

STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION

# POR-14-06.20

## CITY OF STREETSBORO PORTAGE COUNTY

**PROJECT DESCRIPTION**

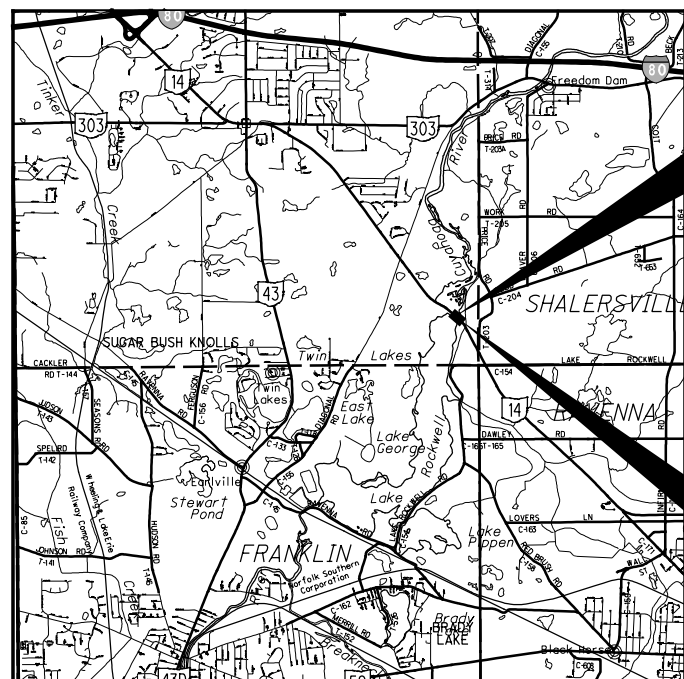
THE REPLACEMENT OF THE EXISTING STRUCTURE OVER LAKE ROCKWELL AND CUYAHOGA RIVER WITH A NEW THREE SPAN CONTINUOUS METALLIZED STEEL BEAM STRUCTURE WITH COMPOSITE REINFORCED CONCRETE DECK ON CONCRETE INTEGRAL ABUTMENTS AND CONCRETE CAPPED PILE PIERS AND APPROACH ROADWAY CONSTRUCTION.

**EARTH DISTURBED AREAS**

PROJECT EARTH DISTURBED AREA: 0.31 ACRES  
ESTIMATED CONTRACTOR EARTH DISTURBED AREA: 0.31 ACRES  
NOTICE OF INTENT EARTH DISTURBED AREA: N/A  
NOI (NOT REQUIRED)

**2016 SPECIFICATIONS**

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PLANS AND CHANGES LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.



**LOCATION MAP**

LATITUDE: N 41°12'35" LONGITUDE: W 81°18'15"



- PORTION TO BE IMPROVED: - - - - -
- INTERSTATE HIGHWAY: - - - - -
- STATE & FEDERAL ROUTES: - - - - -
- COUNTY & TOWNSHIP ROADS: - - - - -
- OTHER ROADS: - - - - -

**DESIGN DESIGNATION**

- CURRENT ADT (2016): - - - - - 19,000
- DESIGN ADT (2036): - - - - - 20,000
- DESIGN HOURLY VOLUME (2036): - - - - - 2,000
- DIRECTIONAL DISTRIBUTION: - - - - - 54%
- T: - - - - - 9%
- TRUCKS (24 HOUR B&C): - - - - - 9%
- DESIGN SPEED: - - - - - 50 MPH
- LEGAL SPEED: - - - - - 50 MPH
- DESIGN FUNCTIONAL CLASSIFICATION: URBAN PRINCIPAL ARTERIAL
- NHS PROJECT: - - - - - NO

DESIGN EXCEPTIONS	APPROVAL DATE	SHEET NO.
SUPERELEVATION RATE	12/05/2016	7

**UNDERGROUND UTILITIES**

CONTACT BOTH SERVICES  
CALL TWO WORKING DAYS  
**BEFORE YOU DIG**

CALL  
**1-800-362-2764**  
(TOLL FREE)

OHIO UTILITIES PROTECTION SERVICE  
NON-MEMBERS  
MUST BE CALLED DIRECTLY

OIL & GAS PRODUCERS PROTECTIVE  
SERVICE CALL: **1-800-925-0988**

PLAN PREPARED BY:



ENGINEERS SEAL:

SIGNED: *Thomas E. Stora*  
DATE: 11/23/2016

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## RECORD DRAWINGS JUNE 14, 2017

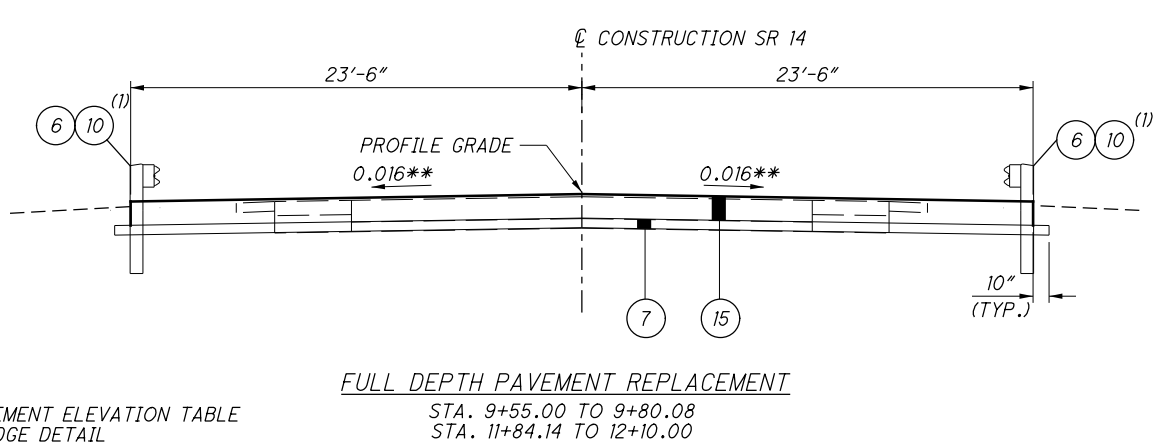
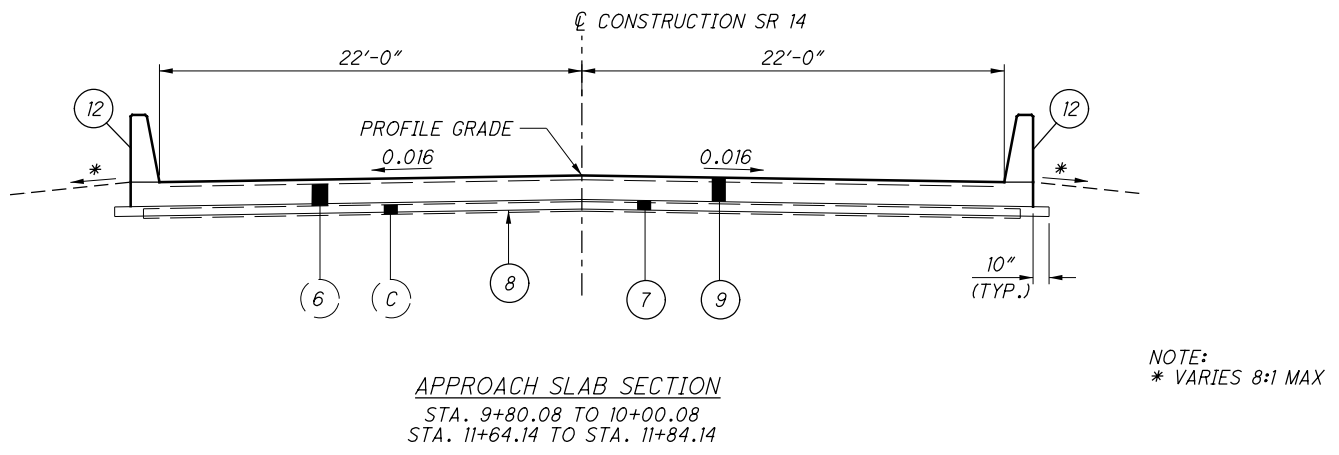
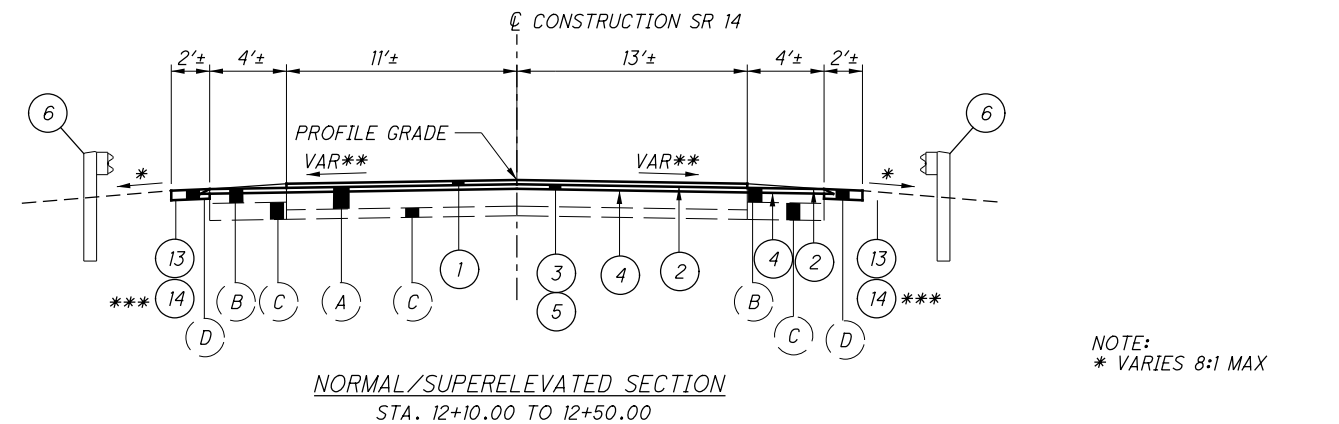
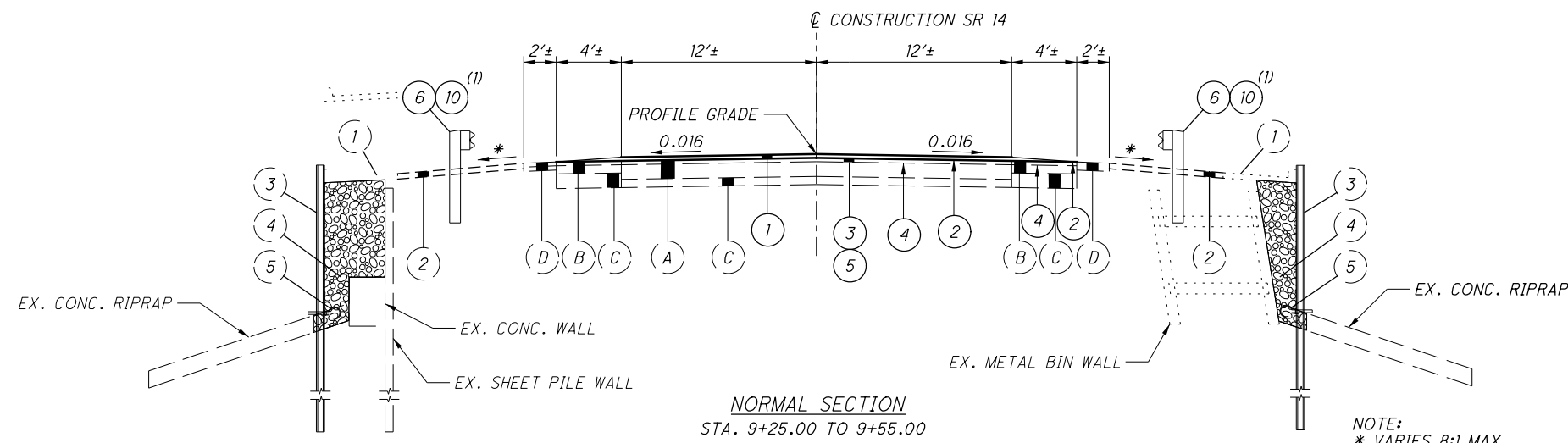
STANDARD CONSTRUCTION DRAWINGS				SUPPLEMENTAL SPECIFICATIONS
BP-3.1	7/18/14	AS-1-15	7/17/15	800-2016 7/15/16
BP-4.1	7/19/13	AS-2-15	7/17/15	832 1/17/14
		GSD-1-96	7/19/02	846 4/17/15
DM-1.1	1/15/16	ICD-1-82	7/19/02	
DM-4.3	1/15/16	SBR-1-13	1/17/14	
DM-4.4	1/15/16			
MGS-1.1	7/19/13			
MGS-2.1	7/19/13			
MGS-3.1	7/18/14			
MGS-5.3	7/15/16			
RM-4.6	7/19/13			
				<b>SPECIAL PROVISIONS</b>
				WATERWAY PERMIT 10/17/16

I HEREBY APPROVE THIS PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY AND THAT DETOURS WILL BE PROVIDED.

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FEDERAL PROJECT NO.	E170202
CONSTRUCTION PROJECT NO.	169014
PID NO.	104119
RAILROAD INVOLVEMENT	NONE
POR-14-06.20	1 22

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**EXISTING LEGEND**

- (A) EX. ASPHALT PAVEMENT (18" TO 22")
- (B) EX. ASPHALT PAVEMENT SHOULDER (9')
- (C) EX. AGGREGATE BASE (DEPTH UNKNOWN)
- (D) EX. AGGREGATE SHOULDER
- (1) EX. COMBINATION CURB AND GUTTER, TYPE 2, AS PER PLAN
- (2) EX. 3" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (448), (UNDER GUARDRAIL)
- (3) EX. STEEL SHEET PILING LEFT IN PLACE
- (4) EX. POROUS BACKFILL WITH FILTER FABRIC, AS PER PLAN
- (5) EX. 6" PERFORATED PIPE, INCLUDING SPECIALS
- (6) EX. REINFORCED CONCRETE APPROACH SLAB (T = 13")

**PROPOSED LEGEND**

- (1) ITEM 441 - ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), APP (T=1.25")
- (2) ITEM 407 - TACK COAT (EST. RATE - 0.055 GAL/SY)
- (3) ITEM 441 - ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448) (T=VARIABLE)
- (4) ITEM 407 - TACK COAT (EST. RATE - 0.085 GAL/SY)
- (5) ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE (SEE NOTE "A")
- (6) ITEM 606 - GUARDRAIL, TYPE MGS
- (7) ITEM 304 - 6" AGGREGATE BASE
- (8) ITEM 204 - SUBGRADE COMPACTION
- (9) ITEM 526 - REINFORCED CONCRETE APPROACH SLAB (T = 13")
- (10) ITEM 606 - MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1
- (11) NOT USED
- (12) SINGLE SLOPE BARRIER (SBR-1-13)
- (13) ITEM 617 - COMPACTED AGGREGATE, AS PER PLAN
- (14) ITEM 408 - PRIME COAT, AS PER PLAN
- (15) ITEM 255 - FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS QC1

**NOTE "A"**

PAVEMENT PLANING SHALL BE A CONSTANT DEPTH OF 1/4" AT THE C OF CONSTRUCTION WITH A UNIFORM CROSS SLOPE OF 0.016 ESTABLISHED.

PAVEMENT ELEVATION TABLE						
EP ELEV.	WIDTH LT	STATION	C ELEV.	WIDTH RT	EP ELEV.	NOTES
1064.41	11.3'	11+90	1064.59	13.1'	1064.38	END NORMAL SECTION/ BEG SUPERELEVATION TRANSITION
1064.58	11.3'	12+10	1064.71	13.1'	1064.43	END FULL DEPTH REPLACEMENT/ BEG PLANE AND OVERLAY
1064.75	11.3'	12+30	1064.82	13.1'	1064.49	
1064.93	11.3'	12+50	1064.94	13.1'	1064.55	END PLANE AND OVERLAY/ MATCH EXISTING PAVEMENT

**NOTE (1)**  
GUARDRAIL AND BTA TO BE INSTALLED BY OTHERS (POR-14-6.10)  
STA. 9+60.77 LT AND STA. 9+71.17 RT BEGIN CONCRETE BARRIER END SECTION, TYPE D

NOTE:  
\* VARIES 8:1 MAX

NOTE:  
\* VARIES 8:1 MAX

NOTE:  
\* VARIES 8:1 MAX

**NOTES:**  
\* VARIES 8:1 MAX  
\*\* 0.016 AND VARIES SEE PAVEMENT ELEVATION TABLE  
\*\*\* SEE SHEET 6 FOR SAFETY EDGE DETAIL

TYPICAL SECTIONS

POR-14-06.20

**UTILITIES:**

THE CONTRACTOR SHALL USE THE FOLLOWING PROCEDURE AT EACH LOCATION WHERE WORK IS PERFORMED, IN ACCORDANCE WITH SECTIONS 105.07 AND 107.16 IN THE CONSTRUCTION AND MATERIALS SPECIFICATIONS.

THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER, THE OHIO UTILITIES PROTECTION SERVICE (OUPS), THE OHIO & GAS PRODUCERS UNDERGROUND PROTECTION SERVICE (OGPUPS), THE OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 4 HEADQUARTERS AND ALL NON REGISTERED UTILITY OWNERS AT LEAST TWO (2) WORKING DAYS PRIOR TO COMMENCING CONSTRUCTION IN ALL AREAS.  
OUPS 1-800-362-2764 (CONTACT LIMITED BASIS PARTICIPANTS DIRECTLY)  
OGPUPS 1-800-925-0988

THERE ARE NO KNOWN UNDERGROUND UTILITIES LOCATED WITHIN THE PROJECT CONSTRUCTION LIMITS. THERE ARE NO UTILITIES SHOWN ON THE PLANS, ADDITIONAL UTILITY INFORMATION CAN BE OBTAINED FROM THE OWNERS OF THE UTILITIES. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO UTILITIES.

**ELEVATION DATUM:**

USE THE FOLLOWING VERTICAL POSITIONING AND HORIZONTAL POSITIONING PARAMETERS FOR ALL SURVEYING:

VERTICAL POSITIONING  
ORTHOMETRIC HEIGHT DATUM: NAVD 88  
GEOID: GEOID03  
HORIZONTAL POSITIONING  
REFERENCE FRAME: NORTH AMERICAN DATUM OF 1983 ADJUSTED TO THE NATIONAL SPATIAL REFERENCE SYSTEM OF 2007 (NAD 83 (NSRS 2007))  
ELLIPSOID: GRS80  
MAP PROJECTION: LAMBERT CONFORMAL CONIC  
COORDINATE SYSTEM: OHIO STATE PLANE SOUTH ZONE  
COMBINED SCALE FACTOR: 0.99991936

UNITS ARE IN U.S. SURVEY FEET. USE THE FOLLOWING CONVERSION FACTOR: 1 METER = 3.280833333 U.S. SURVEY FEET.

**ITEM 606 - ANCHOR ASSEMBLY, MGS TYPE E:**

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING ANY OF THE GUARDRAIL END TERMINALS LISTED ON ROADWAY ENGINEERING'S WEB PAGE UNDER ROADSIDE SAFETY DEVICES FOR APPROVED GUARDRAIL END TREATMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

THE FACE OF THE TYPE E IMPACT HEAD SHALL BE COVERED WITH A SHEET OF TYPE G REFLECTIVE SHEETING, PER CMS 730.19.

REFER TO THE MANUFACTURER'S INSTRUCTIONS REGARDING THE INSTALLATION OF, AND THE GRADING AROUND THE FOUNDATION TUBES GROUND STRUT. THE TOP OF ANY FOUNDATION TUBE SHOULD BE LESS THAN 4 INCHES ABOVE THE GROUND. THE PLACEMENT OF THE FOUNDATION TUBES SHOULD BE AN APPROPRIATE DEPTH BELOW THE LEVEL LINE IN ORDER TO MAINTAIN THE FINISHED GUARDRAIL HEIGHT OF 27.75 INCHES FROM THE EDGE OF THE SHOULDER. ON-SITE GRADING IS REQUIRED IF THE TOP OF THE FOUNDATION TUBES OR TOP OF THE GROUND STRUT DOES PROJECT MORE THAN 4 INCHES ABOVE THE GROUND LINE.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, ANCHOR ASSEMBLY, MGS TYPE E, EACH AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL ANCHOR ASSEMBLY SYSTEM, INCLUDING ALL RELATED TRANSITIONS, REFLECTIVE SHEETING, HARDWARE, GRADING, EMBANKMENT AND EXCAVATION NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

**ITEM 617 - COMPACTED AGGREGATE, AS PER PLAN**

IN LOW SHOULDER AREAS EXCEEDING 1", AND ADJACENT TO THE SAFETY EDGE, OR AS DIRECTED BY THE ENGINEER, RECYCLED ASPHALT PAVEMENT (RAP) SHALL BE USED IN AREAS ADJACENT TO THE PAVED BERM. THE RAP SHALL HAVE A MINIMUM PG CONTENT OF 4.5% AND MEET THE FOLLOWING GRADATION. ONCE THE STOCKPILE MEETS THE GRADATION, THE PG CONTENT OF THE RAP SHALL BE DETERMINED PER 441.03. THE RAP ANALYSIS MUST BE SUBMITTED TO THE ENGINEER FOR APPROVAL 2 WEEKS PRIOR TO USE. METHOD OF MEASUREMENT SHALL BE AS PER 617.06. PLACEMENT AND COMPACTION SHALL MEET THE REQUIREMENTS OF ITEM 617.

MODIFIED GRADATION SHALL APPLY:

SIEVE	TOTAL PERCENT PASSING
1-1/2"	100
3/4"	50-100
NO. 4	35-70
NO. 30	9-33
NO. 200	0-13

**ITEM 441 - AC SURFACE COURSE, TYPE 1, (448), AS PER PLAN**

703.05 DO NOT USE COARSE AGGREGATE FROM A SOURCE DESIGNATED "SR" OR "SRH" ACCORDING TO THE OFFICE OF MATERIALS MANAGEMENT (OMM) IN ANY JOB MIX FORMULA (JMF) FOR THIS ITEM.

**ITEM 408 - PRIME COAT, AS PER PLAN**

APPLY "MC-70" AT A RATE OF 0.4 GALLONS PER SQUARE YARD, OR AS DETERMINED BY THE ENGINEER, TO THE COMPLETED COMPACTED AGGREGATE SHOULDER.

**ENVIRONMENTAL:**

**ENDANGERED BAT HABITAT REMOVAL**

THE PROJECT IS LOCATED WITHIN THE KNOWN HABITAT RANGES OF THE FEDERALLY LISTED AND PROTECTED INDIANA BAT AND NORTHERN LONG-EARED BAT. THE UNDERSIDE OF BRIDGE NO. POR-14-6.24 SHALL BE CAREFULLY EXAMINED FOR THE PRESENCE OF BATS, ESPECIALLY FROM APRIL 1 TO SEPTEMBER 30. IF ANY BATS ARE FOUND ROOSTING ON THE UNDERSIDE OF THE BRIDGE, THE USFWS, ECOLOGICAL SERVICES DIVISION (614-416-8993), ODOT OFFICE OF ENVIRONMENTAL SERVICES (614-466-7880) AND ODOT DISTRICT 4 ENVIRONMENTAL SECTION (330-786-4930) SHALL BE CONTACTED TO PROVIDE THIS INFORMATION. SHOULD ADDITIONAL INFORMATION ON LISTED ENDANGERED/THREATENED/POTENTIALLY THREATENED SPECIES OR THEIR CRITICAL HABITAT BECOME AVAILABLE, OR IF NEW INFORMATION REVEALS EFFECTS ON THIS PROJECT THAT WERE NOT PREVIOUSLY CONSIDERED, ODOT WILL REINITIATE CONSULTATION WITH THE USFWS AND ODNR TO ASSESS WETHER THE PROJECT DETERMINATIONS ARE STILL VALID.

**PAINTING AND SEALING OPERATIONS**

THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PREVENT EPOXY-URETHANE SEALER, PAINT OR OTHER MATERIALS USED TO REPAIR, CLEAN, PAINT, SEAL OR TREAT ANY STRUCTURE FROM ENTERING LAKE ROCKWELL RESERVOIR, WETLANDS OR OTHER WATERS OF THE UNITED STATES AND TAKE THE APPROPRIATE ACTIONS IN THE EVENT OF A RELEASE.

