

SITE PLAN

BRIDGE OVER CHERRY HILL AVENUE
I.R. 880 OVER CHERRY HILL AVENUE
MAHONING COUNTY

DESIGNED	AEK	NBR
REVIEWED	AEK	STATION
DRAWN	AEK	STA. 585+16.33
REVISION	5006635 / 5006600	

ELT. ROBINSON
ENGINEERING
DESIGN AGENCY

BENCHMARK DATA

BM #1 STA. 585+07.99, 8.34 LT., ELEV. 970.65, IRON PIN SET
BM #2 STA. 586+57.42, 11.41 RT., ELEV. 970.13, IRON PIN SET
FOR ADDITIONAL BENCHMARK INFORMATION. SEE ROADWAY PLAN SHEET

NOTES

EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.

DESIGN TRAFFIC:
2020 ADT = 48,000 2020 ADTT = 4320
2040 ADT = 49,000 2040 ADTT = 4410
DIRECTIONAL DISTRIBUTION = 53%

DATUM ADJUSTMENT: ELEVATIONS FROM THE EXISTING PLANS CIRCA 1965 ARE BASED ON AN OLDER SURVEY DATUM. ELEVATIONS USED FROM THE EXISTING PLANS ARE ADJUSTED BY SUBTRACTING 0.56 FEET TO BE CONSISTENT WITH THE CURRENT (2015) SURVEY DATUM.

LEGEND

- 14'-6" REQUIRED MINIMUM VERTICAL CLEARANCE
- 14'-1" ACTUAL EX. MINIMUM VERTICAL CLEARANCE
- 15'-0" PROPOSED MINIMUM VERTICAL CLEARANCE
- ⊕ = BENCHMARK

EXISTING STRUCTURE

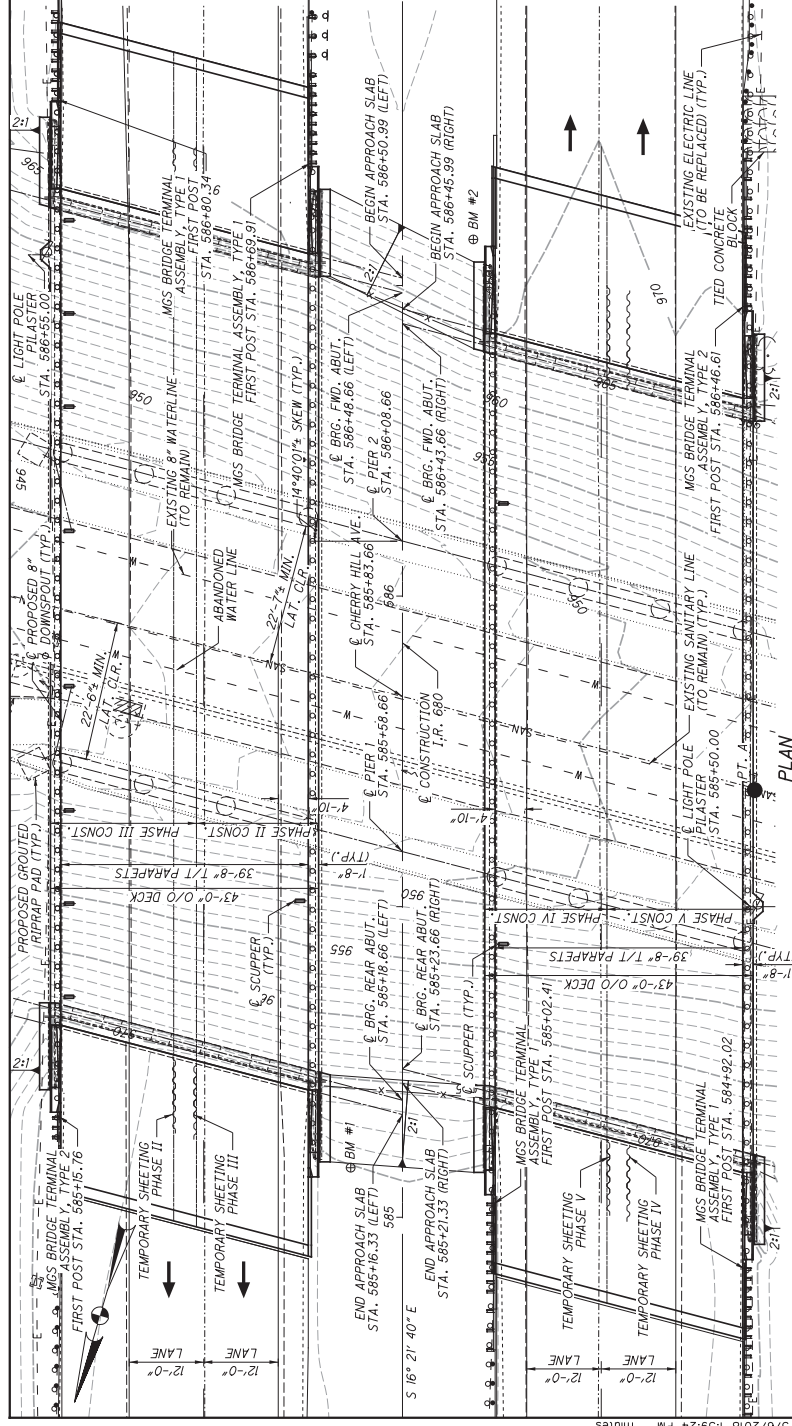
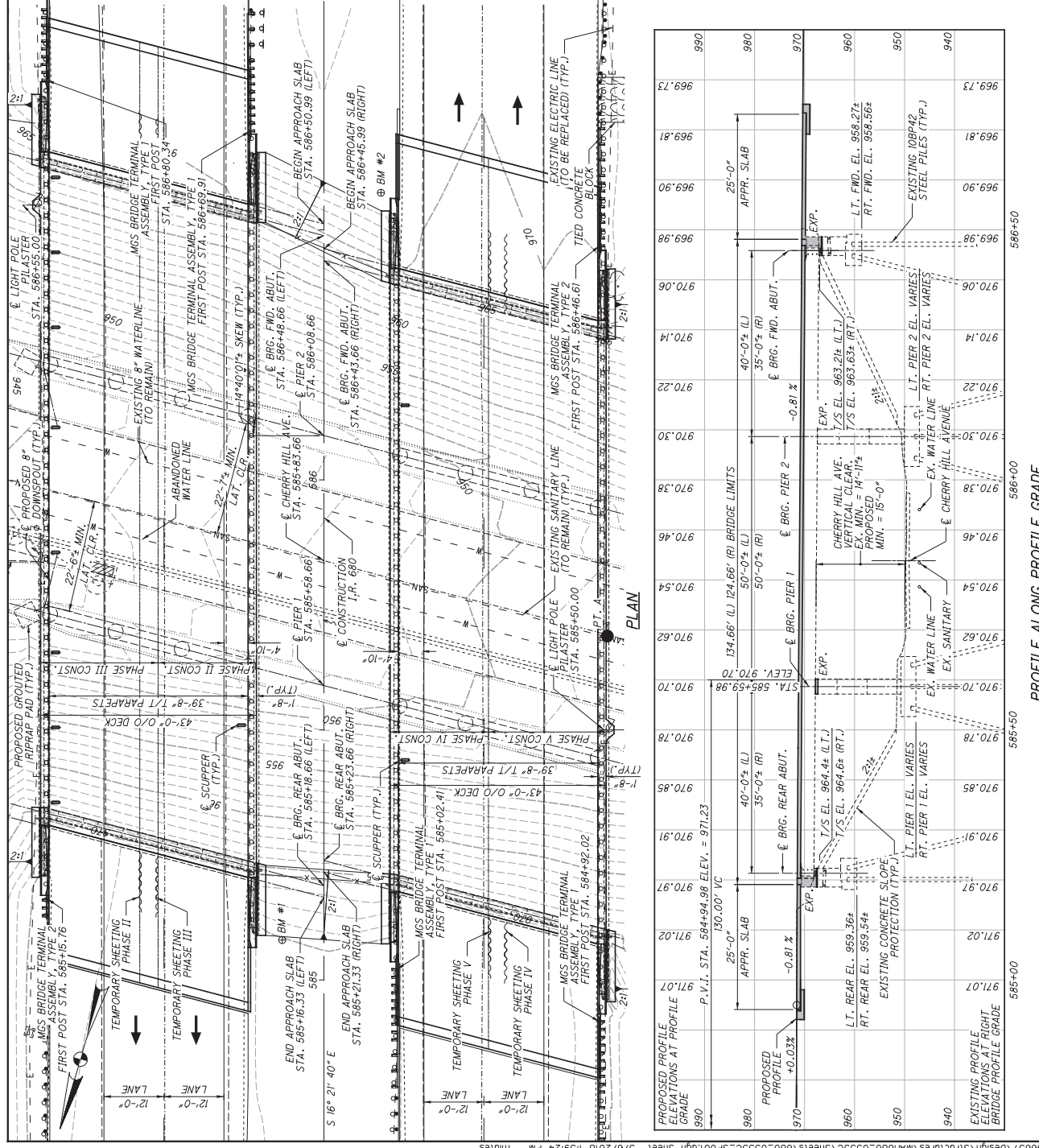
TYPE: 3-SPAN CONTINUOUS STEEL BEAM WITH REINFORCED CONCRETE DECK AND SUBGRADE

SPANS: 35'-0" x 50'-0", 35'-0" x 35'-0" (R), 40'-0", 50'-0", 40'-0" (L)
C/C BRGS: 3'-6"
ROADWAY: 39'-8" T/T CURBS
LOADING: CF 2000 (ST)
SKEW: 14°40'01" LEFT FORWARD
WEARING SURFACE: 3" ASPHALT CONCRETE
ALIGNMENT: TANGENT
CROWN: 0.016 FT/FT
DATE BUILT: 07/01/1967
DISPOSITION: TO BE REHABILITATED

PROPOSED STRUCTURE

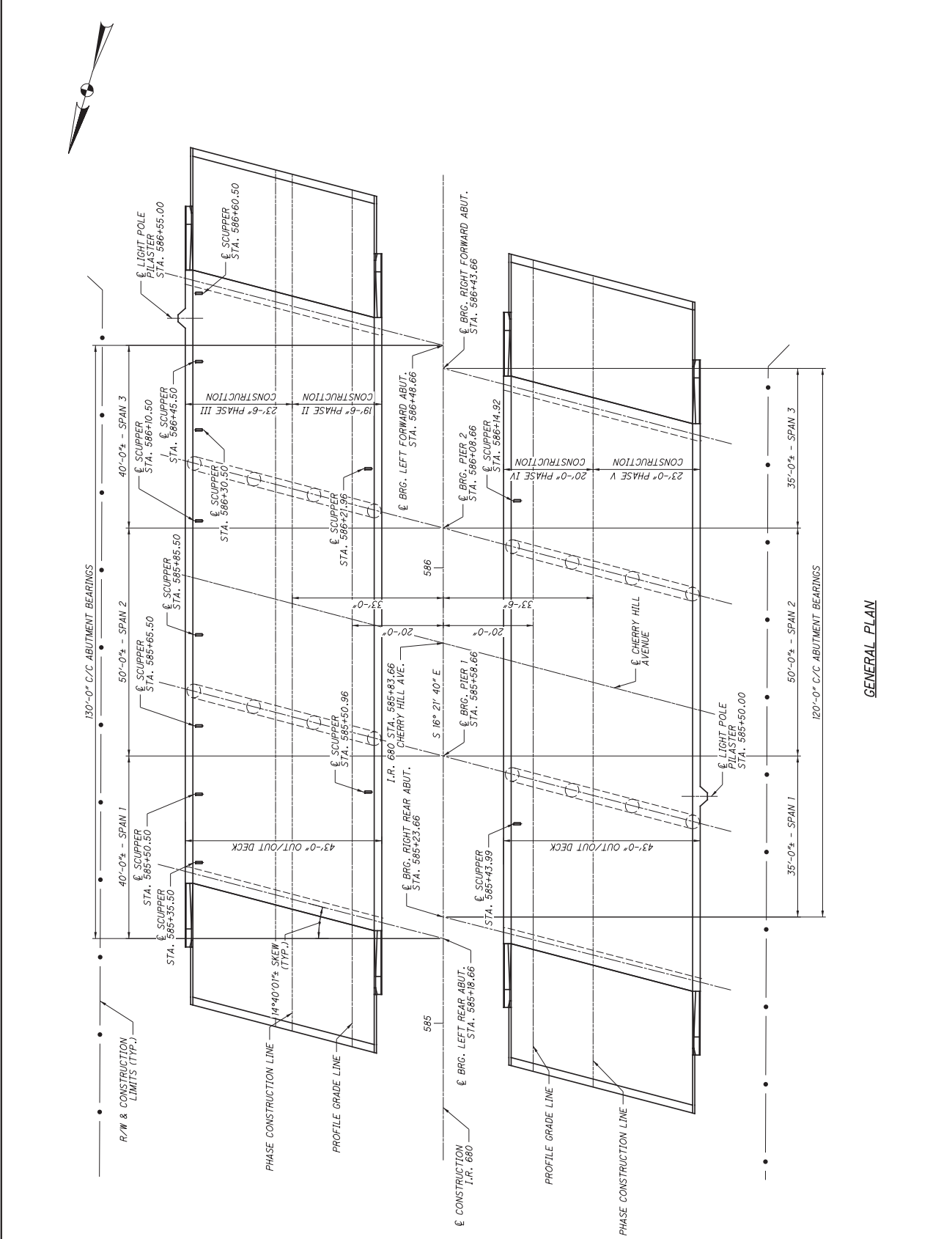
PROPOSED WORK: PROVIDE MOMENT PLATE RETROFITS, COMPOSITE CONCRETE DECK, RAISE PIER CAPS, RAISE ABUTMENT-BEAM SEATS, REPLACE BEARINGS, AND CONVERT ABUTMENTS TO SEMI-INTEGRAL

SPANS: 35'-0" x 50'-0", 35'-0" x 35'-0" (R), 40'-0", 50'-0", 40'-0" (L)
C/C BRGS: 3'-6"
ROADWAY: 39'-8" TOE/TOE PARAPET
LOADING: HS25 CASE II AND 60 PSF FWS - BEAMS, DECK, & BEARINGS
CF 2000 (ST) - ABUTMENTS & PIERS
SKEW: 14°40'01" LEFT FORWARD
WEARING SURFACE: 1" MONOLITHIC CONCRETE
APPROACH SLABS: 25'-0" LONG (AS-FHS & AS-2-15)
ALIGNMENT: TANGENT (TYPE C INSTALLATION)
CROWN: 0.016 FT/FT AND 0.04 FT/FT
COORDINATES: LATITUDE (R) IN 41° 06' 49.9" (L) N 41° 06' 49.93" LONGITUDE (R) IN 80° 41' 31.43" (L) W 80° 41' 32.29" W



DESIGNED	LAH	DATE	5006635/5006600
CHECKED	LAH	REF	12/31/2015
REVISD	LAH	REVIEWED	
NBR		STRUCTURE FILE NUMBER	5006635/5006600

BRIDGE NO. MAH-680-0333L&R
 I.R. 680 OVER CHERRY HILL AVENUE



GENERAL PLAN

STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS:

- REFER TO THE FOLLOWING STANDARD BRIDGE DRAWINGS:
- AS-2-16 REVISED 7-17-15
- AS-2-15 REVISED 7-17-15
- AS-2-14 REVISED 7-19-02
- GD-1-36 REVISED 1-17-14
- SBR-1-13 REVISED 7-18-14
- SICD-1-96 REVISED 7-18-14
- SICD-2-14 REVISED 7-18-14
- PCB-91 REVISED 1-18-13

AND THE FOLLOWING SUPPLEMENTAL SPECIFICATIONS:
 800 DATED 7-29-17
 869 DATED 10-17-14

DESIGN SPECIFICATIONS:
 THIS STRUCTURE CONFORMS TO THE STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2002 - Tenth EDITION AND THE ODOT BRIDGE DESIGN MANUAL, 2004.

DESIGN LOADING:
 HS20 CASE I AND THE ALTERNATE MILITARY LOADING FUTURE WEARING SURFACE (FIRST OF 60 PSF - BEAMS, DECK, AND BEARINGS
 CP 2000 (57) - ABUTMENTS AND PIERS

DESIGN STRESSES:
 CONCRETE CLASS 0C2 - COMPRESSIVE STRENGTH 4600 PSI (SUPERSTRUCTURE)
 CONCRETE CLASS 0C1 - COMPRESSIVE STRENGTH 4000 PSI (SUBSTRUCTURE)

REINFORCING STEEL - ASTM A615 OR A996 GRADE 60
 MINIMUM YIELD STRENGTH 60,000 PSI
 PROPOSED CROSSFRAMES AND BOLTED COVER PLATE
 RETROFITS STEEL - ASTM A709 GRADE 50
 MINIMUM YIELD STRENGTH 50,000 PSI
 EXISTING STRUCTURAL STEEL - ASTM A36
 MINIMUM YIELD STRENGTH 36,000 PSI

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.

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 OMS SECTIONS 102.05, 105.02, AND 515.04.

BASE CONTRACT BID PRICES UP ON 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 THAT HAVE BEEN VERIFIED IN THE FIELD.

DECK PLACEMENT DESIGN ASSUMPTIONS:
 THE FOLLOWING ASSUMPTIONS OF CONSTRUCTION MEANS AND METHODS WERE MADE FOR THE ANALYSIS AND DESIGN OF 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 2.4 KIPS FOR A TOTAL MACHINE LOAD OF 19.2 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".

A MAXIMUM DISTANCE FROM THE CENTERLINE OF THE FASCIA GIRDER TO THE FACE OF THE SAFETY HANDRAIL OF 65".

PROPOSED WORK:
 THE FOLLOWING IS A GENERAL SUMMARY OF THE PROPOSED WORK FOR THIS STRUCTURE; INCIDENTAL ITEMS ARE NOT INCLUDED.

1. REMOVE EXISTING DECK OVERLAY, DECK, APPROACH SLABS, PARAPETS, BACKWALLS, PORTIONS OF BEAM SEATS, EXPANSION JOINTS, AND END DIAPHRAGMS.
2. JACK SUPERSTRUCTURE AND REMOVE EXISTING ABUTMENT AND PIER BEARINGS.
3. RECONSTRUCT BEAM SEATS.
4. PLACE NEW ELASTOMERIC BEARINGS.
5. ERECT NEW MOMENT PLATE RETROFITS AND ADJUST CROSSFRAMES AS NECESSARY.
6. PREPARE SURFACES AND PAINT STRUCTURAL STEEL.
7. WELD NEW SHEAR STUDS.
8. CONSTRUCT ABUTMENT DIAPHRAGMS.
9. CONSTRUCT NEW DECK AND APPROACH SLABS, AND INSTALL CROSS FRAMES.
10. CONSTRUCT NEW PARAPETS AND SEAL CONCRETE SURFACES WITH EPOXY-URETHANE.
11. OPEN BRIDGE TO TRAFFIC.

ITEM 202 - PORTIONS OF STRUCTURE REMOVED - OVER 20 FOOT SPAN AS PER PLAN:

THIS WORK CONSISTS OF THE REMOVAL OF CONCRETE DECKS INCLUDING PARAPETS, RAILINGS, DECK JOINTS, PLYWOOD DECKING AND OTHER APPURTENANCES FROM STEEL SUPPORTING SYSTEMS BEAMS, GIRDERS, CROSS FRAMES, ETC.). THE PROVISIONS OF ITEM 202 APPLY EXCEPT AS SPECIFIED BY THE FOLLOWING NOTES. PERFORM WORK CAREFULLY DURING DECK REMOVALS TO PROTECT PORTIONS OF SUCH SYSTEMS THAT ARE TO BE SALVAGED AND INCORPORATED INTO THE PROPOSED STRUCTURE. THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE RAM TYPE OF EQUIPMENT IS PROHIBITED. SUBMIT CONSTRUCTION PLANS ACCORDING TO OMS 501.05.

PROTECTION OF STEEL SUPPORT SYSTEMS:
 BEFORE DECK SLAB CUTTING IS PERMITTED, DRAW THE OUTLINE OF PRIMARY STEEL MEMBERS IN CONTACT WITH THE BOTTOM OF THE DECK ON THE SURFACE OF DECK. DRILL SMALL DIAMETER PILOT HOLES 2 INCHES OUTSIDE THESE LINES TO CONFIRM THE LOCATION OF FLANGE EDGES. DECK CUTS MADE OUTSIDE 2 INCHES OF FLANGE EDGES MAY EXTEND THE FULL DEPTH OF THE DECK. DECK CUTS OVER OR WITHIN 2 INCHES OF FLANGE EDGES SHALL NOT EXTEND LOWER THAN THE BOTTOM LAYER OF DECK SLAB REINFORCING STEEL. PERFORM WORK CAREFULLY DURING CUTTING OF THE DECK SLAB TO AVOID DAMAGING STEEL MEMBERS THAT ARE TO BE INCORPORATED INTO THE PROPOSED STRUCTURE. REPLACE OR REPAIR STEEL MEMBERS DAMAGED BY THE DECK SLAB CUTTING OPERATIONS AT NO COST TO THE PROJECT.

AT LEAST 7 DAYS BEFORE PERFORMING REPAIR WORK, SUBMIT A PROPOSED REPAIR PLAN, DEVELOPED BY AN OHIO REGISTERED PROFESSIONAL ENGINEER TO THE ENGINEER. OBTAIN THE ENGINEER'S APPROVAL BEFORE PERFORMING REPAIR.

EXISTING WELDED ATTACHMENTS:
 REMOVE EXISTING WELDED ATTACHMENTS (E.G., FINISHING MACHINE AND FORM SUPPORTS, AND SUPPORTS FOR SCUFFERS AND BULB ANGLES WHICH ARE TO BE REMOVED) LOCATED IN THE DESIGNATED TENSION PORTIONS OF THE TOP FLANGES OF EXISTING STEEL MEMBERS AND GRIND THE FLANGE SURFACES SMOOTH. CAREFULLY GRIND PARALLEL TO THE PLANS.

CUT LINE CONSTRUCTION JOINT PREPARATION FOR SUBSTRUCTURES:

SAW CUT BOUNDARIES OF PROPOSED CONCRETE REMOVALS 1 INCH DEEP. REMOVE CONCRETE TO A ROUGH SURFACE. WHERE DIRECTED IN THE PLANS LEAVE EXISTING REINFORCING STEEL IN PLACE. INSTALL DOWEL BARS IF SPECIFIED. PRIOR TO CONCRETE PLACEMENT ABRASTIVELY CLEAN JOINT SURFACES AND EXISTING REINFORCEMENT TO REMOVE LOOSE AND EXPOSED REINFORCEMENT OF ALL DIRT, DUST, RUST OR OTHER FOREIGN MATERIAL BY USE OF WATER, AIR UNDER PRESSURE, OR OTHER METHODS THAT PRODUCE SATISFACTORY RESULTS. EXISTING REINFORCING STEEL DOES NOT HAVE TO HAVE A BRIGHT STEEL FINISH, BUT REMOVE ALL PAOK AND LOOSE RUST. THOROUGHLY DRENCH EXISTING CONCRETE SURFACES WITH CLEAN WATER AND ALLOW TO DRY TO A DAMP CONDITION BEFORE PLACING CONCRETE.

SUBSTRUCTURE CONCRETE REMOVAL:
 REMOVE CONCRETE BY MEANS OF APPROVED PNEUMATIC HAMMERS EMPLOYING POINTED AND BLUNT CHISEL TOOLS. HYDRAULIC HOE-RAM TYPE HAMMERS WILL NOT BE PERMITTED. THE WEIGHT OF THE HAMMER SHALL NOT BE MORE THAN 35 POUNDS FOR REMOVAL WITHIN 18 INCHES OF PORTIONS TO BE PRESERVED. OUTSIDE THE 18 INCH LIMIT, THE CONTRACTOR MAY USE HAMMERS NOT EXCEEDING 90 POUNDS UPON THE APPROVAL OF THE ENGINEER. DO NOT PLACE PNEUMATIC HAMMERS IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE.

MEASUREMENT & PAYMENT:
 THE DEPARTMENT WILL MEASURE THE QUANTITY OF REMOVALS ON A LUMP SUM BASIS. THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES OF REMOVALS AT THE CONTRACT PRICE FOR ITEM 202, PORTIONS OF STRUCTURE REMOVED, AS PER PLAN.

ITEM 503. COFFERDAMS AND EXCAVATION BRACING:

THE DESIGN SHOWN IN THE PLANS FOR TEMPORARY SUPPORT OF EXCAVATION IS ONE REPRESENTATIVE DESIGN THAT MAY BE USED TO CONSTRUCT THE PROJECT. THE CONTRACTOR MAY CONSTRUCT THE DESIGN SHOWN IN THE PLANS OR PREPARE AN ALTERNATE DESIGN TO SUPPORT THE SIDES OF EXCAVATIONS. IF CONSTRUCTING AN ALTERNATE DESIGN FOR TEMPORARY SUPPORT OF EXCAVATION, PREPARE AND PROVIDE PLANS IN ACCORDANCE WITH OMS 501.05. THE DEPARTMENT WILL PAY FOR THE TEMPORARY SUPPORT OF EXCAVATION AT THE CONTRACT LUMP SUM PRICE FOR COFFERDAMS AND EXCAVATION BRACING. NO ADDITIONAL PAYMENT WILL BE MADE FOR PROVIDING AN ALTERNATE DESIGN.

THE STEEL SHEET PILING SHALL CONFORM TO ASTM A328 AND SHALL HAVE THE FOLLOWING:

SECTION	REBAR & FORWARD ABUTMENTS
MINIMUM YIELD STRESS, Fy (KSI)	36
DESIGN EMBEDMENT DEPTH (FT.)	12
DESIGN TOTAL DEPTH (FT.)	32

ITEM 503. UNCLASSIFIED EXCAVATION, AS PER PLAN:

FOR THE CONSTRUCTION OF THE BACKFILL BEHIND THE ABUTMENTS.

ITEM 509. EPOXY COATED REINFORCING STEEL - AS PER PLAN:

IN ADDITION TO THE PROVISIONS OF ITEM 509, FIELD BEND AND/OR FIELD CUT THE REINFORCING STEEL DESIGNATED IN THE PLANS, AS NECESSARY, IN ORDER TO MAINTAIN THE REQUIRED CLEARANCES AND BAR SPACINGS. REPAIR ALL DAMAGE TO THE EPOXY COATING, AS A RESULT OF THIS WORK, ACCORDING TO 709.00.

ITEM 510. DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT:

ITEM 513. STRUCTURAL STEEL MISC.: REPLACEMENT OF CROSSFRAMES:

THIS WORK CONSISTS OF REPLACING CROSSFRAMES AS INDICATED IN THE PLANS IN ORDER TO FACILITATE PARTIAL NEW CONSTRUCTION. THIS ITEM WILL INCLUDE SUPPLYING NEW CROSSFRAMES AND WELDING THEM BACK TO THE ORIGINAL POSITIONS OF THE CROSSFRAMES THAT ARE BEING REPLACED. AFTER REMOVAL, ALL WELDS WILL BE GROUND SMOOTH IN PREPARATION OF WELDING THE NEW CROSSFRAMES IN PLACE. ALL CROSSFRAMES TO BE REPLACED WILL BE FIELD MEASURED TO VERIFY SIZE AND LENGTHS PRIOR TO ORDERING MATERIAL. THE NEW CROSSFRAMES WILL BE THE VERTICAL LEG GIRDERS OR BEAMS ON BOTH SIDES OF THE WELDED TO THE AND ON THE TOP SIDE OF THE HORIZONTAL LEG. THE ANGLE WILL BE WELDED USING A 3/4" CONTINUOUS FILLET WELD. STEEL MEMBERS TO BE FABRICATED UNDER THIS ITEM WILL NOT REQUIRE SHOP DRAWINGS PRIOR TO FABRICATION. AISC CERTIFICATION IS NOT REQUIRED. THE CONTRACTOR WILL TAKE THE NECESSARY FIELD MEASUREMENTS TO VERIFY MEASUREMENTS BEFORE ORDERING MATERIALS. THE ENGINEER WILL HAVE THE AUTHORITY AND THE RESPONSIBILITY FOR ENSURING THAT THE STEEL IS ACCEPTABLE. AFTER FABRICATION THE PAY WEIGHTS SHALL BE COMPUTED IN COMPLIANCE WITH ITEM 513 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS AND SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL. ALL LABOR, MATERIALS, EQUIPMENT, AND INCIDENTALS NECESSARY TO COMPLETE THIS ITEM, EXCEPT FOR PAINT, WILL BE INCLUDED FOR PAYMENT UNDER ITEM 513 - STRUCTURAL STEEL MISC.: REPLACEMENT OF CROSSFRAMES.

ITEM 514. PAINTING OF EXISTING STRUCTURAL STEEL:

ALL EXISTING STRUCTURAL STEEL SHALL BE PAINTED USING THE OZEU PAINT SYSTEM. THE PAINT COLOR SHALL MEET FEDERAL COLOR #45826 (BLUW).



DESIGNED	LAH
DRAWN	LAH
REVIEWED	LAH
DATE	12/31/2015
PROJECT FILE NUMBER	5006635/5006600

BRIDGE NO.	680 OVER CHERRY HILL AVENUE
DATE	03/31/2018

GENERAL NOTES - 1

MAH-680-3-25

PID No. 96637

3 / 46

ITEM 516 - JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN

THIS WORK CONSISTS OF RAISING OR RE-POSITIONING EXISTING STRUCTURES TO THE DIMENSIONS AND REQUIREMENTS DEFINED IN THE PROJECT PLANS. SUBMIT CONSTRUCTION PLANS IN ACCORDANCE WITH CMS 501.05.

IF, DURING THE JACKING OPERATIONS, DAMAGE TO THE STRUCTURE IS VISUALLY OBSERVED, IMMEDIATELY CEASE THE JACKING OPERATION AND INSTALL SUPPORTS TO THE SATISFACTION OF THE ENGINEER. ANALYZE THE DAMAGE AND SUBMIT A METHOD OF CORRECTION TO THE ENGINEER FOR APPROVAL. THE DEPARTMENT WILL NOT PAY FOR THE COST OF REQUIRED REPAIRS. THE BRIDGE BEARINGS SHALL BE FULLY SEATED AT ALL CONTACT AREAS. IF FULL SEATING IS NOT ATTAINED, SUBMIT A REPAIR PLAN TO THE ENGINEER. THE DEPARTMENT WILL NOT PAY FOR THE REPAIR COSTS TO ENSURE FULL SEATING ON BEARINGS.

THE BRIDGE SHALL BE RAISED UNIFORMLY IN A TRANSVERSE DIRECTION IN ORDER TO AVOID INDUCING STRESSES INTO THE SUPERSTRUCTURE. DIFFERENTIAL MOVEMENT BETWEEN STRINGERS SHALL BE LIMITED TO 1/4" INCH.

THE ESTIMATED JACKING LOADS ARE 2.1 KIPS/BEAM AT THE ABUTMENTS AND 7.1 KIPS/BEAM AT THE PIERS. THESE LOADS INCLUDE THE WEIGHT OF THE EXISTING STRUCTURAL STEEL ONLY. THE ESTIMATED JACKING IS APPROXIMATELY 1".

THE DEPARTMENT WILL MEASURE THIS WORK ON A LUMP SUM BASIS.

THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES AT THE CONTRACT PRICE ITEM 516, JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN.

ITEM 518 - PATCHING CONCRETE SURFACES, AS PER PLAN

PRIOR TO THE SURFACE CLEANING SPECIFIED IN 519.04 AND WITHIN 24 HOURS OF PLACING PATCHING MATERIAL, BLAST CLEAN ALL SURFACES TO BE PATCHED INCLUDING THE EXPOSED REINFORCING STEEL. ACCEPTABLE METHODS INCLUDE HIGH-PRESSURE WATER BLASTING WITH OR WITHOUT ABRASIVES IN THE WATER, ABRASIVE BLASTING WITH CONTAINMENT, OR VACUUM ABRASIVE BLASTING.

MECHANICAL CONNECTORS FOR REINFORCING STEEL:

AN APPROVED TYPE OF MECHANICAL CONNECTOR FOR REINFORCING BARS SHALL BE PROVIDED WHERE REQUIRED. INSTALLATION OF CONNECTORS SHALL CONFORM WITH MANUFACTURER'S RECOMMENDED PROCEDURES. IF A DOWEL BAR SPLICE TYPE OF CONNECTOR IS FURNISHED, THE MINIMUM DOWEL BAR LENGTH TO BE FURNISHED WITH THE CONNECTOR SHALL BE AS SHOWN ON THE PLAN.

CONNECTORS AND DOWEL BARS SHALL BE EPOXY COATED. COATING FOR BOTH THE CONNECTORS AND BARS SHALL CONFORM TO THE SAME SPECIFICATIONS. COATINGS WHICH HAVE BEEN DAMAGED OR WHICH OTHERWISE DO NOT MEET SPECIFICATIONS WITH RESPECT TO COLOR, CONTINUITY, AND UNIFORMITY, MAY BE REPAIRED AS DIRECTED BY THE ENGINEER OR THEY SHALL BE REPLACED WITH MATERIAL WHICH MEETS THE SPECIFICATIONS.

