

REFERENCE SHALL BE MADE TO STANDARD DRAWINGS

AS-1-81	DATED	11-27-81	VPF-1-90	DATED	2-1-92
EXJ-4-87	DATED	1-20-94	HL-30.31	DATED	5-1-87
BR-2-82	DATED	11-1-82	SD-1-69	DATED	6-12-69
GR-3.1	DATED	5-6-91	RB-1-55	DATED	2-2-59

DESIGN SPECIFICATIONS: THE REPAIRS TO THE STRUCTURES SHALL CONFORM TO "STANDARD SPECIFICATIONS FOR HIGHWAYS BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 1989 AND THE OHIO "SUPPLEMENT" TO THESE SPECIFICATIONS.

**DESIGN DATA**

- CONCRETE CLASS S - COMPRESSIVE STRENGTH 4500 P.S.I.
- CONCRETE CLASS C - COMPRESSIVE STRENGTH 4000 P.S.I.
- REINFORCING STEEL - ASTM A615, A616 OR A617 - GRADE 60 MIN. YIELD STRENGTH 60,000 P.S.I., EPOXY COATED.
- STRUCTURAL STEEL - ASTM A36 - UNIT STRESS 20,000 P.S.I.

EXISTING STRUCTURE VERIFICATION: THE DETAILS SHOWN IN THESE PLANS ARE BASED ON DIMENSIONS OBTAINED FROM EXISTING DRAWINGS OF THE STRUCTURE AND/OR FIELD OBSERVATIONS. CONSEQUENTLY, THE DIMENSIONS AND DETAILS WITHIN THESE PROPOSED DRAWINGS SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR SHALL REFER TO CMS SECTIONS 102.05, 105.02, AND 513.02.

CONTRACT BID PRICES SHALL BE BASED UPON WORK PROPOSED IN THE ATTACHED DRAWINGS AND A PREBID EXAMINATION OF THE EXISTING STRUCTURE BY THE CONTRACTOR. THE PRICE BID SHALL ALSO REFLECT THE UNCERTAINTIES DESCRIBED ABOVE AS ALL PROJECT WORK WILL BE BASED UPON DETAILS AND DIMENSIONS VERIFIED IN THE FIELD BY THE CONTRACTOR.

EXISTING BRIDGE PLANS: EXISTING BRIDGE PLANS MAY BE INSPECTED AT THE BUREAU OF BRIDGES AND STRUCTURAL DESIGN IN COLUMBUS, OHIO, OR IN THE DISTRICT 8 OFFICE IN LEBANON, OHIO.

EXISTING REINFORCING STEEL: AT LOCATIONS WHERE CONCRETE REMOVAL AND REPLACEMENT IS REQUIRED, THE EXISTING REINFORCING STEEL SHALL REMAIN. THE STEEL SHALL BE BENT AND TRIMMED TO MAINTAIN REQUIRED CLEARANCES. THE CONTRACTOR SHALL EXERCISE CAUTION TO INSURE THAT THOSE EXISTING REINFORCING BARS WHICH ARE TO BE INCORPORATED INTO THE NEW WORK ARE NOT DAMAGED DURING THE CONCRETE REMOVAL OPERATION. ANY REINFORCING BARS DAMAGED AS A RESULT OF THE CONTRACTOR'S OPERATION SHALL BE REPLACED OR REPAIRED BY THE CONTRACTOR AT HIS EXPENSE. EXISTING REINFORCING BARS LABELED UNUSABLE BY THE ENGINEER DUE TO CORROSION SHALL BE REPLACED WITH NEW STEEL. AN ALLOWANCE OF NEW REINFORCING STEEL HAS BEEN INCLUDED WITH THE STEEL QUANTITIES FOR THE REPLACEMENT OF CORRODED STEEL. HOWEVER, AT LOCATIONS WHERE ABUTMENT BACKWALLS ARE BEING REPLACED IT IS THE CONTRACTOR'S OPTION TO REMOVE EXISTING STEEL WITH THE REST OF THE BACKWALL AND DOWEL THE NEW BARS INTO THE WALL AS DETAILED.

UTILITY LINES: EXPENSES REQUIRED TO RELOCATE THOSE UTILITY LINES THAT INTERFERE WITH THE PROJECT SHALL BE BORNE BY THE OWNER(S). THE CONTRACTOR AND OWNER(S) ARE REQUESTED TO COORDINATE WORK SUCH THAT INCONVENIENCES TO EITHER WILL BE MINIMIZED.

ITEM SPECIAL, SEALING OF CONCRETE SURFACE (SEE PROPOSAL NOTE): THIS ITEM INCLUDES ALL WORK REQUIRED TO SEAL THOSE SURFACES SPECIFIED ON THE PLANS. SEE THE PROPOSAL NOTE FOR SURFACE PREPARATION REQUIREMENTS, MATERIAL REQUIREMENTS, APPLICATION RATES, AND APPLICATION PROCEDURES. THE PRICE BID FOR ITEM SPECIAL, SEALING OF CONCRETE SURFACE, OR ITEM SPECIAL, SEALING OF CONCRETE SURFACE (EPOXY), SHALL BE PER SQUARE YARD, AND SHALL INCLUDE ALL LABOR, MATERIALS, AND EQUIPMENT REQUIRED TO COMPLETE THE WORK.

ITEM 518, SCUPPER MODIFICATION: THIS ITEM INCLUDES ALL WORK NECESSARY TO RAISE THE TOP OF EXISTING SCUPPERS OR DRAIN INLETS TO MEET THE MICRO-SILICA MODIFIED CONCRETE OVERLAY. THIS WORK SHALL BE PERFORMED ACCORDING TO DETAIL 'B' FOR SCUPPERS OR DETAIL 'E' FOR DRAIN INLETS AS SHOWN ON GENERAL DETAIL SHEET 273/401. MEASUREMENTS TO DETERMINE DIMENSIONS, QUANTITY, AND SPACING OF THE STEEL BARS USED TO RAISE EACH SCUPPER OR DRAIN INLET SHALL BE MADE IN THE FIELD. THE PRICE BID FOR THIS ITEM SHALL BE PER EACH, AND SHALL INCLUDE ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY TO COMPLETE THIS WORK.

ITEM 517, RAILING FACED, AS PER PLAN: THIS ITEM INCLUDES ALL WORK NECESSARY TO RETROFIT THE EXISTING CURB AND PARAPET ON THE SUPERSTRUCTURES WITH THE BARRIER SHAPE. THE CONTRACTOR SHALL CAREFULLY REMOVE THE EXISTING ALUMINUM RAILING OR GUARDRAIL FROM THE BRIDGE AND DISCARD THEM. THE CONCRETE SAFETY CURB WHICH PROTRUDES ABOVE THE SCARIFIED DECK SHALL BE REMOVED. (COSTS TO REMOVE ITEMS SHALL BE INCLUDED IN ITEM 202, PORTIONS OF STRUCTURE REMOVED, FOR PAYMENT). THE CONTRACTOR SHALL MAINTAIN THE EXISTING CONDUIT SYSTEM WHERE APPLICABLE.

REINFORCING BARS SHALL BE GROUT ANCHORED AS STIPULATED IN SUPPLEMENTAL SPECIFICATIONS 852 AND 952 AT SPACINGS SHOWN ON THE DRAWINGS. THE HOLES SHALL BE THOROUGHLY CLEANED OF ALL DUST AND OTHER DELETERIOUS MATERIAL. SEE THE SUPPLEMENTAL SPECIFICATIONS FOR MATERIAL REQUIREMENTS AND FURTHER APPLICATION REQUIREMENTS. PAYMENT FOR GROUT ANCHORING SHALL BE INCLUDED IN ITEM 517, RAILING FACED, AS PER PLAN.

LOOSE AND UNSOUND CONCRETE IN THE AREA OF THE PARAPET TO BE FACED AND CONCRETE NEAR THE DECK EXTENSIONS SHALL BE REMOVED. ALL REMAINING SOUND CONCRETE TO BE COVERED WITH NEW CONCRETE SHALL BE MECHANICALLY SCARIFIED 1/4" DEEP. THE MINIMUM THICKNESS FOR THE PROPOSED FACING SHALL BE 5". THE CONCRETE SURFACES TO BE FACED SHALL BE THOROUGHLY DRENCHED WITH CLEAN WATER AND ALLOWED TO DRY TO A DAMP CONDITION JUST BEFORE PLACING THE CONCRETE.

ALL NEW REINFORCING STEEL SHALL BE EPOXY COATED AS PER ITEM 509. EPOXY COATED REINFORCING STEEL DAMAGED BY CUTTING, BENDING, ETC., SHALL BE REPAIRED AS PER ITEM 509. CONCRETE COVER OVER ALL RESTEEL SHALL BE 2". MINIMUM LAP REQUIRED FOR A #5 BAR IS 2'-0" AND FOR A #6 BAR IS 2'-6" UNLESS NOTED OTHERWISE. CONCRETE SHALL BE CLASS S AS PER ITEM 511. PAYMENT FOR CLASS S CONCRETE SHALL BE INCLUDED IN ITEM 517, RAILING FACED, AS PER PLAN. THE EXISTING DEFLECTION JOINTS SHALL BE EXTENDED COMPLETELY THROUGH THE PROPOSED FACING. THE JOINT SHALL BE MADE BY FORMING OR SAWCUTTING THE HARDENED CONCRETE THREE (3) DAYS AFTER PLACEMENT. THE 1/4" JOINTS SHALL BE SEALED 3/4" DEEP (MINIMUM) WITH AN IMPREGNATED PRECOMPRESSED EXPANDING FOAM SEALANT TAPE KNOWN AS WILL-SEAL, MANUFACTURED BY ILLBRUCK/USA INC., MINNEAPOLIS, MINNESOTA, OR A CLOSED CELL EXPANDED NEOPRENE KNOWN AS WILLIAMS NEOPRENE, MANUFACTURED BY WILLIAMS PRODUCTS INC., TROY, MICHIGAN.

ALL OF THE ABOVE WORK AND RELEVANT PLAN NOTES SHALL BE INCLUDED IN THE PRICE BID PER LINEAR FOOT FOR ITEM 517, RAILING FACED AS PER PLAN, EXCEPT THE FOLLOWING: CURB REMOVAL, PORTIONS OF DECK AND CONCRETE RAILING REMOVAL, AND REMOVAL OF ALUMINUM RAILING, SHALL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 202, PORTIONS OF STRUCTURE REMOVED, FOR PAYMENT; REINFORCING STEEL COSTS SHALL BE PAID UNDER ITEM 509, EPOXY COATED REINFORCING STEEL, GRADE 60; SEALING OF SUPERSTRUCTURE PARAPETS SHALL BE INCLUDED IN PRICE BID FOR ITEM SPECIAL, SEALING OF CONCRETE SURFACE. (ALL ABUTMENT PARAPET WORK SHALL BE INCLUDED UNDER ITEM 511 CLASS "S" CONCRETE, MISC.: ABUTMENT PARAPETS).

ITEM 511, CLASS "S" CONCRETE, MISC.: ABUTMENT PARAPETS: THIS ITEM SHALL INCLUDE THE COST OF ALL MATERIALS, LABOR, AND EQUIPMENT NECESSARY TO REBUILD THE ABUTMENT PARAPETS AS DETAILED. THE REMOVAL OF ALUMINUM RAILING AND CURB OR PARAPET AS SHOWN ON THE PLANS SHALL BE INCLUDED UNDER ITEM 202, PORTIONS OF STRUCTURE REMOVED. USE ANCHORING SYSTEM SPECIFIED IN ITEM 517, RAILING FACED, AS PER PLAN. (DRILL DOWEL HOLES AND GROUT REINFORCING STEEL AS PER ITEM 517, ETC.) PLACE CLASS S CONCRETE AS PER ITEM 511. INSTALL ANCHOR ASSEMBLIES FOR GUARDRAILS (COST OF ANCHOR ASSEMBLIES TO BE INCLUDED WITH COST OF GUARDRAIL). MAINTAIN EXISTING CONDUIT SYSTEM AND INSTALL CONDUIT EXPANSION JOINT ASSEMBLIES, WHERE APPLICABLE, AS PER HL 30.31. ALSO, OTHER WORK SPECIFIED IN PLANS SHALL BE INCLUDED IN THIS ITEM FOR PAYMENT.

PAYMENT FOR THIS ITEM SHALL BE PER CUBIC YARD, ITEM 511, CLASS "S" CONCRETE, MISC.: ABUTMENT PARAPETS. REMOVAL ITEMS SHALL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 202, PORTIONS OF STRUCTURE REMOVED, FOR PAYMENT. REINFORCING STEEL COSTS SHALL BE PAID UNDER ITEM 509, EPOXY COATED REINFORCING STEEL, GRADE 60. SEALING OF BACKWALL SHALL BE PAID FOR UNDER ITEM SPECIAL, SEALING OF CONCRETE SURFACE (EPOXY). SEALING OF ABUTMENT PARAPETS INCLUDED IN PRICE BID FOR ITEM SPECIAL, SEALING OF CONCRETE SURFACE. (WORK TO REPLACE ABUTMENT BACKWALLS IS INCLUDED IN OTHER ITEMS FOR PAYMENT, SEE PLANS).

ITEM 516, REFURBISH BEARING DEVICE: THIS ITEM SHALL INCLUDE ALL WORK NECESSARY TO: JACK AND TEMPORARILY SUPPORT THE EXISTING BRIDGES (SEE GENERAL JACKING REQUIREMENTS ON THIS SHEET); DISASSEMBLY OF THE EXISTING BEARINGS; HAND CLEANING GRINDING (IF NECESSARY), AND PAINTING AS REQUIRED BY PROPOSAL NOTE "FIELD PAINTING OF EXISTING STEEL, USING EPOXY AND URETHANE (EEU), (†); LUBRICATING SLIDING SURFACES USING FLAKED GRAPHITE; REPLACEMENT OF SAME SIZE AS THE BEARINGS, TO PROVIDE A SNUG FIT; REALIGNMENT OF THE UPPER BEARING PLATE BY REMOVING EXISTING WELDS BY THE AIR-ARC PROCESS AND REWELDING THE PLATE SO THAT THE BEARINGS ARE ALIGNED AT 60 DEGREES FAHRENHEIT; REASSEMBLY OF THE BEARINGS; AND REMOVAL OF THE JACKS. BEARINGS SUBJECT TO THIS TREATMENT ARE LABELED IN THE PLANS. AT THE OPTION OF THE CONTRACTOR AND AT NO ADDITIONAL COST TO THE STATE, NEW BEARINGS OF THE SAME TYPE AS THE EXISTING MAY BE INSTALLED IN PLACE OF THE REFURBISHED BEARINGS. ALL WORK SHALL BE TO THE SATISFACTION OF THE PROJECT ENGINEER. THE CONTRACTOR SHALL SUBMIT HIS METHOD FOR JACKING AND SUPPORTING THE BRIDGE FOR PRIOR APPROVAL. PAYMENT FOR THE LABOR AND MATERIALS DESCRIBED ABOVE SHALL BE MADE AT THE CONTRACT PRICE BID PER EACH, ITEM 516, REFURBISH BEARING DEVICE.

GENERAL JACKING REQUIREMENTS: THE FOLLOWING ARE REQUIREMENTS FOR JACKING EXISTING STRUCTURES WHICH APPLY TO ITEM 516, REFURBISH BEARING DEVICE, DETAILED PLANS OF THE JACKING PROCEDURES, INCLUDING METHODS OF PREVENTING HORIZONTAL MOVEMENT WHERE APPLICABLE, SHALL BE PREPARED BY A PROFESSIONAL ENGINEER AND SHALL BEAR THE ENGINEER'S SIGNATURE AND SEAL. THE CONTRACTOR SHALL SUBMIT THREE (3) COPIES OF THE PLANS AND TWO (2) COPIES OF DESIGN CALCULATIONS TO THE DIRECTOR FIFTEEN (15) DAYS PRIOR TO JACKING OPERATIONS. APPROVAL SHALL BE RECEIVED BEFORE JACKING OPERATIONS ARE STARTED.

ATTACHMENTS MADE BY WELDING TO ANY MAIN STRUCTURAL MEMBER SHALL BE APPROVED BY THE DIRECTOR BEFORE ATTACHMENTS ARE MADE. DETAILS OF THE ATTACHMENTS SHALL BE SUBMITTED FOR APPROVAL AS PART OF THE JACKING PROCEDURE PLANS OR INDEPENDENTLY BY A SIMILAR SUBMISSION.

JACKS ARE REQUIRED TO HAVE A CAPACITY TO SAFELY SUPPORT EACH ABUTMENT AND PIER SUPPORT. MINIMUM JACK CAPACITY IS LISTED ON THE GENERAL PLAN SHEET FOR EACH BRIDGE. JACKING AND/OR TEMPORARY SUPPORTS SHALL BE LIMITED TO ONE (1) SUBSTRUCTURE UNIT AT ANY GIVEN TIME AND ALL BEAMS AT A GIVEN SUBSTRUCTURE UNIT SHALL BE RAISED SIMULTANEOUSLY. THE ABOVE JACKING PROCEDURE MAY BE WAIVED IF THE ENTIRE SUPERSTRUCTURE IS RAISED UNIFORMLY AND SIMULTANEOUSLY. IN SUCH A CASE, FIXED BEARINGS SHALL BE DISASSEMBLED AND REASSEMBLED UNDER THE DIRECTION OF THE ENGINEER. SEPARATE PAYMENT WILL NOT BE MADE FOR WORK PERFORMED ON THE FIXED BEARINGS.

APPROVAL OF THE JACKING PLANS SHALL NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR THE BEHAVIOR OF THE JACKING PROCEDURES PROPOSED. IT SHALL BE UNDERSTOOD THAT ALL JACKING OPERATIONS ARE TO BE DIRECTED BY A REGISTERED PROFESSIONAL ENGINEER. ALL JACKING OPERATIONS OF A PARTICULAR BRIDGE MUST BE COMPLETED BEFORE THE MICRO-SILICA MODIFIED CONCRETE OVERLAY IS PLACED ON SAID BRIDGE.

SEE ADDITIONAL GENERAL JACKING REQUIREMENTS ON SHEET 272A.

ITEM 516, PREFORMED ELASTOMERIC COMPRESSION JOINT SEAL (705.11): THIS ITEM SHALL INCLUDE ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY TO COMPLETE THE JOINT IN PLACE INCLUDING THE SAWED JOINT. MEASUREMENT FOR PAY PURPOSES SHALL BE BASED ON THE SEALED LENGTH OF JOINTS MEASURED HORIZONTALLY ALONG THE JOINT CENTERLINES AND SHALL BE PER LINEAR FOOT.

