GRE DEC 2014

PROJECT ID: 4984-07-71
WITH: N/A

COUNTY: OUTAGAMIE

ORDER OF SHEETS

TOTAL SHEETS = 140

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STATE HIGHWAY REHABILITATION-MAINTENANCE PROJECT

S. ONEIDA STREET, CITY OF APPLETON

FOX RIVER BRIDGE B-44-0075

LOCAL STREET

OUTAGAMIE COUNTY

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
4984-07-71	———	———

STATE PROJECT NUMBER
4984-07-71

DESIGN DESIGNATION

A.A.D.T. 2013	=	15,800
A.A.D.T. 2033	=	17,300
D.H.V.	=	1,781.9
D.D.	=	59/41
T.	=	5.5%
DESIGN SPEED	=	35 mph
ESALS	=	N/A

CONVENTIONAL SYMBOLS

PLAN

CORPORATE LIMITS

REFERENCE LINE

COMBUSTIBLE FLUIDS — CAUTION

UTILITIES

ELECTRIC — E

FIBER OPTIC — FO

GAS — G

SANITARY SEWER — SAN

STORM SEWER — SS

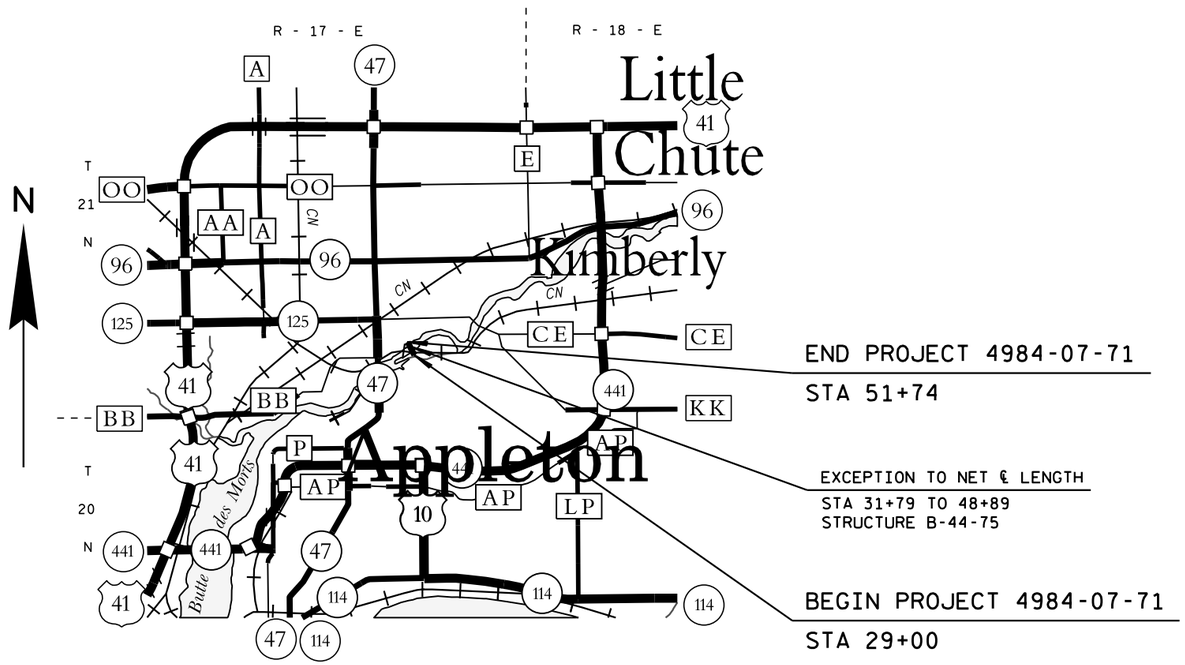
TELEPHONE — T

WATER — W

UTILITY PEDESTAL

POWER POLE

TELEPHONE POLE



END PROJECT 4984-07-71
STA 51+74

EXCEPTION TO NET ℄ LENGTH
STA 31+79 TO 48+89
STRUCTURE B-44-75

BEGIN PROJECT 4984-07-71
STA 29+00

LAYOUT
SCALE 0 1 MI.

TOTAL NET LENGTH OF CENTERLINE = 0.107 MI.

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), NAD 83 (2007) OUTAGAMIE COUNTY.

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	NER
Designer	J. ZAVADA
Project Manager	T. RANK
Regional Examiner	
Regional Supervisor	C. KAROW
C.O. Examiner	

APPROVED FOR THE DEPARTMENT

DATE: 7-31-14 (Signature)

E

FILE NAME : F:\D3_498407\010101_TI.dgn PLOT DATE : 24-SEP-2014 08:39 PLOT BY : dotmzc PLOT NAME : 010101 tiA PLOT SCALE : 10560:1

WISDOT/CADDS SHEET 14

GENERAL NOTES

CURVE DATA IS BASED ON ARC DEFINITION.

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

EXCAVATION BELOW SUBGRADE EBS SHALL BE MEASURED AND PAID FOR AS COMMON EXCAVATION. THE EXACT LIMITS AND LOCATIONS ARE TO BE DETERMINED BY THE ENGINEER IN THE FIELD.

ALL MANHOLE AND INLET OFFSETS ARE GIVEN TO THE CENTER OF THE STRUCTURE UNLESS OTHERWISE NOTED IN THE MISCELLANEOUS QUANTITIES.

ALL DISTURBED AREAS, EXCEPT THE AREAS BETWEEN THE SUBGRADE POINTS, SHALL BE TOPSOILED, FERTILIZED, SEEDED AND MULCHED.

THE EXACT LOCATIONS AND DIMENSIONS OF ALL EROSION CONTROL ITEMS SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.

IMMEDIATELY AFTER CONSTRUCTION OF ANY INLET, CONTRACTOR SHALL CONSTRUCT THE INLET PROTECTION TO MINIMIZE SEDIMENTATION IN THE INLET AND STORM SEWER.

ALL ELEVATIONS ON THIS PROJECT ARE REFERENCED TO THE NGVD 29 VERTICAL DATUM.

DETAILS OF CONSTRUCTION NOT SHOWN SHALL BE IN ACCORDANCE WITH THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS.

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

CURB AND GUTTER GRADES AND LAYOUT DATA ARE GIVEN TO THE FLANGE OF THE CURB.

PRIOR TO ORDERING DRAINAGE PIPES AND STRUCTURES, THE CONTRACTOR SHALL VERIFY RELATED DRAINAGE INFORMATION IN THE PLAN AND PROVIDE DOCUMENTATION TO THE ENGINEER IN ACCORDANCE WITH THE SPECIFICATIONS. THIS ALSO INCLUDES VERIFICATION OF INVERT ELEVATIONS AT ALL PROPOSED STORM SEWER CONNECTION POINTS TO EXISTING SYSTEMS.

SIDEWALK AND CURB & GUTTER REPLACEMENT SHOULD BE THE NEAREST JOINT. LIMITS ARE APPROXIMATE AND ARE TO BE VERIFIED IN THE FIELD BY THE ENGINEER. MATCH EXISTING SIDEWALK WIDTH.

BENCHMARK LOCATIONS SHOWN ON PLAN ARE APPROXIMATE AND SHOULD BE VERIFIED.

UTILITIES

VINCENT LEBRUN
AT&T WISCONSIN - COMMUNICATION LINE
4TH FLOOR
221 WEST WASHINGTON ST
APPLETON, WI 54911
(920) 735-3076
vl1253@att.com

STEVE JAKUBIEC
TDS METROCOM - COMMUNICATION LINE
SUITE 218A
10 COLLEGE AVE
APPLETON, WI 54911
(920) 882-4166
steve.jakubiec@tdstelecom.com

CODY BECKMAN
WE ENERGIES - GAS/PETROLEUM
800 S. LYNNDALE DRIVE
APPLETON, WI 54912
(920) 380-3422
cody.beckman@we-energies.com

KENNETH VAN OSS
WE ENERGIES - ELECTRICITY
800 S. LYNNDALE DRIVE
APPLETON, WI 54912
(920) 380-3318
kenneth.van-oss@we-energies.com

RICHARD HAMMETTER
WISCONSIN INDEPENDENT NETWORK - COMMUNICATION LINE
SUITE 219
800 WISCONSIN AVE
EAU CLAIRE, WI 53086
(715) 838-4406
hammetter@win.net

EMERGENCY CONTACT NUMBERS FOR WE ENERGIES

ELECTRIC 24 HOUR EMERGENCY SERVICE:
1-800-662-4797

GAS 24 HOUR EMERGENCY SERVICE: 1-800-261-5325

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

DNR LIAISON

MATTHEW SCHAEVE
DEPARTMENT OF NATURAL RESOURCES NORTHEAST REGION
2984 SHAWANO AVE
GREEN BAY, WI 54313
(920) 662-5472
MATTHEW.SCHAEVE@WISCONSIN.GOV

COUNTY SURVEYOR OR SURVEY CONTACT PERSON

JAMES HEBERT
LAND INFORMATION
410 SOUTH WALNUT STREET
APPLETON, WI 54911
(920) 832-5255
JIM@HEBERTASSOC.COM

DAVE JOHNSON (DEPUTY COUNTY SURVEYOR)
LAND INFORMATION
410 SOUTH WALNUT STREET
APPLETON, WI 54911
(920) 832-5255
DAVE.JOHNSON@OUTAGAMIE.ORG

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2

N

BEGIN PROJECT 4984-07-71
STA 29+00

ONEIDA ST

STRUCTURE B-44-75

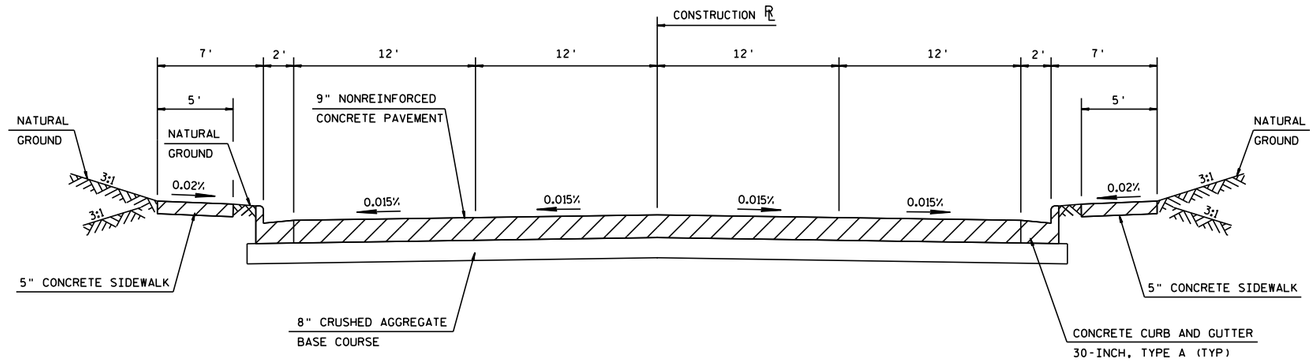
PROSPECT AVE

MCKINLEY ST

S. OLDE ONEIDA ST

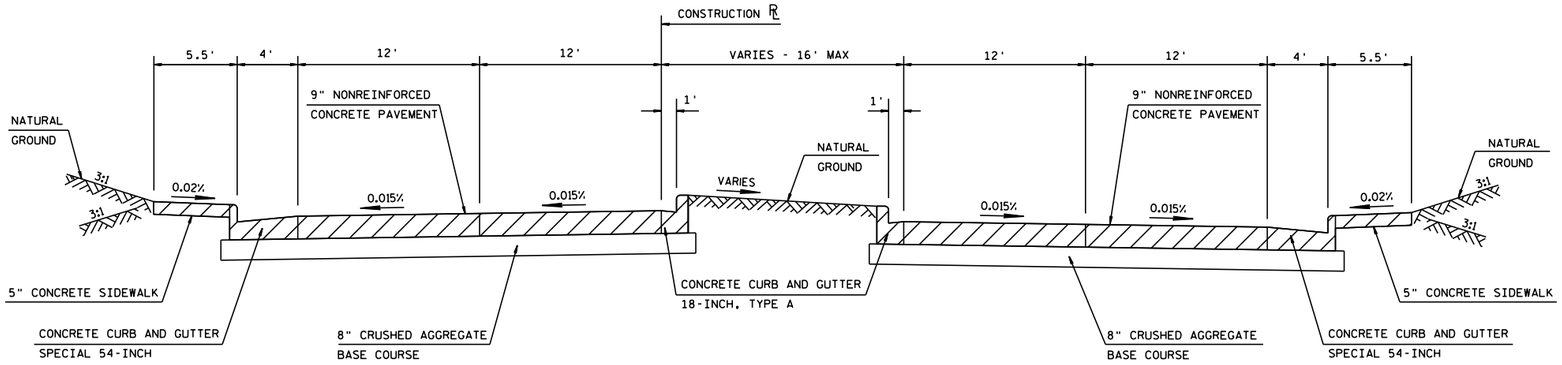
END PROJECT 4984-07-71
STA 51+74

PROJECT NO: 4984-07-71	HWY: LOCAL	COUNTY: OUTAGAMIE	PROJECT OVERVIEW	SHEET 3	E



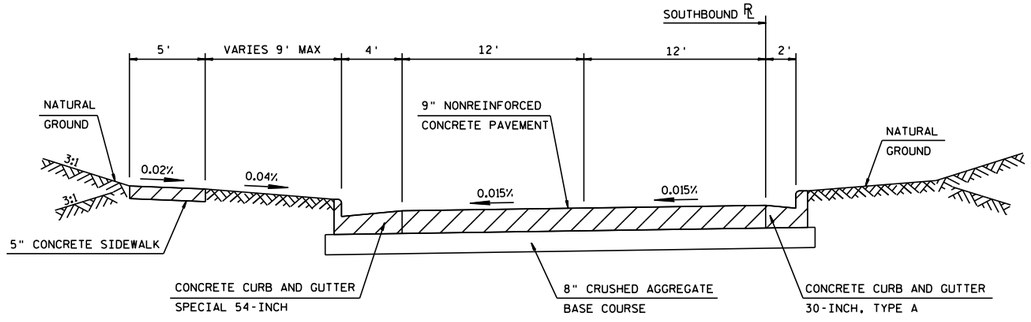
TYPICAL EXISTING CROSS SECTION

ONEIDA STREET - SEYMOUR TO MCKINLEY
PROSPECT AVENUE
ONEIDA STREET CONNECTION



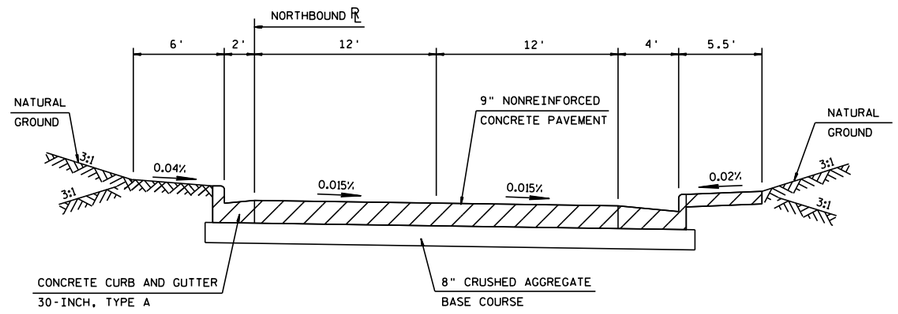
TYPICAL EXISTING CROSS SECTION

ONEIDA STREET - MCKINLEY TO RIVER BRIDGE
RIVER BRIDGE TO PARK BRIDGE



TYPICAL EXISTING CROSS SECTION

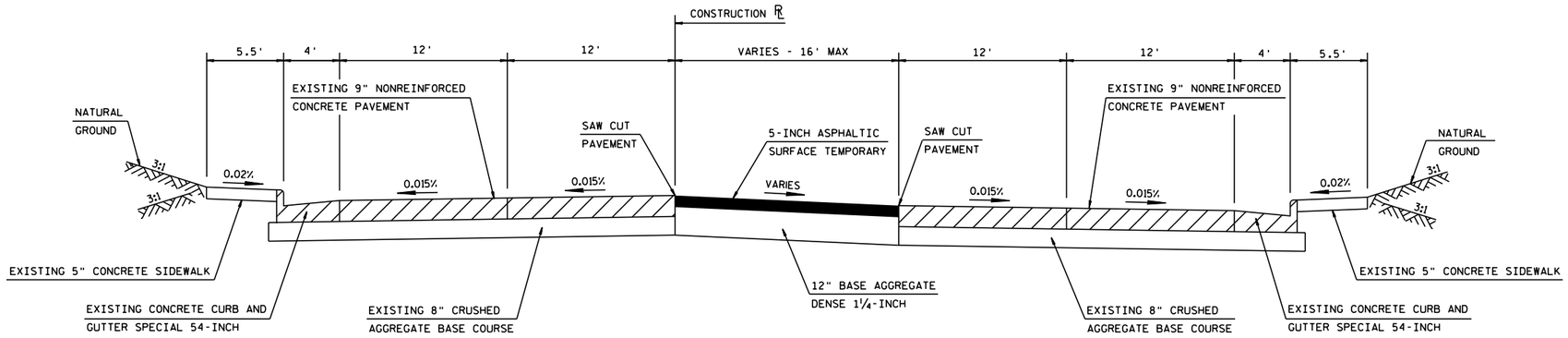
ONEIDA STREET - SOUTHBOUND PARK BRIDGE TO LAWRENCE



TYPICAL EXISTING CROSS SECTION

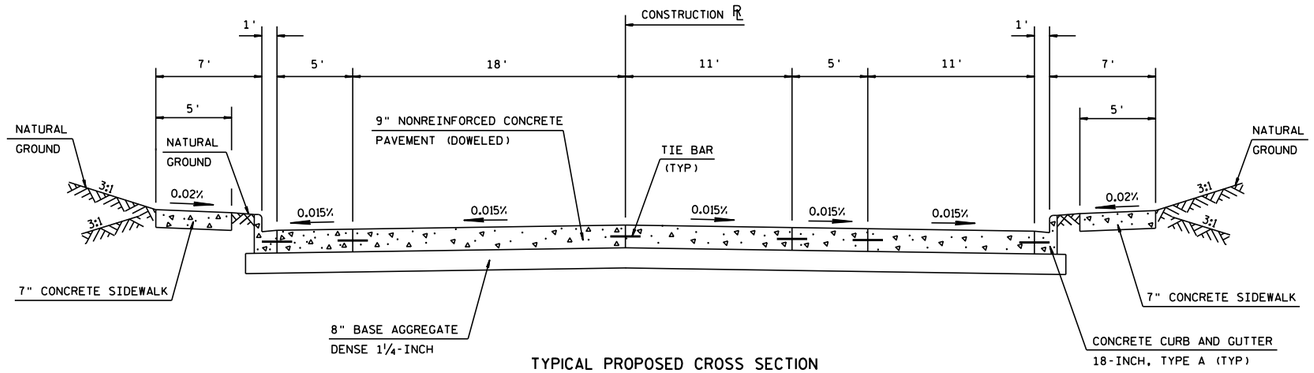
ONEIDA STREET - NORTHBOUND PARK BRIDGE TO LAWRENCE

PROJECT NO: 4984-07-71	HWY: LOCAL	COUNTY: OUTAGAMIE	EXISTING TYPICAL CROSS SECTIONS	SHEET	E



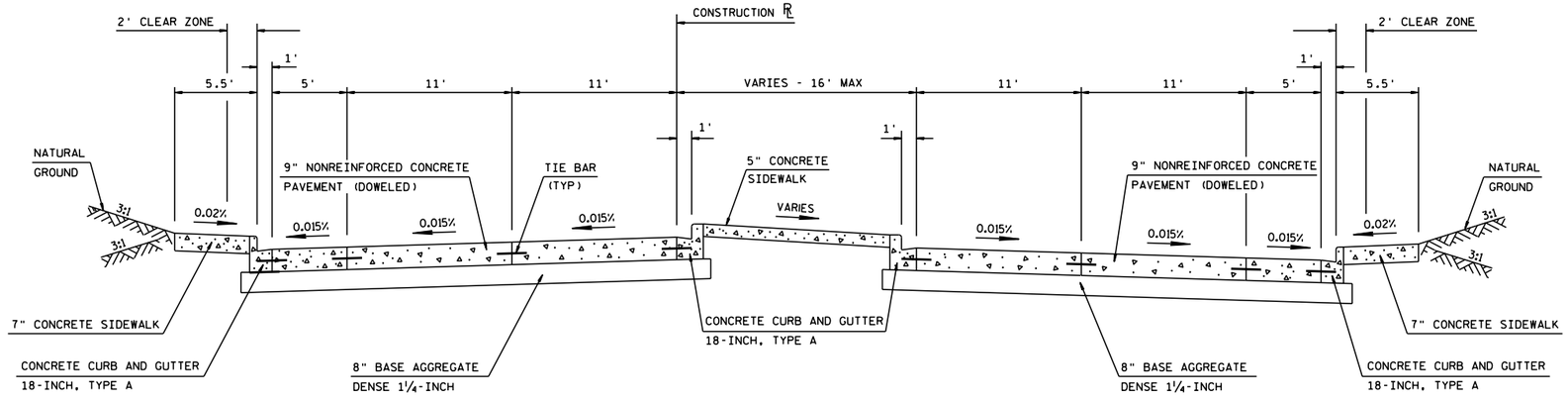
TYPICAL PROPOSED TRAFFIC CONTROL CROSSOVER CROSS SECTION

STA 29+00 TO 30+75
STA 50+88 TO 51+59



TYPICAL PROPOSED CROSS SECTION

PROSPECT AVENUE
STA 208+00 TO 209+30



TYPICAL PROPOSED CROSS SECTION

ONEIDA STREET
STA 49+00 TO 51+74

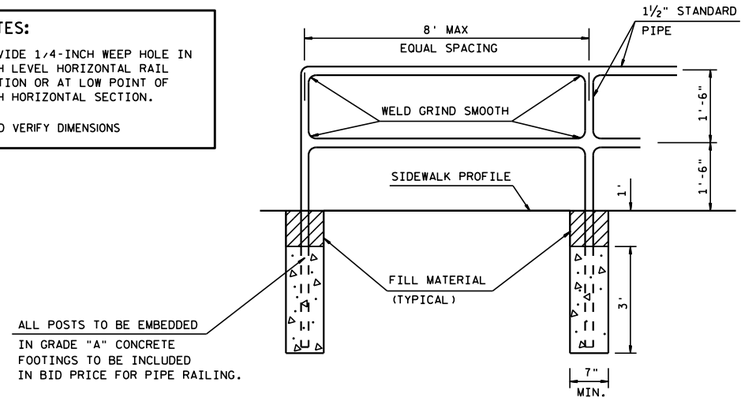
PROJECT NO: 4984-07-71	HWY: LOCAL	COUNTY: OUTAGAMIE	PROPOSED TYPICAL CROSS SECTIONS	SHEET 5	E

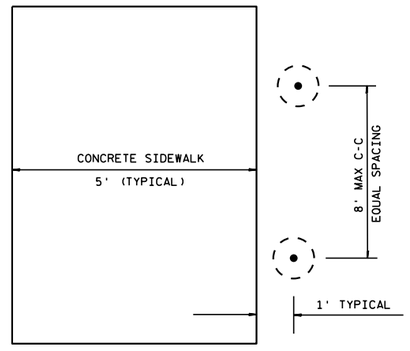
2

NOTES:

PROVIDE 1/4-INCH WEEP HOLE IN EACH LEVEL HORIZONTAL RAIL SECTION OR AT LOW POINT OF EACH HORIZONTAL SECTION.

FIELD VERIFY DIMENSIONS

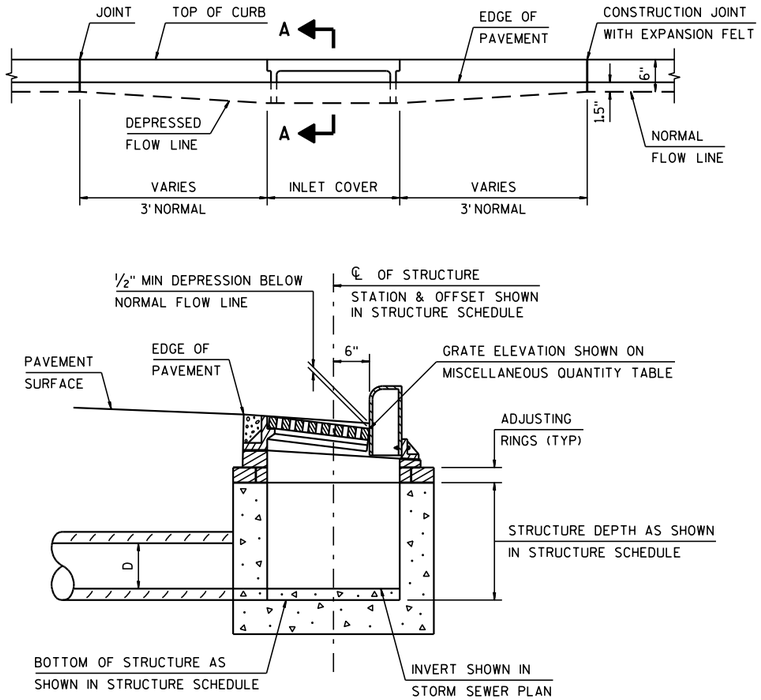




PIPE RAILING DETAIL

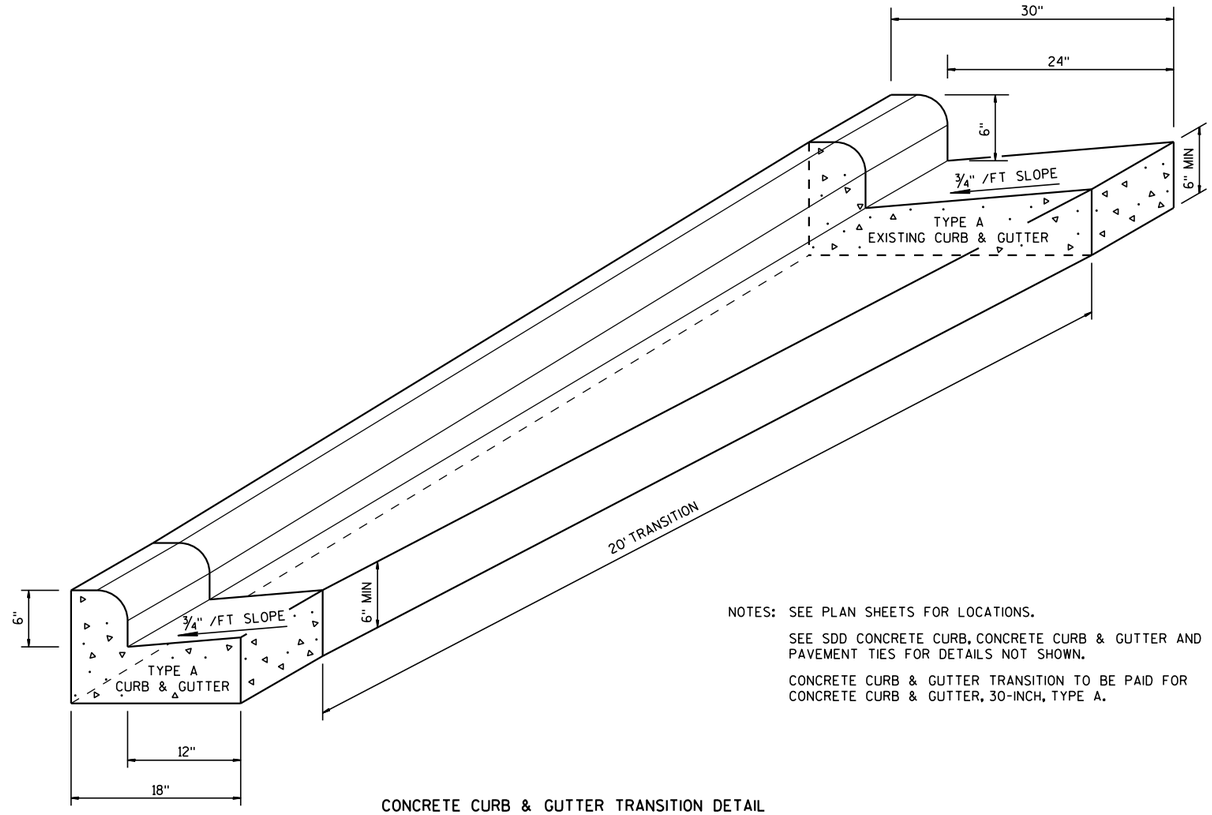
PROJECT NO: 4984-07-71	HWY: LOCAL	COUNTY: OUTAGAMIE	CONSTRUCTION DETAILS	SHEET	E

2



SECTION A-A

DETAIL OF CURB AND GUTTER AT INLETS

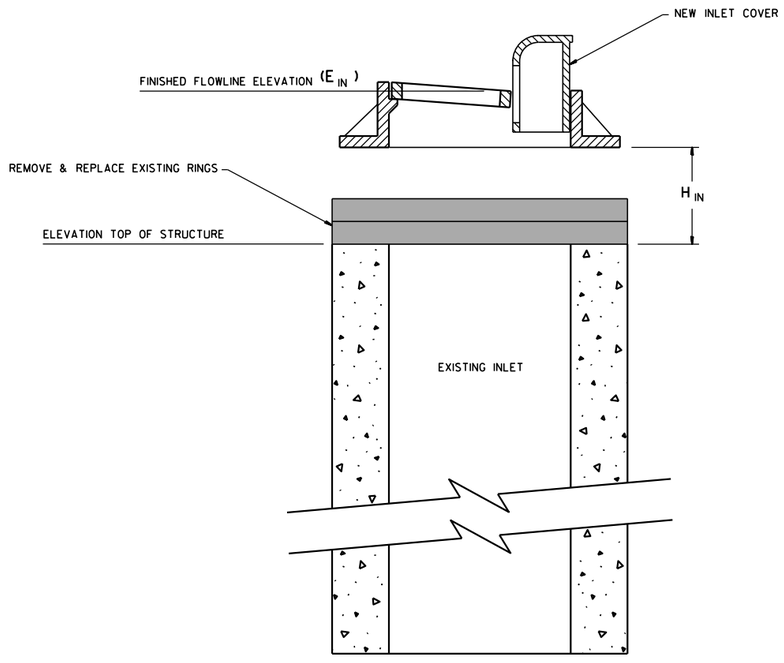


NOTES: SEE PLAN SHEETS FOR LOCATIONS.

SEE SDD CONCRETE CURB, CONCRETE CURB & GUTTER AND PAVEMENT TIES FOR DETAILS NOT SHOWN.

CONCRETE CURB & GUTTER TRANSITION TO BE PAID FOR CONCRETE CURB & GUTTER, 30-INCH, TYPE A.

CONCRETE CURB & GUTTER TRANSITION DETAIL

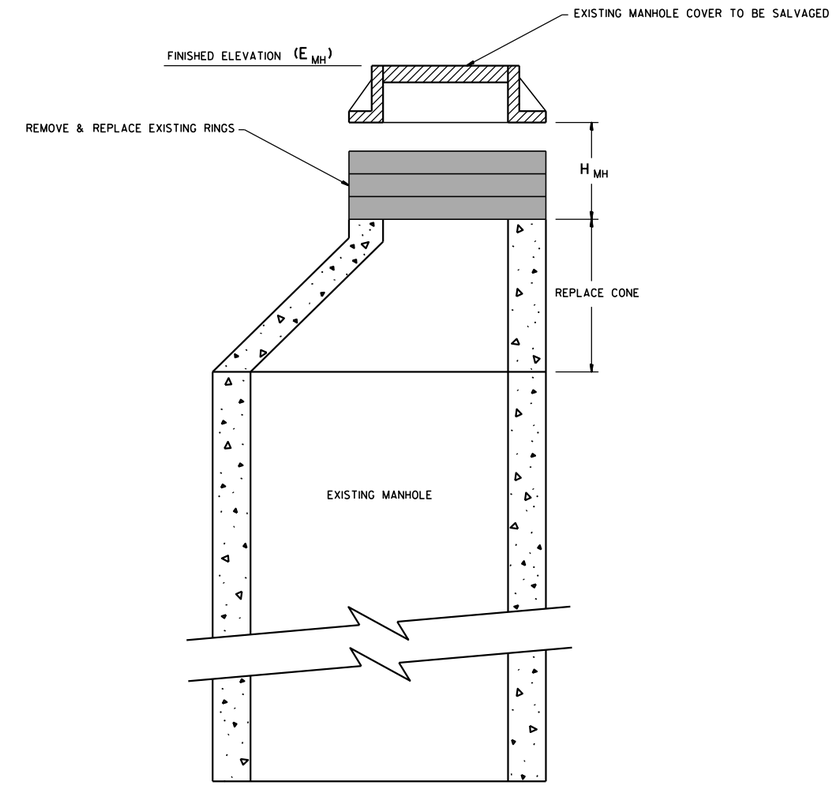


NOTES: ALL EXISTING RINGS SHALL BE REMOVED.
ALL CONCRETE RINGS SHALL BE A MINIMUM THICKNESS OF 3".
THE MAXIMUM NUMBER OF 2 RINGS ALLOWED PER STRUCTURE.

PRIOR TO ORDERING ADJUSTMENT RINGS THE CONTRACTOR SHALL VERIFY ALL STRUCTURE ELEVATIONS IN THE PLAN AND REVIEW INFORMATION WITH THE ENGINEER.

STRUCTURE	EXIST H_{IN}	E_{IN}
LL-13B	1'	776.68
LL-15A	1'	777.07
LL-15B	2'	777.12
LL-15C	2'	777.44
LL-15D	2'	777.58

RECONSTRUCTING INLETS



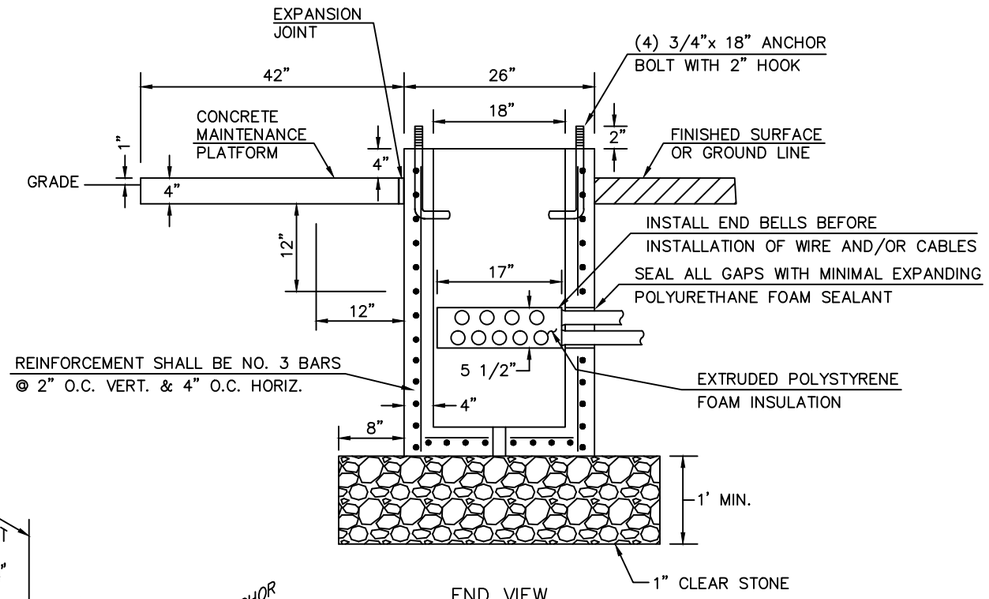
NOTES: ALL EXISTING RINGS SHALL BE REMOVED.
ALL CONCRETE RINGS SHALL BE A MINIMUM THICKNESS OF 3".
THE MAXIMUM NUMBER OF 3 RINGS ALLOWED PER STRUCTURE.

PRIOR TO ORDERING ADJUSTMENT RINGS THE CONTRACTOR SHALL VERIFY ALL STRUCTURE ELEVATIONS IN THE PLAN AND REVIEW INFORMATION WITH THE ENGINEER.

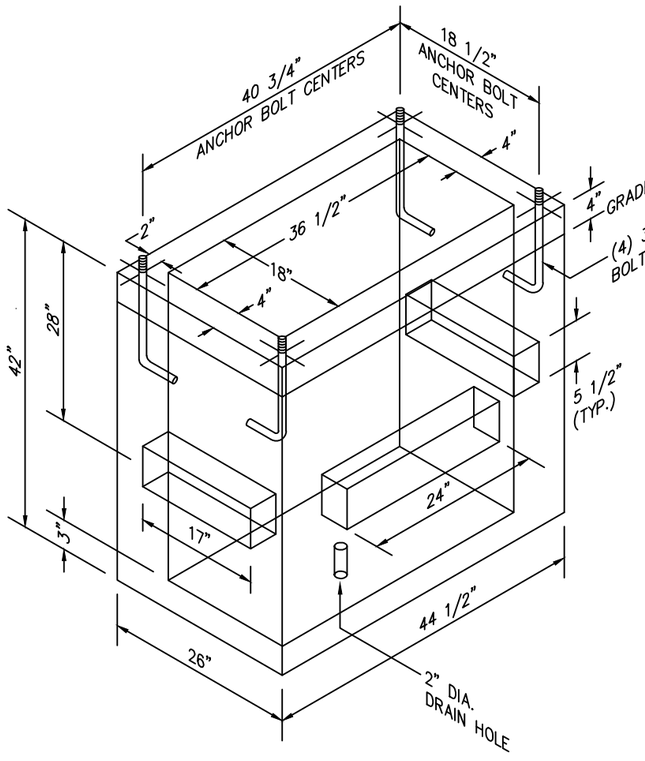
STRUCTURE	H_{MH}	E_{MH}
LL-11	.5'	777.76

RECONSTRUCTING MANHOLES

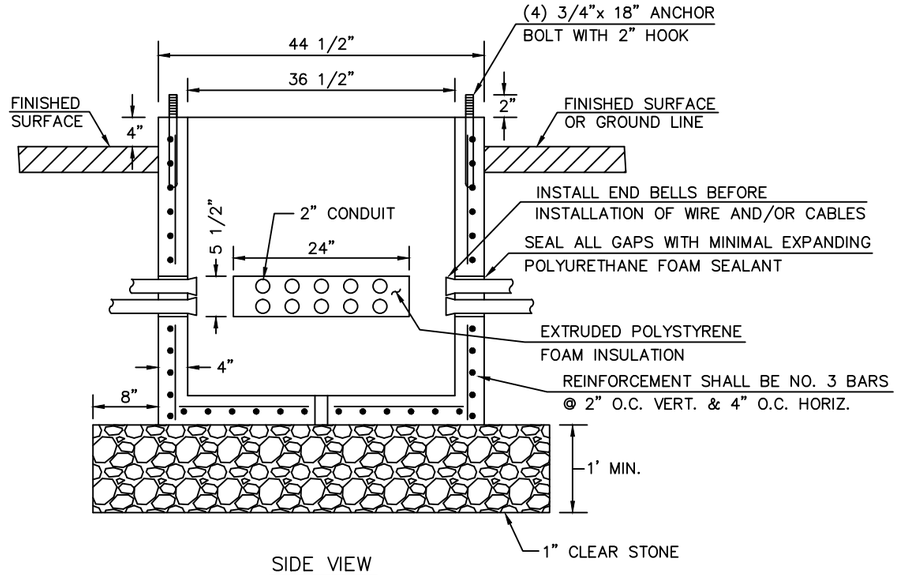
2



END VIEW



ISOMETRIC VIEW



SIDE VIEW

GENERAL NOTES

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

CONDUITS SHALL EXTEND BEYOND FACE OF CONCRETE WALL 1 INCH.

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

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

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

CONTROL CABINET BASE TOP SURFACE SHALL BE TROWEL FINISHED AND LEVEL.

MAINTENANCE PLATFORM SHALL BE FLOAT OR BROOM FINISHED AND BE LEVEL.

MAINTENANCE PLATFORMS ARE NOT REQUIRED WHEN THE SURROUNDING AREA IS PAVED.

PLUG ALL BELOW GRADE NONMETALLIC CONDUIT ENDS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED.

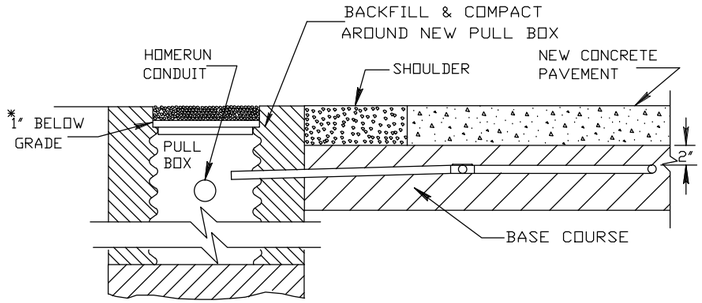
ALL CONDUIT ENDS AT THE CONCRETE BASE WALLS SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

A TWO–INCH DIAMETER DRAIN HOLE IS REQUIRED AT THE BOTTOM OF THE BASE.

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

INSTALL PRECAST CONCRETE CABINET BASE, SPV.0060.03

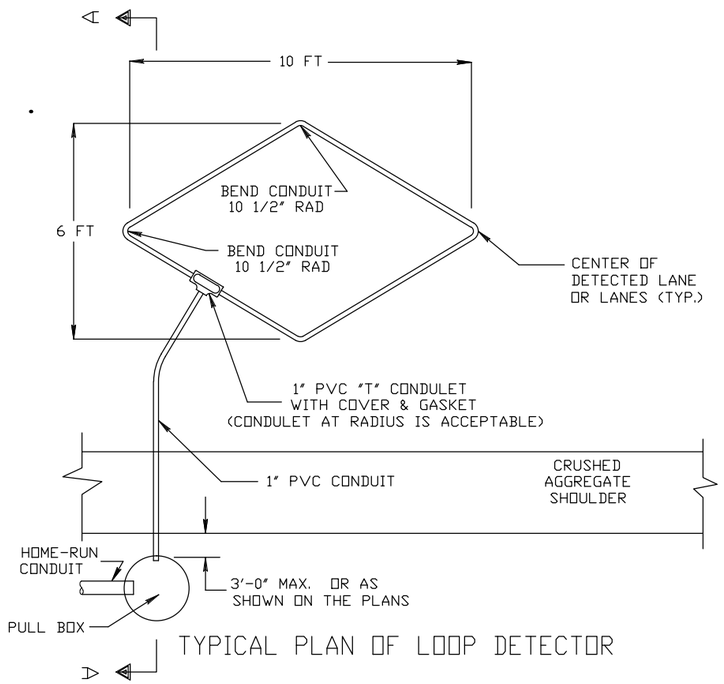
PROJECT NO: 4984-07-71	HWY: LOCAL	COUNTY: OUTAGAMIE	CONSTRUCTION DETAIL (CONTROL CABINET)	SHEET 9	E



SECTION A-A
NO CURB & GUTTER

DETECTOR LOOP INSTALLATION DETAIL

* RECESS PULL BOX SO THAT THE COVER IS 3" BELOW GRADE IN SHOULDER WHEN LOCATED IN AREAS OF CRUSHED AGGREGATE. BACKFILL OVER COVER WITH CRUSHED AGGREGATE TO BRING THE AREA UP TO FINAL GRADE.



TYPICAL PLAN OF LOOP DETECTOR

GENERAL NOTES:

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

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

PITCH LEAD OUT CONDUIT TO DRAIN TO ROADSIDE PULL BOX. NON-INSULATED BUTT SPLICES TO FIT #12 AWG STRANDED WIRE SHALL BE USED. SPLICES SHALL BE SOLDERED AND INSULATED FROM EACH OTHER, PER SPLICE KIT INSTRUCTIONS.

SPLICES SHALL BE INSTALLED BY USING AN APPROVED CAST-IN-PLACE SPLICE KIT.

MEASURE GROUND RESISTANCE USING A MEGGER. REPLACE LOOP WIRE NOT ATTAINING A READING OF INFINITY TO GROUND.

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

ANTI-SIEZE LUBRICATING MATERIAL SHALL BE USED ON ALL THREADS OF THREADED ASSEMBLIES BEFORE INSTALLATION.

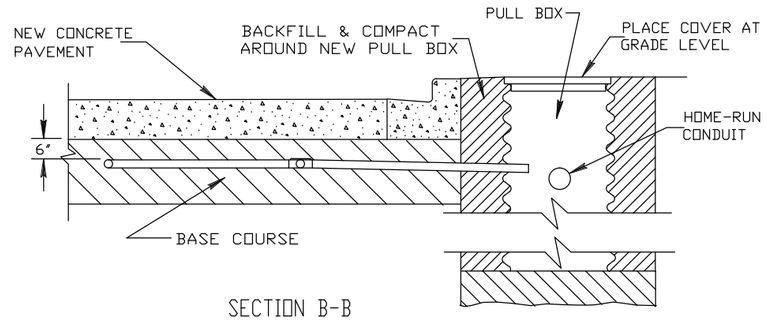
LOOP DETECTOR LEADS SHALL BE IDENTIFIED WITH THEIR ASSOCIATED LOOP BY USE OF WATERPROOF TAGS AT BOTH ENDS OF THE CABLE. A LISTING OF THE CABLE IDENTIFICATION PER INDIVIDUAL LOOP LEAD-IN SHALL BE PROVIDED TO THE ENGINEER OR PLACED IN THE CABINET.

THE #12 AWG LOOP WIRE FROM THE LOOP TO THE ROADSIDE PULL BOX SHALL BE HAND TWISTED AT LEAST 3 TWISTS PER FOOT BEFORE INSTALLATION.

SPLICES OF LOOP WIRE TO LEAD-IN CABLE SHALL ONLY BE MADE IN ROADSIDE PULL BOXES.

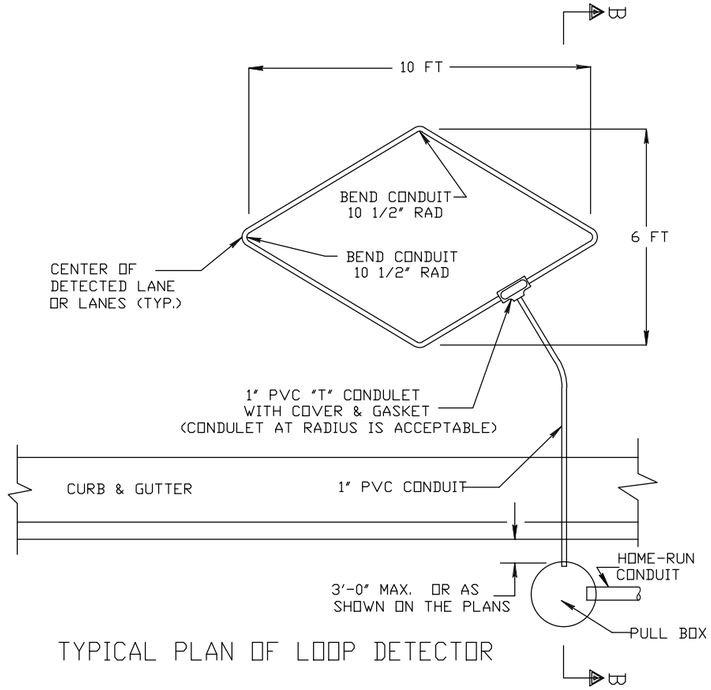
THE #12 AWG LOOP WIRE SHALL BE INSTALLED FROM THE ROADSIDE PULL BOX, THRU THE LOOP DETECTOR CONDUIT, BACK TO THE ROADSIDE PULL BOX, AND BE INSTALLED IN ONE, NON-SPLICED, CONTINUOUS LENGTH.

PROTECTION OF THE CONDUIT AND CONDULET SHALL BE REQUIRED AFTER INSTALLATION AND BEFORE PLACEMENT OF THE NEW CONCRETE PAVEMENT.



SECTION B-B
CURB & GUTTER

LOOP DETECTOR INSTALLATION DETAIL



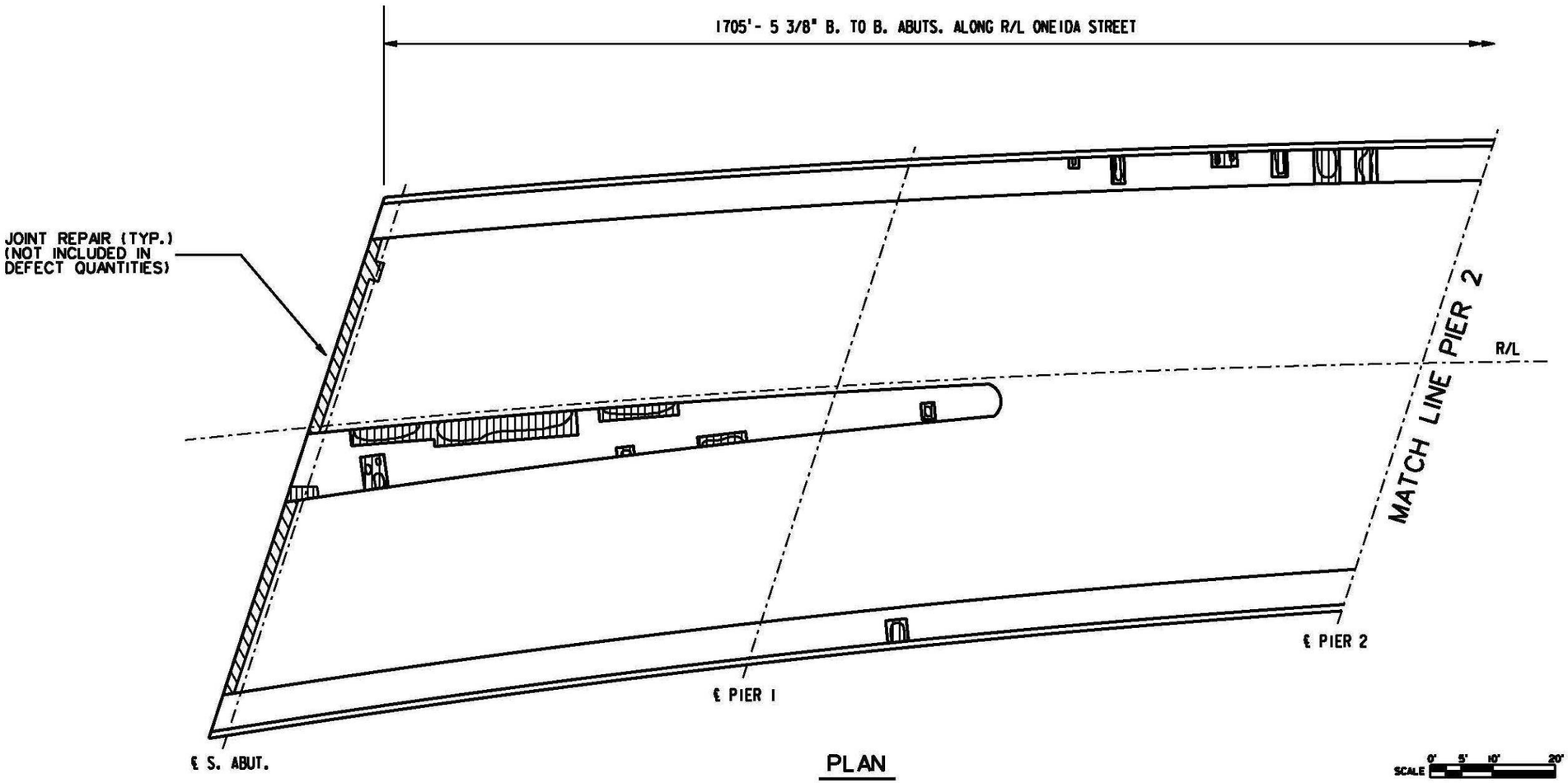
TYPICAL PLAN OF LOOP DETECTOR

LOOP DETECTOR PLACED IN CRUSHED AGGREGATE BASE

(NEW CONCRETE PAVEMENT)

PROJECT NO: 4984-07-71	HWY: LOCAL	COUNTY: OUTAGAMIE	CONSTRUCTION DETAIL (LOOP DETECTOR)	SHEET 10	E

PROPOSED REHABILITATION AREAS FOR
ONEIDA STREET OVER FOX RIVER
STRUCTURE NO. B-44-75



PLAN

PROPOSED REHABILITATION AREAS

SURFACE TYPE: CONCRETE - NO OVERLAY
INFRARED INSPECTION DATE: 5/6/14

STRUCTURE NO. B-44-75

FIELD OBSERVATIONS SUMMARY		ROADWAY		SIDEWALKS		MEDIANS	
ITEM	UNIT	QUANT.	%	QUANT.	%	QUANT.	%
TOTAL AREA	yd^2	11047.0		2098.0		397.0	
SHADE/DEBRIS	yd^2	0		0		0	
PREPARATION, DECKS, TYPE 1	yd^2	546.2	4.9	524.7	25.0	76.8	19.3
PREPARATION, DECKS, TYPE 2	yd^2	273.1	2.5	262.4	12.5	38.4	9.7
FULL DEPTH DECK REPAIR	yd^2	5.0	<0.1	2.0	<0.1	0	0

LEGEND

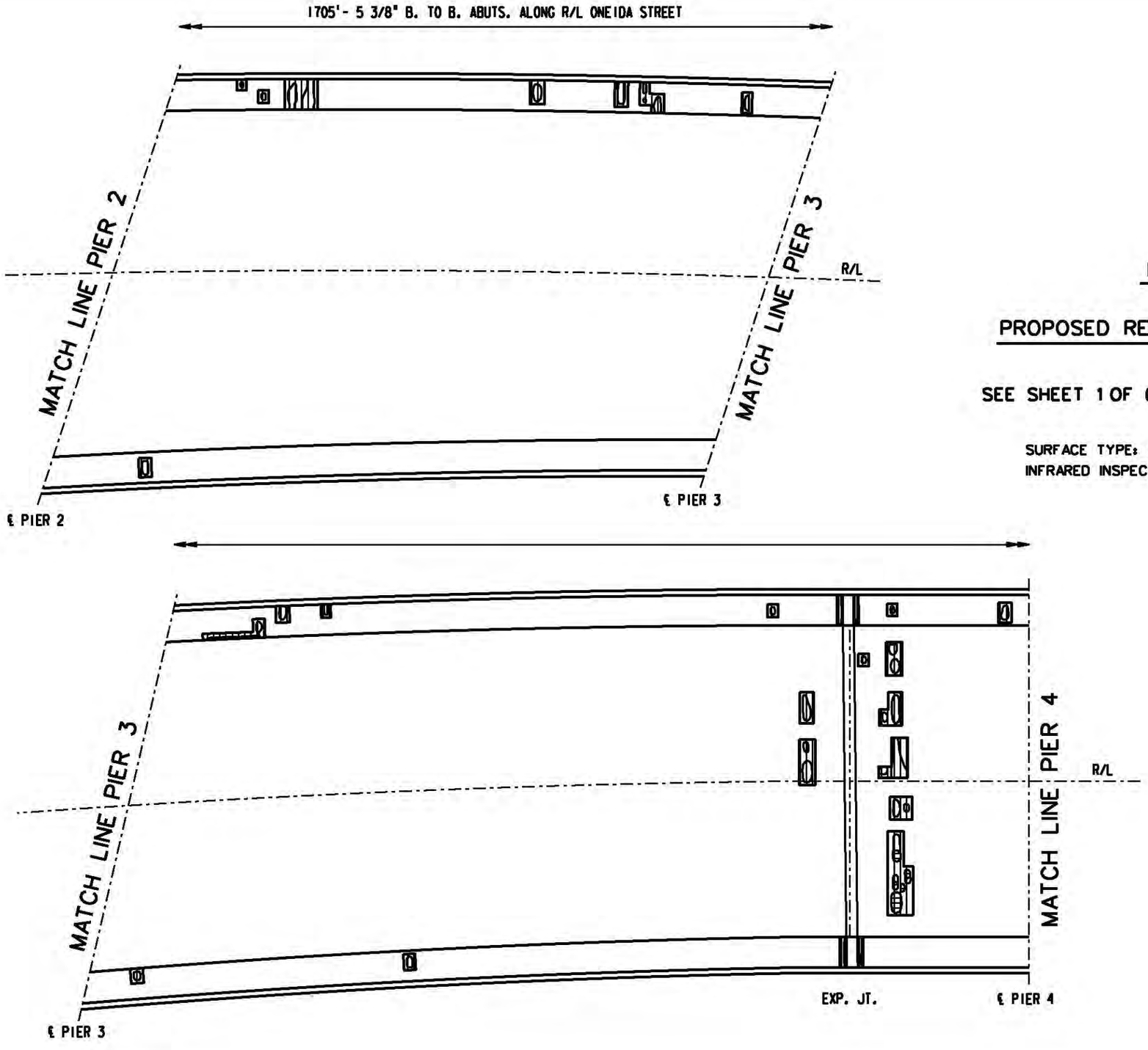
DECK PREPARATION AREA
SHADE/DEBRIS
DELAMINATION
SPALL
SEALANT
ASPHALT PATCH
CONCRETE PATCH

PROJECT NO: 4984-07-71	HWY: LOCAL	COUNTY: OUTAGAMIE	CONSTRUCTION DETAIL	SHEET: 11	E

FILE NAME : _____ PLOT DATE : _____ PLOT BY : _____ PLOT NAME : _____ PLOT SCALE : 1:1

PROPOSED REHABILITATION AREAS FOR
ONEIDA STREET OVER FOX RIVER
STRUCTURE NO. B-44-75

2

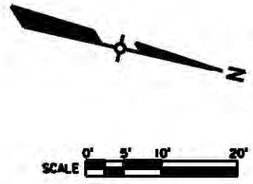


PLAN

PROPOSED REHABILITATION AREAS

SEE SHEET 1 OF 6 FOR REHAB QUANTITIES

SURFACE TYPE: CONCRETE - NO OVERLAY
INFRARED INSPECTION DATE: 5/6/14



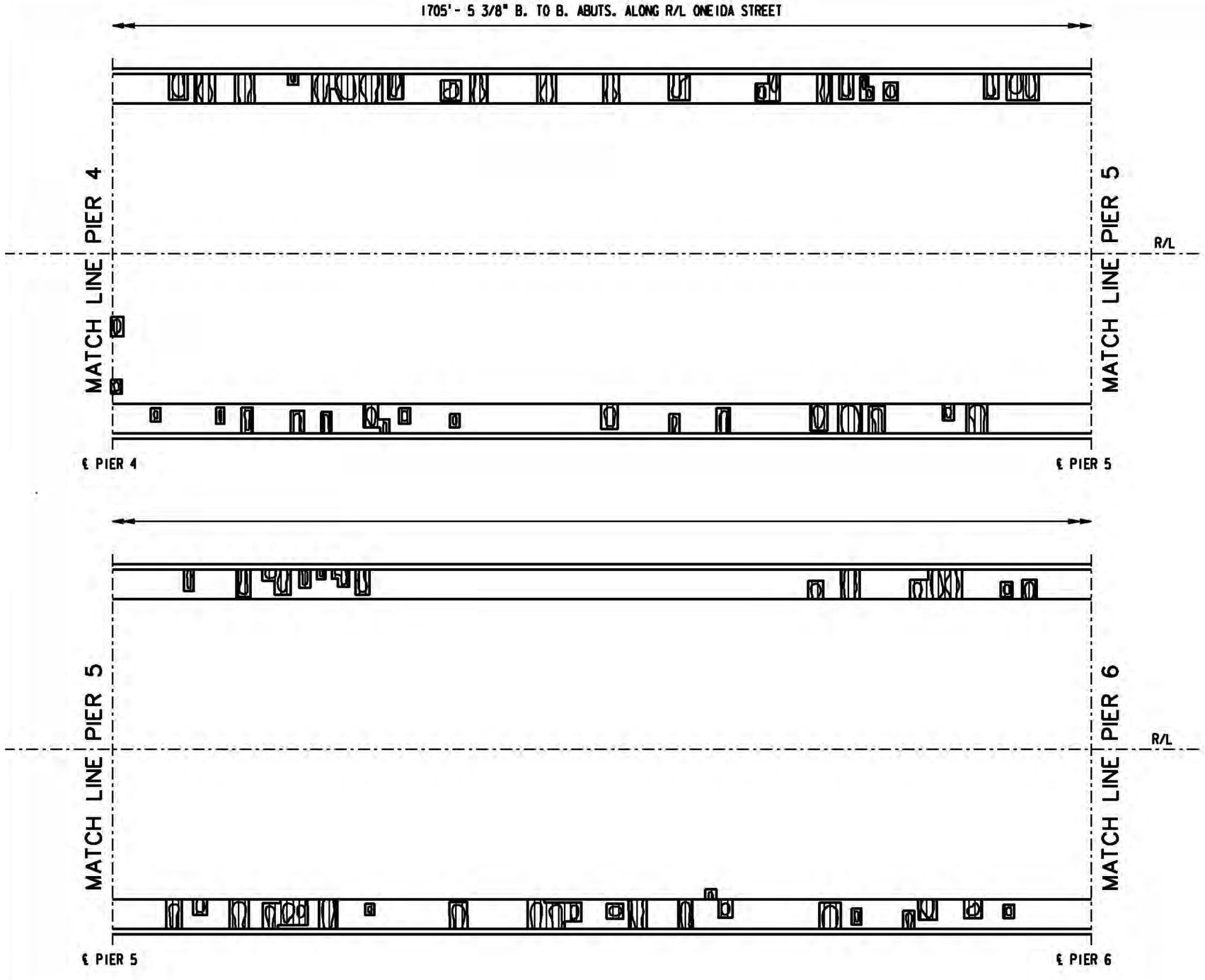
LEGEND	
DECK PREPARATION AREA	
SHADE/DEBRIS	
DELAMINATION	
SPALL	
SEALANT	
ASPHALT PATCH	
CONCRETE PATCH	

PROJECT NO: 4984-07-71	HWY: LOCAL	COUNTY: OUTAGAMIE	CONSTRUCTION DETAIL	SHEET: 12	E

FILE NAME : _____ PLOT DATE : _____ PLOT BY : _____ PLOT NAME : _____ PLOT SCALE : 1:1

PROPOSED REHABILITATION AREAS FOR
ONEIDA STREET OVER FOX RIVER
STRUCTURE NO. B-44-75

2

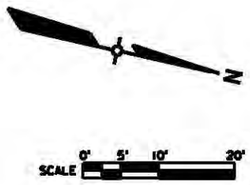


PLAN

PROPOSED REHABILITATION AREAS

SEE SHEET 1 OF 6 FOR REHAB QUANTITIES

SURFACE TYPE: CONCRETE - NO OVERLAY
INFRARED INSPECTION DATE: 5/6/14



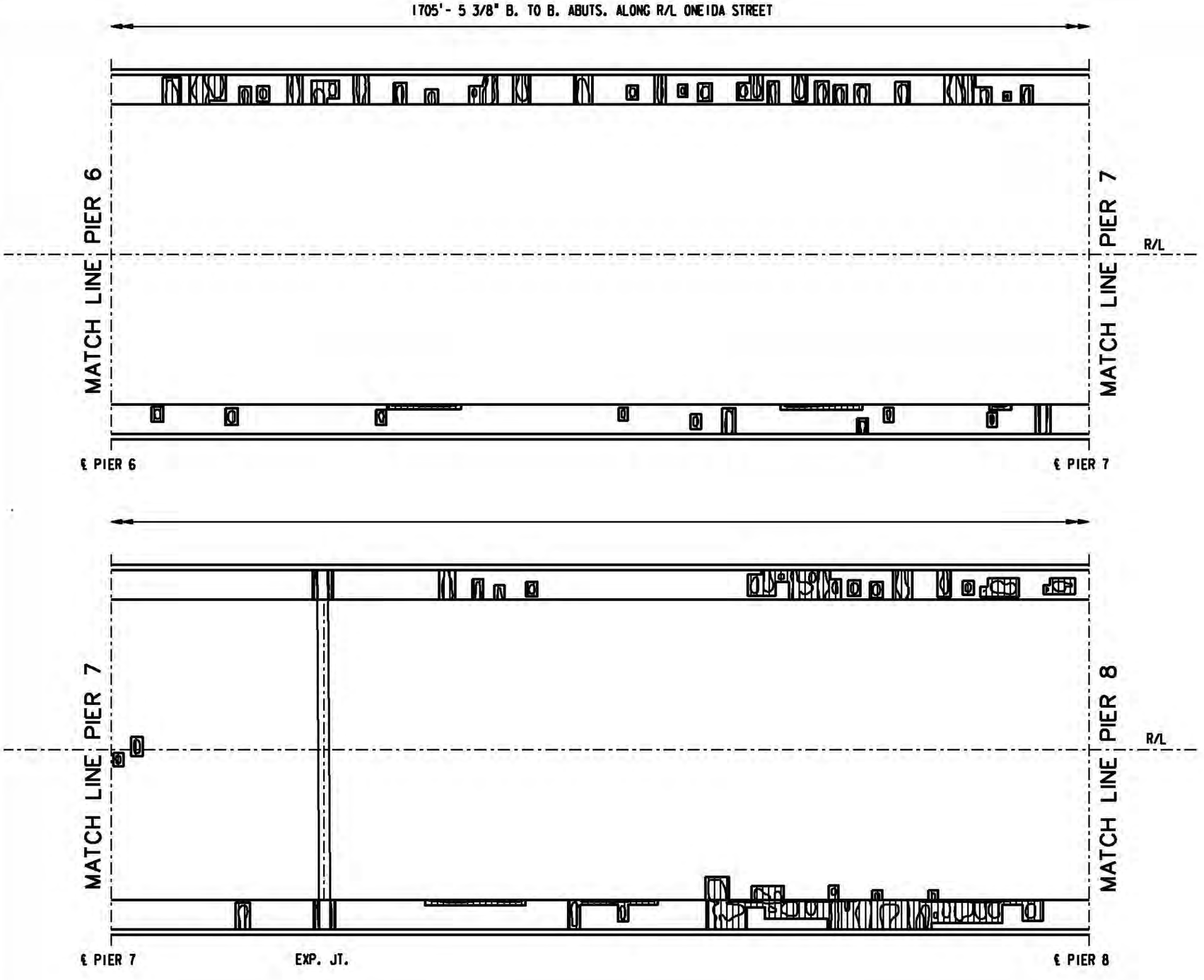
LEGEND	
DECK PREPARATION AREA	
SHADE/DEBRIS	
DELAMINATION	
SPALL	
SEALANT	
ASPHALT PATCH	
CONCRETE PATCH	

PROJECT NO: 4984-07-71	HWY: LOCAL	COUNTY: OUTAGAMIE	CONSTRUCTION DETAIL	SHEET: 13	E

FILE NAME : _____ PLOT DATE : _____ PLOT BY : _____ PLOT NAME : _____ PLOT SCALE : 1:1

2

PROPOSED REHABILITATION AREAS FOR
ONEIDA STREET OVER FOX RIVER
STRUCTURE NO. B-44-75

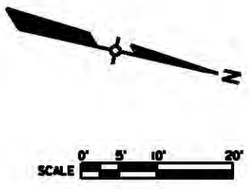


PLAN

PROPOSED REHABILITATION AREAS

SEE SHEET 1 OF 6 FOR REHAB QUANTITIES

SURFACE TYPE: CONCRETE - NO OVERLAY
INFRARED INSPECTION DATE: 5/6/14



LEGEND	
DECK PREPARATION AREA	
SHADE/DEBRIS	
DELAMINATION	
SPALL	
SEALANT	
ASPHALT PATCH	
CONCRETE PATCH	

PROJECT NO: 4984-07-71	HWY: LOCAL	COUNTY: OUTAGAMIE	CONSTRUCTION DETAIL	SHEET: 14	E

FILE NAME : _____ PLOT DATE : _____ PLOT BY : _____ PLOT NAME : _____ PLOT SCALE : 1:1

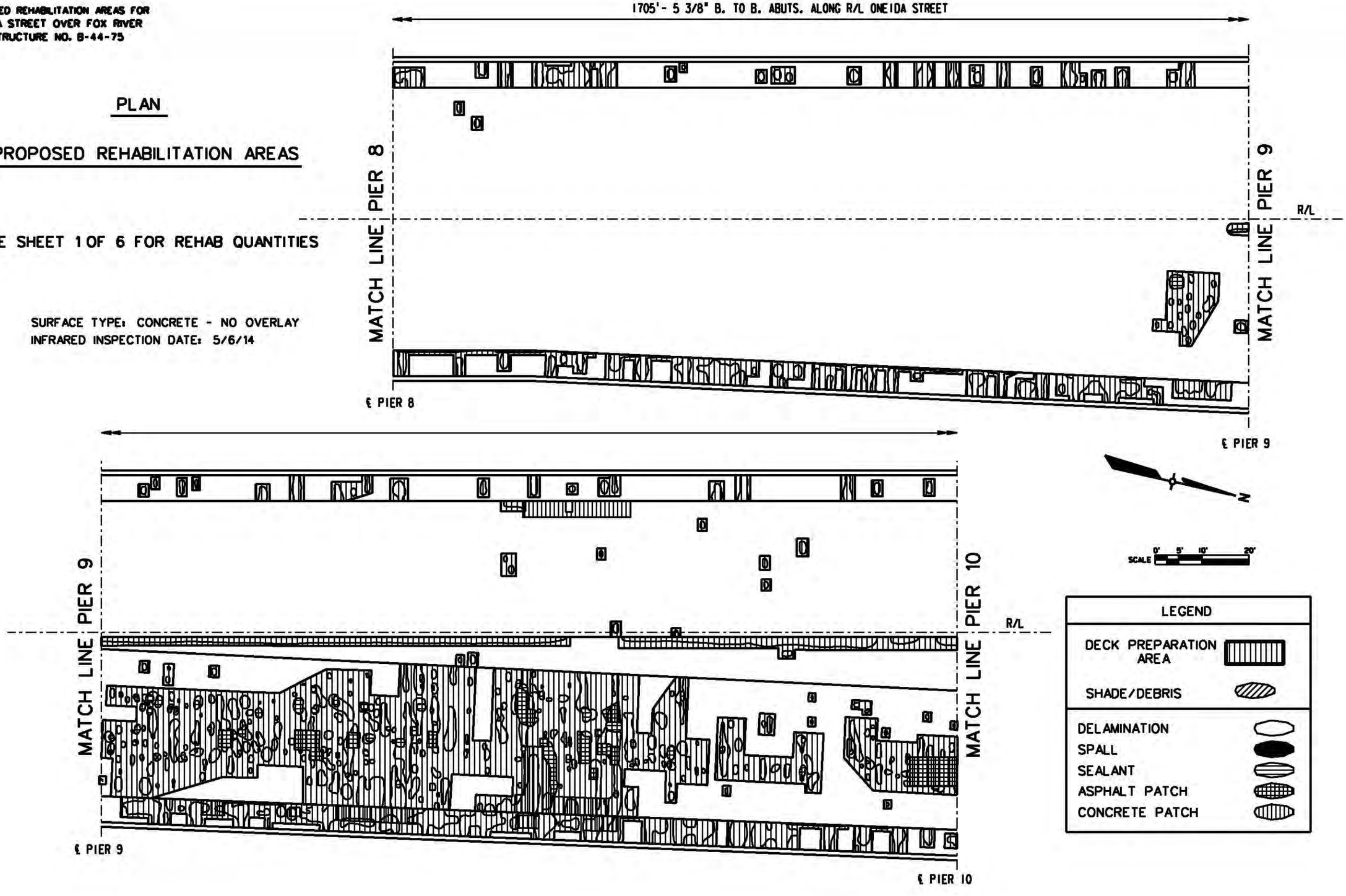
PROPOSED REHABILITATION AREAS FOR
ONEIDA STREET OVER FOX RIVER
STRUCTURE NO. B-44-75

PLAN

PROPOSED REHABILITATION AREAS

SEE SHEET 1 OF 6 FOR REHAB QUANTITIES

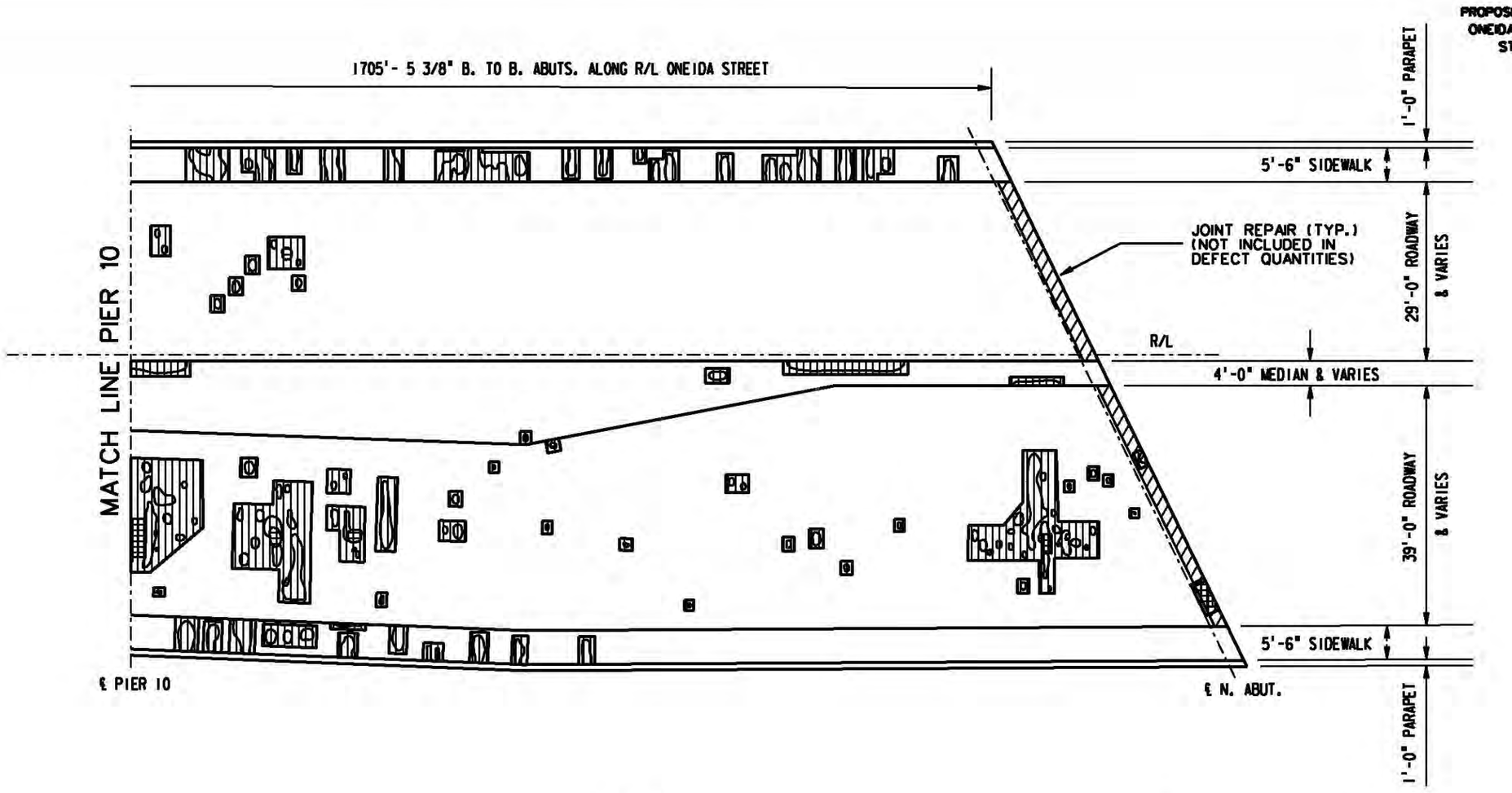
SURFACE TYPE: CONCRETE - NO OVERLAY
INFRARED INSPECTION DATE: 5/6/14



PROJECT NO: 4984-07-71	HWY: LOCAL	COUNTY: OUTAGAMIE	CONSTRUCTION DETAIL	SHEET: 15	E

FILE NAME : _____ PLOT DATE : _____ PLOT BY : _____ PLOT NAME : _____ PLOT SCALE : 1:1

PROPOSED REHABILITATION AREAS FOR ONEIDA STREET OVER FOX RIVER STRUCTURE NO. B-44-75



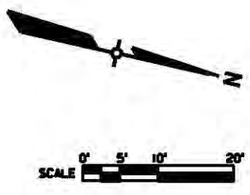
PLAN

PROPOSED REHABILITATION AREAS

SEE SHEET 1 OF 6 FOR REHAB QUANTITIES

SURFACE TYPE: CONCRETE - NO OVERLAY

INFRARED INSPECTION DATE: 5/6/14



LEGEND	
DECK PREPARATION AREA	
SHADE/DEBRIS	
DELAMINATION	
SPALL	
SEALANT	
ASPHALT PATCH	
CONCRETE PATCH	

PROJECT NO: 4984-07-71	HWY: LOCAL	COUNTY: OUTAGAMIE	CONSTRUCTION DETAIL	SHEET: 16	E

FILE NAME : _____ PLOT DATE : _____ PLOT BY : _____ PLOT NAME : _____ PLOT SCALE : 1:1

2

PROSPECT AVE

N

50+00

51+00

ONEIDA ST

PROPOSED SIGNAL BASE

PROPOSED SIGNAL BASE

5'

5'

*2'

*2'

8'

8'

8'

46'

8'

16'

8'

PIPE RAILING FOOTING
(TYP)

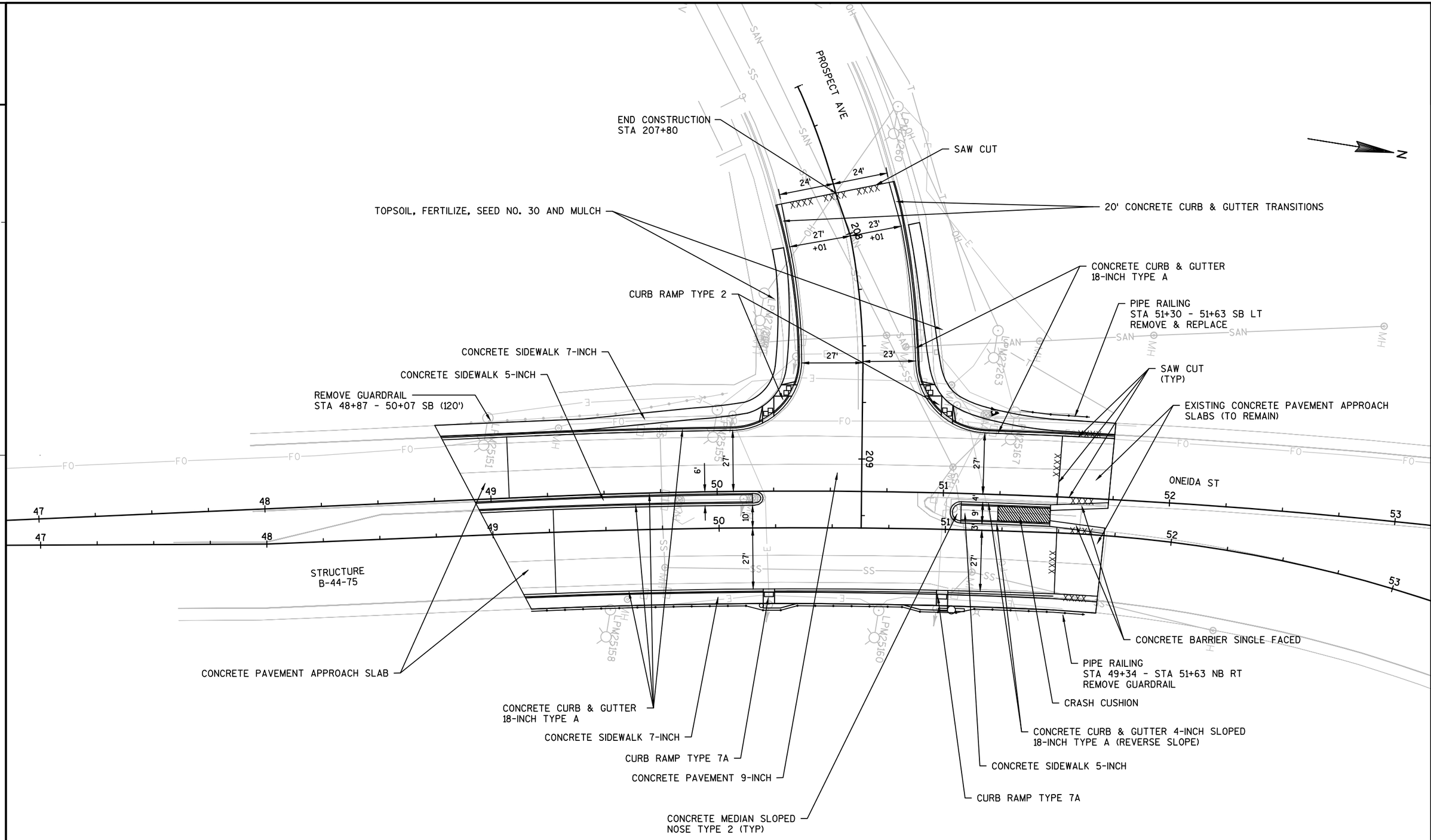
* ACTUAL SIDEWALK DIMENSIONS TO BE DETERMINED IN THE FIELD BASED ON RAILING FOOTING AND SIGNAL BASE LOCATIONS AND APPROVED BY THE ENGINEER.

SIDEWALK AND RAILING LAYOUT DETAIL

PROJECT NO: 4984-07-71	HWY: LOCAL	COUNTY: OUTAGAMIE	CONSTRUCTION DETAIL	SHEET	E

FILE NAME : N:\PDS\C3D\49840771\SHEETSPLAN\021003_CD.DWG PLOT DATE : 7/25/2014 7:07 AM PLOT BY : CAMPSHURE, MICHAEL RPLOT NAME : PLOT SCALE : 1 IN:10 FT

2



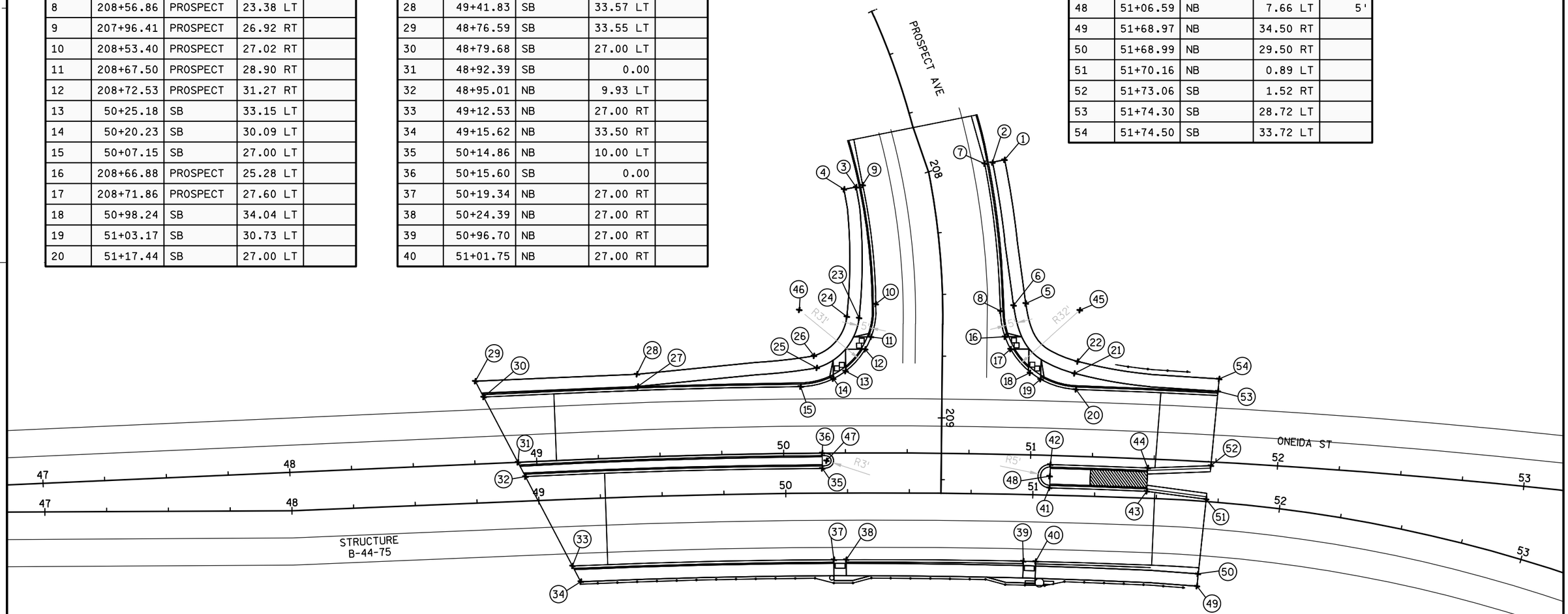
PROJECT NO: 4984-07-71	HWY: LOCAL	COUNTY: OUTAGAMIE	INTERSECTION DETAIL	SHEET	E

FILE NAME : N:\PDS\C3D\49840771\SHEETSPLAN\021101_ID.DWG PLOT DATE : 7/31/2014 11:45 AM PLOT BY : CAMPSHURE, MICHAEL RPLOT NAME : PLOT SCALE : 1 IN:40 FT

POINT	STATION	ALIGNMENT	OFFSET	RADIUS
1	208+01.08	PROSPECT	31.15 LT	
2	208+01.11	PROSPECT	26.15 LT	
3	207+96.33	PROSPECT	29.67 RT	
4	207+95.55	PROSPECT	34.61 RT	
5	208+54.20	PROSPECT	33.68 LT	
6	208+54.86	PROSPECT	28.73 LT	
7	208+01.09	PROSPECT	22.96 LT	
8	208+56.86	PROSPECT	23.38 LT	
9	207+96.41	PROSPECT	26.92 RT	
10	208+53.40	PROSPECT	27.02 RT	
11	208+67.50	PROSPECT	28.90 RT	
12	208+72.53	PROSPECT	31.27 RT	
13	50+25.18	SB	33.15 LT	
14	50+20.23	SB	30.09 LT	
15	50+07.15	SB	27.00 LT	
16	208+66.88	PROSPECT	25.28 LT	
17	208+71.86	PROSPECT	27.60 LT	
18	50+98.24	SB	34.04 LT	
19	51+03.17	SB	30.73 LT	
20	51+17.44	SB	27.00 LT	

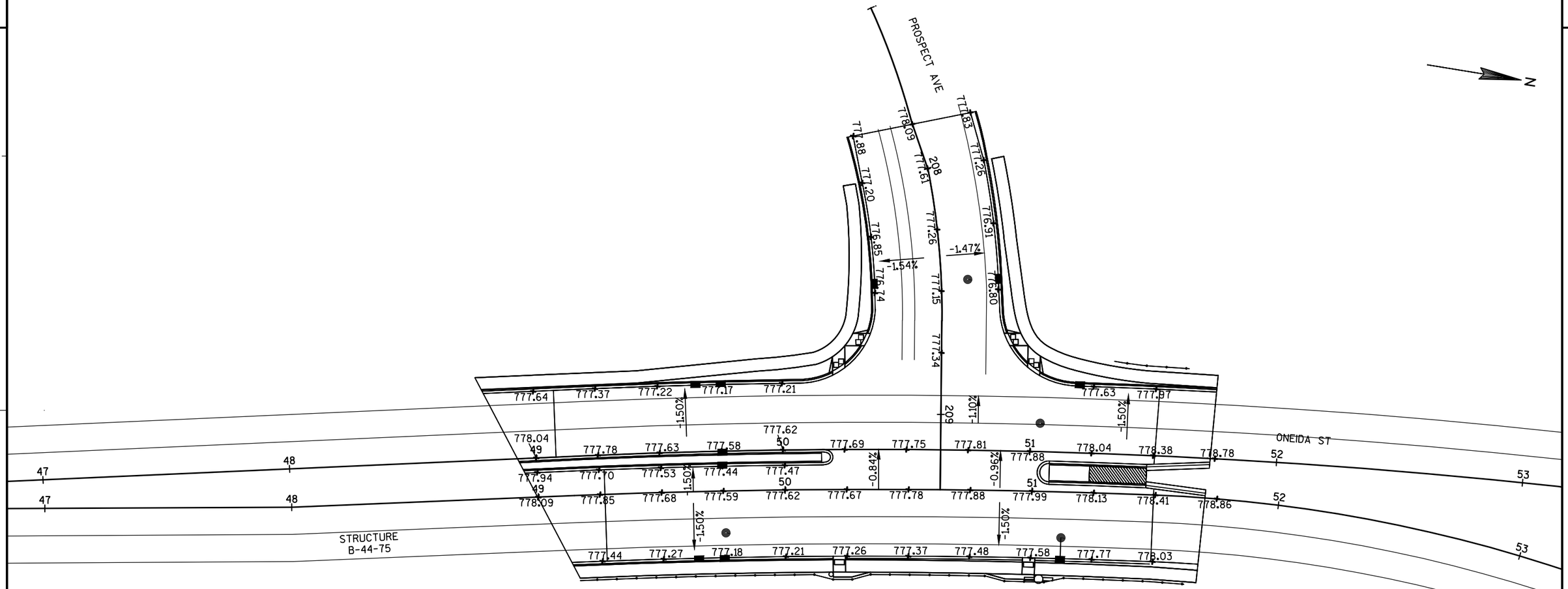
POINT	STATION	ALIGNMENT	OFFSET	RADIUS
21	51+16.63	SB	33.46 LT	
22	51+17.75	SB	38.33 LT	
23	208+59.62	PROSPECT	33.80 RT	
24	208+58.97	PROSPECT	38.77 RT	
25	50+13.69	SB	34.51 LT	
26	50+12.61	SB	39.40 LT	
27	49+42.01	SB	28.57 LT	
28	49+41.83	SB	33.57 LT	
29	48+76.59	SB	33.55 LT	
30	48+79.68	SB	27.00 LT	
31	48+92.39	SB	0.00	
32	48+95.01	NB	9.93 LT	
33	49+12.53	NB	27.00 RT	
34	49+15.62	NB	33.50 RT	
35	50+14.86	NB	10.00 LT	
36	50+15.60	SB	0.00	
37	50+19.34	NB	27.00 RT	
38	50+24.39	NB	27.00 RT	
39	50+96.70	NB	27.00 RT	
40	51+01.75	NB	27.00 RT	

POINT	STATION	ALIGNMENT	OFFSET	RADIUS
41	51+06.62	NB	2.94 LT	
42	51+08.03	SB	3.70 RT	
43	51+46.03	NB	2.78 LT	
44	51+47.56	SB	3.70 RT	
45	51+17.96	SB	59.10 LT	32'
46	50+06.95	SB	58.06 LT	31'
47	50+16.58	NB	13.10 LT	3'
48	51+06.59	NB	7.66 LT	5'
49	51+68.97	NB	34.50 RT	
50	51+68.99	NB	29.50 RT	
51	51+70.16	NB	0.89 LT	
52	51+73.06	SB	1.52 RT	
53	51+74.30	SB	28.72 LT	
54	51+74.50	SB	33.72 LT	



PROJECT NO: 4984-07-71	HWY: LOCAL	COUNTY: OUTAGAMIE	INTERSECTION DETAIL	SHEET 19	E

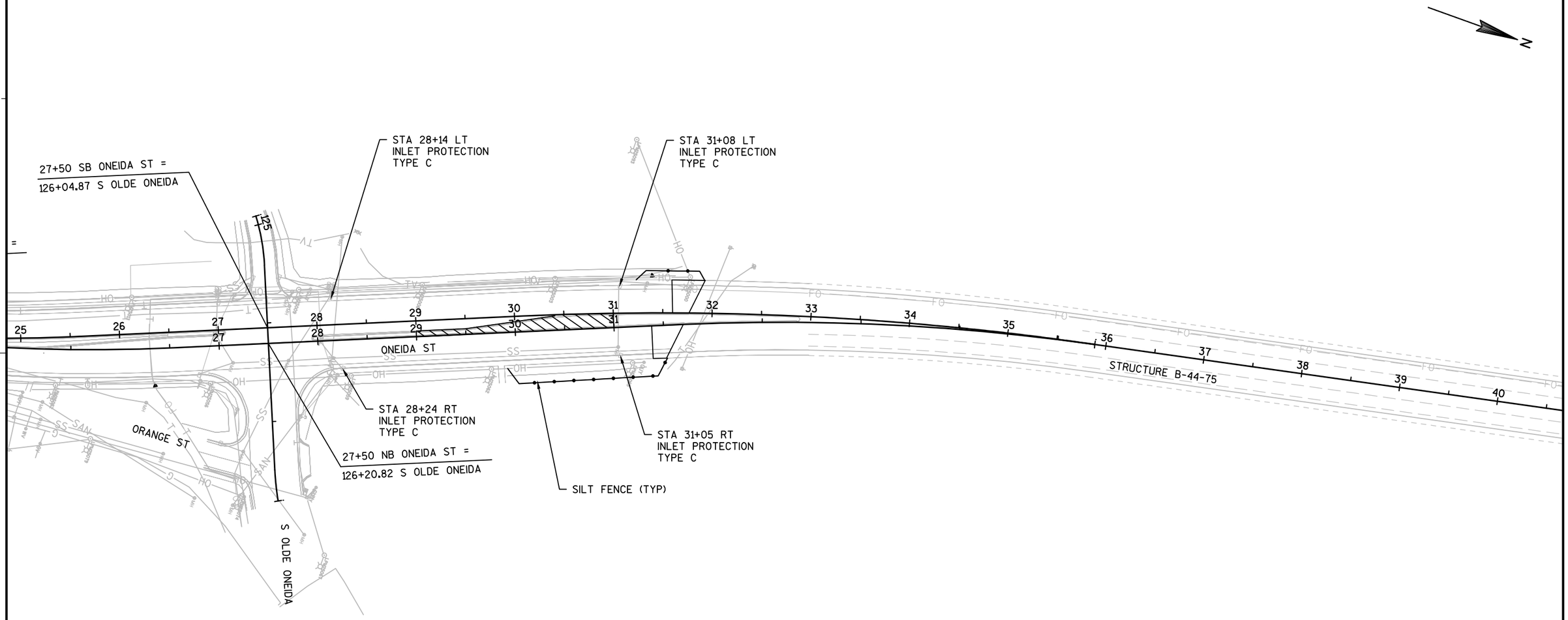
2



PROJECT NO: 4984-07-71	HWY: LOCAL	COUNTY: OUTAGAMIE	GRADING DETAIL	SHEET 20	E

FILE NAME : N:\PDS\C3D\49840771\SHEETSPLAN\PAVEMENT GRADES.DWG PLOT DATE : 7/29/2014 7:24 AM PLOT BY : ZAVADA, JENNIFER R PLOT NAME : PLOT SCALE : 1 IN:40 FT

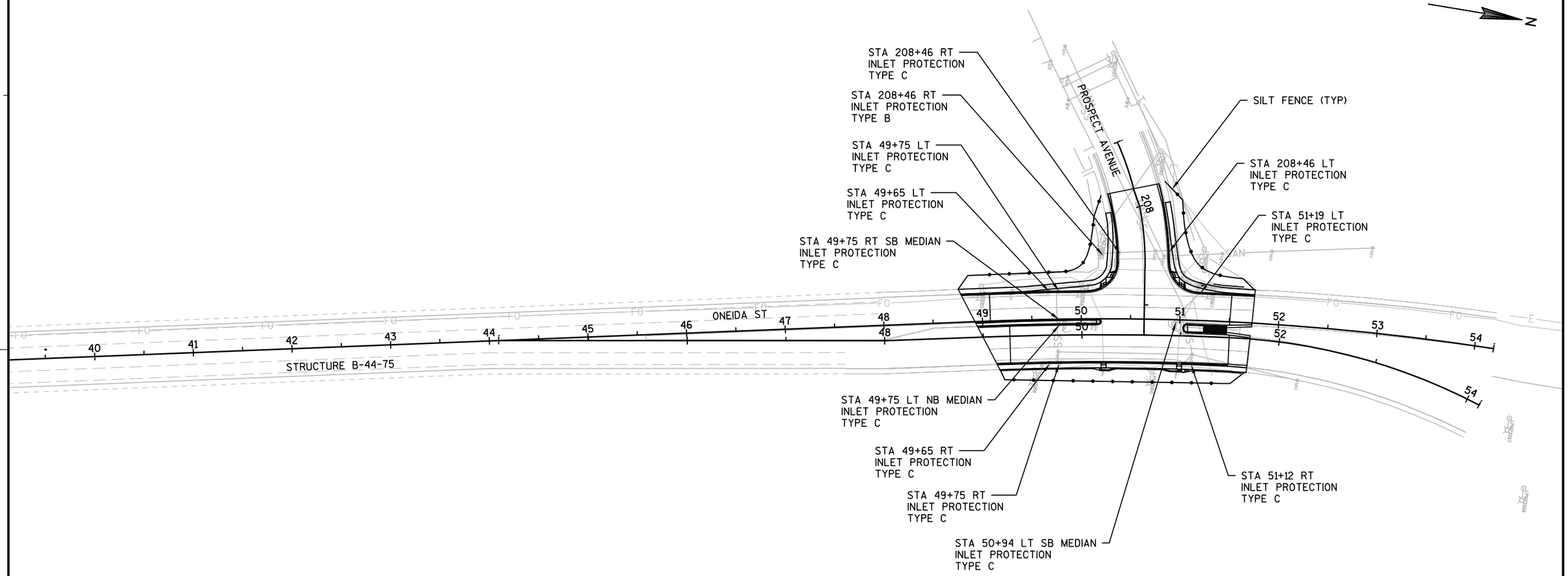
2



PROJECT NO: 4984-07-71	HWY: LOCAL	COUNTY: OUTAGAMIE	EROSION CONTROL DETAIL	SHEET	E

FILE NAME : N:\PDS\C3D\49840771\SHEETSPLAN\022001_EC.DWG PLOT DATE : 7/25/2014 7:33 AM PLOT BY : CAMPSHURE, MICHAEL RPLOT NAME : PLOT SCALE : 1"=100_XREF

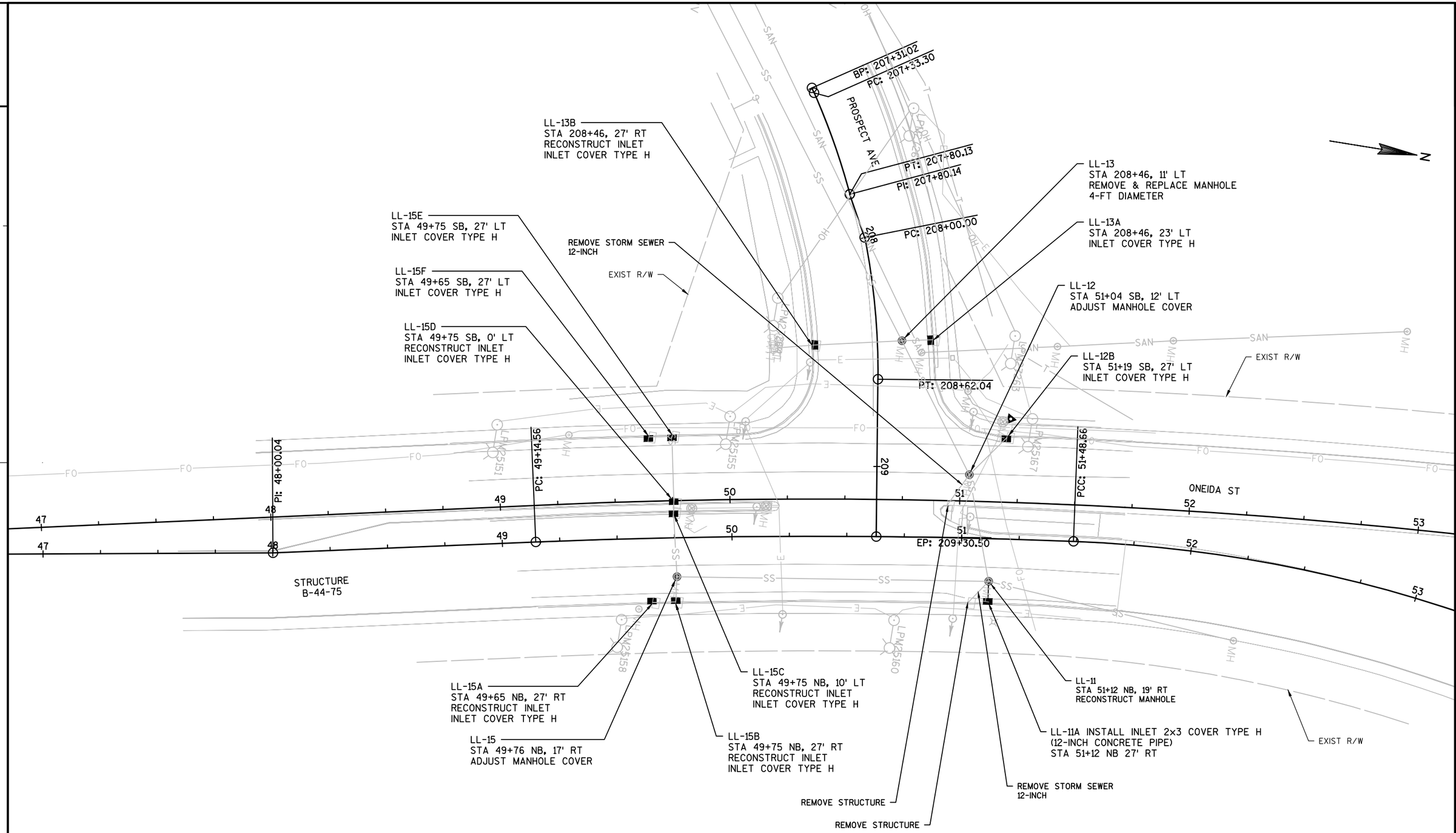
2



PROJECT NO: 4984-07-71	HWY: LOCAL	COUNTY: OUTAGAMIE	EROSION CONTROL DETAIL	SHEET	E

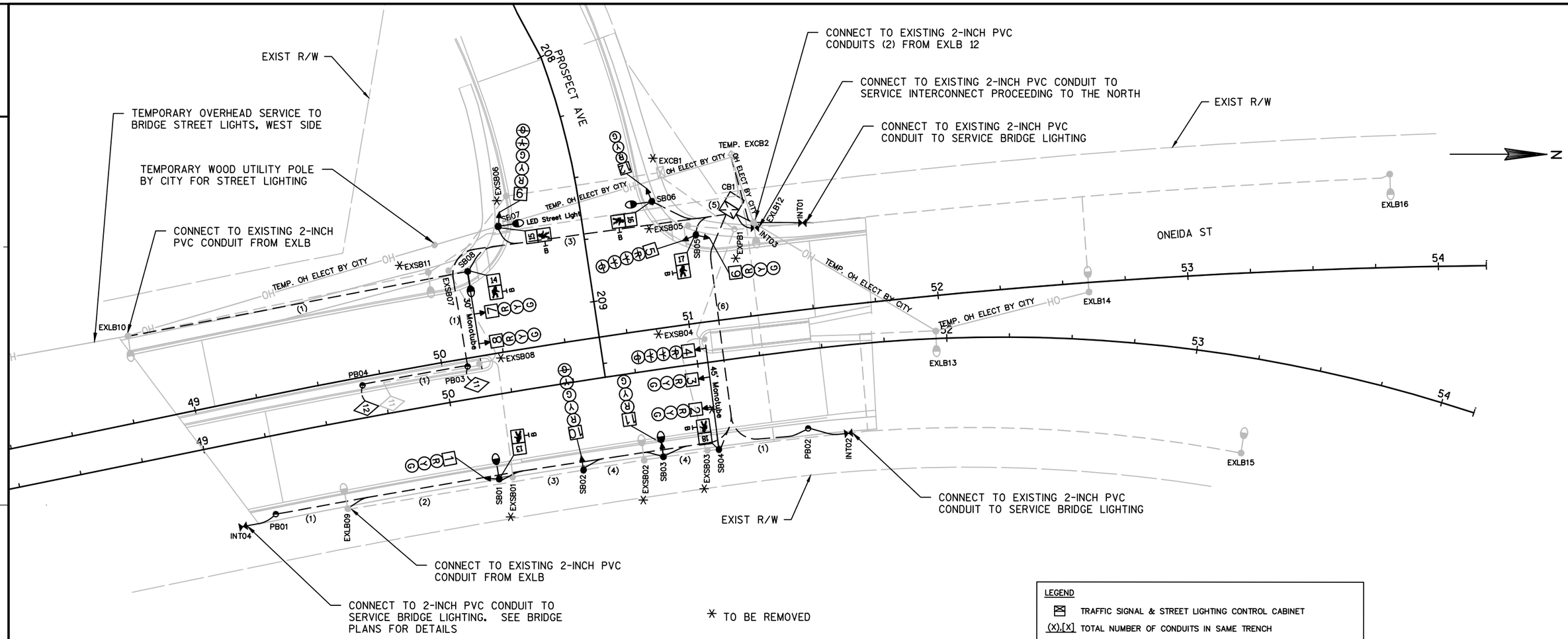
FILE NAME : N:\PDS\C3D\49840771\SHEETSPLAN\022001_EC.DWG PLOT DATE : 7/25/2014 7:33 AM PLOT BY : CAMPSHURE, MICHAEL RPLOT NAME : PLOT SCALE : 1"=100_XREF
WISDOT/CADDS SHEET 42

2



PROJECT NO: 4984-07-71	HWY: LOCAL	COUNTY: OUTAGAMIE	STORM SEWER DETAIL	SHEET	E

FILE NAME : N:\PDS\C3D\49840771\SHEETSPLAN\022501_SS.DWG PLOT DATE : 7/25/2014 6:40 AM PLOT BY : CAMPSHURE, MICHAEL RPLOT NAME : PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42



1) ALL CONCRETE BASE LOCATIONS SHALL BE STAKED PER PLAN A MINIMUM OF THREE WORKING DAYS PRIOR TO INSTALLATION. LOCATION WILL BE FIELD REVIEWED BY THE CITY OF APPLETON PRIOR TO INSTALLATION. CITY CONTACT IS MIKE HARDY, (920)832-5580.