CONNECTOR AND DOWEL BAR EXTENSIONS SHALL CONFORM ITEM 509. THE COST OF FURNISHING THE CONNECTORS AND EXTENSIONS SHALL BE INCLUDED WITH ITEM 509 - EPOXY COATED REINFORCING STEEL, AS PER PLAN.

OBJECT MARKERS AND STRUCTURE IDENTIFICATION SIGNS

OBJECT MARKERS WILL BE PLACED ON EACH APPROACH OFF THE LEFT AND RIGHT SHOULDER, FACING TRAFFIC, AND BEHIND THE GUARDRAIL IF APPLICABLE. ONE 0M-3L AND ONE 0M-3R WILL BE INSTALLED AT EACH APPROACH. THE SIGNS WILL BE MOUNTED ON NEW NO.2 POSTS AND SHALL BE INSTALLED AS PER STANDARD CONSTRUCTION DRAWING TC-41-20. MOST CURRENT REVISION. EACH POST WILL BE 10.5' IN LENGTH.

STRUCTURE IDENTIFICATION SIGNS (I-H260) WILL BE INSTALLED ON THE SAME POST AND DIRECTLY BELOW THE OBJECT MARKER OFF THE RIGHT SHOULDER ON EACH APPROACH. A QUANTITY OF ONE SIGN WILL BE INSTALLED AT EACH APPROACH. THE SIGNS WILL HAVE A NON-REFLECTIVE WHITE SHEETING BACKGROUND.

FOR ADDITIONAL SIGN INFORMATION AND LOCATIONS, SEE SHEETS 70 TO 71.

THE FOLLOWING QUANTITIES HAVE BEEN INCLUDED FOR EACH APPROACH:

- LEFT BRIDGE:
 - ITEM 630 - GROUND MOUNTED SUPPORT, NO. 2 POST, 21 FT
 - ITEM 630 - SIGN, FLAT SHEET, 6 SF
 - ITEM 630 - SIGN, FLAT SHEET, 730.20, 1 SF
 - ITEM 630 - REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL, 3 EA
 - ITEM 630 - REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL, 2 EA
- RIGHT BRIDGE:
 - ITEM 630 - GROUND MOUNTED SUPPORT, NO. 2 POST, 21 FT
 - ITEM 630 - SIGN, FLAT SHEET, 6 SF
 - ITEM 630 - SIGN, FLAT SHEET, 730.20, 1 SF
 - ITEM 630 - REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL, 3 EA
 - ITEM 630 - REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL, 2 EA

ASBESTOS NOTIFICATION STRUCTURE NO. MAH-680-333R (SFN: 5006630)

AN ASBESTOS SURVEY OF THE IR-680 BRIDGE OVER CHERRY HILL AVENUE (SFN: 5006600) SCHEDULED FOR REHABILITATION WAS CONDUCTED BY A CERTIFIED ASBESTOS HAZARD EVALUATION SPECIALIST. THE SURVEY DETERMINED THAT CHRYSOTILE ASBESTOS WAS IDENTIFIED IN BROWN PIPE WRAP AT THE NE AND SE CORNER BETWEEN ABUTMENT AND PARAPET CONDUIT. THE REMOVAL AND DISPOSAL OF THE ASBESTOS CONTAINING MATERIAL MUST COMPLY WITH THE OHIO ADMINISTRATIVE CODE, THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATIVE (OSHA) REGULATIONS AND THE NATIONAL EMISSION STANDARD FOR HAZARDOUS AIR POLLUTANTS (NESHAP) STANDARD FOR ASBESTOS. THIS ASBESTOS CONTAINING MATERIAL WILL BE REMOVED BY THE CONTRACTOR IN COORDINATION WITH THE BRIDGE DECK REMOVAL.

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

MAHONING-TRUMBULL AIR POLLUTION CONTROL
345 OAK HILL AVE., SUITE 200
YOUNGSTOWN, OH 44502
ATTN.: TARA GIOFFI
(330) 743-3333
FAX: (330) 743-3960

AT LEAST TEN (10) WORKING DAYS PRIOR TO THE START OF THE DEMOLITION OF THE BRIDGES, THE CONTRACTOR SHALL PROVIDE A COPY OF THE COMPLETED FORM TO THE ENGINEER. INFORMATION REQUIRED ON THE FORM WILL INCLUDE: 1) THE CONTRACTORS 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 METHODS TO BE USED. A COPY OF THE OEPA FORM IS AVAILABLE FOR INSPECTION AT THE ODOT DISTRICT 4 OFFICE.
2088 SOUTH ARLINGTON ROAD, AKRON, OHIO, 44306-4243.

BAISIS FOR PAYMENT-THE CONTRACTOR SHALL FURNISH ALL FEES, LABOR, AND MATERIAL NECESSARY TO COMPLETE AND SUBMIT THE OEPA NOTIFICATION FORM. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN ITEM 202-PORIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.

ASBESTOS NOTIFICATION STRUCTURE NO. MAH-680-333R (SFN: 5006635)

AN ASBESTOS SURVEY OF THE IR-680 BRIDGE OVER CHERRY HILL AVENUE (SFN: 5006635) FOR REHABILITATION 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:

MAHONING-TRUMBULL AIR POLLUTION CONTROL
345 OAK HILL AVE., SUITE 200
YOUNGSTOWN, OH 44502
ATTN.: TARA GIOFFI
(330) 743-3333
FAX: (330) 743-3960

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 CONTRACTORS 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 METHODS 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

BAISIS FOR PAYMENT-THE CONTRACTOR SHALL FURNISH ALL FEES, LABOR, AND MATERIAL NECESSARY TO COMPLETE AND SUBMIT THE OEPA NOTIFICATION FORM. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN ITEM 202-PORIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.

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2088 SOUTH ARLINGTON ROAD, AKRON, OHIO, 44306-4243.

BAISIS FOR PAYMENT-THE CONTRACTOR SHALL FURNISH ALL FEES, LABOR, AND MATERIAL NECESSARY TO COMPLETE AND SUBMIT THE OEPA NOTIFICATION FORM. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN ITEM 202-PORIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.

ASBESTOS NOTIFICATION STRUCTURE NO. MAH-680-333R (SFN: 5006635)

AN ASBESTOS SURVEY OF THE IR-680 BRIDGE OVER CHERRY HILL AVENUE (SFN: 5006635) FOR REHABILITATION 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:

MAHONING-TRUMBULL AIR POLLUTION CONTROL
345 OAK HILL AVE., SUITE 200
YOUNGSTOWN, OH 44502
ATTN.: TARA GIOFFI
(330) 743-3333
FAX: (330) 743-3960

DESIGNED	DATE	12/31/2015
DRAWN	LAH	
CHECKED	LAH	
REVISED	STRUCTURE FILE NUMBER	5006635/5006600

GENERAL NOTES - 2
 BRIDGE OVER CHERRY HILL AVENUE
 I.R. 680 OVER CHERRY HILL AVENUE

MAH-680-3-25
 PID No. 96637

4 / 46
 80
 163

ITEM	EXTENSION	DATE: 11/9/2016	DATE: 11/20/2016	TOTAL OI/MS/BR	UNIT	DESCRIPTION	ABUT.	PIERS	SUPER	GEN.	STRUCTURAL FILE NUMBER: 5006600	REFERENCE SHEET NO.
202	11203	LS			LS	PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN						3/46, 4/46, AND 9/46
202	22900	133			SY	APPROACH SLAB REMOVED				133		
202	23500	793			SY	WEARING COURSE REMOVED				793		
202	32800	52			SY	CONCRETE SLOPE PROTECTION REMOVED				52		
503	11000	LS			LS	COFFERDAMS AND EXCAVATION BRACING						3/46
503	21301	LS			LS	UNCLASSIFIED EXCAVATION, AS PER PLAN						
509	10001	73,951			LB	EPOXY COATED REINFORCING STEEL, AS PER PLAN	4,014	720	69,217			3/46
510	10000	348			EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT	288	60				
511	21522	227			CY	CLASS O22 CONCRETE WITH OC/OA, SUPERSTRUCTURE			227			
511	33500	2			EACH	SEMI-INTEGRAL DIAPHRAGM GUIDE	2					
511	34450	48			CY	CLASS O22 CONCRETE WITH OC/OA, BRIDGE DECK (PARAPET)			48			
511	41010	2			CY	CLASS O21 CONCRETE, PIER ABOVE FOOTINGS		2				
511	44110	26			CY	CLASS O21 CONCRETE, ABUTMENT NOT INCLUDING FOOTING	26					
512	10100	664			SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	81	240	343			
512	33000	3			SY	TYPE 2 WATERPROOFING	3					
512	74000	234			SY	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES		234				
513	02000	5,345			LB	STRUCTURAL STEEL MEMBERS, LEVEL UP			5,345			
513	20000	2,376			EACH	WELDED STUD SHEAR CONNECTORS			2,376			2,510
513	90000	2,510			LB	STRUCTURAL STEEL, MISC.: (REPLACEMENT OF CROSSFRAMES)						
514	00100	LS			LS	SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL						
514	00200	LS			LS	FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT						
514	00300	LS			LS	FIELD PAINTING OF EXISTING STRUCTURAL STEEL, INTERMEDIATE COAT						
514	00400	LS			LS	FIELD PAINTING OF EXISTING STRUCTURAL STEEL, FINISH COAT						
514	00504	14			MHR	GRINDING PINS, TEARS, SILVERS ON EXISTING STRUCTURAL STEEL			14			
514	10000	8			EACH	FINAL INSPECTION REPAIR			8			
516	10010	82			FT	ARMORLESS PREFORMED JOINT SEAL				82		
516	19600	16			SF	1" PREFORMED EXPANSION JOINT FILLER				16		
516	19900	177			SF	2" PREFORMED EXPANSION JOINT FILLER	177					
516	4020	107			FT	SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL	107					
516	44100	12			EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (INCORP. 1/8" x 14" x 2.95" WITH 1/4" x 15" x 15" VARIES LOAD PLATE)	12					24/46
516	44101	12			EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (INCORP. 1/8" x 15" x 2.04" WITH 1/4" x 16" x 1.50" LOAD PLATE)	12					3/46
516	47001	LS			LS	JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN						
518	12200	8			EACH	SCUPPERS, INCLUDING SUPPORTS				8		
518	12201	2			EACH	SCUPPERS, INCLUDING SUPPORTS, AS PER PLAN				2		43/46
518	21200	63			CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC				63		
518	40000	124			FT	6" PERFORATED CORRUGATED PLASTIC PIPE				124		
518	40001	37			FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS, AS PER PLAN				37		15/46 and 18/46
518	5101	32			FT	8" PIPE DOWNSPOUT, INCLUDING SPECIALS, AS PER PLAN				32		43/46
518	60031	24			FT	PIPE HORIZONTAL CONDUCTOR, AS PER PLAN				24		43/46
519	1101	24			SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN				24		4/46
526	25000	220			SY	REINFORCED CONCRETE APPROACH SLABS (T=15')	220					
526	90030	83			FT	TYPE C INSTALLATION	83					
601	12000	4			SY	RIPPRAP, WITH GROUT				4		
601	21001	52			SY	CONCRETE SLOPE PROTECTION, AS PER PLAN						10/46
607	39900	263			FT	VANDAL PROTECTION FENCE, 6' STRAIGHT, COATED FABRIC			263			
630	02000	21			FT	GROUND MOUNTED SUPPORT, NO. 2 POST				21		
630	80000	6			SF	SIGN FLAT SHEET				6		
630	80001	1			SF	SIGN FLAT SHEET, AS PER PLAN (130.2)				1		4/46
630	84900	3			EACH	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL				3		
630	86002	2			EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL				2		

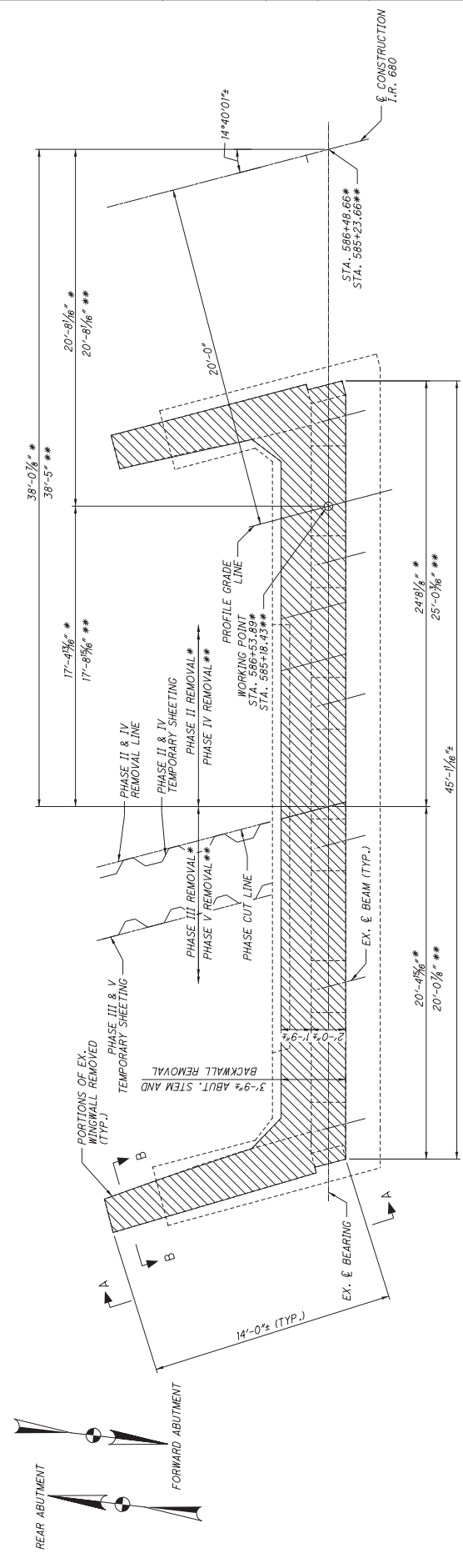
NO.	DATE	DESCRIPTION
1	3/3/18	ADJUSTED QUANTITIES

MAH-680-3.25

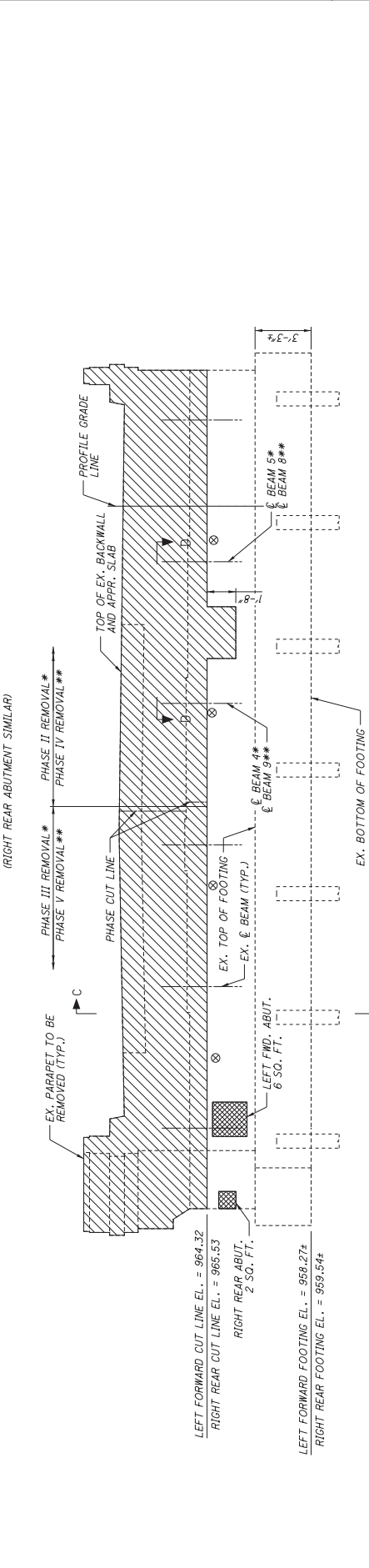
ADJUSTED QUANTITIES

ISSUE RECORD

ITEM	EXTENSION	TOTAL DIMS/BR	UNIT	DESCRIPTION	ABUT.	PIERS	SUPER	GEN.	REFERENCE SHEET NO.
202	10203	LS		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN					
202	22900	133	SY	APPROACH SLAB REMOVED				133	3/46, 4/46, AND 9/46
202	23600	249	SY	WEARING COURSE REMOVED				249	
202	32800	144	SY	CONCRETE SLOPE PROTECTION REMOVED				144	
503	1100	LS		CORRERS AND EXCAVATION BRACING					
503	21501	LS		UNCLASSIFIED EXCAVATION, AS PER PLAN					3/46
509	10001	69,039	LB	EPOXY COATED REINFORCING STEEL, AS PER PLAN	4,018	720	64,301		3/46
510	10000	348	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT	288	60			
511	21522	214	CY	CLASS OC2 CONCRETE WITH CO2/O4, SUPERSTRUCTURE	2		214		
511	33500	2	EACH	SEMI-INTEGRAL DIAPHRAGM GUIDE					
511	34450	45	CY	CLASS OC2 CONCRETE WITH CO2/O4, BRIDGE DECK (PARAPET)			45		
511	41010	2	CY	CLASS OC1 CONCRETE, PIER ABOVE FOOTINGS		2			
511	44110	26	CY	CLASS OC1 CONCRETE, ABUTMENT NOT INCLUDING FOOTING	26				
512	10100	609	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	81	205	322		
512	33000	3	SY	TYPE 2 WATERPROOFING	3				
512	74000	198	SY	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES		198			
513	20000	2,244	EACH	WELDED STUD SHEAR CONNECTORS			2,244		
513	90000	1,329	LB	STRUCTURAL STEEL, MISC.; REPLACEMENT OF CROSSFRAMES				1,329	
514	00100	LS		SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL					
514	00200	LS		FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT					
514	00300	LS		FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT					
514	00400	LS		FIELD PAINTING STRUCTURAL STEEL, FINISH COAT					
514	00504	13	MNHR	GRINDING FINIS, TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL		13			
514	10000	8	EACH	FINAL INSPECTION REPAIR		8			
516	10010	82	FT	ARMORLESS PERFORMED JOINT SEAL				82	
516	13600	16	SF	1" PREFORMED EXPANSION JOINT FILLER				16	
516	13900	177	SF	2" PREFORMED EXPANSION JOINT FILLER	177				
516	14020	107	FT	SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL	107				
516	44100	12	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (13" x 14" x 2.95" WITH 14" x 15" x VARIES LOAD PLATE)	12				24/46
516	44101	12	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (10" x 15" x 2.04" WITH 11" x 16" x 1.50" LOAD PLATE)	12				3/46
516	47001	LS		JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN					
518	12200	2	EACH	SCUPEERS, INCLUDING SUPPORTS			2		
518	21000	62	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	62				
518	40000	124	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	124				
518	40011	37	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS, AS PER PLAN	37				15/46 and 18/46
519	1101	14	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN	14				4/46
526	25000	220	SY	REINFORCED CONCRETE APPROACH SLABS (T-157)	220				
526	90030	83	FT	TYPE C INSTALLATION	83				
601	21001	151	SY	CONCRETE SLOPE PROTECTION, AS PER PLAN	151				10/46
607	39900	243	FT	VANDUJL PROTECTION FENCE, 6' STRAIGHT, COATED FABRIC			243		
630	02100	21	FT	GROUND MOUNTED SUPPORT, NO. 2 POST				21	
630	80100	6	SF	SIGN, FLAT SHEET				6	
630	80101	7	SF	SIGN, FLAT SHEET, AS PER PLAN (730.2)				7	
630	84900	3	EACH	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL				3	4/46
630	86002	2	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL				2	



PLAN - LEFT FORWARD ABUTMENT SHOWN
 (RIGHT REAR ABUTMENT SIMILAR)



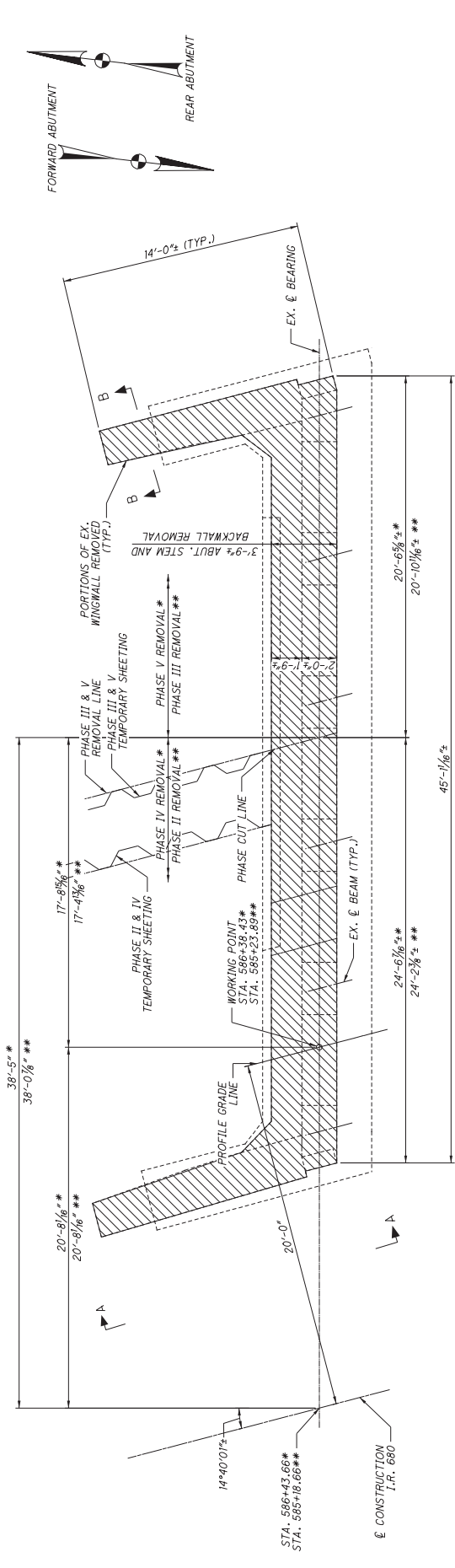
ELEVATION

- NOTES:**
- FOR VIEWS A-A AND D-D, AND SECTIONS B-B AND C-C, SEE SHEET 97/46.
 - THE TOTAL ESTIMATED QUANTITY FOR ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN, HAS BEEN ADJUSTED BY 50% OVER FIELD MEASURED AREAS. FINAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.
 - THE ANCHOR RODS FOR THE EXISTING BEARINGS SHALL BE CUT FLUSH WITH THE CUT LINE.

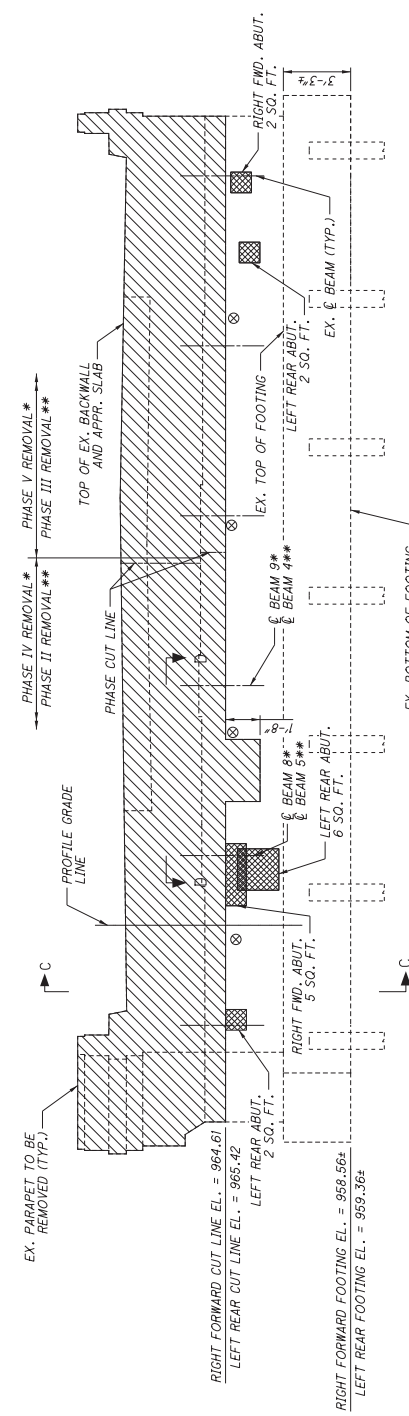
SUMMARY OF PATCHING QUANTITIES

BRIDGE	ABUTMENT	SO. FT.
LEFT	REAR	10
RIGHT	REAR	2
LEFT	FORWARD	6
RIGHT	FORWARD	7
TOTAL		25
ADJUSTED TOTAL		38







- LEGEND:**
- [Hatched pattern] = INDICATES REMOVAL PER ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN, OVER 20 FOOT SPAN, AS PER PLAN
 - [Cross-hatched pattern] = INDICATES PATCHING PER ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN
 - * = LEFT FORWARD ABUTMENT
 - ** = RIGHT REAR ABUTMENT
 - ⊗ = INDICATES PLUGGED 4" DIA. WEEPHOLE



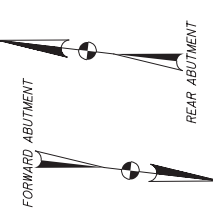
PLAN - RIGHT FORWARD ABUTMENT SHOWN
(LEFT REAR ABUTMENT SIMILAR)

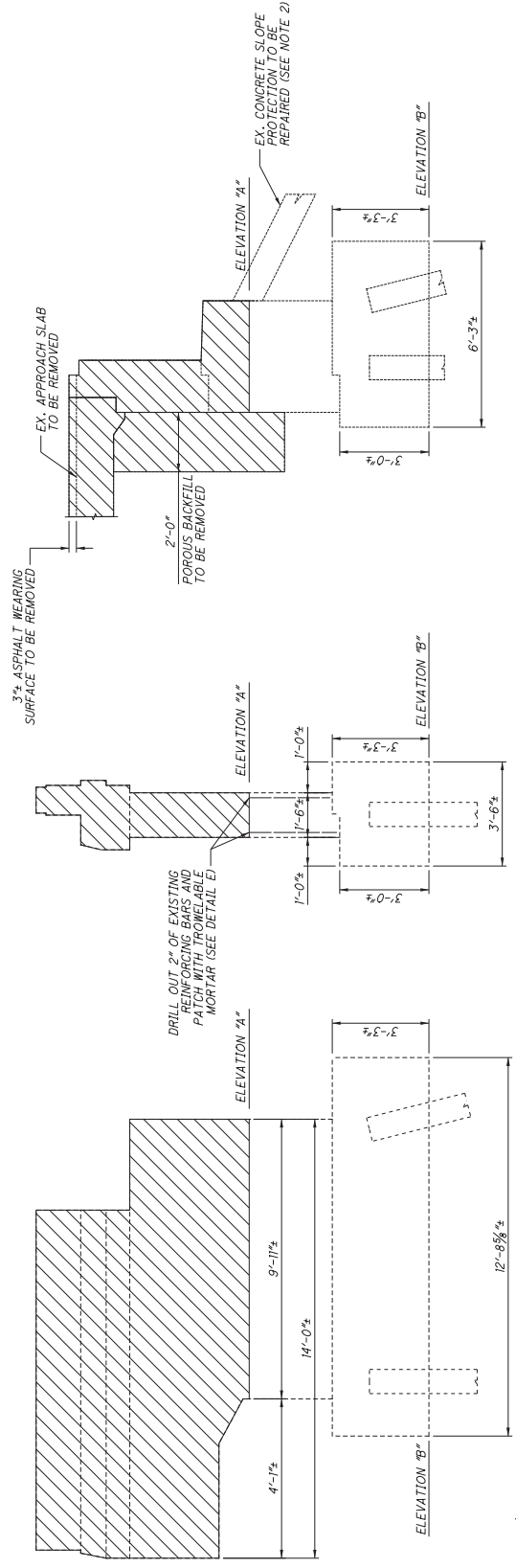


ELEVATION

- LEGEND:**
-  = INDICATES REMOVAL PER ITEM - 202
 -  = INDICATES REMOVAL PER ITEM - 202 OVER 200' SPAN AS PER PLAN
 -  = INDICATES PATCHING PER ITEM E19 - AS PER PLAN
 -  = RIGHT FORWARD ABUTMENT
 -  = LEFT REAR ABUTMENT
 -  = INDICATES PLUGGED 4" DIA. WEEPHOLE

- NOTES:**
1. FOR VIEW A-A AND D-D, AND SECTIONS B-B AND C-C, SEE SHEET 97461.
 2. FOR SUMMARY OF PATCHING QUANTITIES, SEE SHEET 17461.
 3. THE ANCHOR RODS FOR THE EXISTING BEARINGS SHALL BE CUT FLUSH WITH THE CUT LINE.





SECTION C-C

SECTION B-B

VIEW A-A

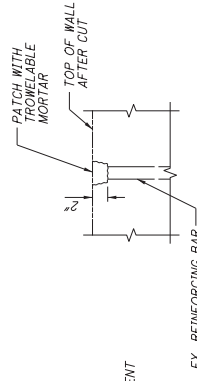
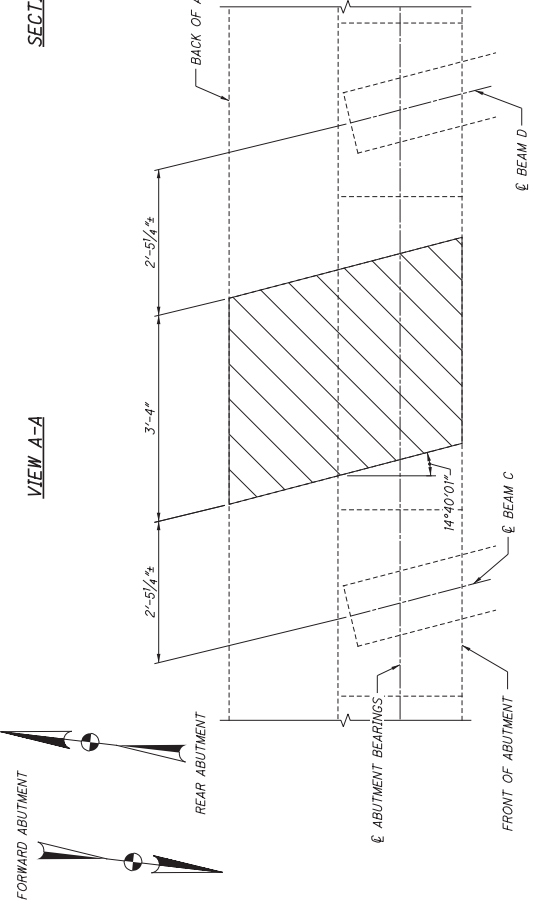


TABLE OF BEAMS AND ELEVATIONS

BRIDGE	ABUTMENT	"A"	"B"	"C"	"D"
LEFT	FORWARD	964.32	968.27±	BEAM 4	BEAM 5
	REAR	965.42	969.36±	BEAM 5	BEAM 4
RIGHT	FORWARD	964.61	968.56±	BEAM 8	BEAM 9
	REAR	965.53	969.54±	BEAM 9	BEAM 8

(INCLUDE THIS WORK WITH ITEM 202 - PORTIONS OF STRUCTURE REMOVED, AS PER PLAN FOR PAYMENT)

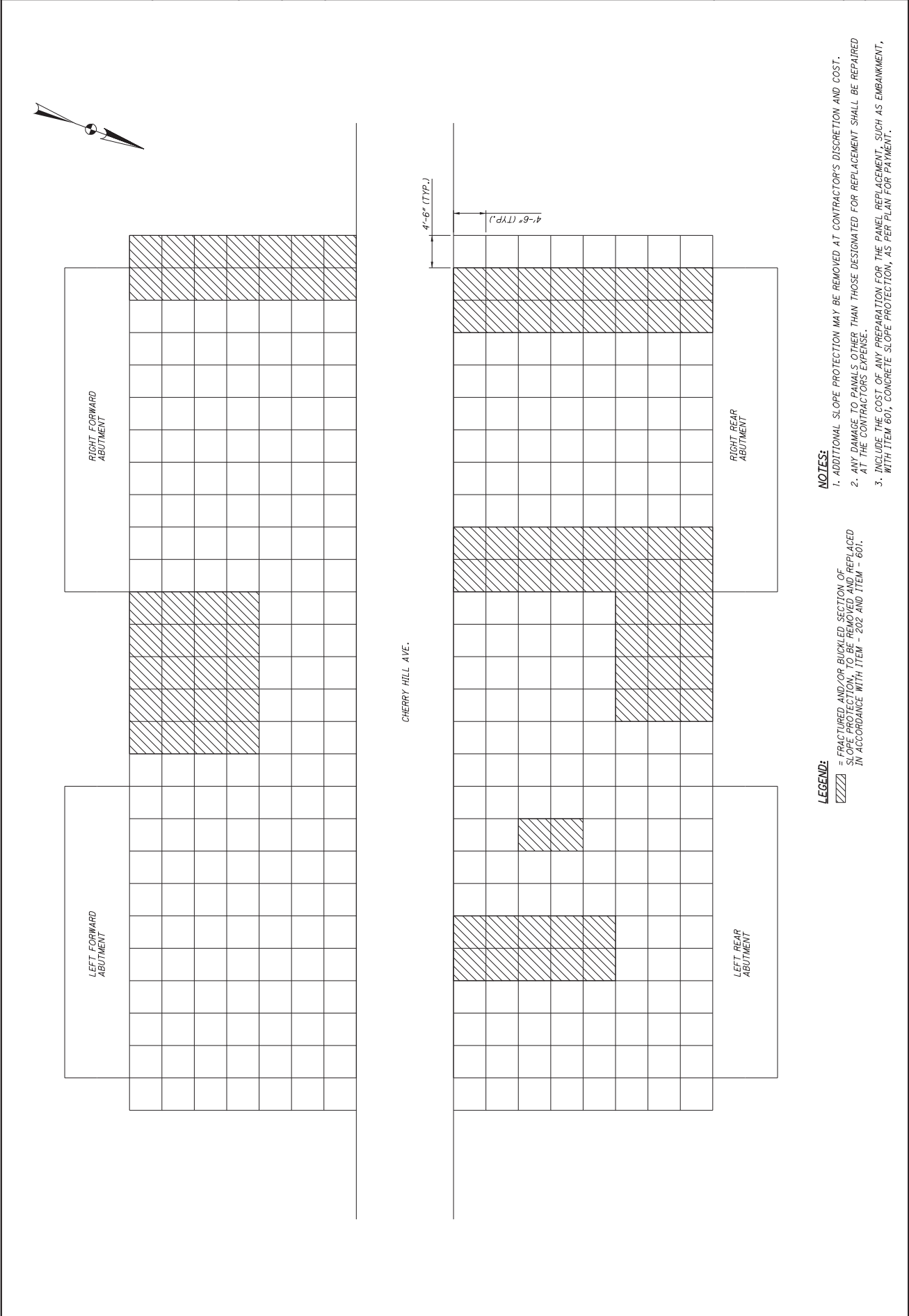


NOTES:

- FOR LOCATIONS OF VIEW A-A AND D-D, AND SECTIONS B-B AND C-C, SEE SHEETS 17/46 AND 18/46.
- FOR CONCRETE SLOPE PROTECTION DETAILS, SEE SHEET 10/46.

