GRE

PROJECT ID: 1420-23-71

WITH: N/A

53

COUNTY: FOND DU LAC

MAY 2015

ORDER OF SHEETS

Section No.	1	Title
Section No.	2	Typical Sections and Details (Includes Erosion Control Plans)
Section No.	3	Estimate of Quantities
Section No.	3	Miscellaneous Quantities
Section No.	4	Right of Way Plat
Section No.	5	Plan and Profile
Section No.	6	Standard Detail Drawings
Section No.	7	Sign Plates
Section No.	8	Structure Plans
Section No.	9	Computer Earthwork Data
Section No.	9	Cross Sections

TOTAL SHEETS = 646

SUB-CONTRACTOR LIST
Barricade Flasher Service, Inc.
Bodart Electric Service, Inc.
Fencing Plus, Inc.
Guide Liines Pavement Maring, LLC.
HB Wick Drains
Lunda Construction Company
Martell Construction, Inc.
Mid-State Concrete Cutting Co.
North Farm Landscaping, LLC.
Northeast Asphalt, Inc.
Sommers Construction Co. Inc.
Wisconsin Land Surveying, Inc.

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

FOND DU LAC BYPASS

CTH T OVERPASS

USH 151

FOND DU LAC

STATE PROJECT NUMBER
1420-23-71

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1420-23-71	WISC 2015306	1

AS-BUILT PLANS B-20-27

SUPERVISOR: Rob Wagner
PROJECT MANAGER: Bryon Learst
PROJECT LEADER: Brooks Fechhelm
CONTRACTOR: Mashuda Contractors, Inc.
WORK START DATE: June 16, 2015
WORK COMPLETED DATE: December 6, 2016

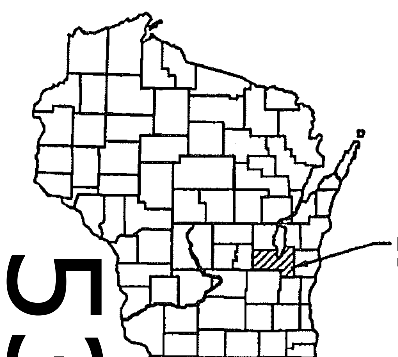
ORIGINAL PLANS PREPARED BY
OMNI ASSOCIATES

WISCONSIN RYAN E. BETKER E-38778 NEENAH WI PROFESSIONAL ENGINEER
2-19-15

ORIGINAL PLANS PREPARED BY
GREMMER & ASSOCIATES, INC. CONSULTING ENGINEERS
Stevens Point • Fond du Lac
83 South Pioneer Road, Suite 300 • Fond du Lac, WI 54935
(920) 924-8720 • fax (920) 924-8725

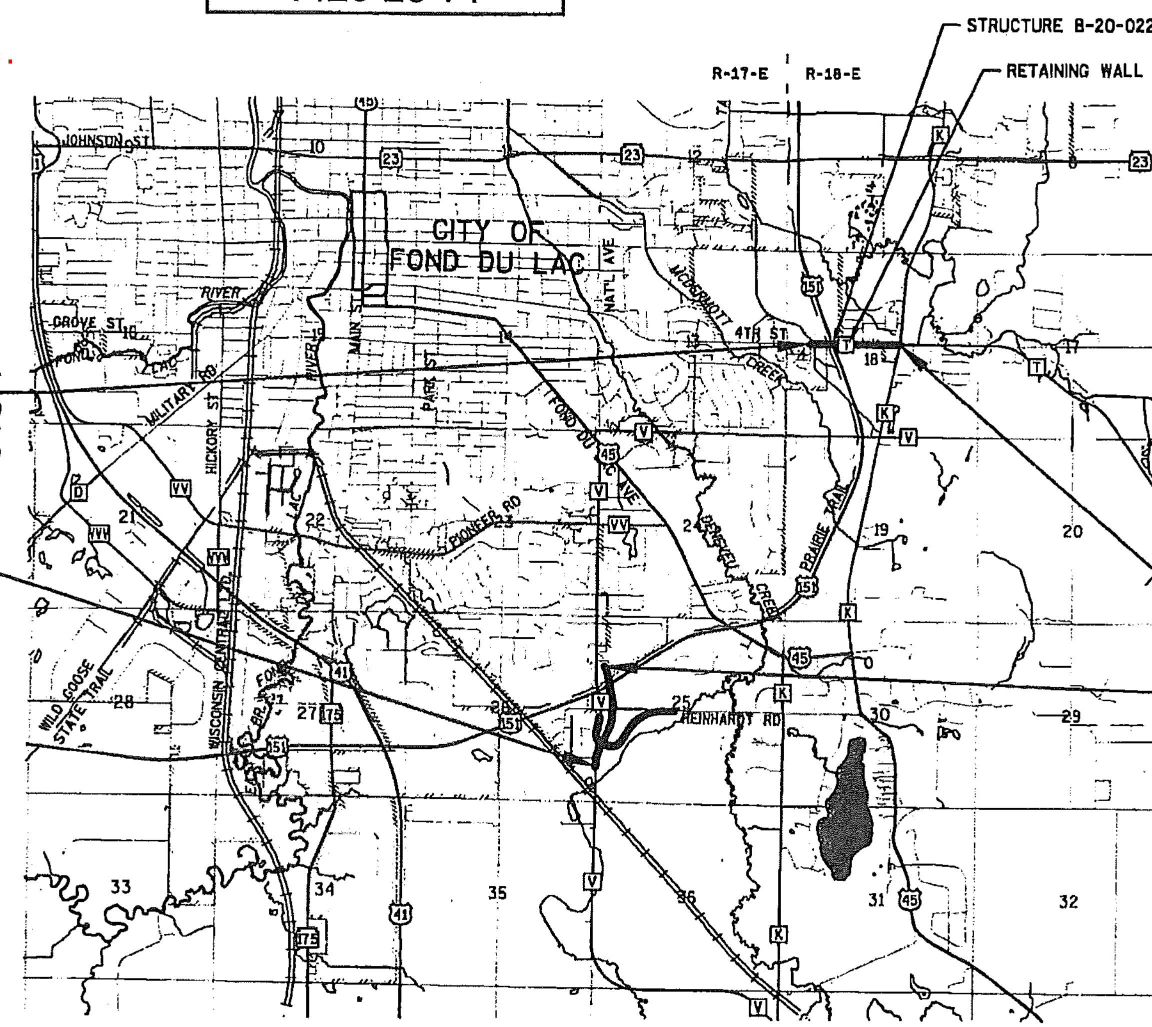
WISCONSIN JEFFREY A. CHVOSTA E-39047 SLINGER, WI PROFESSIONAL ENGINEER
2/10/15

(Date) JEFFREY A. CHVOSTA, PE



DESIGN DESIGNATION

			CTH T	CTH V
A.A.D.T.	(2006)	=	3,000	3,000
A.A.D.T.	(2038)	=	5,800	4,700
D.H.V.	(2038)	=	638	517
D.D.		=	60/40	60/40
T.		=	7.1	7.1
DESIGN SPEED		=	40 MPH	40 MPH
ESALS		=	1,284,800 (HMA)	905,200



BEGIN PROJECT
STA 593+00.00
Y = 382656.497
X = 828665.739

BEGIN CONSTRUCTION
STA 106'NB'+94.58

END PROJECT
STA 628+13.35

END CONSTRUCTION
STA 136'NB'+75.00

LAYOUT
SCALE 0 0.5 MI

TOTAL NET LENGTH OF CENTERLINE (CTH T) = 0.665 MI
TOTAL NET LENGTH OF CENTERLINE (CTH V) = 0.565 MI
TOTAL NET LENGTH OF CENTERLINE = 1.230 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COUNTY COORDINATES, FOND DU LAC COUNTY, NAD83 (97), IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

ELEVATIONS SHOWN ON THE PLAN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).

CONVENTIONAL SYMBOLS

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

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

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	WISDOT/ GREMMER & ASSOCIATES, INC.
Designer	GREMMER & ASSOCIATES, INC./ OMNI
Project Manager	BRYAN LEARST
Regional Examiner	
Regional Supervisor	ROBERT WAGNER

APPROVED FOR THE DEPARTMENT
DATE 02/19/2015 (Signature)

E

FILE NAME : S:\CLRRPROJ\FONDDUCO\USH 151 - CTH T - V\CIVIL3D\SHEETSPLAN\14202371_010101_TI.DWG
LAYOUT NAME - 14202371_010101_TI - SHEET-01
PLOT DATE : 2/10/2015 9:41 AM
PLOT BY : AARON SARAUER
PLOT NAME :

ABBREVIATIONS

AEW	APRON ENDWALL
ASP OR ASPH	ASPHALT
BOC	BACK OF CURB
BAD	BASE AGGREGATE DENSE
BLDG	BUILDING
CP	CONTROL POINT
COR	CORNER
CORR	CORRUGATED
CPCM	CULVERT PIPE CORRUGATED METAL
CPCP	CULVERT PIPE CORRUGATED PLASTIC
CSW	CONCRETE SIDEWALK
CSD	CONCRETE SURFACE DRAIN
DIM	DIMENSION
EOP	EDGE OF PAVEMENT
ECIP	EROSION CONTROL IMPLEMENTATION PLAN
FOC	FACE OF CURB
FO	FIBER OPTIC
G	GARAGE
HMOD	HEIGHT MODERNIZATION SURVEY STATION
HMA	HOT MIX ASPHALT
IE	INVERT ELEVATION
D	LANE DISTRIBUTION
LP	LOW POINT
MAX	MAXIMUM
MGS	MIDWEST GUARDRAIL SYSTEM
MIN	MINIMUM
MOD	MODIFIED
NOR	NORMAL
OC	ON CENTER
OH	OVERHEAD ELECTRIC
PC	PORTLAND CEMENT
RC	REVERSE CROWN
S	SHED
SHLD	SHOULDER
SD	SPECIAL DITCH
ULO	UTILITY LINE OPENING

ORDER OF SECTION 2 SHEETS

GENERAL NOTES
PROJECT OVERVIEW
TYPICAL SECTIONS
CONSTRUCTION DETAILS
PAVING DETAILS
CONTOUR PLAN
EROSION CONTROL
STORM SEWER
PLANTING
SIGN REMOVALS
PERMANENT SIGNING
LIGHTING
PAVEMENT MARKING
TRAFFIC CONTROL
ALIGNMENT DIAGRAM

UTILITIES

CABLE

* CHARTER COMMUNICATIONS
1623 BROADWAY AVENUE
SHEBOYGAN, WI 53081
PHONE: (608) 826-1619
MOBILE: (920) 263-0074
ATTN: BRUCE HENRY
EMAIL: BRUCE.HENRY@CHARTER.COM

TELEPHONE

* AT&T
70 EAST DIVISION STREET
FOND DU LAC, WI 54935
PHONE: (920) 929-1013
MOBILE: (920) 410-5104
ATTN: CHUCK BARTELT
EMAIL: CB1461@ATT.COM

ELECTRIC TRANSMISSION

* AMERICAN TRANSMISSION COMPANY
801 O'KEEFE ROAD
DEPERE, WI 54241
PHONE: (920) 338-6556
MOBILE: (920) 680-6322
ATTN: KIM HACKELBERG
EMAIL: KHACKELBERG@ATCLLC.COM

ELECTRIC & GAS

* ALLIANT ENERGY CORPORATION
883 WEST SCOTT STREET
FOND DU LAC, WI 54937
PHONE: (920) 322-6683
MOBILE: (920) 979-0135
ATTN: STEVEN PAUTZ
EMAIL: STEVEPAUTZ@ALLIANTENERGY.COM

WATER

* CITY OF FOND DU LAC
160 SOUTH MACY STREET
FOND DU LAC, WI 54936
PHONE: (920) 322-3682
MOBILE: (920) 960-5458
ATTN: KATHY SCHARF
EMAIL: KSCHARF@FDL.WI.GOV

SEWER

* CITY OF FOND DU LAC
160 SOUTH MACY STREET
FOND DU LAC, WI 54936
PHONE: (920) 322-3473
MOBILE: (920) 517-7890
ATTN: PAUL DEVRIES
EMAIL: PDEVRIES@FDL.WI.GOV

SEWER

* TOWN OF EMPIRE SANITARY DISTRICT #1
100 CAMELOT DRIVE
FOND DU LAC, WI 54935
PHONE: (920) 322-1726
ATTN: MAX FRANZEN
EMAIL: MAXWELL.F@EXCELENGINEER.COM

SEWER

* TOWN OF EMPIRE SANITARY DISTRICT #3
W4340 WHITETAIL COURT
FOND DU LAC, WI 54937
PHONE: (920) 921-5446
MOBILE: (920) 948-5705
ATTN: RONALD E. CUNZENHEIM, PE
EMAIL: RONC_PE@CHARTER.NET

SEWER

* TOWN OF FOND DU LAC SANITARY DISTRICT #4
100 CAMELOT DRIVE
FOND DU LAC, WI 54935
PHONE: (920) 322-1726
ATTN: MAX FRANZEN
EMAIL: MAXWELL.F@EXCELENGINEER.COM

* DENOTES MEMBER OF DIGGERS HOTLINE

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

GENERAL NOTES

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

UTILITY REFERENCE LINES ON THE CROSS SECTIONS ARE FOR HORIZONTAL REFERENCE ONLY.

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

ALL MANHOLE AND INLET OFFSETS ARE GIVEN TO THE CENTER OF THE STRUCTURE.

INLET AND DISCHARGE ELEVATIONS FOR DRAINAGE STRUCTURES SHOWN ARE APPROXIMATE AND SHALL BE VERIFIED BY THE ENGINEER IN THE FIELD.

CULVERT PIPE FLOWLINE ELEVATIONS SHOWN ARE APPROXIMATE AND SHALL BE VERIFIED BY THE ENGINEER IN THE FIELD.

PRIOR TO ORDERING DRAINAGE STRUCTURES, THE CONTRACTOR SHALL VERIFY RELATED DRAINAGE INFORMATION IN THE PLAN WITH THE ENGINEER.

CURB AND GUTTER RADII ARE SHOWN TO THE FLANGE LINE OF THE CURB AND GUTTER.

THE EXACT LOCATIONS AND LIMITS OF PRIVATE ENTRANCES, FIELD ENTRANCE AND COMMERCIAL ENTRANCES SHALL BE VERIFIED BY THE ENGINEER IN THE FIELD.

IMMEDIATELY AFTER CONSTRUCTION OF ANY INLET, CONTRACTOR SHALL CONSTRUCT THE EROSION CONTROL PROTECTION IN ACCORDANCE WITH THE DETAILS SHOWN ON THE PLANS TO MINIMIZE SEDIMENTATION IN THE INLET AND STORM SEWER.

WETLAND AREAS ARE SHOWN ON THE PLANS. CONTRACTOR SHALL LIMIT CONSTRUCTION ACTIVITIES TO WORK WITHIN THE SLOPE INTERCEPTS IN THE WETLAND AREAS.

DISTANCES SHOWN ON THIS PLAN ARE GROUND DISTANCES.

EROSION CONTROL FEATURES AS SHOWN ON THE PLAN SHEETS ARE AT SUGGESTED LOCATIONS. EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER IN THE FIELD.

MISCELLANEOUS REMOVAL ITEMS SHALL BE REMOVED TO AN EXISTING JOINT OR SAWCUT WHERE SHOWN ON THE PLANS.

DESIGNER NOTES

DESIGN, PLANS, SPECIFICATIONS AND ESTIMATE FOR CTH V ITEMS PROVIDED BY OMNNI ASSOCIATES.

DESIGN, PLANS, SPECIFICATIONS AND ESTIMATE FOR PLANTING ITEMS PROVIDED BY KEN SAIKI DESIGN.

DESIGN, PLANS, SPECIFICATIONS AND ESTIMATE FOR SIGNING PROVIDED BY WISDOT NORTHEAST REGION.

DESIGN, PLANS, SPECIFICATIONS AND ESTIMATE FOR LIGHTING PROVIDED BY POWRTEK ENGINEERING, INC.

DESIGN, PLANS, SPECIFICATIONS AND ESTIMATE FOR TRAFFIC CONTROL PROVIDED BY QUEST CIVIL ENGINEERS, LLC.

DESIGN, PLANS, SPECIFICATIONS AND ESTIMATE FOR STRUCTURES B-20-227 AND R-20-46 PROVIDED BY WISDOT BOS.

HYDROLOGY, HYDRAULICS AND CULVERT SIZING FOR THE PROJECT PROVED BY STORMWATER SOLUTIONS ENGINEERING.

DESIGN CONTACT - CTH T

GREMMER & ASSOCIATES, INC.
93 S. PIONEER ROAD, SUITE 300
FOND DU LAC, WI 54935
PHONE: (920) 924-5720
ATTN: JEFFREY CHVOSTA
EMAIL: J.CHVOSTA@GREMMERASSOCIATES.COM

DESIGN CONTACT - CTH V

OMNNI ASSOCIATES
ONE SYSTEMS DRIVE
APPLETON, WI 54914
PHONE: (920) 830-6157
ATTN: RYAN BETKER
EMAIL: RYAN.BETKER@OMNNI.COM

WISDOT SURVEY CONTACT

WISDOT NORTHEAST REGION SURVEY
944 VANDERPERREN WAY
GREEN BAY, WI 54304
PHONE: (920) 492-5638
ATTN: MR. CORMAC MCINNIS
EMAIL: CORMAC.MCINNIS@DOT.WI.GOV

CITY OF FOND DU LAC CONTACT

MR. JORDAN SKIFF
DIRECTOR OF PUBLIC WORKS
160 S. MACY STREET
FOND DU LAC, WI 54935
PHONE: (920) 322-3472

FOND DU LAC COUNTY CONTACT

MR. TOM JANKE
HIGHWAY COMMISSIONER
301 DIXIE STREET
FOND DU LAC, WI 54936-1234
PHONE: (920) 929-3488

TOWN OF EMPIRE CONTACT

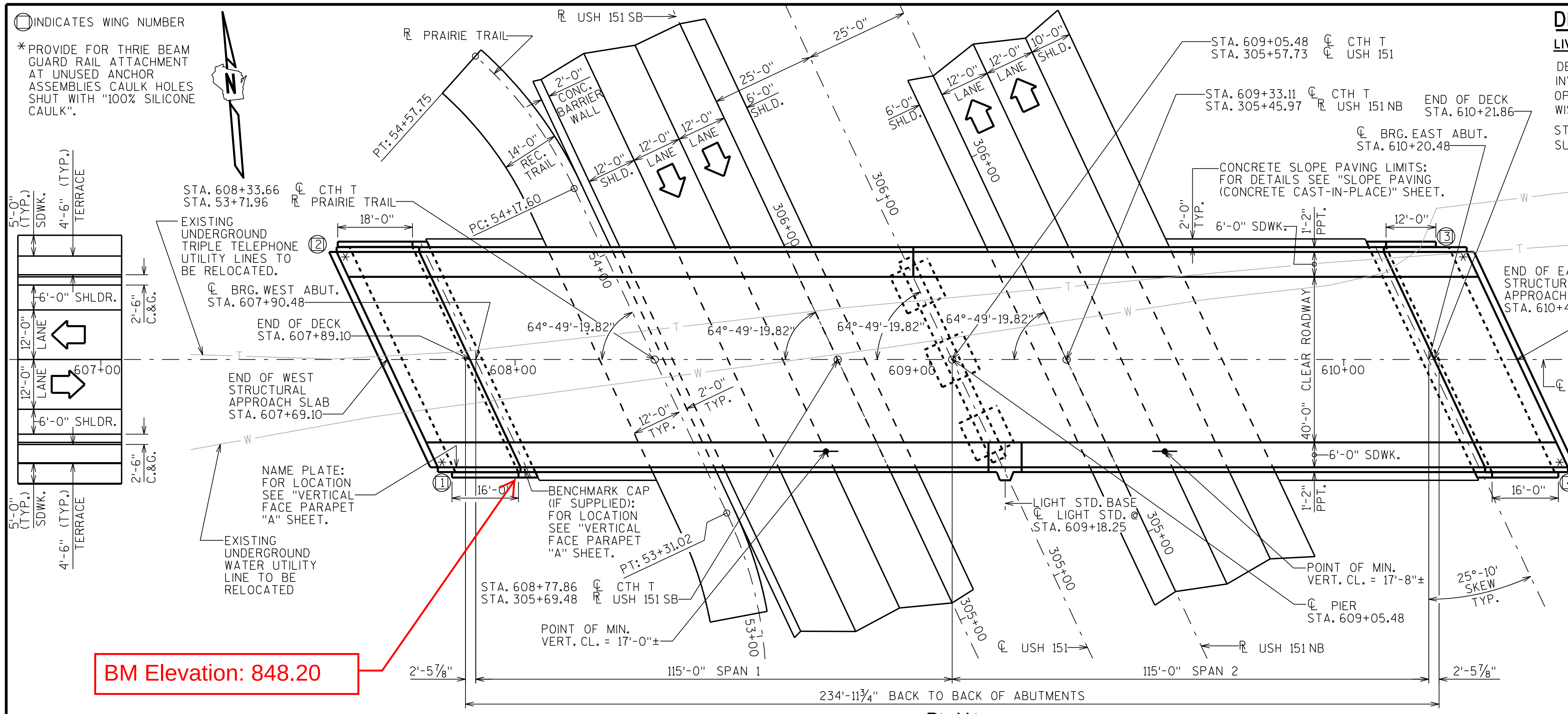
MR. JAMES PIERQUET
TOWN CHAIRMAN
W3204 4TH ST. ROAD
FOND DU LAC, WI 54937-80118
PHONE: (920) 922-7814

DNR AREA LIAISON

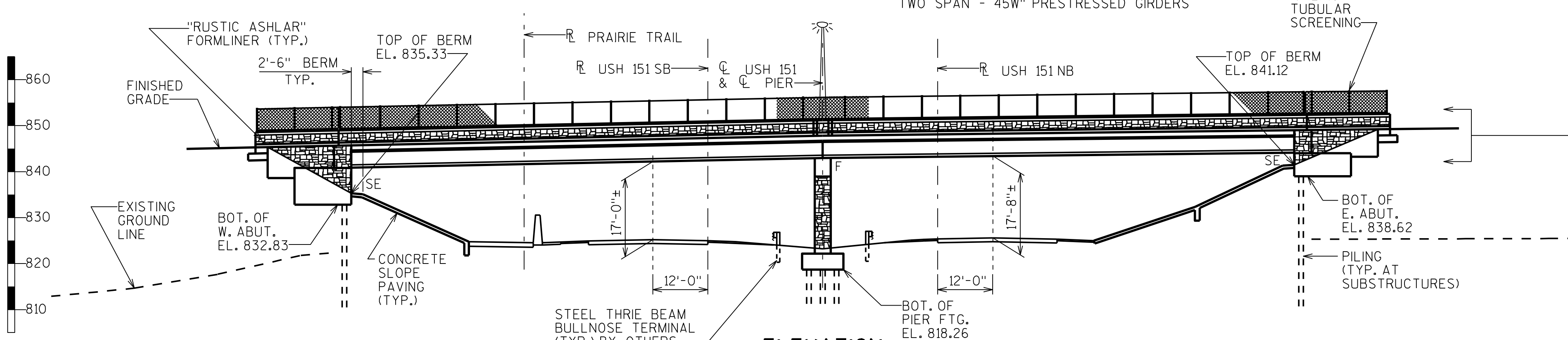
WISCONSIN DEPT. OF NATURAL RESOURCES
2984 SHAWANO AVENUE
GREEN BAY, WI 54313
PHONE: (920) 662-5130
ATTN: MR. JAY SCHIEFELBEIN
EMAIL: JEREMIAH.SCHEFELBEIN@WISCONSIN.GOV

◯ INDICATES WING NUMBER

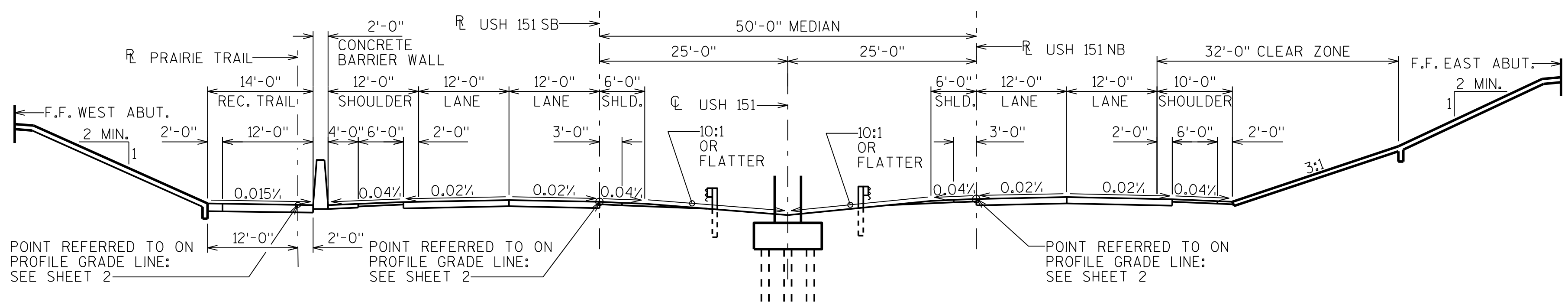
* PROVIDE FOR THRIE BEAM GUARD RAIL ATTACHMENT AT UNUSED ANCHOR ASSEMBLIES CAULK HOLES SHUT WITH "100% SILICONE CAULK".



PLAN
TWO SPAN - 45W" PRESTRESSED GIRDERS



ELEVATION
NORMAL TO USH 151 - LOOKING NORTH



PROPOSED SECTION THRU USH 151
NORMAL TO USH 151 - LOOKING NORTH (UPSTATION)

STATE PROJECT NUMBER

1420-23-71

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING FACTOR: RF=1.19
OPERATING RATING FACTOR: RF=1.57
WISCONSIN STANDARD PERMIT VEHICLE (WIS.-SPV): 250 (KIPS)

STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 POUNDS PER SQUARE FOOT.

MATERIAL PROPERTIES:

CONCRETE MASONRY:
DECK — f'c = 4,000 P.S.I. ALL OTHER — f'c = 3,500 P.S.I.

BAR STEEL REINFORCEMENT, GRADE 60 — fy = 60,000 P.S.I.

45W" PRESTRESSED GIRDERS, CONCRETE MASONRY — f'c = 8,000 P.S.I.
STRANDS- 0.6" DIA. WITH ULTIMATE TENSILE STRENGTH OF 270,000 P.S.I.

FOUNDATION DATA

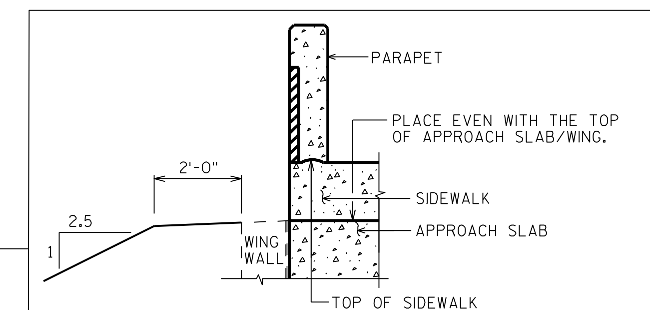
ABUTMENTS TO BE SUPPORTED ON CAST-IN-PLACE (CIP) 12 3/4" DIA. X 0.375" WALL CONCRETE PILINGS DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 210 TONS ** PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA.
ESTIMATED 70'-0" LONG AT WEST ABUTMENT.
ESTIMATED 75'-0" LONG AT EAST ABUTMENT.

PIER TO BE SUPPORTED ON CAST-IN-PLACE (CIP) 12 3/4" DIA. X 0.375" WALL CONCRETE PILINGS DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 210 TONS ** PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA.
ESTIMATED 50'-0" LONG AT PIER.

** 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.

TRAFFIC VOLUME

CTH T	USH 151
A.D.T. = 5,800 (2038)	A.D.T. = 15,500 (2038)
R.D.S. = 40 M.P.H.	R.D.S. = 60 M.P.H.



TYPICAL FILL SECTION AT END OF STRUCTURAL APPROACH SLABS

LIST OF DRAWINGS

STRUCTURES DESIGN CONTACTS:
ADAM SWIERCZEK (608) 267-4593
AARON BONK (608) 261-0261

NO.	DATE	REVISION	BY

Plans Prepared By WISDOT BUREAU OF STRUCTURES

ACCEPTED William C. Dreher 1/21/15
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-20-227

CTH T OVER USH 151

COUNTY FOND DU LAC CITY FOND DU LAC

DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY ABS DESIGN CK'D. APC DRAWN BY JPH/DDS PLANS CK'D. ABS

GENERAL PLAN

SHEET 1 OF 25

478

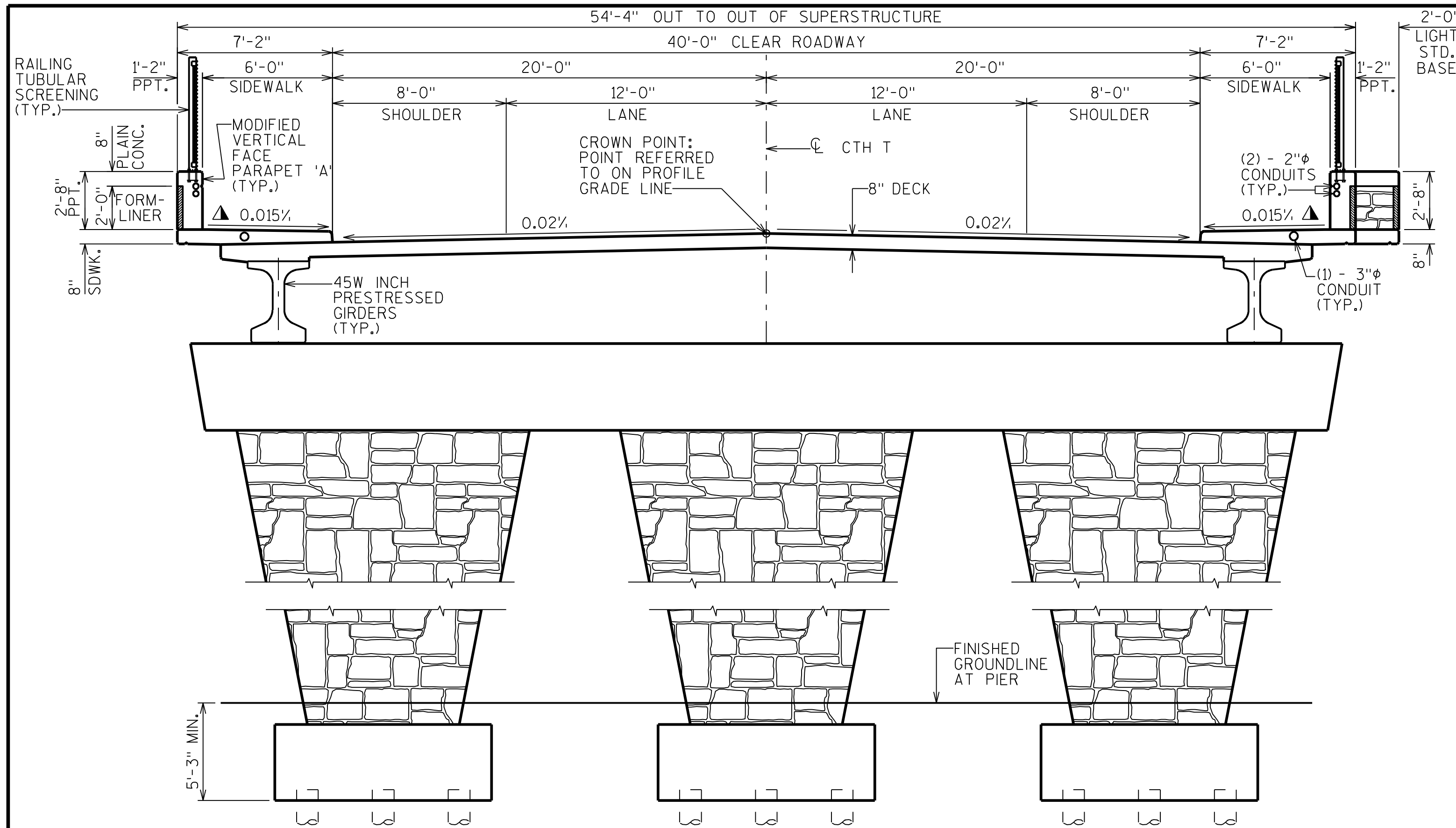
8

8

SCALE = 16

I.D. 1420-23-00A

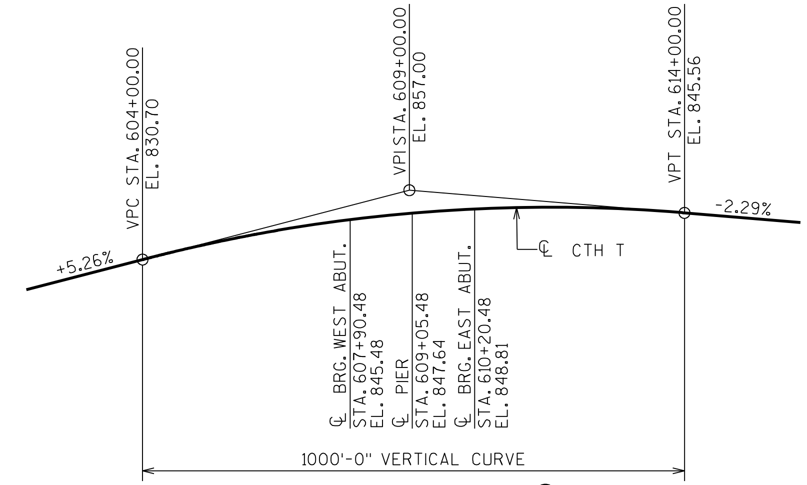
DATE: NOV. 2014



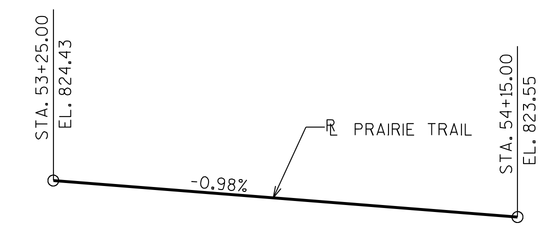
CROSS SECTION THRU ROADWAY

LOOKING EAST (UPSTATION)

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



PROFILE GRADE LINE FOR ℄ CTH T



PROFILE GRADE LINE FOR PRAIRIE TRAIL

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	SUPER.	WEST APPROACH SLAB	WEST ABUT.	PIER	EAST ABUT.	EAST APPROACH SLAB	TOTALS
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-20-227	LS	—	—	—	—	—	—	1
210.0100	BACKFILL STRUCTURE	CY	—	—	198	47	114	—	359
305.0120	BASE AGGREGATE DENSE 1 1/4-INCH	TON	—	169	—	—	—	169	338
502.0100	CONCRETE MASONRY BRIDGES	CY	543	81	97	123	64	81	989
502.3200	PROTECTIVE SURFACE TREATMENT	SY	1,570	135		—		135	1,840
503.0146	PRESTRESSED GIRDER TYPE I 45W-INCH	LF	2,077	—	—	—	—	—	2,077
505.0405	BAR STEEL REINFORCEMENT HS BRIDGES	LB	—	—	5,600	2,020	4,180	—	11,800
505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	108,340	13,650	2,460	15,370	1,640	13,650	155,110
505.0800.S	BAR STEEL REINFORCEMENT HS STAINLESS STRUCTURE	LB	1,870	—	—	—	—	—	1,870
506.2605	BEARING PADS ELASTOMERIC NON-LAMINATED	EACH	—	—	9	18	9	—	36
506.4000	STEEL DIAPHRAGMS B-20-227	EACH	32	—	—	—	—	—	32
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	—	—	16	—	14	—	30
◆ 517.1015.S	CONCRETE STAINING MULTI-COLOR B-20-227	SF	1,015	80	585	1,255	170	80	3,185
517.1050.S	ARCHITECTURAL SURFACE TREATMENT B-20-227	SF	1,015	80	585	1,255	170	80	3,185
550.0600	PILE REDRIVING	EACH	—	—	2	4	2	—	8
550.2126	PILING CIP CONCRETE 12 3/4 X 0.375-INCH	LF	—	—	910	1,350	900	—	3,160
604.0400	SLOPE PAVING CONCRETE	SY	—	—	213	—	369	—	582
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	—	—	295	—	290	—	585
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	—	2	—	—	—	2	4
652.0125	CONDUIT RIGID METALLIC 2-INCH	LF	44	12	—	—	12	—	68
652.0135	CONDUIT RIGID METALLIC 3-INCH	LF	12	48	—	—	—	48	108
652.0225	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	LF	916	85	—	—	—	77	1,078
652.0235	CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH	LF	458	—	—	—	—	—	458
653.0222	JUNCTION BOXES 18X12X6-INCH	EACH	5	—	—	—	—	—	5
657.6005.S	ANCHOR ASSEMBLIES LIGHT POLES ON STRUCTURES	EACH	1	—	—	—	—	—	1
SPV.0090.08	RAILING TUBULAR SCREENING GALVANIZED B-20-227	LF	466	39	—	—	—	39	544
	NON-BID ITEMS								
	FILLER	SIZE	—	—	—	—	—	—	½", ¾", 1½"
	PLASTIC OR ZINC PLATE	SIZE	—	—	—	—	—	—	⅛"

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

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

AT THE BACKFACE OF ABUTMENT ALL VOLUME WHICH CANNOT BE PLACED BEFORE ABUTMENT CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE OR "BASE AGGREGATE DENSE 1¼-INCH" SHALL BE BACKFILLED WITH STRUCTURE BACKFILL.

ELASTOMERIC BEARING PADS NEED NOT BE INDIVIDUALLY MOLDED PROVIDED THE CUT EDGES ARE SMOOTH AND TRUE.

