WKE FEB 2018

PROJECT ID WITH: N/A 2984-06-76

INDEX OF SHEETS

TOTAL SHEETS 76

12

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

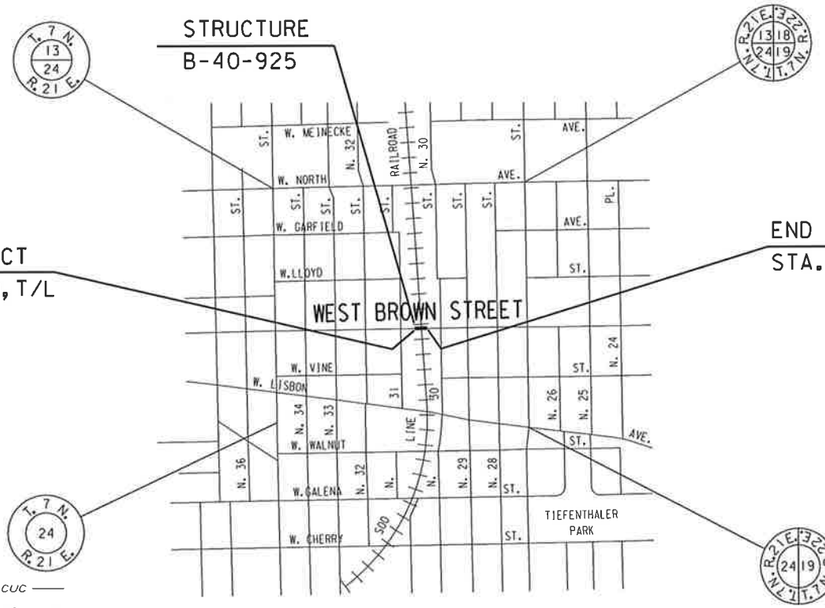
WEST BROWN STREET

BRIDGE OVER CPRR (B-40-0925)

LOCAL STREET
MILWAUKEE COUNTY

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
2984-06-76	———	1

STATE PROJECT NUMBER
2984-06-76



GN

DESIGN DESIGNATION

A.D.T. (CURRENT)	= 1,400
A.D.T. (2035)	= 1,400
D.H.V.	= 140
D.	= 51%
T.	= 1.8%
DESIGN SPEED	= 30 MPH
ESALS	= 40,363

CONVENTIONAL SYMBOLS

PLAN

- COUNTY LINE
- TOWNSHIP OR RANGE LINE
- SECTION LINE
- CORPORATE OR CITY LIMITS
- PROPERTY LINE — P.L.
- STANDARD BENCH MARK
- EXISTING RIGHT OF WAY LINE — R/W
- PROPOSED SEWER LATERAL — (SIZE)
- REFERENCE LINE
- CONCRETE WALK/DWY. REMOVAL
- LIMITS OF CONCRETE PAVEMENT REMOVAL — X X X X X X
- COMBUSTIBLE FLUIDS — CAUTION
- RAILROADS
- FENCE — (TYPE)
- CATCH BASIN OR INLET — EXISTING PROPOSED

PROFILE

- GRADE LINE
- ORIGINAL GROUND
- GRADE ELEVATION — 95.36

UTILITIES

- CITY UNDERGROUND CONDUIT — CUC
- GAS — G
- SANITARY SEWER — SAN
- COMBINED SEWER — CMB
- WATER — W
- FIRE & POLICE CALL BOX
- LIGHT POLE
- POWER POLE
- TELEPHONE OR TELEGRAPH POLE
- TRAFFIC SIGNAL
- TRAFFIC SIGNAL CONTROL BOX
- HYDRANT
- GAS OR WATER GATE VALVE
- MANHOLES - SEWER ○ UTILITY (TYPE) □
- TREES - EXISTING ◑ TO BE REMOVED

LAYOUT

SCALE 1/4 MI.

TOTAL NET LENGTH OF CENTERLINE = 0.038 MILES (URBAN)

THE COORDINATES ON THIS PLAN ARE BASED ON THE WISCONSIN STATE PLANE COORDINATE SYSTEM, MILWAUKEE COUNTY, NAD 27 SOUTH ZONE.

ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO THE CITY OF MILWAUKEE DATUM.

TO CONVERT ELEVATIONS SHOWN ON THIS PLAN TO NATIONAL GEODEDIC VERTICAL DATUM OF 1929, ADD 580.603 TO ELEVATIONS SHOWN ON THIS PLAN.

Accepted For
City of Milwaukee

6/21/17 (Date) Commissioner of Public Works

Original Plans Prepared By

WISCONSIN PROFESSIONAL ENGINEER
JEFFREY S. POLENSKE
E-33028
MILWAUKEE WIS.

6/22/17 (Date) City Engineer

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor City of Milwaukee
Designer City of Milwaukee
Management Consultant DAAR Engineering Inc.
C.O. Examiner

APPROVED FOR THE DEPARTMENT
DATE: 7/31/2017 (Management Consultant Signature)

E

COUNTY MILWAUKEE

FILE NAME = W:\STR\B0934\APPROACH PLANS\TITLE.DGN

GENERAL NOTES

1. ALL OPENINGS BELOW SUBGRADE, RESULTING FROM REMOVALS OR ABANDONMENTS, SHALL BE BACKFILLED WITH BASE AGGREGATE DENSE, 1-1/4 INCH.

2. ALL DISTURBED AREAS, NOT SURFACED, ARE TO BE COVERED WITH 4" OF TOPSOIL, SODDED AND FERTILIZED UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

3. NO TREES OR SHRUBS SHALL BE REMOVED UNLESS DESIGNATED FOR REMOVAL BY THE ENGINEER.

4. TRANSVERSE JOINTS IN THE SIDEWALK SHALL BE CONSTRUCTED AT INTERVALS EQUAL TO THE WIDTH OF THE CONCRETE UNLESS OTHEREWISE DIRECTED BY THE ENGINEER.

5. THE LOCATION OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLAN IS APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA WHICH ARE NOT SHOWN.

6. INLET SCREENS ARE TO BE PLACED BETWEEN THE FRAME AND GRATE OF CATCH BASINS / INLETS TO PREVENT SOIL FROM ENTERING THE SEWERS. ALL EROSION CONTROL MEASURES SHALL BE MAINTAINED UNTIL SUCH TIME AS THE ENGINEER DETERMINES THE MEASURES ARE NO LONGER NECESSARY.

STANDARD ABBREVIATIONS

ASPH.	- ASPHALT
B.M.	- BENCH MARK
CTR.	- CENTER
C/L	- CENTER LINE
COMB.	- COMBINED
CONC.	- CONCRETE
C.W.	- CONCRETE WALK
COR.	- CORNER
C	- CURB
ELEV.	- ELEVATION
ENT.	- ENTRANCE
EXIST.	- EXISTING
F	- FLANGE
G	- GUTTER, OR GAS
HYD.	- HYDRANT
LT.	- LEFT
MMSD	- MILWAUKEE METROPOLITAN SEWERAGE DISTRICT
P/L.	- PROPERTY LINE
R OR RAD.	- RADIUS
RET.	- RETAINING
RT.	- RIGHT
R/W	- RIGHT OF WAY
TEL	- AMERITECH
TES	- TRAFFIC ENGINEERING, AND ELECTRICAL SERVICES
T/L	- TRANSIT LINE
WEP	- WISCONSIN ELECTRIC POWER

ORDER OF SECTION 2 SHEETS

2

UTILITY CONTACTS

CITY OF MILWAUKEE, UTILITY COORDINATOR

MUSA ABU-KHADER
841 N. BROADWAY, RM 710
MILWAUKEE, WI 53202
PHONE: 414-286-2432
mkhader@milwaukee.gov

WE ENERGIES - ELECTRIC

SEND ALL CORRESPONDENCE TO:
LATROY BRUMFIELD
333 W. EVERTT ST.
MILWAUKEE, WI 53203
PHONE: 414-221-5617
latroy.brumfield@we-energies.com

CONSTRUCTION FIELD CONTACT:
KENNETH FRANECKI
500 S. 116TH ST.
WEST ALLIS, WI 53214
PHONE: 414-944-5531
kenneth.franecki@we-energies.com

CONSTRUCTION FIELD CONTACT:
PATRICIA FINN
500 S. 116TH ST.
WEST ALLIS, WI 53214
PHONE: 414-944-5760
patricia.finn@we-energies.com

CITY OF MILWAUKEE, STREET LIGHTING

MR. DENIS KOZELEK
841 N. BROADWAY, RM 901
MILWAUKEE, WI 53202
PHONE: 414-286-3252
dkozelek@milwaukee.gov

CHARTER COMMUNICATIONS

STEVE CRAMER
1320 N. DR. MARTIN LUTHER KING JR. DR.
MILWAUKEE, WI 53212
PHONE: 414-277-4045
CELL: 414-688-2385
FAX: 414-277-0638
steve.cramer@twcable.com

AT & T WISCONSIN

JAY BULANEK
2005 PEWAUKEE RD.
WAUKESHA WI. 53188-2443
PHONE: 262-896-7669 (O)
414-491-2855 (C)
jb5175@att.com

LEVEL 3 COMMUNICATIONS

BRAHIM GADDOUR
3235 INTERTECH DR., SUITE 600
BROOKFIELD, WI 53045
PHONE: 414-908-1027
CELL: 414-704-1026

CITY OF MILWAUKEE, COMMUNICATIONS

MR. DAVID HENKE
1440 WEST CANAL ST.
MILWAUKEE, WI 53233
PHONE: 414-286-3248
dhenke@milwaukee.gov

OTHER CONTACTS

WISCONSIN DEPT. OF NATURAL RESOURCES

KRISTINA BETZOLD
2300 N. DR. MARTIN LUTHER KING JR. DR.
MILWAUKEE, WI 53212-0436
PHONE: 414-263-8517
kristina.betzold@wisconsin.gov

MILWAUKEE COUNTY TRANSIT SYSTEM

MELANIE MACARTHUR
1942 N. 17TH ST.
MILWAUKEE, WI 53205
PHONE: 414-343-1764
mmacarthur@mcts.org

MILWAUKEE METROPOLITAN SEWERAGE DISTRICT

DEBRA JENSEN - PLANNING SERVICES SUPERVISOR
260 W. SEEBOTH AVE.
MILWAUKEE, WI 53204
PHONE: 414-225-2143
djensen@mmsd.com

CITY OF MILWAUKEE

HOLLY RUTENBECK, P.E.
841 N. BROADWAY
MILWAUKEE, WI 53202
PHONE: 414-286-0465
holly.rutenbeck@milwaukee.gov

CANADIAN PACIFIC RAILROAD

JIM KRIEGER
120 S. 6TH ST.
SUITE 700
MINNEAPOLIS, MN. 55402
PHONE: 612-330-4555

WISCONSIN & SOUTHERN RAILROAD CO.

ROGER SCHAALMA
1890 EAST JOHNSON STREET
MADISON, WI 53704
PHONE: 608-620-2044

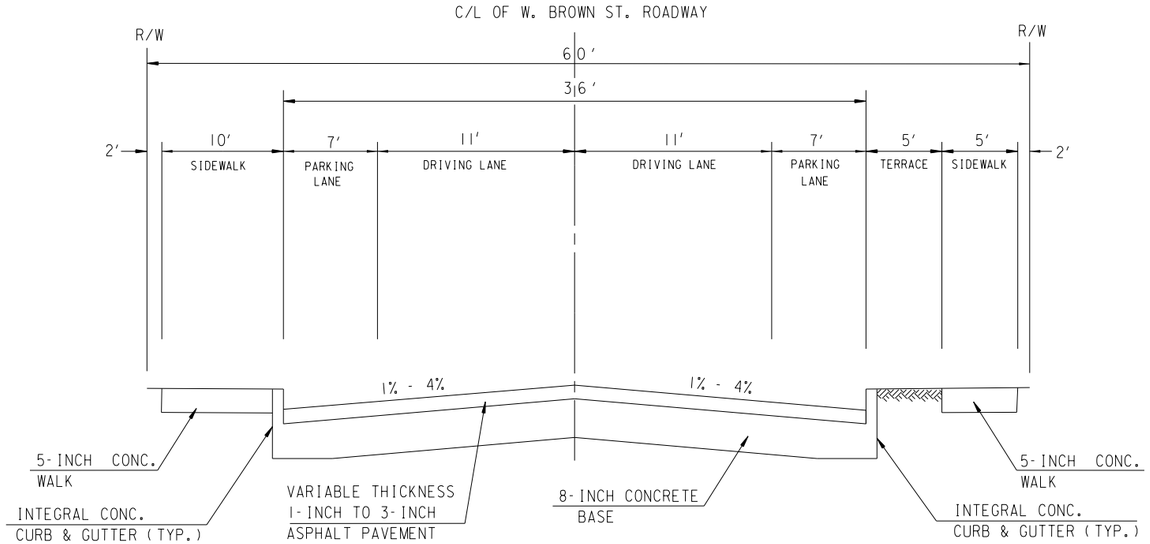
DIGGERS HOTLINE
Dial 811 or (800) 242-8511
www.DiggersHotline.com

2

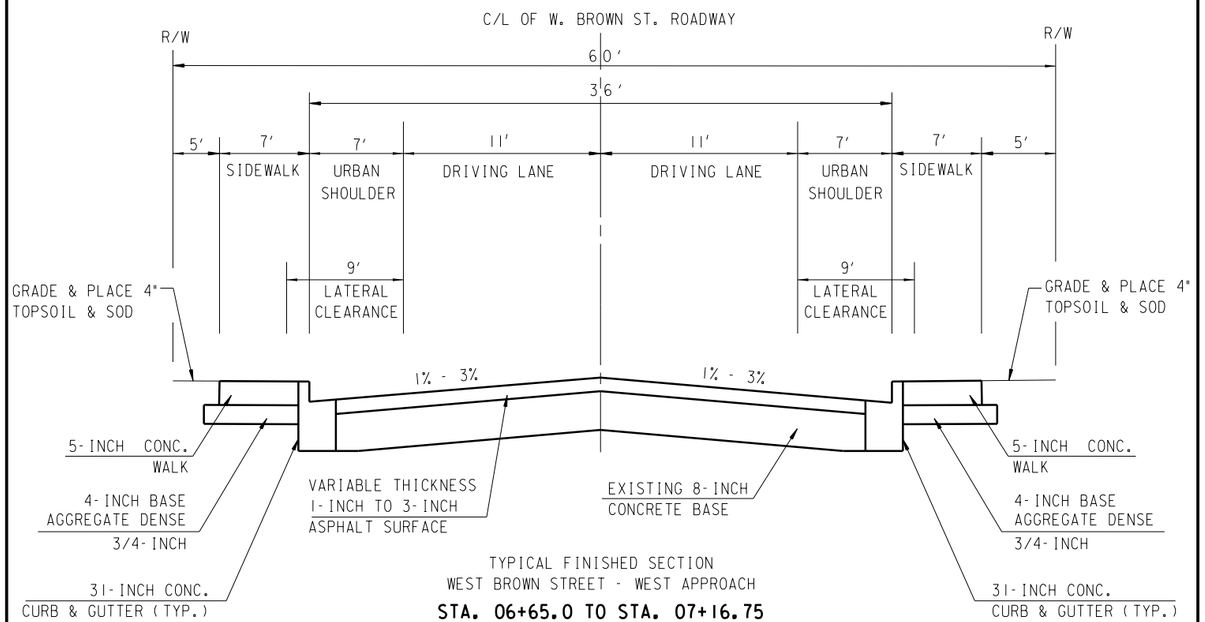
STATE PROJECT NUMBER 2984-06-76 - -	HWY: LOCAL STREET	COUNTY: MILWAUKEE	UTILITY CONTACTS	SCALE FEET	SHEET NO: 3	E

FILE NAME: W:\STR\BO934\APPROACH PLANS\UTILITY CONTACTS.DGN

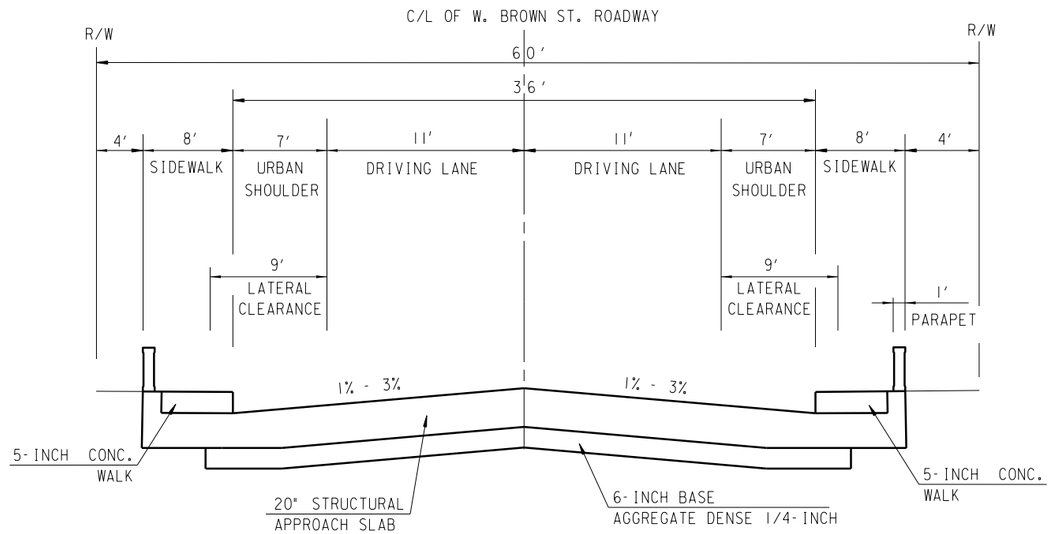
REVISED DATE: 12-21-2017 BY DB



TYPICAL EXISTING SECTION
WEST BROWN STREET - WEST APPROACH
STA. 06+65.0 TO STA. 07+16.75



TYPICAL FINISHED SECTION
WEST BROWN STREET - WEST APPROACH
STA. 06+65.0 TO STA. 07+16.75

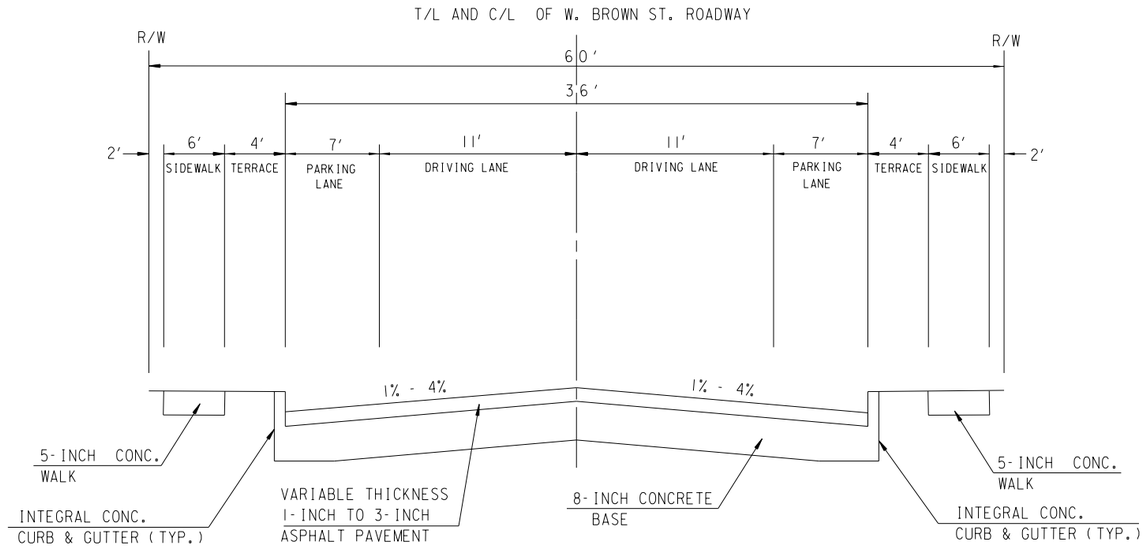


TYPICAL FINISHED SECTION
WEST BROWN STREET - WEST APPROACH
STA. 07+16.75 TO STA. 07+37.0

STATE PROJECT NUMBER 2984-06-76 - -	HWY: LOCAL STREET	COUNTY: MILWAUKEE	TYPICAL SECTION	SCALE FEET 0' 40'	SHEET NO: 4	E

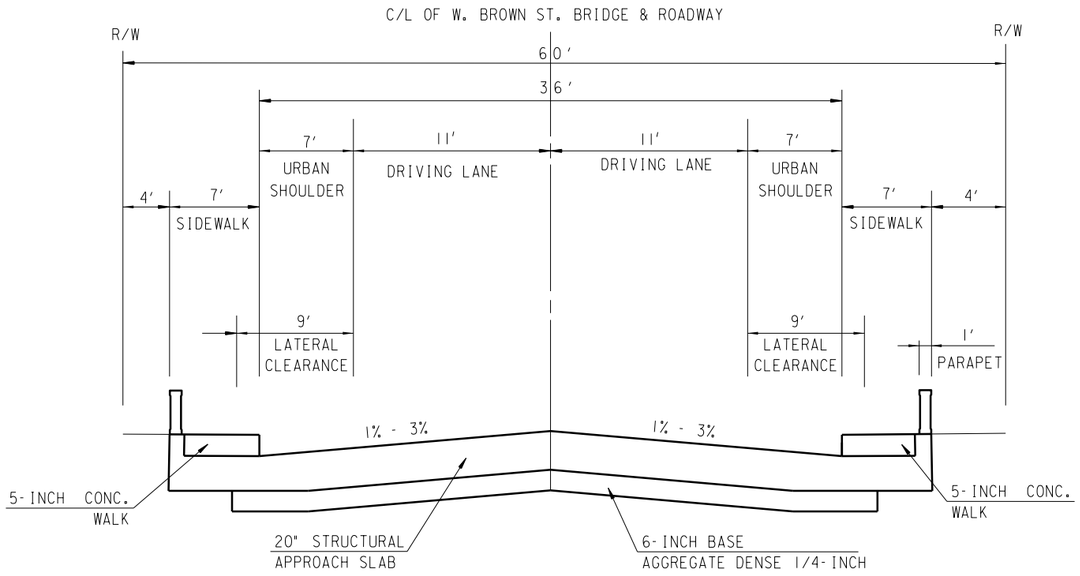
FILENAME: W:\STR\B0934\APPROACH PLANS\TYPSEC.DGN

REVISED DATE: 12-01-2017 BY DB



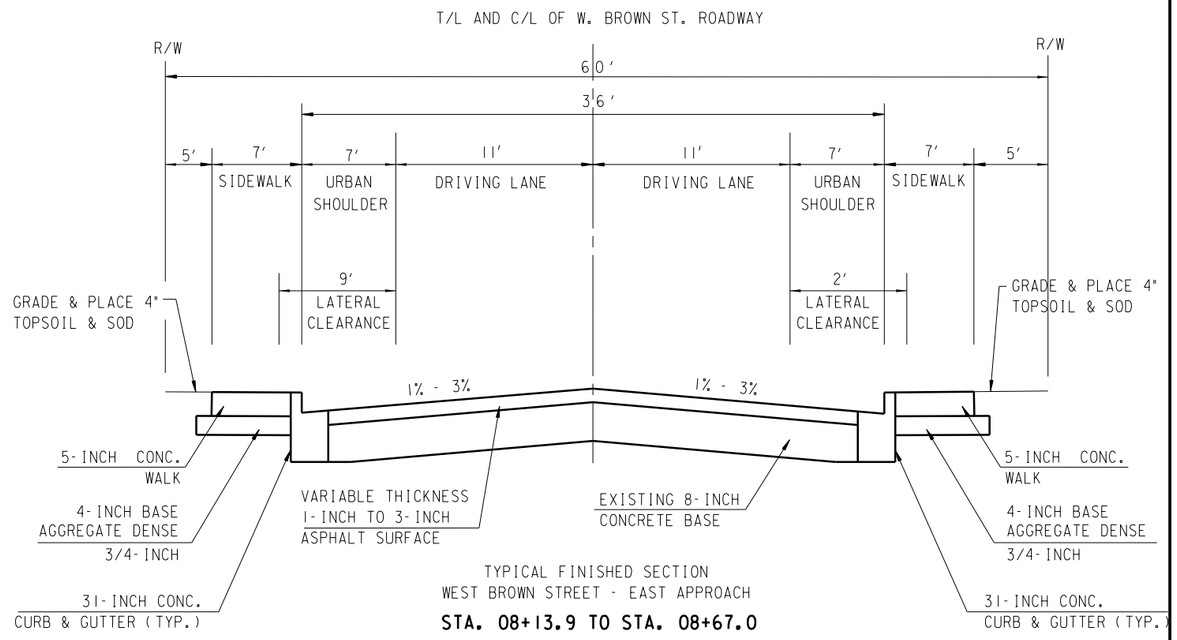
TYPICAL EXISTING SECTION
WEST BROWN STREET - EAST APPROACH

STA. 08+13.9 TO STA. 08+67.0



TYPICAL FINISHED SECTION
WEST BROWN STREET - EAST APPROACH

STA. 07+95.02 TO STA. 08+13.9



TYPICAL FINISHED SECTION
WEST BROWN STREET - EAST APPROACH

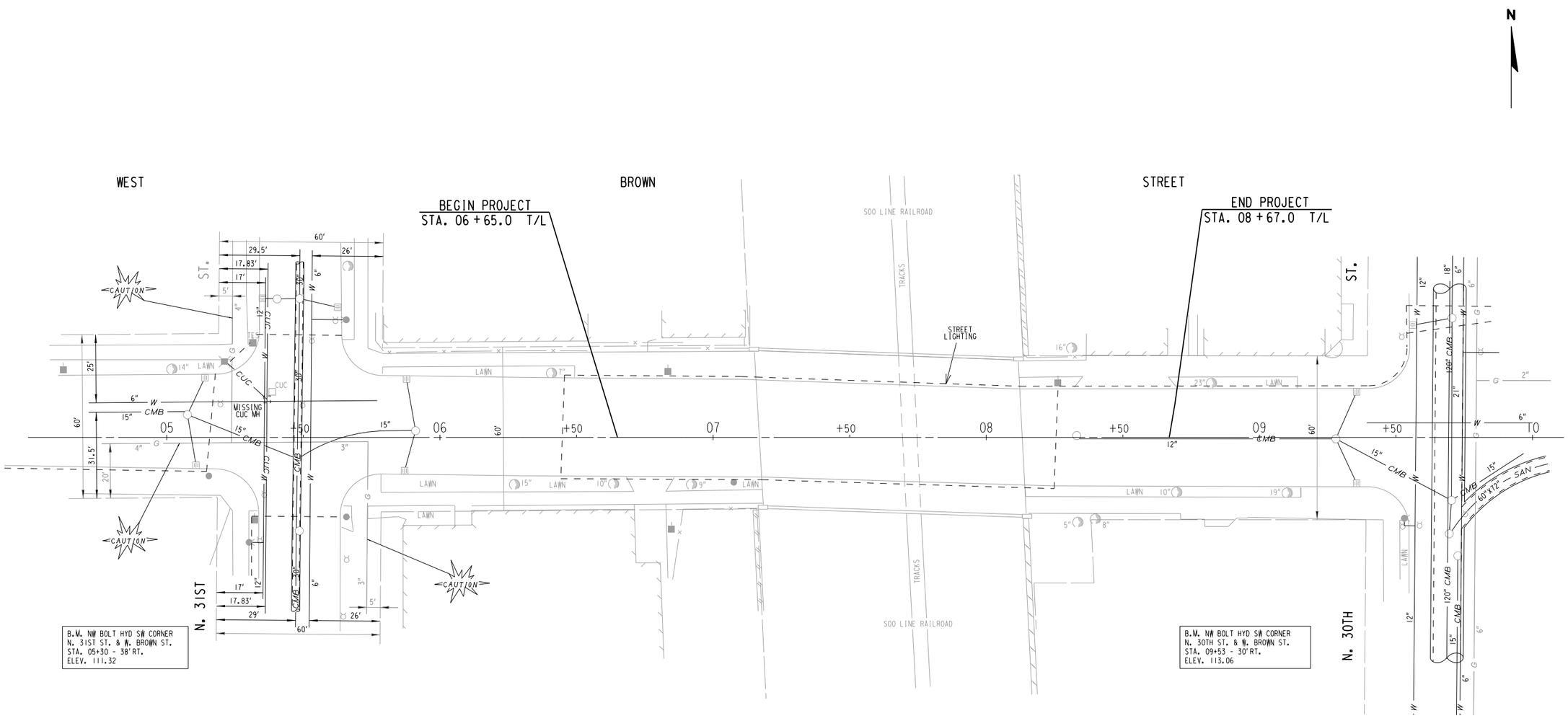
STA. 08+13.9 TO STA. 08+67.0

STATE PROJECT NUMBER 2984-06-76 - -	HWY: LOCAL STREET	COUNTY: MILWAUKEE	TYPICAL SECTION	SCALE FEET 0' 40'	SHEET NO: 5	E

FILENAME: W:\STR\B0934\APPROACH PLANS\TYPSEC.DGN

REVISED DATE: 12-01-2017 BY DB

2

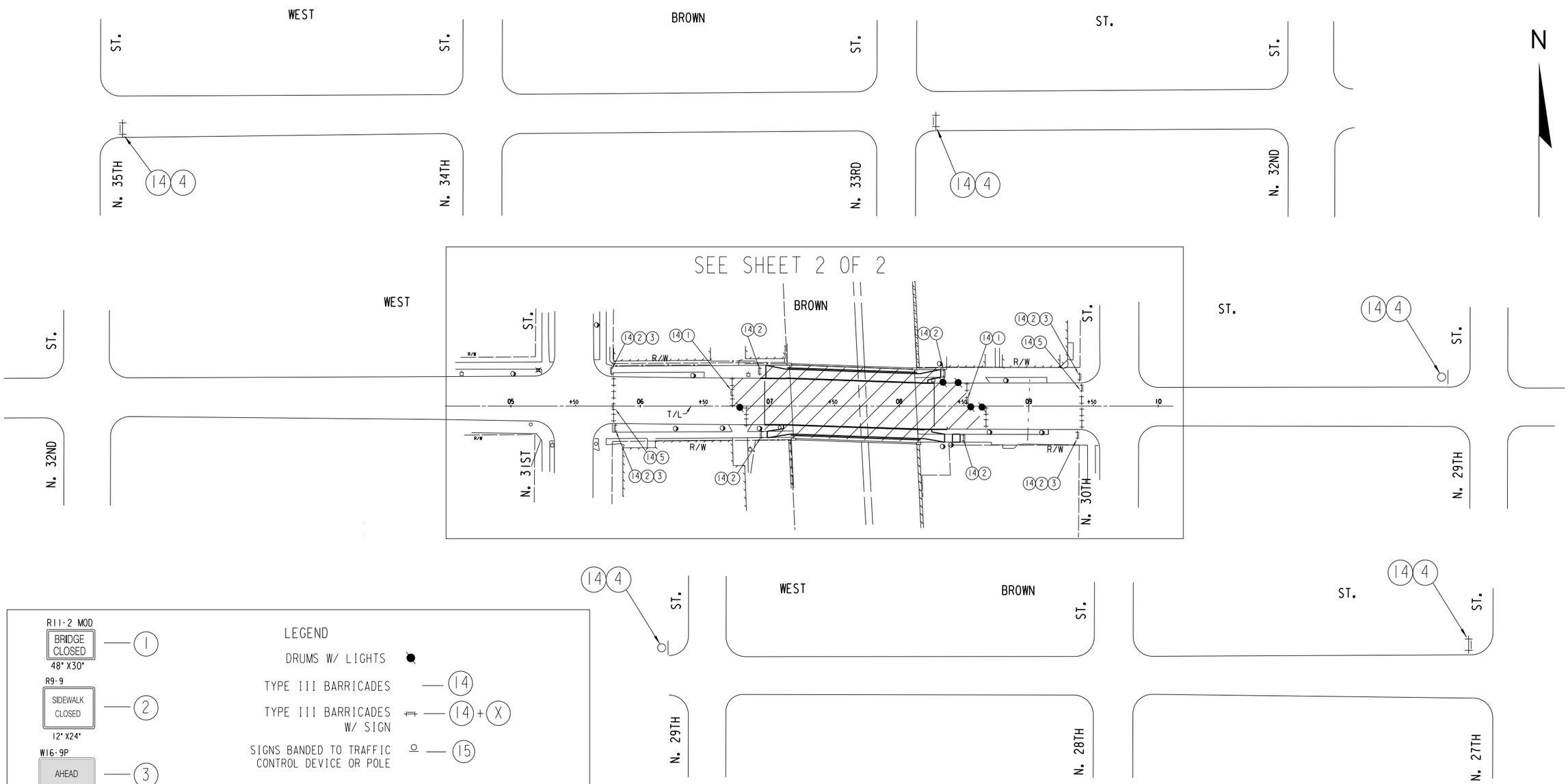


STATE PROJECT NUMBER 2984-06-76 - -	HWY: LOCAL STREET	COUNTY: MILWAUKEE	UTILITY	SCALE FEET 0' 40'	SHEET NO: 6	E

FILENAME: W:\STR\B0934\APPROACH PLANS\UTILITY.DGN

REVISED DATE: 07-25-2017 BY DB

2



LEGEND

DRUMS W/ LIGHTS

TYPE III BARRICADES — (14)

TYPE III BARRICADES W/ SIGN — (14)+(X)

SIGNS BANDED TO TRAFFIC CONTROL DEVICE OR POLE — (15)

WORK AREA

R11-2 MOD
BRIDGE CLOSED
48" X30" — (1)

R9-9
SIDEWALK CLOSED
12" X24" — (2)

W16-9P
AHEAD
24" X12" — (3)

R11-3-B
BRIDGE OUT AHEAD LOCAL TRAFFIC ONLY
60"X30" — (4)

R11-2
ROAD CLOSED
48" X30" — (5)

NOTE: ALL SIGNING SHALL BE THE CONTRACTORS RESPONSIBILITY.
ALL SIGNS SHALL BE BANDED TO EXISTING UTILITY POLES UNLESS OTHERWISE NOTED.
CONTRACTOR RESPONSIBLE FOR COVERING ALL CONFLICTING PAVEMENT MARKINGS.

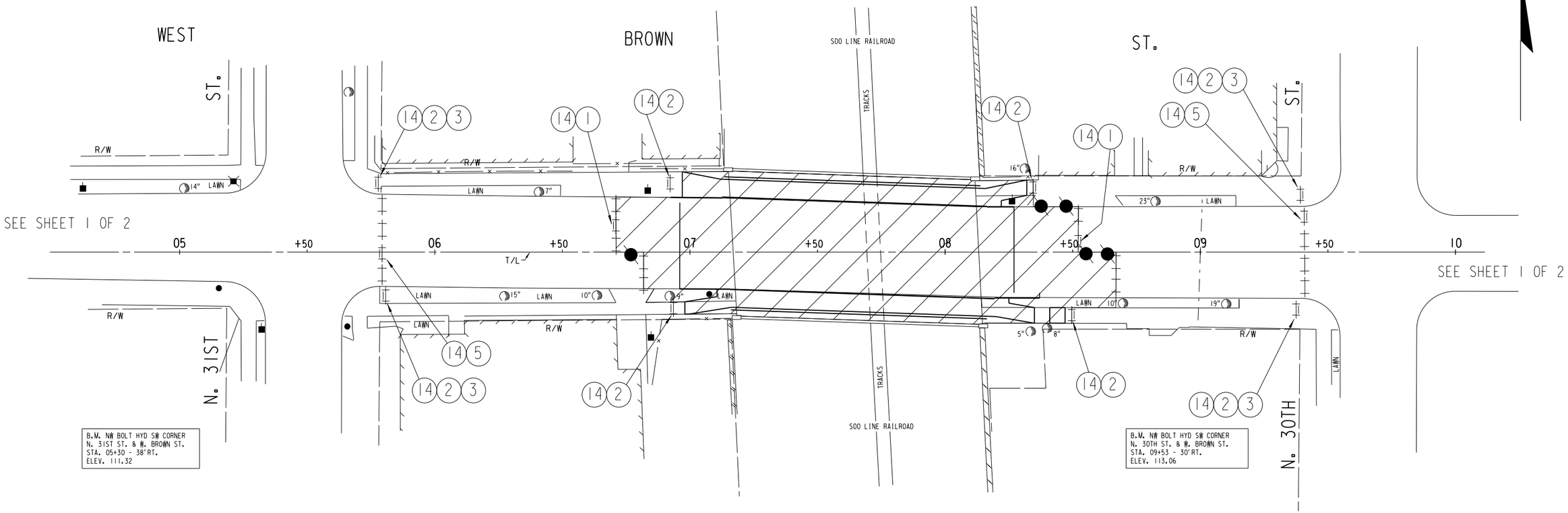
SHEET 1 OF 2

STATE PROJECT NUMBER 2984-06-76 - -	HWY: LOCAL STREET	COUNTY: MILWAUKEE	TRAFFIC CONTROL	SCALE FEET 0' 80'	SHEET NO: 7	E

FILENAME: W:\STR\B0934\APPROACH PLANS\TRAFFIC.DGN

REVISED DATE: 06-01-2017 BY DB

2



R11-2 MOD
BRIDGE CLOSED
48" X30" — (1)

R9-9
SIDEWALK CLOSED
12" X24" — (2)

W16-9P
AHEAD
24" X12" — (3)

R11-3-B
BRIDGE OUT AHEAD
LOCAL TRAFFIC ONLY
60" X30" — (4)

R11-2
ROAD CLOSED
48" X30" — (5)

LEGEND

TYPE III BARRICADES — (14)

TYPE III BARRICADES W/ SIGN — (14) + (X)

SIGNS BANDED TO TRAFFIC CONTROL DEVICE OR POLE — (15)

WORK AREA

NOTE: ALL SIGNING SHALL BE THE CONTRACTORS RESPONSIBILITY.
ALL SIGNS SHALL BE BANDED TO EXISTING UTILITY POLES UNLESS OTHERWISE NOTED.
CONTRACTOR RESPONSIBLE FOR COVERING ALL CONFLICTING PAVEMENT MARKINGS.

SHEET 2 OF 2

STATE PROJECT NUMBER 2984-06-76 - -	HWY: LOCAL STREET	COUNTY: MILWAUKEE	TRAFFIC CONTROL	SCALE FEET 0' 40'	SHEET NO: 8	E

FILENAME: W:\STR\B0934\APPROACH PLANS\TRAFFIC.DGN

REVISED DATE: 05-30-2017 BY BB

2

TRAFFIC & STREET LIGHTING GENERAL NOTES:

PRIOR TO CONSTRUCTION, THE LOCATION OF UNDERGROUND UTILITIES SHALL BE DETERMINED IN THE FIELD BY CONTACTING "DIGGERS HOTLINE."

STREET LIGHTING & TRAFFIC SIGNALS SHALL BE INSTALLED IN COMPLIANCE WITH WISCONSIN DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS SECTION 652 EXCEPT:

THE CONTRACTOR IS RESPONSIBLE FOR ALL COSTS INCLUDING REPAIRS, REPLACEMENT OR RELOCATION ETC. OF STREET LIGHTING OR TRAFFIC SIGNAL FACILITIES IF THE CONTRACTOR DOES ANY DEVIATION FROM THE STREET LIGHTING OR TRAFFIC SIGNAL DESIGN WITHOUT THE STREET LIGHTING ENGINEERS SIGNED PERMISSION.

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

2 LOCATIONS OF THE PVC CONDUITS WHERE THEY ARE REQUIRED ARE IDENTIFIED IN THE PRINTS. HOWEVER, INSTALLATION MAY REQUIRE INTEGRATION WITH EXISTING FIELD CONDITIONS. APPROPRIATE ADJUSTMENT ON CONDUIT LOCATIONS MAY BE MADE IF THE FIELD CONDITIONS ARE SUCH THAT THE CONDUIT CANNOT BE INSTALLED AT THE SPECIFIED LOCATIONS. ANY RELOCATIONS MUST BE APPROVED BY THE ENGINEER. FIELD MARK EACH CONDUIT LOCATION BY STAMPING AND PAINTING WITH RED PAINT ON TOP AND BACKSIDE OF CURB.

3 TYPICAL CONDUIT INSTALLED UP TO DIRECT BURIED STREET LIGHT POLES IS AS FOLLOWS 3-INCH OR 2.5-INCH (AS NOTED) SCHEDULE 40 RIGID PVC TO STREET LIGHTING METAL HOUSING (PEDESTAL), THE 1.5-INCH SCHEDULE 40 RIGID PVC TO STREET LIGHT POLE CABLE SLOT, AND THE 2-INCH SCHEDULE 40 RIGID PVC TO SIGNAL STANDARD BASE AND RISER FOR TRAFFIC SIGNAL ON STREET LIGHT POLE.

4 DEPTH OF CONDUIT INSTALLED BELOW THE STREETS, HIGHWAYS, ROADS, AND ALLEYS SHALL BE 24-INCHES MINIMUM AND 36-INCHES MAXIMUM. (MEASURED FROM FINISHED FLANGE LINE)

5 CONDUIT INSTALLED BEHIND CURB, AND UNDER DRIVEWAYS SHALL BE INSTALLED AT A DISTANCE OF 6 INCHES AWAY FROM THE BACK OF CURB TO THE CENTER LINE OF CONDUIT, AND 18 INCHES DOWN MEASURED FROM THE TOP OF CURB OR FINISHED GRADE TO THE TOP OF CONDUIT.

6 WHEN THERE IS MORE THAN ONE CONDUIT TO BE INSTALLED, PLACE ALL CONDUITS IN THE SAME TRENCH.

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

8 THE CONTRACTOR OR HIS SUBCONTRACTOR MUST MAKE SURE THE AREA BEHIND CURB AND/OR TRENCH SHALL BE FREE OF DEBRIS AND OVERPOUR AND SHALL NOT BE BACKFILLED PRIOR TO INSPECTION OF THE CONDUIT.

9 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.

10 ALL CUT ENDS SHALL BE TRIMMED INSIDE AND OUTSIDE TO REMOVE ALL ROUGH EDGES ON ALL CONDUITS. (SEE NEC 352.28 2008 CODE)

11 PRIOR TO CONDUIT ACCEPTANCE, ALL CONDUIT ENDS SHALL BE THOROUGHLY CLEANED AND BE CAPPED IMMEDIATELY AFTER INSTALLATION WITH THE APPROPRIATE CAST PLASTIC CAP WHICH FITS SNUGGLY ON THE CONDUIT, BUT EASILY REMOVED IN THE FUTURE. DUCT TAPE OR ANY OTHER CAPPING METHOD IS NOT ACCEPTABLE.

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

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

14 PULL ROPE (3/8-INCH NYLON) SHALL BE INSTALLED IN ALL NEW CONDUIT.

15 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 UNLESS OTHERWISE APPROVED BY THE STREET LIGHTING ENGINEER.

16 WHEN ENDS OF CONDUIT DO NOT CONNECT TO A PULL BOX / VAULT AND WILL END UP UNDER CONCRETE WALK. THE CONTRACTOR IS REQUIRED TO LEAVE A 24" X 24" BOX FORM CENTERED OVER THE END OF CONDUIT AND FILL THE BOXFORM WITH CRUSHED GRAVEL. (PER WISDOT SPEC 209.2.1(1) GRANULAR BACKFILL)

17 ALL PIPE CROSSINGS AND PULL BOXES / VAULTS SHALL BE AT LEAST SIX (6) FEET AWAY FROM FIRE HYDRANTS, UNLESS NOTED OTHERWISE, OR APPROVED BY THE STREET LIGHTING ENGINEER.

18 ALL POLES AND TRAFFIC STANDARDS IN CONCRETE ARE REQUIRED TO HAVE A 30"X30" BOX SHAPED JOINT PLACED AROUND THEM USING AN EXPANSION JOINT FILLER. UNLESS NOTED OTHERWISE (SEE DETAIL 122)

19 TYPICAL RECTANGULAR PULL BOXES / VAULTS SHOULD BE INSTALLED AS SHOWN ON PLANS, BUT WHEN IT IS NOT POSSIBLE, A 5 FT. TO 6 FT. OFFSET FROM STREET LIGHT POLES, SIGNAL STANDARDS AND FIRE HYDRANTS SHOULD BE USED, OTHERWISE APPROVED BY THE STREET LIGHTING ENGINEER.

TRAFFIC & STREET LIGHTING GENERAL NOTES:

20 LIGHT POLES AND TRAFFIC STANDARDS INSTALLED BEHIND THE CURB MUST MEET A MINIMUM DISTANCE OF 24 INCHES FROM THE FACE OF CURB TO THE CURB SIDE FACE OF THE POLE OR TRAFFIC STANDARD.

21 COORDINATE NEW CONDUIT CONNECTIONS WITH EXISTING CONDUIT, DUCT PACKAGES, AND PULL BOXES/ VAULTS/ MANHOLES WITH CITY OF MILWAUKEE STREET LIGHTING. THE CITY REQUIRES THREE WORKING DAYS ADVANCED NOTICE. CONTACT ELECTRICAL SUPERVISOR
STREET LIGHTING - DENNIS MILLER (OFFICE) 414-286-5942 (CELL) 414-708-4251 OR DISPATCHER @ 414-286-5944
TRAFFIC SIGNALS - AL NICHOLS (OFFICE) 414-286-3687 (CELL) 414-708-5148 OR DISPATCHER @ 414-286-3687

22 IMMEDIATELY AFTER THE CONTRACTOR HAS COMPLETED ALL THE ELECTRICAL PULL BOXES / VAULTS, CONDUIT AND CONDUIT CONNECTIONS, AND JUST BEFORE ELECTRICAL WORK IS COVERED UP WITH CONRETE, SOIL, OR ETC. THE CONTRACTOR IS REQUIRED TO CONTACT THE CITY OF MILWAUKEE ELECTRICAL SHOP SUPERVISORS FOR FINAL INSPECTION AND APPROVAL OF ALL WORK.
STREET LIGHTING - DENNIS MILLER (OFFICE) 414-286-5942 (CELL) 414-708-4251
STREET LIGHTING - GEORGE BERDINE (OFFICE) 414-286-5943 (CELL) 414-708-4245
STREET LIGHTING - THOMAS HUGHES (OFFICE) 414-286-3457 (CELL) 414-708-3175
STREET LIGHTING - DISPATCHER @ 414-286-5944
TRAFFIC SIGNALS - AL NICHOLS (OFFICE) 414-286-5941 (CELL) 414-708-5148
TRAFFIC SIGNALS - DISPATCHER @ 414-286-3687

23 CONDUIT WILL ONLY BE INSTALLED AFTER THE CURB IS POURED, UNLESS APPROVED BY BOTH THE ENGINEER & STREET LIGHTING SHOP SUPERVISOR.

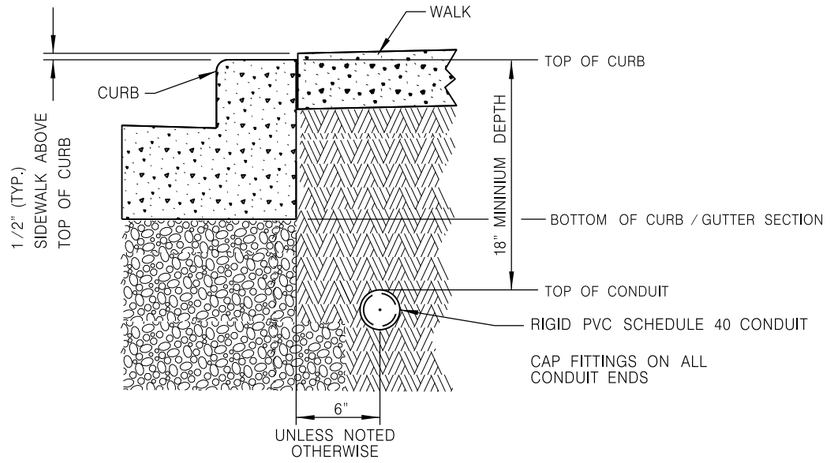
2

SHEET 1 OF 3

PROJECT NO: 2984–06–76	HWY: LOCAL STREET	COUNTY: MILWAUKEE	STREET LIGHTING DETAILS	SHEET 9	E

FILE NAME : W:\bes\pavings\Bridge Work\2018 work\wBrown St – Bridge Over OPM (2984–06–06)\2984–06–06 wBrown St – Bridge Conduit & Foundations.dgn PLOT DATE : 31–MAY–2017 12:13 PLOT BY : dkozel PLOT NAME : PLOT SCALE : 30.000000:1.000000
WISDOT/CADDS SHEET 42

NOTE: 1.) KEEP AREA BEHIND CURB FREE OF DEBRIS AND CONCRETE OVERPOUR.
2.) CONDUIT TO BE PLACED 6 INCHES ON CENTER DIRECTLY BEHIND CURB, UNLESS NOTED OR APPROVED BY ENGINEER.



DETAIL "A"

100

TYPICAL CONDUIT INSTALLATION BEHIND CURB

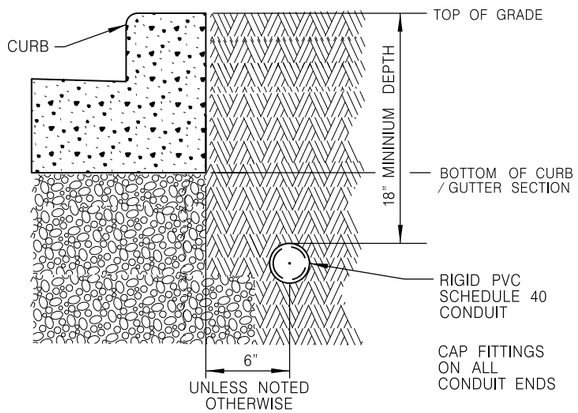
NOT TO SCALE

ANY DEVIATIONS FROM DETAIL WILL REQUIRE PERMISSION FROM STREET LIGHTING FORCES.
CONTACT DISPATCHER AT (414) 286–5944 FOR THE APPROPRIATE SHOP SUPERVISOR.

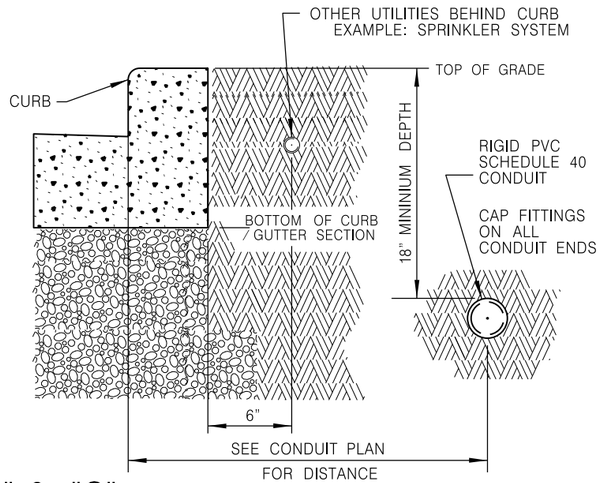
NOTE: 1.) KEEP AREA BEHIND CURB FREE OF DEBRIS AND CONCRETE OVERPOUR.

DETAIL "B"

CONDUIT TO BE PLACED 6" ON CENTER DIRECTLY BEHIND CURB, UNLESS NOTED OR APPROVED BY ENGINEER.



DETAIL "C"



DETAIL "B" & "C"

100

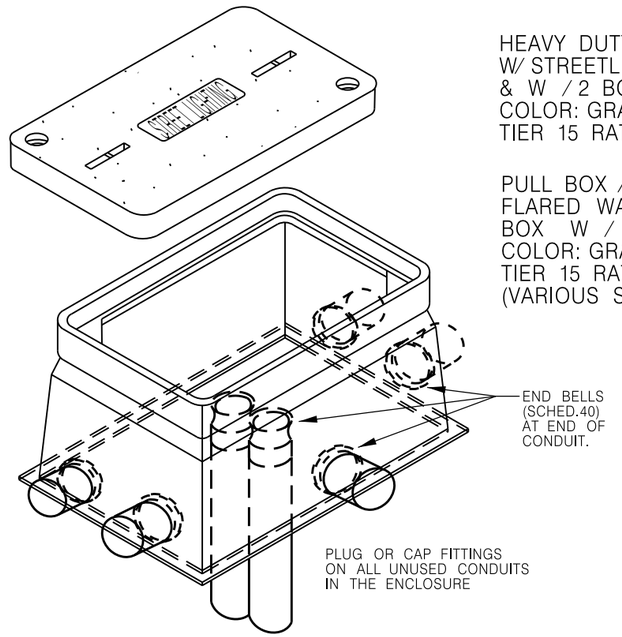
TYPICAL CONDUIT INSTALLATION BEHIND CURB

NOT TO SCALE

SHEET 2 OF 3

PROJECT NO: 2984–06–76	HWY: LOCAL STREET	COUNTY: MILWAUKEE	STREET LIGHTING DETAILS	SHEET 10	E

FILE NAME : W:\bes\pavings\Bridge Work\2018 work\wBrown St – Bridge Over OPM (2984–06–06)\2984–06–06 wBrown St – Bridge Conduit & Foundations.dgn
PLOT DATE : 31–MAY–2017 12:13
PLOT BY : dkozel
PLOT NAME :
PLOT SCALE : 30.000000:1.000000
WISDOT/CADDS SHEET 42

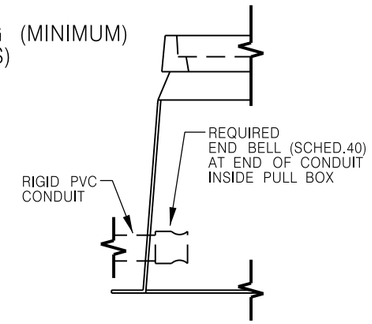


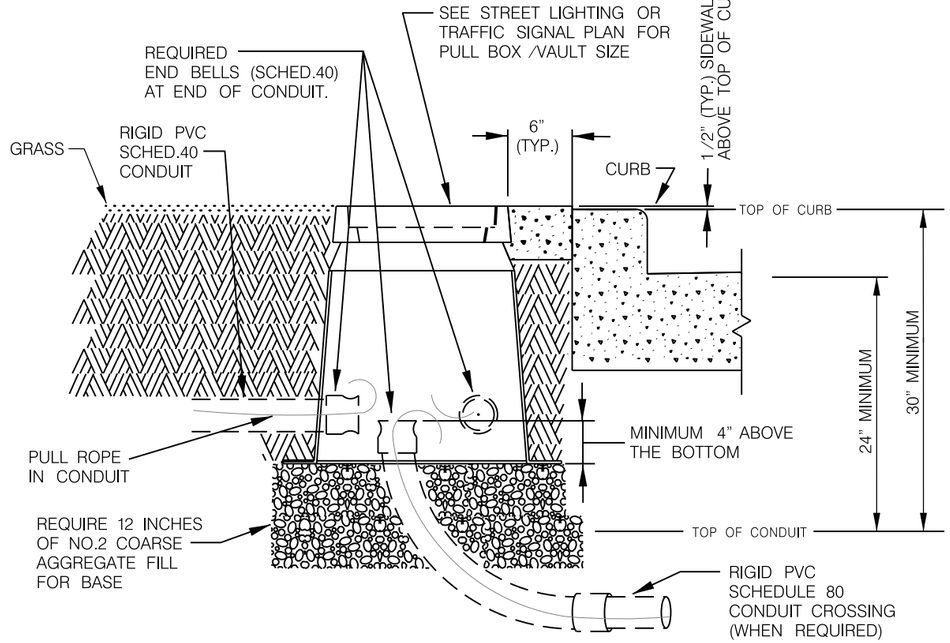
HEAVY DUTY COVER
W/ STREETLIGHTING LOGO
& W / 2 BOLTS
COLOR: GRAY
TIER 15 RATING (MINIMUM)

PULL BOX /VAULT
FLARED WALL
BOX W / NO BASE
COLOR: GRAY
TIER 15 RATING (MINIMUM)
(VARIOUS SIZES)

END BELLS
(SCHED.40)
AT END OF
CONDUIT.

PLUG OR CAP FITTINGS
ON ALL UNUSED CONDUITS
IN THE ENCLOSURE





112 DETAIL

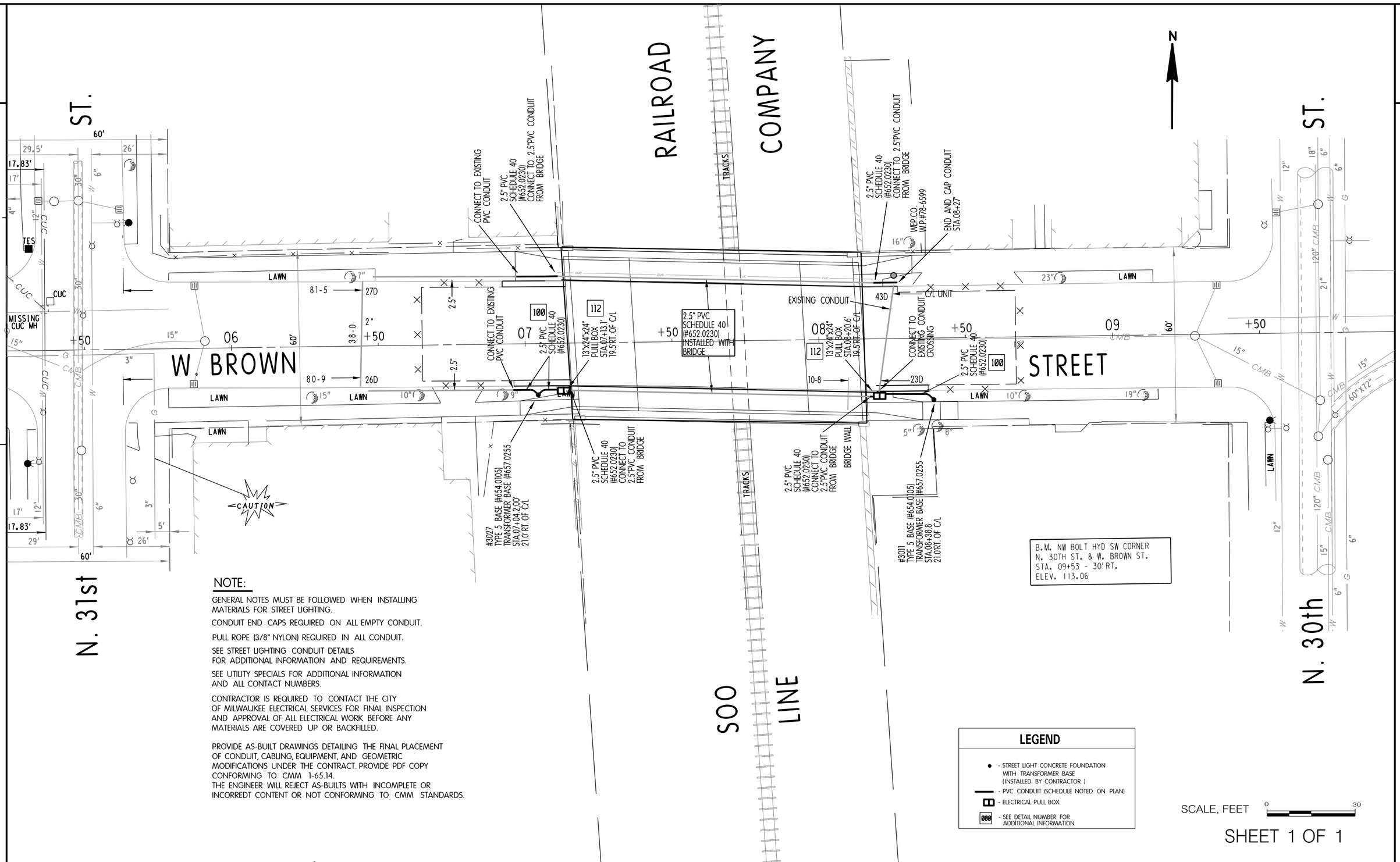
TYPICAL PULL BOX /VAULT INSTALLATION
IN EITHER PAVEMENT OR GRASS AREAS

NOT TO SCALE

ANY DEVIATIONS FROM DETAIL WILL REQUIRE PERMISSION FROM STREET LIGHTING FORCES.
CONTACT DISPATCHER AT (414) 286-5944 FOR THE APPROPRIATE SHOP SUPERVISOR.

