NEL

JUNE 2017

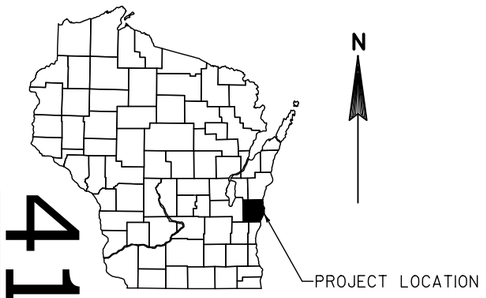
PROJECT ID: 4996-19-71

WITH: N/A

COUNTY: SHEBOYGAN

ORDER OF SHEETS

TOTAL SHEETS = 58



41

DESIGN DESIGNATION

A.A.D.T. 2019	=	12,400
A.A.D.T. 2039	=	13,600
D.H.V.	=	6.4
D.D.	=	59/41
T.	=	7.4%
DESIGN SPEED	=	30 MPH
ESALS	=	142,350

CONVENTIONAL SYMBOLS

PLAN

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

PROFILE

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

UTILITIES

- ELECTRIC (E)
- FIBER OPTIC (FO)
- GAS (G)
- SANITARY SEWER (SAN)
- STORM SEWER (SS)
- TELEPHONE (T)
- WATER (W)
- UTILITY PEDESTAL
- POWER POLE
- TELEPHONE POLE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

C SHEBOYGAN, 8TH STREET

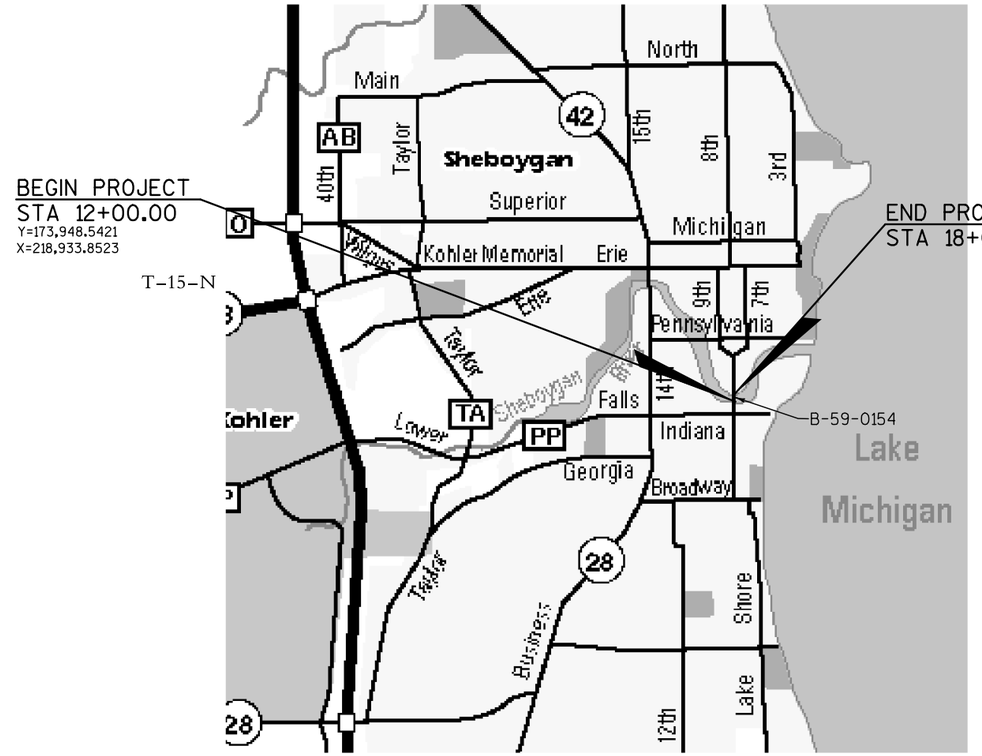
SHEBOYGAN RIVER BRIDGE

LOC STR
SHEBOYGAN COUNTY

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
4996-19-71	———	———

STATE PROJECT NUMBER
4996-19-71

R-23-E



R-23-E

LAYOUT
SCALE 0 1 MI.

TOTAL NET LENGTH OF CENTERLINE = 0.114 MI.

COORDINATES ON THIS PLAN ARE REFERENCED TO AN ASSUMED COORDINATE SYSTEM.

ACCEPTED FOR

CITY of SHEBOYGAN

1-12-2017 (Date) DIRECTOR OF DPW (Signature & Title of Official)

ORIGINAL PLANS PREPARED BY

AECOM
1555 N River Center Drive, Suite 214
Milwaukee, WI 53212
T 414.944.6080
F 414.944.6081

WISCONSIN 1/12/17
WILLIAM R. SCHILLING
E-35841-006
WAUKESHA, WI
PROFESSIONAL ENGINEER

(Date) (Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	N/A
Designer	AECOM
Management consultant	JT ENGINEERING

APPROVED FOR THE DEPARTMENT

DATE: 1/12/17 (Management Consultant Signature)

E

GENERAL NOTES

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

NOTIFY DIGGERS HOTLINE AND ALL UTILITIES IN THE VICINITY OF THE PROJECT TO LOCATE THEIR FACILITIES AT LEAST THREE WORKING DAYS PRIOR TO BEGINNING WORK.

AN ASSUMED COORDINATE SYSTEM WAS USED FOR ALIGNMENT INFORMATION. THE ALIGNMENT IS FOR REFERENCE AND QUANTITY PURPOSES ONLY. FIELD VERIFY ALL QUANTITY LOCATIONS.

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

DISTURBED AREAS NEAR THE NORTHWEST RETAINING WALL LOCATION, SHALL BE REPLACED TO EXISTING CONDITION OR BETTER. INSTALL SHRUBS AS SHOWN IN THE MISCELLANEOUS QUANTITIES.

DISTURBED AREAS WITHIN THE PROJECTS LIMITS SHALL BE FERTILIZED, SEEDED, AND MATTED.

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

EROSION CONTROL DEVICES ARE TO BE PLACED AND MAINTAINED THROUGHOUT THE PROJECT TO COMPLETION OR AS DETERMINED BY THE FIELD ENGINEER.

ALL LOCATIONS AND STATIONING IDENTIFIED IN THE PLANS ARE APPROXIMATE AS NO SURVEY WAS PROVIDED. ALL PAVEMENT AND CURB AND GUTTER REPLACEMENT LOCATIONS MUST BE VERIFIED IN THE FIELD BY THE ENGINEER. NO WORK WILL BE PERFORMED PAST THE CURB RETURNS ON THE SOUTH SIDE OF RIVERFRONT DRIVE OR PAST THE FIRST MARKED CROSS WALK SOUTH OF THE BRIDGE. CURB RAMPS DETAILS FOR THE SOUTH PROJECT LIMITS ARE REFERENCED TO THE CITY OF SHEBOYGAN DATUM. SEE THE DETAIL FOR ADDITIONAL INFORMATION.

DO NOT CLOSE EAST AND WEST SIDEWALKS ALONG 8TH STREET AT THE SAME TIME. ONE SIDE MUST REMAIN OPEN FOR THE DURATION OF THE PROJECT EXCEPT FOR DURING THE TWO DAY FULL CLOSURE FOR FINAL TESTING.

UTILITIES

ALLIANT ENERGY
MR. JASON HOGAN
4902 N BILTMORE LANE
PO BOX 770077
MADISON, WI 53707-1007
(608) 458-4871
JASONHOGAN@ALLIANTENERGY.COM

AT&T WISCONSIN
MS. LISA SUPRENAND
70 EAST DIVISION STREET
FOND DU LAC, WI 54935
(920) 929-8459
AD5647@ATT.COM

CITY OF SHEBOYGAN - SANITARY SEWER
MR. RYAN SAZAMA
2026 NEW JERSEY AVENUE
SHEBOYGAN, WI 53081
(920) 459-3485
RYAN.SAZAMA@SHEBOYGANWI.GOV

CITY OF SHEBOYGAN - WATER
MR. DAMIAN NEVERS
72 PARK AVE
SHEBOYGAN, WI 53081
(920) 459-3806
DAMIANNEVERS@SHEBOYGANWATER.ORG

WISCONSIN PUBLIC SERVICE CORPORATION (GAS/PETROLEUM)
MS. LORI BUTRY
700 N ADAMS STREET
PO BOX 19001
GREEN BAY, WI 54307-9001
(920) 433-1703
LABUTRY@INTEGRYSGROUP.COM

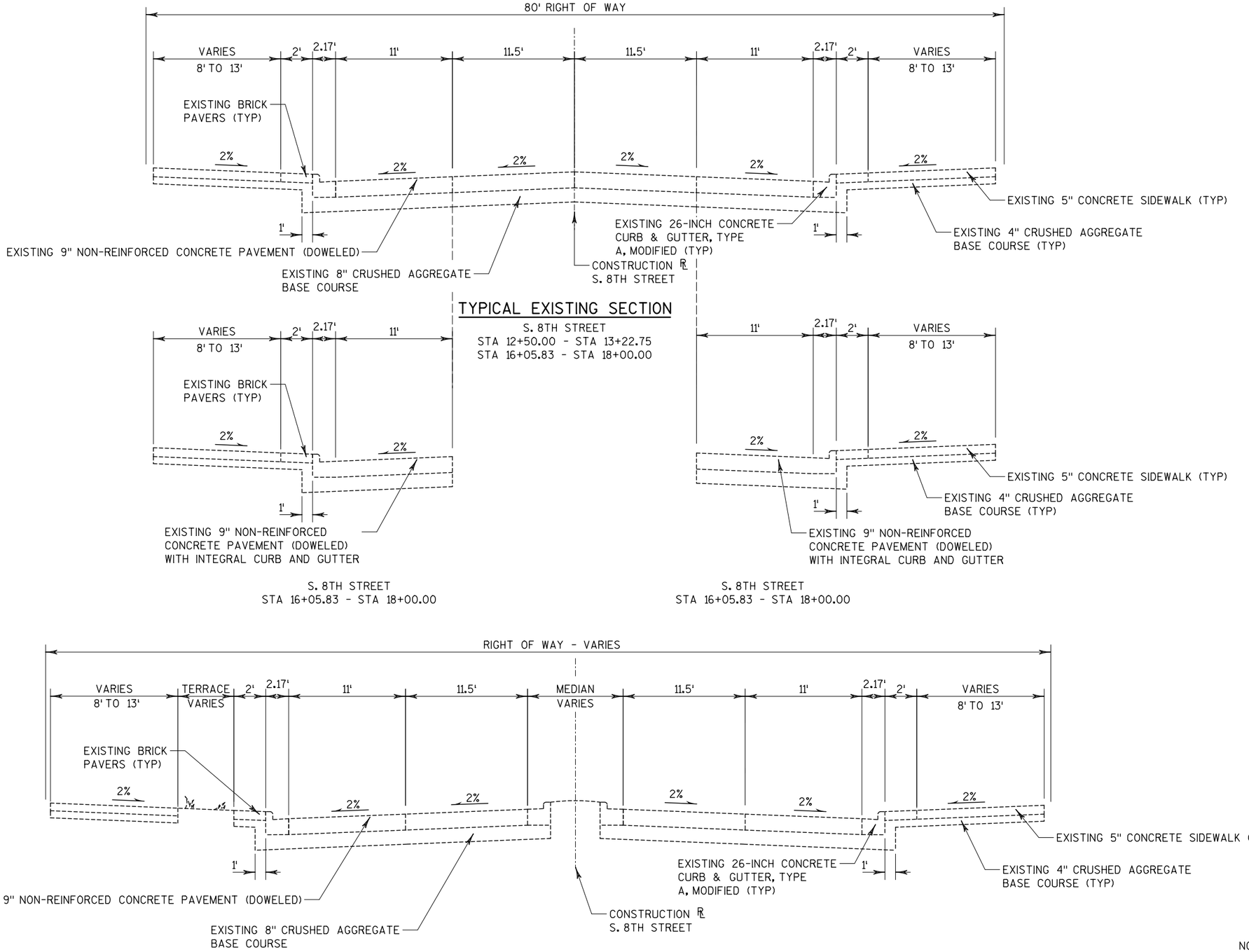
WISCONSIN DNR

MR. JAY SCHIEFELBEIN
2984 SHAWANO AVENUE
GREEN BAY, WI 54313
(920) 662-5472
JEREMIAH.SCHIEFELBEIN@WISCONSIN.GOV

DIGGERS HOTLINE
Dial 811 or (800) 242-8511
www.DiggersHotline.com

PROJECT NO: 4996-19-71	HWY: LOCAL	COUNTY: SHEBOYGAN	GENERAL NOTES	SHEET 2	E

PROJECT NO: 4996-19-71	HWY: LOCAL	COUNTY: SHEBOYGAN	PROJECT OVERVIEW	SHEET 3	E



TYPICAL EXISTING SECTION

S. 8TH STREET
STA 12+50.00 - STA 13+22.75
STA 16+05.83 - STA 18+00.00

S. 8TH STREET
STA 16+05.83 - STA 18+00.00

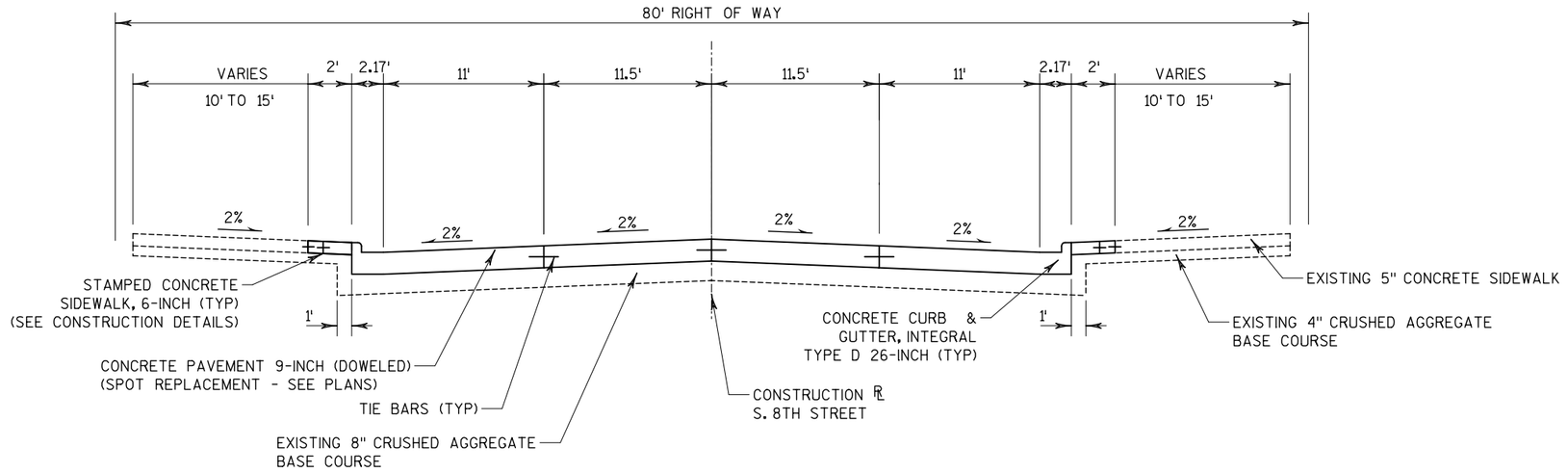
S. 8TH STREET
STA 16+05.83 - STA 18+00.00

TYPICAL EXISTING SECTION

S. 8TH STREET
STA 12+00.00 - STA 12+50.00

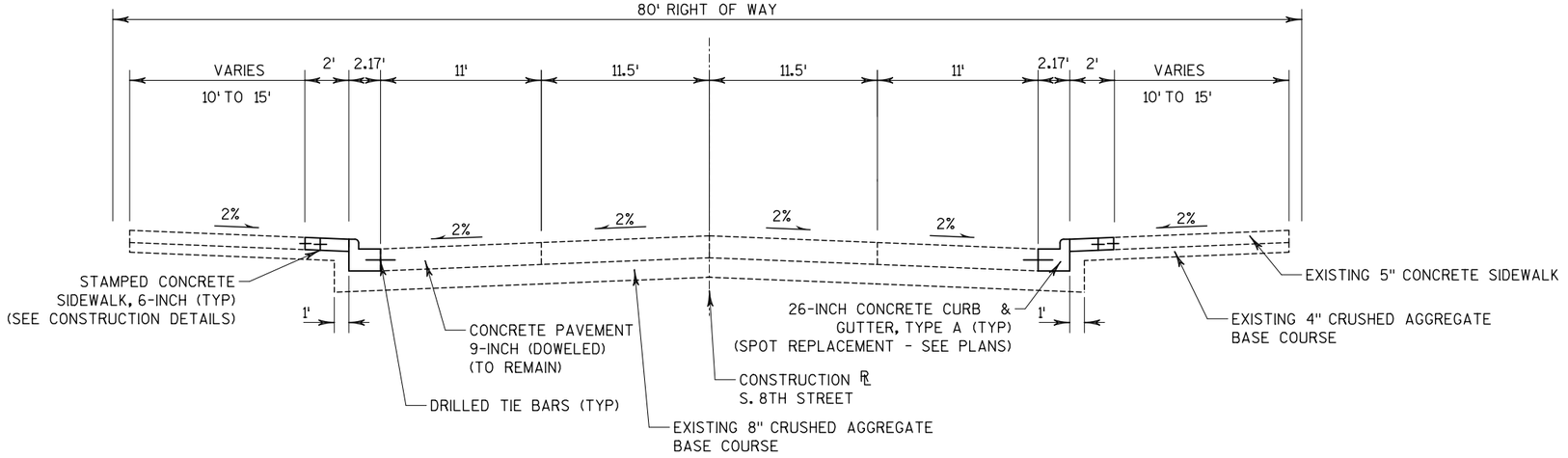
NOTE:
NOT TO SCALE

PROJECT NO: 4996-19-71	HWY: LOCAL	COUNTY: SHEBOYGAN	TYPICAL SECTIONS	SHEET 4	E



TYPICAL FINISHED SECTION

S. 8TH STREET
STA 16+05.83 - STA 18+00.00
(SEE QUANTITIES FOR LOCATIONS)

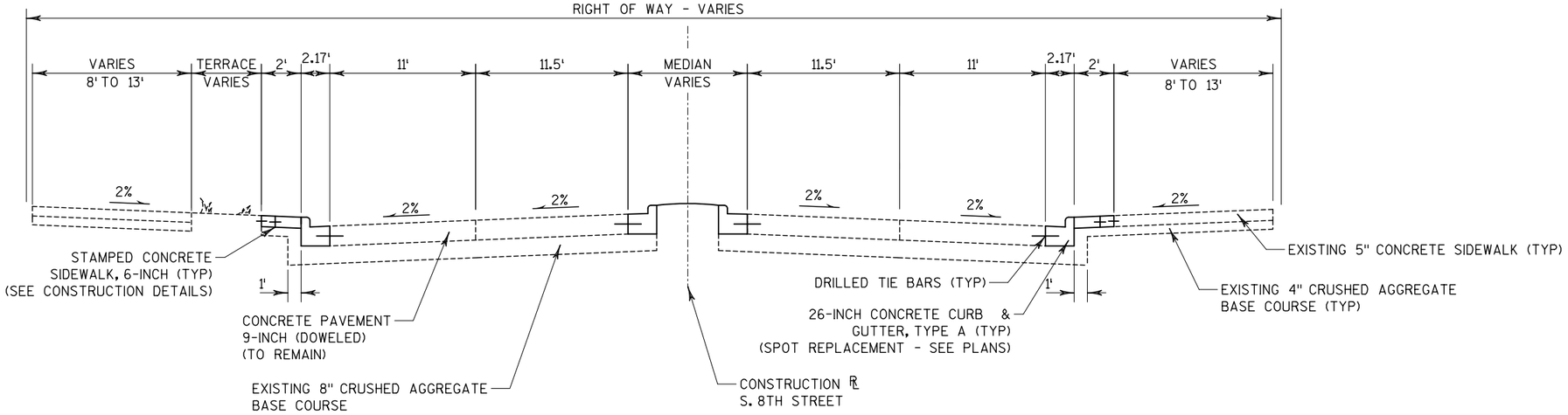


TYPICAL FINISHED SECTION

S. 8TH STREET
STA 12+50.00 - STA 13+22.75
(SEE QUANTITIES FOR LOCATION)

NOTE: NOT TO SCALE

PROJECT NO: 4996-19-71	HWY: LOCAL	COUNTY: SHEBOYGAN	TYPICAL SECTIONS	SHEET 5	E



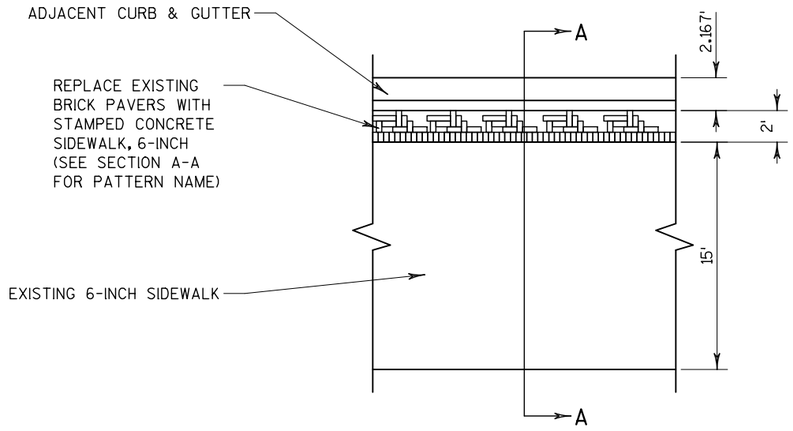
TYPICAL EXISTING SECTION

S. 8TH STREET
STA 12+00.00 - STA 12+50.00

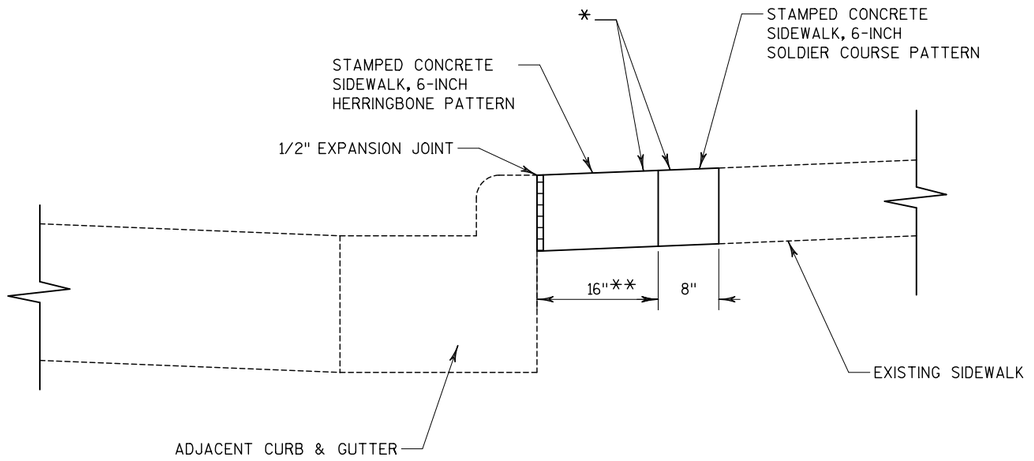
NOTE:
NOT TO SCALE.

SEE CURB RAMP DETAILS
FOR ADDITIONAL WORK.

PROJECT NO: 4996-19-71	HWY: LOCAL	COUNTY: SHEBOYGAN	TYPICAL SECTIONS	SHEET 6	E



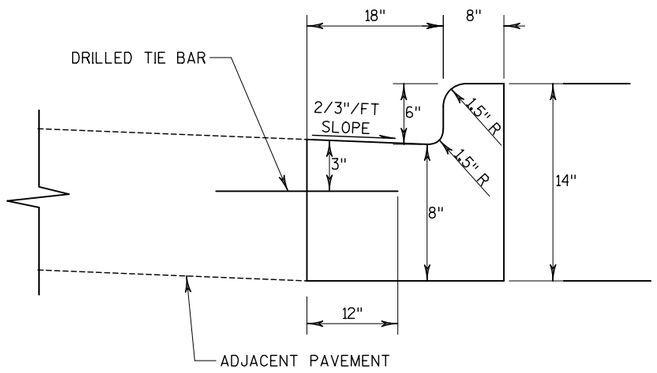
STAMPED CONCRETE SIDEWALK
6-INCH DETAIL



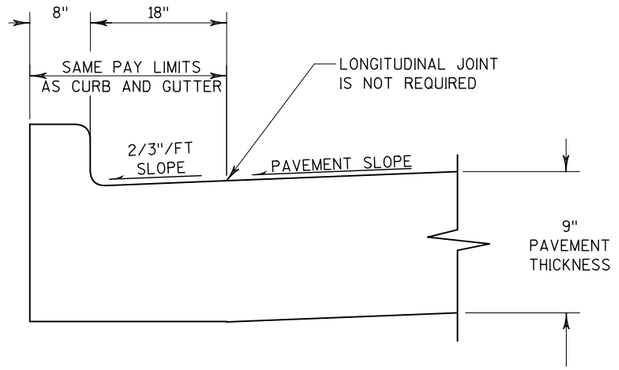
SECTION A-A

*REMOVE PAVERS AND BASE TO 6" BELOW EXISTING SURFACE ELEVATION - ADDITIONAL BASE AND GRADING REQUIRED BELOW PAVERS TO MATCH EXISTING GRADE IS INCIDENTAL

**WHERE STAMPED CONCRETE NARROWS IN THE SOUTHEAST QUADRANT OF THE RIVERFRONT DRIVE INTERSECITON, REDUCE HERRINGBONE PATTERN WIDTH AS NECESSARY.

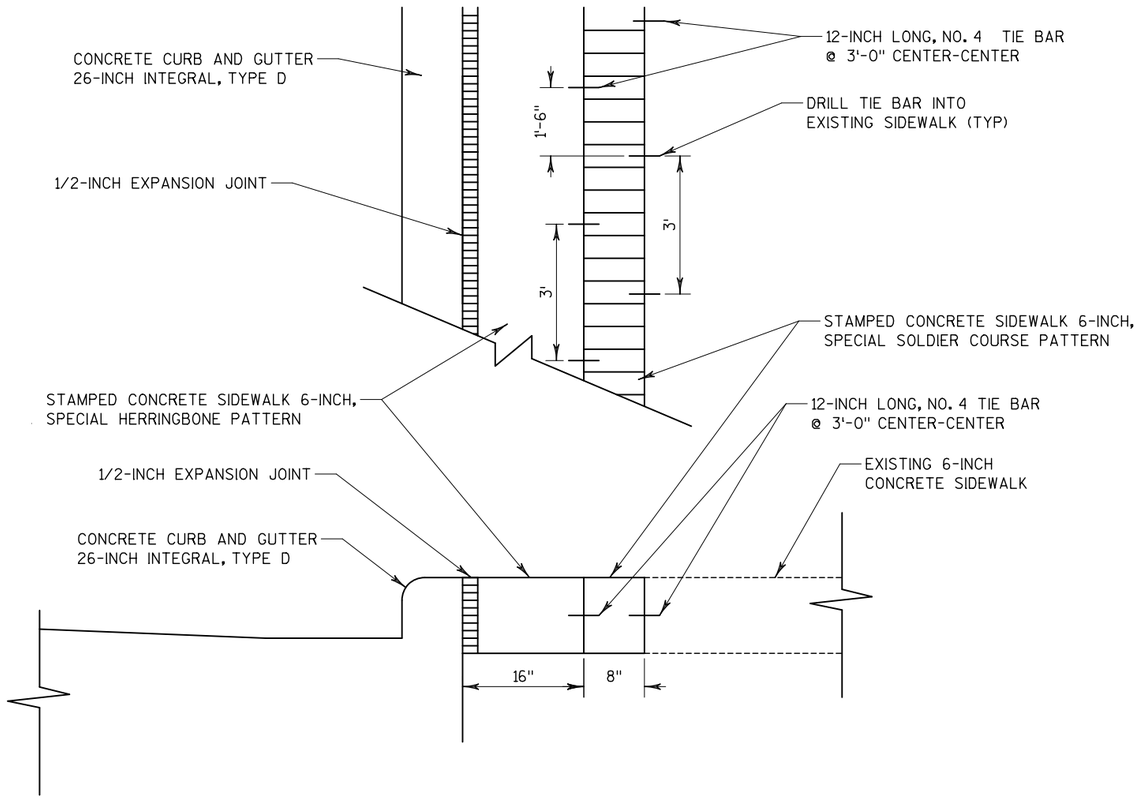


CONCRETE CURB AND
GUTTER 26-INCH TYPE A



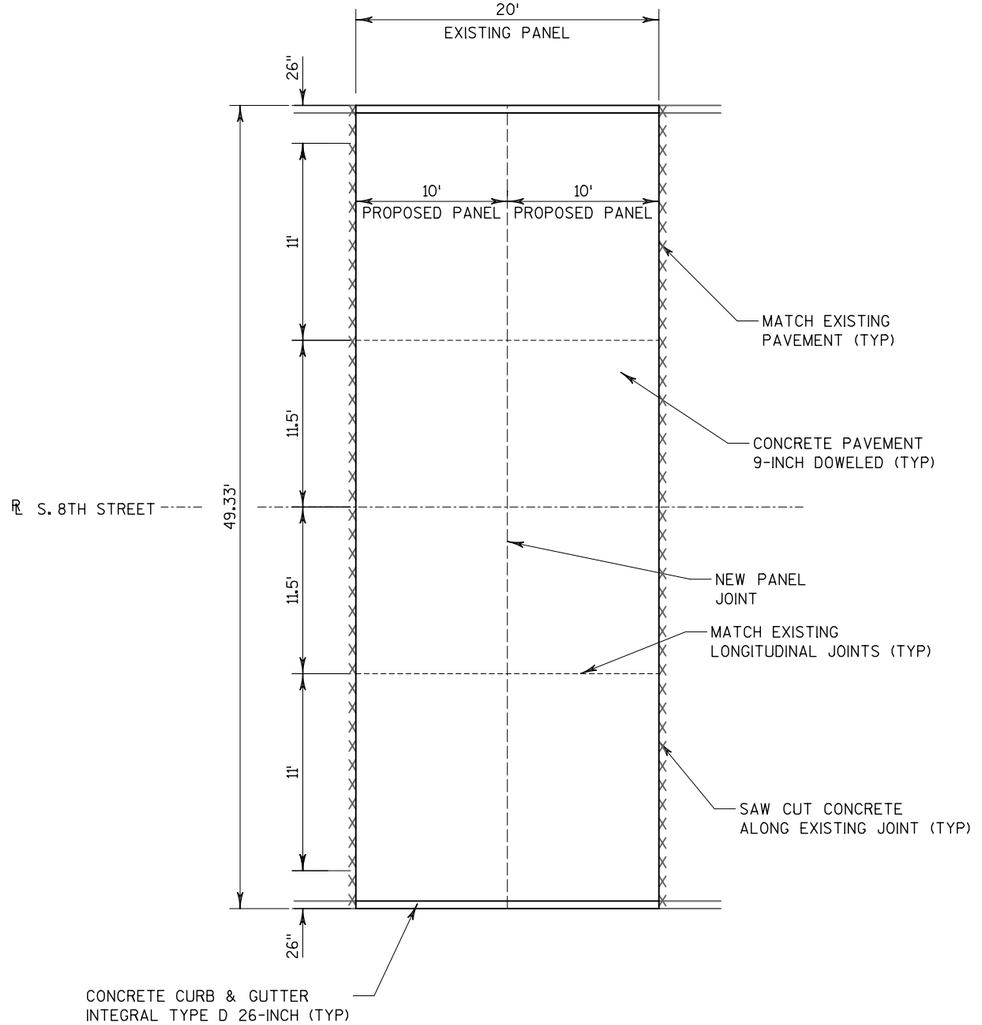
PAVEMENT WITH INTEGRAL
CURB AND GUTTER TYPE D

PROJECT NO: 4996-19-71	HWY: LOCAL	COUNTY: SHEBOYGAN	CONSTRUCTION DETAIL	SHEET 7	E



STAMPED CONCRETE SIDEWALK TIE BAR DETAIL

(NTS)

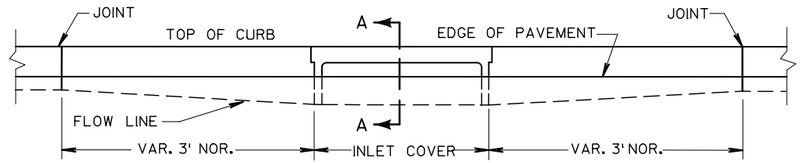


PANEL REPLACEMENT DETAIL

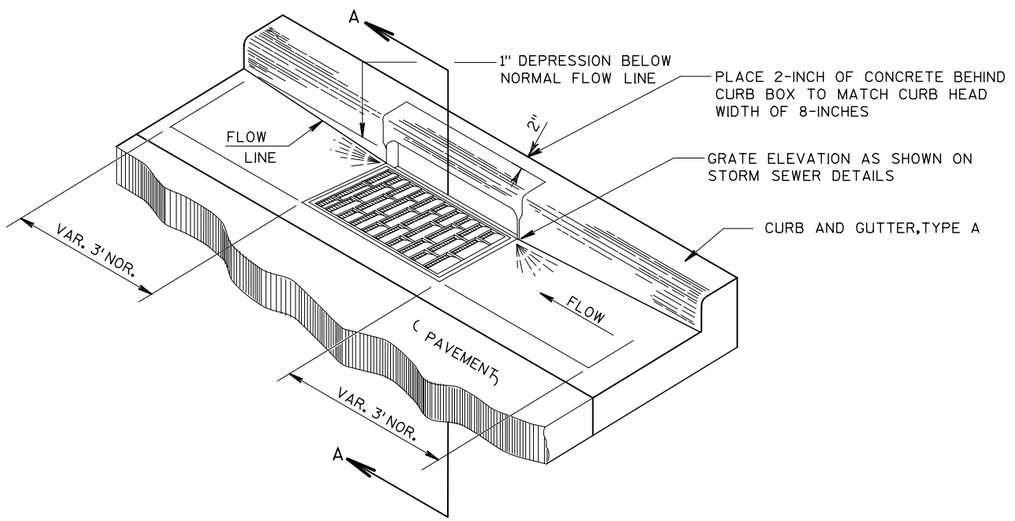
(NTS)

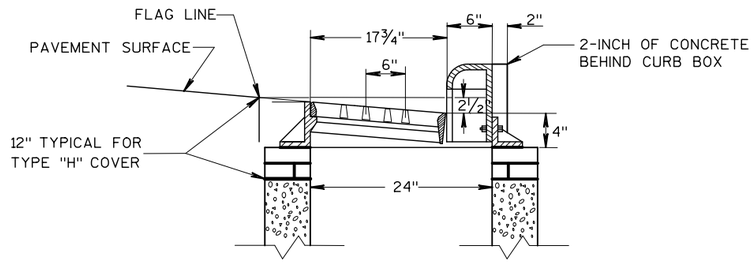
NOTE:
LONGITUDINAL JOINTS REQUIRE TIE BARS (INCIDENTAL TO CONCRETE PAVEMENT OR CURB AND GUTTER ITEMS IN UNHARDENED CONCRETE). TRANSVERSE JOINTS REQURED DOWEL BARS (INCIDENTAL TO CONCRETE PAVEMENT FOR UNHARDENED LOCATIONS) OR DRILLED DOWEL BARS FOR CONNECTION WITH EXISTING PAVEMENT. SEE SDD "CONCRETE PAVEMENT JOINT TYPES" FOR DETAILS.