THE GRADATION OF THE STRUCTURE BACKFILL SHALL MEET THE REQUIREMENTS OF SECTION 209.2.2 OF THE STANDARD SPECIFICATIONS FOR GRADE 1 MATERIAL.

THE EXISTING GROUND LINE SHALL BE USED AS THE UPPER LIMITS OF EXCAVATION AT THE PIER.

THE HAUNCH CONCRETE QUANTITY IS BASED ON THE AVERAGE HAUNCH SHOWN ON THE "45W PRESTRESED GIRDER DETAILS 1" SHEET.

PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO THE ENTIRE EXPOSED TOP OF DECK AND TOP OF APPROACH SLAB SURFACES AND SIDEWALK SURFACES AT BOTH DECK AND SLAB AS WELL AS THE INSIDE AND TOP OF PARAPETS, INCLUDING PARAPETS ON APPROACH SLABS.

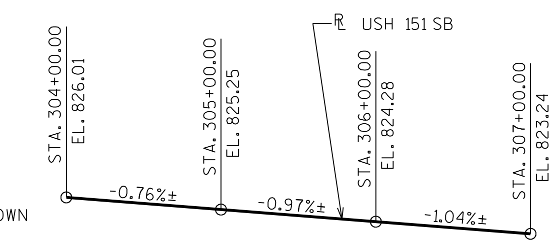
BEVEL EXPOSED EDGES OF CONCRETE 3/4" UNLESS OTHERWISE SHOWN OR NOTED.

THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH SLOPE PAVING MATERIAL TO THE EXTENT SHOWN ON SHEET 1 AND ON THE 'SLOPE PAVING' SHEET AND ON THE ABUTMENT DETAILS SHEETS.

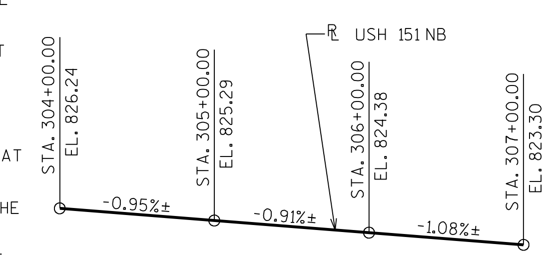
FOR AESTHETIC DETAILS (INCLUDING STAINING LOCATIONS/LIMITS AND ARCHITECTURAL SURFACE TREATMENT LOCATIONS/LIMITS.) SEE 'AESTHETIC DETAILS' SHEET.

◆ CONTRACTOR TO REMOVE AND DISPOSE OF AESTHETIC TEST PANEL UPON COMPLETION OF PROJET.

ALL RAILINGS, POSTS AND ALL EXPOSED/ASSOCIATED HARDWARE SHALL BE FINISHED AS DETAILED ON "RAILING TUBULAR SCREENING" AND "LIGHT ACCESS GATE DETAILS" SHEETS. IF TOUCH UP PAINTING IS REQUIRED AFTER INSTALLATION IS COMPLETE, ALL TOUCH UP PAINTING IS TO BE DONE TO THE SATISFACTION OF THE ENGINEER AT NO ADDITIONAL COST.



EXISTING PROFILE GRADE LINE FOR SOUTHBOUND USH 151



EXISTING PROFILE GRADE LINE FOR NORTHBOUND USH 151

STATE PROJECT NUMBER

1420-23-71

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-20-227

DRAWN BY JPH PLANS CK'D. ABS

CROSS SECTION & QUANTITIES

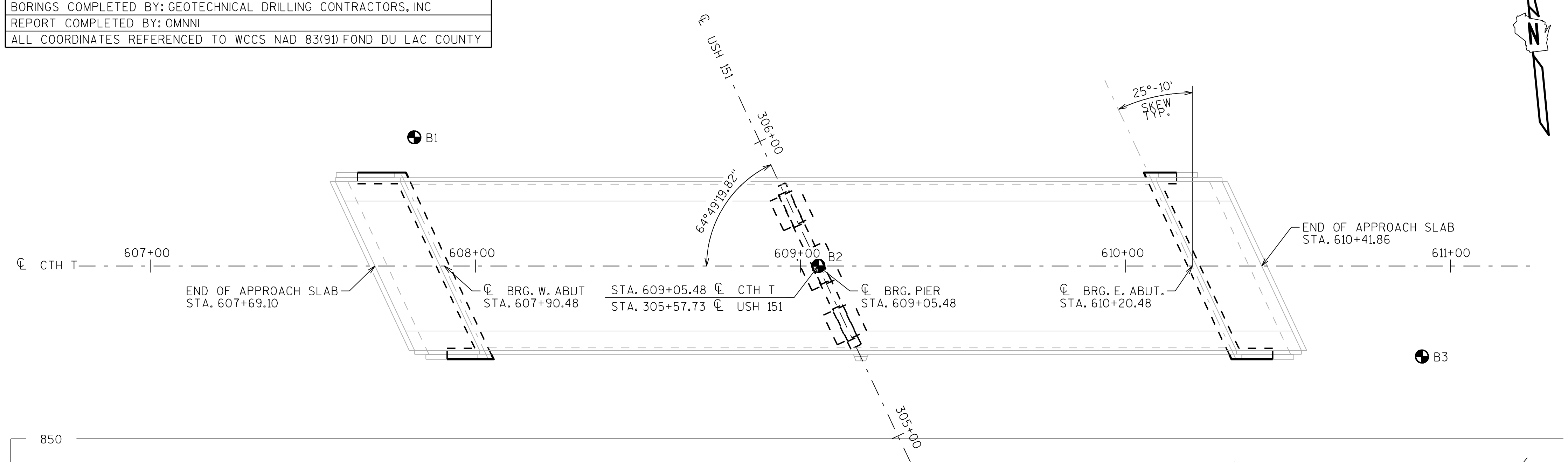
SHEET 2

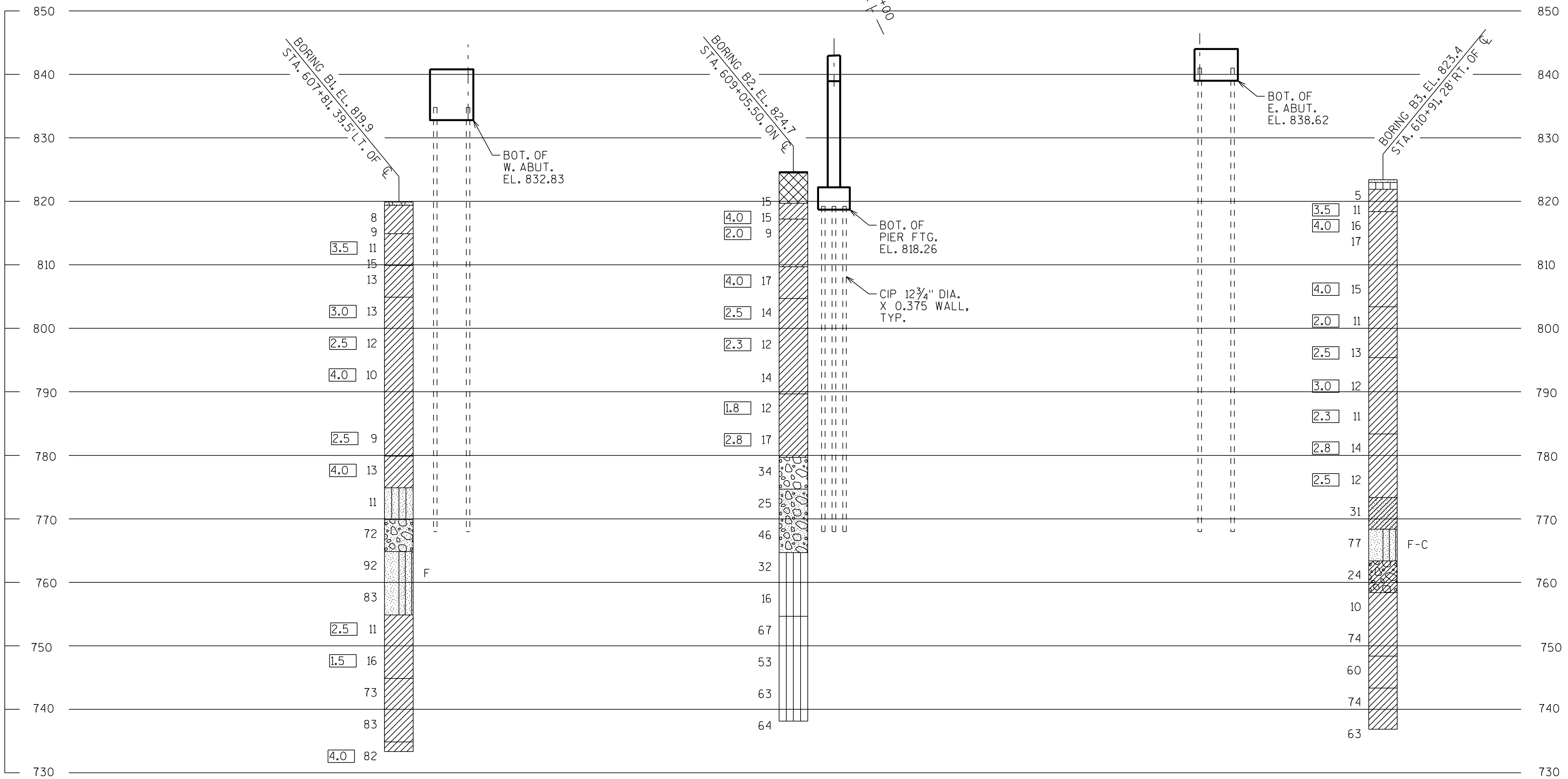
479

SCALE = 4

8

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
1	7/25/2014	382713.5044	830142.2422
2	7/31/2014	382663.9196	830262.8687
3	7/29/2014	382621.0044	830445.6338
BORINGS COMPLETED BY: GEOTECHNICAL DRILLING CONTRACTORS, INC			
REPORT COMPLETED BY: OMNNI			
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) FOND DU LAC COUNTY			





NOTE: NO GROUNDWATER WAS OBSERVED AT THE TIME OF DRILLING

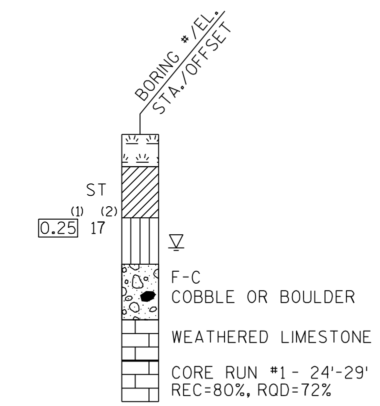
STATE PROJECT NUMBER

1420-23-71

MATERIAL SYMBOLS

ASPHALT, TOPSOIL, PEAT, CONCRETE, FILL, GRAVEL, SAND, CLAY, SILT, BOULDERS OR COBBLES, LIMESTONE, BEDROCK (UNKNOWN), SHALE, SANDSTONE, IGNEOUS/META

LEGEND OF BORING



(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNLESS OTHERWISE SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION

- AT TIME OF DRILLING
- END OF DRILLING
- AFTER DRILLING

ABBREVIATIONS

F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-20-227

DRAWN BY PR/ABS PLANS CK'D. ABS

SUBSURFACE EXPLORATION

SHEET 3

480

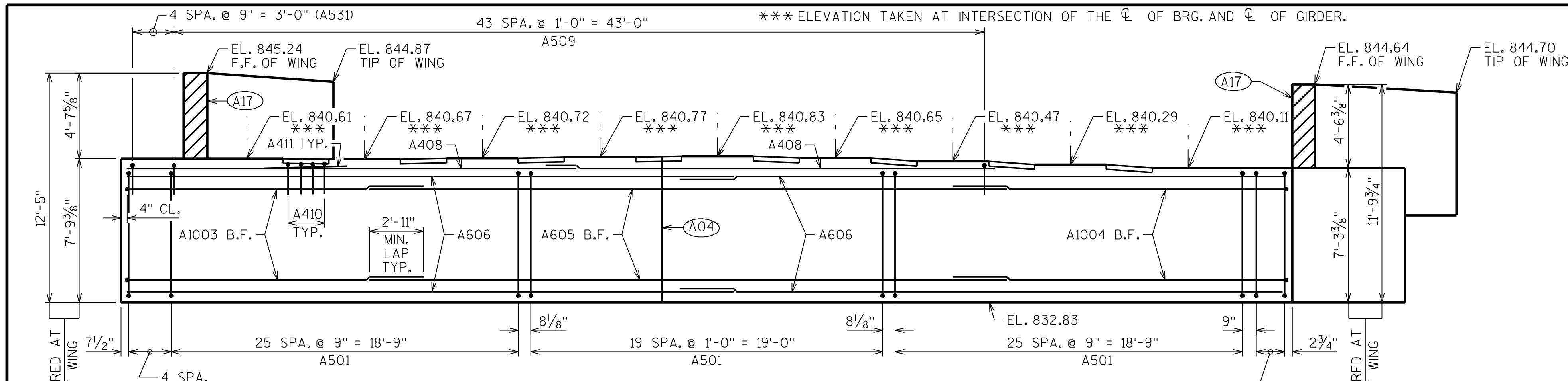
8

SCALE = 2.0

STATE PROJECT NUMBER

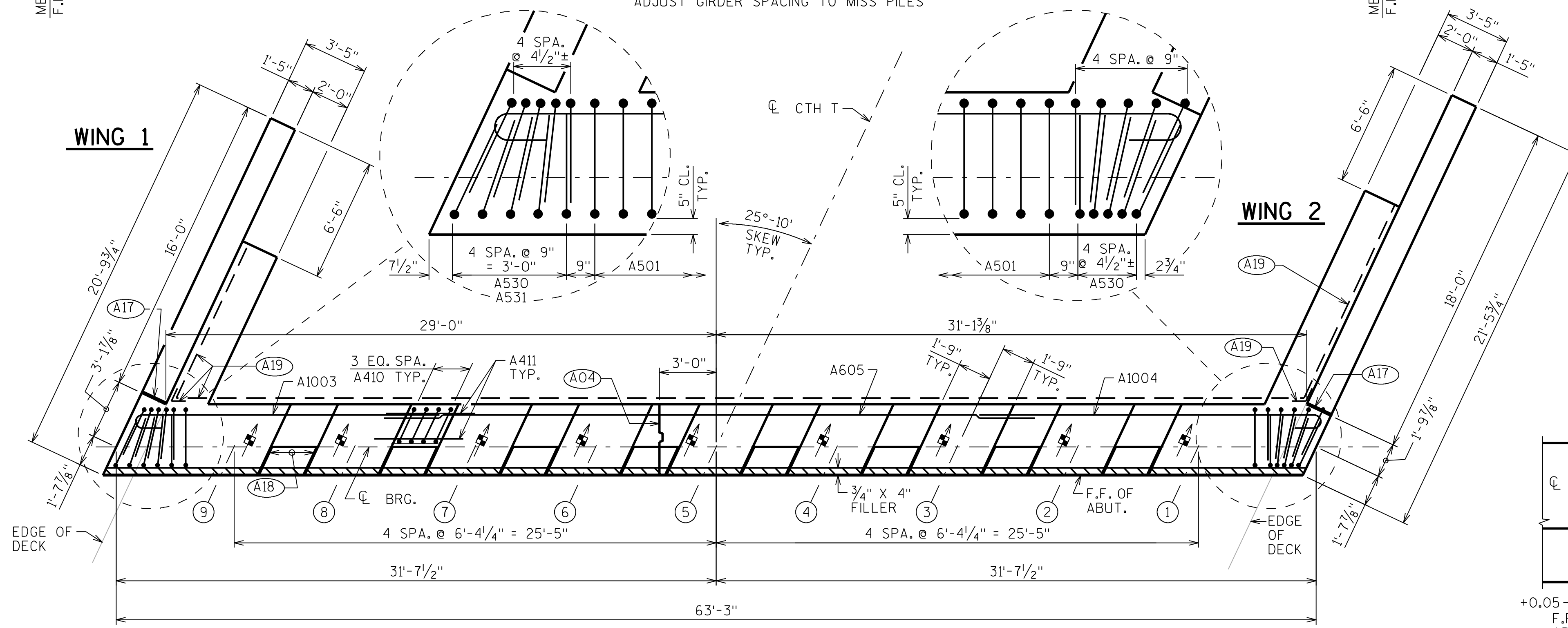
1420-23-71

*** ELEVATION TAKEN AT INTERSECTION OF THE ℄ OF BRG. AND ℄ OF GIRDER.



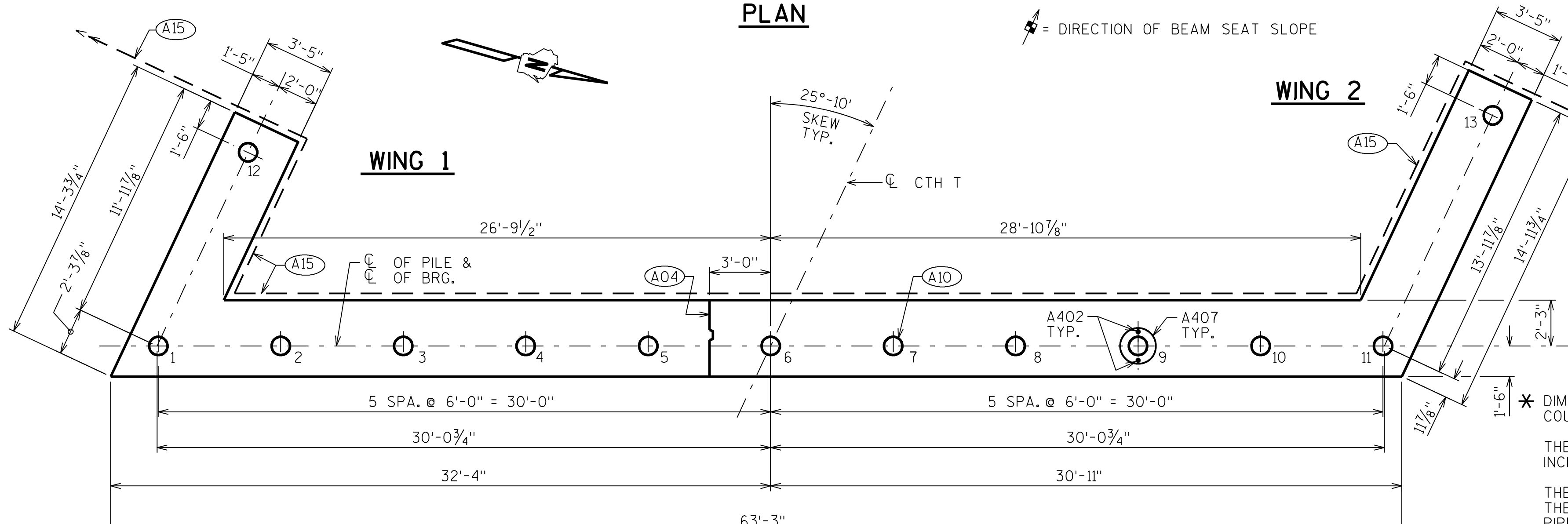
ELEVATION - LOOKING WEST

ADJUST GIRDER SPACING TO MISS PILES

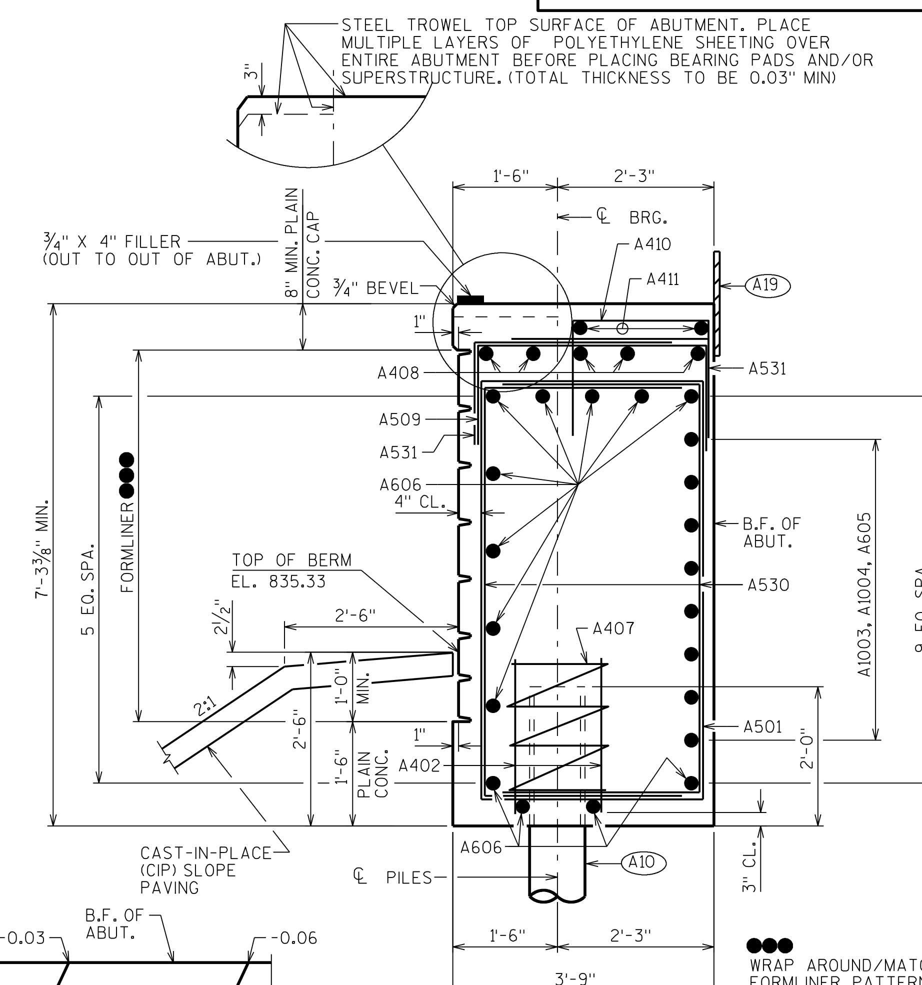


PLAN

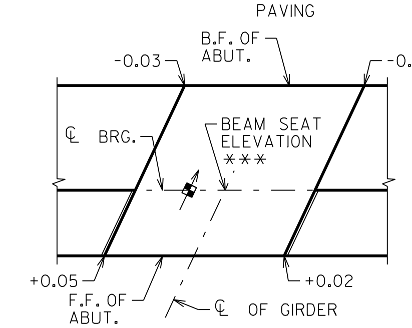
= DIRECTION OF BEAM SEAT SLOPE



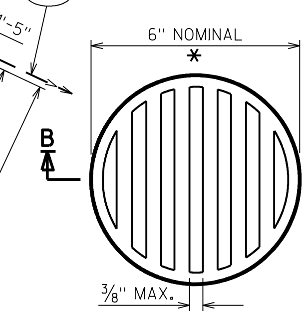
PILE PLAN

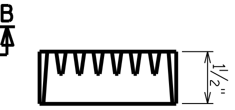


SECTION THRU BODY



BEAM SEAT DETAIL





SECTION B-B

RODENT SHIELD DETAIL

A04 VERT. CONSTRUCTION JOINT: KEYWAY FORMED BY A BEVELED 2 X 8. 3/4" "V" GROOVE @ THE FRONT FACE AND 18" R.M.W. @ BACKFACE. FOR OPTIONAL DETAILS SEE "ALTERNATE CONSTRUCTION JOINT" SHEET.

A10 SUPPORT ABUTMENT ON 12 3/4" DIA. X .375 WALL CAST-IN-PLACE (CIP) CONCRETE PILING, ESTIMATED 70'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 210 TONS PER PILE.

A15 PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQ'D.

A17 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

A18 3/4" CORK FILLER UP VERT. BEAM SEAT FACES THAT RUN PARALLEL WITH GIRDER.

A19 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

* 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 WRAPPED 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.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-20-227

DRAWN BY DDS | PLANS CK'D. ABS

WEST ABUTMENT

SHEET 4

481

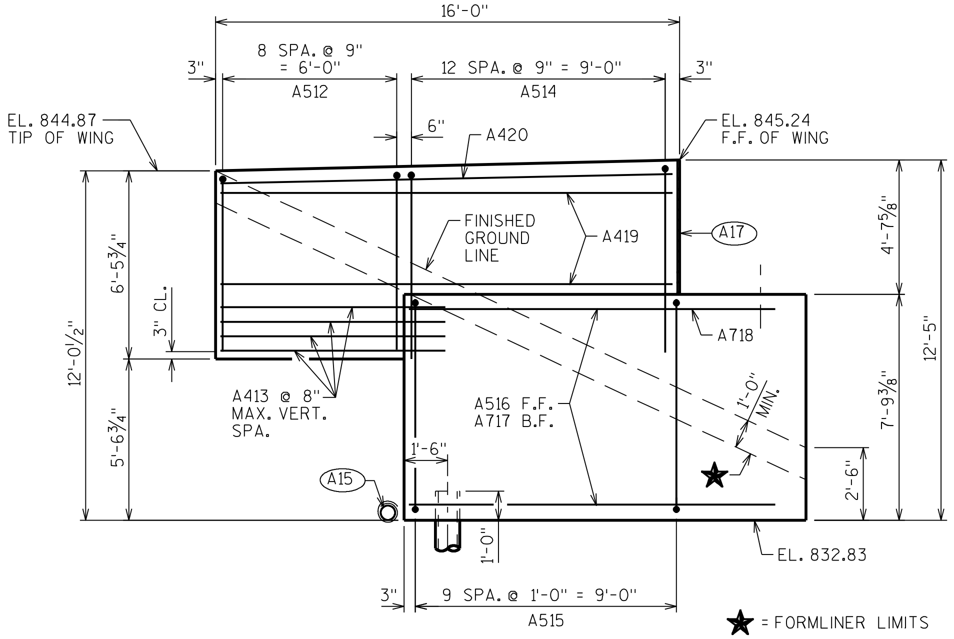
8

8

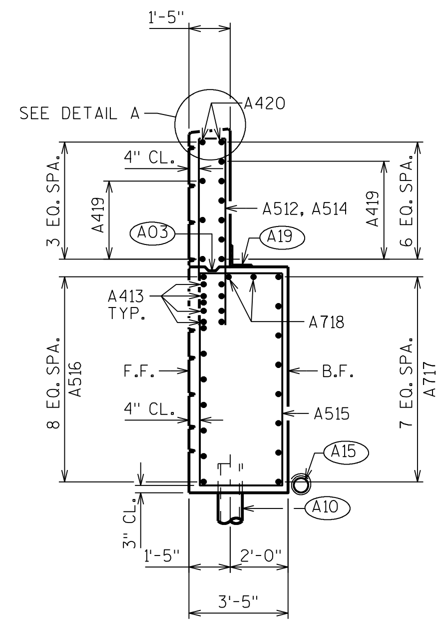
SCALE = 4.8

STATE PROJECT NUMBER

1420-23-71



ELEVATION - WING 1



SECTION THRU WING 1

(A03) OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2 X 6. (18" R.M.W. @ B.F. & 3/4" "V" GROOVE @ F.F. IF JOINT IS USED).

(A10) SUPPORT ABUTMENT ON 12¾" DIA. X 0.375 WALL CAST-IN-PLACE CONCRETE PILING, ESTIMATED 70'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 210 TONS PER PILE.

(A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.

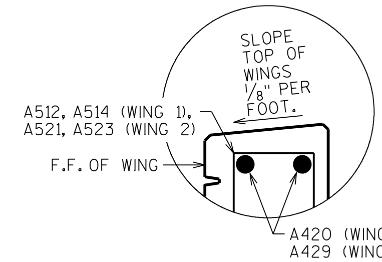
(A17) 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

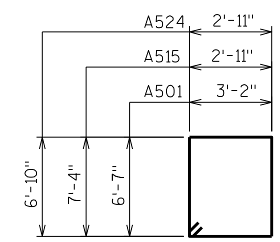
BILL OF BARS

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

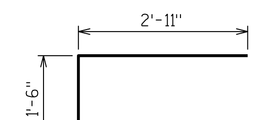
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A501		72	20'-2"	X		BODY-STIRRUPS
A402		22	2'-3"			PILES - 2 PER BODY PILE
A1003		8	17'-5"	X		BODY-HORIZONTAL - B.F.
A1004		8	19'-5"	X		BODY-HORIZONTAL - B.F.
A605		8	34'-5"			BODY-HORIZONTAL - B.F.
A606		26	32'-9"			BODY-HORIZONTAL
A407		11	28'-0"	X		PILES - 1 PER BODY PILE
A408		10	24'-4"			BODY-HORIZONTAL - UNDER GIRS. 3-9
A509		44	6'-5"	X		BODY-VERTICAL - TOP UNDER GIRS. 3-9
A410		32	4'-5"	X		BODY-VERTICAL - BETWEEN BEAM SEATS
A411		16	4'-9"			BODY-HORIZONTAL - BETWEEN BEAM SEATS
A512	X	9	12'-10"	X		WING 1-VERTICAL - UPPER WING
A413	X	8	7'-9"			WING 1-HORIZONTAL - UPPER WING
A514	X	13	13'-8"	X		WING 1-VERTICAL - UPPER WING
A515	X	10	21'-2"	X		WING 1-STIRRUP - LOWER WING
A516	X	9	13'-0"			WING 1-HORIZONTAL - F.F. - LOWER WING
A717	X	8	11'-3"			WING 1-HORIZONTAL - B.F. - LOWER WING
A718	X	2	12'-2"			WING 1-HORIZONTAL - LOWER WING
A419	X	9	15'-8"			WING 1-HORIZONTAL - UPPER WING
A420	X	2	15'-8"			WING 1-HORIZONTAL - TOP - UPPER WING
A521	X	9	12'-4"	X		WING 2-VERTICAL - UPPER WING
A422	X	6	7'-9"			WING 2-HORIZONTAL - UPPER WING
A523	X	16	13'-6"	X		WING 2-VERTICAL - UPPER WING
A524	X	12	20'-2"	X		WING 2-STIRRUP - LOWER WING
A525	X	9	14'-1"			WING 2-HORIZONTAL - F.F. - LOWER WING
A926	X	8	15'-2"	X		WING 2-HORIZONTAL - B.F. - LOWER WING
A927	X	2	15'-2"	X		WING 2-HORIZONTAL - LOWER WING
A428	X	10	17'-8"			WING 2-HORIZONTAL - UPPER WING
A429	X	2	17'-8"			WING 2-HORIZONTAL - TOP - UPPER WING
A530		20	12'-2"	X		BODY - VERT. - ENDS
A531		5	4'-4"	X		BODY - VERT. - ENDS



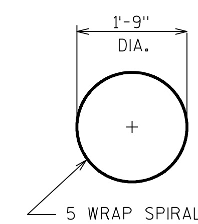
DETAIL A



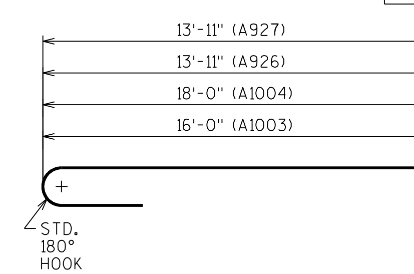
A501, A515, A524



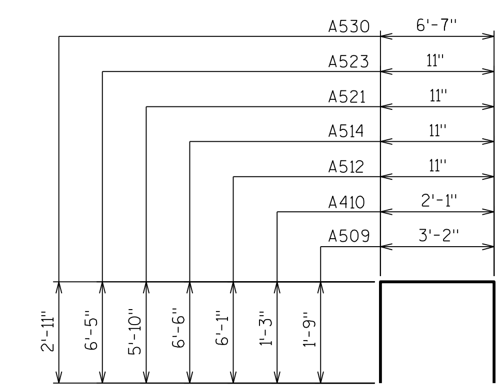
A531



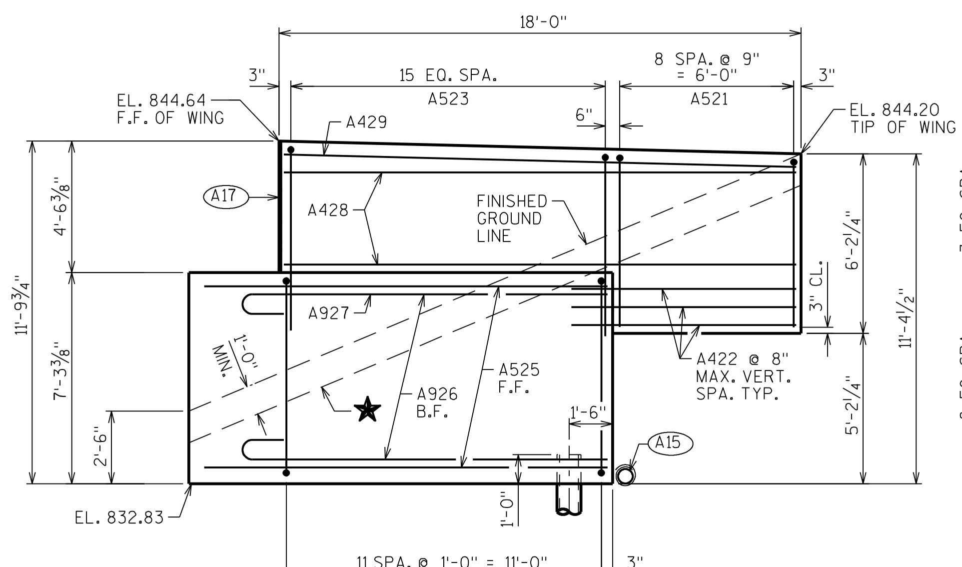
A407



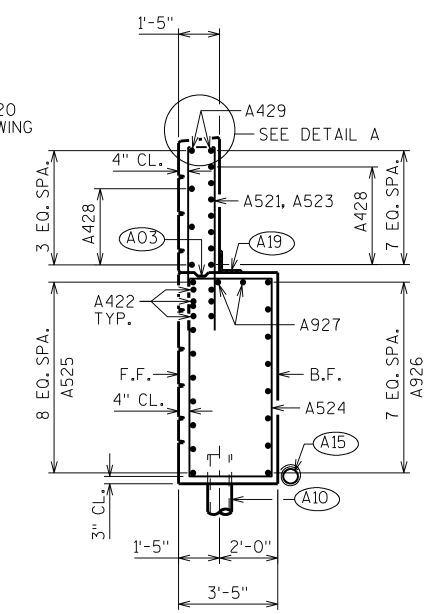
A1003, A1004, A926, A927



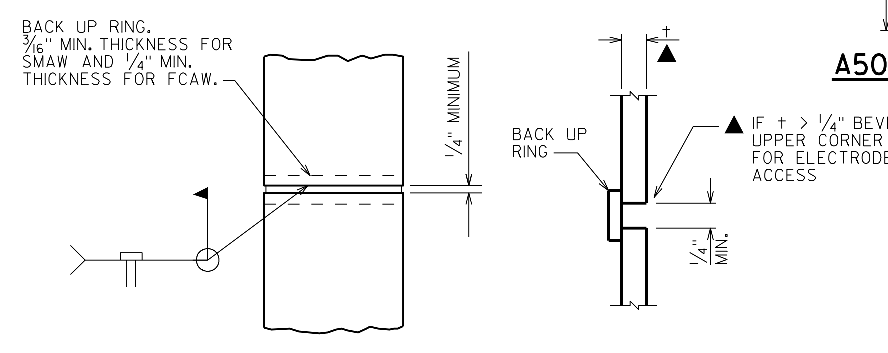
A509, A410, A512, A514, A521, A523, A530