SHEET 3 OF 3

PROJECT NO: 2984-06-76	HWY: LOCAL STREET	COUNTY: MILWAUKEE	STREET LIGHTING DETAILS	SHEET 11	E



PROJECT NO: 2984–06–76	HWY: LOCAL STREET	COUNTY: MILWAUKEE	STREET LIGHTING PLAN	SHEET 12	E

FILE NAME : W:\bes\pavings\Bridge Work\2018 work\wBrown St – Bridge Over OPM (2984–06–06)\2984–06–06 wBrown St – Bridge Conduit & Foundations.dgn PLOT DATE : 01–JUN–2017 11:19 PLOT BY : dkozel PLOT NAME : PLOT SCALE : 30.000000:1.000000

2

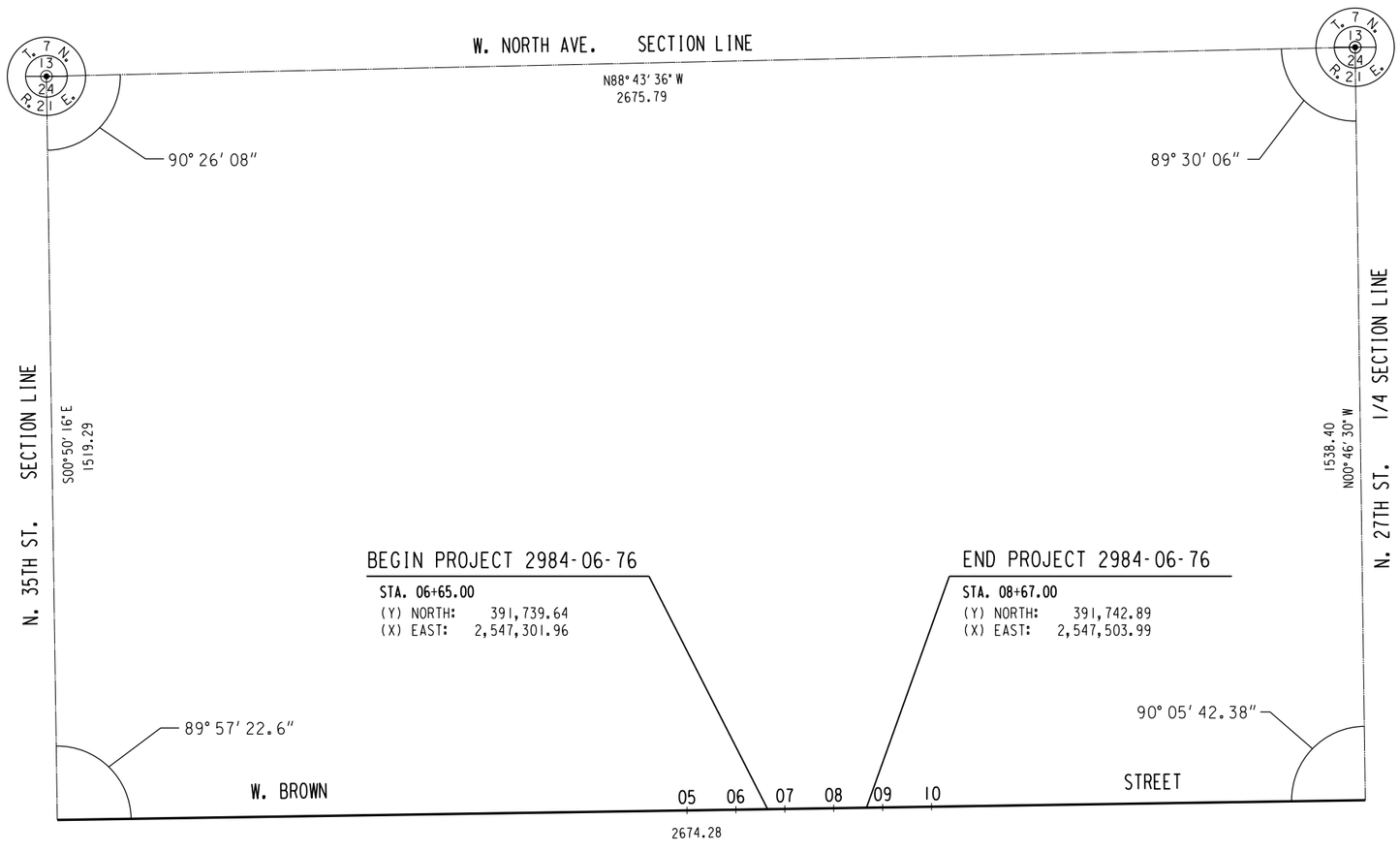
N

STATE PLANE COORDINATES OF
QUARTER SECTION CORNER

(Y) NORTH: 393,236.87
(X) EAST: 2,545,827.69

STATE PLANE COORDINATES OF
QUARTER SECTION CORNER

(Y) NORTH: 393,296.33
(X) EAST: 2,548,502.82



STATE PROJECT NUMBER 2984-06-76 - -	HWY: S.T.H. 145	COUNTY: MILWAUKEE	ALIGNMENT PLAN	SCALE FEET 0' 300'	SHEET NO: 13	E

FILENAME: W:\STR\BO934\APPROACH PLANS\ALIGNMENT.DGN

REVISED DATE: 06-01-2017 BY DB

2984-06-76

Line	Item	Item Description	Unit	Total	Qty
0002	201.0110	Clearing	SY	35.000	35.000
0004	201.0120	Clearing	ID	9.000	9.000
0006	201.0210	Grubbing	SY	35.000	35.000
0008	201.0220	Grubbing	ID	9.000	9.000
0010	203.0200	Removing Old Structure (station) 01. 7+66.02	LS	1.000	1.000
0012	203.0225.S	Debris Containment (structure) 01. P-40-859	LS	1.000	1.000
0014	204.0115	Removing Asphaltic Surface Butt Joints	SY	360.000	360.000
0016	204.0150	Removing Curb & Gutter	LF	80.000	80.000
0018	204.0155	Removing Concrete Sidewalk	SY	60.000	60.000
0020	206.1000	Excavation for Structures Bridges (structure) 01. B-40-925	LS	1.000	1.000
0022	206.3000	Excavation for Structures Retaining Walls (structure) 01. R-40-673	LS	1.000	1.000
0024	206.3000	Excavation for Structures Retaining Walls (structure) 02. R-40-674	LS	1.000	1.000
0026	206.3000	Excavation for Structures Retaining Walls (structure) 03. R-40-675	LS	1.000	1.000
0028	206.3000	Excavation for Structures Retaining Walls (structure) 04. R-40-676	LS	1.000	1.000
0030	210.1500	Backfill Structure Type A	TON	3,014.000	3,014.000
0032	305.0110	Base Aggregate Dense 3/4-Inch	TON	10.000	10.000
0034	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	220.000	220.000
0036	455.0605	Tack Coat	GAL	10.000	10.000
0038	465.0105	Asphaltic Surface	TON	60.000	60.000
0040	502.0100	Concrete Masonry Bridges	CY	866.000	866.000
0042	502.3200	Protective Surface Treatment	SY	597.000	597.000
0044	502.4205	Adhesive Anchors No. 5 Bar	EACH	268.000	268.000
0046	504.0500	Concrete Masonry Retaining Walls	CY	12.000	12.000
0048	505.0400	Bar Steel Reinforcement HS Structures	LB	33,370.000	33,370.000
0050	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	96,640.000	96,640.000
0052	505.0800.S	Bar Steel Reinforcement HS Stainless Structures	LB	1,700.000	1,700.000
0054	509.1500	Concrete Surface Repair	SF	8.000	8.000
0056	511.1200	Temporary Shoring (structure) 01. B-40-925	SF	75.000	75.000
0058	513.7011	Railing Steel Type C2 (structure) 01. B-40-925	LF	200.000	200.000
0060	516.0100	Dampproofing	SY	390.000	390.000
0062	516.0500	Rubberized Membrane Waterproofing	SY	48.000	48.000
0064	517.1010.S	Concrete Staining (structure) 01. B-40-925	SF	776.000	776.000
0066	517.1015.S	Concrete Staining Multi-Color (structure) 01. B-40-925	SF	542.000	542.000
0068	517.1050.S	Architectural Surface Treatment (structure) 01. B-40-925	SF	542.000	542.000
0070	550.0500	Pile Points	EACH	92.000	92.000

2984-06-76

Line	Item	Item Description	Unit	Total	Qty
0072	550.1120	Piling Steel HP 12-Inch X 53 Lb	LF	5,060.000	5,060.000
0074	601.0331	Concrete Curb & Gutter 31-Inch	LF	80.000	80.000
0076	602.0410	Concrete Sidewalk 5-Inch	SF	510.000	510.000
0078	612.0206	Pipe Underdrain Unperforated 6-Inch	LF	12.000	12.000
0080	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	172.000	172.000
0082	625.0100	Topsoil	SY	60.000	60.000
0084	628.1504	Silt Fence	LF	120.000	120.000
0086	628.1520	Silt Fence Maintenance	LF	120.000	120.000
0088	630.0120	Seeding Mixture No. 20	LB	1.000	1.000
0090	631.1000	Sod Lawn	SY	25.000	25.000
0092	642.5201	Field Office Type C	EACH	1.000	1.000
0094	643.0300	Traffic Control Drums	DAY	995.000	995.000
0096	643.0420	Traffic Control Barricades Type III	DAY	5,373.000	5,373.000
0098	643.0705	Traffic Control Warning Lights Type A	DAY	10,746.000	10,746.000
0100	643.0715	Traffic Control Warning Lights Type C	DAY	995.000	995.000
0102	643.0900	Traffic Control Signs	DAY	4,179.000	4,179.000
0104	643.5000	Traffic Control	EACH	1.000	1.000
0106	650.6500	Construction Staking Structure Layout (structure) 01. B-40-925	LS	1.000	1.000
0108	650.6500	Construction Staking Structure Layout (structure) 02. R-40-673	LS	1.000	1.000
0110	650.6500	Construction Staking Structure Layout (structure) 03. R-40-674	LS	1.000	1.000
0112	650.6500	Construction Staking Structure Layout (structure) 04. R-40-675	LS	1.000	1.000
0114	650.6500	Construction Staking Structure Layout (structure) 05. R-40-676	LS	1.000	1.000
0116	650.8500	Construction Staking Electrical Installations (project) 01. 2984-06-76	LS	1.000	1.000
0118	650.9910	Construction Staking Supplemental Control (project) 01. 2984-06-76	LS	1.000	1.000
0120	652.0230	Conduit Rigid Nonmetallic Schedule 40 2 1/2-Inch	LF	276.000	276.000
0122	652.0235	Conduit Rigid Nonmetallic Schedule 40 3-Inch	LF	196.000	196.000
0124	654.0105	Concrete Bases Type 5	EACH	2.000	2.000
0126	657.0255	Transformer Bases Breakaway 11 1/2-Inch Bolt Circle	EACH	2.000	2.000
0128	715.0502	Incentive Strength Concrete Structures	DOL	8,660.000	8,660.000
0130	801.0117	Railroad Flagging Reimbursment	DOL	30,000.000	30,000.000
0132	999.1000.S	Seismograph	LS	1.000	1.000
0134	999.1500.S	Crack and Damage Survey	LS	1.000	1.000
0136	SPV.0060	Special 01. FIBERGLASS/POLYMER CONCRETE PULL BOXES 13"X24"X24"	EACH	2.000	2.000

2984-06-76

Line	Item	Item Description	Unit	Total	Qty
0138	SPV.0090	Special 01. REMOVAL OF EXISTING AND INSTALLATION OF NEW CHAIN LINK FENCE	LF	118.000	118.000
0140	SPV.0165	Special 01. WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH R-40-673	SF	491.000	491.000
0142	SPV.0165	Special 02. WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH R-40-674	SF	570.000	570.000
0144	SPV.0165	Special 03. WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH R-40-675	SF	570.000	570.000
0146	SPV.0165	Special 04. WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH R-40-676	SF	491.000	491.000
0148	SPV.0195	Special 01. EXC HAUL & DISP SOLID WASTE INCL MUNIC WASTE MIXED W/SHALLOW SOIL & URB FILL	TON	213.000	213.000

3

Estimate of Traffic Control Items Required (0010 Participating)

Items		Stage 1 (Each) * (Days)	Total
643.0300	Traffic Control Drums	5 * 995	**995**
(1)643.0420	Traffic Control, Barricades, Type III	27 * 5,373	**5,373**
643.0705	Traffic Control, Warning Lights, Type "A" (Flashing)	54 * 10,746	**10,746**
643.0715	Traffic Control Warning Lights, Type "C" (Steady)	5 * 995	**995**
643.0900	Traffic Control, Signs	21 * 4,179	**4,179**
643.5000	Traffic Control (Project) [Lump Sum]		**1**

(1) All Type III Barricades have 2 flashing yellow lights

Traffic Control Signs	
Items	Stage 1
R11-2	2
R11-2 MOD	2
R11-3-B	5
R9-9	8
W16-9P	4
Total	**21**

CONSTRUCTION STAKING ITEMS

		CONST. STAKING SUPPLEMENTAL CONTROL (PROJECT)	CONST. STAKING STRUCTURE LAYOUT (STRUCTURE) B-40-925	CONST. STAKING STRUCTURE LAYOUT (STRUCTURE) R-40-673	CONST. STAKING STRUCTURE LAYOUT (STRUCTURE) R-40-674	CONST. STAKING STRUCTURE LAYOUT (STRUCTURE) R-40-675	CONST. STAKING STRUCTURE LAYOUT (STRUCTURE) R-40-676
ITEM NO.		650.9910	650.6500.01	650.6500.02	650.6500.03	650.6500.04	650.6500.05
UNIT PAY		LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM
CATEGORY		0010	0020	0030	0040	0050	0060
LOCATION							
STA 6+65.0 to STA 8+67.0							
SUBTOTALS							
STA 6+65.0 to STA 8+67.0							
SUBTOTALS							
GRAND TOTALS		1	1	1	1	1	1

REMOVALS

		CLEARING	CLEARING	GRUBBING	GRUBBING	REMOVING ASPHALTIC SURFACE	REMOVING CURB & GUTTER	REMOVING CONCRETE SIDEWALK
ITEM NO.		201.0110	201.0120	201.0210	201.0220	204.0115	204.0150	204.0155
UNIT PAY		SY	ID	SY	ID	SY	LF	SY
CATEGORY		0020	0010	0020	0010	0010	0010	0010
LOCATION								
STA 6+65.0 to STA 8+67.0	LT	17	0	17	0	200	40	30
SUBTOTALS	**(LEFT)**	**17**	**0**	**17**	**0**	**200**	**40**	**30**
STA 6+65.0 to STA 8+67.0	RT	18	9	18	9	160	40	30
SUBTOTALS	**(RIGHT)**	**18**	**9**	**18**	**9**	**160**	**40**	**30**
GRAND TOTALS		**35**	**9**	**35**	**9**	**360**	**80**	**60**

3

3

MISCELLANEOUS LANDSCAPING ITEMS

	ITEM NO.	TOPSOIL 625.0100	TOPSOIL 625.0100	SILT FENCE 628.1504	SILT FENCE MAINTENANCE 628.1520	SEEDING MIXTURE NO. 20 630.0120	SOD LAWN 631.1000
	UNIT PAY	SY	SY	LF	LF	LB	SY
	CATEGORY	0010	0020	0020	0020	0020	0010
LOCATION							
STA 6+65.0 to STA 8+67.0	LT	10	17	60	60	0.5	10
SUBTOTALS (LEFT)		**10**	**17**	**60**	**60**	**0.5**	**10**
STA 6+65.0 to STA 8+67.0	RT	15	18	60	60	0.5	15
SUBTOTALS (RIGHT)		**15**	**18**	**60**	**60**	**0.5**	**15**
GRAND TOTALS		**25**	**35**	**120**	**120**	**1**	**25**

MISCELLANEOUS ITEMS

	ITEM NO.	INCENTIVE STRENGTH CONCRETE STRUCTURES 715.0502	RAILROAD FLAGGING REIMBURSEMENT 801.0117
	UNIT PAY	DOL	DOL
	CATEGORY	0020	0020
LOCATION			
STA 6+65.0 to STA 8+67.0	LT		
SUBTOTALS (LEFT)			
STA 6+65.0 to STA 8+67.0	RT		
SUBTOTALS (RIGHT)			
GRAND TOTALS		**8,660**	**30,000**

3

ASPHALT ITEMS

		TACK COAT	ASPHALT SURFACE
ITEM NO.		455.0605	465.0105
UNIT PAY		GAL	TON
CATEGORY			
LOCATION			
STA 6+65.0 to STA 8+67.0	LT	6	30
SUBTOTALS	**(LEFT)**	**6**	**30**
STA 6+65.0 to STA 8+67.0	RT	4	30
SUBTOTALS	**(RIGHT)**	**4**	**30**
GRAND TOTALS		**10**	**60**

CONCRETE CONSTRUCTION ITEMS

		BASE AGGREGATE DENSE 3/4-INCH	BASE AGGREGATE DENSE 1 1/4-INCH	CONCRETE CURB & GUTTER 31-INCH	CONCRETE SIDEWALK 5-INCH
ITEM NO.		305.0110	305.0120	601.0331	602.0410
UNIT PAY		TON	TON	LF	SF
CATEGORY		0010	0010	0010	0010
LOCATION					
STA 6+65.0 to STA 8+67.0	LT	5	8	40	250
SUBTOTALS	**(LEFT)**	**5**	**8**	**40**	**250**
STA 6+65.0 to STA 8+67.0	RT	5	7	40	260
SUBTOTALS	**(RIGHT)**	**5**	**7**	**40**	**260**
GRAND TOTALS		**10**	**15**	**80**	**510**

3

3

ESTIMATE OF QUANTITIES; STREET LIGHTING

PROJECT ID. 2984-06-06

MILWAUKEE COUNTY

	Std.Bid Item No.	Description	Unit	Quantity
-	650.8500	Construction Staking Electrical	LS	1
-	652.0230	Conduit Rigid Nonmetallic Schedule 40 2 1/2-Inch	LF	80
-	654.0105	Concrete Bases Type 5	EACH	2
-	657.0255	Trans Base Brkwy 11 1/2-Inch Bolt Circle	EACH	2
-	SPV.0060.01	Fiberglass/Polymer Concrete Pull Boxes 13" x 24" x 24"	EACH	2

SHEET 1 OF 1

WEST BROWN STREET

BEGIN PROJECT
STA. 06+65.0 T/L

END PROJECT
STA. 08+67.0 T/L

N

CAUTION

ST.

R/W

5'

4"

14" LAWN

CUC

C/L BRIDGE

T/L

2°

05 +50 06 +50 07 +50 08 +50 09 +50 10

PROPOSED BRIDGE B-40-925

SEE BRIDGE PLANS

SOO LINE RAILROAD

TRACKS

111.55
END OF PARAPET (TOP OF WALK)

110.61 +12.53 26.0 LT C/L BRIDGE

110.47 (TOP OF DECK) +34.82 26.0 LT

110.04 (TOP OF DECK) +92.83 26.0 LT

+12.92 26.0 LT C/L BRIDGE 109.89

110.82
END OF PARAPET (TOP OF WALK)

111.51
END OF PARAPET (TOP OF WALK)

110.59 +16.91 26.0 RT C/L BRIDGE

+89.2 110.43 26.0 RT (TOP OF DECK)

110.01 +97.21 (TOP OF DECK) 26.0 RT

110.78
END OF PARAPET (TOP OF WALK)

+17.31 109.86 26.0 RT C/L BRIDGE

111.29 111.19 111.12 110.96 110.61± 110.59± 111.28 111.18 111.34 111.32 111.22 110.65 110.61± 110.99 110.78 110.19 110.62 110.08 110.30 110.39 110.53 110.30 110.23 110.31 110.17 110.78 110.96 109.98 110.62

B.W. NW BOLT HYD SW CORNER
N. 31ST ST. & W. BROWN ST.
STA. 05+30 - 38'RT.
ELEV. 111.32

B.W. NW BOLT HYD SW CORNER
N. 30TH ST. & W. BROWN ST.
STA. 09+53 - 30'RT.
ELEV. 113.06

N. 31ST

N. 30TH

(A) CONST. CONC. CURB & GUTTER 31-INCH
(B) CONST. 5" CONC. SIDEWALK
(C) CONST. 20" STRUCTURAL APPROACH SLAP
(D) REMOVING ASPHALTIC SURFACE BUTT JOINTS AND CONSTRUCT ASPH. SURFACE

113 112 111 110 109 108

EXISTING ELEVATION T/L OF ROADWAY

PVC

40'-0" V.C.

PROPOSED BRIDGE B-40-925

PVT

END OF DECK

START OF DECK

PROPOSED ELEVATION T/L OF ROADWAY

BEGIN PROJECT
STA. 06+65.0 T/L

END PROJECT
STA. 08+67.0 T/L

PVC STA. 6+94.74, EL. 111.22

PVT STA. 7+34.74, EL. 110.98

85 84 83

EL. 84.29

C/L R.R. TRACKS STA. 7+71.94

EXISTING ELEVATION T/L OF ROADWAY

111.10 110.81 111.18 111.29 111.13 111.19 111.12 110.96 110.86 110.53 110.49 110.39 110.23 108.87

4 +50 05 +50 06 +50 +82.5 07 +14.71 +37.01 +50 +95.02 08 +15.12 +50 09 +50 10

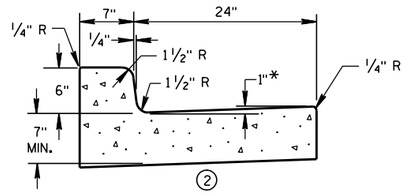
STATE PROJECT NUMBER 2984-06-76 - -	HWY: LOCAL STREET	COUNTY: MILWAUKEE	PLAN AND PROFILE	SCALE FEET 0' 40'	SHEET NO: 22	E

FILENAME: W:\STR\B0934\APPROACH PLANS\05-09.DGN

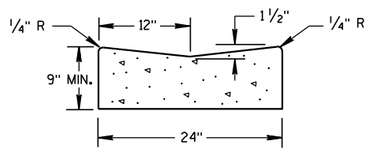
REVISED DATE: 07-24-2017 BY DB

Standard Detail Drawing List

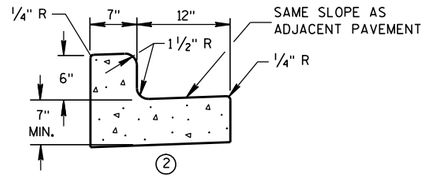
08D16-10	CONCRETE GUTTER, CURB AND GUTTER AND PAVEMENT TIES
08E09-06	SILT FENCE
09B02-10	CONDUIT
09C02-07	CONCRETE BASES, TYPES 1, 2, 5, & 6
09C03-04	TRANSFORMER/PEDESTAL BASES
12A03-10	NAME PLATE (STRUCTURES)
13B02-08A	CONCRETE PAVEMENT APPROACH SLAB
13B02-08B	STRUCTURAL APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB
15C02-06A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-06B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-06C	DETOUR SIGNING FOR MAINLINE CLOSURES



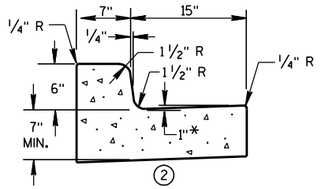
① CONCRETE CURB & GUTTER 31"



① CONCRETE GUTTER 24"

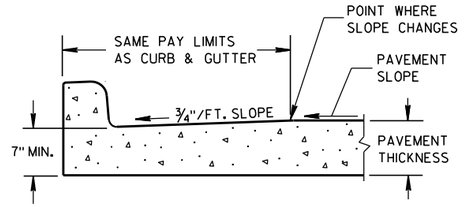


① CONCRETE CURB & GUTTER 19"



① CONCRETE CURB & GUTTER 22"

* TO BE MEASURED TO A MAXIMUM OF 3" WHERE DRAINAGE PROBLEMS EXIST.



PARTIAL SECTION OF PAVEMENT WITH INTEGRAL CURB & GUTTER

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.

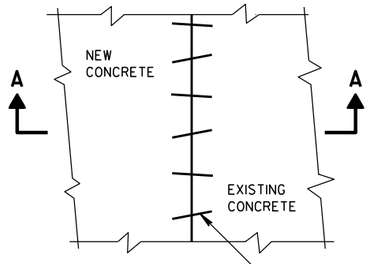
WHERE THE TRANSVERSE JOINTS IN THE PAVEMENT ARE REQUIRED TO BE SEALED, THE JOINTS IN THE INTEGRAL CURB AND GUTTER SHALL BE SEALED TO THE FACE OF CURB WITH THE SAME TYPE OF SEALANT. THE COST OF FURNISHING AND INSTALLING THIS SEALANT SHALL BE INCIDENTAL TO THE ITEM CONCRETE CURB AND GUTTER.

UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE COURSE AND UNCLASSIFIED EXCAVATION LIMITS ARE 2'-0" BEHIND THE BACK OF CURB.

① WHEN PLACED ADJACENT TO NEW CONCRETE, TIE BARS ARE REQUIRED FOR CURB AND GUTTER 31", 22", 19" AND CONCRETE GUTTER 24".

② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE COURSE PROVIDED A 7" MIMIMUM GUTTER THICKNESS IS MAINTAINED.

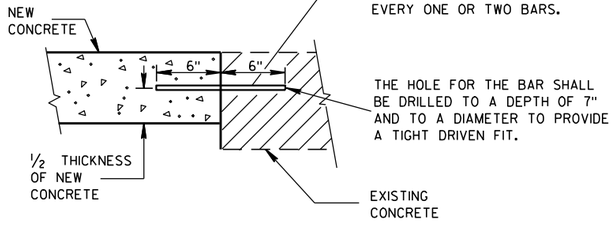
③ WHEN HIGH SIDE CURB SECTION IS REQUIRED, THE LOCATION(S) WILL BE NOTED ON THE PLAN.



PLAN VIEW

EXISTING AND NEW CONCRETE MAY BE CURB & GUTTER, SURFACE DRAIN, PAVEMENT OR OTHER CONCRETE STRUCTURE.

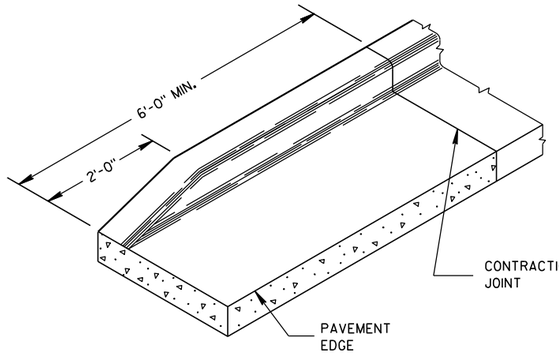
NO. 6 X 12" DEF. BARS SPACED 3'-0" C-C, INSTALLED ON 6:1 SKEW HORIZONTALLY. DIRECTION OF SKEW ALTERNATING AFTER EVERY ONE OR TWO BARS.



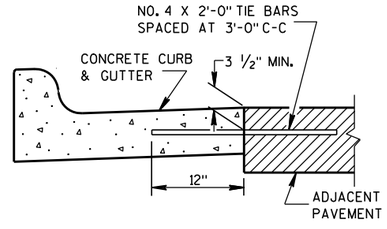
THE HOLE FOR THE BAR SHALL BE DRILLED TO A DEPTH OF 7" AND TO A DIAMETER TO PROVIDE A TIGHT DRIVEN FIT.

SECTION A-A

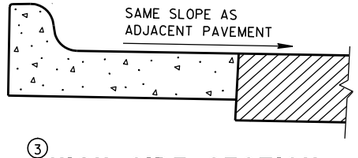
PAVEMENT TIES



END SECTION CURB & GUTTER



① TYPICAL TIE BAR LOCATION



③ HIGH SIDE SECTION

(TYPICAL FOR ALL CURB & GUTTER)

CONCRETE GUTTER, CURB AND GUTTER AND PAVEMENT TIES

(For Optional Use in Milwaukee Co. Only)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

11/2/2010 — DATE

/S/ Jerry Zogg — ROADWAY STANDARDS ENGINEER

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FHWA

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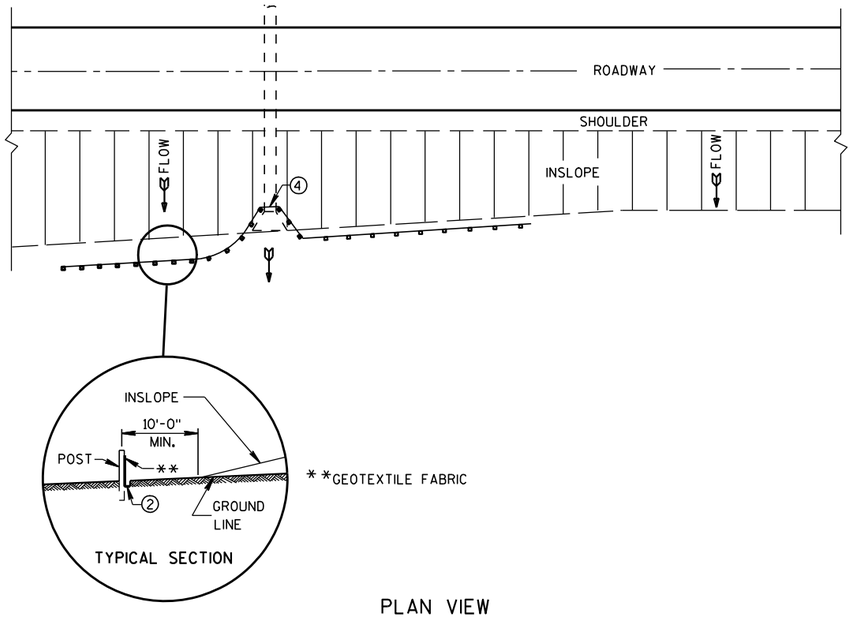
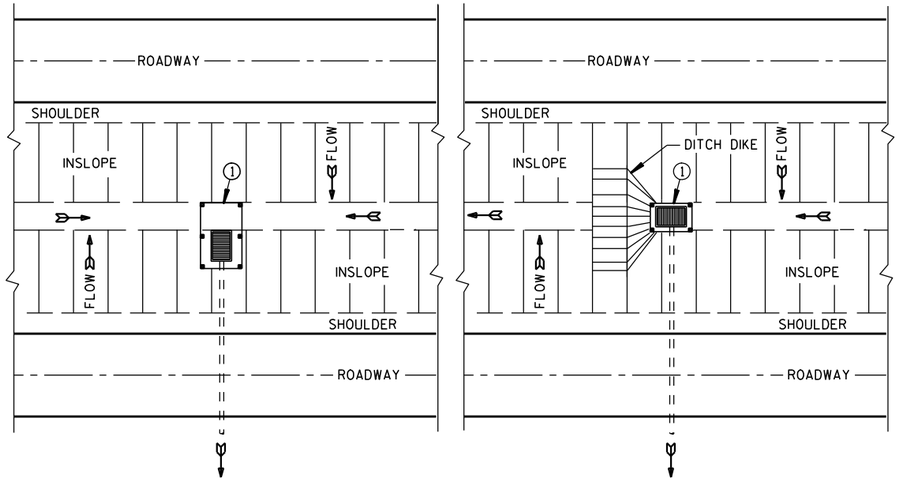


PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



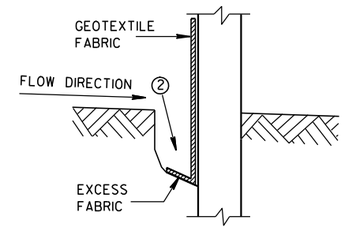
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

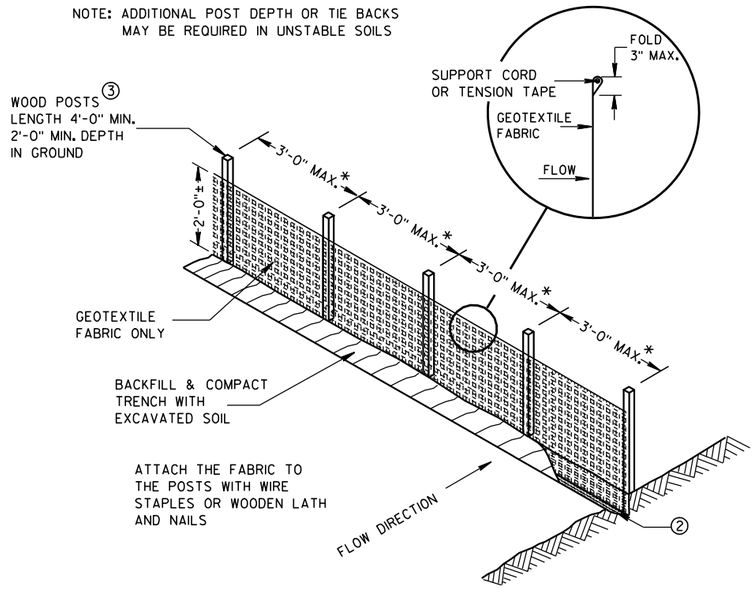
GENERAL NOTES

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

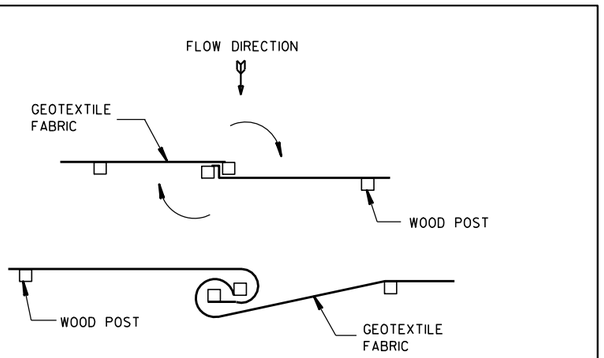
1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL 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.



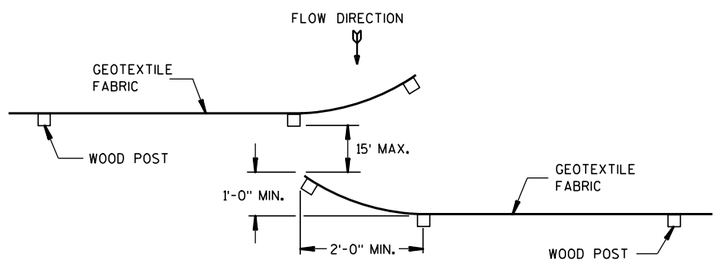
TRENCH DETAIL



SILT FENCE

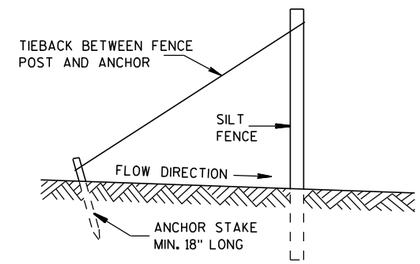


TWIST METHOD



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

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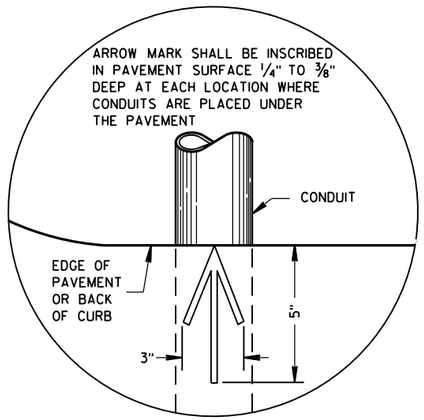
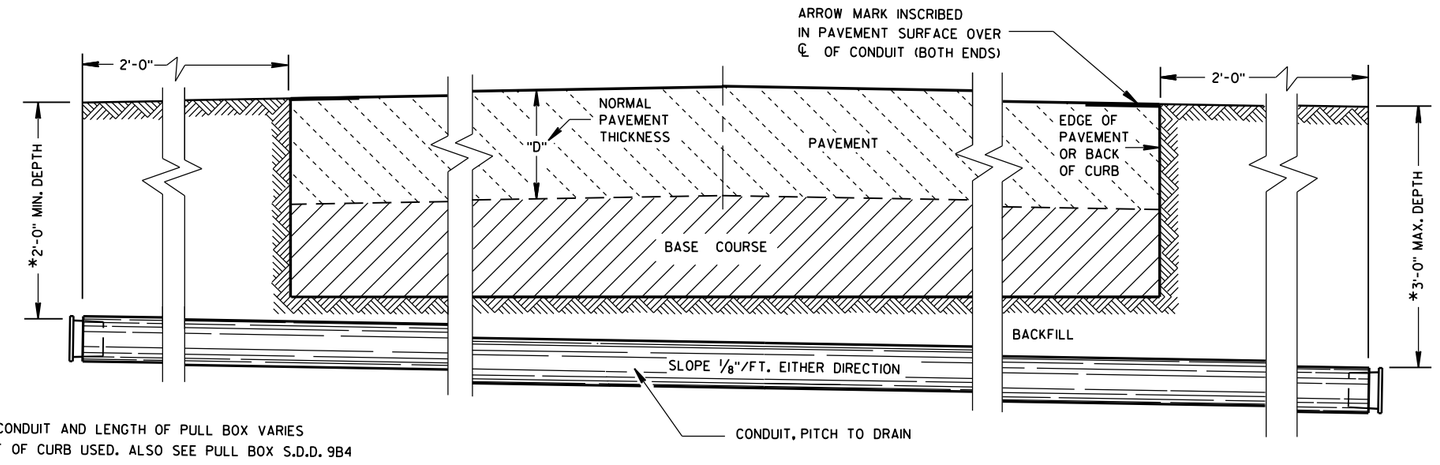
S.D.D. 8 E 9-6



PLAN VIEW

ARROW MARK



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

SIDE ELEVATION

DETAIL FOR CONDUIT UNDER PAVED HIGHWAYS

GENERAL NOTES

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

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

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

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

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

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

ALL METALLIC CONDUIT RACEWAY ENDS SHALL BE REAMED AND THREADED.

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

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

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

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

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

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

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

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

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

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

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

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

CONDUIT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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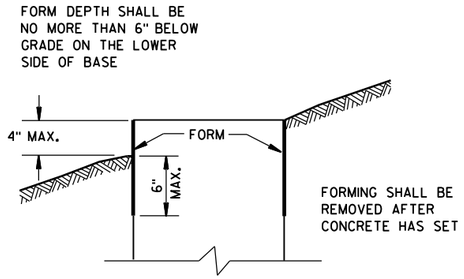


FORMING DETAIL

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

GENERAL NOTES

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

BASES SHALL BE EXCAVATED BY USE OF A CIRCULAR AUGER.

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

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

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

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

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

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

GENERAL NOTES (CONTINUED)

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

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

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

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

A NO. 4 AWG, STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD) FOR TYPE 1, TYPE 2, TYPE 5, AND TYPE 6 BASES.

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

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

WASHERS AND LOCK WASHERS ARE REQUIRED ON ALL ANCHOR RODS.

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

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

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

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

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

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

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

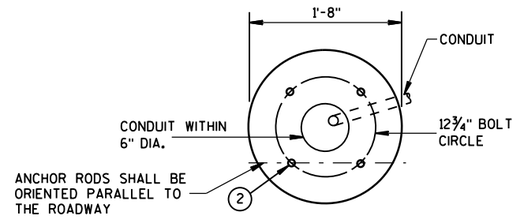
(4) (6) NO. 6 X 6'-8" BAR STEEL REINFORCEMENT.

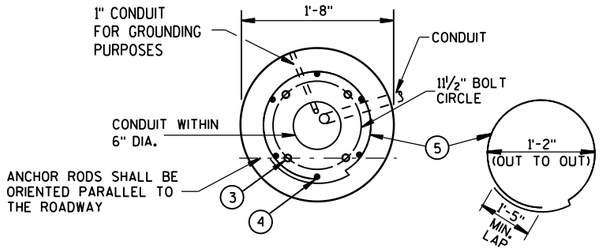
(5) (7) NO. 4 X 5'-1" BAR STEEL REINFORCEMENT @ 1'-0" C-C.

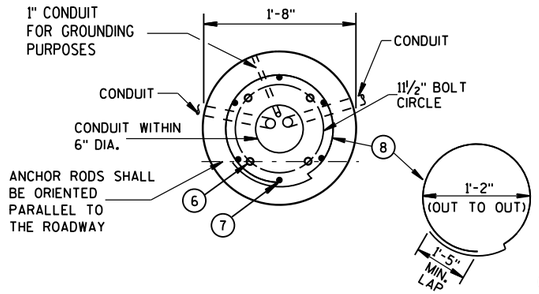
(6) (4) 1" DIA. X 3'-6" ANCHOR RODS.

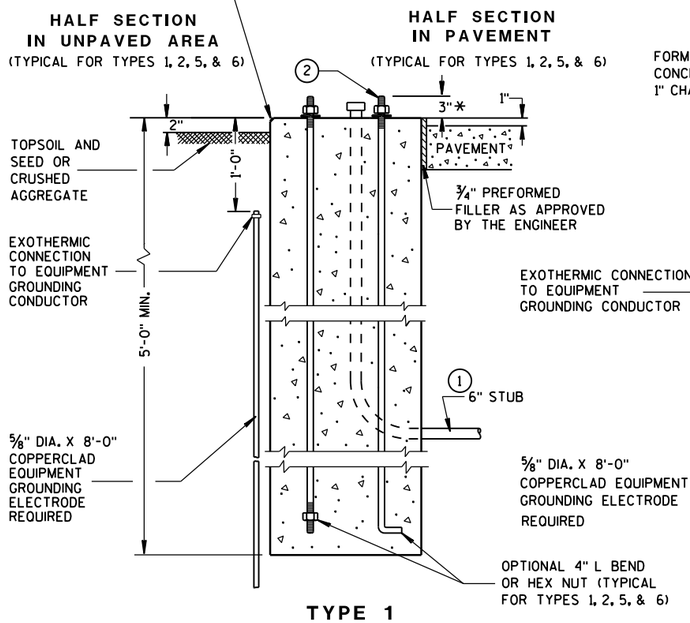
(7) (6) NO.4 X 4'-8" BAR STEEL REINFORCEMENT.

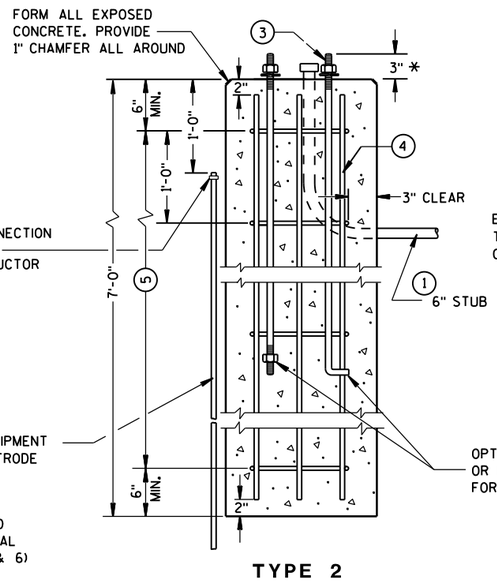
(8) (5) NO. 4 X 5'-1" BAR STEEL REINFORCEMENT @ 1'-0" C-C.

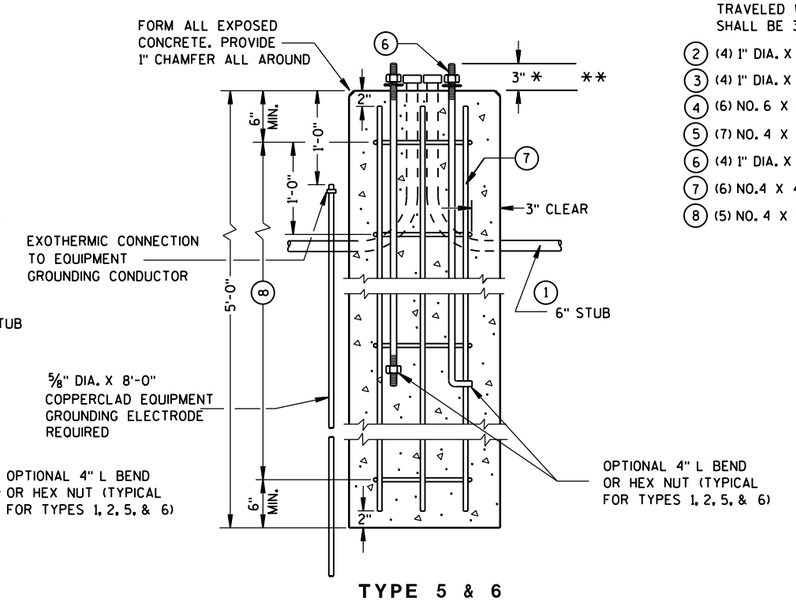












CONCRETE BASES

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

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

CONCRETE BASES, TYPES 1, 2, 5, & 6

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL 27
FHWA

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S.D.D. 9 C 2-7

GENERAL NOTES

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

FOUR (4) BOLTS SHALL BE FURNISHED WITH EACH TRANSFORMER BASE. BOLTS SHALL BE 1" DIAMETER, 4" IN LENGTH, WITH WASHERS, LOCK WASHERS AND NUTS. BOLTS, NUTS AND WASHERS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 641.2.2 OF THE STANDARD SPECIFICATIONS.

LEVELING SHIMS, IF NEEDED, SHALL BE DESIGNED FOR THE PURPOSE AND USED UNDER CAST BASES WHEN PLUMBING POLES OR STANDARDS DURING INSTALLATION. THE USE OF WASHERS IN LIEU OF PROPER LEVELING SHIMS IS NOT ACCEPTABLE.

SHIM LENGTH SHALL BE LONG ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.

DOUBLE NUTTING IS NOT ACCEPTABLE FOR LEVELING OR MOUNTING PURPOSES.

A NEMA APPROVED, U.L. LISTED, COPPER WITH BRASS OR STAINLESS STEEL SET SCREW, DIRECT BURY RATED, MECHANICAL CONNECTOR (LUG), SIZED TO ACCEPT AWG. #10 TO #4 COPPER STRANDED WIRE SHALL BE FURNISHED AND INSTALLED IN THE PEDESTAL AND TRANSFORMER BASES.

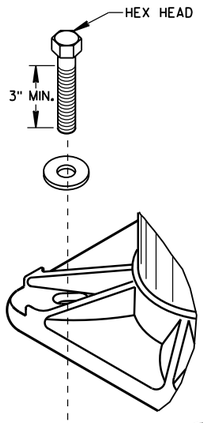
THE MECHANICAL CONNECTOR SHALL BE INSTALLED USING A 1/4" - 20 (TPI) STAINLESS STEEL HEX HEAD BOLT OF SUFFICIENT LENGTH TO FIRMLY ATTACH THE LUG TO THE BASE.

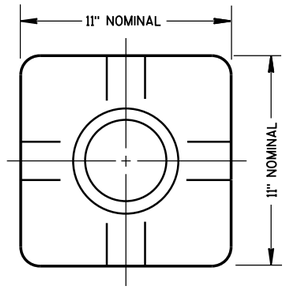
SHOULD THE MANNER OF ATTACHMENT OF THE LUG REQUIRE WASHERS, HEX NUTS, LOCK WASHER - THEY SHALL BE STAINLESS STEEL AS IS THE BOLT. THE MANNER OF ATTACHMENT SHALL NOT BLOCK ACCESSIBILITY TO WIRE PLACEMENT IN THE CONNECTOR.

PEDESTAL BASE COLLAR THREADING SHALL BE TAPERED AND IN ACCORDANCE WITH NATIONAL PIPE THREADING DIMENSIONS.

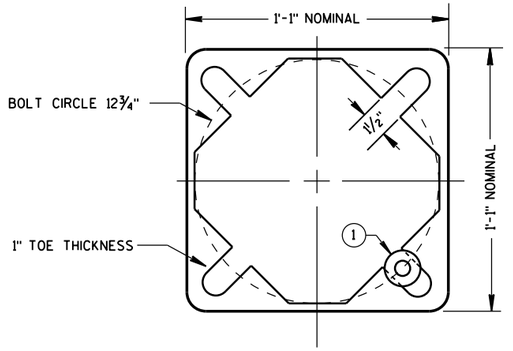
BASE COLLAR THREADING SHALL EXTEND INTO THE BASE COLLAR WITH SUFFICIENT DEPTH TO ACCEPT THE INSTALLATION OF TRAFFIC SIGNAL STANDARDS TO A DEPTH OF 1 1/2", THEN TIGHTENING TO A POINT OF BEING IMMOVABLE.

THE ACCESS DOOR SHALL BE OF THE SAME MATERIAL AS THE BASE.

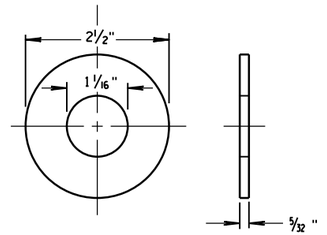




TOP VIEW
(PEDESTAL BASE)

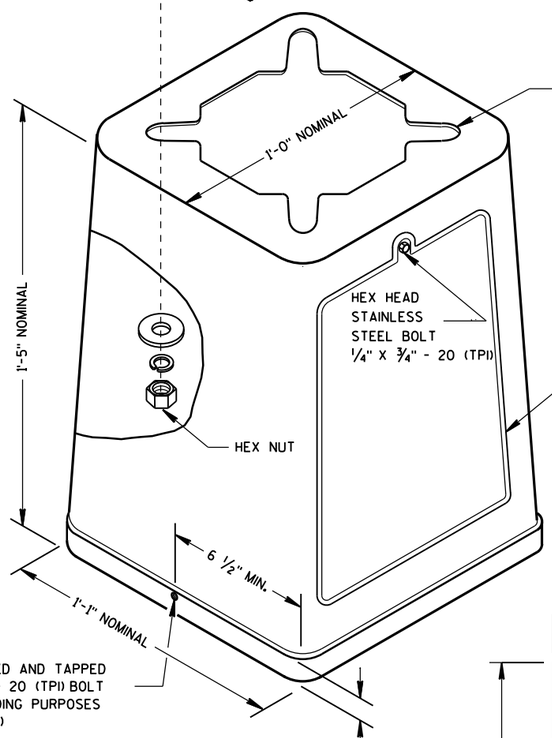


BOTTOM VIEW
(PEDESTAL BASE)

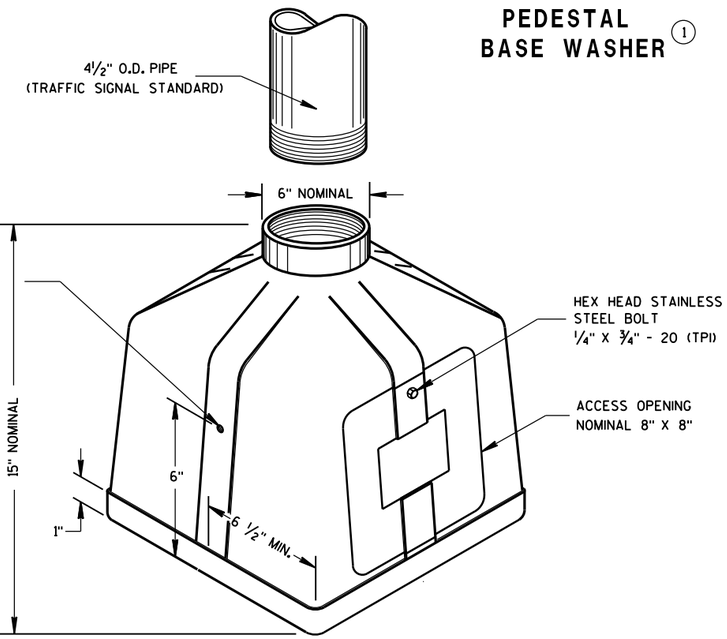


ZINC COATED STEEL WASHER
TO BE PROVIDED BY THE CONTRACTOR

PEDESTAL BASE WASHER (1)

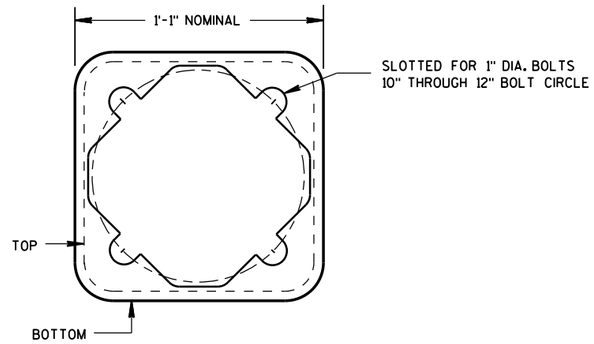


ISOMETRIC VIEW

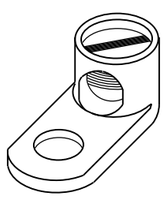


ISOMETRIC VIEW

PEDESTAL BASE



BOTTOM VIEW
(TRANSFORMER BASE)

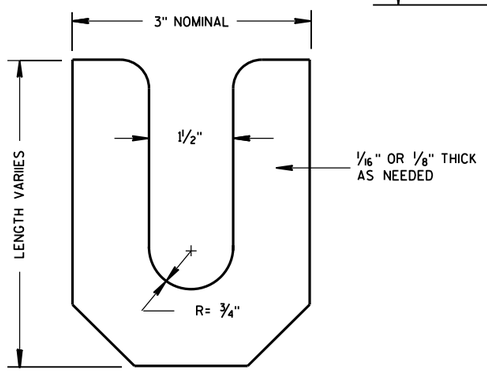


TYPICAL MECHANICAL CONNECTOR LUG

TO BE FURNISHED WITH EACH BASE

TRANSFORMER BASE

INTENDED FOR USE WITH TYPE 2, 3, 4, 5 & 6 POLES



LEVELING SHIM

TRANSFORMER/PEDESTAL BASES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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S.D.D. 9 C 3-4

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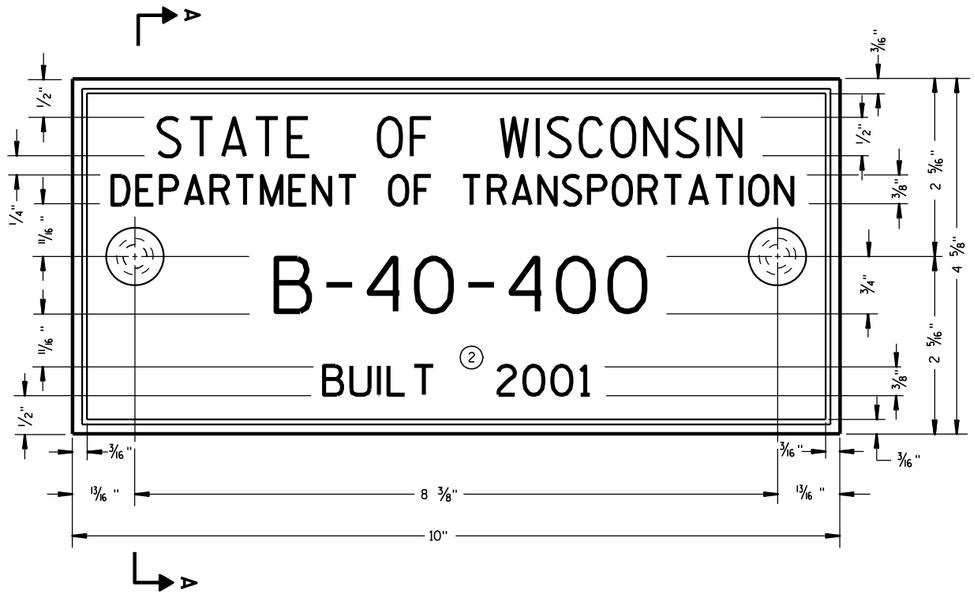
S.D.D. 9 C 3-4



TYPICAL NAME PLATE
(BRIDGES, CULVERTS, AND RETAINING WALLS)

FOR MULTI-UNIT STRUCTURES
LINE 3 ABOVE SHALL READ

B = BRIDGE
C = CULVERT
R = RETAINING WALL

COUNTY NO.

BRIDGE NO.

UNIT NO. FOR MULTIPLE UNIT BRIDGE

B-40-400-1A

NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES

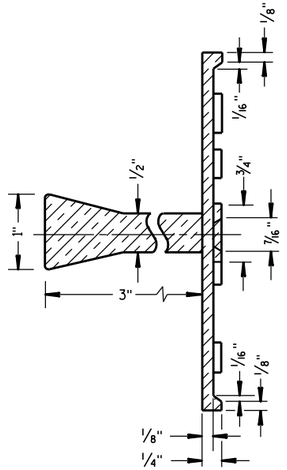
GENERAL NOTES

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

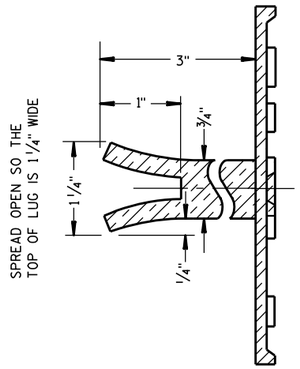
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

(1) EPOXY RESIN SHALL BE FROM AN APPROVED MANUFACTURER AND USED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

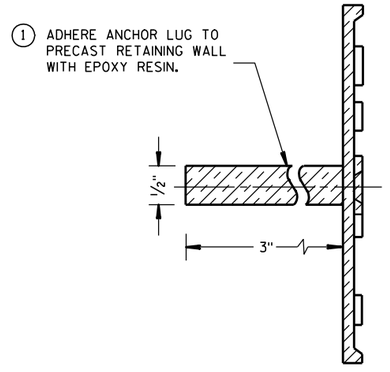
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



SECTION A-A



ALTERNATE LUG



ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE (STRUCTURES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/26/10 DATE

/S/ Scot Beck -- CHIEF STRUCTURAL DEVELOP ENGINEER

FHWA

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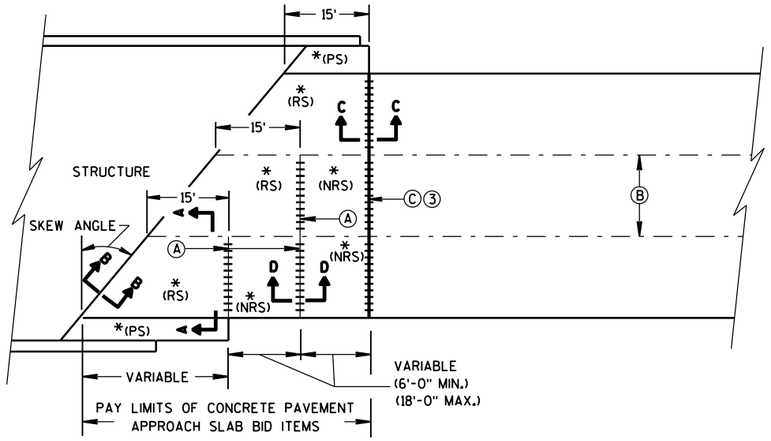
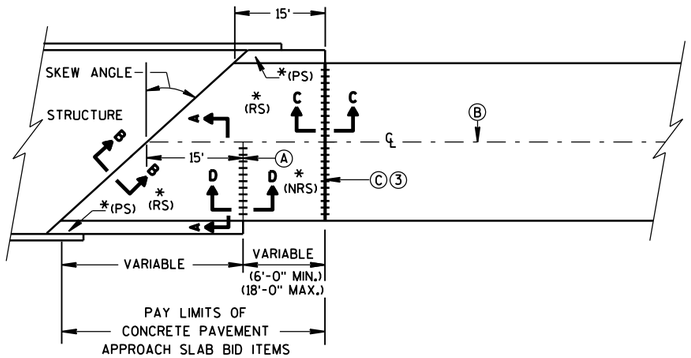
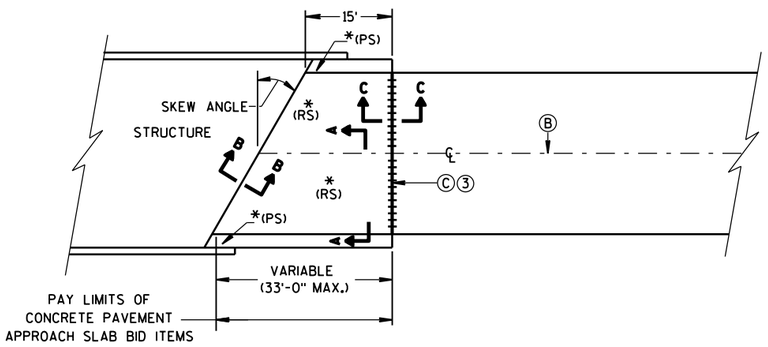
S.D.D. 12 A 3-10



SKEWED APPROACH
(PAVEMENT MORE THAN 2 LANES)



SKEWS >20°
(PAVEMENT WIDTH ≤30')



SKEWS ≤20°
(PAVEMENT WIDTH ≤30')

APPROACH SLAB AND ADJACENT PAVEMENT

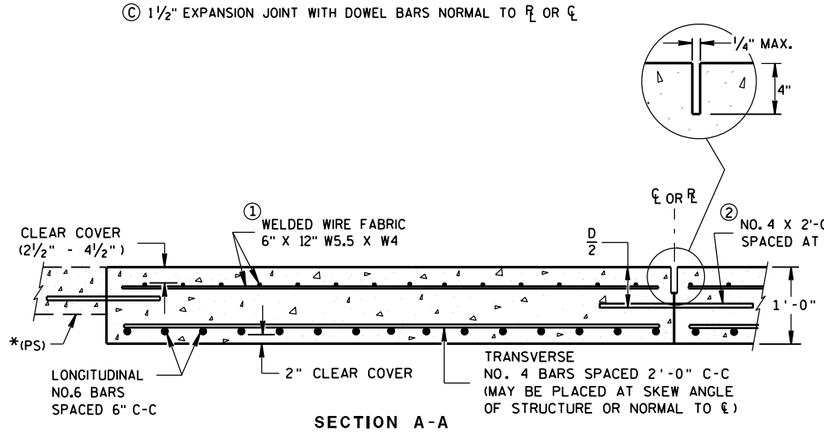
*(RS) = REINFORCED CONCRETE SLAB
*(PS) = PAVED CONCRETE SHOULDER OR CONCRETE DRAINAGE SLAB
(SEE DETAILS ELSEWHERE IN THE PLAN)
*(NRS) = NON-REINFORCED CONCRETE SLAB

***STANDARD DOWEL BAR DIAMETER
(SEE SDD 13C11, & SDD 13C13)

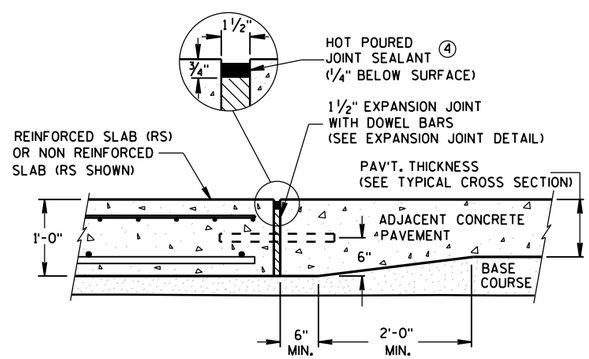
Ⓐ STANDARD CONTRACTION JOINT NORMAL TO ℄ OR ℄

Ⓑ STANDARD LONGITUDINAL JOINT WITH TIE BARS.

