCED CONCRETE 10"+, DEPTH OVER 5' SF
0010	UNDISTRIBUTED	50	50	50	50	50	50	50
	PROJECT TOTALS	**50**	**50**	**50**	**50**	**50**	**50**	**50**

SELECT CRUSHED MATERIAL

CATEGORY	DESCRIPTION	(312.0110) TON	COMMENTS
0010	PROJECT 5990-00-34	221	UNDISTRIBUTED FOR EBS
	PROJECT TOTAL	**221**	

EXCAVATION, HAULING, AND DISPOSAL OF PAH CONTAMINATED SOIL

CATEGORY	STATION	TO STATION	LOCATION	(SPV.0195.01) TON
0030	13+18	13+40	LT & RT	400
		PROJECT TOTAL		**400**

EARTHWORK PROJECT I.D. 5990-00-34 - MILWAUKEE STREET - BRIDGE RECONSTRUCTION

Division	From/To Station	Location	Common Excavation (1) Cut (2)	(item # 205.0100) EBS Excavation (3)	Salvaged/Unusable Pavement Material (4)	Available Material (5)	Unexpanded Fill	Expanded Fill (6) Factor 1.25	Mass Ordinate +/- (7)	Waste	Borrow (item #208.0100)	Comment:
1	10+98 - 13+40.72		930		330	600	0	0	600	600	0	
2	15+58.88 - 16+77		176		106	70	0	0	70	70	0	
	STRUCTURE B-53-0294		0	0	0	0	0	0	0	0	0	
	UNDISTRIBUTED EBS		0	221	0	0	0	0	0	0	0	
Project Totals			1,106	221	436	670	0	0	670	670	0	
	Overall Project Total:		1,327									

1) Excavation Common is the sum of the Cut and EBS Excavation columns. Item number 205.0100
2) Salvaged/Unsuable Pavement Material is included in Cut.
3) EBS Excavation to be backfilled with Select Crushed Material. An undistributed amount of Select Crushed Material is included in the project.
4) Salvaged/Unusable Asphalt and Concrete Pavement Material
5) Available Material = Cut - Salvaged/Unusuable Pavement Material
6) Expanded Fill. Factor = 1.25
7) 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.

CONCRETE PAVEMENT

CATEGORY	STATION	TO STATION	LOCATION	* (305.0120) BASE AGGREGATE DENSE 1 1/4-INCH TON	* (624.0100) WATER MGAL	(415.0080) CONCRETE PAVEMENT 8-INCH SY	(415.4100) CONCRETE PAVEMENT JOINT FILLING SY	(415.0410) CONCRETE PAVEMENT APPROACH SLAB SY	(650.4500) CONSTRUCTION STAKING SUBGRADE LF	(650.7000) CONSTRUCTION STAKING CONCRETE PAVEMENT LF	(715.0415) INCENTIVE STRENGTH CONCRETE PAVEMENT DOL	* (690.0150) SAWING ASPHALT LF
0010	11+50	13+40	LT & RT	316	4	700	755	55	190	190	-	-
	15+62	15+89	RT	17	-	41	41	-	15	15	-	-
	15+60	16+77	LT & RT	187	3	385	440	55	117	117	-	36
		PROJECT 5990-00-34		-	-	-	-	-	-	-	500	-
		PROJECT TOTALS		**520**	**7**	**1,126**	**1,346**	**110**	**322**	**322**	**500**	**36**

*ADDITIONAL QUANTITIES FOUND ELSEWHERE

NOTE: WATER BID ITEM TO BE USED FOR BASE AGGREGATE DUST CONTROL AND COMPACTION

ASPHALT PAVEMENT

CATEGORY	STATION	TO STATION	LOCATION	* (305.0120) BASE AGGREGATE DENSE 1 1/4-INCH TON	(465.0105) ASPHALTIC SURFACE TON	(455.0605) TACK COAT GAL	* (624.0100) WATER MGAL	* (690.0150) SAWING ASPHALT LF
0010	10+43	11+50	LT & RT	324	92	16	5	183
	15+65	15+85	RT	22	5	1	-	16
	16+77	16+92	RT	15	5	1	-	40
		PROJECT TOTALS		**361**	**102**	**18**	**5**	**239**

*ADDITIONAL QUANTITIES FOUND ELSEWHERE

NOTE: WATER BID ITEM TO BE USED FOR BASE AGGREGATE DUST CONTROL AND COMPACTION

ASPHALTIC SURFACE TEMPORARY

CATEGORY	STATION	TO STATION	LOCATION	* (305.0120) BASE AGGREGATE DENSE 1 1/4-INCH TON	(465.0125) ASPHALTIC SURFACE TEMPORARY TON
0010	15+86	15+96	RT	1	1
		PROJECT TOTALS		**1**	**1**

*ADDITIONAL QUANTITIES FOUND ELSEWHERE

CONCRETE CURB & GUTTER

CATEGORY	STATION	TO STATION	LOCATION	(601.0417) CONCRETE CURB & GUTTER 30-INCH TYPE K LF	(601.0419) CONCRETE CURB & GUTTER 30-INCH TYPE L LF	(SPV.0090.02) CONCRETE CURB & GUTTER 30-INCH TYPE K SPECIAL LF	(SPV.0090.03) CONCRETE CURB & GUTTER 24-INCH TYPE L SPECIAL LF	(SPV.0090.04) CONCRETE GUTTER 36-INCH SPECIAL LF	(601.0600) CONCRETE CURB PEDESTRIAN LF	* (650.5500) CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER LF
0010	10+93	13+40	RT	190	60	-	-	-	25	85
	11+02	13+40	LT	195	65	-	-	-	-	65
	15+48	16+77	RT	115	-	10	20	55	-	20
	15+60	16+77	LT	85	-	30	-	-	-	-
		PROJECT TOTALS		**585**	**125**	**40**	**20**	**55**	**25**	**170**

*ADDITIONAL QUANTITIES FOUND ELSEWHERE

NOTE: BASE AGGREGATE UNDER THE CURB & GUTTER IS INCLUDED WITH THE CONCRETE PAVEMENT BID ITEMS

CONCRETE PLANTER CURB SPECIAL

CATEGORY	STATION	TO STATION	LOCATION	(SPV.0090.01) LF
0030	16+63	16+72	LT	30
		PROJECT TOTAL		**30**

RAISED PLANTER MISCELLANEOUS ITEMS

CATEGORY	STATION	TO STATION	LOCATION	* (625.0100) TOPSOIL SY	* (650.5500) CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER LF
0010	16+63	16+72	LT	2	30
		PROJECT TOTALS		**2**	**30**

*ADDITIONAL QUANTITIES FOUND ELSEWHERE

3

3

CONCRETE SIDEWALK

CATEGORY	STATION	TO STATION	LOCATION	* (305.0120) BASE AGGREGATE DENSE 1 1/4-INCH TON	* (602.0410) CONCRETE SIDEWALK 5-INCH SF	(602.0415) CONCRETE SIDEWALK 6-INCH SF	(SPV.0165.09) STRUCTURAL SIDEWALK SPECIAL SF	(602.0515) CURB RAMP DETECTABLE WARNING FIELD NATURAL PATINA SF	(602.0615) CURB RAMP DETECTABLE WARNING FIELD RADIAL NATURAL PATINA SF	(SPV.0165.10) CONSTRUCTION STAKING SIDEWALK SF	(650.9000) CONSTRUCTION STAKING CURB RAMPS EACH
0010	11+03	13+08	LT	88	835	335	-	36	-		3
	11+07	13+08	RT	91	1,090	135	-	26	-	-	2
	15+47	16+83	LT	38	700	-	-	10	-	-	1
	15+47	16+88	RT	36	430	210	-	24	19.6	-	3
	15+50	15+70	LT	9	150	-	210	-	-	150	-
	PROJECT TOTALS			**262**	**3,205**	**680**	**210**	**96**	**19.6**	**150**	**9**

*ADDITIONAL QUANTITIES FOUND ELSEWHERE

CONCRETE SIDEWALK (NON-PARTICIPATING)

CATEGORY	STATION	TO STATION	LOCATION	* (602.0410) CONCRETE SIDEWALK 5-INCH SF
0030	11+19	13+40	RT	1,090
	11+28	13+18	LT	970
	15+70	16+83	LT	540
	15+90	16+88	RT	490
	PROJECT TOTAL			**3,090**

*ADDITIONAL QUANTITIES FOUND ELSEWHERE

CONCRETE STEPS

CATEGORY	STATION	TO STATION	LOCATION	(SPV.0105.03) CONCRETE STEPS AND SUPPORTS LS	(SPV.0090.05) METAL DECORATIVE HANDRAIL LF	(SPV.0090.06) METAL DECORATIVE GUARDRAIL LF
0010	15+52	15+64	LT	1	42	70
	PROJECT TOTALS			**1**	**42**	**70**

CONCRETE SIDEWALK, 5-INCH, COLORED

CATEGORY	STATION	TO STATION	LOCATION	(SPV.0165.01) SF
0030	10+91	13+08	RT	1,395
	11+03	13+08	LT	1,440
	15+50	16+83	LT	285
	15+50	16+88	RT	285
	PROJECT TOTAL			**3,405**

NOTE: BASE AGGREGATE UNDER THE CONCRETE SIDEWALK, 5-INCH, COLORED IS INCLUDED IN THE CONCRETE SIDEWALK MISCELLANEOUS QUANTITY TABLE

CONSTRUCTION STAKING

CATEGORY	STATION	TO STATION	LOCATION	(650.8500.01) ELECTRICAL INSTALLATIONS LS	(650.9910.01) SUPPLEMENTAL CONTROL LS	(650.9920) SLOPE STAKES LF
0010	11+13	13+40	LT	-	-	227
		PROJECT 5990-00-34		1	1	-
		PROJECT TOTALS		**1**	**1**	**227**

PROPERTY CORNERS

CATEGORY	DESCRIPTION	(SPV.0105.06) LOCATE AND REFERENCE PROPERTY CORNERS LS	(SPV.0105.07) RESET PROPERTY CORNERS LS
0010	PROJECT 5990-00-34	1	1
	PROJECT TOTALS	**1**	**1**

SEISMOGRAPH AND CRACK AND DAMAGE SURVEY

CATEGORY	LOCATION	(999.1000.S) SEISMOGRAPH LS	(999.1500.S) CRACK AND DAMAGE SURVEY LS	NOTES
0010	MILWAUKEE STREET	1	1	APPROX. 8 PARCELS
	PROJECT TOTALS	**1**	**1**	

MAINTENANCE AND REPAIR OF HAUL ROADS

CATEGORY	DESCRIPTION	(618.0100.01) EACH
0040	PROJECT 5990-00-34	1
	PROJECT TOTAL	**1**

CONSTRUCTION STAKING STRUCTURE LAYOUT

CATEGORY	DESCRIPTION	(650.6500.01) LS
0020	STRUCTURE B-53-294	1
	PROJECT TOTAL	**1**

STORM SEWER STRUCTURES

CATEGORY	STRUCTURE I.D.	STATION	LOCATION	(522.1060) APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 60-INCH EACH	(611.2004) MANHOLES 4-FT DIAMETER EACH	(611.2005) MANHOLES 5-FT DIAMETER EACH	(611.2006) MANHOLES 6-FT DIAMETER EACH	(SPV.0060.01) MANHOLES 8x8-FT SPECIAL EACH	(611.3230) INLETS 2x3-FT EACH	(SPV.0060.02) MANHOLE COVER TYPE SPECIAL LOGO EACH	(SPV.0060.03) INLET COVER TYPE H SPECIAL LOGO EACH	(SPV.0060.04) INLET COVER TYPE H SPECIAL LOGO LP EACH	(650.4000) CONSTRUCTION STAKING STORM SEWER EACH	** JOINT TIES FOR CONCRETE PIPE EACH	TOP OF STRUCTURE ELEVATION	BOX DEPTH FEET	RIM ELEVATION	INVERT
0010	EX.1	10+47.44	23.07' RT	-	-	-	-	-	-	-	-	-	-	-	771.94	2.79	773.19	769.15
	1.0	10+83.00	5.50' RT	-	1	-	-	-	-	1	-	-	1	-	772.78	4.78	774.03	768.00
	2.0	12+64.00	0.00' RT	-	-	1	-	-	-	1	-	-	1	-	771.78	8.54	773.03	763.24
	2.1	12+64.00	18.00' LT	-	-	-	-	-	1	-	-	1	1	-	771.49	4.79	772.70	766.70
	2.2	12+54.00	18.00' LT	-	-	-	-	-	1	-	-	1	1	-	771.54	4.79	772.75	766.75
	2.3	12+64.00	18.00' RT	-	-	-	-	-	1	-	-	1	1	-	771.49	4.79	772.70	766.70
	2.4	12+54.00	18.00' RT	-	-	-	-	-	1	-	-	1	1	-	771.54	4.79	772.75	766.75
	2.5	12+09.50	24.00' RT	-	-	-	-	-	1	-	-	1	1	-	771.58	4.61	772.79	766.97
	3.0	13+15.00	0.00' RT	-	-	-	1	-	-	1	-	-	1	-	772.00	10.33	773.25	761.67
	3.1	13+35.00	18.00' LT	-	-	-	-	-	1	-	1	-	1	-	771.79	4.79	773.00	767.00
	3.2	13+35.00	18.00' RT	-	-	-	-	-	1	-	1	-	1	-	771.79	4.79	773.00	767.00
	4.0	13+42.50	0.00' RT	-	-	-	-	-	-	-	-	-	1	6	-	-	-	761.30
	5.0	15+57.80	0.00' RT	1	-	-	-	-	-	-	-	-	1	6	-	-	-	759.65
	6.0	16+00.00	1.90' LT	-	-	-	-	1	-	1	-	-	1	-	774.59	13.27	775.84	761.32
	6.1	15+92.00	18.00' LT	-	-	-	-	-	1	-	1	-	1	-	774.31	4.79	775.52	769.52
	6.2	16+01.50	18.00' RT	-	-	-	-	-	1	-	1	-	1	-	774.17	4.79	775.38	769.38
	PROJECT TOTALS			**1**	**1**	**1**	**1**	**1**	**9**	**4**	**4**	**5**	**15**	**12**				

**FOR INFORMATIONAL PURPOSES ONLY; NOT A PAY ITEM

STORM SEWER PIPE

CATEGORY	FROM STRUCTURE ID	TO STRUCTURE ID	(608.0312) REINFORCED CONCRETE CLASS III 12-INCH LF	(608.0324) REINFORCED CONCRETE CLASS III 24-INCH LF	(608.0336) REINFORCED CONCRETE CLASS III 36-INCH LF	(608.0342) REINFORCED CONCRETE CLASS III 42-INCH LF	(608.0360) REINFORCED CONCRETE CLASS III 60-INCH LF	(608.3018) CLASS III-A 18-INCH LF
0010	EX.1	1.0	-	-	-	-	-	40
	1.0	2.0	-	180	-	-	-	-
	2.0	3.0	-	-	51	-	-	-
	2.0	2.1	18	-	-	-	-	-
	2.1	2.2	10	-	-	-	-	-
	2.0	2.3	18	-	-	-	-	-
	2.3	2.4	10	-	-	-	-	-
	2.4	2.5	44	-	-	-	-	-
	3.0	4.0	-	-	-	27	-	-
	3.0	3.1	26	-	-	-	-	-
	3.0	3.2	28	-	-	-	-	-
	5.0	6.0	-	-	-	-	42	-
	6.0	6.1	18	-	-	-	-	-
	6.0	6.2	20	-	-	-	-	-
	PROJECT TOTALS		**192**	**180**	**51**	**27**	**42**	**40**

EXISTING SANITARY SEWER STRUCTURES

CATEGORY	STATION	LOCATION	(611.8110) ADJUSTING MANHOLE COVERS EACH	(611.8120.S) COVER PLATES TEMPORARY EACH
0030	15+89.0	9.2' RT	1	1
	PROJECT TOTALS		**1**	**1**

UTILITY LINE OPENING (ULO)

CATEGORY	STATION	LOCATION	(SPV.0060.05) EACH	UTILITY
0010	11+09	5.5' RT	1	GAS
	PROJECT TOTAL		**1**	

INSULATION BOARD POLYSTYRENE, 2-INCH

CATEGORY	STATION	LOCATION	(612.0902.S.01) SY
0010	10+67	13' RT	4
	10+91	6' RT	4
	PROJECT TOTAL		**8**

FINISHING ITEMS

CATEGORY	STATION	TO STATION	LOCATION	(625.0100)* TOPSOIL SY	(629.0210) FERTILIZER TYPE B CWT	(630.0140) SEEDING MIXTURE NO. 40 LB	(628.2008) EROSION MAT URBAN CLASS I TYPE B SY
0010	11+03	13+41	LT	60	0.05	1.00	60
		PROJECT TOTALS		**60**	**0.05**	**1.00**	**60**

*ADDITIONAL QUANTITIES FOUND ELSEWHERE

EROSION BALES

CATEGORY	DESCRIPTION	(628.1104) EACH
0010	UNDISTRIBUTED	50
	PROJECT TOTAL	**50**

SILT FENCE

CATEGORY	DESCRIPTION	(628.1504) LF	(628.1520) MAINTENANCE LF
0010	UNDISTRIBUTED	100	100
	PROJECT TOTALS	**100**	**100**

TURBIDITY BARRIERS

CATEGORY	DESCRIPTION	(628.6005) SY
0010	UNDISTRIBUTED	100
	PROJECT TOTAL	**100**

MOBILIZATIONS EROSION CONTROL

CATEGORY	PROJECT	(628.1905) EACH	(628.1910) EMERGENCY EACH
0010	5990-00-34	9	6
	PROJECT TOTALS	**9**	**6**

TRACKING PADS

CATEGORY	DESCRIPTION	(628.7560) EACH
0010	10+98	1
	16+77	1
	WATER STREET	1
	PROJECT TOTAL	**3**

INLET PROTECTION TYPE D

CATEGORY	STATION	LOCATION	(628.7020) EACH	NOTES
0010	10+41	RT	1	EXISTING
	11+21	RT	1	EXISTING
	11+23	LT	1	EXISTING
	12+05	LT	1	EXISTING
	12+27	RT	1	EXISTING
	12+10	RT	1	PROPOSED
	12+33	LT	1	EXISTING
	12+54	LT	1	PROPOSED
	12+54	RT	1	PROPOSED
	12+64	LT	1	PROPOSED
	12+64	RT	1	PROPOSED
	13+05	RT	1	EXISTING
	13+08	LT	1	EXISTING
	13+35	LT	1	PROPOSED
	13+35	RT	1	PROPOSED
	15+77	LT	1	EXISTING
	15+92	LT	1	PROPOSED
	16+02	RT	1	PROPOSED
	16+11	RT	1	EXISTING
	PROJECT TOTAL		**19**	

3

3

BICYLE RACKS, TRASH RECEPTABLES AND BENCHES

CATEGORY	STATION	LOCATION	TO STATION	LOCATION	(SPV.0060.13) REMOVE, SALVAGE AND REINSTALL TRASH RECEPTACLE EACH	(SPV.0060.14) REMOVE, SALVAGE AND REINSTALL BENCH, 6-FOOT, BACKED EACH	(SPV.0060.15) BICYCLE RACK EACH	(SPV.0060.16) TRASH RECEPTACLE EACH	(SPV.0060.17) BENCH, 6-FOOT, BACKLESS EACH
0030	11+40	LT	12+40	RT	-	1	-	-	-
	11+45	LT	11+35	LT	1	-	-	-	-
	11+45	RT	-	-	-	-	-	-	1
	11+75	RT	-	-	-	-	1	-	-
	12+05	LT	-	-	-	-	-	-	1
	12+18	RT	11+30	RT	1	-	-	-	-
	12+35	LT	-	-	-	-	-	-	1
	12+65	LT	-	-	-	-	1	-	-
	13+05	LT	-	-	-	-	-	1	-
	15+60	RT	12+50	RT	-	1	-	-	-
	15+67	RT	12+60	RT	1	-	-	-	-
			PROJECT TOTALS		**3**	**2**	**2**	**1**	**3**

TREES

CATEGORY	STATION	LOCATION	(632.0101.01) TREES (JAPANESE TREE LILAC, 'IVORY SILK', 2.5" CAL., B&B) EACH	(632.0101.02) TREES (HONEYLOCUST, 'SKYLINE', 2.5" CAL, B&B) EACH	(SPV.0060.11) TREE GRATE EACH	* (SPV.0180.01) SHREDDED HARDWOOD BARK MULCH SY
0030	11+58	RT	1	-	1	3.5
	11+90	LT	1	-	1	3.5
	12+32	RT	-	-	1	3.5
	12+50	LT	-	1	1	3.5
	12+85	RT	1	-	1	3.5
	16+68	LT	-	-	-	3.5
	PROJECT TOTALS		**3**	**1**	**5**	**21**

*ADDITIONAL QUANTITIES FOUND ELSEWHERE

LANDSCAPING PLANTER

CATEGORY	STATION	TO STATION	LOCATION	(SPV.0060.18) PERENNIALS, DAYLILY, HAPPY RETURNS, CG, #1 EACH	(SPV.0060.19) PERENNIALS, ASTER, PURPLE DOME, CG, #1 EACH	(SPV.0060.20) PERENNIALS, LILYTURF, CG, #SP04 EACH	(SPV.0060.21) BULBS, DAFFODIL, MIXED EACH	(SPV.0090.10) SHOVEL CUT EDGING LF	* (SPV.0180.01) SHREDDED HARDWOOD BARK MULCH SY
0030	13+11	13+23	LT	11	8	10	30	15	7
		PROJECT TOTALS		**11**	**8**	**10**	**30**	**15**	**7**

*ADDITIONAL QUANTITIES FOUND ELSEWHERE

ROOT PRUNING EXISTING TERRACE TREES

CATEGORY	STATION	LOCATION	(SPV.0060.12) EACH
0030	12+32	RT	1
	16+68	LT	1
	PROJECT TOTAL		**2**

LANDSCAPE PLANTING SURVEILLANCE AND CARE CYCLES

CATEGORY	DESCRIPTION	(632.9101) EACH
0030	PROJECT 5990-00-34	10
	PROJECT TOTAL	**10**

NOTE: CARE CYCLE IS FROM MAY 2019 TO AUGUST 2020

REMOVING SIGNS

CATEGORY	SIGN NO.	STATION	LOCATION	(638.2602) REMOVING SIGNS TYPE II EACH	(638.3000) REMOVING SMALL SIGN SUPPORTS EACH	(204.9060.S.01) REMOVING FLASHING BEACON ASSEMBLY EACH	* (204.0195) REMOVING CONCRETE BASES EACH	NOTES
0010	E1.1	11+19	LT	1	-	-	-	ON TRAFFIC SIGNAL POLE
	E1.2	11+29	RT	1	-	-	-	ON STREET LIGHT POLE
	E1.3	11+84	LT	-	-	-	-	TO BE REMOVED BY OTHERS
	E1.4	11+98	LT	-	-	-	-	TO BE REMOVED BY OTHERS
	E1.5	12+00	LT	1	-	-	-	ON STREET LIGHT POLE
	E1.6	12+28	LT	-	-	-	-	TO BE REMOVED BY OTHERS
	E1.7	12+63	LT	1	1	-	-	
	E1.8	12+96	RT	1	-	-	-	ON STREET LIGHT POLE
	E1.9	13+17	LT	-	-	1	1	
	E1.10	13+22	RT	1	1	-	-	
	E1.11	13+25	RT	-	-	1	1	
	E1.12	15+68	LT	1	-	-	-	ON STREET LIGHT POLE
	E1.13	15+71	RT	1	-	-	-	ON STREET LIGHT POLE
	E1.14	15+94	RT	1	1	-	-	
PROJECT TOTALS				**9**	**3**	**2**	**2**	

*ADDITIONAL QUANTITIES FOUND ELSEWHERE

NOTE: SIGNS AT THE SAME LOCATION ARE COUNTED AS ONE SIGN REMOVAL

PERMANENT SIGNING

CATEGORY	SIGN NO.	STATION	LOCATION	SIGN CODE	SIGN IN X IN	(637.2210) SIGNS TYPE II REFLECTIVE H SF	(637.2230) SIGNS TYPE II REFLECTIVE F SF	(654.0101) CONCRETE BASES TYPE 1 EACH	(657.0100) PEDESTAL BASES EACH	(657.0420) TRAFFIC SIGNAL STANDARDS ALUMINUM 13-FT EACH	NOTES
0010	1.1	12+80	LT	R3-8A	36" X 30"	7.50	-	-	-	-	ON STREET LIGHT POLE
	1.2	13+15	LT	W11-2	30" X 30"	-	6.25	1	1	1	ON TRAFFIC SIGNAL STANDARD, SEE CONSTRUCTION DETAILS
	1.3	13+15	LT	W11-2	30" X 30"	-	6.25	-	-	-	ON TRAFFIC SIGNAL STANDARD, SEE CONSTRUCTION DETAILS
	1.4	13+15	LT	W16-7L	24" X 12"	-	2.00	-	-	-	ON TRAFFIC SIGNAL STANDARD, SEE CONSTRUCTION DETAILS
	1.5	13+15	LT	W16-7R	24" X 12"	-	2.00	-	-	-	ON TRAFFIC SIGNAL STANDARD, SEE CONSTRUCTION DETAILS
	1.6	13+29	RT	W11-2	30" X 30"	-	6.25	-	-	-	ON STREET LIGHT POLE, SEE CONSTRUCTION DETAILS
	1.7	13+29	RT	W11-2	30" X 30"	-	6.25	-	-	-	ON STREET LIGHT POLE, SEE CONSTRUCTION DETAILS
	1.8	13+29	RT	W16-7L	24" X 12"	-	2.00	-	-	-	ON STREET LIGHT POLE, SEE CONSTRUCTION DETAILS
	1.9	13+29	RT	W16-7R	24" X 12"	-	2.00	-	-	-	ON STREET LIGHT POLE, SEE CONSTRUCTION DETAILS
	1.10	16+30	LT	R3-7L	30" X 30"	6.25	-	-	-	-	ON STREET LIGHT POLE
PROJECT TOTALS						**13.75**	**33.00**	**1**	**1**	**1**	

TRAFFIC CONTROL

CATEGORY	DESCRIPTION	(643.5000) TRAFFIC CONTROL EACH	BARRICADES TYPE III NO. DEVICES	* (643.0420) TRAFFIC CONTROL BARRICADES TYPE III DAY	WARNING LIGHTS TYPE A NO. DEVICES	* (643.0705) TRAFFIC CONTROL WARNING LIGHTS TYPE A DAY	SIGNS NO. DEVICES	* (643.0900) TRAFFIC CONTROL SIGNS DAY	SIGNS FIXED MESSAGE NO. DEVICES	* (643.1000) TRAFFIC CONTROL SIGNS FIXED MESSAGE SF	SIGNS PCMS NO. DEVICES	(643.1050) TRAFFIC CONTROL SIGNS PCMS DAY	DURATION	
0010	W. MILWAUKEE STREET	-	5	1,320	6	1,584	5	1,320	-	-	1	7	264	DAYS
	E. MILWAUKEE STREET	-	5	1,320	6	1,584	5	1,320	-	-	1	7	264	DAYS
	RIVER STREET	-	-	-	-	-	4	1,056	2	16.00	-	-	264	DAYS
	MAIN STREET	-	-	-	-	-	4	1,056	2	16.00	-	-	264	DAYS
	WATER STREET	-	5	1,320	8	2,112	2	528	1	12.50	-	-	264	DAYS
	BIKE TRAIL	-	6	1,584	6	1,584	-	-	3	9.00	-	-	264	DAYS
	N. MAIN STREET PUBLIC PARKING LOT	-	1	264	1	264	-	-	1	3.00	-	-	264	DAYS
	RIVER STREET INTERSECTION CLOSURE	-	15	45	21	63	13	39	-	-	-	-	3	DAYS
	PROJECT 5990-00-34	1	-	-	-	-	-	-	-	-	-	-		
	PROJECT TOTALS	**1**	**-**	**5,853**	**-**	**7,191**	**-**	**5,319**	**-**	**56.50**		**14**		

*ADDITIONAL QUANTITIES FOUND ELSEWHERE

PEDESTRIAN ACCESS

CATEGORY	DESCRIPTION	(644.1410.S) TEMPORARY PEDESTRIAN SURFACE ASPHALT SF	(644.1420.S) TEMPORARY PEDESTRIAN SURFACE PLYWOOD SF	(644.1430.S) TEMPORARY PEDESTRIAN SURFACE PLATE SF	* (305.0120) BASE AGGREGATE DENSE 1 1/4-INCH TON	(644.1601.S) TEMPORARY CURB RAMP EACH	(644.1616.S) TEMPORARY PEDESTRIAN SAFETY FENCE LF	DRUMS NO. DEVICES	(643.0300) TRAFFIC CONTROL DRUMS DAY	WARNING LIGHTS TYPE C NO. DEVICES	(643.0715) TRAFFIC CONTROL WARNING LIGHTS TYPE C DAY	BARRICADES TYPE II NO. DEVICES	(643.0410) TRAFFIC CONTROL BARRICADES TYPE II DAY	BARRICADES TYPE III NO. DEVICES	* (643.0420) TRAFFIC CONTROL BARRICADES TYPE III DAY	WARNING LIGHTS TYPE A NO. DEVICES	* (643.0705) TRAFFIC CONTROL WARNING LIGHTS TYPE A DAY	SIGNS NO. DEVICES	* (643.0900) TRAFFIC CONTROL SIGNS DAY	DURATION	
0010	RIVER STREET INTERSECTION	25	-	-	1	2	-	10	2,640	10	2,640	3	792	1	264	4	1,056	4	1,056	264	DAYS
	MILWAUKEE STREET - RIVER STREET TO BRIDGE	-	-	-	-	-	260	-	-	-	-	-	-	5	1,320	5	1,320	3	792	264	DAYS
	MILWAUKEE STREET - BRIDGE TO MAIN STREET	-	-	-	-	-	205	-	-	-	-	-	-	3	792	3	792	2	528	264	DAYS
	UNDISTRIBUTED	50	50	50	1	2	235	-	500	-	500	-	600	-	800	-	400	-	800		
	PROJECT TOTALS	**75**	**50**	**50**	**2**	**4**	**700**		**3,140**		**3,140**		**1,392**		**3,176**		**3,568**		**3,176**		

*ADDITIONAL QUANTITIES FOUND ELSEWHERE

TRAFFIC CONTROL DETOUR

CATEGORY	DESCRIPTION	BARRICADES TYPE III NO. DEVICES	* (643.0420) TRAFFIC CONTROL BARRICADES TYPE III DAY	WARNING LIGHTS TYPE A NO. DEVICES	* (643.0705) TRAFFIC CONTROL WARNING LIGHTS TYPE A DAY	SIGNS NO. DEVICES	* (643.0900) TRAFFIC CONTROL SIGNS DAY	SIGNS FIXED MESSAGE NO. DEVICES	* (643.1000) TRAFFIC CONTROL SIGNS FIXED MESSAGE SF	DURATION	
0010	W. MILWAUKEE STREET	-	-	-	-	6	1,584	2	16.00	264	DAYS
	E. MILWAUKEE STREET	1	264	2	528	7	1,848	2	16.00	264	DAYS
	JACKSON STREET	-	-	-	-	8	2,112	4	32.00	264	DAYS
	COURT STREET	-	-	-	-	12	3,168	6	48.00	264	DAYS
	MAIN STREET	-	-	-	-	8	2,112	4	32.00	264	DAYS
	PROJECT TOTALS		**264**		**528**		**10,824**		**144.00**		

*ADDITIONAL QUANTITIES FOUND ELSEWHERE

TEMPORARY PAVEMENT MARKINGS

CATEGORY	DESCRIPTION	(649.0250) TEMPORARY MARKING LINE REMOVABLE TAPE 8-INCH LF	(649.0850) TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH LF
0010	MILWAUKEE STREET & RIVER STREET INTERSECTION	90	20
	PROJECT TOTALS	**90**	**20**

FENCE SAFETY

CATEGORY	DESCRIPTION	(616.0700.S) LF
0010	WATER STREET - AROUND CONSTRUCTION STAGING AREAS	900
	UNDISTRIBUTED	300
	PROJECT TOTAL	**1,200**

PAVEMENT MARKINGS

CATEGORY	STATION	TO STATION	(646.1020) MARKING LINE EPOXY 4-INCH (YELLOW) LF	(646.1020) MARKING LINE EPOXY 4-INCH (WHITE) LF	(646.3020) MARKING LINE EPOXY 8-INCH (WHITE) LF	(646.5020) MARKING ARROW EPOXY (TYPE 2, WHITE) EACH	(646.6120) MARKING STOP LINE EPOXY 18-INCH LF	(646.7420) MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH LF	(646.7520) MARKING CROSSWALK EPOXY LADDER PATTERN 24-INCH LF	(646.8320) MARKING PARKING STALL EPOXY (4-INCH, WHITE) LF
0010	10+98	16+95	1,100	115	100	2	35	360	112	36
SUBTOTALS			**1,100**	**115**	**-**	**-**	**-**	**-**	**-**	**-**
PROJECT TOTALS			**1,215**		**100**	**2**	**35**	**360**	**112**	**36**

REMOVE AND SALVAGE LIGHT POLE ASSEMBLY

CATEGORY	STATION	LOCATION	(SPV.0060.08) EACH	NOTES
0030	11+29	32' RT	1	
	12+00	24' LT	1	
	12+52	24' RT	1	PEDESTAL BASE
	12+96	21' RT	1	
	14+54	25' RT	1	ON BRIDGE
	15+68	28' LT	1	ON BRIDGE
	15+71	30' RT	1	
	16+30	23' RT	1	
	16+81	22' LT	1	
PROJECT TOTAL			**9**	

STREET LIGHTING REMOVALS

CATEGORY	STATION	LOCATION	* (204.0195) REMOVING CONCRETE BASES EACH	(653.0905) REMOVING PULL BOXES EACH	NOTES
0010	11+29	32' RT	1	-	
	12+00	24' LT	1	-	
	12+01	19' LT	-	1	
	12+03	33' RT	-	1	
	12+52	24' RT	1	-	PEDESTAL BASE
	12+96	21' RT	1	-	
	15+63	33' RT	1	-	CONTROL CABINET BASE
	15+71	25' RT	-	1	
	15+71	30' RT	1	-	
	16+30	23' RT	1	-	
	16+81	22' LT	1	-	
PROJECT TOTALS			**8**	**3**	

*ADDITIONAL QUANTITIES FOUND ELSEWHERE

TRAFFIC SIGNAL MODIFICATIONS

CATEGORY	STATION	LOCATION	* (204.0195) REMOVING CONCRETE BASES EACH	(SPV.0105.01) REMOVE, SALVAGE, & REINSTALL TRAFFIC SIGNAL EQUIPMENT (MILWAUKEE ST & RIVER ST) LS	(658.5069.01) SIGNAL MOUNTING HARDWARE (MILWAUKEE STREET & RIVER STREET) LS	(SPV.0105.02) REMOVE, SALVAGE, & REINSTALL TRAFFIC SIGNAL EQUIPMENT (MILWAUKEE ST & MAIN ST) LS	(658.5069.02) SIGNAL MOUNTING HARDWARE (MILWAUKEE STREET & MAIN STREET) LS
0010	11+19.30	27.85' LT	1	-	-	-	-
	11+21.25	24.25' LT	-	1	1	-	-
	16+81.00	23.75' LT	-	-	-	1	1
PROJECT TOTALS			**1**	**1**	**1**	**1**	**1**

*ADDITIONAL QUANTITIES FOUND ELSEWHERE

3

CONDUIT RIGID NONMETALLIC (2-INCH)

CATEGORY	FROM	TO	* (652.0225) SCHEDULE 40 2-INCH LF	(652.0325) SCHEDULE 80 2-INCH LF	* (652.0700.S) INSTALL CONDUIT INTO EXISTING ITEM EACH
0010	EXSB1	LP-1	22	-	-
	LP-1	LP-3	42	-	-
	LP-3	LP-5	66	-	-
	LP-5	LP-7	63	-	-
	LP-7	PB1	54	-	-
	PB1	BRIDGE	18	-	-
	PB1	PED SIGN	17	-	-
	PED SIGN	LP-8	-	47	-
	PB1	PB2	-	82	-
	LP-2	LP-4	61	-	-
	LP-4	LP-6	64	-	-
	LP-6	LP-8	79	-	-
	LP-8	PB2	5	-	-
	PB2	BRIDGE	20	-	-
	BRIDGE	PB3	8	-	-
	PB3	LP-17	61	-	-
	LP-17	EXLPB2	56	-	1
	LP-19	EXSPB1	4	-	1
	BRIDGE	PB4	-	46	-
	PB4	LP-16	6	-	-
	LP-16	LP-18	58	-	-
	LP-18	EXLPB3	27	-	1
	PROJECT TOTALS		**731**	**175**	**3**

*ADDITIONAL QUANTITIES FOUND ELSEWHERE

CONDUIT RIGID NONMETALLIC (3/4-INCH)

CATEGORY	FROM	TO	* (652.0205) SCHEDULE 40 3/4-INCH LF	(652.0305) SCHEDULE 80 3/4-INCH LF
0030	LP-1	LP-3	42	-
	LP-3	LP-5	66	-
	LP-5	LP-7	63	-
	LP-7	PB5	50	-
	PB5	BRIDGE	12	-
	PB5	PB6	-	41
	LP-2	LP-4	61	-
	LP-4	LP-6	64	-
	LP-6	LP-8	79	-
	LP-8	PB6	3	-
	PB6	BRIDGE	13	-
	BRIDGE	PB7	5	-
	PB7	LP-17	64	-
	LP-17	LP-19	53	-
	BRIDGE	PB8	-	42
	PB8	LP-16	10	-
	LP-16	LP-18	58	-
	PROJECT TOTALS		**643**	**83**

*ADDITIONAL QUANTITIES FOUND ELSEWHERE

ADJUSTING PULL BOXES

CATEGORY	PULL BOX NUMBER	STATION	LOCATION	(653.0900) EACH
0010	EXSPB3	16+80.00	22.90' RT	1
	EXLPB3	16+84.00	23.25' RT	1
	EXSPB2	16+86.00	23.25' RT	1
	PROJECT TOTAL			**3**

PULL BOXES STEEL 24x42-INCH

CATEGORY	PULL BOX NUMBER	STATION	LOCATION	(653.0140) EACH
0010	PB1	13+31.00	20.50' LT	1
	PB2	13+32.50	20.50' RT	1
	PB3	15+67.00	20.50' LT	1
	PB4	16+00.00	20.50' RT	1
	PROJECT TOTAL			**4**

PULL BOXES STEEL 12x36-INCH

CATEGORY	PULL BOX NUMBER	STATION	LOCATION	(653.0115) EACH
0030	PB5	13+28.50	20.50' LT	1
	PB6	13+31.25	20.50' RT	1
	PB7	15+64.50	20.50' LT	1
	PB8	15+97.50	20.50' RT	1
	PROJECT TOTAL			**4**

LOOP DETECTORS

CATEGORY	LOOP NUMBER	STATION	LOCATION	SIZE	NUMBER OF TURNS	(652.0800) CONDUIT LOOP DETECTOR LF	(655.0700) LOOP DETECTOR LEAD IN CABLE LF	(655.0800) LOOP DETECTOR WIRE LF	* (652.0700.S) INSTALL CONDUIT INTO EXISTING ITEM EACH
0010	21	16+86.5	11.75' RT	6'x6'	4	40	143	160	1
	22	16+74.5	11.75' RT	6'x20'	3	72	-	216	1
	PROJECT TOTALS					**112**	**143**	**376**	**2**

*ADDITIONAL QUANTITIES FOUND ELSEWHERE

CABLE TRAFFIC SIGNAL

CATEGORY	FROM	TO	(655.0210) 3-14 AWG LF	(655.0230) 5-14 AWG LF	(655.0260) 12-14 AWG LF
0010	LP-19	HEAD 2	-	20	-
	EXSB1	PED HEAD 2A	18	-	-
	EXSC1	LP-1	-	-	30
	LP-1	HEAD 1	-	20	-
	LP-1	PED HEAD 8A	18	-	-
	PROJECT TOTALS		**36**	**40**	**30**

ELECTRICAL WIRE LIGHTING

CATEGORY	FROM	TO	* (655.0610) 12 AWG LF	(655.0615) 10 AWG LF	(655.0625) 6 AWG LF	(655.0630) 4 AWG LF	(655.0635) 2 AWG LF
0010	EXLC1	EXLPB1	-	1,074	-	-	716
	EXLPB1	EXLPB2	-	720	-	-	480
	EXLPB2	EXLPB3	-	252	-	336	-
	EXLPB2	LP-17	-	462	-	308	-
	LP-17	PB3	246	246	-	328	-
	PB3	LP-13	267	267	-	356	-
	LP-15	LP-13	384	-	-	-	-
	LP-13	LP-11	201	201	-	268	-
	LP-11	LP-9	201	201	-	268	-
	LP-9	PB1	249	249	332	-	-
	PB1	LP-7	225	-	300	-	-
	LP-7	LP-5	219	-	292	-	-
	LP-5	LP-3	228	-	304	-	-
	EXLPB3	LP-18	-	144	-	192	-
	LP-18	LP-16	-	204	-	272	-
	LP-16	PB4	81	-	-	108	-
	PB4	LP-14	375	-	-	500	-
	LP-14	LP-12	201	-	-	268	-
	LP-12	LP-10	201	-	-	268	-
	LP-10	PB2	246	-	328	-	-
	PB2	LP-8	78	-	104	-	-
	LP-8	LP-6	267	-	356	-	-
	LP-6	LP-4	222	-	296	-	-
	LP-4	LP-2	213	-	213	-	-
	EXSB1	LP-1	204	-	-	-	-
	EXSPB1	LP-19	150	-	-	-	-
	PROJECT TOTALS		**4,458**	**4,020**	**2,525**	**3,472**	**1,196**

*ADDITIONAL QUANTITIES FOUND ELSEWHERE

STREET LIGHT POLE ELECTRICAL WIRE

CATEGORY	POLE NUMBER	STATION	LOCATION	* (655.0610) ELECTRICAL WIRE LIGHTING 12 AWG LF
0010	LP-1	11+21.25	24.25' LT	186
	LP-2	11+35.00	27.75' RT	84
	LP-3	11+60.00	22.75' LT	84
	LP-4	11+95.00	27.75' RT	84
	LP-5	12+20.00	22.00' LT	84
	LP-6	12+55.00	24.75' RT	84
	LP-7	12+80.00	21.75' LT	84
	LP-8	13+29.00	21.50' RT	156
	LP-9	ON BRIDGE PIER		84
	LP-10	ON BRIDGE PIER		84
	LP-11	ON BRIDGE PIER		84
	LP-12	ON BRIDGE PIER		84
	LP-13	ON BRIDGE PIER		84
	LP-14	ON BRIDGE PIER		84
	LP-15	ON BRIDGE ABUTMENT		84
	LP-16	16+06.00	21.75' RT	84
	LP-17	16+30.00	21.75' LT	84
	LP-18	16+60.00	22.35' RT	84
	LP-19	16+81.00	23.75' LT	186
		PROJECT TOTAL		**1,872**

*ADDITIONAL QUANTITIES FOUND ELSEWHERE

DECORATIVE ROADWAY LIGHTING

CATEGORY	POLE NUMBER	STATION	LOCATION	(SPV.0060.06) CONCRETE BASE TYPE 3 SPECIAL EACH	(SPV.0060.07) CONCRETE BASE TYPE 5 SPECIAL EACH	(SPV.0060.09) DECORATIVE MAST ARM LIGHTING UNIT EACH	(SPV.0060.10) DECORATIVE POLE TOP LIGHTING UNIT EACH
0010	LP-1	11+21.25	24.25' LT	1	-	1	-
	LP-2	11+35.00	27.75' RT	-	1	-	1
	LP-3	11+60.00	22.75' LT	-	1	-	1
	LP-4	11+95.00	27.75' RT	-	1	-	1
	LP-5	12+20.00	22.00' LT	-	1	-	1
	LP-6	12+55.00	24.75' RT	-	1	-	1
	LP-7	12+80.00	21.75' LT	-	1	-	1
	LP-8	13+29.00	21.50' RT	1	-	1	-
	LP-9	ON BRIDGE PIER		-	-	-	1
	LP-10	ON BRIDGE PIER		-	-	-	1
	LP-11	ON BRIDGE PIER		-	-	-	1
	LP-12	ON BRIDGE PIER		-	-	-	1
	LP-13	ON BRIDGE PIER		-	-	-	1
	LP-14	ON BRIDGE PIER		-	-	-	1
	LP-15	ON BRIDGE ABUTMENT		-	-	-	1
	LP-16	16+06.00	21.75' RT	-	1	-	1
	LP-17	16+30.00	21.75' LT	-	1	-	1
	LP-18	16+60.00	22.35' RT	-	1	-	1
	LP-19	16+81.00	23.75' LT	1	-	1	-
		PROJECT TOTALS		**3**	**9**	**3**	**16**

R/W PROJECT NUMBER	SHEET NUMBER	TOTAL SHEETS
5990-00-33	4.01	2
FEDERAL PROJECT NUMBER N/A		

PLAT OF RIGHT-OF-WAY REQUIRED FOR
CITY OF JANESVILLE, W. MILWAUKEE STREET
(ROCK RIVER BRIDGE B-53-0294)
LOCAL STREET — ROCK COUNTY

CONSTRUCTION PROJECT NUMBER
5990-00-34

ACCEPTED FOR
CITY of JANESVILLE

2-27-18 (Date) — (DIRECTOR OF PUBLIC WORKS)

ORIGINAL PLAT PREPARED BY

MSA PROFESSIONAL SERVICES
TRANSPORTATION • MUNICIPAL • REMEDIATION
DEVELOPMENT • ENVIRONMENTAL
2901 International Lane, Suite 300 Madison, WI 53704-3133
608-242-7779 1-800-446-0679 Fax: 608-242-5664

WISCONSIN
BRADLEY L. TISDALE
S-2824
WAUNAKEE
WI
LAND SURVEYOR

1-18-2018 (Date) — (Professional Land Surveyor)

4

CONVENTIONAL ABBREVIATIONS

ACCESS POINT/ DRIVEWAY CONNECTION	AP	RELEASE OF RIGHTS	ROR
ACCESS RIGHTS	AR	REMAINING	REM.
ACRES	AC.	RIGHT-OF-WAY	R/W
AND OTHERS	ET.AL.	SECTION	SEC.
CENTERLINE	C/L	STATION	STA.
CERTIFIED SURVEY MAP	CSM	TEMPORARY LIMITED EASEMENT	TLE
CORNER	COR.	VOLUME	V.
DOCUMENT	DOC.	**CURVE DATA**	
EASEMENT	EASE.	LONG CHORD	LCH
HIGHWAY EASEMENT	H.E.	LONG CHORD BEARING	LCB
LAND CONTRACT	LC	RADIUS	R
MONUMENT	MON.	DEGREE OF CURVE	D
PAGE	P.	CENTRAL ANGLE OR DELTA	DELTA
PERMANENT LIMITED EASEMENT	PLE	LENGTH OF CURVE	L
PROPERTY LINE	PL	TANGENT	TAN
RECORDED AS	(100')		
REFERENCE LINE	R/L		

CONVENTIONAL SYMBOLS

FOUND IRON PIPE/PIN	⌀ (1" UNLESS NOTED)	PROPOSED R/W LINE	
		EXISTING H.E. LINE	
R/W MONUMENT	● (SET)	PROPERTY LINE	
R/W STANDARD	▲ (SET)	LOT & TIE LINES	
SIGN	ISIGN	SLOPE INTERCEPTS	
SECTION CORNER MONUMENT	●	BUILDING WALL	
SECTION CORNER SYMBOL		ACCESS RESTRICTED (BY PREVIOUS ACQUISITION/CONTROL)	
FEE (HATCH VARIES)		ACCESS RESTRICTED (BY ACQUISITION)	
TEMPORARY LIMITED EASEMENT		NO ACCESS (BY STATUTORY AUTHORITY)	
PERMANENT LIMITED EASEMENT		SECTION LINE	
R/W BOUNDARY POINT	HWB20	QUARTER LINE	
PARCEL NUMBER	101	SIXTEENTH LINE	
UTILITY INTEREST	40	EXISTING CENTERLINE	
SIGN NUMBER (OFF PREMISE)	21	PROPOSED REFERENCE LINE	
BUILDING		PARALLEL OFFSET	

CONVENTIONAL UTILITY SYMBOLS

	NON COMPENSABLE	COMPENSABLE
WATER	—W—	
GAS	—G—	
TELEPHONE	—T—	
OVERHEAD TRANSMISSION LINES	—OH—	
ELECTRIC	—E—	
CABLE TELEVISION	—TV—	
FIBER OPTIC	—FO—	
SANITARY SEWER	—SAN—	
STORM SEWER	—SS—	
POWER POLE		
TELEPHONE POLE		
TELEPHONE PEDESTAL		
ELECTRIC TOWER		

NOTES:

COORDINATES AND BEARINGS ON THIS PLAT ARE ORIENTED TO THE WISCONSIN COUNTY COORDINATE SYSTEM, ROCK COUNTY ZONE, NAD 83 (2011) ADJUSTMENT. THE COORDINATES SHOWN ARE GRID COORDINATES AND ARE TO BE USED AS GRID OR GROUND VALUES ON THIS PLAT.

ALL STATION/OFFSET DATA IS REFERENCED TO THE MAINLINE ALIGNMENT (W. MILWAUKEE ST).

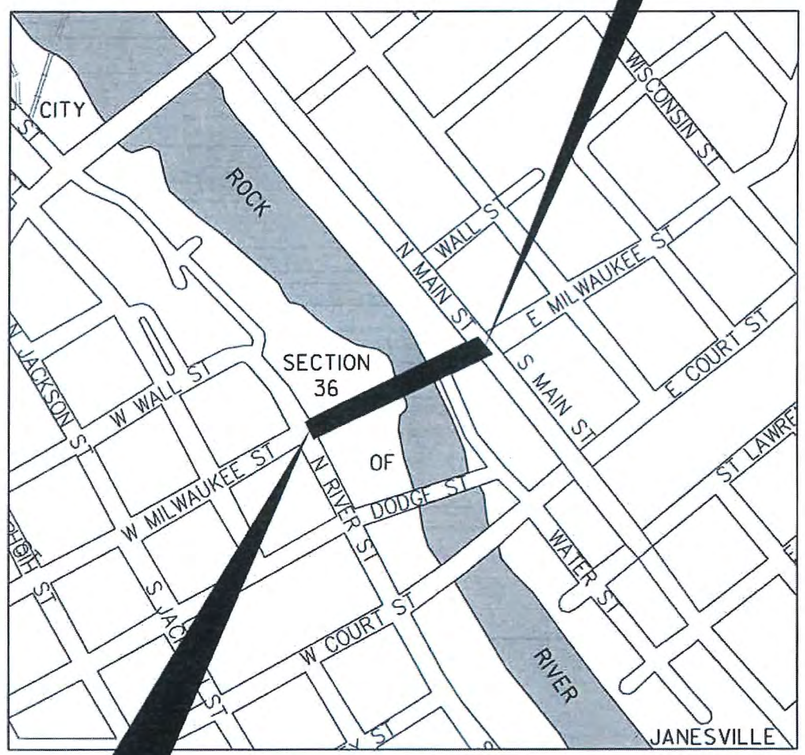
RIGHT-OF-WAY MONUMENTS ARE TYPE 2 MONUMENTS (TYPICALLY 3/4" REBAR) BUT WILL NOT BE PLACED FOR THIS PROJECT AS THE LOCATIONS ARE AT THE BUILDING FACE.

RIGHT-OF-WAY BOUNDARIES ARE DEFINED WITH COURSES OF THE PERIMETER OF THE HIGHWAY LANDS REFERENCED TO THE U.S. PUBLIC LAND SURVEY SYSTEM.

EXISTING RIGHT-OF-WAY DETERMINED BY THE ORIGINAL PLAT OF JANESVILLE AND CSM RECORDED AS DOCUMENT NO. 2094614, VOL. 38, PAGES 396-399.

END RELOCATION
ORDER STA.17+27.74
Y = 269,160.190
X = 493,347.332
APPROXIMATELY 1279 FEET NORTH OF AND 2518 FEET EAST OF THE WEST 1/4 CORNER OF SECTION 36, T3N, R12E, CITY OF JANESVILLE, WI.

T 3 N



R 12 E

BEGIN RELOCATION
ORDER STA.10+75.00
Y = 268,882.161
X = 492,758.725
APPROXIMATELY 1001 FEET NORTH OF AND 1929 FEET EAST OF THE WEST 1/4 CORNER OF SECTION 36, T3N, R12E, CITY OF JANESVILLE, WI.

N

LAYOUT
SCALE 0 250FT

TOTAL NET LENGTH OF CENTERLINE = 0.124MI

REVISION DATE			

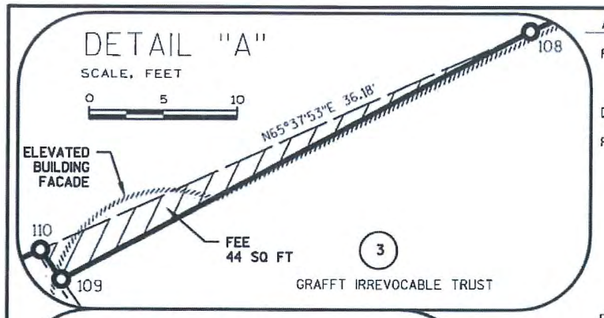
DATE 01/18/2018
GRID FACTOR NA

FILE NAME : P:\870S\879\00879002\C3D\RW\00879002 RW PLAT.DWG
PLOT DATE : 1/18/2018 8:21 AM
PLOT BY : BRAD TISDALE
PLOT NAME :
PLOT SCALE : 0.30000000 = 1'-0"_XREF

DETAIL "A"

SCALE, FEET

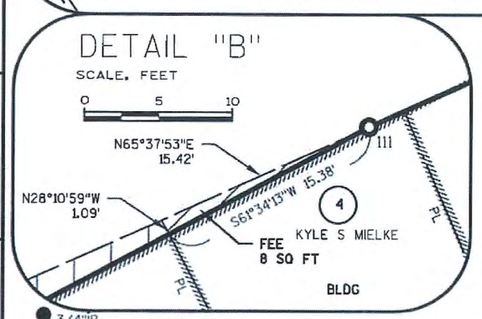
0 5 10



DETAIL "B"

SCALE, FEET

0 5 10



ALIGNMENT INFORMATION

PI = STA 10+00
Y = 268,846.571
X = 492,692.707

DA = N61°40'16"E

PI = STA 12+00.80
Y = 268,941.855
X = 492,869.456
Δ = 8°50'30"
T = 28.60'
L = 57.10'
R = 370.00'
LC = 57.04'
LCB = N66°05'31"E
PC = 11+72.19
PT = 12+29.29

DA = N70°30'46"E

PI = STA 13+32.58
Y = 268,985.856
X = 492,993.799

DA = N66°45'46"E

PI = STA 15+96.86
Y = 269,090.126
X = 493,236.642
Δ = 9°05'45"
T = 29.83
L = 59.53'
R = 375.00'
LC = 59.47'
LCB = N62°12'54"E
PC = 15+67.04
PT = 16+26.57

DA = N57°40'01"E

PI = STA 17+27.74
Y = 269,160.190
X = 493,347.332

R/W POINT	STATION	OFFSET	NORTHING	EASTING
100	11+12.19	39.50 L	268,934.581	492,772.713
101	15+53.91	48.89 L	269,118.108	493,177.887
102	15+57.48	33.63 L	269,105.487	493,187.184
103	15+68.81	35.44 L	269,111.562	493,196.722
104	15+69.61	30.50 L	269,107.323	493,199.374
105	16+95.23	34.80 L	269,172.205	493,301.250
106	17+03.39	34.38 R	269,118.116	493,345.147
107	16+53.80	34.51 R	269,091.487	493,303.311
108	16+28.83	31.01 R	269,081.084	493,280.344
109	15+95.56	29.84 R	269,064.154	493,248.812
110	15+95.25	27.40 R	269,066.158	493,247.392
111	11+73.74	40.92 R	268,892.908	492,864.909
112	11+13.23	41.03 R	268,864.185	492,811.851

TLE POINT	STATION	OFFSET
T1	15+57.95	59.09 L
T2	15+64.82	60.13 L
T3	15+63.66	34.64 L
T4	15+98.87	58.00 R
T5	15+58.28	57.35 R
T6	15+59.61	27.00 R

SCHEDULE OF LANDS & INTERESTS REQUIRED

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

PARCEL NUMBER	OWNER(S)	INTEREST REQUIRED	R/W SQ FT REQUIRED NEW	R/W SQ FT REQUIRED EXISTING	R/W SQ FT REQUIRED TOTAL	PLE SQ FT	TLE SQ FT
1	CITY OF JANESVILLE	TLE	--	--	--	--	1260
2	BRENNAN STEIL S.C.	FEE/TLE	53	--	53	--	150
3	JAMES AND HEIDI GRAFFT IRREVOCABLE TRUST	FEE	44	--	44	--	--
4	KYLE S MIELKE	FEE	8	--	8	--	--
5	SCHOOL DISTRICT OF JANESVILLE	FEE	121	--	121	--	--

CITY

NE-NW 1/16 LINE

SE-NW 10' UTILITY EASEMENT PER CSM V.14, PAGES 77-79 DOC NO. 1097801

ROCK

PROPOSED BRIDGE B-53-0294

AT&T (TELEPHONE)

LOT 1 OF CSM V.38, PAGES 396-399 DOC NO. 2094614

TRAFFIC SIGNAL AND SIDEWALK EASEMENT PER CSM V.38, PAGES 396-399 DOC NO. 2094614

VISION EASEMENT DOC NO. 1827894

CITY OF JANESVILLE (ELECTRIC)

SLOPE INTERCEPT

ELECTRIC EASEMENT TO ATTACH CABLE TO BUILDING WALL DOC. NO. 670722

12' WALKWAY EASEMENT PER COMBS PLAT OF SURVEY

COMBS PLAT OF SURVEY 07/07/16

LOT 174

SMITH, BAILEY & STONE'S ADDITION

SCHOOL DISTRICT OF JANESVILLE

ALLIANT ENERGY (GAS)

6.25' RIVER WALK EASEMENT CARD 116, IMAGE 397 DOC NO. 958667

ORIGINAL PLAT OF THE CITY OF JANESVILLE BLOCK 43 LOT 3

BRENNAN STEIL S.C. BLDG LOT 4

ALLIANT ENERGY (GAS)

TLE - GRADING 150 SQ FT

FEE 53 SQ FT DETAIL "D"

ALLIANT ENERGY (ELECTRIC)

DETAIL "A"

CITY OF JANESVILLE (ELECTRIC)

ORIGINAL PLAT OF THE CITY OF JANESVILLE BLOCK 44 LOT 1

JAMES AND HEIDI GRAFFT IRREVOCABLE TRUST

FEE 44 SQ FT

LOT 2

CITY OF JANESVILLE (ELECTRIC)

N. MAIN ST.

END RELOCATION ORDER STA.17+27.74
Y = 269,160.190
X = 493,347.332

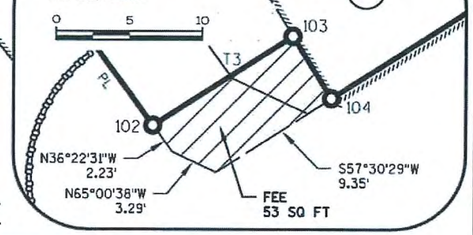
TLE - GRADING 1260 SQ FT

CITY OF JANESVILLE LOT 1

DETAIL "D"

SCALE, FEET

0 5 10

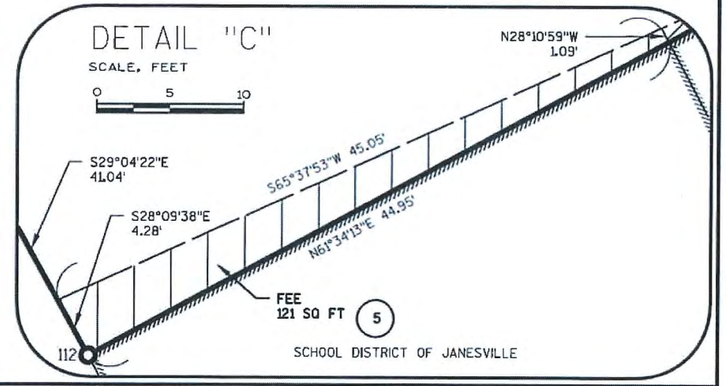


JANESVILLE

DETAIL "C"

SCALE, FEET

0 5 10



COURSE TABLE					
COURSE	BEARING	DISTANCE	COURSE	BEARING	DISTANCE
100-101	N65°37'53"E	444.80'	107-108	S65°37'53"W	25.21'
101-102	S36°22'31"E	15.68'	108-109	S61°46'06"W	35.79'
102-103	N57°30'29"E	11.31'	109-110	N35°19'24"W	2.46'
103-104	S32°01'32"E	5.00'	110-111	S65°37'53"W	419.89'
104-105	N57°30'29"E	120.78'	111-112	S61°34'13"W	60.33'
106-107	S57°31'25"W	49.59'	110-108	N65°37'53"E	36.18'

3/4"IR

COTTON GIN SPIKE
Y = 270,537.868
X = 490,763.000

ALUMINUM MONUMENT
Y = 267,881.366
X = 490,829.755

BEGIN RELOCATION ORDER STA.10+75.00
Y = 268,882.161
X = 492,758.725

BP: 10+00.00

N01°26'22"W 2657.34'

N88°33'38"E 1987.13'

969.07'

BRADLEY L. TISDALE S-2824 WAUNAKEE WI
WISCONSIN LAND SURVEYOR
1-18-2018

REVISION DATE	DATE 01/18/18	SCALE, FEET 0 25 50	HWY: W. MILWAUKEE STREET	R/W PROJECT NUMBER 5990-00-33	PLAT SHEET 4.02
	GRID FACTOR		COUNTY: ROCK	CONSTRUCTION PROJECT NUMBER 5990-00-34	PS&E SHEET 71

FILE NAME : P:\870S\879\00879002\C3D\RW\00879002 RW PLAT.DWG

PLOT DATE : 1/18/2018 8:20 AM PLOT BY : BRAD TISDALE PLOT NAME :

WISDOT/CADDS SHEET 75

PI STA = 12+00.80
Y = 268941.86
X = 492869.46
DELTA = 8°50'30"
D = 15°29'07"
T = 28.60'
L = 57.10'
R = 370.00'
PC STA = 11+72.19
PT STA = 12+29.29

PI STA. = 13+32.58
Y = 268985.86
X = 492993.80
Δ. = 03°45'00"

PI STA = 15+96.86
Y = 269090.13
X = 493236.64
DELTA = 9°05'45"
D = 15°16'44"
T = 29.83'
L = 59.53'
R = 375.00'
PC STA = 15+67.04
PT STA = 16+26.57

PI STA. = 17+27.74
Y = 269160.19
X = 493347.33
Δ. = 00°41'50"

BENCHMARKS

NO.	STATION	LOCATION	DESCRIPTION	ELEV.
BM#1	12+86.2	23.4' LT.	TOP NUT OF FIRE HYDRANT	776.39
BM#2	14+53.6	27.7' LT.	CHISELED SQUARE	779.38

136100338
CITY OF JANESVILLE
28 W. MILWAUKEE ST

136100012
CITY OF JANESVILLE
20 W. MILWAUKEE ST

136100325
BRENNAN STEIL SC
1 E. MILWAUKEE ST

136100326
JAMES & HEIDI GRAFFT IRREVOCABLE TRUST
20 E. MILWAUKEE ST

136100345
KYLE S MIELKE
27 W. MILWAUKEE ST

136100346
SCHOOL DISTRICT
OF JANESVILLE
29 W. MILWAUKEE ST

136100344
DALE F & JUDY T
SCHUMWAY
25 W. MILWAUKEE ST

136100343
COREY PROPERTIES LLC
21 W. MILWAUKEE ST

136100005
JAMES & HEIDI GRAFFT
IRREVOCABLE TRUST
15 W. MILWAUKEE ST

RIVER STREET
MAIN STREET
MILWAUKEE STREET
WATER STREET
PUBLIC PARKING
ROCK RIVER
RIVERWALK
STAIRS
VAULT

CLEARING & GRUBBING, 10-INCH DIA.
CITY OF JANESVILLE (ELECTRIC)
AT&T (TELEPHONE)
SLOPE INTERCEPTS (TYP.)
CITY OF JANESVILLE (WATERMAIN)
EXISTING WOOD ICE AGE TRAIL SIGN TO REMAIN
CONCRETE PAVEMENT APPROACH SLAB
REMOVE EXISTING STRUCTURE B-53-0715
CONCRETE STEPS, SEE CONSTRUCTION DETAILS
EXISTING ABUTMENT FACE
ALLIANT ENERGY (ELECTRIC)
REMOVING CONCRETE STEPS, SUPPORTS, AND RAILINGS
REMOVING CONCRETE PLANTER CURB
ALLIANT ENERGY (GAS)
EXISTING TREE TO REMAIN
CAUTION
CONCRETE ASPHALT
ASPHALT CONCRETE
REMOVE, SALVAGE AND REINSTALL AWNING SIDE PANELS
CITY OF JANESVILLE (STORM SEWER)
CITY OF JANESVILLE (SANITARY SEWER)
REMOVE BRICK PAVERS (PAID AS 'REMOVING CONCRETE SIDEWALK')
EXISTING TREE TO REMAIN
RAISED BASEMENT (MAY EXTEND UNDER SIDEWALK AND ROADWAY PER SANBORN MAPS)
CONTAMINATED SOIL REMOVAL LIMITS, SEE CONSTRUCTION DETAILS
PROPOSED STRUCTURE B-53-0294
GRUBBING, 16-INCH DIA.
CANTILEVER SIDEWALK COUNTERWEIGHT
REMOVING PAVEMENT
EXISTING VAULT
ABANDONED BASEMENT OPENING

BEGIN PROJECT
STA. 10+98.00
Y = 268,893.07
X = 492,778.97

END PROJECT
STA. 16+77.00
Y = 269,133.05
X = 493,304.46

PC: 11+72.19
PT: 12+29.29
PI: 13+32.58
PC: 15+67.04
PT: 16+57
BM#1
BM#2
TLE
R/W
EXISTING R/W
11+00
12+00
13+00
14+00
15+00
16+00
17+00
N61°40'16"E
N70°30'46"E
N66°45'46"E
N57°40'01"E

STA 10+98.00 EL 773.97
STA 11+27.52 EL 773.72
STA 12+64.00 EL 773.03
STA 13+35.00 EL 773.33
STA 15+64.55 EL 775.76
STA 16+14.00 EL 775.92
STA 16+77.00 EL 776.26

EXISTING ℄ PROFILE
FINISHED ℄ PROFILE
-0.85%
-0.50%
0.42%
1.06%
0.33%
0.53%
1.36%

	11	12	13	14	15	16	17
	773.96	773.93	774.02	773.93	773.86	774.34	775.24
	773.95	773.60	773.35	773.10	773.18	773.49	774.02
						775.93	776.11
						774.55	775.08
						775.92	775.56
						775.61	775.88
						775.97	776.61
						776.11	

780
770
768

PROJECT NO: 5990-00-34	HWY: MILWAUKEE STREET	COUNTY: ROCK	PLAN AND PROFILE: MILWAUKEE STREET	SHEET 72 E

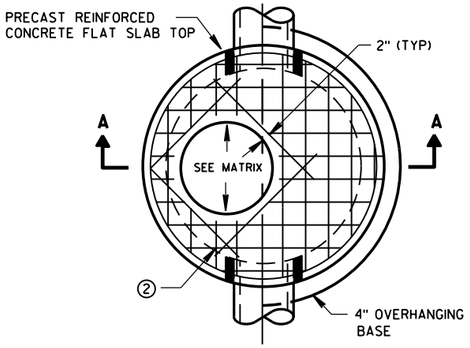
FILE NAME : P:\870S\879\00879002\C3D\SHEETSPLAN\050101-PP.DWG
LAYOUT NAME - 050101-PP
PLOT DATE : 5/1/2018 1:53 PM
PLOT BY : JASON DOLENS
PLOT NAME :
PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 44

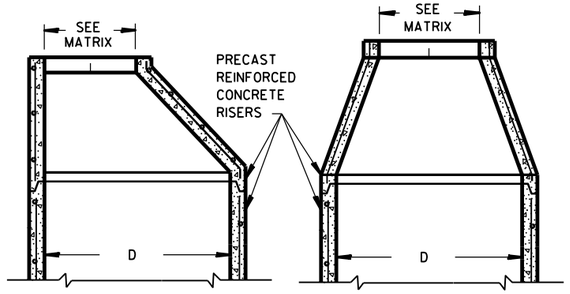
Standard Detail Drawing List

08B09-02	MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER
08B10-02	MANHOLES 3X3-FT, 4X4-FT, 5X5-FT AND 6X6-FT
08C07-02	INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT
08D01-20A	CONCRETE CURB & GUTTER
08D01-20B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D05-19A	CURB RAMPS TYPES 1 AND 1-A
08D05-19B	CURB RAMPS TYPES 2 AND 3
08D05-19C	CURB RAMPS TYPES 4A AND 4A1
08D05-19D	CURB RAMPS TYPE 4B AND 4B1
08D05-19E	CURB RAMPS TYPES 5, 6, 7A, 7B & 8
08D05-19F	CURB RAMPS RADIAL DETECTABLE WARNING FIELD APPLICATIONS
08D05-19G	CURB RAMPS RECTANGULAR AND RADIAL DETECTABLE WARNING PLATES
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08E11-02	TURBIDITY BARRIER
08E14-01	TRACKING PAD
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
09B02-10	CONDUIT
09B04-11	PULL BOX
09C02-07	CONCRETE BASES, TYPES 1, 2, 5, & 6
09C03-04	TRANSFORMER/PEDESTAL BASES
09E01-14C	POLE MOUNTINGS FOR TRAFFIC SIGNALS AND LIGHTING UNITS, TYPE 4
09E01-14D	POLE MOUNTINGS FOR LIGHTING UNITS, TYPE 5 (30 FEET)
09E01-14G	HARDWARE DETAILS FOR POLE MOUNTINGS
09F15-04A	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 1)
09F15-04B	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)
12A03-10	NAME PLATE (STRUCTURES)
13B02-08A	CONCRETE PAVEMENT APPROACH SLAB
13C01-19	CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES
13C13-09	URBAN DOWELED CONCRETE PAVEMENT
13C18-06A	CONCRETE PAVEMENT JOINTING
13C18-06B	CONCRETE PAVEMENT STEEL REINFORCEMENT
13C18-06C	CONCRETE PAVEMENT JOINT TYPES
13C18-06D	CONCRETE PAVEMENT JOINTING AT UTILITY FIXTURES
13C18-06E	CONCRETE PAVEMENT JOINTING AND STEEL REINFORCEMENT IN ROUNDABOUTS
13C18-06F	CONCRETE PAVEMENT JOINTING AND STEEL REINFORCEMENT IN ROUNDABOUTS
14A02-01	TREE PLANTING DETAIL
15C02-06A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-06B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-06C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C03-04	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C05-04	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS
15C07-14C	PAVEMENT MARKING ARROWS
15C08-18A	LONGITUDINAL MARKING (MAINLINE)
15C08-18B	PAVEMENT MARKING (TURN LANES)
15C33-03	STOP LINE AND CROSSWALK PAVEMENT MARKING
15D30-03A	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-03B	TRAFFIC CONTROL, TEMPORARY ADA COMPLIANT PEDESTRIAN ACCOMMODATION
15D30-03C	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D38-02A	TEMPORARY TRAFFIC CONTROL SIGN MOUNTING
15D38-02B	ATTACHMENT OF SIGNS TO POSTS

6

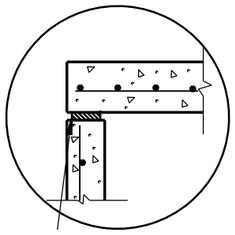


PLAN VIEW CIRCULAR OPENING

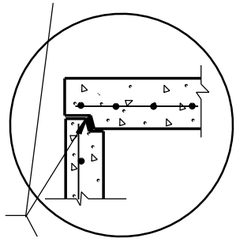


OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP

OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP

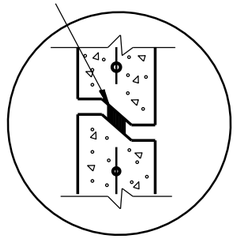


TOP WITH PLAIN END JOINT



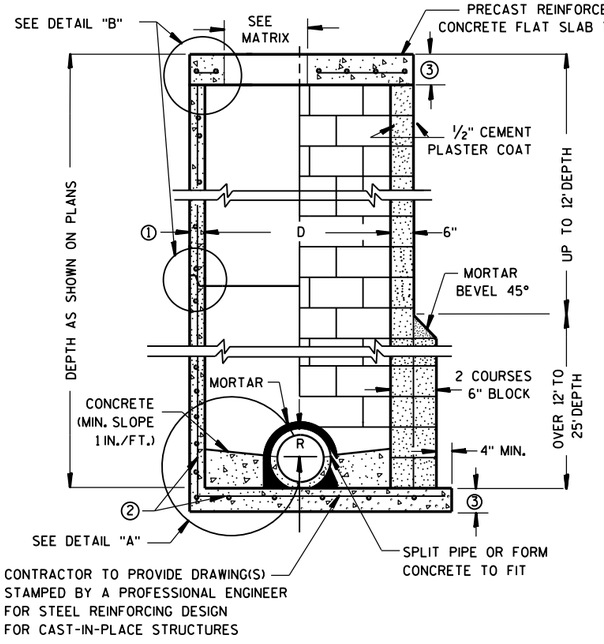
JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C990 (TYP)

TOP WITH TONGUE AND GROOVE JOINT



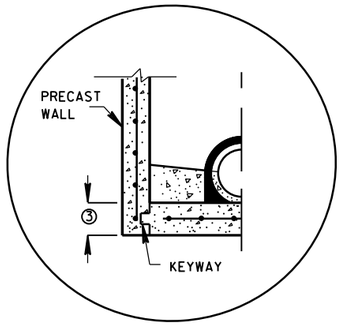
RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B"

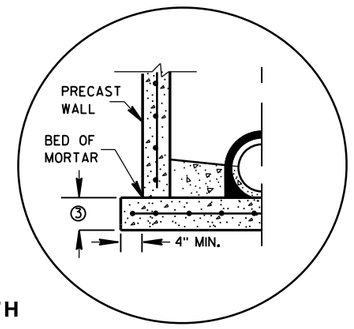


PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

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

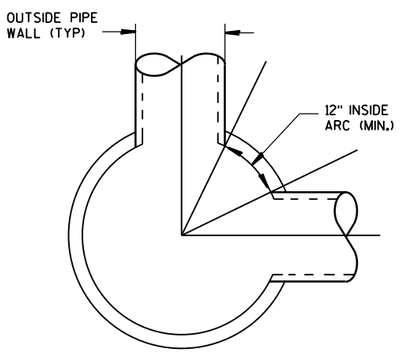


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "A"



DETAIL "C"

GENERAL NOTES

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

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

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

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

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

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

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

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

STEPS OF APPROVED POLYPROPYLENE PLASTIC COATED REINFORCEMENT BAR ARE ACCEPTABLE. REINFORCING BAR MUST BE A MINIMUM OF ½" AND MEET THE REQUIREMENTS OF ASTM A615.

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

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

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

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

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

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

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

① MINIMUM WALL THICKNESS SHALL BE 4 INCHES FOR 3-FT, 5 INCHES FOR 4-FT, 6 INCHES FOR 5-FT, 7 INCHES FOR 6-FT, 8 INCHES FOR 7-FT AND 9 INCHES FOR 8-FT DIAMETER PRECAST MANHOLES.

② FOR PRECAST MANHOLES PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.

③ PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER OF 48" AND LESS SHALL HAVE A MINIMUM THICKNESS OF 6". PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER LARGER THAN 48" SHALL HAVE A MINIMUM THICKNESS OF 8".

MANHOLE COVER OPENING MATRIX

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

PIPE MATRIX

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

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

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DEPARTMENT OF TRANSPORTATION

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ROADWAY STANDARDS DEVELOPMENT
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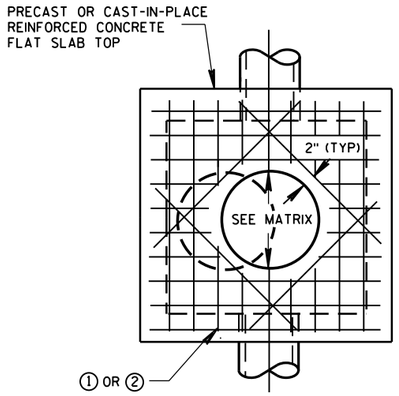
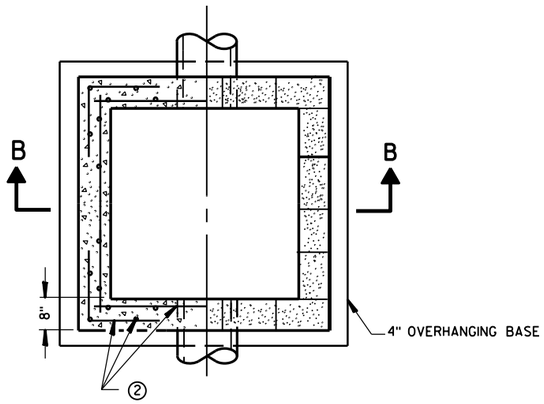
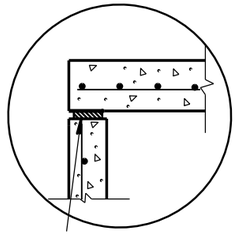
S.D.D. 8 B 9-2



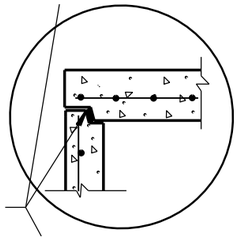
PLAN VIEW
CIRCULAR OPENING



SECTION A-A
PLAN VIEW

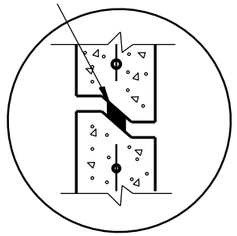


TOP WITH PLAIN END JOINT



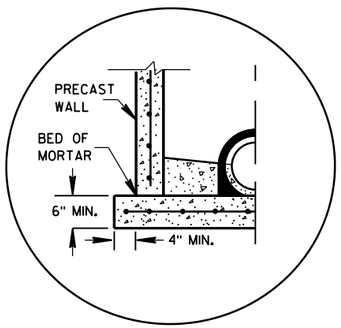
JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C 990 (TYP)

TOP WITH TONGUE AND GROOVE JOINT



RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B"



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "A"

PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

SECTION B-B

PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE

CAST-IN-PLACE REINFORCED CONCRETE

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

GENERAL NOTES

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

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

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

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

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

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

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

STEPS OF APPROVED POLYPROPYLENE PLASTIC COATED REINFORCEMENT BAR ARE ACCEPTABLE. REINFORCING BAR MUST BE A MINIMUM OF ½ INCH AND MEET THE REQUIREMENTS OF ASTM A615.

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

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

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

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

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

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

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

① FOR PRECAST MANHOLES PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913.

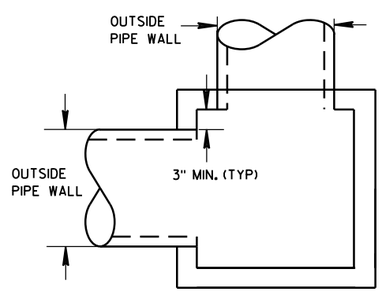
② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

MANHOLE COVER OPENING MATRIX

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

PIPE MATRIX

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



DETAIL "C"

SQUARE MANHOLES W/ FLAT TOP

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

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept., 2016
DATE
FHWA

/S/ Rodney Taylor
ROADWAY STANDARDS
UNIT SUPERV

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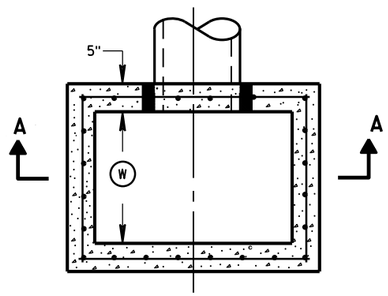
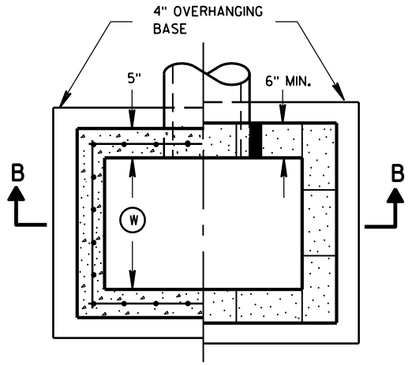
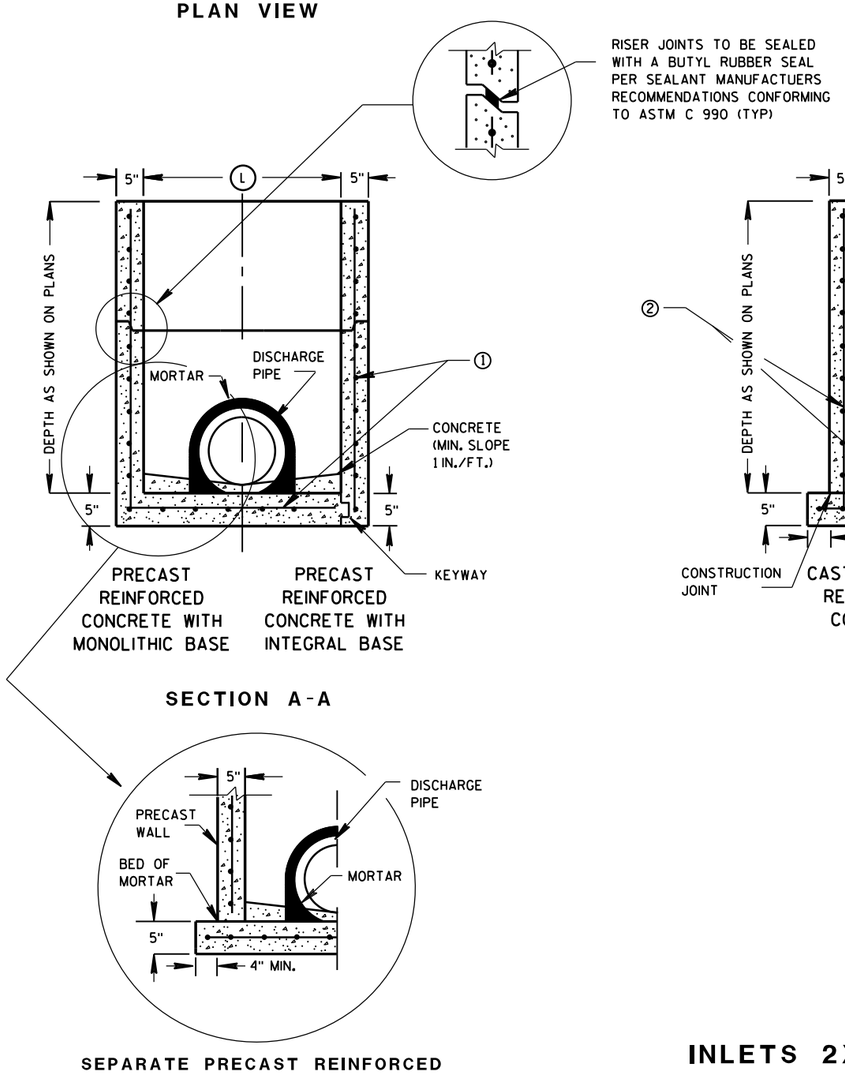
S.D.D. 8 B 10-2



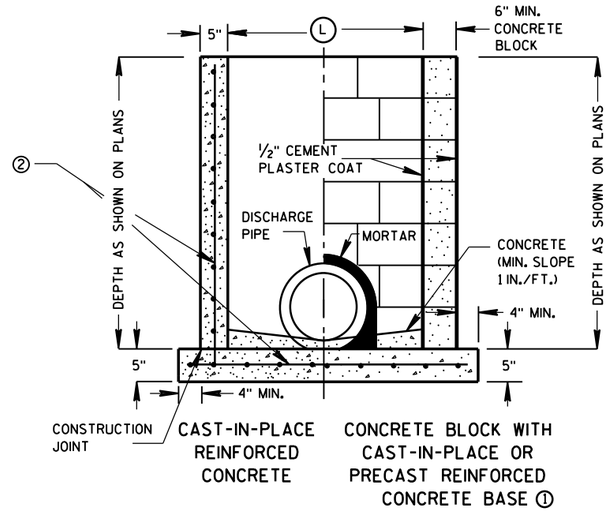
PLAN VIEW



PLAN VIEW



SECTION A-A



SECTION B-B

SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

① FOR PRECAST INLETS PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913.

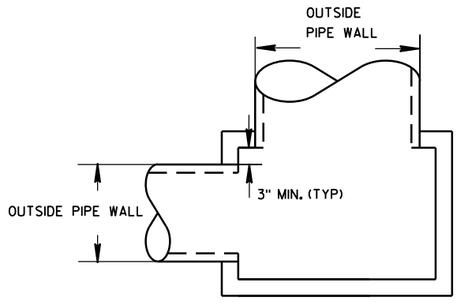
② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

INLET COVER MATRIX

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

PIPE MATRIX

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



DETAIL "A"

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

STATE OF WISCONSIN
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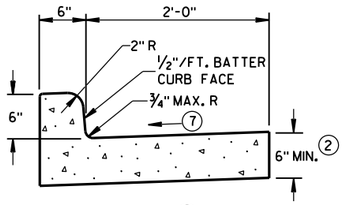
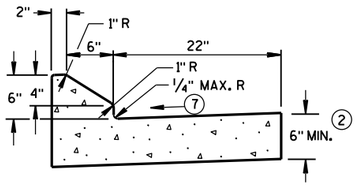
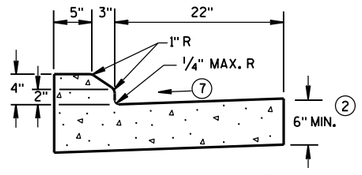
INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT



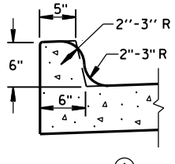
TYPES A (1) & D



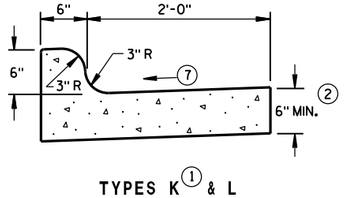
6" SLOPED CURB TYPES G (1) & J



4" SLOPED CURB TYPES G (1) & J

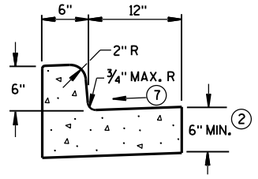


TYPES K (1) & L
(OPTIONAL CURB SHAPE)



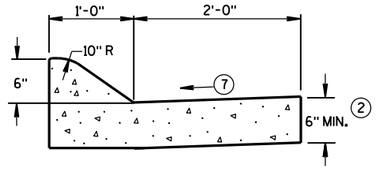
TYPES K (1) & L

CONCRETE CURB & GUTTER 30"

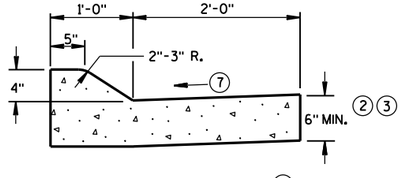


TYPES A (1) & D

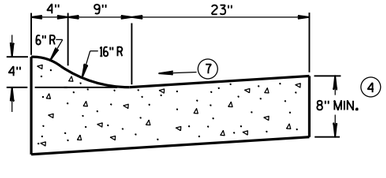
CONCRETE CURB & GUTTER 18"



6" SLOPED CURB TYPES A (1) & D

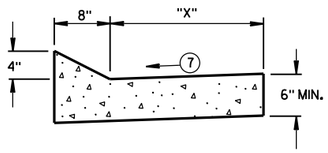


4" SLOPED CURB TYPES A (1) & D



4" SLOPED CURB TYPES R (1) & T (5)

CONCRETE CURB & GUTTER 36"



TYPES TBT & TBTT (1)

CONCRETE CURB & GUTTER

TBT & TBTT	"X"
30"	22"
36"	28"

GENERAL NOTES

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

PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

INTEGRAL CURB & GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB & GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE.

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

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

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

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

(3) USE 8" MINIMUM GUTTER THICKNESS WHEN USED WITH AN ADJACENT CONCRETE TRUCK APRON PLACED BEHIND BACK OF CURB.

(4) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.

(5) THE FACE OF CURB IS 6" FROM THE BACK OF CURB.

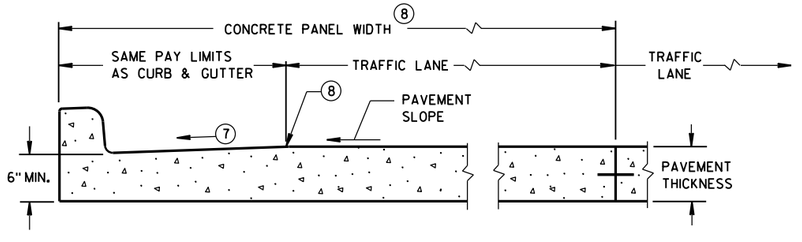
(6) WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.

(7) USE 4% GUTTER CROSS SLOPE UNLESS OTHERWISE NOTED IN THE PLANS.

(8) INCLUDE LONGITUDINAL JOINT AND TIE BARS ALONG LANE EDGE WHEN CONCRETE PANEL WIDTH EXCEEDS THE MAXIMUM WIDTH PER TABLE BELOW. LONGITUDINAL JOINT(S) ARE NOT ALLOWED WITHIN TRAFFIC LANES AND BIKE LANES. LONGITUDINAL JOINT MAY BE SAWED.

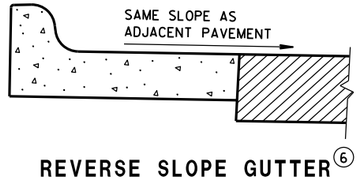
PAVEMENT THICKNESS AND MAXIMUM CONCRETE PANEL WIDTH TABLE

PAVEMENT THICKNESS	MAXIMUM PANEL WIDTH
LESS THAN 10"	12'
10" & ABOVE	15'



PARTIAL SECTION OF PAVEMENT *
WITH INTEGRAL CURB & GUTTER

* BIKE LANE IS NOT SHOWN.



REVERSE SLOPE GUTTER (6)
(TYPICAL FOR ALL CURB & GUTTER TYPES)

CONCRETE CURB & GUTTER

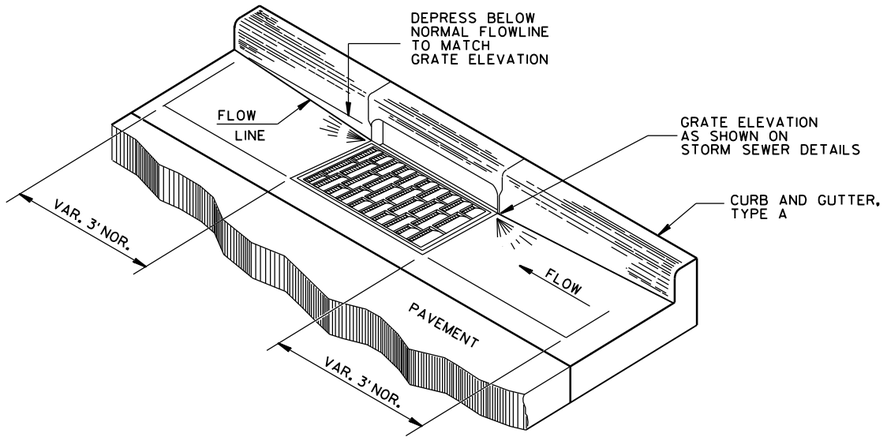
STATE OF WISCONSIN
DEPARTMENT OF TRANSPO...

6

S.D.D. 8 D 1-20a

6

S.D.D. 8 D 1-20a



DETAIL OF CURB AND GUTTER AT INLETS

(TYPE H INLET COVER SHOWN)

GENERAL NOTES

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

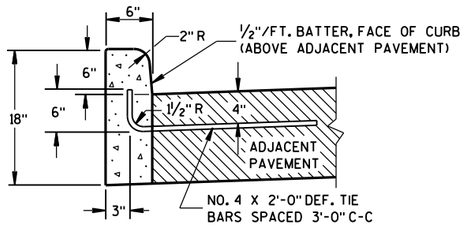
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

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

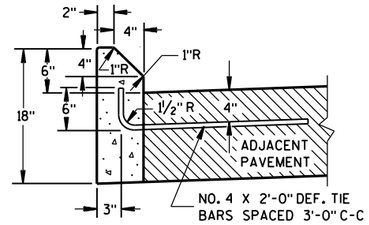
(1) TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K, R AND TBTT.

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

(9) REFER TO SDD 8D18 AND SDD 8D19 FOR ADDITIONAL DRIVEWAY ENTRANCE CURB DETAILS.

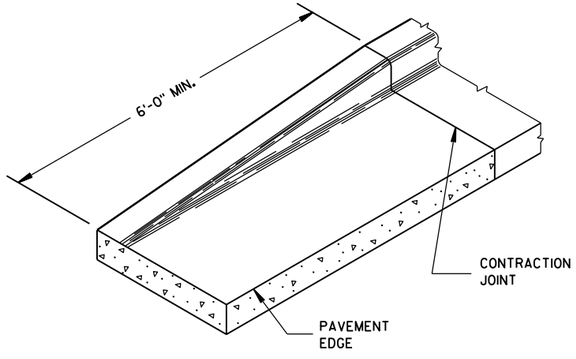


TYPES A (1) & D

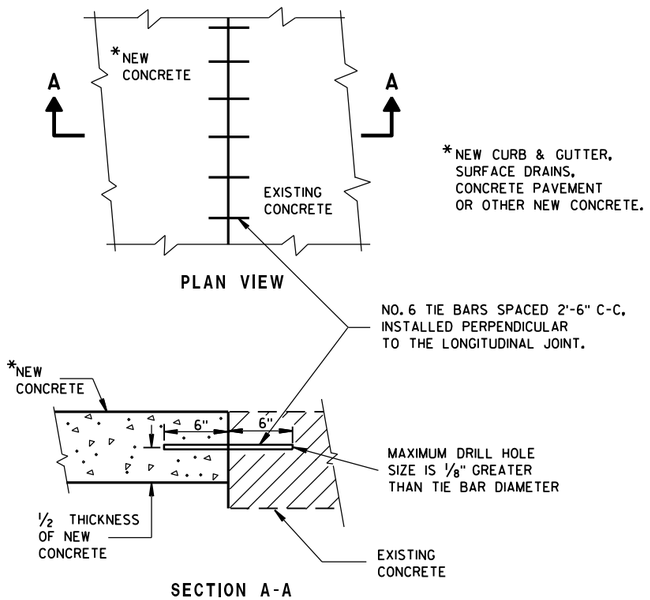


TYPES G (1) & J

CONCRETE CURB



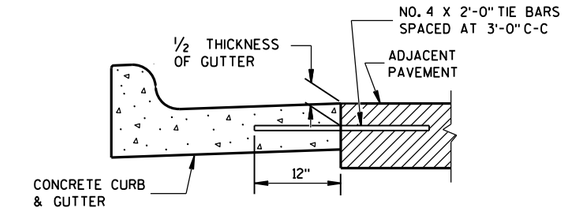
END SECTION CURB & GUTTER



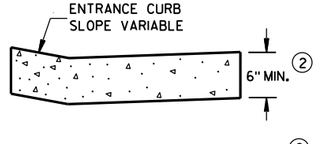
PLAN VIEW

SECTION A-A

TIE BARS DRILLED INTO EXISTING PAVEMENT



TYPICAL TIE BAR LOCATION (1)



DRIVEWAY ENTRANCE CURB (9)

(WHEN DIRECTED BY THE ENGINEER)

CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2017 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS 78 — ENT
UNIT SUPERVISOR
FHWA

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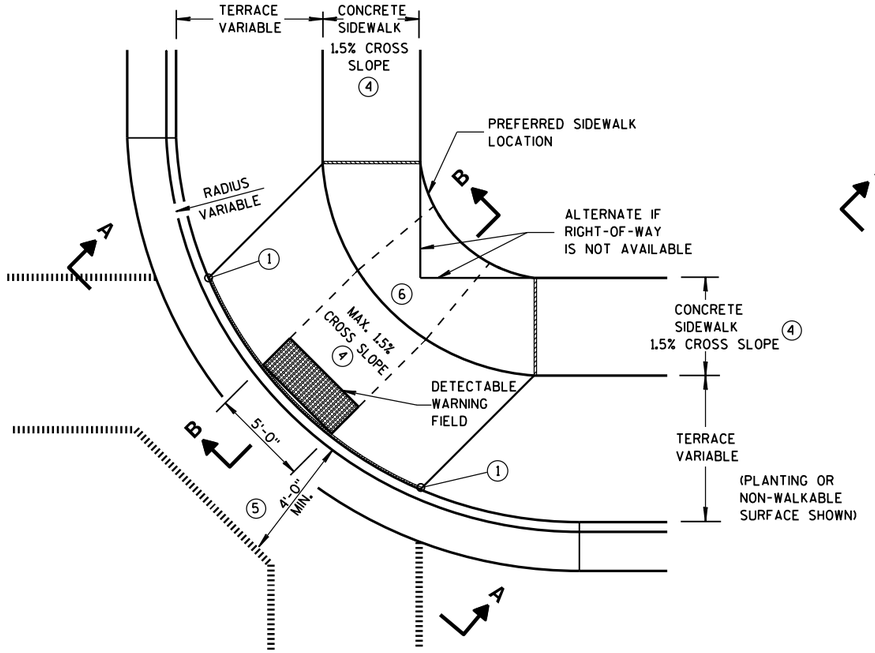
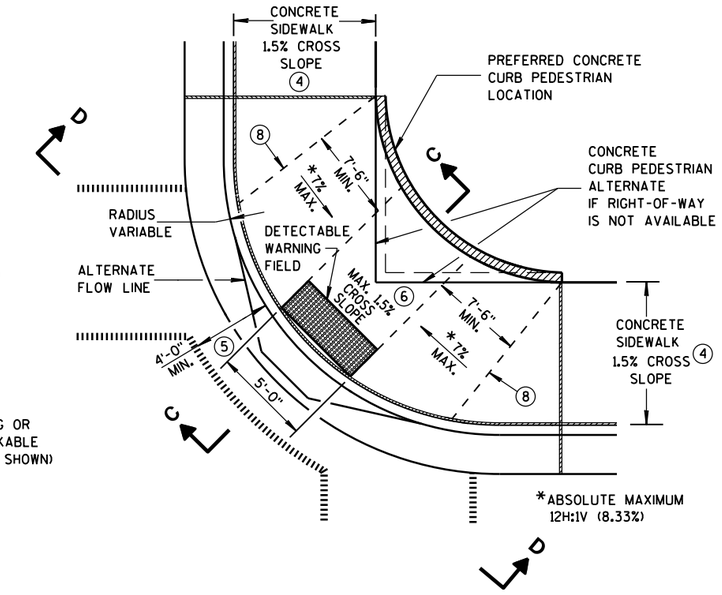
S.D.D. 8 D 1-20b



PLAN VIEW

TYPE 1 RAMP

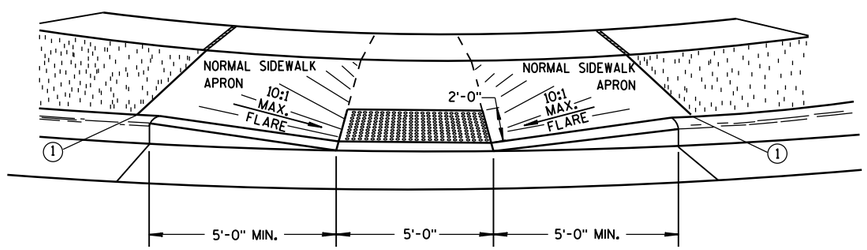
(CENTER OF CORNER RADIUS)



PLAN VIEW

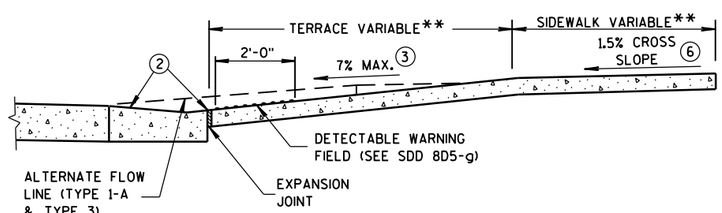
TYPE 1-A RAMP

(NO TERRACE)

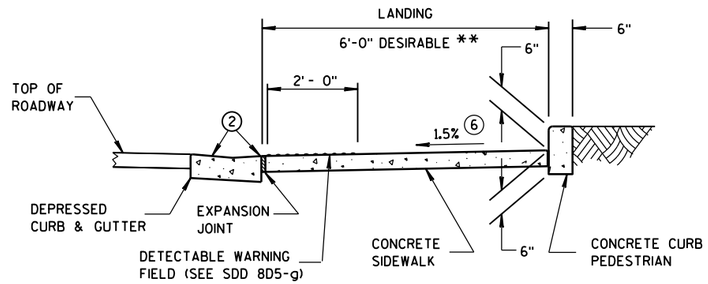


VIEW A-A

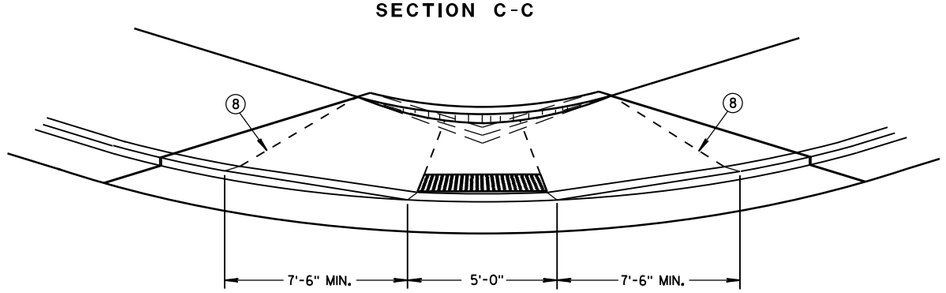
** WIDTH SHOWN ELSEWHERE IN THE PLANS



SECTION B-B



SECTION C-C



VIEW D-D

GENERAL NOTES

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

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

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

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

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

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

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

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

(1) THIS POINT IS AN EXTENSION OF OUTSIDE EDGE OF APPROACHING SIDEWALK WHERE IT MEETS THE BACK OF CONCRETE CURB. POINT LOCATION MAY BE ADJUSTED TO ALIGN WITH BEGINNING OF FULL-HEIGHT CURB IF THIS DISTANCE IS SHORT.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(5) PROVIDE A LEVEL LANDING IN THE STREET AND GUTTER AREA. (2% MAXIMUM SLOPE IN ANY DIRECTION). WHEN THE GUTTER SLOPE EXCEEDS 2%, CONSTRUCT THE LEVEL LANDING IN THE STREET AREA.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

LEGEND

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

CURB RAMPS TYPES 1 AND 1-A

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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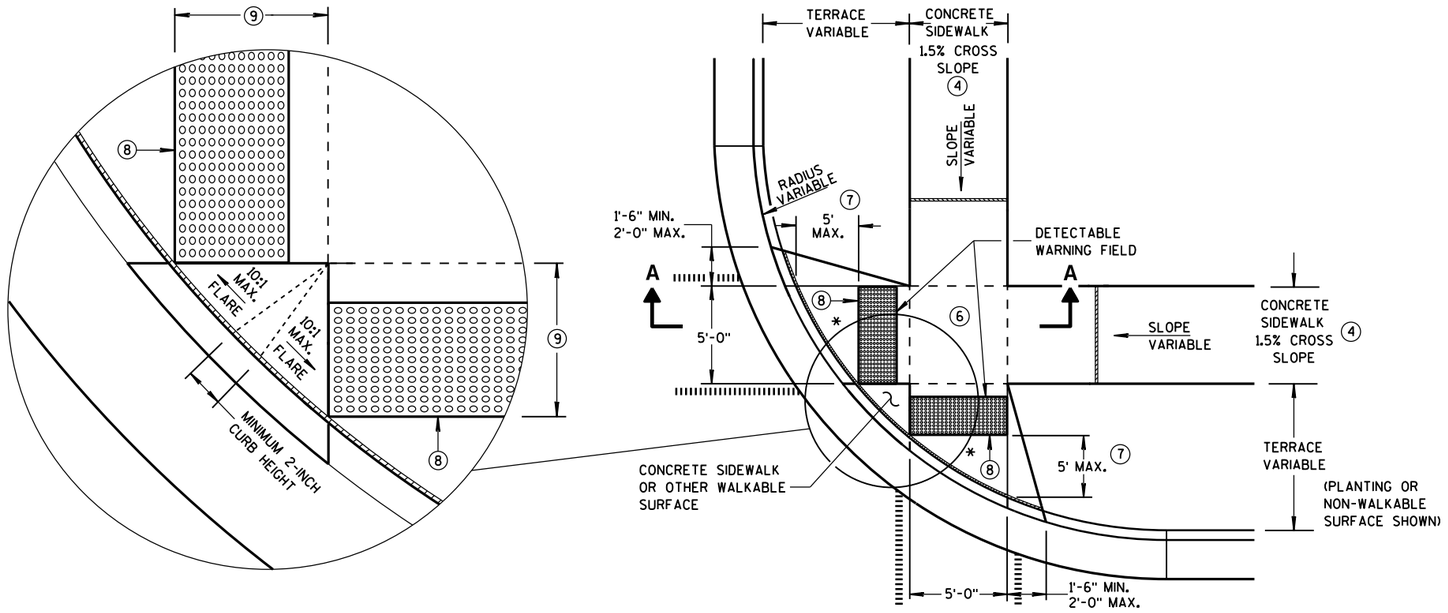
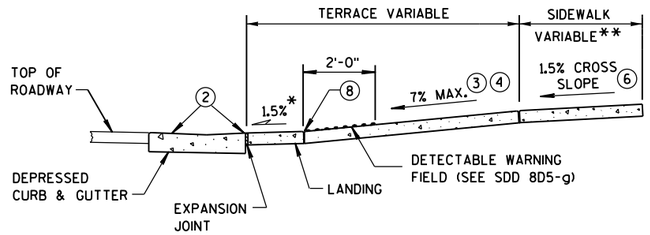
S.D.D. 8 D 5-19a



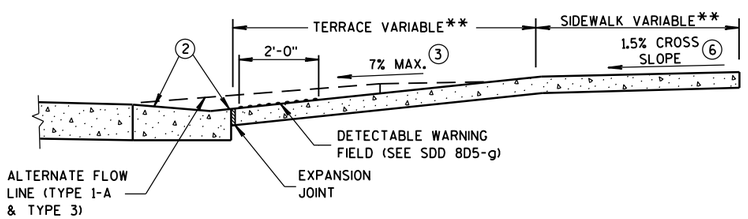
PLAN VIEW
TYPE 2 RAMP
(ON LINE WITH SIDEWALK)

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



SECTION A-A

** WIDTH SHOWN ELSEWHERE IN THE PLANS



SECTION B-B

GENERAL NOTES

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

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

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.

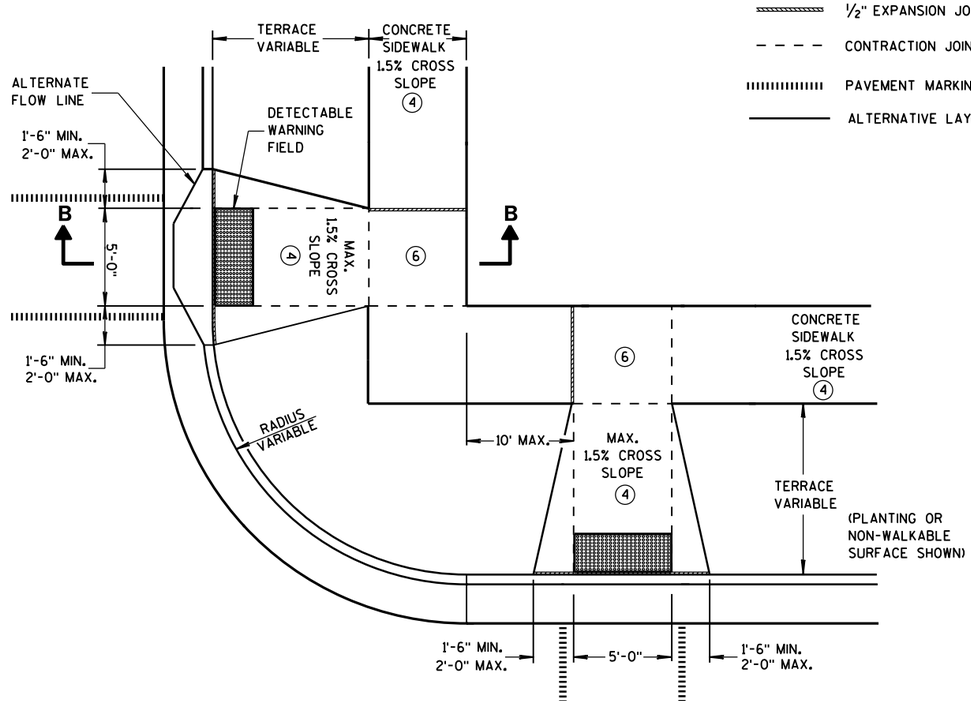
(7) WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

(9) WHEN THIS DISTANCE IS LESS THAN 6'-0", IT MAY BE DIFFICULT TO ACHIEVE A 7% SLOPE OR FLATTER ALONG THE RAMP. REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 7% SLOPE OR FLATTER ON RAMP. CONSTRUCT 2-INCH MINIMUM CURB HEIGHT BETWEEN 10:1 FLARES.