ELEVATION - WING 2



SECTION THRU WING 2



CAST-IN-PLACE 'PIPE PILE' C.I.P. PILE WELD DETAIL

PILE DETAILS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-20-227

DRAWN BY DDS PLANS CK'D. ABS

WEST ABUTMENT DETAILS

SHEET 5

482

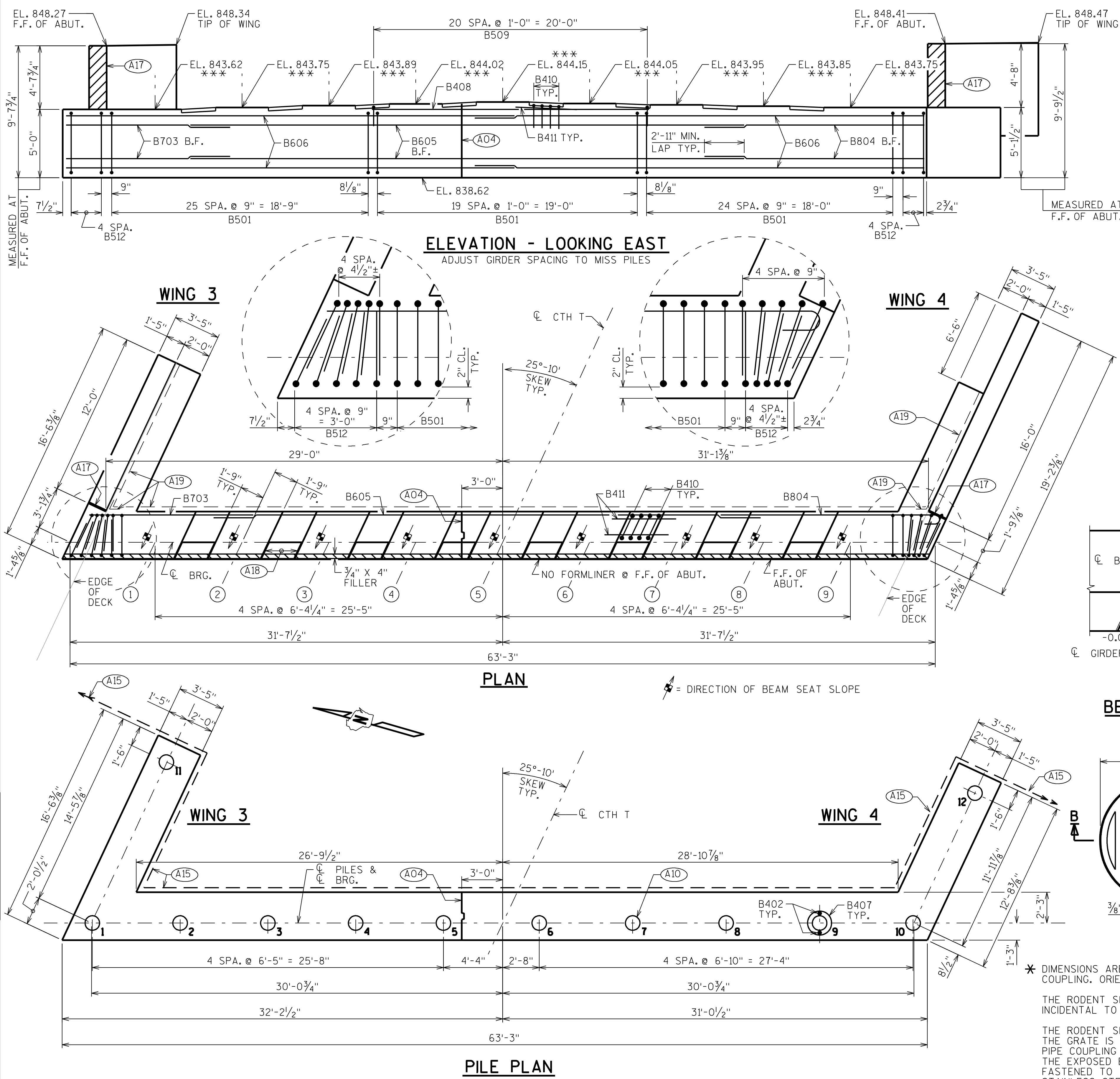
8

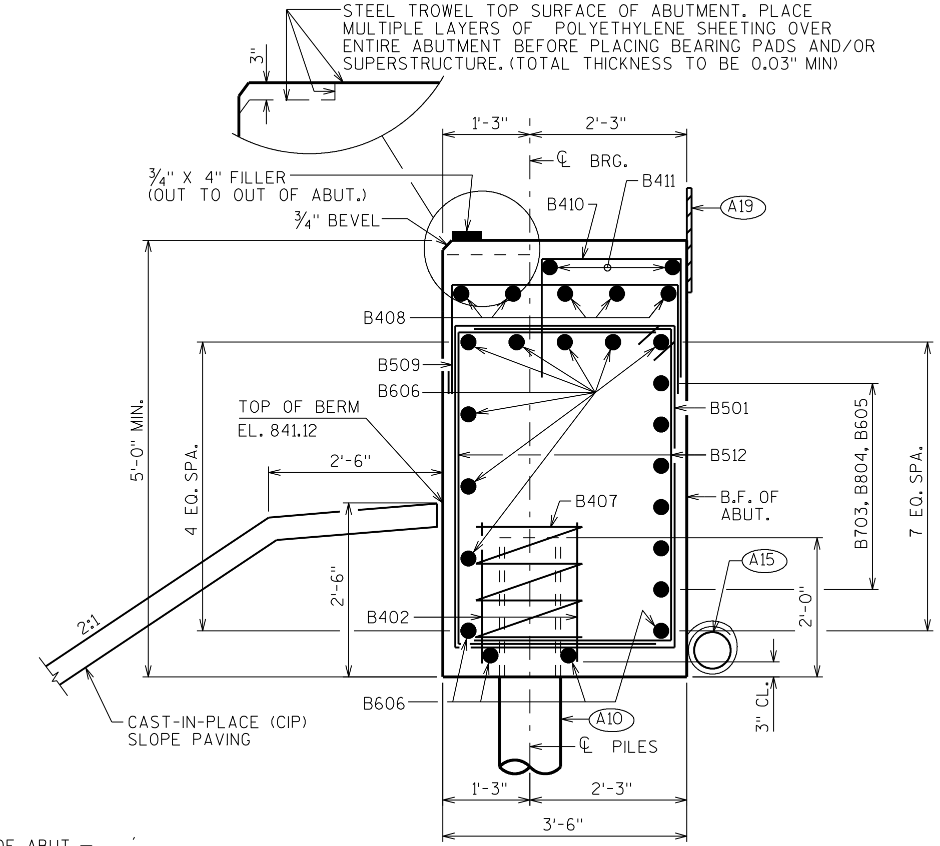
SCALE = 3.20

STATE PROJECT NUMBER

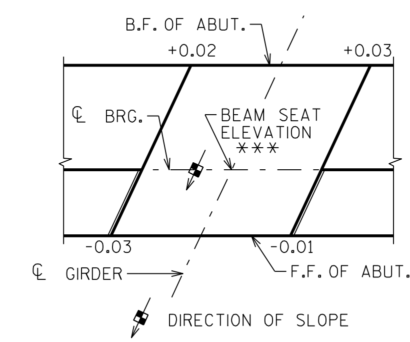
1420-23-71

*** ELEVATION TAKEN AT INTERSECTION OF THE ℄ OF BRG. AND ℄ OF GIRDER.

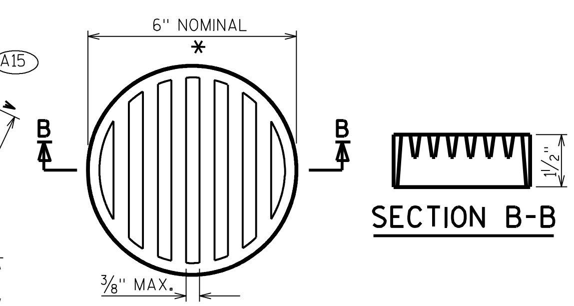




SECTION THRU BODY



BEAM SEAT DETAIL



SECTION B-B

RODENT SHIELD DETAIL

(A04) VERT. CONSTRUCTION JOINT: KEYWAY FORMED BY A BEVELED 2 X 8. 3/4" "V" GROOVE @ THE FRONT FACE AND 18" R.M.W. @ BACKFACE. FOR OPTIONAL DETAILS SEE "ALTERNATE CONSTRUCTION JOINT" SHEET.

(A10) SUPPORT ABUTMENT ON 12¾" DIA. X .375 WALL CAST-IN-PLACE (CIP) CONCRETE PILING, ESTIMATED 75'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 210 TONS PER PILE.

(A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQ'D.

(A17) 1/2" FILLER (INCLUDED IN WING LENGTH); SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

(A18) 3/4" CORK FILLER UP VERT. BEAM SEAT FACES THAT RUN PARALLEL WITH GIRDER.

(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

* 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 WRAPPED 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.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-20-227

DRAWN BY DDS PLANS CK'D. ABS

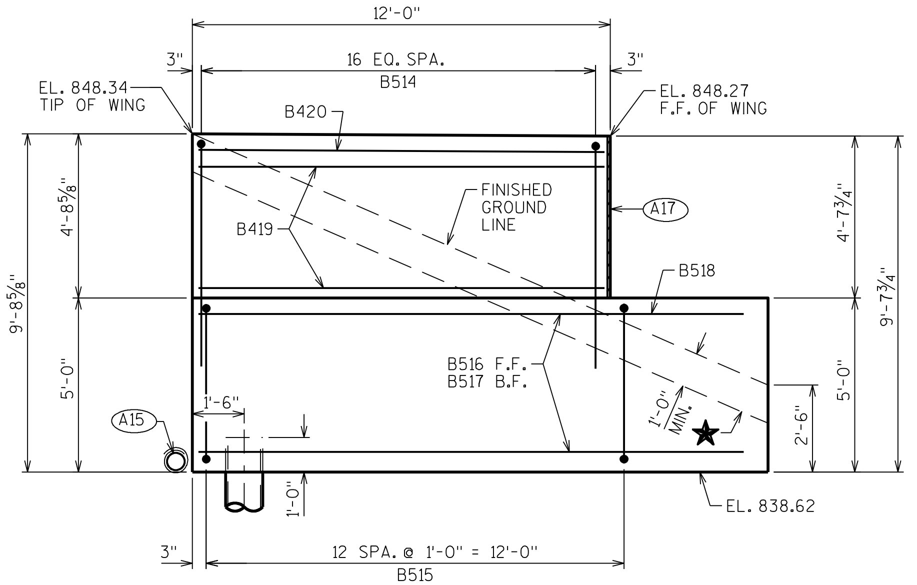
EAST ABUTMENT

SHEET 6

483

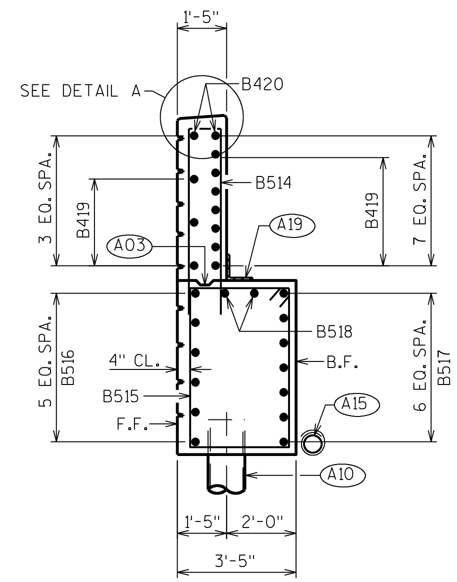
SCALE = 4

8

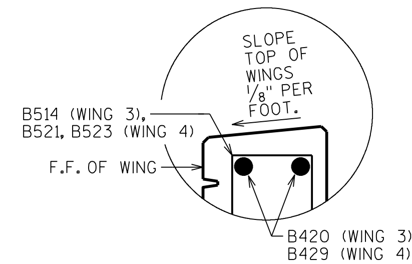


★ = FORMLINER LIMITS

ELEVATION - WING 3



SECTION THRU WING 3



DETAIL A

(A03) OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2 x 6. (18" R.M.W. @ B.F. & 3/4" "V" GROOVE @ F.F. IF JOINT IS USED).

(A10) SUPPORT ABUTMENT ON 12¾" DIA. X 0.375 WALL CAST-IN-PLACE CONCRETE PILING, ESTIMATED 75'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 210 TONS PER PILE.

(A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQ'D.

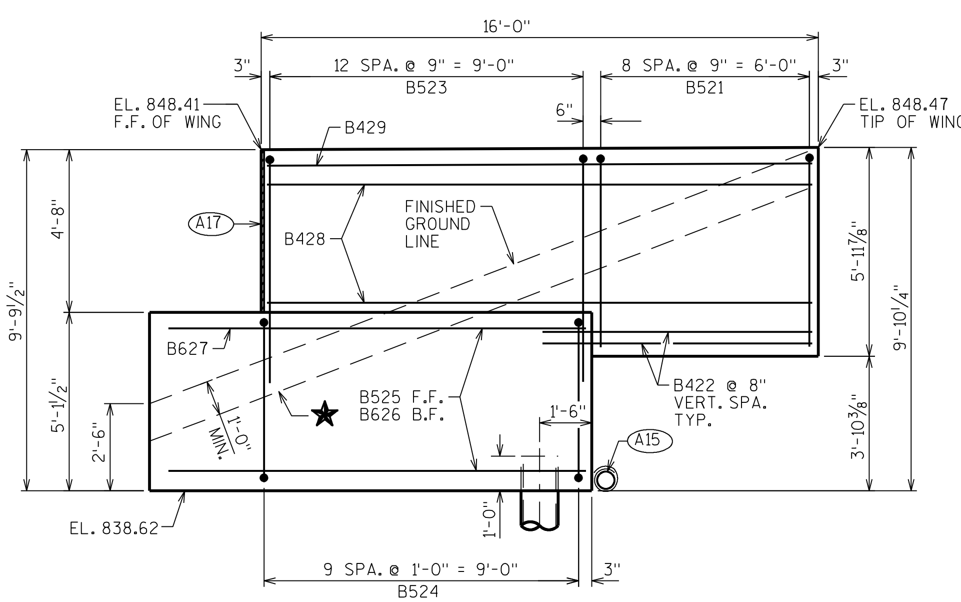
(A17) 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

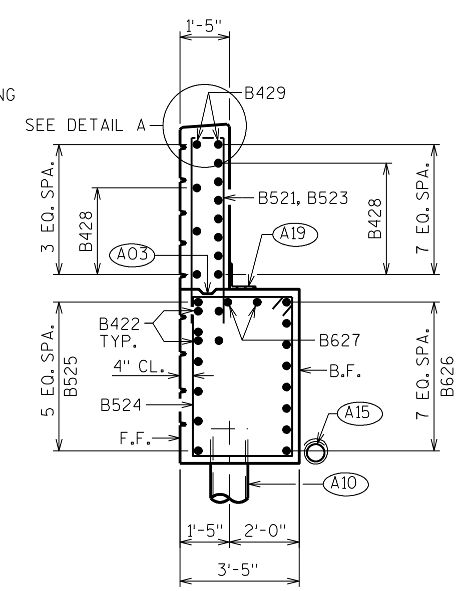
BILL OF BARS

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

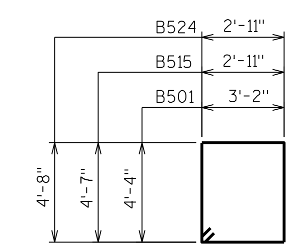
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
B501		72	15'-8"	X		BODY-STIRRUPS
B402		20	2'-3"			PILES-2 PER BODY PILE
B703		6	12'-0"			BODY-HORIZONTAL - B.F.
B804		6	16'-11"	X		BODY-HORIZONTAL - B.F.
B605		6	40'-5"			BODY-HORIZONTAL - B.F.
B606		24	40'-2"			BODY-HORIZONTAL
B407		10	28'-0"	X		PILES-1 PER BODY PILE
B408		5	20'-6"			BODY-HORIZONTAL - UNDER GIRDS. 4-6
B509		21	5'-11"	X		BODY-VERTICAL - TOP - UNDER GIRDS. 4-6
B410		32	4'-5"	X		BODY-VERTICAL - BETWEEN BEAM SEATS
B411		16	4'-9"			BODY-HORIZONTAL - BETWEEN BEAM SEATS
B512		20	9'-11"	X		BODY-VERTICAL - ENDS
B413		NOT	USED			———
B514	X	17	13'-8"	X		WING 3-VERTICAL - UPPER WING
B515	X	13	15'-8"	X		WING 3-STIRRUP - LOWER WING
B516	X	6	15'-7"			WING 3-HORIZONTAL - F.F. - LOWER WING
B517	X	7	13'-1"			WING 3-HORIZONTAL - B.F. - LOWER WING
B518	X	2	14'-0"			WING 3-HORIZONTAL - LOWER WING
B419	X	10	11'-8"			WING 3-HORIZONTAL - UPPER WING
B420	X	2	11'-8"			WING 3-HORIZONTAL - UPPER WING
B521	X	9	11'-10"	X		WING 4-VERTICAL - UPPER WING
B422	X	4	7'-9"			WING 4-HORIZONTAL - UPPER WING
B523	X	13	13'-8"	X		WING 4-VERTICAL - UPPER WING
B524	X	10	15'-10"	X		WING 4-STIRRUP - LOWER WING
B525	X	6	11'-11"			WING 4-HORIZONTAL - F.F. - LOWER WING
B626	X	8	12'-3"			WING 4-HORIZONTAL - B.F. - LOWER WING
B627	X	2	12'-3"			WING 4-HORIZONTAL - LOWER WING
B428	X	10	15'-8"			WING 4-HORIZONTAL - UPPER WING
B429	X	2	15'-8"			WING 4-HORIZONTAL - UPPER WING



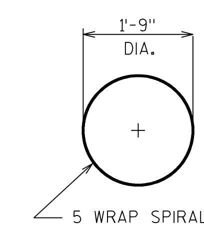
ELEVATION - WING 4



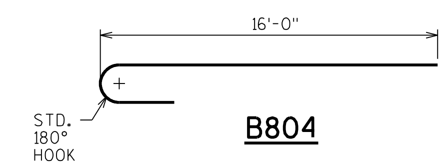
SECTION THRU WING 4



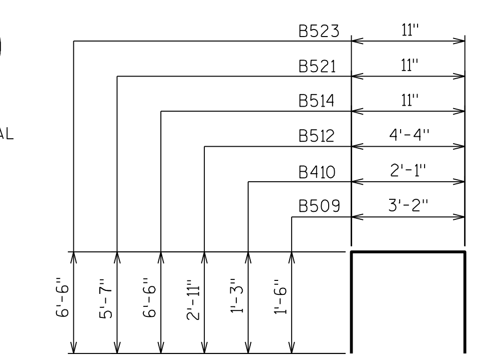
B501, B515, B524



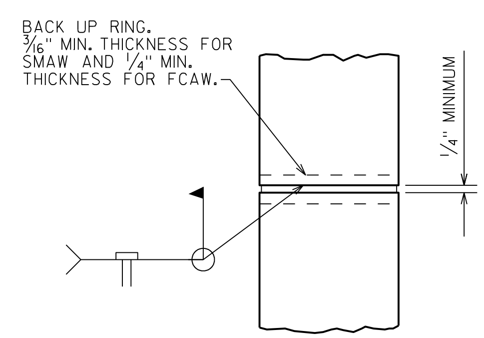
B407



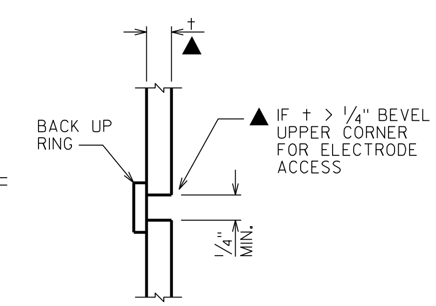
B804



B509, B410, B512, B514, B521, B523



CAST-IN-PLACE 'PIPE PILE'



C.I.P. PILE WELD DETAIL

PILE DETAILS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-20-227

DRAWN BY DDS | PLANS CK'D. ABS

EAST ABUTMENT DETAILS

SHEET 7

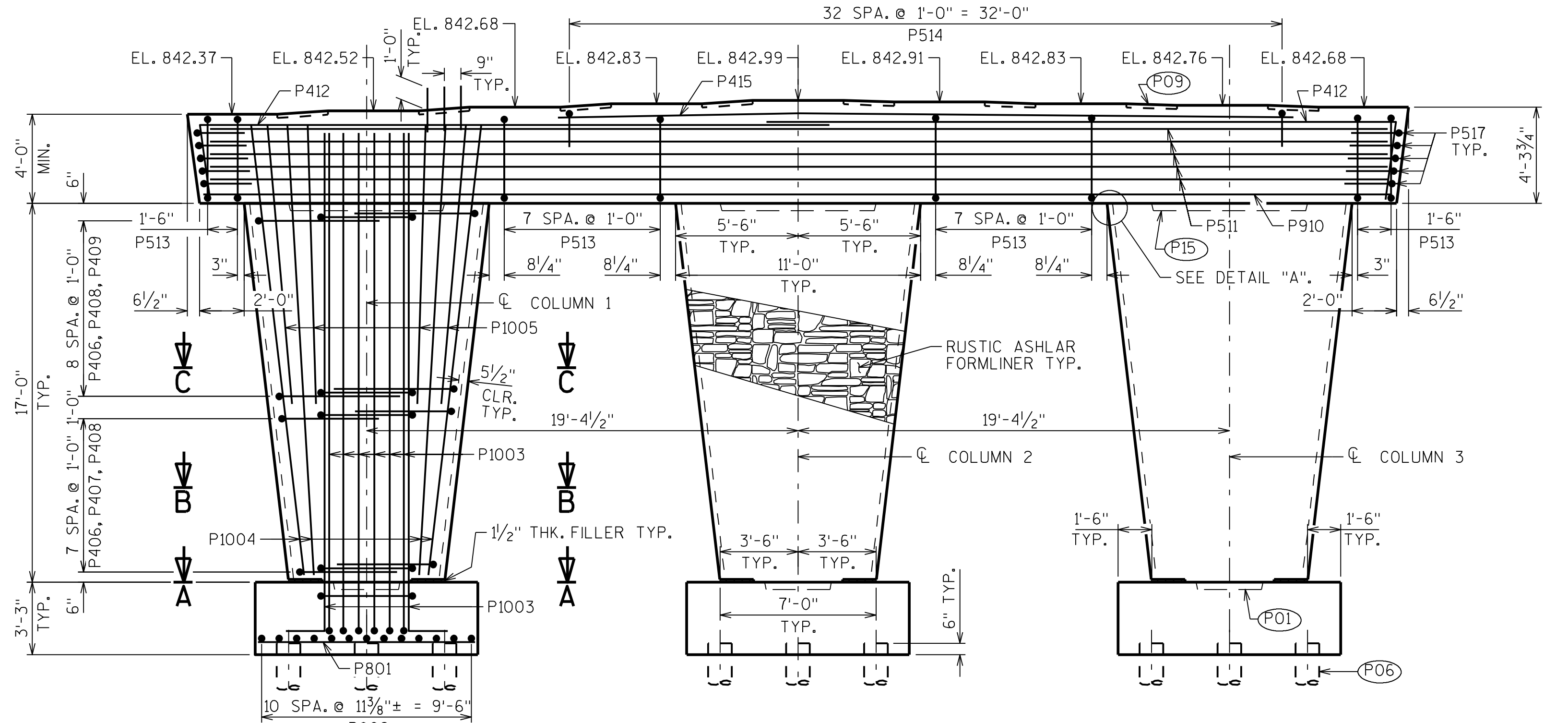
SCALE = 2.667

8

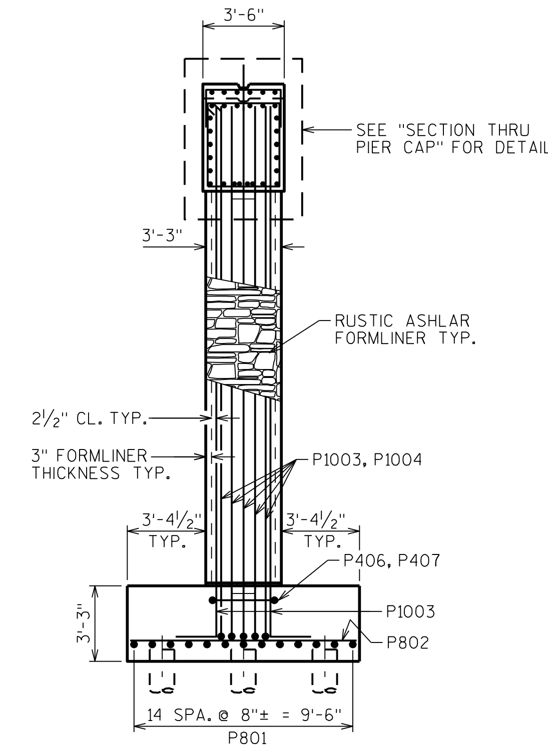
8

STATE PROJECT NUMBER

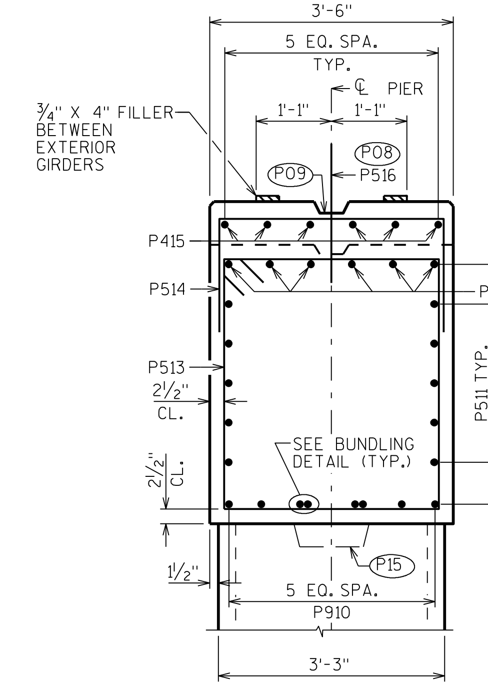
1420-23-71



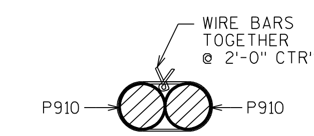
ELEVATION
LOOKING EAST



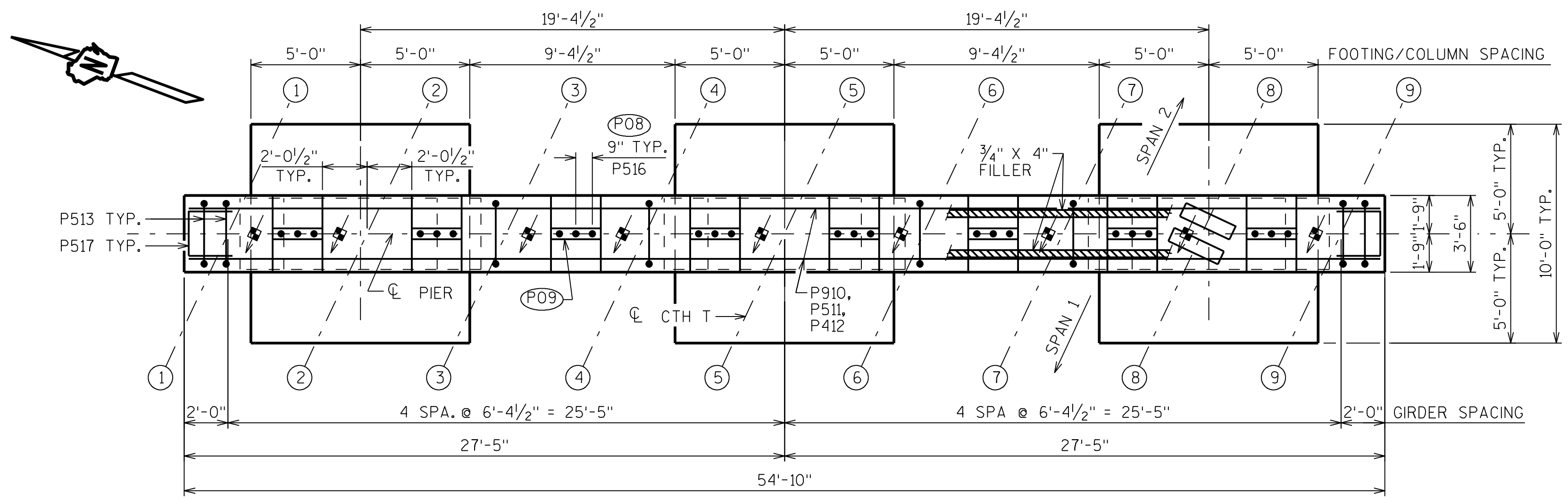
COLUMN SIDE VIEW
LOOKING NORTH



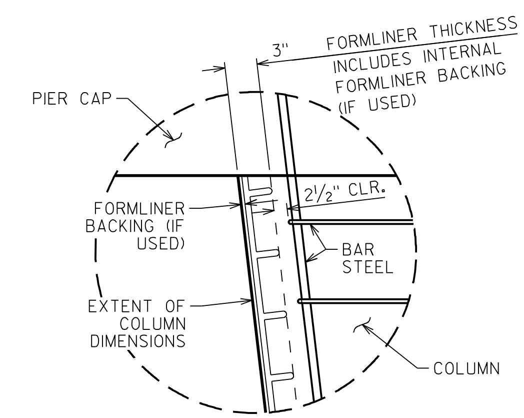
SECTION THRU PIER CAP



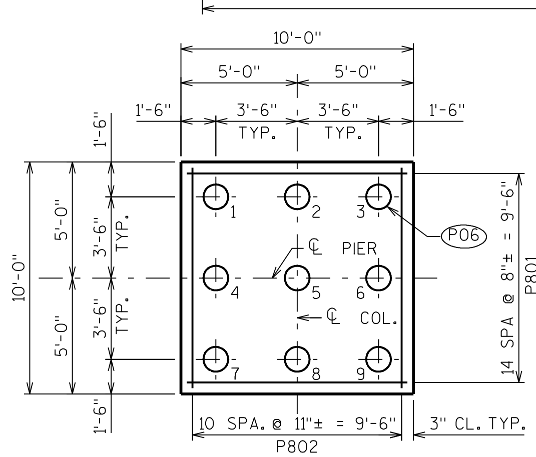
BUNDLING DETAIL



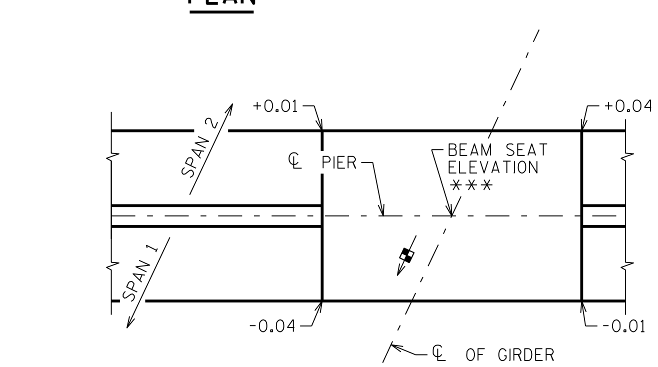
PLAN



DETAIL "A"



PILE/FOOTING DETAIL - TYP.



BEAM SEAT DETAIL

*** ELEVATION TAKEN AT INTERSECTION OF THE ℄ PIER AND ℄ OF GIRDER.

(P01) 2'-0" X 1'-1" X 4" DEEP CONSTRUCTION JOINT FORMED BY BEVELED KEYWAY.

(P06) SUPPORT PIER ON 12 3/4" DIA. CAST-IN-PLACE CONCRETE PILING, ESTIMATED 50'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 210 TONS PER PILE.

(P08) BARS @ 9" CTRS. BETWEEN BEAM SEATS. MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. (EMBED 1'-0" INTO CONC.)

(P09) KEYWAY CONSTRUCTION JOINT-FORMED BY A BEVELED 2X6 BETWEEN BEAM SEATS.

(P15) 7'-0" X 1'-1" X 4" DEEP CONSTRUCTION JOINT FORMED BY BEVELED KEYWAY.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-20-227

DRAWN BY DDS/ABS | PLANS CK'D. ABS

PIER

SHEET 8

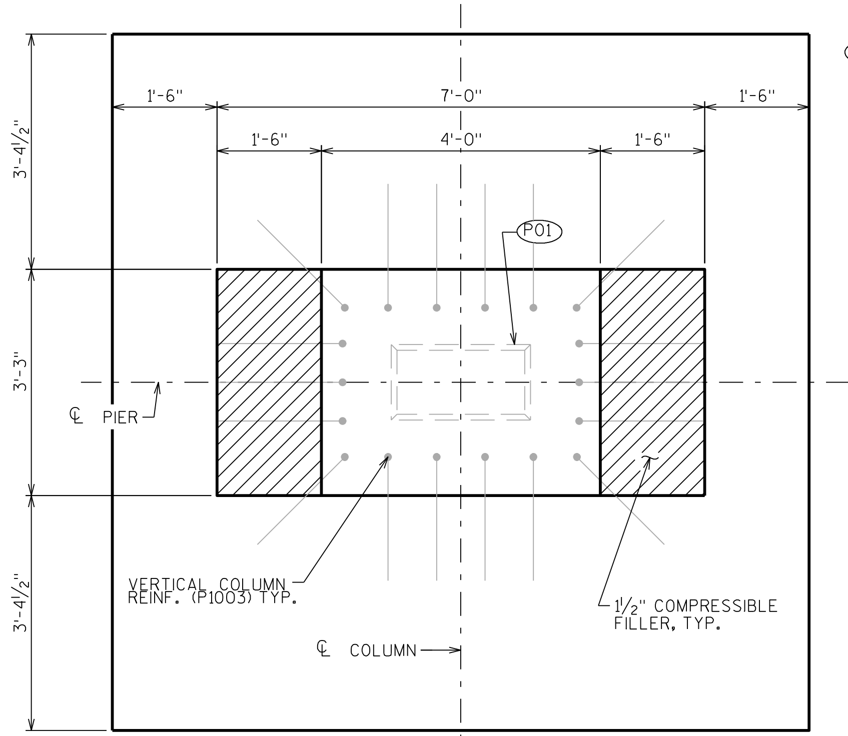
485

SCALE = 4

8

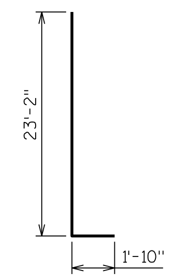
STATE PROJECT NUMBER

1420-23-71

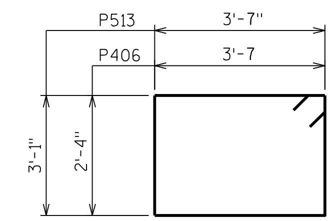


SECTION A-A

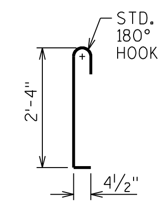
P01 2'-0" X 1'-1" X 4" DEEP CONSTRUCTION JOINT FORMED BY BEVELED KEYWAY.



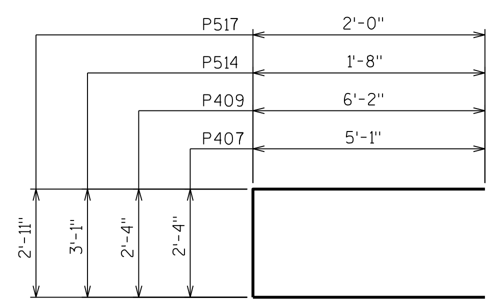
P1003



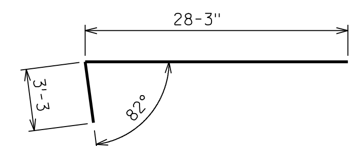
P406, P513



P408



P407, P409, P514, P517



P412

BILL OF BARS

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

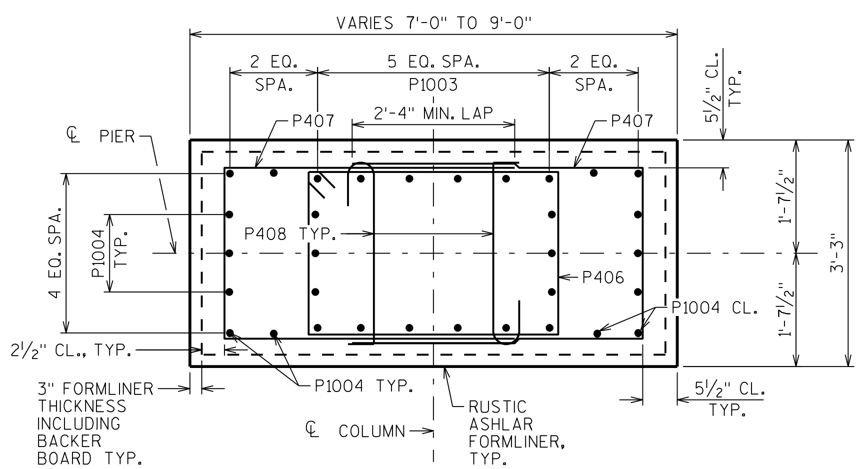
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
P801		45	9'-8"			FOOTING - HORIZ.
P802		33	9'-8"			FOOTING - HORIZ.
P1003	X	54	24'-9"	X		FOOTING/SHAFT - VERT.
P1004	X	42	20'-4"			SHAFT/CAP - VERT.
P1005	X	24	12'-6"			SHAFT/CAP - VERT.
P406	X	54	12'-4"	X		SHAFT - HORIZ. - STIRRUP
P407	X	48	12'-4"	X		SHAFT - HORIZ. - LOWER
P408	X	129	3'-2"	X		SHAFT - HORIZ. - TIE BARS
P409	X	54	14'-6"	X		SHAFT - HORIZ. - TOP
P910	X	8	53'-4"			CAP - HORIZ. - BOTTOM
P511	X	10	53'-7"		▲	CAP - HORIZ. - SIDES
P412	X	12	31'-5"	X		CAP - HORIZ. - TOP
P513	X	20	14'-0"	X		CAP - STIRRUP
P514	X	33	6'-2"	X		CAP - VERT. - TOP
P415	X	6	32'-6"			CAP - HORIZ. - TOP
P516	X	24	2'-0"			DOWEL BARS
P517	X	10	6'-8"	X		CAP - HORIZ. - ENDS

▲ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

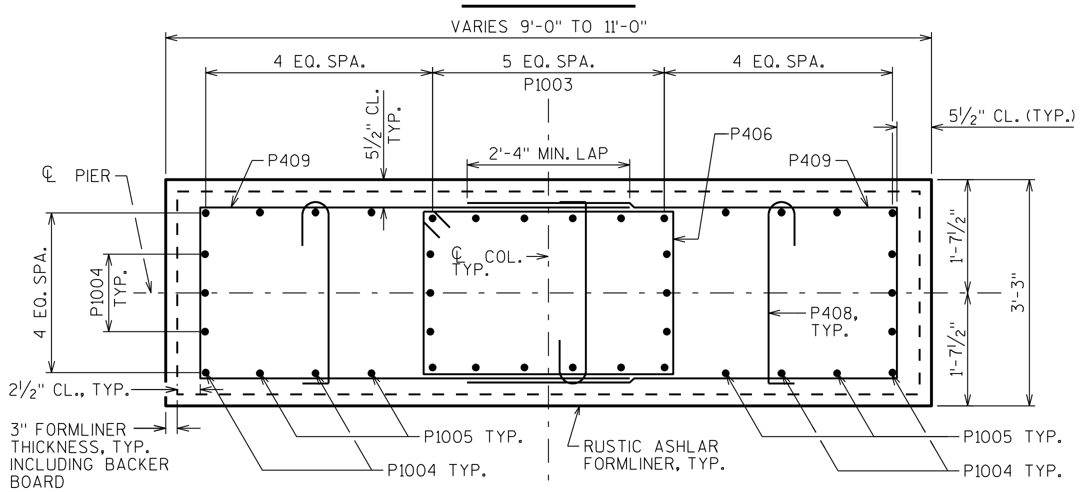
BAR SERIES TABLE

MARK	NO. REQD.	LENGTH
P511	2 SERIES OF 5	53'-3" TO 53'-10"

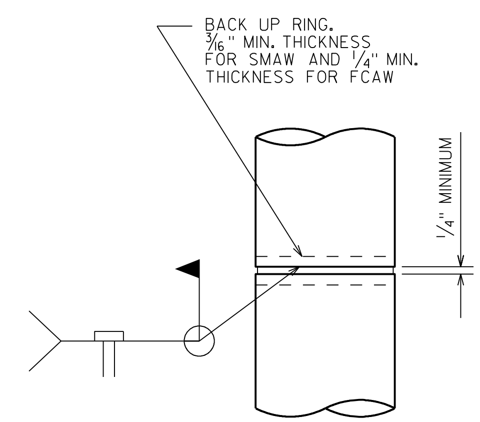
BUNDLE AND TAG EACH SERIES SEPARATELY.