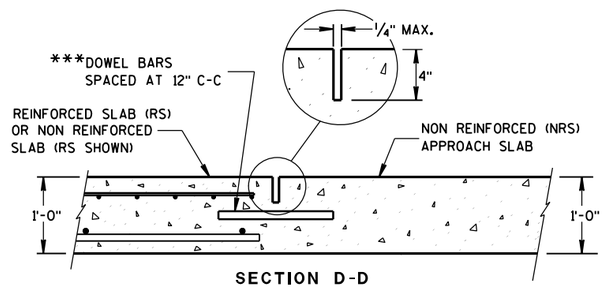
Ⓒ 1½" EXPANSION JOINT WITH DOWEL BARS NORMAL TO ℄ OR ℄



SECTION A-A
REINFORCEMENT POSITIONING DETAIL



SECTION C-C
TRANSITION DETAIL
APPROACH SLAB TO ADJACENT PAVEMENT



SECTION D-D
CONTRACTION JOINT

GENERAL NOTES

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

TACK WELD DOWEL BARS TO THE BASKETS ON ALTERNATE ENDS.

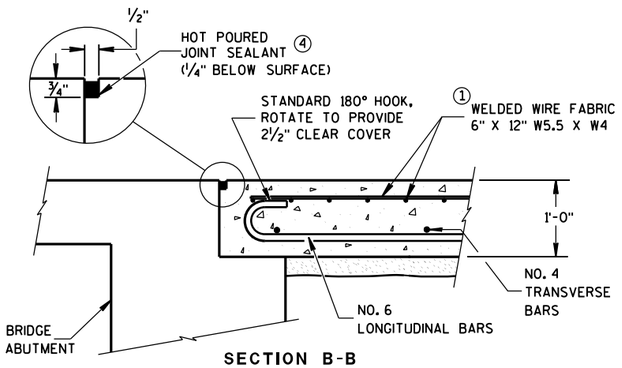
① THE CONTRACTOR MAY USE NO. 4 BARS SPACED AT 2'-0" C-C IN BOTH THE LONGITUDINAL AND TRANSVERSE DIRECTIONS FOR TOP REINFORCEMENT AS AN ALTERNATIVE TO THE WELDED WIRE FABRIC.

② THE CONTRACTOR MAY OMIT TIE BARS BETWEEN REINFORCED SLABS WHERE SLAB REINFORCEMENT BARS EXTEND ACROSS THE CENTERLINE OR REFERENCE LINE.

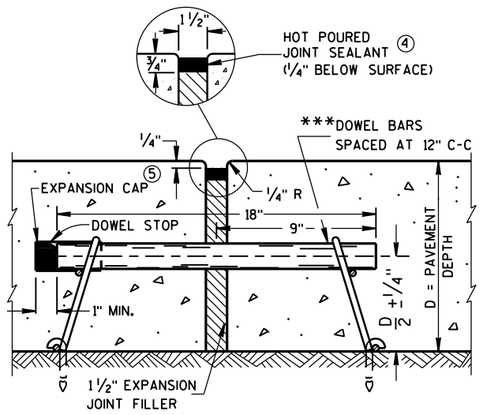
③ DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING AN HMA PAVEMENT.

④ USE A JOINT SEALANT MEETING THE REQUIREMENTS OF ASTM D6690.

⑤ PLACE EXPANSION CAP ON THE END OF THE DOWEL THAT IS NOT TACK WELDED TO THE BASKET. DO NOT FORCE DOWEL BAR PAST THE DOWEL STOP.



SECTION B-B
BEND DETAIL
BOTTOM REINFORCEMENT



EXPANSION JOINT DETAIL

CONCRETE PAVEMENT APPROACH SLAB

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015
DATE
/S/ Peter Kemp, P.E.
PAVEMENT SUPER
FHWA

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S.D.D. 13 B 2-8a

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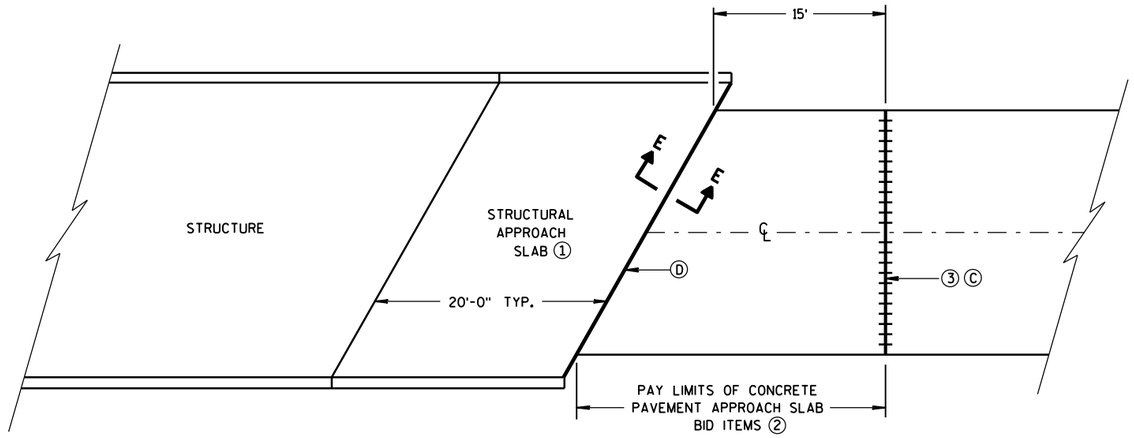
S.D.D. 13 B 2-8a

BRIDGE APPROACHES



GENERAL NOTES

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

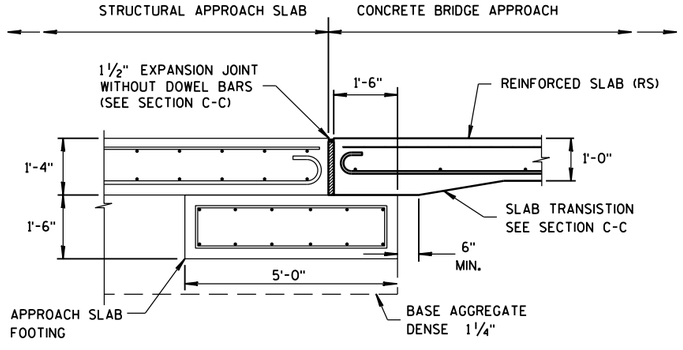
① SEE BRIDGE PLAN.

② CONFORM TO SHEET 13 B 2(A) FOR CONCRETE PAVEMENT APPROACH SLAB DETAILS.

③ DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING AN HMA PAVEMENT.

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

Ⓓ 1½" EXPANSION JOINT (NO DOWELS)



SECTION E-E

FOOTING DETAIL

STRUCTURAL APPROACH SLAB TO CONCRETE BRIDGE APPROACH

STRUCTURAL APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015 — DATE
/S/ Peter Kemp, P.E. — PAVEMENT SUPERVISOR
FHWA

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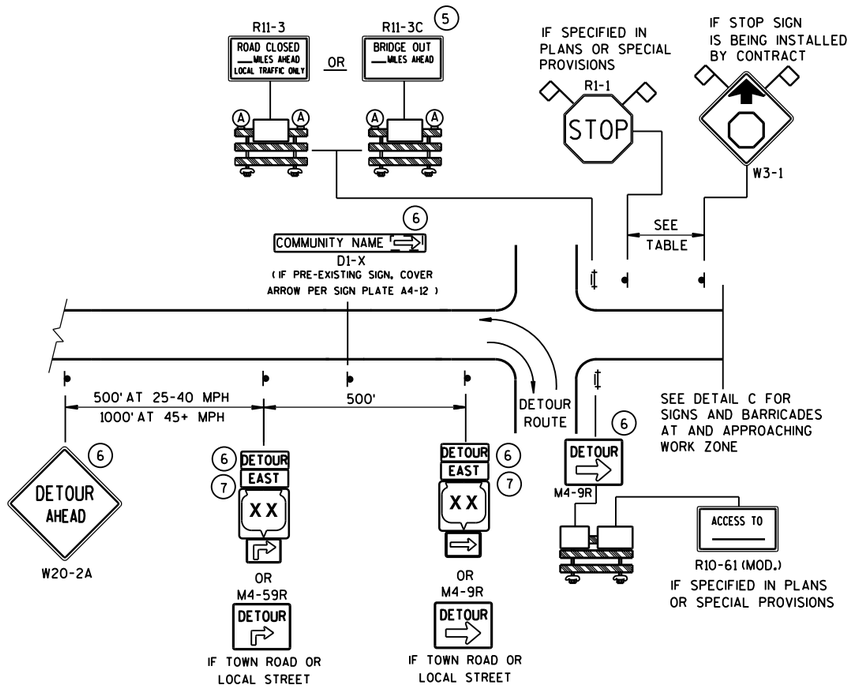
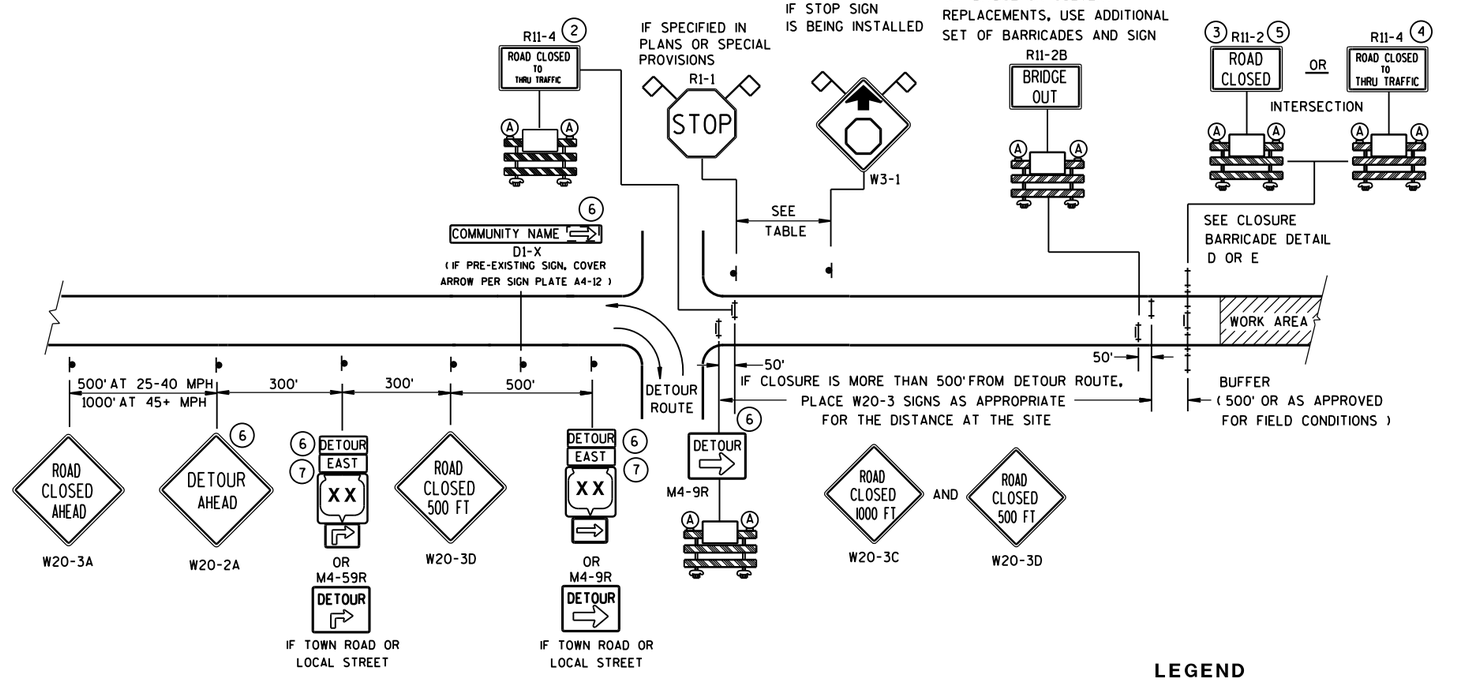
S.D.D. 13 B 2-8b

S.D.D. 13 B 2-8b



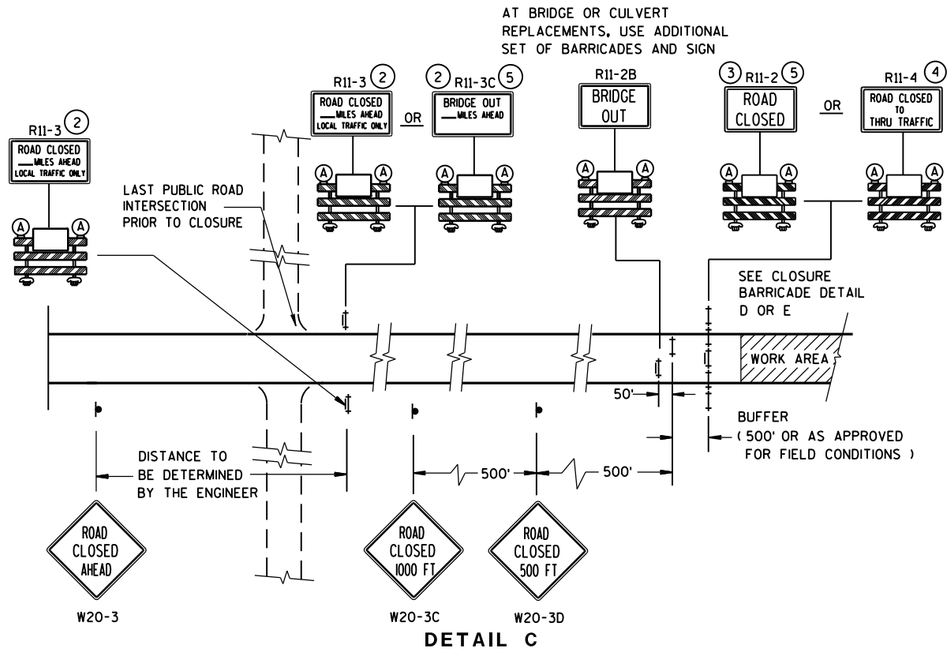
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

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



DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR

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



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

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

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

LEGEND

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

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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

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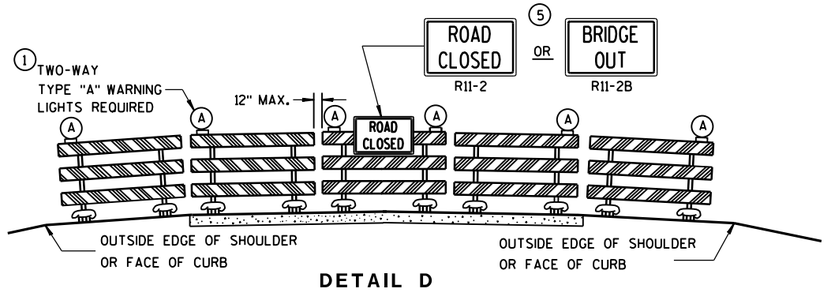
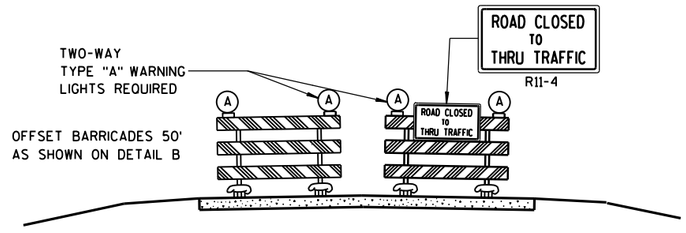
S.D.D. 15 C 2-6a



DETAIL D

ROAD CLOSURE BARRICADE DETAIL

APPROACH VIEW



DETAIL E

LANE CLOSURE BARRICADE DETAIL

APPROACH VIEW

SEE SDD 15C2-SHEET "**a**" FOR LEGEND

GENERAL NOTES

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

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

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

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

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

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

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

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

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

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
- R11-2 SHALL BE 48" X 30".
- R11-3, R11-4 AND R10-61 SHALL BE 60" X 30".
- M4-9 SHALL BE 30" X 24".
- M3-X SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS.)
- M4-8 SHALL BE 24" X 12". (30" X 15" IF NEEDED TO MATCH EXISTING SIGNS.)
- M1-4, M1-5A, AND M1-6 SHALL BE 24" X 24". (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS.)
- M05-1 AND M06-1 SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)
- D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.
- R1-1 SHALL BE 36" X 36".

(1) TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8-FOOT LIGHT SPACING).

(2) THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT INTERSECTION.

(3) FOR ROAD CLOSURE WITHOUT LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL D.

(4) FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT, SEE LANE CLOSURE BARRICADE DETAIL E.

(5) FOR BRIDGE OR CULVERT REPLACEMENTS, SUBSTITUTE "BRIDGE OUT" INSTEAD OF "ROAD CLOSED" ON R11-2 AND R11-3 SIGNS.

(6) INSTALL DETOUR AND COMMUNITY GUIDE SIGNS AND ARROWS ONLY IF SPECIFIED IN THE CONTRACT. IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. MODIFY EXISTING SIGNS WHERE POSSIBLE. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. IF DETOUR SIGNS ARE BEING INSTALLED BY OTHERS, PLACE THE CONTRACTED TRAFFIC CONTROL SIGNS TO ALLOW FOR PLACEMENT OF ALL WARNING, DETOUR AND GUIDE SIGNS AS SHOWN.

(7) "EAST" CARDINAL DIRECTION MARKERS AND RIGHT TURN ARROWS ARE SHOWN. USE OTHER CARDINAL DIRECTIONS AND ARROWS AS APPROPRIATE.

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

Sept. 2015 — DATE

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

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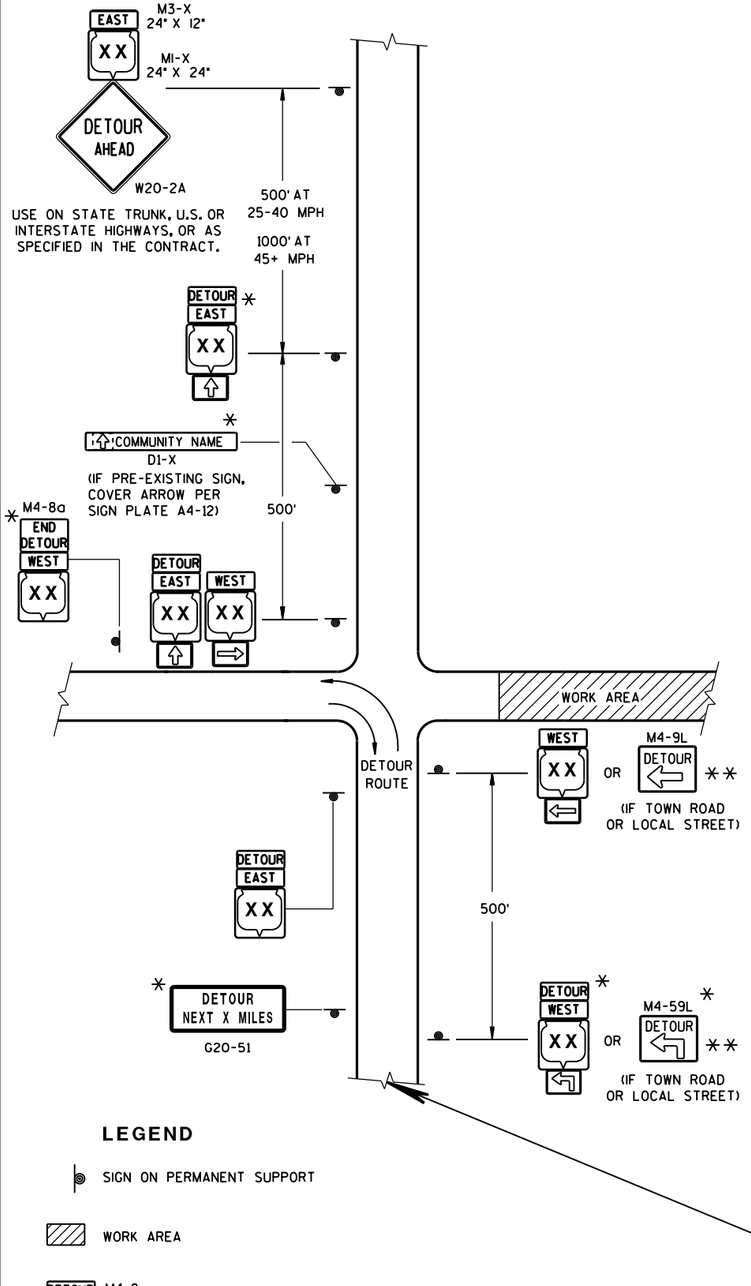
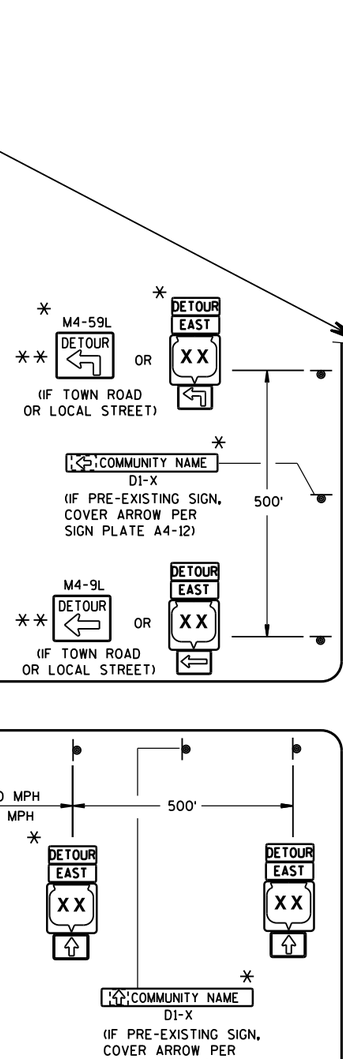
S.D.D. 15 C 2-6b

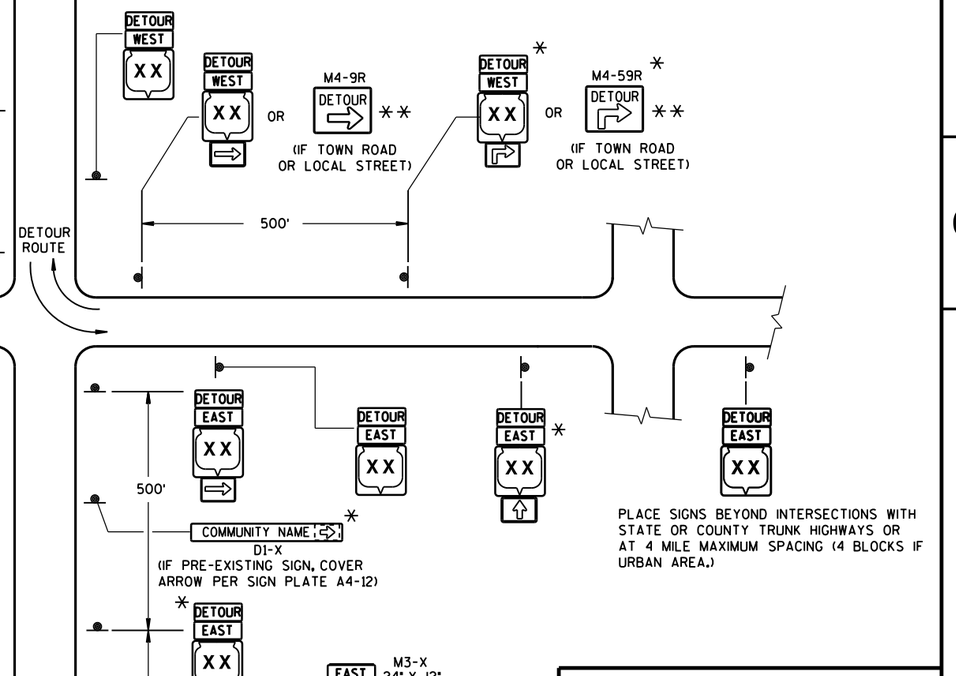


SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS AND DETAIL A OR B ON SDD 15C2-SHEET "a"

THIS DRAWING PROVIDES GENERAL GUIDANCE ON TYPICAL DETOUR SIGN LAYOUT AND SPACING. SEE PROJECT DETOUR SIGNING SHEETS FOR SPECIFIC DETAILS FOR EACH PROJECT.

MATCH POINT





GENERAL NOTES

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

IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. MODIFY EXISTING SIGNS WHERE POSSIBLE.

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

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

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

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

SIGN SIZES SHALL BE AS FOLLOWS:

- M3-X SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS.)
- M4-8 SHALL BE 24" X 12". (30" X 15" IF NEEDED TO MATCH EXISTING SIGNS.)
- M1-4, M1-5A, AND M1-6 SHALL BE 24" X 24". (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS.)
- MO5-1 AND MO6-1 SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)
- M4-9 SHALL BE 30" X 24".
- M4-8a SHALL BE 24" X 18".
- G20-51 SHALL BE 60" X 24".
- W20-2 SHALL BE 48" X 48".
- D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.

* OPTIONAL SIGNS. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS.

** FOR A TOWN ROAD OR LOCAL STREET DETOURED ONTO A STATE TRUNK HIGHWAY, PLACE A ROAD NAME PLAQUE ABOVE THE M4-9 SIGN AS SPECIFIED IN THE CONTRACT.

DETAIL F

DETOUR SIGNING

DETOUR SIGNING FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

Sept. 2015 — DATE

/S/ Peter Amakobe Atepe — STATEWIDE WORK ZO[illegible] SAFETY ENGI[illegible] FIC

FHWA

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

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

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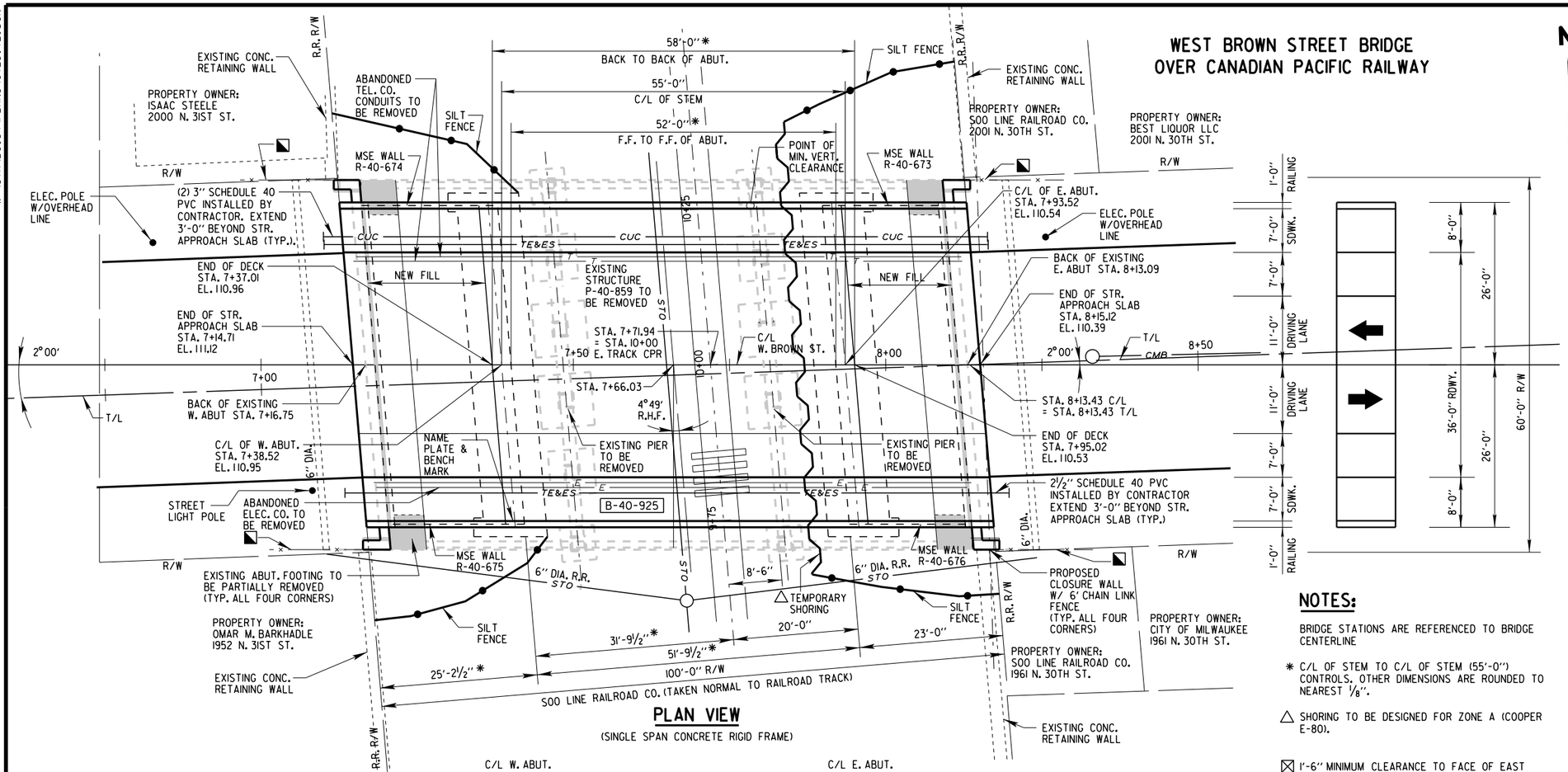
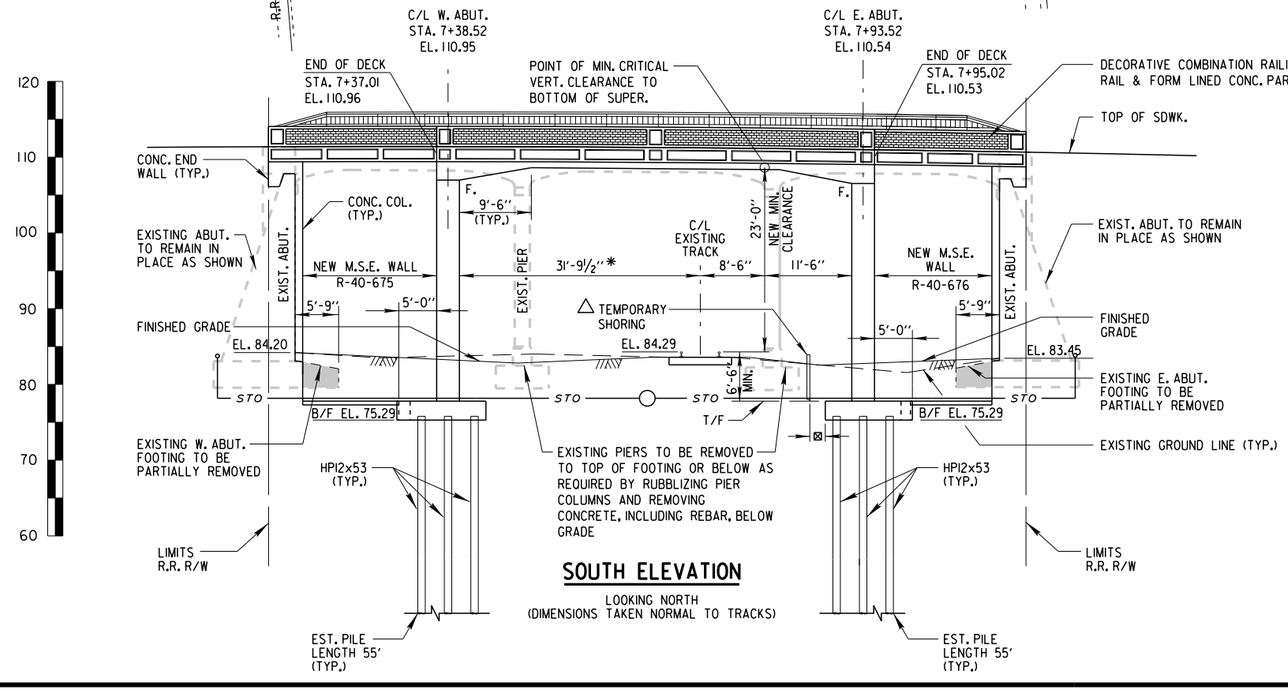
REVISED: 05/31/2017 BY GJR

WEST BROWN STREET BRIDGE OVER CANADIAN PACIFIC RAILWAY



PLAN VIEW

(SINGLE SPAN CONCRETE RIGID FRAME)



SOUTH ELEVATION

LOOKING NORTH
(DIMENSIONS TAKEN NORMAL TO TRACKS)

NOTES:

BRIDGE STATIONS ARE REFERENCED TO BRIDGE CENTERLINE

* C/L OF STEM TO C/L OF STEM (55'-0") CONTROLS. OTHER DIMENSIONS ARE ROUNDED TO NEAREST ⅛".

△ SHORING TO BE DESIGNED FOR ZONE A (COOPER E-80).

☒ 1'-6" MINIMUM CLEARANCE TO FACE OF EAST ABUTMENT FOOTING

◪ REMOVE EXISTING CHAIN LINK FENCE AND REPLACE WITH NEW 6' HIGH CHAIN LINK FENCE

EXISTING OVERHEAD LINES ON NORTH SIDE OF BRIDGE WILL BE REMOVED BEFORE BEGINNING CONSTRUCTION

WISDOT CONTACT:
WILLIAM DREHER 608-266-8489

CONSULTANT CONTACT:
CITY OF MILWAUKEE
JERREL KRUSCHKE 414-286-3402

B.M. HYDRANT @ S.W. CORNER OF N. 30TH ST. & W. BROWN ST.
EL. 111.32

STATE PROJECT NUMBER
2984 - 06 - 76

LIST OF DRAWINGS

SHEET NO.	SHEET TITLE
1	SITE PLAN & ELEVATION
2	CROSS SECTION
3	ESTIMATE OF QUANTITIES
4	SUBSURFACE EXPLORATION LAYOUT
5	ABUTMENT FOOTING PLAN
6	WEST ABUTMENT PLAN & ELEVATION
7	WEST ABUTMENT BILL OF BARS & DETAILS
8	EAST ABUTMENT PLAN & ELEVATION
9	EAST ABUTMENT BILL OF BARS & DETAILS
10	DECK GRADES
11	DECK PLAN
12	DECK CROSS SECTIONS
13	DECK DETAILS & BILL OF BARS
14	WEST STRUCTURAL APPROACH SLAB
15	EAST STRUCTURAL APPROACH SLAB
16	STRUCTURAL APPROACH SLAB DETAILS
17	RAILING PLAN & ELEVATIONS
18	NORTH RAILING PLAN, ELEVATION & DETAILS
19	SOUTH RAILING PLAN, ELEVATION & DETAILS
20	PARAPET DETAILS
21	STEEL RAILING DETAILS
22	NE CLOSURE WALL
23	NW CLOSURE WALL
24	SW CLOSURE WALL
25	SE CLOSURE WALL

WISCONSIN
JERREL KRUSCHKE
43536-6
MILWAUKEE, WIS.
PROFESSIONAL ENGINEER
07-20-2017

NO.	DATE	REVISION	BY

ORIGINAL PLANS PREPARED BY
CITY OF MILWAUKEE
DEPARTMENT OF PUBLIC WORKS
INFRASTRUCTURE SERVICES DIVISION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher SDR 08/09/17
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-40-925

W. BROWN ST. OVER CANADIAN PACIFIC RAILWAY

COUNTY MILWAUKEE	~~TOWN~~/CITY/ ~~VILLAGE~~ MILWAUKEE
DESIGN SPEC.	AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS
DESIGNED BY M.S.A.	DESIGN CK'D. A.R.
DRAWN BY G.J.R.	PLANS CK'D. H.J.R.

SITE PLAN & ELEVATION

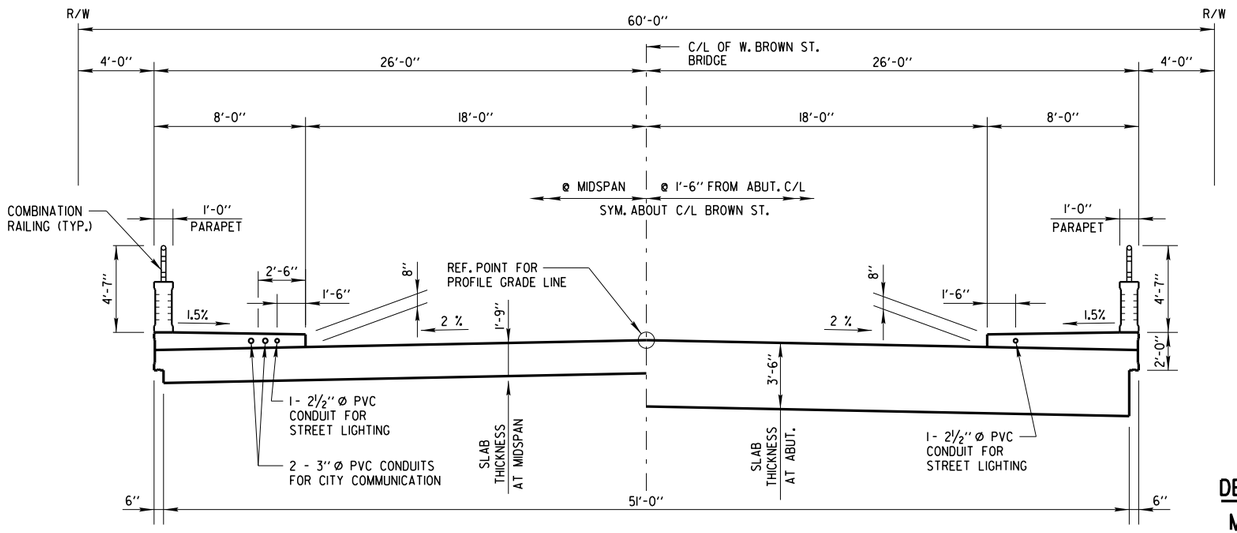
SHEET 1 OF 25
35

8

8

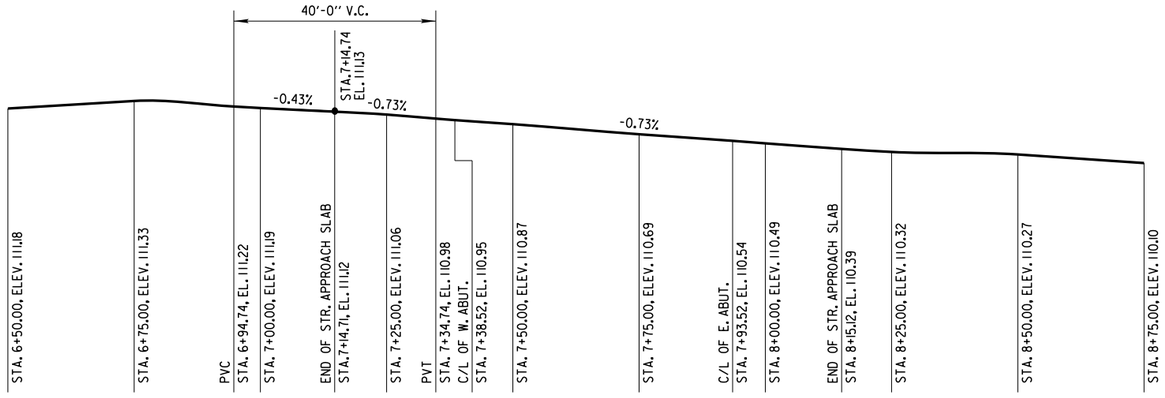
W:\STR\B0934\PLANS\02_SECTION.DGN

REVISED: 05/22/2017 GJR

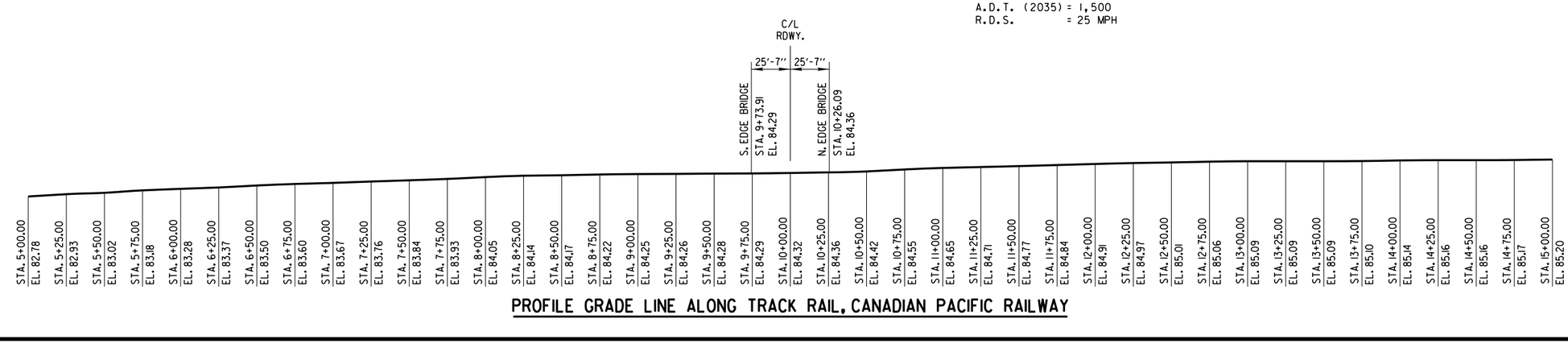


TYPICAL SECTION THRU NEW BRIDGE LOOKING EAST

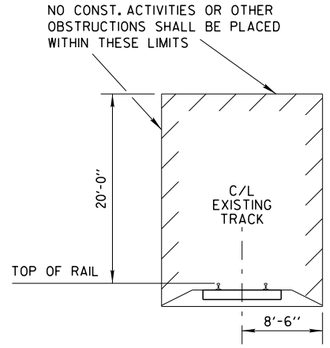
(ALL DIMENSIONS NORMAL TO C/L OF BRIDGE)



PROFILE GRADE LINE ALONG C/L OF W. BROWN ST.



PROFILE GRADE LINE ALONG TRACK RAIL, CANADIAN PACIFIC RAILWAY



MINIMUM CONSTRUCTION CLEARANCE ENVELOPE

NORMAL TO RAILROAD

DESIGN DATA

MATERIAL PROPERTIES

CONCRETE SUPERSTRUCTURE	f'c = 4,000 PSI
CONCRETE SUBSTRUCTURE (ALL OTHERS)	f'c = 3,500 PSI
BAR STEEL REINFORCEMENT	fy = 60,000 PSI
STRUCTURAL APPROACH SLAB	f'c = 4,000 PSI

FOUNDATIONS

EAST ABUTMENT TO BE SUPPORTED ON HP 12x53 STEEL PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 220 TONS* PER PILE AS DETERMINED BY MODIFIED GATES DYNAMIC FORMULA. ESTIMATED 55'-0'' LONG.

WEST ABUTMENT TO BE SUPPORTED ON HP 12x53 STEEL PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 220 TONS* PER PILE AS DETERMINED BY MODIFIED GATES DYNAMIC FORMULA. ESTIMATED 55'-0'' LONG.

* THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS THE REQUIRED DRIVING RESISTANCE MULTIPLIED BY A RESISTANCE FACTOR OF 0.5 USING MODIFIED GATES TO DETERMINE DRIVEN PILE CAPACITY.

DEAD LOAD

CONCRETE = 150 LB/CF
F.W.S. = 20 LB/SF
PARAPET = 380 LB/LF

LIVE LOAD

DESIGN LOADING:	HL-93
INVENTORY RATING FACTOR:	RF = 1.03
OPERATING RATING FACTOR:	RF = 1.34
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV)	= 250 KIPS

TRAFFIC DATA (YEAR)

A.D.T. (2015) = 1,500
A.D.T. (2035) = 1,500
R.D.S. = 25 MPH

GENERAL NOTES

ALL STATIONS AND ELEVATIONS ARE IN FEET.

ALL ELEVATIONS ARE REFERRED TO CITY OF MILWAUKEE DATUM = 580.6 NGVD

DRAWINGS SHALL NOT BE SCALED. BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2'' CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

BEVEL EXPOSED EDGES OF CONCRETE 1'' UNLESS OTHERWISE NOTED.

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

BENDING DIMENSIONS FOR REINFORCING ARE OUT TO OUT.

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

EXISTING GROUND LINE SHALL BE UPPER LIMITS OF ''EXCAVATION, HAULING, AND DISPOSAL OF PETROLEUM CONTAMINATED SOIL''.

ALL SPACES EXCAVATED AND NOT OCCUPIED BY NEW STRUCTURE OR MSE WALL FILL SHALL BE BACKFILLED WITH STRUCTURE BACKFILL.

JOINT FILLER SHALL CONFORM TO AASHTO DESIGNATION M153 TYPE I, TYPE II, OR TYPE III, OR AASHTO DESIGNATION M213.

INFORMATION SHOWN ON DRAWINGS CONCERNING TYPE AND LOCATION ON UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL-INCLUSIVE.

CONTRACTOR IS RESPONSIBLE FOR MAKING DETERMINATIONS AS TO TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGES.

RAILROAD SHORING SHALL CONFORM TO OSHA STANDARDS FOR EXCAVATION AND MUST BE DESIGNED FOR RAILROAD LIVE LOAD SURCHARGE FOR COOPER E-80. FINAL LOCATION AND TYPE OF SHORING SYSTEM TO BE DETERMINED BY CONTRACTOR. CONTRACTOR SHALL SUBMIT DESIGN DRAWINGS AND CALCULATIONS DIRECTLY TO CANADIAN PACIFIC RAILWAY.

TEMPORARY MINIMUM CLEARANCE OF 20'-0'' SHALL BE MAINTAINED ABOVE RAILROAD TRACKS AT ALL TIMES UNLESS PRIOR CONSENT IS GIVEN BY ENGINEER.

FOR RAILROAD COORDINATION PLEASE REFER TO RAILROAD MINIMUM REQUIREMENTS AS PART OF SPECIAL PROVISIONS.

TEMPORARY SHORING SHALL NOT EXTEND ABOVE ELEVATION OF TOP RAIL ADJACENT TO SHORING.

EXISTING BRIDGE (P-40-859) PLANS MAY BE FOUND ON WISCONSIN DOT HIGHWAY STRUCTURES INFORMATION (HSI) SITE.

REFER TO SPECIAL PROVISIONS FOR CONCRETE STAIN AND CONCRETE STAIN MULTICOLOR.

PAINT FOR STEEL RAILING TO MATCH FEDERAL STANDARD NO. 595C, NO. 27038.

COORDINATE CONSTRUCTION OF BRIDGE B-40-925 AND RETAINING WALLS R-40-673, R-40-674, R-40-675, & R-40-676

THE EXISTING STRUCTURE IS A THREE SPAN HAUNCH SLAB BRIDGE WITH AN OVERALL WIDTH OF 58'-6'' AND OVERALL LENGTH OF 96'-4'' AND IS TO BE REMOVED WITH THE EXCEPTION OF ABUTMENTS.

STATE PROJECT NUMBER

2984 - 06 - 76

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-925

DRAWN BY G.J.R. | PLANS CK'D. H.J.R. A.R.

CROSS SECTION

SHEET 2 OF 25

W:\STR\B0934\PLANS\03_QUANTITIES.DGN

REVISED: 07-19-2017 BY CJR

STATE PROJECT NUMBER

2984 - 06 - 76

ESTIMATE OF QUANTITIES

ITEM NO.	BID ITEM	UNIT	WEST ABUT.	EAST ABUT.	SUPER.	W. STRUC. APPROACH SLAB	E. STRUC. APPROACH SLAB	TOTAL
203.0200	REMOVING OLD STRUCTURE STA. 7+66.02	LS						1
203.0225.S	DEBRIS CONTAINMENT P-40-859	LS						1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-40-925	LS						1
210.1500	BACKFILL STRUCTURE TYPE A	TON	1,720	1,294				3,014
305.0120	BASE AGGREGATE DENSE 1 1/4-INCH	TON	1	1		107	96	205
502.0100	CONCRETE MASONRY BRIDGES	CY	224	224	263	81	74	866
502.3200	PROTECTIVE SURFACE TREATMENT	SY			344	133	120	597
502.4205	ADHESIVE ANCHORS NO. 5 BAR	EACH	16	16				32
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	16,720	16,650				33,370
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	11,630	11,560	46,940	12,800	11,770	94,700
505.0800.S	BAR STEEL REINFORCEMENT HS STAINLESS STRUCTURES	LB			1,700			1700
511.1200	TEMPORARY SHORING B-40-925	SF		75				75
513.7011	RAILING STEEL TYPE C2 B-40-925	LF			116	44	40	200
516.0100	DAMPPROOFING	SY	176	174				350
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	24	24				48
517.1010.S	CONCRETE STAINING B-40-925	SF			443	173	160	776
517.1015.S	CONCRETE STAINING MULTI-COLOR B-40-925	SF			409	71	62	542
517.1050.S	ARCHITECTURAL SURFACE TREATMENT B-40-925	SF			409	71	62	542
550.0500	PILE POINTS	EACH	46	46				92
550.1120	PILING STEEL HP 12-INCH X 53 LB	LF	2,530	2,530				5,060
612.0206	PIPE UNDERDRAIN UNPERFORATED 6-INCH	LF	6	6				12
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	52	52				104
652.0230	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2 1/2-INCH	LF			196			196
652.0235	CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH	LF			196			196
999.1000.S	SEISMOGRAPH	LS						1
999.1500.S	CRACK AND DAMAGE SURVEY	LS						1
SPV.0090.01	REMOVAL OF EXISTING & INSTALLATION OF NEW CHAIN LINK FENCE	LF	66	52				118
SPV.0195.01	EXCAVATION, HAULING AND DISPOSAL OF SOLID WASTE, INCLUDING MUNICIPAL WASTE MIXED WITH SHALLOW SOIL AND URBAN FILL	TON	111	102				213
	NON BID ITEMS							
	PREFORMED JOINT FILLER	LF						
	NON BITUMINOUS JOINT FILLER	LF						
	NAME PLATE	EACH						
	POLYETHYLENE SHEETS	SF						

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-925

DRAWN BY C.J.R. | PLANS CK'D. H.J.R. J.P.H.

ESTIMATE OF QUANTITIES

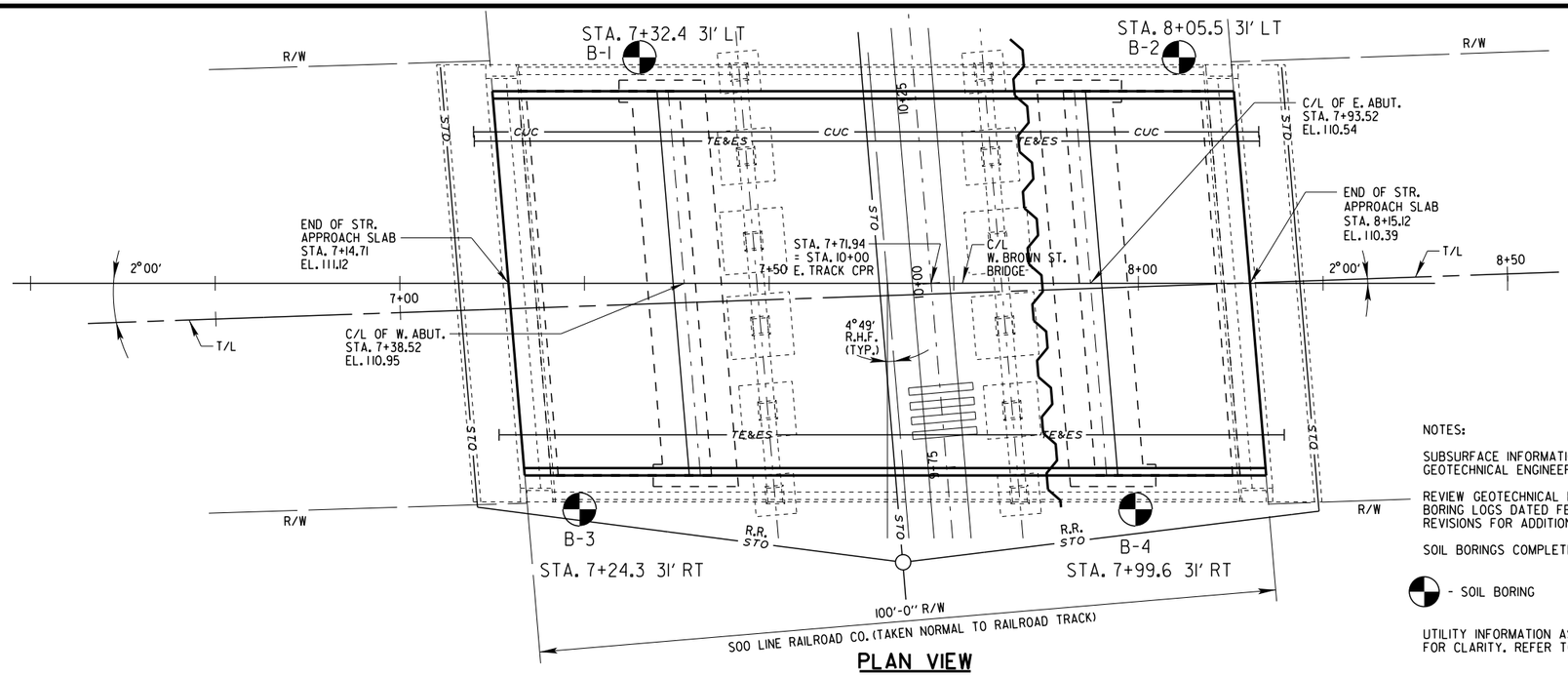
SHEET 3 OF 25

W:\STR\B0934\PLANS\04_SUBSURFACE.DGN

REVISED: 05-26-2017 DB

STATE PROJECT NUMBER

2984 - 06 - 76



PLAN VIEW

(SINGLE SPAN CONCRETE RIGID FRAME)

NOTES:

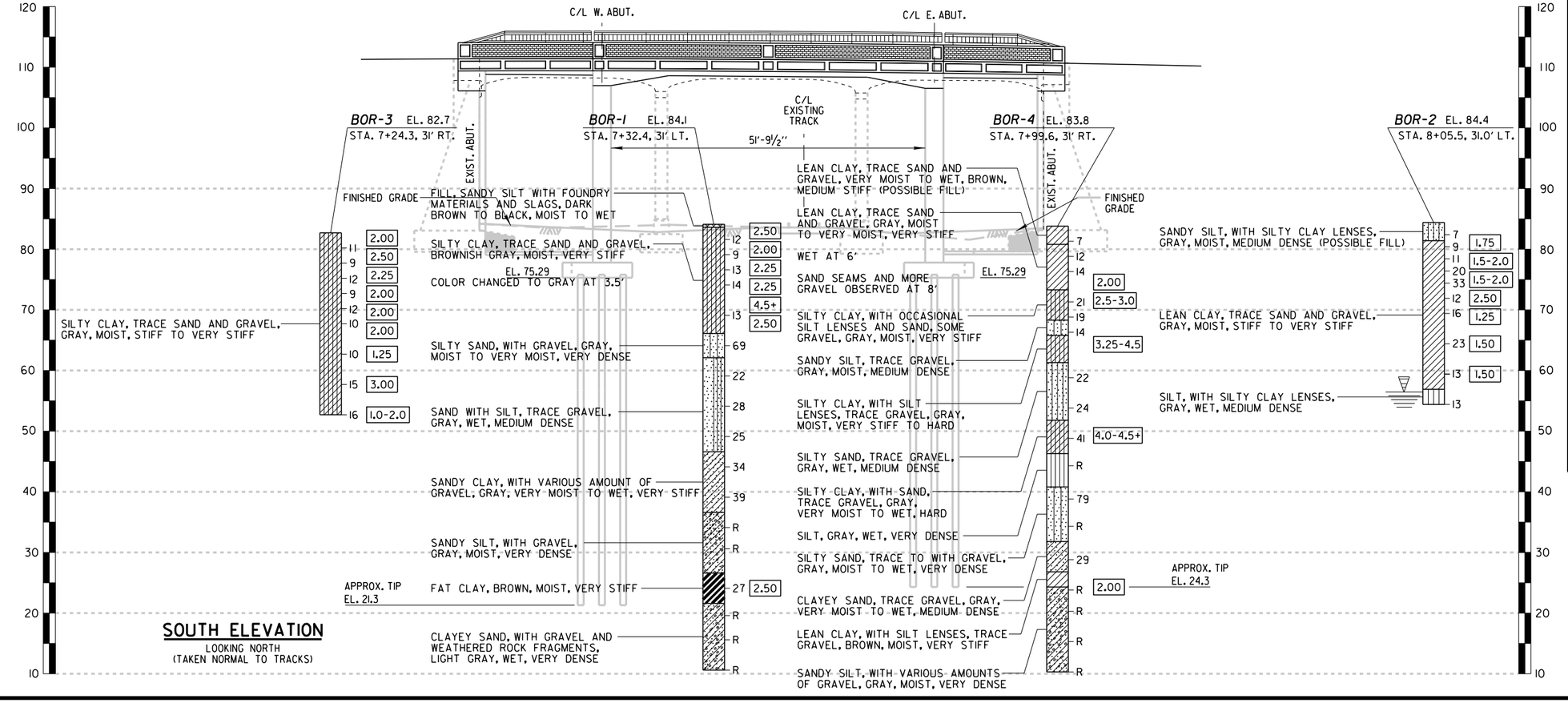
SUBSURFACE INFORMATION ON PLAN SHEET SUMMARIZES GEOTECHNICAL ENGINEERING REPORT.

REVIEW GEOTECHNICAL ENGINEERING REPORT AND SOIL BORING LOGS DATED FEBRUARY 4, 2016 AND SUBSEQUENT REVISIONS FOR ADDITIONAL SUBSURFACE INFORMATION.

SOIL BORINGS COMPLETED BY GESTRA ENGINEERING.

⊕ - SOIL BORING

UTILITY INFORMATION AS SHOWN IS NOT ALL INCLUSIVE FOR CLARITY. REFER TO SITE PLAN SHEET NO. 1.



SOUTH ELEVATION

LOOKING NORTH
(TAKEN NORMAL TO TRACKS)

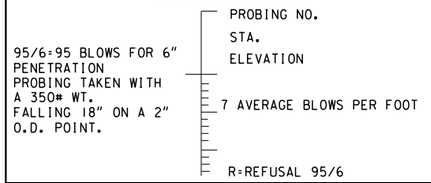
ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

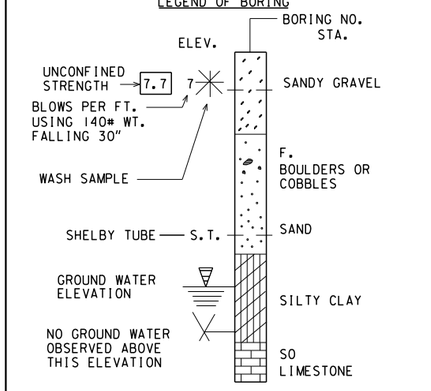
MATERIAL SYMBOLS

TOPSOIL, SILT, SANDSTONE, SAND, PEAT, LIMESTONE, GRAVEL, CLAY, IGNEOUS ROCK

LEGEND OF PROBING



LEGEND OF BORING



UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-925

DRAWN BY C.J.R. | PLANS CK'D. H.J.R. A.R.

SUBSURFACE EXPLORATION LAYOUT

SHEET 4 OF 25

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REVISED: 07/12/2017 BY GJR

STATE PROJECT NUMBER

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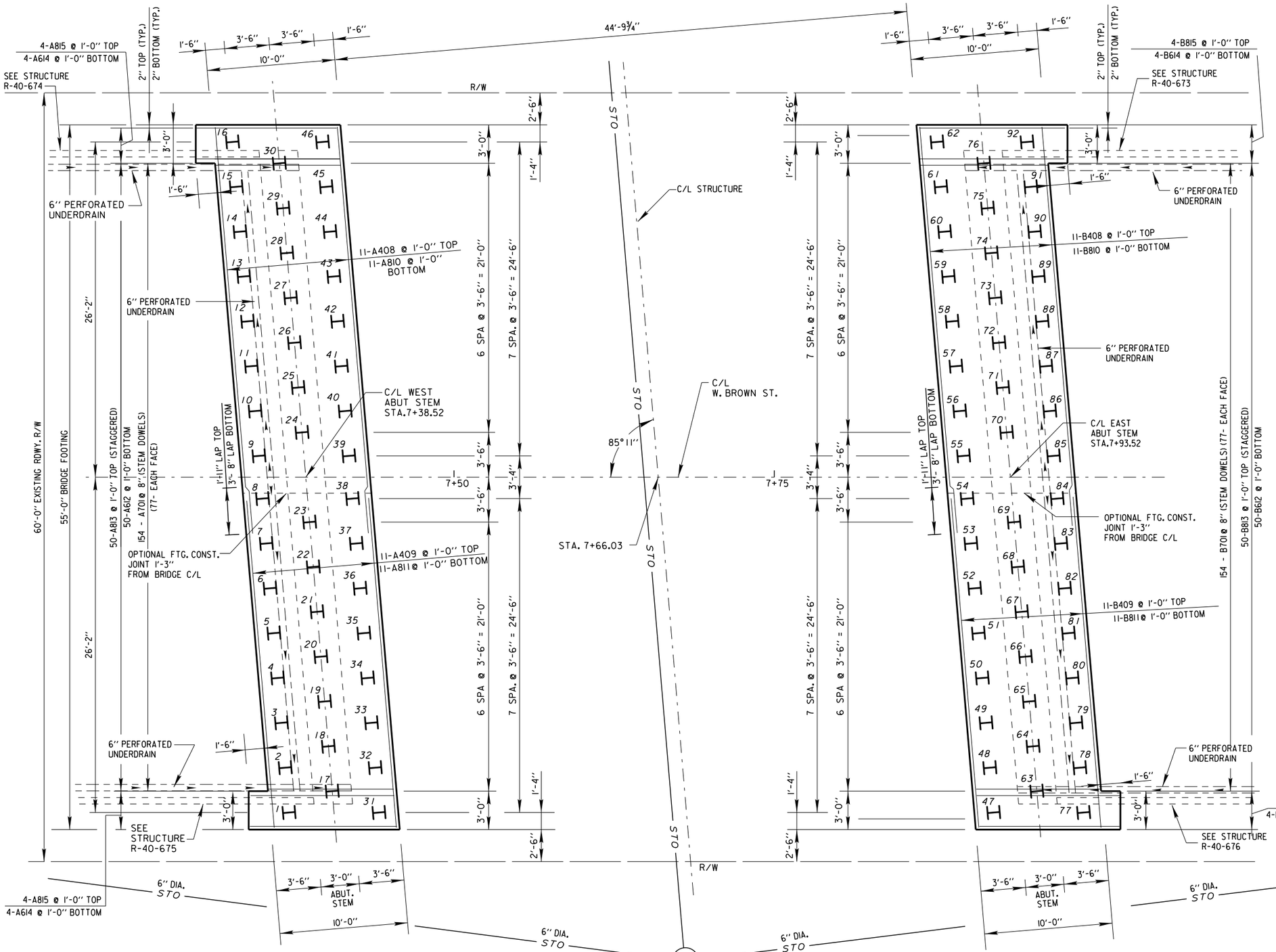
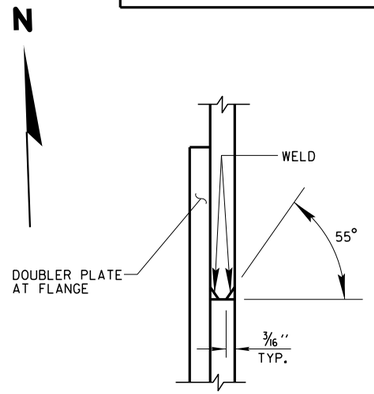
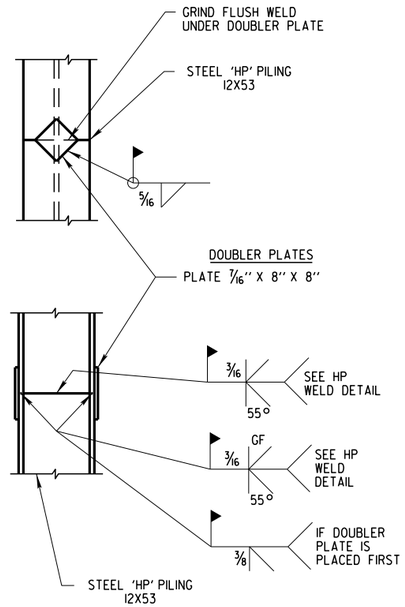


PLAN VIEW AT TOP OF FOOTINGS



HP WELD DETAIL

FLANGE SHOWN, WEB SIMILAR



STEEL 'HP' SHAPES

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-925

DRAWN BY T.J.K. | PLANS CK'D. A.R. H.J.R.