LEGEND

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



PLAN VIEW
TYPE 3 RAMP
(OUTSIDE OF CROSSWALK AREA)

CURB RAMPS TYPES 2 AND 3

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

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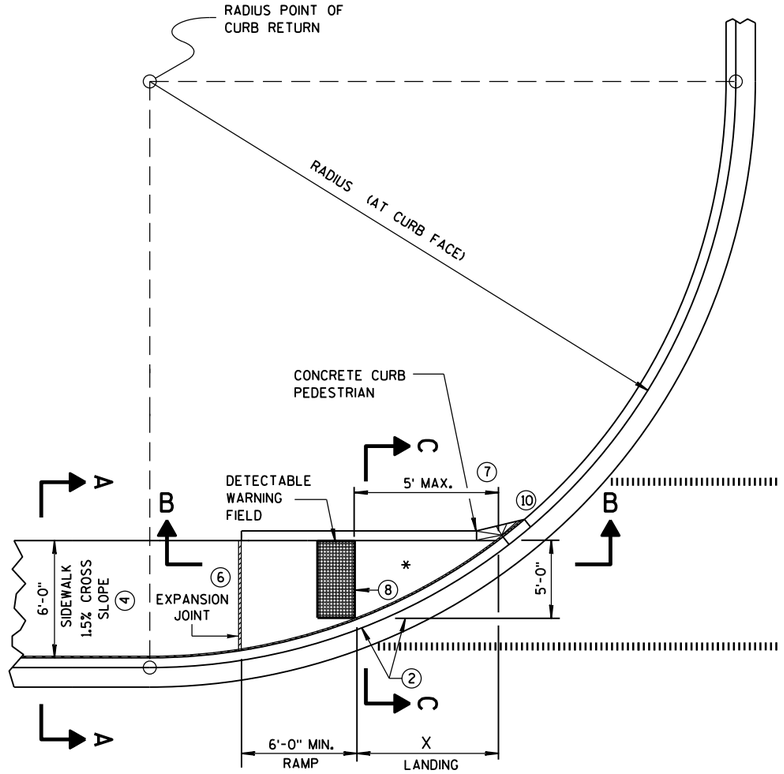
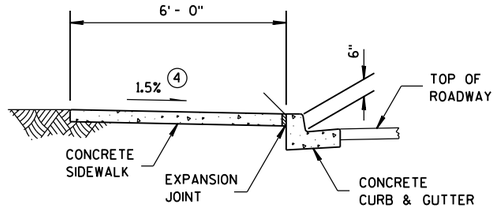
S.D.D. 8 D 5-19b



CURB RAMP TYPE 4A
PLAN VIEW

RADIUS (AT CURB FACE)	X
10 FEET	4'-7"
15 FEET	6'-5½"

INTERMEDIATE RADII CAN BE INTERPOLATED



SECTION A-A FOR TYPE 4A

GENERAL NOTES

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

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

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

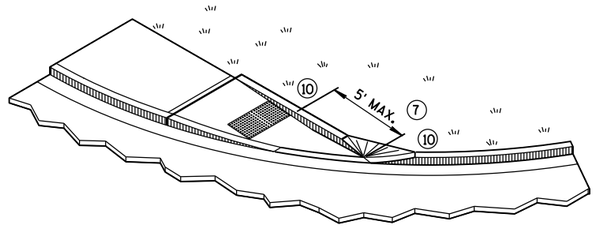
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.

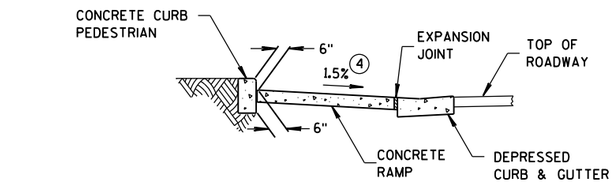
(7) WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

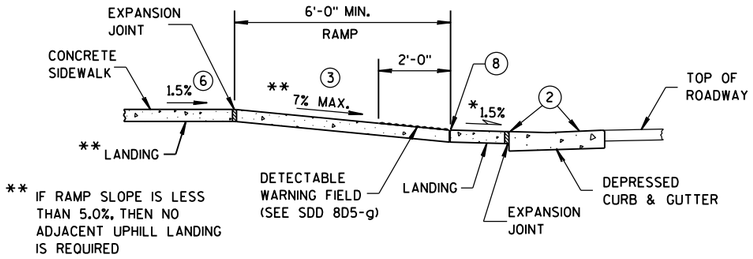
(10) INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.



ISOMETRIC VIEW FOR TYPE 4A



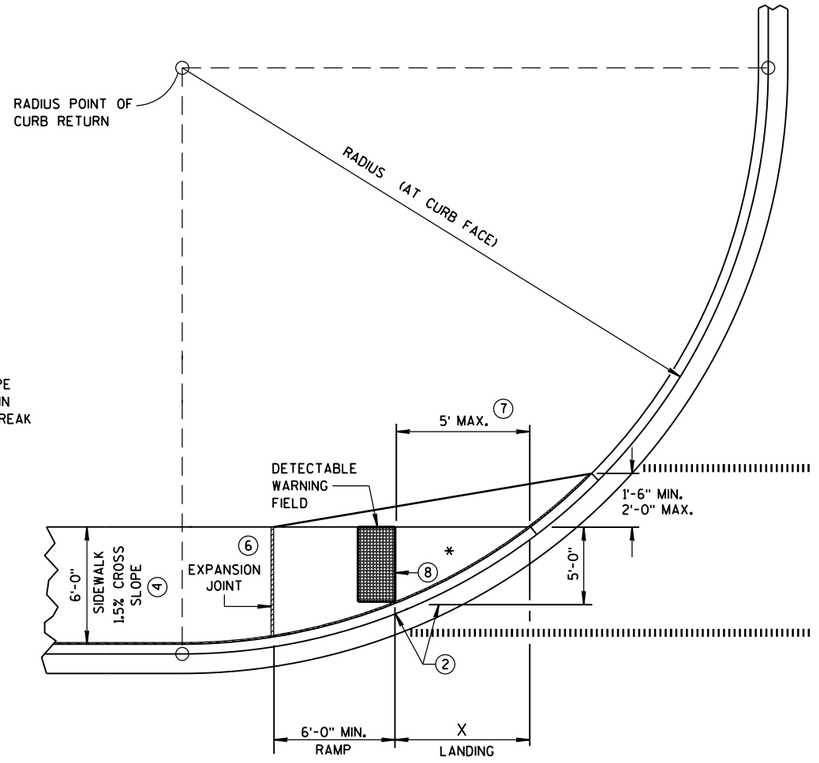
SECTION C-C FOR TYPE 4A



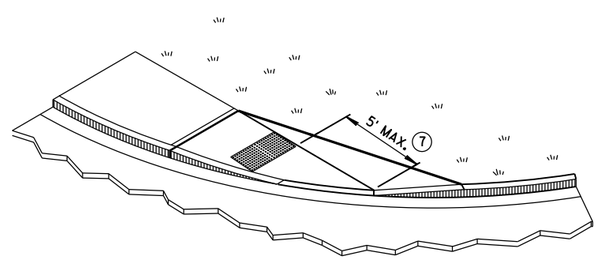
** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

SECTION B-B FOR TYPE 4A

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



CURB RAMP TYPE 4A1
PLAN VIEW



ISOMETRIC VIEW FOR TYPE 4A1

LEGEND

½" EXPANSION JOINT-SIDEWALK

CONTRACTION JOINT FIELD LOCATED

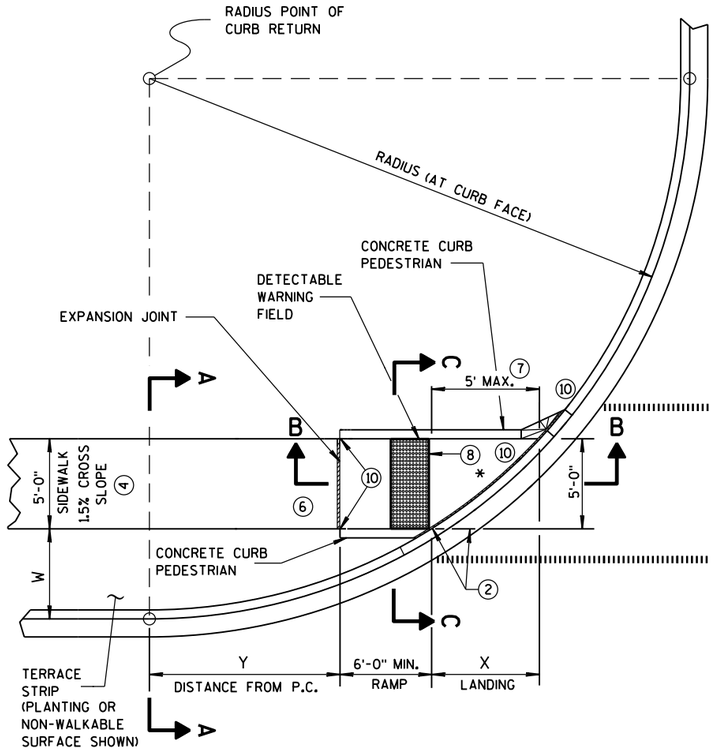
PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS
TYPES 4A AND 4A1

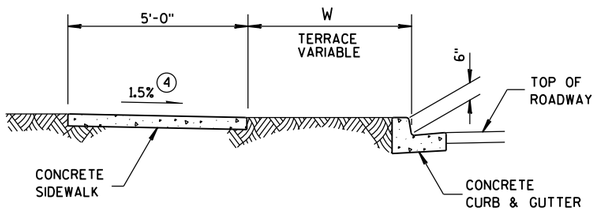
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

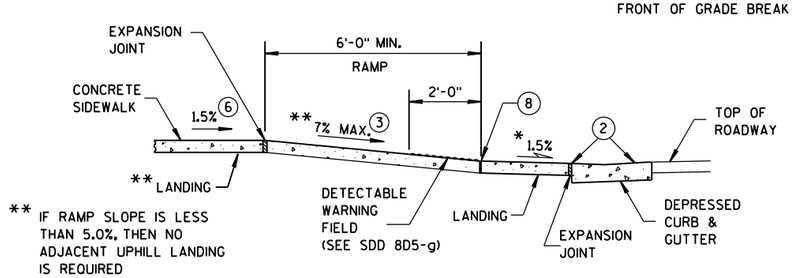
S.D.D. 8 D 5-19c



CURB RAMP TYPE 4B
PLAN VIEW



SECTION A-A FOR TYPE 4B



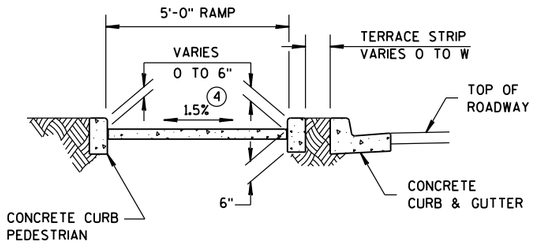
* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK

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

SECTION B-B FOR TYPE 4B

RADIUS (AT CURB FACE)	W = 3'-0"		W = 4'-0"		W = 5'-0"		W = 6'-0"		W = 7'-0"		W = 8'-0"		W = 9'-0"		W = 10'-0"	
	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y
10 FEET	2'-10¼"	0'-5"	2'-1"	1'-4½"	1'-5"	2'-1"	0'-10"	2'-7½"	0'-3¼"	3'-0¼"						
15 FEET	4'-6¾"	2'-1¾"	3'-9"	3'-5¼"	3'-1¼"	4'-6"	2'-6¾"	5'-4½"	2'-1"	6'-1"	1'-8"	6'-8½"	1'-3¼"	7'-2½"	0'-10¾"	7'-7¼"
20 FEET	5'-9¾"	3'-6½"	4'-11½"	5'-1¾"	4'-3¼"	6'-5½"	3'-8¾"	7'-7"	3'-3"	8'-6½"	2'-10"	9'-4½"	2'-5½"	10'-1¼"	2'-1¼"	10'-9"
30 FEET			6'-9¼"	7'-11¼"	6'-0¼"	9'-8"	5'-5"	11'-1¾"	4'-10¾"	12'-5¾"	4'-5½"	13'-7¾"	4'-0¾"	14'-8½"	3'-8½"	15'-8¼"
40 FEET									6'-1¾"	15'-8½"	5'-8"	17'-2"	5'-3"	18'-5¾"	4'-10¾"	19'-8¼"
50 FEET															5'-10¼"	23'-2"

INTERMEDIATE RADII CAN BE INTERPOLATED
DIMENSION "Y" IS CALCULATED BASED ON 6'-0" RAMP LENGTH
DIMENSION "X" IS CALCULATED BASED ON 5'-0" SIDEWALK WIDTH



SECTION C-C FOR TYPE 4B

GENERAL NOTES

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

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

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

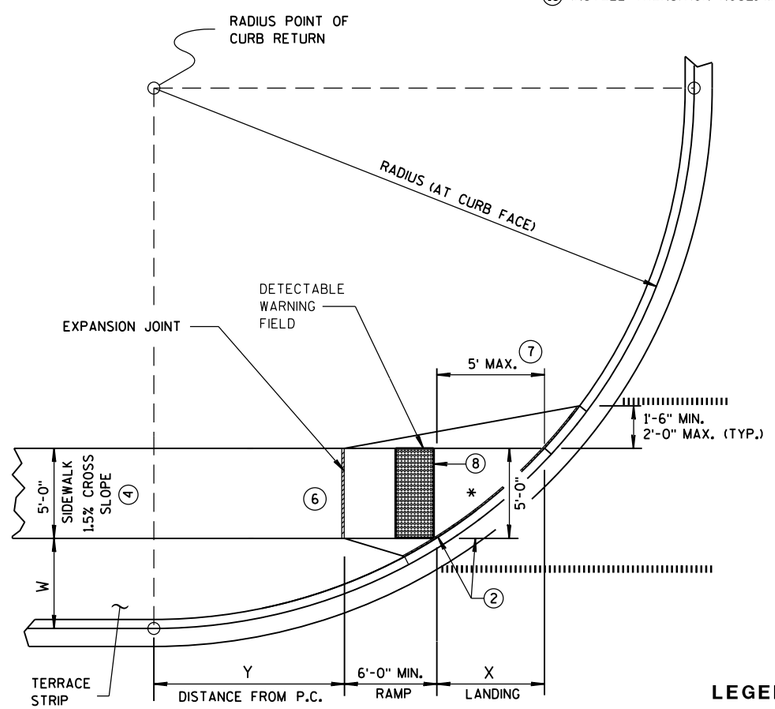
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.

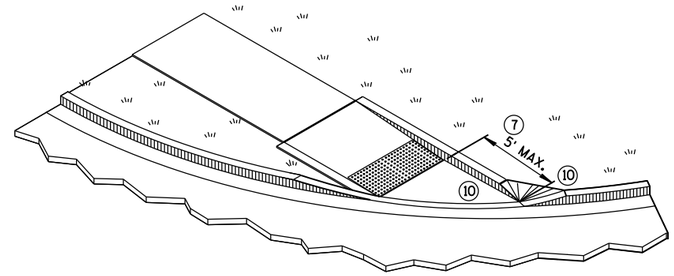
(7) WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

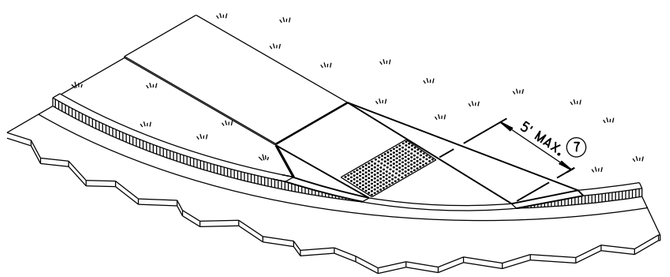
(10) INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.



CURB RAMP TYPE 4B1
PLAN VIEW



ISOMETRIC VIEW FOR TYPE 4B



ISOMETRIC VIEW FOR TYPE 4B1

LEGEND

½" EXPANSION JOINT-SIDEWALK

CONTRACTION JOINT FIELD LOCATED

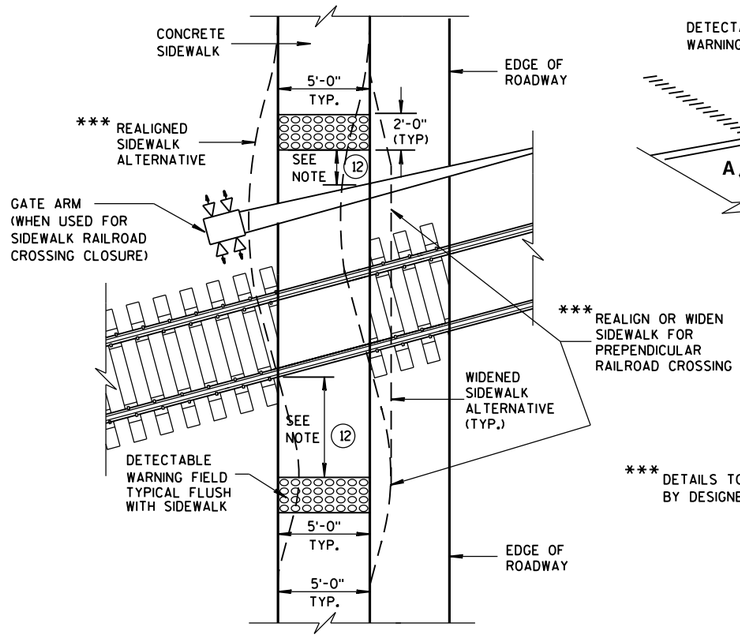
PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS TYPE 4B AND 4B1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

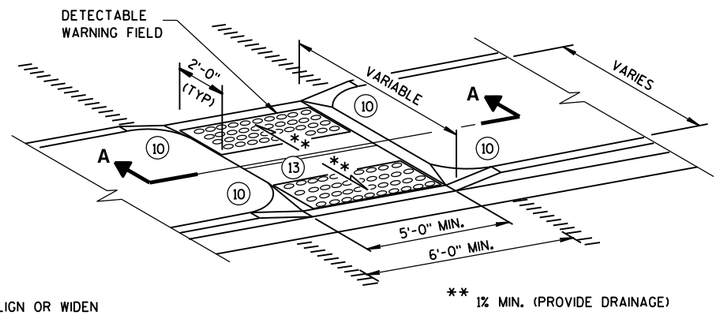
6

S.D.D. 8 D 5-19d



*** DETAILS TO BE DETERMINED BY DESIGNER

TYPE 8
DETECTABLE WARNINGS AT RAILROAD CROSSING



** 1% MIN. (PROVIDE DRAINAGE)

MEDIAN ISLAND
NON-ELEVATED PEDESTRIAN CROSSING
TYPE 5

GENERAL NOTES

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

SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.

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

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

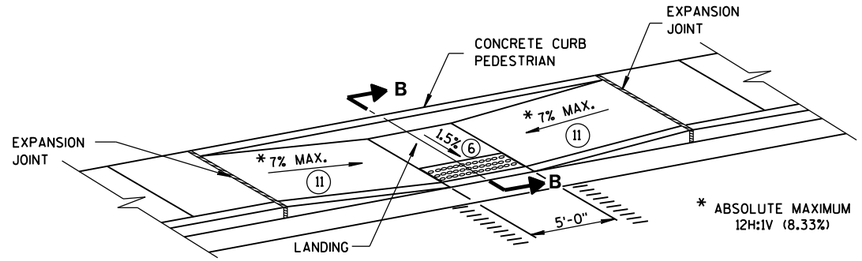
(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.

(10) INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.

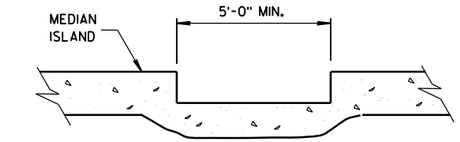
(11) SLOPE SIDEWALK TOWARD LANDING AS SHOWN WHERE THERE IS NO TERRACE OR WHERE THE TERRACE WIDTH IS LESS THAN 6 FEET WIDE.

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

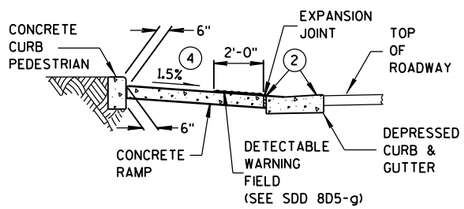
(13) DO NOT INSTALL DETECTABLE WARNING FIELDS AT THE EDGES OF STREET-LEVEL PEDESTRIAN REFUGE ISLANDS IF A MINIMUM 2-FOOT CONCRETE SURFACE WITHOUT DETECTABLE WARNINGS (MEASURED IN THE DIRECTION OF PEDESTRIAN TRAVEL) CANNOT BE ACHIEVED.



MID-BLOCK CROSSING
TYPE 7A

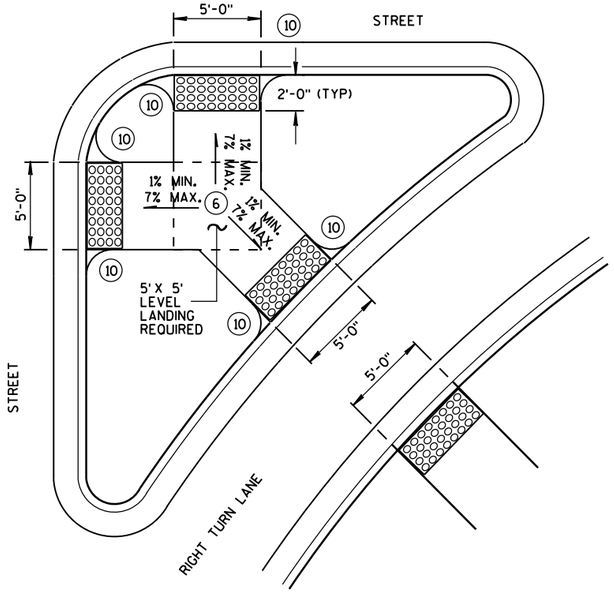


SECTION A-A

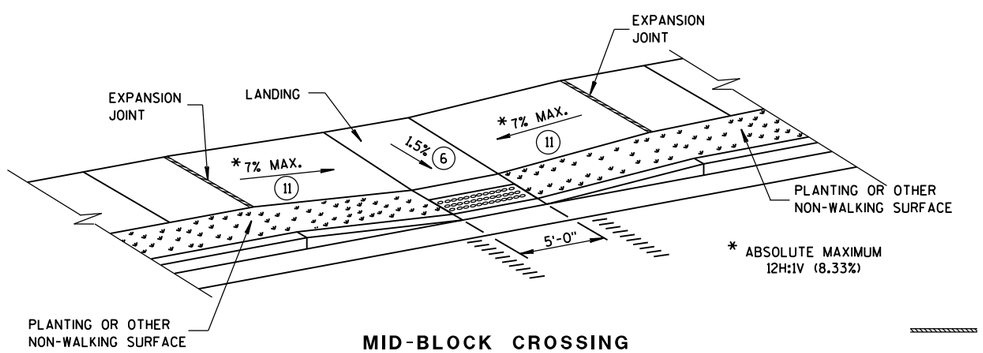


SECTION B-B

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



TYPE 6
DETECTABLE WARNING AT ISLANDS



MID-BLOCK CROSSING
TYPE 7B

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

LEGEND

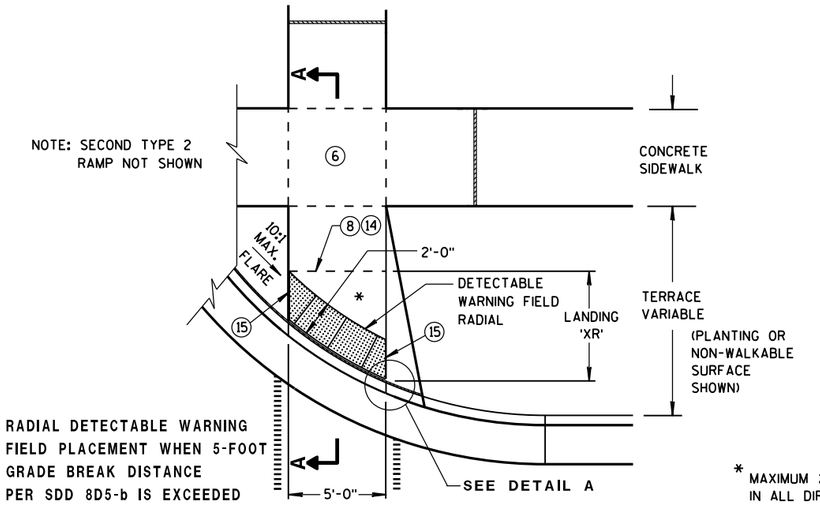
- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 8 D 5-19e

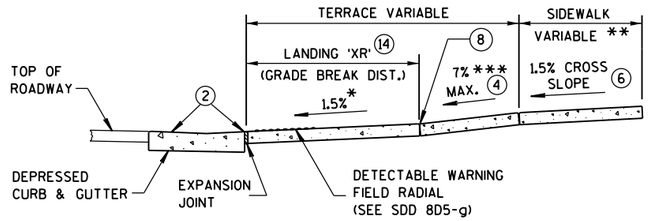


TYPE 2 RAMP
PLAN VIEW
(GRADE BREAK DISTANCE GREATER THAN 5 FEET)
(ON LINE WITH SIDEWALK)

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

LEGEND

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



** WIDTH SHOWN ELSEWHERE IN THE PLANS

*** ABSOLUTE MAXIMUM 12H:1V (8.33%)

SECTION A-A

GENERAL NOTES

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

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

APPLY RADIAL DETECTABLE WARNING PLACEMENT SIMILARLY FOR TYPE 4A AND 4A1 CURB RAMPS AND SIMILARLY FOR TYPE 4B AND 4B1 CURB RAMPS. TYPE 4A AND 4B CURB RAMPS ARE NOT SHOWN.

REFER TO SDD 8D5-g FOR ADDITIONAL RADIAL PLATE REQUIREMENTS.

FIELD CUTS AT INTERMEDIATE JOINTS WITHIN THE RADIAL DETECTABLE WARNING FIELD ARE PROHIBITED.

DETERMINE FINAL RADIAL WARNING FIELD CONFIGURATION AND ITS INDIVIDUAL PLATE LOCATIONS. PERFORM PRE-LAYOUT PRIOR TO PLACEMENT IN PLASTIC CONCRETE. FOLLOW MANUFACTURER'S PRODUCT LIST AND INSTALLATION RECOMMENDATIONS.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.

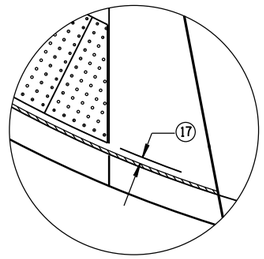
(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

(14) CONSULT ENGINEER IF GRADE BREAK LOCATION (END OF LANDING DIMENSION 'XR') REQUIRES FIELD ADJUSTMENT WHEN ESTABLISHING FINAL RADIAL DETECTABLE WARNING FIELD LOCATION.

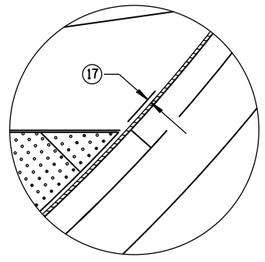
(15) FIELD SAW CUTS ALONG RADIAL DETECTABLE WARNING PLATES WILL BE NECESSARY TO MATCH EACH CURB RAMP EDGE. AVOID CUTTING THROUGH DOMES WHENEVER POSSIBLE. MAKE FIELD CUTS TRUE TO LINE AND WITHIN 1/8" DEVIATION. SMOOTH EDGES OF FIELD CUT PLATES.

(16) USE 1'X 2' RECTANGULAR END PLATE AT END OF TYPE 4A1 RAMP AND PROVIDE MINIMUM 2'-0" DETECTABLE WARNING FIELD COVERAGE (IN DIRECTION OF PEDESTRIAN TRAVEL) ALONG THE ENTIRE CURB RAMP WIDTH.

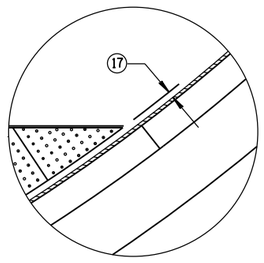
(17) A MAXIMUM 3-INCH CONCRETE BORDER WIDTH IS ALLOWABLE IN FRONT OF RADIAL DETECTABLE WARNING FIELD FOR CONSTRUCTABILITY PURPOSES. CONCRETE BORDER WIDTH MAY VARY UP TO 1 INCH.



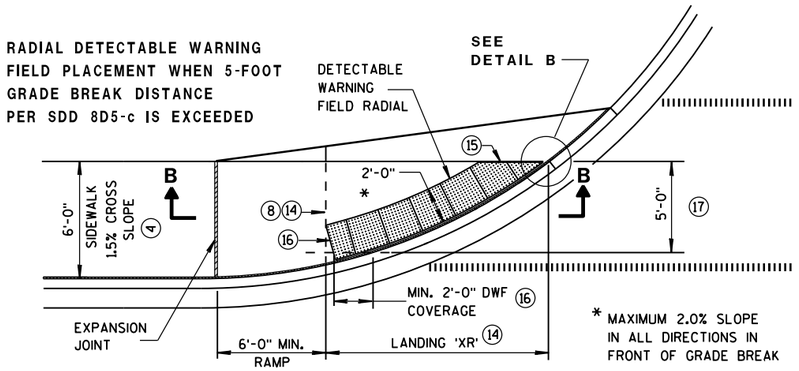
DETAIL A



DETAIL C

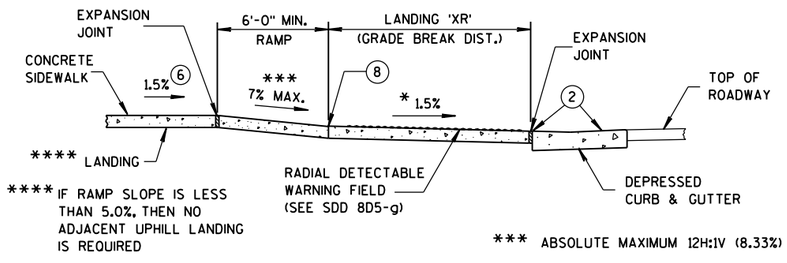


DETAIL B



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

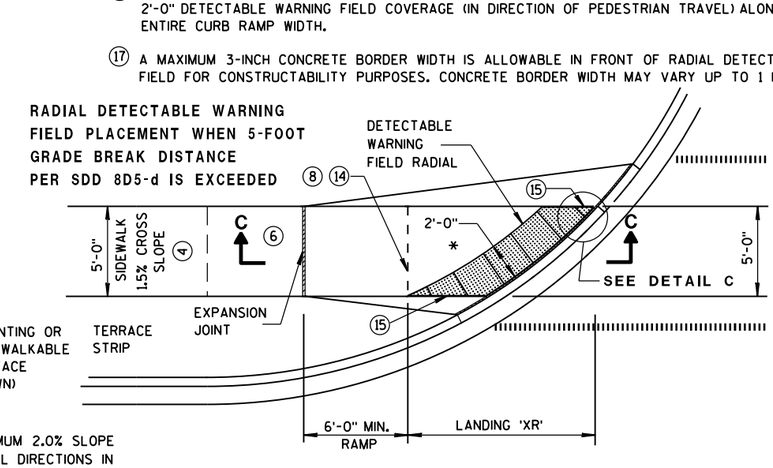
CURB RAMP TYPE 4A1
PLAN VIEW
(GRADE BREAK DISTANCE GREATER THAN 5 FEET)



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

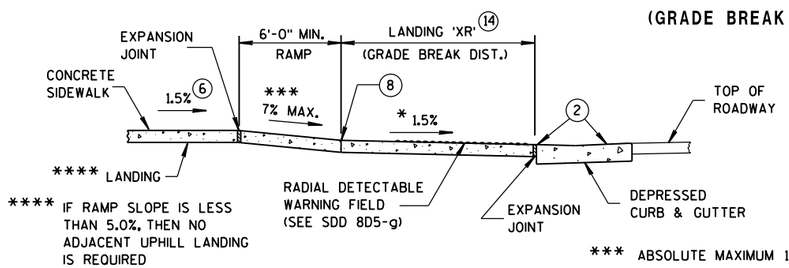
*** ABSOLUTE MAXIMUM 12H:1V (8.33%)

SECTION B-B FOR TYPE 4A1



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

CURB RAMP TYPE 4B1
PLAN VIEW
(GRADE BREAK DISTANCE GREATER THAN 5 FEET)



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

*** ABSOLUTE MAXIMUM 12H:1V (8.33%)

SECTION C-C FOR TYPE 4B1

CURB RAMPS
RADIAL DETECTABLE WARNING FIELD APPLICATIONS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

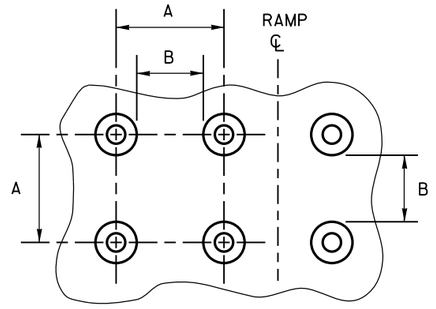
S.D.D. 8 D 5-19f

6

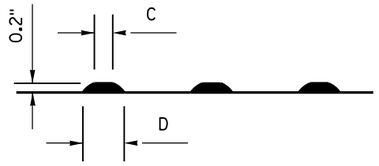
S.D.D. 8 D 5-19f

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

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



PLAN VIEW



ELEVATION VIEW

TRUNCATED DOMES

DETECTABLE WARNING PATTERN DETAIL

GENERAL NOTES

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

PLACE ALL DETECTABLE WARNING FIELD SYSTEMS IN ACCORDANCE TO THE MANUFACTURER'S RECOMMENDATION.

FIELD CUTS AT INTERMEDIATE JOINTS WITHIN THE RADIAL DETECTABLE WARNING FIELD ARE PROHIBITED.

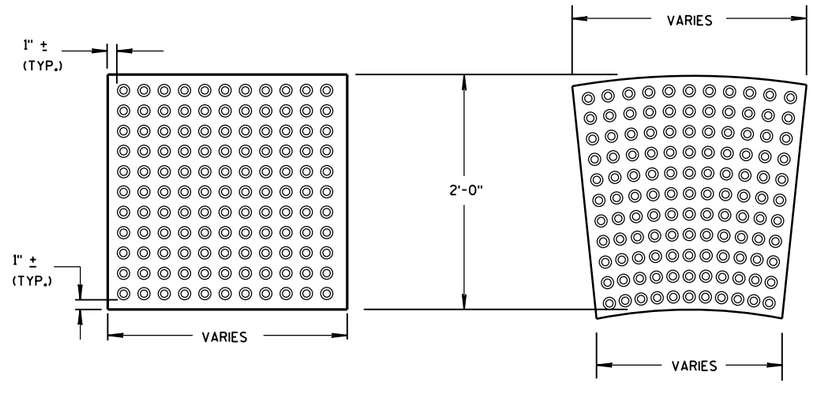
DETERMINE FINAL RADIAL WARNING FIELD CONFIGURATION AND ITS INDIVIDUAL PLATE LOCATIONS. PERFORM PRE-LAYOUT PRIOR TO PLACEMENT IN PLASTIC CONCRETE. FOLLOW MANUFACTURER'S PRODUCT LIST AND INSTALLATION RECOMMENDATIONS.

FOR RADIAL DETECTABLE WARNING FIELD APPLICATIONS WHERE STANDARD RADIAL PLATES ARE NOT AVAILABLE AT AN INTERSECTION CURB RADIUS, A COMBINATION OF SQUARE OR RECTANGULAR PLATES AND RADIAL PLATES MAY BE USED TO FORM RADIAL CONFIGURATION. RADIAL WEDGES IN COMBINATION WITH SQUARE PANELS ARE ALSO ACCEPTABLE. FOLLOW MANUFACTURER'S RECOMMENDATIONS.

REFER TO CONTRACT AND STANDARD SPECIFICATIONS FOR FIELD CUTTING REQUIREMENTS.

DO NOT EMBED IN CONCRETE ANY FIELD-CUT PLATES WITH CUT EDGES SHORTER THAN 6 INCHES. CONSULT WITH MANUFACTURER FOR RE-DRILLING AND ANCHORING REQUIREMENTS OF FIELD-CUT PLATES.

⑮ FIELD SAW CUTS ALONG RADIAL DETECTABLE WARNING PLATES WILL BE NECESSARY TO MATCH EACH CURB RAMP EDGE. AVOID CUTTING THROUGH DOMES WHENEVER POSSIBLE. MAKE FIELD CUTS TRUE TO LINE AND WITHIN 1/8" DEVIATION. SMOOTH EDGES OF FIELD CUT PLATES.

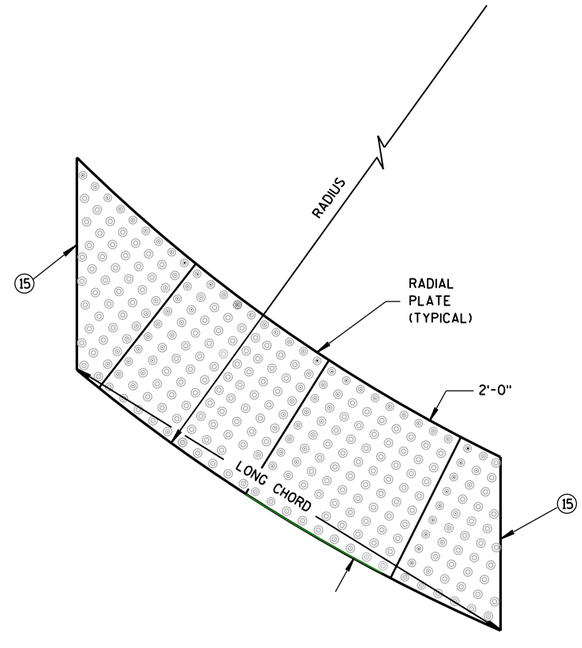


RECTANGULAR PLATES

RADIAL PLATES

DETECTABLE WARNING FIELDS (TYPICAL)

PLAN VIEW



RADIAL DETECTABLE WARNING FIELD ATTRIBUTES

CURB RAMPS
RECTANGULAR AND RADIAL
DETECTABLE WARNING PLATES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2017 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS UNIT SUPERV
FHWA

ENT

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S.D.D. 8 D 5-19g

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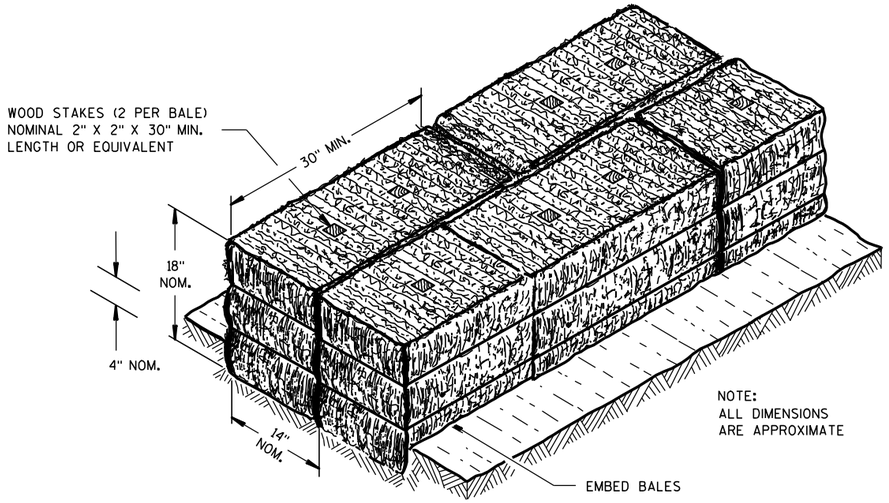
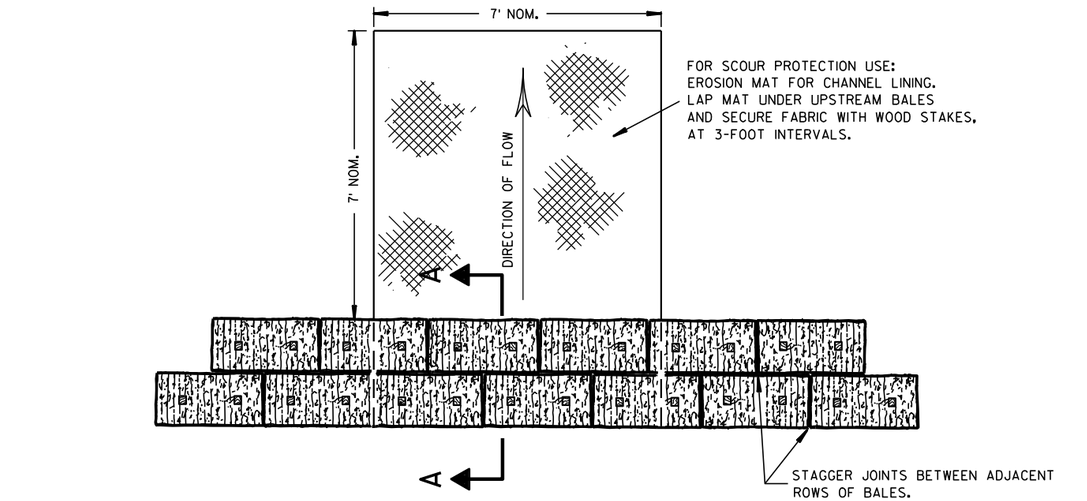
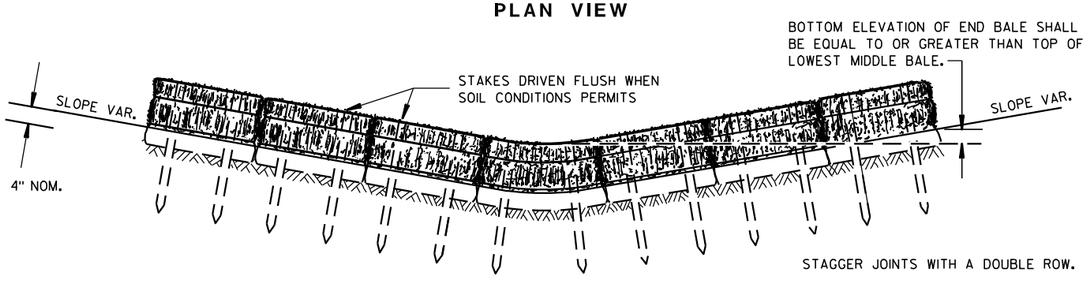
S.D.D. 8 D 5-19g



SECTION A-A



PLAN VIEW



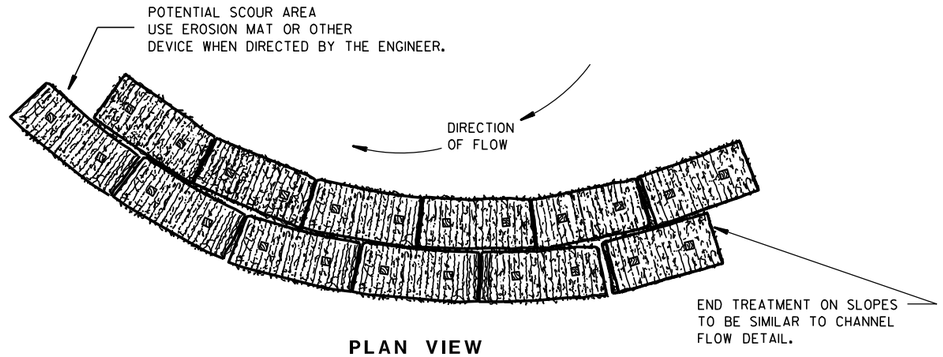
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES (1)

GENERAL NOTES

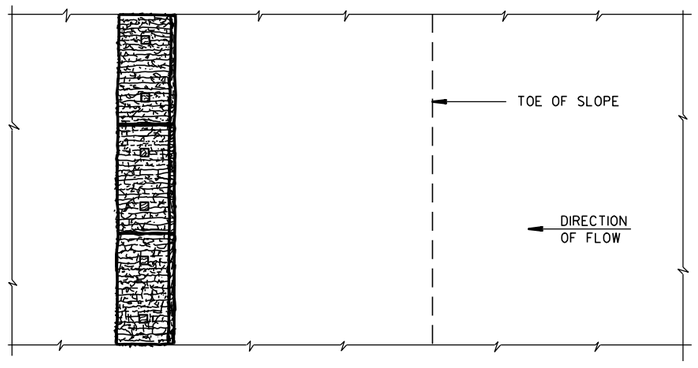
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

(1) TEMPORARY DITCH CHECKS EITHER EROSION BALES OR MANUFACTURED SHALL BE PAID FOR UNDER THE BID ITEM OF TEMPORARY DITCH CHECK. THE DEPARTMENT WILL NOT PAY FOR TEMPORARY DITCH CHECKS CONSTRUCTED OF A SINGLE ROW OF EROSION BALES.

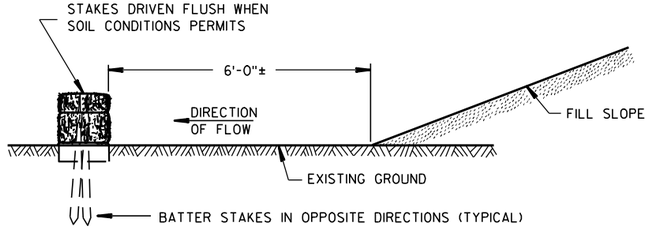


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

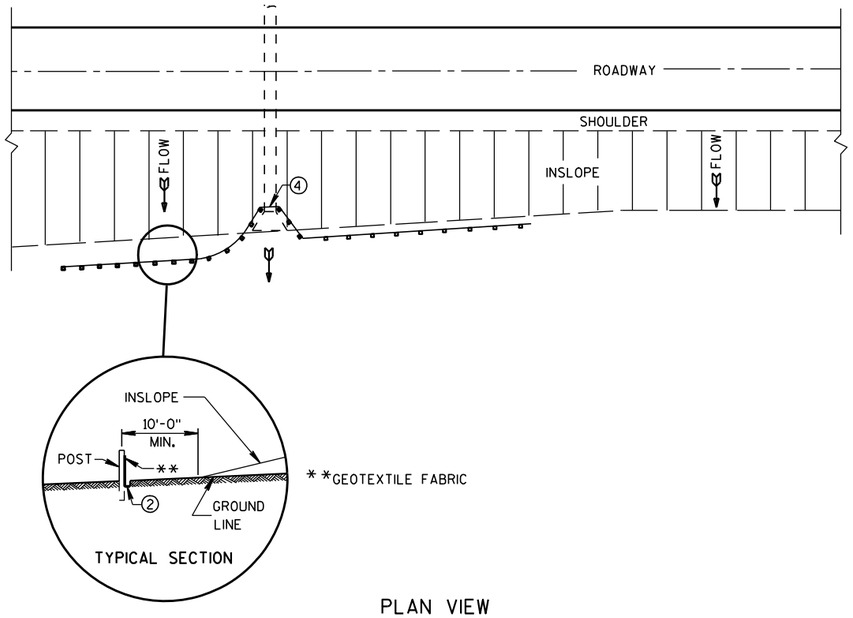
WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

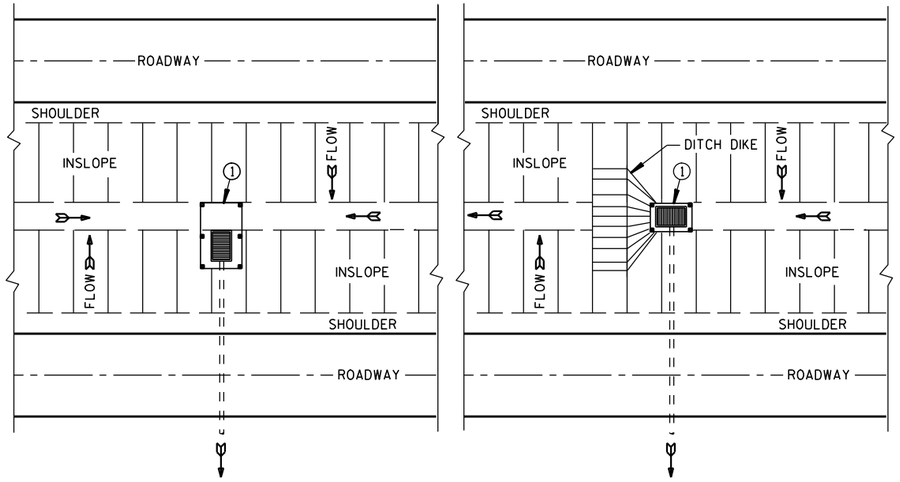
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/04/02 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA



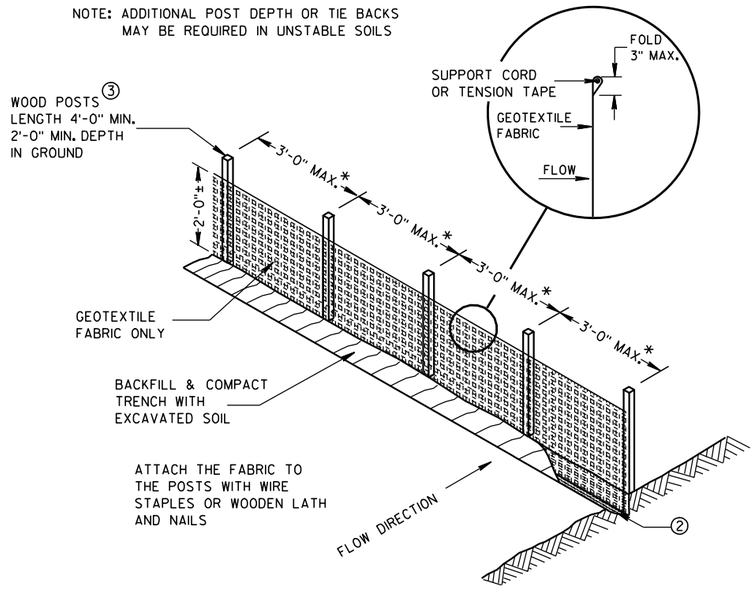
PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



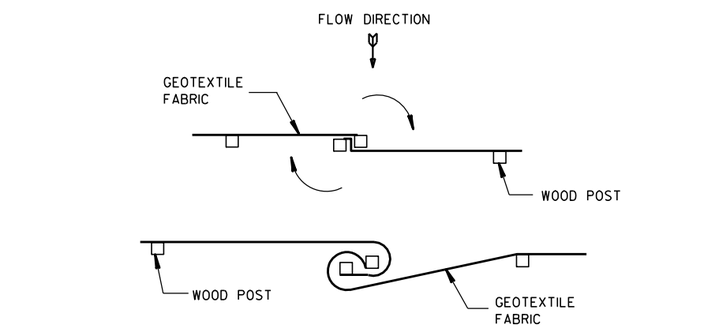
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

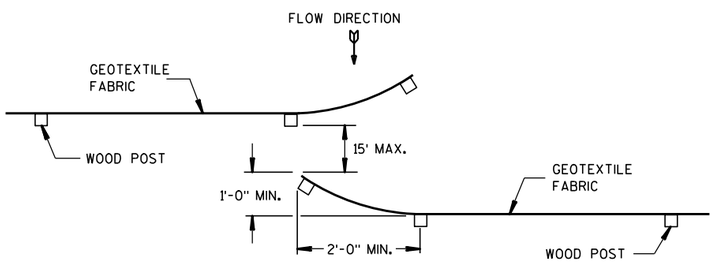


*NOTE: 8'-0" POST SPACING ALLOWED IF A WOVEN GEOTEXTILE FABRIC IS USED.

SILT FENCE



TWIST METHOD



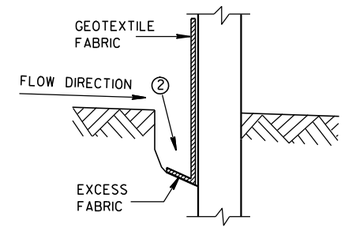
HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE 5

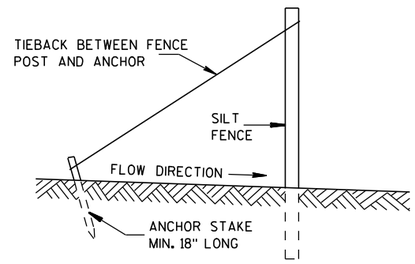
GENERAL NOTES

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

1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.
4. SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.
5. CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



TRENCH DETAIL



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
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4-29-05 DATE
/S/ Beth Cannestra
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FHWA

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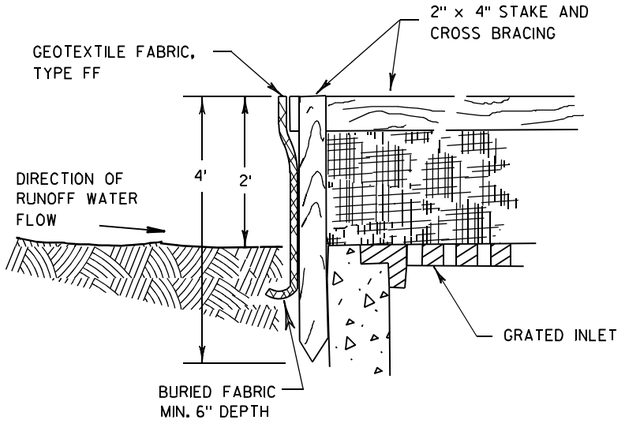
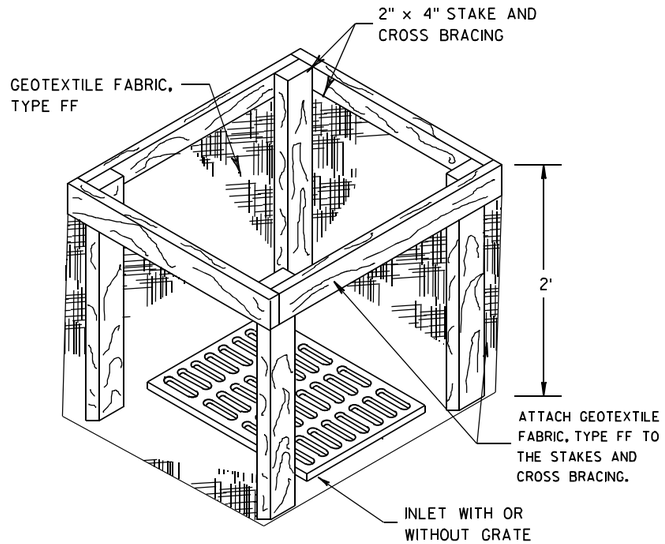
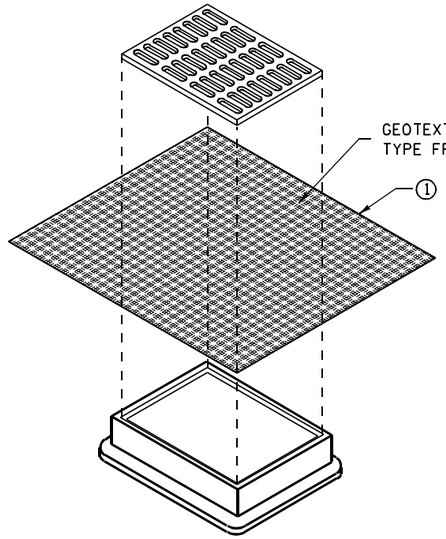
6



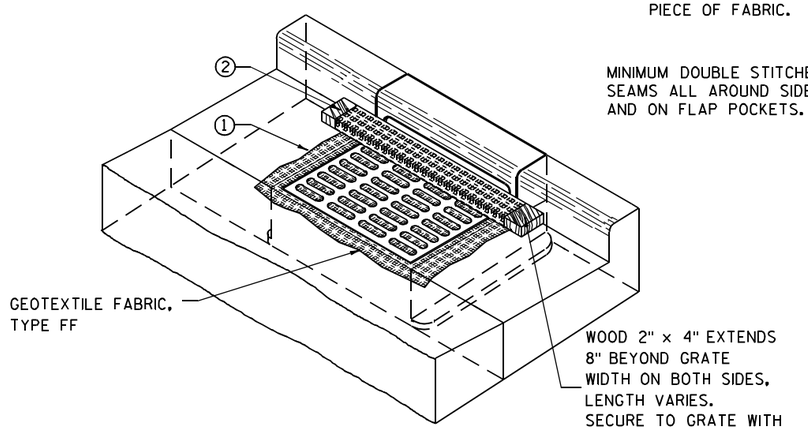


INLET PROTECTION, TYPE A

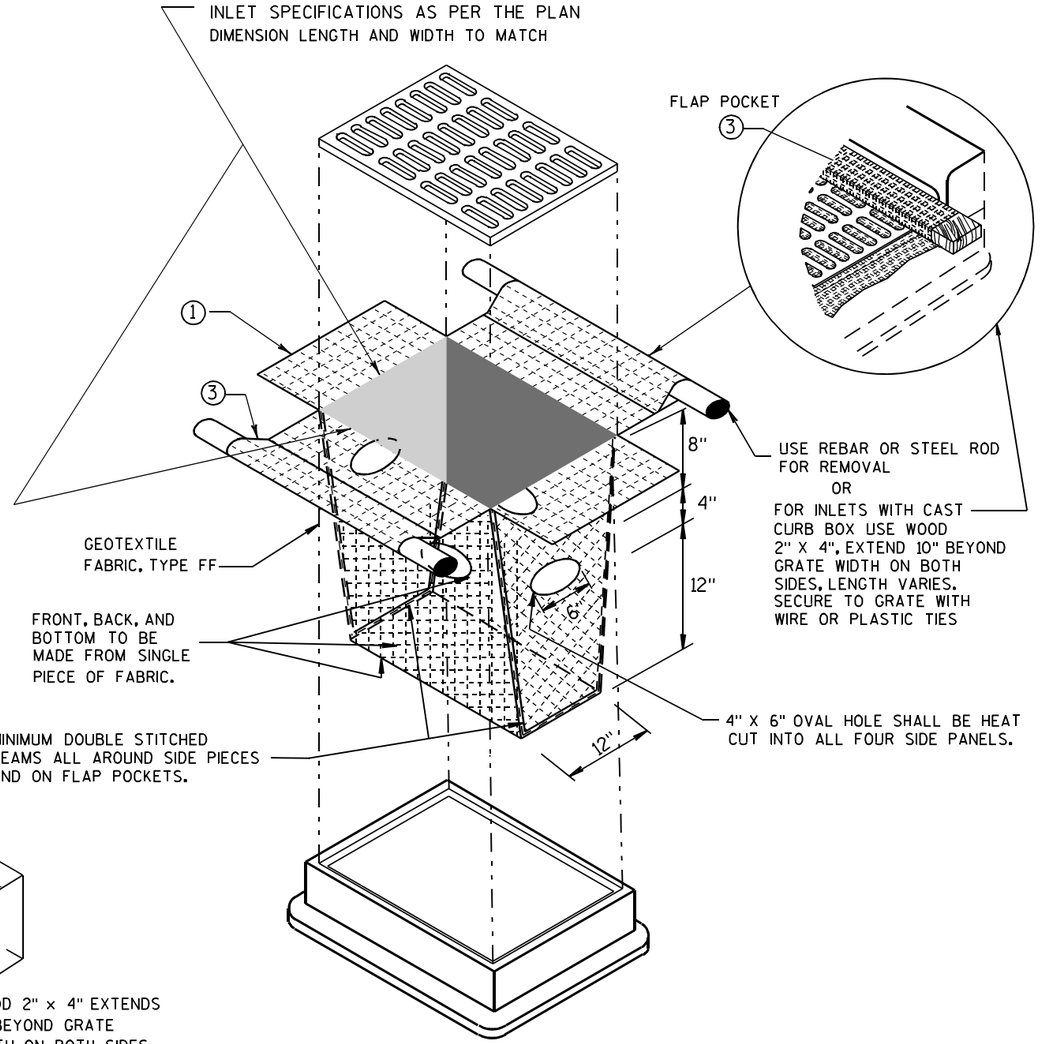


INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

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



INLET PROTECTION, TYPE C (WITH CURB BOX)



INLET PROTECTION, TYPE D

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

GENERAL NOTES

INLET PROTECTION DEVICES SHALL BE MAINTAINED OR REPLACED AT THE DIRECTION OF THE ENGINEER.

MANUFACTURED ALTERNATIVES APPROVED AND LISTED ON THE DEPARTMENT'S EROSION CONTROL PRODUCT ACCEPTABILITY LIST MAY BE SUBSTITUTED.

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

① FINISHED SIZE, INCLUDING FLAP POCKETS WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10" AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.

② FOR INLET PROTECTION, TYPE C (WITH CURB BOX), AN ADDITIONAL 18" OF FABRIC IS WRAPPED AROUND THE WOOD AND SECURED WITH STAPLES. THE WOOD SHALL NOT BLOCK THE ENTIRE HEIGHT OF THE CURB BOX OPENING.

③ FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2X4.

INSTALLATION NOTES

TYPE B & C

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

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

TYPE D

DO NOT INSTALL INLET PROTECTION TYPE D IN INLETS SHALLOWER THAN 30", MEASURED FROM THE BOTTOM OF THE INLET TO THE TOP OF THE GRATE.

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

THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE BOTTOM OF THE BAG.

INLET PROTECTION
TYPE A, B, C, AND D

STATE OF WISCONSIN
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10/16/02
DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
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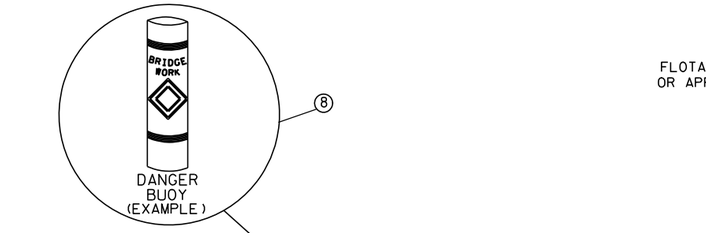
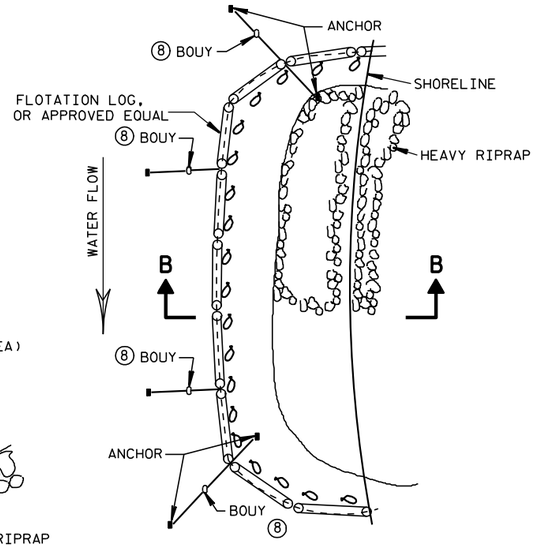
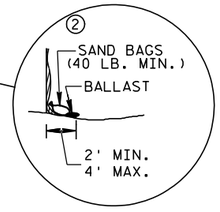
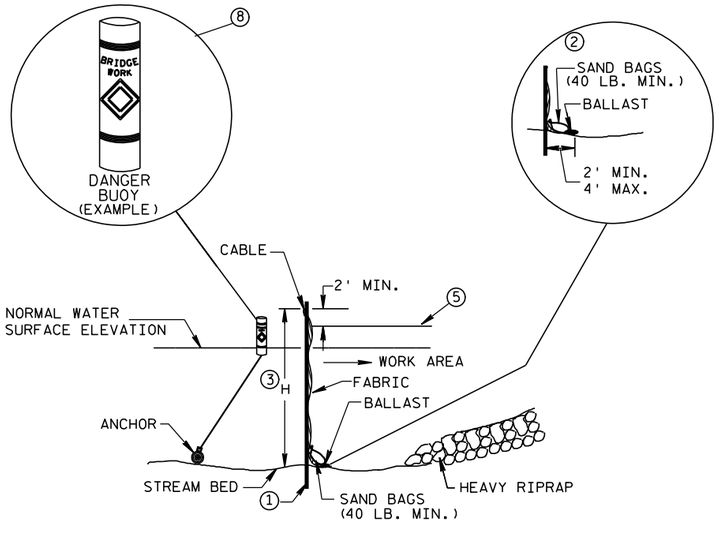


SECTION B-B

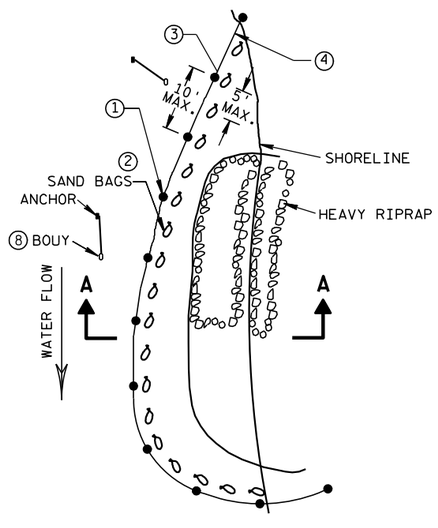




TURBIDITY BARRIER FLOAT ALTERNATIVE
CAUTION - SEE NOTE 6



SECTION A-A



PLAN VIEW

TURBIDITY BARRIER STANDARD POST INSTALLATION

TURBIDITY BARRIER PLACEMENT DETAILS

GENERAL NOTES

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

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.

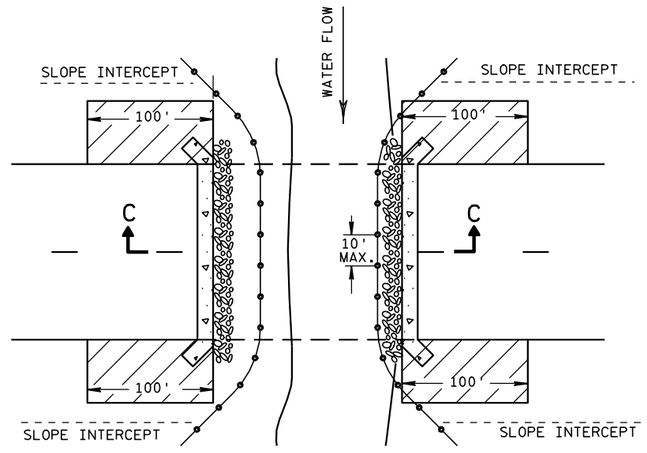
④ IN WATERWAYS SUBJECT TO FLUCTUATING WATER ELEVATIONS, PROVISIONS SHOULD BE MADE TO ALLOW THE WATER TO EQUALIZE ON EACH SIDE OF THE BARRIER. THIS MAY BE ACCOMPLISHED BY LEAVING A PORTION OF THE BARRIER OPEN ON THE UPSTREAM END.

⑤ ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION PERIOD. MIMIMUM BARRIER HEIGHT SHALL BE 2'GREATER THAN EITHER THE O2 ELEVATION OR THE ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION, WICHEVER IS GREATER.

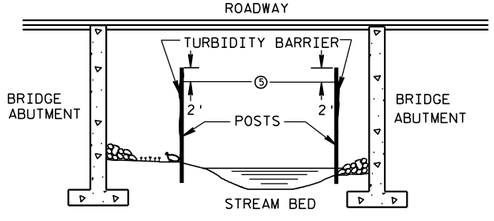
⑥ FLOAT ALTERNATIVE WILL ONLY BE ALLOWED WITH WRITTEN APPROVAL OF THE ENGINEER, AND IS MEANT FOR LOCATIONS WHERE BED ROCK PREVENTS THE INSTALLATION OF POSTS.

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.



PLAN VIEW



SECTION C-C

TURBIDITY BARRIER DETAIL SHOWING TYPICAL PLACEMENT AT STRUCTURES

TURBIDITY BARRIER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/04/02 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
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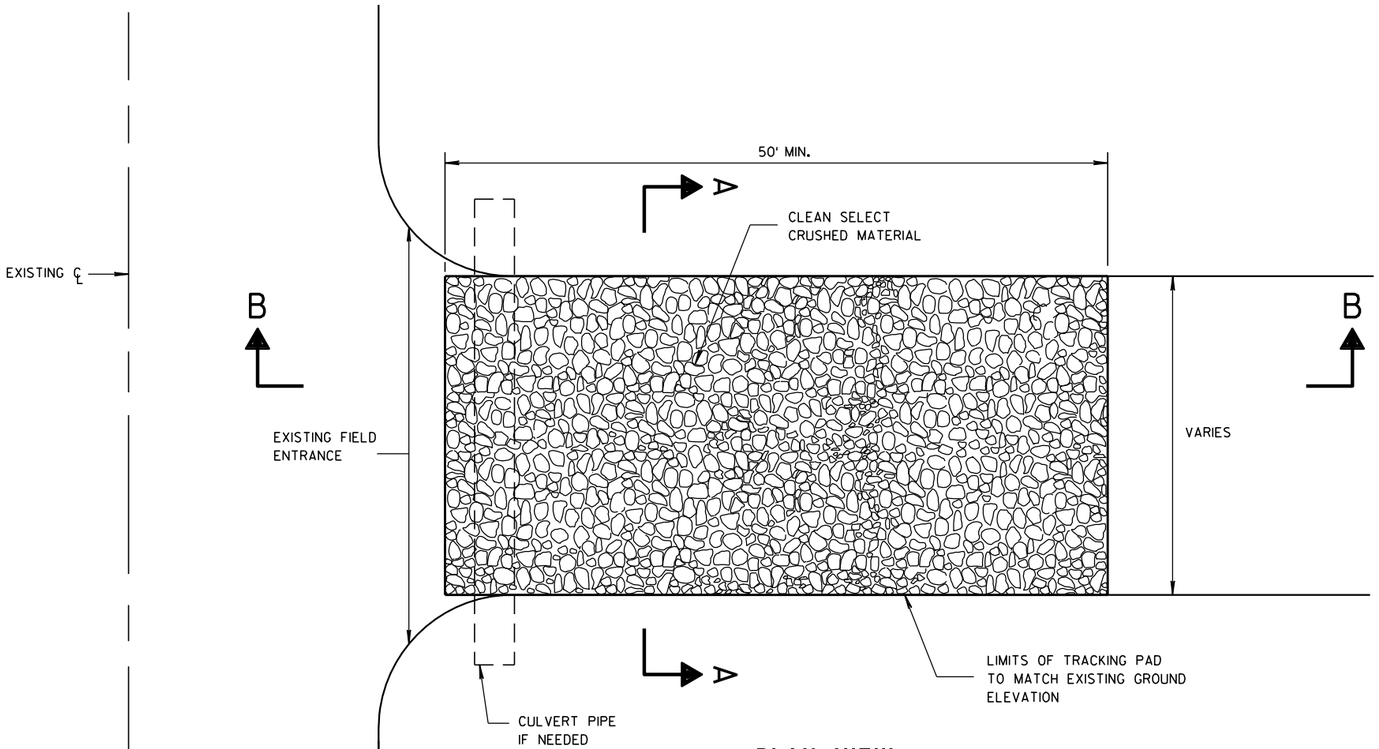
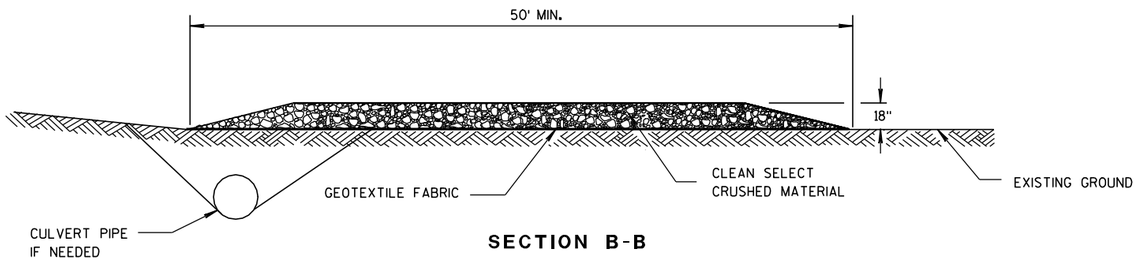


PLAN VIEW



SECTION B-B

GENERAL NOTES

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

TRACKING PAD SHALL BE INSPECTED DAILY. DEFICIENT AREAS SHALL BE REPAIRED OR REPLACED IMMEDIATELY.

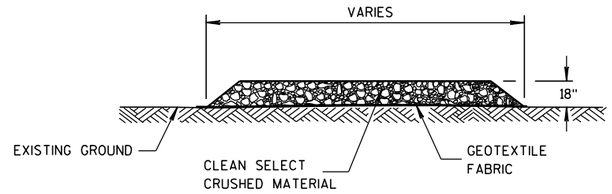
TRACKING PAD TO BE REMOVED AFTER CONSTRUCTION IS COMPLETED.

TRACKING PAD SHALL BE THE FULL WIDTH OF THE EGRESS POINT.

SURFACE WATER MUST BE PREVENTED FROM PASSING THROUGH THE TRACKING PAD. FLOWS SHALL BE DIVERTED AWAY, AROUND OR CONVEYED UNDER THE TRACKING PAD.

CULVERT PIPE OR OTHER BMP USED TO DIVERT WATER AWAY, AROUND OR UNDER THE TRACKING PAD SHALL BE DESIGNED TO CONVEY THE 2 YEAR - 24 HOUR EVENT.

THE COST OF ADDITIONAL BMP TO DIVERT WATER ARE INCIDENTAL TO THE TRACKING PAD BID ITEM.



SECTION A-A

TRACKING PAD

TRACKING PAD

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
3/24/2011 — DATE
/S/ Jerry H. Zoda — ROADWAY STANDARDS ENGINEER
FHWA

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S.D.D. 8 E 14-1

METAL APRON ENDWALLS

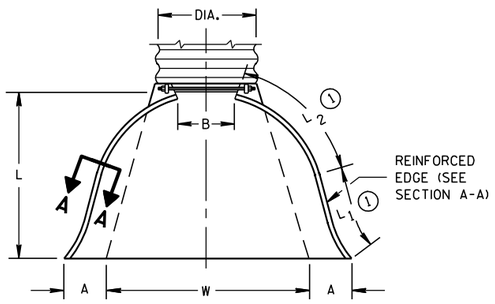
PIPE DIA. (IN.)	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4	36	2 1/2 to 1	1 Pc.
21	.064	.060	9	12	6	36	18	29 5/8	42	2 1/2 to 1	1 Pc.
24	.064	.075	10	13	6	41	18	37 1/4	48	2 1/2 to 1	1 Pc.
30	.079	.075	12	16	8	51	18	52 1/4	60	2 1/2 to 1	1 Pc.
36	.079	.105	14	19	9	60	24	59 3/4	72	2 1/2 to 1	2 Pc.
42	.109	.105	16	22	11	69	24	75 5/8	84	2 1/2 to 1	2 Pc.
48	.109	.105	18	27	12	78	24	81	90	2 1/4 to 1	3 Pc.
54	.109	.105	18	30	12	84	30	85 1/2	102	2 1/4 to 1	3 Pc.
60	.109×	.105×	18	33	12	87	—	—	114	2 to 1	3 Pc.
66	.109×	.105×	18	36	12	87	—	—	120	2 to 1	3 Pc.
72	.109×	.105×	18	39	12	87	—	—	126	2 to 1	3 Pc.
78	.109×	.105×	18	42	12	87	—	—	132	1 1/2 to 1	3 Pc.
84	.109×	.105×	18	45	12	87	—	—	138	1 1/2 to 1	3 Pc.
90	.109×	.105×	18	37	12	87	—	—	144	1 1/2 to 1	3 Pc.
96	.109×	.105×	18	35	12	87	—	—	150	1 1/2 to 1	3 Pc.

× EXCEPT CENTER PANEL SEE GENERAL NOTES

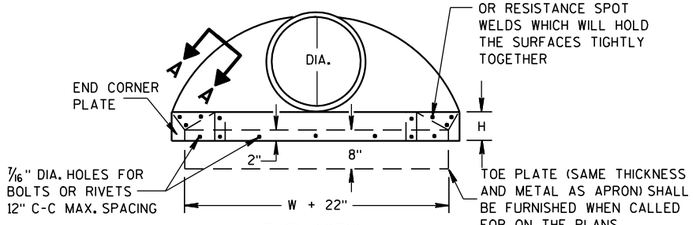
REINFORCED CONCRETE APRON ENDWALLS

PIPE DIA. (IN.)	DIMENSIONS (Inches) T	A	B	C	D	E	G	APPROX. SLOPE
12	2	4	24	48 7/8	72 1/8	24	2	3 to 1
15	2 1/4	6	27	46	73	30	2 1/4	3 to 1
18	2 1/2	9	27	46	73	36	2 1/2	3 to 1
21	2 3/4	9	36	37 1/2	73 1/2	42	2 3/4	3 to 1
24	3	9 1/2	43 1/2	30	73 1/2	48	3	3 to 1
27	3 1/4	10 1/2	49 1/2	24	73 1/2	54	3 1/4	3 to 1
30	3 1/2	12	54	19 3/4	73 1/2	60	3 1/2	3 to 1
36	4	15	63	34 3/4	97 3/4	72	4	3 to 1
42	4 1/2	21	63	35	98	78	4 1/2	3 to 1
48	5	24	72	26	98	84	5	3 to 1
54	5 1/2	27	65	* 33 1/4 - ** 35	* 98 1/4 - ** 100	90	5 1/2	2 2/5 to 1
60	6	* 30 - ** 35	60	39	99	96	5	2 to 1
66	6 1/2	* 24 - ** 30	* 72 - ** 78	* 21 - ** 27	99	102	5 1/2	2 to 1
72	7	* 24 - ** 36	78	21	99	108	6	2 to 1
78	7 1/2	* 24 - ** 36	78	21	99	114	6 1/2	2 to 1
84	8	36	90 1/2	21	111 1/2	120	6 1/2	1 1/2 to 1
90	8 1/2	41	87 1/2	24	111 1/2	132	6 1/2	1 1/2 to 1

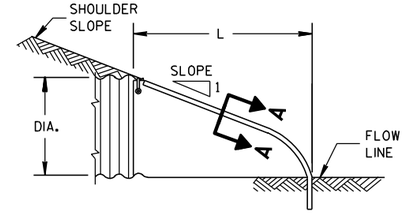
*MINIMUM
**MAXIMUM



PLAN VIEW

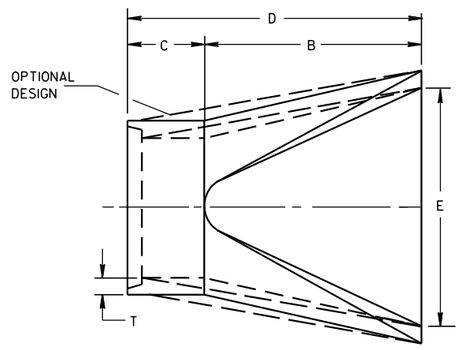


END VIEW

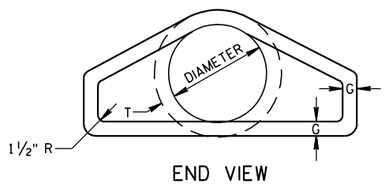


SIDE ELEVATION

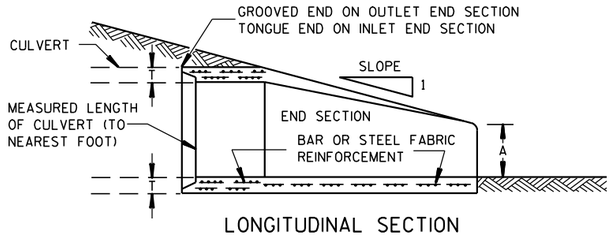
METAL ENDWALLS



PLAN

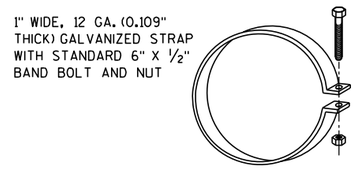


END VIEW



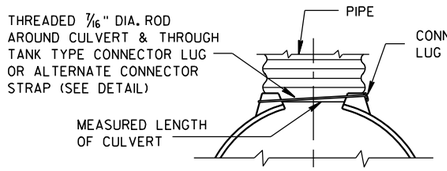
LONGITUDINAL SECTION

CONCRETE ENDWALLS

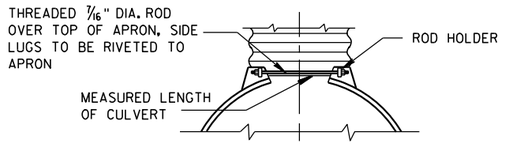


ALTERNATE FOR TYPE 1 CONNECTION

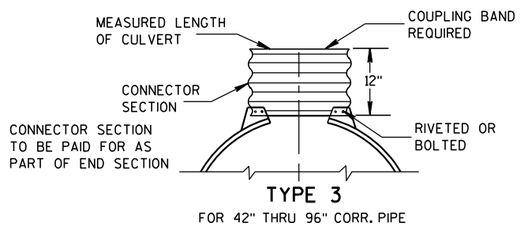
END SECTION CONNECTOR STRAP



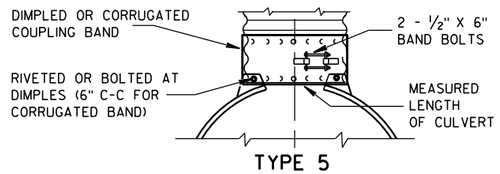
TYPE 1
FOR 12" THRU 24" CORR. PIPE



TYPE 2
FOR 30" THRU 96" CORR. PIPE



TYPE 3
FOR 42" THRU 96" CORR. PIPE



TYPE 5
ALTERNATE FOR:
ALL SIZES CORRUGATED CIRCULAR PIPE

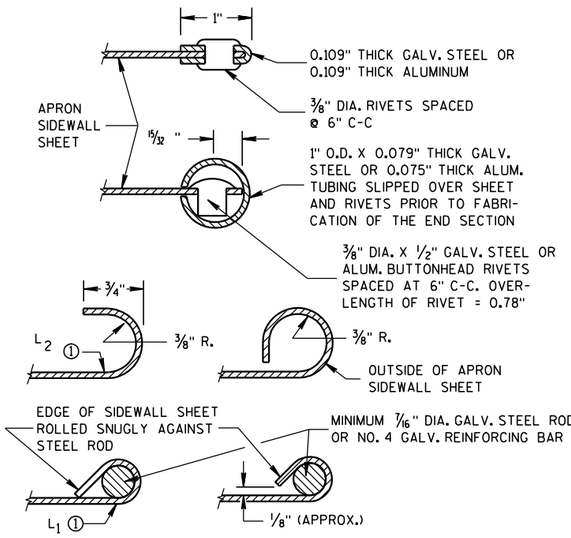
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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

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

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

CONNECTION DETAILS



SECTION A-A

GENERAL NOTES

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

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

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

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

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

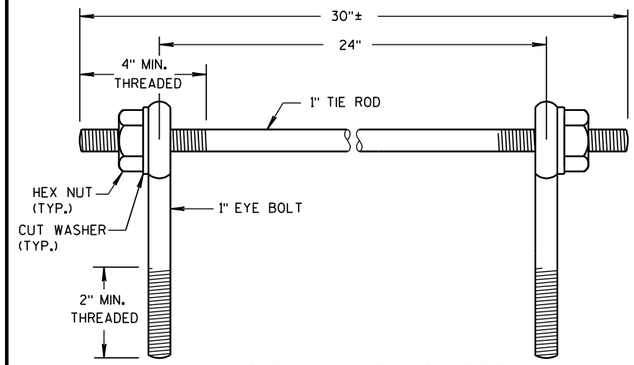
① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR CULVERT PIPE

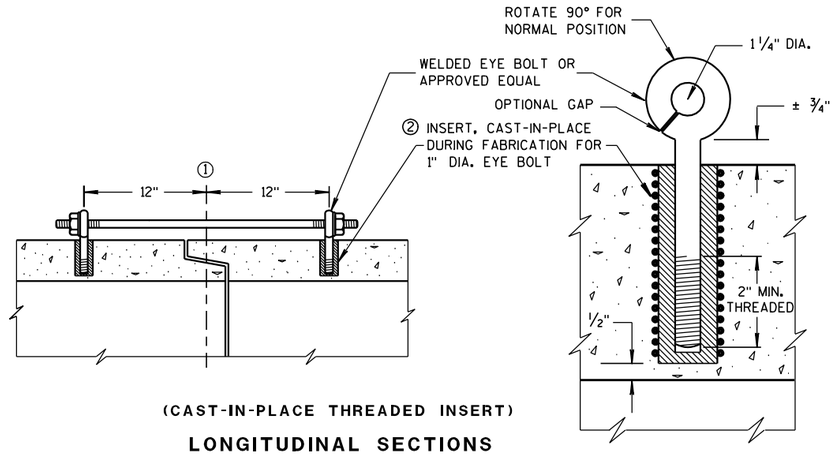
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6
S.D.D. 8 F 1-11



EYE BOLTS AND TIE ROD



(CAST-IN-PLACE THREADED INSERT)

LONGITUDINAL SECTIONS

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

GENERAL NOTES

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

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

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

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

① ℄ OF TONGUE AND GROOVE OR BELL AND SPIGOT JOINTS.

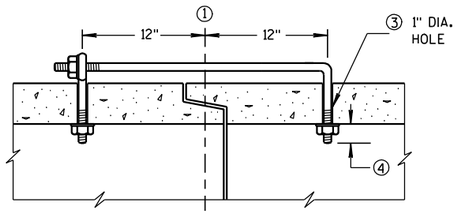
② THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.

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

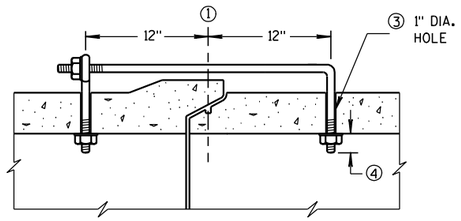
④ BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.

⑤ OPENING TO BE ROD DIAMETER PLUS 1 INCH.

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



(TONGUE & GROOVE PIPE)

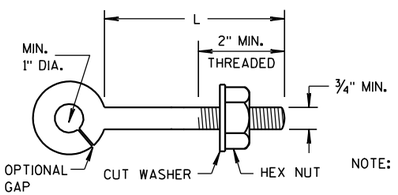


(MODIFIED BELL PIPE)

LONGITUDINAL SECTION

EYE BOLT DIMENSION TABLE

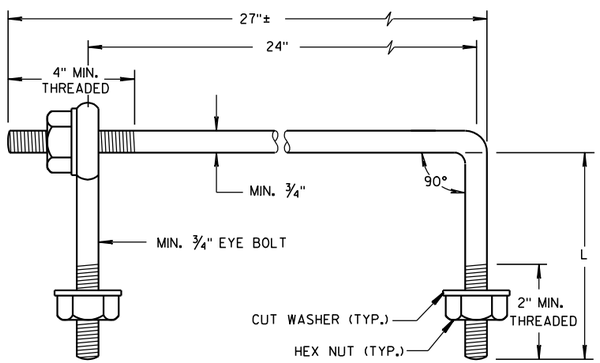
PIPE SIZE	L = LENGTH	
	TONGUE & GROOVE PIPE	MODIFIED BELL PIPE
18" TO 24"	4 1/2"	6 1/4"
30"	5"	7"
36"	5 1/2"	7"
42"	6"	
48"	6 1/2"	
60"	7 1/2"	
66"	8"	



NOTE:

EYE BOLT

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



EYE BOLT AND TIE ROD

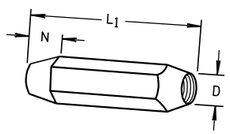
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

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

ADJUSTABLE TIE ROD TABLE

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

DIMENSIONS SHOWN ARE IN INCHES



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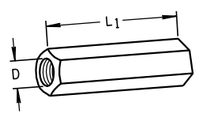
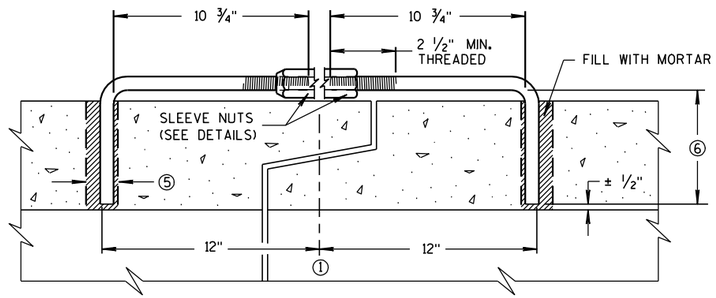


PLAIN

RIGHT AND LEFT THREADS

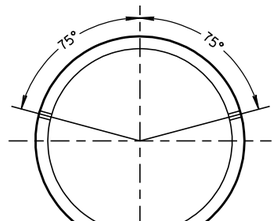
SLEEVE NUTS



LONGITUDINAL SECTION

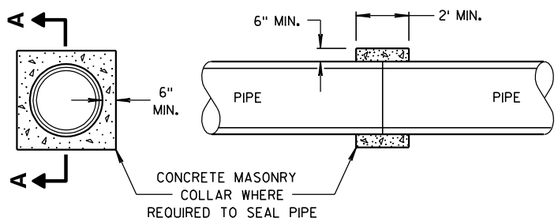
(JOINT TIES FOR 12" TO 108" DIA. CONCRETE PIPE)

ADJUSTABLE TIE ROD (ALTERNATE NO. 3)



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

TRANSVERSE SECTION



SECTION A-A

CONCRETE COLLAR DETAIL

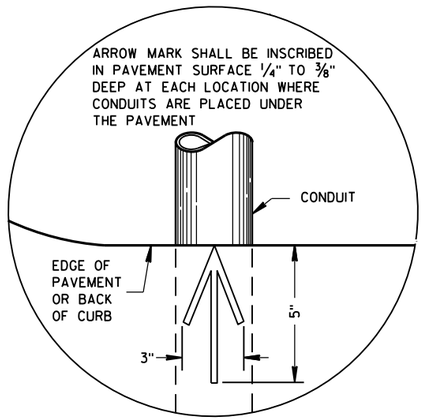
JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/5/2012 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
92
FHWA

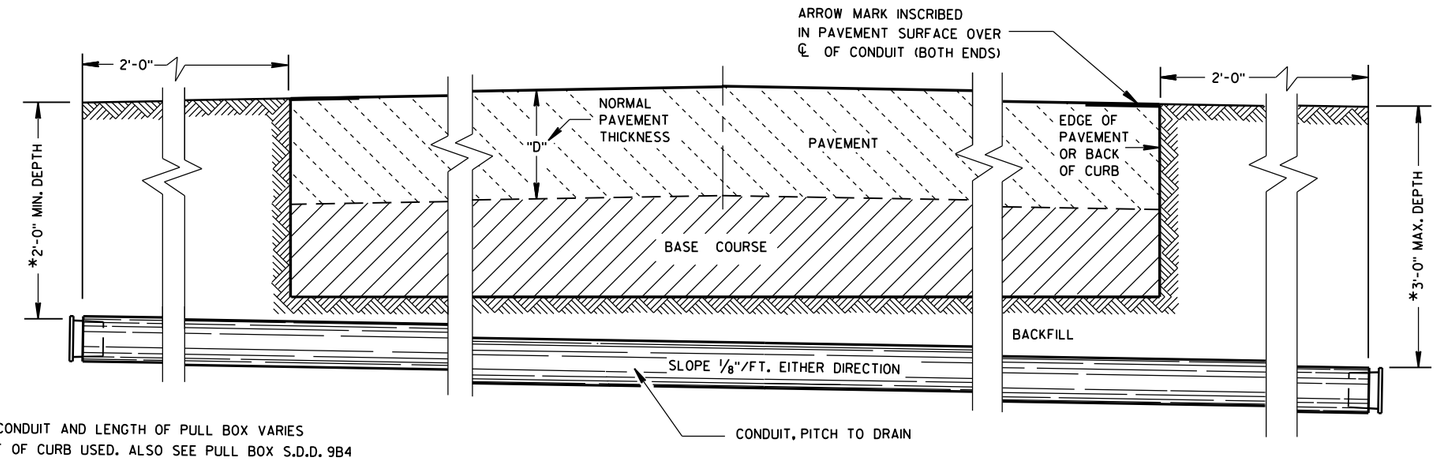
6

S.D.D. 8 F 4-7



PLAN VIEW

ARROW MARK



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

SIDE ELEVATION

DETAIL FOR CONDUIT UNDER PAVED HIGHWAYS

GENERAL NOTES

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

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

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

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

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

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

ALL METALLIC CONDUIT RACEWAY ENDS SHALL BE REAMED AND THREADED.

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

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

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

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

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

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

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

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

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

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

TRACER WIRE SHALL BE INSTALLED AS STATED IN THE STANDARD SPECIFICATION, ITEM 652.3.1.1.

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

CONDUIT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March, 2017 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

6

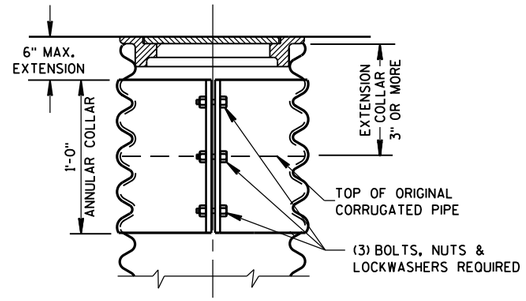
S.D.D. 9 B 2-10

TABLE OF NOMINAL DIMENSIONS AND WEIGHTS

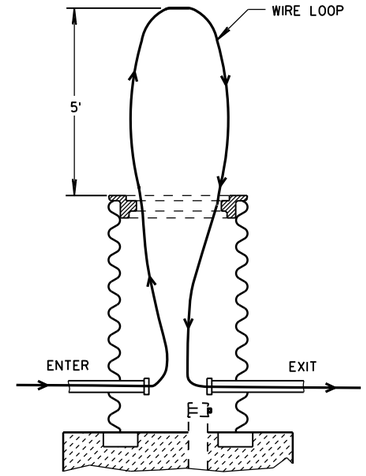
DIMENSION IN INCHES		CORRUGATED STEEL PIPE								
PIPE DIAMETER (INSIDE)	A	12	12	12	18	18	18	24	24	24
PIPE LENGTH **	B	24	30	36	24	30	36	36	42	48
WALL THICKNESS	C	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064
COVER	D	10 1/4	10 1/4	10 1/4	16 1/4	16 1/4	16 1/4	22 1/4	22 1/4	22 1/4
FRAME	E	14 1/2	14 1/2	14 1/2	20 1/2	20 1/2	20 1/2	26 1/2	26 1/2	26 1/2
FRAME	F	8 1/2	8 1/2	8 1/2	14 1/2	14 1/2	14 1/2	20 1/2	20 1/2	20 1/2
FRAME	G	11 1/2	11 1/2	11 1/2	17 1/2	17 1/2	17 1/2	23 1/2	23 1/2	23 1/2
WEIGHT IN POUNDS *										
FRAME AND COVER		60	60	60	110	110	110	155	155	155

* THE ACTUAL WEIGHT OF THE MANHOLE FRAME AND COVER MAY VARY WITHIN 5 PERCENT PLUS OR MINUS OF THE WEIGHTS SHOWN.

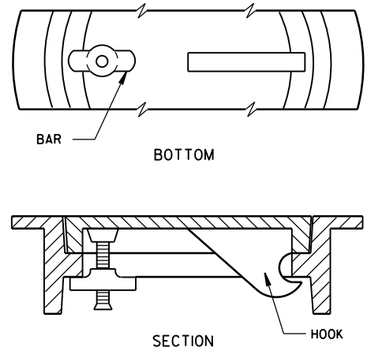
** NORMALLY USED LENGTHS. THE PROJECT ENGINEER SHALL DETERMINE IF PIPE LENGTHS, OTHER THAN THOSE SPECIFIED, SHALL BE USED, TO A MAXIMUM OF 48" (CONTINUOUS LENGTH, NON-SPLICED). THE ADDITIONAL LENGTH SHALL BE INCIDENTAL TO THE PULL BOX BID PRICE.



CORRUGATED PIPE EXTENDER

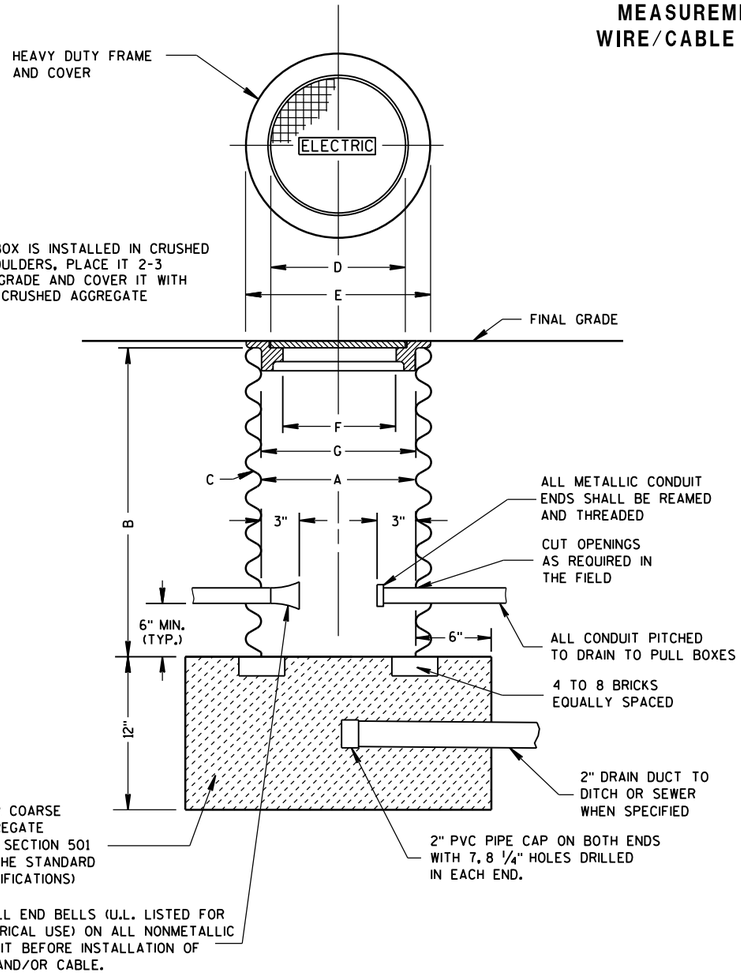


MEASUREMENT DETAIL FOR WIRE/CABLE IN THE PULL BOX



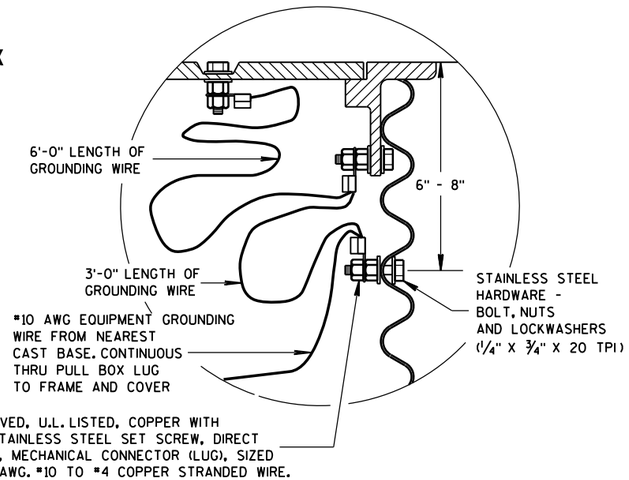
ALTERNATE COVER (LOCKING)

TIGHTENING BAR TYPE

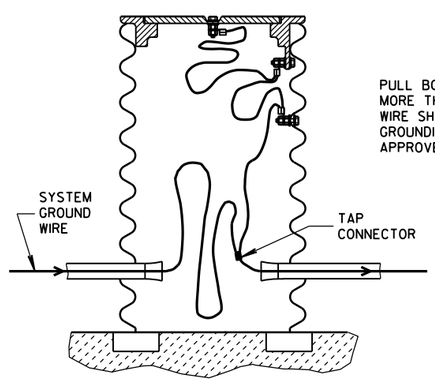


WHEN A PULL BOX IS INSTALLED IN CRUSHED AGGREGATE SHOULDERS, PLACE IT 2-3 INCHES BELOW GRADE AND COVER IT WITH 2-3 INCHES OF CRUSHED AGGREGATE

PULL BOX



EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES



PULL BOX TO NEAREST BASE DISTANCE MORE THAN 20 FEET. PULL BOX GROUND WIRE SHALL CONNECT AT SYSTEM GROUNDING WIRE. USE DEPARTMENT APPROVED TAP CONNECTOR.

EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES

GENERAL NOTES

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

ALL FRAMES AND COVERS SHALL BE HEAVY DUTY TYPE, SUITABLE FOR VEHICULAR TRAFFIC LOADS.

PULL BOXES LOCATED IN THE ROADWAYS SHALL HAVE LOCKING COVERS.

ENTRANCE HOLES INTO PULL BOXES SHALL BE CUT WITH A CIRCULAR HOLE SAW OR HYDRAULIC CONDUIT PUNCH. HOLE SIZE SHALL BE THE OUTSIDE DIAMETER OF THE CONDUIT THAT IS TO FIT IN THE OPENING PLUS NO MORE THAN 1/4".

THE CONTRACTOR SHALL NOT INSTALL WIRE IN ANY PULL BOX UNTIL ITS INSTALLATION HAS BEEN INSPECTED AND ACCEPTED BY THE ENGINEER.

GROUNDING LUGS (MECHANICAL CONNECTORS) SHALL BE U.L. LISTED AND APPROVED FOR USE WITH COPPER WIRE.

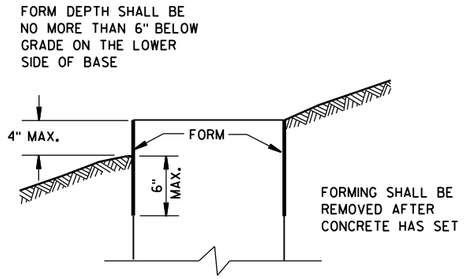
ALL METALLIC CONDUIT IN WHICH WIRE AND/OR CABLE IS TO BE INSTALLED, SHALL BE BUSHED BEFORE INSTALLATION OF THE WIRE AND/OR CABLE.

WHEN PULL BOXES ARE INSTALLED FOR FUTURE USE, DO NOT INSTALL THE EQUIPMENT GROUNDING LUG. THE EQUIPMENT GROUNDING LUG, THE EQUIPMENT GROUNDING ELECTRODE AND THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE REQUIRED AND INSTALLED UNDER A FUTURE WIRING CONTRACT.

PULL BOX

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA



FORMING DETAIL

QUANTITY REQUIREMENTS	CONCRETE BASE TYPE		
	1	2	5 & 6
APPROX. CUBIC YARDS OF CONCRETE	0.40	0.57	0.40
LBS. OF HOOP BAR STEEL	NONE	23	16
LBS. OF VERTICAL BAR STEEL	NONE	60	18

GENERAL NOTES

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

BASES SHALL BE EXCAVATED BY USE OF A CIRCULAR AUGER.

TOP SURFACES OF CONCRETE BASES SHALL BE TROWEL FINISHED SMOOTH AND LEVEL.

CONDUIT SIZES AND LOCATIONS SHALL BE AS SHOWN ON THE PLANS.

THE FINAL OR TERMINATING CONCRETE BASE IN A CONDUIT RUN SHALL HAVE A 6" EXIT STUB INSTALLED FOR FUTURE CABLING USE. THE EXIT STUB SHALL BE SIZED AS USED THROUGHOUT THE CONDUIT RUN AS SHOWN AT THE ENTRANCE OF THE BASE.

MINIMUM BENDING RADIUS OF CONDUIT IS EQUAL TO 6 X THE DIAMETER.

CONDUIT HEIGHT ABOVE CONCRETE BASES SHALL BE 1 INCH. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

GENERAL NOTES (CONTINUED)

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF CONCRETE BASES BEFORE INSTALLATION OF CABLE OR WIRE.

ENDS OF CONDUIT INSTALLED BELOW GRADE FOR FUTURE USE SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC.

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

IF A BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE DIRT OR FILL, THE FORM SHALL BE REMOVED BEFORE BACKFILLING AROUND THE BASE. BACKFILL SHALL BE TAMPED TIGHT AGAINST THE BARE CONCRETE BASE IN LAYERS OF 1 FOOT OR LESS.

A NO. 4 AWG, STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD) FOR TYPE 1, TYPE 2, TYPE 5, AND TYPE 6 BASES.

THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE FURNISHED AND INSTALLED TO ENTER THE BASE OF THE TYPE 2 AND TYPE 5 BASES THROUGH A 1 INCH CONDUIT INSTALLED FOR GROUNDING PURPOSES, LEAVING A 4 FOOT COIL OF WIRE ABOVE THE CONCRETE BASE. THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE NEATLY COILED AND THE COILS TIED TOGETHER.

ANCHOR RODS SHALL BE THREADED 12" IN LENGTH ON EACH END OF THE ROD. ANCHOR RODS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 654.2.1 OF THE STANDARD SPECIFICATIONS.

WASHERS AND LOCK WASHERS ARE REQUIRED ON ALL ANCHOR RODS.

WHEN ANCHOR RODS USING THE ALTERNATE "L" BEND ARE FURNISHED, THE 4" "L" BEND SHALL BE IN ADDITION TO THE SPECIFIED ANCHOR ROD BAR LENGTH. THE "L" BEND END SHALL NOT BE THREADED.

ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

WELDING OF THE ANCHOR RODS TO THE CAGE IS UNACCEPTABLE. TIE WIRES SHALL BE USED.

BAR STEEL REINFORCEMENT SHALL BE COATED WITH POWDERED EPOXY RESIN IN ACCORDANCE WITH SECTION 505 OF THE STANDARD SPECIFICATIONS (LATEST EDITION).

(1) THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18 INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36 INCHES EXCEPT WITH WRITTEN APPROVAL BY THE ENGINEER.

(2) (4) 1" DIA. X 3'-6" ANCHOR RODS.

(3) (4) 1" DIA. X 5'-0" ANCHOR RODS.

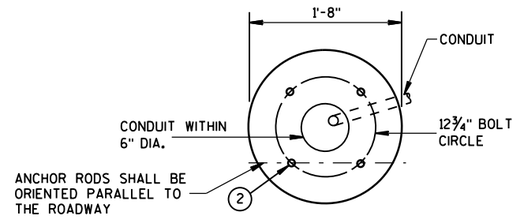
(4) (6) NO. 6 X 6'-8" BAR STEEL REINFORCEMENT.

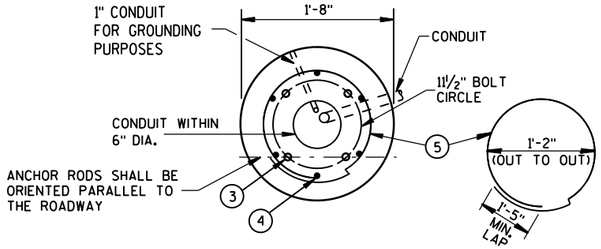
(5) (7) NO. 4 X 5'-1" BAR STEEL REINFORCEMENT @ 1'-0" C-C.

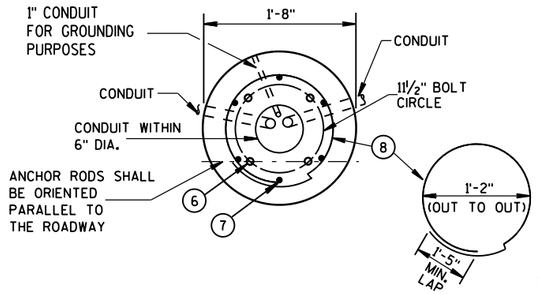
(6) (4) 1" DIA. X 3'-6" ANCHOR RODS.