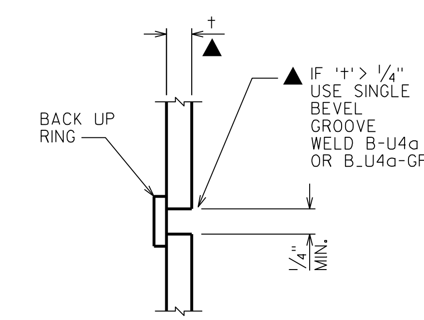
SECTION B-B



SECTION C-C



CAST-IN-PLACE 'PIPE PILE'



C.I.P. PILE WELD DETAIL

PILE DETAILS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-20-227

DRAWN BY DDS PLANS CK'D. ABS

PIER DETAILS

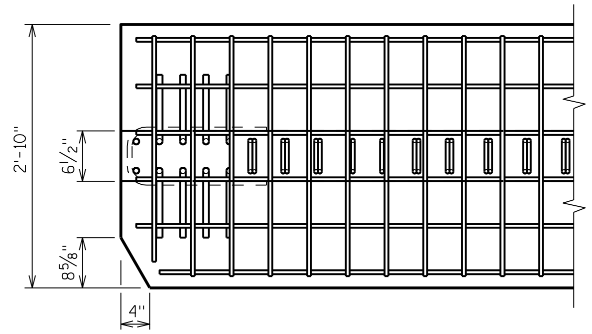
SHEET 9

486

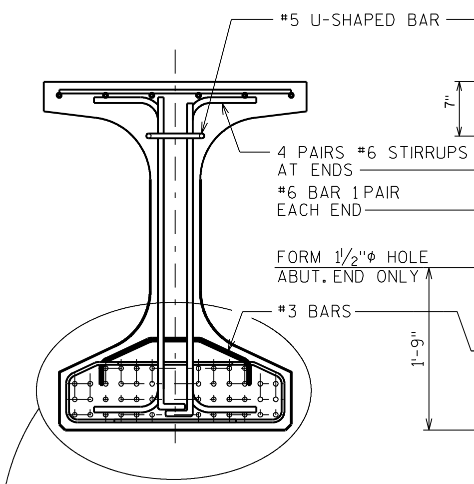
SCALE = 4

8

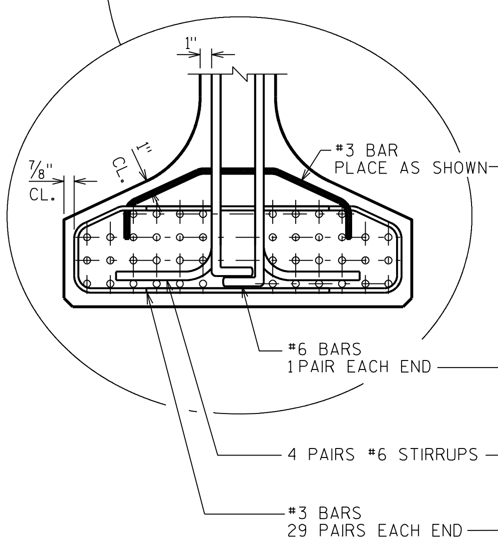
8

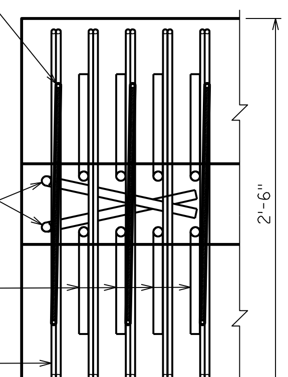


TOP FLANGE

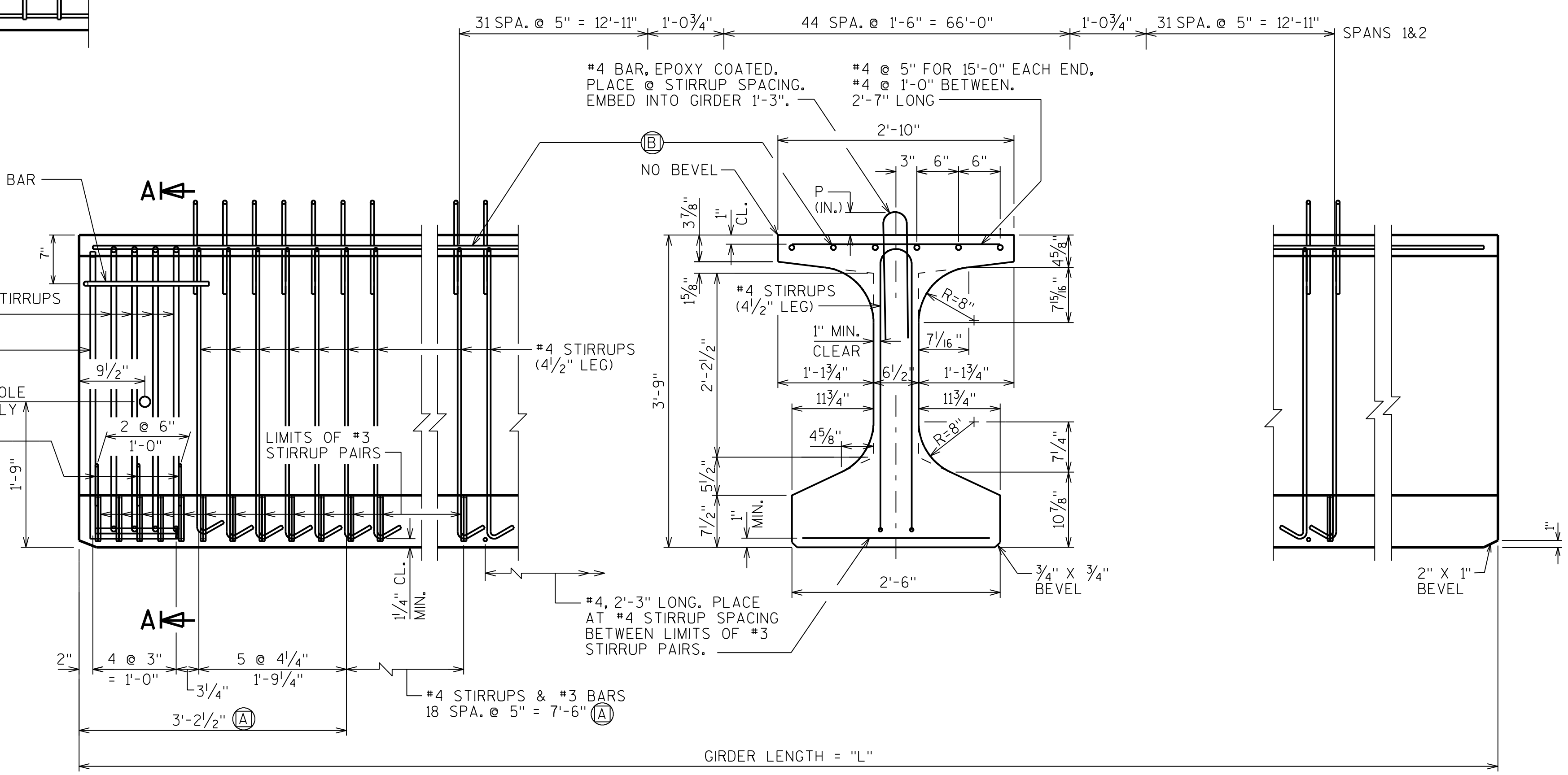


SECTION A-A





BOTTOM FLANGE



SIDE VIEW & TYP. SECTION IN SPAN

(A) DETAIL TYP. AT EACH END

(B) 6 #4 BARS, FULL LENGTH, MIN. LAP = 1'-11"

NOTES

TOP OF GIRDER TO BE ROUGH FLOATED AND BROOMED TRANSVERSELY, EXCEPT THE OUTSIDE 8" OF THE GIRDER, WHICH SHALL RECEIVE A SMOOTH FINISH. AN APPROVED CONCRETE SEALER SHALL BE APPLIED TO ALL SMOOTH SURFACES INCLUDING THE OUTSIDE 8" OF THE TOP FLANGE.

DO NOT APPLY CONCRETE SEALER TO SURFACES RECEIVING APPLICATION OF CONCRETE STAINING.

THE GIRDERS SHALL BE PROVIDED WITH A SUITABLE LIFTING DEVICE FOR HANDLING AND ERECTING THE GIRDERS.

STRANDS SHALL BE FLUSH WITH THE END OF GIRDER. FOR GIRDER ENDS EMBEDDED COMPLETELY IN CONCRETE, ENDS OF STRANDS SHALL BE COATED WITH NON-BITUMINOUS JOINT SEALER. FOR GIRDER ENDS THAT ARE FINALLY EXPOSED, COAT THE GIRDER ENDS, EXPOSED STRAND ENDS AND ALL NON-BONDING SURFACES WITHIN 2 FEET OF THE GIRDER ENDS WITH A NON-PIGMENTED EPOXY CONFORMING TO AASHTO M-235 TYPE III, CLASS B OR C. THE EPOXY SHALL BE APPLIED AT LEAST 3 DAYS AFTER MOIST CURING HAS CEASED AND PRIOR TO APPLICATION OF THE SEALER.

ALL GIRDERS SHALL BE CAST FULL LENGTH AS SHOWN.

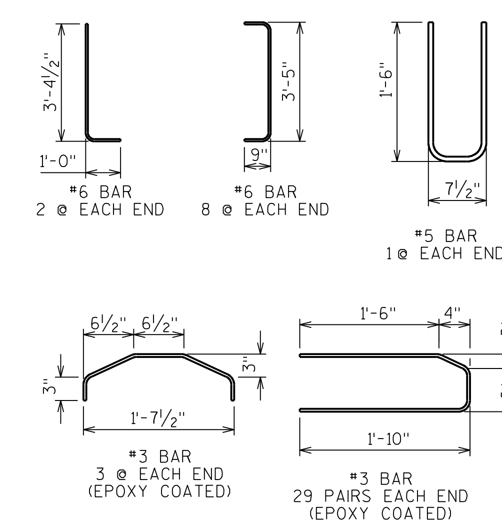
SPACING SHOWN FOR #4 STIRRUPS IS FOR GRADE 60 REINFORCEMENT. IF THE FABRICATOR WANTS TO BUILD A BAR STEEL CAGE BY WELDING LONGITUDINAL REINFORCEMENT TO THE #4 STIRRUPS, ONE OPTION IS AVAILABLE:

USE ASTM A706, GRADE 60 REINFORCEMENT AND THE STIRRUP SPACING AS SHOWN ON THE PLANS.

AN ALTERNATE EQUIVALENT OF WELDED WIRE FABRIC (WWF) ASTM A497 MAY BE SUBSTITUTED FOR THE STIRRUP REINFORCEMENT SHOWN, UPON APPROVAL OF THE STRUCTURES DEVELOPMENT SECTION.

PRESTRESSING STRANDS SHALL BE 0.6" DIA.-7 WIRE LOW-RELAXATION STRANDS WITH AN ULTIMATE STRENGTH OF 270,000 psi.

FOR DIAPHRAGM INSERT & CONNECTION DETAILS SEE "STEEL DIAPHRAGM" SHEET.



✳ MINIMUM CYLINDER STRENGTH OF CONCRETE @ TIME OF TRANSFER OF PRESTRESS FORCE.

GIRDER DATA

SPAN	GIRDER	GIRDER LENGTH "L"	DEAD LOAD DEFL. (IN.) 1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	CONC. STRGTH. f'c (p.s.i.)	"P" 1ST ⅓ OF GIRDER	"P" MID ⅓ OF GIRDER	"P" END ⅓ OF GIRDER	DIA. OF STRAND (IN.)	DRAPED PATTERN TOTAL NO. OF STRANDS	DRAPED f'ci (P.S.I.) ✳	DRAPED (IN.) "A"	DRAPED (IN.) "B" MIN.	DRAPED (IN.) "B" MAX.	DRAPED (IN.) "C"	UNDRAPED PATTERN TOTAL NO. OF STRANDS	UNDRAPED f'ci (P.S.I.) ✳
1	1, 9	115.375	0.73	1.38	1.89	2.19	2.28	2.15	1.82	1.31	0.68	8000	7"	7"	7"	0.06	34	6800	4.0	13.8	16.8	3.0		
1	2-8	115.375	0.79	1.50	2.04	2.38	2.49	2.35	1.99	1.44	0.75	8000	7"	7"	7"	0.06	34	6800	4.0	13.8	16.8	3.0		
2	1, 9	115.375	0.68	1.31	1.82	2.15	2.28	2.19	1.88	1.38	0.73	8000	7"	7"	7"	0.06	34	6800	4.0	13.8	16.8	3.0		
2	2-8	115.375	0.75	1.44	1.99	2.35	2.49	2.38	2.04	1.50	0.79	8000	7"	7"	7"	0.06	34	6800	4.0	13.8	16.8	3.0		

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-20-227

DRAWN BY DDS PLANS CK'D. ABS

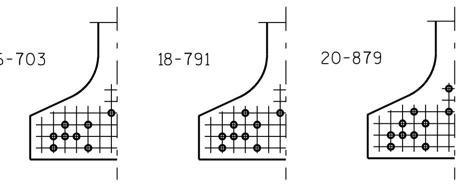
45W" PRESTRESSED GIRDER DETAILS

SHEET 10

8

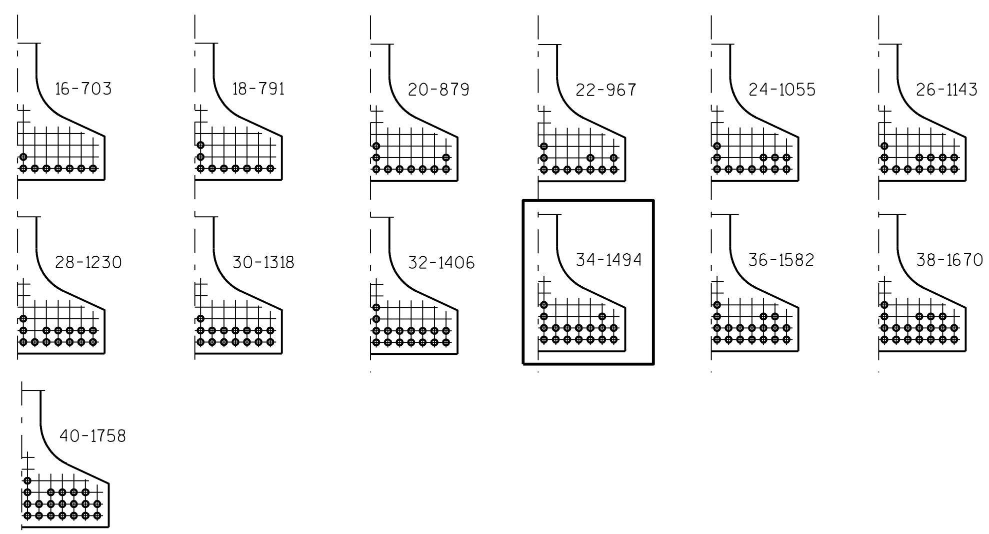
8

SCALE = 1



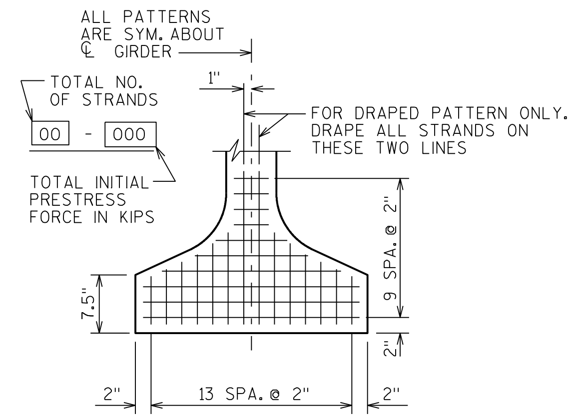
STANDARD ARRANGEMENTS TO RAISE CENTER OF GRAVITY TO AVOID DRAPING OF STRANDS

0.6"φ STRANDS

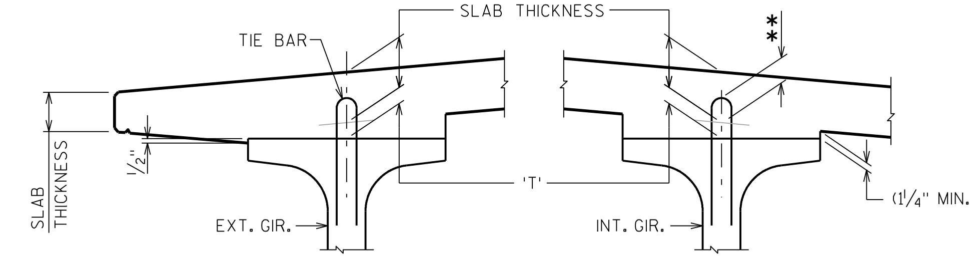


ARRANGEMENT AT ℄ SPAN - FOR GIRDERS WITH DRAPED STRANDS

0.6"φ STRANDS



TYP. STRAND PATTERN



SLAB HAUNCH DETAIL

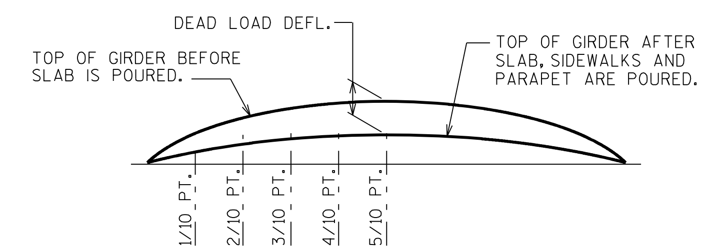
IF 1 1/4" MINIMUM HAUNCH HEIGHT AT EDGE OF GIRDER CANNOT BE MAINTAINED, THE GRADE LINE MAY BE REVISED BY THE ENGINEER AT THE OPTION OF THE CONTRACTOR. THE PLAN SLAB THICKNESS SHALL BE HELD. NOTIFY THE STRUCTURES SECTION IF THE GRADE LINE IS RAISED FROM THE PLAN PROFILE BY MORE THAN 1/2" OR,
** IF 3" MINIMUM DECK EMBEDMENT OF TIE BAR CANNOT BE OBTAINED.

TO DETERMINE 'T', ELEV. OF TOP OF GIR'S. AT ℄ OF SUBSTRUCTURE UNITS & AT 1/10 POINTS OF EACH SPAN SHALL BE TAKEN. THEN FOLLOW THIS PROCESS:

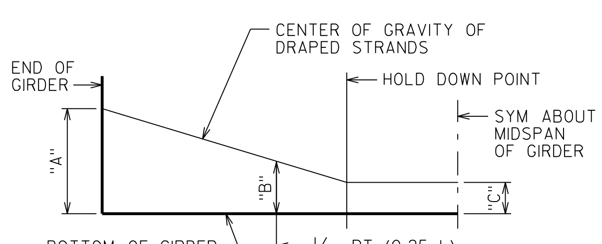
TOP OF DECK ELEV. AT FINAL GRADE
- TOP OF GIRDER ELEVATION
+ DEAD LOAD DEFLECTION
- SLAB THICKNESS

= HAUNCH HEIGHT 'T'

NOTE: AN AVERAGE HAUNCH ('T') OF 2.6" WAS USED IN THE QUANTITY "CONCRETE MASONRY BRIDGES".



DEAD LOAD DEFLECTION DIAGRAM



DRAPED STRAND PROFILE

*THE THEORETICAL INITIAL CAMBER VALUE AT THE TIME OF STRAND RELEASE AT MIDSPAN MULTIPLIED BY A FACTOR OF 1.4 TO ACCOUNT FOR CAMBER GROWTH FROM THE TIME OF STRAND RELEASE TO JOBSITE PLACEMENT.

SPAN	CAMBER (IN.) *
1	3.65
2	3.65

THESE VALUES ARE NOT TO BE USED IN DETERMINING 'T', USE ACTUAL GIRDER SHOTS.

THESE VALUES ARE FOR INFORMATIONAL PURPOSES ONLY.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-20-227

DRAWN BY DDS PLANS CK'D. ABS

45W" PRESTRESSED GIRDER DETAILS 1

SHEET 11

8

8

SCALE = 1

STATE PROJECT NUMBER

1420-23-71

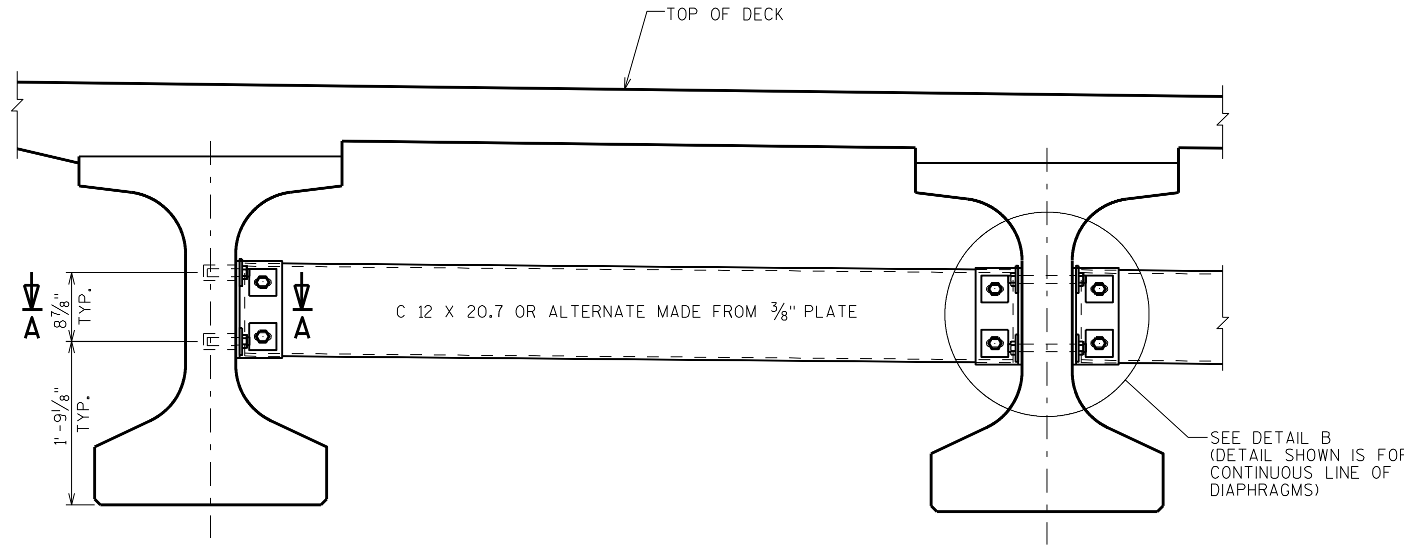
NOTES

ALL DIAPHRAGM MATERIAL NOT EMBEDDED IN THE CONCRETE GIRDER SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGMS B-20-227", EACH.

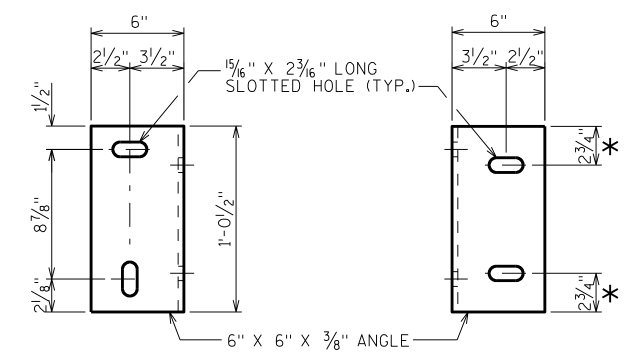
EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 36. ALL BOLTS, NUTS AND WASHERS SHALL BE ASTM A325 TYPE 1.

ALL DIAPHRAGM STRUCTURAL STEEL SHOWN SHALL BE HOT-DIPPED GALVANIZED. ALL BOLTS, NUTS AND WASHERS SHALL BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C. GALVANIZED NUTS SHALL BE TAPPED OVERSIZED IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM A563 AND SHALL MEET THE REQUIREMENTS OF SUPPLEMENTARY REQUIREMENT S1 OF ASTM A563, LUBRICANT AND TEST FOR COATED NUTS.

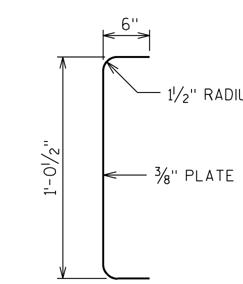


PART TRANSVERSE SECTION AT DIAPHRAGM

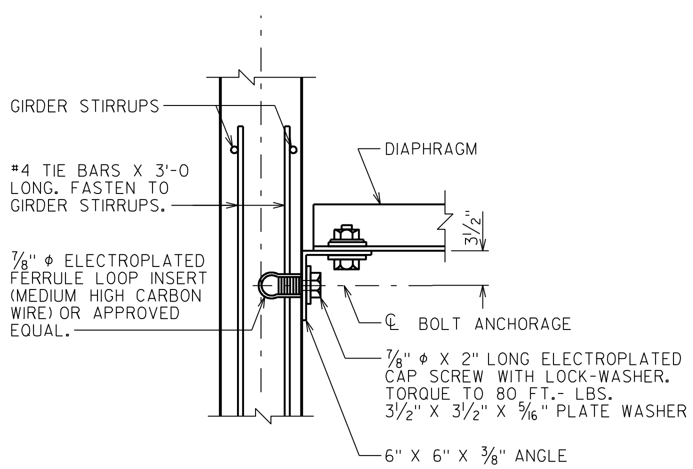


DIAPHRAGM SUPPORT

* 2 1/2" FOR ALTERNATE PLATE DIAPHRAGM

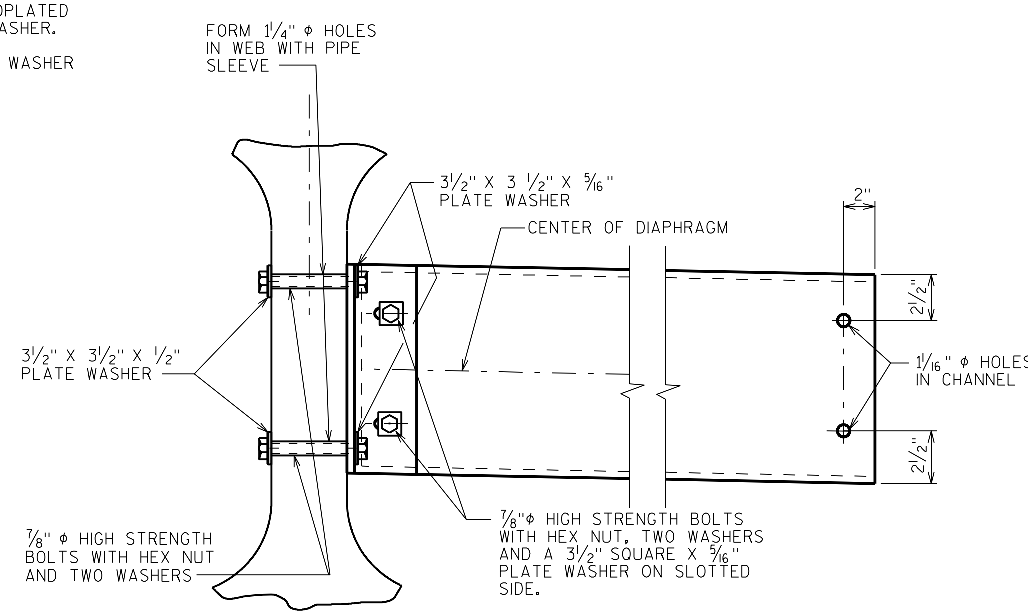


SECTION THRU ALTERNATE DIAPHRAGM



SECTION A-A

(FOR EXTERIOR ATTACHMENT)



(FOR STAGGERED DIAPHRAGM)

DETAIL B

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-20-227

DRAWN BY DDS PLANS CK'D. ABS

STEEL DIAPHRAGM

SHEET 12

489

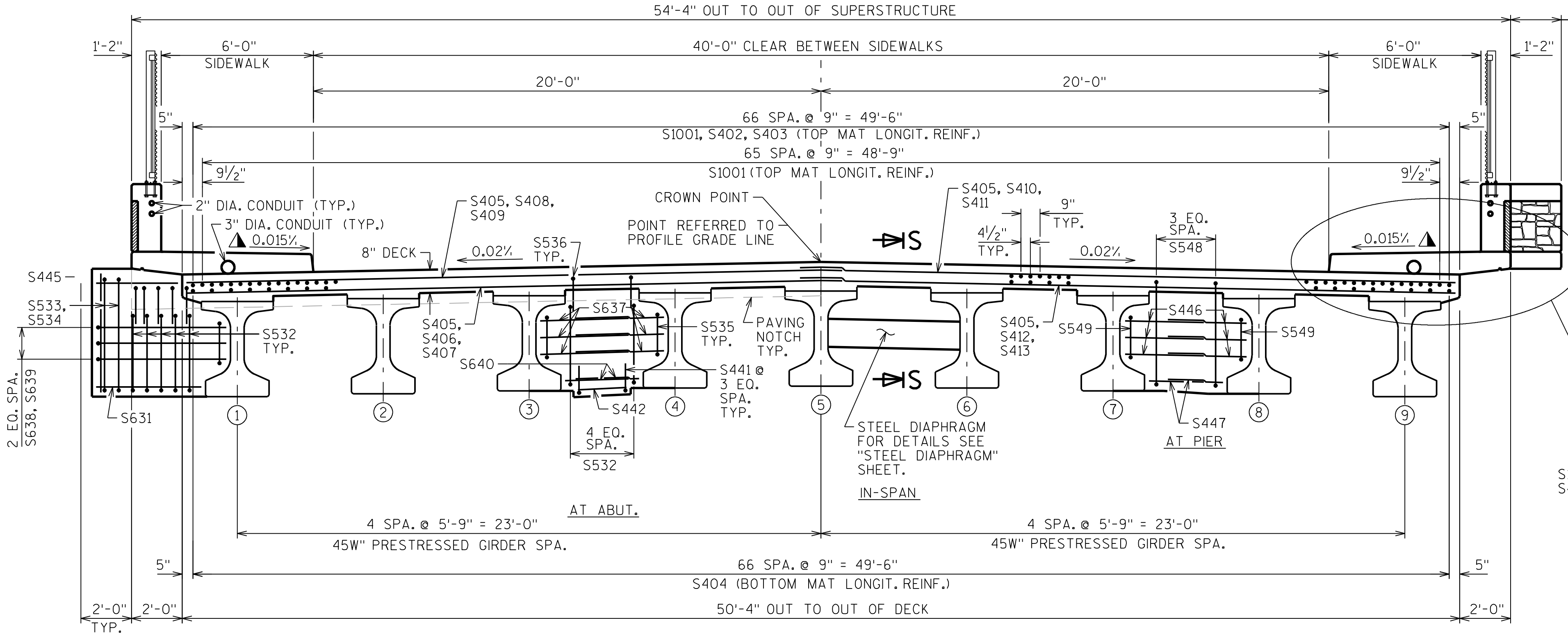
8

8

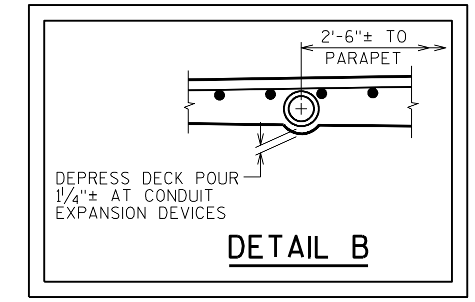
SCALE = 1.0

STATE PROJECT NUMBER

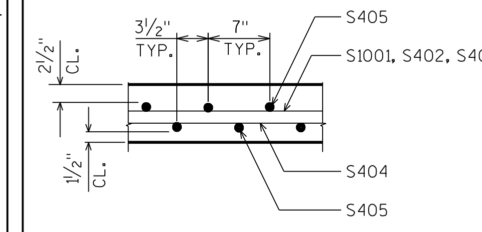
1420-23-71



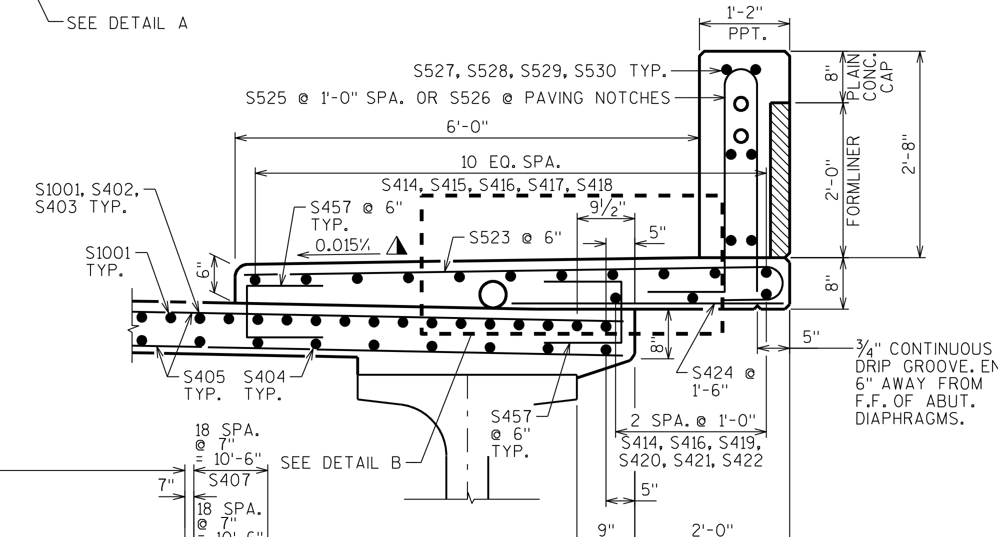
CROSS SECTION THRU ROADWAY - LOOKING EAST