ITEM 518, STRUCTURE DRAINAGE, MISC.: MODIFY DRAINAGE PIPING: THE EXISTING DRAINAGE PIPING SHOWN WAS OBTAINED FROM CONSTRUCTION PLANS AND FIELD INVESTIGATIONS. THE INTENT OF THE PROPOSED DRAINAGE MODIFICATIONS IS TO IMPROVE THE FLOW CHARACTERISTICS OF THE EXISTING DRAINAGE SYSTEM. THIS IS PRIMARILY ACHIEVED BY REPLACING 90 DEGREE ELBOWS AND CLEANOUTS WITH OBTUSE ELBOWS THUS INCREASING THE SLOPE OF THE DRAINAGE PIPING. PROPOSED DRAINAGE MODIFICATIONS MAY BE VARIED, AS REQUIRED, TO MEET EXISTING CONDITIONS. CONTRACTOR SHALL NOT CLIP ANY PART OF THE STEEL BEAMS OR GIRDERS IN THE MODIFICATION OF PIPING. REALIGNMENT OF PIPING TO CLEAR BEAMS OR GIRDERS SHALL BE ACHIEVED USING ELBOWS AS INDICATED ON THE DRAINAGE MODIFICATION PLANS. NEW HANGERS SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR TO ACHIEVE THE MAXIMUM SLOPE INCREASE THAT EXISTING CROSS BRACING WILL PERMIT. DRAINAGE PIPING SHALL BE GALVANIZED STEEL, 707.08, AND OF THE SAME SIZE AS THE PIPE BEING REPLACED. THE PIPE SHALL BE SECURELY FASTENED WITH HANGER AND/OR CLAMP ASSEMBLIES TO THE STRUCTURE. CONTRACTOR SHALL UTILIZE EXISTING SUPPORTS WHERE POSSIBLE. THE NUMBER OF PIPE SUPPORTS SHALL NOT BE LESS THAN USED IN THE EXISTING SYSTEM UNLESS APPROVED BY THE ENGINEER. FIELD WELDING TO THE EXISTING GIRDERS OR STEEL BEAMS WILL NOT BE PERMITTED WITHOUT THE PRIOR WRITTEN APPROVAL OF THE ENGINEER. CONNECTIONS TO STRUCTURAL CONCRETE SHALL BE MADE USING 5/8" DIAMETER THREADED RODS WITH NON-SHRINK EPOXY MORTAR PER SUPPLEMENTAL SPECIFICATION 852 AND 952 OR SELF DRILLING ANCHORS ITEM 712.01. PROVIDE A MINIMUM OF 8" EMBEDMENT FOR ANCHORS. PRIOR TO DRILLING FOR ANCHOR DOWEL HOLES, CONTRACTOR SHALL VERIFY THE REINFORCING BAR LOCATIONS TO AVOID THEIR DAMAGE. ANCHORS SHALL BE LOCATED A MINIMUM OF 6" FROM THE EDGES OF CONCRETE MEMBERS.

PROPOSED DRAINAGE PIPING AND SUPPORTS SHALL BE CLEANED AND PAINTED AS PER PROPOSAL NOTE "FIELD PAINTING OF EXISTING STEEL, USING EPOXY AND URETHANE (EEU)." GALVANIZED SURFACES SHALL BE TREATED PRIOR TO PAINTING AS RECOMMENDED BY THE PAINT MANUFACTURER. COLOR OF PAINT TO MATCH EXISTING.

PAYMENT SHALL BE MADE AT THE LUMP SUM PRICE FOR ITEM 518, STRUCTURE DRAINAGE, MISC.: MODIFY DRAINAGE PIPING. PRICE BID SHALL INCLUDE ALL LABOR, MATERIALS, AND OTHER COSTS REQUIRED, TO REMOVE AND DISPOSE OF EXISTING PIPE, MODIFY EXISTING PIPING AS SPECIFIED ABOVE AND DETAILED ON PLANS, AND DOING OTHER WORK INCIDENTAL THERETO.

ITEM SPECIAL, WATERPROOFING, MISC.: SEALING OF ASPHALT WEARING SURFACE: THIS ITEM INCLUDES ALL WORK REQUIRED TO SEAL THE EXISTING ASPHALT WEARING SURFACE ON THE SUPERSTRUCTURE. SEE FEDERAL SPECIFICATION R-P-355E, FOR MATERIAL INFORMATION. THE CONTRACTOR SHALL APPLY THREE APPLICATIONS OF SLURRY MADE WITH 5 TO 6 POUNDS OF CLEAN AND DRY SILICA SAND PER GALLON OF UNDLUTED COAL TAR PITCH. THE SILICA SAND SHALL HAVE AN AMERICAN FOUNDRY SOCIETY-GRAIN FINENESS RATING OF 50 TO 75 WITH THE FOLLOWING SIEVE ANALYSIS:

SIEVE	TOTAL PERCENT PASSING
No. 30	98 MIN.
No. 140	12 MAX.
No. 200	3 MAX.

SURFACE PREPARATION, APPLICATION RATES AND METHODS SHALL BE AS RECOMMENDED BY THE MANUFACTURER. THE PRICE BID FOR ITEM SPECIAL, WATERPROOFING, MISC.: SEALING ASPHALT WEARING SURFACE, SHALL BE PER SQUARE YARD, AND SHALL INCLUDE COSTS FOR ALL LABOR, MATERIALS AND EQUIPMENT REQUIRED TO COMPLETE THE WORK.

ITEM SPECIAL, EPOXY INJECTION (SEE PROPOSAL NOTE): THIS ITEM INCLUDES ALL WORK REQUIRED TO REPAIR CRACKS IN THE CONCRETE STRUCTURE. SEE THE PROPOSAL NOTE ENTITLED "CONCRETE REPAIR BY EPOXY INJECTION", FOR PROCEDURES AND MATERIAL INFORMATION. THE PRICE BID FOR ITEM SPECIAL, EPOXY INJECTION, SHALL BE PER LINEAL FOOT, AND SHALL INCLUDE COSTS FOR ALL LABOR, MATERIALS, AND EQUIPMENT REQUIRED TO COMPLETE THE WORK.

CUT LINE JOINT PREPARATION: SAW CUT BOUNDARIES OF PROPOSED CONCRETE REMOVALS 1" DEEP. REMOVE CONCRETE TO A ROUGH SURFACE. WHERE PRACTICABLE, AT LEAST 2'-0" LENGTH OF PROTRUDING REINFORCING STEEL SHALL BE LEFT IN PLACE. INSTALL DOWEL BARS AS SPECIFIED. PRIOR TO CONCRETE PLACEMENT, ABRASIVELY CLEAN JOINT SURFACE AND EXPOSED REINFORCEMENT TO REMOVE LOOSE AND DISINTEGRATED CONCRETE AND LOOSE RUST. THEN, THE JOINT SURFACE AND EXPOSED REINFORCEMENT SHALL BE THOROUGHLY CLEANED OF ALL DIRT, DUST, OR OTHER FOREIGN MATERIAL BY THE USE OF WATER, AIR UNDER PRESSURE, OR OTHER METHODS THAT PRODUCE SATISFACTORY RESULTS. CONCRETE BONDING SURFACES SHALL BE WET WITHOUT FREE WATER AS CONCRETE IS PLACED.

SUPERSTRUCTURE CONCRETE REMOVAL: CONCRETE REMOVAL SHALL BE 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, A HAMMER HEAVIER THAN 35 POUNDS, BUT NOT TO EXCEED 85 POUNDS, MAY BE USED AT THE APPROVAL OF THE ENGINEER. PNEUMATIC HAMMERS SHALL NOT BE PLACED IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE.

MICRO-SILICA MODIFIED CONCRETE OVERLAY: WHERE SOC IS SPECIFIED ON THESE DRAWINGS, IT IS INTENDED TO BE MICRO-SILICA MODIFIED CONCRETE.

DOWEL HOLES AS PER PLAN FOR CLASS C CONCRETE, ABUTMENT RECONSTRUCTION SHALL BE GROUT ANCHORED WITH EPOXY

SEALING OF CONCRETE SURFACES(PARAPETS). SEALING SHALL MEET THE REQUIREMENTS OF THE PROPOSAL NOTE EXCEPT THE COLOR SHALL BE WHITE.

† EXCEPT BRIDGES NUMBERED, HAM-71-0986, -0987, HAM-71-1063L, HAM-71-1063R, WHICH SHALL BE PAINTED WITH OZEU WITH THE REST OF THE BRIDGE.

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**GENERAL NOTES**

BRIDGE NO. \_\_\_\_\_

HAMILTON COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
L.A.T.M.	D.E.E.		M.A.A.	D.E.M.	11/94	

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# BRIDGE GENERAL NOTES

### ITEM 516 - REFURBISH BEARING DEVICE, AS PER PLAN

THIS WORK SHALL INCLUDE ALL WORK NECESSARY TO: JACK AND TEMPORARILY SUPPORT THE EXISTING BRIDGE (SEE GENERAL JACKING REQUIREMENTS ON SHEET 272); DISASSEMBLY AND REMOVAL OF THE EXISTING BEARING; AND REPLACEMENT WITH NEW BEARING OF THE SAME SIZE AND TYPE AS THE EXISTING. THE CONTRACTOR SHALL VERIFY THE SIZE AND TYPE OF EXISTING BEARINGS PRIOR TO ORDERING MATERIALS FOR THE NEW BEARINGS. REFERENCE SHALL BE MADE TO STANDARD DRAWING RB-1-55 (2-2-59) AND TO THE DRAWINGS "SLOTTED-SHIM PLATE FOR SLIDING PLATE BEARINGS" AND "SHIM PLATE FOR ROCKER TYPE BEARINGS".

\* THIS ITEM SHALL INCLUDE FURNISHING AND INSTALLING ALL SHIMS REQUIRED TO ACHIEVE PROPER BEARING AND PLACEMENT AS REQUIRED BY THE ENGINEER; REMOVAL OF THE UPPER BEARING PLATE BY REMOVING EXISTING WELDS BY AIR-ARC PROCESS AND REALIGNMENT AND REWELDING OF THE PLATE SO THAT THE BEARING IS ALIGNED AT 60 DEG. F; LUBRICATING SLIDING SURFACES USING FLAKED GRAPHITE; REASSEMBLING OF THE BEARING; REMOVAL OF JACKS; AND REALIGNMENT OF EXISTING CROSS-MEMBERS AS DIRECTED BY THE ENGINEER. PAYMENT SHALL INCLUDE ALL LABOR, EQUIPMENT AND MATERIAL NEEDED TO COMPLETE ALL WORK AS DESCRIBED ABOVE, AND WILL BE MADE AT THE CONTRACT BID UNIT PRICE PER EACH, ITEM 516, REFURBISH BEARING DEVICE, AS PER PLAN.

\*THE NEW BEARINGS SHALL BE SHOP PAINTED WITH COMPLETE SYSTEM OZEU PAINTING, MATCHING THE COLOR OF THE EXISTING BRIDGE.

### ADDITIONAL GENERAL JACKING REQUIREMENTS

BEFORE JACKING BEGINS, THE ENGINEER SHALL INSPECT ALL BEAM SEAT AREAS TO CHECK THE SOUNDNESS OF THE EXISTING CONCRETE. ALL AREAS FOUND TO BE UNSOUND SHALL BE REPAIRED BY THE CONTRACTOR; THESE AREAS WILL BE MEASURED AND PAID FOR UNDER ITEM 519 PATCHING CONCRETE STRUCTURES. SUBSEQUENT TO THE JACKING OPERATION, ANY EXISTING OR REPAIRED BEAM SEAT AREAS FOUND TO BE DAMAGED BY THE CONTRACTOR'S JACKING OPERATION SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE PROJECT.

### ITEM 518 - STRUCTURE DRAINAGE, MISC.: SCUPPER AND DRAINAGE PIPE CLEANOUT

THIS WORK SHALL CONSIST OF REMOVING SEDIMENT AND DEBRIS FROM THE EXISTING SCUPPERS AND STRUCTURE DRAINAGE PIPES, AT LOCATIONS DESIGNATED BY THE ENGINEER, TO PROVIDE POSITIVE DRAINAGE FLOW THROUGH THE STRUCTURE DRAINAGE SYSTEM. ALL MATERIAL REMOVED FROM THE SCUPPERS AND PIPES SHALL BE DISPOSED OF AS PER 203.05. THE STRUCTURE DRAINAGE SYSTEM FOR EACH STRUCTURE SHALL BE CLEANED OUT TO THE SATISFACTION OF THE ENGINEER. PAYMENT FOR THIS ITEM SHALL INCLUDE ALL LABOR, EQUIPMENT, AND MATERIAL NEEDED TO COMPLETE THE WORK, AND WILL BE MADE AT THE LUMP SUM PRICE BID FOR EACH BRIDGE.

### ITEM 202 - WEARING COURSE REMOVED (ASPHALT), AS PER PLAN

THE ASPHALT WEARING COURSE REMOVAL SHALL BE A SEPARATE AND INDEPENDENT OPERATION FROM THE 1/4" DECK SCARIFICATION FOR THE MICRO-SILICA MODIFIED CONCRETE OVERLAY. ALL ASPHALT SHALL BE REMOVED FROM THE SURFACE OF THE BRIDGE DECK PRIOR TO SCARIFICATION. EXISTING RAISED PAVEMENT MARKERS SHALL BE REMOVED FOR STORAGE AND WILL BE INCLUDED FOR PAYMENT UNDER THE ROADWAY ITEM 202 RAISED PAVEMENT MARKERS REMOVED FOR STORAGE.

### ITEM 514 - FIELD PAINTING, MISC.: FIELD PAINTING EXISTING STEEL (EEU)

THIS ITEM SHALL INCLUDE ALL WORK TO PREPARE AND FIELD PAINT IN PLACE ALL STRUCTURAL STEEL WITHIN 6' ON EITHER SIDE OF AN EXPANSION JOINT, IN ACCORDANCE WITH THE PROPOSAL NOTE "FIELD PAINTING OF EXISTING STEEL USING EPOXY AND URETHANE (EEU)". THIS WORK SHALL INCLUDE PAINTING OF THE STEEL BEAMS, CROSS-FRAMES, EXISTING AND/OR REFURBISHED EXPANSION JOINTS, AND OTHER MISCELLANEOUS STEEL AS DIRECTED BY THE ENGINEER. THE COLOR OF THE NEW PAINT SHALL MATCH THE COLOR OF THE EXISTING BRIDGE. PAYMENT WILL BE MADE AT THE LUMP SUM BID PRICE FOR EACH BRIDGE AND SHALL INCLUDE ALL LABOR, EQUIPMENT, AND MATERIAL NEEDED TO COMPLETE THE WORK TO THE SATISFACTION OF THE ENGINEER.

### ITEM 516 - STRUCTURAL JOINT OR JOINT SEALER, MISC.: SEAL JOINT BETWEEN ABUTMENT AND CONCRETE SLOPE PROTECTION

THIS ITEM OF WORK PROVIDES FOR THE CLEANING OUT AND RESEALING OF THE EXISTING JOINTS BETWEEN THE BRIDGE ABUTMENT AND CONCRETE SLOPE PROTECTION. THE JOINTS SHALL BE CLEANED OF ALL DEBRIS AND VEGETATION. THE JOINT SHALL THEN BE FILLED WITH HOT-APPLIED CRACK AND JOINT SEALER AS PER 705.04. A FOAM BACKER ROD MAY BE PLACED PRIOR TO PLACEMENT OF THE JOINT SEALER. PAYMENT SHALL INCLUDE ALL LABOR, EQUIPMENT, AND MATERIAL NEEDED TO COMPLETE THE WORK TO THE SATISFACTION OF THE ENGINEER.

### ITEM 601 - SLOPE PROTECTION, MISC.: REPAIR CONCRETE SLOPE PROTECTION

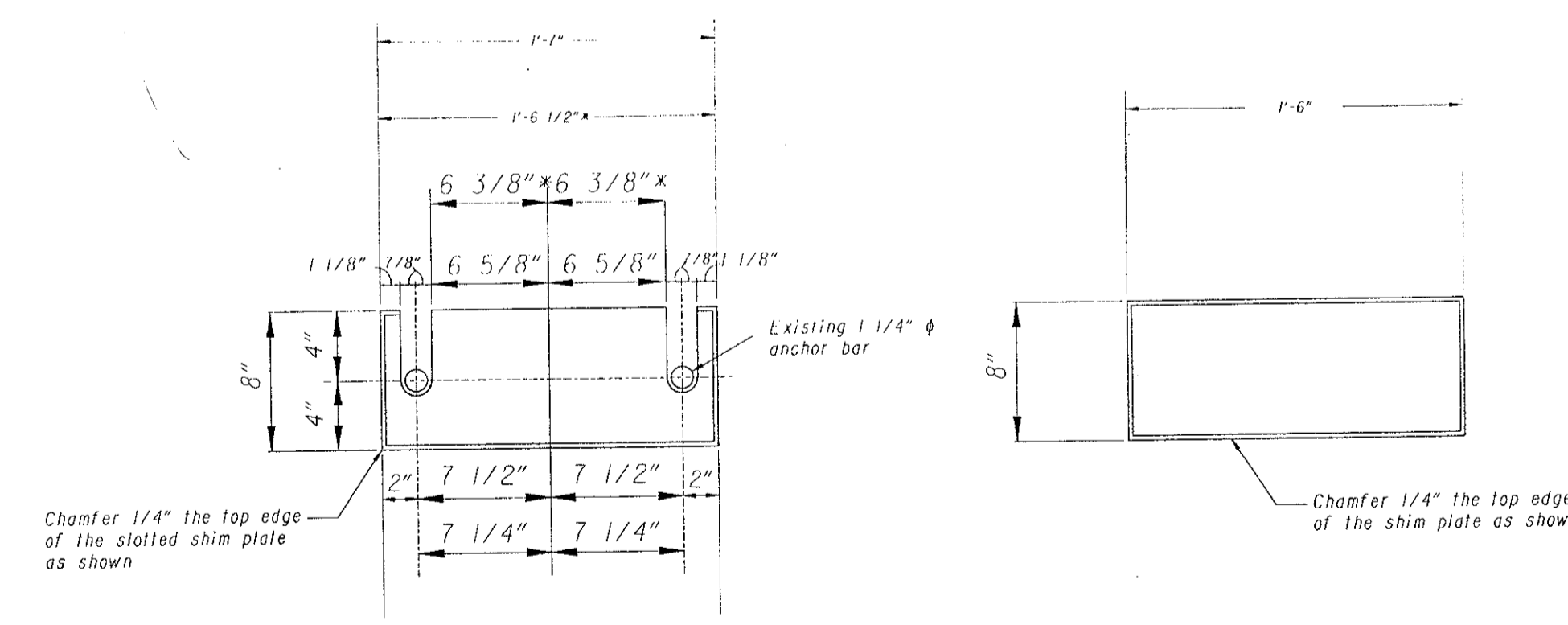
THIS ITEM PROVIDES FOR THE REPAIR OF THE EXISTING CONCRETE SLOPE PROTECTION IN AREAS WHERE THE EXISTING CONCRETE HAS BEEN WASHED OUT OR UNDERMINED. THE EXISTING CONCRETE SHALL BE REMOVED AS DIRECTED BY THE ENGINEER. THE VOID UNDERNEATH FILLED WITH GRANULAR BASE MATERIAL, AND THE CONCRETE REPLACED WITH CLASS C CONCRETE. ALL WORK SHALL CONFORM TO ITEM 601. LOCATIONS WHERE THIS WORK IS TO BE PERFORMED SHALL BE DETERMINED BY THE ENGINEER. PAYMENT SHALL INCLUDE ALL LABOR, EQUIPMENT, AND MATERIAL NEEDED TO COMPLETE THE WORK, AND SHALL BE MADE AT THE BID UNIT PRICE PER SQUARE YARD.

### ITEM 516 - STRUCTURAL JOINT OR JOINT SEALER, MISC.: 2"X4" SEALER, AS PER PLAN

IN ADDITION TO LOCATIONS SHOWN ON THE PLANS, THIS ITEM SHALL BE USED AT OTHER LOCATIONS AS DIRECTED BY THE ENGINEER TO SEAL THE EXISTING VERTICAL JOINT BETWEEN THE ABUTMENT AND WINGWALL. THE SEALS SHALL BE FURNISHED AND THE WORK PERFORMED AS PER THE DETAILS SHOWN ON SHEET 277 OF THE PLANS. THIS ITEM SHALL ALSO INCLUDE ANY TRIMMING OF THE EXISTING CONCRETE NEEDED IN ORDER TO PROPERLY SEAL THE JOINT.