2



ELEVATION

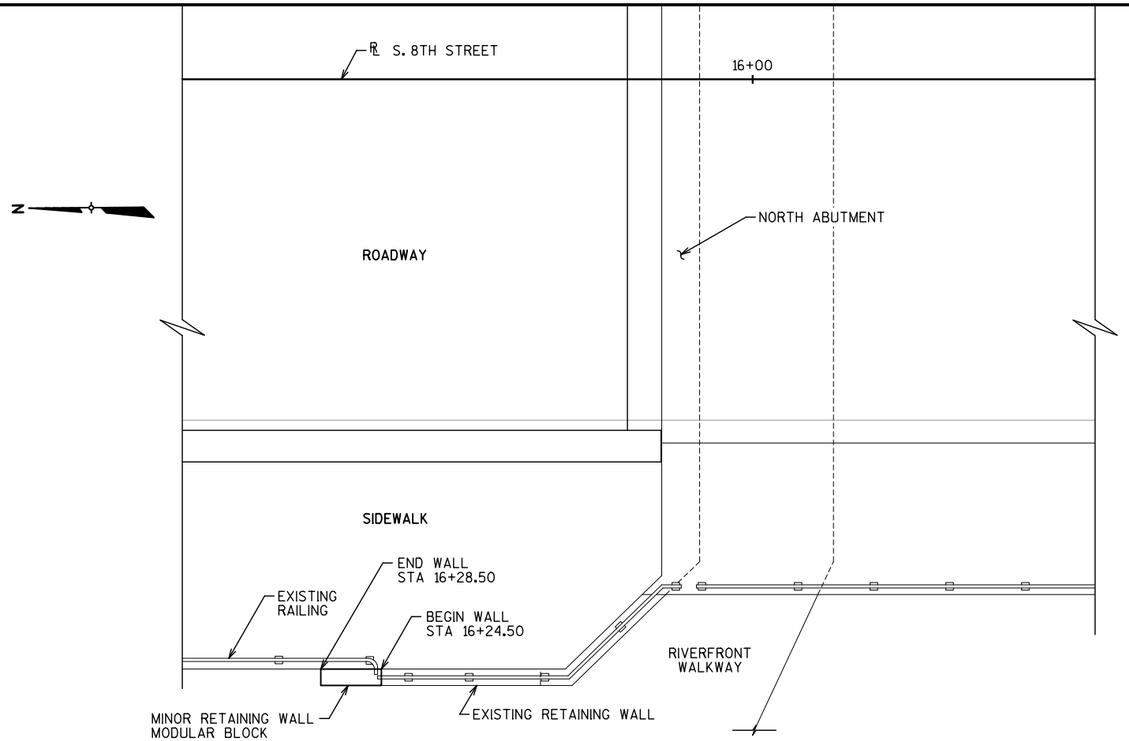




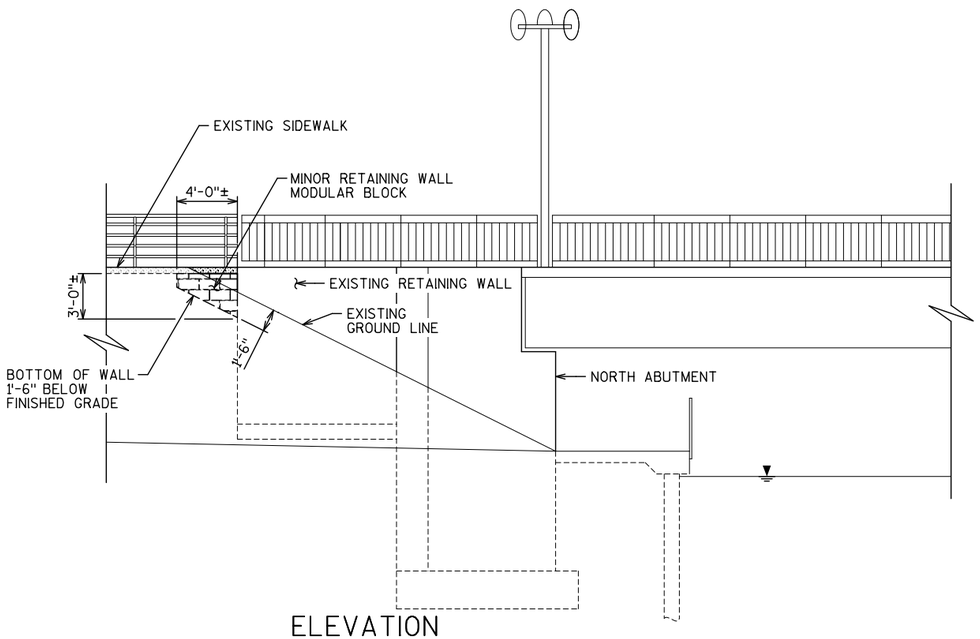
SECTION A-A

DETAIL OF CURB AND GUTTER AT INLETS

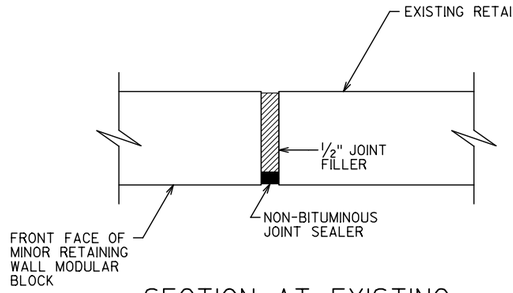
(TYPE 3-H INLET SHOWN)



PLAN OF WALL MODULAR BLOCK GRAVITY LANDSCAPE



ELEVATION



SECTION AT EXISTING
RETAINING WALL JOINT

NOTES

PLACE WALL FLUSH WITH EXISTING RETAINING WALL AND EXISTING SIDEWALK. EXTEND WALL 1'-6" DEPTH BELOW FINISHED GRADE AND 1'-0"± LENGTH BEYOND EXTENT OF EROSION.

BACKFILL CAVITY BEHIND WALL AND UNDER EXISTING SIDEWALK AFTER WALL IS IN PLACE WITH CONTROLLED LOW STRENGTH MATERIAL. PAYMENT FOR THIS BACKFILL INCLUDED UNDER BID ITEM "BACKFILL CONTROLLED LOW STRENGTH."

PAYMENT FOR RETAINING WALL INCLUDED UNDER BID ITEM "WALL MODULAR BLOCK GRAVITY LANDSCAPE LRFD."

PAYMENT FOR THE JOINT FILLER IS INCLUDED UNDER BID ITEM "NON-BITUMINOUS JOINT FILLER."

RESTORE THE LANDSCAPED AREA DISTURBED BY THE CONSTRUCTION OF THE WALL WITH ARBORVITAE MATCHING THE SURROUNDING LANDSCAPE.

2

N

NOTES:

ALL ELEVATIONS ON THIS PAGE ARE CITY OF SHEBOYGAN DATUM.
CONVERSION IS NGVD29 - 581.00 = CITY DATUM OR NAVD88-580.9=CITY DATUM.

SEE CONSTRUCTION DETAILS FOR STAMPED CONCRETE DETAILS. LIMITS SHOWN ARE APPROXIMATE.

ALL NEW SIDEWALK SHALL BE 6-INCH.

LAYOUT OF THE SIDEWALK SHALL BE APPROVED BY THE ENGINEER.

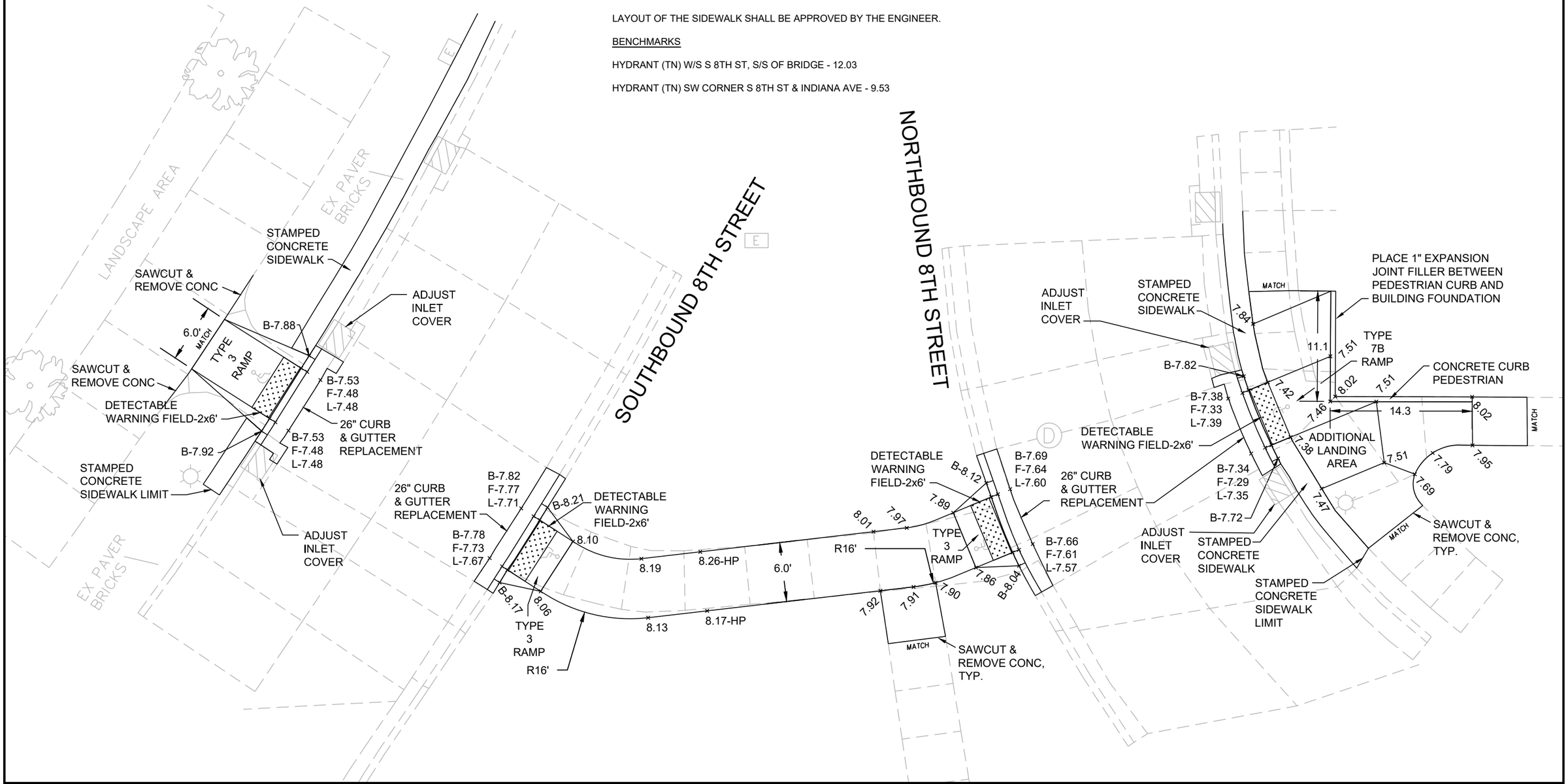
BENCHMARKS

HYDRANT (TN) W/S S 8TH ST, S/S OF BRIDGE - 12.03

HYDRANT (TN) SW CORNER S 8TH ST & INDIANA AVE - 9.53

LEGEND:

B - BACK OF CURB
F - FLOW LINE OF CURB
L - FLAG OF CURB/EDGE OF LANE



PROJECT NO: 4996-19-71	HWY: LOCAL	COUNTY: SHEBOYGAN	CURB RAMP AND SIDEWALK DETAILS	SHEET 11	E

2

N

NOTES:

ALL ELEVATIONS ON THIS PAGE ARE CITY OF SHEBOYGAN DATUM.
CONVERSION IS NGVD29 - 581.00 = CITY DATUM OR NAVD88-580.9=CITY DATUM.

SEE CONSTRUCTION DETAILS FOR STAMPED CONCRETE DETAILS. LIMITS SHOWN ARE APPROXIMATE.

ALL NEW SIDEWALK SHALL BE 6-INCH.

EXISTING TRAFFIC SIGNAL BASES TO BE MINIMUM OF 0.08 HIGHER THAN SURROUNDING SIDEWALK.

LAYOUT OF THE SIDEWALK SHALL BE APPROVED BY THE ENGINEER.

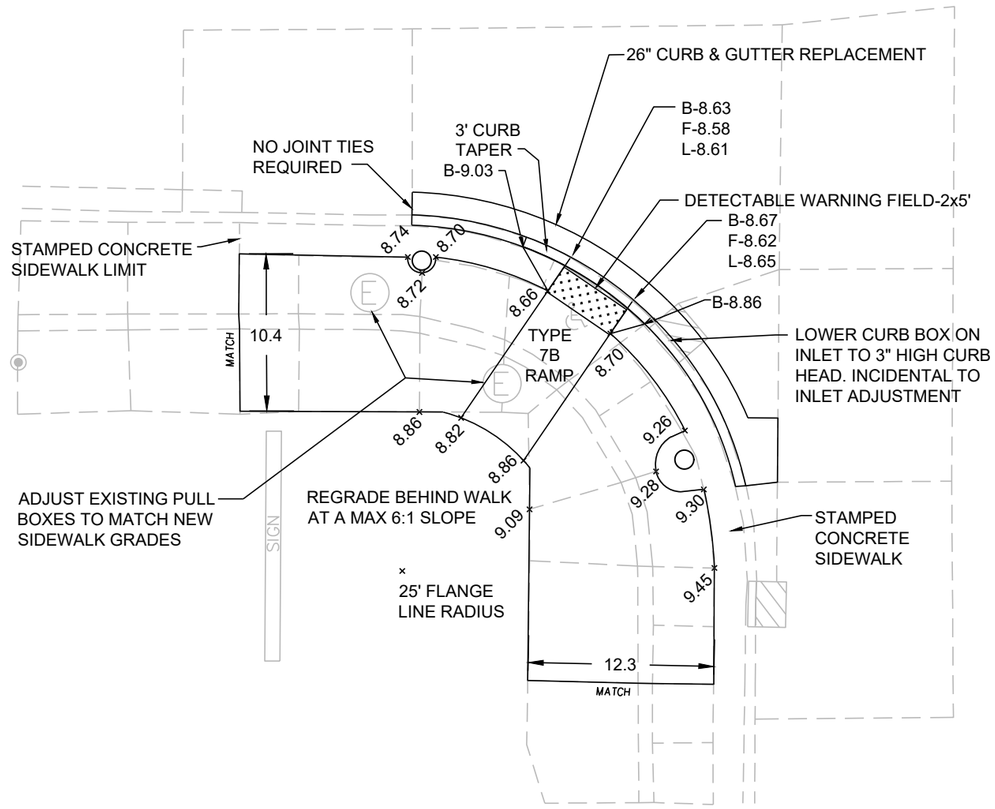
BENCHMARKS

HYDRANT (TN) W/S S 8TH ST, S/S OF BRIDGE - 12.03

HYDRANT (TN) SW CORNER S 8TH ST & INDIANA AVE - 9.53

LEGEND:

B - BACK OF CURB
F - FLOW LINE OF CURB
L - FLAG OF CURB/EDGE OF LANE



PROJECT NO: 4996-19-71	HWY: LOCAL	COUNTY: SHEBOYGAN	CURB RAMP AND SIDEWALK DETAILS	SHEET 12	E

2

N

LEGEND

C — INLET PROTECTION TYPE C

SILT FENCE

INDIANA AVENUE

NEW JERSEY AVENUE

S. 8TH STREET

S. 8TH STREET

FERTILIZE, SEED, AND MAT DISTURBED AREAS NEAR CONCRETE WORK

STRUCTURE B-59-0154

PLACE SHRUBS AFTER RETAINING WALL WORK IS COMPLETE (SEE QUANTITIES)

12

14

16

℄ 8TH STREET

S. PIER DRIVE

SHEBOYGAN RIVER

RIVERFRONT DRIVE

S. 7TH STREET

PROJECT NO: 4996-19-71	HWY: LOCAL	COUNTY: SHEBOYGAN	EROSION CONTROL	SHEET 13	E

PAVEMENT MARKING LEGEND

1. PAVEMENT MARKING PAINT 4-INCH (DOUBLE YELLOW)
2. STOP LINE PAINT 18-INCH (WHITE)
3. PAVEMENT MARKING PAINT 4-INCH (DASHED WHITE) (12.5' LINE 25' SPACE)
4. SYMBOLS BIKE SHARED LANE PAINT (WHITE)

N

STRUCTURE B-59-0154

S. 8TH STREET

12 13 14 15 16 17 18

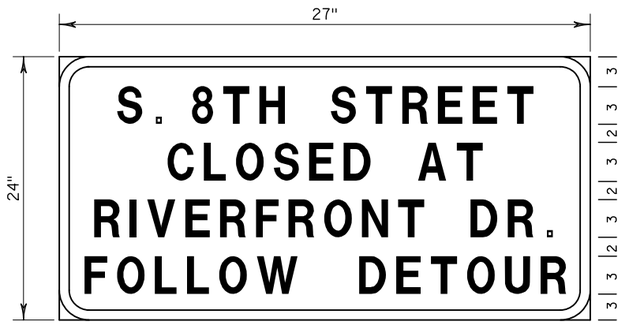
11' 11.5' 11.5' 11'

℄ 8TH STREET

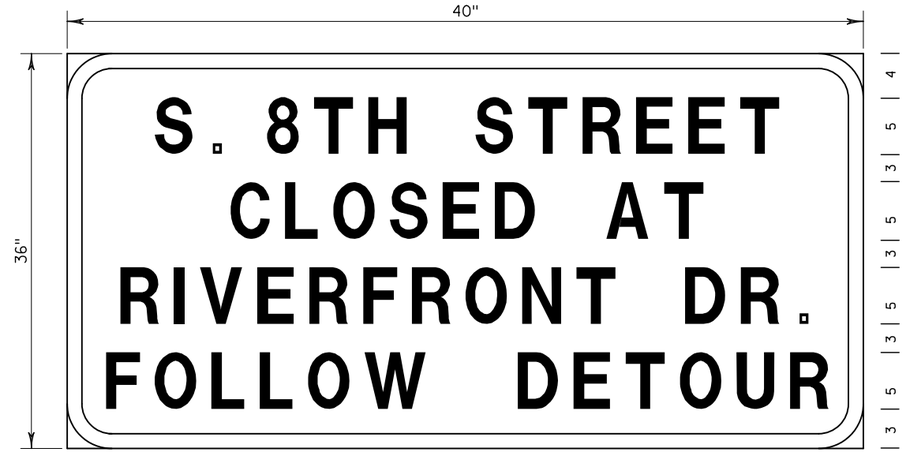
SHEBOYGAN RIVER

PROJECT NO: 4996-19-71	HWY: LOCAL	COUNTY: SHEBOYGAN	PAVEMENT MARKING	SHEET 14	E

2



(5) FULL PEDESTRIAN CLOSURE



(7) FULL BRIDGE CLOSURE

PROJECT NO: 4996-19-71	HWY: LOCAL	COUNTY: SHEBOYGAN	TRAFFIC CONTROL FIXED MESSAGE	SHEET 15	E

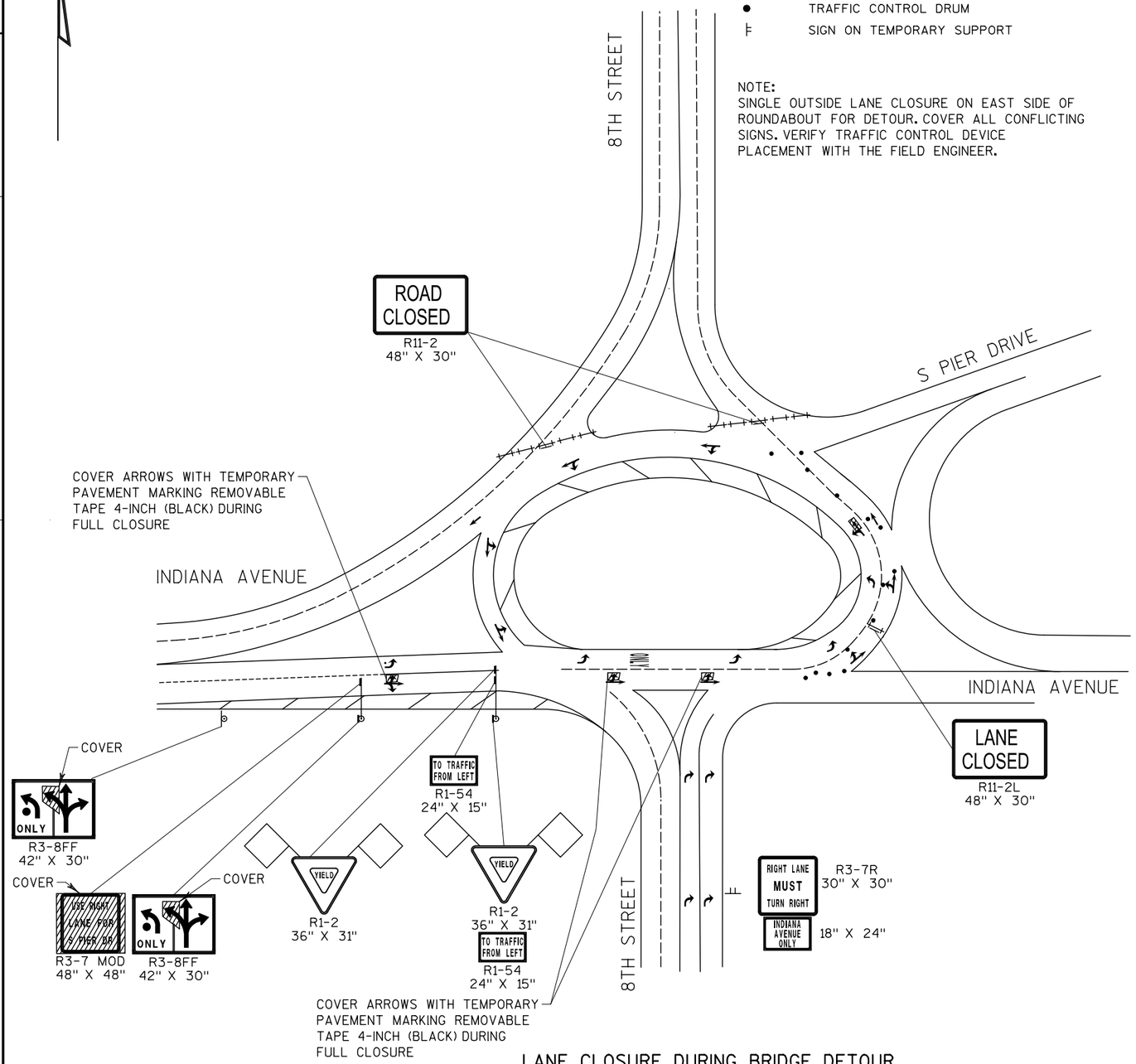
2

N

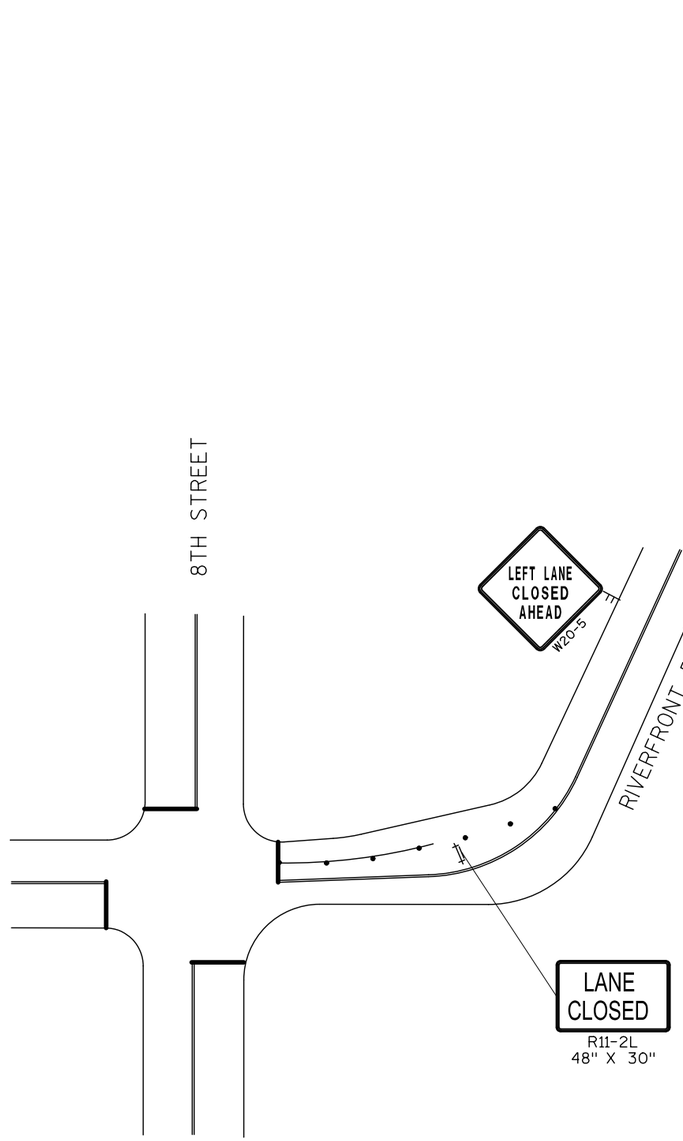
LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- SIGN ON TEMPORARY SUPPORT

NOTE:
SINGLE OUTSIDE LANE CLOSURE ON EAST SIDE OF ROUNDABOUT FOR DETOUR. COVER ALL CONFLICTING SIGNS. VERIFY TRAFFIC CONTROL DEVICE PLACEMENT WITH THE FIELD ENGINEER.

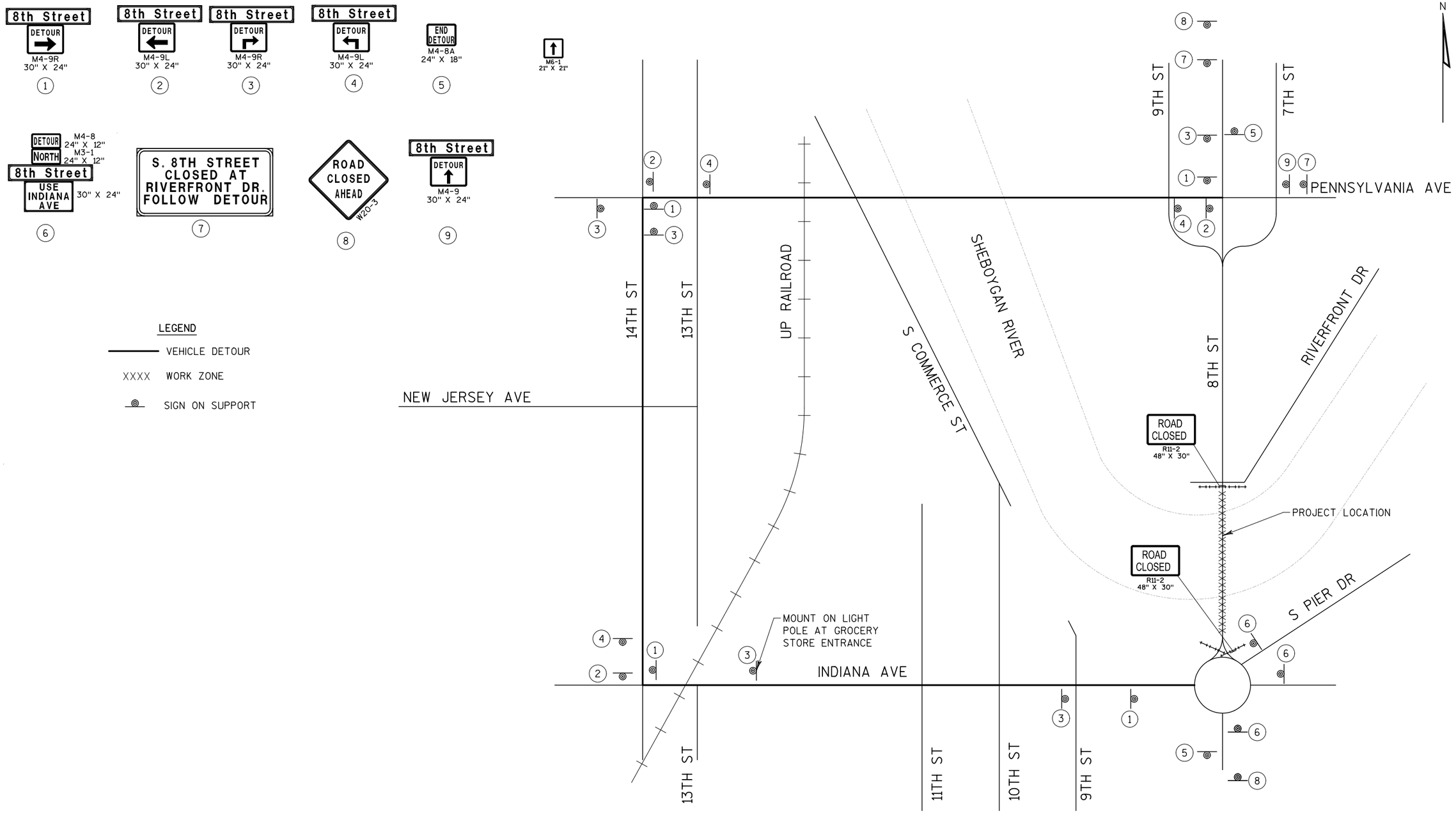


LANE CLOSURE DURING BRIDGE DETOUR
8TH STREET & INDIANA AVENUE

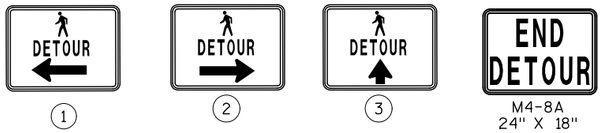


TURN LANE CLOSURE DURING BRIDGE DETOUR
8TH STREET & RIVERFRONT DRIVE

PROJECT NO: 4996-19-71	HWY: LOCAL	COUNTY: SHEBOYGAN	TRAFFIC CONTROL - RAB & RIVERFRONT DRIVE	SHEET 16	E



PROJECT NO: 4996-19-71	HWY: LOCAL	COUNTY: SHEBOYGAN	DETOUR PLAN: 8TH STREET	SHEET 17	E



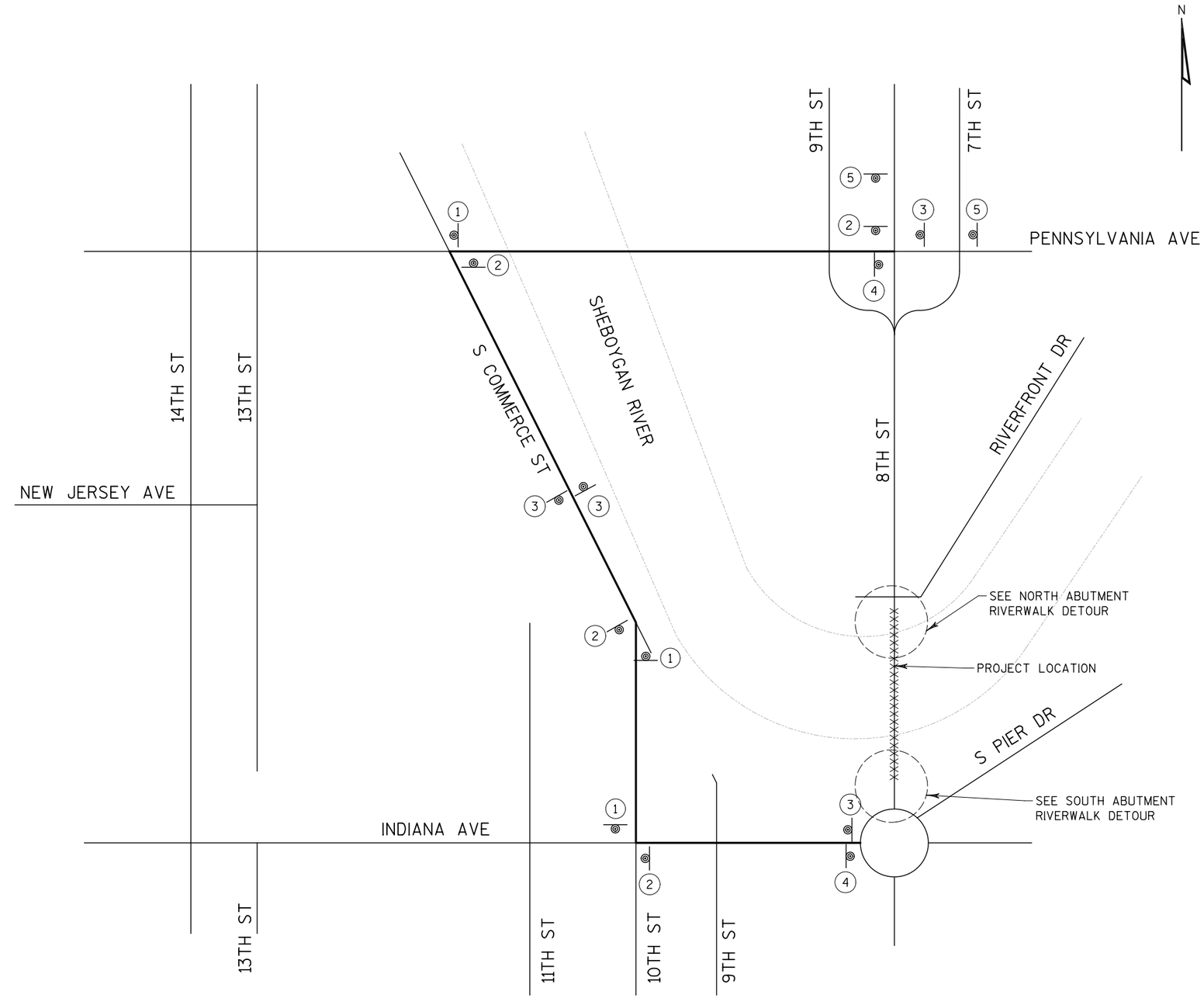
1 2 3 4 5

LEGEND

PEDESTRIAN DETOUR

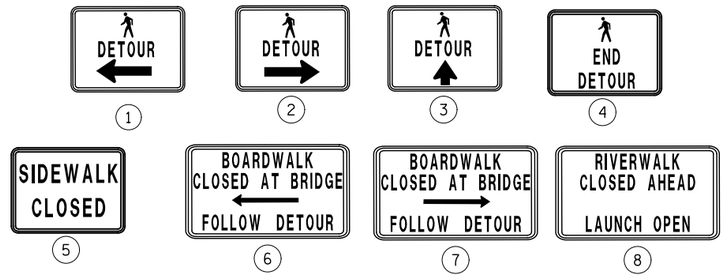
XXXX WORK ZONE

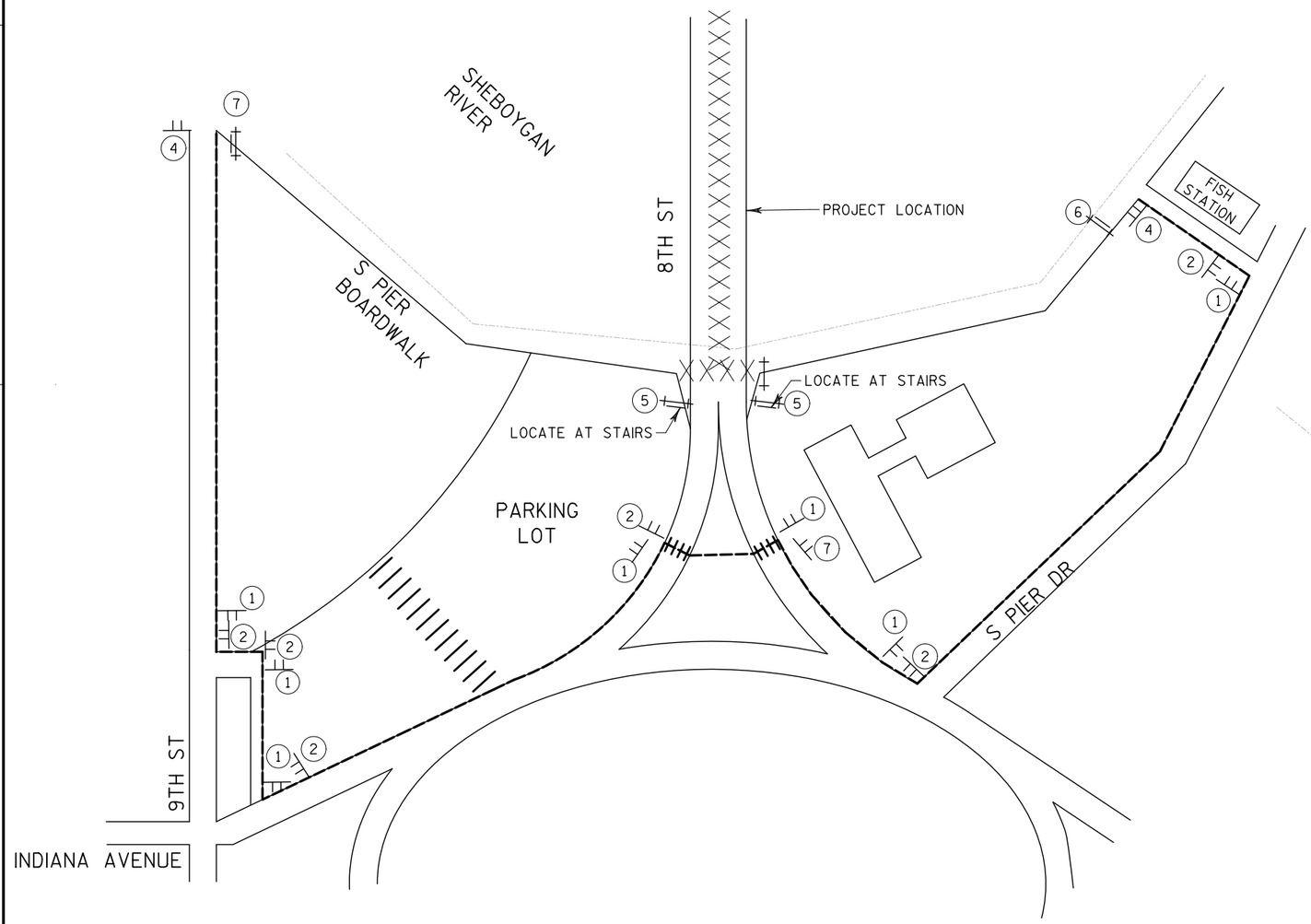
SIGN ON SUPPORT



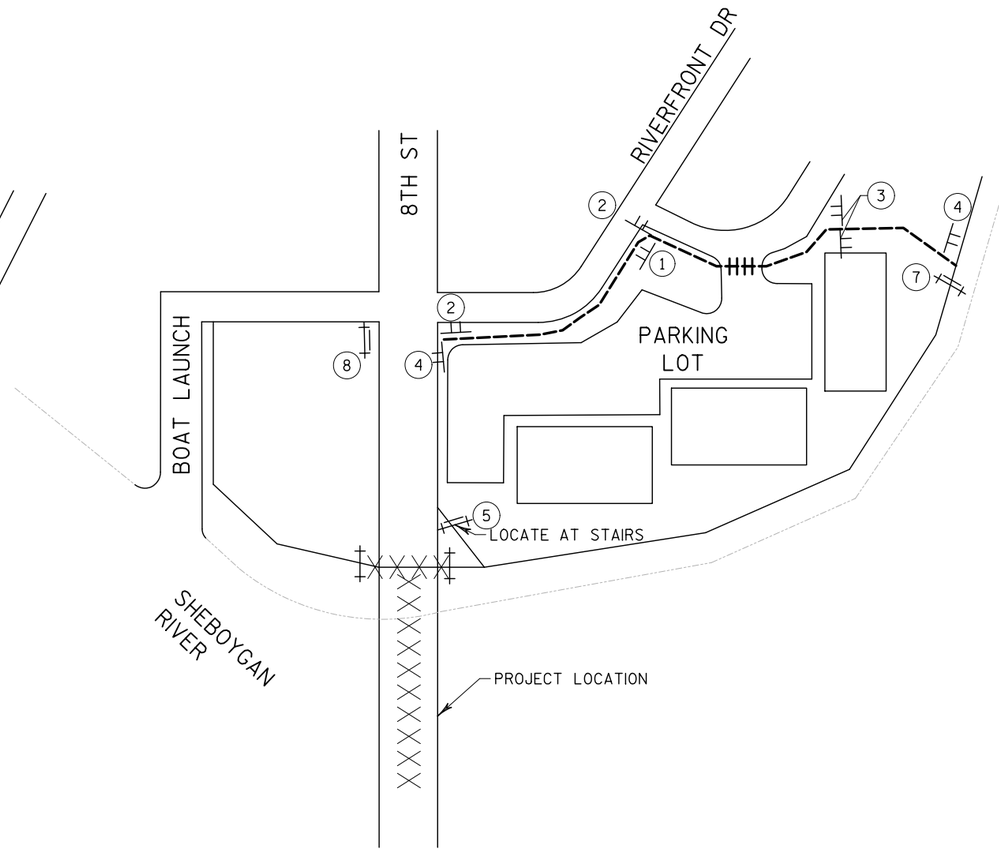
LEGEND

- PEDESTRIAN DETOUR
- WORK ZONE
- TRAFFIC CONTROL BARRICADE TYPE II WITH SIGN
- TRAFFIC CONTROL BARRICADE TYPE III
- TRAFFIC CONTROL BARRICADE TYPE III WITH SIGN
- CROSSWALK