DETAIL B

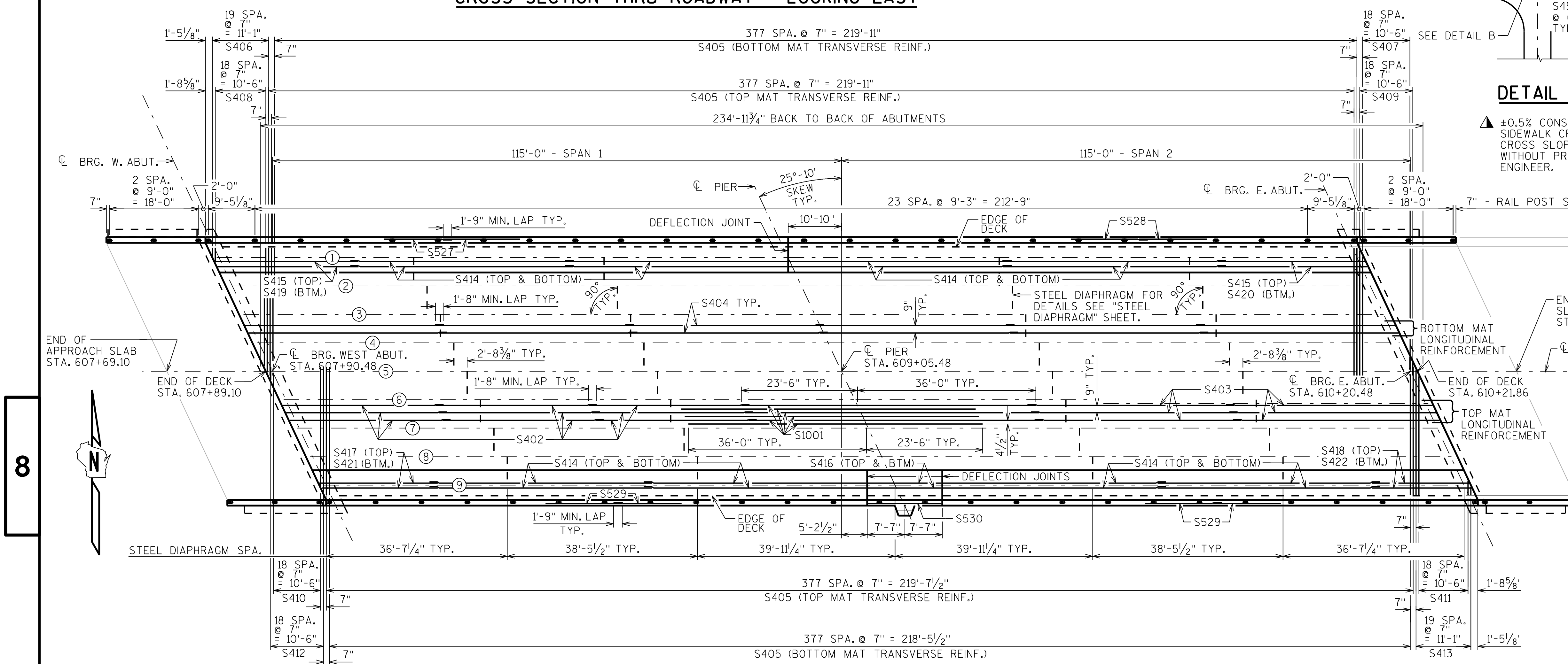


SECTION S-S



DETAIL A

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



PLAN

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-20-227

DRAWN BY DDS | PLANS CK'D. ABS

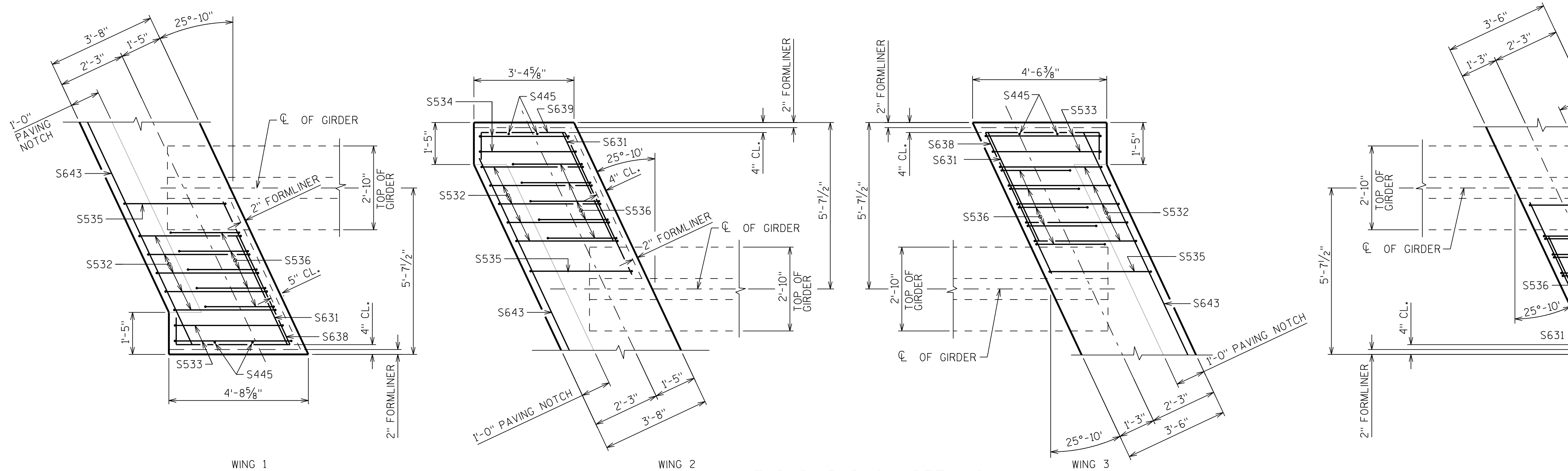
SUPERSTRUCTURE | SHEET 13

490

SCALE = 14.4

STATE PROJECT NUMBER

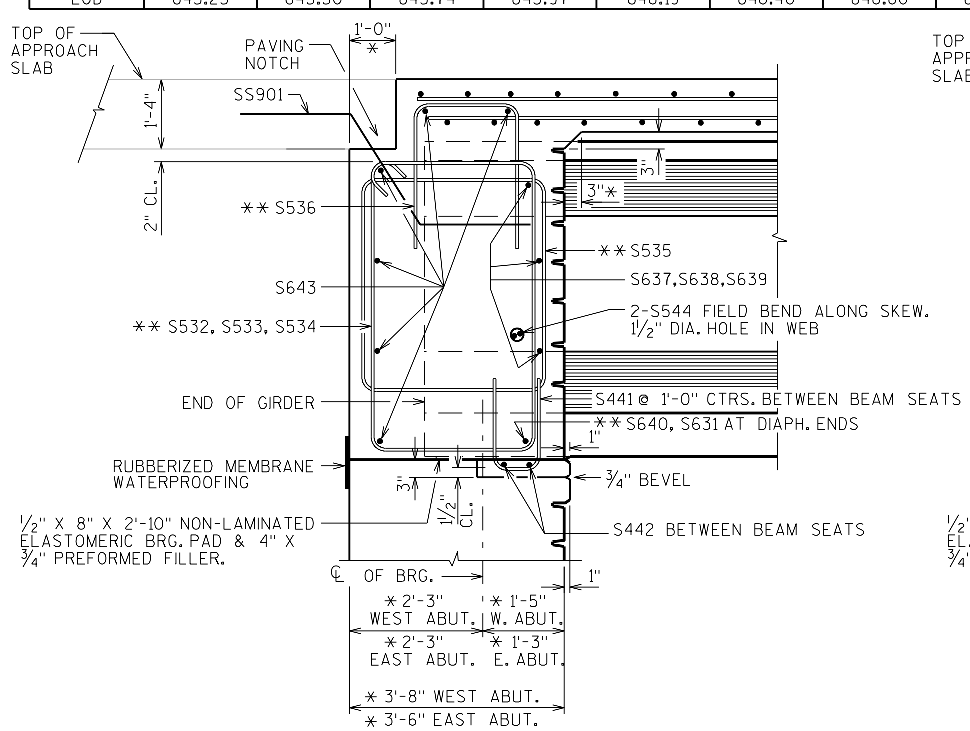
1420-23-71



END DIAPHRAGM DETAILS

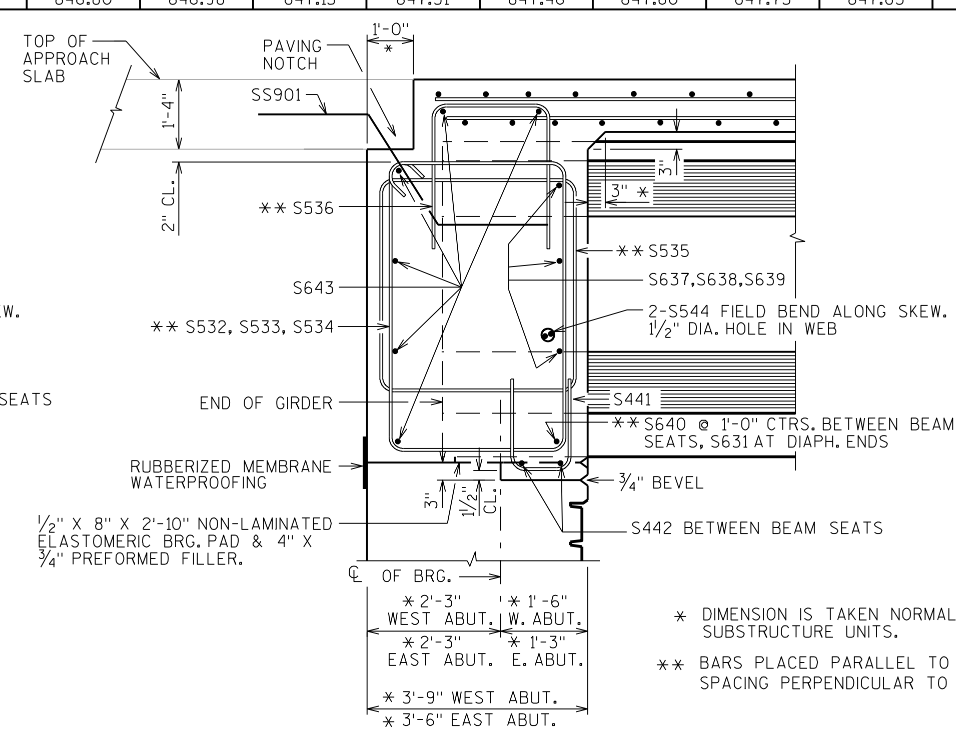
TOP OF DECK ELEVATIONS

	W. ABUT.	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	PIER	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	E. ABUT.
EOD	844.70	844.97	845.24	845.49	845.73	845.96	846.18	846.39	846.59	846.78	846.97	847.14	847.30	847.45	847.59	847.72	847.85	847.96	848.06	848.15	848.23
GIR. 1	844.77	845.04	845.30	845.55	845.79	846.02	846.24	846.45	846.65	846.84	847.03	847.20	847.36	847.51	847.65	847.78	847.90	848.01	848.11	848.20	848.28
GIR. 2	844.95	845.22	845.48	845.72	845.96	846.19	846.41	846.62	846.81	847.00	847.18	847.35	847.51	847.66	847.79	847.92	848.04	848.15	848.25	848.34	848.41
GIR. 3	845.13	845.39	845.65	845.90	846.13	846.36	846.57	846.78	846.98	847.16	847.34	847.50	847.66	847.80	847.94	848.07	848.18	848.29	848.38	848.47	848.55
GIR. 4	845.31	845.57	845.82	846.07	846.30	846.52	846.74	846.94	847.13	847.32	847.49	847.65	847.81	847.95	848.09	848.21	848.32	848.43	848.52	848.60	848.68
PGL/GIR. 5	845.49	845.75	846.00	846.24	846.47	846.69	846.90	847.10	847.29	847.47	847.65	847.81	847.96	848.10	848.23	848.35	848.46	848.56	848.66	848.74	848.81
GIR. 6	845.43	845.69	845.94	846.18	846.41	846.63	846.83	847.03	847.22	847.40	847.57	847.73	847.88	848.02	848.14	848.26	848.37	848.47	848.56	848.64	848.71
GIR. 7	845.38	845.64	845.88	846.12	846.34	846.56	846.77	846.96	847.15	847.33	847.49	847.65	847.80	847.93	848.06	848.18	848.28	848.38	848.46	848.54	848.61
GIR. 8	845.33	845.58	845.82	846.06	846.28	846.50	846.70	846.89	847.08	847.25	847.42	847.57	847.71	847.85	847.97	848.09	848.19	848.28	848.37	848.44	848.51
GIR. 9	845.27	845.52	845.76	846.00	846.22	846.43	846.63	846.82	847.00	847.18	847.34	847.49	847.63	847.76	847.88	848.00	848.10	848.19	848.27	848.34	848.41
EOD	845.25	845.50	845.74	845.97	846.19	846.40	846.60	846.80	846.98	847.15	847.31	847.46	847.60	847.73	847.85	847.96	848.06	848.15	848.24	848.31	848.37



AT ABUTMENTS - ENDS

NOTE: NO AESTHETICS AT EAST ABUT.

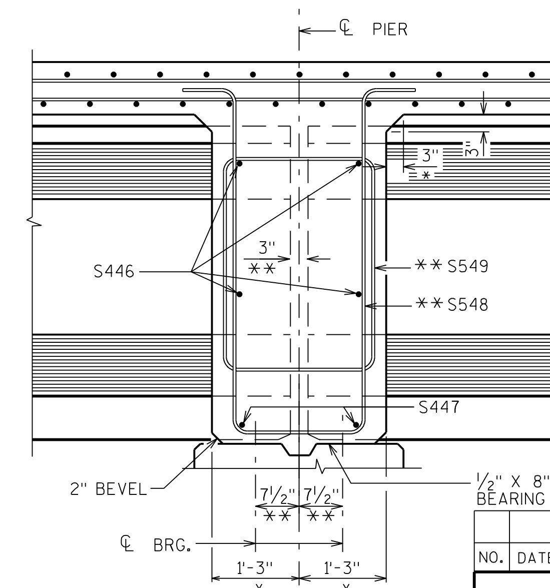


AT ABUTMENTS - BETWEEN GIRDERS

PART LONGIT. SECTION

* DIMENSION IS TAKEN NORMAL TO ℄ SUBSTRUCTURE UNITS.

** BARS PLACED PARALLEL TO GIRDERS SPACING PERPENDICULAR TO ℄ GIRDERS



½" X 8" X 2'-6" NON-LAMINATED ELASTOMERIC BEARING PADS & ¾" PREFORMED FILLER.

AT PIER DIAPHRAGM

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-20-227

DRAWN BY DDS | PLANS CK'D. ABS

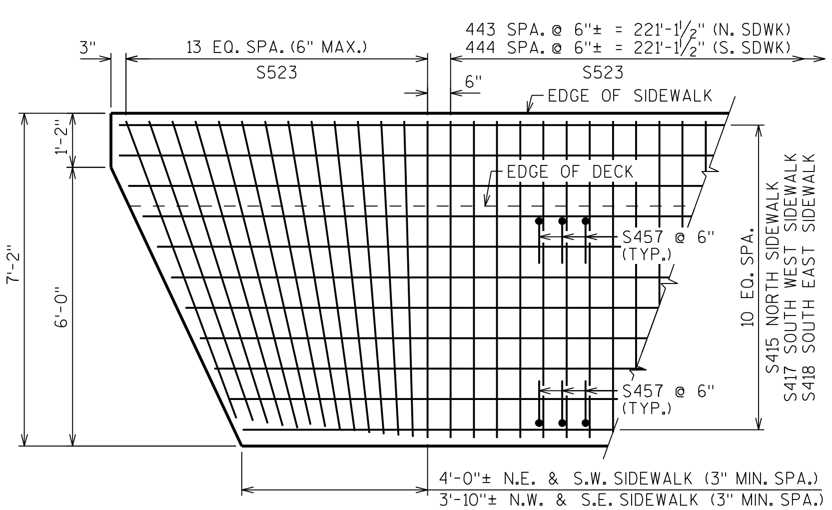
SUPERSTRUCTURE DIAPH. DETAILS

SHEET 14

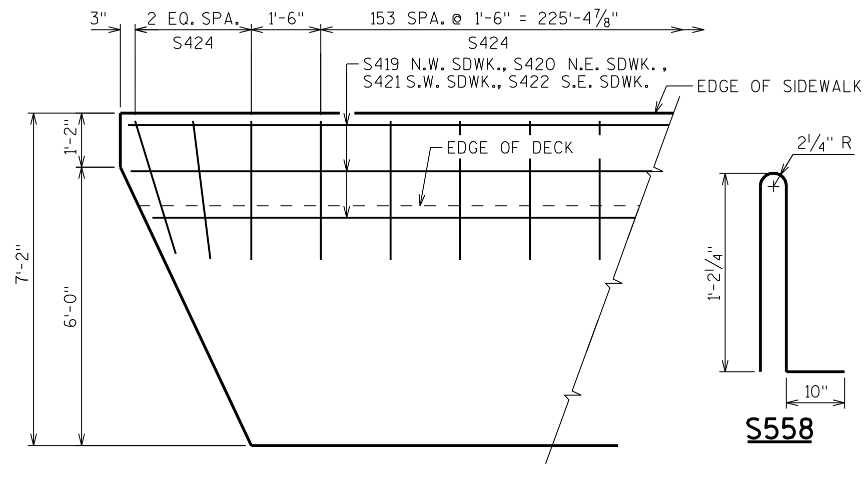
491

8

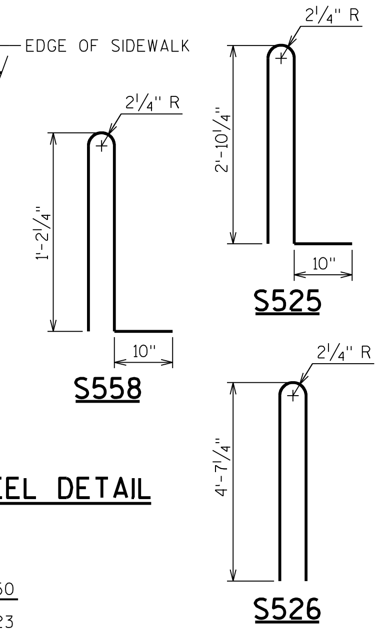
SCALE = 2

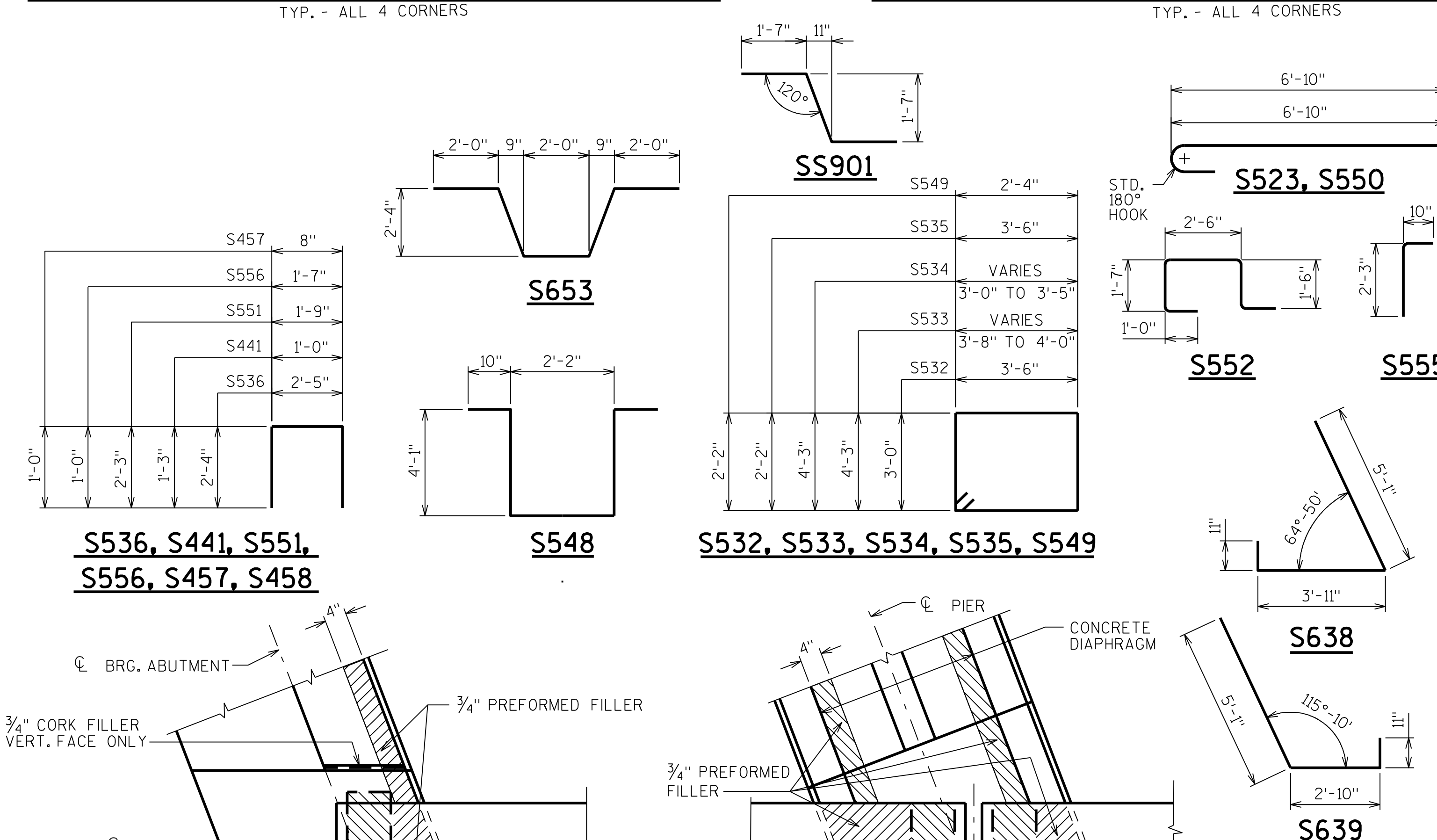


SIDEWALK - TOP TRANSVERSE BAR STEEL DETAIL
TYP. - ALL 4 CORNERS



SIDEWALK - BOTTOM TRANSVERSE BAR STEEL DETAIL
TYP. - ALL 4 CORNERS





BAR SERIES TABLE

MARK	NO. REQD.	LENGTH
S406	1 SERIES OF 20	1'-8" TO 25'-2"
S407	1 SERIES OF 19	2'-3" TO 24'-8"
S408	1 SERIES OF 19	2'-3" TO 24'-7"
S409	1 SERIES OF 19	2'-11" TO 25'-3"
S410	1 SERIES OF 19	2'-11" TO 25'-3"
S411	1 SERIES OF 19	2'-3" TO 24'-7"
S412	1 SERIES OF 19	2'-3" TO 24'-8"
S413	1 SERIES OF 20	1'-8" TO 25'-2"
S415	2 SERIES OF 11	28'-0" TO 30'-8"
S417	1 SERIES OF 11	22'-5" TO 25'-0"
S418	1 SERIES OF 11	18'-5" TO 21'-3"
S533	2 SERIES OF 2	16'-6" TO 17'-2"
S534	2 SERIES OF 2	15'-2" TO 16'-0"

BUNDLE AND TAG EACH SERIES SEPERATELY

BILL OF BARS

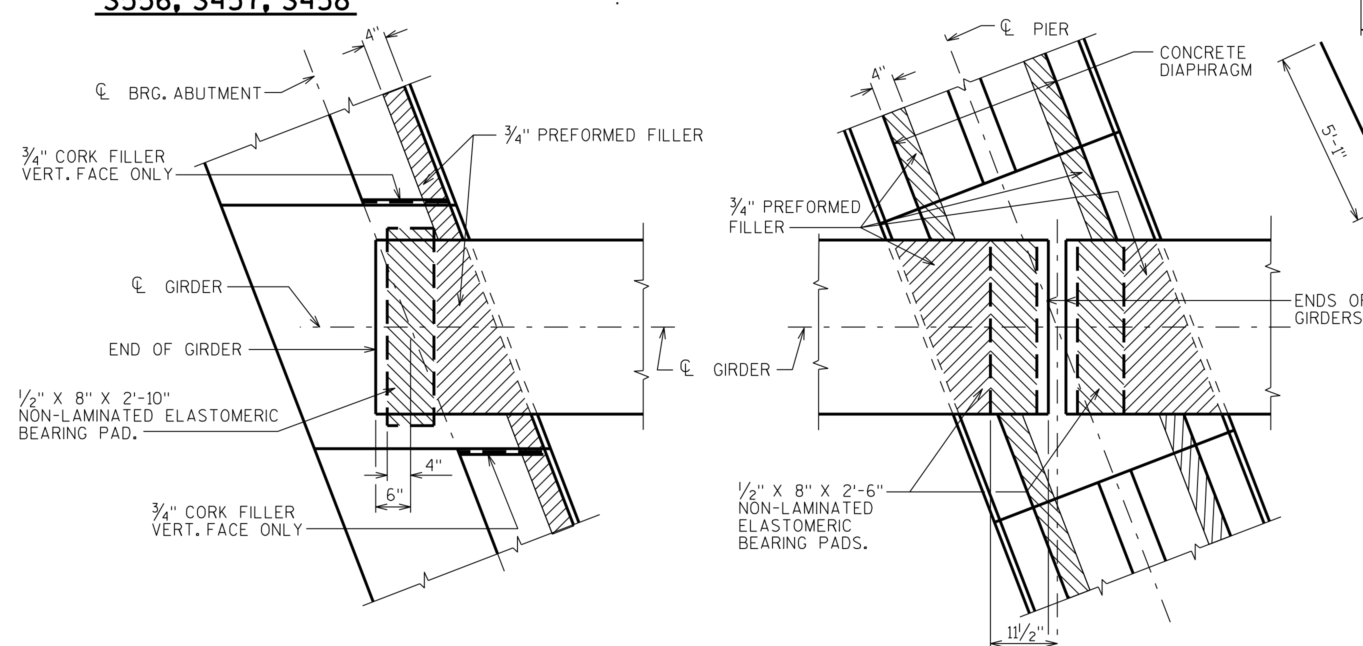
NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
S1001	X	133	59'-6"			DECK - LONGITUDINAL - CONTINUITY
S402	X	198	32'-7"			DECK - LONGITUDINAL - TOP - SPAN 1
S403	X	132	41'-9"			DECK - LONGITUDINAL - TOP - SPAN 2
S404	X	402	40'-2"			DECK - LONGITUDINAL - BOTTOM
S405	X	1512	25'-10"			DECK - TRANSVERSE - TOP & BOTTOM
S406	X	20	13'-5"		▲	DECK - TRANSVERSE - BOTTOM
S407	X	19	13'-5"		▲	DECK - TRANSVERSE - BOTTOM
S408	X	19	13'-5"		▲	DECK - TRANSVERSE - TOP
S409	X	19	14'-1"		▲	DECK - TRANSVERSE - TOP
S410	X	19	14'-1"		▲	DECK - TRANSVERSE - TOP
S411	X	19	13'-5"		▲	DECK - TRANSVERSE - TOP
S412	X	19	13'-5"		▲	DECK - TRANSVERSE - BOTTOM
S413	X	20	13'-5"		▲	DECK - TRANSVERSE - BOTTOM
S414	X	112	45'-0"			NORTH & SOUTH SDWK.- LONGIT. - TOP & BOTTOM
S415	X	22	29'-4"		▲	NORTH SIDEWALK - LONGIT. - TOP - ENDS
S416	X	14	14'-10"			SOUTH SIDEWALK - LONGIT. - MIDDLE - TOP & BOTTOM
S417	X	11	23'-8"		▲	SOUTHWEST SIDEWALK - LONGIT. - TOP - END
S418	X	11	19'-11"		▲	SOUTHEAST SIDEWALK - LONGIT. - TOP - END
S419	X	3	30'-8"			NORTHWEST SIDEWALK - LONGIT. - BOTTOM - END
S420	X	3	28'-7"			NORTHEAST SIDEWALK - LONGIT. - BOTTOM - END
S421	X	3	23'-0"			SOUTHWEST SIDEWALK - LONGIT. - BOTTOM - END
S422	X	3	21'-3"			SOUTHEAST SIDEWALK - LONGIT. - BOTTOM - END
S523	X	945	7'-5"	X		SIDEWALK - TRANSVERSE - TOP
S424	X	320	3'-0"			SIDEWALK - TRANSVERSE - BOTTOM
S525	X	465	6'-8"	X		PARAPET - VERTICAL
S526	X	4	9'-5"	X		PARAPET - VERTICAL - AT PAVING NOTCHES
S527	X	18	40'-4"			PARAPET - HORIZONTAL - N.W. PPT.
S528	X	18	39'-5"			PARAPET - HORIZONTAL - N.E. PPT.
S529	X	36	37'-7"			PARAPET - HORIZONTAL - S.W. & S.E. PPT.
S530	X	6	14'-10"			PARAPET - HORIZONTAL - MID OF S. PPT.
S631	X	4	4'-3"			ABUT. DIAPH. - HORIZONTAL - ENDS - BOTTOM
S532	X	100	13'-8"	X		ABUT. DIAPH. - STIRRUP - WEST & EAST - ABUT. DIAPH.
S533	X	4	16'-10"	X	▲	ABUT. DIAPH. - STIRRUP - ENDS - WINGS 1&3
S534	X	4	15'-7"	X	▲	ABUT. DIAPH. - STIRRUP - ENDS - WINGS 2&4
S535	X	36	12'-0"	X		ABUT. DIAPH. - STIRRUPS - AT GIRDERS
S536	X	100	6'-10"	X		ABUT. DIAPH. - VERT.
S637	X	96	3'-6"			ABUT. DIAPH. - HORIZ. - BETWEEN GIRDERS
S638	X	6	9'-7"	X		ABUT. DIAPH. - HORIZ. - ENDS - WINGS 1&3
S639	X	6	8'-6"	X		ABUT. DIAPH. - HORIZ. - ENDS - WINGS 2&4
S640	X	32	2'-8"			ABUT. - HORIZ. - BOTTOM - BETWEEN BEAM SEATS
S441	X	64	3'-4"	X		ABUT. DIAPH. - VERT. - BOTTOM - BETWEEN GIRDERS
S442	X	32	2'-1"			ABUT. DIAPH. - HORIZ. - BOTTOM - BTWN. GIRDERS
S643	X	24	33'-0"			ABUT. DIAPH. - HORIZ. - B.F.
S544	X	36	6'-0"			ABUT. DIAPH. - HORIZ. - TIE BARS THRU GIRDERS
S445	X	8	4'-3"			ABUT. DIAPH. - VERT. - ENDS
S446	X	64	3'-2"			PIER - HORIZ. - BETWEEN GIRDERS
S447	X	32	2'-5"			PIER - HORIZ. - BETWEEN GIRDERS - BOTTOM
S548	X	32	11'-6"	X		PIER DIAPH. - VERT.
S549	X	16	9'-8"	X		PIER DIAPH. - STIRRUP AT GIRDERS
S550	X	10	7'-5"	X		LIGHT STD. - HORIZ. - SIDEWALK - TOP

▲ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

BILL OF BARS (CONTINUED)

	BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
	S551	X	4	6'-0"	X		LIGHT STD. - VERT. - AT JUNCTION BOX
	S552	X	4	6'-11"	X		LIGHT STD. - VERT. - AT JUNCTION BOX
	S653	X	7	10'-8"	X		LIGHT STD./DECK - HORIZ.
	S554	X	10	3'-3"			LIGHT STD. - HORIZ. - SIDEWALK - BOTTOM
	S555	X	2	3'-0"	X		LIGHT STD. - VERT.
	S556	X	2	3'-4"	X		LIGHT STD. - VERT.
	S457	X	1890	2'-6"	X		SIDEWALK - VERT. - TIE BAR
	S558	X	12	3'-5"	X		PARAPET - VERT. - AT ABUT. JUNCTION BOX
	S559	X	12	2'-4"			PARAPET - VERT. - AT ABUT. JUNCTION BOX
STAINLESS STEEL	SS901	X	110	5'-0"	X		CONC. ABUT. DIAPH. TO APPROACH SLAB



BEARING PAD DETAILS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-20-227

DRAWN BY DDS PLANS CK'D. ABS

SUPERSTRUCTURE DETAILS

SHEET 15

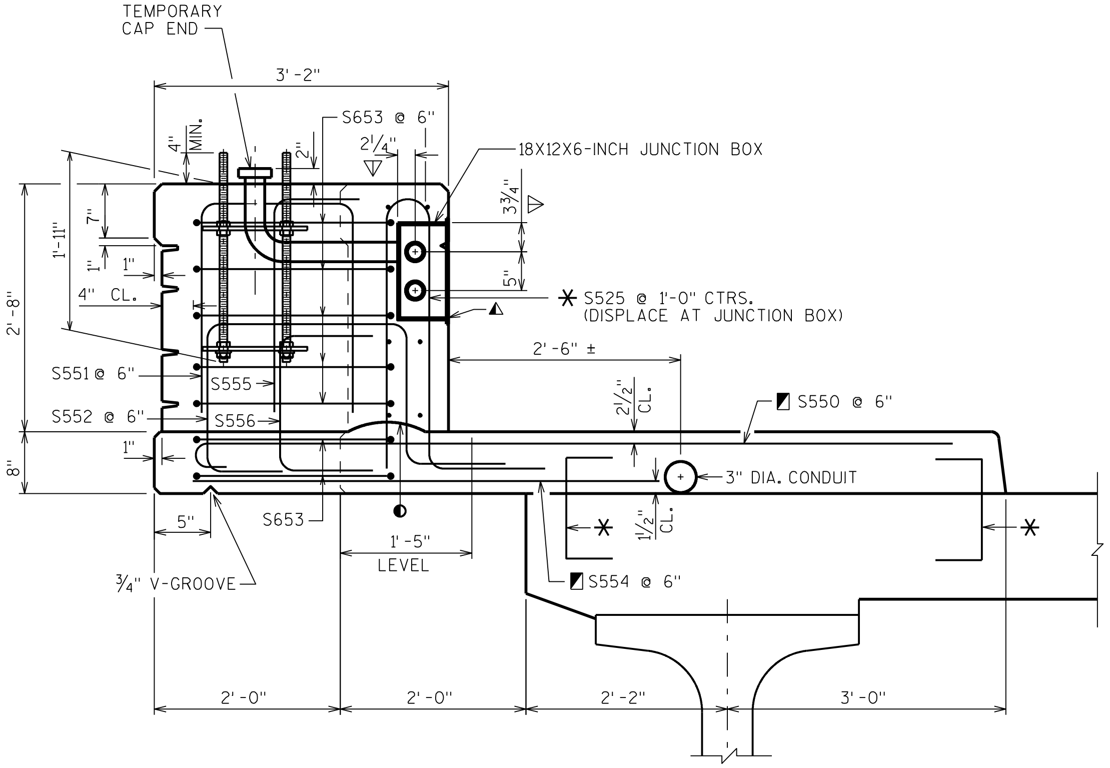
8

8

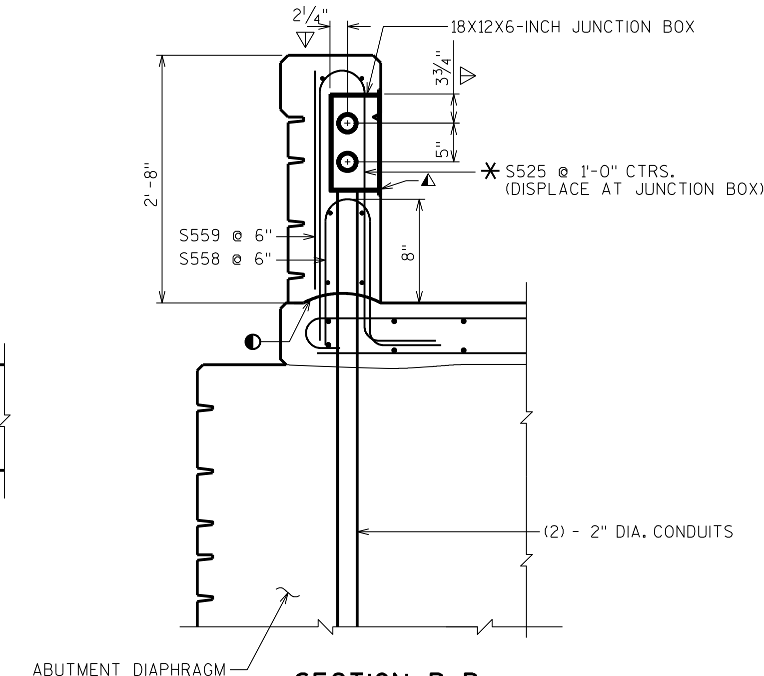
SCALE = 1.333

STATE PROJECT NUMBER

1420-23-71



SECTION A-A



SECTION B-B

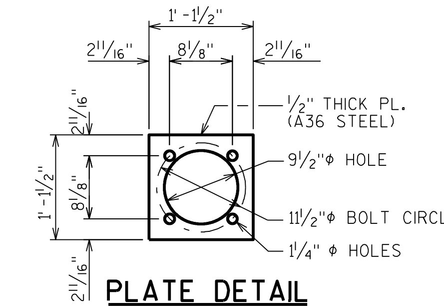
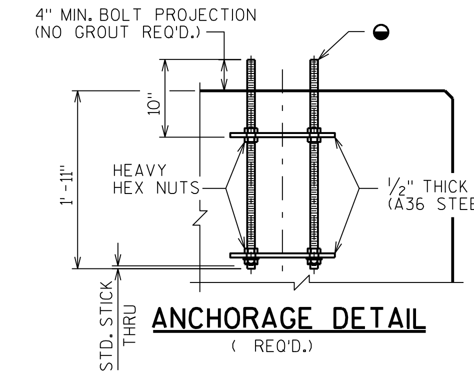


PLATE DETAIL

(REQ'D.)



ANCHORAGE DETAIL

(REQ'D.)

◐ CONSTR. JT. STRIKE OFF AS SHOWN

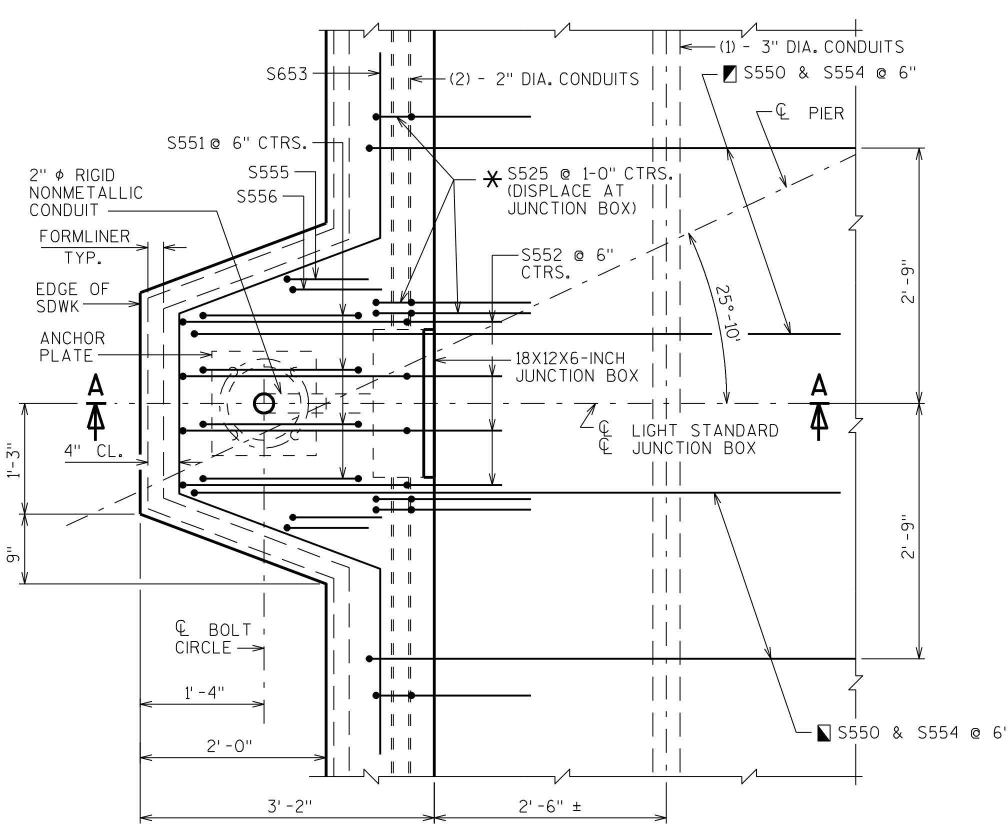
◭ CUT OUT ± 1" OF GASKET AT BOTTOM OF JUNCTION BOX COVER TO ALLOW FOR DRAINAGE.

▽ LOCATION OF CONDUIT IS MEASURED FROM OUTSIDE EDGE OF JUNCTION BOX.

