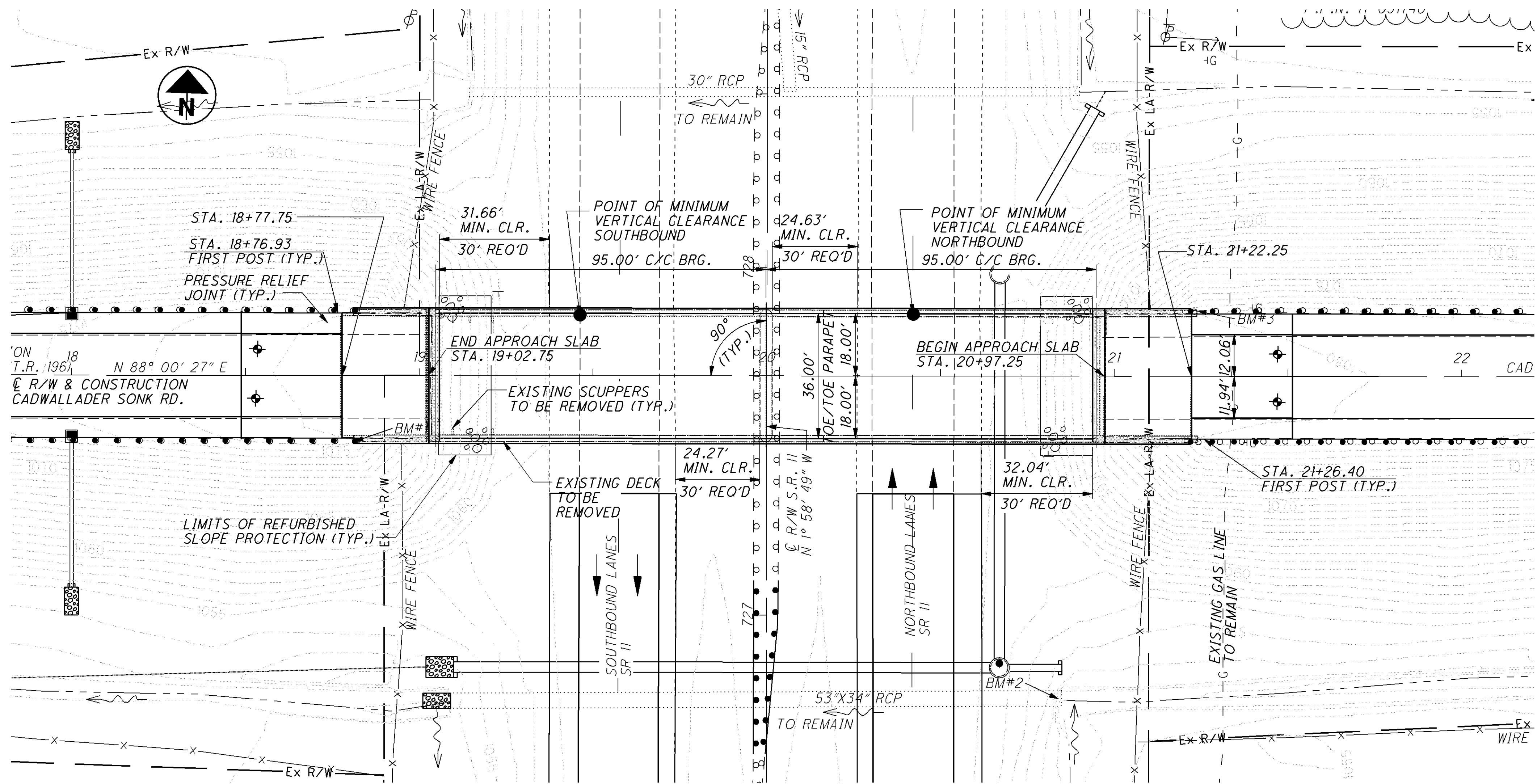
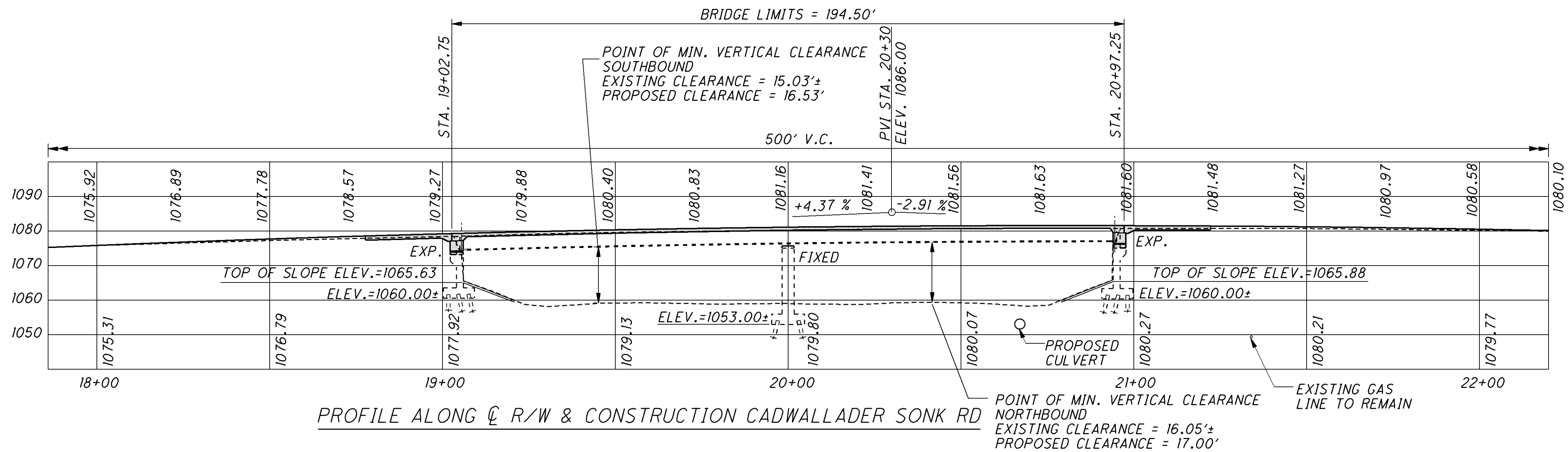




PLAN



PROFILE ALONG C R/W & CONSTRUCTION CADWALLADER SONK RD

BENCHMARK DATA

BM #1 STA. 18+81.19, ELEV. 1079.52, OFFSET 19.08', RT.
BM #2 STA. 726+76.02, ELEV. 1055.02, OFFSET 84.10', BT. SR II
BM #3 STA. 21+23.74, ELEV. 1082.23, OFFSET 18.90',

FOR ADDITIONAL BENCHMARK INFORMATION. SEE ROADWAY PLAN SHEETS 51/21 & 52/21

NOTES

- EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.
- ALL EXISTING STRUCTURE DIMENSIONS SHALL BE FIELD VERIFIED.
- ALL PIER AND ABUTMENT INFORMATION BELOW GRADE IS TAKEN FROM ORIGINAL BRIDGE PLANS AND IS NOT FIELD VERIFIED.

DESIGN TRAFFIC:

2011 ADT = 850 2011 ADTT = 26
2031 ADT = 1100 2031 ADTT = 33
DIRECTIONAL DISTRIBUTION = 60%

LEGEND

- PAVEMENT CORING LOCATION
- 16'-6" REQUIRED MINIMUM VERTICAL CLEARANCE
16'-6 3/8" ACTUAL MINIMUM VERTICAL CLEARANCE

EXISTING STRUCTURE

TYPE: CONTINUOUS WEATHERING STEEL GIRDER WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE

SPANS: 95'-0"± - 95'-0"± C/C BEARING

ROADWAY: 36'-0"± F/F PARAPET

LOADING: HS-20-44

SKREW: NONE

APPROACH SLABS: 25' LONG

ALIGNMENT: TANGENT

WEARING SURFACE: LATEX MODIFIED CONCRETE

CROWN: 0.016

STRUCTURE FILE NUMBER: 7808127

DATE BUILT: 1973

DISPOSITION: TO BE REHABILITATED

PROPOSED STRUCTURE

PROPOSED WORK: REPLACE EXISTING DECK, RAISE BEAMS, ADD MOMENT PLATES, CONVERT ABUTMENTS TO SEMI-INTEGRAL

TYPE: CONTINUOUS WEATHERING STEEL GIRDER WITH NEW COMPOSITE REINFORCED CONCRETE DECK ON EXISTING CONCRETE ABUTMENTS CONVERTED TO SEMI-INTEGRAL

SPANS: 95'-0" - 95'-0" C/C BEARING

ROADWAY: 36'-0" TOE/TOE PARAPET

LOADING: HS25 CASE II AND ALTERNATE MILITARY, FWS = 60 PSF

SKREW: NONE

APPROACH SLABS: 25'-0" LONG (AS-1-81)

ALIGNMENT: TANGENT

WEARING SURFACE: MONOLITHIC CONCRETE

CROWN: 0.016

COORDINATES: LATITUDE N 41°17'14"

LONGITUDE W 80°42'17"

DESIGN AGENCY
HAMMOND & ASSOCIATES, LIMITED
5233 STONEHAM ROAD
NORTH CANTON, OHIO 44720

DATE
08-11-10
REVIEWED
KJO
STRUCTURE FILE NUMBER
7808127

DRAWN
MCC
DESIGNED
MCC
CHECKED
CJP

TRUMBULL
STA. 19+02.75
STA. 20+97.25

SITE PLAN
TRU-11-1367
CADWALLADER SONK ROAD OVER SR 11

TRU-11-13.67
PID No. 76409

1/23

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GENERAL NOTES

STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS
REFER TO THE FOLLOWING STANDARD BRIDGE DRAWINGS:

AS-1-81 DATED (REVISED) 7-19-02
GSD-1-96 DATED (REVISED) 7-19-02
SBR-1-99 DATED (REVISED) 7-19-02
SICD-1-96 DATED (REVISED) 7-19-02

AND TO SUPPLEMENT SPECIFICATION:
843 DATED 4-18-03

DESIGN SPECIFICATIONS:
THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES"
ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION
OFFICIALS, 2002, INCLUDING THE LATEST INTERIM SPECIFICATIONS AND THE ODOT BRIDGE
DESIGN MANUAL.

DESIGN LOADING:
HS25, CASE II AND THE ALTERNATE MILITARY LOADING.

FUTURE WEARING SURFACE (FWS) OF 60 PSF.

DESIGN DATA:
CONCRETE CLASS HP - COMPRESSIVE STRENGTH 4500 PSI (SUPERSTRUCTURE)

CONCRETE CLASS HP - COMPRESSIVE STRENGTH 4500 PSI (PARAPETS)

CONCRETE CLASS C - COMPRESSIVE STRENGTH 4000 PSI (SUBSTRUCTURE)

REINFORCING STEEL - ASTM A615 OR A996 GRADE 60 MINIMUM YIELD STRENGTH 60,000 PSI

STRUCTURAL STEEL - ASTM A709 GRADE 50(W), YIELD STRENGTH 50,000 PSI.

DECK PROTECTION METHOD:
EPOXY COATED REINFORCING STEEL
2½" CONCRETE COVER

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

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 AND OTHER APPURTENANCES FROM STEEL SUPPORTING SYSTEMS
(BEAMS, GIRDERS, CROSS FRAMES, ETC.) INCLUDING SCUPPERS. 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 CMS 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 OVER OR WITHIN
2 INCHES OF FLANGE EDGES SHALL NOT EXTEND LOWER THAN THE BOTTOM LAYER OF DECK
SLAB REINFORCING STEEL. CUTS MADE OUTSIDE 2 INCHES OF FLANGE EDGES MAY EXTEND
THE FULL DEPTH OF THE DECK. 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 DIRECTOR. OBTAIN THE DIRECTOR'S
APPROVAL BEFORE PERFORMING REPAIR.

REMOVAL METHODS: THE CONTRACTOR MAY REMOVE CONCRETE BY CUTTING AND BY MEANS
OF HAND OPERATED PNEUMATIC HAMMERS EMPLOYING POINTED OR BLUNTED CHISEL TYPE
TOOLS. FOR REMOVALS OVER STRUCTURAL MEMBERS (STEEL BEAMS), THE CONTRACTOR
MAY USE A HAMMER HEAVIER THAN 35 POUNDS BUT NOT TO EXCEED 90 POUNDS UNLESS
APPROVED BY THE ENGINEER. REMOVAL METHODS OVER STRUCTURAL MEMBERS SHALL
ENSURE ADEQUATE DEPTH CONTROL AND PREVENT NICKING OR GOUGING THE PRIMARY
STRUCTURAL MEMBERS.

DUE TO THE POSSIBLE PRESENCE OF ATTACHMENTS (E.G., FINISHING MACHINE, SCUPPER
AND FORM SUPPORTS, ETC.) TO EXISTING STRUCTURAL MEMBERS, PERFORM WORK
CAREFULLY DURING DECK REMOVAL TO AVOID DAMAGING STRUCTURAL MEMBERS THAT ARE
TO REMAIN. REPLACE OR REPAIR STRUCTURAL MEMBERS DAMAGED BY THE REMOVAL
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 DIRECTOR. OBTAIN THE DIRECTOR'S APPROVAL BEFORE
PERFORMING REPAIRS.

CUT LINE CONSTRUCTION JOINT PREPARATION: SAW CUT BOUNDARIES OF PROPOSED
CONCRETE REMOVALS 1 INCH DEEP. REMOVE CONCRETE TO A ROUGH SURFACE. LEAVE THE
EXISTING REINFORCING STEEL, IF REQUIRED IN THE PLANS, IN PLACE. INSTALL DOWEL
BARS IF SPECIFIED. PRIOR TO CONCRETE PLACEMENT ABRASIVELY CLEAN JOINT SURFACES
AND EXISTING EXPOSED REINFORCEMENT TO REMOVE LOOSE AND DISINTEGRATED CONCRETE
AND LOOSE RUST. THOROUGHLY CLEAN THE JOINT SURFACE AND EXPOSED REINFORCEMENT
OF ALL DIRT, DUST, RUST OR OTHER FOREIGN MATERIAL BY THE 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
PACK 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
OVER 20 FOOT SPAN, AS PER PLAN.

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

BASE CONTRACT BID PRICES UPON 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.

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 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.

THE TEMPORARY MINIMUM VERTICAL CLEARANCE SHALL BE 14'-4".

IF, DURING THE JACKING OPERATIONS, CRACKING OF THE CONCRETE SUPERSTRUCTURE,
SEPARATION OF THE CONCRETE DECK FROM THE STEEL STRINGERS, OR OTHER 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 A METHOD OF CORRECTION TO THE ENGINEER FOR APPROVAL. EPOXY INJECT
ALL BEAMS THAT SEPARATE FROM THE DECK FOR THE DISTANCE OF THE SEPARATION IN
ACCORDANCE WITH CMS 512.07. THE DEPARTMENT WILL NOT PAY FOR THE COST OF THIS
EPOXY INJECTION OR OTHER REQUIRED REPAIRS. THE BRIDGE BEARINGS HALL 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 COST TO
ENSURE FULL SEATING ON THE BEARINGS.

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

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

INSPECTION OF EXISTING STRUCTURAL STEEL:

THE ENGINEER WILL VISUALLY INSPECT ALL EXISTING BUTT-WELDED SPLICES AND/OR TOP
FLANGE COVER PLATE FILLET WELDS TO ENSURE THE WELDS, PLATES AND BEAMS OR
GIRDERS ARE FREE OF DEFECTS AND CRACKS. IF NECESSARY, REMOVE ALL DECK SLAB
HAUNCH FORMS IMMEDIATELY ADJACENT TO SUCH WELDS THAT MAY INTERFERE WITH THE
ENGINEER'S INSPECTION. THE INSPECTION WILL NOT TAKE PLACE UNTIL THE TOP FLANGES
ARE CLEANED ACCORDING TO 511.10, BUT IT WILL BE DONE BEFORE THE DECK SLAB
REINFORCEMENT IS INSTALLED. THE DEPARTMENT WILL PAY FOR THE COST ASSOCIATED
WITH THIS INSPECTION WITH ITEM 511, SUPERSTRUCTURE CONCRETE. THE ENGINEER WILL
REPORT ALL CRACKS FOUND TO THE OFFICE OF CONSTRUCTION ADMINISTRATION, BRIDGE
CONSTRUCTION SPECIALIST, ALONG WITH SPECIFIC INFORMATION ON LOCATION OF THE
CRACKS, LENGTH, AND DEPTH SO AN EVALUATION AND REPAIR OR REPLACEMENT
RECOMMENDATION CAN BE MADE.

ITEM 516 SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL, AS PER PLAN:
PER PLAN.

INSTALL A 3 FOOT WIDE NEOPRENE SHEET AT LOCATIONS SHOWN IN THE PLANS. SECURE
THE NEOPRENE SHEETING TO THE CONCRETE WITH 1¼" X #10 GAGE (LENGTH X SHANK
DIAMETER) GALVANIZED BUTTON HEAD SPIKES THROUGH A 1 INCH OUTSIDE DIAMETER, #10
GAGE GALVANIZED WASHER. MAXIMUM FASTENER SPACING IS 9 INCHES. USE OF OTHER
SIMILAR GALVANIZED DEVICES, WHICH WILL NOT DAMAGE EITHER THE NEOPRENE OR THE
CONCRETE WILL BE SUBJECT TO THE APPROVAL OF THE ENGINEER.

CENTER THE NEOPRENE STRIPS ON ALL JOINTS. FOR HORIZONTAL JOINTS, SECURE THE
HORIZONTAL NEOPRENE STRIP BY USING A SINGLE LINE OF FASTENERS, STARTING AT 6
INCHES, +/-, FROM THE TOP OF THE NEOPRENE STRIP. FOR THE VERTICAL JOINTS
SECURE THE VERTICAL NEOPRENE STRIP BY USING A SINGLE VERTICAL LINE OF FASTENERS,
STARTING AT 6 INCHES, +/- FROM THE VERTICAL EDGE OF THE NEOPRENE STRIP NEAREST
TO THE CENTERLINE OF ROADWAY. FOR VERTICAL JOINTS, INSTALL 2 ADDITIONAL
FASTENERS AT 6 INCHES, CENTER TO CENTER, ACROSS THE TOP OF THE NEOPRENE STRIP
ON THE SAME SIDE OF THE VERTICAL JOINT AS THE SINGLE VERTICAL ROW OF FASTENERS
IS LOCATED.

THE VERTICAL NEOPRENE STRIPS SHALL COMPLETELY OVERLAP THE HORIZONTAL STRIPS.
LAP LENGTHS OF THE HORIZONTAL STRIPS THAT ARE NOT VULCANIZED OR ADHESIVE
BONDED, SHALL BE AT LEAST 1 FOOT IN LENGTH, OR 6 INCHES IN LENGTH IF THE LAP IS
VULCANIZED OR ADHESIVE BONDED. NO LAPS ARE ACCEPTABLE IN VERTICALLY INSTALLED
NEOPRENE STRIPS.

THE NEOPRENE SHEETING SHALL BE ¾" THICK GENERAL PURPOSE, HEAVY DUTY NEOPRENE
SHEET WITH NYLON FABRIC REINFORCEMENT. THE SHEETING SHALL BE "FAIRPRENE NUMBER
NN-0003", BY E. I. DUPONT DE NEMOURS AND COMPANY, INC., "WINGPRENE" BY THE
GOODYEAR TIRE AND RUBBER COMPANY, OR AN APPROVED ALTERNATE. THE NEOPRENE
SHEETING SHALL CONFORM TO THE FOLLOWING:

DESCRIPTION OF TEST	ASTM METHOD	REQUIREMENT
THICKNESS, INCHES	D751	0.094 X 0.01
BREAKING STRENGTH, GRAB, LBS MINIMUM (LONG. X TRANS.)	D751	700 X 700
ADHESIVE STRIP, 1" WIDE X 2" LONG, LBS MINIMUM	D751	9
BURST STRENGTH, PSI MINIMUM	D751	1400
HEAT AGING, 70 HR, 212 °F, 180° BEND WITHOUT CRACKING	D2136	NO CRACKING OF COATING
LOW TEMP., BRITTLINESS, 1 HR, -40 °F,D2136 BEND AROUND¼" MANDREL		NO CRACKING OF COATING

METHOD OF MEASUREMENT: THE DEPARTMENT WILL MEASURE THE TOTAL LENGTH OF JOINT
TO BE SEALED BY THE NUMBER OF FEET.