SOUTH ABUTMENT RIVERWALK DETOUR



NORTH ABUTMENT RIVERWALK DETOUR

PROJECT NO: 4996-19-71	HWY: LOCAL	COUNTY: SHEBOYGAN	DETOUR PLAN: RIVERWALK	SHEET 19	E

Estimate Of Quantities

4996-19-71

Line	Item	Item Description	Unit	Total	Qty
0010	204.0100	Removing Pavement	SY	220.000	220.000
0020	204.0150	Removing Curb & Gutter	LF	102.000	102.000
0030	204.0155	Removing Concrete Sidewalk	SY	135.000	135.000
0040	204.0185	Removing Masonry	CY	2.000	2.000
0050	205.0100	Excavation Common	CY	8.000	8.000
0060	209.0200.S	Backfill Controlled Low Strength	CY	1.000	1.000
0070	213.0100	Finishing Roadway (project) 01. 4996-19-71	EACH	1.000	1.000
0080	305.0110	Base Aggregate Dense 3/4-Inch	TON	15.000	15.000
0090	405.1000	Stamping Colored Concrete 01. Herringbone Pattern	CY	18.000	18.000
0100	405.1000	Stamping Colored Concrete 02. Soldier Course Pattern	CY	10.000	10.000
0110	415.0090	Concrete Pavement 9-Inch	SY	200.000	200.000
0120	416.0610	Drilled Tie Bars	EACH	261.000	261.000
0130	416.0620	Drilled Dowel Bars	EACH	144.000	144.000
0140	502.0100	Concrete Masonry Bridges	CY	2.000	2.000
0150	502.3200	Protective Surface Treatment	SY	151.000	151.000
0160	502.4205	Adhesive Anchors No. 5 Bar	EACH	12.000	12.000
0170	502.4206	Adhesive Anchors No. 6 Bar	EACH	12.000	12.000
0180	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	280.000	280.000
0190	507.0200	Treated Lumber and Timber	MBM	0.150	0.150
0200	509.1200	Curb Repair	LF	44.000	44.000
0210	509.1500	Concrete Surface Repair	SF	284.000	284.000
0220	509.9020.S	Epoxy Crack Sealing	LF	1,887.000	1,887.000
0230	517.1800.S	Structure Repainting Recycled Abrasive (structure) 01. B-59-154	LS	1.000	1.000
0240	517.3000.S	Structure Overcoating Cleaning and Priming (structure) 01. B-59-154	LS	1.000	1.000
0250	517.4000.S	Containment and Collection of Waste Materials (structure) 01. B-59-154	LS	1.000	1.000
0260	517.4500.S	Negative Pressure Containment and Collection of Waste Materials (structure) 01. B-59-154	LS	1.000	1.000
0270	517.6001.S	Portable Decontamination Facility	EACH	1.000	1.000
0280	601.0600	Concrete Curb Pedestrian	LF	26.000	26.000
0290	602.0415	Concrete Sidewalk 6-Inch	SF	2,415.000	2,415.000
0300	602.0515	Curb Ramp Detectable Warning Field Natural Patina	SF	58.000	58.000
0310	611.8115	Adjusting Inlet Covers	EACH	5.000	5.000
0320	619.1000	Mobilization	EACH	1.000	1.000
0330	625.0100	Topsoil	SY	60.000	60.000
0340	628.1504	Silt Fence	LF	45.000	45.000
0350	628.1520	Silt Fence Maintenance	LF	45.000	45.000
0360	628.1905	Mobilizations Erosion Control	EACH	5.000	5.000
0370	628.1910	Mobilizations Emergency Erosion Control	EACH	1.000	1.000

4996-19-71

Line	Item	Item Description	Unit	Total	Qty
0380	628.2008	Erosion Mat Urban Class I Type B	SY	60.000	60.000
0390	628.7015	Inlet Protection Type C	EACH	12.000	12.000
0400	629.0210	Fertilizer Type B	CWT	4.100	4.100
0410	630.0140	Seeding Mixture No. 40	LB	3.000	3.000
0420	632.0201	Shrubs (species) (size) (root) 01. Juniperus Horizontalis 'Blue Rug Juniper', CG, 6-FT Spread	EACH	10.000	10.000
0430	642.5001	Field Office Type B	EACH	1.000	1.000
0440	643.0100	Traffic Control (project) 01. 4996-19-71	EACH	1.000	1.000
0450	643.0300	Traffic Control Drums	DAY	3,000.000	3,000.000
0460	643.0410	Traffic Control Barricades Type II	DAY	566.000	566.000
0470	643.0420	Traffic Control Barricades Type III	DAY	718.000	718.000
0480	643.0705	Traffic Control Warning Lights Type A	DAY	432.000	432.000
0490	643.0715	Traffic Control Warning Lights Type C	DAY	825.000	825.000
0500	643.0900	Traffic Control Signs	DAY	918.000	918.000
0510	643.0920	Traffic Control Covering Signs Type II	EACH	6.000	6.000
0520	643.1000	Traffic Control Signs Fixed Message	SF	29.000	29.000
0530	643.1050	Traffic Control Signs PCMS	DAY	47.000	47.000
0540	643.2000	Traffic Control Detour (project) 01.4996-19-71	EACH	1.000	1.000
0550	643.3000	Traffic Control Detour Signs	DAY	1,567.000	1,567.000
0560	646.0103	Pavement Marking Paint 4-Inch	LF	1,380.000	1,380.000
0570	647.0333	Pavement Marking Symbols Bike Shared Lane Paint	EACH	4.000	4.000
0580	647.0563	Pavement Marking Stop Line Paint 18-Inch	LF	48.000	48.000
0590	649.0400	Temporary Pavement Marking Removable Tape 4-Inch	LF	942.000	942.000
0600	653.0900	Adjusting Pull Boxes	EACH	2.000	2.000
0610	690.0250	Sawing Concrete	LF	436.000	436.000
0620	715.0415	Incentive Strength Concrete Pavement	DOL	500.000	500.000
0630	SPV.0060	Special 01. Re-chrome Cylinder Rod	EACH	1.000	1.000
0640	SPV.0060	Special 02. Hone Cylinder Barrel	EACH	1.000	1.000
0650	SPV.0060	Special 03. Replace Load Holding Valve	EACH	1.000	1.000
0660	SPV.0060	Special 04. Support Hanger Replacement	EACH	22.000	22.000
0670	SPV.0090	Special 01. Non-Bituminous Joint Filler	LF	339.000	339.000
0680	SPV.0090	Special 02. Concrete Curb & Gutter Integral Type D, 26-inch	LF	80.000	80.000
0690	SPV.0090	Special 03. Concrete Curb & Gutter 26-Inch, Type A	LF	102.000	102.000
0700	SPV.0105	Special 01. Electrical Work	LS	1.000	1.000
0710	SPV.0105	Special 02. Hydraulic Span Drive Machinery Rehabilitation	LS	1.000	1.000
0720	SPV.0105	Special 03. Tubular Steel Railing Repair	LS	1.000	1.000
0730	SPV.0105	Special 04. Heating and Housing	LS	1.000	1.000
0740	SPV.0120	Special 01. Water For Seeded Areas	MGAL	2.000	2.000

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Line	Item	Item Description	Unit	Total	Qty
0750	SPV.0165	Special 01. Wall Modular Block Gravity Landscape LRFD	SF	25.000	25.000
0760	SPV.0165	Special 02. Removing Brick Pavers	SF	1,237.000	1,237.000
0770	SPV.0180	Special 01. Sealing Concrete Pavement Joints	SY	245.000	245.000

REMOVING PAVEMENT

CATEGORY	LOCATION	STATION	-	STATION	LT/RT	204.0100 REMOVING PAVEMENT SY
0030	8TH STREET	16+58	-	16+78	LT/RT	110
0030	8TH STREET	17+07	-	17+47	LT/RT	110
	TOTAL					220

REMOVING CURB & GUTTER

CATEGORY	LOCATION	STATION	-	STATION	LT/RT	204.0150* REMOVING CURB & GUTTER LF
0030	8TH STREET	13+23	-	13+29	LT	6
0030	8TH STREET	17+70	-	17+72	LT	12
	TOTAL					18

*DENOTES QUANTITY FOUND ELSEWHERE

FINISHING ROADWAY

CATEGORY	LOCATION	213.0100 FINISHING ROADWAY 4996-19-71 EACH
1000	PROJECT 4996-19-71	1
	TOTAL	1

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CONCRETE PAVEMENT

CATEGORY	LOCATION	STATION	-	STATION	LT/RT	415.0090 CONCRETE PAVEMENT 9-INCH SY	416.0610* DRILLED TIE BARS EACH	416.0620 DRILLED DOWEL BARS EACH	SPV.0180.01 SEALING CONCRETE PAVEMENT JOINTS SY
0030	8TH STREET	CURB RAMP	-	SOUTH LIMIT	LT	-	-	-	7
0030	8TH STREET	CURB RAMP	-	SOUTH LIMIT	RT	-	-	-	7
0030	8TH STREET	13+23		13+29	LT	-	-	-	3
0030	8TH STREET	16+58	-	16+78	LT/RT	100	-	72	110
0030	8TH STREET	17+07	-	17+27	RT	24	8	18	29
0030	8TH STREET	17+27	-	17+47	LT/RT	76	8	54	81
0030	8TH STREET	CURB RAMP	-	NORTH LIMIT	LT	-	-	-	8
	TOTAL					200	16	144	245

*DENOTES QUANTITY FOUND ELSEWHERE

CONCRETE CURB & GUTTER

CATEGORY	LOCATION	STATION	-	STATION	LT/RT	SPV.0090.03* CONCRETE CURB & GUTTER 26-INCH TYPE A LF	416.0610* DRILLED TIE BARS EACH	SPV.0090.02 CONCRETE CURB & GUTTER INTEGRAL TYPE D, 26-INCH LF
0030	8TH STREET	13+23	-	13+29	LT	6	3	-
0030	8TH STREET	17+70	-	17+72	LT	12	5	-
0030	8TH STREET	16+58	-	16+77	LT/RT	-	-	40
0030	8TH STREET	17+07	-	17+27	RT	-	-	20
0030	8TH STREET	17+27	-	17+47	LT	-	-	20
	TOTAL					18	8	80

*DENOTES QUANTITY FOUND ELSEWHERE

STAMPED CONCRETE SIDEWALK

CATEGORY	LOCATION	STA	-	STA	LT/RT	602.0415* CONCRETE SIDEWALK 6-INCH SF	416.0610* DRILLED TIE BARS EACH	405.1000.01 STAMPING COLORED CONCRETE HERRINGBONE PATTERN CY	405.1000.02 STAMPING COLORED CONCRETE SOLDIER COURSE PATTERN CY
0030	S/B 8TH ST.	12+02	-	13+22	LT	259	44	4	2
0030	N/B 8TH ST.	11+91	-	13+22	RT	265	45	4	2
0030	S/B 8TH ST.	16+06	-	17+70	LT	380	62	5	3
0030	N/B 8TH ST.	16+06	-	17+57	RT	333	57	5	3
	TOTAL					1237	208	18	10

*DENOTES QUANTITY FOUND ELSEWHERE

ADJUSTING INLET COVERS

CATEGORY	LOCATION	LOCATION	LT/RT	611.8115 ADJUSTING INLET COVERS EACH
0030	NORTH APPROACH	CURB RAMP SW QUADRANT RIVERFRONT DR	LT	1
0030	SOUTH APPROACH	CURB RAMP SB WEST	LT	1
0030	SOUTH APPROACH	CURB RAMP SB WEST	LT	1
0030	SOUTH APPROACH	CURB RAMP NB EAST	RT	1
0030	SOUTH APPROACH	CURB RAMP NB EAST	RT	1
	TOTAL			5

MOBILIZATIONS EROSION CONTROL

CATEGORY	LOCATION	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH
0010	PROJECT 4996-19-71	5	1
	TOTAL	5	1

LANDSCAPING

CATEGORY	LOCATION	STATION	TO	STATION	LT/RT	625.0100* TOPSOIL SY	628.2008* EROSION MAT URBAN CLASS I TYPE B SY	629.0210* FERTILIZER TYPE B CWT	630.0140* SEEDING MIXTURE NO. 40 LB	SPV.0120.01 WATER FOR SEEDED AREAS MGAL	632.0201 SHRUBS JUNIPERUS HORIZONTALIS "BLUE RUG JUNIPER" CG, 6-FT SPREAD EACH
0030	SOUTHERN LIMITS	12+05		12+50	LT	35	35	1	1	1	-
0010	RETAINING WALL	16+10		16+50	LT	-	-	-	-	-	10
UNDISTRIBUTED						4	4	1	1	1	-
TOTAL						39	39	2	2	2	10

*DENOTES QUANTITY FOUND ELSEWHERE

EROSION CONTROL

CATEGORY	LOCATION	STATION	-	STATION	LT/RT	628.7015 INLET PROTECTION TYPE C EACH	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF
0010	SOUTH APPROACH	11+62	-	12+29	LT	3	-	-
0010	SOUTH APPROACH	11+62	-	12+29	RT	3	-	-
0010	NORTH APPROACH	17+44	-	17+69	LT	2	-	-
0010	NORTH APPROACH	17+44	-	17+69	RT	2	-	-
0010	RETAINING WALL	16+16	-	16+48	LT	-	35	35
UNDISTRIBUTED						2	10	10
	TOTAL					12	45	45

TRAFFIC CONTROL SIGNS FIXED MESSAGE

CATEGORY	LOCATION	SIGN NO.	SIGN MESSAGE	SIGN SIZE H (IN)	X	SIGN SIZE W (IN)	NO. OF SIGNS	643.1000 TRAFFIC CONTROL SIGNS FIXED MESSAGE SF
0010	FULL BRIDGE DETOUR	7	S. 8TH STREET CLOSED AT RIVERFRONT DR. FOLLOW DETOUR	36		40	2	20
0010	FULL PED DETOUR	5	S. 8TH STREET CLOSED AT RIVERFRONT DR. FOLLOW DETOUR	24		27	2	9
			TOTALS					29

TRAFFIC CONTROL

CATEGORY	LANE	LOCATION	643.0300 TRAFFIC CONTROL DRUMS EACH	643.0300 TRAFFIC CONTROL DRUMS DAYS	643.0410 TRAFFIC CONTROL BARRICADES TYPE II EACH	643.0410 TRAFFIC CONTROL BARRICADES TYPE II DAYS	643.0420 TRAFFIC CONTROL BARRICADES TYPE III EACH	643.0420 TRAFFIC CONTROL BARRICADES TYPE III DAYS	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A EACH	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A DAYS	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C EACH	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C DAYS	643.0900 TRAFFIC CONTROL SIGNS EACH	643.0900 TRAFFIC CONTROL SIGNS DAYS	643.1050 TRAFFIC CONTROL SIGNS PCMS EACH	643.1050 TRAFFIC CONTROL SIGNS PCMS DAY	643.3000 TRAFFIC CONTROL DETOUR SIGNS EACH	643.3000 TRAFFIC CONTROL DETOUR SIGNS DAY	NO. OF CLOSURES	REMARKS
0010	-	ADVANCED WARNING BEGIN PROJECT	-	-	-	-	-	-	-	-	-	-	-	-	2	14	-	-	-	7 DAYS
0010	-	ADVANCED WARNING FULL CLOSURE	-	-	-	-	-	-	-	-	-	-	-	-	2	14	-	-	-	7 DAYS
0010	-	ADVANCED WARNING BRIDGE TESTING	-	-	-	-	-	-	-	-	-	-	-	-	2	14	-	-	-	7 DAYS
0010	1	S/B OUTSIDE LANE	28	1,400	-	-	2	100	2	100	8	400	7	350	-	-	4	200	1	50 DAYS
0010	4	N/B OUTSIDE LANE	26	1,300	-	-	2	100	2	100	7	350	8	400	-	-	4	200	1	50 DAYS
0010	-	PED DETOUR NORTH	-	-	7	98	5	70	-	-	-	-	-	-	-	-	9	126	1	14 DAYS
0010	-	PED DETOUR SOUTH	-	-	16	224	5	70	-	-	-	-	-	-	-	-	20	280	1	14 DAYS
0010	1-4	FULL BRIDGE DETOUR - PAVING	25	250	16	160	26	260	16	160	-	-	7	70	-	-	49	490	1	10 DAYS
0010	1-4	FULL BRIDGE DETOUR - TESTING	25	50	16	32	26	52	16	32	-	-	7	14	-	-	49	98	1	2 DAYS
0010	-	FULL PED DETOUR - TESTING	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15	30	1	2 DAYS
UNDISTRIBUTED					-	52	-	66	-	40	-	75	-	84	-	5	-	143	-	
		TOTALS		3,000		566		718		432		825		918		47		1,567		

3

TRAFFIC CONTROL PROJECT

CATEGORY	LOCATION	643.0100 TRAFFIC CONTROL 4996-19-71 EACH
0010	PROJECT 4996-19-71	1
	TOTAL	1

TRAFFIC CONTROL DETOUR

CATEGORY	LOCATION	643.2000 TRAFFIC CONTROL DETOUR 4996-19-71 EACH
0010	PROJECT	1
TOTAL		1

TRAFFIC CONTROL COVERING SIGNS TYPE II

CATEGORY	LOCATION	SIGN	CODE	643.0920 TRAFFIC CONTROL COVERING SIGNS TYPE II EACH	NO. OF SIGNS	CYCLES
0010	ROUNDABOUT	LT ARROW	R3-8FF	2	1	2
0010	ROUNDABOUT	LT ARROW	R3-8FF	2	1	2
0010	ROUNDABOUT	USE RITGHT LANE FOR S PIER	R3-7 MOD	2	1	2
	TOTAL			6		

3

PAVEMENT MARKING

CATEGORY	LOCATION	STA	STA	646.0103 PAVEMENT MARKING PAINT 4-INCH SOLID YELLOW LF	DASH WHITE LF	647.0333 SYMBOLS BIKE SHARED LANE PAINT WHITE EACH	647.0563 STOP LINE PAINT 18-INCH WHITE LF
0030	PROJECT	12+57	17+77	1,050	330	4	48
	SUBTOTAL			1,050	330		
	TOTAL			1,380		4	48

TEMPORARY PAVEMENT PAVEMENT MARKING

CATEGORY	STAGE	LOCATION	649.0400 TEMPORARY PAVEMENT MARKING TAPE 4-INCH BLACK LF	REMARKS
0010	FULL CLOSURE - PAVING	RAB	240	LT ARROW OF TYPE 3 ARROW X2
			68	STRAIGHT ARROW OF TYPE 3 ARROW X1
			120	LT ARROW OF TYPE 6 ARROW X1
0010	FULL CLOSURE - TESTING	RAB	240	LT ARROW OF TYPE 3 ARROW X2
			68	STRAIGHT ARROW OF TYPE 3 ARROW X1
			120	LT ARROW OF TYPE 6 ARROW X1
	UNDISTRIBUTED		86	
	TOTAL		942	

SAWING CONCRETE

CATEGORY	LOCATION	STATION	-	STATION	LT/RT	690.0250* SAWING CONCRETE LF
0030	8TH STREET	13+17	-	13+21	LT	9
0030	8TH STREET	16+58	-	16+78	LT/RT	99
0030	8TH STREET	17+07	-	17+27	LT/RT	42
0030	8TH STREET	17+27	-	17+47	LT/RT	88
0030	8TH STREET	17+70	-	17+72	LT	17
	TOTAL					255

*DENOTES QUANTITY FOUND ELSEWHERE

RETAINING WALL

CATEGORY	LOCATION	STATION	-	STATION	LT/RT	SPV.0165.01 WALL MODULAR BLOCK GRAVITY LANDSCAPE LRFD SF
0030	NORTH WEST ABUTMENT	16+10	-	16+50	LT	25
	TOTAL					25

REMOVING BRICK PAVERS

CATEGORY	LOCATION	STATION	-	STATION	LT/RT	SPV.0165.02 REMOVING BRICK PAVERS SF
0030	S/B 8TH STREET	12+02	-	13+22	LT	259
0030	N/B 8TH STREET	11+91	-	13+22	RT	265
0030	S/B 8TH STREET	16+06	-	17+70	LT	380
0030	N/B 8TH STREET	16+06	-	17+57	RT	333
	TOTAL					1,237

3

CURB RAMPS

CATEGORY	LOCATION		204.0150* REMOVING CURB AND GUTTER LF	204.0155 REMOVING CONCRETE SIDEWALK SY	205.0100 EXCAVATION COMMON CY	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	416.0610* DRILLED TIE BARS EA	601.0600 CONCRETE CURB PEDESTRIAN LF	602.0515 CURB RAMP DETECTABLE WARNING FIELD NATURAL PATINA SF	602.0415* CONCRETE SIDEWALK 6-INCH SF	625.0100* TOPSOIL SY	628.2008* EROSION MAT URBAN CLASS I TYPE B SY	629.0210* FERTILZER TYPE B CWT	630.0410* SEEDING MIXTURE NO. 40 LB	653.0900 ADJUSTING PULL BOXES EA	690.0250* SAWING CONCRETE LF	SPV.0090.03* CONCRETE CURB AND GUTTER 26-INCH, TYPE A LF
0030	SB LT	RIVERFRONT DR	31	53	-	-	2	-	10	474	3	3	0.1	0.04	2	62	31
0030	SB LT	INDIANA AVE	12	9	-	-	4	-	12	70	2	2	0.1	0.04	-	33	12
0030	SB RT	INDIANA AVE	14	39	-	-	9	-	12	344	13	13	0.8	0.23	-	19	14
0030	NB LT	INDIANA AVE	16	-	-	-	10	-	12	-	-	-	-	-	-	25	16
0030	NB RT	INDIANA AVE	11	34	-	-	4	26	12	290	1	1	0.1	0.02	-	42	11
	UNDISTRIBUTED		-	-	8	15	-	-	-	-	2	2	1	0.67	-	-	-
	TOTALS		84	135	8	15	29	26	58	1178	21	21	2.1	1	2	181	84

*DENOTES QUANTITY FOUND ELSEWHERE

SHEBOYGAN RIVER

N

ADJUSTING INLETS

FOR CURB RAMP REPLACEMENT, SEE CONSTRUCTION DETAILS

REMOVING BRICK PAVERS, REPLACE WITH STAMPED CONCRETE SIDEWALK 6-INCH (SEE NOTE)

STRUCTURE B-59-0154

WALL MODULAR BLOCK GRAVITY LANDSCAPE LRFD- SEE CONSTRUCTION DETAIL

REMOVING BRICK PAVERS, REPLACE WITH STAMPED CONCRETE SIDEWALK 6-INCH (SEE NOTE)

REMOVE CURB AND GUTTER. REPLACE WITH CONCRETE CURB AND GUTTER TYPE A, 26-INCH

ADJUSTING INLET

FOR CURB RAMP REPLACEMENT, SEE CONSTRUCTION DETAILS

5

5

12 13 14 15 16 17 18

S. 8TH STREET

POE STA 18+00.00

1.25% PI STA 18+00.00

BEGIN PROJECT
STA 12+00.00
Y=173,948.5421
X=218,933.8523

ADJUSTING INLETS

REMOVE CURB & GUTTER. REPLACE WITH CONCRETE CURB AND GUTTER 26-INCH TYPE A

℄ 8TH STREET

REMOVING PAVEMENT, REPLACE WITH CONCRETE PAVEMENT 9-INCH (DOWELED) & CONCRETE CURB & GUTTER INTEGRAL TYPE D, 26-INCH (SEE NOTE)

END PROJECT
STA 18+00.00

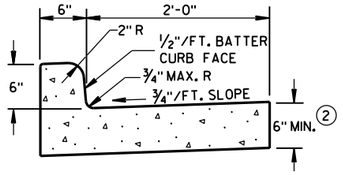
REMOVING BRICK PAVERS, REPLACE WITH STAMPED CONCRETE SIDEWALK 6-INCH (SEE NOTE)

NOTE:
SEE CONSTRUCTION DETAILS FOR EXISTING/PROPOSED CONCRETE PAVEMENT PANEL INFORMATION AND PAVER DETAILS

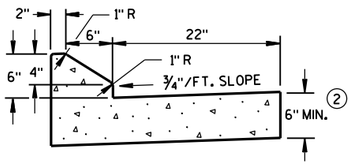
PROJECT NO: 4996-19-71	HWY: LOCAL	COUNTY: SHEBOYGAN	PLAN SHEET	SHEET 28	E

Standard Detail Drawing List

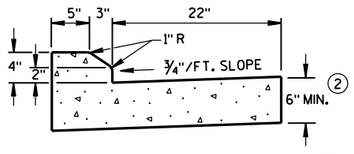
08D01-19	CONCRETE CURB, CONCRETE CURB AND GUTTER AND TIES
08D05-18A	CURB RAMPS TYPES 1 AND 1-A
08D05-18B	CURB RAMPS TYPES 2 AND 3
08D05-18C	CURB RAMPS TYPES 4A AND 4A1
08D05-18D	CURB RAMPS TYPE 4B AND 4B1
08D05-18E	CURB RAMPS TYPES 5, 6, 7A, 7B & 8
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
13C18-05C	CONCRETE PAVEMENT JOINT TYPES
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
15C07-13E	PAVEMENT MARKING FOR BIKE LANES
15C08-17A	LONGITUDINAL MARKING (MAINLINE)
15C19-04B	MOVING PAVEMENT MARKING OPERATION MULTI-LANE UNDIVIDED ROADWAY
15C29-04B	PAVEMENT MARKING FOR SHARED LANE 35 MPH OR LESS
15C33-02	STOP LINE AND CROSSWALK PAVEMENT MARKING
15D20-04	TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY
15D21-04	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE



TYPES A & D ①

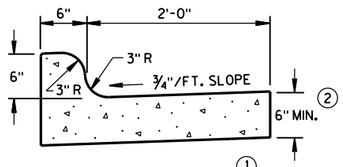


6" SLOPED CURB TYPES G & J ①

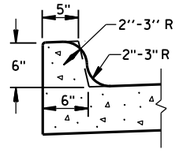


4" SLOPED CURB TYPES G & J ①

CONCRETE CURB & GUTTER 30"

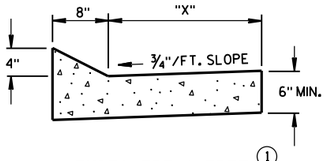


TYPES K & L ①



OPTIONAL CURB SHAPE FOR TYPES K & L ①

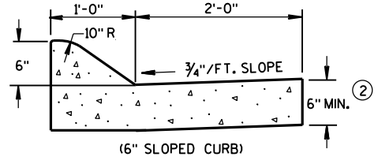
CONCRETE CURB & GUTTER 30"



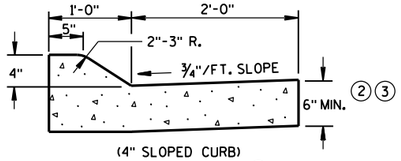
TYPES TBT & TBTT ①

CONCRETE CURB & GUTTER

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

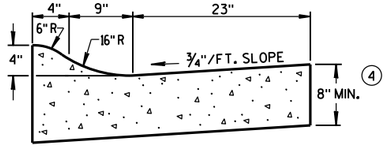


(6" SLOPED CURB)



(4" SLOPED CURB)

TYPES A & D ①



4" SLOPED CURB TYPES R & T ①⑤

CONCRETE CURB & GUTTER 36"

GENERAL NOTES

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

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

INTEGRAL CURB & GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB & GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE. A LONGITUDINAL CONSTRUCTION JOINT IS NOT REQUIRED WITH INTEGRAL CURB AND GUTTER.

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

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

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

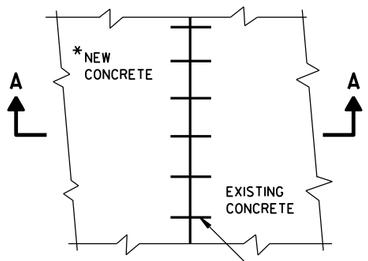
② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.

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

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

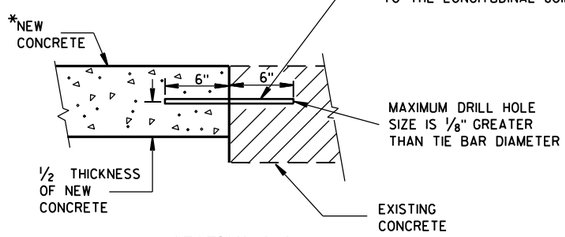
⑤ THE FACE OF CURB IS 6" FROM THE BACK OF CURB.