2) CONCRETE BASES SHALL NOT BE POURED UNTIL NEARBY CURB IS SET TO ASSURE PROPER FINISHED BASE HEIGHT.

3) ELECTRICAL WIRE REMOVAL AND INSTALLATION BY CITY OF APPLETON. REMOVALS AND REINSTALLATIONS SHALL BE COORDINATED WITH THE CITY'S TRAFFIC SECTION TO MINIMIZE DOWNTIME TO STREET LIGHTS. REMOVALS WILL OCCUR AT TIME OF CONSTRUCTION TO KEEP STREET LIGHTS ACTIVE FOR PUBLIC SAFETY.

4) THE CITY PLANS TO INSTALL TEMPORARY OVERHEAD CABLE TO SERVICE EXISTING STREET LIGHTS NOT SCHEDULED FOR REMOVAL, INCLUDING LIGHTS ON THE WEST SIDE OF THE BRIDGE OVER THE FOX RIVER. SEE PLAN FOR LOCATIONS OF OVERHEAD CABLES AND TEMPORARY WOOD SUPPORT POLE.

5) THE CONTRACTOR SHALL INSTALL TYPE 9 POLES, TYPE 10 POLES AND MONOTUBE ARMS FURNISHED BY THE CITY OF APPLETON. THE CITY WILL INSTALL ALL OTHER TRAFFIC SIGNAL POLES, SIGNAL DISPLAYS, STREET LIGHTS, AND SIGNAL CONTROL CABINET.

6) THE CITY OF APPLETON WILL COORDINATE NEW SERVICE INSTALLATION WITH THE UTILITY COMPANY. CONTRACTOR SHALL INSTALL CITY FURNISHED CONCRETE CABINET BASEMENT A MINIMUM OF FOUR WEEKS PRIOR TO THE START-UP DATE OF THE NEW TRAFFIC SIGNAL CONTROL TO ALLOW THE CITY AND UTILITY COMPANY TO SCHEDULE INSTALLATIONS.

7) ALL CONDUITS SHALL BE IN THE SAME TRENCH, UNLESS THE PLAN INDICATES OTHERWISE.

8) CONNECTIONS TO EXISTING CONDUITS AT EXISTING STREET LIGHT BASES OR DESIGNATED INTERCEPTS INCIDENTAL TO CONDUIT PAY ITEM.

9) THE CONTRACTOR SHALL INSTALL A PULL ROPE IN EACH RUN OF CONDUIT INSTALLED. IF THE CONDUIT INSTALLED INTERCEPTS AN EXISTING CONDUIT, THE PULL ROPE SHALL EXTEND TO THE NEXT STREET LIGHT BASE OR PULL BOX. PULL ROPE SHALL BE INSTALLED WITHIN THREE DAYS OF COMPLETION OF ANY RUN OF CONDUIT.

10) THE CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF LOOP DETECTOR WIRE.

11) INSTALL AN EQUIPMENT GROUNDING LUG IN EACH PULL BOX.

12) ALL EXISTING PRIVATE UTILITIES MAY NOT BE SHOWN ON THE PLAN DUE TO LIMITED RECORDS OR RECENT RELOCATIONS. VERIFY UTILITIES IN THE FIELD BEFORE INSTALLATIONS.

LEGEND

- TRAFFIC SIGNAL & STREET LIGHTING CONTROL CABINET
- (X),[X] TOTAL NUMBER OF CONDUITS IN SAME TRENCH
- [X] = NUMBER OF 3 -INCH SCH 80 RIGID NONMETALLIC CONDUITS
- (X) = NUMBER OF 2-INCH SCH 80 RIGID NONMETALLIC CONDUITS
- "X" = NUMBER OF 1-INCH SCH 80 RIGID NONMETALLIC CONDUITS
- 12 X 24 - INCH PULL BOX OR AS NOTED
- 24 X 42 - INCH PULL BOX OR AS NOTED
- CONCRETE BASE, TYPE AS NOTED
- CONDUIT INTERCEPT AS NOTED
- STUB & CAP CONDUIT FOR FUTURE CONNECTION

EXSB## = EXISTING SIGNAL BASE NUMBER
EXLB## = EXISTING STREET LIGHT BASE NUMBER
SB## = SIGNAL OR STREET LIGHT BASE NUMBER
PB## = PULL BOX NUMBER
INT## = EXISTING CONDUIT INTERCEPT NUMBER
STUB## = STUB & CAP CONDUIT NUMBER
11 = LOOP DETECTOR CONDUIT AND NUMBER
= 12-INCH SIGNAL INDICATION AND HEAD NUMBER
= 16-INCH PEDESTRIAN COUNTDOWN INDICATION, PUSH BUTTON AND HEAD NUMBER

PROJECT NO: 4984-07-71	HWY: LOCAL	COUNTY: OUTAGAMIE	TRAFFIC SIGNAL PLAN	SHEET	E

2

N

PAVEMENT MARKING STOP LINE
EPOXY 18-INCH

PAVEMENT MARKING ARROWS
BIKE LANE EPOXY (TYP)

PAVEMENT MARKING SYMBOLS
BIKE LANE EPOXY (TYP)

6'
11'
11'
10'
11'
11'
6'
9'

23 24 25 26 27 28 29

ONEIDA ST

PAVEMENT MARKING EPOXY
8-INCH CHANNELIZING LINE (WHITE)

PAVEMENT MARKING EPOXY
4-INCH LANE LINE (WHITE)
(15' LINE, 25' GAP) (TYP)

PAVEMENT MARKING EPOXY
6-INCH EDGE LINE (WHITE)
(TYP)

S. OLDE ONEIDA

PROJECT NO: 4984-07-71	HWY: LOCAL	COUNTY: OUTAGAMIE	PAVEMENT MARKING	SHEET 25	E

FILE NAME : N:\PDS\C3D\49840771\SHEETSPLAN\024501_PM.DWG PLOT DATE : 7/25/2014 8:29 AM PLOT BY : CAMPSHURE, MICHAEL RPLOT NAME : PLOT SCALE : 1 IN:40 FT

2

2

N

PAVEMENT MARKING EPOXY
8-INCH CHANNELIZING LINE (WHITE)

PAVEMENT MARKING ISLAND
NOSE EPOXY (TYP)

PAVEMENT MARKING EPOXY
4-INCH CENTERLINE (YELLOW)

6'
11'
11'
11'
11'
6'

29
30
31
32
33
34
35

ONEIDA ST

STRUCTURE B-44-75

PAVEMENT MARKING EPOXY
4-INCH LANE LINE (WHITE)
(15' LINE, 25' GAP) (TYP)

PAVEMENT MARKING EPOXY
6-INCH EDGE LINE (WHITE)
(TYP)

PROJECT NO: 4984-07-71	HWY: LOCAL	COUNTY: OUTAGAMIE	PAVEMENT MARKING	SHEET	E

FILE NAME : N:\PDS\C3D\49840771\SHEETSPLAN\024501_PM.DWG PLOT DATE : 7/25/2014 8:29 AM PLOT BY : CAMPSHURE, MICHAEL RPLOT NAME : PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

2

N

PAVEMENT MARKING EPOXY
4-INCH CENTERLINE (YELLOW)

6'
11'
11'
11'
11'
6'

35 36 37 38 39 40 41

ONEIDA ST

STRUCTURE B-44-75

PAVEMENT MARKING EPOXY
4-INCH LANE LINE (WHITE)
(15' LINE, 25' GAP) (TYP)

PAVEMENT MARKING EPOXY
6-INCH EDGE LINE (WHITE)
(TYP)

PROJECT NO: 4984-07-71	HWY: LOCAL	COUNTY: OUTAGAMIE	PAVEMENT MARKING	SHEET	E

FILE NAME : N:\PDS\C3D\49840771\SHEETSPLAN\024501_PM.DWG PLOT DATE : 7/25/2014 8:29 AM PLOT BY : CAMPSHURE, MICHAEL RPLOT NAME : PLOT SCALE : 1 IN:40 FT

2

2

N

PAVEMENT MARKING EPOXY
4-INCH CENTERLINE (YELLOW)

PAVEMENT MARKING ISLAND
NOSE EPOXY (TYP)

6'
11'
11'
11'
6'

41 42 43 44 45 46 47

ONEIDA ST

STRUCTURE B-44-75

PAVEMENT MARKING EPOXY
4-INCH LANE LINE (WHITE)
(15' LINE, 25' GAP) (TYP)

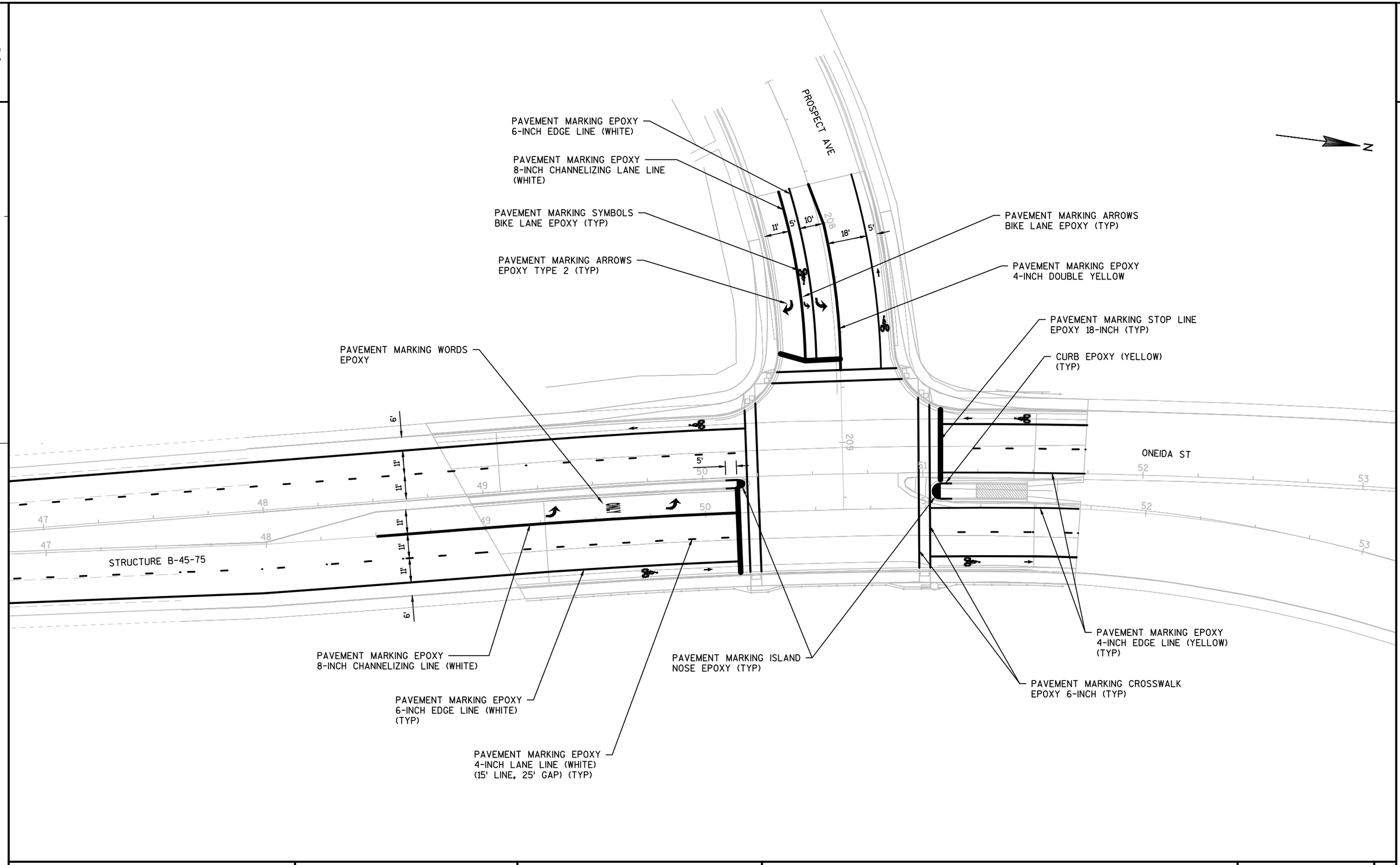
PAVEMENT MARKING EPOXY
6-INCH EDGE LINE (WHITE)
(TYP)

PROJECT NO: 4984-07-71	HWY: LOCAL	COUNTY: OUTAGAMIE	PAVEMENT MARKING	SHEET	E

FILE NAME : N:\PDS\C3D\49840771\SHEETSPLAN\024501_PM.DWG PLOT DATE : 7/25/2014 8:29 AM PLOT BY : CAMPSHURE, MICHAEL RPLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2



PROJECT NO: 4984-07-71	HWY: LOCAL	COUNTY: OUTAGAMIE	PAVEMENT MARKING	SHEET	E

2

2

W LAWRENCE ST

W EIGHTH ST

S BADGER AVE

STH 47

S STATE ST

S WALNUT ST

S ELM ST

WORK ZONE

S ROCKY BLEIER RUN

E WATER ST

N

W SPENCER ST

NO ACCESS TO ONEIDA ST

ROAD CLOSED 0.4 MILES AHEAD LOCAL TRAFFIC ONLY

R11-3 60" X 30"

TYPE III BARRICADE

W SIXTH ST

S ELM ST

S ONEIDA ST

STRUCTURE B-44-75

W FIFTH ST

S MEMORIAL DR

W PROSPECT AVE

W FOURTH ST

W WATER ST

ROAD CLOSED TO THRU TRAFFIC

R11-4 60" X 30"

TYPE III BARRICADE

W THIRD ST

W EDISON AVE

S PIERCE AVE

S LOCUST ST

STH 47

ROAD CLOSED TO THRU TRAFFIC

R11-4 60" X 30"

TYPE III BARRICADE

NO ACCESS TO ONEIDA ST

ROAD CLOSED 0.5 MILES AHEAD LOCAL TRAFFIC ONLY

R11-3 60" X 30"

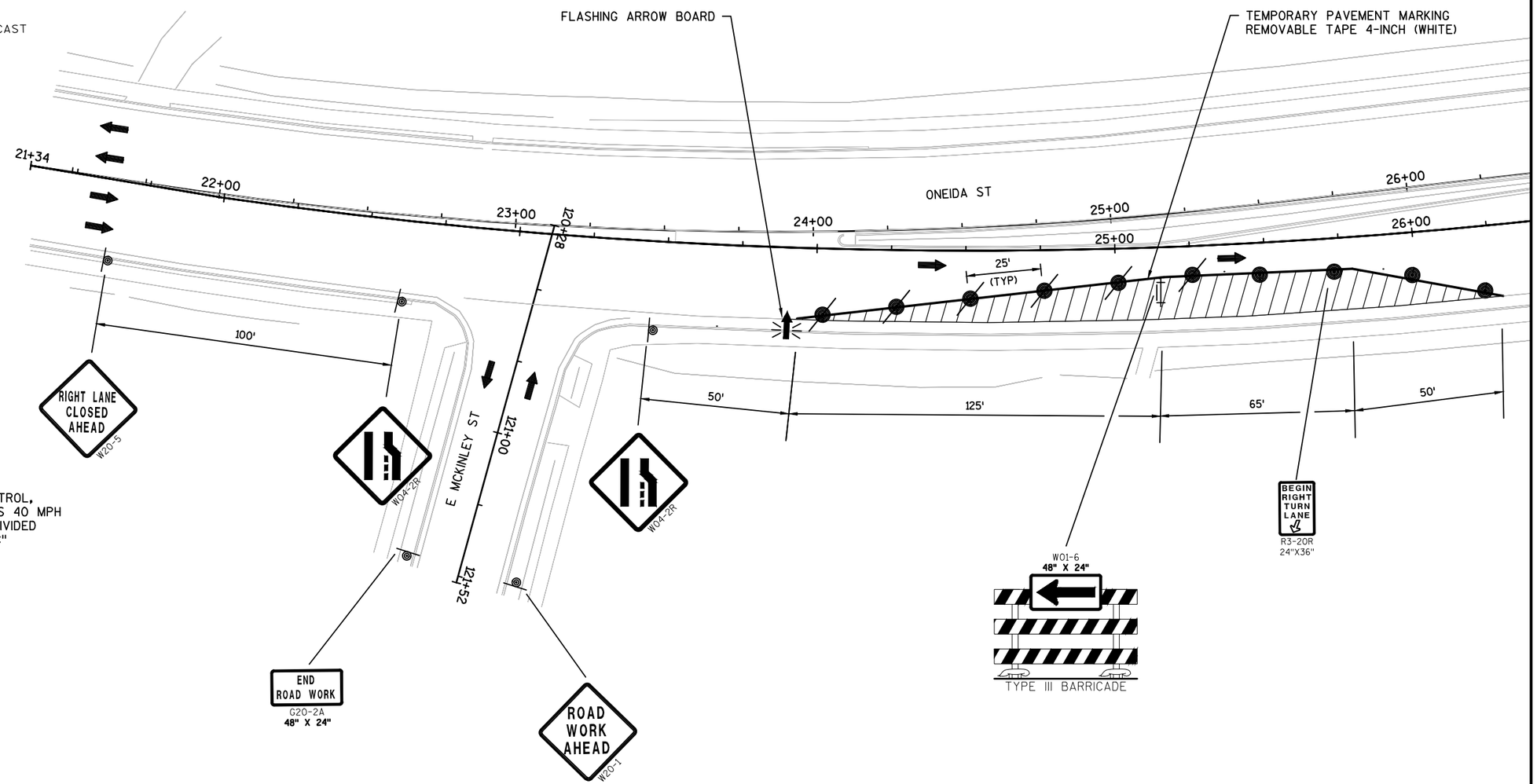
TYPE III BARRICADE

S OLDE ONEIDA ST

PROJECT NO: 4984-07-71	HWY: LOCAL	COUNTY: OUTAGAMIE	TRAFFIC CONTROL (STAGES 1-3)	SHEET	E

LEGEND

- TYPE III BARRICADE
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- WORK AREA
- DIRECTION OF TRAFFIC
- CONCRETE BARRIER TEMPORARY PRECAST
- TEMPORARY PAVEMENT AREA



SEE SDD "TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 MPH OR LESS TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC"

PROJECT NO: 4984-07-71	HWY: LOCAL	COUNTY: OUTAGAMIE	TRAFFIC CONTROL (NB CLOSED STAGE 1)	SHEET 31	E

2

N

CONCRETE BARRIER TEMPORARY CONTINUES
ACROSS STRUCTURE WITH CRASH CUSHION TEMPORARY

TEMPORARY PAVEMENT MARKING
REMOVABLE TAPE 4-INCH (WHITE)

TEMPORARY PAVEMENT MARKING
REMOVABLE TAPE 4-INCH (YELLOW)

ONEIDA ST

125+00

126+00

127+00

127+81

26+00

27+00

28+00

29+00

30+00

31+00

32+00

CC

25'
(TYP)

50'

100'

150'

100'

S OLDE ONEIDA ST

LANE
CLOSED
R11-2(MOD)
48" X 30"
TYPE III BARRICADE

END
ROAD WORK
G20-2A
48" X 24"

ROAD
WORK
AHEAD
W20-1

W01-6
48" X 24"
TYPE III BARRICADE

W06-3

SEE SDD "TRAFFIC CONTROL, SIDEWALK CLOSURE"

LEGEND

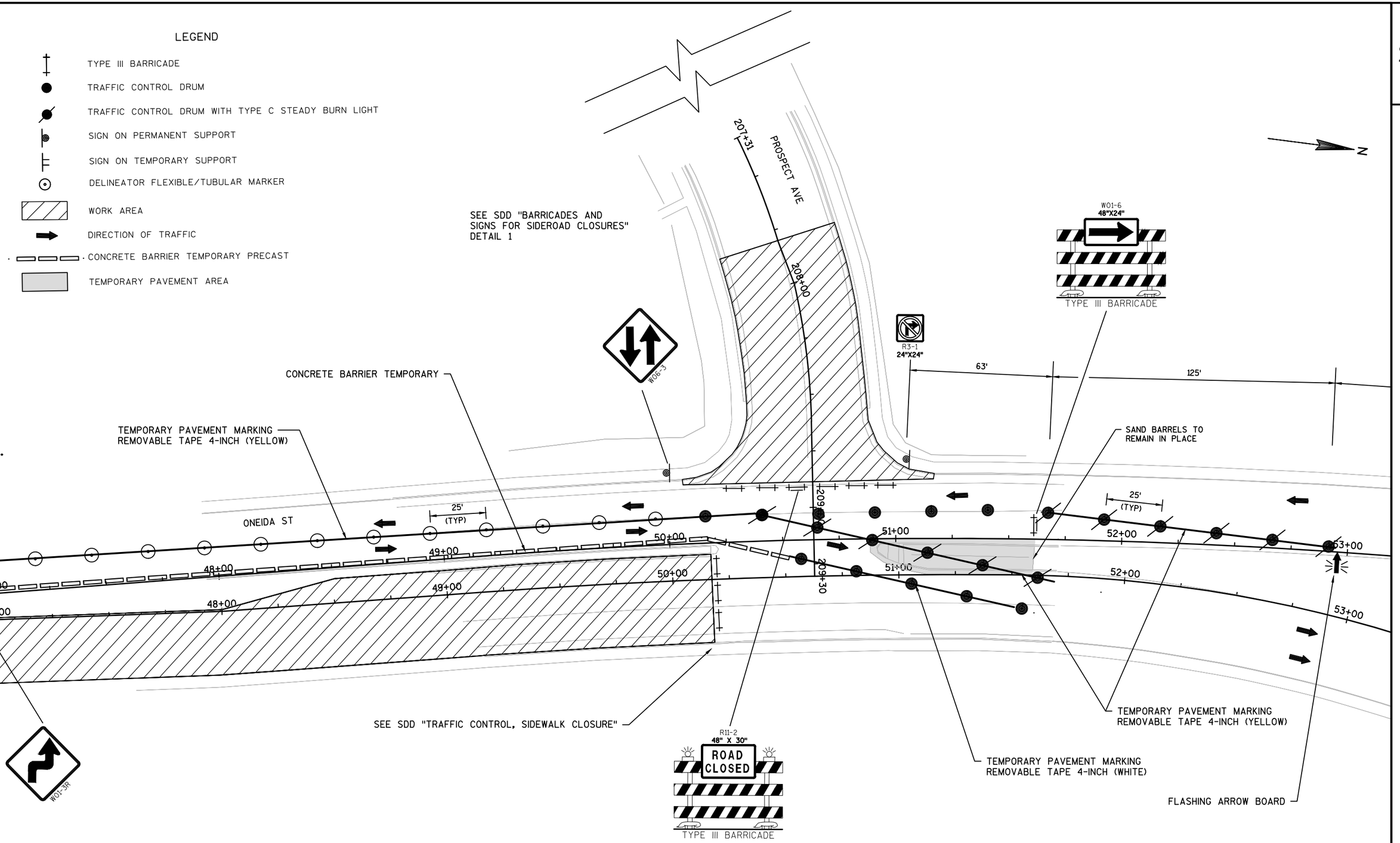
- TYPE III BARRICADE
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- WORK AREA
- DIRECTION OF TRAFFIC
- CONCRETE BARRIER TEMPORARY PRECAST
- TEMPORARY PAVEMENT AREA

PROJECT NO: 4984-07-71	HWY: LOCAL	COUNTY: OUTAGAMIE	TRAFFIC CONTROL (NB CLOSED STAGE 1)	SHEET 32	E

FILE NAME : N:\PDS\C3D\49840771\SHEETSPLAN\025003_TC.DWG PLOT DATE : 7/28/2014 11:12 AM PLOT BY : CAMPSHURE, MICHAEL RPLOT NAME : PLOT SCALE : 1 IN:40 FT

LEGEND

- TYPE III BARRICADE
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- WORK AREA
- DIRECTION OF TRAFFIC
- CONCRETE BARRIER TEMPORARY PRECAST
- TEMPORARY PAVEMENT AREA

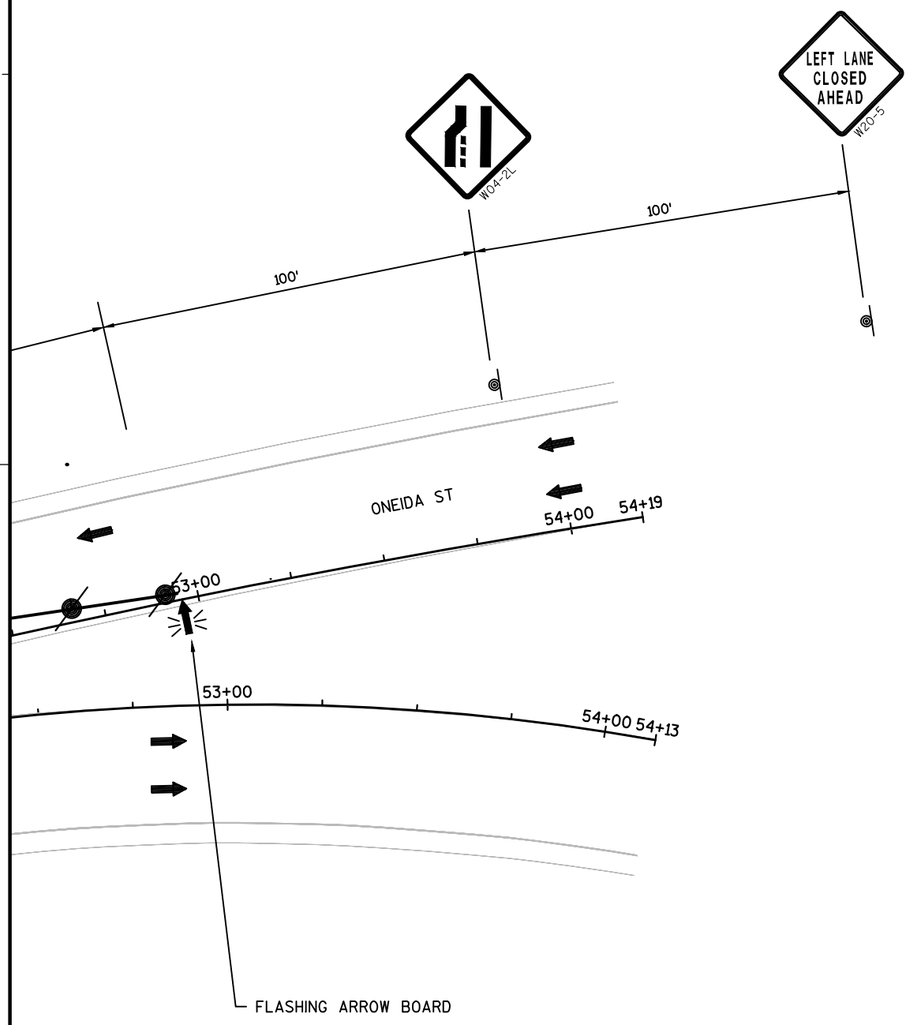


PROJECT NO: 4984-07-71	HWY: LOCAL	COUNTY: OUTAGAMIE	TRAFFIC CONTROL (NB CLOSED STAGE 1)	SHEET	E

FILE NAME : N:\PDS\C3D\49840771\SHEETSPLAN\025001_TC.DWG PLOT DATE : 7/28/2014 11:12 AM PLOT BY : CAMPSHURE, MICHAEL RPLOT NAME : PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

2

N



SEE SDD "TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 MPH OR LESS TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC"

LEGEND

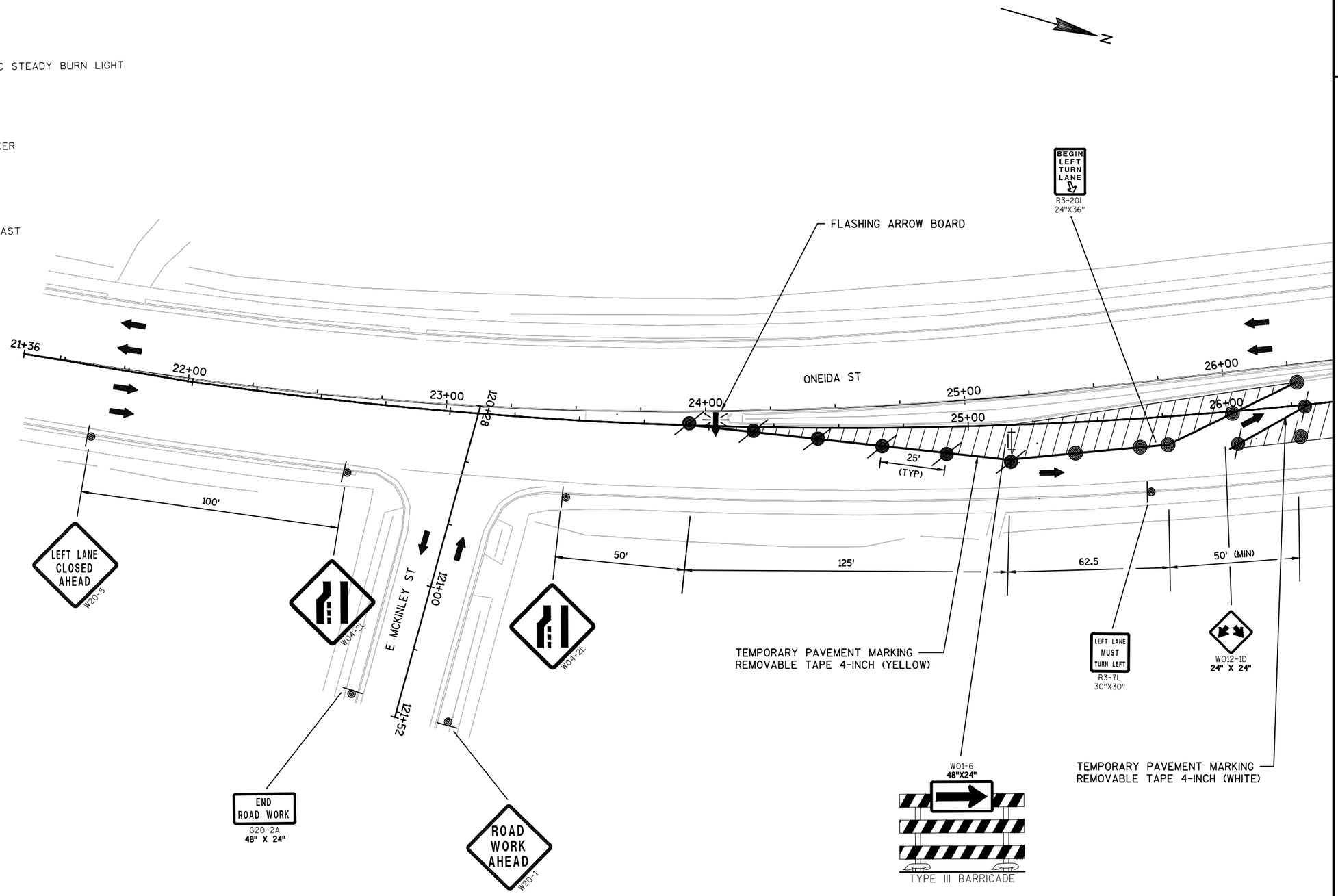
- TYPE III BARRICADE
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- WORK AREA
- DIRECTION OF TRAFFIC
- CONCRETE BARRIER TEMPORARY PRECAST
- TEMPORARY PAVEMENT AREA

PROJECT NO: 4984-07-71	HWY: LOCAL	COUNTY: OUTAGAMIE	TRAFFIC CONTROL (NB CLOSED STAGE 1)	SHEET 34	E

LEGEND

- TYPE III BARRICADE
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- WORK AREA
- DIRECTION OF TRAFFIC
- CONCRETE BARRIER TEMPORARY PRECAST
- TEMPORARY PAVEMENT AREA

SEE SDD "TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 MPH OR LESS TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC"



PROJECT NO: 4984-07-71	HWY: LOCAL	COUNTY: OUTAGAMIE	TRAFFIC CONTROL (SB CLOSED STAGE 2)	SHEET	E

FILE NAME : N:\PDS\C3D\49840771\SHEETSPLAN\025004_TC.DWG PLOT DATE : 7/28/2014 11:12 AM PLOT BY : CAMPSHURE, MICHAEL RPLOT NAME : PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

2

N

125+00

126+00

127+00

127+81

S OLDE ONEIDA ST

ONEIDA ST

26+00

27+00

28+00

29+00

30+00

31+00

32+00

TEMPORARY PAVEMENT MARKING
REMOVABLE TAPE 4-INCH (WHITE)

TEMPORARY PAVEMENT MARKING
REMOVABLE TAPE 4-INCH (YELLOW)

SEE SDD "TRAFFIC CONTROL, SIDEWALK CLOSURE"

CONCRETE BARRIER TEMPORARY
CONTINUES ACROSS STRUCTURE

W01-3R

25'
(TYP)

50' (MIN)

145'

50' MIN BUFFER
FROM WORK ZONE

W12-1D
24" X 24"

W01-6
48"X24"

TYPE III BARRICADE

W01-6
48"X24"

TYPE III BARRICADE

W06-3

TEMPORARY PAVEMENT MARKING
REMOVABLE TAPE 4-INCH (YELLOW)

END
ROAD WORK
G20-2A
48" X 24"

ROAD
WORK
AHEAD
W20-1

LEGEND

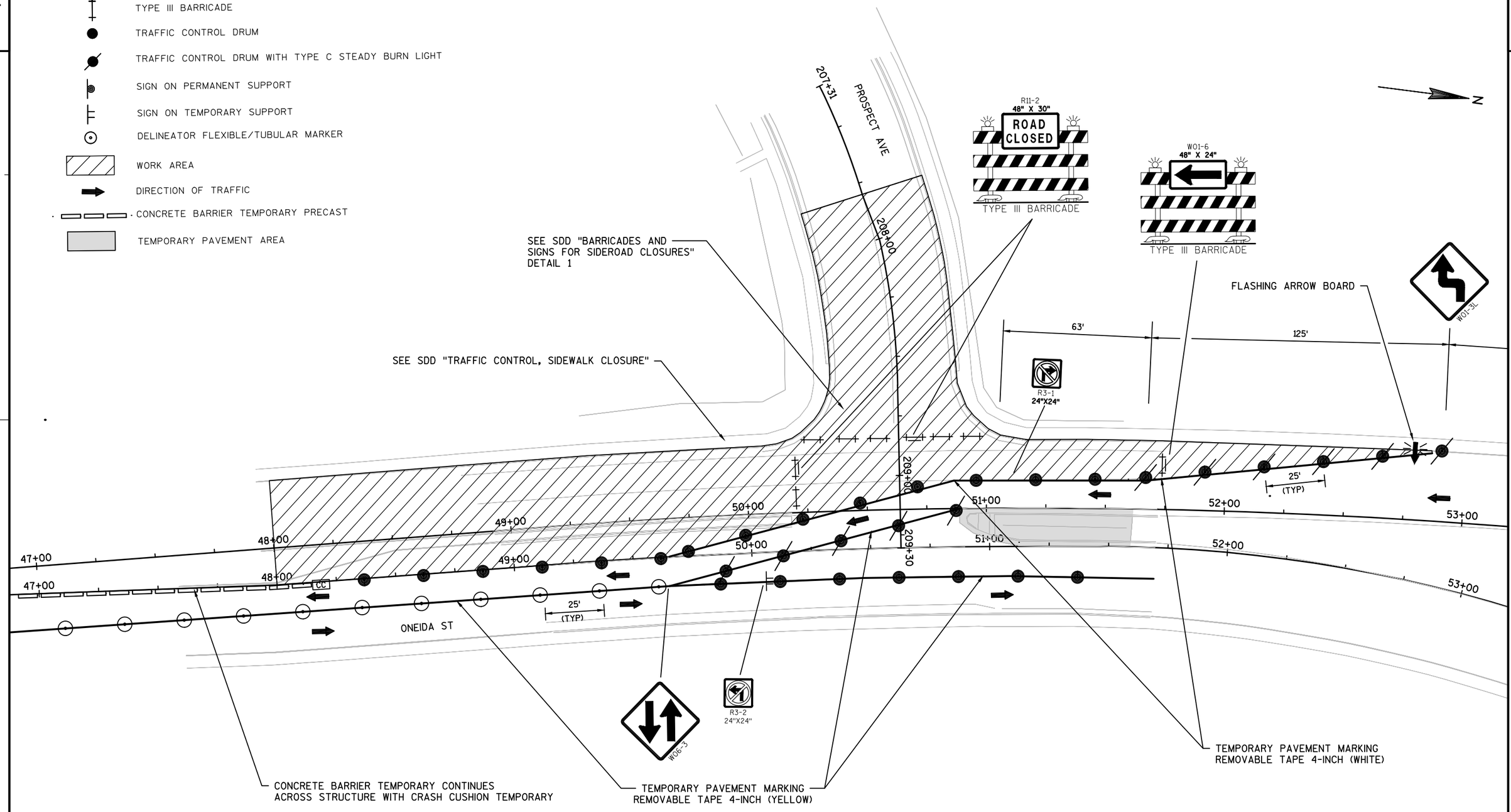
- TYPE III BARRICADE
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- WORK AREA
- DIRECTION OF TRAFFIC
- CONCRETE BARRIER TEMPORARY PRECAST
- TEMPORARY PAVEMENT AREA

PROJECT NO: 4984-07-71	HWY: LOCAL	COUNTY: OUTAGAMIE	TRAFFIC CONTROL (SB CLOSED STAGE 2)	SHEET	E

FILE NAME : N:\PDS\C3D\49840771\SHEETSPLAN\025004_TC.DWG PLOT DATE : 7/28/2014 11:12 AM PLOT BY : CAMPSHURE, MICHAEL RPLOT NAME : PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

LEGEND

- TYPE III BARRICADE
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- WORK AREA
- DIRECTION OF TRAFFIC
- CONCRETE BARRIER TEMPORARY PRECAST
- TEMPORARY PAVEMENT AREA



PROJECT NO: 4984-07-71	HWY: LOCAL	COUNTY: OUTAGAMIE	TRAFFIC CONTROL (SB CLOSED STAGE 2)	SHEET	E

FILE NAME : N:\PDS\C3D\49840771\SHEETSPLAN\025002_TC.DWG PLOT DATE : 7/28/2014 11:12 AM PLOT BY : CAMPSHURE, MICHAEL RPLOT NAME : PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

2

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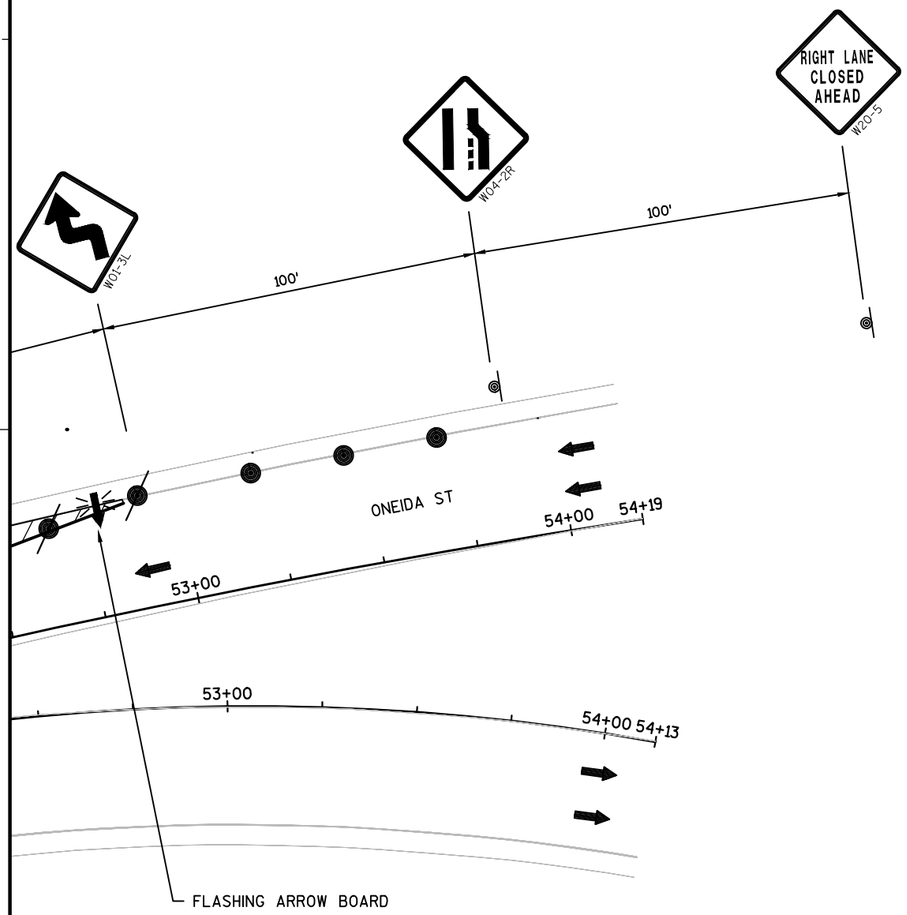

SEE SDD "TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 MPH OR LESS TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC"

LEGEND

- TYPE III BARRICADE
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
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- SIGN ON TEMPORARY SUPPORT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- WORK AREA
- DIRECTION OF TRAFFIC
- CONCRETE BARRIER TEMPORARY PRECAST
- TEMPORARY PAVEMENT AREA

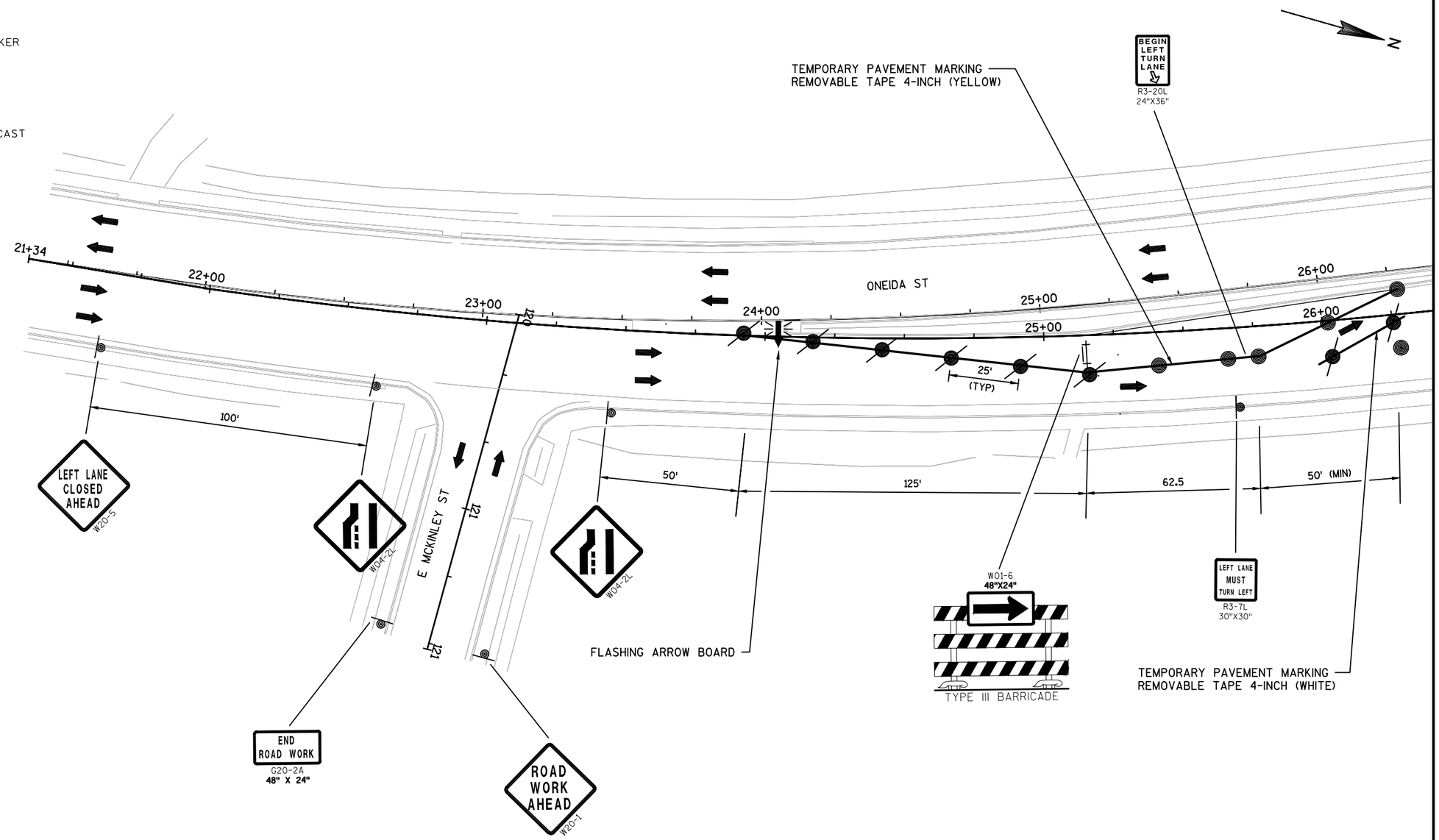
PROJECT NO: 4984-07-71	HWY: LOCAL	COUNTY: OUTAGAMIE	TRAFFIC CONTROL (SB CLOSED STAGE 2)	SHEET 38	E

FILE NAME : N:\PDS\C3D\49840771\SHEETSPLAN\025002_TC.DWG PLOT DATE : 7/28/2014 11:12 AM PLOT BY : CAMPSHURE, MICHAEL RPLOT NAME : PLOT SCALE : 1 IN:40 FT

LEGEND

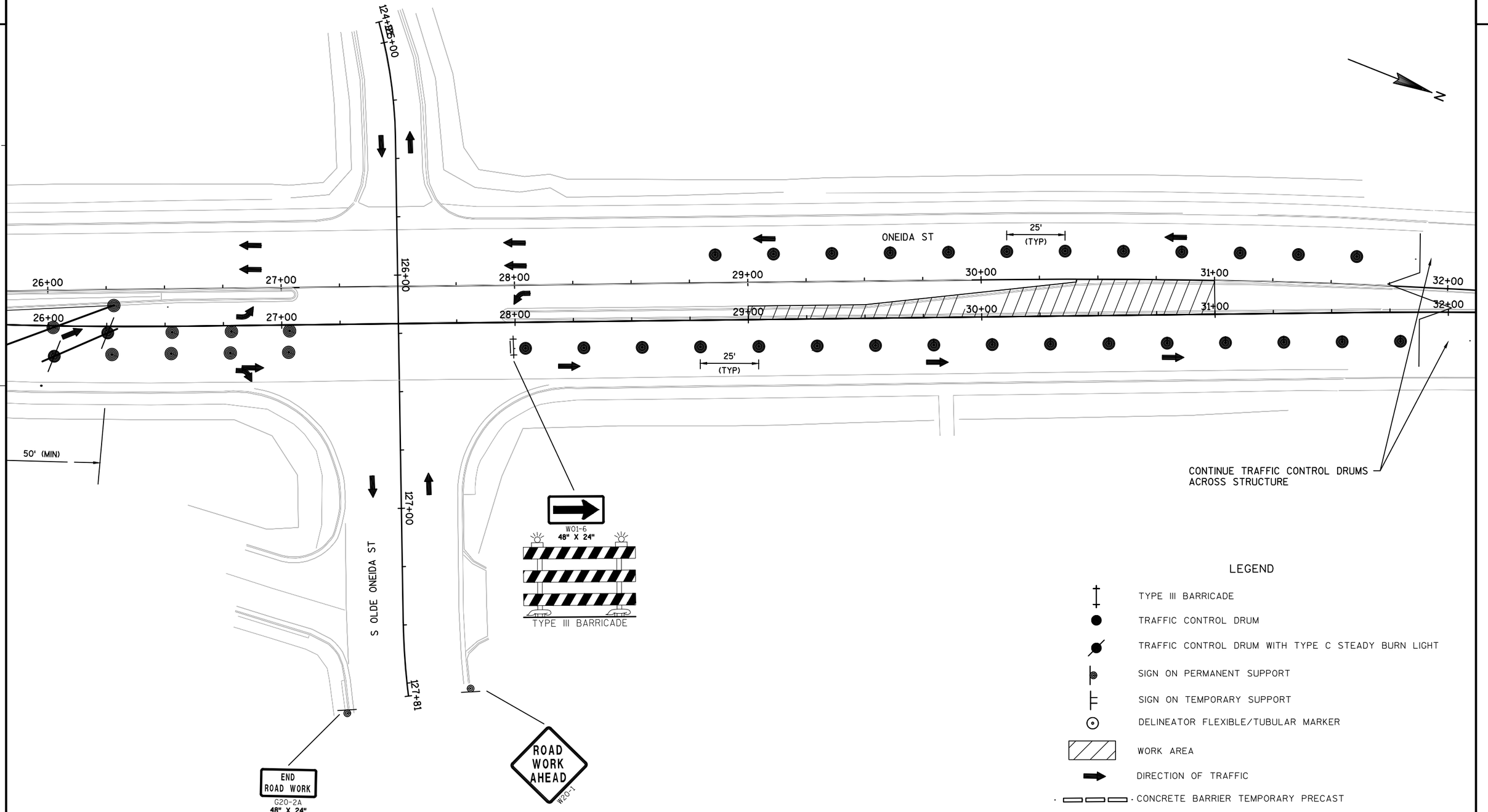
- TYPE III BARRICADE
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- WORK AREA
- DIRECTION OF TRAFFIC
- CONCRETE BARRIER TEMPORARY PRECAST

SEE SDD "TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 MPH OR LESS TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC"



PROJECT NO: 4984-07-71	HWY: LOCAL	COUNTY: OUTAGAMIE	TRAFFIC CONTROL (CENTER LANES CLOSED STAGE 3)	SHEET 39	E

2

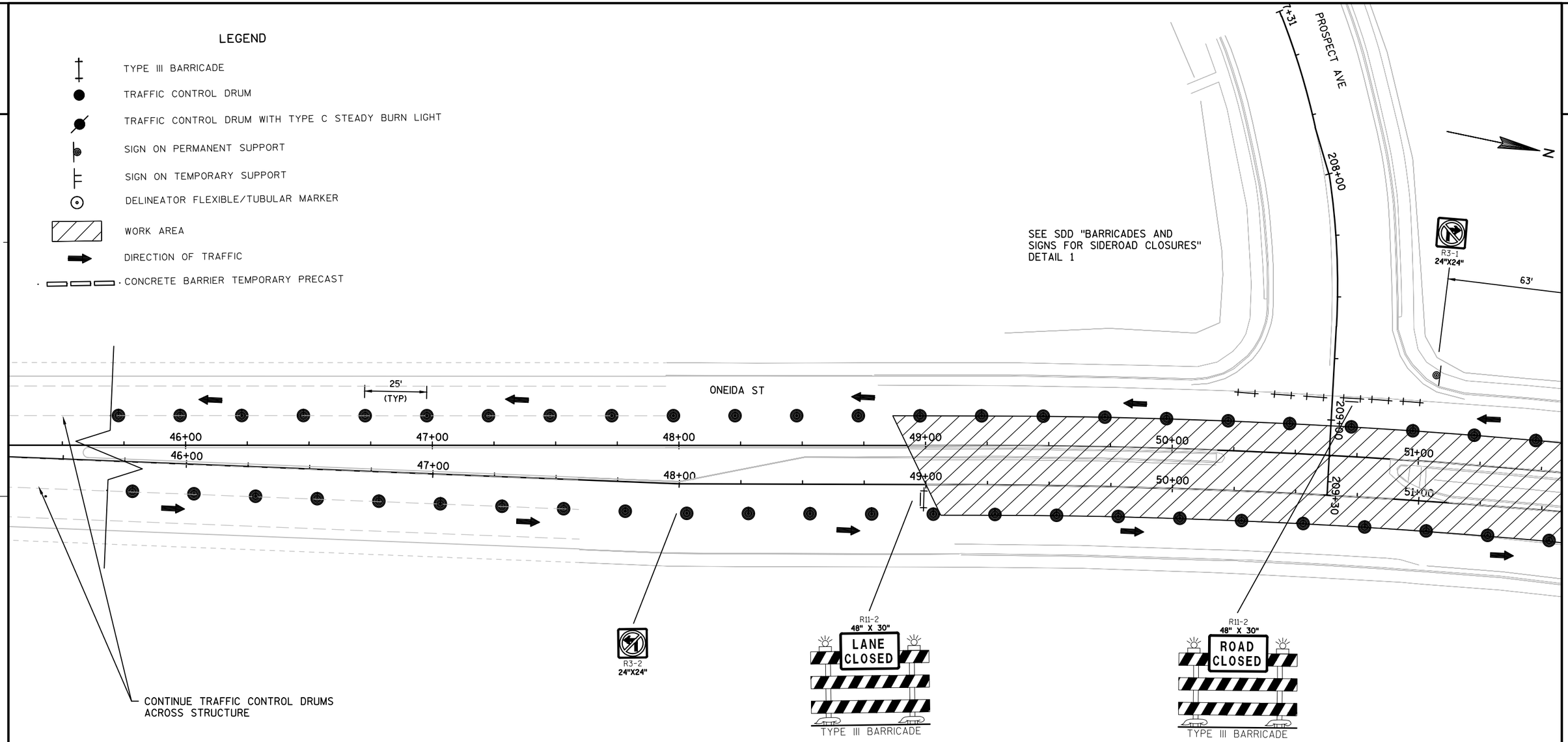


PROJECT NO: 4984-07-71	HWY: LOCAL	COUNTY: OUTAGAMIE	TRAFFIC CONTROL (CENTER LANES CLOSED STAGE 3)	SHEET 40	E

2

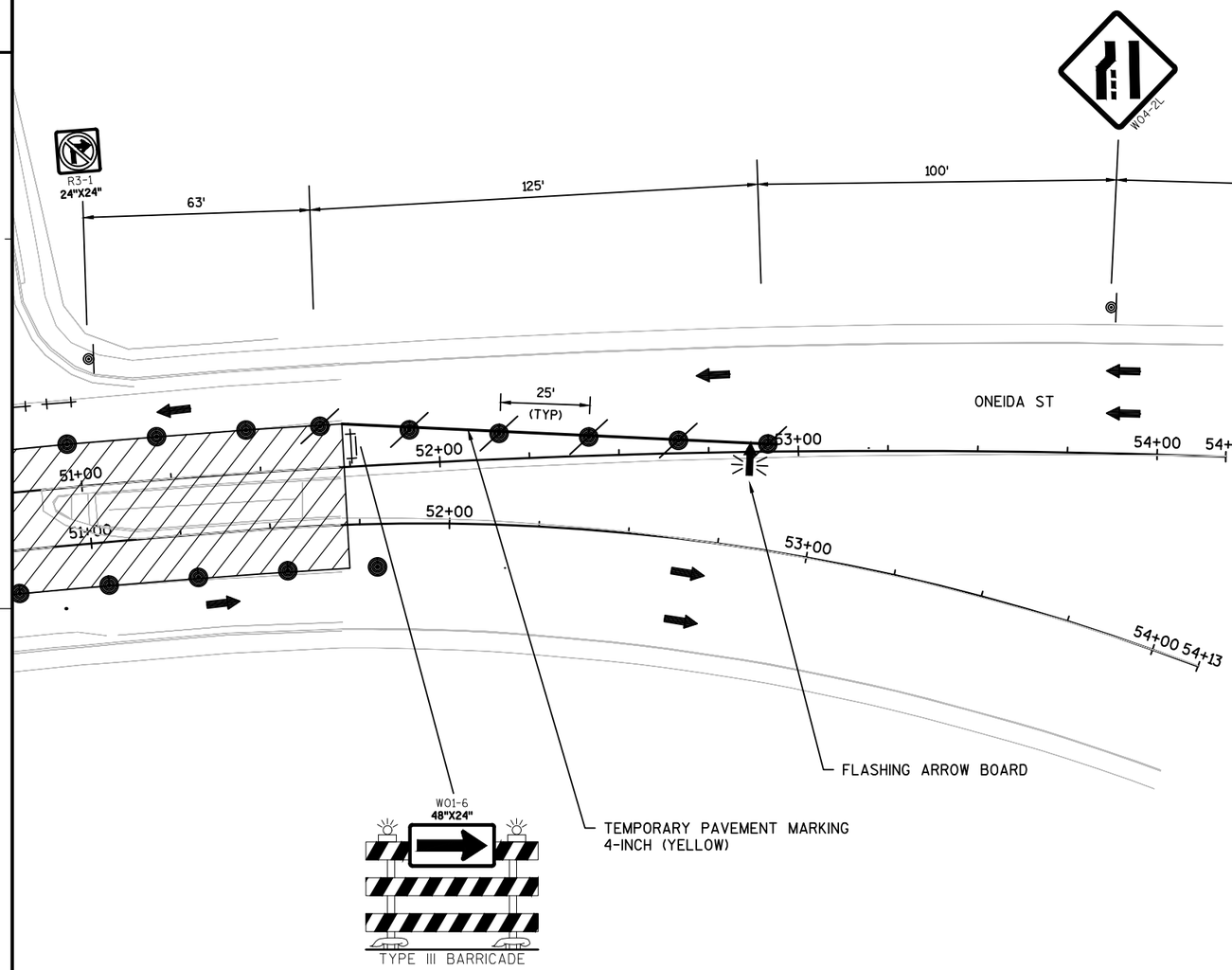
LEGEND

- TYPE III BARRICADE
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- WORK AREA
- DIRECTION OF TRAFFIC
- CONCRETE BARRIER TEMPORARY PRECAST



PROJECT NO: 4984-07-71	HWY: LOCAL	COUNTY: OUTAGAMIE	TRAFFIC CONTROL (CENTER LANES CLOSED STAGE 3)	SHEET 41	E

2



SEE SDD "TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 MPH OR LESS TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC"

LEGEND

- TYPE III BARRICADE
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- DIRECTION OF TRAFFIC
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PROJECT NO: 4984-07-71	HWY: LOCAL	COUNTY: OUTAGAMIE	TRAFFIC CONTROL (CENTER LANES CLOSED STAGE 3)	SHEET 42	E

DATE 14OCT14 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	4984-07-71 QUANTITY
0010	203.0225.S	DEBRIS CONTAINMENT (STRUCTURE) 01. B-44-75	LS	1.000	1.000
0020	204.0100	REMOVING PAVEMENT	SY	2,655.000	2,655.000
0030	204.0150	REMOVING CURB & GUTTER	LF	1,505.000	1,505.000
0040	204.0155	REMOVING CONCRETE SIDEWALK	SY	459.000	459.000
0050	204.0165	REMOVING GUARDRAIL	LF	478.000	478.000
0060	204.0195	REMOVING CONCRETE BASES	EACH	10.000	10.000
0070	204.0210	REMOVING MANHOLES	EACH	1.000	1.000
0080	204.0220	REMOVING INLETS	EACH	2.000	2.000
0090	204.0245	REMOVING STORM SEWER (SIZE) 01. 12-INCH	LF	29.000	29.000
0100	204.9090.S	REMOVING (ITEM DESCRIPTION) 01. RAILING	LF	33.000	33.000
0110	205.0100	EXCAVATION COMMON	CY	210.000	210.000
0120	213.0100	FINISHING ROADWAY (PROJECT) 01. 4984-07-71	EACH	1.000	1.000
0130	305.0120	BASE AGGREGATE DENSE 1 1/4-INCH	TON	1,310.000	1,310.000
0140	415.0090	CONCRETE PAVEMENT 9-INCH	SY	2,345.000	2,345.000
0150	415.0410	CONCRETE PAVEMENT APPROACH SLAB	SY	310.000	310.000
0160	416.0620	DRILLED DOWEL BARS	EACH	80.000	80.000
0170	465.0125	ASPHALTIC SURFACE TEMPORARY	TON	89.000	89.000
0180	502.3100	EXPANSION DEVICE (STRUCTURE) 01. B-44-75	LS	1.000	1.000
0190	502.3200	PROTECTIVE SURFACE TREATMENT	SY	12,795.000	12,795.000
0200	502.5005	MASONRY ANCHORS TYPE L NO. 5 BARS	EACH	178.000	178.000
0210	502.6105	MASONRY ANCHORS TYPE S 5/8-INCH	EACH	16.000	16.000
0220	505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	4,530.000	4,530.000
0230	505.0904	BAR COUPLERS NO. 4	EACH	8.000	8.000
0240	505.0905	BAR COUPLERS NO. 5	EACH	12.000	12.000
0250	505.0907	BAR COUPLERS NO. 7	EACH	20.000	20.000
0260	509.0301	PREPARATION DECKS TYPE 1	SY	1,150.000	1,150.000
0270	509.0302	PREPARATION DECKS TYPE 2	SY	575.000	575.000
0280	509.0500	CLEANING DECKS	SY	10,950.000	10,950.000
0290	509.1000	JOINT REPAIR	SY	83.000	83.000
0300	509.1200	CURB REPAIR	LF	2,000.000	2,000.000
0310	509.1500	CONCRETE SURFACE REPAIR	SF	500.000	500.000
0320	509.2000	FULL-DEPTH DECK REPAIR	SY	7.000	7.000
0330	509.2500	CONCRETE MASONRY OVERLAY DECKS	CY	730.000	730.000
0340	509.5100.S	POLYMER OVERLAY	SY	2,105.000	2,105.000
0350	513.2050.S	RAILING PIPE	LF	262.000	262.000
0360	513.9005.S	REMOVING AND RESETTING TUBULAR RAILING (STRUCTURE) 01. B-44-75	LS	1.000	1.000
0370	517.1800.S	STRUCTURE REPAINTING RECYCLED ABRASIVE (STRUCTURE) 01. B-44-75	LS	1.000	1.000
0380	517.3000.S	STRUCTURE OVERCOATING CLEANING AND PRIMING (STRUCTURE) 01. B-44-75	LS	1.000	1.000
0390	517.4000.S	CONTAINMENT AND COLLECTION OF WASTE MATERIALS (STRUCTURE) 01. B-44-75	LS	1.000	1.000
0400	517.4500.S	NEGATIVE PRESSURE CONTAINMENT AND COLLECTION OF WASTE MATERIALS (STRUCTURE) 01. B-44-75	LS	1.000	1.000
0410	517.6001.S	PORTABLE DECONTAMINATION FACILITY	EACH	1.000	1.000
0420	520.8000	CONCRETE COLLARS FOR PIPE	EACH	4.000	4.000
0430	601.0405	CONCRETE CURB & GUTTER 18-INCH TYPE A	LF	1,408.000	1,408.000
0440	601.0409	CONCRETE CURB & GUTTER 30-INCH TYPE A	LF	40.000	40.000
0450	602.0410	CONCRETE SIDEWALK 5-INCH	SF	829.000	829.000
0460	602.0420	CONCRETE SIDEWALK 7-INCH	SF	3,107.000	3,107.000

3

DATE 14OCT14 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	4984-07-71 QUANTITY
0470	602.0515	CURB RAMP DETECTABLE WARNING FIELD NATURAL PATINA	SF	48.000	48.000
0480	603.0105	CONCRETE BARRIER SINGLE-FACED 32-INCH	LF	48.000	48.000
0490	603.8000	CONCRETE BARRIER TEMPORARY PRECAST DELIVERED	LF	1,912.000	1,912.000
0500	603.8125	CONCRETE BARRIER TEMPORARY PRECAST INSTALLED	LF	3,612.000	3,612.000
0510	608.0312	STORM SEWER PIPE REINFORCED CONCRETE CLASS III 12-INCH	LF	34.000	34.000
0520	608.0315	STORM SEWER PIPE REINFORCED CONCRETE CLASS III 15-INCH	LF	8.000	8.000
0530	611.0420	RECONSTRUCTING MANHOLES	EACH	1.000	1.000
0540	611.0430	RECONSTRUCTING INLETS	EACH	6.000	6.000
0550	611.0624	INLET COVERS TYPE H	EACH	10.000	10.000
0560	611.2004	MANHOLES 4-FT DIAMETER	EACH	1.000	1.000
0570	611.3230	INLETS 2X3-FT	EACH	1.000	1.000
0580	611.8110	ADJUSTING MANHOLE COVERS	EACH	2.000	2.000
0590	614.0800	CRASH CUSHIONS PERMANENT	EACH	1.000	1.000
0600	614.0905	CRASH CUSHIONS TEMPORARY	EACH	2.000	2.000
0610	618.0100	MAINTENANCE AND REPAIR OF HAUL ROADS (PROJECT) 01. 4984-07-71	EACH	1.000	1.000
0620	619.1000	MOBILIZATION	EACH	1.000	1.000
0630	620.0300	CONCRETE MEDIAN SLOPED NOSE	SF	59.000	59.000
0640	624.0100	WATER	MGAL	18.000	18.000
0650	625.0100	TOPSOIL	SY	235.000	235.000
0660	627.0200	MULCHING	SY	235.000	235.000
0670	628.1504	SILT FENCE	LF	890.000	890.000
0680	628.1520	SILT FENCE MAINTENANCE	LF	890.000	890.000
0690	628.1905	MOBILIZATIONS EROSION CONTROL	EACH	10.000	10.000
0700	628.1910	MOBILIZATIONS EMERGENCY EROSION CONTROL	EACH	5.000	5.000
0710	628.7010	INLET PROTECTION TYPE B	EACH	17.000	17.000
0720	628.7015	INLET PROTECTION TYPE C	EACH	15.000	15.000
0730	628.7570	ROCK BAGS	EACH	20.000	20.000
0740	629.0210	FERTILIZER TYPE B	CWT	0.148	0.148
0750	630.0130	SEEDING MIXTURE NO. 30	LB	4.230	4.230
0760	642.5401	FIELD OFFICE TYPE D	EACH	1.000	1.000
0770	643.0100	TRAFFIC CONTROL (PROJECT) 01. 4984-07-71	EACH	1.000	1.000
0780	643.0300	TRAFFIC CONTROL DRUMS	DAY	15,235.000	15,235.000
0790	643.0410	TRAFFIC CONTROL BARRICADES TYPE II	DAY	1,320.000	1,320.000
0800	643.0420	TRAFFIC CONTROL BARRICADES TYPE III	DAY	4,540.000	4,540.000
0810	643.0500	TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS	EACH	154.000	154.000
0820	643.0600	TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER BASES	EACH	154.000	154.000
0830	643.0705	TRAFFIC CONTROL WARNING LIGHTS TYPE A	DAY	6,815.000	6,815.000
0840	643.0715	TRAFFIC CONTROL WARNING LIGHTS TYPE C	DAY	4,195.000	4,195.000
0850	643.0800	TRAFFIC CONTROL ARROW BOARDS	DAY	380.000	380.000
0860	643.0900	TRAFFIC CONTROL SIGNS	DAY	7,635.000	7,635.000
0870	643.1050	TRAFFIC CONTROL SIGNS PCMS	DAY	21.000	21.000
0880	646.0106	PAVEMENT MARKING EPOXY 4-INCH	LF	5,047.000	5,047.000
0890	646.0116	PAVEMENT MARKING EPOXY 6-INCH	LF	4,733.000	4,733.000
0900	646.0126	PAVEMENT MARKING EPOXY 8-INCH	LF	445.000	445.000
0910	646.0600	REMOVING PAVEMENT MARKINGS	LF	2,815.000	2,815.000
0920	647.0166	PAVEMENT MARKING ARROWS EPOXY TYPE 2	EACH	4.000	4.000
0930	647.0206	PAVEMENT MARKING ARROWS BIKE LANE EPOXY	EACH	8.000	8.000

3

DATE 14OCT14 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	4984-07-71 QUANTITY
0940	647.0306	PAVEMENT MARKING SYMBOLS BIKE LANE EPOXY	EACH	8.000	8.000
0950	647.0356	PAVEMENT MARKING WORDS EPOXY	EACH	1.000	1.000
0960	647.0456	PAVEMENT MARKING CURB EPOXY	LF	20.000	20.000
0970	647.0566	PAVEMENT MARKING STOP LINE EPOXY 18-INCH	LF	134.000	134.000
0980	647.0606	PAVEMENT MARKING ISLAND NOSE EPOXY	EACH	4.000	4.000
0990	647.0766	PAVEMENT MARKING CROSSWALK EPOXY 6-INCH	LF	413.000	413.000
1000	649.0400	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH	LF	9,955.000	9,955.000
1010	650.7000	CONSTRUCTION STAKING CONCRETE PAVEMENT	LF	1,035.000	1,035.000
1020	652.0325	CONDUIT RIGID NONMETALLIC SCHEDULE 80 2-INCH	LF	1,760.000	1,760.000
1030	652.0800	CONDUIT LOOP DETECTOR	LF	62.000	62.000
1040	653.0105	PULL BOXES STEEL 12X24-INCH	EACH	2.000	2.000
1050	653.0140	PULL BOXES STEEL 24X42-INCH	EACH	2.000	2.000
1060	653.0905	REMOVING PULL BOXES	EACH	1.000	1.000
1070	654.0102	CONCRETE BASES TYPE 2	EACH	6.000	6.000
1080	654.0110	CONCRETE BASES TYPE 10	EACH	1.000	1.000
1090	654.0113	CONCRETE BASES TYPE 13	EACH	1.000	1.000
1100	655.0800	LOOP DETECTOR WIRE	LF	232.000	232.000
1110	657.1350	INSTALL POLES TYPE 10	EACH	1.000	1.000
1120	657.1355	INSTALL POLES TYPE 12	EACH	1.000	1.000
1130	657.1530	INSTALL MONOTUBE ARMS 30-FT	EACH	1.000	1.000
1140	657.1545	INSTALL MONOTUBE ARMS 45-FT	EACH	1.000	1.000
1150	690.0250	SAWING CONCRETE	LF	1,177.000	1,177.000
1160	SPV.0060	SPECIAL 01. FRP DRAIN PIPE B-44-75	EACH	15.000	15.000
1170	SPV.0060	SPECIAL 02. HANGER ASSEMBLY	EACH	14.000	14.000
1180	SPV.0060	SPECIAL 03. INSTALL PRECAST CONCRETE CABINET BASE	EACH	1.000	1.000
1190	SPV.0075	SPECIAL 01. STREET SWEEPING	HRS	20.000	20.000
1200	SPV.0105	SPECIAL 01. DRAINAGE SYSTEM B-44-75	LS	1.000	1.000
1210	SPV.0105	SPECIAL 02. FINGER EXPANSION JOINT TROUGH B-44-75	LS	1.000	1.000
1220	SPV.0105	SPECIAL 03. NAVIGATION LIGHTING SYSTEM	LS	1.000	1.000

3

REMOVING PAVEMENT

204.0100

STAGE	CATEGORY	STATION	TO	STATION	LOCATION	SY	REMARKS
1	0010	49+00	-	49+29	NB	90	APPROACH SLAB
1	0010	31+44	-	31+71	NB	60	APPROACH SLAB
1	0030	49+27	-	51+49	NB	639	LANES AND SHOULDER
1	0030	207+82	-	208+90	PROSPECT	638	SIDEROAD
2	0010	31+60	-	31+76	SB	100	APPROACH SLAB
2	0010	48+93	-	49+09	SB	60	APPROACH SLAB
2	0030	49+08	-	51+49	SB	426	SHOULDER AND OUTER LANE
3	0030	49+08	-	51+49	SB/NB	642	INNER LANES
					TOTAL 0010	310	
					TOTAL 0030	2345	
					PROJECT TOTAL	2655	

REMOVING CURB & GUTTER

204.0150

STAGE	CATEGORY	STATION	TO	STATION	LOCATION	LF	REMARKS
1	0010	29+00	-	30+75	NB LT	175	MEDIAN
1	0010	29+00	-	30+75	SB RT	175	MEDIAN
1	0010	31+38	-	31+57	NB RT	19	
2	0010	31+58	-	31+88	SB LT	31	
1	0030	49+00	-	50+25	NB LT	125	MEDIAN
1	0030	49+13	-	51+67	NB RT	251	
2	0030	48+93	-	50+25	SB RT	132	MEDIAN
2	0030	48+80 SB	-	208+01 PROSPECT	SB LT/PROSPECT RT	246	SW QUAD
2	0030	208+01 PROSPECT	-	51+75 SB	PROSPECT LT/SB LT	187	NW QUAD
3	0030	50+92	-	51+73	SB RT	81	MEDIAN
3	0030	50+87	-	51+75	NB LT	83	MEDIAN
					TOTAL 0010	400	
					TOTAL 0030	1,105	
					PROJECT TOTAL	1,505	

REMOVING CONCRETE SIDEWALK

204.0155

STAGE	CATEGORY	STATION	TO	STATION	LOCATION	SY	REMARKS
1	0010	28+98	-	29+50	MEDIAN	23	
1	0010	31+38	-	31+57	NB RT	10	
1	0030	49+13	-	51+67	NB RT	138	
2	0010	31+58	-	31+88	SB LT	17	
2	0030	48+80 SB	-	208+01 PROSPECT	SB LT/PROSPECT RT	126	
2	0030	208+01 PROSPECT	-	51+75 SB	PROSPECT LT/SB LT	92	
3	0030	48+93	-	50+25	SB RT	40	MEDIAN
3	0030	51+59	-	51+70	NB LT	13	MEDIAN
					TOTAL 0010	50	
					TOTAL 0030	409	
					PROJECT TOTAL	459	

REMOVING GUARDRAIL

204.0165

STAGE	CATEGORY	STATION	TO	STATION	LOCATION	LF
1	0010	30+15	-	31+45	RT	129
1	0010	49+34	-	51+63	NB RT	229
2	0010	48+87	-	50+07	SB LT	120
					TOTAL 0010	478

REMOVING CONCRETE BASES

204.0195

CATEGORY	STATION	OFFSET	LOCATION	EACH	REMARKS
0030	208+52	28	RT	1	EXCB1
0030	51+04	55	LT	1	EXSB1
0030	51+04	9	LT	1	EXSB2
0030	51+00	35	RT	1	EXSB3
0030	50+74	35	RT	1	EXSB4
0030	50+20	33	RT	1	EXSB5
0030	50+15	13	LT	1	EXSB6
0030	50+00	52	LT	1	EXSB7
0030	50+08	52	LT	1	EXSB8
0030	208+52	28	RT	1	EXSB11
			TOTAL 0030	10	

STORM SEWER REMOVALS

CATEGORY	STATION	OFFSET	REMOVING MANHOLES 204.021 EACH	REMOVING INLETS 204.0220 EACH	REMOVING STORM SEWER 12-INCH 204.0245 LF	REMARKS
0030	50+95	SB RT	---	1	---	LL-12A
0030	50+95 - 51+04	SB LT	---	---	16	LL-12A TO LL-12
0030	51+03	NB RT	---	1	---	LL-11A
0030	51+03 - 51+12	NB RT	---	---	13	LL-11A TO LL-11
0030	208+46	PROSPECT	1	---	---	LL-13
		TOTAL 0030	1	2	29	

REMOVING RAILING

204.9090.S

STAGE	CATEGORY	STATION	TO	STATION	LOCATION	LF
2	0030	51+20	-	51+53	SB LT	33
					TOTAL 0030	33

EXCAVATION COMMON

205.0100

CATEGORY	STATION	TO	STATION	LOCATION	CY	REMARKS
0010	29+00	-	30+75	NB LT	130	MEDIAN - STAGE 1
0010	50+88	-	51+59	NB LT	80	MEDIAN - STAGE 1
				TOTAL 0010	210	

FINISHING ROADWAY (PROJECT)

213.0100

CATEGORY	LOCATION	EACH
0010	4984-07-71	1
	TOTAL 0010	1

BASE AGGREGATE DENSE 1 1/4-INCH

						305.0120 TON	WATER 624.0100 MGAL	
STAGE	CATEGORY	STATION	TO	STATION	LOCATION			REMARKS
1	0010	29+00	-	30+75	NB LT	130	2	MEDIAN CROSSOVER
1	0010	50+88	-	51+59	NB LT	80	1	MEDIAN CROSSOVER
1	0030	49+27	-	51+49	NB	300	4	LANES AND SHOULDER
1	0030	207+82	-	208+90	PROSPECT	300	4	SIDEROAD
2	0030	49+08	-	51+49	SB	200	3	SHOULDER AND OUTER LANE
3	0030	49+08	-	51+49	SB/NB	300	4	INNER LANES
					TOTAL 0010	210	3	
					TOTAL 0030	1,100	15	
					PROJECT TOTAL	1,310	18	

CONCRETE PAVEMENT 9-INCH

415.0090

STAGE	CATEGORY	STATION	TO	STATION	LOCATION	SY	REMARKS
1	0030	49+27	-	51+49	NB	639	LANES AND SHOULDER
1	0030	207+82	-	208+90	PROSPECT	638	SIDEROAD
2	0030	49+08	-	51+49	SB	426	SHOULDER AND OUTER LANE
3	0030	49+08	-	51+49	SB/NB	642	INNER LANES
					TOTAL 0030	2,345	

CONCRETE PAVEMENT APPROACH SLAB

415.0410

STAGE	CATEGORY	STATION	TO	STATION	LOCATION	SY
1	0010	49+00	-	49+29	NB	90
1	0010	31+44	-	31+71	NB	60
2	0010	48+93	-	49+09	SB	60
2	0010	31+60	-	31+76	SB	100
					TOTAL 0010	310

DRILLED DOWEL BARS

416.0620

CATEGORY	LOCATION	EACH	REMARKS
0010	PROSPECT AVE	16	MATCHLINE
0030	51+49	16	NB APPROACH SLAB
0030	51+49	16	SB APPROACH SLAB
0030	31+45	16	NB APPROACH SLAB
0030	31+45	16	SB APPROACH SLAB
	TOTAL 0010	16	
	TOTAL 0030	64	
	PROJECT TOTAL	80	

ASPHALTIC SURFACE TEMPORARY

465.0125

STAGE	CATEGORY	STATION	TO	STATION	LOCATION	TON	REMARKS
1	0010	29+00	-	30+75	NB LT	55	MEDIAN
1	0010	50+88	-	51+59	NB LT	34	MEDIAN
					TOTAL 0010	89	

RAILING PIPE

513.2050.S

STAGE	CATEGORY	STATION	TO	STATION	LOCATION	LF
1	0010	49+34	-	51+63	NB RT	229
2	0030	51+30	-	51+63	SB LT	33
					TOTAL 0010	229
					TOTAL 0030	33
					PROJECT TOTAL	262

CONCRETE CURB & GUTTER 18-INCH TYPE A

601.0405

STAGE	CATEGORY	STATION	TO	STATION	LOCATION	LF	REMARKS
1	0010	31+38	-	31+57	NB RT	19	
1	0030	48+80	-	208+01	SB LT - PROSPECT RT	246	
1	0030	49+13	-	51+67	NB RT	251	
1	0030	208+01	-	51+75	PROSPECT LT - SB LT	187	
2	0010	31+58	-	31+88	SB LT	31	
2	0030	48+93	-	50+16	SB RT	123	MEDIAN
2	0030	48+94	-	50+15	NB LT	121	MEDIAN
2	0030	51+08	-	51+48	SB RT	40	MEDIAN
2	0030	51+06	-	51+46	NB LT	40	MEDIAN
3	0010	29+00	-	30+75	NB LT	175	MEDIAN
3	0010	29+00	-	30+75	SB RT	175	MEDIAN
					TOTAL 0010	400	
					TOTAL 0030	1,008	
					PROJECT TOTAL	1,408	

CONCRETE CURB & GUTTER 30-INCH TYPE A

601.0409

CATEGORY	STATION	TO	STATION	LOCATION	LF	REMARKS
0030	207+81	-	208+01	PROSPECT LT	20	TRANSITION AREA
0030	207+81	-	208+01	PROSPECT RT	20	TRANSITION AREA
				TOTAL 0030	40	

CONCRETE SIDEWALK 5-INCH

602.0410

STAGE	CATEGORY	STATION	TO	STATION	LOCATION	SF
3	0010	28+98	-	29+50	MEDIAN	208
3	0030	48+94	-	50+15	MEDIAN	363
3	0030	51+06	-	51+46	MEDIAN	258
					TOTAL 0010	208
					TOTAL 0030	621
					PROJECT TOTAL	829

CONCRETE SIDEWALK 7-INCH

602.0420

STAGE	CATEGORY	STATION	TO	STATION	LOCATION	SF
1	0010	31+38	-	31+57	NB RT	10
2	0010	31+58	-	31+88	SB LT	17
1	0030	49+13	-	51+67	NB RT	1,239
2	0030	48+80 SB	-	208+01	SB LT/PROSPECT RT	1,070
2	0030	208+01	-	51+75	PROSPECT LT/SB LT	771
					TOTAL 0010	27
					TOTAL 0030	3,080
					PROJECT TOTAL	3,107

CURB RAMP DETECTABLE WARNING FIELD NATURAL PATINA

602.0515

CATEGORY	STATION	LOCATION	SF
0030	208+69	PROSPECT LT	8
0030	208+70	PROSPECT RT	8
0030	50+23	SB LT	8
0030	51+01	SB LT	8
0030	50+22	NB RT	8
0030	50+99	NB RT	8
		TOTAL 0030	48

STORM SEWER PIPE REINFORCED CONCRETE CLASS III

CATEGORY	FROM	TO	UP STREAM INVERT ELEVATION	DOWN STREAM INVERT ELEVATION	12-INCH 608.0312 LF	15-INCH 608.0315 LF	CONCRETE COLLAR FOR PIPE 520.8000 EACH	REMARKS
0030	LL-11A	LL-11	773.33	773.29	10	---	---	
0030	LL-13A	LL-13	773.17	771.97	8	---	1	CONNECT TO EXISTING
0030	LL-13B	LL-13	772.77	771.81	8	---	1	CONNECT TO EXISTING
0030	LL-13	LL-12	771.65	771.32	---	8	1	CONNECT TO EXISTING
0030	TO THE WEST	LL-13	776.11	771.83	8	---	1	CONNECT TO EXISTING
				TOTAL 0030	34	8	4	

RECONSTRUCTING INLETS

611.0430

CATEGORY	STRUCTURE	EACH
0030	LL-13B	1
0030	LL-11A	1
0030	LL-15B	1
0030	LL-15A	1
0030	LL-15D	1
0030	LL-15C	1
	TOTAL 0030	6

RECONSTRUCTING MANHOLES

611.0420

CATEGORY	STRUCTURE	ELEVATION	EACH
0030	LL-11	777.76	1
		TOTAL 0030	1

CONCRETE BARRIER

STAGE	CATEGORY	STATION	TO	STATION	LOCATION	CONCRETE BARRIER SINGLE-FACED 32-INCH 603.0105 LF	CONCRETE BARRIER TEMPORARY PRECAST DELIVERED 603.8000 LF	CONCRETE BARRIER TEMPORARY PRECAST INSTALLED 603.8125 LF
1	0010	31+38	-	50+50	SB	---	1,912	1,912
2	0010	31+25	-	48+25	NB	---	---	1,700
3	0030	51+46	-	51+70	MEDIAN	24	---	---
3	0030	51+46	-	51+70	MEDIAN	24	---	---
					TOTAL 0010	---	1,912	3,612
					TOTAL 0030	48	---	---
					PROJECT TOTAL	48	1,912	3,612

CRASH CUSHIONS

CATEGORY	STATION	LOCATION	PERMANENT 614.0800 EACH	TEMPORARY 614.0905 EACH	BACK WIDTH FT	OBJECT MARKING PATTERN	CRASH TEST LEVEL	CRASH CUSHION SHIELDS
0010	31+38	SB RT	---	1	2	OM-3R	TL-2	TEMPORARY CONCRETE BARRIER ON SHOULDER
0010	50+16	NB LT	---	1	2	OM-3R	TL-2	TEMPORARY CONCRETE BARRIER ON SHOULDER
0030	51+50	NB LT MEDIAN	1	---	7	OM-3C	TL-2	PERMANENT CONCRETE BARRIER IN MEDIAN
		TOTAL 0010	---	2				
		TOTAL 0030	1	---				
		PROJECT TOTAL	1	2				

MAINTENANCE AND REPAIR OF HAUL ROADS

CATEGORY	LOCATION	618.0100 EACH	REMARKS
0010	4984-07-71	1	
	TOTAL 0010	1	

CONCRETE MEDIAN SLOPED NOSE

CATEGORY	STATION	LOCATION	620.0300 SF
0030	50+17	NB LT	23
0030	51+05	NB LT	36
		TOTAL 0030	59

FIELD OFFICE TYPE D

CATEGORY	LOCATION	642.5401 EACH
0010	4984-07-71	1
	TOTAL 0010	1

STORM SEWER SUMMARY

CATEGORY	STRUCTURE	RIM ELEVATION	INVERT ELEVATION	MANHOLE 4-FT DIAMETER 611.2004 LF	INLETS 2X3-FT 611.3230 LF	INLET COVERS TYPE H 611.0624 EACH
0030	LL-11A	777.58	773.33	---	1	1
0030	LL-13	777.16	771.65	1	---	---
0030	LL-13B	776.68	---	---	---	1
0030	LL-15B	777.12	---	---	---	1
0030	LL-15A	777.07	---	---	---	1
0030	LL-15D	777.58	---	---	---	1
0030	LL-15C	777.44	---	---	---	1
0030	LL-12B	777.60	---	---	---	1
0030	LL-13A	776.74	---	---	---	1
0030	LL-15E	777.11	---	---	---	1
0030	LL-15F	777.11	---	---	---	1
			TOTAL 0030	1	1	10

NOTE: ALL INLET COVER ELEVATIONS ARE AT THE FLOW LINE

ADJUSTING MANHOLE COVERS

CATEGORY	STRUCTURE	ELEVATION	611.8110 EACH
0030	LL-12	777.69	1
0030	LL-15	777.34	1
		TOTAL 0030	2

MOBILIZATION

CATEGORY	LOCATION	619.1000 EACH
0010	4984-07-71	1
	TOTAL 0010	1

TRAFFIC CONTROL (PROJECT)

CATEGORY	LOCATION	643.0100 EACH
0010	4984-07-71	1
	TOTAL 0010	1

EROSION CONTROL

CATEGORY	STATION	LOCATION	SILT FENCE 628.1504 LF	SILT FENCE MAINTENANCE 628.1520 LF	INLET PROTECTION TYPE B 628.7015 EACH	INLET PROTECTION TYPE C 628.7015 EACH	ROCK BAGS 628.7570 EACH	MOBILIZATIONS EROSION CONTROL 628.1905	MOBILIZATIONS EMERGENCY EROSION CONTROL 628.1910	REMARKS
0010	28+14	LT	---	---	---	1	---	---	---	NB
0010	28+24	RT	---	---	---	1	---	---	---	SB
0010	29+90-31+50	RT	185	185	---	---	---	---	---	NB
0010	31+25-31+90	LT	80	80	---	---	---	---	---	SB
0010	31+05	RT	---	---	---	1	---	---	---	NB
0010	31+08	LT	---	---	---	1	---	---	---	SB
0030	49+65	LT	---	---	---	1	---	---	---	SB
0030	49+65	RT	---	---	---	1	---	---	---	NB
0030	49+75	LT	---	---	---	1	---	---	---	SB
0030	49+75	LT	---	---	---	1	---	---	---	SB MEDIAN
0030	49+75	LT	---	---	---	1	---	---	---	NB MEDIAN
0030	49+75	RT	---	---	---	1	---	---	---	NB
0030	50+94	LT	---	---	---	1	---	---	---	SB MEDIAN
0030	51+03	RT	---	---	---	1	---	---	---	NB
0030	51+19	LT	---	---	---	1	---	---	---	SB
0030	49+15-51+65	RT	260	260	---	---	---	---	---	NB
0030	207+80-48+80	RT	215	215	---	---	---	---	---	PROSPECT/SB
0030	207+80-51+75	LT	150	150	---	---	---	---	---	PROSPECT/SB
0030	208+46	LT	---	---	---	1	---	---	---	PROSPECT
0030	208+46	RT	---	---	1	1	---	---	---	PROSPECT
0010	B-44-75		---	---	16	---	---	---	---	STRUCTURE
0010	UNDISTRIBUTED		---	---	---	---	20	10	5	
		TOTAL 0010	265	265	16	4	20	10	5	
		TOTAL 0030	625	625	1	11	---	---	---	
		PROJECT TOTAL	890	890	17	15	20	10	5	