ABUTMENT FOOTING PLAN

SHEET 5 OF 25

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8

8

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REVISED: 07-17-2017 BY SB

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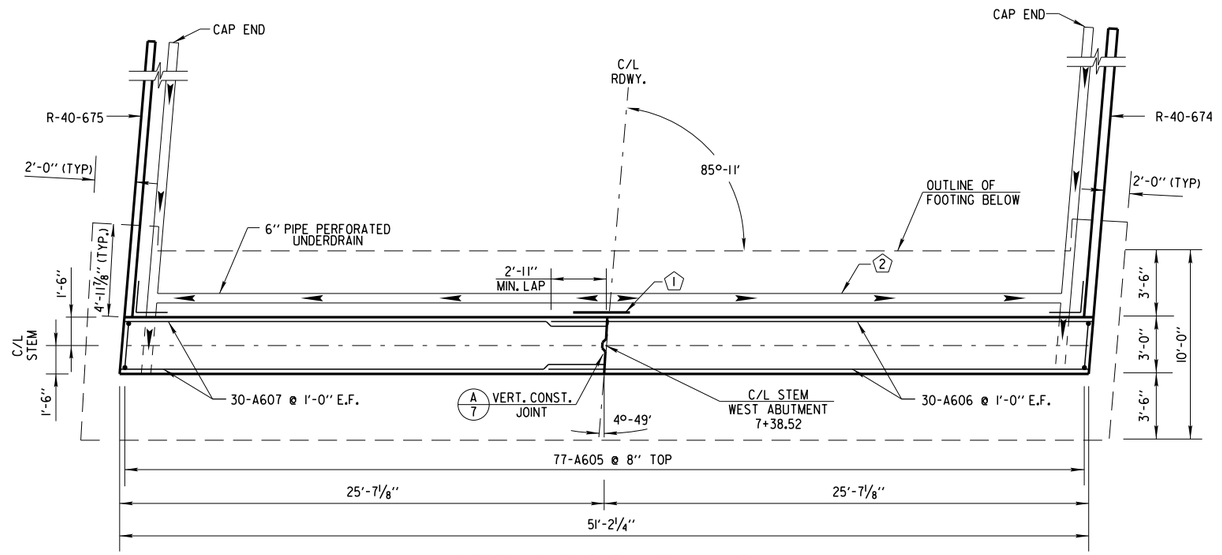
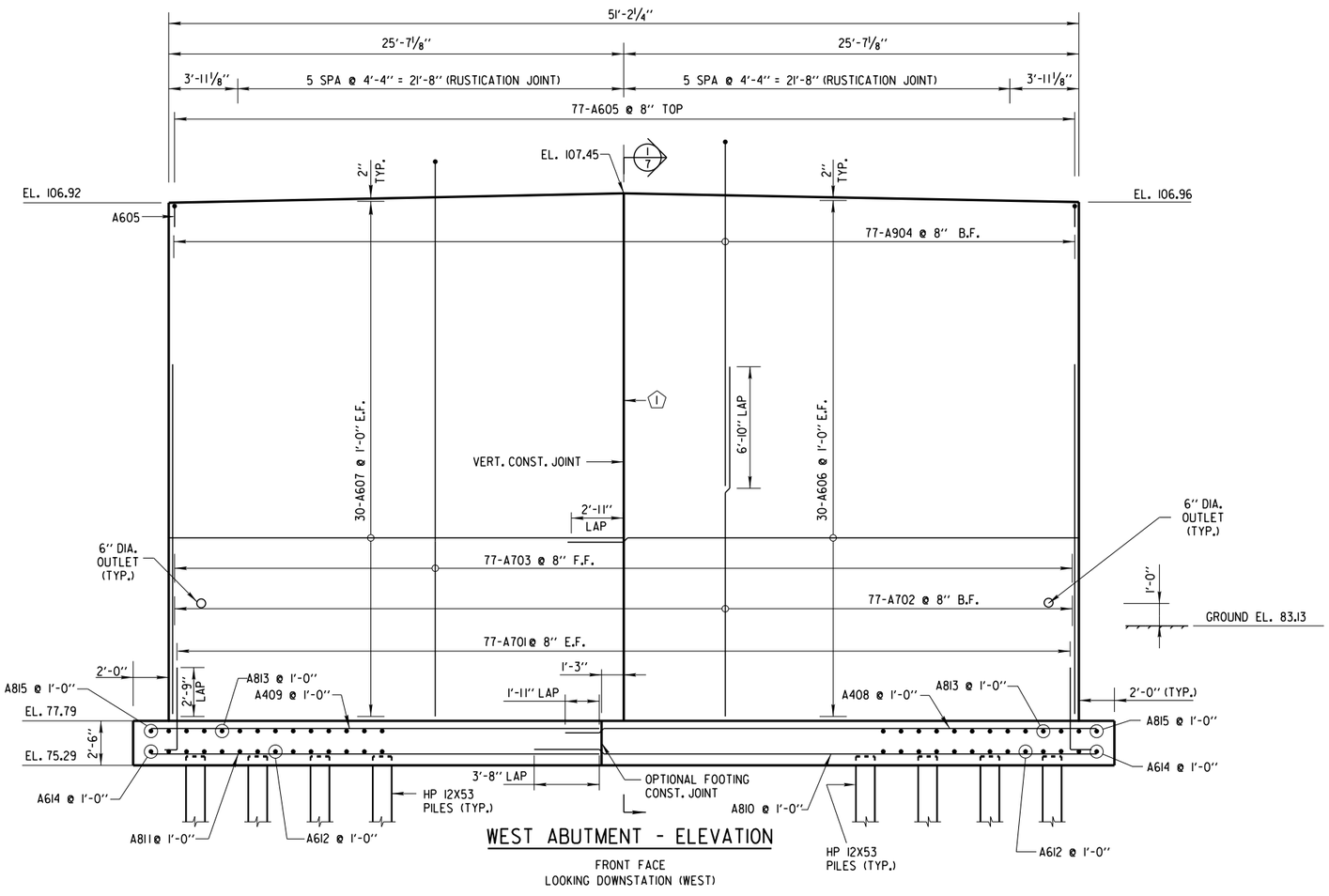
STATE PROJECT NUMBER

2984 - 06 - 76



WEST ABUTMENT - PLAN VIEW



WEST ABUTMENT - ELEVATION

FRONT FACE
LOOKING DOWNSTATION (WEST)

ABUTMENT NOTES:

1. 18-INCH RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACK FACE. VERTICAL WATERPROOFING TO EXTEND FROM TOP OF FOOTING TO TOP OF MSE WALLS.

2. 6-INCH PERFORATED PIPE UNDERDRAIN ALONG BACK FACE OF ABUTMENT AND MSE WALLS.

3. ATTACH RODENT SHIELD PER S.S.D. REINFORCED CONCRETE APRON ENDWALL FOR PIPE UNDERDRAIN. SEE DETAIL ON SHEET 7.

RUN BAR STEEL THRU CONSTRUCTION JOINT.

PLACE FULL HEIGHT VERTICAL RUSTICATION JOINTS AS SHOWN ON THE ELEVATIONS ALONG LENGTH OF FRONT FACE OF ABUTMENT. RUSTICATION JOINT SHOULD LINE UP WITH VERTICAL CONSTRUCTION JOINT ON ABUTMENT. SEE DETAIL SHEET 7.

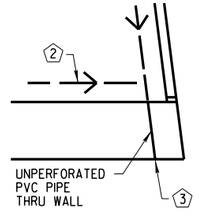
PLACE FULL WIDTH HORIZONTAL RUSTICATION AT END FACE OF ABUTMENT TO MATCH MSE WALL PATTERN. SEE DETAIL SHEET 7.

F.F. = FRONT FACE
B.F. = BACK FACE
E.F. = EACH FACE

BACKFILL EACH FACE OF ABUTMENT EQUALLY TO APPROXIMATE EL. 79.29. DO NOT BACKFILL ABOVE EL. 79.29 AT BACKFACE UNTIL SUPERSTRUCTURE HAS ACHIEVED 3,500 PSI OR CONTRACTOR DESIGNED BRACING STRUTS ARE INSTALLED.

BACKFILL ABOVE EL. 86.00 MUST BE PLACED AT EAST AND WEST ABUTMENTS SIMULTANEOUSLY. ELEVATION OF BACKFILL AT BOTH ABUTMENTS SHALL VARY BY NO MORE THAN 5 FT DURING BACKFILL PLACEMENT. COORDINATE THIS WORK WITH ADJACENT RETAINING WALL STRUCTURES.

STAGGER TOP AND BOTTOM MAT TRANSVERSE REINFORCEMENT IN FOOTING TO PREVENT CRACKING.



UNDERDRAIN DETAIL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-925

DRAWN BY T.J.K. | PLANS CK'D. A.R. H.J.R.

WEST ABUTMENT PLAN & ELEVATION

SHEET 6 OF 25
40

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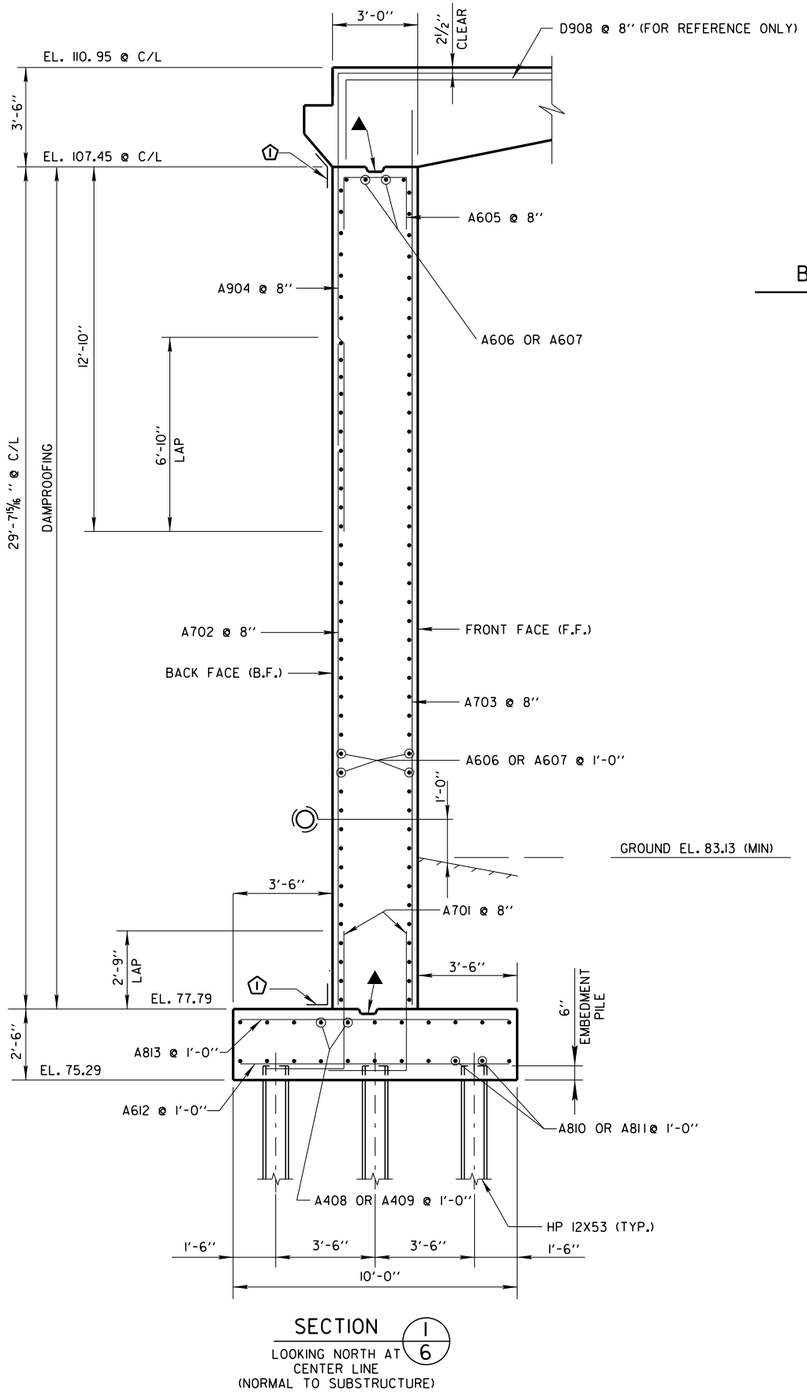
REVISED: 07-17-2017 BY SB

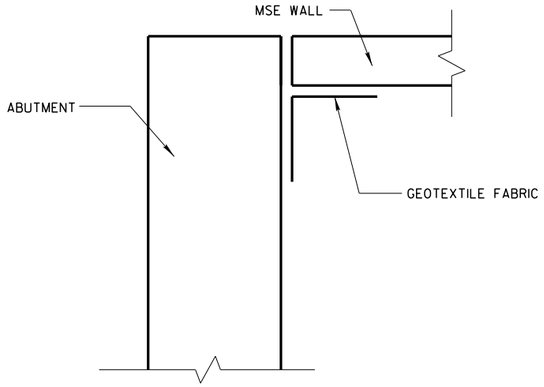
STATE PROJECT NUMBER

2984 - 06 - 76



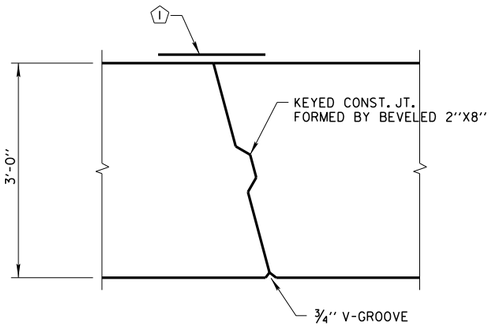
SECTION 1/6

LOOKING NORTH AT CENTER LINE (NORMAL TO SUBSTRUCTURE)



BUTT JOINT DETAIL AT C.I.P. STRUCTURES

(SEE RETAINING WALL PLANS FOR ADDITIONAL DETAIL)



A 6.8 DETAIL PLAN VIEW ABUTMENT VERTICAL CONSTRUCTION JOINT

BILL OF BARS - WEST ABUTMENT

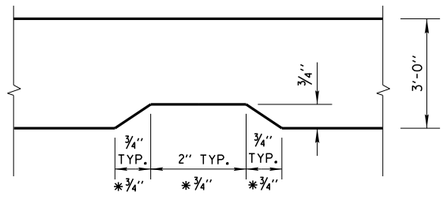
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	LOCATION
A701		158	7'-7"	X	WEST ABUTMENT - FOOTING DOWEL TOTAL OF E.F.
A702		79	23'-6"		WEST ABUTMENT - VERTICAL B.F.
A703	X	79	31'-6"		WEST ABUTMENT - VERTICAL F.F.
A904	X	79	23'-2"	X	WEST ABUTMENT - VERTICAL B.F.
A605		79	5'-8"	X	WEST ABUTMENT - CAP STIRRUP
A606		62	28'-6"		WEST ABUTMENT - HORIZONTAL TOTAL OF E.F. AND TOP
A607		62	25'-3"		WEST ABUTMENT - HORIZONTAL TOTAL OF E.F. AND TOP
A408		11	30'-8"		FOOTING - LONGITUDINAL TOP
A409		11	26'-6"		FOOTING - LONGITUDINAL TOP
A810		11	32'-6"		FOOTING - LONGITUDINAL BOTTOM
A811		11	26'-0"		FOOTING - LONGITUDINAL BOTTOM
A612		52	9'-8"		FOOTING - TRANSVERSE BOTTOM
A813		52	9'-8"		FOOTING - TRANSVERSE TOP
A614		8	11'-2"		FOOTING - TRANSVERSE BOTTOM ENDS
A815		8	11'-2"		FOOTING - TRANSVERSE TOP ENDS

ABUTMENT NOTES:

1. 18-INCH RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE. VERTICAL WATERPROOFING TO EXTEND FROM TOP OF FOOTING TO TOP OF ABUTMENT STEM, AND TOP OF ABUTMENT STEM TO TOP OF MSE WALLS.

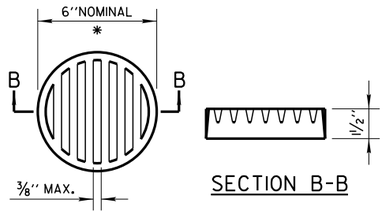
▲ BEVELED KEY 2" x 6"

PIPE UNDERDRAIN WRAPPED (16-INCH) SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN. (SEE RODENT SHIELD DETAIL)



RUSTICATION DETAIL

* PLACE FULL WIDTH HORIZONTAL RUSTICATION AT END FACE OF ABUTMENT TO MATCH MSE WALL PATTERN.



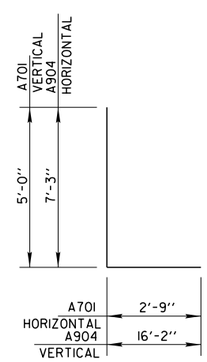
SECTION B-B

RODENT SHIELD DETAIL

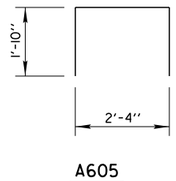
* DIMENSIONS ARE APPROXIMATE, THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING, ORIENT SO SLOTS ARE VERTICAL.

THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN 6-INCH".

THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALLY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.



A701, A904



A605

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-925

DRAWN BY T.J.K. | PLANS CK'D. H.J.R. A.R.

WEST ABUTMENT BILL OF BARS & DETAILS

SHEET 7 OF 25

8

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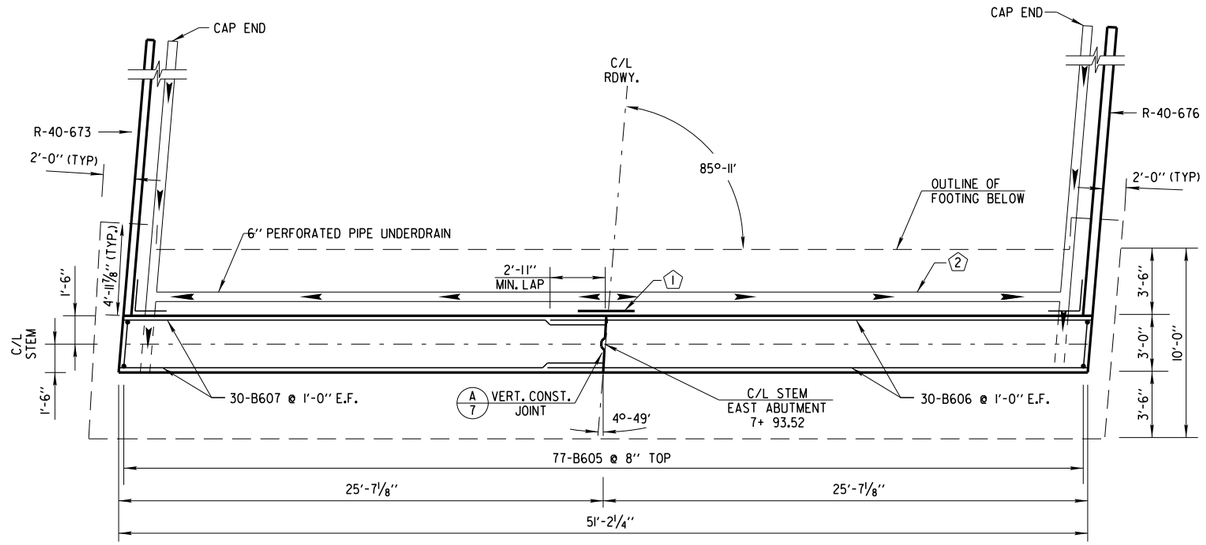
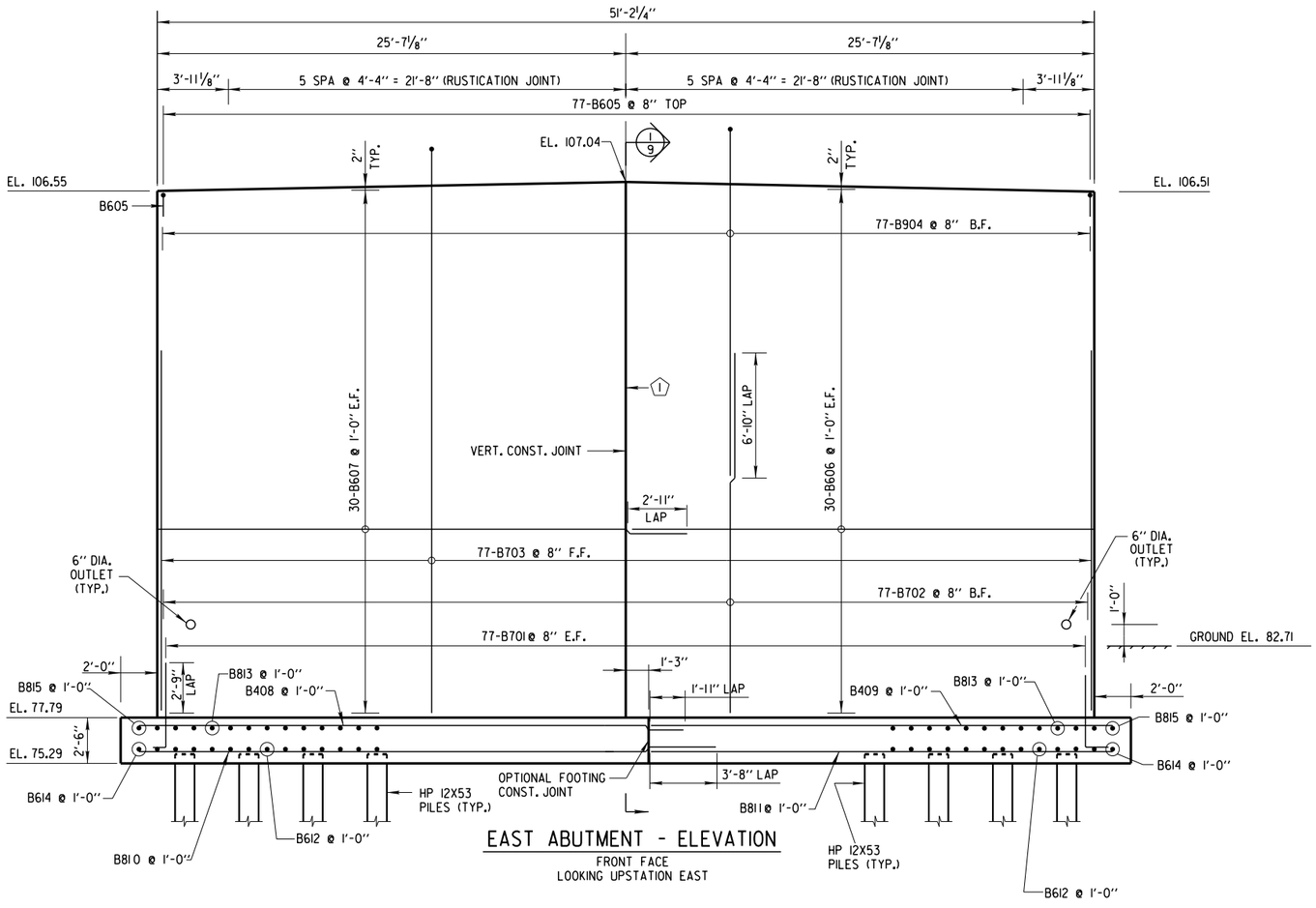
REVISED: 07-17-2017 BY: SB

STATE PROJECT NUMBER

2984 - 06 - 76



EAST ABUTMENT - PLAN VIEW



EAST ABUTMENT - ELEVATION

FRONT FACE
LOOKING UPSTATION EAST

N

ABUTMENT NOTES:

1. 18-INCH RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACK FACE. VERTICAL WATERPROOFING TO EXTEND FROM TOP OF FOOTING TO TOP OF MSE WALLS.
2. 6-INCH PERFORATED PIPE UNDERDRAIN ALONG BACK FACE OF ABUTMENT AND MSE WALLS.
3. ATTACH RODENT SHIELD PER S.S.D. REINFORCED CONCRETE APRON ENDWALL FOR PIPE UNDERDRAIN. SEE DETAIL ON SHEET 7.

RUN BAR STEEL THRU CONSTRUCTION JOINT.

PLACE FULL HEIGHT VERTICAL RUSTICATION JOINTS AS SHOWN ON THE ELEVATIONS ALONG LENGTH OF FRONT FACE OF ABUTMENT. RUSTICATION JOINT SHOULD LINE UP WITH VERTICAL CONSTRUCTION JOINT ON ABUTMENT. SEE DETAIL SHEET 7.

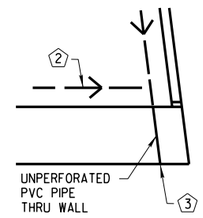
PLACE FULL WIDTH HORIZONTAL RUSTICATION AT END FACE OF ABUTMENT TO MATCH MSE WALL PATTERN. SEE DETAIL SHEET 7.

F.F. = FRONT FACE
B.F. = BACK FACE
E.F. = EACH FACE

BACKFILL EACH FACE OF ABUTMENT EQUALLY TO APPROXIMATE EL. 79.29. DO NOT BACKFILL ABOVE EL. 79.29 AT BACKFACE UNTIL SUPERSTRUCTURE HAS ACHIEVED 3,500 PSI OR CONTRACTOR DESIGNED BRACING STRUTS ARE INSTALLED.

BACKFILL ABOVE EL. 86.00 MUST BE PLACED AT EAST AND WEST ABUTMENTS SIMULTANEOUSLY. ELEVATION OF BACKFILL AT BOTH ABUTMENTS SHALL VARY BY NO MORE THAN 5 FT DURING BACKFILL PLACEMENT. COORDINATE THIS WORK WITH ADJACENT RETAINING WALL STRUCTURES.

STAGGER TOP AND BOTTOM MAT TRANSVERSE REINFORCEMENT IN FOOTING TO PREVENT CRACKING.



UNDERDRAIN DETAIL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-925

DRAWN BY T.J.K. | PLANS CK'D. H.J.R. A.R.

EAST ABUTMENT PLAN & ELEVATION

SHEET 8 OF 25

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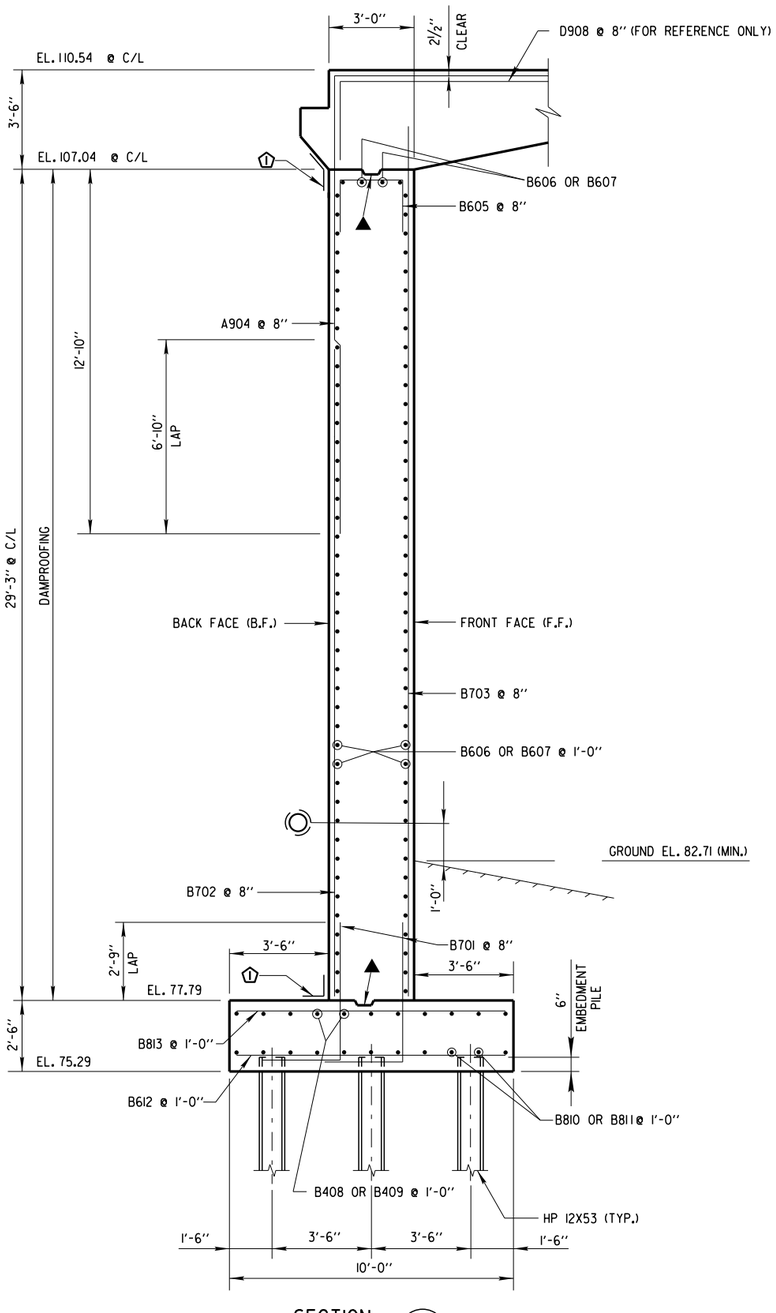
REVISED 07/17/2017 BY: SB

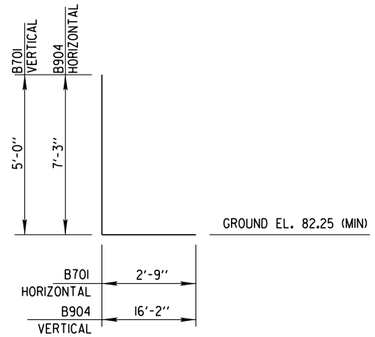
STATE PROJECT NUMBER

2984 - 06 - 76

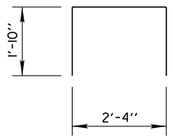


SECTION 1/8

LOOKING SOUTH AT CENTER LINE (NORMAL TO SUBSTRUCTURE)



B701, B904



B605

BILL OF BARS - EAST ABUTMENT

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	LOCATION
B701		158	7'-7''	X	EAST ABUTMENT - FOOTING DOWEL TOTAL OF E.F.
B702		79	23'-1''		EAST ABUTMENT - VERTICAL B.F.
B703	X	79	31'-1''		EAST ABUTMENT - VERTICAL F.F.
B904	X	79	23'-2''	X	EAST ABUTMENT - VERTICAL B.F.
B605		79	5'-8''	X	EAST ABUTMENT - CAP STIRRUP
B606		62	28'-6''		EAST ABUTMENT - HORIZONTAL TOTAL OF E.F. AND TOP
B607		62	25'-3''		EAST ABUTMENT - HORIZONTAL TOTAL OF E.F. AND TOP
B408		11	30'-8''		FOOTING - LONGITUDINAL TOP
B409		11	26'-0''		FOOTING - LONGITUDINAL TOP
B810		11	32'-6''		FOOTING - LONGITUDINAL BOTTOM
B811		11	26'-0''		FOOTING - LONGITUDINAL BOTTOM
B612		52	9'-8''		FOOTING - TRANSVERSE BOTTOM
B813		52	9'-8''		FOOTING - TRANSVERSE TOP
B614		8	11'-2''		FOOTING - TRANSVERSE BOTTOM ENDS
B815		8	11'-2''		FOOTING - TRANSVERSE TOP ENDS

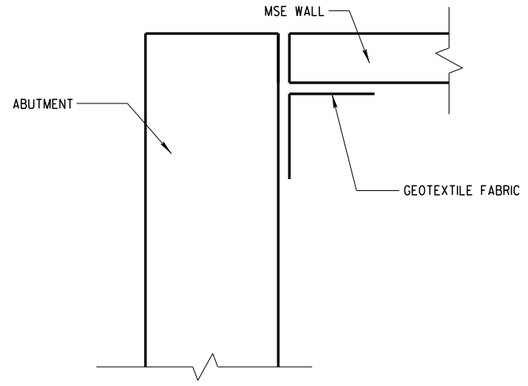
ABUTMENT NOTES:

1 18-INCH RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE. VERTICAL WATERPROOFING TO EXTEND FROM TOP OF FOOTING TO TOP OF ABUTMENT STEM, AND TOP OF ABUTMENT STEM TO TOP OF MSE WALLS.

▲ BEVELED KEY 2'' x 6''

FOR RUSTICATION, VERTICAL CONSTRUCTION JOINT & RODENT DETAILS SEE SHT. 7

PIPE UNDERDRAIN WRAPPED (16-INCH) SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN. (SEE RODENT SHIELD DETAIL ON SHT. 7)



BUTT JOINT DETAIL AT C.I.P. STRUCTURES

(SEE RETAINING WALL PLANS FOR ADDITIONAL DETAIL)

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-925

DRAWN BY T.J.K. | PLANS CK'D. H.J.R. A.R.

EAST ABUTMENT BILL OF BARS & DETAILS

SHEET 9 OF 25

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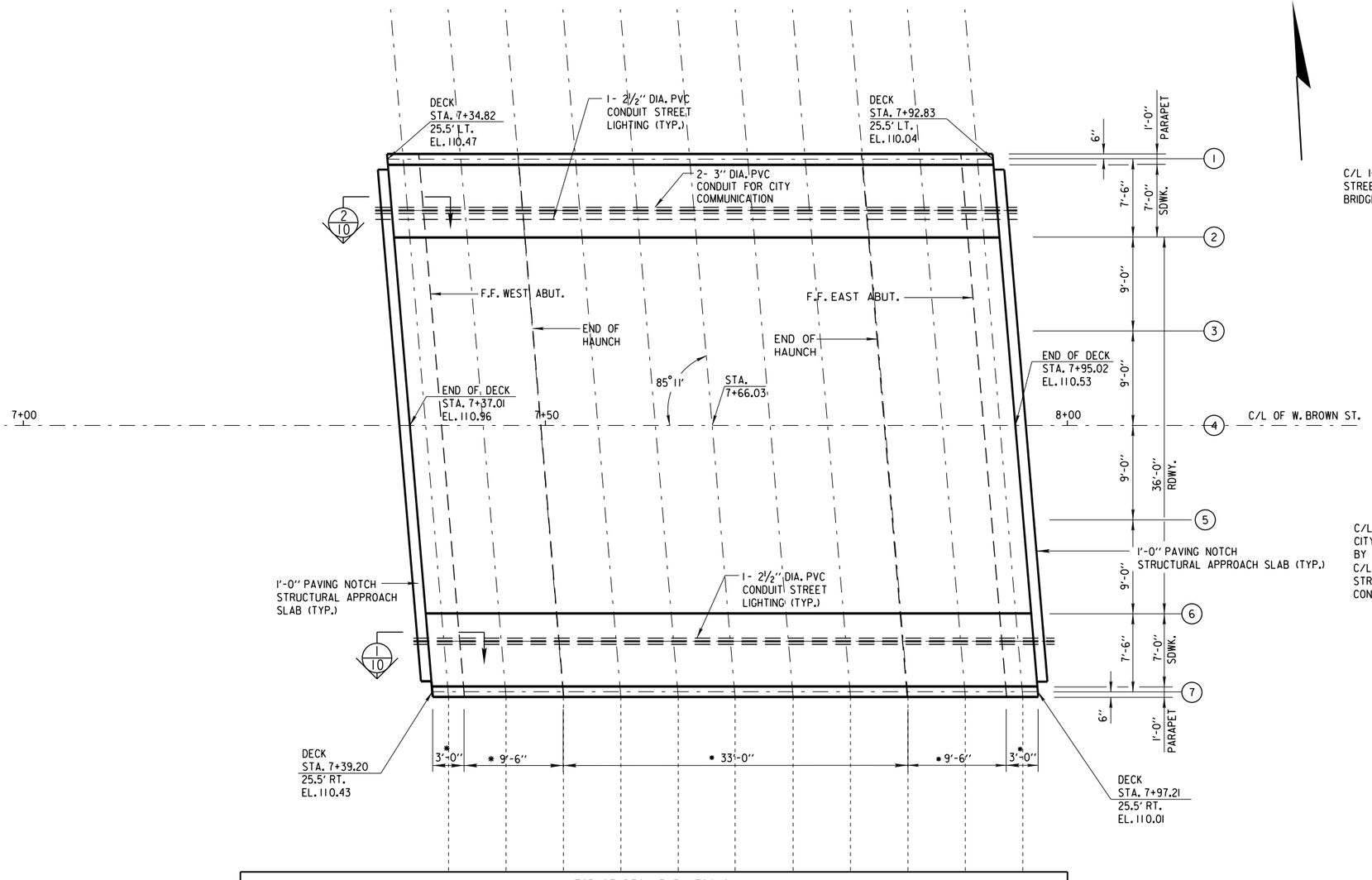
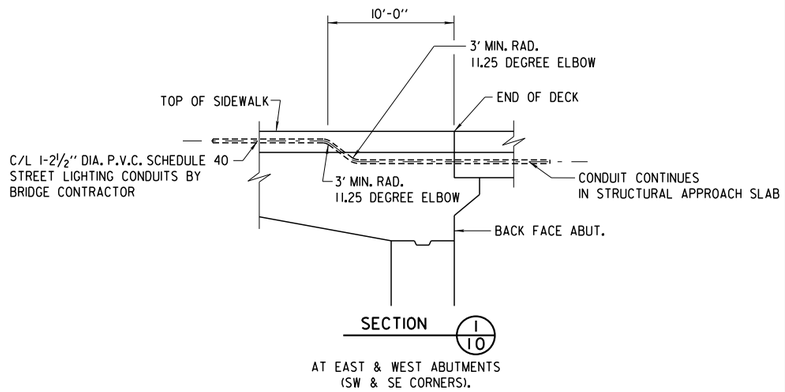
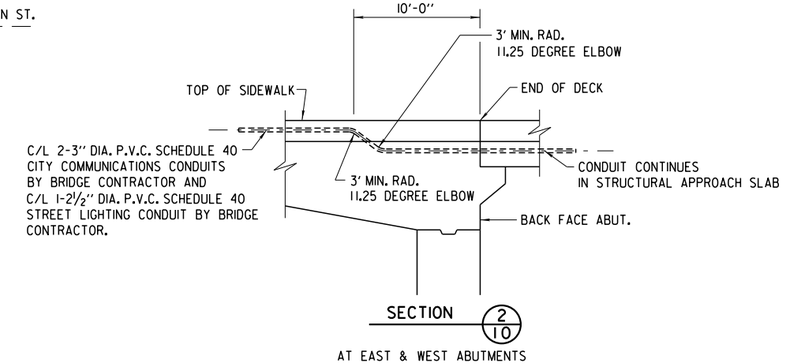
STATE PROJECT NUMBER
2984 - 06 - 76





AT EAST & WEST ABUTMENTS
(SW & SE CORNERS).



AT EAST & WEST ABUTMENTS
(NW & NE CORNERS).

* DIMENSIONS GIVEN ARE NORMAL TO RAILROAD TRACK.

TOP OF DECK ELEVATIONS

SPAN LENGTH 'L'	DECK LOCATION	WEST END OF DECK	0.1L	0.2L	0.3L	0.4L	0.5L	0.6L	0.7L	0.8L	0.9L	EAST END OF DECK
55'-0"	CAMBER (IN.)	0.0	0.03	0.25	0.25	0.5	0.7	0.5	0.25	0.25	0.03	0.0
	①	110.48	110.42	110.38	110.34	110.30	110.25	110.21	110.17	110.13	110.08	110.04
	②	110.62	110.57	110.53	110.48	110.44	110.40	110.36	110.31	110.27	110.23	110.19
	③	110.80	110.74	110.70	110.66	110.62	110.57	110.53	110.49	110.45	110.40	110.36
	④	110.96	110.91	110.87	110.82	110.78	110.74	110.70	110.65	110.61	110.57	110.53
	⑤	110.78	110.73	110.69	110.65	110.61	110.56	110.52	110.48	110.44	110.39	110.35
	⑥	110.60	110.55	110.50	110.46	110.42	110.38	110.33	110.29	110.25	110.21	110.17
	⑦	110.44	110.39	110.35	110.31	110.26	110.22	110.18	110.14	110.10	110.05	110.01

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-925

DRAWN BY M.L. | PLANS CK'D. M.S.A.

DECK GRADES

SHEET 10 OF 25

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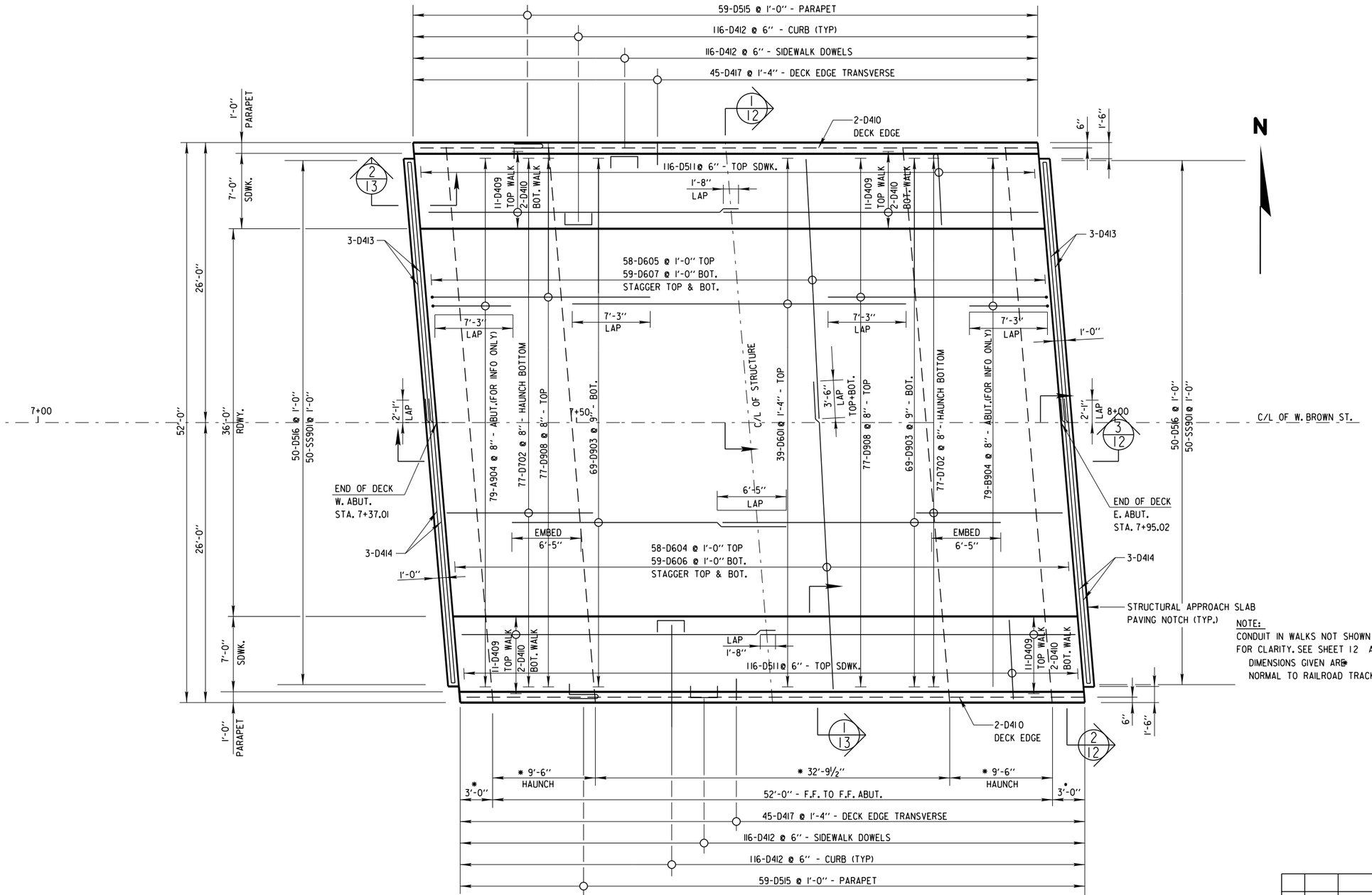
REVISED DATE: 10/4/2016 BY ML

STATE PROJECT NUMBER
2984 - 06 - 76



NOTE:
CONDUIT IN WALKS NOT SHOWN FOR CLARITY. SEE SHEET 12 AND 13
* DIMENSIONS GIVEN ARE NORMAL TO RAILROAD TRACK.

PLAN VIEW

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-925

DRAWN BY M.L. | PLANS CK'D. H.J.R. M.S.A.

DECK PLAN

SHEET 11 OF 25
45

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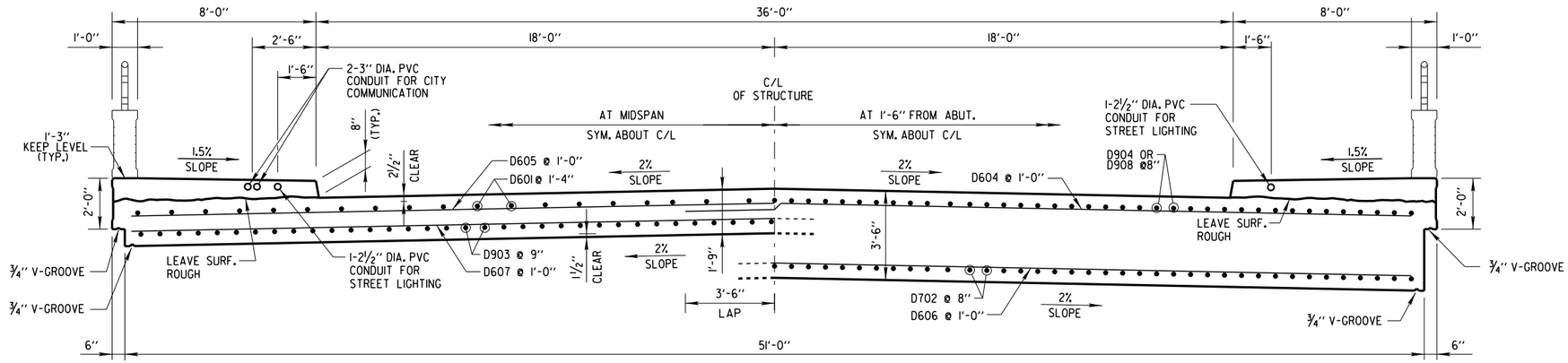
REVISED: 03/08/2017 BY G.J.R.

STATE PROJECT NUMBER

2984 - 06 - 76



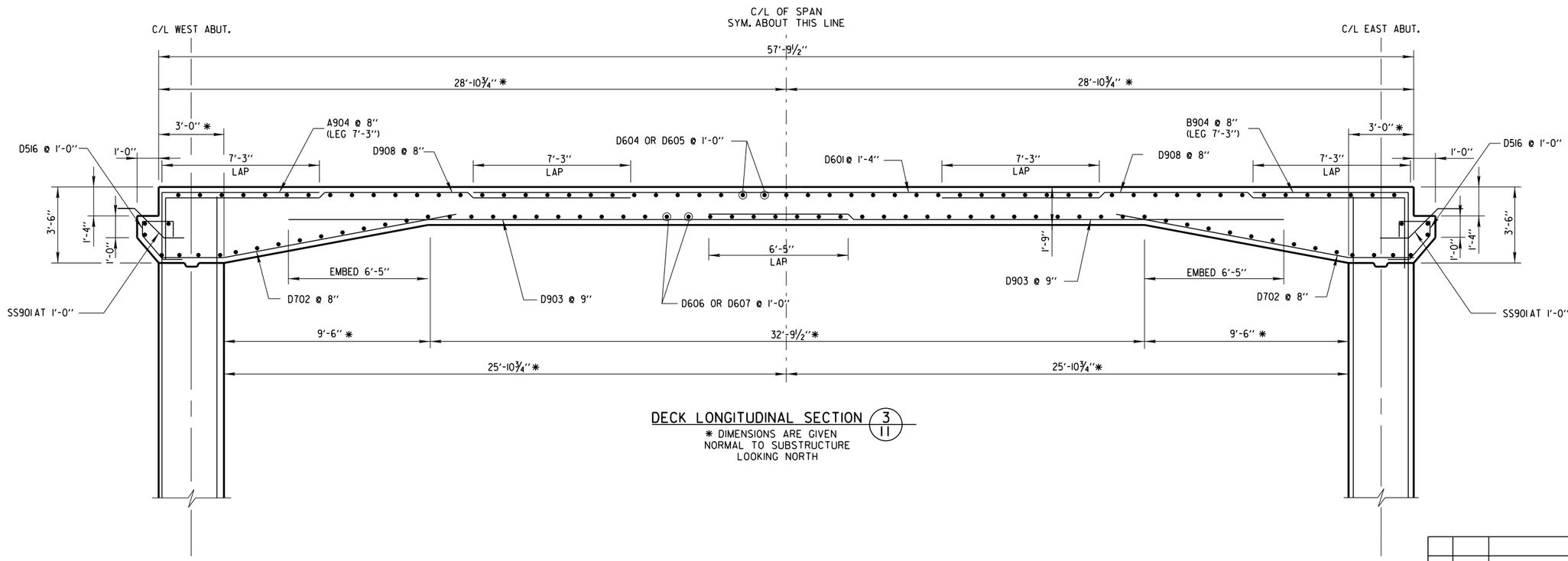
DECK CROSS SECTION 1/11

AT MIDSPAN LOOKING EAST

DECK CROSS SECTION 2/11

AT 1'-6" FROM C/L ABUTMENT LOOKING EAST

NOTE:
SIDEWALK BARS AND EDGE BEAM BARS NOT SHOWN FOR CLARITY. SEE SHEET 13



DECK LONGITUDINAL SECTION 3/11

* DIMENSIONS ARE GIVEN NORMAL TO SUBSTRUCTURE LOOKING NORTH

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-925

DRAWN BY D.L.F. | PLANS CK'D. M.S.A.

DECK CROSS SECTIONS

SHEET 12 OF 25

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REVISED: 06/21/2017 BY: DB

STATE PROJECT NUMBER

2984 - 06 - 76

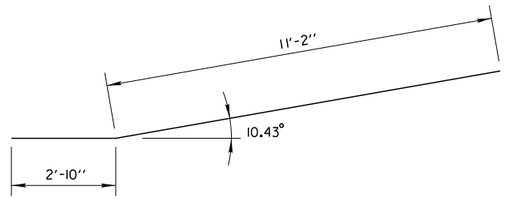
BILL OF BARS - DECK

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	LOCATION
D601	X	39	31'-0''		DECK - TOP LONGITUDINAL
D702	X	154	14'-0''	X	DECK - BOTTOM LONGITUDINAL - HAUNCH
D903	X	138	26'-2''		DECK - BOTTOM LONGITUDINAL
D604	X	58	29'-1''		DECK - TOP TRANSVERSE
D605	X	58	25'-3''		DECK - TOP TRANSVERSE
D606	X	59	29'-1''		DECK - BOTTOM TRANSVERSE
D607	X	59	25'-3''		DECK - BOTTOM TRANSVERSE
D908	X	154	23'-4''	X	HAUNCH/SLAB INTERCEPT - TOP LONGITUDINAL
D409	X	44	29'-10''		SIDEWALK - TOP LONGITUDINAL
D410	X	16	29'-10''		SIDEWALK - BOTTOM LONGITUDINAL
D511	X	232	8'-3''	X	SIDEWALK - TRANSVERSE TOP
D412	X	464	3'-9''	X	SIDEWALK - DOWELS
D413	X	6	24'-3''		CORBEL - TRANSVERSE
D414	X	6	26'-7''		CORBEL TRANSVERSE
D515	X	118	6'-9''	X	PARAPET DOWELS
D516	X	100	5'-0''	X	CORBEL
D417	X	90	4'-7''	X	DECK- EDGE TRANSVERSE

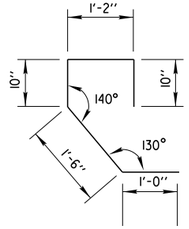
BILL OF BARS - DECK STAINLESS STEEL

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	LOCATION
SS901		100	5'-0''	X	EAST AND WEST APPROACH SLAB DOWELS

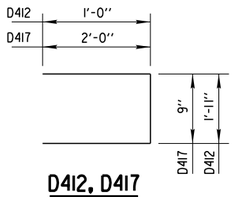
THE BID ITEM FOR SS901 SHALL BE SPECIAL PROVISION
''BAR STEEL REINFORCEMENT HS STAINLESS BRIDGES''.



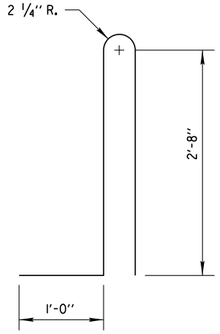
D702



D516



D412, D417



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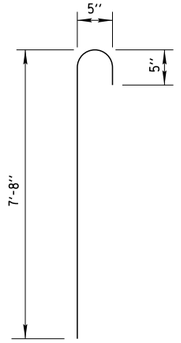
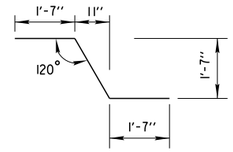
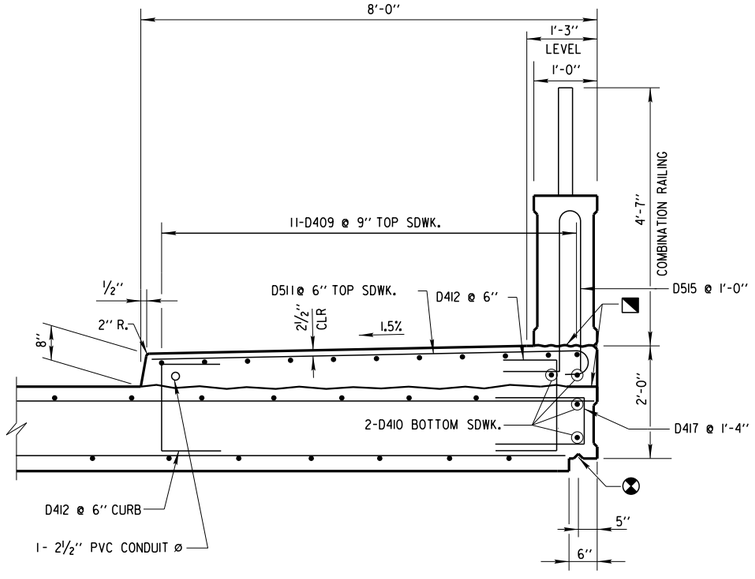


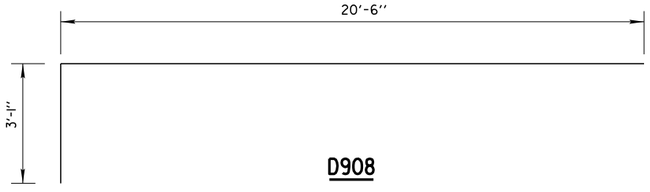
D511



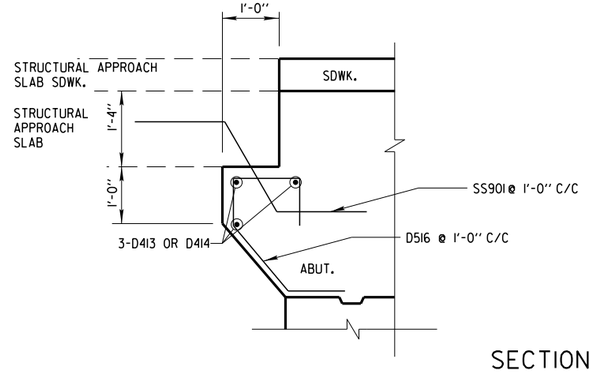
SS901



SECTION
SIDEWALK, EDGE BEAM (1/11)



D908



SECTION
STRUCTURAL APPROACH SLAB PAVING NOTCH (2/11)

NOTES:

FOR AESTHETIC TREATMENT TO PARAPET AND DECK FASCIA REFER TO SHEETS 17-21.

PARAPET REINFORCEMENT SHOWN ON SHEET 17-21.

CONST. JOINT-STRIKE OFF AS SHOWN AND LEAVE ROUGH. FOR DECK POUR. MATCH BRIDGE X-SLOPE.

3/4'' V-GROOVE REQ'D. EXTEND TO 6'' FROM F.F. OF ABUT. DIAPH.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-925

DRAWN BY D.L.F. | PLANS CK'D. H.J.R. M.S.A.

DECK DETAILS & BILL OF BARS

SHEET 13 OF 25

8

8

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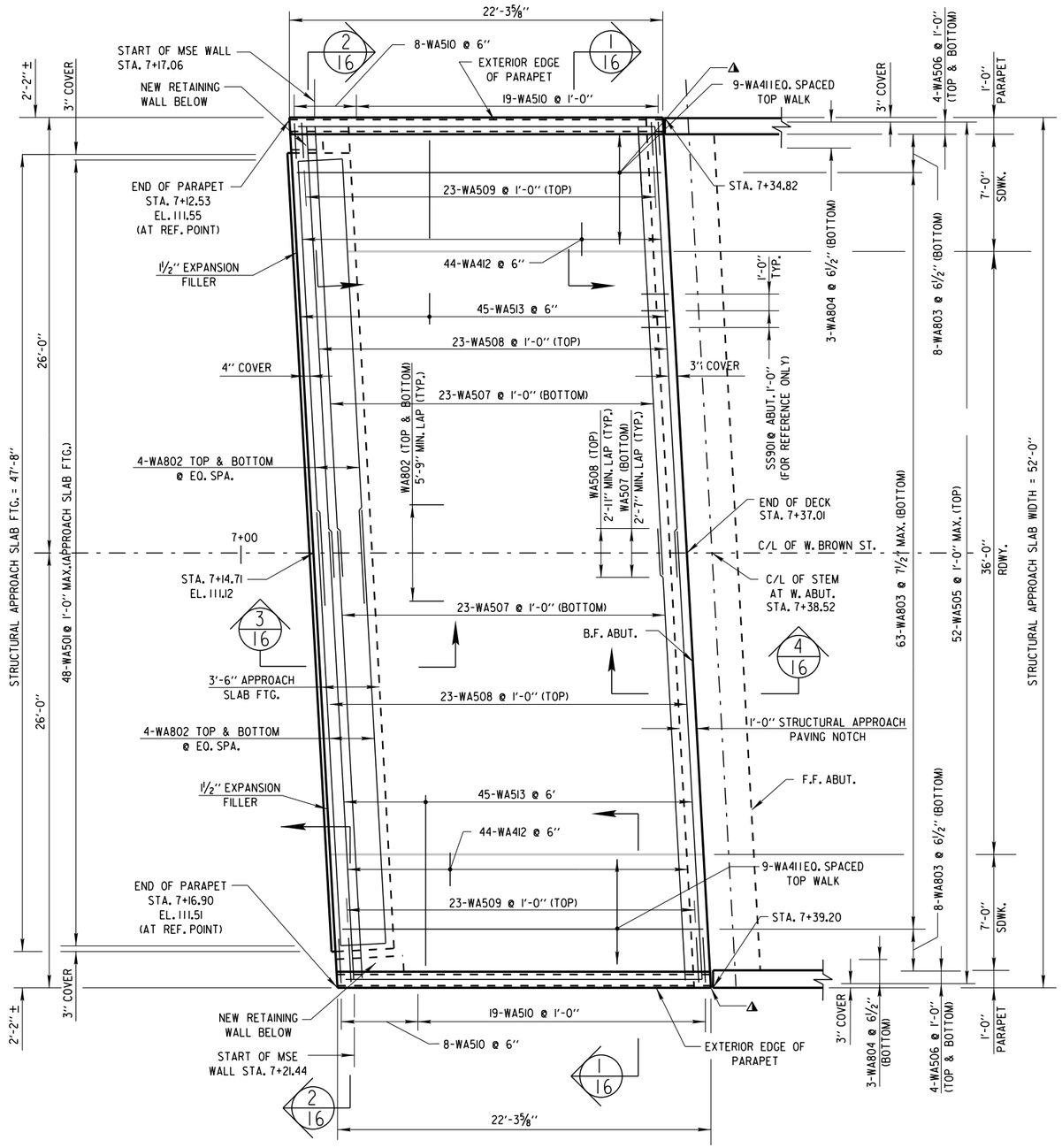
REVISED: 05-23-2017 BY: DLF

STATE PROJECT NUMBER
2984 - 06 - 76



WEST APPROACH SLAB PLAN

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NOTE:

LONGITUDINAL APPROACH SLAB REINFORCEMENT SHALL BE PLACED PARALLEL TO THE ℄ BROWN STREET (I.E., NOT NORMAL TO THE ℄ ABUTMENT WITH SKEWED STRUCTURES).