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



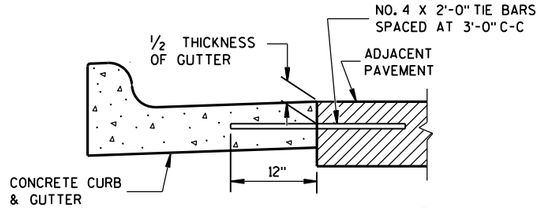
PLAN VIEW

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

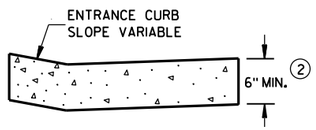


SECTION A-A

TIE BARS DRILLED INTO EXISTING PAVEMENT

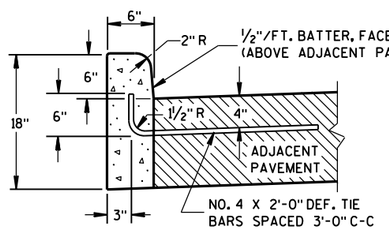


TYPICAL TIE BAR LOCATION ①

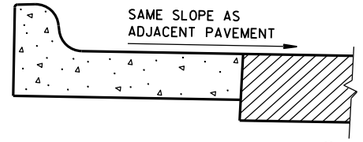


DRIVEWAY ENTRANCE CURB

(WHEN DIRECTED BY THE ENGINEER)

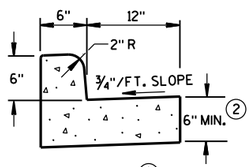


① TYPES A & D



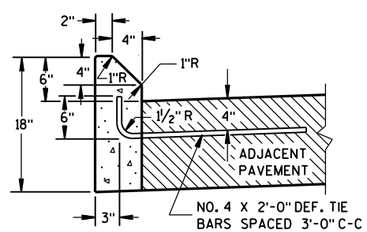
⑥ REVERSE SLOPE GUTTER

(TYPICAL FOR ALL CURB & GUTTER TYPES)



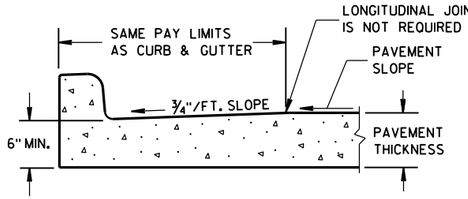
① TYPES A & D

CONCRETE CURB & GUTTER 18"

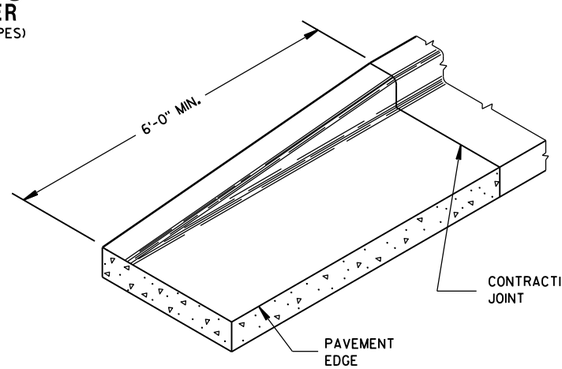


① TYPES G & J

CONCRETE CURB



PARTIAL SECTION OF PAVEMENT WITH INTEGRAL CURB & GUTTER



END SECTION CURB & GUTTER

CONCRETE CURB, CONCRETE CURB & GUTTER AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2016 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

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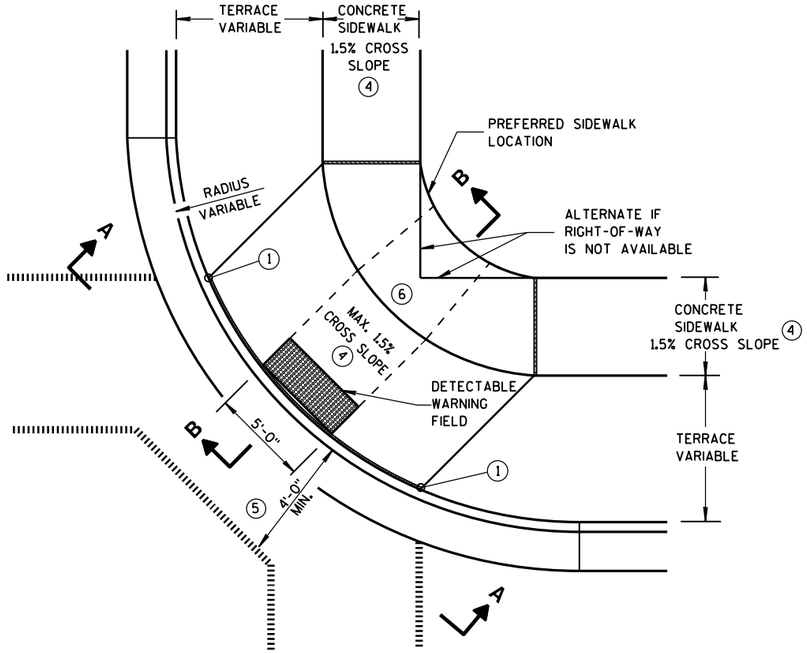
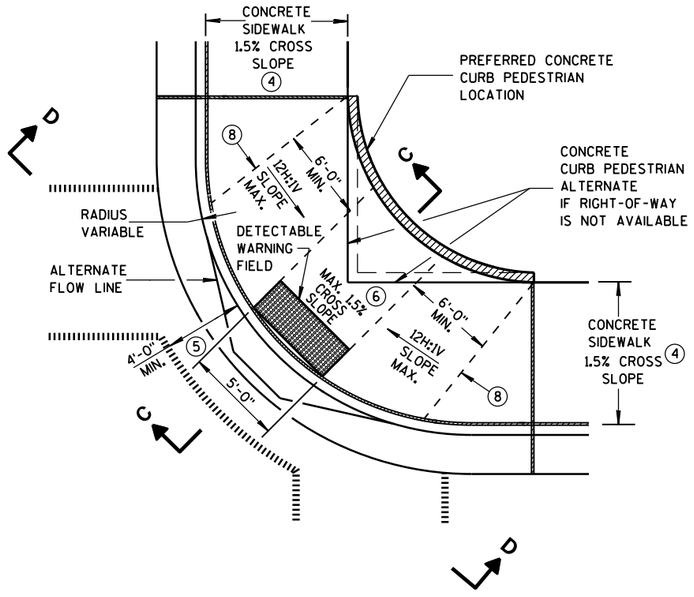
S.D.D. 8 D 1-19



PLAN VIEW

TYPE 1 RAMP

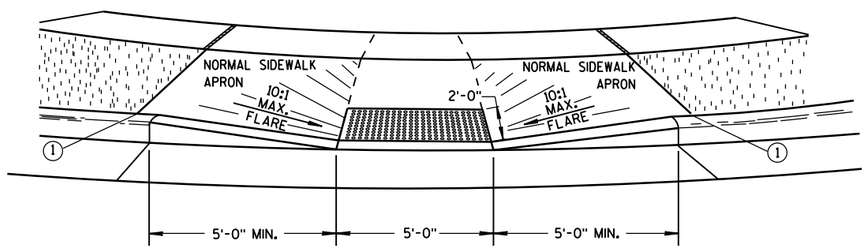
(CENTER OF CORNER RADIUS)



PLAN VIEW

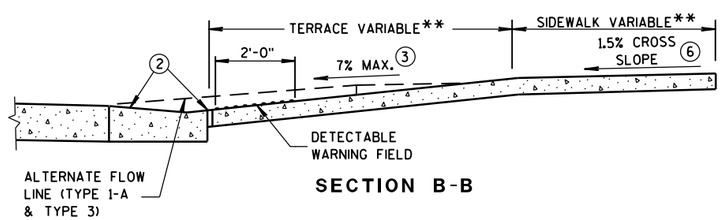
TYPE 1-A RAMP

(NO TERRACE)

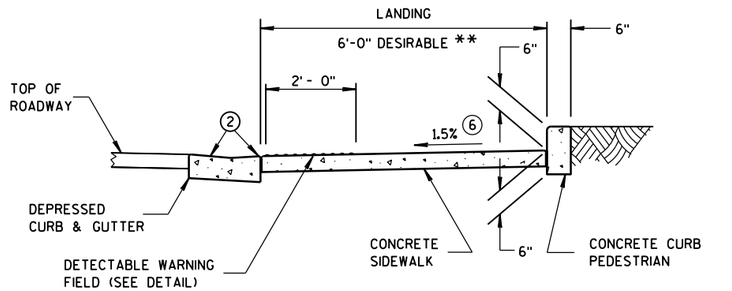


VIEW A-A

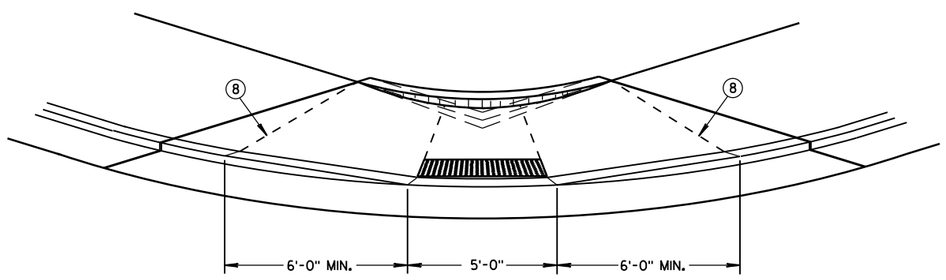
** WIDTH SHOWN ELSEWHERE IN THE PLANS



SECTION B-B



SECTION C-C



VIEW D-D

GENERAL NOTES

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

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

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

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

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

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

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

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

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL NOT EXCEED 7%.

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

(4) ±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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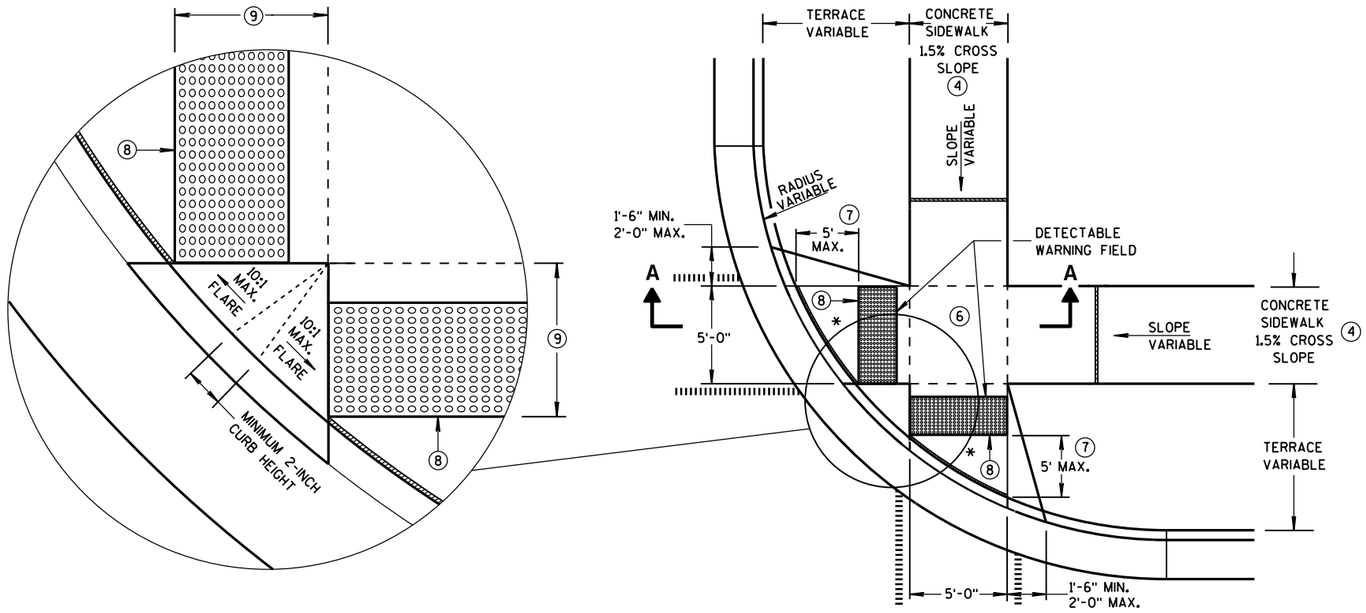
S.D.D. 8 D 5-18a

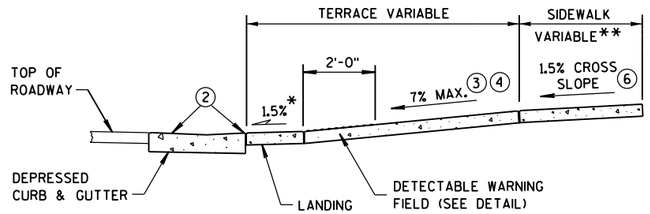


PLAN VIEW

TYPE 2 RAMP

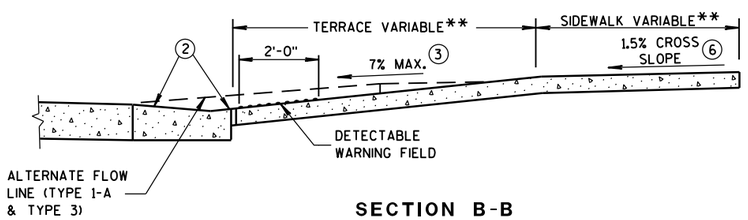
(ON LINE WITH SIDEWALK)

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



SECTION A-A

** WIDTH SHOWN ELSEWHERE IN THE PLANS



SECTION B-B

GENERAL NOTES

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

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL NOT EXCEED 7%.

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

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

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

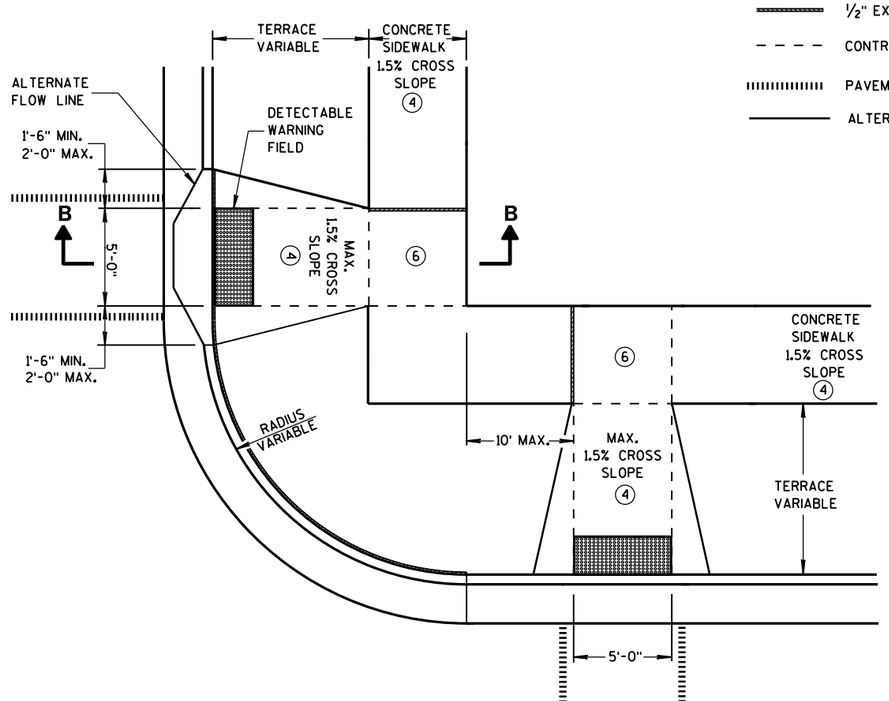
(7) WHEN THIS DISTANCE EXCEEDS 5 FEET, STAGGER ADDITIONAL DETECTABLE WARNING PANEL FORWARD TO REDUCE THIS DISTANCE. PROVIDE MINIMUM 12-INCH ROW OVERLAP TO AVOID SIDESTEP OF DOME DETECTION. USE EQUAL-SIZE PANELS TO DEVELOP OVERLAPPING, STAGGERED ROWS. ALIGN DOMES BETWEEN OVERLAPPING ROWS AND IN DIRECTION OF PEDESTRIAN TRAVEL.

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

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

LEGEND

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



PLAN VIEW

TYPE 3 RAMP

(OUTSIDE OF CROSSWALK AREA)

CURB RAMPS TYPES 2 AND 3

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

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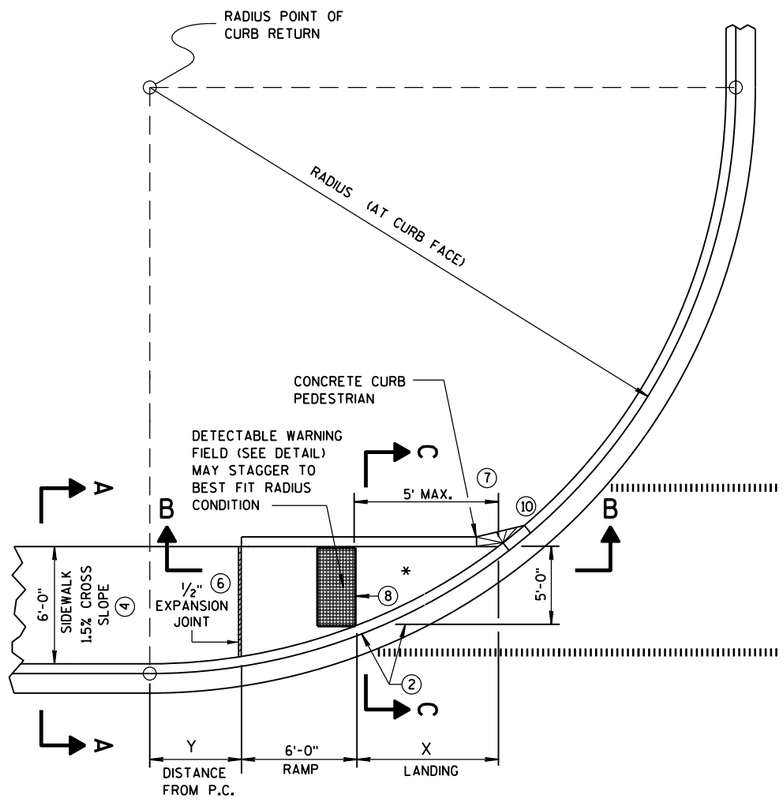
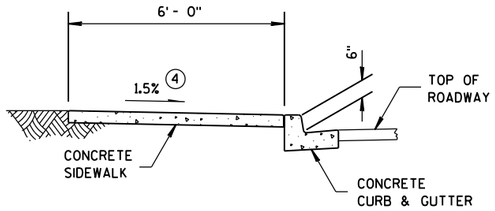


CURB RAMP TYPE 4A

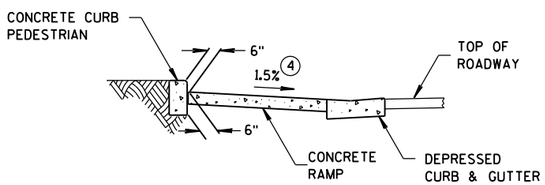
PLAN VIEW

RADIUS (AT CURB FACE)	X	Y
20 FEET	7'-11"	0'-2"
30 FEET	10'-2¾"	1'-7½"
40 FEET	12'-1¼"	2'-10"
50 FEET	13'-8¾"	3'-10¾"
60 FEET	15'-2"	4'-10¼"

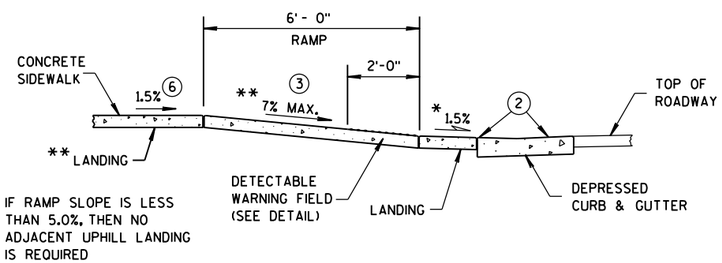
INTERMEDIATE RADII CAN BE INTERPOLATED



SECTION A-A FOR TYPE 4A



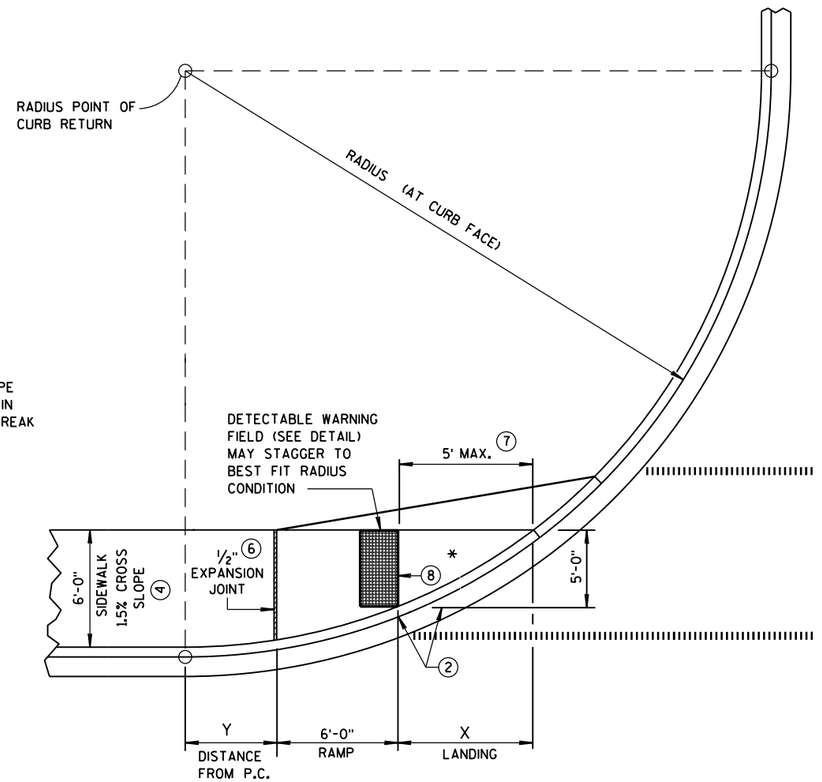
SECTION C-C FOR TYPE 4A



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

SECTION B-B FOR TYPE 4A

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



CURB RAMP TYPE 4A1

PLAN VIEW

GENERAL NOTES

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

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

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL NOT EXCEED 7%.

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

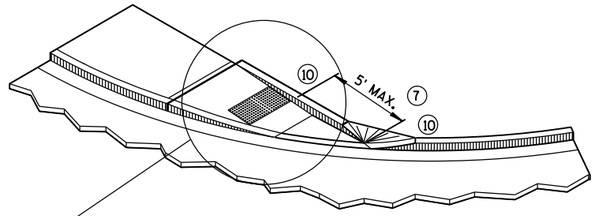
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

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

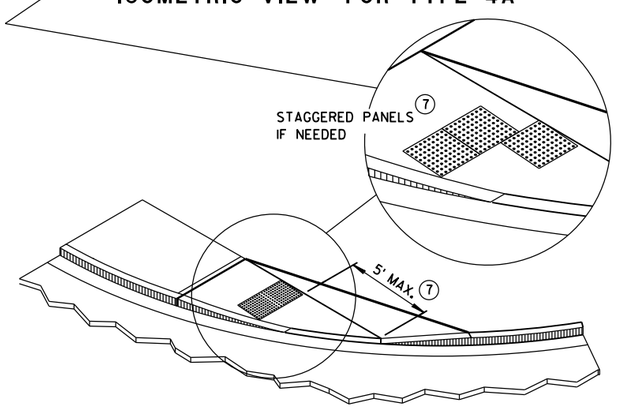
(7) WHEN THIS DISTANCE EXCEEDS 5 FEET, STAGGER ADDITIONAL DETECTABLE WARNING PANEL FORWARD TO REDUCE THIS DISTANCE. PROVIDE MINIMUM 12-INCH ROW OVERLAP TO AVOID SIDESTEP OF DOME DETECTION. USE EQUAL-SIZE PANELS TO DEVELOP OVERLAPPING, STAGGERED ROWS. ALIGN DOMES BETWEEN OVERLAPPING ROWS AND IN DIRECTION OF PEDESTRIAN TRAVEL.

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

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



ISOMETRIC VIEW FOR TYPE 4A



ISOMETRIC VIEW FOR TYPE 4A1

LEGEND

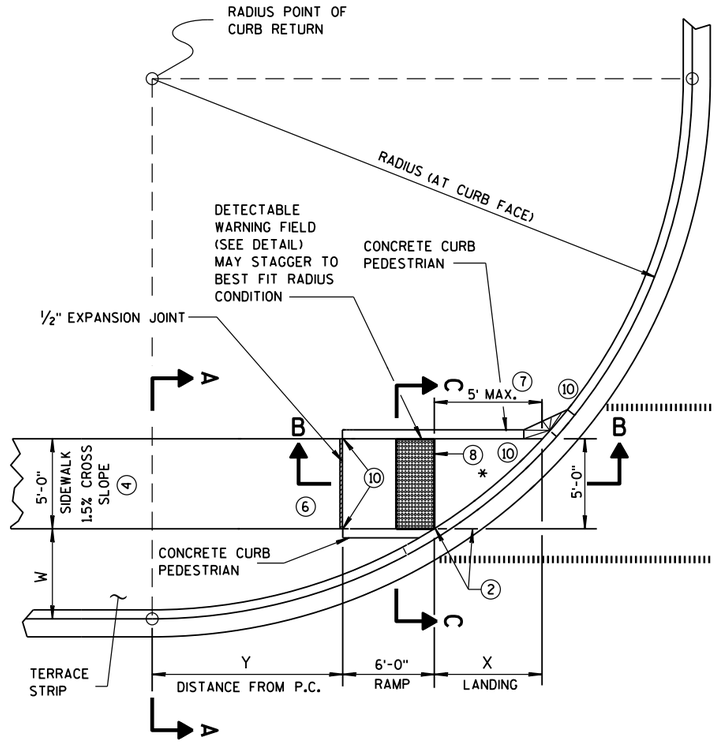
- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS
TYPES 4A AND 4A1

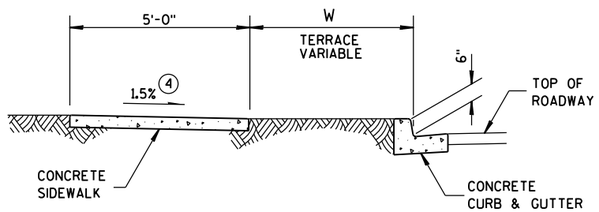
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

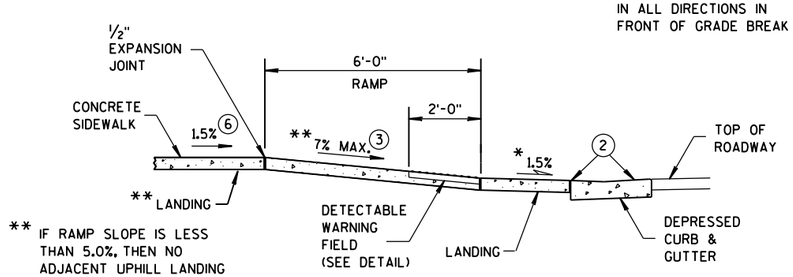
S.D.D. 8 D 5-18c



CURB RAMP TYPE 4B
PLAN VIEW



SECTION A-A FOR TYPE 4B



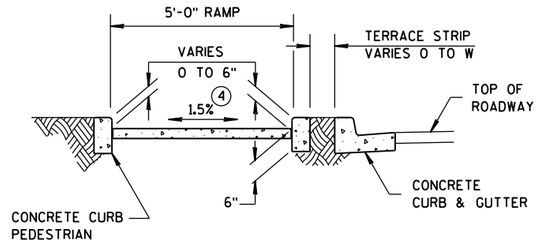
SECTION B-B FOR TYPE 4B

LEGEND

½" EXPANSION JOINT-SIDEWALK

CONTRACTION JOINT FIELD LOCATED

PAVEMENT MARKING CROSSWALK (WHITE)



SECTION C-C FOR TYPE 4B

RADIUS (AT CURB FACE)	W = 3'-0"		W = 4'-0"		W = 5'-0"		W = 6'-0"		W = 7'-0"	
	X	Y	X	Y	X	Y	X	Y	X	Y
20 FEET	5'-9¾"	3'-6½"	4'-11½"	5'-1¾"	4'-3¼"	6'-5½"	3'-8¾"	7'-6¾"	3'-3"	8'-6¼"
30 FEET	7'-9¼"	5'-10½"	6'-9½"	7'-11¼"	6'-0¼"	9'-8"	5'-5"	11'-1¾"	4'-10¾"	12'-5¾"
40 FEET	9'-4"	7'-10"	8'-2¾"	10'-3"	7'-4¾"	12'-3¾"	6'-8½"	14'-1¼"	6'-1¾"	15'-8½"
50 FEET	10'-8"	9'-6½"	9'-5½"	12'-3¼"	8'-6½"	14'-7½"	7'-9¾"	16'-8¼"	7'-2½"	18'-6¼"
60 FEET	11'-10¼"	11'-0¾"	10'-6½"	14'-1¼"	9'-6½"	16'-8½"	8'-9¼"	18'-11¾"	8'-1½"	21'-0½"

INTERMEDIATE RADII CAN BE INTERPOLATED

GENERAL NOTES

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

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

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL NOT EXCEED 7%.

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

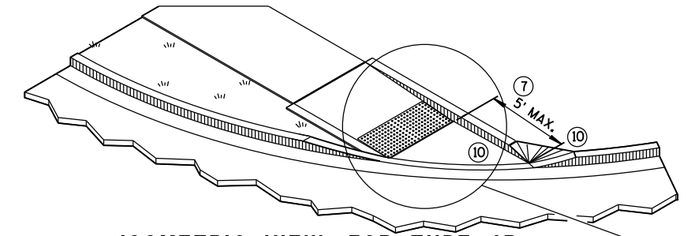
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

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

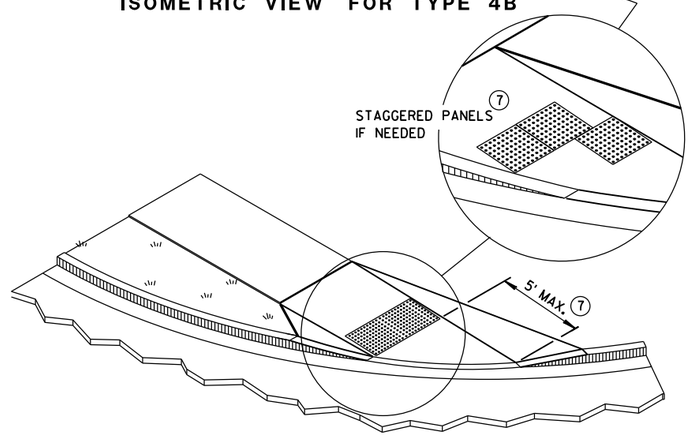
(7) WHEN THIS DISTANCE EXCEEDS 5 FEET, STAGGER ADDITIONAL DETECTABLE WARNING PANEL FORWARD TO REDUCE THIS DISTANCE. PROVIDE MINIMUM 12-INCH ROW OVERLAP TO AVOID SIDESTEP OF DOME DETECTION. USE EQUAL-SIZE PANELS TO DEVELOP OVERLAPPING, STAGGERED ROWS. ALIGN DOMES BETWEEN OVERLAPPING ROWS AND IN DIRECTION OF PEDESTRIAN TRAVEL.

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

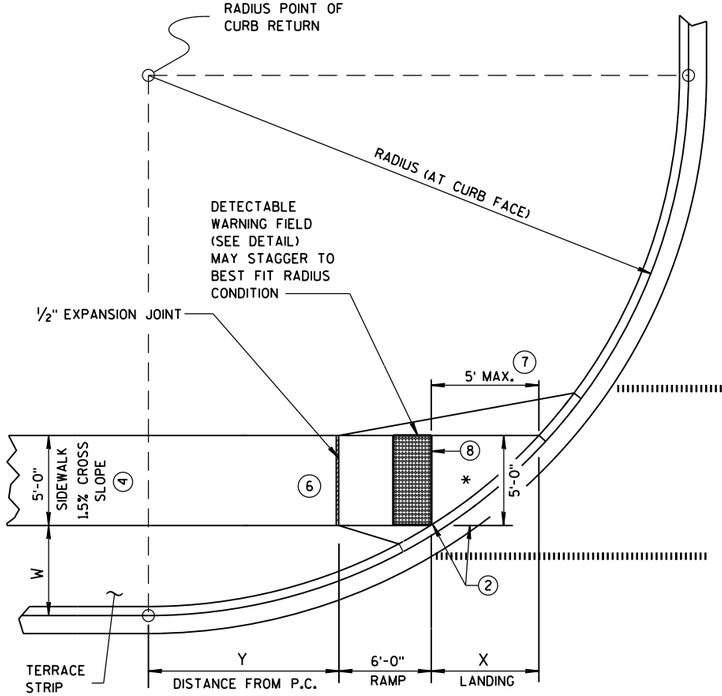
(10) INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.



ISOMETRIC VIEW FOR TYPE 4B



ISOMETRIC VIEW FOR TYPE 4B1



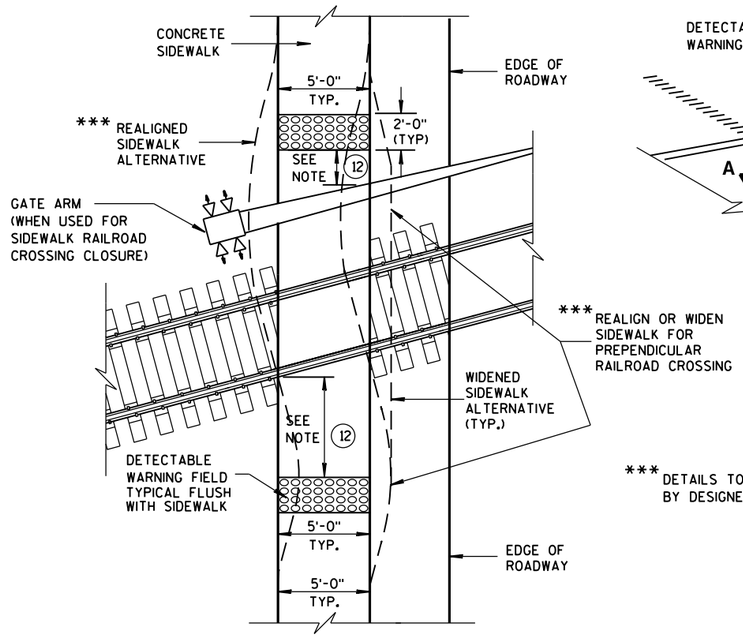
CURB RAMP TYPE 4B1
PLAN VIEW

CURB RAMPS TYPE 4B AND 4B1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

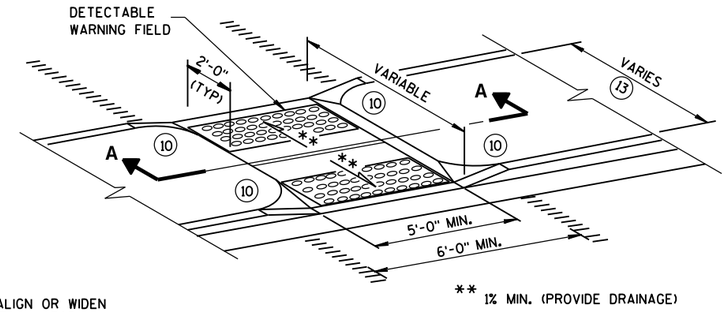
6

S.D.D. 8 D 5-18d



*** DETAILS TO BE DETERMINED BY DESIGNER

TYPE 8
DETECTABLE WARNINGS AT RAILROAD CROSSING



** 1% MIN. (PROVIDE DRAINAGE)

MEDIAN ISLAND NON-ELEVATED CROSSING
TYPE 5

GENERAL NOTES

SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.

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

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL NOT EXCEED 7%.

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

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

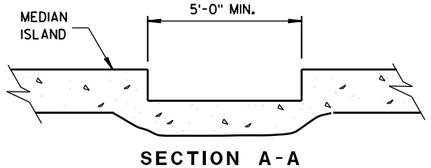
(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.

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

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

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

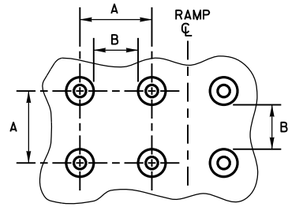
(13) DO NOT INSTALL DETECTABLE WARNING FIELDS IF MEDIAN WIDTH BETWEEN BACK OF CURBS IS LESS THAN 6 FEET.