**COMMUNITY NOTIFICATION**

THE CONTRACTOR WILL ADVISE THE ODOT PROJECT ENGINEER A MINIMUM OF FOURTEEN (14) DAYS PRIOR TO THE START OF CONSTRUCTION ACTIVITIES. THE CONTRACTOR MUST ALSO PROVIDE NOTIFICATION TO THE ODOT PROJECT ENGINEER A MINIMUM OF FOURTEEN (14) DAYS PRIOR TO ANY LANE RESTRICTIONS OR CLOSURES. THE ODOT PROJECT ENGINEER WILL FORWARD THIS INFORMATION TO THE ODOT DISTRICT PUBLIC INFORMATION OFFICER FOR USE TO NOTIFY EMERGENCY SERVICES AND THE PUBLIC A MINIMUM OF FOURTEEN (14) DAYS PRIOR TO THE START OF PROJECT CONSTRUCTION. INCLUDED IN THIS NOTIFICATION WILL BE THE PROPOSED LANE RESTRICTIONS, ROAD CLOSURES AND DETOURS REQUIRED BY THE PROJECT.

**CONSTRUCTION AND DEMOLITION DEBRIS**

THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS TO AVOID AND OR LIMIT DEMOLITION DEBRIS FROM ENTERING LAKE ROCKWELL RESERVOIR AND/OR WETLANDS. ANY MATERIAL THAT DOES FALL INTO LAKE ROCKWELL RESERVOIR AND/OR WETLANDS SHALL BE IMMEDIATELY REMOVED (WITHIN 72 HOURS).

**LAKE ROCKWELL RESERVOIR/AKRON DRINKING WATER SUPPLY AVOIDANCE**

LAKE ROCKWELL RESERVOIR, WHICH IS FED BY THE STATE SCENIC UPPER CUYAHOGA RIVER, IS A SOURCE FOR THE CITY OF AKRON DRINKING WATER SUPPLY. BECAUSE OF THIS, LAKE ROCKWELL RESERVOIR AND THE SURROUNDING AREAS ARE HIGHLY RESTRICTED. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PROTECT LAKE ROCKWELL RESERVOIR AND ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES AS SPECIFIED IN THE PLAN SHALL BE IN PLACE PRIOR TO ANY EXCAVATION, GRADING OR FILLING OPERATIONS AND INSTALLATION OF PROPOSED STRUCTURES AND/OR UTILITIES.

THE CONTRACTOR SHALL DEVELOP A SPILL CONTAINMENT AND CLEANUP PLAN PRIOR TO THE START OF ANY CONSTRUCTION ACTIVITIES AND PARTICULAR ATTENTION SHALL ALSO BE GIVEN TO DRAINAGE WAYS, DITCHES, WETLANDS AND OPEN WATER AREAS. APPROPRIATELY DESIGNED EROSION CONTROLS SHALL BE UTILIZED AND ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE PROPERLY MAINTAINED UNTIL FINAL PROJECT SITE STABILIZATION IS ACHIEVED AND ACCEPTED BY THE ENGINEER. EQUIPMENT AND MATERIAL STAGING AREAS SHALL BE KEPT AWAY FROM THE LAKE ROCKWELL RESERVOIR, WETLANDS, AND OTHER WATERS OF THE UNITED STATES TO THE EXTENT PRACTICABLE. IDLE EQUIPMENT, PETROCHEMICALS AND TOXIC/HAZARDOUS MATERIALS SHOULD NOT BE STORED IN PROXIMITY OF LAKE ROCKWELL RESERVOIR, WETLANDS AND OTHER WATERS OF THE UNITED STATES. ALL PROJECT RELATED REFUELING AND MAINTENANCE ACTIVITIES SHALL BE PERFORMED IN AN ENVIRONMENTALLY RESPONSIBLE MANNER AND UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR DISCHARGE ANY PETROCHEMICALS AND/OR TOXIC AND HAZARDOUS MATERIALS.

SPILLS OF FUELS, OILS, CHEMICALS OR OTHER TOXIC/HAZARDOUS MATERIALS SHALL BE CLEANED UP IMMEDIATELY BY THE CONTRACTOR AND REPORTED TO THE PROJECT ENGINEER. IN EACH CASE WHERE THERE IS AN INCIDENT OF HAZARDOUS MATERIAL SPILL IN A REPORTABLE QUANTITY OR ANY SPILL THAT COULD POSE A RISK TO SURFACE WATER OR GROUNDWATER, THE CONTRACTOR SHALL, AS SOON AS POSSIBLE, NOTIFY THE PROJECT ENGINEER AND THE FOLLOWING AGENCIES:

STREETSBORO WATER DEPARTMENT EMERGENCY/SERVICE: (STREETSBORO SERVICE DEPARTMENT) 330-626-2856

EMERGENCY/SERVICE AFTER HOURS: (STREETSBORO POLICE DEPARTMENT NON-EMERGENCY) 330-626-4976

STREETSBORO FIRE DEPARTMENT PHONE: 330-626-4664  
CALL 9-1-1 FOR ALL EMERGENCIES

OHIO EPA SPILL REPORTING - 24 HOUR EMERGENCY SERVICE 800-282-9378  
PROVIDE AS MUCH OF THE FOLLOWING INFORMATION AS POSSIBLE:

- 1. TIME OBSERVED
- 2. LOCATION
- 3. MATERIAL RELEASED
- 4. PROBABLE SOURCE
- 5. VOLUME & DURATION
- 6. PRESENT & ANTICIPATED MOVEMENT OF CONTAMINANT
- 7. PERSONNEL ON SCENE
- 8. ACTIONS ALREADY INITIATED
- 9. PERSON(S) ON THE SCENE TO CONTACT.

THE CONTRACTOR SHALL DEVELOP A SPILL CONTAINMENT AND CLEANUP PLAN PRIOR TO THE START OF ANY CONSTRUCTION ACTIVITIES INCLUDING ANY NECESSARY CLEARING AND GRUBBING ACTIVITIES.

**AKRON WATER PLAN NOTIFICATION**

THE CONTRACTOR SHALL NOTIFY THE AKRON WATER PLANT AT LEAST TWO (2) WORKING DAYS PRIOR TO THE START OF ANY DEMOLITION AND/OR INSTALLATION OF ANY MATERIALS, INCLUDING TEMPORARY FILLS OR FLOATS AND/OR PERMANENT FILLS BELOW THE ORDINARY HIGH WATER MARK OF LAKE ROCKWELL. NOTIFICATION MUST ALSO BE PROVIDED ANY TIME OTHER MATERIALS/DEMO DEBRIS INADVERTENTLY DROP INTO OR ENTER LAKE ROCKWELL.

DURING NORMAL BUSINESS HOURS  
CALL BOB GEISER: 330-283-8110

AFTER HOURS/WEEKENDS  
CALL OPERATOR-ON-DUTY: 330-678-0077 PRESS OPTION #2  
IF OPERATOR-ON-DUTY DOES NOT ANSWER USE ALTERNATE NO.: 330-212-8512 OR 330-208-7206

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CALCULATED  
KDC  
CHECKED  
FG

GENERAL NOTES

POR-14-06.20

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22



**ENVIRONMENTAL (CONTINUED):**

**BEST MANAGEMENT PRACTICES**

WATER COLUMN AND SEDIMENTATION IMPACTS SHALL BE KEPT TO A MINIMUM THROUGH THE USE OF BEST MANAGEMENT PRACTICES FOR SOIL EROSION AND SEDIMENTATION CONTROL. ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IN PLACE PRIOR TO ANY EXCAVATION, GRADING OR FILLING OPERATIONS AND INSTALLATION OF PROPOSED STRUCTURES OR UTILITIES. THEY SHALL REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETED AND THE AREA IS STABILIZED AS ACCEPTED BY THE ENGINEER. SPECIFICATIONS SET FORTH IN THE MOST CURRENT VERSION OF ODOT'S CMS, LOCATION AND DESIGN MANUAL AND STANDARD DRAWINGS SHALL BE USED TO ENSURE ADEQUATE EROSION AND SEDIMENT CONTROL DURING CONSTRUCTION.

NATURAL BUFFERS ADJACENT TO OPEN WATER AND WETLANDS SHALL BE PRESERVED TO THE MAXIMUM EXTENT PRACTICABLE. EXISTING RIPARIAN HABITATS SHOULD BE MAINTAINED TO THE MAXIMUM EXTENT PRACTICABLE AND EQUIPMENT STAGING AREAS SHALL BE KEPT WELL AWAY FROM OPEN WATER AND WETLANDS TO THE EXTENT PRACTICABLE. ODOT CMS SECTION 107.10 (PROTECTION AND RESTORATION OF PROPERTY) PROHIBIT THE CONTRACTOR FROM CREATING STAGING AREAS NEAR STREAMS/WETLANDS. AREAS DISTURBED BY THE PROJECT SHALL BE SEEDED/REVEGETATED WITH NATIVE PLANT SPECIES AND MULCHED DURING CONSTRUCTION TO ENCOURAGE ESTABLISHMENT OF VEGETATION COVER, DECREASE EROSION AND PREVENT EROSION OF SEDIMENTS INTO WATERS OF THE UNITED STATES.

THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PREVENT ANY INCIDENTAL DISCHARGES ASSOCIATED WITH THE CUTTING AND REMOVAL OF THE CONCRETE DECK, ABUTMENTS AND OR SHORELINE PROTECTION. SPECIFICATIONS SET FORTH IN THE MOST CURRENT VERSION OF ODOT'S CMS , LOCATION AND DESIGN MANUAL AND STANDARD DRAWINGS SHALL BE USED TO ENSURE ADEQUATE EROSION AND SEDIMENT CONTROL DURING CONSTRUCTION. ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IN PLACE PRIOR TO ANY EXCAVATION, GRADING OR FILLING OPERATIONS AND INSTALLATION OF PROPOSED STRUCTURES OR UTILITIES. THEY SHALL REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETED AND THE AREA IS STABILIZED AS ACCEPTED BY THE ENGINEER. ALL WASTE MATERIAL GENERATED BY THE PROJECT MUST BE PROPERLY STAGED AND CONTAINED TO PREVENT ANY DISCHARGE TO LAKE ROCKWELL RESERVOIR.

**WATERWAY PERMIT DETERMINATION (404/401) - ODOT PROJECTS**

ALL PROJECTS INVOLVING JURISDICTIONAL WATERS OF THE UNITED STATES (STREAMS, RIVERS, NON-ISOLATED WETLANDS) AND/OR ISOLATED WETLANDS ARE SUBJECT TO REGULATION UNDER SECTIONS 404 AND 401 OF THE CLEAN WATER ACT, AND POSSIBLY OHIO EPA ISOLATED WETLAND LAW. THE WATERWAY PERMITS CONDITIONS VERIFIED FOR THE PROJECT HAVE BEEN INCORPORATED INTO THE PROJECT CONSTRUCTION PLAN AS SPECIAL PROVISIONS. THE PROJECT CONTRACTOR SHALL REVIEW AND ADHERE TO ALL WATERWAY PERMIT TERMS AND CONDITIONS THROUGHOUT PROJECT CONSTRUCTION.

**ASBESTOS NOTIFICATION**

AN ASBESTOS SURVEY OF THE BRIDGE NO. POR-14-6.24 BRIDGE STRUCTURES WAS CONDUCTED BY A CERTIFIED ASBESTOS HAZARD EVALUATION SPECIALIST. THE SURVEY DETERMINED THAT NO ASBESTOS IS PRESENT ON THE BRIDGE STRUCTURE.

A COPY OF THE OHIO ENVIRONMENTAL PROTECTION AGENCY (OEPA) NOTIFICATION OF DEMOLITION AND RENOVATION FORMS, PARTIALLY COMPLETED AND SIGNED BY THE BRIDGE OWNER, WILL BE PROVIDED TO THE SUCCESSFUL BIDDER. THE CONTRACTOR SHALL COMPLETE THE FORM AND SUBMIT IT TO:

AKRON REGIONAL AIR QUALITY MANAGEMENT DISTRICT  
146 S. HIGH STREET, SUITE 904  
AKRON, OHIO 44308  
SAM RUBENS, ADMINISTRATOR  
330-812-3874

AT LEAST TEN (10) WORKING DAYS PRIOR TO THE START OF ANY DEMOLITION AND/OR REHABILITATION. THE CONTRACTOR SHALL PROVIDE A COPY OF THE COMPLETED FORM TO THE ENGINEER.

- INFORMATION REQUIRED ON THE FORM WILL INCLUDE:
- 1) THE CONTRACTOR'S NAME AND ADDRESS
  - 2) THE SCHEDULED DATES FOR THE START AND COMPLETION OF THE BRIDGE REMOVAL AND
  - 3) A DESCRIPTION OF THE PLANNED DEMOLITION WORK AND THE METHOD(S) TO BE USED

A COPY OF THE OEPA FORM IS AVAILABLE FOR INSPECTION AT THE ODOT DISTRICT 4 OFFICE,  
2088 SOUTH ARLINGTON,  
AKRON, OHIO 44306.

BASIS FOR PAYMENT-THE CONTRACTOR SHALL FURNISH ALL FEES, LABOR, AND MATERIALS NECESSARY TO COMPLETE AND SUBMIT THE OEPA NOTIFICATION FORM. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN ITEM 202 - PORTIONS OF STRUCTURE REMOVED, AS PER PLAN.

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**GENERAL NOTES**

**POR-14-06.20**

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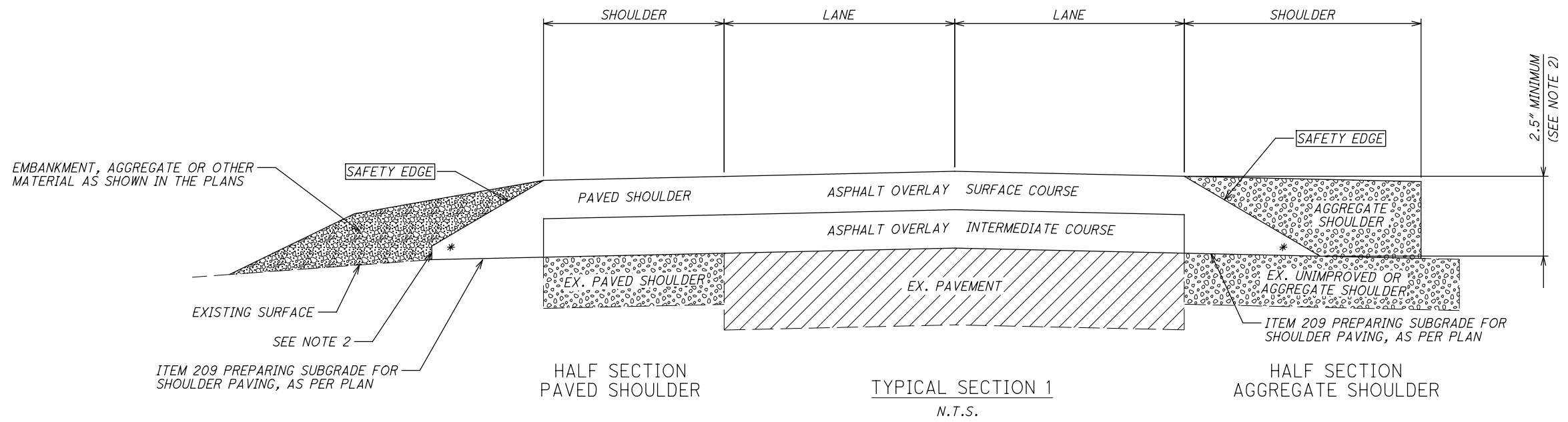
ITEMS LIST										
ITEM	EXTENSION	TOTAL	UNIT	DESCRIPTION	ABUTS.	PIERS	SUPER.	GENERAL	SHT. REF.	
202	11003	LUMP		STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN						
202	10000		SQ YD	SUBGRADE COMPACTION						
202	23010		SY	PAVEMENT REMOVED, ASPHALT						
202	38000		FT	GUARDRAIL REMOVED						
204	10000		SQ YD	SUBGRADE COMPACTION						
254	01000		SQ YD	PAVEMENT PLANING, ASPHALT CONCRETE						
255	10010		SQ YD	FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS QC1						
304	20000		CU YD	AGGREGATE BASE						
407	10000		GAL	TACK COAT						
408	10001		GAL	TACK COAT, AS PER PLAN						
441	50000		CU YD	ASPHALT CONCRETE SURFACE COURSE, TYPE 1 (448), AS PER PLAN						
441	50300		CU YD	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2 (448)						
617	10101		CU YD	COMPACTED AGGREGATE, AS PER PLAN						
622	25000		EACH	CONCRETE BARRIER END SECTION, TYPE D						
505	11100	LUMP		PILE DRIVING EQUIPMENT MOBILIZATION						
507	00200		FT	STEEL PILES HP 12X53, FURNISHED						
507	00250		FT	STEEL PILES HP 12X53, DRIVEN						
SPECIAL	50771200		FT	PILE ENCASEMENT						
509	10000		POUND	EPOXY COATED REINFORCING STEEL						
510	10000		EA	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT						
511	34446		CU YD	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK						
511	34448		CU YD	CLASS QC2 CONCRETE, BRIDGE DECK (PARAPET)						
511	42510		CU YD	CLASS QC1 CONCRETE, PIER CAP						
511	44110		CU YD	CLASS QC1 CONCRETE, ABUTMENT NOT INCLUDING FOOTING						
512	10100		SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)						
513	10241		POUND	STRUCTURAL STEEL MEMBERS, LEVEL 2, AS PER PLAN						
513	20000		EACH	WELDED STUD SHEAR CONNECTORS						
516	13200		SQ FT	1/2" PREFORMED EXPANSION JOINT FILLER						
516	13600		SQ FT	1" PREFORMED EXPANSION JOINT FILLER						
516	14014		FT	INTEGRAL ABUTMENT EXPANSION JOINT SEAL						
516	43000		EACH	ELASTOMERIC BEARING WITH LOAD PLATE						
516	44100		EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (12" X 16" X 2.05" WITH 13" X 17" X 1/2" MIN. LOAD PLATE)						
518	21200		CU YD	POROUS BACKFILL WITH GEOTEXTILE FABRIC						
526	15000		SQ YD	REINFORCED CONCRETE APPROACH SLAB, (T=13")						
606	15050		FT	GUARDRAIL, TYPE MGS						
606	28100		EACH	ANCHOR ASSEMBLY, MGS TYPE E						
606	35002		EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1						
626	00100		EACH	BARRIER REFLECTOR						
630	02100		FT	GROUND MOUNTED SUPPORT, NO. 2 POST						
630	80100		SQ FT	SIGN, FLAT SHEET, 730.20						
630	84900		EACH	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL						
630	86002		EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL						
832	30000		EACH	EROSION CONTROL						

CALCULATED  
CHECKED

ITEMS LIST

POR-14-06.20

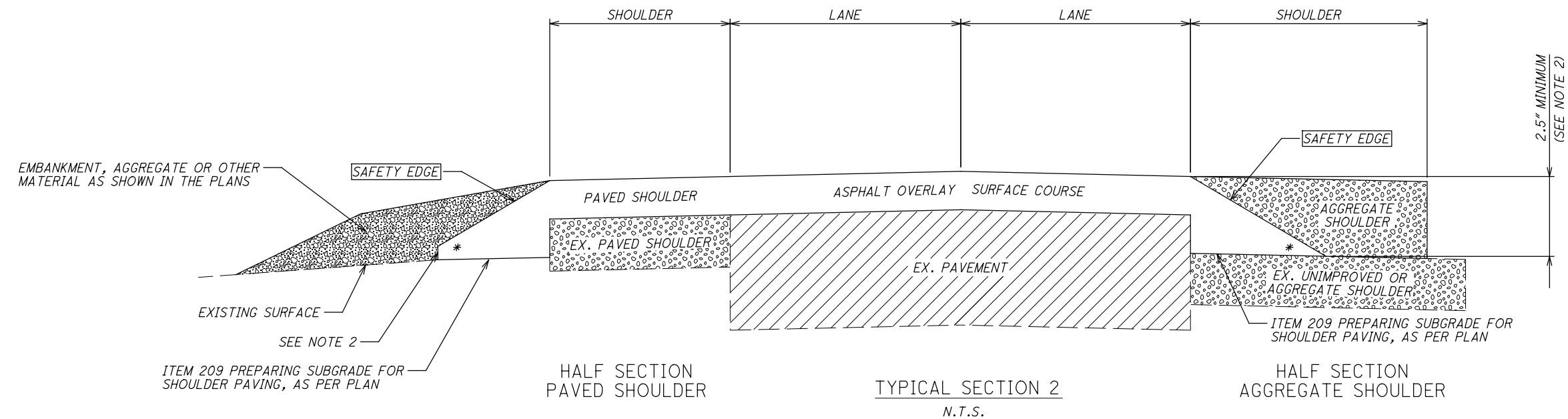
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HALF SECTION PAVED SHOULDER

TYPICAL SECTION 1  
N.T.S.

HALF SECTION AGGREGATE SHOULDER



HALF SECTION PAVED SHOULDER

TYPICAL SECTION 2  
N.T.S.

HALF SECTION AGGREGATE SHOULDER

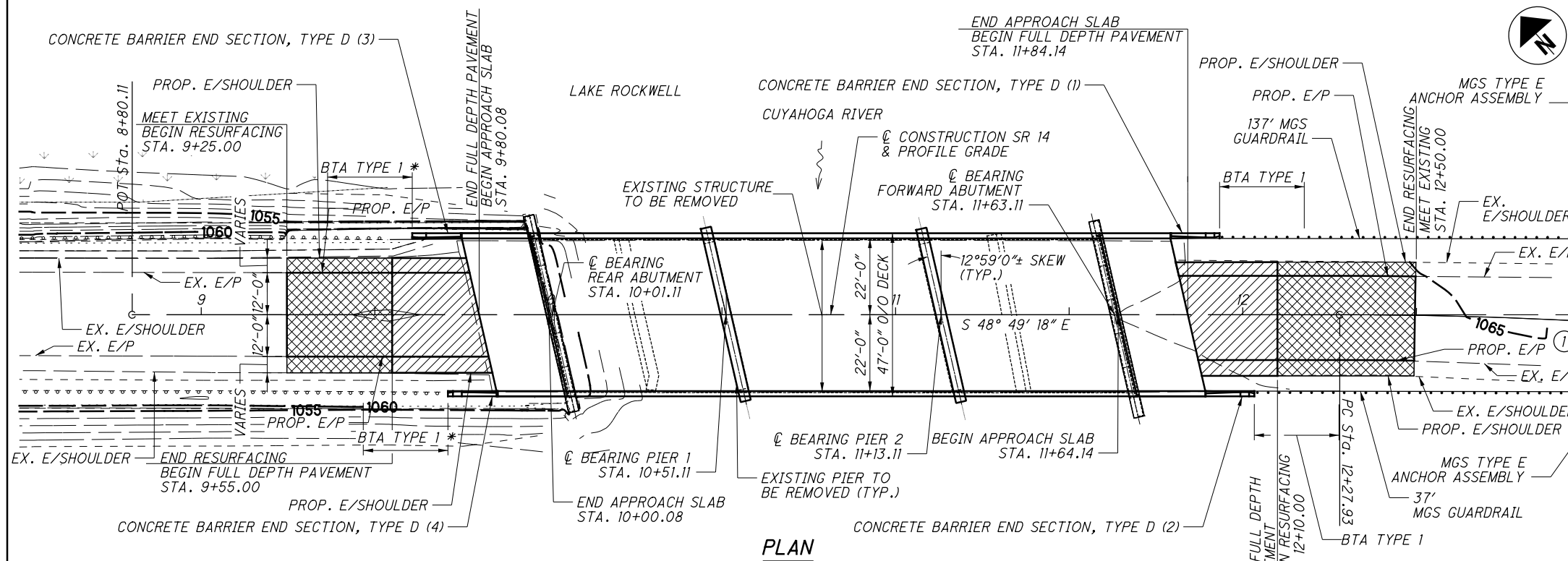
**NOTES:**

1. SAFETY EDGES ARE REQUIRED AT THE OUTSIDE EDGES OF THE PAVED ROADWAY (EDGE OF TRAVEL LANE OR EDGE OF PAVED SHOULDER).
2. CONSTRUCT THE SAFETY EDGE THE FULL ASPHALT CONCRETE OVERLAY THICKNESS OR 2.5" WHICHEVER IS GREATER, NOT TO EXCEED THE MAXIMUM SAFETY EDGE THICKNESS OF 6". CONSTRUCT A NEAR-VERTICAL FACE BELOW THE SAFETY EDGE FOR THICKNESS GREATER THAN 6".
3. BLADE AND SHAPE EXISTING SHOULDER MATERIAL TO FORM A UNIFORM SURFACE UNDER THE SAFETY EDGE PRIOR TO PLACEMENT OF THE ASPHALT CONCRETE OVERLAY.