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

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

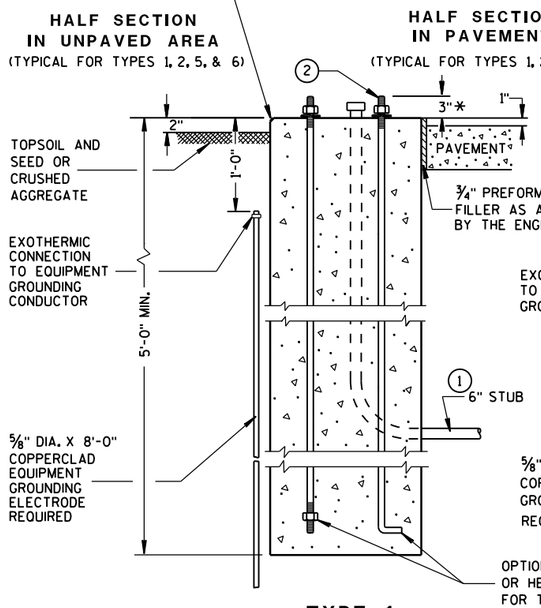






HALF SECTION IN UNPAVED AREA

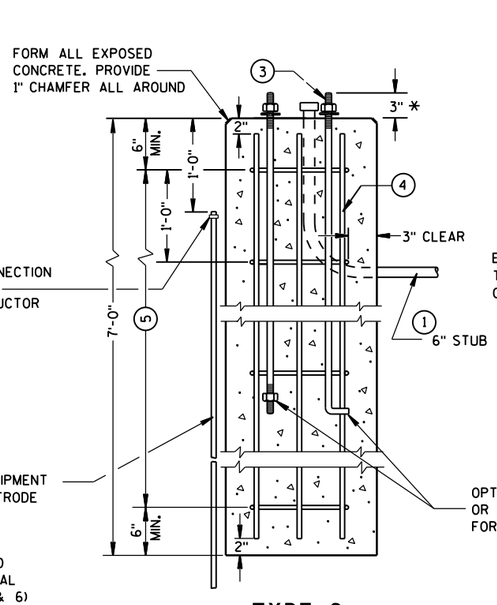
(TYPICAL FOR TYPES 1, 2, 5, & 6)



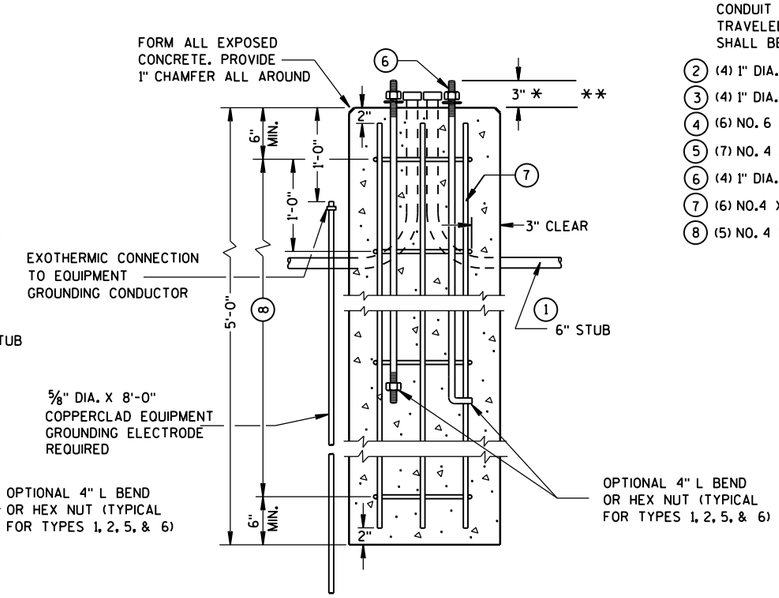
HALF SECTION IN PAVEMENT

(TYPICAL FOR TYPES 1, 2, 5, & 6)

TYPE 1



TYPE 2



TYPE 5 & 6

CONCRETE BASES

* ANY ANCHOR ROD PROJECTION SHORTER THAN 2¾" OR LONGER THAN 3¼" SHALL REQUIRE THE BASE TO BE REMOVED AND REPLACED AT THE CONTRACTORS EXPENSE.

** FOR NONBREAKAWAY INSTALLATIONS, 4½" ± ANCHOR ROD PROJECTION WITH THE USE OF LEVELING NUTS. RODENT SCREEN REQUIRED.

CONCRETE BASES, TYPES 1, 2, 5, & 6

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL 95
FHWA

6
S.D.D. 9 C 2-7

GENERAL NOTES

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

FOUR (4) BOLTS SHALL BE FURNISHED WITH EACH TRANSFORMER BASE. BOLTS SHALL BE 1" DIAMETER, 4" IN LENGTH, WITH WASHERS, LOCK WASHERS AND NUTS. BOLTS, NUTS AND WASHERS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 641.2.2 OF THE STANDARD SPECIFICATIONS.

LEVELING SHIMS, IF NEEDED, SHALL BE DESIGNED FOR THE PURPOSE AND USED UNDER CAST BASES WHEN PLUMBING POLES OR STANDARDS DURING INSTALLATION. THE USE OF WASHERS IN LIEU OF PROPER LEVELING SHIMS IS NOT ACCEPTABLE.

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

DOUBLE NUTTING IS NOT ACCEPTABLE FOR LEVELING OR MOUNTING PURPOSES.

A NEMA APPROVED, U.L. LISTED, COPPER WITH BRASS OR STAINLESS STEEL SET SCREW, DIRECT BURY RATED, MECHANICAL CONNECTOR (LUG), SIZED TO ACCEPT AWG. #10 TO #4 COPPER STRANDED WIRE SHALL BE FURNISHED AND INSTALLED IN THE PEDESTAL AND TRANSFORMER BASES.

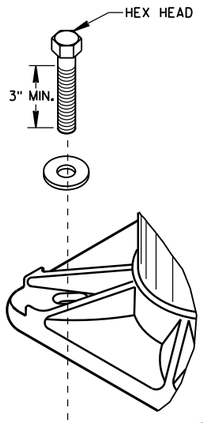
THE MECHANICAL CONNECTOR SHALL BE INSTALLED USING A 1/4" - 20 (TPI) STAINLESS STEEL HEX HEAD BOLT OF SUFFICIENT LENGTH TO FIRMLY ATTACH THE LUG TO THE BASE.

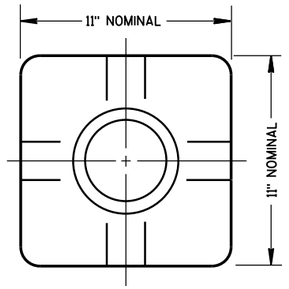
SHOULD THE MANNER OF ATTACHMENT OF THE LUG REQUIRE WASHERS, HEX NUTS, LOCK WASHER - THEY SHALL BE STAINLESS STEEL AS IS THE BOLT. THE MANNER OF ATTACHMENT SHALL NOT BLOCK ACCESSIBILITY TO WIRE PLACEMENT IN THE CONNECTOR.

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

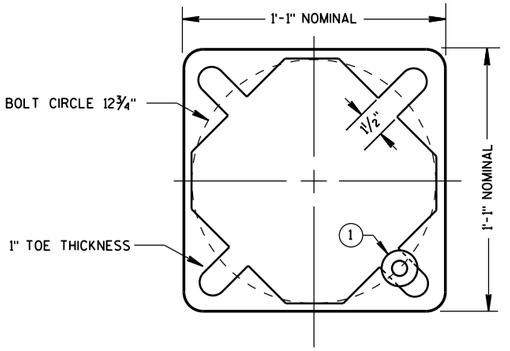
BASE COLLAR THREADING SHALL EXTEND INTO THE BASE COLLAR WITH SUFFICIENT DEPTH TO ACCEPT THE INSTALLATION OF TRAFFIC SIGNAL STANDARDS TO A DEPTH OF 1 1/2", THEN TIGHTENING TO A POINT OF BEING IMMOVABLE.

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

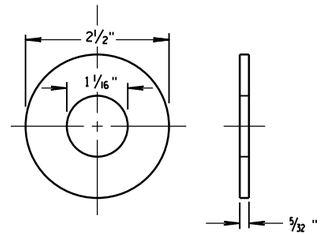




TOP VIEW
(PEDESTAL BASE)

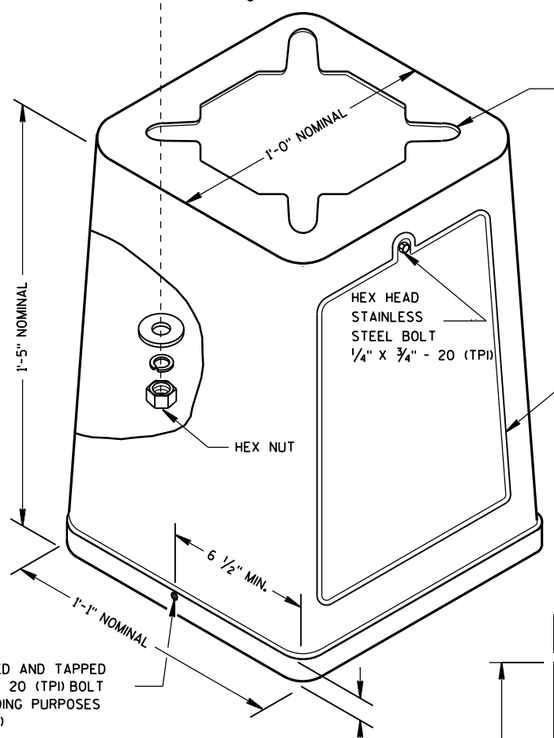


BOTTOM VIEW
(PEDESTAL BASE)

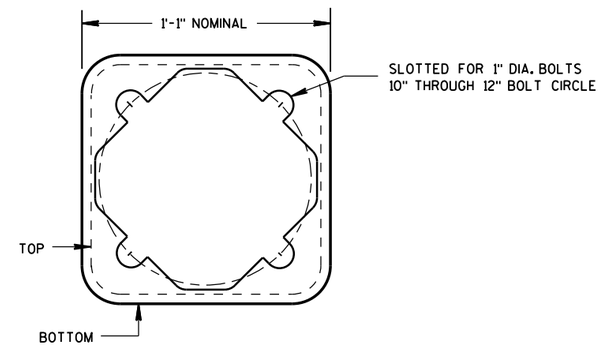


ZINC COATED STEEL WASHER
TO BE PROVIDED BY THE CONTRACTOR

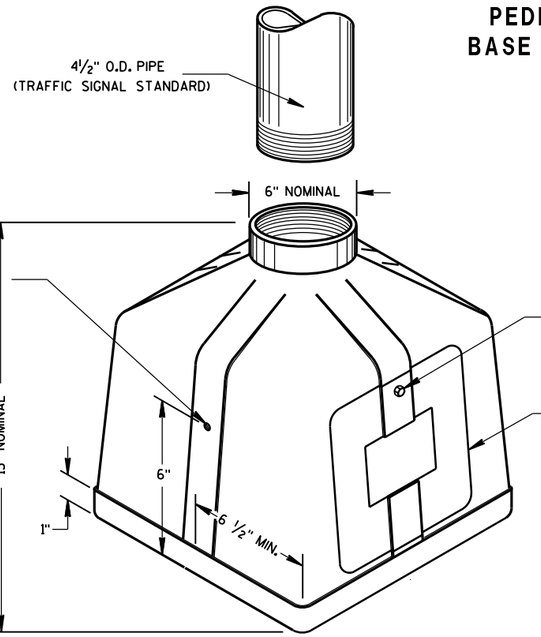
PEDESTAL BASE WASHER (1)



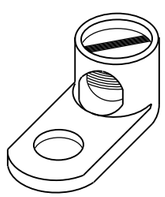
ISOMETRIC VIEW



BOTTOM VIEW
(TRANSFORMER BASE)

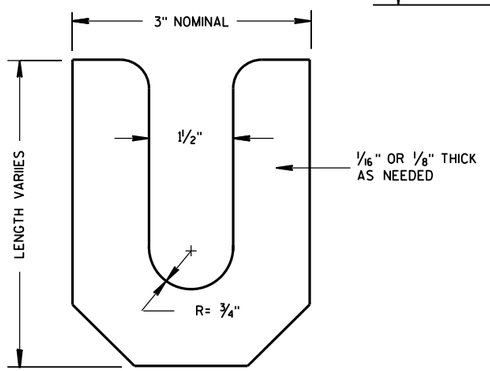


ISOMETRIC VIEW
PEDESTAL BASE



TYPICAL MECHANICAL CONNECTOR LUG
TO BE FURNISHED WITH EACH BASE

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



LEVELING SHIM

TRANSFORMER/PEDESTAL BASES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
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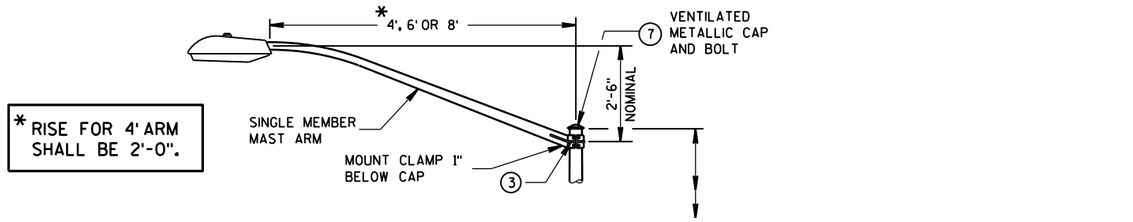
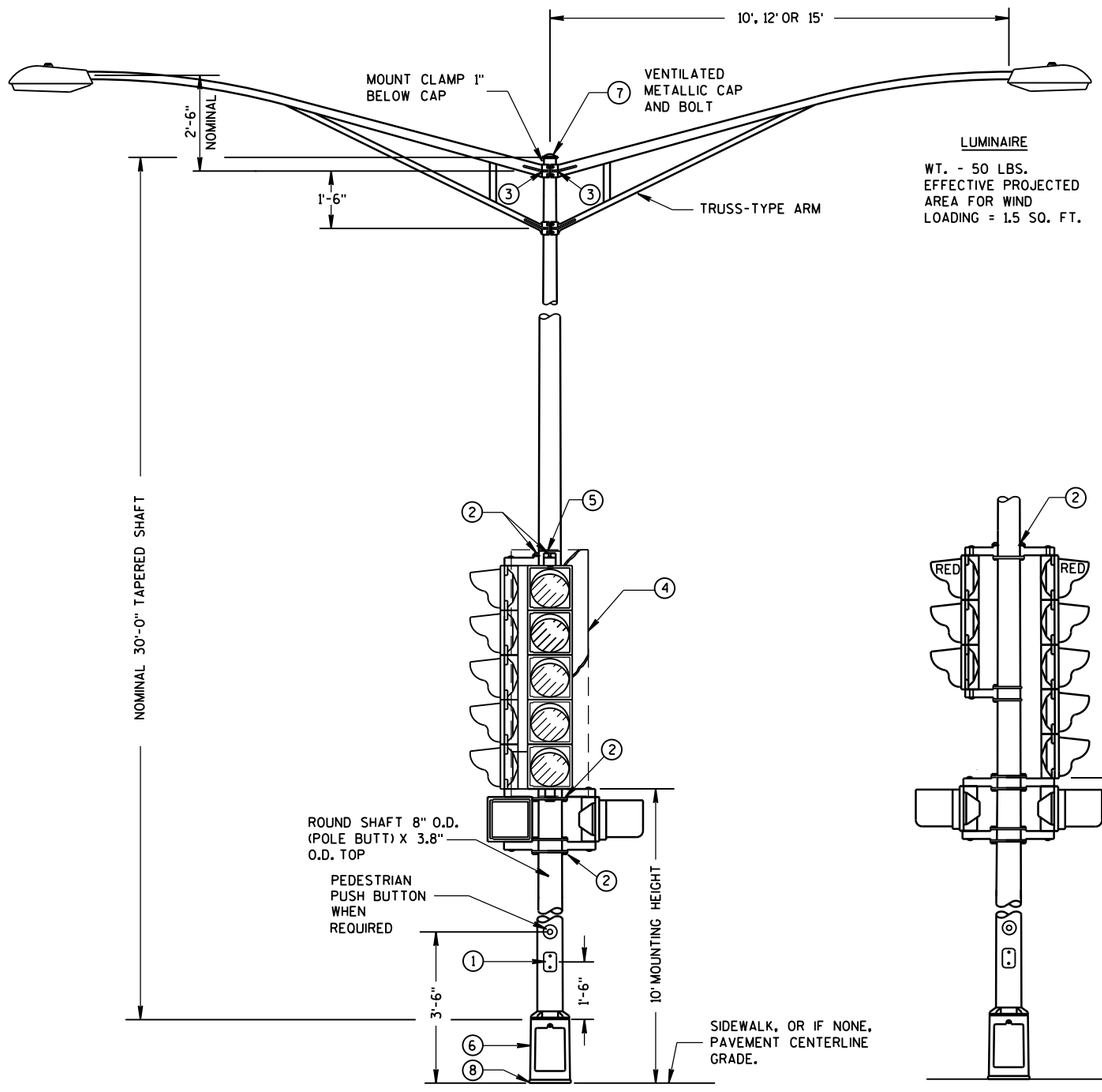
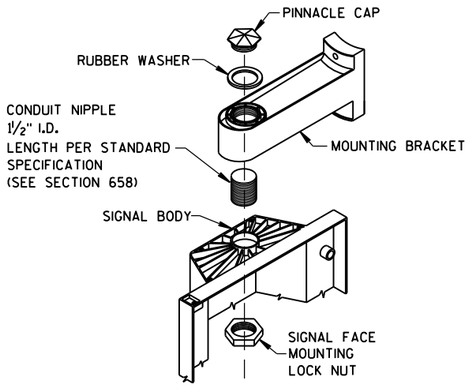




LUMINAIRE

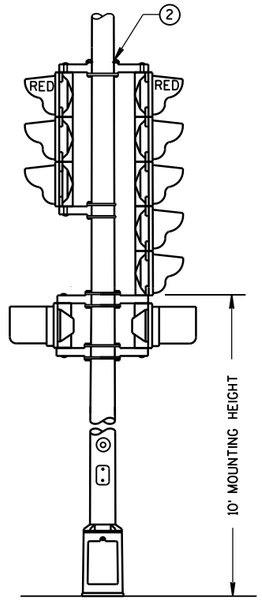
WT. - 50 LBS.
EFFECTIVE PROJECTED AREA FOR WIND LOADING = 1.5 SQ. FT.

(MAXIMUM LOAD)

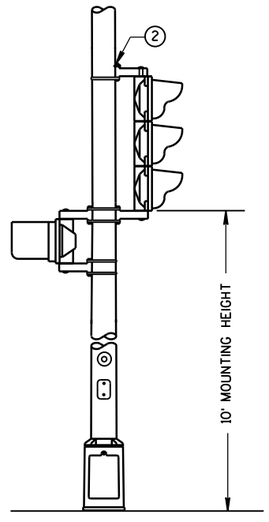


SIGNAL FACE MOUNTING DETAIL

(BANDED)



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



TYPICAL MOUNTING OF 3 SECTION SIGNAL FACE

TYPE 4 POLE MOUNTING CONFIGURATION

GENERAL NOTES

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

ALL TYPE 4 POLE MOUNTINGS SHALL BE DESIGNED TO INCLUDE TWIN 15' ARMS WITH LUMINAIRES.

POLES SHALL BE GALVANIZED STEEL WITH A MINIMUM WALL THICKNESS OF U.S. STANDARD 11 GAGE (.1196").

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

THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 2⅜ INCHES IN OUTSIDE DIAMETER. THE STRAIGHT PORTION OF THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 12 INCHES IN LENGTH.

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

(1) 4" X 6" REINFORCED HANDHOLE & COVER ASSEMBLY WITH 2 (TWO) ¼" X ¾" - 20 TPI HEX HEAD STAINLESS STEEL BOLTS.

(2) SIGNAL FACE MOUNTING BRACKETS, MOUNT WITH CAP SCREWS AND BANDING. (SEE STANDARD SPECIFICATIONS - SEC. 658).

(3) GROMMETS, 1" CHASE NIPPLES OR 1" CLOSE CONDUIT NIPPLES WITH BUSHINGS SHALL BE PROVIDED FOR 1⅜" HOLE IN POLE SHAFT FOR WIRING.

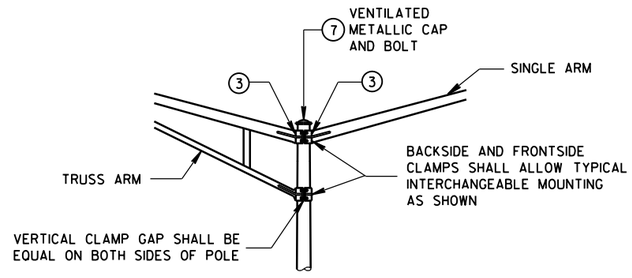
(4) SECURELY MOUNT DULL BLACK POLYCARBONATE BACKPLATES, PROJECTING 5" BEYOND ALL SIDES OF THE SIGNAL FACE HOUSING, PER MANUFACTURER'S RECOMMENDATIONS.

(5) POLE MOUNTED SIGNAL FACES SHALL REQUIRE 1 OR MORE MOUNTING SPACERS UNDER THE TOP MOUNTING BRACKET(S) AS REQUIRED, TO PLUMB THE SIGNAL FACE.

(6) CAST ALUMINUM TRANSFORMER BASE, WHEN REQUIRED.

(7) FURNISH AND INSTALL VENTILATED, CAST, METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) ¼" X ¾" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.

(8) SHIMMING, IF NEEDED, SHALL BE LOCATED BETWEEN THE CONCRETE FOUNDATION AND THE TRANSFORMER BASE.



INTERCHANGEABLE MOUNTING DETAIL

POLE MOUNTINGS FOR TRAFFIC SIGNALS AND LIGHTING UNITS, TYPE 4

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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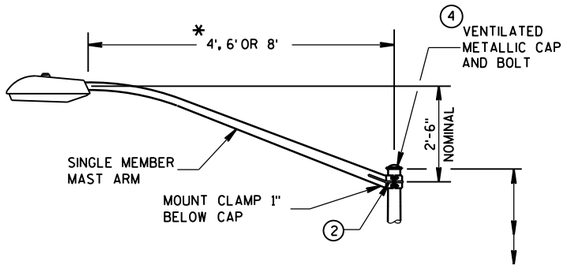
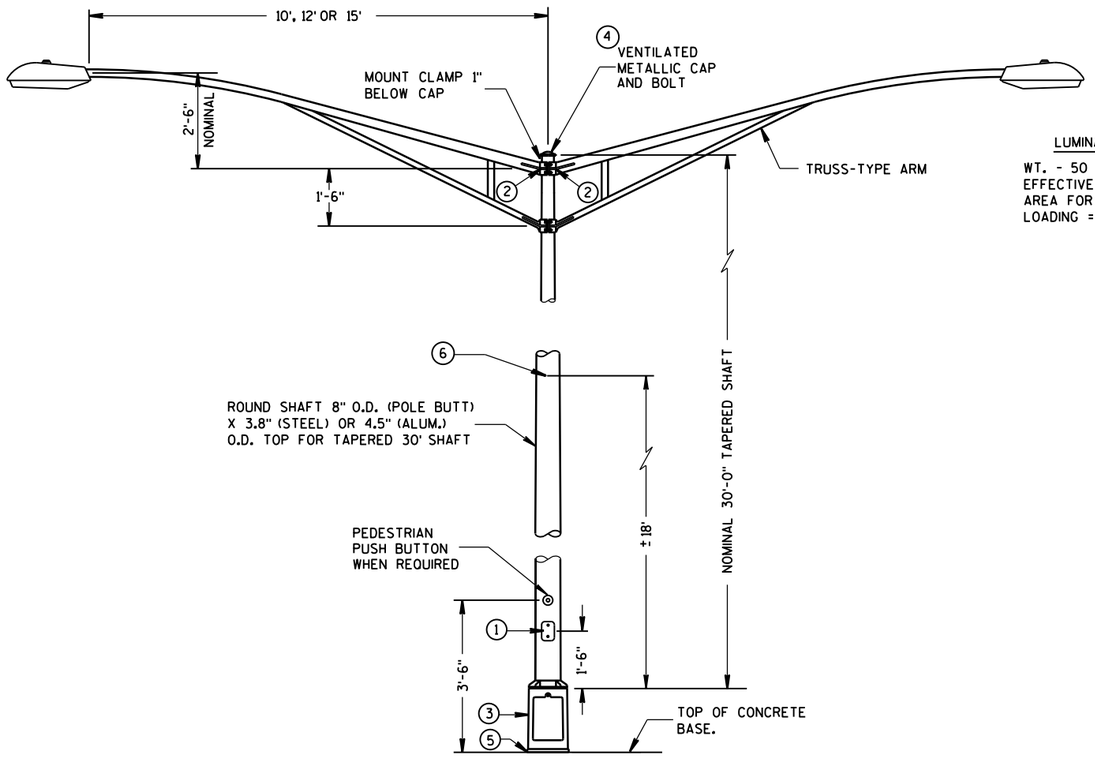
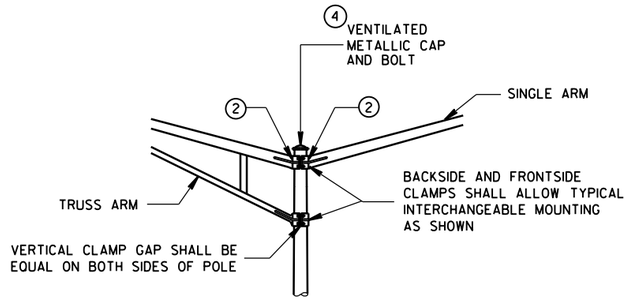
S.D.D. 9 E 1-14c
S.D.D. 9 E 1-14c

*RISE FOR 4' ARM SHALL BE 2'-0".





TYPE 5 POLE MOUNTING CONFIGURATION
(MAXIMUM LOAD)
LIGHTING ONLY



INTERCHANGEABLE MOUNTING DETAIL

LUMINAIRE

WT. - 50 LBS.
EFFECTIVE PROJECTED
AREA FOR WIND
LOADING = 1.5 SQ. FT.

GENERAL NOTES

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

ALL TYPE 5 POLE MOUNTINGS SHALL BE DESIGNED TO INCLUDE TWIN 15' ARMS WITH LUMINAIRES.

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

TYPE 5 ALUMINUM POLES SHALL BE CONSTRUCTED OF 6063-T6 ALUMINUM ALLOY. SLEEVING INSIDE THE POLE IS NOT ACCEPTABLE.

THE TYPE 5 ALUMINUM POLES SHALL HAVE A MINIMUM WALL THICKNESS OF 0.188".

TYPE 5 STEEL POLES SHALL HAVE A MINIMUM WALL THICKNESS OF U.S. STANDARD 11 GAGE (.1196").

THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 2⅜ INCHES IN OUTSIDE DIAMETER. THE STRAIGHT PORTION OF THE SLIPFITTER END OF THE LUMINAIRE ARM SHALL BE A NOMINAL 12 INCHES IN LENGTH.

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

(1) 4" x 6" REINFORCED HANDHOLE & COVER ASSEMBLY WITH 2 (TWO) ¼" X ¾" - 20 TPI HEX HEAD STAINLESS STEEL BOLTS.

(2) GROMMETS, 1" CHASE NIPPLES OR 1" CLOSE CONDUIT NIPPLES WITH BUSHINGS SHALL BE PROVIDED FOR 1⅜" HOLE IN POLE SHAFT FOR WIRING.

(3) CAST ALUMINUM TRANSFORMER BASE, WHEN REQUIRED.

(4) FURNISH AND INSTALL VENTILATED, CAST, METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) ¼" X ¾" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.

(5) SHIMMING, IF NEEDED, SHALL BE LOCATED BETWEEN THE CONCRETE FOUNDATION AND THE TRANSFORMER BASE.

(6) INTERNAL DUMBBELL-TYPE VIBRATION DAMPER.

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S.D.D. 9 E 1-14d

POLE MONTINGS FOR
LIGHTING UNITS, TYPE 5
(30 FEET)

STATE OF WISCONSIN
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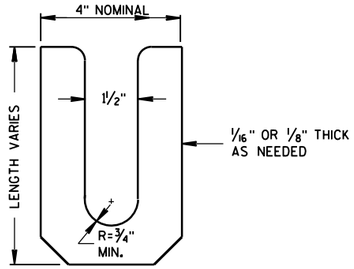
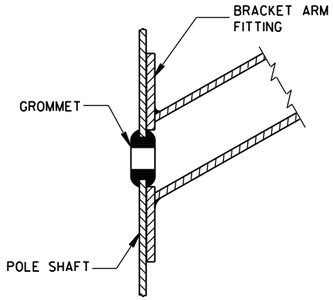
S.D.D. 9 E 1-14d

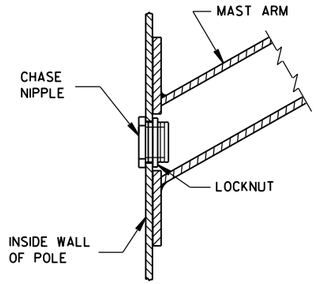


LEVELING SHIM (13)

SHALL BE ALUMINUM



TYPICAL APPLICATION OF GROMMET IN POLE SHAFT



TYPICAL APPLICATION OF CHASE NIPPLE IN POLE SHAFT

GENERAL NOTES

CLAMP BOLT-NUT TIGHTENING TORQUE SHALL BE INDICATED BY INDENT STAMPING (1/2 INCH NUMERALS AND LETTERS) OR WEATHERPROOF PRINTING ON THE INSIDE OF THE CLAMP THAT IS WELDED TO THE ARM MEMBER.

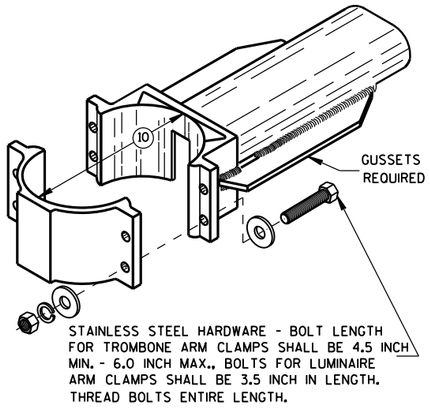
(10) 4.5" I.D. FOR LUMINAIRE MAST ARM CLAMP.
6.625" I.D. FOR TROMBONE MAST ARM CLAMP.

(11) INDIVIDUAL BASE PLATE ANCHOR ROD COVERS. (4 REQUIRED)

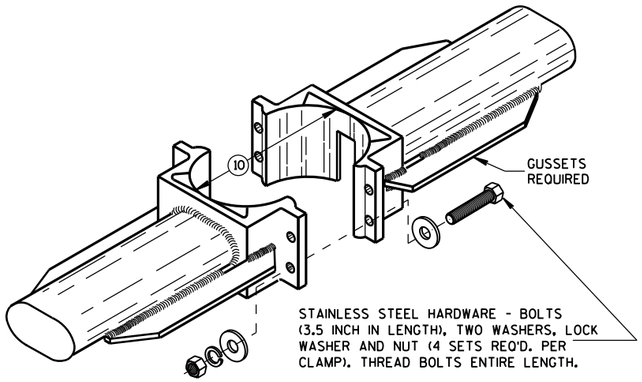
(12) BASE PLATE SLOTTED TO ACCEPT 11" THROUGH 12" BOLT CIRCLE USING 1" DIAMETER ANCHOR RODS.

(13) LEVELING SHIMS, DESIGNED FOR THE PURPOSE, SHALL BE USED WHEN PLUMBING POLES. THE USE OF WASHERS IN LIEU OF PROPER LEVELING SHIMS IS NOT ACCEPTABLE. LEVELING SHIMS SHALL BE USED ONLY BETWEEN THE TOP OF THE CONCRETE BASE AND A METALLIC BASE PLATE.

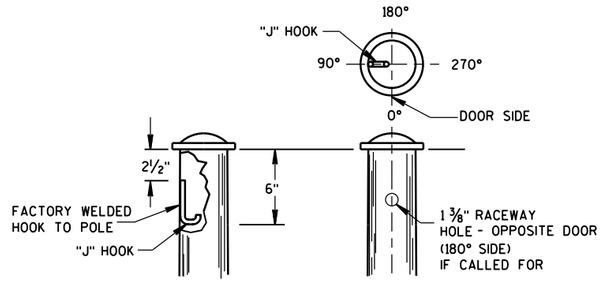
SHIMS SHALL BE LONG ENOUGH AND WIDE ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.



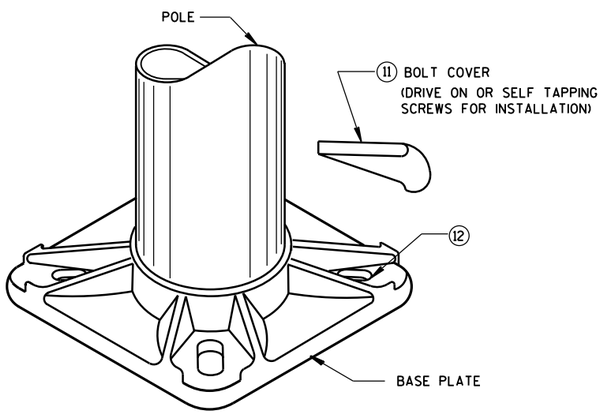
TYPICAL TROMBONE MAST ARM AND SINGLE LUMINAIRE MAST ARM MOUNTING CLAMP



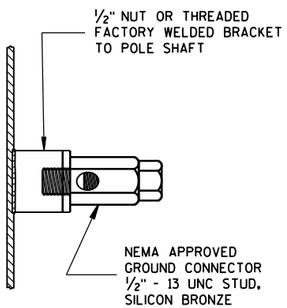
TYPICAL LUMINAIRE MAST ARM (DOUBLE) MOUNTING BRACKETS

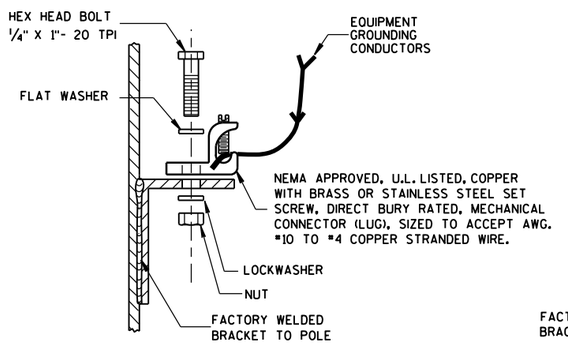


TYPICAL "J" HOOK LOCATION



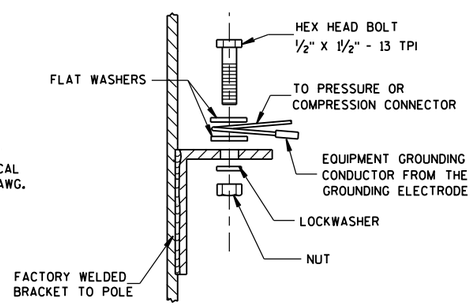
BASE PLATE





TYPICAL GROUNDING CONNECTIONS

NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL



HARDWARE DETAILS FOR POLE MOUNTINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Feb. 2015
DATE

/S/ Ahmet Demirbilek
STATE ELECTRICAL 99

FHWA

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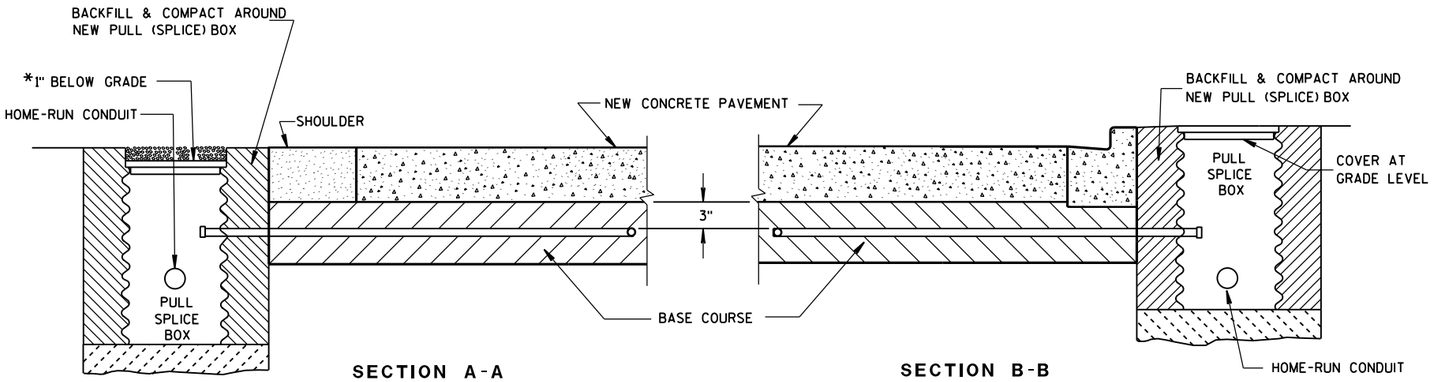
S.D.D. 9 E 1-14g



SECTION A-A
NO CURB & GUTTER

SECTION B-B
CURB & GUTTER

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

LOOP DETECTOR INSTALLATION DETAIL

GENERAL NOTES

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

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

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

SPLICES SHALL BE INSTALLED BY USING CAST IN PLACE SPLICE KITS LISTED ON THE DEPARTMENTS APPROVED PRODUCTS LIST OR AN ENGINEER APPROVED EQUAL. NON-INSULATED BUTT SPLICES TO FIT #12 AWG STRANDED WIRE SHALL BE USED. SPLICES SHALL BE SOLDERED AND INSULATED FROM EACH OTHER AS PER INSTRUCTIONS INCLUDED IN THE SPLICE KIT.

MEASURE GROUND RESISTANCE USING A MEGGER. REPLACE LOOP WIRE NOT ATTAINING A READING OF INFINITY TO GROUND.

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

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

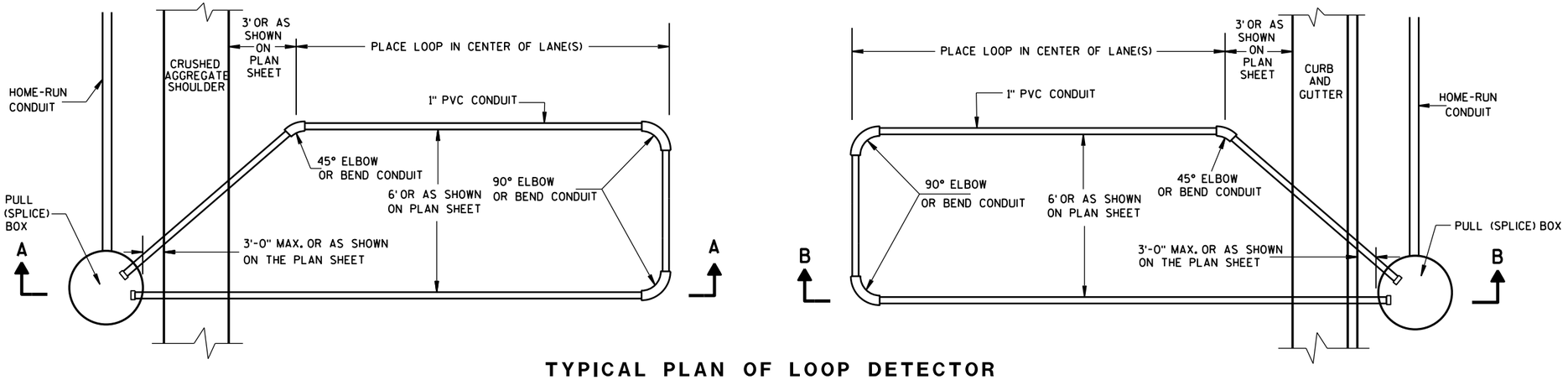
THE #12 AWG. LOOP WIRE IN THE PULL (SPLICE) BOX SHALL BE HAND TWISTED AT LEAST 3 TWISTS PER FOOT BEFORE BEING SPLICED TO THE LOOP LEAD-IN CABLE.

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

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

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

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



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

LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 1)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

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S.D.D. 9 F 15-4a

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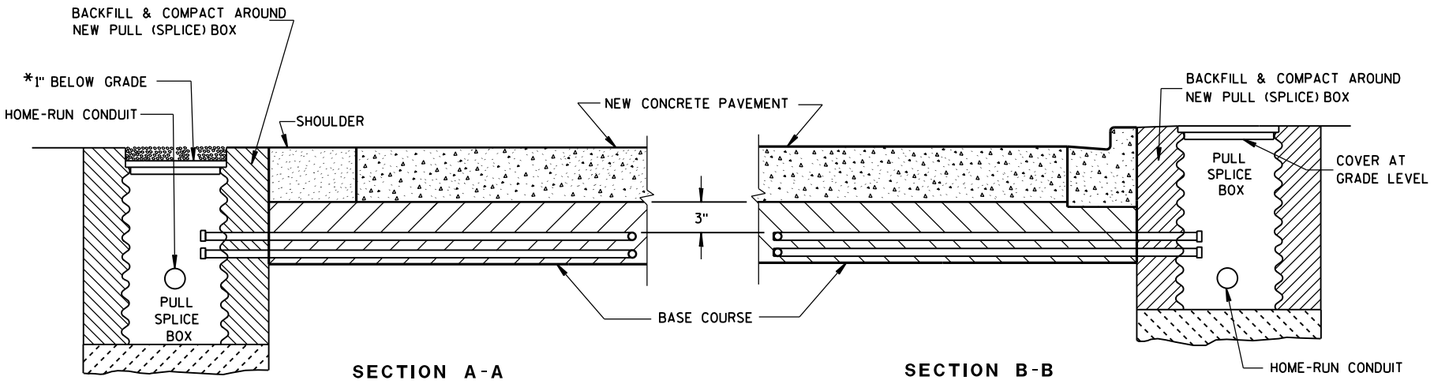
S.D.D. 9 F 15-4a



SECTION A-A
NO CURB & GUTTER

SECTION B-B
CURB & GUTTER

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

LOOP DETECTOR INSTALLATION DETAIL

GENERAL NOTES

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

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

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

SPLICES SHALL BE INSTALLED BY USING CAST IN PLACE SPLICE KITS LISTED ON THE DEPARTMENTS APPROVED PRODUCTS LIST OR AN ENGINEER APPROVED EQUAL. NON-INSULATED BUTT SPLICES TO FIT #12 AWG STRANDED WIRE SHALL BE USED. SPLICES SHALL BE SOLDERED AND INSULATED FROM EACH OTHER AS PER INSTRUCTIONS INCLUDED IN THE SPLICE KIT.

MEASURE GROUND RESISTANCE USING A MEGGER. REPLACE LOOP WIRE NOT ATTAINING A READING OF INFINITY TO GROUND.

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

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

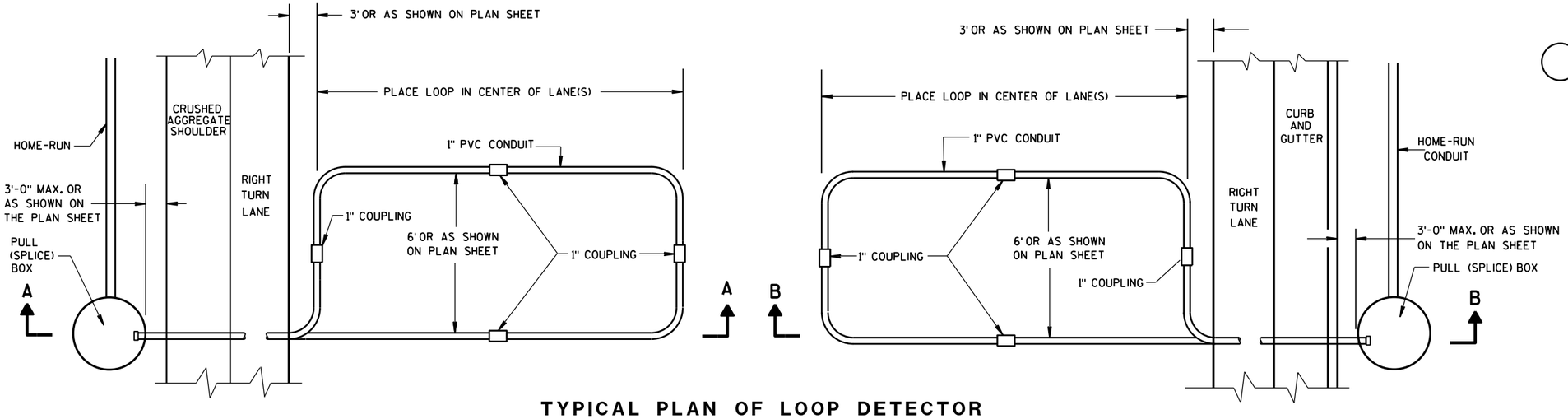
THE #12 AWG. LOOP WIRE IN THE PULL (SPLICE) BOX SHALL BE HAND TWISTED AT LEAST 3 TWISTS PER FOOT BEFORE BEING SPLICED TO THE LOOP LEAD-IN CABLE.

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

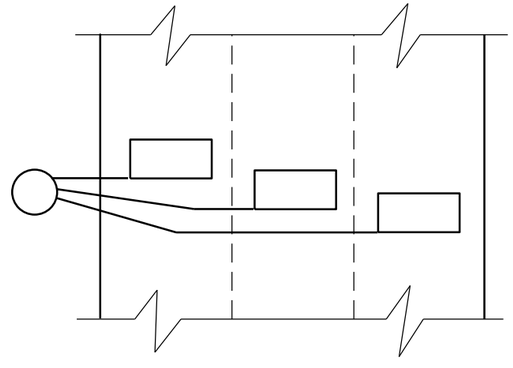
THE #12 AWG LOOP WIRE SHALL BE INSTALLED FROM THE ROADSIDE PULL (SPLICE) BOX, THROUGH THE LOOP CONDUIT, BACK TO THE ROADSIDE PULL (SPLICE) BOX, AND BE INSTALLED IN ONE, NON-SPLICED CONTINUOUS LENGTH.

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

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

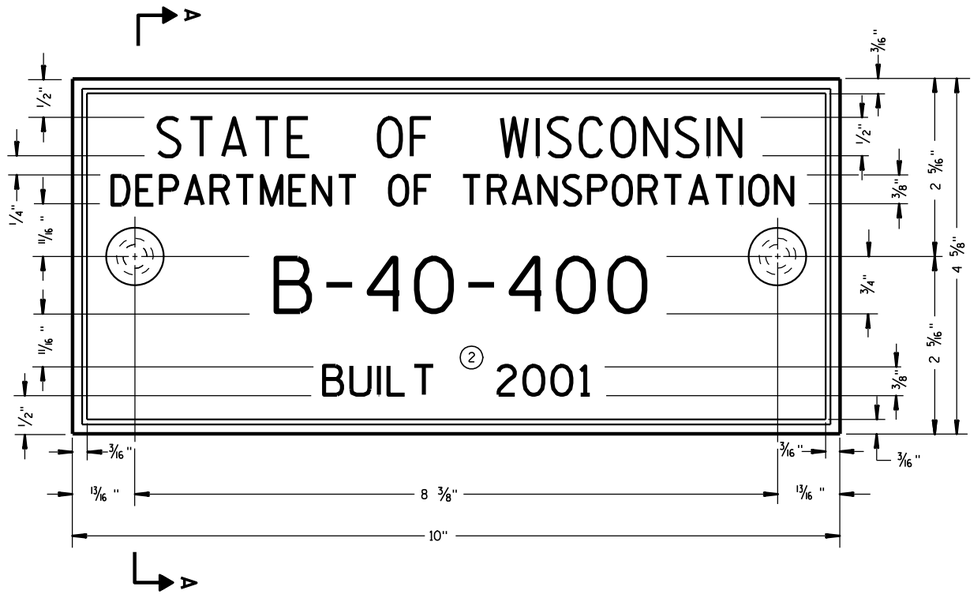


TYPICAL PLAN OF LOOP DETECTOR WITH 24" PULL (SPLICE) BOX



MULTI-LANE INSTALLATION

LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION
APPROVED Sept. 2014 DATE — /S/ Ahmet Demirbilek STATE ELECTRICAL FHWA



TYPICAL NAME PLATE
(BRIDGES, CULVERTS, AND RETAINING WALLS)

FOR MULTI-UNIT STRUCTURES
LINE 3 ABOVE SHALL READ

B = BRIDGE
C = CULVERT
R = RETAINING WALL

COUNTY NO.

BRIDGE NO.

UNIT NO. FOR MULTIPLE UNIT BRIDGE

B-40-400-1A

NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES

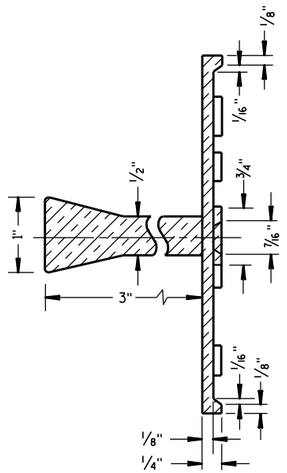
GENERAL NOTES

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.

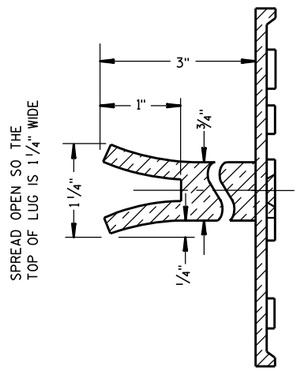
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

(1) EPOXY RESIN SHALL BE FROM AN APPROVED MANUFACTURER AND USED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

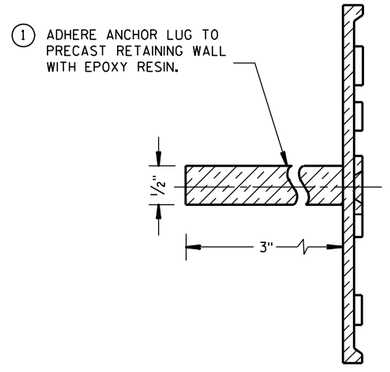
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



SECTION A-A



ALTERNATE LUG



ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE (STRUCTURES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/26/10 DATE

/S/ Scot Beck -- CHIEF STRUCTURAL DEVELOP ENGINEER

FHWA

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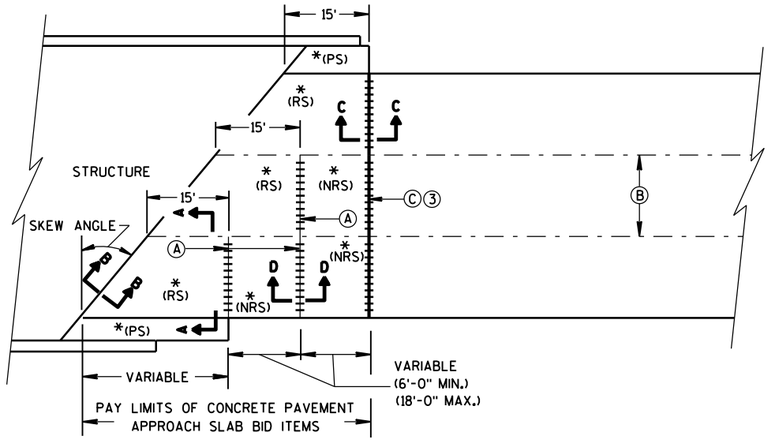
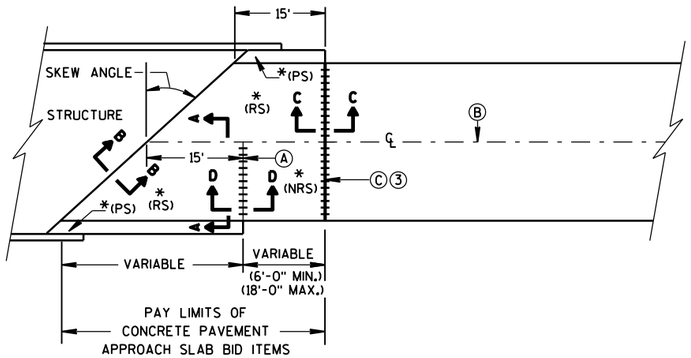
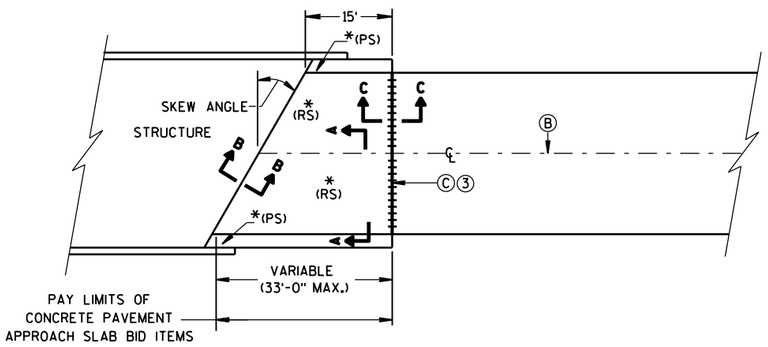


SKEWED APPROACH
(PAVEMENT MORE THAN 2 LANES)



SKEWS >20°
(PAVEMENT WIDTH ≤30')



SKEWS ≤20°
(PAVEMENT WIDTH ≤30')

APPROACH SLAB AND ADJACENT PAVEMENT

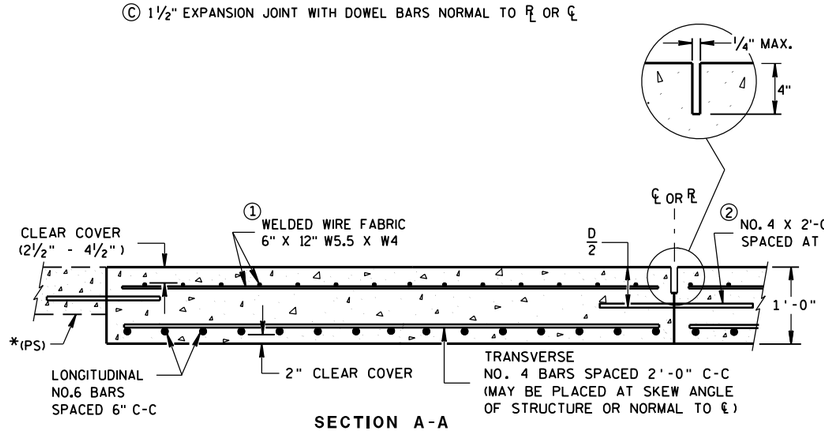
*(RS) = REINFORCED CONCRETE SLAB
*(PS) = PAVED CONCRETE SHOULDER OR CONCRETE DRAINAGE SLAB
(SEE DETAILS ELSEWHERE IN THE PLAN)
*(NRS) = NON-REINFORCED CONCRETE SLAB

***STANDARD DOWEL BAR DIAMETER
(SEE SDD 13C11, & SDD 13C13)

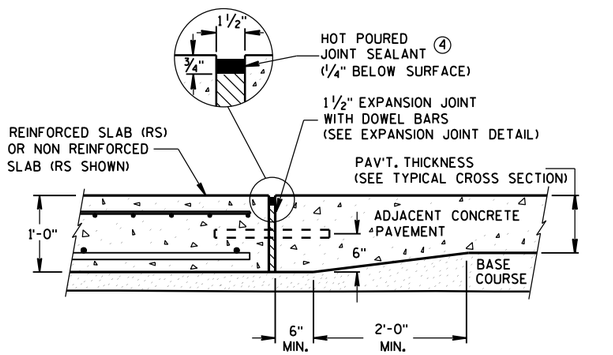
Ⓐ STANDARD CONTRACTION JOINT NORMAL TO ℄ OR ℄

Ⓑ STANDARD LONGITUDINAL JOINT WITH TIE BARS.

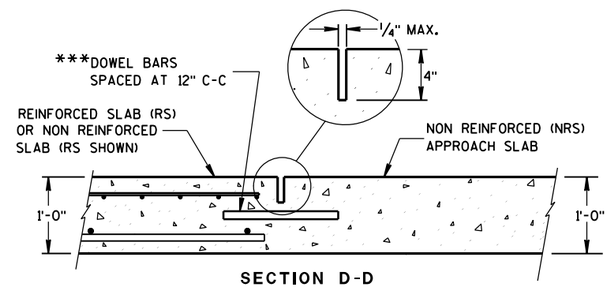
Ⓒ 1½" EXPANSION JOINT WITH DOWEL BARS NORMAL TO ℄ OR ℄



SECTION A-A
REINFORCEMENT POSITIONING DETAIL



SECTION C-C
TRANSITION DETAIL
APPROACH SLAB TO ADJACENT PAVEMENT



SECTION D-D
CONTRACTION JOINT

GENERAL NOTES

THE CONTRACTOR MAY SPLICE NO. 6 BARS IN THE APPROACH SLAB FOR SKEWED STRUCTURES ONLY. STAGGER SPLICES WITH A MAXIMUM OF ONE SPLICE PER BAR. THE LENGTH OF LAP IS 20 INCHES.

TACK WELD DOWEL BARS TO THE BASKETS ON ALTERNATE ENDS.

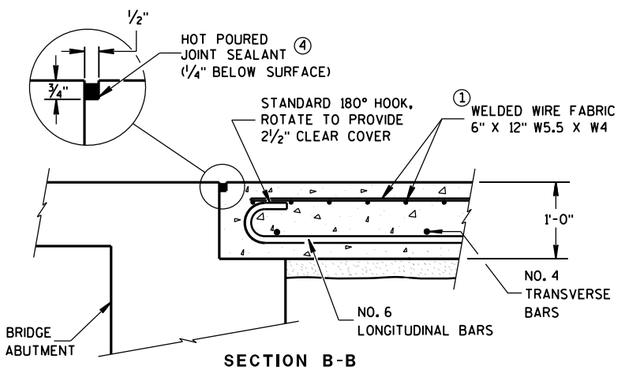
① THE CONTRACTOR MAY USE NO. 4 BARS SPACED AT 2'-0" C-C IN BOTH THE LONGITUDINAL AND TRANSVERSE DIRECTIONS FOR TOP REINFORCEMENT AS AN ALTERNATIVE TO THE WELDED WIRE FABRIC.

② THE CONTRACTOR MAY OMIT TIE BARS BETWEEN REINFORCED SLABS WHERE SLAB REINFORCEMENT BARS EXTEND ACROSS THE CENTERLINE OR REFERENCE LINE.

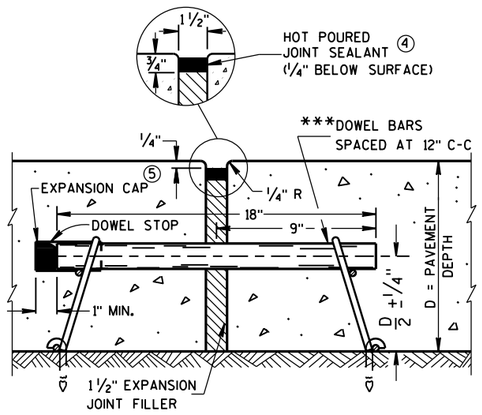
③ DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING AN HMA PAVEMENT.

④ USE A JOINT SEALANT MEETING THE REQUIREMENTS OF ASTM D6690.

⑤ PLACE EXPANSION CAP ON THE END OF THE DOWEL THAT IS NOT TACK WELDED TO THE BASKET. DO NOT FORCE DOWEL BAR PAST THE DOWEL STOP.



SECTION B-B
BEND DETAIL
BOTTOM REINFORCEMENT



EXPANSION JOINT DETAIL

CONCRETE PAVEMENT APPROACH SLAB

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015
DATE
/S/ Peter Kemp, P.E.
PAVEMENT SUPER
FHWA

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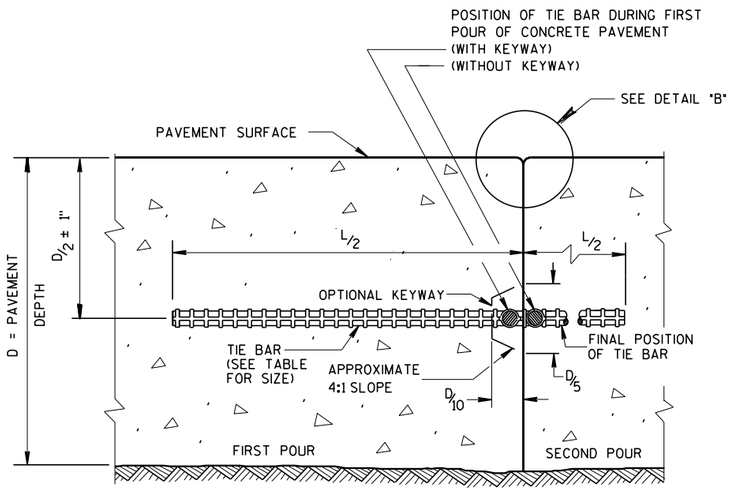
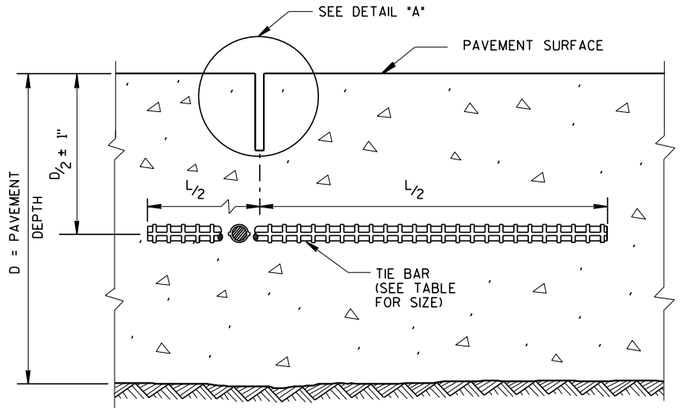
S.D.D. 13 B 2-8a



CONSTRUCTION JOINT



SAWED JOINT

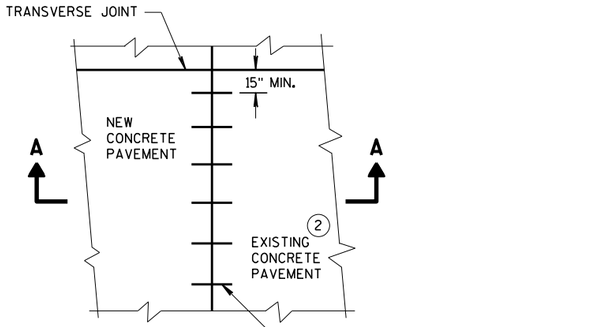
GENERAL NOTES

CREATE A LONGITUDINAL JOINT FOR PAVEMENT WIDTHS GREATER THAN 15 FEET.

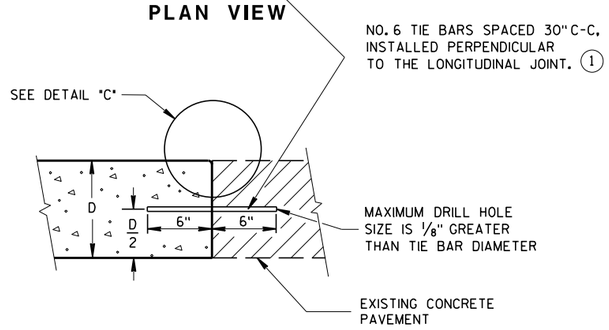
CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

(1) ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

(2) PAVEMENT THAT WAS IN PLACE PRIOR TO THE CONTRACT.

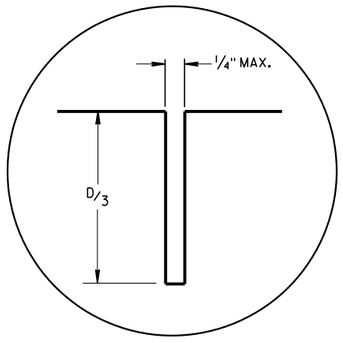


PLAN VIEW

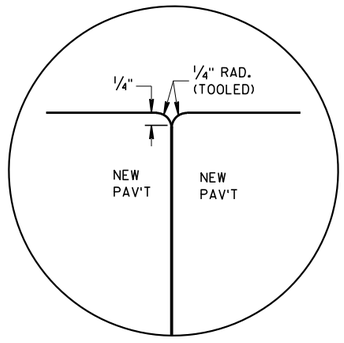


SECTION A-A

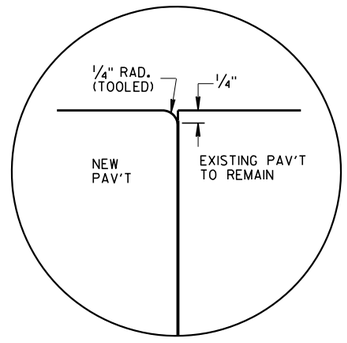
LONGITUDINAL CONSTRUCTION JOINT TIE BARS ANCHORED INTO EXISTING PAVEMENT



DETAIL "A"



DETAIL "B"



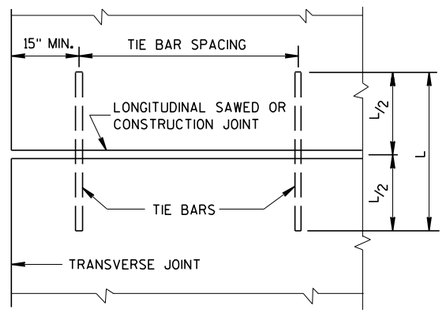
DETAIL "C"

TIE BAR TABLE

PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 1/2"	NO. 4	30"	36"
≥ 10 1/2"	NO. 5	36"	36"
	NO. 4 *	30"	24" **

* SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)

** CONFORM TO 15" MINUMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.



PLAN VIEW
SHOWING LOCATION OF TIE BARS

CONCRETE PAVEMENT
LONGITUDINAL JOINTS AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018 — DATE
/S/ Peter Kemp PE — PAVEMENT SUPE
FHWA

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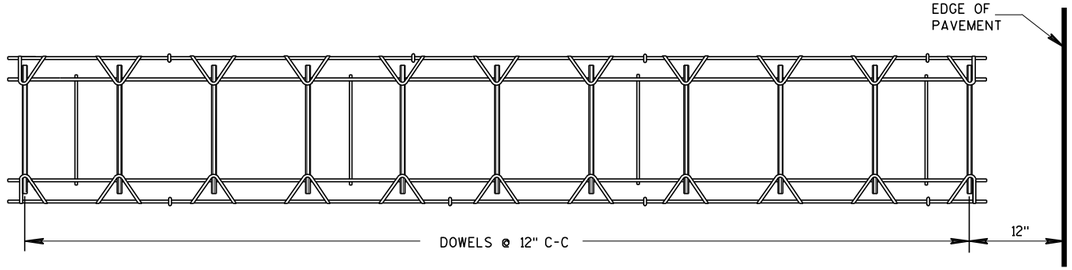


PLAN VIEW

SIDE VIEW

CONTRACTION JOINT DOWEL ASSEMBLY ①

PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
5 ½", 6", 6 ½"	NONE	12'
7", 7 ½"	1"	14'
8", 8 ½"	1 ¼"	15'
9", 9 ½"	1 ¼"	15'
10" & ABOVE	1 ½"	15'

GENERAL NOTES

CONTRACTION JOINTS

CONSTRUCT TRANSVERSE CONTRACTION JOINTS NORMAL TO THE CENTERLINE. SHOW THE LOCATION OF CONTRACTION JOINTS THROUGH INTERSECTIONS ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.

FOR PAVEMENT SLABS OF VARYING WIDTHS, LOCATE THE OUTER MOST DOWEL BAR SO THAT THE CENTER OF THE BAR IS A MINIMUM OF 6 INCHES AND A MAXIMUM OF 18 INCHES FROM THE LONGITUDINAL JOINT AND THE FREE EDGE OF PAVEMENT.

CONSTRUCTION JOINTS

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

① OBTAIN THE ENGINEER'S APPROVAL FOR THE USE OF ALTERNATIVE DESIGNS OF THE DOWEL ASSEMBLY. USE MECHANICAL DOWEL BAR INSERTERS OR DOWEL ASSEMBLIES WHEN CONSTRUCTING CONTRACTION JOINTS.

② SECURE BASKETS WITH ANCHORS TO HOLD DOWEL BARS IN THE CORRECT POSITION AND ALIGNMENT. TYPE, LOCATION, NUMBER AND LENGTH OF ANCHORS ARE DEPENDENT UPON FIELD CONDITIONS.

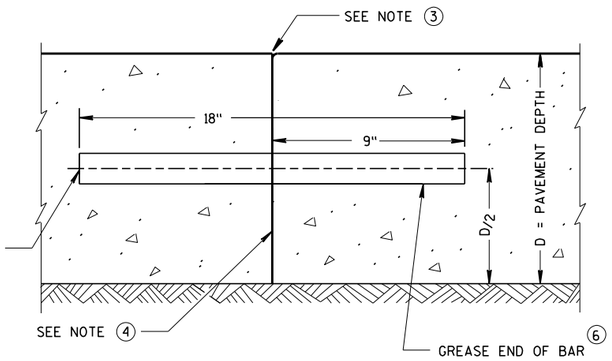
③ FORM OR SAW CONSTRUCTION JOINTS. PROVIDE A ¼-INCH RADIUS AT FORMED JOINTS.

④ PROVIDE A SMOOTH VERTICAL FACE FOR THE ENTIRE DEPTH OF THE PAVEMENT WHEN FORMING CONSTRUCTION JOINTS.

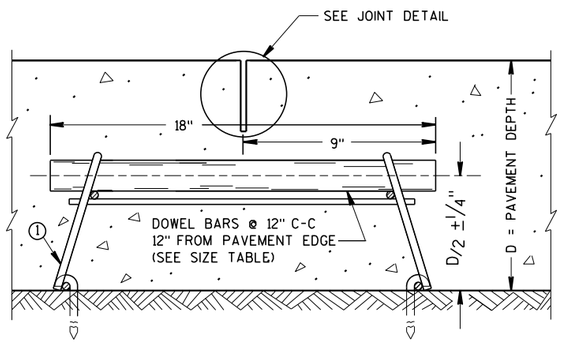
⑤ INSTALL DOWEL BARS AT CONSTRUCTION JOINTS BY FORMING OR DRILLING. INSTALL FORMED DOWEL BARS 12 INCHES C-C AND 12 INCHES FROM PAVEMENT EDGE. REMOVE EXCESS CONCRETE FROM THE FREE END OF THE DOWEL BAR IF DOWEL BARS ARE FORMED THROUGH A HEADER BOARD. INSTALL DRILLED DOWEL BARS ACCORDING TO *DRILLED DOWEL BAR CONSTRUCTION JOINT* DETAIL.

⑥ APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.

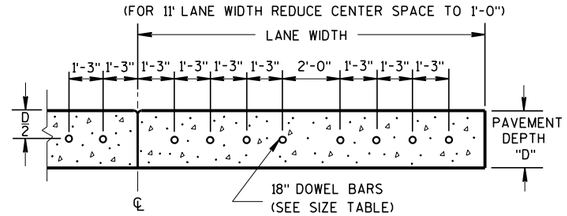
⑦ ANCHOR DOWEL BARS INTO DRILLED HOLES WITH AN EPOXY. MAXIMUM DRILLED HOLE SIZE IS ⅛-INCH GREATER THAN DOWEL BAR DIAMETER, 9 INCHES IN LENGTH.



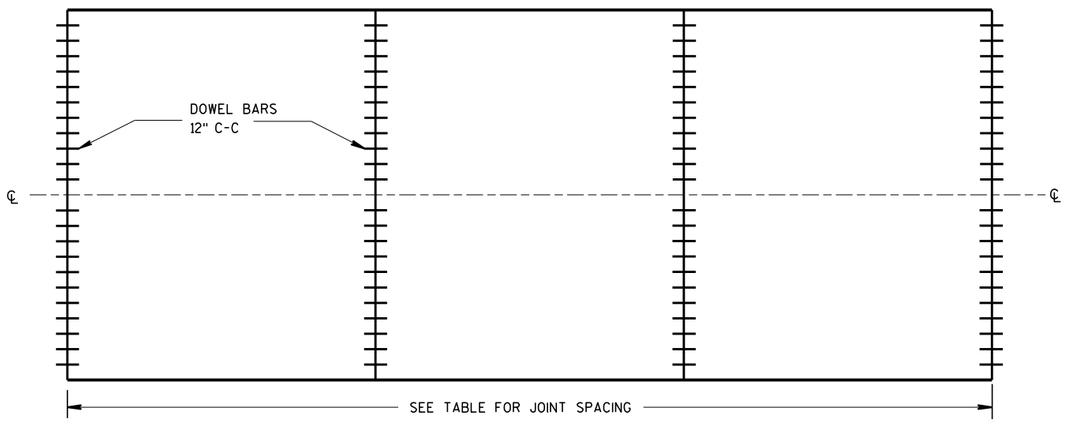
TRANSVERSE CONSTRUCTION JOINT



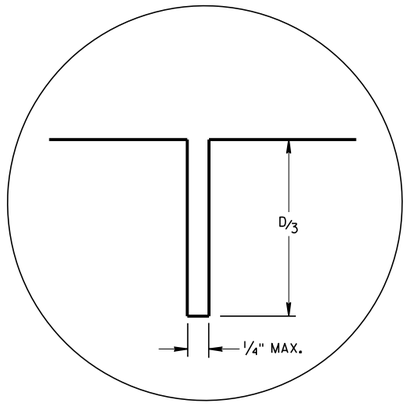
DOWELED CONTRACTION JOINT



DRILLED DOWEL BAR CONSTRUCTION JOINT ⑦



CONTRACTION JOINT LOCATIONS



JOINT DETAIL

URBAN DOWELED CONCRETE PAVEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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March 2018 — DATE
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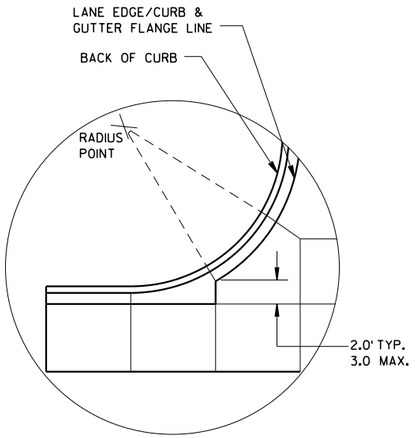
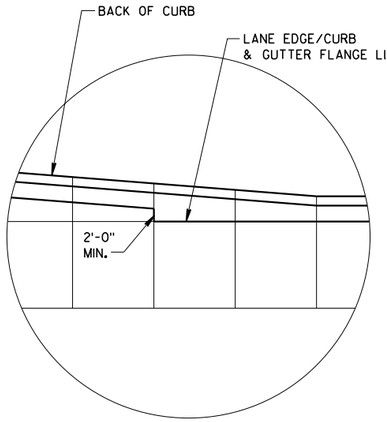
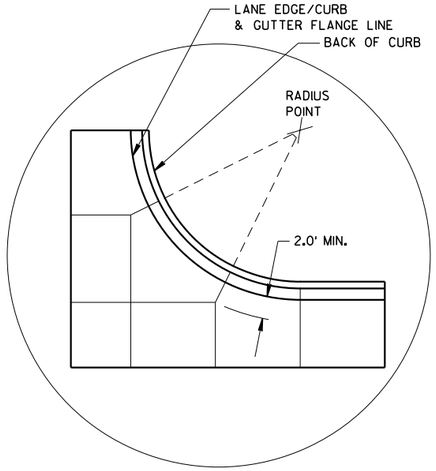


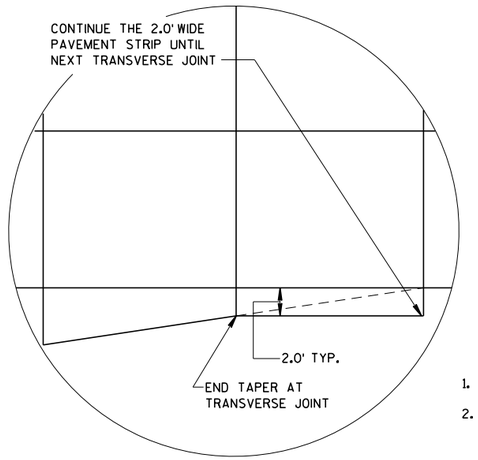
DETAIL "A"



DETAIL "B"



DETAIL "C"



DETAIL "D"

GENERAL NOTES

THE PRIMARY ROADWAY CONTROLS THE TRANSVERSE JOINT PATTERN.

ALIGN NEW JOINTS WITH EXISTING JOINTS OR CRACKS.

CONSTRUCT TRANSVERSE JOINTS PERPENDICULAR TO THE ROADWAY.

ADJUST TRANSVERSE JOINTS TO ALIGN WITH UTILITY FIXTURES (E.G. MANHOLES AND INLETS) IN THE PAVEMENT STRUCTURE WHEN POSSIBLE. WATER VALVES DO NOT REQUIRE JOINT ADJUSTMENT.

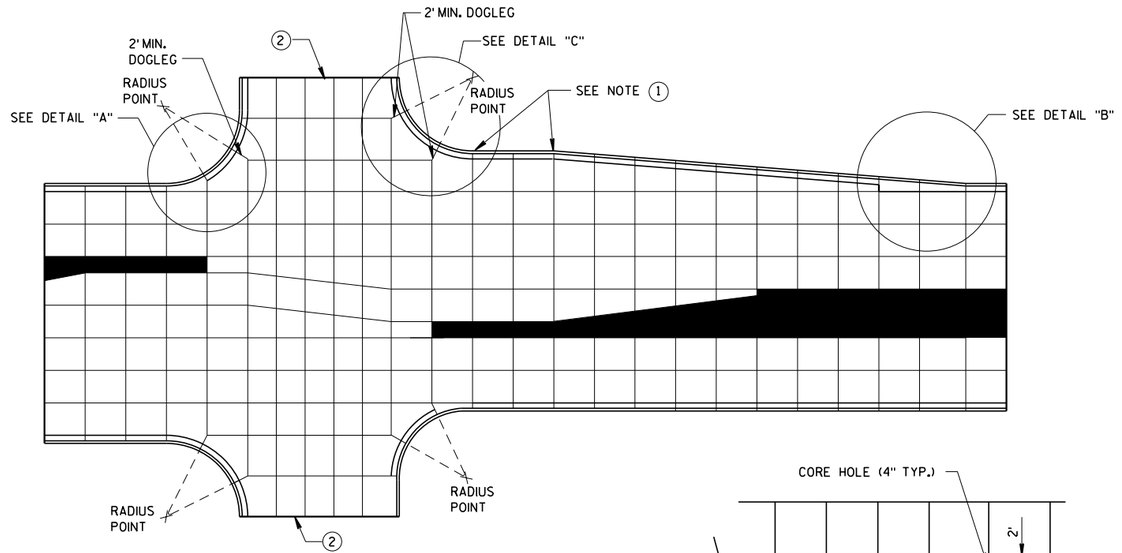
AVOID SLABS LESS THAN 2 FEET WIDE OR GREATER THAN 15 FEET WIDE.

SEE TABLE FOR TRANSVERSE JOINT SPACING. JOINT SPACING SPECIFIED IS MAXIMUM AND ACTUAL SPACING CAN BE ADJUSTED TO ACCOMMODATE INTERSECTIONS.

AVOID ANGLES LESS THAN 60° BY DOGLEGGING JOINTS THROUGH CURVE RADIUS POINTS. USE 90° ANGLES WHEN POSSIBLE.

CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

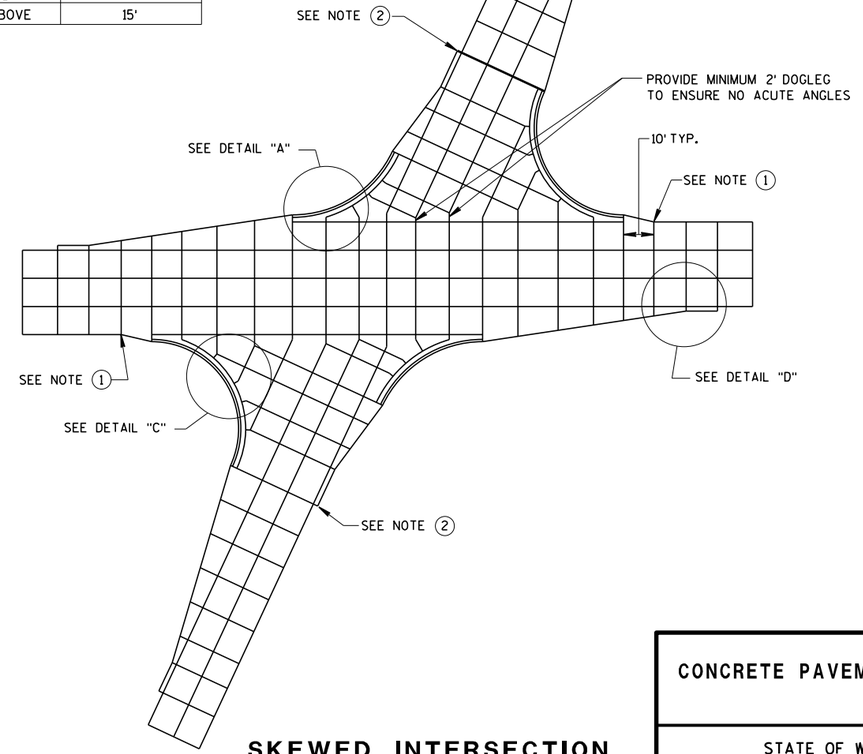
1. PROVIDE TRANSVERSE JOINTS AT ALL PAVEMENT WIDTH CHANGES.
2. CONSTRUCT DOWELED EXPANSION JOINT ON THE SIDE ROAD OF AN INTERSECTION IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH. ALIGN EXPANSION JOINT WITH EDGE OF RADIUS.
3. THE ENGINEER MAY APPROVE SLIGHT VARIATIONS FROM THESE JOINTING DETAILS.



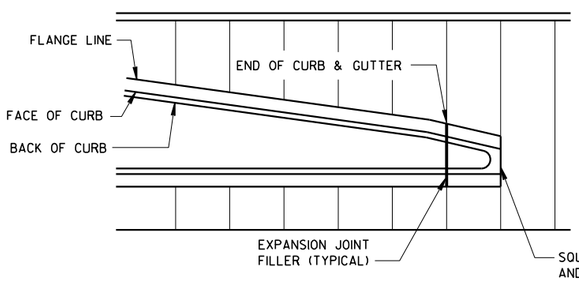
STANDARD INTERSECTION

PAVEMENT DEPTH AND JOINT SPACING TABLE

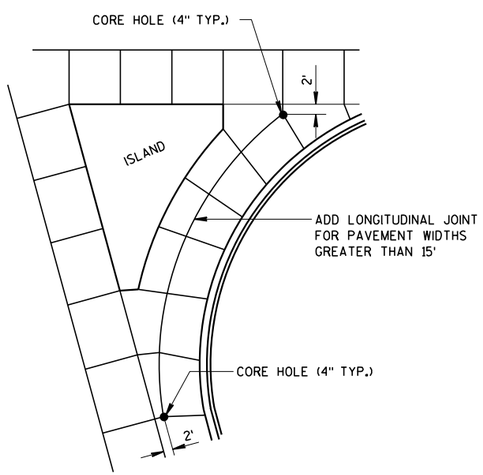
PAVEMENT DEPTH (D)	CONTRACTION JOINT SPACING
6", 6½"	12'
7", 7½"	14'
8" & ABOVE	15'



SKEWED INTERSECTION



APPROACH TO MEDIAN



LARGE RIGHT TURN

CONCRETE PAVEMENT JOINTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

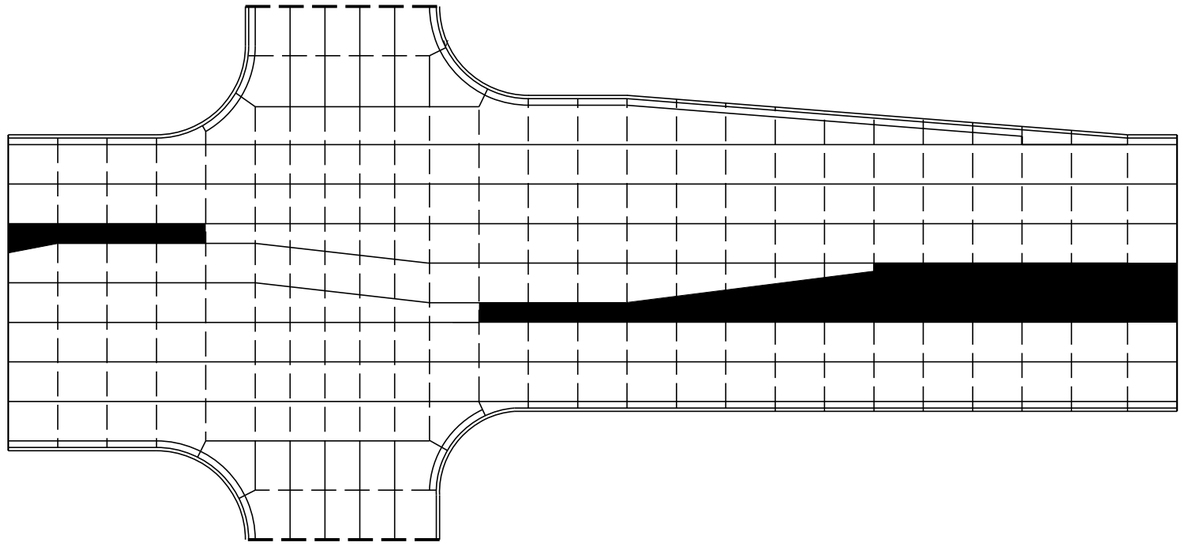
6
S.D.D. 13 C 18-6a

LEGEND

POTENTIAL DOWELED EXPANSION JOINT

DOWELED JOINT

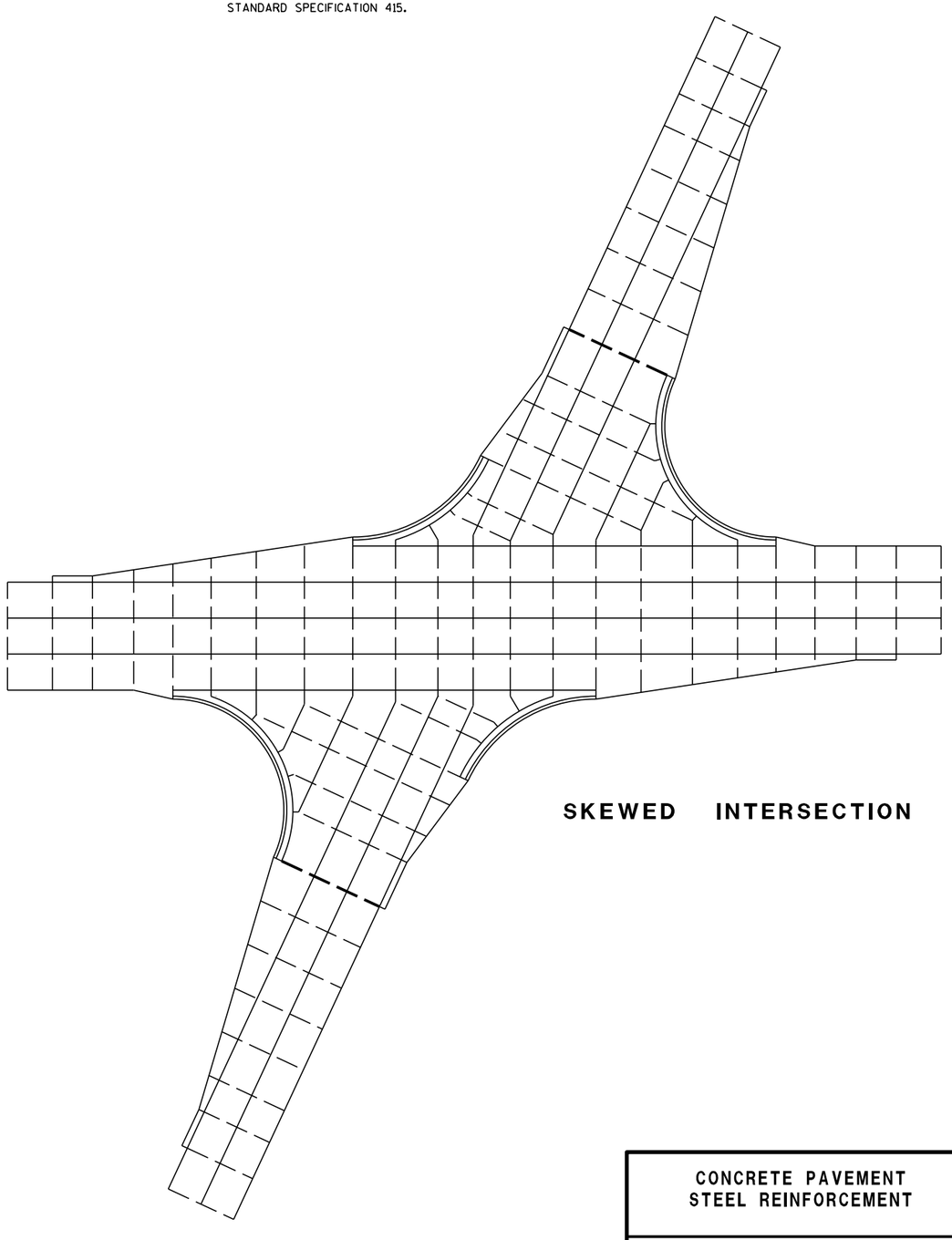
TIED JOINT



STANDARD INTERSECTION

GENERAL NOTES

USE AN EXPANSION JOINT FILLER MEETING THE REQUIREMENTS OF STANDARD SPECIFICATION 415.



SKEWED INTERSECTION

6

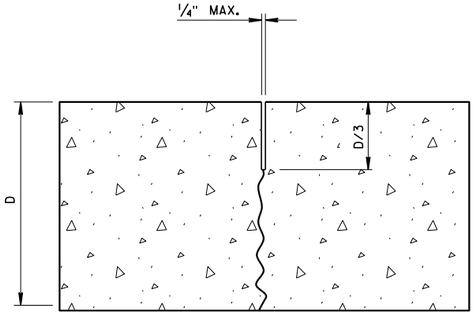
6

S.D.D. 13 C 18-6b

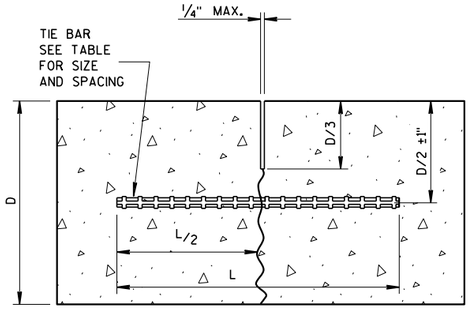
S.D.D. 13 C 18-6b

CONCRETE PAVEMENT
STEEL REINFORCEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



UNDOWELED-TRANSVERSE



TIED LONGITUDINAL

TIE BAR TABLE

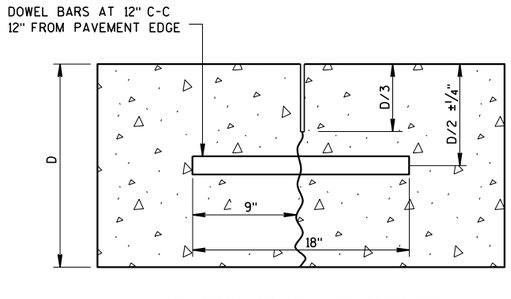
PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 1/2"	NO. 4	30"	36"
≥ 10 1/2"	NO. 5	36"	36"
	NO. 4 *	30"	24" **

* SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)

** CONFORM TO 15" MINUMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.

GENERAL NOTES

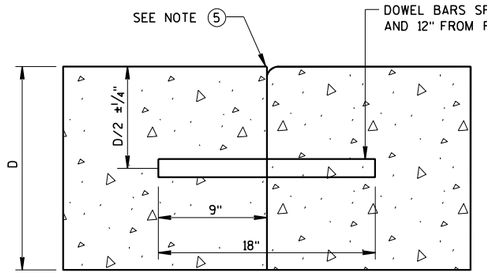
1. USE DOWELED EXPANSION JOINTS ON SIDE ROADS AT INTERSECTIONS (TO ISOLATE THE SIDE ROAD FROM THE THROUGH STREET) IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH.
2. SPACE CONTRACTION JOINTS IN ACCORDANCE WITH 13C4, 13C11 OR 13C13.
3. LOCATE CONSTRUCTION JOINTS A MINIMUM OF 6 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO CONTRACTION JOINTS.
4. CONSTRUCTION JOINTS CAN BE FORMED OR SAWED.
5. IF JOINT IS FORMED, PROVIDE A 1/4-INCH RADIUS.
6. ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.



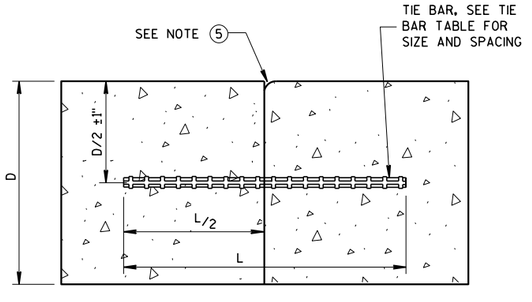
DOWELED-TRANSVERSE

CONTRACTION JOINTS

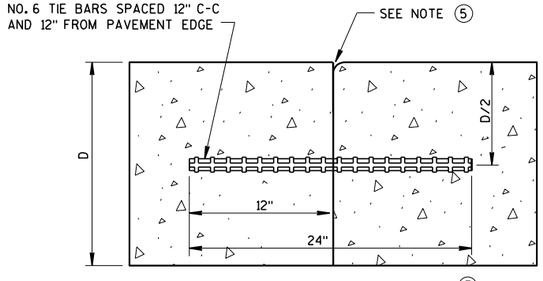
SEE NOTE (2)



DOWELED TRANSVERSE (3)

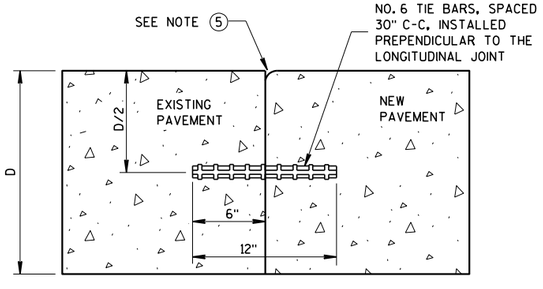


TIED LONGITUDINAL



TIED TRANSVERSE (3)

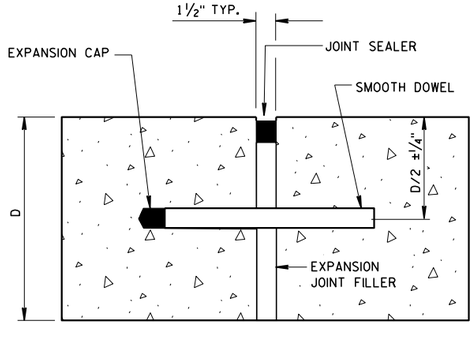
(FOR USE ON NON-DOWELED PAVEMENTS ONLY)



TIED LONGITUDINAL TO EXISTING

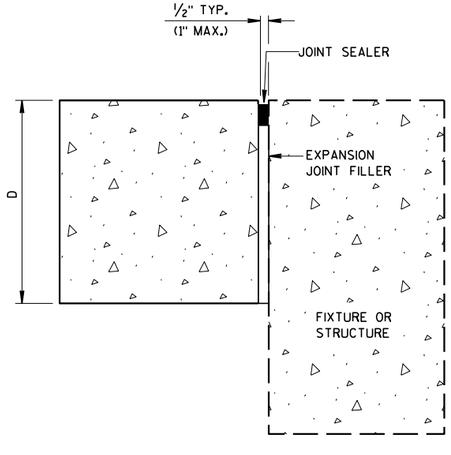
CONSTRUCTION JOINTS

SEE NOTE (4)



DOWELED-TRANSVERSE

SEE NOTE (1)



UNTIED-LONGITUDINAL

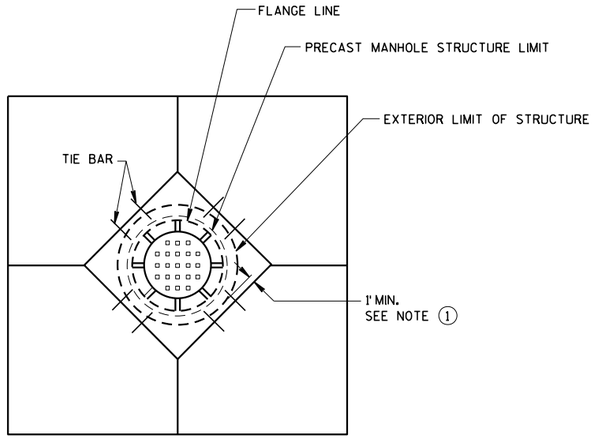
EXPANSION JOINTS

CONCRETE PAVEMENT
JOINT TYPES

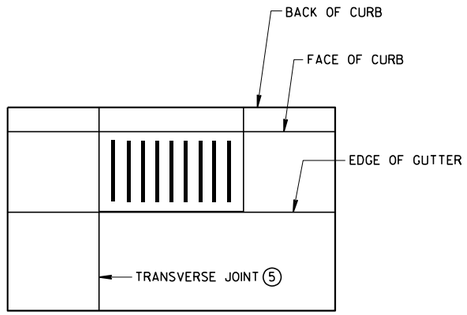
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

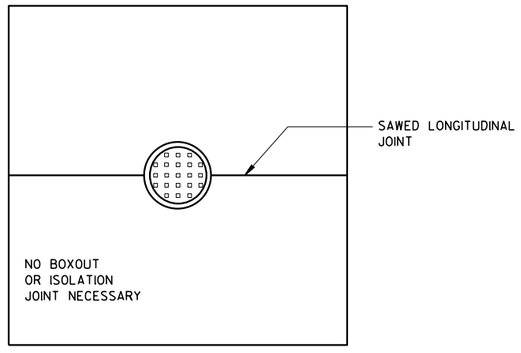
S.D.D. 13 C 18-6c



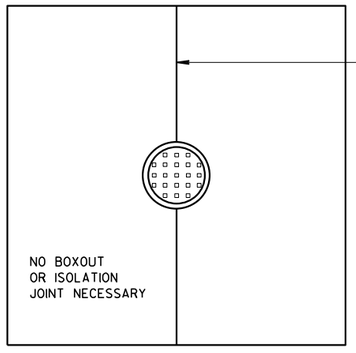
DIAGONAL MANHOLE BOXOUT FOR CONSTRUCTION JOINTS



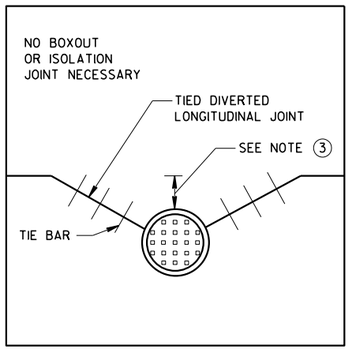
INLET WITH TRANSVERSE JOINT



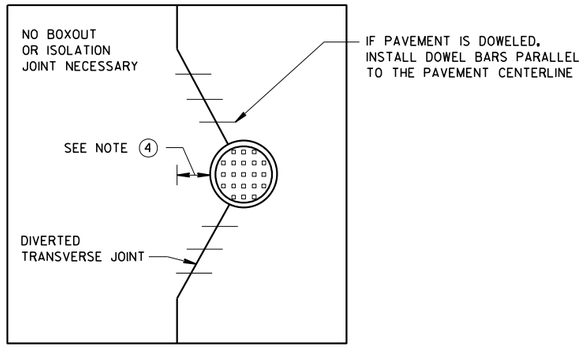
MANHOLE WITH LONGITUDINAL JOINT



MANHOLE WITH TRANSVERSE JOINT



MANHOLE WITH DIVERTED LONGITUDINAL CONTRACTION JOINT



MANHOLE WITH DIVERTED TRANSVERSE CONTRACTION JOINT

GENERAL NOTES

(1) USE BOXOUTS WHEN UTILITY STRUCTURE IS IN THE PATH OF CONSTRUCTION JOINTS. PROVIDE A 1-FOOT MINIMUM CLEARANCE BETWEEN THE EXTERIOR LIMIT OF THE STRUCTURE TO THE DIAMOND BOXOUT.

(2) ADJUST TRANSVERSE JOINT TO INTERSECT MANHOLE IF POSSIBLE.

(3) IF DISTANCE BETWEEN THE LONGITUDINAL JOINT AND THE EDGE OF MANHOLE IS 2 FEET OR LESS, DIVERT THE LONGITUDIAL JOINT AT A 2:1 TAPER RATE TO THE CENTER OF THE MANHOLE. IF THE DISTANCE IS GREATER THAN 2 FEET, DO NOT DIVERT THE JOINT AND SAW AS NORMAL. PLACE REBAR REINFORCEMENT AROUND THE MANHOLE.

(4) IF DISTANCE FROM THE EDGE OF THE MANHOLE TO THE NEAREST TRANSVERSE JOINT IS 4 FEET OR LESS, REDIRECT JOINT TO INTERSECT THE CENTER OF THE MANHOLE. IF DISTANCE IS GREATER THAN 4 FEET, DO NOT DIVERT THE JOINT AND SAW AS NORMAL. PLACE REBAR REINFORCEMENT AROUND THE MANHOLE.

(5) ALIGN TRANSVERSE JOINT WITH ONE EDGE OF INLET WHEN PRACTICAL.

CONCRETE PAVEMENT JOINTING AT UTILITY FIXTURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018
DATE

/S/ Peter K[illegible] P.E.
PAVEMENT SUPE

FHWA

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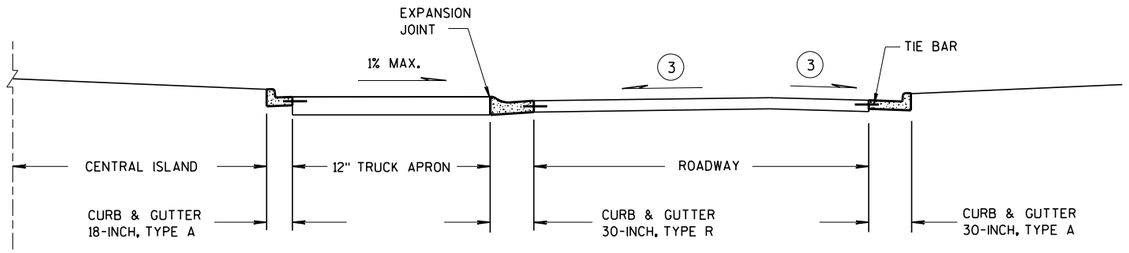
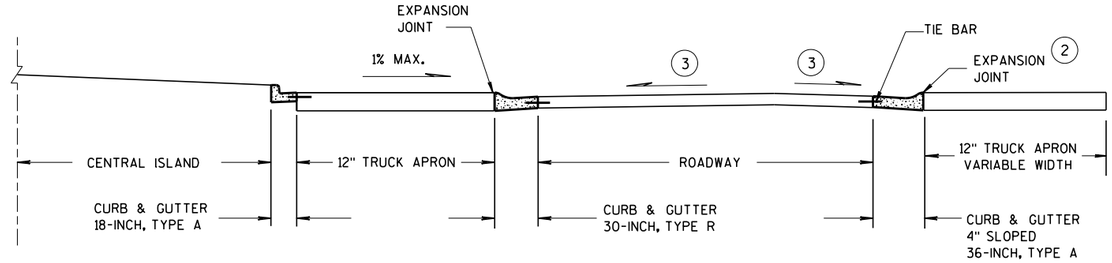
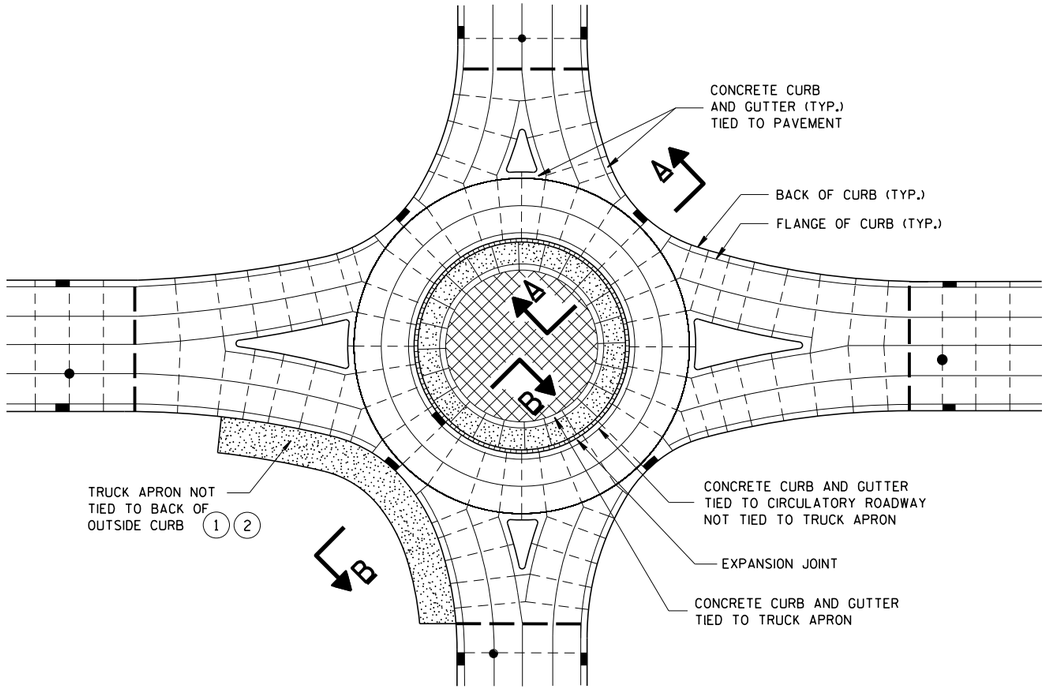


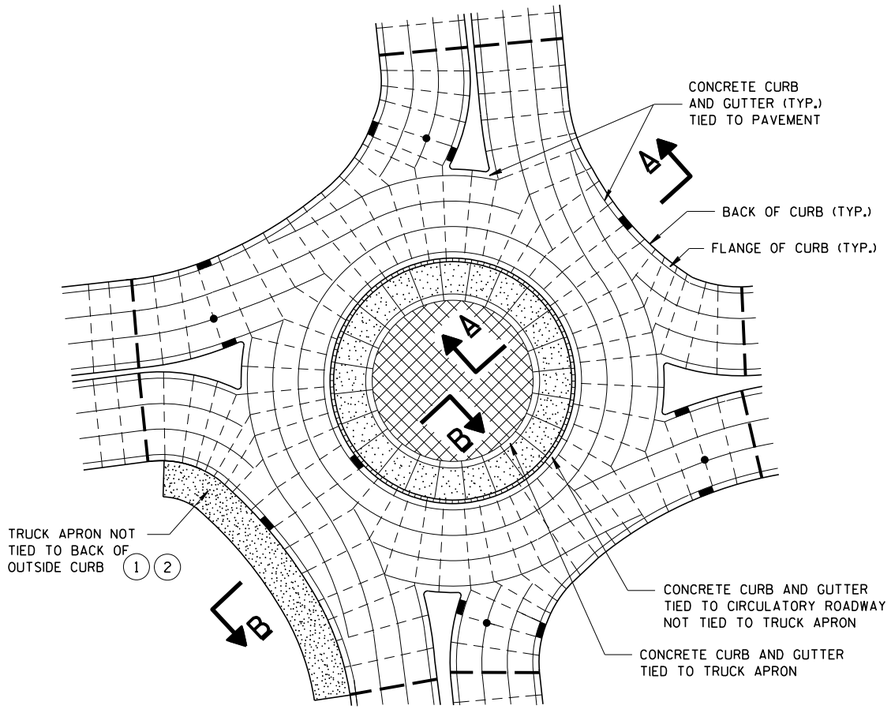
SECTION A-A



SECTION B-B



ISOLATED CIRCLE JOINT LAYOUT FOR ROUNDABOUTS



PINWHEEL JOINT LAYOUT FOR ROUNDABOUTS

GENERAL NOTES

MAXIMUM JOINT SPACING IS IN ACCORDANCE WITH THE TABLE SHOWN ON SDD 13C18 SHEET "a".

USE AN EXPANSION JOINT FILLER MEETING THE REQUIREMENTS OF STANDARD SPECIFICATION 415.

DO NOT DOWEL OR TIE THE TRUCK APRON TRANSVERSE JOINTS.

(1) DESIGNER DETERMINES SIZE AND LOCATION(S) OF TRUCK APRON TO ACCOMMODATE TRACKING OF OVERSIZE/OVERWEIGHT VEHICLES.

(2) TIE THE OUTSIDE TRUCK APRON TO THE BACK SIDE OF CURB ONLY WHEN ENTIRE TRUCK APRON WIDTH IS LESS THAN 3 FEET.

(3) CONFORM TO PLAN CONSTRUCTION DETAILS FOR CIRCULATORY ROADWAY CROSS SLOPE.