BASIS OF PAYMENT: THE DEPARTMENT WILL PAY FOR ACCEPTED QUANTITIES AT THE
CONTRACT PRICE FOR ITEM 516, SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL, AS
PER PLAN.

DESIGN AGENCY
HAMMONTREE & ASSOCIATES, LIMITED
5233 STONEHAM ROAD
NORTH CANTON, OHIO 44720

DATE
08-11-10

REVIEWED
KJO

DRAWN
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DESIGNED
MCC

STRUCTURE FILE NUMBER
7808127

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GENERAL NOTES - I

TRU-11-1367

CADWALLADER SONK ROAD OVER SR 11

TRU-11-13.67

PID No. 76409

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ITEM 511 - CLASS HP CONCRETE, AS PER PLAN

THE PROVISIONS OF ITEM 511 SHALL APPLY EXCEPT AS NOTED BELOW.

MIX OPTIONS: ALL SUPERSTRUCTURE, BRIDGE DECK, APPROACH SLABS AND PARAPET CONCRETE SHALL BE THIS MIX (HP4, AS PER PLAN)). THE FOLLOWING PROPORTIONS WILL BE USED AS A STARTING MIX DESIGN.

CONCRETE TABLE
QUANTITIES PER CUBIC YARD
AGGREGATES (SSD)
MIX 4, AS PER PLAN (GGBF SLAG + MICROSILICA)

AGG TYPE	FINE AGG (LB)	#8 COARSE AGG (LB) *	#57 COARSE AGG (LB) *	TOTAL (LB)	CEMENT CONTENT (LB)	GGBF SLAG (LB)	MICRO SILICA (LB)	MAX WTAER TO CEMENTITIOUS RATIO	AIR CONTENT +/- 2%
GRAVEL	1370	650	790	2810	440	190	30	0.42	6
LIMESTONE	1370	655	800	2820	440	190	30	0.42	6
SLAG	1370	570	695	2635	440	190	30	0.42	6

* ALL COARSE AGGREGATE SHALL HAVE AN ABSORPTION OF 1.00% OR GREATER AS DEFINED PER ASTM C127

BASIS OF PAYMENT:
PAYMENT FOR THE ABOVE COMPLETED AND ACCEPTED QUANTITIES WILL BE MADE AT THE CONTRACT PRICE BID FOR:
ITEM 511 - CLASS HP CONCRETE, BRIDGE DECK, AS PER PLAN, (CU YD)
ITEM 511 - CLASS HP CONCRETE, BRIDGE DECK (PARAPET), AS PER PLAN, (CU YD)

DECK PLACEMENT

THE FOLLOWING ASSUMPTIONS OF CONSTRUCTION MEANS AND METHODS WERE MADE FOR THE ANALYSIS AND DESIGN OF THE SUPERSTRUCTURE. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN OF THE FALSEWORK SUPPORT SYSTEM WITHIN THESE PARAMETERS AND WILL ASSUME RESPONSIBILITY FOR SUPERSTRUCTURE ANALYSIS FOR DEVIATION FROM THESE DESIGN ASSUMPTIONS.

AN EIGHT WHEEL FINISHING MACHINE WITH A MAXIMUM WHEEL LOAD OF 0.686 KIPS FOR A TOTAL MACHINE LOAD OF 5.486 KIPS.

A MINIMUM OUT-TO-OUT WHEEL SPACING AT EACH END OF THE MACHINE OF 103".

A MAXIMUM SPACING OF OVERHANG FALSE WORK BRACKETS OF 36 IN.

A MAXIMUM DISTANCE FROM THE CETNERLINE OF THE FASCIA GIRDER TO THE FACE OF THE SAFETY HANDRAIL OF 78".

ITEM 526 - REINFORCED CONCRETE APPROACH SLABS, AS PER PLAN

THE PROVISIONS OF CMS 526 SHALL APPLY EXCEPT AS NOTED BELOW.

CLASS HP CONCRETE, MIX 4, AS PER PLAN, SHALL BE THE ONLY MIX DESIGN OPTION. THE PROPORTIONS FOR THE STARTING MIX DESIGN SHALL BE AS SHOWN FOR ITEM 511 - CLASS HP CONCRETE, AS PER PLAN.

ITEM 601 - CRUSHED AGGREGATE SLOPE PROTECTION, AS PER PLAN

THE LIMITS OF THE CRUSHED AGGREGATE SLOPE PROTECTION SHALL EXTEND 4.0' BEYOND THE LIMITS OF THE DECK FOR A TOTAL WIDTH OF 47.0'. THE AGGREGATE SHALL EXTEND DOWN THE 2:1 SLOPE FOR A DISTANCE OF 16.75' BEGINNING AT THE FACE OF EACH ABUTMENT AND EXTENDING TO THE TOE OF EACH SLOPE. THE THICKNESS SHALL BE 0.5'. THESE DIMENSIONS ARE TYPICAL AT BOTH ABUTMENTS. NO REGRADING IS REQUIRED.

ASBESTOS NOTIFICATION

AN ASBESTOS SURVEY OF THE CR 196 (CADWALLADER-SONK ROAD) BRIDGE OVER A SR 11 (STRUCTURE NO. TRU-11-13.67, SFN 7808127) SCHEDULED FOR DEMOLITION 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 FORM, PARTIALLY COMPLETED BY THE BRIDGE OWNER, WILL BE PROVIDED TO THE SUCCESSFUL BIDDER. THE CONTRACTOR SHALL COMPLETE AND SIGN THE FORM AND SUBMIT IT TO:

MAHONING-TRUMBULL AIR POLLUTION CONTROL

345 OAK HILL AVE., SUITE 200
YOUNGSTOWN, OH 44502

NEIL H. ALTMAN
(330) 743-3333
FAX: (330) 743-3960

AT LEAST TEN (10) WORKING DAYS PRIOR TO THE START OF ANY DEMOLITON AND/OR REHABILITATION. THE CONTRACTOR SHALL PROVIDE A COPY OF THE COMPLETED AND SIGNED FORM TO THE ENGINEER. INFORMATION REQUIRED ON THE FORM WILL INCLUDE: 1) THE CONTRACTOR'S NAME AND ADDRESS, 2) THE SCHEDULED DATES FOR THE START AND COMPLETION OF BRIDGE REMOVAL, AND 3) A DESCRIPTION OF THE PLANNED DEMOLITION WORK AND THE METHOD(S) TO BE USED. THE OEPA FORM IS AVAILABLE FOR INSPECTION AT THE ODOT DISTRICT 4 OFFICE, 2088 S. ARLINGTON RD, AKRON, OH 44306.

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

PROPOSED WORK

- 1) ERECT BARRICADES TO CLOSE THE ROAD.
- 2) TRAFFIC SHALL BE DETOURED FOR THE DURATION OF CONSTRUCTION.
- 3) SAWCUT AND REMOVE DECK, BACKWALLS, APPROACH SLABS AND PORTIONS OF THE WINGWALLS.
- 4) REMOVE END CROSSFRAMES.
- 5) JACK AND TEMPORARILY SUPPORT THE STRUCTURE AND REMOVE ABUTMENT AND PIER BEARINGS.
- 6) INSTALL NEW MOMENT PLATES ON ELEVATED BEAMS OVER THE PIER.
- 7) RECONSTRUCT ABUTMENT AND PIER SEATS TO THEIR PROPER ELEVATIONS.
- 8) PLACE NEW ELASTOMERIC BEARINGS AT ABUTMENTS AND PIER. RESET BEAMS ON NEW BEARINGS.
- 9) ATTACH SHEAR STUDS TO GIRDERS.
- 10) PLACE END BLOCKS.
- 11) PLACE COMPOSITE CONCRETE DECK AND SUPERSTRUCTURE CONCRETE.
- 12) CONSTRUCT WINGWALLS AND APPROACH SLABS.
- 13) CLEAN AND PAINT STRUCTURE.
- 14) ALLOW NORMAL TRAFFIC.

PAINT COLOR

PAINT SHALL BE FEDERAL COLOR NUMBER 595B-20045. THE QUANTITY INCLUDES 30% FOR INCIDENTALS.

SALT REMEDIATION FROM STEEL SURFACES DURING SURFACE PREPARATION FOR PAINTING OF STRUCTURAL STEEL

IN ADDITION TO THE REQUIREMENTS OF C&MS 514.13 SURFACE PREPARATION, TEST EXISTING STEEL SURFACES FOR CHLORIDE CONTAMINANTS, SOLUBLE FERROUS ION LEVELS, AND SUFLATE CONTAMINANTS, PRIOR TO COATING APPLICATION.

USE RELJABLE, REPRODUCIBLE TEST METHODS. THESE TESTS SHALL USE EXTRACT SOLUTIONS THAT ARE ACIDIC, FACTORY PRE-MEASURED, PRE-PACKAGED AND OF UNIFORM CONCENTRATION. THE SOLUTIONS SHALL BE MERCURY FREE. THE EXTRACTION TEST CONTAINER SHALL CREATE A SEALED, ENCAPSULATED ENVIRONMENT DURING SALT ION EXTRACTION FOR HORIZONTAL, VERTICAL, FLAT, CURVED, SMOOTH, PITTED AND ROUGH STEEL SURFACES. ALL SALT ION CONCENTRATION SHALL BE DIRECTLY MEASURED IN MICROGRAMS PER SQUARE CENTIMETER OR GRAINS PER SQUARE INCH.

PERFORM THREE TESTS FOR THE FIRST 1000 SQUARE FEET AND ONE TEST FOR EACH ADDITIONAL 2000 SQUARE FEET OR PART THERE OF. THE ENGINEER WILL SELECT TEST LOCATIONS AT AREAS OF COATING FAILURE AND AREAS OF CORROSION PITTING. RE-BLAST TESTED AND CLEANED AREAS AND RE-TEST UNTIL ALL REQUIRED TESTS SHOW RESULTS LESS THAN 7 µG/CM² (0.0007 GRAINS/IN²) OF CHLORIDE CONTAMINANTS, LESS THAN 10 µG/CM² (0.001 GRAINS/IN²) OF SOLUBLE FERROUS ION LEVELS, OR LESS THAN 17 µG/CM² (0.0017 GRAINS/IN²) OF SULFATE CONTAMINANTS. METHODS OF REMOVAL OF SOLUBLE SALT CONTAMINATION MAY INCLUDE ABRASIVE BLAST CLEANING, WET ABRASIVE BLAST CLEANING, HIGH PRESSURE WATER RINSING, STEAM CLEANING, AND CLEANING USING A SOLUTION OF WATER WASHING AND SOLUBLE SALT REMOVER. THE SOLUBLE SALT REMOVER SHALL BE BIODEGRADABLE, NONTOXIC, NONCORROSIVE, AND AFTER APPLICATION, SHALL NOT INTERFERE WITH PRIMER ADHESION.

CONTAIN, COLLECT, CHARACTERIZE AND LEGALLY DISPOSE OF ALL WASTE WATER AND SLUDGE GENERATION DURING THE WORK. DO NOT MIX WASTE WATER WITH STORM WATER. DO NOT DISCHARGE ANY WASTE WATER WITHOUT THE APPROPRIATE REGULATORY PERMITS. MANAGE WASTE WATER AND SLUDGE IN ACCORDANCE WITH ORC CHAPTER 6111 AND ALL OTHER LAWS, REGULATIONS, PERMITS AND LOCAL ORDNANCES RELATING TO THIS WATER. WASTE WATER MANAGEMENT IS INCIDENTAL TO THE WORK UNLESS OTHERWISE SPECIFIED IN THE CONTRACT.

PAYMENT FOR THIS ITEM SHALL INCLUDE ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY FOR THE TESTING, REMOVAL, CONTAINMENT, COLLECTION, CHARACTERIZATION AND DISPOSAL OF THE SOLUBLE SALT CONTAMINATION FROM THE STRUCTURAL STEEL ON A PER HOUR BASIS FOR ITEM SPECIAL-STRUCTURE MISC.: SALT REMEDIATION FOR STRUCTURAL STEEL PAINTING.

ESTIMATED QUANTITIES									
					CALC. MCC DATE: 5/24/10		CHK'D CJP DATE: 5/25/10		
ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	ABUT.	PIERS	SUPER	GEN.	SEE SHEET
202	11203	LUMP		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN				LUMP	2/23
202	22900	192	SO YD	APPROACH SLAB REMOVED				192	
503	21300	LUMP		UNCLASSIFIED EXCAVATION				LUMP	
509	10000	80,012	POUND	EPOXY COATED REINFORCING STEEL	2404	1790	75,818		
509	10001	454	POUND	EPOXY COATED REINFORCING STEEL, AS PER PLAN	454				2/23
510	10000	356	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT	260	96			
511	43200	10	CU YD	CLASS C CONCRETE, PIER		10			
511	45700	24	CU YD	CLASS C CONCRETE, ABUTMENT	24				
511	50001	271	CU YD	CLASS HP CONCRETE, BRIDGE DECK, AS PER PLAN			271		3/23
511	50101	83	CU YD	CLASS HP CONCRETE, BRIDGE DECK (PARAPET), AS PER PLAN			83		3/23
511	52000	LUMP		CLASS HP CONCRETE, TEST SLAB				LUMP	
512	10100	825	SO YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	164	108	553		
513	10260	3070	POUND	STRUCTURAL STEEL MEMBERS, LEVEL 3			3070		
513	20000	1815	EACH	WELDED STUD SHEAR CONNECTORS			1815		
514	00050	14,370	SO FT	SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL			14,370		
514	00056	14,370	SO FT	FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT			14,370		
514	00060	14,370	SO FT	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT			14,370		
514	00066	14,370	SO FT	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT			14,370		
514	00504	16	MAN HOUR	GRINDING FINS, TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL			16		
514	10000	7	EACH	FINAL INSPECTION REPAIR			7		
516	14021	81	FT	SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL, AS PER PLAN	81				2/23
516	44100	10	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES (10"x15"x2.560" THICK)	10				
				AND LOAD PLATE (11"x16"x1.5" THICK) (NEOPRENE)					
516	44300	5	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES (15"x22"x4.417" THICK)		5			
				AND LOAD PLATE (16"x30"xBEVELED) (NEOPRENE)					
516	47001	LUMP		JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTRE, AS PER PLAN			LUMP		2/23
518	21200	38	CU YD	POROUS BACKFILL WITH FILTER FABRIC	38				
526	25001	192	SO YD	REINFORCED CONCRETE APPROACH SLABS (T=15"), AS PER PLAN				192	3/23
SPECIAL	530E00500	42	HOOR	STRUCTURE MISC.: SALT REMEDIATION FOR STRUCTURAL STEEL PAINTING			42		3/23
601	20001	181	SO YD	CRUSHED AGGREGATE SLOPE PROTECTION, AS PER PLAN				181	3/23
843	50000	15	SO FT	PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR	15				

APPROACH SLAB
INCLUDE WITH ITEM 202,
APPROACH SLABS REMOVED
FOR PAYMENT

EXISTING WINGWALL (TYP.)

CL R/W & CONSTRUCTION CADWALLADER SONK RD

19'-8"± REAR
24'-9"± FORWARD

EXISTING BACKWALL
WITH EXISTING END
CROSSFRAMES

18'-9"

18'-9"

37'-6"

FORWARD ABUTMENT & APPROACH SLAB REMOVAL PLAN
(REAR ABUTMENT & APPROACH SLAB SIMILAR)

CL R/W & CONSTRUCTION CADWALLADER SONK RD

ELEV. = 1072.25± REAR
ELEV. = 1074.43± FORWARD

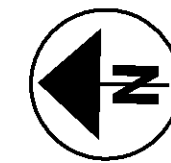
WINGWALL SHEAR KEY
TO REMAIN

EXISTING ABUTMENT SEAT

WINGWALL SHEAR KEY
TO REMAIN

EXISTING PIPE
TERMINATION
TO REMAIN

FORWARD ABUTMENT REMOVAL ELEVATION
(REAR ABUTMENT SIMILAR)



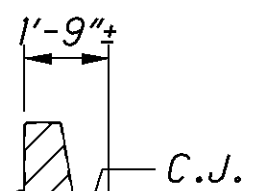
ELEV. = 1077.14± REAR
ELEV. = 1079.41± FORWARD

WINGWALL SHEAR KEY
TO REMAIN

WINGWALL ELEVATION

19'-8"± REAR
24'-9"± FORWARD

ELEV. = 1076.77± REAR
ELEV. = 1079.37± FORWARD



SECTION A-A

BRIDGE LIMIT

CL BEARING

3'-9"±
1'-0"± 2'-3"± 6"±

EXISTING DECK

APPROACH SLAB
INCLUDED WITH ITEM 202,
APPROACH SLABS REMOVED,
FOR PAYMENT

CONSTRUCTION JOINT

EXISTING 4"Ø PIPE
TO BE PLUGGED.
INCLUDED WITH ITEM 202,
PORTIONS OF STRUCTURE
REMOVED, OVER 20 FOOT
SPAN, AS PER PLAN,
FOR PAYMENT.

3'-3"± 2'-0"± 3'-9"±

ELEV. = 1067.81± REAR
ELEV. = 1067.76± FORWARD

SECTION B-B

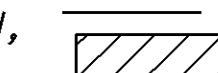
NOTES:

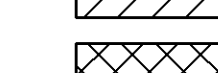
1.) SEE SHEET 6/23 FOR ADDITIONAL REMOVAL DETAILS.

2.) ALL EXISTING REINFORCING IN THE PORTIONS OF
STRUCTURE REMOVED SHALL BE CUT FLUSH WITH THE
REMAINING CONCRETE. INCLUDE WITH ITEM 202, PORTIONS
OF STRUCTURE REMOVED, OVER 20 FOOT SPAN AS PER PLAN,
FOR PAYMENT.

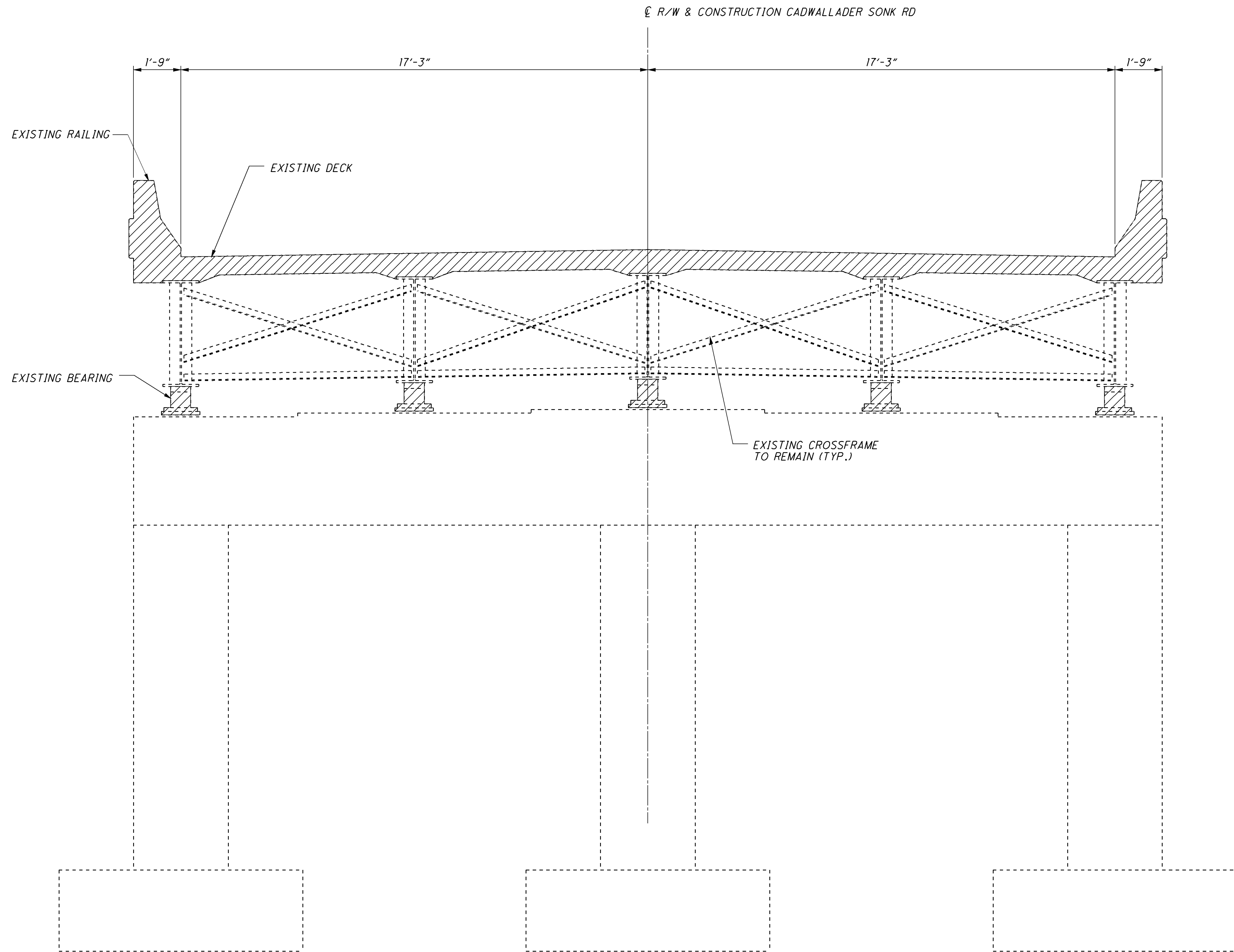
3.) WINGWALL ELEVATIONS ARE TAKEN FROM EXISTING PLANS
AND ARE NOT FIELD VERIFIED.