ITEM 516 - REFURBISH BEARING DEVICE, AS PER PLAN		
BEAM DESIGNATIONS LEFT TO RIGHT FACING UP STATION		QUANTITY
HAM-71-0154	FORWARD ABUT., BEAMS 4,5,6,7	4
HAM-22-0145	REAR ABUT., BEAM 6	1
HAM-42-0264 R	FORWARD ABUT., BEAMS 1,2,3,4,5	5
HAM-71-0243 L	REAR ABUT., BEAMS 1,2,3,4,5,6	6
HAM-71-0243 R	REAR ABUT., BEAMS 5,6,7,8,11,12 PIER 4 REAR, BEAM 7 PIER 4 FORWARD, BEAMS 4,5,6,7,8,9,10,11	15
HAM-71-1063 R	FORWARD ABUT., BEAM 11	1
TOTAL:		32 EACH

TOTAL CARRIED TO GENERAL SUMMARY



Cast of providing shim plates and welding to be included with Item 516 Refurbish Bearing Devices, As Per Plan, for payment.

**SLOTTED SHIM PLATE**  
 (For Sliding Plate Bearings)

- Notes:
1. Weld the slotted shim plate to the existing bearing base plate with 1/4" fillet weld where chamfered.
  2. Shim plates shall not exceed 3/4" in thickness.
    - \* Shim plate dimensions for Bridge No. WAR-75-100P only.
  3. For placement or replacement of anchor bars see Anchor Bar Detail below this sheet.

Cast of providing shim plates and welding to be included with Item 516 Refurbish Bearing Devices, As Per Plan, for payment.

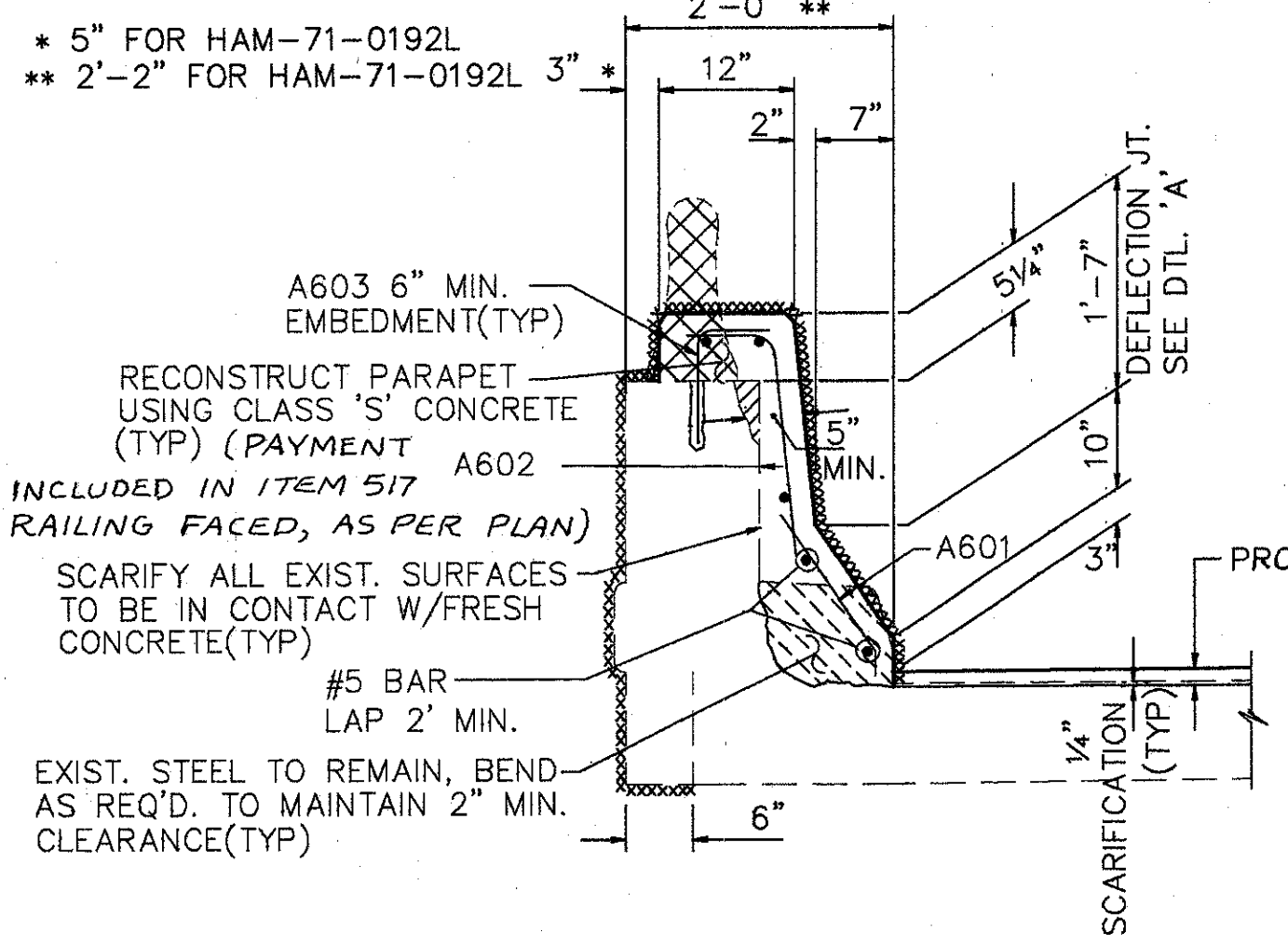
**SHIM PLATE**  
 (For Rocker Type Bearings)

- Notes:
1. Weld the slotted shim plate to the existing bearing base plate with 1/4" fillet weld where chamfered.

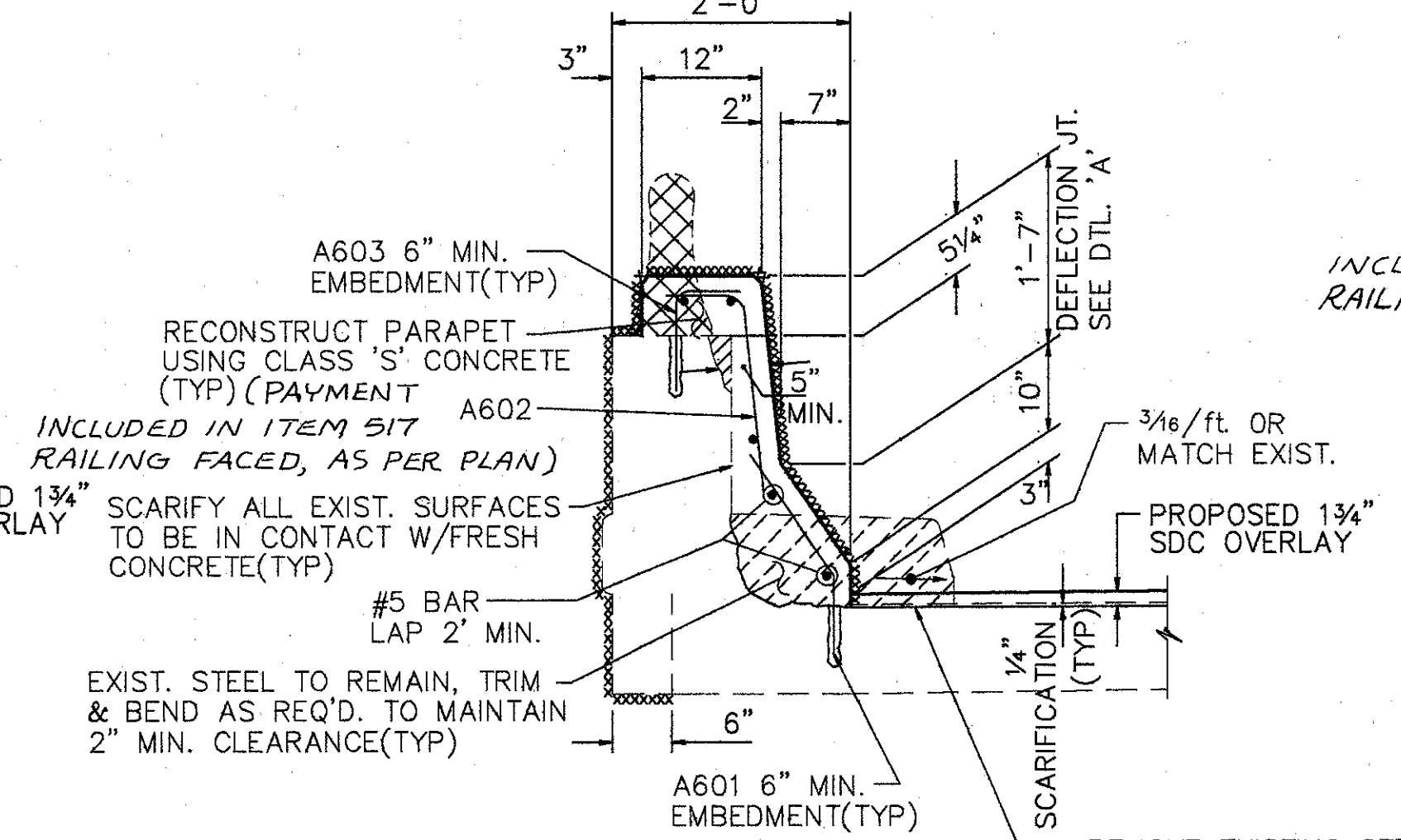




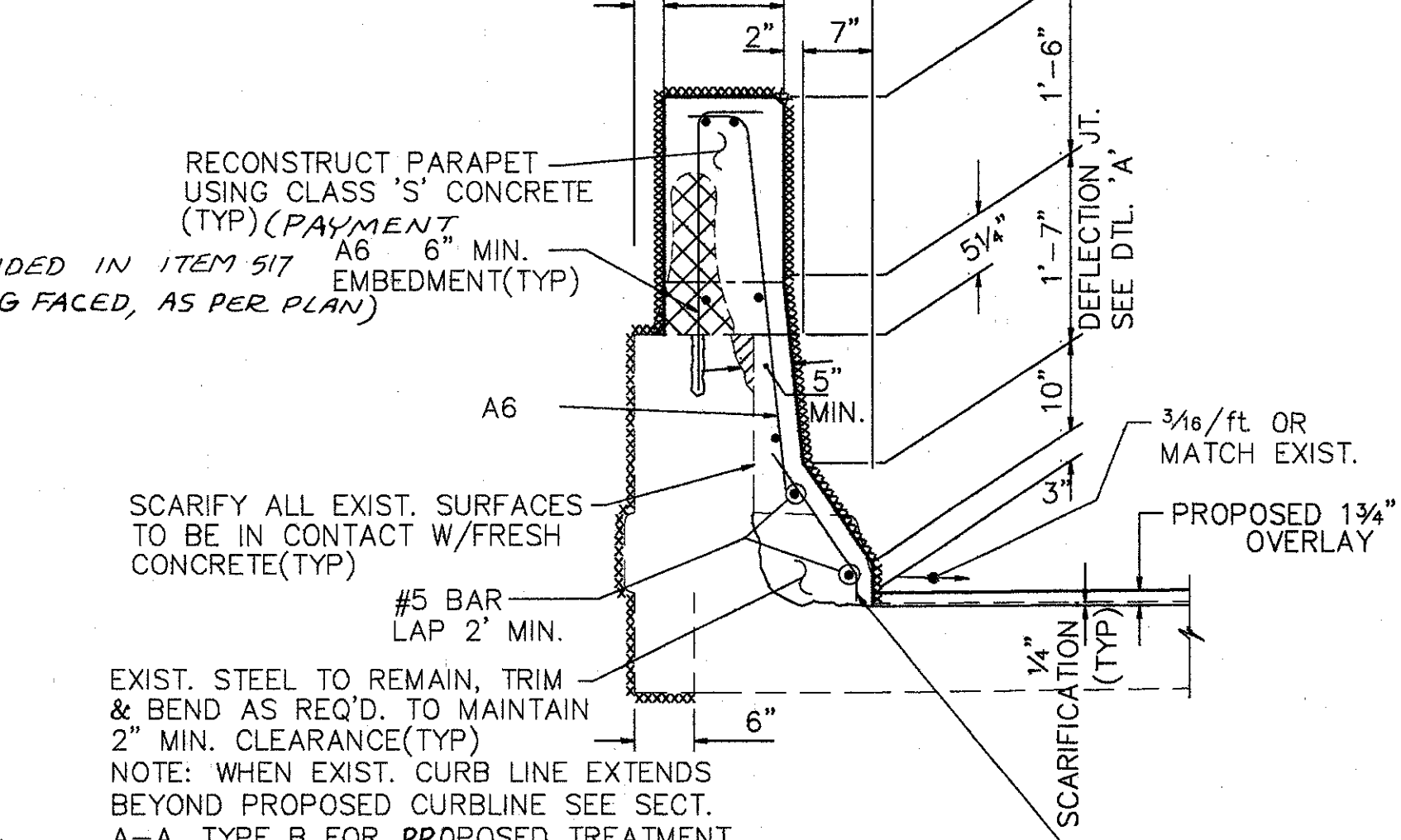




SECTION A-A TYPE A  
RAILING FACED AS PER PLAN (517)

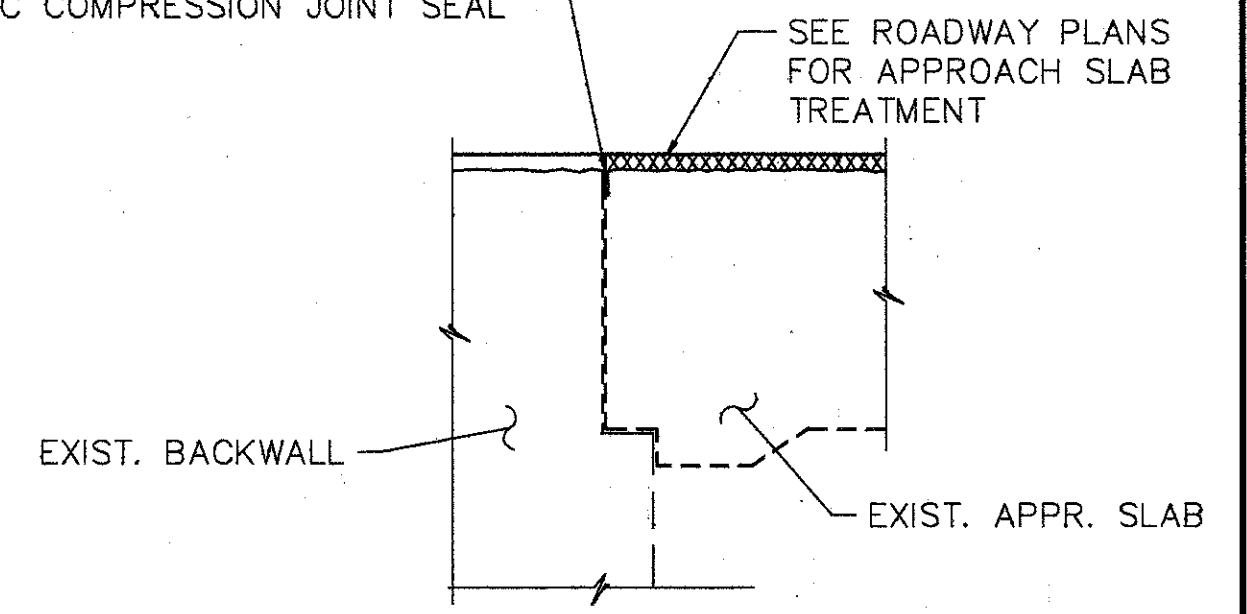


SECTION A-A TYPE B



SECTION A-A TYPE C

PREFORMED ELASTOMERIC JOINT SEALER - 705.11 (1 1/4" FOR 1/2" JT) PLACED IN 1/2" x 2 1/2" SAWED GROOVE. PAYMENT TO BE BY ITEM 516, PREFORMED ELASTOMERIC COMPRESSION JOINT SEAL (705.11)

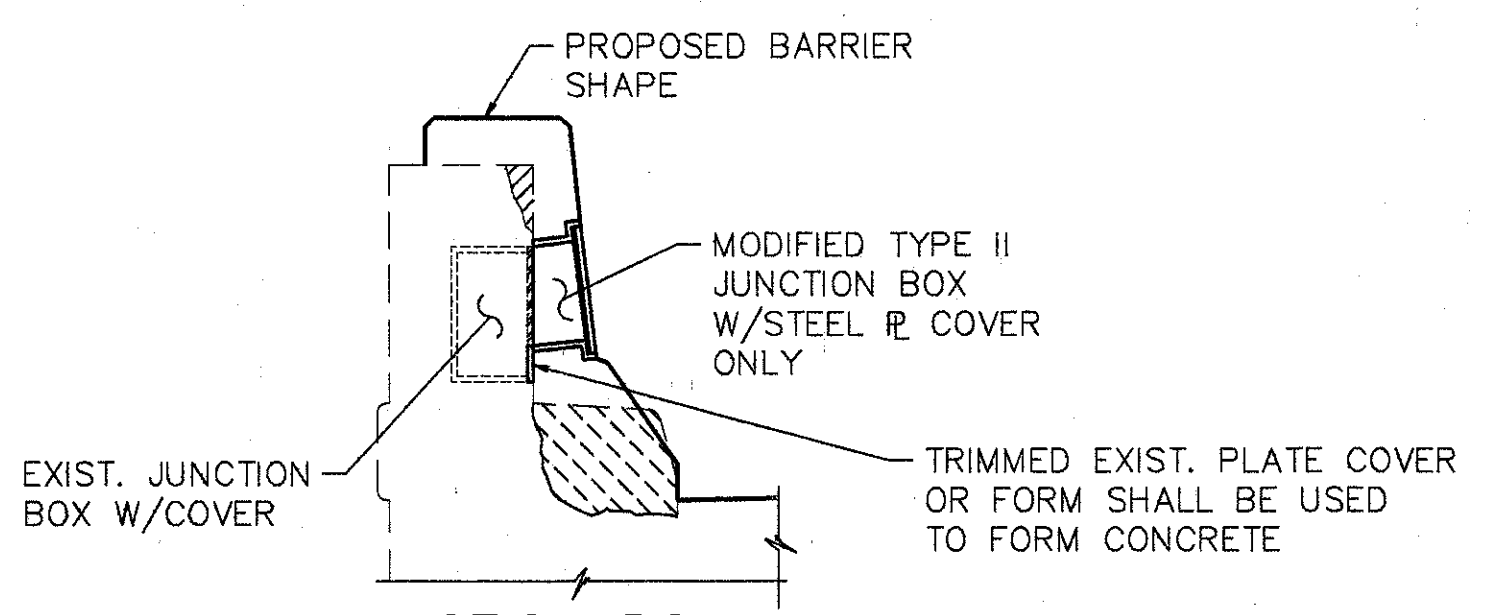


BACKWALL JOINT DETAIL

- XXXX SURFACES TO BE SEALED UNDER ITEM SPECIAL, SEALING OF CONCRETE SURFACE.
- EXISTING CURB TO BE REMOVED UNDER ITEM 202, PORTIONS OF STRUCTURE REMOVED.
- EXIST. RAILING & POSTS TO BE REMOVED & DISCARDED. ALL WORK SHALL BE INCLUDED IN THE PRICE BID FOR ITEM 202, PORTIONS OF STRUCTURE REMOVED.