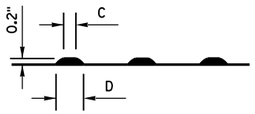
SECTION A-A

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

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

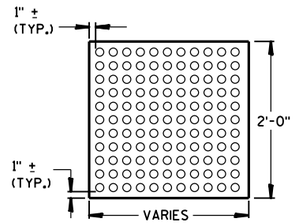


PLAN VIEW

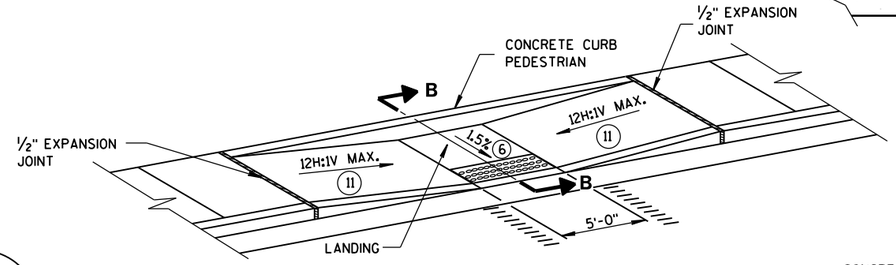


ELEVATION VIEW

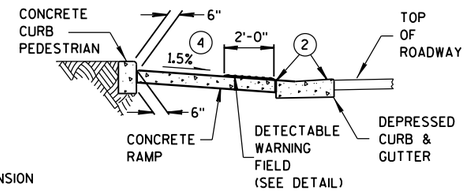
TRUNCATED DOMES
DETECTABLE WARNING PATTERN DETAIL



PLAN VIEW
DETECTABLE WARNING FIELD (TYPICAL)

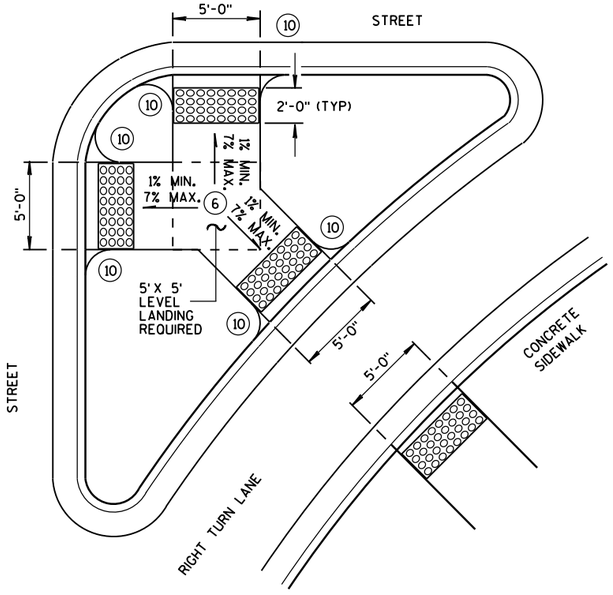


MID-BLOCK CROSSING
TYPE 7A

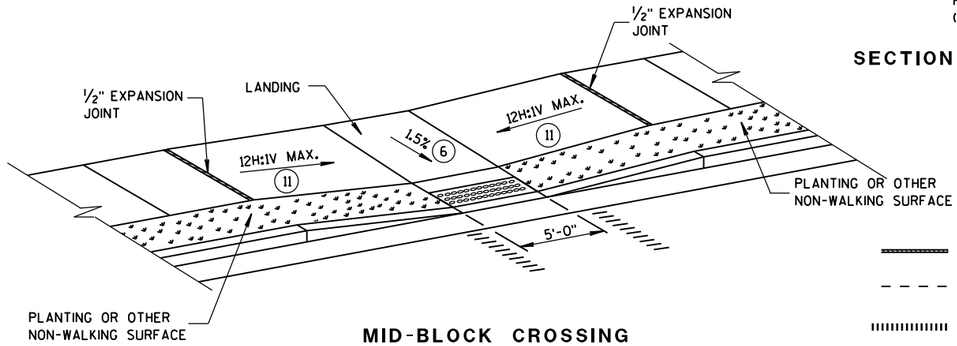


SECTION B-B

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

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

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept., 2016
DATE
FHWA

/S/ Rodney Taylor
ROADWAY STANDARDS UNIT SUPERV

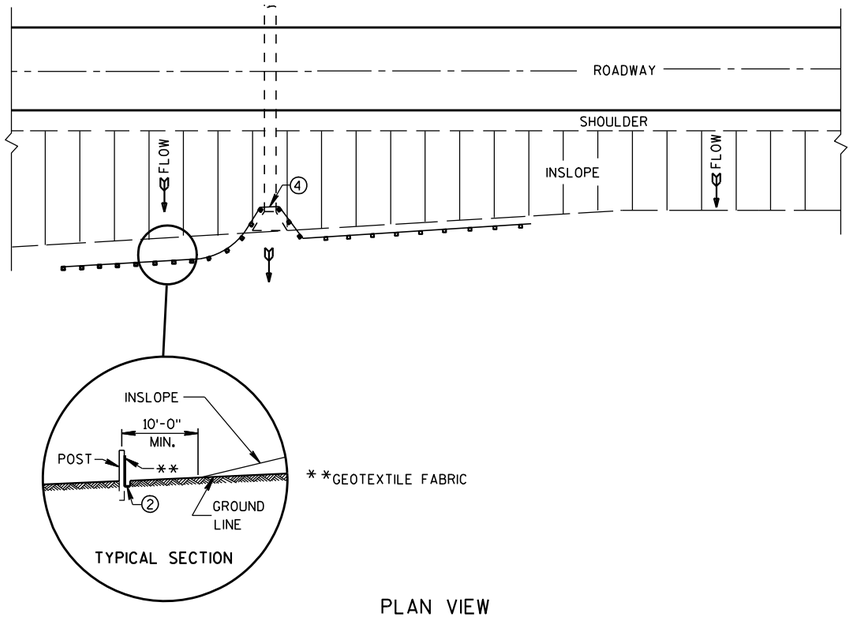
ENT

6

S.D.D. 8 D 5-18e

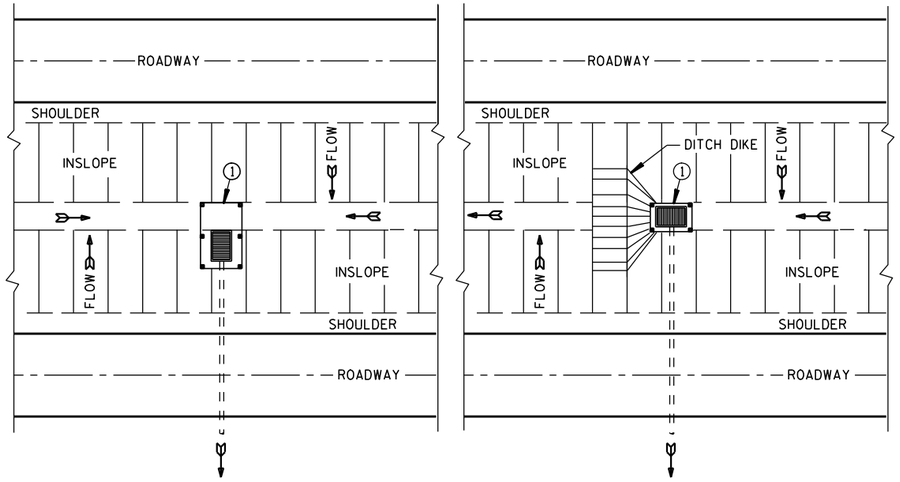
6

S.D.D. 8 D 5-18e



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

GENERAL NOTES

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

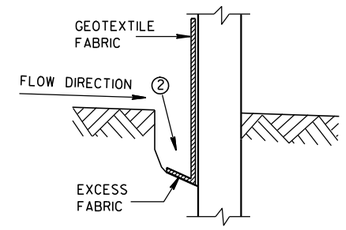
① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.

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

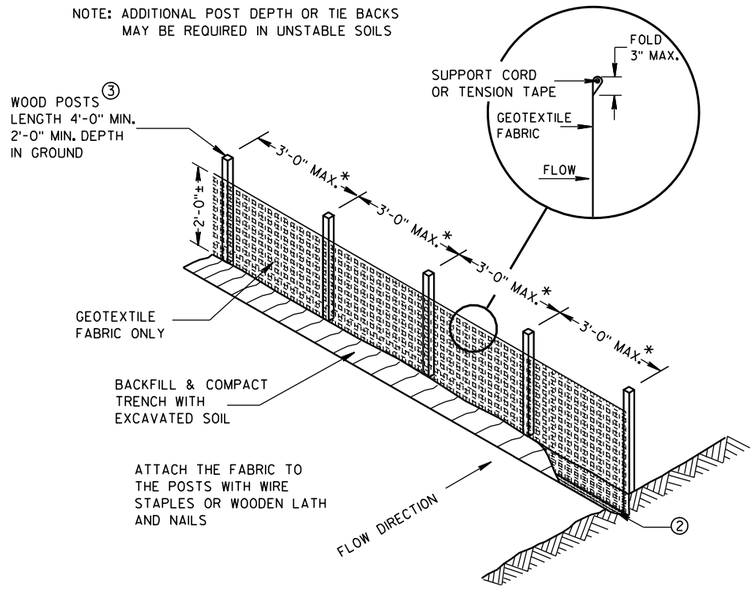
③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.

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

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

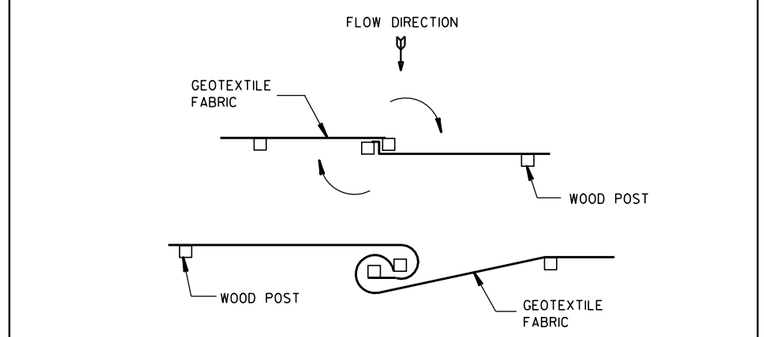


TRENCH DETAIL

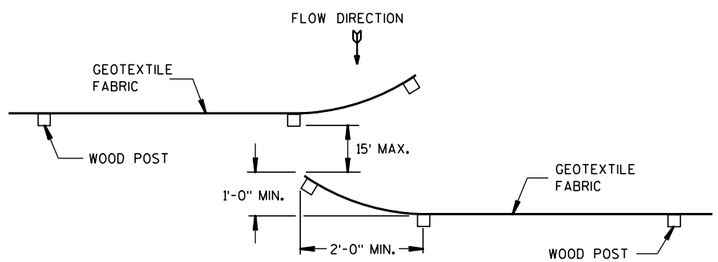


*NOTE: 8'-0" POST SPACING ALLOWED IF A WOVEN GEOTEXTILE FABRIC IS USED.

SILT FENCE

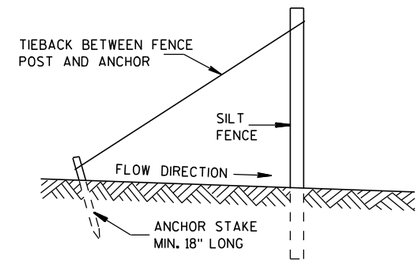


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE ⑤



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

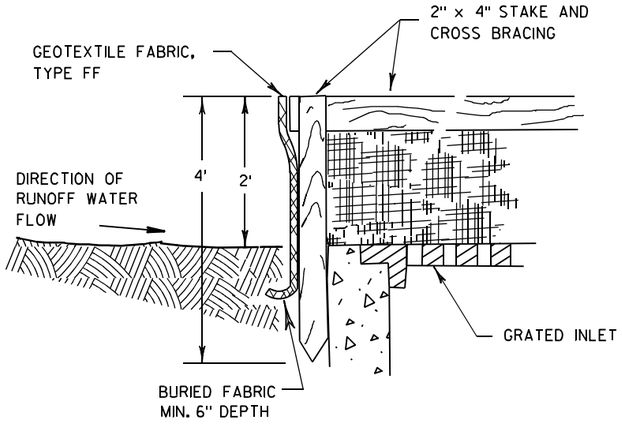
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

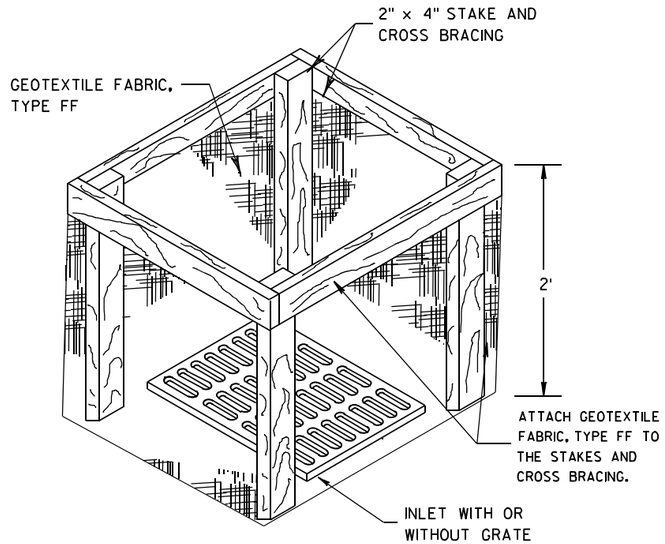
6

S.D.D. 8 E 9-6

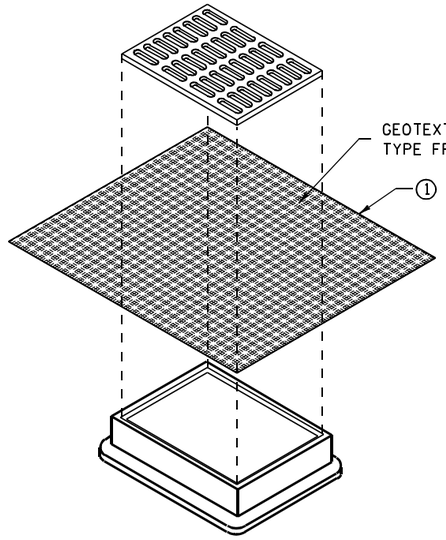
6

S.D.D. 8 E 9-6



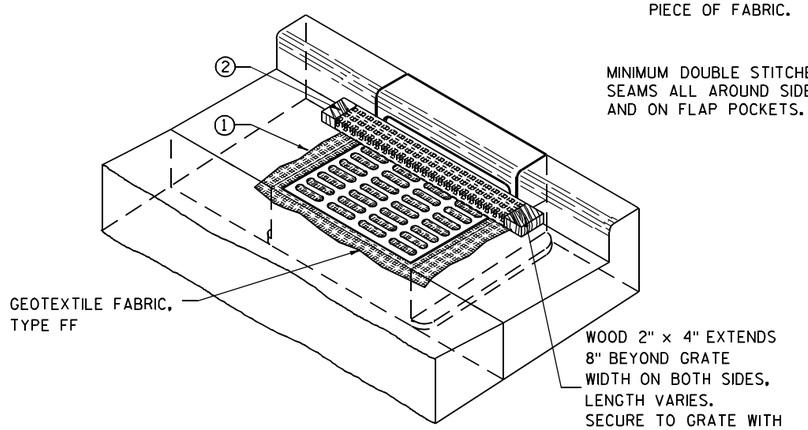


INLET PROTECTION, TYPE A

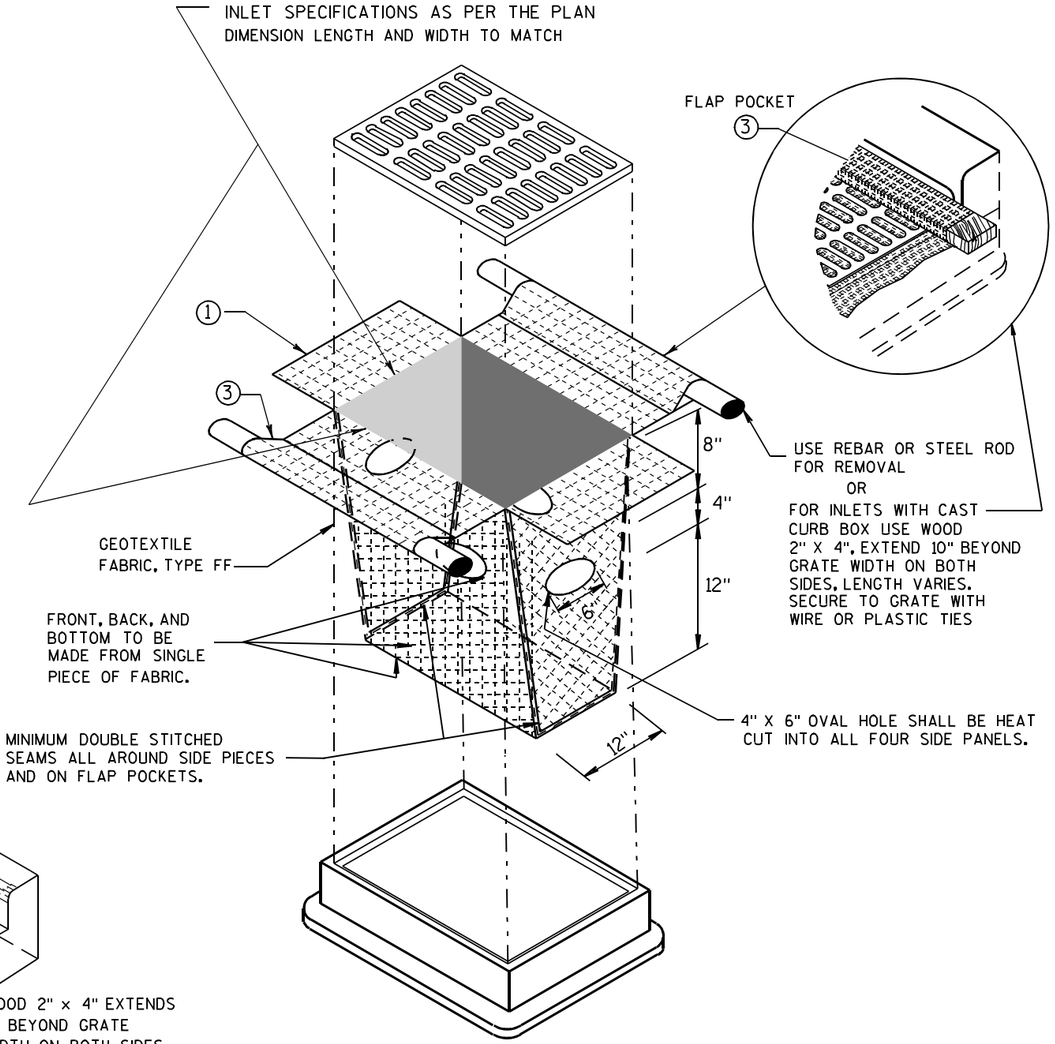


INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

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



INLET PROTECTION, TYPE C (WITH CURB BOX)



INLET PROTECTION, TYPE D

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

GENERAL NOTES

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

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

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

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

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

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

INSTALLATION NOTES

TYPE B & C

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

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

TYPE D

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

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

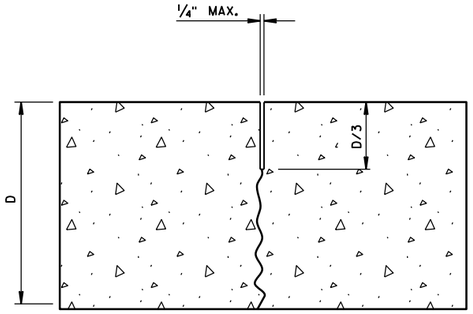
THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE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

INLET PROTECTION
TYPE A, B, C, AND D

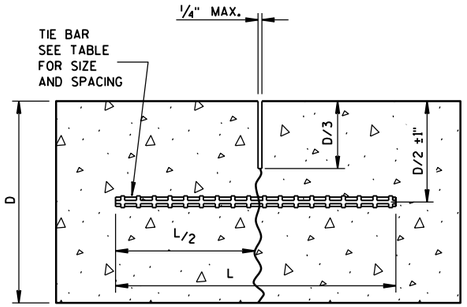
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6
S.D.D. 8 E 10-2



UNDOWELED-TRANSVERSE



TIED LONGITUDINAL

TIE BAR TABLE

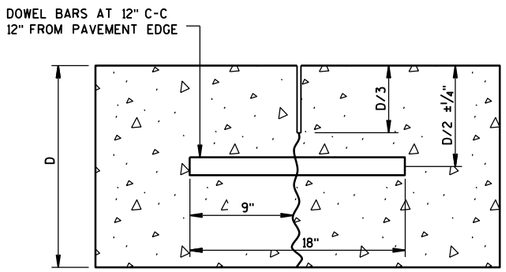
PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 1/2"	NO. 4	30"	36"
≥ 10 1/2"	NO. 5	36"	36"
	NO. 4*	30"	24"**

* 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

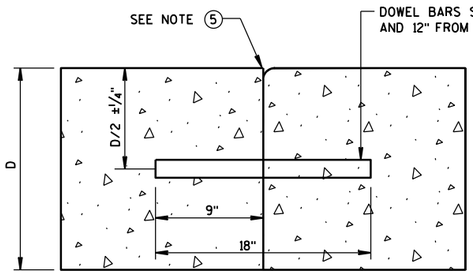
1. USE DOWELED EXPANSION JOINTS ON SIDE ROADS AT INTERSECTIONS (TO ISOLATE THE SIDE ROAD FROM THE THROUGH STREET) IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH.
2. SPACE CONTRACTION JOINTS IN ACCORDANCE WITH 13C4, 13C11 OR 13C13.
3. LOCATE CONSTRUCTION JOINTS A MINIMUM OF 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.



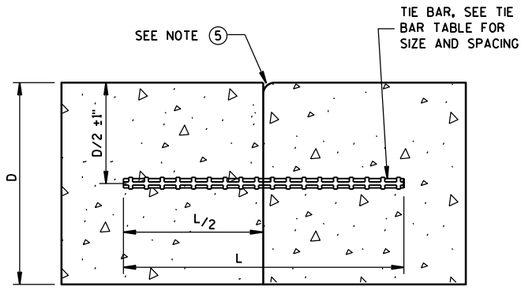
DOWELED-TRANSVERSE

CONTRACTION JOINTS

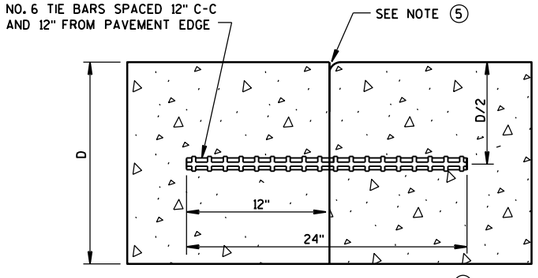
SEE NOTE (2)



DOWELED TRANSVERSE (3)

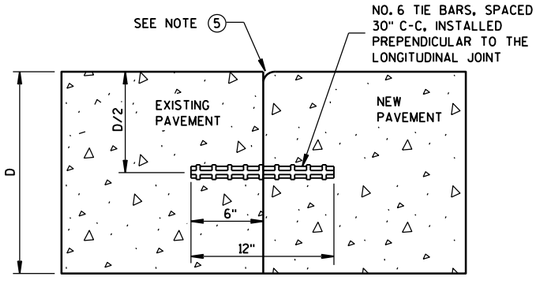


TIED LONGITUDINAL



TIED TRANSVERSE (3)

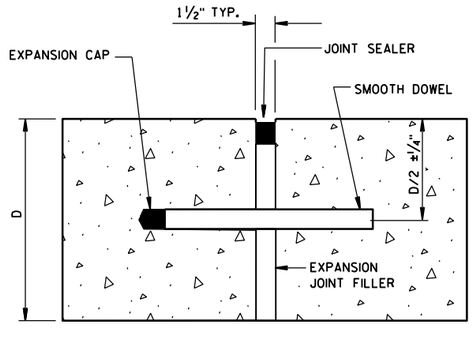
(FOR USE ON NON-DOWELED PAVEMENTS ONLY)



TIED LONGITUDINAL TO EXISTING

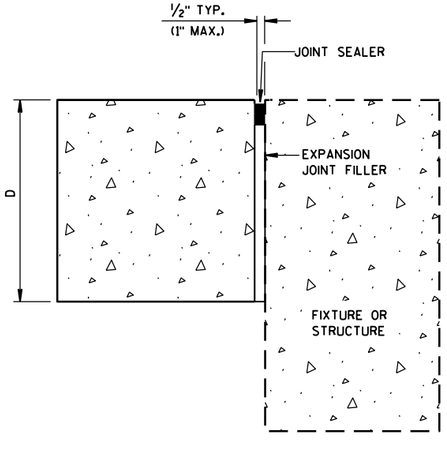
CONSTRUCTION JOINTS

SEE NOTE (4)



DOWELED-TRANSVERSE

SEE NOTE (1)



UNTIED-LONGITUDINAL

EXPANSION JOINTS

CONCRETE PAVEMENT
JOINT TYPES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

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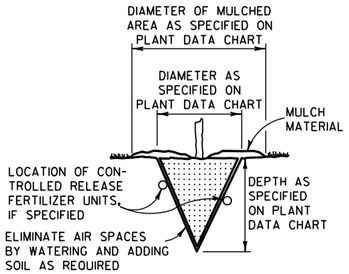
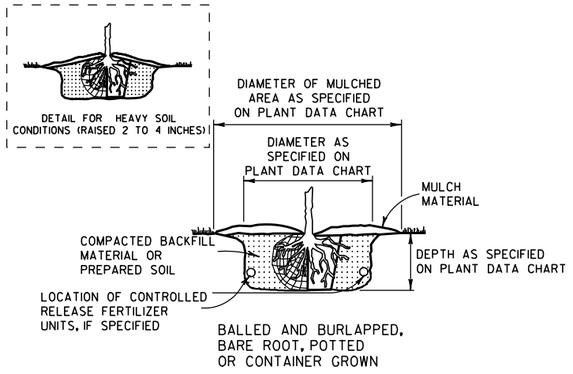
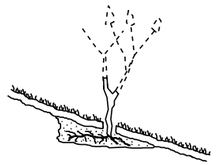
S.D.D. 13 C 18-5c



MACHINE MOVED

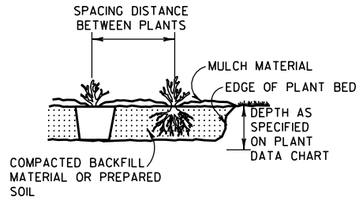


BALLED AND BURLAPPED, BARE ROOT, POTTED OR CONTAINER GROWN



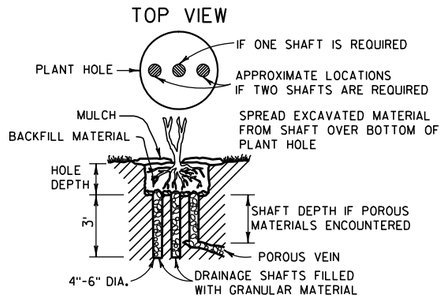
ACCOMMODATE ROOTS (SMOOTH AND STAGHORN SUMAC)

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



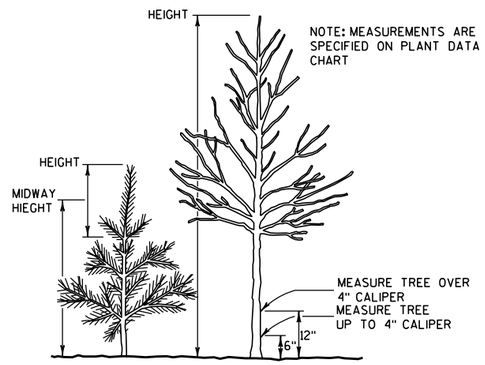
PREPARED BED (BARE ROOT AND POTTED)

PLANTING

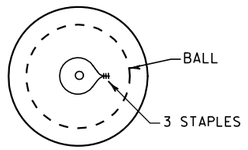


NOTE:
DRAINAGE SHAFT AS SPECIFIED ON PLANT DATA CHART

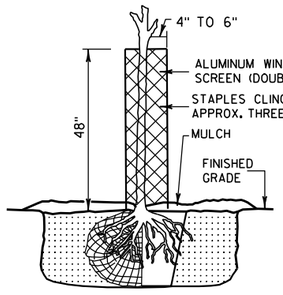
DRAINING



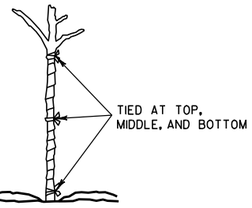
MEASURING



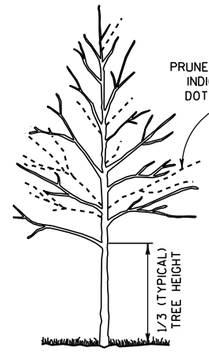
TOP VIEW



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)

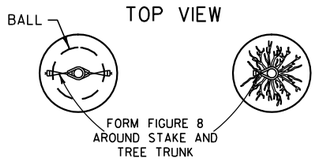
NOTE: WHEN PRUNING, PRESERVE CHARACTER AND SHAPE OF TREE. AVOID LEAVING STUBS - REMOVE BRANCH OR TWIG BACK TO THE NEAREST CROTCH
1) PRUNE TO REMOVE DEAD AND BROKEN BRANCHES
2) PRUNE TO REMOVE BRANCHES THAT TOUCH OR ARE TOO CLOSE TO OTHER BRANCHES

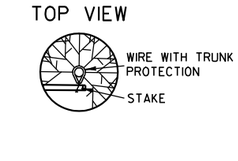
SHRUBS (GRAY DOGWOOD ARROWWOOD VIBURNUM)

SUMAC

TREE TYPE EVERGREENS (PINE, SPRUCE, FIR) EVERGREENS USUALLY ARE NOT PRUNED

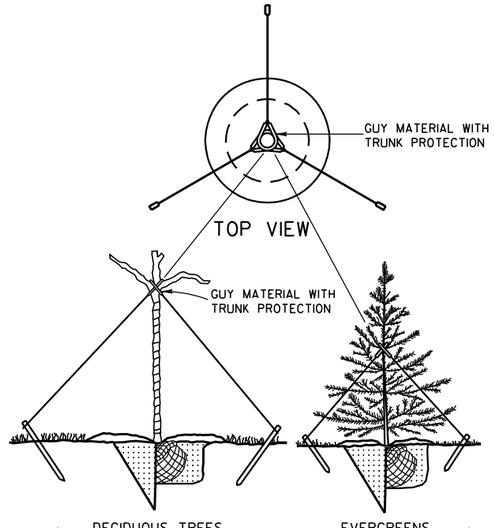
PRUNING





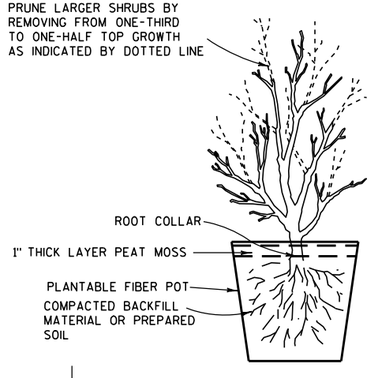
NOTE: BRACING STAKE
1) SHALL BE DRIVEN INTO THE GROUND AS CLOSE TO THE TREE AS POSSIBLE WITHOUT DAMAGING THE BRANCHES.
2) MAY BE DRIVEN AT SUCH AN ANGLE THAT IT DOES NOT PENETRATE THE BALL OR POT.
3) SHALL NOT PROTRUDE ABOVE THE TOP OF THE TREE; AND
4) SHALL HAVE A HOLE NEAR THE TOP TO HOLD THE WIRE 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.

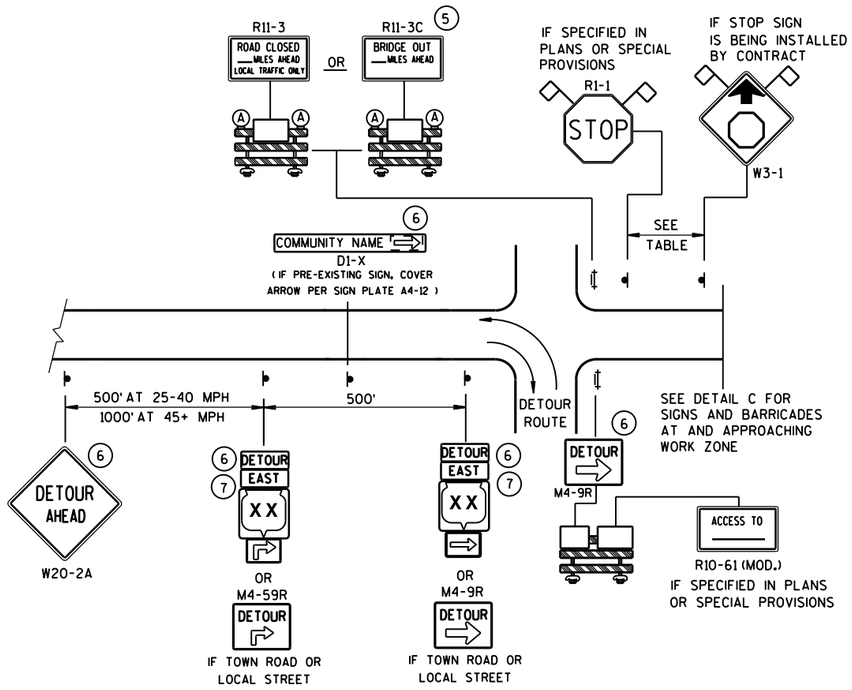
TREE PLANTING DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4/11/94
DATE
/S/ Rory L. Rhinesmith
CHIEF METHODS DEVELOPMENT ENGINEER
FHWA

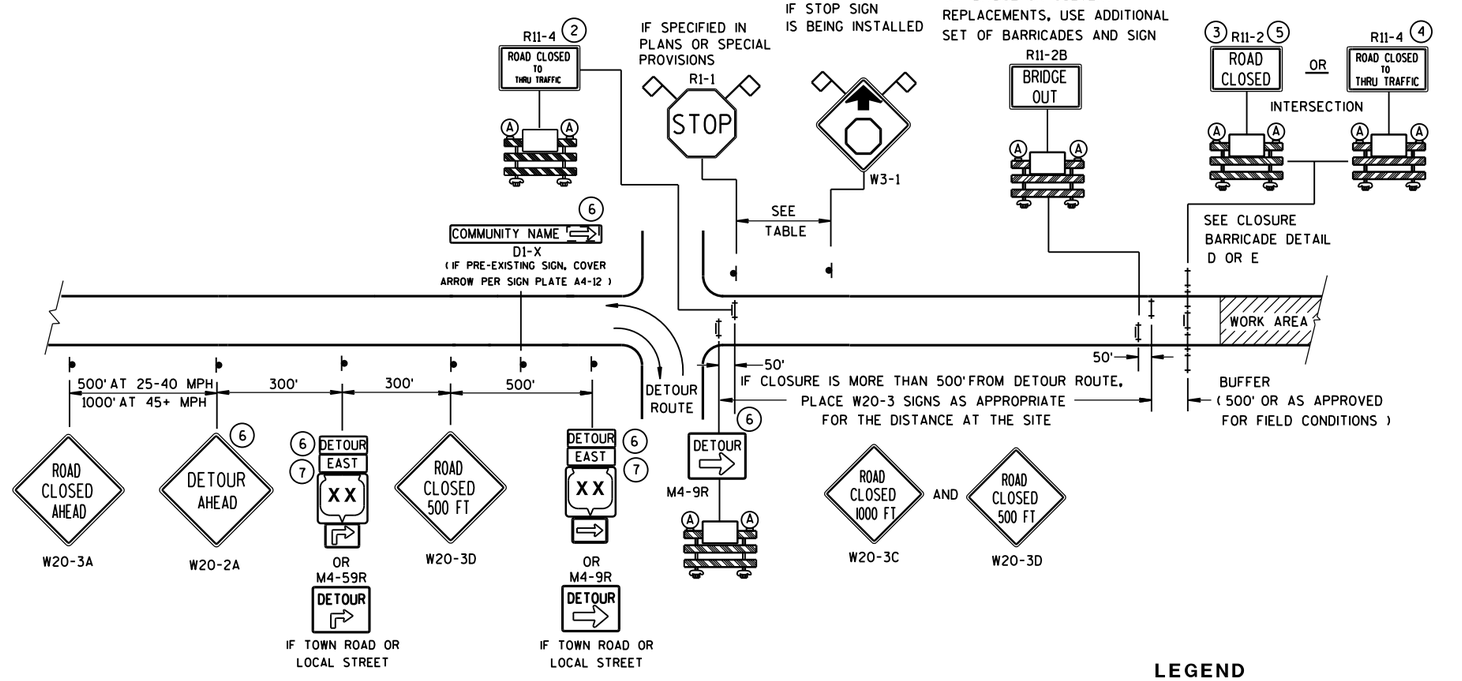
6

S.D.D. 14 A 2-1



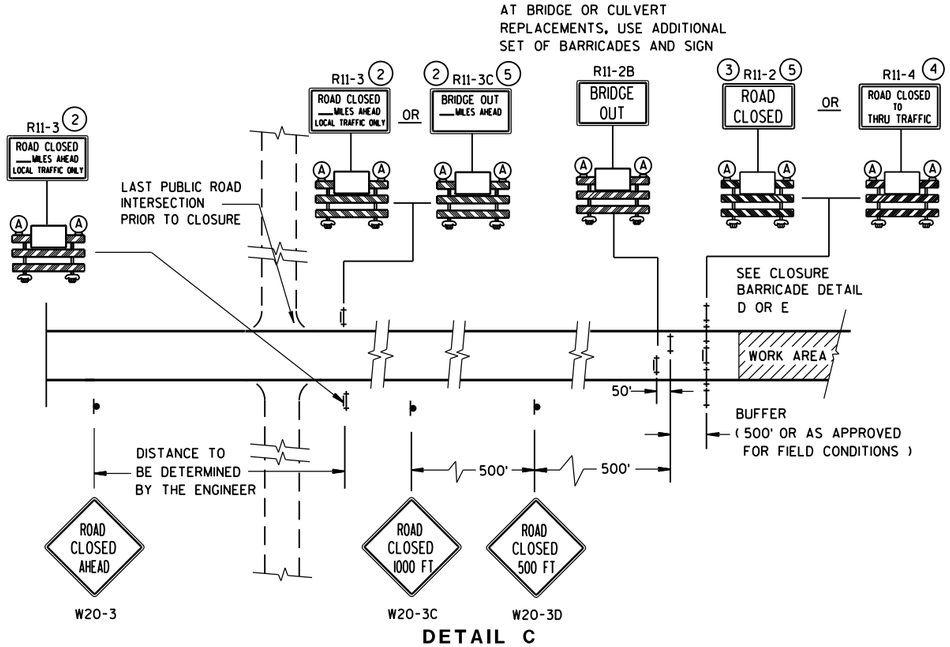
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

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



DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR

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



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

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

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

LEGEND

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

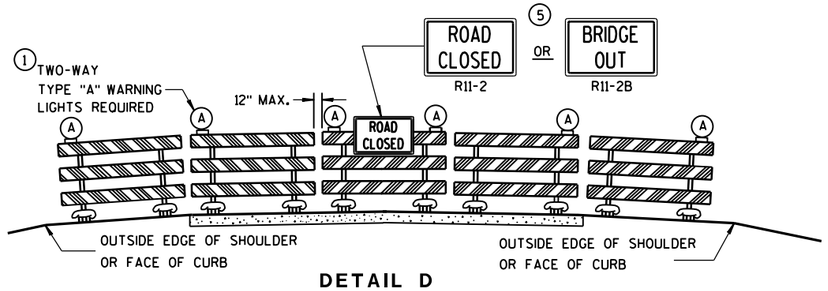
BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

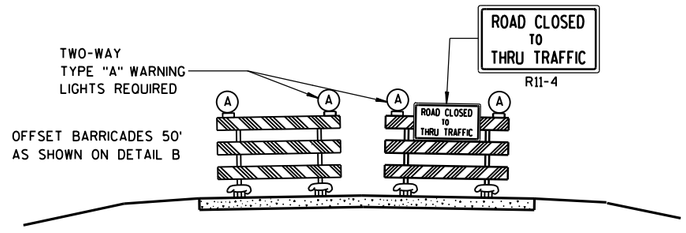
S.D.D. 15 C 2-6a



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

6

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.