\* 40° MAX

CALCULATED  
CHECKED

ASPHALT SAFETY EDGE DETAIL



**GUARDRAIL/CONCRETE BARRIER NOTES:**

- (1) STA. 11+79.32 - BEGIN CONCRETE BARRIER END SECTION, TYPE D  
 STA. 11+93.32 - END CONCRETE BARRIER END SECTION, TYPE D  
 (PROVIDE 3" GAP BETWEEN END SECTION AND BRIDGE PARAPET.)
- (2) STA. 11+89.46 - BEGIN CONCRETE BARRIER END SECTION, TYPE D  
 STA. 12+03.46 - END CONCRETE BARRIER END SECTION, TYPE D  
 (PROVIDE 3" GAP BETWEEN END SECTION AND BRIDGE PARAPET.)
- (3) STA. 9+60.76 - BEGIN CONCRETE BARRIER END SECTION, TYPE D  
 STA. 9+74.76 - END CONCRETE BARRIER END SECTION, TYPE D  
 (PROVIDE 3" GAP BETWEEN END SECTION AND BRIDGE PARAPET.)
- (4) STA. 9+70.90 - BEGIN CONCRETE BARRIER END SECTION, TYPE D  
 STA. 9+84.90 - END CONCRETE BARRIER END SECTION, TYPE D  
 (PROVIDE 3" GAP BETWEEN END SECTION AND BRIDGE PARAPET.)

**LEGEND**

- A = NORMAL WATER ELEVATION = 1051.37
- B = FLOW LINE ELEVATION = 1042.37
- C = ORDINARY HIGH WATER MARK = 1052.00
- BTA = BRIDGE TERMINAL ASSEMBLY
- ▨ AREA OF ASPHALT CONCRETE TO BE RESURFACED
- ▩ AREA OF ASPHALT CONCRETE TO BE REPLACED
- \* INSTALLED WITH POR-14-6.10 BIN WALL PROJECT (PID 101883)

**PROJECT CONTROL (GROUND COORDINATES):**

"URS CORP CONTROL POINT" CAPPED RBS 8' NORTHEAST OF NORTHEAST EDGE OF PAVEMENT SHOULDER AND 82' NORTHWEST OF NORTHWEST END OF BIN WALL ON NORTH SIDE OF S.R. 14.  
 STA. 154+86.58, 26.53' LT. (CL R/W AND CONST. S.R. 14)  
 N: 565001.233, E: 2297231.038

"URS CORP CONTROL POINT" CAPPED RBS 4' NORTH OF NORTH EDGE OF PAVEMENT SHOULDER AND 86.5' EAST OF EAST EDGE OF CONCRETE BRIDGE OVER LAKE ROCKWELL.  
 STA. 164+60.03, 22.32' LT. (CL R/W AND CONST. S.R. 14)  
 N: 564366.068, E: 2297972.285

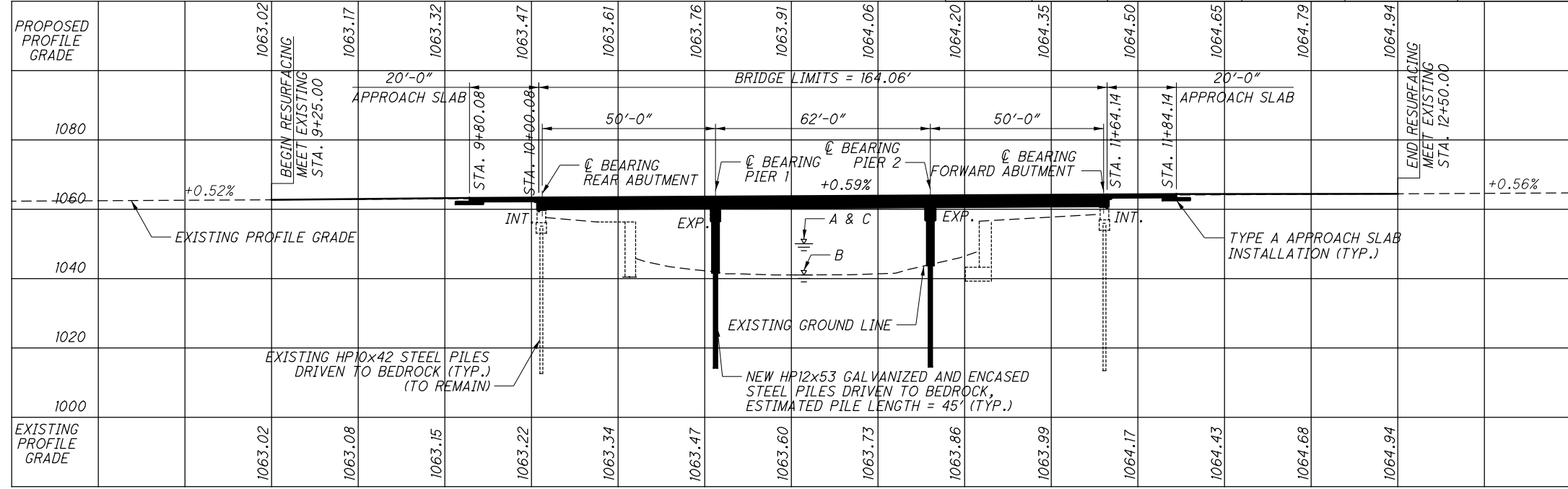
CHS BOX ON SOUTHWEST CORNER OF WINGWALL AT SOUTHWEST CORNER OF BRIDGE ABUTMENT  
 ELEVATION = 1062.83  
 N: 564488.489, E: 2297761.433

**① CURVE DATA**

P.I. Sta. 14+83.04  
 $\Delta = 21^\circ 24' 07''$  (RT)  
 $D_c = 4^\circ 14' 39''$   
 $R = 1,350.00'$   
 $T = 255.11'$   
 $L = 504.27'$   
 $E = 23.89'$   
 $e_{max} = 0.06$

CENTERLINE CONSTRUCTION SR 14 REFERENCE - GROUND COORDINATES

STATION	OFFSET (FT.)	STREET	NORTHING	EASTING	DESCRIPTION
8+80.11	0.00	CL S.R. 14	564591.9381	2297684.3502	POT
12+27.93	0.00	CL S.R. 14	564362.9293	2297946.1436	P.C.
14+83.04	23.89 RT.	CL S.R. 14	564194.9644	2298238.1541	P.I.
17+32.20	0.00	CL S.R. 14	563968.5157	2298255.6326	P.T.
21+27.38	0.00	CL S.R. 14	563617.7303	2298437.6153	POT



**EXISTING STRUCTURE**

TYPE: THREE SPAN CONTINUOUS STEEL BEAM WITH REINFORCED CONCRETE DECK ON CAPPED PILE ABUTMENTS AND PIERS  
 SPANS: 50'-0"±, 62'-0"±, 50'-0"± C/C BEARING  
 ROADWAY: 44'-0" F/F GUARDRAIL  
 LOADING: HS20-44 AND ALTERNATE MILITARY LOADING  
 SKEW: 12°59'00"±  
 APPROACH SLABS: 20'-0" LONG (AS-1-81)  
 ALIGNMENT: TANGENT  
 WEARING SURFACE: 1/4" EPOXY OVERLAY  
 STRUCTURAL FILE NUMBER: 6700586  
 DATE BUILT: 1985  
 DISPOSITION: TO BE PARTIALLY REMOVED

**PROPOSED STRUCTURE**

TYPE: THREE SPAN CONTINUOUS STEEL BEAM WITH COMPOSITE REINFORCED CONCRETE DECK ON EXISTING CONCRETE INTEGRAL ABUTMENTS AND NEW CONCRETE CAPPED PILE PIERS  
 SPANS: 50'-0", 62'-0", 50'-0" C/C BEARING  
 ROADWAY: 44'-0" TOE/TOE PARAPET  
 LOADING: HL-93 AND 60 PSF FWS  
 SKEW: 12°59'00"±  
 WEARING SURFACE: 1" MONOLITHIC CONCRETE  
 APPROACH SLABS: 20'-0" LONG (AS-1-15 & AS-2-15)  
 ALIGNMENT: TANGENT  
 CROWN: 0.016 FT/FT  
 COORDINATES: LATITUDE 41°12'35" N  
 LONGITUDE 81°18'15" W

DESIGN AGENCY: **PRIME**

DATE: 10/31/2016  
 REVIEWED: TES  
 STRUCTURE FILE NUMBER: 6700586

DRAWN: KDC  
 CHECKED: CCJ

PORTAGE COUNTY  
 STA. 10+00.08 TO  
 STA. 11+64.14

**SITE PLAN**  
 BRIDGE NO. POR-14-0620  
 SR 14 OVER CUYAHOGA RIVER & LAKE ROCKWELL

**POR-14-06.20**  
 PID No. 104119

1 / 16  
 7  
 22



**GENERAL NOTES:**

**REFERENCE TO BRIDGE STANDARD DRAWINGS**

REFERENCE SHALL BE MADE TO THE FOLLOWING STANDARD BRIDGE DRAWINGS:

AS-1-15	REVISED 7/17/15
AS-2-15	REVISED 7/17/15
GSD-1-96	REVISED 7/19/02
ICD-1-82	REVISED 7/19/02
SBR-1-13	REVISED 1/17/14

**DESIGN SPECIFICATIONS:**

THIS STRUCTURE CONFORMS TO THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 6th EDITION, 2012, INCLUDING THE 2013 INTERIM SUPPLEMENTS AND THE ODOT BRIDGE DESIGN MANUAL, 2007.

**OPERATIONAL IMPORTANCE:**

A LOAD MODIFIER OF 1.0 HAS BEEN ASSUMED FOR THE DESIGN OF THIS STRUCTURE IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, ARTICLE 1.3.5 AND THE ODOT BRIDGE DESIGN MANUAL, 2007.

**DESIGN LOADING:**

DESIGN LOADING HL-93  
 FUTURE WEARING SURFACE (FWS) OF 0.060 KIPS/SQ FT  
 STAY-IN-PLACE FORMS OF 0.015 KIPS/SQ FT

**DESIGN DATA:**

CONCRETE, QC/QA CLASS QC2 - COMPRESSIVE STRENGTH 4.5 KSI (SUPERSTRUCTURE)  
 CONCRETE, CLASS QC1 - COMPRESSIVE STRENGTH 4.0 KSI (SUBSTRUCTURE)  
 REINFORCING STEEL - MINIMUM YIELD STRENGTH 60 KSI  
 STRUCTURAL STEEL:  
     ASTM A709 GRADE 50 - YIELD STRENGTH 50 KSI, METALLIZED (ROLLED BEAMS)  
     ASTM A709 GRADE 50 - YIELD STRENGTH 50 KSI, GALVANIZED (TYPE 4 CROSSFRAMES)  
 STEEL H-PILES - ASTM A572 - YIELD STRENGTH 50 KSI, GALVANIZED (PIERS)  
 EXISTING STEEL H-PILES - ASTM A36 - YIELD STRENGTH 36 KSI (EXISTING ABUTMENTS)

**DECK PROTECTION METHOD:**

EPOXY COATED REINFORCING STEEL  
 2 1/2" CONCRETE COVER

**MONOLITHIC WEARING SURFACE:**

MONOLITHIC WEARING SURFACE IS ASSUMED, FOR DESIGN PURPOSES, TO BE 1 INCH THICK.

**DECK PLACEMENT DESIGN ASSUMPTIONS:**

THE FOLLOWING ASSUMPTIONS OF CONSTRUCTION MEANS AND METHODS WERE MADE FOR THE ANALYSIS AND DESIGN OF THE SUPERSTRUCTURE. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN OF THE FALSEWORK SUPPORT SYSTEM WITHIN THESE PARAMETERS AND WILL ASSUME RESPONSIBILITY FOR SUPERSTRUCTURE ANALYSIS FOR DEVIATION FROM THESE DESIGN ASSUMPTIONS.  
 AN EIGHT WHEEL FINISHING MACHINE WITH A MAXIMUM WHEEL LOAD OF 1.12 KIPS PER WHEEL FOR A TOTAL MACHINE LOAD OF 8.97 KIPS.  
 A MINIMUM OUT-TO-OUT WHEEL SPACING AT EACH END OF THE MACHINE OF 103".  
 A MAXIMUM SPACING OF OVERHANG FALSEWORK BRACKETS OF 48 IN.  
 A MAXIMUM DISTANCE FROM THE CENTERLINE OF THE FASCIA GIRDER TO THE FACE OF THE SAFETY HANDRAIL OF 65".

**UTILITY LINES:**

THERE ARE NO KNOWN UTILITIES UNDERGROUND OR OVERHEAD WITHIN THE PROJECT CONSTRUCTION LIMITS.

**ITEM 202. PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN:**

THIS ITEM SHALL INCLUDE THE ELEMENTS INDICATED IN THE PLANS AND GENERAL NOTES. ITEMS TO BE REMOVED INCLUDE ALL EXISTING MATERIALS BEING REPLACED BY NEW CONSTRUCTION AND MISCELLANEOUS ITEMS THAT ARE NOT SHOWN TO BE INCORPORATED INTO THE FINAL CONSTRUCTION PLANS AND ARE DIRECTED TO BE REMOVED BY THE ENGINEER. THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE-RAMS WILL NOT BE PERMITTED. THE METHOD OF REMOVAL AND THE WEIGHT OF HAMMER SHALL BE APPROVED BY THE ENGINEER. CHIPPING HAMMERS SHALL NOT BE HEAVIER THAN THE NOMINAL 90-POUND CLASS. SUBMIT CONSTRUCTION PLANS ACCORDING TO CMS 501.05. THIS WORK CONSISTS OF:

- A. THE REMOVAL OF ENTIRE SUPERSTRUCTURE, BRIDGE RAILING, AND BEARINGS.
- B. REMOVAL OF PORTIONS OF ABUTMENTS INCLUDING BACKWALLS ABOVE THE EXISTING BEAM SEAT, AS SHOWN ON PLANS.
- C. REMOVE PORTIONS OF EXISTING PIERS AS SHOWN ON PLANS.
- D. REMOVAL METHODS: THE CONTRACTOR MAY REMOVE CONCRETE BY CUTTING AND BY MEANS OF HAND OPERATED PNEUMATIC HAMMERS EMPLOYING POINTED OR BLUNTED CHISEL TYPE TOOLS. FOR REMOVALS OVER STRUCTURAL MEMBERS, THE CONTRACTOR MAY USE A HAMMER HEAVIER THAN 35 POUNDS BUT NOT TO EXCEED 90 POUNDS UNLESS APPROVED BY THE ENGINEER.

**EXISTING STRUCTURE VERIFICATION:**

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05, 105.02, AND 513.04.

BASE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS WHICH HAVE BEEN VERIFIED IN THE FIELD.

**PILES DRIVEN TO BEDROCK:**

DRIVE PILES TO REFUSAL ON BEDROCK. THE DEPARTMENT WILL CONSIDER REFUSAL TO BE OBTAINED WHEN THE PILE PENETRATION IS AN INCH OR LESS AFTER RECEIVING AT LEAST 20 BLOWS FROM THE PILE HAMMER. SELECT THE HAMMER SIZE TO ACHIEVE THE REQUIRED DEPTH TO BEDROCK AND REFUSAL. THE TOTAL FACTORED LOAD IS 267 KIPS PER PILE FOR THE 7 PIER PILES AT EACH PIER.

PIER PILES:  
 HP12x53 PILES 50 FEET LONG, ORDER LENGTH

**ITEM SPECIAL - PILE ENCASEMENT:**

ENCASE ALL STEEL H-PILES FOR THE CAPPED PILE PIERS IN CONCRETE CONFORMING TO C&MS 511 (F'C = 4.0 KSI). PROVIDE A CONCRETE SLUMP BETWEEN 6 TO 8 INCHES WITH THE USE OF A SUPERPLASTICIZER. PLACE THE CONCRETE WITHIN A FORM THAT CONSISTS OF POLYETHYLENE PIPE (707.33), OR PVC PIPE (707.42). THE ENCASEMENT SHALL EXTEND FROM FINISHED GROUND SURFACE UP TO THE CONCRETE PIER CAP. POSITION THE PIPE SO THAT AT LEAST 3 INCHES OF CONCRETE COVER IS PROVIDED AROUND THE EXTERIOR OF THE PILE.

GALVANIZE THE PILES ACCORDING TO 711.02. THE GALVANIZING SHALL BE CONTINUOUS FROM THE FINISH GROUND SURFACE UP TO THE CONCRETE PIER CAP. THE GALVANIZED COATING THICKNESS SHALL BE A MINIMUM OF 4 MILS. REPAIR ALL GOUGES, SCRAPES, SCRATCHES OR OTHER SURFACE IMPERFECTIONS CAUSED BY THE HANDLING OR THE DRIVING OF THE PILE TO THE SATISFACTION OF THE ENGINEER.

THE DEPARTMENT WILL MEASURE PILE ENCASEMENT BY THE NUMBER OF FEET. THE DEPARTMENT WILL DETERMINE THE SUM AS THE LENGTH MEASURED ALONG THE AXIS OF EACH PILE FROM THE BOTTOM OF THE ENCASEMENT TO THE BOTTOM OF THE PIER CAP. THE DEPARTMENT WILL NOT PAY FOR GALVANIZING PROVIDED BEYOND THE PROJECT REQUIREMENTS. THE DEPARTMENT WILL PAY FOR ACCEPTED QUANTITIES AT THE CONTRACT PRICE FOR ITEM - SPECIAL, PILE ENCASEMENT.

**STRUCTURE IDENTIFICATION SIGNS**

STRUCTURE IDENTIFICATION SIGNS (I-H25b) WILL BE PLACED ON EACH APPROACH OFF THE RIGHT SHOULDER, FACING TRAFFIC, AND BEHIND THE GUARDRAIL IF APPLICABLE. A QUANTITY OF ONE SIGN PER APPROACH WILL BE INSTALLED. THE SIGNS WILL HAVE A NON-REFLECTIVE WHITE SHEETING BACKGROUND.

THE SIGNS WILL BE MOUNTED ON NEW NO. 2 POSTS AND WILL BE INSTALLED AS PER STANDARD CONSTRUCTION DRAWING TC-41.20, MOST CURRENT REVISION. EACH POST WILL BE 7.5' IN LENGTH.

INSTALL SIGNS FOR THE FOLLOWING STRUCTURES: POR-14-06.20 (2 APPROACHES)

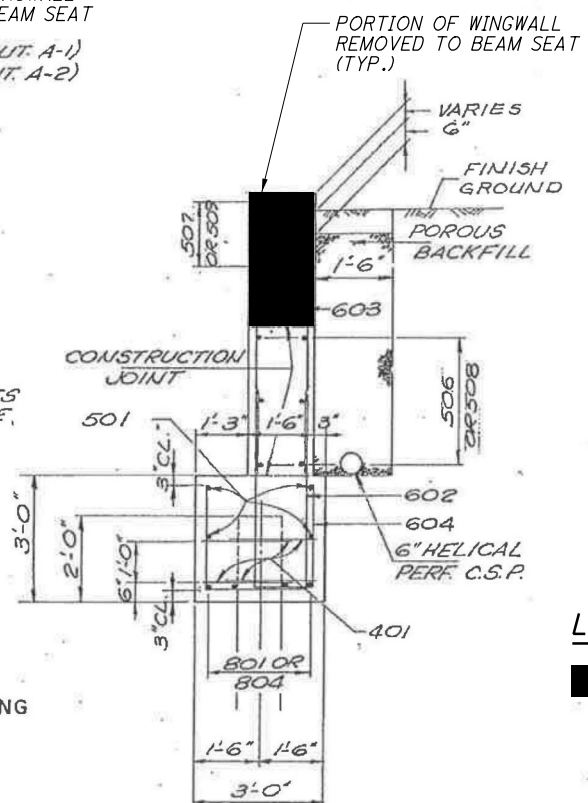
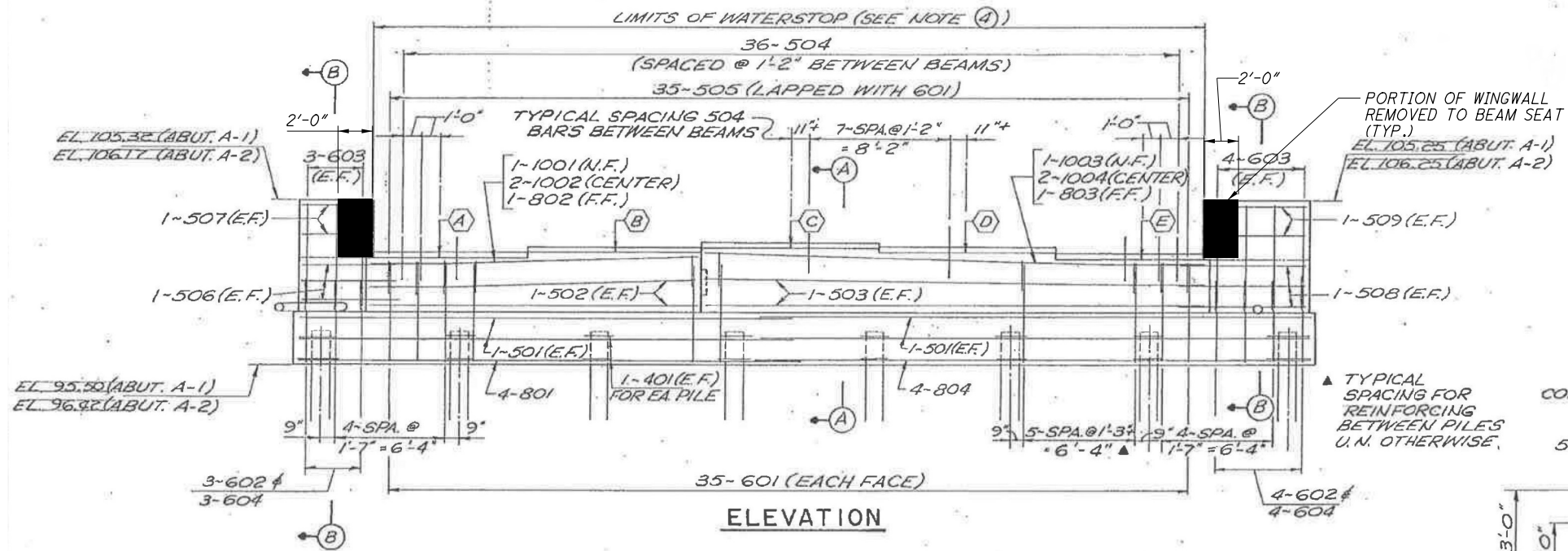
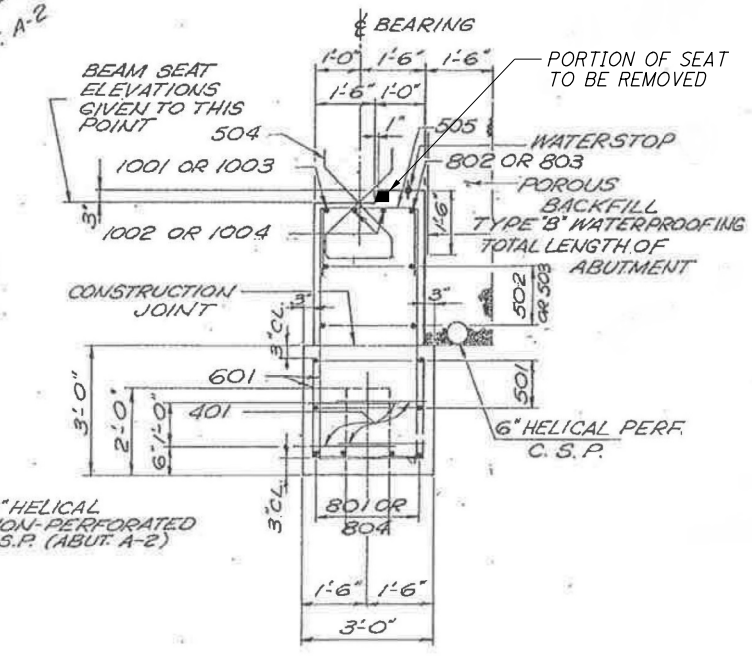
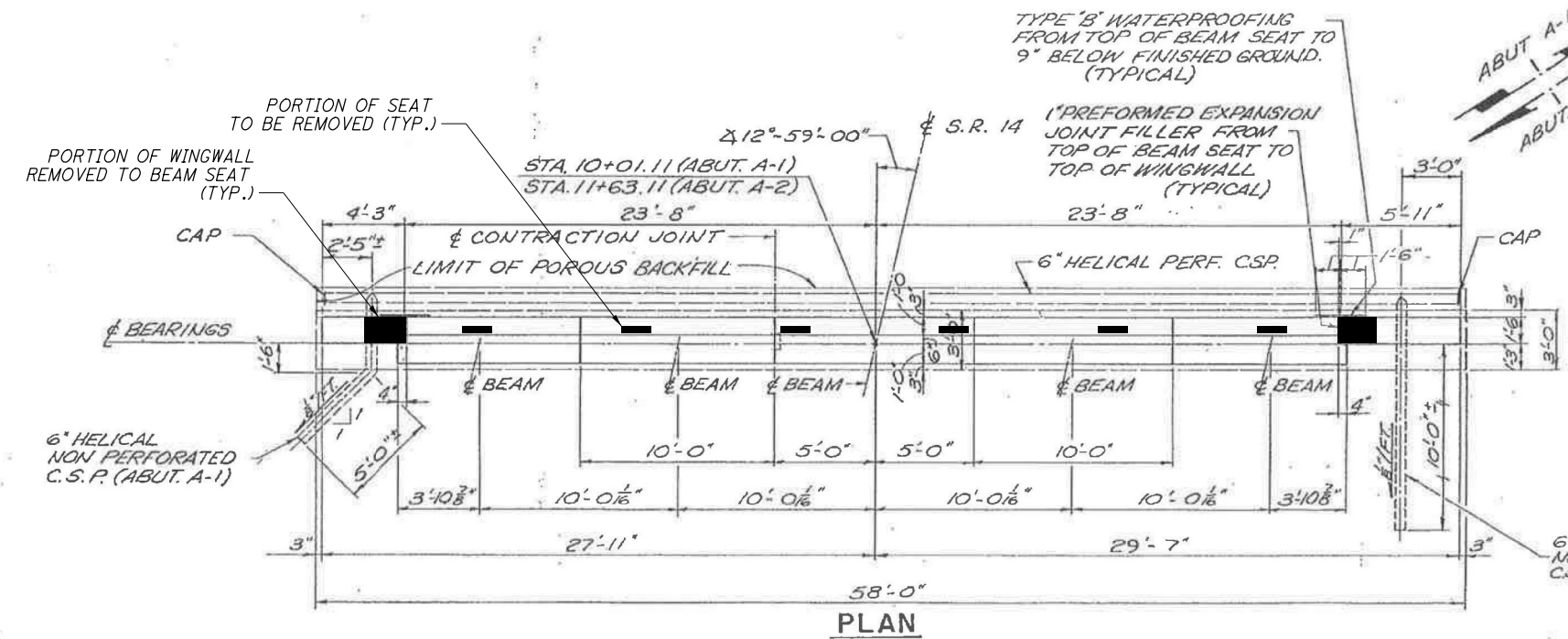
THE FOLLOWING QUANTITIES HAVE BEEN INCLUDED FOR EACH APPROACH:

- ITEM 630 - SIGN, FLAT SHEET, 730.20, 1 SQ FT
- ITEM 630 - GROUND MOUNTED SUPPORT, NO. 2 POST, 7.5 FT
- ITEM 630 - REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL, 1 EACH
- ITEM 630 - REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL, 1 EACH

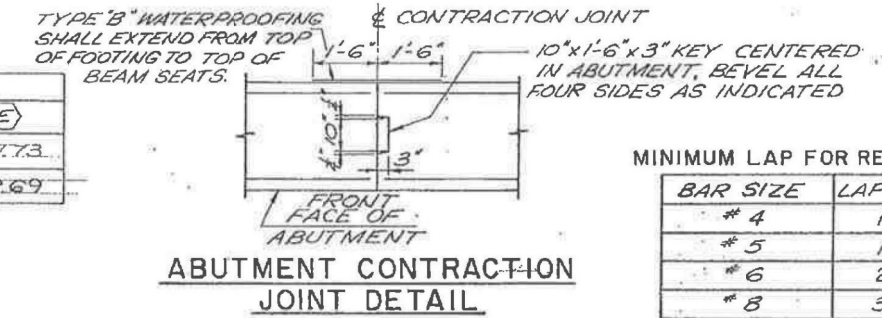
**STANDARD ABBREVIATIONS:**

BRGS.	-	BEARINGS	F.F.	-	FAR FACE
C/C	-	CENTER TO CENTER	F.S.	-	FIELD SPICE
C.J.	-	CONSTRUCTION JOINT	FIN.	-	FINISHED
CPP	-	CORRUGATED PLASTIC PIPE	MIN.	-	MINIMUM
CLR.	-	CLEAR	N.F.	-	NEAR FACE
DIA.	-	DIAMETER	OPT.	-	OPTIONAL
E.F.	-	EACH FACE	PEJF	-	PREFORMED EXPANSION JOINT FILLER
EQ.	-	EQUAL	R.A.	-	REAR ABUTMENT
EXIST.	-	EXISTING	SPA.	-	SPACING/SPACES
EXP.	-	EXPANSION	T&B	-	TOP AND BOTTOM
F.A.	-	FORWARD ABUTMENT	TYP.	-	TYPICAL





LOCATION	ELEVATION				
	(A)	(B)	(C)	(D)	(E)
ABUTMENT A-1	101.78	102.15	102.28	102.72	101.73
ABUTMENT A-2	102.69	103.02	103.19	103.05	102.69

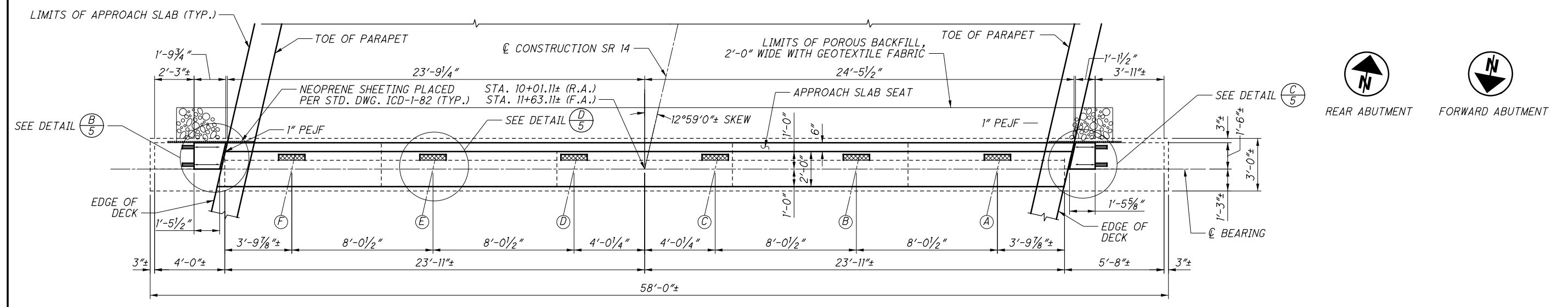


MINIMUM LAP FOR REINFORCING

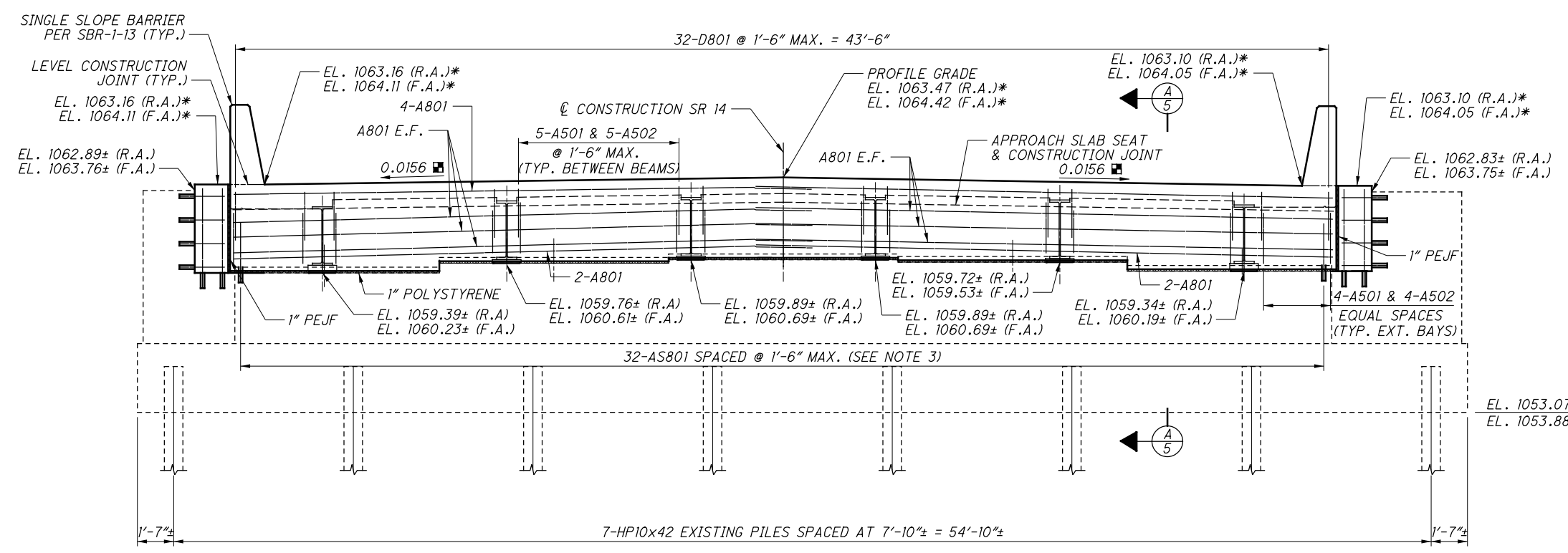
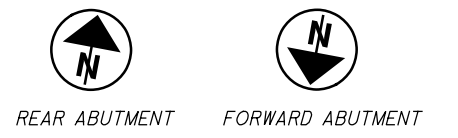
BAR SIZE	LAP REQ'D
# 4	1'-4"
# 5	1'-8"
# 6	2'-0"
# 8	3'-5"

**LEGEND:**  
■ - LIMITS OF REMOVAL

- REMOVAL NOTES:**
- REMOVE PORTIONS OF THE ABUTMENT AS SHOWN ON THE PLANS. FOR ADDITIONAL DETAILS, SEE SHEET 5/16.
  - FOR GENERAL NOTES, SEE SHEET 2/16.



**PLAN**  
REAR ABUTMENT SHOWN, FORWARD ABUTMENT SIMILAR

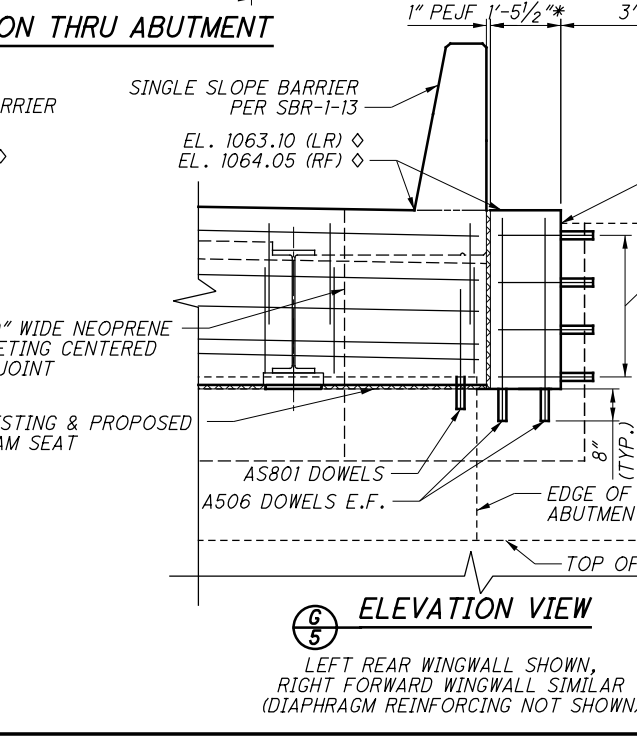
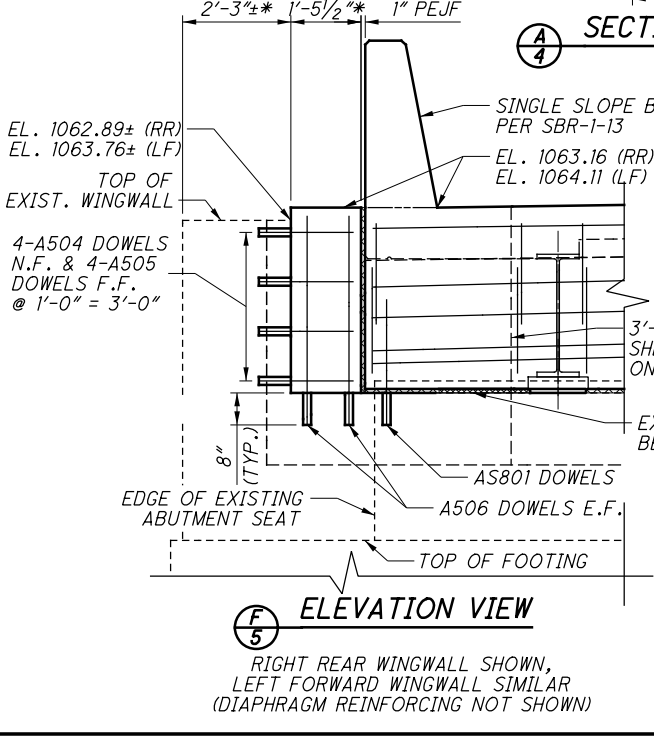
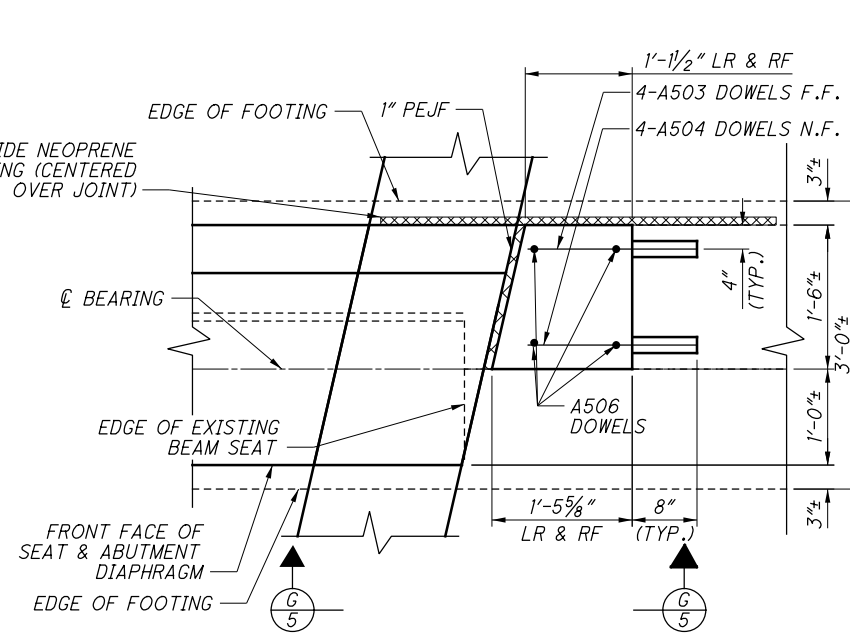
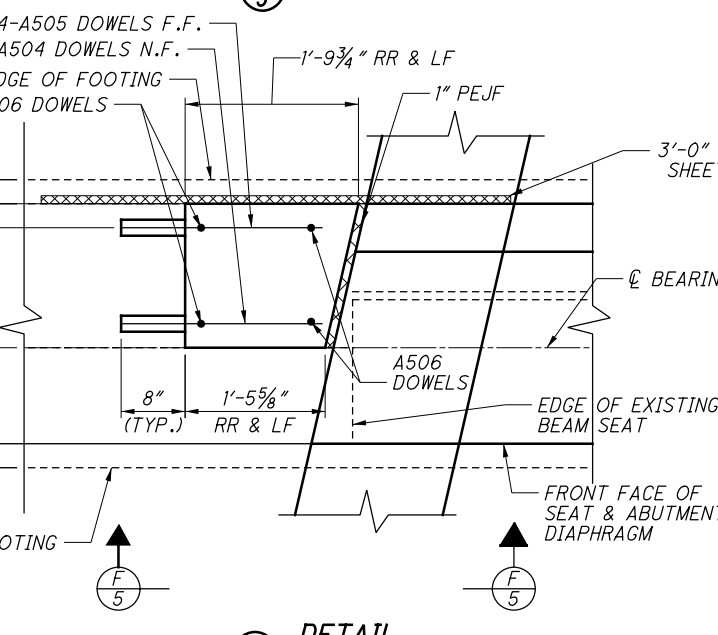
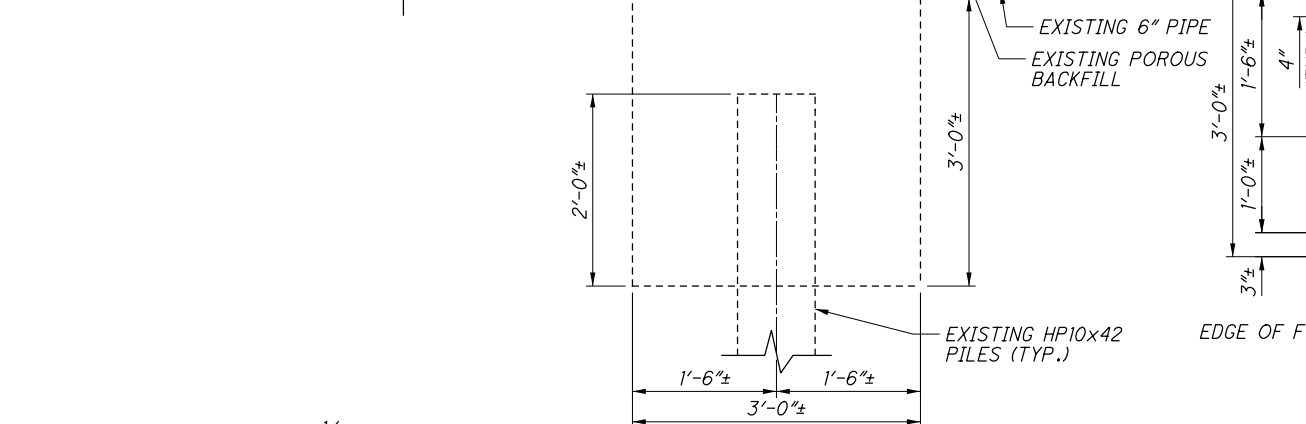
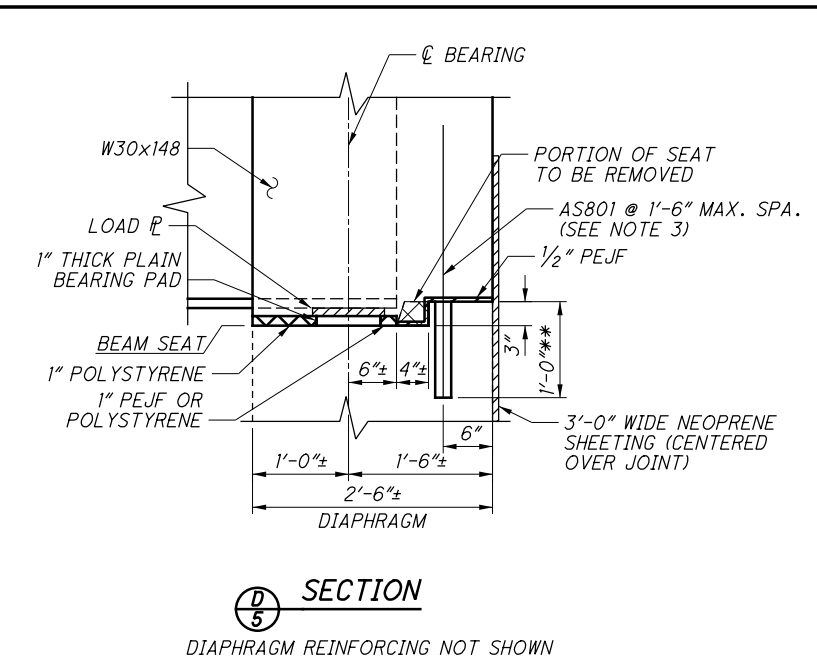
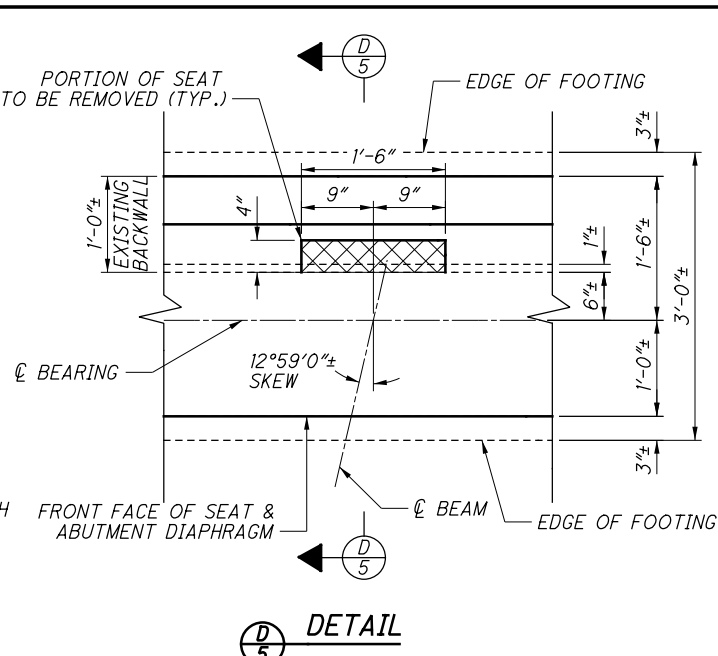
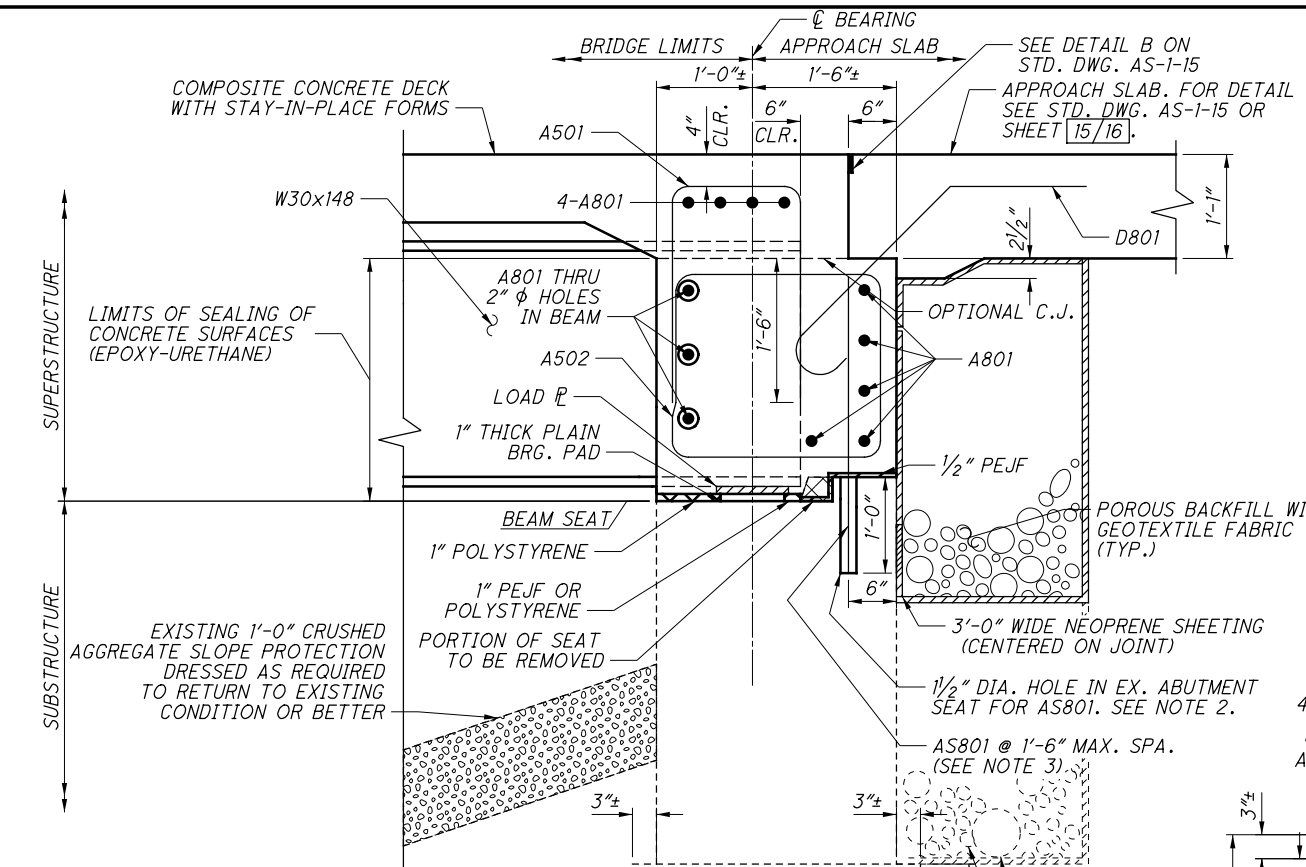


**ELEVATION**  
REAR ABUTMENT SHOWN, FORWARD ABUTMENT SIMILAR

**LEGEND:**  
\* - ELEVATIONS AT  $\bar{C}$  BEARING  
■ - PERPENDICULAR TO  $\bar{C}$  CONSTRUCTION

- NOTES:**
- FOR REINFORCING STEEL LIST, SEE SHEET 16/16.
  - LAP LENGTHS FOR #5 BARS = 2'-6"  
LAP LENGTHS FOR #8 BARS = 6'-4"
  - AS801 SHALL BE 1" DIA. SMOOTH STEEL RODS CONFORMING TO ASTM A311, GRADE 1018. A BOND BREAKER SHALL BE APPLIED TO THE DOWELS ABOVE THE BEAM SEAT.