FINISHING ITEMS

CATEGORY	STATION	TO	STATION	LOCATION	TOPSOIL 625.0100 SY	MULCHING 627.0200 SY	FERTILIZER TYPE B 629.0210 CWT	SEEDING MIXTURE NO. 30 630.0130 LB	REMARKS
0010	29+00	-	30+75	MEDIAN	193	193	0.122	3.47	CROSS-OVER
0030	48+76	-	50+12	LT	15	15	0.009	0.27	SB
0030	207+95	-	50+12	RT	10	10	0.006	0.18	PROSPECT SOUTH
0030	208+01	-	51+04	LT	9	9	0.006	0.16	PROSPECT NORTH
0030	51+04	-	51+71	LT	8	8	0.005	0.14	SB
				TOTAL 0010	193	193	0.122	3.47	
				TOTAL 0030	42	42	0.026	0.76	
				PROJECT TOTAL	235	235	0.148	4.23	

TRAFFIC CONTROL

CATEGORY	LOCATION	DAYS	643.0300 DRUMS DAYS	643.0410 BARRICADES TYPE II DAYS	643.0420 BARRICADES TYPE III DAYS	643.0500 FLEXIBLE TUBULAR MARKER POSTS EACH	643.0600 FLEXIBLE TUBULAR MARKER BASES EACH	643.0705 WARNING LIGHTS TYPE A DAYS	643.0715 WARNING LIGHTS TYPE C DAYS	643.0800 ARROW BOARD DAYS	643.0900 SIGNS DAYS
0010	STAGE 1	95									
0010	21+36 - 27+50		950	---	95	---	---	---	570	95	1,045
0010	27+50 - 50+00		1,710	---	190	78	78	380	665	---	475
0010	50+00 - 54+19		2,090	---	475	---	---	190	1,140	95	1,045
0010	PROSPECT AVE		---	---	1,520	---	---	2,090	---	---	760
0010	SIDEWALK CLOSURE		---	760	---	---	---	760	---	---	380
0010	STAGE 2	70									
0010	21+36 - 27+50		1,540	---	70	---	---	---	420	70	980
0010	27+50 - 50+00		1,120	---	140	76	76	---	280	---	420
0010	50+00 - 54+19		2,450	---	280	---	---	420	770	70	840
0010	PROSPECT AVE		---	---	1,120	---	---	1,540	---	---	560
0010	SIDEWALK CLOSURE		---	560	---	---	---	560	---	---	280
0010	STAGE 3	25									
0010	21+36 - 27+50		500	---	25	---	---	---	200	25	300
0010	27+50 - 54+19		4,875	---	225	---	---	325	150	25	350
0010	PROSPECT AVE		---	---	400	---	---	550	---	---	200
	STAGE 1 TOTAL		4,750	760	2,280	78	78	3,420	2,375	190	3,705
	STAGE 2 TOTAL		5,110	560	1,610	76	76	2,520	1,470	140	3,080
	STAGE 3 TOTAL		5,375	---	650	---	---	875	350	50	850
	TOTAL 0010		15,235	1,320	4,540	154	154	6,815	4,195	380	7,635

TRAFFIC CONTROL SIGNS PCMS

CATEGORY	LOCATION	DAYS	643.1050 DAYS
		7	
0010	ONEIDA ST		14
0010	PROSPECT AVE		7
		TOTAL 0010	21

TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH

STAGE	CATEGORY	STATION	TO	STATION	LOCATION	649.0400 LF	REMARKS
1	0010	23+92	-	26+28	NB	240	WHITE
1	0010	29+00	-	30+50	NB	160	WHITE
1	0010	29+00	-	30+57	NB	160	YELLOW
1	0010	30+50	-	50+40	SB	4020	DOUBLE YELLOW
1	0010	50+50	-	51+55	NB	105	WHITE
1	0010	50+40	-	51+70	NB	130	YELLOW
1	0010	51+70	-	53+00	NB	130	YELLOW
2	0010	23+95	-	26+30	SB	240	YELLOW
2	0010	26+00	-	26+32	SB	35	WHITE
2	0010	29+00	-	30+50	SB	150	YELLOW
2	0010	29+97	-	30+25	SB	30	WHITE
2	0010	30+50	-	49+75	NB	3850	DOUBLE YELLOW
2	0010	48+25	-	52+95	SB	470	WHITE
2	0010	49+75	-	51+70	SB	235	YELLOW
					TOTAL 0010	9955	

3

EPOXY PAVEMENT MARKING SUMMARY

					4-INCH		EPOXY	EPOXY	REMOVING PAVEMENT	ARROWS	ARROWS	SYMBOLS			STOP LINE		CROSSWALK
					WHITE	YELLOW	6-INCH	8-INCH	MARKINGS	TYPE 2	BIKE LANE	BIKE LANE	WORDS	CURB	18-INCH	ISLAND NOSE	6-INCH
					646.0106		646.0116	646.0126	646.0600	647.0166	647.0206	647.0303	647.0356	647.0456	647.0566	647.0606	647.0766
CATEGORY	STATION	TO	STATION	LOCATION	LF	LF	LF	LF	LF	EACH	EACH	EACH	EACH	LF	LF	EACH	LF
0010	23+92	-	26+00	NB	---	---	---	---	208	---	---	---	---	---	---	---	---
0010	30+57	-	50+38	SB	---	---	---	---	2476	---	---	---	---	---	---	---	---
0010	51+64	-	52+95	NB	---	---	---	---	131	---	---	---	---	---	---	---	---
0010	23+50	-	27+00	NB	350	---	---	---	---	---	---	---	---	---	---	---	---
0010	23+50	-	27+00	NB	135	---	---	90	---	---	---	---	---	---	---	---	---
0010	28+00	-	50+14	NB	---	---	2215	---	---	---	2	2	---	---	---	---	---
0010	32+85	-	45+54	NB/SB	---	2538	---	---	---	---	---	---	---	---	---	2	---
0010	28+00	-	50+14	NB	825	---	---	165	---	2	---	---	1	---	---	---	---
0010	50+16			NB	---	---	---	---	---	---	---	---	---	---	37	---	---
0010	50+20			NB	---	---	---	---	---	---	---	---	---	---	---	---	73
0010	50+26			NB	---	---	---	---	---	---	---	---	---	---	---	---	76
0010	51+00	-	51+74	NB	---	---	74	---	---	---	1	1	---	---	---	---	---
0010	51+00	-	51+74	NB	30	74	---	---	---	---	---	---	---	---	---	---	---
0010	50+96			NB	---	---	---	---	---	---	---	---	---	---	---	---	77
0010	51+02			NB	---	---	---	---	---	---	---	---	---	---	---	---	74
0010	51+06			SB	---	---	---	---	---	---	---	---	---	---	32	---	---
0010	27+04			SB	---	---	---	---	---	---	---	---	---	---	---	---	---
0010	27+10			SB	---	---	---	---	---	---	---	---	---	---	---	---	---
0010	29+91			SB	---	---	---	---	---	---	---	---	---	---	---	---	---
0010	27+96			SB	---	---	---	---	---	---	---	---	---	---	---	---	---
0010	28+00			SB	---	---	---	---	---	---	---	---	---	---	38	---	---
0010	28+00	-	50+14	SB	---	---	2215	120	---	---	---	---	---	---	---	---	---
0010	28+00	-	50+14	SB	825	---	---	---	---	---	2	2	---	---	---	---	---
0010	51+06	-	51+74	SB	---	---	68	---	---	---	1	1	---	---	---	---	---
0010	51+06	-	51+74	SB	30	68	---	---	---	---	---	---	---	---	---	---	---
0030	50+09	-	50+19	NB	---	---	---	---	---	---	---	---	---	10	---	1	---
0030	51+02	-	51+12	NB	---	---	---	---	---	---	---	---	---	10	---	1	---
0030	207+80	-	208+66	PROSPECT	---	172	---	---	---	2	2	2	---	---	---	---	---
0030	208+00	-	208+54	PROSPECT	---	---	161	70	---	---	---	---	---	---	---	---	---
0030	208+54			PROSPECT	---	---	---	---	---	---	---	---	---	---	27	---	---
0030	208+58			PROSPECT	---	---	---	---	---	---	---	---	---	---	---	---	54
0030	208+66			PROSPECT	---	---	---	---	---	---	---	---	---	---	---	---	59
TOTAL 0010					2195	2680	4572	375	2815	2	6	6	1	---	107	2	300
TOTAL 0030					---	172	161	70	---	2	2	2	---	20	27	2	113
PROJECT TOTAL					5047		4733	445	2815	4	8	8	1	20	134	4	413

CONSTRUCTION STAKING CONCRETE PAVEMENT

650.7000

STAGE	CATEGORY	STATION	TO	STATION	LOCATION	LF
1	0030	49+27	-	51+49	NB	222
1	0030	207+81	-	208+90	PROSPECT	109
2	0030	49+08	-	51+49	SB	241
3	0030	49+27	-	51+49	NB	222
3	0030	49+08	-	51+49	SB	241
					TOTAL 0030	1,035

CONDUIT RIGID NON-METALLIC SCHEDULE 80 2-INCH

652.0325

CATEGORY	FROM	TO	LF
0030	CB1	EXLB12	10
0030	EXLB12	INT01	20
0030	CB1	INT03	13
0030	CB1	PB02	120
0030	PB02	INT02	18
0030	CB1	SB04	100
0030	CB1	SB03	120
0030	SB03	EXLB09	132
0030	CB1	SB02	158
0030	CB1	SB01	187
0030	CB1	PB01	280
0030	PB01	INT04	15
0030	CB1	SB05	17
0030	CB1	SB06	30
0030	CB1	SB07	97
0030	CB1	SB08	110
0030	SB08	EXLB10	138
0030	CB01	PB03	155
	PB03	PB04	40
		TOTAL 0030	1,760

REMOVING PULL BOXES

653.0905

CATEGORY	STATION	OFFSET	LOCATION	EACH	REMARKS
0030	48+79	50'	SB LT	1	EXPB1
			TOTAL 0030	1	

TRAFFIC LOOP DETECTORS

CATEGORY	CONDUIT LOOP DETECTOR 652.0800 LF	LOOP DETECTOR WIRE 655.0800 ** LF
0030	31	116
0030	31	116
TOTAL 0030	62	232

** 4 TURNS OF WIRE

PULL BOXES

CATEGORY	LOCATION	STATION	OFFSET		STEEL 12X24-INCH 653.0105 EACH	STEEL 24X42-INCH 653.0140 EACH
0030	PB01	51+45	34.2'	RT	---	1
0030	PB02	50+09	12.7'	LT	---	1
0030	PB03	51+48	50.9'	LT	1	---
0030	PB04	48+84	50.1'	LT	1	---
				TOTAL 0030	2	2

3

CONCRETE BASES

CATEGORY	LOCATION	STATION	OFFSET		CONCRETE BASES TYPE 2 654.0102 EACH	CONCRETE BASES TYPE 10 654.0110 EACH	** CONCRETE BASES TYPE 13 654.0113 EACH	INSTALL PRECAST CONCRETE CABINET BASE SPV.0060.01 EACH
0030	CB1	51+22	60.9'	LT	--	--	--	1
0030	SB01	50+14	34.8'	RT	1	--	--	--
0030	SB02	50+45	35.3'	RT	1	--	--	--
0030	SB03	50+71	35.1'	RT	1	--	--	--
0030	SB04	51+04	35.1'	RT	--	--	1	--
0030	SB05	51+06	51.1'	LT	1	--	--	--
0030	SB06	50+92	66.1'	LT	1	--	--	--
0030	SB07	50+30	66.1'	LT	1	--	--	--
0030	SB08	50+15	50.4'	LT	--	1	--	--
				TOTAL 0030	6	1	1	1

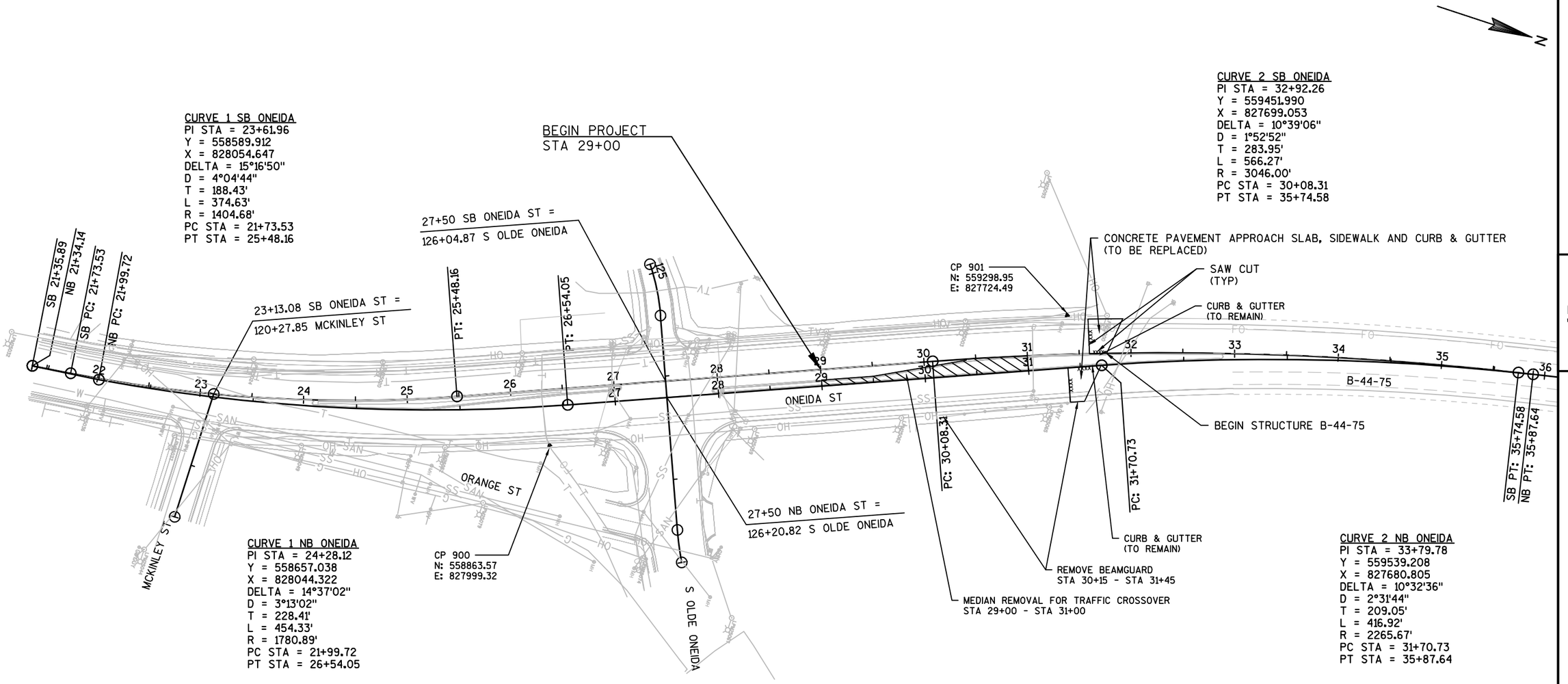
** APPLICATION OF SDD 9 C 13-2 REQUIRED

TRAFFIC SIGNAL MONOTUBE POLES & ARMS

CATEGORY	LOCATION	STA	OFFSET		INSTALL POLES TYPE 10 657.1350 EACH	INSTALL POLES TYPE 12 657.1355 EACH	INSTALL MONOTUBE ARMS 30-FT 657.1545 EACH	INSTALL MONOTUBE ARMS 45-FT 657.1530 EACH
0030	SB04	51+04	35.1'	RT	--	1	--	1
0030	SB08	50+15	50.4'	RT	1	--	1	--
				TOTAL 0030	1	1	1	1

SAWING CONCRETE

STAGE	CATEGORY	STATION	LOCATION	690.0250 LF	REMARKS
1	0010	28+98	NB LT	7	MEDIAN CROSSOVER
1	0010	30+55	NB LT	1.5	MEDIAN CROSSOVER
1	0010	30+55	SB RT	1.5	MEDIAN CROSSOVER
1	0010	28+98 - 30+55	NB RT	157	MEDIAN CROSSOVER
1	0010	28+98 - 30+55	SB LT	157	MEDIAN CROSSOVER
1	0010	31+38	NB	68	MAINLINE APPROACH
1	0010	50+92 - 51+78	SB RT	86	MEDIAN CROSSOVER
1	0010	50+88 - 51+75	NB LT	87	MEDIAN CROSSOVER
1	0030	207+80	PROSPECT AVE	54	MATCHLINE
1	0030	207+80	PROSPECT AVE LT	5	SIDEWALK
1	0030	207+80	PROSPECT AVE RT	5	SIDEWALK
1	0030	49+13	NB RT	5	SIDEWALK
1	0030	51+67	NB RT	5	SIDEWALK
1	0030	50+10 - 51+12	SB LT	102	PROSPECT
1	0030	50+15 - 51+75	NB RT	160	MAINLINE
1	0030	51+49	NB	27	MAINLINE APPROACH
2	0010	31+58	SB	52	MAINLINE APPROACH
2	0030	51+75	SB LT	5	SIDEWALK
2	0030	48+80	SB LT	5	SIDEWALK
2	0030	50+15 - 51+75	SB LT	160	MAINLINE
2	0030	51+49	SB	27	MAINLINE APPROACH
			TOTAL 0010	617	
			TOTAL 0030	560	
			PROJECT TOTAL	1177	



BENCH MARKS

NO.	STATION	DESCRIPTION	ELEV.
CP 900		1" IP W/RED CAP	769.97
CP 901		1" IP W/RED CAP	777.90
HYD 783		HYD SE COR MCKINLEY	785.68
HYD 3276		HYD 135' N/O NAVIGATION BRIDGE	729.20

PROJECT NO: 4984-07-71	HWY: LOCAL	COUNTY: OUTAGAMIE	PLAN	SHEET	E

FILE NAME : N:\PDS\C3D\49840771\SHEETSPLAN\050201_PN.DWG PLOT DATE : 7/31/2014 1:32 PM PLOT BY : CAMPSHURE, MICHAEL RPLOT NAME : PLOT SCALE : 1"=100_XREF
WISDOT/CADDS SHEET 44

CURVE 1 PROSPECT
PI STA = 207+56.76
Y = 561146.248
X = 827190.890
DELTA = 8°56'19"
D = 19°05'14"
T = 23.46'
L = 46.83'
R = 300.18'
PC STA = 207+33.30
PT STA = 207+80.13

N

PROSPECT AVENUE

208

5

5

NB: 44+08.99

PI: 48+00.04

PC: 49+20.49

36 37 38 39 40 41 42 43 44 45 46 47 48 49 50

B-44-75

ONEIDA ST

SB PT: 35+74.58

NB PT: 35+87.64

PC: 49+14.56

END STRUCTURE B-44-75

SB ONEIDA ST
209+30.50 PROSPECT AVE

CURVE 3 NB ONEIDA
PI STA = 50+31.67
Y = 561159.919
X = 827359.961
DELTA = 4°37'53"
D = 1°58'42"
T = 117.11'
L = 234.10'
R = 2896.20'
PC STA = 49+14.56
PT STA = 51+48.66

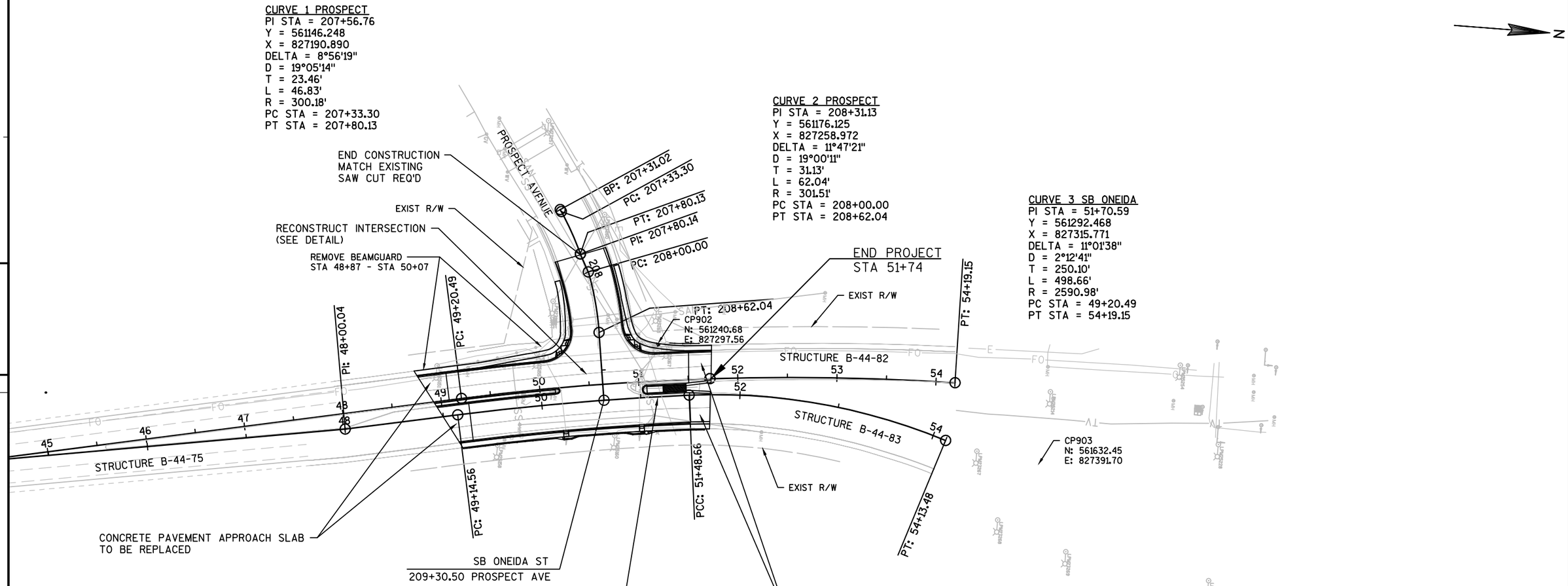
EIDA
.78

6"

.73
7.64

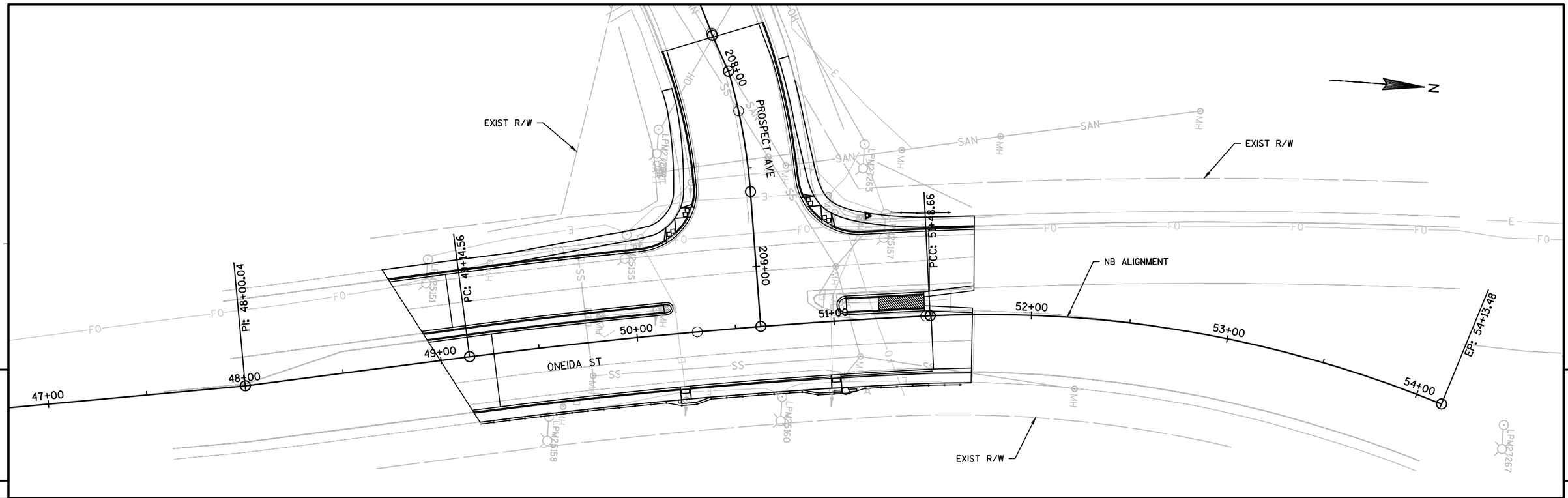
PROJECT NO: 4984-07-71	HWY: LOCAL	COUNTY: OUTAGAMIE	PLAN	SHEET	E

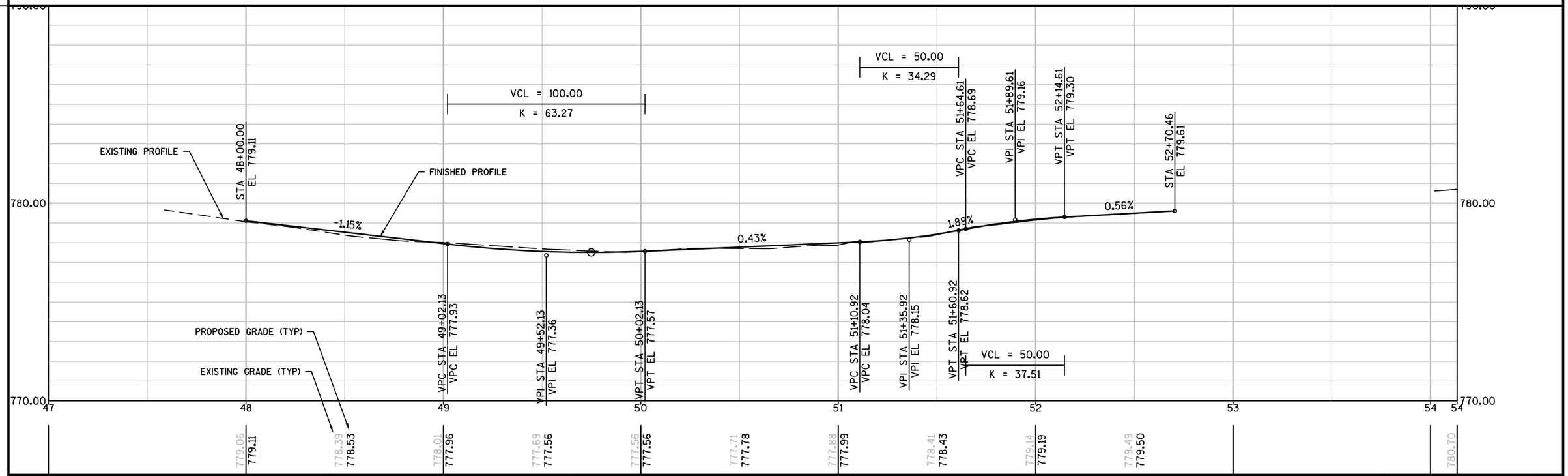
FILE NAME : N:\PDS\C3D\49840771\SHEETSPLAN\050201_PN.DWG PLOT DATE : 7/30/2014 7:57 AM PLOT BY : CAMPSHURE, MICHAEL RPLOT NAME : PLOT SCALE : 1"=100_XREF
WISDOT/CADDS SHEET 44



BENCH MARKS

NO.	STATION	DESCRIPTION	ELEV.
CP 902		1" IP W/RED CAP	778.10
CP 903		1" IP W/RED CAP	782.64
HYD 887		HYD N/S 250'± W/O ONEIDA ON PROSPECT	781.97

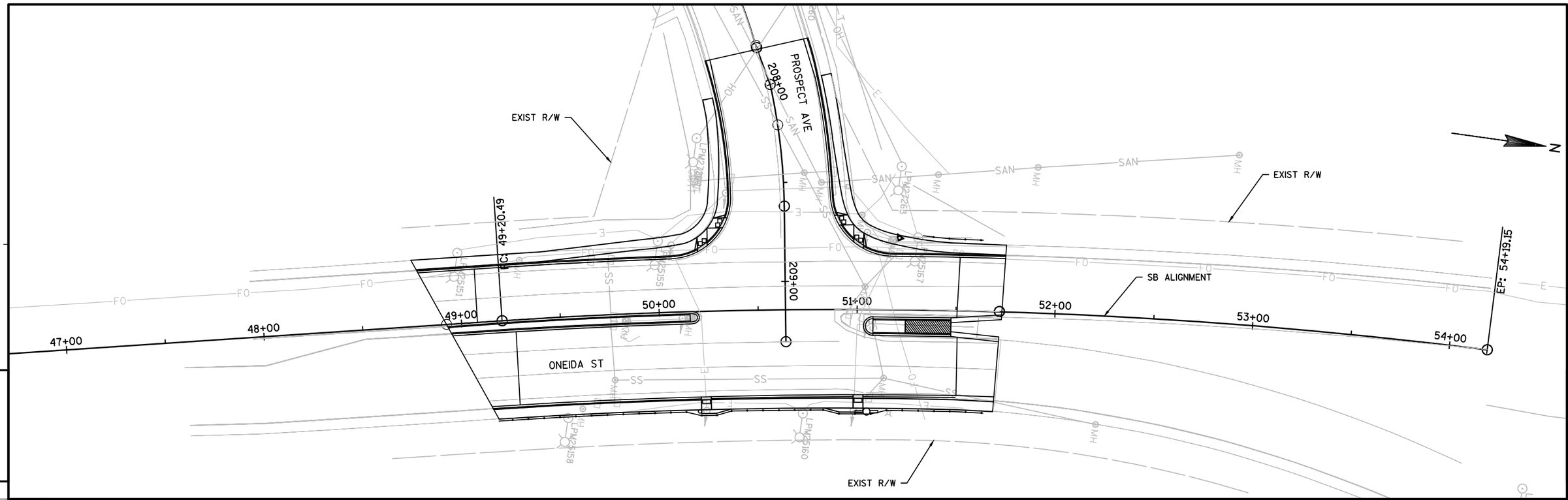


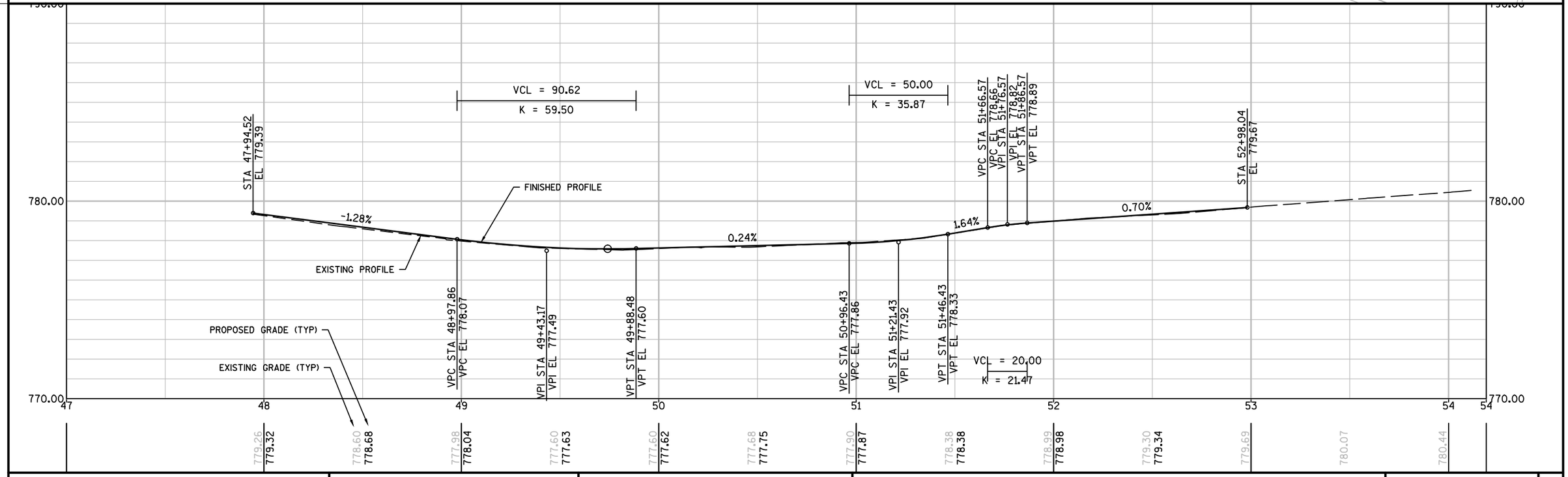


PROJECT NO: 4984-07-71	HWY: LOCAL	COUNTY: OUTAGAMIE	PLAN AND PROFILE: NB ONEIDA ST	SHEET 58	E

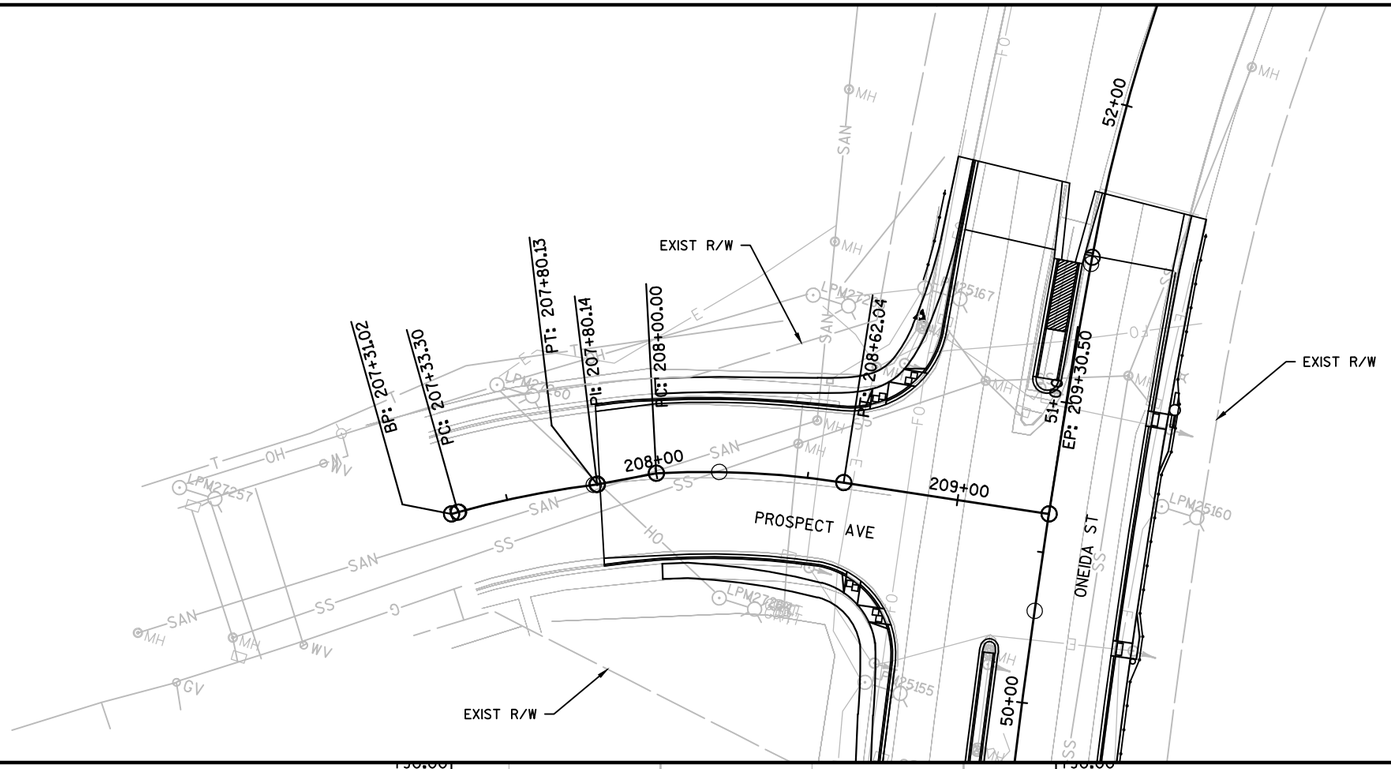
FILE NAME : N:\PDS\C3D\49840771\SHEETSPLAN\050101_PP.DWG PLOT DATE : 7/30/2014 9:30 AM PLOT BY : CAMPSHURE, MICHAEL RPLOT NAME : PLOT SCALE : 1"=50'_XREF

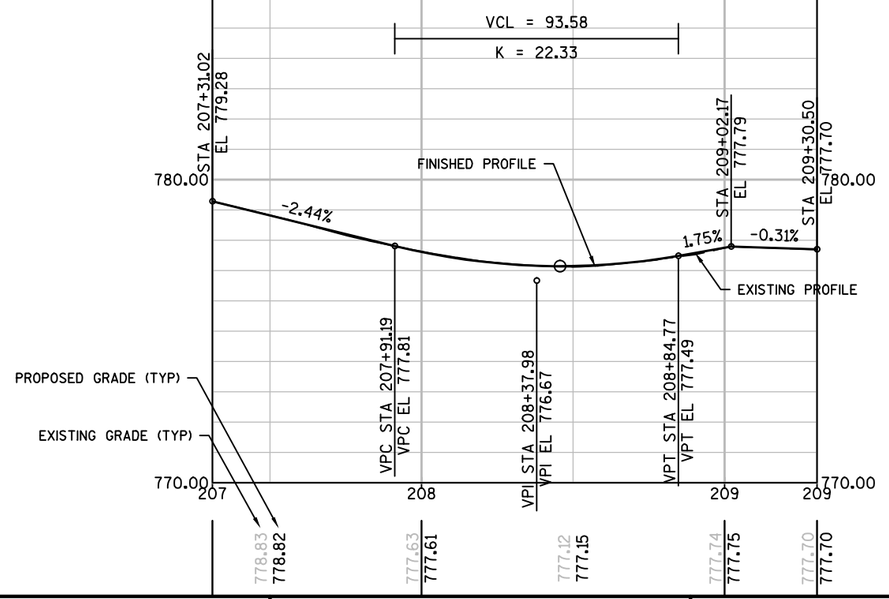
WISDOT/CADDS SHEET 44





PROJECT NO: 4984-07-71	HWY: LOCAL	COUNTY: OUTAGAMIE	PLAN AND PROFILE: SB ONEIDA ST	SHEET 59	E





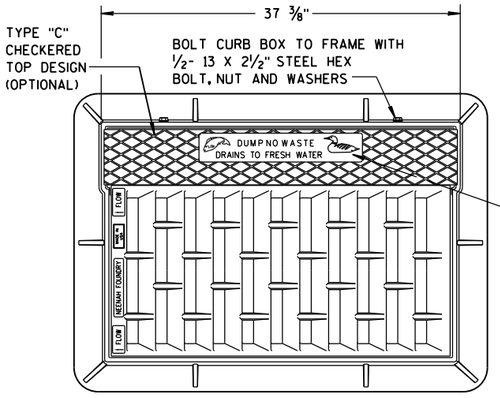
PROJECT NO: 4984-07-71	HWY: LOCAL	COUNTY: OUTAGAMIE	PLAN AND PROFILE: PROSPECT AVE	SHEET	E

FILE NAME : N:\PDS\C3D\49840771\SHEETSPLAN\050102_PP.DWG PLOT DATE : 7/30/2014 9:30 AM PLOT BY : CAMPSHURE, MICHAEL RPLOT NAME : PLOT SCALE : 1"=50'_XREF
WISDOT/CADDS SHEET 44

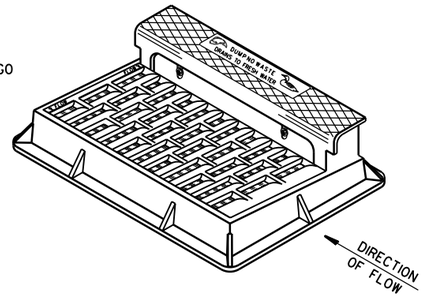
Standard Detail Drawing List

08A05-19A	INLET COVERS TYPE A, H, A-S, H-S & Z
08B09-01	MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER
08C07-01	INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT
08D01-17	CONCRETE CURB, CONCRETE CURB AND GUTTER AND TIES
08D05-15A	CURB RAMPS TYPES 1 AND 1-A
08D05-15B	CURB RAMPS TYPES 2 AND 3
08D05-15C	CURB RAMPS TYPES 4A AND 4A1
08D05-15D	CURB RAMPS TYPE 4B AND 4B1
08D05-15E	CURB RAMPS TYPES 5, 6, 7A, 7B & 8
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
09B02-07	CONDUIT
09B04-10	PULL BOX
09C02-06	CONCRETE BASES, TYPES 1, 2 & 5
09C11-04	CONCRETE BASE TYPE 10
09C12-04A	CONCRETE BASE TYPE 10
09C12-04B	CONCRETE BASE TYPE 13
09C13-02	CONCRETE BASE TYPE 10 & TYPE 13 EXTENSION
09E08-05B	TYPE 10 POLE 15'-30' MONOTUBE ARM
09E08-05C	TYPE 12 POLE 35'-55' MONOTUBE ARM
09E08-05E	GENERAL NOTES AND HARDWARE DETAILS FOR TYPE 9, 10, 12 & 13 POLES WITH MONOTUBE ARMS
11B02-02	CONCRETE MEDIAN NOSE
13B02-07A	CONCRETE BRIDGE APPROACH
13B02-07B	STRUCTURAL APPROACH SLAB AND CONCRETE BRIDGE APPROACH
13C01-16	CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES
13C13-08	URBAN DOWELED CONCRETE PAVEMENT
13C18-02A	CONCRETE PAVEMENT JOINTING
13C18-02B	CONCRETE PAVEMENT STEEL REINFORCEMENT
13C18-02C	CONCRETE PAVEMENT JOINT TIES
13C18-02D	CONCRETE PAVEMENT JOINTING AT UTILITY FIXTURES
14B07-14A	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14B	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14C	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14D	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14E	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14F	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14G	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14H	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B08-01A	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-01E	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B22-06A	CONCRETE BARRIER, SINGLE-FACED (WITH ANCHORAGE)
14B22-06B	CONCRETE BARRIER, SINGLE-FACED (WITH ANCHORAGE)
15C02-05A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-05B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C03-02	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C05-02	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS
15C07-12B	PAVEMENT MARKING WORDS
15C07-12C	PAVEMENT MARKING ARROWS
15C08-16A	PAVEMENT MARKING (MAINLINE)
15C08-16B	PAVEMENT MARKING (INTERSECTIONS)
15C08-16E	PAVEMENT MARKING (LEFT TURN LANE)
15C08-16F	PAVEMENT MARKING (ISLANDS)
15C11-05	FLEXIBLE TUBULAR MARKER POST, ANCHOR & BASES
15C29-03A	BICYCLE LANE MARKING
15C29-03C	URBAN BICYCLE LANE MARKING
15C29-03E	PAVEMENT MARKING FOR BIKE LANES
15C33-01	STOP LINE AND CROSSWALK PAVEMENT MARKING
15D21-02	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE
15D30-01	TRAFFIC CONTROL, SIDEWALK CLOSURE

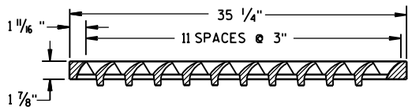
6

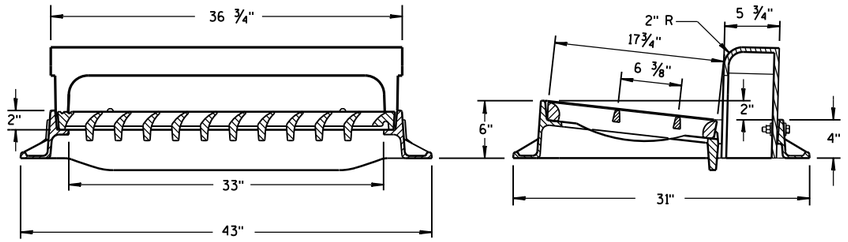


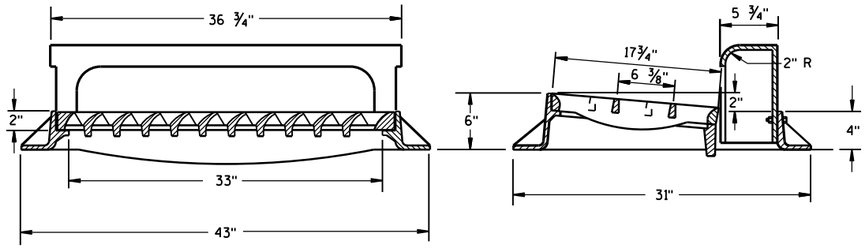
NOTE:
GRATE IS REVERSIBLE.



NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

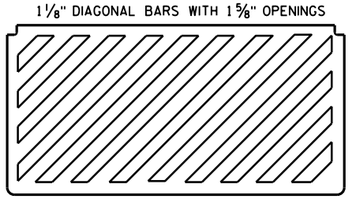






TYPE "H"

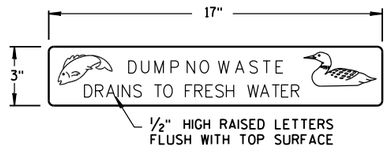
NOTE: EITHER CASTING IS ACCEPTABLE



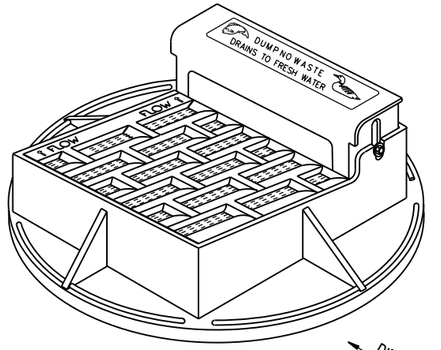
SPECIAL GRATE FOR TYPE "H" COVER

(MEASURES 35 1/4" X 17 3/4" X 2")

(NOTED AS TYPE H-S ON DRAINAGE TABLE)

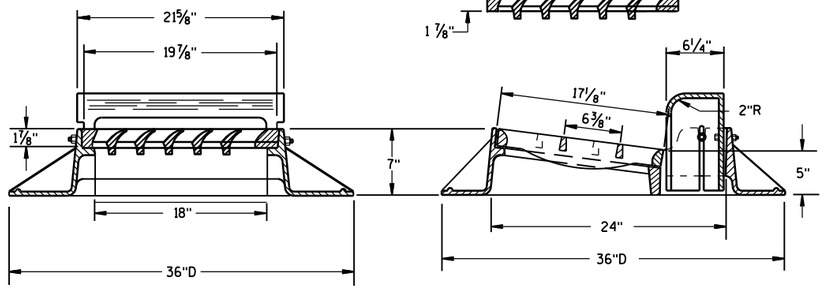


LOGO DETAIL



NOTE: CURB BOX ADJUSTABLE 4" TO 9"

NOTE:
GRATE IS REVERSIBLE.



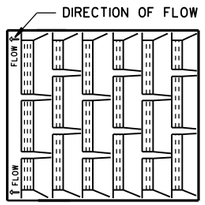
TYPE "A"

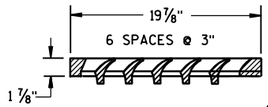
GENERAL NOTES

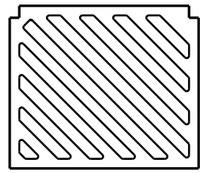
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

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



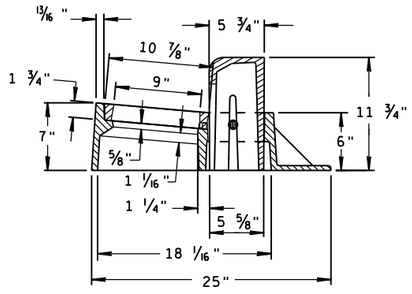


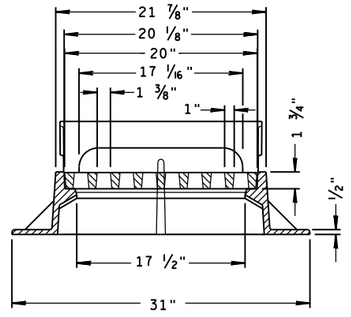


SPECIAL GRATE FOR TYPE "A" COVER

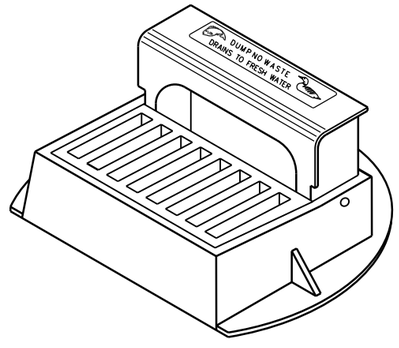
(MEASURES 19 3/4" X 17" X 1 7/8")

(NOTED AS TYPE A-S ON DRAINAGE TABLE)





TYPE "Z"



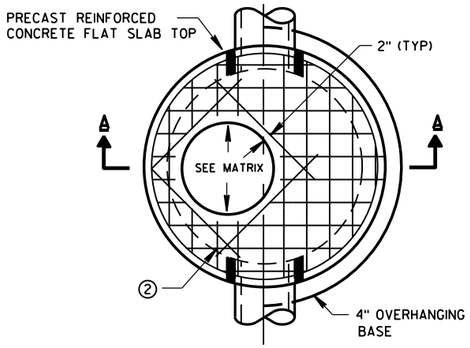
INLET COVERS
TYPE A, H, A-S, H-S & Z

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

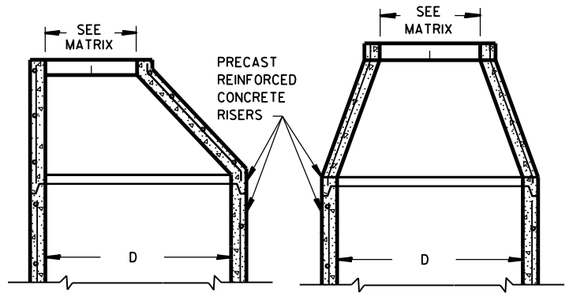
APPROVED
11-27-13 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6

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

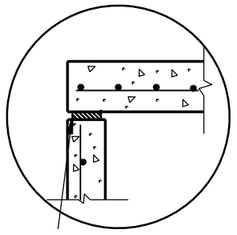


PLAN VIEW CIRCULAR OPENING

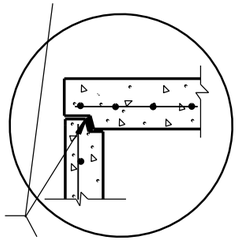


OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP

OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP

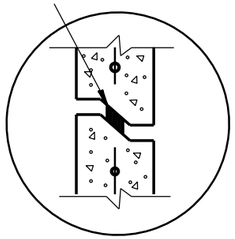


TOP WITH PLAIN END JOINT



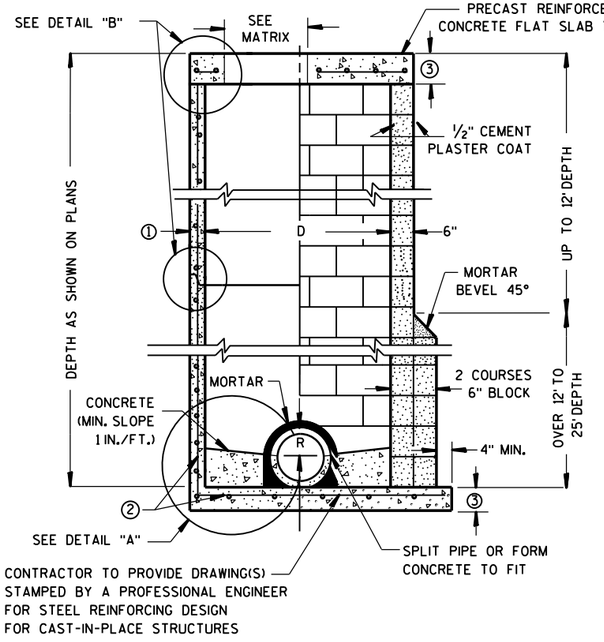
JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C990 (TYP)

TOP WITH TONGUE AND GROOVE JOINT



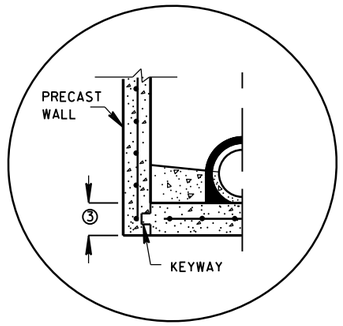
RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B"

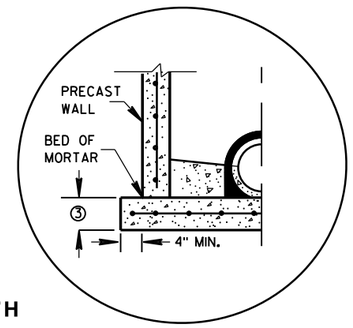


PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

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

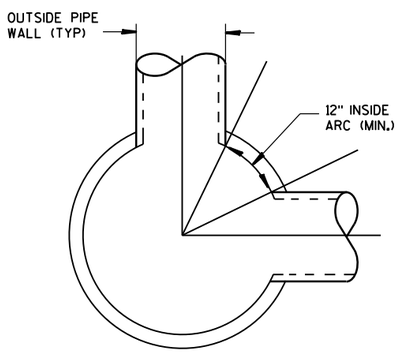


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "A"



DETAIL "C"

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

MANHOLE COVER OPENING MATRIX

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

PIPE MATRIX

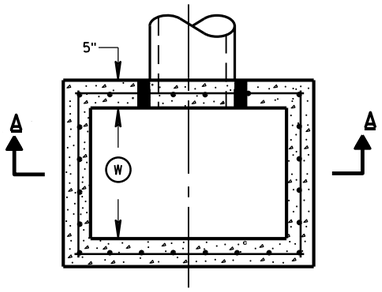
MANHOLE SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	180° SEPARATION (IN)	90° SEPARATION (IN)
3-FT	15	12
4-FT	24	18
5-FT	36	24
6-FT	42	36
7-FT	48	36
8-FT	60	42

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

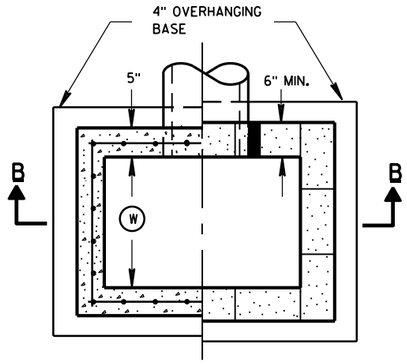
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

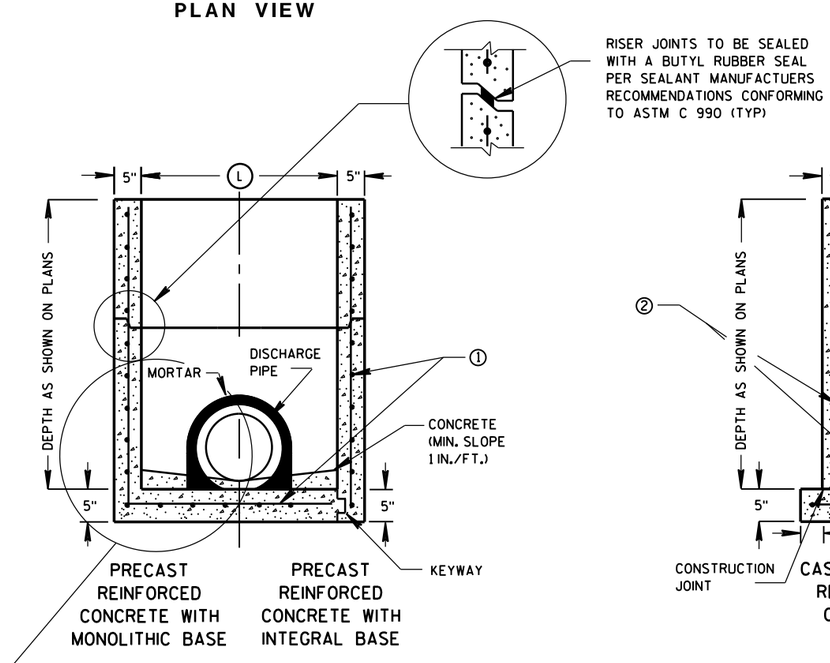
S.D.D. 8 B 9-1



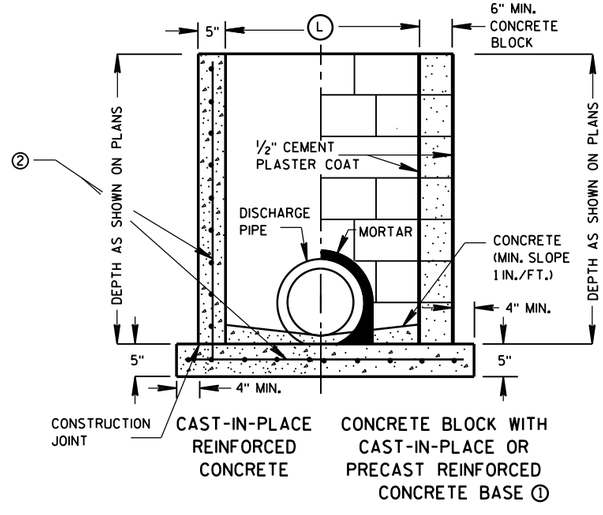
PLAN VIEW



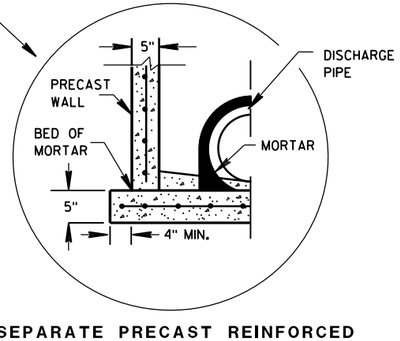
PLAN VIEW



SECTION A-A



SECTION B-B



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

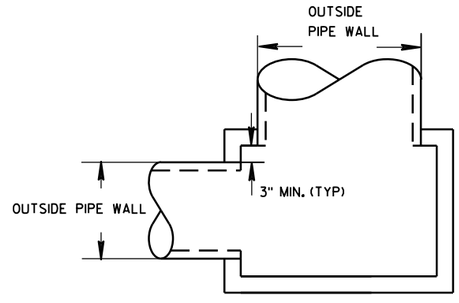
② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

INLET COVER MATRIX

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

PIPE MATRIX

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



DETAIL "A"

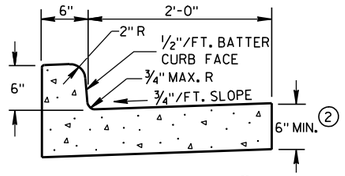
INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

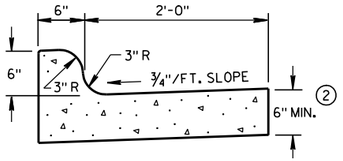
APPROVED
6/5/2012
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DE
ENGINEER
FHWA

6

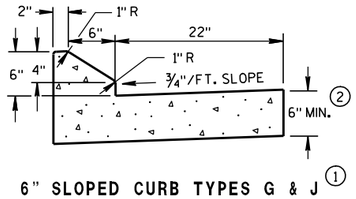
S.D.D. 8 C 7-1



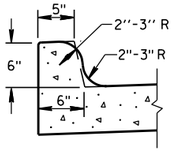
TYPES A & D (1)



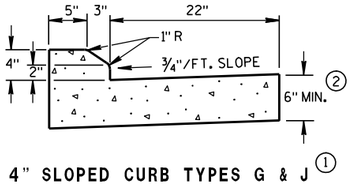
TYPES K & L (1)



6" SLOPED CURB TYPES G & J (1)

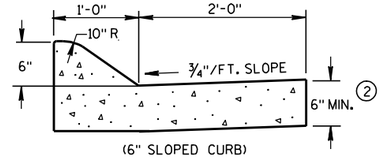


OPTIONAL CURB SHAPE FOR TYPES K & L (1)

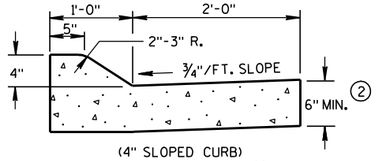


4" SLOPED CURB TYPES G & J (1)

CONCRETE CURB & GUTTER 30"

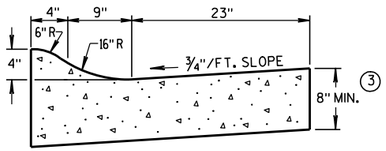


(6" SLOPED CURB)



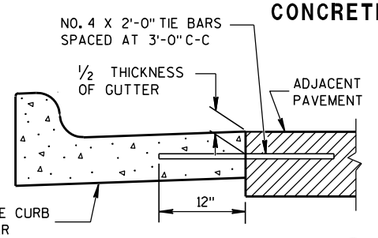
(4" SLOPED CURB)

TYPES A & D (1)

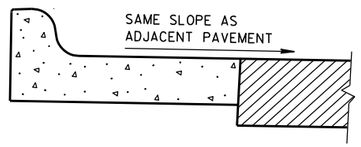


4" SLOPED CURB TYPES R & T (1) (4)

CONCRETE CURB & GUTTER 36"



TYPICAL TIE BAR LOCATION (1)



REVERSE SLOPE GUTTER (5)
(TYPICAL FOR ALL CURB & GUTTER TYPES)

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.

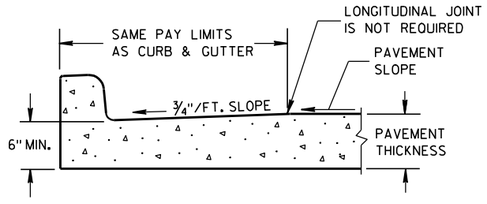
(1) TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K AND R.

(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.

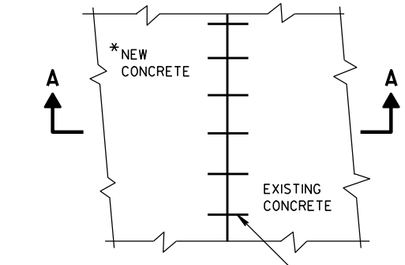
(3) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.

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

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

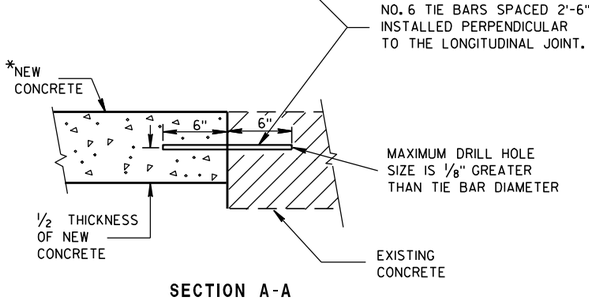


PARTIAL SECTION OF PAVEMENT WITH INTEGRAL CURB & GUTTER



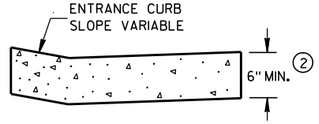
PLAN VIEW

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

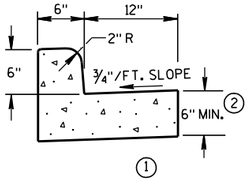


SECTION A-A

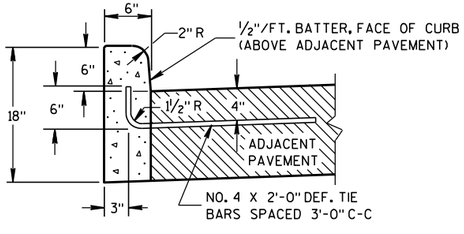
TIE BARS DRILLED INTO EXISTING PAVEMENT



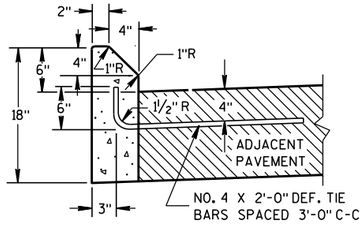
DRIVEWAY ENTRANCE CURB
(WHEN DIRECTED BY THE ENGINEER)



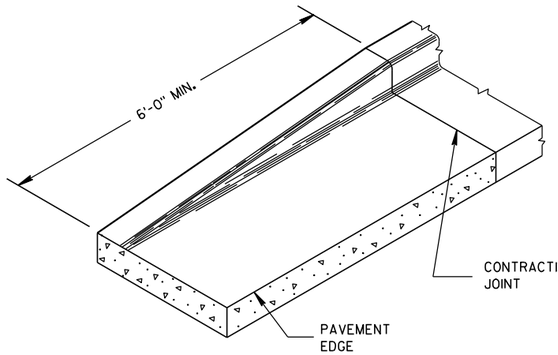
(1)
TYPES A & D
CONCRETE CURB & GUTTER 18"



(1)
TYPES A & D



(1)
TYPES G & J



END SECTION CURB & GUTTER

CONCRETE CURB

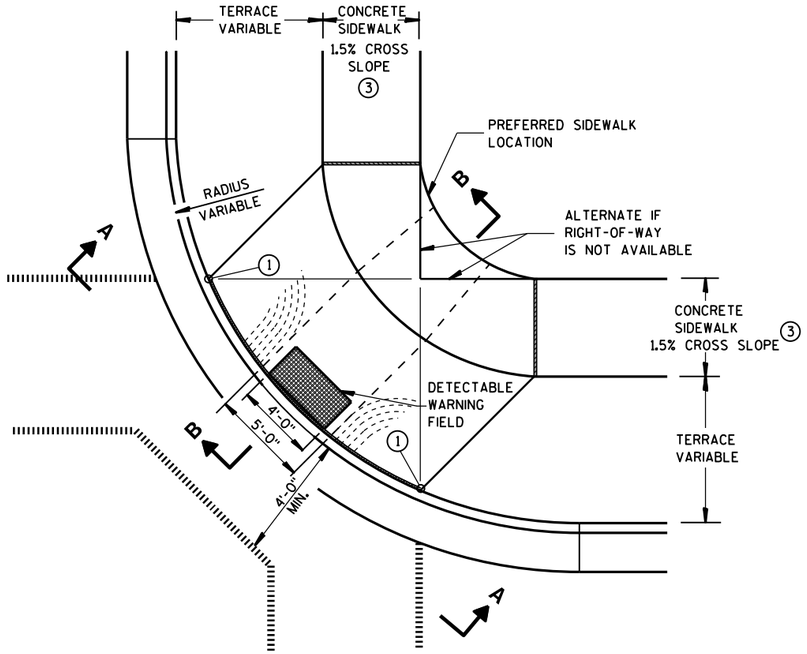
CONCRETE CURB, CONCRETE CURB & GUTTER AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
9/4/08 DATE
/S/ Jerry H. [illegible]
ROADWAY STANDARDS ENGINEER
FHWA

6

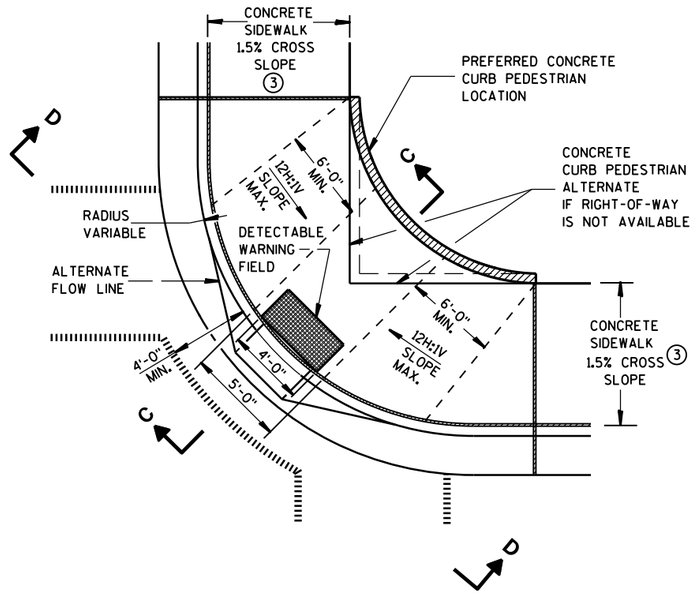
S.D.D. 8 D 1-17



PLAN VIEW

TYPE 1 RAMP

(CENTER OF CORNER RADIUS)



PLAN VIEW

TYPE 1-A RAMP

(NO TERRACE)

GENERAL NOTES

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

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

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

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

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

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.

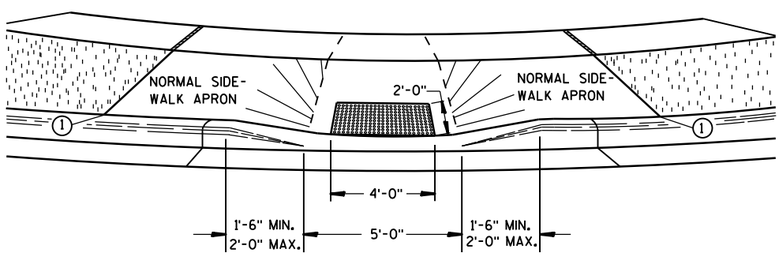
① THIS POINT IS AN EXTENSION OF OUTSIDE EDGE OF APPROACHING SIDEWALK WHERE IT MEETS THE BACK OF CONCRETE CURB.

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

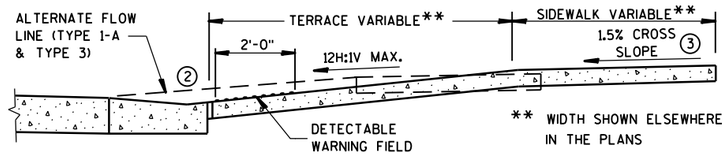
③ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

LEGEND

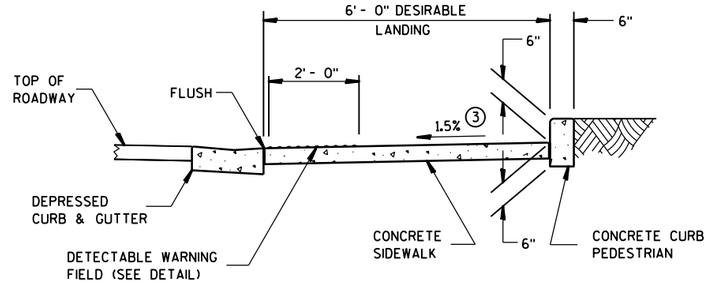
- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)
- ALTERNATIVE LAYOUT



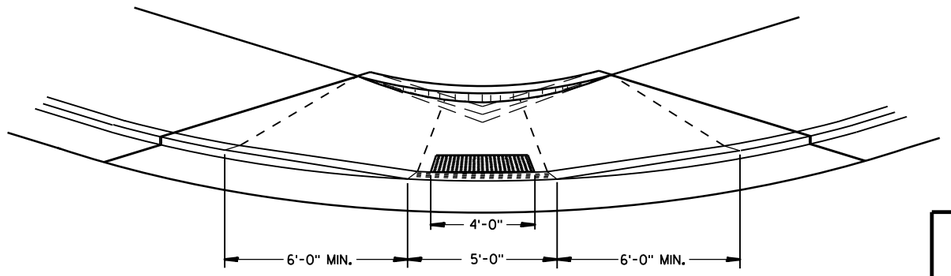
VIEW A-A



SECTION B-B



SECTION C-C



VIEW D-D

CURB RAMPS TYPES 1 AND 1-A

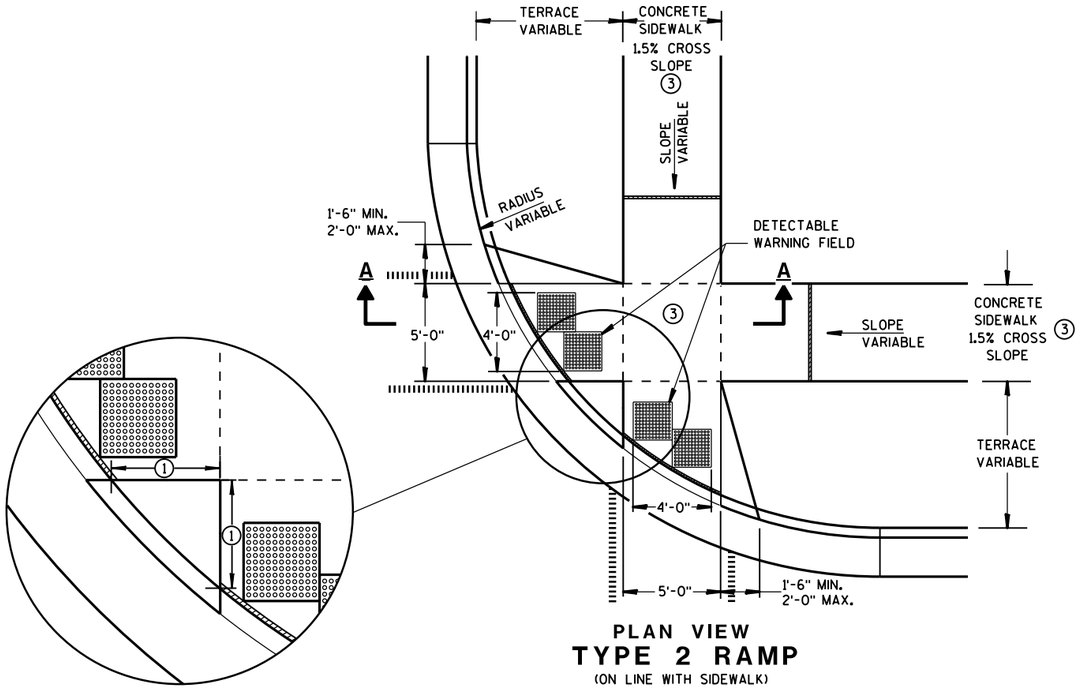
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR 66

6

S.D.D. 8 D 5-15a

6

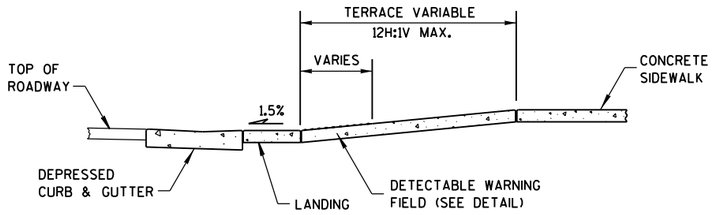
S.D.D. 8 D 5-15a



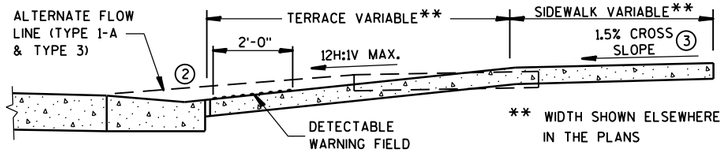
PLAN VIEW

TYPE 2 RAMP

(ON LINE WITH SIDEWALK)



SECTION A-A



SECTION B-B

GENERAL NOTES

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

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

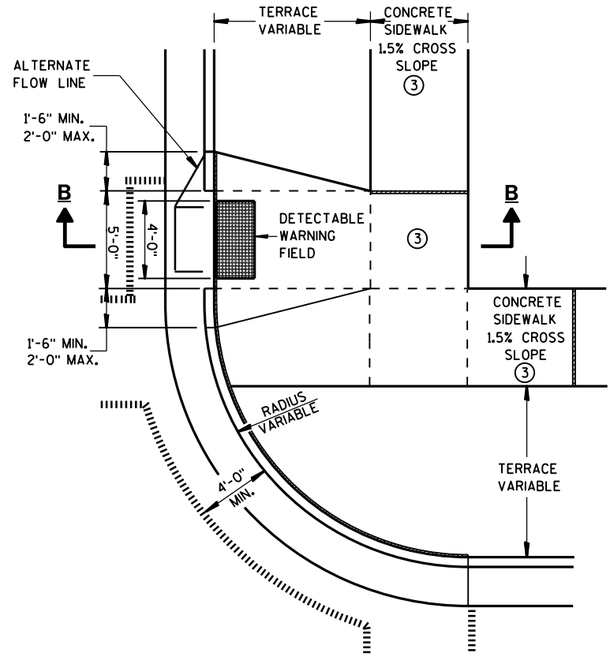
① WHEN THIS DISTANCE IS LESS THAN 6'-0" IT MAY BE DIFFICULT TO ACHIEVE A 12H:1V SLOPE, OR FLATTER, ON THE RAMP. REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 12H:1V SLOPE, OR FLATTER, ON RAMP. 2" MINIMUM CURB HEIGHT.

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

③ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

LEGEND

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



PLAN VIEW

TYPE 3 RAMP

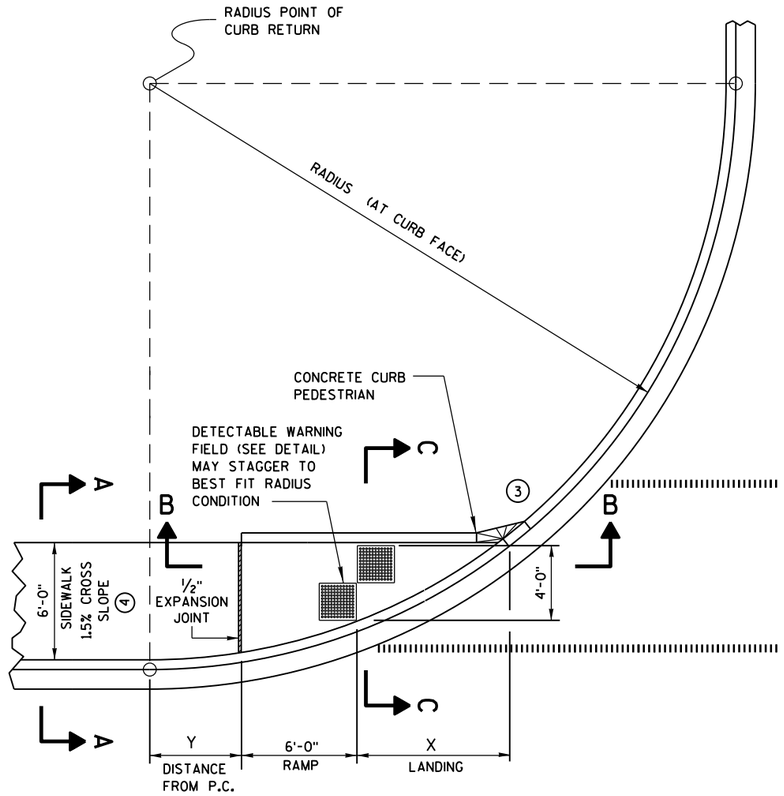
(OUTSIDE OF CROSSWALK AREA)

CURB RAMPS TYPES 2 AND 3

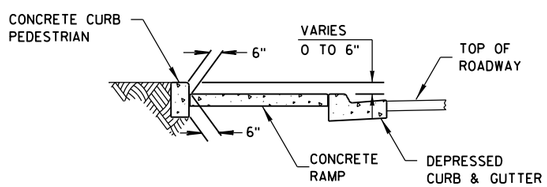
STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

6

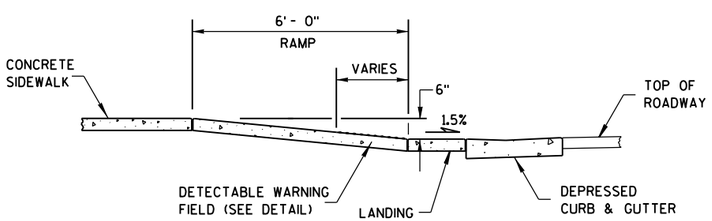
S.D.D. 8 D 5-15b



CURB RAMP TYPE 4A
PLAN VIEW



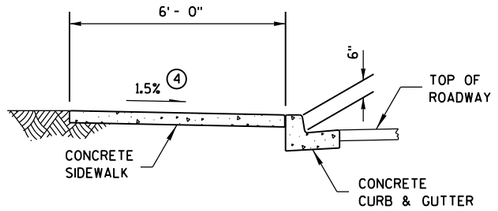
SECTION C-C FOR TYPE 4A



SECTION B-B FOR TYPE 4A

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

INTERMEDIATE RADII CAN BE INTERPOLATED



SECTION A-A FOR TYPE 4A

GENERAL NOTES

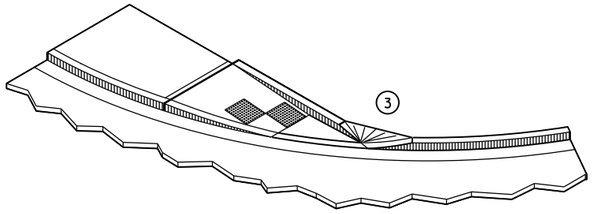
AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

RAMP SLOPES SHALL NOT BE STEEPER THAN 12:1.

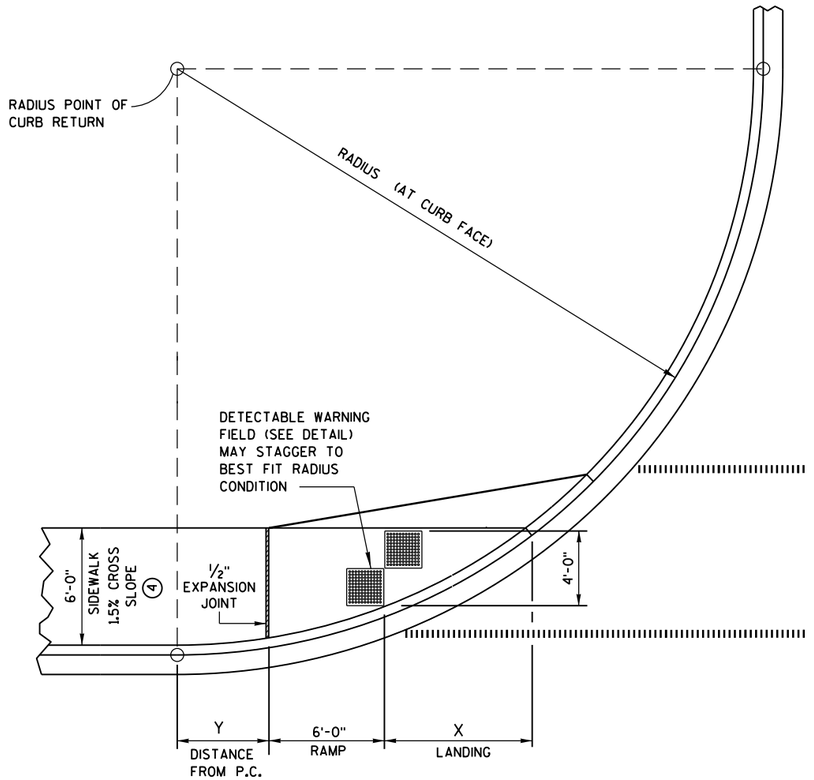
DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

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

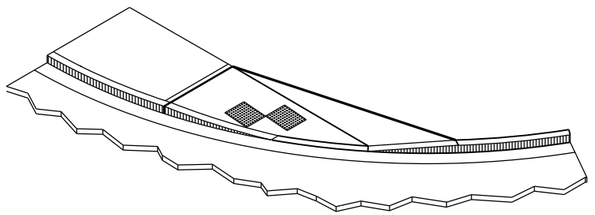
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.



ISOMETRIC VIEW FOR TYPE 4A



CURB RAMP TYPE 4A1
PLAN VIEW



ISOMETRIC VIEW FOR TYPE 4A1

LEGEND

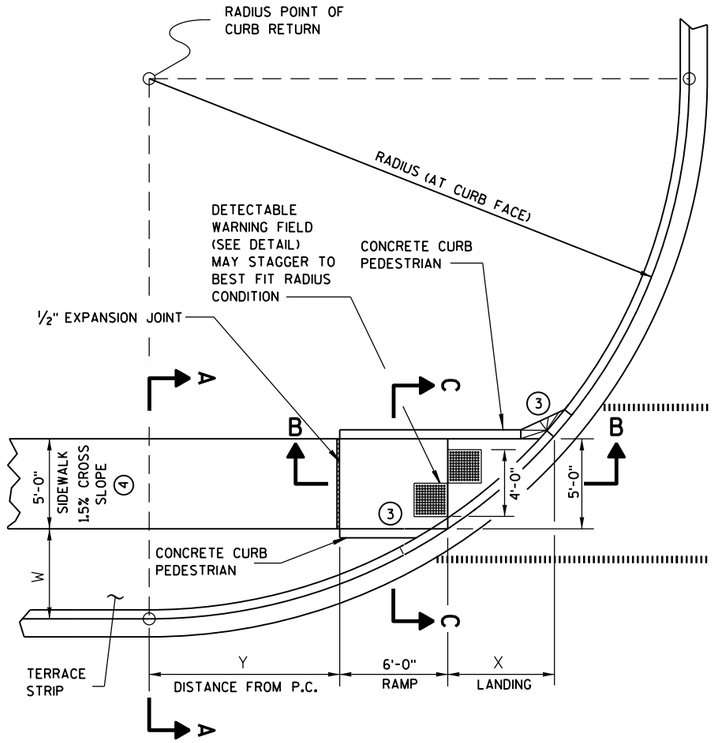
- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS TYPES 4A AND 4A1

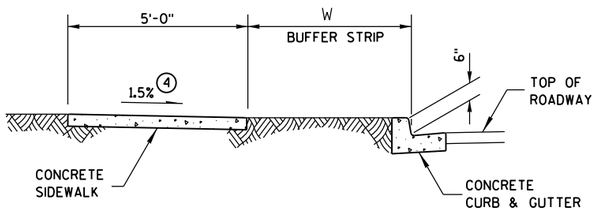
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

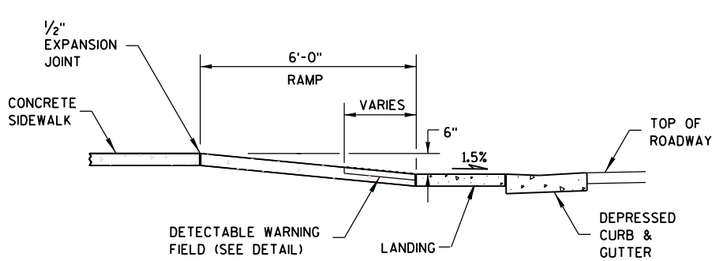
S.D.D. 8 D 5-15c



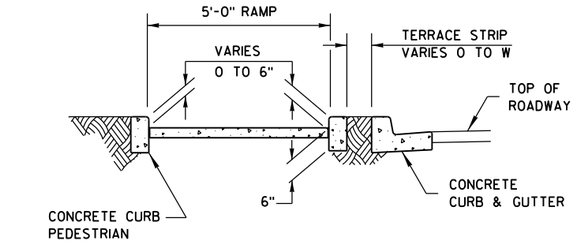
CURB RAMP TYPE 4B
PLAN VIEW



SECTION A-A FOR TYPE 4B



SECTION B-B FOR TYPE 4B



SECTION C-C FOR TYPE 4B

LEGEND

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

RADIUS (AT CURB FACE)	W = 3'-0"		W = 4'-0"		W = 5'-0"		W = 6'-0"		W = 7'-0"	
	X	Y	X	Y	X	Y	X	Y	X	Y
20 FEET	5'-5½"	4'-6½"	4'-8½"	6'-0"	4'-1"	7'-2¾"	3'-7"	8'-3½"	3'-1½"	9'-2½"
30 FEET	7'-3¾"	7'-1"	6'-5½"	8'-11½"	5'-9¼"	10'-7"	5'-2½"	12'-0"	4'-8¾"	13'-3¼"
40 FEET	8'-9½"	9'-2½"	7'-10"	11'-5¼"	7'-1"	13'-4½"	6'-5¾"	15'-¾"	5'-11½"	16'-7¼"
50 FEET	10'-¾"	11'-¾"	9'-¼"	13'-7¼"	8'-2½"	15'-9½"	7'-6½"	17'-9"	6'-11¾"	19'-6¼"
60 FEET	11'-2½"	12'-8¾"	10'-¾"	15'-6½"	9'-2¼"	17'-11¾"	8'-5¾"	20'-1¾"	7'-10½"	22'-1½"

INTERMEDIATE RADII CAN BE INTERPOLATED

GENERAL NOTES

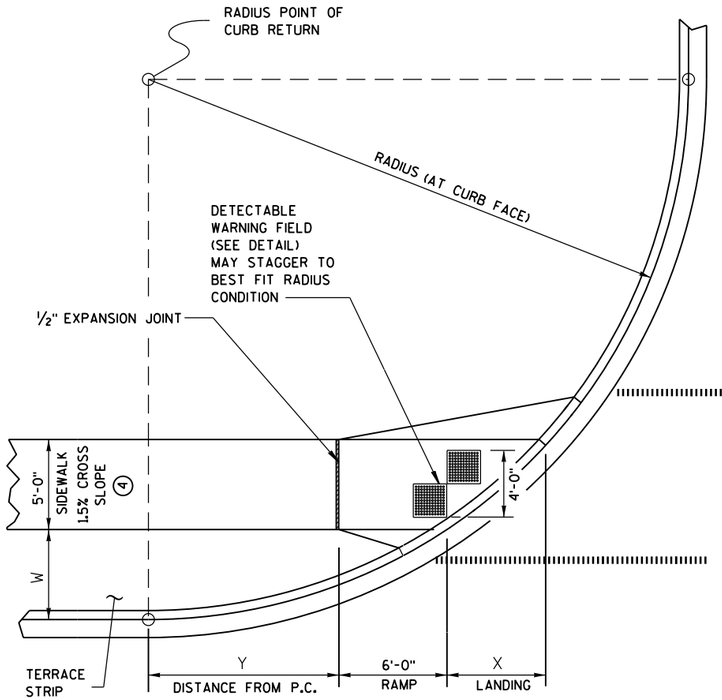
AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

RAMP SLOPES SHALL NOT BE STEEPER THAN 12:1.

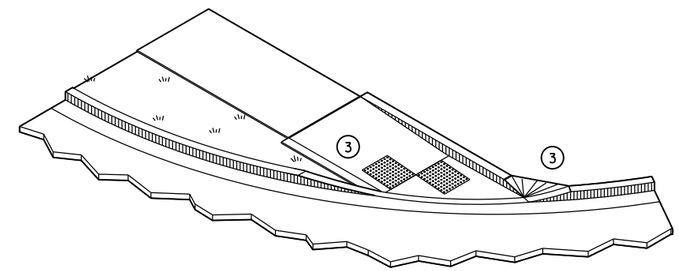
DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

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

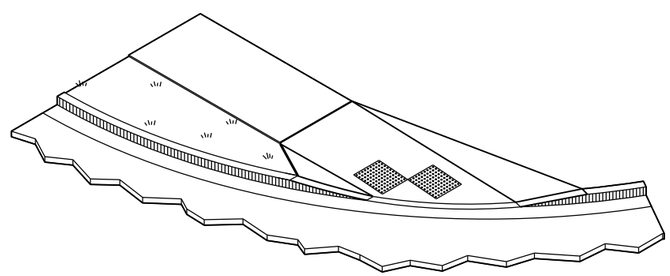
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.



CURB RAMP TYPE 4B1
PLAN VIEW



ISOMETRIC VIEW FOR TYPE 4B



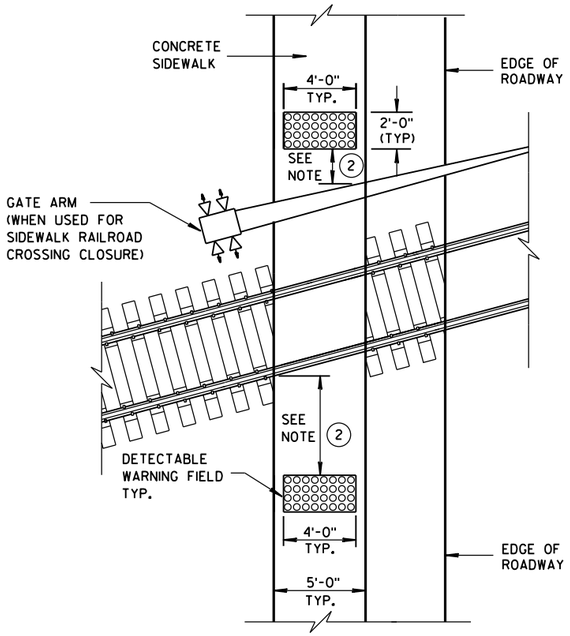
ISOMETRIC VIEW FOR TYPE 4B1

CURB RAMPS TYPE 4B AND 4B1

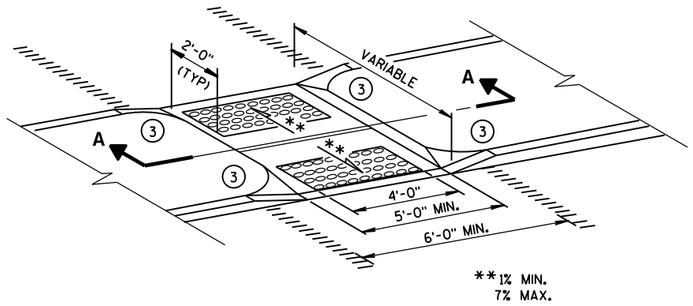
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 8 D 5-15d



TYPE 8
DETECTABLE WARNINGS AT RAILROAD CROSSING



MEDIAN ISLAND
NON-ELEVATED CROSSING
TYPE 5

GENERAL NOTES

SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.

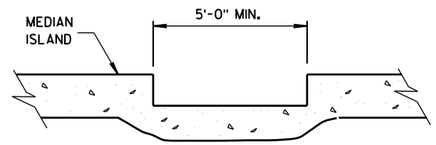
DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

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

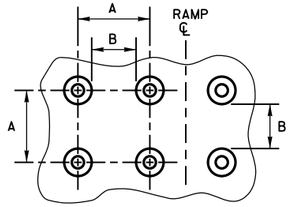
(2) THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO A RAILROAD CROSSING SHALL BE 1.5 FEET ± 0.1' FROM THE FACE OF THE GATE ARM IF THE GATE ARM EXTENDS ACROSS THE SIDEWALK. WHERE THERE IS NO PEDESTRIAN GATE, THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO THE RAILROAD CROSSING SHALL BE 15 FEET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

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

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



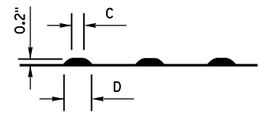
SECTION A-A



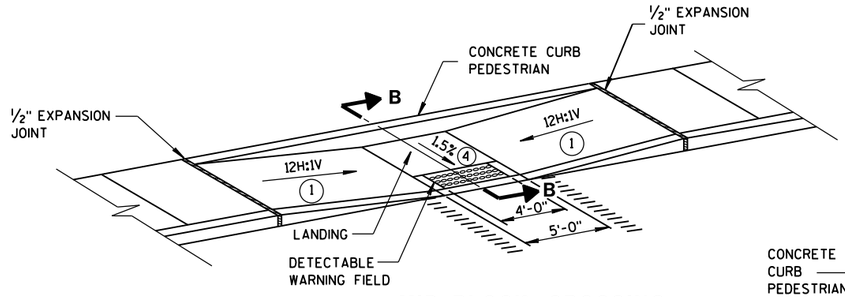
PLAN VIEW

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

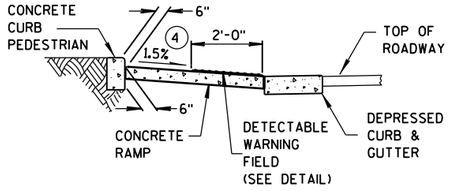
* THE C DIMENSION IS 50% TO 65% OF THE D DIMENSION.