LEGEND

- DOWELED JOINT
- TIED JOINT
- EXPANSION JOINT
- POTENTIAL DOWELED EXPANSION JOINT
- TRUCK APRON
- CENTRAL ISLAND
- UTILITY STRUCTURES

CONCRETE PAVEMENT JOINTING AND STEEL REINFORCEMENT IN ROUNDABOUTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018 — DATE
/S/ Peter Ke — PAVEMENT SUF
FHWA

6

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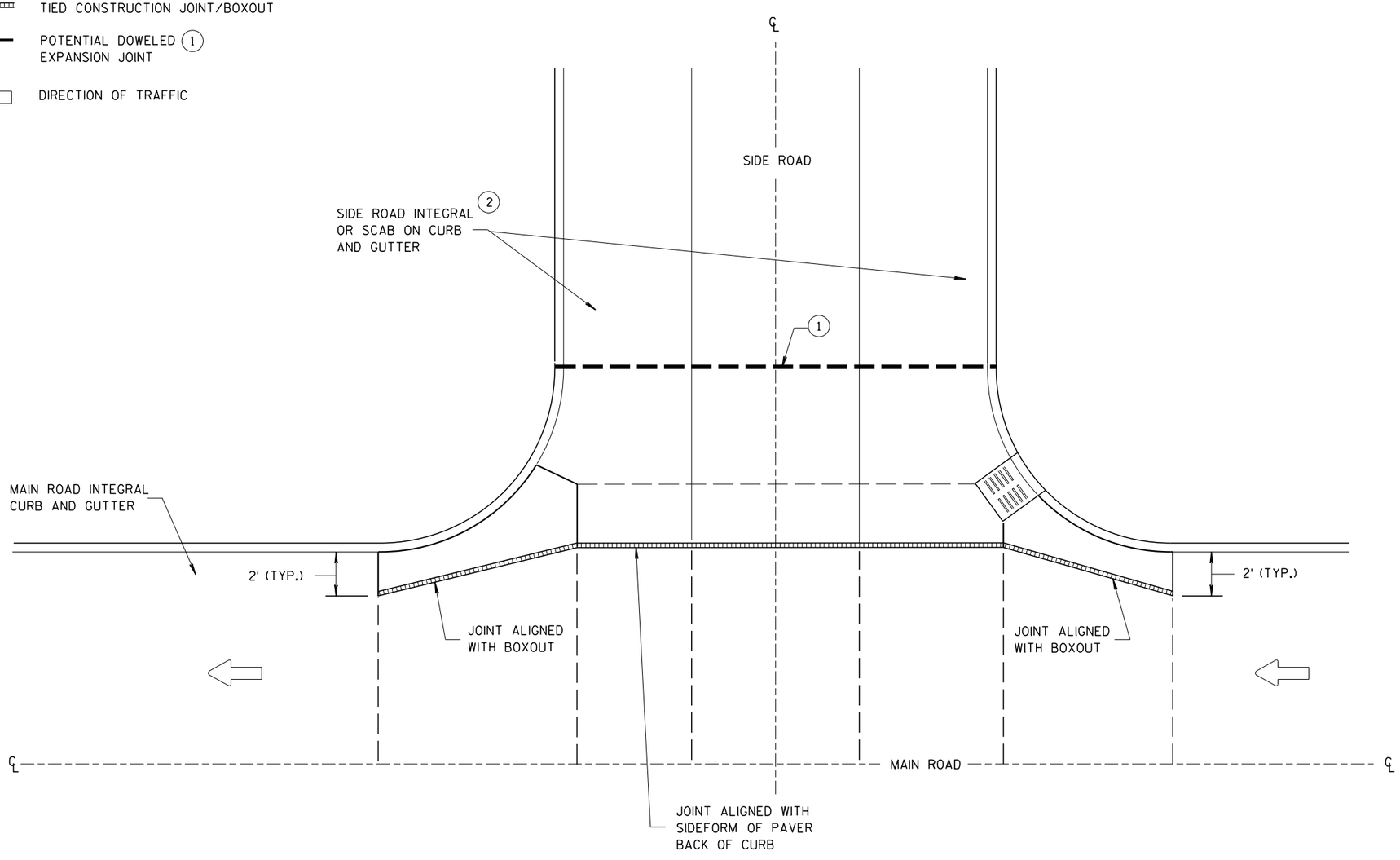
LEGEND

- DOWELED JOINT
- TIED JOINT
- TIED CONSTRUCTION JOINT/BOXOUT
- POTENTIAL DOWELED EXPANSION JOINT (1)
- DIRECTION OF TRAFFIC



GENERAL NOTES

1. CONSTRUCT DOWELED EXPANSION JOINT ON THE SIDE ROAD OF AN INTERSECTION IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH, ALIGN EXPANSION JOINT WITH EDGE OF RADIUS.

2. PROVIDE TIED JOINT AT THE FLANGE OF SCAB ON CURB IF SCAB ON CURB AND GUTTER IS USED.

INTERSECTION BOXOUT FOR INTEGRAL CURB AND GUTTER

CONCRETE PAVEMENT INTERSECTION BOXOUT FOR INTEGRAL CURB AND GUTTER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018 — DATE
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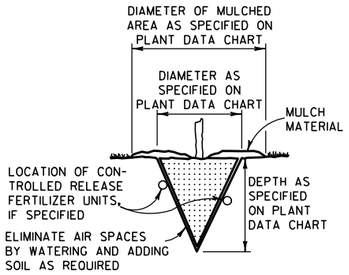
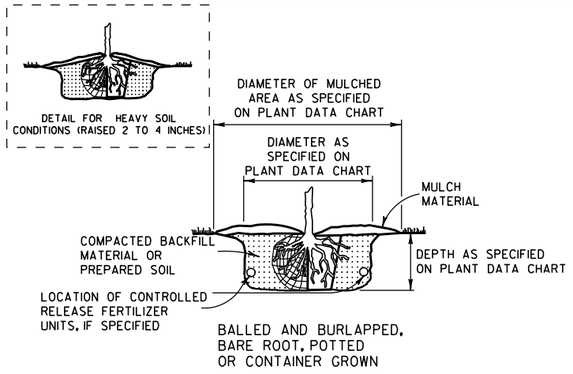
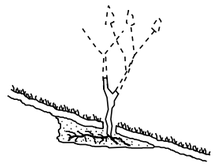


MACHINE MOVED

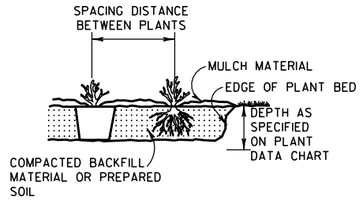


BALLED AND BURLAPPED, BARE ROOT, POTTED OR CONTAINER GROWN



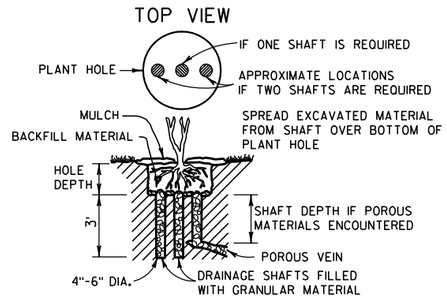
ACCOMMODATE ROOTS (SMOOTH AND STAGHORN SUMAC)

NOTE:
1) ENGINEER SHALL REQUIRE 3 SLITS IN POT TO SPEED DETERIORATION
2) METAL, PLASTIC OR OTHER NONDEGRADABLE POTS SHALL BE REMOVED PRIOR TO PLANTING



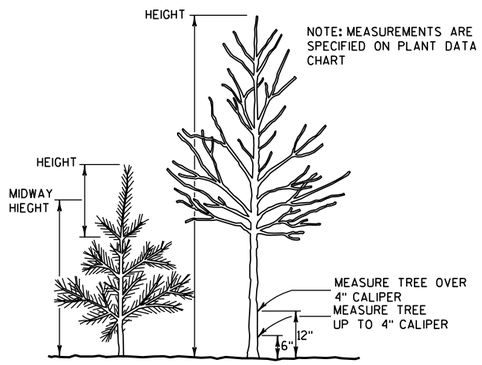
PREPARED BED (BARE ROOT AND POTTED)

PLANTING

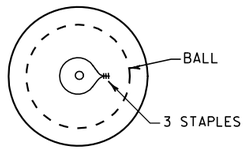


NOTE:
DRAINAGE SHAFT AS SPECIFIED ON PLANT DATA CHART

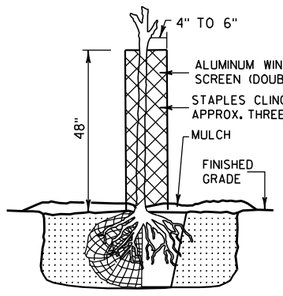
DRAINING



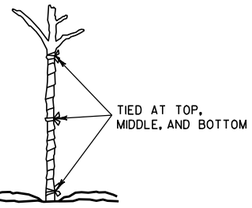
MEASURING



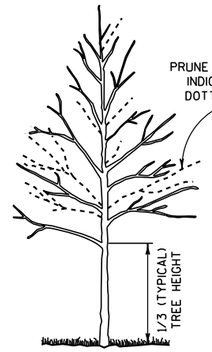
TOP VIEW



RODENT PROTECTION



WRAPPING

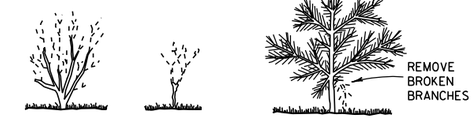


TALL DECIDUOUS TREES (ASH, MAPLE, LINDEN, OAK)

SINGLE STEMMED LOW DECIDUOUS TREES (CRABS AND OTHER SINGLE STEM TYPE)

MULTI-STEMMED LOW DECIDUOUS TREES OR LARGE SHRUBS (HAWTHORN, SERVICEBERRY)

NOTE: WHEN PRUNING, PRESERVE CHARACTER AND SHAPE OF TREE. AVOID LEAVING STUBS - REMOVE BRANCH OR TWIG BACK TO THE NEAREST CROTCH
1) PRUNE TO REMOVE DEAD AND BROKEN BRANCHES
2) PRUNE TO REMOVE BRANCHES THAT TOUCH OR ARE TOO CLOSE TO OTHER BRANCHES

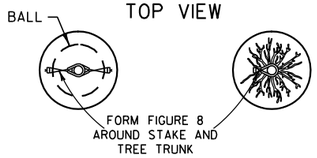


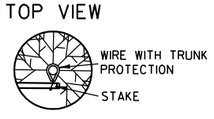
SHRUBS (GRAY DOGWOOD ARROWWOOD VIBURNUM)

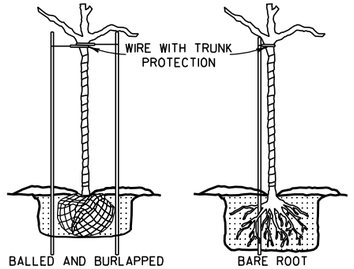
SUMAC

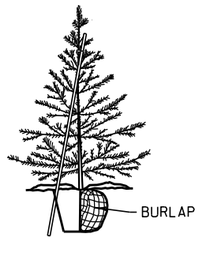
TREE TYPE EVERGREENS (PINE, SPRUCE, FIR) EVERGREENS USUALLY ARE NOT PRUNED

PRUNING



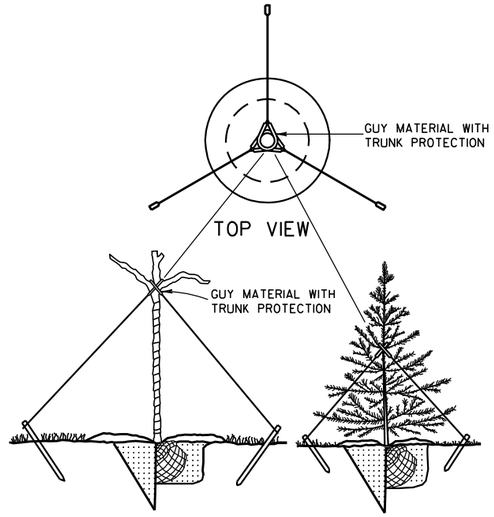






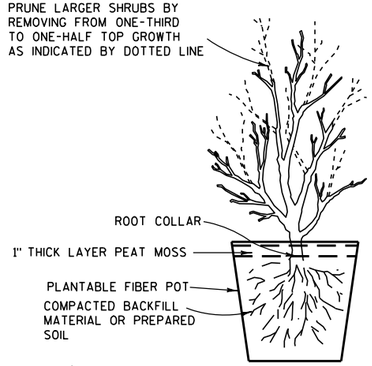
NOTE: BRACING STAKE
1) SHALL BE DRIVEN INTO THE GROUND AS CLOSE TO THE TREE AS POSSIBLE WITHOUT DAMAGING THE BRANCHES.
2) MAY BE DRIVEN AT SUCH AN ANGLE THAT IT DOES NOT PENETRATE THE BALL OR POT.
3) SHALL NOT PROTRUDE ABOVE THE TOP OF THE TREE; AND
4) SHALL HAVE A HOLE NEAR THE TOP TO HOLD THE WIRE IN PLACE.

BRACING



GUYING

PRUNE LARGER SHRUBS BY REMOVING FROM ONE-THIRD TO ONE-HALF TOP GROWTH AS INDICATED BY DOTTED LINE



POTTING

NOTES

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

BRACING, WRAPPING, GUYING, RODENT PROTECTION, FERTILIZER AND MULCH SHALL BE USED ONLY WHEN SPECIFIED ON THE PLANT DATA CHART (PART OF PLAN) OR SPECIAL PROVISIONS.

TREE PLANTING DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4/11/94 — DATE
/S/ Rory L. Rhinesmith — CHIEF METHODS DEVELOPMENT ENGINEER
FHWA

S.D.D. 14 A 2-1

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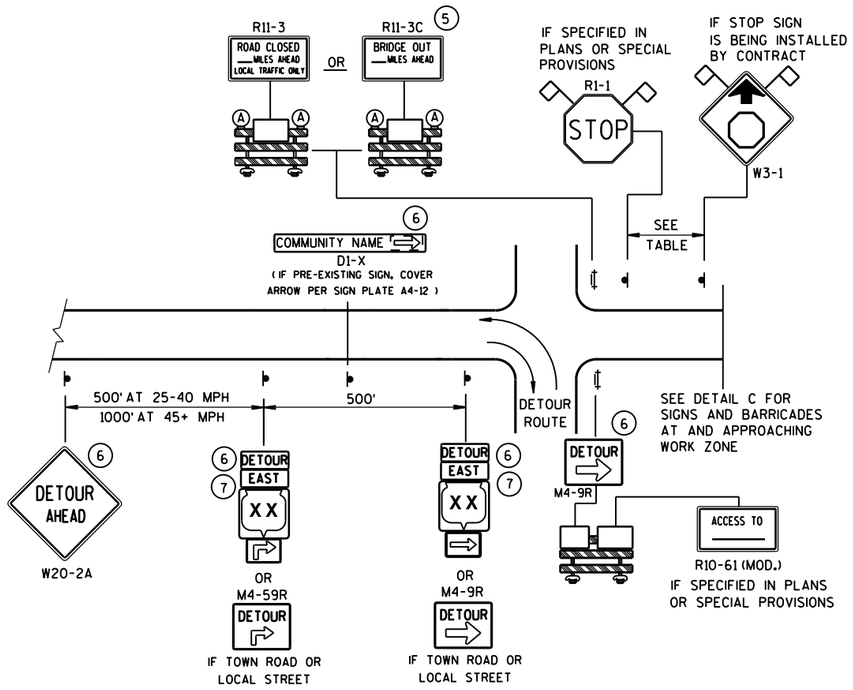
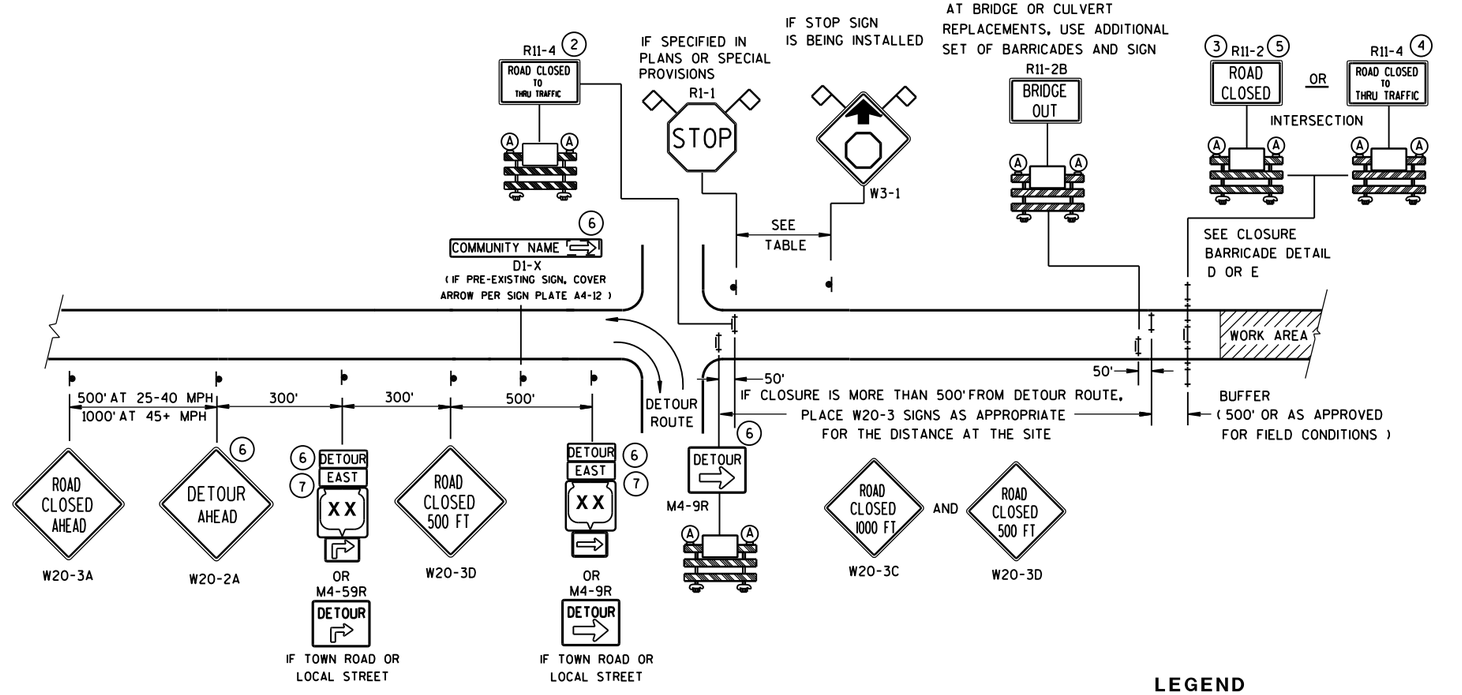


DETAIL A

MAINLINE CLOSURE WITH POSTED DETOUR

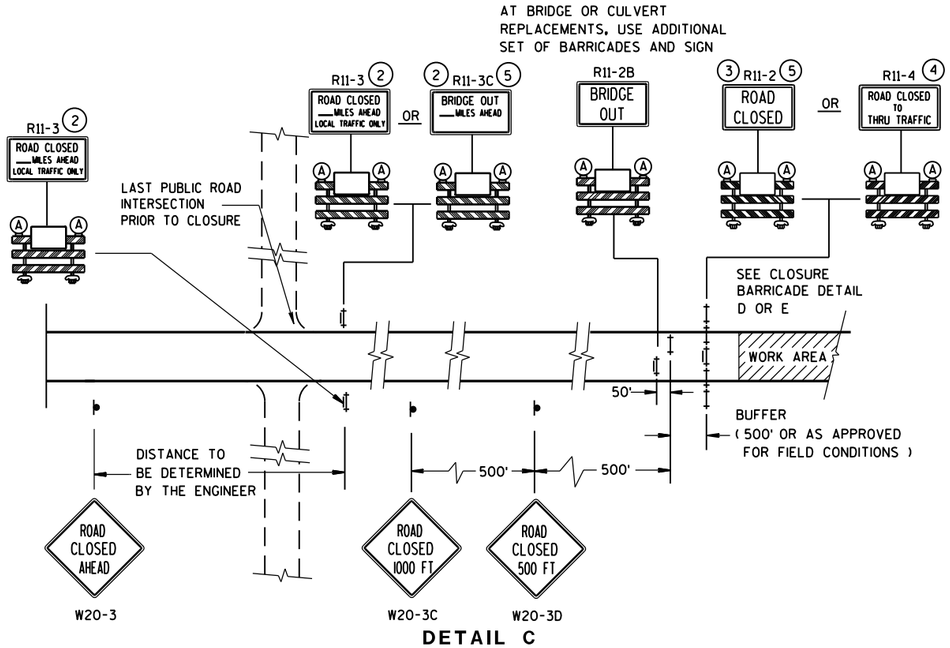
WORK ZONE GREATER THAN ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL B

MAINLINE CLOSURE WITH POSTED DETOUR

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



DETAIL C

MAINLINE CLOSURE, NO POSTED DETOUR

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

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

LEGEND

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

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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S.D.D. 15 C 2-6a

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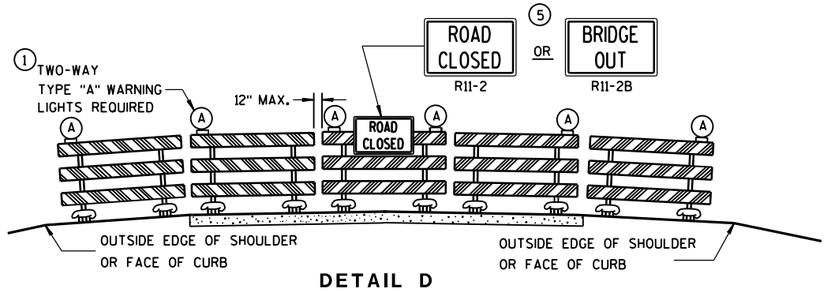
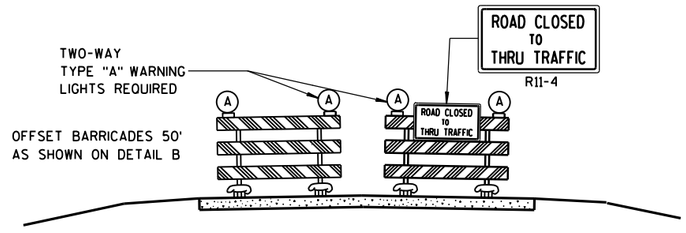
S.D.D. 15 C 2-6a



DETAIL D

ROAD CLOSURE BARRICADE DETAIL

APPROACH VIEW



DETAIL E

LANE CLOSURE BARRICADE DETAIL

APPROACH VIEW

SEE SDD 15C2-SHEET "**a**" FOR LEGEND

GENERAL NOTES

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

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

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

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

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

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

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

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

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

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
- R11-2 SHALL BE 48" X 30".
- R11-3, R11-4 AND R10-61 SHALL BE 60" X 30".
- M4-9 SHALL BE 30" X 24".
- M3-X SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS.)
- M4-8 SHALL BE 24" X 12". (30" X 15" IF NEEDED TO MATCH EXISTING SIGNS.)
- M1-4, M1-5A, AND M1-6 SHALL BE 24" X 24". (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS.)
- M05-1 AND M06-1 SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)
- D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.
- R1-1 SHALL BE 36" X 36".

(1) TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8-FOOT LIGHT SPACING).

(2) THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT INTERSECTION.

(3) FOR ROAD CLOSURE WITHOUT LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL D.

(4) FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT, SEE LANE CLOSURE BARRICADE DETAIL E.

(5) FOR BRIDGE OR CULVERT REPLACEMENTS, SUBSTITUTE "BRIDGE OUT" INSTEAD OF "ROAD CLOSED" ON R11-2 AND R11-3 SIGNS.

(6) INSTALL DETOUR AND COMMUNITY GUIDE SIGNS AND ARROWS ONLY IF SPECIFIED IN THE CONTRACT. IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. MODIFY EXISTING SIGNS WHERE POSSIBLE. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. IF DETOUR SIGNS ARE BEING INSTALLED BY OTHERS, PLACE THE CONTRACTED TRAFFIC CONTROL SIGNS TO ALLOW FOR PLACEMENT OF ALL WARNING, DETOUR AND GUIDE SIGNS AS SHOWN.

(7) "EAST" CARDINAL DIRECTION MARKERS AND RIGHT TURN ARROWS ARE SHOWN. USE OTHER CARDINAL DIRECTIONS AND ARROWS AS APPROPRIATE.

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

Sept. 2015 — DATE
/S/ Peter Amakobe Atepe — STATEWIDE WORK ZO SAFETY ENGI
FHWA — FIC

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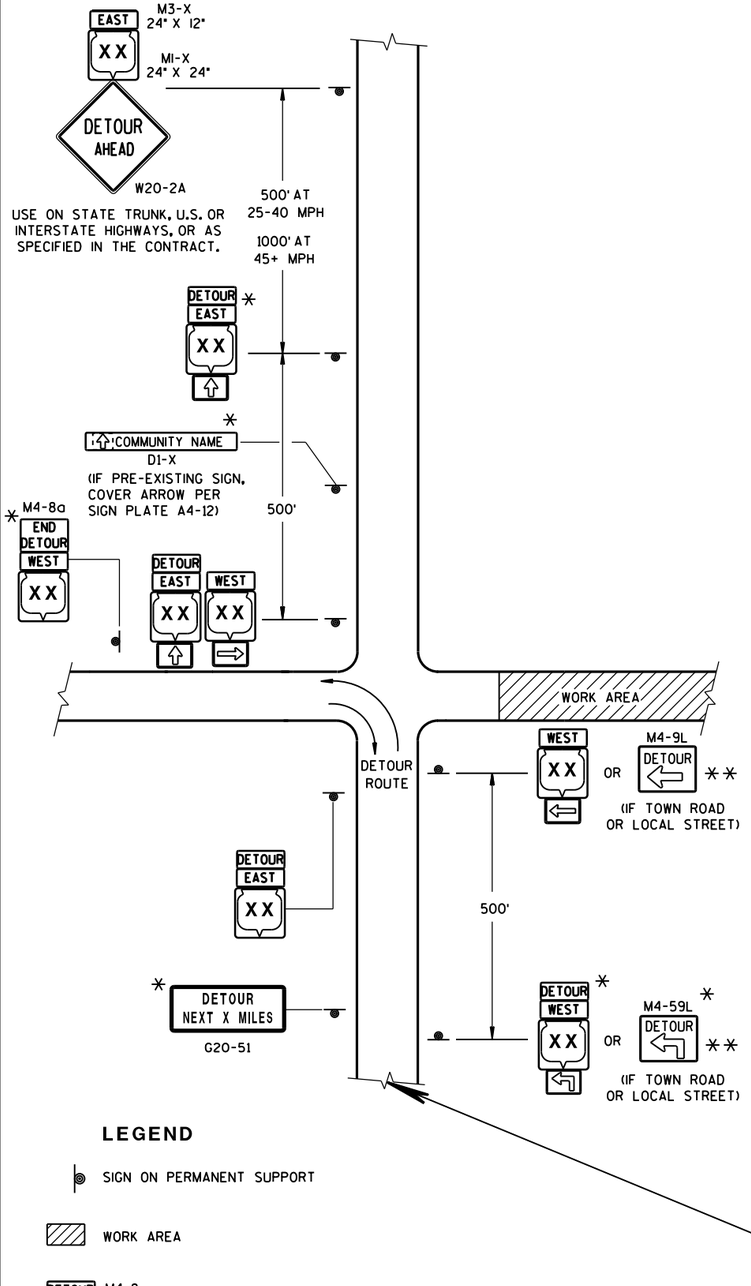
S.D.D. 15 C 2-6b



THIS DRAWING PROVIDES GENERAL GUIDANCE ON TYPICAL DETOUR SIGN LAYOUT AND SPACING. SEE PROJECT DETOUR SIGNING SHEETS FOR SPECIFIC DETAILS FOR EACH PROJECT.

GENERAL NOTES

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

IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. MODIFY EXISTING SIGNS WHERE POSSIBLE.

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

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

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

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

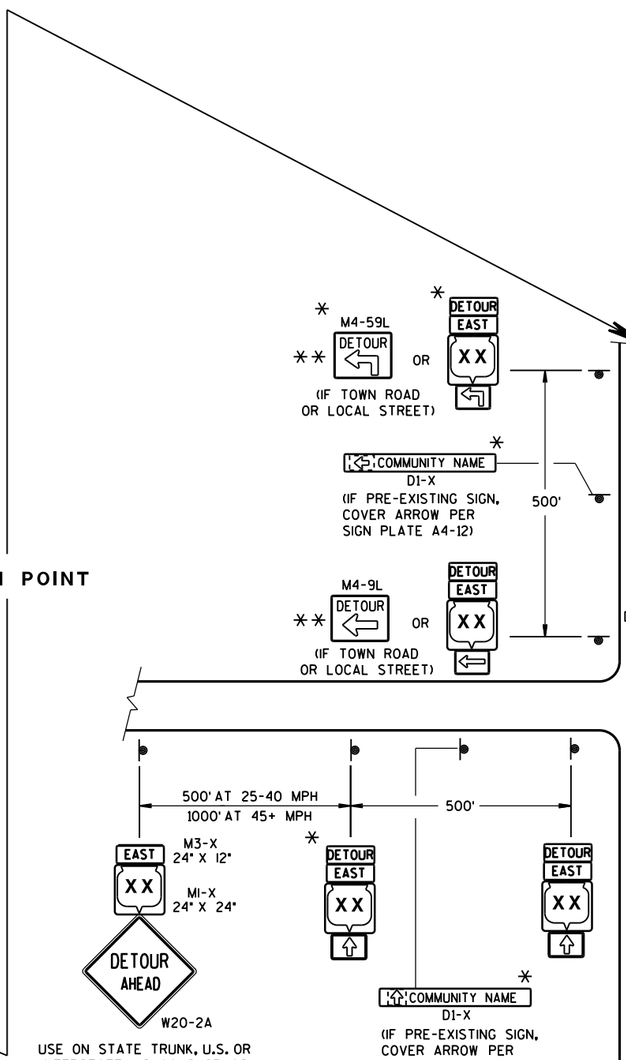
SIGN SIZES SHALL BE AS FOLLOWS:

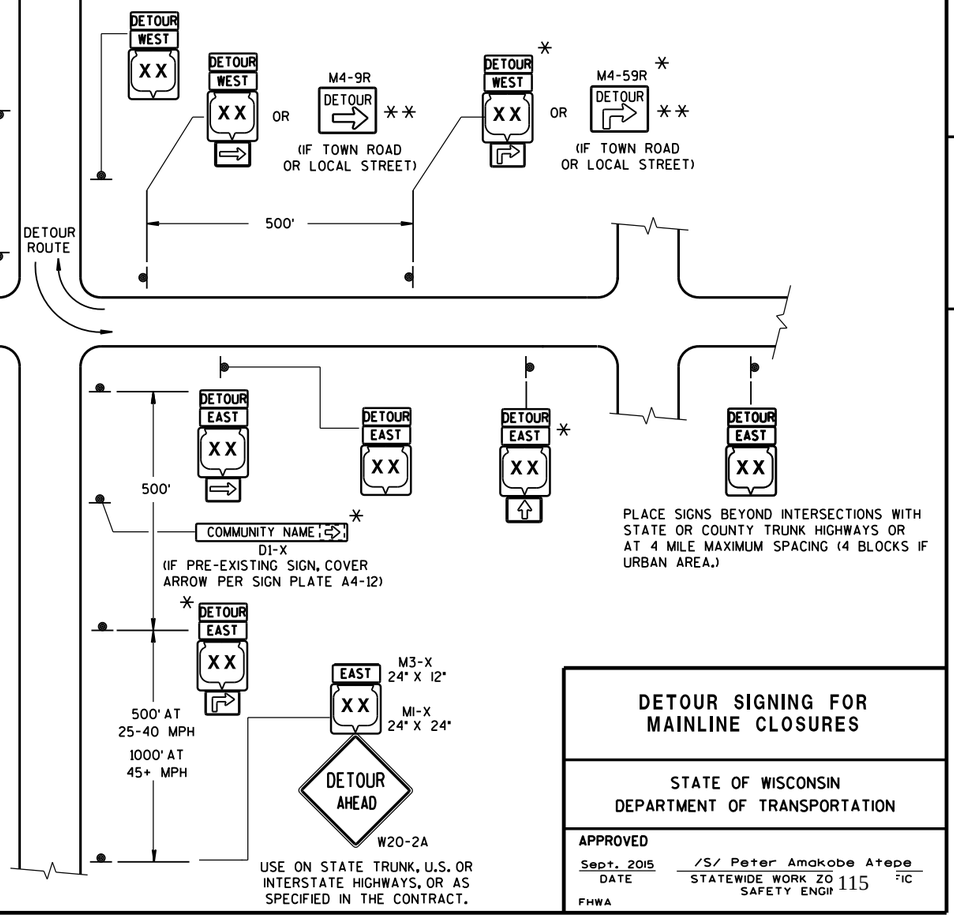
- M3-X SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS.)
- M4-8 SHALL BE 24" X 12". (30" X 15" IF NEEDED TO MATCH EXISTING SIGNS.)
- M1-4, M1-5A, AND M1-6 SHALL BE 24" X 24". (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS.)
- MO5-1 AND MO6-1 SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)
- M4-9 SHALL BE 30" X 24".
- M4-8a SHALL BE 24" X 18".
- G20-51 SHALL BE 60" X 24".
- W20-2 SHALL BE 48" X 48".
- D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.

* OPTIONAL SIGNS. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS.

** FOR A TOWN ROAD OR LOCAL STREET DETOURED ONTO A STATE TRUNK HIGHWAY, PLACE A ROAD NAME PLAQUE ABOVE THE M4-9 SIGN AS SPECIFIED IN THE CONTRACT.

MATCH POINT





LEGEND

- SIGN ON PERMANENT SUPPORT
- WORK AREA
- DETOUR EAST — M4-8 / M3-X
- XX OR COUNTY XX OR XX — M1-4 / M1-5A / M1-6
- MO5-1 OR MO6-1 OR MO6-1

SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS AND DETAIL A OR B ON SDD 15C2-SHEET "a"

DETAIL F

DETOUR SIGNING

DETOUR SIGNING FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

Sept. 2015 — DATE

/S/ Peter Amakobe Atepe
STATEWIDE WORK ZO[illegible] FIC
SAFETY ENGI[illegible]

FHWA

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S.D.D. 15 C 2-6c

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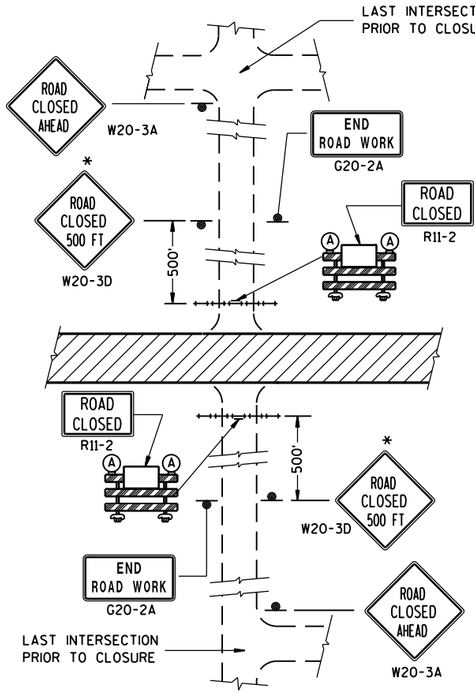
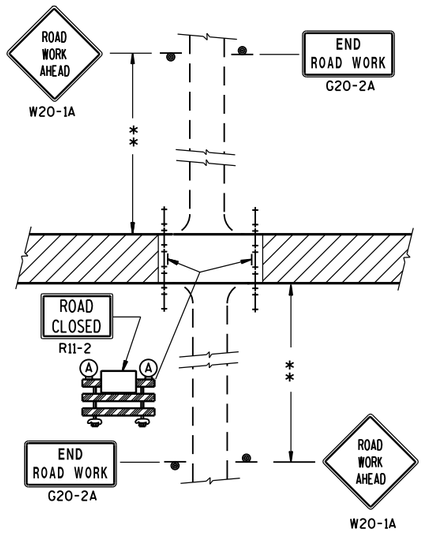
S.D.D. 15 C 2-6c



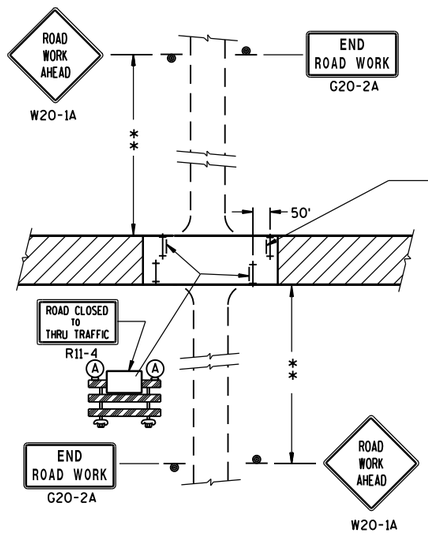
DETAIL 1

(NO ACCESS TO PROJECT)



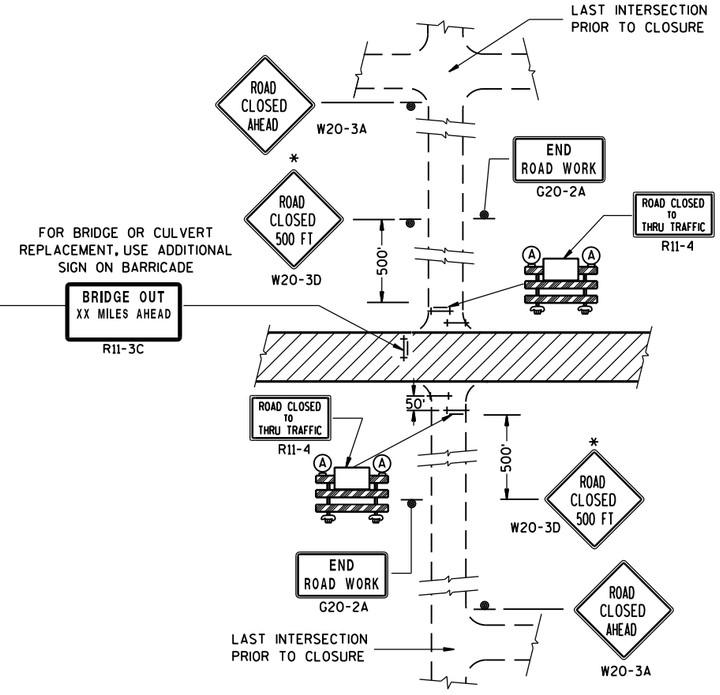
DETAIL 2

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



DETAIL 3

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



DETAIL 4

(CONTRACTOR, LOCAL BUSINESS AND RESIDENT ACCESS TO PROJECT)

GENERAL NOTES

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

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

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

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

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

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

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

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

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

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
R11-2 SHALL BE 48" X 30".
R11-4 AND R11-3 SHALL BE 60" X 30".

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

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

LEGEND

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

BARRICADES AND SIGNS FOR SIDEROAD CLOSURES

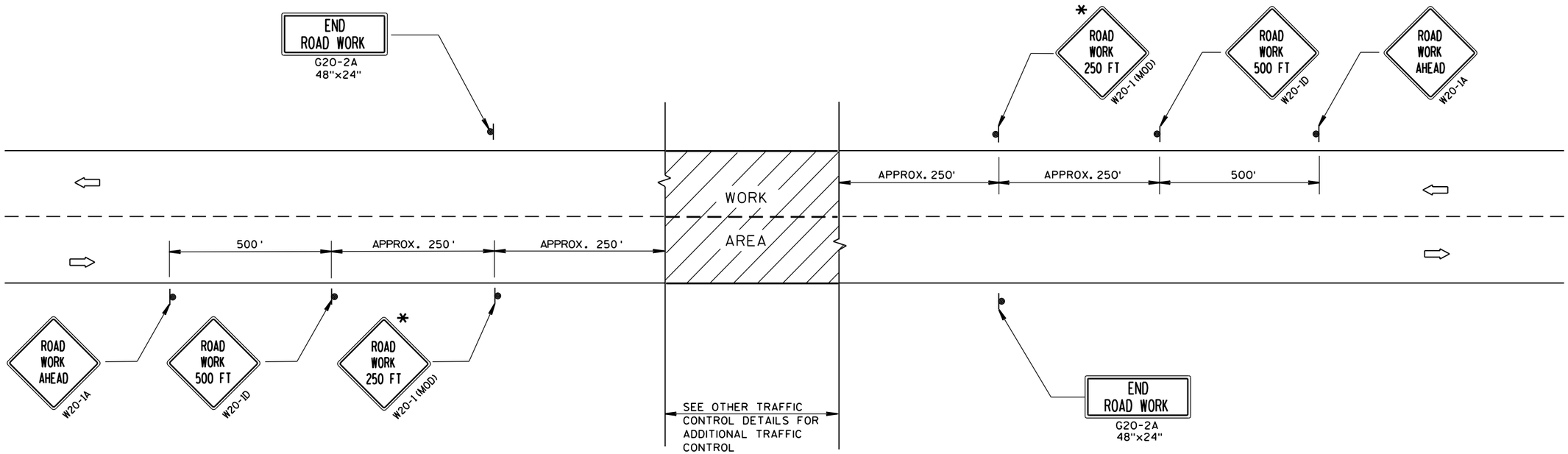
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2017 — DATE
/S/ Andrew Heldtke — WORK ZONE ENG
FHWA

6

S.D.D. 15 C 3-4

TYPICAL SIDEROAD APPROACH WARNING SIGN DETAIL



GENERAL NOTES

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

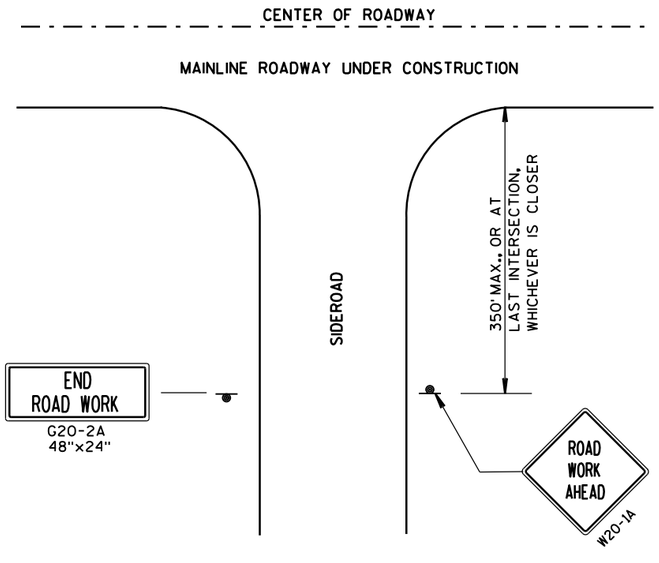
THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS, 36"x36" SIGNS MAY BE USED INSTEAD OF 48"x48" SIGNS.

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

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

* THE THIRD W20-1 SIGN IS REQUIRED ONLY IF THERE IS AN INTERSECTION BETWEEN THE "ROAD WORK 500 FT" SIGN AND THE WORK ZONE. ADJUST THE PLACEMENT OF THIS SIGN BASED ON INTERSECTION LOCATION AND OTHER FIELD CONDITIONS.



LEGEND

- SIGN ON PERMANENT SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA

TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

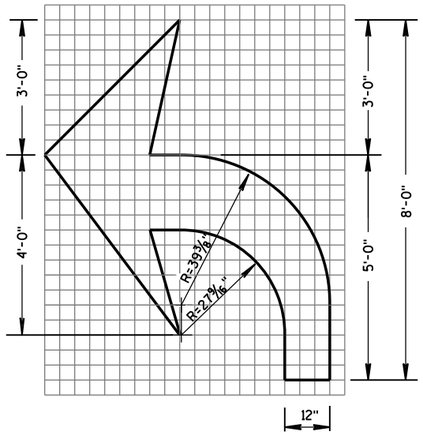
APPROVED
Sept. 2017 — DATE
/S/ Andrew Heldtke — WORK ZONE ENG
FHWA

6

S.D.D. 15 C 5-4

GENERAL NOTES

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



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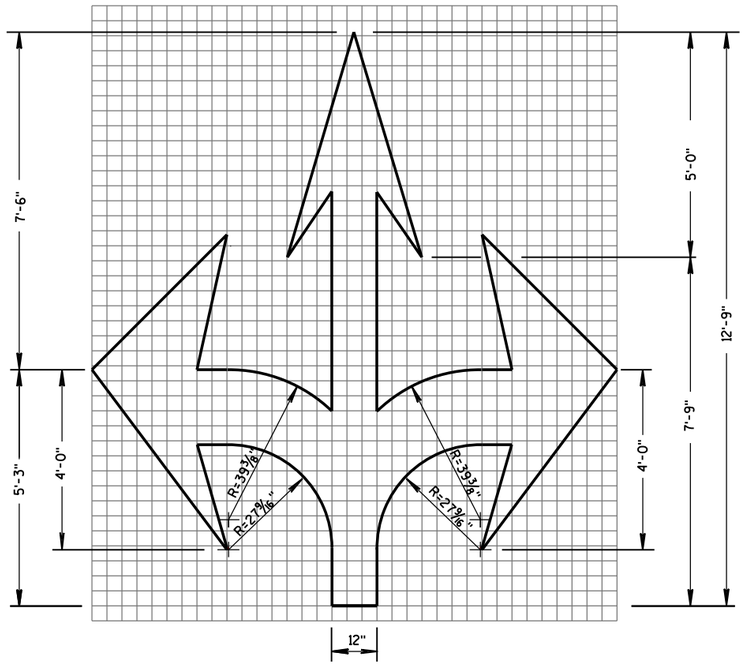

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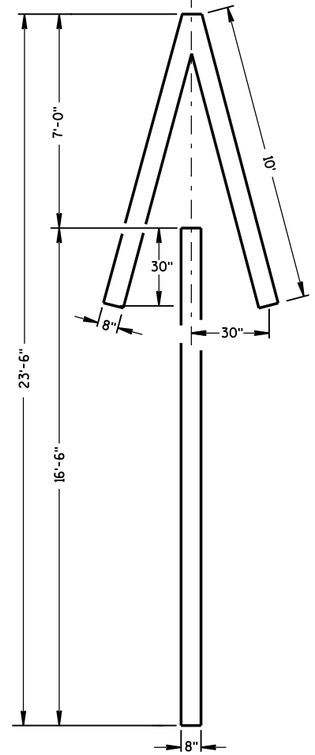

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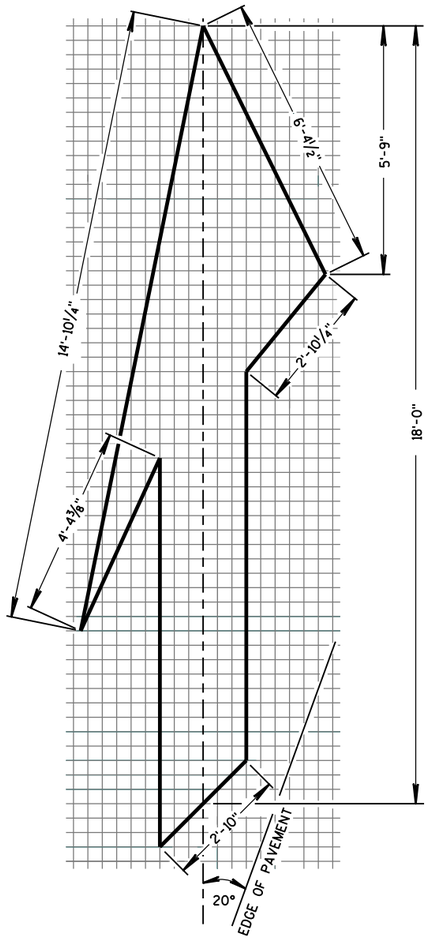
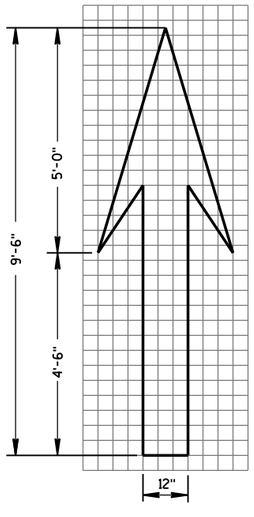
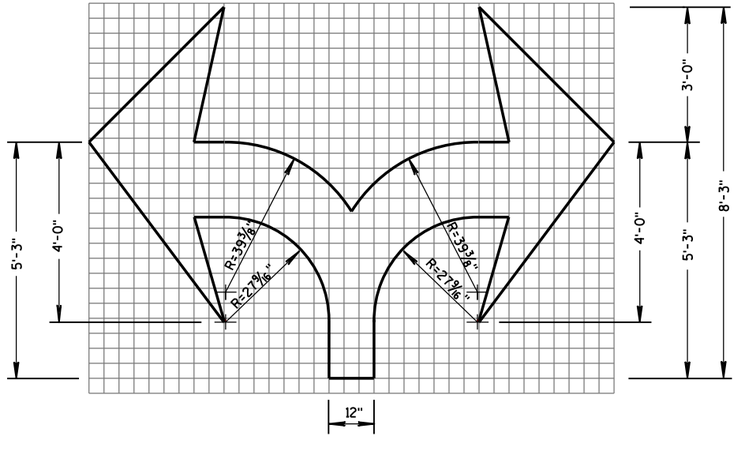


TYPE 5 LANE DROP ARROW



TYPE 1



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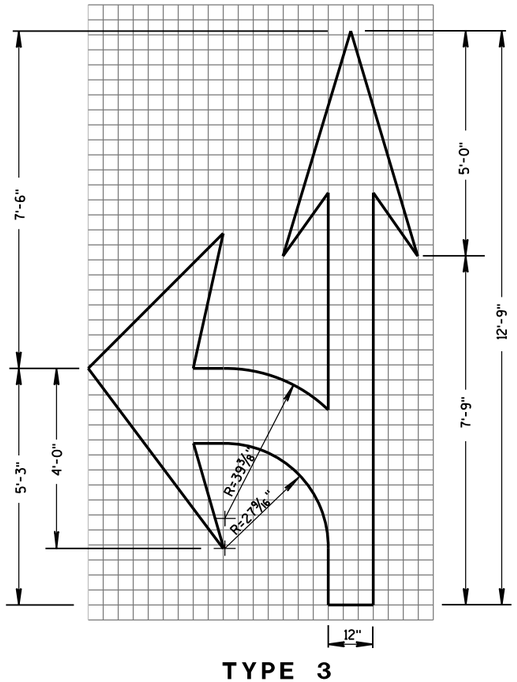

TYPE 3

PAVEMENT MARKING ARROWS

STATE OF WISCONSIN
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S.D.D. 15 C 7-14c

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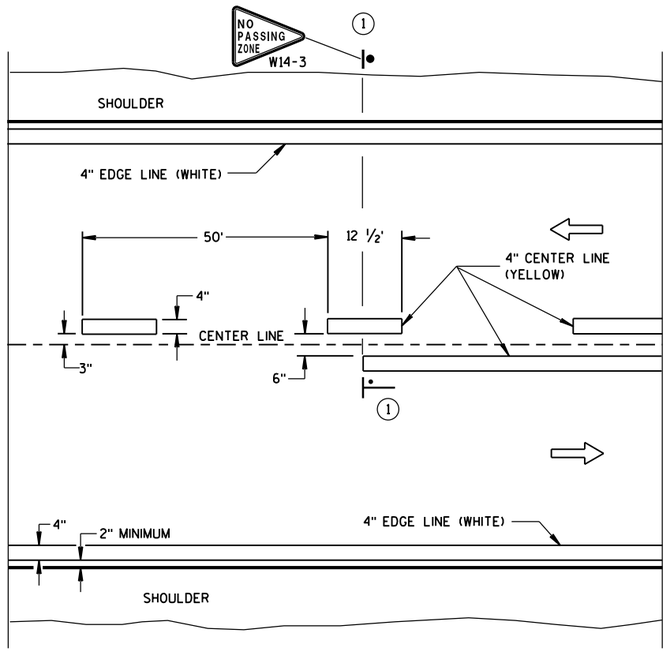
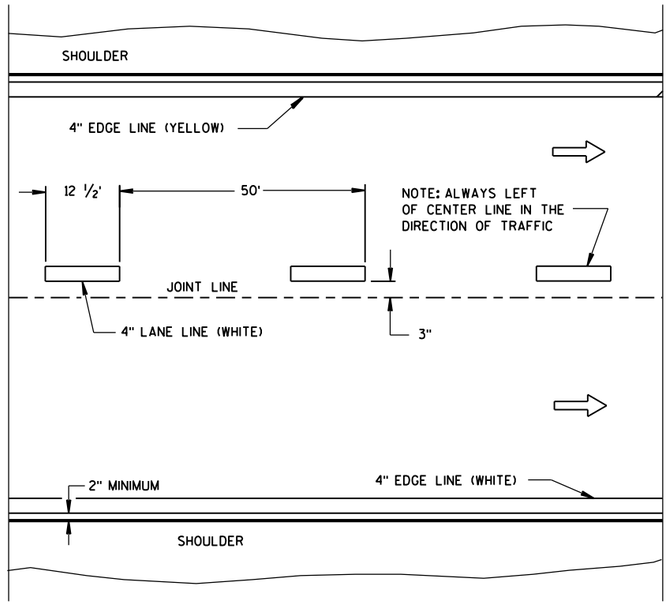
S.D.D. 15 C 7-14c



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

GENERAL NOTES

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

(1) LOCATE THE NO PASSING ZONE W14-3 SIGN WITHIN 50 FEET OF THE "T" MARKING.

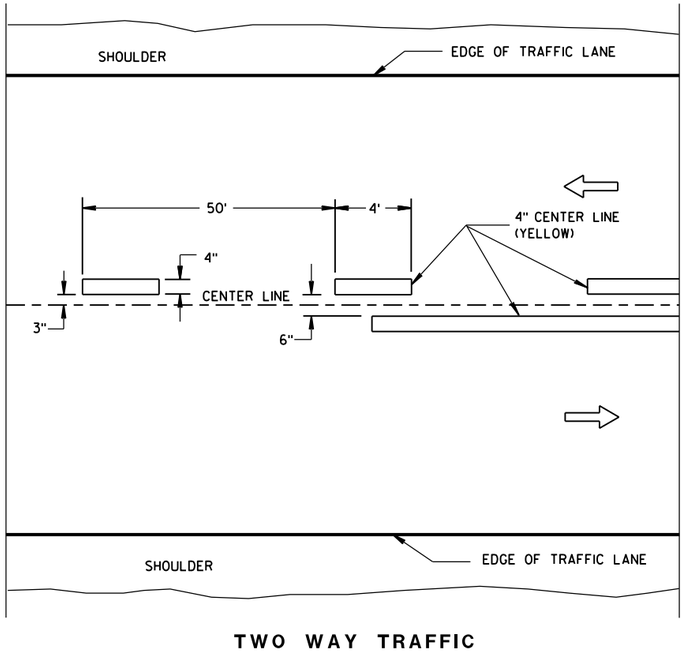
NOTE

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL

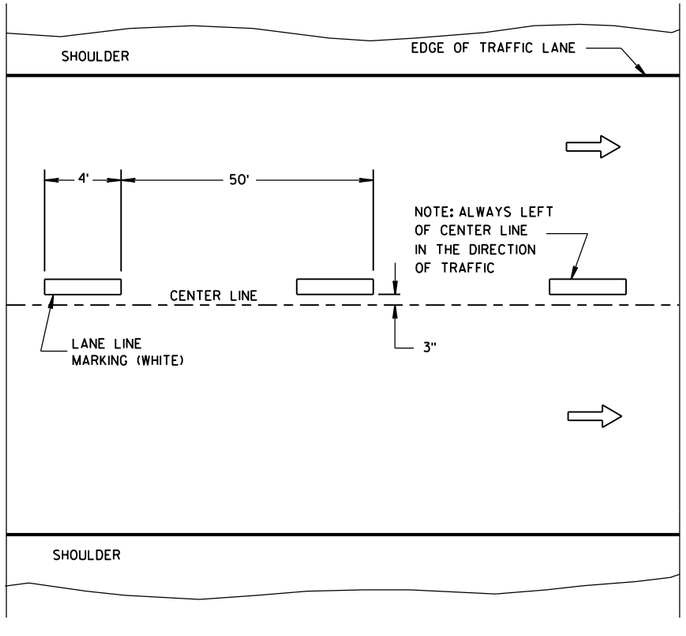
LEGEND

"T" MARKING

POST MOUNTED SIGN



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

LONGITUDINAL MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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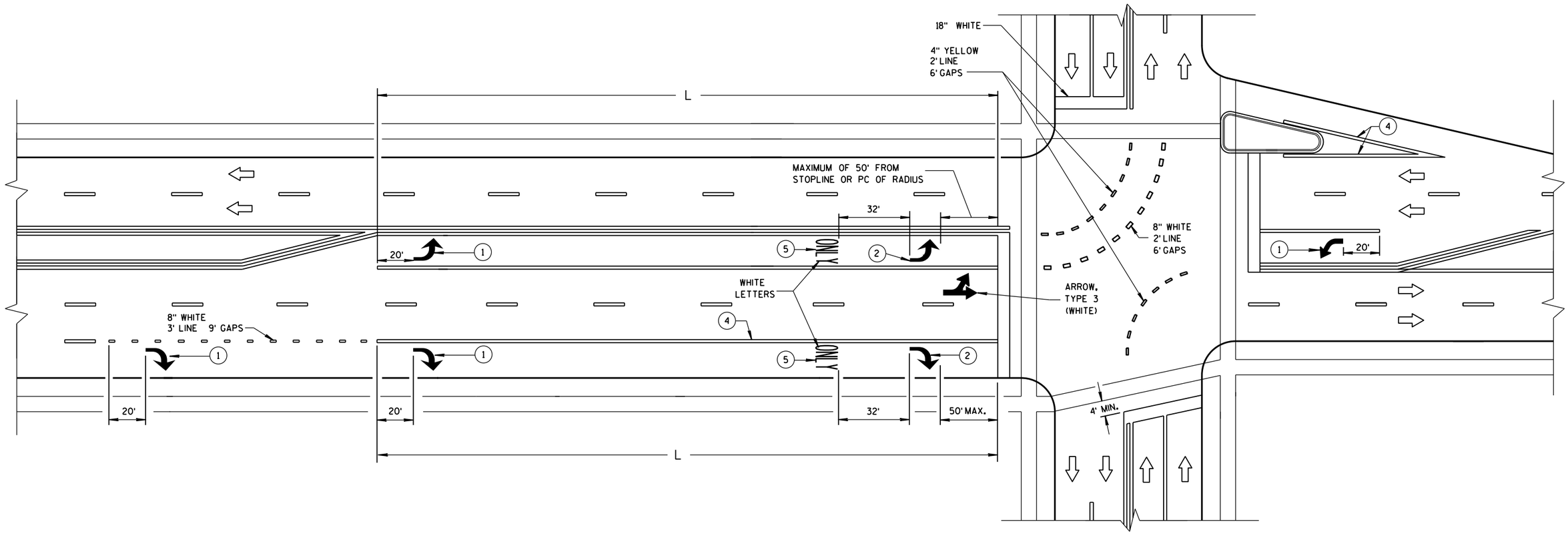
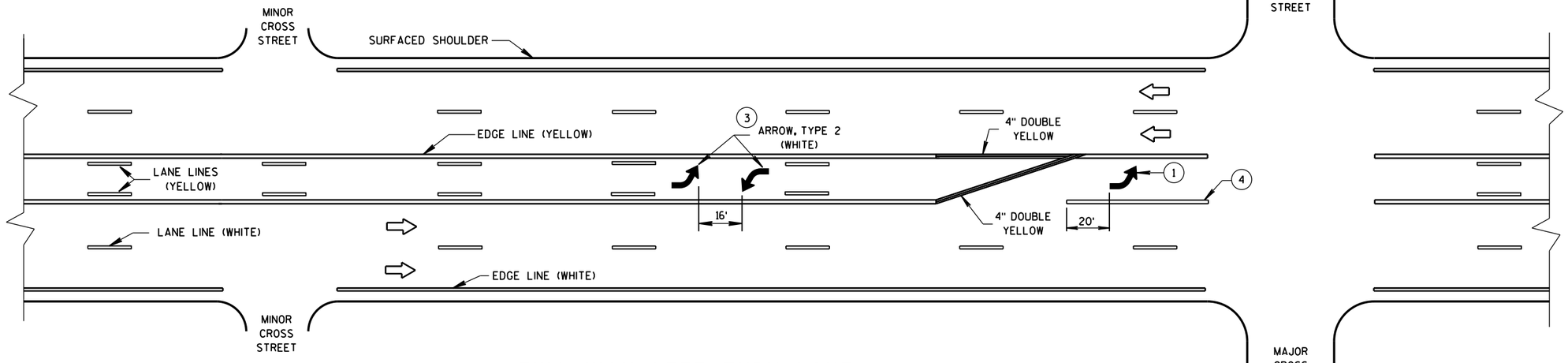
S.D.D. 15 C 8-18a





TWO WAY LEFT TURN LANE

GENERAL NOTES

(1) REQUIRED ARROW, TYPE 2 (WHITE).

(2) REQUIRED ARROW, TYPE 2 (WHITE) WHEN L IS GREATER THAN 78 FEET AND LESS THAN OR EQUAL TO 166 FEET.

(3) A SET OF ARROWS IS REQUIRED EVERY 400 FEET OR NEAR INTERSECTIONS OR DRIVEWAYS WITH TURNING TRAFFIC.

(4) 8" WHITE

(5) REQUIRED WORD ONLY WHEN L IS GREATER THAN 166 FEET.

NOTE:
ARROW SYMBOL (⇨)
SHOWS DIRECTION OF TRAVEL

L = LENGTH OF TURN BAY

PAVEMENT MARKING (TURN LANES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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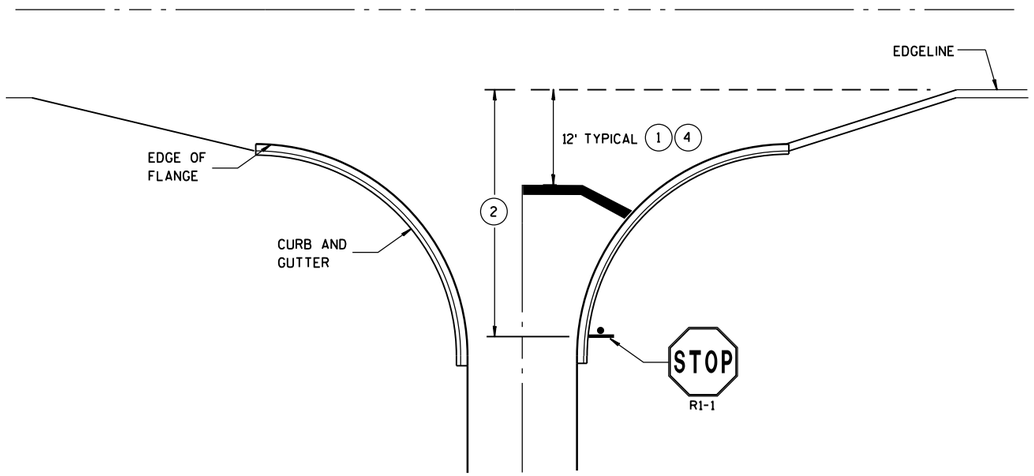
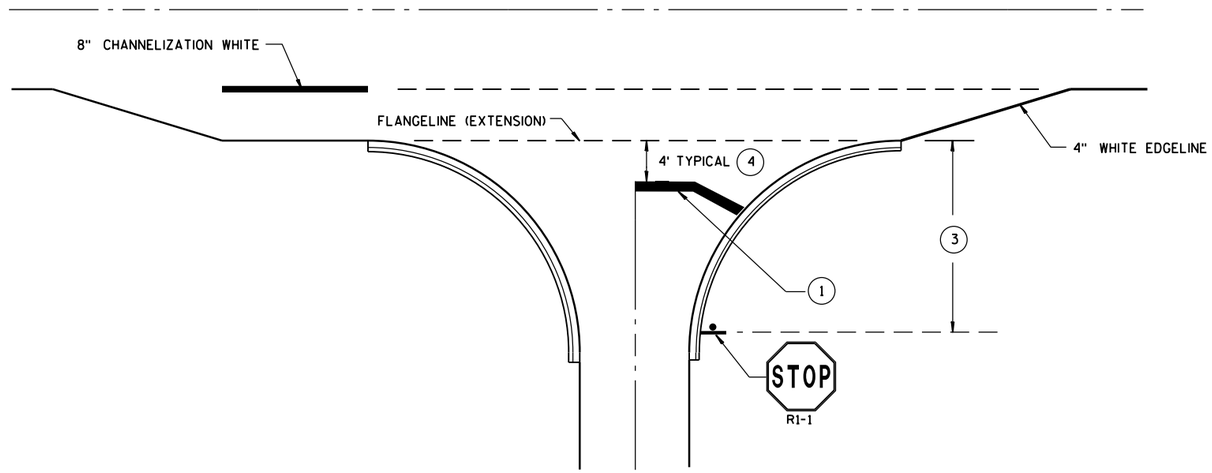
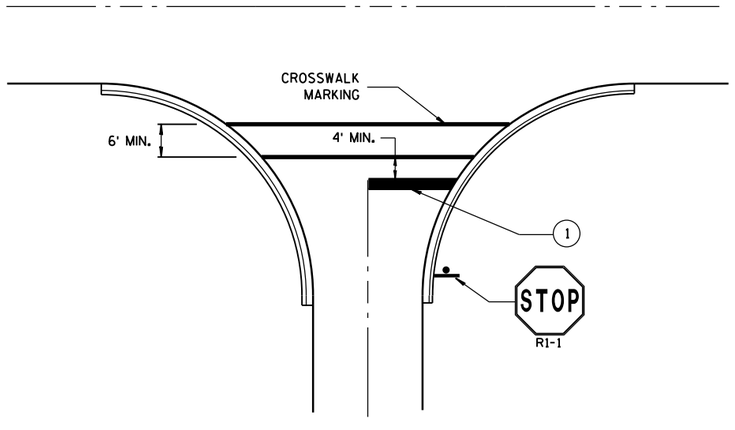
S.D.D. 15 C 8-18b



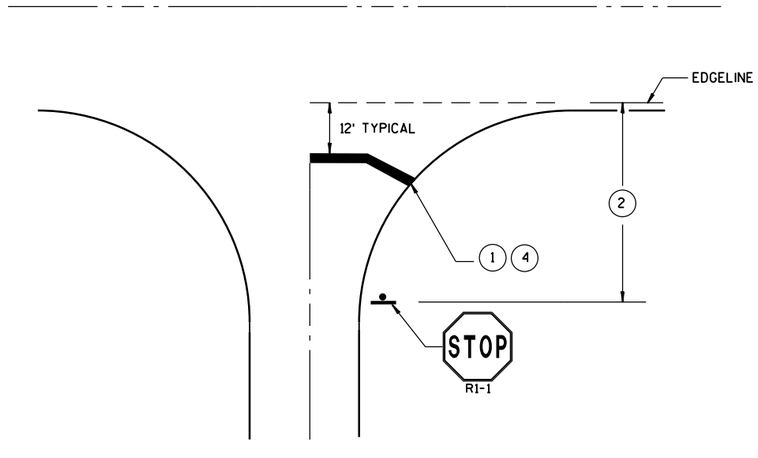
TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER



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

STOP SIGN SHALL BE PLACED A MINIMUM OF 6 FEET TO A MAXIMUM OF 50 FEET FROM THE EDGELINE LOCATION.

(1) 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE PROJECT ENGINEER BASED ON VISIBILITY AND SIGHT LINES.

(2) IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGELINE THAN NO STOP LINE IS REQUIRED.

(3) IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGELINE EXTENSION THAN NO STOP LINE IS REQUIRED.

(4) MOVE CLOSER TO EDGE OF TRAVEL LANE AS NEEDED FOR VISIBILITY AND SIGHT LINES. (NO CLOSER THAN 4 FEET).

STOP LINE AND CROSSWALK PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

Sept., 2017 — DATE

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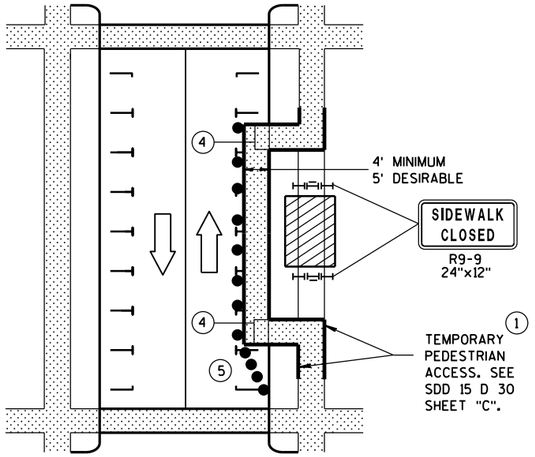
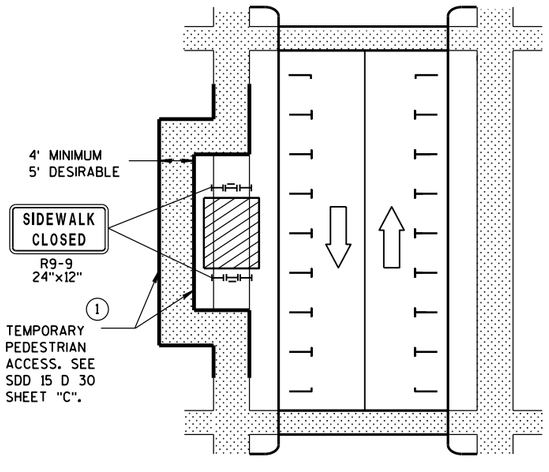
NOTE: MAY BE USED ON ROADWAY WITH POSTED SPEED OF LESS THAN 40 MPH.

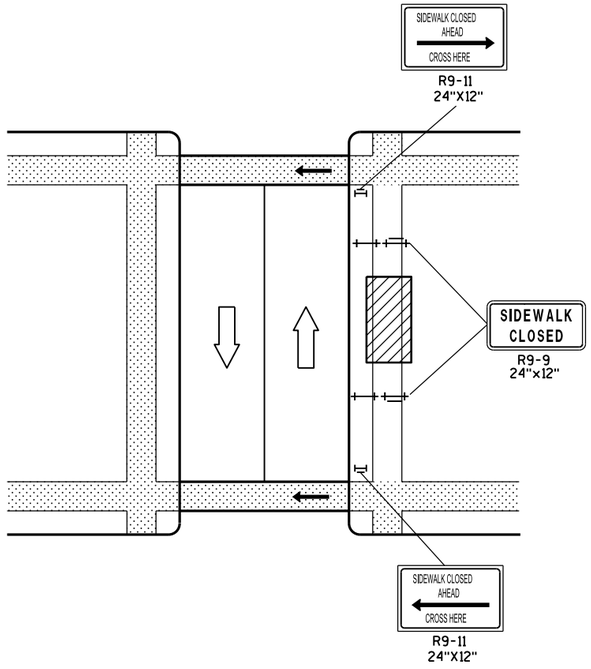


MID-BLOCK SIDEWALK CLOSURE IN PARKING LANE

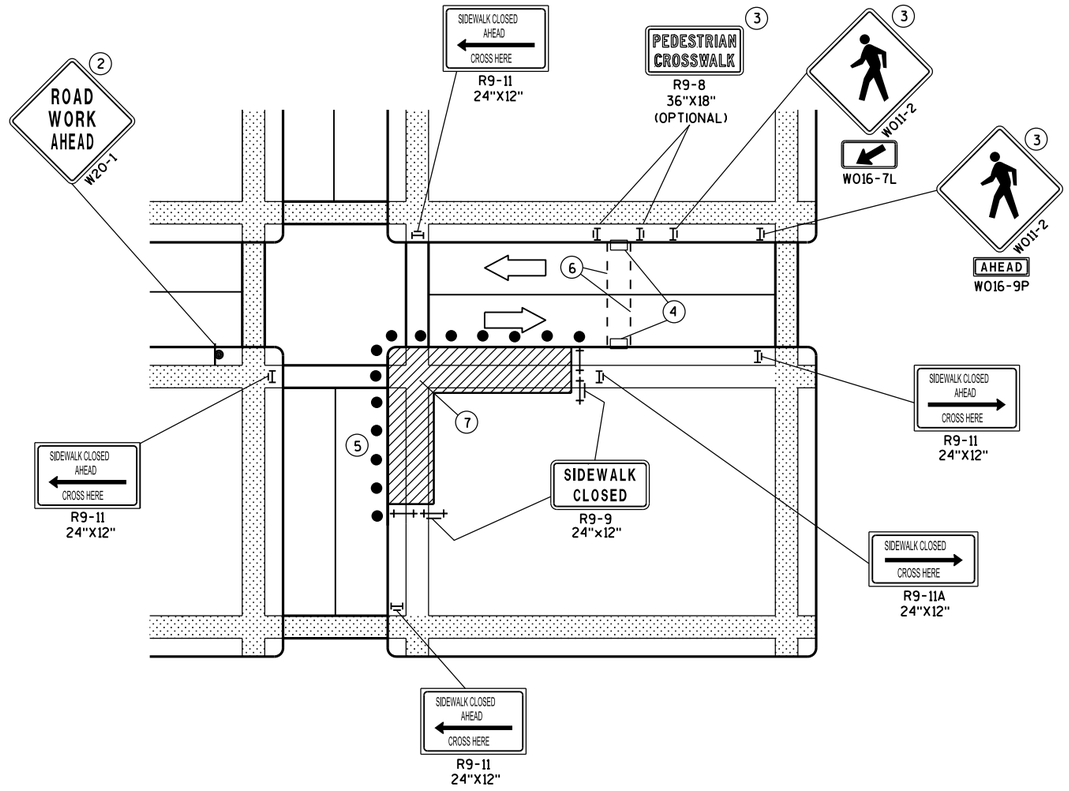
NOTE: LAYOUT SAME AS ABOVE.



SIDEWALK DIVERSION



MID-BLOCK SIDEWALK CLOSURE



CORNER SIDEWALK CLOSURE WITH TEMPORARY CROSSWALK

GENERAL NOTES

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

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

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

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

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

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

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

(1) IF SIDEWALK CLOSURE AFFECTS AN ACCESSIBLE AND DETECTABLE FACILITY, MAINTAIN ACCESSIBILITY AND DETECTABILITY ALONG THE ALTERNATE PEDESTRIAN ROUTE.

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

(3) IF TEMPORARY PEDESTRIAN CROSSWALK IS NOT PROVIDED, OMIT R9-8 AND W011-2 SIGN ASSEMBLIES. IF PROVIDED INCLUDE ON BOTH SIDES OF THE CROSSWALK.

(4) TEMPORARY CURB RAMPS. SEE SDD 15 D 30 SHEET "B".

(5) DRUMS OR BARRICADES AT 25 FOOT SPACING. STREET PARKING SHALL BE PROHIBITED FOR AT LEAST 50 FEET IN ADVANCE OF THE MID-BLOCK CROSSWALK.

(6) TEMPORARY PAVEMENT MARKING FOR CROSSWALK LINES.

(7) LIMIT WORK TO ONE QUADRANT AT A TIME TO MINIMIZE PEDESTRIAN DISRUPTION.

LEGEND

- SIGN ON PERMANENT SUPPORT
- UNDER PEDESTRIAN TRAFFIC
- WORK AREA
- PEDESTRIAN CHANNELIZATION DEVICE
- TYPE II BARRICADE WITH/WITHOUT SIGN (ALL WITH ONE WARNING LIGHT, TYPE A, LOW-INTENSITY FLASHING)
- TYPE III BARRICADE WITH/WITHOUT SIGN (ALL WITH ONE WARNING LIGHT, TYPE A, LOW-INTENSITY FLASHING)
- DIRECTION OF TRAFFIC
- TRAFFIC CONTOL DRUM

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

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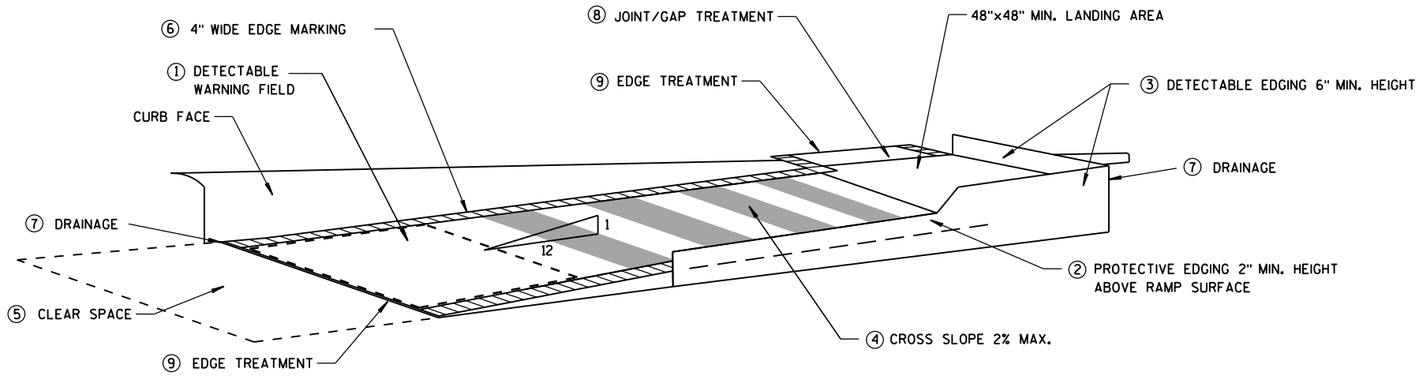
S.D.D. 15 D 30-3a



TEMPORARY CURB RAMP PARALLEL TO CURB

GENERAL NOTES

NOTIFY THE BUS COMPANY 7 DAYS IN ADVANCE OF THE BUS STOP RELOCATION.

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

① CURB RAMPS SHALL BE 48" MIN. WIDTH WITH A FIRM, STABLE AND SLIP RESISTANT SURFACE. INSTALL CONTRASTING DETECTABLE WARNING FIELD AT PEDESTRIAN STREET CROSSINGS. REFER TO SDD 8D5 SHEET "E".

② PROTECTIVE EDGING WITH A 2" MIN. HEIGHT SHALL BE INSTALLED WHEN A CURB RAMP OR LANDING PLATFORM HAS A VERTICAL DROP OF 6" OR GREATER OR HAS A SIDE APRON SLOPE STEEPER THAN 1:3 (33%). PROTECTIVE EDGING SHOULD BE CONSIDERED WHEN CURB RAMPS OR LANDING PLATFORMS HAVE A VERTICAL DROP OF 3" OR MORE.

③ DETECTABLE EDGING WITH 6" MIN. HEIGHT AND CONTRASTING COLOR SHALL BE INSTALLED ON ALL CURB RAMP LANDINGS WHERE THE WALKWAY CHANGES DIRECTION (TURNS).

④ CURB RAMPS AND LANDINGS SHALL HAVE A 1:50 (2%) MAX. CROSS-SLOPE.

⑤ CLEAR SPACE OF 48"X48" MIN. SHALL BE PROVIDED ABOVE AND BELOW THE CURB RAMP.

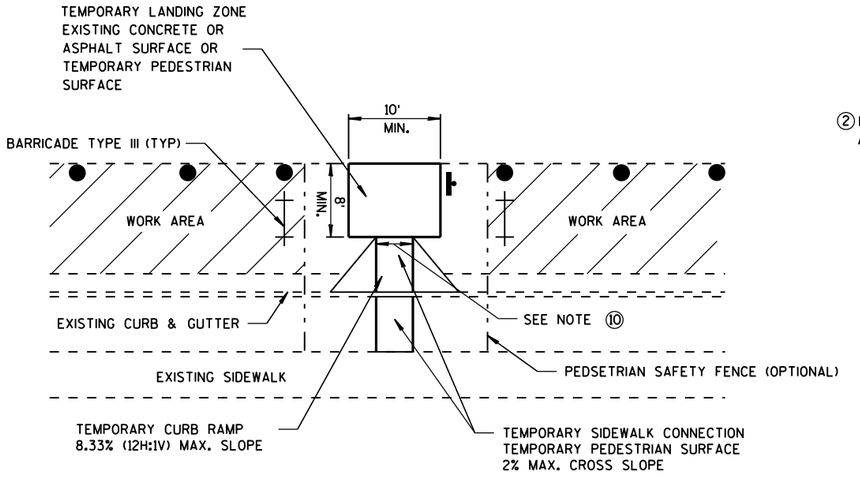
⑥ THE CURB RAMP WALKWAY EDGE SHALL BE MARKED WITH A YELLOW COLOR, 4" WIDE MARKING, UNLESS A CONTRASTING DETECTABLE WARNING FIELD IS PROVIDED.

⑦ DO NOT RESTRICT WATER FLOW IN THE GUTTER SYSTEM.

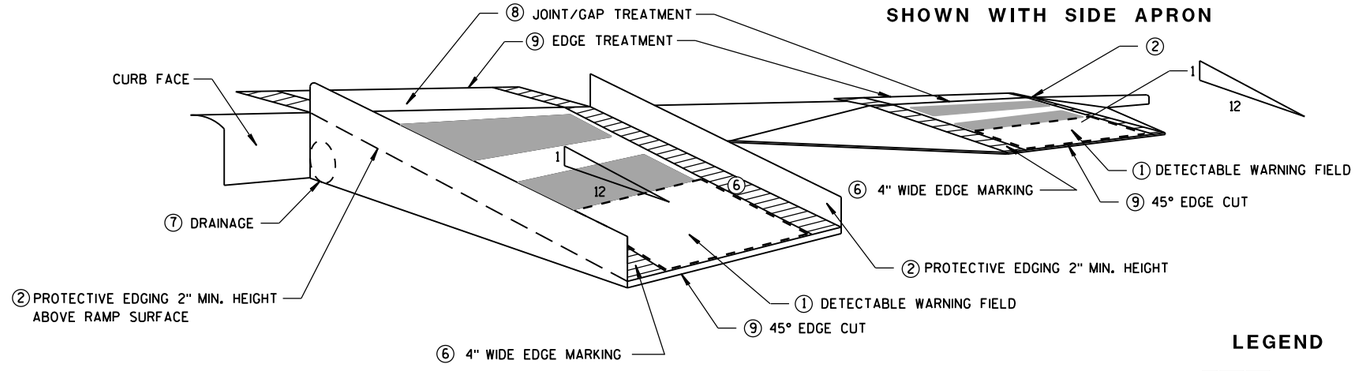
⑧ LATERAL JOINTS OR GAPS BETWEEN SURFACES SHALL BE LESS THAN 1/2" WIDTH.

⑨ CHANGES BETWEEN SURFACE HEIGHTS SHALL NOT EXCEED 1/2". LATERAL EDGES SHALL BE VERTICAL UP TO 1/4" HIGH, AND BEVELED AT 1:2 BETWEEN 1/4" AND 1/2".

⑩ 5' WIDE MIN. WITH PEDSETRIAN SAFETY FENCE, 10' WIDE MIN. WITHOUT PEDESTRIAN SAFETY FENCE.



TEMPORARY BUS STOP PAD



SHOWN WITH PROTECTIVE EDGE

TEMPORARY CURB RAMP PERPENDICULAR TO CURB

LEGEND

WORK AREA

TYPE III BARRICADE

TRAFFIC CONTOL DRUM

TRAFFIC CONTROL, TEMPORARY ADA COMPLIANT PEDESTRIAN ACCOMMODATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

June 2016 — DATE

/S/ Peter Amakobe Atepe — STATEWIDE WORK ZO SAFETY ENGI IC

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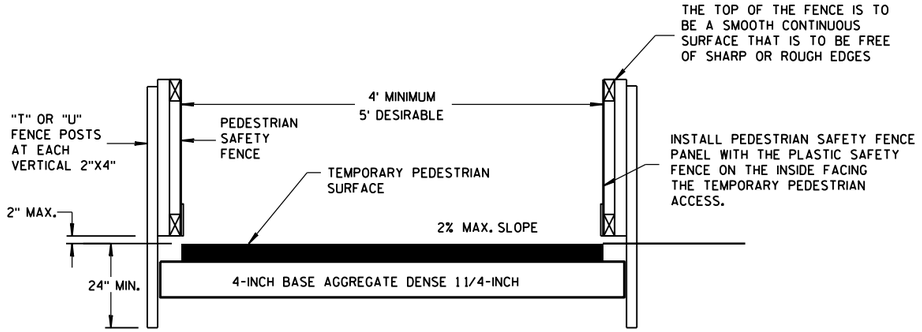
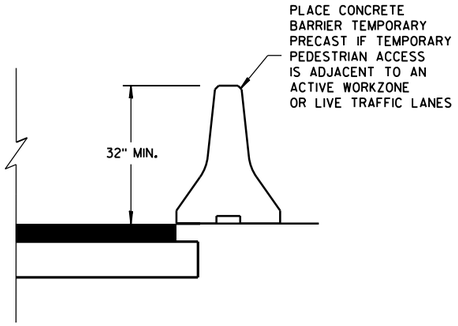
S.D.D. 15 D 30-3b

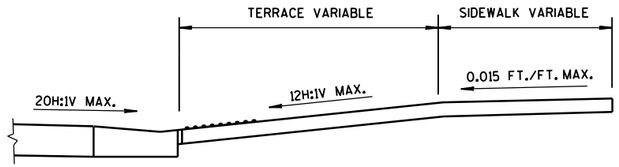




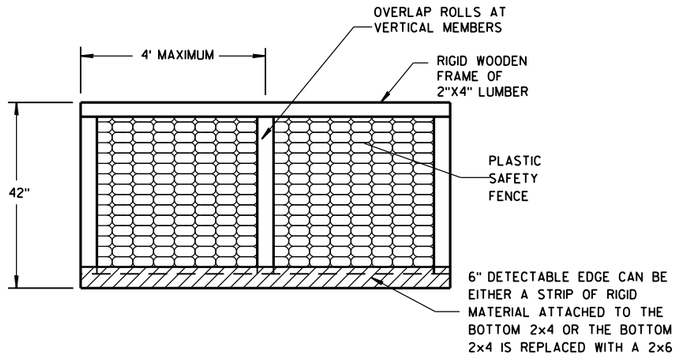
TEMPORARY PEDESTRIAN ACCESS

GENERAL NOTES

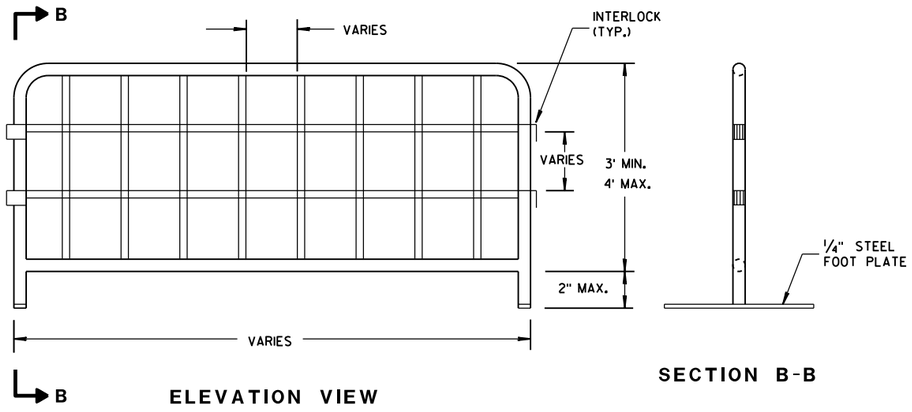
(1) INTERCHANGEABLE WITH THE PEDESTRIAN SAFETY FENCE.



SECTION A-A



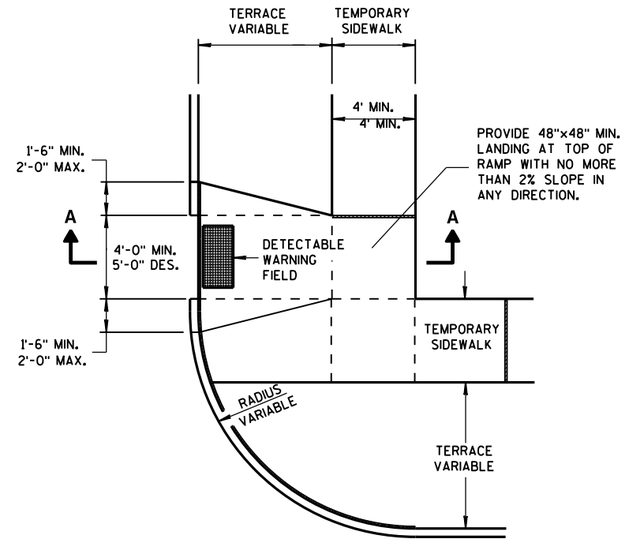
PEDESTRIAN SAFETY FENCE



ELEVATION VIEW

SECTION B-B

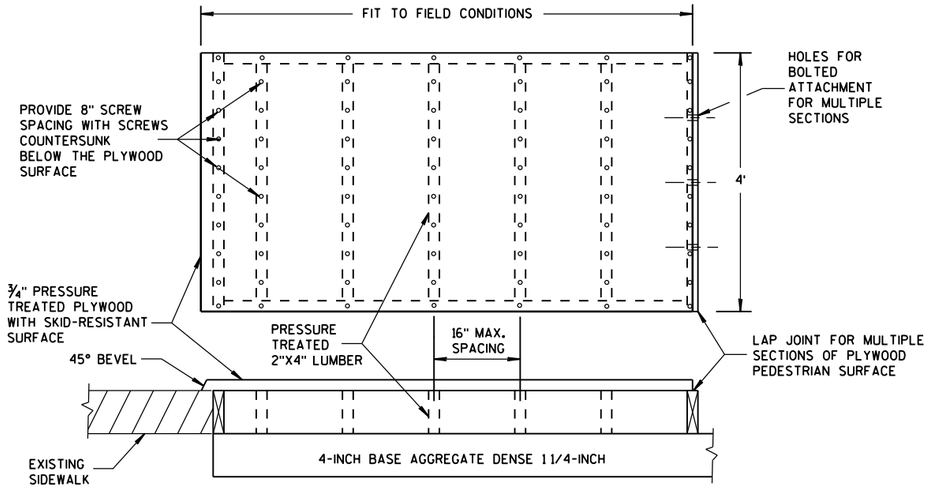
TEMPORARY PEDESTRIAN STEEL BARRICADE (1)



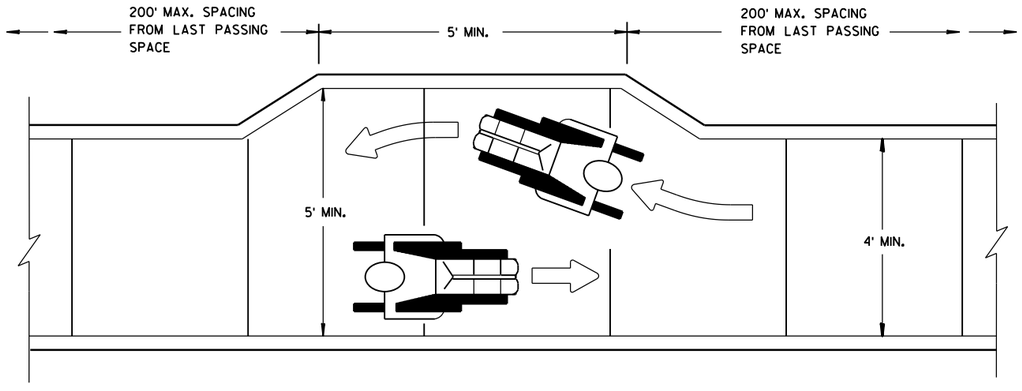
PLAN VIEW

TEMPORARY TYPE 3 RAMP

(OUTSIDE OF CROSSWALK AREA)



TEMPORARY PEDESTRIAN SURFACE PLYWOOD



NARROW SIDEWALK PASSING DETAIL

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2016
DATE
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZON SAFETY ENGIN IC
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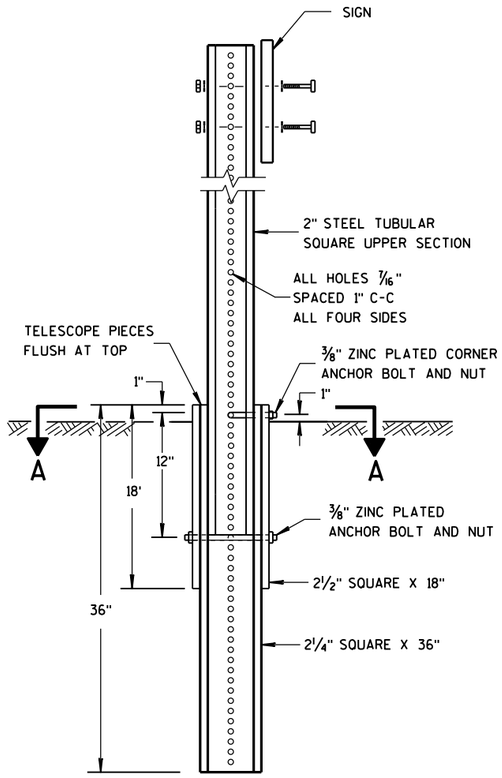
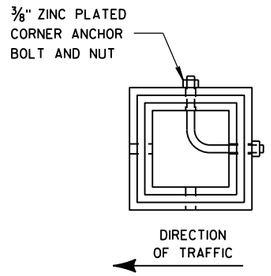
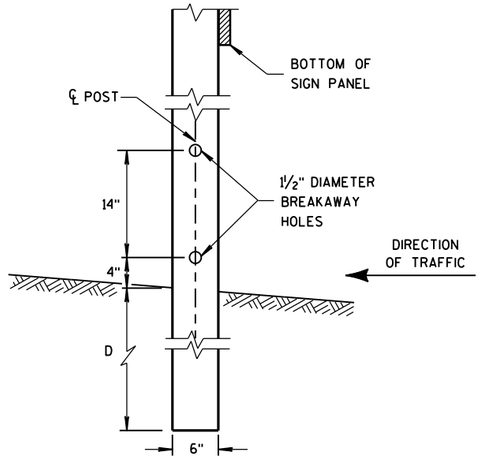


DETAIL OF TUBULAR STEEL SIGN POST



SECTION A-A



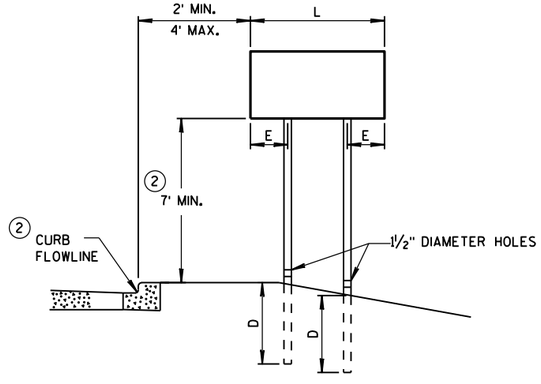
4"x6" WOOD POST MODIFICATION

GENERAL NOTES

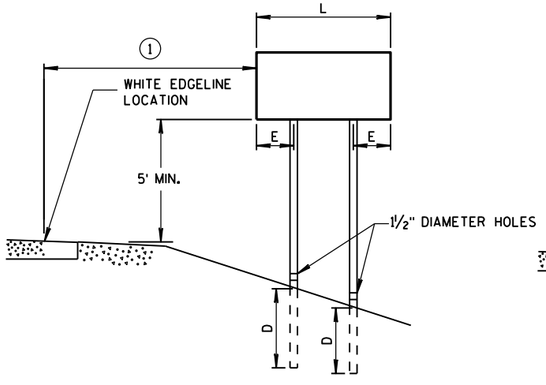
(1) 6 FEET FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER. LATERAL OFFSET SHOULD BE ADJUSTED TO AVOID THE DITCH FLOWLINE.

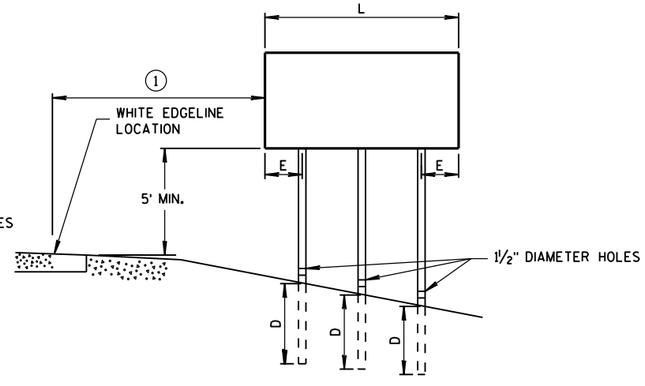
(2) THE EXISTENCE OF CURB AND GUTTER DOES NOT IN ITSELF MANDATE THE VERTICAL CLEARANCE ILLUSTRATED. THAT HEIGHT IS TYPICALLY MEASURED WHERE THERE IS SIDEWALK ADJACENT TO THE ROADWAY OR PARKING IS PERMITTED. IN THE ABSENCE OF SIDEWALK, VERTICAL CLEARANCE IS MEASURED FROM THE TOP OF THE CURB. IF NO SIDEWALK AND NO PARKING, VERTICAL CLEARANCE MAY BE REDUCED TO 5 FOOT MINIMUM. OFFSET OF SIGNS IS MEASURED FROM THE CURB FLOWLINE.

(3) FOR SIGNS REQUIRING 4 POSTS, SPACE INTERMEDIATE POSTS EVENLY.



URBAN AREA





RURAL AREA

POST MOUNTING DETAIL FOR TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

TUBULAR STEEL POSTS

AREA OF SIGN INSTALLATION (SQ. FT.)	NUMBER OF REQUIRED TUBULAR STEEL POSTS
9 OR LESS	1
GREATER THAN 9 LESS THAN OR EQUAL TO 18	2
GREATER THAN 18 LESS THAN OR EQUAL TO 27	3

SIGNS WIDER THAN 3 FEET OR LARGER THAN 9 SQ. FT. SHALL BE MOUNTED ON MULTIPLE POSTS (SEE ABOVE TABLE).

SIGNS LARGER THAN 27 SQ. FT. SHALL NOT BE MOUNTED ON TUBULAR STEEL POSTS.

WOOD POST EMBEDMENT DEPTH

AREA OF SIGN INSTALLATION (SQ. FT.)	D (MIN)
20 OR LESS	4'
GREATER THAN 20	5'

4" X 6" WOOD POST

POST SPACING REQUIREMENTS		NUMBER OF WOOD POSTS REQUIRED
L	E	
48" OR LESS AND LESS THAN 20 SQ. FT.	-	1
LESS THAN 60"	12"	2
60" TO 120"	L/5	2
GREATER THAN 120" LESS THAN 168"	12"	3
168" AND GREATER	12"	4

SEE NOTE (3)

TEMPORARY TRAFFIC CONTROL SIGN MOUNTING

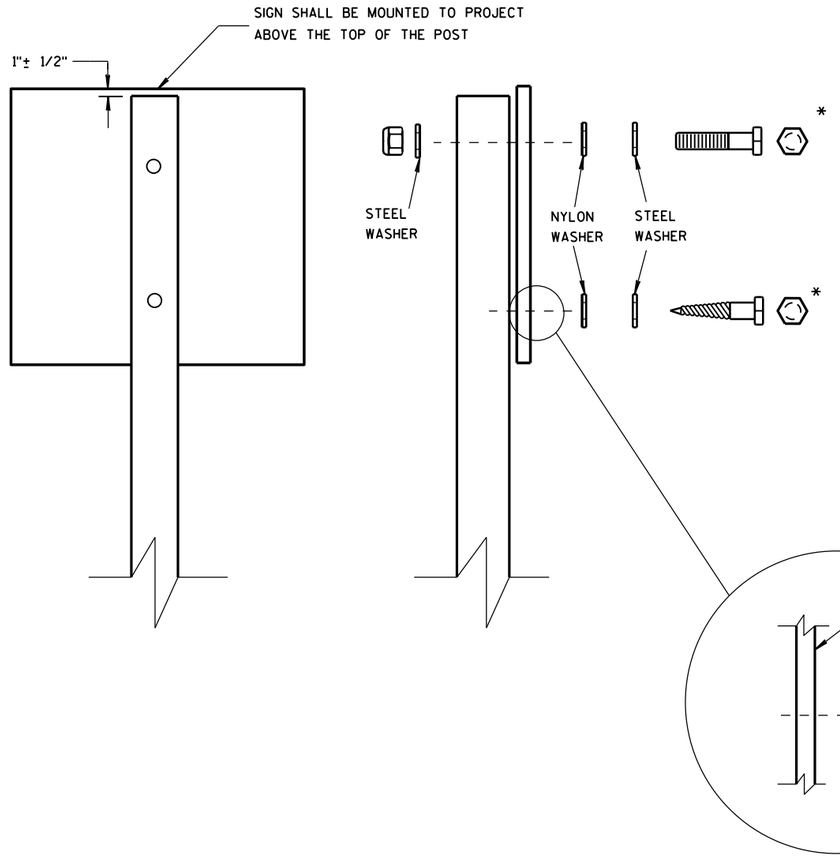
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 15 D 38-2a

6

S.D.D. 15 D 38-2a



WASHER PLACEMENT WHEN SIGN HAS OTHER THAN TYPE H OR TYPE F FACE

NUTS, BOLTS AND LAGS USED FOR MOUNTING SIGNS SHALL HAVE HEXAGONAL HEADS AND SHALL BE EITHER:

A. HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: A 153, CLASS D, OR SC 3

B. ELECTRO-GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: B 633, TYPE III, SC 3

THREADS ON BOLTS AND NUTS SHALL BE MANUFACTURED WITH SUFFICIENT ALLOWANCE FOR THE CADMIUM PLATE OR GALVANIZED COATING TO PERMIT THE NUTS TO RUN FREELY ON THE BOLTS.

WOOD POSTS (4" x 4" or 4" x 6")

LAG SCREWS - 3/8" X 3"

MACHINE BOLTS - 5/16" X 6-1/2" OR 7" LENGTH W/ NUTS

SQUARE STEEL POSTS (2" x 2")

MACHINE BOLTS - 3/8" X 3-1/4" LENGTH W/ NUTS

RIVETS - 9/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH

WASHERS (ALL POSTS) -

1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL

1-1/4" O.D. X 3/8" I.D. X .080 NYLON FOR ALL TYPE H SIGNS

* TWO DIFFERENT FASTENING SYSTEMS ARE SHOWN FOR ILLUSTRATION PURPOSES. ON ANY INDIVIDUAL SIGN, EITHER ONE OR THE OTHER SYSTEM SHALL BE USED. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA. FOR A SINGLE POST INSTALLATION, ALL SIGNS GREATER THAN 9 SQ. FT. REQUIRE THE USE OF 3 FASTENERS.