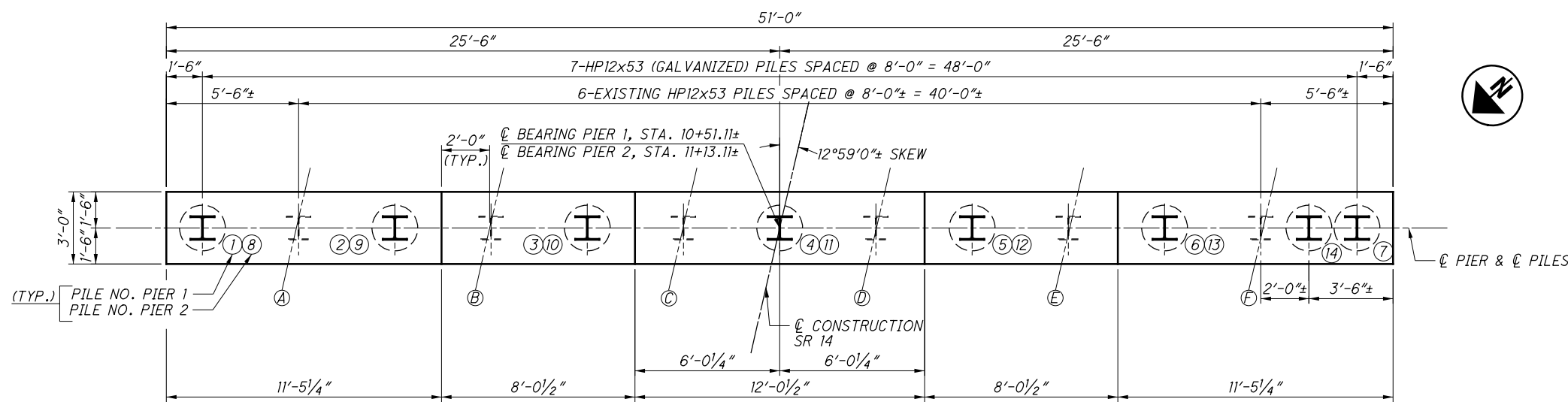
**LEGEND:**

- LR - LEFT REAR
- LF - LEFT FORWARD
- RF - RIGHT FORWARD
- RR - RIGHT REAR
- \* - MEASURED AT FRONT FACE OF WINGWALL
- \*\* - MINIMUM INTO EXISTING ABUTMENT SEAT
- ◊ - ELEVATIONS AT CL BEARING

**NOTES:**

1. POROUS BACKFILL WITH GEOTEXTILE FABRIC, 2'-0" THICK SHALL EXTEND FROM 1'-0" BELOW THE BEAM SEAT UP TO THE PLANE OF THE SUBGRADE AND Laterally TO 2'-0" BEYOND THE ABUTMENT END BLOCK.
2. INSTALL 1" DIA. SMOOTH STEEL RODS ACCORDING TO CMS 510 USING NON-SHRINK GROUT.
3. AS801 SHALL BE 1" DIA. SMOOTH STEEL RODS CONFORMING TO ASTM A311, GRADE 1018. A BOND BREAKER SHALL BE APPLIED TO THE DOWELS ABOVE THE BEAM SEAT.





PLAN

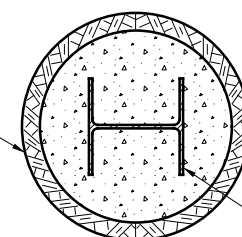
NOTES:

1. FOR REINFORCING STEEL LIST, SEE SHEET 16/16.
2. ALL EXPOSED SURFACES OF PIERS EXCEPT TOP OF PIER CAP SHALL BE SEALED WITH ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE).
3. FOR PILE ENCASEMENT NOTES, SEE SHEET 2/16.

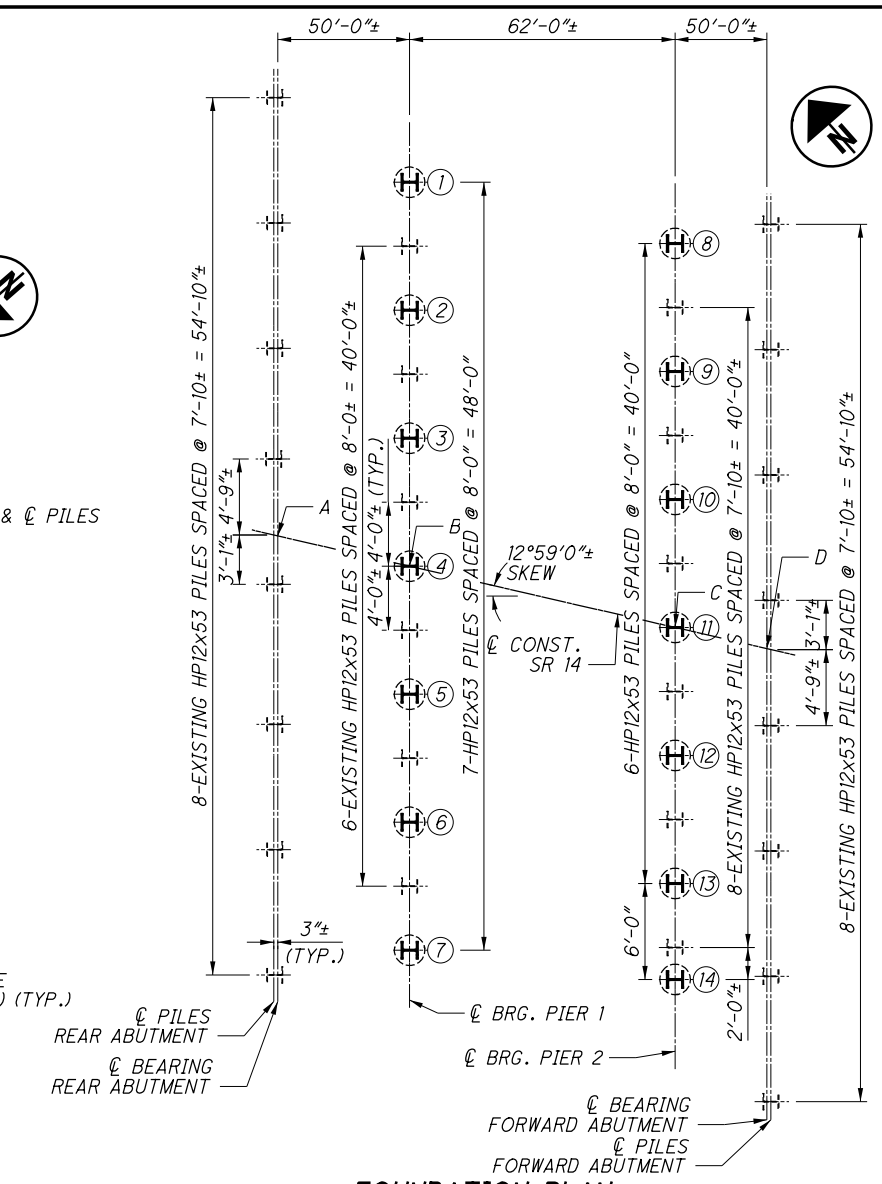
2'-0" DIAMETER POLYETHYLENE, 707.33 TYPE S OR PVC PIPE, 707.42. THE PIPE DIAMETER SHALL MAINTAIN 3" CONCRETE COVER. (TYP.)

MINIMUM LAP LENGTHS:

- #5 BARS = 2'-6"
- #6 BARS = 2'-11"
- #7 BARS = 5'-2"
- #11 BARS = 9'-8"

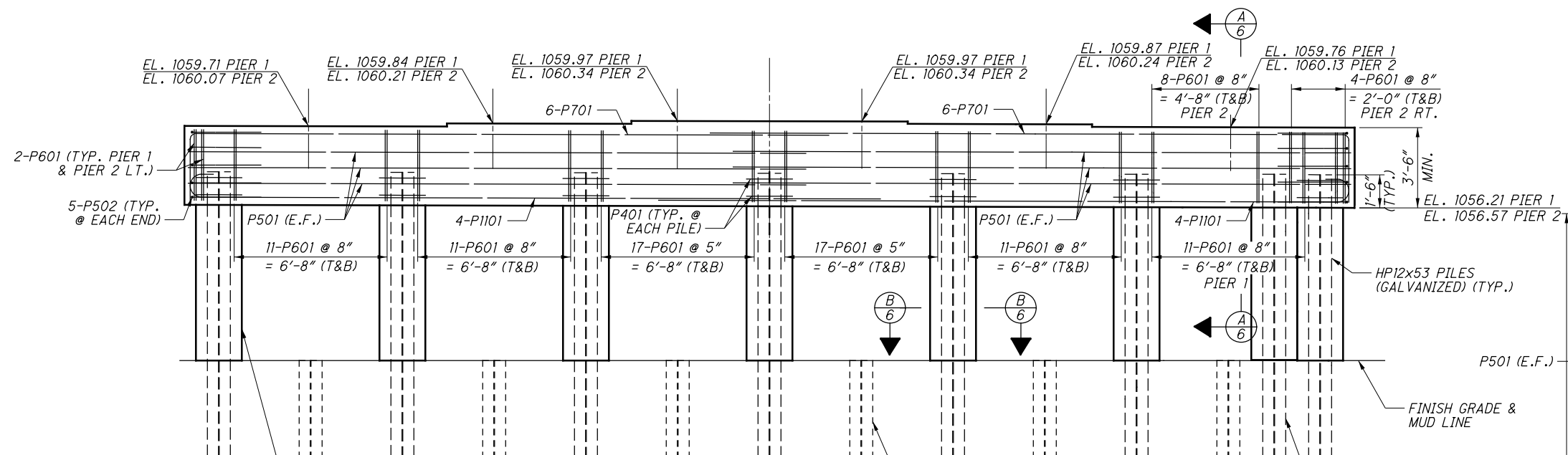


SECTION THROUGH PILE ENCASEMENT

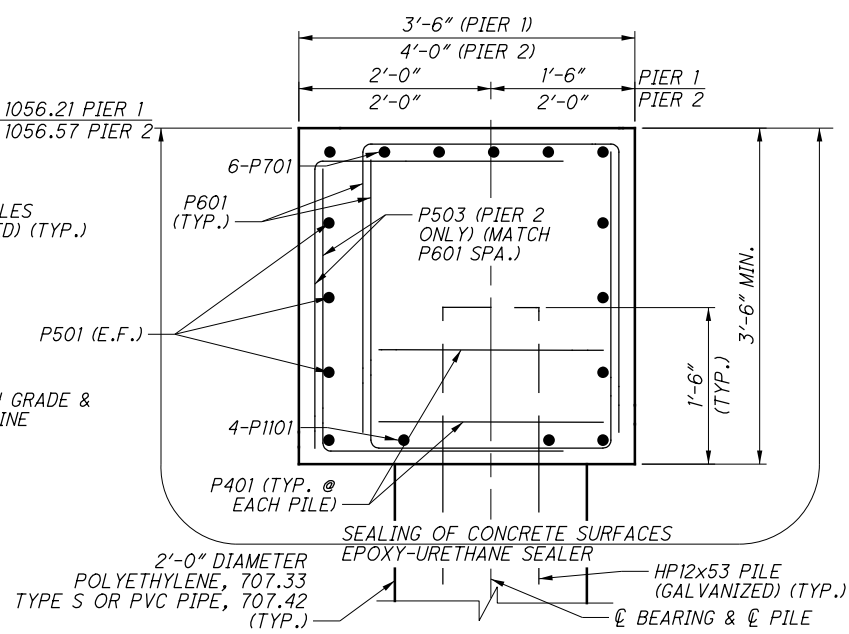


FOUNDATION PLAN

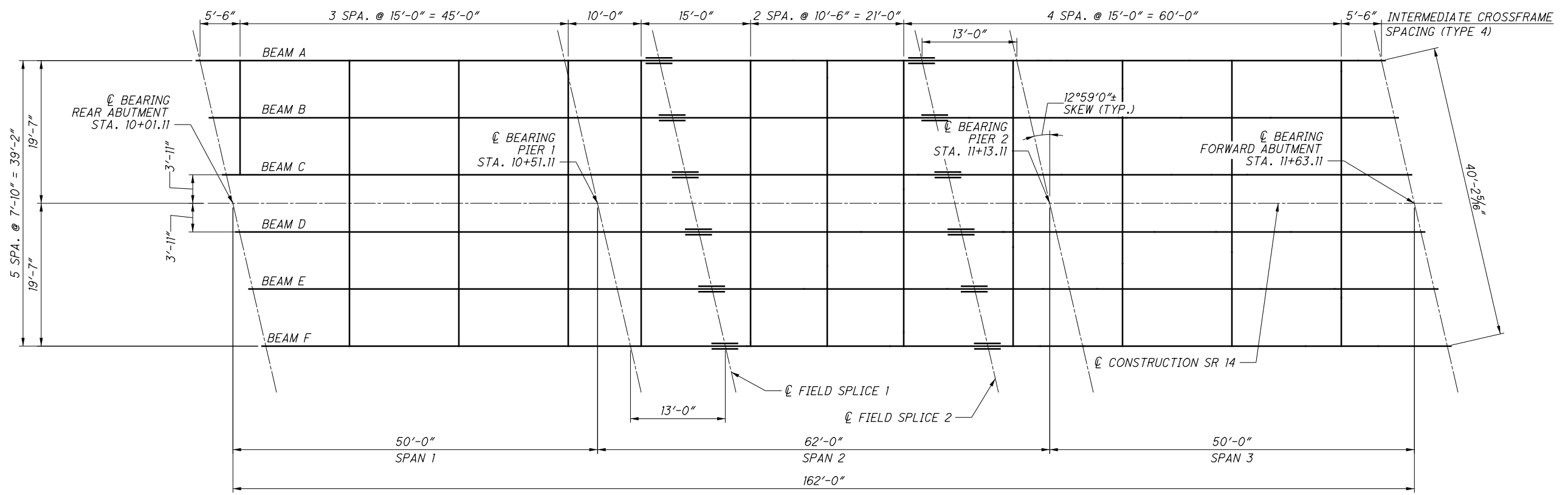
LOCATION	A	B	C	D
STATION	10+01.11±	10+51.11±	11+13.11±	11+63.11±



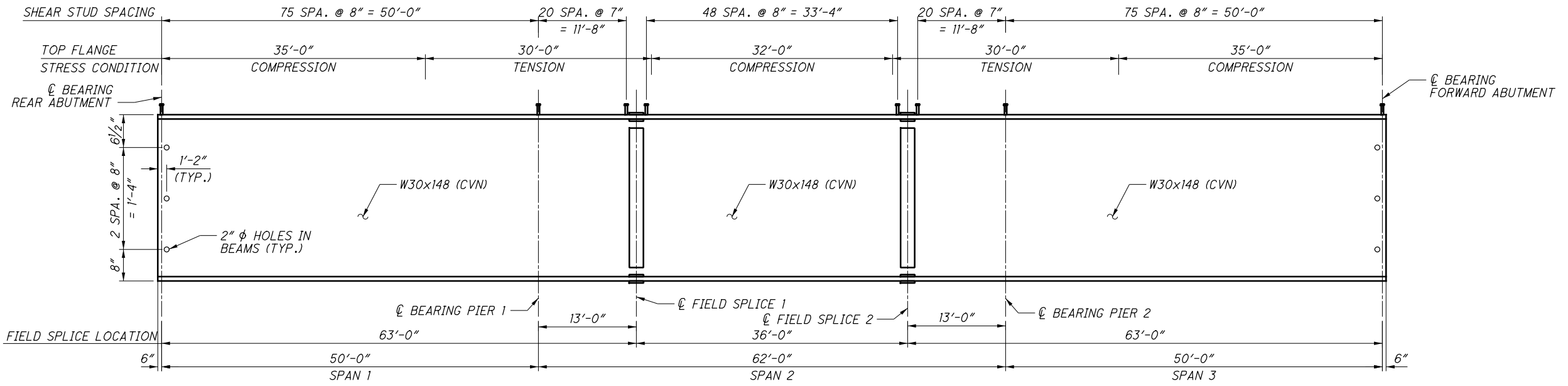
ELEVATION



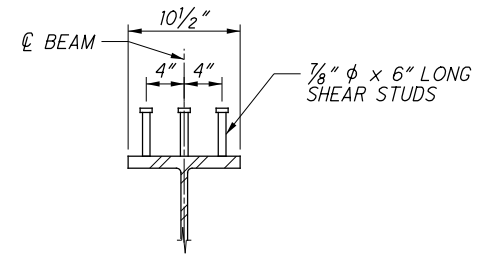
SECTION THRU PIER CAP



**FRAMING PLAN**  
BEAMS A THROUGH F



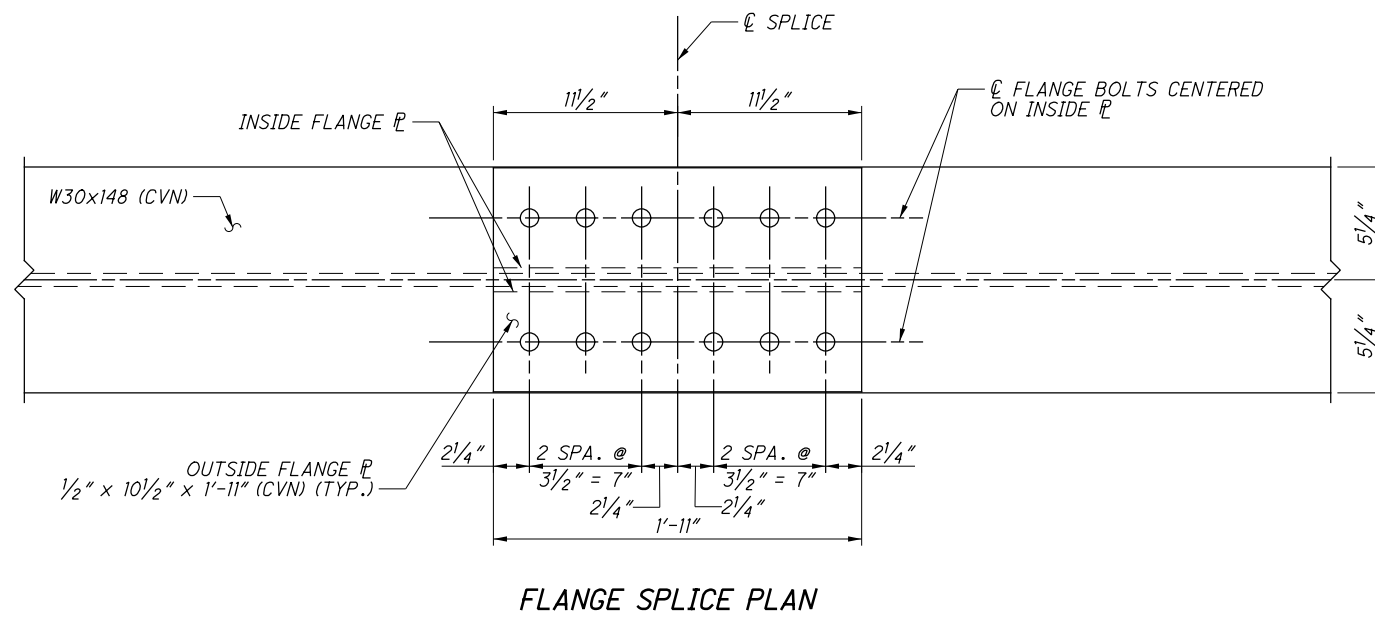
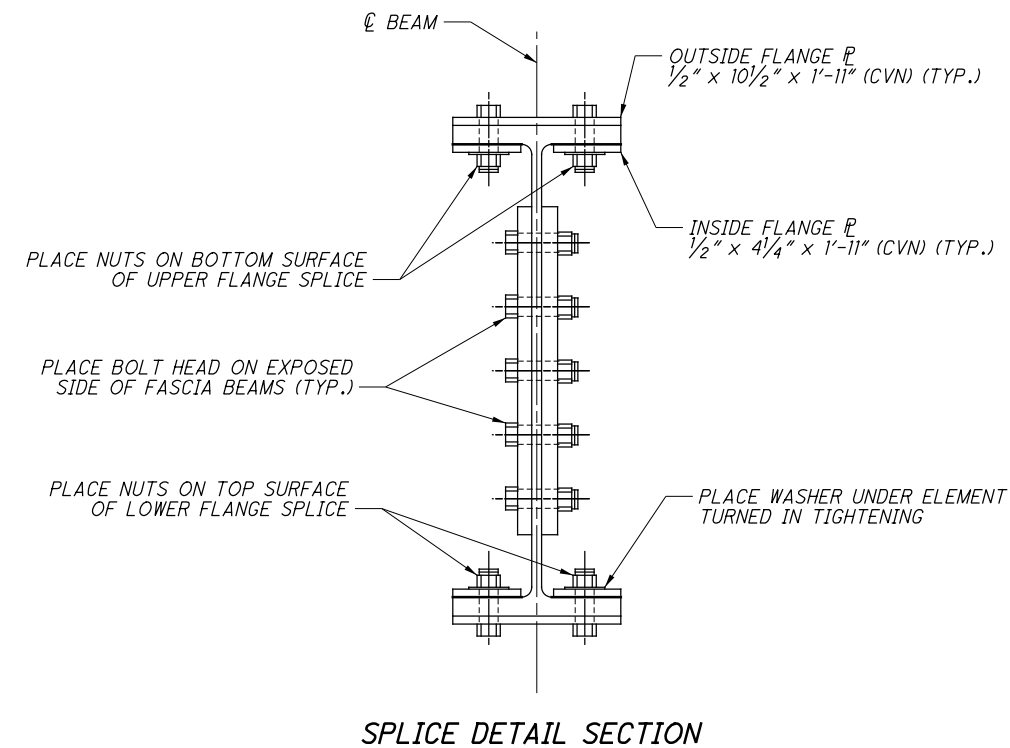
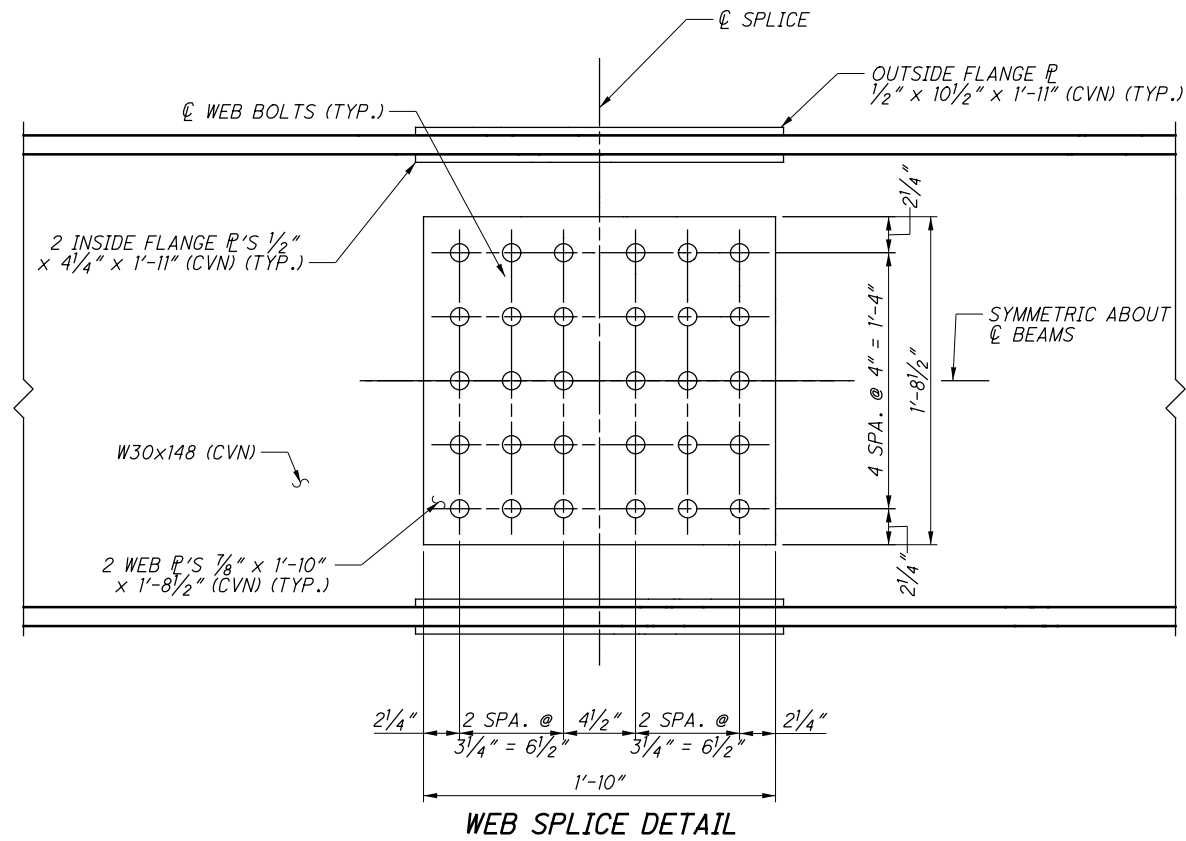
**TYPICAL BEAM ELEVATION**