LEGEND:

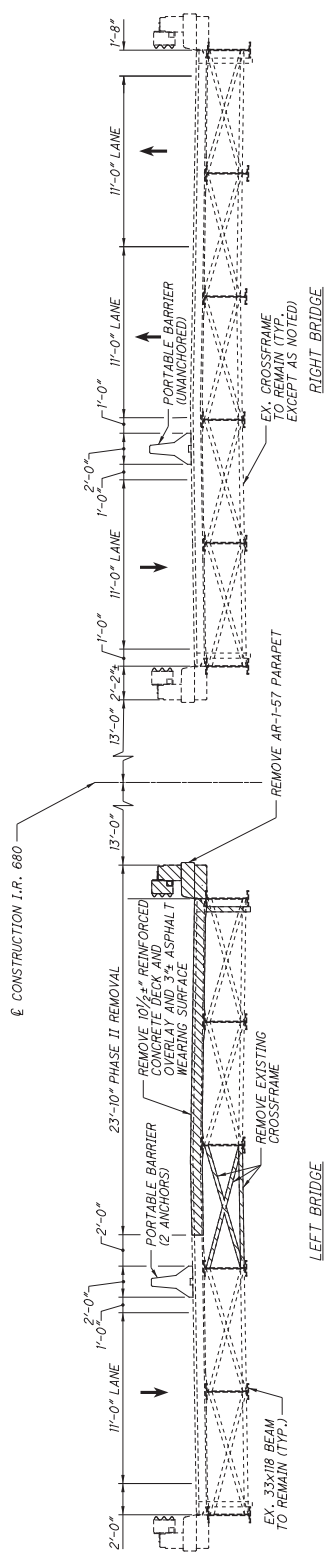
▨ = INDICATES REMOVAL PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN



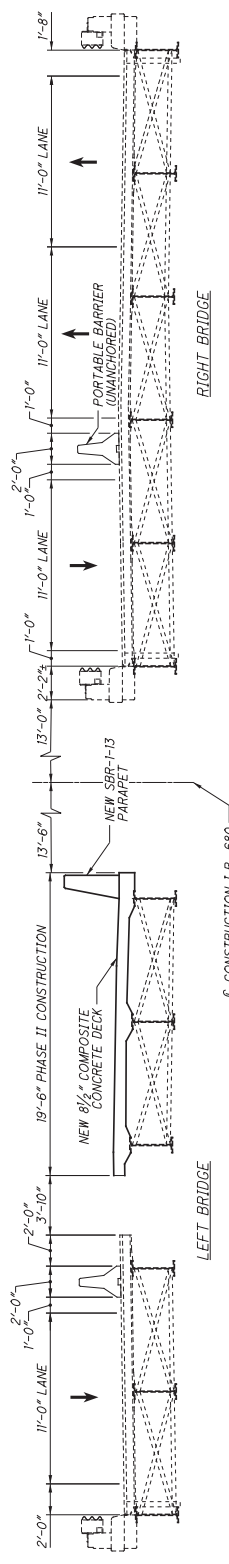
LEGEND:
 [Hatched Box] = FRACTURED AND/OR BUCKLED SECTION OF SLOPE PROTECTION, TO BE REMOVED AND REPLACED IN ACCORDANCE WITH ITEM - 202 AND ITEM - 601.

NOTES:
 1. ADDITIONAL SLOPE PROTECTION MAY BE REMOVED AT CONTRACTOR'S DISCRETION AND COST.
 2. ANY DAMAGE TO PANELS OTHER THAN THOSE DESIGNATED FOR REPLACEMENT SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
 3. INCLUDE THE COST OF ANY PREPARATION FOR THE PANEL REPLACEMENT, SUCH AS EMBANKMENT, WITH ITEM 601, CONCRETE SLOPE PROTECTION, AS PER PLAN FOR PAYMENT.

X:\96637\Design\Structures\MAH680-0333C\Sheets\680-0333C-SV004.dgn Sheet 3/6/2018 1:39:31 PM miles



LEFT BRIDGE
 PHASE II REMOVAL



LEFT BRIDGE
 PHASE II CONSTRUCTION



RIGHT BRIDGE
 PHASE II REMOVAL



RIGHT BRIDGE
 PHASE II CONSTRUCTION

€ CONSTRUCTION I.R. 680

€ CONSTRUCTION I.R. 680

PHASE II CONSTRUCTION SEQUENCE:

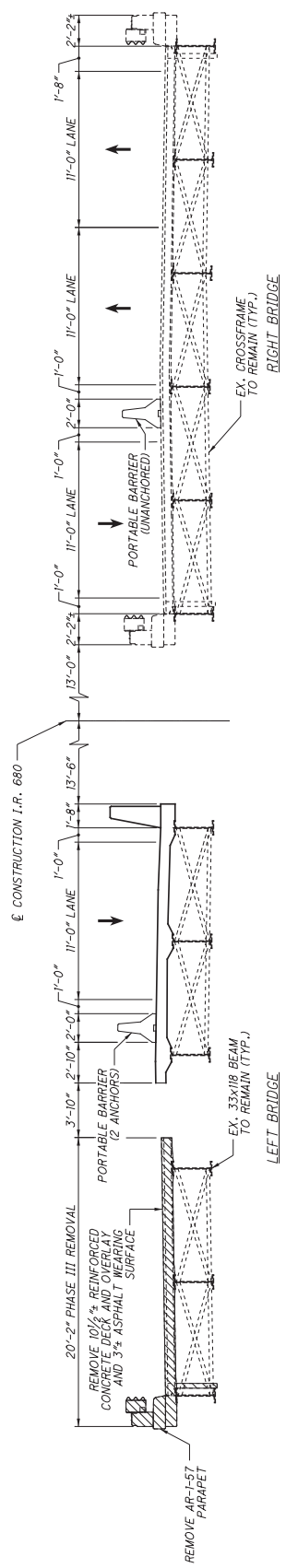
1. INSTALL PORTABLE BARRIERS AND MAINTAIN 4 LANES OF TRAFFIC AS SHOWN.
2. REMOVE EXISTING CONCRETE DECK, HAUNCHES, PARAPET, SCUPPERS, SCUPPER SLABS, AND APPROACH SLABS TO THE LIMITS SHOWN IN THE PLANS. REMOVE CROSSFRAMES BETWEEN BEAMS 3 AND 4.
3. JACK PHASE II SUPERSTRUCTURE TO PROPOSED PROFILE GRADE.
4. REMOVE EXISTING PHASE II BEARINGS, END CROSSFRAMES, AND CROSSFRAMES BETWEEN BEAMS 1 AND 2. WELD NEW WELDED SPLICE RETROFIT PLATES AT BEAMS 4, 5, AND 6 AS SHOWN IN THE PLANS.
5. INSTALL TEMPORARY SHEETING, AS NECESSARY.
6. REMOVE EXISTING PHASE II ABUTMENT BACKWALL AND STEM TO THE LIMITS SHOWN IN THE PLANS.
7. CONSTRUCT PHASE II ABUTMENT AND PIER CAP AND INSTALL NEW BEARINGS.
8. LOWER PHASE II SUPERSTRUCTURE ONTO NEW BEARINGS AND WELD BEARINGS TO BEAMS.
9. WELD NEW SHEAR STUDS TO BEAMS AND INSTALL WELDED COVER PLATE RETROFITS AND ASSOCIATED CROSSFRAME REPLACEMENTS.
10. CONSTRUCT NEW PHASE II CONCRETE DECK AND SEMI-INTEGRAL DIAPHRAGM.
11. POUR NEW PHASE II PARAPET.

LEGEND:

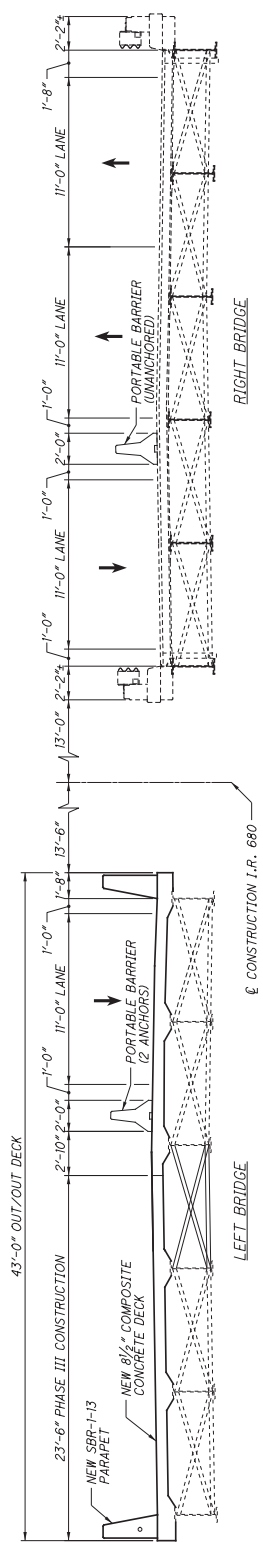
||||| = INDICATES REMOVAL PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN

NOTES:

1. PHASE CONSTRUCTION DETAILS CONTINUED ON SHEETS [2746] THRU [2746].



PHASE III REMOVAL



PHASE III CONSTRUCTION

PHASE III CONSTRUCTION SEQUENCE:

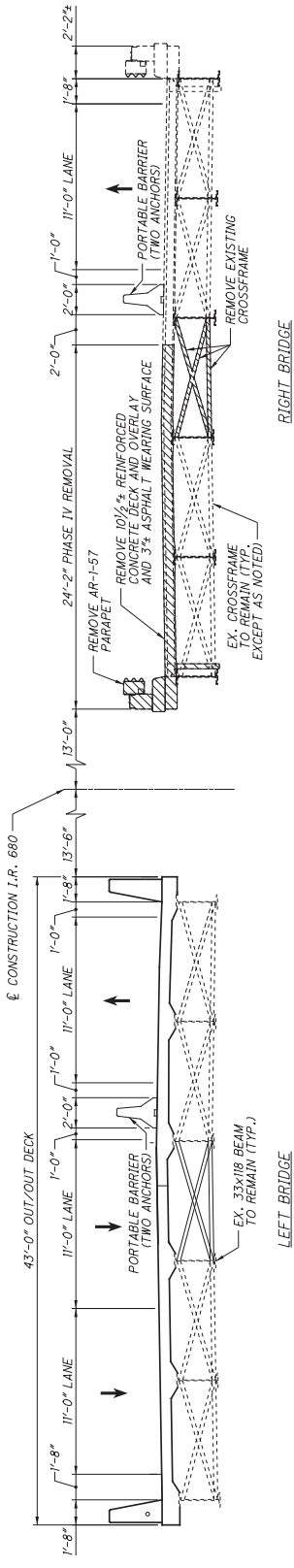
1. INSTALL PORTABLE BARRIER AND MAINTAIN 4 LANES OF TRAFFIC AS SHOWN.
2. REMOVE THE EXISTING CONCRETE DECK, HAUNCHES, PARAPET, SCUPPERS, SCUPPER SUPPORTS, LIGHT POLES, AND APPROACH SLABS TO THE LIMITS SHOWN IN THE PLANS.
3. JACK PHASE III SUPERSTRUCTURE TO PROPOSED PROFILE GRADE.
4. REMOVE EXISTING PHASE III BEARINGS, END CROSSFRAMES, AND CROSSFRAMES THAT WILL INTERFERE WITH INSTALLATION OF THE NEW WELDED SPlice RETROFIT PLATES AT BEAMS 1 THROUGH 3 AS SHOWN IN THE PLANS.
5. INSTALL TEMPORARY SHEETING, AS NECESSARY.
6. REMOVE EXISTING PHASE III ABUTMENT BACKWALL AND STEM TO THE LIMITS SHOWN IN THE PLANS.
7. CONSTRUCT PHASE III ABUTMENT AND PIER GAP AND INSTALL NEW BEARINGS.
8. LOWER PHASE III SUPERSTRUCTURE ONTO NEW BEARINGS AND WELD BEARINGS TO BEAMS. INSTALL NEW CROSSFRAMES BETWEEN BEAMS 3 AND 4.
9. WELD NEW SHEAR STUDS TO BEAMS AND INSTALL WELDED COVER PLATE RETROFITS AND ASSOCIATED CROSSFRAME REPLACEMENTS.
10. CONSTRUCT NEW PHASE III CONCRETE DECK AND SEMI-INTEGRAL DIAPHRAGM.

LEGEND:

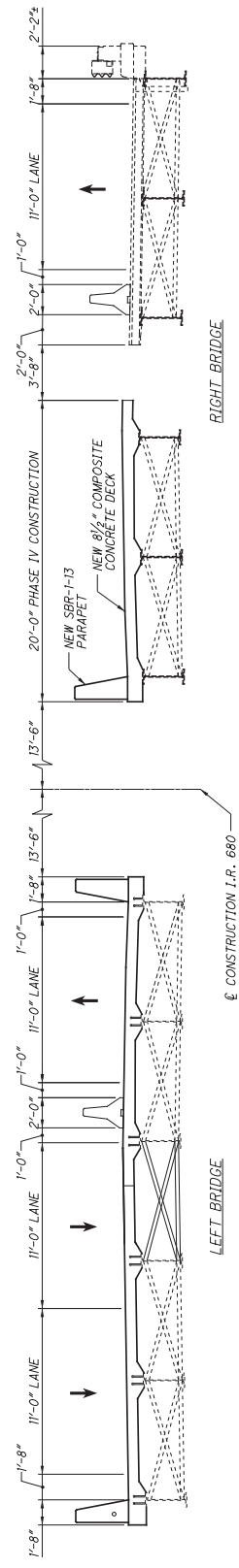
= INDICATES REMOVAL PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN

NOTES:

1. PHASE CONSTRUCTION DETAILS CONTINUED ON SHEET 13/46 AND 14/46.



PHASE IV REMOVAL



PHASE IV CONSTRUCTION

PHASE IV CONSTRUCTION SEQUENCE:

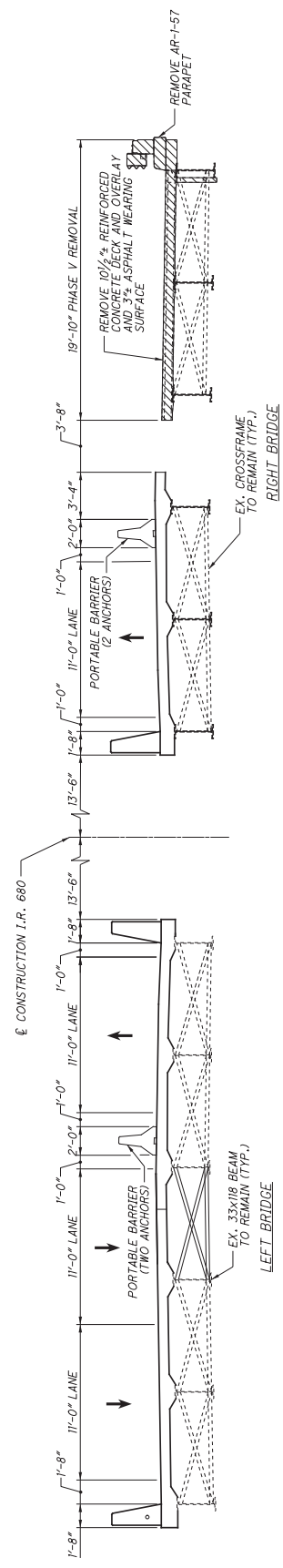
1. INSTALL PORTABLE BARRIERS AND MAINTAIN 4 LANES OF TRAFFIC AS SHOWN.
2. REMOVE EXISTING CONCRETE DECK, HAUNCHES, PARAPET, SCUPPERS, SCUPPER CROSSFRAMES BETWEEN BEAMS 9 AND 10.
3. JACK PHASE IV SUPERSTRUCTURE TO PROPOSED PROFILE GRADE.
4. REMOVE EXISTING PHASE IV BEARINGS, END CROSSFRAMES, AND CROSSFRAMES THAT WILL INTERFERE WITH INSTALLATION OF THE NEW WELDED SPLICE RETROFIT PLATES AT BEAMS 7, 8, AND 9, AS SHOWN IN THE PLANS.
5. INSTALL TEMPORARY SHEETING, AS NECESSARY.
6. REMOVE EXISTING PHASE IV ABUTMENT BACKWALL AND STEM TO THE LIMITS SHOWN IN THE PLANS.
7. CONSTRUCT PHASE IV ABUTMENT AND PIER CAP AND INSTALL NEW BEARINGS.
8. LOWER PHASE IV SUPERSTRUCTURE ONTO NEW BEARINGS AND WELD BEARINGS TO BEAMS.
9. WELD NEW SHEAR STUDS TO BEAMS AND INSTALL WELDED COVER PLATE RETROFITS AND ASSOCIATED CROSSFRAME REPLACEMENTS.
10. CONSTRUCT NEW PHASE IV CONCRETE DECK AND SEMI-INTEGRAL DIAPHRAGM.
11. POUR NEW PHASE IV PARAPET.

LEGEND:

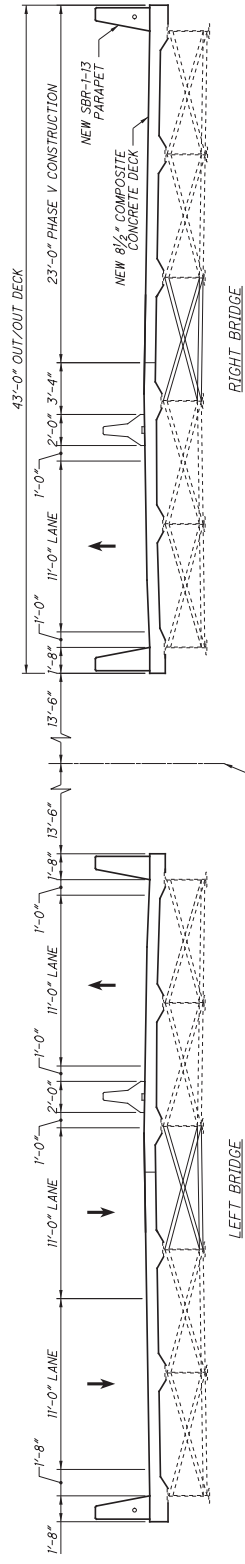
▨ = INDICATES REMOVAL PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN

NOTES:

I. PHASE CONSTRUCTION DETAILS CONTINUED ON SHEET 14/46.



PHASE V REMOVAL



PHASE V CONSTRUCTION

PHASE V CONSTRUCTION SEQUENCE:

1. INSTALL PORTABLE BARRIER AND MAINTAIN 4 LANES OF TRAFFIC AS SHOWN.
2. REMOVE EXISTING CONCRETE DECK, HAUNCHES, PARAPET, SCURPERS, SCURPERS SUPPORTS, LIGHT POLES, AND APPROACH SLABS TO THE LIMITS SHOWN IN THE PLANS.
3. JACK PHASE V SUPERSTRUCTURE TO PROPOSED PROFILE GRADE.
4. REMOVE EXISTING PHASE V BEARINGS, END CROSSFRAMES, AND CROSSFRAMES. REINFORCE THE ABUTMENT WALLS WITH STEEL PLATE AND WELDED SPLICE RETROFIT PLATES AT BEAMS 10, 11, AND 12, AS SHOWN IN THE PLANS.
5. INSTALL TEMPORARY SHEETING, AS NECESSARY.
6. REMOVE EXISTING PHASE V ABUTMENT BACKWALL TO THE LIMITS SHOWN IN THE PLANS.
7. CONSTRUCT PHASE V ABUTMENT AND PIER CAP AND INSTALL NEW BEARINGS.
8. LOWER PHASE V SUPERSTRUCTURE ONTO NEW BEARINGS AND WELD BEARINGS TO BEAMS. INSTALL NEW CROSSFRAMES BETWEEN BEAMS 9 AND 10.
9. WELD NEW SHEAR STUDS TO BEAMS AND INSTALL WELDED COVER PLATE RETROFITS AND ASSOCIATED CROSSFRAME REPLACEMENTS.
10. CONSTRUCT NEW PHASE V CONCRETE DECK AND SEMI-INTEGRAL DIAPHRAGM.
11. FOUR NEW PHASE V PARAPET.

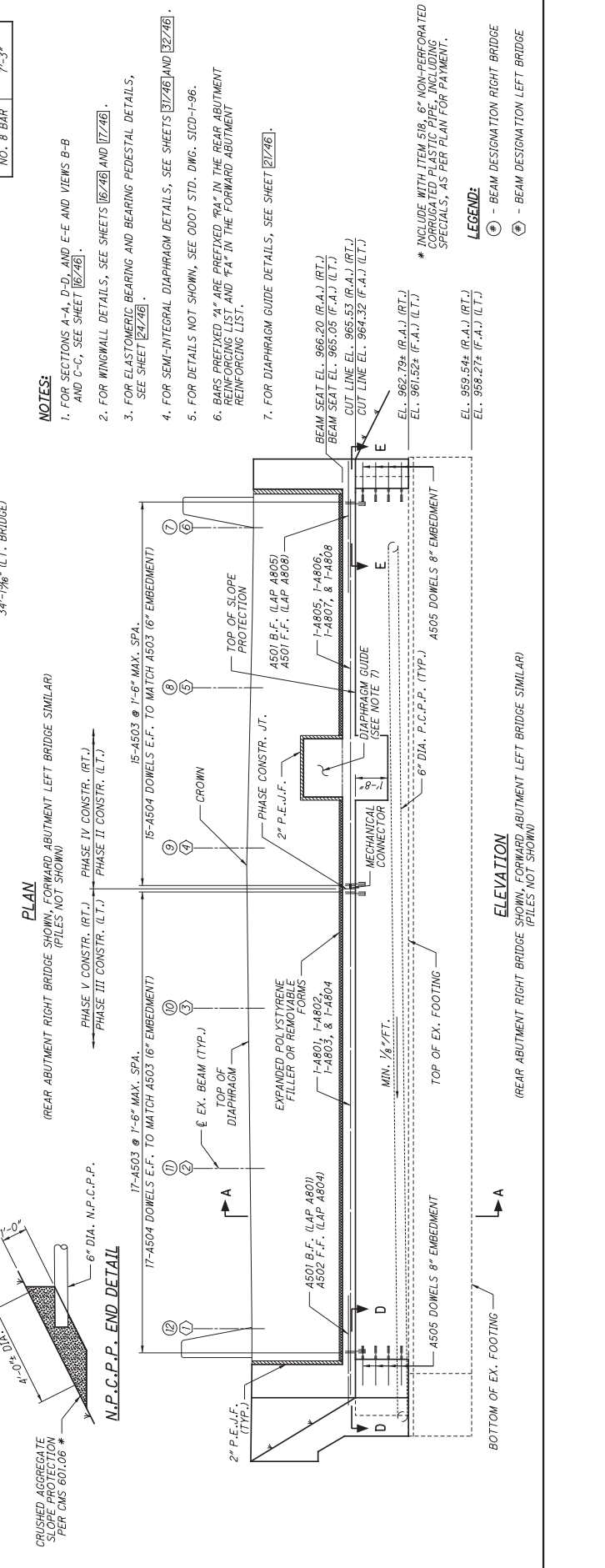
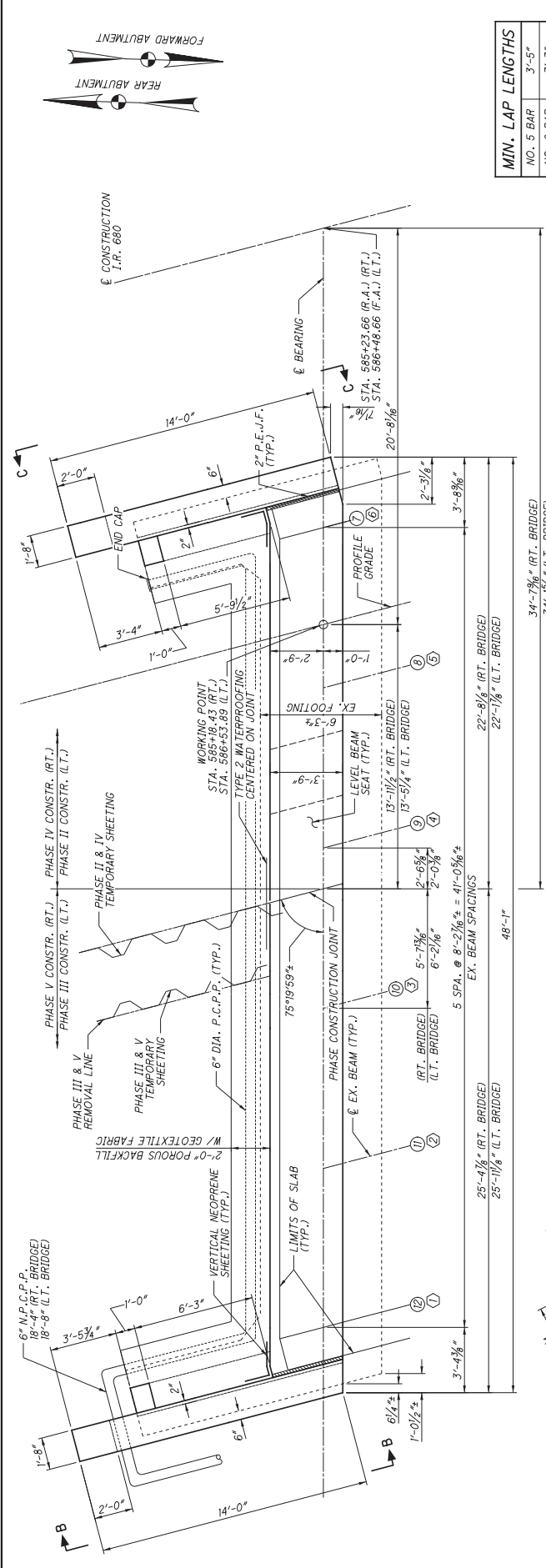
12. REMOVE PORTABLE CONCRETE BARRIERS AND SEAL ANCHOR HOLES IN DECK.
13. PLACE ROADWAY STRIPING.
14. SEAL PARAPETS AND DECK OVERHANGS WITH EPOXY-URETHANE.

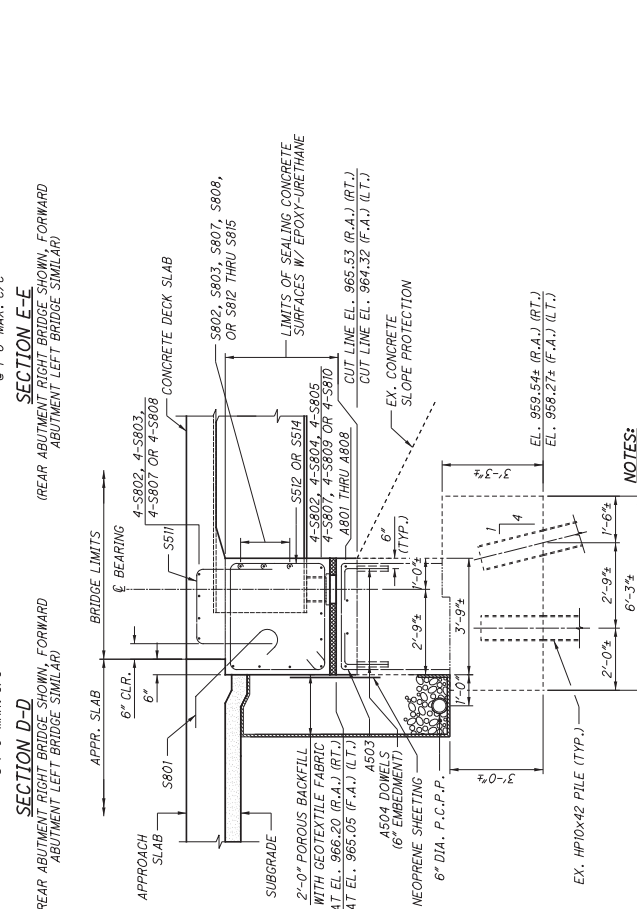
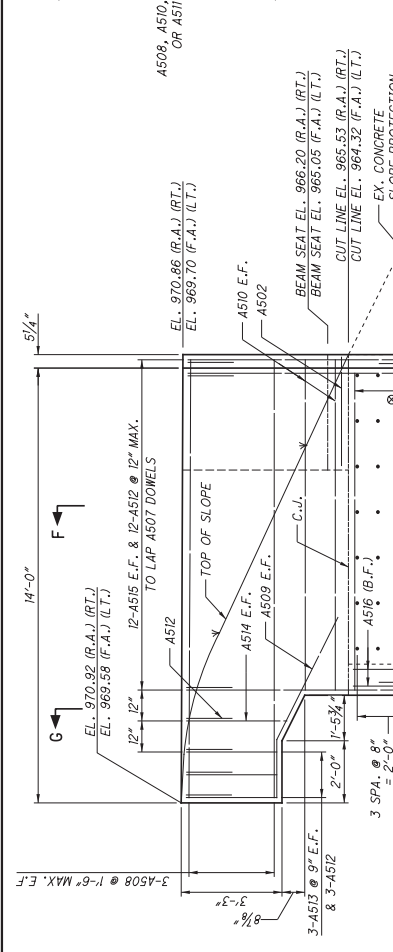
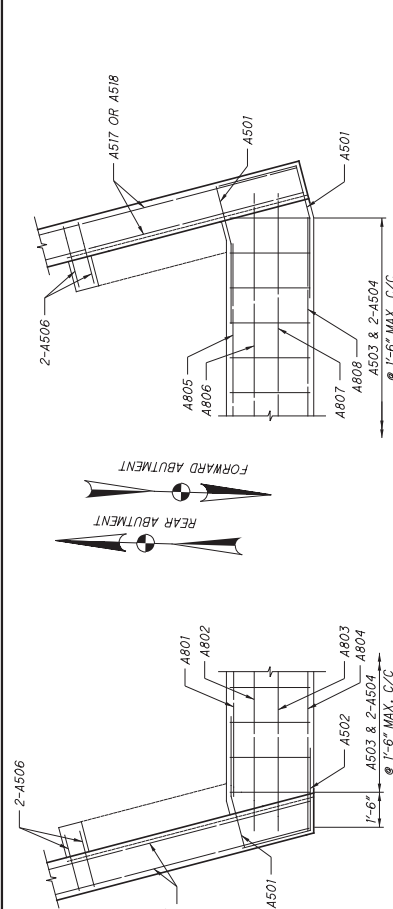
LEGEND:

 = INDICATES REMOVAL PER ITEM 202 - PORTIONS OF SUPERSTRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN

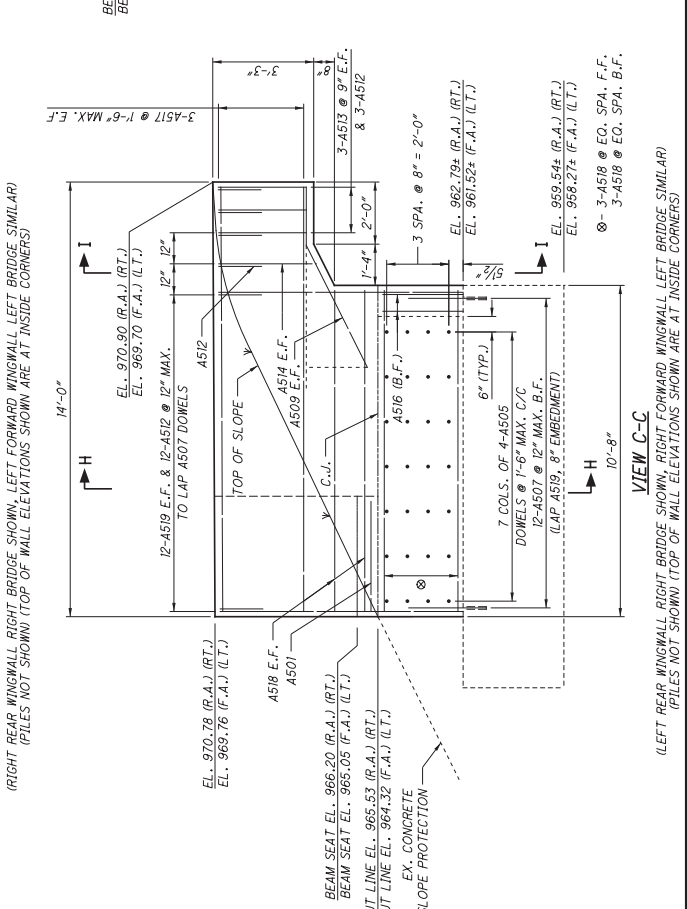
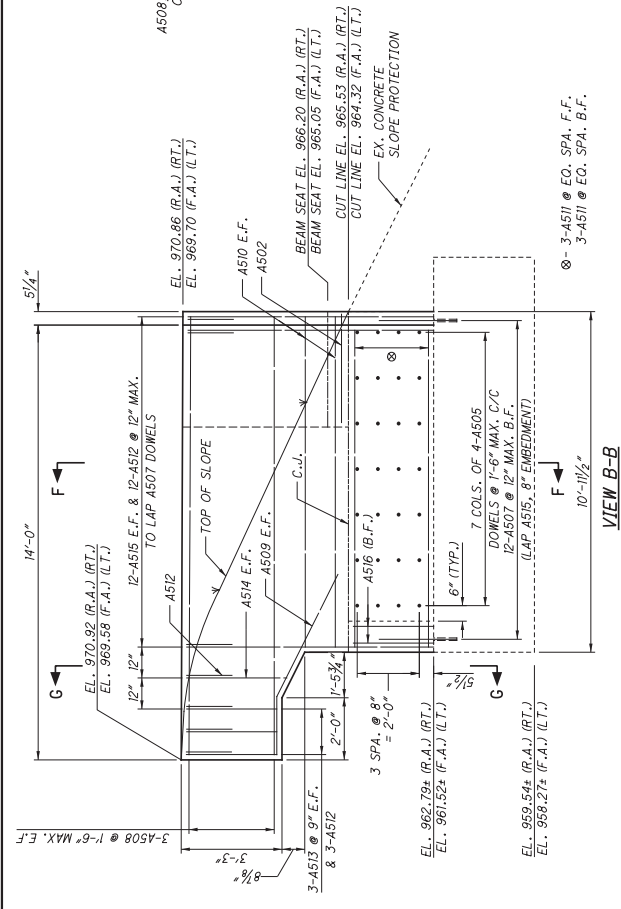
NOTES:

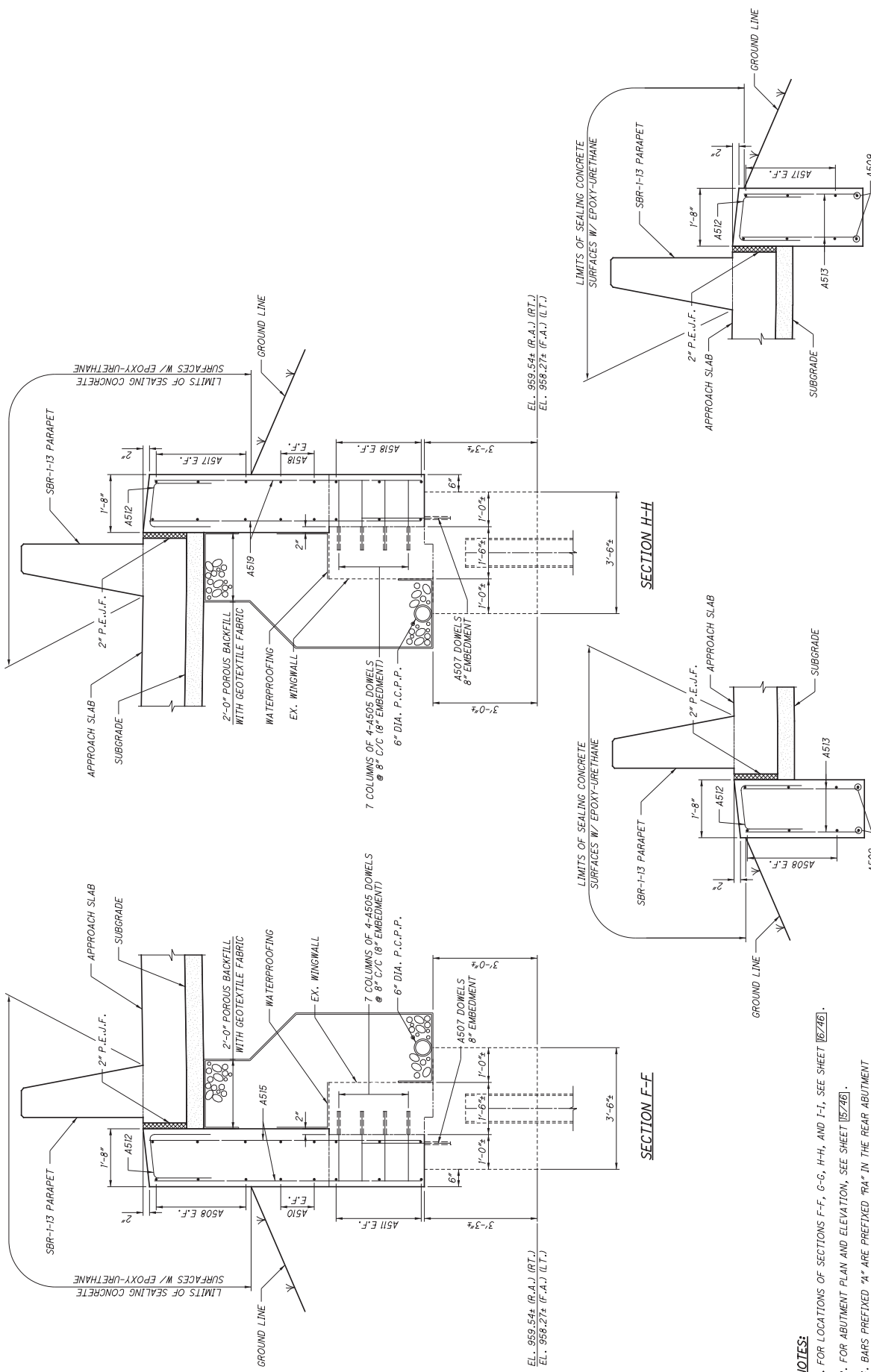
1. FOR ADDITIONAL PHASE CONSTRUCTION DETAILS SEE SHEETS 12/46 THRU 13/46.





- NOTES:**
1. FOR LOCATIONS OF SECTIONS A-A, D-D, AND E-E AND VIEWS B-B AND C-C, SEE SHEET 15246.
 2. FOR SECTIONS F-F, G-G, H-H, AND I-I, SEE SHEET 17246.
 3. FOR ABUTMENT PLAN AND ELEVATION, SEE SHEET 15246.
 4. FOR SEMI-INTEGRAL DIAPHRAGM DETAILS, SEE SHEET 17246 AND 17246B.
 5. BARS PREFIXED "A" ARE PREFIXED "RA" IN THE REAR ABUTMENT REINFORCING LIST AND "FA" IN THE FORWARD ABUTMENT REINFORCING LIST.
 6. FOR REPAIRS OF CONCRETE SLOPE PROTECTION, SEE SHEET 10246.
 7. FOR DETAILS ON THE VERTICAL JOINT AT THE APPROACH SLAB, SEE ODOT STANDARD DRAWING AS-1-15, DETAIL B.





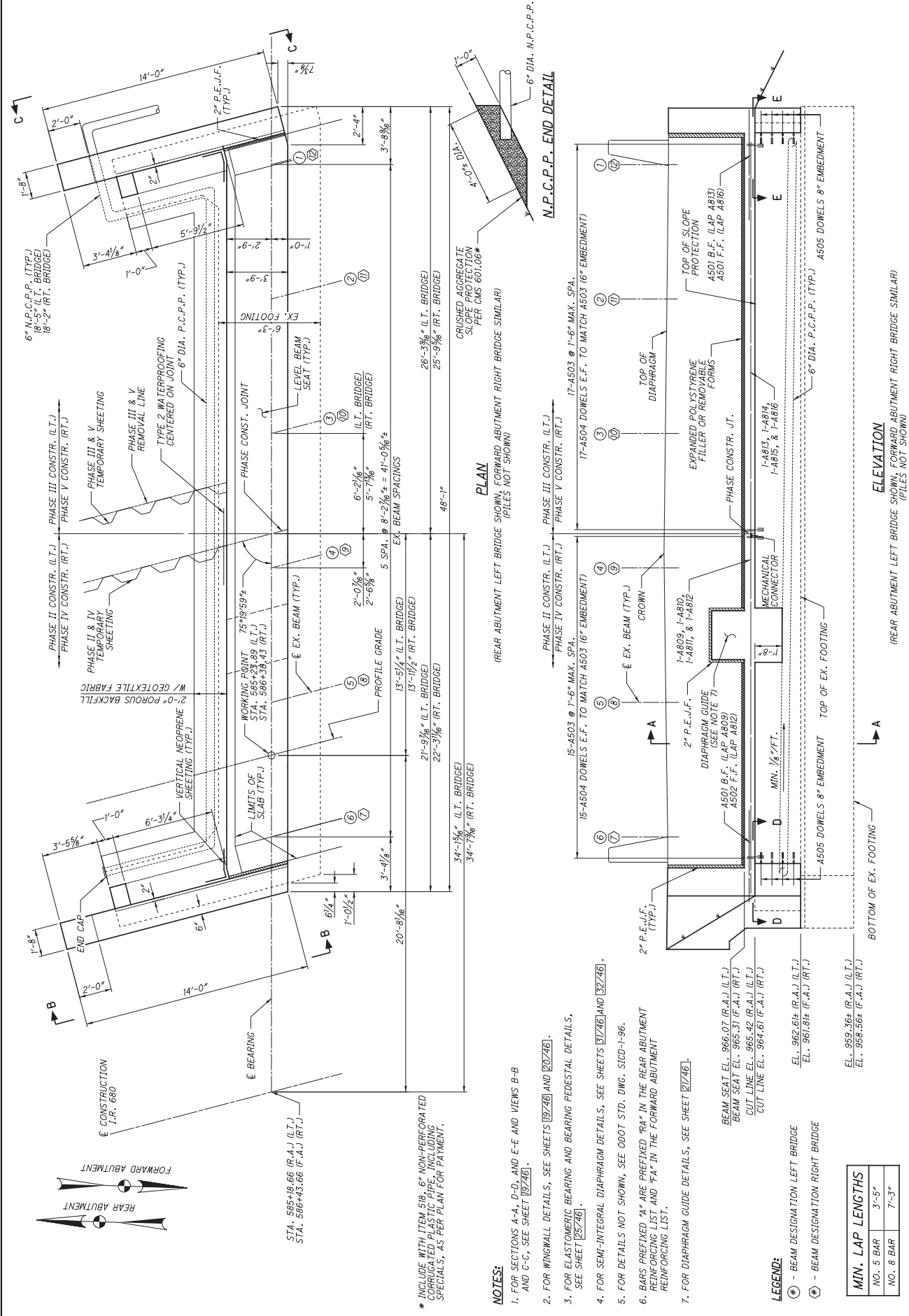
SECTION I-I

SECTION G-G

SECTION H-H

SECTION F-F

- NOTES:**
1. FOR LOCATIONS OF SECTIONS F-F, G-G, H-H, AND I-I, SEE SHEET 162746.
 2. FOR ABUTMENT PLAN AND ELEVATION, SEE SHEET 162746.
 3. BARS PREFIXED "A" ARE PREFIXED "RA" IN THE REAR ABUTMENT REINFORCING LIST AND "FA" IN THE FORWARD ABUTMENT REINFORCING LIST.

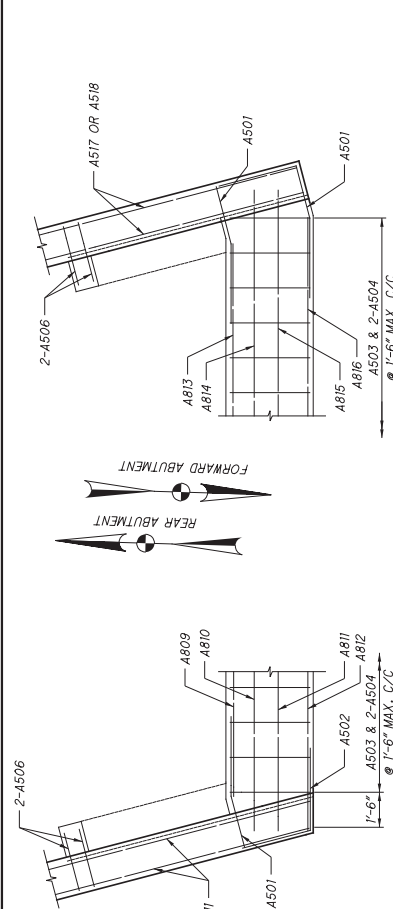


* INCLUDE WITH ITEM 518, 6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS, AS PER PLAN FOR PAYMENT.

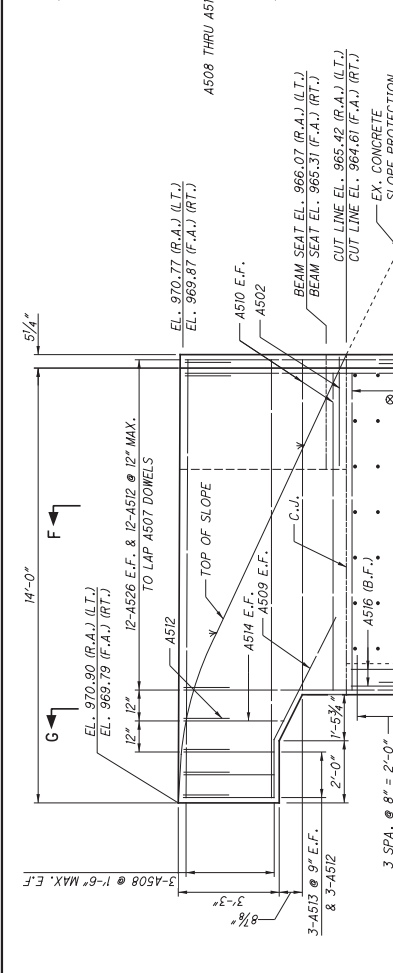
NOTES:
 1. FOR SECTIONS A-A, D-D, AND E-E AND VIEWS B-B AND C-C, SEE SHEET [B274B].
 2. FOR WALL DETAILS, SEE SHEETS [B274B] AND [B274B].
 3. FOR ELASTOMERIC BEARING AND BEARING PEDESTAL DETAILS, SEE SHEET [B274B].
 4. FOR SEMI-INTEGRAL DIAPHRAGM DETAILS, SEE SHEETS [B274B] AND [B274B].
 5. FOR DETAILS NOT SHOWN, SEE ODOT STD. DWG. SICD-1-96.
 6. BARS PREFIXED "A" ARE PREFIXED "RA" IN THE REAR ABUTMENT REINFORCING LIST AND "FA" IN THE FORWARD ABUTMENT REINFORCING LIST.
 7. FOR DIAPHRAGM GUIDE DETAILS, SEE SHEET [B274B].

LEGEND:
 (A) - BEAM DESIGNATION LEFT BRIDGE
 (B) - BEAM DESIGNATION RIGHT BRIDGE

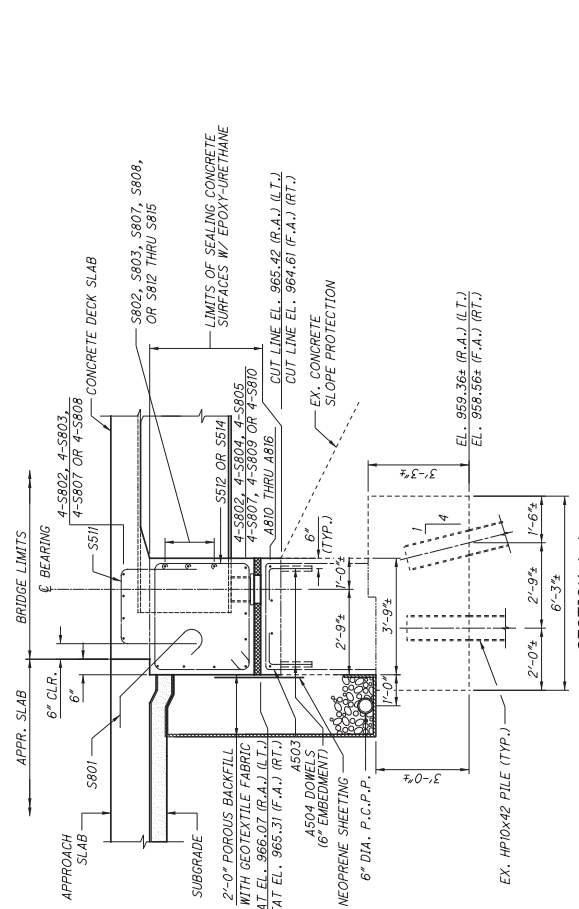
MIN. LAP LENGTHS	
NO. 5 BAR	3'-5"
NO. 8 BAR	7'-3"



SECTION E-E
 (REAR ABUTMENT LEFT BRIDGE SHOWN, FORWARD ABUTMENT RIGHT BRIDGE SIMILAR)

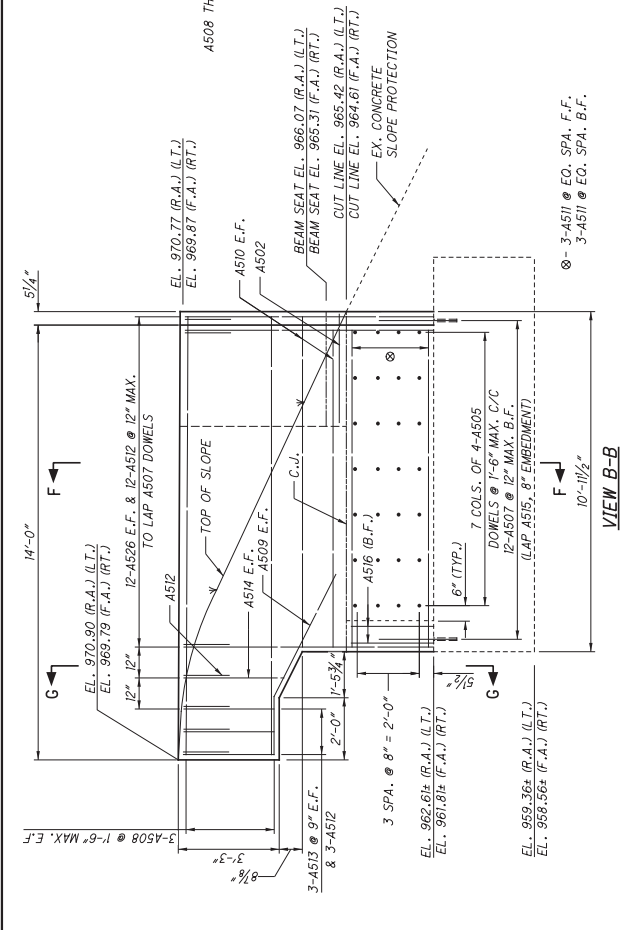


SECTION D-D
 (REAR ABUTMENT LEFT BRIDGE SHOWN, FORWARD ABUTMENT RIGHT BRIDGE SIMILAR)

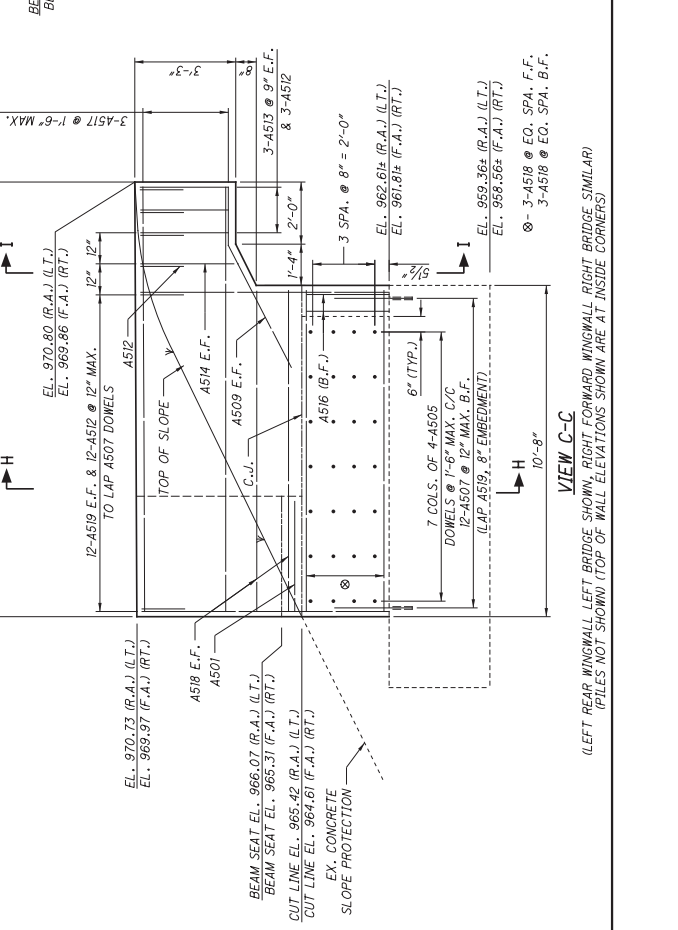


SECTION A-A

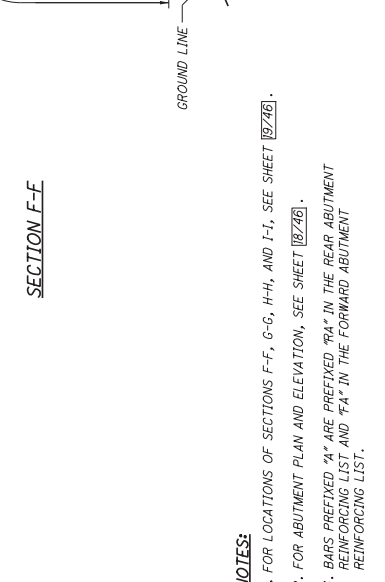
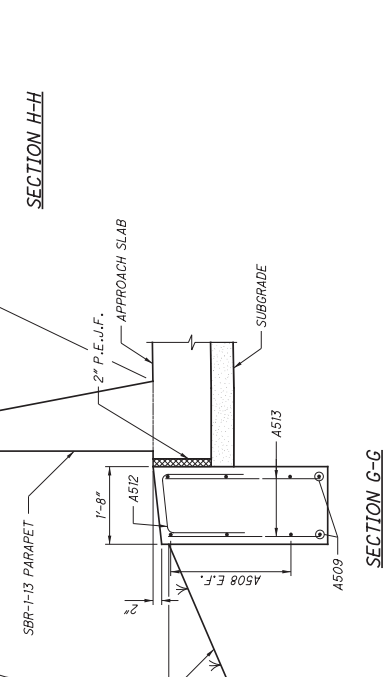
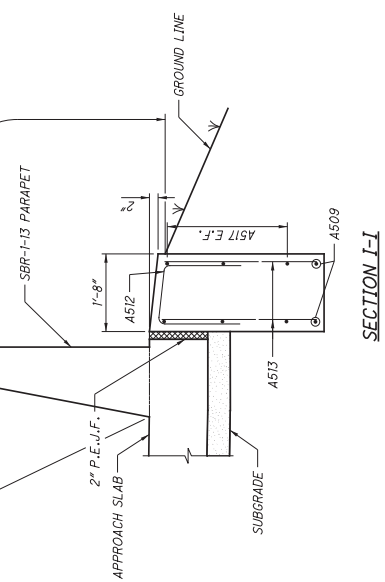
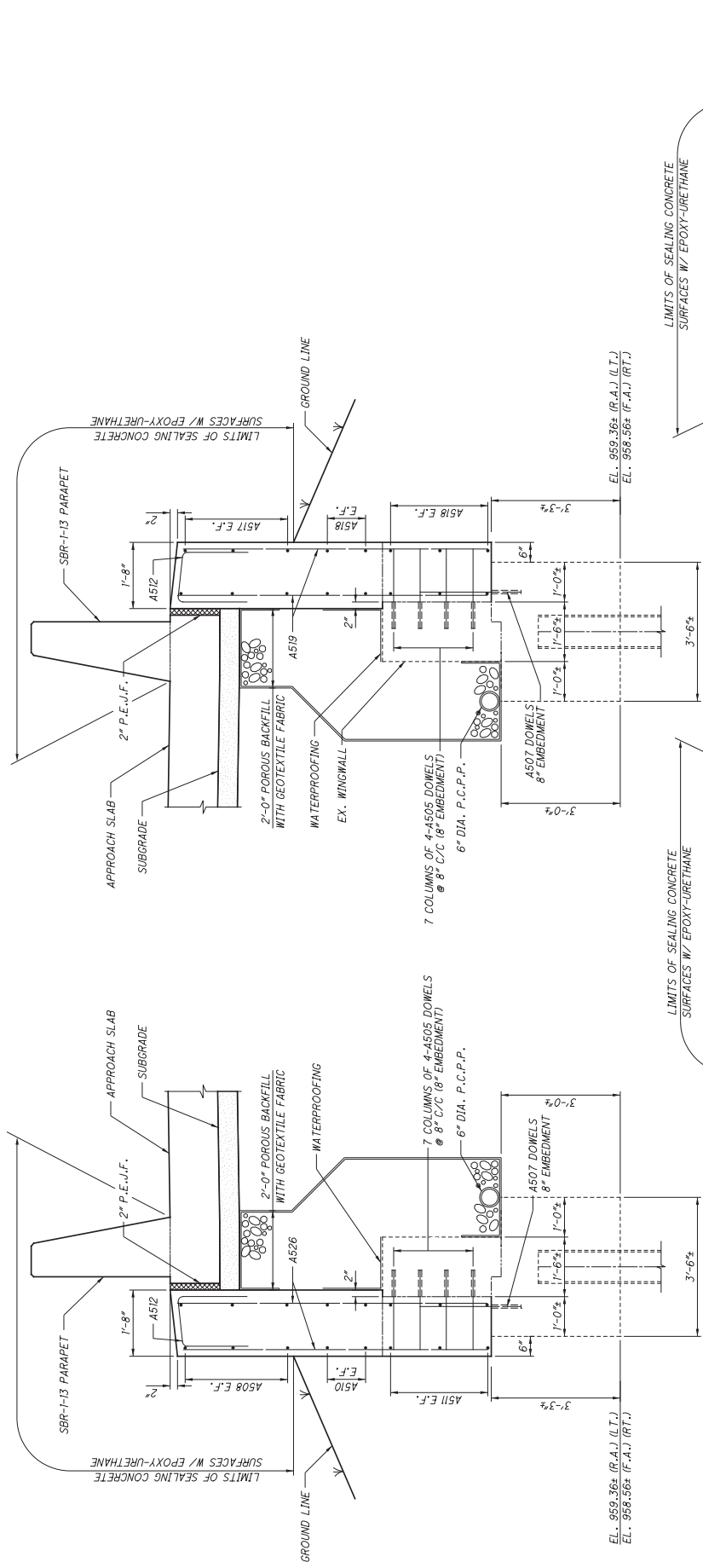
- NOTES:**
- FOR LOCATIONS OF SECTIONS A-A, D-D, AND E-E AND VIEWS B-B AND C-C, SEE SHEET 18/246.
 - FOR SECTIONS F-F, G-G, H-H, AND I-I, SEE SHEET 20/246.
 - FOR ABUTMENT PLAN AND ELEVATION, SEE SHEET 18/246.
 - FOR SEMI-INTEGRAL DIAPHRAGM DETAILS, SEE SHEETS 17/246 AND 19/246.
 - BARS PREFIXED "A" ARE PREFIXED "RA" IN THE REAR ABUTMENT REINFORCING LIST AND "FA" IN THE FORWARD ABUTMENT REINFORCING LIST.
 - FOR REPAIRS OF CONCRETE SLOPE PROTECTION, SEE SHEET 10/246.
 - FOR DETAILS ON THE VERTICAL JOINT AT THE APPROACH SLAB, SEE ODOT STANDARD DRAWING AS-1-15, DETAIL B.



VIEW B-B
 (RIGHT REAR WINGWALL LEFT BRIDGE SHOWN, LEFT FORWARD WINGWALL RIGHT BRIDGE SIMILAR)
 (PILES NOT SHOWN) (TOP OF WALL ELEVATIONS SHOWN ARE AT INSIDE CORNERS)



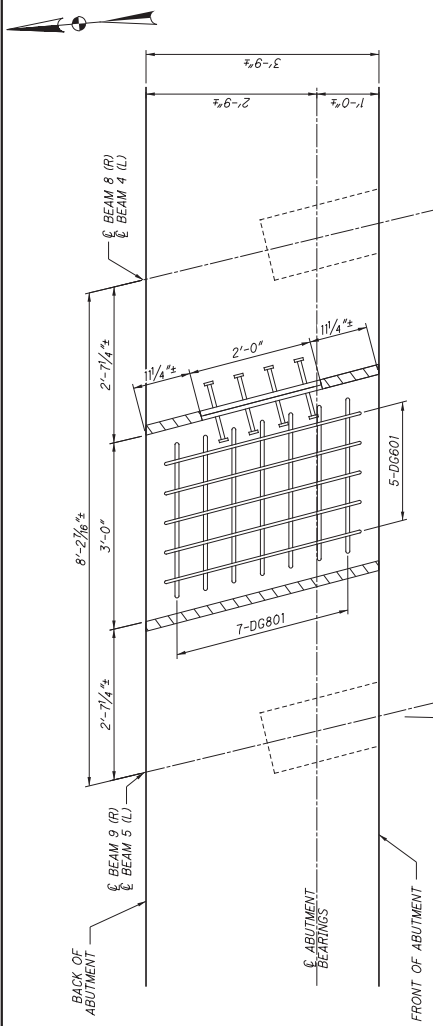
VIEW C-C
 (LEFT REAR WINGWALL LEFT BRIDGE SHOWN, RIGHT FORWARD WINGWALL RIGHT BRIDGE SIMILAR)
 (PILES NOT SHOWN) (TOP OF WALL ELEVATIONS SHOWN ARE AT INSIDE CORNERS)



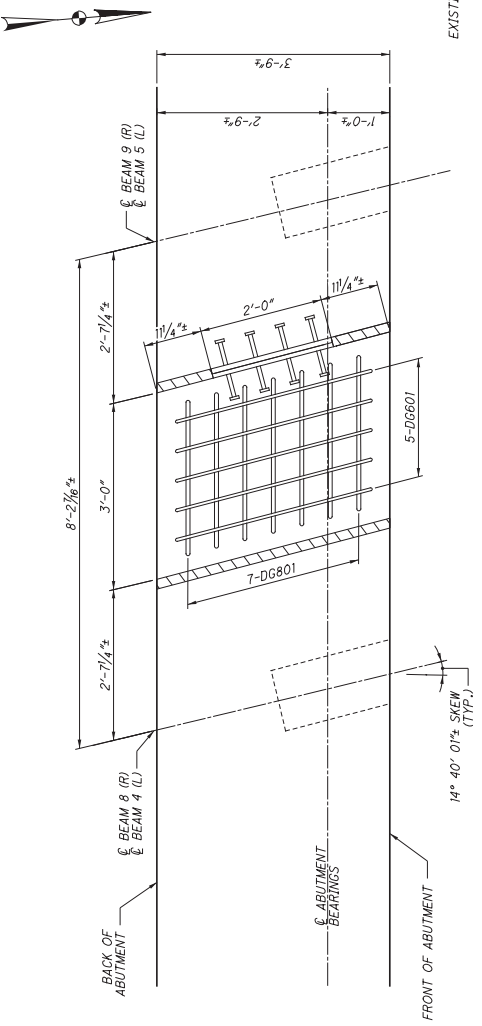
- NOTES:**
1. FOR LOCATIONS OF SECTIONS F-F, G-G, H-H, AND I-I, SEE SHEET 187268.
 2. FOR ABUTMENT PLAN AND ELEVATION, SEE SHEET 187268.
 3. BARS PREFIXED "A" ARE PREFIXED "RA" IN THE REAR ABUTMENT REINFORCING LIST AND "FA" IN THE FORWARD ABUTMENT REINFORCING LIST.