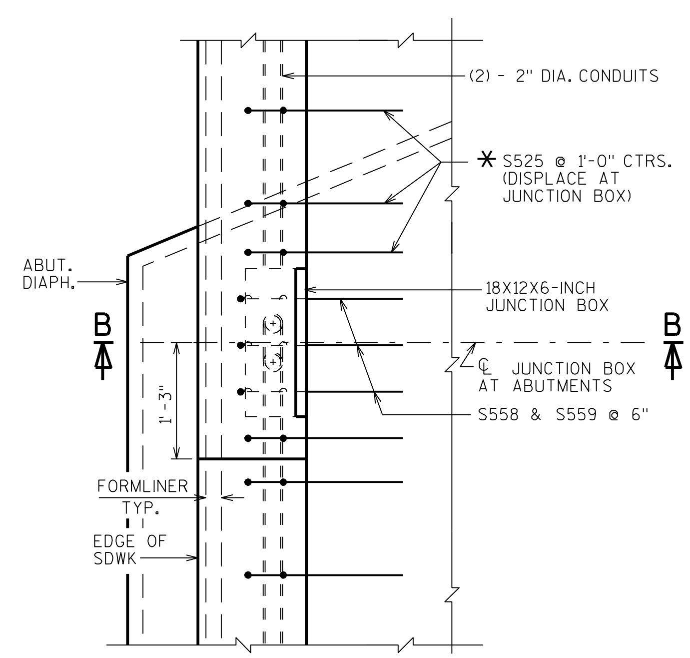
◩ THESE BARS ARE IN ADDITION TO STANDARD TRANSVERSE BARS IN SIDEWALK.

◓ 1"ϕ THREADED ANCHOR BOLTS ASTM A449 OR AASHTO M 314-90 GR 55. HOT DIP ASTM A153, CLASS C, UPPER 8" OF BOLT INCLUDING NUTS & WASHERS. PROVIDE ENLARGED THREAD ON NUTS FOR PROPER FIT AFTER GALVANIZING. PROVIDE DOUBLE FLAT WASHERS & NUTS.

✻ SEE VERTICAL FACE PARAPET "A", SHT. FOR ADDITIONAL BAR STEEL DETAILS.



PLAN AT LIGHT STANDARD



PLAN AT ABUTMENT JUNCTION BOXES

NORTHWEST CORNER SHOWN (WING 2). OTHERS SIMILAR

NOTES

BID ITEMS SHALL BE:
"JUNCTION BOXES 18X12X6-INCH", EACH.
"ANCHOR ASSEMBLIES LIGHT POLES", EACH.
"CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH"
"CONDUIT RIGID METALLIC 2-INCH"

APPROVED MANUFACTURERS - JUNCTION BOXES: SEE APPROVED MATERIAL LIST.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-20-227

DRAWN BY DDS PLANS CK'D. ABS

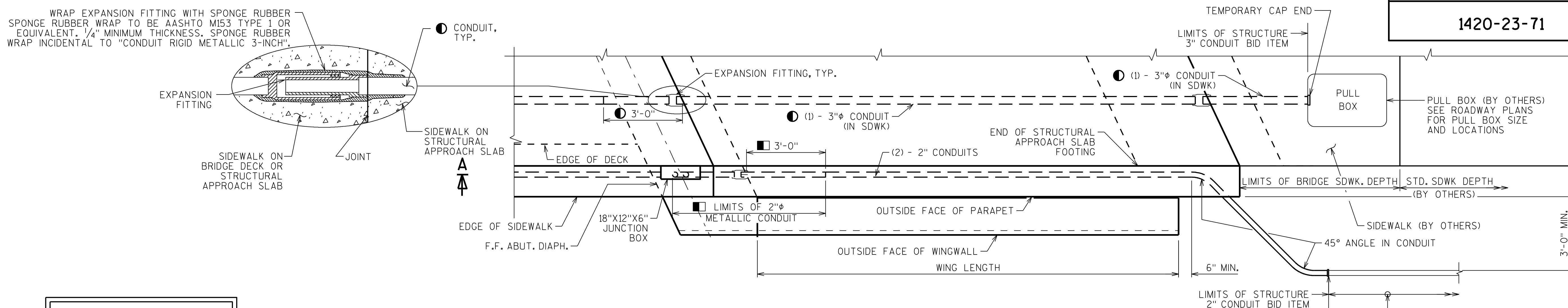
PARAPET "A" ELECTRICAL WORK

SHEET 16

493

8

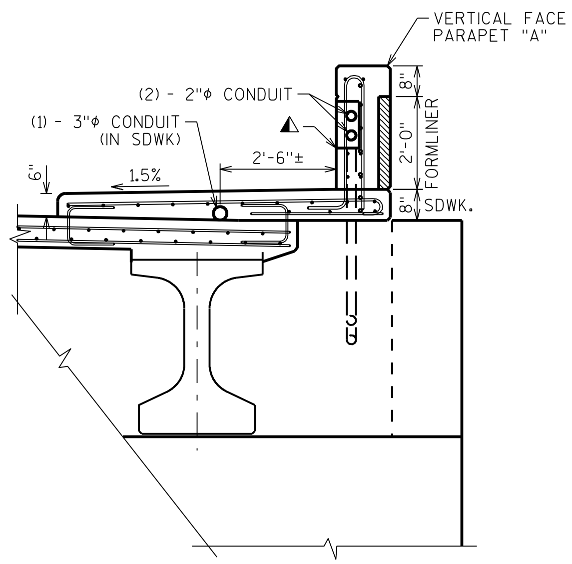
SCALE = 1



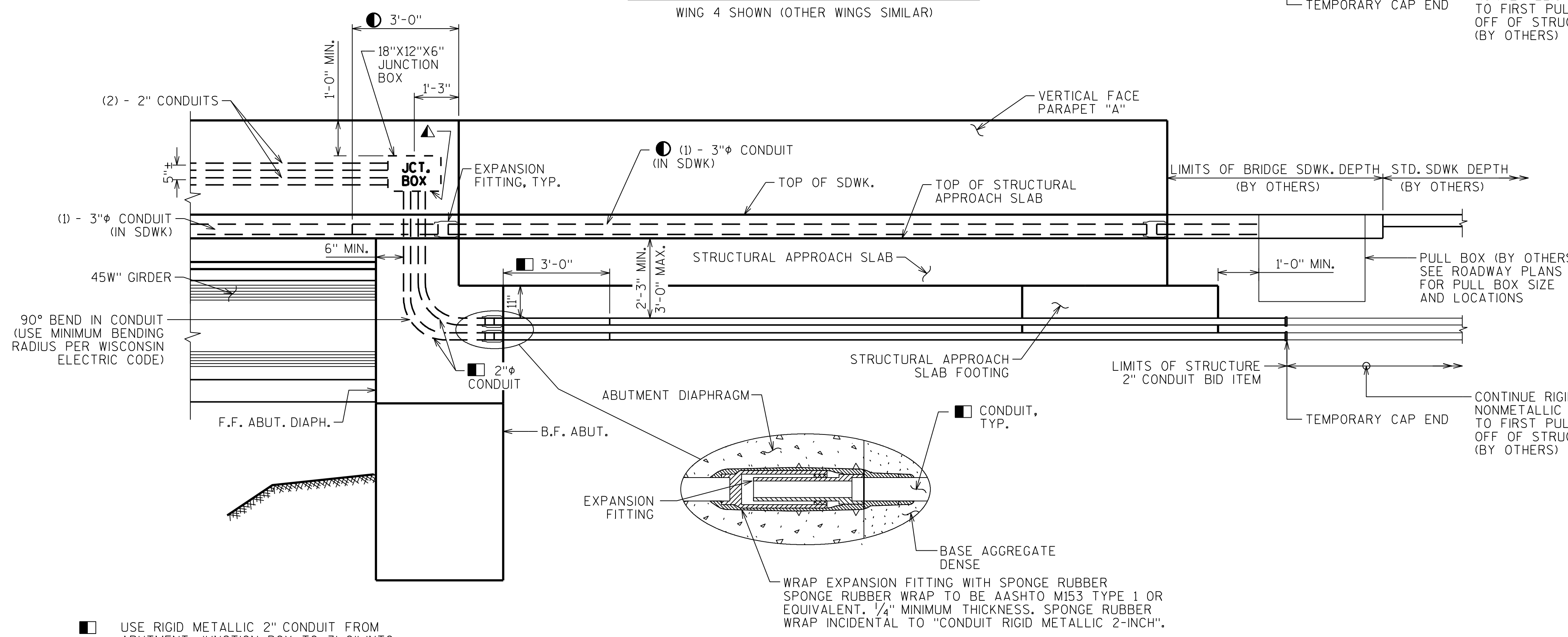
PLAN OF PARAPET AT WINGWALL

WING 4 SHOWN (OTHER WINGS SIMILAR)

NOTE: PLACE 3" CONDUIT DIRECTLY ON TOP OF ROUGHENED DECK SURFACE. AT CONDUIT EXPANSION FITTINGS, ROUGHENED DECK TO BE HELD DOWN 1 1/4"± AS NEEDED FOR EXPANSION DEVICE.



CROSS SECTION AT ABUTMENT DIAPHRAGM



SECTION A-A

WING 4 SHOWN (OTHER WINGS SIMILAR)

- ◧ USE RIGID METALLIC 2" CONDUIT FROM ABUTMENT JUNCTION BOX TO 3'-0" INTO BASE AGGREGATE DENSE BEHIND ABUTMENT DIAPHRAGM.
- ◐ USE RIGID METALLIC 3" CONDUIT 3'-0" INTO BRIDGE DECK SIDEWALK AND THROUGHOUT THE STRUCTURAL APPROACH SLAB SIDEWALK AND EXTEND TO FIRST PULL BOX OFF OF STRUCTURE.
- ◭ CUT OUT ± 1" OF GASKET AT BOTTOM OF JUNCTION BOX COVER TO ALLOW FOR DRAINAGE.
- ▽ LOCATION OF CONDUIT IS MEASURED FROM OUTSIDE EDGE OF JUNCTION BOX.
- ✱ SEE VERTICAL FACE PARAPET "A", AND PARAPET "A" ELECTRICAL WORK SHEETS FOR ADDITIONAL DETAILS.

NOTES

BID ITEMS SHALL BE:
"JUNCTION BOXES 18X12X6-INCH", EACH.
"CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH"
"CONDUIT RIGID METALLIC 2-INCH".
"CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH"
"CONDUIT RIGID METALLIC 3-INCH".

APPROVED MANUFACTURERS - JUNCTION BOXES:
SEE APPROVED MATERIAL LIST.

APPROVED MANUFACTURER OR EQUIVALENT - EXPANSION FITTING:
O-Z/GEDNEY TYPE AX-200 AND BONDING JUMPER (4" TOTAL CONDUIT MOVEMENT).

EXPANSION FITTINGS, ANGLES AND ADAPTER FITTINGS TO BE INCIDENTAL TO "CONDUIT RIGID METALLIC 2-INCH" AND "CONDUIT RIGID METALLIC 3-INCH".

WHEN CONNECTING NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS U.L. OR NRTL LISTED FOR ELECTRICAL USE SHALL BE USED.

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-20-227

DRAWN BY ABS PLANS CK'D. DDS

CONDUIT DETAILS

SHEET 17

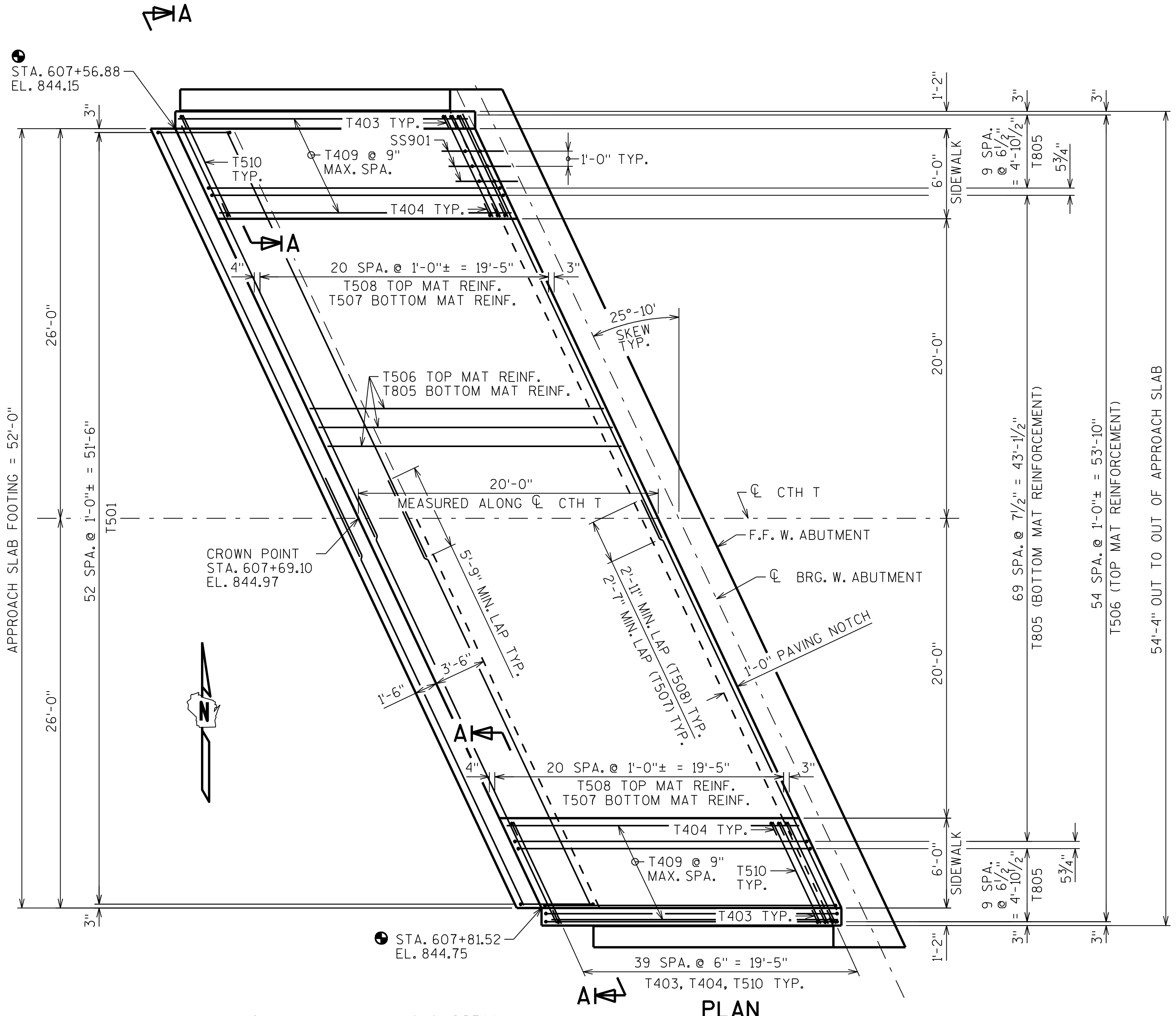
8

8

SCALE = 2.0

STATE PROJECT NUMBER

1420-23-71

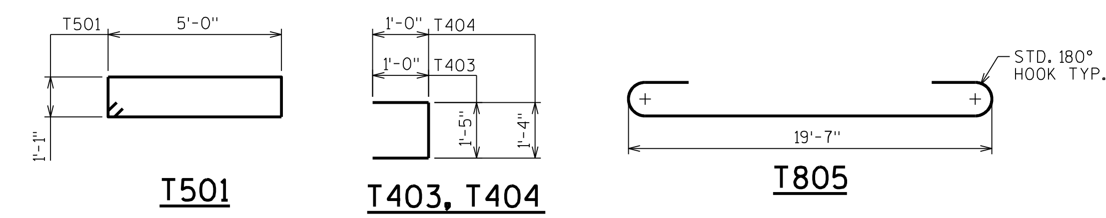


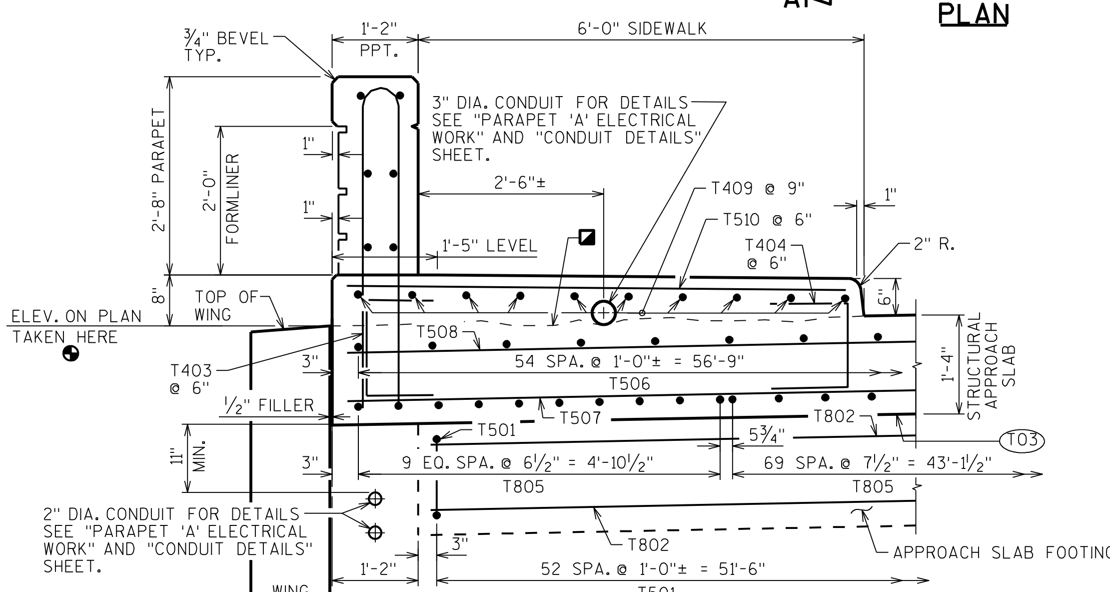
PLAN

BILL OF BARS

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

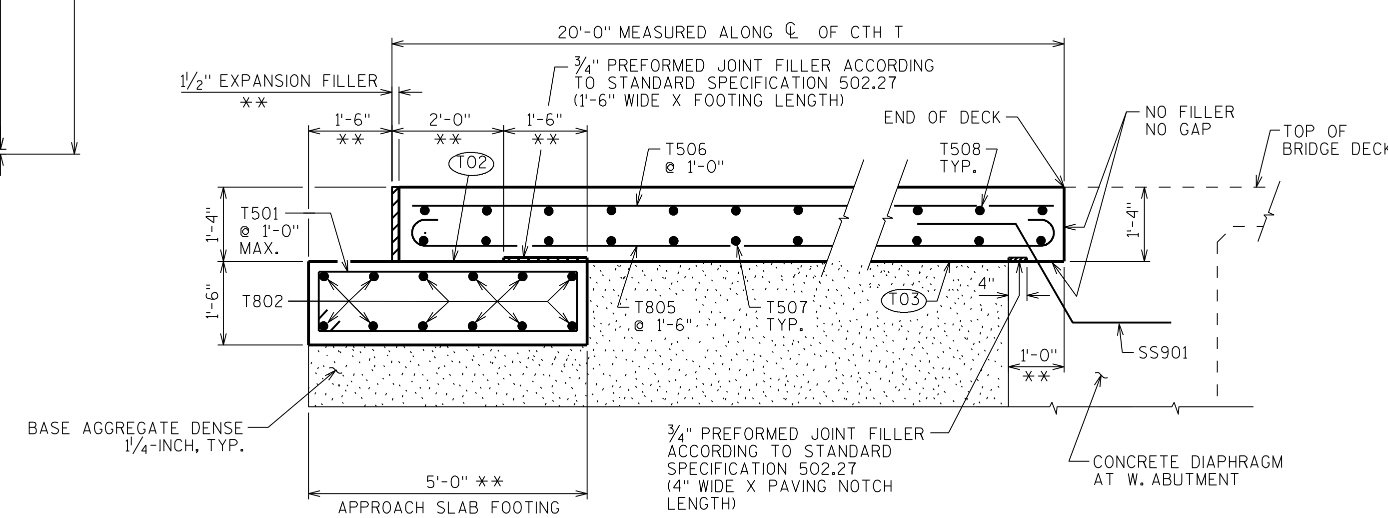
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
T501	X	58	12'-10"	X		APPROACH SLAB - FOOTING - STIRRUP
T802	X	24	31'-5"			APPROACH SLAB - FOOTING - TRANSVERSE
T403	X	80	3'-3"	X		SIDEWALK/APPROACH SLAB - TIE BAR
T404	X	80	3'-2"	X		SIDEWALK/APPROACH SLAB - TIE BAR
T805	X	90	21'-5"	X		APPROACH SLAB - LONGITUDINAL - BOTTOM MAT
T506	X	55	19'-7"			APPROACH SLAB - LONGITUDINAL - TOP MAT
T507	X	42	31'-2"			APPROACH SLAB - TRANSVERSE - BOTTOM MAT
T508	X	42	31'-4"			APPROACH SLAB - TRANSVERSE - TOP MAT
T409	X	20	19'-7"			SIDEWALK - LONGITUDINAL
T510	X	80	7'-5"			SIDEWALK - TRANSVERSE - TOP





SECTION A-A THRU APPROACH SLAB/SIDEWALK

◪ CONSTRUCTION JOINT - STRIKE OFF AS SHOWN AND LEAVE ROUGH. FOR APPROACH SLAB POUR, MATCH BRIDGE CROSS-SLOPE.



SECTION THRU APPROACH SLAB

APPLY PROTECTIVE SURFACE TREATMENT TO PAVING NOTCH SURFACES PRIOR TO POURING STRUCTURAL APPROACH SLAB.

STAINLESS STEEL SPACE PERPENDICULAR TO ℄ CTH 'T'. SEE "SUPERSTRUCTURE DETAILS" SHEET FOR BILL OF BARS.

** MEASURED NORMAL TO ABUTMENT.

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

(T03) PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THICKNESS) OF POLYETHELENE SHEETS OVER THE ENTIRE TOP OF SUBGRADE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-20-227

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WEST APPROACH SLAB DETAILS

SHEET 18

495

8

8

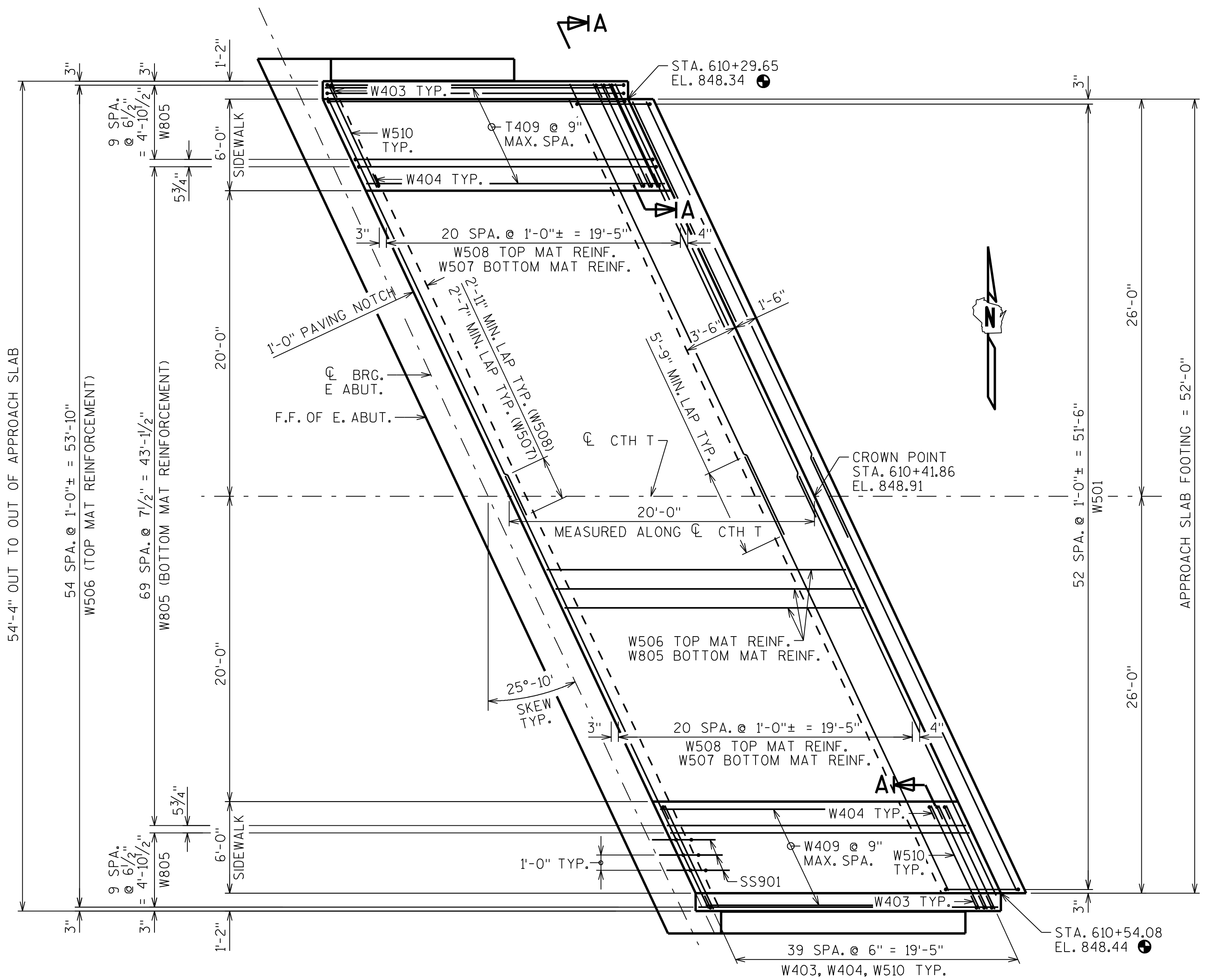
SCALE = 5

STATE PROJECT NUMBER
1420-23-71

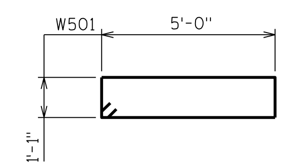
BILL OF BARS

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

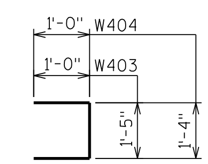
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
W501	X	58	12'-10"	X		APPROACH SLAB - FOOTING - STIRRUP
W802	X	24	31'-5"			APPROACH SLAB - FOOTING - TRANSVERSE
W403	X	80	3'-3"	X		SIDEWALK/APPROACH SLAB - TIE BAR
W404	X	80	3'-2"	X		SIDEWALK/APPROACH SLAB - TIE BAR
W805	X	90	21'-5"	X		APPROACH SLAB - LONGITUDINAL - BOTTOM MAT
W506	X	55	19'-7"			APPROACH SLAB - LONGITUDINAL - TOP MAT
W507	X	42	31'-2"			APPROACH SLAB - TRANSVERSE - BOTTOM MAT
W508	X	42	31'-4"			APPROACH SLAB - TRANSVERSE - TOP MAT
W409	X	20	19'-7"			SIDEWALK - HORIZONTAL
W510	X	80	7'-5"			SIDEWALK - TRANSVERSE - TOP



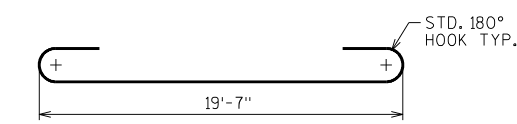
PLAN



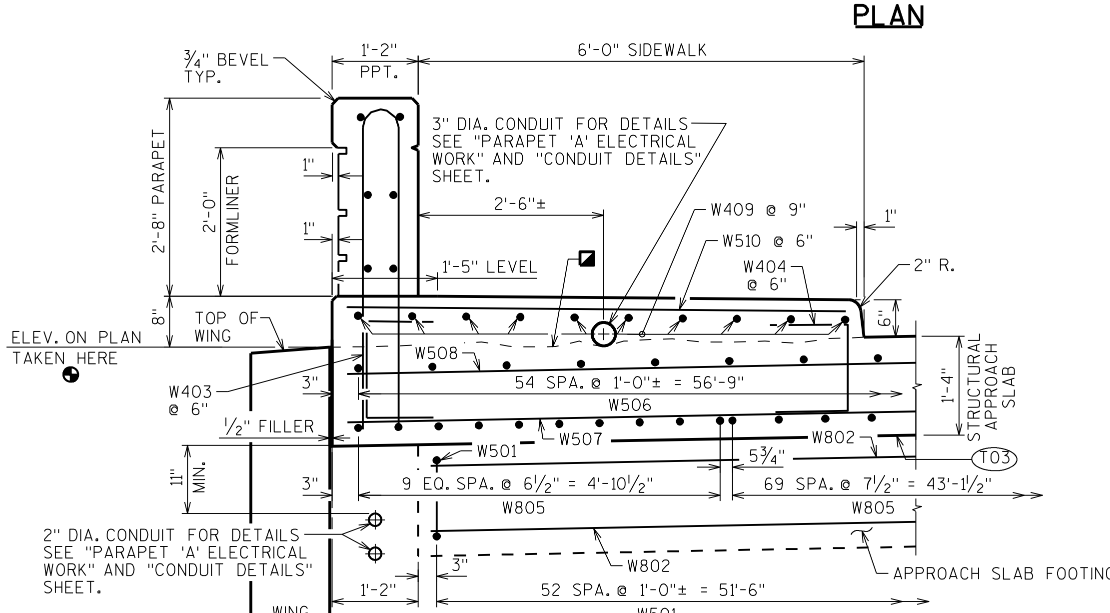
W501



W403, W404

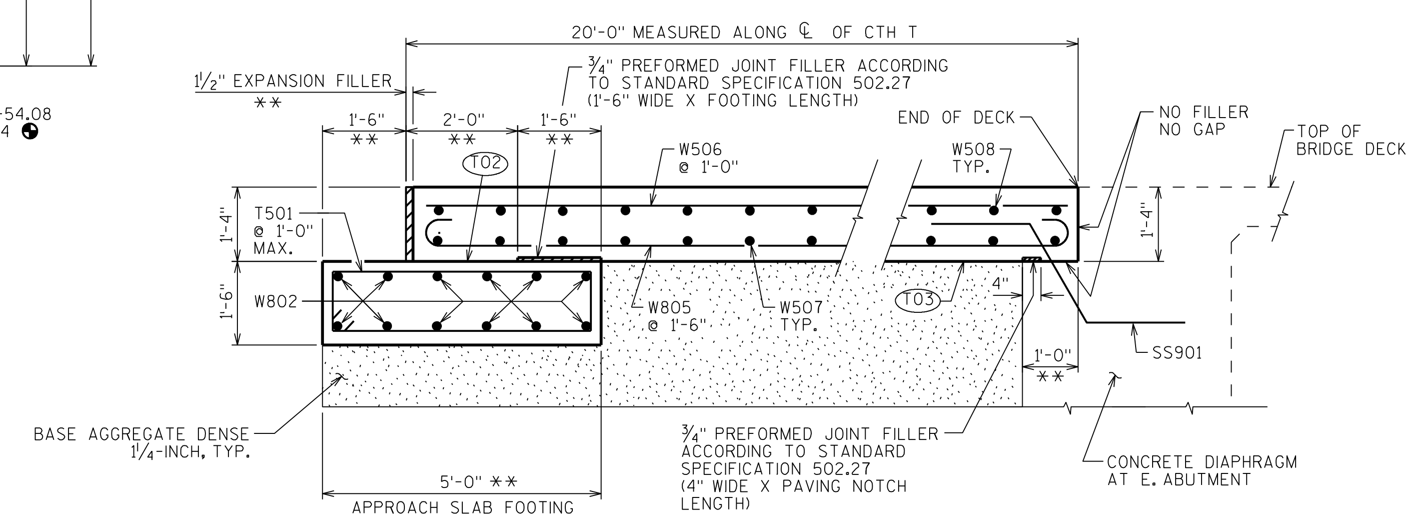


W805



SECTION A-A THRU APPROACH SLAB/SIDEWALK

CONSTRUCTION JOINT - STRIKE OFF AS SHOWN AND LEAVE ROUGH. FOR APPROACH SLAB POUR, MATCH BRIDGE CROSS-SLOPE.



SECTION THRU APPROACH SLAB

APPLY PROTECTIVE SURFACE TREATMENT TO PAVING NOTCH SURFACES PRIOR TO POURING STRUCTURAL APPROACH SLAB.

STAINLESS STEEL SPACE PERPENDICULAR TO ℄ CTH 'T'. SEE "SUPERSTRUCTURE DETAILS" SHEET FOR BILL OF BARS.

** MEASURED NORMAL TO ABUTMENT.

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

T03 PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THICKNESS) OF POLYETHELENE SHEETS OVER THE ENTIRE TOP OF SUBGRADE

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-20-227

DRAWN BY DDS PLANS CK'D. ABS

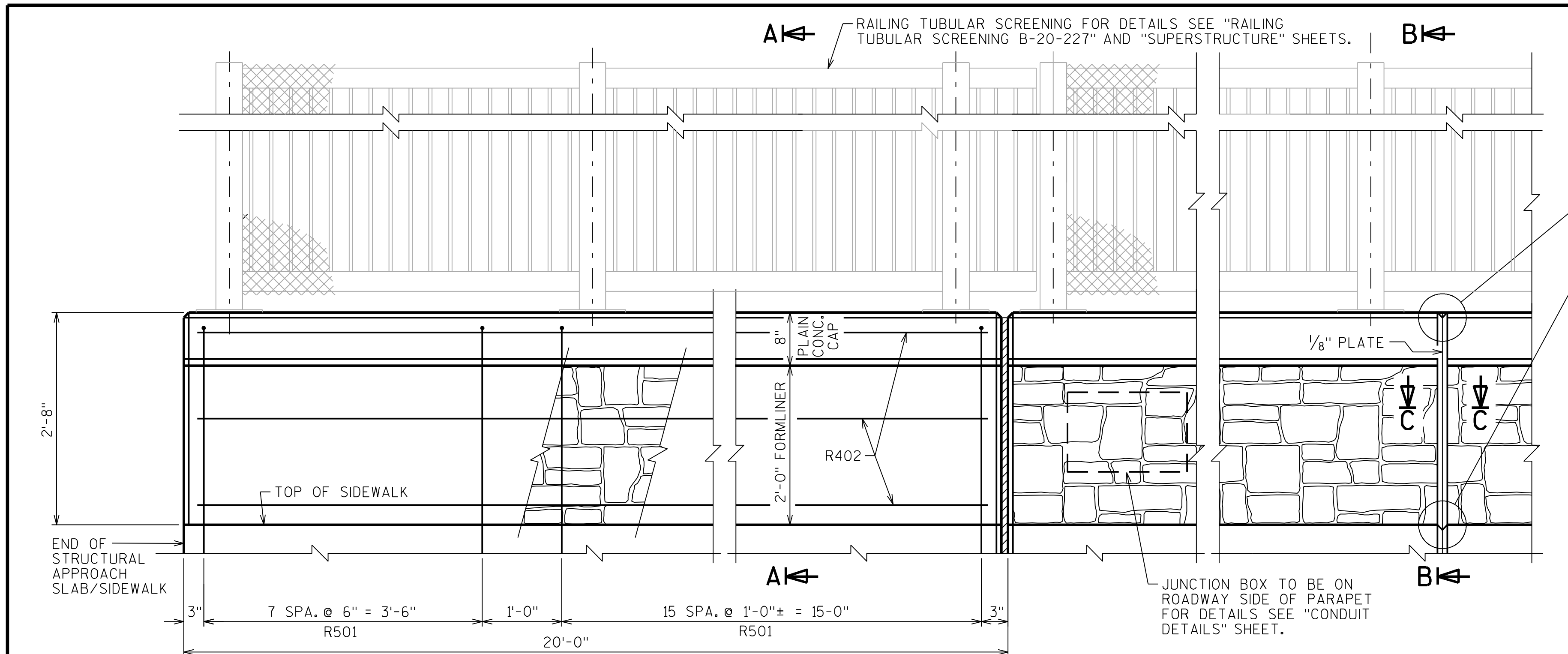
EAST APPROACH SLAB DETAILS

SHEET 19

8

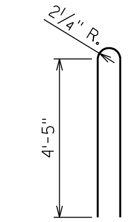
8

SCALE = 5



OUTSIDE ELEVATION - PARAPET ON SIDEWALKS/APPROACH SLABS

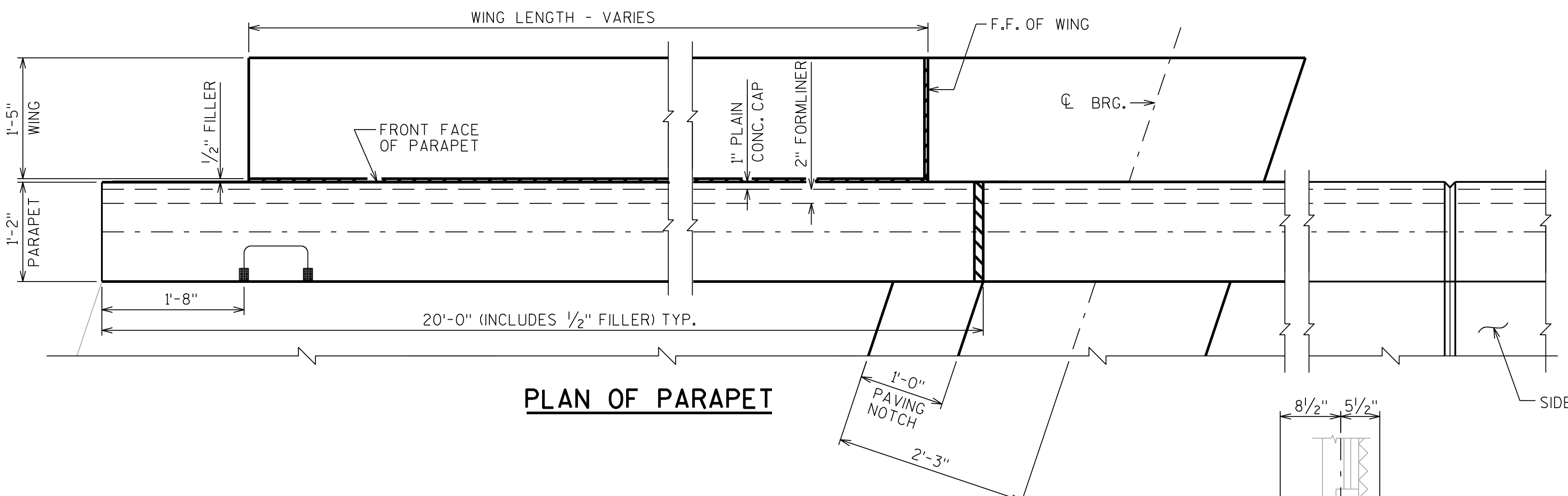
AT DEFLECTION JOINT



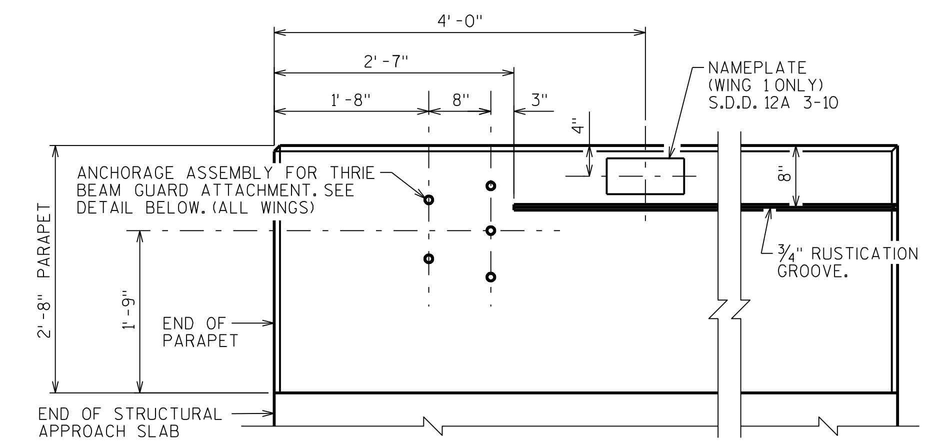
R501

BILL OF BARS

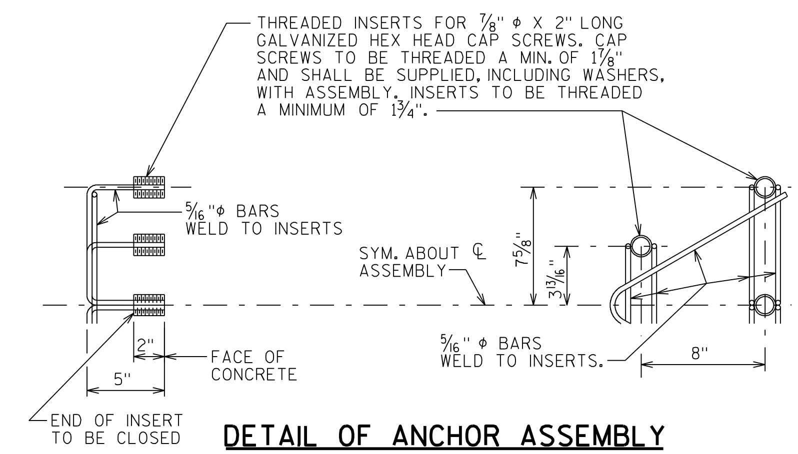
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
R501	X	96	9-5	X		PARAPET VERT.
R402	X	24	19-8			PARAPET - HORIZ.