**SHEAR STUD CONNECTOR**

**NOTES:**

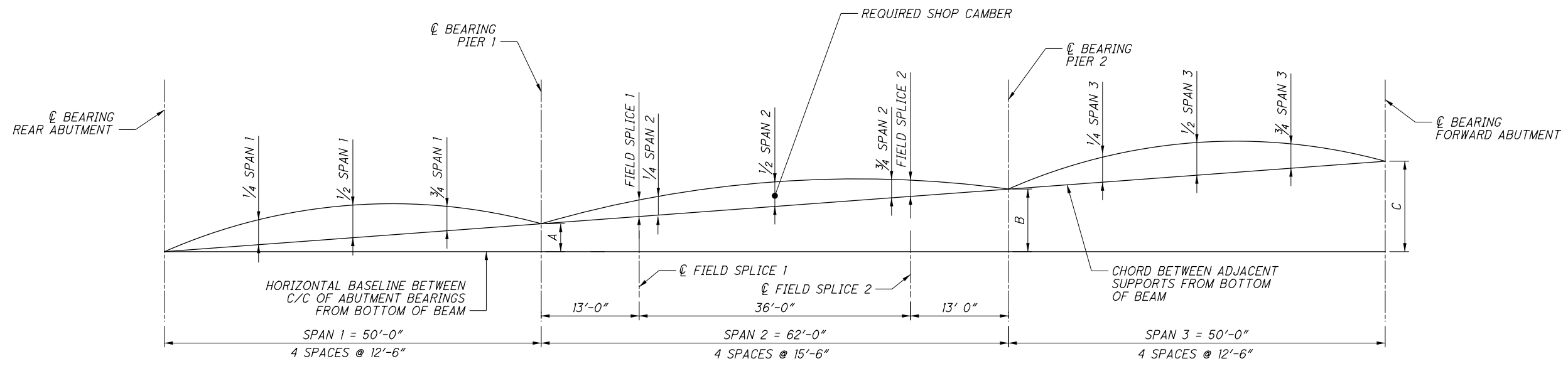
- ALL STRUCTURAL STEEL SHALL BE ASTM A709, GRADE 50 (A572) PER SECTION 711.01 OF THE CMS AND BE METALLIZED.
- INTERMEDIATE CROSSFRAMES SHALL BE TYPE 4 (GALVANIZED), PER STD. DWG. GSD-1-96.
- WELDED SHEAR CONNECTORS: THE WELDED SHEAR CONNECTORS (SHEAR STUDS) MAY BE INSTALLED IN THE SHOP PRIOR TO METALLIZING. OTHERWISE, INSTALL SHEAR CONNECTORS AFTER THE DECKING OR OTHER WALKING/WORKING SURFACE HAS BEEN INSTALLED. REMOVE THE METALLIZED COATING BY GRINDING AT EACH CONNECTOR LOCATION PRIOR TO WELDING.
- WHEN A SHAPE OR PLATE IS DESIGNATED (CVN), FURNISH MATERIAL THAT MEETS THE MINIMUM NOTCH TOUGHNESS REQUIREMENTS AS SPECIFIED IN 711.01.
- ALL BOLTS SHALL BE 1" DIAMETER HIGH STRENGTH, ASTM A325, TYPE 1 (GALVANIZED). ALL BOLT HOLES SHALL BE 1/16" DIAMETER.
- WELDED ATTACHMENT OF SUPPORTS FOR CONCRETE DECK FINISHING MACHINE TO AREAS OF THE FASCIA STRINGER FLANGES DESIGNATED "COMPRESSION". DO NOT WELD ATTACHMENTS TO AREAS DESIGNATED "TENSION". FILLET WELDS TO COMPRESSION FLANGES SHALL BE AT LEAST 1" FROM EDGE OF FLANGE, BE NO MORE THAN 2" LONG, AND BE AT LEAST 1/4" FOR THICKNESSES UP TO 3/4" OR 5/16" FOR GREATER THAN 3/4" THICK.
- FOR FIELD SPLICE DETAILS, SEE SHEET 8/16.
- FOR CAMBER AND DEFLECTIONS, SEE SHEET 9/16.



**NOTES:**

1. ALL STRUCTURAL STEEL SHALL BE ASTM A709, GRADE 50 (A572) PER SECTION 711.01 OF THE CMS AND BE METALLIZED.
2. WHEN A SHAPE OR PLATE IS DESIGNATED (CVN), FURNISH MATERIAL THAT MEETS THE MINIMUM NOTCH TOUGHNESS REQUIREMENTS AS SPECIFIED IN 711.01.
3. ALL BOLTS SHALL BE 1" DIAMETER HIGH STRENGTH, ASTM A325, TYPE 1 (GALVANIZED). ALL BOLT HOLES SHALL BE  $\frac{1}{16}''$  DIAMETER.
4. FOR LOCATION OF FIELD SPLICING, SEE SHEET [7/16].

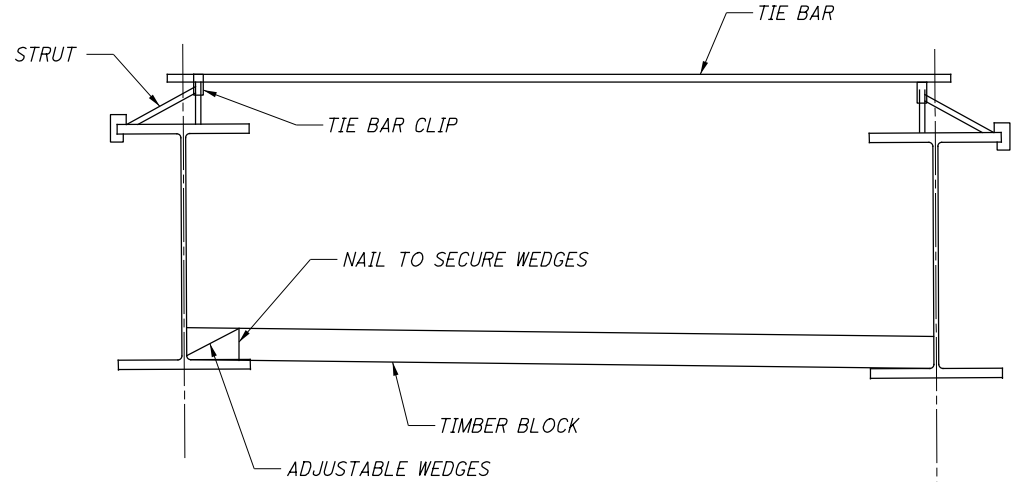




**BLOCKING AND CAMBER DIAGRAM**

		DEFLECTION AND CAMBER TABLE (INCHES)														
LOCATION OF POINT		¢ BRG. R.A.	1/4 SPAN 1	1/2 SPAN 1	3/4 SPAN 1	¢ BRG. PIER 1	FIELD SPLICE 1	1/4 SPAN 2	1/2 SPAN 2	3/4 SPAN 2	FIELD SPLICE 2	¢ BRG. PIER 2	1/4 SPAN 3	1/2 SPAN 3	3/4 SPAN 3	¢ BRG. F.A.
BEAMS A-F	DEFLECTION DUE TO WEIGHT OF STEEL	0	1/16	1/16	1/16	0	1/16	1/16	1/16	1/16	1/16	0	1/16	1/16	1/16	0
	DEFLECTION DUE TO REMAINING DEAD LOAD	0	1/4	5/16	1/8	0	3/16	1/4	3/8	1/4	3/16	0	1/8	5/16	1/4	0
	ADJUSTMENT DUE TO VERTICAL CURVE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	REQUIRED SHOP CAMBER	0	5/16	3/8	3/16	0	1/4	5/16	7/16	5/16	1/4	0	3/16	3/8	5/16	0

BLOCKING TABLE (INCHES)			
BEAMS	DIM "A"	DIM "B"	DIM "C"
BEAM A	4"	8 3/8"	10 1/16"
BEAM B	3 1/8"	7 1/2"	10 1/16"
BEAM C	2 1/16"	7 1/16"	9 5/8"
BEAM D	2 1/16"	7 1/16"	9 5/8"
BEAM E	3 1/16"	7 7/16"	9 1/4"
BEAM F	4"	8 7/16"	9 5/8"



**TEMPORARY LATERAL SUPPORT SYSTEM**

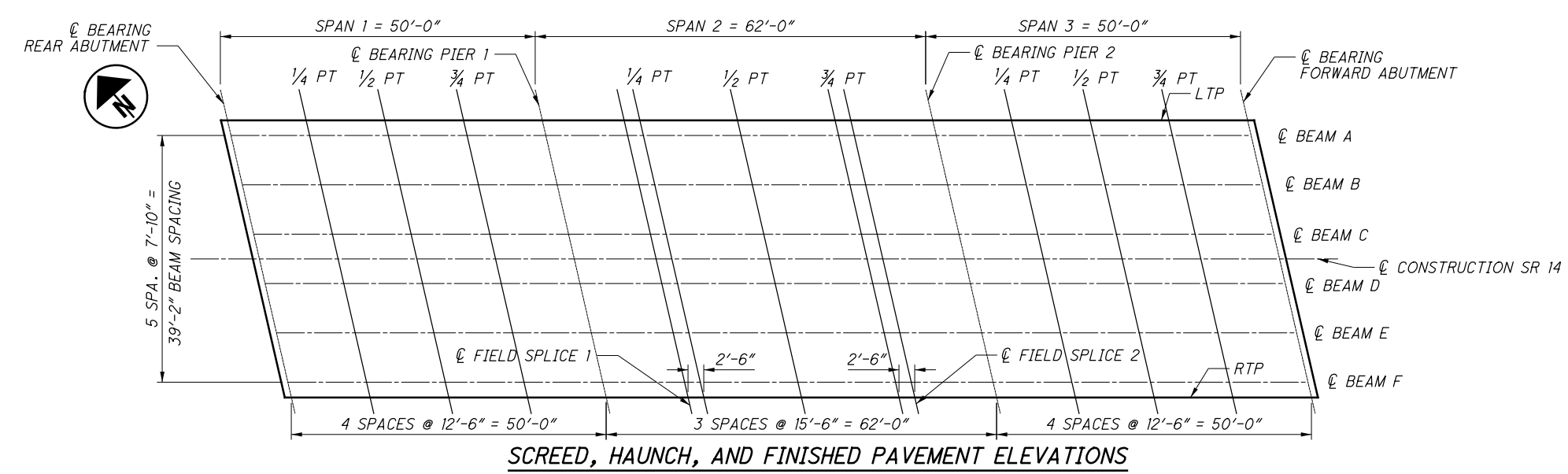
TEMPORARY SUPPORTS TO BE PLACED MIDWAY BETWEEN CROSSFRAMES ACROSS STRUCTURE

**LEGEND:**  
 BRG. = BEARING  
 R.A. = REAR ABUTMENT  
 F.A. = FORWARD ABUTMENT

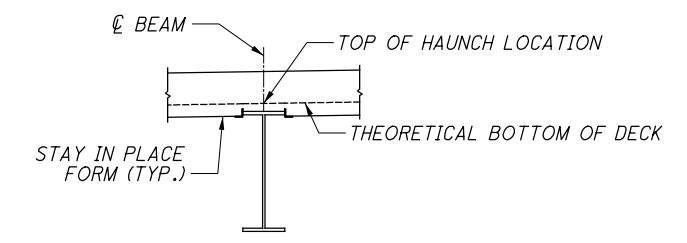
**NOTES:**  
 1. FOR FRAMING PLAN AND BEAM ELEVATION, SEE SHEET 7/16.

SCREED ELEVATIONS																
LOCATION		☉ BRG. RA	1/4 SPAN 1	1/2 SPAN 1	3/4 SPAN 1	☉ BRG. PIER 1	FIELD SPLICE 1	1/4 SPAN 2	1/2 SPAN 2	3/4 SPAN 2	FIELD SPLICE 2	☉ BRG. PIER 2	1/4 SPAN 3	1/2 SPAN 3	3/4 SPAN 3	☉ BRG. FA
LEFT TOE OF PARAPET	STATION	9+96.04	10+08.54	10+21.04	10+33.54	10+46.04	10+59.04	10+61.54	10+77.04	10+92.54	10+95.04	11+08.04	11+20.54	11+33.04	11+45.54	11+58.04
	SCREED ELEVATION	1063.10	1063.19	1063.27	1063.33	1063.39	1063.48	1063.50	1063.61	1063.69	1063.70	1063.76	1063.84	1063.93	1064.00	1064.05
CENTERLINE OF CONSTRUCTION	STATION	10+01.11	10+13.61	10+26.11	10+38.61	10+51.11	10+64.11	10+66.61	10+82.11	10+97.61	11+00.11	11+13.11	11+25.61	11+38.11	11+50.61	11+63.11
	SCREED ELEVATION	1063.47	1063.56	1063.64	1063.70	1063.76	1063.86	1063.88	1063.98	1064.06	1064.07	1064.13	1064.21	1064.30	1064.37	1064.42
RIGHT TOE OF PARAPET	STATION	10+06.18	10+18.68	10+31.18	10+43.68	10+56.18	10+69.18	10+71.68	10+87.18	11+02.68	11+05.18	11+18.18	11+30.68	11+43.18	11+55.68	11+68.18
	SCREED ELEVATION	1063.16	1063.25	1063.33	1063.39	1063.45	1063.54	1063.56	1063.66	1063.75	1063.76	1063.82	1063.90	1063.99	1064.06	1064.11
TOP OF HAUNCH ELEVATIONS																
LOCATION		☉ BRG. RA	1/4 SPAN 1	1/2 SPAN 1	3/4 SPAN 1	☉ BRG. PIER 1	FIELD SPLICE 1	1/4 SPAN 2	1/2 SPAN 2	3/4 SPAN 2	FIELD SPLICE 2	☉ BRG. PIER 2	1/4 SPAN 3	1/2 SPAN 3	3/4 SPAN 3	☉ BRG. FA
BEAM A	STATION	9+96.59	10+09.09	10+21.59	10+34.09	10+46.59	10+59.59	10+62.09	10+77.59	10+93.09	10+95.59	11+08.59	11+21.09	11+33.59	11+46.09	11+58.59
	TOP OF HAUNCH ELEV.	1062.43	1062.52	1062.60	1062.66	1062.72	1062.82	1062.84	1062.94	1063.02	1063.03	1063.09	1063.17	1063.26	1063.33	1063.38
BEAM B	STATION	9+98.40	10+10.90	10+23.40	10+35.90	10+48.40	10+61.40	10+63.90	10+79.40	10+94.90	10+97.40	11+10.40	11+22.90	11+35.40	11+47.90	11+60.40
	TOP OF HAUNCH ELEV.	1062.56	1062.66	1062.73	1062.79	1062.86	1062.95	1062.97	1063.07	1063.15	1063.16	1063.22	1063.31	1063.40	1063.46	1063.52
BEAM C	STATION	10+00.21	10+12.71	10+25.21	10+37.71	10+50.21	10+63.21	10+65.71	10+81.21	10+96.71	10+99.21	11+12.21	11+24.71	11+37.21	11+49.71	11+62.21
	TOP OF HAUNCH ELEV.	1062.69	1062.79	1062.87	1062.93	1062.99	1063.08	1063.10	1063.20	1063.28	1063.29	1063.36	1063.44	1063.53	1063.60	1063.65
BEAM D	STATION	10+02.01	10+14.51	10+27.01	10+39.51	10+52.01	10+65.01	10+67.51	10+83.01	10+98.51	11+01.01	11+14.01	11+26.51	11+39.01	10+51.51	11+64.01
	TOP OF HAUNCH ELEV.	1062.70	1062.80	1062.88	1062.94	1063.00	1063.09	1063.11	1063.21	1063.30	1063.30	1063.37	1063.45	1063.54	1063.61	1063.66
BEAM E	STATION	10+03.82	10+16.32	10+28.82	10+41.32	10+53.82	10+66.82	10+69.32	10+84.82	11+00.32	11+02.82	11+15.82	11+28.32	11+40.82	11+53.32	11+65.82
	TOP OF HAUNCH ELEV.	1062.59	1062.69	1062.77	1062.83	1062.89	1062.98	1063.00	1063.10	1063.18	1063.19	1063.25	1063.34	1063.43	1063.50	1063.55
BEAM F	STATION	10+05.63	10+18.13	10+30.63	11+43.13	10+55.63	10+68.63	10+71.13	10+86.63	11+02.13	11+04.63	11+17.63	11+30.13	11+42.63	11+55.13	11+67.63
	TOP OF HAUNCH ELEV.	1062.48	1062.58	1062.66	1063.71	1062.78	1062.87	1062.89	1062.99	1063.07	1063.08	1063.14	1063.23	1063.32	1063.38	1063.44
FINISHED DECK ELEVATIONS																
LOCATION		☉ BRG. RA	1/4 SPAN 1	1/2 SPAN 1	3/4 SPAN 1	☉ BRG. PIER 1	FIELD SPLICE 1	1/4 SPAN 2	1/2 SPAN 2	3/4 SPAN 2	FIELD SPLICE 2	☉ BRG. PIER 2	1/4 SPAN 3	1/2 SPAN 3	3/4 SPAN 3	☉ BRG. FA
LEFT TOE OF PARAPET	STATION	9+96.04	10+08.54	10+21.04	10+33.54	10+46.04	10+59.04	10+61.54	10+77.04	10+92.54	10+95.04	11+08.04	11+20.54	11+33.04	11+45.54	11+58.04
	FINAL DECK ELEVATION	1063.10	1063.17	1063.24	1063.32	1063.39	1063.47	1063.48	1063.57	1063.67	1063.68	1063.76	1063.83	1063.90	1063.98	1064.05
BEAM A	STATION	9+96.59	10+09.09	10+21.59	10+34.09	10+46.59	10+59.59	10+62.09	10+77.59	10+93.09	10+95.59	11+08.59	11+21.09	11+33.59	11+46.09	11+58.59
	FINAL DECK ELEVATION	1063.14	1063.21	1063.28	1063.36	1063.43	1063.51	1063.52	1063.61	1063.71	1063.72	1063.80	1063.87	1063.95	1064.02	1064.09
BEAM B	STATION	9+98.40	10+10.90	10+23.40	10+35.90	10+48.40	10+61.40	10+63.90	10+79.40	10+94.90	10+97.40	11+10.40	11+22.90	11+35.40	11+47.90	11+60.40
	FINAL DECK ELEVATION	1063.27	1063.34	1063.42	1063.49	1063.56	1063.64	1063.66	1063.75	1063.84	1063.85	1063.93	1064.00	1064.08	1064.15	1064.23
BEAM C	STATION	10+00.21	10+12.71	10+25.21	10+37.71	10+50.21	10+63.21	10+65.71	10+81.21	10+96.71	10+99.21	11+12.21	11+24.71	11+37.21	11+49.71	11+62.21
	FINAL DECK ELEVATION	1063.40	1063.48	1063.55	1063.62	1063.70	1063.77	1063.79	1063.88	1063.97	1063.99	1064.06	1064.14	1064.21	1064.28	1064.36
CENTERLINE OF CONSTRUCTION	STATION	10+01.11	10+13.61	10+26.11	10+38.61	10+51.11	10+64.11	10+66.61	10+82.11	10+97.61	11+00.11	11+13.11	10+25.61	11+38.11	11+50.61	11+63.11
	FINAL DECK ELEVATION	1063.47	1063.54	1063.62	1063.69	1063.76	1063.84	1063.86	1063.95	1064.04	1064.05	1064.13	1064.20	1064.28	1064.35	1064.42
BEAM D	STATION	10+02.01	10+14.51	10+27.01	10+39.51	10+52.01	10+65.01	10+67.51	10+83.01	10+98.51	11+01.01	11+14.01	10+26.51	11+39.01	11+51.51	11+64.01
	FINAL DECK ELEVATION	1063.41	1063.49	1063.56	1063.63	1063.71	1063.78	1063.80	1063.89	1063.98	1064.00	1064.07	1064.15	1064.22	1064.30	1064.37
BEAM E	STATION	10+03.82	10+16.32	10+28.82	10+41.32	10+53.82	10+66.82	10+69.32	10+84.82	11+00.32	11+02.82	11+15.82	11+28.32	11+40.82	11+53.32	11+65.82
	FINAL DECK ELEVATION	1063.30	1063.38	1063.45	1063.52	1063.60	1063.67	1063.69	1063.78	1063.87	1063.89	1063.96	1064.04	1064.11	1064.18	1064.26
BEAM F	STATION	10+05.63	10+18.13	10+30.63	10+43.13	10+55.63	10+68.63	10+71.13	10+86.63	11+02.13	11+04.63	11+17.63	11+30.13	11+42.63	11+55.13	11+67.63
	FINAL DECK ELEVATION	1063.19	1063.26	1063.34	1063.41	1063.49	1063.56	1063.58	1063.67	1063.76	1063.77	1063.85	1063.92	1064.00	1064.07	1064.15
RIGHT TOE OF PARAPET	STATION	10+06.18	10+18.68	10+31.18	10+43.68	10+56.18	10+69.18	10+71.68	10+87.18	11+02.68	11+05.18	11+18.18	11+30.68	11+43.18	11+55.68	11+68.18
	FINAL DECK ELEVATION	1063.16	1063.23	1063.30	1063.38	1063.45	1063.53	1063.54	1063.63	1063.73	1063.74	1063.82	1063.89	1063.96	1064.04	1064.11

**LEGEND:**  
 LTP = LEFT TOE OF PARAPET  
 RTP = RIGHT TOE OF PARAPET  
 BRG. = BEARING  
 R.A. = REAR ABUTMENT  
 F.A. = FORWARD ABUTMENT



- NOTES:**
- SCREED ELEVATIONS SHOWN REPRESENT THE THEORETICAL DECK SURFACE LOCATION PRIOR TO DEFLECTIONS CAUSED BY DECK PLACEMENT AND OTHER ANTICIPATED DEAD LOADS.
  - TOP OF HAUNCH ELEVATIONS SHOWN REPRESENT THE THEORETICAL LOCATION OF THE BOTTOM OF THE DECK ABOVE THE BEAM/GIRDER HAUNCH PRIOR TO DEFLECTIONS CAUSED BY DECK PLACEMENT AND OTHER ANTICIPATED DEAD LOADS.
  - FINAL DECK SURFACE ELEVATIONS SHOWN REPRESENT THE DECK SURFACE AFTER ALL ANTICIPATED DEAD LOAD DEFLECTIONS HAVE OCCURRED.