6

6

S.D.D. 15 D 38-2b

S.D.D. 15 D 38-2b

ATTACHMENT OF SIGNS TO POSTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

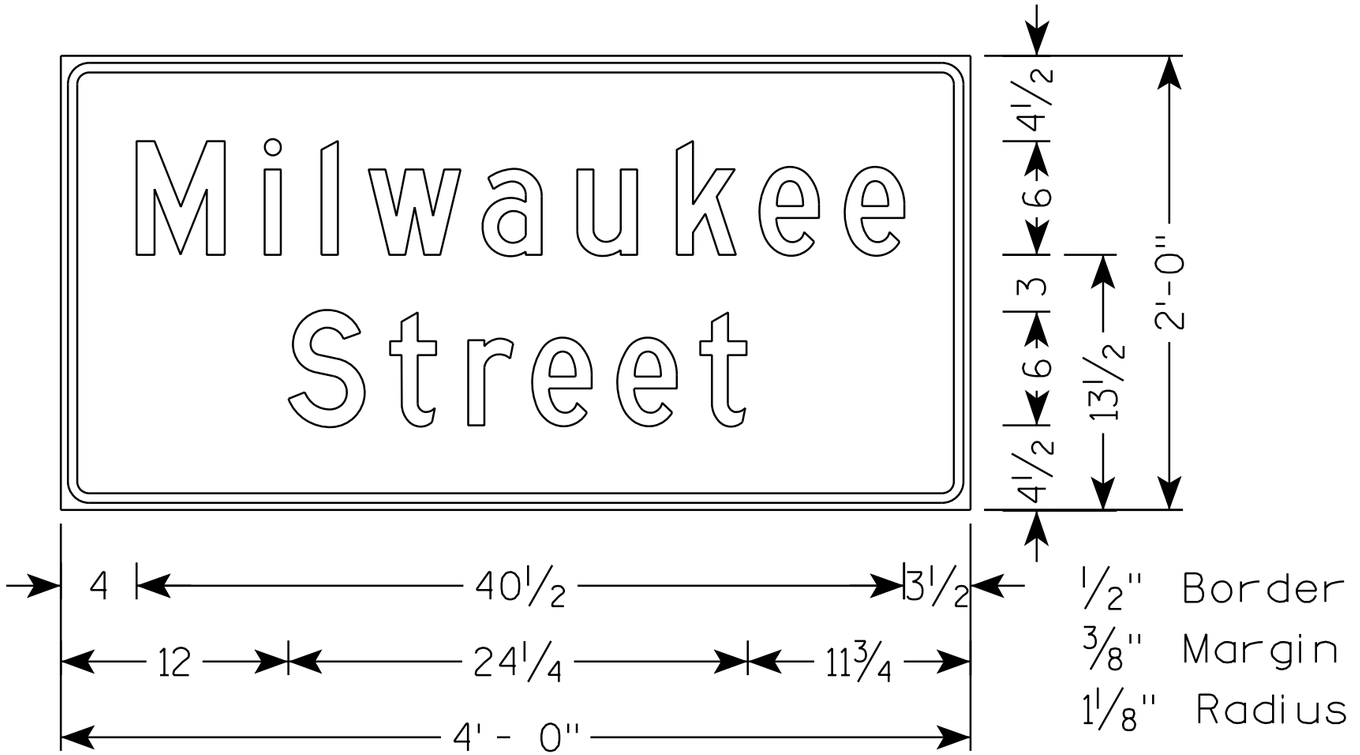
June 2017
DATE

/S/ Andrew Heldtke
WORK ZONE ENG

FHWA

NOTES

1. Sign is Type II - Type F Reflective - Reference WisDOT Standard Specifications for Highway and Structure Construction latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - D



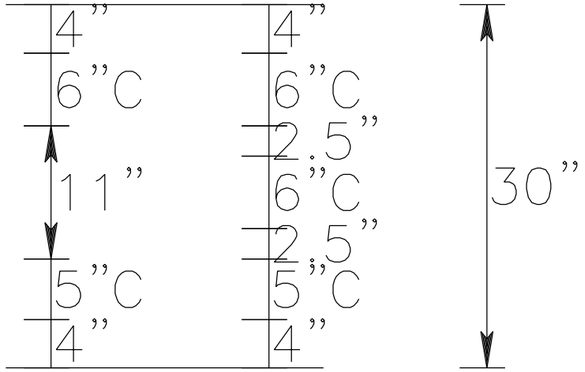
7

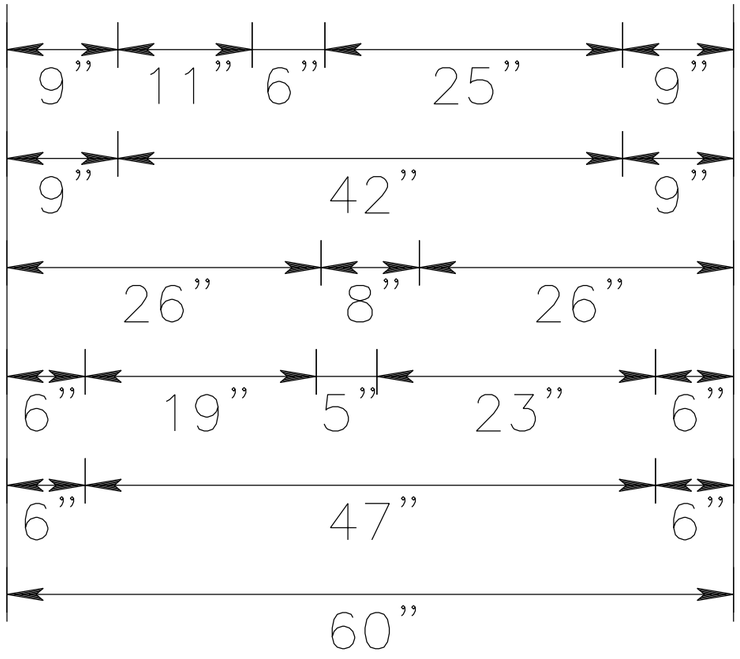
7

PROJECT NO: 5990-00-34	HWY: MILWAUKEE STREET	COUNTY: ROCK	SIGN PLATES	SHEET NO: 127	E

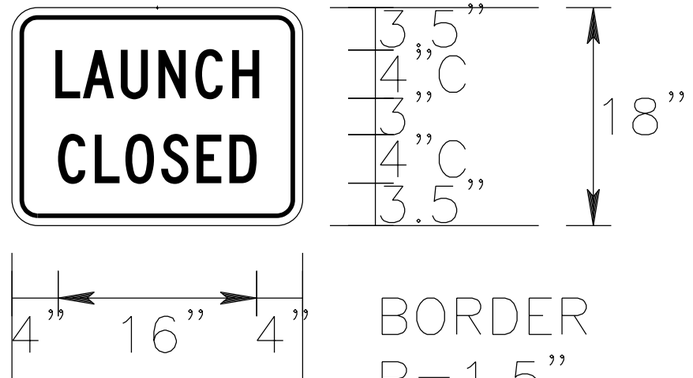
FILE NAME : P:\870s\879\00879002\C3D\SheetsPlan\Special Sign Plate.dgn PLOT DATE : 12/18/2017 PLOT BY : jdolens PLOT NAME : PLOT SCALE : 1:7.995

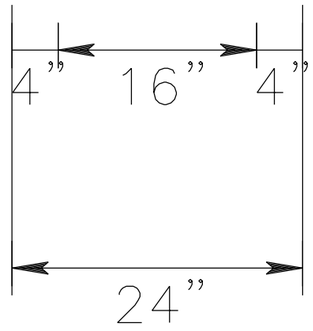
WISDOT/CADDS SHEET 42



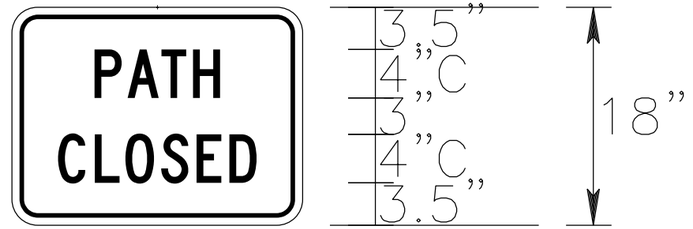


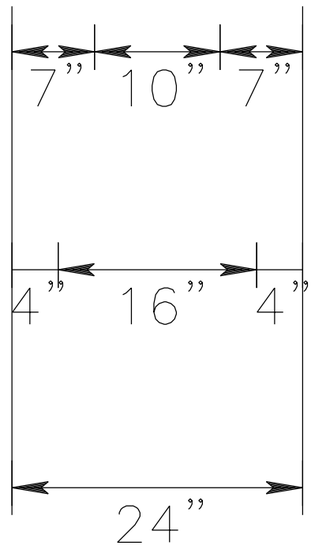
BORDER
R=1.88"
TH=0.75"
IN=0.5"





BORDER
R=1.5"
TH=0.38"
IN=0.63"





BORDER
R=1.5"
TH=0.38"
IN=0.63"

NOTES

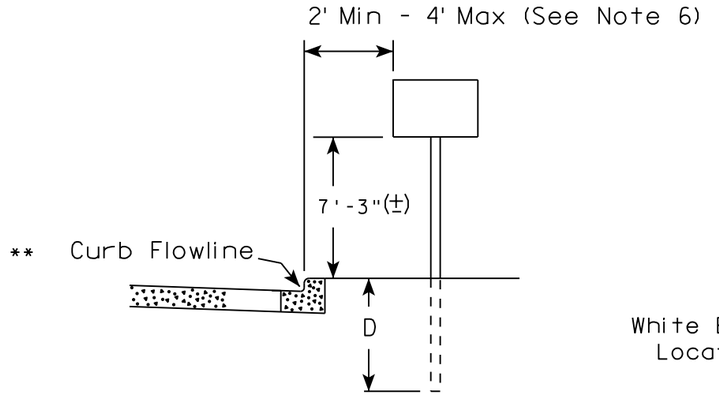
1. Sign is Type II- Type H Reflective - Reference WisDOT Standard Specifications for Highway and Structure Construction latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

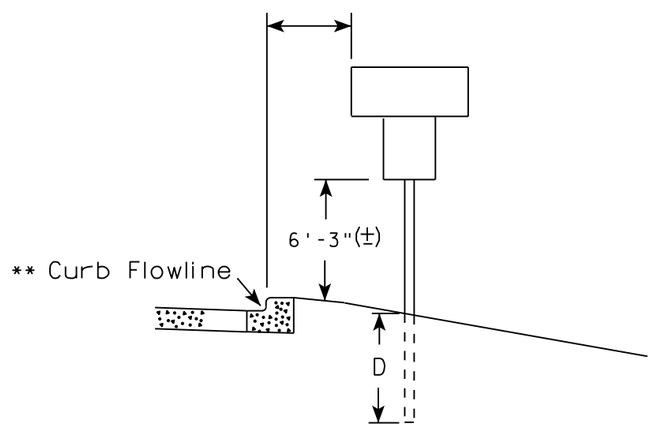
7

7

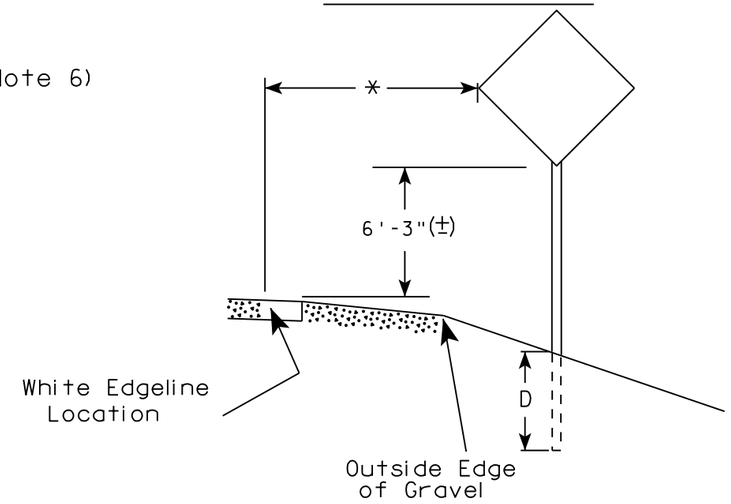
PROJECT NO:5990-00-34	HWY: MILWAUKEE STREET	COUNTY: ROCK	SIGN PLATES	SHEET NO: 128	E

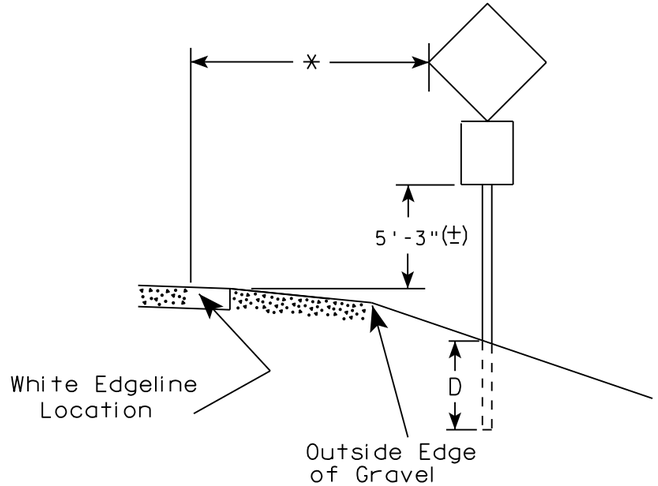
URBAN AREA





RURAL AREA (See Note 2)





GENERAL NOTES

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

POST EMBEDMENT DEPTH

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

** The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.

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

TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

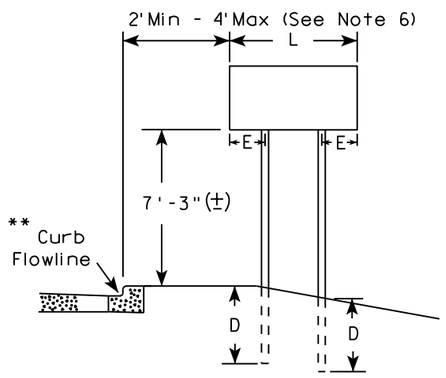
DATE 8/21/17 PLATE NO. A4-3.21

7

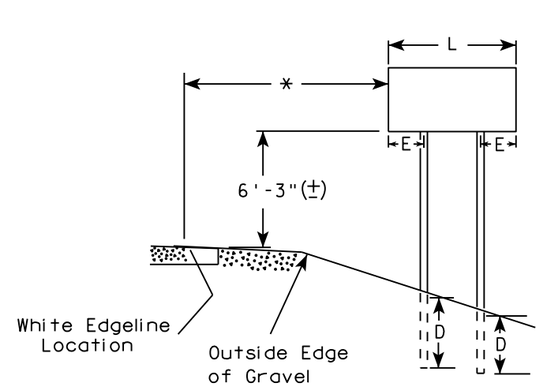
7

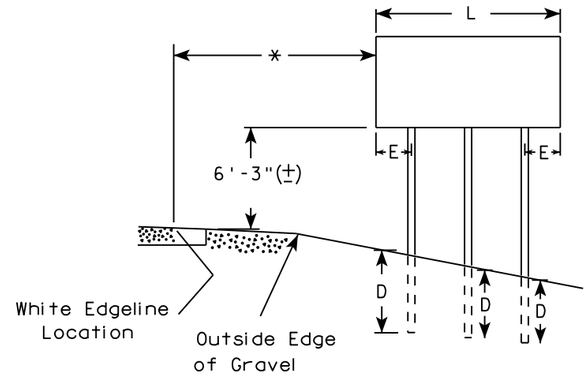
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 129	E

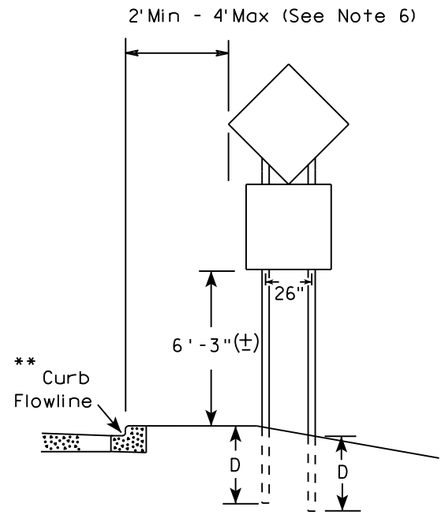
URBAN AREA



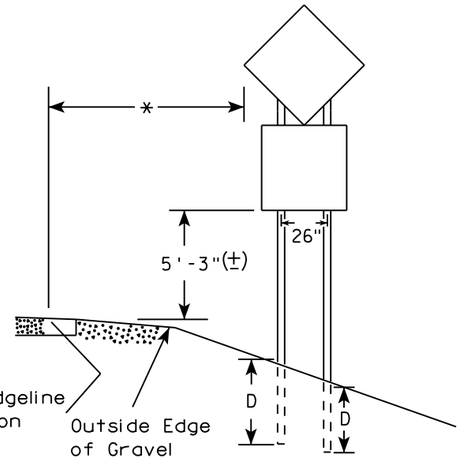
RURAL AREA (See Note 3)







48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

SIGN SHAPE OTHER THAN DIAMOND (TWO POSTS REQUIRED)		
	L	E
***	Greater than 48" Less than 60"	12"
	60" to 108"	L/5

SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 108" to 144"	12"

GENERAL NOTES

1. For 3 or 4 post installations, individual post spacing shall be greater than 3'-6".
2. See tables below for required number of posts.
3. For expressways and freeways, mounting height is 7'-3" (±) or 6'-3" (±) depending upon existence of sub-sign.
4. The (±) tolerance for mounting height is 3 inches.
5. J-Assemblies are considered to be one sign for mounting height.
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. Folding signs shall be mounted at a height of 5'-3" (±) or as directed by the engineer.
8. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4"-3" (±).

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

** The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.

*** See A4-3 sign plate for signs 4' or less in width and less than 20 S.F. in area.

POST EMBEDMENT DEPTH

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

TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

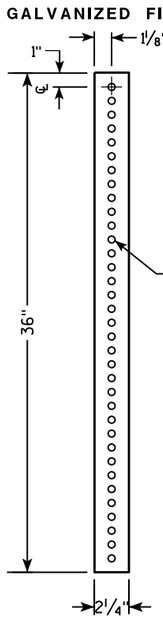
APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 8/21/17 PLATE NO. A4-4.15

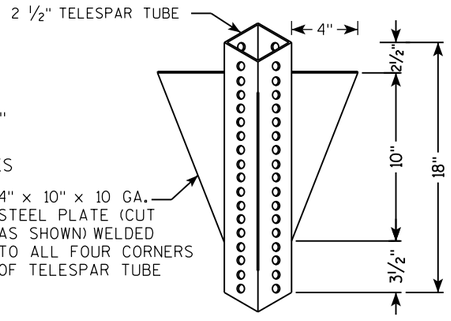
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 130	E

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

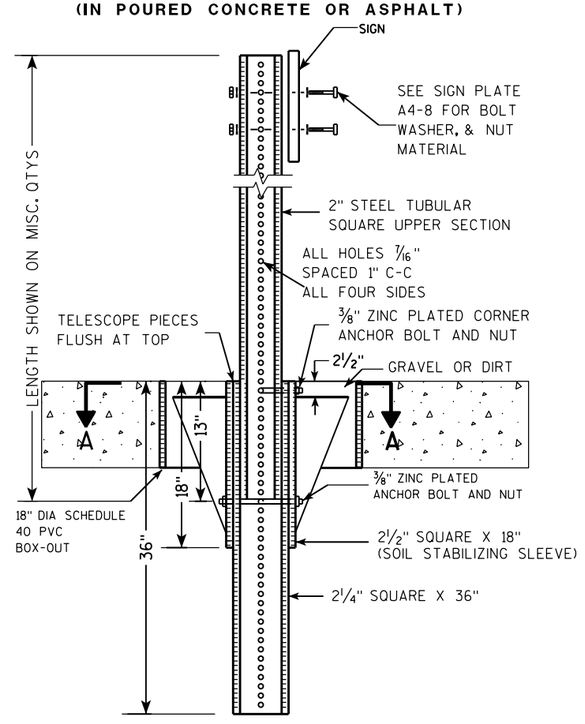
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



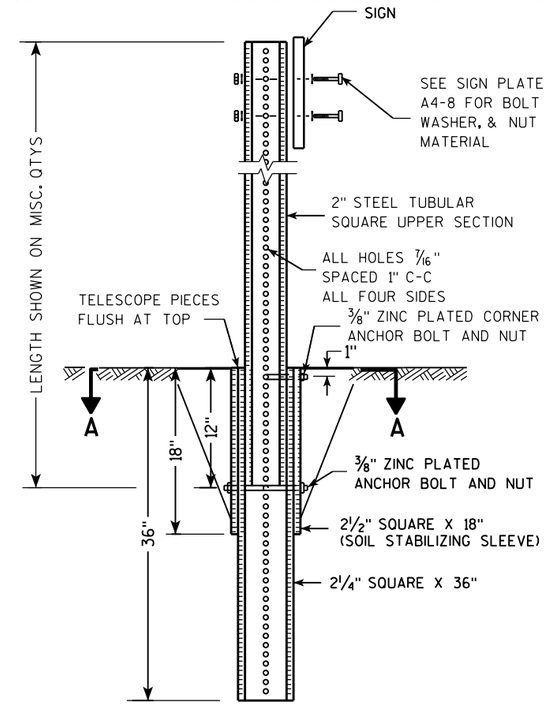
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

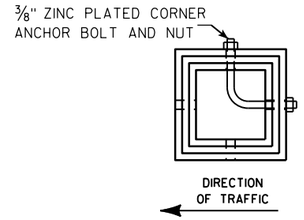


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



DETAIL OF TUBULAR STEEL SIGN POST
(IN LOCATIONS OTHER THAN POURED CONCRETE OR ASPHALT)





SECTION A-A

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

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

TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

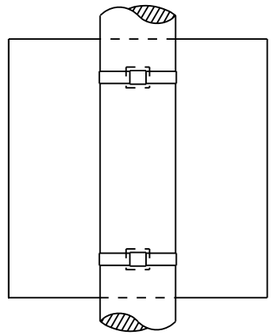
DATE 2/05/15 PLATE A4-9.9

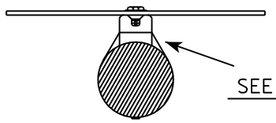
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A49.DGN PLOT DATE : 05-FEB-2015 17:09 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000 WISDOT/CADDS SHEET 42

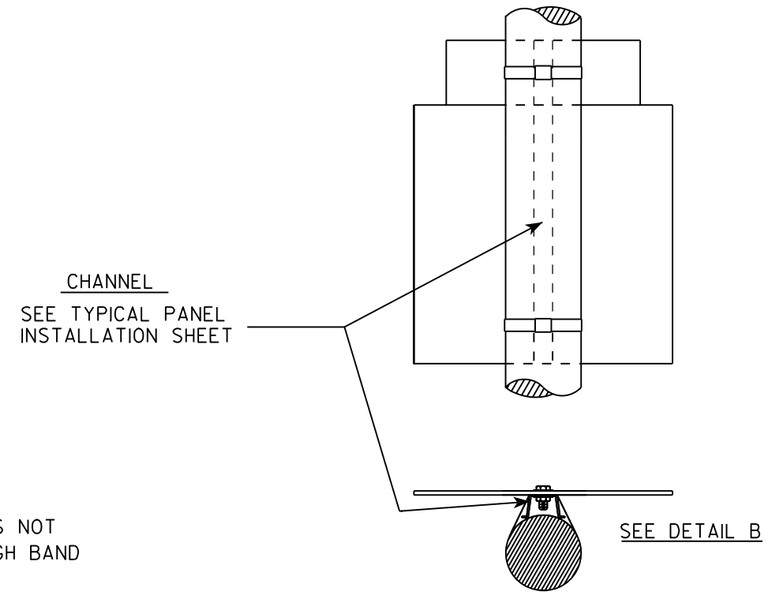
BANDING

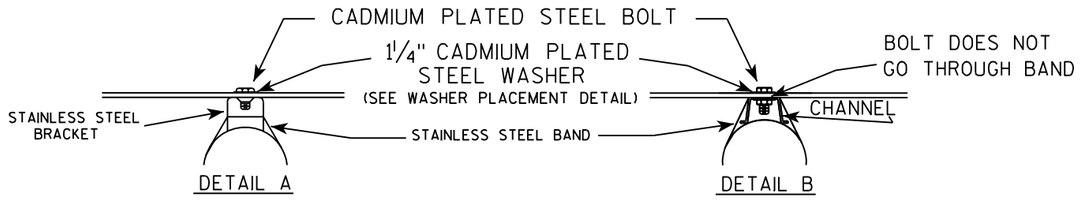
SINGLE SIGN



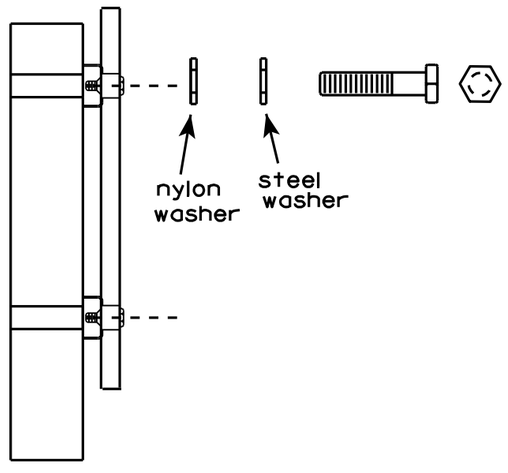


"J" ASSEMBLY





WASHER PLACEMENT



WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

GENERAL NOTES

1. Any sign over 3 feet in width shall use the V-Block banding method. See A5-10 standard plate.
2. Signs 3 feet or greater in height shall have three bracket bands installed. Signs less than 3 feet in height shall have two bracket bands installed.
3. Banding and assembly bracket shall be stainless steel. All bands shall be 3/4" in width and 0.025" thickness.

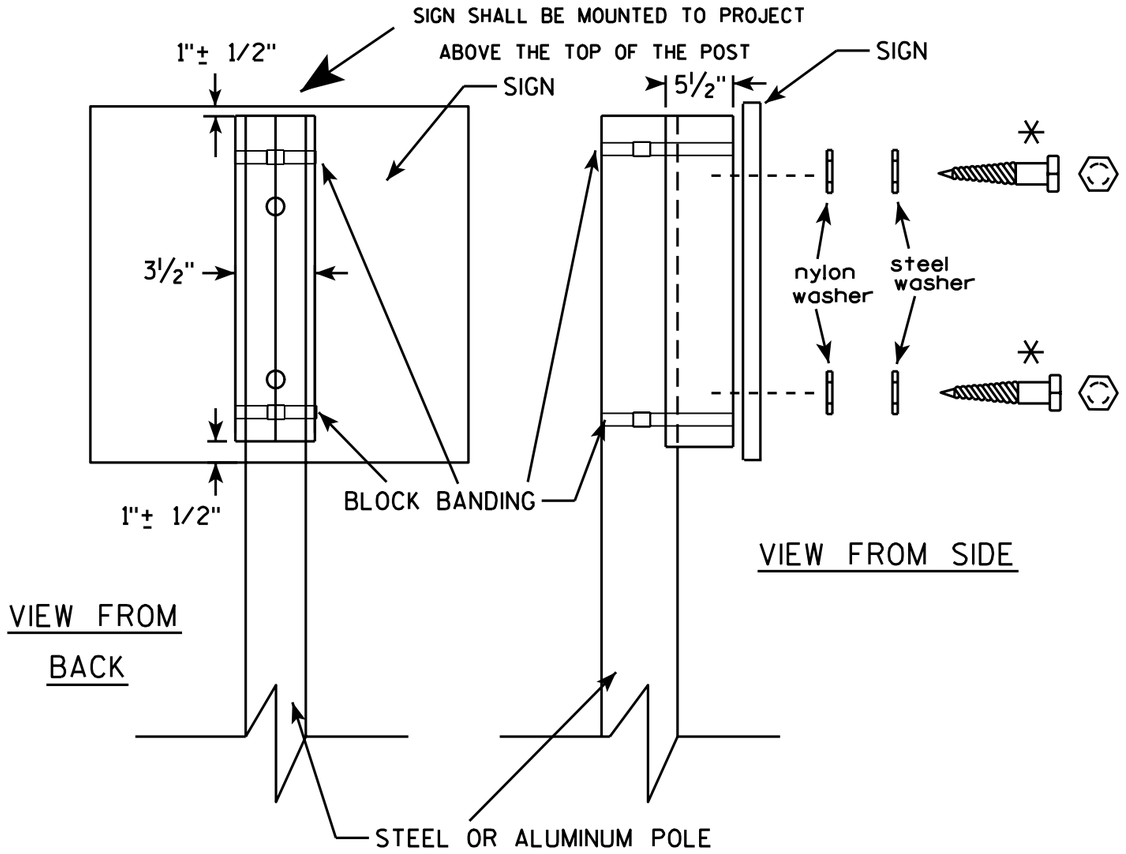
STANDARD SIGN
SIGN BANDING DETAILS

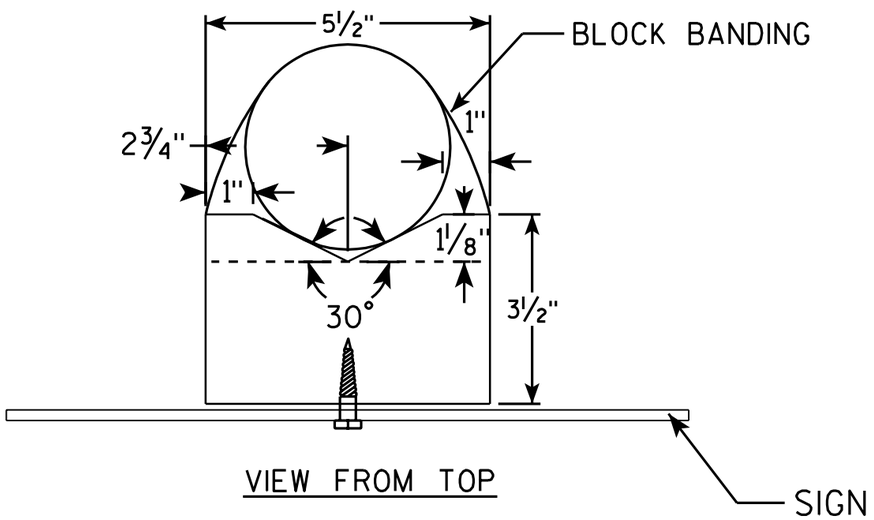
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/16/13 PLATE NO. A5-9.3

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





GENERAL NOTES

1. WOOD 4"X6" POST MATERIAL SHALL CONFORM TO 507.2.2 OF THE WisDOT STANDARD SPECIFICATIONS
2. BLOCK BANDING AND CLIPS SHALL BE STAINLESS STEEL, ¾" WIDTH AND 0.025" THICKNESS
3. SIGNS 3' OR GREATER IN HEIGHT SHALL UTILIZE 3 BLOCK BANDS. SIGNS UNDER 3' IN HEIGHT SHALL UTILIZE 2 BLOCK BANDS
4. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA, BUT NORNALLY THERE ARE TWO. FOR SIGNS GREATER THAN 9 S.F. 3 FASTENERS SHALL BE USED.
5. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
   a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D, or
   b. Cadmium plated in accordance with ASTM Designation : B 766 TYPE 3, Class 12, or
   c. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.
6. ALL BOLTS SHALL HAVE HEXAGONAL HEADS.
7. STEEL WASHERS SHALL BE 1¼" O.D. X ⅜" I.D. X 1/16"
8. NYLON WASHERS SHALL BE 1¼" O.D. X ⅜" I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

✳ LAG BOLTS SHALL BE ⅜" X 2½"

BLOCK BANDING DETAIL (V-BLOCK OPTION)

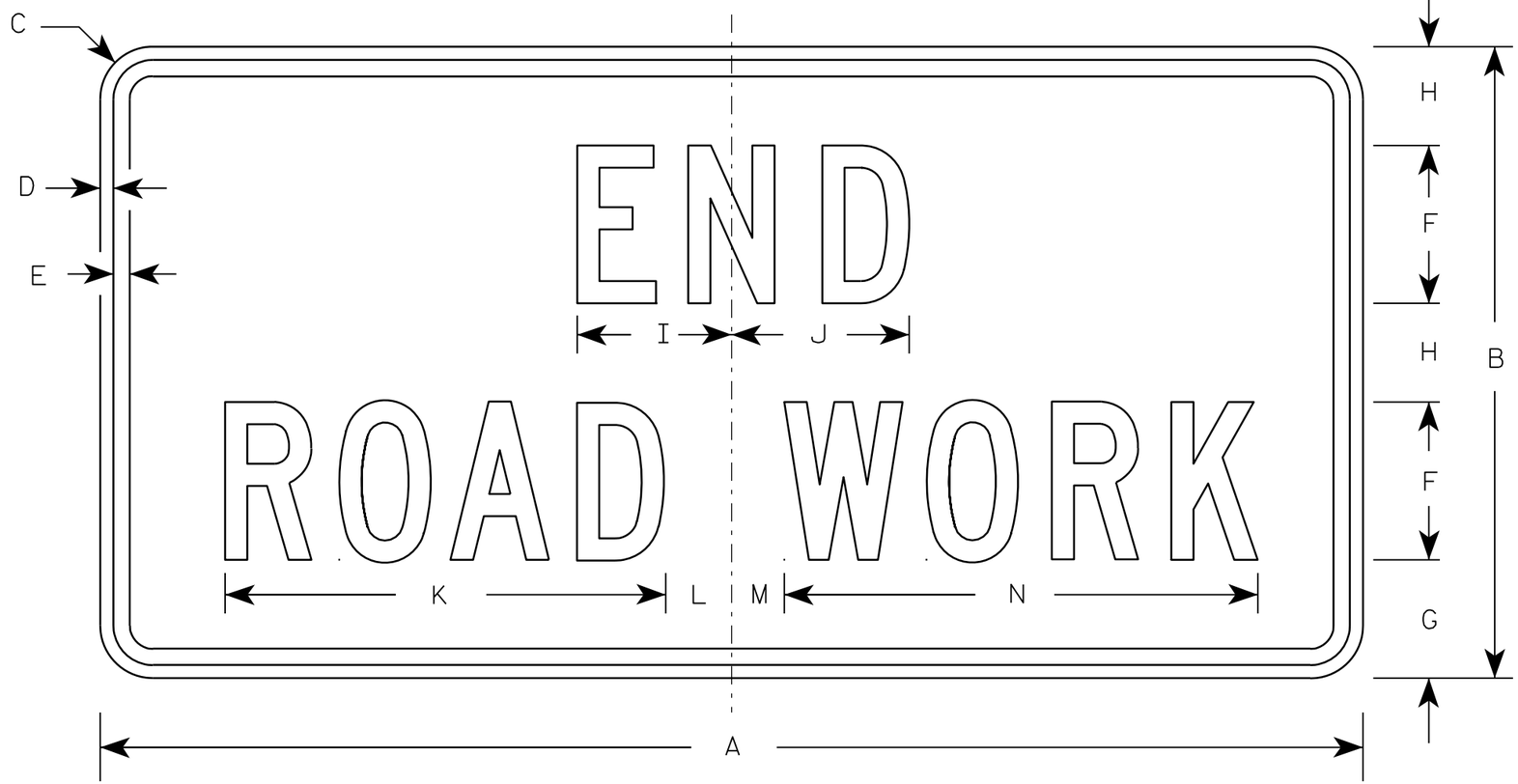
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/12/07 PLATE NO. A5-10.1

PROJECT NO:

SHEET NO: 133 E



G20-2A

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

Metric equivalent for this sign is:

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m2
1	36	18	1 1/8	3/8	1/2	4	3 3/4	2 1/2	4 1/8	4 1/8	11 1/8	2	1	12 1/8													4.5	0.41
2	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
3	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
4	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
5	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72

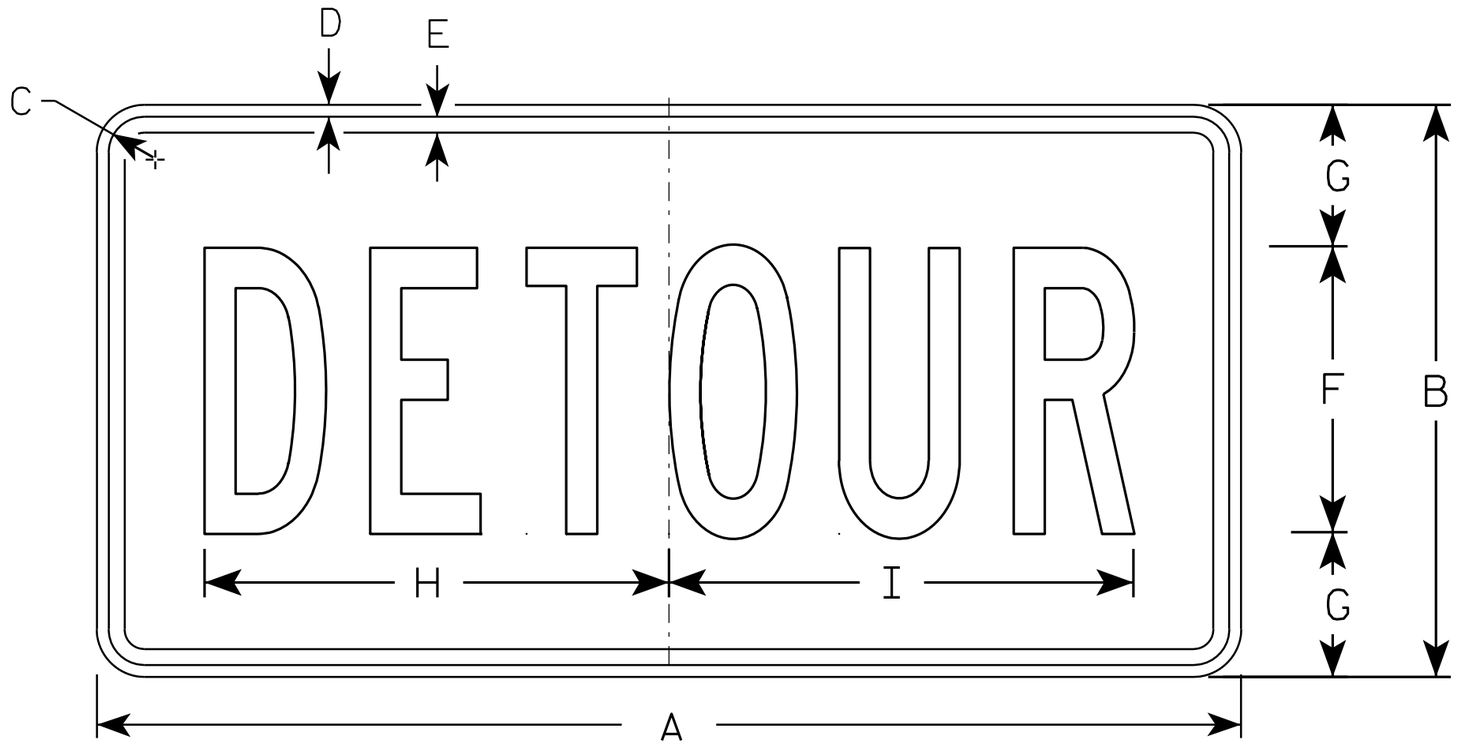
STANDARD SIGN
G20-2A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/30/09 PLATE NO. G20-2A.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 134	E



M4-8

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - B
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	3	10	10 1/4																		2.0
3	36	18	1 1/8	3/8	1/2	9	4 1/2	14 5/8	14 1/2																		4.5
4																											
5																											

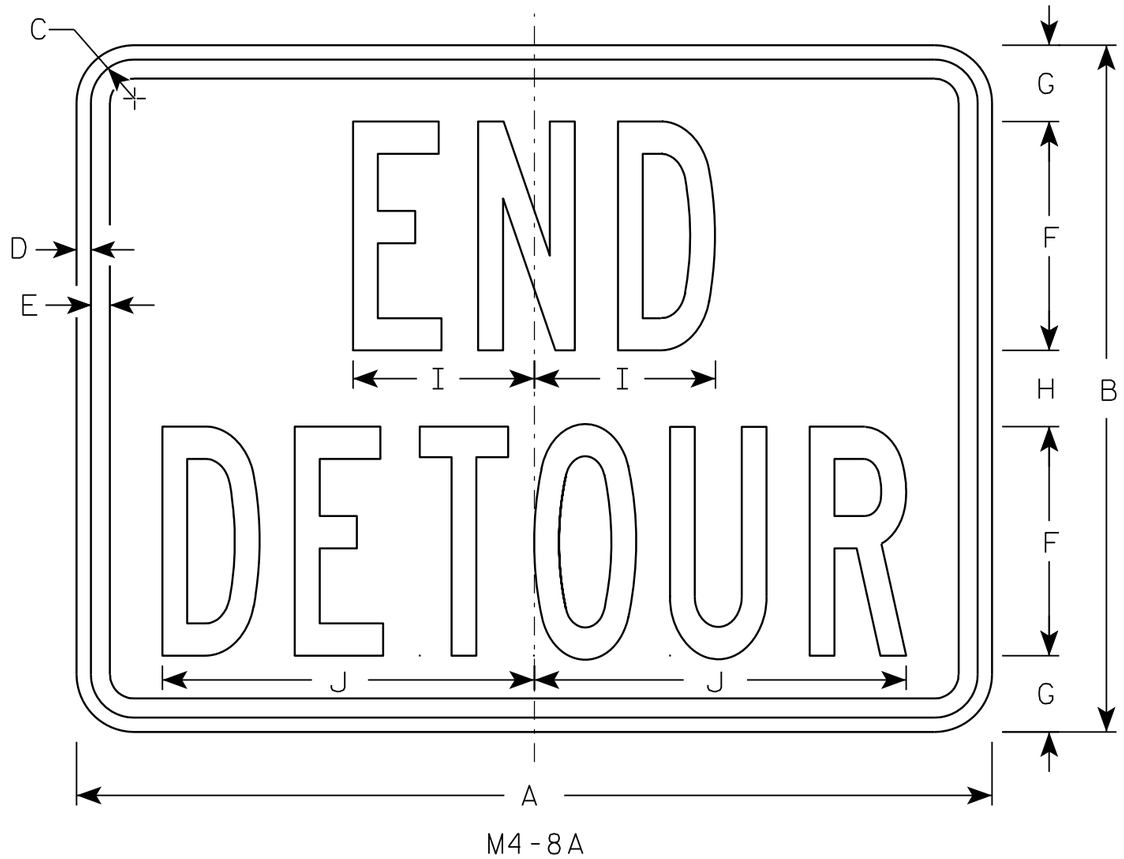
STANDARD SIGN
M4-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/10/10 PLATE NO. M4-8.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 135	E



M4-8A

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - B
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	18	1 1/8	3/8	1/2	6	2	2	4 3/4	9 3/4																	3.0
3	30	24	1 1/8	3/8	1/2	8	2 1/2	3	6 3/4	13																	5.0
4																											
5																											

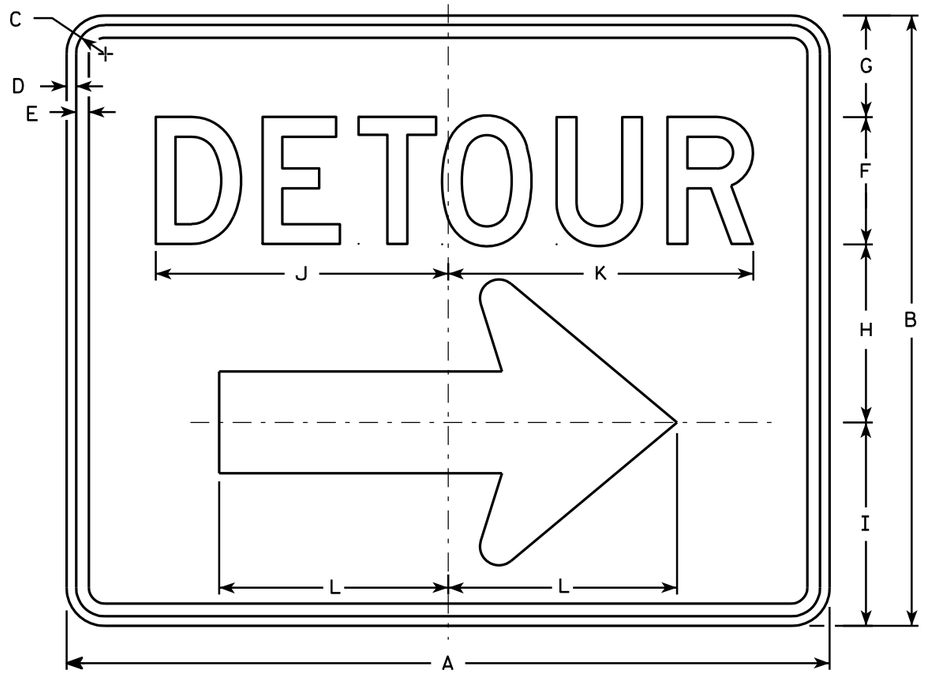
STANDARD SIGN
M4-8A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/9/11 PLATE NO. M4-8A.2

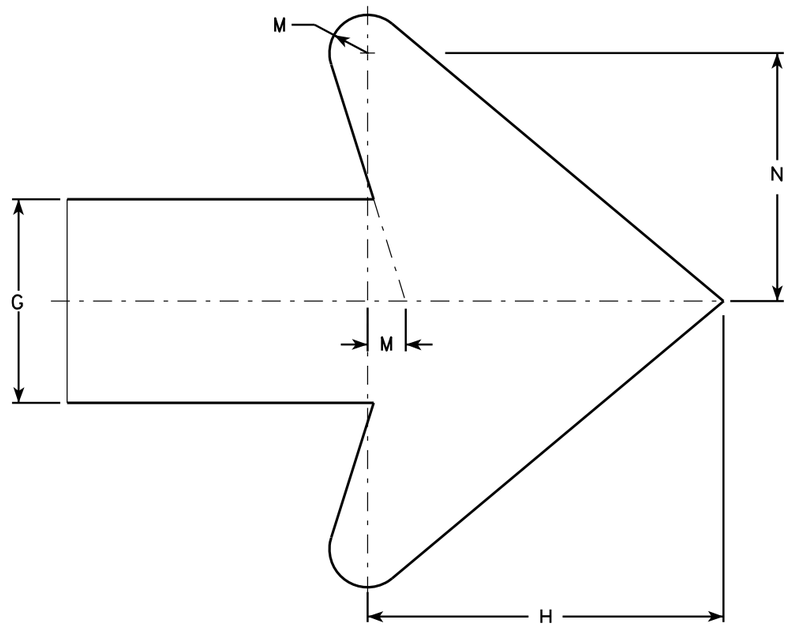
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 136	E



M4-9R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M4-9L is the same as M4-9R except the arrow is reversed.



Arrow Detail

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	30	24	1 1/8	3/8	1/2	5	4	7	8	11 1/2	12	9	3/4	4 7/8													5.00
3	30	24	1 1/8	3/8	1/2	5	4	7	8	11 1/2	12	9	3/4	4 7/8													5.00
4	48	36	1 3/8	1/2	5/8	8	6	10 1/2	11 5/8	20 5/8	20 1/2	13 1/4	1 1/8	6 7/8													12.0
5	48	36	1 3/8	1/2	5/8	8	6	10 1/2	11 5/8	20 5/8	20 1/2	13 1/4	1 1/8	6 7/8													12.0

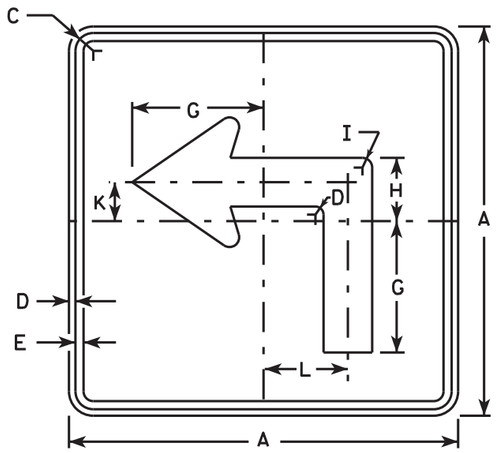
STANDARD SIGN
M4-9 R & L

WISCONSIN DEPT OF TRANSPORTATION

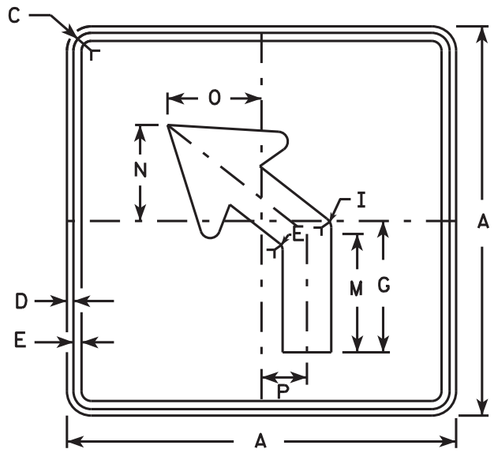
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/9/11 PLATE NO. M4-9R.4

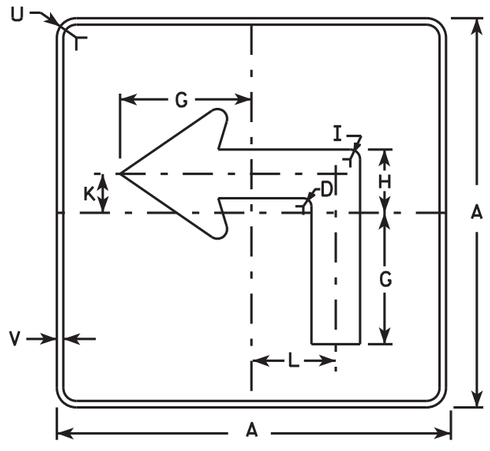
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 137	E



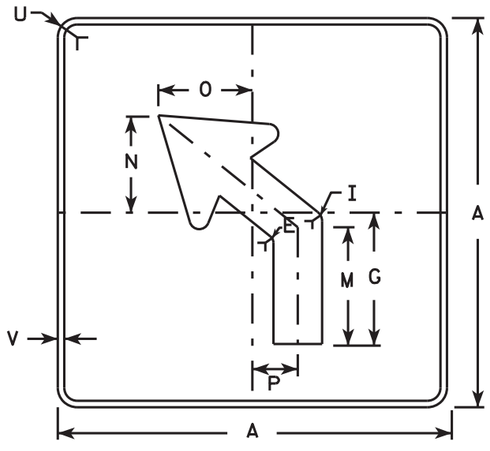
M5-1L
MM5-1L
MO5-1L
MP5-1L



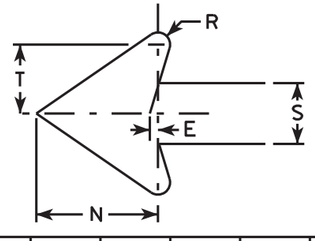
M5-2L
MM5-2L
MO5-2L
MP5-2L



MB5-1L
MK5-1L
MN5-1L
MR5-1L



MB5-2L
MK5-2L
MN5-2L
MR5-2L



NOTES

1. Signs are Type II - Type H reflective except as shown
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M5-1 and M5-2 Background - White
   Message - Black
   MB5-1 and MB5-2 Background - Blue
   Message - White
   MK5-1 and MK5-2 Background - Green
   Message - White
   MM5-1 and MM5-2 Background - White
   Message - Green
   MN5-1 and MN5-2 Background - Brown
   Message - White
   MO5-1 and MO5-2 Background - Orange - Type F Reflective
   Message - Black
   MP5-1 and MP5-2 Background - White - Type H Reflective
   Message - Blue
   MR5-1 and MR5-2 Background - Brown
   Message - Yellow
5. M5-1R same as M5-1L except arrow points right.
6. M5-2R same as M5-2L except arrow tilts right.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	3/8	3/8		7	3 3/8	5/8		2 1/8	4 1/2	6 3/8	5 1/4	5	2 1/2		1/2	2 5/8	3	1 1/2	1/2					3.06
3	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25
4	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25
5	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25

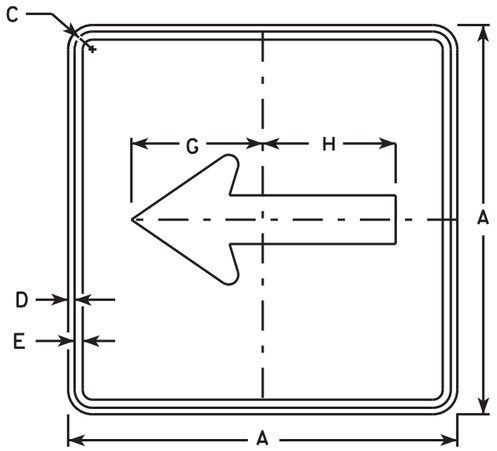
STANDARD SIGN
M5-1 & M5-2

WISCONSIN DEPT OF TRANSPORTATION

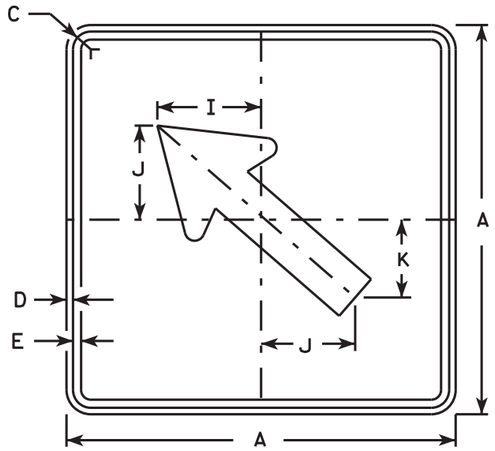
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/15/15 PLATE NO. M5-1.13

PROJECT NO: | HWY: | COUNTY: | SHEET NO. 138 | E



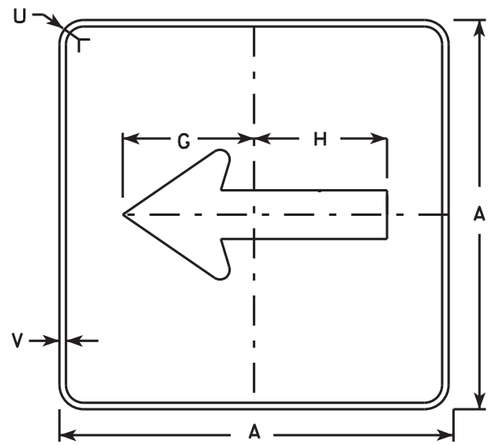
M6-1
MM6-1
MO6-1
MP6-1



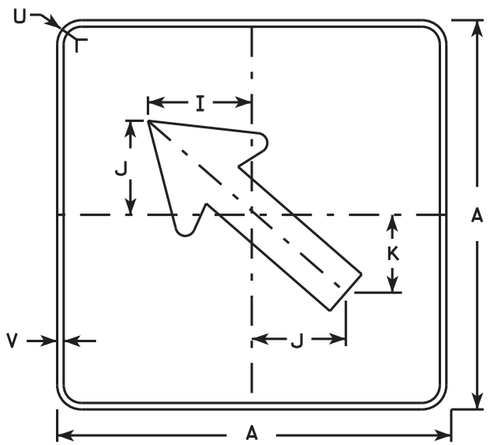
M6-2
MM6-2
MO6-2
MP6-2

NOTES

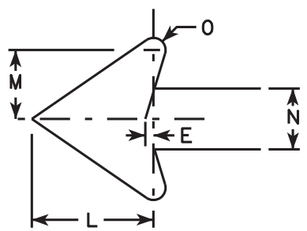
1. Signs are Type II - Type H except as Shown
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M6-1 and M6-2 Background - White
   Message - Black
   MB6-1 and MB6-2 Background - Blue
   Message - White
   MK6-1 and MK6-2 Background - Green
   Message - White
   MM6-1 and MM6-2 Background - White
   Message - Green
   MN6-1 and MN6-2 Background - Brown
   Message - White
   MO6-1 and MO6-2 Background - Orange - Type F Reflective
   Message - Black
   MP6-1 and MP6-2 Background - White
   Message - Blue
   MR6-1 and MR6-2 Background - Brown
   Message - Yellow



MB6-1
MK6-1
MN6-1
MR6-1



MB6-2
MK6-2
MN6-2
MR6-2



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	3/8	3/8		7 1/2	7 1/8	5 5/8	5	4 1/4	5 1/4	3	2 5/8	1/2						1 1/2	1/2						3.06
3	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2						6.25
4	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2						6.25
5	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2						6.25

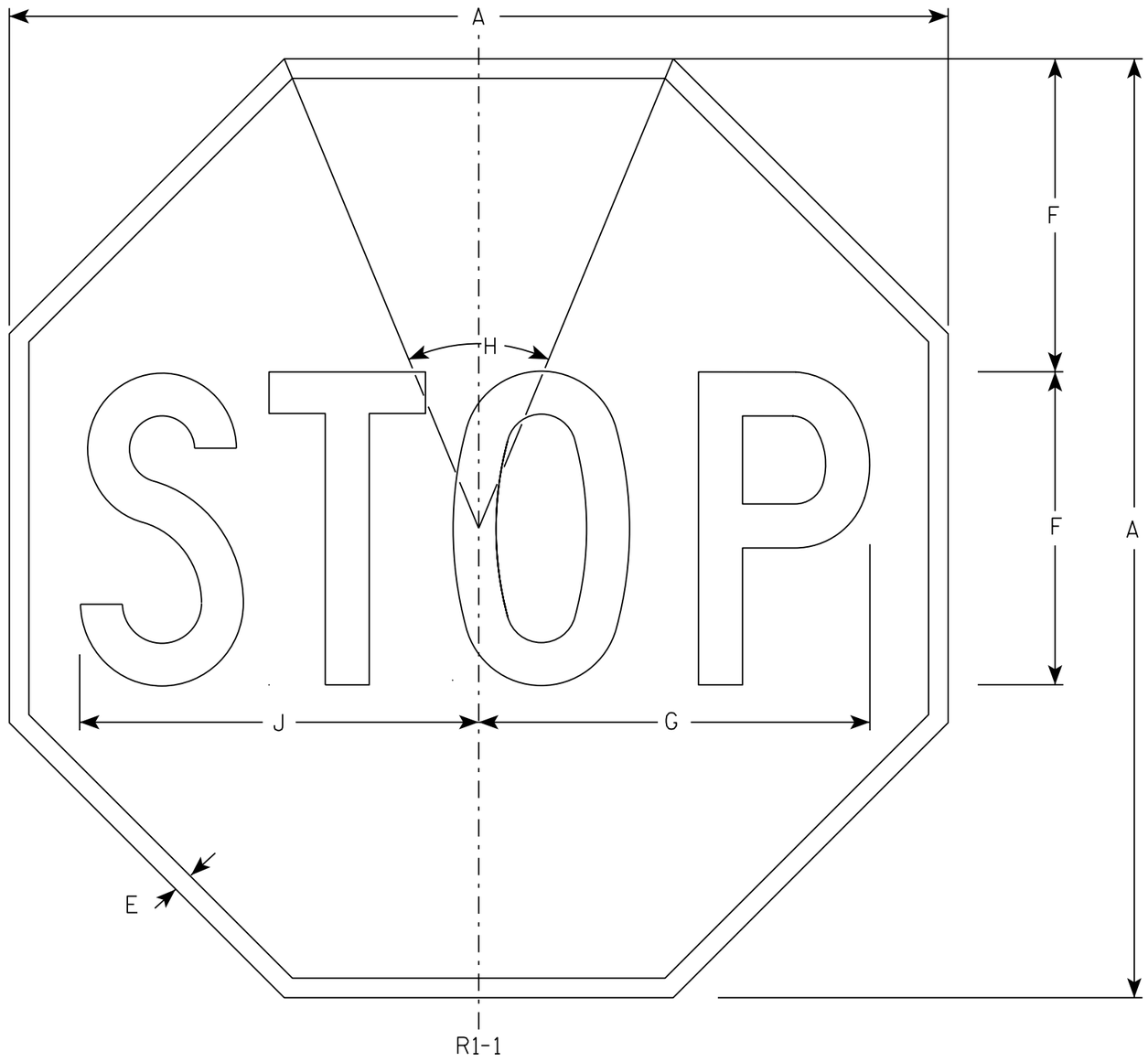
STANDARD SIGN
M6-1 & M6-2
SERIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/15/15 PLATE NO. M6-1.15

PROJECT NO: | HWY: | COUNTY: | SHEET NO. 139 | E



NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Red
   Message - White
3. Message Series - C

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30				5/8	10	12 1/2	45°		12 3/4																	5.18
2S	30				5/8	10	12 1/2	45°		12 3/4																	5.18
2M	36				3/4	12	15	45°		15 3/8																	7.46
3	36				3/4	12	15	45°		15 3/8																	7.46
4	48				1	16	20	45°		20 1/2																	13.25
5	48				1	16	20	45°		20 1/2																	13.25
6	18				3/8	6	7 3/4	45°		7 3/4																	1.86
7	12				1/4	4	5	45°		5 1/8																	0.78

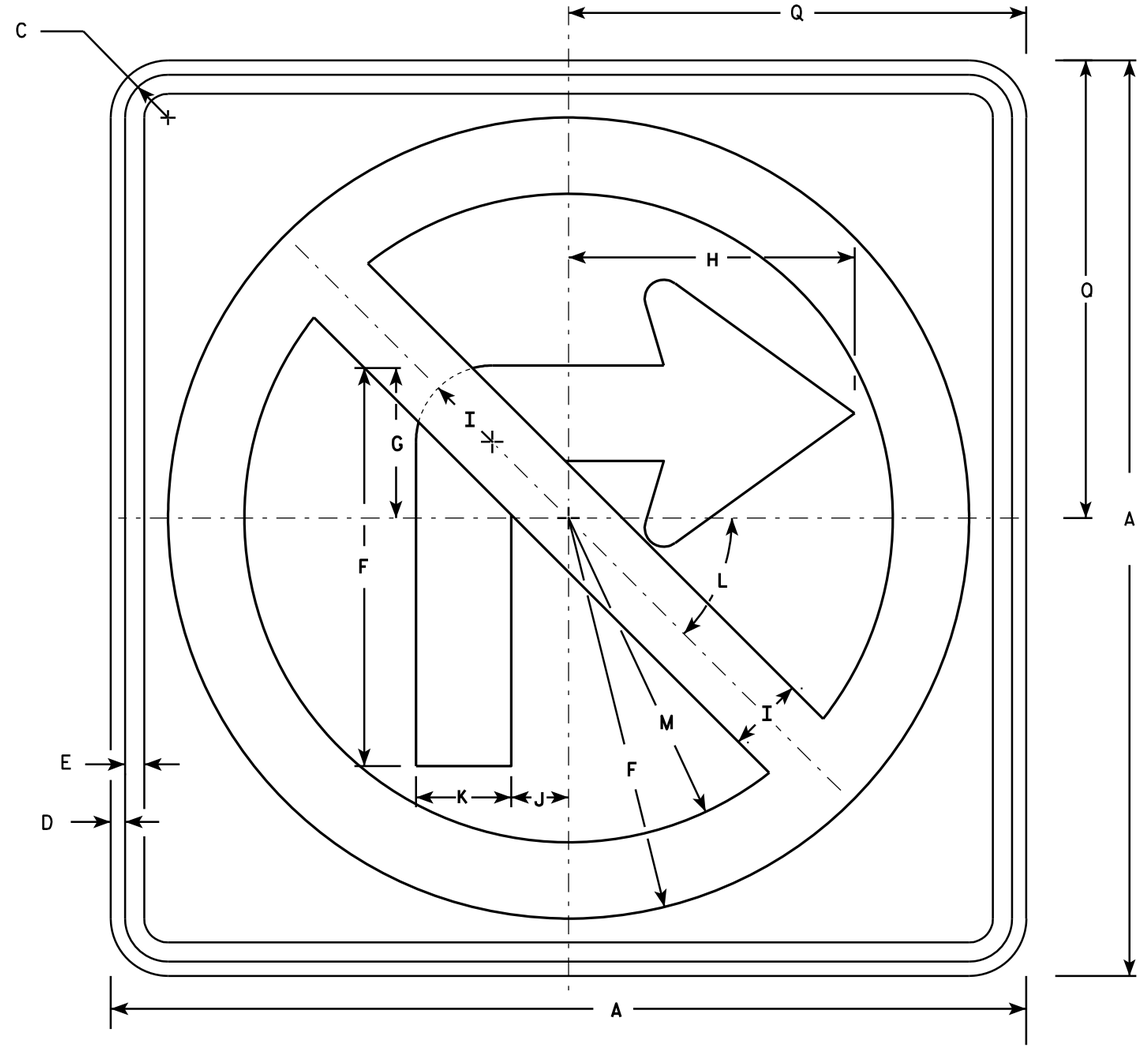
STANDARD SIGN
R1-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/12/15 PLATE NO. R1-1.13

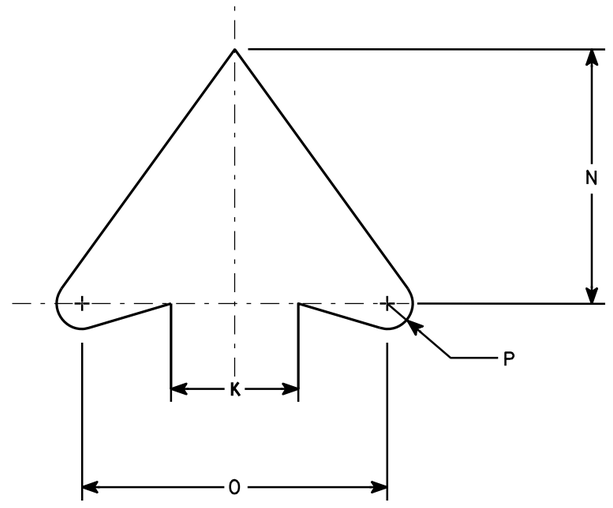
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 140	E



R3-1

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. Border & Arrow are non reflective black, the circle with diagonal bar is reflective red.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2	10 1/2	4	7 1/2	2	1 1/2	2 1/2	45	8 1/2	5	6	1/2	12										4.0
2S	24		1 1/8	3/8	1/2	10 1/2	4	7 1/2	2	1 1/2	2 1/2	45°	8 1/2	5	6	1/2	12										4.0
2M	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45	12 3/4	7 1/2	9	3/4	18										9.0
3	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45	12 3/4	7 1/2	9	3/4	18										9.0
4	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45°	12 3/4	7 1/2	9	3/4	18										9.0
5	48		2 1/4	3/4	1	21	8	15	4	3	5	45°	17	10	12	1	24										16.0

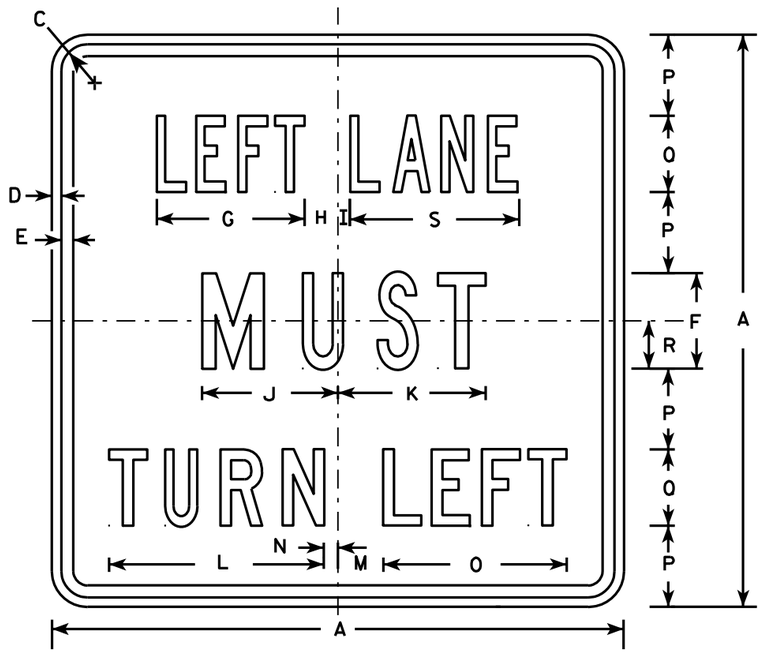
STANDARD SIGN
R3-1

WISCONSIN DEPT OF TRANSPORTATION

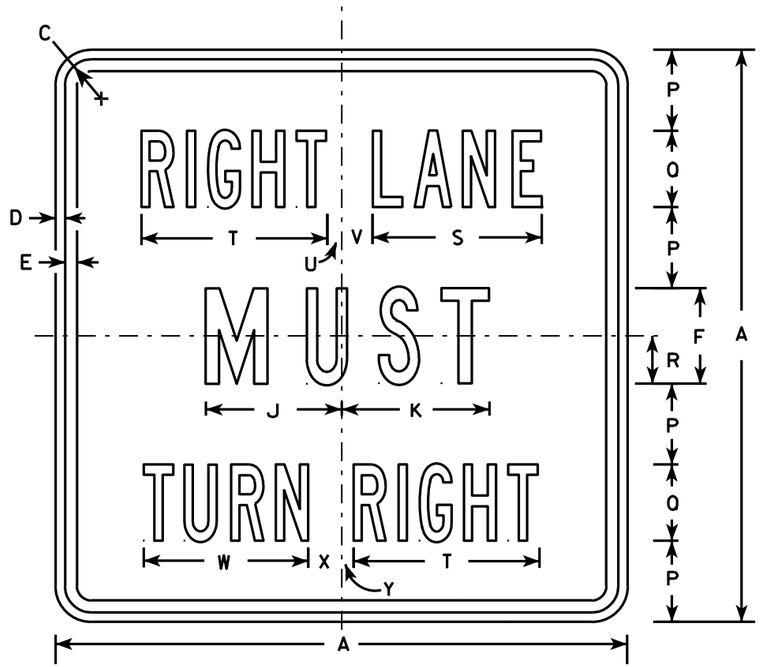
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/08/10 PLATE NO. R3-1.5

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 141	E



R3-7L



R3-7R

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - Line 1 is Series B.
   Line 2 is Series C.
   Line 3 on plate R3-7R is Series B and Series C on plate R3-7L.
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 3/8	1/2	5/8	5	7 3/4	1 3/4	5/8	7 1/8	7 3/4	11 1/4	2 3/8	3/4	9 5/8	4 1/4	4	2 1/2	8 7/8	9 3/4	3/4	1 5/8	8 5/8	1 5/8	5/8		6.25
2S	30		1 3/8	1/2	5/8	5	7 3/4	1 3/4	5/8	7 1/8	7 3/4	11 1/4	2 3/8	3/4	9 5/8	4 1/4	4	2 1/2	8 7/8	9 3/4	3/4	1 5/8	8 5/8	1 5/8	5/8		6.25
2M	30		1 3/8	1/2	5/8	5	7 3/4	1 3/4	5/8	7 1/8	7 3/4	11 1/4	2 3/8	3/4	9 5/8	4 1/4	4	2 1/2	8 7/8	9 3/4	3/4	1 5/8	8 5/8	1 5/8	5/8		6.25
3	36		1 5/8	5/8	3/4	6	9 5/8	2	1 1/8	8 3/4	9	13 1/2	3 7/8	1 1/2	12 1/2	5	5	3	10 5/8	12	7/8	2 1/4	10 5/8	2 1/8	1		9.00
4	48		2 1/4	3/4	1	8	13 1/2	2 3/8	1 1/2	11 1/2	11 7/8	17 3/4	3 5/8	2 1/2	16 3/8	6 1/2	7	4	14 3/8	16 7/8	5/8	3 1/4	15 1/8	2 3/4	1 1/8		16.00
5																											

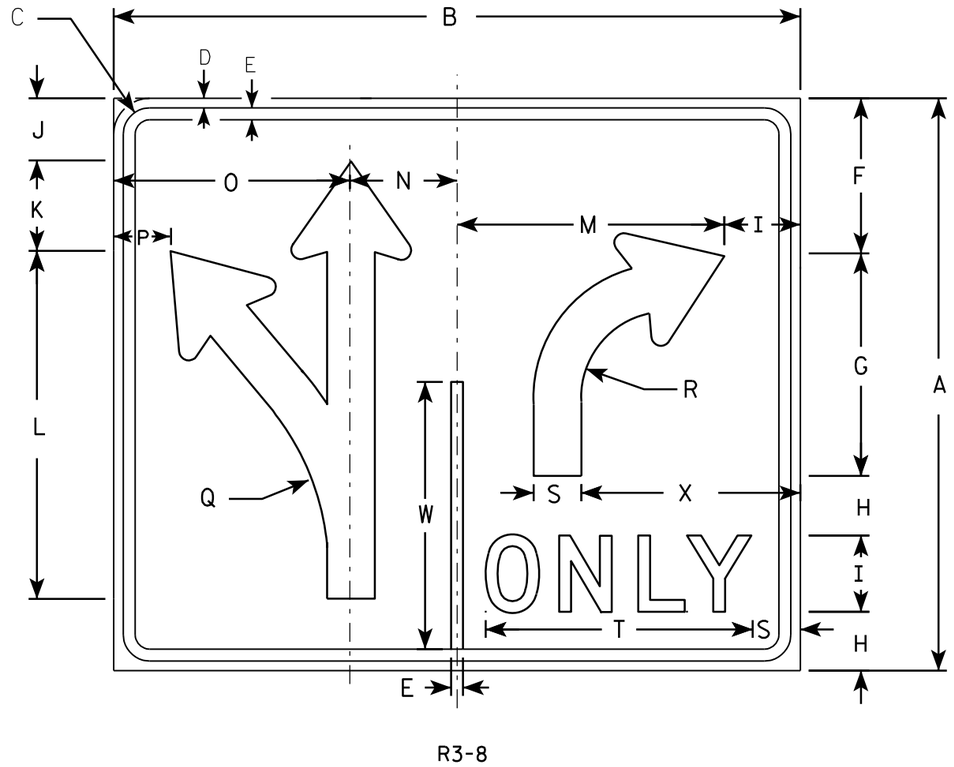
STANDARD SIGN
R3-7L & R3-7R

WISCONSIN DEPT OF TRANSPORTATION

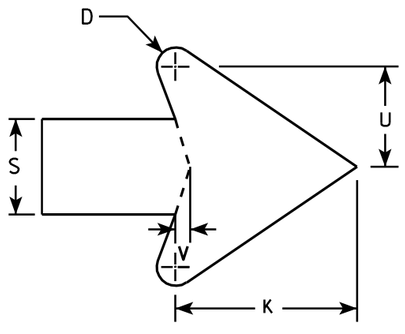
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/2011 PLATE NO. R3-7.3

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 142 | E



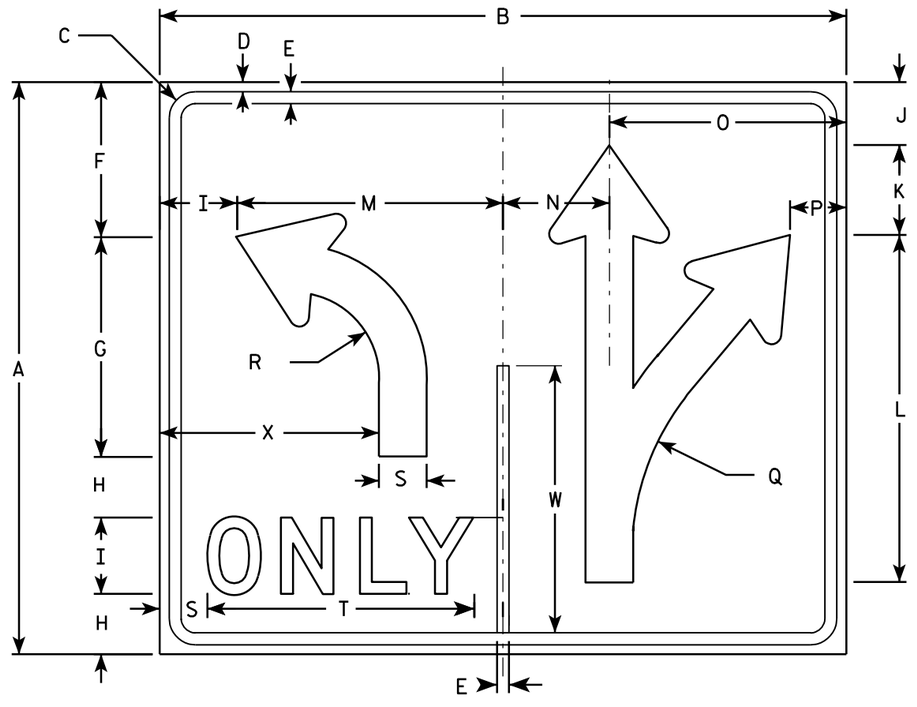
R3-8



ARROW DETAIL

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - WHITE
   Message - BLACK
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



R3-8A

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	36	1 3/8	1/2	5/8	8 1/8	11 5/8	3 1/8	4	3 1/4	4 3/4	18 1/4	14	5 5/8	12 3/8	3	13 1/4	4 1/2	2 1/2	14	2 5/8	3/8	14	11 1/2			7.5
2M	30	36	1 3/8	1/2	5/8	8 1/8	11 5/8	3 1/8	4	3 1/4	4 3/4	18 1/4	14	5 5/8	12 3/8	3	13 1/4	4 1/2	2 1/2	14	2 5/8	3/8	14	11 1/2			7.5
3																											
4	48	54	2 1/4	3/4	1	13 1/4	18 1/2	5 1/8	6	5 1/4	7 1/8	29 1/8	21	8 3/8	18 5/8	4 3/8	21 7/8	7 1/4	3 3/4	20 5/8	4	5/8	22 3/8	17 1/4			18.0
5	48	54	2 1/4	3/4	1	13 1/4	18 1/2	5 1/8	6	5 1/4	7 1/8	29 1/8	21	8 3/8	18 5/8	4 3/8	21 7/8	7 1/4	3 3/4	20 5/8	4	5/8	22 3/8	17 1/4			18.0

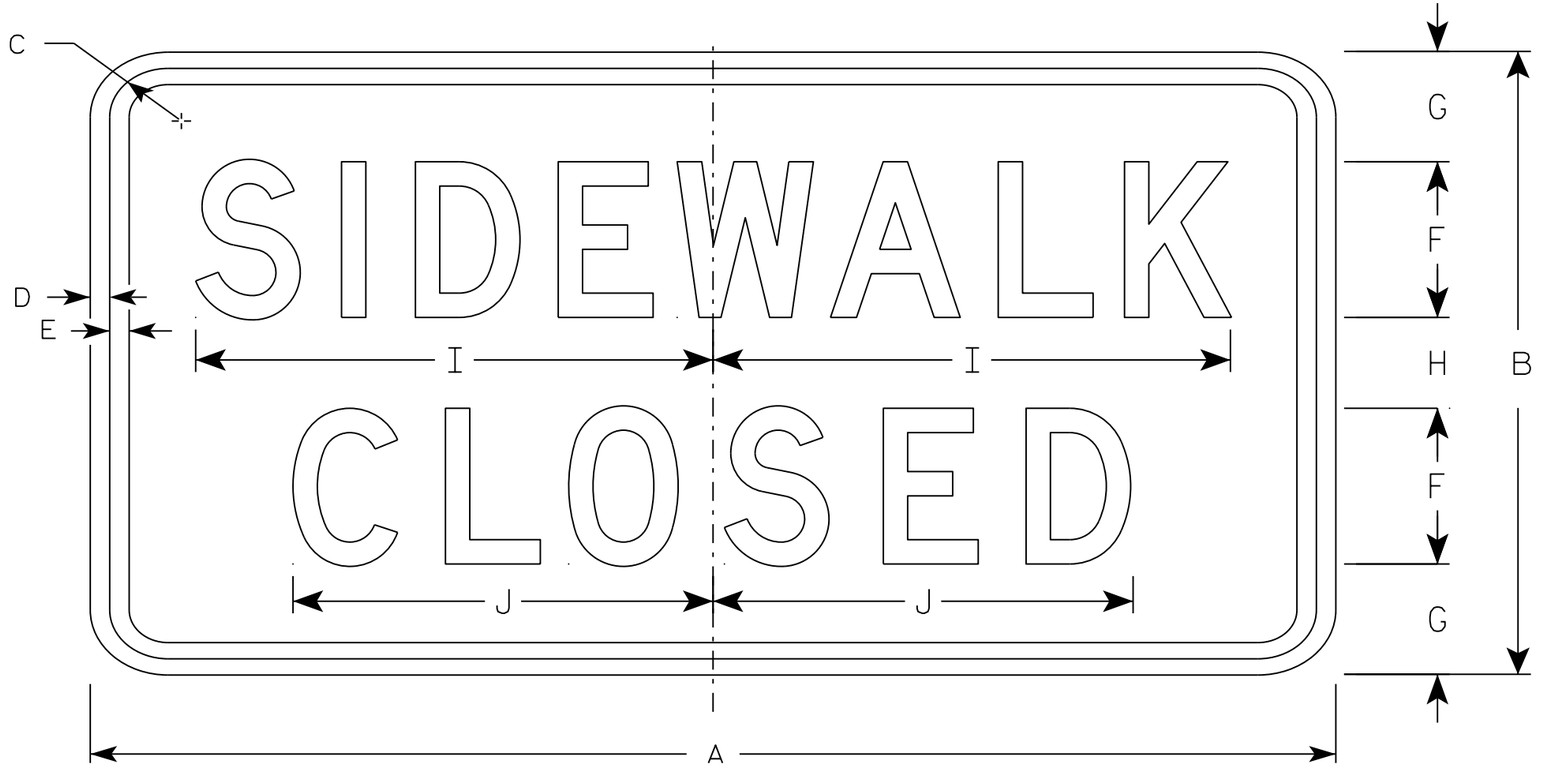
STANDARD SIGN
R3-8 & R3-8A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/2011 PLATE NO. R3-8.5

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 143	E



R9-9

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Use Size 2 for Sidewalks. Use Size 3 for Paths and Trails.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	12	1 3/4	1/2	1/2	3	2 1/8	1 3/4	10	8 1/8																	2.0
2M	24	12	1 3/4	1/2	1/2	3	2 1/8	1 3/4	10	8 1/8																	2.0
3	30	18	1 3/4	1/2	1/2	4	3 1/2	3	12 1/2	10 1/4																	3.75
4																											
5																											

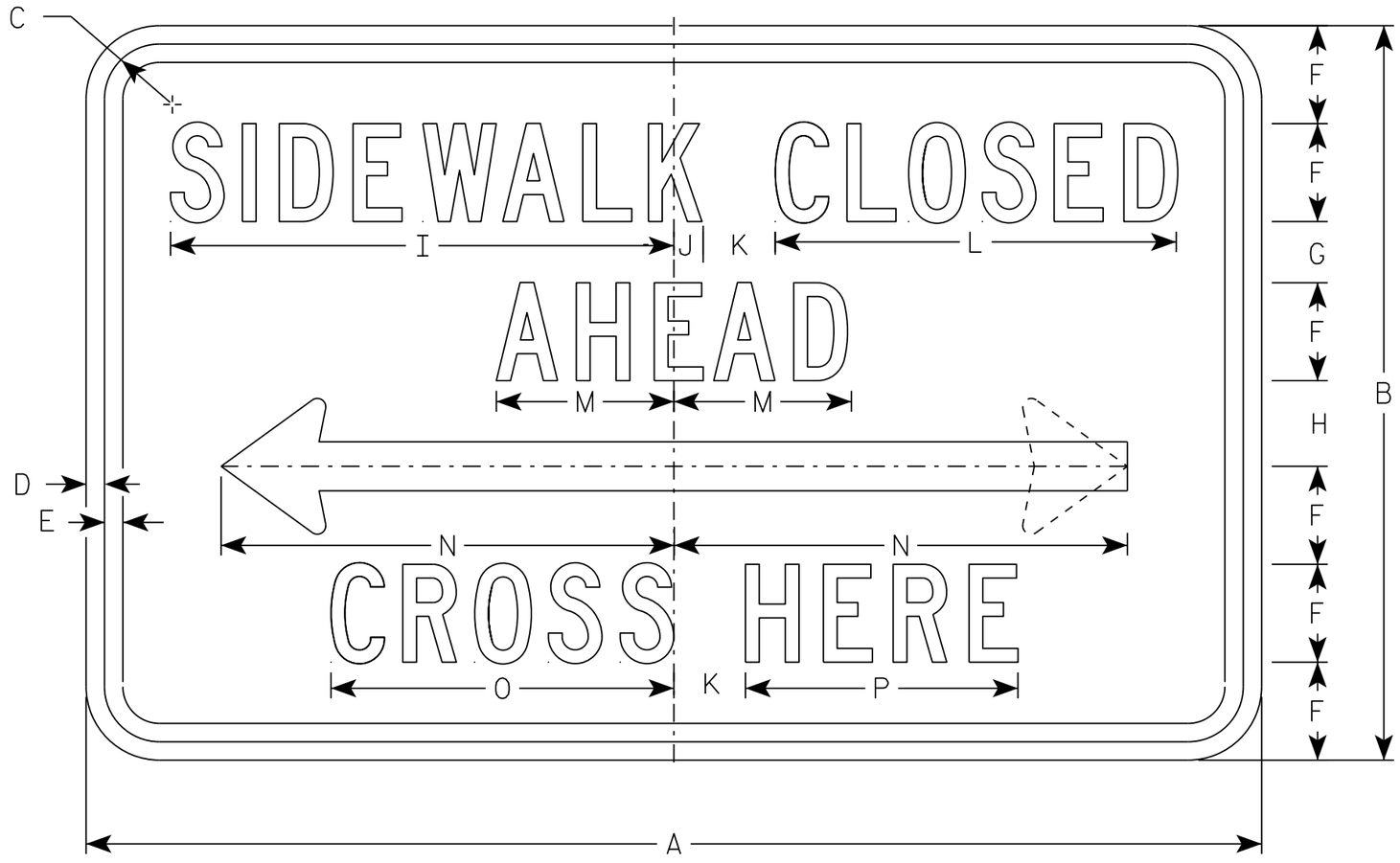
STANDARD SIGN
R9-9

WISCONSIN DEPT OF TRANSPORTATION

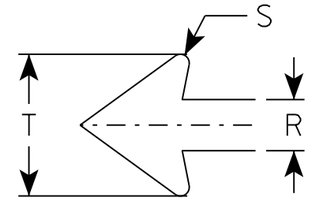
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/11/16 PLATE 144 R9-9.6

PROJECT NO: | HWY: | COUNTY: | SHEET NO: E



R9-11



NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - C except Size 1 is Series D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Use Size 2 for Sidewalks. Use Size 3 for Paths and Trails.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	12	1 1/8	3/8	3/8	1 1/2	1 1/2	1 1/2	9 3/4	5/8	1 1/2	7 5/8	3 1/2	9 1/4	6 5/8	5 1/8		1	1/8	2 3/4							2.0
2M	24	12	1 1/8	3/8	3/8	1 1/2	1 1/2	1 1/2	9 3/4	5/8	1 1/2	7 5/8	3 1/2	9 1/4	6 5/8	5 1/8		1	1/8	2 3/4							2.0
3	30	15	1 1/8	3/8	1/2	2	1 1/2	1 1/2	13	3/4	2	10 1/4	4 5/8	12 3/8	8 7/8	6 7/8		1 1/4	1/4	3 5/8							3.125
4																											
5																											

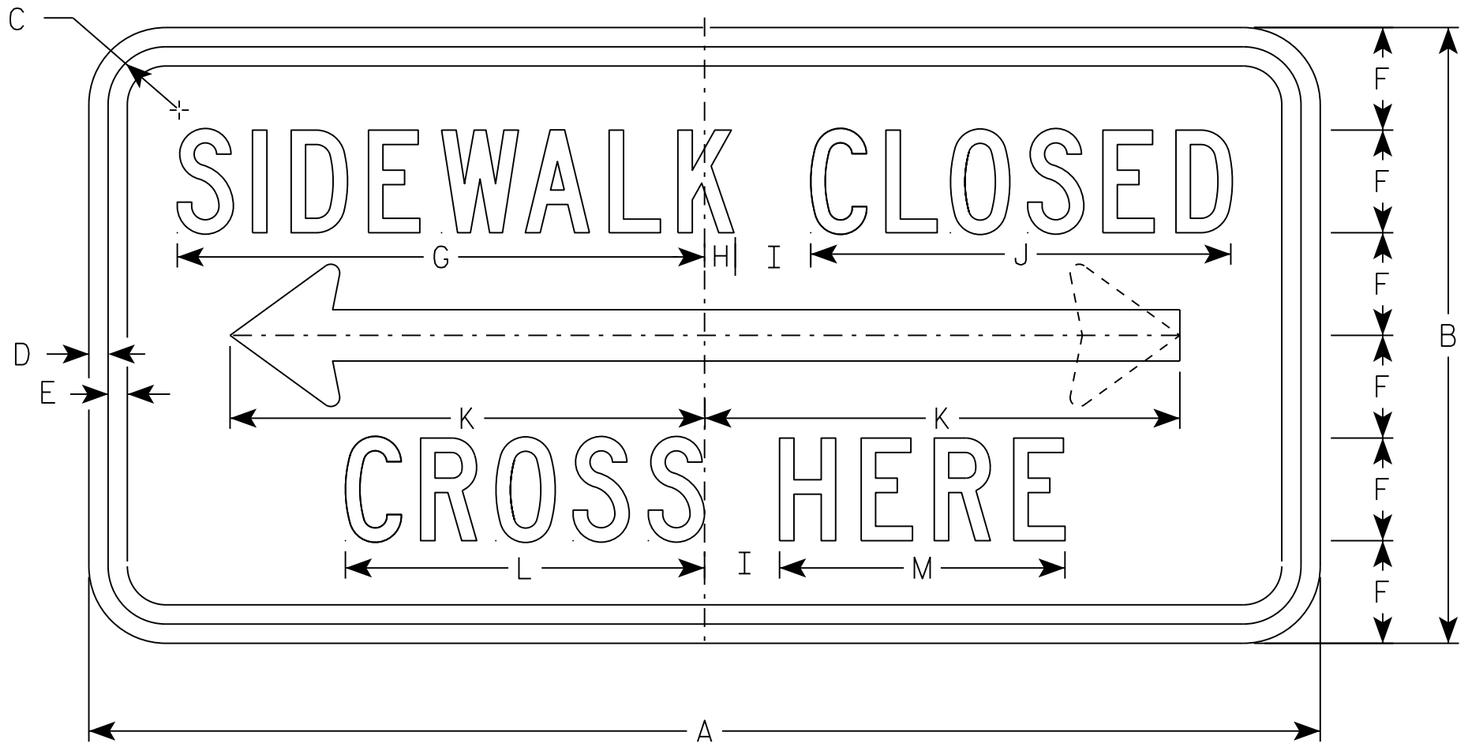
STANDARD SIGN
R9-11

WISCONSIN DEPT OF TRANSPORTATION

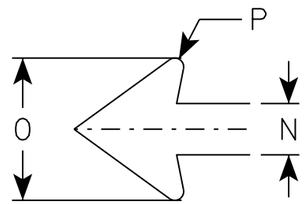
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/29/16 PLATE NO. R9-11.3

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 145	E



R9-11A



NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Use Size 2 for Sidewalks. Use Size 3 for paths and Trails.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	12	1 1/8	3/8	3/8	2	10 1/4	5/8	1 1/2	8 1/4	9 1/4	7	5 5/8	1	2 3/4	1/8											2.0
2M	24	12	1 1/8	3/8	3/8	2	10 1/4	5/8	1 1/2	8 1/4	9 1/4	7	5 5/8	1	2 3/4	1/8											2.0
3	30	15	1 1/8	3/8	1/2	2	13	3/4	2	10 1/4	12 3/8	8 7/8	6 7/8	1 1/4	3 5/8	1/4											3.125
4																											
5																											

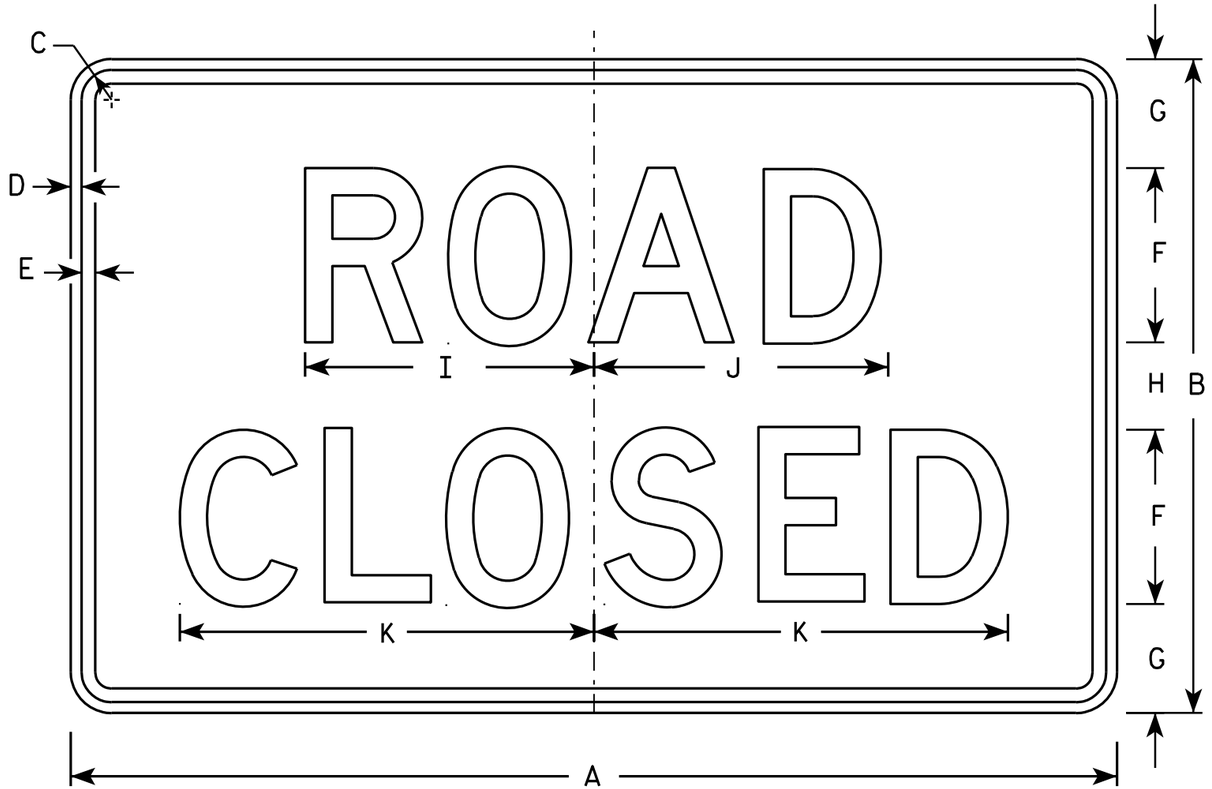
STANDARD SIGN
R9-11A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/29/16 PLATE NO. R9-11A.3

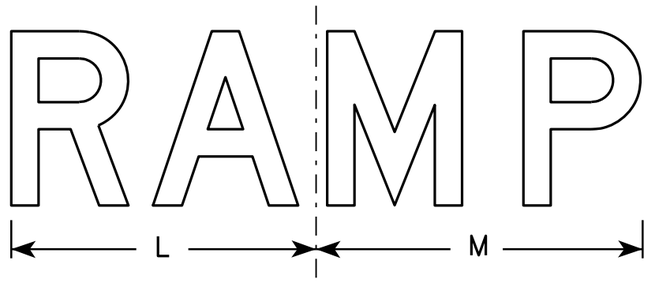
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 146 E



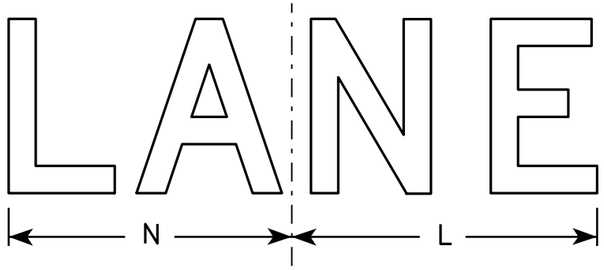
R11-2

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Modify the message as required.



R11-2R



R11-2L

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
2M	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
3	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
4	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
5	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0

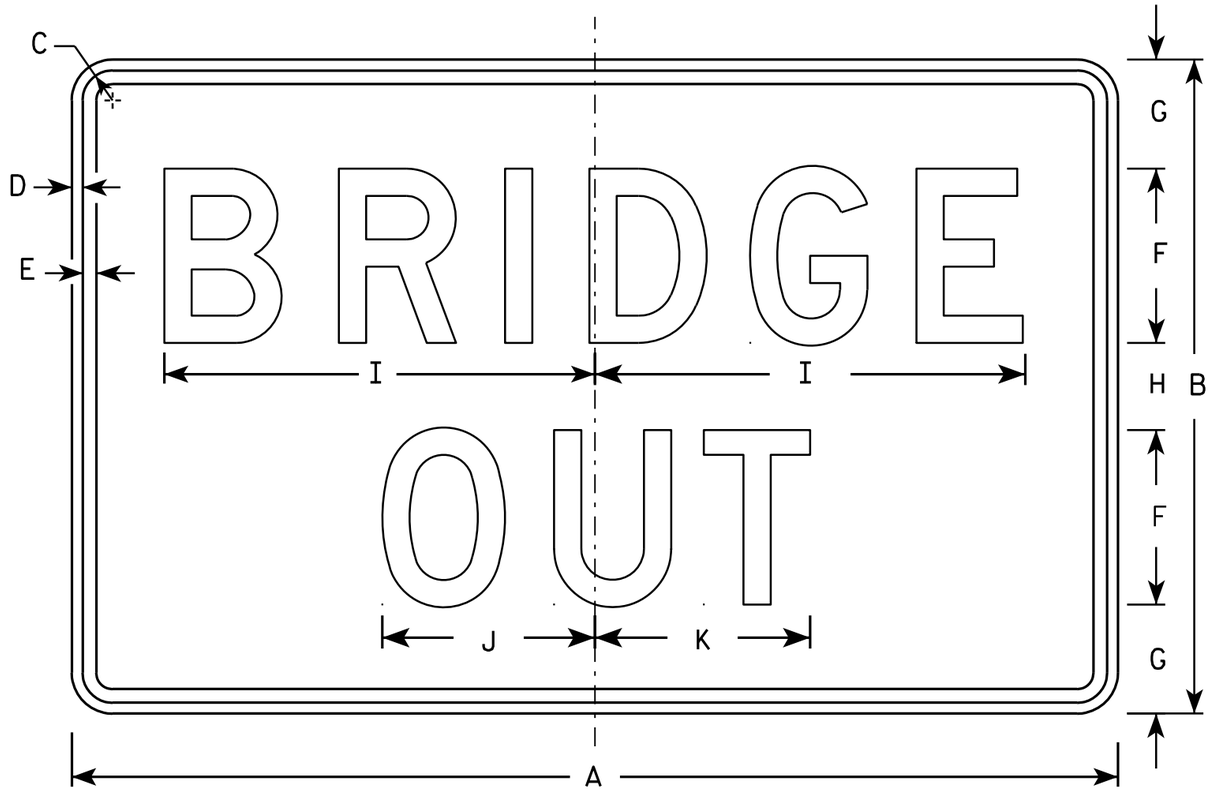
STANDARD SIGN
R11-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/1/11 PLATE NO. R11-2.10

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 147	E



R11-2B

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	30	1 3/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
2M	48	30	1 3/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
3	48	30	1 3/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
4	48	30	1 3/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
5	48	30	1 3/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0

STANDARD SIGN
R11-2B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 4/1/11 PLATE NO. R11-2B.2

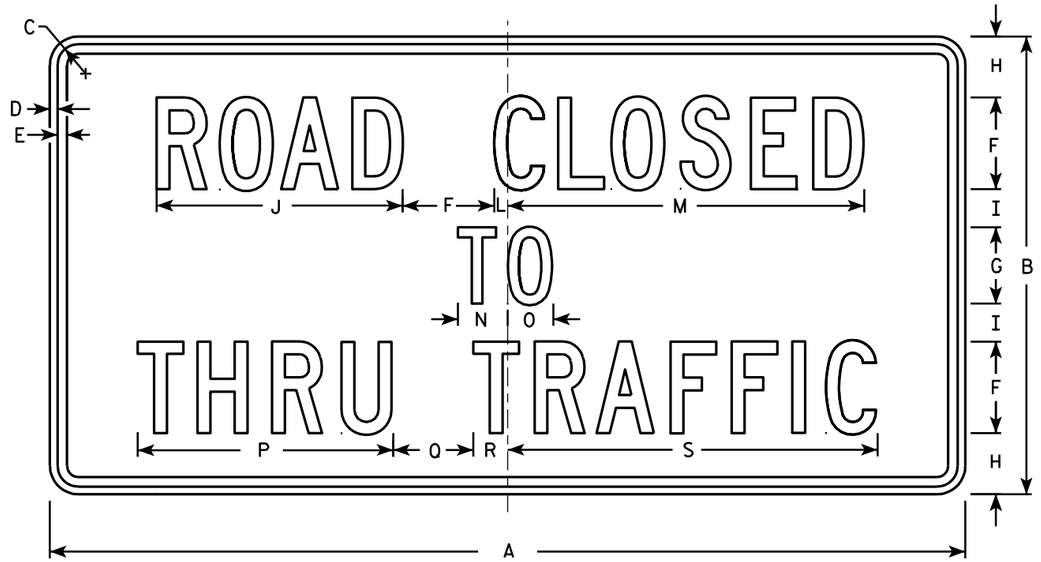
PROJECT NO:

SHEET NO: 148 E

7

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R112B.DGN PLOT DATE : 01-APR-2011 14:23 PLOT BY : mscj9h

WISDOT/CADDS SHEET 42



R11-4

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	60	30	1 3/8	1/2	5/8	6	5	4	2 1/2	16 1/8		7/8	23 3/8	3 1/4	3	16 3/4	5 1/4	2 1/4	24 1/4								12.5
2M	60	30	1 3/8	1/2	5/8	6	5	4	2 1/2	16 1/8		7/8	23 3/8	3 1/4	3	16 3/4	5 1/4	2 1/4	24 1/4								12.5
3																											
4																											
5																											

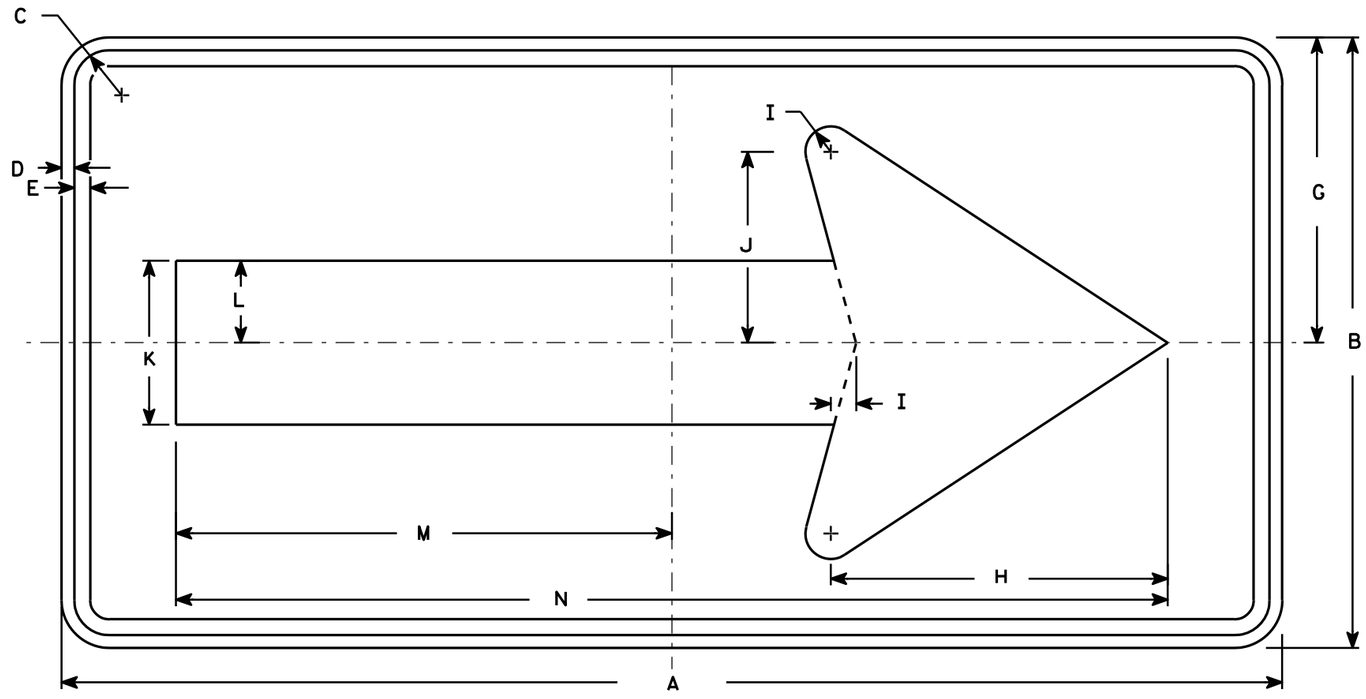
STANDARD SIGN
R11 - 4

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 4/1/11 PLATE NO. R11-4.3

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 149 | E



W1-6

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	18	1 1/8	3/8	3/8		9	10	3/4	5 5/8	4 3/4	2 3/8	14 5/8	29 1/4													4.5
2S	48	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
2M	48	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
3	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
4	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
5	96	48	2 1/4	3/4	1		24	26 1/2	2	15	13	6 1/2	39	78													32.0

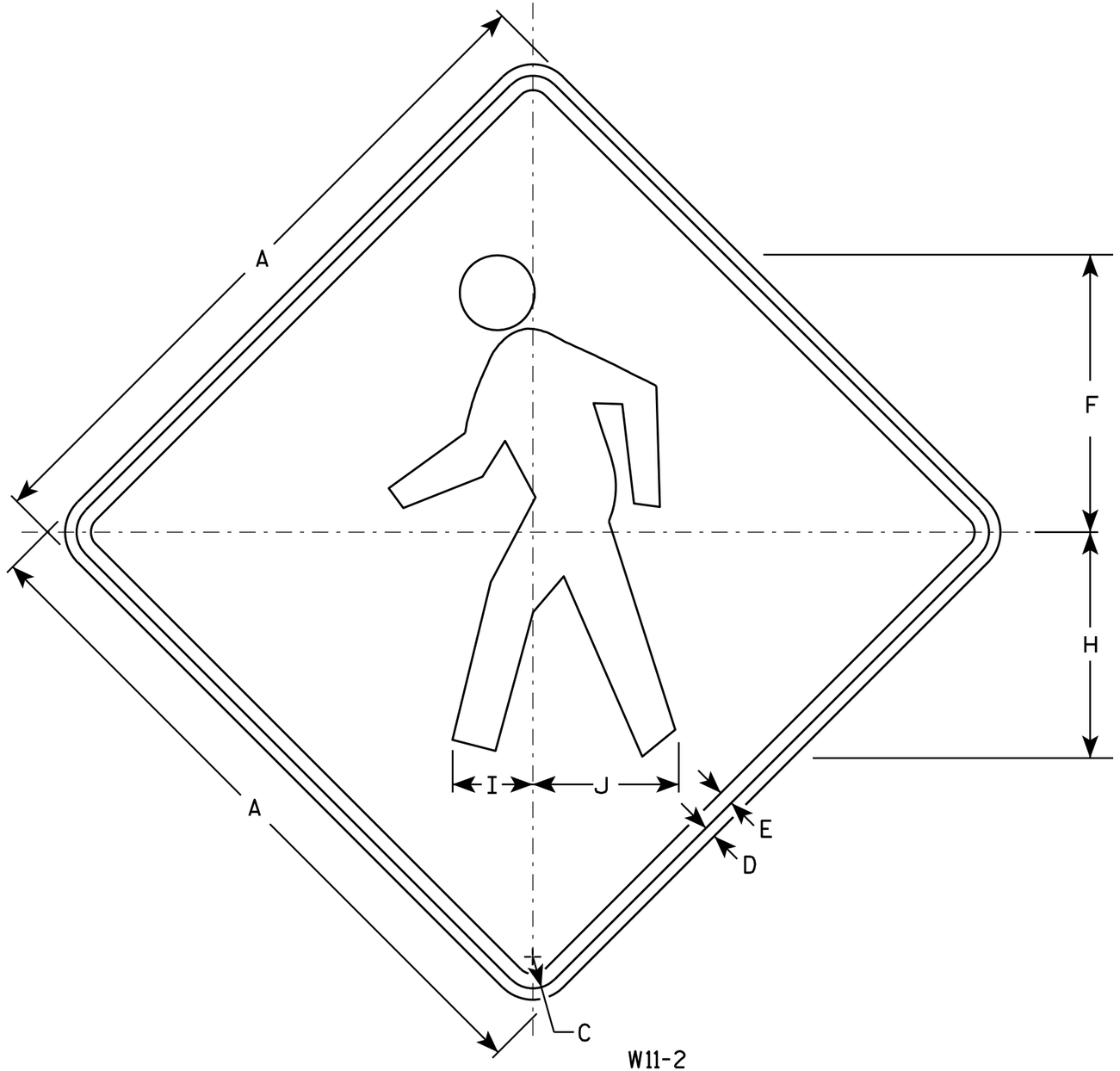
STANDARD SIGN
W1-6

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/7/10 PLATE NO. W1-6.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 150



W11-2

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2	9 3/4		7 7/8	2 7/8	5 1/8																	4.0
2S	30		1 3/8	1/2	5/8	12 1/8		9 7/8	3 1/2	6 3/8																	6.25
2M	36		1 5/8	5/8	3/4	14 1/2		11 7/8	4 1/4	7 5/8																	9.0
3	36		1 5/8	5/8	3/4	14 1/2		11 7/8	4 1/4	7 5/8																	9.0
4	48		2 1/4	3/4	1	19 3/8		15 3/4	5 5/8	10 1/4																	16.0
5																											

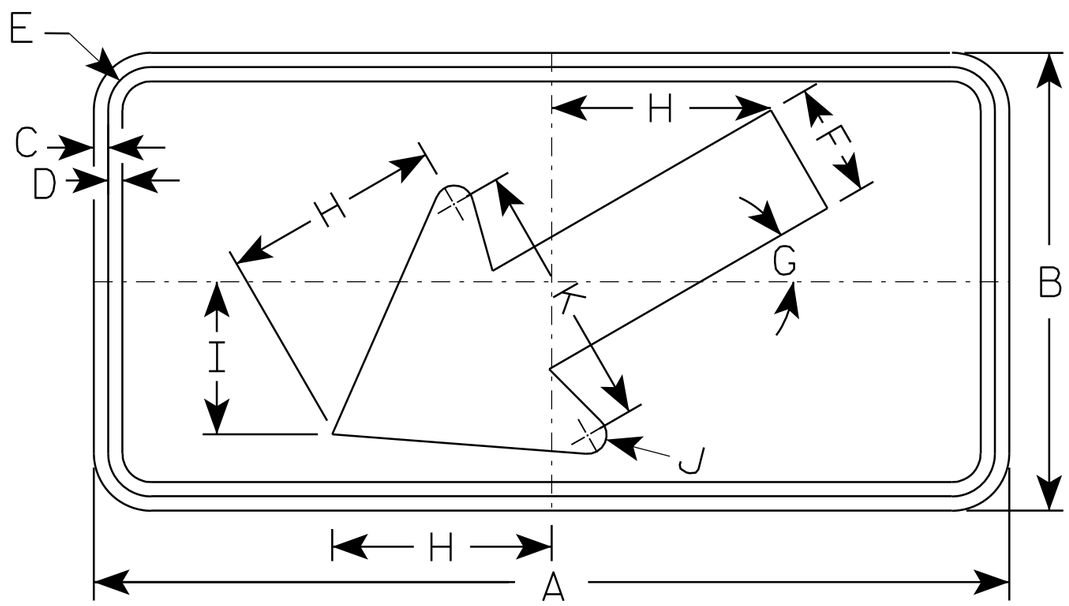
STANDARD SIGN
W11-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/7/10 PLATE NO. W11-2.7

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 151	E



W16-7L

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W16-7R is the same as W16-L except the arrow is reversed along the vertical centerline.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	12	3/8	3/8	1 1/8	3	30°	5 3/4	4	1/2	7																2.0
2M	30	18	3/8	1/2	1 1/8	4 1/2	30°	8 1/2	6	5/8	10 1/4																3.75
3	30	18	3/8	1/2	1 1/8	4 1/2	30°	8 1/2	6	5/8	10 1/4																3.75
4																											8
5																											8

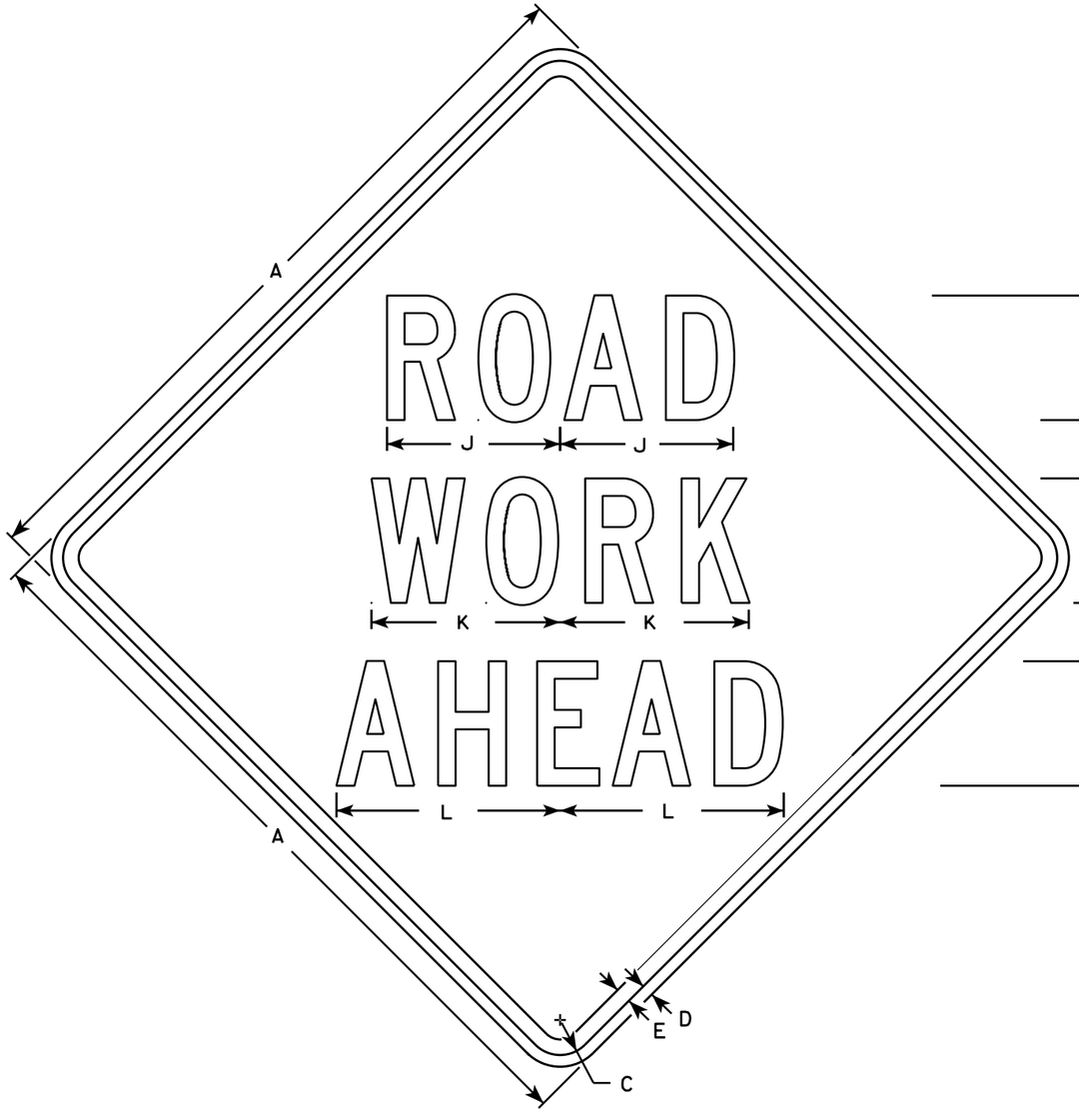
STANDARD SIGN
W16-7

WISCONSIN DEPT OF TRANSPORTATION

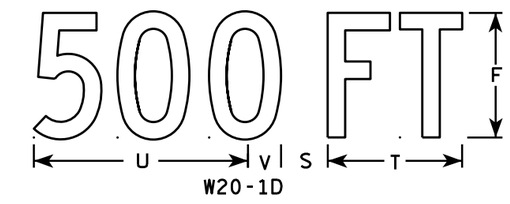
APPROVED Matthew R Rauch
for State Traffic Engineer