DESIGN DATA

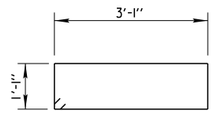
CONCRETE STRENGTH, f'c: 4,000 P.S.I.
BAR STEEL REINFORCEMENT, GRADE 60, fy: 60,000 P.S.I.
ALLOWABLE SOIL BEARING PRESSURE: 2,000 P.S.F.

BILL OF BARS - WEST STRUCTURAL APPROACH SLAB

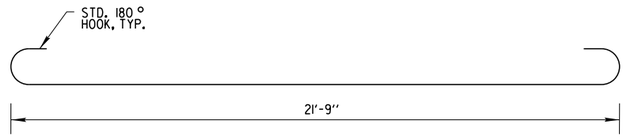
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
WA501	X	48	8'-6"	X		APPROACH SLAB FTG.-STIRRUP
WA802	X	16	26'-6"			APPROACH SLAB FTG.-TRANS. TOP & BOT
WA803	X	79	23'-7"	X		APPROACH SLAB-LONG.-BOT.
WA804	X	6	21'-9"			APPROACH SLAB-LONG.-BOT.-NW & SW WALL
WA505	X	52	21'-9"			APPROACH SLAB-LONG.-TOP
WA506	X	8	21'-9"			APPROACH SLAB-LONG.-TOP. & BOT. NW & SW WALL
WA507	X	46	27'-1"			APPROACH SLAB-TRANS.-BOT.
WA508	X	46	27'-3"			APPROACH SLAB-TRANS.-TOP
WA509	X	46	6'-5"	X		APPROACH SLAB-TRANS.-TOP-WALL
WA510	X	54	7'-6"	X		APPROACH SLAB-PARAPET DOWELS
WA411	X	18	21'-11"			APPROACH WALK-LONG-TOP-SW & NW WALK
WA412	X	88	3'-6"	X		APPROACH WALK-CURB TIE-NW & SW WALK
WA513	X	90	6'-2"			APPROACH WALK-TRANVERSE-TOP NW & SW WALK

LEGEND

△ SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE).



WA501



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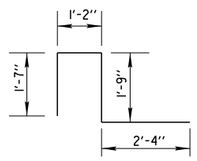

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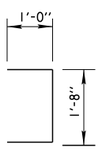

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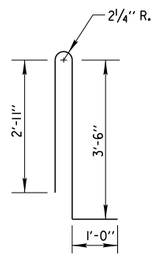

WA510

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-925

DRAWN BY D.L.F. | PLANS CK'D. A.R. H.J.R.

WEST STRUCTURAL APPROACH SLAB

SHEET 14 OF 25
48

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REVISED: 05-23-2017 BY: DLF

STATE PROJECT NUMBER
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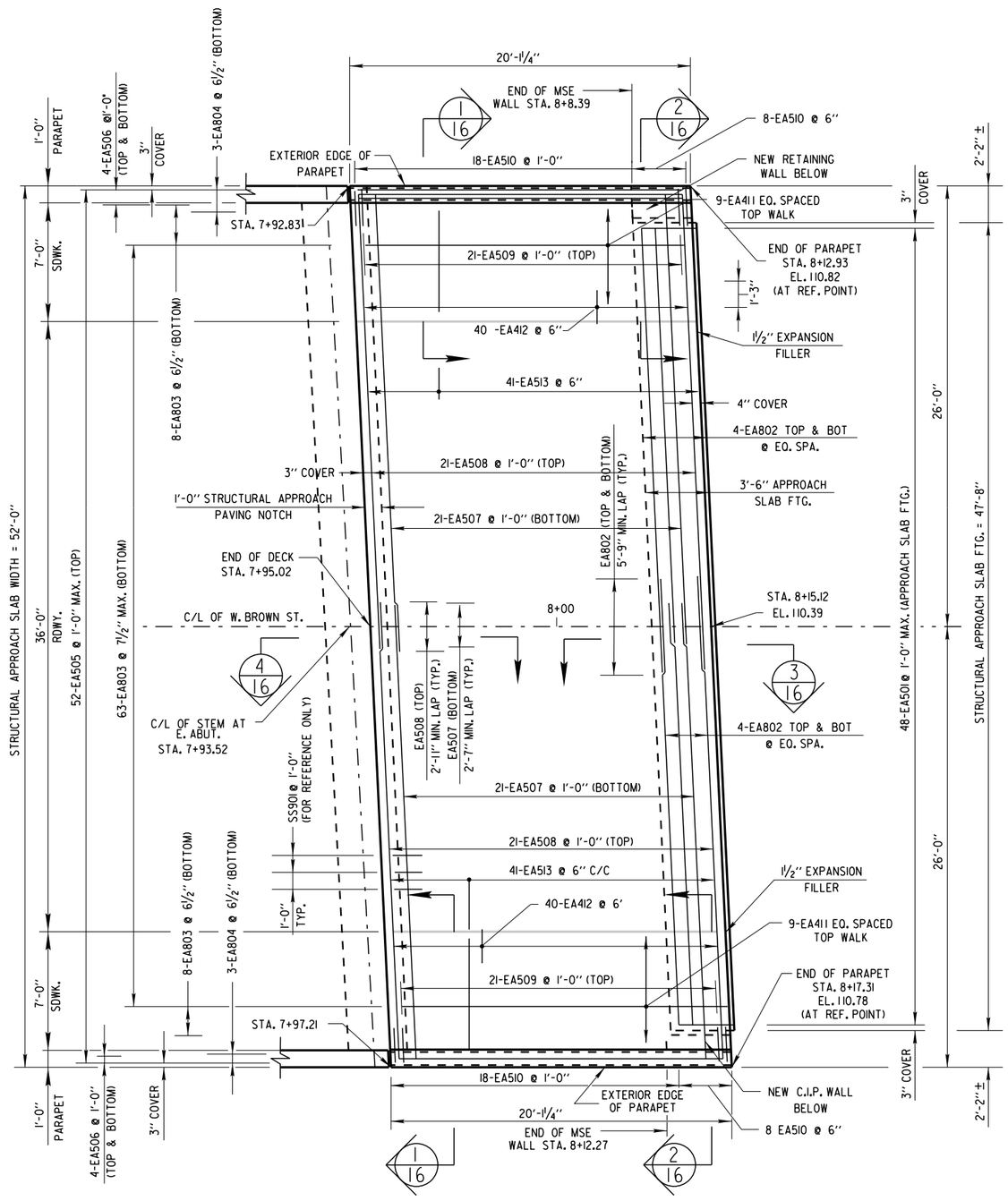


EAST APPROACH SLAB PLAN

NOTE:

LONGITUDINAL APPROACH SLAB REINFORCEMENT SHALL BE PLACED PARALLEL TO THE C/L BROWN STREET (I.E., NOT NORMAL TO THE C ABUTMENT WITH SKEWED STRUCTURES).

DESIGN DATA

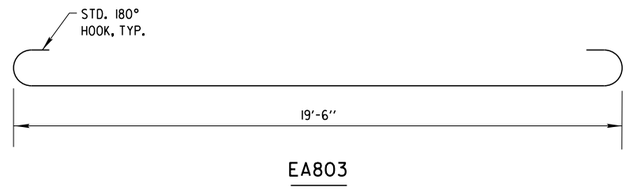
CONCRETE STRENGTH, f'c: 4,000 P.S.I.
BAR STEEL REINFORCEMENT, GRADE 60, fy: 60,000 P.S.I.
ALLOWABLE SOIL BEARING PRESSURE: 2,000 P.S.F.

BILL OF BARS-EAST STRUCTURAL APPROACH SLAB

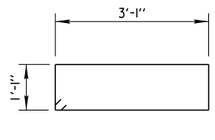
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
EA501	X	48	8'-6"	X		APPROACH SLAB FTG. - STIRRUP
EA802	X	16	26'-6"			APPROACH SLAB FTG.-TRANS. TOP & BOT.
EA803	X	79	21'-4"	X		APPROACH SLAB - LONG. - BOT.
EA804	X	6	19'-6"			APPROACH SLAB - LONG. - BOT. - NE & SE WALL
EA505	X	52	19'-6"			APPROACH SLAB - LONG. - TOP & NE
EA506	X	8	19'-6"			APPROACH SLAB - LONG.-TOP&BOT. NE WALL
EA507	X	42	27'-1"			APPROACH SLAB - TRANS. - BOT.
EA508	X	42	27'-3"			APPROACH SLAB - TRANS. - TOP
EA509	X	42	6'-5"	X		APPROACH SLAB - TRANS. - TOP - WALL
EA510	X	52	7'-6"	X		APPROACH SLAB - PARAPET DOWELS & NE
EA411	X	18	19'-9"			APPROACH WALK-LONG.-TOP. NE WALK
EA412	X	80	3'-6"	X		APPROACH WALK CURB TIE-NE & SE WALK
EA513	X	82	6'-2"			APPR. WALK TRANSVERSE TOP-NE&SE WALK

LEGEND

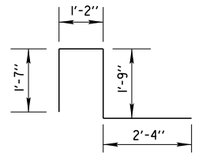
▲ SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE).



EA803



EA501



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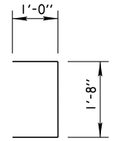
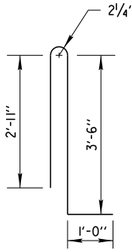


EA412



EA510

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-925

DRAWN BY D.L.F. | PLANS CK'D. A.R. H.J.R.

EAST STRUCTURAL APPROACH SLAB

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REVISED: 05-23-2017 BY DB

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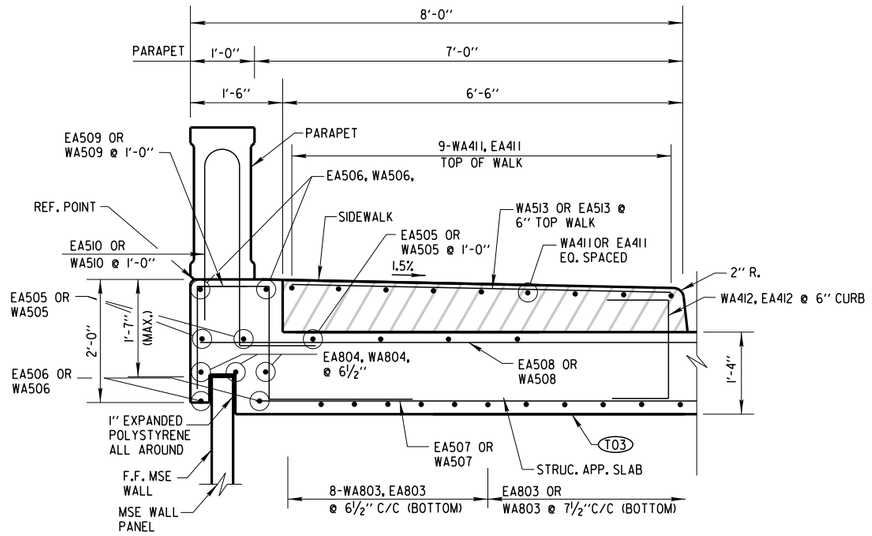
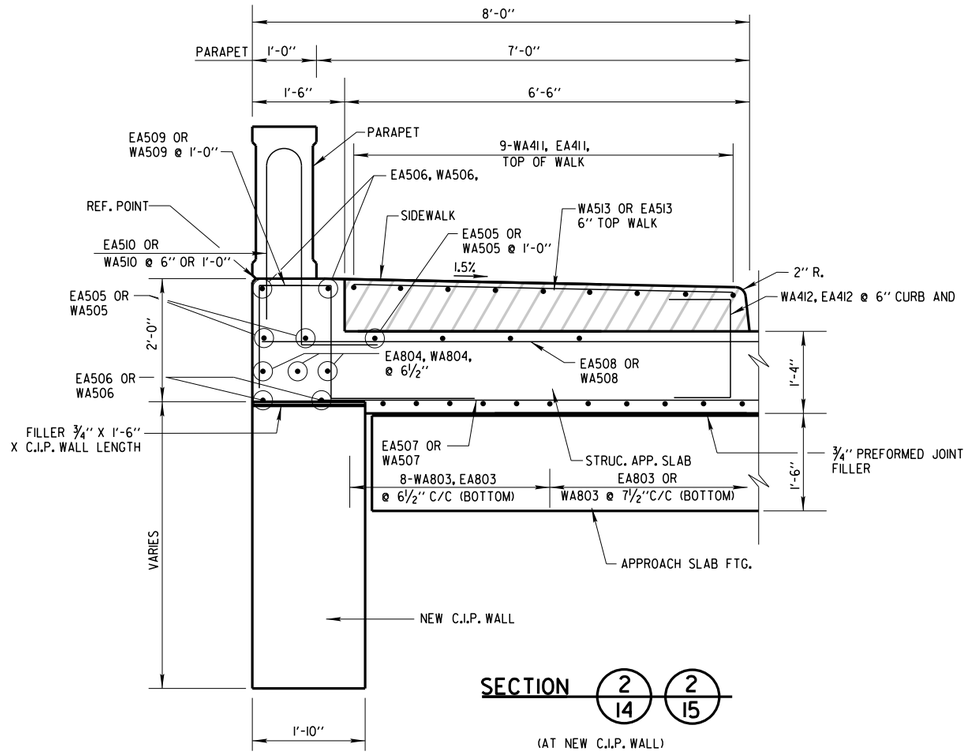


SECTION 1/14 1/15

(AT MSE WINGWALLS)



SECTION 2/14 2/15

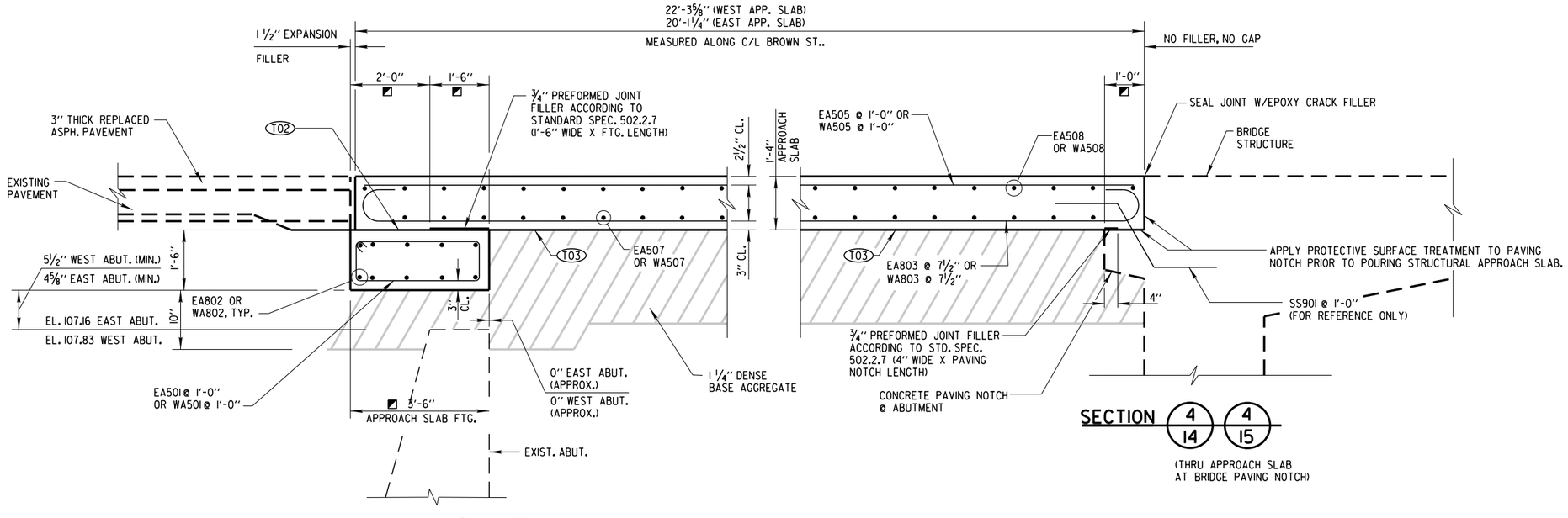
(AT NEW C.I.P. WALL)

LEGEND

(T02) STEEL TROWEL TOP SURFACE OF FOOTING AND PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE TOP OF FOOTING.

(T03) PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) POLYETHYLENE SHEETS OVER THE ENTIRE TOP OF SUBGRADE BENEATH SLAB.

◪ MEASURED NORMAL TO ABUTMENT



SECTION 3/14 3/15

(THRU APPROACH SLAB AT FOOTING)

SECTION 4/14 4/15

(THRU APPROACH SLAB AT BRIDGE PAVING NOTCH)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-925

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STRUCTURAL APPROACH SLAB DETAILS

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REVISED: 05-17-2017 BY: DLF

STATE PROJECT NUMBER

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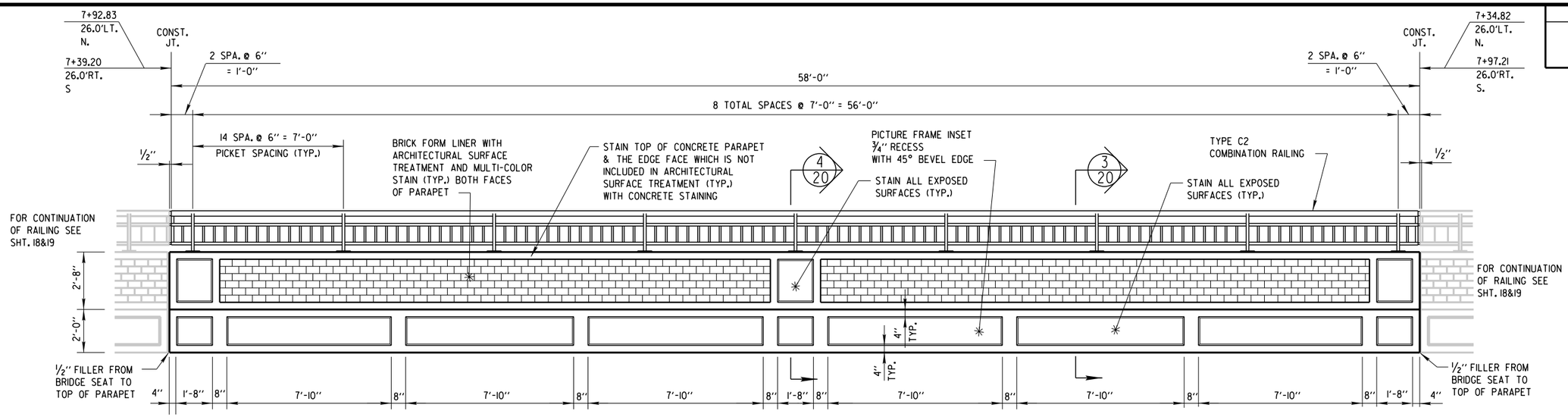
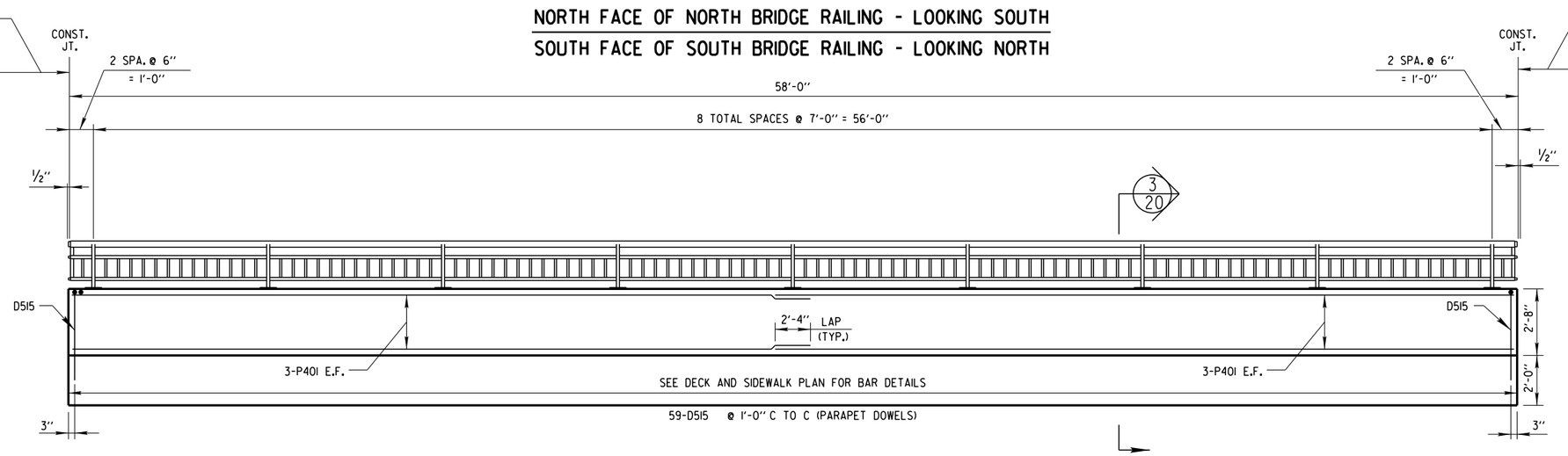
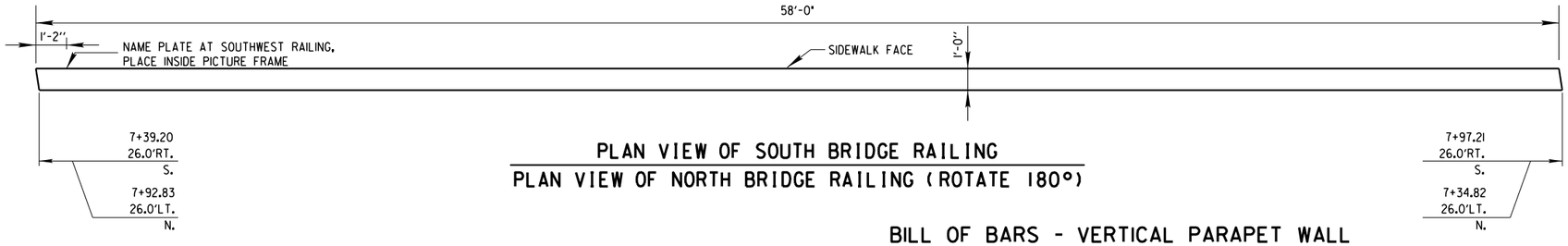


NORTH FACE OF NORTH BRIDGE RAILING - LOOKING SOUTH
SOUTH FACE OF SOUTH BRIDGE RAILING - LOOKING NORTH



NORTH FACE OF NORTH BRIDGE RAILING - LOOKING SOUTH
SOUTH FACE OF SOUTH BRIDGE RAILING - LOOKING NORTH
(REBAR DETAILS)



PLAN VIEW OF SOUTH BRIDGE RAILING
PLAN VIEW OF NORTH BRIDGE RAILING (ROTATE 180°)

BILL OF BARS - VERTICAL PARAPET WALL

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
P401	X	24	30'-0"			PARAPET WALL - HORIZ.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-925

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RAILING PLAN & ELEVATIONS

SHEET 17 OF 25

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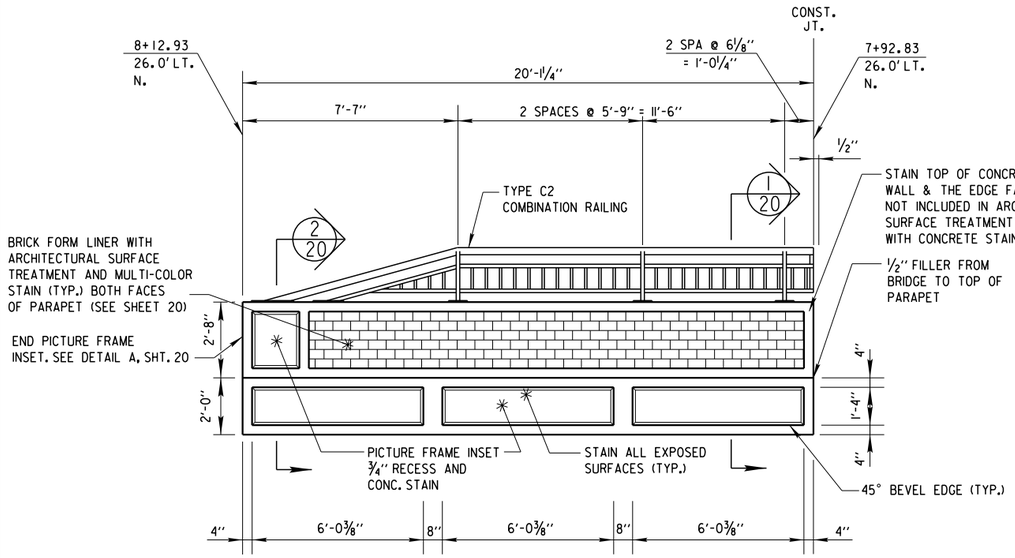
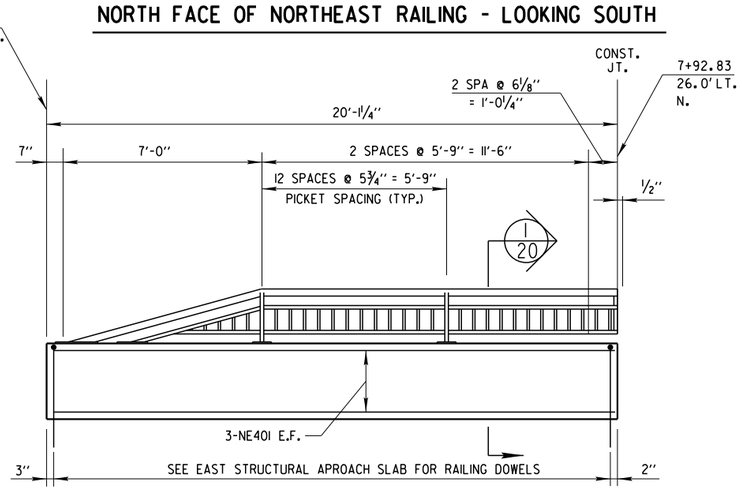
BILL OF BARS PARAPET

BAR MARK	COAT	NO. REQ'D.	LENGTH	BEND	BAR SERIES	LOCATION
NE401	×	6	19'-9"			NE PARAPET WALL-HORIZONTAL

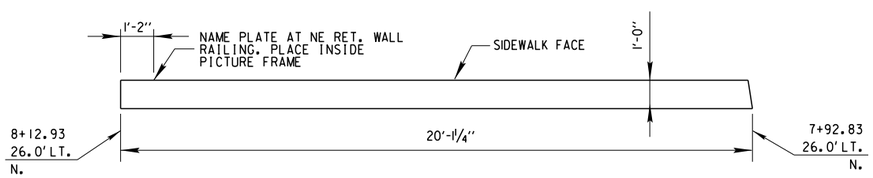
BAR MARK	COAT	NO. REQ'D.	LENGTH	BEND	BAR SERIES	LOCATION
NW401	×	6	21'-11"			NW PARAPET WALL-HORIZONTAL



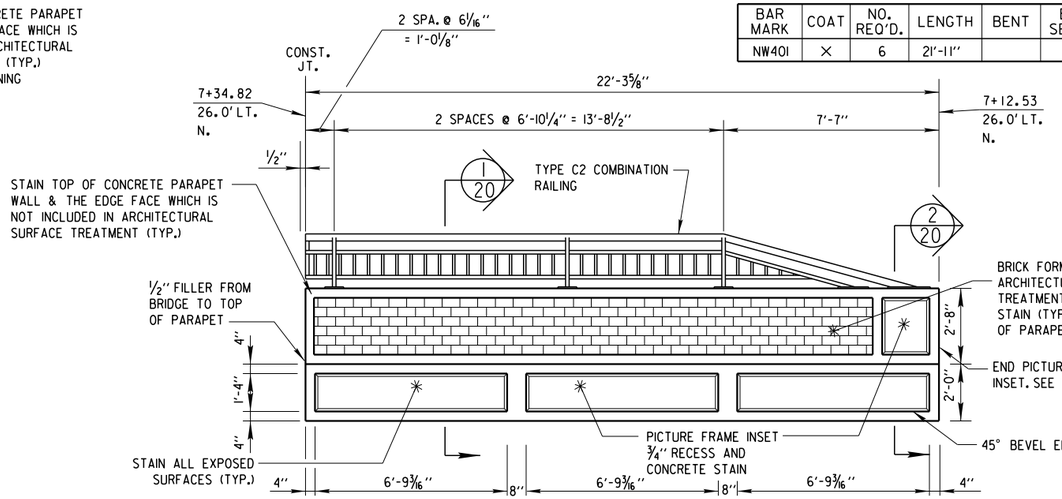
NORTH FACE OF NORTHEAST RAILING - LOOKING SOUTH



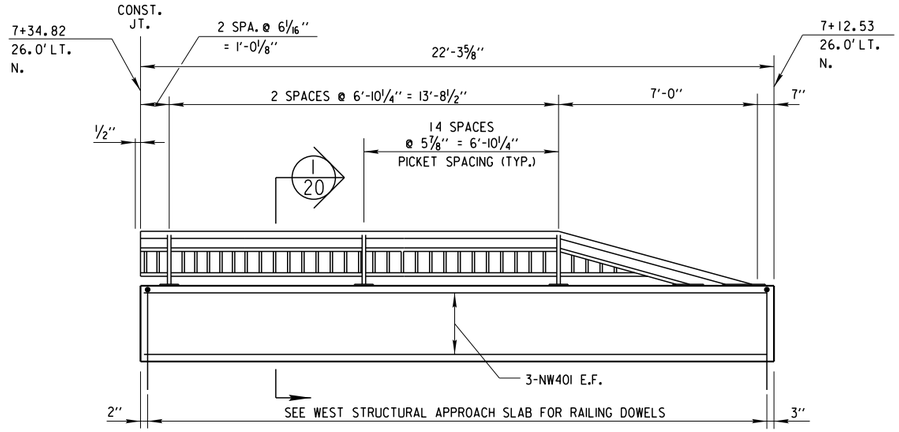
NORTH FACE OF NORTHEAST RAILING - LOOKING SOUTH (REBAR DETAILS)



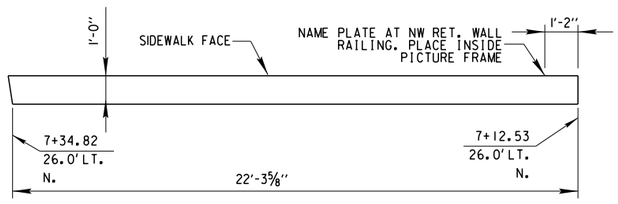
PLAN VIEW OF NORTHEAST RAILING



NORTH FACE OF NORTHWEST RAILING - LOOKING SOUTH



NORTH FACE OF NORTHWEST RAILING - LOOKING SOUTH (REBAR DETAILS)



PLAN VIEW OF NORTHWEST RAILING

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-925

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NORTH RAILING PLAN, ELEVATION & DETAILS

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REVISED: 05-18-2017 BY: DLF

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STATE PROJECT NUMBER

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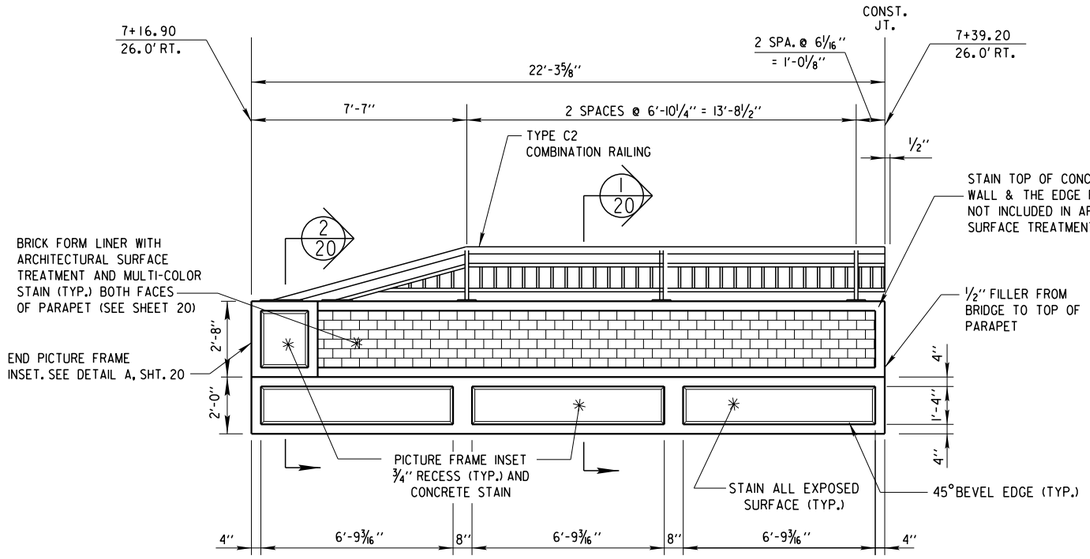
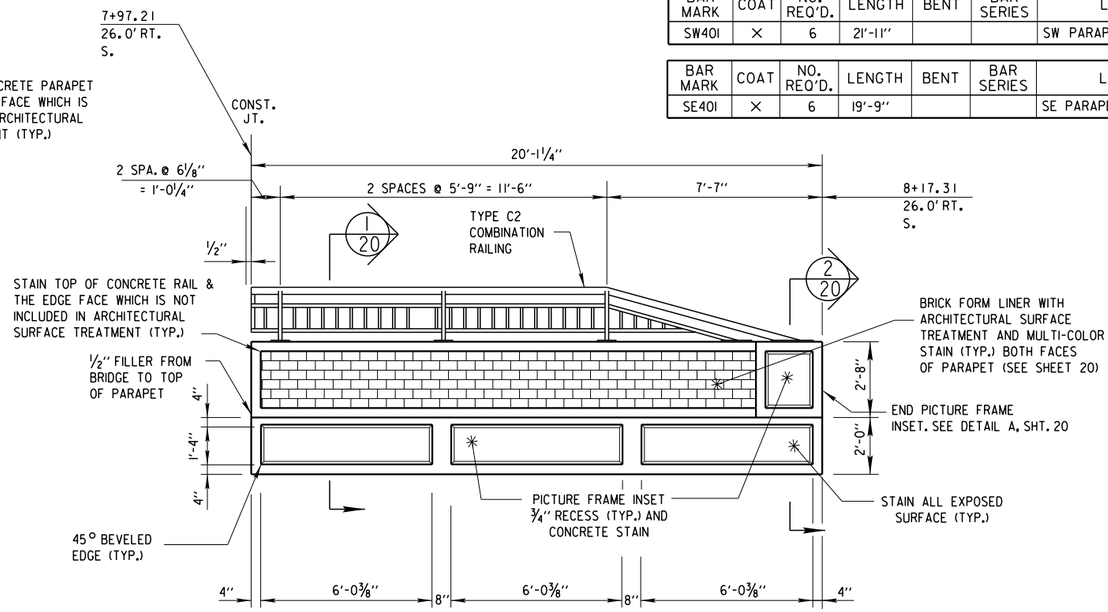


SOUTH FACE OF SOUTHWEST RAILING - LOOKING NORTH

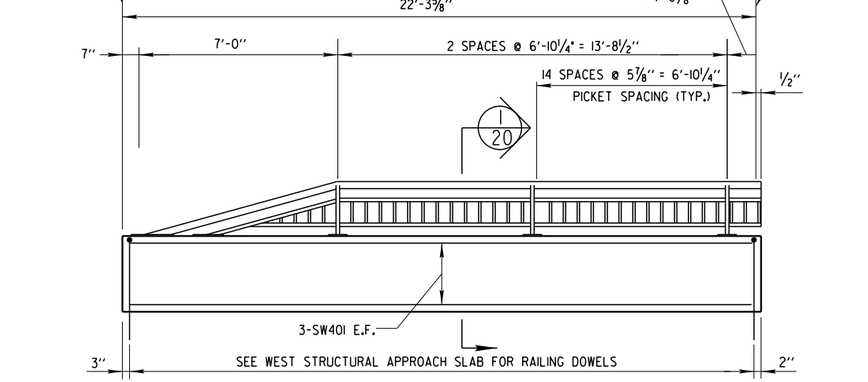
BILL OF BARS - PARAPET

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
SW401	×	6	21'-11"			SW PARAPET WALL-HORIZONTAL

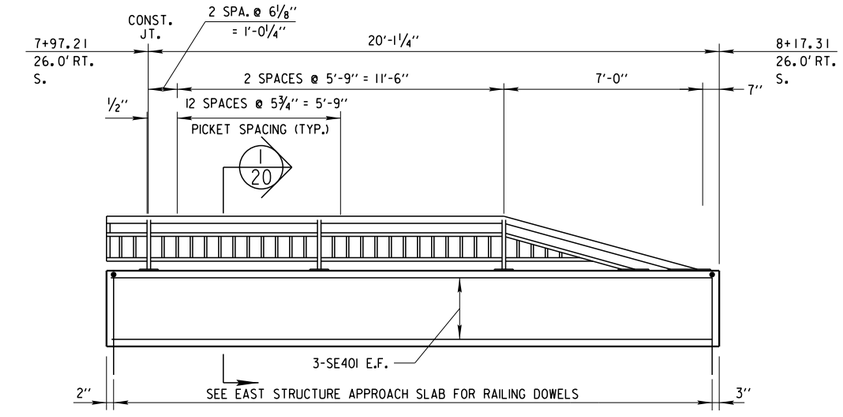
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
SE401	×	6	19'-9"			SE PARAPET WALL-HORIZONTAL



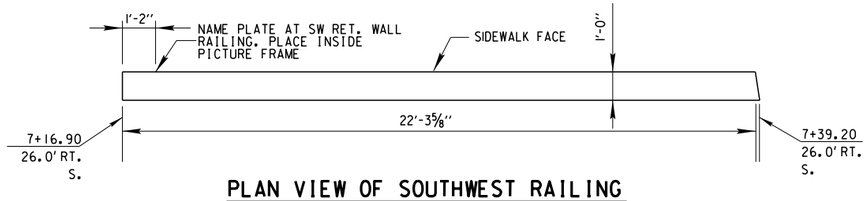
SOUTH FACE OF SOUTHEAST RAILING - LOOKING NORTH



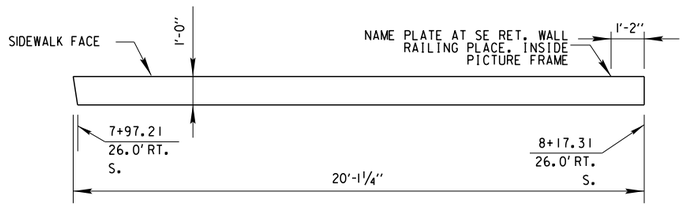
SOUTH FACE OF SOUTHWEST RAILING - LOOKING NORTH (REBAR DETAILS)



SOUTH FACE OF SOUTHEAST RAILING - LOOKING NORTH (REBAR DETAILS)



PLAN VIEW OF SOUTHWEST RAILING



PLAN VIEW OF SOUTHEAST RAILING

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-925

DRAWN BY G.G. | PLANS CK'D. M.S.A. H.J.R.

SOUTH RAILING PLAN, ELEVATION & DETAILS

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REVISED: 05-26-2017 BY: DB

STATE PROJECT NUMBER

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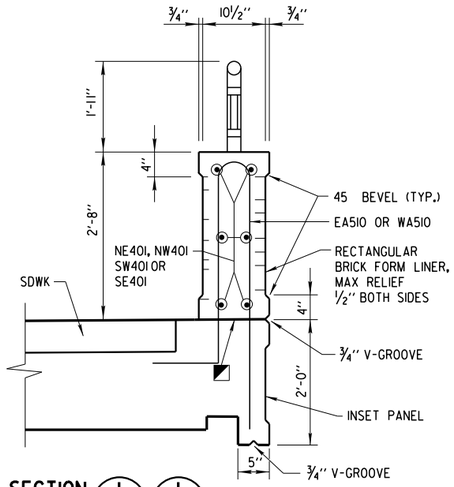
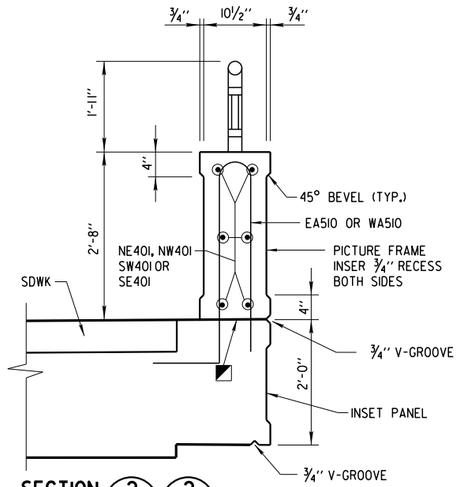
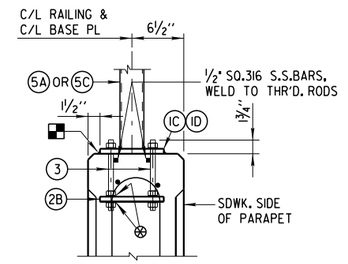


SECTION 1/18 1/19

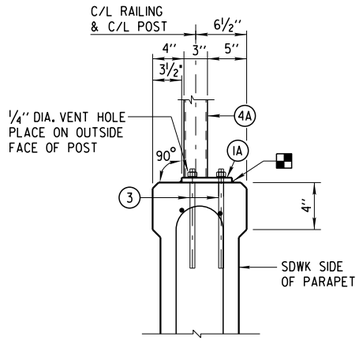


SECTION 2/18 2/19



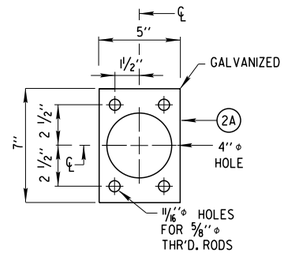
ANCHORAGE FOR END RAIL

NOTE: ANCHOR PLATES NOT REQ'D. WHEN TYPE "S" ANCHORS ARE USED



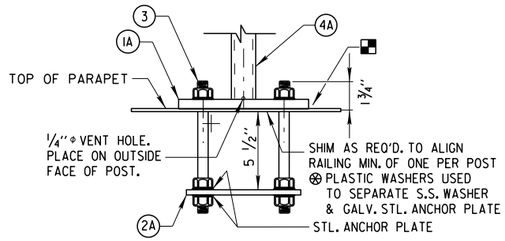
SECTION THRU PARAPET ON BRIDGE AND RETAINING WALL

NOTE-TYPE S ANCHORS SHOWN



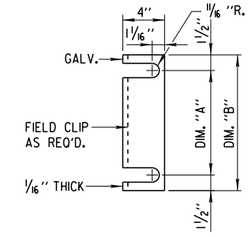
ANCHOR PLATE

FOR 3"x1 1/2"x3/16" POSTS (4A)



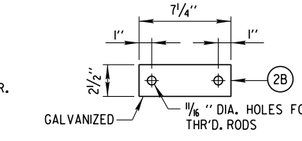
ANCHORAGE FOR RAIL POSTS

NOTE: ANCHOR PLATE NOT REQUIRED WHEN TYPE S ANCHORS ARE USED



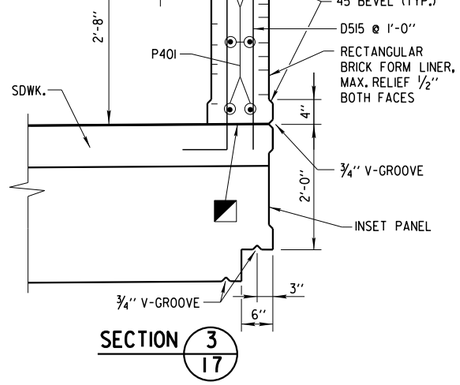
END RAIL SHIM DETAIL

8" X 1'-1" BASE PLATE (1C) DIM. "A" = 10", DIM. "B" = 1'-1", DIM. "C" = 6 1/2"
8" X 1'-6" BASE PLATE (1D) DIM. "A" = 1'-3", DIM. "B" = 1'-6", DIM. "C" = 9"
(2 SETS PER POST)

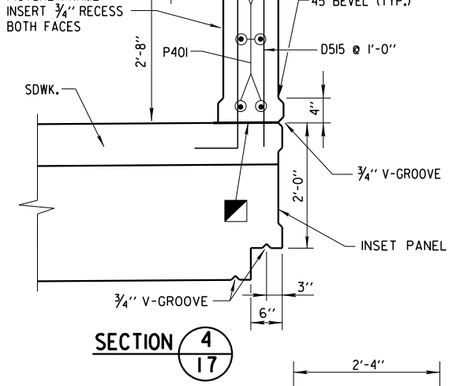


END RAIL ANCHOR PLATE

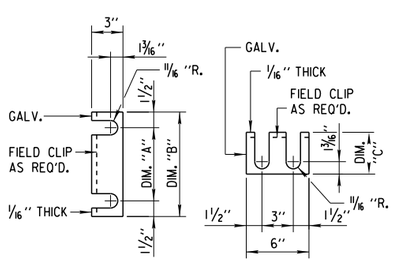
FOR END RAIL BASE PLATES (1C) (1D) 2 REQ'D PER END RAIL BASE PL



SECTION 3/17

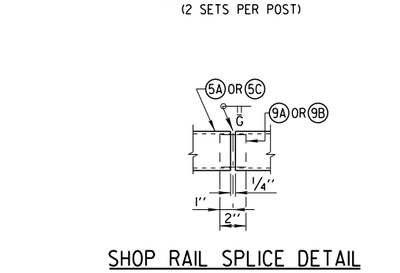


SECTION 4/17



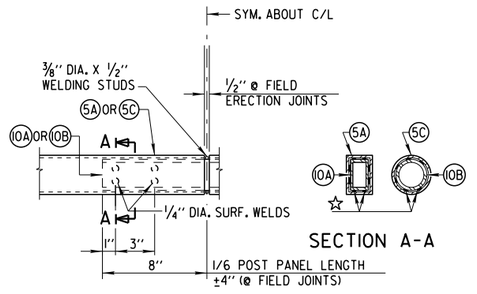
RAIL POST SHIM DETAIL

6" X 8" BASE PL (1A) DIM. "A" = 5", DIM. "B" = 8", DIM. "C" = 4".
(2 SETS PER POST)



SHOP RAIL SPLICE DETAIL

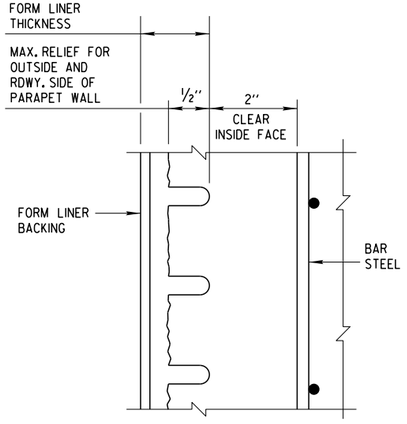
(LOCATION MUST BE SHOWN ON SHOP DRAWINGS)



SECTION A-A

FIELD ERECTION JOINT DETAIL

☆ MIN. 5/8" FLAT SURF. DIA. PUNCHINGS OR STUDS MAY BE USED AS AN ALT.

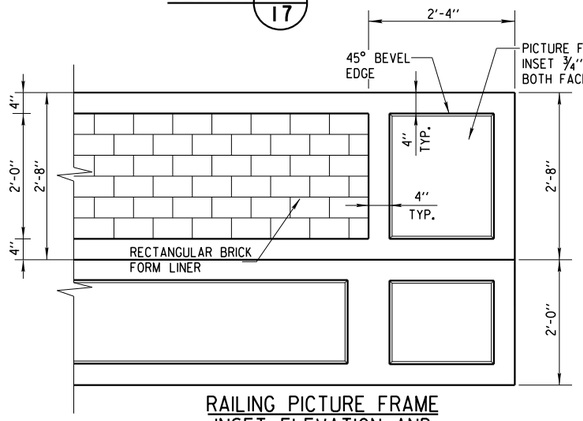


SECTION THRU FORM LINER

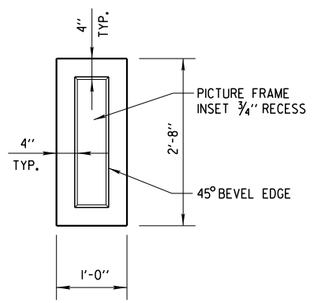
■ HORIZ. CONST. JOINT-STRIKE OFF AS SHOWN & LEAVE ROUGH.

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

SEE SHEET 21 FOR LEGEND AND RAILING NOTES



RAILING PICTURE FRAME INSET ELEVATION AND BRICK STONE FORM LINER



DETAIL A END RAILING PICTURE FRAME INSET ELEVATION

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-925

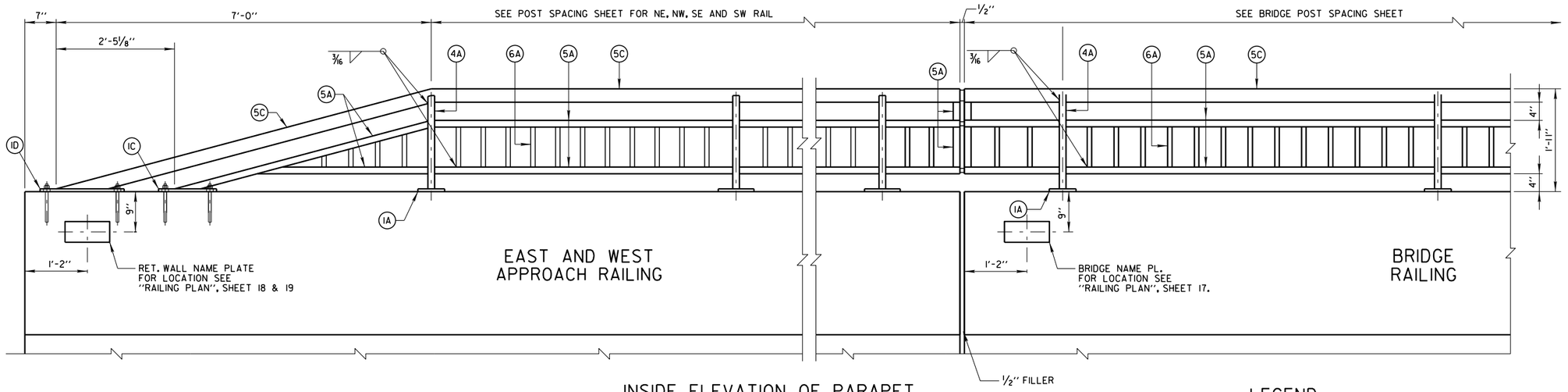
DRAWN BY	G.G.	PLANS CK'D.	M.S.A. H.J.R.

PARAPET DETAILS

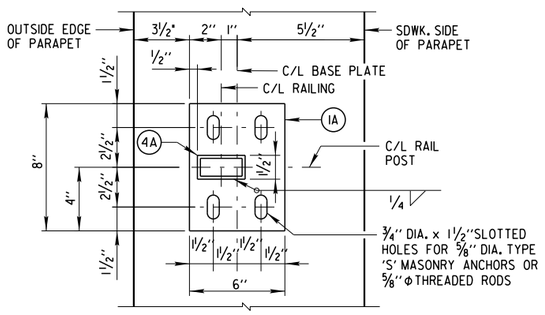
SHEET 20 OF 25
54

8

8

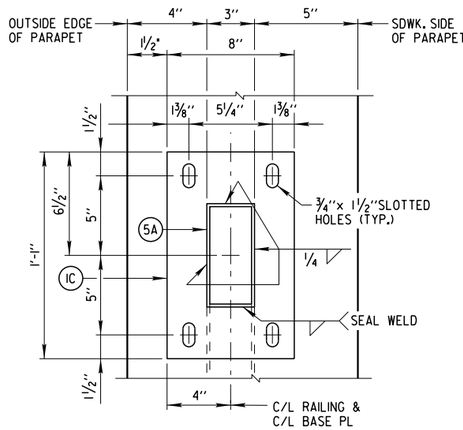


INSIDE ELEVATION OF PARAPET



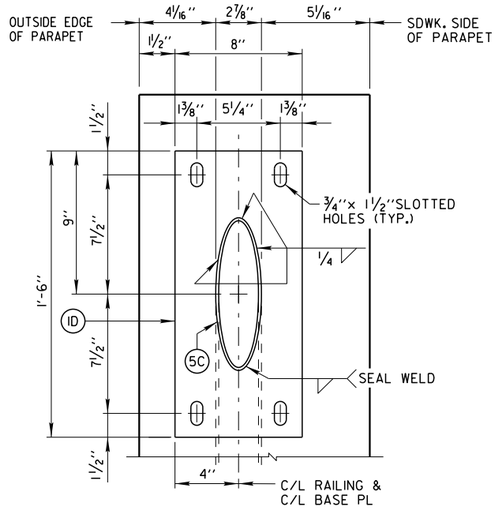
TYPICAL RAIL POST BASE PLATE

FOR 3" X 1 1/2" X 3/16" POSTS (4A)



END RAIL BASE PLATE

FOR 3"x1 1/2"x3/16" POSTS (5A)



END RAIL BASE PLATE

FOR 2 1/2" DIA. STD. PIPE RAIL (5C)

LEGEND

(1A) PLATE 5/8" x 6" x 8" WITH 3/4" x 1 1/2" SLOTTED HOLES.

(1C) PLATE 5/8" x 8" x 1'-1" WITH 3/4" x 1 1/2" SLOTTED HOLES.

(1D) PLATE 5/8" x 8" x 1'-6" WITH 3/4" x 1 1/2" SLOTTED HOLES.

(2A) 1/4" x 5" x 7" ANCHOR PLATE WITH 11/16" DIA. HOLES FOR THR'D RODS NO. 3

(2B) 1/4" x 2 1/2" x 7 1/4" ANCHOR PLATE WITH 11/16" DIA. HOLES FOR THR'D RODS NO. 3.

(3) 5/8" DIA. x 9" LONG. TYPE 316 STAINLESS STEEL THREADED RODS (MIN. TENSILE STRENGTH = 70 ksi) WITH NUT AND WASHERS OF SAME ALLOY GROUP. (ALTERNATE RAIL POST ANCHORAGE: 4 EQUIVALENT STAINLESS STEEL CONCRETE MASONRY ANCHORS TYPE S 5/8-IN. EMBED 7" IN CONCRETE FOR RAIL POSTS. FOR RAIL POSTS EMBED 5" IN CONCRETE FOR END RAILS)

(4A) STRUCTURAL TUBING 3" x 1 1/2" x 3/16". PLACE VERTICAL. WELD TO NO. 1 & NO. 5.

(5A) STRUCTURAL TUBING 3" x 1 1/2" x 3/16" RAILS. WELD TO NO. 1 & NO. 4. INSIDE OF TUBE TO BE PAINTED AT ALL FIELD ERECTION & EXPANSION JOINTS.

(5C) STRUCTURAL TUBING 2 1/2" DIA. (STANDARD SIZE) RAIL (2.875" O.D.). WELD TO NO. 1 & NO. 4. INSIDE OF TUBE TO BE PAINTED AT ALL FIELD ERECTION & EXPANSION JOINTS.

(6A) BAR 1" x 1" PICKETS. WELD TO NO. 5 (SPACE AT 6" MAX. C/L TO C/L SPACING). PLACE VERTICAL.

(9A) RECTANGULAR SLEEVE FABRICATED FROM 3/16" PLATES. PROVIDE "SLIDING FIT".

(9B) CIRCULAR SLEEVE FABRICATED FROM STRUCTURAL TUBING 2" DIA. (STANDARD SIZE) (2.375" O.D.)

(10A) RECTANGULAR SLEEVE FABRICATED FROM 3/16" PLATES. (1'-4" AT FIELD ERECTION JOINTS)

(10B) CIRCULAR SLEEVE FABRICATED FROM STRUCTURAL TUBING 2" DIA. (STANDARD SIZE) (2.375" O.D.) (1'-4" AT FIELD ERECTION JOINTS)

RAILING NOTES

BID ITEM SHALL BE "RAILING STEEL TYPE C2 B-40-925", WHICH SHALL INCLUDE ALL WORK SHOWN ON THIS SHEET.

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

NO. 1, 2, 6, 9 AND 10 SHALL CONFORM TO ASTM A709 GRADE 36. STRUCTURAL TUBING SHALL CONFORM TO ASTM A500 GRADE B (NO. 4 & NO. 5).

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

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

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

ALL JOINTS AND RECESSES IN CONCRETE PARAPET ARE TO BE VERTICAL.

ALL MATERIAL (EXCEPT NO. 3) SHALL BE GALVANIZED AFTER FABRICATION. PRIOR TO GALVANIZING THE STEEL RAILING SHALL BE GIVEN A NO. 6 BLAST CLEANING PER SSPC SPECIFICATIONS. PAINT OVER GALVANIZING WITH AN APPROVED TIE COAT AND TOP AS SPECIFIED IN THE "BRIDGE SPECIAL PROVISIONS". THE RAILING SHALL BE PAINTED FEDERAL COLOR NO. 27038.

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

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

TOUCH-UP PAINTING TO BE DONE AT COMPLETION OF STEEL RAILING INSTALLATION TO THE SATISFACTION OF THE ENGINEER AT NO EXTRA COST.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-925

DRAWN BY	D.B.	PLANS CK'D.	M.S.A. H.J.R.

STEEL RAILING DETAILS

SHEET 21 OF 25

W:\STR\B0934\PLANS\22-NE CLOSURE WALL.DGN

REVISED: 06/20/2017 BY DB

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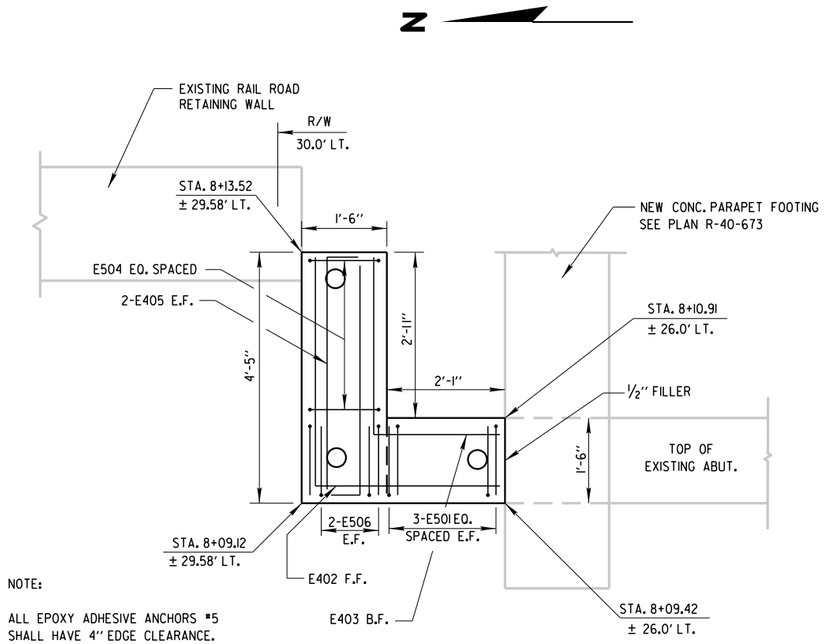


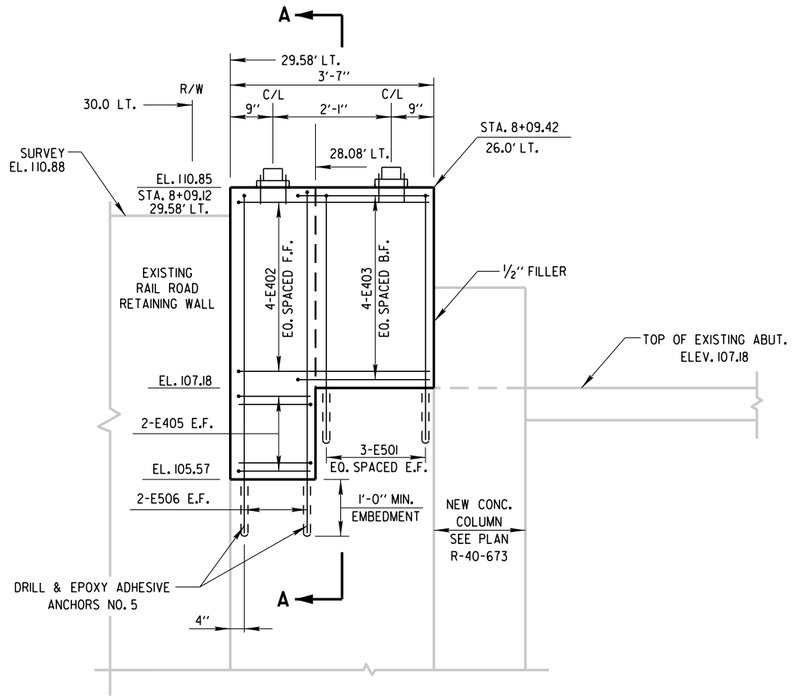
NOTE:

ALL EPOXY ADHESIVE ANCHORS #5 SHALL HAVE 4" EDGE CLEARANCE.