MARK	NUMBER TOTAL	DIMENSIONS		
		A	B	C
DC601	20	3'-6"	3'-8½"	2'-4"
DC801	28	2'-8"	3'-7"	2'-4"

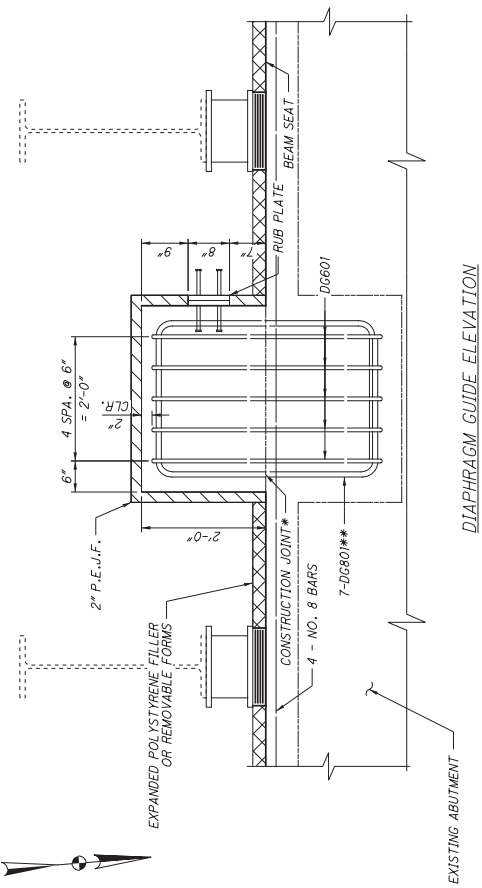
BENDING DIAGRAMS	
	TYPE-3
	TYPE-5



REAR ABUTMENT DIAPHRAGM GUIDE PLAN
 (R = RIGHT BRIDGE, L = LEFT BRIDGE)



FORWARD ABUTMENT DIAPHRAGM GUIDE PLAN
 (R = RIGHT BRIDGE, L = LEFT BRIDGE)



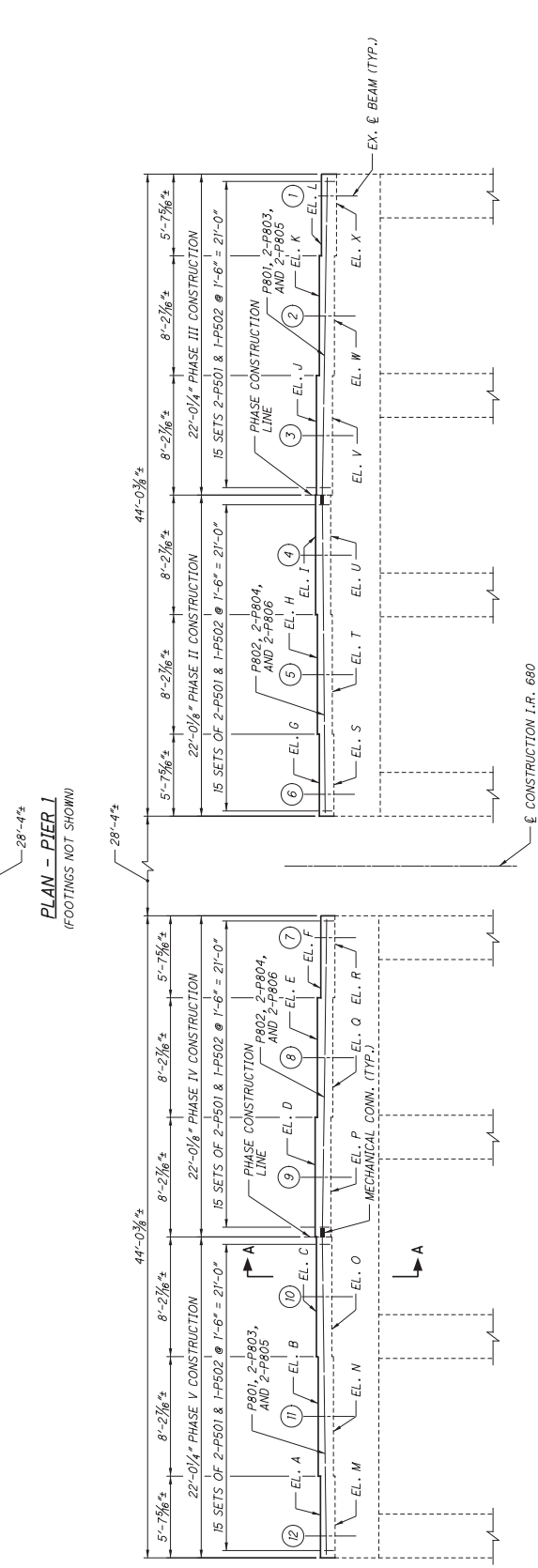
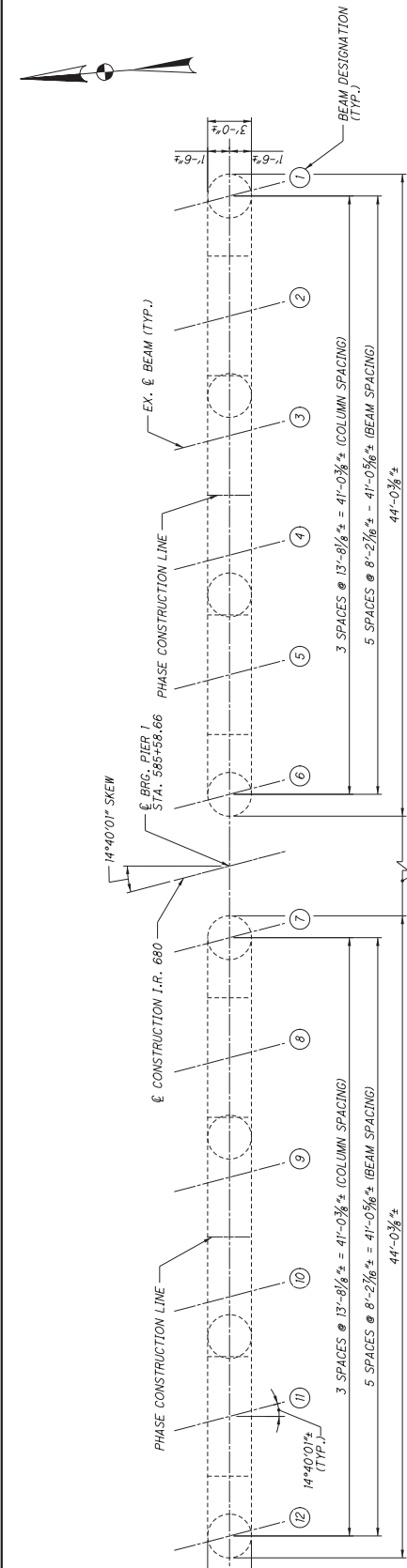
DIAPHRAGM GUIDE ELEVATION

* - FINISH THE SURFACE OF THE CONSTRUCTION JOINT WITH A SERRATED TROMPEL. SERRATIONS SHALL BE ¼" DEEP MINIMUM.

** - PLACE TO AVOID INTERFERENCE WITH LONGITUDINAL REINFORCEMENT IN THE BEAM SEAT.

NOTES:

1. FOR RUB PLATE DETAILS AND ADDITIONAL INFORMATION, SEE STANDARD DRAWING SICD-2-14.
2. THE COST OF DIAPHRAGM GUIDE CAULK, P.E.J.F., CONCRETE REINFORCEMENT, AND RUB PLATES SHALL BE INCLUDED WITH ITEM 511, SEMI-INTEGRAL DIAPHRAGM GUIDE.



NOTES:

1. FOR SECTION A-A AND VIEW B-B, SEE SHEET 23/46.
2. FOR PHASE CONSTRUCTION DETAILS, SEE SHEETS 17/46 THRU 14/46.
3. FOR ELASTOMERIC BEARING DETAILS, SEE SHEET 25/46.
4. INSTALL STRUCTURE GROUNDING SYSTEM BY CONNECTING TO EXISTING GROUND WIRES, EXTENDING THROUGH NEW CAP, AND CONNECTING TO BEAMS. SEE LIGHTING PLANS AND ODOT STANDARD DRAWING HL-50-21 FOR ADDITIONAL DETAILS.
5. THE ANCHOR RODS FOR THE EXISTING BEARINGS SHALL BE CUT FLUSH WITH THE TOP OF THE EXISTING PIER CAP.

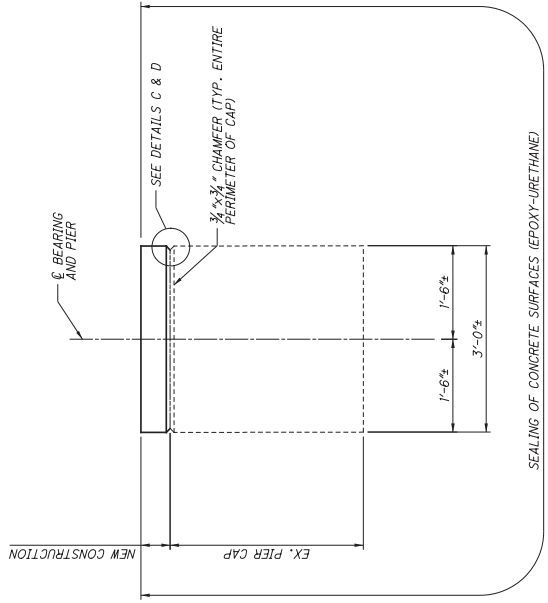
PIER I ELEVATION TABLE

PROPOSED TOP OF PIER CAP												
EL. A	EL. B	EL. C	EL. D	EL. E	EL. F	EL. G	EL. H	EL. I	EL. J	EL. K	EL. L	EL. M
966.55	966.66	966.78	966.86	966.71	966.57	966.46	966.58	966.69	966.57	966.43	966.28	
SURVEYED TOP OF PIER CAP*												
EL. M	EL. N	EL. O	EL. P	EL. Q	EL. R	EL. S	EL. T	EL. U	EL. V	EL. W	EL. X	EL. Y
966.12	966.19	966.30	966.36	966.22	966.18	966.02	966.12	966.22	966.04	965.96	965.81	

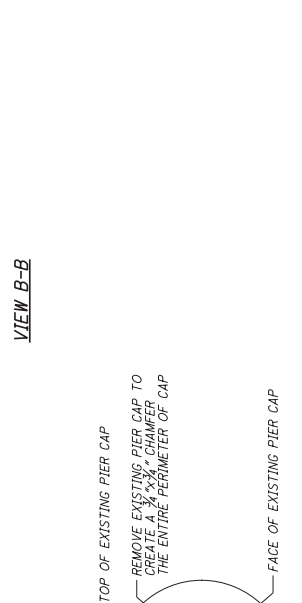
* VERIFY EXISTING ELEVATIONS PRIOR TO FORMING PIER CAP.

DESIGNED	LAH	DATE	12/31/2015
DRAWN	LAH	REVISED	
CHECKED	JOL	STRUCTURE FILE NUMBER	5006635/5006600

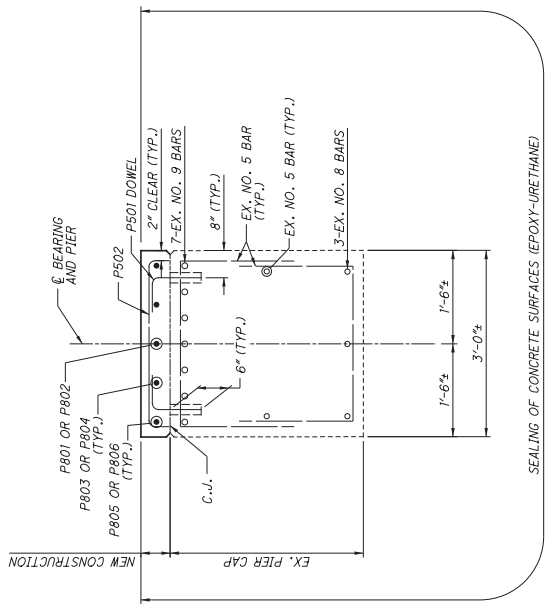
PIER SECTION AND DETAILS
 BRIDGE NO. MAH-680-0333L&R
 I.R. 680 OVER CHERRY HILL AVENUE



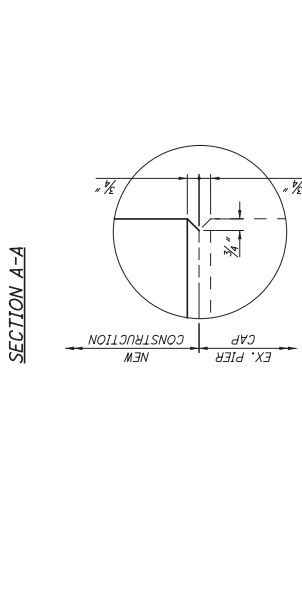
SECTION A-A
 (SEE NOTE 5)
 SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)



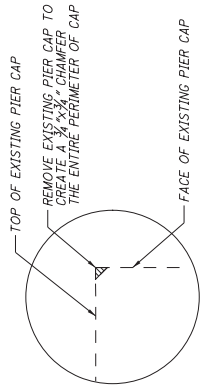
VIEW B-B
 (SEE NOTE 5)
 SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)



SECTION A-A
 (SEE NOTE 5)
 SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)

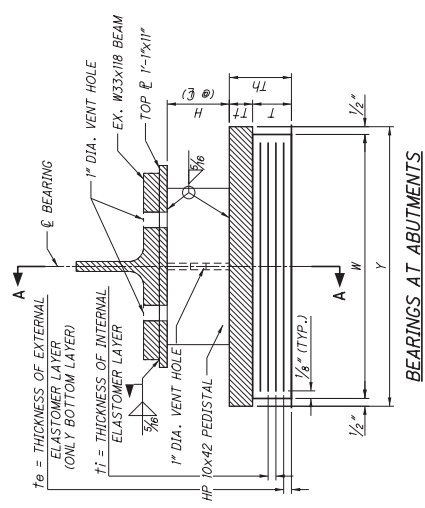


DETAIL C

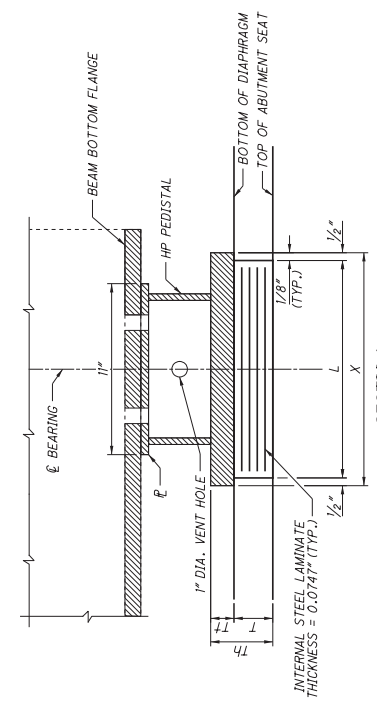


DETAIL D

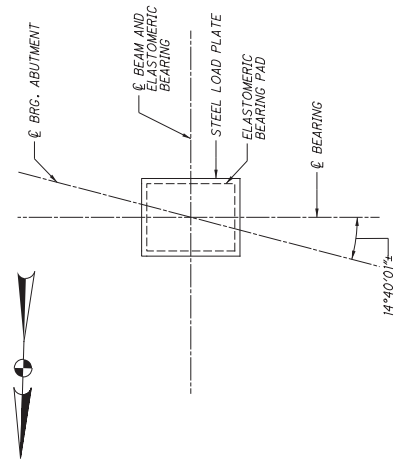
- NOTES:**
1. THE EXISTING REINFORCING STEEL IN THE PIER CAP SHALL BE ACCURATELY LOCATED PRIOR TO THE DRILLING OF DOWEL HOLES. SEE GENERAL NOTES, SHEET 13746.
 2. FOR LOCATIONS OF SECTION A-A AND VIEW B-B, SEE SHEET 13746.
 3. FOR PHASE CONSTRUCTION DETAILS, SEE SHEETS 11746 THRU 11746C.
 4. FOR ELASTOMERIC BEARING DETAILS, SEE SHEET 12548.
 5. ALL EXPOSED CONCRETE SURFACES, INCLUDING THE ENDS OF THE PIERS SHALL BE SEALED WITH THE EXCEPTION OF THE BEAM SEAT.



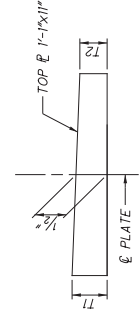
BEARINGS AT ABUTMENTS



SECTION A-A



BEARING ORIENTATION PLAN



TOP PLATE DETAIL

TOP PLATE DIMENSIONS	
REAR ABUTMENT	T1
FORWARD ABUTMENT	T2
	3/8"
	1/8"

HP PEDESTAL DIMENSION TABLE

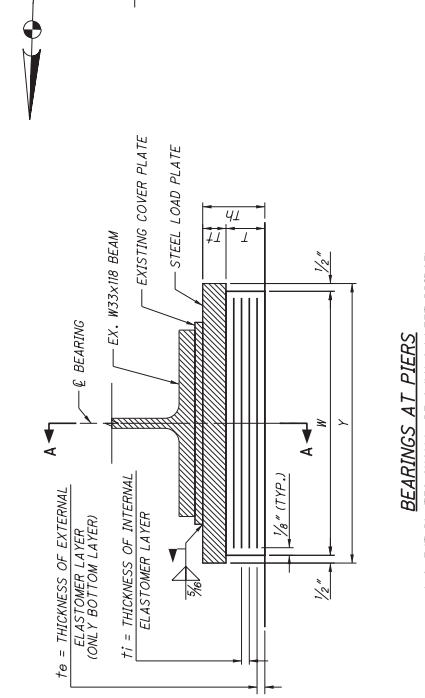
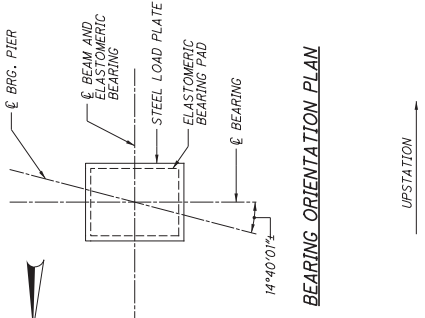
LEFT BRIDGE - REAR ABUTMENT	
BEAM 1	7 1/8"
BEAM 2	8 3/4"
BEAM 3	10 7/8"
BEAM 4	11 3/4"
BEAM 5	10 3/4"
BEAM 6	9"
RIGHT BRIDGE - REAR ABUTMENT	
BEAM 7	7 3/4"
BEAM 8	9 1/4"
BEAM 9	10 3/8"
BEAM 10	8 1/2"
BEAM 11	7 1/8"
BEAM 12	7 1/8"
LEFT BRIDGE - FORWARD ABUTMENT	
BEAM 1	7"
BEAM 2	8 3/4"
BEAM 3	10 7/8"
BEAM 4	11 3/4"
BEAM 5	10 3/4"
BEAM 6	9 1/8"
RIGHT BRIDGE - FORWARD ABUTMENT	
BEAM 7	7 1/4"
BEAM 8	9"
BEAM 9	10 3/4"
BEAM 10	9 1/8"
BEAM 11	8 7/8"
BEAM 12	7 1/8"

NOTES:

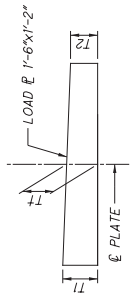
1. THE ELASTOMER SHALL HAVE A HARDNESS OF 50 DUROMETER. THE BEARINGS WERE TESTED IN ACCORDANCE WITH ASTM D 1074. THE LONG-TERM COMPRESSION PROOF LOAD TEST (AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, DIVISION II, SECTION 18-7.2-6) IS NOT REQUIRED.
2. THE STEEL LOAD PLATES AND HP SHAPES SHALL BE ASTM A709 GRADE 50 STEEL AND PAINTED IN ACCORDANCE WITH ITEM 514 TO MATCH PROPOSED BEAM COLOR.
3. THE STEEL LOAD PLATE SHALL BE BONDED BY VULCANIZATION TO THE ELASTOMER DURING THE MOLDING PROCESS.
4. ALL BEARINGS SHALL BE MARKED PRIOR TO SHIPPING. THEY 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.
5. TOTAL DESIGN LOAD FOR BEARINGS EQUALS THE SUM OF THE DEAD LOADS AND LIVE LOADS TABULATED IN THE BEARING TABLE. IMPACT IS NOT INCLUDED. LOADS ARE UNFACTORED.
6. BASIS OF PAYMENT: THE UNIT BID PRICE SHALL INCLUDE THE TOP PLATE, LOAD PLATE, HP SHAPES AND ALL MATERIALS, LABOR, TESTING AND INCIDENTALS NECESSARY TO FABRICATE AND INSTALL THE BEARINGS. THE CONTRACT PRICE FOR EACH ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN.
7. FOR PIER BEARING DETAILS, SEE SHEET 25/46.

ELASTOMERIC BEARING DATA

LOGICION	TYPE	NO. REQ'D.	DL (KIPS)	LL W/O IMPACT (KIPS)	MAX DESIGN LOAD (DL+LL) (KIP)	L (IN)	B (IN)	T1 (IN)	T2 (IN)	NO. OF TIES	NO. OF INTERNAL LAMINATES	T (IN)	X (IN)	Y (IN)	T1 (IN)	T2 (IN)	TH (IN)
ABUTMENTS	EXP.	24	51	63	104	10	15	0.375	0.25	4	4	2.044	11	16	1.5	1.5	3.5

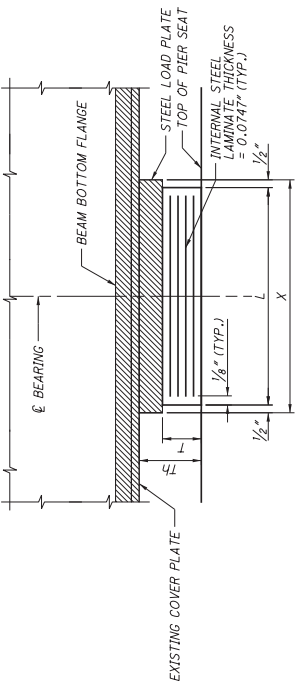


BEARINGS AT PIERS
 (MOMENT PLATES SHOWN ARE ONLY ON LEFT BRIDGE)



STEEL LOAD PLATE DETAIL

BEAM	T1 (IN)			T2 (IN)		
	T	X	Y	T	X	Y
PIER 1	1-12	1 1/2	0%	1 1/2	0%	1 1/2
1	4%	4%	4%	4%	4%	4%
2	4%	4%	4%	4%	4%	4%
3	4%	4%	4%	4%	4%	4%
4	4%	4%	4%	4%	4%	4%
5	5%	5%	5%	5%	5%	5%
6	4%	4%	4%	4%	4%	4%
7	3 3/4	3 3/4	3 3/4	3 3/4	3 3/4	3 3/4
8	4%	4%	4%	4%	4%	4%
9	4%	4%	4%	4%	4%	4%
10	4%	4%	4%	4%	4%	4%
11	4%	4%	4%	4%	4%	4%
12	4%	4%	4%	4%	4%	4%



SECTION A-A
 (MOMENT PLATES SHOWN ARE ONLY ON LEFT BRIDGE)

PIER 2 ELEVATION TABLE

BEAM	PROPOSED BOTTOM OF BEAM	SURVEYED TOP OF PIER CAP*
1	966.25	965.64
2	966.39	965.75
3	966.54	965.90
4	966.65	966.00
5	966.54	965.87
6	966.43	965.82
7	966.53	965.97
8	966.68	966.04
9	966.82	966.20
10	966.75	966.10
11	966.63	965.99
12	966.52	965.93

* VERIFY SURVEYED TOP OF CAP ELEVATIONS PRIOR TO BEARING FABRICATION.

PIER 2 BEARING THICKNESS

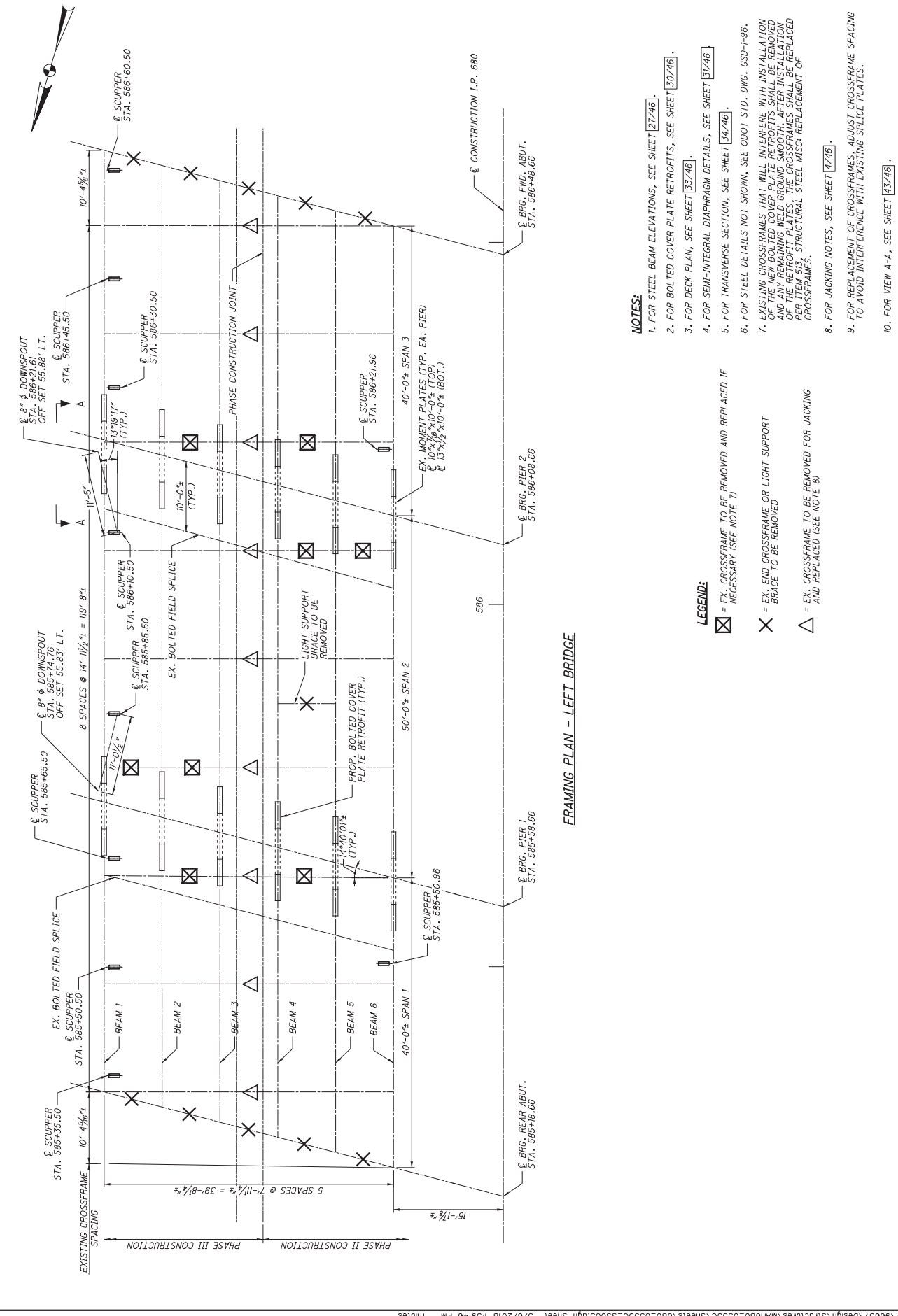
BEAM	Th (IN)
1	7.33
2	7.73
3	7.66
4	7.81
5	8.05
6	7.31
7	6.78
8	7.69
9	7.49
10	7.74
11	7.74
12	7.14

NOTES:

1. THE ELASTOMER SHALL HAVE A HARDNESS OF 50 DUROMETER. THE BEARINGS WERE DESIGNED UNDER DIVISION 1, SECTION 14.6.6 (METHOD A) OF THE MASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES. THE LONG-TERM COMPRESSION PROOF LOAD TEST (MASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, DIVISION II, SECTION 18.7.2.6) IS NOT REQUIRED.
2. THE STEEL LOAD PLATES AND HP SHAPES SHALL BE ASTM A709 GRADE 50 OR GRADE 50W STEEL AND PAINTED IN ACCORDANCE WITH ITEM 514 TO MATCH PROPOSED BEAM COLOR.
3. THE STEEL LOAD PLATE SHALL BE BONDED BY VULCANIZATION TO THE ELASTOMER DURING THE MOLDING PROCESS.
4. ALL BEARINGS SHALL BE MARKED PRIOR TO SHIPPING. THEY 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.
5. TOTAL DESIGN LOAD FOR BEARINGS EQUALS THE SUM OF THE DEAD LOADS AND LIVE LOADS TABULATED IN THE BEARING TABLE. IMPACT IS NOT INCLUDED. LOADS ARE UNFACTORED.
6. BASIS OF PAYMENT: THE UNIT BID PRICE SHALL INCLUDE THE LOAD PLATE, AND ALL MATERIALS, LABOR, TESTING AND INCIDENTALS NECESSARY TO FURNISH AND INSTALL LAMINATED ELASTOMERIC BEARINGS. PAYMENT WILL BE MADE AT THE CONTRACT PRICE FOR ITEM 516. EACH ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN.
7. FOR ABUTMENT BEARING DETAILS SEE SHEET [24/26].

ELASTOMERIC BEARING DATA

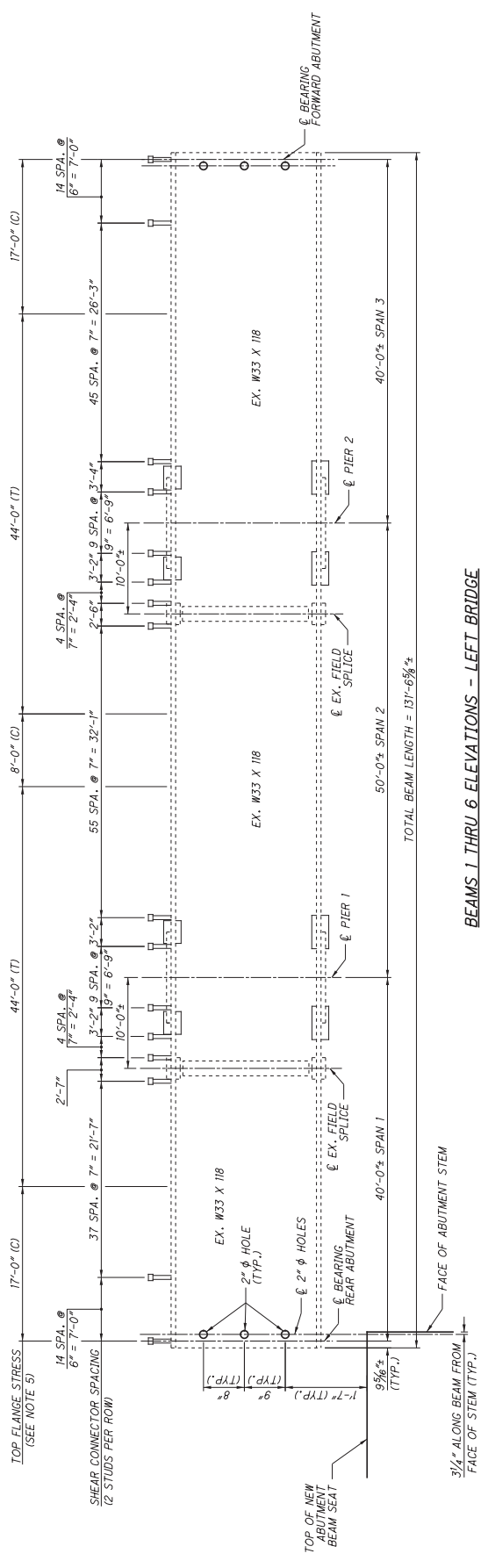
LOCATION	TYPE	NO. REQ'D.	D _L (KIPS)	LL W/O IMPACT (KIPS)	MAX DESIGN LOAD (D _L +LL) (KIP)	L	W	t ₁	t ₀	NO. OF T ₁ 'S	NO. INTERNAL LAMINATES	T	STEEL LOAD PLATE			
						(IN)	(IN)	(IN)	(IN)			(IN)	X	Y	Th	
PIER 1	EXP.	12	89	66	155	13	14	0.375	0.25	6	6	2.948	14	15	1.5	4.448
PIER 2	EXP.	12	89	66	155	13	14	0.375	0.25	6	6	2.948	14	15	VARIES	VARIES



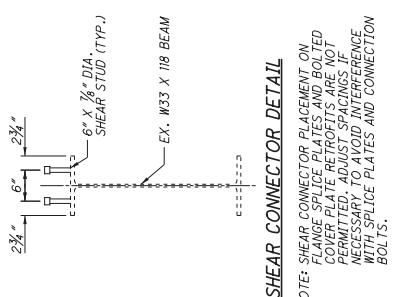
FRAMING PLAN - LEFT BRIDGE

- NOTES:**
1. FOR STEEL BEAM ELEVATIONS, SEE SHEET [27/46].
 2. FOR BOLTED COVER PLATE RETROFITS, SEE SHEET [30/46].
 3. FOR DECK PLAN, SEE SHEET [33/46].
 4. FOR SEMI-INTEGRAL DIAPHRAGM DETAILS, SEE SHEET [37/46].
 5. FOR TRANSVERSE SECTION, SEE SHEET [34/46].
 6. FOR STEEL DETAILS NOT SHOWN, SEE 0001 STD. DWG. GSD-T-96.
 7. EXISTING CROSSFRAMES THAT WILL INTERFERE WITH INSTALLATION OF THE RETROFIT PLATES SHALL BE REMOVED. AFTER INSTALLATION OF THE RETROFIT PLATES, THE CROSSFRAMES SHALL BE REPLACED PER ITEM 513, STRUCTURAL STEEL MISC: REPLACEMENT OF CROSSFRAMES.
 8. FOR JACKING NOTES, SEE SHEET [47/46].
 9. FOR REPLACEMENT OF CROSSFRAMES, ADJUST CROSSFRAME SPACING TO AVOID INTERFERENCE WITH EXISTING SPLICE PLATES.
 10. FOR VIEW A-A, SEE SHEET [43/46].