ELEVATION VIEW

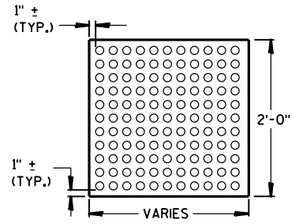


MID-BLOCK CROSSING
TYPE 7A



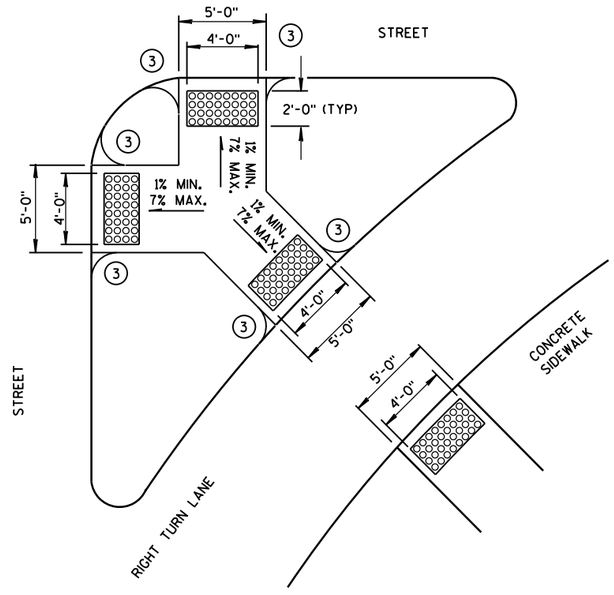
SECTION B-B

TRUNCATED DOMES
DETECTABLE WARNING PATTERN DETAIL

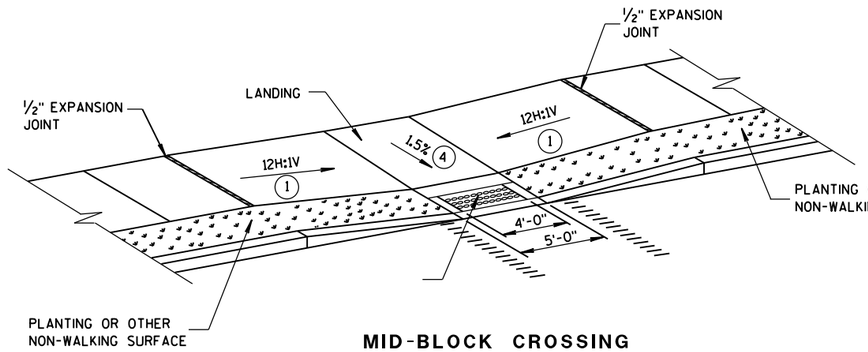


PLAN VIEW

DETECTABLE WARNING FIELD (TYPICAL)



TYPE 6
DETECTABLE WARNING AT ISLANDS



MID-BLOCK CROSSING
TYPE 7B

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

LEGEND

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

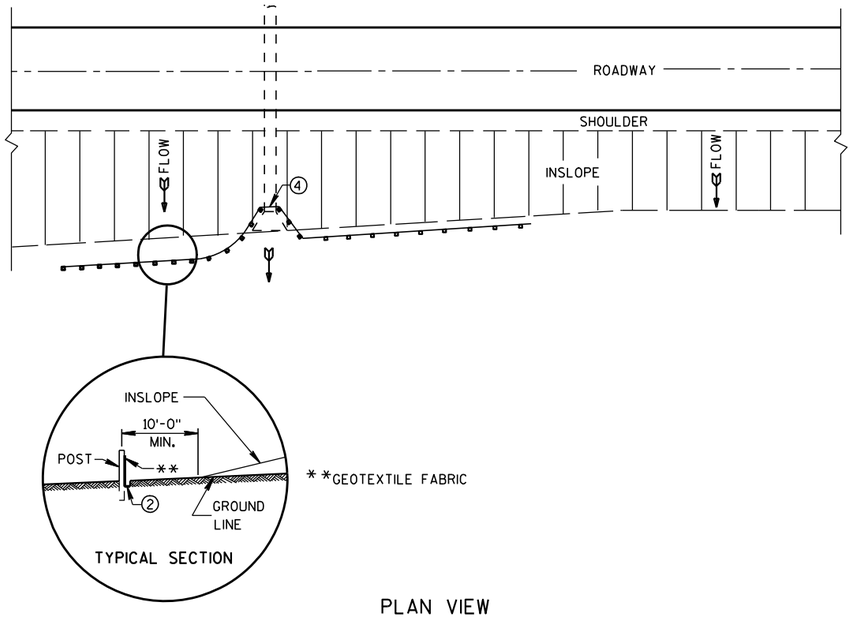
CURB RAMPS
TYPES 5, 6, 7A, 7B & 8

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
2-6-2013 DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

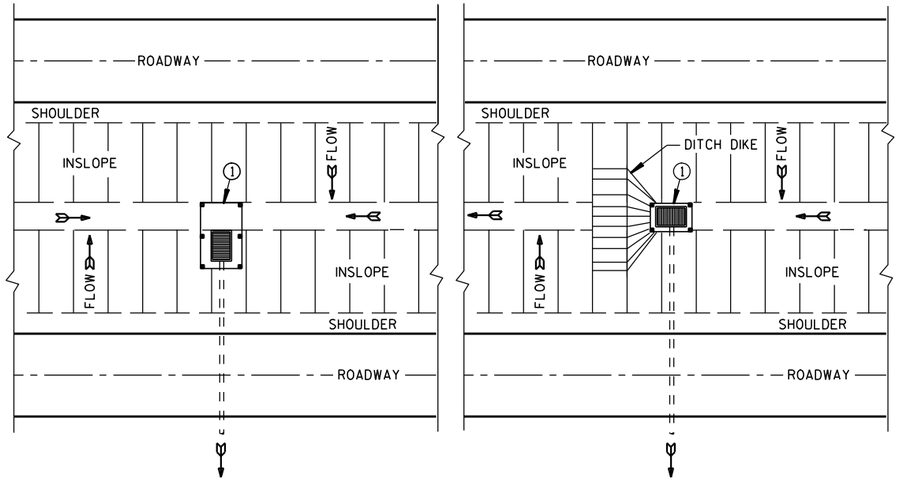
6 S.D.D. 8 D 5-15e

6 S.D.D. 8 D 5-15e



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

GENERAL NOTES

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

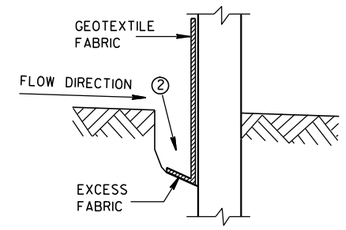
① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.

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

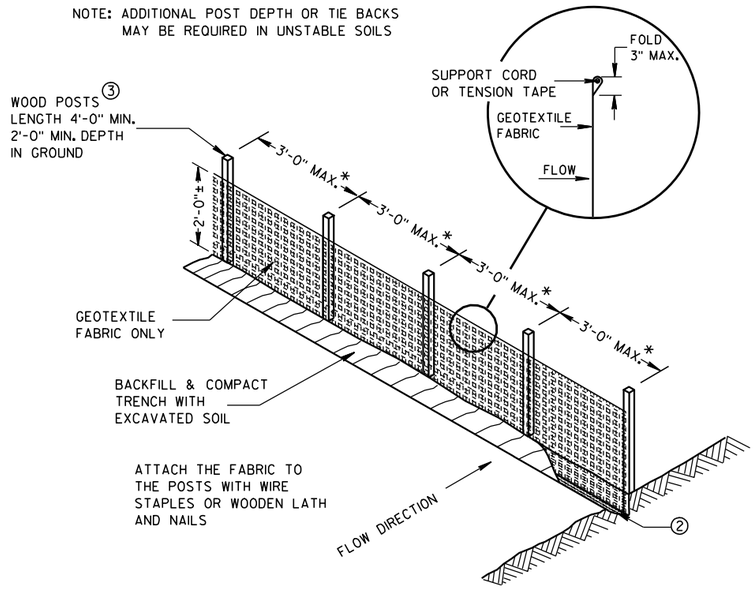
③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.

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

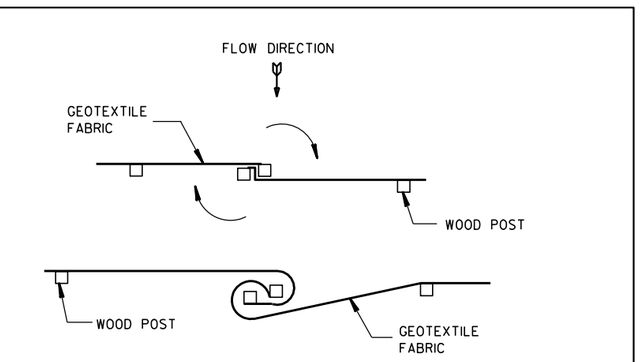
⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



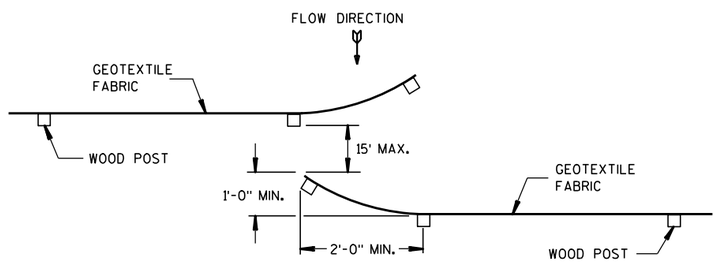
TRENCH DETAIL



SILT FENCE

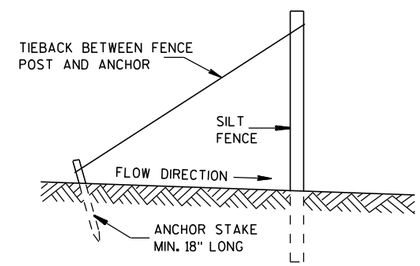


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE ⑤



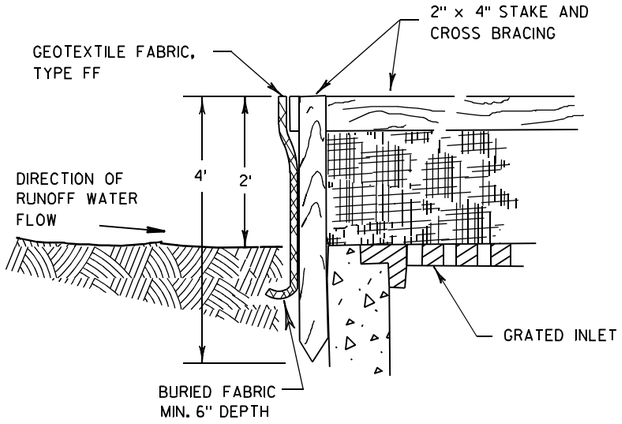
SILT FENCE TIE BACK

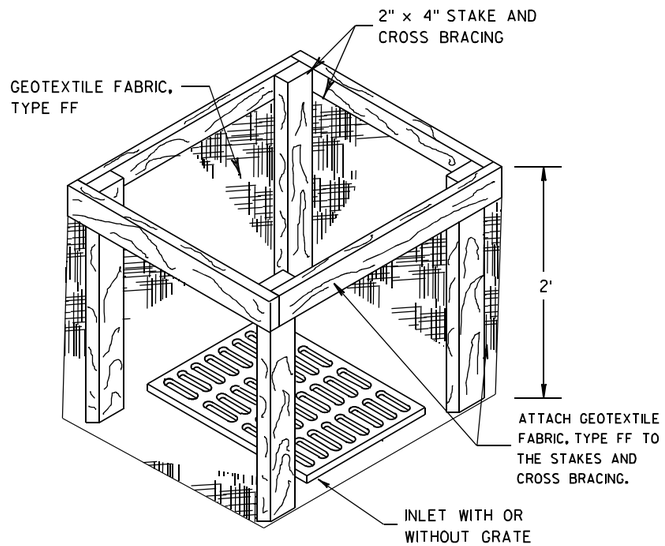
(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
4-29-05 DATE	/S/ Beth Cannestra CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA	

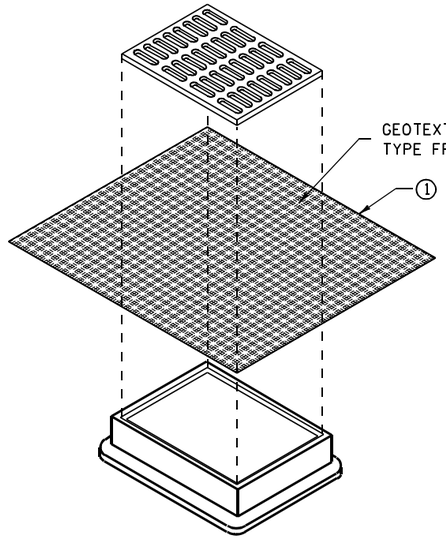
6

S.D.D. 8 E 9-6



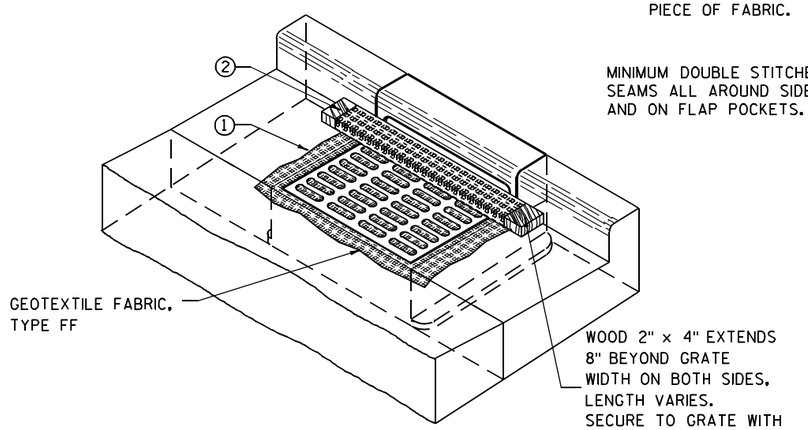


INLET PROTECTION, TYPE A

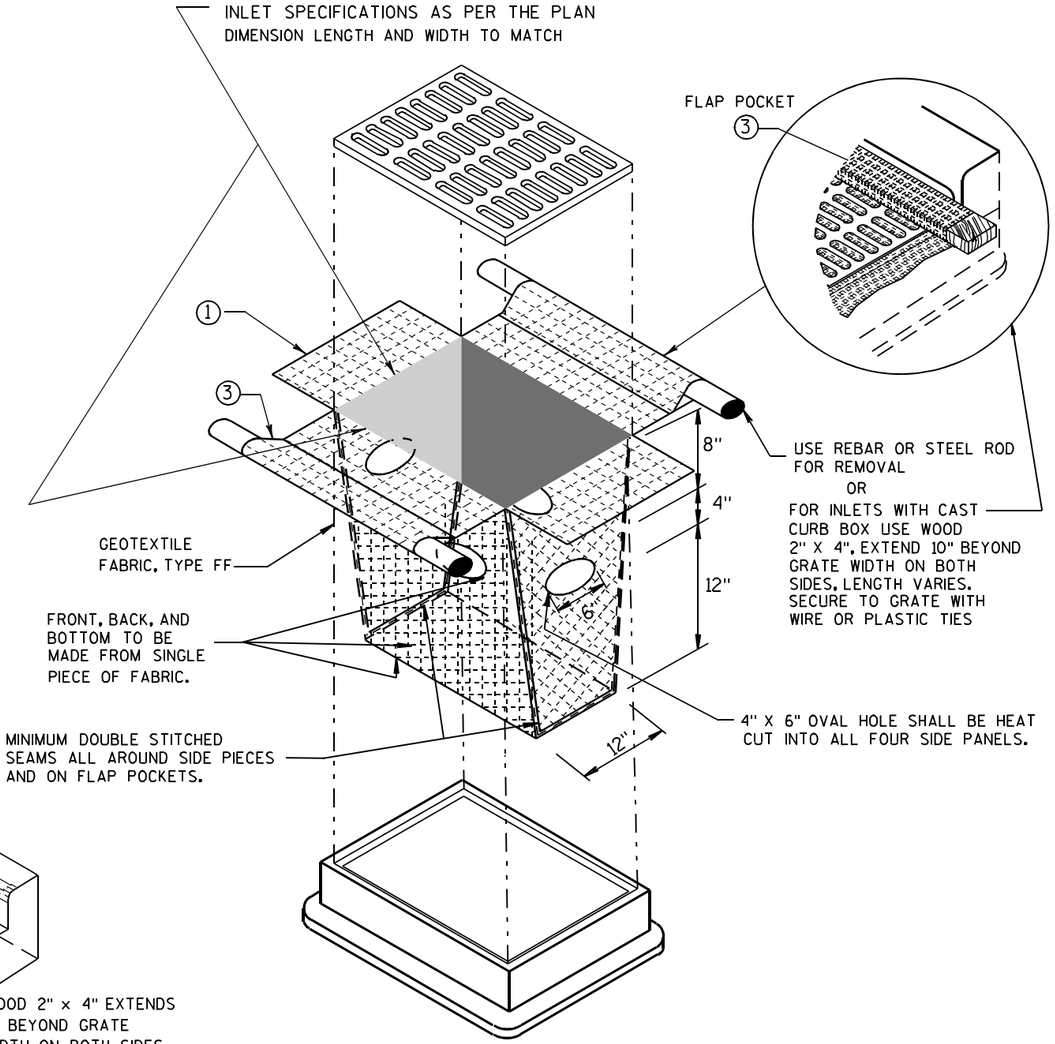


INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

(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

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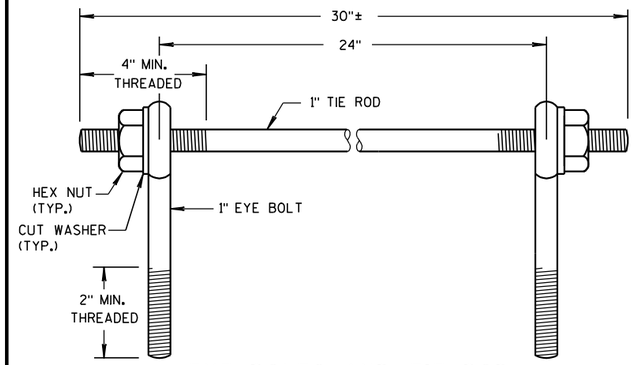
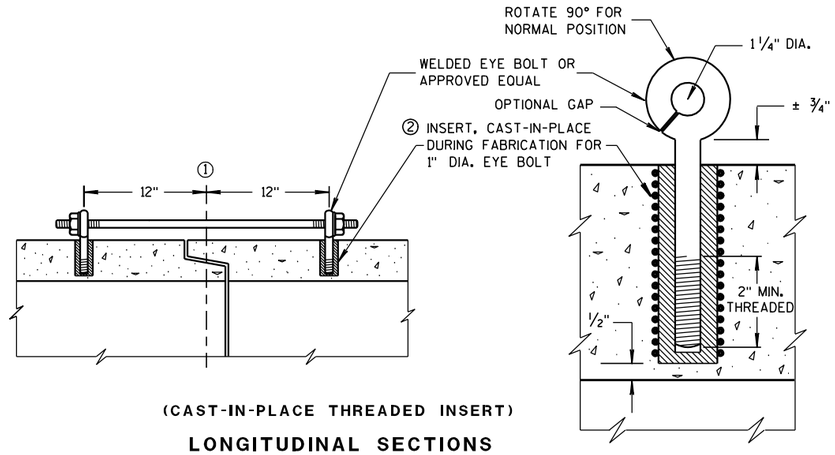


EYE BOLTS AND TIE ROD



(CAST-IN-PLACE THREADED INSERT)

LONGITUDINAL SECTIONS

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

GENERAL NOTES

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

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

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

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

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

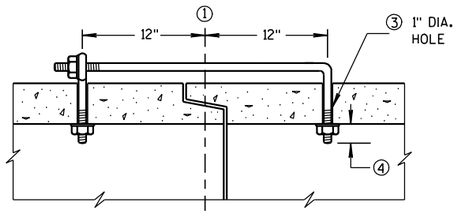
② THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.

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

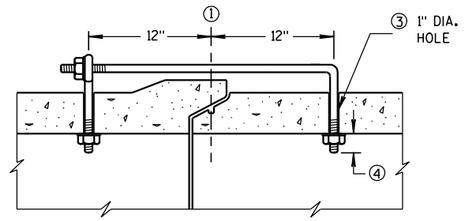
④ BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.

⑤ OPENING TO BE ROD DIAMETER PLUS 1 INCH.

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



(TONGUE & GROOVE PIPE)

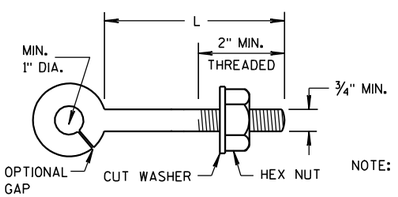


(MODIFIED BELL PIPE)

LONGITUDINAL SECTION

EYE BOLT DIMENSION TABLE

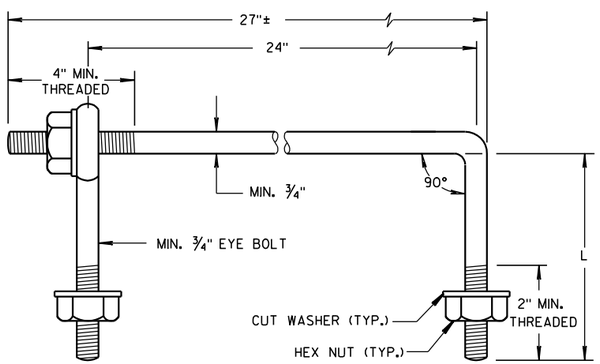
PIPE SIZE	L = LENGTH	
	TONGUE & GROOVE PIPE	MODIFIED BELL PIPE
18" TO 24"	4 1/2"	6 1/4"
30"	5"	7"
36"	5 1/2"	7"
42"	6"	
48"	6 1/2"	
60"	7 1/2"	
66"	8"	



NOTE:

EYE BOLT

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



EYE BOLT AND TIE ROD

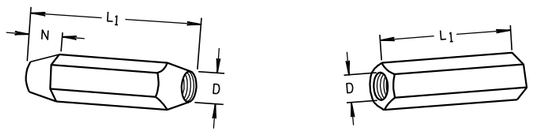
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

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

ADJUSTABLE TIE ROD TABLE

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

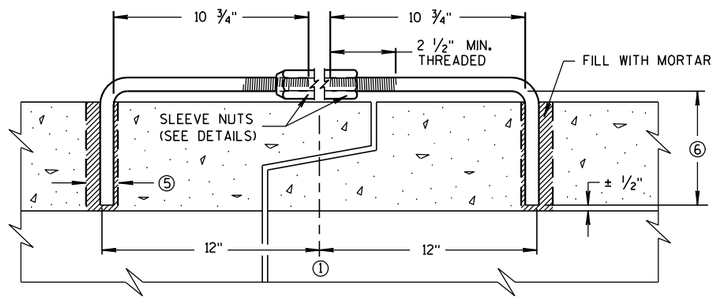
DIMENSIONS SHOWN ARE IN INCHES



TAPERED PLAIN

RIGHT AND LEFT THREADS

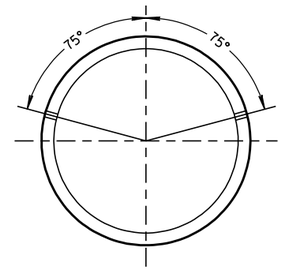
SLEEVE NUTS



LONGITUDINAL SECTION

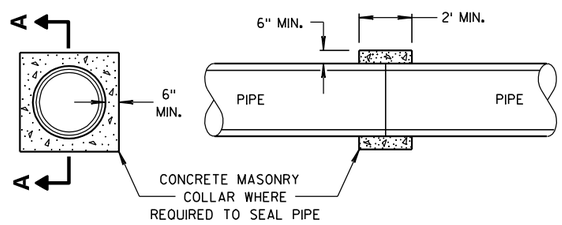
(JOINT TIES FOR 12" TO 108" DIA. CONCRETE PIPE)

ADJUSTABLE TIE ROD (ALTERNATE NO. 3)



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

TRANSVERSE SECTION



SECTION A-A

CONCRETE COLLAR DETAIL

JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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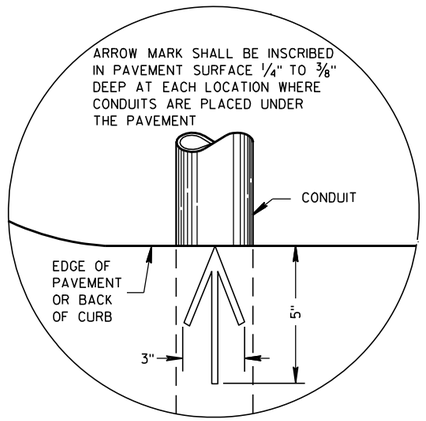
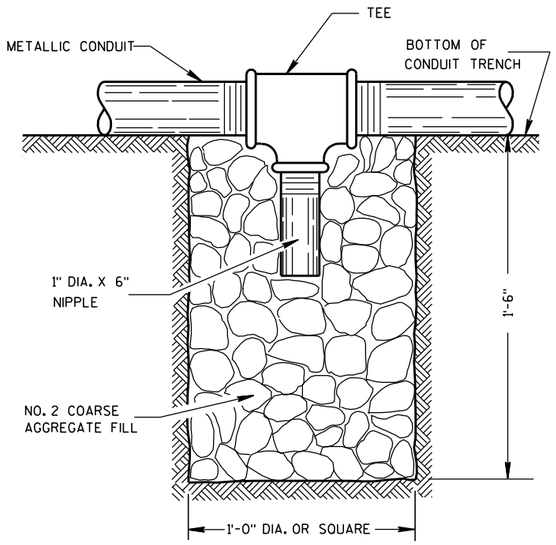


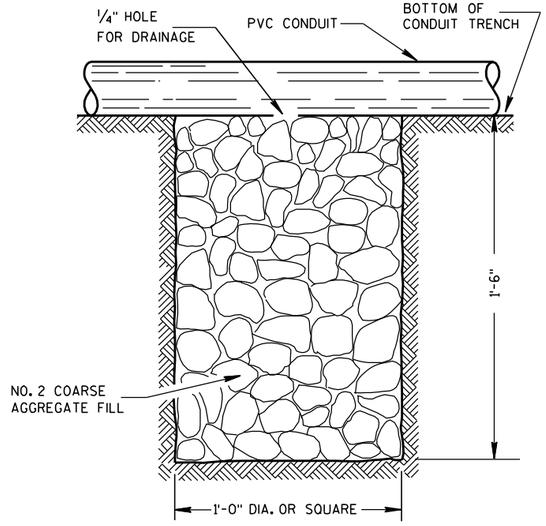
PLAN VIEW

ARROW MARK



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

DRAIN SUMP FOR METALLIC CONDUIT



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

DRAIN SUMP FOR PVC CONDUIT

GENERAL NOTES

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

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

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

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

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

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

ALL METALLIC CONDUIT RACEWAY ENDS SHALL BE REAMED AND THREADED.

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

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

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

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

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

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

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

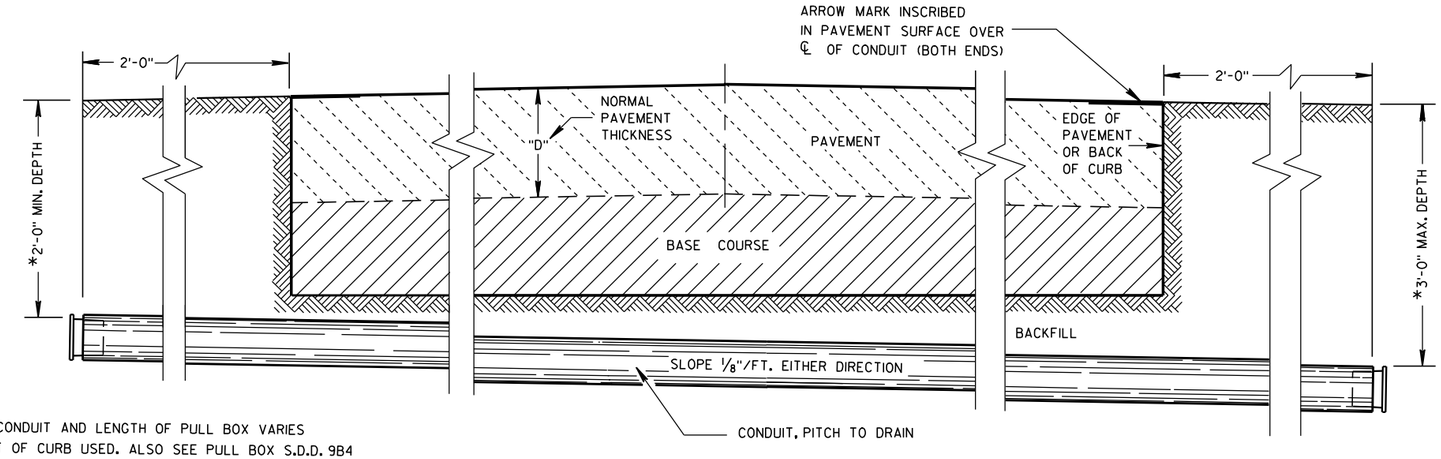
PRIOR TO CONDUIT ACCEPTANCE, CONDUIT CAPS OR PLUGS SHALL BE REMOVED, AND THE CAPS, PLUGS AND CONDUIT ENDS SHALL BE THOROUGHLY CLEANED AND THEN THE CAPS OR PLUGS REINSTALLED TO ENSURE THAT THE CAPS OR PLUGS CAN BE EASILY REMOVED IN THE FUTURE.

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

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

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

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



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

SIDE ELEVATION

DETAIL FOR CONDUIT UNDER PAVED HIGHWAYS

CONDUIT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

10/23/03 — DATE

/S/ Balu Ananthanarayanan — STATE ELECTRICAL ENGI — HWYS

FHWA

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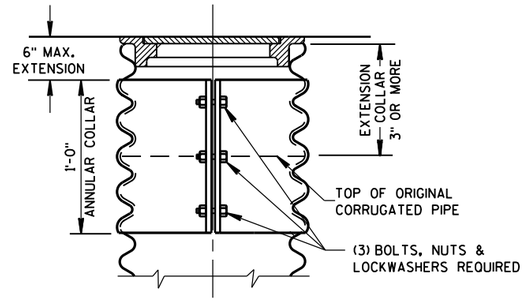
S.D.D. 9 B 2-7

TABLE OF NOMINAL DIMENSIONS AND WEIGHTS

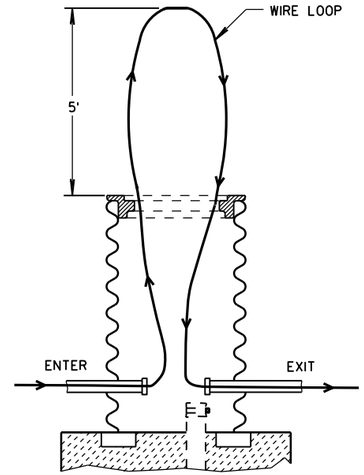
DIMENSION IN INCHES		CORRUGATED STEEL PIPE								
PIPE DIAMETER (INSIDE)	A	12	12	12	18	18	18	24	24	24
PIPE LENGTH **	B	24	30	36	24	30	36	36	42	48
WALL THICKNESS	C	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064
COVER	D	10 1/4	10 1/4	10 1/4	16 1/4	16 1/4	16 1/4	22 1/4	22 1/4	22 1/4
FRAME	E	14 1/2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

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

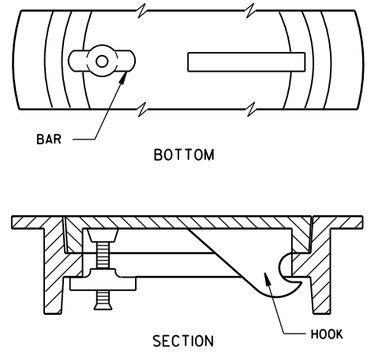
** NORMALLY USED LENGTHS. THE PROJECT ENGINEER SHALL DETERMINE IF PIPE LENGTHS, OTHER THAN THOSE SPECIFIED, SHALL BE USED, TO A MAXIMUM OF 48" (CONTINUOUS LENGTH, NON-SPLICED). THE ADDITIONAL LENGTH SHALL BE INCIDENTAL TO THE PULL BOX BID PRICE.



CORRUGATED PIPE EXTENDER

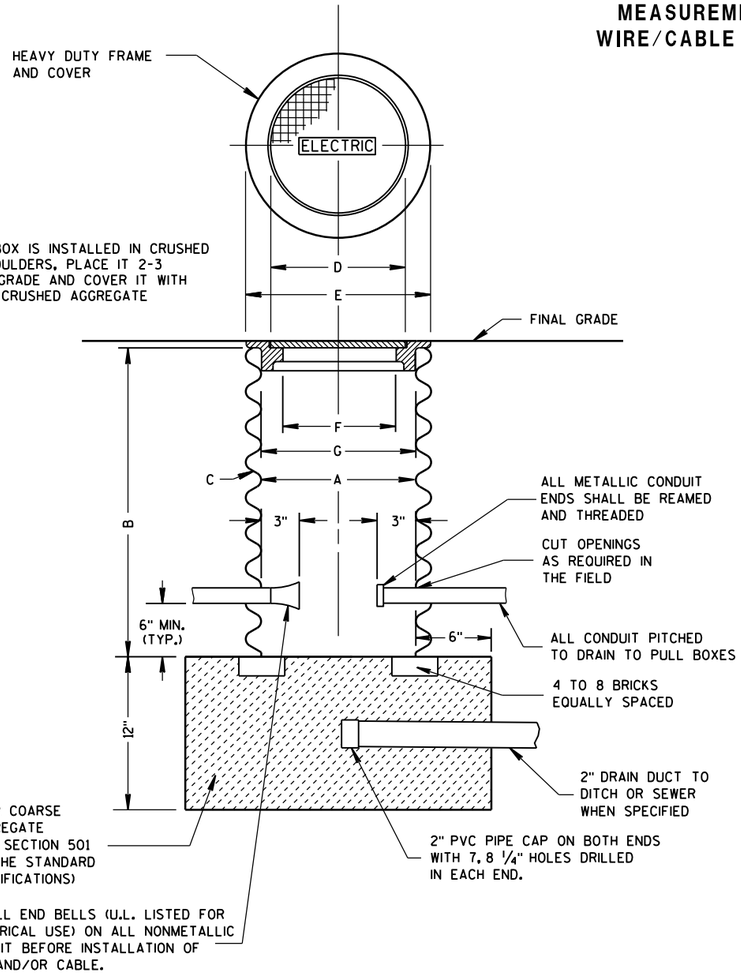


MEASUREMENT DETAIL FOR WIRE/CABLE IN THE PULL BOX



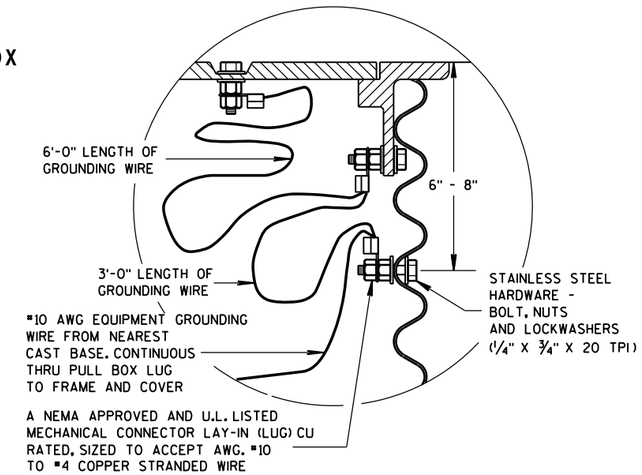
ALTERNATE COVER (LOCKING)

TIGHTENING BAR TYPE

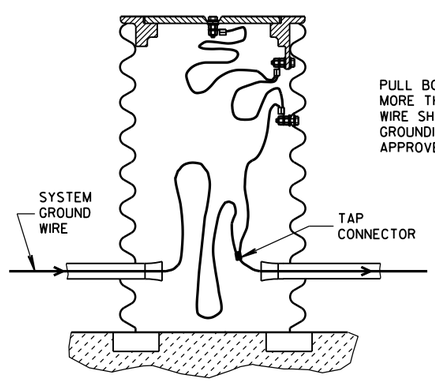


WHEN A PULL BOX IS INSTALLED IN CRUSHED AGGREGATE SHOULDERS, PLACE IT 2-3 INCHES BELOW GRADE AND COVER IT WITH 2-3 INCHES OF CRUSHED AGGREGATE

PULL BOX



EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES



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

EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES

GENERAL NOTES

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

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

PULL BOXES LOCATED IN THE ROADWAYS SHALL HAVE LOCKING COVERS.

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

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

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

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

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

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

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

PULL BOX

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

2-7-2013 — DATE

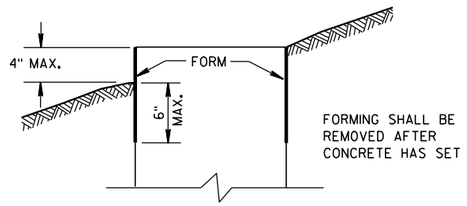
/S/ Ahmet Demirbilek — STATE ELECTRICAL

FHWA

6

S.D.D. 9 B 4-10

FORM DEPTH SHALL BE NO MORE THAN 6" BELOW GRADE ON THE LOWER SIDE OF BASE



FORMING DETAIL

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

GENERAL NOTES

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

BASES SHALL BE EXCAVATED BY USE OF A CIRCULAR AUGER.

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

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

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

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

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

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

GENERAL NOTES (CONTINUED)

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

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

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

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

A NO. 4 AWG, STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD) FOR TYPE 2 AND TYPE 5 BASES.

THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE FURNISHED AND INSTALLED TO ENTER THE BASE OF THE TYPE 2 AND TYPE 5 BASES THROUGH A 1 INCH CONDUIT INSTALLED FOR GROUNDING PURPOSES, LEAVING A 4 FOOT COIL OF WIRE ABOVE THE CONCRETE BASE. THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE NEATLY COILED AND THE COILS TIED TOGETHER.

ANCHOR RODS SHALL BE THREADED 12" IN LENGTH ON EACH END OF THE ROD. ANCHOR RODS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 654.2.1 AND 641.2.2 OF THE STANDARD SPECIFICATIONS, ASTM A-449, OR ASTM A-687 (GRADE 105).

WASHERS AND LOCK WASHERS ARE REQUIRED ON ALL ANCHOR RODS.

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

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

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

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

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

(2) (4) 1" DIA. X 3'-6" ANCHOR RODS.

(3) (4) 1" DIA. X 5'-0" ANCHOR RODS.

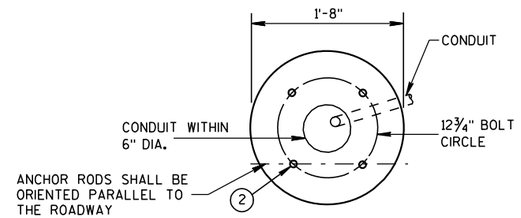
(4) (6) NO. 6 X 6'-8" BAR STEEL REINFORCEMENT.

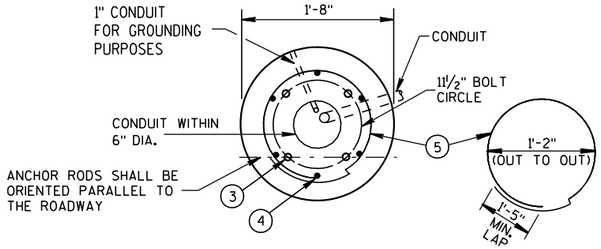
(5) (7) NO. 4 X 5'-1" BAR STEEL REINFORCEMENT @ 1'-0" C-C.

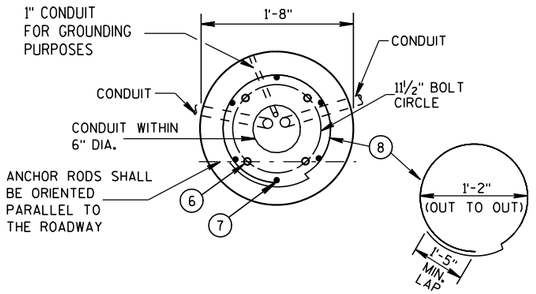
(6) (4) 1" DIA. X 3'-6" ANCHOR RODS.

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

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



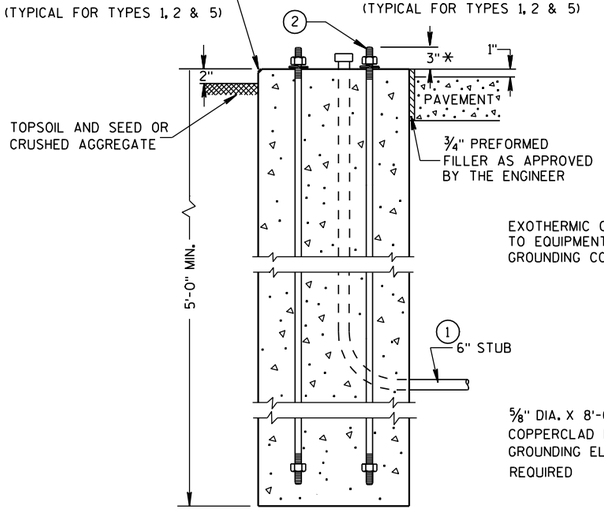




FORM ALL EXPOSED CONCRETE. PROVIDE 1" CHAMFER ALL AROUND

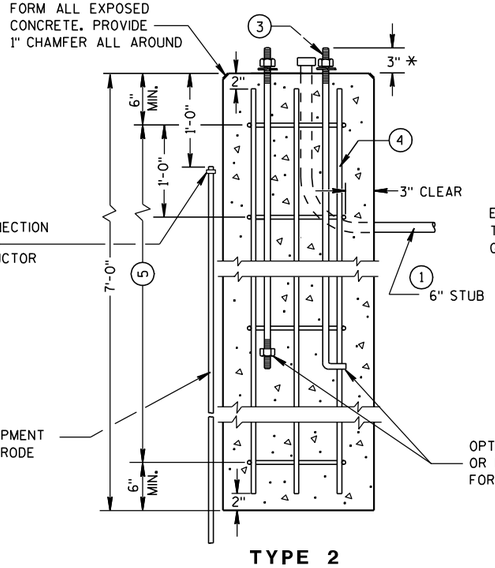
HALF SECTION IN UNPAVED AREA
(TYPICAL FOR TYPES 1, 2 & 5)

HALF SECTION IN PAVEMENT
(TYPICAL FOR TYPES 1, 2 & 5)



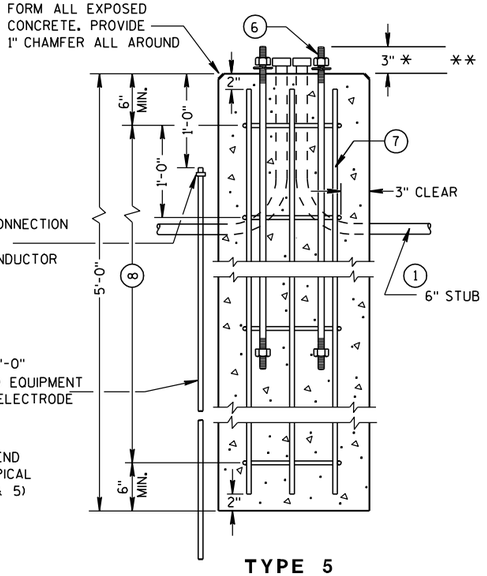
TYPE 1

FORM ALL EXPOSED CONCRETE. PROVIDE 1" CHAMFER ALL AROUND



TYPE 2

FORM ALL EXPOSED CONCRETE. PROVIDE 1" CHAMFER ALL AROUND



TYPE 5

CONCRETE BASES

* ANY ANCHOR ROD PROJECTION SHORTER THAN 2¾" OR LONGER THAN 3¼" SHALL REQUIRE THE BASE TO BE REMOVED AND REPLACED AT THE CONTRACTORS EXPENSE.

** FOR NONBREAKAWAY INSTALLATIONS, 4½" ± ANCHOR ROD PROJECTION WITH THE USE OF LEVELING NUTS. RODENT SCREEN REQUIRED.

CONCRETE BASES, TYPES 1, 2 & 5

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
3/3/10 — DATE
/S/ Joanna L. Rush — STATE ELECTRICAL ENGI
76
HWYS
FHWA

6
S.D.D. 9 C 2-6

GENERAL NOTES

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

BASES SHALL BE EXCAVATED BY USE OF A CIRCULAR AUGER.

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

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

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

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

CONDUIT HEIGHT ABOVE CONCRETE BASES SHALL BE 4 INCHES. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED. NONMETALLIC CONDUIT SHALL HAVE BELL END INSTALLED. ALL CONDUIT SHALL BE SLOPED TO PULL BOX.

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

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

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

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

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

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

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

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

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

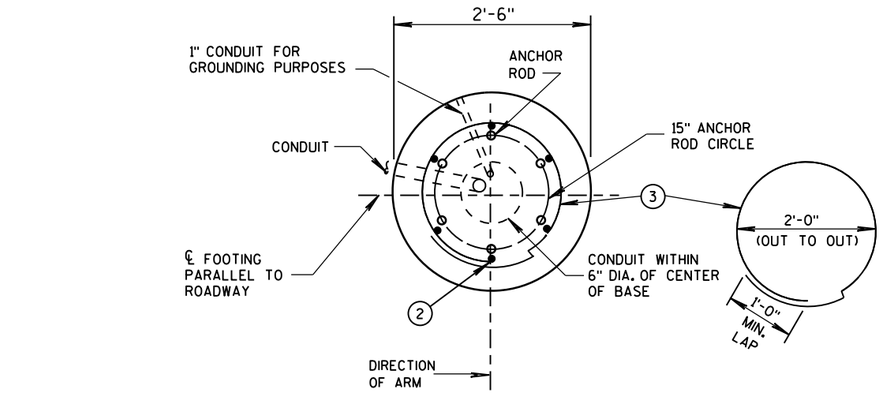
ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

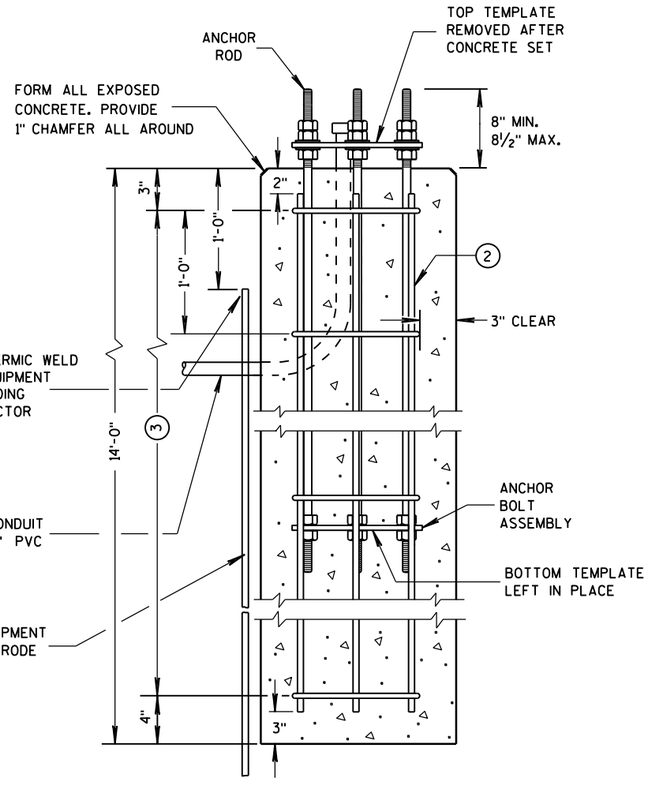
(1) THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18 INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36 INCHES, (GREATER THAN 36 INCHES IF INSTALLED IN BREAKER-RUN), EXCEPT WITH WRITTEN APPROVAL BY THE ENGINEER.

(2) (6) NO. 6 X 13'-7" BAR STEEL REINFORCEMENT.

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

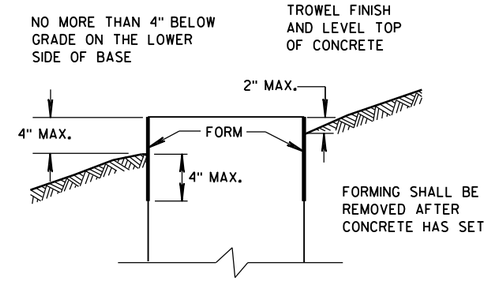
CONCRETE MASONRY	fc=3,500 p.s.i.
HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60	fy=60,000 p.s.i.
ANCHOR RODS, AASHTO M314 GRADE 55	fy=55,000 p.s.i.
TEMPLATES, ASTM, A709 GRADE 36	fy=36,000 p.s.i.



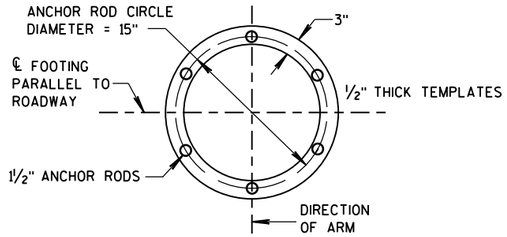


CONCRETE BASE TYPE 10
(FOR TYPE 9 & 10 POLES)

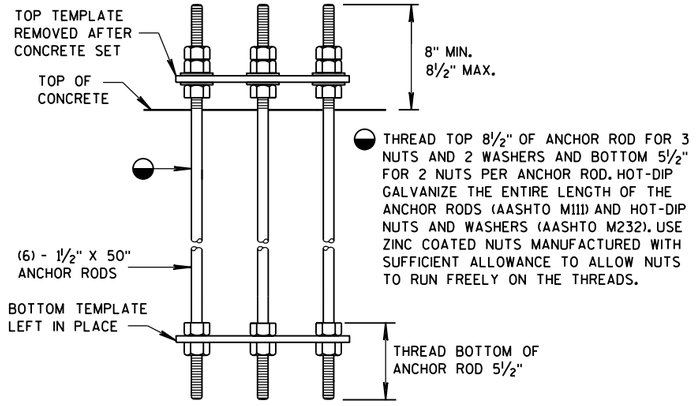
TO BE USED WHEN GROUND ELEVATION AT BASE EQUALS OR IS GREATER THAN HIGH POINT OF ROADWAY ELEVATION. SEE S.D.D. 9C13-2 WHEN GROUND ELEVATION AT BASE IS LOWER THAN HIGH POINT OF ROADWAY ELEVATION.



FORMING DETAIL



TOP AND BOTTOM TEMPLATES



ANCHOR BOLT ASSEMBLY DETAIL

CONCRETE BASE TYPE 10
ANCHOR ASSEMBLY

QUANTITY REQUIREMENTS	
APPROX. CUBIC YARDS OF CONCRETE	2.5
LBS. OF HOOP BAR STEEL	69
LBS. OF VERTICAL BAR STEEL	122

CONCRETE BASE TYPE 10

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

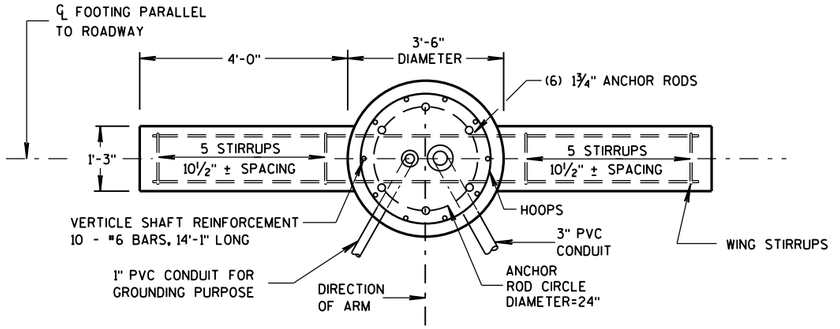
APPROVED
11-26-2013
DATE

/S/ Ahmet Demirbilek
STATE ELECTRICAL

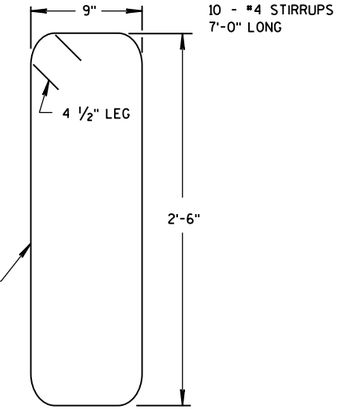
FHWA

6

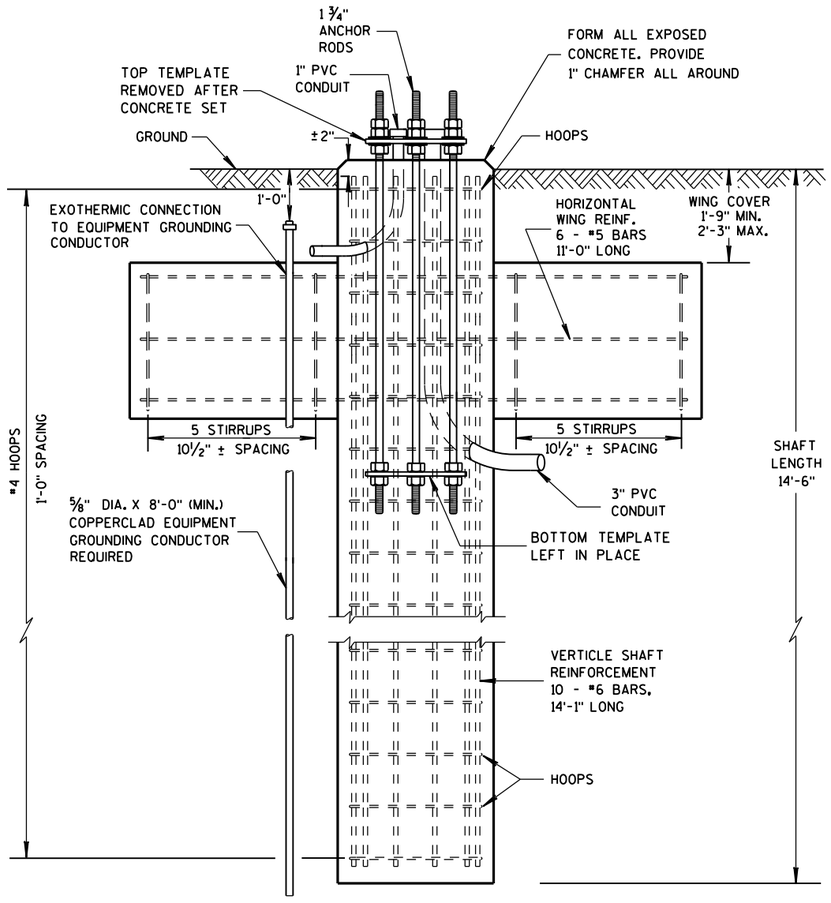
S.D.D. 9 C 11-4



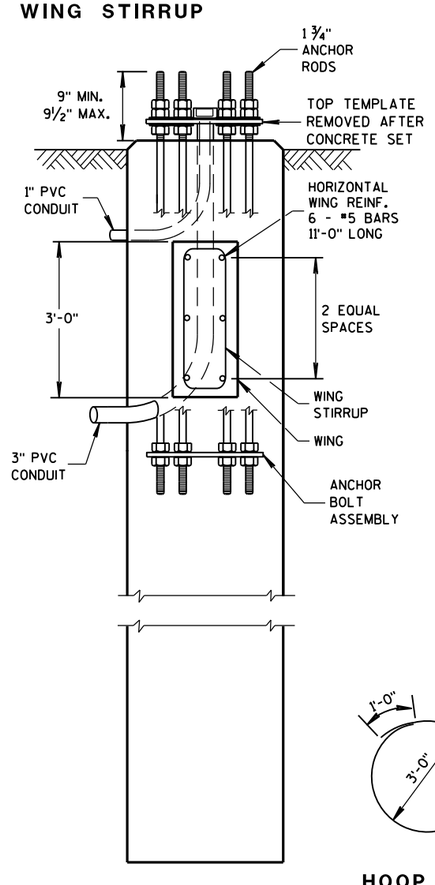
PLAN VIEW



WING STIRRUP

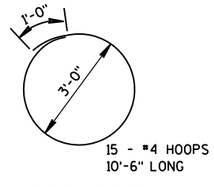


ELEVATION VIEW



SIDE VIEW

DOES NOT SHOW HOOPS OR VERTICAL SHAFT REINFORCEMENT



15 - #4 HOOPS 10'-6" LONG

HOOP DETAIL

GENERAL NOTES

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

ORIENT ANCHOR RODS IN FOOTING AND PROVIDE ANCHOR ROD PROJECTION ABOVE TOP OF CONCRETE FOOTING BASE PER THIS SHEET.

BENDING DIMENSIONS FOR REINFORCING BARS ARE OUT TO OUT.

USE 3" CLEAR FOR ALL REINFORCEMENT UNLESS NOTED OTHERWISE.

THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO THE TYPE AND LOCATION OF THE UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO.

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

BASES (SHAFT), BELOW THE WING, SHALL BE EXCAVATED BY THE USE OF A CIRCULAR AUGER. IF A BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE SOIL, THE FORM SHALL BE REMOVED BEFORE BACKFILLING AROUNG THE BASE. BACKFILL SHALL BE TAMPED TIGHT AGAINST THE BARE CONCRETE BASE IN LAYERS OF 1 FOOT OR LESS.

TOP SURFACE OF THE CONCRETE BASE SHALL BE TROWEL FINISHED AND LEVEL.

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

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

CONDUIT HEIGHT ABOVE CONCRETE BASE SHALL BE 4½" INCHES. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED. NONMETALLIC CONDUIT SHALL HAVE BELL ENDS INSTALLED. ALL CONDUIT SHALL SLOPE TO PULL BOX.

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

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

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTOR FITTINGS, UL LISTED FOR ELECTRICAL USE, SHALL BE USED.

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

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

BAR STEEL REINFORCEMENT SHALL BE COATED WITH POWDERED EPOXY RESIN IN ACCORDANCE WITH SECTION 505 OF THE STANDARD SPECIFICATIONS.

THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVEL WAY SHALL BE 24-INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18-INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36-INCHES, (GREATER THAN 36-INCHES IF INSTALLED IN BREAKER-RUN), EXCEPT WITH THE WRITTEN APPROVAL OF THE ENGINEER.

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

CONCRETE MASONRY	fc=3,500 p.s.i.
HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60	fy=60,000 p.s.i.
ANCHOR RODS, AASHTO M314 GRADE 55	fy=55,000 p.s.i.
TEMPLATES, ASTM A709 GRADE 36	fy=36,000 p.s.i.

(FOR TYPE 12 & 13 POLES)

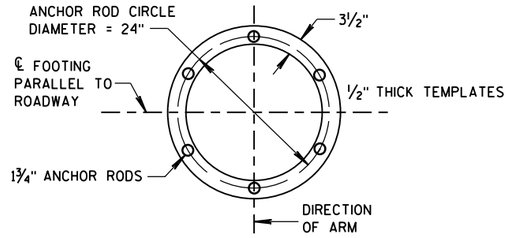
CONCRETE = 6.3 C.Y.
H.S. REINFORCEMENT = 433 LBS.

TO BE USED WHEN GROUND ELEVATION AT BASE EQUALS OR IS GREATER THAN HIGH POINT OF ROADWAY ELEVATION.
SEE S.D.D. 9C13-2 WHEN GROUND ELEVATION AT BASE IS LOWER THAN HIGH POINT OF ROADWAY ELEVATION.

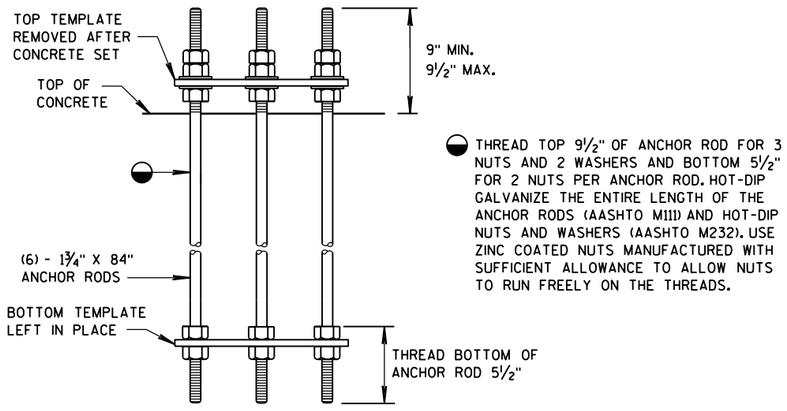
CONCRETE BASE TYPE 13

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6
S.D.D. 9 C 12-4a

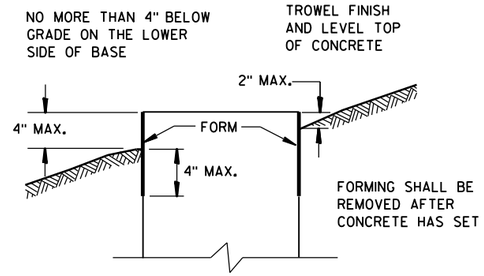


TOP AND BOTTOM TEMPLATES



ANCHOR BOLT ASSEMBLY DETAIL

CONCRETE BASE TYPE 13 ANCHOR ASSEMBLY



FORMING DETAIL

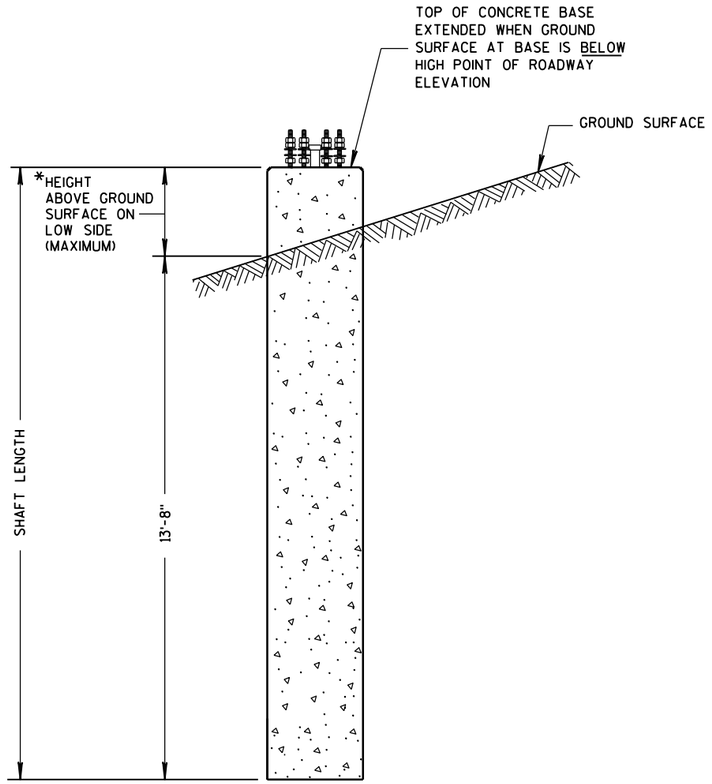
CONCRETE BASE TYPE 13	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 11-26-2013 DATE FHWA	/S/ Ahmet Demirbilek STATE ELECTRICAL

6

S.D.D. 9 C 12-4b

REINFORCEMENT AND CONCRETE QUANTITIES
ADJUSTED FOR EXTENDED TYPE 10 CONCRETE BASE

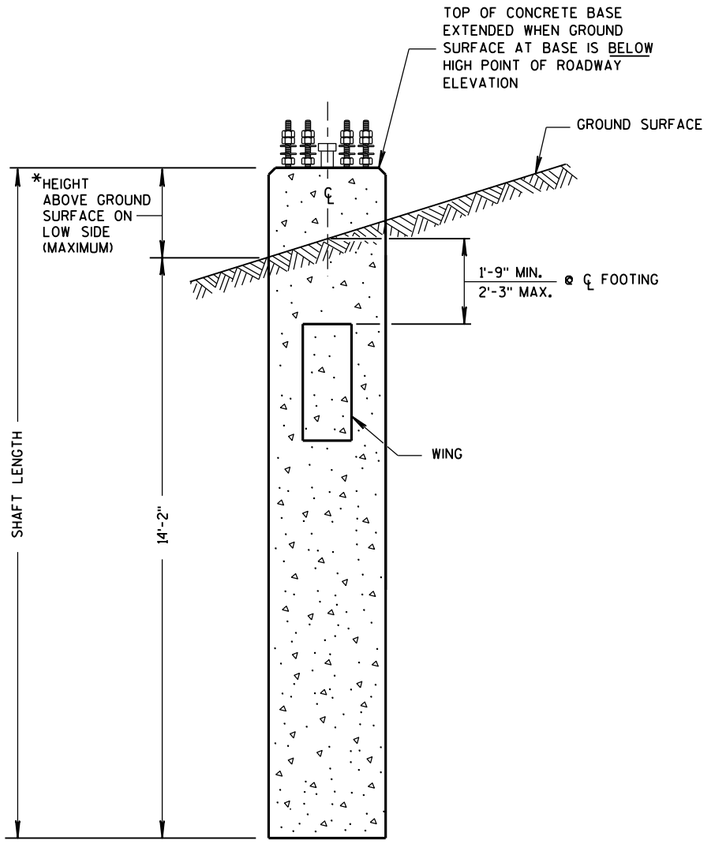
HEIGHT INCREASE REQUIRED	* HEIGHT ABOVE GROUND SURFACE ON LOW SIDE (MAXIMUM)	SHAFT LENGTH	LENGTH OF #6 VERTICAL REINF.	NO. OF #4 HOOPS	C.Y. OF CONCRETE	LBS. OF HOOP BAR STEEL	LBS. OF VERTICAL BAR STEEL
>0" TO 6"	10"	14'-6"	14'-1"	16	2.6	78	127
>6" TO 1'-0"	1'-4"	15'-0"	14'-7"	16	2.7	78	131
>1'-0" TO 1'-6"	1'-10"	15'-6"	15'-1"	17	2.8	83	136
>1'-6" TO 2'-0"	2'-4"	16'-0"	15'-7"	17	2.9	83	141



CONCRETE BASE TYPE 10 (EXTENDED)

REINFORCEMENT AND CONCRETE QUANTITIES
ADJUSTED FOR EXTENDED TYPE 13 CONCRETE BASE

HEIGHT INCREASE REQUIRED	* HEIGHT ABOVE GROUND SURFACE ON LOW SIDE (MAXIMUM)	SHAFT LENGTH	LENGTH OF #6 VERTICAL REINF.	NO. OF #4 HOOPS	C.Y. OF CONCRETE	LBS. OF H.S. BAR STEEL
>0" TO 6"	10"	15'-0"	14'-7"	16	6.5	447
>6" TO 1'-0"	1'-4"	15'-6"	15'-1"	16	6.6	454
>1'-0" TO 1'-6"	1'-10"	16'-0"	15'-7"	17	6.8	469
>1'-6" TO 2'-0"	2'-4"	16'-6"	16'-1"	17	7.0	476



CONCRETE BASE TYPE 13 (EXTENDED)

CONCRETE BASE
TYPE 10 & TYPE 13 EXTENSION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11-26-2013 DATE
/S/ Ahmet Demirbilek
STATE ELECTRICAL
FHWA

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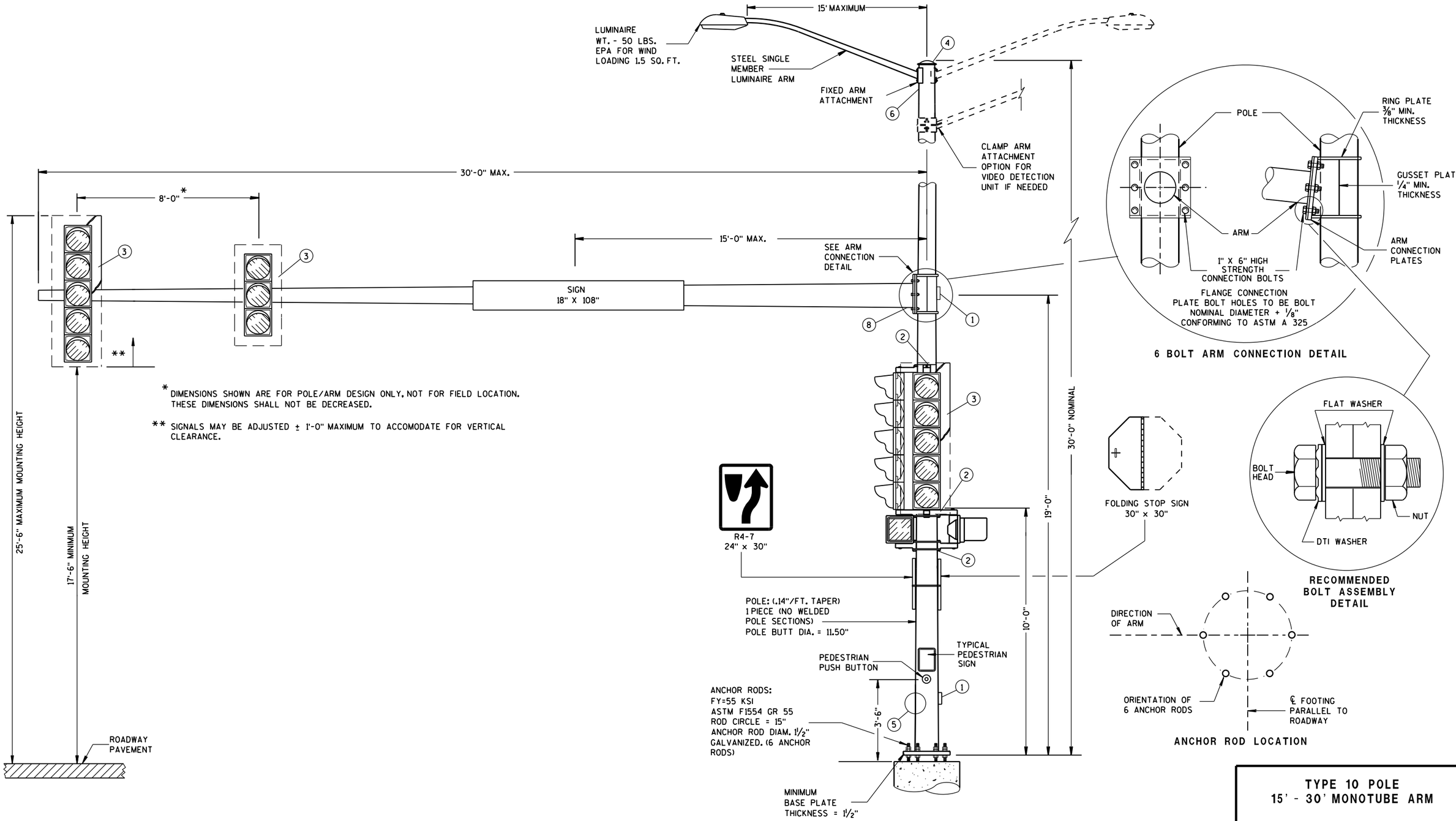


* DIMENSIONS SHOWN ARE FOR POLE/ARM DESIGN ONLY, NOT FOR FIELD LOCATION. THESE DIMENSIONS SHALL NOT BE DECREASED.

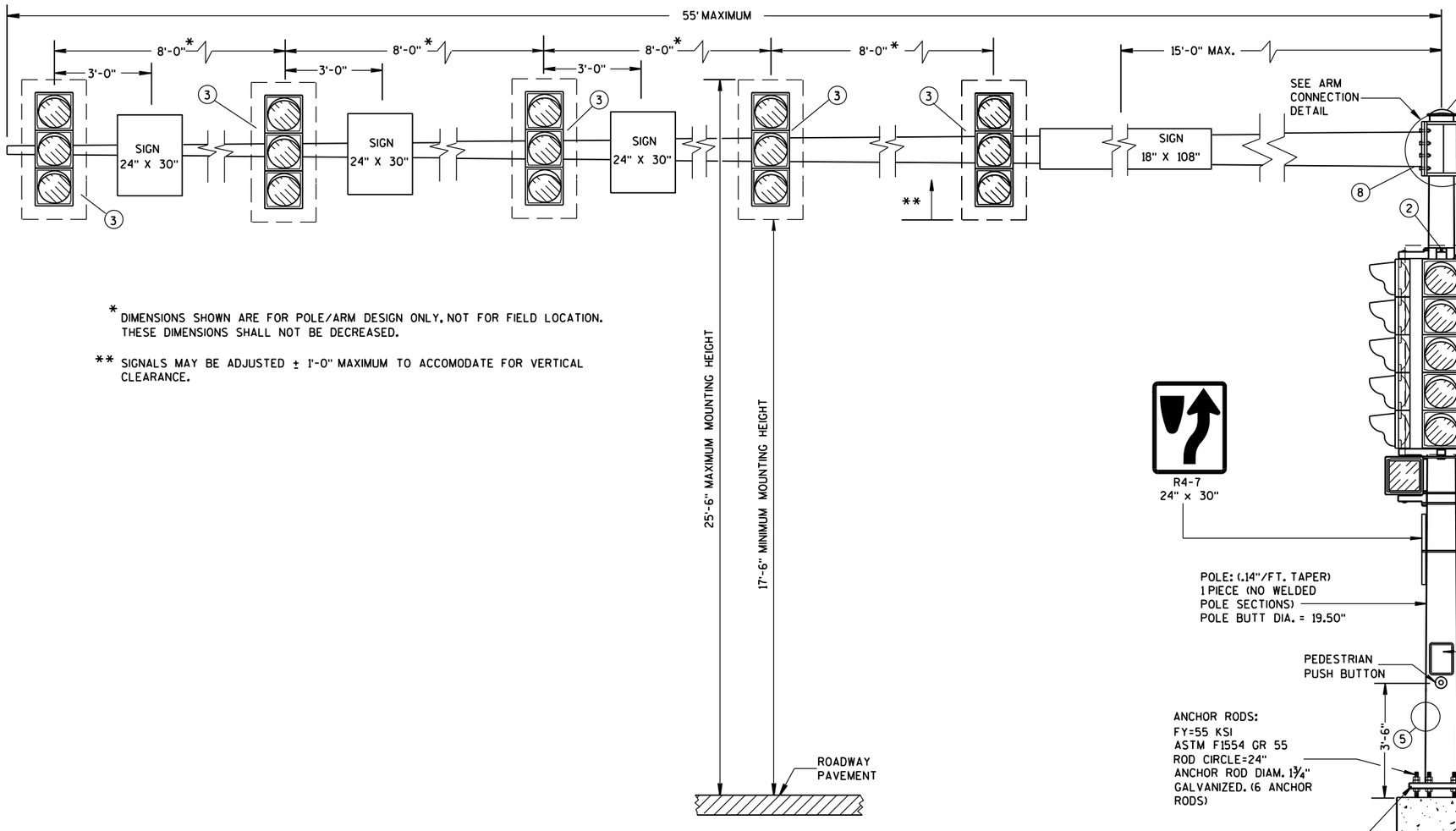
** SIGNALS MAY BE ADJUSTED ± 1'-0" MAXIMUM TO ACCOMODATE FOR VERTICAL CLEARANCE.

(MAXIMUM LOAD)

TYPE 10 POLE
15'- 30' MONOTUBE ARM

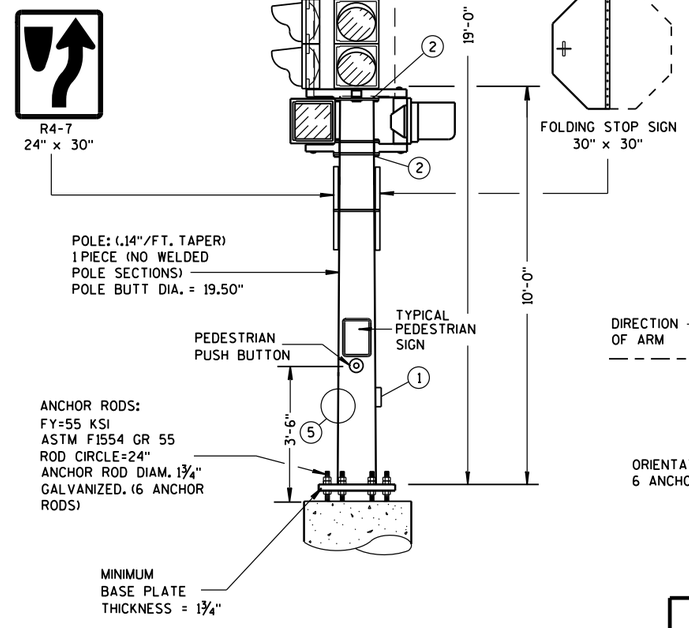
TYPE 10 POLE 15' - 30' MONOTUBE ARM	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED June 2014 DATE	/S/ Ahmet Demirbilek STATE ELECTRICAL
FHWA	

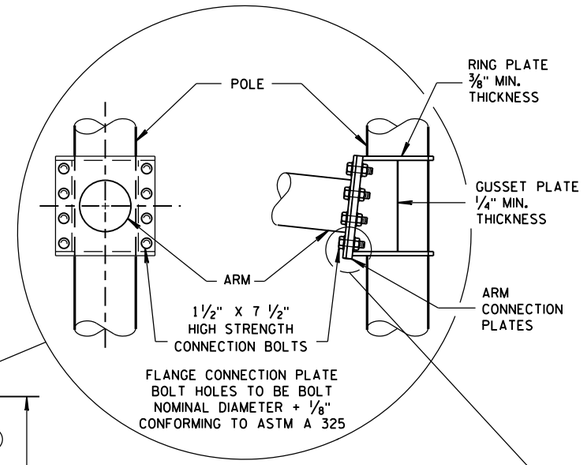
S.D.D. 9 E 8-5b



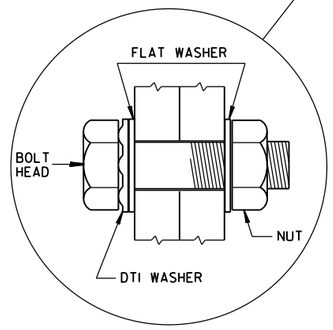
* DIMENSIONS SHOWN ARE FOR POLE/ARM DESIGN ONLY, NOT FOR FIELD LOCATION. THESE DIMENSIONS SHALL NOT BE DECREASED.

** SIGNALS MAY BE ADJUSTED ± 1'-0" MAXIMUM TO ACCOMODATE FOR VERTICAL CLEARANCE.

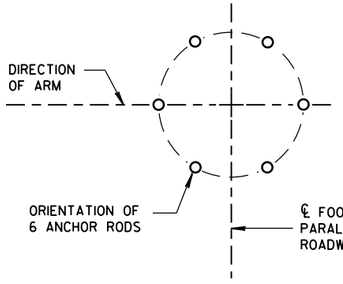




8 BOLT ARM CONNECTION DETAIL



RECOMMENDED
BOLT ASSEMBLY
DETAIL



ANCHOR ROD LOCATION

(MAXIMUM LOAD)

TYPE 12 POLE 35'- 55' MONOTUBE ARM

TYPE 12 POLE 35' - 55' MONOTUBE ARM	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED June 2014 DATE	/S/ Ahmet Demirbilek STATE ELECTRICAL
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GENERAL NOTES

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

POLE TYPES 9 AND 10 ARE FOR ARM LENGTHS 15-FOOT TO 30-FOOT.

POLE TYPES 12 AND 13 ARE FOR ARM LENGTHS 35-FOOT TO 55-FOOT.

MONOTUBE POLE AND ARM SHALL BE GALVANIZED STEEL.

RING-STIFFENED BUILT-UP BOX TYPE OF ATTACHMENT FOR TRAFFIC SIGNAL ARM.

ONE (1) PIECE POLE CONSTRUCTION (NO WELDED POLE SECTIONS).

STANDARD STRAIGHT ARM DESIGN (3 % ± RISE).

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

PROVIDE WIREWAY THRU POLE WALL AND ARM CONNECTION PLATES. PROVIDE ROUND, SMOOTH INSIDE SURFACE.

MANUFACTURER'S SUBMITTED POLE DESIGNS AND DRAWINGS SHALL BE SIGNED AND STAMPED BY A REGISTERED PROFESSIONAL ENGINEER AND CERTIFIED AS BEING IN COMPLIANCE WITH THE AASHTO 2013 6TH EDITION AND ALL PERTINENT WISDOT SPECIFICATIONS AND DRAWINGS FOR TRAFFIC AND LIGHTING STRUCTURES AND AS FOLLOWS:

- CATEGORY III FATIGUE LOADS OF GALLOPING, TRUCK GUSTS (AT 45 MPH VEHICLE VELOCITY) AND NATURAL WIND GUSTS FOR DESIGN OF TYPE 9 AND TYPE 10 STRUCTURES.
- CATEGORY II FATIGUE LOADS OF GALLOPING, TRUCK GUSTS (AT 45 MPH VEHICLE VELOCITY) AND NATURAL WIND GUSTS FOR DESIGN OF TYPE 12 AND TYPE 13 STRUCTURES.
- 90 MPH (3-SECOND GUST) WIND SPEED AND A 50 YEAR DESIGN LIFE.

SECURE THE OPENING BELOW THE BASE PLATE WITH STAINLESS STEEL OR GALVANIZED STEEL MESH AND SECURE THE MESH WITH ¾" S.S. BANDING AROUND THE LEVELING NUTS.

INDENT PRINT (NOMINAL ½" HIGH) THE POLE LENGTH AND FIRST TWO LETTERS OF THE MANUFACTURERS NAME ON TWO SIDES OF THE BASE PLATE 180 DEGREES APART, BEFORE GALVANIZING. THE ARM SHALL BE IDENTIFIED WITH THE SAME INFORMATION BY INDENT PRINT.

SIGNAL FACE SHALL BE MOUNTED 6 INCHES (NOMINAL) FROM THE END OF THE MONOTUBE ARM OR AS SHOWN ON THE PLAN CONSTRUCTION DETAIL OR AS DIRECTED BY THE PROJECT ENGINEER/ELECTRICAL OPERATIONS PERSONNEL. MOUNT ALL LIKE HEADS AT SAME ELEVATION.

SIGN MOUNTING BRACKETS SHALL BE FURNISHED IN ACCORDANCE WITH SECTION 637 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION.

(1) DESIGN FOR MAXIMUM ALLOWABLE HANDHOLE WITH COVER ASSEMBLY WITH TWO ¼" X ¾" - 20 TPI STAINLESS STEEL HEX HEAD BOLTS.

(2) SIGNAL MOUNTING BRACKETS FOR POLE MOUNTING, MOUNT WITH CAP SCREW AND BANDING, (SEE SPECIFICATIONS SEC. 658).

(3) SECURELY MOUNT BACKPLATES, PROJECTING 5" BEYOND ALL SIDES OF THE SIGNAL FACE HOUSING, PER MANUFACTURERS RECOMMENDATIONS.

(4) THE TOP OF THE POLE SHAFT AND THE END OF THE MONOTUBE ARM SHALL BE EQUIPPED WITH A REMOVABLE, VENTILATED CAP HELD SECURELY IN PLACE WITH SET SCREWS.

(5) FACTORY-WELDED BRACKET FOR GROUNDING LUG, OPPOSITE HANDHOLE, (LUG AND HARDWARE PAID UNDER SEPARATE ITEM). PROVIDE HOLE IN BRACKET FOR ¼" X ¾" - 20 TPI STAINLESS STEEL HEX HEAD BOLT.

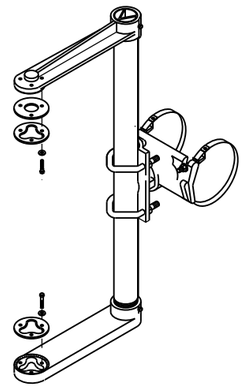
(6) FACTORY-WELDED "J" HOOK FOR STRAIN RELIEF FOR POLE LUMINAIRE WIRE.

(7) INSTALL DEPARTMENT PROVIDED STRUCTURAL IDENTIFICATION PLAQUES.

STRUCTURAL IDENTIFICATION PLAQUES SHALL BE PLACED ON THE POLES IN THE SAME DIRECTION AS THE ARM.

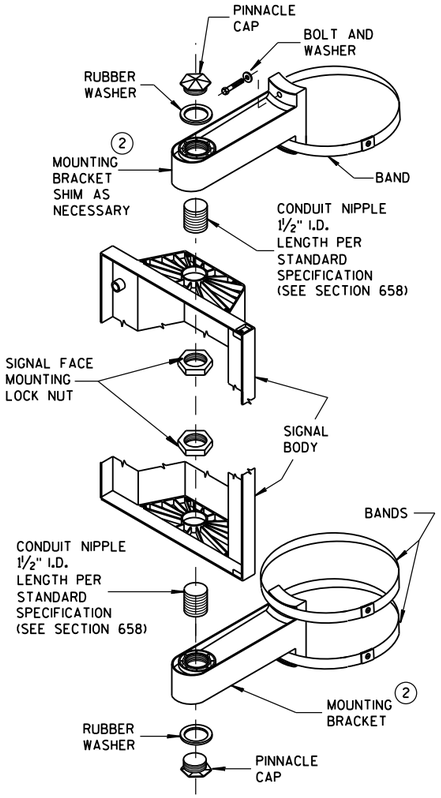
MOUNTING HEIGHT SHALL BE 5'-0" ABOVE THE CURB OR SHOULDER . ADJUST IF IT IS KNOWN THAT REQUIRED TRAFFIC SIGNS WILL BE OBSTRUCTED.

(8) FACTORY DRILLED ½" DRAIN HOLE 2" FROM FLANGE CONNECTION PLATE.

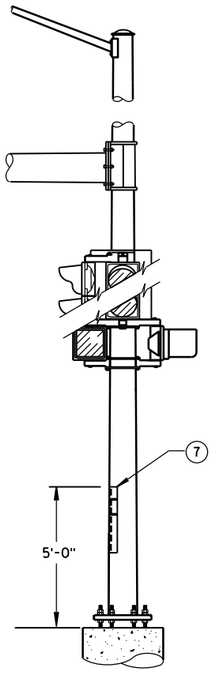


SIGNAL FACE MOUNTING BRACKET DETAIL FOR MONOTUBE ARM

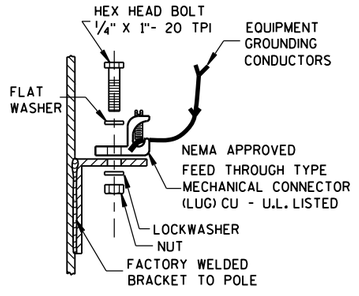
(MOUNT PER MANUFACTURER'S RECOMMENDATION)



SIGNAL FACE VERTICAL MOUNTING DETAIL

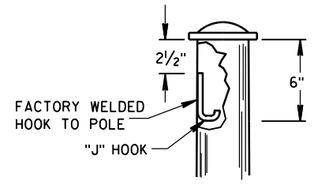


STRUCTURAL IDENTIFICATION PLAQUE PLACEMENT



TYPICAL GROUNDING CONNECTIONS (5)

NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL



"J" HOOK WIRE SUPPORT (6)

GENERAL NOTES AND HARDWARE DETAILS FOR TYPE 9, 10, 12 & 13 POLES WITH MONOTUBE ARMS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
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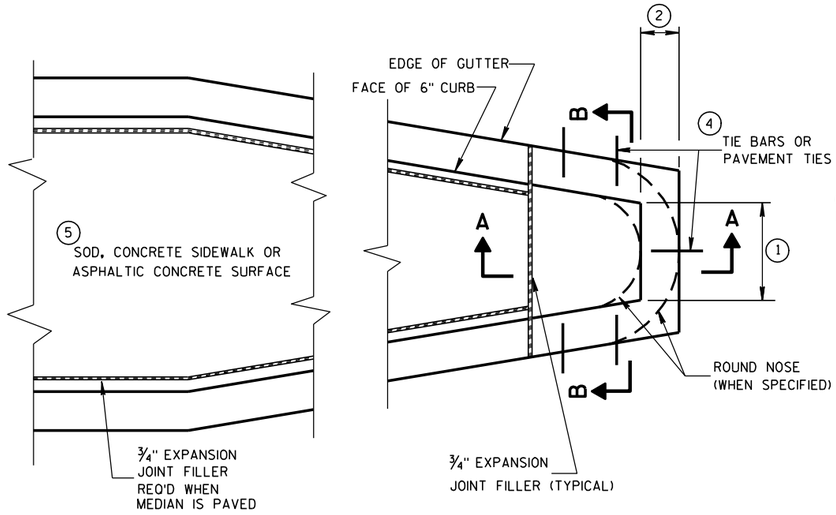
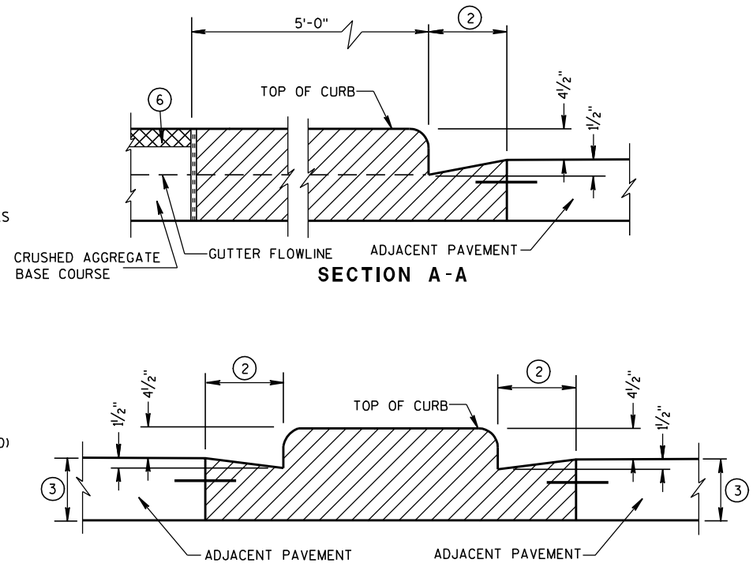




CONCRETE MEDIAN BLUNT NOSE DETAIL

GENERAL NOTES

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

(1) SEE PLAN FOR MEDIAN NOSE WIDTH AND RADIUS (FOR ROUND NOSE ALTERNATE).

(2) WIDTH OF GUTTER TO MATCH EXISTING ADJACENT GUTTER OR AS SPECIFIED ELSEWHERE IN THE PLAN.

(3) DEPTH EQUAL TO ADJACENT PAVEMENT. ADJACENT PAVEMENT STRUCTURE DETAILS ARE SHOWN ON THE PLAN. TYPICAL OPTIONS ARE:

(1) NEW OR EXISTING CONCRETE PAVEMENT.

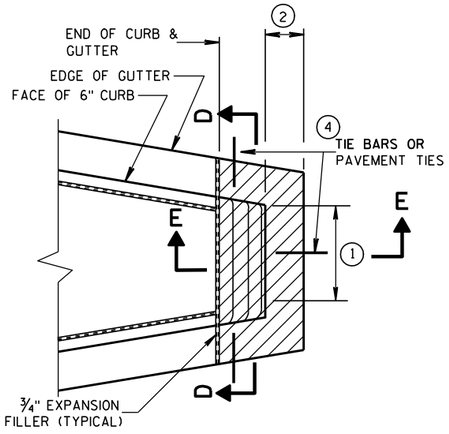
(2) ASPHALTIC CONCRETE PAVEMENT OVER NEW OR EXISTING CONCRETE BASE COURSE.

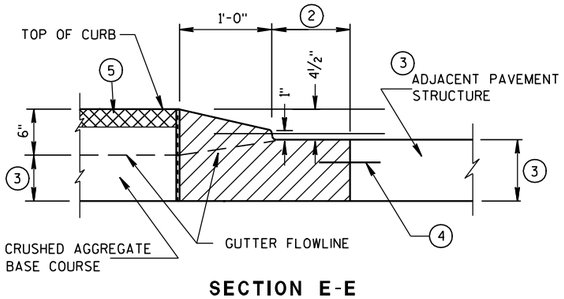
(3) ASPHALTIC CONCRETE PAVEMENT OVER CRUSHED AGGREGATE BASE COURSE.

(4) TIE BARS OR PAVEMENT TIES REQUIRED IN NEW CONCRETE PAVEMENT OR CONCRETE BASE COURSE. TIE BARS SHALL BE NO. 4 X 2'-0" SPACED AT 2'-0" C-C.

PAVEMENT TIES REQUIRED IN EXISTING CONCRETE BASE COURSE. PAVEMENT TIES SHALL BE NO. 6 X 1'-0" SPACED AT 3'-0" C-C INSTALLED ON A HORIZONTAL SKEW OF 6:1. THE DIRECTION OF SKEW SHALL ALTERNATE AFTER EVERY ONE OR TWO BARS.

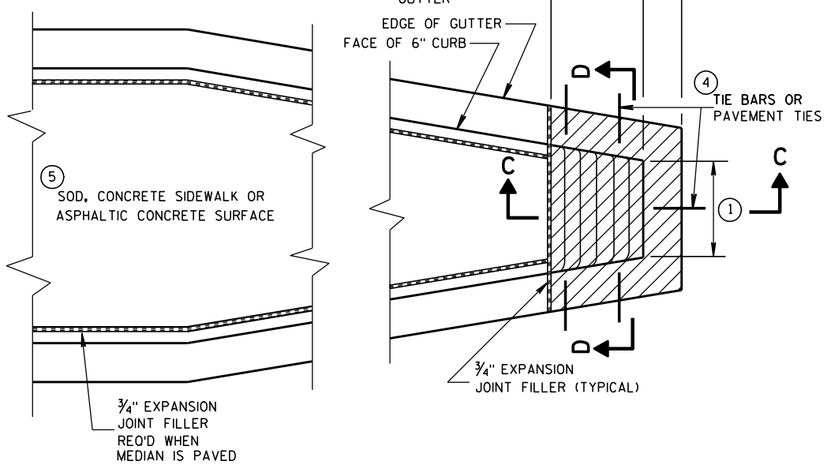
(5) SURFACE TYPE AND DETAILS ARE SHOWN ELSEWHERE IN THE PLAN.

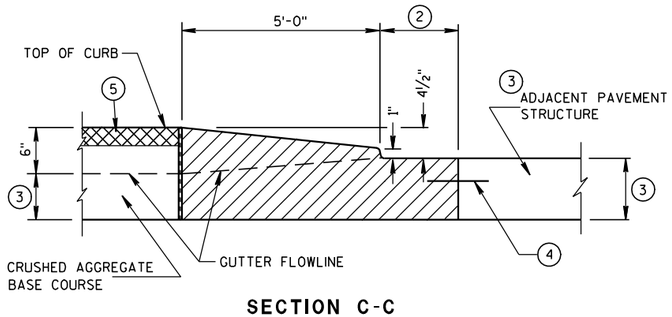




SECTION E-E

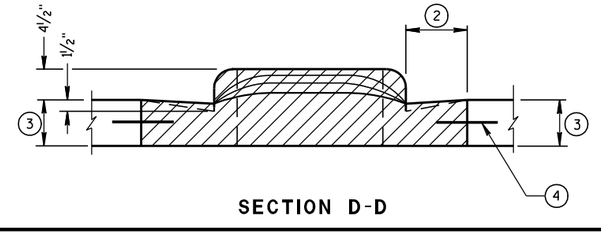
CONCRETE MEDIAN SLOPED NOSE TYPE 2





SECTION C-C

CONCRETE MEDIAN SLOPED NOSE TYPE 1



SECTION D-D

CONCRETE MEDIAN NOSE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/8/2006
DATE

/S/ Jerry H. [illegible]
ROADWAY STANDARDS ENGINEER

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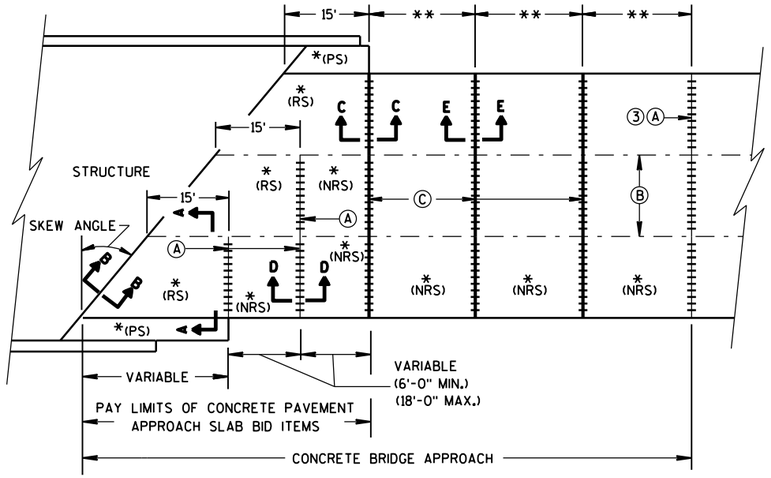
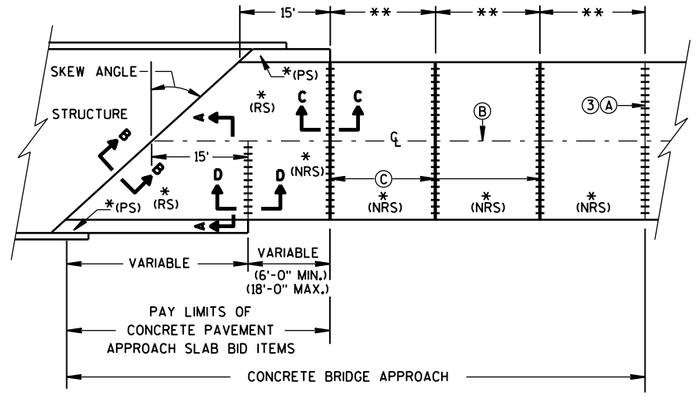
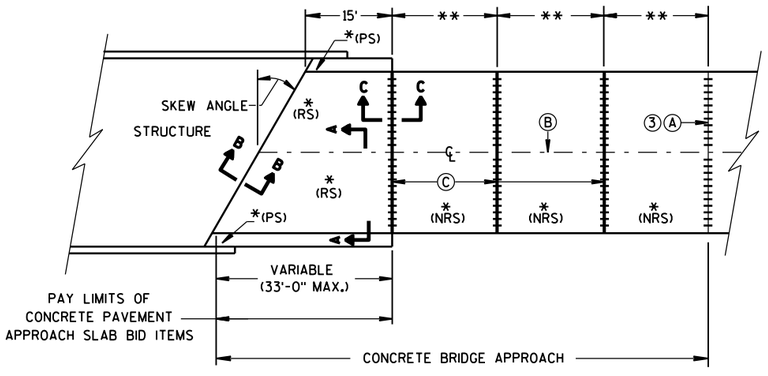


SKEWED APPROACH
(PAVEMENT MORE THAN 2 LANES)



SKEWS >30°
(PAVEMENT WIDTH ≤30')



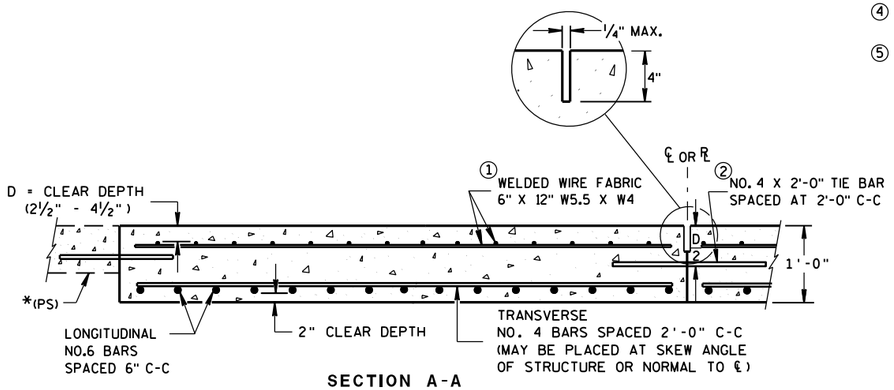
SKEWS ≤30°
(PAVEMENT WIDTH ≤30')

APPROACH SLAB AND ADJACENT PAVEMENT

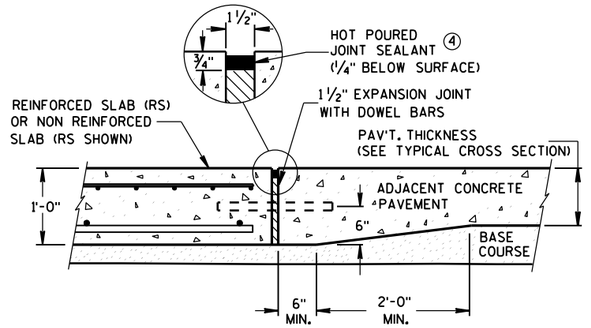
*(RS) = REINFORCED CONCRETE SLAB
*(PS) = PAVED CONCRETE SHOULDER: CONCRETE PAVEMENT, OR CONCRETE SURFACE DRAIN (SEE DETAILS ELSEWHERE IN THE PLAN)
*(NRS) = NON-REINFORCED CONCRETE SLAB

**STANDARD TRANSVERSE JOINT SPACING (SEE SDD 13C4, SDD 13C11, & SDD 13C13)
***STANDARD DOWEL BAR DIAMETER (SEE SDD 13C11, & SDD 13C13)

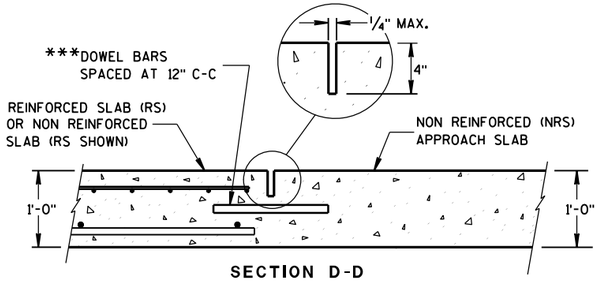
(A) STANDARD CONTRACTION JOINT NORMAL TO ℄ OR ℄
(B) STANDARD LONGITUDINAL JOINT AND TIE BARS.
(C) 1½" EXPANSION JOINT WITH DOWEL BARS NORMAL TO ℄ OR ℄



SECTION A-A
REINFORCEMENT POSITIONING DETAIL



SECTION C-C
TRANSITION DETAIL
APPROACH SLAB TO ADJACENT PAVEMENT



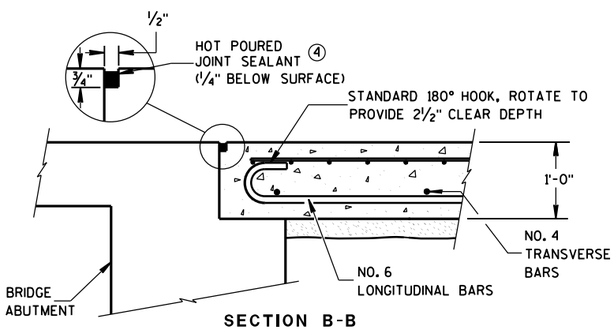
SECTION D-D
CONTRACTION JOINT

GENERAL NOTES

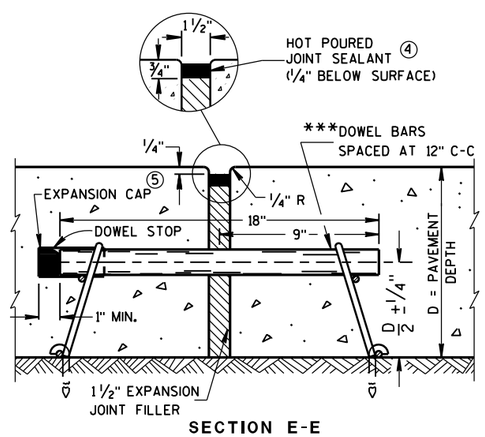
THE CONTRACTOR MAY SPLICE NO. 6 BARS IN THE APPROACH SLAB FOR SKEWED STRUCTURES ONLY. STAGGER SPLICES WITH A MAXIMUM OF ONE SPLICE PER BAR. THE LENGTH OF LAP IS 20 INCHES.