LEGEND

 - PORTIONS OF STRUCTURE TO BE REMOVED

 - APPROACH SLAB TO BE REMOVED

C.J. - CONSTRUCTION JOINT



SUPERSTRUCTURE REMOVAL

NOTE:

1.) SEE SHEET 5/23 FOR ADDITIONAL REMOVAL DETAILS.

LEGEND



- PORTIONS OF STRUCTURE TO BE REMOVED

DESIGN AGENCY
HAMMONTREE & ASSOCIATES, LIMITED
5233 STONEHAM ROAD
NORTH CANTON, OHIO 44720

DATE
08-11-10
REVIEWED
KJO
STRUCTURE FILE NUMBER
7808127

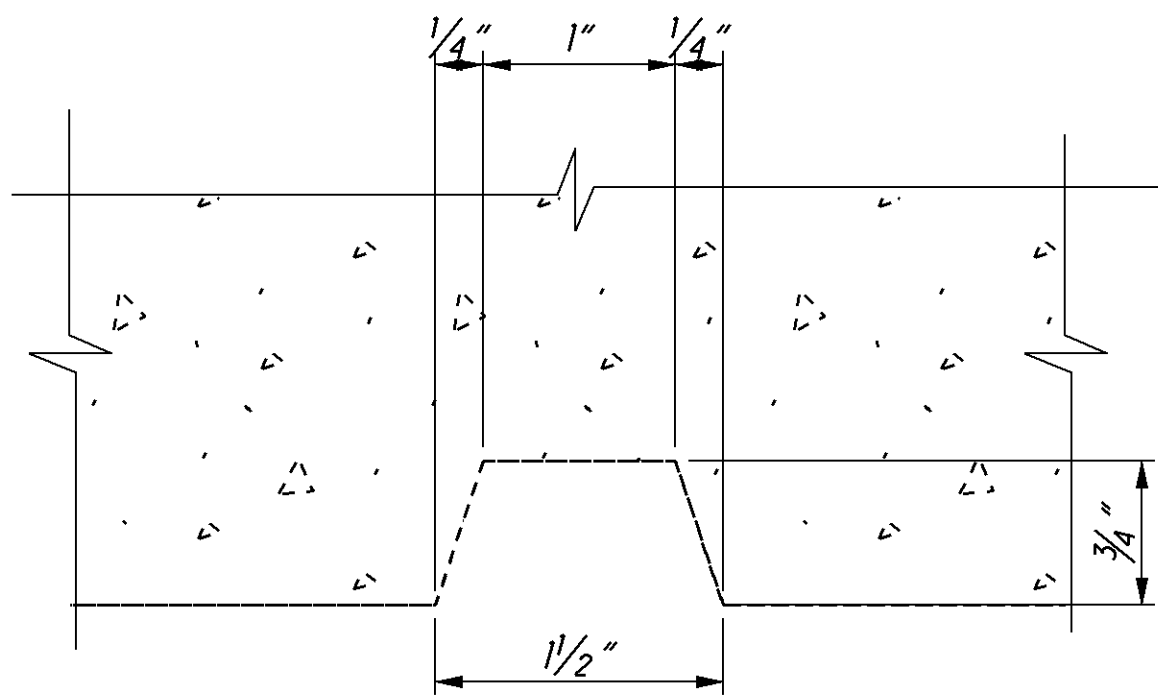
DRAWN
MCC
DESIGNED
MCC
CHECKED
CJP
REVISED

REMOVAL LIMITS - II
TRU-11-1367
CADWALLADER SONK ROAD OVER SR 11

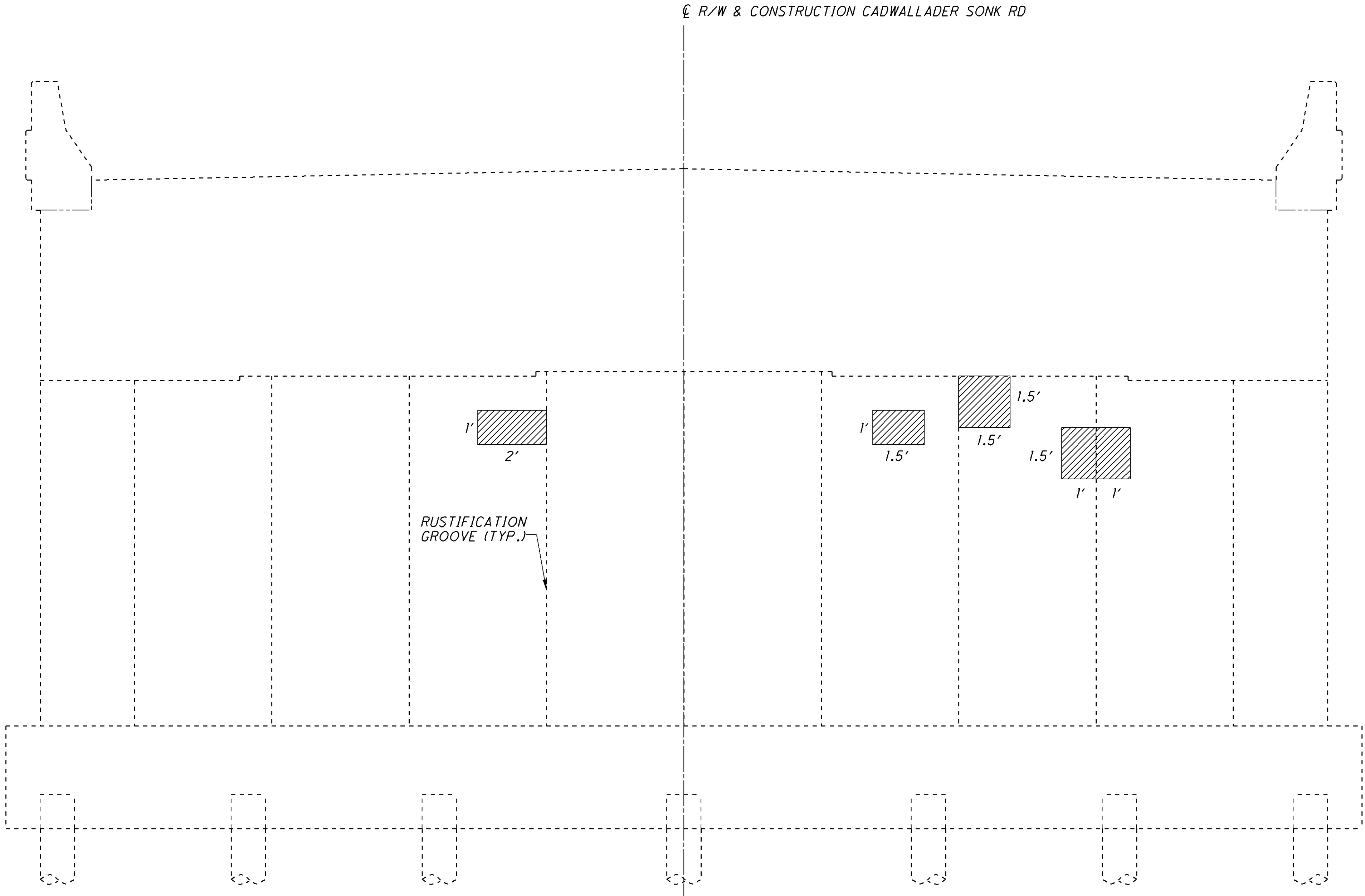
TRU-11-13.67
PID No. 76409

6/23

77
121



RUSTIFICATION GROOVE DETAIL



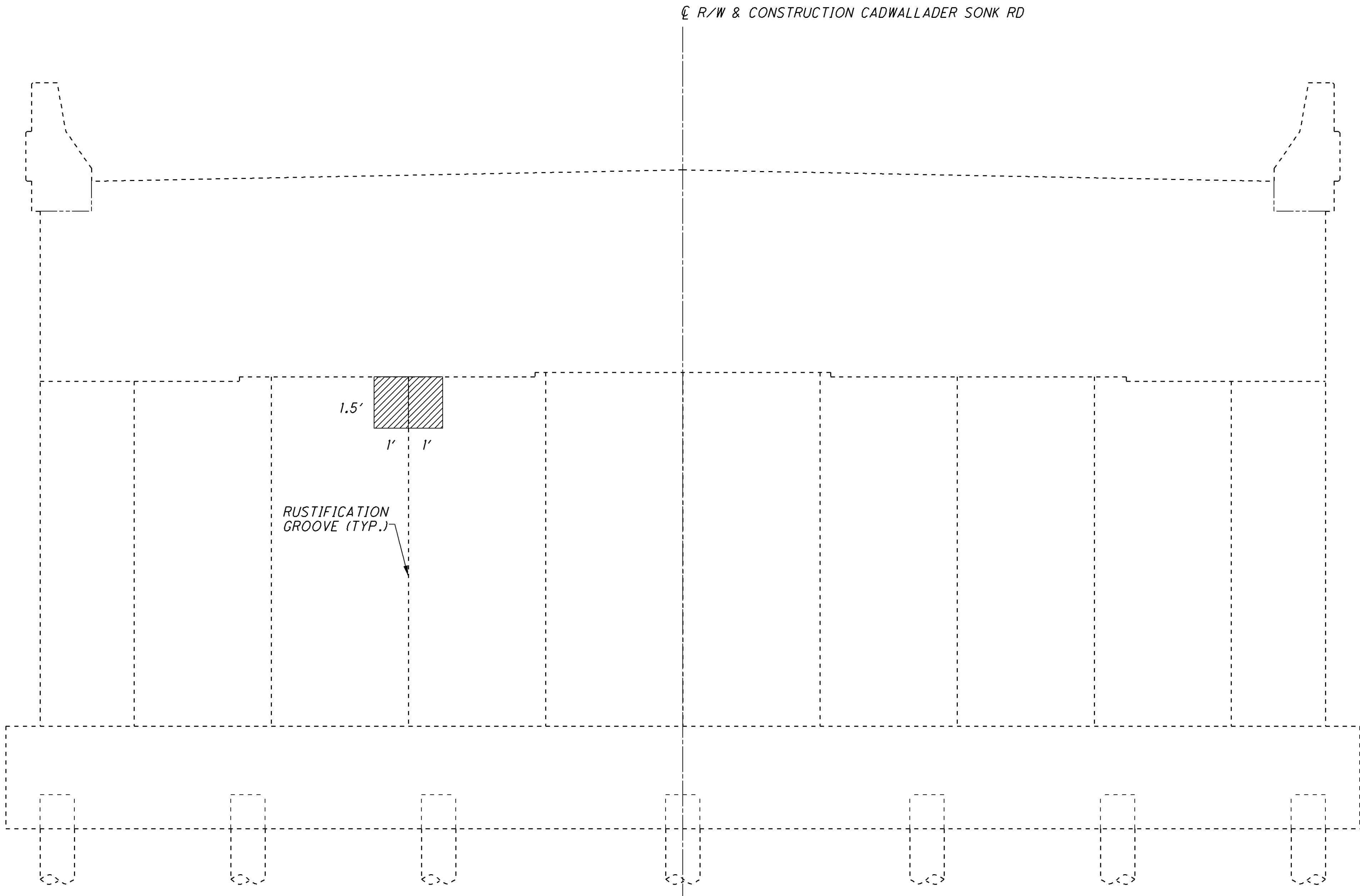
REAR ABUTMENT ELEVATION

- NOTES
- 1.) ALL DIMENSIONS ARE APPROXIMATE.
 - 2.) EXISTING RUSTIFICATION GROOVES SHALL BE REPLICATED IN PATCHING. SEE DETAIL THIS SHEET.

UNSOOUND CONCRETE SUMMARY - ITEM 843			
LOCATION	MEASURED QUANTITY (SQ. FT.)	ESTIMATING FACTOR	ESTIMATED QUANTITY (SQ. FT.)
REAR ABUT.	9	1.15	11
SUBTOTAL	9		11

LEGEND

- AREAS OF UNSOUND CONCRETE TO BE PATCHED WITH ITEM 843, TROWELABLE MORTAR



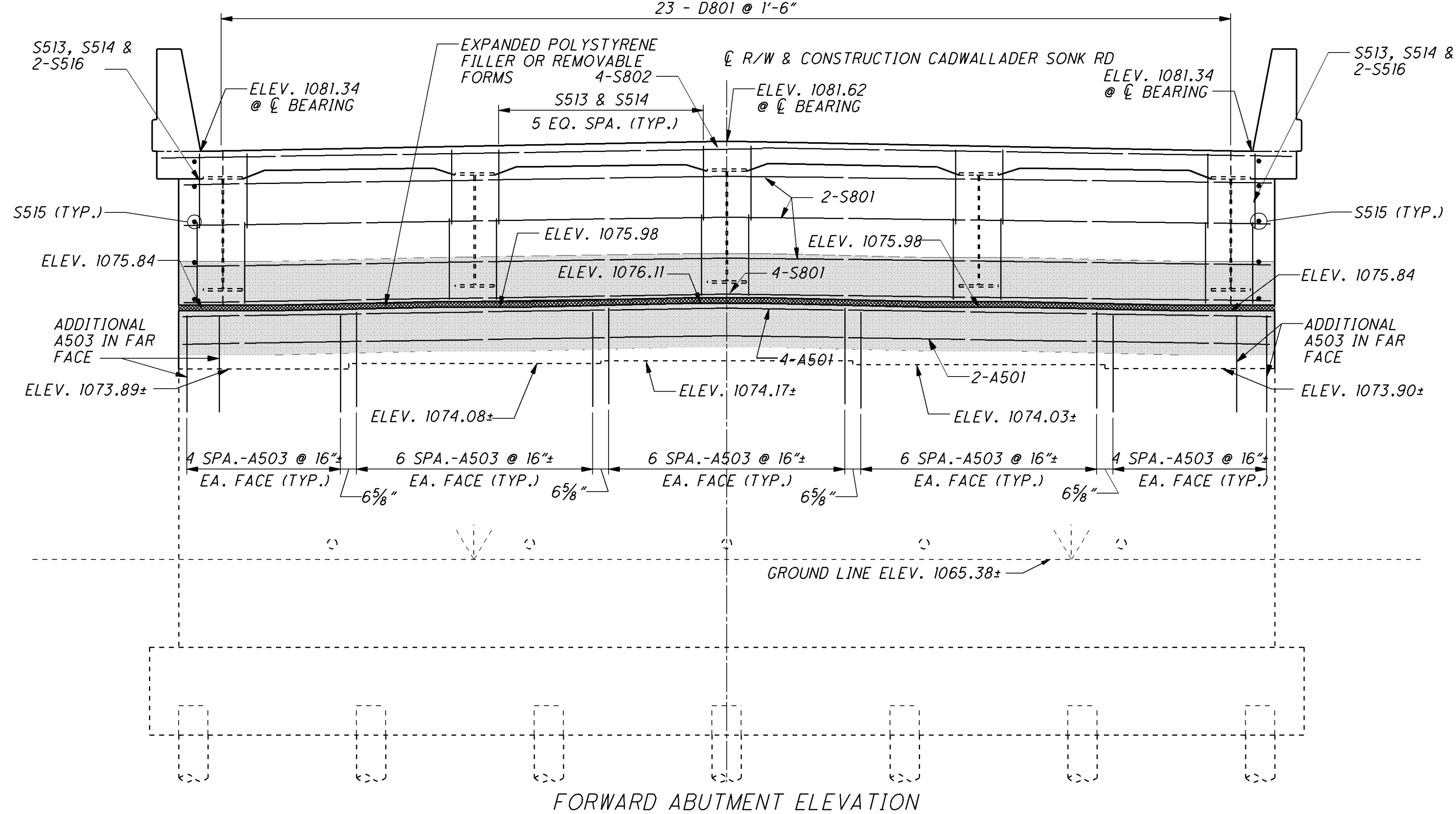
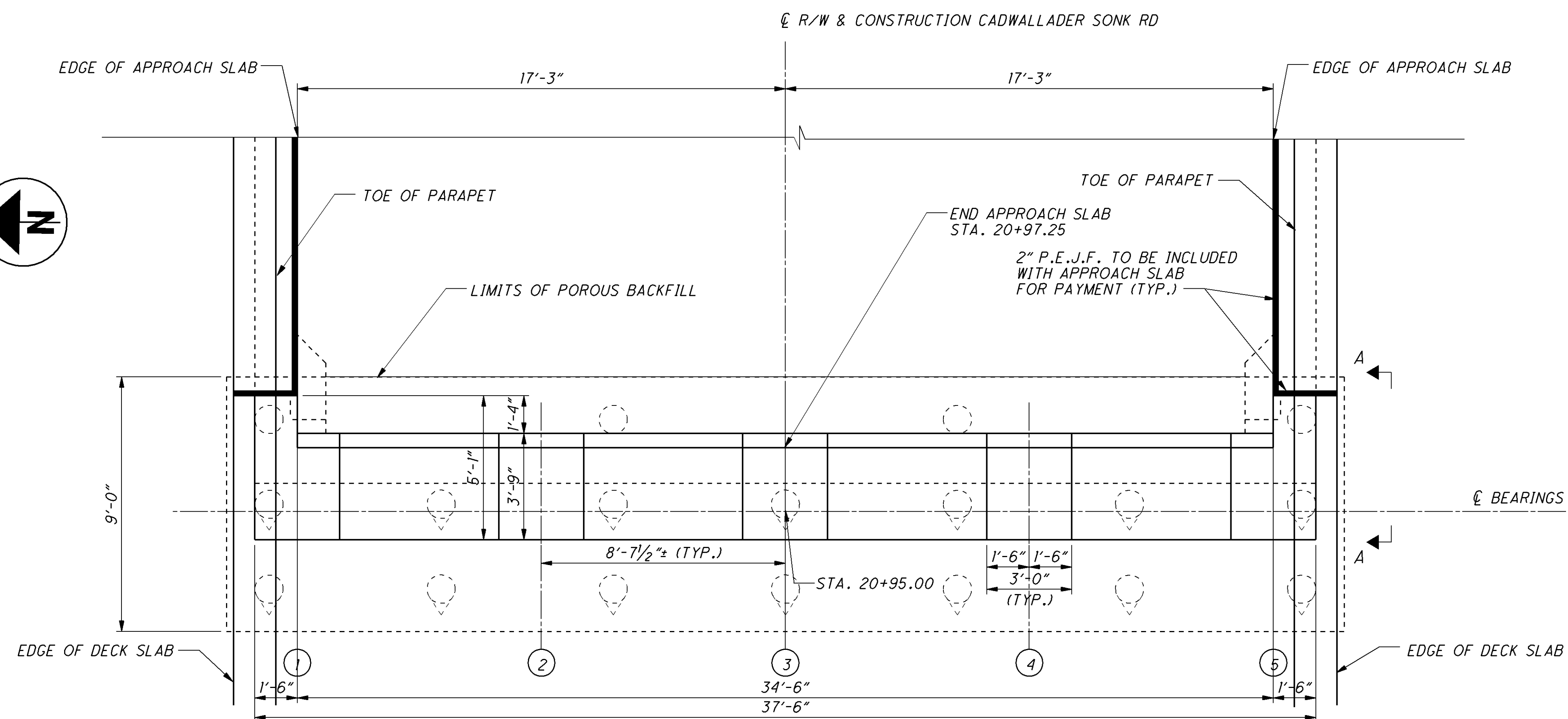
FORWARD ABUTMENT ELEVATION

- NOTES
- 1.) ALL DIMENSIONS ARE APPROXIMATE.
- 2.) EXISTING RUSTIFICATION GROOVES SHALL BE REPLICATED IN PATCHING. SEE SHEET 7/23 FOR DETAIL.