6' CHAIN LINK FENC TO BE INSTALLED ON CLOSURE WALL.

FOR CHAIN LINK FENCE POST BASE DETAIL SEE SE CLOSURE WALL PLAN.

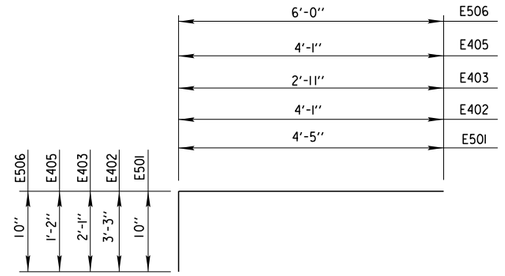
PLAN VIEW NE CLOSURE WALL



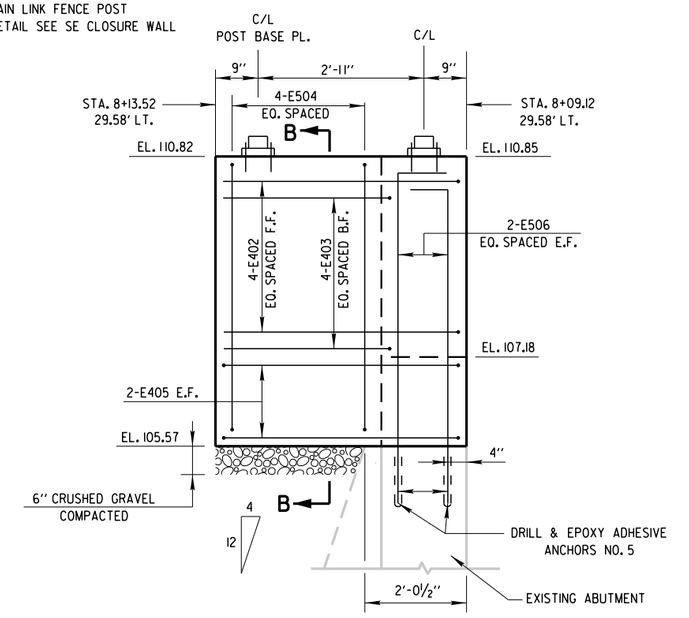
WEST ELEVATION (LOOKING EAST)

BILL OF BARS - NE CLOSURE WALL

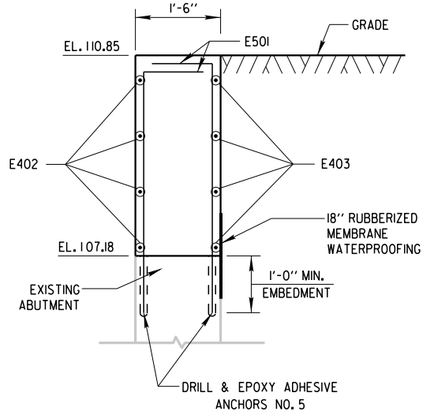
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	LOCATION
E501	X	6	5'-1"	X	VERTICAL DOWEL
E402	X	4	7'-3"	X	HORIZONTAL F.F.
E403	X	4	4'-11"	X	HORIZONTAL B.F.
E504	X	4	12'-2"	X	STIRRUPS
E405	X	4	5'-2"	X	HORIZONTAL
E506	X	4	6'-8"	X	VERTICAL DOWEL



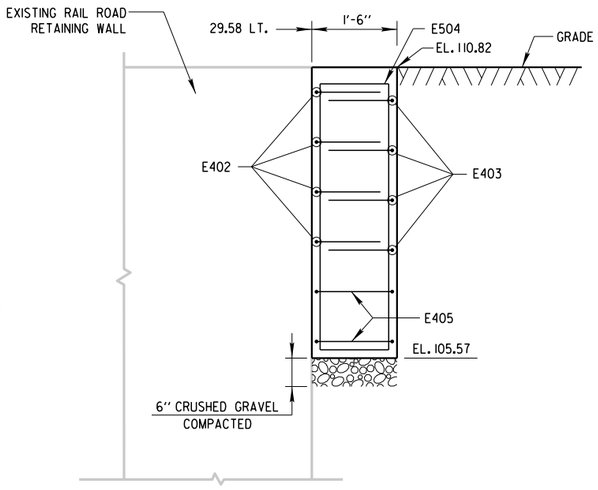
E501, E402, E403, E405, E506



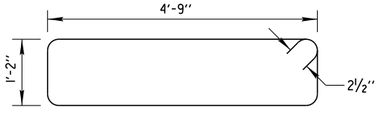
NORTH ELEVATION (LOOKING SOUTH)



SECTION A-A



SECTION B-B



E504

KEY:
E.F. = EACH FACE
F.F. = FRONT FACE
B.F. = BACK FACE
○ = BASE PLATE FOR CHAIN LINK FENCE POST

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-925

DRAWN BY D.B. | PLANS CK'D. J.P.H.

NE CLOSURE WALL

SHEET 22 OF 25

8

8

W:\STR\B0934\PLANS\23_NW CLOSURE WALL.DGN

REVISED: 06/20/2017 BY DB

STATE PROJECT NUMBER

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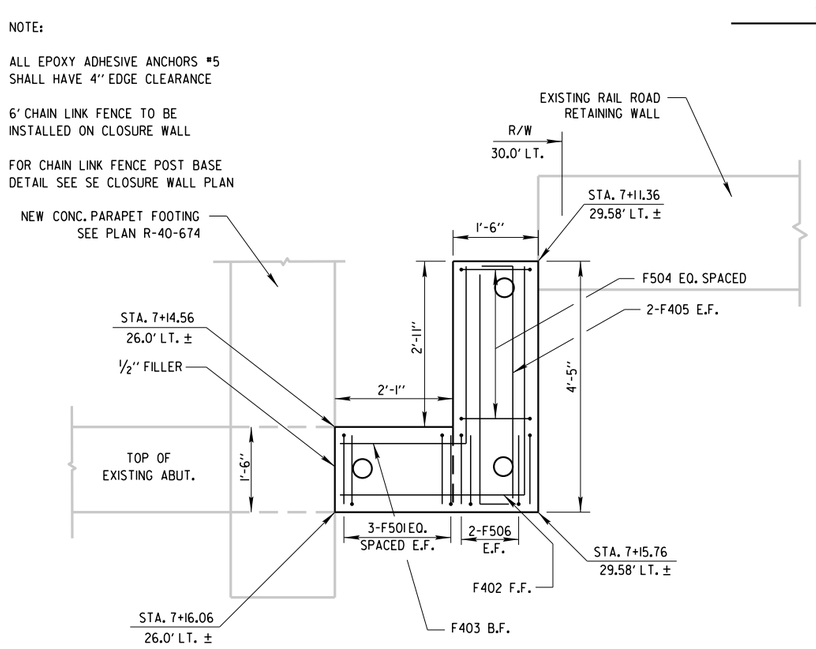
NOTE:

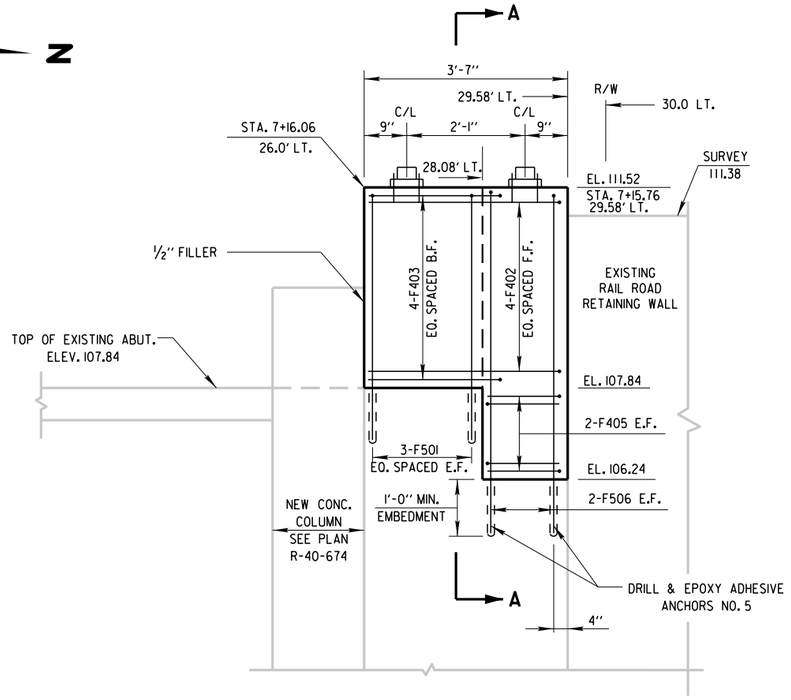
ALL EPOXY ADHESIVE ANCHORS #5 SHALL HAVE 4" EDGE CLEARANCE

6' CHAIN LINK FENCE TO BE INSTALLED ON CLOSURE WALL

FOR CHAIN LINK FENCE POST BASE DETAIL SEE SE CLOSURE WALL PLAN



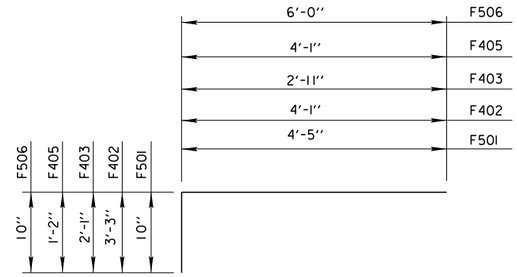
PLAN VIEW NW CLOSURE WALL



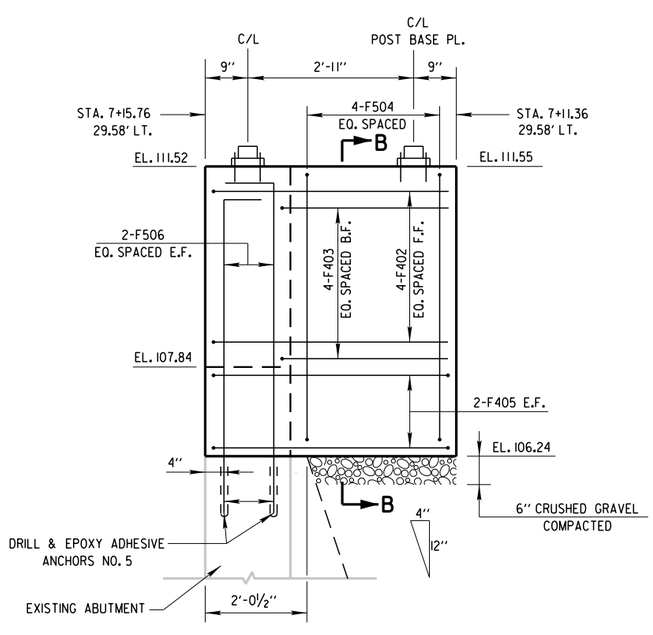
EAST ELEVATION (LOOKING WEST)

BILL OF BARS - NW CLOSURE WALL

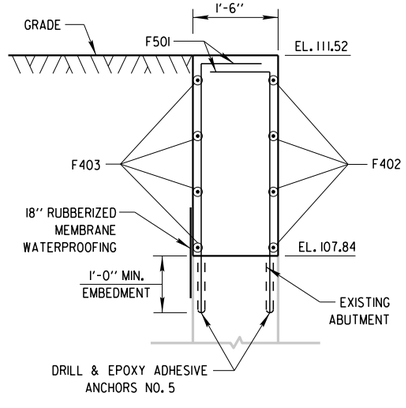
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	LOCATION
F501	X	6	5'-1"	X	VERTICAL DOWEL
F402	X	4	7'-3"	X	HORIZONTAL F.F.
F403	X	4	4'-11"	X	HORIZONTAL B.F.
F504	X	4	12'-2"	X	STIRRUPS
F405	X	4	5'-2"	X	HORIZONTAL
F506	X	4	6'-8"	X	VERTICAL DOWEL



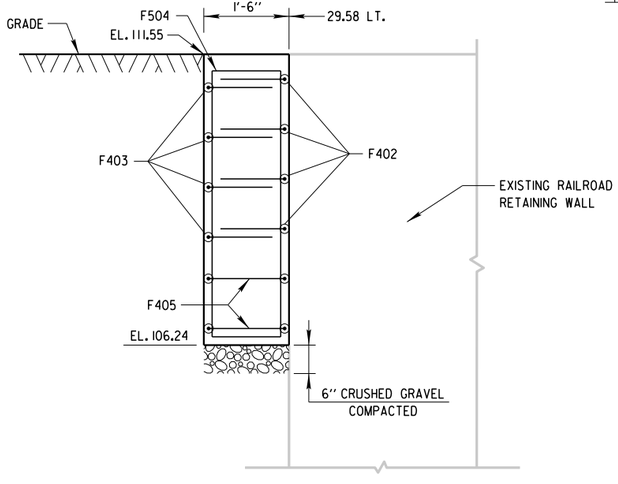
F501, F402, F403, F405, F506



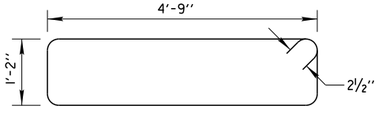
NORTH ELEVATION (LOOKING SOUTH)



SECTION A-A



SECTION B-B



F504

KEY:
E.F. = EACH FACE
F.F. = FRONT FACE
B.F. = BACK FACE

○ = BASE PLATE FOR CHAIN LINK FENCE POST

KEY:
E.F. = EACH FACE
F.F. = FRONT FACE
B.F. = BACK FACE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-925

DRAWN BY D.B. | PLANS CK'D. H.J.R.

NW CLOSURE WALL

SHEET 23 OF 25

57

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8

W:\STR\B0934\PLANS\24-SW CLOSURE WALL.DGN

REVISED: 06/21/2017 BY DB

STATE PROJECT NUMBER

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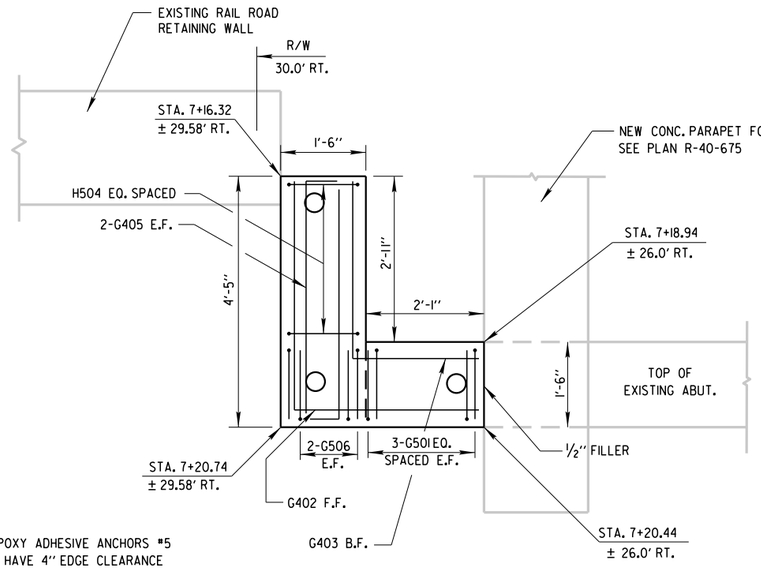
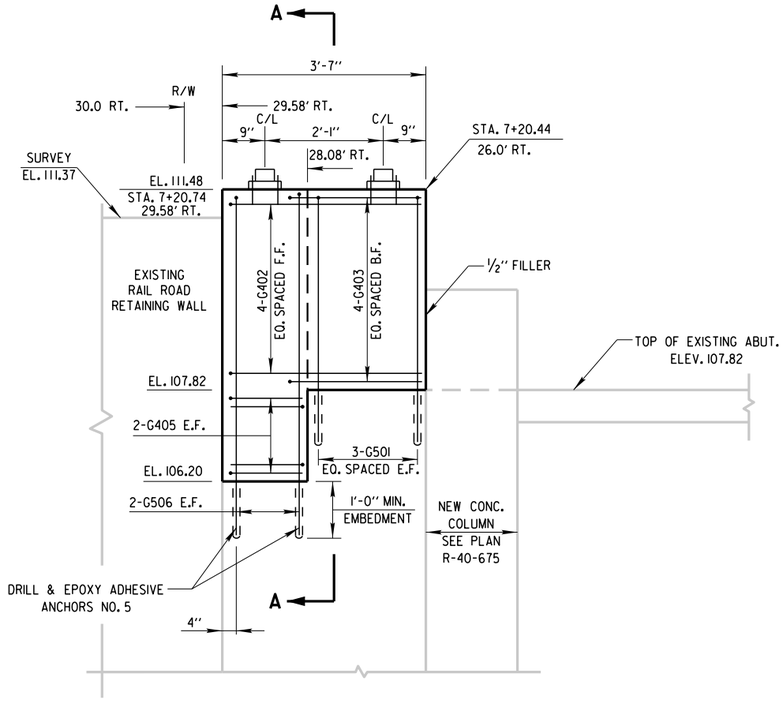


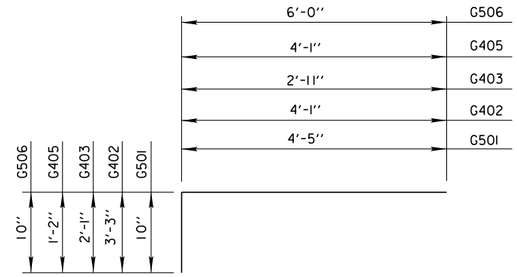
PLAN VIEW NE CLOSURE WALL



EAST ELEVATION (LOOKING WEST)

BILL OF BARS - SW ABUT. CAP

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	LOCATION
G501	X	6	5'-1"	X	VERTICAL DOWEL
G402	X	4	7'-3"	X	HORIZONTAL F.F.
G403	X	4	4'-11"	X	HORIZONTAL B.F.
G504	X	4	12'-2"	X	STIRRUPS
G405	X	4	5'-2"	X	HORIZONTAL
G506	X	4	6'-8"	X	VERTICAL DOWEL



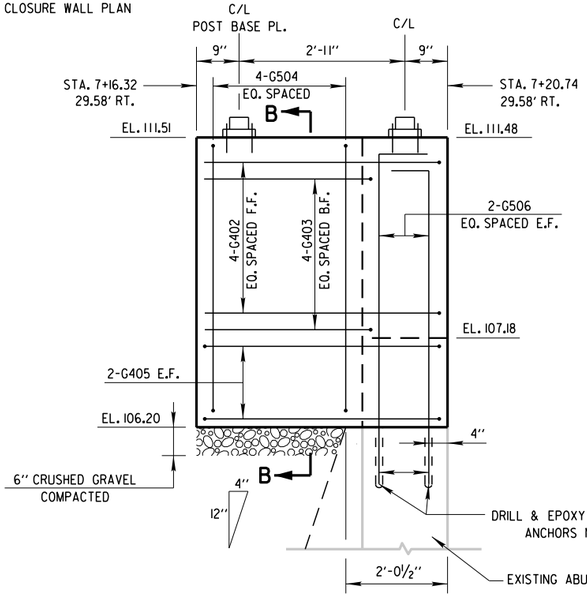
G501, G402, G403, G405, G506

NOTE:

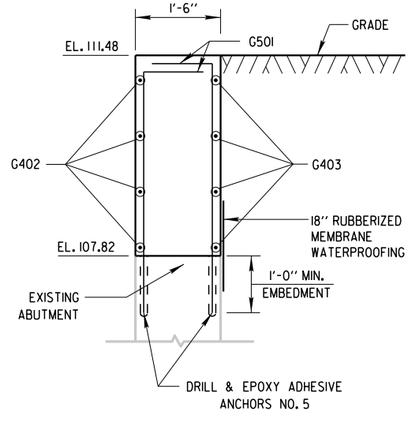
ALL EPOXY ADHESIVE ANCHORS #5 SHALL HAVE 4" EDGE CLEARANCE

6' CHAIN LINK FENCE TO BE INSTALLED ON CLOSURE WALL

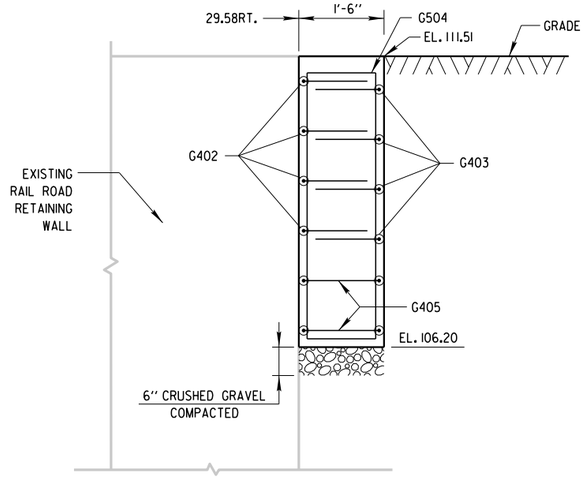
FOR CHAIN LINK FENCE POST BASE DETAIL SEE SE CLOSURE WALL PLAN



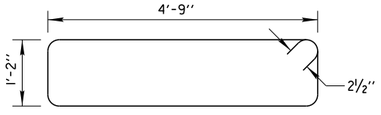
SOUTH ELEVATION (LOOKING NORTH)



SECTION A-A



SECTION B-B



G504

KEY:
E.F. = EACH FACE
F.F. = FRONT FACE
B.F. = BACK FACE
○ = BASE PLATE FOR FENCE POSTS

KEY:
E.F. = EACH FACE
F.F. = FRONT FACE
B.F. = BACK FACE
○ = BASE PLATE FOR CHAIN LINK FENCE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-925

DRAWN BY D.B. | PLANS CK'D. J.P.H. H.J.R.

SW CLOSURE WALL

SHEET 24 OF 25

8

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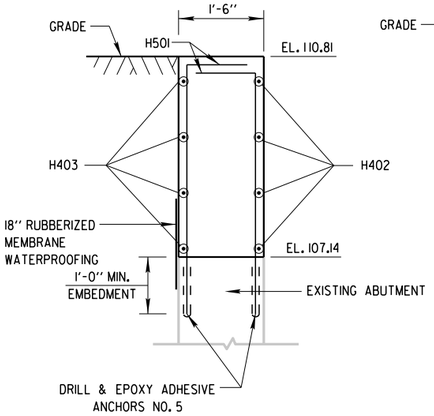
W:\STR\B0934\PLANS\25-SE CLOSURE WALL.DGN

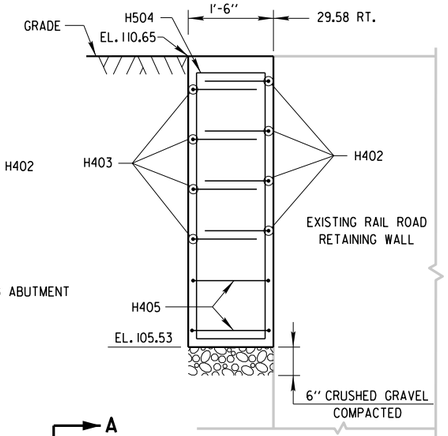
REVISED DATE: 07/19/2017 BY GJR

STATE PROJECT NUMBER

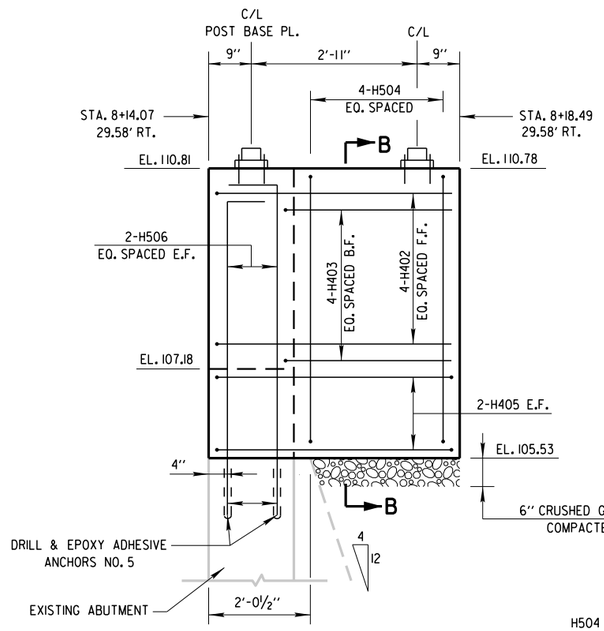
2984 - 06 - 76



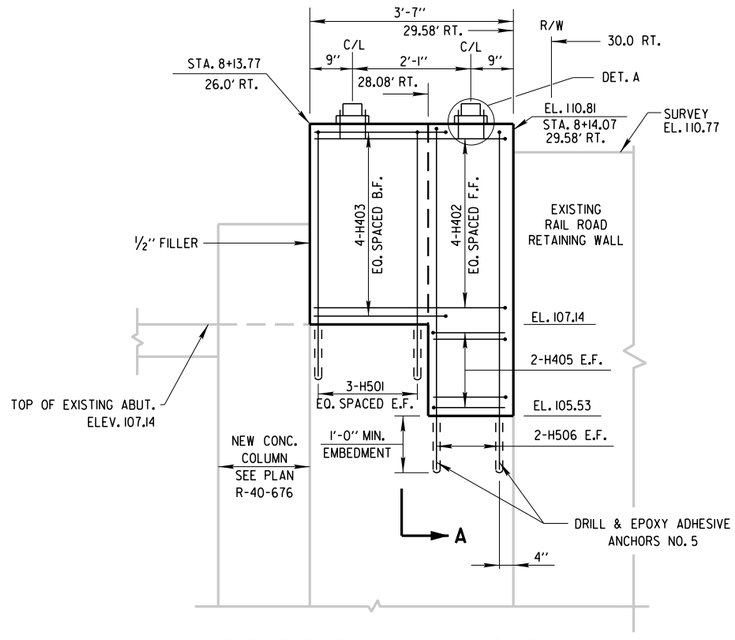
SECTION A-A



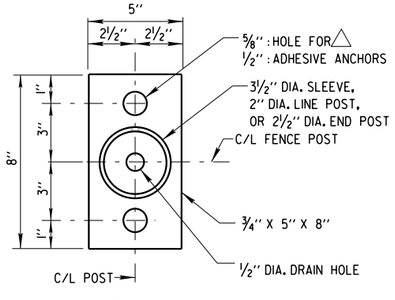
SECTION B-B



SOUTH ELEVATION (LOOKING NORTH)

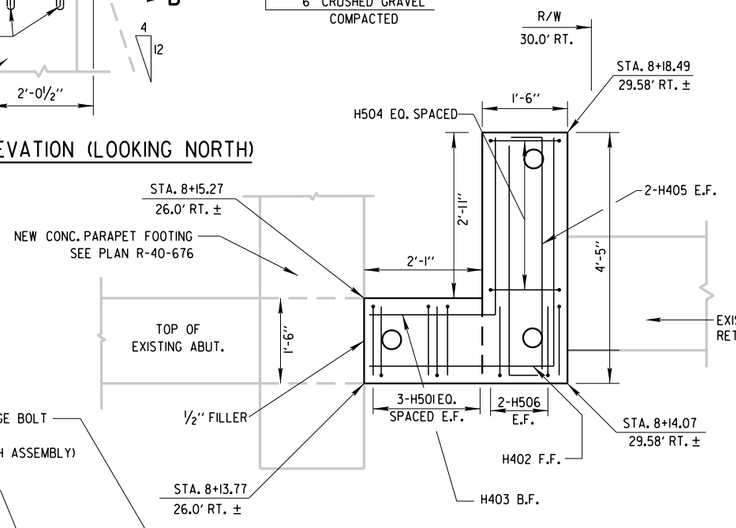


WEST ELEVATION (LOOKING EAST)

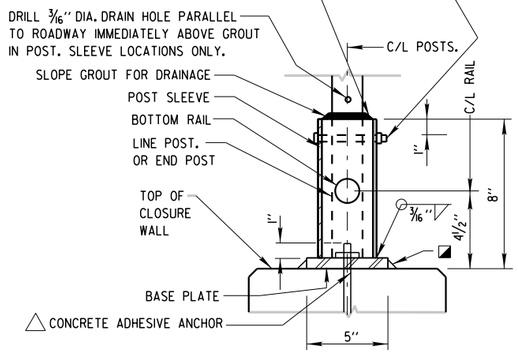


BASE PLATE

KEY:
E.F. = EACH FACE
F.F. = FRONT FACE
B.F. = BACK FACE
○ = BASE PLATE FOR FENCE POSTS



PLAN VIEW SE CLOSURE WALL



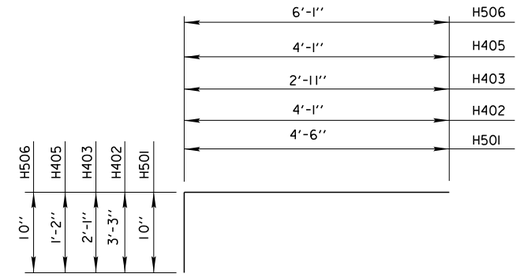
DETAIL A

UNIT SHALL BE GALVANIZED AFTER FABRICATION

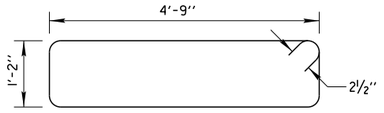
NOTE: IN LIEU OF USING THE POST SLEEVE, THE FENCE POST MAY BE WELDED TO THE BASE PLATE.

BILL OF BARS - SE CLOSURE WALL

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	LOCATION
H501	X	6	5'-2"	X	VERTICAL DOWEL
H402	X	4	7'-3"	X	HORIZONTAL F.F.
H403	X	4	4'-11"	X	HORIZONTAL B.F.
H504	X	4	12'-2"	X	STIRRUPS
H405	X	4	5'-2"	X	HORIZONTAL
H506	X	4	6'-10"	X	VERTICAL DOWEL



H501, H402, H403, H405, H506



H504

NOTE:

ALL EPOXY ADHESIVE ANCHORS #5 SHALL HAVE 4" EDGE CLEARANCE

6' CHAIN LINK FENCE TO BE INSTALLED ON CLOSURE WALL

FENCE DETAIL NOTES:

POSTS ARE TO BE SET VERTICAL.

6' CHAIN LINK TO BE INSTALLED ON CLOSURE WALL UTILIZES ON CLOSURE WALL UTILIZING BASE PLATES AND POST SLEEVES.

BID ITEM SPV.0090.01 REMOVAL OF EXISTING & INSTALLATION OF NEW CHAIN LINK FENCE.

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

BASE PLATES AND SHIMS SHALL BE ASTM A709 GRADE 36.

ALL POST SPACINGS ARE MEASURED HORIZONTALLY ALONG THE C/L OF THE POST.

◪ CAULK AROUND PERIMETER OF BASE PLATE AND FILL PORTION OF SLOTTED HOLE AROUND ANCHOR BOLT IN SHIM WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.

△ CONCRETE ADHESIVE ANCHORS ½-INCH. EMBED 7" IN CONCRETE. ADHESIVE ANCHORS SHALL CONFORM TO SECTION 502.2.12 OF STANDARDS SPECIFICATIONS. ADHESIVE ANCHORS ½-INCH ARE INCIDENTAL TO SPV.0090.01 BID ITEM (REMOVAL OF EXISTING & INSTALLATION OF NEW CHAIN LINK FENCE).

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-925

DRAWN BY D.B. | PLANS CK'D. H.J.R. J.P.H.

SE CLOSURE WALL

SHEET 25 OF 25

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REVISED: 08/08/2017 BY GJR

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

ALL STATIONS AND ALL ELEVATIONS ARE IN FEET.
ALL ELEVATIONS ARE REFERRED TO CITY OF MILWAUKEE DATUM.
CITY OF MILWAUKEE DATUM = 580.60 (NGVD29)

DIMENSIONS AND STATIONS ARE MEASURED IN RELATION TO THE C/L OF W. BROWN ST.

ALL DIMENSIONS ALONG THE FRONT FACE OF WALL UNLESS OTHERWISE OR FIRST SHOWN.

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

BAR REINFORCEMENT SHALL HAVE 2" CLEAR COVER UNLESS SHOWN OTHERWISE.

THESE PLANS ARE FOR A PRECAST CONCRETE PANEL MECHANICALLY STABILIZED EARTH (MSE) RETAINING WALL LRFD.

THE CONTRACTOR MUST COORDINATE THE CONSTRUCTION OF WALLS R-40-673, R-40-674, R-40-675, R-40-676, AND BRIDGE B-40-925.

THE CONTRACTOR SHALL PROVIDE COMPLETE DESIGN, PLANS, DETAILS, SPECIFICATIONS, AND SHOP DRAWINGS FOR THE RETAINING WALLS IN ACCORDANCE WITH THE SPECIAL PROVISIONS. THE RETAINING WALL MANUFACTURER SHALL PROVIDE TECHNICAL ASSISTANCE TO THE CONTRACTOR DURING CONSTRUCTION. THE COST OF FURNISHING THESE ITEMS SHALL BE INCLUDED IN THE BID ITEM, "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH".

THE COST OF FURNISHING AND PLACING BACKFILL WITHIN THE REINFORCED SOIL ZONES, UNREINFORCED CONCRETE LEVELING PAD UNDER THE MSE PRECAST WALL PANELS, REINFORCEMENT, GEOTEXTILE FABRIC, ENGINEERED BACKFILL, JOINT MATERIAL, AND OTHER MISCELLANEOUS ITEMS IS INCLUDED IN THE COST OF BID ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH".

ALL BAR STEEL REINFORCEMENT IN CAST IN PLACE CONCRETE IS TO BE EPOXY COATED.

BEVEL ALL EXPOSED EDGES OF CONCRETE 1" UNLESS NOTED OTHERWISE.

THE PLAN QUANTITY FOR THE ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH" IS BASED ON A WALL HEIGHT MEASURED FROM THE TOP OF THE LEVELING PAD TO THE TOP OF WALL AS SHOWN IN THE PLANS.

PLANS, ELEVATIONS AND DETAILS SHOWN ON THESE DRAWINGS ARE INTENDED TO INDICATE WALL LOCATIONS, LENGTHS HEIGHTS, AND DETAILS COMMON TO THE WALL SYSTEM SELECTED. THE CONTRACTOR SHALL VERIFY THAT THE WALL SYSTEM SELECTED WILL CONFORM TO THE REQUIRED ALIGNMENTS AND DETAILS.

THE MAXIMUM VALUE OF THE ANGLE OF INTERNAL FRICTION OF THE WALL BACKFILL MATERIAL IN THE REINFORCED ZONE SHALL BE ASSUMED TO BE 30° WITHOUT CERTIFIED TEST VALUES.

PLACE BACKFILL IN SPECIFIED LAYER THICKNESS STARTING AT BACK FACE OF WALL AND WORKING AWAY FROM WALL.

UTILITY LOCATIONS SHOWN ARE APPROXIMATE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATION OF ALL UTILIES PRIOR TO EXCAVATING. DAMAGE TO EXISTING UTILITES SHALL BE REPAIRED OR REPLACED AT THE CONTRACTORS EXPENSE.

THE RETAINING WALL IS TO BE DESIGNED USING THE ELEVATIONS GIVEN ON THIS SHEET.

SEE SPECIAL PROVISIONS FOR AESTHETIC TREATMENT TO WALL.

■ THE LENGTHS PROVIDED IN THE TABLE ARE THE MINIMUM REQUIRED REINFORCEMENT LENGTHS BASED UPON THE MINIMUM DESCRIBED IN THE WALL SYSTEM SPECIAL PROVISIONS OR EXTERNAL AND OVERALL STABILITY AT THE DESIGNATED LOCATIONS. THESE DESIGNATED LOCATIONS REPRESENT TYPICAL AND CRITICAL WALL LOCATIONS, BUT SHALL NOT BE CONSIDERED ALL INCLUSIVE. THE CONTRACTOR DESIGN LENGTHS SHALL MEET OR EXCEED THE MINIMUM VALUES REPRESENTED IN THE TABLE AT THESE DESIGNATED LOCATIONS.

CONTRACTOR TO MATCH EXISTING GRADE WITHIN 10 FEET OF FRONT FACE OF M.S.E. WALL.

REMOVAL OF EXISTING ABUTMENT AS SHOWN WILL BE PAID AS PART OF "REMOVING OLD STRUCTURE 7+66.03" SEE STRUCTURE B-40-925.

TOP OF CONCRETE LEVELING PAD TO BE AT SAME ELEVATION AS TOP OF PROPOSED ABUTMENT FOOTING. APPROX. EL. 79.64

SEE STRUCTURE B-40-925 FOR PARAPET AND STRUCTURAL APPROACH SLAB DETAILS.

"CONSTRUCTION STAKING STRUCTURE LAYOUT" INCLUDES VERIFYING LOCATIONS OF NEW AND EXISTING ABUTMENTS PRIOR TO MSE WALL FABRICATION.

DESIGN DATA

MATERIAL PROPERTIES:

CONCRETE MASONRY	f'c = 4,000 PSI
PRECAST CONCRETE WALL PANEL	f'c = 4,000 PSI
BAR STEEL REINFORCEMENT	fy = 60,000 PSI

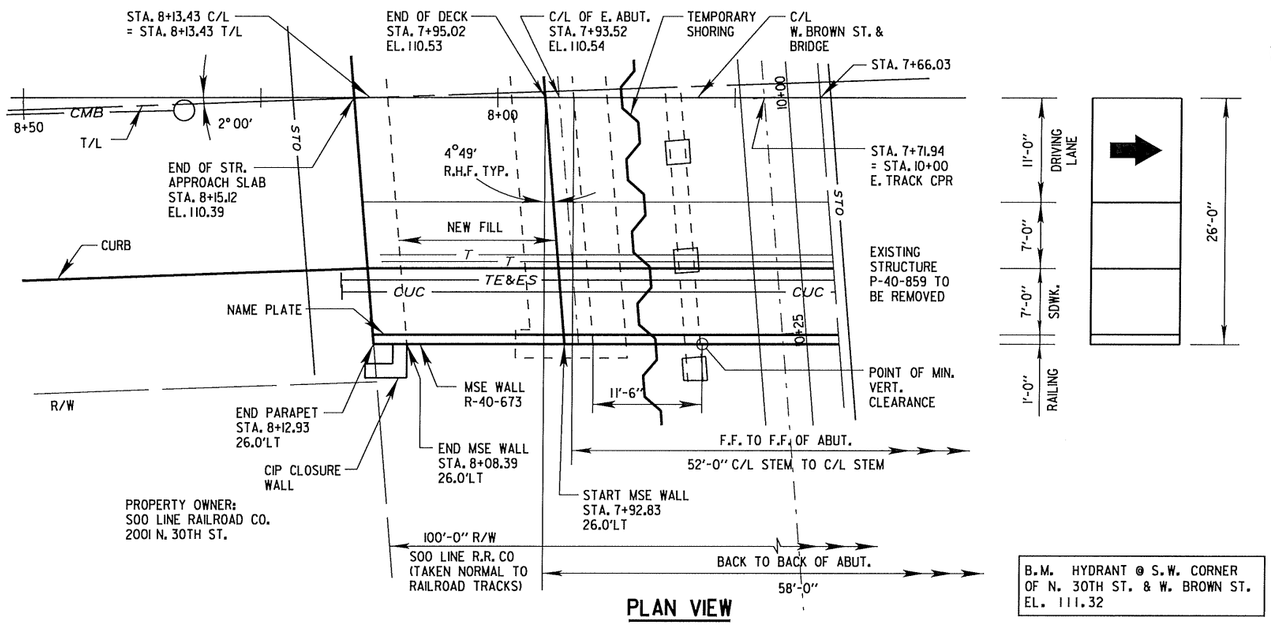
LIVE LOAD:

LIVE LOAD SURCHARGE	240 PSF

WISDOT CONTACT:
WILLIAM DREHER 608-266-8489

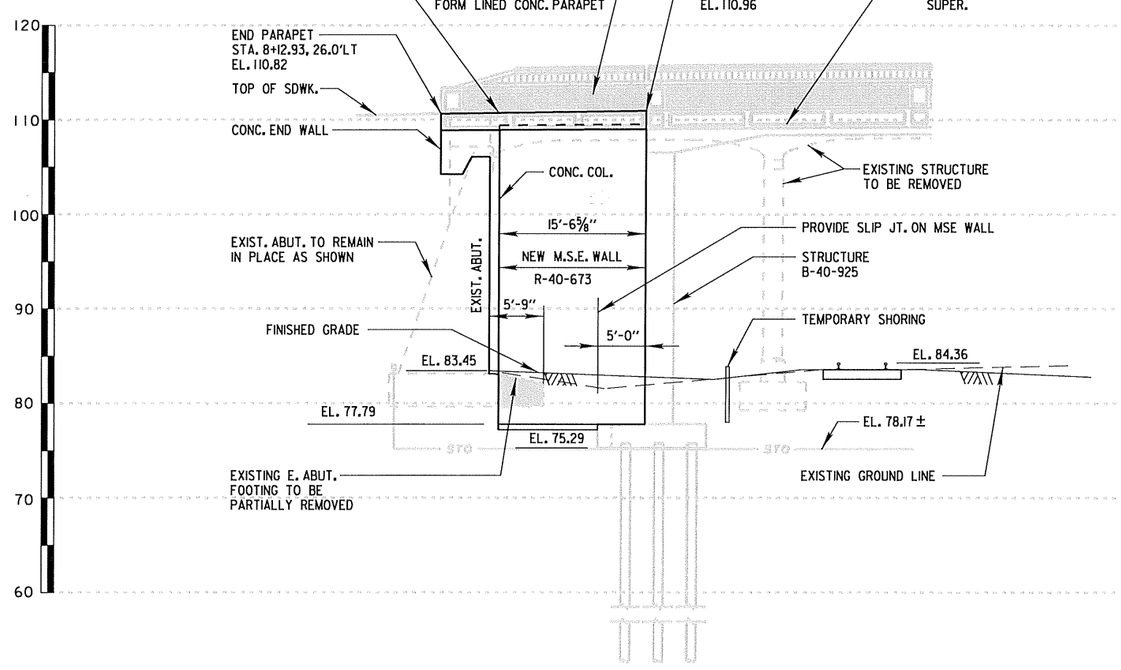
CONSULTANT CONTACT:
CITY OF MILWAUKEE
JERREL KRUSCHKE 414-286-3402

WEST BROWN STREET OVER CANADIAN PACIFIC RAILWAY



PLAN VIEW

B.M. HYDRANT @ S.W. CORNER OF N. 30TH ST. & W. BROWN ST. EL. 111.32



NORTH ELEVATION

LOOKING SOUTH

LIST OF DRAWINGS

STATE PROJECT NUMBER
2984 - 06 - 76

WALL EXTERNAL STABILITY EVALUATION

DIMENSIONS	EVALUATED LOCATIONS
WALL HEIGHT (FEET)	31'-7"
EXPOSED WALL HEIGHT (FEET)	25'-11"
■ MINIMUM LENGTH OF REINFORCEMENT (FEET)	25'-3"
WALL STATION	7+92.83
BORING USED	BOR-2
CAPACITY TO DEMAND RATIO (CDR)	
	DRAINED
SLIDING (CDR > 1.0)	1.02
ECCENTRICITY (CDR > 1.0)	1.47
OVERALL STABILITY (CDR > 1.0)	1.11
BEARING RESISTANCE (CDR > 1.0)	1.11
FACTORED BEARING RESISTANCE, (PSF)	4,500

SOIL PARAMETERS

STRATUM LOCATION & SOIL DESCRIPTION	UNIT DENSITY (PCF)	FRICTION ANGLE (DEGREES)	COHESION (PSF)
STIFF TO V. STIFF CLAY	135	-	2,000
M. DENSE SILT/ SILTY SAND (EL. 52.0-57.0)	125	30	-
HARD CLAY (EL. 46.0-52.0)	140	-	4,500
V. DENSE SILT/SILTY SAND (EL. 32.0-46.0)	135	36	-
M. DENSE CLAYEY SAND (EL. 27.0-32.0)	125	32	-
V. STIFF CLAY (EL. 24.0-27.0)	135	-	2,000
V. DENSE SANDY SILT W/GRAVEL (TILL)	140	38	-

GEOMETRY TABLE

STATION	OFFSET TO F.F. WALL	TOP OF WALL EL. (AT REF. POINT)	FINISHED GRADE EL.
7+17.06	25.5 LT	111.52	84.20
7+34.82	25.5 LT.	111.39	81.51 MIN.

WISCONSIN
JERREL KRUSCHKE
43536-6
MILWAUKEE, WIS.
PROFESSIONAL ENGINEER
12-11-2017

NO.	DATE	REVISION	BY

ORIGINAL PLANS PREPARED BY
CITY OF MILWAUKEE
DEPARTMENT OF PUBLIC WORKS
INFRASTRUCTURE SERVICES DIVISION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher SCR 12/12/17
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE R-40-673

W. BROWN ST. OVER C.P. RAILWAY

COUNTY	~~TOWN~~/CITY/ ~~VILLAGE~~
MILWAUKEE	MILWAUKEE

DESIGN SPEC. AASHTO LRFD SPECIFICATIONS

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
J.P.H.	M.S.A.	G.G.	A.R.

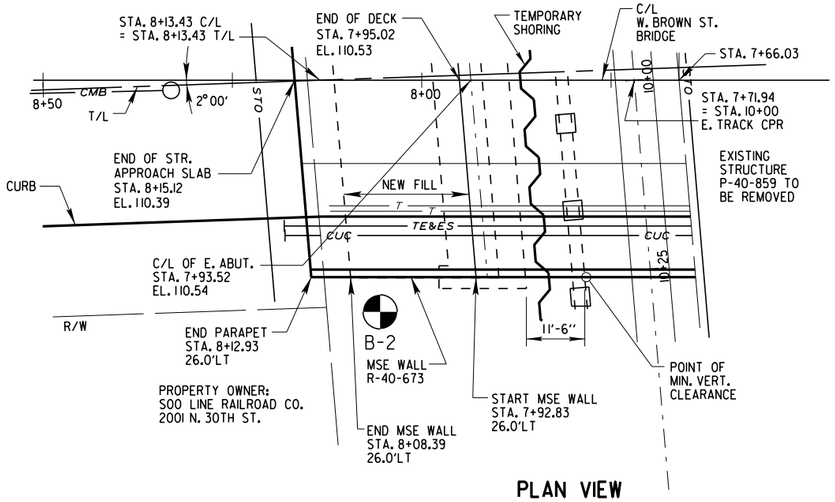
N.E. RETAINING WALL GENERAL PLAN AND ELEVATION

SHEET 60 OF 4

W:\STR\B0934\PLANS\NE_RETWALL\2NE_RWSUBSURFACE.DGN

REVISED: 05/12/2017 BY DB

WEST BROWN STREET OVER CANADIAN PACIFIC RAILWAY



PLAN VIEW

NOTE:

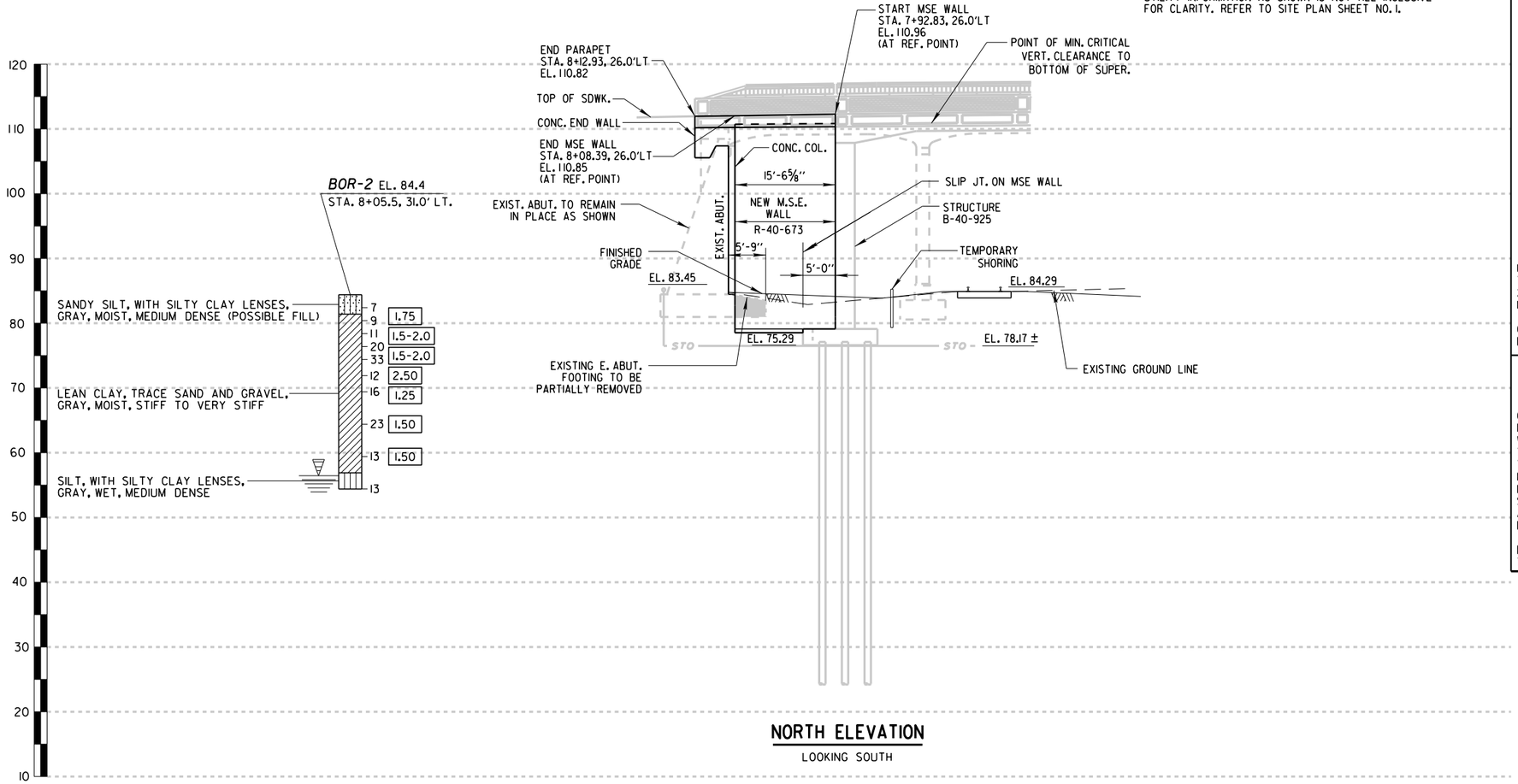
SUBSURFACE INFORMATION ON PLAN SHEET SUMMARIZES GEOTECHNICAL ENGINEERING REPORT.

REVIEW GEOTECHNICAL ENGINEERING REPORT AND SOIL BORING LOGS DATED FEBRUARY 4, 2016 AND SUBSEQUENT REVISIONS FOR ADDITIONAL SUBSURFACE INFORMATION.

SOIL BORINGS COMPLETED BY GESTRA ENGINEERING.

- SOIL BORING

UTILITY INFORMATION AS SHOWN IS NOT ALL INCLUSIVE FOR CLARITY. REFER TO SITE PLAN SHEET NO. 1.



NORTH ELEVATION

LOOKING SOUTH

STATE PROJECT NUMBER

2984 - 06 - 76

ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

MATERIAL SYMBOLS

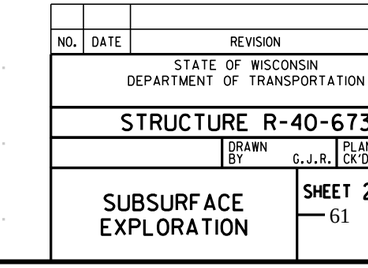
TOPSOIL, SILT, SANDSTONE, SAND, PEAT, LIMESTONE, GRAVEL, CLAY, IGNEOUS ROCK

LEGEND OF PROBING

95/6=95 BLOWS FOR 6" PENETRATION
PROBING TAKEN WITH A 350# WT. FALLING 18" ON A 2" O.D. POINT.

PROBING NO.
STA.
ELEVATION
7 AVERAGE BLOWS PER FOOT
REFUSAL 95/6

LEGEND OF BORING



UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-673

DRAWN BY G.J.R. | PLANS CK'D. A.R.

SUBSURFACE EXPLORATION

SHEET 2 OF 4

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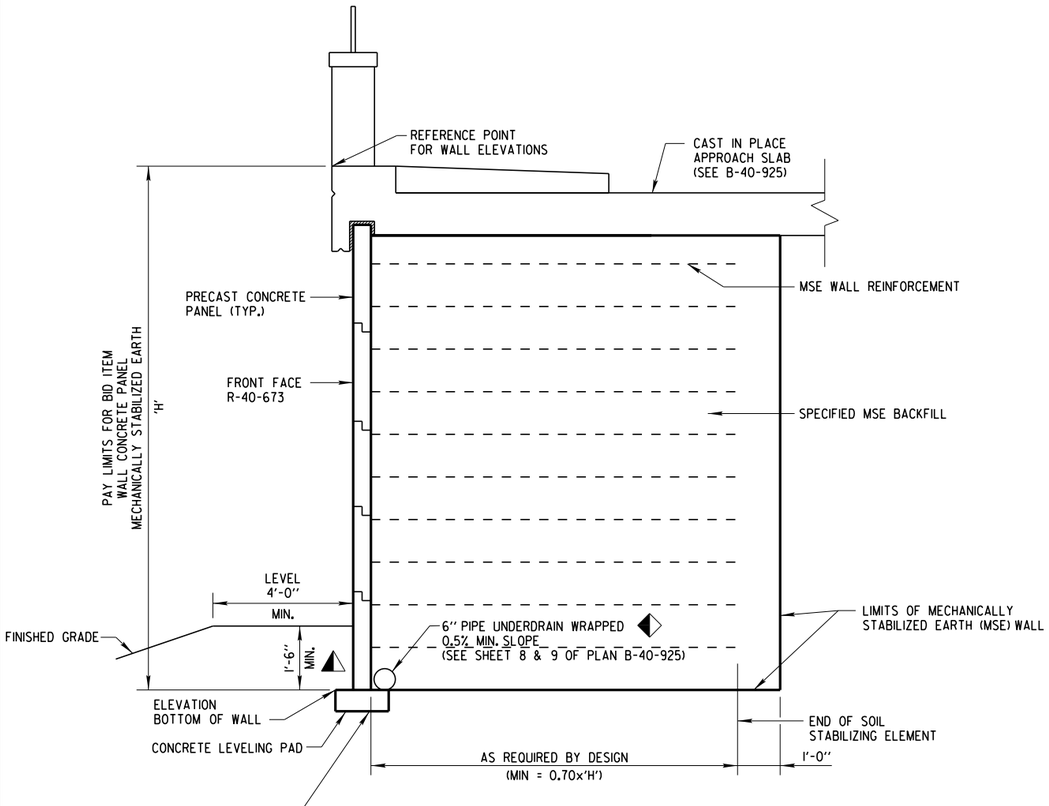
REVISED: 12/06/2017 BY CJR

STATE PROJECT NUMBER

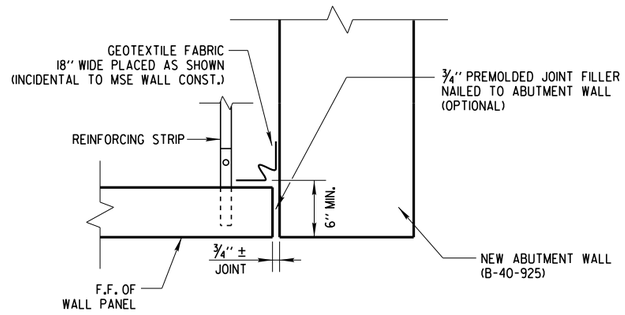
2984 - 06 - 76



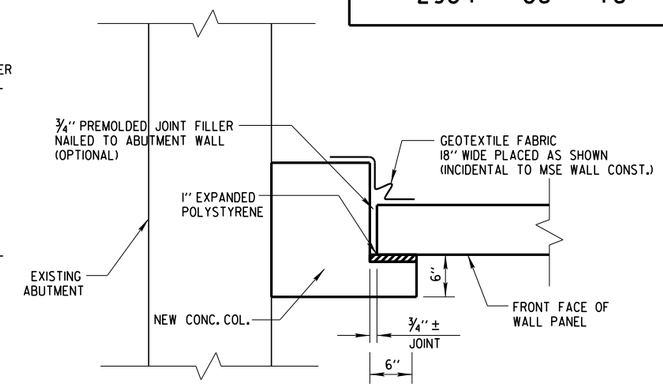
TYPICAL CROSS SECTION

▲ MINIMUM EMBEDMENT BASED ON SITE SPECIFIC PARAMETERS (1'-6" MINIMUM FOR ALL WALLS ON LEVEL GROUND), FIELD EMBEDMENTS SHALL MEET OR EXCEED THE MINIMUM EMBEDMENT. FIELD EMBEDMENTS BELOW MINIMUM EMBEDMENT SHALL NOT BE INCLUDED IN THE PAY LIMITS.

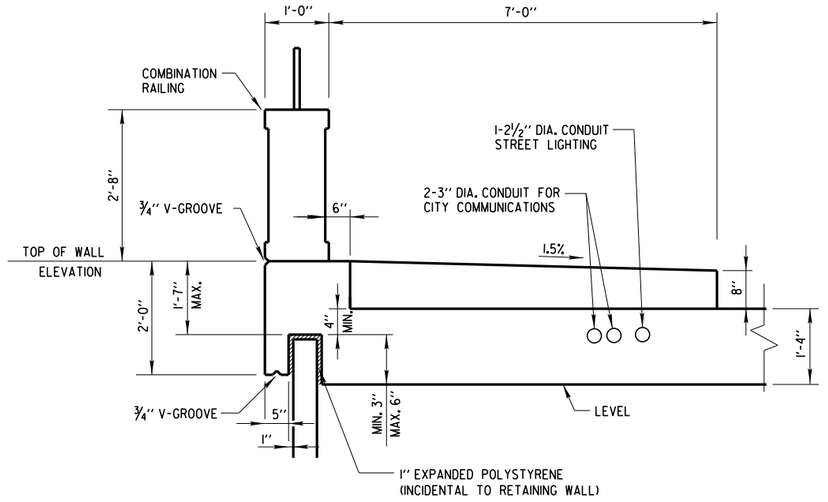
◆ SEE STRUCTURE B-40-925 FOR PIPE UNDER DRAIN. MSE WALL UNDER DRAIN IS CONNECTED TO AND DRAINS INTO THE BRIDGE UNDER DRAIN.



BUTT JOINT DETAIL AT NEW ABUTMENT WALL



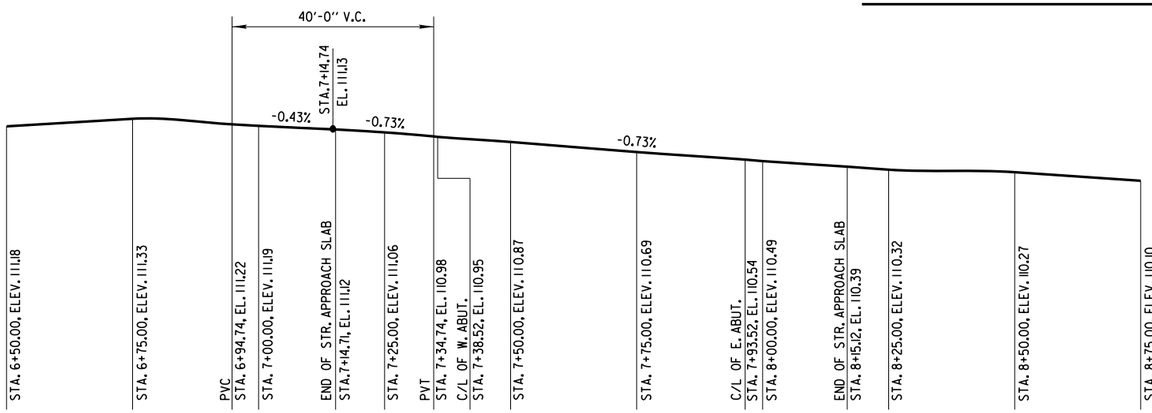
BUTT JOINT DETAIL AT CONCRETE COLUMN



CAST IN PLACE CONCRETE BARRIER DETAIL

ESTIMATE OF QUANTITIES

ITEM NO.	BID ITEM	UNIT	TOTAL
206.3000	EXCAVATION FOR STRUCTURES RETAINING WALLS R-40-673	LS	1
502.4205	ADHESIVE ANCHORS NO. 5 BAR	EACH	58
504.0500	CONCRETE MASONRY RETAINING WALLS	CY	3
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	480
509.1500	CONCRETE SURFACE REPAIR	SF	2
516.0100	DAMPPROOFING	SY	10
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	16
SPV.0165.01	WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH R-40-673	SF	491
	NON BID ITEMS		
	PREMOLDED JOINT FILLER	SIZE	
	NON BITUMINOUS JOINT FILLER	SIZE	
	NAME PLATE	EACH	



PROFILE GRADE LINE ALONG C/L OF W. BROWN ST.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-673

DRAWN BY D.B. | PLANS CK'D. A.R.