TACK WELD DOWEL BARS TO THE BASKETS ON ALTERNATE ENDS.

1. THE CONTRACTOR MAY USE NO. 4 BARS SPACED AT 2'-0" C-C IN BOTH THE LONGITUDINAL AND TRANSVERSE DIRECTIONS FOR TOP REINFORCEMENT AS AN ALTERNATIVE TO THE WELDED WIRE FABRIC.
2. THE CONTRACTOR MAY OMIT TIE BARS BETWEEN REINFORCED SLABS WHERE SLAB REINFORCEMENT BARS EXTEND ACROSS THE CENTERLINE OR REFERENCE LINE.
3. DO NOT DOWEL A CONTRACTION JOINT THAT ABUTS AN HMA PAVEMENT.
4. USE A JOINT SEALANT MEETING THE REQUIREMENTS OF ASTM D6690.
5. PLACE EXPANSION CAP ON THE END OF THE DOWEL THAT IS NOT TACK WELDED TO THE BASKET. DO NOT FORCE DOWEL BAR PAST THE DOWEL STOP.



SECTION B-B
BEND DETAIL
BOTTOM REINFORCEMENT



SECTION E-E
EXPANSION JOINT

CONCRETE BRIDGE APPROACH

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2014 — DATE
/S/ Deb Bischoff — PAVEMENT POLICY & DE
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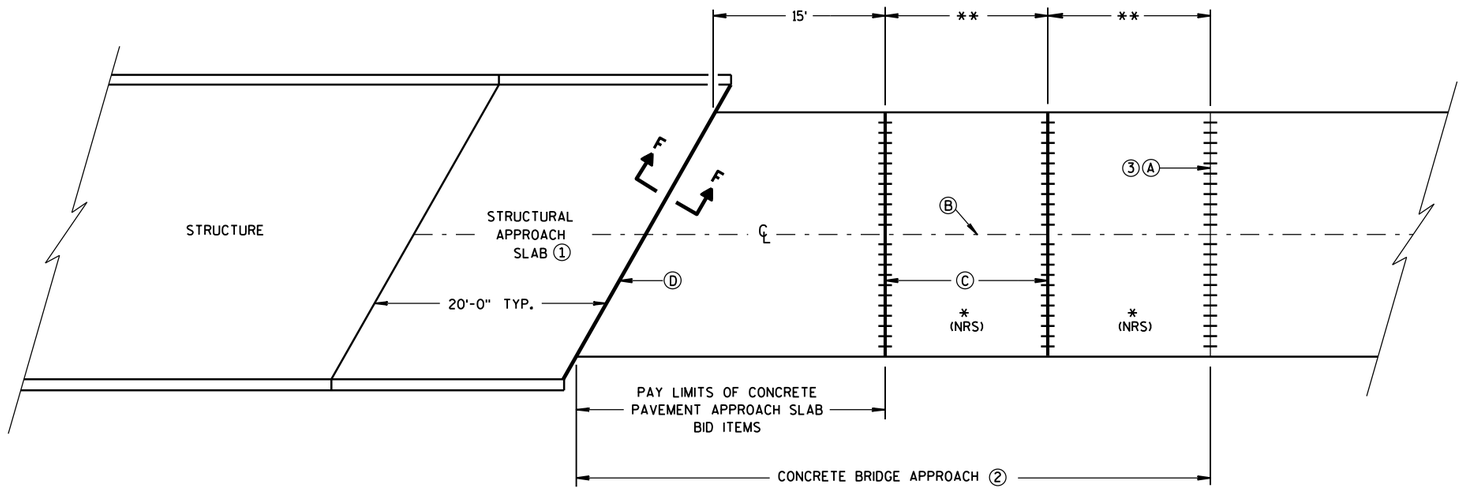


BRIDGE APPROACHES

GENERAL NOTES

ALL PROJECTS THAT INVOLVE A STRUCTURAL APPROACH SLAB WILL ALSO HAVE A CONCRETE BRIDGE APPROACH.

① CONFORM TO APPLICABLE BRIDGE MANUAL STANDARD DRAWINGS FOR *STRUCTURAL APPROACH SLABS* (SEE CHAPTER 12 - ABUTMENTS).

② CONFORM TO SHEET (a) OF THIS SET FOR *CONCRETE BRIDGE APPROACH* DETAILS, WITH ONE EXCEPTION — WHEN CONSTRUCTING A *CONCRETE BRIDGE APPROACH* NEXT TO A *STRUCTURAL APPROACH SLAB*, AS SHOWN IN THE DETAIL DRAWING, THE *CONCRETE BRIDGE APPROACH* WILL ONLY HAVE TWO EXPANSION JOINTS; THE THIRD EXPANSION JOINT IS AT THE END OF THE *STRUCTURAL APPROACH SLAB*.

③ DO NOT DOWEL A CONTRACTION JOINT THAT ABUTS AN HMA PAVEMENT.

*(NRS) = NON-REINFORCED CONCRETE SLAB

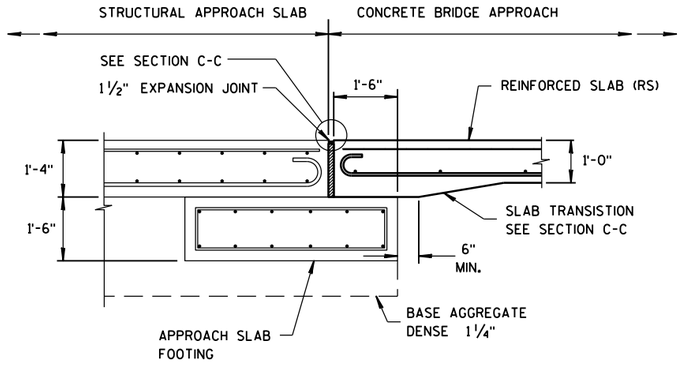
**STANDARD TRANSVERSE JOINT SPACING (SEE SDD 13C4, SDD 13C11, & SDD 13C13)

Ⓐ STANDARD CONTRACTION JOINT NORMAL TO ℄ OR ℄

Ⓑ STANDARD LONGITUDINAL JOINT AND TIE BARS.

Ⓒ 1½" EXPANSION JOINT WITH DOWEL BARS NORMAL TO ℄ OR ℄

Ⓓ 1½" EXPANSION JOINT (NO DOWELS)



SECTION F-F

FOOTING DETAIL

STRUCTURAL APPROACH SLAB TO CONCRETE BRIDGE APPROACH

STRUCTURAL APPROACH SLAB AND CONCRETE BRIDGE APPROACH

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2014 — DATE
/S/ Deb Bischoff — PAVEMENT POLICY & DE
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FHWA

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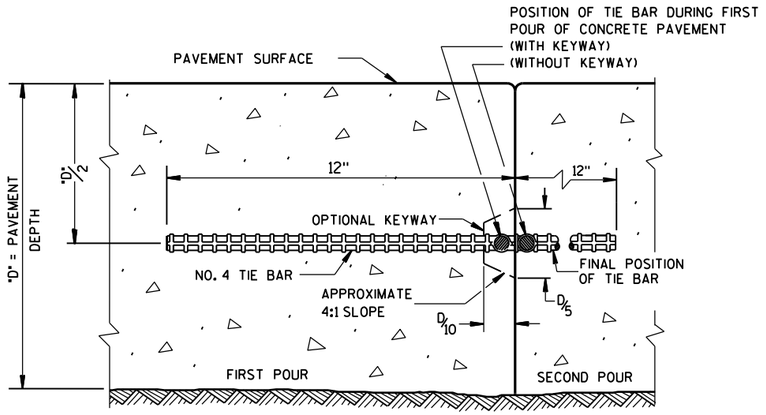
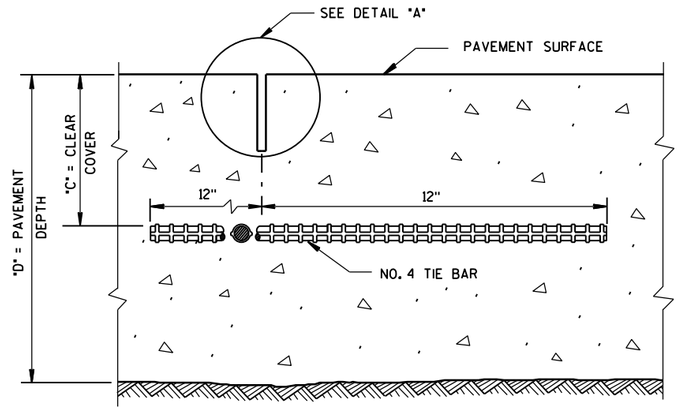


CONSTRUCTION JOINT



SAWED JOINT

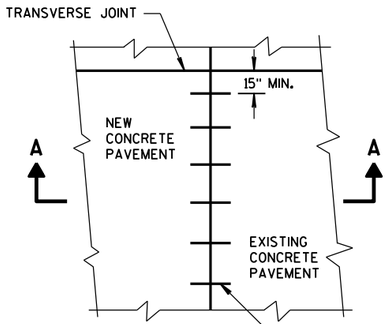
GENERAL NOTES

DO NOT SEAL OR FILL LONGITUDINAL JOINTS.

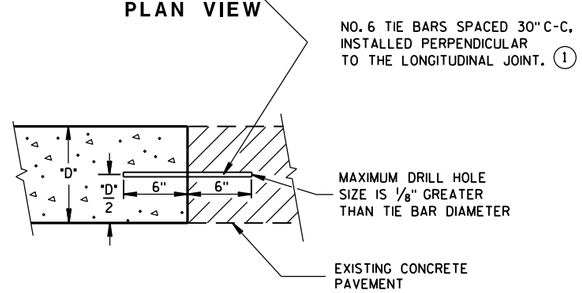
CREATE A LONGITUDINAL JOINT FOR PAVEMENT WIDTHS GREATER THAN 15 FEET.

CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

(1) ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

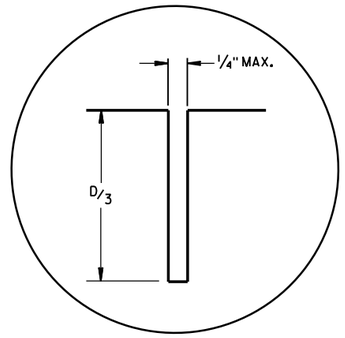


PLAN VIEW



SECTION A-A

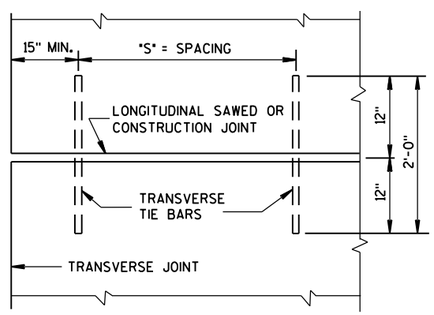
LONGITUDINAL CONSTRUCTION JOINT TIE BARS ANCHORED INTO EXISTING PAVEMENT



DETAIL "A"

TIE BAR TABLE

PAVEMENT DEPTH "D"	CLEAR COVER "C"	MAXIMUM TIE BAR SPACING "S"	
		PAVEMENT WIDTH	
		24' OR 26'	≥ 30'
6, 6 1/2"	3" ± 1/2"	48"	42"
7, 7 1/2"	3 1/4" ± 1"	45"	36"
8, 8 1/2"	3 3/4" ± 1"	39"	30"
9, 9 1/2"	4 1/4" ± 1"	33"	27"
10, 10 1/2"	4 3/4" ± 1"	30"	24"
11, 11 1/2"	5 1/4" ± 1"	27"	21"
12"	5 3/4" ± 1"	24"	21"



PLAN VIEW
SHOWING LOCATION OF TIE BARS

CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

5-3-2013 DATE

/S/ Deb Bischoff
PAVEMENT POLICY & DE ENGINEER

FHWA

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S.D.D. 13 C 1-16

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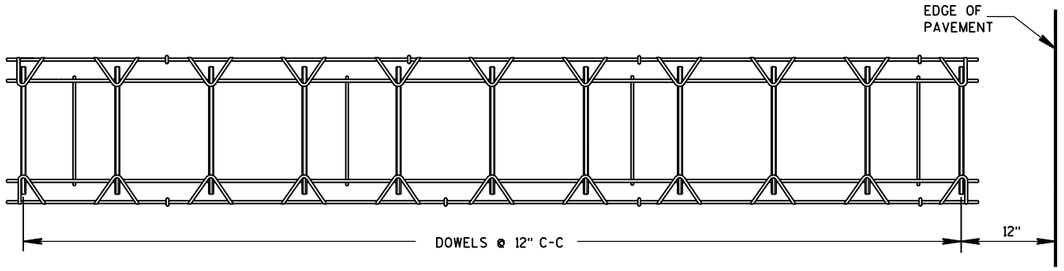
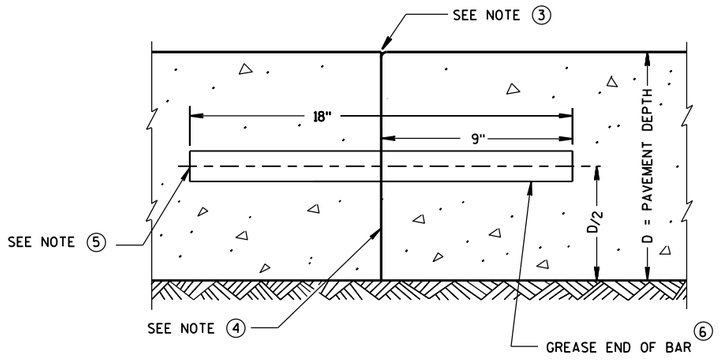
S.D.D. 13 C 1-16



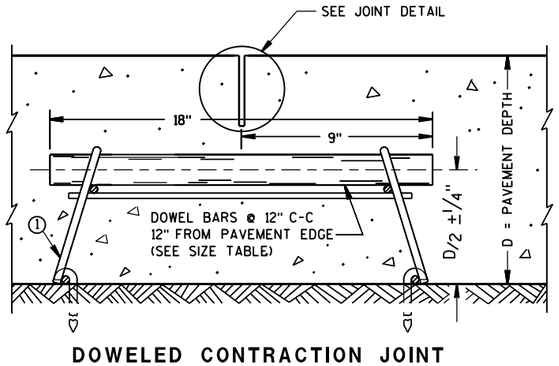
PLAN VIEW

SIDE VIEW

CONTRACTION JOINT DOWEL ASSEMBLY ①



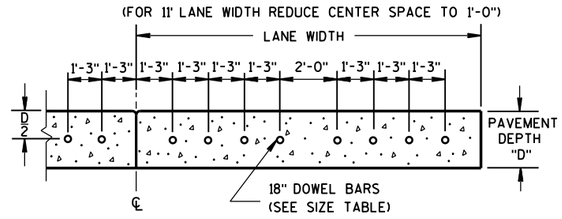
TRANSVERSE CONSTRUCTION JOINT



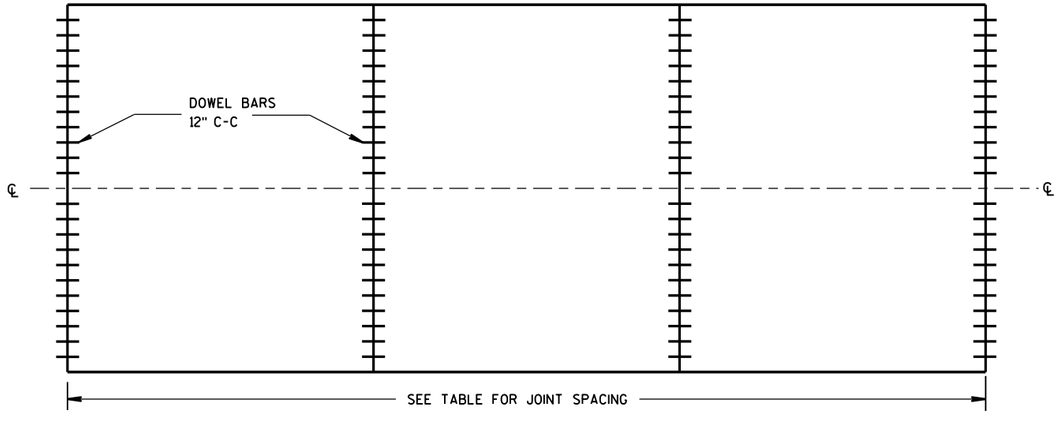
DOWELED CONTRACTION JOINT

PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
5 ½", 6", 6 ½"	NONE	12'
7", 7 ½"	1"	14'
8", 8 ½"	1 ¼"	15'
9", 9 ½"	1 ¼"	15'
10" & ABOVE	1 ½"	15'



DRILLED DOWEL BAR CONSTRUCTION JOINT ⑦



CONTRACTION JOINT LOCATIONS

GENERAL NOTES

CONTRACTION JOINTS

CONSTRUCT TRANSVERSE CONTRACTION JOINTS NORMAL TO THE CENTERLINE. SHOW THE LOCATION OF CONTRACTION JOINTS THROUGH INTERSECTIONS ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

DO NOT SEAL OR FILL CONTRACTION JOINTS.

INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.

FOR PAVEMENT SLABS OF VARYING WIDTHS, LOCATE THE OUTER MOST DOWEL BAR SO THAT THE CENTER OF THE BAR IS A MINIMUM OF 6 INCHES AND A MAXIMUM OF 18 INCHES FROM THE LONGITUDINAL JOINT AND THE FREE EDGE OF PAVEMENT.

CONSTRUCTION JOINTS

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

① **OBTAIN THE ENGINEER'S APPROVAL FOR THE USE OF ALTERNATIVE DESIGNS OF THE DOWEL ASSEMBLY. USE MECHANICAL DOWEL BAR INSERTERS OR DOWEL ASSEMBLIES WHEN CONSTRUCTING CONTRACTION JOINTS.**

② SECURE BASKETS WITH ANCHORS TO HOLD DOWEL BARS IN THE CORRECT POSITION AND ALIGNMENT. TYPE, LOCATION, NUMBER AND LENGTH OF ANCHORS ARE DEPENDENT UPON FIELD CONDITIONS.

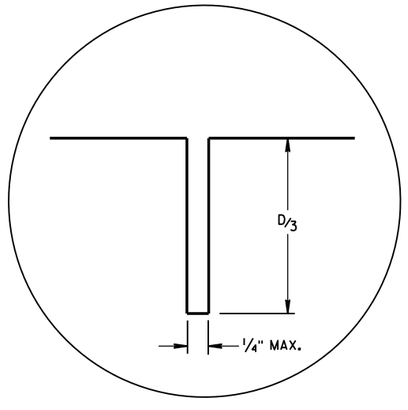
③ FORM OR SAW CONSTRUCTION JOINTS. PROVIDE A ¼-INCH RADIUS AT FORMED JOINTS.

④ PROVIDE A SMOOTH VERTICAL FACE FOR THE ENTIRE DEPTH OF THE PAVEMENT WHEN FORMING CONSTRUCTION JOINTS.

⑤ INSTALL DOWEL BARS AT CONSTRUCTION JOINTS BY FORMING OR DRILLING. INSTALL FORMED DOWEL BARS 12 INCHES C-C AND 12 INCHES FROM PAVEMENT EDGE. REMOVE EXCESS CONCRETE FROM THE FREE END OF THE DOWEL BAR IF DOWEL BARS ARE FORMED THROUGH A HEADER BOARD. INSTALL DRILLED DOWEL BARS ACCORDING TO *DRILLED DOWEL BAR CONSTRUCTION JOINT* DETAIL.

⑥ APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.

⑦ ANCHOR DOWEL BARS INTO DRILLED HOLES WITH AN EPOXY. MAXIMUM DRILLED HOLE SIZE IS ⅛-INCH GREATER THAN DOWEL BAR DIAMETER, 9 INCHES IN LENGTH.



JOINT DETAIL

URBAN DOWELED CONCRETE PAVEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
5/3/2013 DATE
/S/ Deb Bischoff
PAVEMENT POLICY & DE
FHWA

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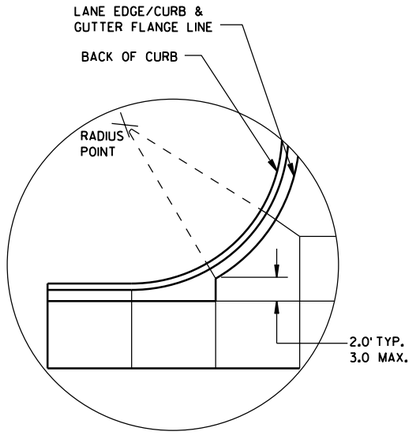
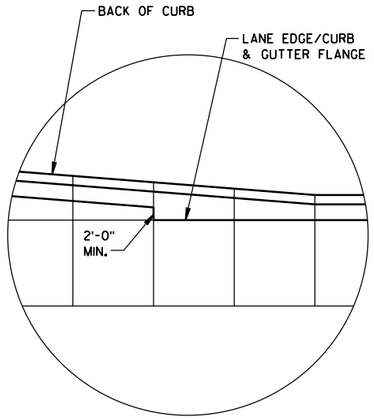
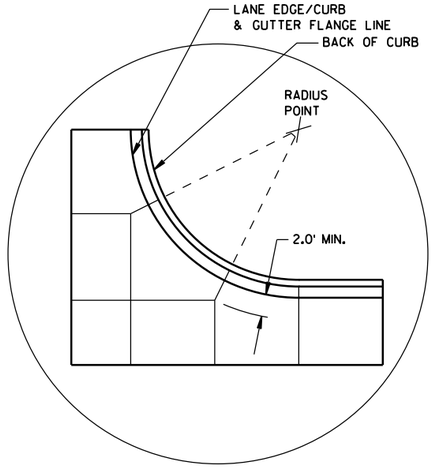
S.D.D. 13 C 13-8



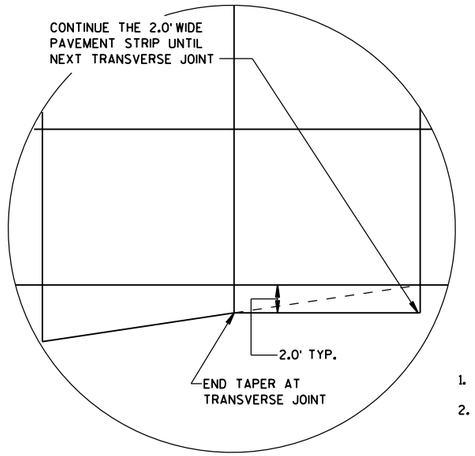
DETAIL "A"



DETAIL "B"



DETAIL "C"



DETAIL "D"

GENERAL NOTES

THE PRIMARY ROADWAY CONTROLS THE TRANSVERSE JOINT PATTERN.

ALIGN NEW JOINTS WITH EXISTING JOINTS OR CRACKS.

CONSTRUCT TRANSVERSE JOINTS PERPENDICULAR TO THE ROADWAY.

ADJUST TRANSVERSE JOINTS TO ALIGN WITH UTILITY FIXTURES (E.G. MANHOLES AND INLETS) IN THE PAVEMENT STRUCTURE WHEN POSSIBLE. WATER VALVES DO NOT REQUIRE JOINT ADJUSTMENT.

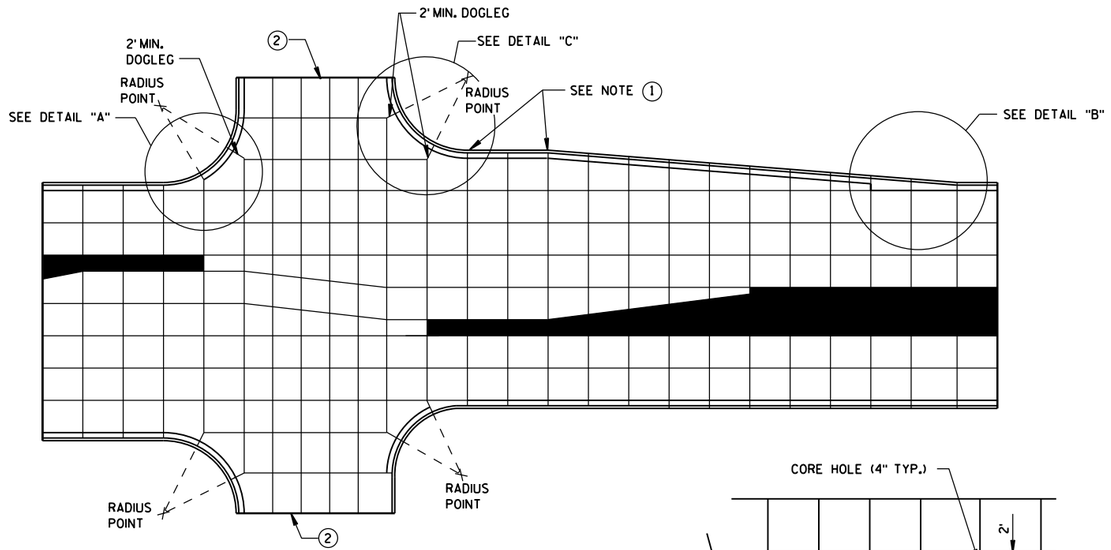
AVOID SLABS LESS THAN 2 FEET WIDE OR GREATER THAN 15 FEET WIDE.

SEE TABLE FOR TRANSVERSE JOINT SPACING. JOINT SPACING SPECIFIED IS MAXIMUM AND ACTUAL SPACING CAN BE ADJUSTED TO ACCOMMODATE INTERSECTIONS.

AVOID ANGLES LESS THAN 60° BY DOGLEGGING JOINTS THROUGH CURVE RADIUS POINTS. USE 90° ANGLES WHEN POSSIBLE.

CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

1. PROVIDE TRANSVERSE JOINTS AT ALL PAVEMENT WIDTH CHANGES.
2. CONSTRUCT DOWELED EXPANSION JOINT ON THE SIDE ROAD OF AN INTERSECTION IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH. ALIGN EXPANSION JOINT WITH EDGE OF RADIUS.
3. THE ENGINEER MAY APPROVE SLIGHT VARIATIONS FROM THESE JOINTING DETAILS.

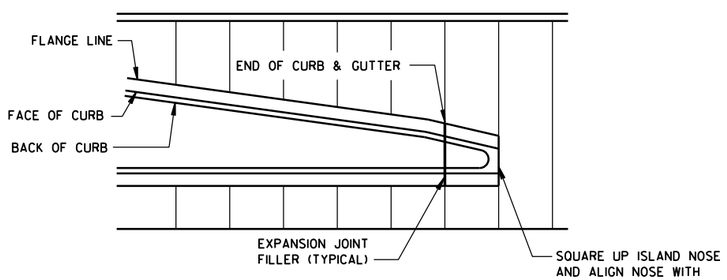


STANDARD INTERSECTION

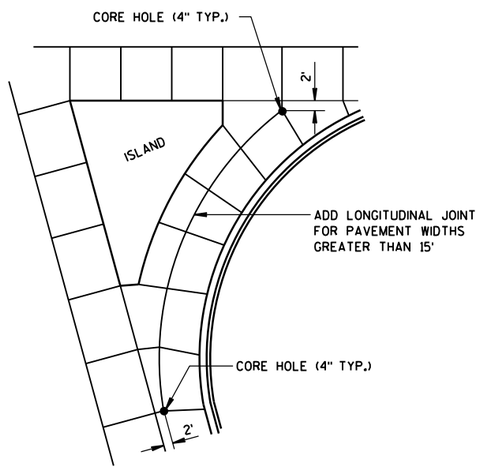
PAVEMENT DEPTH AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	CONTRACTION JOINT SPACING
6", 6½"	12'
7", 7½"	14'
8" & ABOVE	15'

SKEWED INTERSECTION



APPROACH TO MEDIAN



LARGE RIGHT TURN

CONCRETE PAVEMENT JOINTING

6

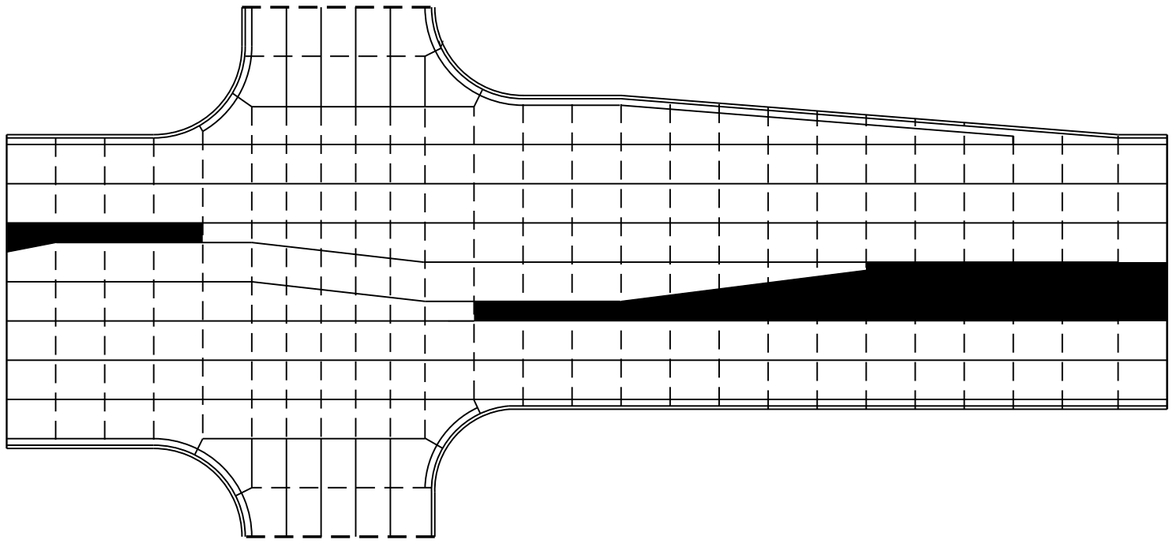
S.D.D. 13 C 18-2a

LEGEND

POTENTIAL DOWELED EXPANSION JOINT

DOWELED JOINT

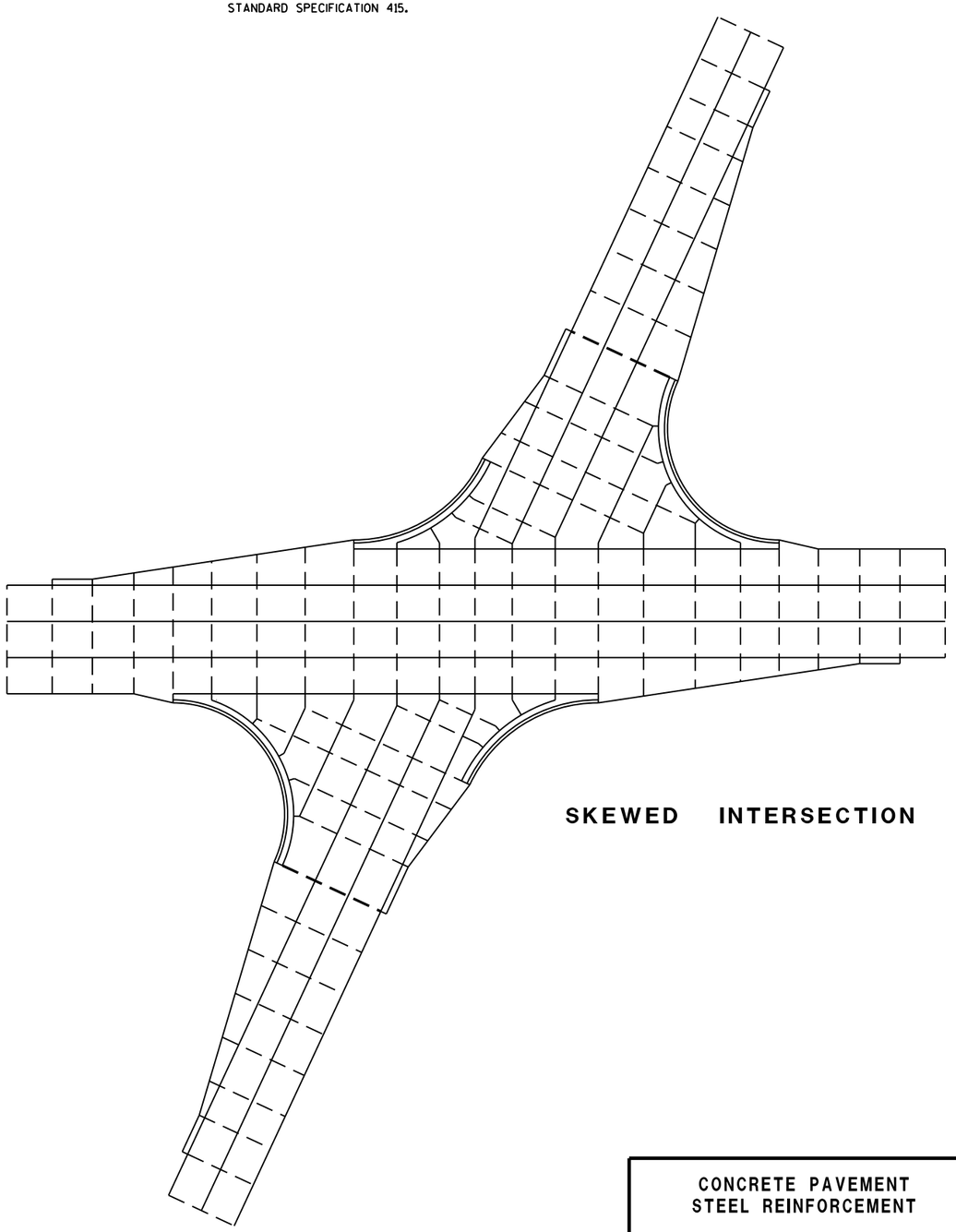
TIED JOINT



STANDARD INTERSECTION

GENERAL NOTES

USE AN EXPANSION JOINT FILLER MEETING THE REQUIREMENTS OF STANDARD SPECIFICATION 415.



SKEWED INTERSECTION

CONCRETE PAVEMENT
STEEL REINFORCEMENT

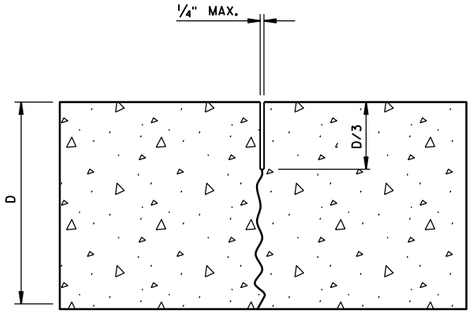
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

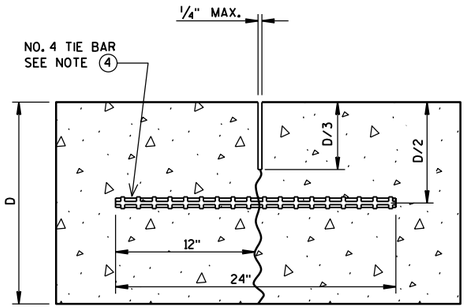
S.D.D. 13 C 18-2b

6

S.D.D. 13 C 18-2b



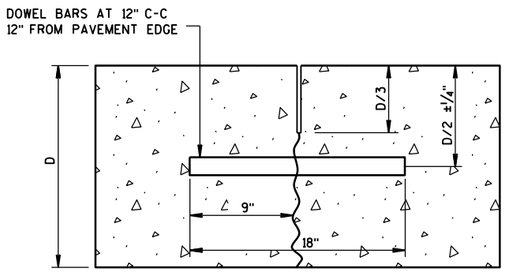
UNDOWELED-TRANSVERSE



TIED LONGITUDINAL

GENERAL NOTES

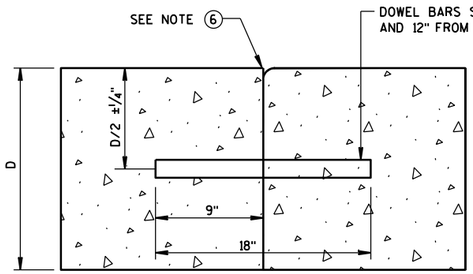
1. USE DOWELED EXPANSION JOINTS ON SIDE ROADS AT INTERSECTIONS (TO ISOLATE THE SIDE ROAD FROM THE THROUGH STREET) IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH.
2. SPACE CONTRACTION JOINTS IN ACCORDANCE WITH 13C4, 13C11 OR 13C13.
3. LOCATE CONSTRUCTION JOINTS A MINIMUM OF 6 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO CONTRACTION JOINTS.
4. SPACE TIE BARS AT LONGITUDINAL CONSTRUCTION OR CONTRACTION JOINTS IN ACCORDANCE WITH SDD 13C1.
5. CONSTRUCTION JOINTS CAN BE FORMED OR SAWED.
6. IF JOINT IS FORMED, PROVIDE A 1/4-INCH RADIUS.



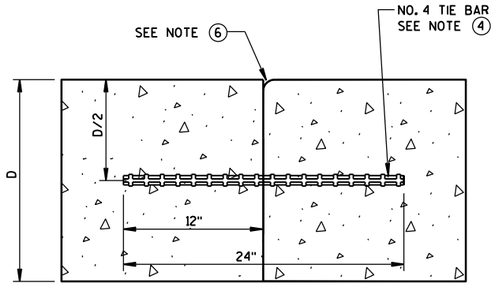
DOWELED-TRANSVERSE

CONTRACTION JOINTS

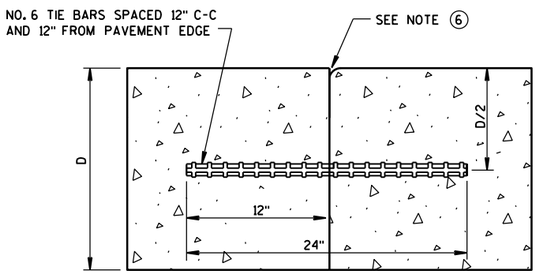
SEE NOTE (2)



DOWELED TRANSVERSE

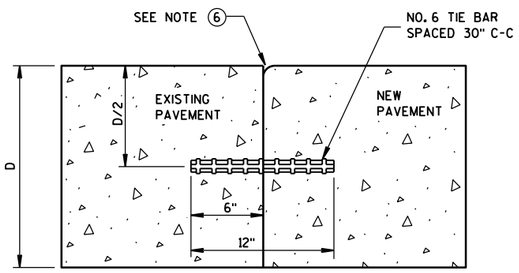


TIED LONGITUDINAL



TIED TRANSVERSE

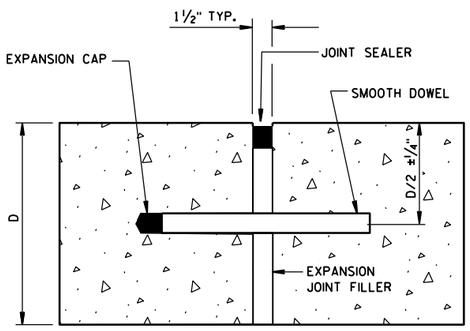
(FOR USE ON NON-DOWELED PAVEMENTS ONLY)



TIED LONGITUDINAL TO EXISTING

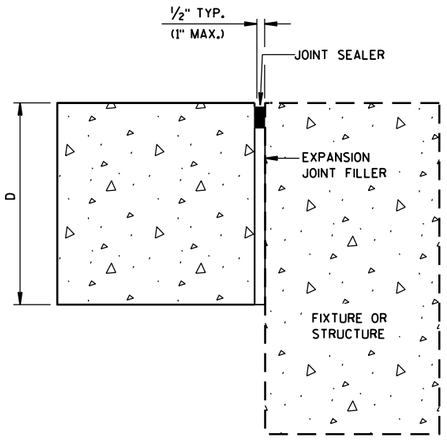
CONSTRUCTION JOINTS

SEE NOTE (5)



DOWELED-TRANSVERSE

SEE NOTE (1)



UNTIED-LONGITUDINAL

EXPANSION JOINTS

CONCRETE PAVEMENT
JOINT TYPES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 13 C 18-2c

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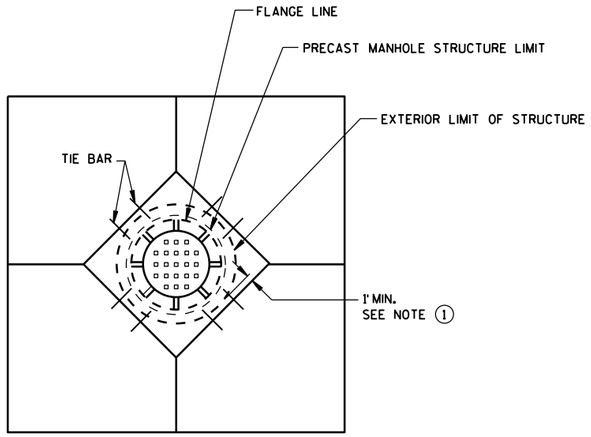
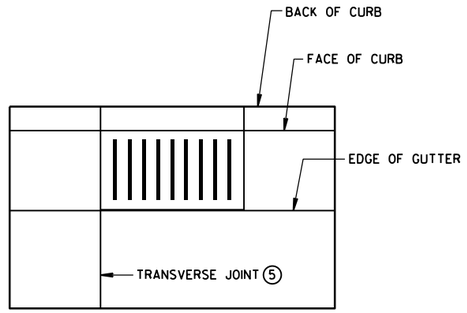
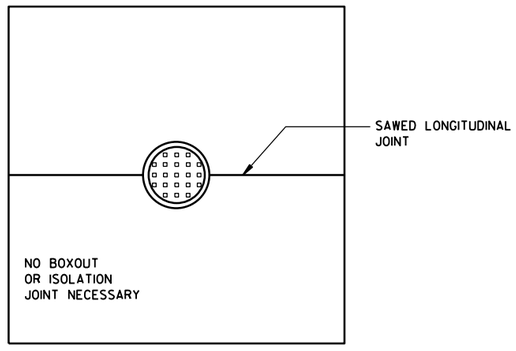
S.D.D. 13 C 18-2c



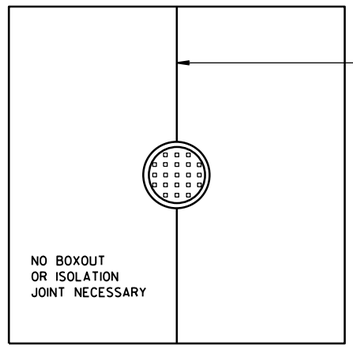
DIAGONAL MANHOLE BOXOUT FOR CONSTRUCTION JOINTS



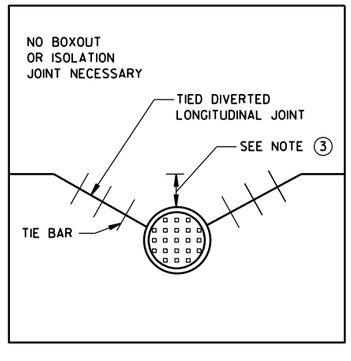
INLET WITH TRANSVERSE JOINT



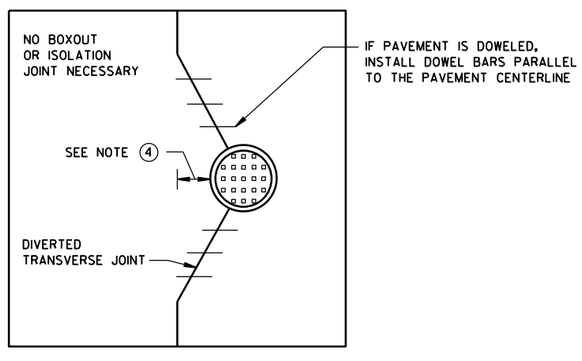
MANHOLE WITH LONGITUDINAL JOINT



MANHOLE WITH TRANSVERSE JOINT



MANHOLE WITH DIVERTED LONGITUDINAL CONTRACTION JOINT



MANHOLE WITH DIVERTED TRANSVERSE CONTRACTION JOINT

GENERAL NOTES

(1) USE BOXOUTS WHEN UTILITY STRUCTURE IS IN THE PATH OF CONSTRUCTION JOINTS. PROVIDE A 1-FOOT MINIMUM CLEARANCE BETWEEN THE EXTERIOR LIMIT OF THE STRUCTURE TO THE DIAMOND BOXOUT.

(2) ADJUST TRANSVERSE JOINT TO INTERSECT MANHOLE IF POSSIBLE.

(3) IF DISTANCE BETWEEN THE LONGITUDINAL JOINT AND THE EDGE OF MANHOLE IS 2 FEET OR LESS, DIVERT THE LONGITUDIAL JOINT AT A 2:1 TAPER RATE TO THE CENTER OF THE MANHOLE. IF THE DISTANCE IS GREATER THAN 2 FEET, DO NOT DIVERT THE JOINT AND SAW AS NORMAL. PLACE REBAR REINFORCEMENT AROUND THE MANHOLE.

(4) IF DISTANCE FROM THE EDGE OF THE MANHOLE TO THE NEAREST TRANSVERSE JOINT IS 4 FEET OR LESS, REDIRECT JOINT TO INTERSECT THE CENTER OF THE MANHOLE. IF DISTANCE IS GREATER THAN 4 FEET, DO NOT DIVERT THE JOINT AND SAW AS NORMAL. PLACE REBAR REINFORCEMENT AROUND THE MANHOLE.

(5) ALIGN TRANSVERSE JOINT WITH ONE EDGE OF INLET WHEN PRACTICAL.

CONCRETE PAVEMENT JOINTING AT UTILITY FIXTURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

5-3-2013
DATE

/S/ Deb Bischoff
PAVEMENT POLICY & DE

NEER

FHWA

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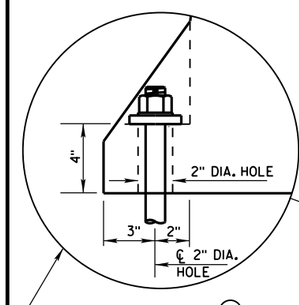
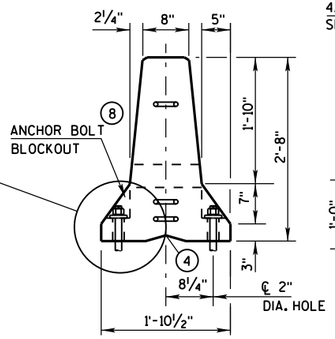
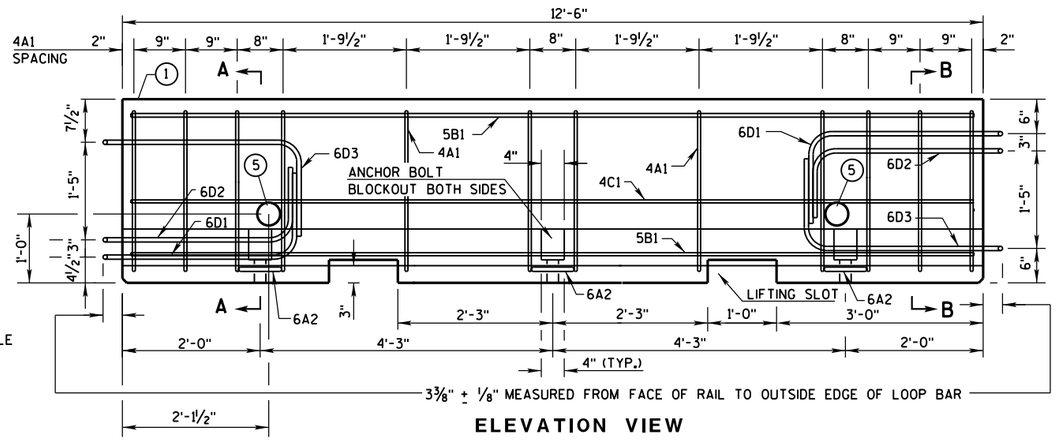
S.D.D. 13 C 18-2d

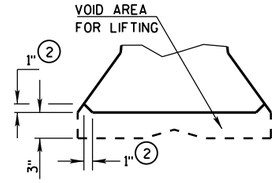




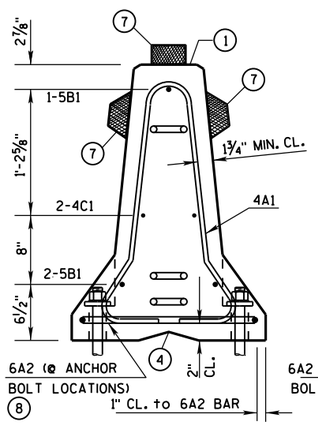
END VIEW



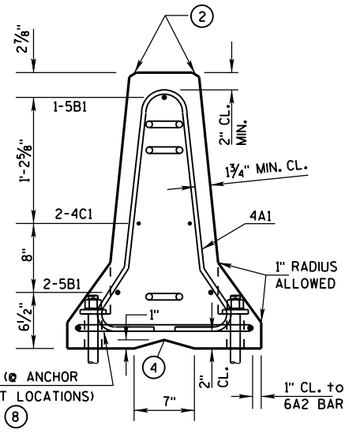
ELEVATION VIEW



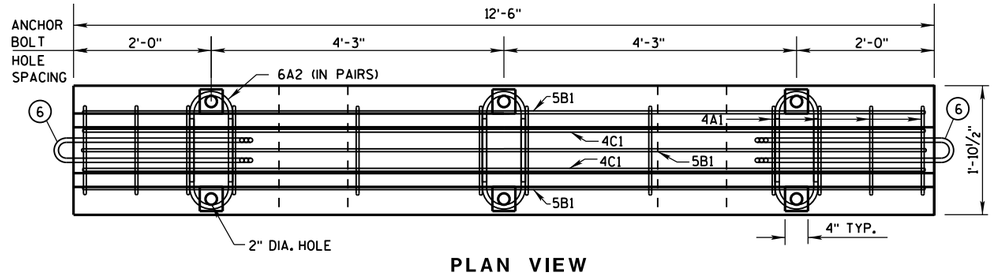
DETAIL "B"
LIFTING SLOT DETAIL



SECTION A-A
(STIRRUP PLACEMENT)

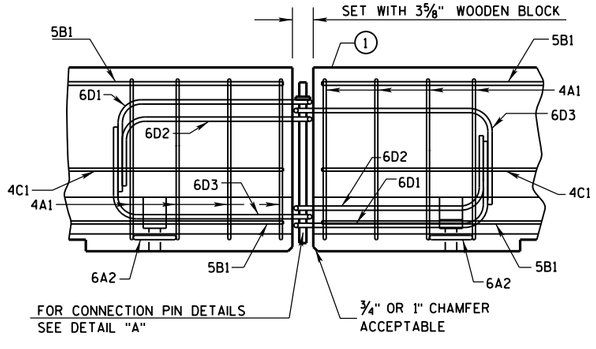


SECTION B-B
(STIRRUP PLACEMENT)

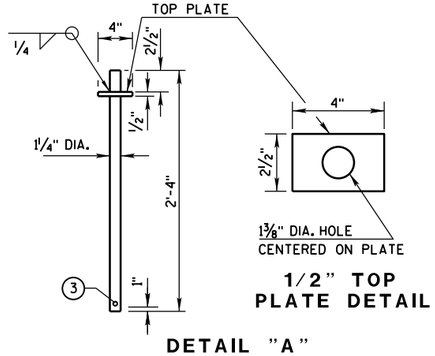


PLAN VIEW

DETAILS OF BARRIER SECTION

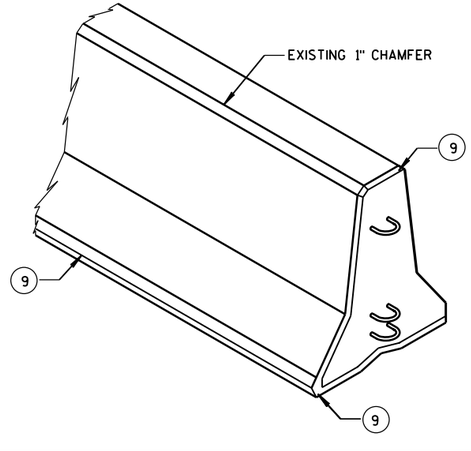


DETAILS OF BARRIER CONNECTION



1/2" TOP
PLATE DETAIL

DETAIL "A"
CONNECTION PIN
(A36 STEEL (10.9 LB EACH))



GENERAL NOTES

THESE GENERAL NOTES APPLY TO SHEETS 14B7-14(a) THRU 14B7-14(h).

DO NOT INTERMIX CONCRETE BARRIER TEMPORARY PRCAST, 12'-6" (CBTP12.5) WITH OTHER TEMPORARY CONCRETE BARRIERS.

USE ASTM A-615, GRADE 60, DEFORMED STEEL BARS FOR BARS 4A1, 6A2, 5B1 AND 4C1 IN THE BARRIER SECTION AND FOR 4V1, 4V2, 4V3, 4V4, 4V5, 4V6, 4F1, 4F2 AND 5F3 IN THE BARRIER TAPER SECTION.

LOOP BARS 6D1, 6D2 AND 6D3 SHALL BE ¾" SMOOTH STEEL BARS WITH A MINIMUM YIELD STRENGTH OF 60 KSI, A TENSILE STRENGTH OF NOT LESS THAN 1.25 TIMES THE YIELD STRENGTH BUT A MINIMUM OF 80 KSI, A MINIMUM 14% ELONGATION IN 8 INCHES AND PASSING A 180 DEGREE BEND TEST USING A 3-½" PIN BEND DIAMETER FOR BEND TESTS. THE LOOPS SHALL BE INSTALLED WITHIN ⅛" OF THE PLAN DIMENSION.

CONSTRUCT LIFTING SLOTS AS SPECIFIED ON THE PLANS TO FACILITATE THE DRAINAGE OF WATER AFTER INSTALLATION.

PLACE BARRIER ON A PAVED SURFACE. REMOVE ALL LOOSE DIRT AND SAND FROM THE ROADWAY SURFACE PRIOR TO PLACEMENT OF THE BARRIER.

INSTALL MECHANICAL OR EPOXY ANCHORS PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE MANUFACTURER'S INFORMATION TO PROJECT ENGINEER.

(1) MARK ONE END OF EACH BARRIER PERMANENTLY BY FORMING INTO THE BARRIER THE FOLLOWING INFORMATION:
- a. TYPE: WI CBTP
- b. MANUFACTURER
- c. DATE MANUFACTURED (MONTH AND YEAR)

(2) 1" CHAMFER TO PREVENT SPALLING.

(3) A ⅜" HOLE IN THE CONNECTION PIN, AT THE LOCATION SHOWN, IS ACCEPTABLE, BUT NOT REQUIRED..

(4) "V" NOTCH IS OPTIONAL.

(5) THE 4" DIAMETER, 11 GAUGE STEEL, ROUND MECHANICAL TUBING SLEEVE FOR LIFTING (OPTIONAL).

(6) NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.

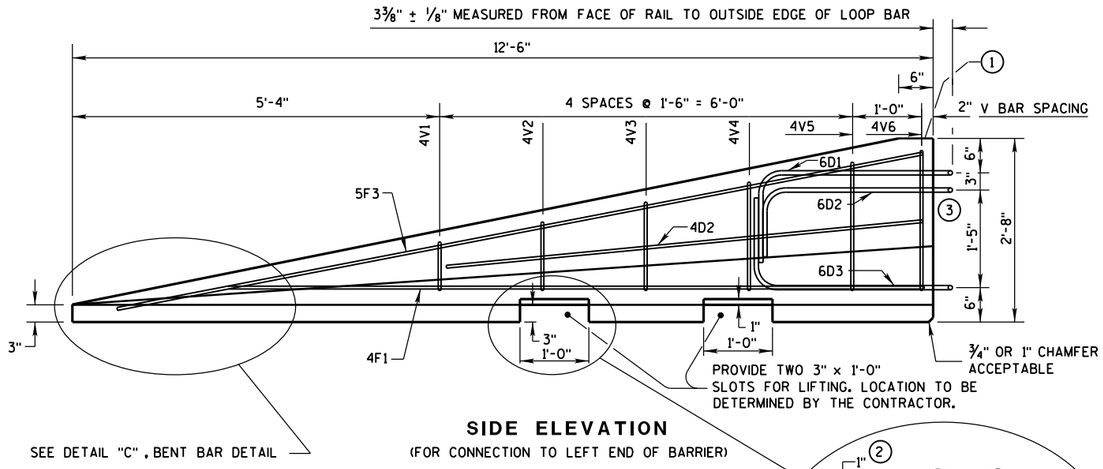
(7) USE DELINEATORS CONFORMING TO SECTION 633 OF THE STANDARD SPECIFICATIONS. CONTRACTOR MAY USE ALTERNATE SHAPES AND HOUSING. INSTALL DELINEATORS ACCORDING TO MANUFACTURES INSTRUCTION. INSTALL YELLOW REFLECTORS WHEN BARRIER IS LOCATED TO THE LEFT OF TRAFFIC AND WHITE REFLECTORS WHEN BARRIER IS LOCATED TO THE RIGHT OF TRAFFIC. SPACE DELINEATORS A MAXIMUM OF 25 FEET APART. PROVIDE TOP MOUNTED DELINEATORS IN ADDITION TO THE SIDE MOUNTED DELINEATORS ON ALL BARRIER INSTALLATIONS LOCATED ON A CURVED ALIGNMENT LONGER THAN 200 FEET AND ON BARRIERS USED TO SEPARATE OPPOSING TRAFFIC.

(8) SEE SHEET D FOR ANCHORING CRITERIA.

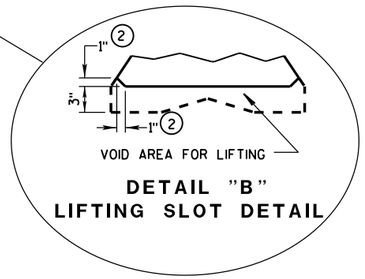
(9) 1" CHAMFER OPTIONAL.

CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"

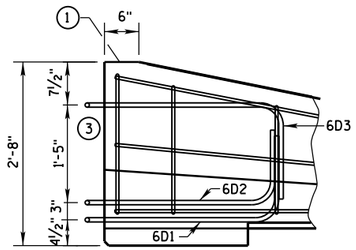
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR



SIDE ELEVATION
(FOR CONNECTION TO LEFT END OF BARRIER)



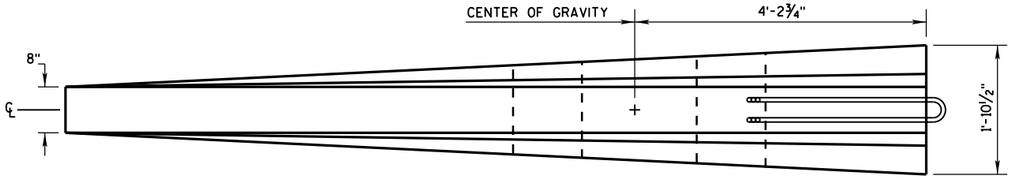
DETAIL "B"
LIFTING SLOT DETAIL



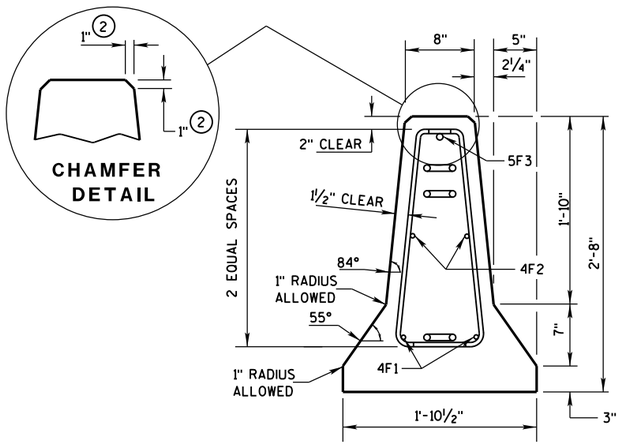
SIDE ELEVATION
LOOP BAR ASSEMBLY INVERTED
FOR OPPOSITE END.
(FOR CONNECTION TO RIGHT END OF BARRIER)

GENERAL NOTES

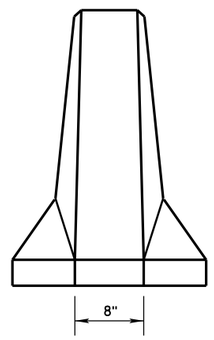
1. MARK ONE END OF EACH BARRIER PERMANENTLY BY FORMING INTO THE BARRIER THE FOLLOWING INFORMATION:
   a. TYPE WICBTP
   b. MANUFACTURER
   c. DATE MANUFACTURED (MONTH AND YEAR)
2. 1" CHAMFER TO PREVENT SPALLING.
3. NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.



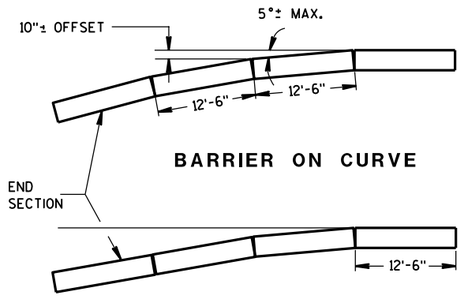
PLAN VIEW



END SECTION



FRONT ELEVATION



BARRIER ON CURVE

FLARE AT BARRIER END

POSTED SPEED, (MPH)	FLARE RATE
40 OR LESS	6:1
45 OR GREATER	8:1

DETAILS OF BARRIER TAPER SECTION

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

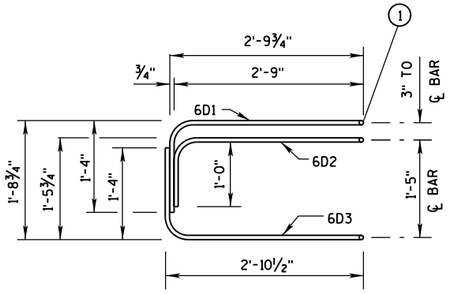
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6
S.D.D. 14 B 7-14b

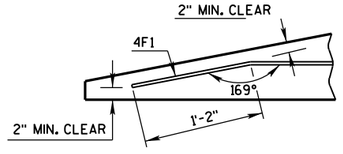
BARRIER TAPER SECTION BILL OF MATERIALS

(PER 12'-6" BARRIER TAPER SECTION)

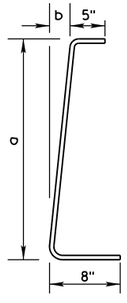
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4V1	4	2	1'-11"
4V2	4	2	2'-2"
4V3	4	2	2'-6"
4V4	4	2	2'-9"
4V5	4	2	3'-2"
4V6	4	2	3'-4"
4F1	4	2	12'-0"
4F2	4	2	7'-6"
5F3	5	1	11'-9"
LOOP ASSEMBLY			
6D1	6	1	8'-5"
6D2	6	1	7'-7"
6D3	6	1	8'-6"



ELEVATION
LOOP BAR ASSEMBLY



DETAIL "C"
BENT BAR DETAIL



BAR	a	b
V1	10"	1"
V2	1'-1"	1¼"
V3	1'-5"	1⅝"
V4	1'-8"	1⅞"
V5	2'-0½"	2⅜"
V6	2'-3"	2¾"

4V BARS
2 AT EACH SIZE REQUIRED
FOR STIRRUP ASSEMBLY

TAPER BARRIER SECTION

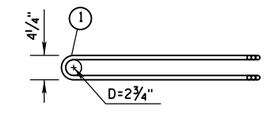
GENERAL NOTES

(1) NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.

BARRIER SECTION BILL OF MATERIALS

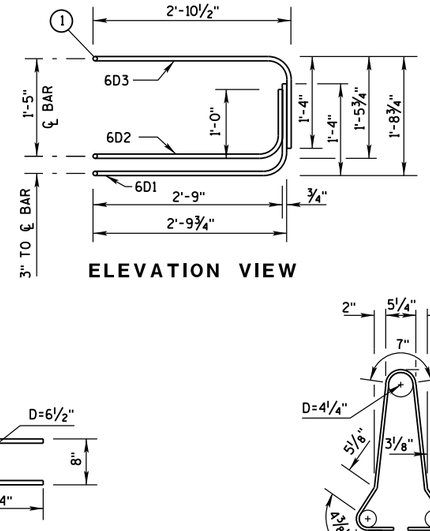
(PER 12'-6" BARRIER SECTION)

BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4A1	4	12	6'-0"
6A2	6	6	2'-11"
5B1	5	3	12'-2"
4C1	4	2	12'-2"
LOOP ASSEMBLY			
6D1	6	2	8'-5"
6D2	6	2	7'-7"
6D3	6	2	8'-6"

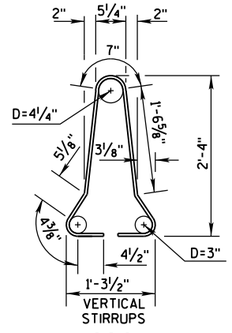


PLAN VIEW
LOOP BAR ASSEMBLY
(MARKED END SHOWN, INVERT FOR OTHER END)

6A2



ELEVATION VIEW



4A1

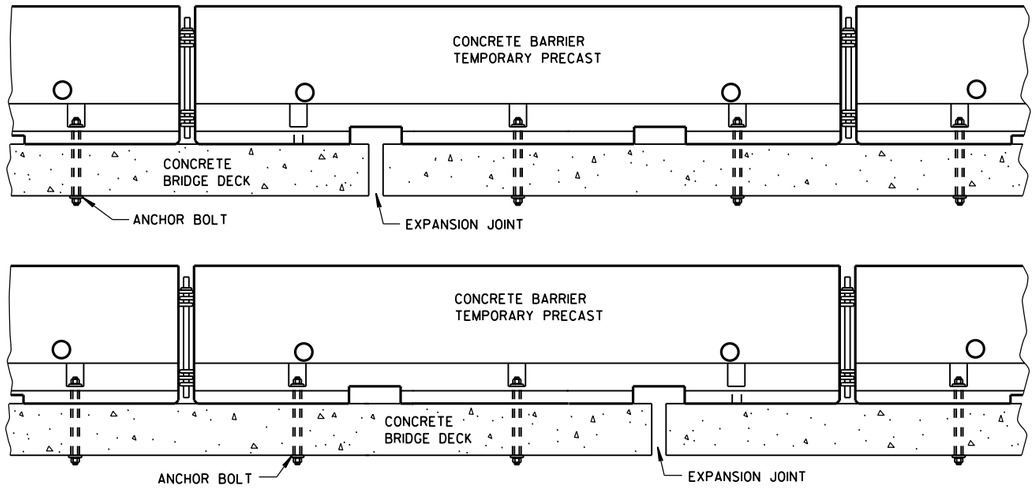
BARRIER SECTION

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

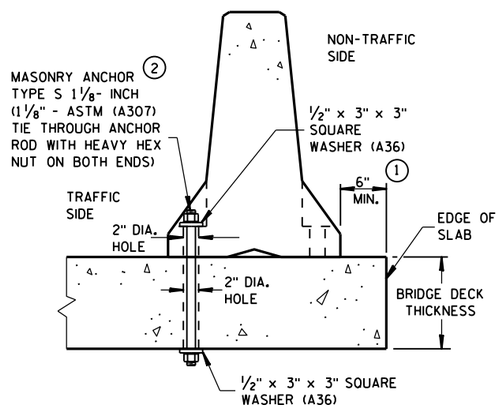
6

S.D.D. 14 B 7-14c



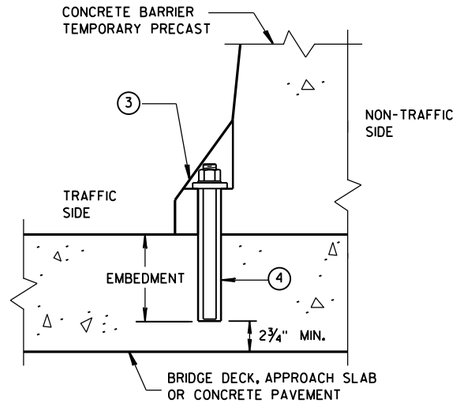
TREATMENT AT BRIDGE DECK EXPANSION JOINTS

(NO SINGLE CONCRETE BARRIER SECTION SHALL BE ANCHORED TO BOTH THE BRIDGE DECK AND THE APPROACH SLAB. ALL ANCHOR BOLT LOCATIONS SHALL BE ANCHORED TO THE DECK IN ACCORDANCE WITH THE DETAIL. NO MORE THAN ONE ANCHOR BOLT SHALL BE ELIMINATED FROM A BARRIER SECTION WHEN SPANNING AN EXPANSION JOINT.)



THROUGH BOLTED ANCHOR INSTALLATION ON BRIDGE DECK

(DO NOTUSE ON CONCRETE BRIDGE DECK WITH ASPHALT OVERLAY)



REMOVABLE ADHESIVE BONDED ANCHOR ② INSTALLATION ON CONCRETE BRIDGE DECK, CONCRETE APPROACH SLAB, OR CONCRETE PAVEMENT

(DO NOT USE ON CONCRETE WITH AN ASPHALTIC OVERLAY)

GENERAL NOTES

① CONCRETE BARRIER TEMPORARY PRECAST, 12'-6" SHALL BE ANCHORED IF:
THE DISTANCE TO A 2 FOOT OR GREATER DROPOFF THAT IS STEEPER THAN 3H : 1V, FOR EXAMPLE THE EDGE OF A BRIDGE DECK OR A DROPOFF AT THE EDGE OF PAVEMENT, IS LESS THAN 4 FEET FROM THE SIDE OF THE BARRIER CLOSEST TO THE DROPOFF AND THE POSTED SPEED IS 45 MPH OR GREATER, OR

THE DISTANCE TO A 2 FOOT OR GREATER DROPOFF THAT IS STEEPER THAN 3H : 1V, FOR EXAMPLE THE EDGE OF A BRIDGE DECK OR A DROPOFF AT THE EDGE OF PAVEMENT. IS LESS THAN 2 FEET FROM THE SIDE OF THE BARRIER CLOSEST TO THE DROPOFF AND THE POSTED SPEED IS 40 MPH OR LESS.

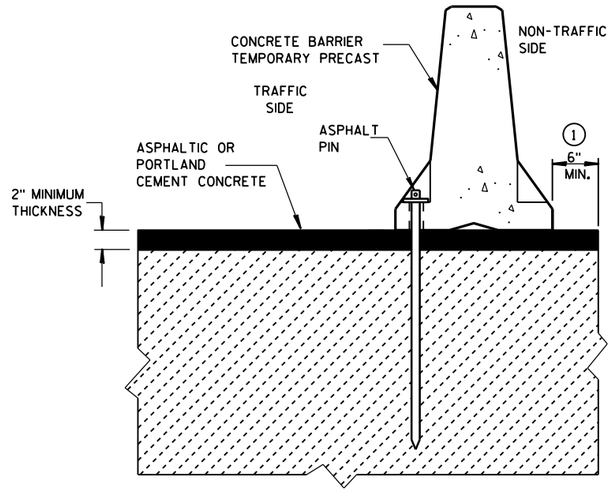
② ANCHORING IS INCIDENTAL TO CONCRETE BARRIER TEMPORARY PRECAST.

WITH THE APPROVAL OF THE ENGINEER, REMOVABLE ADHESIVE BONDED (EPOXY) ANCHOR BOLT INSTALLATION MAY BE USED IN LIEU OF THROUGH BOLTED ANCHOR INSTALLATION. THE ADHESIVE BONDED ANCHOR BOLT MUST BE REMOVABLE. USE ASTM (A307) MASONRY ANCHORS TYPE S 1⅛-INCH, EMBEDDED TO A DEPTH SUFFICIENT TO DEVELOP THE ULTIMATE CAPACITY OF THE ANCHOR BOLT AND PROVIDE DOCUMENTATION TO CONFIRM THIS.

UPON REMOVAL OR RELOCATION OF THE BARRIER UNITS, REMOVE ALLANCHOR BOLTS AND COMPLETELY FILL IN THE REMAINING HOLES IN CONCRETE BRIDGE DECKS, CONCRETE APPROACH SLABS AND CONCRETE PAVEMENTS THAT ARE TO REMAIN, WITH A NON-SHRINK COMMERICAL GROUT OR EPOXY MATERIAL IDENTIFIED ON THE CURRENT WISDOT APPROVED PRODUCTS LIST.

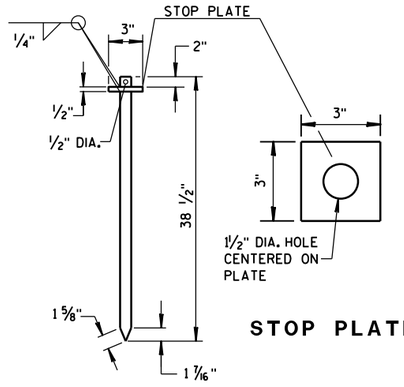
③ 1⅛" DIAMENTER A307 THREADED ROD, ½" X 3" X 3" SQUARE PLATE WASHER WITH ASTM A36 STEEL, ASTM A563A HEAVY HEX NUT.

④ ADHESIVE ANCHORS WITH A MINIMUM BOND STRENGTH OF 1,800 PSI AND 5¼" EMBEDMENT. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.



STAKE DOWN INSTALLATION FOR ASPHALTIC OR PORTLAND CEMENT CONCRETE SURFACE

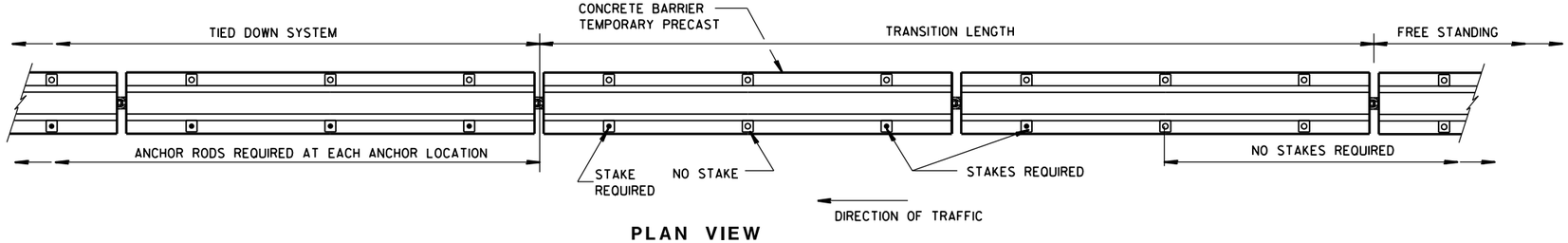
(STAKING IS INCIDENTAL TO CONCRETE BARRIER TEMPORARY PRECAST)



STOP PLATE

ASPHALT PIN

(ASTM A36 STEEL)



PLAN VIEW

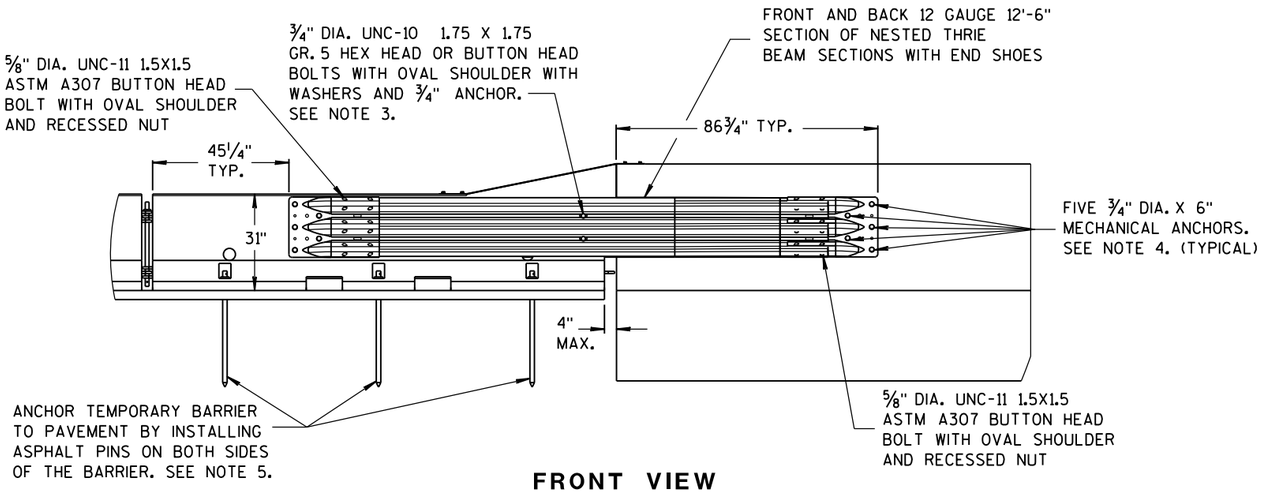
FREE STANDING TRANSITION TO TIED-DOWN SYSTEM

(PLACE TRANSITION IN A TANGENT SECTION OF BARRIER PARALLEL TO THE ROADWAY. IF TRANSITION OCCURS ON STRUCTURAL SLAB, ANCHOR AS SHOWN.)

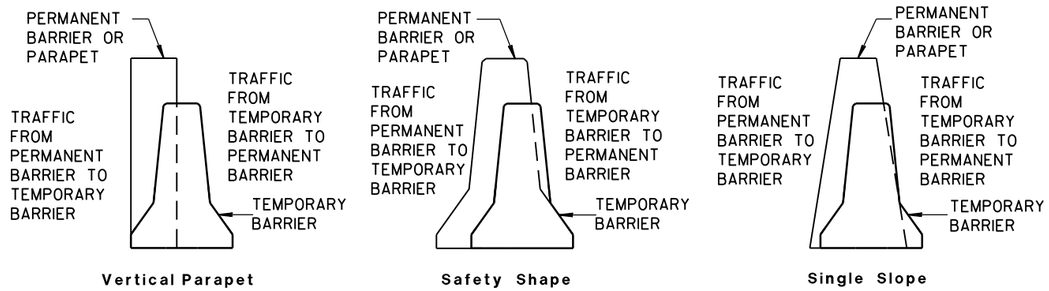
CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6
S.D.D. 14 B 7-14d



FRONT VIEW

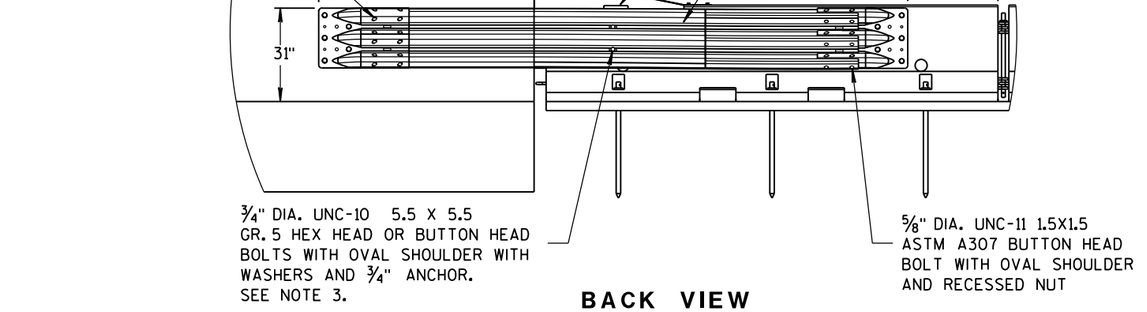


TEMPORARY BARRIER PLACEMENT FOR BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM

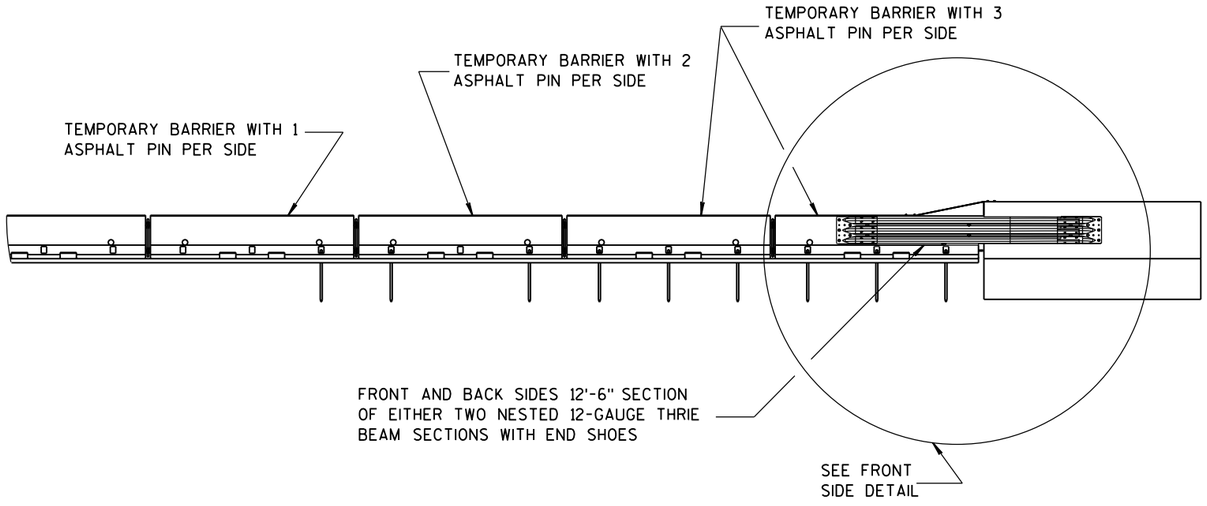
NOTES

NESTED THRIE BEAM IS REQUIRED ON BOTH SIDES OF THE TEMPORARY BARRIER FOR ALL INSTALLATIONS.

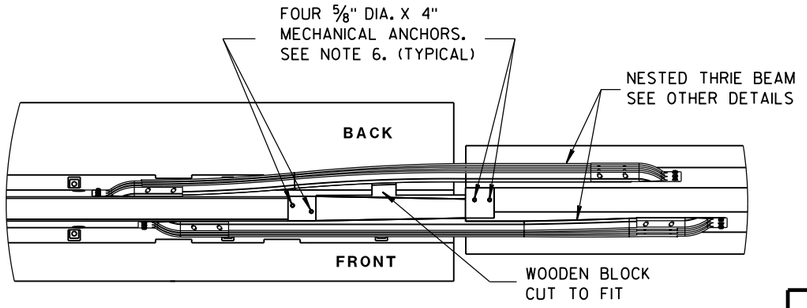
1. CAP END PLATE PLACED FLUSH WITH UPSTREAM END OF PERMANENT BARRIER OR PARAPET.
2. THRIE BEAM PIECES ARE OFFSET 15 1/4" TO PREVENT INTERFERENCE FROM THE ANCHORS ON OPPOSING SIDES.
3. MINIMUM MECHANICAL OR EPOXY ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 9.48 KIPS AND ULTIMATE SHEAR LOAD 10.48 KIPS.
4. MINIMUM MECHANICAL OR EPOXY ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 17.9 KIPS AND ULTIMATE SHEAR LOAD 21.96 KIPS.
5. MAY BE USED ON CONCRETE OR ASPHALT PAVEMENTS. ASPHALT OPTION SHOWN. FOR CONCRETE OPTION SEE OTHER DETAILS.
6. MINIMUM MECHANICAL OR EPOXY ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 12.14 KIPS AND ULTIMATE SHEAR LOAD 17.5 KIPS.



BACK VIEW



FRONT VIEW



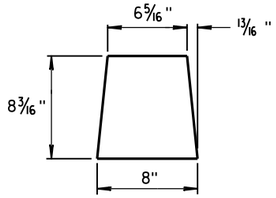
PLAN VIEW

BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM

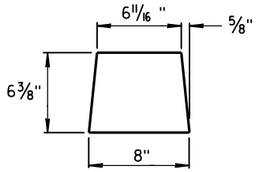
CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

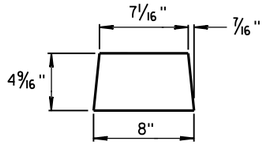
6
S.D.D. 14 B 7-14e



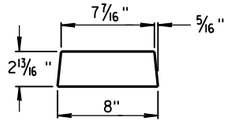
GUSSET 1



GUSSET 2

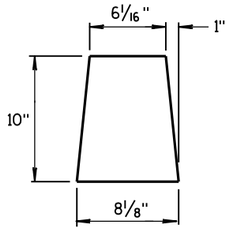


GUSSET 3

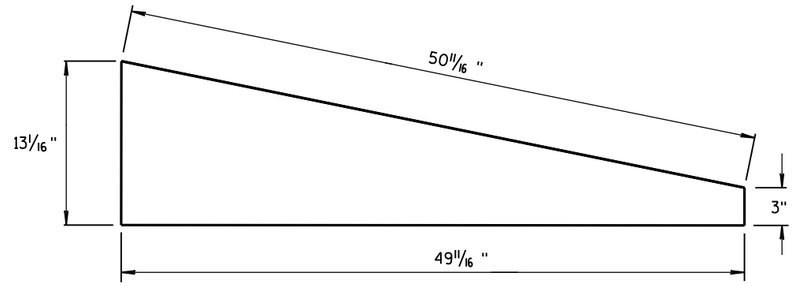


GUSSET 4

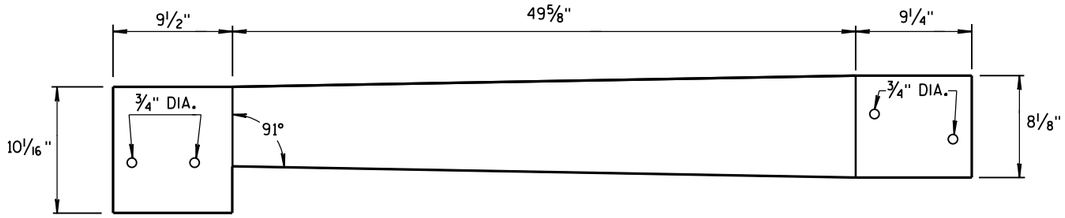
GUSSETS

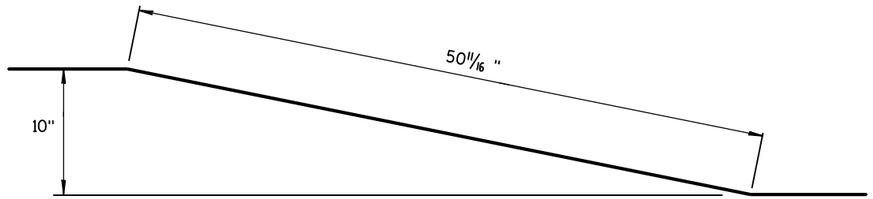


END PLATE



SIDE PLATE

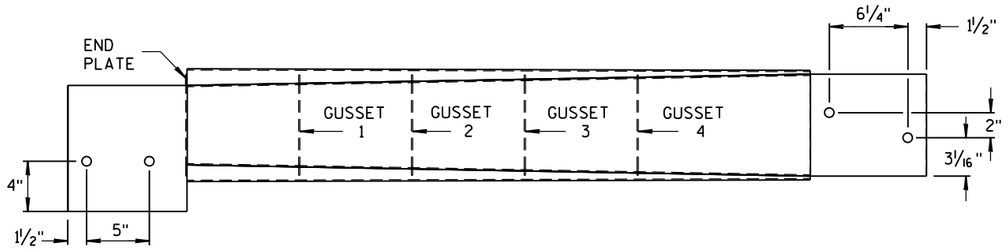


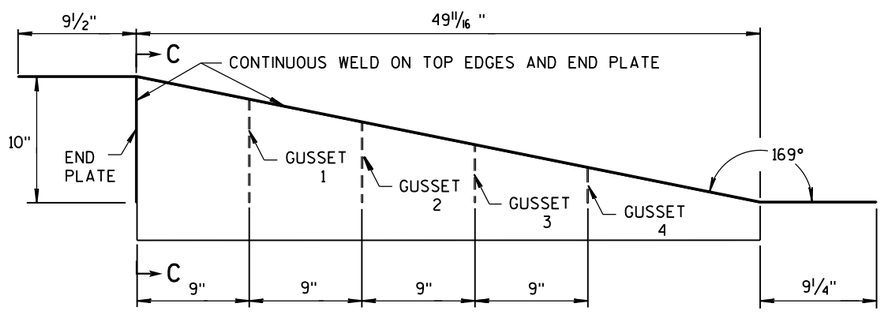


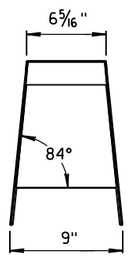
TOP PLATE

SIDE, TOP AND END PLATES FOR CAP FROM TEMPORARY CONCRETE BARRIER TO 42" PERMANENT CONCRETE BARRIER

SIDE PLATES, TOP PLATE, END PLATE AND GUSSETS ARE 12 GAUGE ASTM A36 GALVANIZED STEEL.







SECTION C-C

NOTES

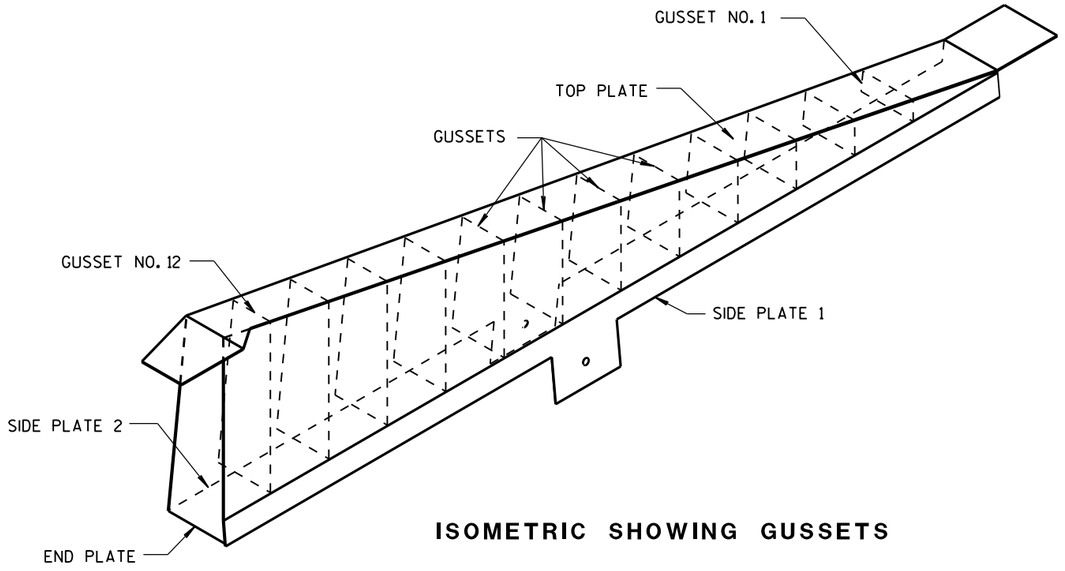
1. FOUR GUSSETS AND END PLATE ARE STITCH WELDED ON THREE SIDES.
2. TWO TRIANGULAR SIDE PLATES ARE STITCH WELDED TO TOP PLATE, END PLATE, AND GUSSETS.