UNSOOUND CONCRETE SUMMARY - ITEM 843			
LOCATION	MEASURED QUANTITY (SQ. FT.)	ESTIMATING FACTOR	ESTIMATED QUANTITY (SQ. FT.)
REAR ABUT.	3	1.15	4
SUBTOTAL	3		4

LEGEND

▨ - AREAS OF UNSOUND CONCRETE TO BE PATCHED WITH ITEM 843, TROWELABLE MORTAR



LEGEND

C.J. - CONSTRUCTION JOINT

SPA. - SPACES

P.E.J.F. - PREFORMED EXPANSION JOINT FILLER

(1) - BEAM NUMBER

 - LIMITS OF ITEM 516, SEMI-INTEGRAL ABUTMENT JOINT SEAL, AS PER PLAN

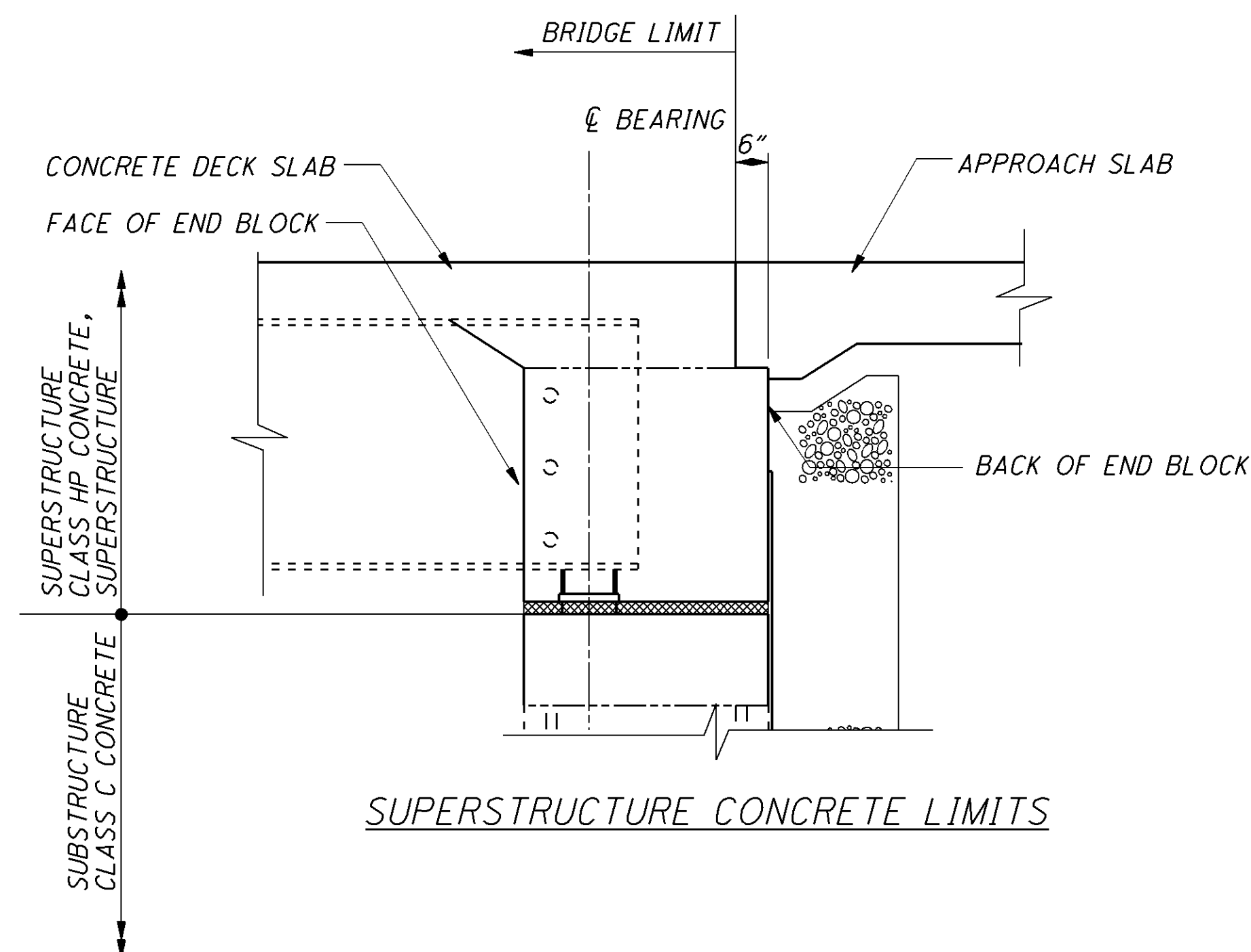
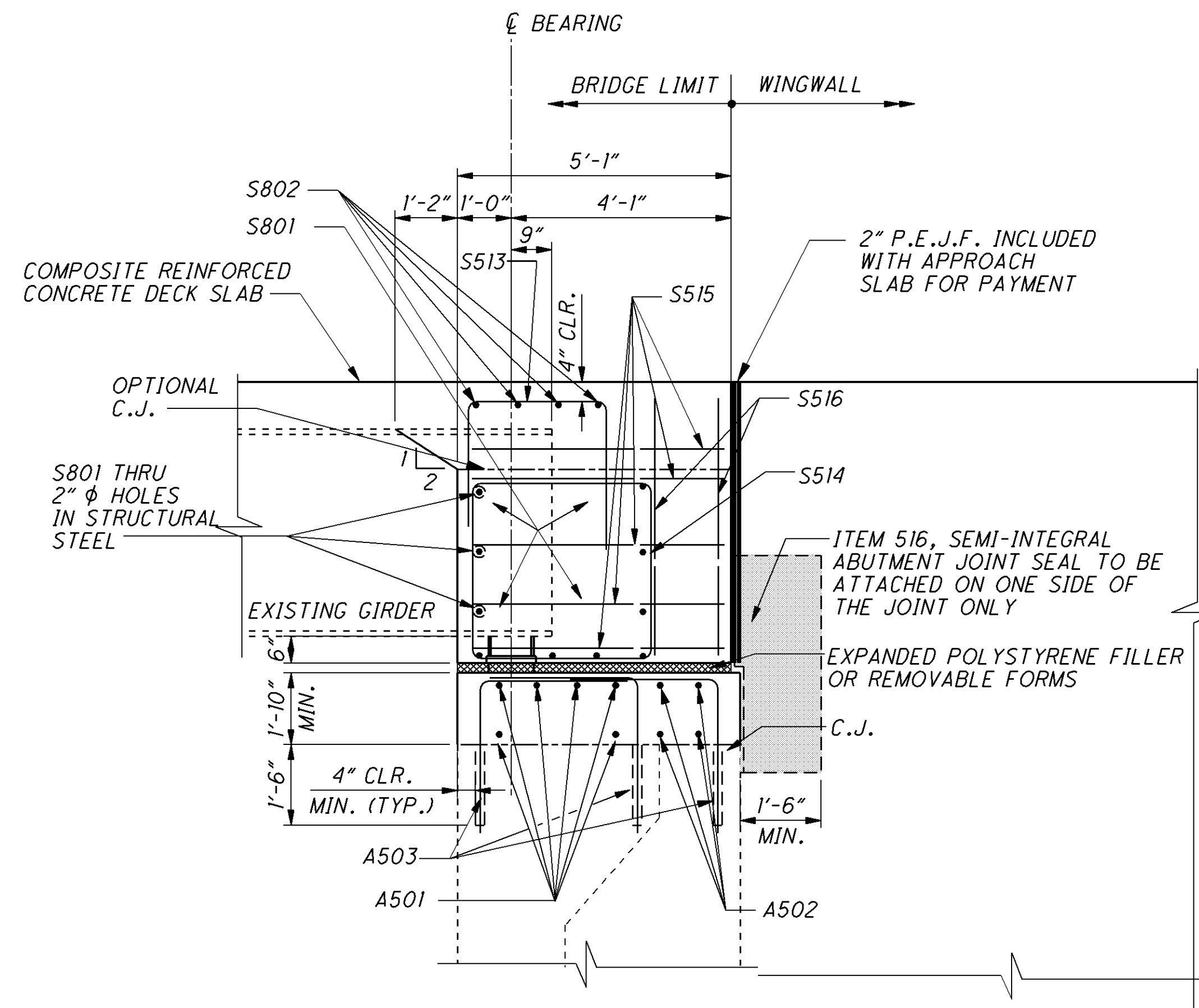
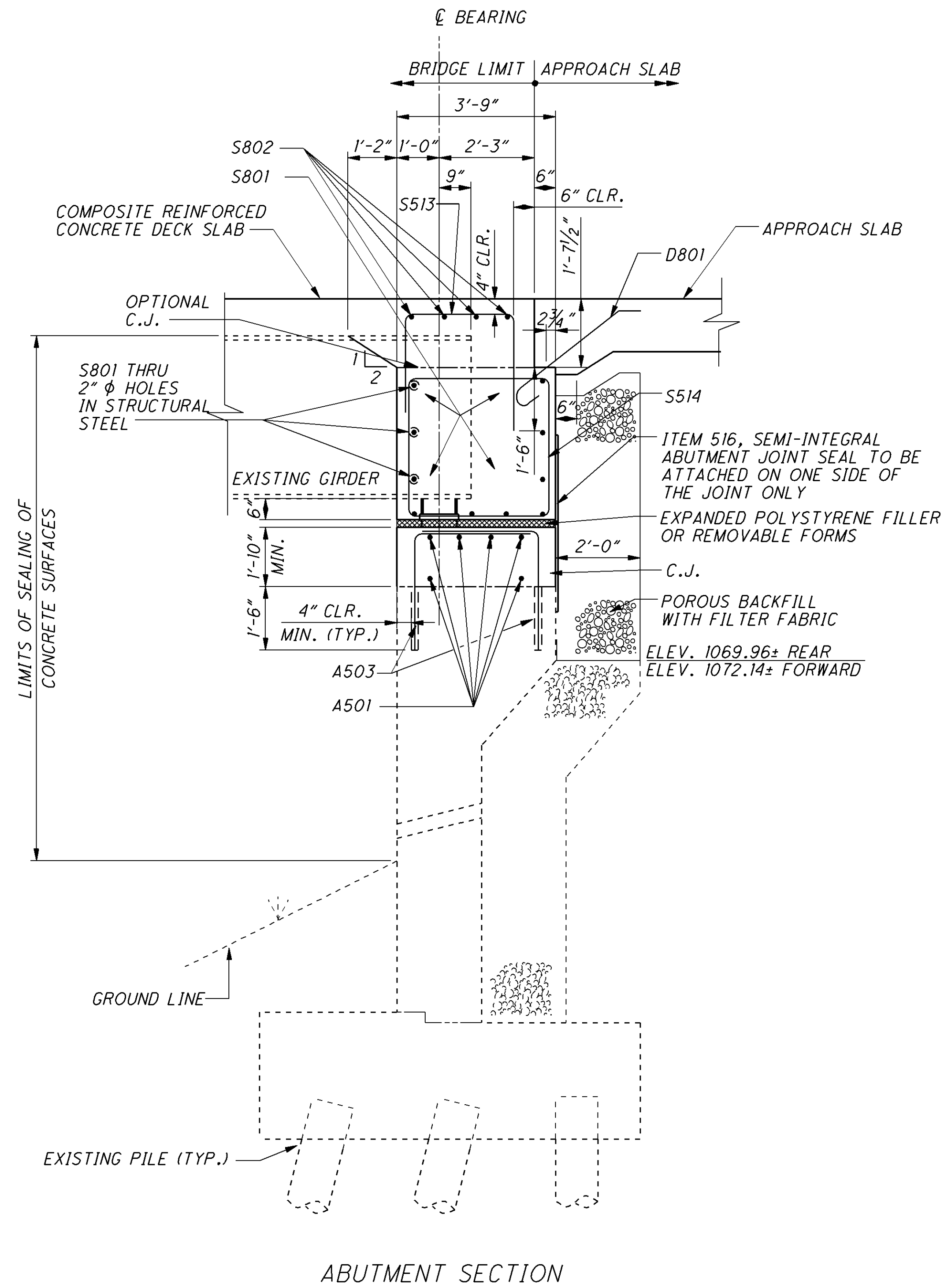
NOTES

1.) FOR ABUTMENT SECTIONS SEE SHEET 11/23.

2.) FOR APPROACH SLAB DETAILS SEE SHEET 22/23.

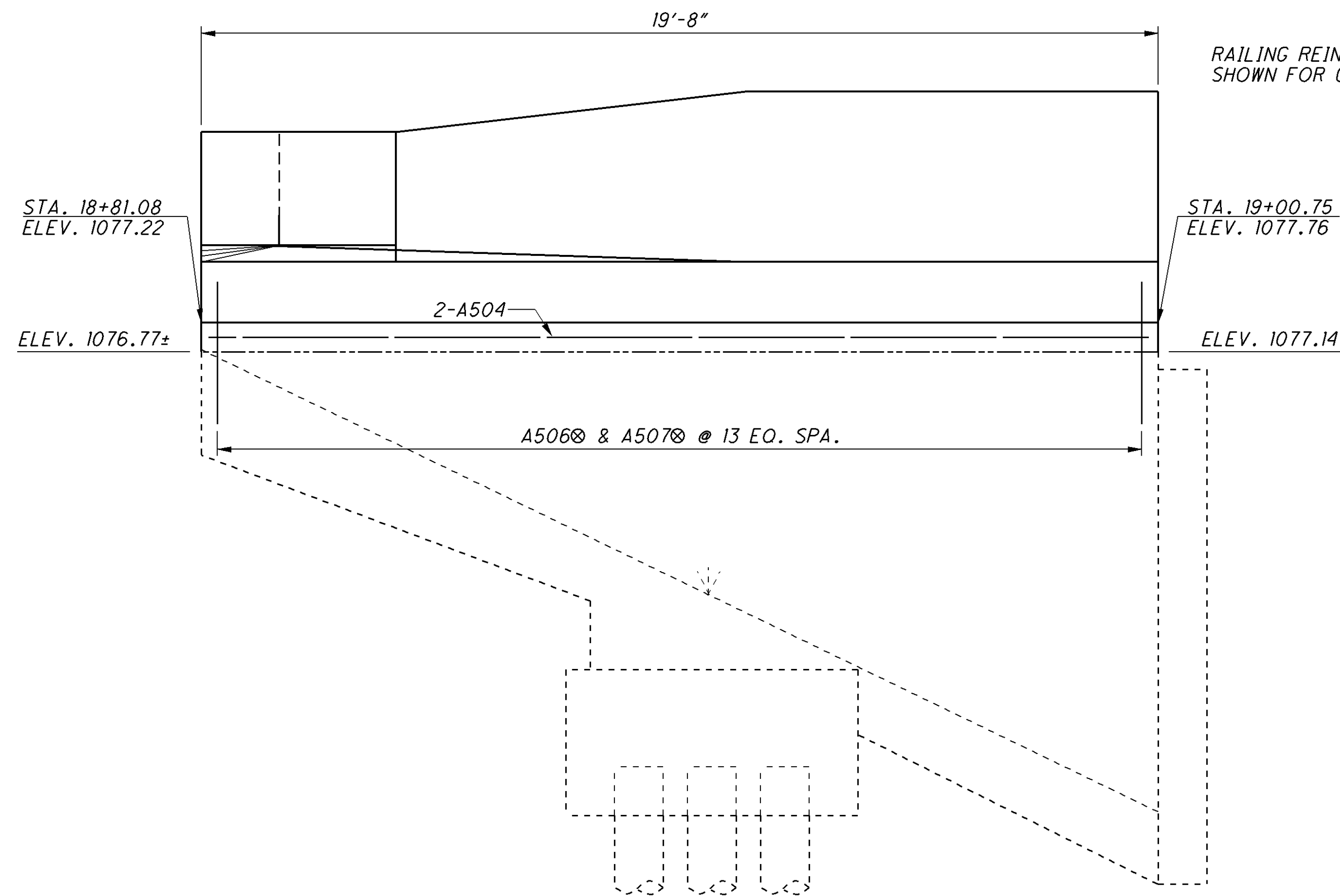
3.) FOR ADDITIONAL NOTES SEE SHEET 9/23.

4.) ABUTMENT SEAT ELEVATIONS HAVE BEEN ADJUSTED UP 0.02 FEET TO ACCOMODATE BEARING DEFLECTION.

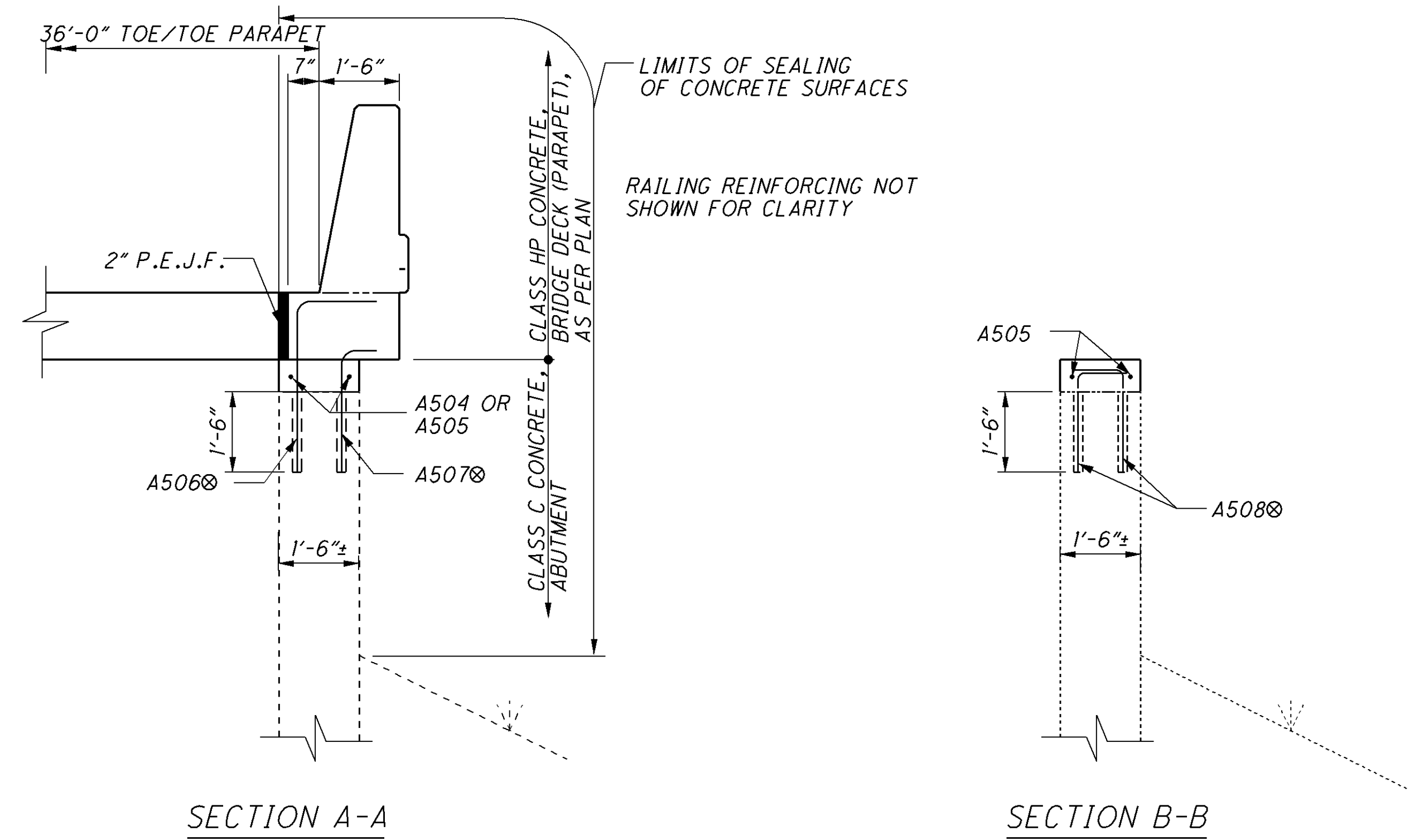


NOTE:
 1.) POROUS BACKFILL WITH FILTER FABRIC, 2 FEET THICK SHALL EXTEND UP TO THE PLANE OF THE SUBGRADE, TO 1 FOOT BELOW THE EMBANKMENT SURFACE, AND Laterally TO THE WINGWALLS.