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

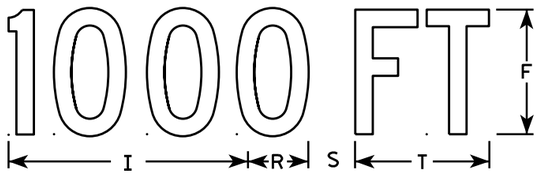
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 152	E



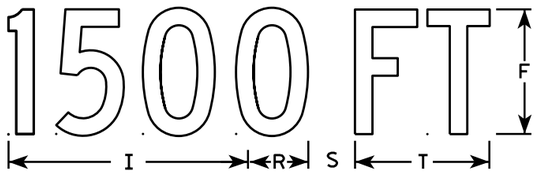
W20-1A



W20-1D



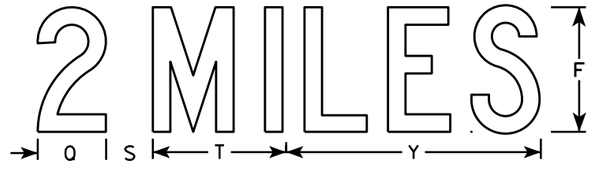
W20-1C



W20-1B

W20-1G

W20-1F



W20-1E

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 3/8	1/2	5/8	5	2 5/8	3 1/4	10 1/8	7	7 5/8	8 7/8	1 1/8	4 1/2	3 1/2	9		2 1/2	2 1/4	5 5/8	9	1 3/8	8	1 3/4	10 3/4	6	9.0
2S	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
2M	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
3	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
4	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
5	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0

STANDARD SIGN
W20-1A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

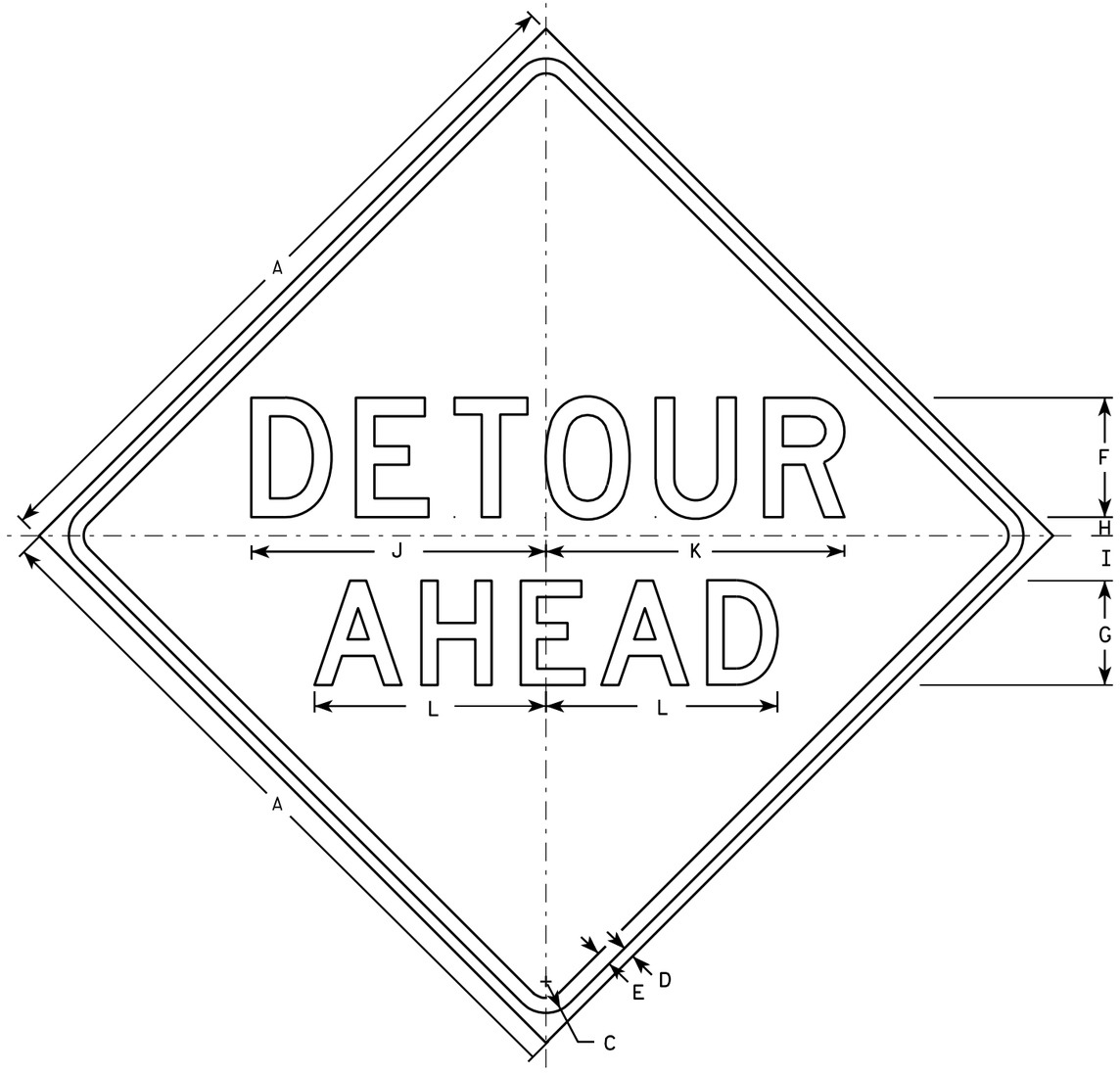
APPROVED

State Traffic Engineer

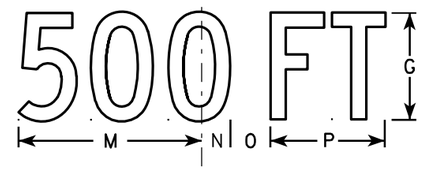
DATE 5/07/15 PLATE NO. W20-1.10

PROJECT NO:

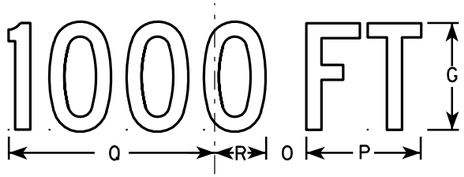
SHEET NO: E



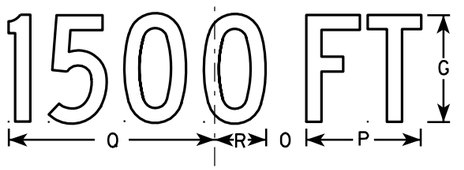
W20-2A



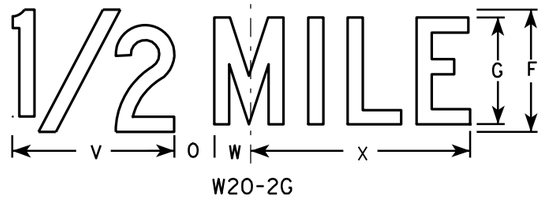
W20-2D



W20-2C



W20-2B



W20-2G

W20-2F

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - See note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Line 1 is Series D.
   Line 2 is Series D for AHEAD and Series C for all other distances.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	6	5	1	2 1/4	14 3/4	15	11 5/8	9	1 3/8	1 7/8	5 5/8	10 1/8	2 1/2	1 1/8	4 1/2	3 1/2	8	1 3/4	10 3/4			9.0
2S	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
2M	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
3	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
4	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
5	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0

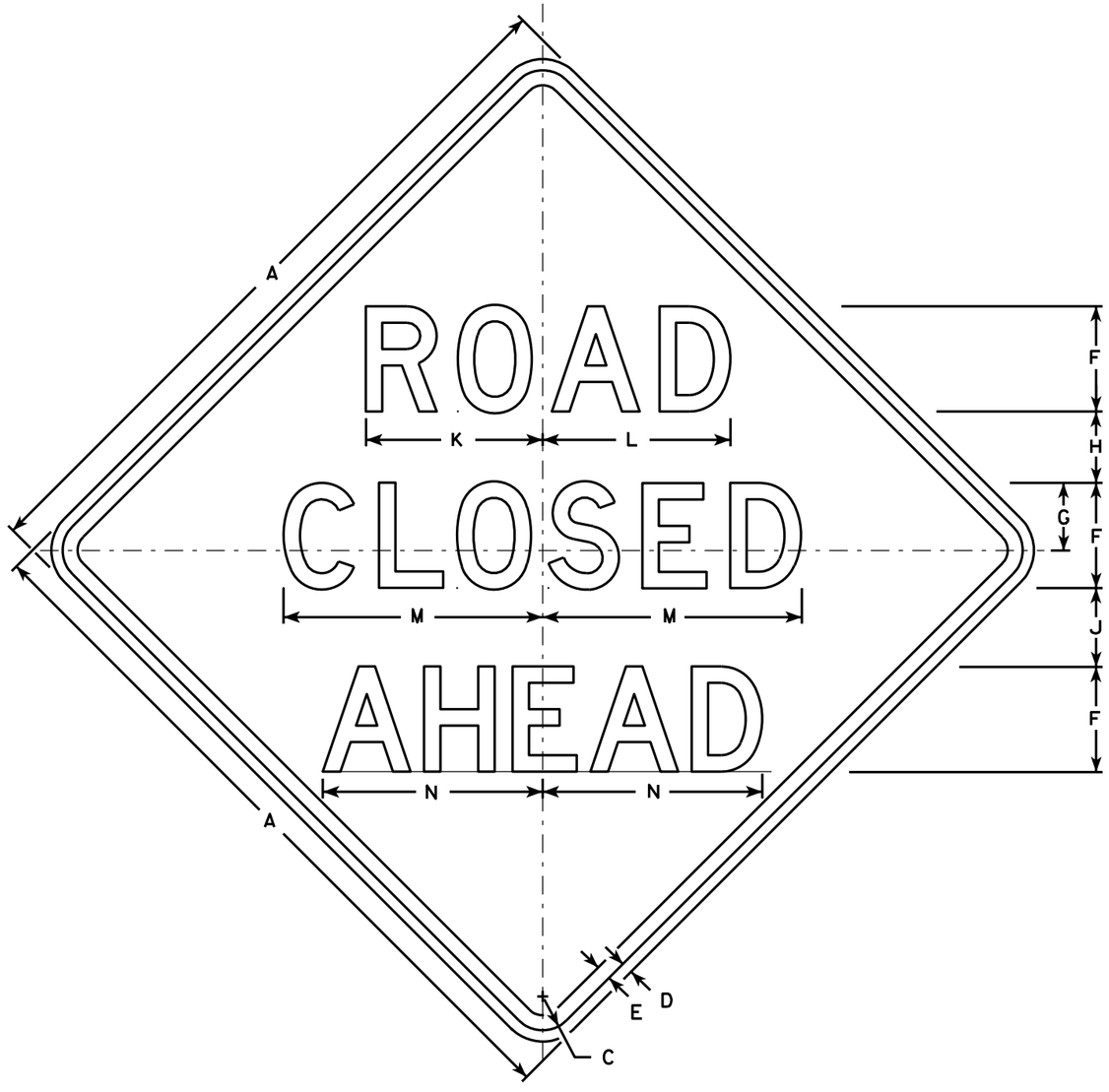
STANDARD SIGN
W20-2A,B,C,D,F & G

WISCONSIN DEPT OF TRANSPORTATION

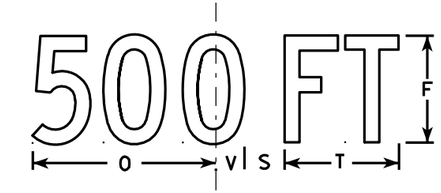
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-2.6

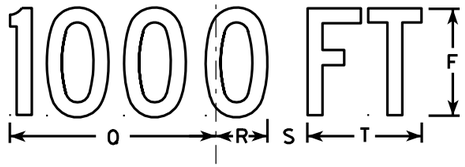
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 154 | E



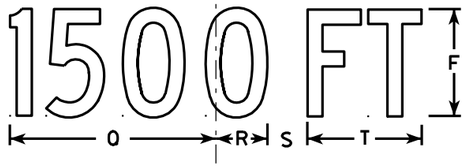
W20-3A



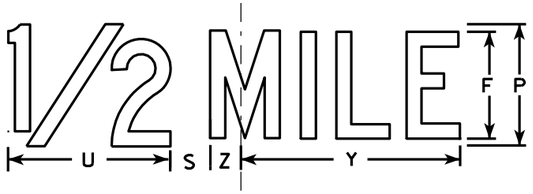
W20-3D



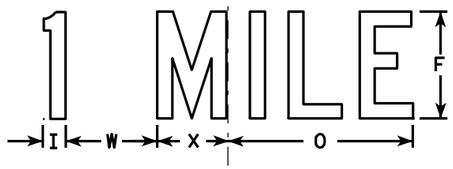
W20-3C



W20-3B



W20-3G



W20-3F

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - see note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Lines 1 and 2 are Series D.
   Line 3 is Series D for AHEAD and Series C for all other distances.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	5	3 3/8	3 1/2	1 1/8	4	8 3/8	8 7/8	12 1/2	11	9	6	10 1/8	2 1/2	1 7/8	5 5/8	8	1 3/8	4 1/2	3 1/2	10 3/4	1 3/4	9.0
2S	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
2M	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
3	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
4	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
5	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0

STANDARD SIGN
W20-3A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer
DATE 3/18/11 PLATE NO. W20-3.7

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 155 | E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W203.DGN PLOT DATE : 18-MAR-2011 12:08 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 9.931739:1.000000

WISDOT/CADDS SHEET 42

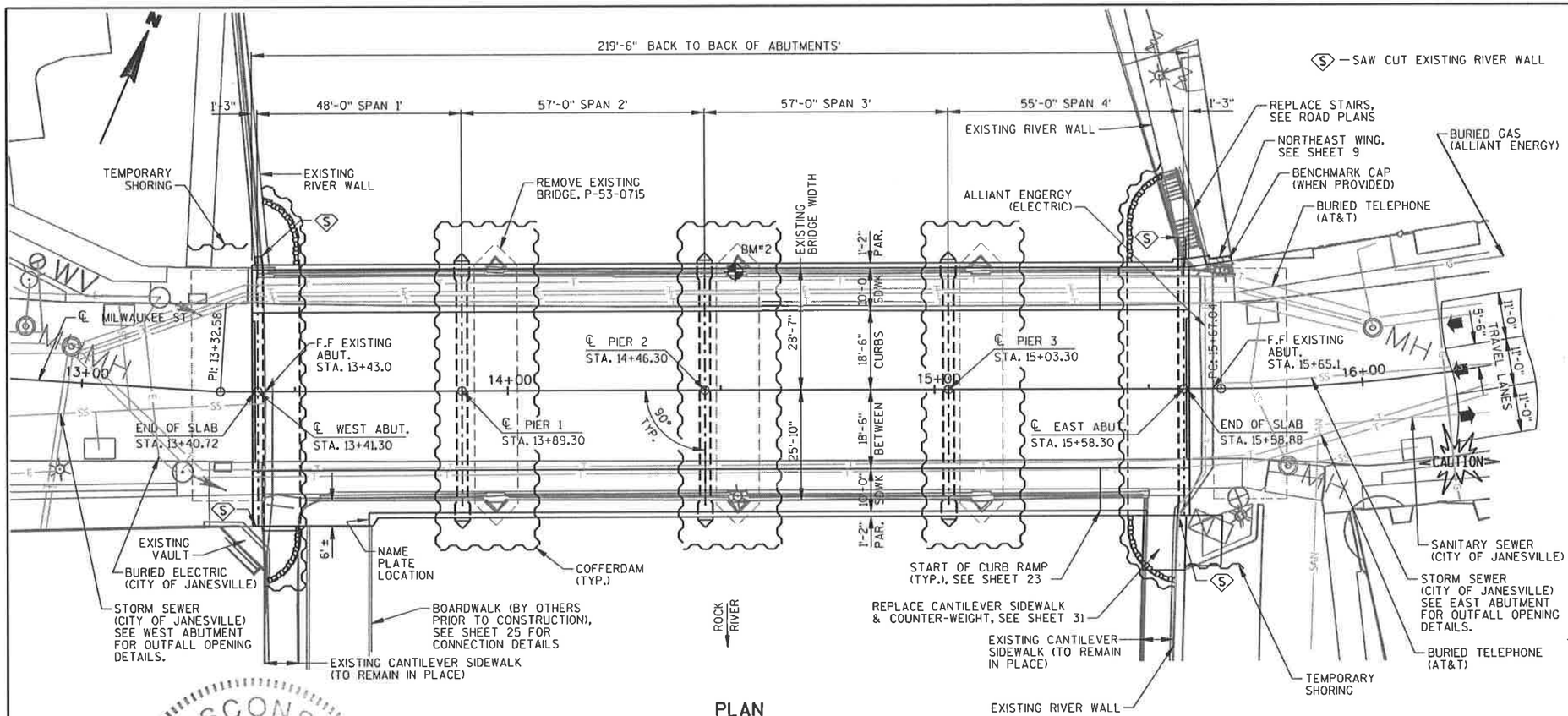
7

7

STATE PROJECT NUMBER
5990-00-34

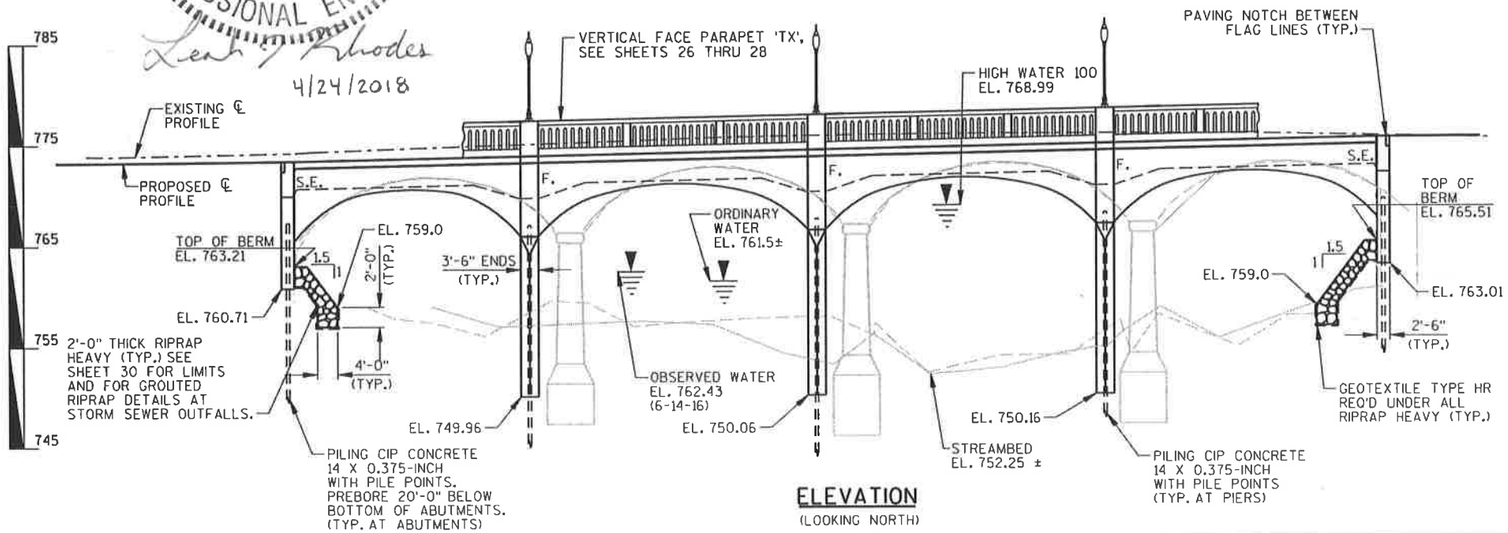
BENCHMARKS — NAVD 88

NO.	STA./OFFSET	DESCRIPTION	ELEV.
1	12+86.2, 23.4' LT.	TOP NUT OF FIRE HYDRANT	776.39
2	14+53.6, 27.7' LT.	CHISELED SQUARE, TOP OF PARAPET	779.38



PLAN

(FOUR SPAN HAUNCHED CONCRETE SLAB STRUCTURE)



ELEVATION

(LOOKING NORTH)

DESIGN DATA

LIVE LOAD:

DESIGN LOADING : HL-93
INVENTORY RATING FACTOR : 1.07
OPERATIONAL RATING FACTOR : 1.39

TRAFFIC DATA:

A.A.D.T. (2018) = 6,700
A.A.D.T. (2038) = 7,500
RDS = 30 MPH

WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) = 250 KIPS.

STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 POUNDS PER SQUARE FOOT.

MATERIAL PROPERTIES:

CONCRETE MASONRY, SLAB, ARCH FASCIA, SIDEWALKS, PARAPETS, & CANTILEVER SIDEWALK — f'_c = 4,000 P.S.I.
ALL OTHER — f'_c = 3,500 P.S.I.

HIGH-STRENGTH BAR STEEL REINFORCEMENT, GRADE 60 — f_y = 60,000 P.S.I.

FOUNDATION DATA:

ABUTMENTS TO BE SUPPORTED ON PILING CIP CONCRETE 14 X 0.375-INCH WITH PILE POINTS. DRIVE WEST ABUTMENT PILES TO A REQUIRED DRIVING RESISTANCE OF 150 TONS ✳ PER PILE. DRIVE EAST ABUTMENT PILES TO A REQUIRED DRIVING RESISTANCE OF 180 TONS ✳ PER PILE. PRIOR TO DRIVING ABUTMENT PILING, PREBORE TO A DEPTH OF 20'-0" BELOW THE BOTTOM OF THE ABUTMENTS. PIERS TO BE SUPPORTED ON PILING CIP CONCRETE 14 X 0.375-INCH WITH PILE POINTS. DRIVE PIER PILES TO A REQUIRED DRIVING RESISTANCE OF 240 TONS ✳ PER PILE. PIER PILES SHALL BE DRIVEN TO A MINIMUM LENGTH OF 80'-0" TO PREVENT THEM FROM BEARING ON A SHALLOWER DENSE LAYER. REQUIRED DRIVING RESISTANCE IS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED ABUTMENT PILE LENGTHS ARE 70'-0". ESTIMATED PIER PILE LENGTHS ARE 100'-0".

✳ THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS THE REQUIRED DRIVING RESISTANCE MULTIPLIED BY A RESISTANCE FACTOR OF 0.5.

HYDRAULIC DATA:

100 YEAR FREQUENCY

DRAINAGE AREA	3.310 SQ. MI.
Q_{100}	16,600 C.F.S.
VELOCITY	7.38 F.P.S.
WATERWAY AREA	2,250 SQ. FT.
HIGH WATER$_{100}$ ELEVATION	768.99
ROADWAY OVERFLOW DESIGN FREQUENCY	> 100 YEARS
SCOUR CRITICAL CODE	5
Q_2 (3,400 C.F.S.)	762.27
VELOCITY$_2$	3.4 F.P.S.

LIST OF DRAWINGS

CONSULTANT DESIGN CONTACT:
LEAH RHODES
(608) 355-8945

BRIDGE OFFICE CONTACT:
WILLIAM DREHER
(608) 266-8489

WISCONSIN — LEAH J. RHODES — E-41726 — BARABOO WI — PROFESSIONAL ENGINEER
Leah J. Rhodes 4/24/2018

NO.	DATE	REVISION	BY

MSA PROFESSIONAL SERVICES
TRANSPORTATION • MUNICIPAL DEVELOPMENT • ENVIRONMENTAL
1230 South Boulevard Baraboo, WI 53913
608-356-2771 1-800-362-4505 Fax: 608-356-2770

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
ACCEPTED William C. Dreher SOR 05/03/18
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-53-294

MILWAUKEE STREET OVER ROCK RIVER

COUNTY	TOWN/CITY/~~VILLAGE~~
ROCK	JANESVILLE

DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
DHW	JAS	RLR	LJR

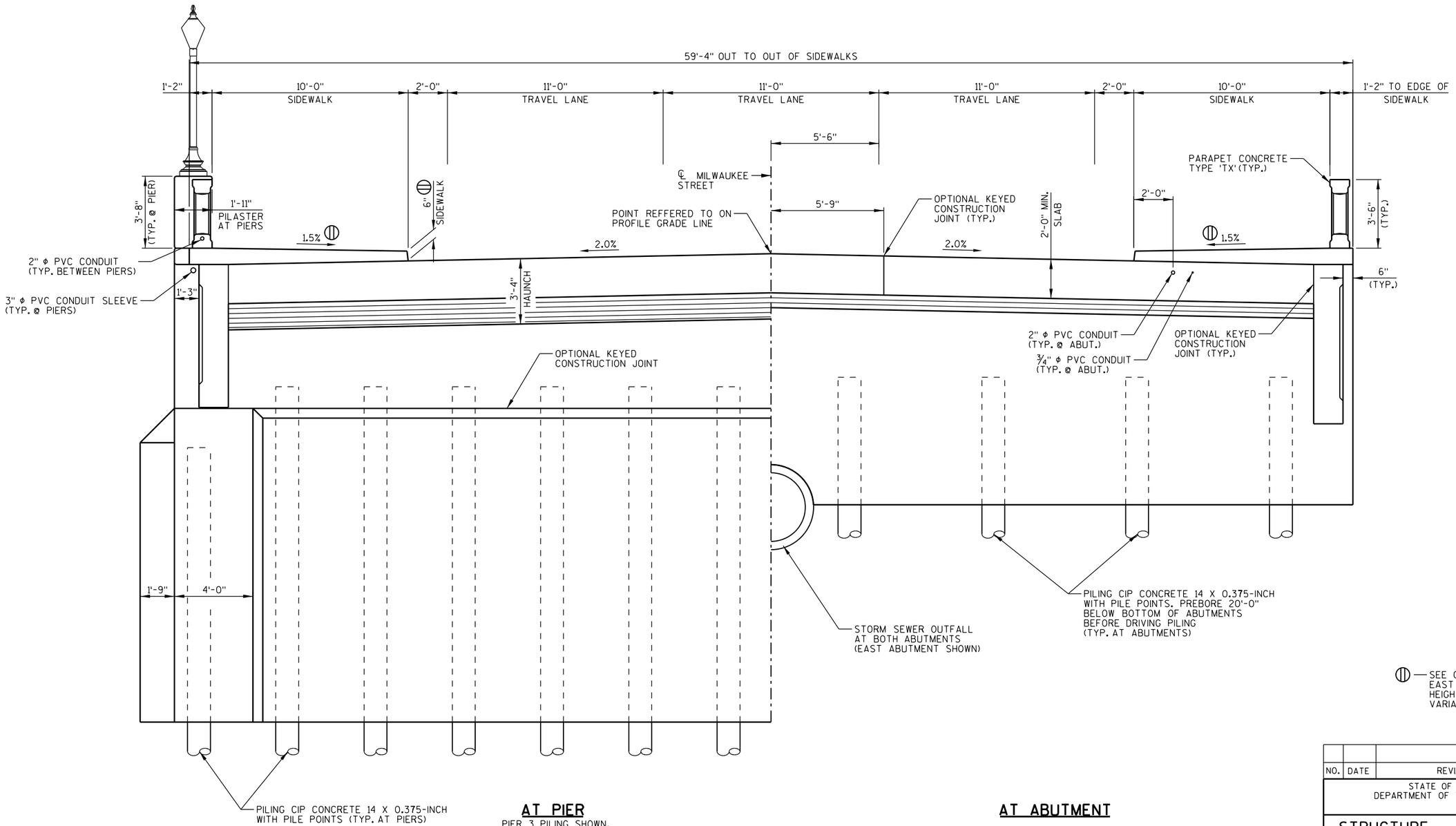
GENERAL PLAN

SHEET 1 OF 32
156

FILE= 879002_01.DGN
DATE= 4/12/2018

879002_01.dgn 4/12/2018 7:16:16 AM rabska

STATE PROJECT NUMBER
5990-00-34



AT PIER
PIER 3 PILING SHOWN. NUMBER OF PILING VARIES AT EACH PIER

AT ABUTMENT

CROSS SECTION THRU BRIDGE
(LOOKING EAST)

⌀ — SEE CURB RAMPS AT EAST ABUTMENT FOR HEIGHT AND SLOPE VARIANCES.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-53-294

DRAWN BY RLR | PLANS CK'D. LJR

CROSS SECTION

SHEET 2 OF 32
157

FILE= 879002_02.DGN
DATE= 3/12/2018

8

8

879002_02.dgn 3/12/2018 2:56:44 PM rrabska

STATE PROJECT NUMBER

5990-00-34

TOTAL STRUCTURE ESTIMATED QUANTITIES

ITEM NUMBER	BID ITEM	UNIT	WEST ABUTMENT	PIER 1	PIER 2	PIER 3	EAST ABUTMENT	SUPER-STRUCTURE	CANTILEVER SIDEWALK	TOTAL
206.1000.01	EXCAVATION FOR STRUCTURES BRIDGES B-53-294	LS	-	-	-	-	-	-	-	1
206.5000.01	COFFERDAMS B-53-294	LS	-	-	-	-	-	-	-	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	600	-	-	-	600	-	30	1230
502.0100	CONCRETE MASONRY BRIDGES	CY	53	121	124	125	66	1222	15	1726
502.2000.01	COMPRESSION JOINT SEALER PREFORMED ELASTOMERIC (2 1/4 - INCH)	LF	-	-	-	-	5	19	-	24
502.3200	PROTECTIVE SURFACE TREATMENT	SY	-	-	-	-	-	1430	20	1450
502.3210	PIGMENTED SURFACE SEALER	SY	-	-	-	-	-	450	-	450
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	4705	6185	6345	6480	4485	-	-	28200
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	-	110	110	110	1060	180490	1510	183390
506.2605	BEARING PADS ELASTOMERIC NON-LAMINATED	EACH	-	2	2	2	-	-	-	6
511.1200.01	TEMPORARY SHORING B-53-294	SF	170	-	-	-	-	-	130	300
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	16	-	-	-	19	-	5	40
550.0010	PRE-BORING UNCONSOLIDATED MATERIALS	LF	160	-	-	-	160	-	-	320
550.0500	PILE POINTS	EACH	8	13	12	14	8	-	-	55
550.2146	PILING CIP CONCRETE 14 X 0.375-INCH	LF	560	1300	1200	1400	560	-	-	5020
606.0300	RIPRAP HEAVY	CY	65	-	-	-	90	-	-	155
606.0700	GROUTED RIPRAP HEAVY	CY	15	-	-	-	15	-	-	30
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	65	-	-	-	70	-	-	135
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	60	-	-	-	60	-	-	120
645.0120	GEOTEXTILE TYPE HR	SY	160	-	-	-	210	-	-	370
652.0105	CONDUIT RIGID METALLIC 3/4-INCH	LF	-	-	-	-	-	16	-	16
652.0125	CONDUIT RIGID METALLIC 2-INCH	LF	-	-	-	-	-	20	-	20
652.0205	CONDUIT RIGID NONMETALLIC SCHEDULE 40 3/4-INCH	LF	-	-	-	-	-	540	-	540
652.0225	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	LF	-	-	-	-	-	670	-	670
652.0235	CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH	LF	-	-	-	-	-	21	-	21
653.0222	JUNCTION BOXES 18X12X6-INCH	EACH	-	-	-	-	-	7	-	7
657.6005	ANCHOR ASSEMBLIES LIGHT POLES ON STRUCTURES	EACH	-	-	-	-	-	7	-	7
SPV.0060.22	SIDEWALK COVER PLATE	EACH	-	-	-	-	-	1	-	1
SPV.0090.09	PARAPET CONCRETE TYPE 'TX'	LF	-	-	-	-	6	401	-	407
SPV.0105.05	REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS STATION 14+54	LS	-	-	-	-	-	-	-	1
SPV.0105.08	REMOVE AND REATTACH EXISTING RAILING	LS	-	-	-	-	-	-	-	1
SPV.0105.09	REMOVE, SALVAGE, MODIFY, AND REATTACH EXISTING RAILING	LS	-	-	-	-	-	-	-	1
SPV.0105.10	RECONSTRUCT CANTILEVER SIDEWALK	LS	-	-	-	-	-	-	-	1
	NON-BID ITEMS									
	PREFORMED FILLER	SIZE	-		-	-	-	-		½", ¾"
	CORK FILLER	SIZE	-		-	-	-	-		¾" , 1½"

GENERAL NOTES

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 AND THE FIRST TWO DIGITS OF A FOUR DIGIT BAR MARK SIGNIFY THE BAR SIZE.

THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH RIPRAP HEAVY OR GROUTED RIPRAP HEAVY AND GEOTEXTILE TYPE HR TO THE LIMITS SHOWN ON SHEETS 1 & 30 AND ON THE ABUTMENT SHEETS OR AS DIRECTED BY THE ENGINEER.

COFFERDAMS ARE REQUIRED FOR THE CONSTRUCTION OF THE ABUTMENTS AND PIERS, FOR EXISTING RIVERWALL CUTOFFS/REMOVALS, FOR EXISTING PIER REMOVALS, AND FOR PLACEMENT OF ABUTMENT RIPRAP HEAVY, GROUTED RIPRAP HEAVY, AND GEOTEXTILE TYPE HR. COFFERDAMS PLACED CONCURRENTLY SHALL HAVE A CUMULATIVE WIDTH OF NO MORE THAN 90 FEET MEASURED PERPENDICULAR TO THE DIRECTION OF THE STREAM FLOW.

THE EXISTING GROUNDLINE SHALL BE THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES" FOR THE ABUTMENTS. THE EXISTING STREAMBED SHALL BE THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES" FOR THE PIERS.

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-53-0715, A 222.1 FOOT LONG BY 54.4 FOOT WIDE, FOUR SPAN, EARTH FILLED CONCRETE SPANDREL ARCH BRIDGE SET ON CONCRETE ABUTMENTS AND CONCRETE PIERS FOUNDED ON TIMBER PILING. 222.1 FOOT STRUCTURE LENGTH IS MEASURED BETWEEN THE FRONT FACES OF THE EXISTING ABUTMENTS.

THE BACKFILL QUANTITIES ARE BASED ON THE PAY LIMITS SHOWN ON THE PLANS AND MAY NOT REFLECT ACTUAL PLACED QUANTITIES. "BACKFILL STRUCTURE TYPE A" REQUIRED DIRECTLY BEHIND ABUTMENTS FOR 3 FEET. BACKFILL PLACED BEYOND PAY LIMITS OR EXCEEDING PLAN QUANTITIES SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES.

Ⓑ - BACKFILL PAY LIMITS. BACKFILL BEYOND BACKFILL PAY LIMITS SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES. LIMITS OF EXCAVATION SHALL BE DETERMINIED BY THE CONTRACTOR, EXCEPT FOR THE REQUIRED EXCAVATION LIMITS DEFINED ON THE ROAD PLANS FOR CONTAMINATED SOIL AT THE WEST ABUTMENT.

DO NOT PLACE FILL ABOVE 3'-0" FROM THE BOTTOM OF ABUTMENT UNTIL THE SUPERSTRUCTURE IS IN PLACE.

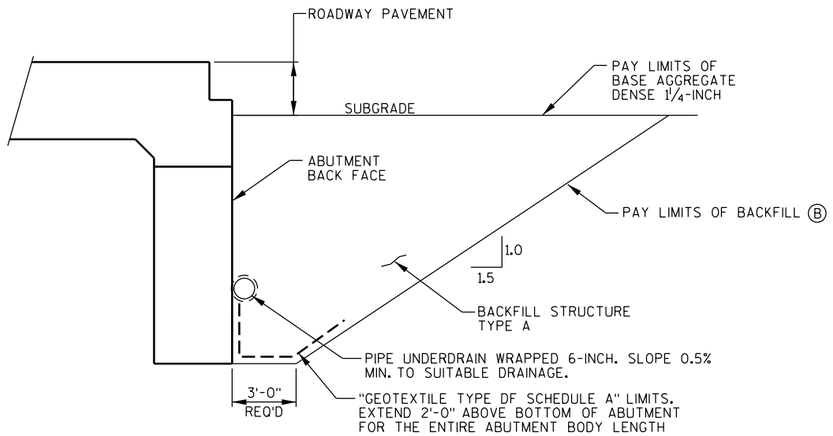
PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE TOP OF SLAB AND TO THE INSIDE FACE AND TOP OF SIDEWALKS. PROTECTIVE SURFACE TREATMENT SHALL ALSO BE APPLIED TO THE TOP, CURB, OUTSIDE EDGE, AND 1'-0" OF THE UNDERSIDE OF THE NEW CANTILEVER SIDEWALK.

PIGMENTED SURFACE SEALER SHALL BE APPLIED TO THE PARAPETS, PILASTERS FOR LIGHT STANDARDS, AND TO THE EDGE AND EXPOSED UNDERSIDE OF THE SIDEWALK OVERHANGS.

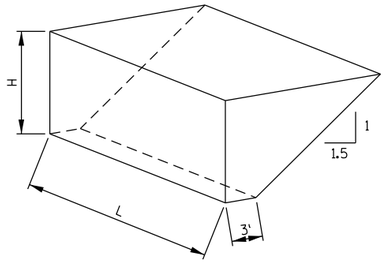
THE AREA OF PARAPET USED TO DETERMINE THE QUANTITY OF PIGMENTED SURFACE SEALER SHALL BE THE LENGTH TIMES THE SUM OF THE INSIDE HEIGHT, TOP WIDTH, AND OUTSIDE HEIGHT FOR EACH PARAPET.

ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO USGS NAVD 88 (2011 ADJUSTED). BENCHMARK REFERENCES AT THE PROJECT SITE WERE SET BY THE CONSULTANT USING GPS TECHNOLOGY.

SEE SPECIAL PROVISIONS FOR INSTRUCTIONS ON OBTAINING THE EXISTING BRIDGE PLANS.

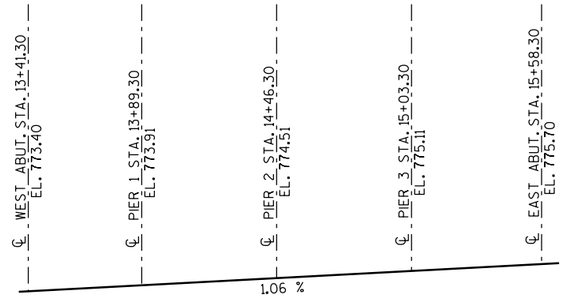


STRUCTURE BACKFILL DETAIL



ABUTMENT BACKFILL DIAGRAM

L = OUT-TO-OUT OF ABUTMENT
H = AVERAGE ABUTMENT FILL HEIGHT
V_{CF} = (L)(3.0')(H)+(L)(0.5)(1.5H)(H)
V_{TON} = V_{CF} (2.0)/27



PROFILE GRADE LINE - ℄ MILWAUKEE STREET

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-53-294

DRAWN BY RLR | PLANS CK'D. LJR

QUANTITIES, PROFILE & NOTES

SHEET 3 OF 32
158

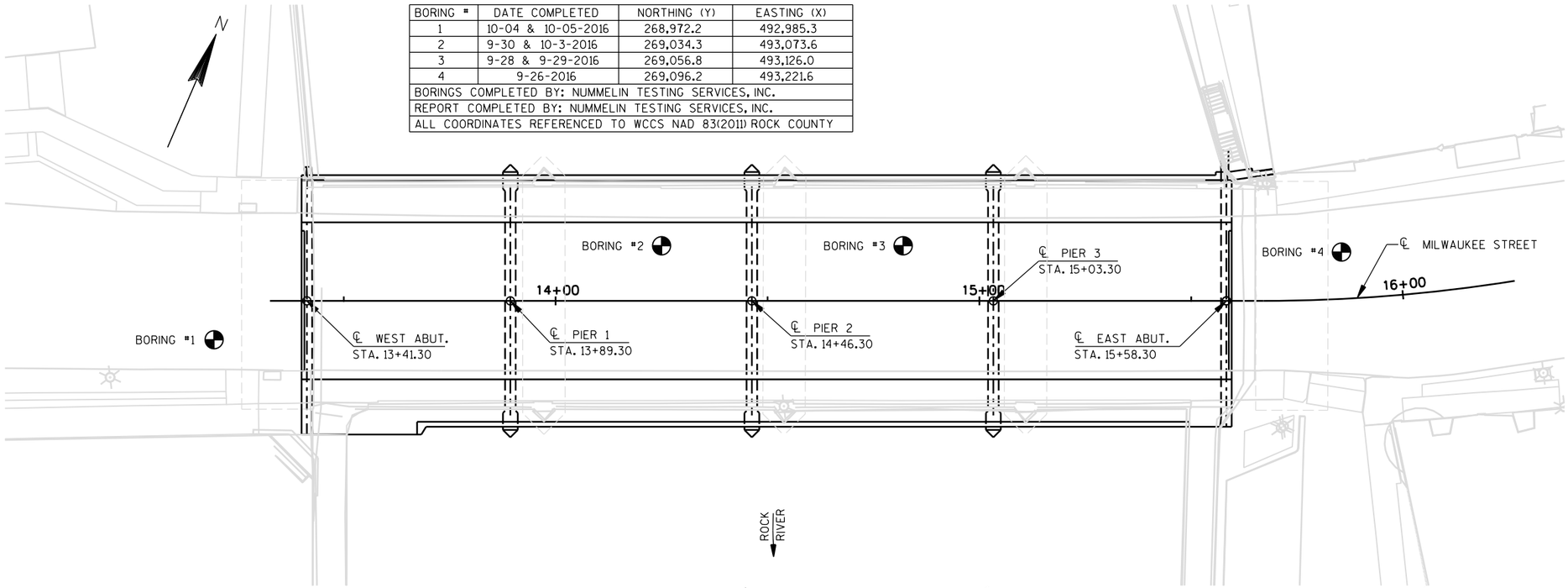
8

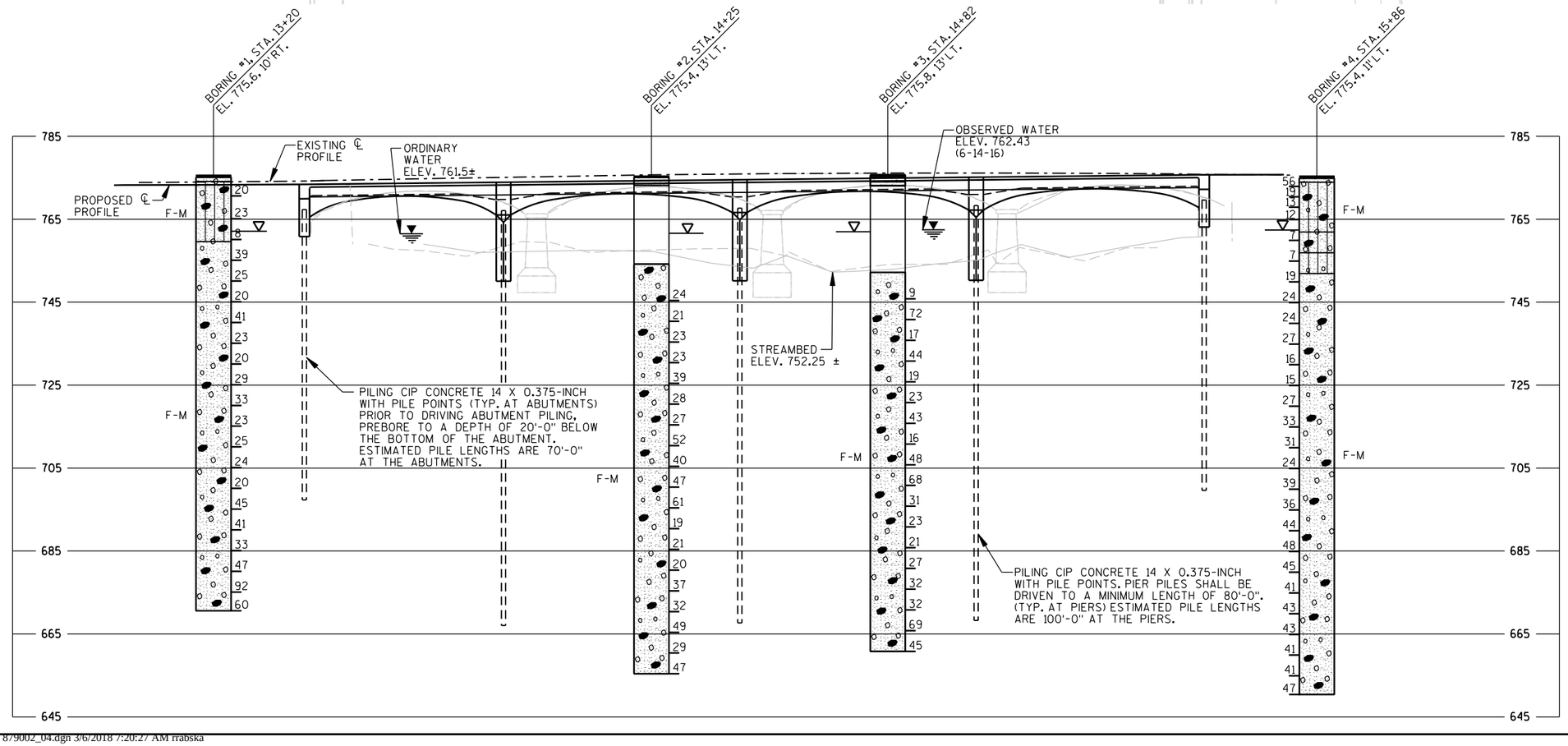
8

879002_03.dgn 4/19/2018 10:25:07 AM jsnyder

FILE= 879002_03.DGN
DATE= 4/19/2018

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
1	10-04 & 10-05-2016	268,972.2	492,985.3
2	9-30 & 10-3-2016	269,034.3	493,073.6
3	9-28 & 9-29-2016	269,056.8	493,126.0
4	9-26-2016	269,096.2	493,221.6
BORINGS COMPLETED BY: NUMMELIN TESTING SERVICES, INC.			
REPORT COMPLETED BY: NUMMELIN TESTING SERVICES, INC.			
ALL COORDINATES REFERENCED TO WCCS NAD 83(2011) ROCK COUNTY			





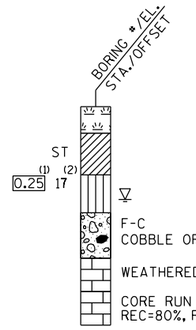
STATE PROJECT NUMBER

5990-00-34

MATERIAL SYMBOLS

ASPHALT, TOPSOIL, PEAT, CONCRETE, FILL, GRAVEL, SAND, CLAY, SILT, BOULDERS OR COBBLES, LIMESTONE, BEDROCK (UNKNOWN), SHALE, SANDSTONE, IGNEOUS/META

LEGEND OF BORING



(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNLESS OTHERWISE, SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION

- ▽ AT TIME OF DRILLING
- ▼ END OF DRILLING
- ▼ AFTER DRILLING

ABBREVIATIONS

F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-53-294

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SUBSURFACE EXPLORATION

SHEET 4 OF 32

159

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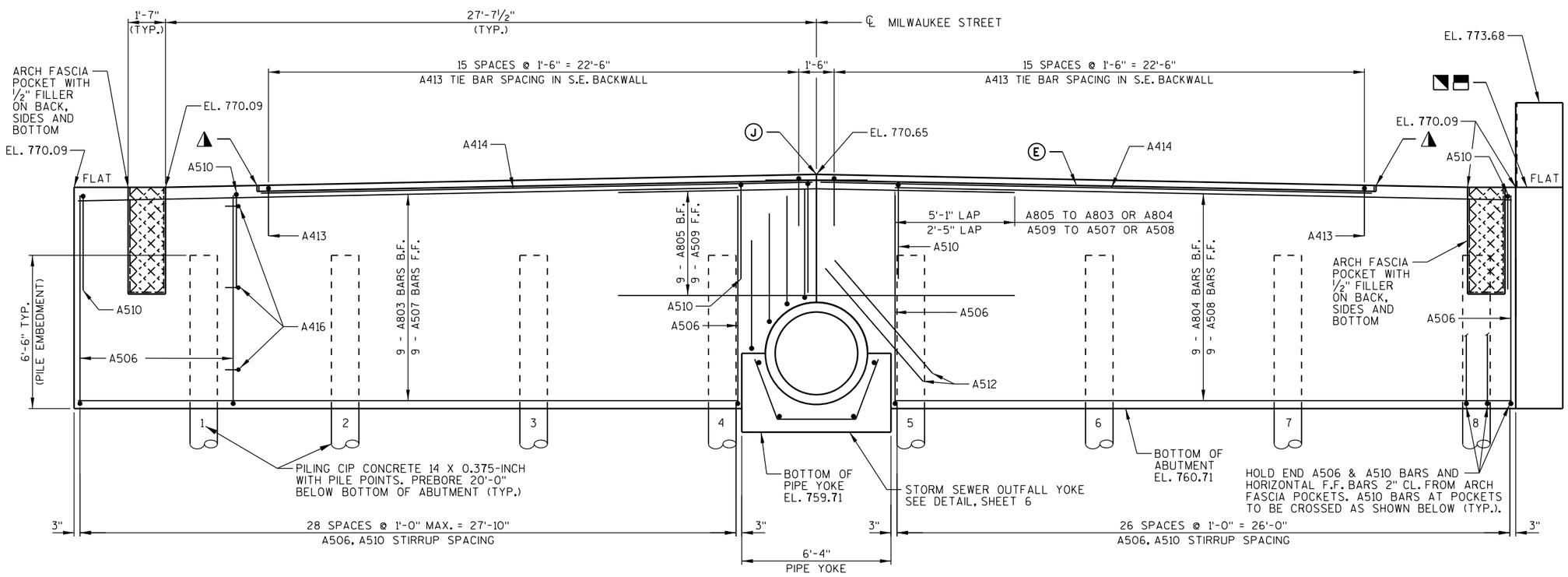
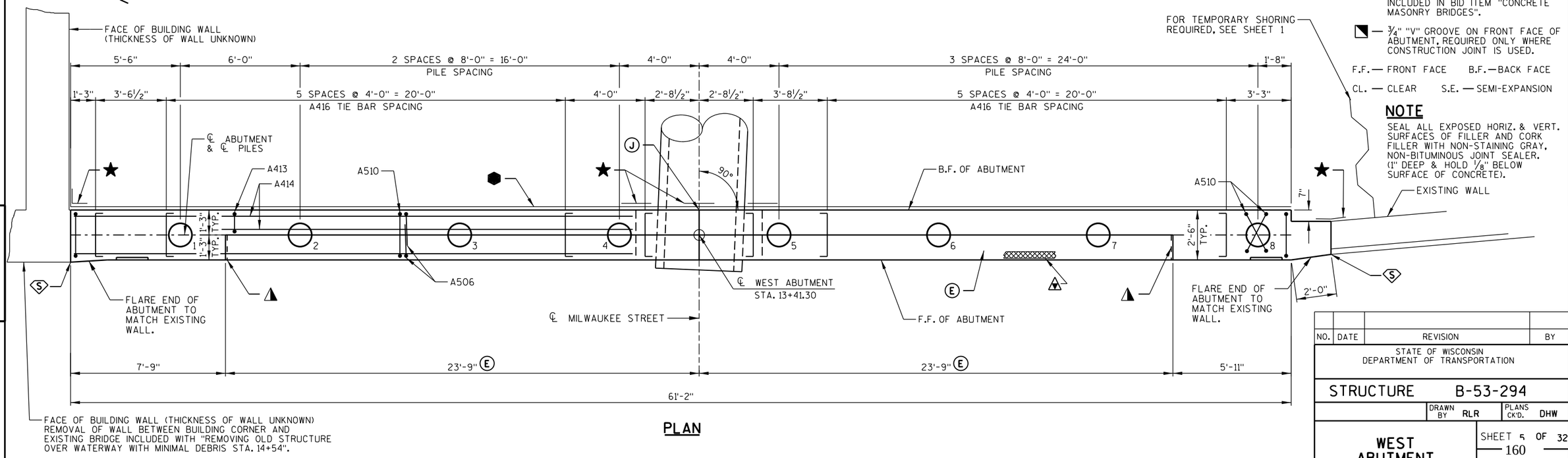
DATE= 3/6/2018



ELEVATION
LOOKING WEST



PLAN

STATE PROJECT NUMBER

5990-00-34

LEGEND

- (J) — KEYED CONST. JOINT ON ABUT. BODY FORMED BY BEVELED 2 x 8. RUN BAR STEEL THRU JOINT. BEVEL EXPOSED EDGES ¾" AND SEAL JOINT. FOR ALTERNATE CONST. JOINT, SEE SHEET 8.
- △ — 4"× ¾" FILLER, EXTEND FULL LENGTH OF ABUTMENT BEARING SEAT BETWEEN EDGES OF SLAB.
- ★ — VERTICAL 18" WIDE RUBBERIZED MEMBRANE WATERPROOFING (RMW). EXTEND FROM BOTTOM OF ABUT. TO TOP SIDEWALK OR SLAB AT ALL VERTICAL CONST. JOINTS. PREPARE SURFACE TO PROVIDE GOOD ADHESION OF RMW.
- ⬢ — HORIZONTAL 18" WIDE RUBBERIZED MEMBRANE WATERPROOFING ON B.F. OF ABUTMENT. EXTEND END TO END OF ABUTMENT. PLACE AT JOINT WITH STORM SEWER PIPE.
- ◯ — PIPE UNDERDRAIN WRAPPED 6-INCH. SEE DETAILS, SHEET 30.
- (E) — SEMI-EXPANSION STEP, CONSTRUCT 3" DEEPER THAN ABUTMENT BACKWALL. STEEL TROWEL TOP SURFACE OF ABUTMENT. PLACE MULTIPLE LAYERS OF POLYETHYLENE SHEETS OVER ENTIRE ABUTMENT TOP BEFORE PLACING SUPERSTRUCTURE. TOTAL THICKNESS OF SHEETS SHALL BE AT LEAST 0.03 INCHES.
- ◭ — ¾" CORK FILLER (SIDE VERTICAL FACES ONLY).
- Ⓢ — FULL DEPTH SAWCUT. PROVIDE SMOOTH SURFACE FULL THICKNESS OF EXISTING WALL. SURFACE TO BE PERPENDICULAR TO F.F. OF ABUT.
- ▀ — OPTIONAL CONST. JOINT ON ABUT. EXTENSION. IF JOINT IS USED, PLACE ⬢ ON B.F. COST OF ⬢ INCLUDED IN BID ITEM "CONCRETE MASONRY BRIDGES".
- ◥ — ¾" "V" GROOVE ON FRONT FACE OF ABUTMENT, REQUIRED ONLY WHERE CONSTRUCTION JOINT IS USED.

F.F. — FRONT FACE B.F. — BACK FACE

CL. — CLEAR S.E. — SEMI-EXPANSION

NOTE

SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF FILLER AND CORK FILLER WITH NON-STAINING GRAY, NON-BITUMINOUS JOINT SEALER. (1" DEEP & HOLD ⅛" BELOW SURFACE OF CONCRETE).

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-53-294

DRAWN BY RLR PLANS CK'D. DHW

WEST ABUTMENT

SHEET 5 OF 32
160

FILE= 879002_05.DGN
DATE= 4/12/2018

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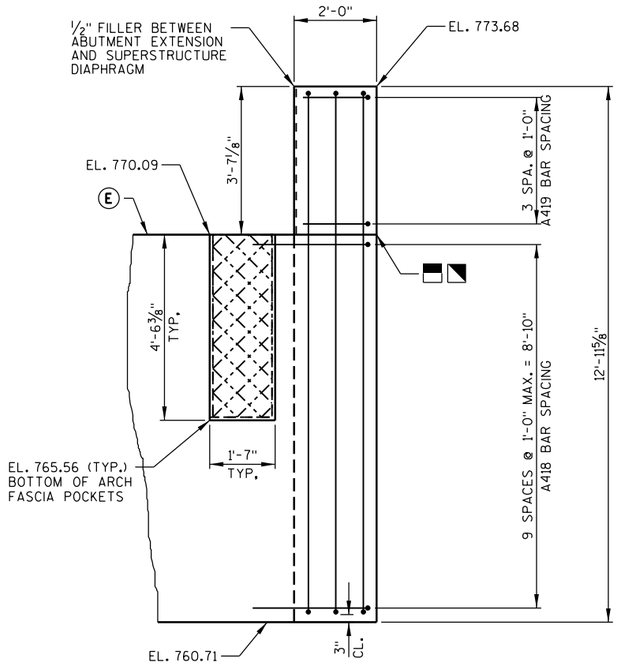
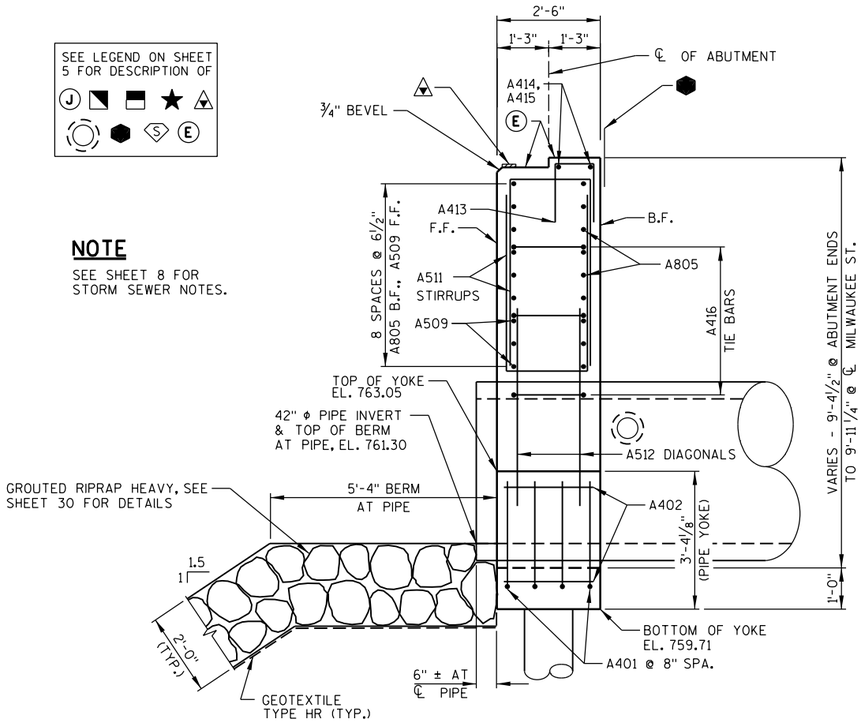
STATE PROJECT NUMBER

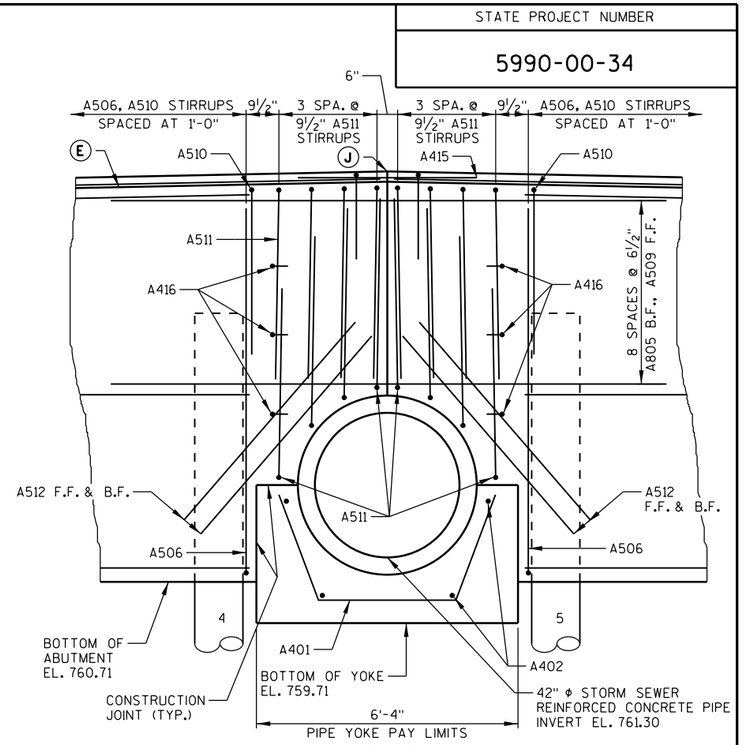
5990-00-34



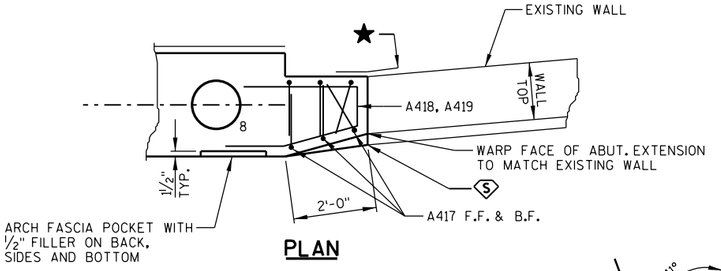
ELEVATION



SECTION WP-WP THRU ABUTMENT

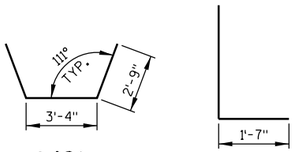


ELEVATION



PLAN

NORTH END OF ABUTMENT DETAIL



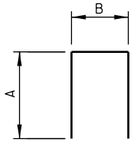
A401

A506

BILL OF BARS (WEST ABUTMENT) 4705 LBS. (UNCOATED)

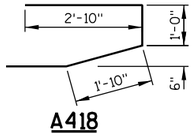
MARK	NUMBER REQUIRED	LENGTH	BENT	LOCATION
A401	4	8'-7"	X	ABUT. BODY - PIPE YOKE - STIRRUP - VERT.
A402	4	2'-2"		ABUT. BODY - PIPE YOKE - HORIZ.
A803	9	28'-0"		ABUT. BODY - B.F. - SOUTH END - HORIZ.
A804	9	26'-2"		ABUT. BODY - B.F. - NORTH END - HORIZ.
A805	9	16'-10"		ABUT. BODY - B.F. - CENTER - HORIZ.
A506	112	10'-2"	X	ABUT. BODY - F.F. & B.F. - VERT.
A507	9	28'-0"		ABUT. BODY - F.F. - SOUTH END - HORIZ.
A508	9	26'-2"		ABUT. BODY - F.F. - NORTH END - HORIZ.
A509	9	11'-6"		ABUT. BODY - F.F. - CENTER - HORIZ.
A510	56	9'-11"	X	ABUT. BODY - TOP - TIES - VERT.
A511	16	11'-1"	X	ABUT. BODY - STIRRUP AT PIPE - VERT.
A512	8	6'-4"		ABUT. BODY - F.F. & B.F. AT PIPE - DIAGONAL
A413	32	3'-9"	X	ABUT. BODY - SEMI-EXP. BACKWALL - VERT.
A414	4	23'-5"		ABUT. BODY - SEMI-EXP. BACKWALL - HORIZ.
A415	2	4'-0"		ABUT. BODY - SEMI-EXP. BACKWALL - HORIZ.
A416	45	2'-9"	X	ABUT. BODY - TIES - TRANS.
A417	6	14'-11"	X	ABUT. - NORTH END EXTENSION - VERT.
A418	10	6'-10"	X	ABUT. - NORTH END EXT. - BOTTOM - TIES - HORIZ.
A419	4	4'-0"	X	ABUT. - NORTH END EXT. - TOP - TIES - HORIZ.

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.
WEST ABUTMENT BARSTEEL IS NOT COATED.

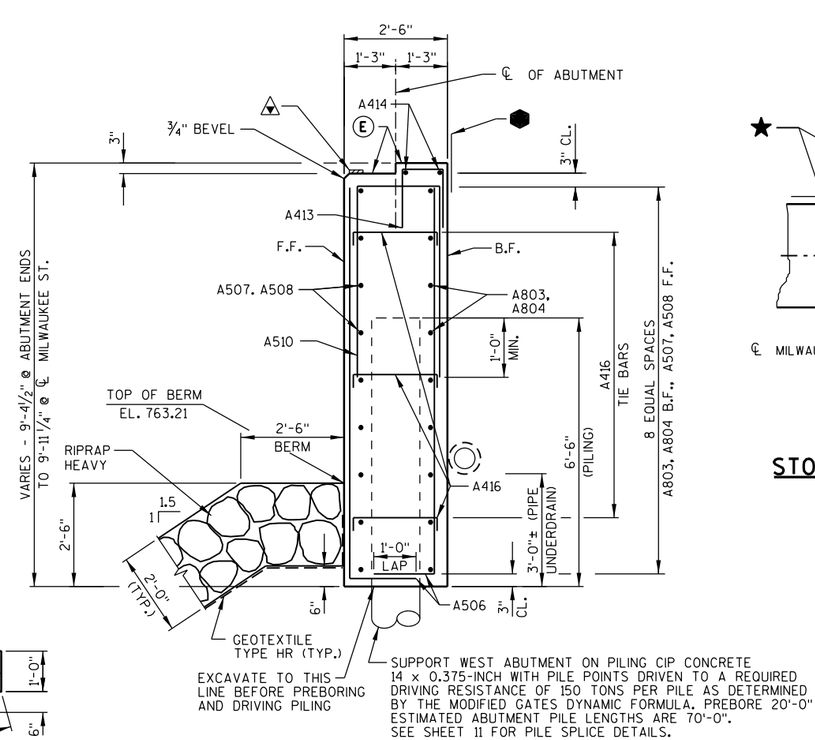


MARK	A	B
A510	4'-0"	2'-2"
A511	4'-7"	2'-2"
A413	1'-6"	11"
A416	4½"	2'-2"
A417	1'-3½"	12'-6"

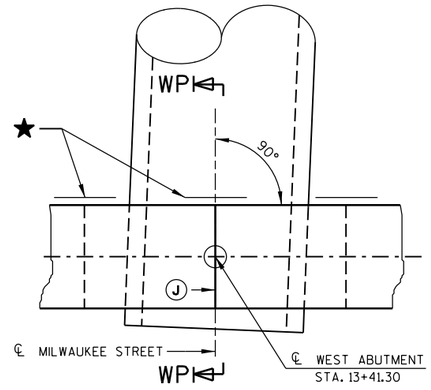
A419



A418



TYPICAL SECTION THRU ABUTMENT



PLAN

STORM SEWER OUTFALL DETAIL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-53-294

DRAWN BY RLR | PLANS CK'D. DHW

WEST ABUTMENT DETAILS

SHEET 6 OF 32
161

FILE= 879002_06.DGN
DATE= 4/12/2018

8

8

STATE PROJECT NUMBER

5990-00-34

EL. 775.77

FLAT NORMAL, SEE SHEET 9 FOR SURFACE AT STAIRWAY.

EL. 772.39

1'-7" (TYP.)

27'-7½" (TYP.)

℄ MILWAUKEE STREET

15 SPACES @ 1'-6" = 22'-6"
B413 TIE BAR SPACING IN S.E. BACKWALL

1'-6"

15 SPACES @ 1'-6" = 22'-6"
B413 TIE BAR SPACING IN S.E. BACKWALL

2'-0" FLAT

EL. 772.39

B414

B510

(J)

EL. 772.95

(E)

B414

B510

ARCH FASCIA POCKET WITH ½" FILLER ON BACK, SIDES AND BOTTOM

B434

EL. 766.75

4'-6⅞" (TYP.)

B413

B510

B416

B506

9 - B803 BARS B.F.
9 - B507 BARS F.F.

6'-6" TYP. (PILE EMBEDMENT)

9 - B805 BARS B.F.
9 - B509 BARS F.F.

5'-1" LAP
2'-5" LAP

B805 TO B803 OR B804
B509 TO B507 OR B508
CONTACT LAPS WITH 7 BARS
SPACE 2 EXTRA IN GAPS AT BOTTOM

B510

B506

B506

9 - B804 BARS B.F.
9 - B508 BARS F.F.

B413

ARCH FASCIA POCKET WITH ½" FILLER ON BACK, SIDES AND BOTTOM

B510

B506

EL. 767.82 (TYP.)

HOLD END B506 & B510 BARS AND HORIZONTAL F.F. BARS 2" CL. FROM ARCH FASCIA POCKETS. B510 BARS AT POCKETS TO BE CROSSED AS SHOWN BELOW (TYP.).

STRUCTURAL SIDEWALK TO BE PLACED OVER NORTH EXTENSION OF ABUTMENT IS INCLUDED WITH ROAD PLANS.

PILING CIP CONCRETE 14 X 0.375-INCH WITH PILE POINTS. PREBORE 20'-0" BELOW BOTTOM OF ABUTMENT (TYP.)

BOTTOM OF ABUTMENT EL. 763.01

STORM SEWER OUTFALL YOKE FOR REINFORCEMENT AND DETAILS, SHEET 8

1½" CORK FILLER BETWEEN WING AND BUILDING

3"

27 SPACES @ 1'-0" MAX. = 27'-0"
B506, B510 STIRRUP SPACING

3½"

6½"

9'-2" PIPE YOKE

BOTTOM OF PIPE YOKE EL. 758.15

26 SPACES @ 1'-0" = 26'-0"
B506, B510 STIRRUP SPACING

3"

ELEVATION
LOOKING EAST

N

2⅛"

1'-2⅞"

1'-2⅞"

5'-0"

10'-7"

5'-6⅞"

9"

1'-3"

1'-3"

82°

1'-9"

28'-8"

28'-6"

27'-2⅞"

℄ ABUTMENT & ℄ PILES

B413

B414

B510

(J)

90°

B.F. OF ABUTMENT

2'-8½"

3'-8½"

5 SPACES @ 4'-0" = 20'-0"
B416 TIE BAR SPACING

3'-3"

29'-8"

℄ MILWAUKEE STREET

LOWER STONE MASONRY PORTION OF EXISTING WALL TO REMAIN. UPPER PORTION WITH CANTILEVER SIDEWALK SLAB TO BE REPLACED. SEE SHEET 31.

B510

1'-3" TYP.

1'-3" TYP.

2'-6" TYP.

B434 AS SHOWN

B506

℄ EAST ABUTMENT
STA. 15+58.30

EXISTING WALL

1'-2"

6 SPACES @ 4'-0" = 24'-0"
B416 TIE BAR SPACING

2'-6½"

2'-8½"

2'-0" FLARE

1'-8"

FLARE END OF ABUTMENT TO MATCH EXISTING WALL.

2'-5"

3 SPACES @ 8'-0" = 24'-0"
PILE SPACING

4'-0"

4'-0"

3 SPACES @ 8'-0" = 24'-0"
PILE SPACING

5'-0"

6'-8"

23'-9" (E)

23'-9" (E)

5'-11"

60'-1"

PLAN

LEGEND

(J) — KEYED CONST. JOINT ON ABUT. BODY FORMED BY BEVELED 2 × 8. RUN BAR STEEL THRU JOINT. BEVEL EXPOSED EDGES ¾" AND SEAL JOINT. FOR ALTERNATE CONST. JOINT, SEE SHEET 8.

△ — 4"× ¾" FILLER, EXTEND FULL LENGTH OF ABUTMENT BEARING SEAT BETWEEN EDGES OF SLAB.

★ — VERTICAL 18" WIDE RUBBERIZED MEMBRANE WATERPROOFING (RMW). EXTEND FROM BOTTOM OF ABUTMENT TO TOP SIDEWALK OR SLAB AT ALL VERTICAL CONSTRUCTION JOINTS. PREPARE SURFACE TO PROVIDE GOOD ADHESION OF RMW.

⬢ — HORIZONTAL 18" WIDE RUBBERIZED MEMBRANE WATERPROOFING ON B.F. OF ABUTMENT. EXTEND END TO END OF ABUTMENT. PLACE AT JOINT WITH STORM SEWER PIPE.

(E) — SEMI-EXPANSION STEP, CONSTRUCT 3" DEEPER THAN ABUTMENT BACKWALL. STEEL TROWEL TOP SURFACE OF ABUTMENT. PLACE MULTIPLE LAYERS OF POLYETHYLENE SHEETS OVER ENTIRE ABUTMENT TOP BEFORE PLACING SUPERSTRUCTURE. TOTAL THICKNESS OF SHEETS SHALL BE AT LEAST 0.03 INCHES.

◭ — ¾" CORK FILLER (SIDE VERTICAL FACES ONLY).

Ⓢ — FULL DEPTH SAWCUT. PROVIDE SMOOTH SURFACE FULL THICKNESS OF EXISTING WALL. SURFACE TO BE PERPENDICULAR TO F.F. OF ABUTMENT.

F.F. - FRONT FACE B.F. - BACK FACE CL. - CLEAR S.E. - SEMI-EXPANSION

◎ — PIPE UNDERDRAIN WRAPPED 6-INCH. SEE DETAILS, SHEET 30.

▬ — OPTIONAL CONST. JOINT ON WING WALL. IF JOINT IS USED, PLACE ⬢ ON B.F. COST OF ⬢ INCLUDED IN BID ITEM "CONCRETE MASONRY BRIDGES".

◥ — ¾" "V" GROOVE ON FRONT FACE, REQUIRED ONLY WHERE CONSTRUCTION JOINT IS USED.

▲ — ½" FILLER EXTEND AS SHOWN.

NOTE

SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF FILLER AND CORK FILLER WITH NON-STAINING GRAY, NON-BITUMINOUS JOINT SEALER. (1" DEEP & HOLD ⅛" BELOW SURFACE OF CONCRETE).

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-53-294

DRAWN BY RLR | PLANS CK'D. DHW

EAST ABUTMENT

SHEET 7 OF 32
162

FILE= 879002_07.DGN
DATE= 3/1/2018

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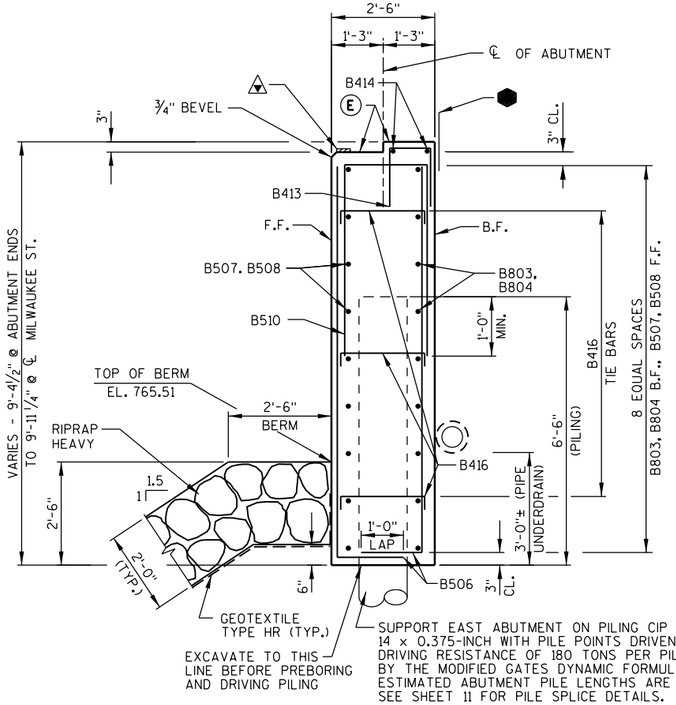
STATE PROJECT NUMBER

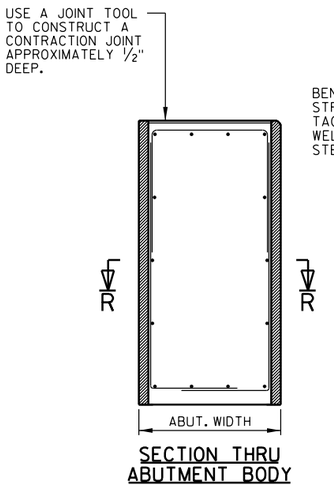
5990-00-34



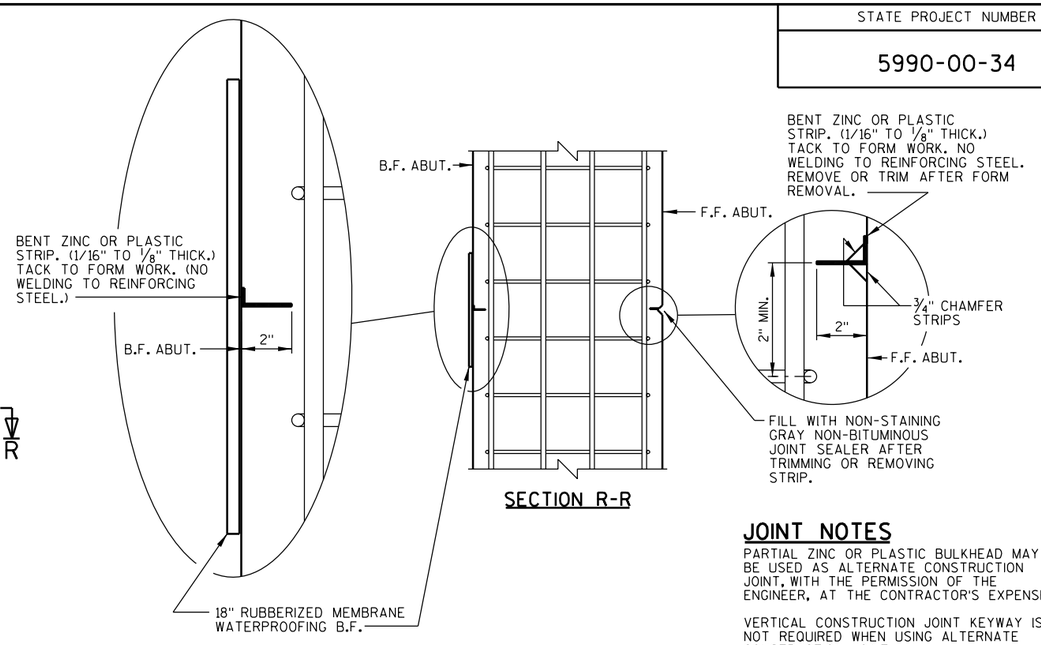
SUPPORT EAST ABUTMENT ON PILING CIP CONCRETE 14 x 0.375-INCH WITH PILE POINTS DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. PREBORE 20'-0". ESTIMATED ABUTMENT PILE LENGTHS ARE 70'-0". SEE SHEET 11 FOR PILE SPLICE DETAILS.

TYPICAL SECTION THRU ABUTMENT

FOR DETAILS OF GROUTED RIPRAP HEAVY AT STORM SEWER OUTFALL, SEE SECTION EP-EP BELOW AND SHEET 30



SECTION THRU ABUTMENT BODY



SECTION R-R

ALTERNATE CONSTRUCTION JOINT AT ABUTMENT

JOINT NOTES

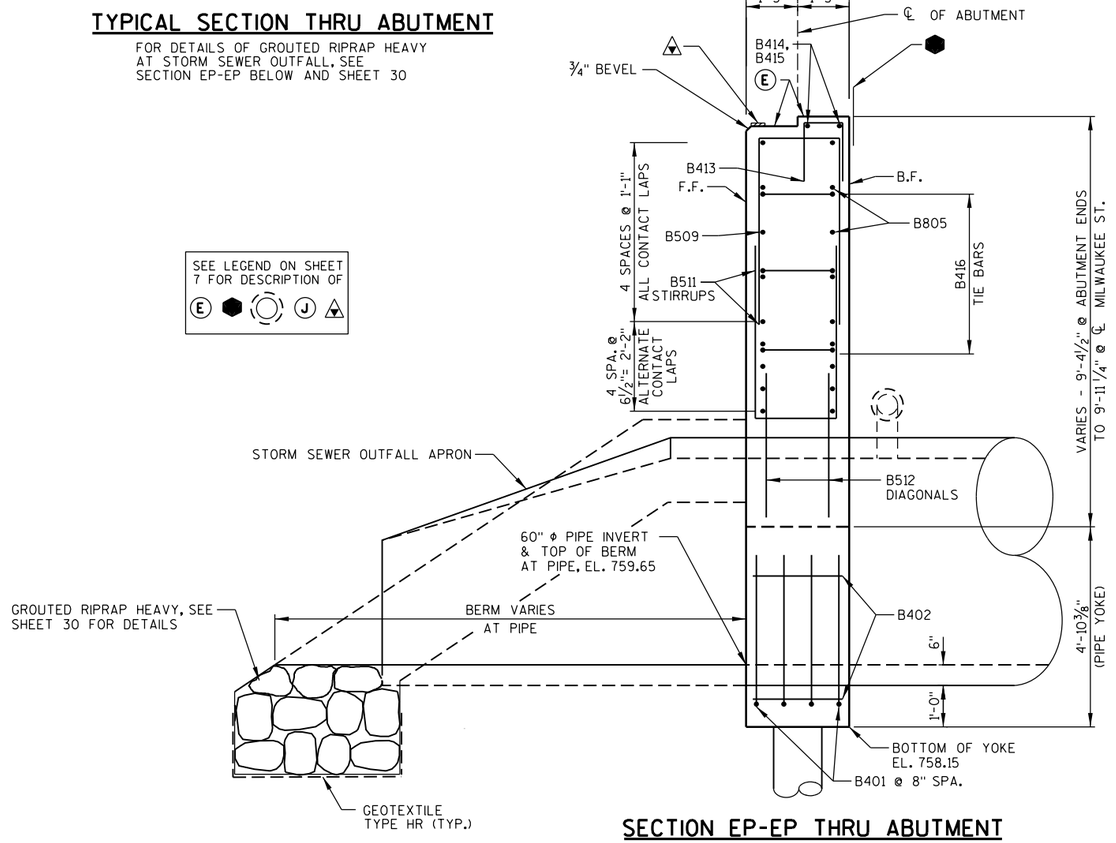
PARTIAL ZINC OR PLASTIC BULKHEAD MAY BE USED AS ALTERNATE CONSTRUCTION JOINT, WITH THE PERMISSION OF THE ENGINEER, AT THE CONTRACTOR'S EXPENSE.

VERTICAL CONSTRUCTION JOINT KEYWAY IS NOT REQUIRED WHEN USING ALTERNATE CONSTRUCTION JOINT.

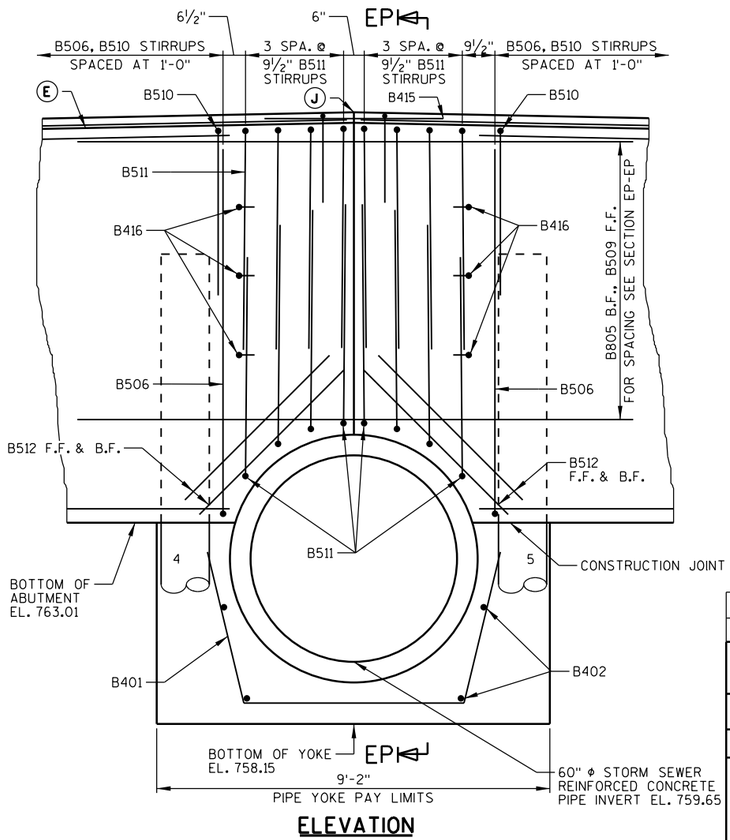
CARE IS TO BE USED IN CASTING CONCRETE AROUND BULKHEAD TO PREVENT DISLOCATION OR MISALIGNMENT OF THE BULKHEAD.

SAW CUTTING JOINT IS NOT ALLOWED.

SEE LEGEND ON SHEET 7 FOR DESCRIPTION OF



SECTION EP-EP THRU ABUTMENT



ELEVATION

STORM SEWER NOTES

STORM SEWER PIPE AND OUTFALL APRON WITH JOINT TIES ARE INCLUDED WITH ROAD PLANS. JOINT TIES MAY BE EMBEDDED IN CONCRETE.

PILNG SHALL BE DRIVEN IN PLACE BEFORE PIPE YOKE AND STORM SEWER ARE PLACED. PREVENT PIPE FROM FLOATING WHEN POURING YOKE CONCRETE.

CONCRETE FOR PIPE YOKE AT BOTH ABUTMENTS IS INCLUDED WITH THE BID ITEM "CONCRETE MASONRY BRIDGES". PAY LIMITS ARE AS SHOWN. SLOPES MAY BE EXTENDED TO FACILITATE CONSTRUCTION.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-53-294

DRAWN BY RLR | PLANS CK'D. DHW

EAST ABUTMENT DETAILS

SHEET R OF 32
163

8

8

FILE= 879002_08.DGN
DATE= 4/12/2018

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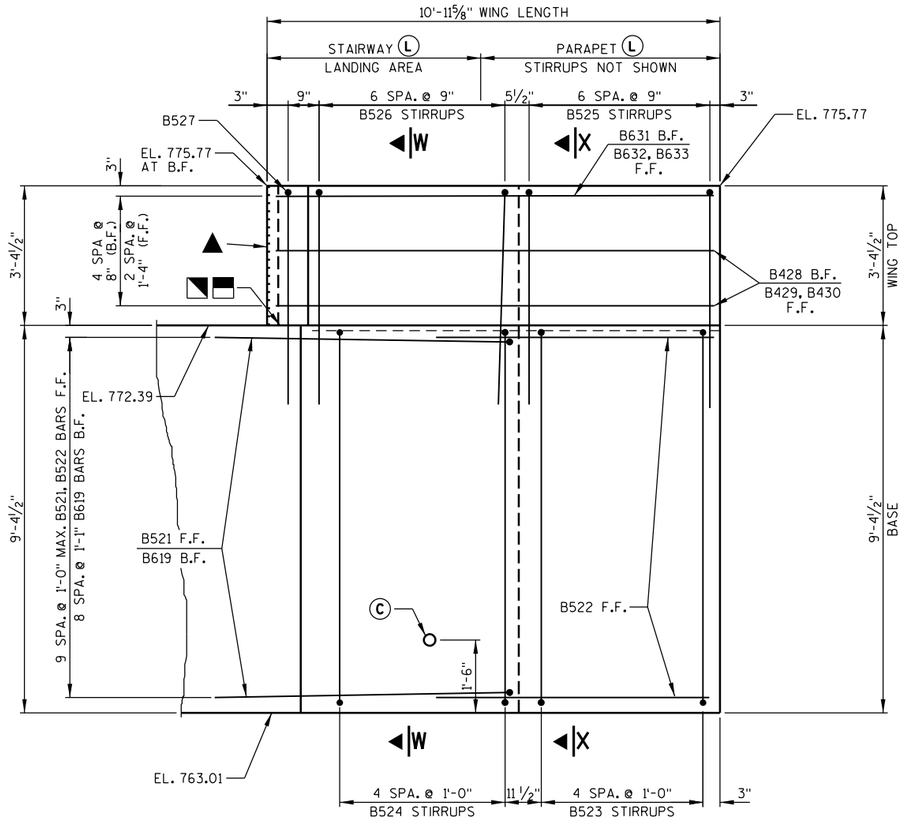
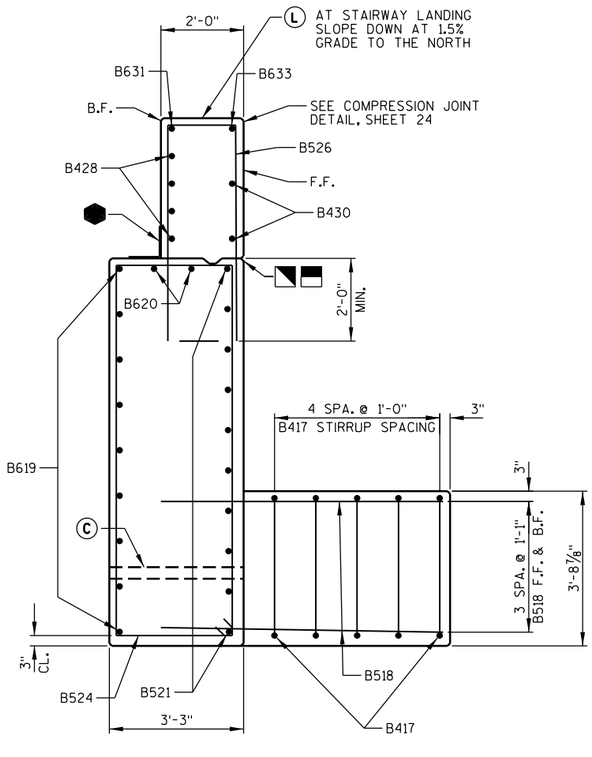
STATE PROJECT NUMBER

5990-00-34



ELEVATION - WING



SECTION W-W THRU WING

BILL OF BARS (EAST ABUTMENT)

UNCOATED 4485 LBS.
COATED 1060 LBS.

MARK	NUMBER REQUIRED COATED	NUMBER REQUIRED UNCOATED	LENGTH	BENT	LOCATION
B401	-	4	12'-8"	X	ABUT. BODY - PIPE YOKE - STIRRUP - VERT.
B402	-	4	2'-2"		ABUT. BODY - PIPE YOKE - HORIZ.
B803	-	9	28'-3"	X	ABUT. BODY - B.F. - NORTH END - HORIZ.
B804	-	9	26'-7"		ABUT. BODY - B.F. - SOUTH END - HORIZ.
B805	-	9	16'-0"		ABUT. BODY - B.F. - CENTER - HORIZ.
B506	-	110	10'-2"	X	ABUT. BODY - F.F. & B.F. - VERT.
B507	-	9	27'-4"		ABUT. BODY - F.F. - NORTH END - HORIZ.
B508	-	9	26'-7"		ABUT. BODY - F.F. - SOUTH END - HORIZ.
B509	-	9	10'-8"		ABUT. BODY - F.F. - CENTER - HORIZ.
B510	-	55	9'-11"	X	ABUT. BODY - TOP - TIES - VERT.
B511	-	16	12'-7"	X	ABUT. BODY - STIRRUP AT PIPE - VERT.
B512	-	8	5'-0"		ABUT. BODY - F.F. & B.F. AT PIPE - DIAGONAL
B413	-	32	3'-9"	X	ABUT. BODY - SEMI-EXP. BACKWALL - VERT.
B414	-	4	23'-5"		ABUT. BODY - SEMI-EXP. BACKWALL - HORIZ.
B415	-	2	4'-0"		ABUT. BODY - SEMI-EXP. BACKWALL - LAP - HORIZ.
B416	45	-	2'-9"	X	ABUT. BODY - TIES - TRANS.
B417	5	-	10'-0"	X	ABUT. - NORTH END EXTENSION - STIRRUP - VERT.
B518	8	-	6'-10"		ABUT. - NORTH END EXT. - F.F. & B.F. - HORIZ.
B619	9	-	12'-2"		WING - BASE - B.F. - HORIZ.
B620	2	-	12'-0"		WING - BASE - TOP - HORIZ.
B521	10	-	8'-10"	X	WING - BASE - F.F. - HORIZ.
B522	10	-	6'-10"		WING - BASE - F.F. - HORIZ.
B523	5	-	22'-10"	X	WING - BASE - STIRRUP - VERT.
B524	5	-	24'-4"	X	WING - BASE - STIRRUP - VERT.
B525	7	-	11'-2"	X	WING - TOP - STIRRUP - VERT.
B526	7	-	11'-11"	X	WING - TOP - STIRRUP - VERT.
B527	1	-	11'-10"	X	WING - TOP - STIRRUP - VERT.
B428	4	-	10'-6"	X	WING - TOP - B.F. - HORIZ.
B429	2	-	6'-10"		WING - TOP - F.F. - HORIZ.
B430	2	-	6'-11"	X	WING - TOP - F.F. - HORIZ.
B631	1	-	10'-6"	X	WING - TOP - B.F. - HORIZ.
B632	1	-	6'-10"		WING - TOP - F.F. - HORIZ.
B633	1	-	6'-10"	X	WING - TOP - F.F. - HORIZ.
B434	2	-	8'-11"		ABUT. BODY - NORTH END - VERT.

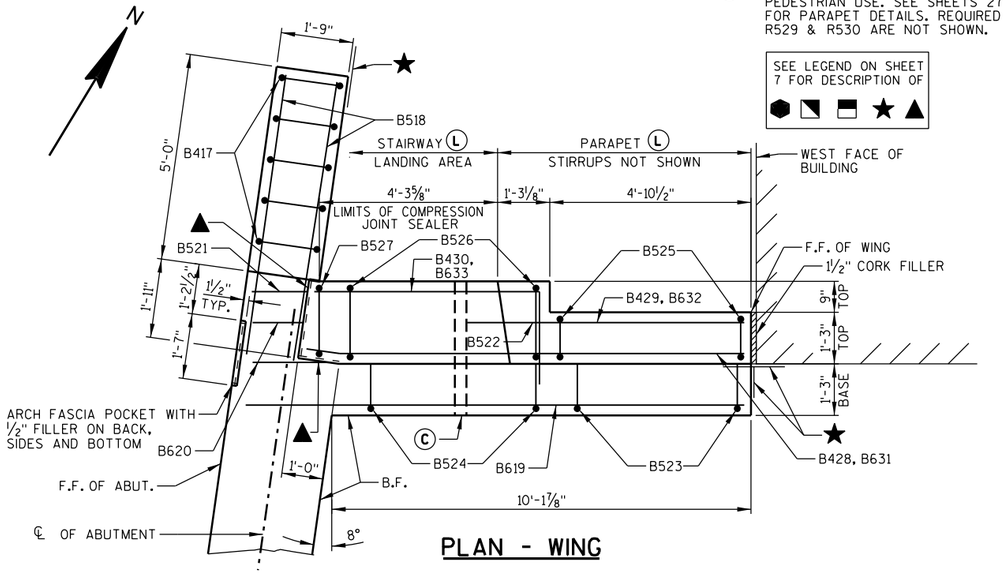
DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.

LEGEND

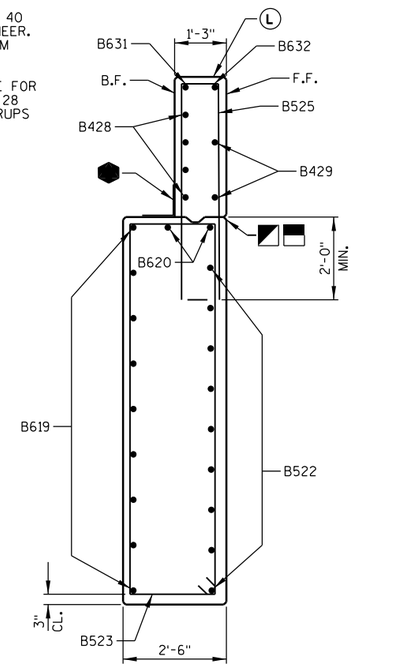
(C) — NON METALLIC 4" ϕ CONDUIT SCHEDULE 40 REQUIRED. VERIFY LOCATION WITH ENGINEER. CONDUIT IS INCIDENTAL TO THE BID ITEM "CONCRETE MASONRY BRIDGES".

(L) — STAIRWAY LANDING FINISH TOP SURFACE FOR PEDESTRIAN USE. SEE SHEETS 27 AND 28 FOR PARAPET DETAILS. REQUIRED STIRRUPS R529 & R530 ARE NOT SHOWN.

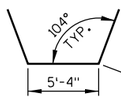
SEE LEGEND ON SHEET 7 FOR DESCRIPTION OF



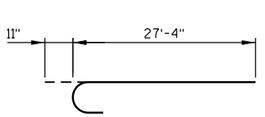
PLAN - WING



SECTION X-X THRU WING

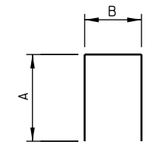


B401

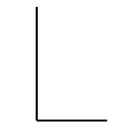


B803

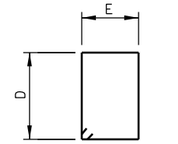
STANDARD 180° HOOK



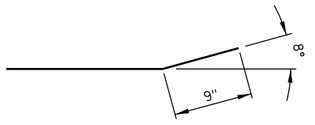
MARK	A	B
B510	4'-0"	2'-2"
B511	5'-4"	2'-2"
B413	1'-6"	11"
B416	4½"	2'-2"
B525	5'-3"	11"
B526	5'-3"	1'-8"
B527	5'-3"	1'-7"



MARK	C
B506	1'-7"
B521	2'-0"
B430	1'-7"
B633	1'-7"



MARK	D	E
B417	3'-4"	1'-5"
B523	8'-11"	2'-2"
B524	8'-11"	2'-11"



B428, B631

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-53-294

DRAWN BY RLR | PLANS CK'D. DHW

NORTHEAST WING & EAST ABUTMENT DETAILS

SHEET 9 OF 32
164

8

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FILE= 879002_09.DGN
DATE= 3/2/2018

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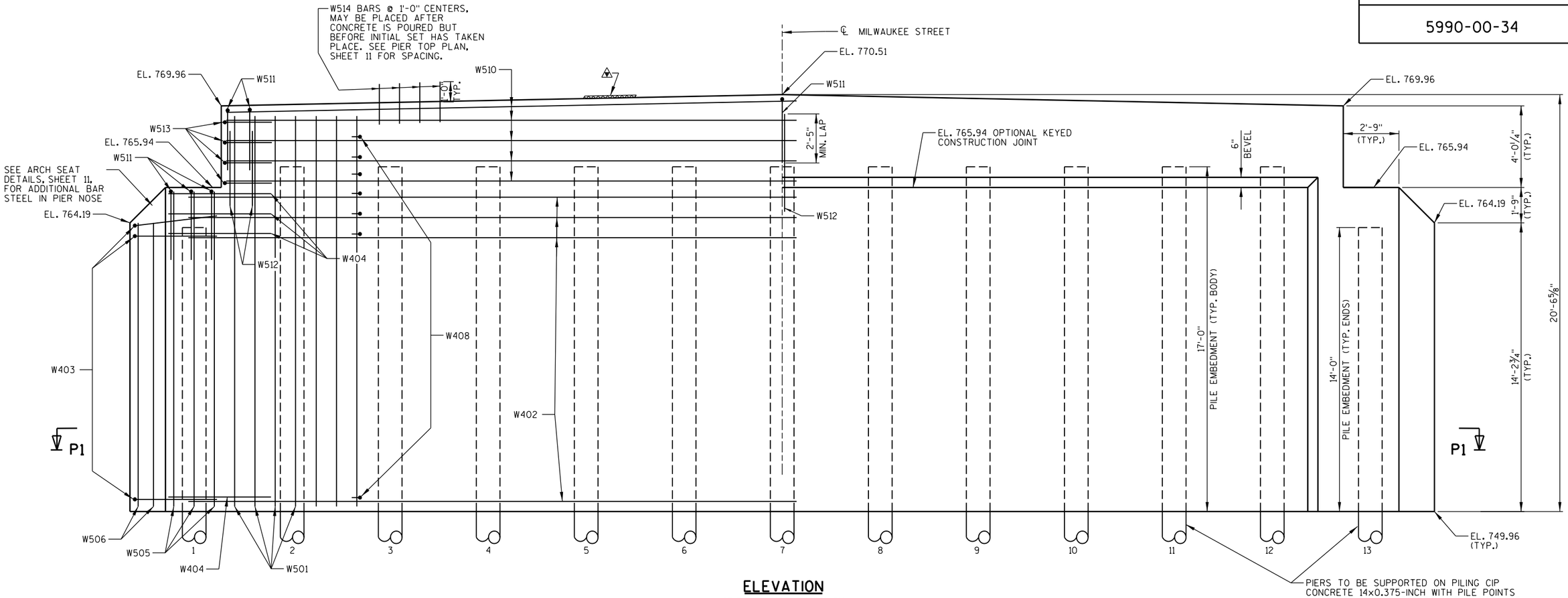
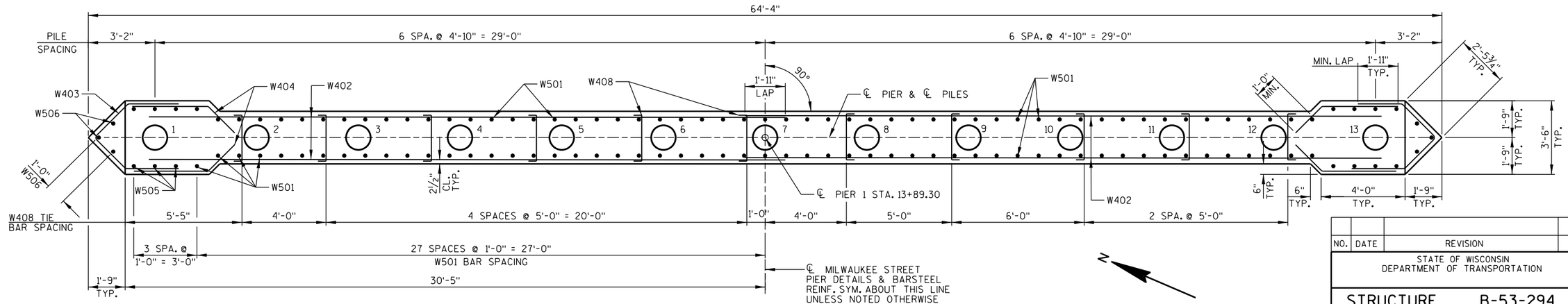
STATE PROJECT NUMBER

5990-00-34



ELEVATION

6" BEVEL NOT SHOWN ON HALF OF PIER FOR CLARITY



SECTION P1-P1

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-53-294

DRAWN BY RLR | PLANS CK'D. LJR

PIER 1

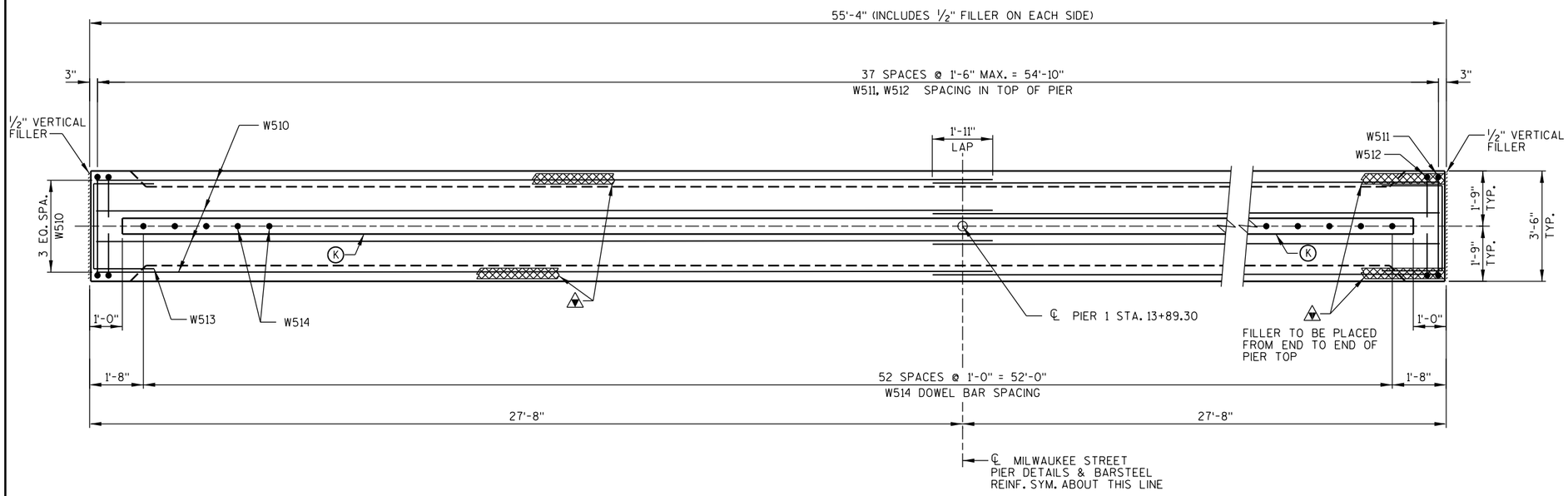
SHEET 10 OF 32
165

FILE= 879002_10.DGN
DATE=3/1/2018

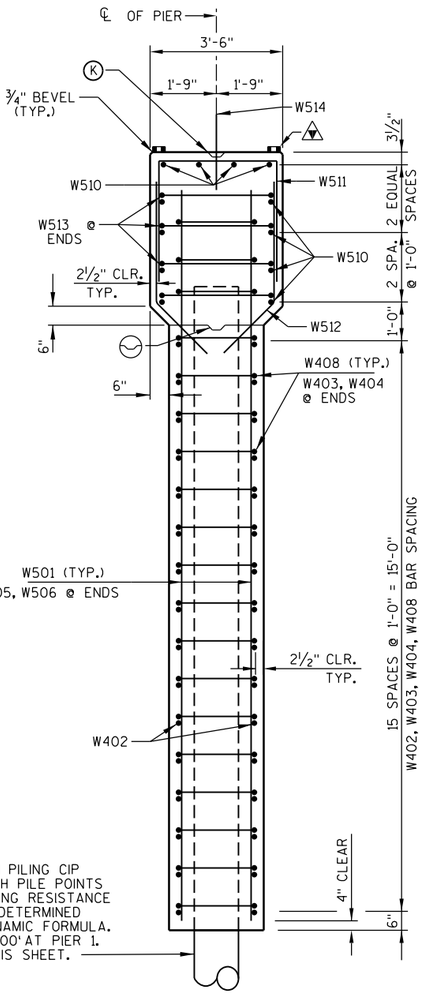
879002_10.dgn 3/1/2018 8:00:12 AM rrabska

STATE PROJECT NUMBER

5990-00-34



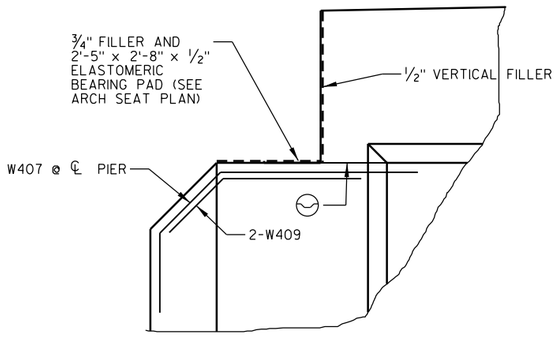
PIER TOP PLAN



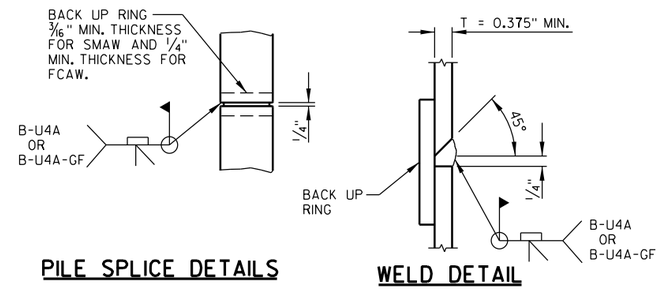
TYPICAL SECTION THRU PIER

LEGEND

- (K) - KEYED CONSTRUCTION JOINT FORMED WITH BEVELED 2X6
- ◡ - OPTIONAL KEYED CONSTRUCTION JOINT FORMED WITH BEVELED 2x6
- ▲ - 4"x3/4" FILLER

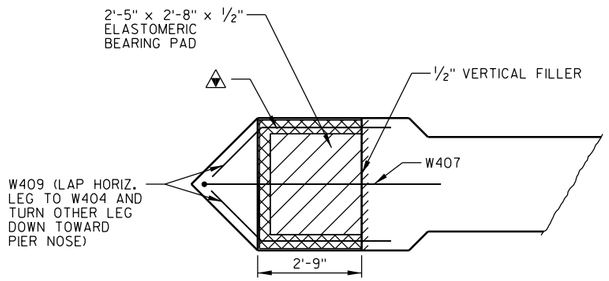


ARCH SEAT ELEVATION



PILE SPLICE DETAILS

WELD DETAIL



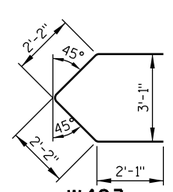
ARCH SEAT PLAN

BILL OF BARS - PIER 1

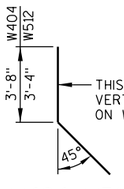
COATED 110 LBS.
UNCOATED 6185 LBS.