CAP DETAILS FOR TEMPORARY CONCRETE BARRIER TO 42" PERMANENT CONCRETE BARRIER

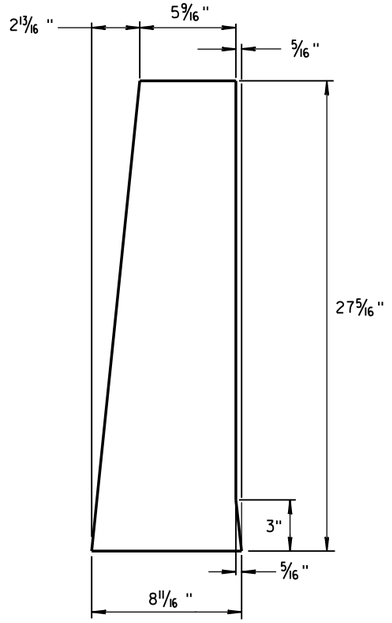
CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6
S.D.D. 14 B 7-14f

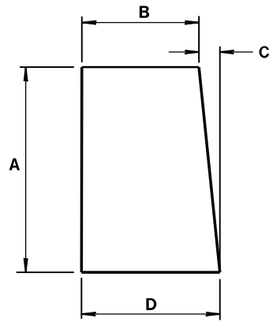


ISOMETRIC SHOWING GUSSETS



END PLATE

1/8" STEEL PLATE



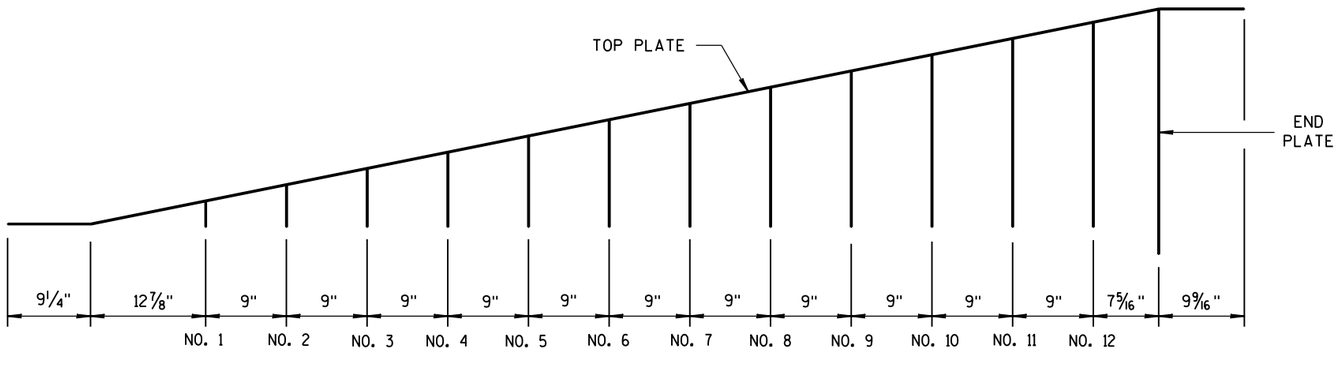
GUSSETS 1 - 12

ALL GUSSETS 1/8" STEEL PLATE

GUSSET DIMENSIONS				
GUSSET NO.	A	B	C	D
1	2 7/8"	7 3/4"	1/4"	8
2	4 11/16 "	7 9/16 "	1/2"	8
3	6 1/2"	7 3/8"	11/16 "	8 1/16 "
4	8 5/16 "	7 3/16 "	7/8"	8 1/16 "
5	10 1/8"	7"	1 1/16 "	8 1/16 "
6	11 15/16 "	6 13/16 "	1 1/4"	8 1/16 "
7	13 3/4"	6 5/8"	1 7/16 "	8 1/16 "
8	15 9/16 "	6 7/16 "	1 9/16 "	8 1/16 "
9	17 3/8"	6 1/4"	1 13/16 "	8 1/16 "
10	19 3/16 "	6 1/16 "	1 15/16 "	8 1/16 "
11	21"	5 7/8"	2 3/16 "	8 1/16 "
12	22 13/16 "	5 11/16 "	2 5/16 "	8 1/16 "

SIDE PLATES, TOP PLATE, END PLATE AND GUSSETS ARE 12 GAUGE ASTM A36 STEEL AND GALVANIZED.

GUSSETS AND END PLATE ARE STITCH WELDED ON 3 SIDES. TWO TRIANGULAR SIDE PLATES ARE STITCH WELDED TO TOP PLATE, END PLATE AND GUSSETS.



GUSSET LOCATION

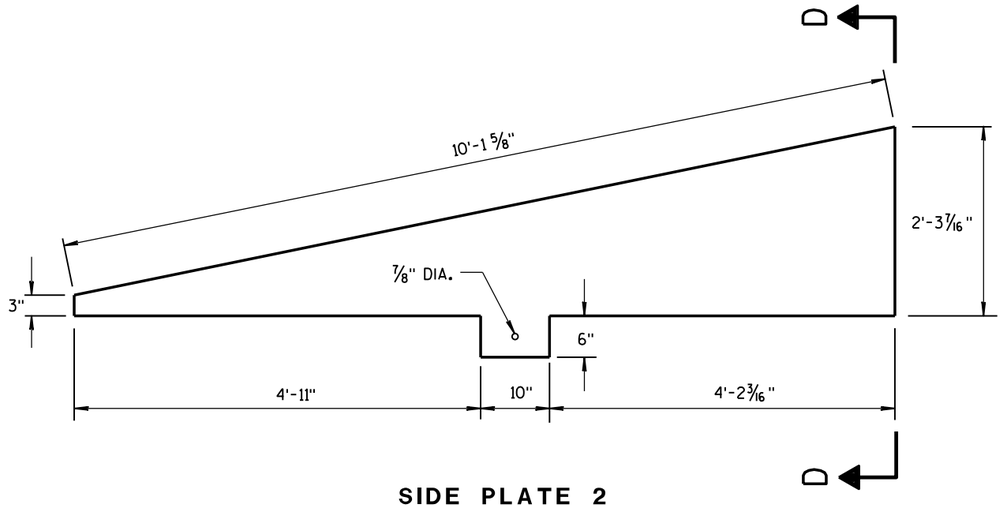
CAP DETAILS FOR TEMPORARY CONCRETE BARRIER TO 56" PERMANENT CONCRETE BARRIER

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

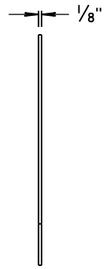
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

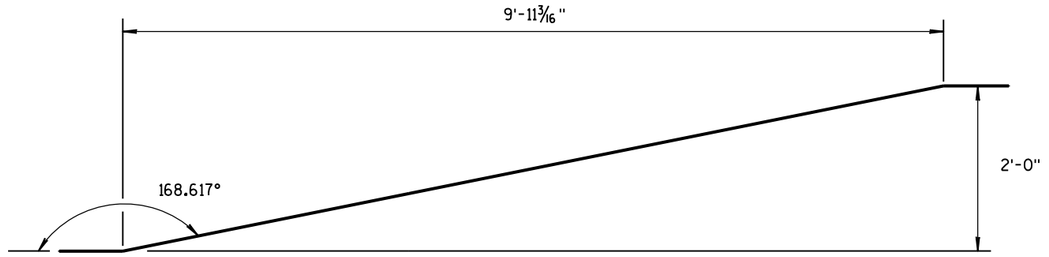
S.D.D. 14 B 7-14g



SIDE PLATE 2

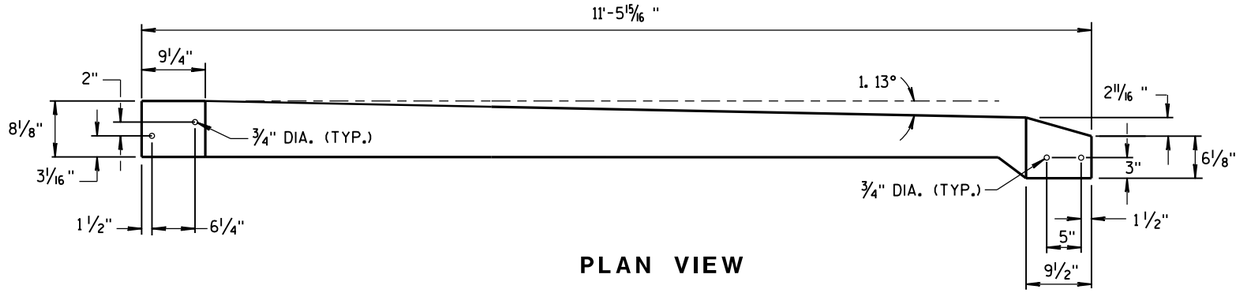


END VIEW



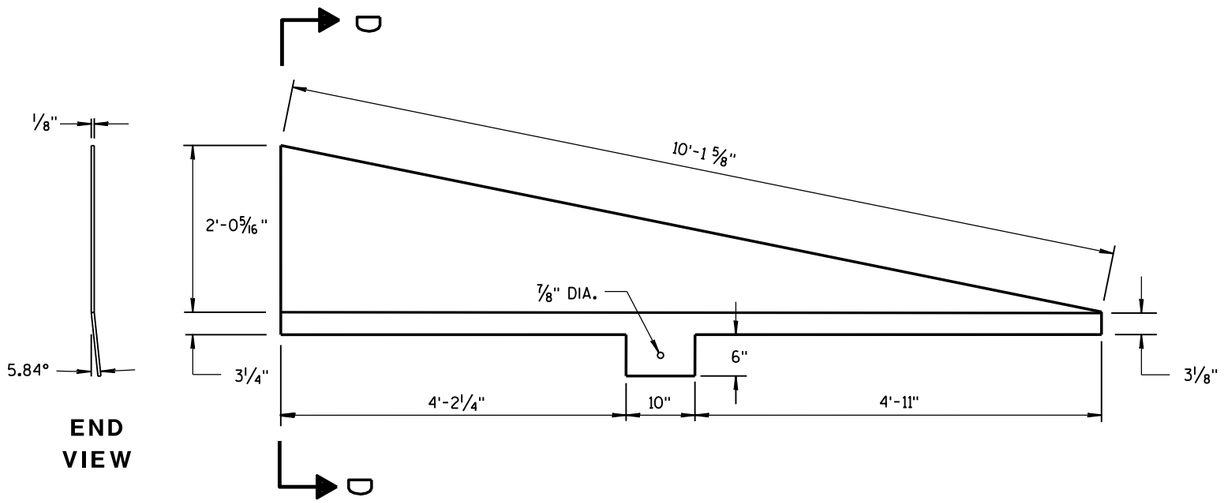
SIDE VIEW

TOP PLATE



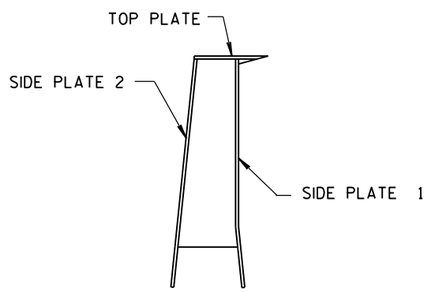
PLAN VIEW

TOP PLATE



END VIEW

SIDE PLATE 1



SECTION D-D

CAP DETAILS FOR TEMPORARY CONCRETE BARRIER TO 56" PERMANENT CONCRETE BARRIER

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2014 — DATE
/S/ Jerry H. Zoda — ROADWAY STANDARD DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 14 B 7-14h

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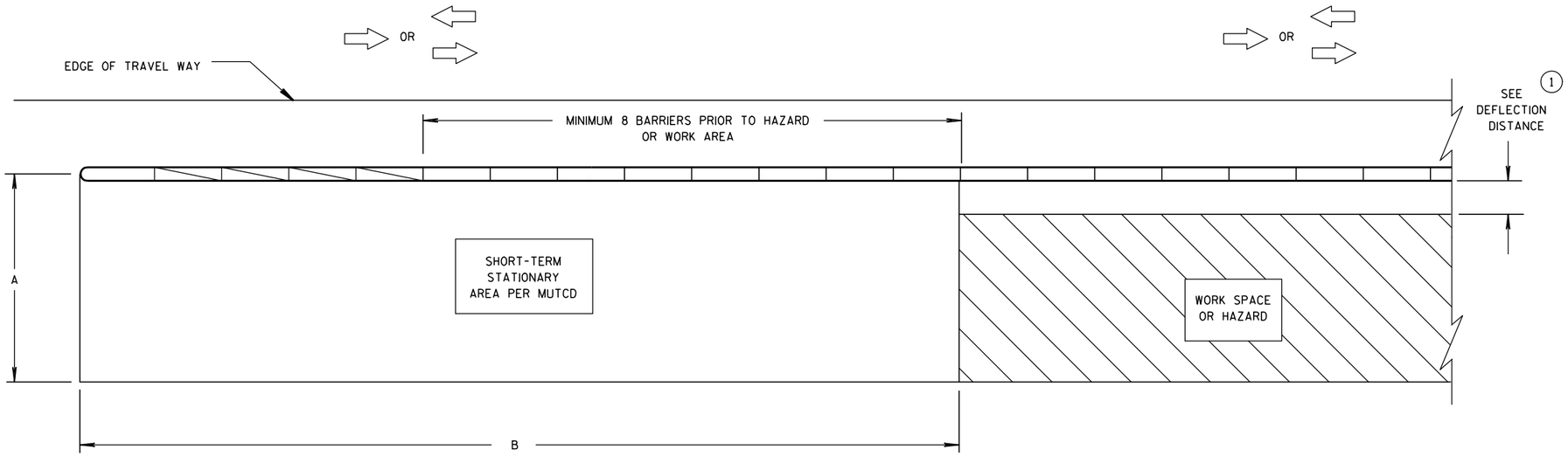
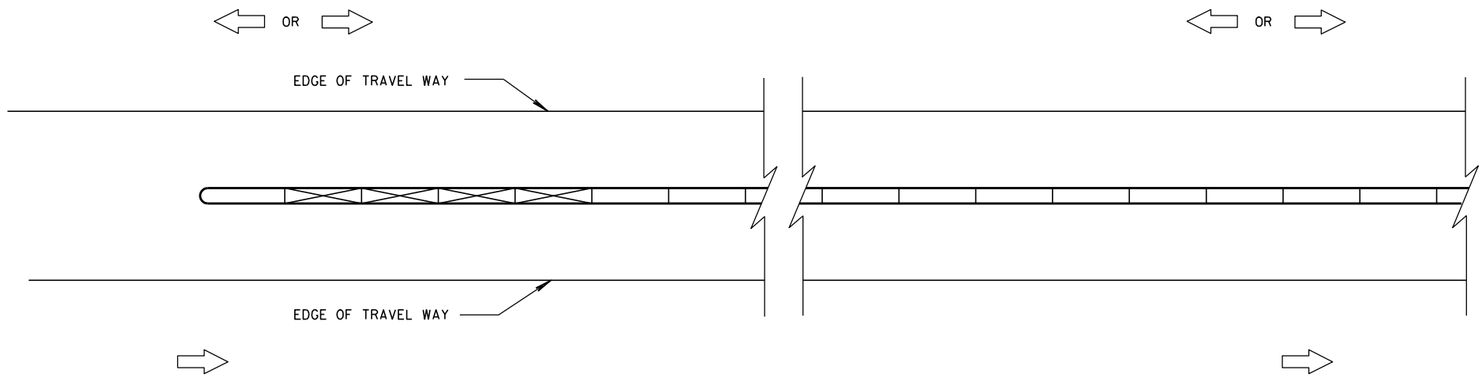
S.D.D. 14 B 7-14h



CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER INSTALLATION FOR TRAFFIC ON ONE SIDE OF BARRIER



CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER INSTALLATION FOR TRAFFIC ON BOTH SIDES OF BARRIER

DIMENSION A TABLE (2)

FACILITY	POSTED SPEED MPH	DIMENSION A	
		MIN. FT	MAX. FT
FREEWAY/EXPRESSWAY	ALL	15	20
NON-FREEWAY/EXPRESSWAY	GREATER THAN OR EQUAL TO 45	10	15
NON-FREEWAY/EXPRESSWAY	LESS THAN 45	8	10
AADT LESS THAN 1,500	ALL	8	10

DIMENSION B TABLE (2)

POSTED SPEEDS MPH	DIMENSION B FT
20	115
25	155
30	200
35	250
40	305
45	360
50	425
55	495
60	570
65	645

LEGEND

DIRECTION OF TRAVEL

CRASH CUSHION OR SAND BARREL ARRAY

SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS

SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS

3 PINS PLACED ON TRAFFIC SIDE OF BARRIER

PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET

FREE STANDING TEMPORARY BARRIER

GENERAL NOTES

SEE STANDARD DETAIL DRAWING 14B7 FOR MORE INFORMATION.

DETAILS PROVIDE A GENERAL LAYOUT OF TEMPORARY CONCRETE BARRIER, CRASH CUSHIONS, SAND BARREL ARRAYS AND TIE DOWN TRANSITIONS. DETAILS PROVIDED MAY NOT FIT ALL POSSIBLE SITUATIONS OR SITE CONDITIONS. SEE OTHER SECTIONS OF THE CONTRACT OR PROJECT ENGINEER FOR MORE DETAILS.

ADDITIONAL TEMPORARY BARRIER MAY BE REQUIRED TO PROTECT TRAVELING PUBLIC FROM HAZARDS, CONTRACTOR'S OPERATIONS OR TO CONTROL TRAFFIC.

TEMPORARY BARRIER MAY BE REQUIRED TO BE ANCHORED TO PAVEMENT OR BRIDGE DECK.

FOR DETAILS ON CRASH CUSHION OR SAND BARREL ARRAYS SEE OTHER SECTIONS OF THE PLAN AND MANUFACTURE'S DETAILS.

SLOPES LEADING TO TEMPORARY BARRIER, CRASH CUSHION OR SAND BARREL ARRAY ARE 10:1 OR LESS.

(1) FOR DEFLECTION INFORMATION SEE STANDARD DETAIL DRAWING 14B7.

(2) VALUES PROVIDED MAY NOT FIT ALL POSSIBLE SITUATIONS OR SITE CONDITIONS. SEE OTHER SECTIONS OF THE CONTRACT OR PROJECT ENGINEER FOR MORE DETAILS.

CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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S.D.D. 14 B 8-1a

LEGEND

DIRECTION OF TRAVEL

CRASH CUSHION OR SAND BARREL ARRAY

SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS

SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS

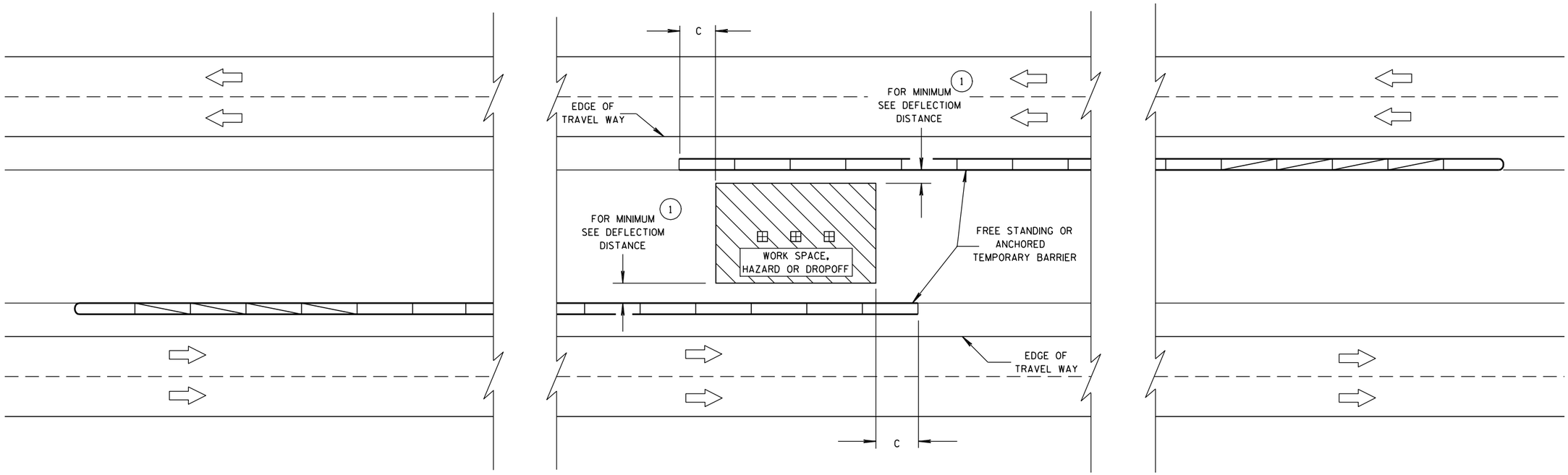
3 PINS PLACED ON TRAFFIC SIDE OF BARRIER

PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET

FREE STANDING TEMPORARY BARRIER

DIMENSION C TABLE (2)

AVAILABLE DEFLECTION DISTANCE	MINIMUM LENGTH OF BARRIER BEYOND HAZARD FT
GREATER THAN 8'	12.5
LESS THAN OR EQUAL TO 8' BUT GREATER THAN 4'	50
LESS THAN OR EQUAL TO 4'	100



CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

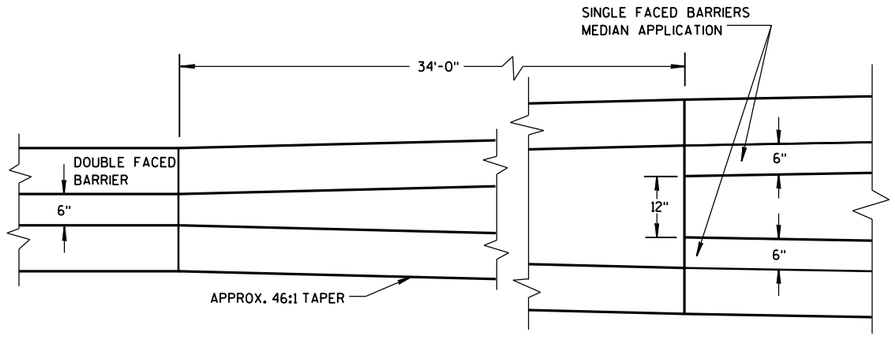
APPROVED

8/31/2012
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINNER

FHWA

6
S.D.D. 14 B 8-1e



PLAN VIEW

TRANSITION DETAILS OF DOUBLE FACED TO SINGLE FACED CONCRETE MEDIAN BARRIER

(FOOTINGS ARE NOT SHOWN)

GENERAL NOTES

SPLICES OF LONGITUDINAL BARS SHALL BE MADE WITH BARS LAPPED AT LEAST 18-INCHES AND FIRMLY TIED OR FASTENED TOGETHER.

ALL BAR STEEL REINFORCEMENT SHALL CONFORM TO REQUIREMENTS OF AASHTO M31, GRADE 60.

(1) BARRIER SHALL BE INSTALLED ON A CONCRETE SHOULDER INSTEAD OF THE CONCRETE FOOTING WHEN SPECIFIED OR SHOWN ELSEWHERE IN CONTRACT.

(2) OPENINGS FOR DRAINAGE SHALL BE PLACED AT LOW POINTS OF VERTICAL CURVES OR WHERE DIRECTED BY THE ENGINEER.

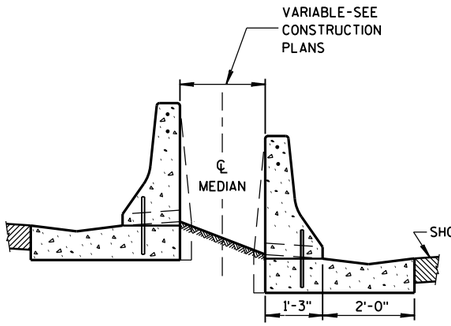
(3) 3/4-INCH BEVEL OR 1-INCH RADIUS (TYPICAL).

(4) NO. 4 BARS SHALL BE CONTINUED THROUGH CONSTRUCTION JOINTS.

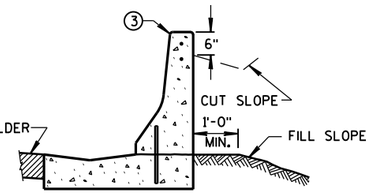
(5) EXPANSION JOINTS SHALL BE PLACED AT EXISTING EXPANSION JOINTS IN THE PAVEMENT AND AT STRUCTURES. SEE REINFORCEMENT AT BARRIER END DETAIL.

(6) SAWED CONTRACTION JOINTS SHALL BE PROVIDED ACROSS THE FULL WIDTH OF THE BARRIER FOOTING, AND IN FRONT, TOP AND BACK FACE OF THE BARRIER AT EXISTING PAVEMENT JOINTS AND AT UNIFORM INTERVALS BETWEEN WITH A MAXIMUM SPACING OF 25 FEET.

HIGH SIDE
CONCRETE BARRIER DETAIL

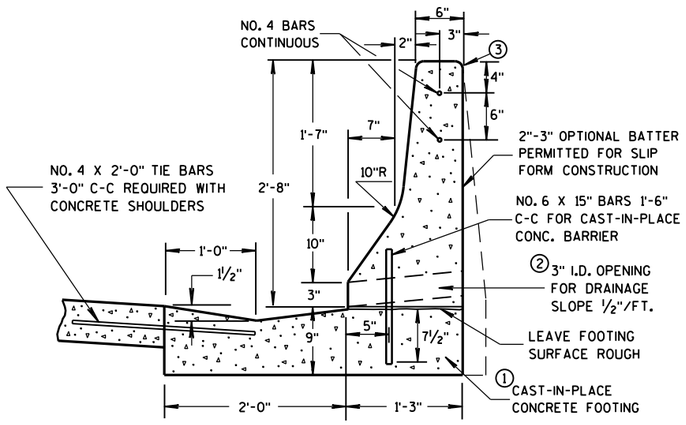


MEDIAN

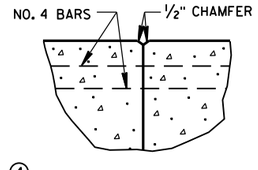


SHOULDER

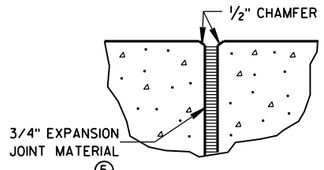
TYPICAL APPLICATIONS



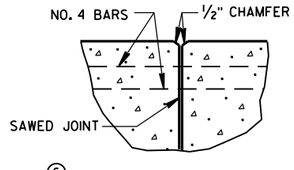
SECTION VIEW



4 CONSTRUCTION JOINT



5 EXPANSION JOINT



6 CONTRACTION JOINT

JOINT DETAILS

CONCRETE BARRIER,
SINGLE-FACED
(WITH ANCHORAGE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

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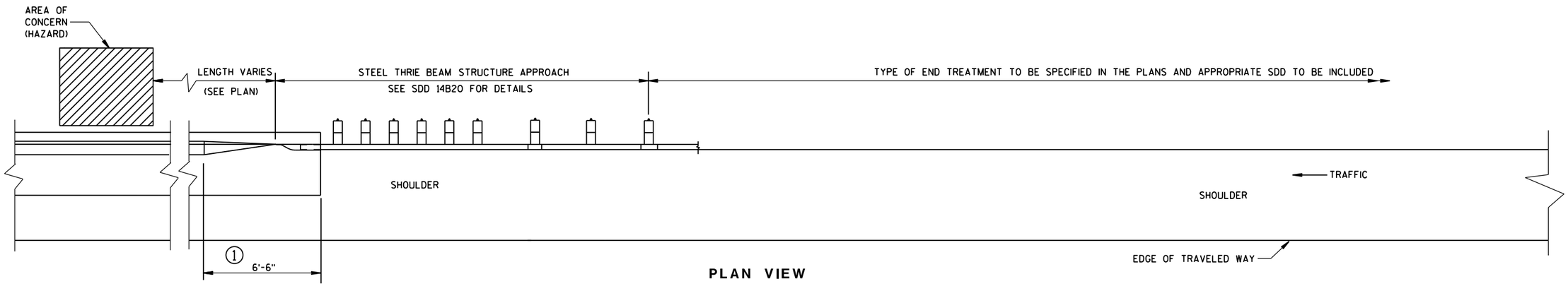
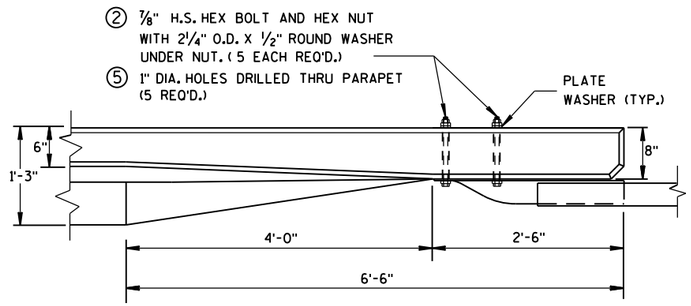
S.D.D. 14 B 22-6a



PLAN VIEW

TRANSITION TO STEEL PLATE BEAM GUARD AND END TERMINAL



PLAN VIEW

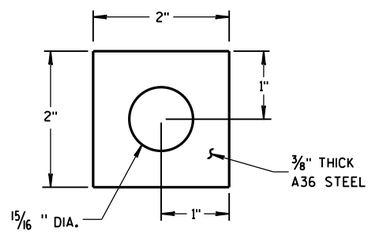
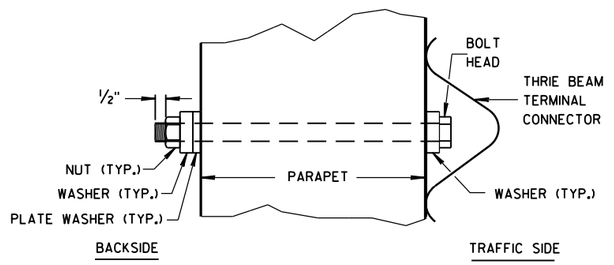


PLATE WASHER DETAIL



THRIE BEAM BOLT DETAIL

GENERAL NOTES

① A SPECIAL END IS REQUIRED ON THE CONCRETE BARRIER TO TRANSITION TO A CONNECTION WITH THE STEEL THRIE BEAM STRUCTURE APPROACH. SEE THE DETAILS ON THIS SHEET.

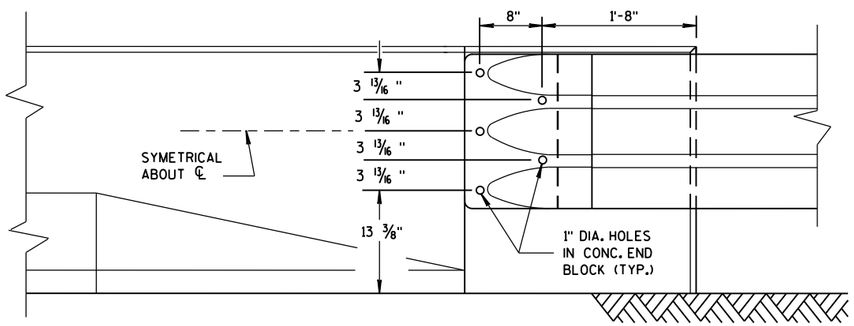
② BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM TERMINAL CONNECTOR. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.

③ REINFORCEMENT REQUIRED AT EXPANSION JOINTS AND WHERE CONCRETE BARRIER IS TERMINATED.

④ PLACE REINFORCEMENT SUCH THAT IT WILL NOT CONFLICT WITH THE BOLT HOLES IN THE THRIE BEAM TERMINAL CONNECTOR.

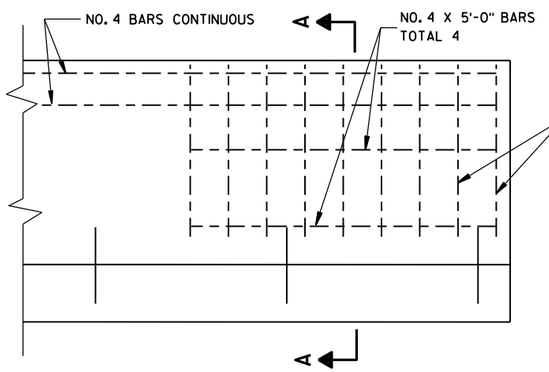
⑤ INCLUDE THE PAYMENT FOR DRILLING BOLT HOLES THROUGH THE PARAPET, AND ALL BOLTS, NUTS AND WASHERS IN THE ITEM "STEEL THRIE BEAM STRUCTURAL APPROACH".

DO NOT USE STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS IN THE STEEL THRIE BEAM STRUCTURAL APPROACH AND THE TRANSITION SECTION OF STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATIONS.

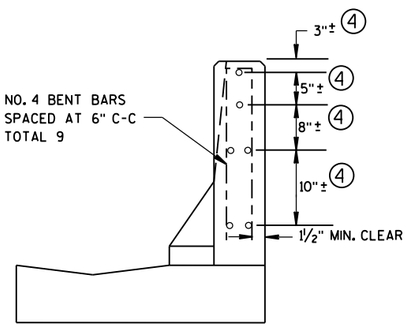


FRONT VIEW

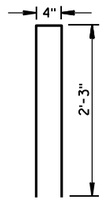
CONCRETE BARRIER TRANSITION TO THRIE BEAM



FRONT VIEW



SECTION A-A



BENT BAR DETAIL

③ REINFORCEMENT AT BARRIER END

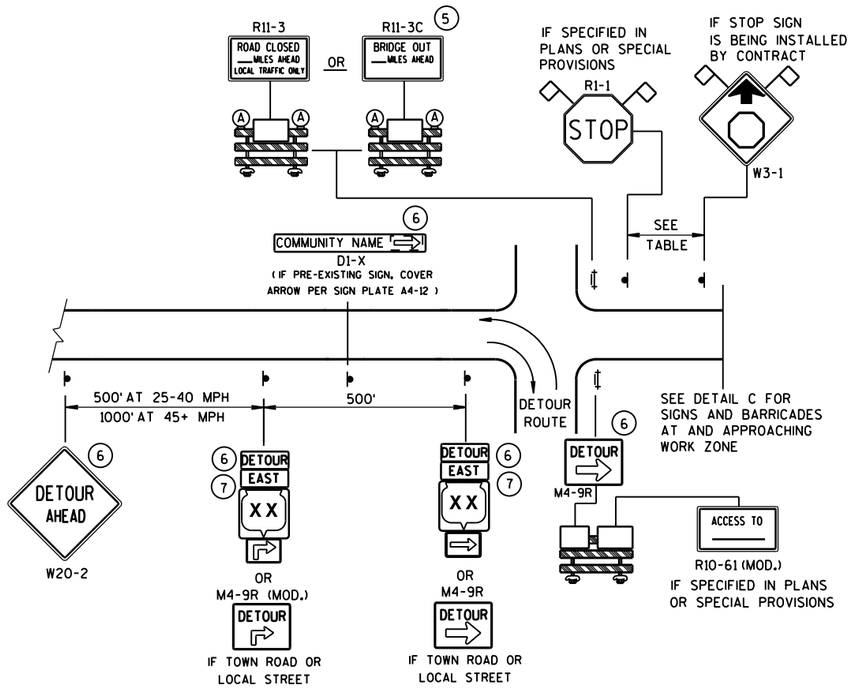
CONCRETE BARRIER, SINGLE-FACED (WITH ANCHORAGE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2014
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER
FHWA

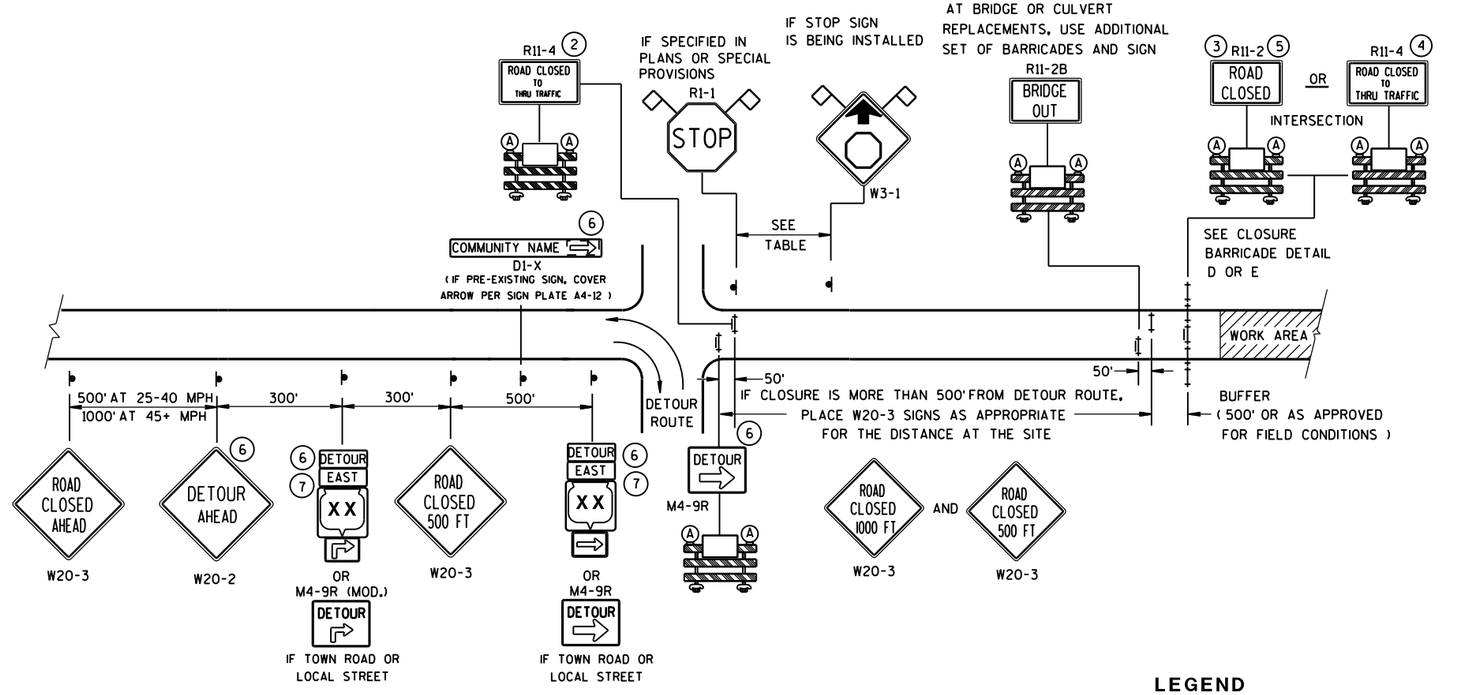
6

S.D.D. 14 B 22-6b



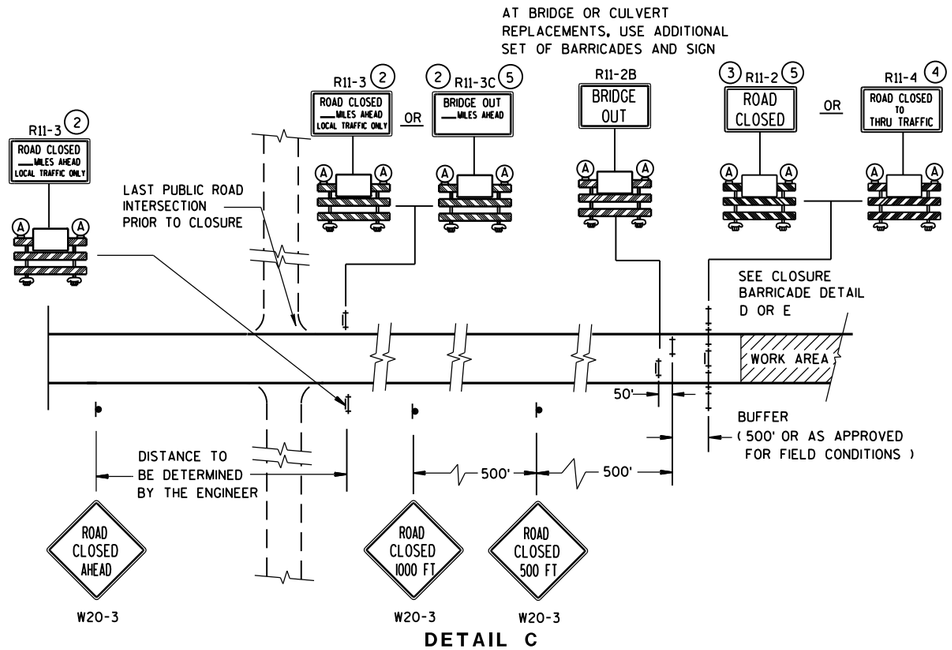
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

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

8/2013 DATE

/S/ Travis Feltes
STATE TRAFFIC ENGINEER

105

FHWA

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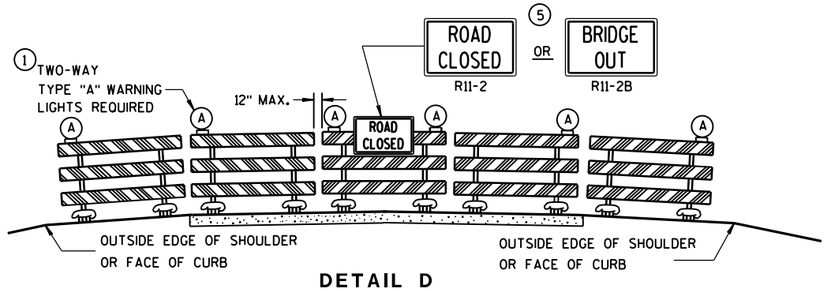
S.D.D. 15 C 2-5a

6

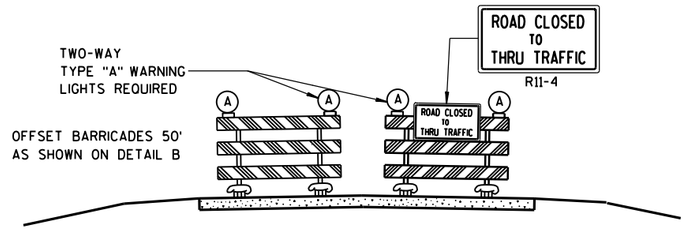
S.D.D. 15 C 2-5a



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

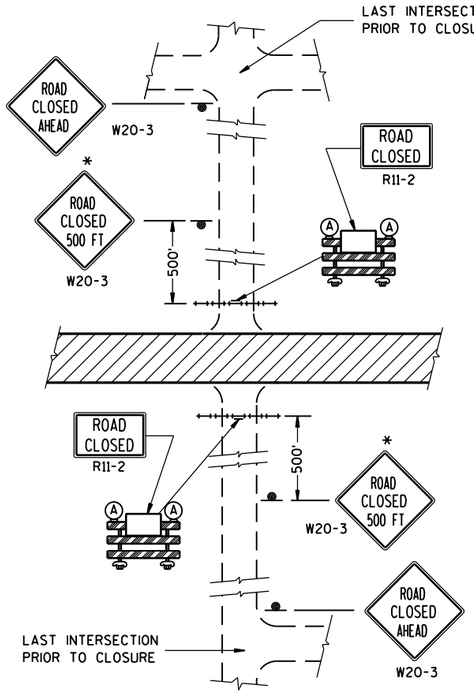
8/2013 — DATE

/S/ Travis Feltes — STATE TRAFFIC ENGINEER

FHWA

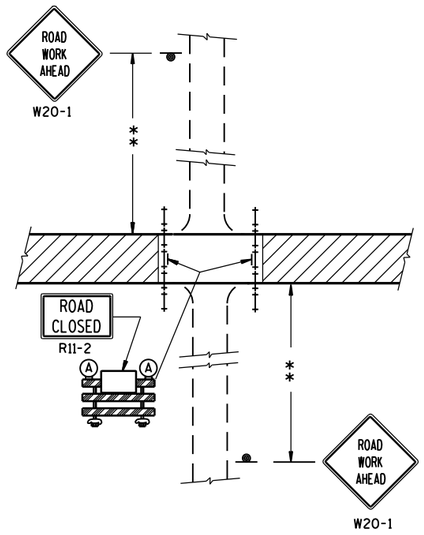
6

S.D.D. 15 C 2-5b



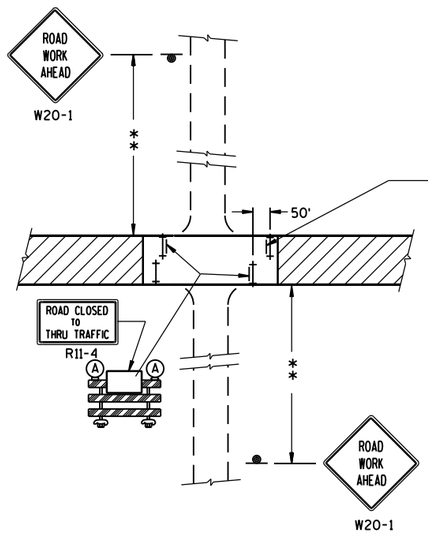
DETAIL 1

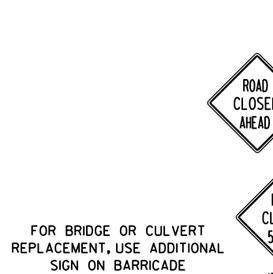
(NO ACCESS TO PROJECT)



DETAIL 2

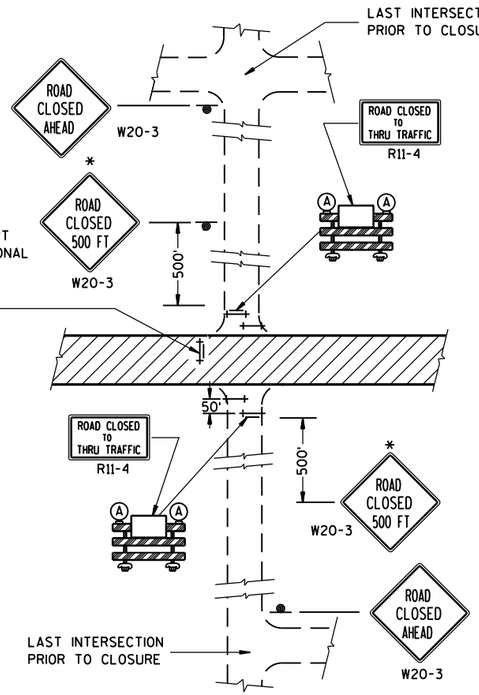
(PUBLIC CROSS-TRAFFIC MAINTAINED. NO ACCESS TO PROJECT).





DETAIL 3

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



DETAIL 4

(CONTRACTOR, LOCAL BUSINESS AND RESIDENT ACCESS TO PROJECT)

GENERAL NOTES

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

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

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

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

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

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

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

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

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

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
R11-2 SHALL BE 48" X 30".
R11-4 AND R11-3 SHALL BE 60" X 30".

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

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

LEGEND

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

BARRICADES AND SIGNS FOR SIDEROAD CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/2013 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINE
FHWA

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S.D.D. 15 C 3-2

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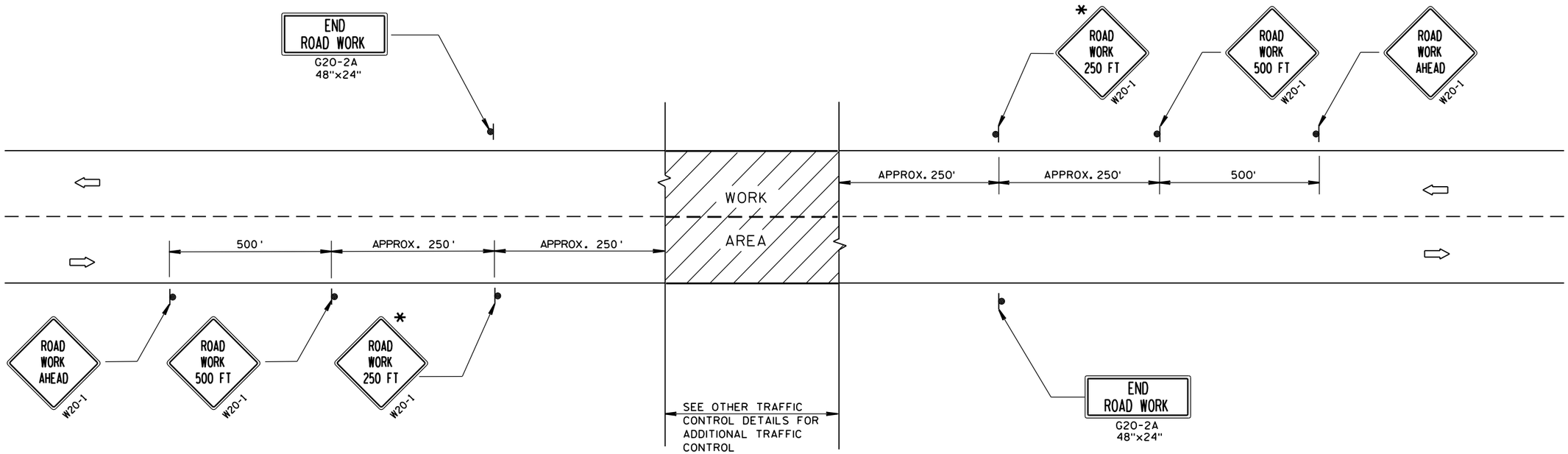
S.D.D. 15 C 3-2

TYPICAL SIDEROAD APPROACH WARNING SIGN DETAIL



GENERAL NOTES

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

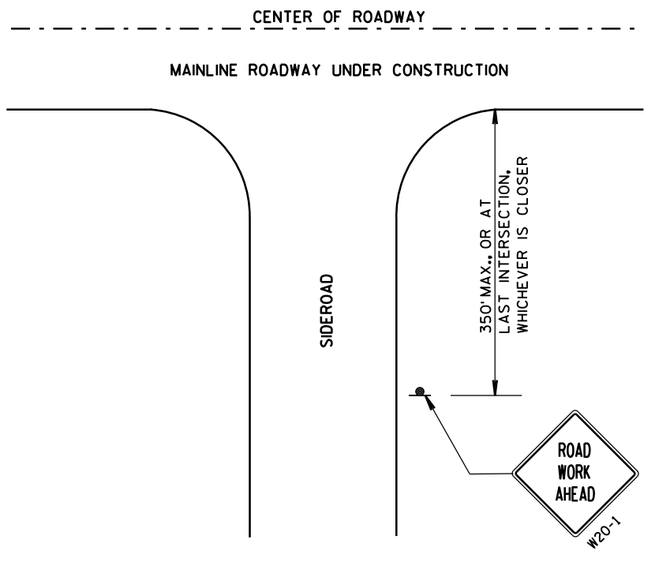
THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS, 36"x36" SIGNS MAY BE USED INSTEAD OF 48"x48" SIGNS.

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

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

* THE THIRD W20-1 SIGN IS REQUIRED ONLY IF THERE IS AN INTERSECTION BETWEEN THE "ROAD WORK 500 FT" SIGN AND THE WORK ZONE. ADJUST THE PLACEMENT OF THIS SIGN BASED ON INTERSECTION LOCATION AND OTHER FIELD CONDITIONS.



LEGEND

- SIGN ON PERMANENT SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA

TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/2013 DATE — /S/ Travis Feltes STATE TRAFFIC ENGINEER — SIGN

FHWA

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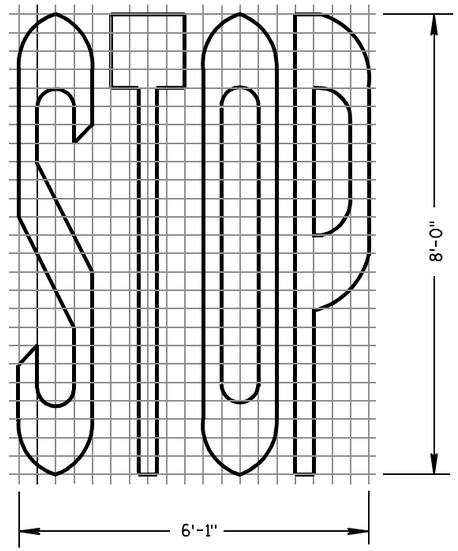
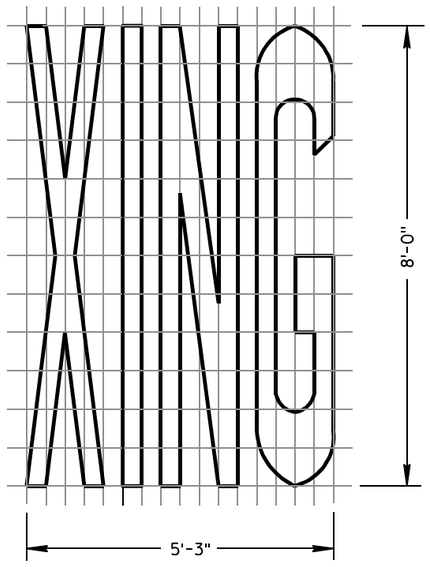
S.D.D. 15 C 5-2

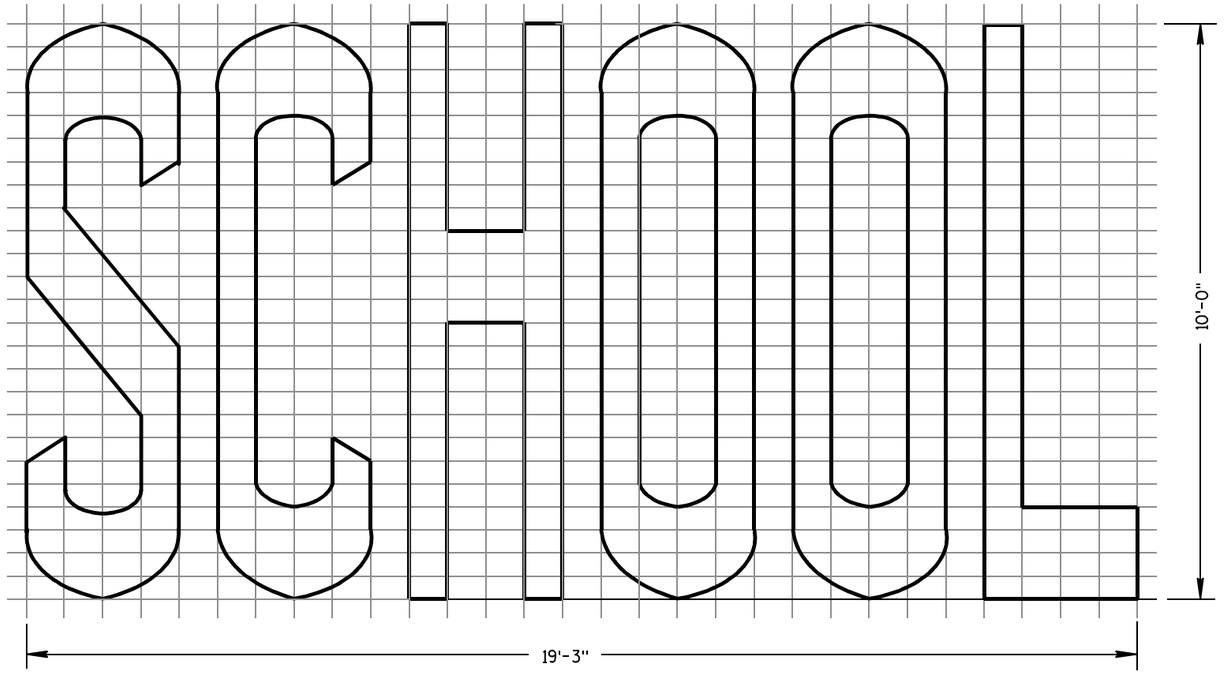
GENERAL NOTES

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

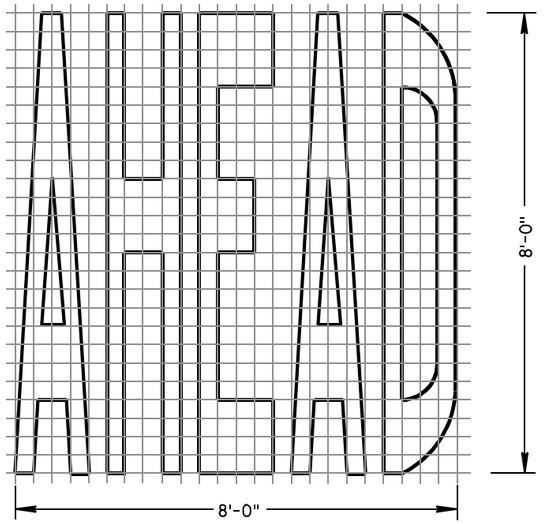
ALL LETTERS, ARROWS AND SYMBOLS SHALL BE IN CONFORMANCE WITH REQUIREMENTS INCLUDED IN "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKING" BOOK BY THE FEDERAL HIGHWAY ADMINISTRATION. ALL LETTERS, ARROWS AND SYMBOLS SHALL BE WHITE AND REFLECTORIZED. SMALL DIFFERENCES IN DIMENSIONS WITHIN THE TOLERANCES OF THAT BOOK ARE ACCEPTABLE.

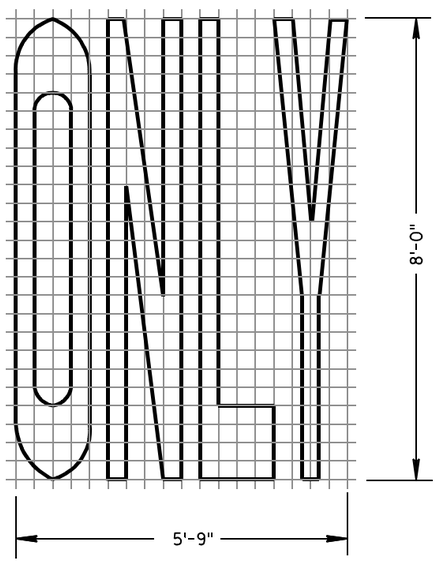


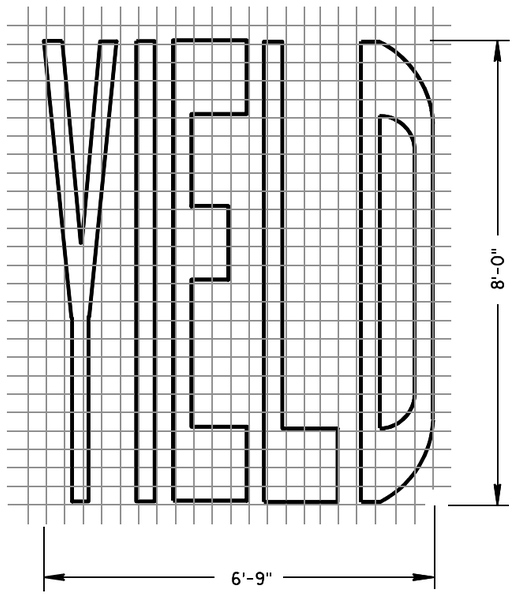


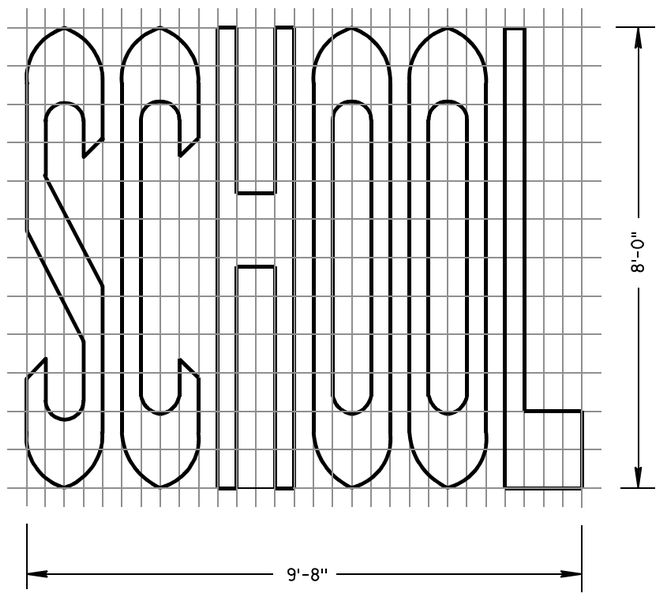


TWO-LANE









SINGLE-LANE

PAVEMENT MARKING WORDS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7-1-11 — DATE

/S/ Thomas N. Nothohm — STATE TRAFFIC ENGINEER

FHWA

6

S.D.D. 15 C 7-12b

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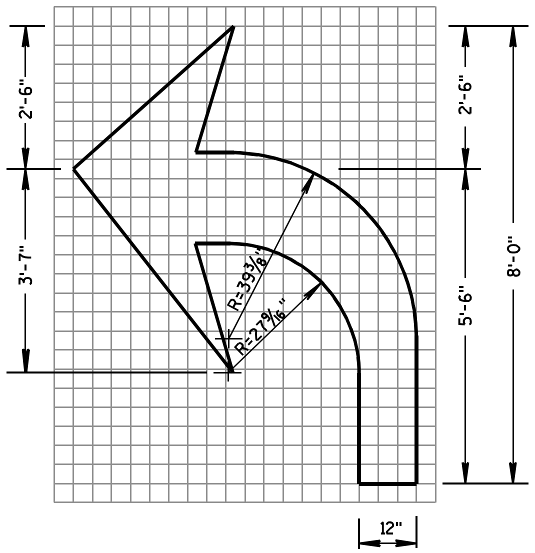
S.D.D. 15 C 7-12b

GENERAL NOTES

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

ALL LETTERS, ARROWS AND SYMBOLS SHALL BE IN CONFORMANCE WITH REQUIREMENTS INCLUDED IN "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKING" BOOK BY THE FEDERAL HIGHWAY ADMINISTRATION. ALL LETTERS, ARROWS AND SYMBOLS SHALL BE WHITE AND REFLECTORIZED. SMALL DIFFERENCES IN DIMENSIONS WITHIN THE TOLERANCES OF THAT BOOK ARE ACCEPTABLE.



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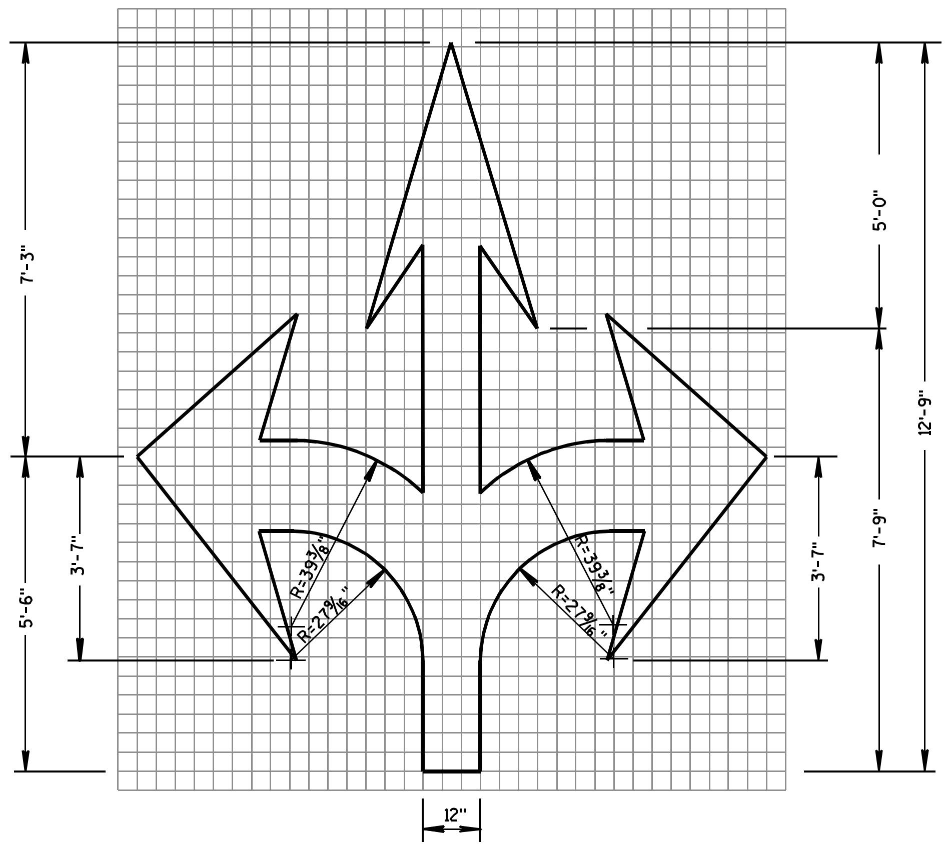
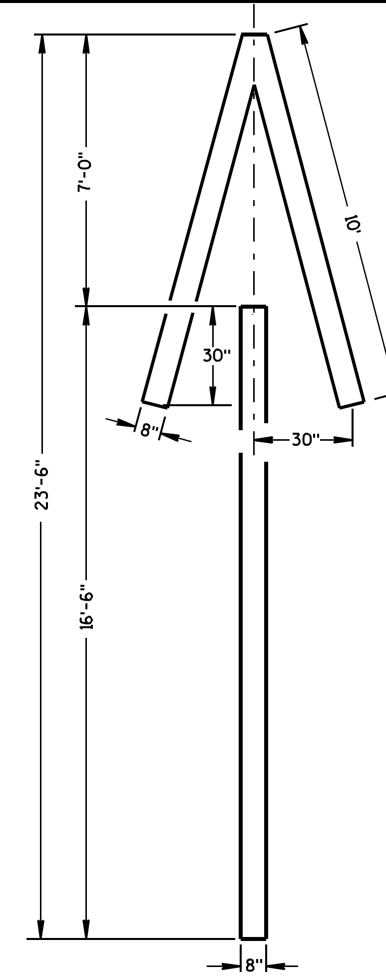


TYPE 6



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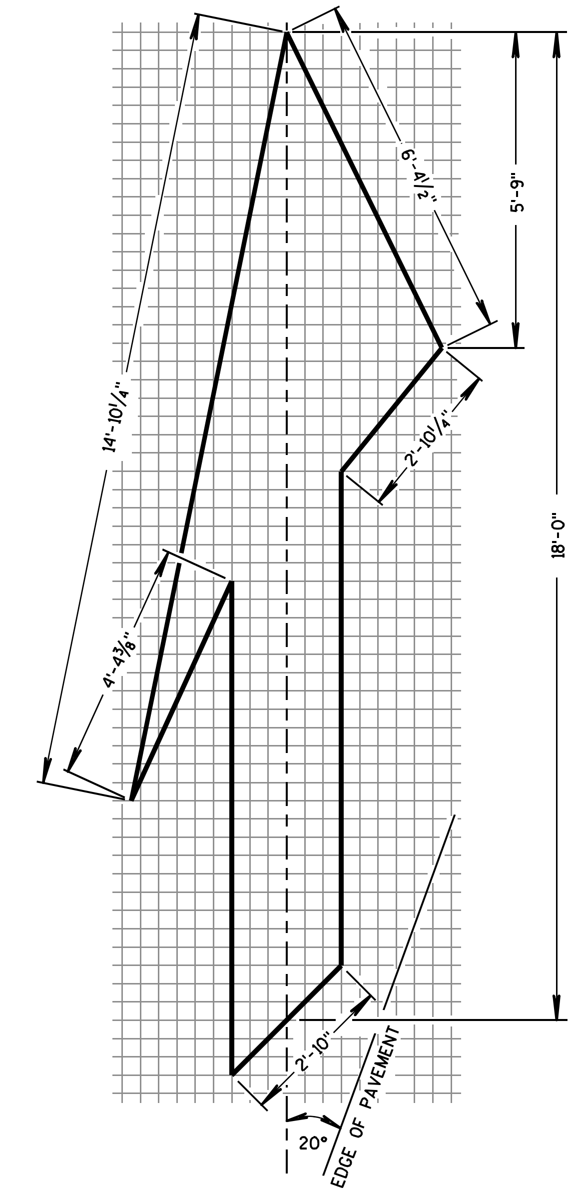
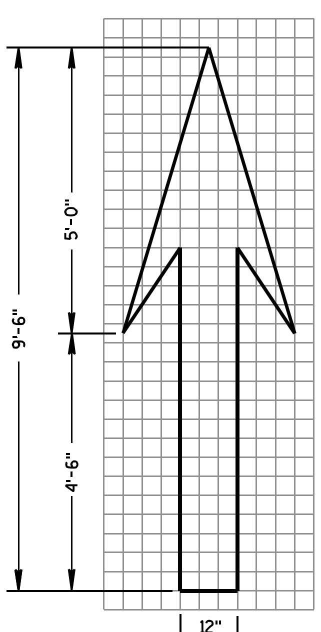
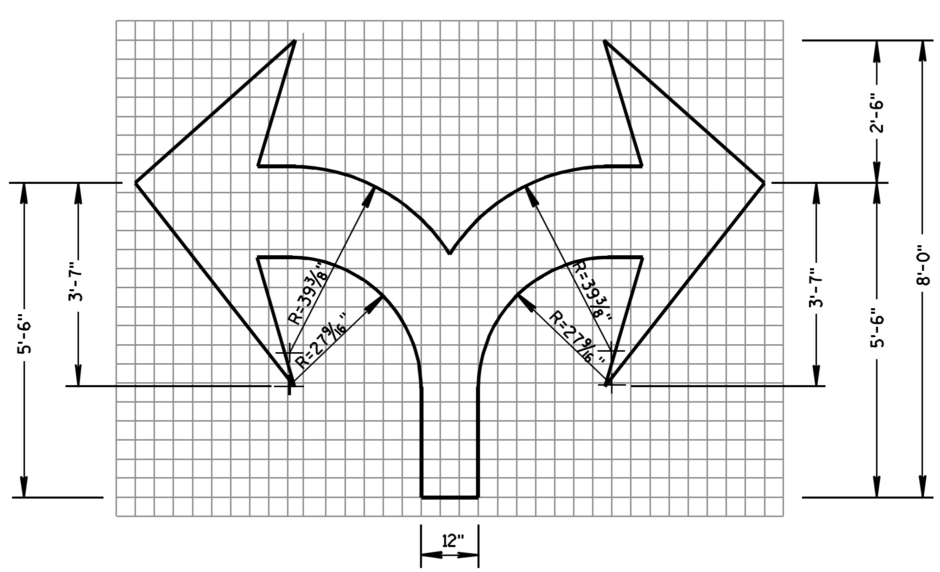


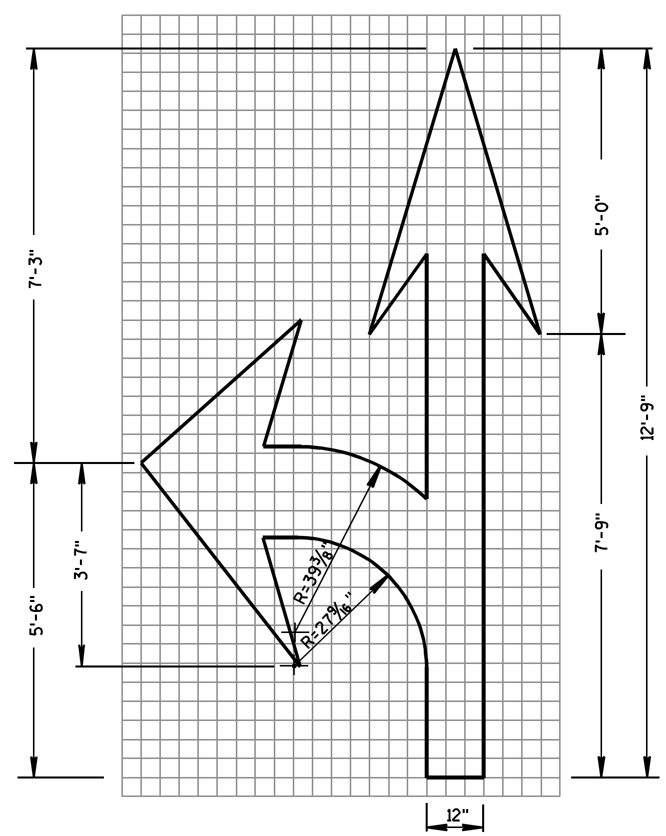
TYPE 5 LANE DROP ARROW



TYPE 1



TYPE 7



TYPE 3

PAVEMENT MARKING ARROWS
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION
APPROVED 7/1/11 /S/ Thomas N. Notbohm DATE STATE TRAFFIC ENGINEER OF DESIGN FHWA

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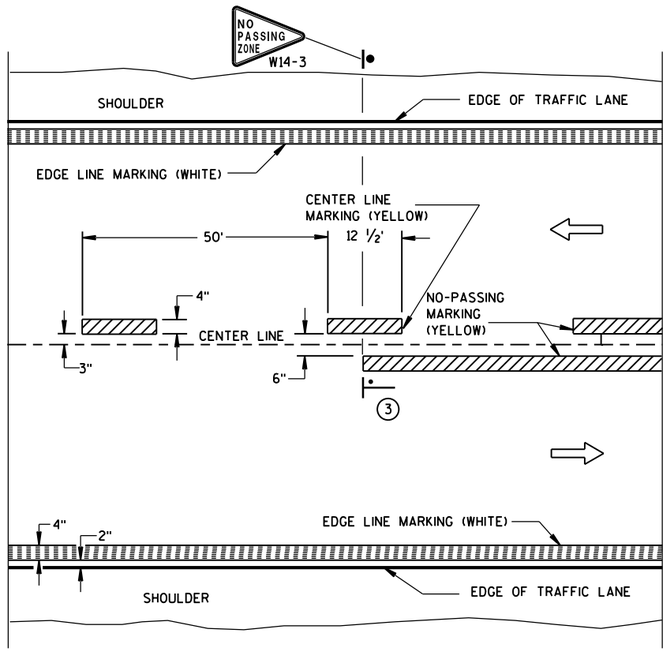
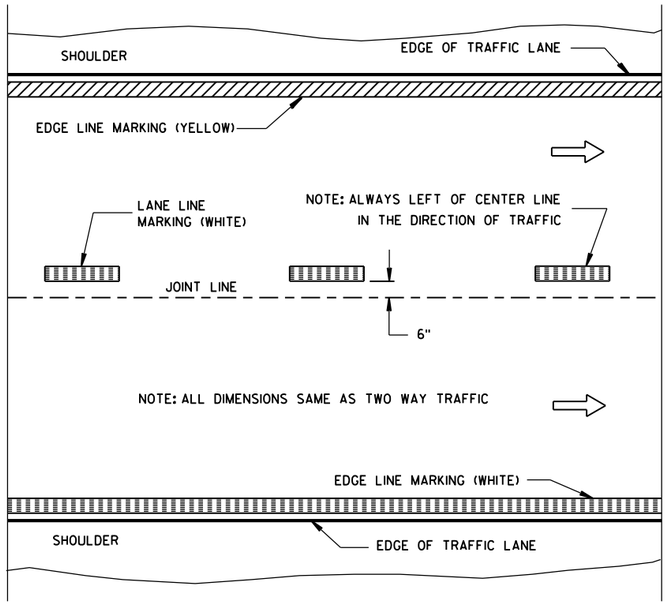
S.D.D. 15 C 7-12c

S.D.D. 15 C 7-12c

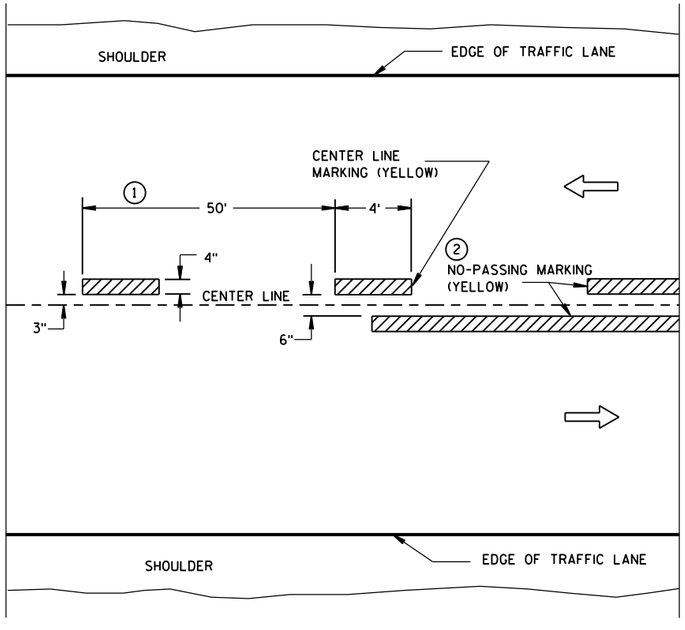


TWO WAY TRAFFIC

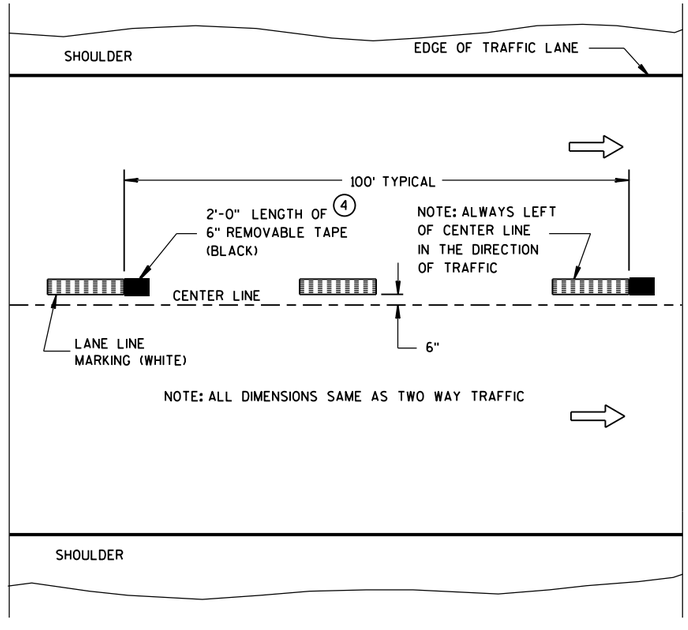


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY (INTERMEDIATE) PAVEMENT MARKING

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

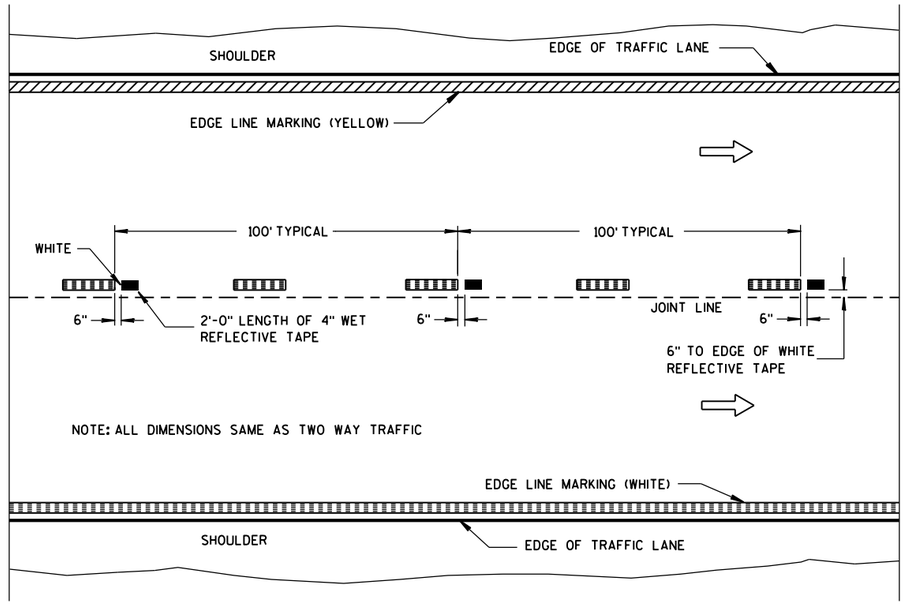
GENERAL NOTES

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

1. HALF CYCLE LENGTHS (25'±) WITH 2' MINIMUM STRIPE LENGTHS SHALL BE PROVIDED ON ROADWAYS (INCLUDING TEMPORARY TRAVELED WAYS) WITH REVERSE CURVATURE, CURVATURE OF OVER 5 DEGREES OR WHEN DIRECTED BY THE ENGINEER TO MARK UNUSUAL ALIGNMENT OF THE TRAVELED WAY.
2. NO PASSING ZONE TEMPORARY PAVEMENT MARKING IS REQUIRED TO BE PLACED, WHERE APPROPRIATE, ALONG WITH CENTERLINE TEMPORARY PAVEMENT MARKING WHEN A SAME DAY PERMANENT PAVEMENT MARKING ITEM IS INCLUDED IN THE CONTRACT.
3. NO PASSING ZONE MARKINGS ARE PLACED ACCORDING TO "T" MARKINGS. IF EXISTING NO PASSING ZONE W14-3 SIGNS ARE BEYOND 50 FEET IN EITHER DIRECTION, THE SIGNS SHALL BE MOVED TO THE "T" MARKINGS.
4. CONCRETE ONLY.

NOTE

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL



WET REFLECTIVE TAPE SUPPLEMENT TO
SPRAYED OR NON WET REFLECTIVE TAPE LANE LINE

LEGEND

"T" MARKING

POST MOUNTED SIGN

PAVEMENT MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

5-13-2013
DATE

/S/ Travis Feltes
STATE TRAFFIC E

FHWA

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S.D.D. 15 C 8-16a

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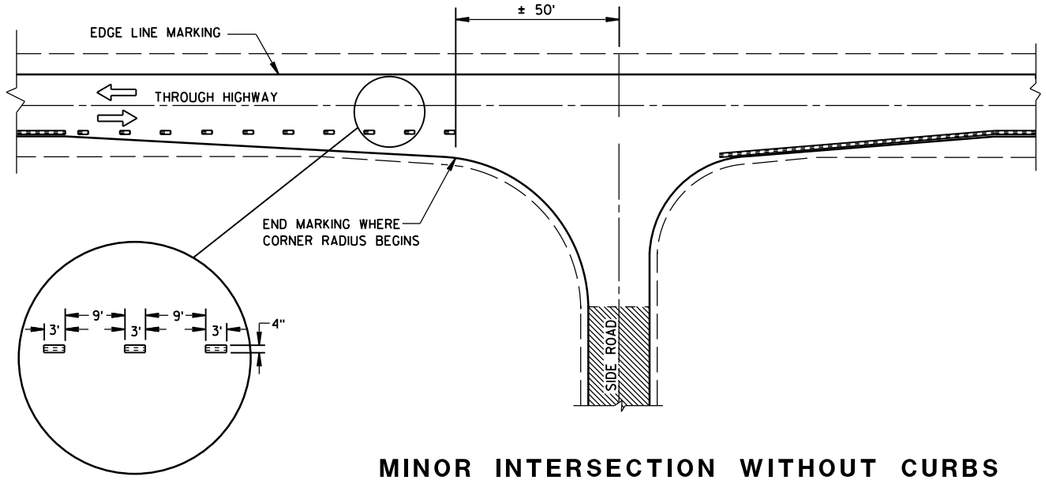
S.D.D. 15 C 8-16a



MINOR INTERSECTION WITHOUT CURBS

GENERAL NOTES

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

(1) WHEN DISTANCE "A" IS LESS THAN 250 FEET, OMIT LANE LINE.

(2) WHEN DISTANCE "B" IS LESS THAN 100 FEET, OMIT CHANNELIZING LANE LINE.

(3) ALTERNATIVE MARKING SHALL BE PROVIDED WHEN SPECIFIED IN THE CONTRACT. TYPICAL SITUATIONS WHERE THIS MARKING MAY BE REQUIRED ARE WHERE THE INTERSECTION IS ON A SHARP HORIZONTAL CURVE OR CREST VERTICAL CURVE IN AN UNLIGHTED AREA SUCH THAT THE EDGE LINE MAY BE MISLEADING TO THE MOTORIST OR DISAPPEAR FROM SIGHT.

(4) THE EDGE LINE IN THE TAPER AREAS OF THE BYPASS LANE AND THE BYPASS LANE SHALL BE LOCATED 1-FOOT FROM EDGE OF PAVEMENT TO THE OUTSIDE EDGE OF EDGE LINE.

(5) BARRIER LINE ENDS AT SIDE ROAD PAVEMENT/SURFACE EDGE EXTENSION.

(6) BARRIER LINE STARTS 500 FEET PRIOR TO THE BYPASS TAPER.

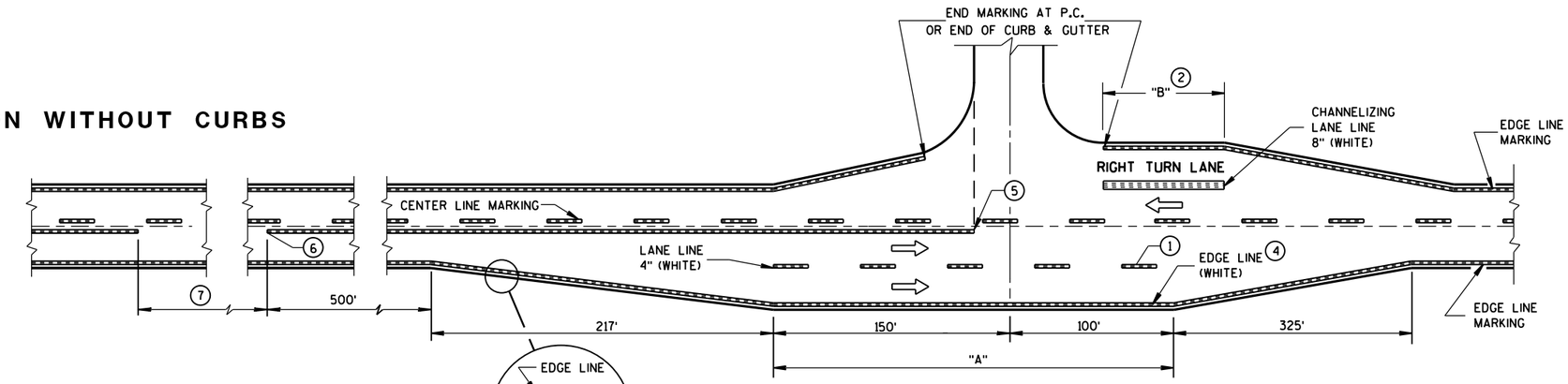
(7) IF THE DISTANCE BETWEEN 2 SUCCESSIVE NO-PASSING ZONES IS LESS THAN THE MINIMUM DISTANCE BETWEEN ZONES, CONNECT THE 2 ZONES.

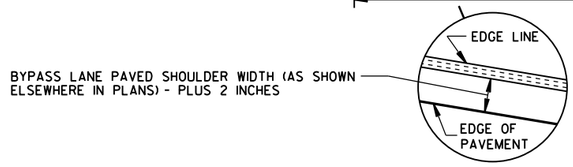
(8) 3' LINE 9' GAP, EXCEPT RETRACE THE EXISTING LINE - GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE.

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL

(7)

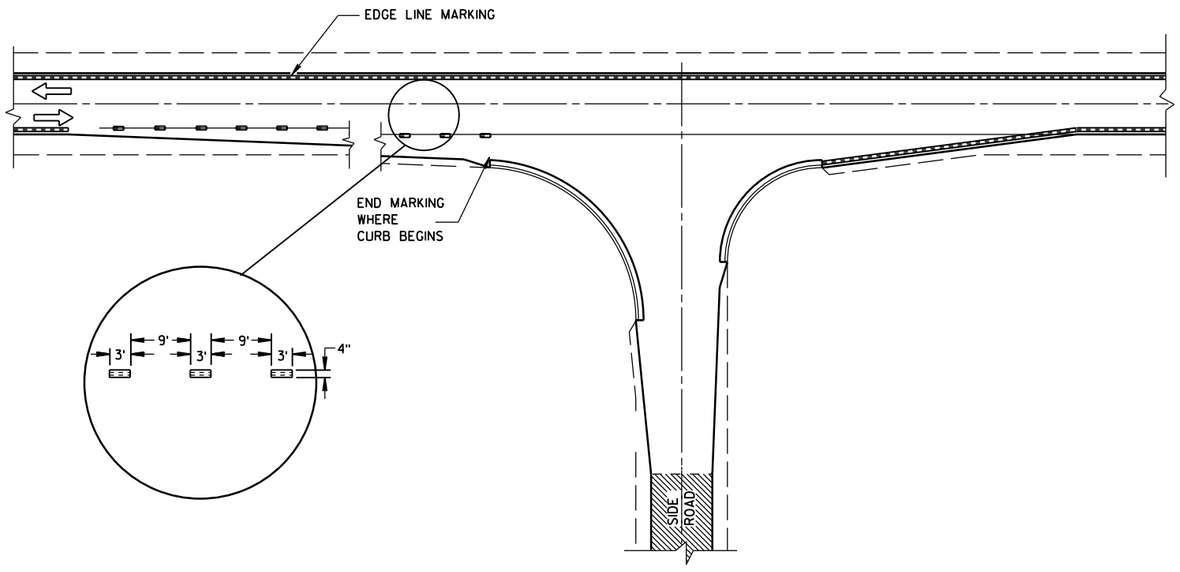
POSTED SPEED (MPH)	MINIMUM DISTANCE BETWEEN ZONES (FEET)
25 - 30	528
35 - 40	528
45 - 50	686
55	792





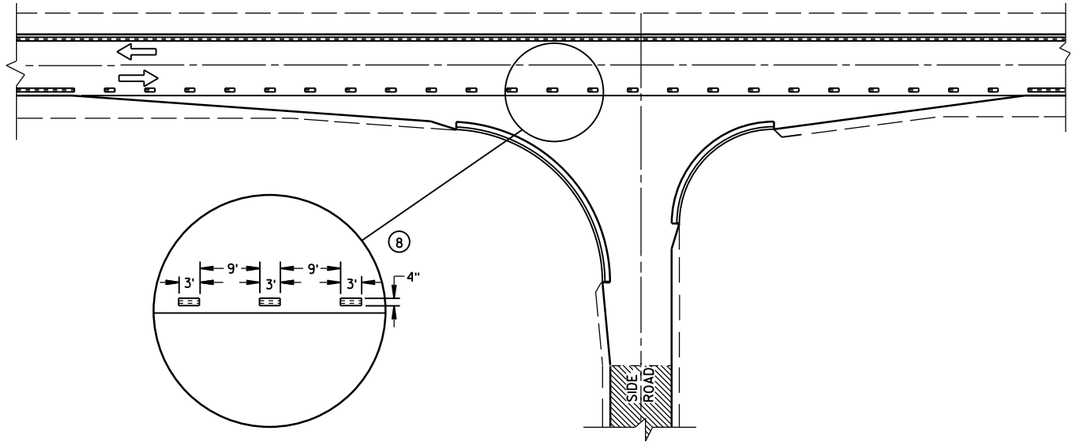
MAJOR INTERSECTIONS

(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANES)



MINOR INTERSECTION WITH CURBS

(TYPICAL MARKING)



MINOR INTERSECTION WITH CURBS

(3) (FOR SPECIAL CONDITIONS AS SPECIFIED)

PAVEMENT MARKING
(INTERSECTIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

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S.D.D. 15 C 8-16b

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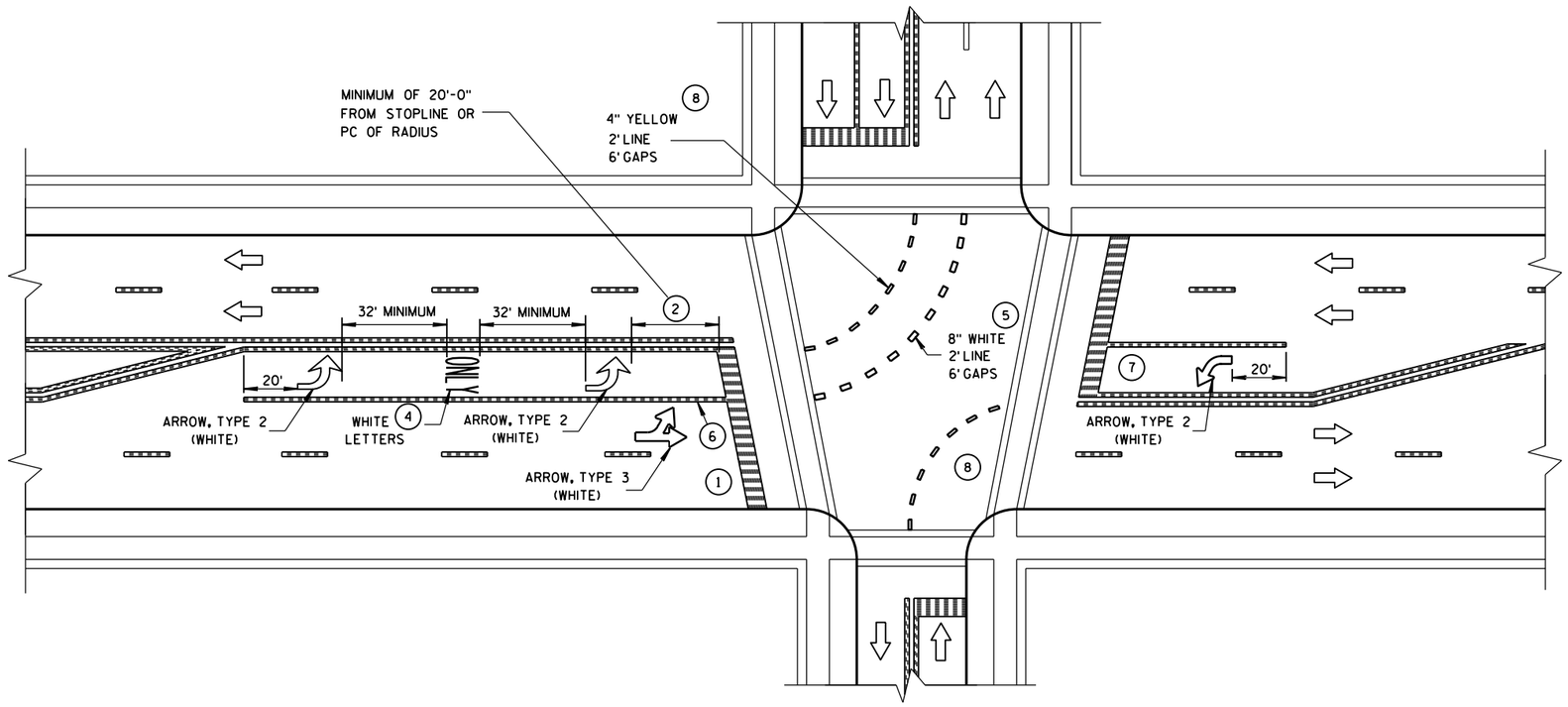
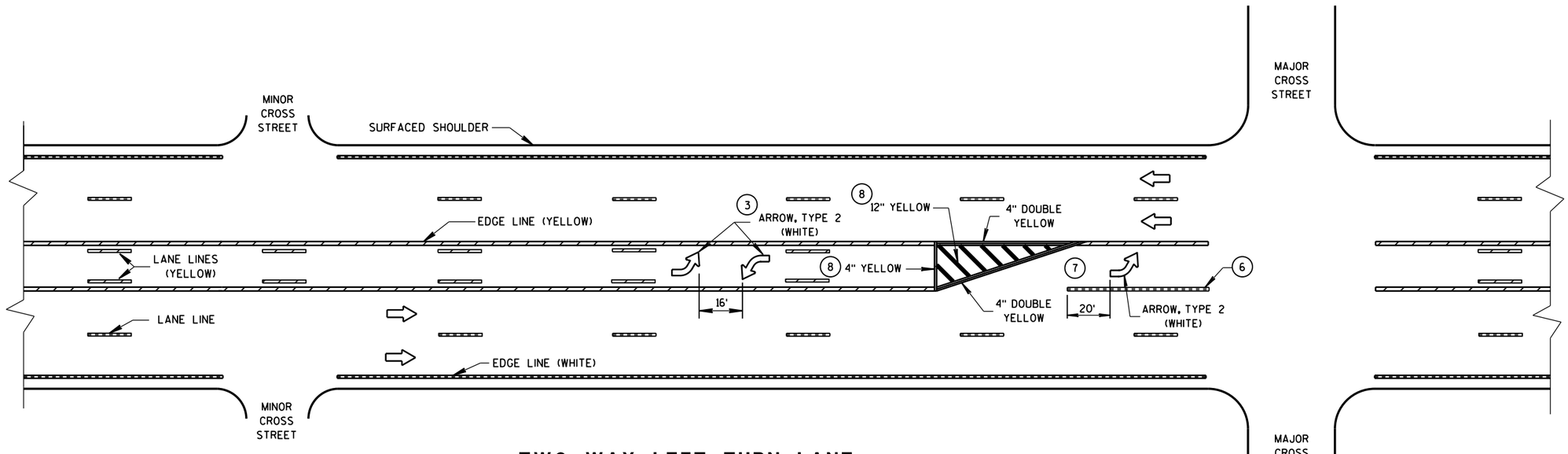
S.D.D. 15 C 8-16b



GENERAL NOTES

1. STOP BAR IS REQUIRED ONLY WHEN SPECIFIED IN THE CONTRACT.
2. DISTANCE MAY BE ADJUSTED TO ACCOMODATE SHORT LEFT TURN LANES. AS APPROVED BY THE ENGINEER.
3. A SET OF ARROWS IS REQUIRED EVERY 400 FEET OR NEAR INTERSECTIONS OR DRIVEWAYS WITH TURNING TRAFFIC.
4. ADD EXTRA SETS OF ONE ARROW AND ONE ONLY PER 160 FEET OR WHEN ON A CURVE.
5. 8" WHITE WITH 2' LINE 6' GAPS FOR DUAL TURN LANE.
6. 8" WHITE
7. ADD SECOND ARROW WHEN TURN BAY IS GREATER THAN OR EQUAL TO 108 FEET.
8. REQUIRED ONLY WHEN SPECIFIED IN THE CONTRACT.