LEGEND
 C.J. - CONSTRUCTION JOINT
 SPA. - SPACES
 P.E.J.F. - PREFORMED EXPANSION JOINT FILLER
 N.F. - NEAR FACE
 F.F. - FAR FACE

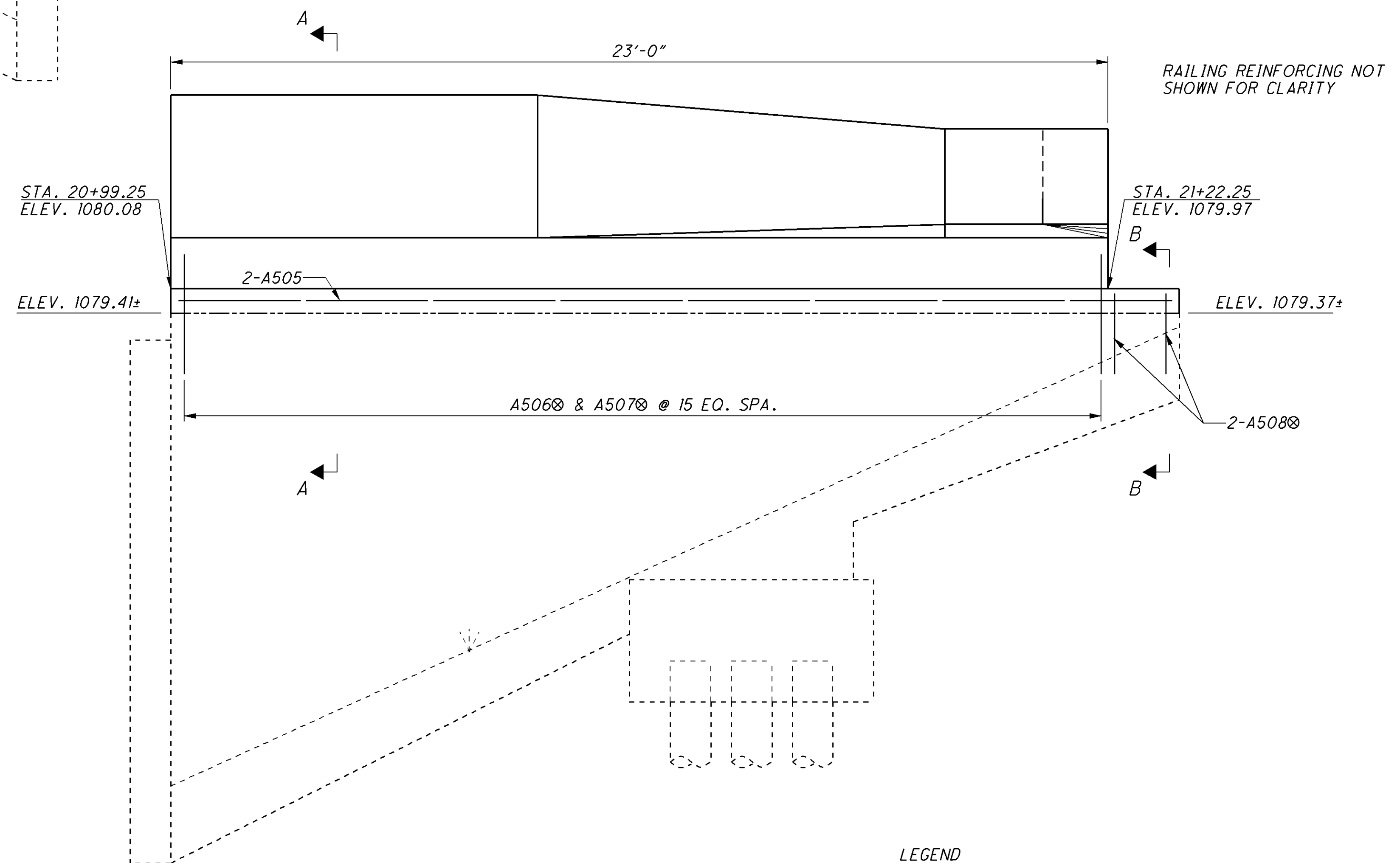


REAR WINGWALL ELEVATION



SECTION A-A

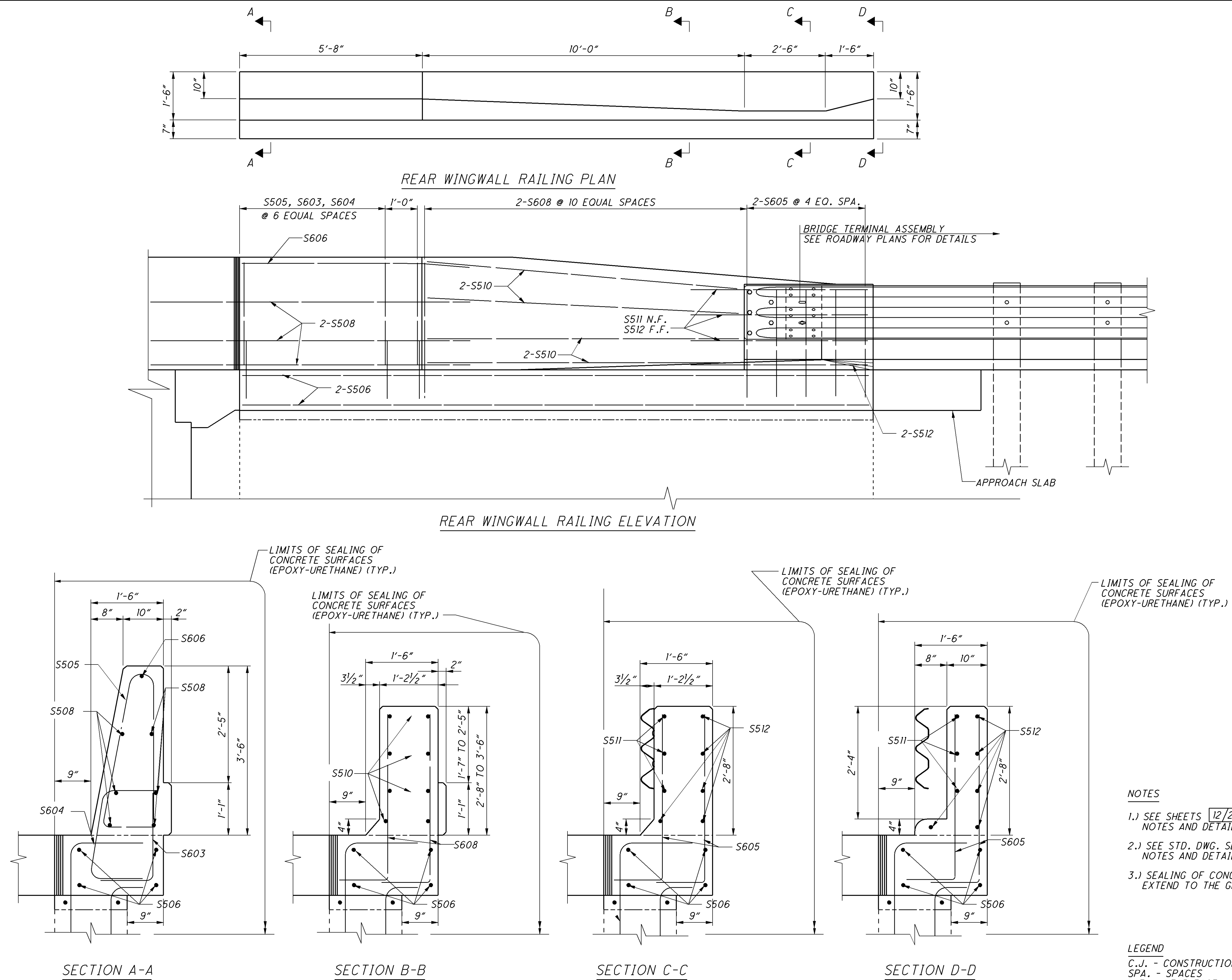
SECTION B-B

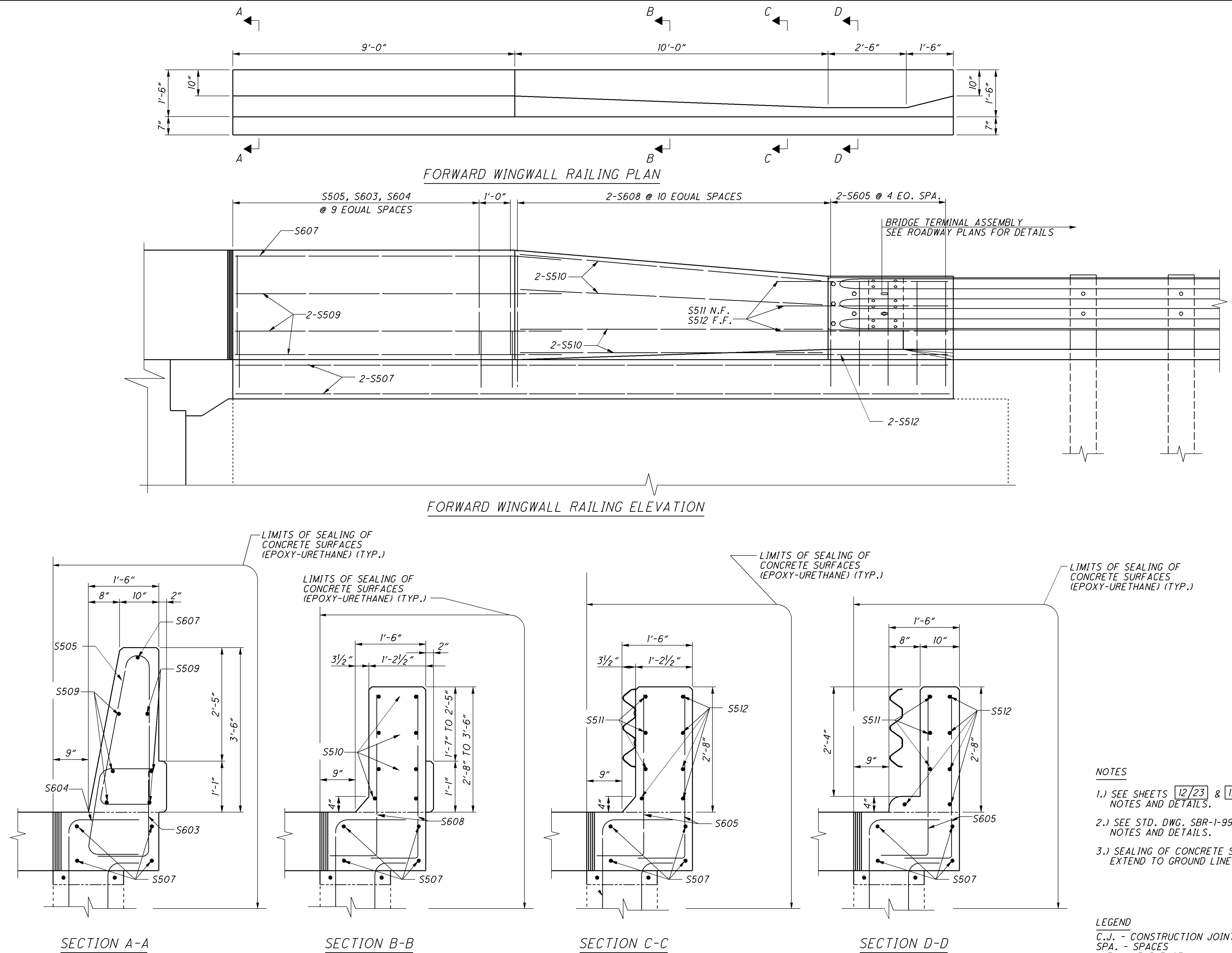


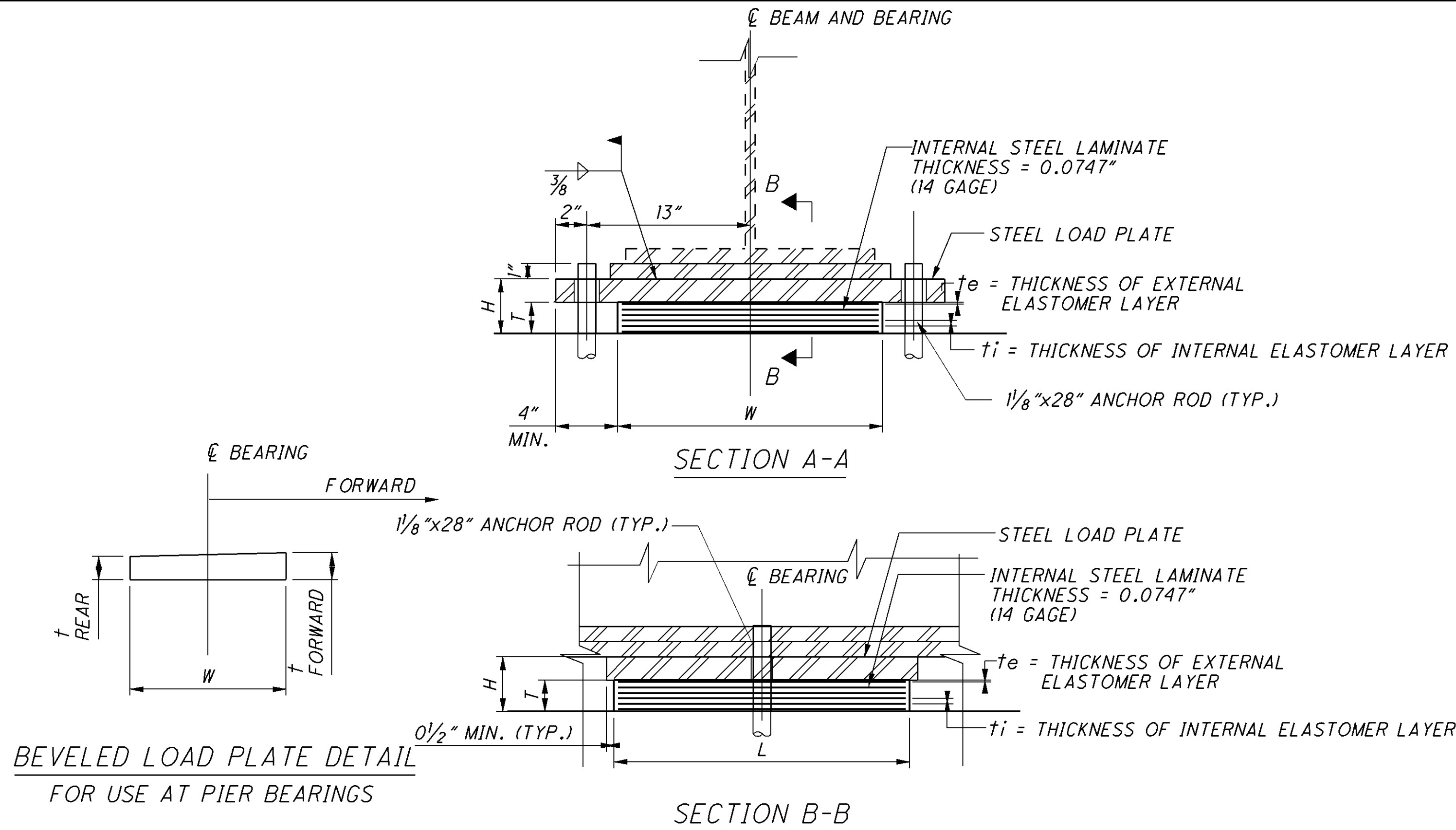
FORWARD WINGWALL ELEVATION

LEGEND

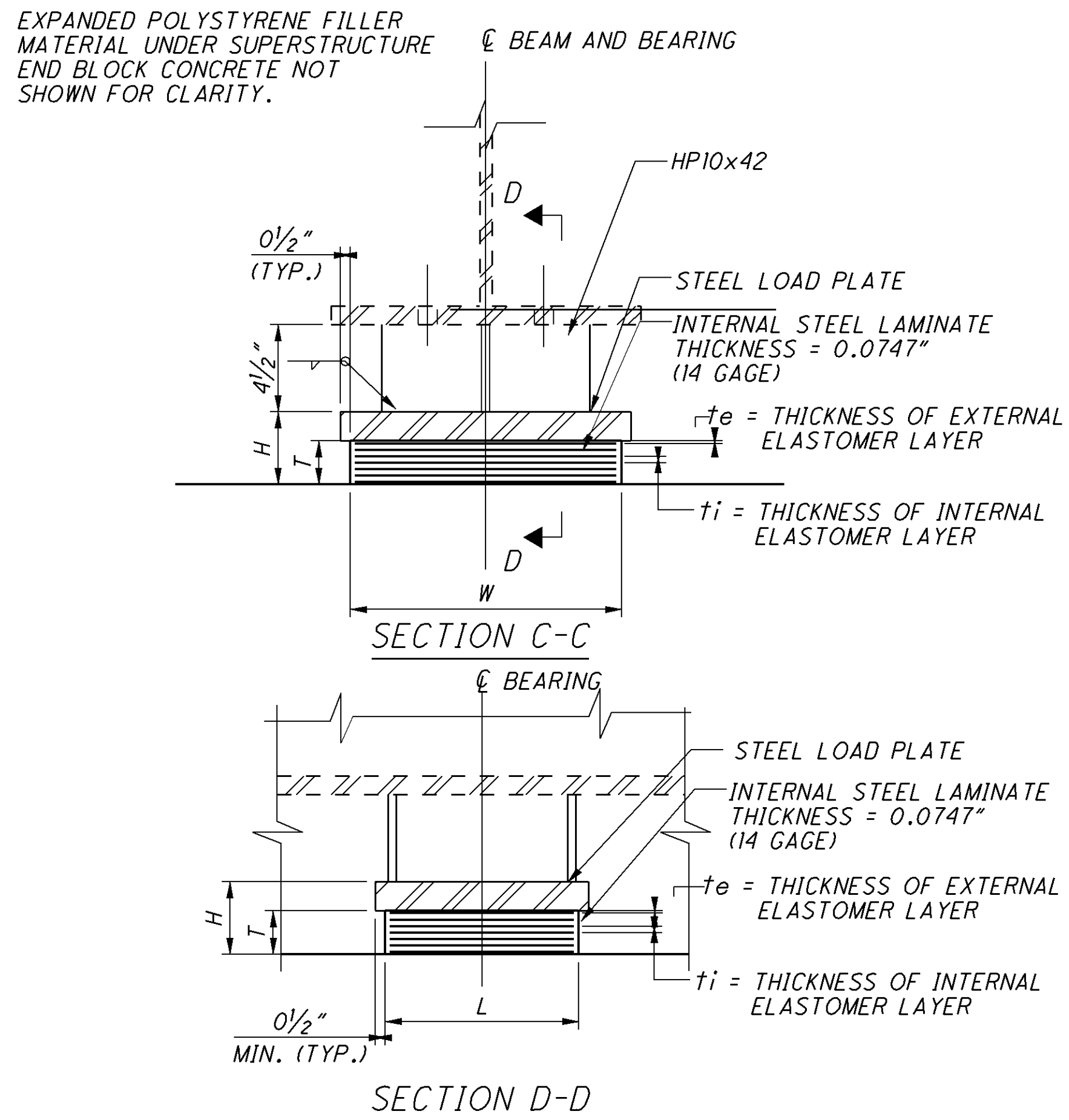
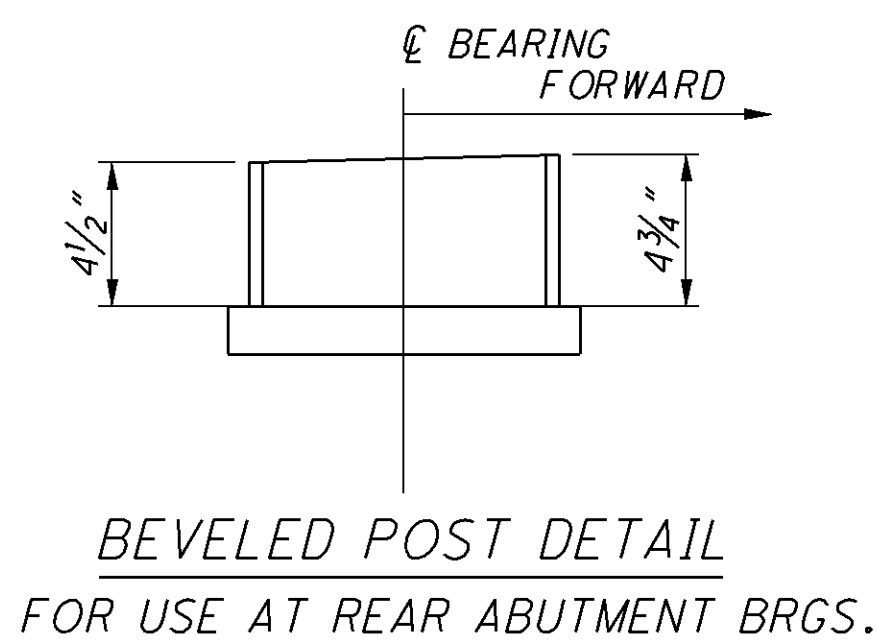
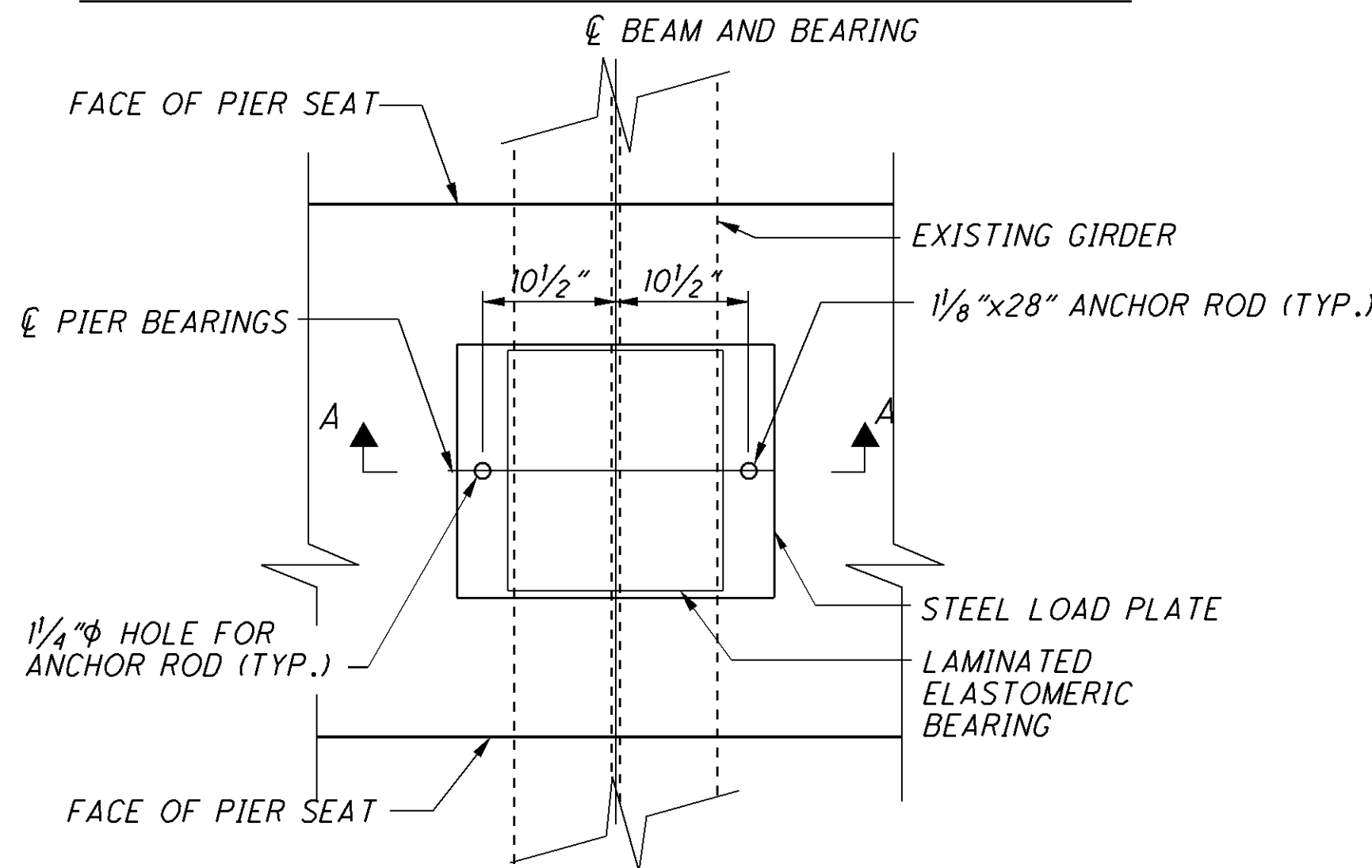
- C.J. - CONSTRUCTION JOINT
- SPA. - SPACES
- P.E.J.F. - PREFORMED EXPANSION JOINT FILLER
- N.F. - NEAR FACE
- F.F. - FAR FACE
- ⊗ - INCLUDED WITH ITEM 509-EPOXY COATED REINFORCING, AS PER PLAN