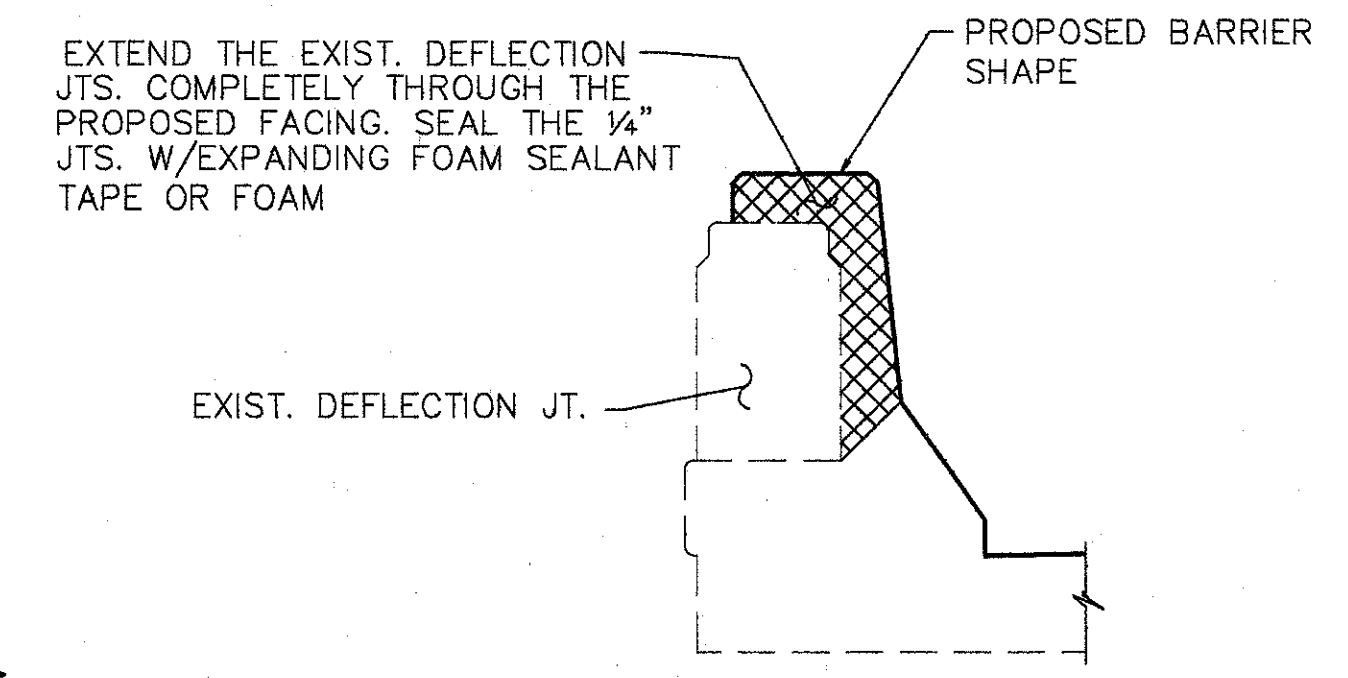
NOTES

1. INSTALL DEFLECTION JOINTS AS PER DETAIL A THIS SHEET AND GENERAL NOTE FOR ITEM 517. SPACING SHALL COINCIDE WITH EXISTING DEFLECTION JOINT LOCATIONS
2. ALL REINFORCING STEEL SHALL BE EPOXY COATED AND PAID FOR UNDER ITEM 509, EPOXY COATED REINFORCING STEEL, GRADE 60. ALL REBARS SHALL HAVE A MINIMUM OF 2" CLEARANCE.
3. REMOVE END DAMS ON CURBS TO RECEIVE NEW BARRIER SHAPE AND STRIP SEALS. INCLUDE WITH LUMP SUM BID FOR ITEM 202, PORTIONS OF STRUCTURE REMOVED.

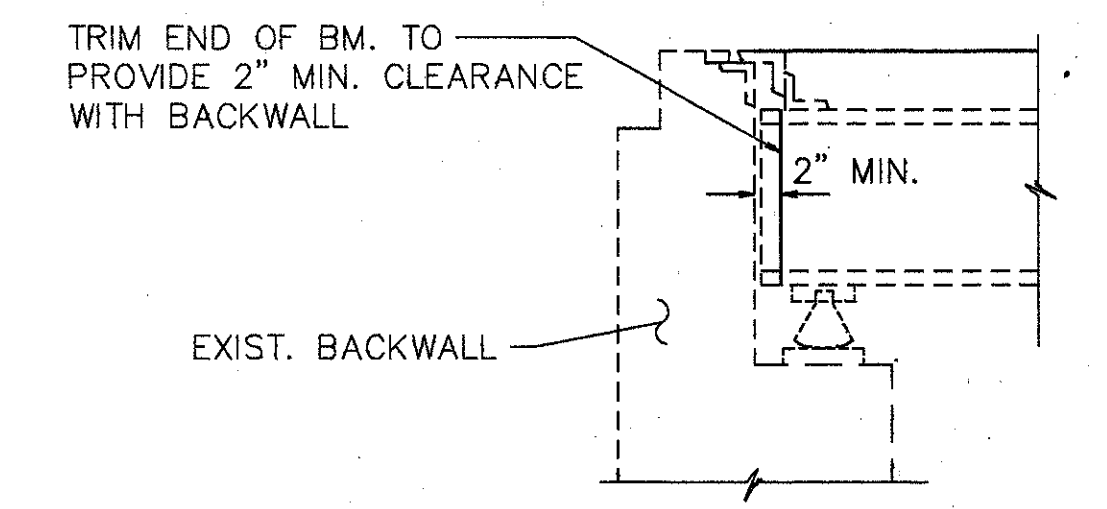


JUNCTION BOX EXTENSION DETAIL

THE PROPOSED JUNCTION BOX SHALL BE MADE FROM A TYPE II JUNCTION BOX. BY REMOVING THE FACE OPPOSITE OF THE OPENING & PORTIONS OF THE WALLS, THE EXIST. JUNCTION BOX CAN BE ACCESSED THROUGH A NEW OPENING ON THE PROPOSED BARRIER SHAPE'S FACE. THE EXTENSION SHALL BE ATTACHED TO THE FORMWORK FOR PLACEMENT. REFER TO LIGHTING PLANS FOR FURTHER DETAILS, TYPE AND LOCATION.

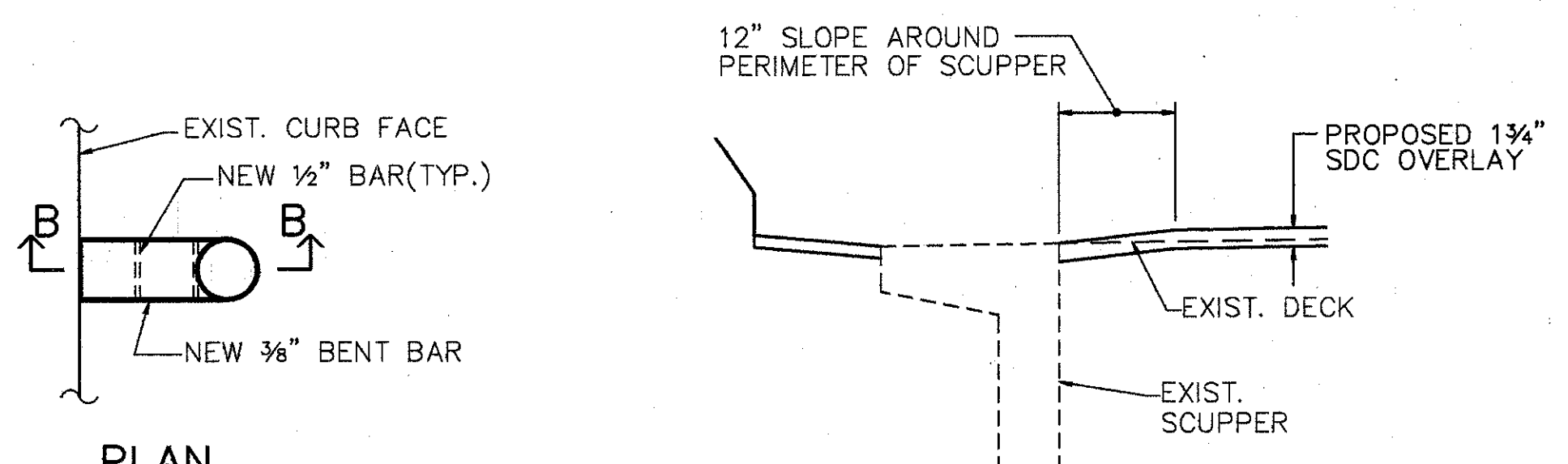


DETAIL A



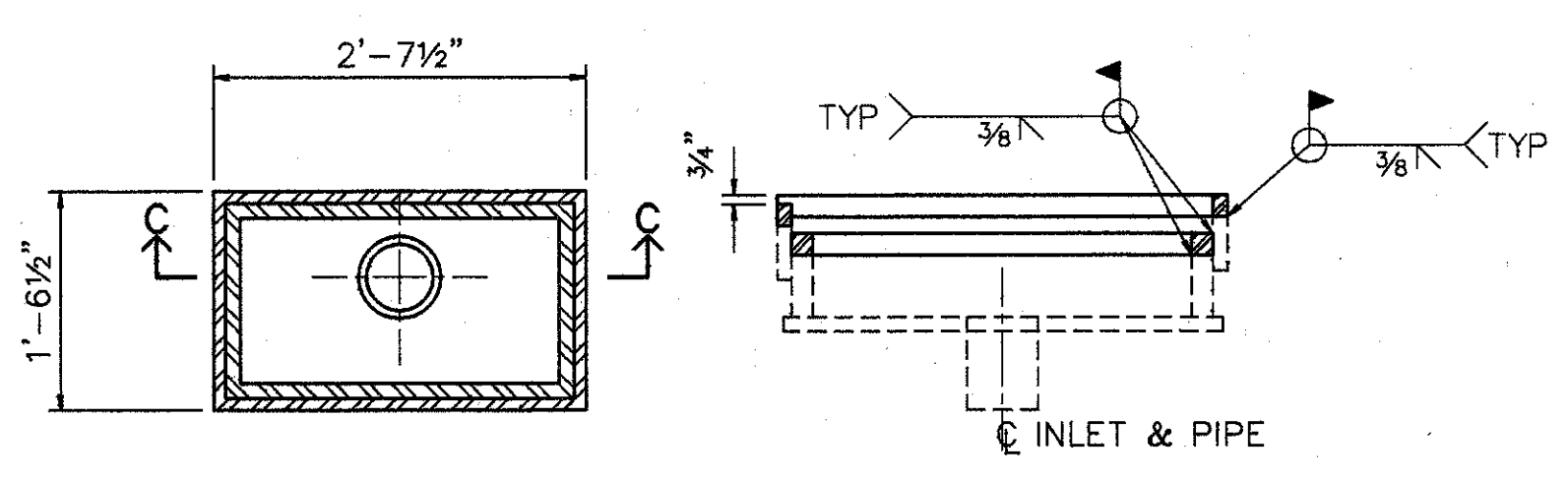
BEAM TRIMMING DETAIL

NOTE: TRIMMED EDGE SHALL HAVE A SMOOTH SURFACE FREE FROM CRACKS, NOTCHES, & BURRS. AREA DISTURBED BY THE TRIMMING OPERATION SHALL BE CLEANED & PAINTED AS PER PROPOSAL NOTE "FIELD PAINTING OF EXISTING STEEL, USING EPOXY AND URETHANE (EPU)." COST OF ALL WORK SHALL BE INCLUDED IN THE PRICE BID PER EACH, ITEM 513, TRIMMING OF BEAM END. THIS WORK SHALL ALSO INCLUDE ANY ADJUSTING OR RELOCATING OF EXISTING CROSS-FRAMING AS NEEDED TO CLEAR THE END OF THE TRIMMED BEAM.



PLAN

DETAIL C

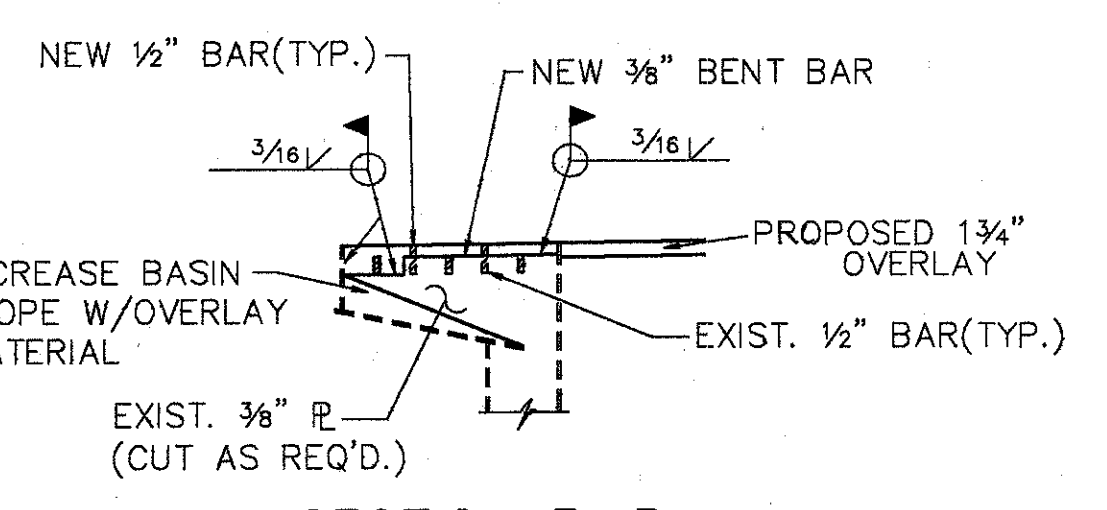


SECTION C-C

DETAIL E

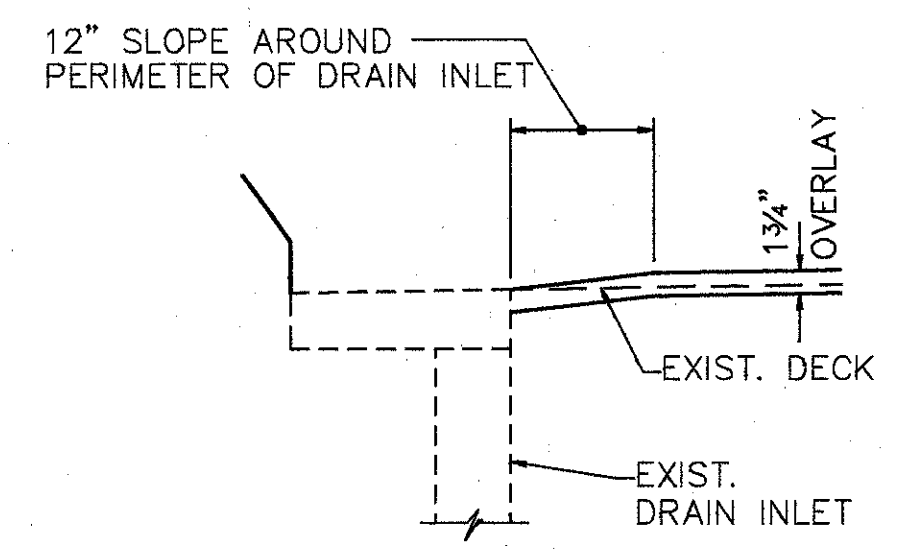
NOTES:

1. WHEN THE SCUPPER/DRAIN INLET IS LOCATED MORE THAN TWO(2) FEET FROM THE PROJECTED EDGE OF PAVEMENT DETAIL 'C' OR 'D' IS TO BE USED.
2. WHEN ANY PHYSICAL PART OF THE SCUPPER/DRAIN INLET IS LOCATED WITHIN TWO(2) FEET OF THE PAVEMENT EDGE, DETAIL 'B' OR 'E' IS TO BE USED.
3. EXTEND STEEL PIPE OF SCUPPER A MIN. OF 8" BELOW BOTTOM FLANGE OF EXIST. BEAM.
4. ALL NEW STEEL AND EXISTING DISTURBED STEEL SURFACES THAT ARE EXPOSED SHALL BE FIELD PAINTED ACCORDING TO PROPOSAL NOTE ENTITLED, "FIELD PAINTING OF EXISTING STEEL, USING EPOXY AND URETHANE (EPU)."
5. ALL LABOR, MATERIALS, EQUIPMENT AND ANY INCIDENTAL ITEMS NEEDED FOR DETAIL 'B' & 'E' TYPE SCUPPER/DRAIN INLET TREATMENT SHALL BE PAID FOR UNDER ITEM 518, SCUPPER MODIFICATION. COSTS FOR DETAIL TYPE 'C' OR 'D' TREATMENT SHALL BE INCLUDED IN THE PRICE FOR ITEM 850, SUPERPLASTICIZED DENSE CONCRETE OVERLAY (1 3/4" THICK).



SECTION B-B

DETAIL B



DETAIL D

TYPICAL SCUPPER TREATMENT FOR BRIDGE DECK OVERLAYS

\* CONCRETE SURFACES ADJACENT TO DECK JTS. SHALL BE FINISHED FLUSH OR SLIGHTLY ABOVE THE STEEL JT. SURFACE.

DETAIL G

**WOOLPERT CONSULTANTS**  
 409 E. MONUMENT AVENUE  
 DAYTON, OHIO 45402-1226  
 (513) 461-5660

GENERAL DETAILS

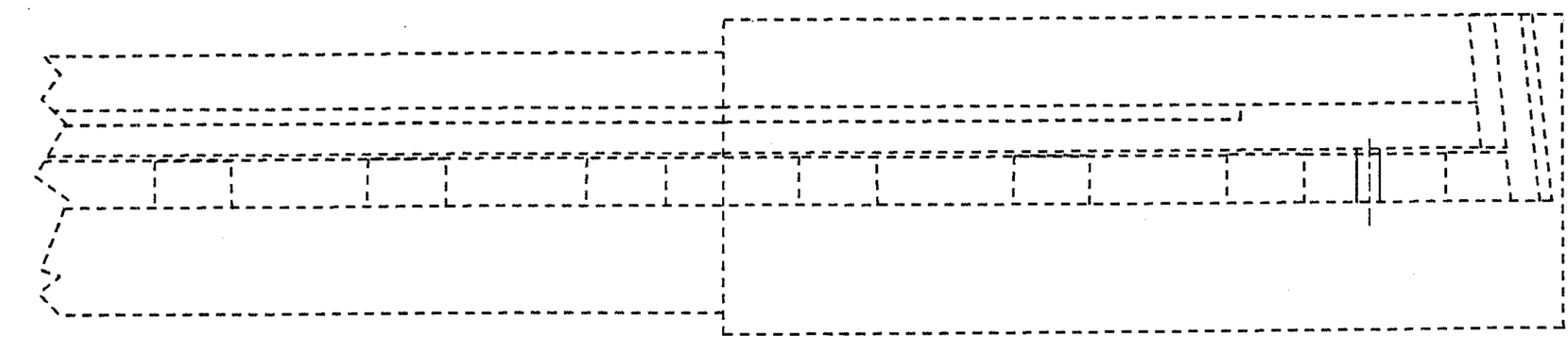
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
L.A.T.M.	D.E.E.		M.A.A.	D.E.M1	11/94	