**TOP OF HAUNCH DETAIL**

DESIGN AGENCY  
**PRIMEVE**

DATE  
10/31/2016

REVIEWED  
TES

DRAWN  
KDC

DESIGNED  
KDC

STRUCTURE FILE NUMBER  
6700586

REVISED

CHECKED  
GTB

**SCREED & FINISHED DECK ELEVATIONS**

BRIDGE NO. POR-14-0620

SR 14 OVER CUYAHOGA RIVER & LAKE ROCKWELL

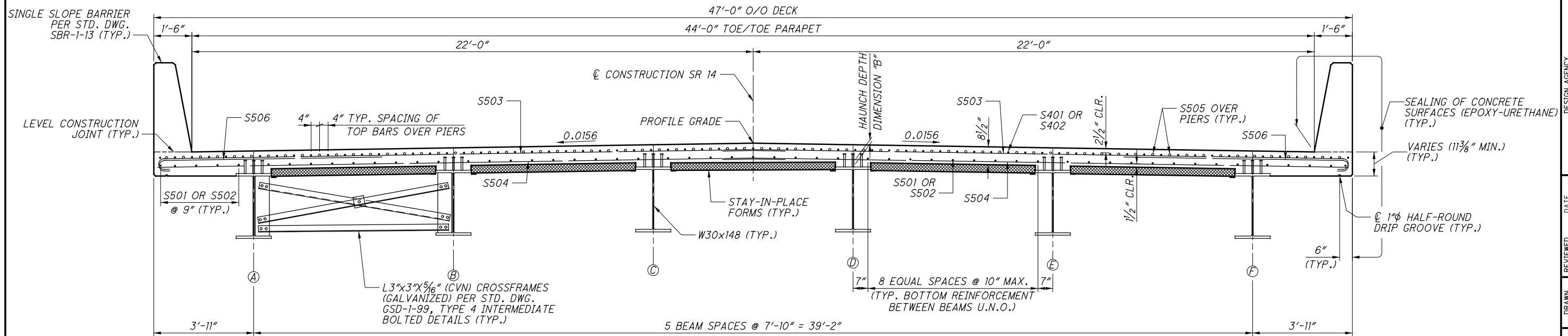
**POR-14-06.20**

PID No. 104119

10 / 16

16

22



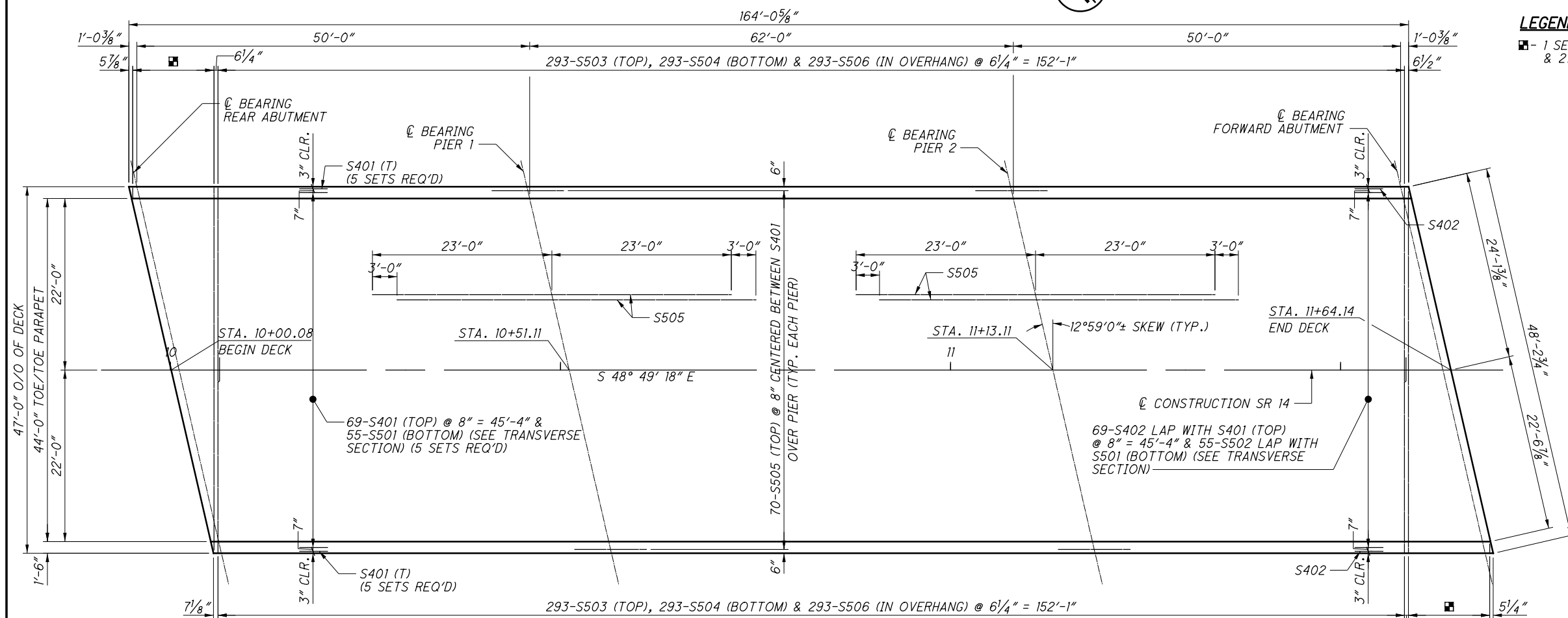
**TRANSVERSE SECTION**

**MINIMUM LAP LENGTHS:**  
 #4 BARS = 2'-0"  
 #5 BARS = 3'-2"

- NOTES:**
1. FOR PARAPET DETAILS, SEE SHEET 13/16.
  2. FOR SHEAR STUD SPACING, SEE SHEET 7/16.
  3. FOR REINFORCING STEEL LIST, SEE SHEET 16/16.

**LEGEND:**

- - 1 SER. OF 21-S507 (TOP), 1 SER. OF 21-S508 (BOTTOM) & 21-S506 (IN OVERHANG) @ 6/4" = 10'-5"



**SLAB REINFORCEMENT PLAN**

DIMENSION "B"							
	LOCATION	A	B	C	D	E	F
SPAN 1	☉ BEARING REAR ABUT.	2 1/2"	1 1/16"	1 3/16"	1 5/16"	1 9/16"	2 1/2"
	1/2	2 1/4"	1 3/16"	1 5/8"	1 3/4"	1 3/4"	2 1/4"
SPAN 2	☉ BEARING PIER 1	2"	2"	2"	2 1/8"	2"	2"
	1/4	2"	2"	2"	2 1/8"	2"	2"
	1/2	2"	2"	2"	2 1/8"	2"	2"
SPAN 3	☉ BEARING PIER 2	2"	2"	2"	2 1/8"	2"	2"
	1/2	2 5/8"	2 3/16"	2 1/2"	2 5/8"	2 1/16"	3 3/16"
	☉ BEARING FWD. ABUT.	3 3/16"	2 7/16"	3"	3 1/8"	3 1/16"	4 3/8"

DESIGN AGENCY  
**PRIME**

DATE  
10/31/2016

REVIEWED  
TES

DRAWN  
KDC

DESIGNED  
KDC

BRIDGE NO. POR-14-0620

SR 14 OVER CUYAHOGA RIVER & LAKE ROCKWELL

DECK PLAN AND TRANSVERSE SECTION

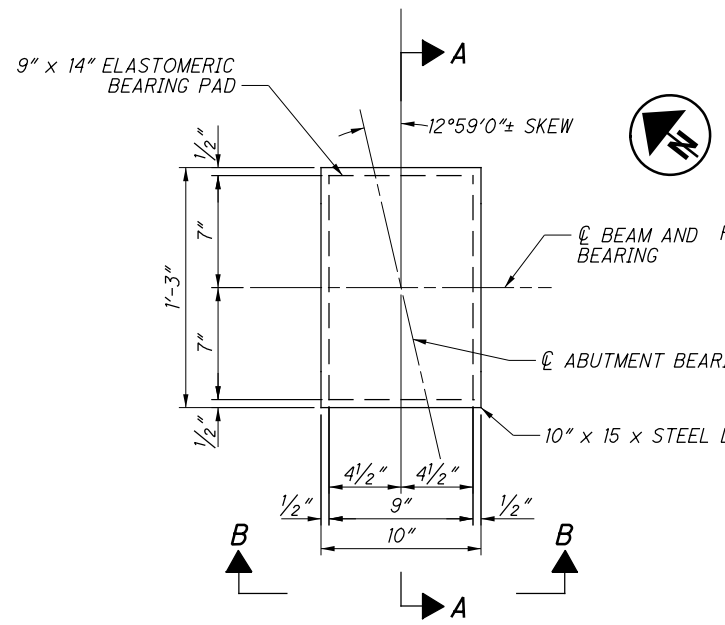
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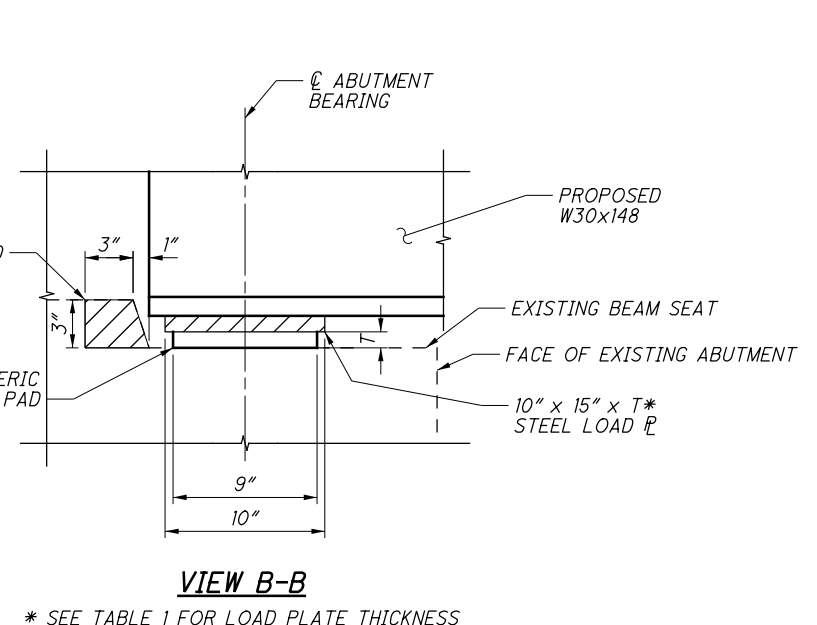
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22

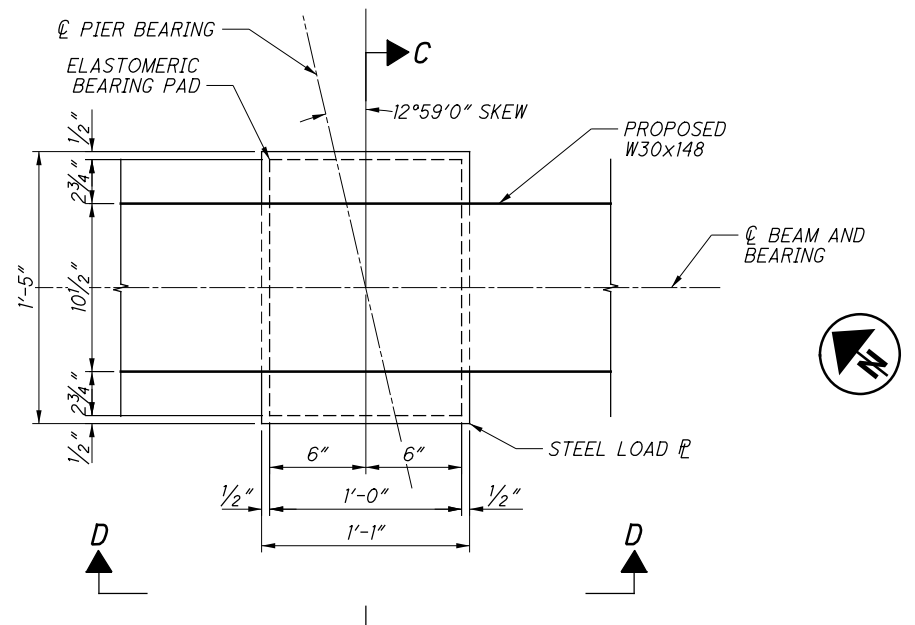




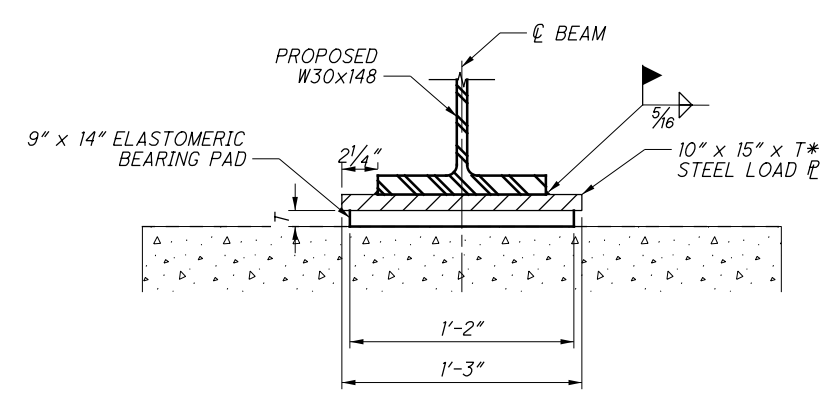
**ABUTMENT BEARING PLAN**  
(TYPICAL BOTH ABUTMENTS)



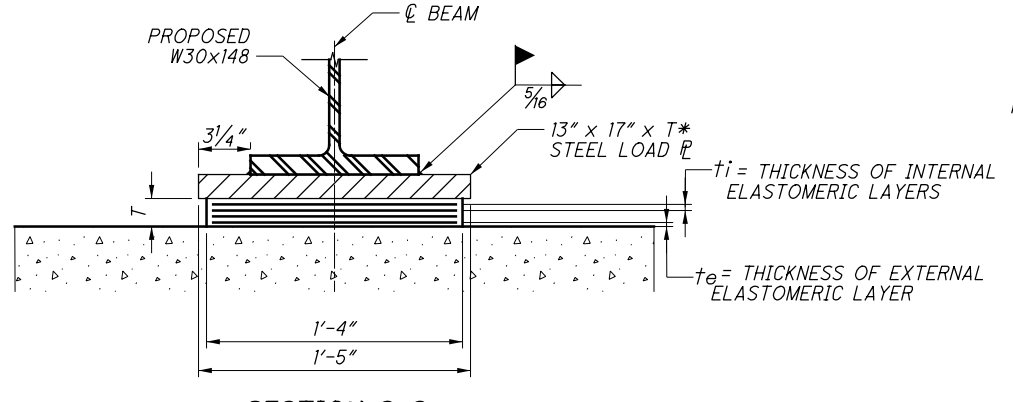
**VIEW B-B**  
\* SEE TABLE 1 FOR LOAD PLATE THICKNESS



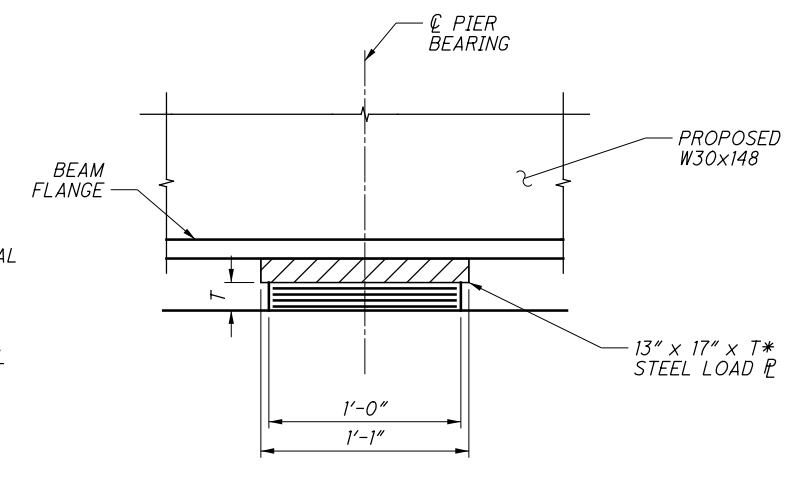
**PIER BEARING PLAN**  
(TYPICAL BOTH PIERS)



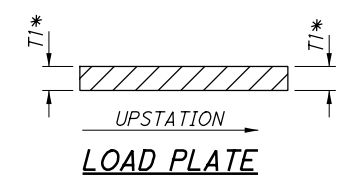
**SECTION A-A**  
\* SEE TABLE 1 FOR PLATE THICKNESS



**SECTION C-C**  
\* SEE TABLE 1 FOR PLATE THICKNESS



**VIEW D-D**  
\* SEE TABLE 1 FOR LOAD PLATE THICKNESS



\* SEE TABLE 1 FOR LOAD PLATE THICKNESS

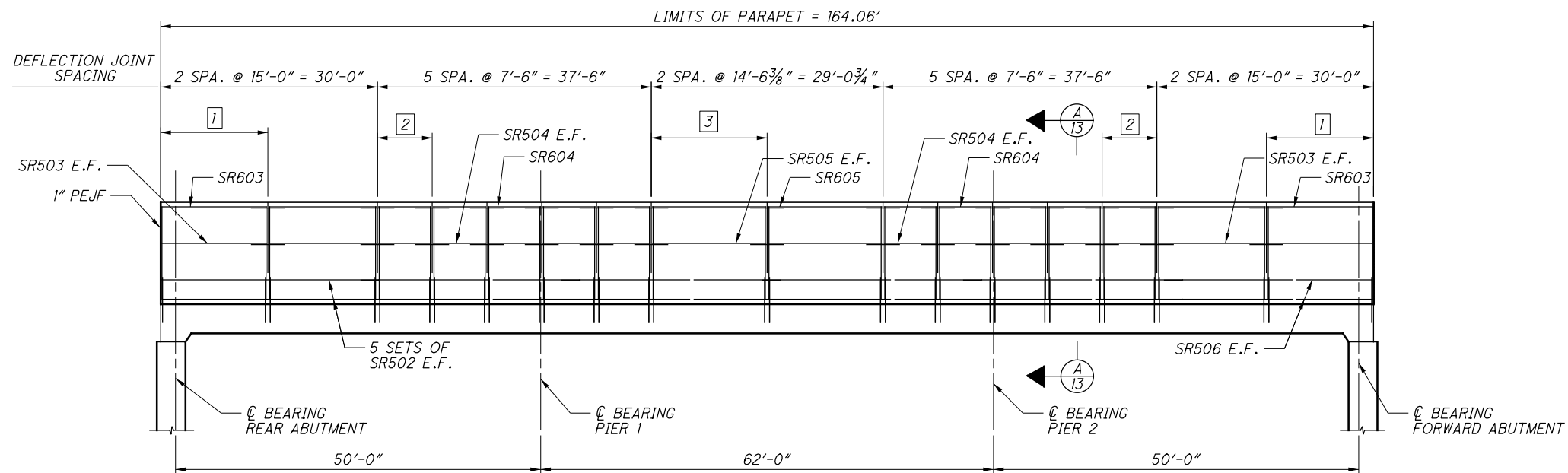
**TABLE 1 - BEARING SCHEDULE**

BEARING TYPE	NO. OF BEARINGS	ELASTOMERIC BEARING PAD SIZE LxWxt	NO. OF STEEL LAMINATES 0.0747" THICK (14 GAGE)	INTERNAL LAYERS		EXTERNAL LAYERS		STEEL LOAD PLATE SIZE LxW	LOAD PLATE THICKNESS T1	UNFACTORED DESIGN LOADS		
				ti	NO.	te	NO.			DEAD LOAD IN KIPS	LIVE LOAD * IN KIPS	TOTAL LOAD IN KIPS
R.A. BEAMS A & F	INT.	9"x14"x1.00"	-	-	-	1"	1	10"x15"	3"	53.0	56.5	109.5
R.A. BEAMS B-E	INT.	9"x14"x1.00"	-	-	-	1"	1	10"x15"	7/8"	53.0	56.5	109.5
PIER 1	EXP.	12"x16"x2.05"	4	0.375"	4	0.25"	1	13"x17"	1 1/2"	104.0	89.0	193.0
PIER 2	EXP.	12"x16"x2.05"	4	0.375"	4	0.25"	1	13"x17"	1 1/2"	104.0	89.0	193.0
F.A. BEAMS A & F	INT.	9"x14"x1.00"	-	-	-	1"	1	10"x15"	3"	53.0	56.5	109.5
F.A. BEAMS B-E	INT.	9"x14"x1.00"	-	-	-	1"	1	10"x15"	7/8"	53.0	56.5	109.5

\* = LIVE LOAD WITHOUT IMPACT

**NOTES**

- ELASTOMERIC BEARINGS:**  
THE ELASTOMER SHALL HAVE A HARDNESS OF 50 DUROMETER. ALL BEARINGS WERE DESIGNED UNDER DIVISION 1, SECTION 14.6.6 (METHOD A) OF THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES.
- LOAD PLATES:**  
THE STEEL LOAD PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 50 AND SHALL BE METALLIZED. LOAD PLATES SHALL BE BONDED TO THE ELASTOMER BY VULCANIZATION DURING THE MOLDING PROCESS.
- BASIS OF PAYMENT:**  
THE UNIT BID PRICE SHALL INCLUDE ALL MATERIALS (BEARING, LOAD PLATES, HP SHAPES, ETC.), LABOR AND INCIDENTALS NECESSARY TO FURNISH AND INSTALL ELASTOMERIC BEARINGS. PAYMENT WILL BE AT THE CONTRACT PRICE FOR ITEM 516, EACH, ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE OR ELASTOMERIC BEARING WITH LOAD PLATE AS LISTED UNDER THE ESTIMATED QUANTITIES.
- MARKINGS:**  
ALL BEARINGS SHALL BE MARKED PRIOR TO SHIPPING. THE MARKS SHALL INCLUDE THE BEARING LOCATION ON THE BRIDGE, AND A DIRECTION ARROW THAT POINTS UP-STATION. ALL MARKS SHALL BE PERMANENT AND BE VISIBLE AFTER THE BEARING IS INSTALLED.



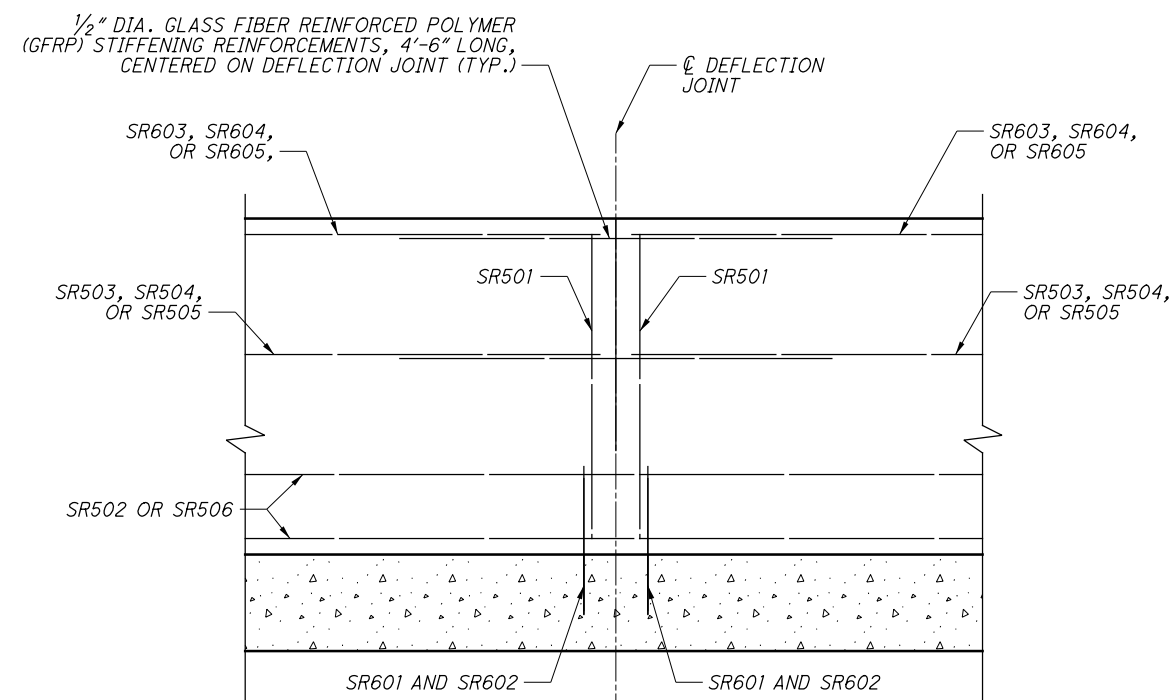
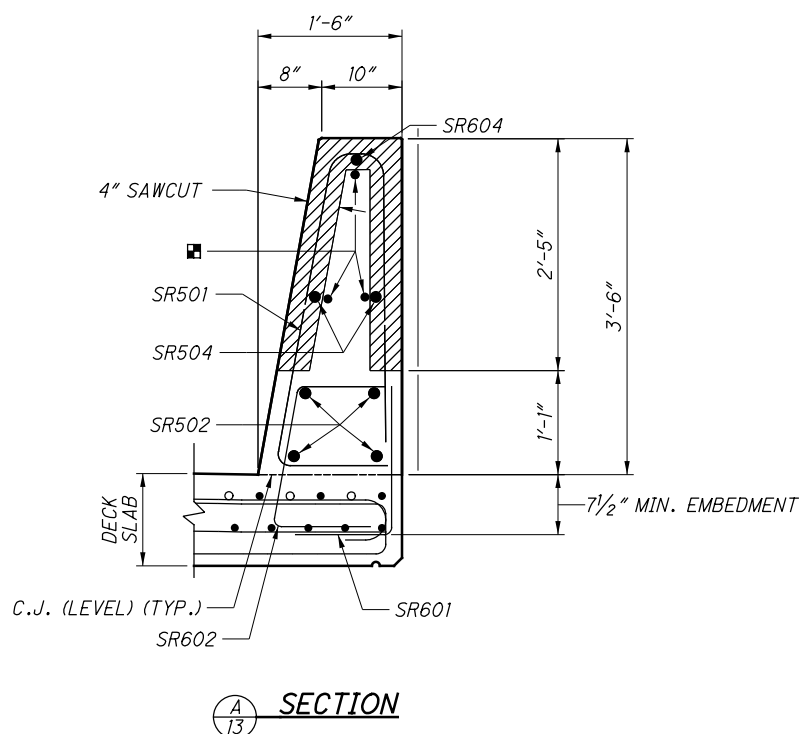
**PARAPET ELEVATION**  
TYPICAL FOR BOTH PARAPETS