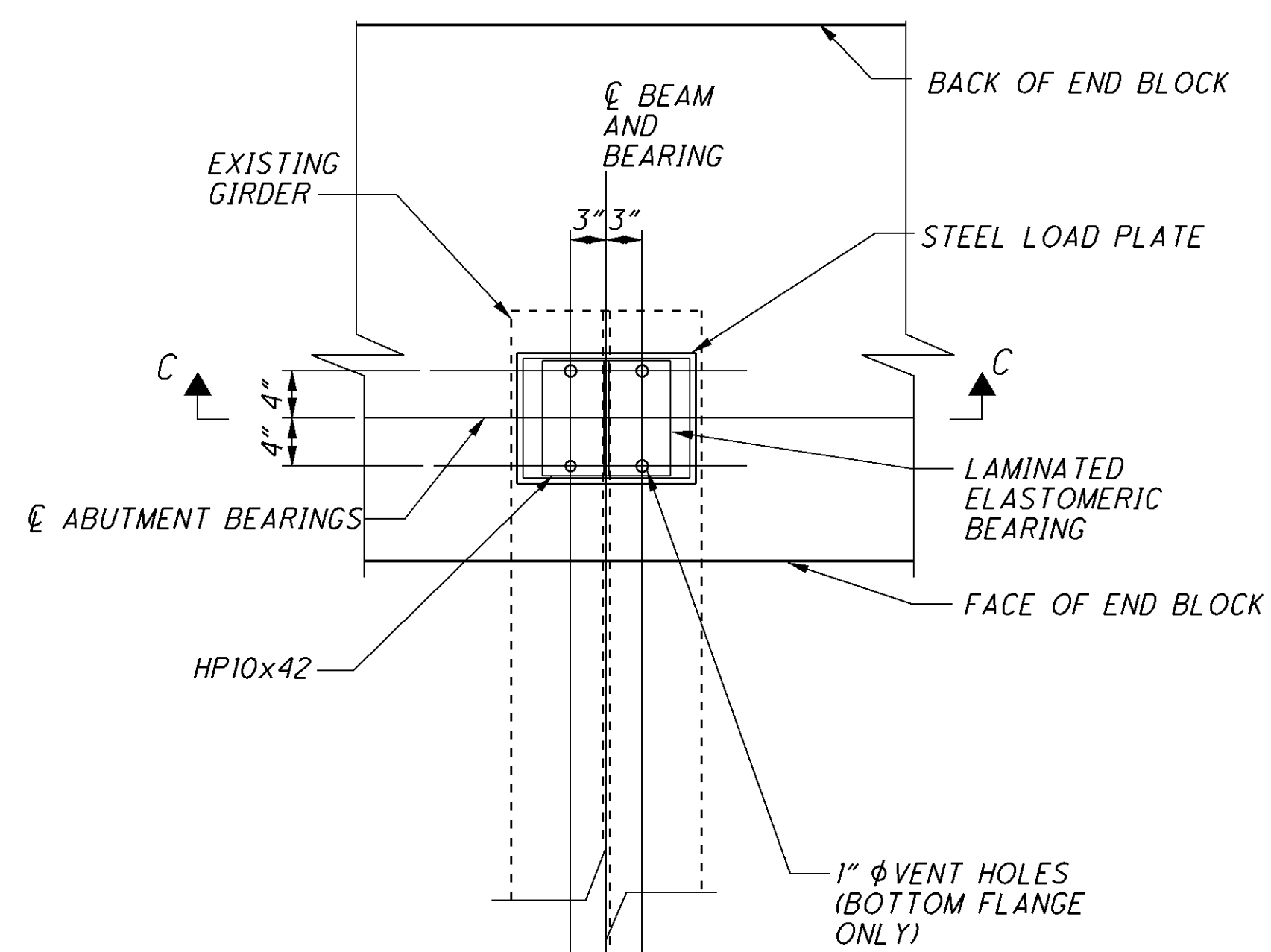




LAMINATED ELASTOMERIC FIXED BEARING, PIER



LAMINATED ELASTOMERIC EXPANSION BEARING WITH SUPPORT POST, ABUTMENTS



NOTES:

1.) **ELASTOMERIC BEARINGS:** THE ELASTOMER SHALL HAVE A HARDNESS OF 50 DUROMETER. THE BEARINGS WERE DESIGNED UNDER DIVISION I, SECTION 14.6.6 (METHOD A) OF THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES.

2.) **LOAD PLATES:** THE STEEL LOAD PLATE SHALL BE THE SAME MATERIAL AS THE STRUCTURAL STEEL AND BE SIMILARLY CLEANED AND COATED. FIELD COATS SHALL BE INCLUDED IN THE PRICE BID FOR PAINTING MAIN STRUCTURAL STEEL. THE STEEL LOAD PLATE SHALL BE BONDED BY VULCANIZATION TO THE ELASTOMER DURING THE MOLDING PROCESS. WELDING OF THE LOAD PLATE TO THE SUPERSTRUCTURE SHALL BE CONTROLLED SO THAT THE PLATE TEMPERATURE AT THE ELASTOMER BONDED SURFACE DOES NOT EXCEED 300°F AS DETERMINED BY THE USE OF PYROMETRIC STICKS OR OTHER TEMPERATURE MONITORING DEVICES. FINISH SURFACE OF LOAD PLATE AFTER MOLDING, IF NECESSARY TO ACHIEVE A FLAT AND HORIZONTAL SURFACE.

3.) **BEARING REPOSITIONING:** IF THE STEEL IS ERECTED AT AN AMBIENT TEMPERATURE HIGHER THAN 80°F OR LOWER THAN 40°F, AND THE BEARING SHEAR DEFLECTION EXCEEDS ONE-SIXTH OF THE BEARING HEIGHT AT 60°F ± 10°F, THE BEAMS SHALL BE RAISED TO ALLOW THE BEARINGS TO RETURN TO THEIR UNDEFORMED SHAPE AT 60°F ± 10°F.

4.) **BEARING ANCHOR RODS:** AT THE OPTION OF THE CONTRACTOR, THE BEARING ANCHOR RODS (OR FORMED HOLES), LOCATED AND SUPPORTED BY TEMPLATES, MAY BE CAST-IN-PLACE.

5.) **BASIS OF PAYMENT:** THE UNIT BID PRICE SHALL INCLUDE ALL MATERIALS, LABOR, TESTING, ANCHOR RODS AND INCIDENTALS NECESSARY TO FURNISH AND INSTALL LAMINATED ELASTOMERIC BEARINGS, EITHER FIXED OR EXPANSION. PAYMENT WILL BE MADE AT THE CONTRACT PRICE FOR ITEM 516, EACH, ELASTOMERIC BEARINGS WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), SIZE AS SPECIFIED ON THIS SHEET.

NOTE: LIVE LOAD EXCLUDES IMPACT

BEARING LOCATION	BEARING TYPE	DEAD LOAD (KIPS)	LIVE LOAD (KIPS)	TOTAL LOAD (KIPS)	L	W	ti	te	NO. OF ti'S	NUMBER OF INTERNAL LAMINATES (14 GAGE)	T	STEEL LOAD PLATE			H @ BRG.
												LxW	t REAR	t FWD.	
ABUTMENTS	EXPANSION	79.8	61.0	140.8	10	15	0.2979	0.125	6	7	2.560	11x16	1.5	1.5	4.060
PIER	FIXED	221.7	100.8	322.5	15	22	0.3800	0.125	9	10	4.417	16x30	1.5	1.75	6.042

DESIGN AGENCY
HAMMONTREE & ASSOCIATES, LIMITED
5233 STONEHAM ROAD
NORTH CANTON, OHIO 44720

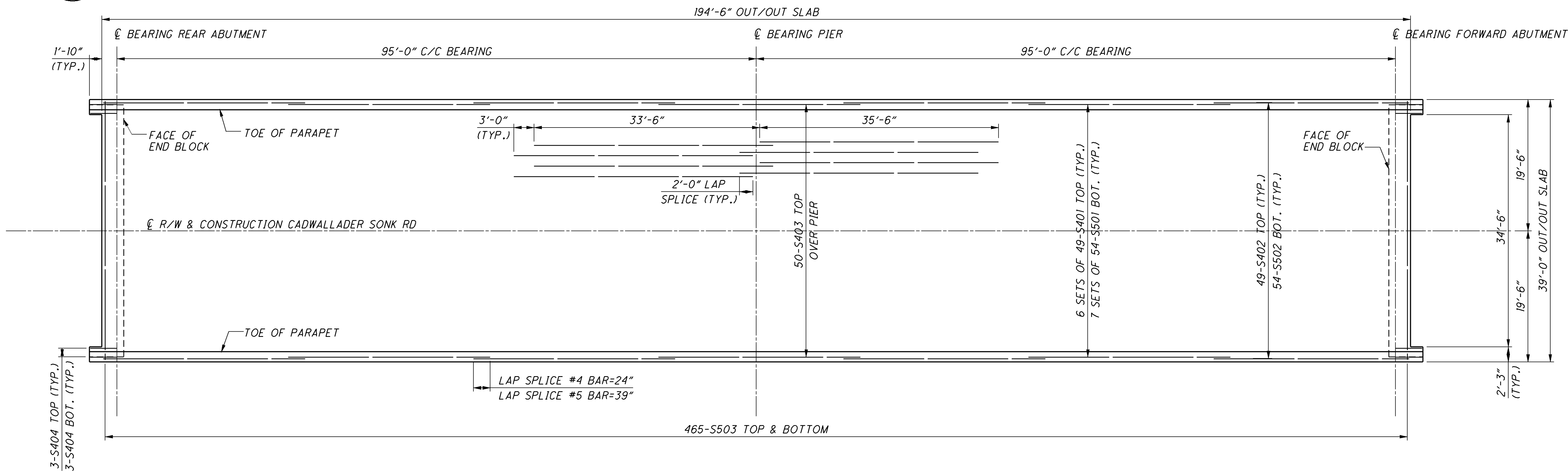
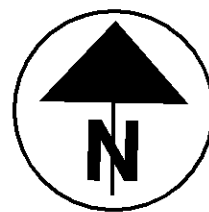
DATE
08-11-10
KJO
REVIEWED
MCC
DRAWN
MCC
CHECKED
CJP

BEARING DETAILS
TRU-11-1367
CADWALLADER SONK ROAD OVER SR 11

TRU-11-13.67
PID No. 76409

16 / 23

87
121



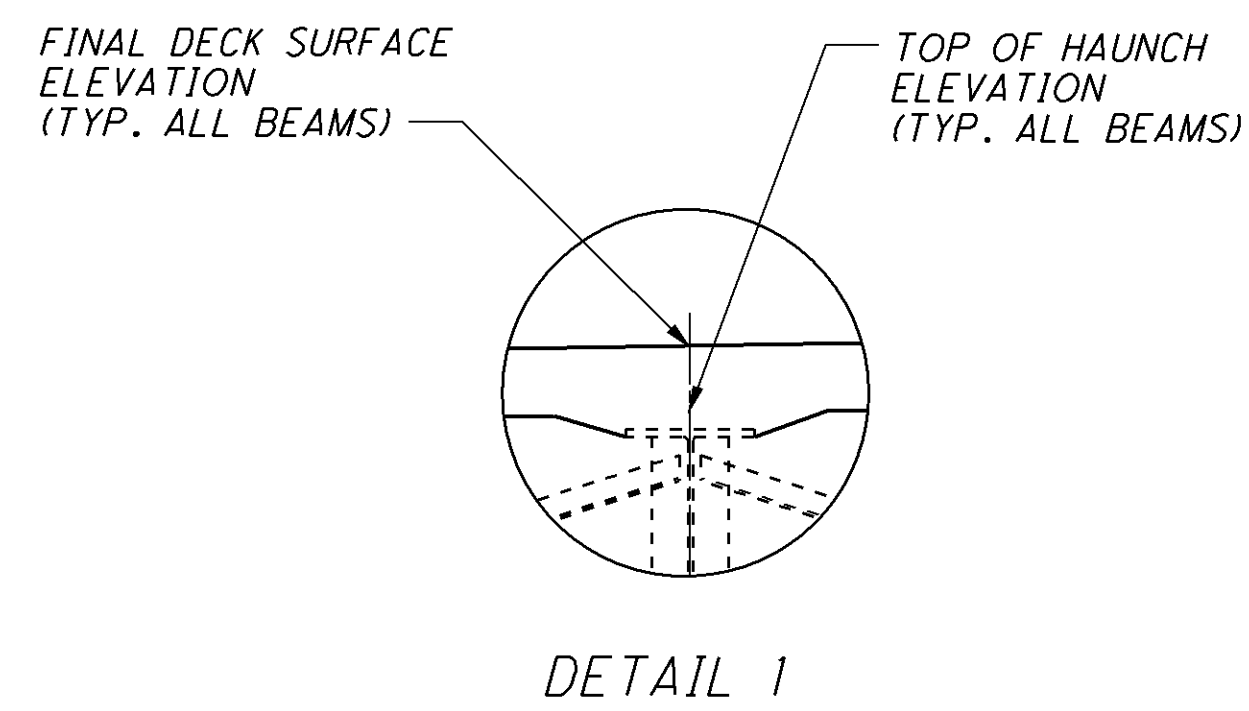
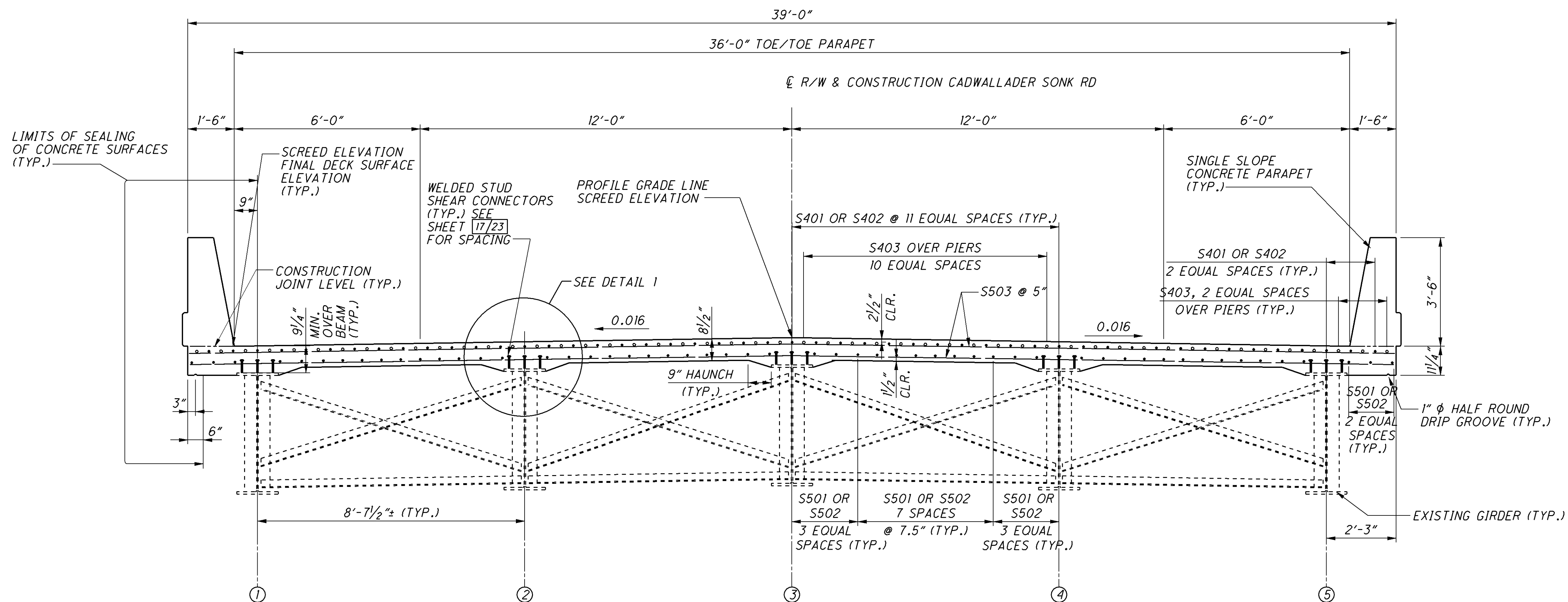
LEGEND

① - BEAM NUMBER

NOTES

- 1.) RAILING REINFORCEMENT NOT SHOWN FOR CLARITY. SEE SHEET 21/23.
- 2.) FOR TRANSVERSE SECTION SEE SHEET 19/23.
- 3.) SEE ABUTMENT DETAILS ON SHEETS 9/23 THROUGH 11/23 FOR END BLOCK REINFORCEMENT.
- 4.) SEE SHEET 20/23 FOR SCREED, TOP OF HAUNCH, AND FINAL DECK SURFACE ELEVATIONS.