PLAN OF PARAPET



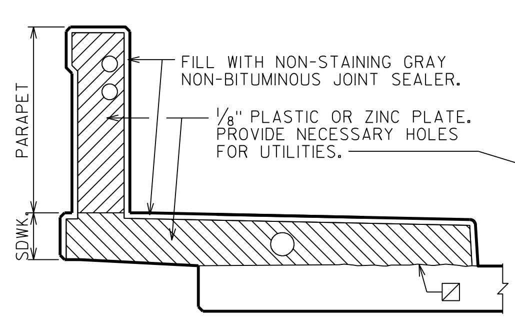
INSIDE FACE OF PARAPET



DETAIL OF ANCHOR ASSEMBLY

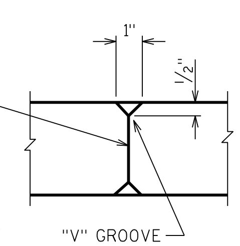
NOTE: HEX HEAD CAP SCREWS & WASHERS TO BE GALVANIZED IN ACCORDANCE WITH AASHTO M232 CLASS C.

ASSEMBLY SHALL BE BID ITEM "ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD", EACH.



SECTION B-B

(SHOWING DEFLECTION JOINT IN PARAPET AND SIDEWALK.)

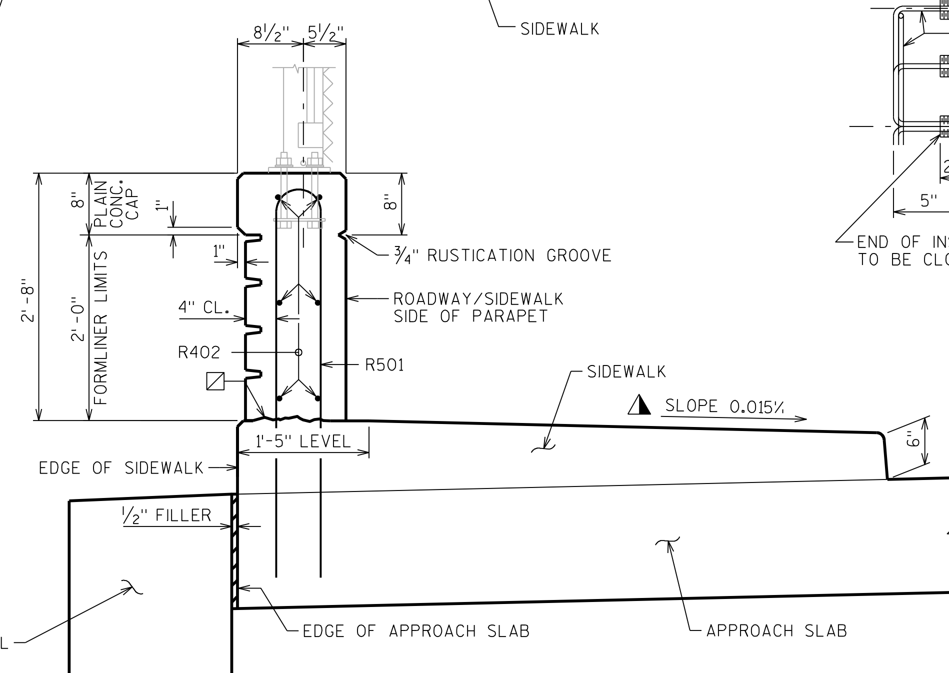


SECTION C-C

WHEN PARAPETS ARE POURED CONTINUOUSLY FROM END TO END, THEY SHALL BE SEPARATED AT THE DEFLECTION JOINTS BY A PIECE OF 1/8" ZINC OR PLASTIC PLATE CUT AS SHOWN IN SECTION B-B BY SHADED AREA. IF CONSTRUCTION JOINTS IN PARAPETS ARE USED AT THE DEFLECTION JOINTS, ONE SIDE OF JOINT SHALL BE COATED WITH AN APPROVED LIQUID BOND BREAKER AND PLATE SEPARATORS MAY BE OMITTED.

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

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



SECTION A-A THRU PARAPET ON APPROACH SLAB

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-20-227

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VERTICAL FACE PARAPET 'A'

SHEET 20

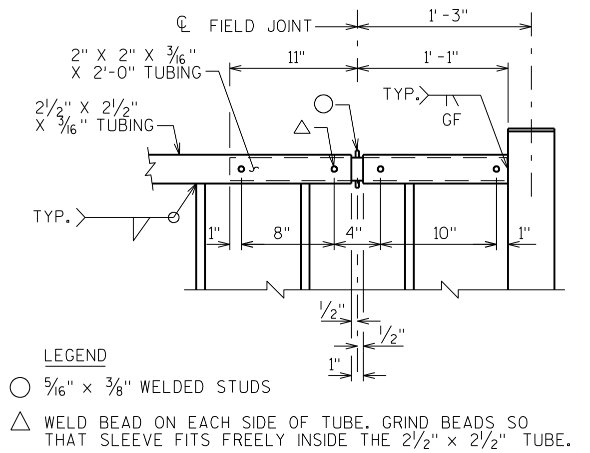
8

8

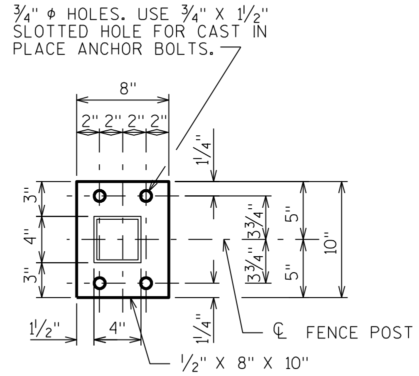
SCALE = 1

STATE PROJECT NUMBER

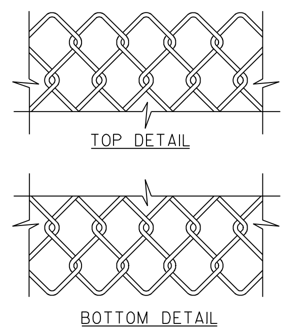
1420-23-71



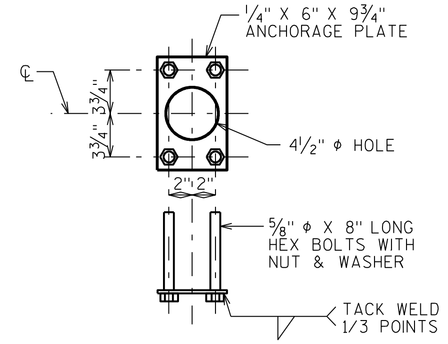
RAILING EXPANSION JOINT DETAIL



BASE PLATE



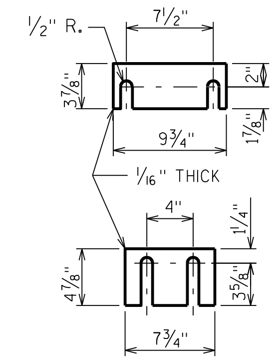
FENCE FABRIC



ANCHORAGE DETAIL

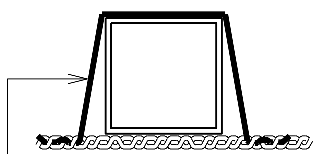
5/8" CAST-IN-PLACE ANCHOR BOLTS. MASONRY ANCHORS MAY BE SUBSTITUTED FOR C.I.P. ANCHOR BOLTS. ANCHORAGE PLATE NOT REQUIRED WHEN TYPE S ANCHORS ARE USED.

MASONRY ANCHOR TYPE S 5/8-INCH. EMBED 7" IN CONCRETE.

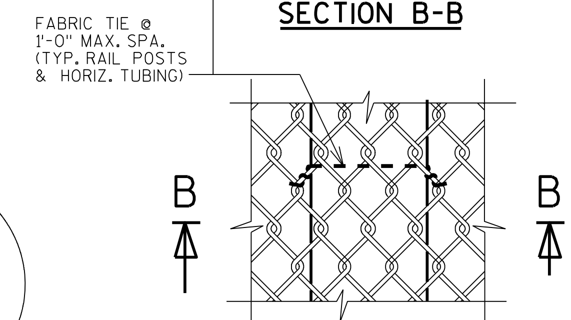


SHIM PLATE DETAILS

TWO SHIMS OF EACH SIZE REQUIRED PER POST



SECTION B-B



DETAIL B

NOTES

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.

RAILS AND POSTS TO BE ASTM A500, GRADE B. BASE PLATES AND SHIMS TO BE ASTM A709, GRADE 36. ALL GALVANIZED AFTER FABRICATION.

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

ALL POST SPA. ARE TAKEN HORIZ. ALONG CENTER LINE OF RAILING AT BASE OF POST.

SHIMS SHALL BE USED UNDER BASE PLATES WHERE REQUIRED FOR ALIGNMENT.

CAULK AROUND PERIMETER OF BASE PLATES AND FILL PORTION OF SLOTTED HOLES AROUND ANCHOR BOLTS WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.

CUT BOTTOM OF POST TO MAKE VERTICAL IN TRANSVERSE DIRECTION.

ANCHOR BOLTS, NUTS AND WASHERS SHALL BE EITHER STAINLESS STEEL OR ASTM 307. IF 307 IS USED, ANCHOR BOLTS, NUTS, AND WASHERS SHALL BE GALVANIZED.

RAILING TO BE PAINTED AND FENCE FABRIC AND TIES TO BE POLYMER COATED. FABRIC SHALL CONFORM TO ASTM F668, CLASS 2B. THE COLOR OF POLYMER COATING FOR THIS STRUCTURE SHALL BE BLACK IN ACCORDANCE WITH ASTM F934.

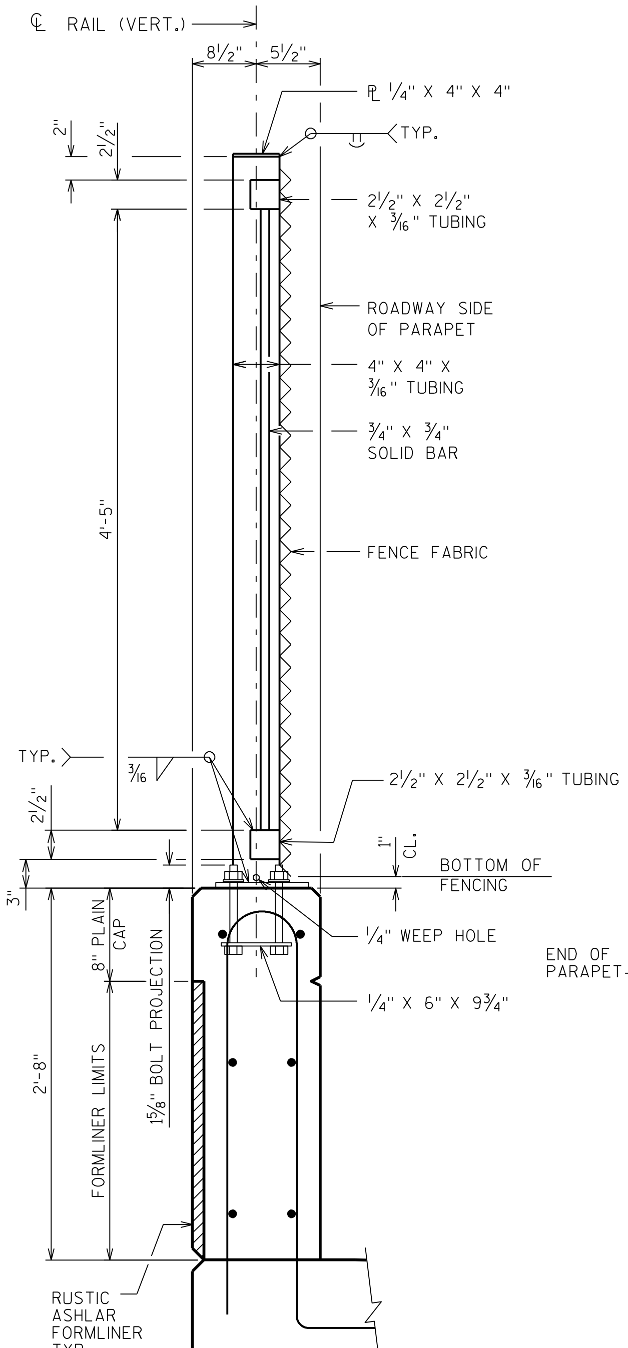
BID ITEM SHALL BE "RAILING TUBULAR SCREENING GALVANIZED B-20-227" WHICH SHALL INCLUDE ALL ITEMS SHOWN, INCLUDING LIGHT ACCESS PANEL.

RAILING SHALL BE FABRICATED IN LENGTHS THAT INCLUDE NOT MORE THAN 3 POSTS.

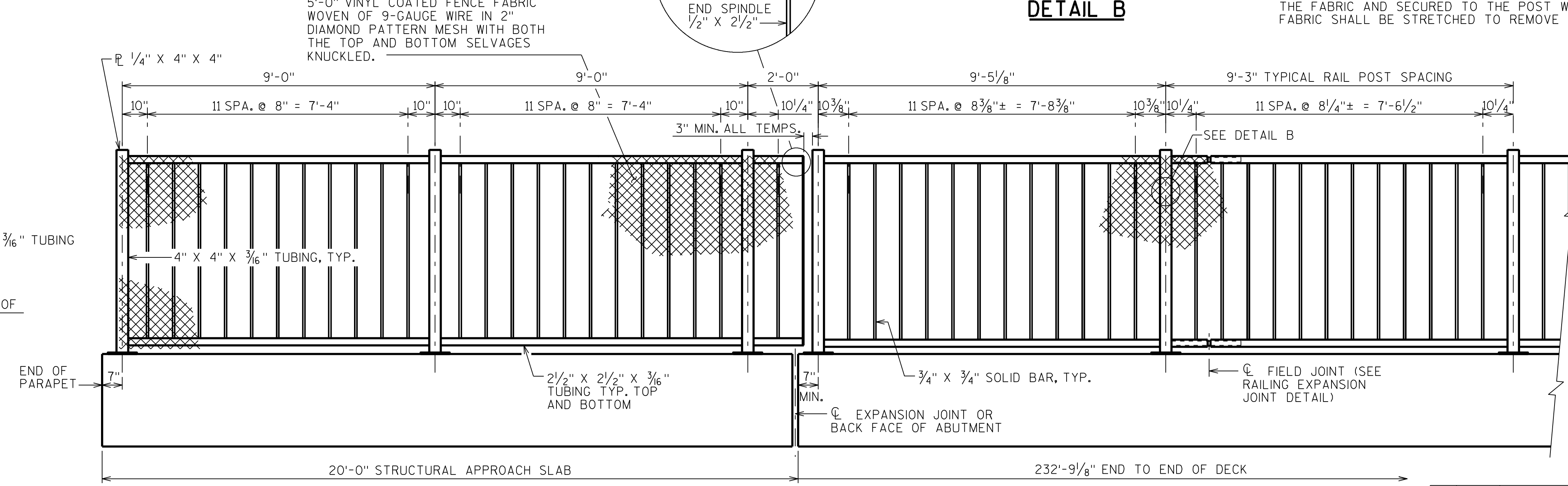
VENT HOLES SHALL BE DRILLED IN MEMBERS AS REQUIRED TO FACILITATE GALVANIZING.

ALL MATERIAL SHALL BE GALVANIZED AFTER FABRICATION. PRIOR TO GALVANIZING ALL STEEL RAILING POSTS AND STEEL TUBING SHALL BE GIVEN A #6 BLAST CLEANING BY SSPC SPECIFICATIONS. PAINT OVER GALVANIZING WITH APPROVED TIE COAT AND TOPCOAT.

THE END OF THE FABRIC SHALL BE ATTACHED TO THE POST BY MEANS OF A TENSION BAR THREADED THROUGH THE END LOOPS OF THE FABRIC AND SECURED TO THE POST WITH CLAMPS & BOLT. THE FABRIC SHALL BE STRETCHED TO REMOVE ALL SLACK.



SECTION THRU RAILING



INSIDE ELEVATION OF RAILING

ELEVATION SHOWN AT NORTHWEST CORNER
OTHER CORNERS SIMILAR

NOTE: FOR POST AND RAILING LAYOUT AT LIGHT STANDARD, SEE "LIGHT ACCESS GATE DETAILS" SHEET.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-20-227

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RAILING TUBULAR SCREENING

SHEET 21

498

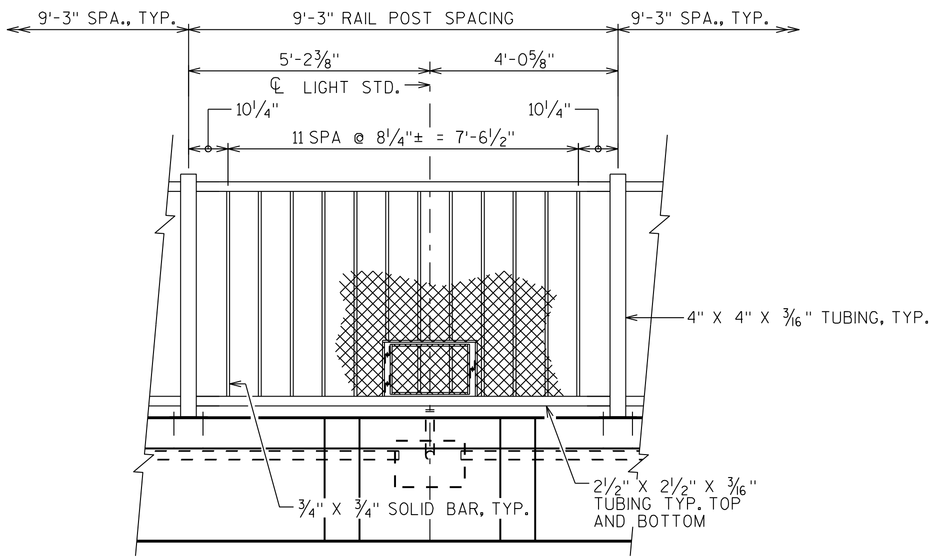
8

8

SCALE = 1.0

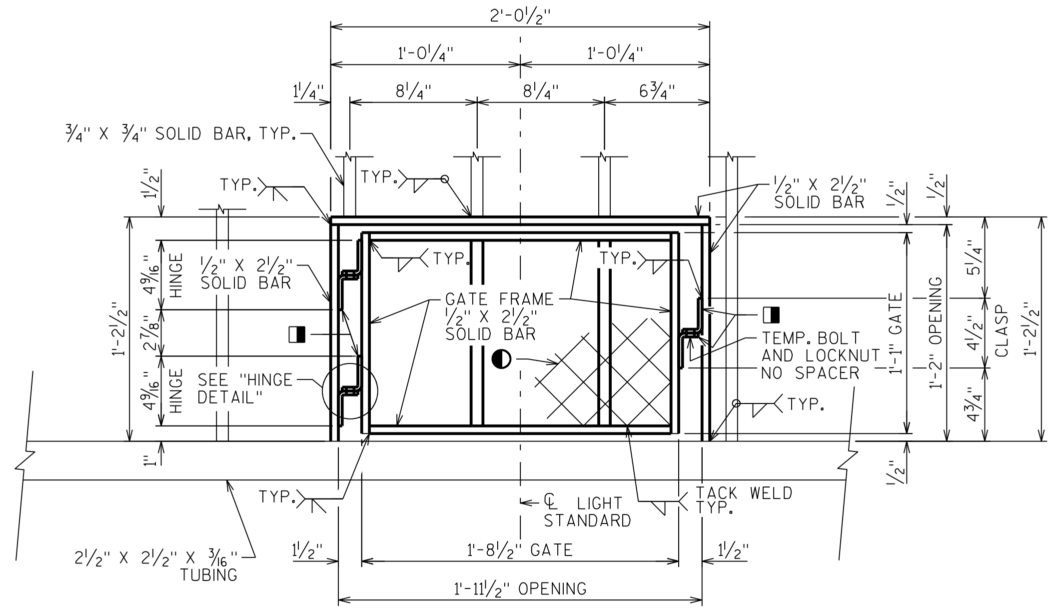
STATE PROJECT NUMBER

1420-23-71



OUTSIDE ELEVATION VIEW

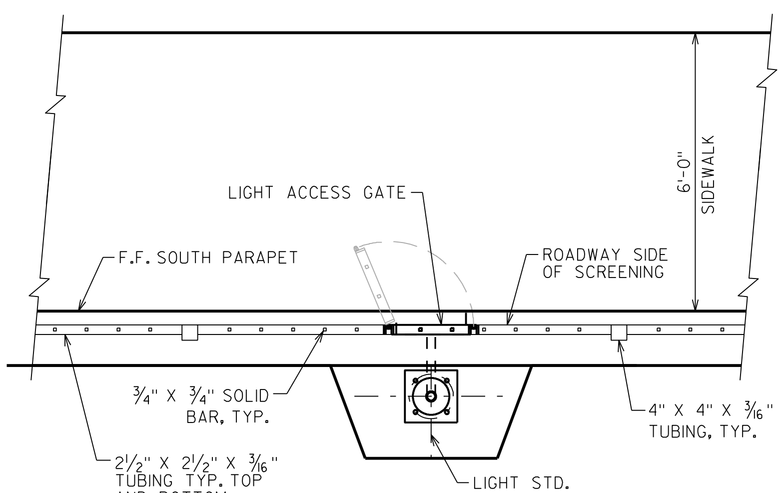
LOOKING NORTH



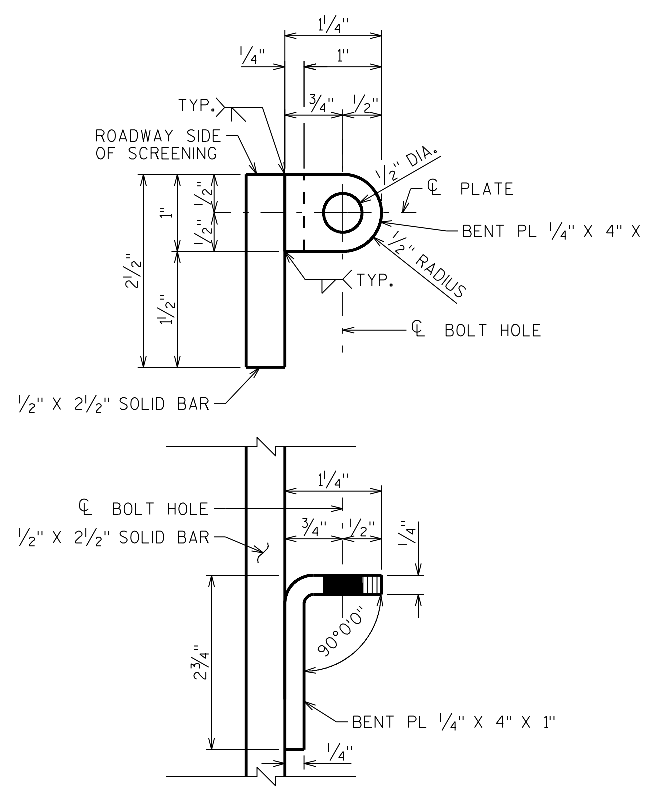
LIGHT ACCESS GATE DETAIL

◐ MCNICHOLS STEEL WIRE MESH WITH OPENING SIZE 2" X 2" SQUARE, 1/4" DIA. WIRE. ITEM NO. 3293920148 (OR EQUIVALENT)

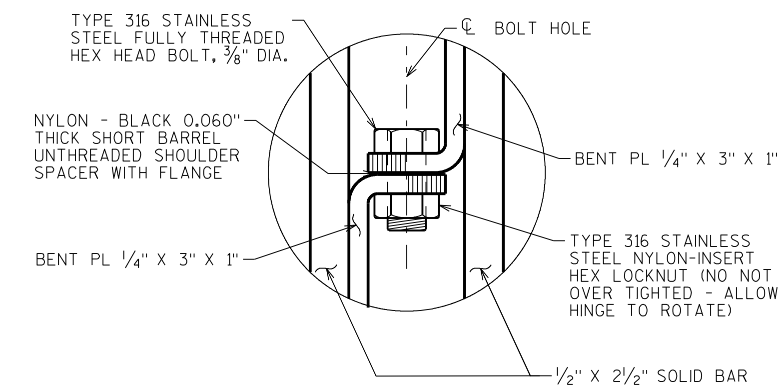
◨ BENT STEEL PL ¼" X 3" X 1". SEE "STEEL PLATE DETAIL."



PLAN



STEEL PLATE DETAIL



HINGE DETAIL

PROVIDE ADDITIONAL STAINLESS STEEL FULLY THREADED HEX HEAD BOLT, ⅜" DIA. AND STAILNESS STEEL NYLON-INSERT HEX LOCKNUT, HAND TIGHTENED, TO ACT AS TEMPORARY LOCK.

NOTES

THE STEEL WIRE MESH SHALL BE ATTACHED TO THE LIGHT ACCESS GATE BY MEANS OF TACK WELDING AT ALL LOCATIONS WHERE THE STEEL WIRE MESH MEETS THE LIGHT ACCESS GATE ½" X 2½" SOLID BAR GATE FRAME AND ¾" X ¾" SOLID BARS. THE STEEL WIRE MESH SHALL BE WELDED TO THE ROADWAY SIDE OF THE ¾" X ¾" SOLID BARS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-20-227

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LIGHT ACCESS GATE DETAILS

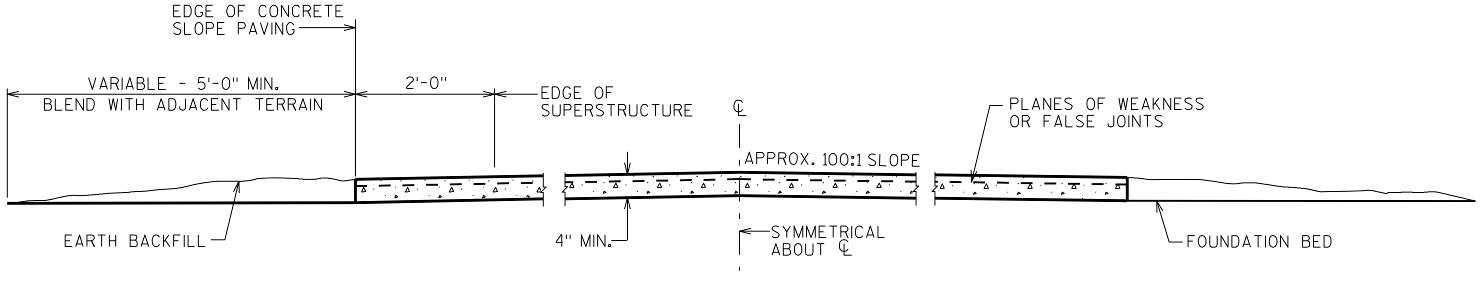
SHEET 22

499

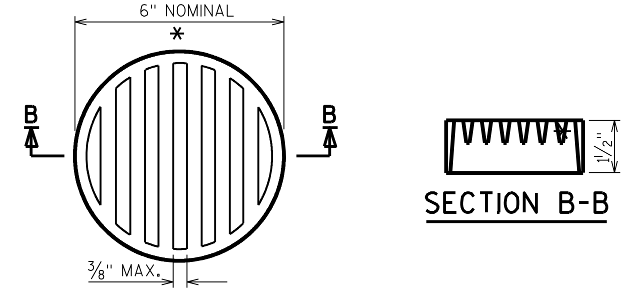
8

SCALE = 1.0

STATE PROJECT NUMBER
1420-23-71



SECTION A-A



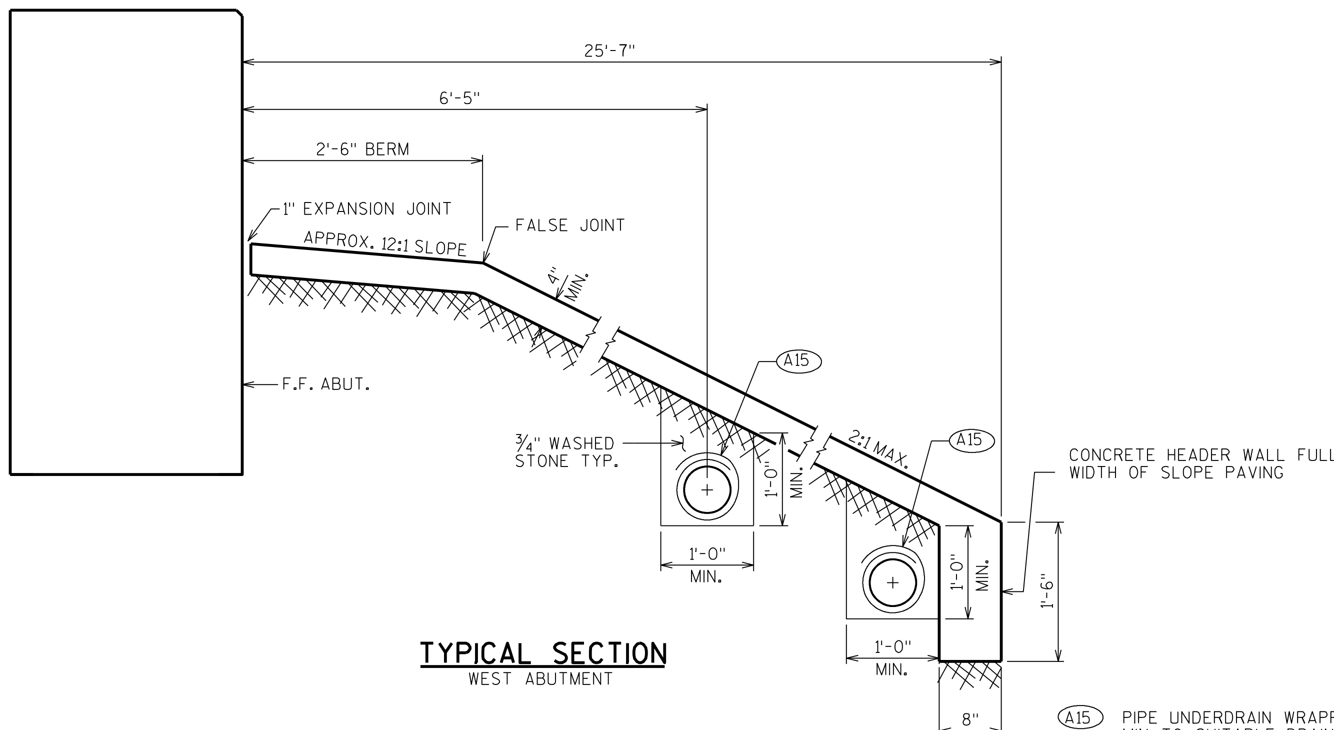
SECTION B-B

RODENT SHIELD DETAIL

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

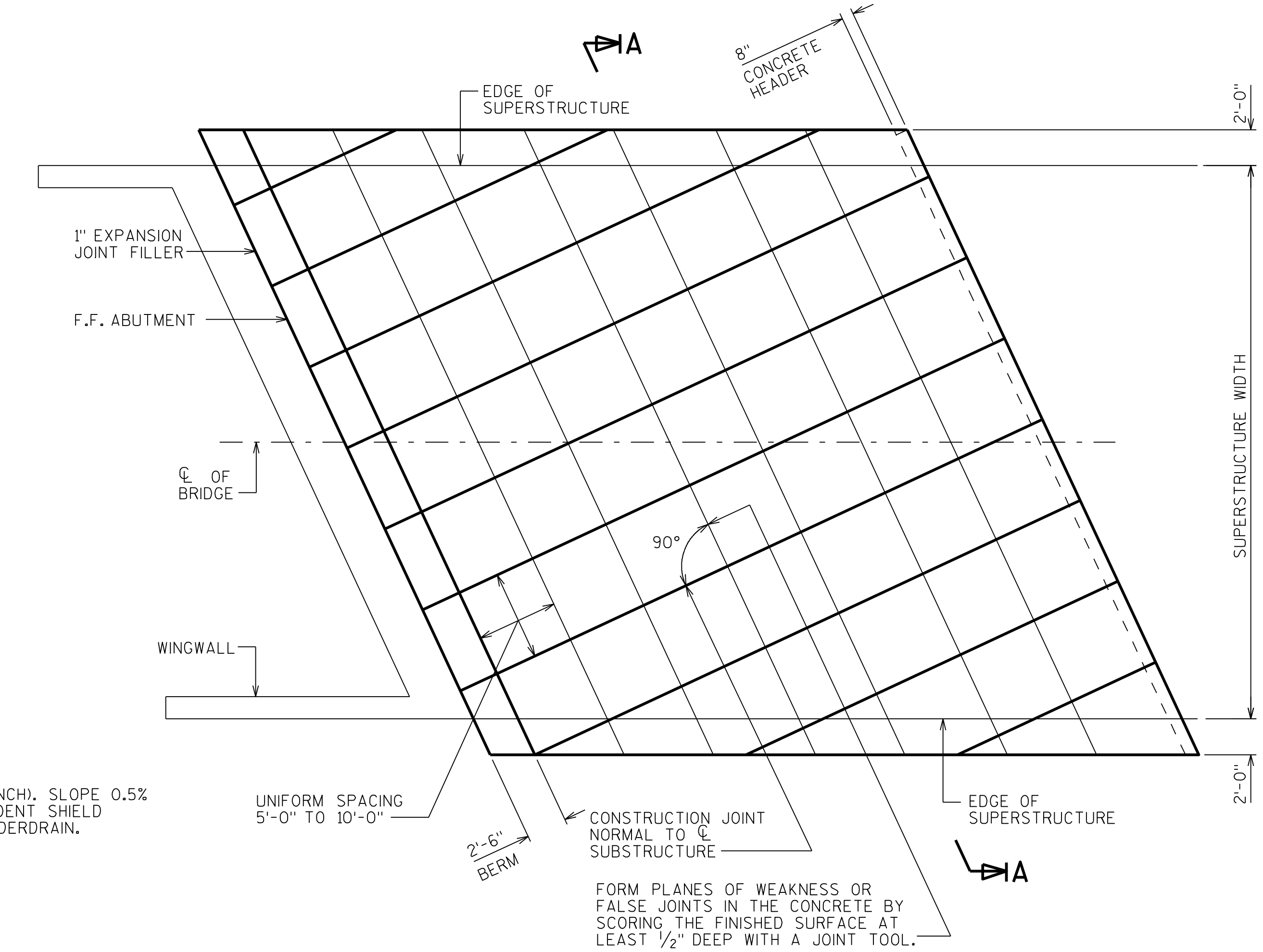
THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

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.