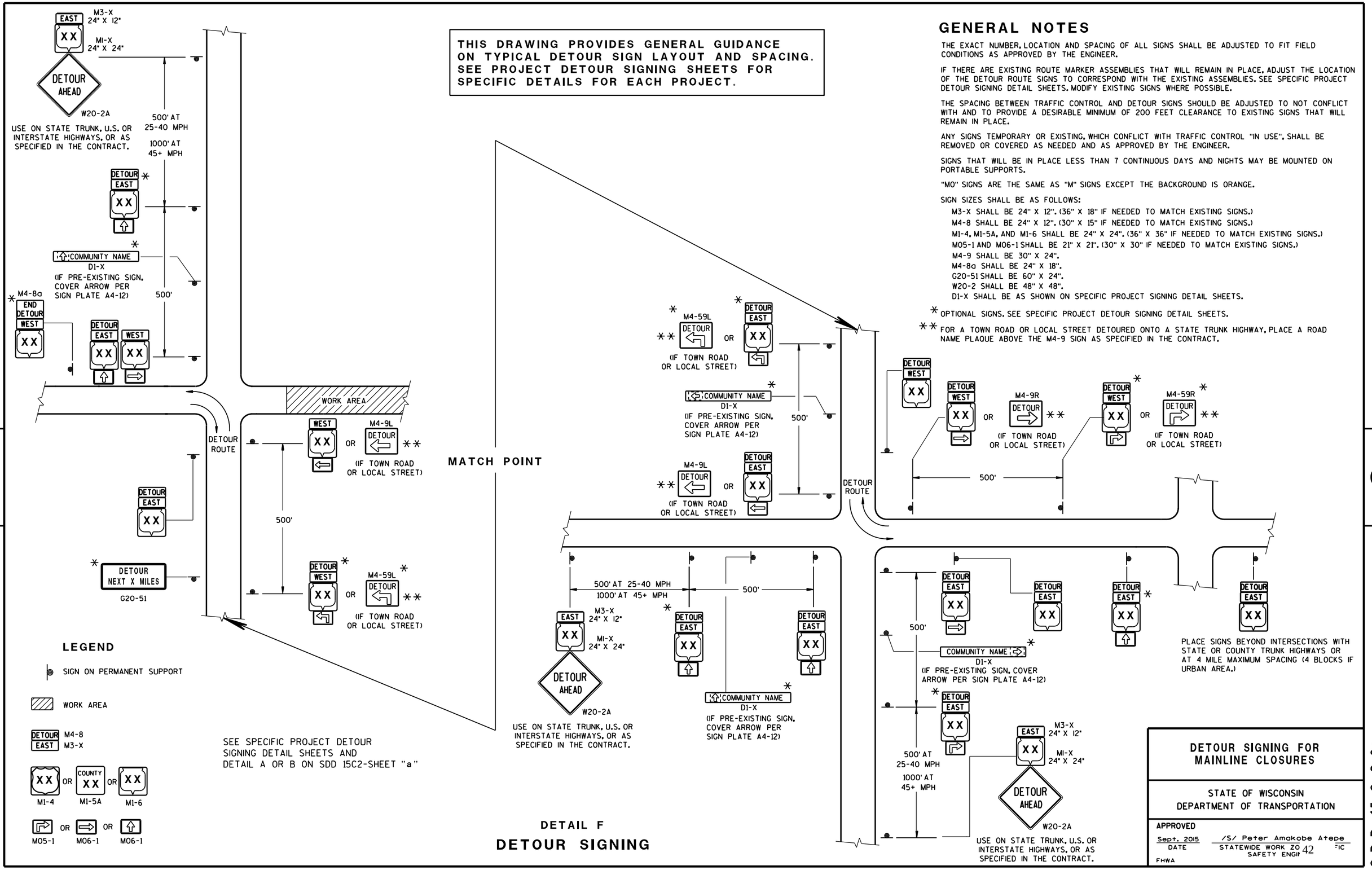
"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

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.



DETAIL F

DETOUR SIGNING

DETOUR SIGNING FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

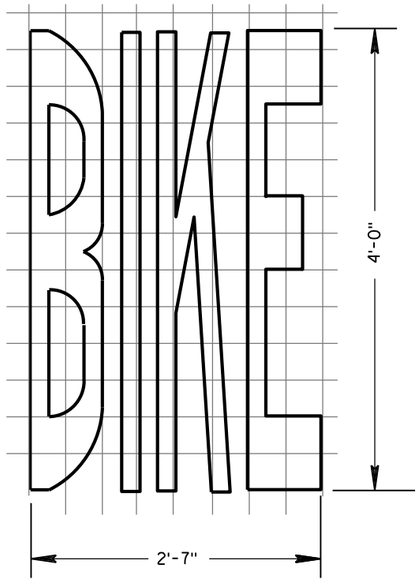
Sept. 2015 — DATE

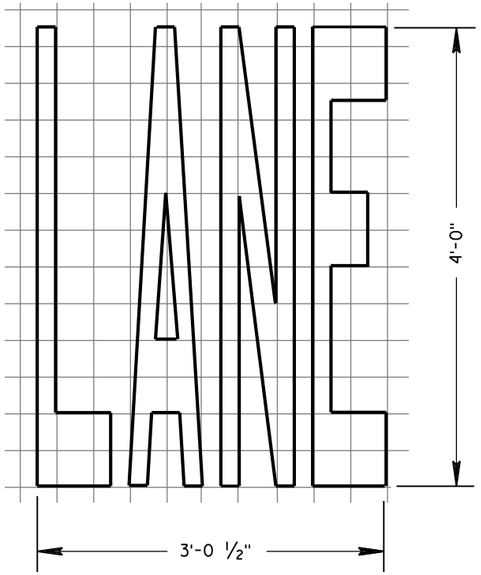
/S/ Peter Amakobe Atepe — STATEWIDE WORK ZO... SAFETY ENGI... FIC

FHWA

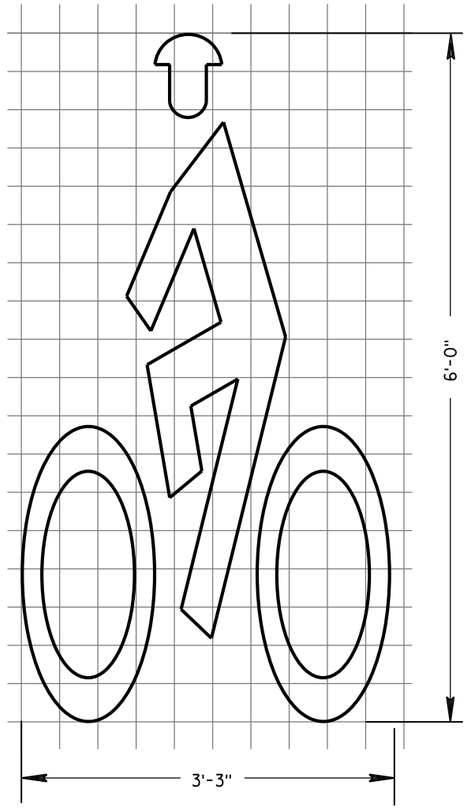
6

S.D.D. 15 C 2-6c

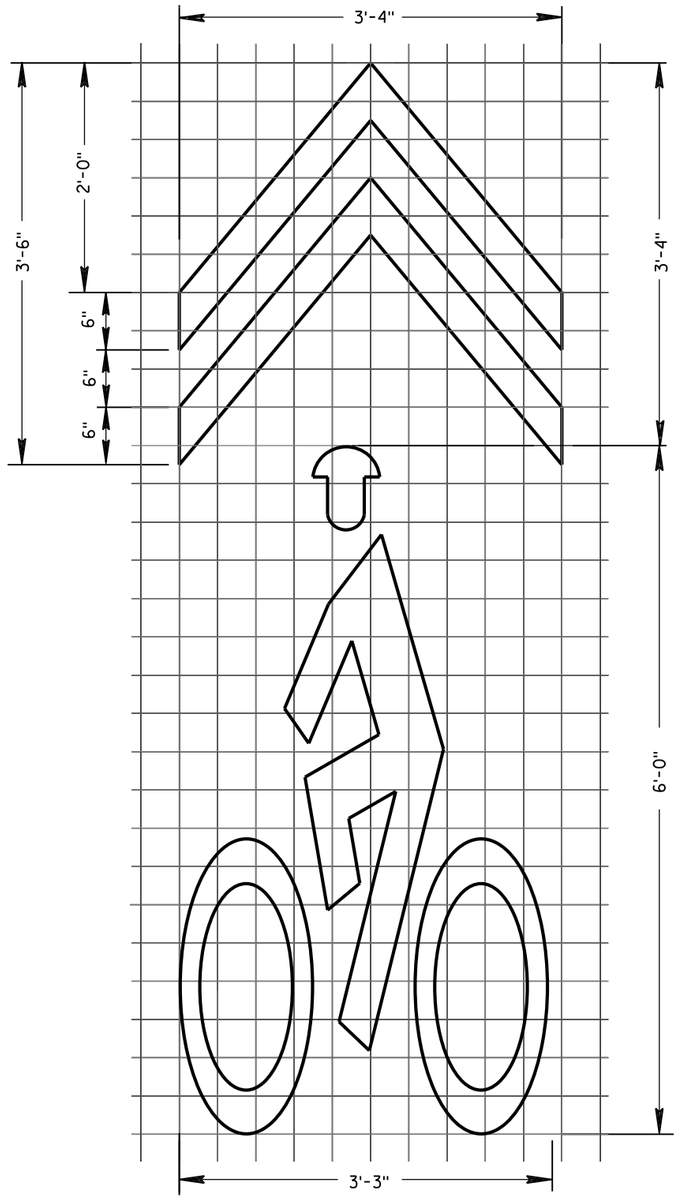




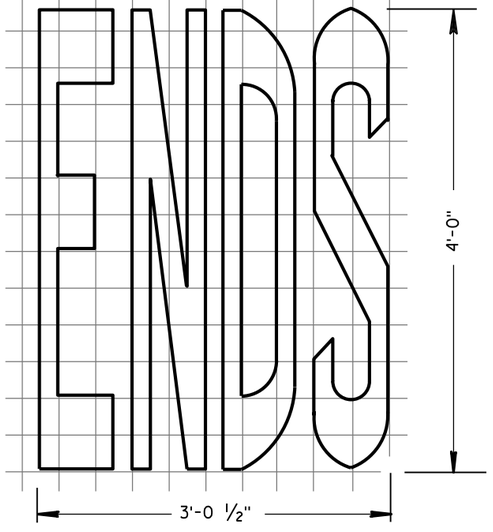
BIKE LANE WORDS



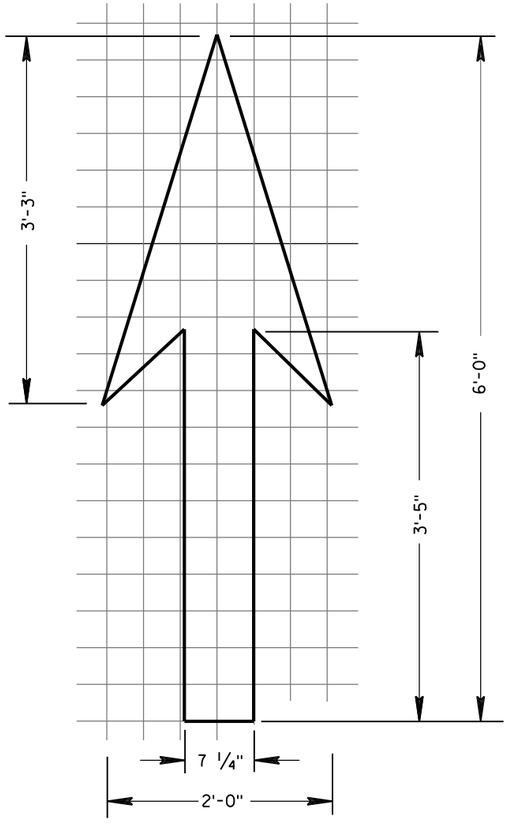
BIKE LANE SYMBOL



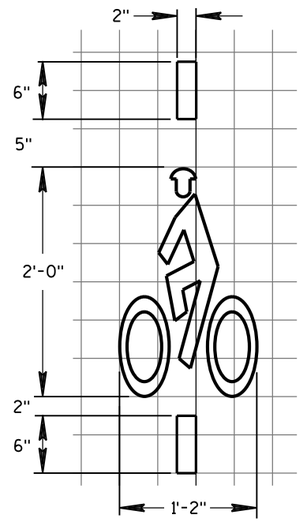
BIKE SYMBOL FOR SHARED LANE



BIKE LANE WORDS



BIKE LANE ARROW



BICYCLE DETECTOR PAVEMENT MARKING

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.

PAVEMENT MARKING FOR BIKE LANES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

4-18-2016
DATE

/S/ Matthew R. Rauch
STATE SIGNING AND MARK ENGINEER

FHWA

6

S.D.D. 15 C 7-13e

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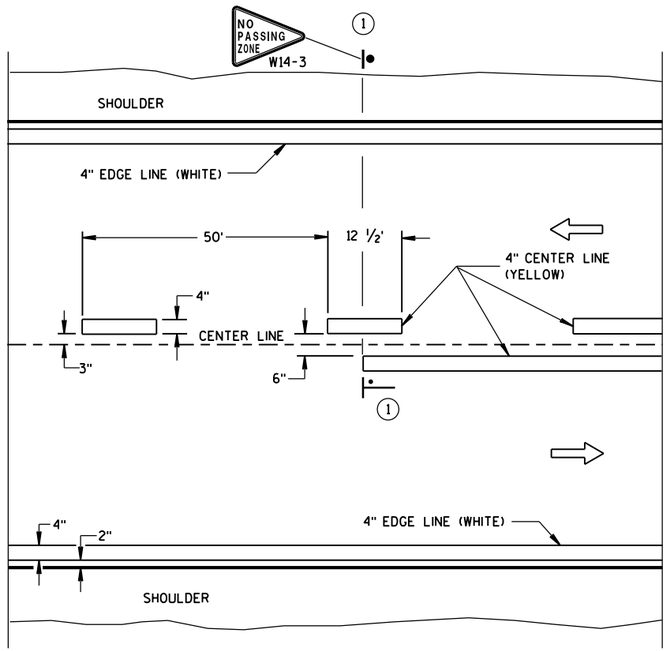
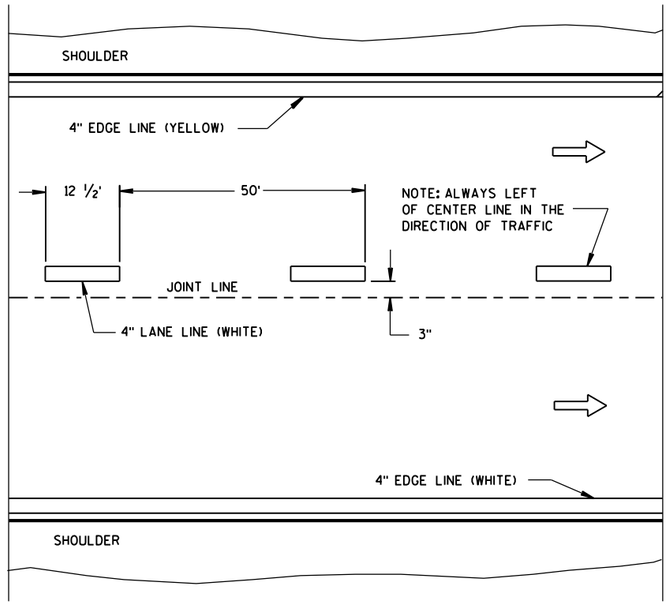
S.D.D. 15 C 7-13e



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

GENERAL NOTES

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

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

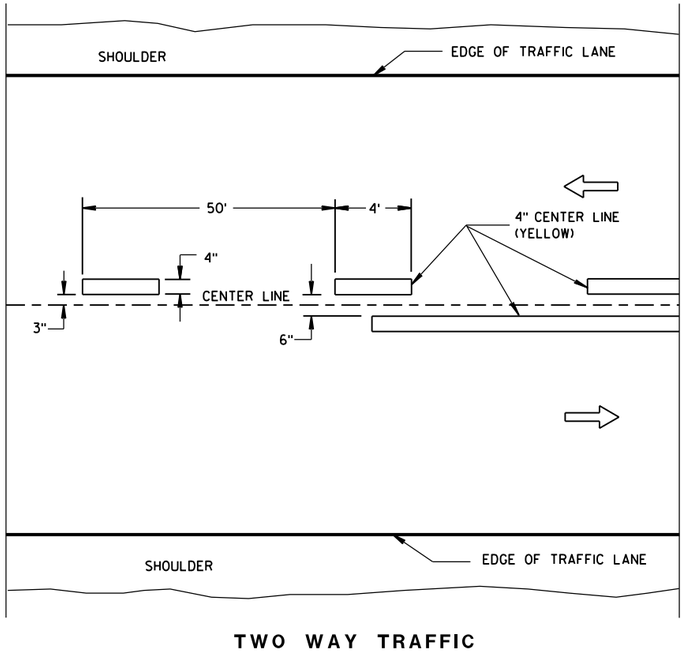
NOTE

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL

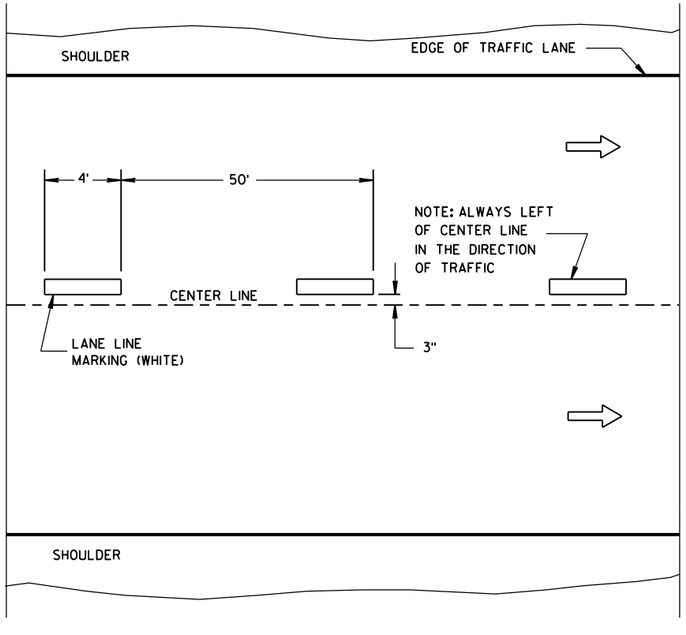
LEGEND

"T" MARKING

POST MOUNTED SIGN



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

LONGITUDINAL MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept., 2016 — DATE
/S/ Matthew R. Rauch — STATE SIGNING AND MAR[illegible]INEER
FHWA

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S.D.D. 15 C 8-17a

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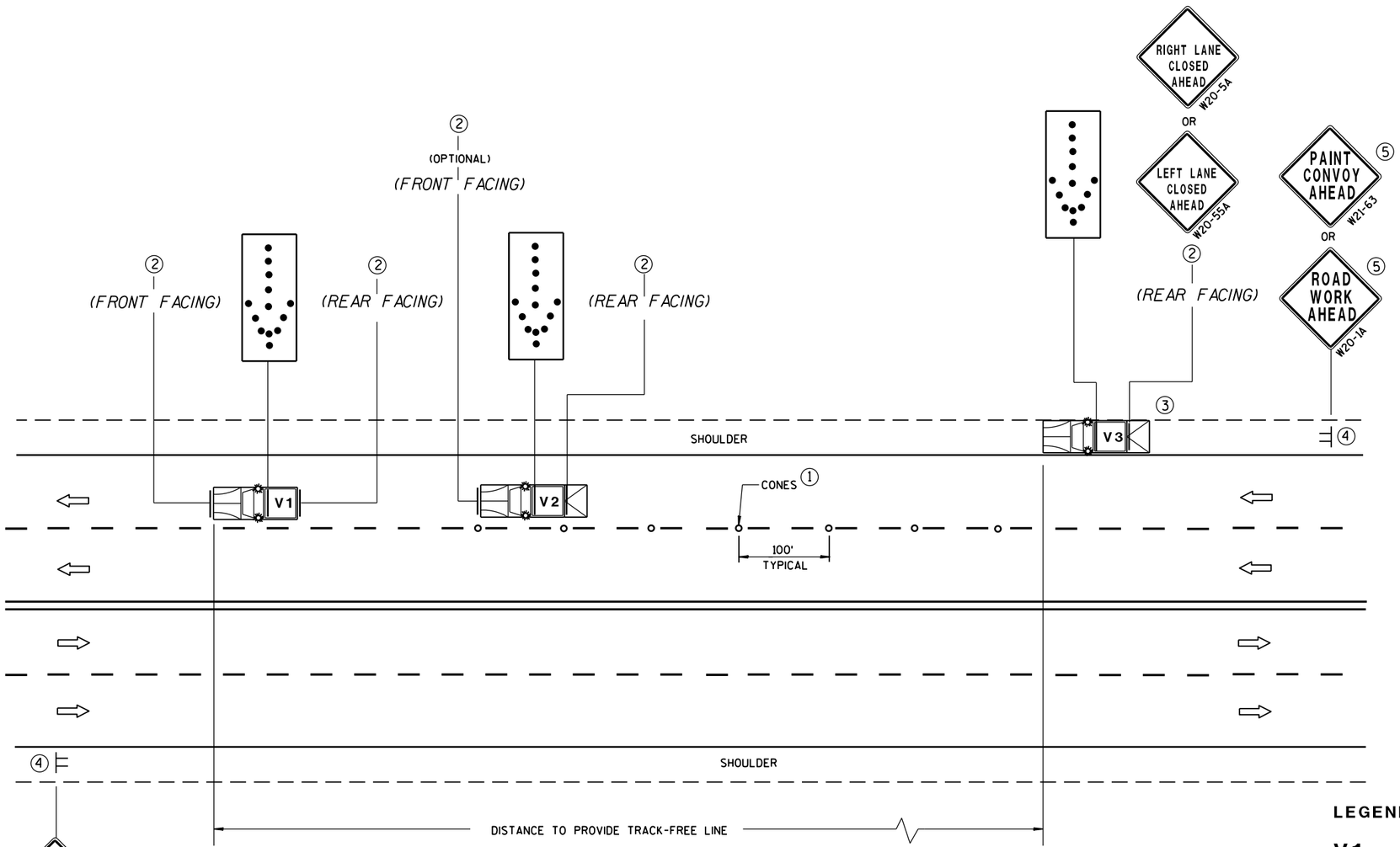
S.D.D. 15 C 8-17a



PAINT CONVOY AHEAD W21-63
OR
ROAD WORK AHEAD W20-1A

MOVING PAVEMENT MARKING OPERATIONS
MULTI-LANE UNDIVIDED ROADWAY

GENERAL NOTES

ALL VEHICLES SHALL BE EQUIPPED WITH TWO 360 DEGREE HIGH INTENSITY YELLOW FLASHING LIGHTS OR STROBE LIGHTS AND OPERATED WITH HEADLIGHTS TURNED ON.

ALL VEHICLES SHALL BE EQUIPPED WITH REAR FACING TYPE B OR C FLASHING ARROW PANEL. SIGNS PLACED ON VEHICLES MUST NOT OBSCURE THE ARROW PANEL.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE SPECIFIED.

IF SPEED LIMIT IS 40 MPH OR LESS STATIONARY SIGNS MAY BE OMITTED IF CONES ARE USED.

ALTERNATE SIGN MESSAGES, SUCH AS "PAINT CREW AHEAD" OR "ROAD PAINTING AHEAD" MAY BE USED.

DISTANCE BETWEEN VEHICLES MAY VARY ACCORDING TO TERRAIN, SIGHT DISTANCE, PAINT DRYING TIME, AND OTHER FACTORS. WHENEVER ADEQUATE STOPPING SIGHT DISTANCE EXISTS TO THE REAR, SHADOW VEHICLES SHOULD MAINTAIN THE MINIMUM DISTANCE FROM THE WORK VEHICLE AND PROCEED AT THE SAME SPEED AS THE WORK VEHICLE. SHADOW VEHICLES SHOULD SLOW DOWN IN ADVANCE OF VERTICAL OR HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.

WHEN WORK ACTIVITY BLOCKS THE LEFT LANE, REVERSE TRAFFIC CONTROL.

WHEN A RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, PROVIDE ADDITIONAL TRAFFIC CONTROLS AS SPECIFIED IN THE CONTRACT OR AS APPROVED BY THE ENGINEER.

USE AN ATTENUATOR ON THE REARMOST VEHICLE THAT BLOCKS ALL OR PART OF THE TRAFFIC LANE.

FOR EDGELINE MARKING OR IF CONES ARE NOT USED, POSITION THE REARMOST SHADOW VEHICLE ON THE SHOULDER AS SHOWN IN THE MUTCD IF THE SHOULDER HAS ADEQUATE WIDTH.

WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR TURN THE STATIONARY WARNING SIGNS AWAY FROM TRAFFIC.

THIS DRAWING SHALL BE USED FOR CENTERLINE OR EDGELINE OR LANELINE MARKING FOR MULTILANE UNDIVIDED ROADWAYS.

(1) CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.

(2) USE STANDARD SIGN W21-64 WITH APPROPRIATE ARROW.

WET PAINT W21-64 OR WET PAINT W21-64

(3) OPTIONAL TRUCK-MOUNTED ATTENUATOR.

(4) SIGNS SHALL BE REPEATED APPROXIMATELY EVERY THREE MILES.

(5) IF CONSTRUCTION WORK ZONE SIGNS ARE IN PLACE, W20-1 OR W21-63 ARE NOT REQUIRED.

LEGEND

V1	LEAD VEHICLE
V2	SHADOW VEHICLE
V3	TRAIL VEHICLE WITH TMA
TMA	TRUCK-MOUNTED ATTENUATOR
	SIGN ON TEMPORARY SUPPORT
	DIRECTION OF TRAFFIC
	CONES
	FLASHING ARROW PANEL (MERGE)

MOVING PAVEMENT MARKING OPERATION
MULTI-LANE UNDIVIDED ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2016 — DATE
/S/ Peter Amakobe Atepe — STATEWIDE WORK ZON SAFETY ENGINE
FHWA

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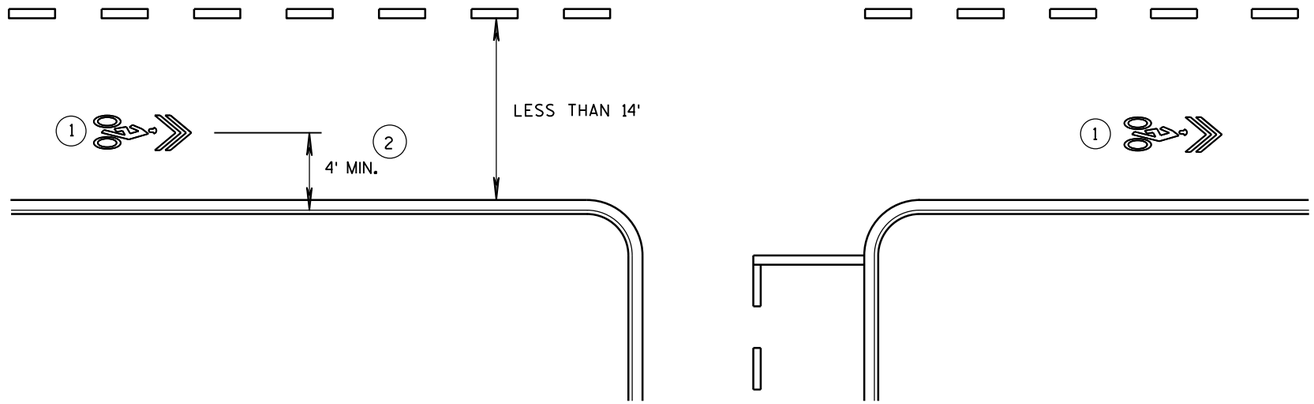
S.D.D. 15 C 19-4b

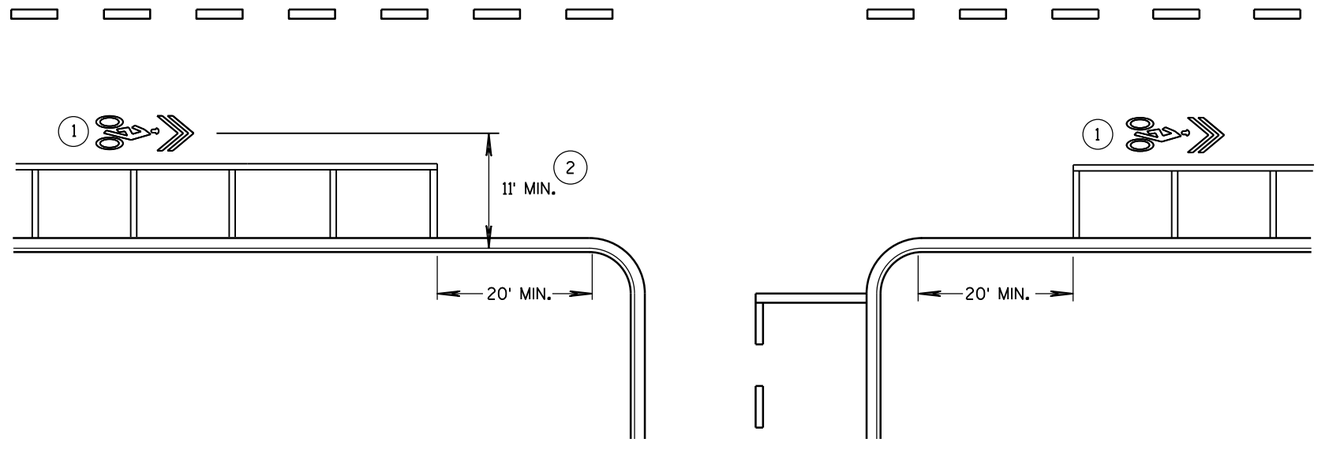
GENERAL NOTES

(1) MINIMUM OF ONE PER BLOCK, MAXIMUM OF 250 FEET.

(2) OR TO EDGE OF PAVEMENT WITHOUT CURB.



WITHOUT PARKING



WITH PARKING

PAVEMENT MARKING FOR SHARED LANE 35 MPH OR LESS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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S.D.D. 15 C 29-4b

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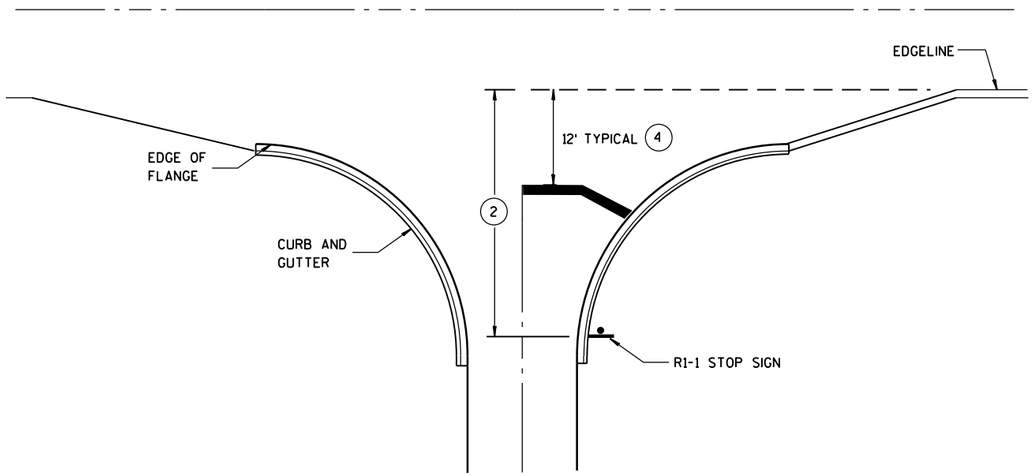
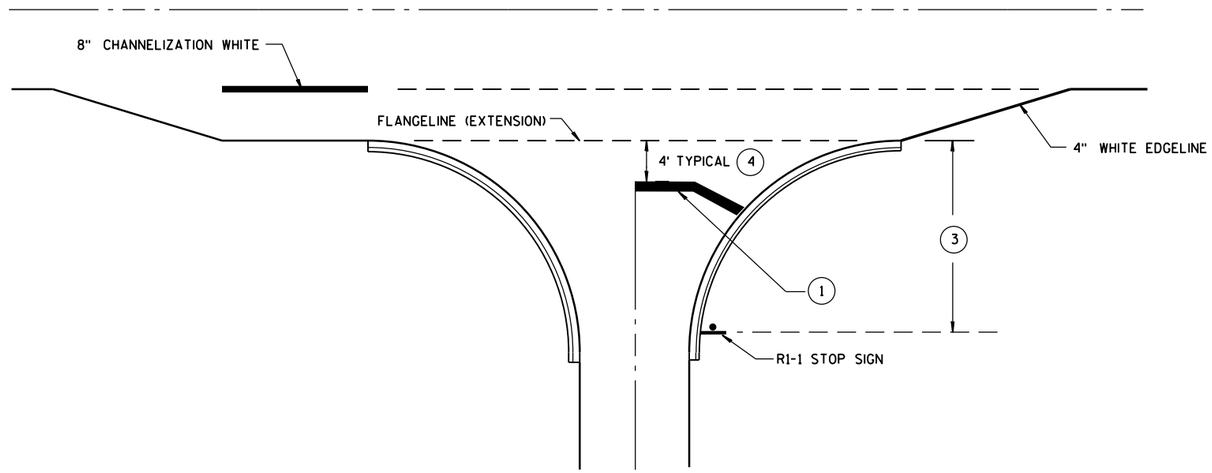
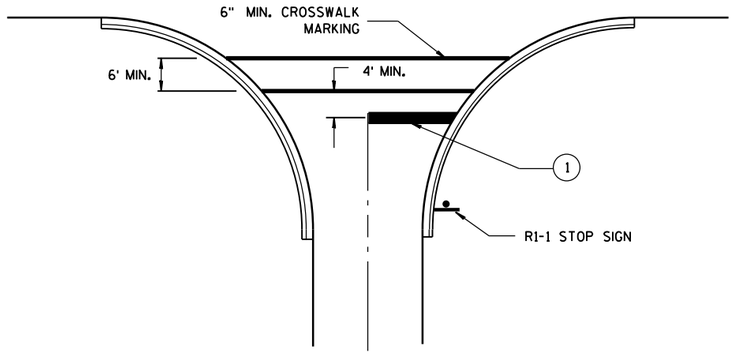
S.D.D. 15 C 29-4b



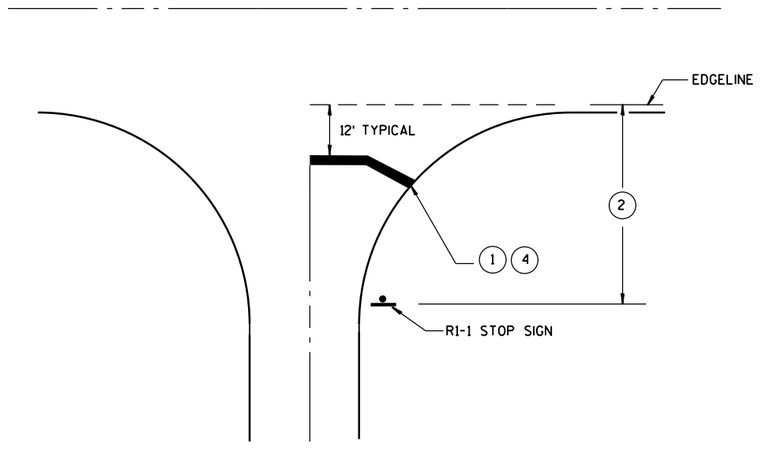
TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER



TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH RIGHT TURN LANE



TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH CROSSWALK MARKING



TYPICAL STOP LINE PAVEMENT MARKING WITHOUT CURB AND GUTTER

GENERAL NOTES

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

STOP LINE AND CROSSWALK PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

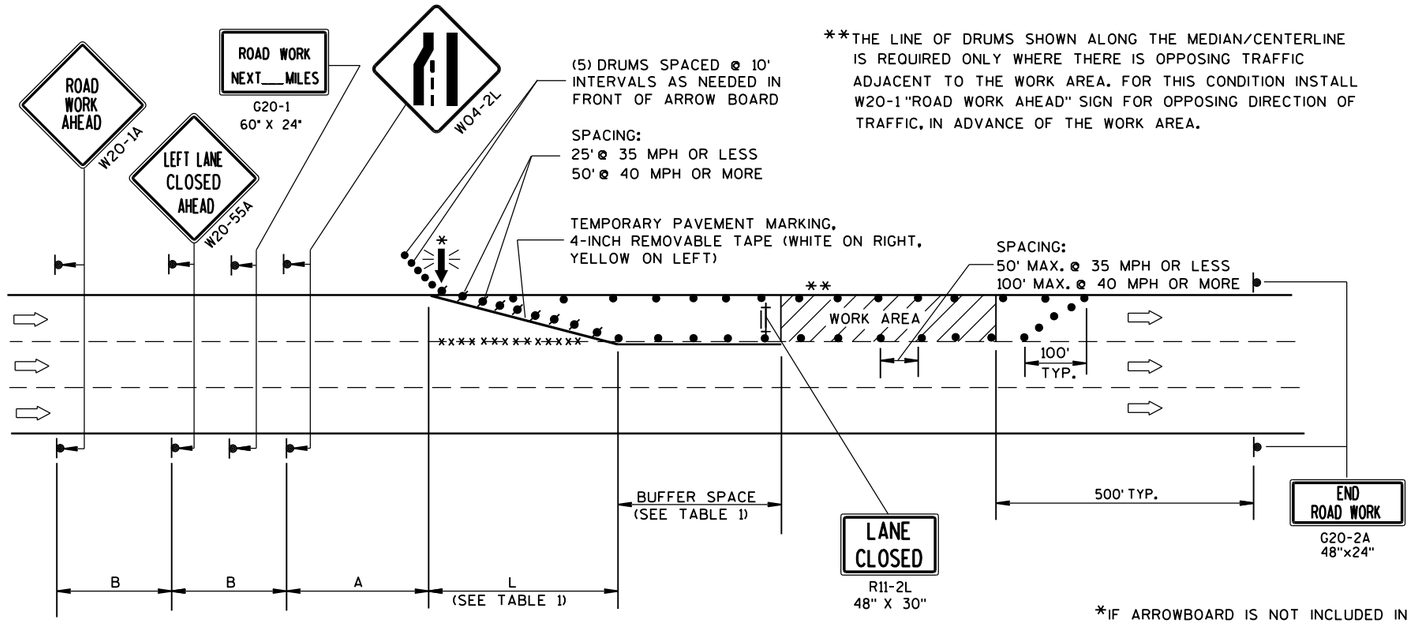
4-18-2016
DATE

/S/ Matthew R. Rauch
STATE SIGNING AND MAR

FHWA

6

S.D.D. 15 C 33-2



**THE LINE OF DRUMS SHOWN ALONG THE MEDIAN/CENTERLINE IS REQUIRED ONLY WHERE THERE IS OPPOSING TRAFFIC ADJACENT TO THE WORK AREA. FOR THIS CONDITION INSTALL W20-1 "ROAD WORK AHEAD" SIGN FOR OPPOSING DIRECTION OF TRAFFIC, IN ADVANCE OF THE WORK AREA.