DESIGN AGENCY HAMMONTREE & ASSOCIATES, LIMITED 5233 STONEHAM ROAD NORTH CANTON, OHIO 44720	DATE 08-11-10	STRUCTURE FILE NUMBER 7808127	DRAWN MCC	DESIGNED MCC	DECK PLAN TRU-11-1367 CADWALLADER SONK ROAD OVER SR 11	TRU-11-13.67 PID No. 76409
	REVIEWED KJO	---	REVIS	CJP		



TRANSVERSE SECTION
(LOOKING FORWARD)

NOTES

- 1.) DECK SLAB CONCRETE QUANTITY: 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 HAUNCH THICKNESS OF 1.71 INCHES AND A CONSTANT HAUNCH WIDTH OUTSIDE THE EDGE OF EACH BEAM FLANGE OF 9 INCHES. DEVIATE FROM THIS HAUNCH THICKNESS AS NECESSARY TO PLACE THE DECK SURFACE AT THE FINISHED GRADE. THE ALLOWABLE TOLERANCE FOR THE HAUNCH WIDTH OUTSIDE THE EDGE OF EACH BEAM FLANGE IS ± 3 INCHES.

THE HAUNCH THICKNESS WAS MEASURED AT THE CENTERLINE OF THE BEAM, FROM THE SURFACE OF THE DECK TO THE BOTTOM OF THE TOP FLANGE MINUS THE DECK SLAB THICKNESS. THE AREA OF ALL EMBEDDED STEEL PLATES HAS BEEN DEDUCTED FROM THE HAUNCH QUANTITY IN ACCORDANCE WITH 511.24.
- 2.) FOR CROSSFRAME DETAILS SEE STD. DWG. GSD-1-96.
- 3.) SEE SHEET 21/23 FOR RAILING DETAILS.

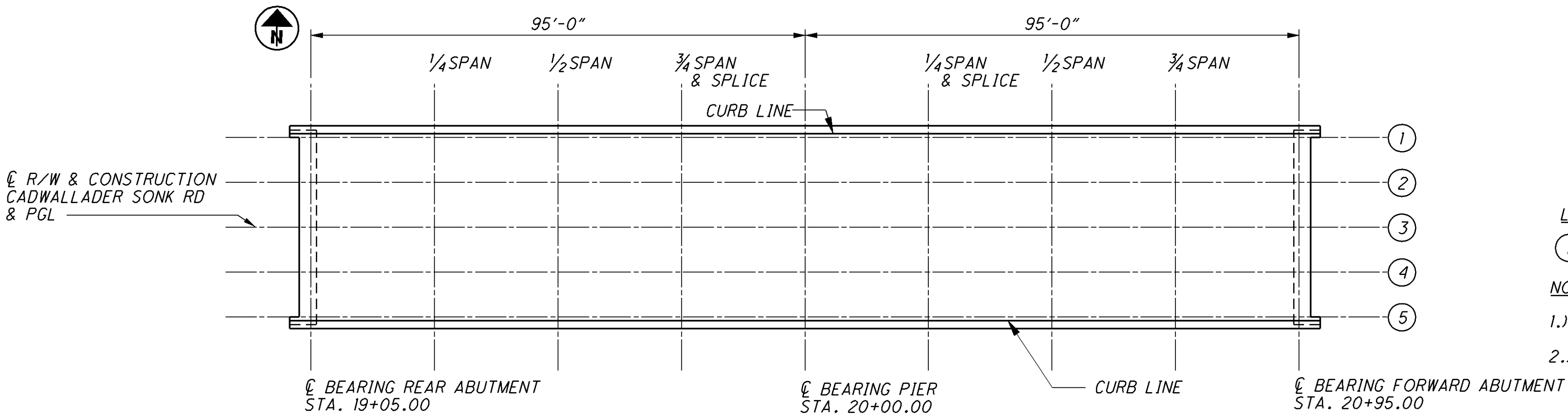
LEGEND

① - BEAM NUMBER

SCREED ELEVATIONS									
LOCATION	℄ BRG. REAR ABUT.	SPAN 1				SPAN 2			
		1/4 SPAN	MIDSPAN	3/4 SPAN	℄ PIER 1	1/4 SPAN	MIDSPAN	3/4 SPAN	℄ BRG. FWD. ABUT.
LEFT CURB	1079.11	1079.75	1080.25	1080.60	1080.88	1081.15	1081.36	1081.42	1081.33
PGL	1079.40	1080.04	1080.54	1080.89	1081.17	1081.44	1081.65	1081.71	1081.62
RIGHT CURB	1079.11	1079.75	1080.25	1080.60	1080.88	1081.15	1081.36	1081.42	1081.33

TOP OF HAUNCH ELEVATIONS									
LOCATION	℄ BRG. REAR ABUT.	SPAN 1				SPAN 2			
		1/4 SPAN	MIDSPAN	3/4 SPAN	℄ PIER 1	1/4 SPAN	MIDSPAN	3/4 SPAN	FWD. ABUT.
BEAM 1	1078.41	1079.05	1079.55	1079.90	1080.18	1080.45	1080.66	1080.72	1080.63
BEAM 2	1078.55	1079.19	1079.69	1080.04	1080.32	1080.59	1080.80	1080.86	1080.77
BEAM 3	1078.69	1079.33	1079.83	1080.18	1080.46	1080.73	1080.94	1081.00	1080.91
BEAM 4	1078.55	1079.19	1079.69	1080.04	1080.32	1080.59	1080.80	1080.86	1080.77
BEAM 5	1078.41	1079.05	1079.55	1079.90	1080.18	1080.45	1080.66	1080.72	1080.63

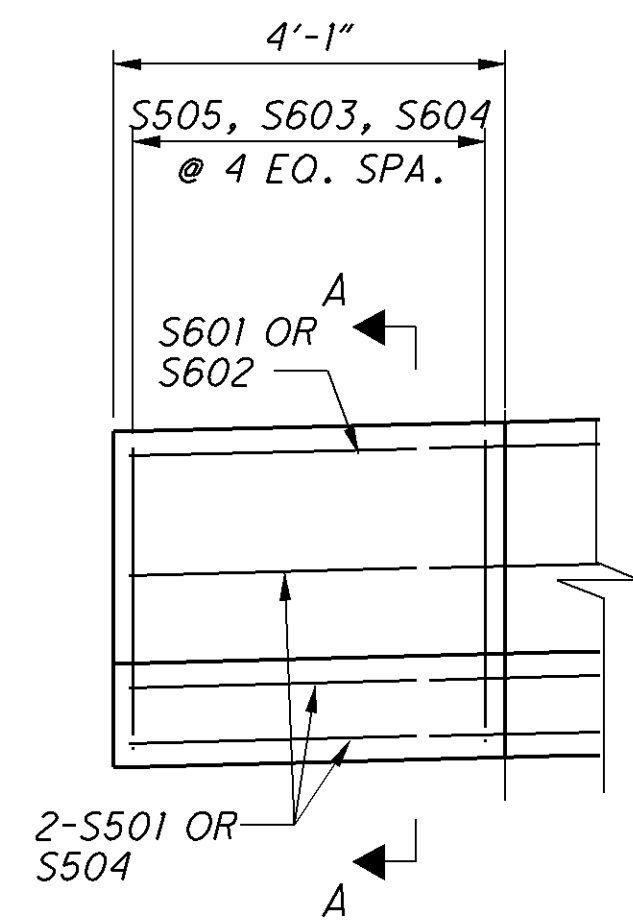
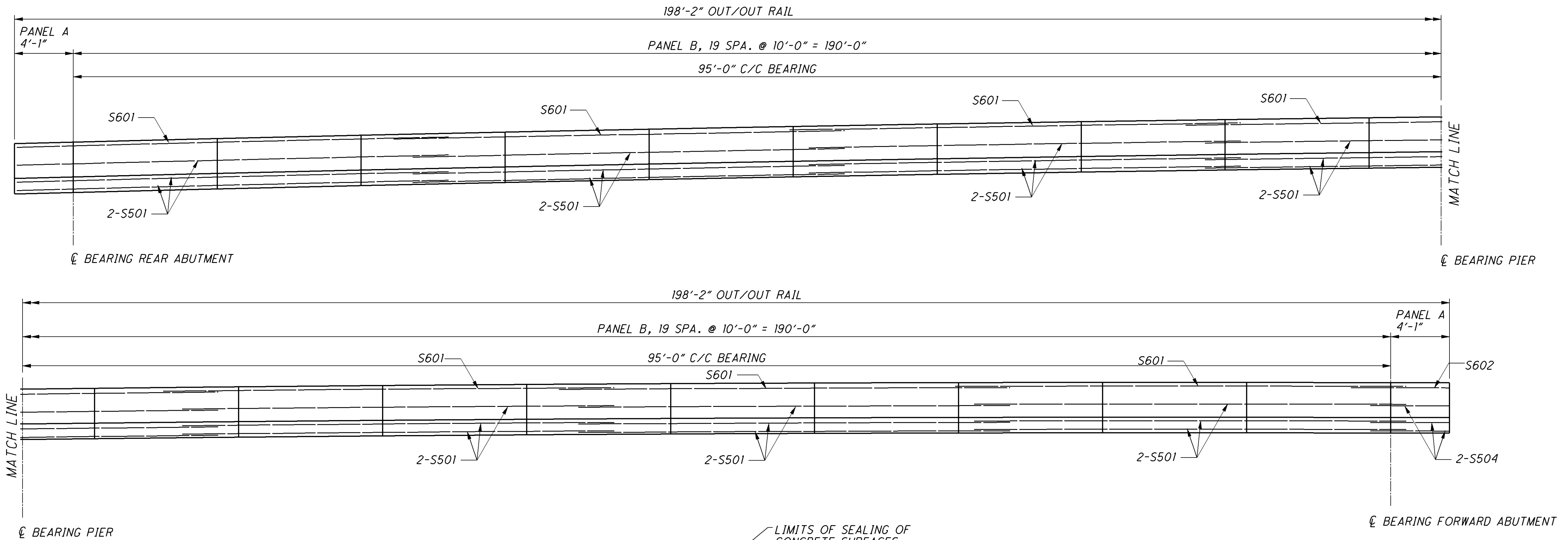
FINAL DECK SURFACE ELEVATIONS									
LOCATION	℄ BRG. REAR ABUT.	SPAN 1				SPAN 2			
		1/4 SPAN	MIDSPAN	3/4 SPAN	℄ PIER 1	1/4 SPAN	MIDSPAN	3/4 SPAN	℄ BRG. FWD. ABUT.
LEFT CURB	1079.11	1079.67	1080.16	1080.56	1080.88	1081.11	1081.27	1081.34	1081.33
BEAM 1	1079.12	1079.68	1080.17	1080.57	1080.89	1081.12	1081.28	1081.35	1081.34
BEAM 2	1079.26	1079.82	1080.31	1080.71	1081.03	1081.26	1081.42	1081.49	1081.48
BEAM 3 & PGL	1079.40	1079.96	1080.45	1080.85	1081.17	1081.40	1081.56	1081.63	1081.62
BEAM 4	1079.26	1079.82	1080.31	1080.71	1081.03	1081.26	1081.42	1081.49	1081.48
BEAM 5	1079.12	1079.68	1080.17	1080.57	1080.89	1081.12	1081.28	1081.35	1081.34
RIGHT CURB	1079.11	1079.67	1080.16	1080.56	1080.88	1081.11	1081.27	1081.34	1081.33



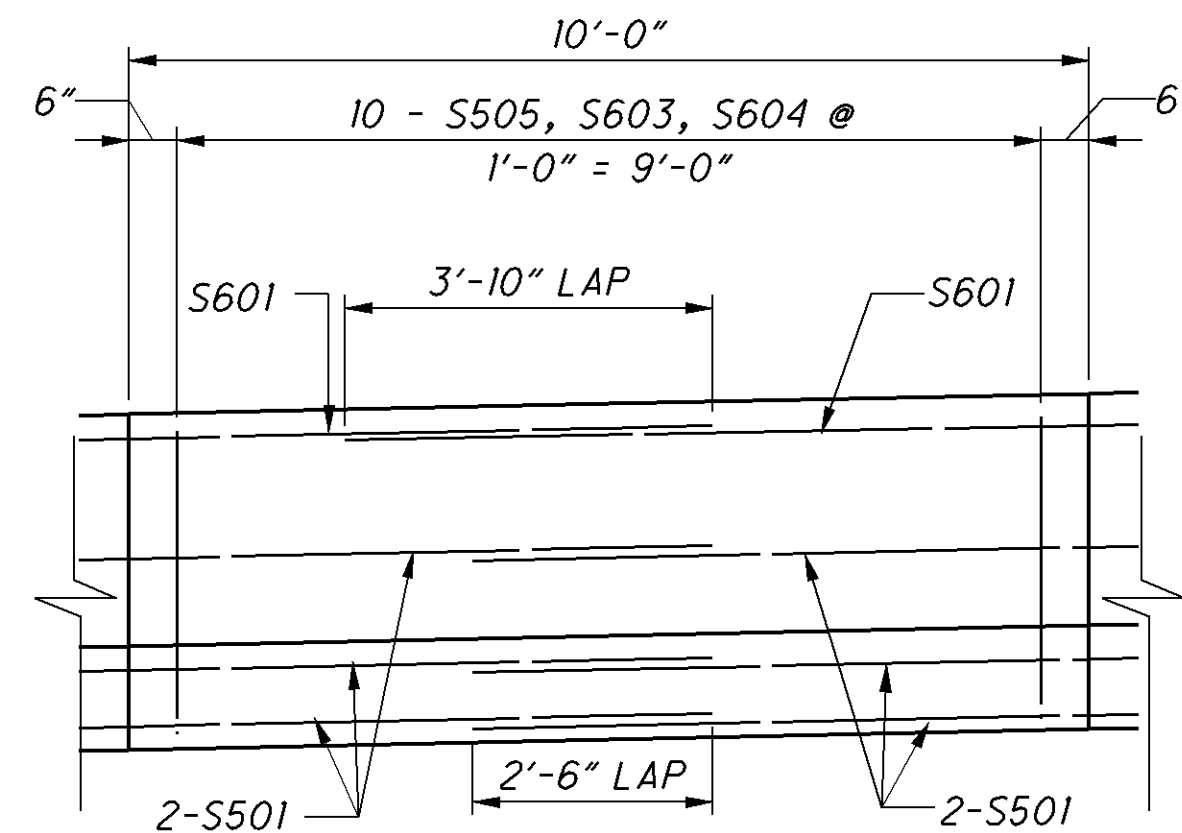
ELEVATION LOCATIONS

LEGEND
① - BEAM NUMBER

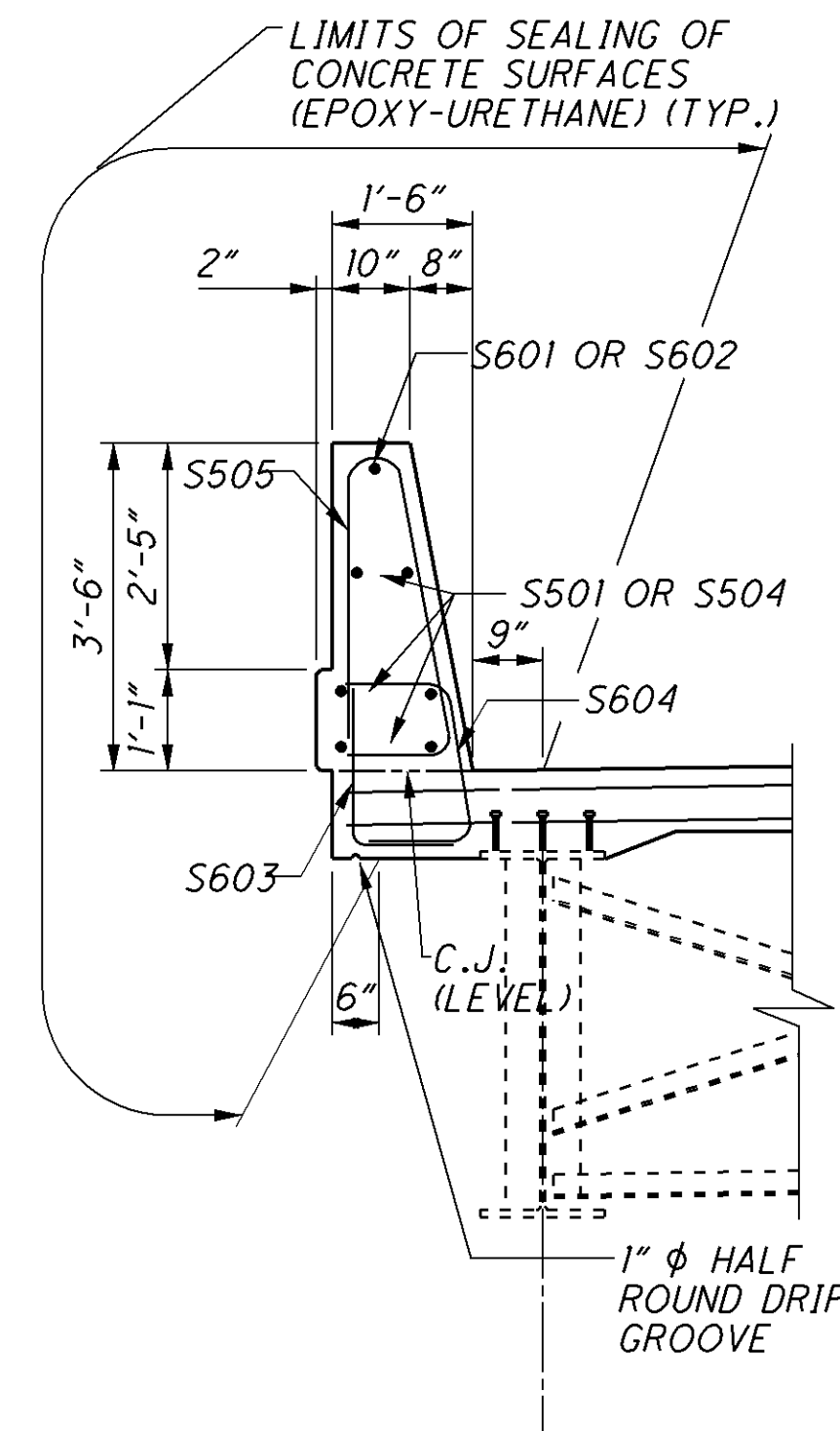
- NOTES
- 1.) FOR TRANSVERSE SECTION SEE SHEET 19/23.
 - 2.) SCREED ELEVATIONS SHOWN REPRESENT THE THEORETICAL DECK SURFACE LOCATION PRIOR TO DEFLECTIONS CAUSED BY DECK PLACEMENT AND OTHER ANTICIPATED DEAD LOADS.
 - 3.) TOP OF HAUNCH ELEVATIONS SHOWN REPRESENT THE THEORETICAL LOCATION OF THE BOTTOM OF THE DECK ABOVE THE BEAM HAUNCH PRIOR TO DEFLECTIONS CAUSED BY DECK PLACEMENT AND OTHER ANTICIPATED DEAD LOADS.
 - 4.) FINAL DECK SURFACE ELEVATIONS SHOWN REPRESENT THE DECK SURFACE LOCATION AFTER ALL ANTICIPATED DEAD LOAD DEFLECTIONS HAVE OCCURRED.