BRIDGE NO.  
 HAMILTON COUNTY

Last Print MAY 15, 1991 @ 2:37 PM  
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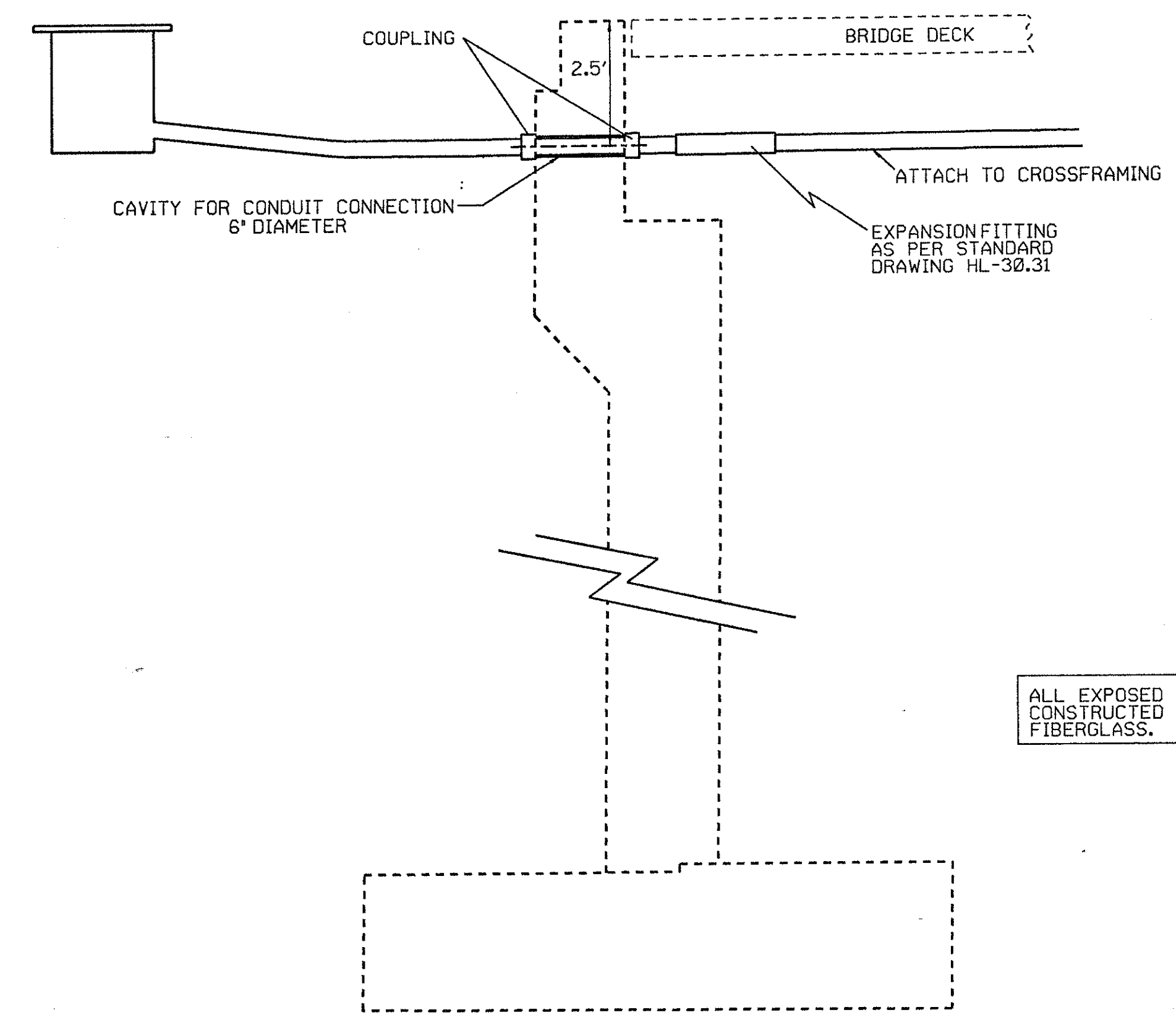
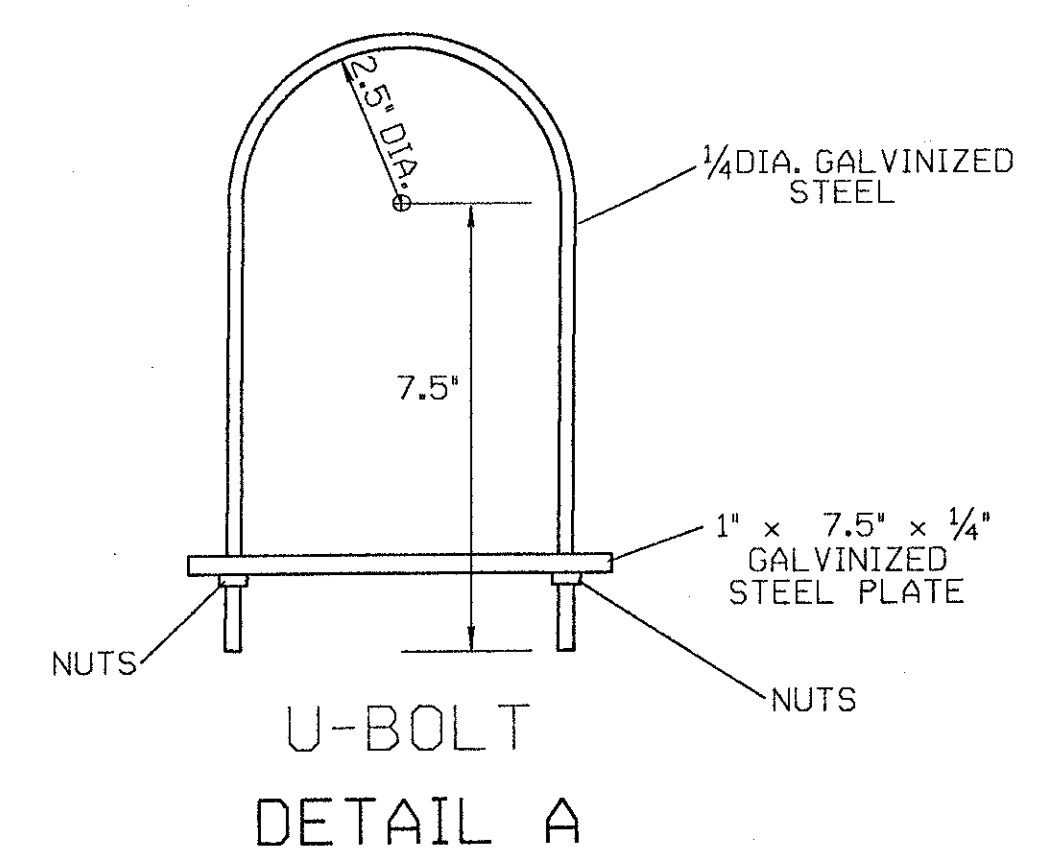
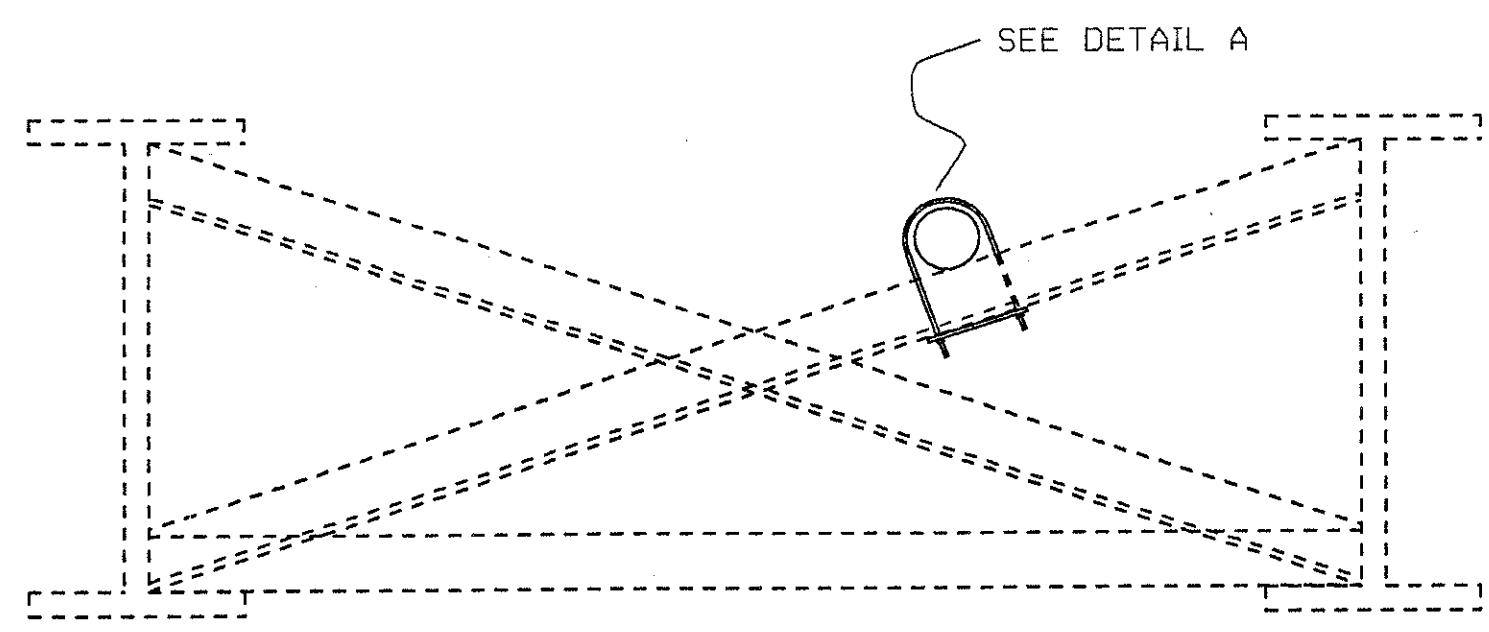
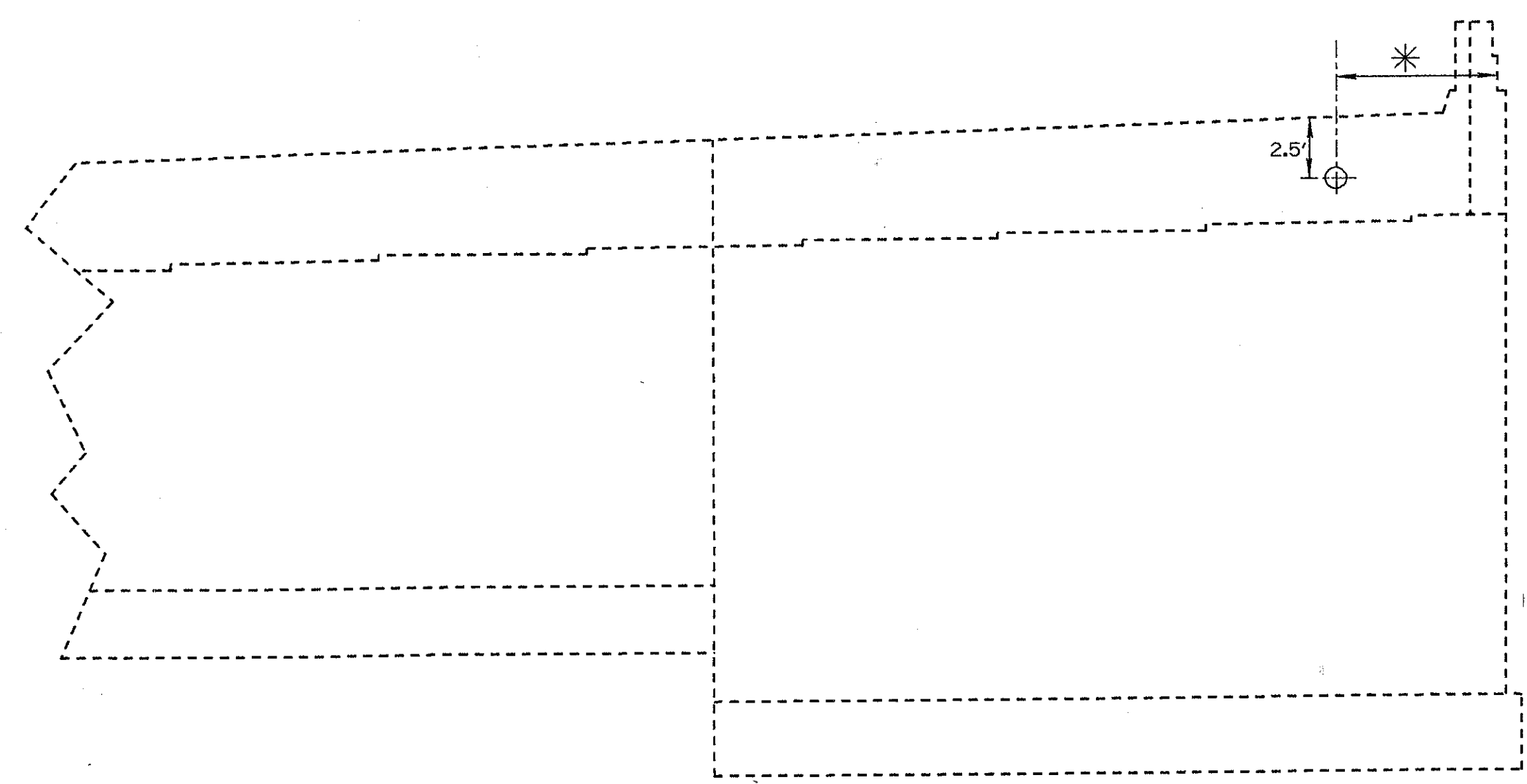
HAM-71-1.30/9.00



**NOTES:**

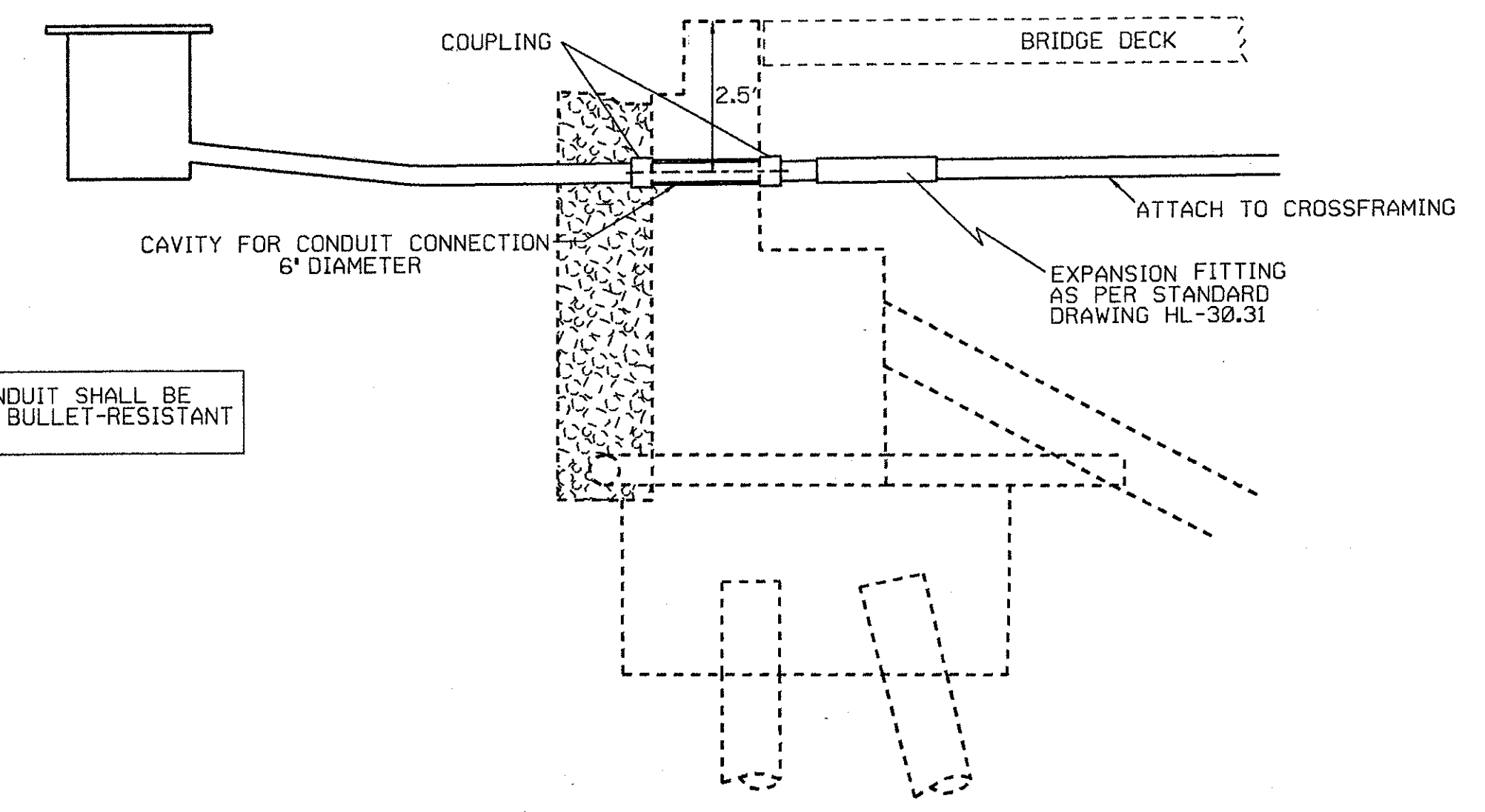
- 1) FILL SPACE AROUND THE CONDUIT AND/OR FITTINGS WITHIN THE CAVITY WITH A POLYURETHANE FOAM OR OTHER APPROVED COLD APPLIED JOINT SEALER.
- 2) FIBERGLASS CONDUIT SHALL BE CONNECTED TOGETHER WITH AN APPROVED EPOXY BONDING AGENT

- \* 4' HAM-71-2.43
  - 2.5' HAM-71-9.65
  - \* 4' HAM-71-10.63
- FIELD VERIFY CROSSFRAME LOCATION BEFORE DRILLING



SECTION  
BRIDGE HAM-71-2.43R  
ONLY

ALL EXPOSED CONDUIT SHALL BE CONSTRUCTED OF BULLET-RESISTANT FIBERGLASS.



SECTION  
BRIDGE HAM-71-9.65R  
BRIDGE HAM-71-10.63R

ALL EXPOSED CONDUIT SHALL BE CONSTRUCTED OF BULLET-RESISTANT FIBERGLASS.