NOTE:
ARROW SYMBOL (⇨)
SHOWS DIRECTION OF TRAVEL



TWO WAY LEFT TURN LANE

PAVEMENT MARKING (LEFT TURN LANE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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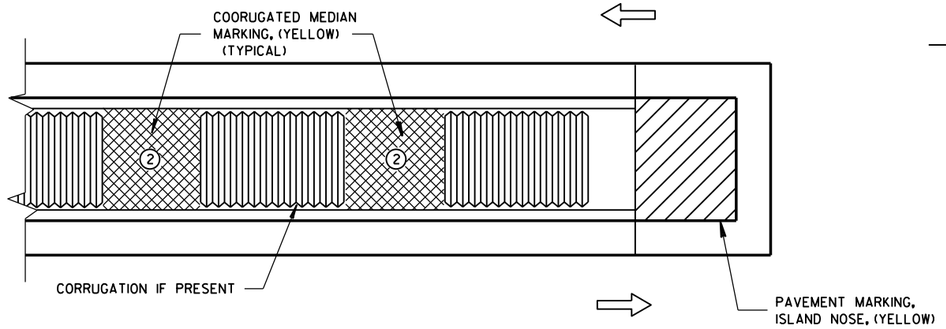
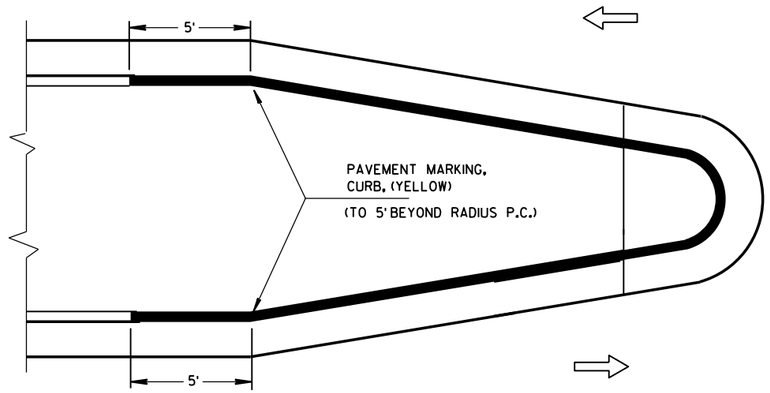
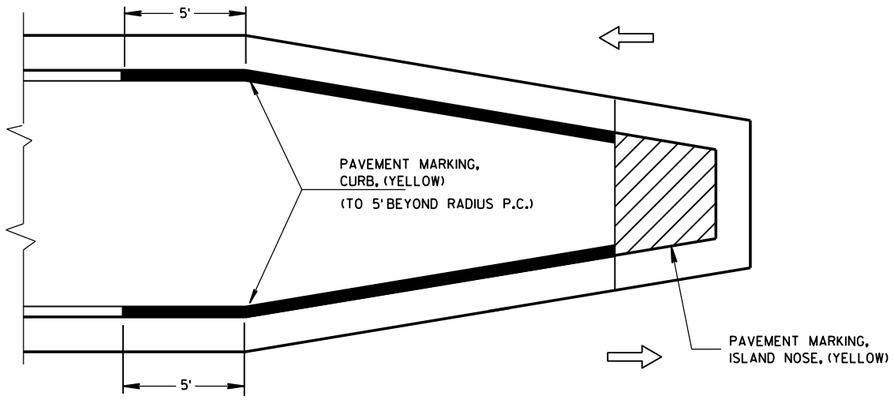


MEDIAN ISLAND WITH SQUARE BLUNT NOSE

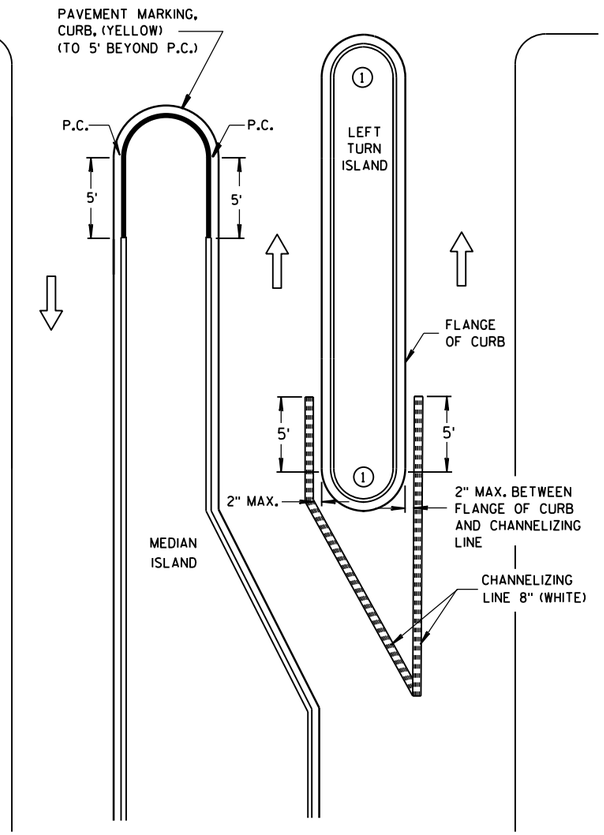


MEDIAN ISLAND WITH ROUND BLUNT NOSE



MEDIAN ISLAND WITH SLOPED NOSE

TYPICAL PLACEMENT OF PAVEMENT MARKING ON MEDIAN ISLANDS

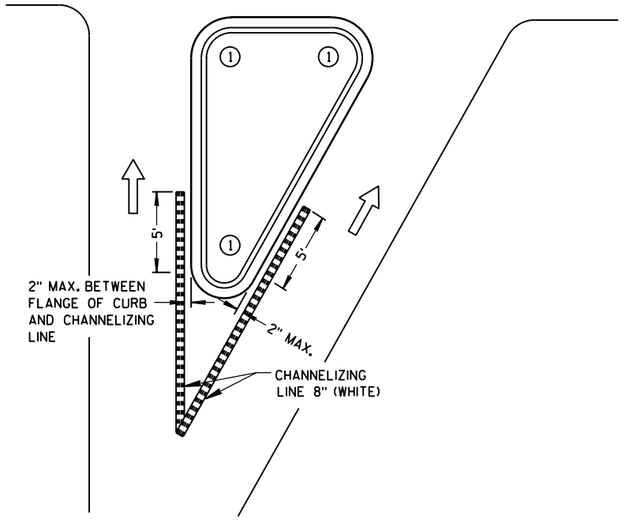


LEFT TURN & MEDIAN ISLAND

GENERAL NOTES

1. DO NOT MARK CURB NOSES THAT SEPARATE LANES OF TRAFFIC TRAVELING IN THE SAME DIRECTION.

2. WHEN CONCRETE CORRUGATED MEDIAN IS CONSTRUCTED TO SEPARATE TRAFFIC OPERATING IN THE OPPOSING DIRECTION YELLOW PAVEMENT MARKING SHALL BE APPLIED TO THE FLAT PORTION OF THE CONCRETE CORRUGATED MEDIAN. THE ITEM OF PAVEMENT MARKING, CONCRETE CORRUGATED MEDIAN, WILL BE MEASURED IN PLACE AND AND ACCEPTED IN ACCORDANCE WITH THE CONTRACT AND PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE FOOT.



RIGHT TURN ISLAND

LEGEND

- ISLAND NOSE MARKING
- CURB MARKING
- CORRUGATED MEDIAN MARKING
- DIRECTION OF TRAVEL

PAVEMENT MARKING
(ISLANDS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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S.D.D. 15 C 8-16f

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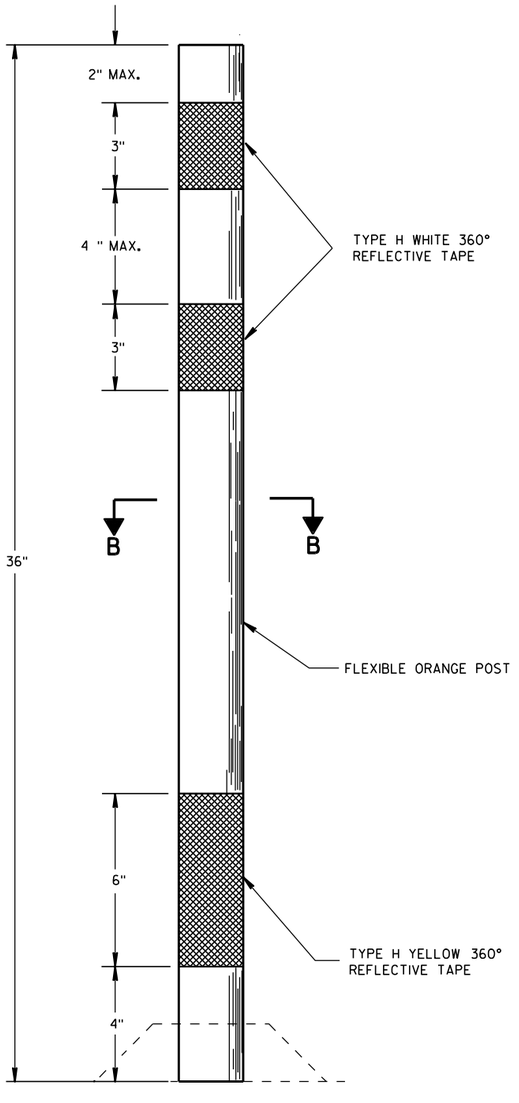
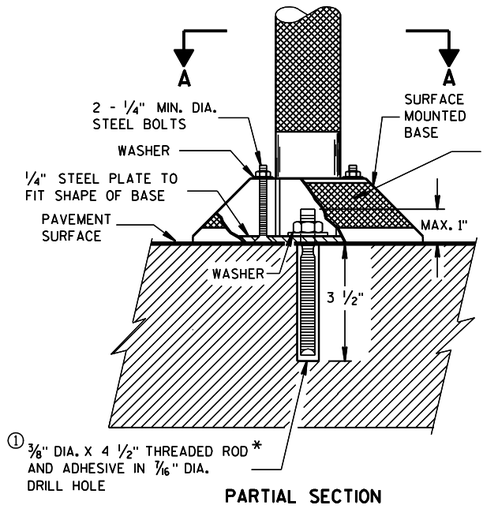
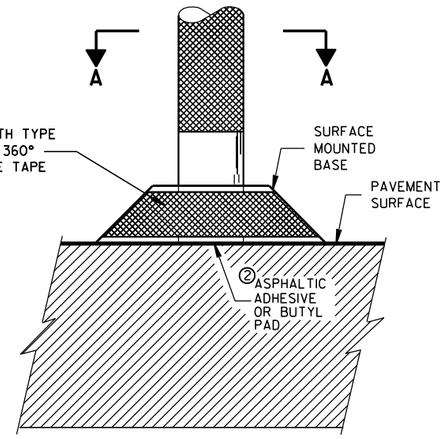


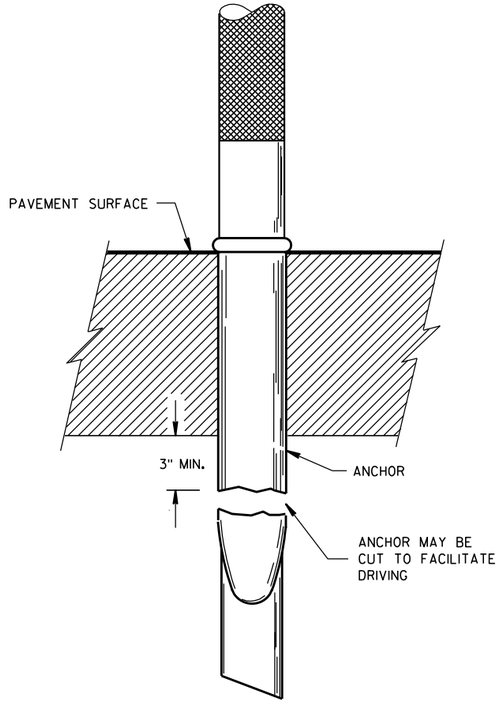
FLEXIBLE TUBULAR MARKER POST



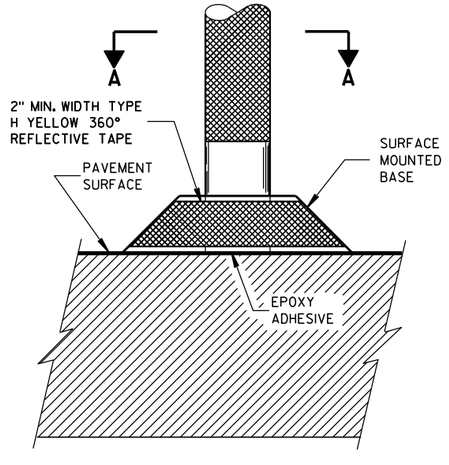
PARTIAL SECTION TO SHOW BOLTS



POST BASES ON NEW OR EXISTING PAVEMENT



POST ANCHOR AND BASE ON PAVEMENT WHICH WILL BE REMOVED



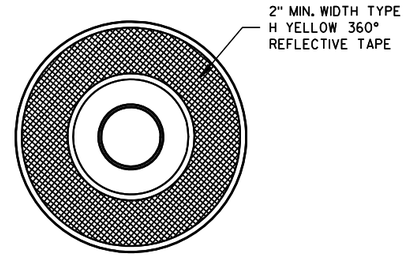
GENERAL NOTES

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

SURFACE MOUNTED BASES SHALL BE FURNISHED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS TO BE COMPATIBLE WITH FLEXIBLE TUBULAR MARKER POSTS TO A SIZE AND SHAPE THAT WILL PROVIDE A STABLE POST FOUNDATION WHEN SECURED TO THE PAVEMENT.

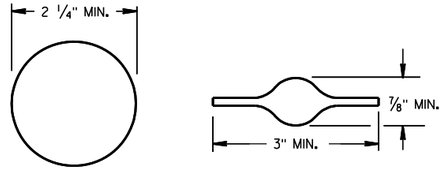
① THREADED ROD SHALL BE MACHINED DOWN TO 0.280 INCH DIA. 1 1/4 INCHES FROM THE TOP.

② THE ASPHALTIC ADHESIVE OR BUTYL PAD FURNISHED SHALL BE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.



SECTION A-A

SURFACE MOUNTED BASE



SECTION B-B

ALTERNATIVE SHAPES

FLEXIBLE TUBULAR MARKER POST, ANCHOR & BASES
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION
APPROVED 2/17/94 DATE /S/ Chester J. [illegible] DIRECTOR, OFFICE O
FHWA

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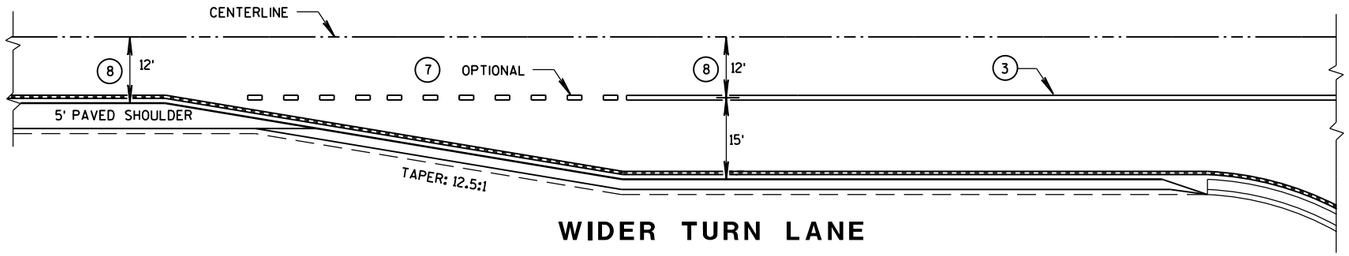
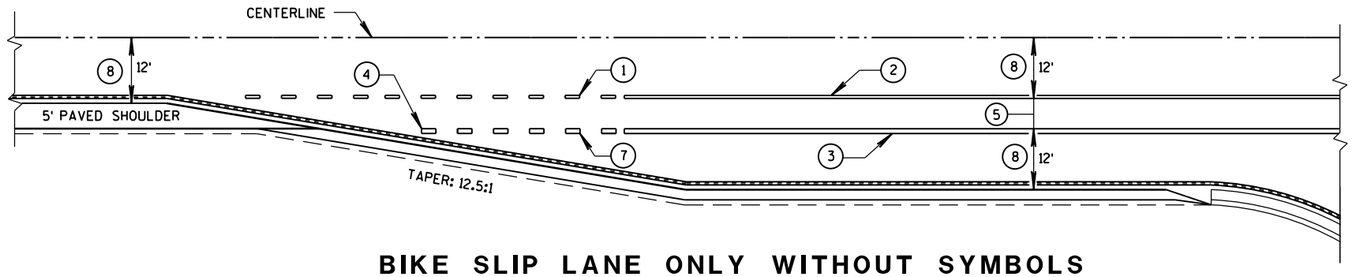
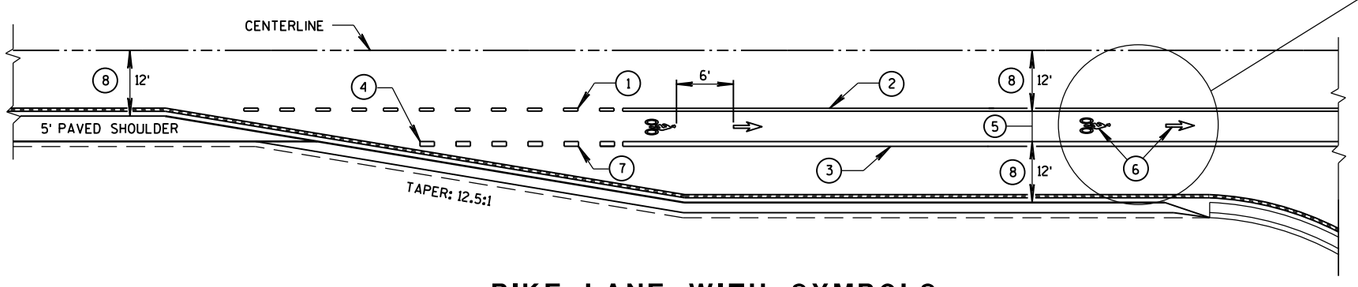
S.D.D. 15 C 11-5



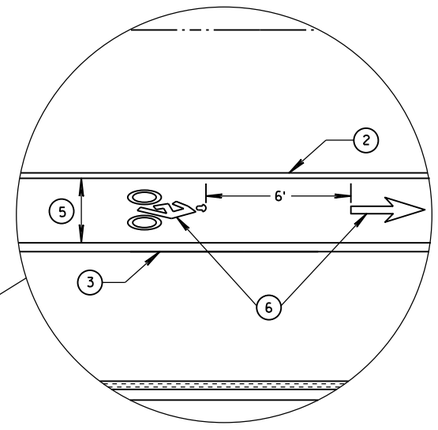
WIDER TURN LANE



BIKE SLIP LANE ONLY WITHOUT SYMBOLS



BIKE LANE WITH SYMBOLS



GENERAL NOTES

1. 3' LINE, 9' GAP - 4-INCH WIDE, WHITE.
2. 4-INCH, WHITE.
3. 8-INCH, WHITE.
4. IF SIGNED AND/OR MARKED AS A BICYCLE FACILITY INCLUDE SECOND LINE OF LINE-SPACE MARKING, OTHERWISE DO NOT.
5. BIKE ACCOMMODATION FOR CONCRETE PAVEMENT IS 5' WIDE.
   BIKE ACCOMMODATION FOR ASPHALT PAVEMENT IS A MINIMUM OF 4', 5' AT ≥ 45 MPH.
6. REQUIRED ONLY WHEN SPECIFIED IN THE CONTRACT.
7. 3' LINE, 9' GAP - 8-INCH WIDE, WHITE.
8. REFER TO CONTRACT PLANS.

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S.D.D. 15 C 29-3a

BICYCLE LANE MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

4/30/2013
DATE

/S/ Travis Feltes
STATE TRAFFIC E

FHWA

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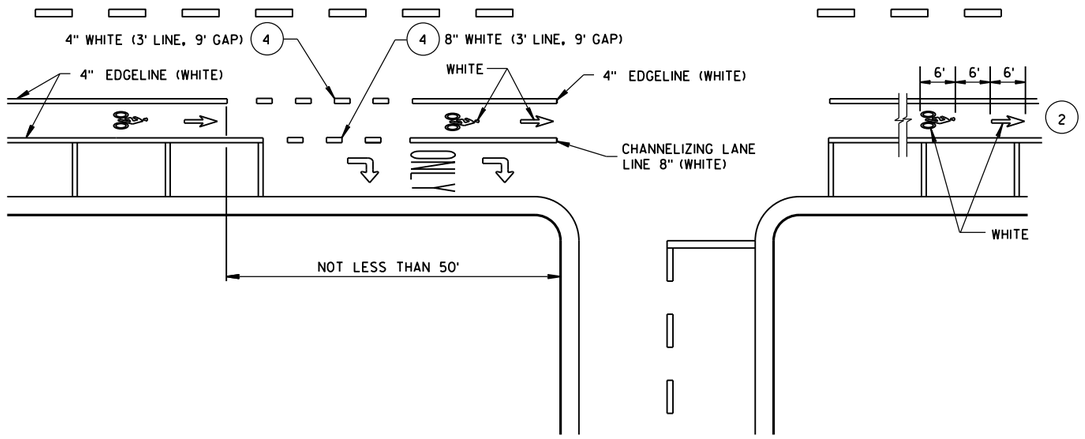
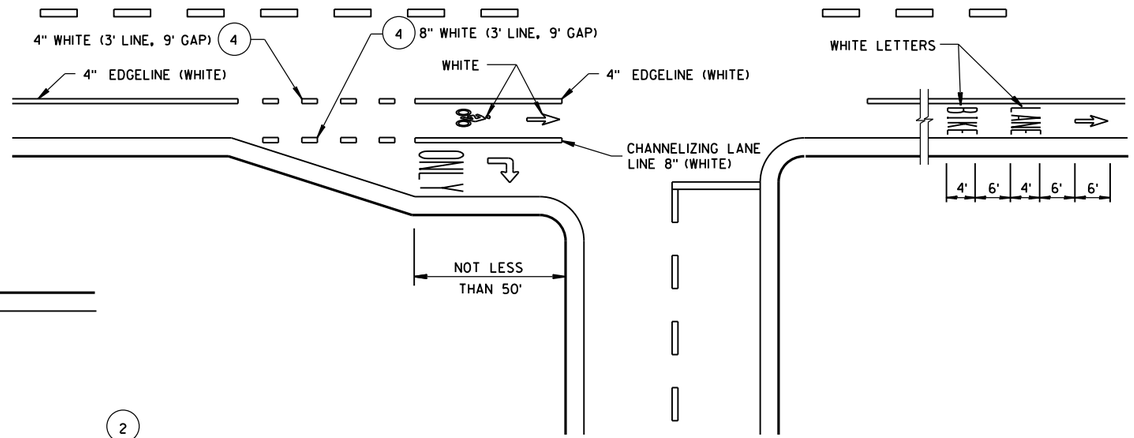
S.D.D. 15 C 29-3a



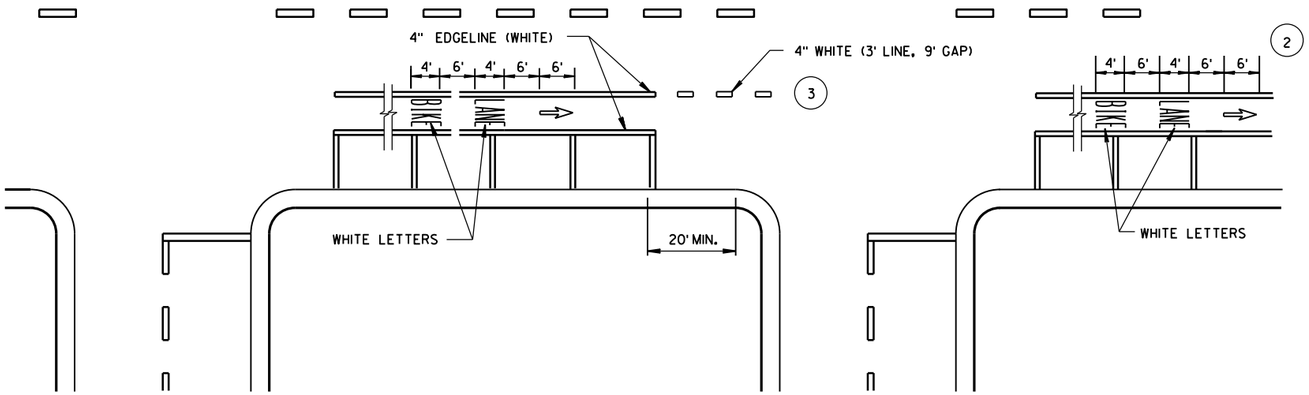
DESIGNATED BICYCLE LANE

GENERAL NOTES

1. DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.
2. THE SERIES OF PAVEMENT MARKING SYMBOLS SHALL BE REPEATED AFTER INTERSECTIONS AND SPACED A MAXIMUM OF 250'. NO PAVEMENT MARKING WILL TAKE PLACE IN THE CROSSWALK.
3. DOTTED LINES SHOULD BE USED 50' TO 200' IN ADVANCE OF AN INTERSECTION WHERE THERE IS NO RIGHT TURN ONLY LANE AND THERE IS HEAVY RIGHT TURN TRAFFIC OR THERE IS A NEAR-SIDE BUS STOP. AT OTHER INTERSECTIONS WHERE RIGHT TURN TRAFFIC IS LIGHT TO MODERATE, A SOLID LINE CAN BE USED UP TO THE INTERSECTION.
4. WHEN SPECIFIED IN THE CONTRACT.



DESIGNATED BICYCLE LANE
NO PARKING, RIGHT TURN LANE



DESIGNATED BICYCLE LANE
WITH PARKING, NO RIGHT TURN LANE

URBAN BICYCLE LANE MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4/30/2013 DATE
/S/ Travis Feltes
STATE TRAFFIC E
FHWA

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S.D.D. 15 C 29-3c

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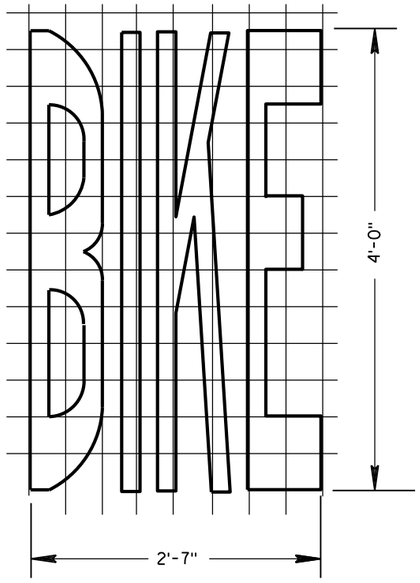
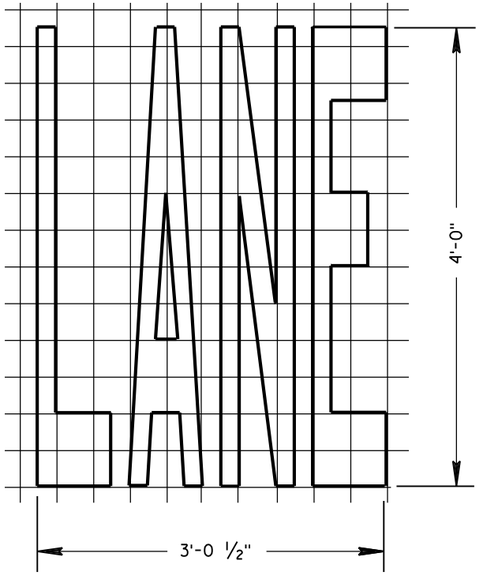
S.D.D. 15 C 29-3c

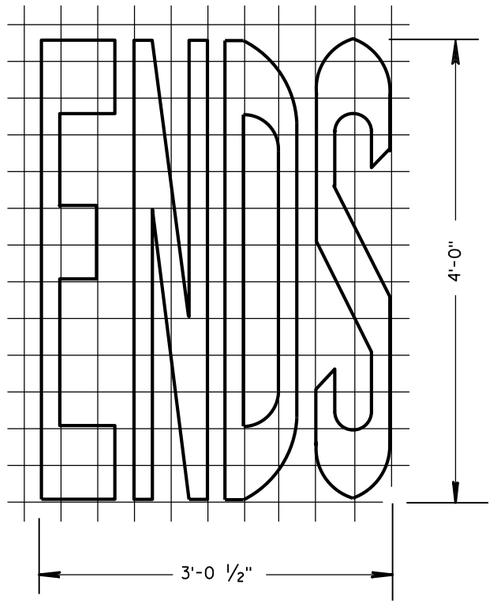
GENERAL NOTES

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

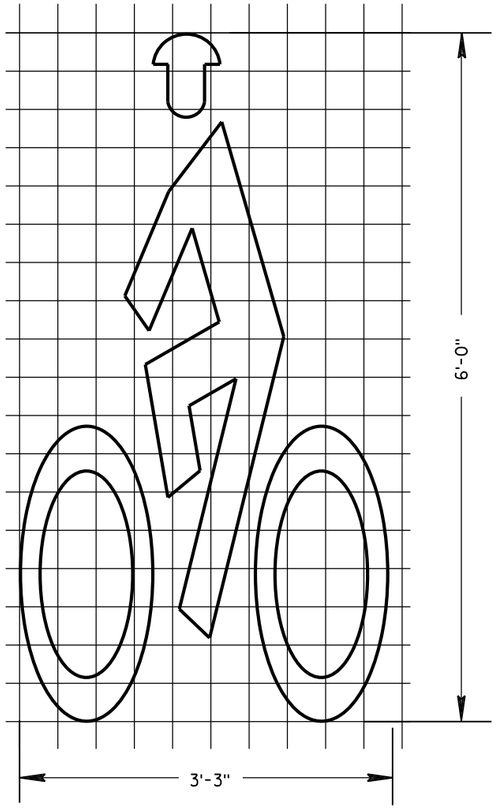
ALL LETTERS, ARROWS AND SYMBOLS SHALL BE IN CONFORMANCE WITH REQUIREMENTS INCLUDED IN "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKING" BOOK BY THE FEDERAL HIGHWAY ADMINISTRATION. ALL LETTERS, ARROWS AND SYMBOLS SHALL BE WHITE AND REFLECTORIZED. SMALL DIFFERENCES IN DIMENSIONS WITHIN THE TOLERANCES OF THAT BOOK ARE ACCEPTABLE.



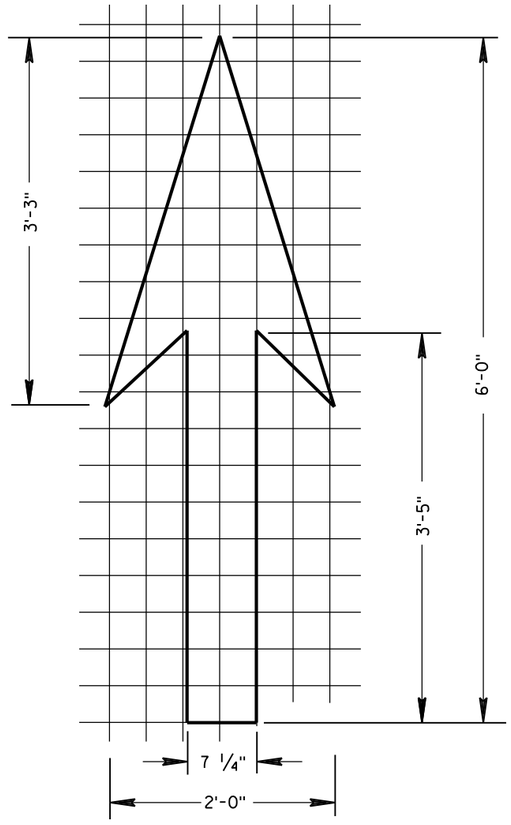




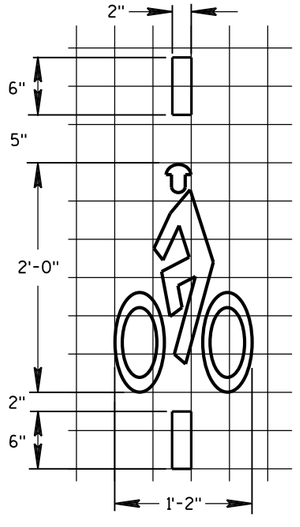
BIKE LANE WORDS



BIKE LANE SYMBOL



BIKE LANE ARROW



BICYCLE DETECTOR PAVEMENT MARKING

PAVEMENT MARKING FOR BIKE LANES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4-30-2013
DATE

/S/ Travis Feltes
STATE TRAFFIC EN

FHWA

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S.D.D. 15 C 29-3e

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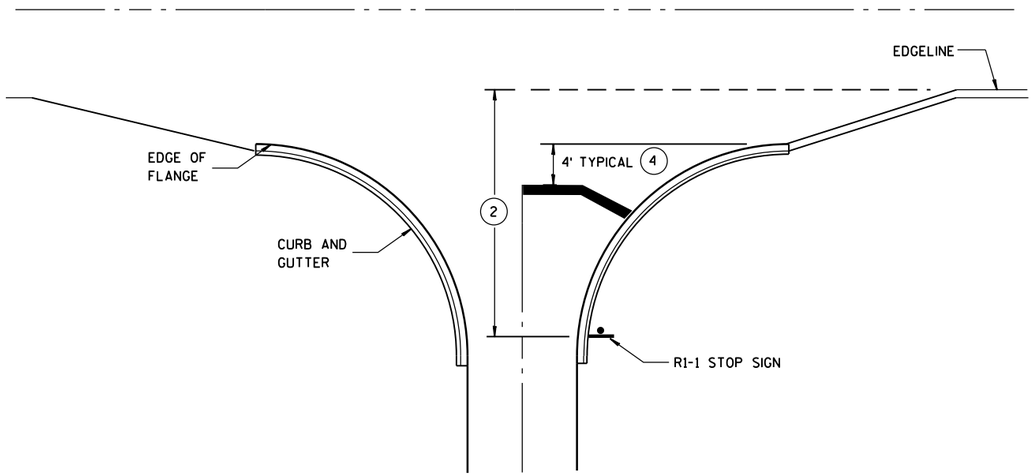
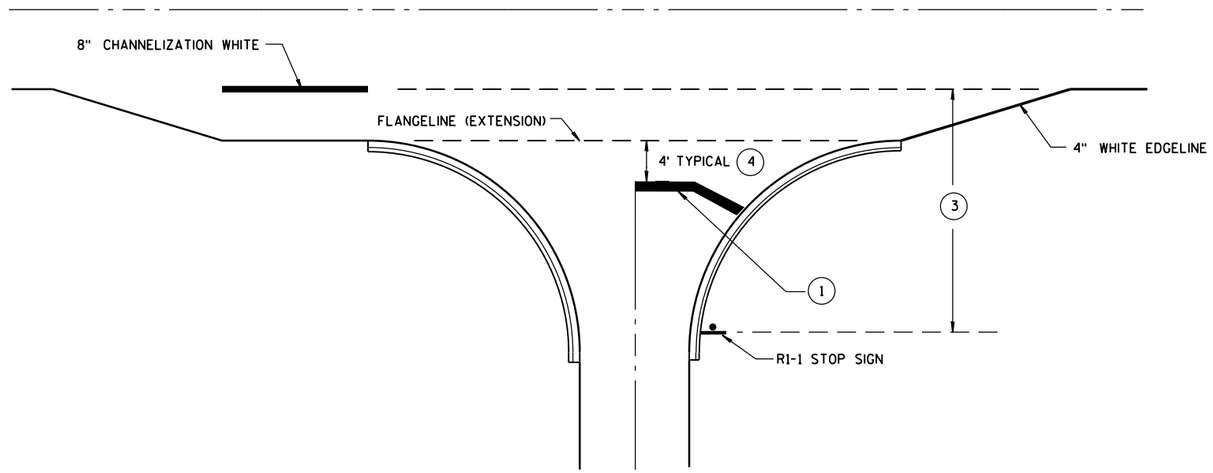
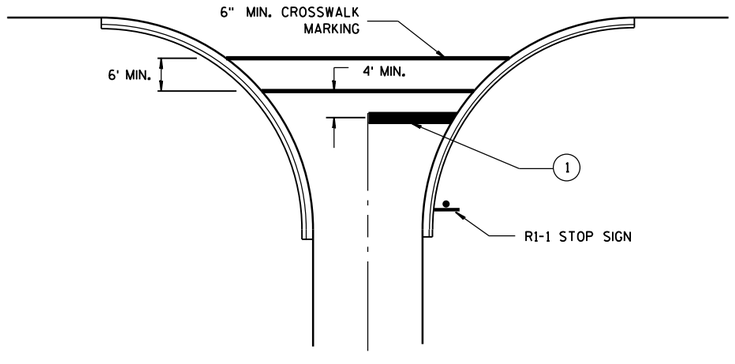


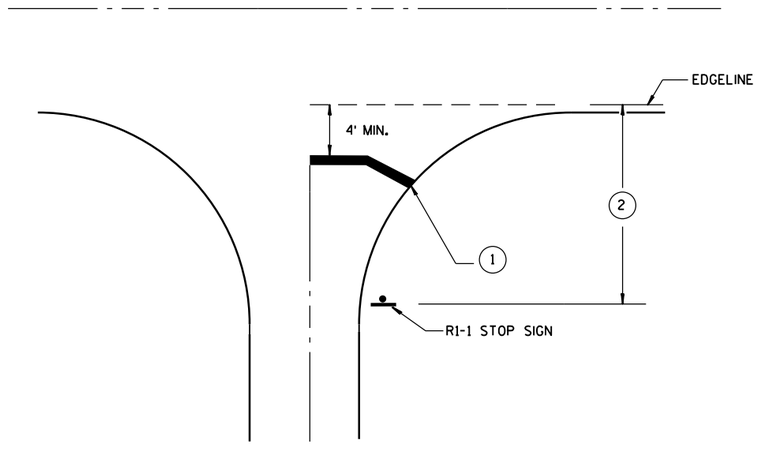
TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER



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.

STOP LINE AND CROSSWALK PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

4/30/2013
DATE

/S/ Travis Feltes
STATE TRAFFIC E

FHWA

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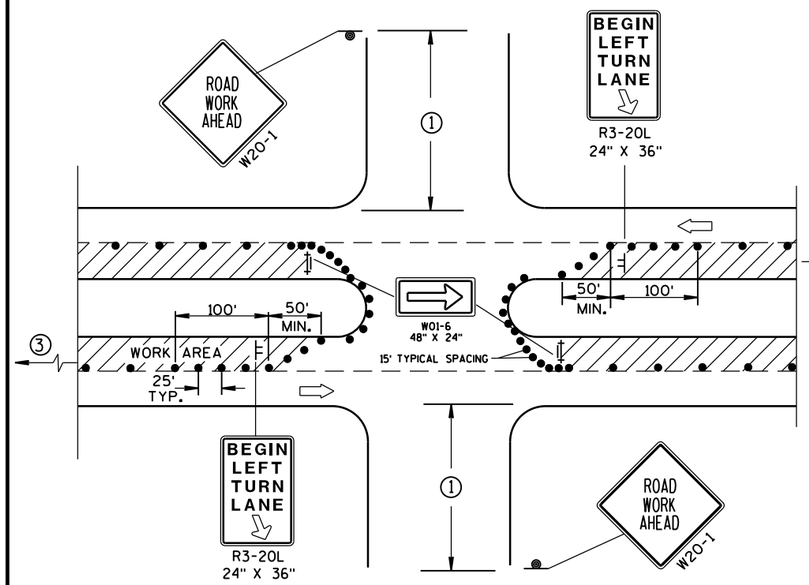
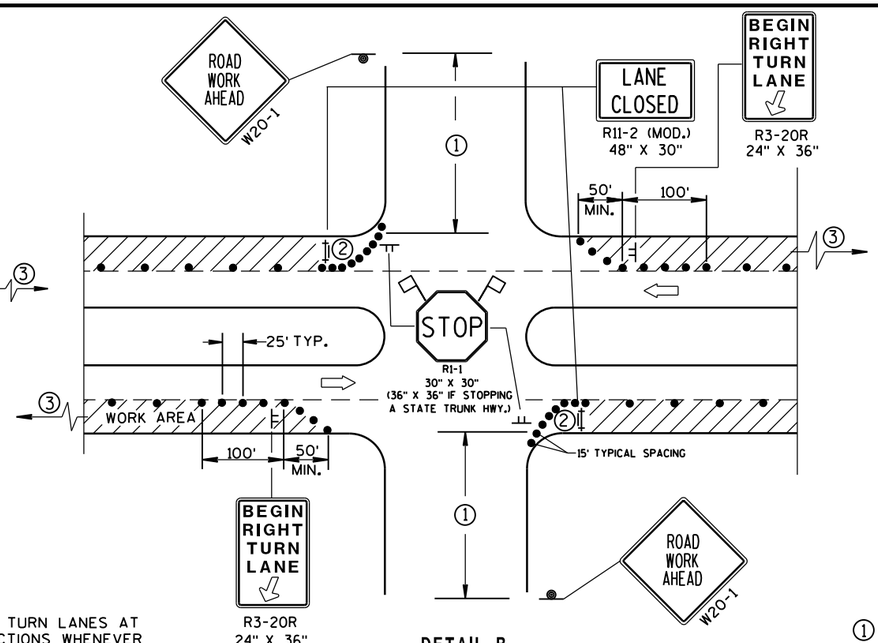


DETAIL A

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.

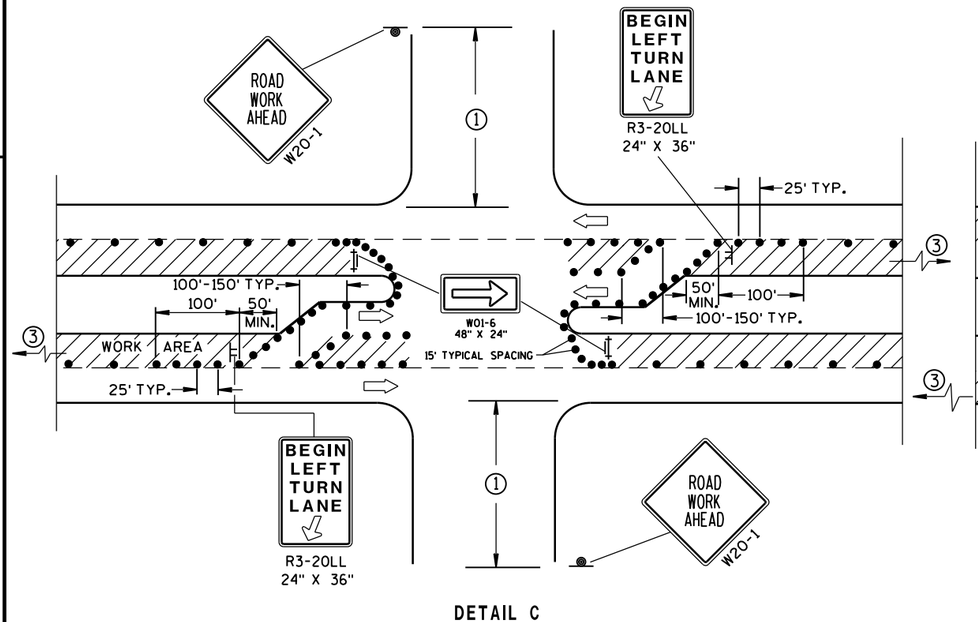
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

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.

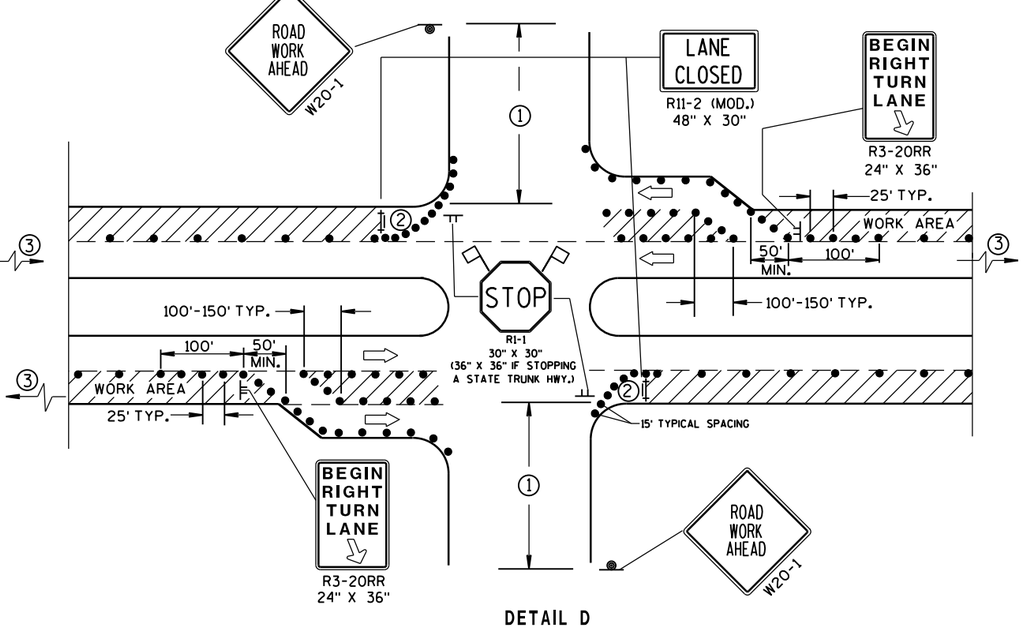
② ALSO USE BARRICADE AND 15-FOOT TYPICAL DRUM SPACING AT COMMERCIAL DRIVEWAYS.

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

8/2013 — DATE

/S/ Travis Feltes — STATE TRAFFIC ENGINEER

FHWA

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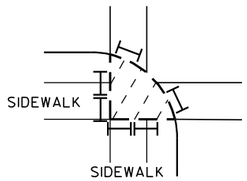
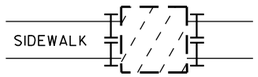
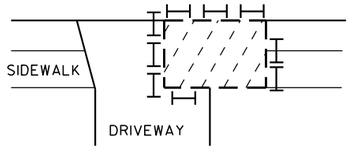
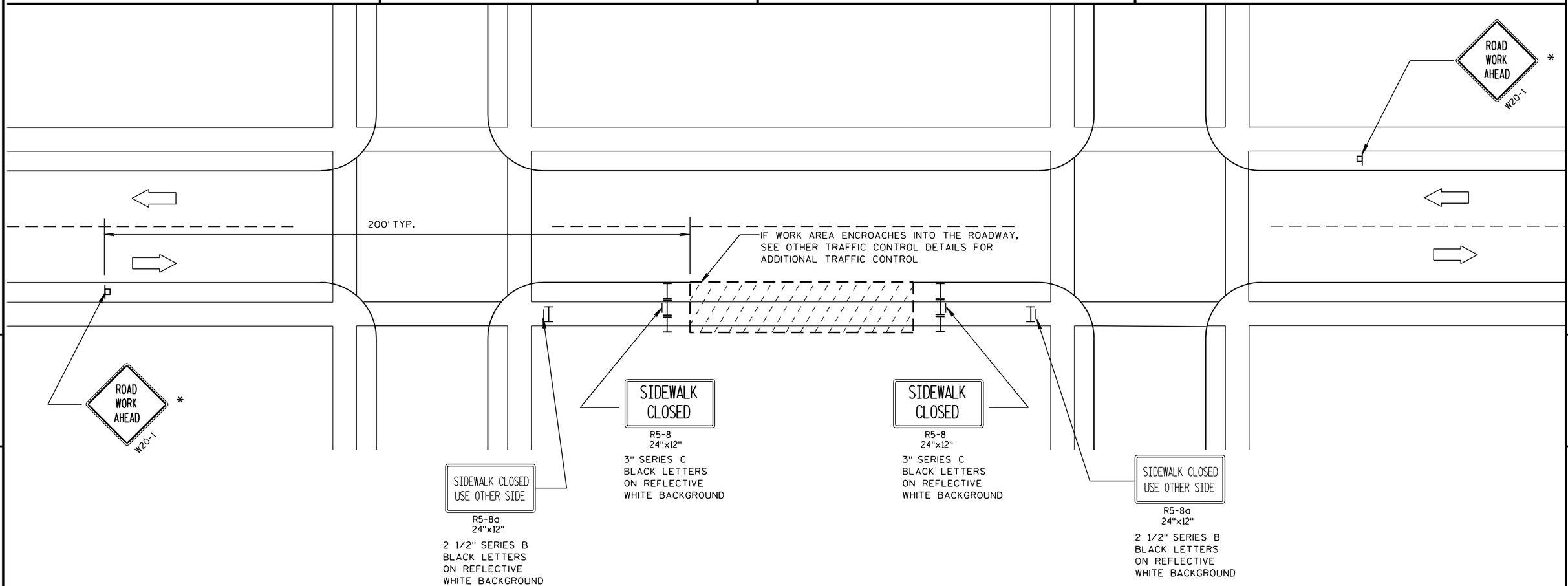
S.D.D. 15 D 21-2

WARNING OF LOCALIZED SIDEWALK WORK AREAS









LEGEND

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

GENERAL NOTES :

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS, 36"x36" SIGNS MAY BE USED INSTEAD OF 48"x48" SIGNS, IF APPROVED BY DISTRICT TRAFFIC UNIT.

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

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

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

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

TRAFFIC CONTROL, SIDEWALK CLOSURE

TRAFFIC CONTROL, SIDEWALK CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

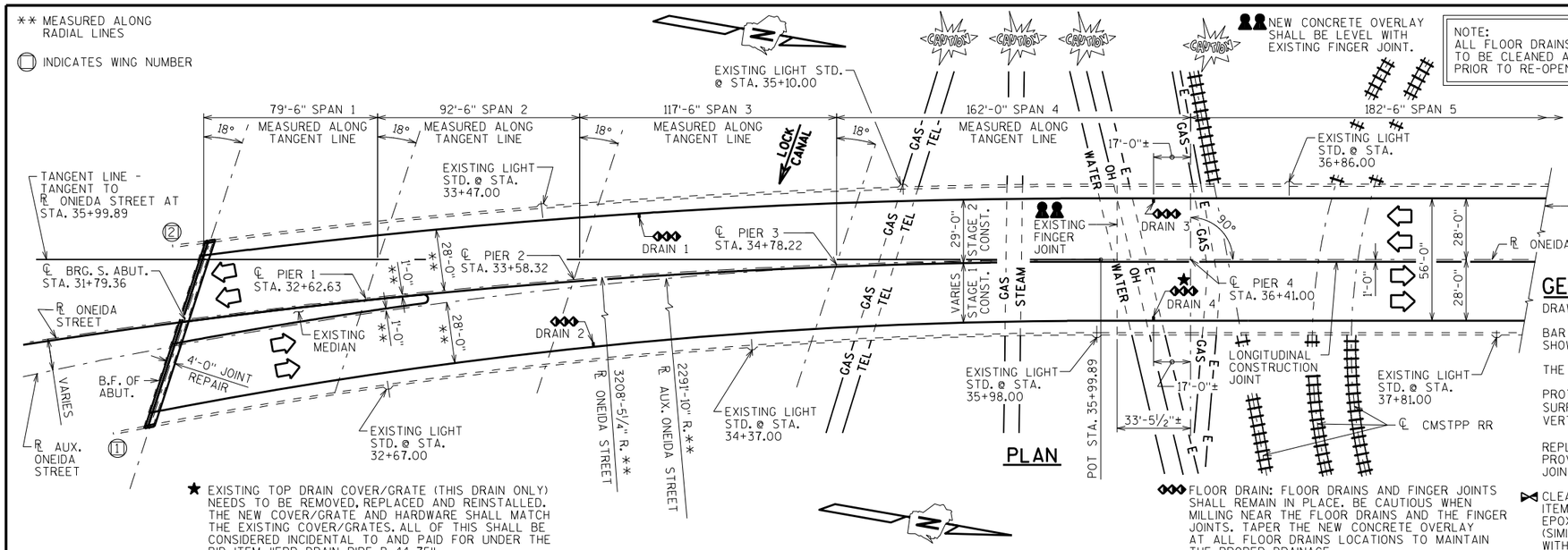
APPROVED
5/23/2000 DATE
/S/ Chester J. [illegible]
CHIEF SIGNS AND MARK[illegible]NEER
FHWA

6

S.D.D. 15 D 30-1

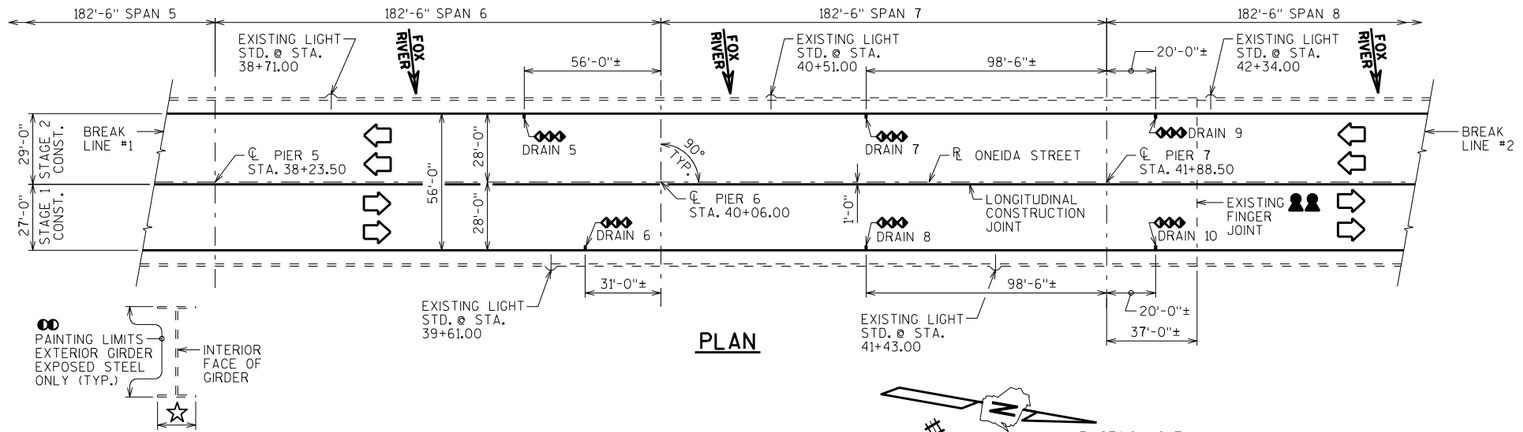
** MEASURED ALONG RADIAL LINES

(2) INDICATES WING NUMBER



★ EXISTING TOP DRAIN COVER/GRATE (THIS DRAIN ONLY) NEEDS TO BE REMOVED, REPLACED AND REINSTALLED. THE NEW COVER/GRATE AND HARDWARE SHALL MATCH THE EXISTING COVER/GRATES. ALL OF THIS SHALL BE CONSIDERED INCIDENTAL TO AND PAID FOR UNDER THE BID ITEM "FRP DRAIN PIPE B-44-75".

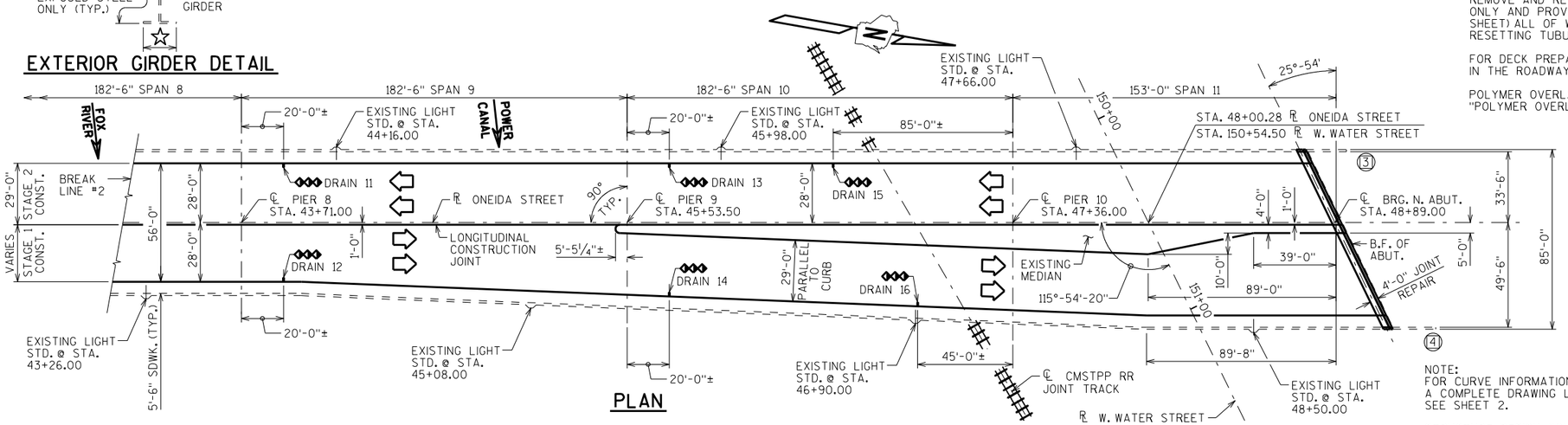
◆◆◆ FLOOR DRAIN: FLOOR DRAINS AND FINGER JOINTS SHALL REMAIN IN PLACE. BE CAUTIOUS WHEN MILLING NEAR THE FLOOR DRAINS AND THE FINGER JOINTS. TAPER THE NEW CONCRETE OVERLAY AT ALL FLOOR DRAINS LOCATIONS TO MAINTAIN THE PROPER DRAINAGE.



PAINTING LIMITS EXTERIOR GIRDER EXPOSED STEEL ONLY (TYP.)

INTERIOR FACE OF GIRDER

EXTERIOR GIRDER DETAIL



NOTE:
FOR CURVE INFORMATION AND A COMPLETE DRAWING LIST SEE SHEET 2.

STRUCTURE DESIGN CONTACT:
MATT COUPAR (608) 266-5083
AARON BONK (608) 261-0261

NOTE:
ALL FLOOR DRAINS AND DOWNSPOUTS ARE TO BE CLEANED AND FREED OF **ALL DEBRIS**, PRIOR TO RE-OPENING THE BRIDGE.

STATE PROJECT NUMBER

4984-07-71

DESIGN DATA

LIVE LOAD:

INVENTORY RATING; HS-20
OPERATIONAL RATING; HS-34
MAXIMUM STANDARD PERMIT VEHICLE LOAD = 250 KIPS.

ULTIMATE DESIGN STRESSES:

CONCRETE MASONRY OVERLAY DECKS — f'c = 4,000 P.S.I.
BAR STEEL REINFORCEMENT, GRADE 60 — fy = 60,000 P.S.I.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO THE ENTIRE TOP OF DECK SURFACE, INCLUDING JOINT REPAIR SURFACE, TOP & SIDE SURFACES OF MEDIAN, VERTICAL SURFACE OF SIDEWALK AND TOP AND ROADWAY SIDE OF PARAPETS.

REPLACE ALL NEOPRENE DRAIN TROUGHS IN EXISTING FINGER JOINTS AND PROVIDE NEW HARDWARE AS REQUIRED. SEE BID ITEM "FINGER EXPANSION JOINT TROUGH B-44-75" FOR MORE INFORMATION.

⋈ CLEAN AND PAINT PIN AND HANGER ASSEMBLIES IN SPANS 4 & 8. SEE BID ITEM "HANGER ASSEMBLY" FOR MORE INFORMATION. THE COLOR OF THE FINISH EPOXY TOP COAT SHALL BE BROWN, FEDERAL STANDARD COLOR NO. 20059 (SIMILAR TO WEATHERING STEEL) OR SIMILAR COLOR APPROVED BY THE ENGINEER WITH THE EXCEPTION OF THE EXTERIOR FACE OF THE EXTERIOR GIRDERS. SEE EXTERIOR GIRDER DETAIL FOR MORE INFORMATION.

☆ POWER TOOL CLEAN AND PAINT THE FIRST SPLICE PLATE ON EXTERIOR GIRDERS NORTH OF THE NORTH PIN AND HANGER ASSEMBLY IN SPAN 8. THE COLOR OF THE FINISH TOP COAT SHALL BE BROWN, FEDERAL STANDARD COLOR NO. 20059 (SIMILAR TO WEATHERING STEEL) OR SIMILAR COLOR APPROVED BY THE ENGINEER.

◐◐ POWER TOOL CLEANING AND REPAINTING OF THE OUTSIDE OF THE EXTERIOR GIRDERS IS REQUIRED. THE COLOR OF THE FINISH EPOXY TOP COAT SHALL BE BLUE, FEDERAL STANDARD COLOR NO. 25240 OR SIMILAR COLOR APPROVED BY THE ENGINEER.

ALL FIELD CONNECTIONS SHALL BE MADE WITH ¾" DIAMETER A325 HIGH-TENSILE STRENGTH BOLTS UNLESS OTHERWISE SHOWN OR NOTED.

DIMENSIONS SHOWN ARE BASED ON THE EXISTING ORIGINAL STRUCTURE PLANS.

ANY EXCAVATION NECESSARY TO COMPLETE THE OVERLAY OR JOINT REPAIR AT THE ABUTMENTS IS TO BE CONSIDERED INCIDENTAL TO THE BID ITEM "CONCRETE MASONRY OVERLAY DECKS".

CONTACT THE BUREAU OF STRUCTURES BEFORE PLACEMENT OF OVERLAY IF THE AVERAGE THICKNESS OF THE NEW OVERLAY WILL EXCEED THE AVERAGE OVERLAY SHOWN ON THE PLANS BY MORE THAN ½".

A MINIMUM OF 1-INCH OF CONCRETE SHALL BE REMOVED FROM THE ENTIRE BRIDGE DECK UNDER THE BID ITEM "CLEANING DECKS".

REMOVE AND RESET THE EXISTING RAILINGS AT THE JOINT REPAIR LOCATIONS ONLY AND PROVIDE NEW STAINLESS STEEL HARDWARE (SEE PARAPET DETAILS SHEET) ALL OF WHICH SHALL BE INLCUDED IN THE BID ITEM "REMOVING AND RESETTING TUBULAR RAILING B-44-75".

FOR DECK PREPARATION LOCATIONS, SEE THE THERMOGRAPHY REPORT PROVIDED IN THE ROADWAY PLANS.

POLYMER OVERLAY TO BE APPLIED TO TOP OF SIDEWALKS. SEE BID ITEM "POLYMER OVERLAY" FOR MORE INFORMATION.

NO.	DATE	REVISION	BY

Plans Prepared By **WISDOT**
BUREAU OF STRUCTURES

ACCEPTED William C. Dreher 7/22/14
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-44-75

ONEIDA ST. OVER WATER ST./FOX RIVER/CMSTPP RR

COUNTY	OUTAGAMIE
~~TOWN~~/CITY/~~VILLAGE~~	APPLETON
DESIGN SPEC.	REHABILITATION N/A
DESIGNED BY	MSC
DESIGN CK'D.	NAR
DRAWN BY	DDS
PLANS CK'D.	MSC

CONCRETE OVERLAY

SHEET 1 OF 18

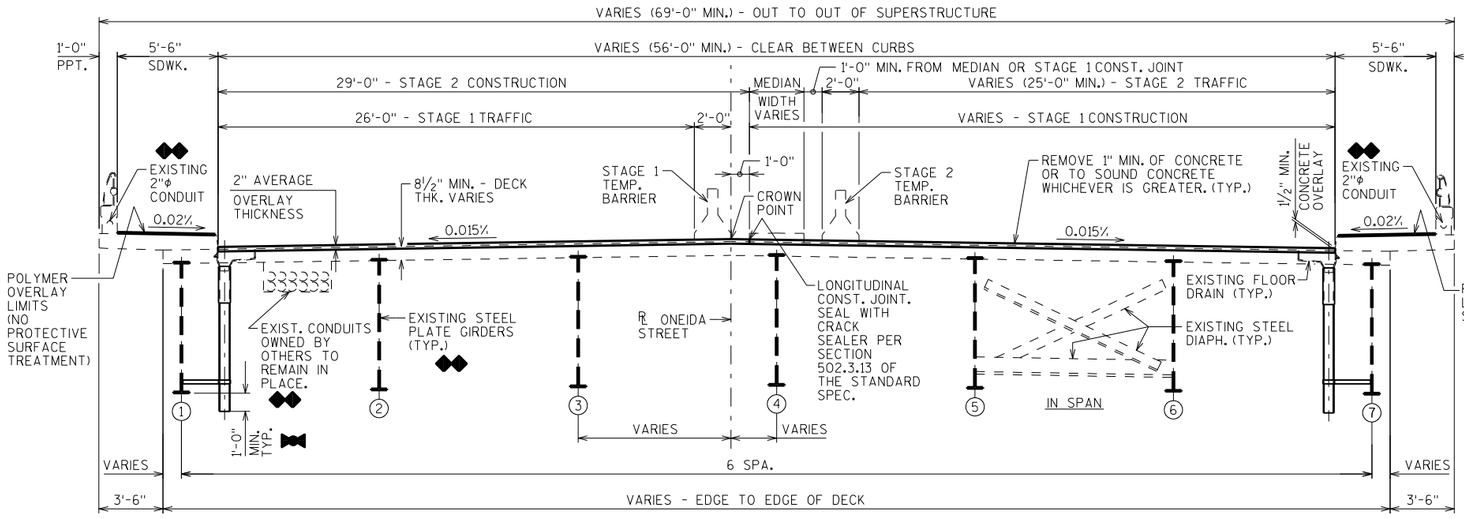
122

SCALE = 30

I.D. 4984-07-00

DATE: APRIL 2014

STATE PROJECT NUMBER
4984-07-71



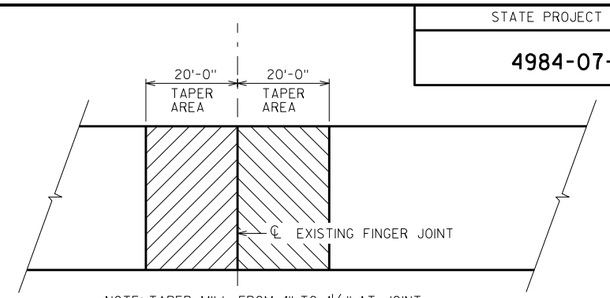
CROSS SECTION THRU ROADWAY (WITH MEDIAN) - LOOKING NORTH

SPANS 1, 2, 9, 10 & 11

NOTE: FOR DECK PREPARATION LOCATIONS IN THE DECK AND SIDEWALK SEE THE THERMOGRAPHY REPORT PROVIDED BY THE ENGINEER.

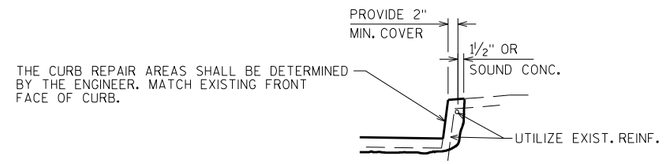
⋈ = EXCEPT AT SPAN 4/PIER #4 FOR THESE DETAILS SEE DRAINAGE SYSTEM DETAILS SHEET

◆◆ = CONTRACTOR SHALL PROVIDE PROTECTION FOR EXISTING GIRDERS, CONDUITS/CONDUIT HANGERS DURING JOINT REPAIR REMOVAL/WORK. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO BID ITEM "CONCRETE MASONRY OVERLAY DECKS".



FINGER JOINT MILLING DETAIL

TYP. AT BOTH FINGER JOINTS

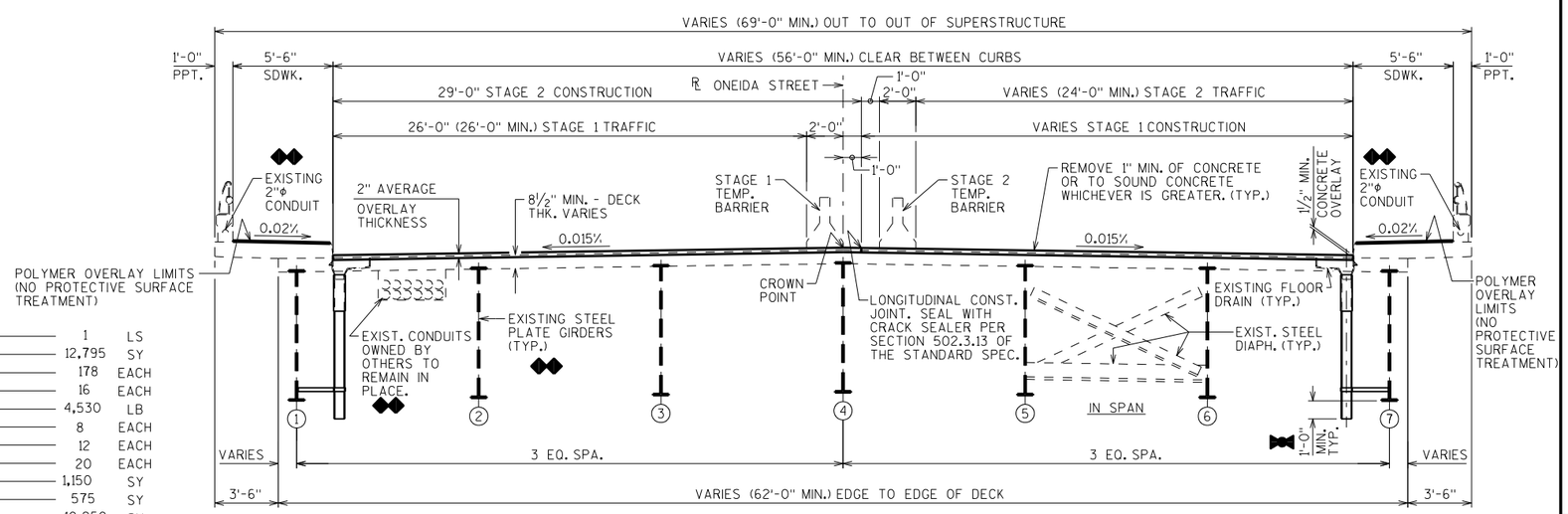


CURB DETAIL

TOTAL ESTIMATED QUANTITIES

502.3100	EXPANSION DEVICE B-44-75	1	LS
502.3200	PROTECTIVE SURFACE TREATMENT	12,795	SY
502.5005	MASONRY ANCHORS TYPE L NO. 5 BARS	178	EACH
502.6105	MASONRY ANCHORS TYPE S 5/8-INCH	16	EACH
505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	4,530	LB
505.0904	BAR COUPLERS NO. 4	8	EACH
505.0905	BAR COUPLERS NO. 5	12	EACH
505.0907	BAR COUPLERS NO. 7	20	EACH
509.0301	PREPARATION DECKS TYPE 1	1,150	SY
509.0302	PREPARATION DECKS TYPE 2	575	SY
509.0500	CLEANING DECKS	10,950	SY
509.1000	JOINT REPAIR	83	SY
509.1200	CURB REPAIR	2,000	LF
509.1500	CONCRETE SURFACE REPAIR	500	SF
509.2000	FULL-DEPTH DECK REPAIR	7	SY
⋈ 509.2500	CONCRETE MASONRY OVERLAY DECKS	730	CY
509.5100.S	POLYMER OVERLAY	2,105	SY
513.9005.S	REMOVING AND RESETTING TUBULAR RAILING B-44-75	1	LS
517.1800.S	STRUCTURE REPAINTING RECYCLED ABRASIVE B-44-75	1	LS
517.3000.S	STRUCTURE OVERCOATING CLEANING AND PRIMING B-44-75	1	LS
517.4000.S	CONTAINMENT AND COLLECTION OF WASTE MATERIALS B-44-75	1	LS
517.4500.S	NEGATIVE PRESSURE CONTAINMENT AND COLLECTION OF WASTE MATERIALS B-44-75	1	LS
517.6001.S	PORTABLE DECONTAMINATION FACILITY	1	EACH
SPV.0060	FRP DRAIN PIPE B-44-75	15	EACH
SPV.0060	HANGER ASSEMBLY	14	EACH
SPV.0105	DRAINAGE SYSTEM B-44-75	1	LS
SPV.0105	FINGER EXPANSION JOINT TROUGH B-44-75	1	LS
SPV.0105	NAVIGATION LIGHTING SYSTEM	1	LS

⋈ INCLUDES CONCRETE FOR BID ITEMS CURB REPAIR, DECK PREP TYPE 1, DECK PREP TYPE 2, FULL DEPTH DECK REPAIR AND JOINT REPAIR.



CROSS SECTION THRU ROADWAY (WITHOUT MEDIAN) - LOOKING NORTH

SPANS 3 THRU 8

NOTE: FOR DECK PREPARATION LOCATIONS IN THE DECK AND SIDEWALK SEE THE THERMOGRAPHY REPORT PROVIDED BY THE ENGINEER.

LIST OF DRAWINGS

CURVE DATA

℄ ONEIDA STREET	℄ AUX. ONEIDA STREET
P.I. = STA. 33+00.59	P.I. = STA. 33+85.16
Δ = 10°-43'-16"	Δ = 10°-43'-16"
D = 1°-47'-09"	D = 2°-30'
T = 301.06'	T = 215.05'
L = 600.36'	L = 428.85'
R = 3208.44'	R = 2291.83'
P.C. = STA. 29+99.53	P.C. = STA. 31+70.74
P.T. = STA. 35+99.89	P.T. = STA. 35+99.89

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-44-75

DRAWN BY DDS | PLANS CK'D. MSC

CROSS SECTION & QUANTITIES

SHEET 2

123

SCALE = 4

8

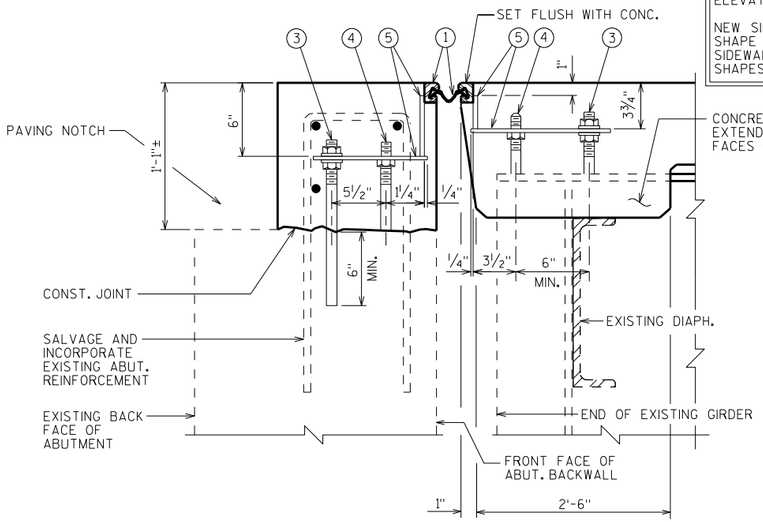
8

STATE PROJECT NUMBER

4984-07-71

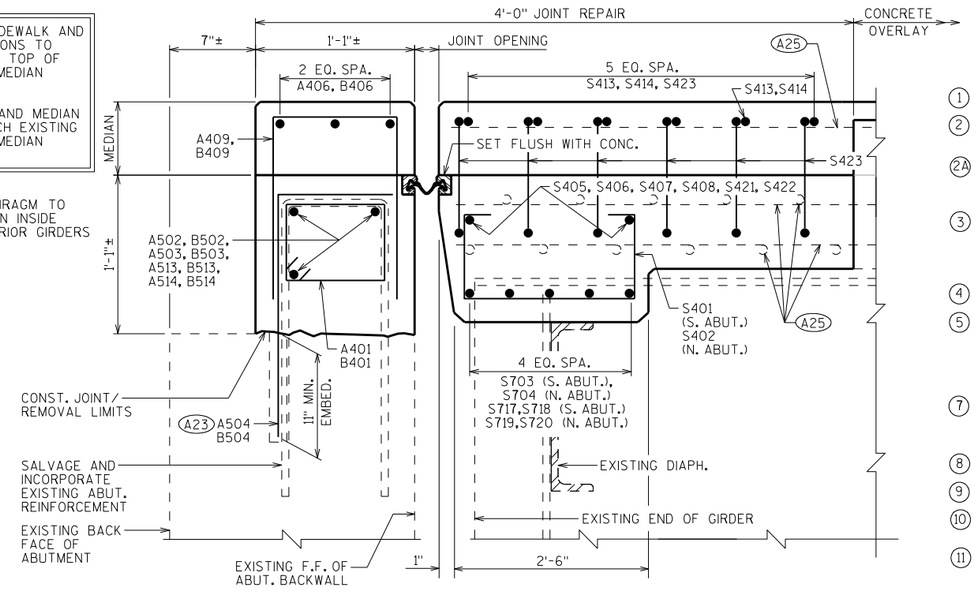
NEW TOP OF SIDEWALK AND MEDIAN ELEVATIONS TO MATCH EXISTING TOP OF SIDEWALK AND MEDIAN ELEVATIONS.

NEW SIDEWALK AND MEDIAN SHAPE TO MATCH EXISTING SIDEWALK AND MEDIAN SHAPES.



SECTION THRU JOINT AT ABUTMENT

NORMAL TO ℄ SUBSTRUCTURE



SECTION THRU JOINT AT ABUTMENT/MEDIAN

NORMAL TO ℄ SUBSTRUCTURE

LEGEND

(1) NEOPRENE STRIP SEAL (4-INCH) AND STEEL EXTRUSIONS.

(2) STUDS ⅝"ϕ X 6⅜" LONG AT 6" ALTERNATE CENTERS. WELD TO EXTRUSIONS AND BEND AS SHOWN AFTER WELDING.

(2A) ½" THICK ANCHOR PLATE WITH ⅝"ϕ ROD (OR ALTERNATE STRIP SEAL ANCHOR). WELD ROD TO ANCHOR PLATE, WELD ANCHOR PLATE TO NO. 1 AT 1'-6" CENTERS BETWEEN GIRDERS.

(3) ¾" ϕ THREADED ROD WITH 2 NUTS AND PLATE WASHERS. WELD THREADED ROD TO TOP FLANGE OR ATTACH BY BOLTING THRU FLANGE. ON ABUTMENT SIDE GROUT THREADED ROD INTO FIELD DRILLED HOLES IN ABUTMENT BACKWALL AS SHOWN.

(4) ¾"ϕ THREADED ROD WITH NUT. TACK WELD NUT TO NO. 5.

(5) FABRICATE SUPPORT FROM 3" X ½" BAR AS SHOWN OR EQUIVALENT, ONE PER GIRDER PER SIDE. SHOP OR FIELD WELD TO NO. 1. IF FIELD WELDED, COVER WELDED AREAS WITH EPOXY-COATING MATERIAL. PROVIDE 1½" ϕ HOLE FOR NO. 3 & 1" ϕ HOLE FOR NO. 4.

(7) ¾"ϕ X 1½" STAINLESS STEEL SOCKET FLAT HEAD SCREWS WITH ANTI-SEIZE LUBRICANT. PLACE IN COUNTERSUNK HOLE. RECESS 1/16" BELOW PLATE SURFACE.

(8) ¾"ϕ X 4" GALVANIZED HEX HEAD BOLT. BEND 45°.

(9) ¾"ϕ X 2¼" GALVANIZED THREADED COUPLING.

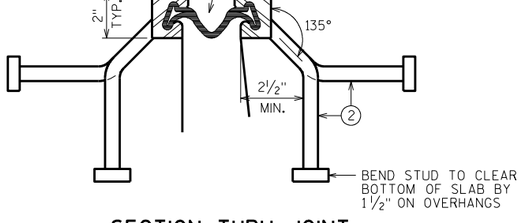
(10) 1" X 5" SLOTTED COUNTERSUNK HOLE FOR NO. 7. PLACE SLOT PARALLEL TO DIRECTION OF MOVEMENT.

(11) SIDEWALK COVER PLATE ⅜" X 2'-0" X LIMITS SHOWN. BEND DOWN FACE OF SIDEWALK WITH HOLES FOR NO. 7. GALVANIZE PLATE AFTER SLIP-RESISTANT SURFACE IS APPLIED.

(12) GALVANIZED PLATE ⅝" X LIMITS SHOWN WITH HOLES FOR NO. 7. BEND AS SHOWN.

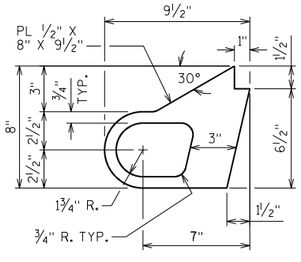
(A23) MASONRY ANCHORS TYPE L NO. 5 BARS, TURN 10" LEG AS NECESSARY TO FIT. EMBED 0'-11" INTO EXISTING CONCRETE.

(A25) SALVAGE EXIST. REINF. & EXTEND FULL LENGTH INTO NEW WORK.

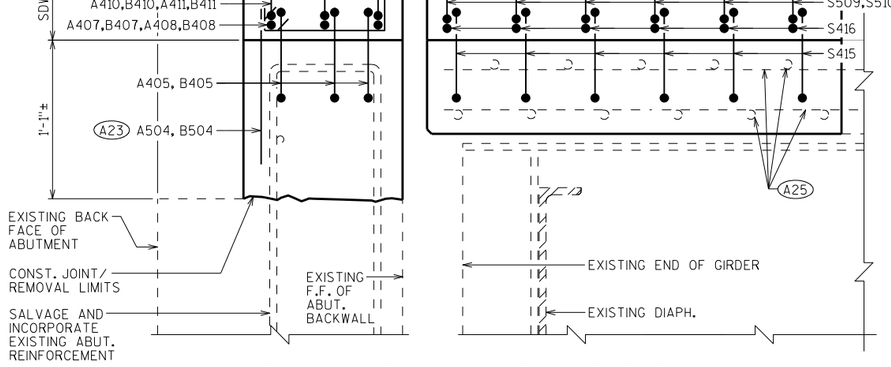


SECTION THRU JOINT

EXTERIOR GIRDER TO EDGE OF DECK AND AT PARAPETS, MEDIANS AND SIDEWALKS



ALTERNATE STRIP SEAL ANCHOR



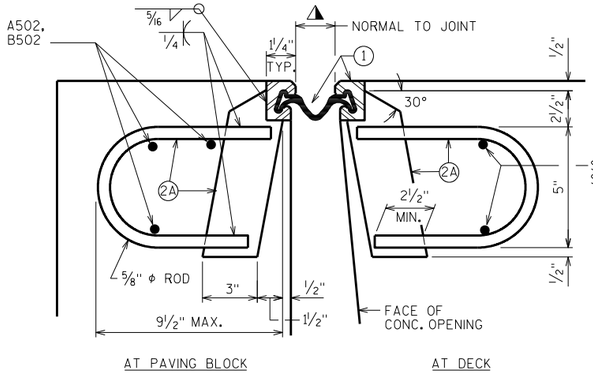
SECTION THRU JOINT AT ABUTMENT/SIDEWALK

NORMAL TO ℄ SUBSTRUCTURE

⚠ TEMPERATURE TABLE

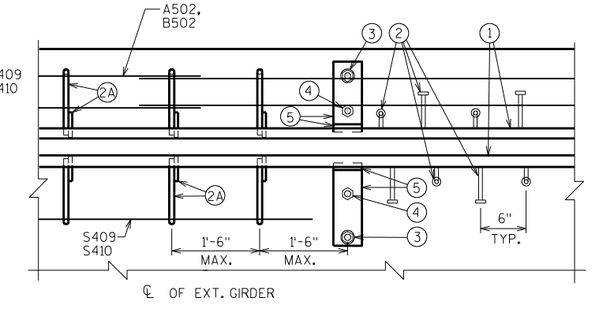
SHADED UNDERSIDE DECK TEMP. (°F)	SOUTH ABUTMENT JOINT OPENING (NORMAL TO JT.)	NORTH ABUTMENT JOINT OPENING (NORMAL TO JT.)
85°	1⅝"	1⅜"
75°	1⅞"	1⅝"
65°	2"	1⅞"
55°	2⅛"	2"
45°	2¼"	2¼"
35°	2⅜"	2½"
25°	2½"	2⅝"
15°	2⅝"	2⅞"
5°	2⅞"	3⅛"

A SMALL JOINT OPENING DUE TO A HIGH TEMPERATURE AT TIME OF CONSTRUCTION MAY REQUIRE NEOPRENE STRIP SEAL INSTALLATION INTO STEEL EXTRUSIONS PRIOR TO SETTING THE EXPANSION JOINT.



SECTION THRU JOINT

ROADWAY TRAFFIC AREA BETWEEN EXTERIOR GIRDERS.



PART PLAN

NOTES

ONE FIELD SPLICE PERMITTED IN STEEL EXTRUSIONS, UNLESS MORE ARE REQUIRED FOR STAGED CONSTRUCTION, HANDLING OR GALVANIZING REQUIREMENTS. IF USED, DETAILS SHALL BE SUBMITTED FOR APPROVAL. NO SPLICING PERMITTED IN NEOPRENE STRIP SEAL.

AFTER FABRICATION, BUT BEFORE SHIPMENT, STRAIGHTEN STEEL EXTRUSIONS SUCH THAT THEY SHALL BE FREE FROM WARP, TWIST AND SWEEP.

FABRICATOR SHALL PROVIDE MEANS OF KEEPING GALVANIZED EXTRUSIONS CLEAN AND SMOOTH DURING SHIPMENT AND PRIOR TO APPLYING LUBRICANT ADHESIVE FOR NEOPRENE GLAND INSTALLATION.

SANDBLAST PLATES, SUPPORTS AND EXTRUSIONS AFTER FABRICATION IN ACCORDANCE WITH SSPC SP. #6 "COMMERCIAL BLAST CLEANING". AFTER BLAST CLEANING, THE PLATES, SUPPORTS AND EXTRUSIONS SHALL BE HOT DIPPED GALVANIZED. SLIP-RESISTANT SURFACE IS APPLIED TO SIDEWALK COVER PLATES BY THE MANUFACTURER AND THEN HOT DIPPED GALVANIZED TO THEIR RECOMMENDATIONS TO MAINTAIN THE INTEGRITY OF THIS SURFACE.

ANCHOR SYSTEM NO. 8 AND NO. 9 SHALL CONFORM TO ASTM A307 AND SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C AND D.

STRIP SEAL EXPANSION JOINT ASSEMBLY, INCLUDING ANCHOR STUDS AND HARDWARE WILL BE PAID FOR AT THE LUMP SUM PRICE BID FOR "EXPANSION DEVICE B-44-75".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-44-75

DRAWN BY DDS | PLANS CK'D. MSC

EXPANSION DEVICE 1

SHEET 3

124

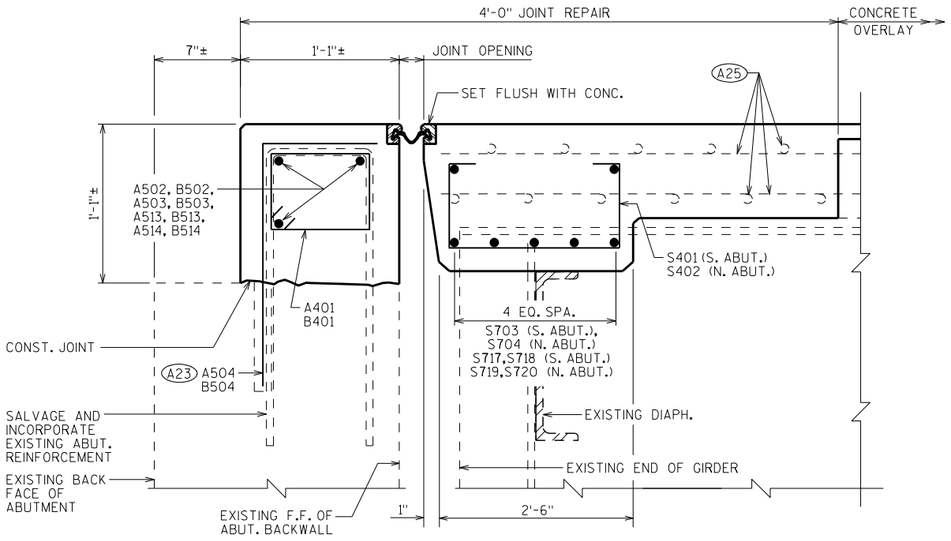
8

8

SCALE = 1

STATE PROJECT NUMBER

4984-07-71

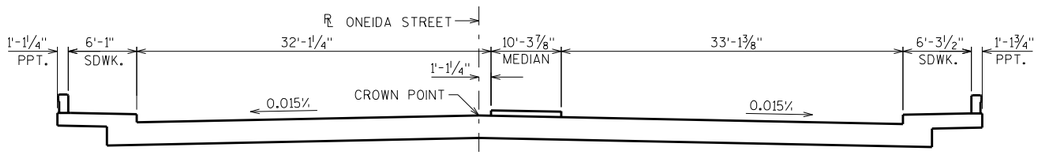


SECTION THRU JOINT AT ABUTMENT

NORMAL TO ℄ SUBSTRUCTURE

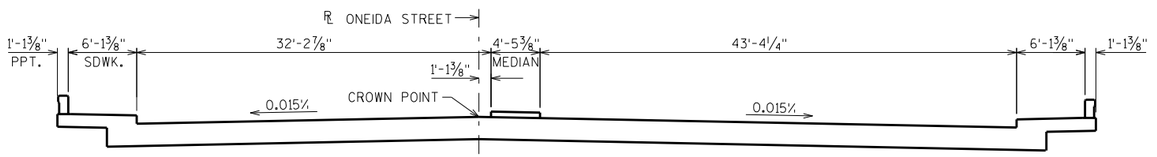
(A23) MASONRY ANCHORS TYPE L NO. 5 BARS, TURN 10" LEG AS NECESSARY TO FIT. EMBED 0'-11" INTO EXISTING CONCRETE.

(A25) SALVAGE EXIST. REINF. & EXTEND FULL LENGTH INTO NEW WORK.



SECTION THRU ROADWAY @ SOUTH ABUTMENT - LOOKING NORTH

MEASURED ALONG F.F. OF BACKWALL



SECTION THRU ROADWAY @ NORTH ABUTMENT - LOOKING NORTH

MEASURED ALONG F.F. OF BACKWALL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-44-75

DRAWN BY DDS | PLANS CK'D. MSC

EXPANSION DEVICE 2

SHEET 4

125

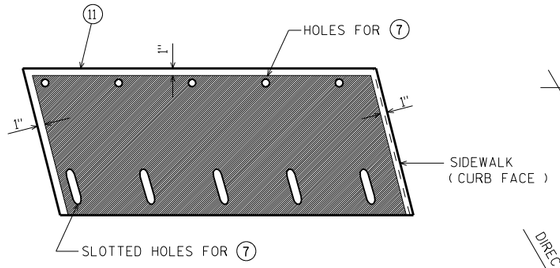
SCALE = 1

8

8

STATE PROJECT NUMBER

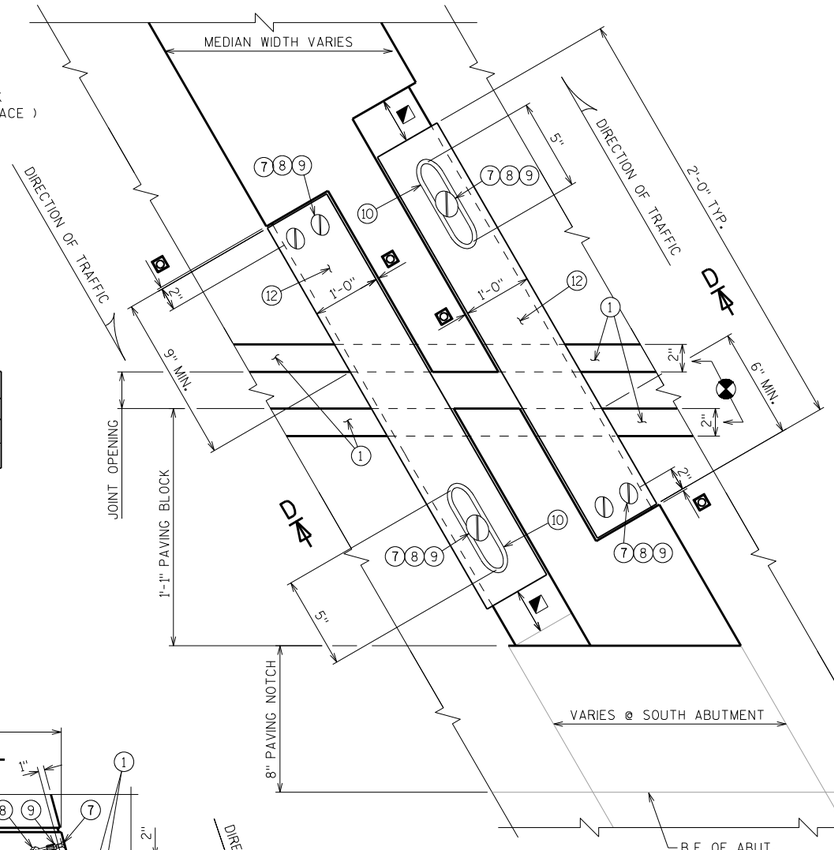
4984-07-71



PLAN OF SIDEWALK COVER PLATE WITH SLIP-RESISTANT SURFACE

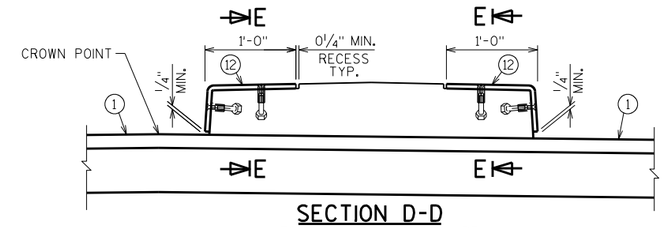
PLACE SLIP-RESISTANT SURFACE ON TOP WALKING SURFACE IN SHADED AREA ONLY (NOT ON CURB FACE).

APPROVED SLIP-RESISTANT APPLIED SURFACES FOR STEEL PLATES		
PRODUCT	MANUFACTURER	CONTACT AT
SLIPNOT GRADE 2, STEEL	W. S. MOLNAR COMPANY	1-800-SLIPNOT
ALGRIP, STEEL	ROSS TECHNOLOGY CORP.	1-800-345-8170



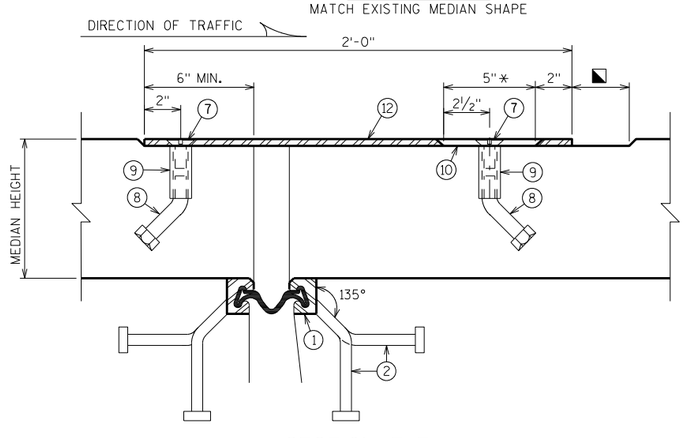
PLAN AT MEDIAN

SOUTH ABUTMENT SHOWN



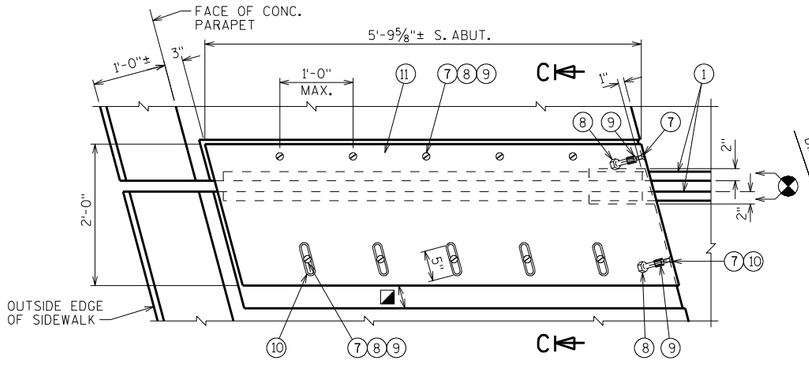
SECTION D-D

MATCH EXISTING MEDIAN SHAPE



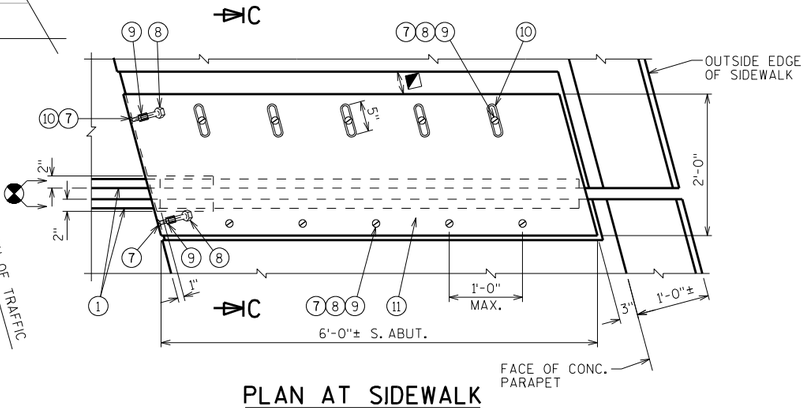
SECTION E-E

* DIMENSION ALONG DIRECTION OF MOVEMENT



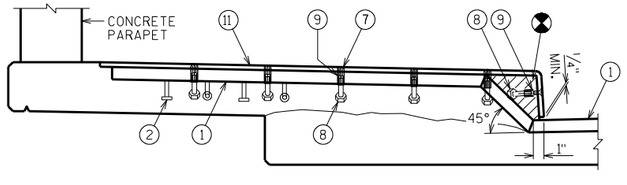
PLAN AT SIDEWALK

SW CORNER



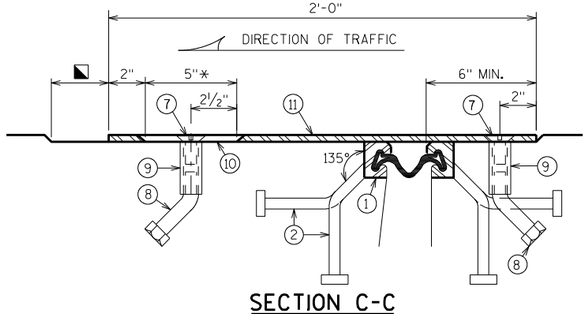
PLAN AT SIDEWALK

SE CORNER



SECTION AT SIDEWALK

SW CORNER SHOWN
SE CORNER SIMILAR



SECTION C-C

* DIMENSION ALONG DIRECTION OF MOVEMENT

- ¼" MIN. RECESS
- BLOCK OUT CONCRETE 2" EACH SIDE OF JOINT OPENING.
- JOINT OPENING DIM. ALONG SKEW PLUS ½".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-44-75

DRAWN BY DDS | PLANS CK'D. MSC

SOUTH ABUT. COVER PLATE DETAILS

SHEET 5

126

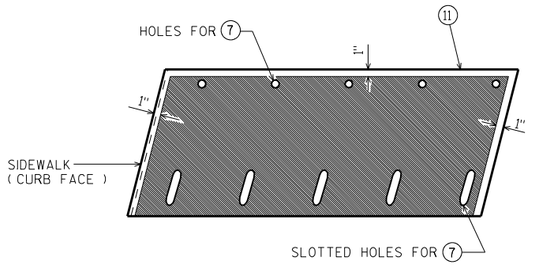
SCALE = 1

8

8

STATE PROJECT NUMBER

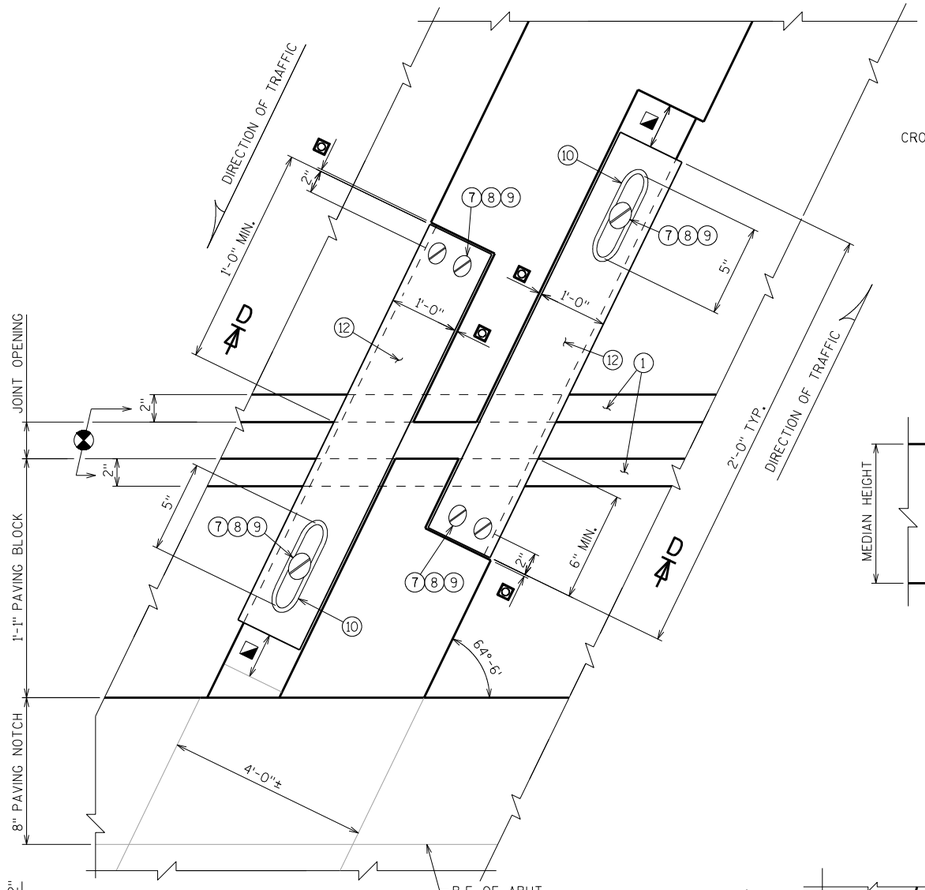
4984-07-71



PLAN OF SIDEWALK COVER PLATE WITH SLIP-RESISTANT SURFACE

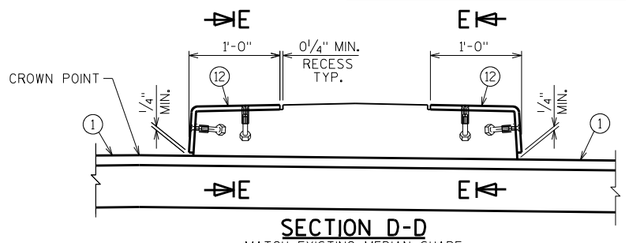
PLACE SLIP-RESISTANT SURFACE ON TOP WALKING SURFACE IN SHADED AREA ONLY (NOT ON CURB FACE).