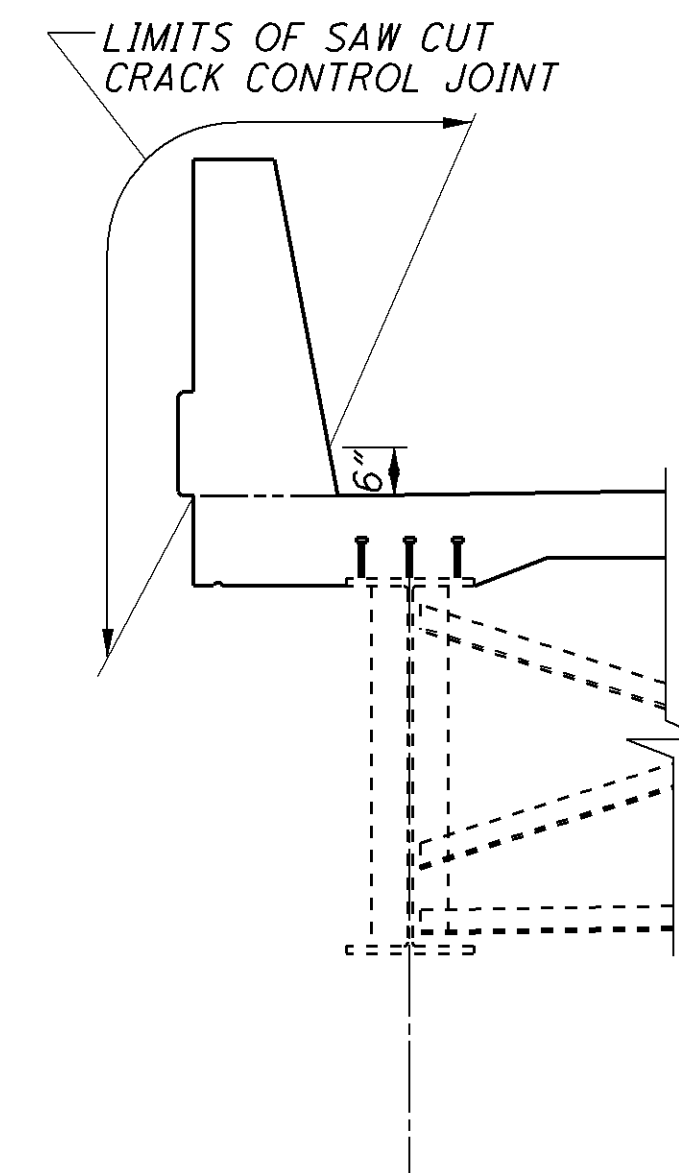
PANEL A DETAIL



PANEL B DETAIL

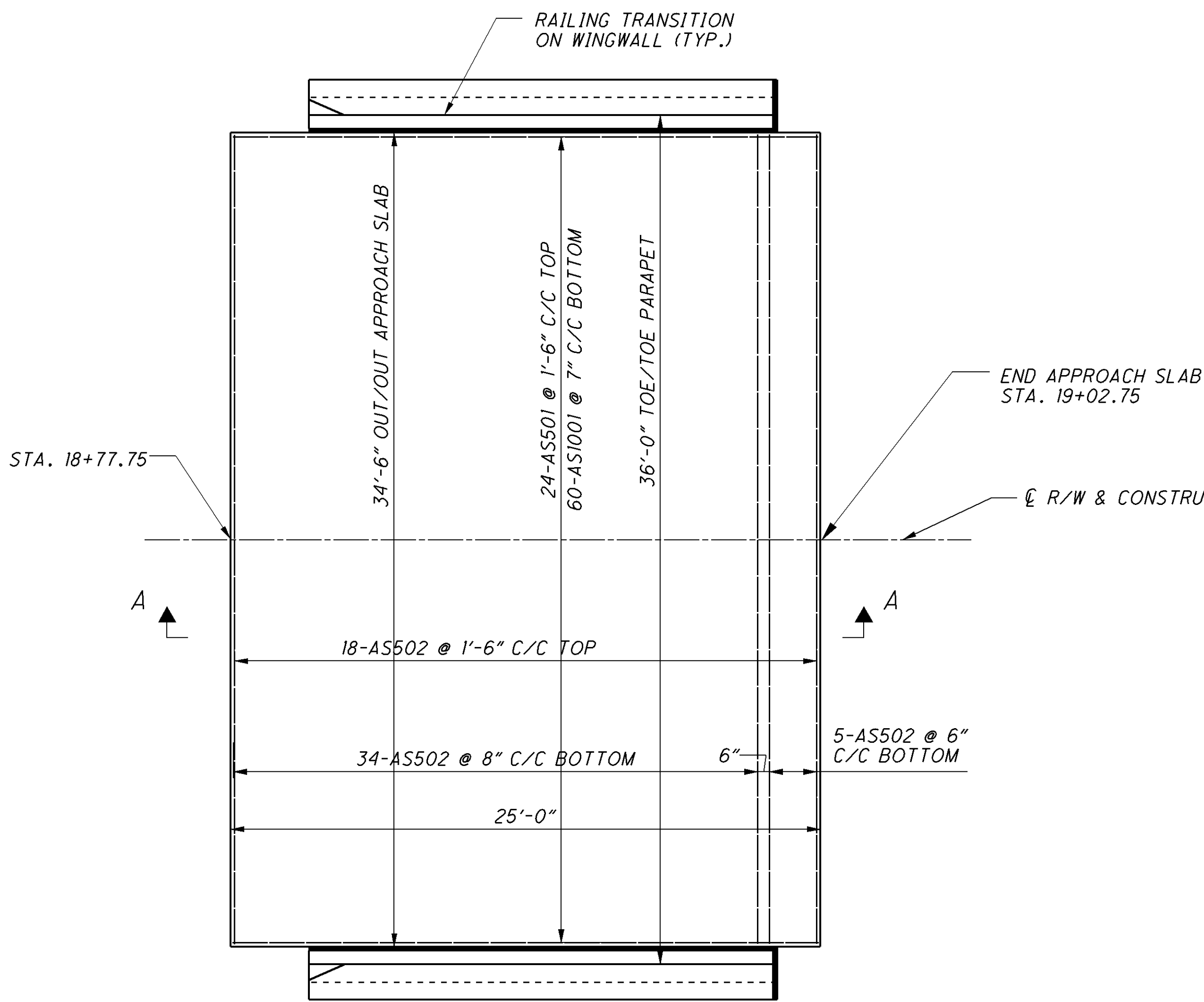


SECTION A-A

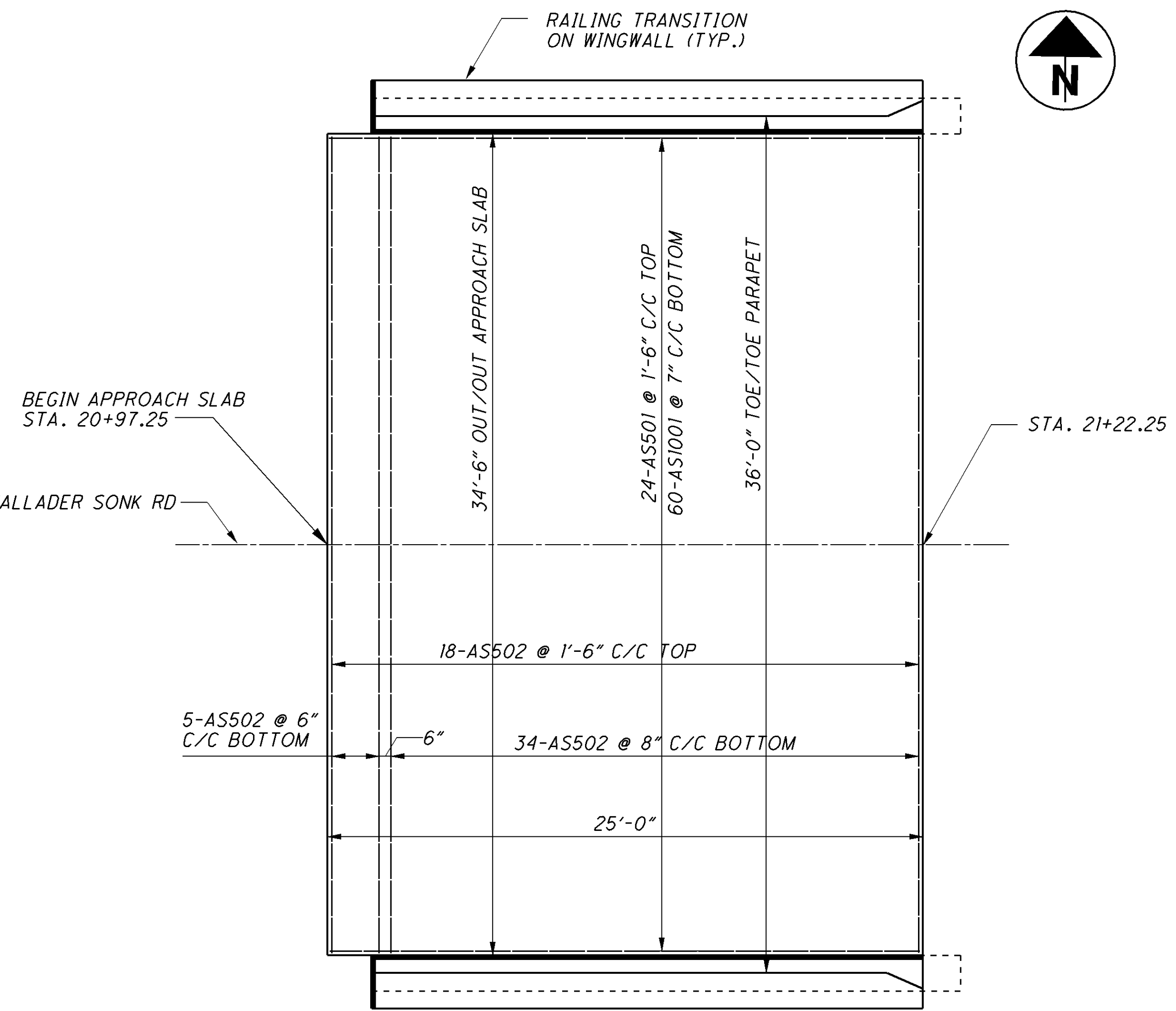


SECTION A-A
SAW CUT DETAIL

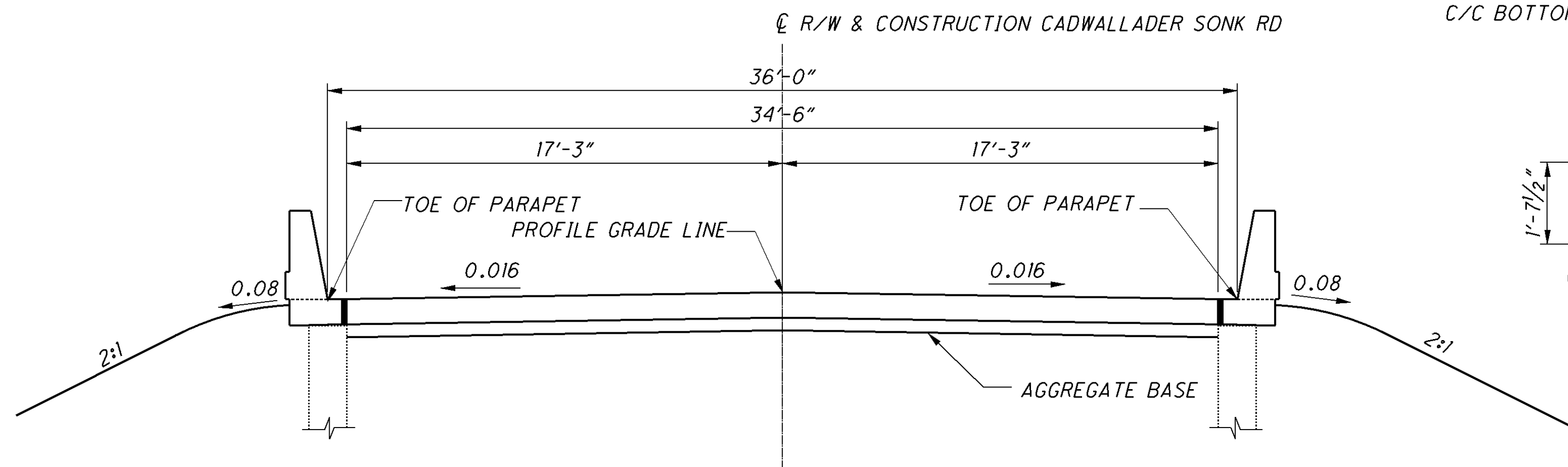
LEGEND
 * - FIELD BEND IF NECESSARY
 N.F. - NEAR FACE
 F.F. - FAR FACE
 C.J. - CONSTRUCTION JOINT



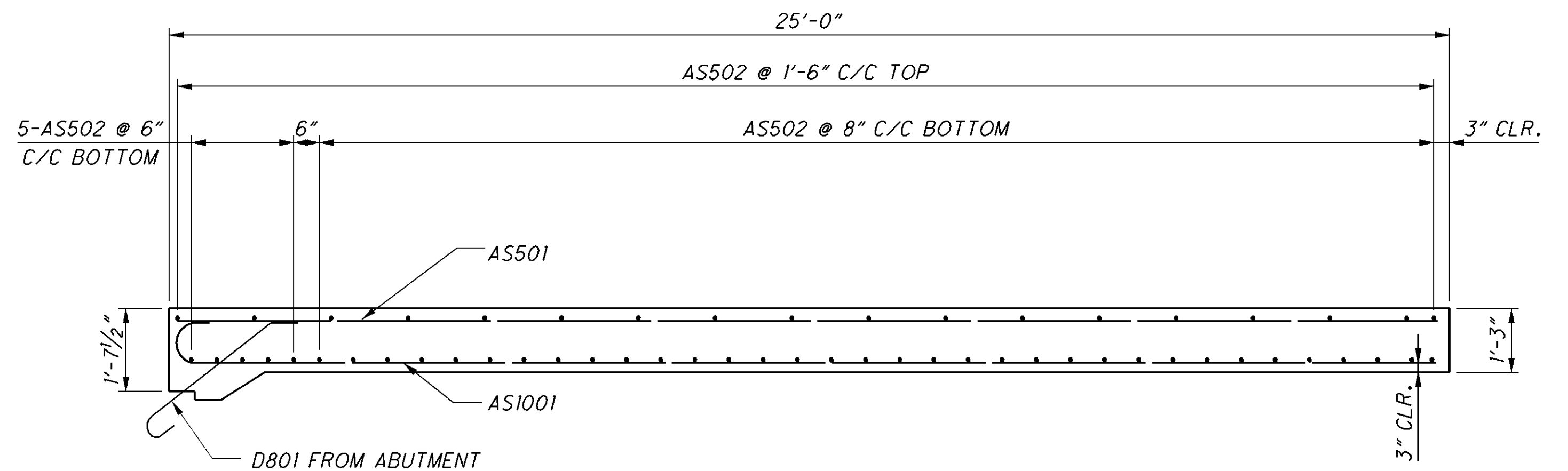
REAR APPROACH SLAB PLAN



FORWARD APPROACH SLAB PLAN



TYPICAL APPROACH SLAB SECTION



SECTION A-A

NOTES

- 1.) SEE SHEET **13/23** FOR ADDITIONAL NOTES AND DETAILS.
- 2.) SEE STD. DWG. AS-1-81 FOR ADDITIONAL DETAILS.

LEGEND

C.J. - CONSTRUCTION JOINT

DESIGN AGENCY
HAMMONTREE & ASSOCIATES, LIMITED
5233 STONEHAM ROAD
NORTH CANTON, OHIO 44720

DATE
08-11-10
KJO
STRUCTURE FILE NUMBER
7808127

DRAWN
MCC
CHECKED
CJP

APPROACH SLAB DETAILS
TRU-11-1367
CADWALLADER SONK ROAD OVER SR 11

TRU-11-13.67
PID No. 76409

22 / 23

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Figure 10-1 illustrates eight types of fillet welds, each with specific dimensions labeled:

- TYPE 1:** A single fillet weld with width A .
- TYPE 2:** A double fillet weld with width A and height B .
- TYPE 3:** A square fillet weld with width A and height B .
- TYPE 4:** A U-shaped fillet weld with width A and height B .
- TYPE 5:** A fillet weld with width A , height B , and a sloped section of length C .
- TYPE 6:** A fillet weld with width A and height B .
- TYPE 7:** A fillet weld with width A , height B , and a sloped section of length C .
- TYPE 8:** A fillet weld with width A , height B , and a sloped section of length C . The sloped section is labeled with a 5.25 inch dimension and a 1/2 inch dimension.

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, INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE, P6001 IS A NO. 6 BAR. BAR DIMENSIONS SHOWN ARE OUT TO OUT UNLESS OTHERWISE NOTED. "STD." WRITTEN IN PLACE OF A DIMENSION INDICATES A STANDARD BEND AT THE END OF THE BAR.

MARK	NUMBER		LENGTH	WEIGHT	TYPE	DIMENSIONS						
	TOTAL					A	B	C	D	E	R	INC
	R	F	SUBSTRUCTURE									
A501	6	6	37'-2"	465	ST							
A502	8	8	1'-11"	32	ST							
A503	68	68	6'-1"	863	6	3'-0"	3'-2"					
A504	4	-	19'-4"	81	ST							
A505	-	4	22'-8"	95	ST							
⊗A506	28	32	4'-5"	276	6	1'-6"	3'-0"					
⊗A507	28	32	2'-8"	167	6	8"	2'-1"					
⊗A508	-	4	2'-8"	11	6	1'-0"	1'-9"					
P501	6		34'-6"	216	ST							
P502	62		5'-6"	348	6	2'-7"	3'-1"					
P503	6		9'-2"	57	4	2'-8"	2'-6"					
P601	16		4'-2"	100	6	3'-1"	1'-3"					
P901	6		34'-6"	704	ST							
P902	12		5'-5"	280	6	2'-4"	3'-4"					
P903	10		2'-6"	85	6	1'-7"	1'-3"					
D801	23	23	5'-5"	868	5	3'-1"	1'-0"	1'-0"				
SUB-TOTAL				4194								
AS PER PLAN SUB-TOTAL				454								
APPROACH SLABS												
AS501	48		24'-6"	1227	ST							
AS502	114		34'-3"	4072	ST							
AS1001	120		25'-11"	13,382	1	24'-6"						
SUB-TOTAL				18,681								

MARK	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS						
	TOTAL				A	B	C	D	E	R	INC
		SUPERSTRUCTURE									
S401	294	30'-0"	5892	ST							
S402	49	26'-2"	856	ST							
S403	100	35'-6"	2371	ST							
S404	28	3'-11"	73	ST							
S501	462	30'-0"	14,456	ST							
S502	54	6'-11"	390	ST							
S503	930	38'-8"	37,507	ST							
S504	12	5'-8"	71	ST							
S505	434	7'-5"	3357	8	3'-0"	3'-2"	1'-1"				
S506	8	19'-4"	161	ST							
S507	8	22'-8"	189	ST							
S508	12	7'-0"	88	ST							
S509	12	10'-4"	129	ST							
S510	32	10'-0"	334	ST							
S511	12	5'-6"	69	9	1'-8"	2'-5"	1'-1"				
S512	20	5'-6"	115	ST							
S513	52	8'-6"	461	2	2'-7"	3'-1"					
S514	52	14'-7"	791	3	3'-5"	3'-7"					
S515	20	4'-9"	99	ST							
S516	8	5'-2"	43	ST							
S601	14	30'-0"	631	ST							
S602	2	15'-0"	45	ST							
S603	434	2'-7"	1684	6	1'-1"	1'-8"					
S604	434	3'-6"	2282	7	1'-1"	1'-8"	4"				
S605	40	4'-6"	270	6	1'-0"	3'-7"					
S606	2	7'-0"	21	ST							
S607	2	10'-4"	31	ST							
	8	4'-6"				3'-7"					
S608	SER OF	TO	591	6	1'-0"	TO				1 1/8"	
	10	5'-4"				4'-5"					
S801	20	37'-2"	1985	ST							
S802	8	38'-8"	826	ST							
SUB-TOTAL			75,818								

DESIGN AGENCY
HAMMONTREE & ASSOCIATES, LIMITED
5233 STONEHAM ROAD
NORTH CANTON, OHIO 44120

REVIEWED	DATE
KJO	08-11-10

STRUCTURE FILE NUMBER
7909127

DESIGNED MCC	DRAWN MCC
CHECKED C IP	REVISED

REINFORCING STEEL LIST
TRU-11-1367

TRU-11-13.67
PID No. 76409

23 / 23

94
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