- LEGEND:**
- ☒ = EX. CROSSFRAME TO BE REMOVED AND REPLACED IF NECESSARY (SEE NOTE 7)
 - ✗ = EX. END CROSSFRAME OR LIGHT SUPPORT BRACE TO BE REMOVED
 - △ = EX. CROSSFRAME TO BE REMOVED FOR JACKING AND REPLACED (SEE NOTE 8)



BEAMS 1 THRU 6 ELEVATIONS - LEFT BRIDGE



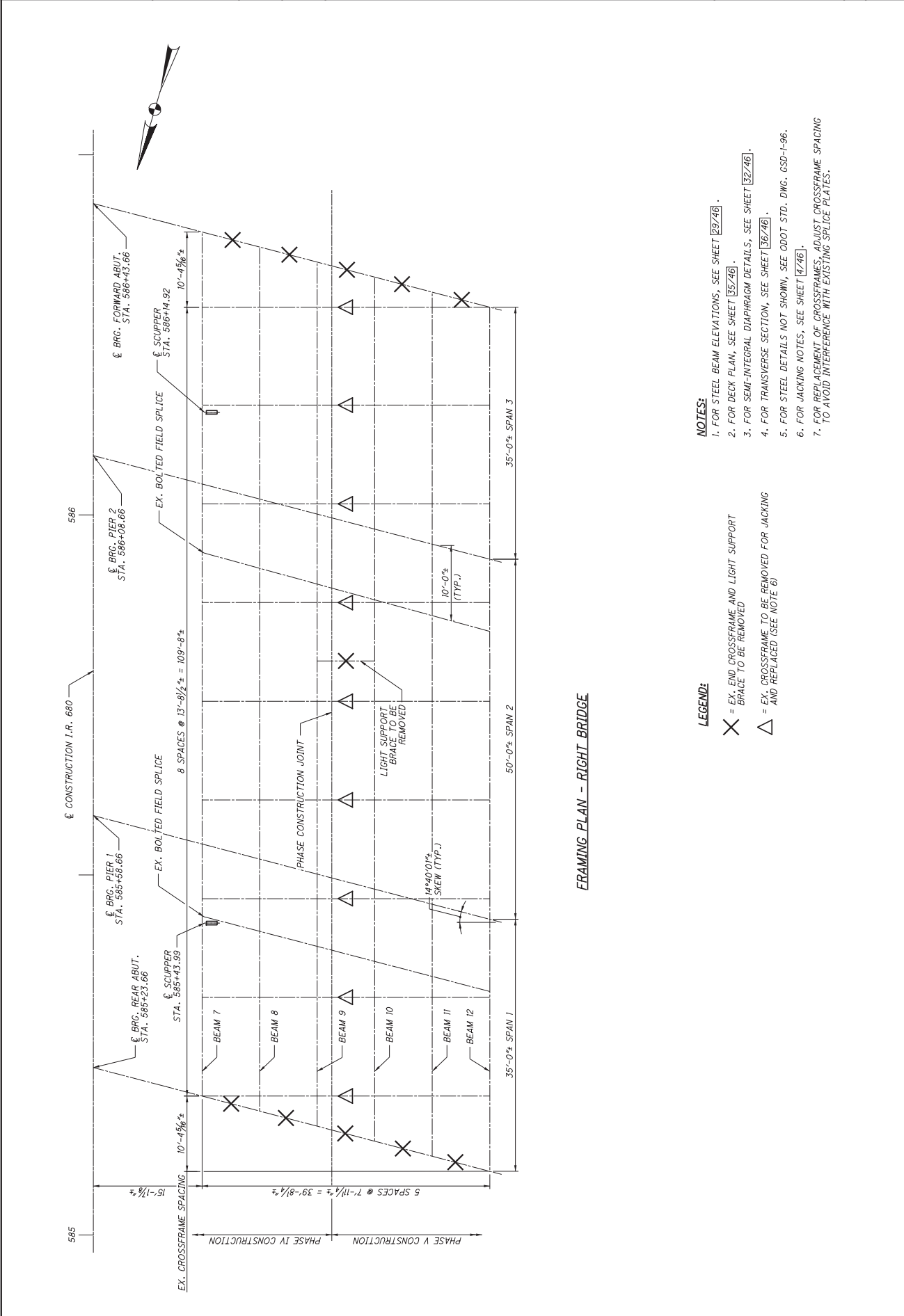
SHEAR CONNECTOR DETAIL

NOTE: SHEAR CONNECTOR PLACEMENT ON TOP FLANGE OF BEAM SHALL BE BOLTED COVER PLATE RETROFITS ARE NOT PERMITTED. ADJUST SPACINGS IF NECESSARY TO AVOID INTERFERENCE WITH SPLICE PLATES AND CONNECTION BOLTS.

NOTES:

1. FOR DECK PLAN, SEE SHEET [33/46].
2. FOR SEMI-INTEGRAL DIAPHRAGM DETAILS, SEE SHEET [31/46].
3. FOR TRANSVERSE SECTION, SEE SHEET [34/46].
4. FOR STEEL DETAILS NOT SHOWN, SEE ODOT STD. DWG. GSD-1-96.
5. WELD ATTACHMENT OF SUPPORTS FOR CONCRETE DECK FINISHING MACHINE TO AREAS OF THE FASCIA STRINGER FLANGES DESIGNATED "C" FOR COMPRESSION. DO NOT WELD ATTACHMENTS TO AREAS DESIGNATED "T" FOR TENSION. FILLET WELDS TO COMPRESSION FLANGES SHALL BE AT LEAST 1/4" FROM EDGE OF FLANGE AND BE NO MORE THAN 1/4" OR 1/8" FOR GREATER THAN 1/4" THICK.
6. FOR FRAMING PLAN, SEE SHEET [26/46].
7. FOR BEARING DETAILS, SEE SHEET [24/46] AND [25/46].
8. INCLUDE PAYMENT FOR 2" Ø HOLES IN EXISTING BEAMS UNDER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, AS PER PLAN.

DESIGNED	LAH	NBR
CHECKED	LAH	CHECKED
REVISED	LAH	STRUCTURE FILE NUMBER
REF	REF	5006633
DATE	DATE	12/31/2018



NOTES:

1. FOR STEEL BEAM ELEVATIONS, SEE SHEET [29/46].
2. FOR DECK PLAN, SEE SHEET [35/46].
3. FOR SEMI-INTEGRAL DIAPHRAGM DETAILS, SEE SHEET [32/46].
4. FOR TRANSVERSE SECTION, SEE SHEET [36/46].
5. FOR STEEL DETAILS NOT SHOWN, SEE ODOT STD. DWG. GSD-I-96.
6. FOR JACKING NOTES, SEE SHEET [7/46].
7. FOR REPLACEMENT OF CROSSFRAMES, ADJUST CROSSFRAME SPACING TO AVOID INTERFERENCE WITH EXISTING SPLICE PLATES.

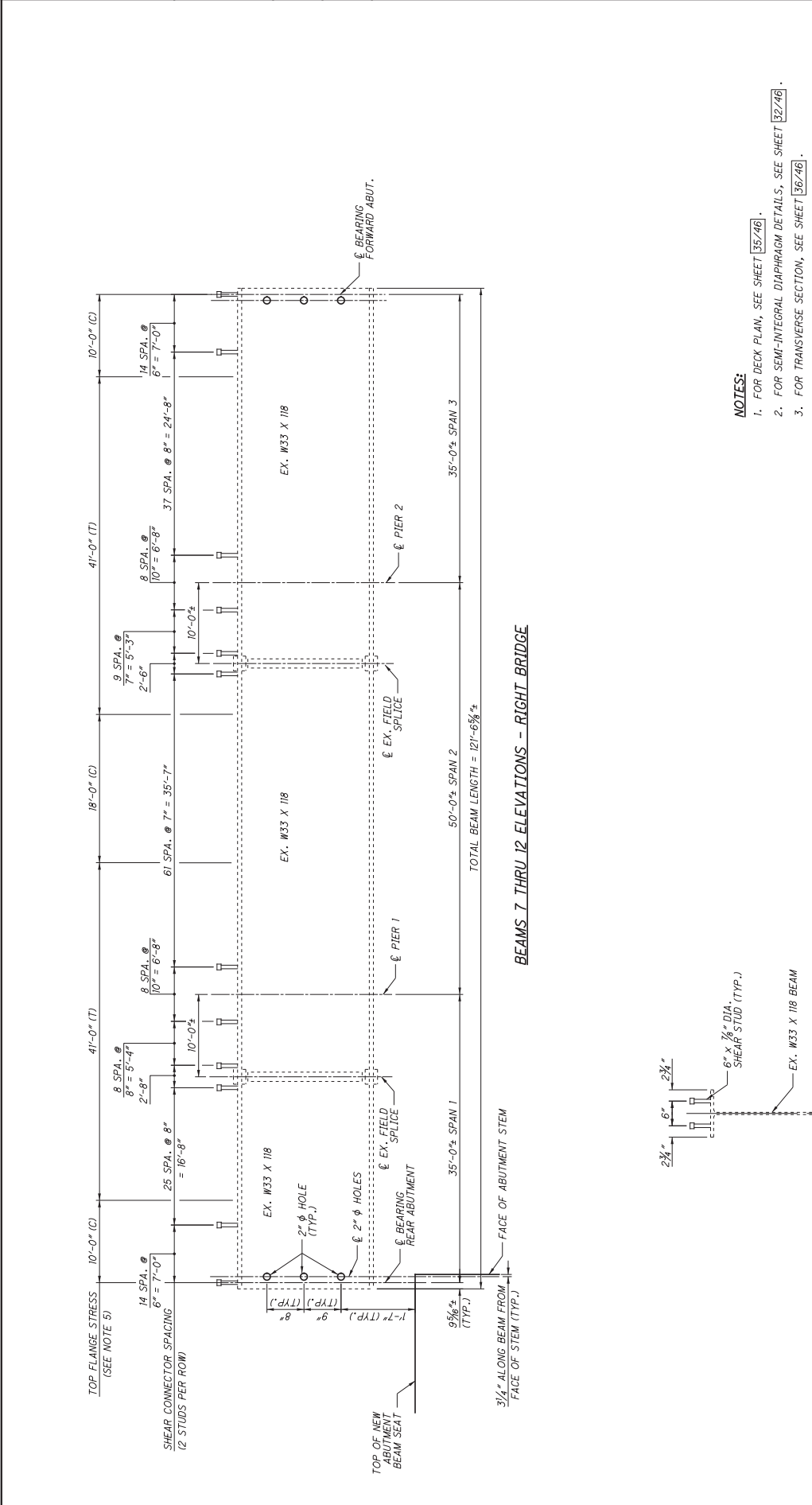
LEGEND:

- X = EX. END-CROSSFRAME AND LIGHT SUPPORT BRACE TO BE REMOVED
- △ = EX. CROSSFRAME TO BE REMOVED FOR JACKING AND REPLACED (SEE NOTE 6)

FRAMING PLAN - RIGHT BRIDGE

DESIGNED	NBR	CHECKED	REVISD	STRUCTURE FILE NUMBER	5006635
DRAWN	LAH	REVISED	LAH	REF	12/31/2015
DATE	REVISED	DATE			

BEAM ELEVATION - RIGHT BRIDGE
 BRIDGE NO. MAH-680-0333L&R
 I. R. 680 OVER CHERRY HILL AVENUE



BEAMS 7 THRU 12 ELEVATIONS - RIGHT BRIDGE

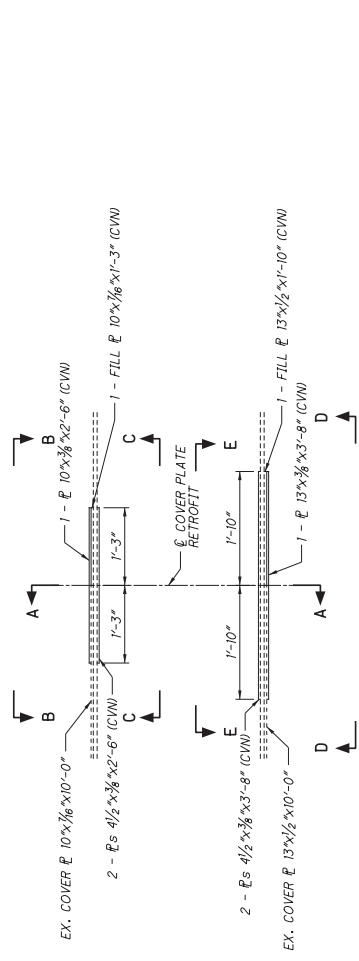
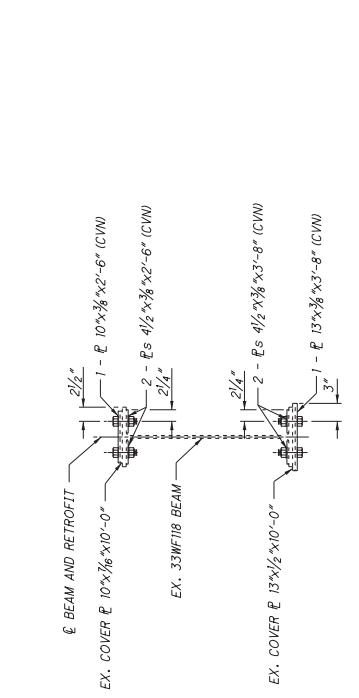
NOTES:

1. FOR DECK PLAN, SEE SHEET [35/46].
2. FOR SEMI-INTEGRAL DIAPHRAGM DETAILS, SEE SHEET [32/46].
3. FOR TRANSVERSE SECTION, SEE SHEET [36/46].
4. FOR STEEL DETAILS NOT SHOWN, SEE ODOT STD. DWG. GSD-1-96.
5. WELD ATTACHMENT OF SUPPORTS FOR CONCRETE DECK FINISHING MACHINE TO AREAS OF THE FASCIA STRINGER FLANGES DESIGNATED "C" FOR COMPRESSION. DO NOT WELD ATTACHMENTS TO AREAS DESIGNATED "T" FOR TENSION. WELD ATTACHMENTS TO TENSION FLANGES SHALL BE AT LEAST 1" FROM EDGE OF FLANGE, BE MORE THAN 2" LONG, AND BE AT LEAST 1/4" FOR THICKNESSES UP TO 3/4" OR 3/8" FOR GREATER THAN 3/4" THICK.
6. FOR FRAMING PLAN, SEE SHEET [28/46].
7. FOR BEARING DETAILS, SEE SHEET [27/46] AND [25/46].
8. INCLUDE PAYMENT FOR 2" φ HOLES IN EXISTING BEAMS UNDER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, AS PER PLAN.

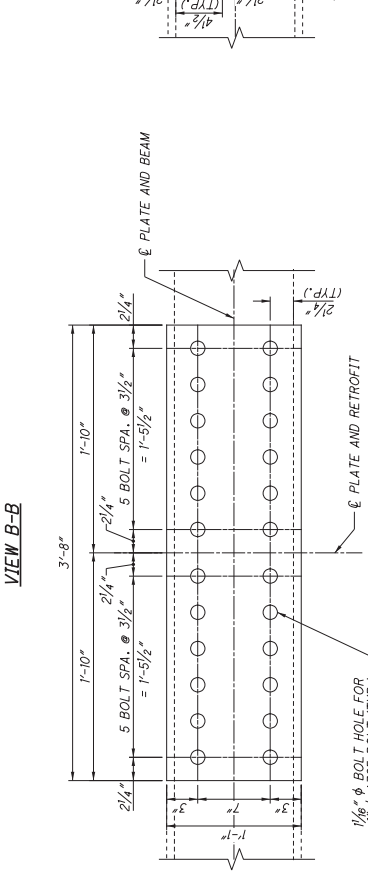
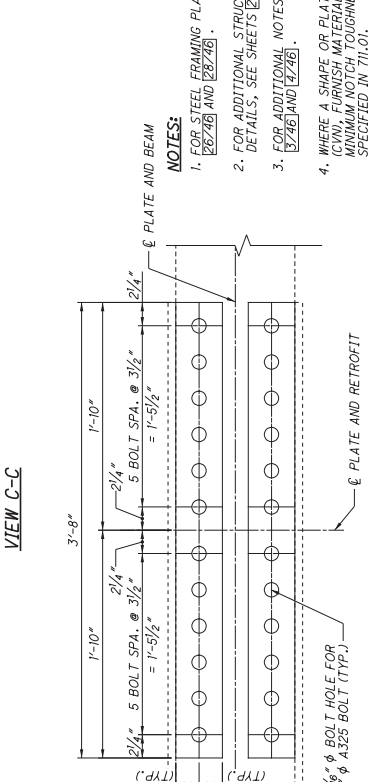
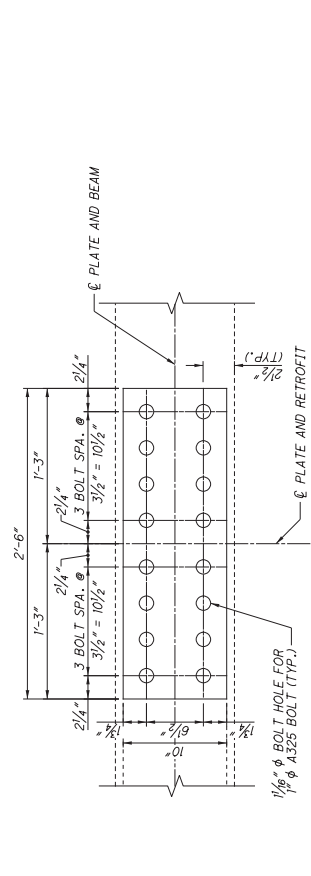
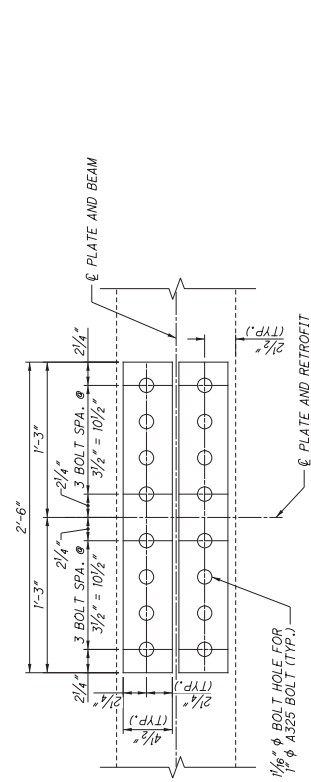
SHEAR CONNECTOR DETAIL

NOTE: SHEAR CONNECTOR PLACEMENT ON FLANGE SPlice PLATES IS NOT PERMITTED. ADJUST SPACINGS IF NECESSARY TO AVOID INTERFERENCE WITH SPlice PLATES AND CONNECTION BOLTS.

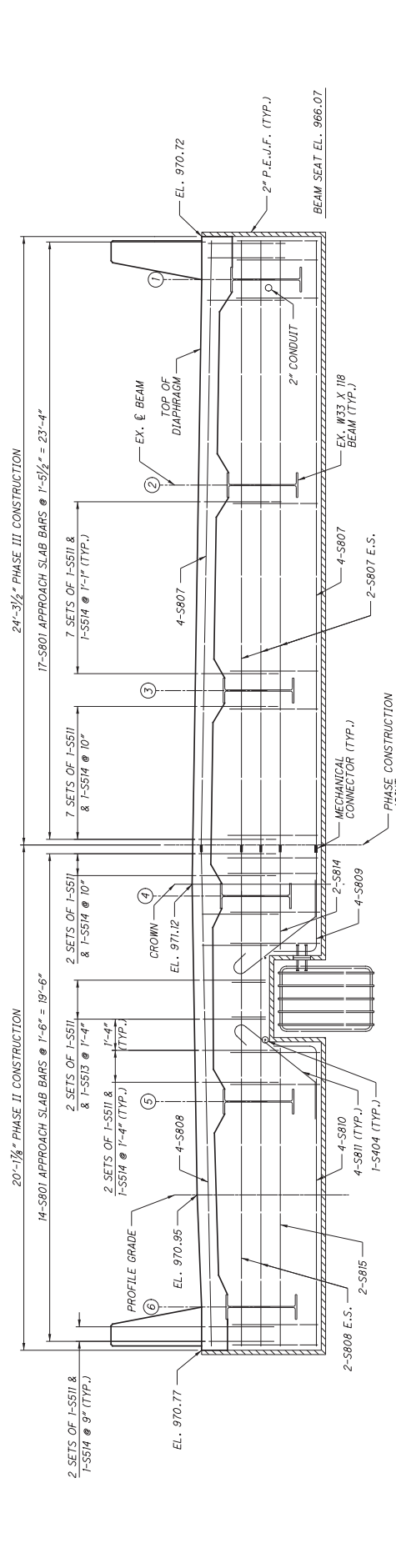
DESIGN AGENCY
ELT. ROBINSON
ENGINEERING
1500 West 150th Street, Omaha, NE 68113
5006600



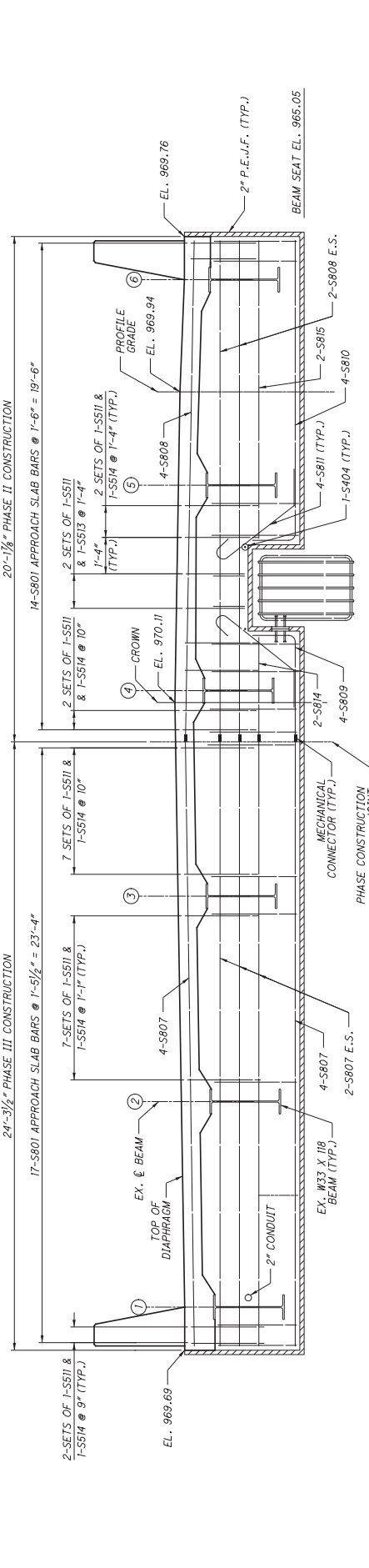
LEFT BRIDGE BOLTED COVER PLATE RETROFIT
(ONE RETROFIT SHOWN, 2 RETROFITS PER LOCATION
TYPICAL AT ALL COVER PLATE LOCATIONS)



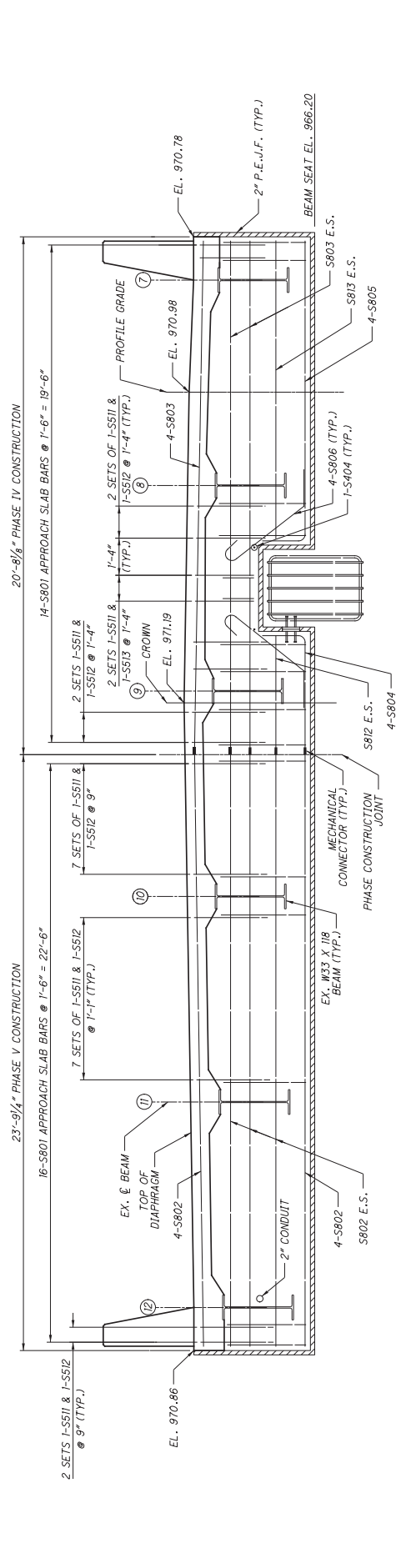
- NOTES:**
- FOR STEEL FRAMING PLAN, SEE SHEETS ϕ 28746 AND ϕ 28748.
 - FOR ADDITIONAL STRUCTURAL STEEL DETAILS, SEE SHEETS ϕ 2746 AND ϕ 2748.
 - FOR ADDITIONAL NOTES, SEE SHEETS ϕ 2746 AND ϕ 2748.
 - WHERE A SHAPE OR PLATE IS DESIGNATED (CVW), SUFFICIENT MATERIAL THAT MEETS THE DESIGN STRENGTH REQUIREMENTS AS SPECIFIED IN 71.01.
 - HIGH STRENGTH BOLTS SHALL BE 1" ϕ A325 UNLESS OTHERWISE NOTED.



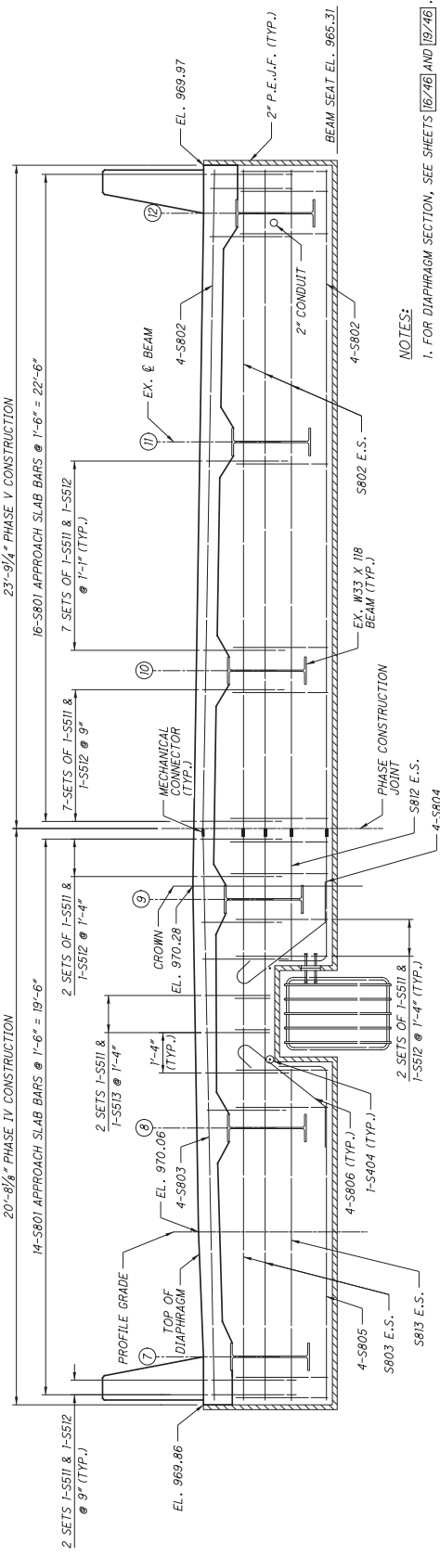
REAR ABUTMENT DIAPHRAGM ELEVATION
(BEARINGS AND PEDESTALS NOT SHOWN)



- NOTES:**
1. FOR DIAPHRAGM SECTION, SEE SHEETS [16/46] AND [19/46].
 2. ELEVATIONS OF THE TOP OF THE SEMI-INTEGRAL DIAPHRAGM ARE GIVEN AT THE ξ OF BEARING AT EACH ABUTMENT.
 3. FOR BEARING DETAILS, SEE SHEET [24/46].
 4. PLACE VERTICAL BARS PARALLEL TO BEAMS.
 5. FOR ABUTMENT DETAILS, SEE SHEETS [15/46] THRU [20/46].
 6. FOR ABUTMENT PLAN AND BEAM DETAILS, SEE SHEETS [26/46] AND [27/46].
 7. FOR DIAPHRAGM GUIDE DETAILS, SEE SHEET [27/46].
 8. PLACE THE DIAPHRAGM CONCRETE ENCASEING THE STRUCTURAL MEMBER ENDS OF AN INDIVIDUAL PHASE WITH THE DECK CONCRETE.



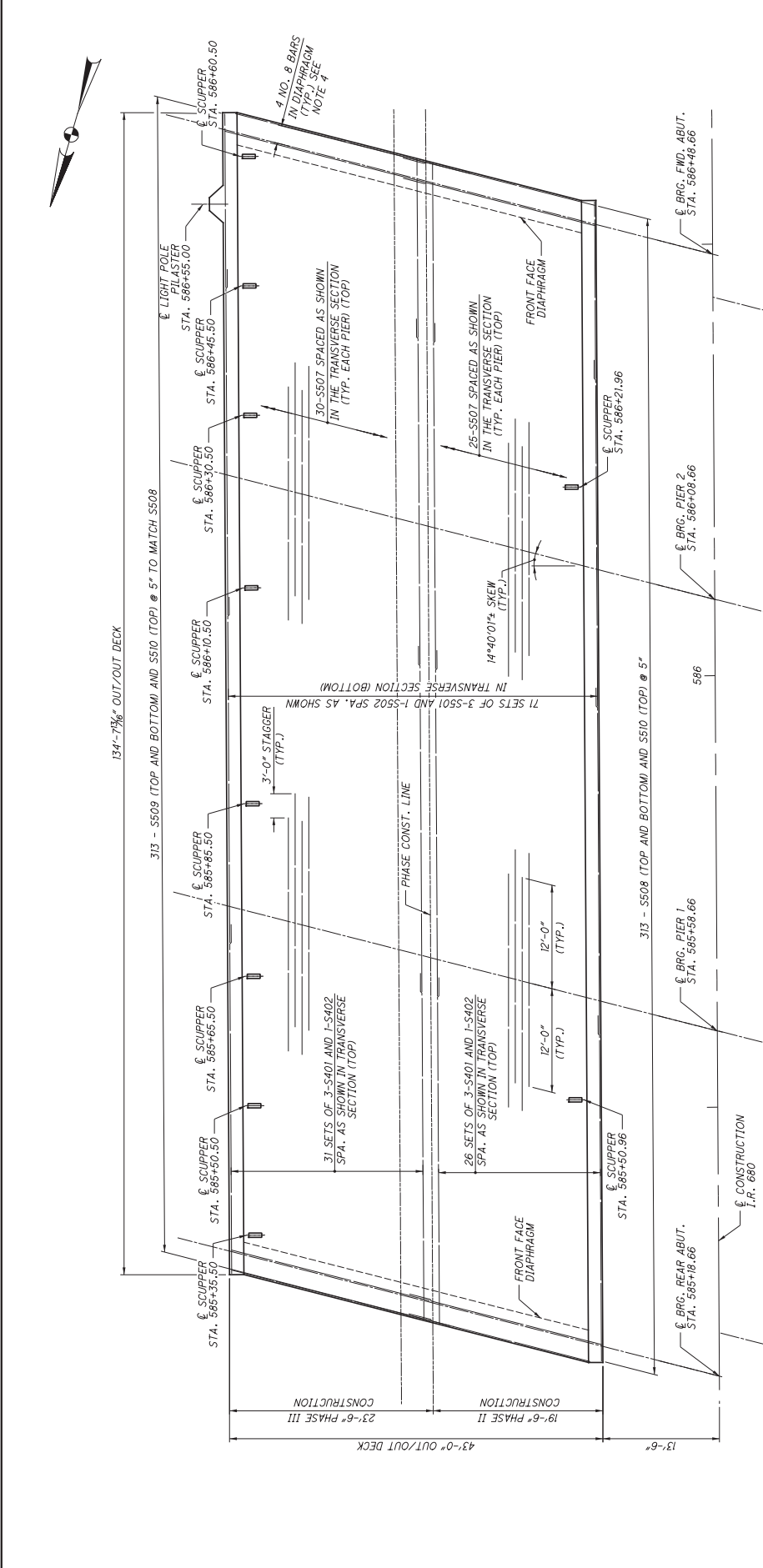
REAR ABUTMENT DIAPHRAGM ELEVATION
 (BEARINGS AND PEDESTALS NOT SHOWN)



FORWARD ABUTMENT DIAPHRAGM ELEVATION
 (BEARINGS AND PEDESTALS NOT SHOWN)

- NOTES:
1. FOR DIAPHRAGM SECTION, SEE SHEETS [16/416] AND [19/416].
 2. ELEVATIONS OF THE TOP OF THE SEMI-INTEGRAL DIAPHRAGM ARE GIVEN AT THE ϵ OF BEARING AT EACH ABUTMENT.
 3. FOR BEARING DETAILS, SEE SHEET [25/416].
 4. PLACE VERTICAL BARS PARALLEL TO BEAMS.
 5. FOR ABUTMENT DETAILS, SEE SHEETS [19/416] THRU [20/416].
 6. FOR FRAMING PLAN AND BEAM DETAILS, SEE SHEETS [28/416] AND [29/416].
 7. FOR DIAPHRAGM GUIDE DETAILS, SEE SHEET [21/416].
 8. PLACE THE DIAPHRAGM CONCRETE ENCASEING THE STRUCTURAL MEMBER ENDS OF AN INDIVIDUAL PHASE WITH THE DECK CONCRETE.