WALL DETAILS AND QUANTITIES

SHEET 3 OF 4

8

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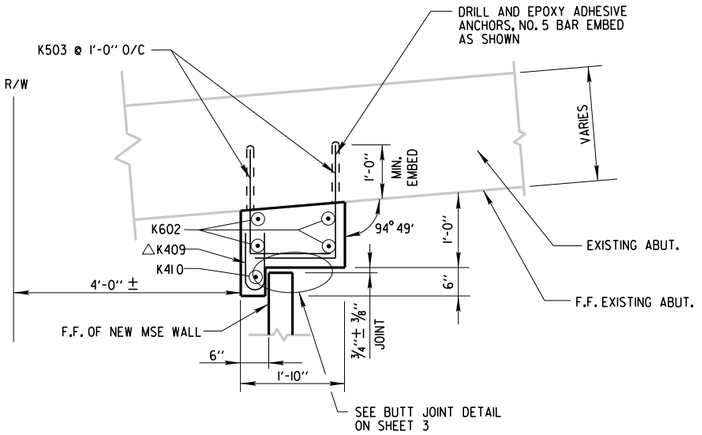
REVISED BY: 05/24/2017 BY ML

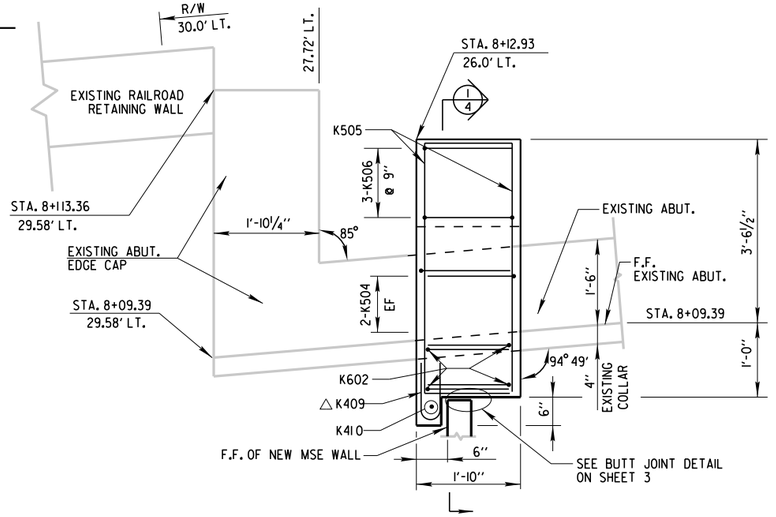
STATE PROJECT NUMBER

2984 - 06 - 76



PLAN VIEW (FROM EL. 83.18 TO EL. 107.18)

(NEW CONCRETE COLUMN)

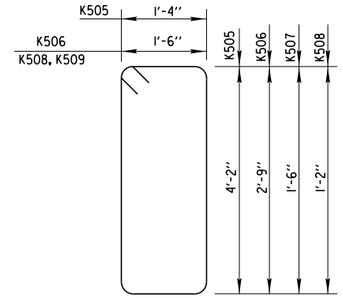


PLAN VIEW (FROM EL. 107.18 TO BOTTOM OF APPROACH SLAB)

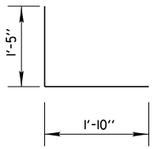
(NEW CONCRETE COLUMN)

BILL OF BARS - COLUMN

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	LOCATION
K501	X	4	2'-10''		DOWELS
K602	X	4	26'-6''	X	VERT. BAR
K503	X	48	3'-2''	X	STIRRUP/ DOWELS
K504	X	4	3'-9''	X	VERT. BAR
K505	X	3	11'-8''	X	HORIZONTAL
K506	X	3	9'-2''	X	VERT. BAR
K507	X	1	6'-8''	X	HORIZONTAL
K508	X	1	6'-0''	X	HORIZONTAL
K409	X	26	2'-2''	X	STIRRUPS
K410	X	1	25'-4''		VERT. BAR



K505, K506
K507, K508



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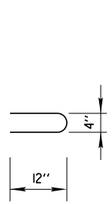
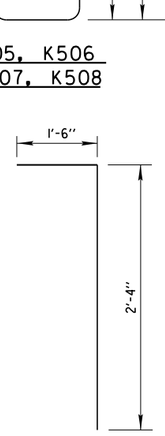


K409
△ PLACED 45° TO HORIZONTAL

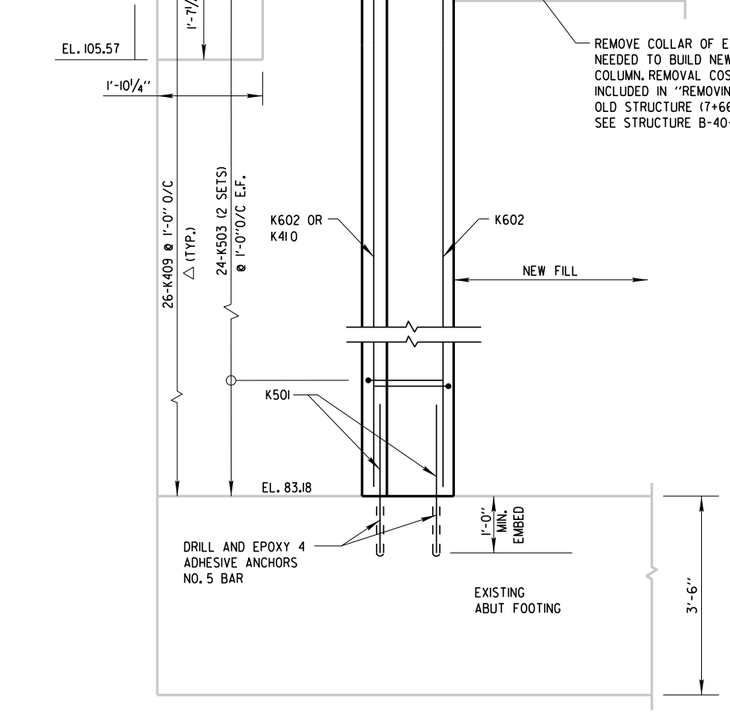
K602



K504

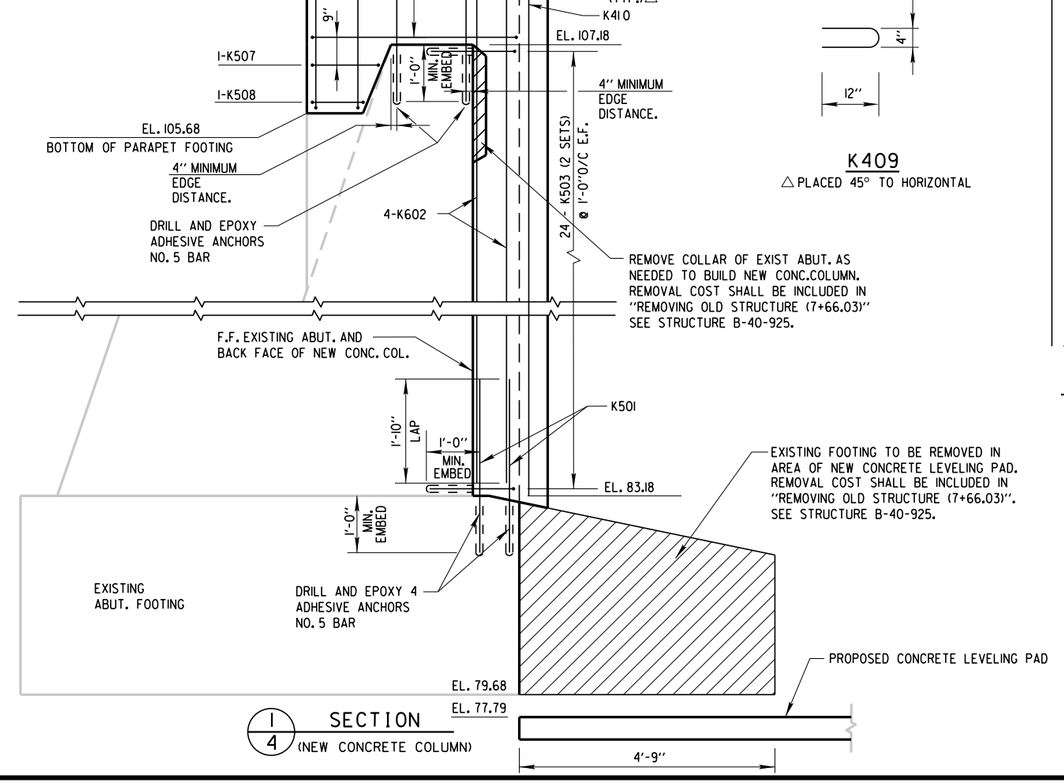
B.F. = BACK FACE
F.F. = FRONT FACE
E.F. = EACH FACE

NOTE:
COLUMN THICKNESS MAY VARY AT TOP TO CREATE PLUMBNESS FOR THE BUTTING MSE WALL



ELEVATION VIEW - FRONT FACE - LOOKING EAST

(NEW CONCRETE COLUMN)



1/4 SECTION

(NEW CONCRETE COLUMN)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-673

DRAWN BY D.B. | PLANS CK'D. J.P.H.

COLUMN DETAILS

SHEET 4 OF 4

63

8

8

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REVISED DATE: 08/08/2017 BY GJR

8

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

ALL STATIONS AND ALL ELEVATIONS ARE IN FEET.
ALL ELEVATIONS ARE REFERRED TO CITY OF MILWAUKEE DATUM.
CITY OF MILWAUKEE DATUM = 580.60 (NGVD29)

DIMENSIONS AND STATIONS ARE MEASURED IN RELATION TO THE C/L OF W. BROWN STREET.

ALL DIMENSIONS ALONG THE FRONT FACE OF WALL UNLESS OTHERWISE SHOWN.

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

BAR REINFORCEMENT SHALL HAVE 2" CLEAR COVER UNLESS SHOWN OTHERWISE.

THESE PLANS ARE FOR A PRECAST CONCRETE PANEL MECHANICALLY STABILIZED EARTH (MSE) RETAINING WALL LRFD.

THE CONTRACTOR MUST COORDINATE THE CONSTRUCTION OF WALLS R-40-676, R-40-673, R-40-674, R-40-675, AND BRIDGE B-40-925.

THE CONTRACTOR SHALL PROVIDE COMPLETE DESIGN, PLANS, DETAILS, SPECIFICATIONS, AND SHOP DRAWINGS FOR THE RETAINING WALLS IN ACCORDANCE WITH THE SPECIAL PROVISIONS. THE RETAINING WALL MANUFACTURER SHALL PROVIDE TECHNICAL ASSISTANCE TO THE CONTRACTOR DURING CONSTRUCTION. THE COST OF FURNISHING THESE ITEMS SHALL BE INCLUDED IN THE BID ITEM, "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH".

THE COST OF FURNISHING AND PLACING BACKFILL WITHIN THE REINFORCED SOIL ZONES, UNREINFORCED CONCRETE LEVELING PAD UNDER THE MSE PRECAST WALL PANELS, REINFORCEMENT, GEOTEXTILE FABRIC, ENGINEERED BACKFILL, JOINT MATERIAL, AND OTHER MISCELLANEOUS ITEMS IS INCLUDED IN THE COST OF BID ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH".

ALL BAR STEEL REINFORCEMENT IN CAST IN PLACE CONCRETE IS TO BE EPOXY COATED.

BEVEL ALL EXPOSED EDGES OF CONCRETE 1" UNLESS NOTED OTHERWISE.

THE PLAN QUANTITY FOR THE ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH" IS BASED ON A WALL HEIGHT MEASURED FROM THE TOP OF THE LEVELING PAD TO THE TOP OF WALL AS SHOWN IN THE PLANS.

PLANS, ELEVATIONS AND DETAILS SHOWN ON THESE DRAWINGS ARE INTENDED TO INDICATE WALL LOCATIONS, LENGTHS HEIGHTS, AND DETAILS COMMON TO THE WALL SYSTEM SELECTED. THE CONTRACTOR SHALL VERIFY THAT THE WALL SYSTEM SELECTED WILL CONFORM TO THE REQUIRED ALIGNMENTS AND DETAILS.

THE MAXIMUM VALUE OF THE ANGLE OF INTERNAL FRICTION OF THE WALL BACKFILL MATERIAL IN THE REINFORCED ZONE SHALL BE ASSUMED TO BE 30 WITHOUT CERTIFIED TEST VALUES.

PLACE BACKFILL IN SPECIFIED LAYER THICKNESS STARTING AT BACK FACE OF WALL AND WORKING AWAY FROM WALL.

UTILITY LOCATIONS SHOWN ARE APPROXIMATE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATION OF ALL UTILIES PRIOR TO EXCAVATING. DAMAGE TO EXISTING UTILITES SHALL BE REPAIRED OR REPLACED AT THE CONTRACTORS EXPENSE.

THE RETAINING WALL IS TO BE DESIGNED USING THE ELEVATIONS GIVEN ON THIS SHEET.

SEE SPECIAL PROVISIONS FOR AESTHETIC TREATMENT TO WALL.

■ THE LENGTHS PROVIDED IN THE TABLE ARE THE MINIMUM REQUIRED REINFORCEMENT LENGTHS BASED UPON THE MINIMUM DESCRIBED IN THE WALL SYSTEM SPECIAL PROVISIONS OR EXTERNAL AND OVERALL STABILITY AT THE DESIGNATED LOCATIONS. THESE DESIGNATED LOCATIONS REPRESENT TYPICAL AND CRITICAL WALL LOCATIONS, BUT SHALL NOT BE CONSIDERED ALL INCLUSIVE. THE CONTRACTOR DESIGN LENGTHS SHALL MEET OR EXCEED THE MINIMUM VALUES REPRESENTED IN THE TABLE AT THESE DESIGNATED LOCATIONS.

CONTRACTOR TO MATCH EXISTING GRADE WITHIN 10 FEET OF FRONT FACE OF M.S.E. WALL.

REMOVAL OF EXISTING ABUTMENT AS SHOWN WILL BE PAID AS PART OF "REMOVING OLD STRUCTURE 7+66.03". SEE STRUCTURE B-40-925.

TOP OF LEVELING PAD TO BE AT SAME ELEVATION AS TOP OF PROPOSED ABUTMENT FOOTING. APPROX. EL. 79.56

SEE STRUCTURE B-40-925 FOR PARAPET AND STRUCTURAL APPROACH SLAB DETAILS

"CONSTRUCTION STAKING STRUCTURE LAYOUT" INCLUDES VERIFYING LOCATIONS OF NEW AND EXISTING ABUTMENTS PRIOR TO MSE WALL FABRICATION.

DESIGN DATA

MATERIAL PROPERTIES:

CONCRETE MASONRY	f'c = 4,000 PSI
PRECAST CONCRETE WALL PANEL	f'c = 4,000 PSI
BAR STEEL REINFORCEMENT	fy = 60,000 PSI

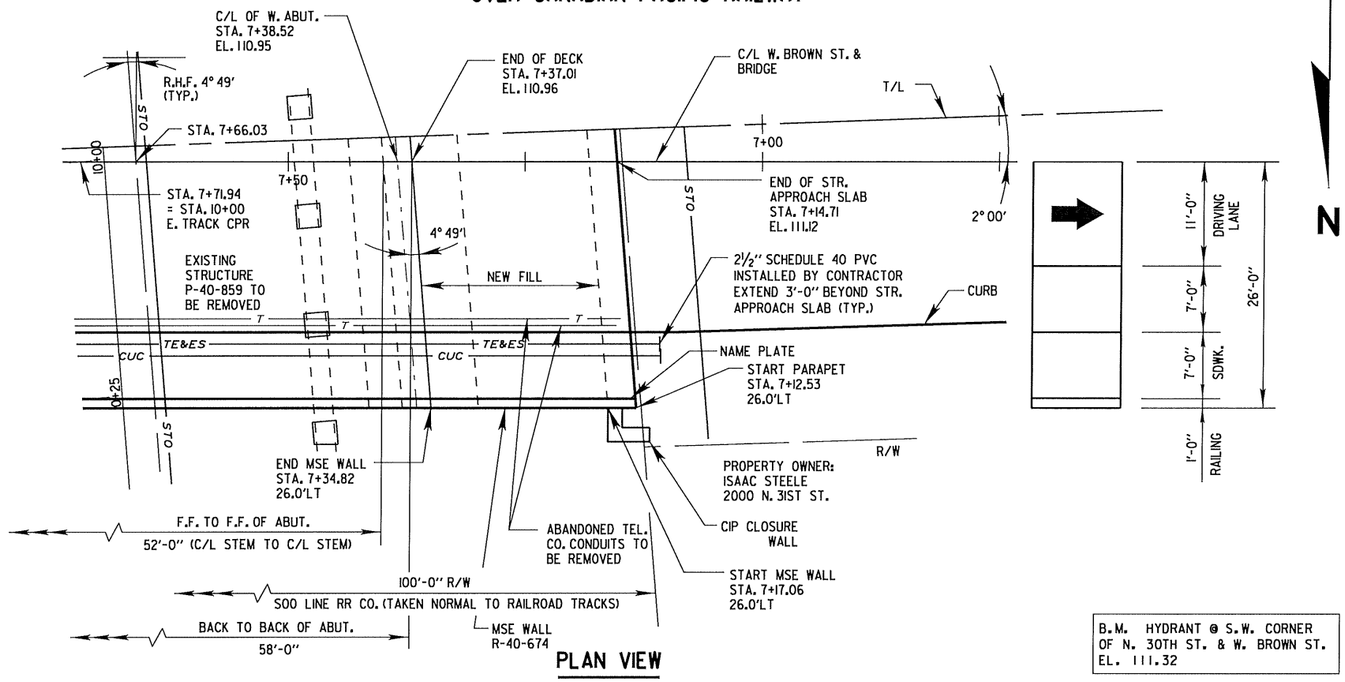
LIVE LOAD:

LIVE LOAD SURCHARGE	240 PSF

WISDOT CONTACT:
WILLIAM DREHER 608-266-8489

CONSULTANT CONTACT:
CITY OF MILWAUKEE
JERREL KRUSCHKE 414-286-3402

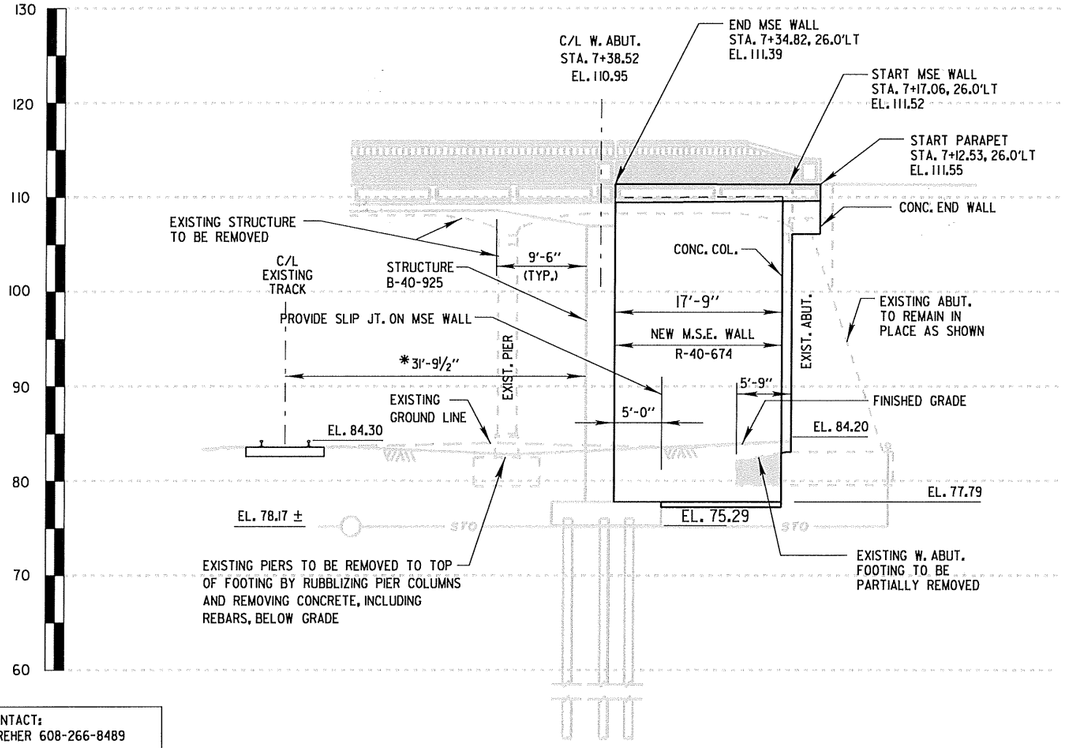
WEST BROWN STREET OVER CANADIAN PACIFIC RAILWAY



PLAN VIEW

N

B.M. HYDRANT @ S.W. CORNER OF N. 30TH ST. & W. BROWN ST. EL. 111.32



NORTH ELEVATION

LOOKING SOUTH
(TAKEN NORMAL TO TRACKS)

STATE PROJECT NUMBER

2984 - 06 - 76

WALL EXTERNAL STABILITY EVALUATION

DIMENSIONS	EVALUATED LOCATIONS
WALL HEIGHT (FEET)	32'-2''
EXPOSED WALL HEIGHT (FEET)	25'-7''
■ MINIMUM LENGTH OF REINFORCEMENT (FEET)	25'-7''
WALL STATION	7+34.82
BORING USED	BOR-1
CAPACITY TO DEMAND RATIO (CDR)	
	DRAINED
SLIDING (CDR > 1.0)	1.02
ECCENTRICITY (CDR > 1.0)	1.47
OVERALL STABILITY (CDR > 1.0)	1.10
BEARING RESISTANCE (CDR > 1.0)	1.11
FACTORED BEARING RESISTANCE, (PSF)	4,500

SOIL PARAMETERS

STRATUM LOCATION & SOIL DESCRIPTION	UNIT DENSITY (PCF)	FRICTION ANGLE (DEGREES)	COHESION (PSF)
STIFF TO V. STIFF CLAY	135	-	2,000
DENSE TO M. DENSE SAND W/SILT/SILTY SAND/ SANDY CLAY (EL. 36.0 - 52.0)	125	30	-
V. DENSE SANDY SILT (EL. 27.0 - 36.0)	135	36	-
V. STIFF CLAY (EL. 22.0 - 27.0)	135	-	2,500
V. DENSE CLAYEY SAND W/ GRAVEL	140	38	-

GEOMETRY TABLE

STATION	OFFSET TO F.F. WALL	TOP OF WALL EL. (AT REF. POINT)	FINISHED GRADE EL.
7+17.06	25.5 LT	111.52	84.20
7+34.82	25.5 LT.	111.39	81.51 MIN.

WISCONSIN
JERREL KRUSCHKE
43536-6
MILWAUKEE, WIS.
PROFESSIONAL ENGINEER

12-11-2017

NO.	DATE	REVISION	BY

ORIGINAL PLANS PREPARED BY
CITY OF MILWAUKEE
DEPARTMENT OF PUBLIC WORKS
INFRASTRUCTURE SERVICES DIVISION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher SOR 12/12/17
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE R-40-674

W. BROWN ST. OVER C.P. RAILWAY

COUNTY MILWAUKEE | ~~TOWN~~/CITY/ ~~VILLAGE~~ MILWAUKEE

DESIGN SPEC. AASHTO LRFD SPECIFICATIONS

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
J.P.H.	M.A.	D.B.	A.R.

N.W. RETAINING WALL GENERAL PLAN AND ELEVATION

SHEET 64 OF 4

LIST OF DRAWINGS

8

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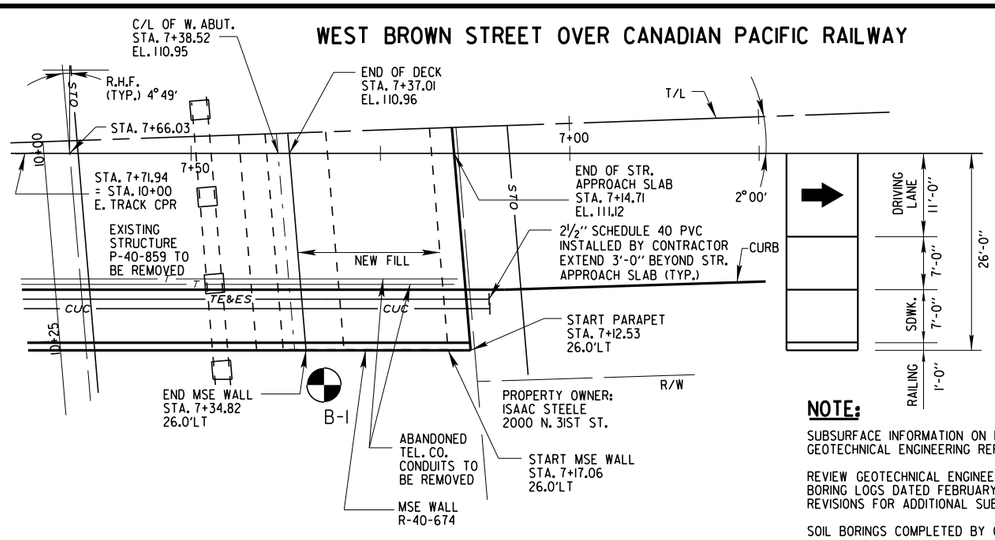
REVISED: 05/12/2017 BY DB

WEST BROWN STREET OVER CANADIAN PACIFIC RAILWAY



PLAN VIEW

NOTE:

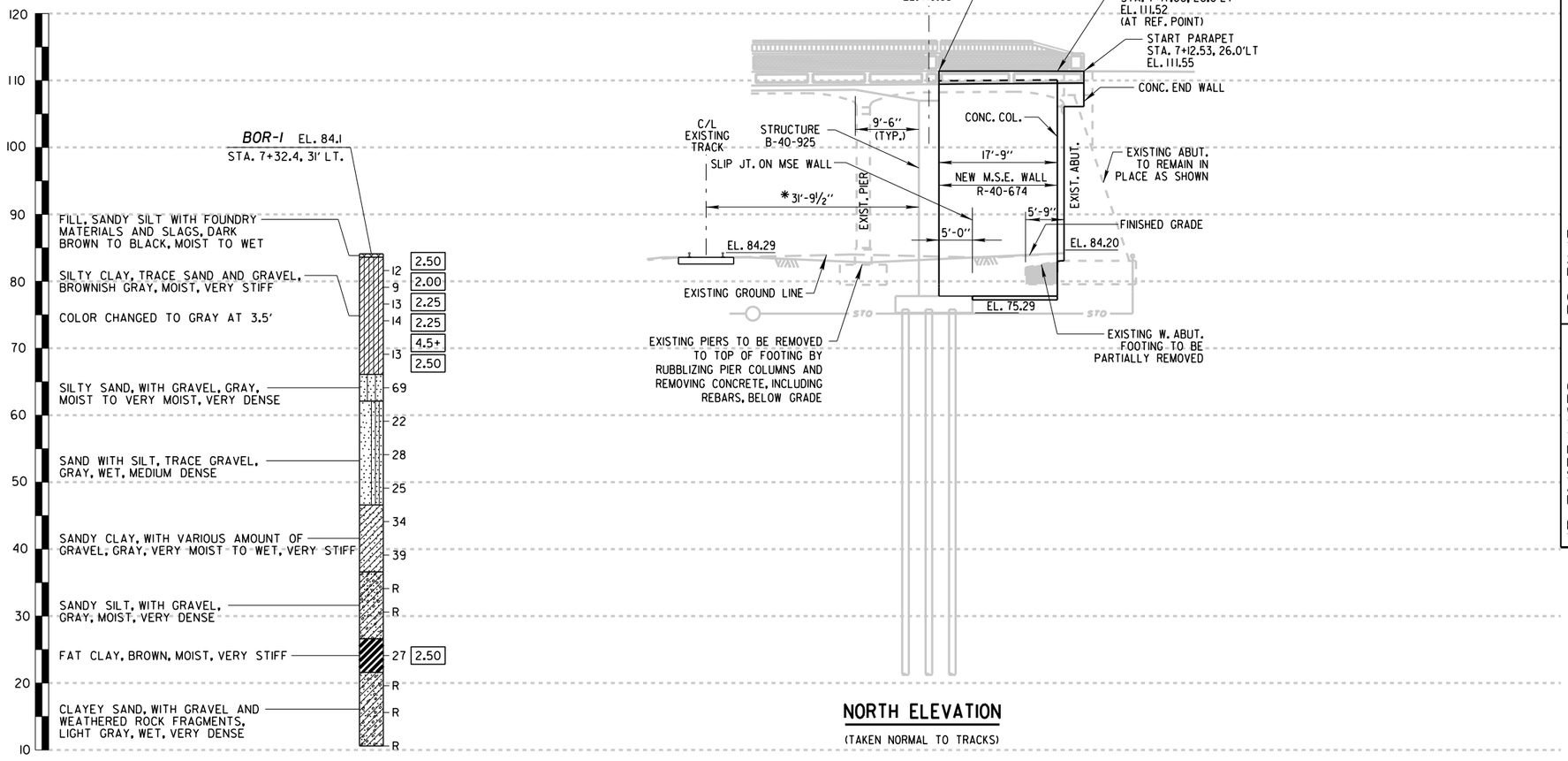
SUBSURFACE INFORMATION ON PLAN SHEET SUMMARIZES GEOTECHNICAL ENGINEERING REPORT.

REVIEW GEOTECHNICAL ENGINEERING REPORT AND SOIL BORING LOGS DATED FEBRUARY 4, 2016 AND SUBSEQUENT REVISIONS FOR ADDITIONAL SUBSURFACE INFORMATION.

SOIL BORINGS COMPLETED BY GESTRA ENGINEERING.

⊕ - SOIL BORING

UTILITY INFORMATION AS SHOWN IS NOT ALL INCLUSIVE FOR CLARITY. REFER TO SITE PLAN SHEET NO. 1.



NORTH ELEVATION

(TAKEN NORMAL TO TRACKS)

STATE PROJECT NUMBER

2984 - 06 - 76

ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

MATERIAL SYMBOLS

TOPSOIL, SILT, SANDSTONE, SAND, PEAT, LIMESTONE, GRAVEL, CLAY, IGNEOUS ROCK

LEGEND OF PROBING

95/6=95 BLOWS FOR 6" PENETRATION
PROBING TAKEN WITH A 350# WT. FALLING 18" ON A 2" O.D. POINT.

PROBING NO.
STA.
ELEVATION
7 AVERAGE BLOWS PER FOOT
REFUSAL 95/6

LEGEND OF BORING

BORING NO.
STA.
ELEV.
UNCONFINED STRENGTH → 7.7
BLOWS PER FT. USING 140# WT. FALLING 30" → 7
WASH SAMPLE
SHELBY TUBE — S.T.
GROUND WATER ELEVATION
NO GROUND WATER OBSERVED ABOVE THIS ELEVATION
SANDY GRAVEL
F. BOULDERS OR COBBLES
SAND
SILTY CLAY
SO LIMESTONE

UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-674

DRAWN BY G.J.R. | PLANS CK'D. A.R.

SUBSURFACE EXPLORATION

SHEET 2 OF 4

8

8

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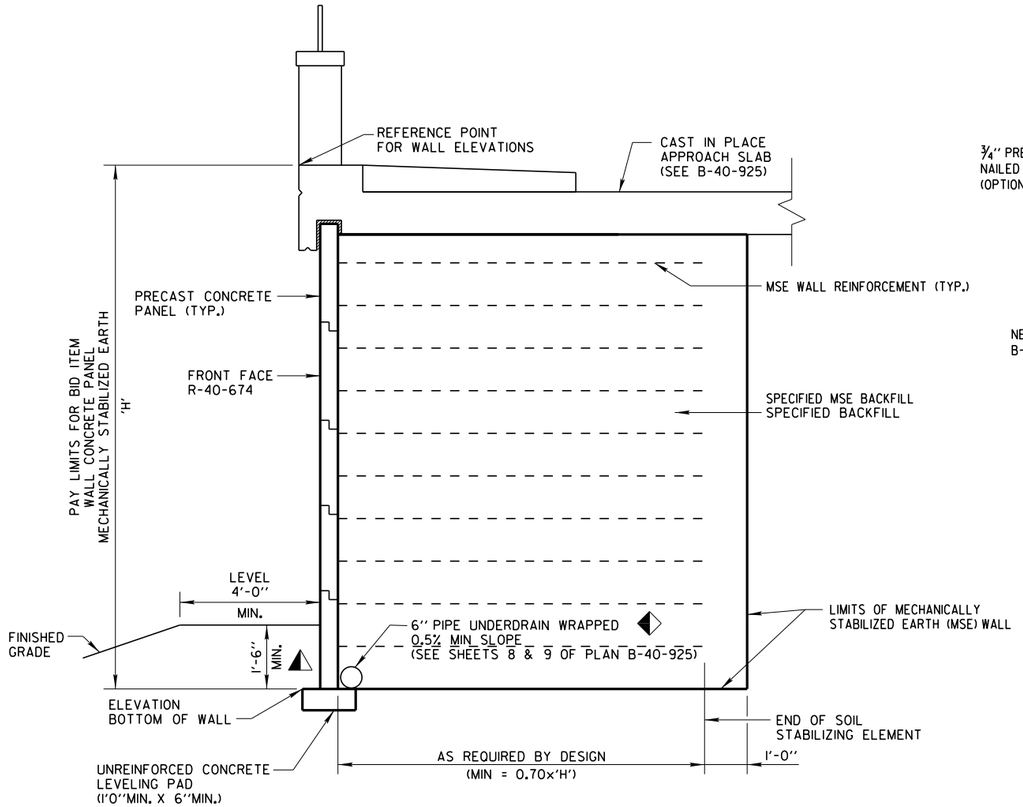
REVISED: 12/06/2017 BY GJR

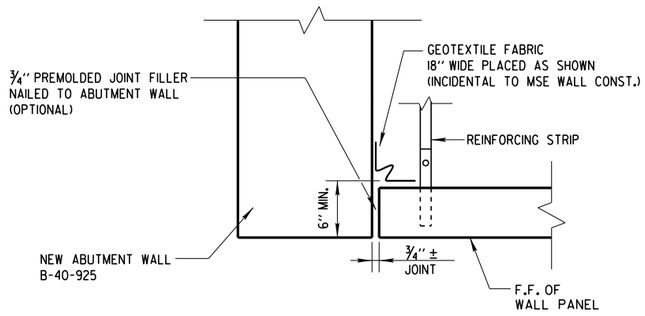
STATE PROJECT NUMBER
2984 - 06 - 76



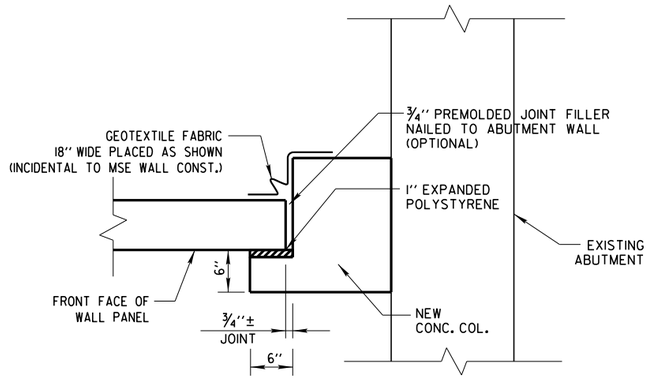
TYPICAL CROSS SECTION

◭ MINIMUM EMBEDMENT BASED ON SITE SPECIFIC PARAMETERS (1'-6" MINIMUM FOR ALL WALLS ON LEVEL GROUND). FIELD EMBEDMENTS SHALL MEET OR EXCEED THE MINIMUM EMBEDMENT. FIELD EMBEDMENTS BELOW MINIMUM EMBEDMENT SHALL NOT BE INCLUDED IN THE PAY LIMITS.

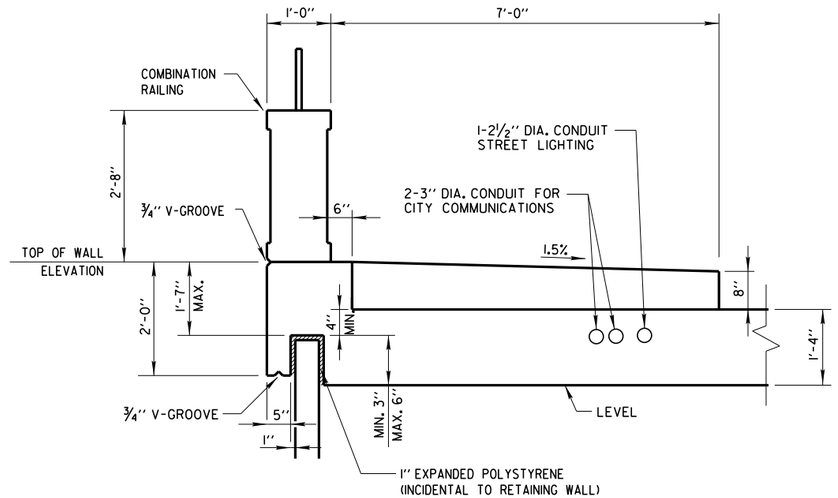
◆ SEE STRUCTURE B-40-925 FOR PIPE UNDER DRAIN. MSE WALL UNDER DRAIN IS CONNECTED TO AND DRAINS INTO THE BRIDGE UNDER DRAIN.



BUTT JOINT DETAIL AT NEW ABUTMENT WALL



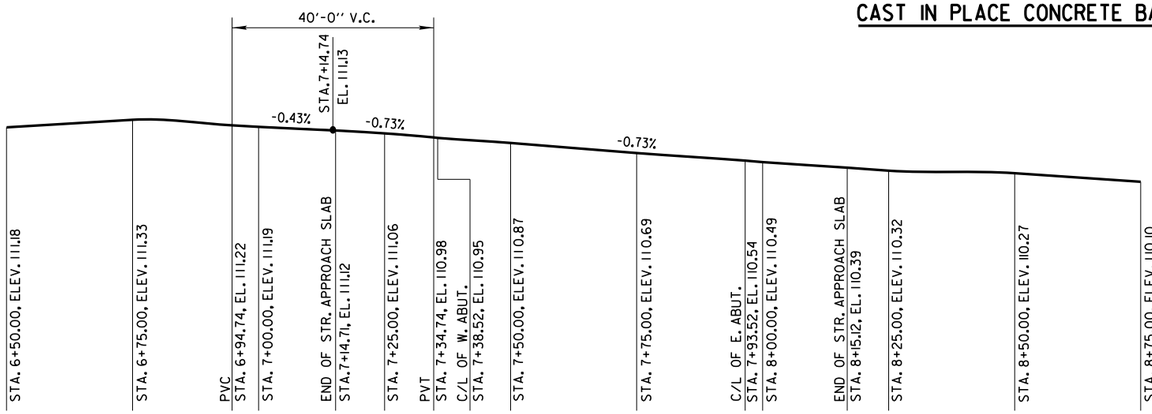
BUTT JOINT DETAIL AT CONCRETE COLUMN



CAST IN PLACE CONCRETE BARRIER DETAIL

ESTIMATE OF QUANTITIES

ITEM NO.	BID ITEM	UNIT	TOTAL
206.3000	EXCAVATION FOR STRUCTURES RETAINING WALLS R-40-674	LS	1
502.4205	ADHESIVE ANCHORS NO. 5 BAR	EACH	60
504.0500	CONCRETE MASONRY RETAINING WALLS	CY	3
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	490
509.1500	CONCRETE SURFACE REPAIR	SF	2
516.0100	DAMPPROOFING	SY	10
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	18
SPV.0165.02	WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH R-40-674	SF	570
	NON BID ITEMS		
	PREMOLDED JOINT FILLER	SIZE	
	NON BITUMINOUS JOINT FILLER	SIZE	
	NAME PLATE	EACH	



PROFILE GRADE LINE ALONG C/L OF W. BROWN ST.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-674

DRAWN BY D.B. | PLANS CK'D. A.R.

WALL DETAILS AND QUANTITIES

SHEET 3 OF 4

8

8

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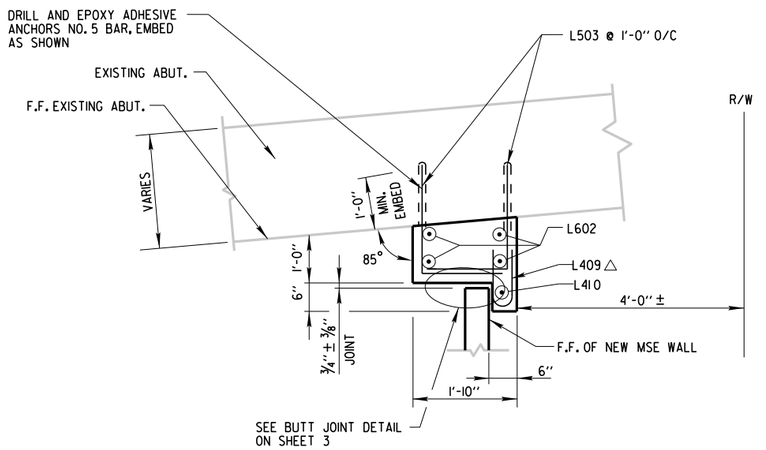
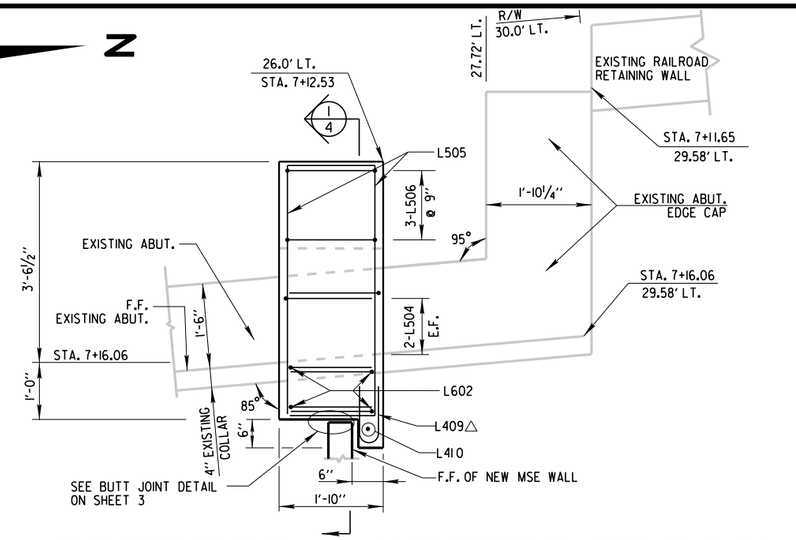
REVISED DATE: 05/24/2017 BY ML

8



PLAN VIEW (FROM EL. 83.10 TO EL. 107.84)

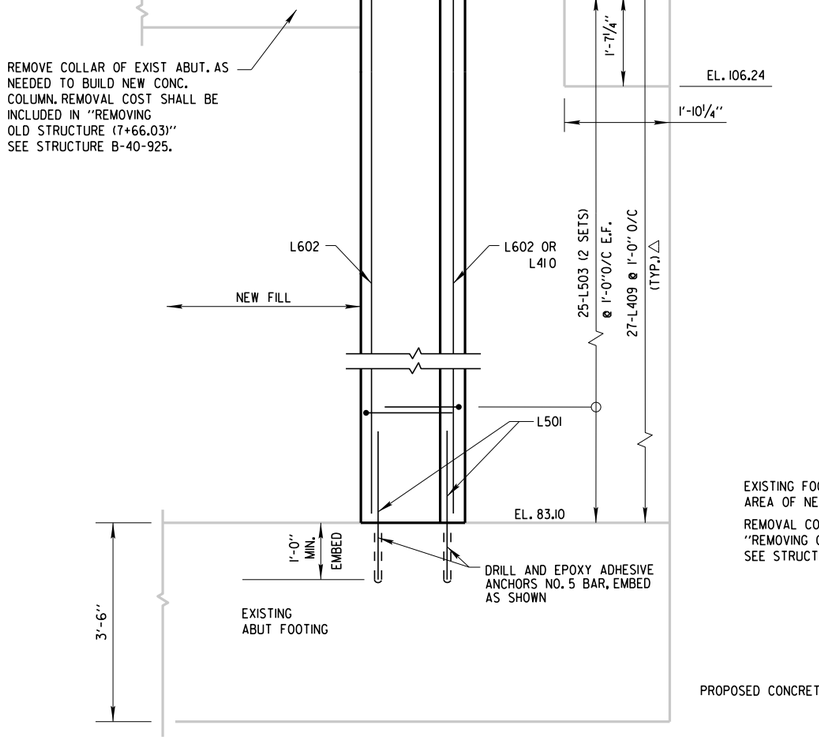
(NEW CONCRETE COLUMN)



PLAN VIEW (FROM EL. 107.84 TO BOTTOM OF APPROACH SLAB)

(NEW CONCRETE COLUMN)

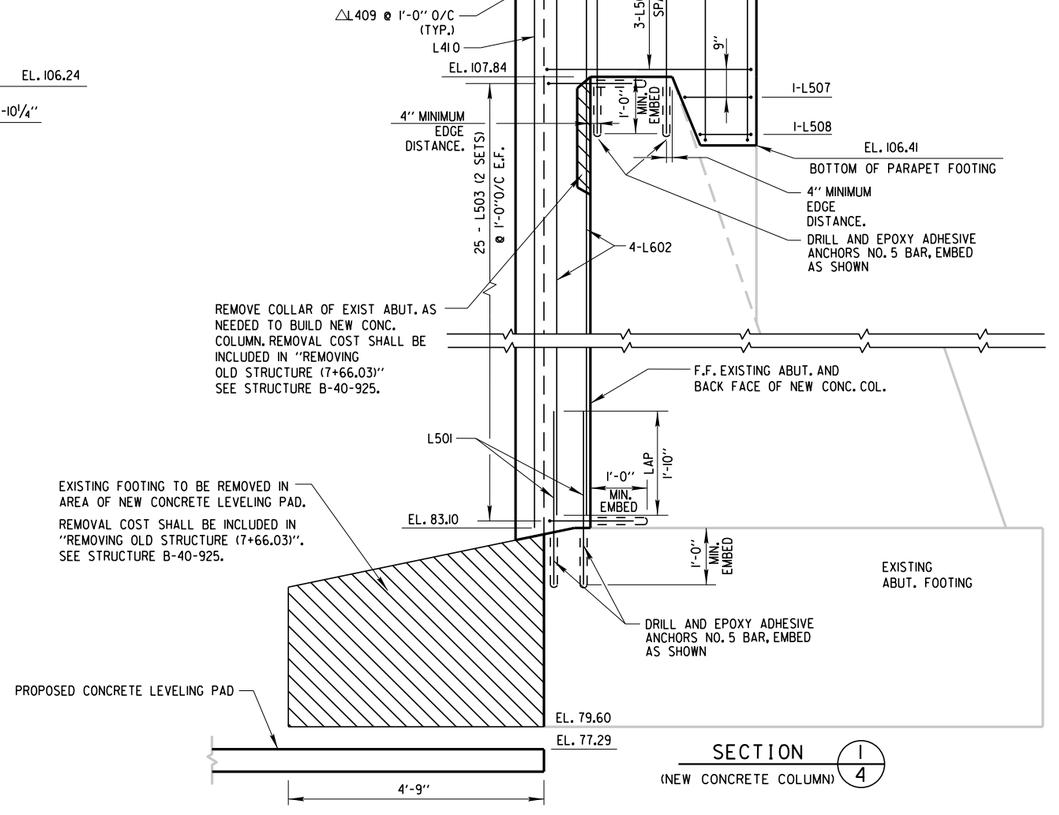
STRUCTURAL APPROACH SLAB ABOVE



ELEVATION VIEW - FRONT FACE - LOOKING WEST

(NEW CONCRETE COLUMN)

STRUCTURAL APPROACH SLAB ABOVE

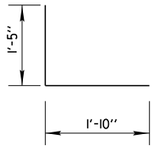


SECTION 1/4

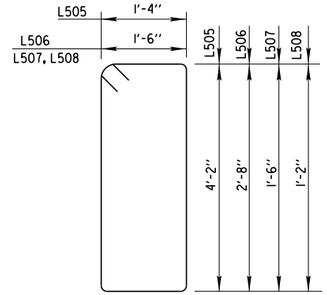
(NEW CONCRETE COLUMN)

BILL OF BARS - COLUMN

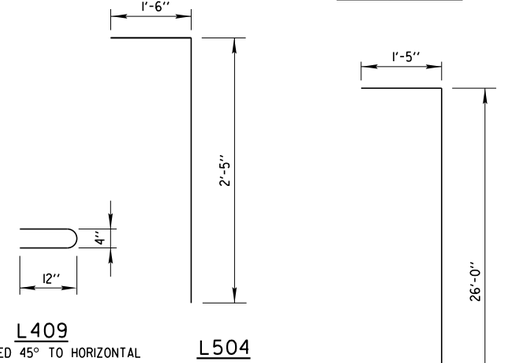
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	LOCATION
L501	X	4	2'-10"		DOWELS
L602	X	4	27'-3"	X	VERT. BAR
L503	X	50	3'-2"	X	STIRRUP/ DOWELS
L504	X	4	3'-9"	X	VERT. BAR
L505	X	3	11'-8"	X	HORIZONTAL
L506	X	3	9'-0"	X	VERT. BAR
L507	X	1	6'-8''	X	HORIZONTAL
L508	X	1	6'-0"	X	HORIZONTAL
L409	X	27	2'-2"	X	STIRRUPS
L410	X	1	26'-1"		VERT. BAR



L503



L505, L506
L507, L508



L409
△ PLACED 45° TO HORIZONTAL

L504

L602

B.F. = BACK FACE

F.F. = FRONT FACE

E.F. = EACH FACE

NOTE:
COLUMN THICKNESS MAY VARY AT TOP TO CREATE PLUMBNESS FOR THE BUTTING MSE WALL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STATE PROJECT NUMBER
2984 - 06 - 76

STRUCTURE R-40-674

DRAWN BY S.S. | PLANS CK'D.

COLUMN DETAILS

SHEET 4 OF 4
67

8

W:\STR\B0934\PLANS\SW_RETWALL\SW_ELEVATION.DGN

REVISED: 08/08/2017 BY GJR

8

GENERAL NOTES

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THE COST OF FURNISHING AND PLACING BACKFILL WITHIN THE REINFORCED SOIL ZONES, UNREINFORCED CONCRETE LEVELING PAD UNDER THE MSE PRECAST WALL PANELS, REINFORCEMENT, GEOTEXTILE FABRIC, ENGINEERED BACKFILL, JOINT MATERIAL, AND OTHER MISCELLANEOUS ITEMS IS INCLUDED IN THE COST OF BID ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH".
ALL BAR STEEL REINFORCEMENT IN CAST IN PLACE CONCRETE IS TO BE EPOXY COATED.
BEVEL ALL EXPOSED EDGES OF CONCRETE 1" UNLESS NOTED OTHERWISE.
THE PLAN QUANTITY FOR THE ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH" IS BASED ON A WALL HEIGHT MEASURED FROM THE TOP OF THE LEVELING PAD TO THE TOP OF WALL AS SHOWN IN THE PLANS.

PLANS, ELEVATIONS AND DETAILS SHOWN ON THESE DRAWINGS ARE INTENDED TO INDICATE WALL LOCATIONS, LENGTHS HEIGHTS, AND DETAILS COMMON TO THE WALL SYSTEM SELECTED. THE CONTRACTOR SHALL VERIFY THAT THE WALL SYSTEM SELECTED WILL CONFORM TO THE REQUIRED ALIGNMENTS AND DETAILS.

THE MAXIMUM VALUE OF THE ANGLE OF INTERNAL FRICTION OF THE WALL BACKFILL MATERIAL IN THE REINFORCED ZONE SHALL BE ASSUMED TO BE 30° WITHOUT CERTIFIED TEST VALUES.

PLACE BACKFILL IN SPECIFIED LAYER THICKNESS STARTING AT BACK FACE OF WALL AND WORKING AWAY FROM WALL.

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TOP OF CONCRETE LEVELING PAD TO BE AT SAME ELEVATION AS TOP OF PROPOSED ABUTMENT FOOTING. APPROX. EL. 79.56

SEE STRUCTURE B-40-925 FOR PARAPET AND STRUCTURAL APPROACH SLAB DETAILS.

"CONSTRUCTION STAKING STRUCTURE LAYOUT" INCLUDES VERIFYING LOCATIONS OF NEW AND EXISTING ABUTMENTS PRIOR TO MSE WALL FABRICATION.

DESIGN DATA

MATERIAL PROPERTIES:

CONCRETE MASONRY	f'c = 4,000 PSI
PRECAST CONCRETE WALL PANEL	f'c = 4,000 PSI
BAR STEEL REINFORCEMENT	fy = 60,000 PSI

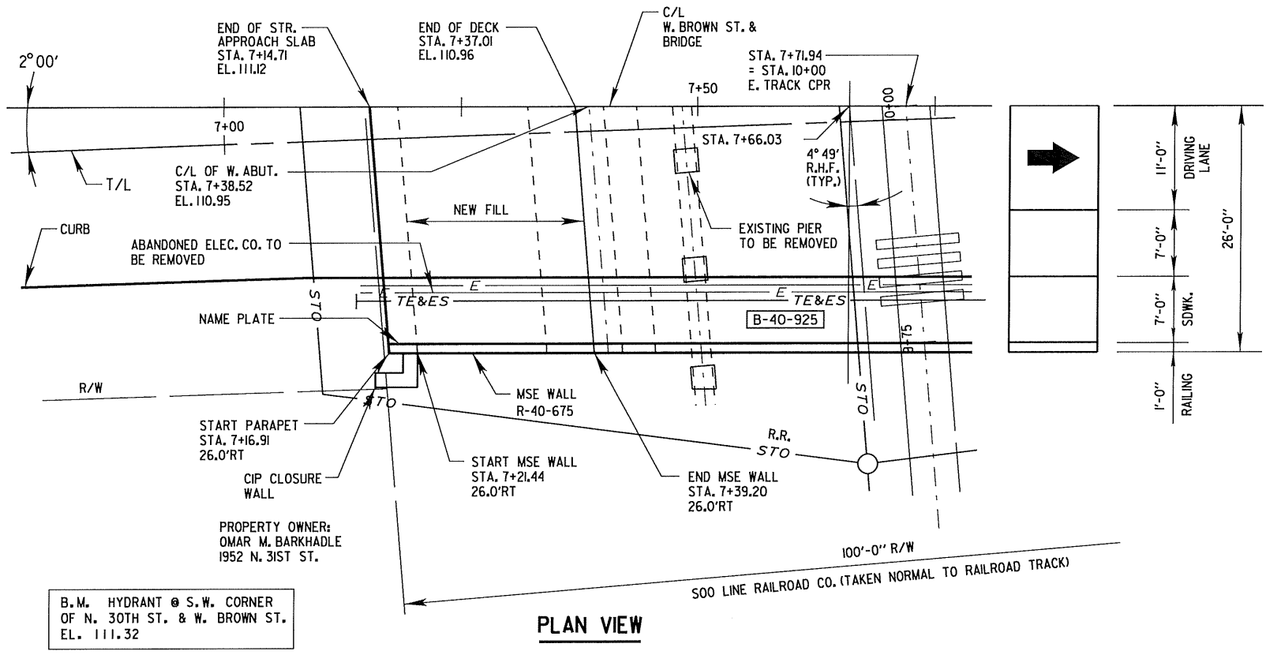
LIVE LOAD:

LIVE LOAD SURCHARGE	240 PSF

WISDOT CONTACT:
WILLIAM DREHER 608-266-8489

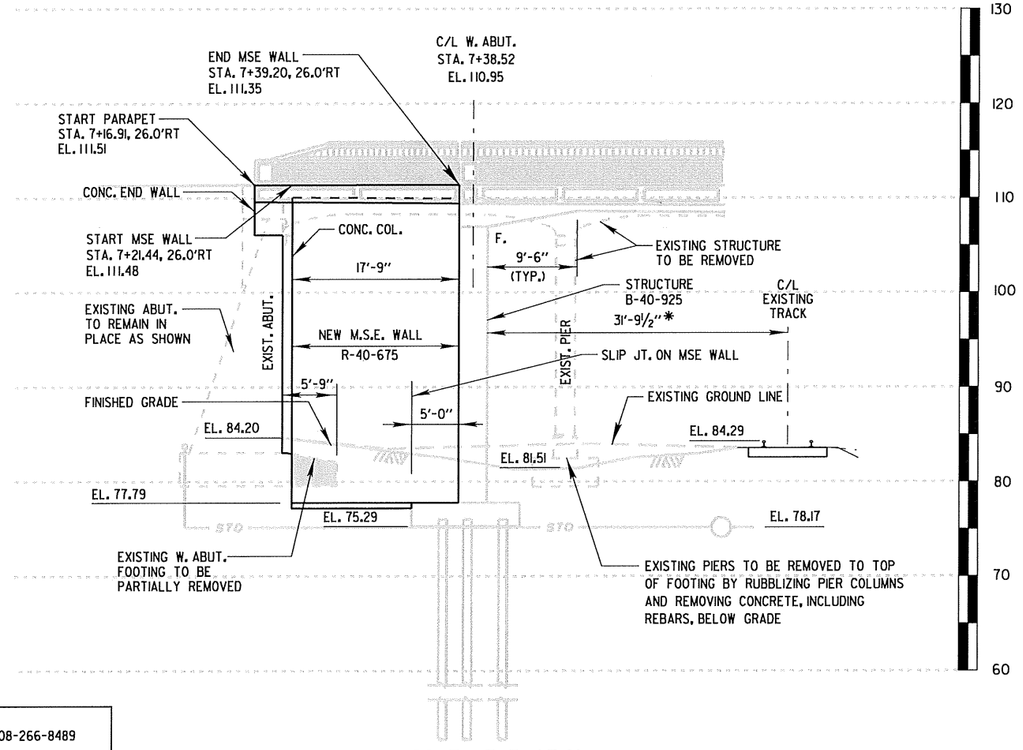
CONSULTANT CONTACT:
CITY OF MILWAUKEE
JERREL KRUSCHKE 414-286-3402

WEST BROWN STREET OVER CANADIAN PACIFIC RAILWAY



B.M. HYDRANT @ S.W. CORNER OF N. 30TH ST. & W. BROWN ST. EL. 111.32

PLAN VIEW



SOUTH ELEVATION

LOOKING NORTH

N

STATE PROJECT NUMBER
2984 - 06 - 76

WALL EXTERNAL STABILITY EVALUATION

DIMENSIONS	EVALUATED LOCATIONS
WALL HEIGHT (FEET)	32'-1''
EXPOSED WALL HEIGHT (FEET)	25'-7''
■ MINIMUM LENGTH OF REINFORCEMENT (FEET)	25'-7''
WALL STATION	7+39.20
BORING USED	BOR-3
CAPACITY TO DEMAND RATIO (CDR)	
	DRAINED
SLIDING (CDR > 1.0)	1.02
ECCENTRICITY (CDR > 1.0)	1.47
OVERALL STABILITY (CDR > 1.0)	1.11
BEARING RESISTANCE (CDR > 1.0)	1.10
FACTORED BEARING RESISTANCE, (PSF)	4,500

SOIL PARAMETERS

STRATUM LOCATION & SOIL DESCRIPTION	UNIT DENSITY (PCF)	FRICTION ANGLE (DEGREES)	COHESION (PSF)
STIFF TO V. STIFF CLAY	135	-	2,000
DENSE TO M. DENSE SAND W/SILT/SILTY SAND/ SANDY CLAY (EL. 36.0 - 52.0)	125	30	-
V. DENSE SANDY SILT (EL. 27.0 - 36.0)	135	36	-
V. STIFF CLAY (EL. 22.0 - 27.0)	135	-	2,500
V. DENSE CLAYEY SAND W/ GRAVEL	140	38	-

GEOMETRY TABLE

STATION	OFFSET TO F.F. WALL	TOP OF WALL ELEV. (AT REF. POINT)	FINISHED GRADE ELEV.
7+21.44	25.5' RT.	111.48	84.20
7+39.20	25.5' RT.	111.35	81.51 MIN.

WISCONSIN
JERREL KRUSCHKE
43536-6
MILWAUKEE, WIS.
PROFESSIONAL ENGINEER
12-11-2017

LIST OF DRAWINGS

1. S.W. RETAINING WALL GENERAL PLAN AND ELEVATION
2. SUBSURFACE EXPLORATION
3. WALL DETAILS AND QUANTITIES
4. COLUMN DETAILS

NO.	DATE	REVISION	BY

ORIGINAL PLANS PREPARED BY
CITY OF MILWAUKEE
DEPARTMENT OF PUBLIC WORKS
INFRASTRUCTURE SERVICES DIVISION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher SCR 12/12/17
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE R-40-675

W. BROWN ST. OVER C.P. RAILWAY

COUNTY MILWAUKEE	~~TOWN~~/CITY/ ~~VILLAGE~~ MILWAUKEE
DESIGN SPEC. AASHTO LRFD SPECIFICATIONS	

DESIGNED BY J.P.H.	DESIGN CK'D. M.S.A.	DRAWN BY G.J.R.	PLANS CK'D. A.R.