RTMS CONDUIT INSTALLATION DETAIL

HAM-71-1.30/9.00

CALCULATED  
JDM  
CHECKED  
JBB



# BRIDGE GENERAL SUMMARY

BRIDGE NUMBER													PARTICIPATION		ITEM	ITEM EXT.	SUBTOTAL SHT 274	UNITS	DESCRIPTION	
71-0130	71-0154	71-0176	71-0192	71-0192W	71-0192N	71-0202	22-0145	71-0221	71-0226	71-0228	42-0235R	42-0257R	42-0264R	STATE & FEDERAL						STATE
																201	11000		L.S.	CLEARING AND GRUBBING
																202	11202	LUMP	L.S.	PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN
																202	23501	14290	S.Y.	WEARING COURSE REMOVED (ASPHALT), AS PER PLAN
																304	20001	3	C.Y.	AGGREGATE BASE, AS PER PLAN
																503	21100	41	C.Y.	UNCLASSIFIED EXCAVATION
																509	15840	7210	LBS.	EPOXY COATED REINFORCING STEEL, GRADE 60
																509	15840	2355	LBS.	EPOXY COATED REINFORCING STEEL, GRADE 60
																509	15840	45768	LBS.	EPOXY COATED REINFORCING STEEL, GRADE 60
																509	15840	43651	LBS.	EPOXY COATED REINFORCING STEEL, GRADE 60
																509	15840	100673	LBS.	EPOXY COATED REINFORCING STEEL, GRADE 60
																510	12201	1019	L.F.	DOWEL HOLES, AS PER PLAN
																511	34450	85	C.Y.	CLASS S CONCRETE, MISC.: ABUTMENT PARAPETS
																511	34400	82	C.Y.	CLASS S CONCRETE, SUPERSTRUCTURE (RECONSTRUCTION)
																511	34450	606	C.Y.	CLASS S CONCRETE, MISC.: CONC. PARAPET RAILING, AS PER PLAN
																511	34450	4	C.Y.	CLASS S CONCRETE, MISC.: RETAINING WALL CAP, AS PER PLAN
																511	45700	143	C.Y.	CLASS C CONCRETE, ABUTMENT (REPAIR OR RECONSTRUCT)
																SPECIAL	51267200	5246	S.Y.	WATERPROOFING, MISC.: SEALING ASPHALT WEARING SURFACE
																SPECIAL	51267500	19185	S.Y.	SEALING OF CONCRETE SURFACE *
																SPECIAL	51267502	4860	S.Y.	SEALING OF CONCRETE SURFACE (EPOXY) *
																513	15501	600	LBS.	STRUCTURAL STEEL (MISC. AND CASTINGS), AS PER PLAN
																513	16000	7400	LBS.	STRUCTURAL STEEL FOR REHABILITATION
																513	21000	93	EACH	TRIMMING OF BEAM END
																SPECIAL	51400050	56000	S.F.	SURFACE PREPARATION OF EXIST. STEEL, SYSTEM OZEU *
																SPECIAL	51400056	56000	S.F.	FIELD PAINTING OF EXIST. STEEL, PRIME COAT, SYSTEM OZEU *
																SPECIAL	51400060	56000	S.F.	FIELD PAINTING OF EXIST. STEEL, INTERMEDIATE COAT, SYSTEM OZEU *
																SPECIAL	51400066	56000	S.F.	FIELD PAINTING OF EXIST. STEEL, FINISH COAT, SYSTEM OZEU *
																SPECIAL	51400504	100	MIN HOUR	GRINDING FIN, TEARS, SLIVERS *
																SPECIAL	51400508		L.F.	GRINDING FLANGE EDGES *
																514	00610	7400	LBS.	FIELD PAINTING OF NEW STEEL, SYSTEM IZEU*
																514	27704	LUMP	L.S.	FIELD PAINTING, MISC.: FIELD PAINTING EXISTING STEEL, EEU *
																516	10000	126	L.F.	PREFORMED ELASTOMERIC COMPRESSION JOINT SEAL (705.11)
																516	10901	115	L.F.	ELASTOMERIC COMPRESSION SEAL, AS PER PLAN
																516	11210	1895	L.F.	STRUCTURAL EXP. JT., INCLUDING ELASTOMERIC STRIP SEAL
																516	13600	2	S.F.	1" PREFORMED EXPANSION JOINT FILLER
																516	14600	1105	L.F.	STRUCTURAL JOINT OR JOINT SEALER, MISC.: 2"x4" SEALER, AS PER PLAN
																516	14600	34	L.F.	STRUCTURAL JOINT OR JOINT SEALER, MISC.: 3"x5" SEALER, AS PER PLAN
																516	30500	8	L.F.	PVC WATERSTOP
																516	31000	345	L.F.	JOINT SEALER, 705.04
																516	45304	232	EACH	REFURBISH BEARING DEVICE
																517	76201	6354	L.F.	RAILING FACED, AS PER PLAN (32" HIGH)
																517	76201		L.F.	RAILING FACED, AS PER PLAN (50" HIGH)
																518	12700	4	EACH	SCUPPER, VERTICAL EXTENSION
																518	12800	44	EACH	SCUPPER MODIFICATION
																518	21200	41	C.Y.	POROUS BACKFILL WITH FILTER FABRIC
																518	41100	77	L.F.	6" PERFORATED HELICAL CORRUGATED STEEL PIPE, 707.01
																518	63300	LUMP	L.S.	STRUCTURE DRAINAGE, MISC.: MODIFY DRAINAGE PIPING
																519	11100	811	S.F.	PATCHING CONCRETE STRUCTURE
																SPECIAL	51912600	361	L.F.	CONCRETE REPAIR BY EPOXY INJECTION *
																SPECIAL	53000400	166	EACH	STRUCTURAL MISC.: LATERAL BRACING GUSSET PLATE RETROFIT (INTERMEDIATE).
																601	20001		S.Y.	CRUSHED AGGREGATE SLOPE PROTECTION, AS PER PLAN
																604	33400	1	EACH	MANHOLE COVER
																607	20001	72	L.F.	FENCE TYPE CL, AS PER PLAN
																607	20101	9	L.F.	FENCE TYPE CL MISC. HEIGHT, AS PER PLAN
																SPECIAL	60739910	180	L.F.	VANDAL PROTECTION FENCE, 8' STRAIGHT, COATED FABRIC
																653	10000		C.Y.	TOPSOIL FURNISHED AND PLACED
																660	25000		S.Y.	SODDING, STAKED
																845	40210	28619	S.Y.	LATEX MODIFIED CONCRETE: OVERLAY (1-3/4" THICK), ON EXISTING DECK
																845	11000	463	C.Y.	LATEX MODIFIED CONCRETE, VARIABLE THICKNESS
																845	30000	9	C.Y.	FULL DEPTH REPAIR

\* SEE PROPOSAL NOTE BRIDGE GENERAL SUMMAR

LEAD PLOT SEPT. 26, 1991, 0 4.12 PM  
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# BRIDGE GENERAL SUMMARY

BRIDGE NUMBER									SUBTOTAL SHT 274	SUBTOTAL SHT 275	PARTICIPATION		ITEM	ITEM EXT	GRAND TOTAL	UNITS	DESCRIPTION
71-0243L	71-0243R	71-0289	71-0965L	71-0965R	71-0986	71-0987	71-1063L	71-1063R			STATE & FEDERAL	STATE					
		LUMP							LUMP	LUMP			201	11000	LUMP	L.S.	CLEARING AND GRUBBING
		LUMP							LUMP	LUMP	LUMP		202	11202	LUMP	L.S.	PORTIONS OF STRUCTURE REMOVED, <b>OVER 20 FOOT SPAN</b>
		LUMP							14290	2600			202	23501	16890	S.Y.	WEARING COURSE REMOVED (ASPHALT), AS PER PLAN
							1300	1300					304	20001	3	C.Y.	AGGREGATE BASE, AS PER PLAN
									3				41	23		C.Y.	UNCLASSIFIED EXCAVATION
23									7210				503	21100	64	C.Y.	UNCLASSIFIED EXCAVATION
									2355				509	15840	2355	LBS.	EPOXY COATED REINFORCING STEEL, GRADE 60
									45768	58371			509	15840	104139	LBS.	EPOXY COATED REINFORCING STEEL, GRADE 60
		667	7335	7746	12925	7726	10342	11630	43651	54681			509	15840	98332	LBS.	EPOXY COATED REINFORCING STEEL, GRADE 60
23392	31289								100968				509	15840	100673	LBS.	EPOXY COATED REINFORCING STEEL, GRADE 60
									1019	921			510	12201	1940	L.F.	DOWEL HOLES, AS PER PLAN
174	154	25	141	141			125	161	85	74			511	34450	159	C.Y.	CLASS S CONCRETE, MISC.: ABUTMENT PARAPETS
4	5		10	13	8	8	13	13	82	10	92		511	34400	92	C.Y.	CLASS S CONCRETE, SUPERSTRUCTURE (RECONSTRUCTION)
4	6								606		606		511	34450	606	C.Y.	CLASS S CONCRETE, MISC.: CONC. PARAPET RAILING, AS PER PLAN
									4		4		511	34450	4	C.Y.	CLASS S CONCRETE, MISC.: RETAINING WALL CAP, AS PER PLAN
									143	94			511	45700	237	C.Y.	CLASS C CONCRETE, ABUTMENT (REPAIR OR RECONSTRUCT)
31	12	3	12	11			10	15	5246		5246		SPECIAL	51267200	5246	S.Y.	WATERPROOFING, MISC.: SEALING ASPHALT WEARING SURFACE
									19185	11612			SPECIAL	51267500	30797	S.Y.	SEALING OF CONCRETE SURFACE *
2190	3088	1337	909	905	140	804	1056	1183	4860	2044			SPECIAL	51267502	6904	S.Y.	SEALING OF CONCRETE SURFACE (EPOXY) *
188	682	140	149	243	92	56	193	301	600	1650	2250		513	15501	2250	LBS.	STRUCTURAL STEEL (MISC. AND CASTINGS), AS PER PLAN
100	1550								7400		7400		513	16000	7400	LBS.	STRUCTURAL STEEL FOR REHABILITATION
									93	82	175		513	21000	175	EACH	TRIMMING OF BEAM END
	4	12	15	18	2		13	18	56000	105070			SPECIAL	51400050	161070	S.F.	SURFACE PREPARATION OF EXIST. STEEL, SYSTEM OZEU *
					24900	14350	24625	41195	56000	105070			SPECIAL	51400056	161070	S.F.	FIELD PAINTING OF EXIST. STEEL, PRIME COAT, SYSTEM OZEU *
					24900	14350	24625	41195	56000	105070			SPECIAL	51400060	161070	S.F.	FIELD PAINTING OF EXIST. STEEL, INTERMEDIATE COAT, SYSTEM OZEU *
					24900	14350	24625	41195	56000	105070			SPECIAL	51400066	161070	S.F.	FIELD PAINTING OF EXIST. STEEL, FINISH COAT, SYSTEM OZEU *
					24900	14350	24625	41195	56000	105070			SPECIAL	51400504	500	HOUR	GRINDING FINIS, TEARS, SLIVERS *
					100	100	100	100	100	400			SPECIAL	51400508	2672	L.F.	GRINDING FLANGE EDGES *
					2672					2672	2672		SPECIAL	51400508	2672	L.F.	GRINDING FLANGE EDGES *
									7400		7400		514	00610	7400	LBS.	FIELD PAINTING OF NEW STEEL, SYSTEM IZEU *
									LUMP	LUMP			514	27704	LUMP	L.S.	FIELD PAINTING, MISC.: FIELD PAINTING EXISTING STEEL, EEU *
LUMP	LUMP	LUMP	LUMP	LUMP					126	199			516	10000	325	L.F.	PREFORMED ELASTOMERIC COMPRESSION JOINT SEAL (705.11)
		54			79	66			115		115		516	10901	115	L.F.	ELASTOMERIC COMPRESSION SEAL, AS PER PLAN
									1895	1445			516	11210	3340	L.F.	STRUCTURAL EXP. JT., INCLUDING ELASTOMERIC STRIP SEAL
155	338	101	170	166	83	71	144	217	2	17	19		516	13600	19	S.F.	1" PREFORMED EXPANSION JOINT FILLER
17									1105	187			516	14600	1292	L.F.	STRUCTURAL JOINT OR JOINT SEALER, MISC.: 2"x4" SEALER, AS PER PLAN
75	25		26	35				26	34				516	14600	3	L.F.	STRUCTURAL JOINT OR JOINT SEALER, MISC.: 3"x5" SEALER, AS PER PLAN
									8	15	23		516	30500	23	L.F.	PVC WATERSTOP
15									345				516	31000	345	L.F.	JOINT SEALER, 705.04
									232	181			516	45304	413	EACH	REFURBISH BEARING DEVICE
24	58	12	18	18	8	8	14	21	6354	3897	10251		517	76201	10251	L.F.	RAILING FACED, AS PER PLAN (32" HIGH)
1514			164	154	976	550	257	282		3176	3176		517	76201	3176	L.F.	RAILING FACED, AS PER PLAN (50" HIGH)
	2310		160	160			260	286	4	70	74		518	12700	74	EACH	SCUPPER, VERTICAL EXTENSION
			9	10	12	7	12	20	44	15	59		518	12800	59	EACH	SCUPPER MODIFICATION
		3			6	6			41	23			518	21200	64	C.Y.	POROUS BACKFILL WITH FILTER FABRIC
23									77	70	147		518	41100	147	L.F.	6" PERFORATED HELICAL CORRUGATED STEEL PIPE, 707.01
70									LUMP	LUMP	LUMP		518	63300	LUMP	L.S.	STRUCTURE DRAINAGE, MISC.: MODIFY DRAINAGE PIPING
LUMP	LUMP								811	173			519	11100	984	S.F.	PATCHING CONCRETE STRUCTURE
			27	3	5	125	7	6	361	152			SPECIAL	51912600	513	L.F.	CONCRETE REPAIR BY EPOXY INJECTION *
	20	109			23				166	176			SPECIAL	53000400	342	EACH	STRUCTURE MISC.: LATERAL BRACING GUSSET PLATE RETROFIT (INTERMEDIATE)
55	120									298			601	20001	298	S.Y.	CRUSHED AGGREGATE SLOPE PROTECTION, AS PER PLAN
		210					28	60					604	33400	1	EACH	MANHOLE COVER
									1		1		607	20001	72	L.F.	FENCE TYPE CL, AS PER PLAN
									72				607	20101	9	L.F.	FENCE TYPE CL MISC. HEIGHT, AS PER PLAN
									9				SPECIAL	60739910	180	L.F.	VANDAL PROTECTION FENCE, 8' STRAIGHT, COATED FABRIC
									180				653	10000	12	C.Y.	TOPSOIL FURNISHED AND PLACED
		12								140			660	25000	140	S.Y.	SODDING, STAKED
4219	10400	1249	1370	1326	1420	804	1557	2526	28619	24871			845	40210	53490	S.Y.	LATEX MODIFIED CONCRETE MISC.: OVERLAY (1-3/4" THICK) ON EXISTING DECK
41	101	85	13	13	56	16	16	99	463	440	903		845	11000	903	C.Y.	LATEX MODIFIED CONCRETE, VARIABLE THICKNESS
1	2	1	1	1	1	1	1	2	9	11			845	30000	20	C.Y.	FULL DEPTH REPAIR

\* SEE PROPOSAL NOTE BRIDGE GENERAL SUMMARY

LHM P111 SEPT. 26, 1991 @ 2:14 PM  
C:\EX15588-03\1705512 Unit Revision By: D.T.E. AUG. 11, 1994 @ 10:59 AM



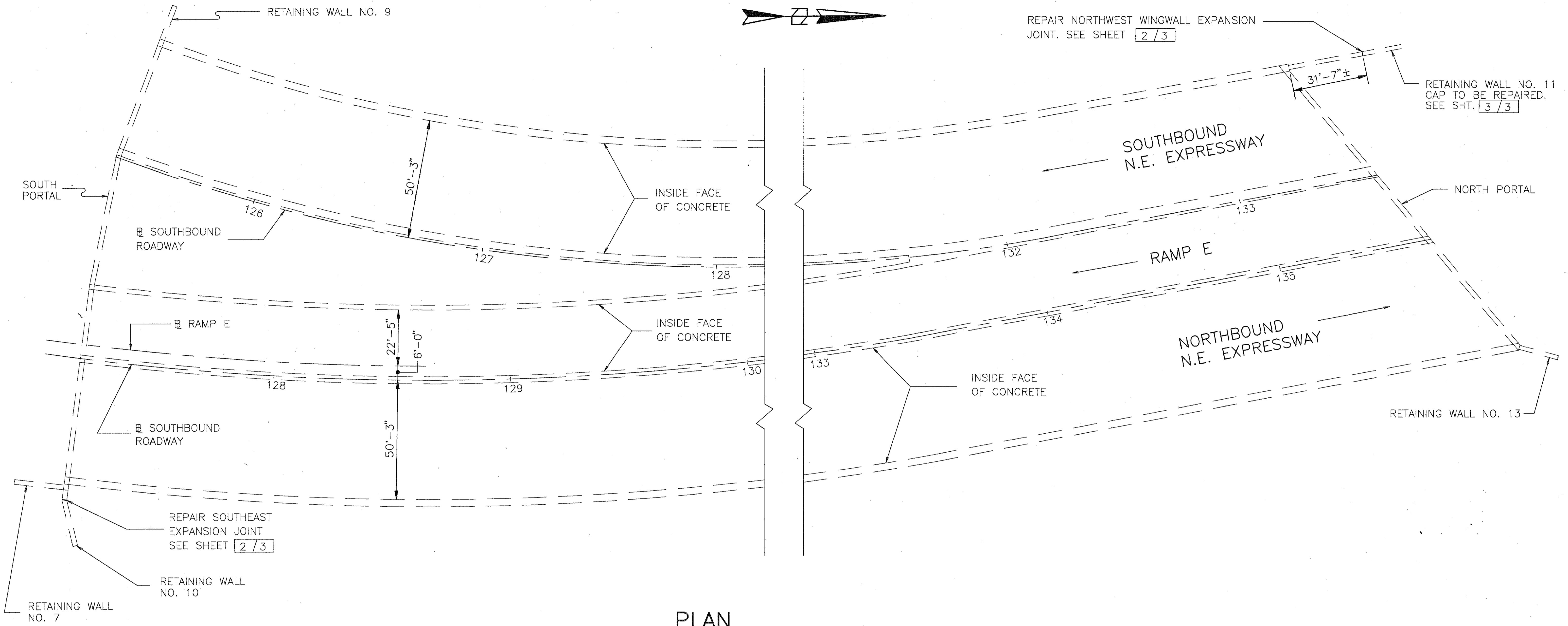
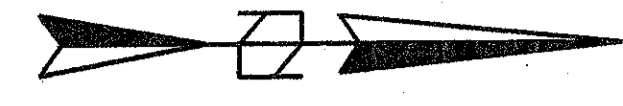
# BRIDGE GENERAL SUMMARY

BRIDGE NUMBER														PARTICIPATION		ITEM	ITEM EXT.	SUBTOTAL	UNITS	DESCRIPTION
71-0130	71-0154	71-0176	71-0192	71-0192W	71-0192N	71-0202	22-0145	71-0221	71-0226	71-0228	42-0235R	42-0257R	42-0264R	STATE & FEDERAL	STATE					
	500		760	80	125	150	100	100	50	50	75	210	475	2675		516	14600	2675	L.F.	STRUCTURAL JOINT OR JOINT SEALER, MISC.: SEAL JOINT BETWEEN ABUTMENT AND CONCRETE SLOPE PROTECTION
	4						1						5	10		516	45305	10	EACH	REFURBISH BEARING DEVICE, AS PER PLAN
	LUMP	LUMP	LUMP	LUMP	LUMP	LUMP	LUMP	LUMP	LUMP	LUMP	LUMP	LUMP	LUMP	LUMP		518	63300	LUMP	L.S.	STRUCTURE DRAINAGE, MISC.: SCUPPER AND DRAINAGE PIPE CLEANOUT
	10		12	3	5	5	4	4	2	2	3	8	10	68		601	21100	68	S.Y.	SLOPE PROTECTION, MISC.: REPAIR CONCRETE SLOPE PROTECTION
10														10		SPECIAL	51911600	10	S.F.	PATCHING CONCRETE STRUCTURE, MISC.: CERAMIC GLAZED WALL TILE

BRIDGE NUMBER									SUBTOTAL	SUBTOTAL	PARTICIPATION		ITEM	ITEM EXT.	GRAND TOTAL	UNITS	DESCRIPTION
71-0243L	71-0243R	71-0289	71-0965L	71-0965R	71-0986	71-0987	71-1063L	71-1063R	ABOVE		STATE & FEDERAL	STATE					
175	235	50							2675	460	3135		516	14600	3135	L.F.	STRUCTURAL JOINT OR JOINT SEALER, MISC.: SEAL JOINT BETWEEN ABUTMENT AND CONCRETE SLOPE PROTECTION
6	15						1		10	22	32		516	45305	32	EACH	REFURBISH BEARING DEVICE, AS PER PLAN
LUMP	LUMP	LUMP	LUMP	LUMP	LUMP	LUMP	LUMP	LUMP	LUMP	LUMP	LUMP		518	63300	LUMP	L.S.	STRUCTURE DRAINAGE, MISC.: SCUPPER AND DRAINAGE PIPE CLEANOUT
6	8	2							68	16	84		601	21100	84	S.Y.	SLOPE PROTECTION, MISC.: REPAIR CONCRETE SLOPE PROTECTION
									10		10		SPECIAL	51911600	10	S.F.	PATCHING CONCRETE STRUCTURE, MISC.: CERAMIC GLAZED WALL TILE