MARK	NO. REQ'D.	LENGTH	BENT	LOCATION
W501	110	19'-0"		PIER - BOTTOM - VERT.
W402	64	30'-6"		PIER - BOTTOM - HORIZ.
W403	30	8'-4"	X	PIER - BOTTOM - END TIES - HORIZ.
W404	64	5'-6"	X	PIER - BOTTOM - END TIES - HORIZ.
W505	12	15'-5"		PIER - BOTTOM - END - VERT.
W506	6	13'-9"		PIER - BOTTOM - END - VERT.
W407	2	9'-6"	X	PIER - BOTTOM - END - VERT.
W408	209	2'-8"	X	PIER - AT PILES- TIES - HORIZ.
W409	4	4'-3"	X	PIER - BOTTOM - ENDS - VERT.
W510	24	28'-6"		PIER - TOP - HORIZ.
W511	44	9'-6"	X	PIER - TOP - TIES - VERT.
W512	76	5'-2"	X	PIER - TOP - VERT.
W513	8	7'-7"	X	PIER - TOP - ENDS - HORIZ.
© W514	53	2'-0"		PIER - DOWELS @ TOP - VERT.

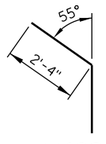
© - THESE BARS SHALL BE EPOXY COATED.



W403

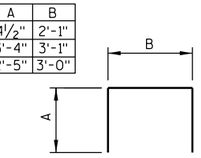


W404, W512

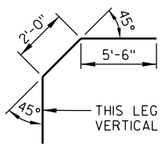


W409

MARK	A	B
W408	4 1/2"	2'-1"
W511	3'-4"	3'-1"
W513	2'-5"	3'-0"



W408, W511, W513



W407

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-53-294

DRAWN BY RLR | PLANS CK'D. LJR

PIER 1 DETAILS

SHEET 11 OF 32
166

FILE= 879002_11.DGN
DATE= 3/1/2018

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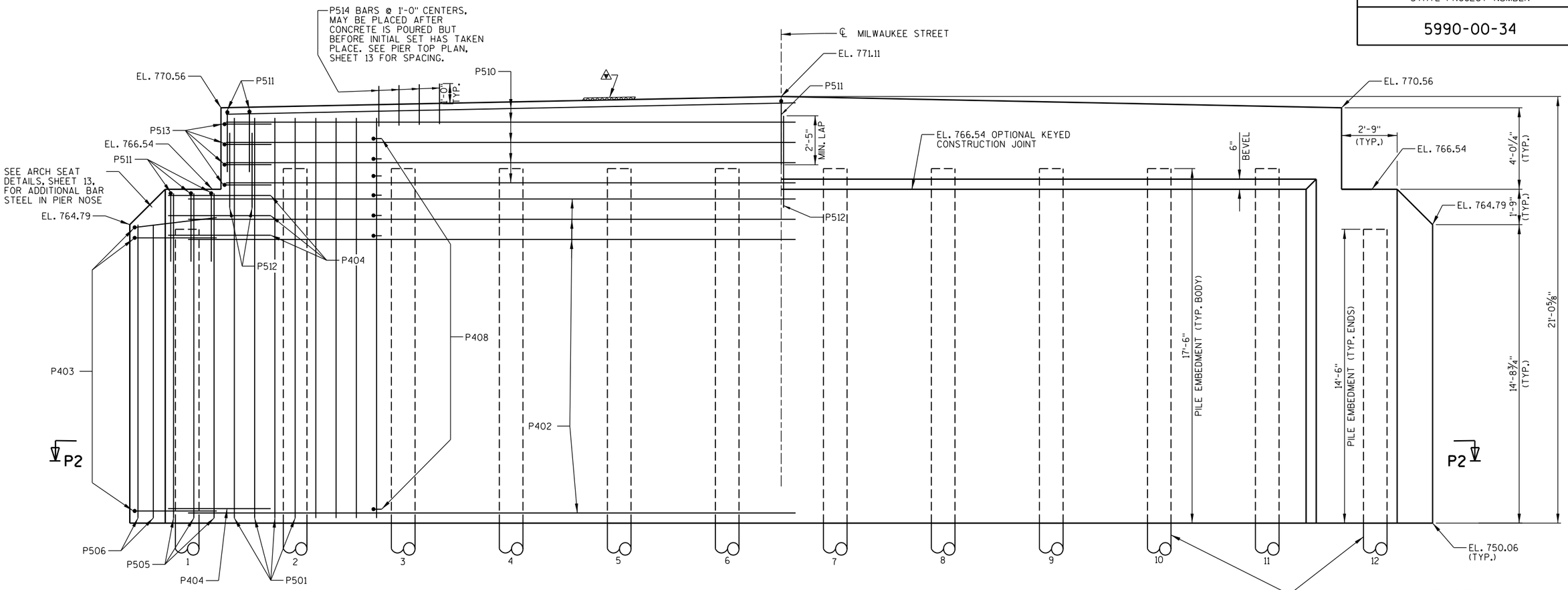
8

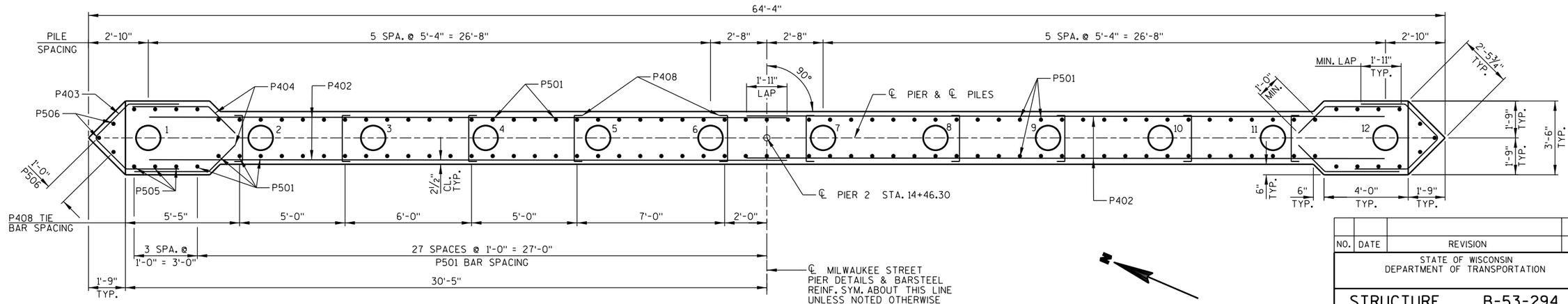
STATE PROJECT NUMBER

5990-00-34



ELEVATION

6" BEVEL NOT SHOWN ON HALF OF PIER FOR CLARITY



SECTION P2-P2

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-53-294

DRAWN BY RLR | PLANS CK'D. LJR

PIER 2

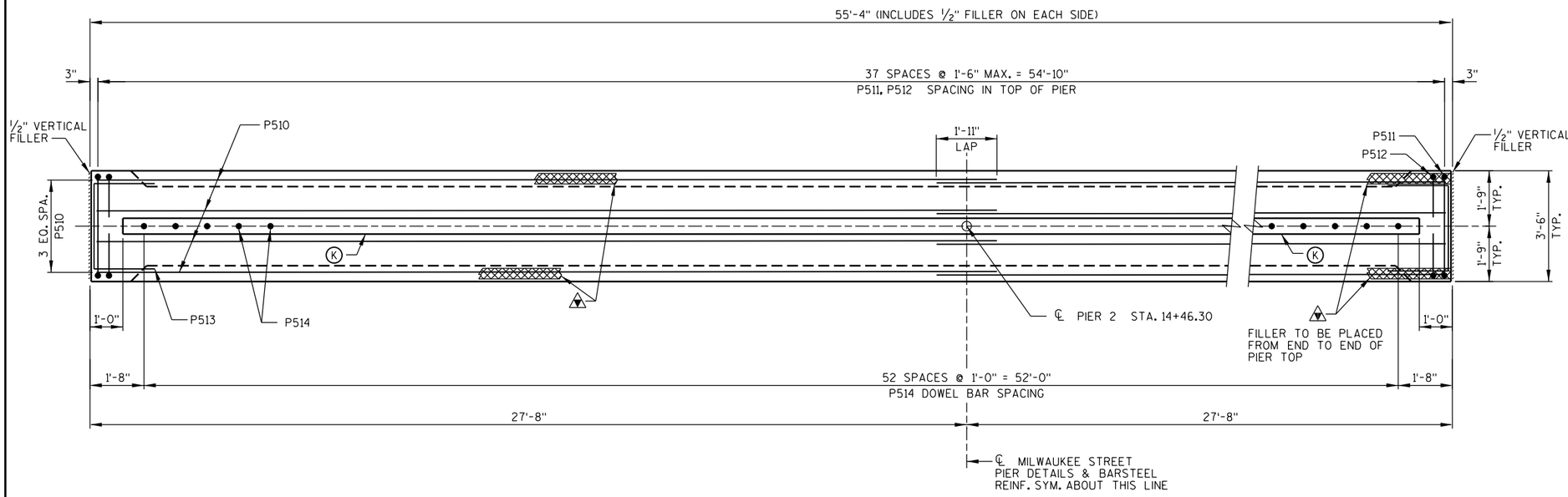
SHEET 12 OF 32
167

FILE= 879002_12.DGN
DATE= 3/1/2018

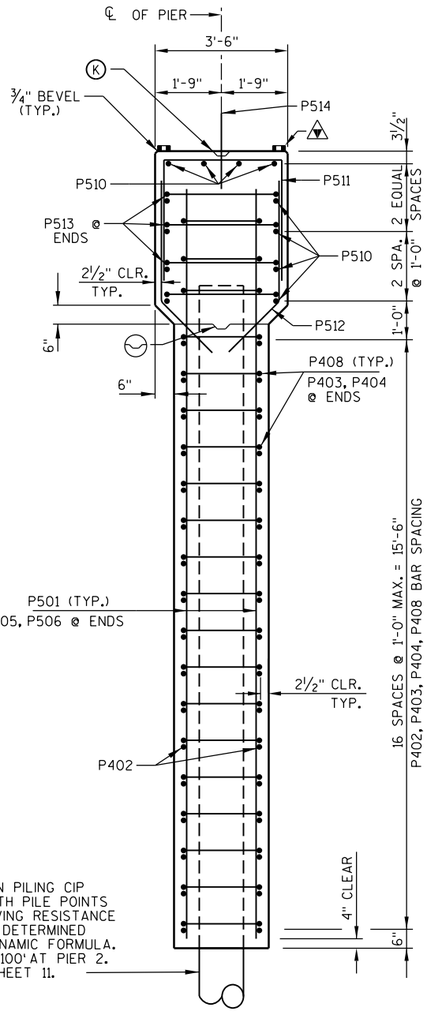
879002_12.dgn 3/1/2018 8:02:18 AM lrabska

STATE PROJECT NUMBER

5990-00-34



PIER TOP PLAN

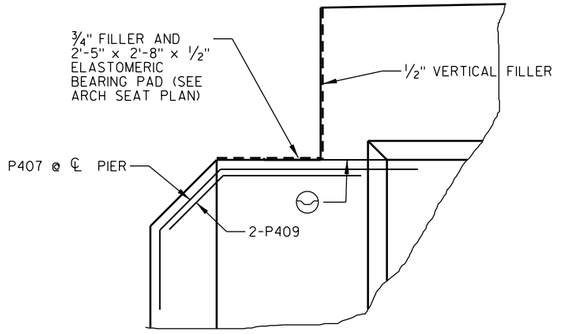


LEGEND

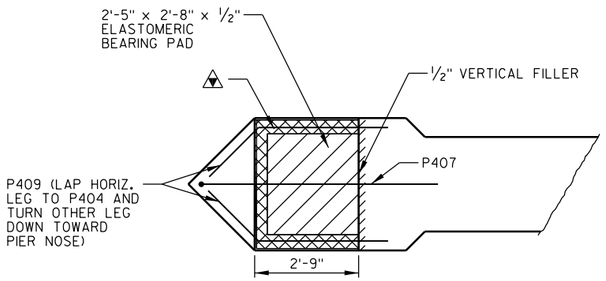
- (K) - KEYED CONSTRUCTION JOINT FORMED WITH BEVELED 2X6
- ⌒ - OPTIONAL KEYED CONSTRUCTION JOINT FORMED WITH BEVELED 2x6
- ▲ - 4"x3/4" FILLER

PIERS TO BE SUPPORTED ON PILING CIP CONCRETE 14x0.375-INCH WITH PILE POINTS DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 240 TONS PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED PILE LENGTH IS 100' AT PIER 2. SEE PILE SPLICE DETAILS, SHEET 11.

TYPICAL SECTION THRU PIER



ARCH SEAT ELEVATION



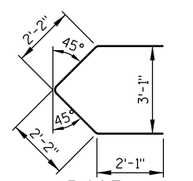
ARCH SEAT PLAN

BILL OF BARS - PIER 2

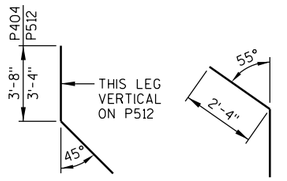
COATED 110 LBS.
UNCOATED 6345 LBS.

MARK	NO. REQ'D.	LENGTH	BENT	LOCATION
P501	110	19'-6"		PIER - BOTTOM - VERT.
P402	68	30'-6"		PIER - BOTTOM - HORIZ.
P403	32	8'-4"	X	PIER - BOTTOM - END TIES - HORIZ.
P404	68	5'-6"	X	PIER - BOTTOM - END TIES - HORIZ.
P505	12	15'-11"		PIER - BOTTOM - END - VERT.
P506	6	14'-3"		PIER - BOTTOM - END - VERT.
P407	2	9'-6"	X	PIER - BOTTOM - END - VERT.
P408	200	2'-8"	X	PIER - AT PILES- TIES - HORIZ.
P409	4	4'-3"	X	PIER - BOTTOM - ENDS - VERT.
P510	24	28'-6"		PIER - TOP - HORIZ.
P511	44	9'-6"	X	PIER - TOP - TIES - VERT.
P512	76	5'-2"	X	PIER - TOP - VERT.
P513	8	7'-7"	X	PIER - TOP - ENDS - HORIZ.
© P514	53	2'-0"		PIER - DOWELS @ TOP - VERT.

© - THESE BARS SHALL BE EPOXY COATED.



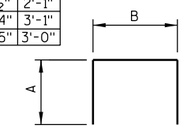
P403



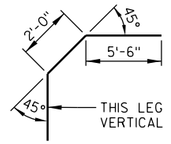
P404, P512

P409

MARK	A	B
P408	4 1/2"	2'-1"
P511	3'-4"	3'-1"
P513	2'-5"	3'-0"



P408, P511, P513



P407

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-53-294

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PIER 2 DETAILS

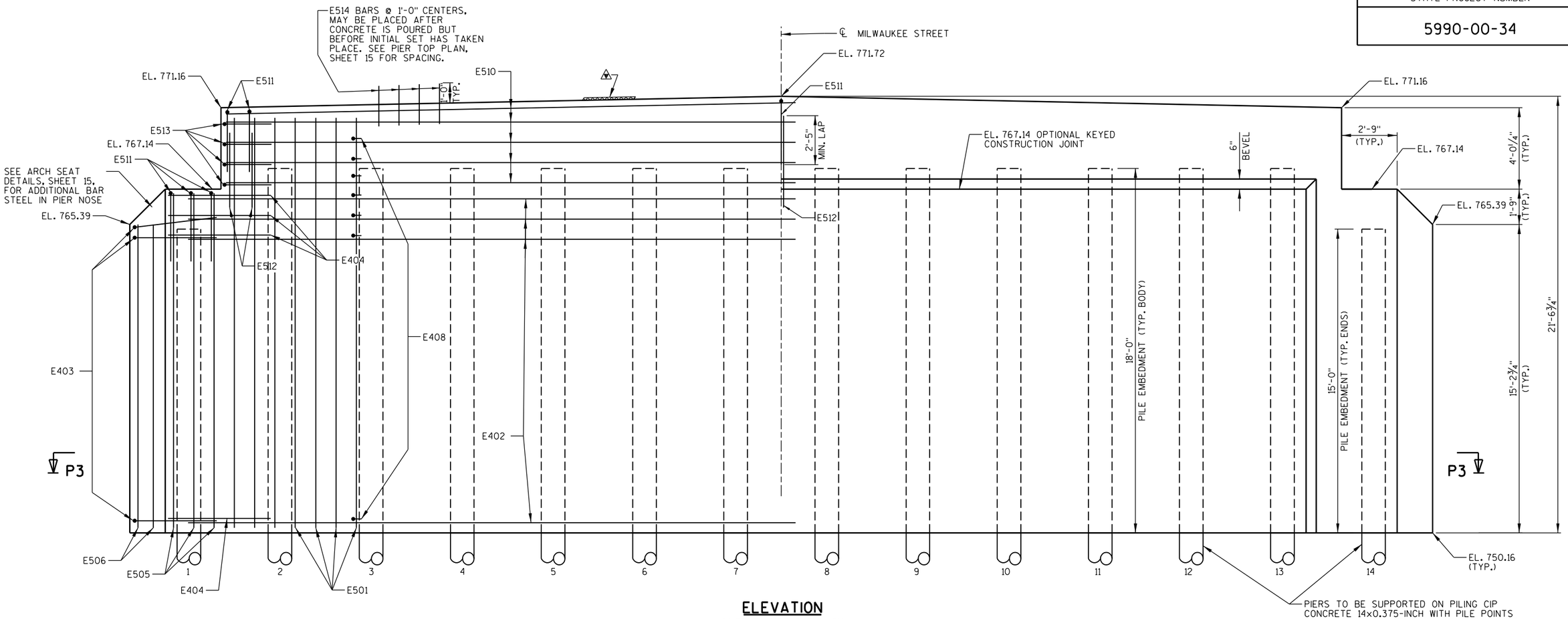
SHEET 13 OF 32
168

FILE= 879002_13.DGN
DATE= 3/9/2018

8

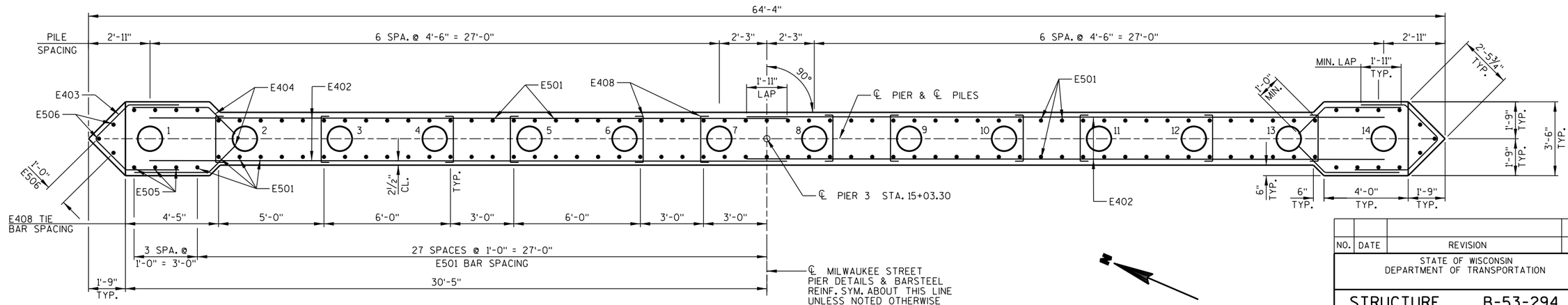
8

STATE PROJECT NUMBER
5990-00-34



ELEVATION

6" BEVEL NOT SHOWN ON HALF OF PIER FOR CLARITY



SECTION P3-P3

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-53-294

DRAWN BY RLR | PLANS CK'D. LJR

PIER 3

SHEET 14 OF 32
169

FILE= 879002_14.DGN
DATE= 3/1/2018

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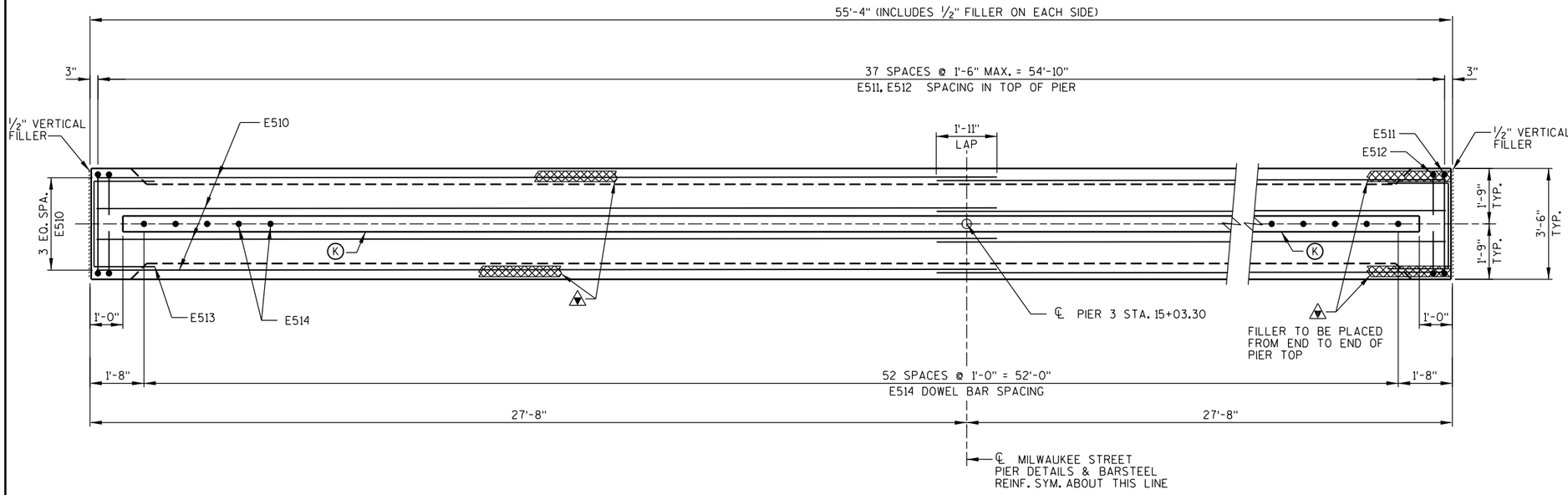
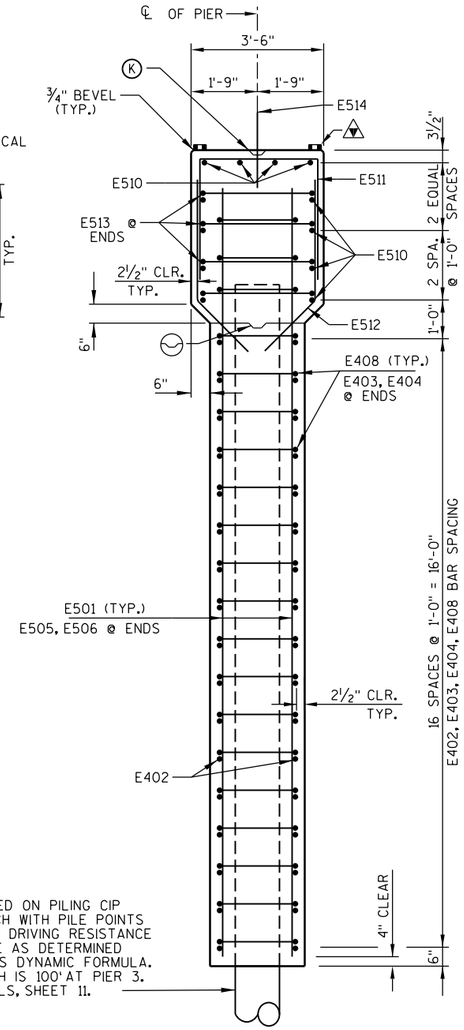
STATE PROJECT NUMBER

5990-00-34



PIER TOP PLAN

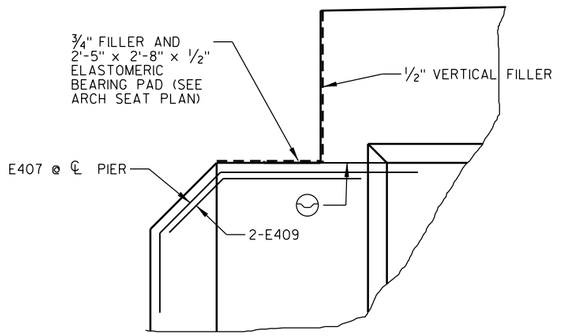


PIERS TO BE SUPPORTED ON PILING CIP CONCRETE 14x0.375-INCH WITH PILE POINTS DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 240 TONS PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED PILE LENGTH IS 100' AT PIER 3. SEE PILE SPLICE DETAILS, SHEET 11.

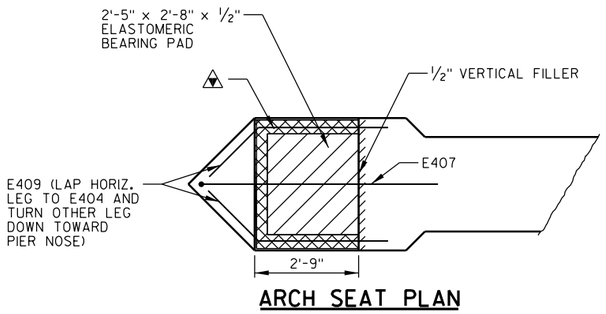
TYPICAL SECTION THRU PIER

LEGEND

- K - KEYED CONSTRUCTION JOINT FORMED WITH BEVELED 2X6
- ⌒ - OPTIONAL KEYED CONSTRUCTION JOINT FORMED WITH BEVELED 2x6
- ▲ - 4"x3/4" FILLER



ARCH SEAT ELEVATION



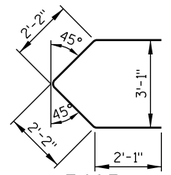
ARCH SEAT PLAN

BILL OF BARS - PIER 3

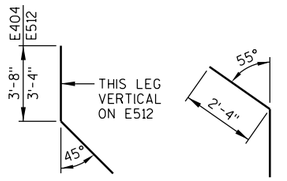
COATED 110 LBS.
UNCOATED 6480 LBS.

MARK	NO. REQ'D.	LENGTH	BENT	LOCATION
E501	110	20'-0"		PIER - BOTTOM - VERT.
E402	68	30'-6"		PIER - BOTTOM - HORIZ.
E403	32	8'-4"	X	PIER - BOTTOM - END TIES - HORIZ.
E404	68	5'-6"	X	PIER - BOTTOM - END TIES - HORIZ.
E505	12	16'-5"		PIER - BOTTOM - END - VERT.
E506	6	14'-9"		PIER - BOTTOM - END - VERT.
E407	2	9'-6"	X	PIER - BOTTOM - END - VERT.
E408	240	2'-8"	X	PIER - AT PILES- TIES - HORIZ.
E409	4	4'-3"	X	PIER - BOTTOM - ENDS - VERT.
E510	24	28'-6"		PIER - TOP - HORIZ.
E511	44	9'-6"	X	PIER - TOP - TIES - VERT.
E512	76	5'-2"	X	PIER - TOP - VERT.
E513	8	7'-7"	X	PIER - TOP - ENDS - HORIZ.
© E514	53	2'-0"		PIER - DOWELS @ TOP - VERT.

© - THESE BARS SHALL BE EPOXY COATED.



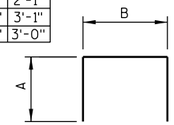
E403



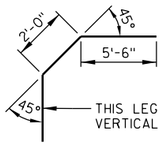
E404, E512

E409

MARK	A	B
E408	4 1/2"	2'-1"
E511	3'-4"	3'-1"
E513	2'-5"	3'-0"



E408, E511, E513



E407

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STATE OF WISCONSIN
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STRUCTURE B-53-294

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PIER 3 DETAILS

SHEET 15 OF 32
170

FILE= 879002_15.DGN
DATE= 3/1/2018

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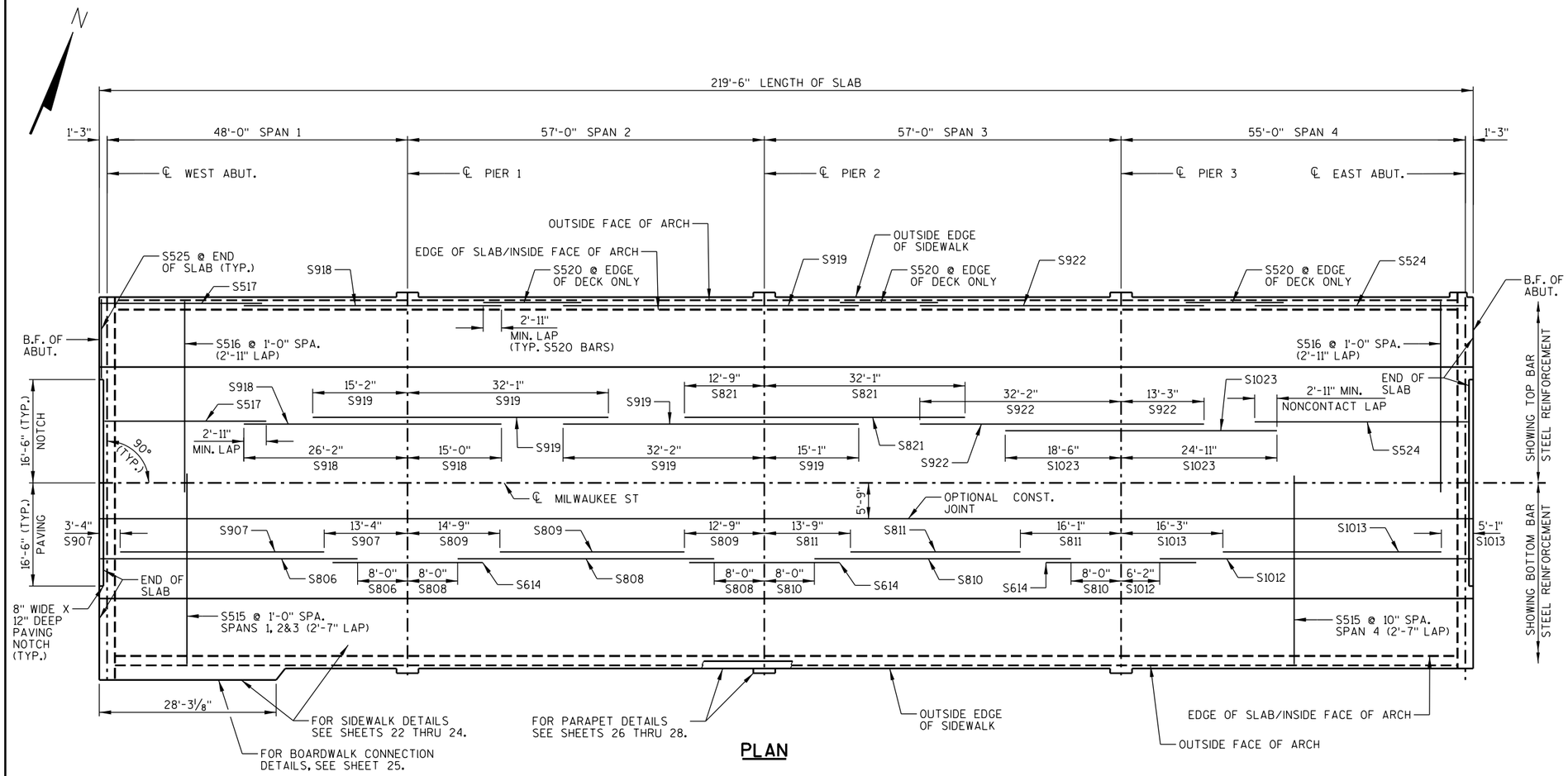
STATE PROJECT NUMBER

5990-00-34



PLAN

TOP OF SLAB ELEVATIONS AND CAMBER VALUES

LOCATION	SOUTH EDGE OF SLAB ELEV.	℄ MILWAUKEE STREET ELEV.	NORTH EDGE OF SLAB ELEV.	CAMBER VALUE (INCHES)
W. ABUT.	772.84	773.40	772.84	0.0
1/10	772.89	773.45	772.89	0.3
2/10	772.95	773.50	772.95	0.6
3/10	773.00	773.55	773.00	0.7
4/10	773.05	773.60	773.05	0.8
5/10	773.10	773.65	773.10	0.7
6/10	773.15	773.70	773.15	0.6
7/10	773.20	773.75	773.20	0.4
8/10	773.25	773.80	773.25	0.2
9/10	773.30	773.85	773.30	0.1
PIER 1	773.35	773.91	773.35	0.0
1/10	773.41	773.97	773.41	0.0
2/10	773.47	774.03	773.47	0.1
3/10	773.53	774.09	773.53	0.3
4/10	773.59	774.15	773.59	0.4
5/10	773.65	774.21	773.65	0.5
6/10	773.71	774.27	773.71	0.5
7/10	773.78	774.33	773.78	0.4
8/10	773.84	774.39	773.84	0.2
9/10	773.90	774.45	773.90	0.1
PIER 2	773.96	774.51	773.96	0.0
1/10	774.02	774.57	774.02	0.0
2/10	774.08	774.63	774.08	0.0
3/10	774.14	774.69	774.14	0.1
4/10	774.20	774.75	774.20	0.2
5/10	774.26	774.81	774.26	0.1
6/10	774.32	774.87	774.32	0.1
7/10	774.38	774.93	774.38	-0.1
8/10	774.44	774.99	774.44	-0.2
9/10	774.50	775.05	774.50	-0.1
PIER 3	774.56	775.11	774.56	0.0
1/10	774.62	775.17	774.62	0.2
2/10	774.68	775.23	774.68	0.6
3/10	774.74	775.29	774.74	1.0
4/10	774.79	775.35	774.79	1.4
5/10	774.85	775.41	774.85	1.6
6/10	774.91	775.46	774.91	1.7
7/10	774.97 ◆	775.52	774.97 ◆	1.5
8/10	775.03 ◆	775.58	775.03 ◆	1.2
9/10	775.09 ◆	775.64	775.09 ◆	0.6
E. ABUT.	775.14 ◆	775.70	775.14 ◆	0.0

NOTES

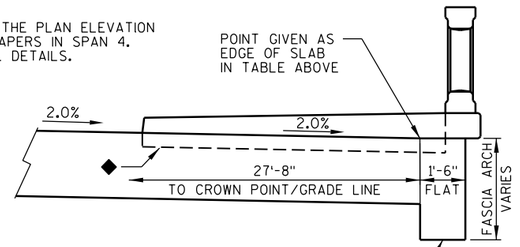
TOP TRANSVERSE BARS IN SLAB SHALL BE SUPPORTED BY INDIVIDUAL BAR CHAIRS AT APPROXIMATELY 3'-0" CENTERS EACH WAY. BOTTOM LONGITUDINAL BARS SHALL BE SUPPORTED BY CONTINUOUS BAR CHAIRS AT APPROXIMATELY 4'-0" CENTERS.

ALL SLAB THICKNESS DIMENSIONS ARE MINIMUM. ANY TOLERANCES NECESSARY TO CORRECT CONSTRUCTION DISCREPANCIES ARE TO BE PLUS (+).

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

SEE SHEET 29 FOR LOCATION OF CONDUITS IN THE SLAB.

◆ - HOLD SLAB POUR 5½" BELOW THE PLAN ELEVATION IN AREA BELOW CURB RAMP TAPERS IN SPAN 4. SEE SHEET 23 FOR ADDITIONAL DETAILS.

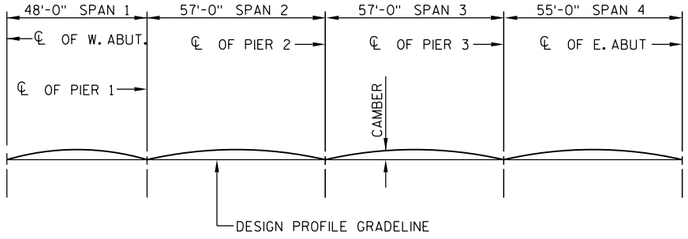


EDGE OF SLAB DETAIL

SURVEY TOP OF SLAB ELEVATIONS

LOCATION	SOUTH SLAB EDGE	℄ MILWAUKEE STREET	NORTH SLAB EDGE
W. ABUT.			
SPAN 1 - 5/10			
PIER 1			
SPAN 2 - 5/10			
PIER 2			
SPAN 3 - 5/10			
PIER 3			
SPAN 4 - 5/10			
E. ABUT.			

PRIOR TO RELEASING SLAB FALSEWORK, TAKE TOP OF SLAB ELEVATIONS AT THE ℄ OF ABUTMENTS, THE ℄ OF PIERS, AND AT THE 5/10 PTS. TO VERIFY CAMBER. TAKE ELEVATIONS ALONG EDGE OF SLAB AND ℄. RECORD THE ELEVATIONS IN THE ABOVE TABLE FOR THE "AS BUILT" PLANS.



CAMBER DIAGRAM

CAMBER SPANS AS SHOWN ABOVE AND IN THE TABLE OF VALUES TO PROVIDE FOR DEAD LOAD DEFLECTION AND FUTURE CREEP. CAMBER DOES NOT INCLUDE ALLOWANCE FOR FORM SETTLEMENT. DEAD LOAD DEFLECTION APPROXIMATES 1/3 OF CAMBER VALUES SHOWN.

TO DETERMINE FALSEWORK ELEVATION AT EDGE OF SLAB, CROWN OR REFERENCE LINE, FOLLOW THIS PROCEDURE:

TOP OF SLAB ELEVATION AT FINAL GRADE

\- SLAB THICKNESS

\+ CAMBER

\+ FORM SETTLEMENT/DEFLECTION DUE TO PLACEMENT OF SLAB CONCRETE (TO BE COMPUTED BY THE CONTRACTOR)

= TOP OF SLAB FALSEWORK ELEVATION

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-53-294

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SUPERSTRUCTURE

SHEET 16 OF 32
171

8

8

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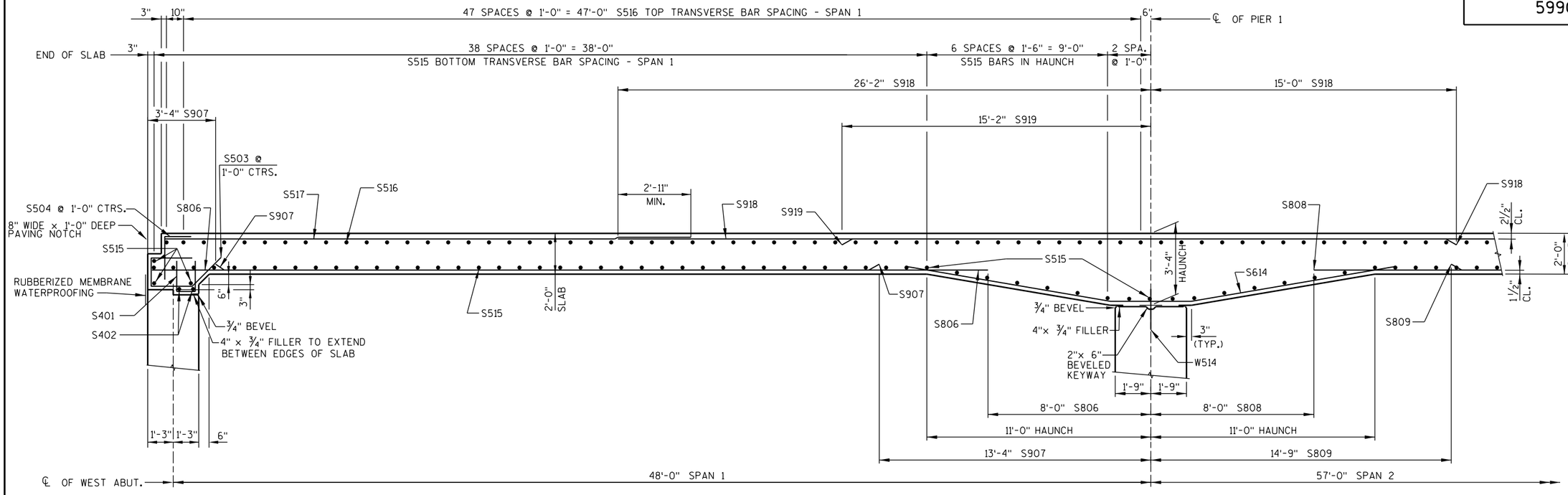
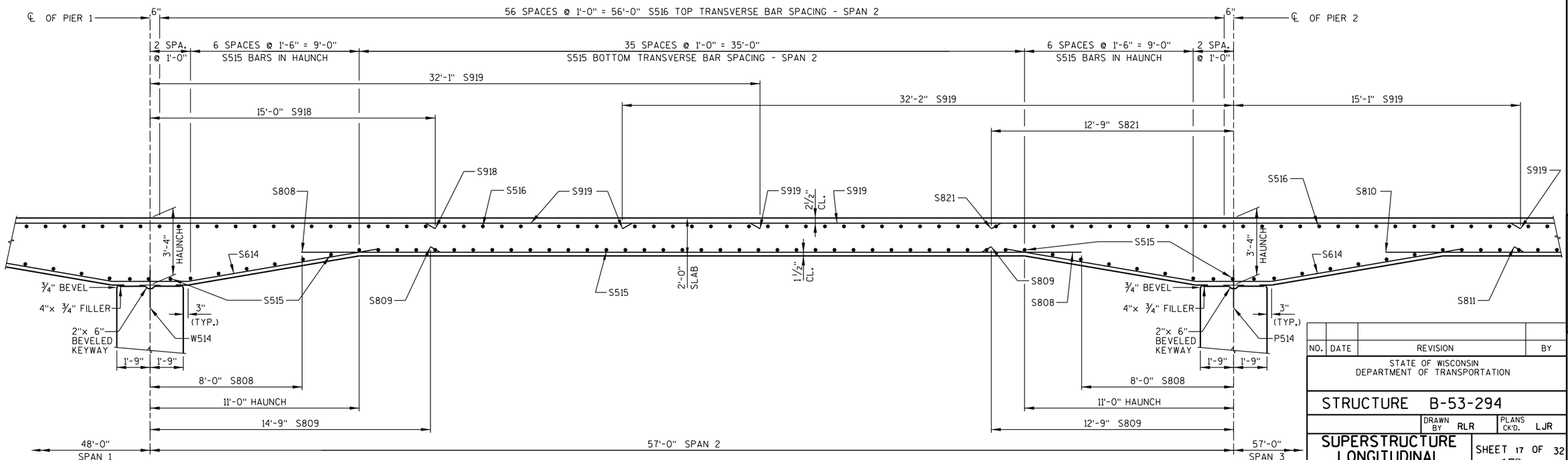
FILE= 879002_16.DGN
DATE= 3/12/2018

STATE PROJECT NUMBER

5990-00-34



PART LONGITUDINAL SECTION - SPAN 1



PART LONGITUDINAL SECTION - SPAN 2

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-53-294

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SUPERSTRUCTURE LONGITUDINAL SECTIONS SPANS 1 & 2

SHEET 17 OF 32
172

FILE= 879002_17.DGN
DATE= 3/2/2018

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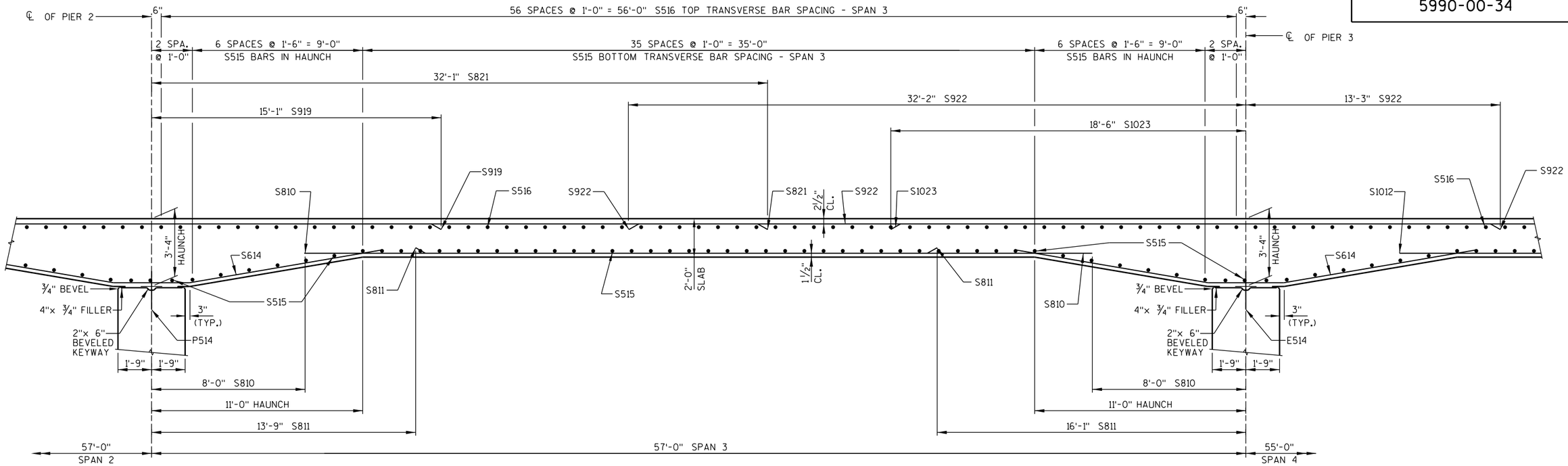
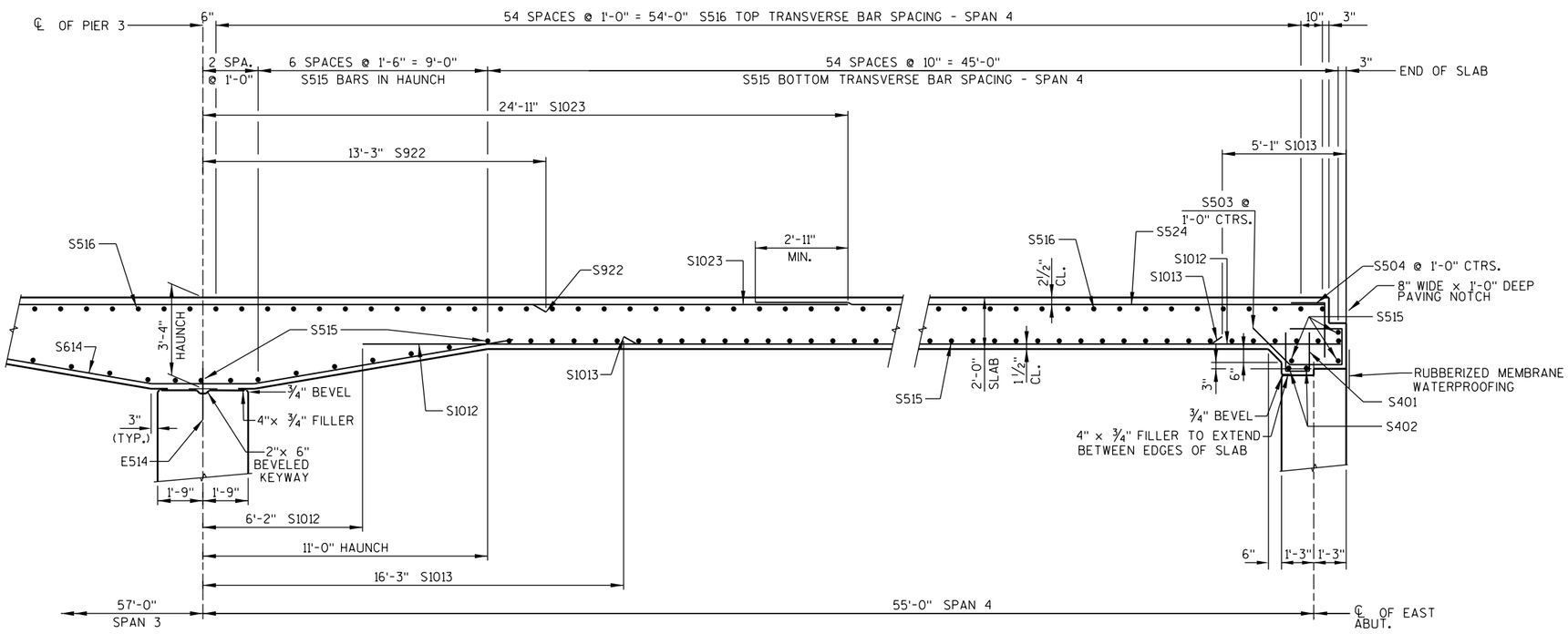
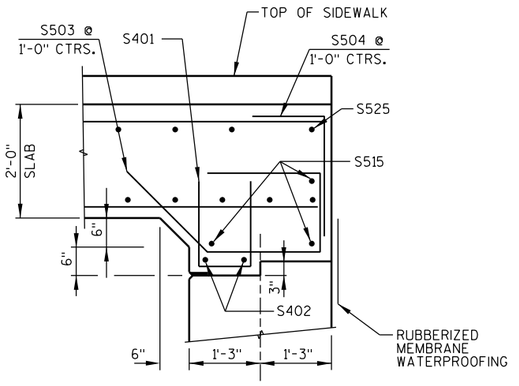


PART LONGITUDINAL SECTION - SPAN 3



PART LONGITUDINAL SECTION - SPAN 4



TYPICAL SECTION THRU ABUT. DIAPHRAGM BEYOND PAVING NOTCH

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-53-294

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SUPERSTRUCTURE LONGITUDINAL SECTIONS SPANS 3 & 4

SHEET 1R OF 32
173

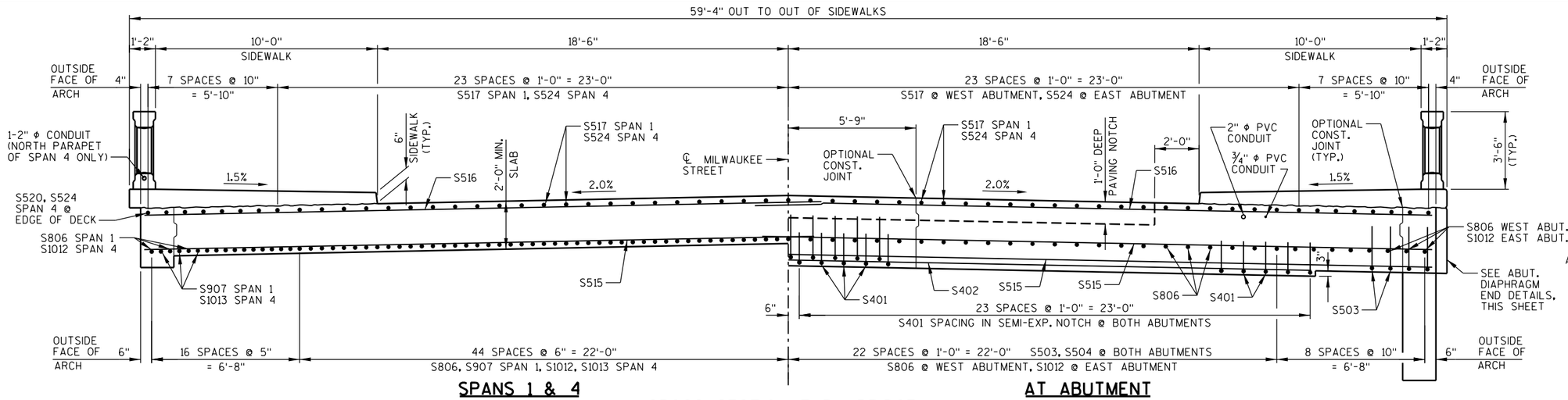
FILE= 879002_18.DGN
DATE= 3/1/2018

8

8

STATE PROJECT NUMBER

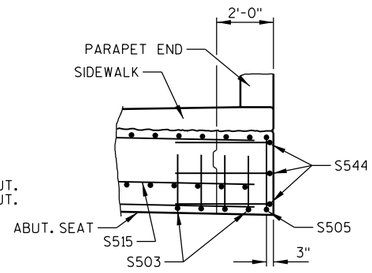
5990-00-34



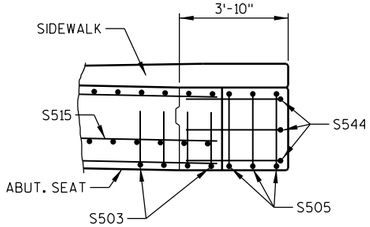
SPANS 1 & 4 — AT ABUTMENT

CROSS SECTION THRU BRIDGE

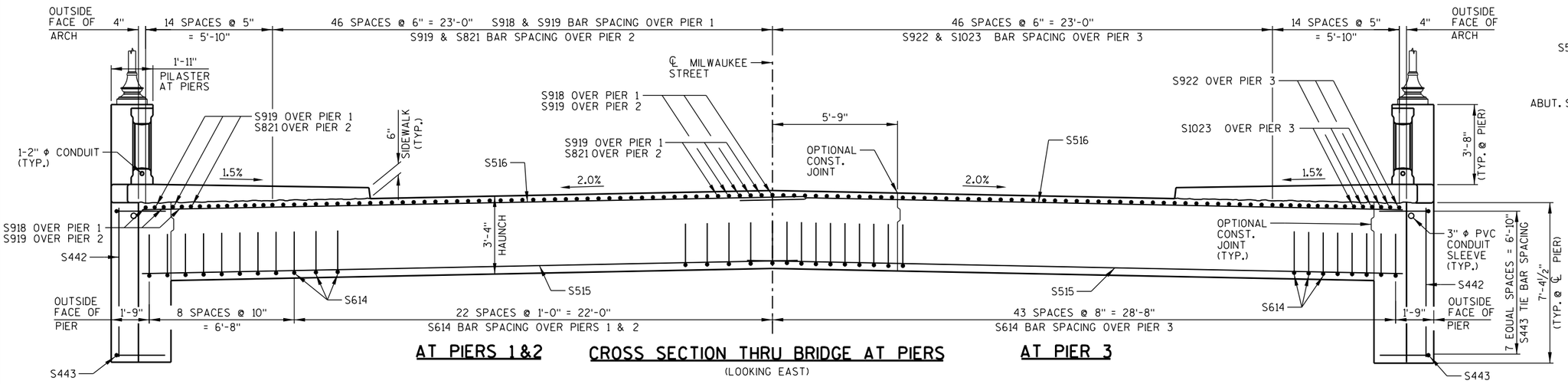
(LOOKING EAST)



TYPICAL ABUTMENT DIAPHRAGM END DETAIL



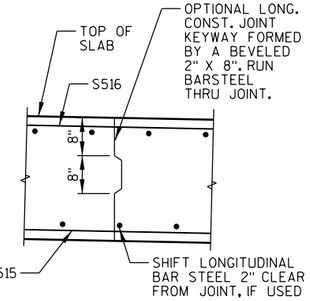
ABUTMENT DIAPHRAGM END DETAIL AT SW CORNER



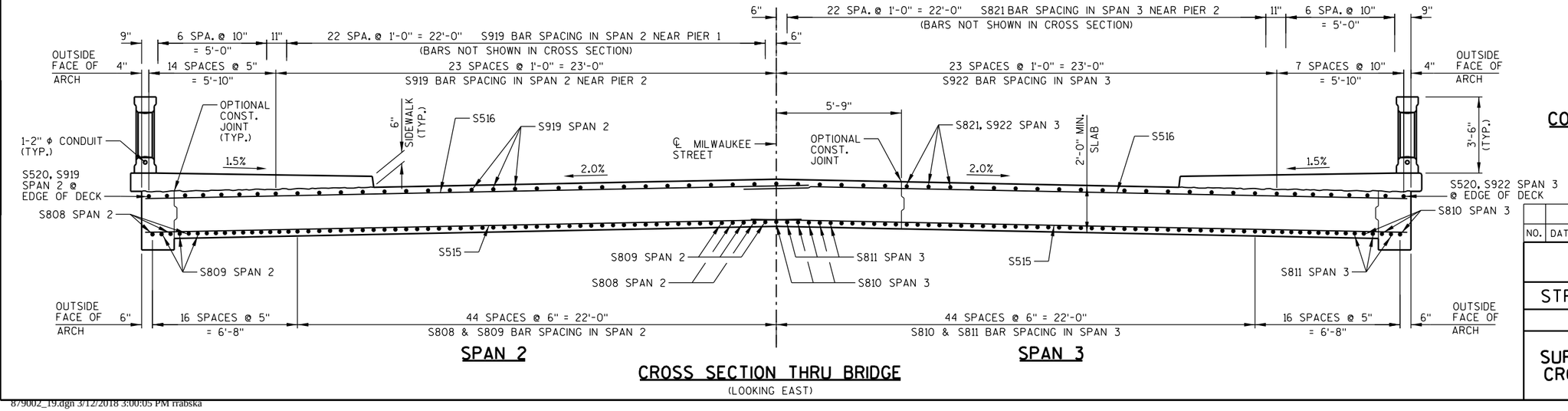
AT PIERS 1&2 — AT PIER 3

CROSS SECTION THRU BRIDGE AT PIERS

(LOOKING EAST)



OPTIONAL LONGITUDINAL CONSTRUCTION JOINT DETAIL



SPAN 2 — SPAN 3

CROSS SECTION THRU BRIDGE

(LOOKING EAST)

NOTE

ARCH INSET PANELS NOT SHOWN

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
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STRUCTURE B-53-294

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SUPERSTRUCTURE CROSS SECTIONS

SHEET 19 OF 32
174

FILE= 879002_19.DGN
DATE= 3/12/2018

8

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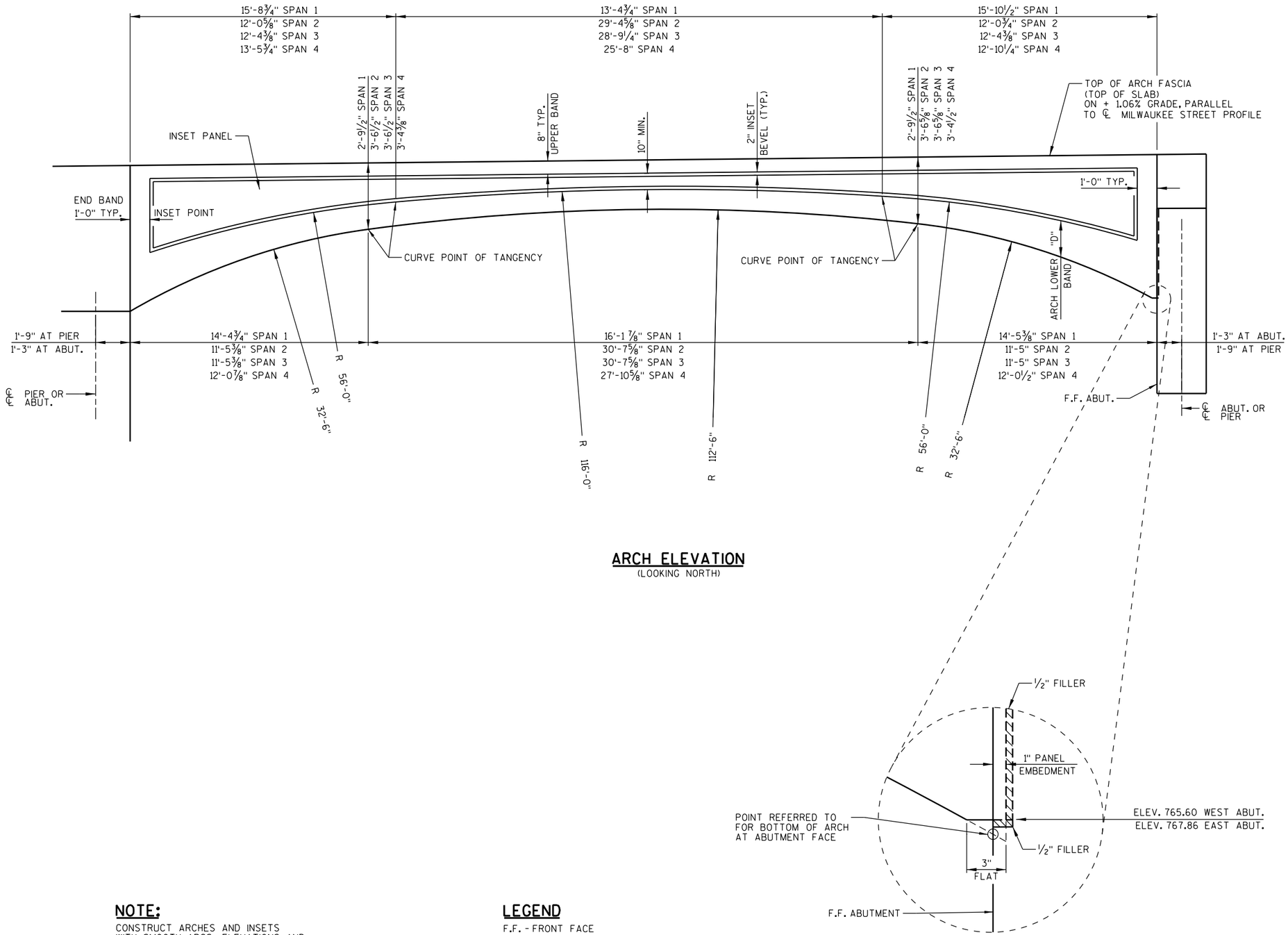

ARCH ELEVATION
(LOOKING NORTH)

ABUTMENT DETAIL

ARCH GEOMETRY TABLE

	LOCATION	EDGE OF SLAB ELEV.	BOTTOM OF ARCH ELEV.	ARCH HEIGHT (DECIMAL FEET)	ARCH LOWER BAND (DIM. "D")
SPAN 1	W. ABUT. FACE	772.86	765.50	7.36	N/A
	AT INSET PANEL	772.87	766.09	6.78	2.50
	1/10	772.89	767.39	5.50	1.98
	2/10	772.95	769.15	3.80	1.35
	3/10	773.00	770.10	2.90	1.09
	4/10	773.05	770.46	2.59	1.03
	5/10	773.10	770.60	2.50	1.00
	6/10	773.15	770.53	2.62	1.04
	7/10	773.20	770.23	2.97	1.11
	8/10	773.25	769.29	3.96	1.41
	9/10	773.30	767.55	5.75	2.08
	AT INSET PANEL	773.32	766.54	6.79	2.50
	W. FACE PIER 1	773.33	765.98	7.36	N/A
SPAN 2	E. FACE PIER 1	773.37	765.98	7.40	N/A
	AT INSET PANEL	773.38	766.52	6.86	2.51
	1/10	773.41	767.90	5.51	1.97
	2/10	773.47	769.63	3.84	1.39
	3/10	773.53	770.46	3.07	1.17
	4/10	773.59	770.95	2.64	1.04
	5/10	773.65	771.15	2.50	1.00
	6/10	773.71	771.06	2.65	1.05
	7/10	773.78	770.70	3.08	1.18
	8/10	773.84	769.99	3.85	1.40
	9/10	773.90	768.40	5.50	1.98
	AT INSET PANEL	773.93	767.10	6.83	2.50
	W. FACE PIER 2	773.94	766.58	7.36	N/A
SPAN 3	E. FACE PIER 2	773.97	766.58	7.40	N/A
	AT INSET PANEL	773.98	767.12	6.86	2.47
	1/10	774.02	768.51	5.51	1.94
	2/10	774.08	770.24	3.84	1.38
	3/10	774.14	771.07	3.07	1.17
	4/10	774.20	771.56	2.64	1.04
	5/10	774.26	771.76	2.50	1.00
	6/10	774.32	771.67	2.65	1.05
	7/10	774.38	771.30	3.08	1.18
	8/10	774.44	770.59	3.85	1.39
	9/10	774.50	769.00	5.50	1.95
	AT INSET PANEL	774.53	767.70	6.83	2.46
	W. FACE PIER 3	774.54	767.18	7.36	N/A
SPAN 4	E. FACE PIER 3	774.57	767.18	7.40	N/A
	AT INSET PANEL	774.58	767.74	6.85	2.42
	1/10	774.62	769.07	5.55	1.92
	2/10	774.68	770.84	3.84	1.35
	3/10	774.74	771.68	3.06	1.16
	4/10	774.79	772.15	2.64	1.04
	5/10	774.85	772.35	2.50	1.00
	6/10	774.91	772.29	2.62	1.04
	7/10	774.97◆	771.95	3.02◆	1.16
	8/10	775.03◆	771.29	3.74◆	1.36
	9/10	775.09◆	769.74	5.35◆	1.92
	AT INSET PANEL	775.11◆	768.30	6.82◆	2.50
	E. ABUT. FACE	775.13◆	767.77	7.36◆	N/A

NOTE:
CONSTRUCT ARCHES AND INSETS WITH SMOOTH ARCS. ELEVATIONS AND DIMENSIONS FOR THE ARCHES GIVEN IN THE GEOMETRY TABLE ARE FOR INFORMATIONAL PURPOSES. ELEVATIONS ARE FOR DESIGN GRADES AND DO NOT ACCOUNT FOR CAMBER.

LEGEND
F.F. - FRONT FACE

◆ - HOLD SLAB POUR 5½" BELOW PLAN ELEVATION IN AREA BELOW CURB RAMP TAPERS IN SPAN 4. SEE SHEET 23 FOR ADDITIONAL DETAILS.

STATE PROJECT NUMBER

5990-00-34

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-53-294

DRAWN BY RLR | PLANS CK'D. DHW

ARCH FASCIA GEOMETRY

SHEET 20 OF 32
175

FILE= 879002_20.DGN
DATE= 3/5/2018

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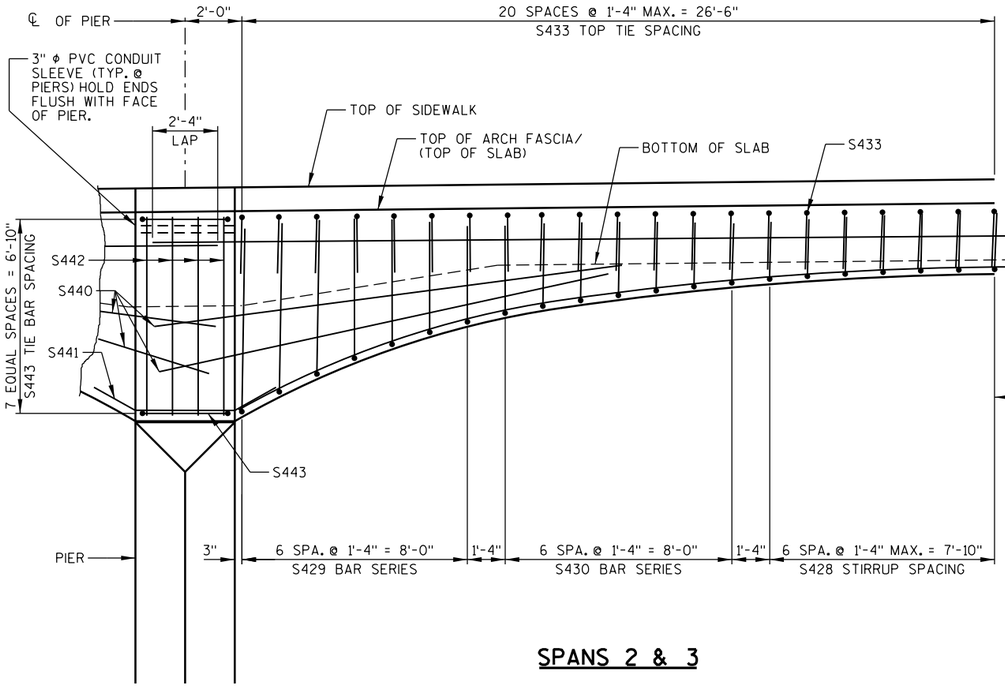
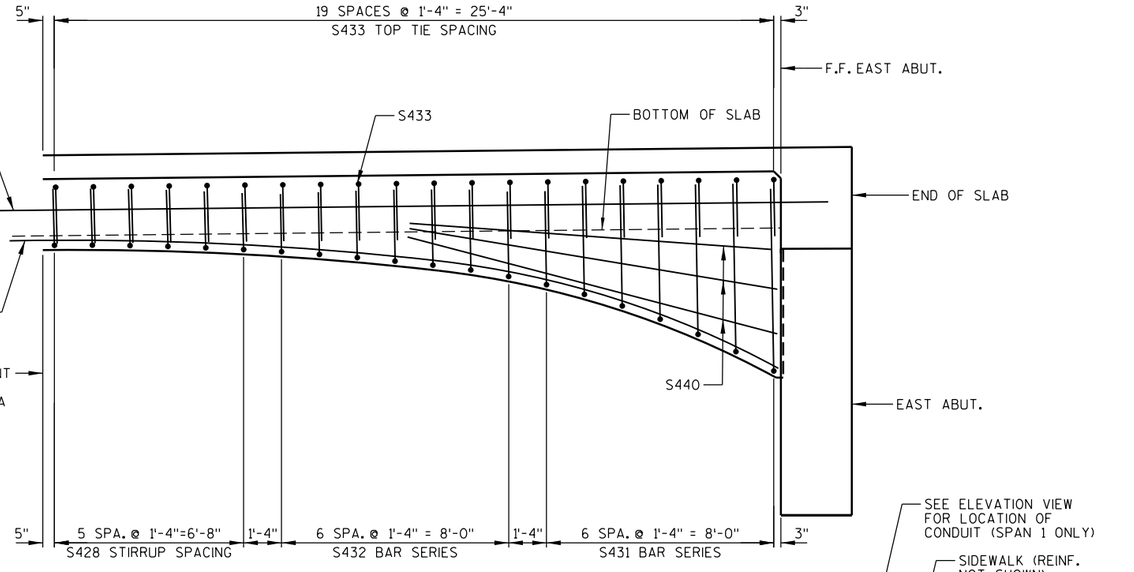
STATE PROJECT NUMBER

5990-00-34



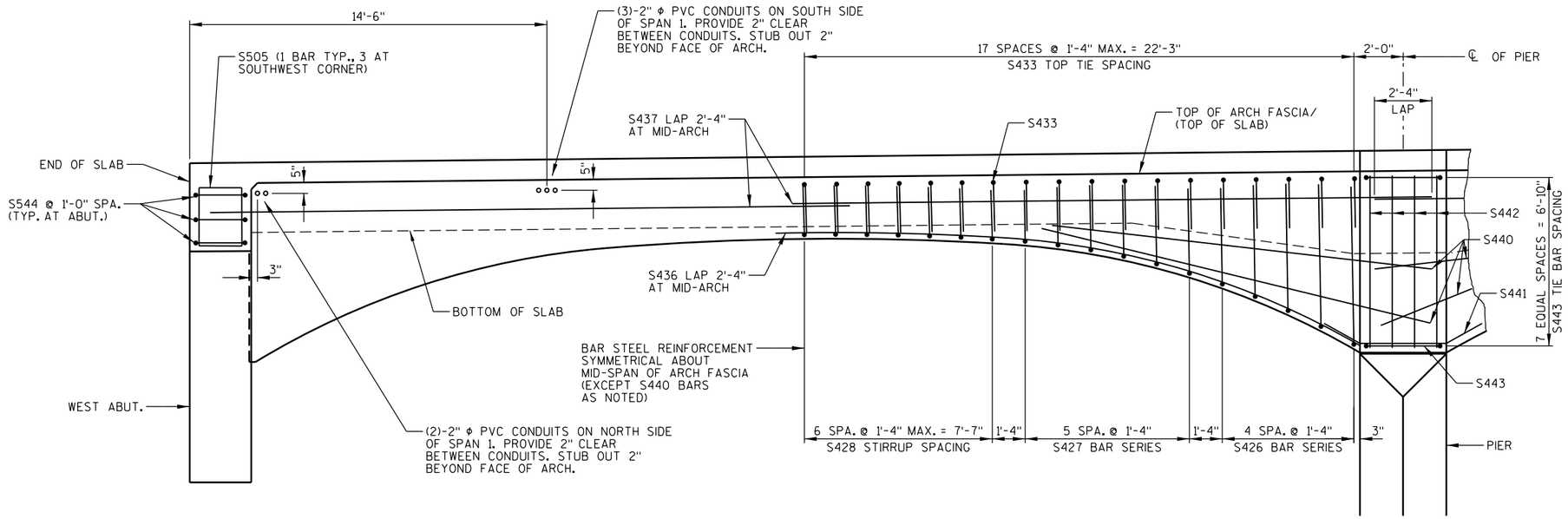
SPANS 2 & 3



SPAN 4

ARCH ELEVATIONS

INDENTS NOT SHOWN

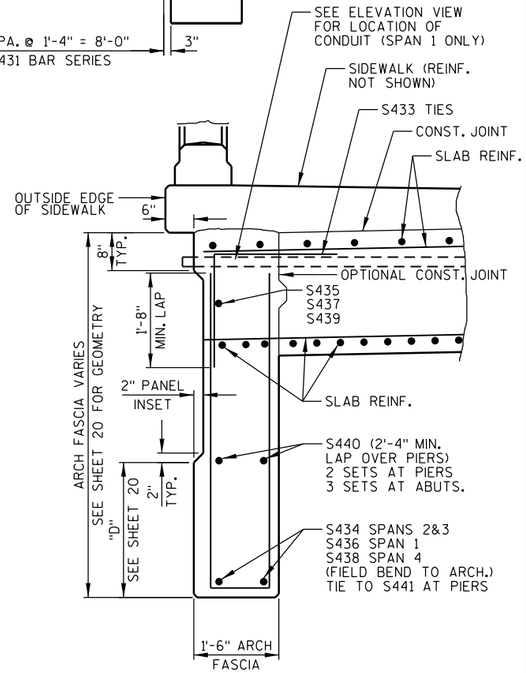


ARCH ELEVATION - SPAN 1

INDENTS NOT SHOWN, SEE SHEET 20
(LOOKING NORTH)

PIER 1 SHOWN

(PIERS 2 & 3 SIMILAR)



TYPICAL SECTION THRU ARCH

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-53-294

DRAWN BY RLR | PLANS CK'D. DHW

ARCH FASCIA REINFORCEMENT DETAILS

SHEET 21 OF 32
176

FILE= 879002_21.DGN
DATE= 3/14/2018

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879002_21.dgn 3/14/2018 9:35:37 AM lrhodes

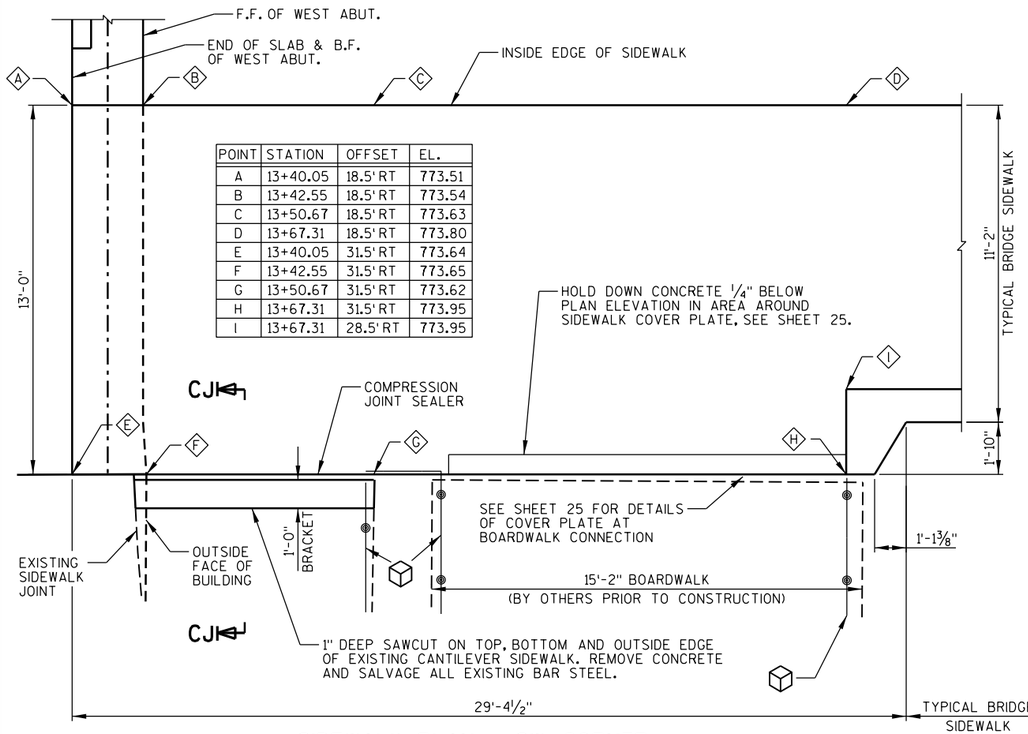
STATE PROJECT NUMBER

5990-00-34

LEGEND

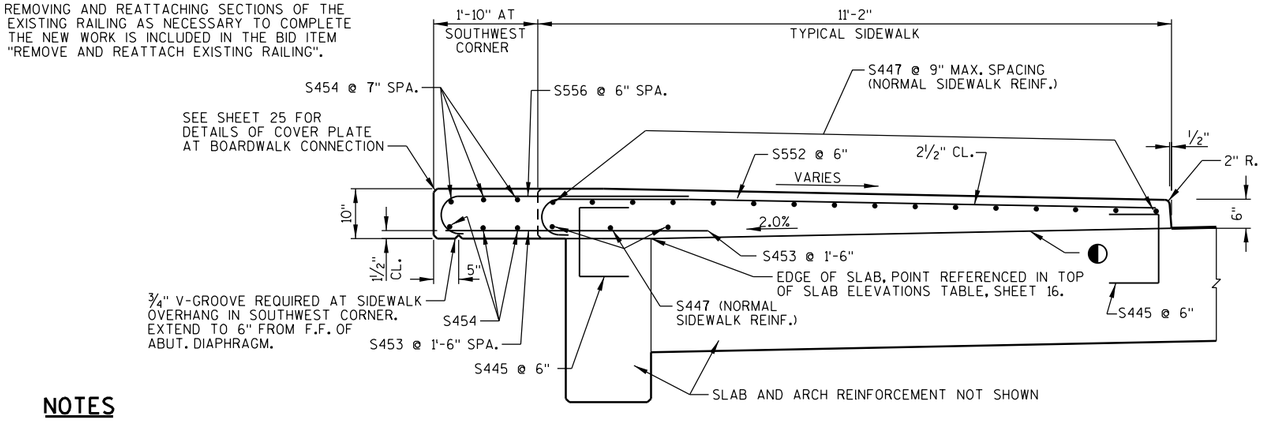
◐ - CONSTRUCTION JOINT, STRIKE OFF AS SHOWN AND LEAVE ROUGH.

⬡ - REMOVING AND REATTACHING SECTIONS OF THE EXISTING RAILING AS NECESSARY TO COMPLETE THE NEW WORK IS INCLUDED IN THE BID ITEM "REMOVE AND REATTACH EXISTING RAILING".



POINT	STATION	OFFSET	EL.
A	13+40.05	18.5' RT	773.51
B	13+42.55	18.5' RT	773.54
C	13+50.67	18.5' RT	773.63
D	13+67.31	18.5' RT	773.80
E	13+40.05	31.5' RT	773.64
F	13+42.55	31.5' RT	773.65
G	13+50.67	31.5' RT	773.62
H	13+67.31	31.5' RT	773.95
I	13+67.31	28.5' RT	773.95

SIDEWALK PLAN - SW CORNER



SECTION THRU SIDEWALK - SW CORNER

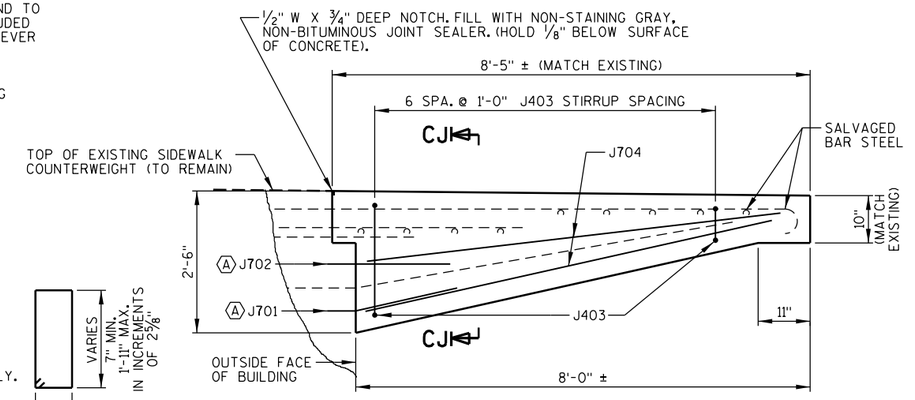
STA. 13+40.05, RT. TO STA. 13+69.43, RT.

NOTES

ELEVATIONS SHOWN IN SIDEWALK PLAN ARE GIVEN AT THE FINISHED TOP OF SIDEWALK.

ALL ITEMS SHOWN TO REMOVE THE EXISTING BRACKET AND CANTILEVER SIDEWALK AND TO CONSTRUCT A NEW BRACKET ARE INCLUDED IN THE BID ITEM "RECONSTRUCT CANTILEVER SIDEWALK".

ASBUILT PLANS FOR THE CANTILEVER SIDEWALK ARE NOT AVAILABLE. EXISTING BARSTEEL SHOWN IS ASSUMED.

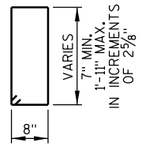


TYPICAL SECTION THRU BRACKET

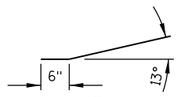
BAR SERIES TABLE

MARK	NO. REQUIRED	LENGTH
J403	1 SERIES OF 7	3'-0" TO 5'-8"

BUNDLE AND TAG EACH SERIES SEPARATELY. BEND BARS AFTER CUTTING.



J403



J701

BILL OF BARS (COATED) 90 LBS.

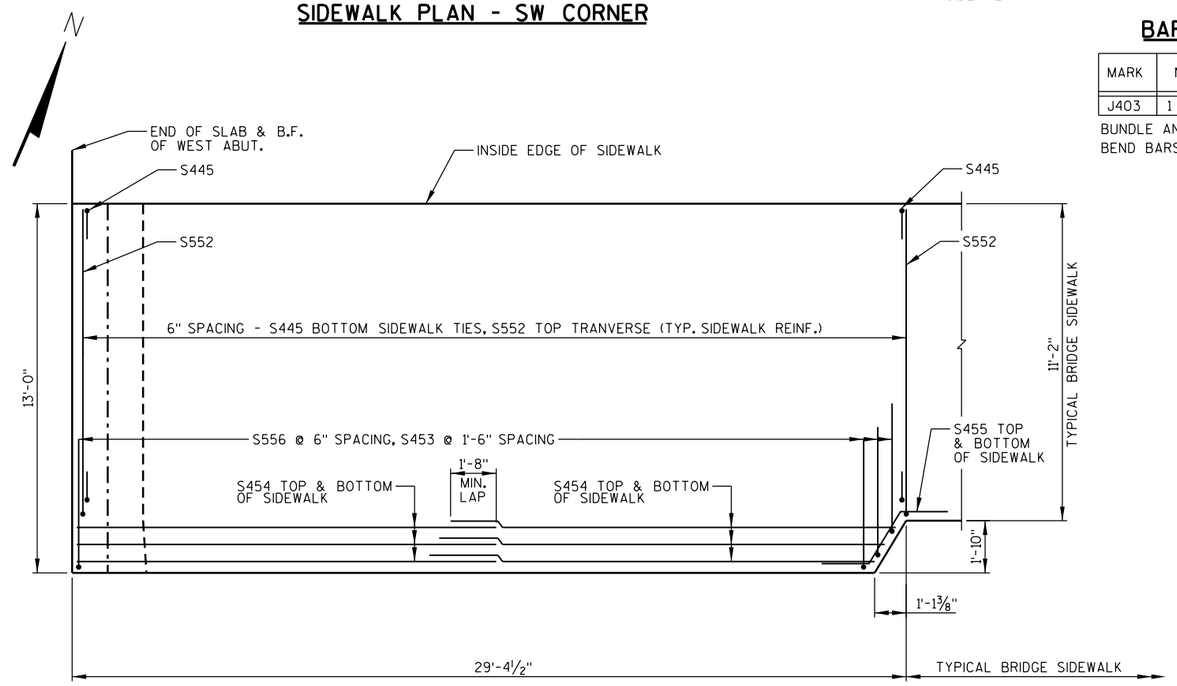
MARK	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A J701	1	2'-4"	X		BRACKET - ADHESIVE ANCHOR - HORIZ.
A J702	1	2'-2"			BRACKET - ADHESIVE ANCHOR - HORIZ.
J403	7	4'-4"	X	Ⓢ	BRACKET - STIRRUP - VERT.
J704	4	7'-4"			BRACKET - HORIZ.

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.

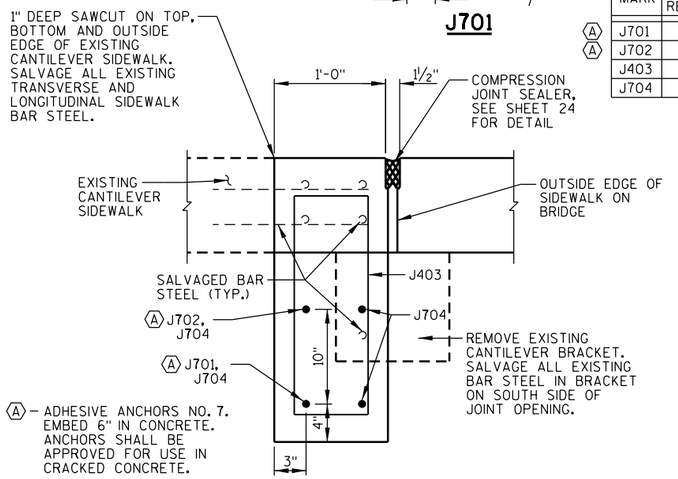
EPOXY COAT ALL BRACKET BAR REINFORCEMENT.

BILL OF BARS FOR BRACKET IS FOR INFORMATION ONLY. BAR STEEL REINFORCEMENT IS INCLUDED IN THE BID ITEM "RECONSTRUCT CANTILEVER SIDEWALK".

Ⓢ - LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.



SIDEWALK REINFORCING PLAN - SW CORNER



Ⓐ - ADHESIVE ANCHORS NO. 7. EMBED 6" IN CONCRETE. ANCHORS SHALL BE APPROVED FOR USE IN CRACKED CONCRETE.

SECTION CJ-CJ

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-53-294

DRAWN BY RLR | PLANS CK'D. LJR

SOUTHWEST CORNER SIDEWALK DETAILS

SHEET 22 OF 32
177

FILE= 879002_22.DGN
DATE= 3/9/2018

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STATE PROJECT NUMBER

5990-00-34

LEGEND

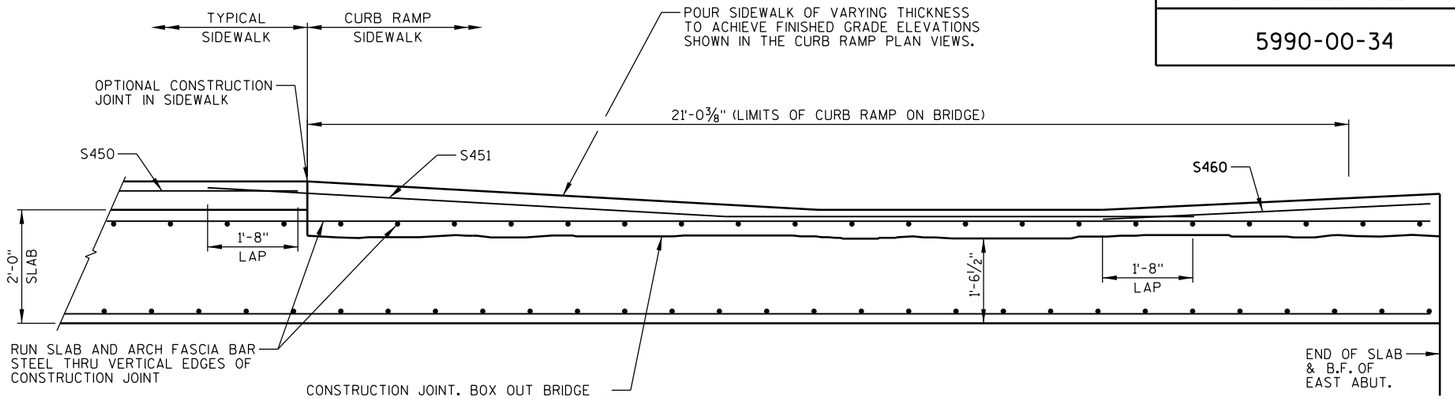
- ◐ - CONSTRUCTION JOINT, STRIKE OFF AS SHOWN AND LEAVE ROUGH.
- ▨ - BOX OUT SLAB CONCRETE IN THIS AREA AND HOLD TOP OF SLAB POUR 5½" BELOW PLAN ELEVATION.
- ▣ - BAR NOT REQUIRED IN AREAS WHERE CURB HEIGHT AT INSIDE EDGE OF SIDEWALK IS LESS THAN 3".

NOTES

ELEVATIONS SHOWN IN CURB RAMP PLANS ARE TO FINISHED TOP OF SIDEWALK AND DO NOT INCLUDE ADJUSTMENTS FOR CAMBER. SEE ROAD PLANS FOR ADDITIONAL CURB RAMP GEOMETRY.

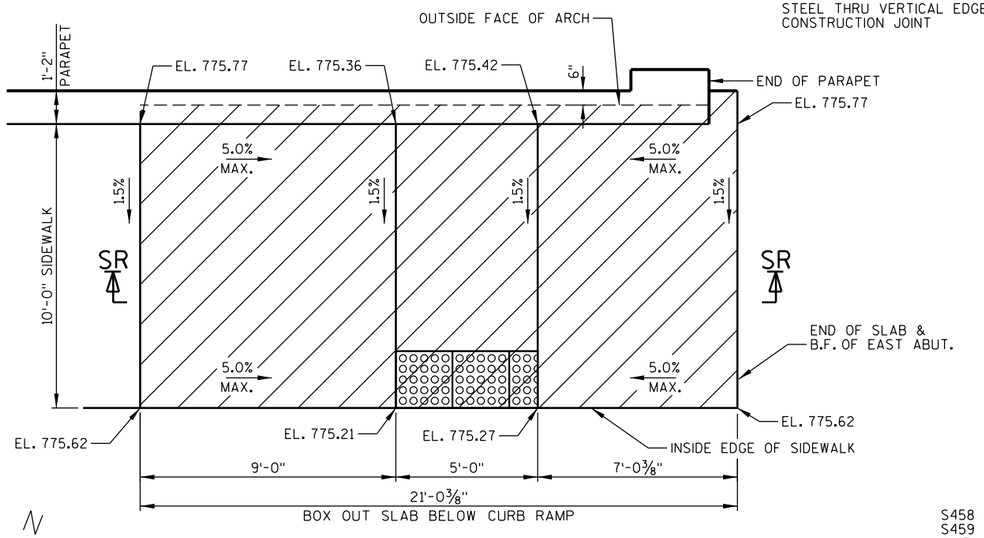
SEAL PERIMETER JOINT AROUND CURB RAMP WITH CRACK SEALER IN ACCORDANCE WITH THE STANDARD SPECIFICATION FOR CRACK SEALING ON NEW CONCRETE DECKS.

2½" CLEARANCE TO TOP OF SIDEWALK MAY BE REDUCED TO 1½" AT LOW POINT IN CURB RAMP.

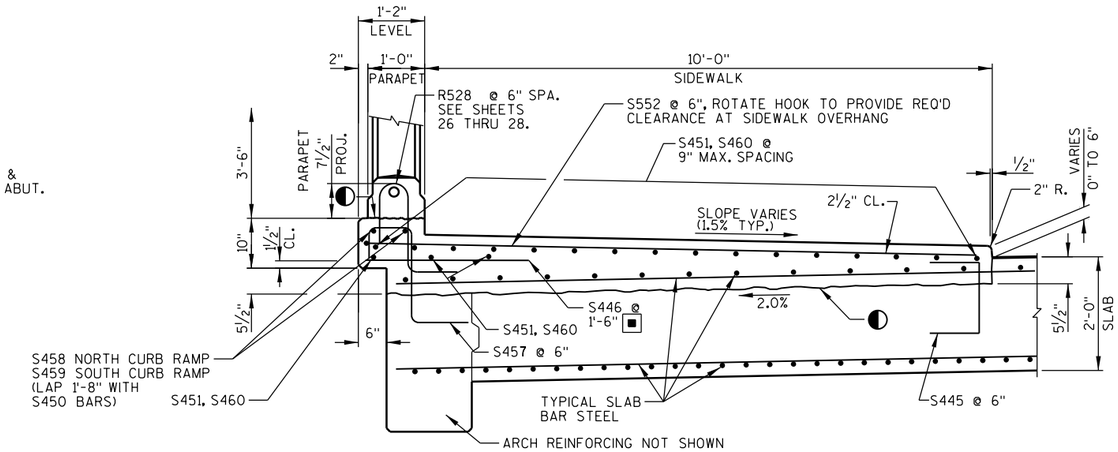


SECTION SR-SR

(NORTH CURB RAMP SHOWN, SOUTH CURB RAMP SIMILAR)

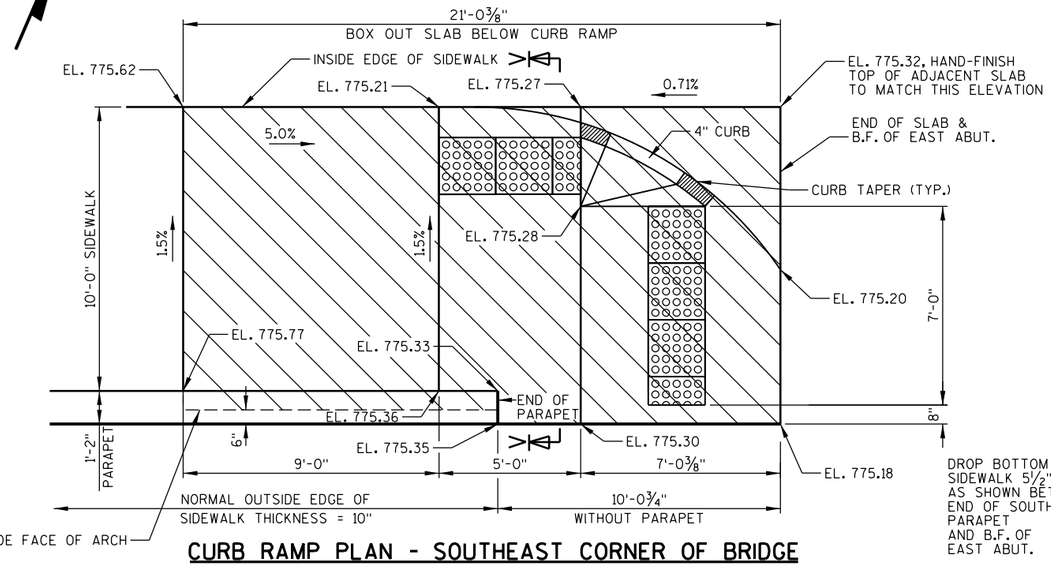


CURB RAMP PLAN - NORTHEAST CORNER OF BRIDGE

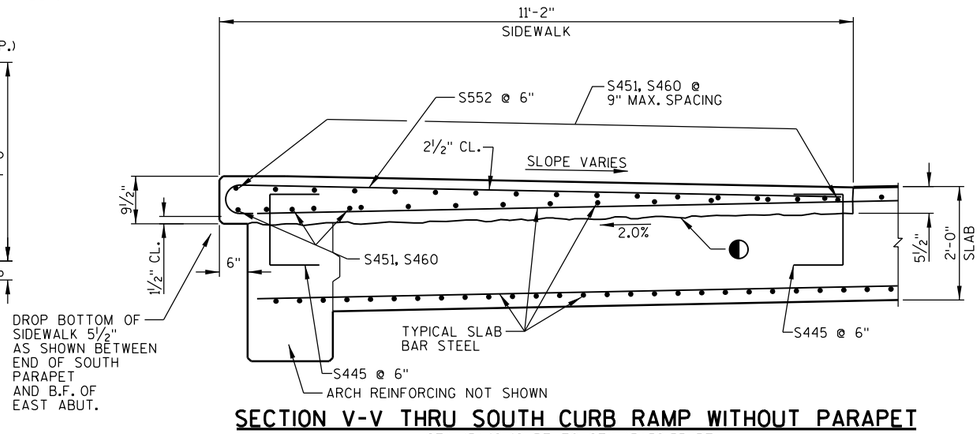


TYPICAL SECTION THRU SIDEWALK AT CURB RAMP

STA. 15+38.52, LT. TO STA. 15+59.55, LT.
STA. 15+38.52, RT. TO STA. 15+49.49, RT.



CURB RAMP PLAN - SOUTHEAST CORNER OF BRIDGE



SECTION V-V THRU SOUTH CURB RAMP WITHOUT PARAPET

STA. 15+49.49, RT. TO STA. 15+59.55, RT.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-53-294

DRAWN BY RLR | PLANS CK'D. LJR

CURB RAMP SIDEWALK DETAILS

SHEET 23 OF 32
178

FILE= 879002_23.DGN
DATE= 3/9/2018

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STATE PROJECT NUMBER

5990-00-34

BILL OF BARS (COATED) 180,490 LBS.

MARK	NUMBER REQ'D.	LENGTH	BENT	BAR SERIES	DESCRIPTION
S401	96	3'-9"	X		DIAPH. @ ABUT. - S.E. SEAT - STIRRUP - VERT.
S402	8	24'-4"			DIAPH. @ ABUT. - S.E. SEAT - TRANS.
S503	122	7'-1"	X		DIAPH. @ ABUT. - STIRRUP - VERT.
S504	122	3'-9"	X		DIAPH. @ ABUT. - STIRRUP - VERT.
S505	6	9'-8"	X		DIAPH. @ ABUT. - TRANS.
S806	61	41'-1"			SLAB - BOTTOM - SPAN 1 - LONGIT.
S907	60	32'-7"			SLAB - BOTTOM - SPAN 1 - LONGIT.
S808	61	41'-0"			SLAB - BOTTOM - SPAN 2 - LONGIT.
S809	60	29'-6"			SLAB - BOTTOM - SPAN 2 - LONGIT.
S810	61	41'-0"			SLAB - BOTTOM - SPAN 3 - LONGIT.
S811	60	27'-2"			SLAB - BOTTOM - SPAN 3 - LONGIT.
S1012	61	49'-11"			SLAB - BOTTOM - SPAN 4 - LONGIT.
S1013	60	34'-11"			SLAB - BOTTOM - SPAN 4 - LONGIT.
S614	209	24'-3"	X		SLAB - BOTTOM - OVER PIERS - LONGIT.
S515	434	30'-4"			SLAB - BOTTOM - TRANS.
S516	438	30'-6"			SLAB - TOP - TRANS.
S517	61	25'-10"			SLAB - TOP - SPAN 1 - LONGIT.
S918	61	41'-2"			SLAB - TOP - OVER PIER 1 - LONGIT.
S919	121	47'-3"			SLAB - TOP - OVER PIERS 1 & 2 - LONGIT.
S520	6	15'-8"			SLAB - TOP - OVER PIERS @ EDGE OF DECK - LONGIT.
S821	60	44'-10"			SLAB - TOP - OVER PIER 2 - LONGIT.
S922	61	45'-5"			SLAB - TOP - OVER PIER 3 - LONGIT.
S1023	60	43'-5"			SLAB - TOP - OVER PIER 3 - LONGIT.
S524	61	34'-1"			SLAB - TOP - SPAN 4 - LONGIT.
S525	4	12'-8"			SLAB - TOP @ CORNERS - TRANS.
S426	20	11'-2"	X	S	ARCH FASCIA - STIRRUP - SPAN 1 - VERT.
S427	24	6'-5"	X	S	ARCH FASCIA - STIRRUP - SPAN 1 - VERT.
S428	102	4'-10"	X		ARCH FASCIA - STIRRUP - ALL SPANS - VERT.
S429	56	10'-8"	X	S	ARCH FASCIA - STIRRUP - SPANS 2 & 3 - VERT.
S430	56	6'-0"	X	S	ARCH FASCIA - STIRRUP - SPANS 2 & 3 - VERT.
S431	28	10'-8"	X	S	ARCH FASCIA - STIRRUP - SPAN 4 - VERT.
S432	28	5'-10"	X	S	ARCH FASCIA - STIRRUP - SPAN 4 - VERT.
S433	314	4'-1"	X		ARCH FASCIA - TOP TIE - ALL SPANS - VERT.
S434	16	28'-7"			ARCH FASCIA - BOTTOM - SPANS 2 & 3 - LONGIT.
S435	8	30'-10"			ARCH FASCIA - TOP - SPANS 2 & 3 - LONGIT.
S436	8	24'-6"			ARCH FASCIA - BOTTOM - SPAN 1 - LONGIT.
S437	4	26'-0"			ARCH FASCIA - TOP - SPAN 1 - LONGIT.
S438	8	27'-9"			ARCH FASCIA - BOTTOM - SPAN 4 - LONGIT.
S439	4	29'-6"			ARCH FASCIA - TOP - SPAN 4 - LONGIT.
S440	72	17'-4"			ARCH FASCIA - ENDS - ALL SPANS - LONGIT.
S441	12	7'-1"	X		ARCH FASCIA - OVER PIERS - LONGIT.
S442	24	7'-0"			ARCH FASCIA - OUTSIDE EDGE OVER PIERS - VERT.
S443	48	7'-8"	X		ARCH FASCIA - TIES - OVER PIERS - TRANS.
S544	12	9'-4"	X		DIAPH. @ ABUT. ENDS - TIE - TRANS.
S445	1695	3'-4"	X		SIDEWALK INTO SLAB - VERT.
S446	252	3'-0"			SIDEWALK - BOTTOM - TRANS.
S447	38	44'-10"			SIDEWALK - SPAN 1 - LONGIT.
S448	114	7'-7"			SIDEWALK - OVER PIERS - LONGIT.
S449	152	25'-2"			SIDEWALK - SPANS 2 & 3 - LONGIT.
S450	38	30'-10"			SIDEWALK - SPAN 4 - LONGIT.
S451	38	17'-6"	X		SIDEWALK - SPAN 4 - CURB RAMP - LONGIT.
S552	878	11'-5"	X		SIDEWALK - TOP - TRANS.
S453	20	5'-0"			SIDEWALK - SOUTHWEST CORNER - BOTTOM - TRANS.
S454	12	15'-4"			SIDEWALK - SOUTHWEST CORNER - LONGIT.
S455	2	5'-6"	X		SIDEWALK - SOUTHWEST CORNER - TRANS.
S556	59	5'-0"	X		SIDEWALK - TOP - SOUTHWEST CORNER - TRANS.
S457	66	3'-10"	X		CURB UNDER PARAPET AT CURB RAMPS - STIRRUP - VERT.
S458	2	21'-6"			CURB UNDER NORTH PARAPET AT CURB RAMP - LONGIT.
S459	2	12'-6"			CURB UNDER SOUTH PARAPET AT CURB RAMP - LONGIT.
S460	38	7'-0"			SIDEWALK - SPAN 4 - CURB RAMP - LONGIT.

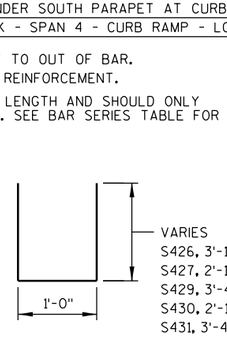
DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.
EPOXY COAT ALL SUPERSTRUCTURE BAR REINFORCEMENT.

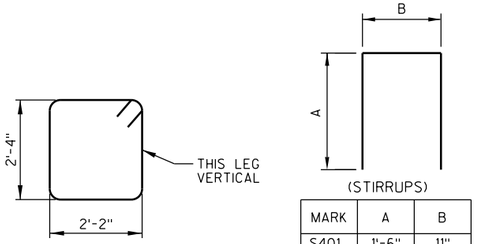
Ⓢ - LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

BAR SERIES TABLE

MARK	NO. REQUIRED	LENGTH
S426	4 SERIES OF 5	8'-8" TO 13'-8"
S427	4 SERIES OF 6	5'-0" TO 7'-10"
S429	8 SERIES OF 7	7'-7" TO 13'-9"
S430	8 SERIES OF 7	5'-0" TO 7'-0"
S431	4 SERIES OF 7	7'-7" TO 13'-9"
S432	4 SERIES OF 7	4'-10" TO 6'-10"

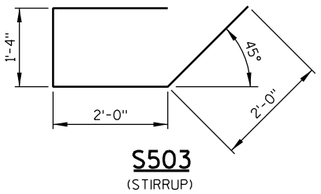
BUNDLE AND TAG EACH SERIES SEPARATELY.
BEND BARS AFTER CUTTING.



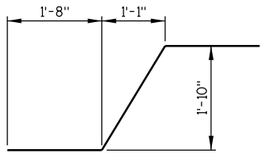


S505

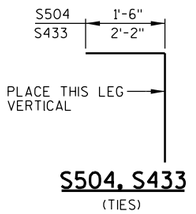
MARK	A	B
S401	1'-6"	11"
S428	2'-0"	1'-0"
S443	2'-4"	3'-2"
S544	3'-9"	2'-1"
S445	1'-0"	1'-6"



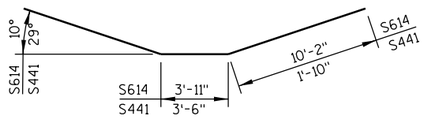
S503
(STIRRUP)



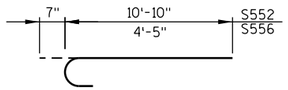
S455



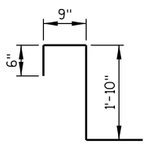
S504, S433
(TIES)



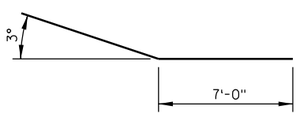
S614, S441



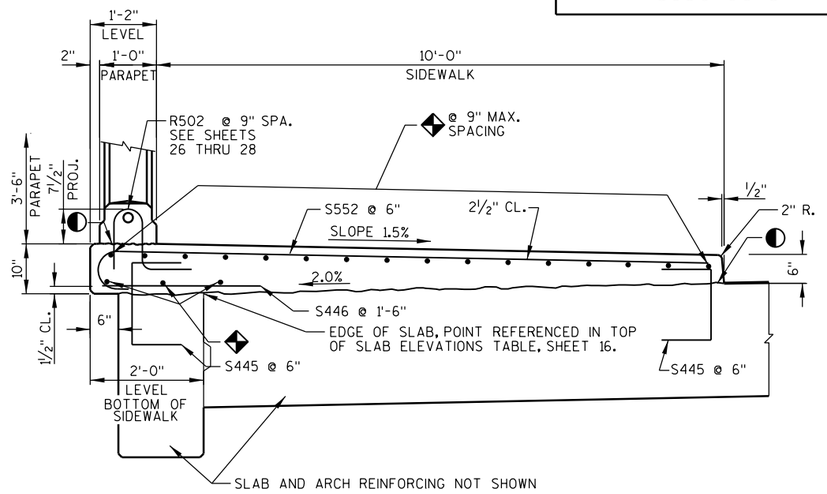
S552, S556
STD. 180° HOOK



S457
(TIE)

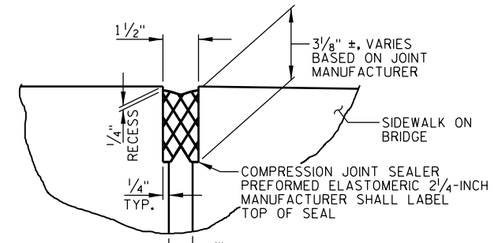


S451



TYPICAL SECTION THRU SIDEWALK

STA. 13+40.05, LT. TO STA. 15+38.52, LT.
STA. 13+69.43, RT. TO STA. 15+38.52, RT.