B=400' AT 25-30 MPH
700' AT 35-40 MPH
1000' AT 45-55 MPH

A=200' AT 25-30 MPH
350' AT 35-40 MPH
500' AT 45-55 MPH

(PLACE BARRICADE AND SIGN APPROX. EVERY 1000' ACROSS THE CLOSED LANE)

*IF ARROWBOARD IS NOT INCLUDED IN MISCELLANEOUS QUANTITIES, SUBSTITUTE A TYPE III BARRICADE WITH W01-6 SIGN IN THE LANE CLOSURE TAPER.

W01-6
48"x24"

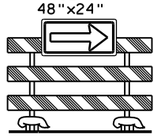


TABLE 1
TAPER AND BUFFER SPACE FOR 12' LANE WIDTH

S	L	BUFFER SPACE
25	125'	55'
30	180'	85'
35	245'	120'
40	320'	170'
45	540'	220'
50	600'	280'
55	660'	335'

FOR LANE WIDTH OTHER THAN 12':

L = WS AT 45 MPH OR GREATER

$L = \frac{WS^2}{60}$ AT 40 MPH OR LESS

L = TAPER LENGTH IN FEET

S = NON-CONSTRUCTION SPEED LIMIT (MPH)

W = WIDTH OF LANE CLOSURE

LEGEND

- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL DRUM
- FLASHING ARROW BOARD
- DIRECTION OF TRAFFIC
- REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)
- WORK AREA

GENERAL NOTES

THIS LANE CLOSURE DETAIL IS TYPICAL FOR CLOSING THE LEFT LANE. FOR A RIGHT LANE CLOSURE, REVERSE THE TRAFFIC CONTROL.

THIS DETAIL MAY BE USED FOR ROADWAYS WITH EITHER TWO OR THREE LANES IN EACH DIRECTION.

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

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

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" SIGNS MAY BE USED IF APPROVED BY DISTRICT TRAFFIC UNIT.

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

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

ON UNDIVIDED ROADWAYS, OMIT THE SIGNS SHOWN ON LEFT SIDE OF ROAD.

W20-1A, G20-1 AND G20-2A SIGNS ARE NOT REQUIRED IF THE LANE CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS.

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROWBOARDS SO THE APPROACHING DRIVER HAS A CLEAR VIEW OF THE ARROWBOARDS AND LANE CLOSURE DRUMS.

PLACE THE ARROWBOARD AS CLOSE AS POSSIBLE TO THE BEGINNING OF THE LANE CLOSURE TAPER, PREFERABLY ON THE SHOULDER OR TERRACE.

CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

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

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2016 — DATE
/S/ Peter Amakobe Atepe — STATEWIDE WORK ZONE SAFETY ENGINEER
FHWA

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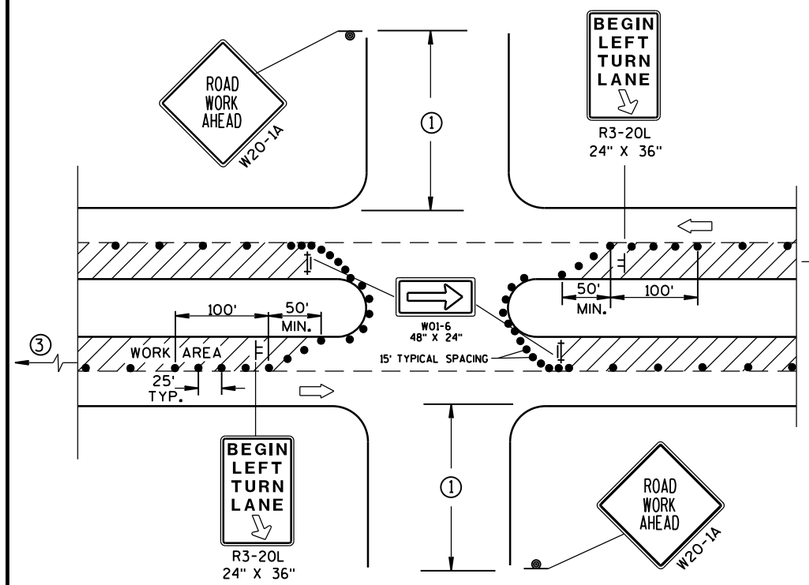
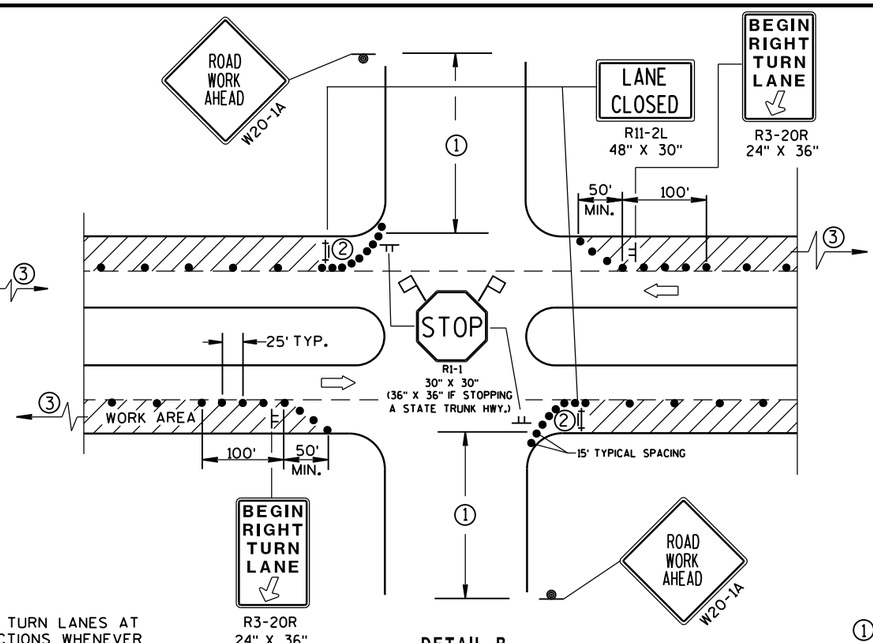


DETAIL A

FOR LEFT LANE CLOSURE AT INTERSECTION OR MEDIAN OPENING

PROVIDE TURN LANES AT INTERSECTIONS WHENEVER STAGING OF WORK ALLOWS. TAPER AND TURN LANE LENGTHS BASED ON FIELD CONDITIONS AS APPROVED BY THE ENGINEER.



DETAIL B

FOR RIGHT LANE CLOSURE AT INTERSECTION

GENERAL NOTES

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

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

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" SIGNS MAY BE USED IF APPROVED BY DISTRICT TRAFFIC UNIT.

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

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

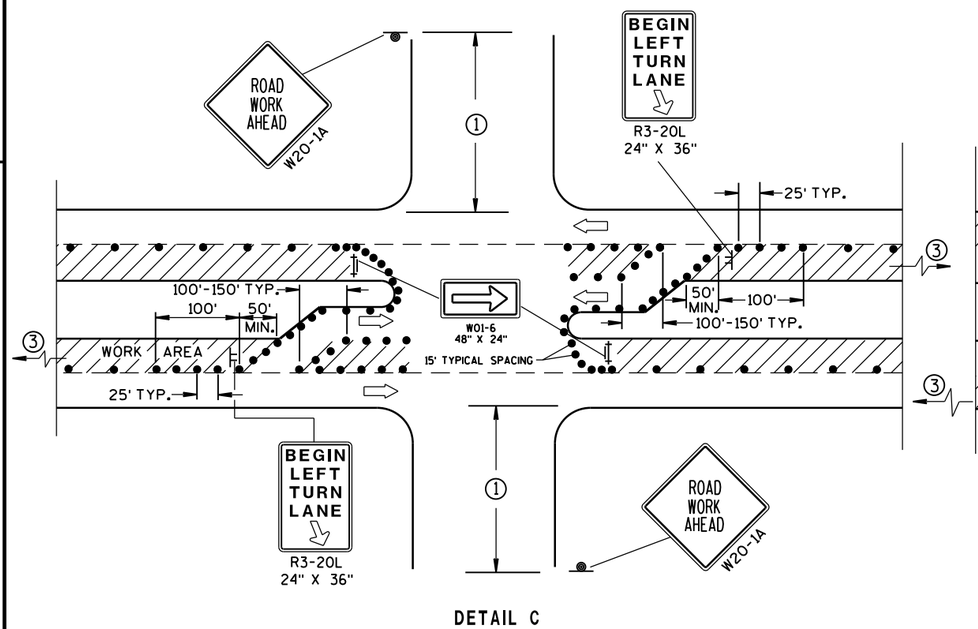
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

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

① 500' TYPICAL OR AT LAST INTERSECTION, WHICHEVER IS CLOSER.
350' IF 35-40 MPH.
200' IF 25-30 MPH.

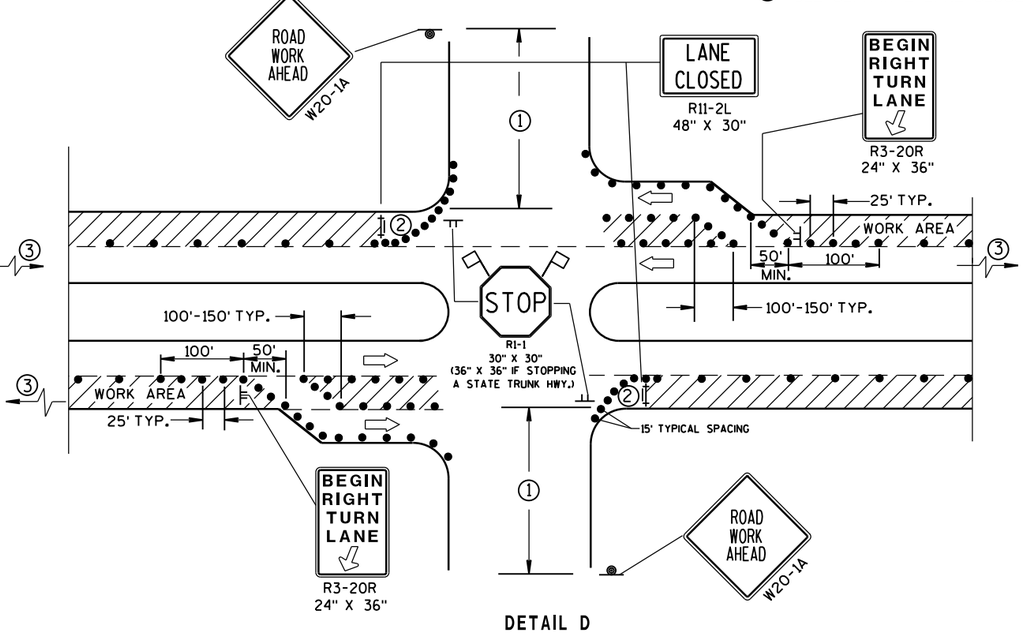
② ALSO USE BARRICADE AND 15-FOOT TYPICAL DRUM SPACING AT COMMERCIAL DRIVEWAYS.

③ SEE SEPARATE LANE CLOSURE DETAIL FOR ADDITIONAL TRAFFIC CONTROL.



DETAIL C

FOR LEFT LANE CLOSURE AT INTERSECTION OR MEDIAN OPENING (WITH LEFT TURN BAY OPEN)



DETAIL D

FOR RIGHT LANE CLOSURE AT INTERSECTION (WITH RIGHT TURN BAY OPEN)

LEGEND

- TRAFFIC CONTROL DRUM
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT (5' MIN. MOUNTING HEIGHT)
- TYPE III BARRICADE WITH ATTACHED SIGN AND TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC
- FLAGS, 16" X 16" MIN., (ORANGE)
- WORK AREA

TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

June 2016
DATE

/S/ Peter Anakobe Atepe
STATEWIDE WORK ZO[illegible] SAFETY ENGI[illegible]

FHWA

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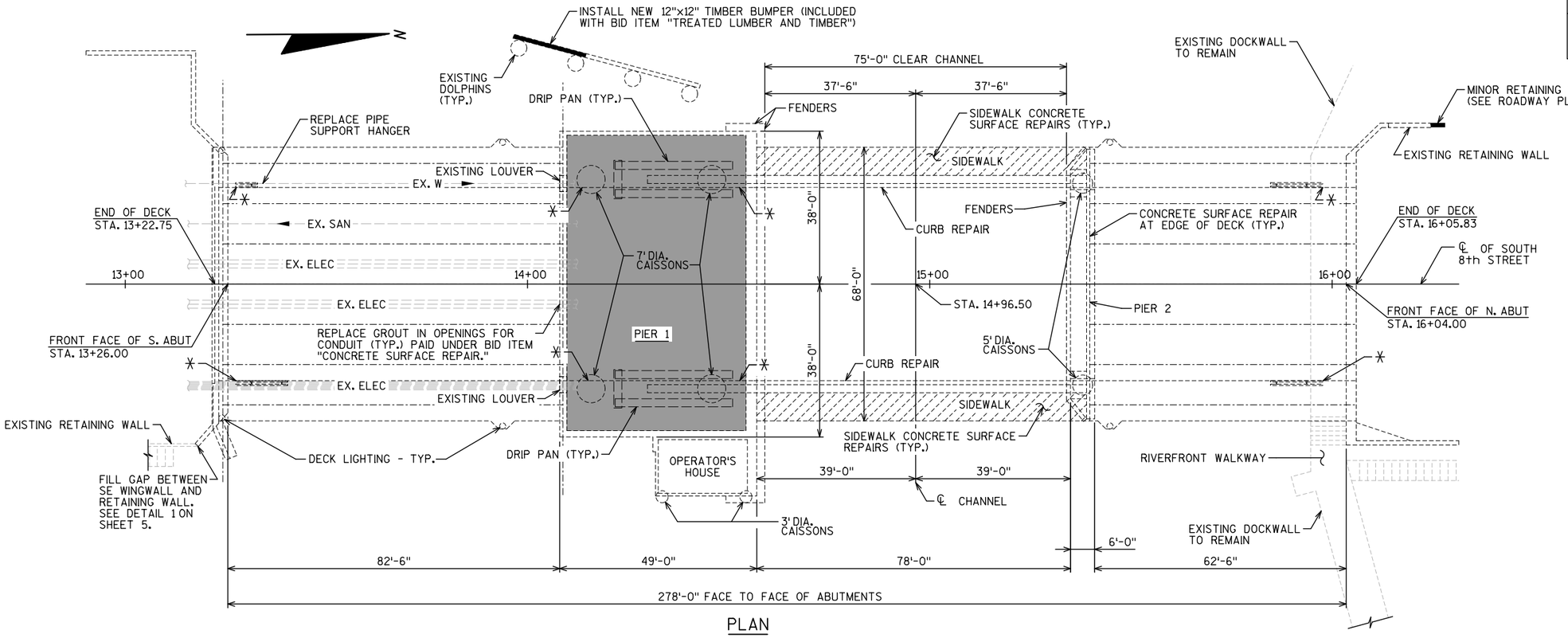


PLAN

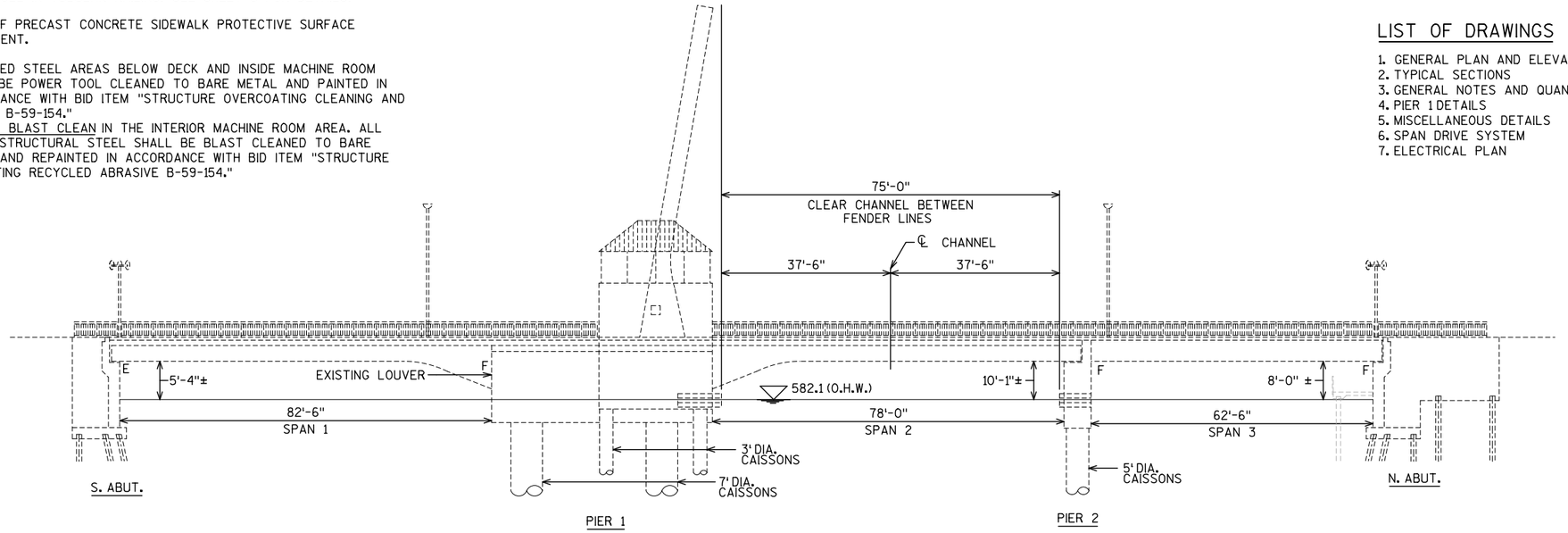
(THREE SPAN SINGLE LEAF BASCULE BRIDGE - UNBALANCED TRUNNION TYPE)

LEGEND

⁂ DRILL HOLE IN TUBULAR RAILING. SEE SHEET 5 FOR DETAILS.

AREA OF PRECAST CONCRETE SIDEWALK PROTECTIVE SURFACE TREATMENT.

CORRODED STEEL AREAS BELOW DECK AND INSIDE MACHINE ROOM SHALL BE POWER TOOL CLEANED TO BARE METAL AND PAINTED IN ACCORDANCE WITH BID ITEM "STRUCTURE OVERCOATING CLEANING AND PRIMING B-59-154."
DO NOT BLAST CLEAN IN THE INTERIOR MACHINE ROOM AREA. ALL OTHER STRUCTURAL STEEL SHALL BE BLAST CLEANED TO BARE METAL AND REPAINTED IN ACCORDANCE WITH BID ITEM "STRUCTURE REPAINTING RECYCLED ABRASIVE B-59-154."



ELEVATION

LIST OF DRAWINGS

BUREAU OF STRUCTURES CONTACT - WILLIAM DREHER (608) 266-8489
CONSULTANT CONTACT - MICHAEL DELEMONT (414) 944-6200

STATE PROJECT NUMBER

4996-19-71

WISCONSIN PROFESSIONAL ENGINEER
MICHAEL A. DELEMONT
E-42185
FRANKLIN, WI
5/22/2017
(SHEETS 1-5)

WISCONSIN PROFESSIONAL ENGINEER
BRADLEY ROBERT KOPPING
E-44714
TAMPA, FL
5/22/17
(SHEET 6)

WISCONSIN PROFESSIONAL ENGINEER
DANIEL A. DUZAN
38846-006
CHICAGO, IL
5/22/17
(SHEET 7)

NO.	DATE	REVISION	BY

AECOM
1555 North Rivercenter Drive, Suite 214
Milwaukee, WI 53212
(414) 944-6080

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher SDR 05/22/17
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-59-154

SOUTH 8TH STREET OVER SHEBOYGAN RIVER

COUNTY	~~TOWN~~/CITY/~~VILLAGE~~
SHEBOYGAN	SHEBOYGAN

DESIGN SPEC. REHABILITATION N/A

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
DNJ	MAD	DNJ	MAD

GENERAL PLAN AND ELEVATION

SHEET 1 OF 7
50

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FILE= \\S1102K306\Projects\Transportation\Sheboygan Lift Bridge\CADD\structural\01_B-59-154 General Plan and Elevation.dgn

DATE: 5/22/2017
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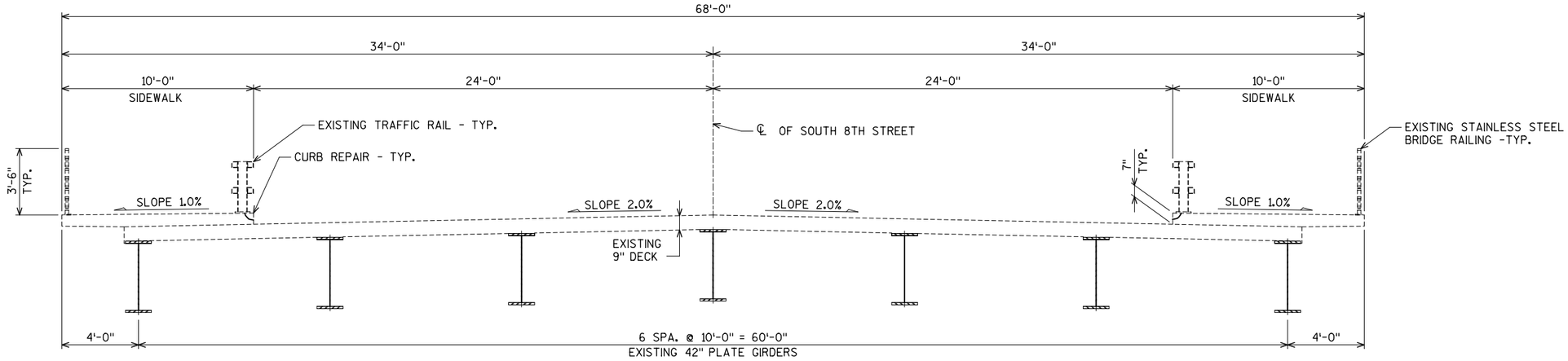
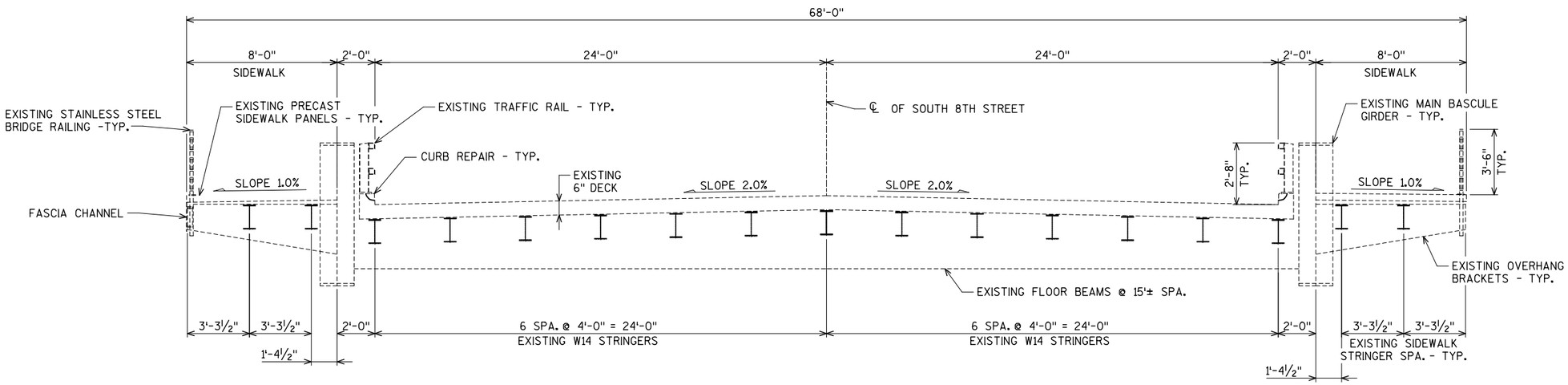
STATE PROJECT NUMBER
4996-19-71



EXISTING APPROACH SPAN DECK SECTION THRU ROADWAY



EXISTING BASCULE SPAN SECTION THRU ROADWAY

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-59-154

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TYPICAL SECTIONS

SHEET 2 OF 7
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FILE: \\S1102K306\Projects\Transportation\Sheboygan Lift Bridge\CADD\structural\02_B-59-154 Typical Sections.dgn

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TOTAL ESTIMATED QUANTITIES

BID ITEM NO.	BID ITEM DESCRIPTION	UNIT	SUPER-STRUCTURE	SOUTH ABUTMENT	PIER 1	PIER 2	NORTH ABUTMENT	STRUCTURE TOTAL
204.0185	REMOVING MASONRY	CY	-	-	2	-	-	2
209.0200.S.01	BACKFILL CONTROLLED LOW STRENGTH	CY	-	-	-	-	1	1
502.0100	CONCRETE MASONRY BRIDGES	CY	-	-	2	-	-	2
502.3200	PROTECTIVE SURFACE TREATMENT	SY	150	-	1	-	-	151
502.4205	ADHESIVE ANCHORS NO. 5 BAR	EACH	-	-	12	-	-	12
502.4206	ADHESIVE ANCHORS NO. 6 BAR	EACH	-	-	12	-	-	12
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	-	-	280	-	-	280
507.0200	TREATED LUMBER AND TIMBER	MBM	-	-	0.15	-	-	0.15
509.1200	CURB REPAIR	LF	44	-	-	-	-	44
509.1500	CONCRETE SURFACE REPAIR	SF	213	5	18	1	47	284
509.9020.S	EPOXY CRACK SEALING	LF	1383	91	117	125	171	1,887
517.1800.S	STRUCTURE REPAINTING RECYCLED ABRASIVE B-59-154	LS	-	-	-	-	-	1
517.3000.S	STRUCTURE OVERCOATING CLEANING AND PRIMING B-59-154	LS	-	-	-	-	-	1
517.4000.S	CONTAINMENT AND COLLECTION OF WASTE MATERIALS	LS	-	-	-	-	-	1
517.4500.S	NEGATIVE PRESSURE CONTAINMENT AND COLLECTION OF WASTE MATERIALS B-59-154	LS	-	-	-	-	-	1
517.6001.S	PORTABLE DECONTAMINATION FACILITY	EACH	-	-	-	-	-	1
SPV.0060.01	RE-CHROME CYLINDER ROD	EACH	-	-	1	-	-	1
SPV.0060.02	HONE CYLINDER BARREL	EACH	-	-	1	-	-	1
SPV.0060.03	REPLACE LOAD HOLDING VALVE	EACH	-	-	1	-	-	1
SPV.0060.04	SUPPORT HANGER REPLACEMENT	EACH	1	-	21	-	-	22
SPV.0090.01	NON-BITUMINOUS JOINT FILLER	LF	324	10	-	-	5	339
SPV.0105.01	ELECTRICAL WORK	LS	-	-	-	-	-	1
SPV.0105.02	HYDRAULIC SPAN DRIVE MACHINERY REHABILITATION	LS	-	-	-	-	-	1
SPV.0105.03	TUBULAR STEEL RAILING REPAIR	LS	-	-	-	-	-	1
SPV.0105.04	HEATING AND HOUSING	LS	-	-	-	-	-	1
	NON-BID ITEMS							
	PREFORMED JOINT FILLER	SIZE						¾", 1½"

DESIGN DATA

LIVE LOAD: (TAKEN FROM HSI 12/21/2016)

DESIGN LOADING: HS-20
INVENTORY RATING: HS-25
OPERATING RATING: HS-42
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) = 220 KIPS

TRAFFIC DATA

A.D.T. = 12,400 (2019)
A.D.T. = 13,600 (2039)
R.D.S. = 30 MPH

ULTIMATE DESIGN STRESSES

CONCRETE MASONRY

DECK	4,000 PSI
OTHER	3,500 PSI
PRECAST	4,500 PSI
BAR STEEL REINFORCEMENT	60,000 PSI

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS. REFERENCE THE ORIGINAL PLANS FOR ADDITIONAL INFORMATION.

ALL ELEVATIONS SHOWN ON THE PLANS ARE BASED ON U.S.G.S. DATUM PER THE ORIGINAL STRUCTURE PLANS. REFERENCE THE ORIGINAL PLANS FOR ADDITIONAL INFORMATION.

EXCAVATION NECESSARY TO COMPLETE THE RETAINING WALL IS CONSIDERED INCIDENTAL TO THE ROADWAY BID ITEM "WALL MODULAR BLOCK GRAVITY LANDSCAPE LRFD." SEE ROADWAY CONSTRUCTION DETAILS FOR ADDITIONAL INFORMATION.

CONCRETE SURFACE REPAIR ON THE DECK SURFACE SHALL BE DEFINED BY A 1" DEEP SAW CUT AT THE LIMITS OF THE SURFACE REPAIR.

CONCRETE SURFACE REPAIR ON THE PRECAST SIDEWALK PANELS SHALL BE DEFINED BY A ⅜" DEEP SAW CUT AT THE LIMITS OF THE SURFACE REPAIR. CONCRETE REMOVAL IS NOT TO EXTEND BEYOND ¼" BELOW THE EXISTING WELDED WIRE FABRIC REINFORCEMENT.

AT CURB REPAIR EXPOSE EXISTING REINFORCEMENT A MINIMUM OF 1" CLEAR.

CONCRETE SURFACE REPAIR AND CURB REPAIR AREAS WILL BE DETERMINED BY THE FIELD ENGINEER.

APPLY NON-BITUMINOUS JOINT FILLER TO ALL LONGITUDINAL AND TRANSVERSE PRECAST SIDEWALK PANEL JOINTS AFTER COMPLETING THE CONCRETE SURFACE REPAIRS ON THE SIDEWALK PANELS AND AFTER PAINTING AND CONCRETE SURFACE SEALER HAS BEEN COMPLETED ON THE SEALING SURFACES.

CLEAN AND FILL EXISTING LONGITUDINAL AND TRANSVERSE CRACKS WITH PENETRATING EPOXY IN THE TOP SURFACE AND UNDERSIDE OF EXISTING DECK (INCLUDING THE UNDERSIDE OF DECK IN THE PIER 1 MACHINERY ROOM), SIDEWALKS, ABUTMENTS, WINGWALLS, AND PIERS AS DIRECTED BY THE FIELD ENGINEER. ALL WORK IS INCLUDED IN THE BID ITEM "EPOXY CRACK SEALING."

APPLY PROTECTIVE SURFACE TREATMENT TO REPAIRED CURB SECTIONS AND TO SPAN 2 SIDEWALK PANELS AFTER CONCRETE SURFACE REPAIRS HAVE BEEN COMPLETED.

ALL EXTERIOR STRUCTURAL STEEL AND TRAFFIC TUBULAR STEEL RAILINGS SHALL BE CLEANED AND PAINTED IN ACCORDANCE WITH BID ITEM "STRUCTURE REPAINTING RECYCLED ABRASIVE B-59-154."

CORRODED STEEL AREAS BELOW DECK AND INSIDE MACHINE ROOM OF PIER 1 SHALL BE POWER TOOL CLEANED TO BARE METAL AND PAINTED IN ACCORDANCE WITH BID ITEM "STRUCTURE OVERCOATING CLEANING AND PRIMING B-59-154."

DO NOT BLAST CLEAN IN THE INTERIOR MACHINE ROOM AREA. PROTECT ALL MACHINERY, HYDRAULIC RAMS, SEALS, BEARINGS, AND ELECTRICAL COMPONENTS FROM PAINT CLEANING AND OVERSPRAY.

THE COLOR OF THE FINISH EPOXY TOP COAT FOR STRUCTURAL STEEL, TUBULAR STEEL RAILINGS, AND MACHINE ROOM CYLINDER SUPPORT PEDESTALS SHALL BE A CUSTOM COLOR "SHEBOYGAN BLUE," MATCHING THE COLOR OF THE EXISTING RIVERFRONT WALKWAY RAILINGS.

THE COLOR OF THE FINISH EPOXY TOP COAT FOR ALL OTHER MACHINE ROOM ITEMS, INCLUDING MACHINERY, SHALL MATCH THEIR EXISTING COLOR, EXCEPT FOR THOSE ITEMS PAINTED "SHEBOYGAN BLUE."

DURING CONSTRUCTION, A MINIMUM 40-FOOT WIDE RIVER CHANNEL, MEASURED AT RIGHT ANGLES TO THE NORMAL FLOW OF THE RIVER, SHALL BE KEPT OPEN TO BOAT TRAFFIC AT ALL TIMES DURING THE NAVIGATION SEASON. THE CONTRACTOR SHALL NOT PLACE ANY EQUIPMENT OR TEMPORARY STRUCTURES WITHIN THE CHANNEL THAT IS TO REMAIN OPEN TO BOAT TRAFFIC. THE CHANNEL TO REMAIN OPEN WILL ALLOW ONLY ONE-WAY BOAT TRAFFIC DURING CONSTRUCTION. THE CONTRACTOR'S OPERATIONS REGARDING THESE REQUIREMENTS ARE SUBJECT TO THE APPROVAL OF THE ENGINEER, THE CITY OF SHEBOYGAN, AND THE U.S. COAST GUARD.