3470mlyc 276-332



PLAN

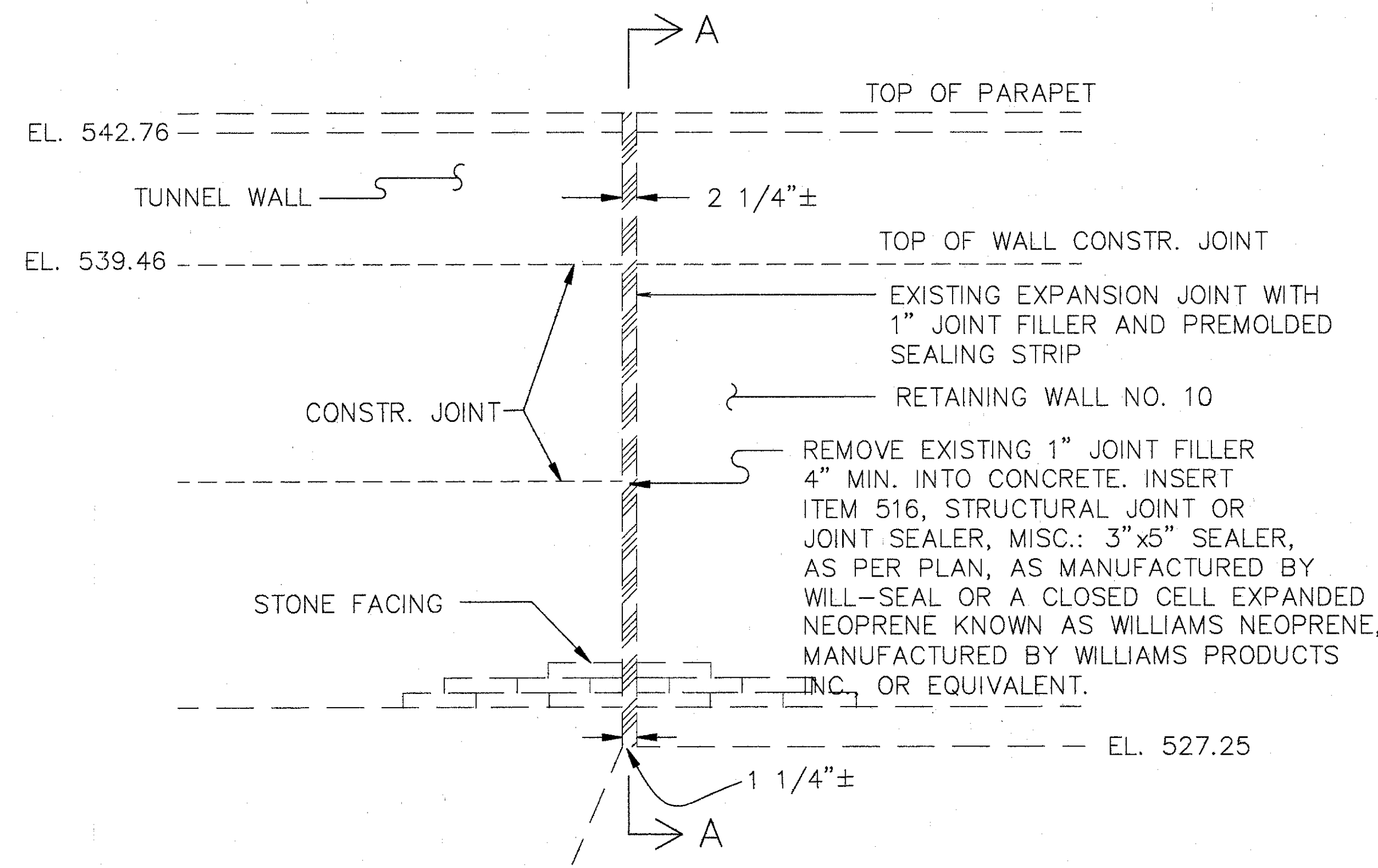
PROPOSED WORK

1. REPAIR EXPANSION JOINTS IN RETAINING WALLS AT SOUTHEAST AND NORTHWEST WINGWALLS.
2. REPAIR RETAINING WALL CAP.
3. AT LEAST ONE LANE OF TRAFFIC SHALL BE MAINTAINED IN THE TUNNEL AT ALL TIMES. FOR NOTE SEE MAINTENANCE OF TRAFFIC PLANS.
4. OTHER WORK AS DESCRIBED IN THESE PLANS.

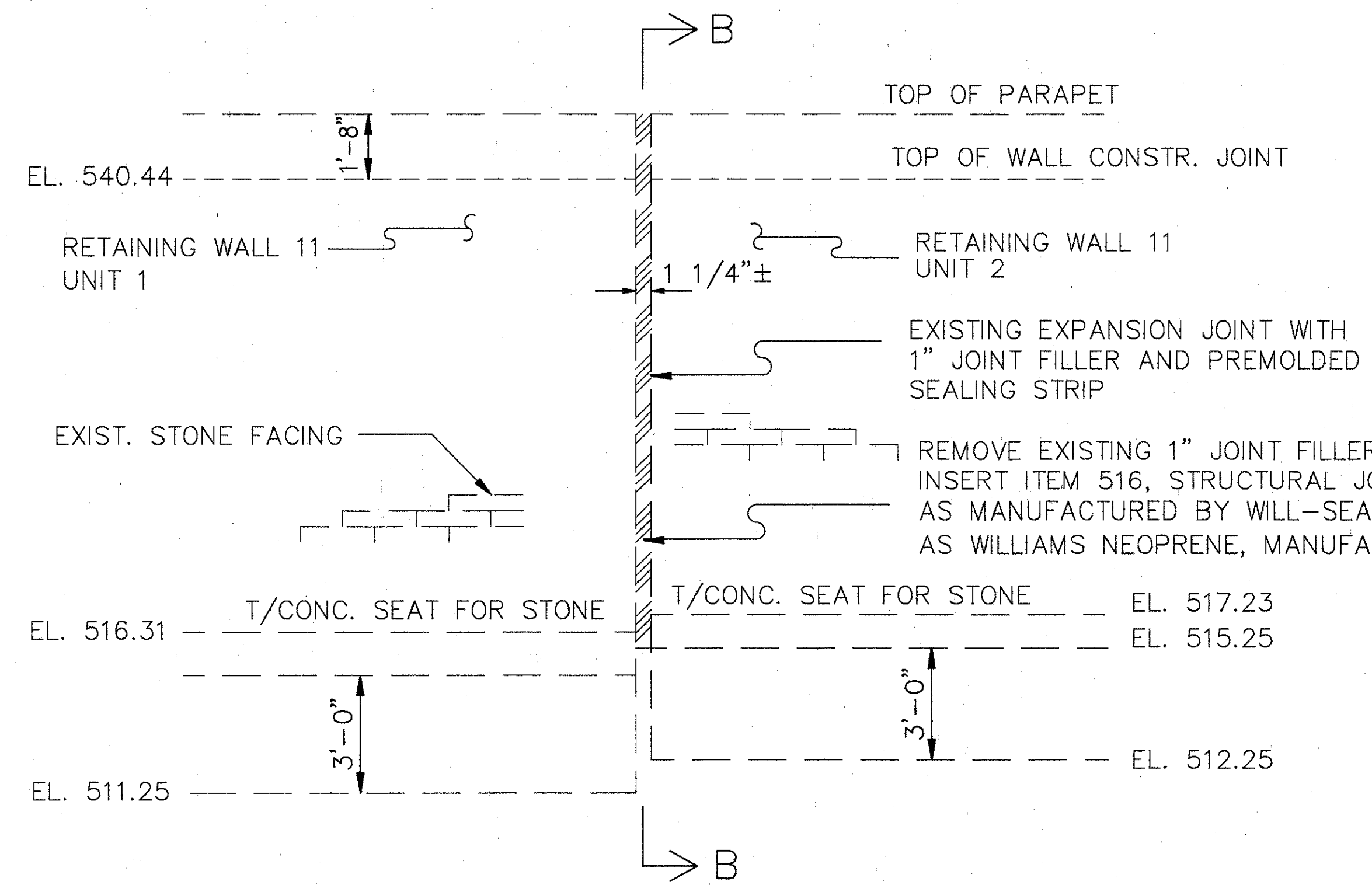
		<b>WOOLPERT CONSULTANTS</b> 409 E. MONUMENT AVENUE DAYTON, OHIO 45402-1226 (513) 461-5660		1 / 3		
<b>GENERAL PLAN</b>						
BRIDGE NO. HAM-71-0130 TUNNEL UNDER LYTLE PARK HAMILTON COUNTY						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
L.A.T.M.	D.E.E.		M.A.A.	D.E.M11/11/94		

LAM: PLOT MAY 15, 1994 @ 5:20 PM  
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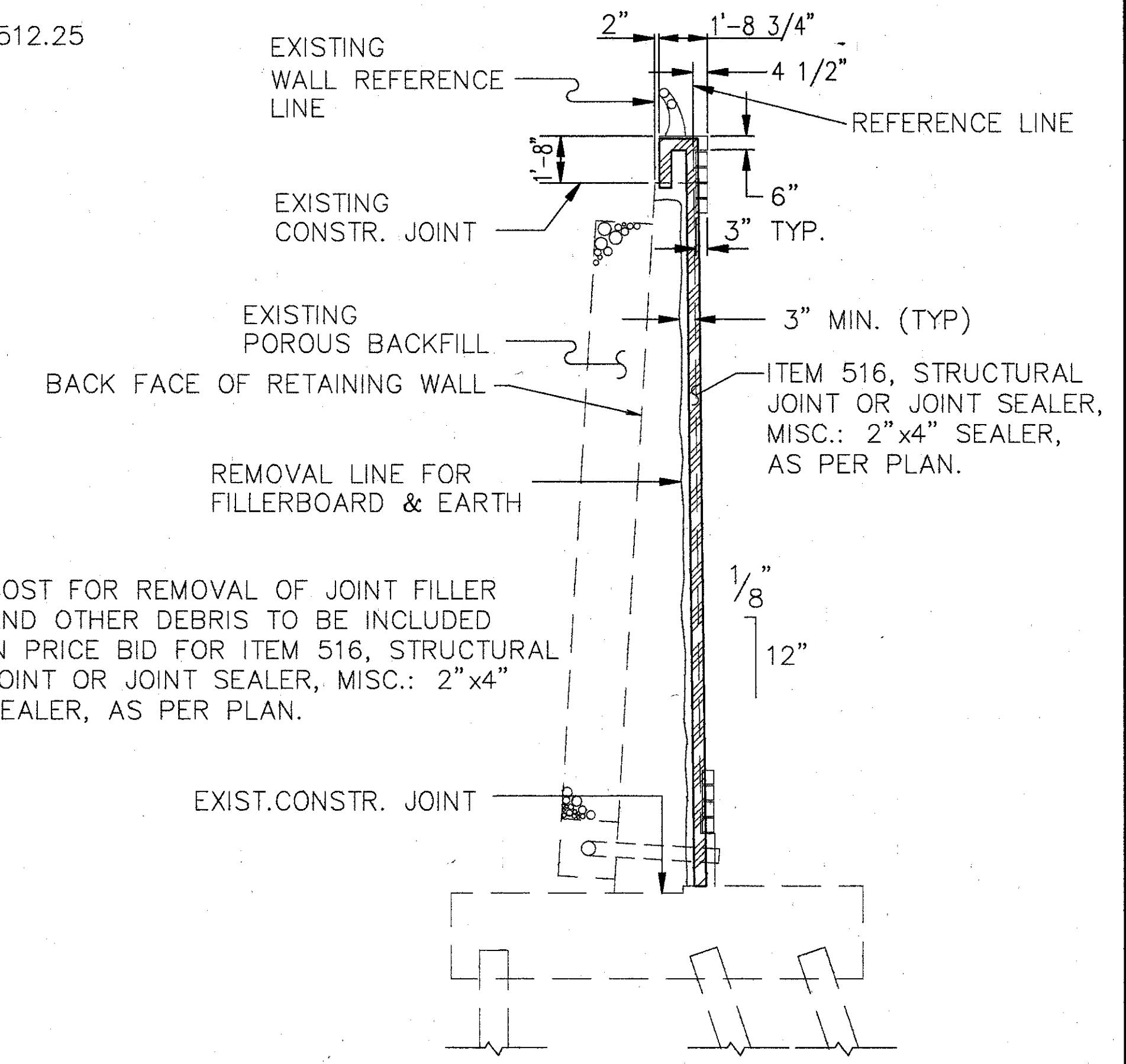




**ELEVATION SOUTHEAST EXP. JOINT**  
NTS

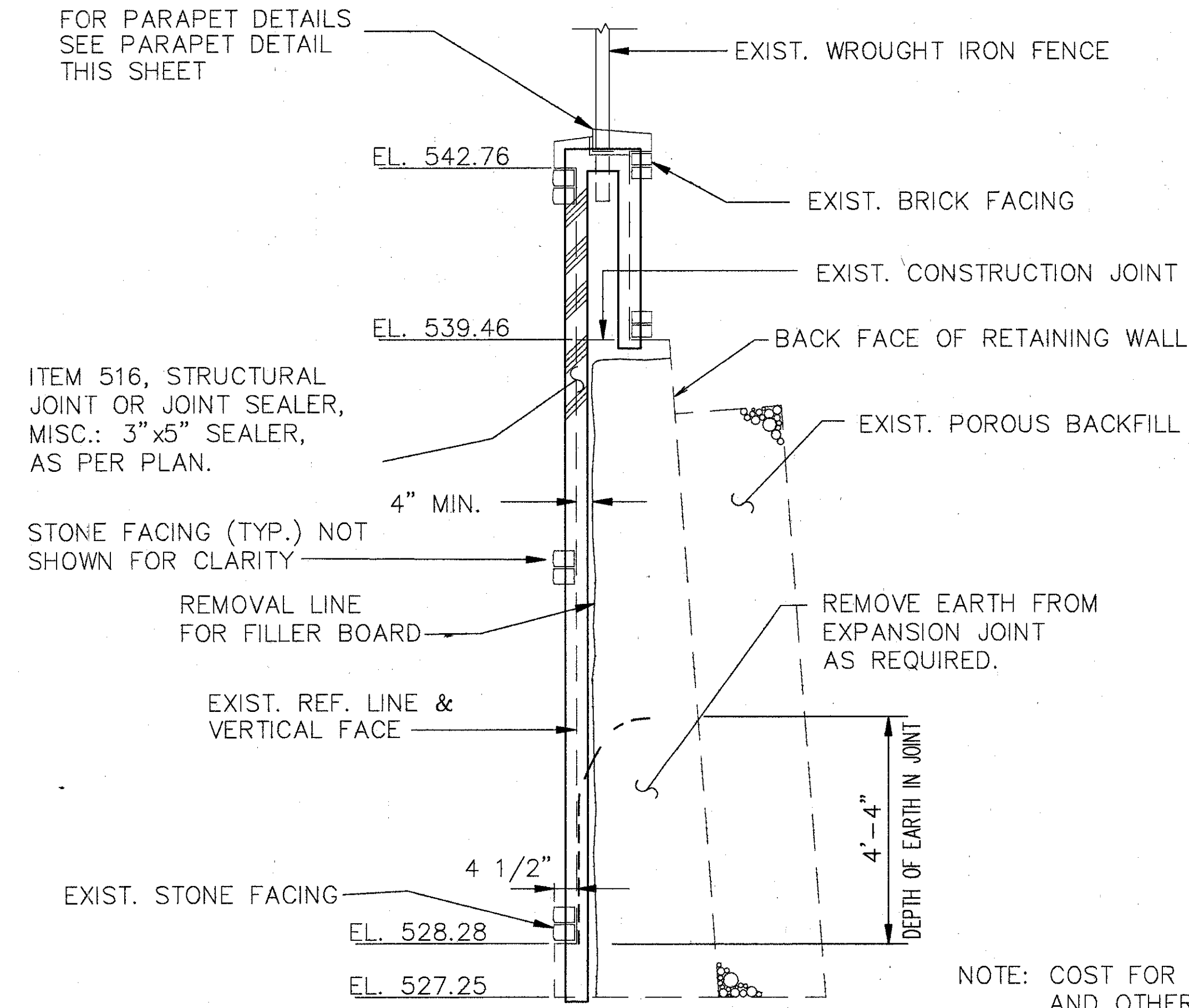


**ELEVATION NORTHWEST EXP. JOINT**  
NTS



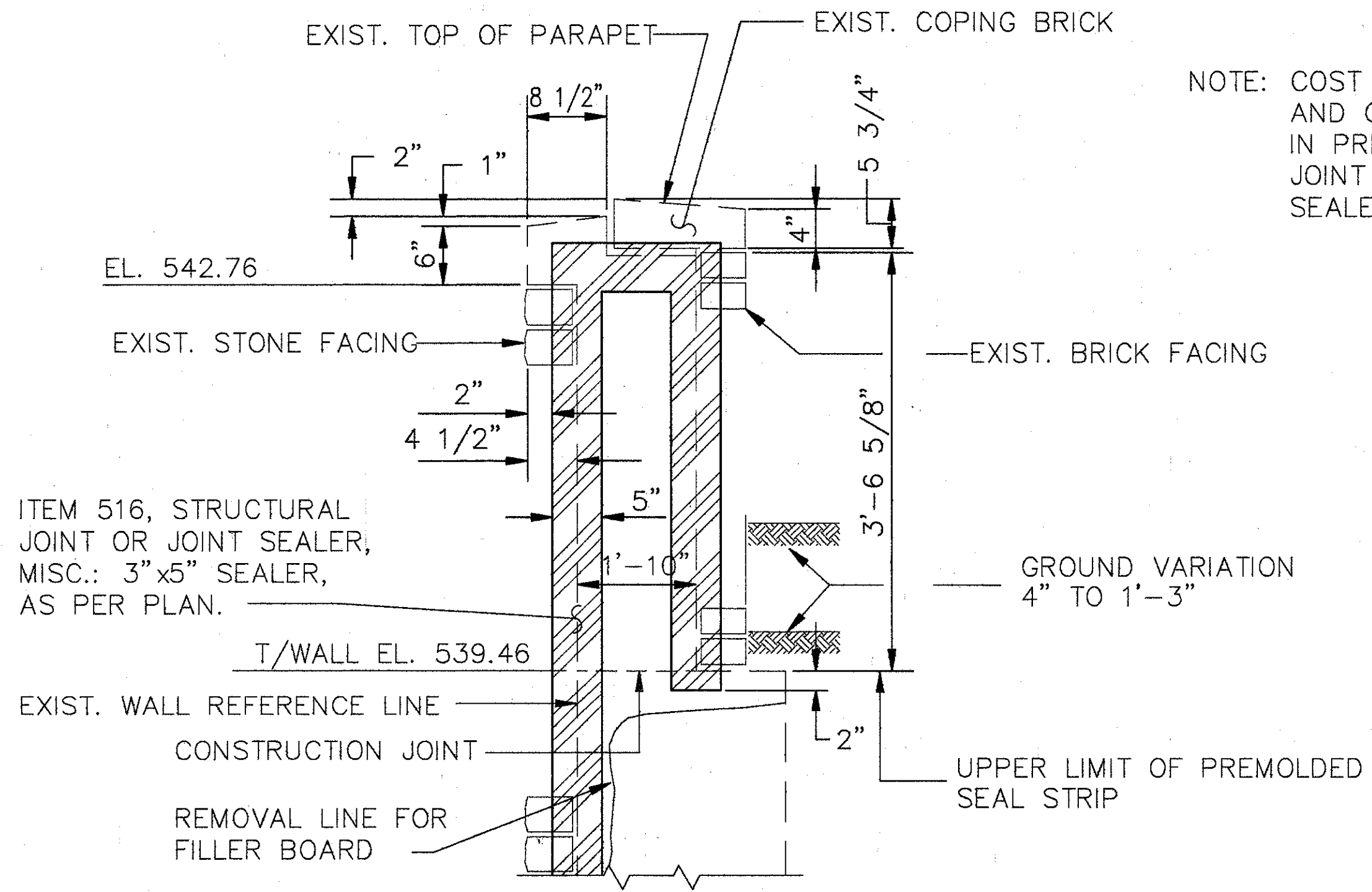
**SECTION B-B**

NOTE: COST FOR REMOVAL OF JOINT FILLER AND OTHER DEBRIS TO BE INCLUDED IN PRICE BID FOR ITEM 516, STRUCTURAL JOINT OR JOINT SEALER, MISC.: 2"x4" SEALER, AS PER PLAN.



**SECTION A-A**

NOTE: COST FOR REMOVAL OF JOINT FILLER AND OTHER DEBRIS TO BE INCLUDED IN PRICE BID FOR ITEM 516, STRUCTURAL JOINT OR JOINT SEALER, MISC.: 3"x5" SEALER, AS PER PLAN.