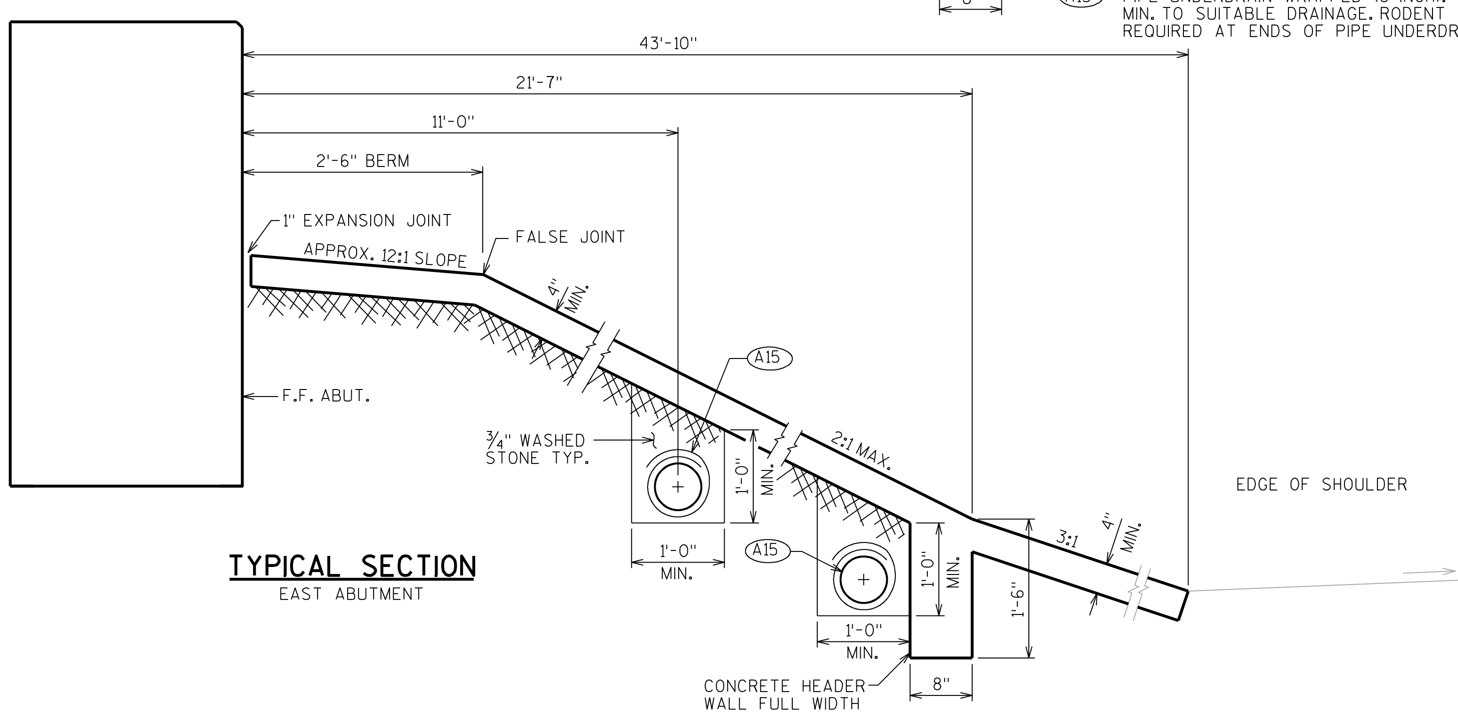


TYPICAL SECTION
WEST ABUTMENT

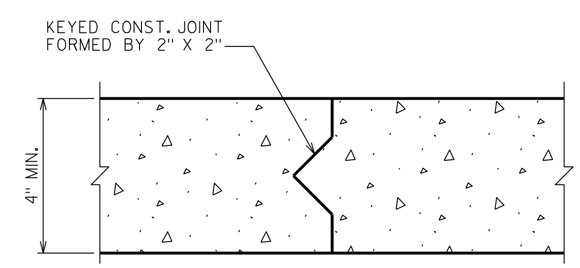
(A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED AT ENDS OF PIPE UNDERDRAIN.



CONSTRUCTION JOINT DESIGN



TYPICAL SECTION
EAST ABUTMENT



CONSTRUCTION JOINT

GENERAL NOTES

DETAILS OF CONSTRUCTION NOT SHOWN HEREON SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-20-227

DRAWN BY DDS PLANS CK'D. ABS

SLOPE PAVING (CONCRETE CAST-IN-PLACE)

SHEET 23

500

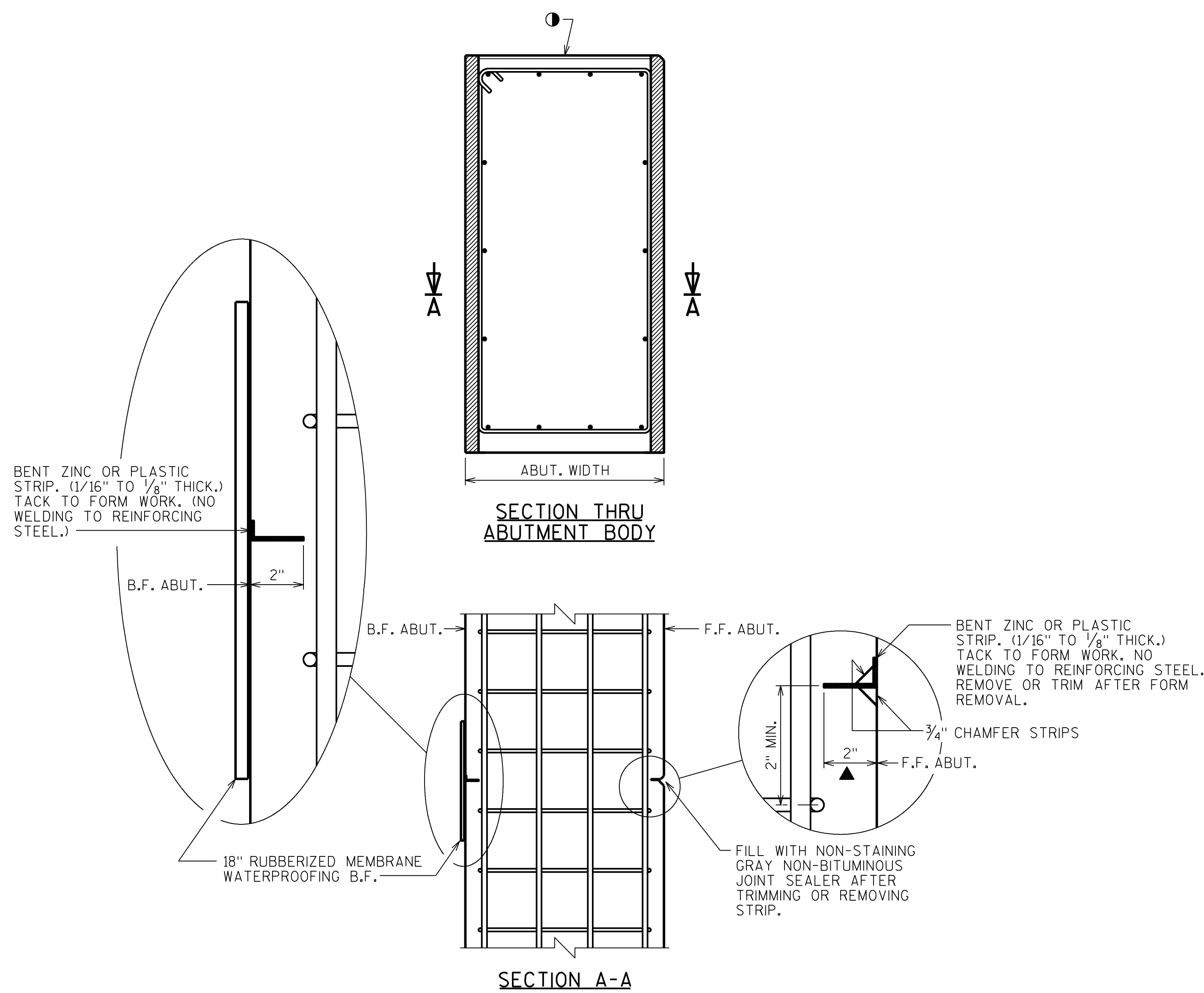
8

8

SCALE = 1

STATE PROJECT NUMBER

1420-23-71



ALTERNATE CONSTRUCTION JOINT AT ABUTMENT

NOTES

PARTIAL ZINC OR PLASTIC BULKHEAD MAY BE USED AS ALTERNATE CONSTRUCTION JOINT, WITH THE PERMISSION OF THE ENGINEER, AT THE CONTRACTOR'S EXPENSE.

VERTICAL CONSTRUCTION JOINT KEYWAY IS NOT REQUIRED WHEN USING ALTERNATE CONSTRUCTION JOINT.

CARE IS TO BE USED IN CASTING CONCRETE AROUND BULKHEAD TO PREVENT DISLOCATION OR MISALIGNMENT OF THE BULKHEAD.

◑ USE A JOINT TOOL TO CONSTRUCT A CONTRACTION JOINT APPROXIMATELY 1/2" DEEP.

▲ DIMENSION IS FOR ABUTMENT WITHOUT FORMLINER. ADD "MAX RELIEF" DIMENSION FROM "AESTHETIC DETAILS" SHEET TO THIS DIMENSION WHERE FORMLINER IS PRESENT.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-20-227

DRAWN BY DDS | PLANS CK'D. ABS

ALTERNATE CONSTRUCTION JOINT

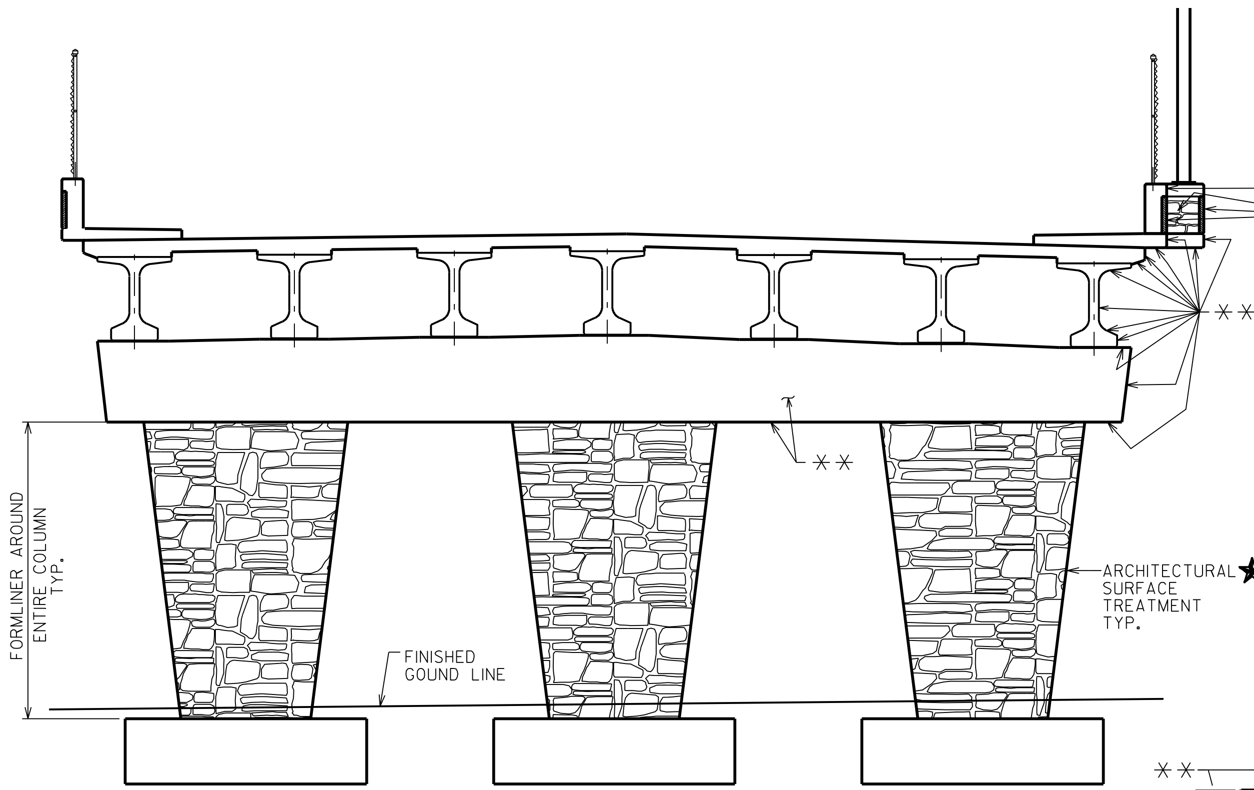
SHEET 24

501

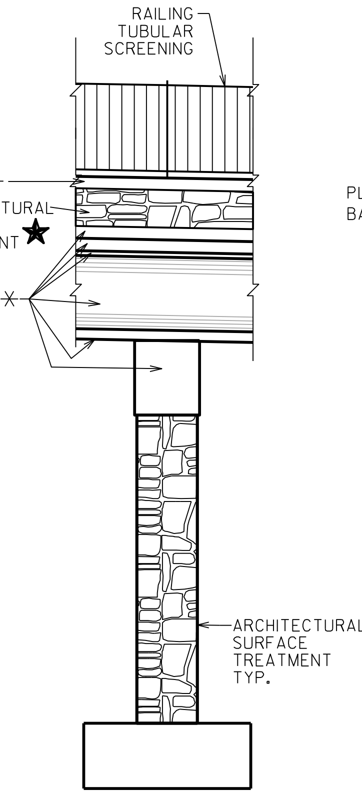
8

8

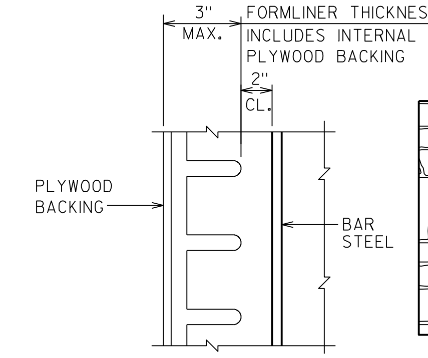
SCALE = 1



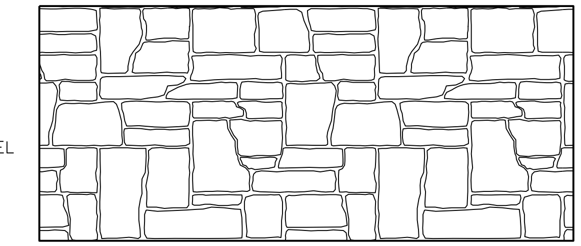
PIER ELEVATION
LOOKING EAST



PIER COLUMN SIDE VIEW
LOOKING NORTH



SECTION THRU FORMLINER



RUSTIC ASHLAR
SIZE = 8" TO 32"
MAX RELIEF = 2"

FORMLINER DETAILS

ABUTMENT NOTES

FORMLINER COURSING ON ABUTMENT AND WINGS SHALL BE LEVEL.

THE FORMLINER COURSING ON THE WINGS SHALL BE VERTICALLY ALIGNED WITH THE FORMLINER COURSING ON THE FRONT OF THE ABUTMENT.

THE FORMLINER PATTERN SHALL BE CONTINUOUS ACROSS CONSTRUCTION JOINTS.

WRAP AROUND/MATCH FORMLINER PATTERN AT CORNERS.

PIER NOTES

FORMLINER COURSING ON PIERS SHALL BE LEVEL.

THE FORMLINER COURSING ON ALL FACES OF EACH COLUMN SHALL BE VERTICALLY ALIGNED.

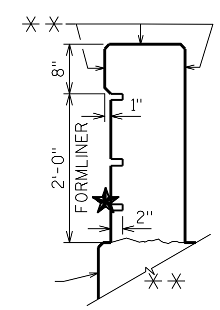
SPACE ADJACENT PORTIONS OF FORMLINER ON SLOPED FACE SO THAT COURSING IS ALIGNED VERTICALLY WITH COURSING ON VERTICAL FACE.

THE FORMLINER PATTERN SHALL BE CONTINUOUS ACROSS CONSTRUCTION JOINTS.

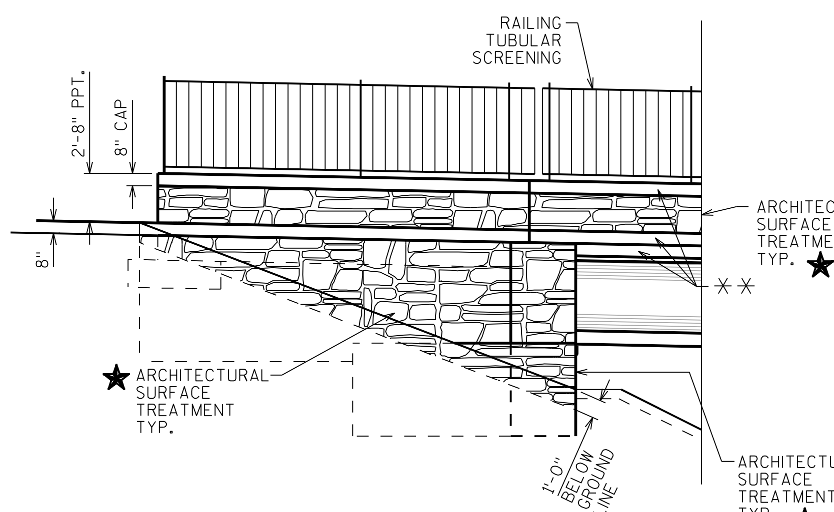
WRAP AROUND/MATCH FORMLINER PATTERN AT CORNERS.

PARAPET NOTES

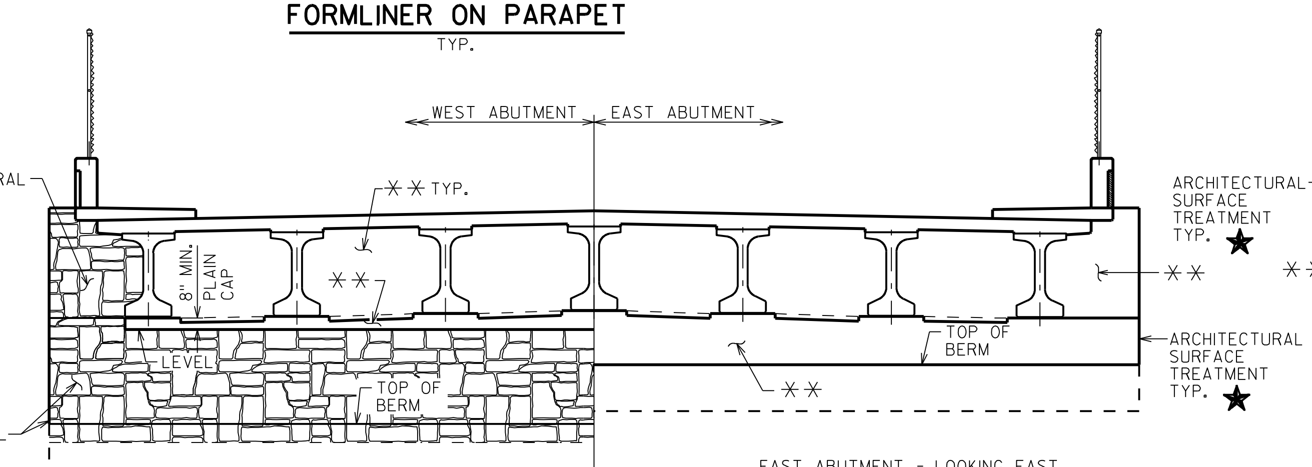
FORMLINER COURSING ON PARAPETS SHALL BE PARALLEL TO TOP OF PARAPET.



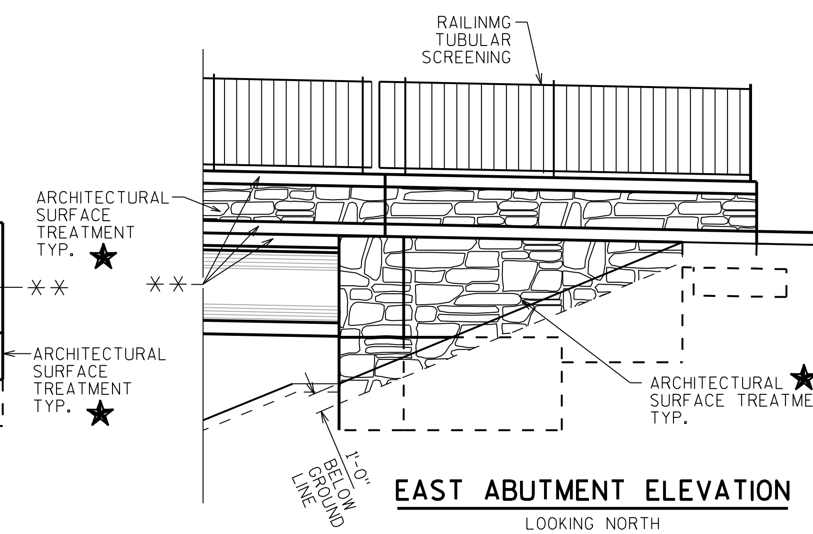
FORMLINER ON PARAPET
TYP.



WEST ABUTMENT ELEVATION
LOOKING NORTH



ABUTMENT ELEVATION



EAST ABUTMENT ELEVATION
LOOKING NORTH

COLOR TABLE	
✱✱	PLAIN CONCRETE, NO STAIN
★	MULTI-COLORED STAIN

Stain: Tri-Sheen Acrylic TK-5342-22
Fed Color: #36521 Tan

NOTE:
MULTI-COLOR STAIN TO LOOK SIMILAR TO WEATHERED LIMESTONE. SIMILAR TO EXISTING BRIDGE B-20-3832.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-20-227

DRAWN BY DDS | PLANS CK'D. ABS

AESTHETIC DETAILS

SHEET 25

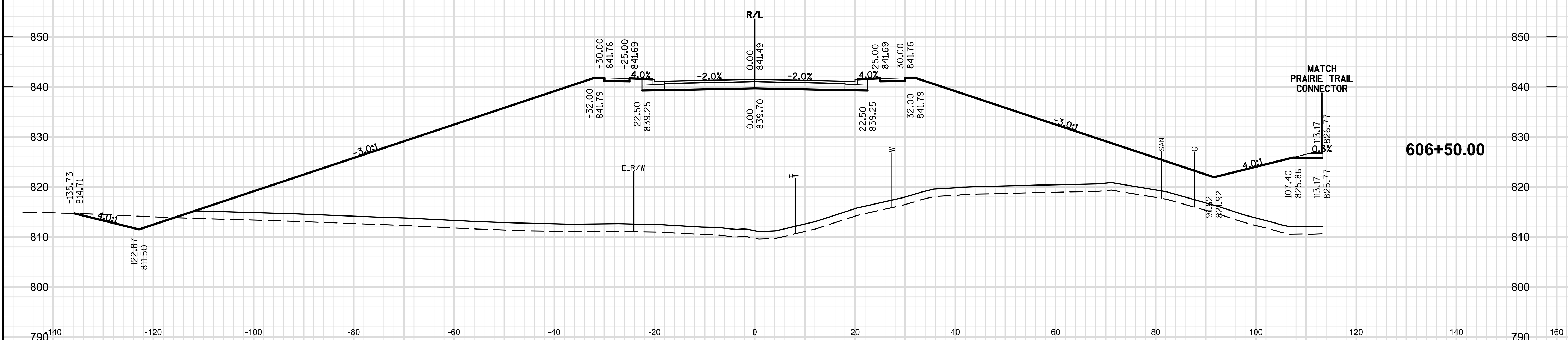
502

SCALE = 5

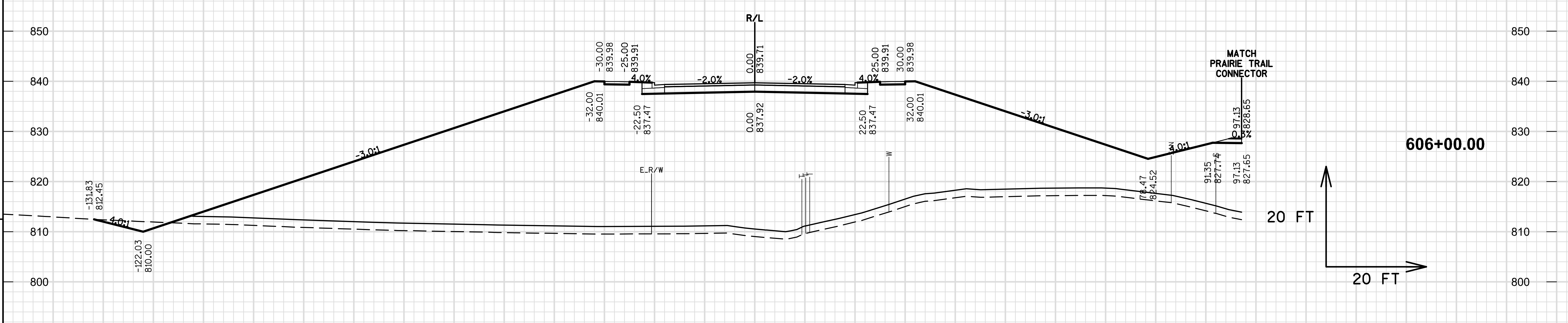
8

8

9



606+50.00



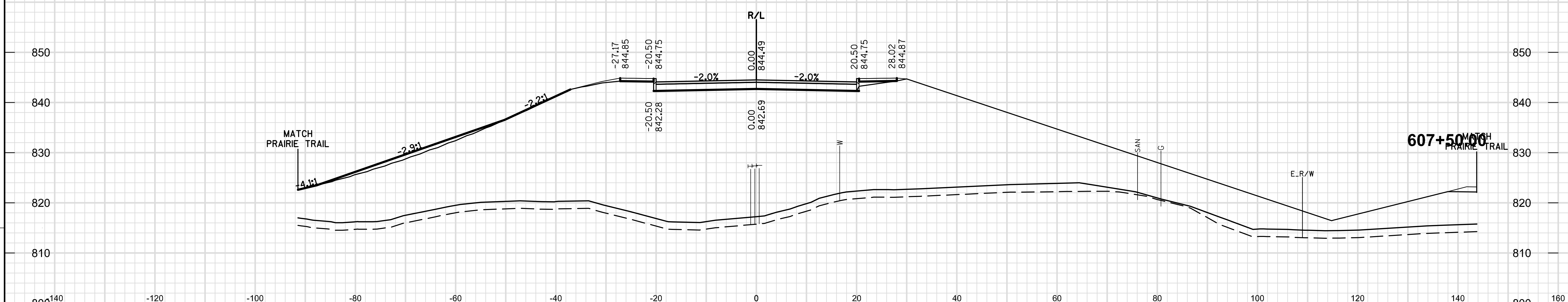
606+00.00

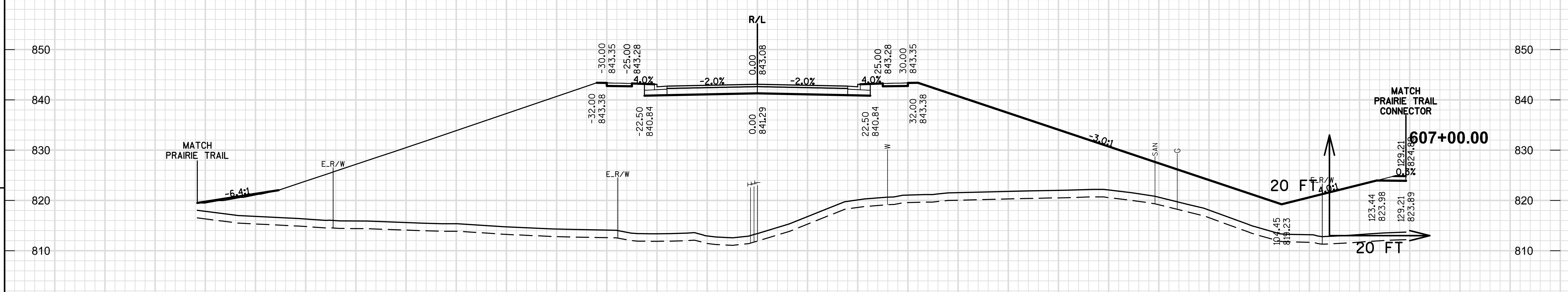
9

PROJECT NO:1420-23-71	HWY:USH 151	COUNTY:FOND DU LAC	CROSS SECTIONS: CTH T	SHEET 535	E

FILE NAME : S:\CURRPROJ\FONDDUCO\USH 151 - CTH T - V\CIVIL3D\DESIGN\CORRIDORS\14202300_CORRIDOR-CTHT_WEST_CROSSSECTIONS_FINAL_C3D_V2012.DWG PLOT DATE : 2/19/2015 8:31 AM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : *********

WISDOT/CADDS SHEET 49





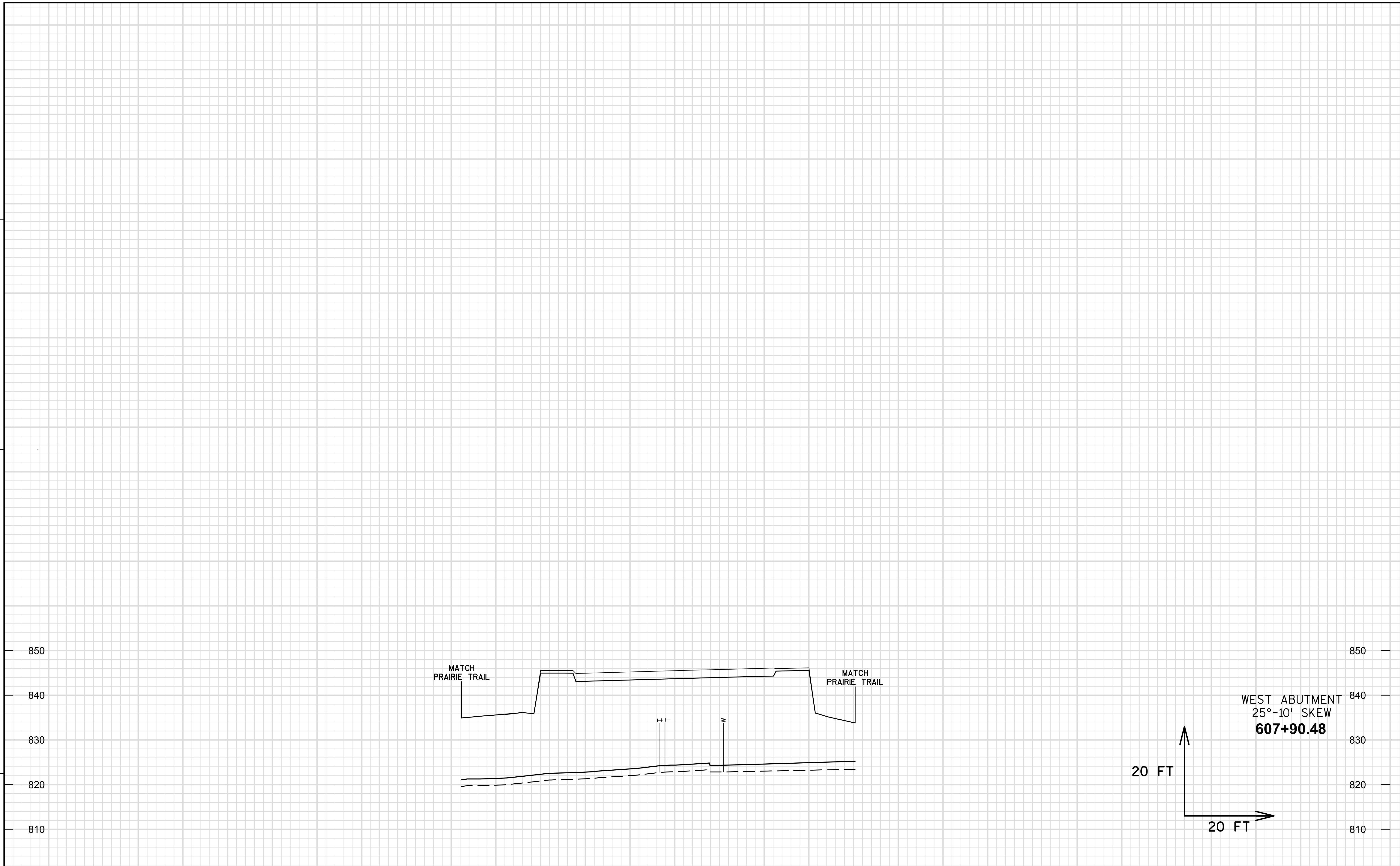
9

9

PROJECT NO:1420-23-71	HWY:USH 151	COUNTY:FOND DU LAC	CROSS SECTIONS: CTH T	SHEET 536	E

FILE NAME : S:\CURRPROJ\FONDDUCO\USH 151 - CTH T - V\CIVIL3D\DESIGN\CORRIDORS\14202300_CORRIDOR-CTHT_WEST_CROSSSECTIONS_FINAL_C3D_V2012.DWG PLOT DATE : 2/19/2015 8:31 AM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : ########

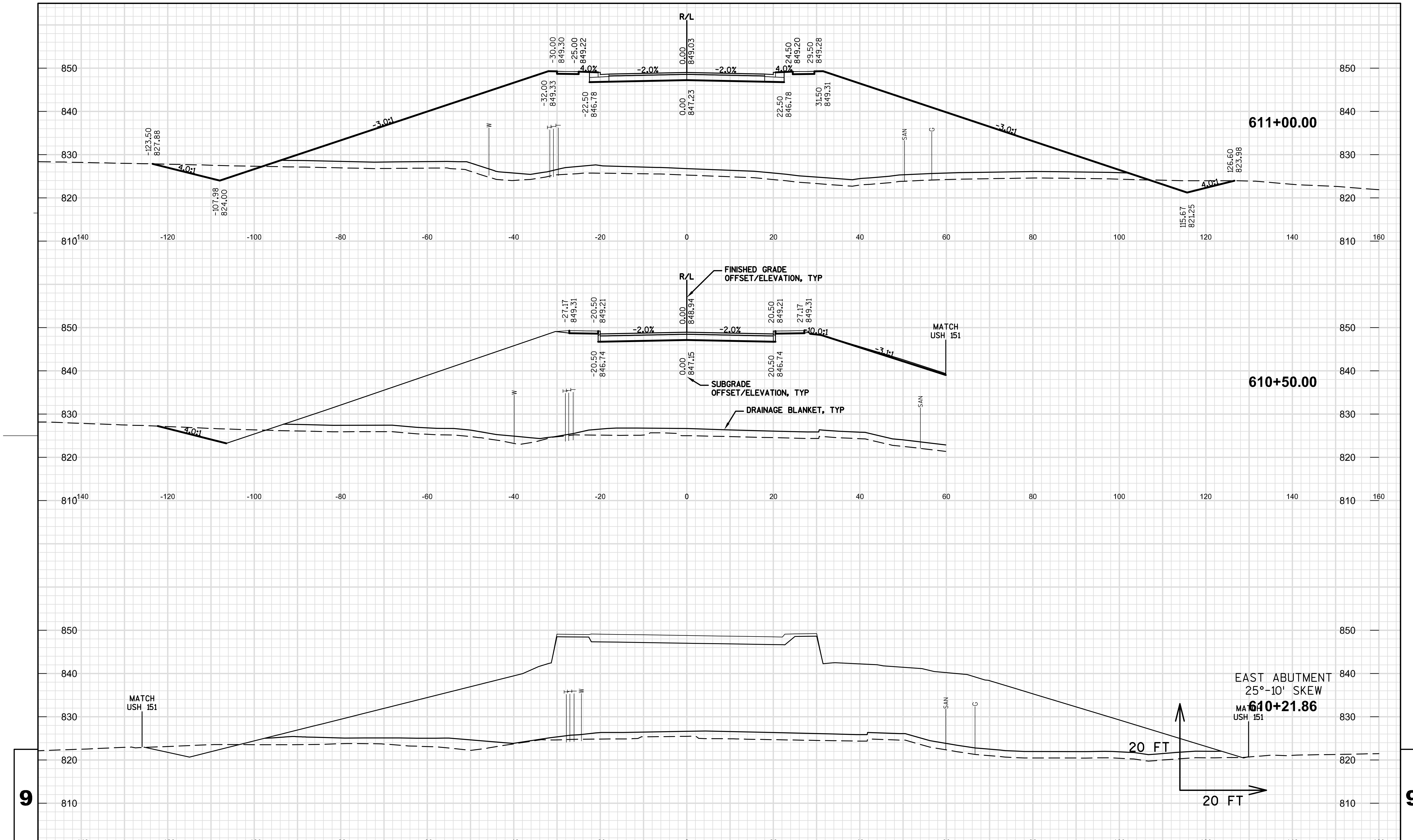
WISDOT/CADDS SHEET 49



9

9

PROJECT NO:1420-23-71	HWY:USH 151	COUNTY:FOND DU LAC	CROSS SECTIONS: CTH T	SHEET 537	E



PROJECT NO:1420-23-71	HWY:USH 151	COUNTY:FOND DU LAC	CROSS SECTIONS: CTH T	SHEET 538	E

FILE NAME : S:\CURRPROJ\FONDDUCO\USH 151 - CTH T - V\CIVIL3D\DESIGN\CORRIDORS\14202300_CORRIDOR-CTHT_EAST_CROSSSECTIONS_FINAL_C3D_V2012.DWG PLOT DATE : 2/19/2015 8:44 AM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : #########

WISDOT/CADDS SHEET 49

Notes

Wisconsin Department of Transportation

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