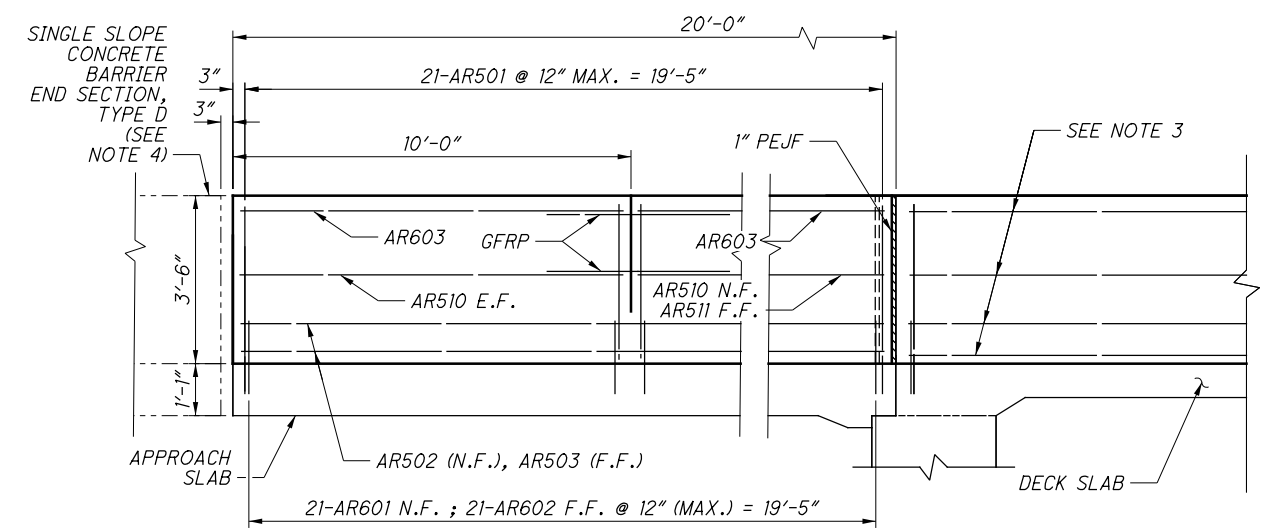
**LEGEND:**

- 1 16 SETS OF SR501, SR601, AND SR602 SPA. @ 11 5/8" (-) = 14'-6"
- 2 8 SETS OF SR501, SR601, AND SR602 SPA. @ 1'-0" = 7'-0"
- 3 15 SETS OF SR501, SR601, AND SR602 SPA. @ 1'-0" = 14'-0"
- 1/2" DIA. GLASS FIBER REINFORCED POLYMER (GFRP) STIFFENING REINFORCEMENT

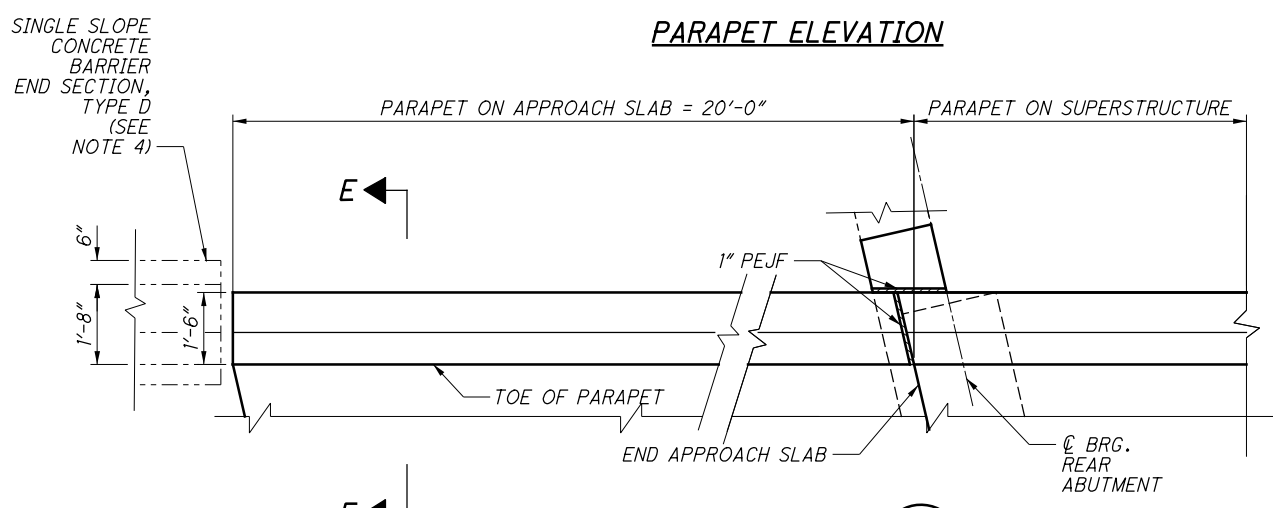
**MINIMUM LAP LENGTHS**

#5 BAR = 2'-6"





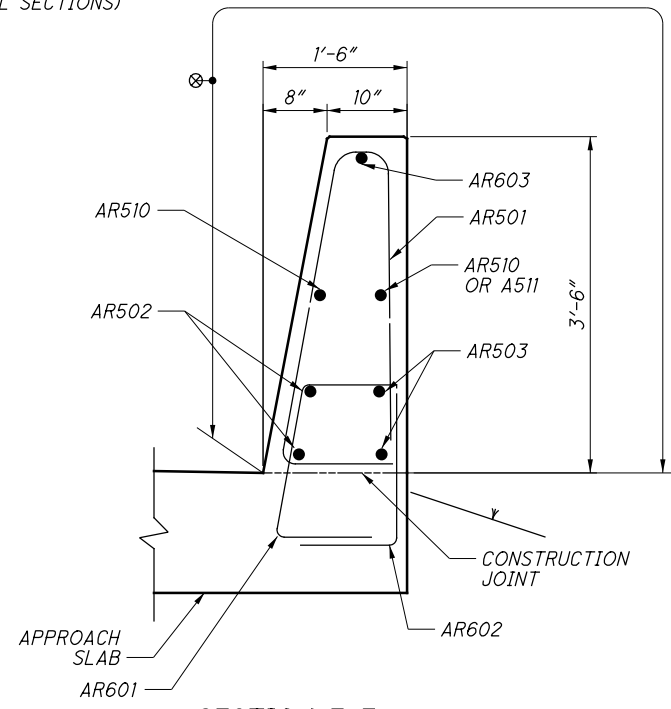
**PARAPET ELEVATION**



**PARAPET PLAN VIEW**

LEFT REAR SHOWN, ALL OTHERS SIMILAR

⊗ SEALING OF CONCRETE SURFACES  
(EPOXY URETHANE)  
(TYP. ALL SECTIONS)



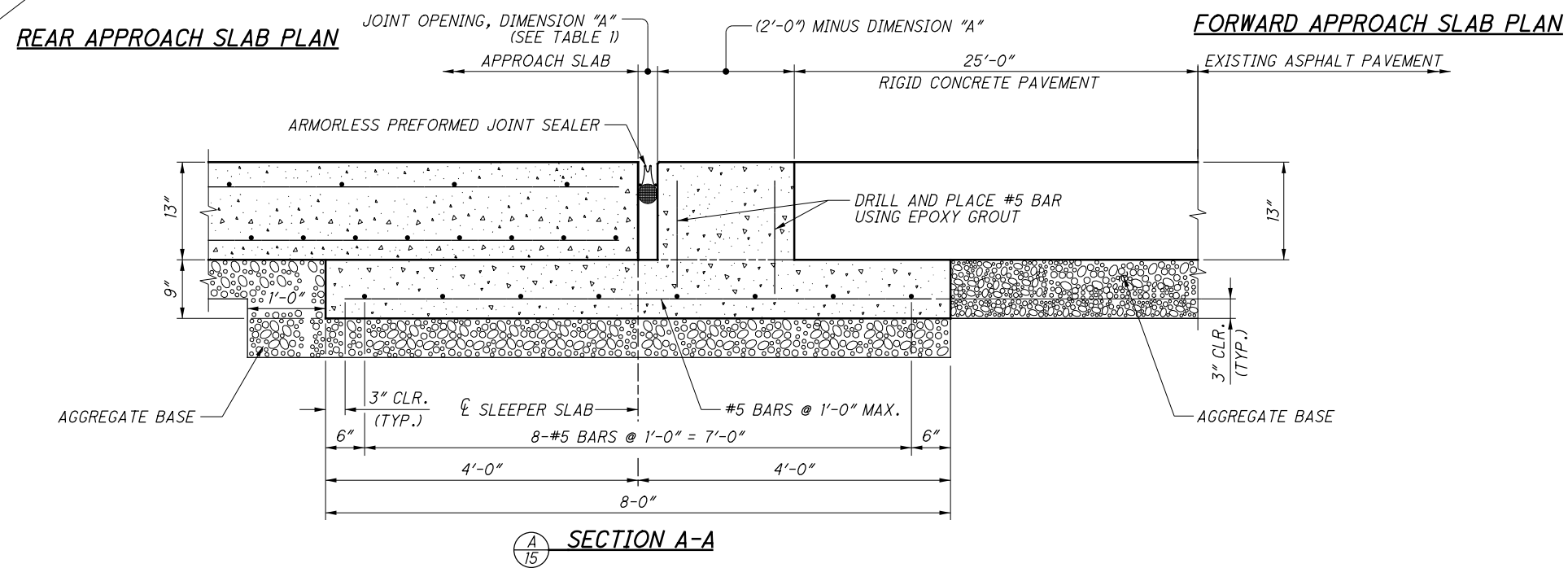
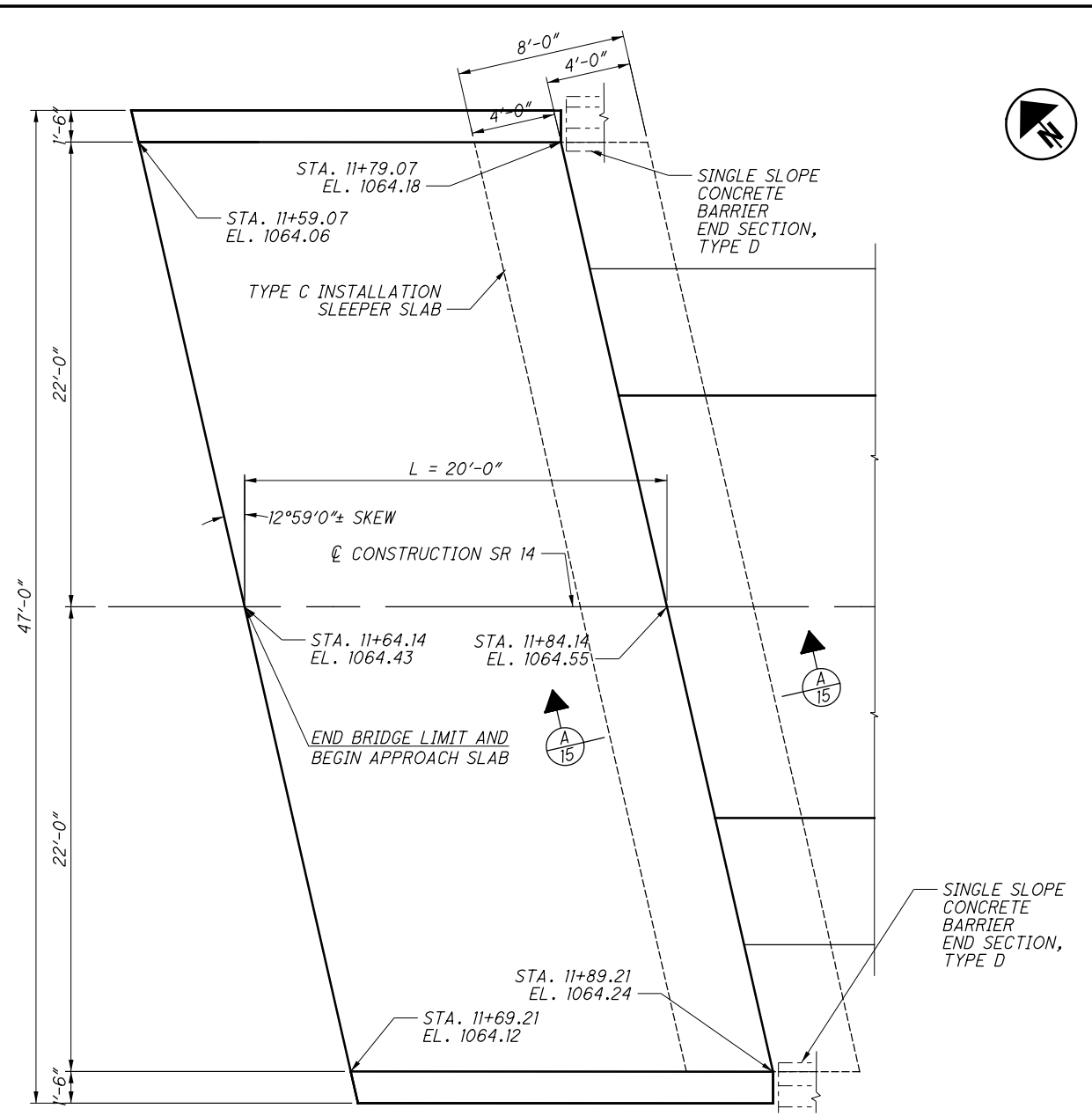
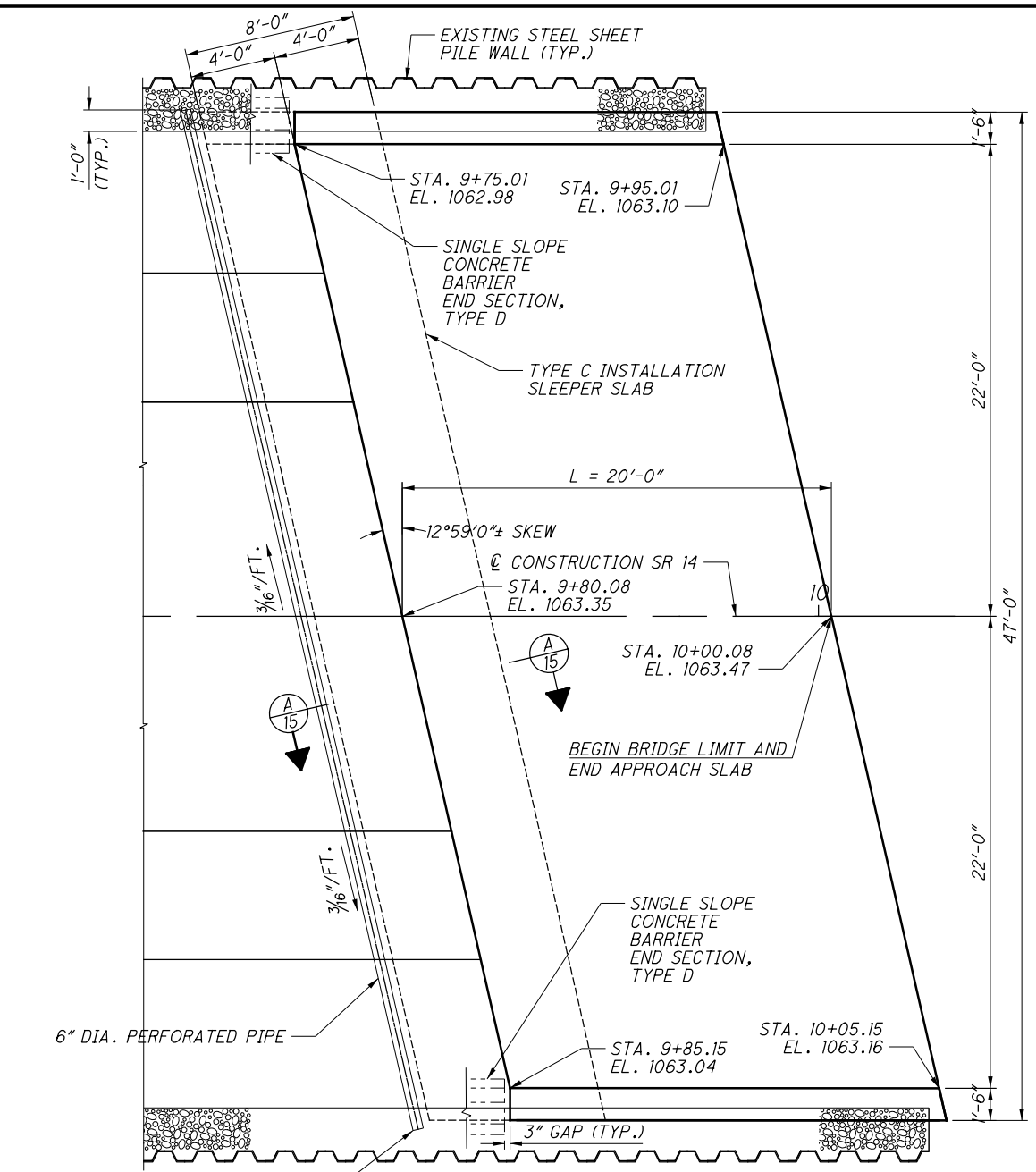
**SECTION E-E**

GFRP AND SAWCUT NOT SHOWN

**NOTES:**

1. FOR DETAILS NOT SHOWN, SEE STD. DWG. SBR-1-13.
2. FOR BRIDGE TERMINAL ASSEMBLY, SEE STD. DWGS. MGS-3.1.
3. FOR PARAPET REINFORCING ON SUPERSTRUCTURE, SEE SHEET 13/16.
4. FOR SINGLE SLOPE CONCRETE BARRIER TYPE D DETAILS, SEE STD. DWG. RM-4.6.



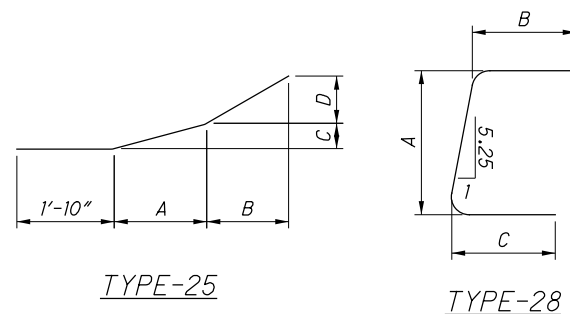
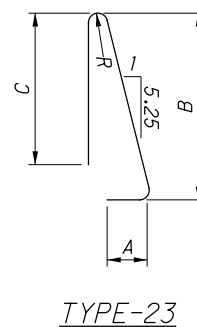
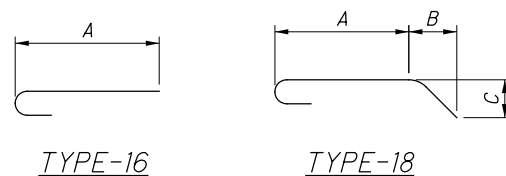
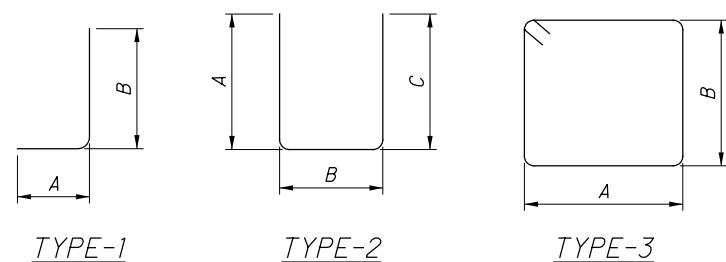


- NOTES:**
- SEE STD. AS-1-15 & AS-2-15 FOR REINFORCING STEEL AND ADDITIONAL NOTES AND DETAILS. TYPE C INSTALLATION SHALL BE USED.
  - ELEVATIONS ARE PROVIDED AT THE TOP OF APPROACH SLAB UNLESS OTHERWISE NOTED.

MARK	NUMBER			LENGTH	WEIGHT	TYPE	DIMENSION					
	REAR	FORWARD	TOTAL				A	B	C	D	E	INCR.
ABUTMENT												
A501	33	33	66	5'-7"	384	2	2'-3"	1'-4"	2'-3"			
A502	33	33	66	8'-8"	597	3	2'-2"	1'-10"				
A503	4	4	8	1'-9"	15	STR						
A504	8	8	16	1'-11"	32	STR						
A505	4	4	8	2'-3"	19	STR						
A506	8	8	16	4'-0"	67	STR						
A801	24	24	48	27'-1"	3471	STR						
*AS801	32	32	64	3'-0"	-	STR						
D801	32	32	64	4'-8"	797	18	2'-6"	1'-0"	1'-0"			
ABUTMENT TOTAL=					5382							

\* - AS801 SHALL BE 1" DIA. SMOOTH STEEL RODS CONFORMING TO ASTM A311, GRADE 1018.

MARK	LEFT PARAPET	RIGHT PARAPET	TOTAL	LENGTH	WEIGHT	TYPE	DIMENSION					
							A	B	C	D	R	INCR.
SUPERSTRUCTURE PARAPETS												
SR501	174	174	348	7'-4"	2662	23	11"	3'-3"	3'-0"			2 3/4"
SR502	20	20	40	30'-0"	1252	STR						
SR503	8	8	16	14'-8"	245	STR						
SR504	20	20	40	7'-2"	299	STR						
SR505	4	4	8	14'-2"	118	STR						
SR506	4	4	8	26'-3"	219	STR						
SR601	174	174	348	2'-4"	1220	1	1'-0"	1'-6 1/2"				
SR602	174	174	348	3'-1"	1612	28	1'-6 1/2"	0'-11"	1'-0"			
SR603	4	4	8	14'-8"	176	STR						
SR604	10	10	20	7'-2"	215	STR						
SR605	2	2	4	14'-2"	85	STR						
SUPERSTRUCTURE PARAPETS TOTAL					8103							



**NOTES:**

- ALL REINFORCING STEEL SHALL BE EPOXY COATED.
- BAR SIZE: THE BAR SIZE IS INDICATED IN THE BAR MARK. THE MARK BEGINS WITH ONE OR TWO LETTERS THAT IDENTIFY THE BAR LOCATION. THE NEXT ONE OR TWO DIGITS INDICATE THE BAR SIZE, AND THE REMAINING TWO DIGITS ARE THE SEQUENCE NUMBER. EXAMPLE: A501  
A = ABUTMENT BAR  
5 = #5 BAR  
01 = BAR SEQUENCE NUMBER 1
- BAR DIMENSIONS SHOWN ARE OUT TO OUT UNLESS NOTED OTHERWISE.
- "STR" IN THE BAR TYPE COLUMN INDICATES A STRAIGHT BAR.
- INC. INDICATES THE LENGTH INCREMENT FOR SERIES BARS.

MARK	TOTAL	LENGTH	WEIGHT	TYPE	DIMENSION					
					A	B	C	D	R	INC
PIERS 1 & 2										
P401	28	9'-5"	176	3	2'-6"	2'-0"				
P501	24	26'-7"	665	STR						
P502	20	7'-3"	151	2	2'-6"	2'-6"	2'-6"			
P503	326	5'-3"	1785	1	2'-6"	2'-11"				
P601	326	8'-4"	4080	2	3'-0"	2'-8"	3'-0"			
P701	24	30'-5"	1492	1	2'-8"	27'-11"				
P1101	16	31'-9"	2699	16	30'-2"					
PIER TOTAL=			11048							
SUPERSTRUCTURE										
S401	355	30'-0"	7114	STR						
S402	71	23'-8"	1122	STR						
S501	275	30'-0"	8605	STR						
S502	55	29'-7"	1697	STR						
S503	586	25'-6"	15586	16	24'-11"					
S504	586	24'-11"	15229	STR						
S505	140	46'-0"	6717	STR						
S506	628	11'-0"	7205	16	10'-5"					
	2 SER.	1'-9"			1'-2"					
S507	OF	TO	1066	16	TO				2'-3"	
	21	46'-11"			46'-4"					
	2 SER.	1'-2"			1'-2"					
S508	OF	TO	1040	16	TO				2'-3"	
	21	46'-4"			46'-4"					
SUPERSTRUCTURE TOTAL =			65381							
APPROACH SLAB PARAPETS										
AR501	84	7'-4"	643	23	11"	3'-3"	3'-0"			2 3/4"
AR502	8	19'-5"	162	STR						
AR503	8	19'-1"	160	STR						
AR504	NOT USED									
AR505	NOT USED									
AR506	NOT USED									
AR507	NOT USED									
AR508	NOT USED									
AR509	NOT USED									
AR510	12	9'-5"	118	STR						
AR511	4	9'-1"	38	STR						
AR601	84	3'-3"	410	28	1'-8"	11"	1'-0"			
AR602	84	2'-6"	315	1	1'-0"	1'-8"				
AR603	8	9'-6"	114	STR						
AR604	NOT USED									
AR605	NOT USED									
AR606	NOT USED									
APPROACH SLAB PARAPETS TOTAL=			1960							