DESIGNED	LAH	JOL
CHECKED	LAH	REVISD
DESIGNED	LAH	REVISD
DATE	REF	STRUCTURE FILE NUMBER
12/31/2019	12/31/2019	5006635

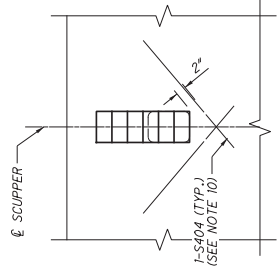


DECK PLAN - LEFT BRIDGE

NOTES:

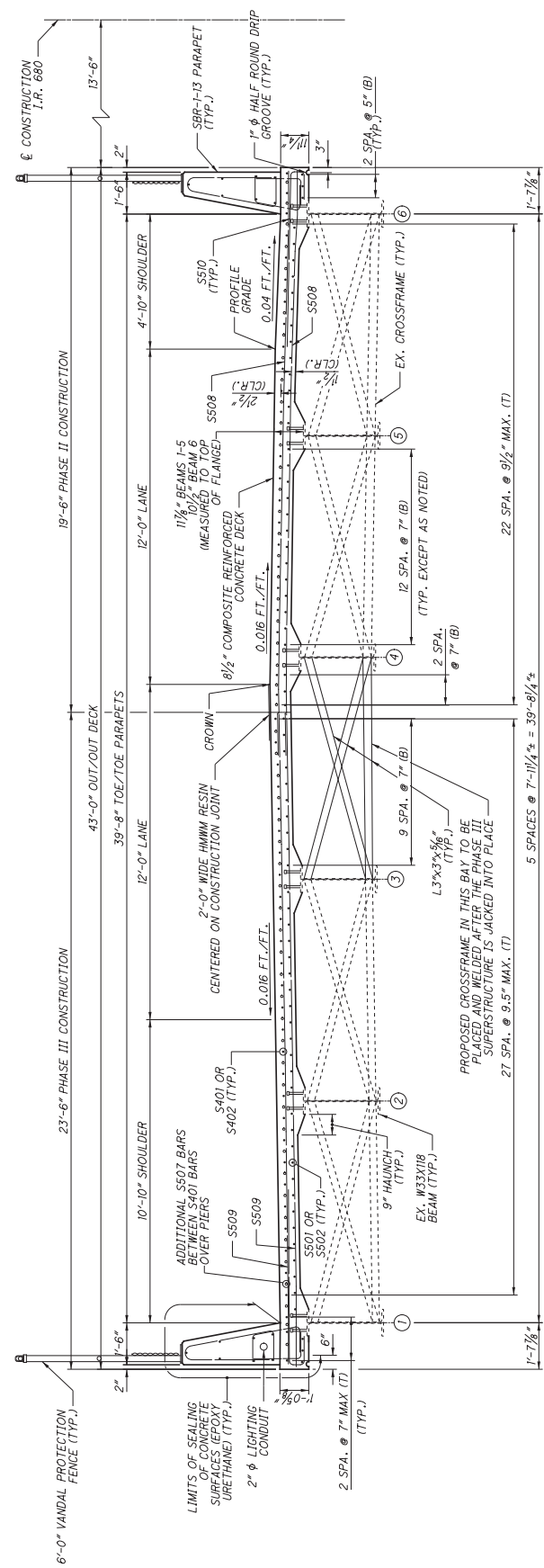
1. FOR TRANSVERSE SECTION, SEE SHEET [34/46].
2. FOR PARAPET ELEVATIONS, SEE SHEET [40/46].
3. FOR SCREED, TOP OF HAUNCH, AND FINAL DECK ELEVATIONS, SEE SHEETS [38/46] AND [39/46].
4. FOR ABUTMENT AND SEMI-INTEGRAL DIAPHRAGM DETAILS, INCLUDING NO. 8 BARS IN DIAPHRAGM, SEE SHEETS [16/46], [19/46], AND [31/46].
5. FOR PHASE CONSTRUCTION DETAILS, SEE SHEETS [17/46] THRU [14/46].
6. FOR PARAPET CONTROL JOINT DETAILS AND ADDITIONAL PARAPET TRANSITION DETAILS NOT SHOWN, SEE ODOT STANDARD DRAWING SBR-1-13.
7. FOR APPROACH SLAB PLAN, SEE SHEET [42/46].
8. FOR REINFORCEMENT SCHEDULE, SEE SHEETS [44/46] AND [45/46].
9. FOR LIGHT POLE PILASTER DETAILS, SEE SHEET [40/46].
10. S404 BARS SHALL BE ORIENTED AT 45° TO THE LONG AXIS OF THE SCUPPER AND LOCATED JUST BELOW THE TRANSVERSE BARS IN THE TOP MAT OF STEEL.
11. FIELD CUT REINFORCING TO ACCOMMODATE SCUPPERS.
12. FOR ADDITIONAL SCUPPER DETAILS, SEE SHEET [43/46].

REQUIRED LAP LENGTHS
 NO. 4 BARS 2'-0" MIN.
 NO. 5 BARS 2'-6" MIN.



ADDITIONAL REINFORCING AT SCUPPERS

(NORMAL LONGITUDINAL REINFORCEMENT, NOT SHOWN FOR CLARITY)

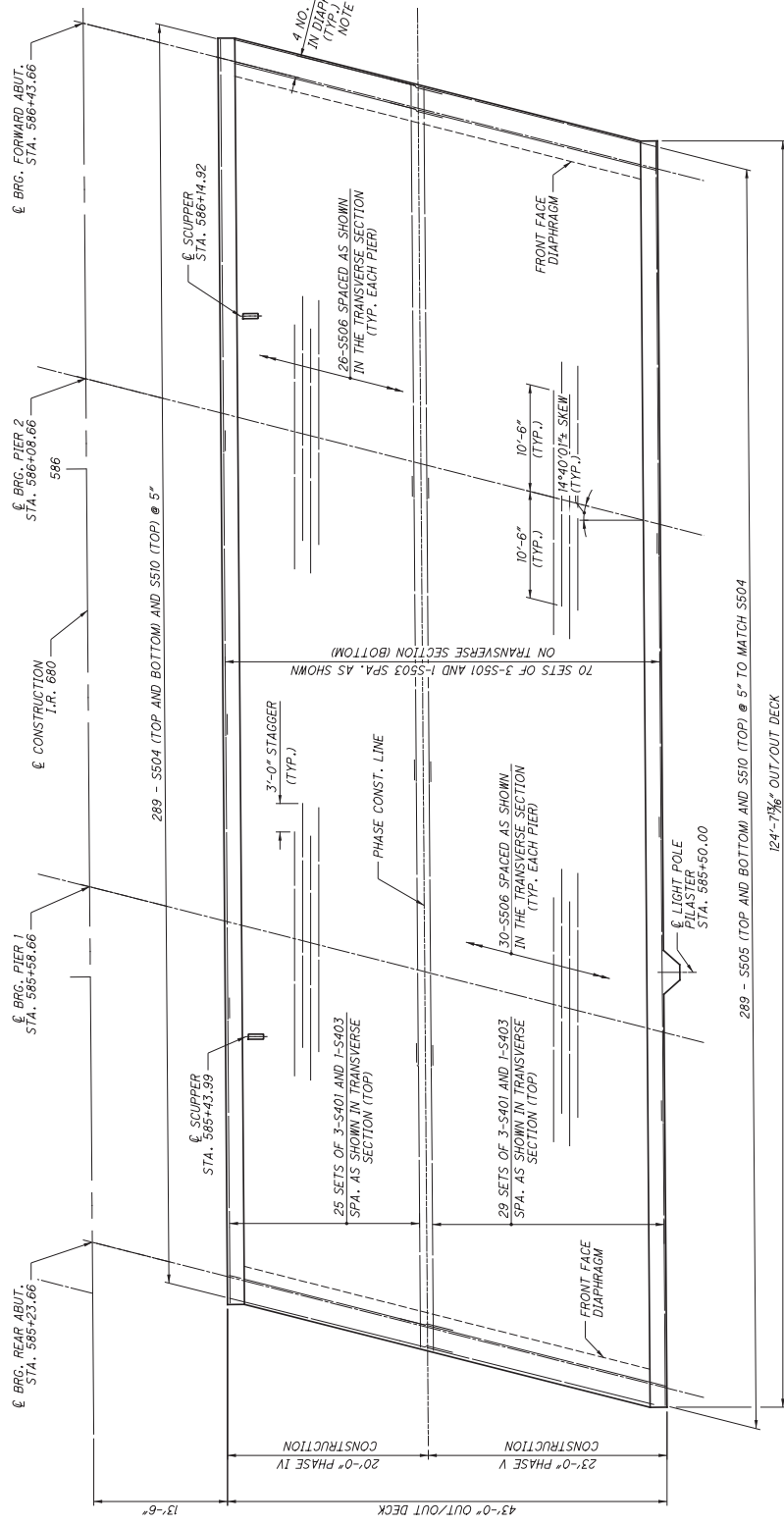


TRANSVERSE SECTION - LEFT BRIDGE

NOTES:

1. FOR DECK PLAN, SEE SHEET 133/46.
2. FOR REINFORCING STEEL SCHEDULE, SEE SHEET 144/46.
3. THE ESTIMATED QUANTITY OF DECK SLAB CONCRETE IS BASED ON THE CONSTANT DECK SLAB THICKNESS, AS SHOWN, PLUS THE QUANTITY OF CONCRETE THAT FORMS EACH BEAM HAUNCH. THE ESTIMATE ASSUMES A CONSTANT THICKNESS OF 3 3/8 INCHES AT BEAMS 1 THRU 5 AND 2 INCHES AT BEAM 6 AND A CONSTANT HAUNCH WIDTH OUTSIDE THE EDGE OF EACH BEAM OF 9 INCHES. DEVIATE FROM THIS ESTIMATE AT YOUR OWN RISK. THE ALLOWABLE TOLERANCE FOR THE HAUNCH WIDTH OUTSIDE THE EDGE OF EACH BEAM IS ±3 INCHES.
4. THE HAUNCH THICKNESS IS MEASURED AT THE CENTERLINE OF THE BEAM, FROM THE SPAN TO THE CENTERLINE OF THE HAUNCH. THE AREA OF ALL EMBEDDED STEEL PLATES HAS BEEN DEDUCTED FROM THE HAUNCH QUANTITY IN ACCORDANCE WITH 511.24.
5. FOR PARAPET DETAILS, SEE SHEET 140/46.
6. STRUCTURE TO BE GROUNDING IN ACCORDANCE WITH GMS 625.16.
7. SEE ODOT STANDARD DRAWING, GSD-1-96, FOR ADDITIONAL CROSSFRAME DETAILS.

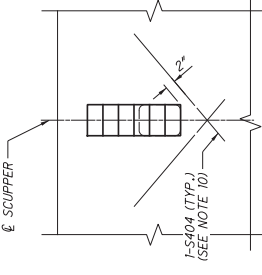
MIN. LAP LENGTHS	
NO. 5 BAR	2'-6"



DECK PLAN - RIGHT BRIDGE

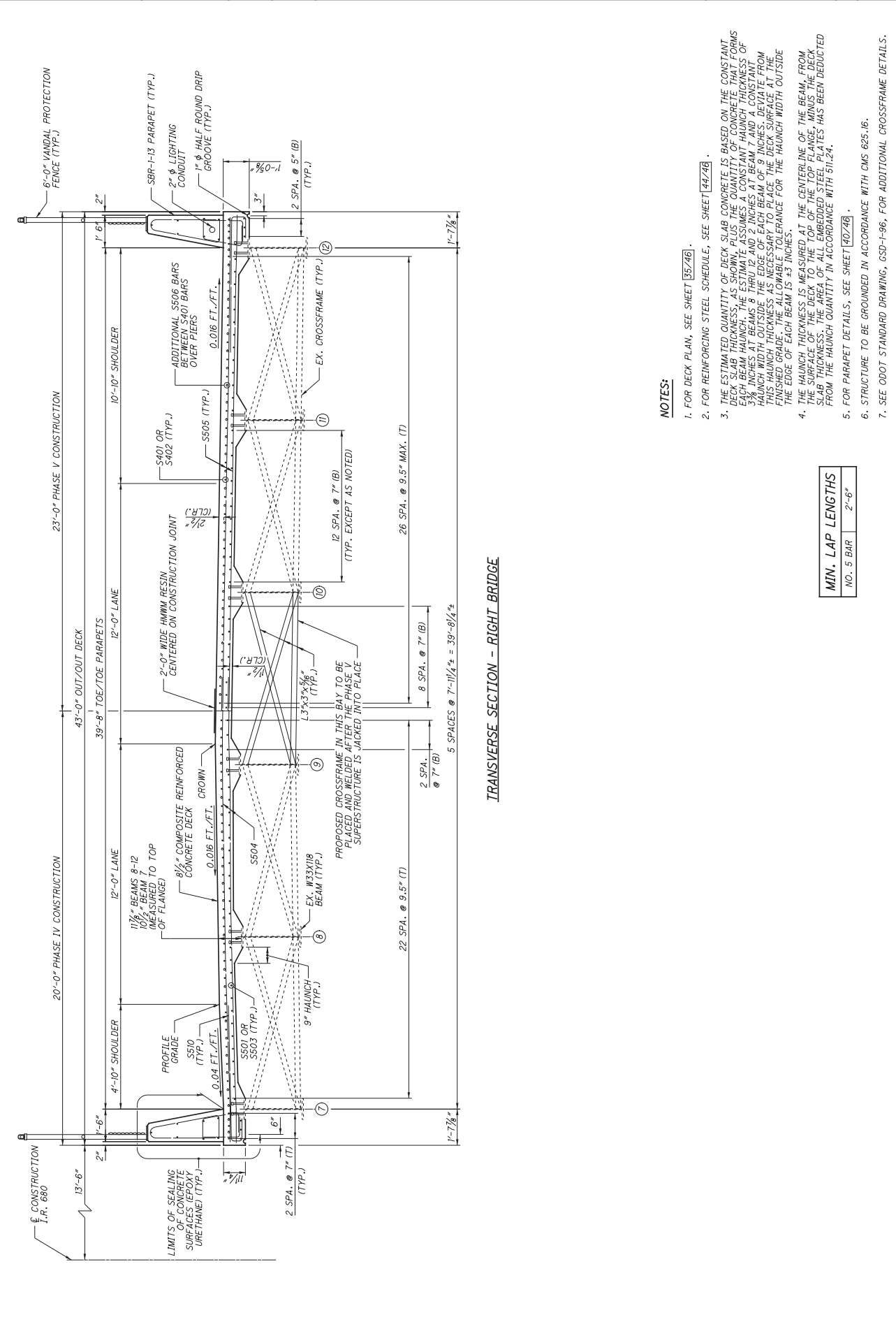
- NOTES:**
1. FOR TRANSVERSE SECTION, SEE SHEET [36/46].
 2. FOR PARAPET ELEVATIONS, SEE SHEET [40/46].
 3. FOR SCORED, TOP OF HAUNCH, AND FINAL DECK ELEVATIONS, SEE SHEETS [36/46] AND [39/46].
 4. FOR ABUTMENT AND SEMI-INTEGRAL DIAPHRAGM DETAILS, INCLUDING NO. 8 BARS IN DIAPHRAGM, SEE SHEETS [16/46], [17/46], AND [22/46].
 5. FOR PHASE CONSTRUCTION DETAILS, SEE SHEETS [17/46] THRU [17/46].
 6. FOR PARAPET CONTROL JOINT DETAILS AND ADDITIONAL PARAPET TRANSITION DETAILS NOT SHOWN, SEE ODOT STANDARD DRAWING SBR-1-15.
 7. FOR APPROACH SLAB PLAN, SEE SHEET [42/46].
 8. FOR REINFORCEMENT SCHEDULE, SEE SHEETS [41/46] AND [45/46].
 9. FOR LIGHT POLE PILASTER DETAILS, SEE SHEET [40/46].
 10. S404 BARS SHALL BE ORIENTED AT 45° TO THE LONG AXIS OF THE SCUPPER AND LOCATED JUST BELOW THE TRANSVERSE BARS IN THE TOP MAT OF STEEL.
 11. FIELD CUT REINFORCING TO ACCOMMODATE SCUPPERS.
 12. FOR ADDITIONAL SCUPPER DETAILS, SEE SHEET [43/46].

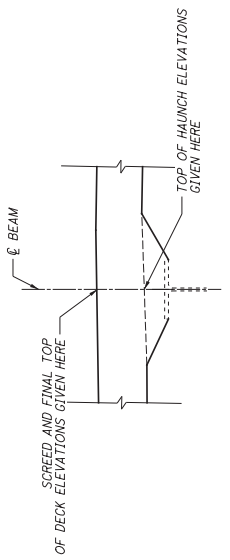
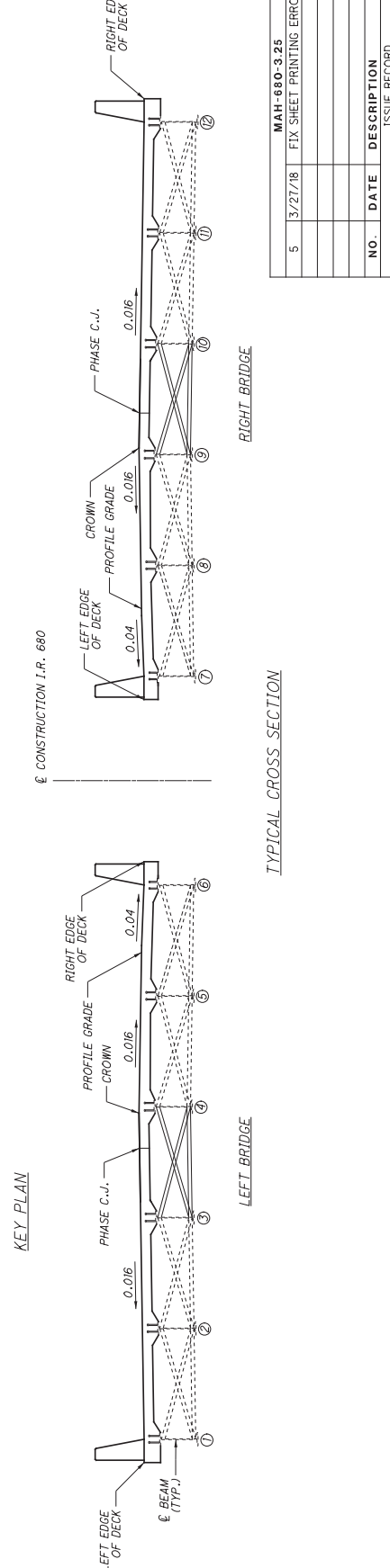
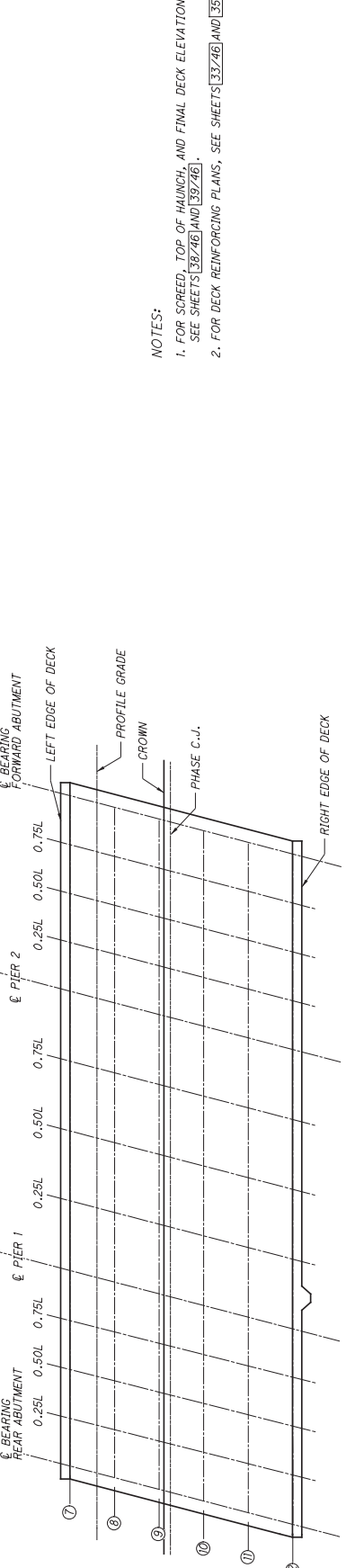
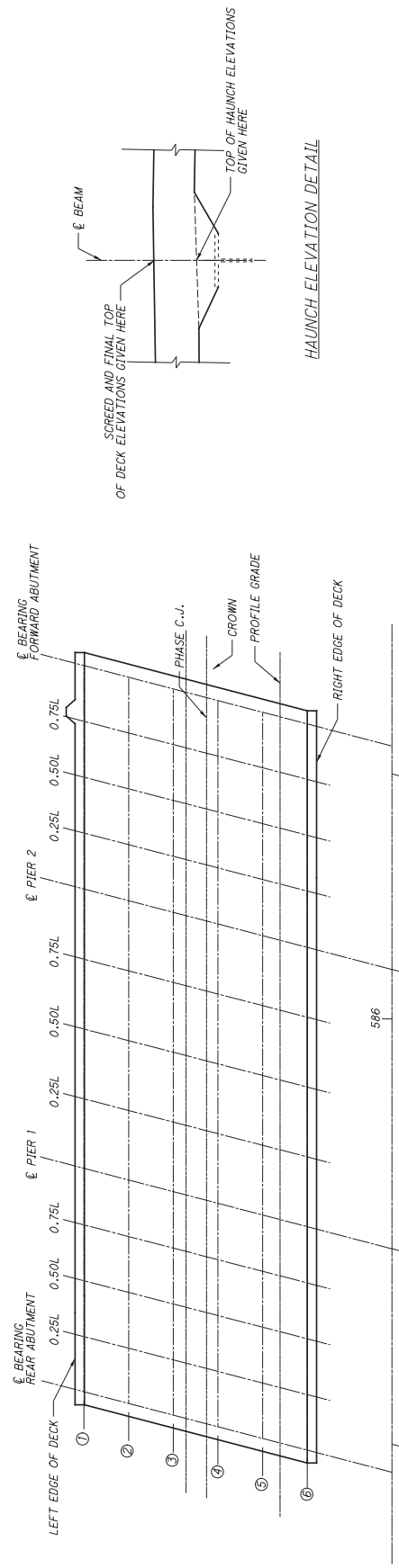
REQUIRED LAP LENGTHS
 NO. 4 BARS 2'-0" MIN.
 NO. 5 BARS 2'-6" MIN.



ADDITIONAL REINFORCING AT SCUPPERS

NORMAL LONGITUDINAL REINFORCEMENT,
 NOT SHOWN FOR CLARITY





NOTES:
 1. FOR SCREED, TOP OF HAUNCH, AND FINAL DECK ELEVATIONS, SEE SHEETS [38/46] AND [39/46].
 2. FOR DECK REINFORCING PLANS, SEE SHEETS [33/46] AND [35/46].

SCREED ELEVATIONS - LEFT BRIDGE

LEFT EDGE OF DECK	STATION	€ BRG. REAR ABUT.	€ PIER 1	€ PIER 2	€ PIER 1	€ PIER 2	€ PIER 2	€ BEARING FWD. ABUT.
		0.25L	0.50L	0.75L	0.25L	0.50L	0.75L	0.75L
		585+33.44	585+43.44	585+53.44	585+63.44	585+73.44	585+83.44	586+63.44
		970.72	970.66	970.51	970.33	970.23	970.12	969.86
		585+27.30	585+37.30	585+47.30	585+57.30	585+67.30	585+77.30	586+57.30
		971.11	971.06	970.91	970.73	970.63	970.52	970.18
		585+21.14	585+31.14	585+41.14	585+51.14	585+61.14	585+71.14	586+51.14
		971.02	970.97	970.82	970.64	970.54	970.44	970.09
		585+15.28	585+25.28	585+35.28	585+45.28	585+55.28	585+65.28	586+45.28
		971.09	971.03	970.88	970.70	970.60	970.50	970.15
		585+9.87	585+19.87	585+29.87	585+39.87	585+49.87	585+59.87	586+39.87
		971.17	971.13	971.00	970.82	970.72	970.62	970.28
		585+08.87	585+18.87	585+28.87	585+38.87	585+48.87	585+58.87	586+38.87
		970.86	970.82	970.71	970.53	970.43	970.33	970.04

SCREED ELEVATIONS - RIGHT BRIDGE

LEFT EDGE OF DECK	STATION	€ BRG. REAR ABUT.	€ PIER 1	€ PIER 2	€ PIER 1	€ PIER 2	€ PIER 2	€ BEARING FWD. ABUT.
		0.25L	0.50L	0.75L	0.25L	0.50L	0.75L	0.75L
		585+20.13	585+28.88	585+37.63	585+46.38	585+55.13	585+63.88	586+40.13
		970.78	970.74	970.68	970.62	970.55	970.48	969.86
		585+18.42	585+27.17	585+35.92	585+44.67	585+53.42	585+62.17	586+38.42
		970.98	970.94	970.88	970.82	970.75	970.68	970.14
		585+16.28	585+24.03	585+32.78	585+41.53	585+50.28	585+59.03	586+35.28
		971.19	971.15	971.09	971.03	970.97	970.90	970.28
		585+14.89	585+23.64	585+32.39	585+41.14	585+49.89	585+58.64	586+34.89
		971.17	971.13	971.08	971.01	970.95	970.88	970.28
		585+08.87	585+17.62	585+26.37	585+35.12	585+43.87	585+52.62	586+28.87
		970.86	970.82	970.77	970.71	970.65	970.59	969.97

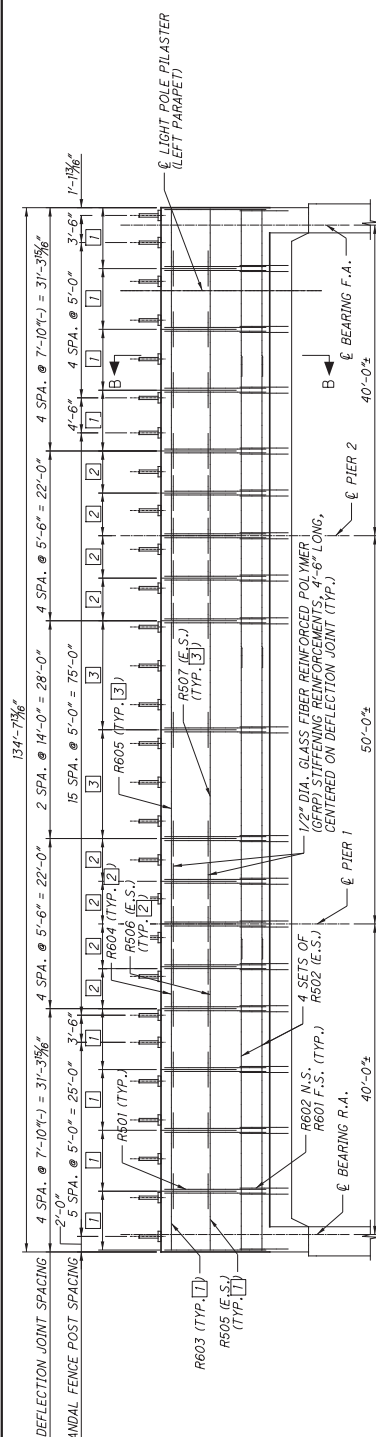
TOP OF HAUNCH ELEVATIONS - LEFT BRIDGE

BEAM 1	STATION	€ BRG. REAR ABUT.	€ PIER 1	€ PIER 2	€ PIER 1	€ PIER 2	€ PIER 2	€ BEARING FWD. ABUT.
		0.25L	0.50L	0.75L	0.25L	0.50L	0.75L	0.75L
		585+35.02	585+43.02	585+51.02	585+59.02	585+67.02	585+75.02	586+63.02
		970.01	969.96	969.80	969.62	969.42	969.23	968.98
		585+30.94	585+40.94	585+50.94	585+60.94	585+70.94	585+80.94	586+60.94
		970.16	970.10	970.03	969.87	969.70	969.52	969.22
		585+28.86	585+38.86	585+48.86	585+58.86	585+68.86	585+78.86	586+58.86
		970.29	970.24	970.17	970.09	969.91	969.70	969.27
		585+26.79	585+36.79	585+46.79	585+56.79	585+66.79	585+76.79	586+56.79
		970.40	970.35	970.28	970.20	970.12	969.92	969.38
		585+24.71	585+34.71	585+44.71	585+54.71	585+64.71	585+74.71	586+54.71
		970.29	970.24	970.17	970.09	969.91	969.70	969.27
		585+22.63	585+32.63	585+42.63	585+52.63	585+62.63	585+72.63	586+52.63
		970.06	970.00	969.94	969.86	969.78	969.68	969.14

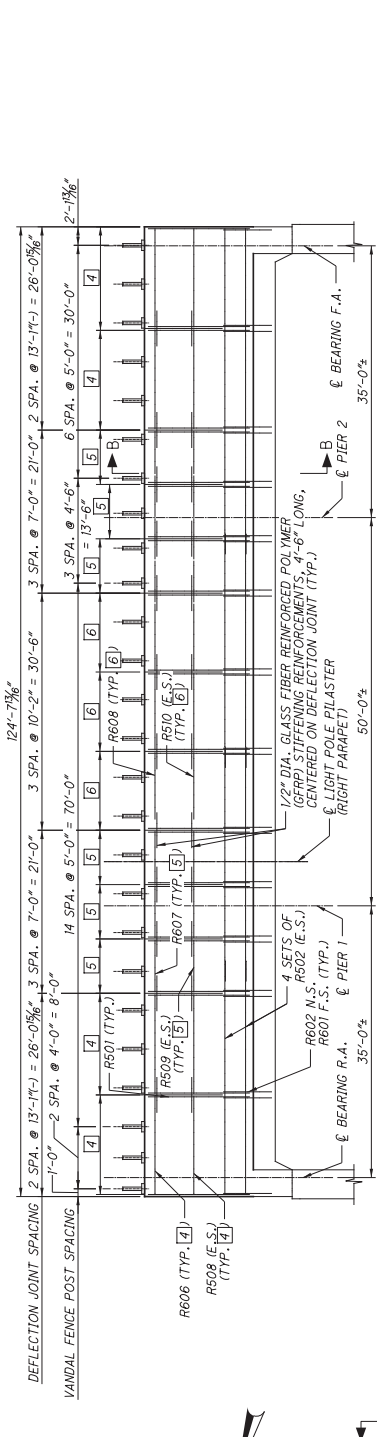
TOP OF HAUNCH ELEVATIONS - RIGHT BRIDGE

BEAM 7	STATION	€ BRG. REAR ABUT.	€ PIER 1	€ PIER 2	€ PIER 1	€ PIER 2	€ PIER 2	€ BEARING FWD. ABUT.
		0.25L	0.50L	0.75L	0.25L	0.50L	0.75L	0.75L
		585+19.69	585+28.44	585+37.19	585+45.94	585+54.69	585+63.44	586+39.69
		970.07	970.03	969.91	969.73	969.55	969.37	969.15
		585+17.61	585+26.36	585+35.11	585+43.86	585+52.61	585+61.36	586+37.61
		970.33	970.29	970.23	970.17	970.10	969.92	969.48
		585+15.53	585+24.28	585+33.03	585+41.78	585+50.53	585+59.28	586+35.53
		970.46	970.42	970.37	970.31	970.24	970.16	969.63
		585+13.46	585+22.21	585+30.96	585+39.71	585+48.46	585+57.21	586+33.46
		970.38	970.34	970.28	970.22	970.16	969.98	969.48
		585+11.38	585+20.13	585+28.88	585+37.63	585+46.38	585+55.13	586+31.38
		970.26	970.22	970.17	970.11	970.05	969.97	969.37
		585+09.30	585+18.05	585+26.80	585+35.55	585+44.30	585+53.05	586+29.30
		970.15	970.10	970.06	970.00	969.94	969.85	969.33

- NOTES:
- FOR DECK ELEVATION LOCATION DETAILS, SEE SHEET 37/46.
 - FOR FINAL DECK SURFACE ELEVATIONS, SEE SHEET 37/46.
 - 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 BOTTOM OF THE DECK ABOVE THE BEAM/GIRDER HAUNCH PRIOR TO DEFLECTIONS CAUSED BY DECK PLACEMENT AND OTHER ANTICIPATED DEAD LOADS.