COMPRESSION JOINT DETAIL

REQUIRED AT 3 LOCATIONS
- SOUTHWEST CANTILEVER SIDEWALK CONNECTION
- NORTHEAST WING TOP AT STAIRS
- SOUTHEAST CANTILEVER SIDEWALK CONNECTION

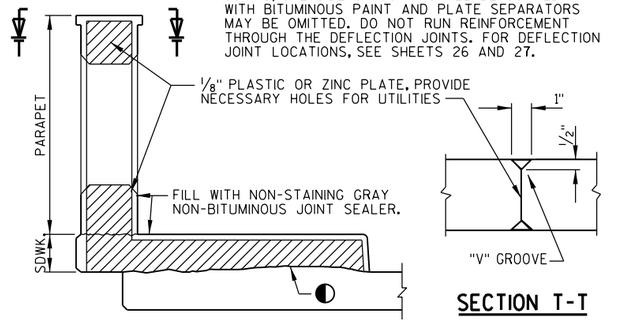
NOTE

WHEN PARAPETS ARE POURED CONTINUOUSLY FROM END TO END, THEY SHALL BE SEPARATED AT THE DEFLECTION JOINTS BY A PIECE OF ⅛" ZINC OR PLASTIC PLATE CUT AS SHOWN IN THE SECTION BY SHADED AREA. IF CONSTRUCTION JOINTS IN PARAPETS ARE USED AT THE DEFLECTION JOINTS, ONE SIDE OF JOINT SHALL BE COATED WITH BITUMINOUS PAINT AND PLATE SEPARATORS MAY BE OMITTED. DO NOT RUN REINFORCEMENT THROUGH THE DEFLECTION JOINTS. FOR DEFLECTION JOINT LOCATIONS, SEE SHEETS 26 AND 27.

LEGEND

◐ - CONSTRUCTION JOINT, STRIKE OFF AS SHOWN AND LEAVE ROUGH.

◆ - S447 SPAN 1,
S448 AT PIERS,
S449 SPANS 2&3 (LAP 1'-8"),
S450 SPAN 4



SECTION T-T

SECTION THRU DEFLECTION JOINT

(SHOWING DEFLECTION JOINT IN PARAPET AND SIDEWALK.)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-53-294

DRAWN BY RLR | PLANS CK'D. LJR

SUPERSTRUCTURE SECTIONS & DETAILS

SHEET 24 OF 32
179

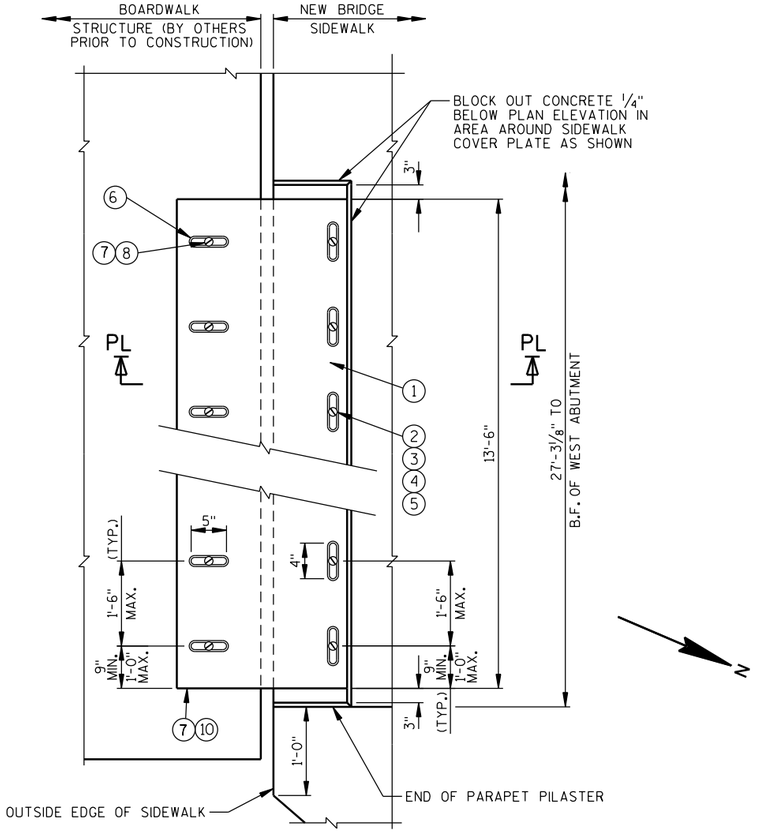
FILE= 879002_24.DGN
DATE= 3/9/2018

8

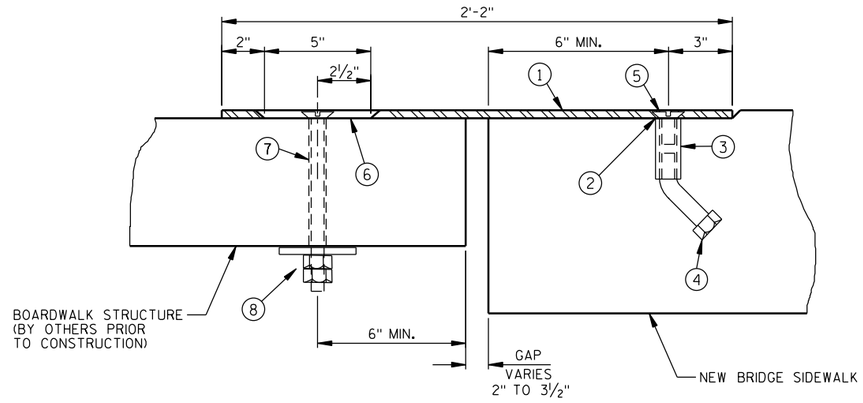
8

STATE PROJECT NUMBER

5990-00-34



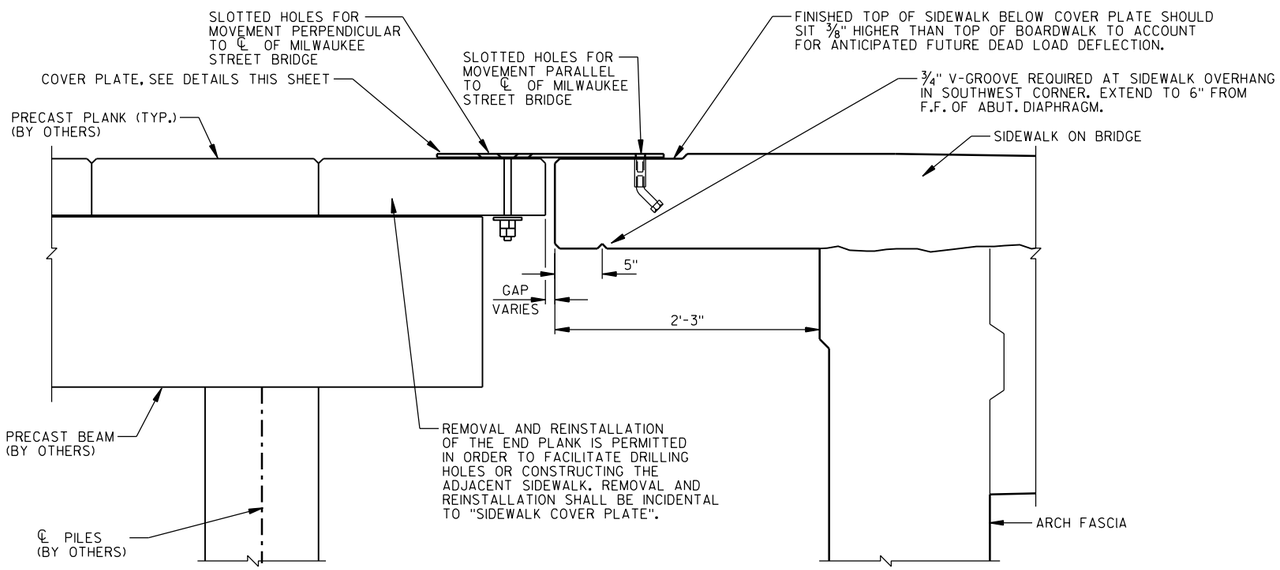
PLAN AT SW QUADRANT SIDEWALK



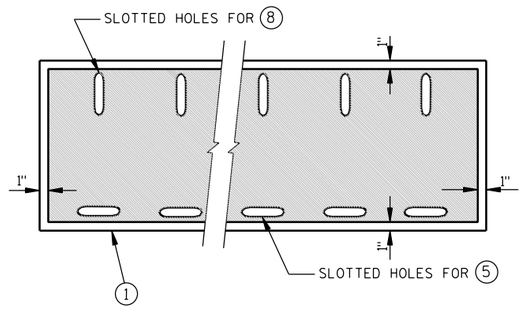
SECTION PL-PL

LEGEND

1. SIDEWALK COVER PLATE 1/4" X 2'-2" X 13'-6". GALVANIZE PLATE AFTER SLIP-RESISTANT SURFACE IS APPLIED. PLATE SHALL CONFORM TO ASTM A709 GRADE 36.
2. 1" X 4" SLOTTED COUNTERSUNK HOLE FOR NO. 5. PLACE SLOT PARALLEL TO ℄ MILWAUKEE STREET.
3. 3/4" ϕ X 2 1/4" GALVANIZED THREADED COUPLING.
4. 3/4" ϕ X 4" GALVANIZED HEX HEAD BOLT. BEND 45°.
5. 3/4" ϕ X 1 1/2" STAINLESS STEEL SOCKET FLAT HEAD SCREWS WITH ANTI-SEIZE LUBRICANT. PLACE IN COUNTERSUNK HOLE. RECESS 1/16" BELOW PLATE SURFACE.
6. 1" X 5" SLOTTED COUNTERSUNK HOLE FOR NO. 8. PLACE SLOT PERPENDICULAR TO ℄ MILWAUKEE STREET.
7. DRILL 7/8" ϕ HOLE THRU CONCRETE PLANK FOR NO. 8.
8. 3/4"ϕ X 7 1/2" STAINLESS STEEL SOCKET FLAT HEAD SCREWS WITH TWO NUTS AND 3" X 3" X 1/4" STAINLESS STEEL PLATE WASHER. PLACE 7 1/2" SCREW THRU PLATE 1 AND HOLE 7. PROVIDE SNUG FIT USING PLATE WASHER AND NUT WITH ADDITIONAL JAM NUT.



SECTION THRU BOARDWALK CONNECTION



PLAN OF SIDEWALK COVER PLATE WITH SLIP-RESISTANT SURFACE

PLACE SLIP-RESISTANT SURFACE ON TOP WALKING SURFACE IN SHADED AREA ONLY.

APPROVED SLIP-RESISTANT APPLIED SURFACES FOR STEEL PLATES		
PRODUCT	MANUFACTURER	CONTACT AT
SLIPNOT GRADE 2, STEEL	W. S. MOLNAR COMPANY	1-800-SLIPNOT
ALGRIP, STEEL	ROSS TECHNOLOGY CORP.	1-800-345-8170

NOTES

SANDBLAST PLATE AFTER FABRICATION IN ACCORDANCE WITH SSPC SP. #6 "COMMERCIAL BLAST CLEANING". AFTER BLAST CLEANING, THE PLATE SHALL BE HOT DIPPED GALVANIZED. SLIP-RESISTANT SURFACE IS APPLIED TO SIDEWALK COVER PLATE BY THE MANUFACTURER AND THEN HOT DIPPED GALVANIZED TO THEIR RECOMMENDATIONS TO MAINTAIN THE INTEGRITY OF THIS SURFACE.

ANCHOR SYSTEM NO. 3 AND NO. 4 SHALL CONFORM TO ASTM A307 AND SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C AND D.

(7), PLATE, MOUNTING HARDWARE, AND ALL PROCESSES TO PRODUCE THEM WILL BE PAID FOR AT THE LUMP SUM PRICE BID FOR "SIDEWALK COVER PLATE".

REVIEW BOARDWALK STRUCTURE SHOP DRAWINGS TO DETERMINE THE LOCATION OF REINFORCING STEEL IN THE PRECAST PLANKS. SET LOCATION OF BOLT HOLES NO. 7 TO AVOID DRILLING THROUGH REINFORCING STEEL IN PLANKS. SEE SPECIAL PROVISIONS FOR INSTRUCTIONS ON OBTAINING SHOP DRAWINGS.

SIDEWALK COVER PLATE NO. 1 SHALL BE FABRICATED AFTER BOLT HOLES NO. 7 ARE DRILLED AND ANCHOR SYSTEM NO. 3 AND NO. 4 ARE IN PLACE TO ENSURE PROPER SLOT LOCATIONS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-53-294

DRAWN BY RLR | PLANS CK'D. LJR

BOARDWALK CONNECTION DETAILS

SHEET 25 OF 32
180

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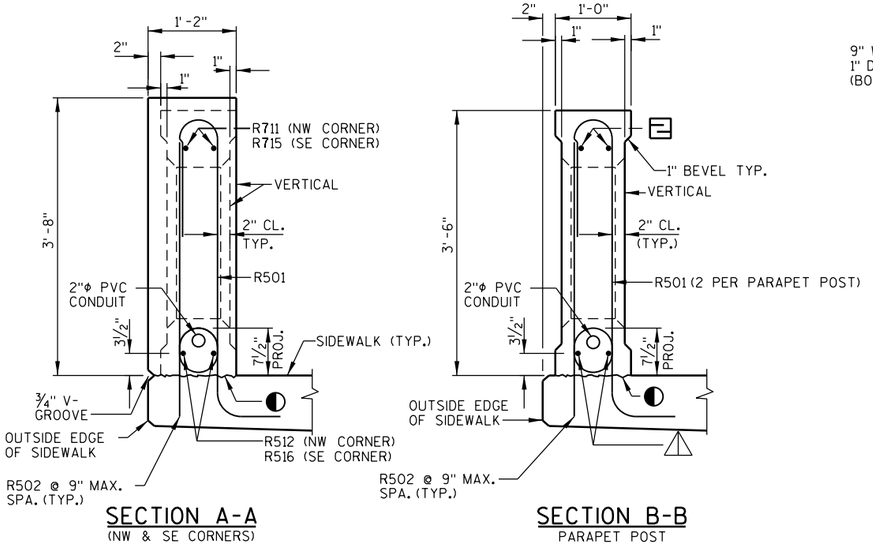
FILE= 879002_25.DGN
DATE= 3/6/2018

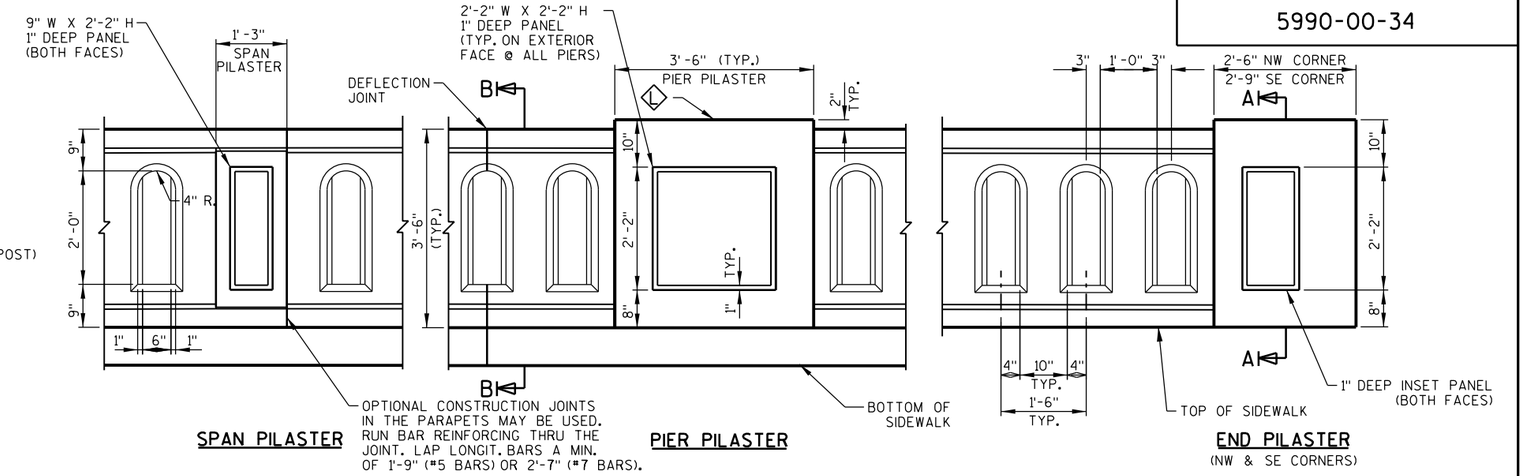
STATE PROJECT NUMBER

5990-00-34



SECTION A-A
(NW & SE CORNERS)

SECTION B-B
PARAPET POST

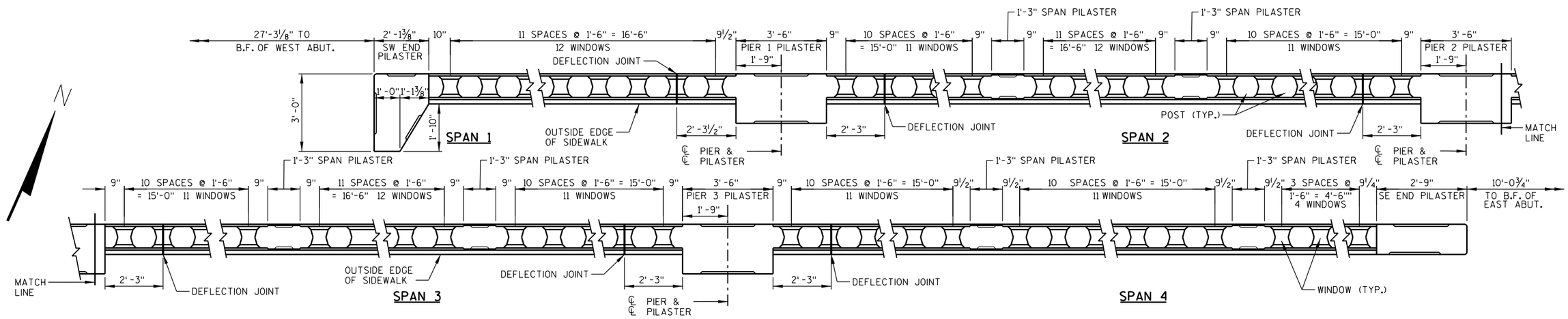


SPAN PILASTER

PIER PILASTER

END PILASTER
(NW & SE CORNERS)

TYPICAL PART OUTSIDE ELEVATION



PARAPET PLAN - SOUTH EDGE OF BRIDGE

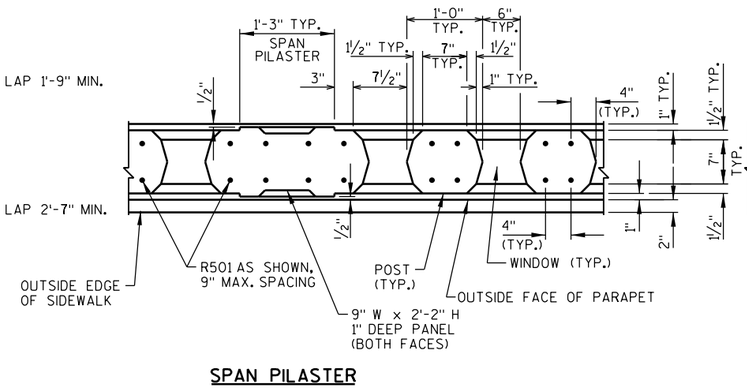
LEGEND

△ — LAP 1'-9" MIN.
- R510 - SPAN 1 SOUTH PARAPET
- R512 - SPAN 1 NORTH PARAPET
- R514 - SPANS 2 & 3
- R516 - SPAN 4 SOUTH PARAPET
- R518 - SPAN 4 NORTH PARAPET
- R520 - OVER PIERS

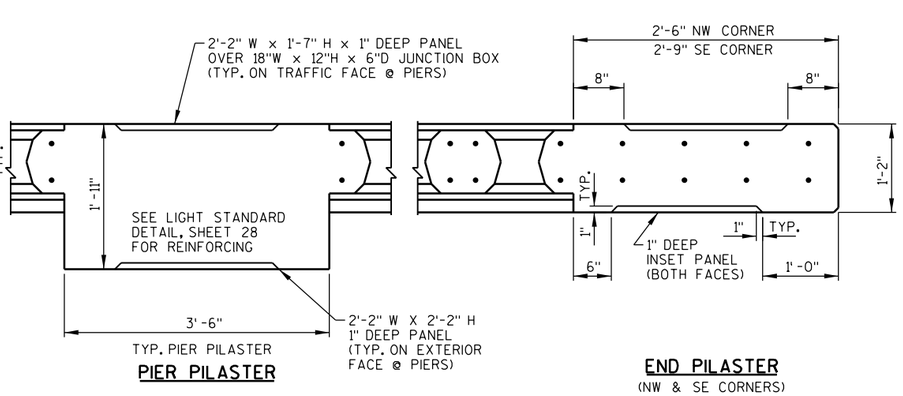
⊟ — LAP 2'-7" MIN.
- R709 - SPAN 1 SOUTH PARAPET
- R711 - SPAN 1 NORTH PARAPET
- R713 - SPANS 2 & 3
- R715 - SPAN 4 SOUTH PARAPET
- R717 - SPAN 4 NORTH PARAPET
- R719 - OVER PIERS

◇L — TOP OF LIGHT STANDARD SHALL BE LEVEL. (TYP.)

◐ — CONSTRUCTION JOINT. STRIKE OFF AS SHOWN AND LEAVE ROUGH.



SPAN PILASTER



PIER PILASTER

END PILASTER
(NW & SE CORNERS)

TYPICAL PARAPET DETAILS

NOTES

FOR LOCATION OF CONDUIT SHOWN IN PARAPET SEE SHEET 29.

WIDTH AND HEIGHT SHOWN FOR ALL PANELS IS MEASURED TO THE OUTSIDE EDGE OF THE 1" BEVELS. ALL PANELS ARE CENTERED HORIZONTALLY ON THE PILASTERS UNLESS OTHERWISE NOTED.

FOR DEFLECTION JOINT DETAILS, SEE SHEET 24.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-53-294

DRAWN BY	PLANS CK'D.
RLR	LJR

VERTICAL FACE PARAPET 'TX' (1 OF 2)

SHEET 26 OF 32
181

FILE= 879002_26.dgn
DATE= 3/6/2018

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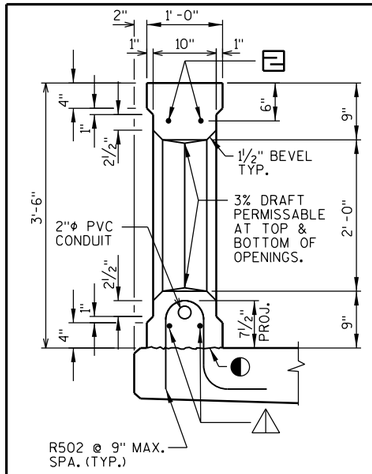
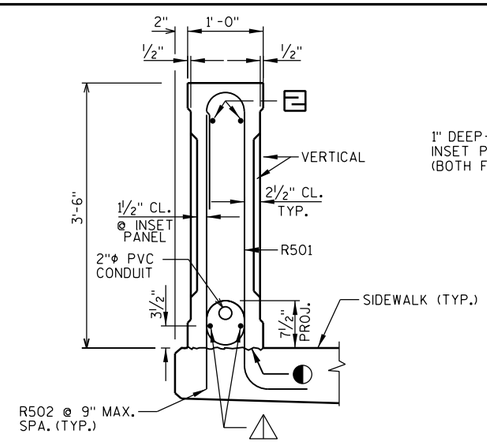
STATE PROJECT NUMBER

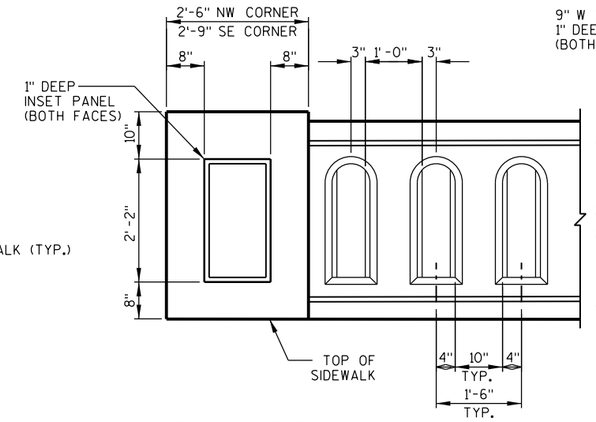
5990-00-34



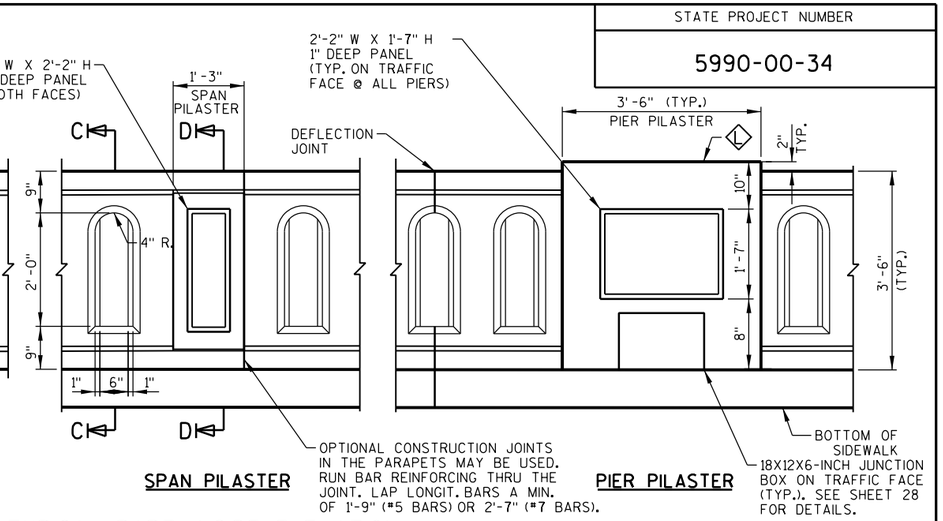
SECTION C-C
PARAPET WINDOW



SECTION D-D
SPAN PILASTER



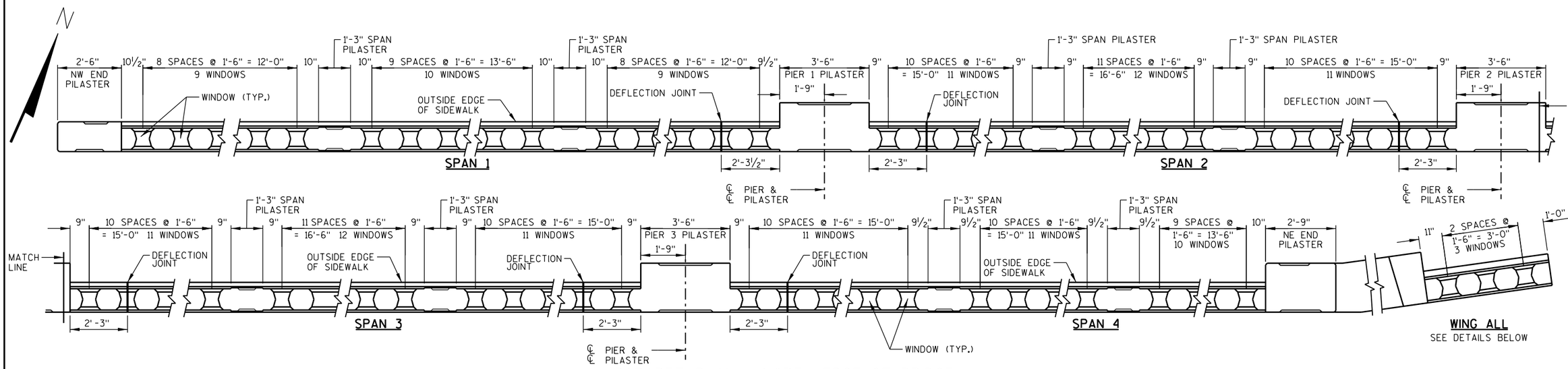
END PILASTER
(NW & SE CORNERS)



SPAN PILASTER

PIER PILASTER

TYPICAL PART INSIDE ELEVATION



PARAPET PLAN - NORTH EDGE OF BRIDGE

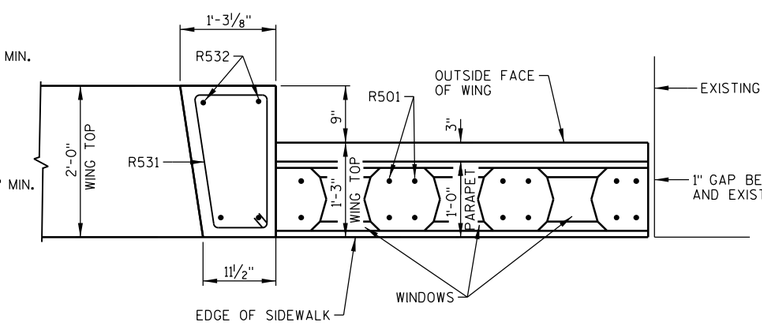
LEGEND

⚠ — LAP 1'-9" MIN.
- R510 - SPAN 1 SOUTH PARAPET
- R512 - SPAN 1 NORTH PARAPET
- R514 - SPANS 2 & 3
- R516 - SPAN 4 SOUTH PARAPET
- R518 - SPAN 4 NORTH PARAPET
- R520 - OVER PIERS

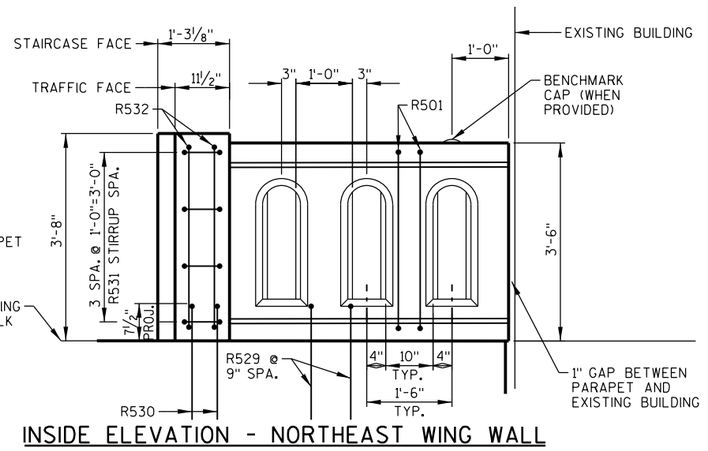
⊟ — LAP 2'-7" MIN.
- R709 - SPAN 1 SOUTH PARAPET
- R711 - SPAN 1 NORTH PARAPET
- R713 - SPANS 2 & 3
- R715 - SPAN 4 SOUTH PARAPET
- R717 - SPAN 4 NORTH PARAPET
- R719 - OVER PIERS

◇ — TOP OF LIGHT STANDARD SHALL BE LEVEL. (TYP.)

◐ — CONSTRUCTION JOINT, STRIKE OFF AS SHOWN AND LEAVE ROUGH.



PARAPET PLAN - NORTHEAST WING WALL



INSIDE ELEVATION - NORTHEAST WING WALL

NOTES

FOR LOCATION OF CONDUIT SHOWN IN PARAPET SEE SHEET 29.

WIDTH AND HEIGHT SHOWN FOR ALL PANELS IS MEASURED TO THE OUTSIDE EDGE OF THE 1" BEVELS. ALL PANELS ARE CENTERED HORIZONTALLY ON THE PILASTERS UNLESS OTHERWISE NOTED.

FOR DEFLECTION JOINT DETAILS, SEE SHEET 24.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-53-294

DRAWN BY RLR | PLANS CK'D. LJR

VERTICAL FACE PARAPET 'TX' (2 OF 2)

SHEET 27 OF 32
182

8

8

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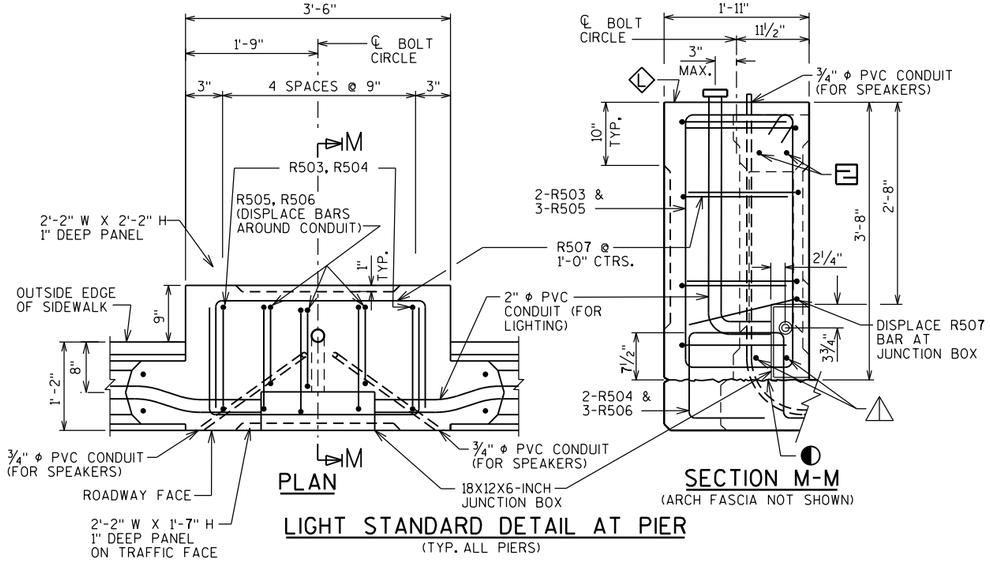
FILE= 879002_27.dgn
DATE= 3/6/2018

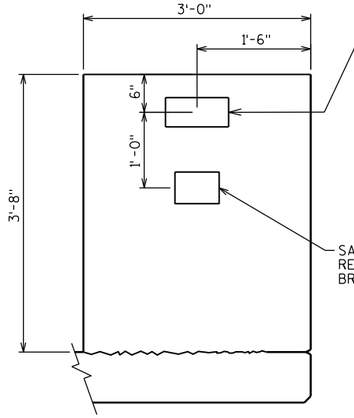
STATE PROJECT NUMBER

5990-00-34



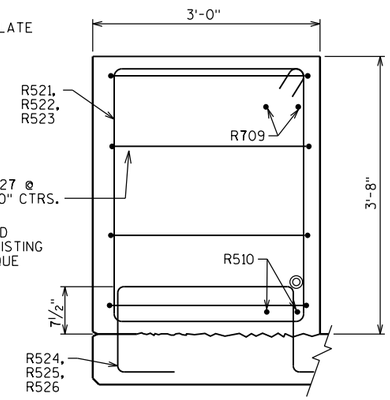
LIGHT STANDARD DETAIL AT PIER

(TYP. ALL PIERS)

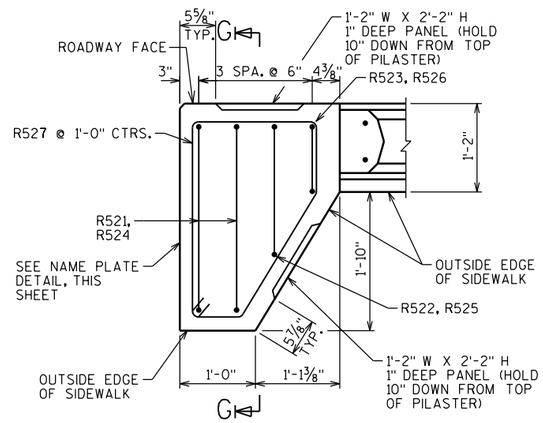


NAME PLATE DETAIL

(LOOKING EAST AT SW PARAPET END)



SECTION G-G



PILASTER DETAIL AT SW PARAPET END

NOTE

POSITION CONDUITS WITHIN 3" OF CENTER OF LIGHT POST. PROVIDE 2" CLEAR MINIMUM BETWEEN CONDUITS.

LEGEND

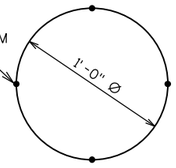
⚠ — R510 - SPAN 1 SOUTH PARAPET; R512 - SPAN 1 NORTH PARAPET; R514 - SPANS 2 & 3; R516 - SPAN 4 SOUTH PARAPET; R518 - SPAN 4 NORTH PARAPET; R520 - OVER PIERS — LAP 1'-9" MIN.

⊏ — R709 - SPAN 1 SOUTH PARAPET; R711 - SPAN 1 NORTH PARAPET; R713 - SPANS 2 & 3; R715 - SPAN 4 SOUTH PARAPET; R717 - SPAN 4 NORTH PARAPET; R719 - OVER PIERS — LAP 2'-7" MIN.

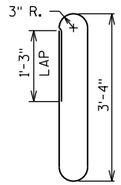
◇ — TOP OF LIGHT STANDARD SHALL BE LEVEL. (TYP.)

◐ — CONSTRUCTION JOINT, STRIKE OFF AS SHOWN AND LEAVE ROUGH.

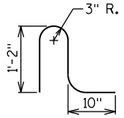
FOUR ½" DIAMETER, HOT-DIPPED GALVANIZED "L" TYPE ANCHOR BOLTS (2½" PROJECTION). ANCHOR BOLTS ARE INCLUDED IN THE BID ITEM "ANCHOR ASSEMBLIES LIGHT POLES ON STRUCTURES."



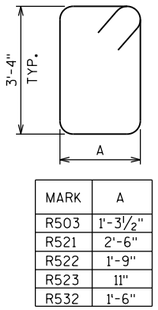
LIGHT POST ANCHOR DETAIL



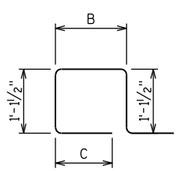
R501



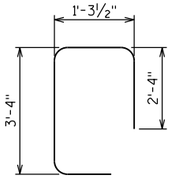
R502



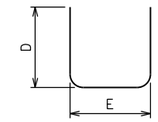
MARK	A
R503	1'-3½"
R521	2'-6"
R522	1'-9"
R523	11"
R532	1'-6"



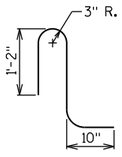
MARK	B	C
R504	1'-3"	1'-0"
R506	11"	9"
R524	2'-6"	2'-3"
R525	1'-9"	1'-6"
R526	11"	8"



R505



MARK	D	E
R507	1'-5"	3'-0"
R508	1'-5"	2'-3"
R530	2'-0"	1'-6"



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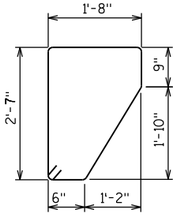

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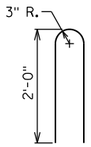
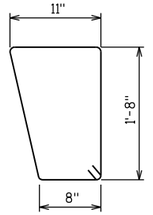
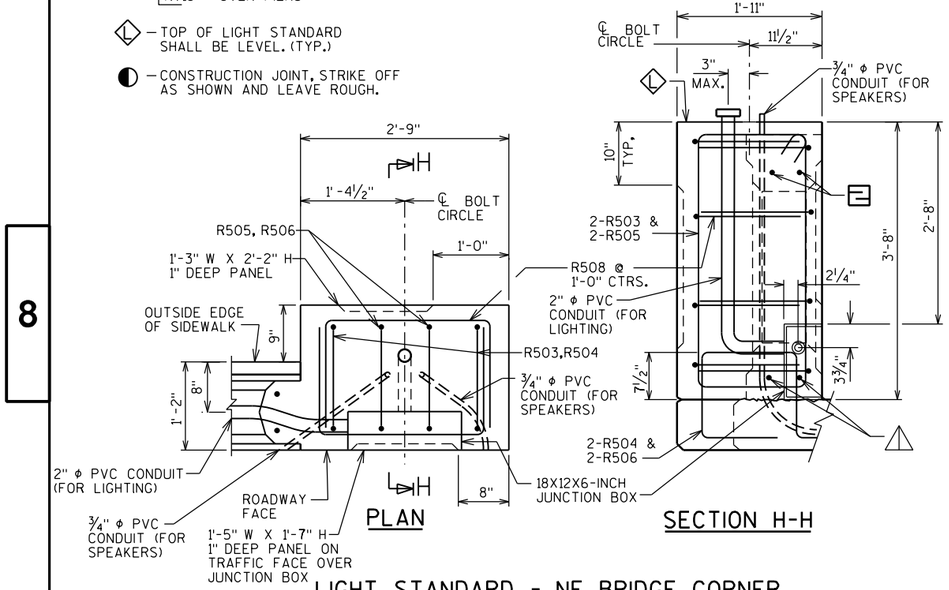


R529



R531



LIGHT STANDARD - NE BRIDGE CORNER

BILL OF BARS 9,905 LBS. COATED

BAR MARK	NO. REQ'D.	LENGTH	BENT	LOCATION
R501	511	8'-6"	X	PARAPET TOP - STIRRUP - VERT.
R502	467	3'-4"	X	PARAPET - INTO SIDEWALK - STIRRUP - VERT.
R503	14	9'-11"	X	PARAPET @ LIGHT STD. - STIRRUP - VERT.
R504	14	4'-9"	X	PARAPET @ LIGHT STD. - STIRRUP - VERT.
R505	20	7'-7"	X	PARAPET @ LIGHT STD. - STIRRUP - VERT.
R506	20	4'-3"	X	PARAPET @ LIGHT STD. - STIRRUP - VERT.
R507	48	5'-6"	X	PARAPET @ PIER LIGHT STD. - TIE - HORIZ.
R508	8	4'-9"	X	PARAPET @ NE LIGHT STD. - TIE - HORIZ.
R709	2	17'-7"		SOUTH PARAPET SPAN 1 - TOP - LONGIT.
R510	2	17'-7"		SOUTH PARAPET SPAN 1 - BOT. - LONGIT.
R711	4	23'-9"		NORTH PARAPET SPAN 1 - TOP - LONGIT.
R512	4	23'-4"		NORTH PARAPET SPAN 1 - BOT. - LONGIT.
R713	16	25'-8"		SPAN 2 & 3 - TOP - LONGIT.
R514	16	25'-3"		SPAN 2 & 3 - BOT. - LONGIT.
R715	4	22'-3"		SOUTH PARAPET SPAN 4 - TOP - LONGIT.
R516	4	21'-10"		SOUTH PARAPET SPAN 4 - BOT. - LONGIT.
R717	4	26'-9"		NORTH PARAPET SPAN 4 - TOP - LONGIT.
R518	4	26'-4"		NORTH PARAPET SPAN 4 - BOT. - LONGIT.
R719	12	7'-8"		PARAPET OVER PIERS - TOP - LONGIT.
R520	12	7'-8"		PARAPET OVER PIERS - BOT. - LONGIT.
R521	2	12'-4"	X	PARAPET - SW END PILASTER - STIRRUP - VERT.
R522	1	10'-10"	X	PARAPET - SW END PILASTER - STIRRUP - VERT.
R523	1	9'-2"	X	PARAPET - SW END PILASTER - STIRRUP - VERT.
R524	2	7'-3"	X	PARAPET - SW END PILASTER - STIRRUP - VERT.
R525	1	5'-9"	X	PARAPET - SW END PILASTER - STIRRUP - VERT.
R526	1	4'-1"	X	PARAPET - SW END PILASTER - STIRRUP - VERT.
R527	4	8'-4"	X	PARAPET - SW END PILASTER - TIE - HORIZ.
R528	58	3'-10"	X	PARAPET - EAST CURB RAMPS - STIRRUP - VERT.
R529	7	4'-4"	X	PARAPET - NE WING - STIRRUP - VERT.
R530	2	5'-3"	X	PARAPET - NE WING - STIRRUP - VERT.
R531	4	5'-8"	X	PARAPET - NE WING - TIE - HORIZ.
R532	2	10'-4"	X	PARAPET - NE WING - STIRRUP - VERT.

EPOXY COAT ALL PARAPET BAR STEEL REINFORCEMENT.

BILL OF BARS FOR PARAPET IS FOR INFORMATION ONLY. BAR STEEL REINFORCEMENT IS INCLUDED IN BID ITEM "PARAPET CONCRETE TYPE TX".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-53-294

DRAWN BY RLR | PLANS CK'D. LJR

VERTICAL FACE PARAPET 'TX' DETAILS

SHEET 28 OF 32
183

FILE= 879002_28.DGN
DATE= 3/14/2018

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STATE PROJECT NUMBER
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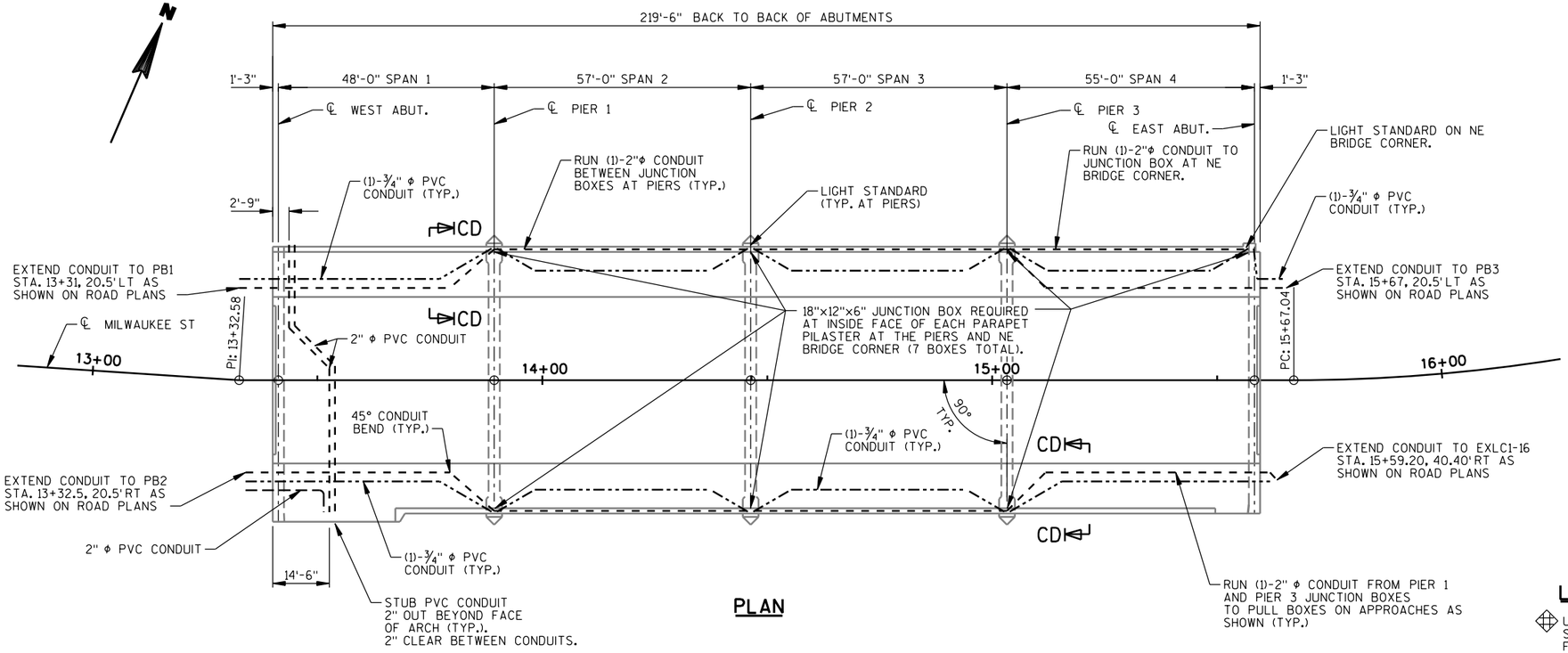


PLAN

NOTES

CONDUIT SHALL BE EMBEDDED 2" CLEAR.

USE 2" DIA. RIGID NONMETALLIC SCHEDULE 40 CONDUIT (PVC) UNLESS NOTED OTHERWISE.

CONDUIT FITTINGS, CONDUIT BENDS, AND ADAPTER FITTINGS INCIDENTAL TO CONDUIT WORK.

CONDUIT BENDS SHALL CONFORM TO THE THE NATIONAL ELECTRIC CODE.

PROVIDE JUNCTION BOXES FROM THE APPROVED PRODUCTS LIST.

FOR DETAILS OF JUNCTION BOXES & CONDUIT TO LIGHT POLES, SEE SHEET 28.

¾" ϕ CONDUIT DOES NOT ENTER JUNCTION BOXES ON BRIDGE, BUT INSTEAD GOES DIRECTLY FROM BASE TO BASE OF LIGHT POSTS.

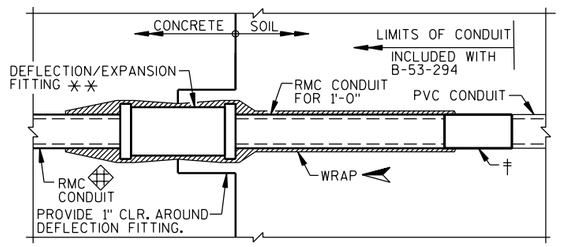
LEGEND

USE RIGID METALLIC (RMC) CONDUIT AT FITTINGS WITH SAME SIZE DIAMETER AS CONNECTING PVC CONDUIT. PROVIDE RMC FOR 3'-0" MIN. ON STRUCTURE SIDE OF JOINT OPENING AND 1'-0" ON SOIL SIDE OF JOINT OPENING.

† NONMETALLIC CONDUIT TO METALLIC CONDUIT ADAPTER FITTING (UL OR NRTL LISTED FOR ELECTRICAL USE SHALL BE USED). ADAPTER FITTING INCIDENTAL TO "CONDUIT RIGID METALLIC _-INCH."

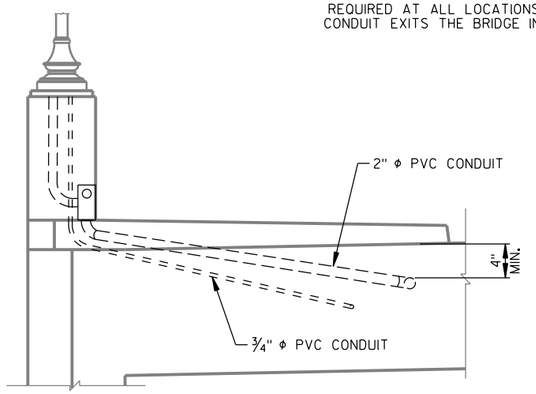
SPONGE RUBBER WRAP TO BE AASHTO M153, TYPE 1 OR EQUIVALENT - 1/4" MINIMUM THICKNESS. PROVIDE WRAP FOR THE ENTIRE LENGTH OF THE FITTING OR AS SHOWN. SPONGE RUBBER WRAP INCIDENTAL TO "CONDUIT RIGID METALLIC _-INCH".

✳✳ DEFLECTION/EXPANSION FITTING REQUIREMENTS:
- UP TO 3/4" CONDUIT CONTRACTION OR EXPANSION AND UP TO 30 DEGREES OF ANGULAR MISALIGNMENT IN ANY DIRECTION WITH BONDING JUMPER

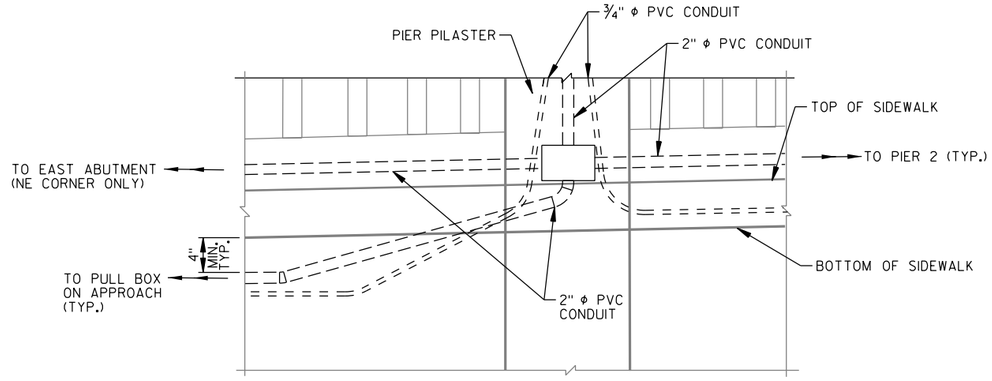


DEFLECTION/EXPANSION FITTING

REQUIRED AT ALL LOCATIONS WHERE CONDUIT EXITS THE BRIDGE INTO SOIL



SECTION CD-CD THRU SIDEWALK



INSIDE ELEVATION VIEW AT PIERS 1 & 3

SHOWING N. PARAPET AT PIER 1 & S. PARAPET AT PIER 3
(S. PARAPET AT PIER 1 & N. PARAPET AT PIER 3 ARE MIRRORED)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-53-294

DRAWN BY JAS | PLANS CK'D. LJR

ELECTRICAL CONDUIT PLAN & DETAILS

SHEET 29 OF 32
184

FILE= 879002_29.DGN
DATE= 3/14/2018

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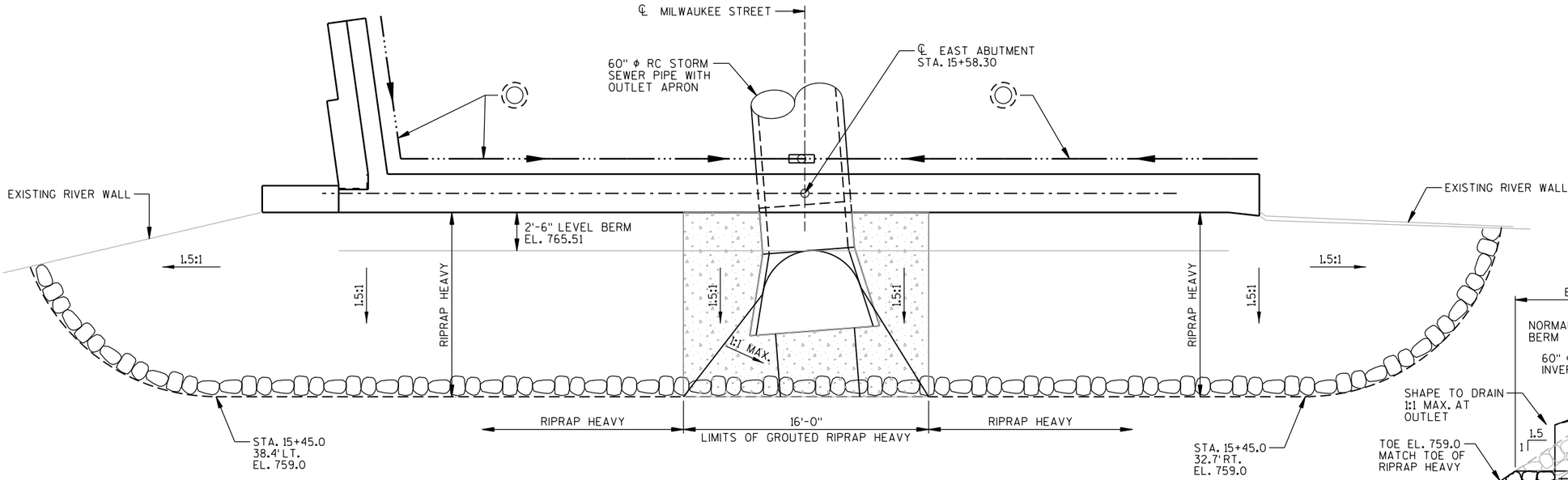
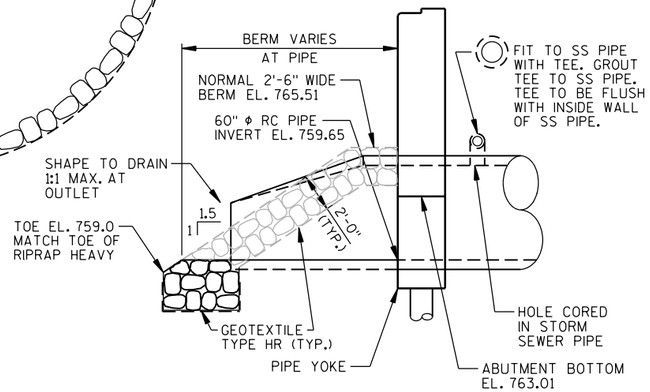


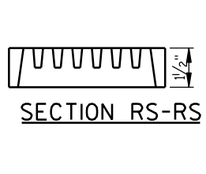
PLAN - EAST ABUTMENT

PIPE UNDERDRAIN WRAPPED 6-INCH. EXTEND TO STORM SEWER PIPE AT ℄ OF MILWAUKEE ST. SLOPE 0.5% MIN. TO DRAIN. PROVIDE RODENT SHIELD PROTECTION AT DRAIN ENDS OF PIPE. ATTACH TO STORM SEWER AS SHOWN USING PVC TEE OR ELBOW CONNECTORS.

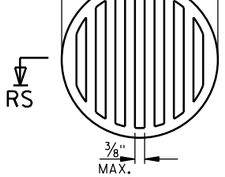


SECTION THRU EAST ABUTMENT AT PIPE

SEE SHEET 8 FOR RIPRAP HEAVY STORM SEWER OUTFALL AND YOKE DETAILS



SECTION RS-RS



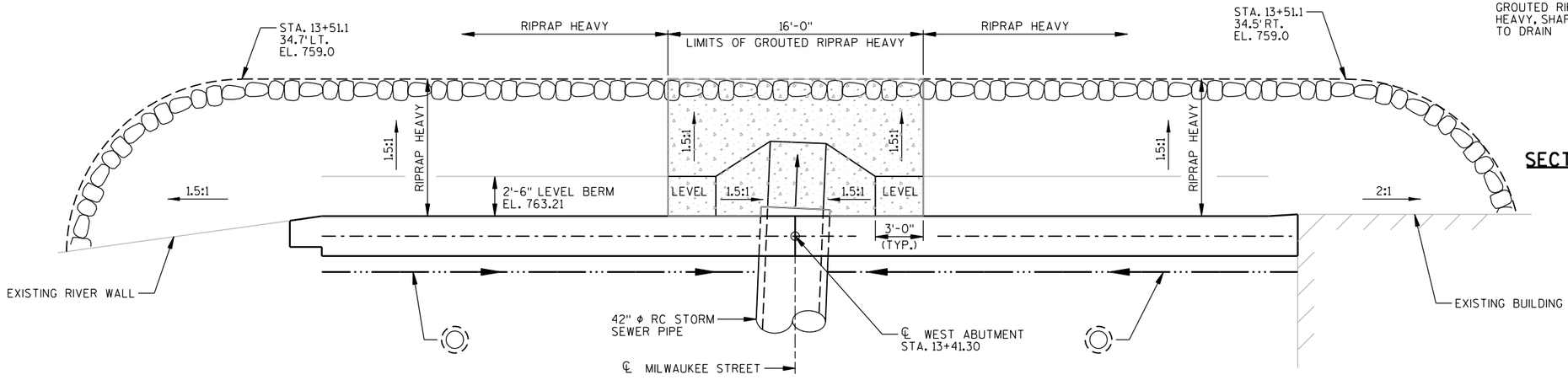
RODENT SHIELD NOTES:

ORIENT SHIELDS SO SLOTS ARE VERTICAL AT WEST ABUTMENT.

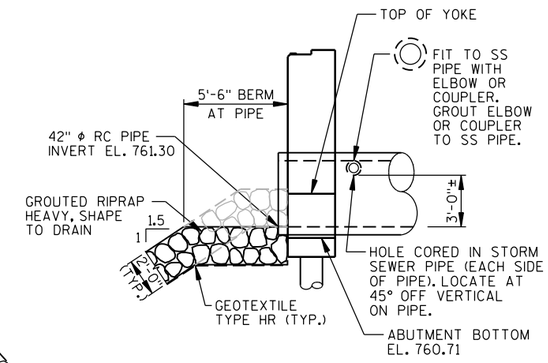
THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALLY AVAILABLE AS A FLOOR STRAINER. FASTEN THE SHIELD INSIDE THE DRAIN ENDS OF PVC TEE OR ELBOWS AT THE STORM SEWER PIPE. THE SHIELD SHALL BE FASTENED TO THE TEE, COUPLING OR ELBOW WITH TWO OR MORE NO. 10 x 1-INCH STAINLESS STEEL SHEET METAL SCREWS. FIT RODENT SHIELD FLUSH OR RECESSED WITH STORM SEWER PIPE. THE RODENT SHIELDS, TEE, ELBOW COUPLINGS, SCREWS AND GROUT SHALL BE INCLUDED IN THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

RODENT SHIELD

Ⓓ - DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE FITTING.



PLAN - WEST ABUTMENT



SECTION THRU WEST ABUTMENT AT PIPE

SEE SHEET 6 FOR RIPRAP HEAVY STORM SEWER OUTFALL AND YOKE DETAILS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-53-294

DRAWN BY RLR | PLANS CK'D. DHW

RIPRAP HEAVY & PIPE UNDERDRAIN

SHEET 30 OF 32
185

FILE= 879002_30.DGN
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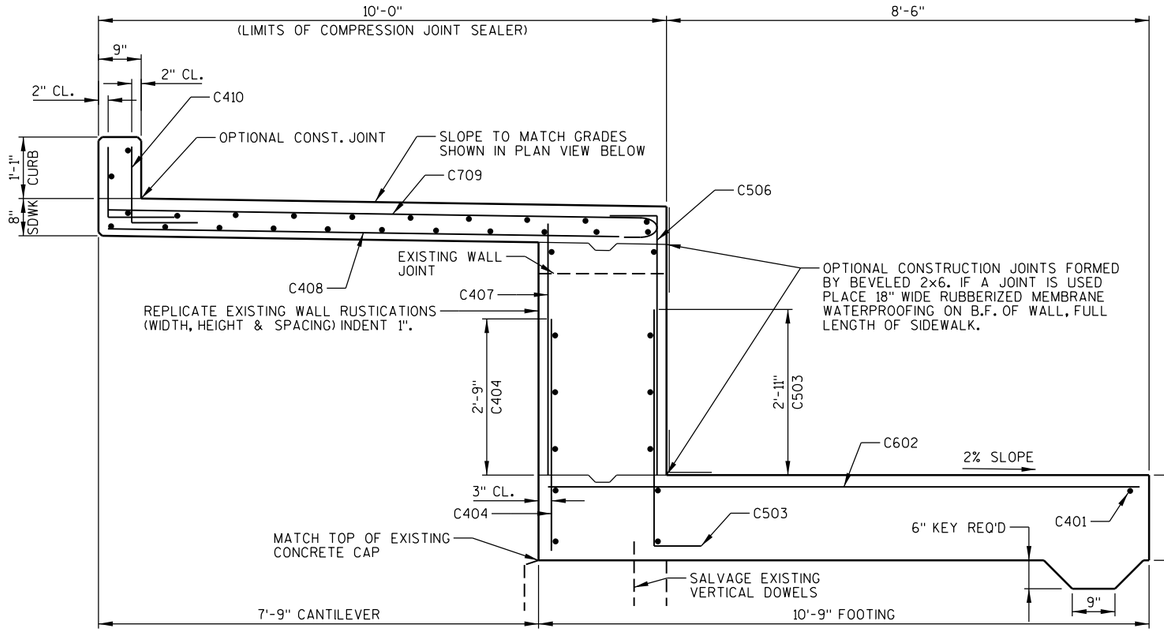
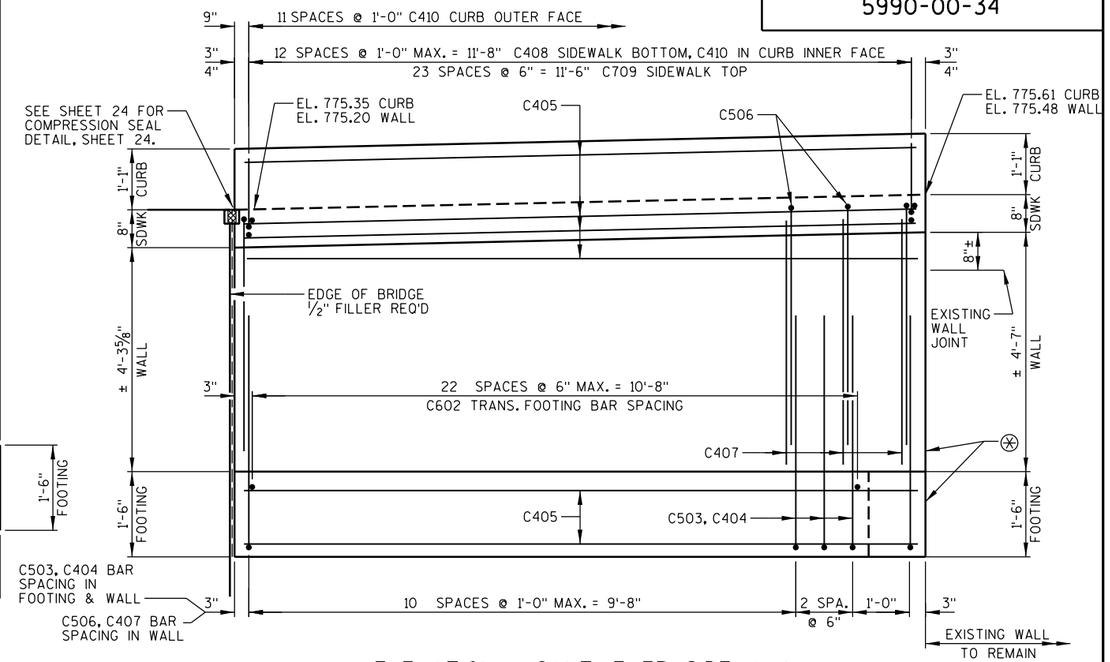
STATE PROJECT NUMBER

5990-00-34

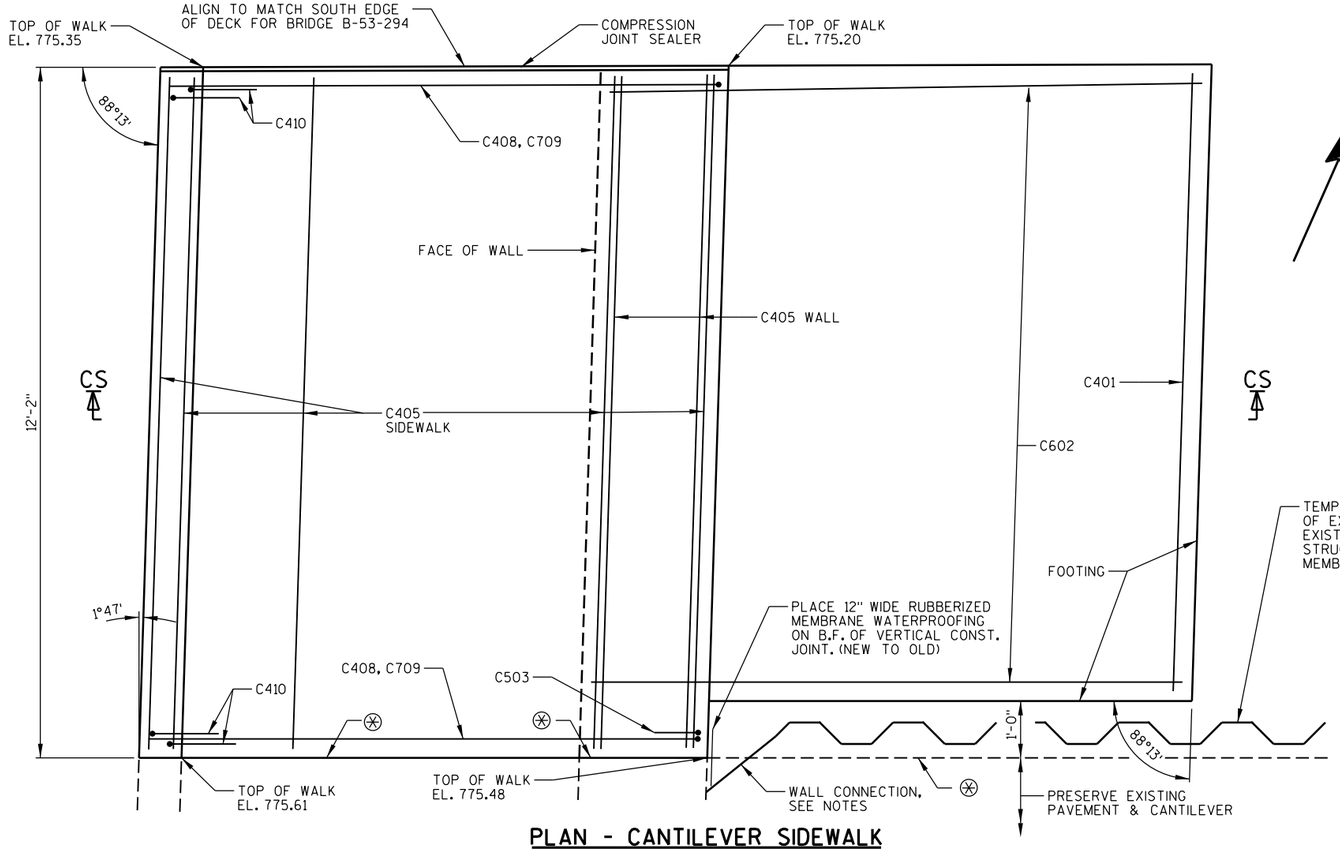


SECTION CS-CS THRU CANTILEVER SIDEWALK



ELEVATION - CANTILEVER SIDEWALK

(LOOKING EAST)



PLAN - CANTILEVER SIDEWALK

N

LEGEND

⊛ — REMOVAL LIMITS, MATCH EXISTING JOINT. IF NECESSARY USE 1" MIN. DEPTH SAW CUTS ON EXPOSED FACES.

TEMPORARY SHORING, SEE SHEET 1. AT BACK FACE OF EXISTING WALL PLACE TEMPORARY SHORING UNDER EXISTING PAVEMENT TO FACILITATE EXCAVATION FOR STRUCTURE AND INSTALLATION OF RUBBERIZED MEMBRANE WATERPROOFING.

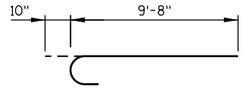
BILL OF BARS (COATED) 1510 LBS.

MARK	NUMBER REQUIRED	LENGTH	BENT	LOCATION
C401	1	10'-10"		FOOTING & WALL - LONGIT.
C602	23	10'-6"		FOOTING - TRANS.
C503	14	4'-11"	X	FOOTING & WALL - DOWEL - B.F. - VERT.
C404	14	4'-1"		FOOTING & WALL - DOWEL - F.F. - VERT.
C405	35	11'-10"		WALL, SIDEWALK & CURB - LONGIT.
C506	14	5'-6"	X	WALL & SIDEWALK - B.F. - VERT.
C407	14	4'-9"		WALL & SIDEWALK - F.F. - VERT.
C408	13	9'-0"		SIDEWALK - BOTTOM - LONGIT.
C709	24	10'-6"	X	SIDEWALK - TOP - LONGIT.
C410	25	2'-3"	X	SIDEWALK & CURB - VERT. - BOTH FACES

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.

EPOXY COAT ALL CANTILEVER SIDEWALK BARSTEEL REINFORCEMENT.

MARK	A
C503	10"
C506	10"
C410	1'-2"



C709
STANDARD 180° HOOK

NOTES

ALL LONGITUDINAL BARS ARE C405 BARS, EXCEPT AS NOTED FOR SINGLE C401 BAR.

SHAPE OF EXISTING STONE MASONRY WALL BACK FACE IS UNKNOWN AND MAY BE SLOPED.

ALL FILL MATERIAL PLACED ABOVE THE FOOTING AND BELOW THE ROADWAY SUBGRADE SHALL BE BACKFILL STRUCTURE TYPE A.

PAYMENT FOR "TEMPORARY SHORING B-53-294" INCLUDES CONNECTION TO THE BACK FACE OF THE EXISTING RIVER WALL AS REQUIRED. MINIMIZE POTENTIAL UNDERMINING OF THE COUNTER-WEIGHT SLAB. ANY UNDERMINING THAT OCCURS THAT CANNOT BE PROPERLY COMPACTED SHALL BE FILLED WITH COMERCIALLY AVAILABLE FLOWABLE FILL. FLOWABLE FILL SHALL BE INCIDENTAL TO THE TEMPORARY SHORING BID ITEM.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-53-294

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SOUTHEAST CANTILEVER SIDEWALK DETAILS

SHEET 31 OF 32
186

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DATE= 3/14/2018

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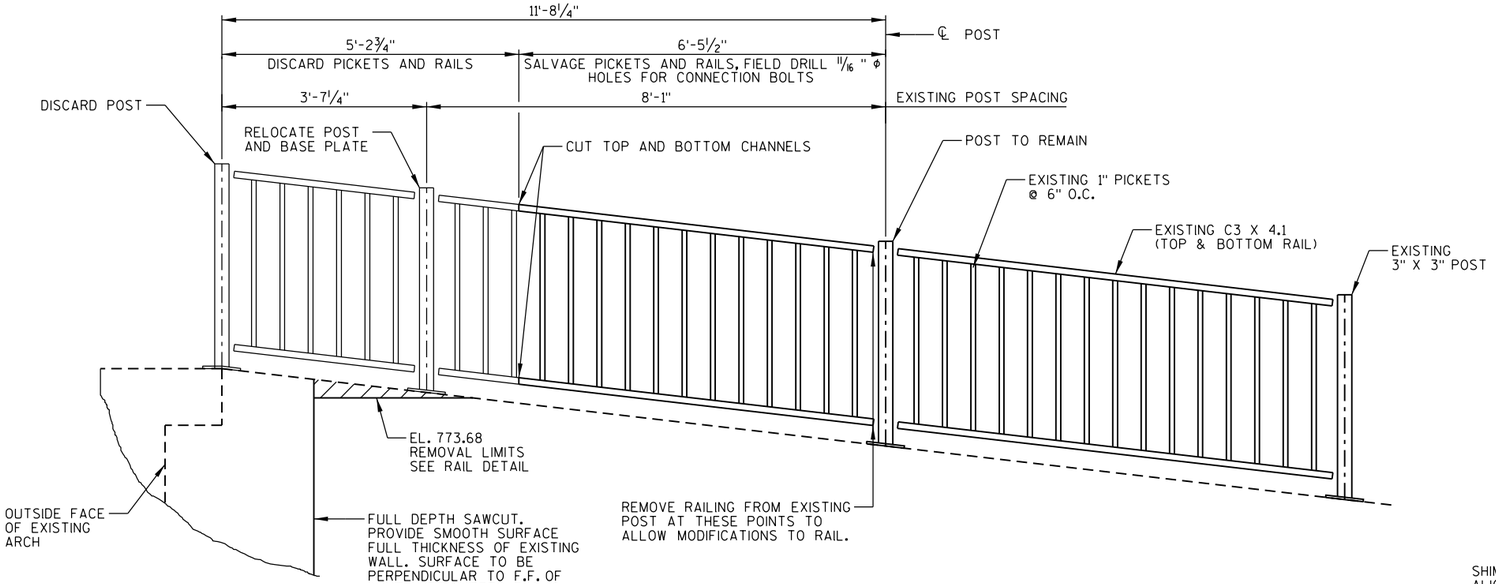
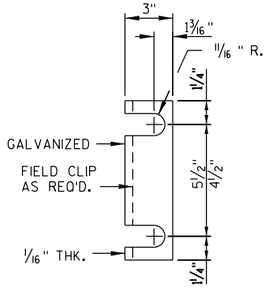
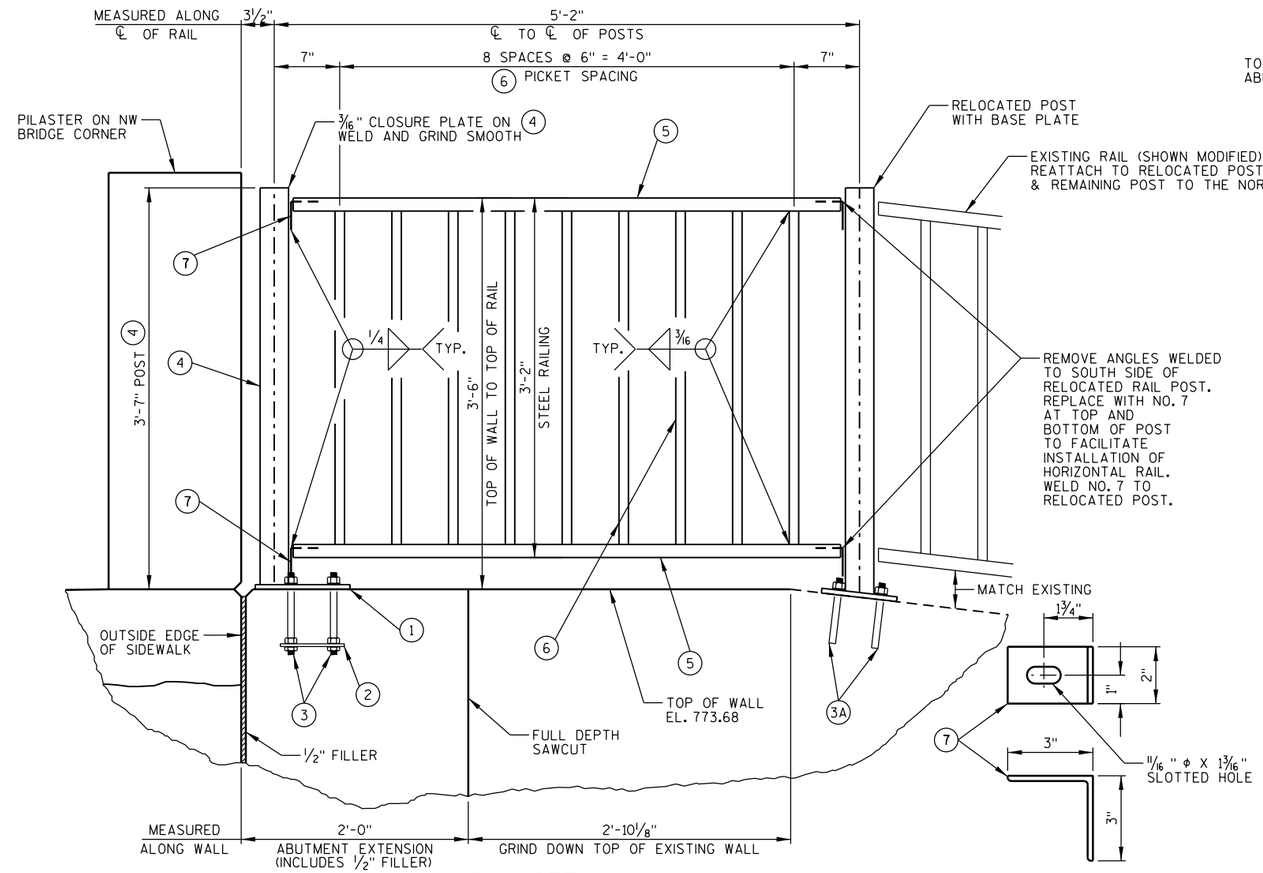


ELEVATION - EXISTING RAIL AND WALL

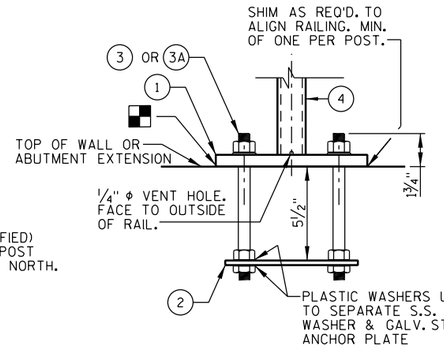


RAIL POST SHIM DETAIL



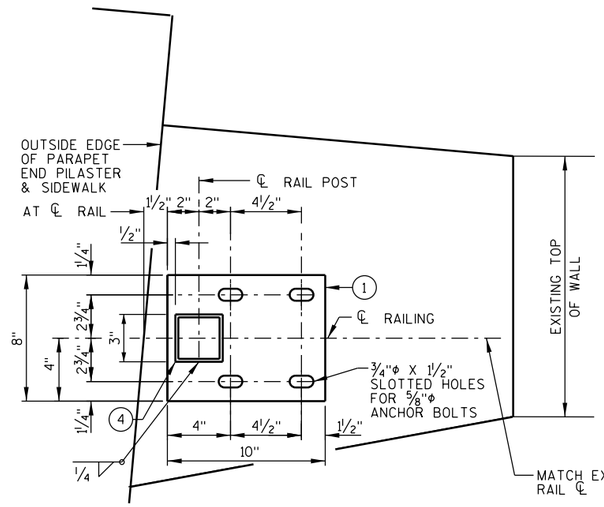
RAIL DETAIL

ANGLE DETAIL



ANCHORAGE FOR RAIL POSTS

NOTE: ANCHOR PLATE NOT REQUIRED WHERE ADHESIVE ANCHORS ARE USED.



NEW RAIL POST END BASE PLATE

LEGEND

1. PLATE ½" X 10" X 8" WITH ¾" X 1½" SLOTTED HOLES.
2. ¼" X 8" X 7" ANCHOR PLATE WITH 11/16 " ϕ HOLES FOR THREADED RODS NO. 3.
3. ⅝" DIA. X 9" LONG, TYPE 316 STAINLESS STEEL THREADED RODS (MIN. TENSILE STRENGTH = 70 KSI) WITH NUT AND WASHERS OF SAME ALLOY GROUP.
- 3A. CONCRETE ADHESIVE ANCHORS ⅝". EMBED 7" IN CONCRETE. ADHESIVE ANCHORS SHALL CONFORM TO SECTION 502.2.12 OF THE STANDARD SPECIFICATIONS.
4. STRUCTURAL TUBING 3" X 3" X 5/16". PLACE VERTICAL. WELD TO NO. 1 & 7.
5. RAILS C3 X 4.1 CHANNEL WITH 11/16 " HOLES FOR NO. 7. BOLT TO NO. 7 WITH ONE ⅝" ϕ X 1" BOLT WITH NUT AND WASHER ON BOTTOM.
6. BAR 1" X 1" PICKETS. WELD TO NO. 5. PLACE VERTICAL.
7. ANGLE ⅜" X 3" X 3" X 2" WIDE. WELD TO NO. 4.

NOTES

BID ITEM SHALL BE "REMOVE, SALVAGE, MODIFY, AND REATTACH EXISTING RAILING", WHICH SHALL INCLUDE ALL STEEL ITEMS SHOWN, ADHESIVE ANCHORS, REMOVING PORTIONS OF THE RAILING, DISPOSING OF UNUSED RAILING, AND MODIFYING AND REATTACHING A PORTION OF THE RAILING AS SHOWN.

POST BASE PLATE 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, CHANNELS AND ANGLES 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.

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 MEMBERS AS REQUIRED TO FACILITATE GALVANIZING AND DRAINAGE.

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 GALVINIZING WITH AN APPROVED TIE COAT AND TOP COAT AS SPECIFIED IN THE CONTRACT DOCUMENTS. THE RAILING SHALL BE PAINTED TO MATCH COLOR OF ORIGINAL RAIL. 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 & 3A) & SHIMS.

SAWCUTS, PARTIAL WALL REMOVAL AND GRINDING TOP OF REMAINING WALL AS SHOWN IS INCLUDED IN THE BID ITEM "REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS STATION 14+54".

FIELD VERIFY RAILING DIMENSIONS PRIOR TO FABRICATION.

■ 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.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-53-294

DRAWN BY RLR | PLANS CK'D. LJR

NORTHWEST RIVER WALL RAILING DETAILS

SHEET 32 OF 32
187

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879002_32.dgn 3/14/2018 8:41:02 AM rrabska

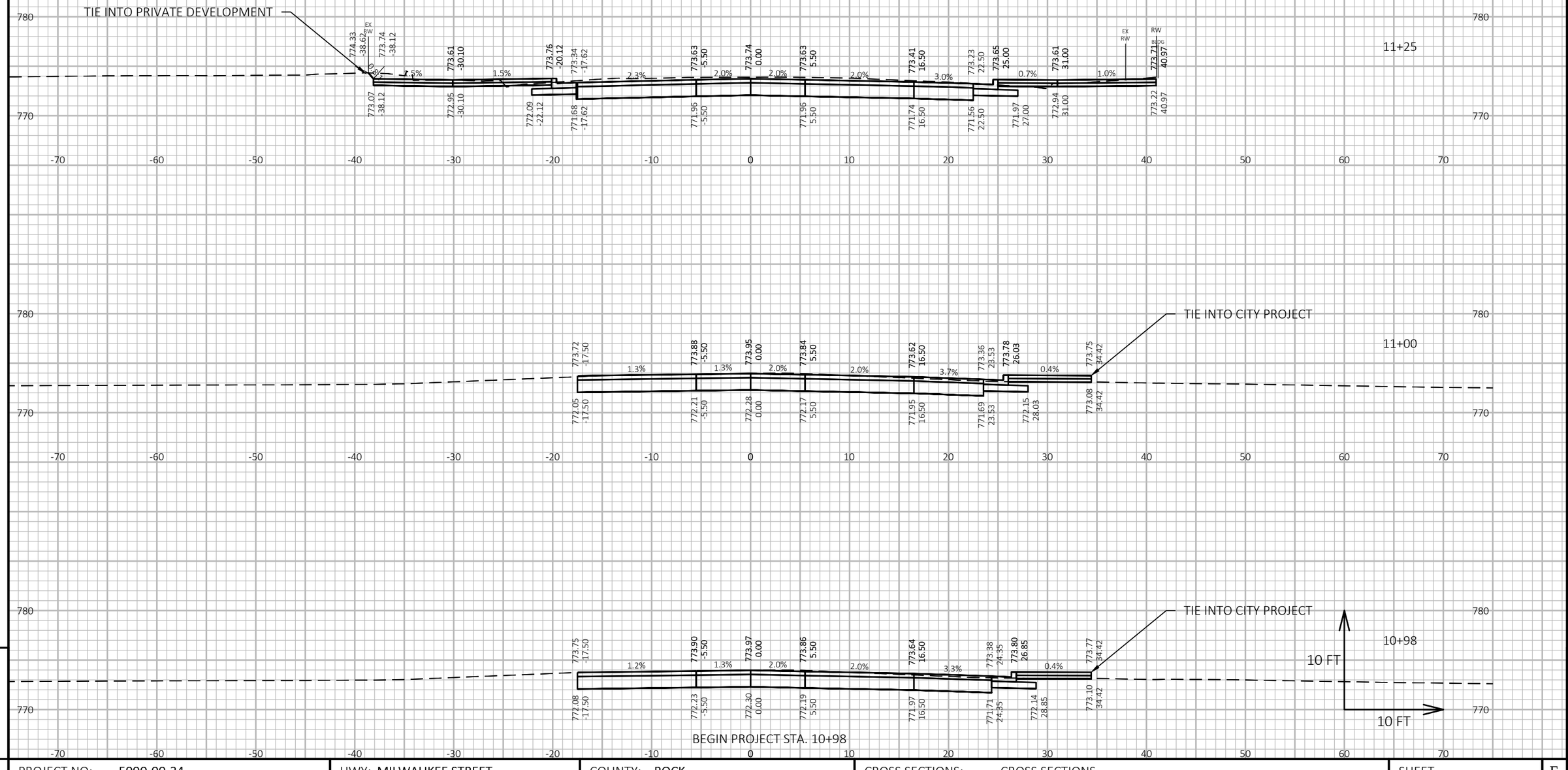
FILE= 879002_32.DGN
DATE= 3/14/2018

EARTHWORK PROJECT I.D. 5990-00-34 - MILWAUKEE STREET - BRIDGE RECONSTRUCTION (DIVISION 1)

STATION	Real Station	Distance	AREA (SF)			Incremental Vol (CY) (Unadjusted)			Cumulative Vol (CY)		Mass Ordinate
			Cut	Salvaged/Unusable Pavement Material	Fill	Cut	Salvaged/Unusable Pavement Material	Fill	Cut 1.00	Expanded Fill 1.25	
						Note 1	Note 2	Note 3	Note 1		Note 7
10+98	1098.00	0.00	75	40	0	0	0	0	0	0	0
11+00	1100.00	2.00	74	40	0	6	3	0	6	0	3
11+25	1125.00	25.00	107	40	0	84	37	0	89	0	49
11+50	1150.00	25.00	108	40	0	100	37	0	189	0	112
11+75	1175.00	25.00	98	40	0	95	37	0	284	0	170
12+00	1200.00	25.00	102	40	0	93	37	0	377	0	226
12+25	1225.00	25.00	109	37	0	98	36	0	474	0	288
12+50	1250.00	25.00	116	33	0	104	32	0	579	0	359
12+75	1275.00	25.00	109	33	0	104	31	0	683	0	433
13+00	1300.00	25.00	93	33	0	93	31	0	776	0	495
13+25	1325.00	25.00	107	33	0	92	31	0	868	0	557
13+40.72	1340.72	15.72	107	33	0	62	19	0	930	0	600
	B-53-294										
				DIVISION 1 TOTALS		930	330	0			

EARTHWORK PROJECT I.D. 5990-00-34 - MILWAUKEE STREET - BRIDGE RECONSTRUCTION (DIVISION 2)

STATION	Real Station	Distance	AREA (SF)			Incremental Vol (CY) (Unadjusted)			Cumulative Vol (CY)		Mass Ordinate
			Cut	Salvaged/Unusable Pavement Material	Fill	Cut	Salvaged/Unusable Pavement Material	Fill	Cut 1.00	Expanded Fill 1.25	
						Note 1	Note 2	Note 3	Note 1		Note 7
	B-53-294										
15+58.88	10406.54	0.00	67	33	0	0	0	0	0	0	0
15+75	10418.00	11.46	67	33	0	28	14	0	28	0	14
16+00	10430.00	12.00	41	33	0	24	15	0	52	0	24
16+25	10454.00	24.00	46	33	0	39	29	0	91	0	33
16+50	10466.00	12.00	57	33	0	23	15	0	114	0	41
16+75	10488.00	22.00	66	33	0	50	27	0	164	0	64
16+77	10493.00	5.00	66	33	0	12	6	0	176	0	70
				DIVISION 2 TOTALS		176	106	0			
				PROJECT TOTALS		1,106	0	0			



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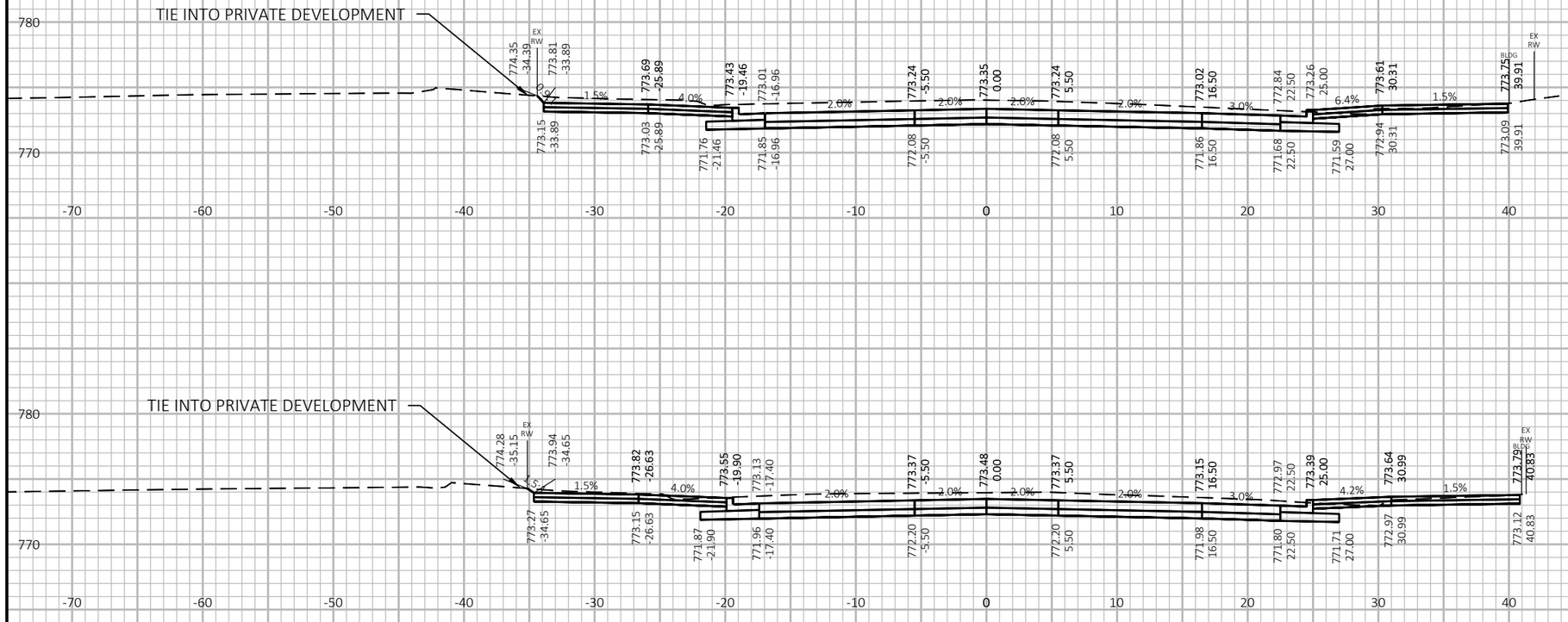
PROJECT NO: 5990-00-34	HWY: MILWAUKEE STREET	COUNTY: ROCK	CROSS SECTIONS: CROSS SECTIONS	SHEET 189	E

FILE NAME : P:\870S\879\00879002\C3D\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 090201-xs

PLOT DATE : 4/19/2018 2:39 PM PLOT BY : CHAD WAGNER PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



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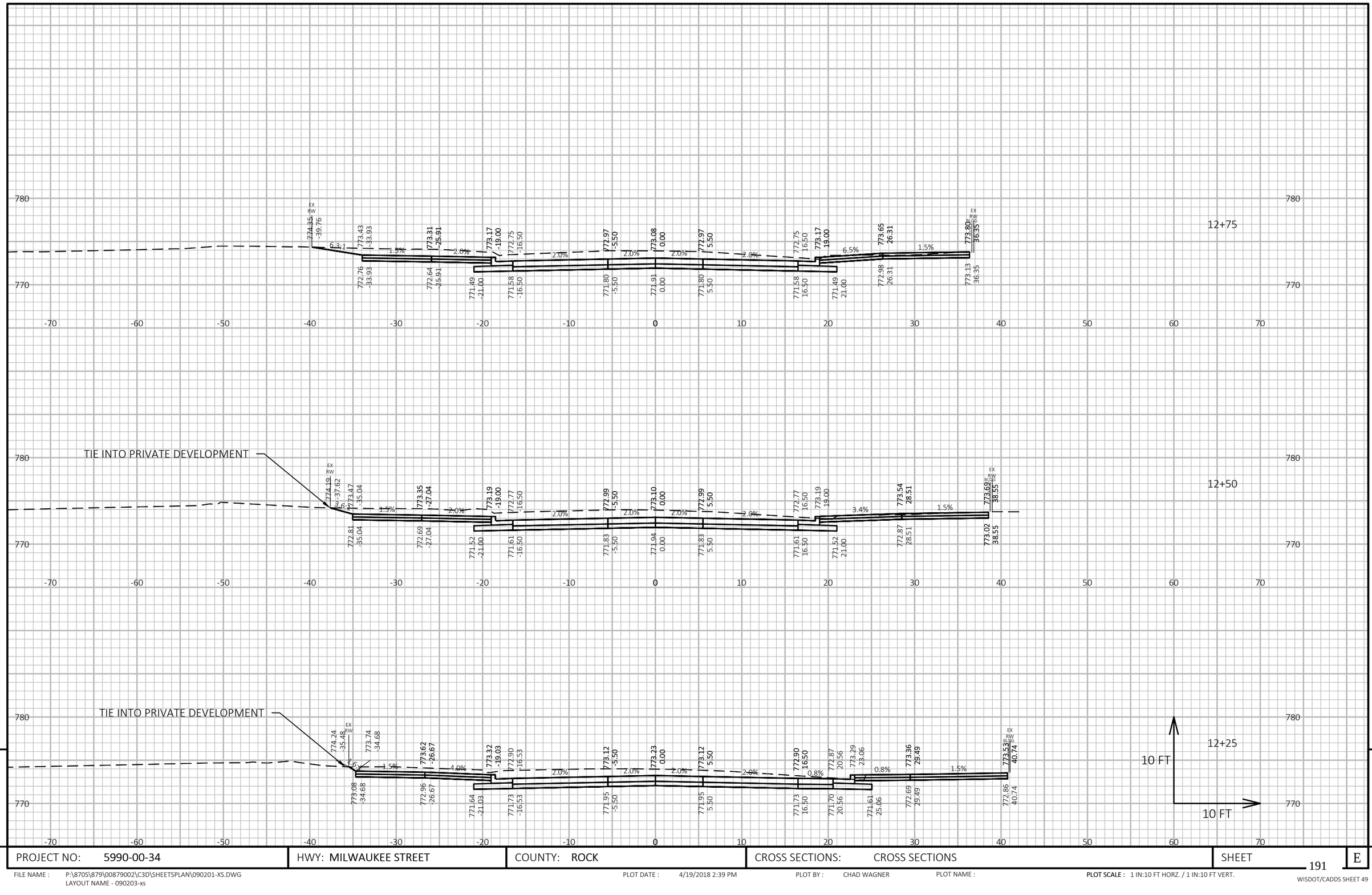
PROJECT NO: 5990-00-34	HWY: MILWAUKEE STREET	COUNTY: ROCK	CROSS SECTIONS: CROSS SECTIONS	SHEET 190	E

FILE NAME : P:\870S\879\00879002\C3D\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 090202-xs

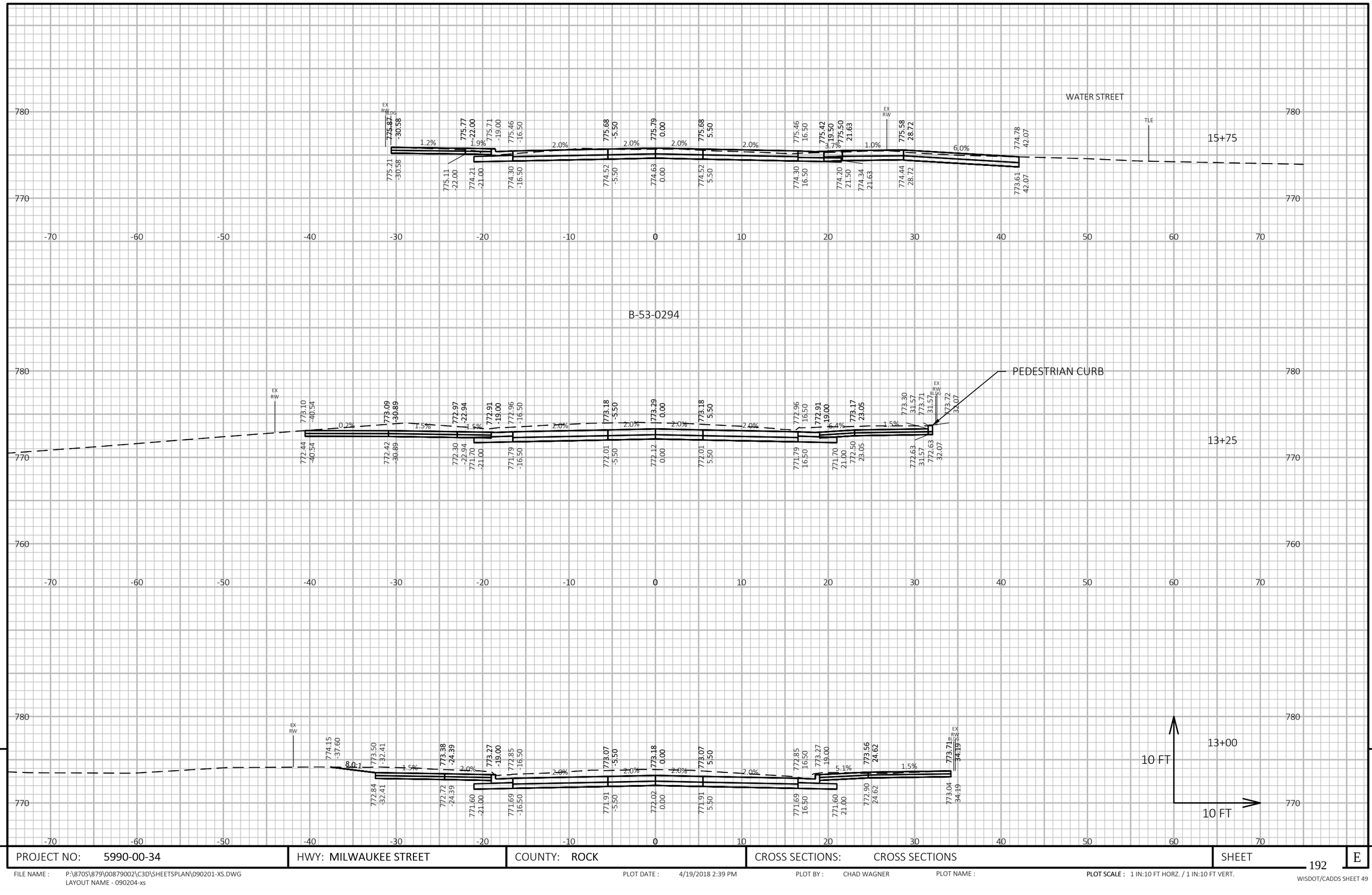
PLOT DATE : 4/19/2018 2:39 PM PLOT BY : CHAD WAGNER PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



PROJECT NO: 5990-00-34	HWY: MILWAUKEE STREET	COUNTY: ROCK	CROSS SECTIONS: CROSS SECTIONS	SHEET 191 E

FILE NAME : P:\870S\879\00879002\C3D\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 090203-xs

PLOT DATE : 4/19/2018 2:39 PM PLOT BY : CHAD WAGNER PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



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PROJECT NO: 5990-00-34	HWY: MILWAUKEE STREET	COUNTY: ROCK	CROSS SECTIONS: CROSS SECTIONS	SHEET 192	E

FILE NAME : P:\870S\879\00879002\C3D\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 090204-xs

PLOT DATE : 4/19/2018 2:39 PM

PLOT BY : CHAD WAGNER

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

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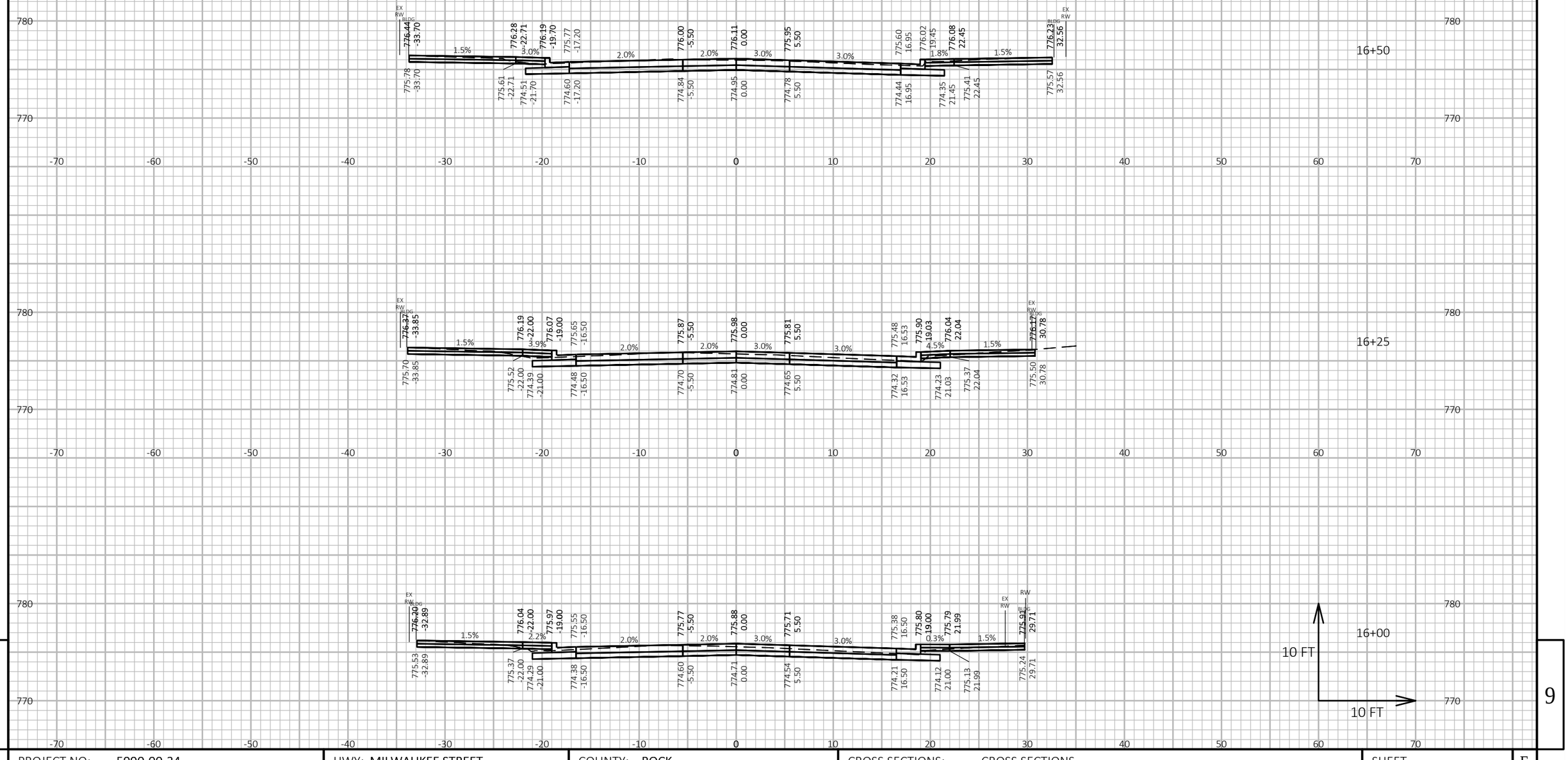

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PROJECT NO: 5990-00-34	HWY: MILWAUKEE STREET	COUNTY: ROCK	CROSS SECTIONS: CROSS SECTIONS	SHEET 193	E

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LAYOUT NAME - 090205-xs

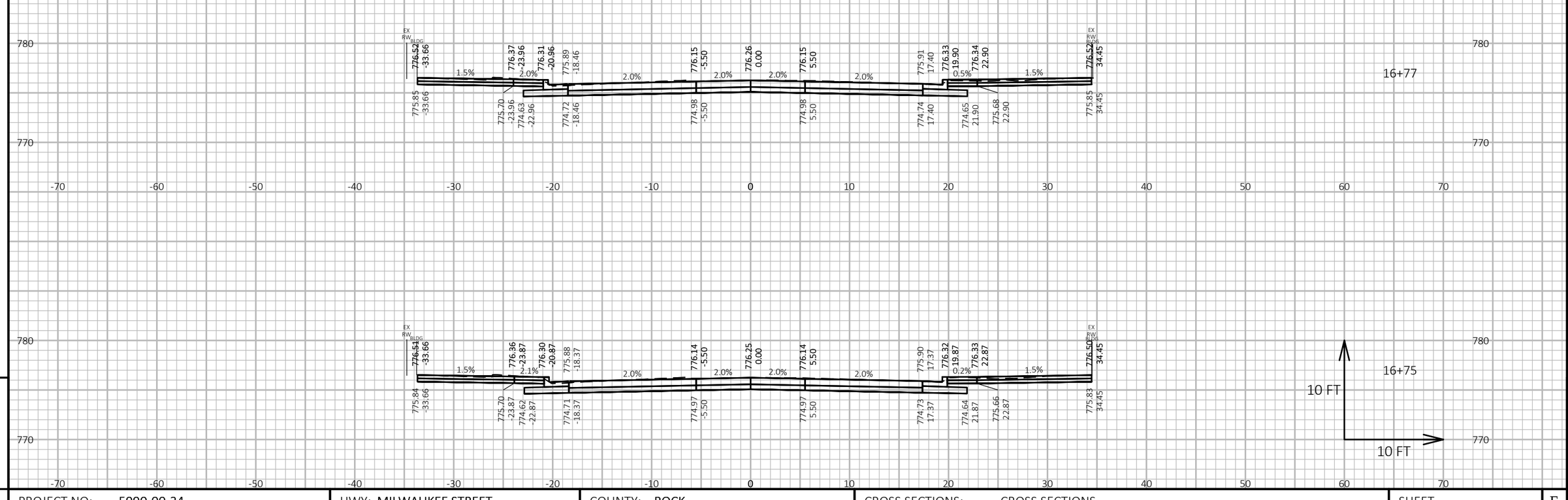
PLOT DATE : 4/19/2018 2:39 PM

PLOT BY : CHAD WAGNER

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

END PROJECT STA. 16+77



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PROJECT NO: 5990-00-34	HWY: MILWAUKEE STREET	COUNTY: ROCK	CROSS SECTIONS: CROSS SECTIONS	SHEET 194	E

FILE NAME : P:\870S\879\00879002\C3D\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 090206-xs

PLOT DATE : 4/19/2018 2:39 PM

PLOT BY : CHAD WAGNER

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

Notes

Wisconsin Department of Transportation

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