THE CONTRACTOR SHALL NOT RESTRICT THE NAVIGATION CHANNEL HEREIN DESCRIBED DURING CONSTRUCTION UNLESS APPROVAL IS OBTAINED FROM THE CITY OF SHEBOYGAN AND THE U.S. COAST GUARD. IF THE CONTRACTOR WISHES TO TEMPORARILY OBSTRUCT THE NAVIGATION CHANNEL FOR ANY PERIOD OF TIME, THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ANY TEMPORARY PERMITS PRIOR TO PLACING ANY CONSTRUCTION RELATED EQUIPMENT WITHIN THE NAVIGATION CHANNEL. THE CONTRACTOR IS HEREBY ADVISED THAT NO GUARANTEES CAN BE GIVEN THAT THE CITY OF SHEBOYGAN AND THE U.S. COAST GUARD WILL PERMIT ANY TEMPORARY CLOSURES TO NAVIGATION.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH THE REQUIREMENTS OF THE U.S. COAST GUARD FOR ANY AND ALL TEMPORARY NAVIGATION LIGHTING WHICH MAY BE REQUIRED INCLUDING, BUT NOT LIMITED TO LIGHTS ON FALSEWORK, EXISTING SUPERSTRUCTURE, PIERS, CONSTRUCTON EQUIPMENT, AND BUOYS WHICH MAY BE REQUIRED UNTIL CONSTRUCTION IS COMPLETE. IF REQUIRED, COST FOR THESE ITEMS IS INCIDENTAL TO THE BID ITEM IN WHICH THE ITEMS ARE NECESSARY.

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-59-154

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GENERAL NOTES AND QUANTITIES

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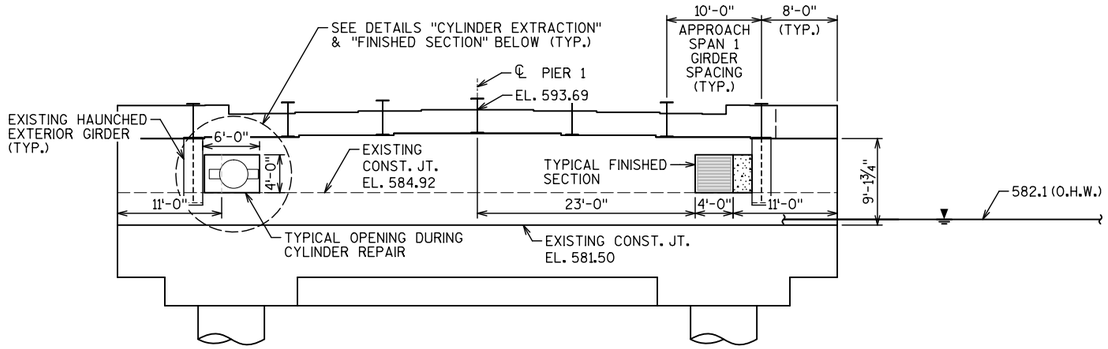


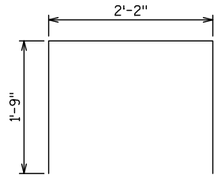
PIER 1 CROSS SECTION

SOUTH WALL LOOKING NORTH, UP STATION

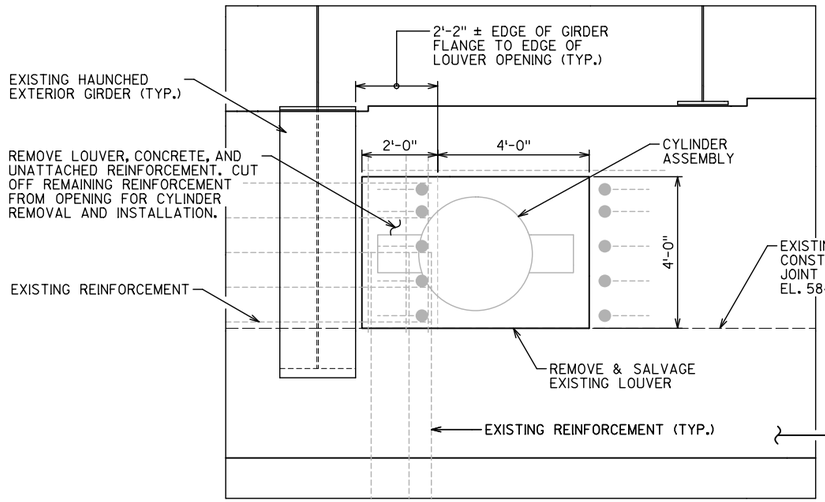
BAR TABLE

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	LOCATION
P501	X	10	5'-5"	X	LOUVER OPENING - HORIZONTAL
P502	X	12	3'-10"		LOUVER OPENING - VERTICAL
P603	X	12	3'-4"		LOUVER OPENING - VERTICAL
P504	X	12	3'-2"		LOUVER OPENING - VERTICAL
P505	X	20	3'-4"		LOUVER OPENING - HORIZONTAL

TOTAL WEIGHT = 280 LB

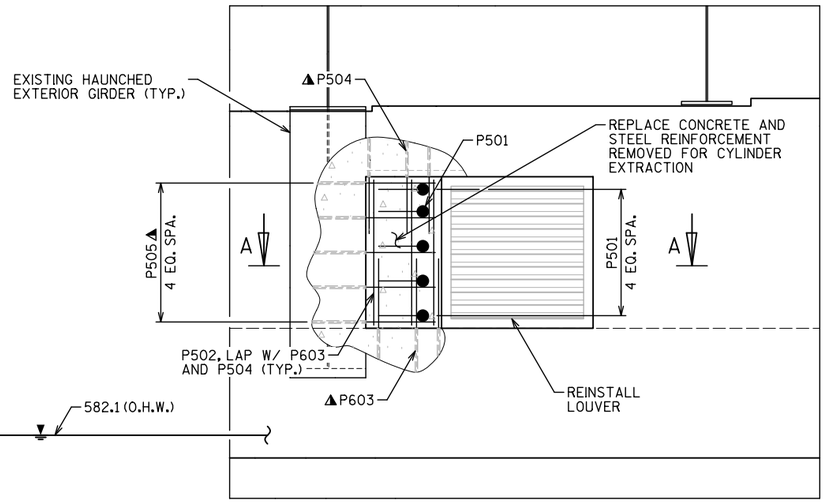


P501



CYLINDER EXTRACTION

(WEST SIDE SHOWN, EAST SIDE SIMILAR)



FINISHED SECTION

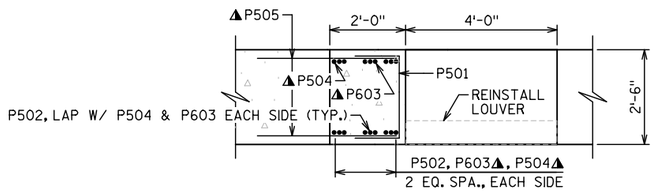
(WEST SIDE SHOWN, EAST SIDE SIMILAR)

LEGEND

▲ ADHESIVE ANCHOR
EMBED ADHESIVE ANCHORS:
NO. 5 BAR = 1'-6"
NO. 6 BAR = 1'-10"

NOTES

MAKE A ½" DEEP SAW CUT IN THE CONCRETE TO BE REMOVED FOR THE TEMPORARY LOUVER OPENING EXTENSION BOTH INSIDE AND OUTSIDE OF THE PIER WALL AT THE LIMITS OF THE TEMPORARY LOUVER OPENING EXTENSION BEFORE REMOVING CONCRETE.



SECTION A-A

NO.	DATE	REVISION	BY

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STRUCTURE B-59-154

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PIER 1 DETAILS

SHEET 4 OF 7
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FILE= \\S1102K306\Projects\Transportation\Sheboygan Lift Bridge\CADD\structural\04_B-59-154 Pier 1 Details.dgn

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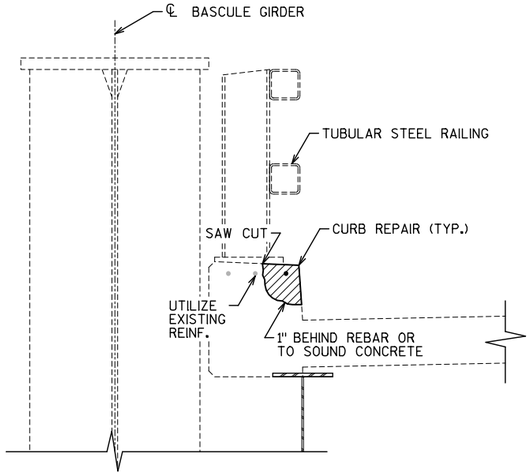
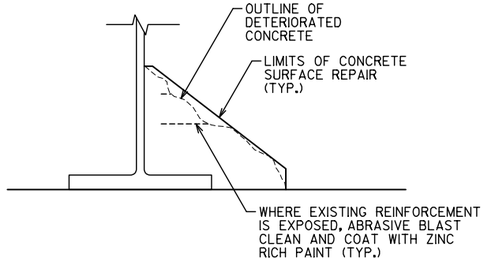
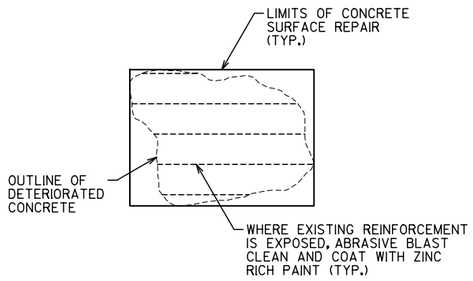


CURB REPAIR DETAILS



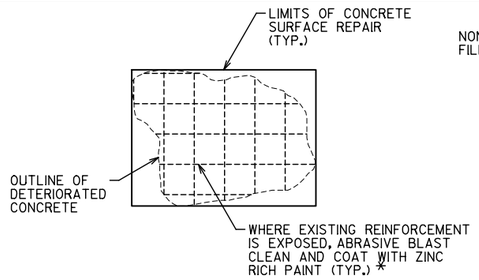
CONCRETE SURFACE REPAIR

TYPICAL AT GIRDER END DIAPHRAGM



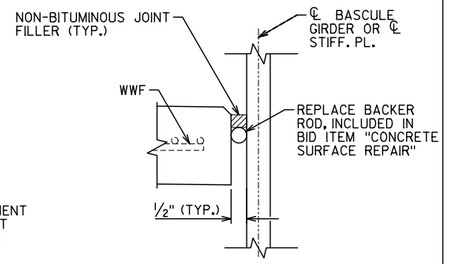
CONCRETE SURFACE REPAIR

TYPICAL AT ABUTMENT/PIER

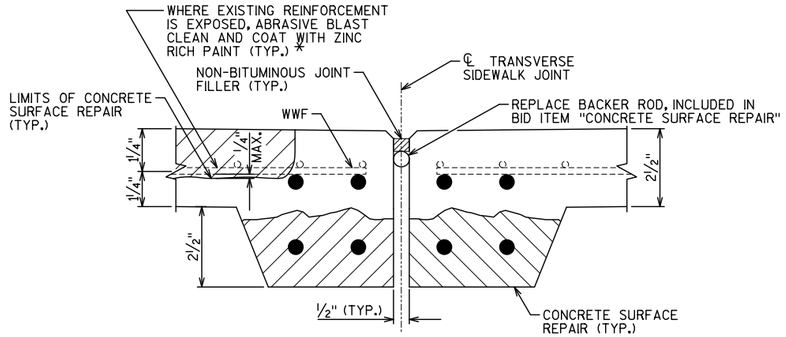


PLAN VIEW

TYPICAL AT SIDEWALK PANEL



LONGITUDINAL JOINT ALONG BASCULE GIRDER

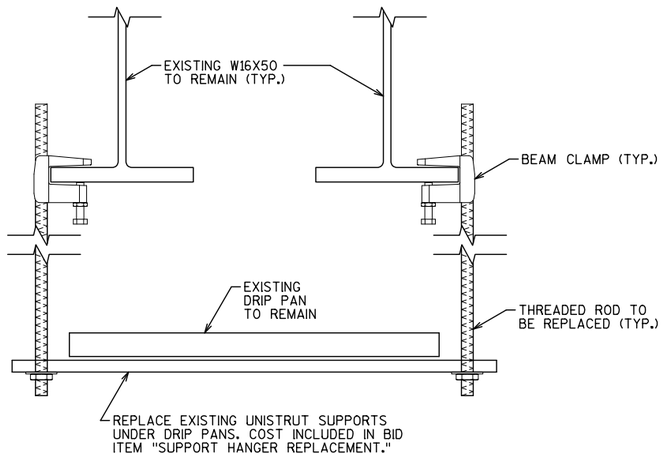


PRECAST CONCRETE SIDEWALK PANEL JOINT

TRANSVERSE JOINT (TYP.)

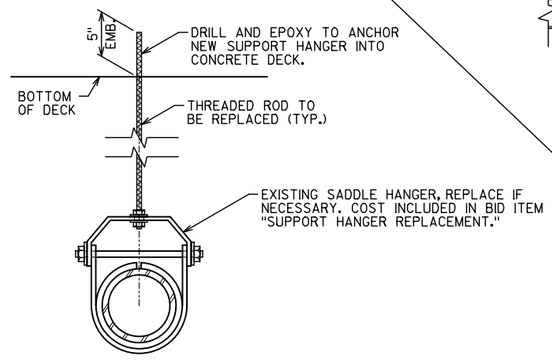
* WHEN REMOVING CONCRETE DO NOT USE HAMMERS HEAVIER THAN 15 POUNDS. DO NOT REMOVE CONCRETE FURTHER THAN 1/4" PAST THE WELDED WIRE FABRIC.

CONCRETE SURFACE REPAIR AT PRECAST CONCRETE SIDEWALK PANEL DETAILS



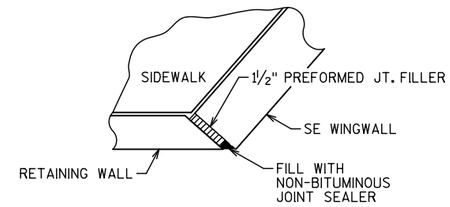
BEAM CLAMP SUPPORT HANGER REPLACEMENT DETAIL

(DRIP PAP/CONDUIT SUPPORT HANGER SHOWN)



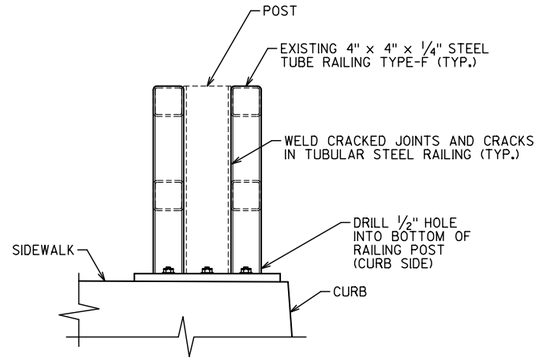
EPOXY ANCHORED SUPPORT HANGER REPLACEMENT DETAIL

(SEWER/WATER PIPE HANGER SHOWN)

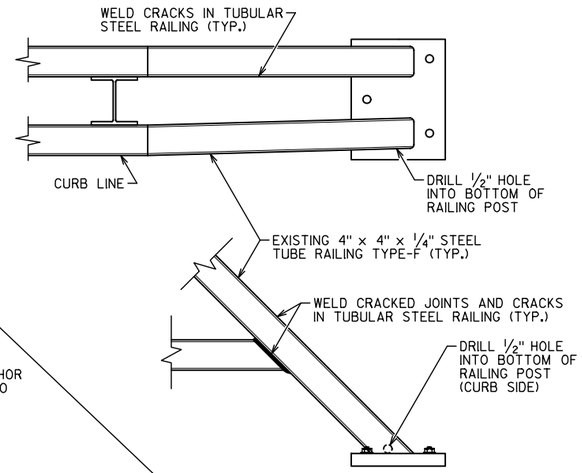


DETAIL 1

(SEE SHEET 1 FOR LOCATION)



(SHOWING LEFT RAIL LOOKING NORTH)



TUBULAR STEEL RAILING REPAIR DETAILS

SEE SHEET 1 FOR LOCATIONS
(SHOWING RIGHT RAIL LOOKING NORTH)

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DEPARTMENT OF TRANSPORTATION

STRUCTURE B-59-154

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MISCELLANEOUS DETAILS

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FILE= \\S1102K306\Projects\Transportation\Sheboygan Lift Bridge\CADD\structural\05_B-59-154 Miscellaneous Details.dgn

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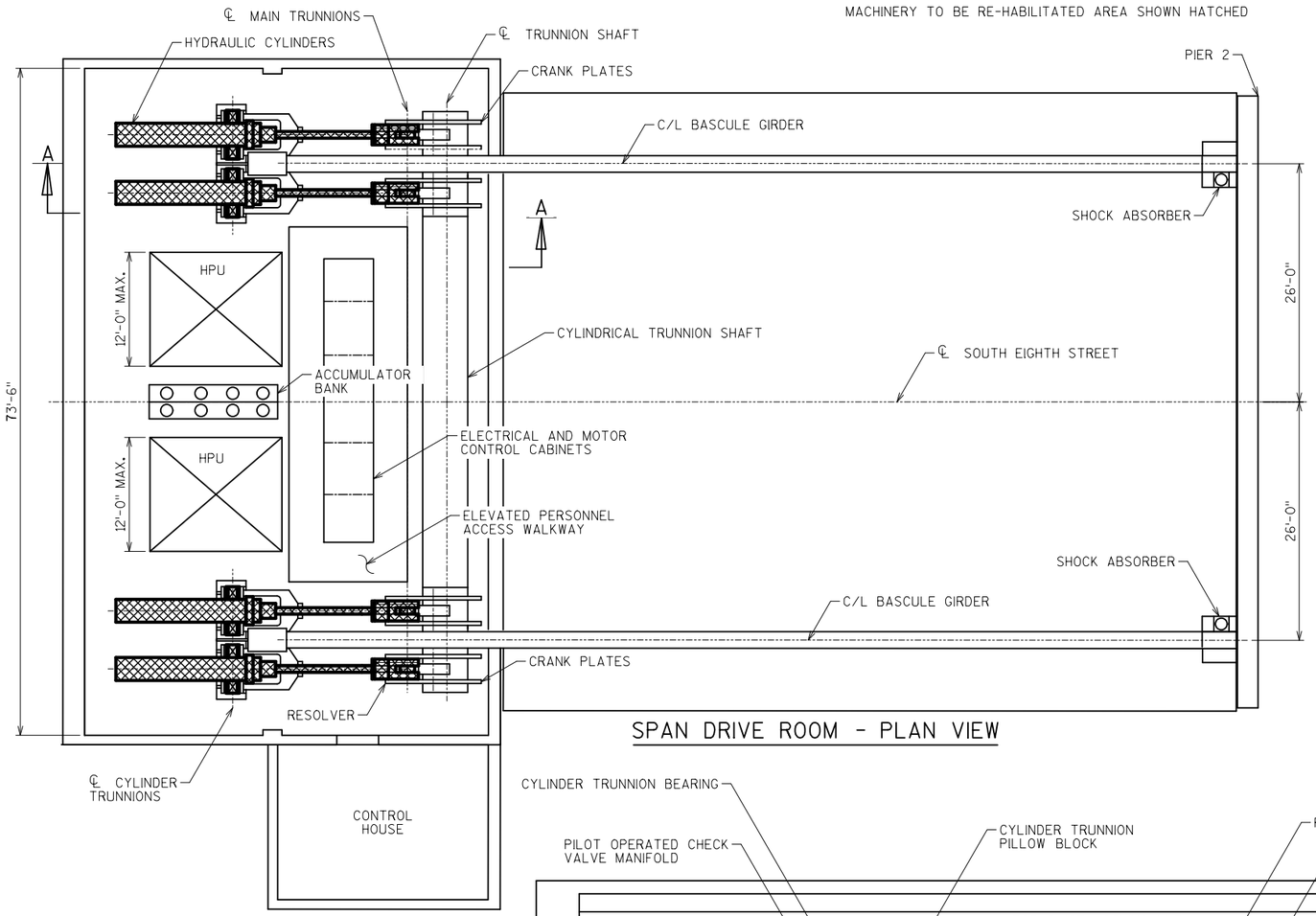
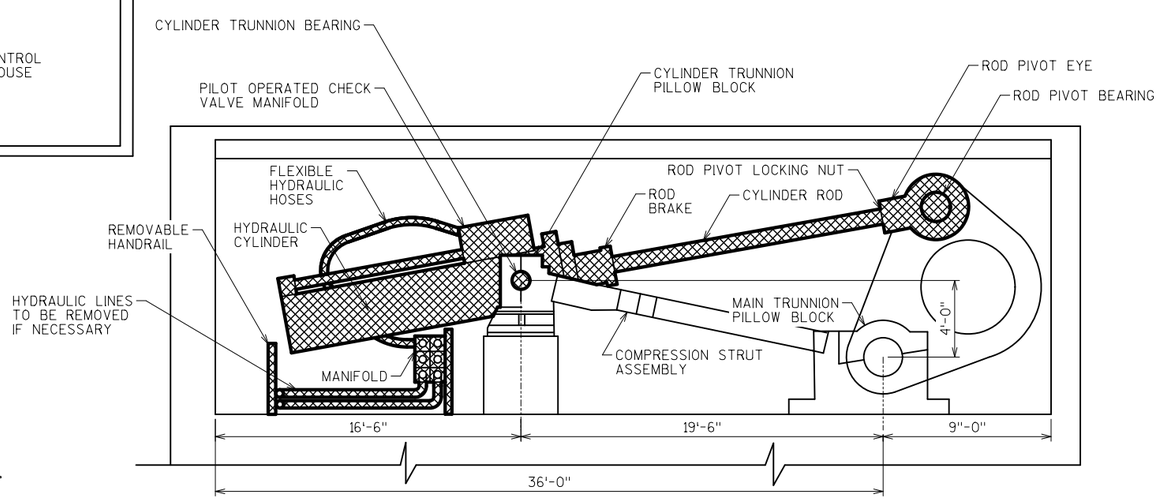


SPAN DRIVE ROOM - PLAN VIEW



SECTION A-A

NOTES:

1. DRAWINGS ARE NOT TO SCALE.
2. CYLINDER SPECIFICATIONS:
   MODEL NO: OILGEAR D-022623
   CYLINDER BORE = 26.00"
   ROD DIAMETER = 9.00"
   QUANTITY OF CYLINDERS (QTY. 4)
3. DIMENSIONS SHOWN ARE BASED ON ORIGINAL STRUCTURE PLANS. REFERENCE ORIGINAL PLANS FOR ADDITIONAL INFORMATION.
4. SEE ORIGINAL OILGEAR / REMCO HYDRAULICS CO. DWG. 022623 FOR ADDITIONAL CYLINDER INFORMATION, SPECIFICATIONS, AND RE-ASSEMBLY TORQUE VALUES.
5. THE PIPING ARRANGEMENT SHOWN IS SCHEMATIC AND DOES NOT SHOW ALL REQUIRED LINES. SEE HYDRAULIC SCHEMATIC AND SPECIAL PROVISIONS FOR REQUIREMENTS. HARD-LINE PIPING NOT SHOWN ON DRAWING MAY HAVE TO BE REMOVED.

SCOPE OF WORK (CONT.)

28. RE-CONNECT CYLINDER ROD EYE TO CRANK PLATE ASSEMBLY.
29. GREASE CYLINDER TRUNNION BEARING AND ROD PIVOT BEARING
30. PERFORM A FINAL HIGH PRESSURE WATER WASH DOWN WITH DEGREASING AGENT AND LIGHT DETERGENT TO REMOVE ALL HYDRAULIC OIL FROM COMPONENTS AND FLOOR.
31. FINAL INSPECTION, TESTING, AND OPERATION OF BRIDGE.

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SCOPE OF WORK

1. SUBMIT FOR REVIEW CYLINDER REMOVAL PROCEDURE.
2. INSTALL TEMPORARY SUPPORT AND DISCONNECT ROD END OF CYLINDER FROM CRANK PLATE ASSEMBLY.
3. RETRACT CYLINDER FULLY, DRAIN HYDRAULIC FLUID, AND CAP OPEN CONNECTIONS IMMEDIATELY. COMPLETE ALL HYDRAULIC WORK PRIOR TO CONCRETE DEMOLITION.
4. BLEED OFF PRESSURE FROM HYDRAULIC ACCUMULATORS AND LOCK OUT THE HYDRAULIC POWER PACKS FROM USE.
5. REMOVE HOSING, PIPING, AND ANY OTHER COMPONENTS IN PREPARATION FOR CYLINDER REMOVAL FROM PIER. CAP OPEN CONNECTIONS IMMEDIATELY AND COMPLETE HYDRAULIC WORK PRIOR TO CONCRETE DEMOLITION.
6. PERFORM CONCRETE DEMOLITION AND STRUCTURAL MODIFICATIONS TO ENLARGE EXIT IN PREPARATION FOR CYLINDER REMOVAL (SEE SHEET "PIER 1 DETAILS".
7. REMOVE HYDRAULIC CYLINDERS FROM PIER STRUCTURE. REMOVE WEST OUTER CYLINDER FIRST.
8. TRANSPORT CYLINDERS TO REBUILD FACILITY.
9. REMOVE PILOT OPERATED CHECK VALVE MANIFOLD FROM CYLINDER BODY.
10. REMOVE, INSPECT, AND REPAIR AS NEEDED THE BRAKE, CYLINDER HEAD, ROD, AND PISTON.
11. INSPECT AND REPAIR THE CYLINDER BARREL AND CYLINDER ROD. IT IS ANTICIPATED THAT ONE OF THE FOUR CYLINDERS WILL REQUIRE THE BARREL TO BE HONED AND THE ROD TO BE RE-CHROMED. CONTACT THE ENGINEER PRIOR TO PERFORMING THIS WORK.
12. MODIFY ROD BRAKE HOUSING FOR OIL LEAK CAPTURE PER SPECIFICATIONS, REPLACE ROD WIPER SEAL (PARKER D-9000), AND INSTALL ON ROD.
13. REPLACE CYLINDER PISTON, HEAD, AND ROD SEALS.
14. BENCH TEST PILOT OPERATED CHECK VALVES AND PROVIDE TEST RESULTS.
15. PROTECT SEALS, PORTS, AND PILOT OPERATED CHECK VALVES, SANDBLAST, AND PAINT CYLINDER.
16. BENCH PRESSURE TEST, OPERATE EACH CYLINDER, AND PROVIDE TEST RESULTS.
17. TRANSPORT CYLINDERS BACK TO BRIDGE.
18. AFTER APPROVAL OF CYLINDER REBUILD AND TEST REPORTS, MOVE CYLINDERS INTO THE HYDRAULIC SPAN DRIVE MACHINERY ROOM.
19. DURING CYLINDER REBUILD PROCESS, REMOVE HYDRAULIC FLUID FROM POWER PACK RESERVOIRS, REMOVE TANK HEATERS, CLEAN HYDRAULIC TANK, AND INSTALL NEW TANK HEATERS.
20. PERFORM A TOP DOWN SPAN DRIVE MACHINERY ROOM HIGH PRESSURE WATER WASH DOWN WITH LIGHT DETERGENT TO REMOVE ANY RESIDUAL DUST FROM CONCRETE DEMOLITION OPERATIONS AND PREVENT HYDRAULIC OIL CONTAMINATION DURING RE-ASSEMBLY.
21. REPLACE HYDRAULIC FLUID WITH NEW FLUID PER SPECIFICATIONS.
22. FLUSH, COLLECT, AND CAPTURE PRIOR TO RESERVOIR INTAKE EXISTING HYDRAULIC FLUID FROM POWER PACK, LINES, HOSING, AND ALL OTHER HYDRAULIC EQUIPMENT. TRANSPORT FLUSHED FLUID AND EXISTING RESERVOIR FLUID TO PROPER TREATMENT AND DISPOSAL FACILITY.
23. CONFIRM FLUSHING PROCESS IS COMPLETE BY COLLECTING AN OIL SAMPLE AND CONFIRM THAT SAMPLE MEETS ISO 17/15/13. REPEAT FLUSHING PROCESS IF OIL DOES NOT MEET SPECIFICATION.
24. INSTALL EACH CYLINDER BACK INTO POSITION BUT DO NOT CONNECT THE CYLINDER ROD EYE TO THE BRIDGE.
25. REPLACE PREVIOUSLY REMOVED HYDRAULIC COMPONENTS, VALVES, SOLID AND FLEXIBLE HOSING, AND RETURN SYSTEM TO OPERATIONAL.
26. BLEED SYSTEM COMPONENTS AS NEEDED TO PURGE ANY AIR.
27. PRE-TEST CYLINDERS OPERATION BY EXTENDING AND RETRACTING THE CYLINDERS THROUGH 10 CYCLES. IF EXTENSION IS NOT SMOOTH AND CONSISTENT FROM TRAPPED AIR IN THE SYSTEM, REPEAT 24-25.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-59-154

DRAWN BY	JCJ	PLANS CK'D.	BRK

SPAN DRIVE SYSTEM

SHEET 8 OF 7
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DATE: 5/22/2017
I.D.

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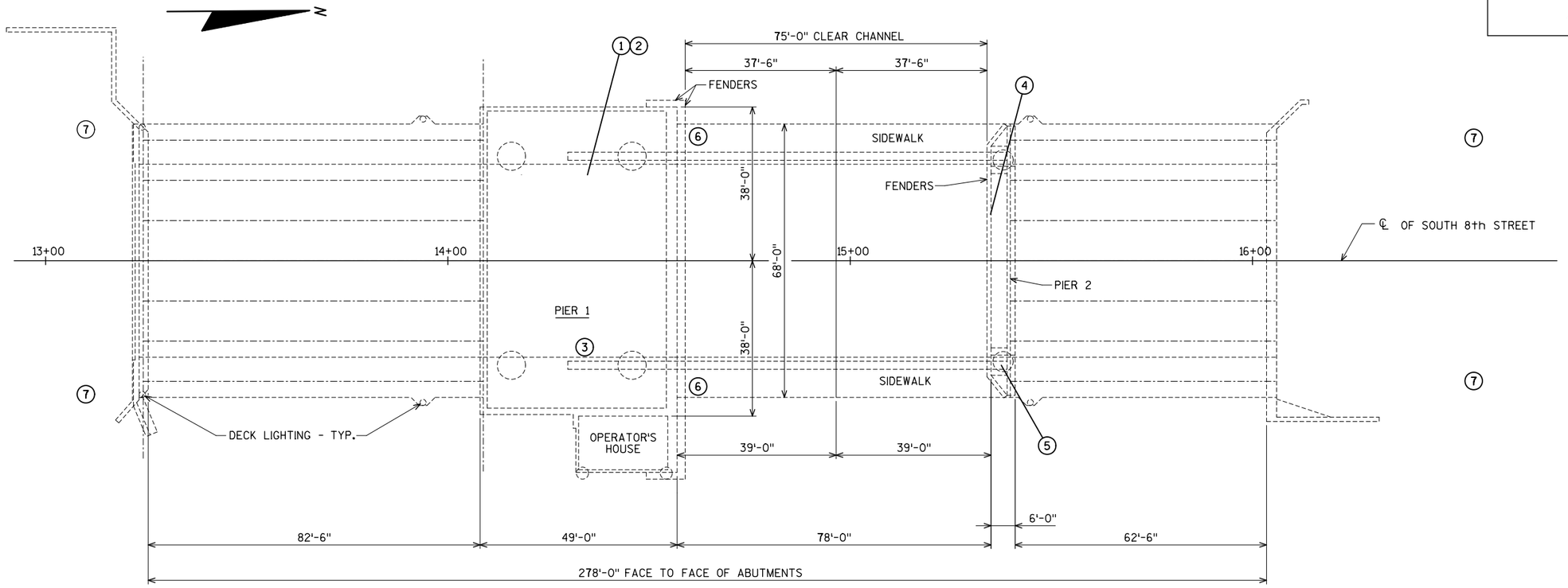
STATE PROJECT NUMBER
4996-19-71



PLAN

ELECTRICAL SCOPE OF WORK

1. REMOVE AND REPLACE EXISTING BRIDGE FULL OPEN LEVER ARM LIMIT SWITCH.
2. REMOVE AND REPLACE EXISTING CONDUIT FROM 2 FEET ABOVE FLOOR TO BRIDGE FULL OPEN LIMIT SWITCH AND TO ENCODER/RESOLVER. FURNISH AND INSTALL A NEW STAINLESS STEEL JUNCTION BOX TO TRANSITION TO NEW CONDUIT.
3. REMOVE AND REPLACE 30' SECTION OF FOUR OVERHEAD 1" TO 1.5" CONDUITS OVER THE EAST HYDRAULIC CYLINDERS. REPLACE CONDUIT SUPPORT HANGERS, PAID FOR UNDER STRUCTURAL PAY ITEM.
4. REMOVE AND REPLACE ALL CONDUIT ON THE SOUTH FACE OF PIER 2 THAT FEEDS PIER LIGHTS AND BRIDGE SEATED LIMIT. FURNISH AND INSTALL STAINLESS STEEL PULL AND JUNCTION BOXES AS NEEDED.
5. REMOVE AND REPLACE BRIDGE SEATED LIMIT SWITCH.
6. REMOVE AND REPLACE BRIDGE NAVIGATION HORNS(2)
7. REPAIR/REPLACE AUDIBLE AND VISUAL WARNING SIGNALS AT TRAFFIC APPROACHES

GENERAL NOTES

1. PROVIDE SUBMITTALS THAT INCLUDE ALL MATERIALS, DATA SHEETS, AND DRAWINGS AS REQUIRED BY THE CONTRACT DOCUMENTS. MATERIALS SHALL NOT BE PURCHASED UNTIL THE RELATED SUBMITTAL IS APPROVED BY THE ENGINEER.
2. CONFORM TO ALL NEC, UL, IEEE, NEMA, AND AASHTO CODES, STANDARDS AND PRACTICES.
3. ELECTRICAL DEVICES AND EQUIPMENT ARE SHOWN SYMBOLICALLY ON THE PLANS. THE USE OF SYMBOLS AND NOTATIONS (OR THE OMISSION THEREOF) DOES NOT RELIEVE THE CONTRACTOR FROM FURNISHING A SAFE, COMPLETE AND FULLY FUNCTIONAL SYSTEM. FIELD LOCATE DEVICES AND EQUIPMENT TO FACILITATE ACCESSIBILITY WITH RESPECT TO OPERATIONS AND MAINTENANCE CONDITIONS.
4. ALL MOUNTING HARDWARE SHALL BE 300 SERIES STAINLESS STEEL. ALL EXTERIOR BOXES SHALL BE NEMA 4X. ALL INTERIOR BOXES AND CABINETS SHALL BE NEMA 1 OR AS SHOWN ON THE PLANS.
5. MINIMUM CONDUIT SIZE IS 3/4" FOR RGS AND PVC COATED RGS. ALL CONDUIT IN MACHINERY ROOM AND ON PIER SHALL BE PVC COATED RIGID GALVANIZED STEEL.
6. ALL WIRES SHALL BE THHN/MTW UNLESS OTHERWISE NOTED. MINIMUM WIRE SIZE IS #14 AWG FOR CONTROL AND #10 AWG FOR POWER.
7. GROUNDING AND BONDING NEW EQUIPMENT PER NEC 250.
8. PULL BOXES SHALL BE UTILIZED FOR CONTINUOUS PULLING OF WIRES, NO SPLICING ALLOWED. JUNCTION BOXES SHALL BE UTILIZED TO BRING WIRES INTO AND TERMINATE ONTO TERMINAL BLOCKS. WIRE NUTS AND COMPRESSION SPLICES ARE NOT PERMITTED. DO NOT EXCEED 3-90 DEGREE CONDUIT BENDS WITHOUT PROVIDING A PULL BOX.
9. FURNISH EQUIPMENT THAT ARE U.L. LISTED AND LABELED, AS APPLICABLE.

PIER 2 NAVIGATION LIGHTS AND CONDUIT

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STRUCTURE B-59-154

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ELECTRICAL PLAN

SHEET 7 OF 7
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Notes

Wisconsin Department of Transportation

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