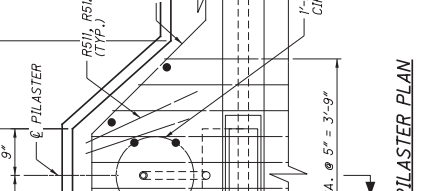
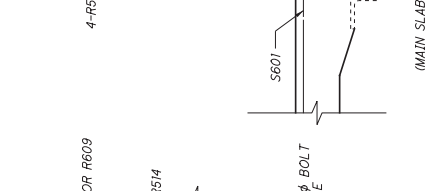
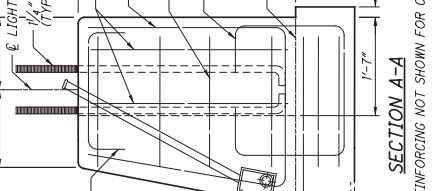
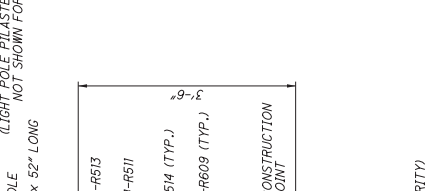
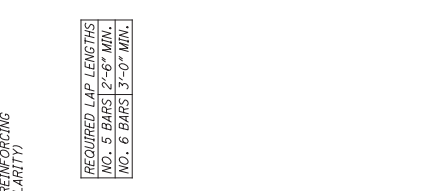


PARAPET ELEVATION - LEFT BRIDGE
 TYPICAL BOTH PARAPETS
 (LIGHT POLE PILASTER REINFORCING NOT SHOWN FOR CLARITY)



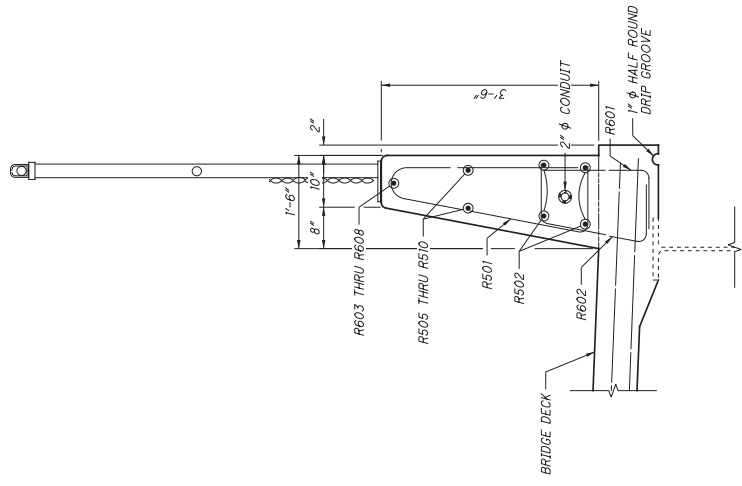
PARAPET ELEVATION - RIGHT BRIDGE
 TYPICAL BOTH PARAPETS
 (LIGHT POLE PILASTER REINFORCING NOT SHOWN FOR CLARITY)

- LEGEND:**
- 1 10 SETS OF R501, R601, & R602 SPA. @ 10" = 7'-6" (6 SETS OF 1 TOTAL PER PARAPET)
 - 2 6 SETS OF R501, R601, & R602 SPA. @ 1'-0" = 5'-0" (8 SETS OF 2 TOTAL PER PARAPET)
 - 3 16 SETS OF R501, R601, & R602 SPA. @ 11" = 13'-9" (2 SETS OF 3 TOTAL PER PARAPET)
 - 4 16 SETS OF R501, R601, & R602 SPA. @ 10" = 12'-6" (4 SETS OF 4 TOTAL PER PARAPET)
 - 5 8 SETS OF R501, R601, & R602 SPA. @ 11" = 6'-5" (6 SETS OF 5 TOTAL PER PARAPET)
 - 6 14 SETS OF R501, R601, & R602 SPA. @ 9" = 9'-9" (3 SETS OF 6 TOTAL PER PARAPET)
- NOTES:**
1. FOR DETAILS NOT SHOWN, SEE STD. DWG. SBR-I-13.
 2. FOR SLAB PLAN, SEE SHEETS 33/46 AND 35/46.
 3. STRUCTURE TO BE GROUTED IN ACCORDANCE WITH CMS 625.16.
 4. FOR ADDITIONAL LIGHT POLE PILASTER DETAILS, SEE ODOT STANDARD DRAWING HL-20.14 AND LIGHTING PLANS.
 5. FOR POLE BASE PLATE DETAILS, SEE ODOT STANDARD DRAWING HL-10.13.
 6. FOR PAYMENT OF MATERIAL AND LABOR ASSOCIATED WITH LIGHT POLE AND LUMINAIRE, SEE LIGHTING PLANS.
 7. FOR PARAPET CONTROL JOINT DETAILS AND ADDITIONAL PARAPET TRANSITION DETAILS NOT SHOWN, SEE ODOT STANDARD DRAWING SBR-I-13.
 8. FOR SECTION B-B DETAILS, SEE SHEET 41/46.
 9. REFER TO LIGHTING PLANS FOR PARAPET CONDUIT AND JUNCTION BOX DETAILS.



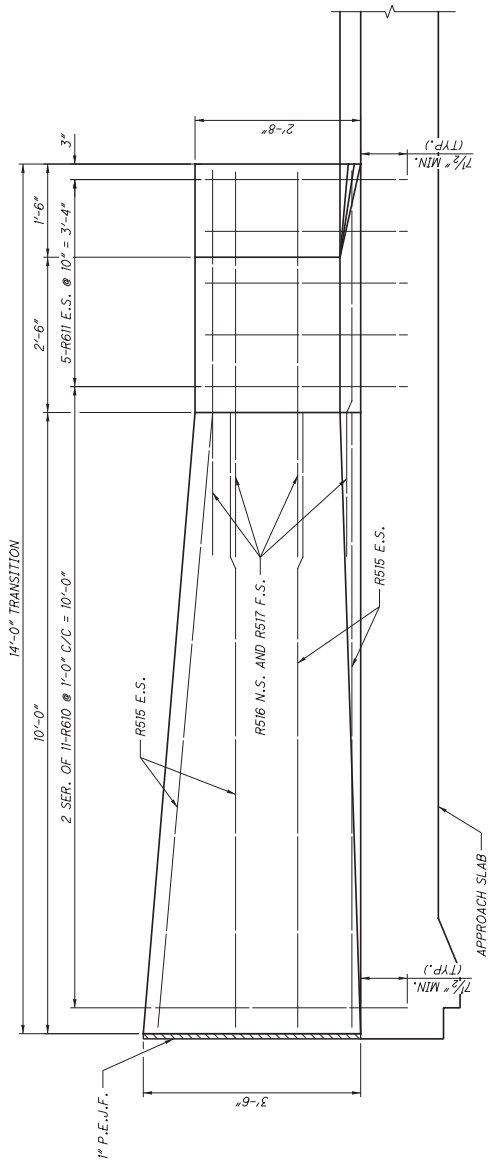
SECTION A-A
 (MAIN SLAB REINFORCING NOT SHOWN FOR CLARITY)

LIGHT POLE PILASTER PLAN



SECTION B-B

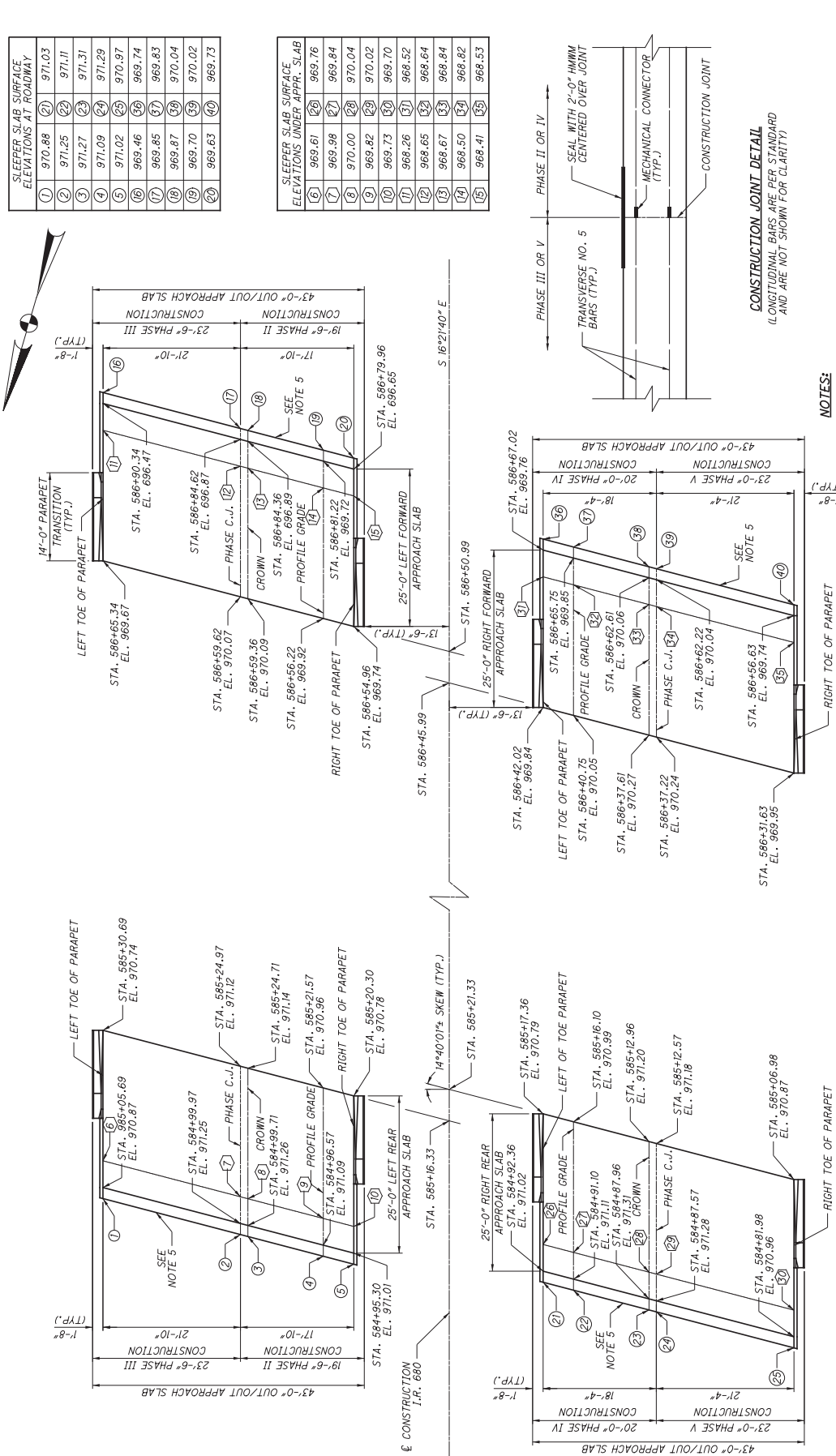
- NOTES:
1. FOR SLAB PLAN, SEE SHEETS [33/46] AND [35/46].
 2. FOR APPROACH SLAB DETAILS, SEE SHEET [42/46] AND ODOT STANDARD DRAWINGS AS-1-15 AND AS-2-15.
 3. FOR ADDITIONAL PARAPET TRANSITION DETAILS NOT SHOWN, SEE ODOT STANDARD DRAWING SBR-1-13.
 4. FOR REINFORCING SCHEDULES, SEE SHEETS [44/46] AND [45/46].
 5. REFER TO LIGHTING PLANS FOR PARAPET CONDUIT AND JUNCTION BOX DETAILS.
 6. PAYMENT FOR THE PARAPET TRANSITION CONCRETE ON THE APPROACH SLAB SHALL BE INCLUDED IN THE CONTRACT. CONTRACTORS SHALL PROVIDE BRIDGE DECK PARAPET REINFORCEMENT SHALL BE INCLUDED WITH THE BRIDGE PARAPET REINFORCEMENT UNDER ITEM 509 - EPOXY COATED REINFORCING STEEL, AS PER PLAN.
 7. SEAL THE ENTIRE PERIMETER OF THE 14'-0" PARAPET TRANSITION WITH EPOXY URETHANE SEALER.



PARAPET TRANSITION ELEVATION

MINIMUM LAP LENGTHS	
NO. 5 BAR	2'-6"

6. PAYMENT FOR THE PARAPET TRANSITION CONCRETE ON THE APPROACH SLAB SHALL BE INCLUDED IN THE CONTRACT. CONTRACTORS SHALL PROVIDE BRIDGE DECK PARAPET REINFORCEMENT SHALL BE INCLUDED WITH THE BRIDGE PARAPET REINFORCEMENT UNDER ITEM 509 - EPOXY COATED REINFORCING STEEL, AS PER PLAN.
7. SEAL THE ENTIRE PERIMETER OF THE 14'-0" PARAPET TRANSITION WITH EPOXY URETHANE SEALER.



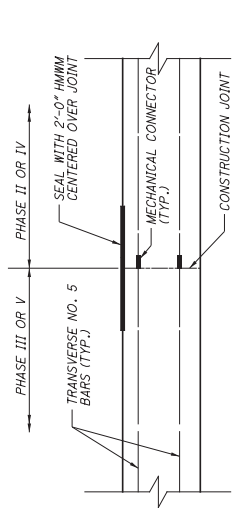
SLEEPER SLAB SURFACE ELEVATIONS AT ROADWAY

1	970.88	21	971.03
2	971.29	22	971.11
3	971.27	23	971.31
4	971.09	24	971.29
5	971.02	25	970.97
6	969.46	26	969.74
7	969.85	27	969.83
8	969.87	28	970.04
9	969.70	29	970.02
10	969.63	30	969.73

SLEEPER SLAB SURFACE ELEVATIONS UNDER APPR. SLAB

6	969.61	26	969.76
7	969.98	27	969.84
8	970.00	28	970.04
9	969.82	29	970.02
10	969.73	30	969.70
11	968.26	31	968.52
12	968.65	32	968.64
13	968.67	33	968.84
14	968.50	34	968.82
15	968.41	35	968.53

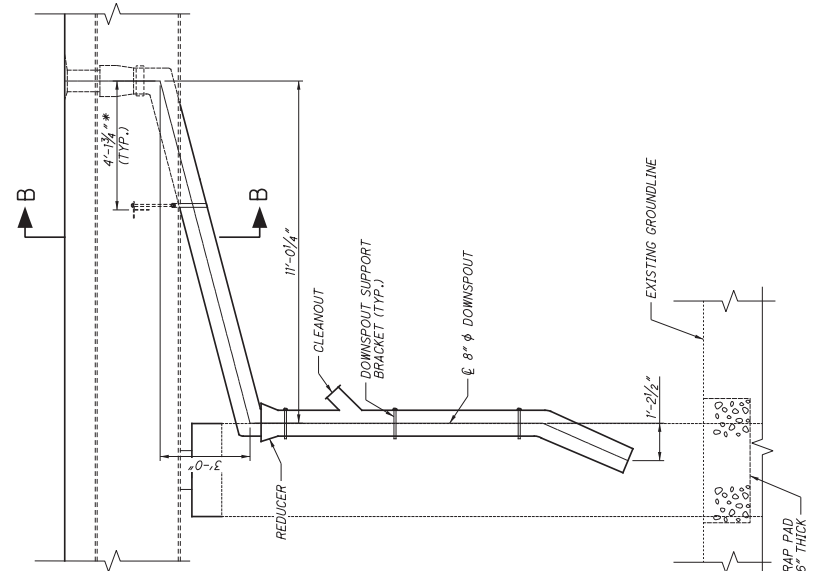
CONSTRUCTION JOINT DETAIL
 (LONGITUDINAL BARS ARE PER STANDARD AND ARE NOT SHOWN FOR CLARITY)



NOTES:

- FOR ADDITIONAL APPROACH SLAB DETAILS, SEE ODOT STANDARD DRAWING SER-1-B AND PROPOSED RIGID PAVEMENT.
- FOR PARAPET ELEVATIONS, SEE SHEET 42/46.
- FOR ADDITIONAL PARAPET TRANSITION DETAILS, SEE ODOT STANDARD DRAWING SER-1-B.
- THE CROSS SLOPE ALONG THE INSIDE SHOULDER OF EACH APPROACH SLAB TRANSITIONS FROM 0.04 FT/FT TO 0.06 FT/FT FROM THE BRIDGE TO THE BEGINNING OR END OF THE APPROACH SLAB.
- SLEEPER SLAB FOR TYPE C INSTALLATION AS PER AS-2-16 EXCEPT THAT THE TRANSVERSE NO. 5 BARS SHALL BE LAPPED AT THE PHASE CONSTRUCTION JOINT SIMILAR TO APPROACH SLAB JOINT DETAIL.

APPROACH SLAB PLAN



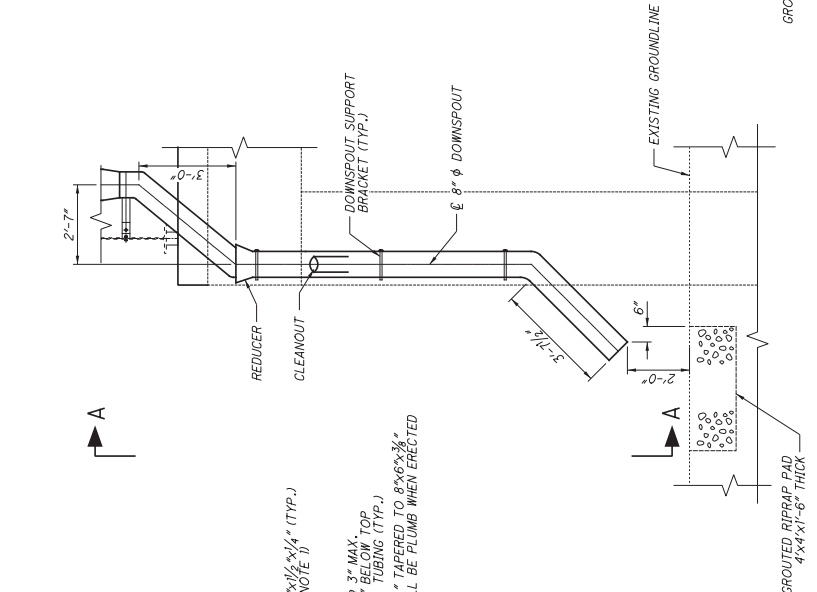
VIEW A-A

(SCUPPER AT STA. 586+10.50 SHOWN,
SCUPPER AT STA. 585+85.50 SIMILAR)

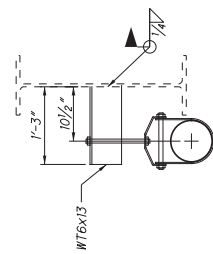
* = ADJUST AS REQUIRED TO CLEAR EXISTING FIELD SPLICE

NOTES:

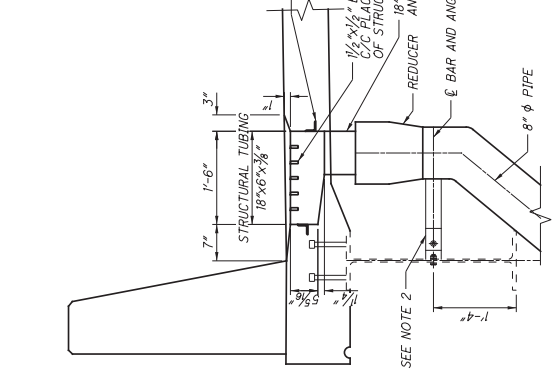
1. REFER TO SECTION E-E IN ODOT STANDARD DRAWING GSD-1-96 FOR ADDITIONAL ANGLE DETAILS.
2. REFER TO SECTION F-F IN ODOT STANDARD DRAWING GSD-1-96 FOR CONNECTION DETAILS.
3. SEE STD. DRAWING GSD-1-96 FOR DETAILS OF SCUPPERS AT STATIONS 585+35.50, 585+43.99, 585+50.50, 585+50.96, 585+65.50, 586+14.92, 586+21.96, 586+30.50, 586+45.50, AND 586+60.50
4. INCLUDE SCUPPERS AT STA. 585+85.50 AND 586+10.50 WITH ITEM 518 - SCUPPERS, INCLUDING SUPPORTS AS PER PLAN. INCLUDE ALL OTHER SCUPPERS WITH ITEM 518 - SCUPPERS, INCLUDING SUPPORTS.
5. ALL PIPE SHALL BE GALVANIZED ASTM A53.
6. INCLUDE THE COST OF ALL SUPPORTS, REDUCERS, CLEANOUTS, ECT. WITH ITEM 518 - 8" PIPE DOWNSPOUT INCLUDING SPECIALS AS PER PLAN OR ITEM 518 - PIPE HORIZONTAL CONDUCTOR, AS PER PLAN.



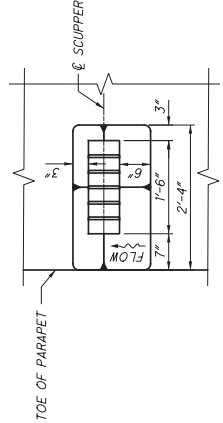
ELEVATION



SECTION B-B



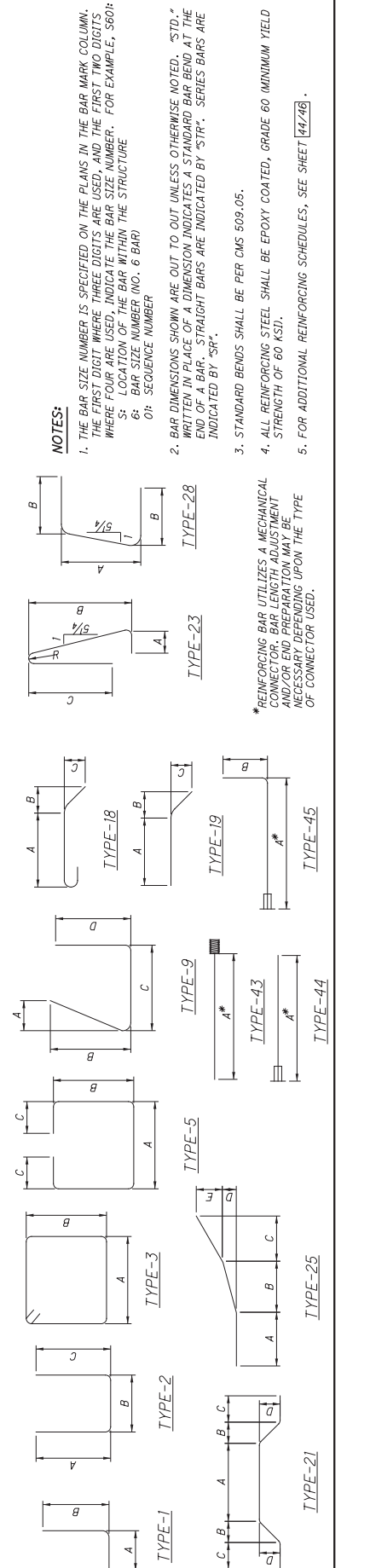
SCUPPER DETAIL AT STA. 585+85.50
AND 586+10.50



PLAN

MARK	NUMBER		LENGTH	WEIGHT	TYPE	DIMENSIONS						
	PHASE II	PHASE III				A	B	C	D	E	R	INC
PARAPETS - LEFT BRIDGE												
R501	160	160	7'-4"	320	23	11"	3'-3"	3'-0"				2 3/4"
R502	16	16	35'-6"	32	STR							
R503	16	16	7'-6"	32	STR							
R504	16	16	5'-2"	173	STR							
R505	16	16	13'-8"	114	STR							
R506	4	4	8'-5"	35	9	7"	3'-2"	2'-4"	3'-2"			
R507	4	4	2'-10"	12	2	7"	1'-10"	7"				
R508	4	4	3'-2"	13	STR							
R509	6	6	7'-3"	45	21	1'-4"	1'-10"	1'-6"	1'-10"			
R510	16	16	9'-9"	328	STR							
R511	8	8	5'-8"	95	25	1'-10"	2'-5"	1'-5"	1/2"	5"		
R512	8	8	5'-8"	95	STR							
R601	160	160	2'-7"	1242	1	1'-2"	1'-7"					
R602	160	160	3'-1"	1482	28	1'-7"	1'-11"					
R603	8	8	7'-6"	180	STR							
R604	8	8	5'-2"	124	STR							
R605	2	4	13'-8"	82	STR							
R606	2	4	5'-7"	34	5	1'-11"	1'-4"	10"				
R607	4 SR	4 SR	4'-0"	8 SR	4'-0"							
R608	OF	OF	TO	573	1	1'-10"						
R609	11	11	4'-8"									
R610	20	20	4'-0"	240	1	1'-0"	3'-10"					
R611												
				SUB-TOTAL	8748							
DIAPHRAGMS - LEFT BRIDGE												
S404	4	4	3'-5"	9	STR							
S511	34	46	7'-1"	591	2	2'-5"	2'-6"	2'-5"				
S512	4	4	9'-0"	38	3	3'-5"	10"					
S513	30	46	13'-2"	1044	3	3'-5"	2'-11"					
S801	28	34	5'-0"	828	18	2'-8"	1'-0"	1'-0"				
S802	28	28	24'-0"	1784	43							
S803	16	16	19'-11"	851	44							
S804	8	8	5'-11"	126	45	4'-3"	1'-10"					
S805	8	8	13'-8"	292	1	12'-0"	1'-10"					
S806	16	16	6'-6"	278	18	4'-2"	11"	1'-1"				
S812	4	4	4'-0"	43	44							
S813	4	4	12'-0"	128	STR							
				SUB-TOTAL	6022							

MARK	NUMBER		LENGTH	WEIGHT	TYPE	DIMENSIONS						
	PHASE IV	PHASE V				A	B	C	D	E	R	INC
PARAPETS - RIGHT BRIDGE												
R501	154	308	7'-4"	2356	23	11"	3'-3"	3'-0"				2 3/4"
R502	16	32	33'-0"	1101	STR							
R503	8	16	12'-9"	213	STR							
R504	12	24	6'-8"	167	STR							
R505	6	12	9'-10"	123	STR							
R506	4	4	8'-5"	35	9	7"	3'-2"	2'-4"	3'-2"			
R507	4	4	2'-10"	12	2	7"	1'-10"					
R508	4	4	3'-2"	13	STR							
R509	6	6	7'-3"	45	21	1'-4"	1'-10"	1'-6"	1'-10"			
R510	16	16	9'-9"	326	STR							
R511	8	8	5'-8"	95	25	1'-10"	2'-5"	1'-5"	1/2"	5"		
R512	8	8	5'-8"	95	STR							
R601	154	308	2'-7"	1195	1	1'-2"	1'-7"					
R602	154	308	3'-1"	1426	28	1'-7"	11"					
R603	4	8	12'-9"	153	STR							
R604	6	12	6'-8"	120	STR							
R605	3	6	9'-10"	89	STR							
R606	4	4	5'-7"	34	5	1'-11"	1'-4"	10"				
R607	4 SR	8 SR	4'-0"	8 SR	4'-0"							
R608	OF	OF	TO	573	1	1'-0"						
R609	11	11	4'-8"									
R610	20	20	4'-0"	240	1	1'-0"	3'-10"					
R611												
				SUB-TOTAL	8411							
DIAPHRAGMS - RIGHT BRIDGE												
S404	4	4	3'-5"	9	STR							
S511	34	46	7'-1"	591	2	2'-5"	2'-6"	2'-5"				
S512	30	46	13'-0"	1030	3	3'-5"	2'-10"					
S513	4	4	9'-0"	38	3	3'-5"	10"					
S801	28	32	5'-0"	801	18	2'-8"	1'-0"	1'-0"				
S802	28	28	23'-7"	1763	43							
S803	16	16	20'-6"	876	44							
S804	8	8	6'-5"	137	45	4'-9"	1'-10"					
S805	8	8	13'-8"	292	1	12'-0"	1'-10"					
S806	16	16	6'-6"	278	18	4'-2"	11"	1'-1"				
S812	4	4	4'-7"	49	44							
S813	4	4	12'-0"	128	STR							
				SUB-TOTAL	5992							



NOTES:

1. THE BAR SIZE NUMBER IS SPECIFIED ON THE PLANS IN THE BAR MARK COLUMN. THE FIRST DIGIT WHERE THREE DIGITS ARE USED, AND THE FIRST TWO DIGITS WHERE FOUR ARE USED, INDICATE THE BAR SIZE NUMBER. FOR EXAMPLE, S601: S: LOCATION OF THE BAR WITHIN THE STRUCTURE. 6: BAR SIZE NUMBER (NO. 6 BAR) 01: SEQUENCE NUMBER
2. BAR DIMENSIONS SHOWN ARE OUT TO CUT UNLESS OTHERWISE NOTED. *STD. * WRITTEN IN PLACE OF A DIMENSION INDICATES STANDARD BAR BEND AT THE END OF A BAR. STRAIGHT BARS ARE INDICATED BY 'STR'. SERIES BARS ARE INDICATED BY '*SR'.
3. STANDARD BENDS SHALL BE PER CMS 509.05.
4. ALL REINFORCING STEEL SHALL BE EPOXY COATED, GRADE 60 (MINIMUM YIELD STRENGTH OF 60 KSI).
5. FOR ADDITIONAL REINFORCING SCHEDULES, SEE SHEET [44/46].

*REINFORCING BAR UTILIZES A MECHANICAL CONNECTOR. BAR LENGTH ADJUSTMENT AND/OR END PREPARATION MAY BE NECESSARY, DEPENDING UPON THE TYPE OF CONNECTOR USED.

MARK	NUMBER		LENGTH	WEIGHT	TYPE	DIMENSIONS						
	PHASE II	PHASE III				A	B	C	D	E	R	INC
SUPERSTRUCTURE - LEFT BRIDGE												
S401	78	93	35'-0"	3998	STR							
S402	26	31	35'-9"	1361	STR							
S404	4	16	2'-3"	30	STR							
S501	96	117	35'-0"	7776	STR							
S502	32	39	37'-3"	2758	STR							
S507	50	60	27'-0"	3098	STR							
S508	626	626	22'-6"	14691	STR							
S509	626	626	24'-1"	15724	STR							
S510	313	313	7'-7"	4951	2	6'-4"	6"	1'-0"				
S601	10	10	4'-0"	60	STR							
			SUB-TOTAL	54447								
PIERS - LEFT BRIDGE												
P501	30	30	60	1'-2"	73	1	6"	9"				
P502	15	15	30	2'-11"	91	2	3"	2'-8"	3"			
P801	1	1	21'-9"	58	43							
P802	1	1	21'-9"	58	44							
P803	2	2	21'-0"	112	43							
P804	2	2	21'-0"	112	44							
P805	2	2	20'-3"	108	43							
P806	2	2	20'-3"	108	44							
			SUB-TOTAL	720								

MARK	NUMBER		LENGTH	WEIGHT	TYPE	DIMENSIONS						
	PHASE IV	PHASE V				A	B	C	D	E	R	INC
SUPERSTRUCTURE - RIGHT BRIDGE												
S401	75	87	35'-0"	3788	STR							
S403	25	29	25'-9"	329	STR							
S404	4	4	2'-3"	6	STR							
S501	96	114	35'-0"	7666	STR							
S503	32	38	27'-3"	1990	STR							
S504	578	578	23'-0"	13666	STR							
S505	578	578	23'-7"	14217	STR							
S506	52	60	24'-0"	2804	STR							
S510	289	289	7'-7"	4572	2	6'-4"	6"	1'-0"				
S601	10	10	4'-0"	60	STR							
			SUB-TOTAL	48888								
PIERS - RIGHT BRIDGE												
P501	30	30	60	1'-2"	73	1	6"	9"				
P502	15	15	30	2'-11"	91	2	3"	2'-8"	3"			
P801	1	1	21'-9"	58	43							
P802	1	1	21'-9"	58	44							
P803	2	2	21'-0"	112	43							
P804	2	2	21'-0"	112	44							
P805	2	2	20'-3"	108	43							
P806	2	2	20'-3"	108	44							
			SUB-TOTAL	720								

NOTES:
 1. FOR REINFORCING STEEL NOTES, SEE SHEETS [57/46] AND [7/46].
 2. FOR BAR BENDING DIAGRAM, SEE SHEET [65/46].