APPROVED SLIP-RESISTANT APPLIED SURFACES FOR STEEL PLATES		
PRODUCT	MANUFACTURER	CONTACT AT
SLIPNOT GRADE 2, STEEL	W. S. MOLNAR COMPANY	1-800-SLIPNOT
ALGRIP, STEEL	ROSS TECHNOLOGY CORP.	1-800-345-8170



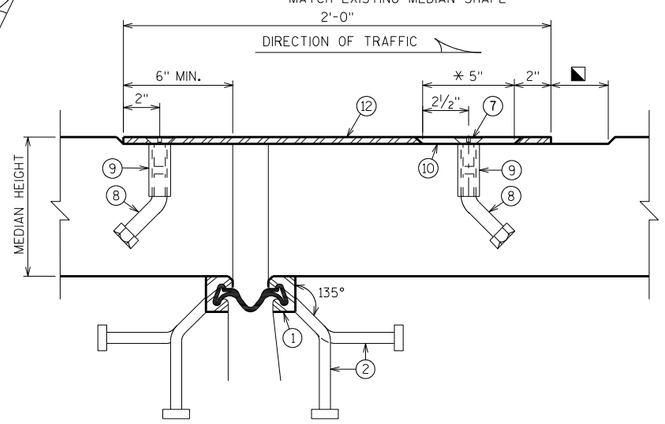
PLAN AT MEDIAN

NORTH ABUTMENT SHOWN



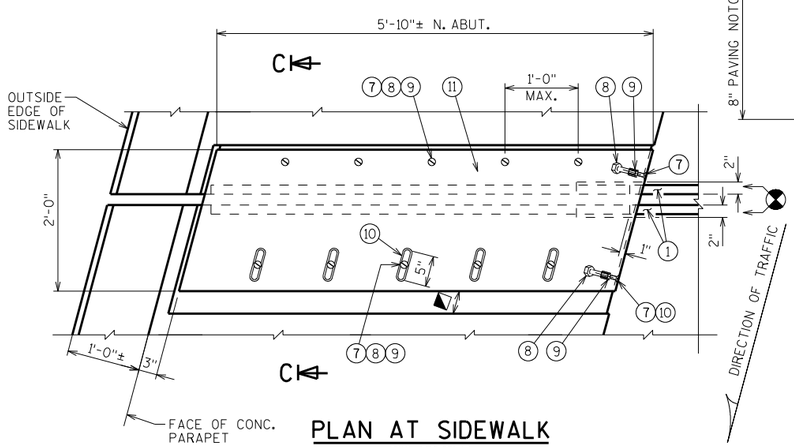
SECTION D-D

MATCH EXISTING MEDIAN SHAPE



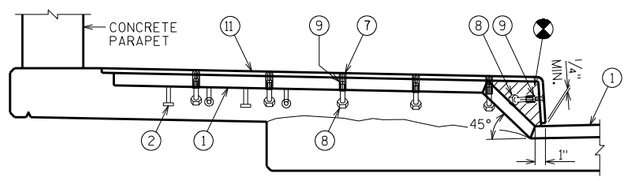
SECTION E-E

* DIMENSION ALONG DIRECTION OF MOVEMENT



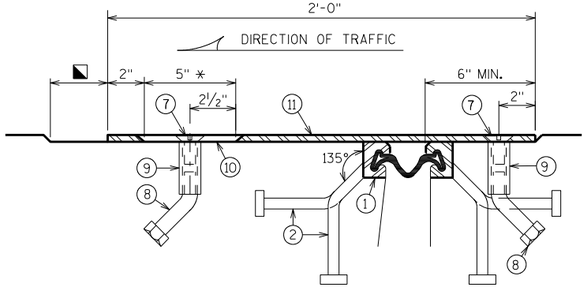
PLAN AT SIDEWALK

NW CORNER



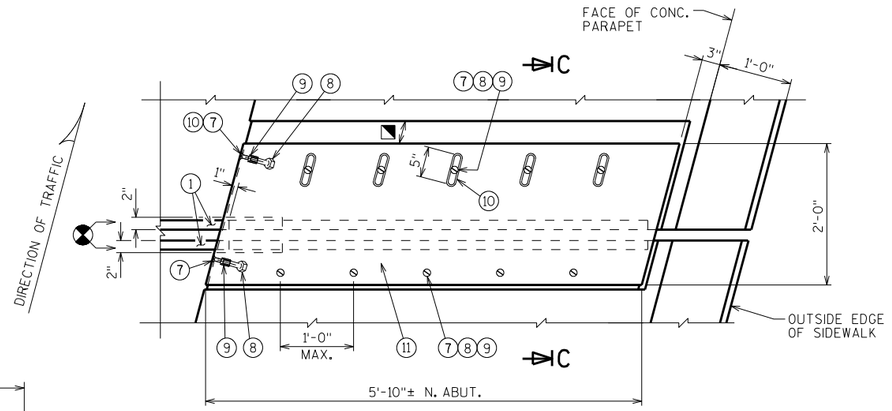
SECTION AT SIDEWALK

NW CORNER SHOWN
NE CORNER SIMILAR



SECTION C-C

* DIMENSION ALONG DIRECTION OF MOVEMENT



PLAN AT SIDEWALK

NE CORNER

- ¼" MIN. RECESS
- BLOCK OUT CONCRETE 2" EACH SIDE OF JOINT OPENING.
- JOINT OPENING DIM. ALONG SKEW PLUS ½".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-44-75

DRAWN BY DDS | PLANS CK'D. MSC

NORTH ABUT. COVER PLATE DETAILS

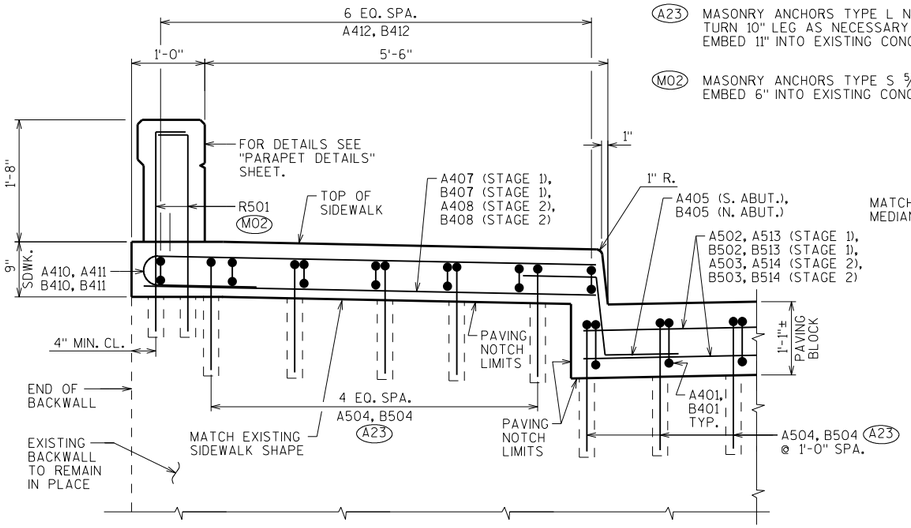
SHEET 6

127

SCALE = 1

8

8



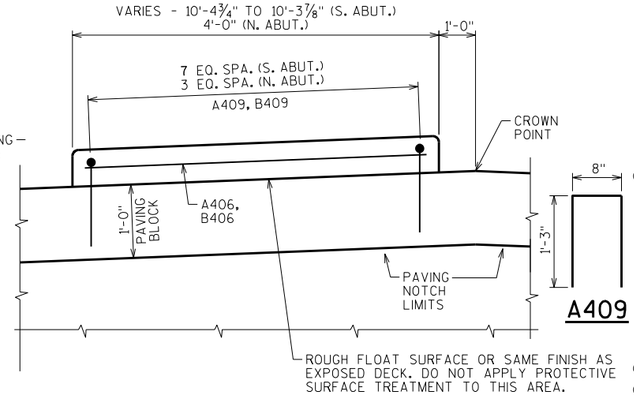
JOINT REPAIR AT ABUTMENT BACKWALL

PAVING NOTCH LIMITS = LINE OF REMOVAL
TYPICAL AT ABUTMENT BACKWALLS/SIDEWALKS

A23 MASONRY ANCHORS TYPE L NO. 5 BARS, TURN 10" LEG AS NECESSARY TO FIT. EMBED 11" INTO EXISTING CONCRETE.

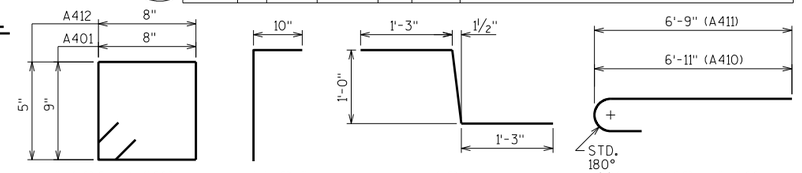
M02 MASONRY ANCHORS TYPE S 5/8-INCH EMBED 6" INTO EXISTING CONCRETE.

S01 BAR COUPLERS USED. BAR LENGTH COMPUTED TO ℄ OF LONGITUDINAL JOINT AND SHALL BE MODIFIED TO THE BAR COUPLER MANUFACTURERS RECOMMENDATIONS.



JOINT REPAIR AT ABUTMENT BACKWALL

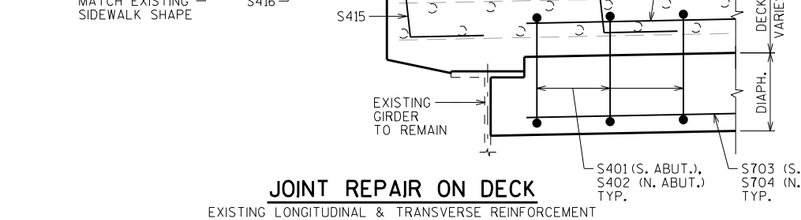
PAVING NOTCH LIMITS = LINE OF REMOVAL
TYPICAL AT ABUTMENT BACKWALLS/MEDIANS



BILL OF BARS

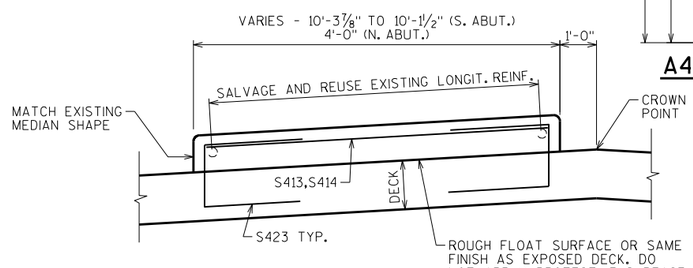
NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A401	X	77	3'-2"	X		PAVING BLOCK - STIRRUP
A502	X	18	7'-2"			PAVING BLOCK - HORIZ. - (STAGE 1)
A503	X	12	7'-4"			PAVING BLOCK - HORIZ. - (STAGE 2)
A504	X	87	2'-6"	X		PAVING BLOCK - VERT.
A405	X	6	3'-4"	X		PAVING BLOCK/SIDEWALK - VERT.
A406	X	3	9'-9"			PAVING BLOCK/MEDIAN - HORIZ.
A407	X	3	6'-11"			PAVING BLOCK/SIDEWALK - HORIZ. - (STAGE 1)
A408	X	3	6'-9"			PAVING BLOCK/SIDEWALK - HORIZ. - (STAGE 2)
A409	X	8	3'-0"	X		PAVING BLOCK/MEDIAN - VERT.
A410	X	3	7'-5"	X		PAVING BLOCK/SIDEWALK - VERT. - (STAGE 1)
A411	X	3	7'-3"	X		PAVING BLOCK/SIDEWALK - VERT. - (STAGE 2)
A412	X	14	2'-8"	X		PAVING BLOCK/SIDEWALK - STIRRUP
S01 A513	X	3	7'-2"			PAVING BLOCK - HORIZ. - (STAGE 1)
S01 A514	X	3	7'-4"			PAVING BLOCK - HORIZ. - (STAGE 2)



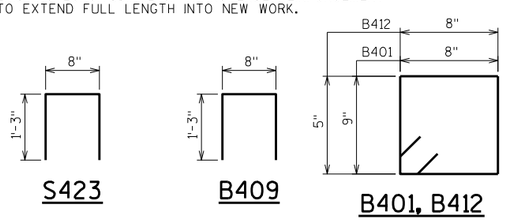
JOINT REPAIR ON DECK

EXISTING LONGITUDINAL & TRANSVERSE REINFORCEMENT TO EXTEND FULL LENGTH INTO NEW WORK.



JOINT REPAIR AT ABUTMENTS ON DECK

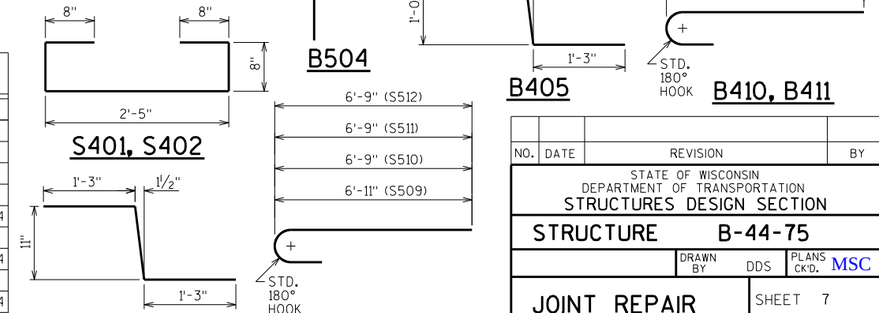
EXISTING LONGITUDINAL & TRANSVERSE REINFORCEMENT TO EXTEND FULL LENGTH INTO NEW WORK.



BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
B401	X	81	3'-2"	X		PAVING BLOCK - STIRRUP
B502	X	18	7'-9"			PAVING BLOCK - HORIZ. - (STAGE 1)
B503	X	12	7'-4"			PAVING BLOCK - HORIZ. - (STAGE 2)
A23 B504	X	91	2'-6"	X		PAVING BLOCK - VERT.
B405	X	6	3'-4"	X		PAVING BLOCK/SIDEWALK - VERT.
B406	X	3	3'-11"			PAVING BLOCK/MEDIAN - HORIZ.
B407	X	3	6'-9"			PAVING BLOCK/SIDEWALK - HORIZ. - (STAGE 1)
B408	X	3	6'-9"			PAVING BLOCK/SIDEWALK - HORIZ. - (STAGE 2)
B409	X	4	3'-0"	X		PAVING BLOCK/MEDIAN - VERT.
B410	X	3	7'-3"	X		PAVING BLOCK/SIDEWALK - VERT. - (STAGE 1)
B411	X	3	7'-3"	X		PAVING BLOCK/SIDEWALK - VERT. - (STAGE 2)
B412	X	14	2'-8"	X		PAVING BLOCK/SIDEWALK - STIRRUP
S01 B513	X	3	7'-9"			PAVING BLOCK - HORIZ. - (STAGE 1)
S01 B514	X	3	7'-4"			PAVING BLOCK - HORIZ. - (STAGE 2)



BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
S401	X	90	4'-9"	X		S. ABUT. DIAPH. - VERT. - BTWN. GIRDERS
S402	X	96	4'-9"	X		N. ABUT. DIAPH. - VERT. - BTWN. GIRDERS
S703	X	25	12'-0"			S. ABUT. DIAPH. - HORIZ.
S704	X	25	12'-5"			N. ABUT. DIAPH. - HORIZ.
S405	X	10	12'-0"			S. ABUT. DIAPH. - HORIZ.
S406	X	10	12'-5"			N. ABUT. DIAPH. - HORIZ.
S01 S407	X	2	4'-11"			S. ABUT. DIAPH. - HORIZ. - (STAGE 1) BTWN. GIRDERS 3&4
S01 S408	X	2	7'-0"			S. ABUT. DIAPH. - HORIZ. - (STAGE 2) BTWN. GIRDERS 3&4
S509	X	6	7'-6"	X		S. ABUT. SIDEWALK - VERT. (STAGE 1)
S510	X	6	7'-4"	X		S. ABUT. SIDEWALK - VERT. (STAGE 2)
S511	X	6	7'-4"	X		N. ABUT. SIDEWALK - VERT. (STAGE 1)
S512	X	6	7'-4"	X		N. ABUT. SIDEWALK - VERT. (STAGE 2)

BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
S413	X	6	9'-7"			MEDIAN - HORIZ. - (S. ABUT.)
S414	X	6	3'-10"			MEDIAN - HORIZ. - (N. ABUT.)
S415	X	48	3'-3"	X		DECK/SIDEWALK - VERT.
S416	X	24	4'-6"			SIDEWALK - HORIZ. - BOTTOM
S01 S717	X	5	4'-11"			S. ABUT. DIAPH. - HORIZ. (STAGE 1) BTWN GIRDERS 3&4
S01 S718	X	5	7'-0"			S. ABUT. DIAPH. - HORIZ. (STAGE 2) BTWN GIRDERS 3&4
S01 S719	X	5	6'-3"			N. ABUT. DIAPH. - HORIZ. (STAGE 1) BTWN GIRDERS 3&4
S01 S720	X	5	6'-1"			N. ABUT. DIAPH. - HORIZ. (STAGE 2) BTWN GIRDERS 3&4
S01 S421	X	2	6'-3"			N. ABUT. DIAPH. - HORIZ. (STAGE 1) BTWN GIRDERS 3&4
S01 S422	X	2	6'-1"			N. ABUT. DIAPH. - HORIZ. (STAGE 2) BTWN GIRDERS 3&4
S423	X	24	3'-0"	X		MEDIAN - VERT.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-44-75

DRAWN BY DDS | PLANS CK'D. MSC

JOINT REPAIR DETAILS

SHEET 7

128

STATE PROJECT NUMBER

4984-07-71

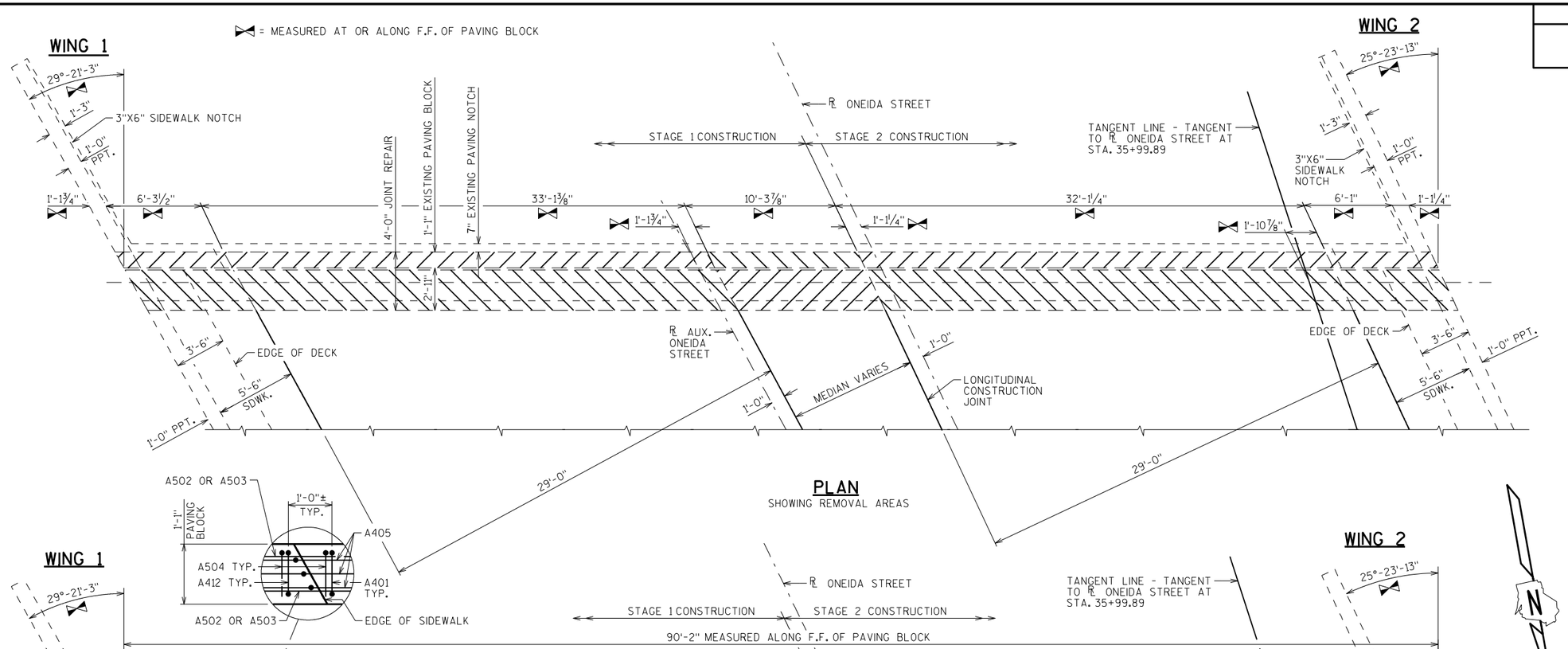
SCALE = 1

8

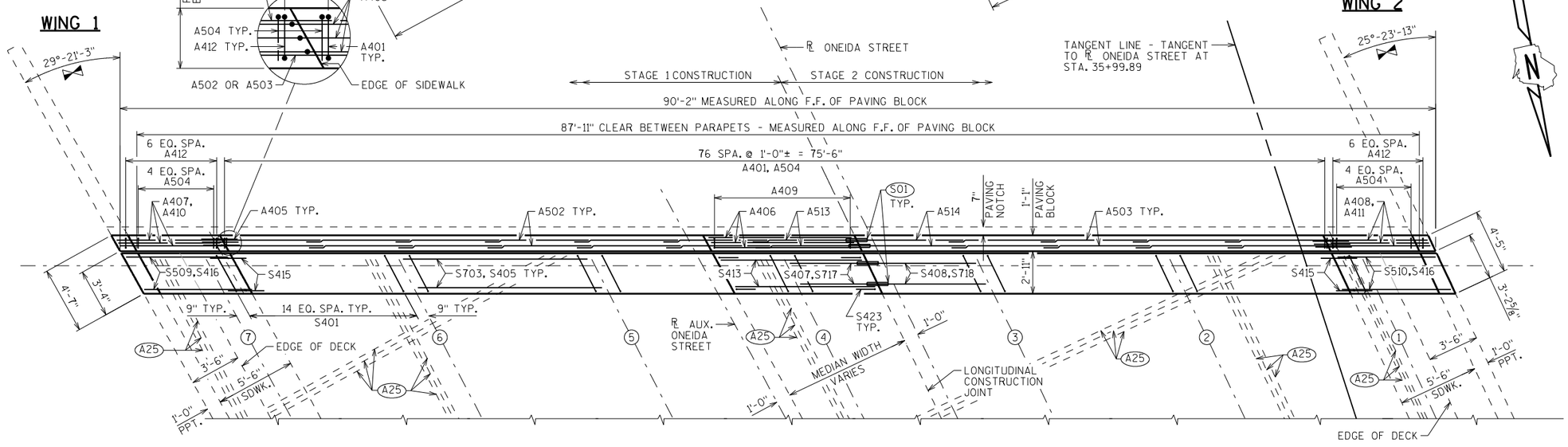
8

STATE PROJECT NUMBER
4984-07-71

= MEASURED AT OR ALONG F.F. OF PAVING BLOCK



PLAN
SHOWING REMOVAL AREAS



PLAN
SHOWING REINFORCEMENT

(A25) SALVAGE EXIST. REINF. & EXTEND FULL LENGTH INTO NEW WORK.

(S01) BAR COUPLERS USED. BAR LENGTH COMPUTED TO ℄ OF LONGITUDINAL JOINT & SHALL BE MODIFIED TO THE BAR COUPLER MANUFACTURERS RECOMMENDATIONS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-44-75

DRAWN BY DDS | PLANS CK'D. MSC

SOUTH ABUTMENT JOINT REPAIR

SHEET 8

129

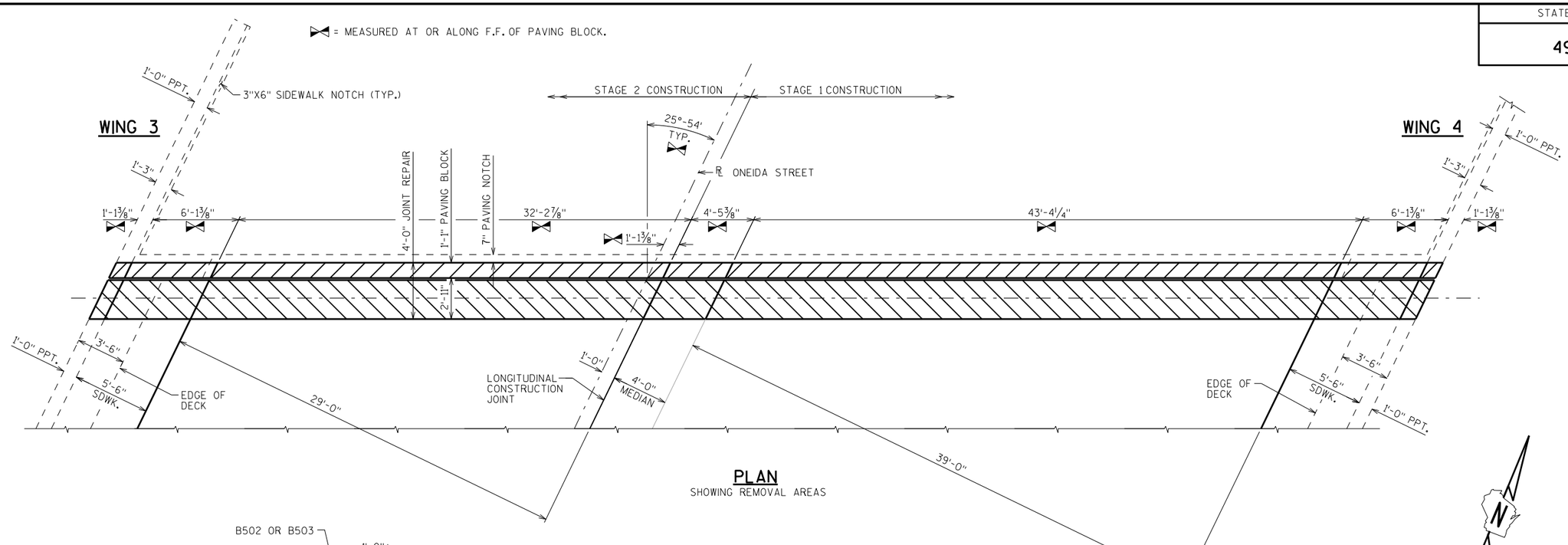
SCALE = 4

8

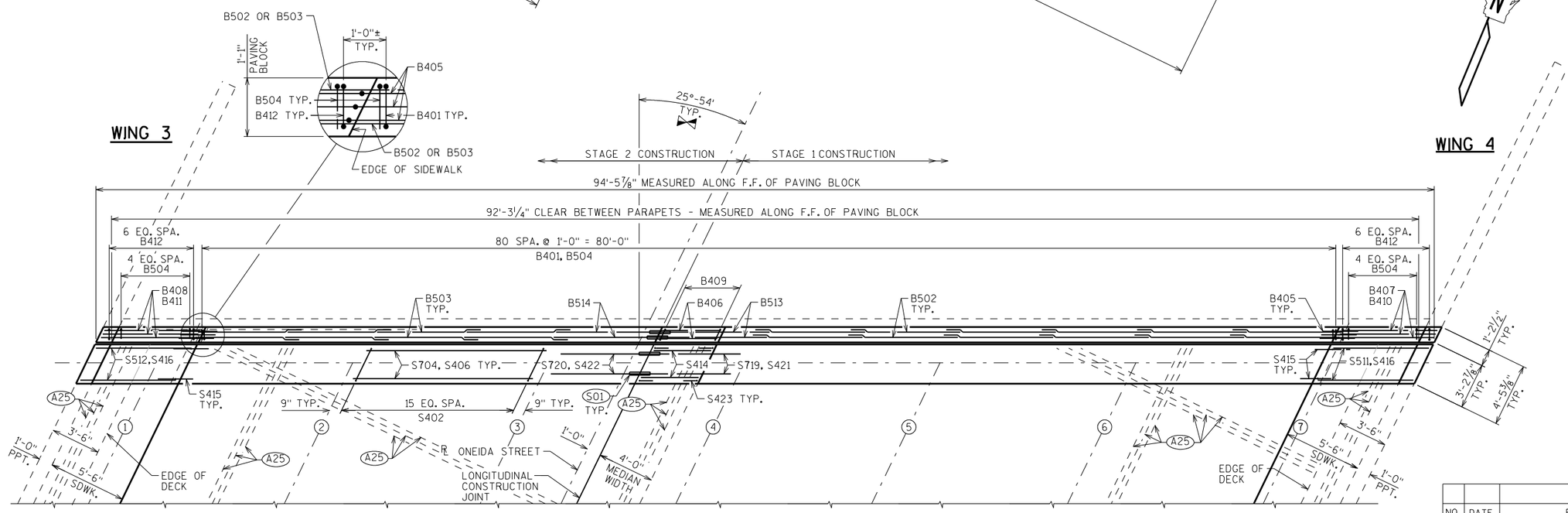
8

STATE PROJECT NUMBER
4984-07-71

= MEASURED AT OR ALONG F.F. OF PAVING BLOCK.



PLAN
SHOWING REMOVAL AREAS



PLAN
SHOWING REINFORCEMENT

(A25) SALVAGE EXIST. REINF. & EXTEND FULL LENGTH INTO NEW WORK.

(S01) BAR COUPLERS USED. BAR LENGTH COMPUTED TO ℄ OF LONGITUDINAL JOINT & SHALL BE MODIFIED TO THE BAR COUPLER MANUFACTURERS RECOMMENDATIONS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-44-75

DRAWN BY DDS | PLANS CK'D. MSC

NORTH ABUTMENT JOINT REPAIR

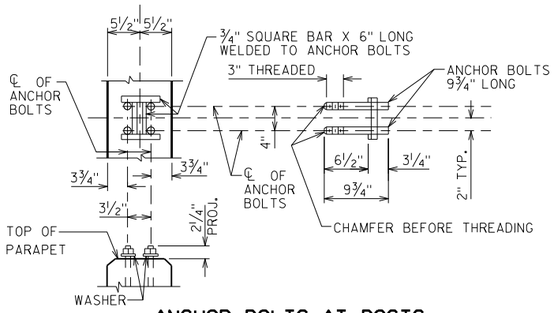
SHEET 9

130

SCALE = 4

STATE PROJECT NUMBER

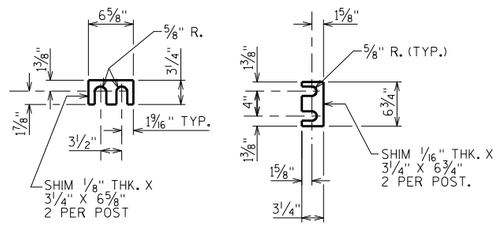
4984-07-71



ANCHOR BOLTS AT POSTS

THE SHANK AND ROOT DIAMETER OF THREAD FOR ANCHOR BOLTS SHALL BE A MIN. OF ⅝".

ANCHOR BOLTS, NUTS AND WASHERS SHALL BE STAINLESS STEEL.



POST SHIM DETAILS

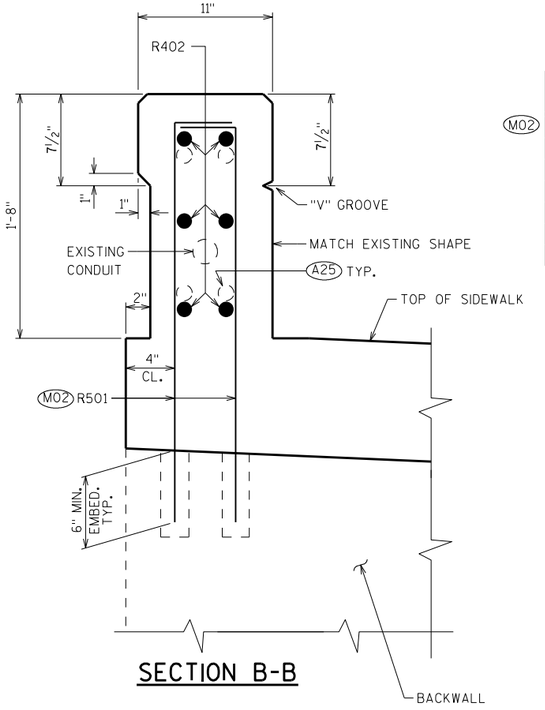
SHIMS CONFORMING TO SAME MATERIAL AS POSTS SHALL BE USED UNDER POSTS WHERE REQUIRED FOR ALIGNMENT.

NOTES:

AT EXISTING VERTICAL DEFLECTION JOINTS IN PARAPETS REMOVE SEALER AND REPLACE WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER, INCIDENTAL TO BID ITEM "CONCRETE MASONRY OVERLAY DECKS".

PROVIDE CONCRETE SURFACE REPAIR ON EXISTING PARAPETS AS DIRECTED BY THE ENGINEER.

DIMENSIONS ARE FOR REFERENCE ONLY. MATCH THE SHAPES OF THE EXISTING PARAPETS AND SIDEWALKS.



SECTION B-B

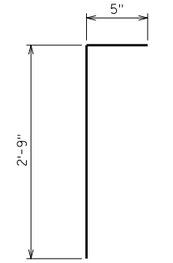
BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

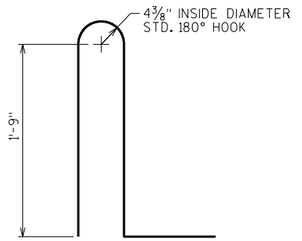
	BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
M02	R501	X	16	3'-1"	X		PARAPET - VERT. - (WINGS 1-4)
	R402	X	24	0'-10"			PARAPET - HORIZ. - (WINGS 1-4)
	R503	X	16	4'-11"	X		PARAPET - VERT. - (WINGS 1-4)
	R404	X	6	2'-9"			PARAPET - HORIZ. - (WING 1)
	R405	X	6	2'-8"			PARAPET - HORIZ. - (WING 2)
	R406	X	12	2'-8"			PARAPET - HORIZ. - (WINGS 3&4)

M02 MASONRY ANCHORS TYPE S, ⅝-INCH, EMBED 6" INTO EXISTING CONCRETE.

A25 SALVAGE EXIST. REINF. & EXTEND FULL LENGTH INTO NEW WORK.



R501



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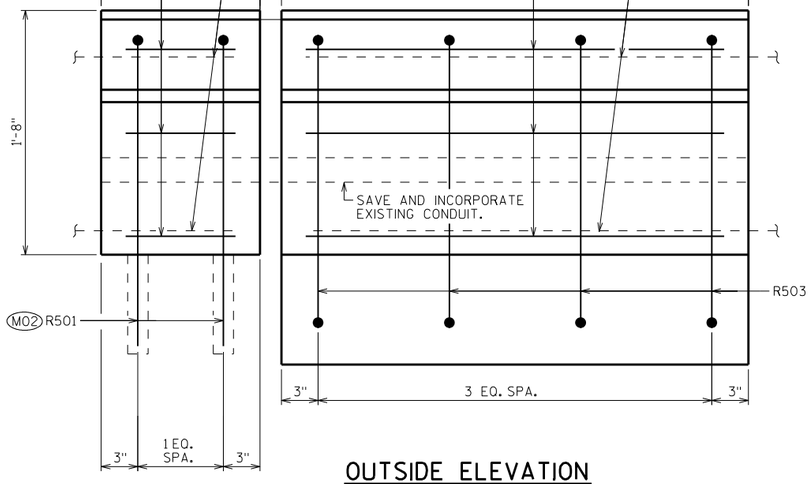
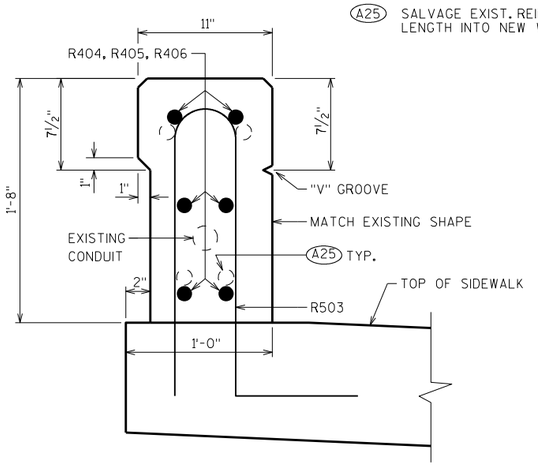
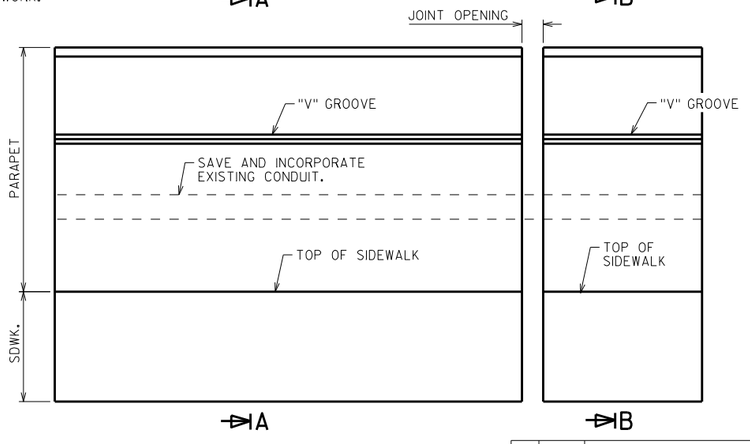


OUTSIDE ELEVATION



SECTION A-A



INSIDE ELEVATION

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-44-75

DRAWN BY DDS | PLANS CK'D. MSC

PARAPET DETAILS

SHEET 10

131

SCALE = 0.5

8

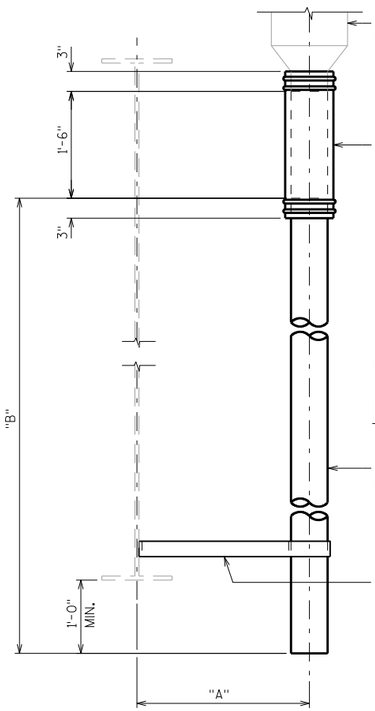
8

STATE PROJECT NUMBER

4984-07-71

DRAIN NO.	"A"	"B"
1	2'-1½"±	3'-2"±
2	2'-3"±	3'-2"±
3	1'-11½"±	SEE DRAINAGE SYSTEM
4	2'-4"±	SEE DRAINAGE SYSTEM
5	2'-4"±	6'-3"±
6	2'-4"±	6'-3"±
7	2'-4"±	6'-3"±
8	2'-4"±	6'-3"±
9	2'-4"±	6'-3"±
10	2'-4"±	6'-3"±
11	2'-4"±	6'-3"±
12	2'-4"±	6'-3"±
13	2'-4"±	6'-3"±
14	1'-3½"±	6'-3"±
15	2'-4"±	6'-3"±
16	1'-3½"±	6'-3"±
FINGER JOINT - SPAN 4	2'-0"±	SEE DRAINAGE SYSTEM
FINGER JOINT - SPAN 8	2'-0"±	———

FOR DRAIN LOCATIONS SEE SHEET 1



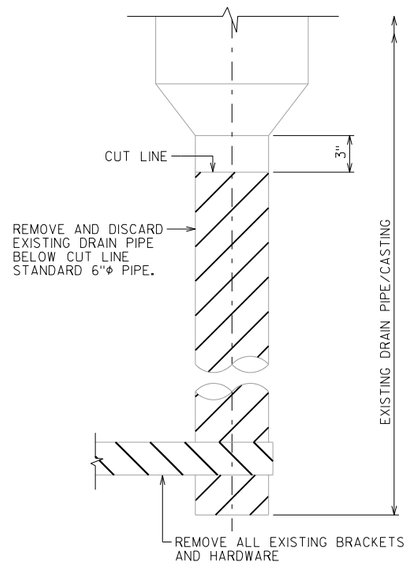
NOTE:
ALL FIBERGLASS PIPE AND FITTINGS SHALL BE PIGMENTED RESIN THROUGH OUT THE WALL THK. COLOR TO BE STANDARD CONCRETE GRAY.
PAINT, GEL-COAT OR EXTERIOR COATINGS WILL NOT BE ACCEPTED.

6"Φ PIPE SHALL BE FIBERGLASS REINFORCED PLASTIC (FRP) CONFORMING TO ASTM D2996 AND ASTM G154 (D4329-99)

NEW BRACKET TO USE EXISTING HOLES IN THE GIRDERS. SEE BRACKET DETAIL BELOW.

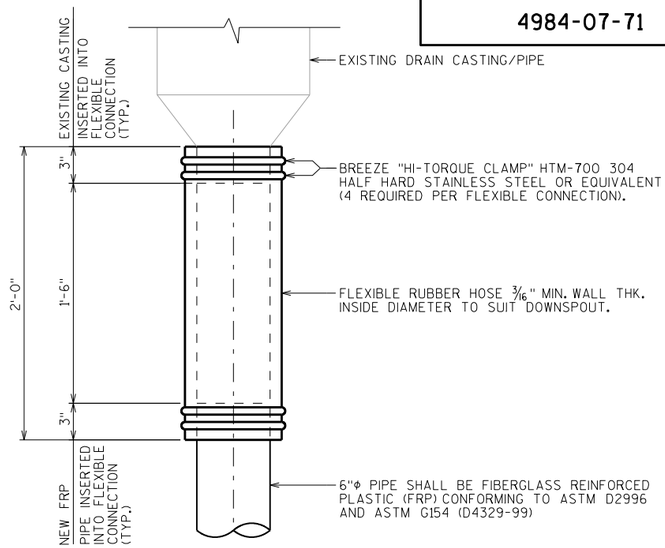
ELEVATION

14 TOTAL
ALL FLOOR DRAINS EXCEPT SPAN 4 FLOOR DRAINS



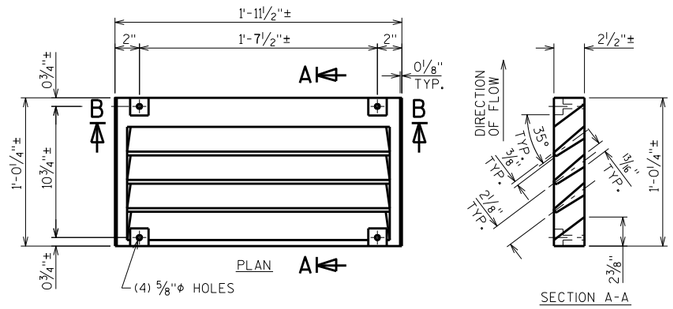
EXISTING DRAIN PIPE

SHOWING REMOVAL
REMOVAL WORK TO BE INCLUDED UNDER BID ITEM "FRP DRAIN PIPE B-44-75"



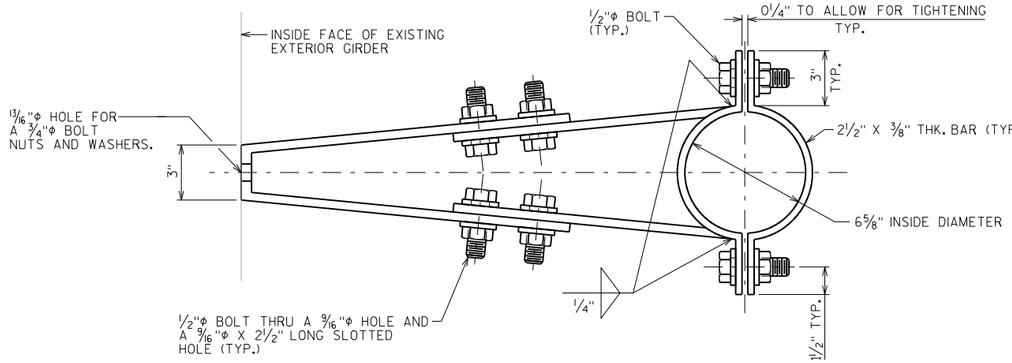
FLEXIBLE CONNECTION

1 PER FLOOR DRAIN



GRATE DETAILS

AS SHOWN WITH ★ ON SHEET 1
ALL MATERIAL FOR TYPE "GC" GRATE COVER SHALL BE GRAY IRON CONFORMING TO ASTM A48 CLASS 30 (APPROX. WEIGHT = 225 LBS.)



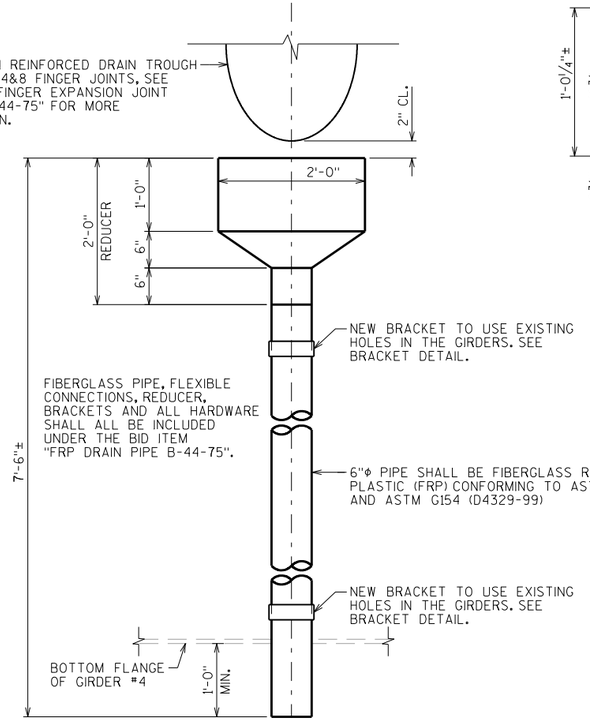
BRACKET DETAIL

NOTE:

MATERIAL FOR BRACKET SHALL BE ASTM A36.

ALL STEEL SHALL BE GALVANIZED.

NEW NYLON REINFORCED DRAIN TROUGH AT SPANS 4&8 FINGER JOINTS, SEE BID ITEM "FINGER EXPANSION JOINT TROUGH B-44-75" FOR MORE INFORMATION.



ELEVATION - SPAN 8

LOCATED NEAR CENTER OF BRIDGE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-44-75

DRAWN BY DDS | PLANS CK'D. MSC

DRAIN DETAILS

SHEET 11

132

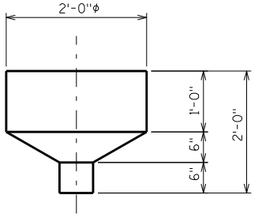
8

8

SCALE = 1

STATE PROJECT NUMBER

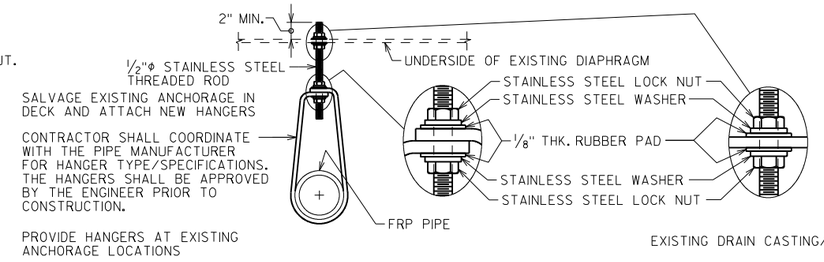
4984-07-71



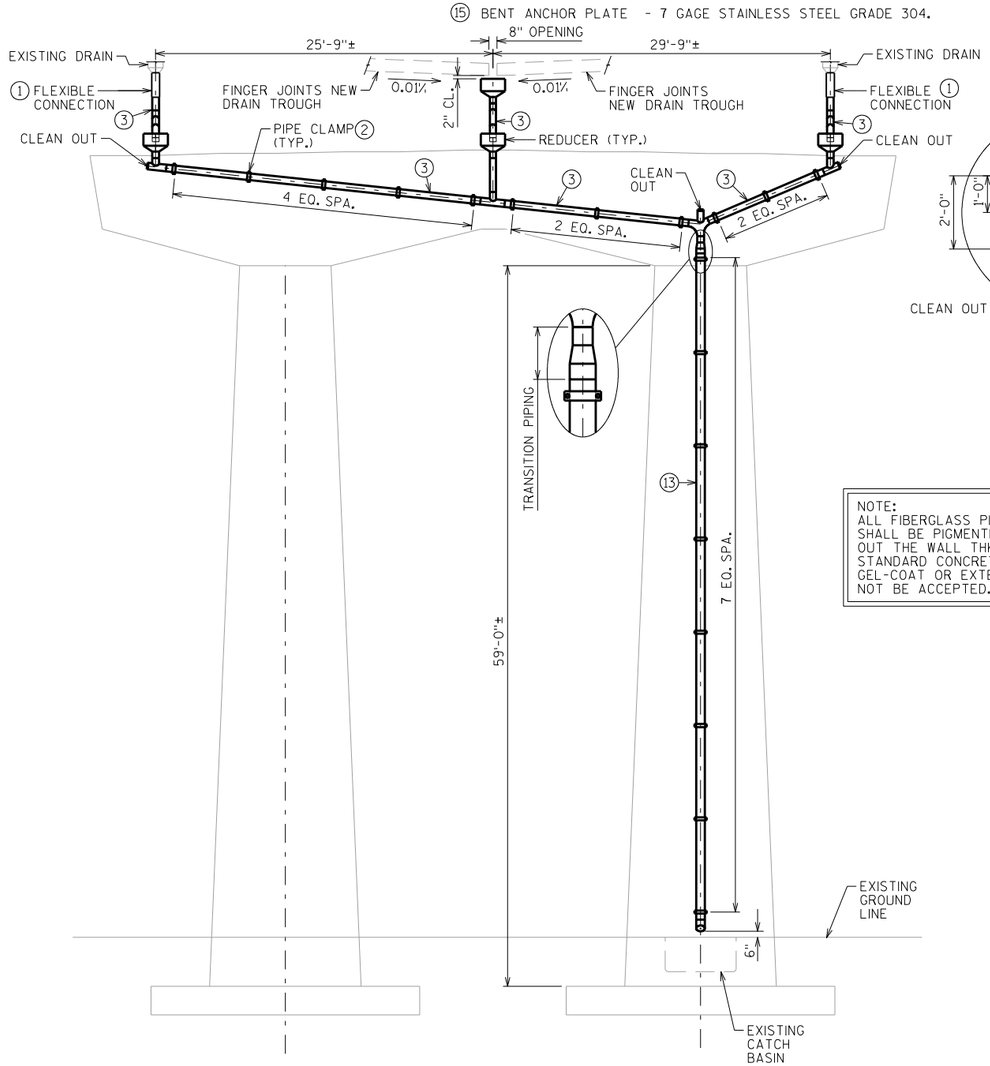
REDUCER DETAILS

LEGEND

1. FLEXIBLE RUBBER HOSE, 3/16" MIN. THICK WALL. INSIDE DIAMETER TO SUIT DOWNSPOUT.
2. 10 GAGE STAINLESS STEEL CLAMP GRADE 304.
3. NEW 6"ϕ DOWNSPOUT PIPING SHALL BE FIBERGLASS REINFORCED PLASTIC PIPING (FRP) CONFORMING TO ASTM D2996 & ASTM G154 (D4329-99).
7. 6" LG. SPLIT FRP STRIP. BOND TO #3. PLACE AT ALL CLAMP LOCATIONS.
8. BENT ANCHOR PLATE - 7 GAGE STAINLESS STEEL GRADE 304.
9. 1/2"ϕ ADHESIVE ANCHOR BOLTS. (STAINLESS STEEL BOLT & WASHER - TYP.)
11. 7 GAGE STAINLES STEEL GUSSET PLATE - WELD TO #2 & 8.
12. 3/8" X 1" LONG STAINLESS STEEL HEX HEAD BOLT WITH NUT & LOCK WASHER.
13. NEW 8"ϕ DOWNSPOUT PIPING SHALL BE FIBERGLASS REINFORCED PLASTIC PIPING (FRP) CONFORMING TO ASTM D2996 & D4329-99.
14. 8" LG. SPLIT FRP STRIP. BOND TO #13. PLACE AT ALL CLAMP LOCATIONS.
15. BENT ANCHOR PLATE - 7 GAGE STAINLESS STEEL GRADE 304.



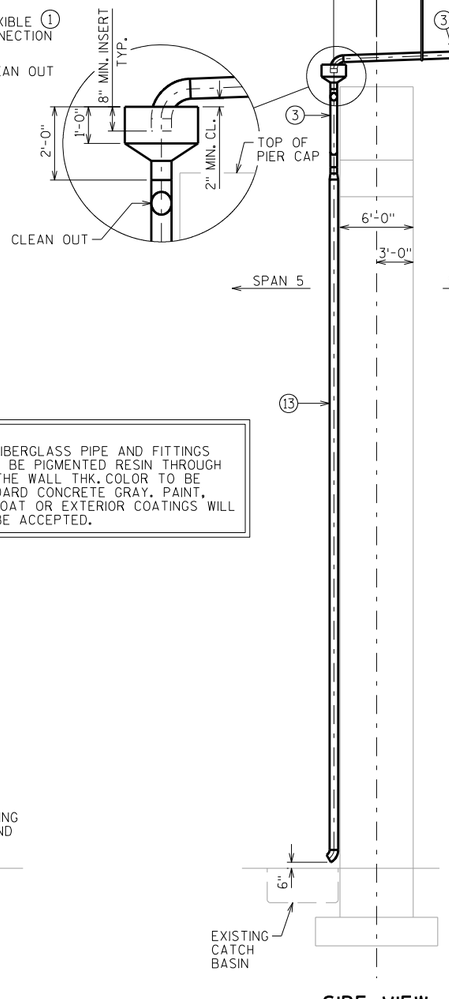
FIBERGLASS PIPE HANGER DETAIL



ELEVATION - PIER 4

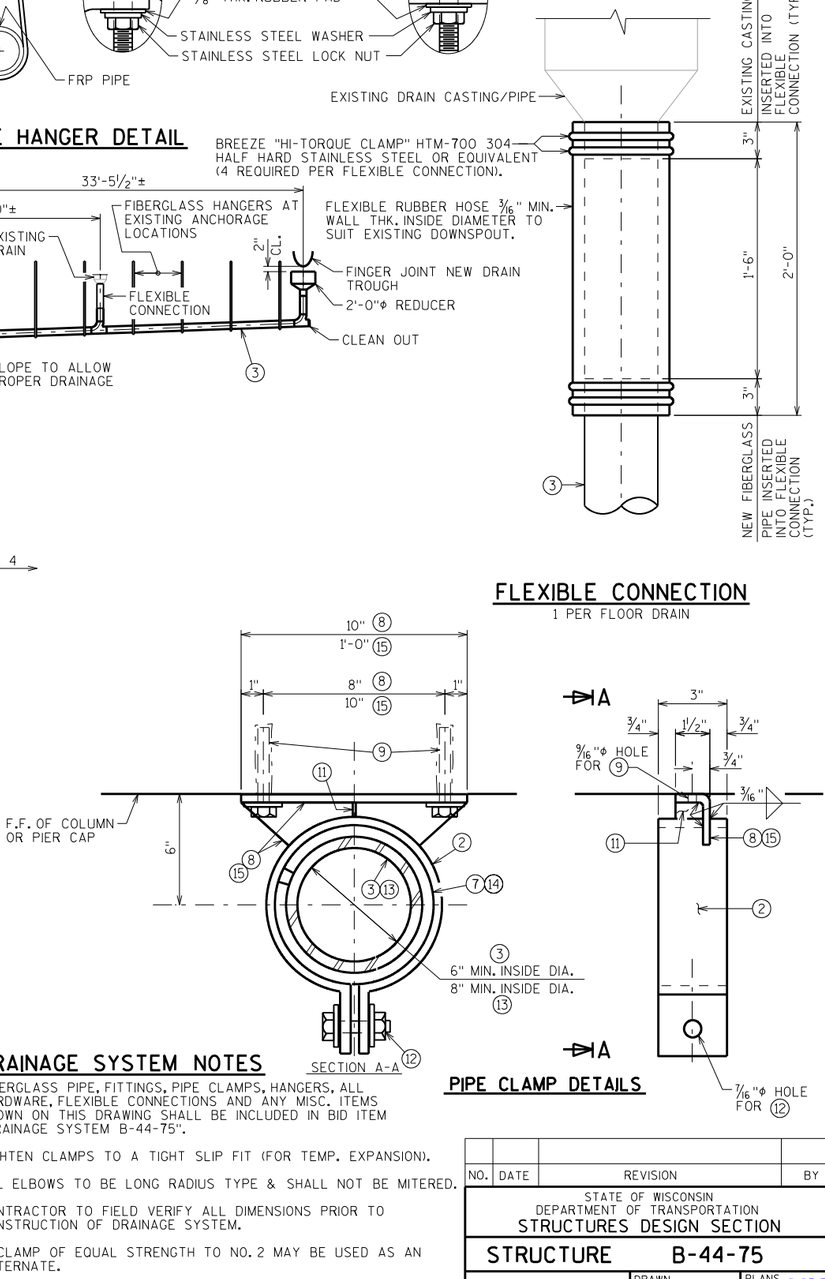
LOOKING SOUTH

NOTE:
ALL FIBERGLASS PIPE AND FITTINGS SHALL BE PIGMENTED RESIN THROUGH OUT THE WALL THK. COLOR TO BE STANDARD CONCRETE GRAY. PAINT, GEL-COAT OR EXTERIOR COATINGS WILL NOT BE ACCEPTED.



SIDE VIEW

PIER 4



FLEXIBLE CONNECTION

1 PER FLOOR DRAIN

PIPE CLAMP DETAILS

DRAINAGE SYSTEM NOTES

FIBERGLASS PIPE, FITTINGS, PIPE CLAMPS, HANGERS, ALL HARDWARE, FLEXIBLE CONNECTIONS AND ANY MISC. ITEMS SHOWN ON THIS DRAWING SHALL BE INCLUDED IN BID ITEM "DRAINAGE SYSTEM B-44-75".

TIGHTEN CLAMPS TO A TIGHT SLIP FIT (FOR TEMP. EXPANSION).

ALL ELBOWS TO BE LONG RADIUS TYPE & SHALL NOT BE MITERED.

CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION OF DRAINAGE SYSTEM.

A CLAMP OF EQUAL STRENGTH TO NO. 2 MAY BE USED AS AN ALTERNATE.

"DRAINAGE SYSTEM B-44-75" TO BE SUPPORTED AT 8'-0" MAX. SPACING USING PIPE CLAMPS SHOWN & SPACING SPECIFIED FOR PIPE HANGERS.

INSTALL CLEAN-OUTS AT ELBOWS.

DRAIN WORK TO BE COMPLETED AS DIRECTED BY THE ENGINEER.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
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STRUCTURES DESIGN SECTION

STRUCTURE B-44-75

DRAWN BY DDS | PLANS CK'D. MSC

DRAINAGE SYSTEM DETAILS

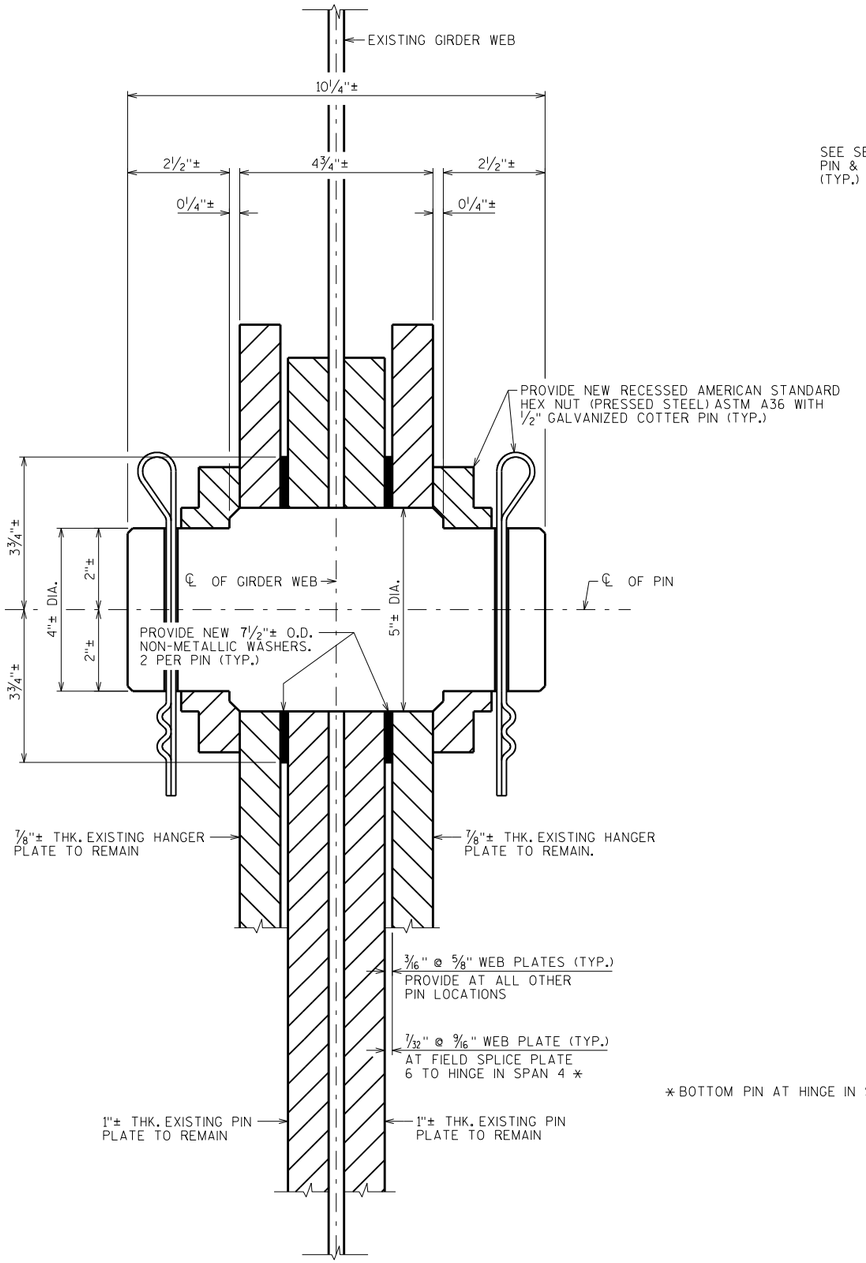
SHEET 12

133

SCALE = 6

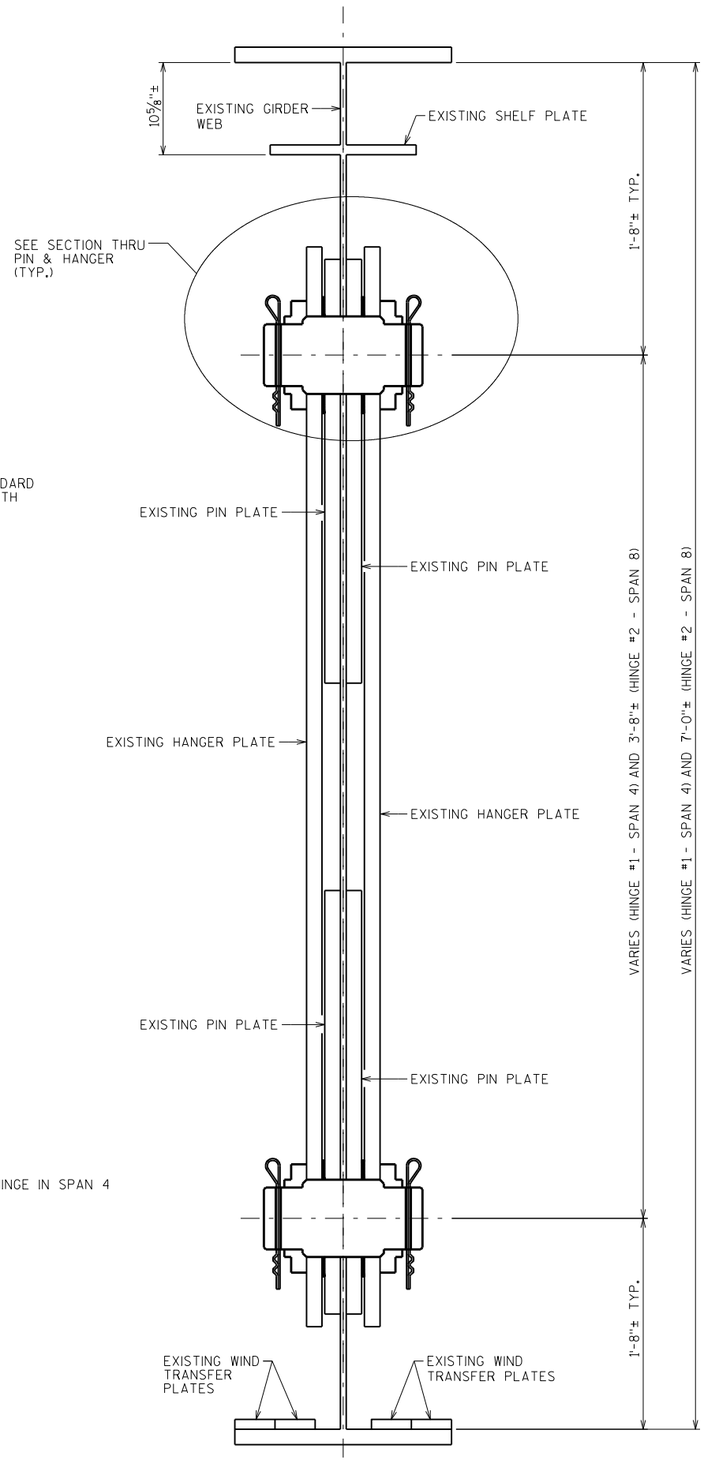
8

8



SECTION THRU PIN & HANGER

* BOTTOM PIN AT HINGE IN SPAN 4



HANGER ASSEMBLY

STATE PROJECT NUMBER

4984-07-71

NOTES

DIMENSIONS SHOWN ARE BASED ON THE EXISTING ORIGINAL STRUCTURE PLANS.

ALL DIMENSIONS ARE TO BE FIELD VERIFIED BY THE CONTRACTOR.

SEE BID ITEM "HANGER ASSEMBLY" FOR MORE INFORMATION.

NON-METALLIC WASHERS SHALL HAVE AN INSIDE DIAMETER BETWEEN 0.005" AND 0.010" LARGER THAN THE PIN DIAMETER.

NON-METALLIC WASHERS REQUIRED FOR USE AS SPACERS BETWEEN THE PIN PLATES AND THE HANGER PLATES SHALL BE MADE FROM ONE OF THE FOLLOWING MATERIALS.

1. PHENOLIC, CANVAS REINFORCED, MIL-P-15035
2. POLYETHYLENE HIGH DENSITY, BLACK ASTM D 1248, TYPE III, CLASS B.
3. ACETAL, FEDERAL SPECIFICATION L-P-392
4. TEFLON, TFE, MIL-P-22241A

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-44-75

DRAWN BY DDS | PLANS CK'D. MSC

PIN AND HANGER DETAILS

SHEET 13

134

SCALE = 0.75

8

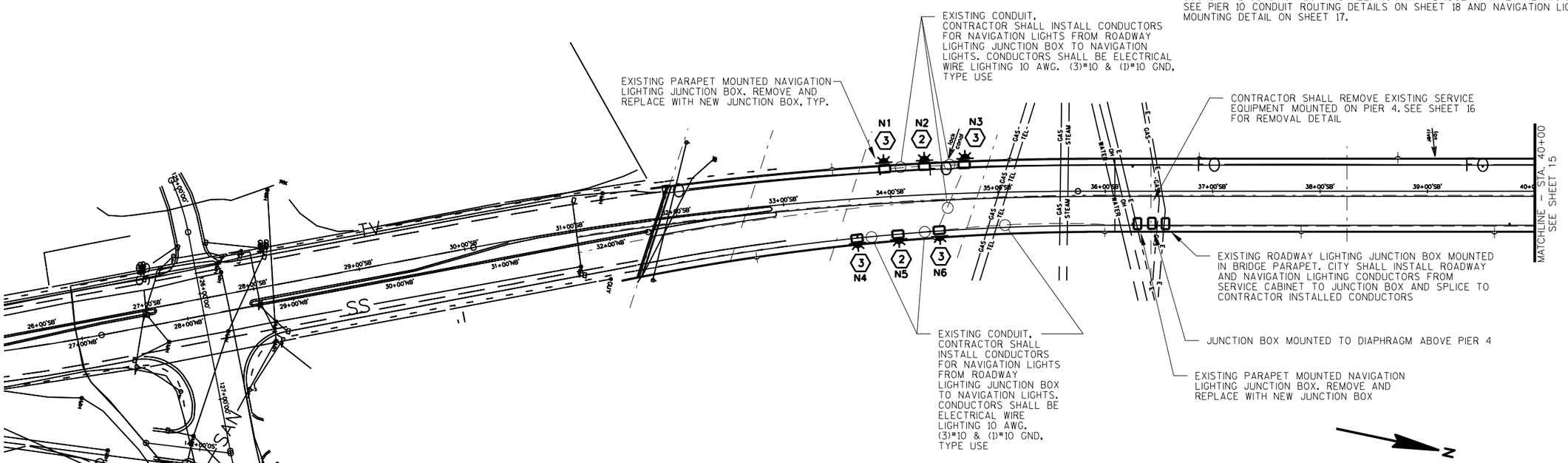
8

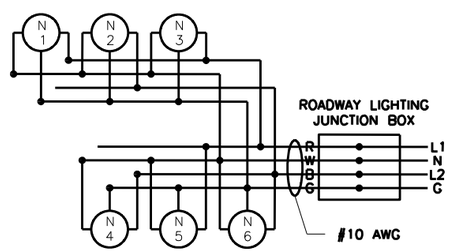
STATE PROJECT NUMBER
4984-07-71

1. ALL NEW CONDUIT ON THIS PLAN SHEET SHALL BE CONDUIT RIGID METALLIC 2-INCH UNLESS OTHERWISE NOTED.

(2) REMOVE EXISTING NAVIGATION LIGHT ASSEMBLY. FURNISH AND INSTALL NEW LED NAVIGATION LIGHT ASSEMBLY. CHANNEL CENTER LIGHT - 360° GREEN. REMOVE EXISTING PARAPET MOUNTED JUNCTION BOX. FURNISH AND INSTALL NEW JUNCTION BOX. COORDINATE JUNCTION BOX INSTALLATION WITH BRIDGE PARAPET REPAIR WORK. SEE PIER 4 CONDUIT ROUTING DETAILS AND NAVIGATION LIGHT MOUNTING DETAIL ON SHEET 17.

(3) REMOVE EXISTING NAVIGATION LIGHT ASSEMBLY. FURNISH AND INSTALL NEW LED NAVIGATION LIGHT ASSEMBLY. CHANNEL MARGIN - 180° RED. REMOVE EXISTING PARAPET MOUNTED JUNCTION BOX. FURNISH AND INSTALL NEW JUNCTION BOX. COORDINATE JUNCTION BOX INSTALLATION WITH BRIDGE PARAPET REPAIR WORK. SEE PIER 10 CONDUIT ROUTING DETAILS ON SHEET 18 AND NAVIGATION LIGHT MOUNTING DETAIL ON SHEET 17.





CIRCUIT DIAGRAM

LEGEND

- NAVIGATIONAL LIGHT
- UNDERGROUND WIRING IN CONDUIT
- EXISTING CIRCUIT IN CONDUIT
- EXISTING PAD MOUNTED SERVICE CABINET
- JUNCTION BOX
- PULLBOX
- CONDUIT STUB
- LIGHTING UNIT NUMBER

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-44-75

DRAWN BY AKF | PLANS CK'D. MSC

LIGHTING PLAN 1

SHEET 14

135

SCALE = .50

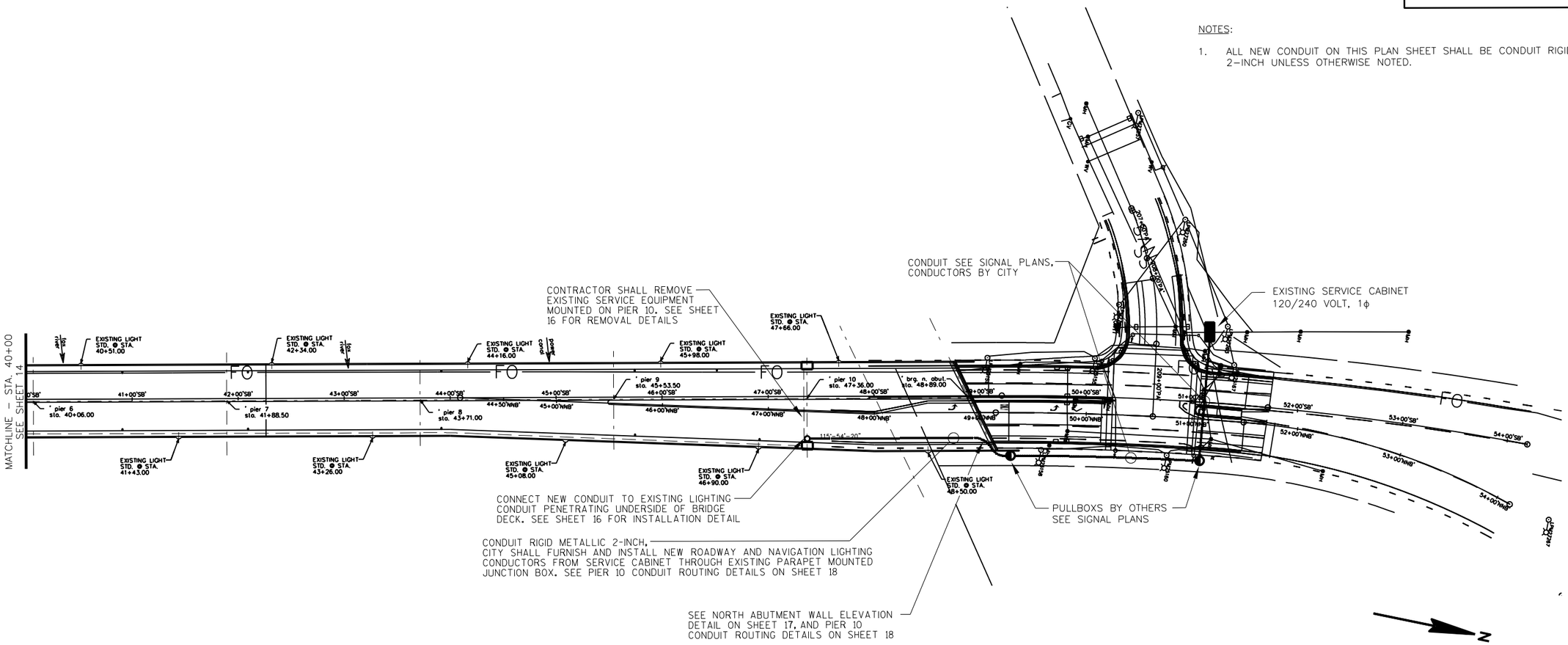
8

8

STATE PROJECT NUMBER
4984-07-71

NOTES:

1. ALL NEW CONDUIT ON THIS PLAN SHEET SHALL BE CONDUIT RIGID METALLIC 2-INCH UNLESS OTHERWISE NOTED.



LEGEND

- NAVIGATIONAL LIGHT
- UNDERGROUND WIRING IN CONDUIT
- EXISTING CIRCUIT IN CONDUIT
- EXISTING PAD MOUNTED SERVICE CABINET
- JUNCTION BOX
- PULLBOX
- CONDUIT STUB
- LIGHTING UNIT NUMBER

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-44-75

DRAWN BY AKF | PLANS CK'D. MSC

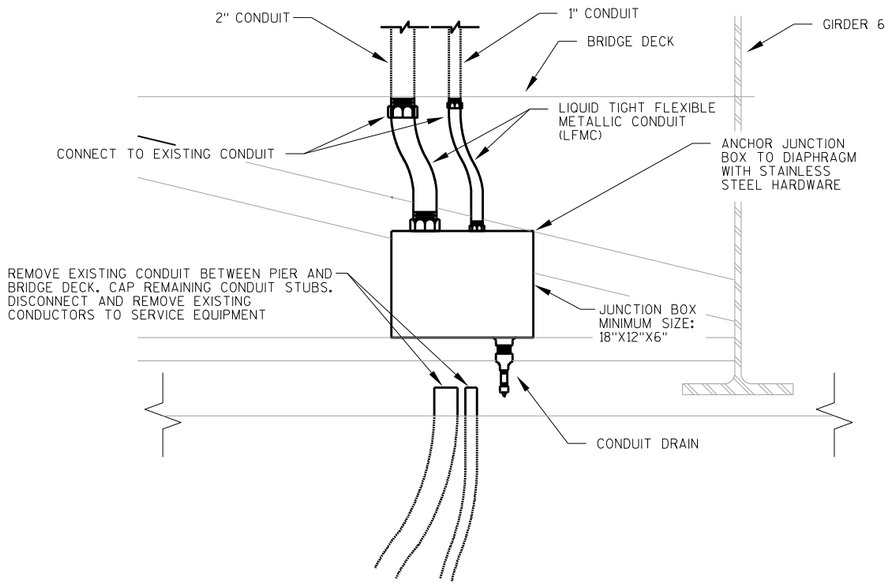
LIGHTING PLAN 2

SHEET 15

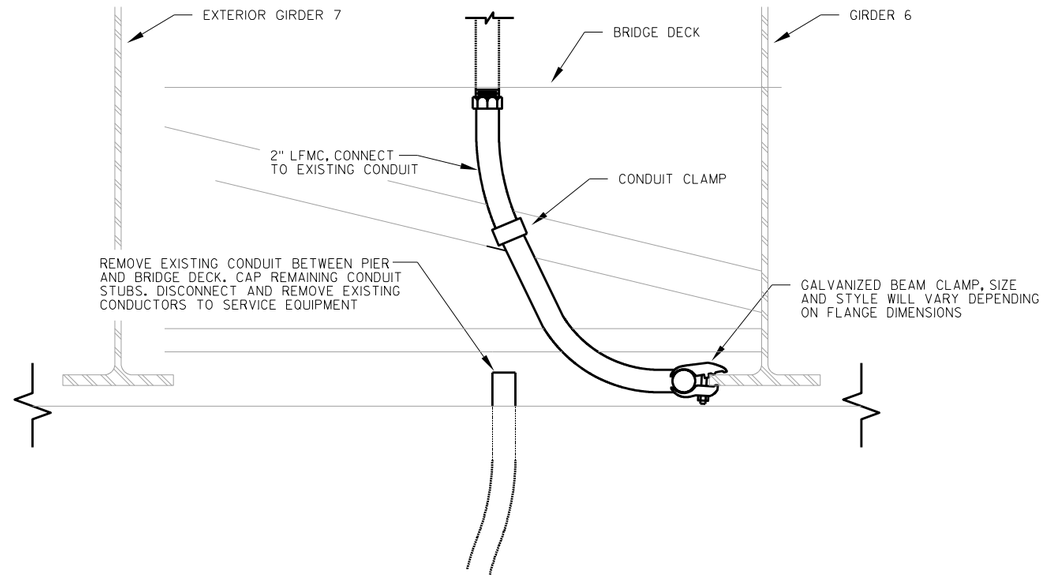
SCALE: 1" = 50'

STATE PROJECT NUMBER

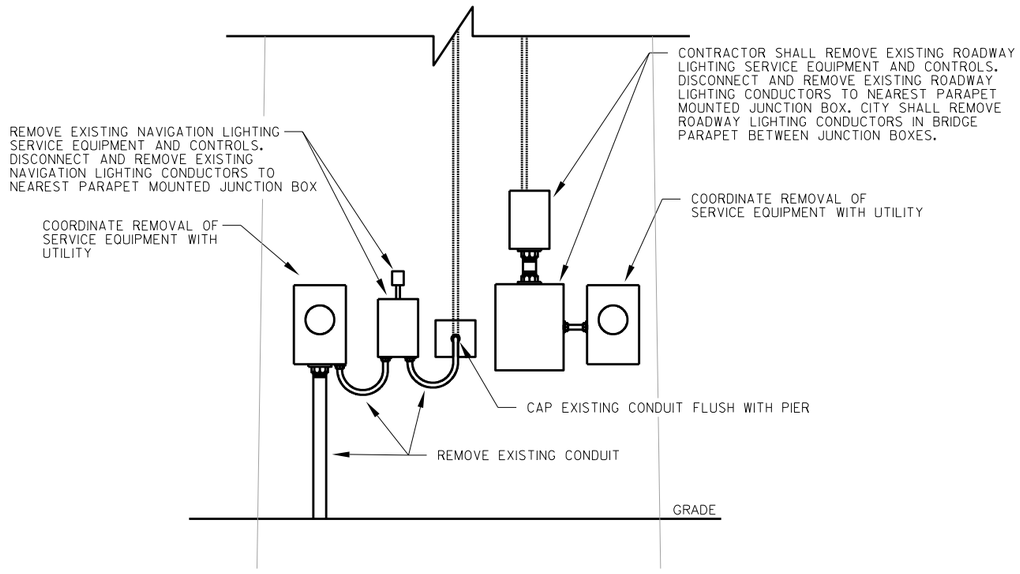
4984-07-71



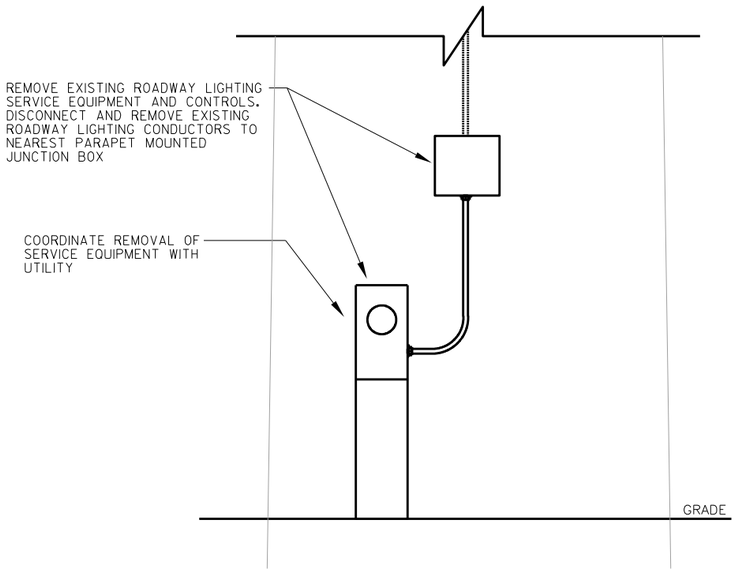
PIER 4 INSTALLATION DETAIL



PIER 10 INSTALLATION DETAIL



PIER 4 SERVICE REMOVAL DETAIL



PIER 10 SERVICE REMOVAL DETAIL

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-44-75

DRAWN BY AKF | PLANS CK'D. MSC

LIGHTING DETAILS 1

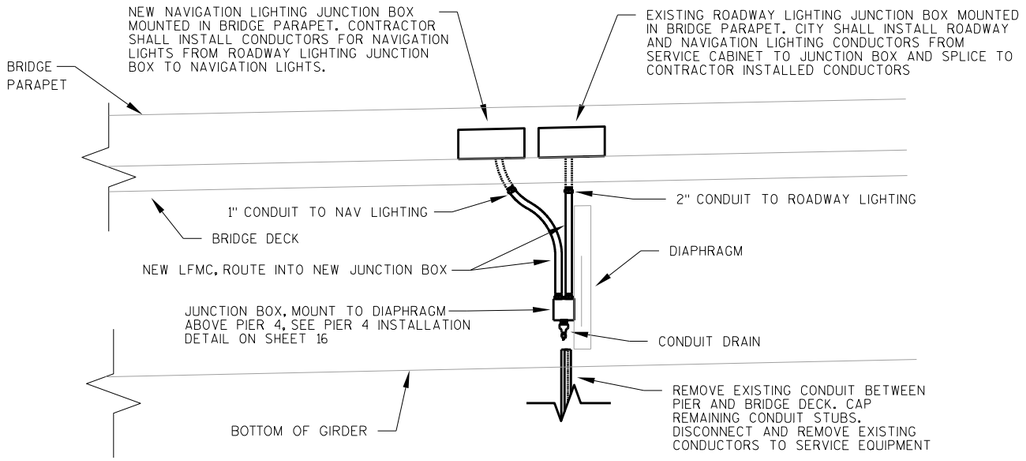
SHEET 16

137

SCALE = .50

STATE PROJECT NUMBER

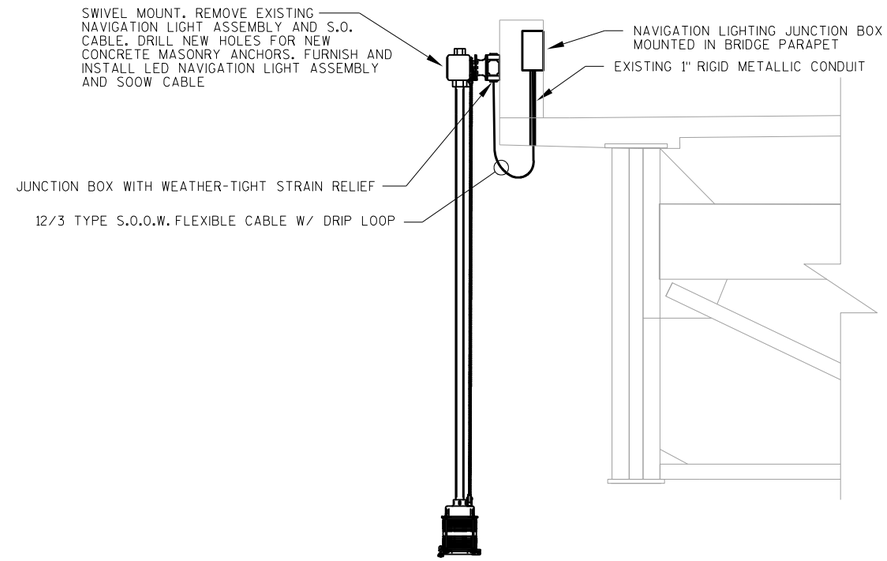
4984-07-71



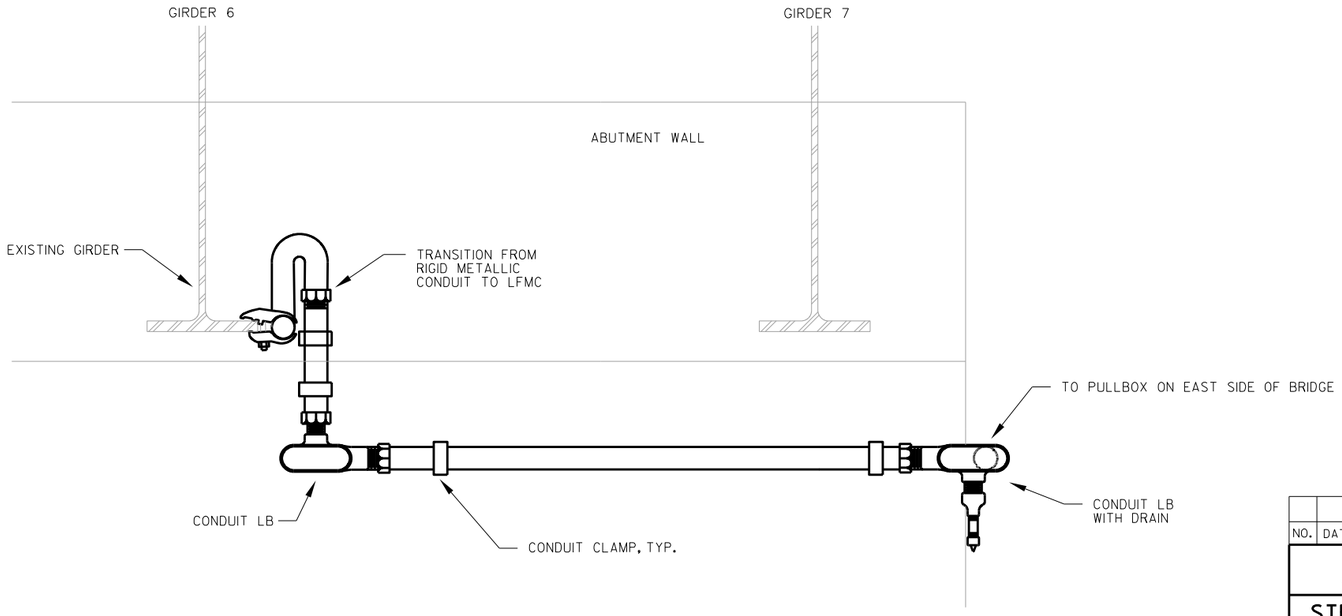
NOTES:

1. FASTEN LFMC TO DIAPHRAGM.
2. COORDINATE WITH CITY TO ASSIST IN THE INSTALLATION OF CITY FURNISHED CONDUCTORS BETWEEN PARAPET MOUNTED ROADWAY AND NAVIGATION LIGHTING JUNCTION BOXES.

PIER 4 CONDUIT ROUTING DETAILS



NAVIGATION LIGHT MOUNTING DETAILS



NORTH ABUTMENT WALL ELEVATION DETAIL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-44-75

DRAWN BY AKF | PLANS CK'D. MSC

LIGHTING DETAILS 2

SHEET 17

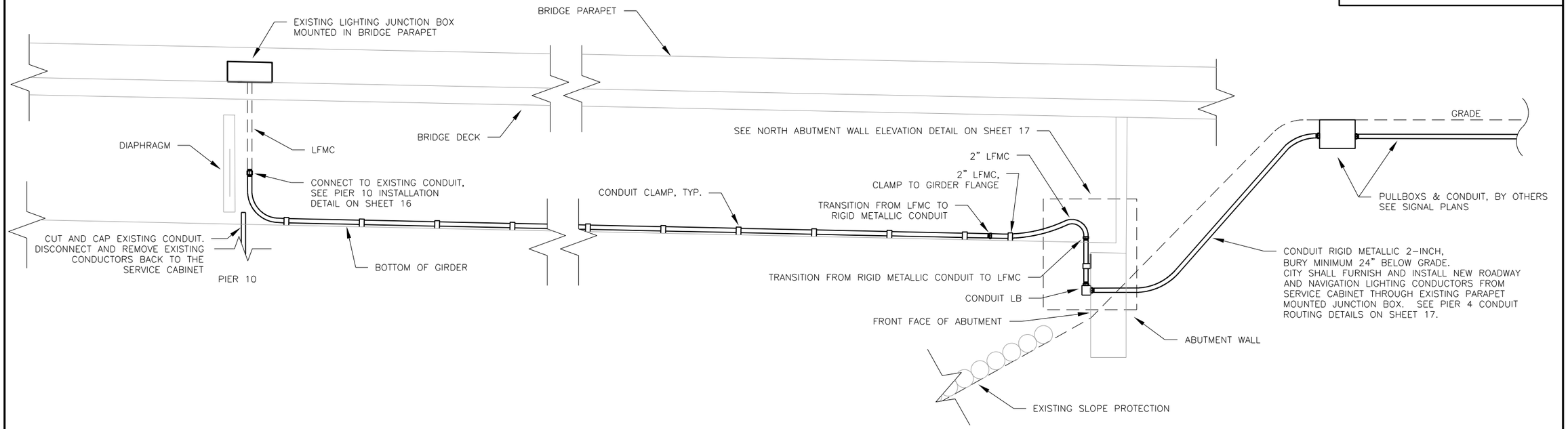
138

8

8

SCALE = .50

STATE PROJECT NUMBER
4984-07-71



PIER 10 CONDUIT ROUTING DETAILS

NOTES:

1. ALL EXPOSED CONDUIT RUNS SHALL BE RIGID METALLIC CONDUIT, UNLESS OTHERWISE NOTED.
2. FASTEN RIGID METALLIC CONDUIT WITH CLAMPS, AS DETAILED ON SHEET 17, ABOUT 5'-0" ON CENTER.
3. FASTEN CLAMPS TO CONCRETE WITH CONCRETE MASONRY ANCHORS.
4. EXPANSION CONDUIT FITTINGS SHALL BE INSTALLED AT ALL BRIDGE EXPANSION JOINTS

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STATE OF WISCONSIN
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STRUCTURE B-44-75

DRAWN BY AKF | PLANS CK'D. MSC

LIGHTING DETAILS 3

SHEET 18

139

8

8

SCALE = .50

Wisconsin Department of Transportation

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