S.W. RETAINING WALL GENERAL PLAN AND ELEVATION

SHEET 68 OF 4

8

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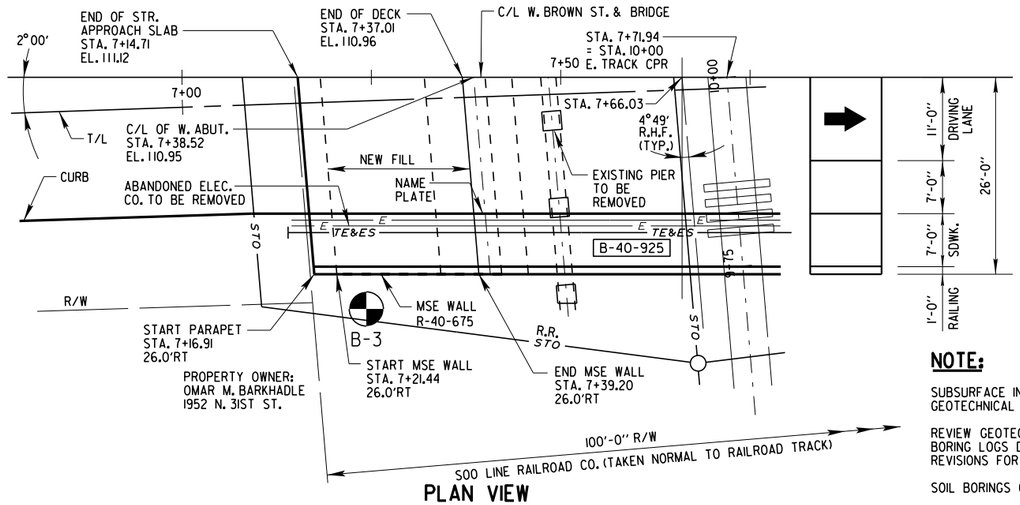
REVISED: 05/16/2017 BY DB

WEST BROWN STREET
OVER CANADIAN PACIFIC RAILWAY



PLAN VIEW

N

NOTE:

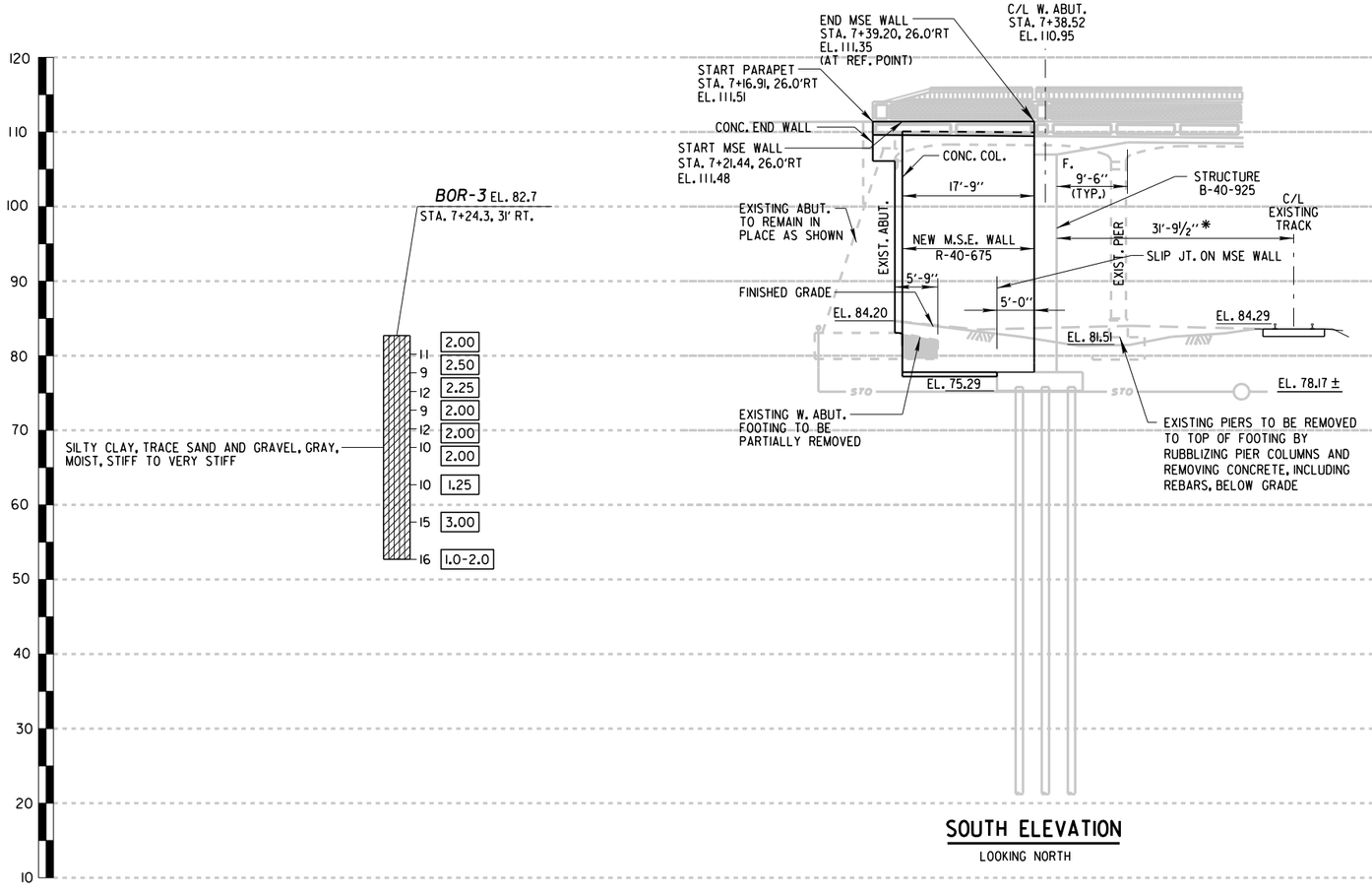
SUBSURFACE INFORMATION ON PLAN SHEET SUMMARIZES GEOTECHNICAL ENGINEERING REPORT.

REVIEW GEOTECHNICAL ENGINEERING REPORT AND SOIL BORING LOGS DATED FEBRUARY 4, 2016 AND SUBSEQUENT REVISIONS FOR ADDITIONAL SUBSURFACE INFORMATION.

SOIL BORINGS COMPLETED BY GESTRA ENGINEERING.

- SOIL BORING

UTILITY INFORMATION AS SHOWN IS NOT ALL INCLUSIVE FOR CLARITY. REFER TO SITE PLAN SHEET NO. 1.



SOUTH ELEVATION

LOOKING NORTH

STATE PROJECT NUMBER

2984 - 06 - 76

ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

MATERIAL SYMBOLS

TOPSOIL SILT SANDSTONE
SAND PEAT LIMESTONE
GRAVEL CLAY IGNEOUS ROCK

LEGEND OF PROBING

95/6=95 BLOWS FOR 6" PENETRATION
PROBING TAKEN WITH A 350# WT. FALLING 18" ON A 2" O.D. POINT.

PROBING NO.
STA.
ELEVATION
7 AVERAGE BLOWS PER FOOT
REFUSAL 95/6

LEGEND OF BORING

BORING NO.
STA.
ELEV.
UNCONFINED STRENGTH → 7.7
BLOWS PER FT. USING 140# WT. FALLING 30" → 7
WASH SAMPLE
SHELBY TUBE — S.T.
GROUND WATER ELEVATION
NO GROUND WATER OBSERVED ABOVE THIS ELEVATION
SANDY GRAVEL
F. BOULDERS OR COBBLES
SAND
SILTY CLAY
SO LIMESTONE

UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-675

DRAWN BY G.J.R. PLANS CK'D. A.R.

SUBSURFACE EXPLORATION

SHEET 2 OF 4
69

8

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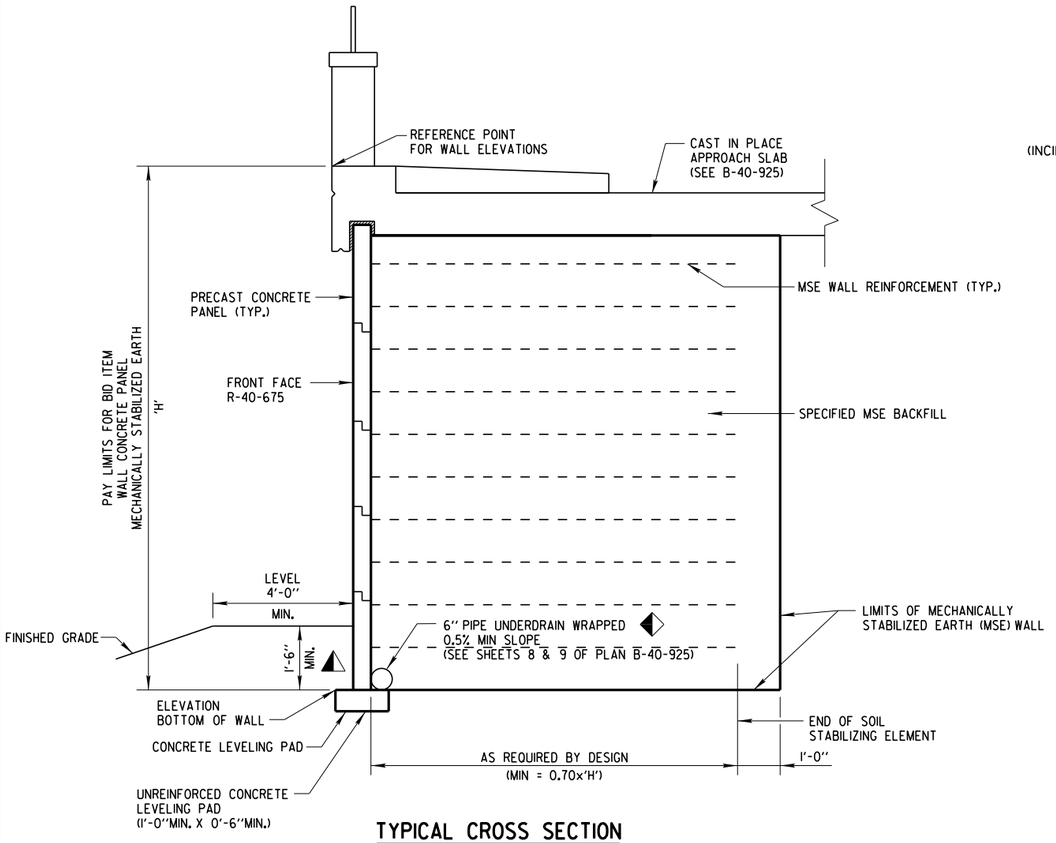
REVISED: 12/06/2017 BY GJR

STATE PROJECT NUMBER

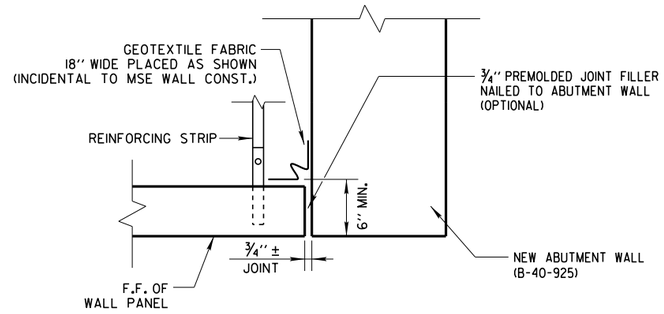
2984 - 06 - 76



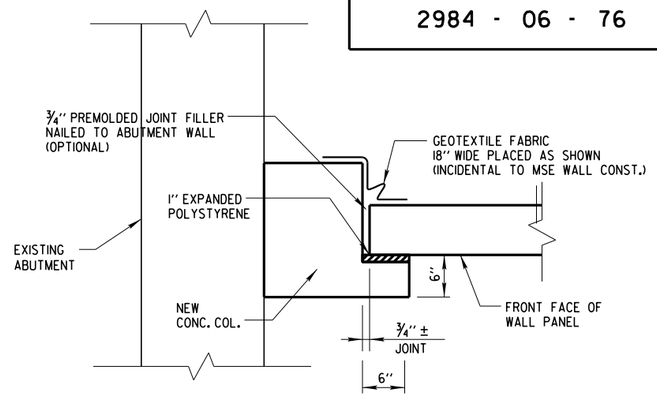
TYPICAL CROSS SECTION

◭ MINIMUM EMBEDMENT BASED ON SITE SPECIFIC PARAMETERS (1'-6" MINIMUM FOR ALL WALLS ON LEVEL GROUND). FIELD EMBEDMENTS SHALL MEET OR EXCEED THE MINIMUM EMBEDMENT. FIELD EMBEDMENTS BELOW MINIMUM EMBEDMENT SHALL NOT BE INCLUDED IN THE PAY LIMITS.

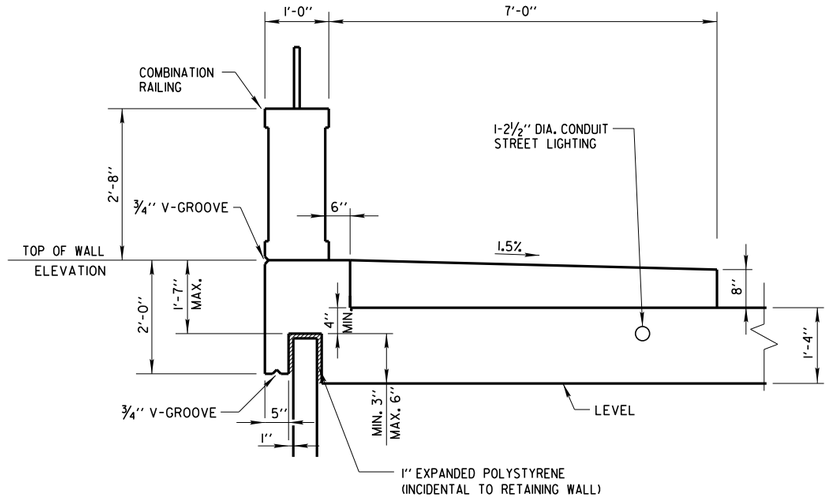
◈ SEE STRUCTURE B-40-925 FOR PIPE UNDER DRAIN. MSE WALL UNDER DRAIN IS CONNECTED TO AND DRAINS INTO THE BRIDGE UNDER DRAIN.



BUTT JOINT DETAIL AT NEW ABUTMENT WALL



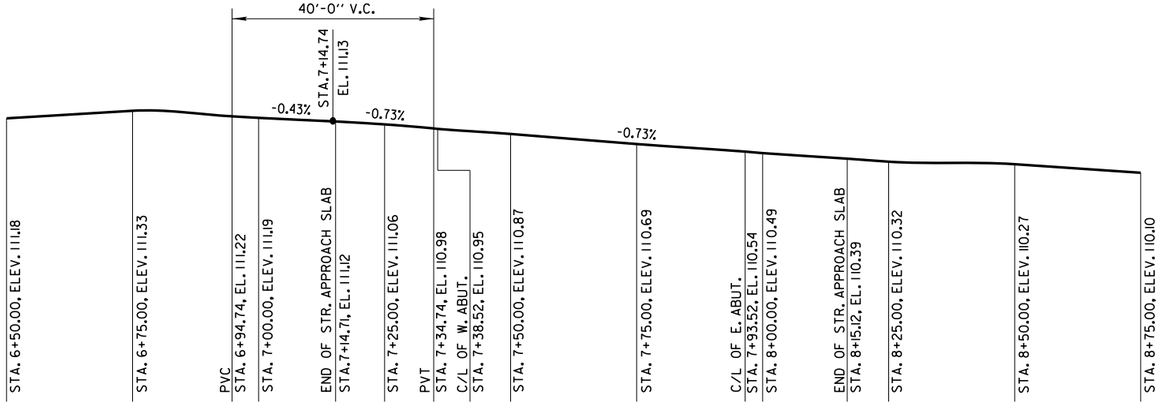
BUTT JOINT DETAIL AT CONCRETE COLUMN



CAST IN PLACE CONCRETE BARRIER DETAIL

ESTIMATE OF QUANTITIES

ITEM NO.	BID ITEM	UNIT	TOTAL
206.3000	EXCAVATION FOR STRUCTURES RETAINING WALLS R-40-675	LS	1
502.4205	ADHESIVE ANCHORS NO. 5 BAR	EACH	60
504.0500	CONCRETE MASONRY RETAINING WALLS	CY	3
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	490
509.1500	CONCRETE SURFACE REPAIR	SF	2
516.0100	DAMPPROOFING	SY	10
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	18
SPV.0165.03	WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH R-40-675	SF	570
	NON BID ITEMS		
	PREMOLDED JOINT FILLER	SIZE	
	NON BITUMINOUS JOINT FILLER	SIZE	
	NAME PLATE	EACH	



PROFILE GRADE LINE ALONG C/L OF W. BROWN ST.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-675

DRAWN BY D.B. | PLANS CK'D. A.R.

WALL DETAILS AND QUANTITIES

SHEET 3 OF 4

70

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REVISED: 05/24/2017 BY ML

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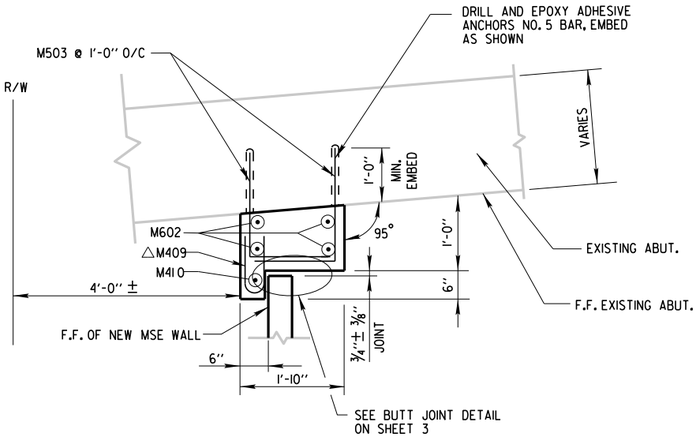
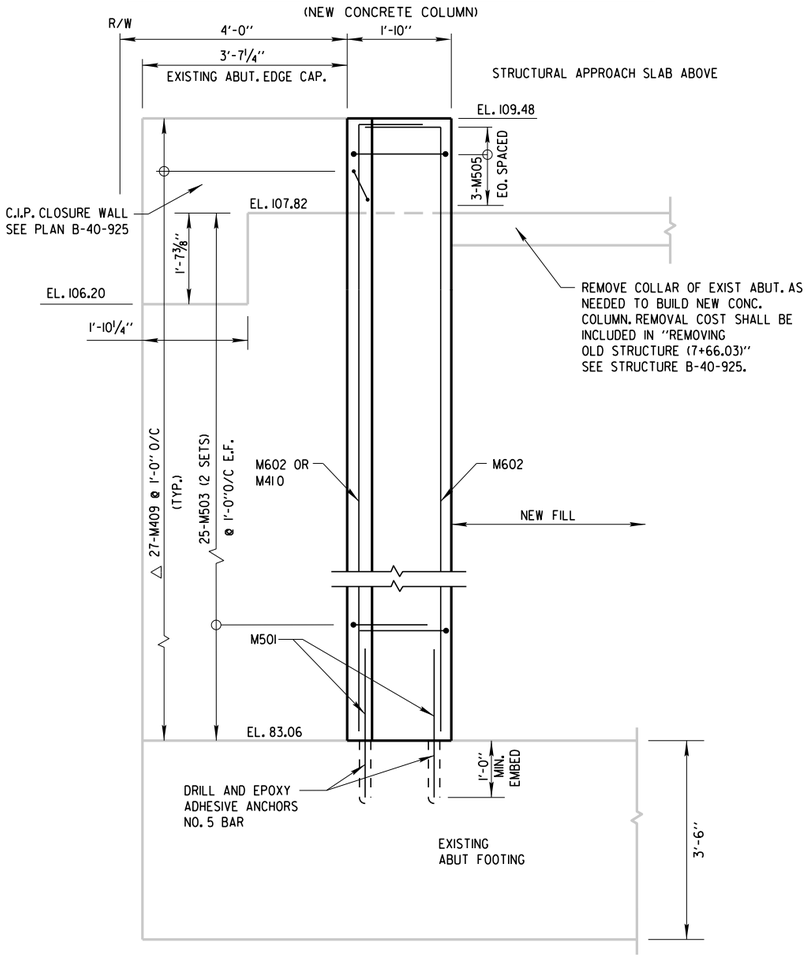
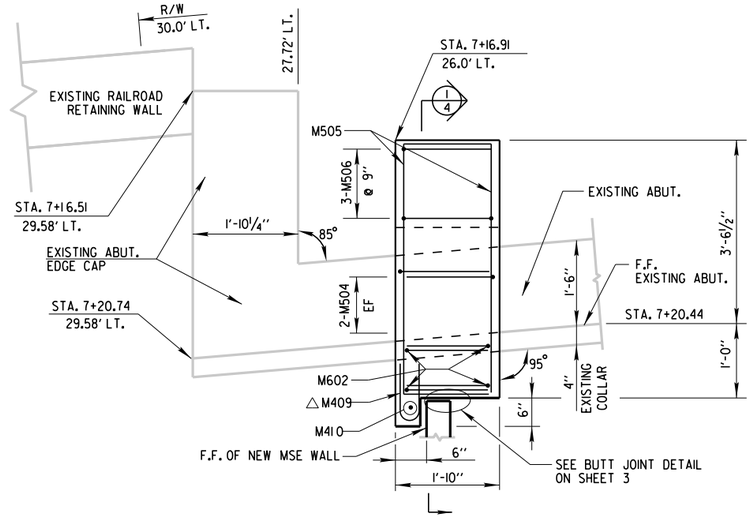


PLAN VIEW (FROM EL. 83.06 TO EL. 107.82)

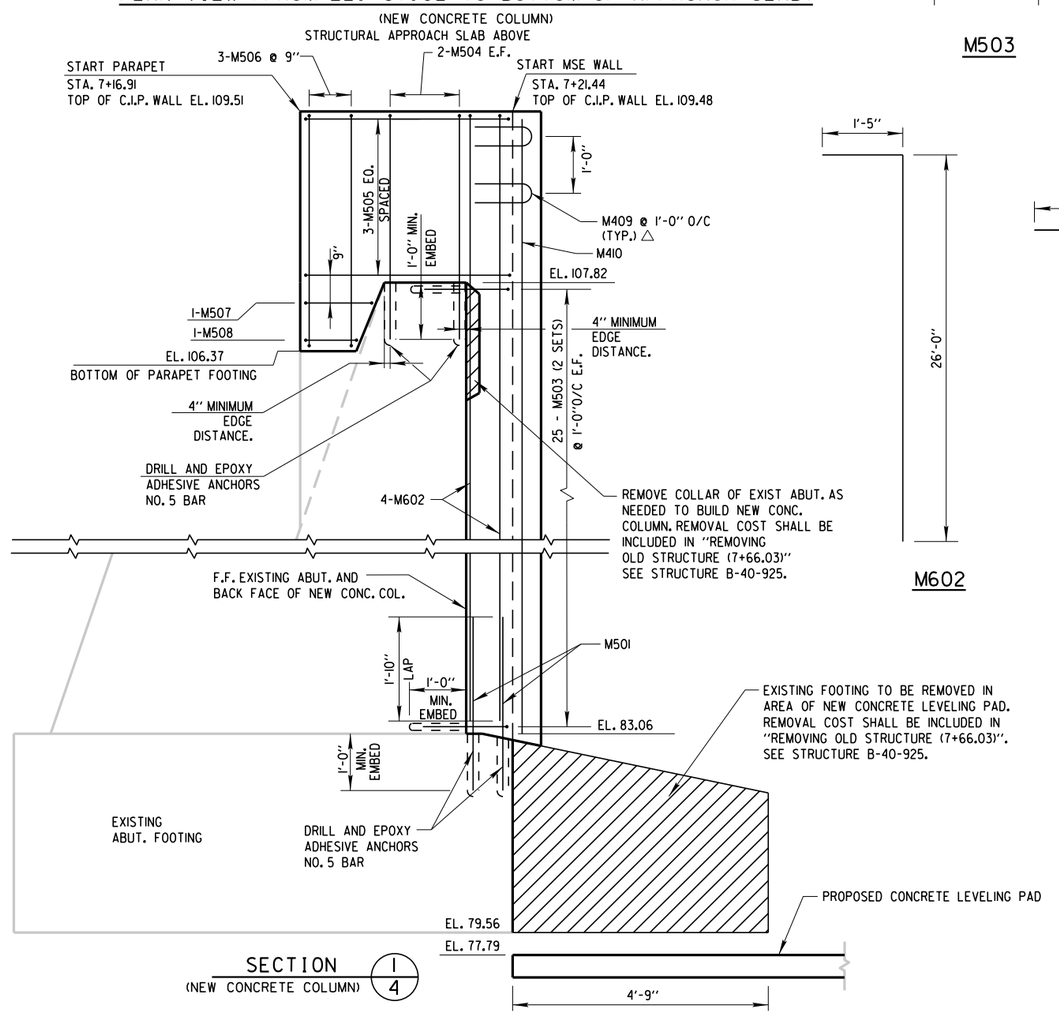


ELEVATION VIEW - FRONT FACE - LOOKING WEST

(NEW CONCRETE COLUMN)



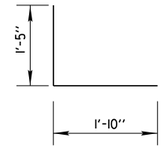
PLAN VIEW (FROM EL. 107.82 TO BOTTOM OF APPROACH SLAB)



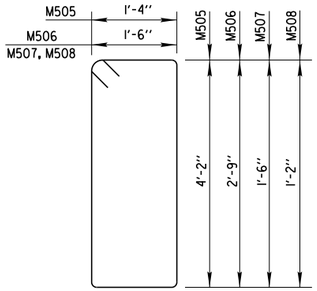
SECTION (I/4) (NEW CONCRETE COLUMN)

BILL OF BARS - COLUMN

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	LOCATION
M501	X	4	2'-10"		DOWELS
M602	X	4	27'-3"	X	VERT. BAR
M503	X	50	3'-2"	X	STIRRUP/ DOWELS
M504	X	4	3'-9"	X	VERT. BAR
M505	X	3	11'-8"	X	HORIZONTAL
M506	X	3	9'-2"	X	VERT. BAR
M507	X	1	6'-8''	X	HORIZONTAL
M508	X	1	6'-0"	X	HORIZONTAL
M409	X	27	2'-2"	X	STIRRUPS
M410	X	1	26'-1"		VERT. BAR



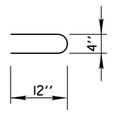
M503



M505, M506
M507, M508

M504

M602



M409
△ PLACED 45° TO HORIZONTAL

B.F. = BACK FACE

F.F. = FRONT FACE

E.F. = EACH FACE

NOTE:
COLUMN THICKNESS MAY VARY AT TOP TO CREATE PLUMBNESS FOR THE BUTTING MSE WALL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STATE PROJECT NUMBER
2984 - 06 - 76

STRUCTURE R-40-675

DRAWN BY D.B. | PLANS CK'D. J.P.H.

COLUMN DETAILS

SHEET 4 OF 4
71

8

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REVISED: 08/08/2017 BY GJR

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

ALL STATIONS AND ALL ELEVATIONS ARE IN FEET.
ALL ELEVATIONS ARE REFERRED TO CITY OF MILWAUKEE DATUM.
CITY OF MILWAUKEE DATUM = 580.60 (NGVD29)

DIMENSIONS AND STATIONS ARE MEASURED IN RELATION TO THE C/L OF W. BROWN ST.

ALL DIMENSIONS ALONG THE FRONT FACE OF WALL UNLESS OTHERWISE OR FIRST SHOWN.

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

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PRECAST CONCRETE WALL PANEL	f'c = 4,000 PSI
BAR STEEL REINFORCEMENT	fy = 60,000 PSI

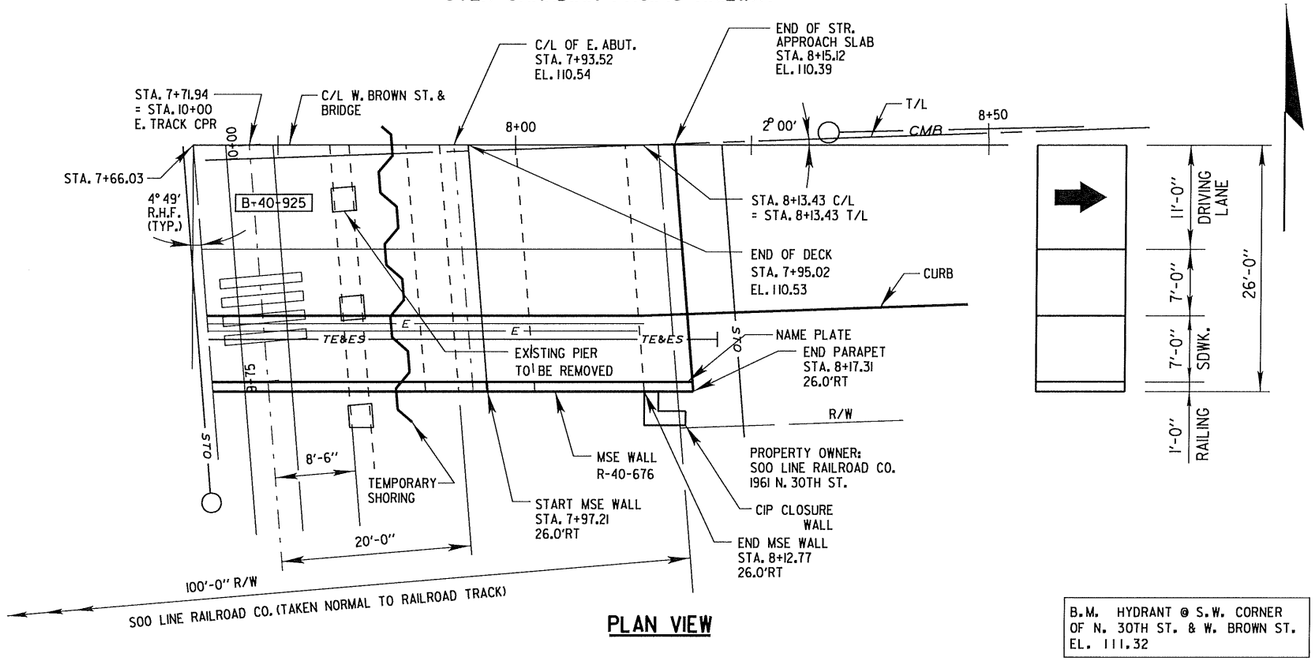
LIVE LOAD:

LIVE LOAD SURCHARGE	240 PSF

WISDOT CONTACT:
WILLIAM DREHER 608-266-8489

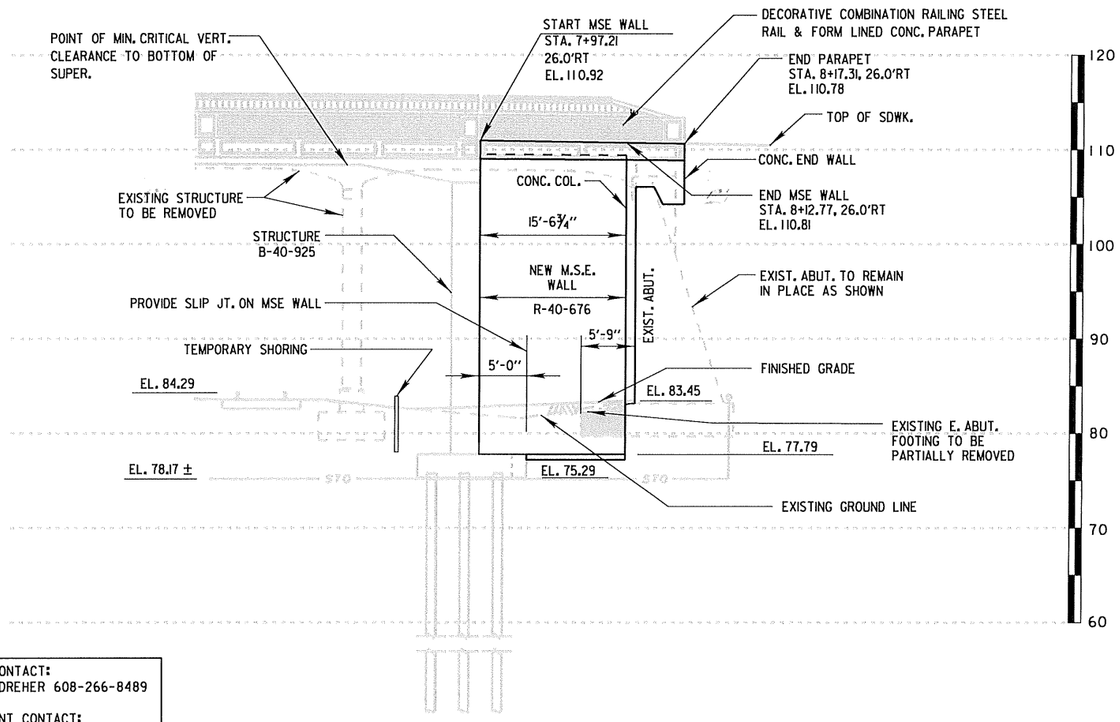
CONSULTANT CONTACT:
CITY OF MILWAUKEE
JERREL KRUSCHKE 414-286-3402

WEST BROWN STREET OVER CANADIAN PACIFIC RAILWAY



PLAN VIEW

B.M. HYDRANT @ S.W. CORNER OF N. 30TH ST. & W. BROWN ST. EL. 111.32



SOUTH ELEVATION

LOOKING NORTH
(TAKEN NORMAL TO TRACKS)

LIST OF DRAWINGS

1. SE. RETAINING WALL GENERAL PLAN AND ELEVATION
2. SUBSURFACE EXPLORATION
3. WALL DETAILS AND QUANTITIES
4. COLUMN DETAILS

N

STATE PROJECT NUMBER
2984 - 06 - 76

WALL EXTERNAL STABILITY EVALUATION

DIMENSIONS	EVALUATED LOCATIONS
WALL HEIGHT (FEET)	31'-6"
EXPOSED WALL HEIGHT (FEET)	25'-10"
■ MINIMUM LENGTH OF REINFORCEMENT (FEET)	25'-2"
WALL STATION	7+97.21
BORING USED	BOR-4
CAPACITY TO DEMAND RATIO (CDR)	
	DRAINED
SLIDING (CDR > 1.0)	1.02
ECCENTRICITY (CDR > 1.0)	1.47
OVERALL STABILITY (CDR > 1.0)	1.11
BEARING RESISTANCE (CDR > 1.0)	1.11
FACTORED BEARING RESISTANCE, (PSF)	4,500

SOIL PARAMETERS

STRATUM LOCATION & SOIL DESCRIPTION	UNIT DENSITY (PCF)	FRICTION ANGLE (DEGREES)	COHESION (PSF)
STIFF TO V. STIFF CLAY	135	-	2,000
M. DENSE SILT/SILTY SAND (EL. 52.0 - 57.0)	125	30	-
HARD CLAY (EL. 46.0 - 52.0)	140	-	4,500
V. DENSE SILT/SILTY SAND (EL. 32.0 - 46.0)	135	36	-
M. DENSE CLAYEY SAND (EL. 27.0 - 32.0)	125	32	-
V. STIFF CLAY (EL. 24.0 - 27.0)	135	-	2,000
V. DENSE SANDY SILT W/GRAVEL (TILL)	140	38	-

GEOMETRY TABLE

STATION	OFFSET TO F.F. WALL	TOP OF WALL ELEV. (AT REF. POINT)	FINISHED GRADE ELEV.
7+97.21	25.5	110.92	81.51
8+12.77	25.5	110.81	83.45

WISCONSIN
JERREL KRUSCHKE
43536-6
MILWAUKEE, WIS.
PROFESSIONAL ENGINEER
12-11-2017

NO.	DATE	REVISION	BY

ORIGINAL PLANS PREPARED BY
CITY OF MILWAUKEE
DEPARTMENT OF PUBLIC WORKS
INFRASTRUCTURE SERVICES DIVISION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
ACCEPTED William C. Dreher SDR 12/12/17
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE R-40-676

W. BROWN ST. OVER C.P. RAILWAY

COUNTY MILWAUKEE	~~TOWN~~/CITY/~~VILLAGE~~ MILWAUKEE
DESIGN SPEC. AASHTO LRFD SPECIFICATIONS	
DESIGNED BY J.P.H.	DESIGN CK'D. M.S.A.
DRAWN BY G.J.R.	PLANS CK'D. A.R.

S.E. RETAINING WALL GENERAL PLAN AND ELEVATION

SHEET 72 OF 4

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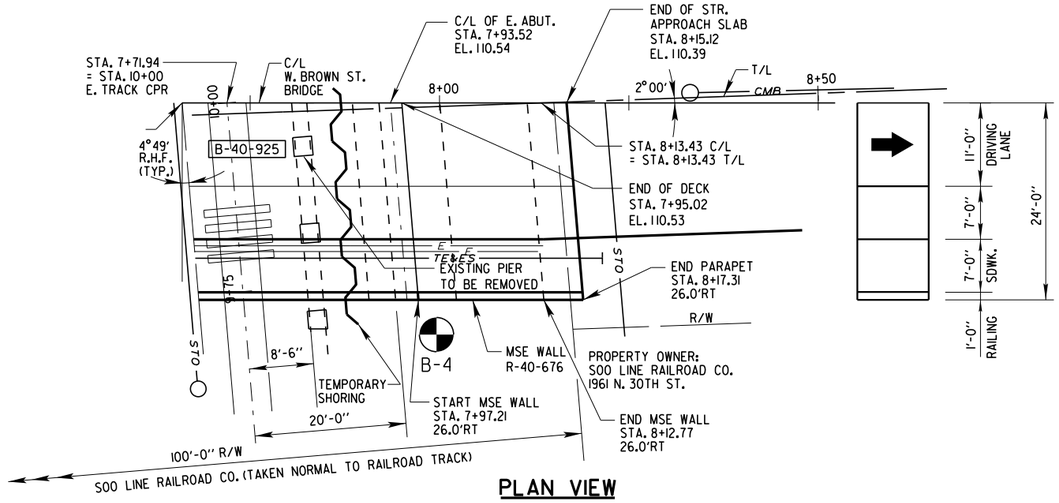
W:\STR\B0934\PLANS\SE_RETWALL\2SE_RWSUBSURFACE.DGN

REVISED: 05/16/2017 BY DB

WEST BROWN STREET
OVER CANADIAN PACIFIC RAILWAY



PLAN VIEW

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NOTE:

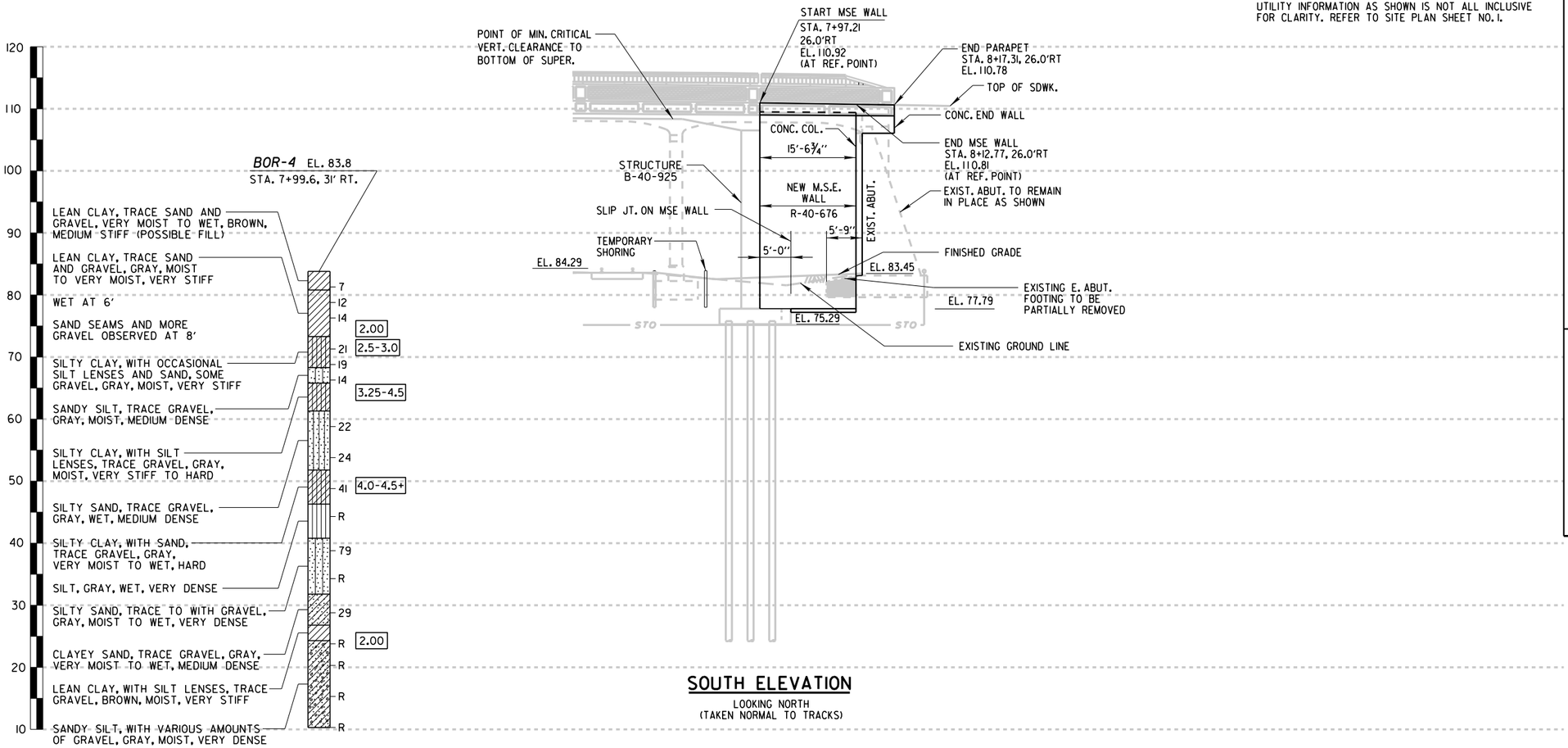
SUBSURFACE INFORMATION ON PLAN SHEET SUMMARIZES GEOTECHNICAL ENGINEERING REPORT.

REVIEW GEOTECHNICAL ENGINEERING REPORT AND SOIL BORING LOGS DATED FEBRUARY 4, 2016 AND SUBSEQUENT REVISIONS FOR ADDITIONAL SUBSURFACE INFORMATION.

SOIL BORINGS COMPLETED BY GESTRA ENGINEERING.

- SOIL BORING

UTILITY INFORMATION AS SHOWN IS NOT ALL INCLUSIVE FOR CLARITY. REFER TO SITE PLAN SHEET NO. 1.



SOUTH ELEVATION

LOOKING NORTH
(TAKEN NORMAL TO TRACKS)

STATE PROJECT NUMBER

2984 - 06 - 76

ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

MATERIAL SYMBOLS

TOPSOIL, SILT, SANDSTONE
SAND, PEAT, LIMESTONE
GRAVEL, CLAY, IGNEOUS ROCK

LEGEND OF PROBING

95/6=95 BLOWS FOR 6" PENETRATION
PROBING TAKEN WITH A 350# WT. FALLING 18" ON A 2" O.D. POINT.

PROBING NO.
STA.
ELEVATION
7 AVERAGE BLOWS PER FOOT
REFUSAL 95/6

LEGEND OF BORING

BORING NO.
STA.
ELEV.
UNCONFINED STRENGTH → 7.7
BLOWS PER FT. USING 140# WT. FALLING 30"
WASH SAMPLE
SHELBY TUBE — S.T.
GROUND WATER ELEVATION
NO GROUND WATER OBSERVED ABOVE THIS ELEVATION
SANDY GRAVEL
F. BOULDERS OR COBBLES
SAND
SILTY CLAY
SO LIMESTONE

UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-676

DRAWN BY G.J.R. | PLANS CK'D. A.R.

SUBSURFACE EXPLORATION

SHEET 2 OF 4
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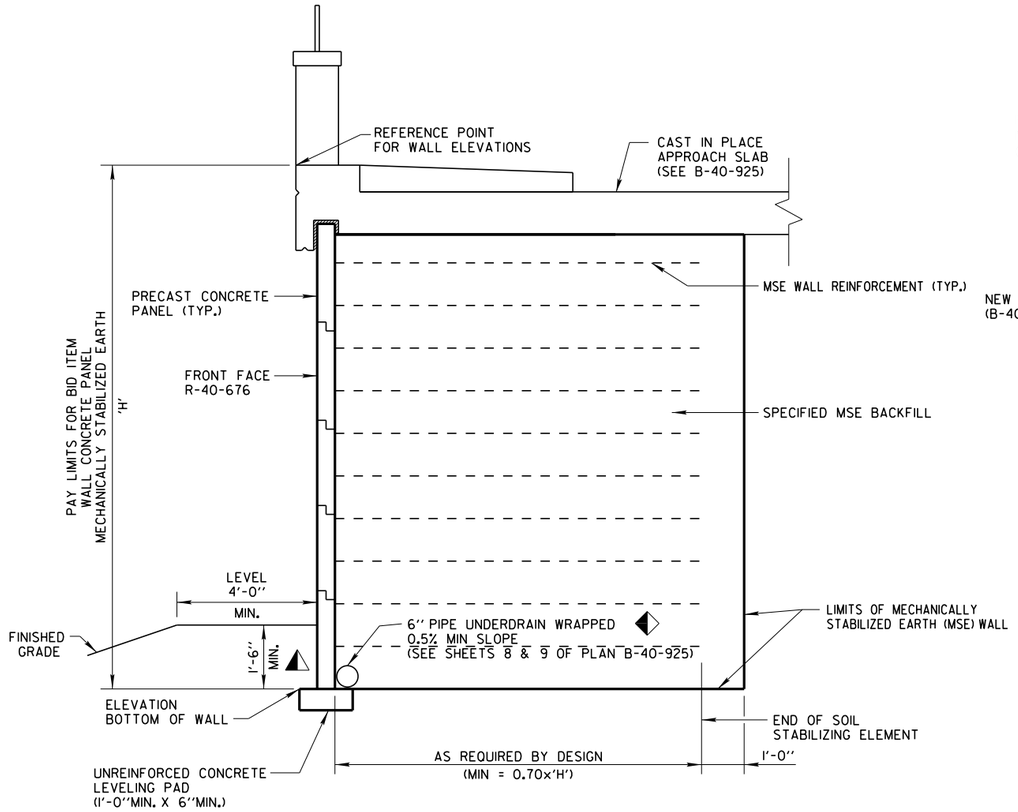
REVISED: 12/11/2017 BY GJR

STATE PROJECT NUMBER

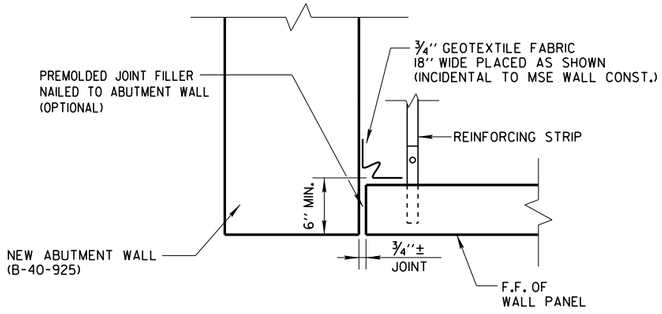
2984 - 06 - 76



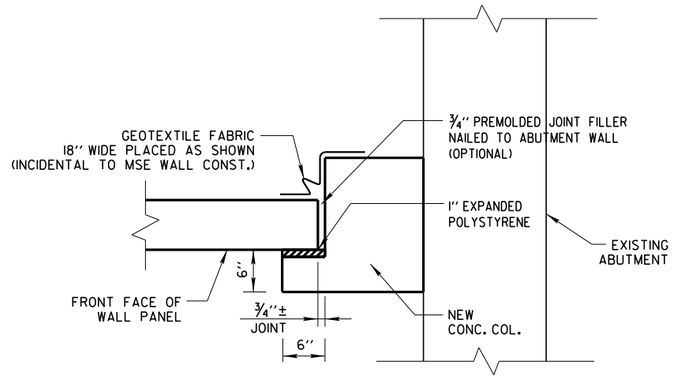
TYPICAL CROSS SECTION

▲ MINIMUM EMBEDMENT BASED ON SITE SPECIFIC PARAMETERS (1'-6" MINIMUM FOR ALL WALLS ON LEVEL GROUND). FIELD EMBEDMENTS SHALL MEET OR EXCEED THE MINIMUM EMBEDMENT. FIELD EMBEDMENTS BELOW MINIMUM EMBEDMENT SHALL NOT BE INCLUDED IN THE PAY LIMITS.

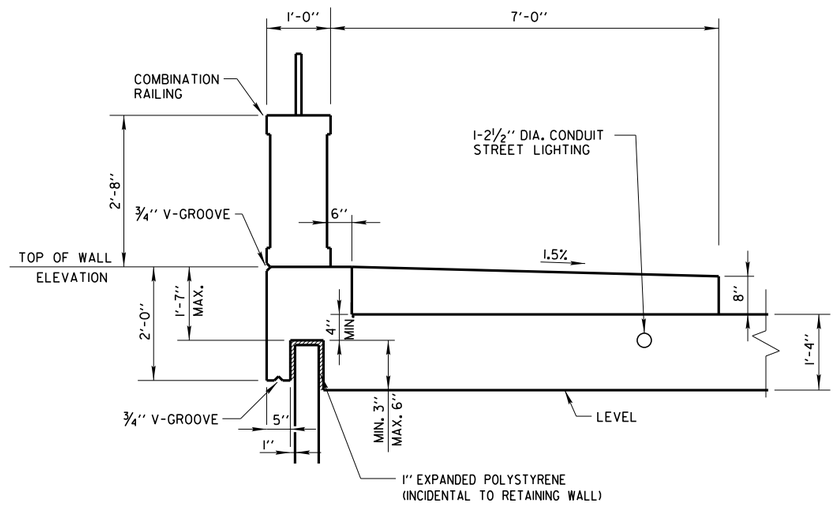
◆ SEE STRUCTURE B-40-925 FOR PIPE UNDER DRAIN. MSE WALL UNDER DRAIN IS CONNECTED TO AND DRAINS INTO THE BRIDGE UNDER DRAIN.



BUTT JOINT DETAIL AT NEW ABUTMENT WALL



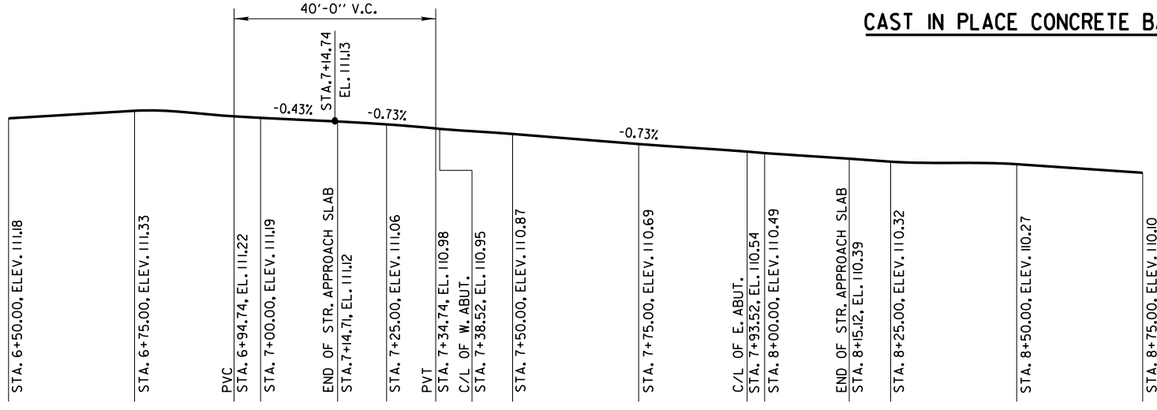
BUTT JOINT DETAIL AT CONCRETE COLUMN



CAST IN PLACE CONCRETE BARRIER DETAIL

ESTIMATE OF QUANTITIES

ITEM NO.	BID ITEM	UNIT	TOTAL
206.3000	EXCAVATION FOR STRUCTURES RETAINING WALLS R-40-676	LS	1
502.4205	ADHESIVE ANCHORS NO. 5 BAR	EACH	58
504.0500	CONCRETE MASONRY RETAINING WALLS	CY	3
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	480
509.1500	CONCRETE SURFACE REPAIR	SF	2
516.0100	DAMPPROOFING	SY	10
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	16
SPV.0165.04	WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH R-40-676	SF	491
	NON BID ITEMS		
	PREMOLDED JOINT FILLER	SIZE	
	NON BITUMINOUS JOINT FILLER	SIZE	
	NAME PLATE	EACH	



PROFILE GRADE LINE ALONG C/L OF W. BROWN ST.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-676

DRAWN BY D.B. | PLANS CK'D. A.R.

WALL DETAILS AND QUANTITIES

SHEET 3 OF 4

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REVISED DATE: 05/24/2017 BY ML

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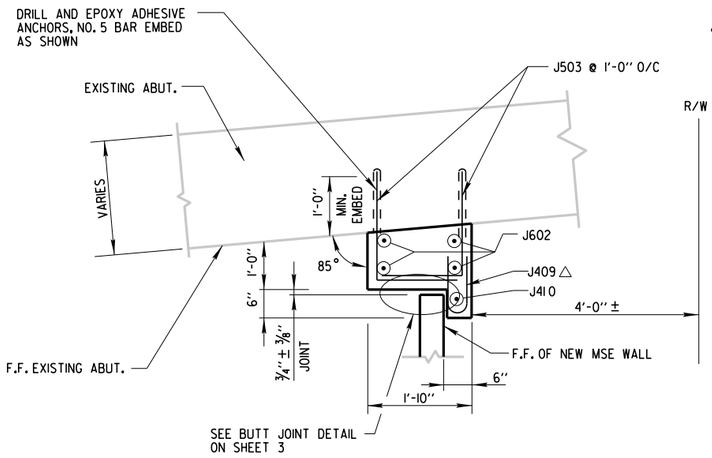
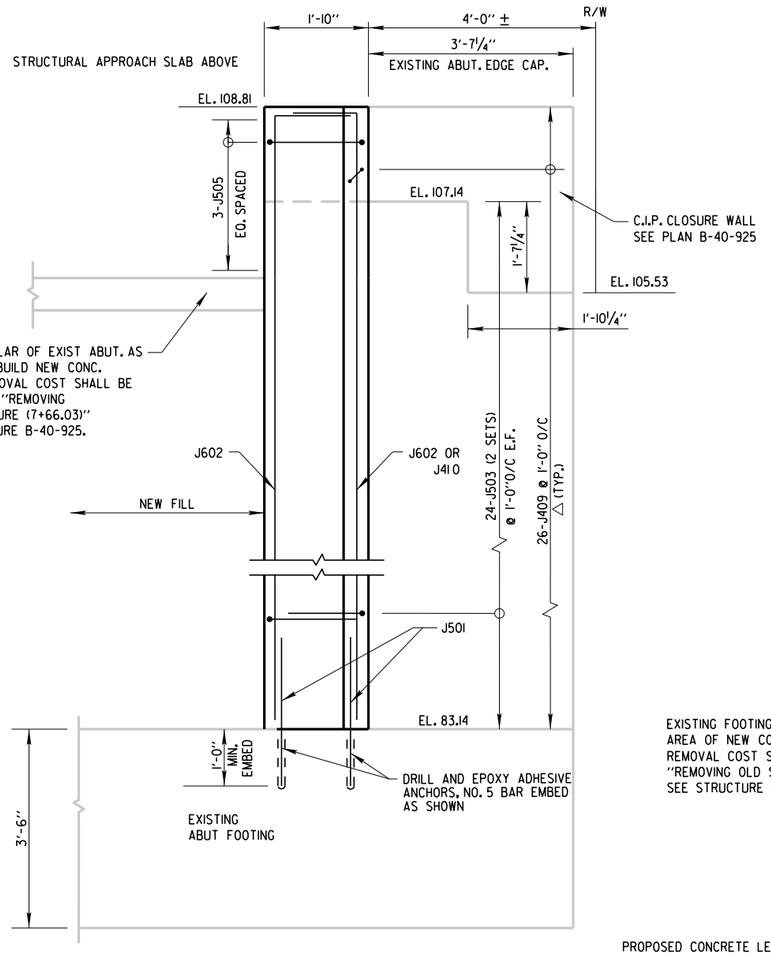


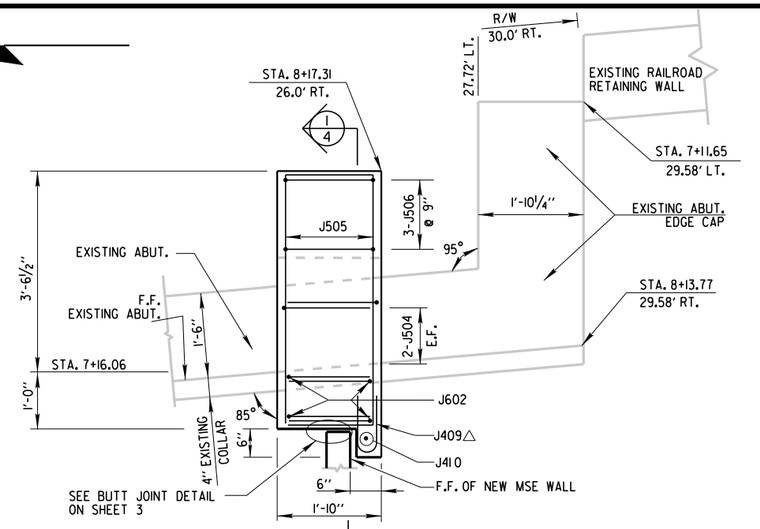
PLAN VIEW (FROM EL. 83.14 TO EL. 107.14)

(NEW CONCRETE COLUMN)



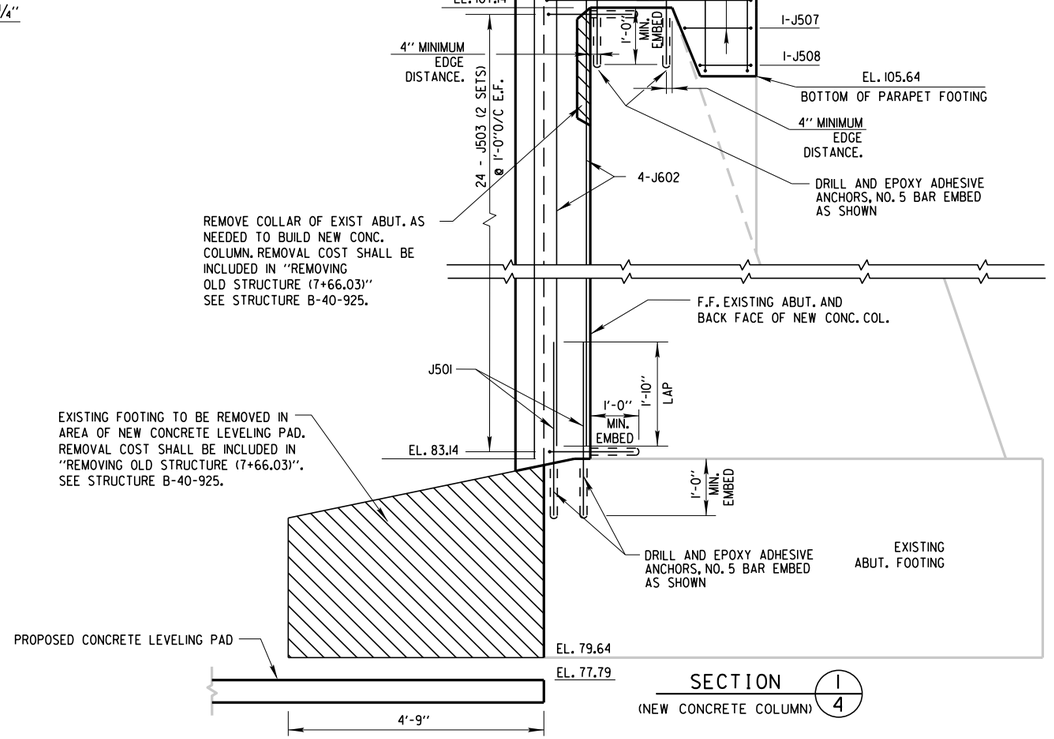
ELEVATION VIEW - FRONT FACE - LOOKING EAST

(NEW CONCRETE COLUMN)



PLAN VIEW (FROM EL. 107.14 TO BOTTOM OF APPROACH SLAB)

(NEW CONCRETE COLUMN)



SECTION 1/4

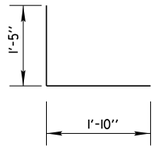
(NEW CONCRETE COLUMN)

STATE PROJECT NUMBER

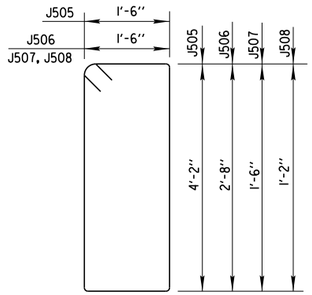
2984 - 06 - 76

BILL OF BARS - COLUMN

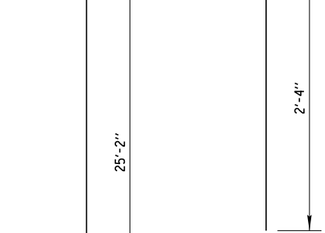
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	LOCATION
J501	X	4	2'-10''		DOWELS
J602	X	4	26'-6''	X	VERT. BAR
J503	X	48	3'-2''	X	STIRRUP/ DOWELS
J504	X	4	3'-9''	X	VERT. BAR
J505	X	3	11'-8''	X	HORIZONTAL
J506	X	3	9'-0''	X	VERT. BAR
J507	X	1	6'-8''	X	HORIZONTAL
J508	X	1	6'-0''	X	HORIZONTAL
J409	X	26	2'-2''	X	STIRRUPS
J410	X	1	25'-4''		VERT. BAR



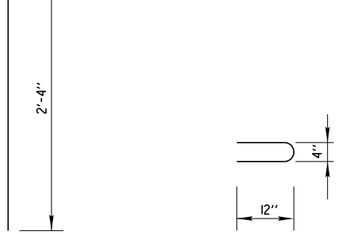
J503



J505, J506
J507, J508



J602



J504

J409

△ PLACED 45° TO HORIZONTAL

B.F. = BACK FACE

F.F. = FRONT FACE

E.F. = EACH FACE

NOTE:

COLUMN THICKNESS MAY VARY AT TOP TO CREATE PLUMBNESS FOR THE BUTTING MSE WALL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-676

DRAWN BY D.B. | PLANS CK'D. J.P.H.

COLUMN DETAILS

SHEET 4 OF 4

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Wisconsin Department of Transportation

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