**PARAPET DETAIL**  
SOUTHEAST EXP. JT. ONLY

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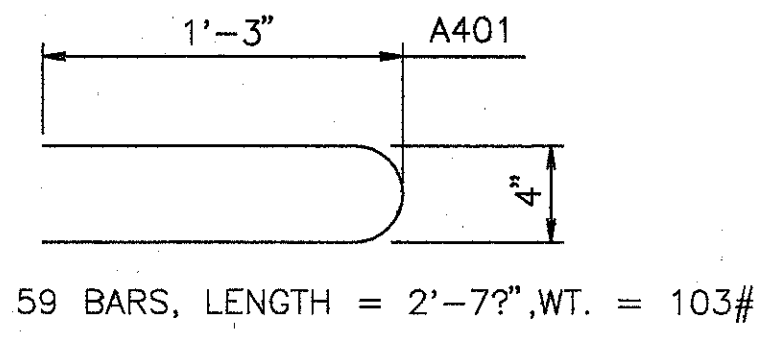
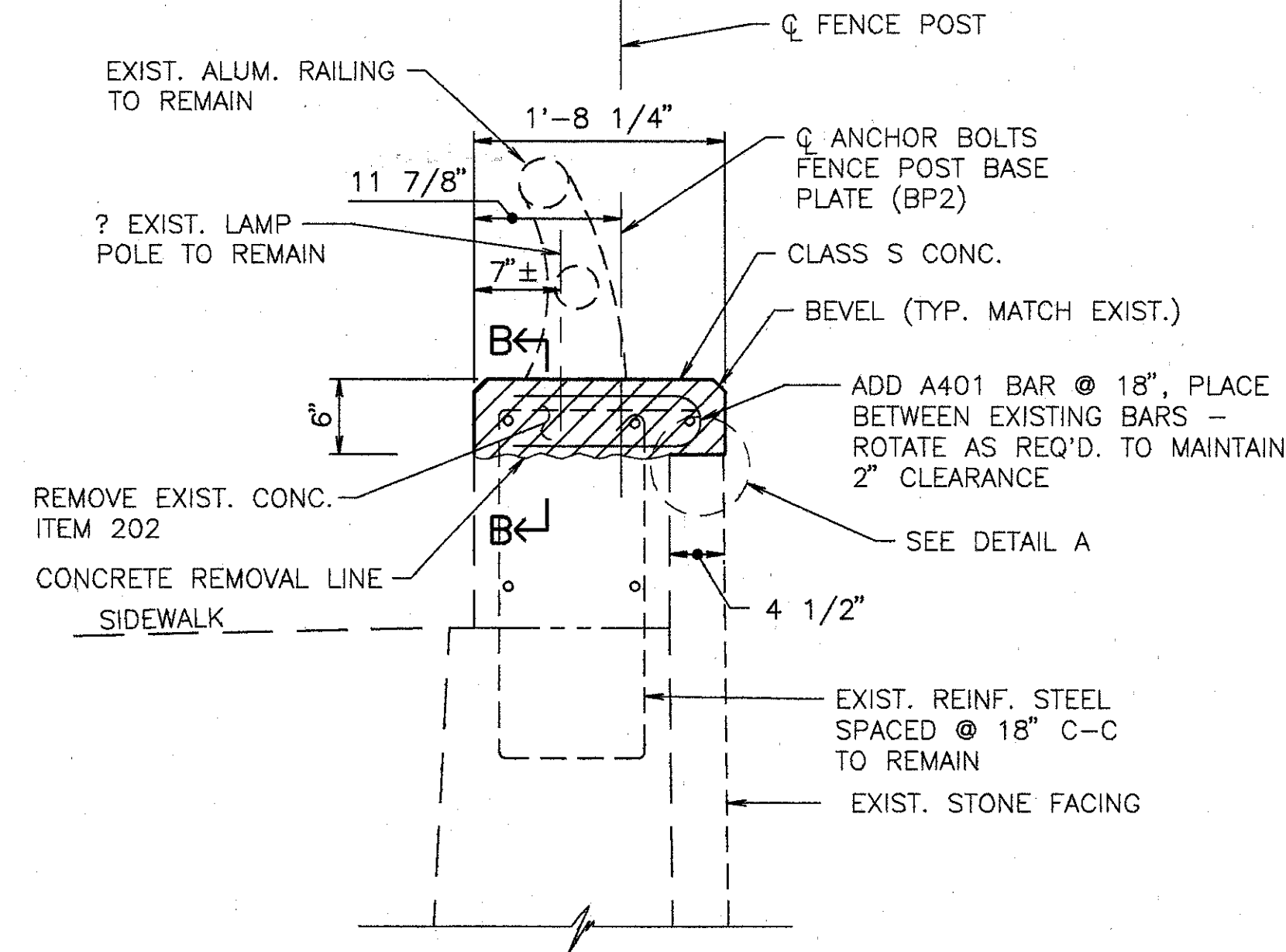
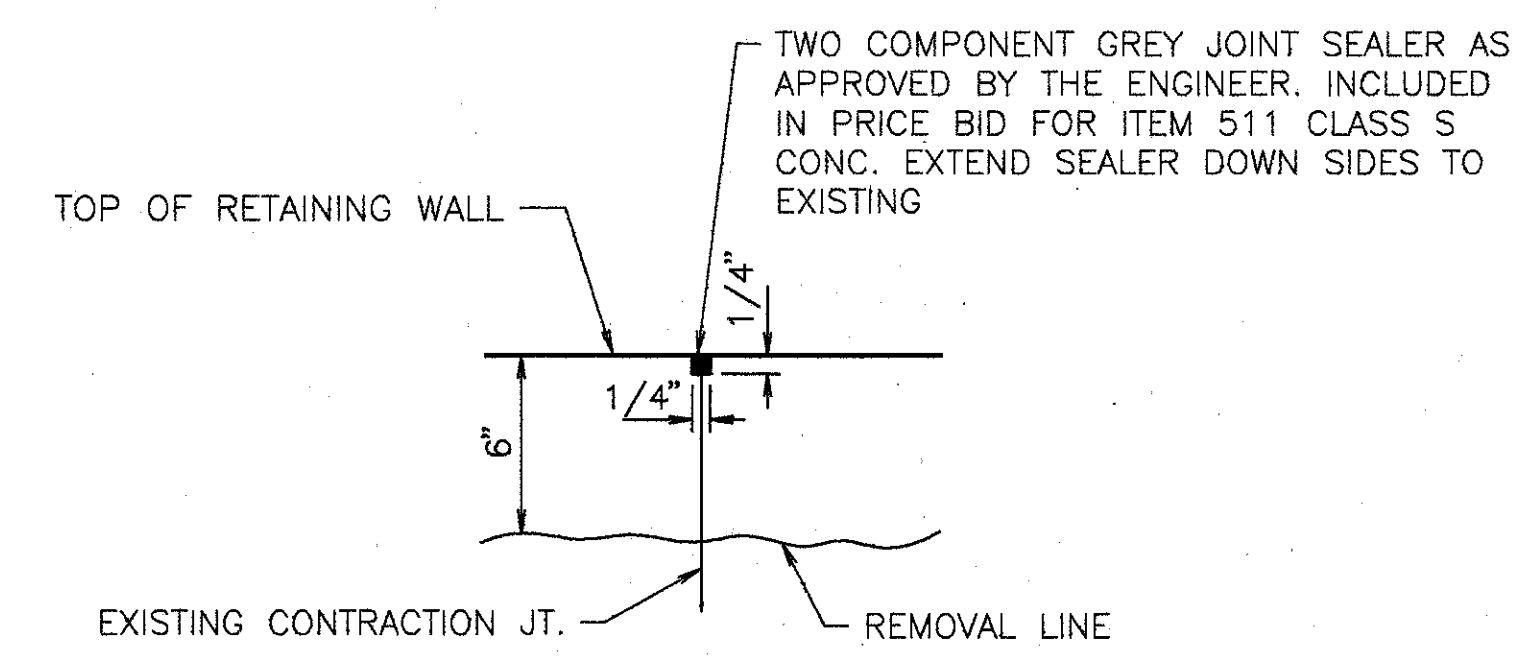
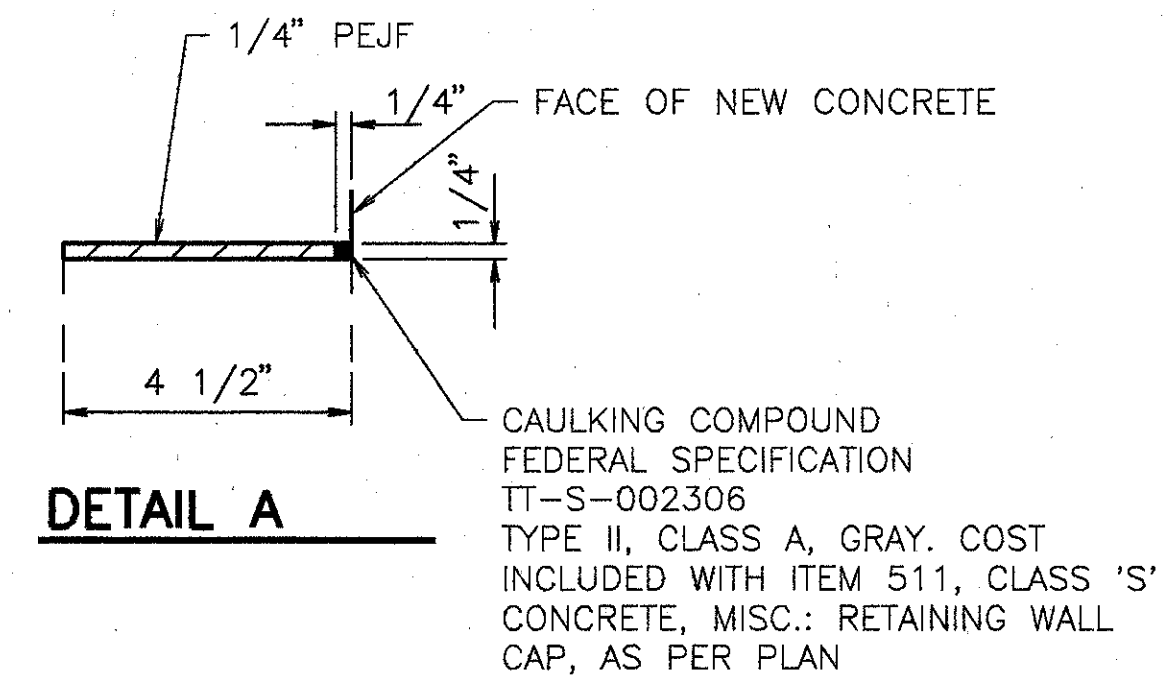
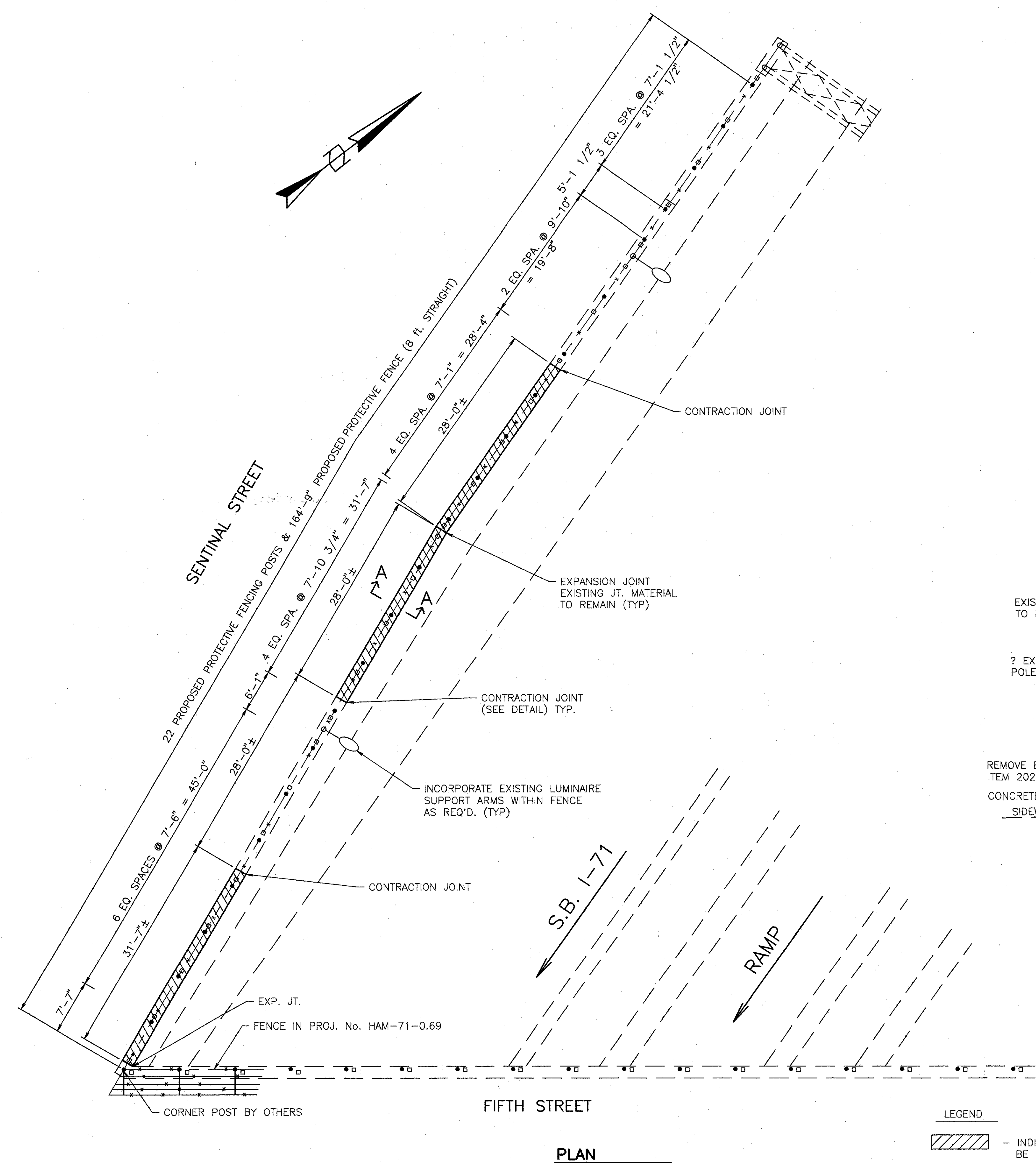
**EXPANSION JOINT DETAILS**  
 BRIDGE NO. HAM-71-0130  
 TUNNEL UNDER LYTLE PARK  
 HAMILTON COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
L.A.T.M.	D.E.E.		M.A.A.	D.E.M11/11/94		

L.A.T.M. MAY 15, 1991 8:26 PM  
 G:\STATIONING\CONSTRUCTION\DETAIL



ITEM	ITEM EXT.	TOTAL	UNITS	DESCRIPTION
202	11200	LUMP SUM	L.S.	PORTIONS OF STRUCTURE REMOVED
509	15820	137	LBS.	EPOXY COATED REINFORCING STEEL, GRADE 60
511	34450	4	C.Y.	CLASS S CONCRETE, MISC: RETAINING WALL CAP, AS PER PLAN
516	14600	30	L.F.	MISC. STRUCTURAL JOINT OR JOINT SEALER: 2"x4" SEALER, AS PER PLAN.
516	14600	21	L.F.	MISC. STRUCTURAL JOINT OR JOINT SEALER: 3"x5" SEALER, AS PER PLAN.
SPECIAL	60739910	165	L.F.	VANDAL PROTECTION FENCE, 8 FT. STRAIGHT, COATED FABRIC
SPECIAL	51911600	10	S.F.	PATCHING, MISC.: CERAMIC GLAZED WALL TILE



- NOTES:
- CONTRACTOR TO VERIFY ALL DIMENSIONS PRIOR TO THE START OF CONSTRUCTION.
  - FOR FENCE DETAILS AND BASE PLATE DETAILS, SEE STD. DWG. VPF-1-90.
  - EXISTING BRIDGE RAILING IS AR-1-57 WITH TYPE C POSTS.
  - USE BP-2 BASE PLATE AND PS-3 POST SECTION.
  - CONTRACTOR SHALL PROVIDE TEMPORARY OUTRIGGERS WITH NETS, SHEETING OR OTHER MATERIAL AS APPROVED BY THE PROJECT ENGINEER TO PROTECT THE PUBLIC IN THE REMOVAL AND REPLACEMENT OF THE RETAINING WALL CAP. PRICE TO BE INCLUDED IN THE PRICE BID FOR ITEM 202.

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 (513) 461-5660

3/3

**RETAINING WALL: FENCING & CONCRETE CAP REPAIR**

BRIDGE NO. HAM-71-0130  
 TUNNEL UNDER LYTTLE PARK

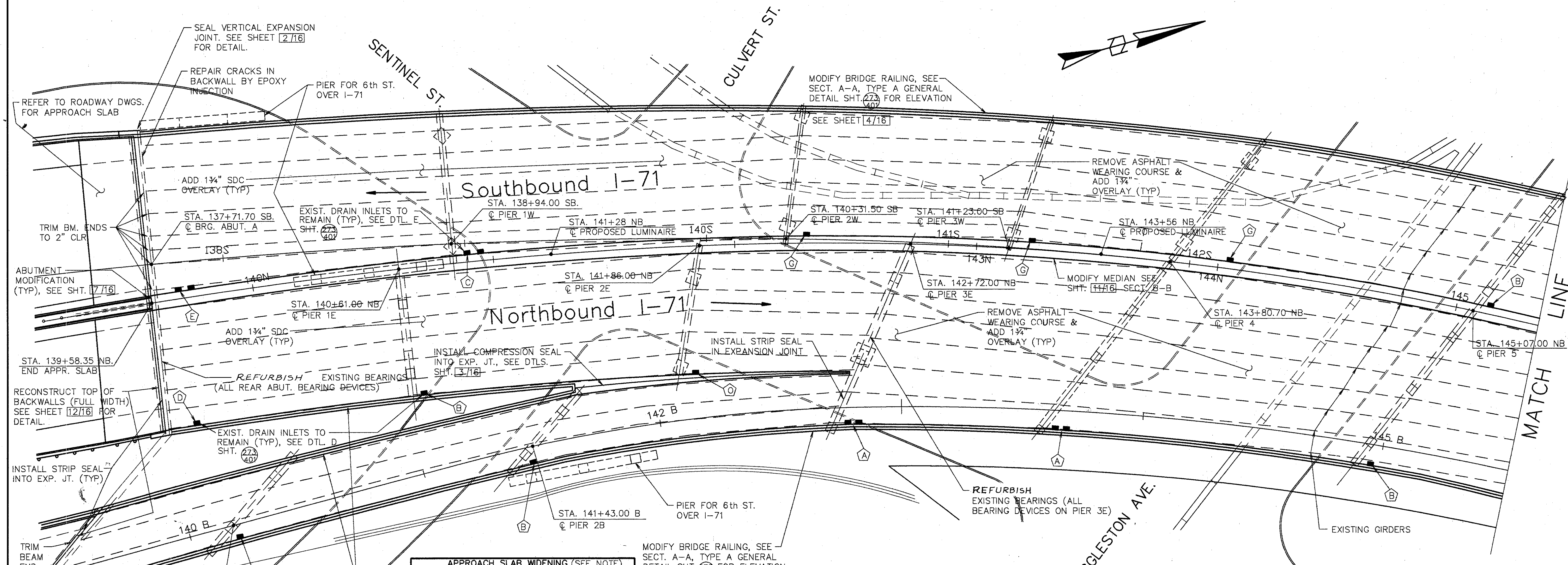
HAMILTON COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
D.E.M.	D.E.E.		M.A.A.	D.E.M11/11/94		

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LEGEND

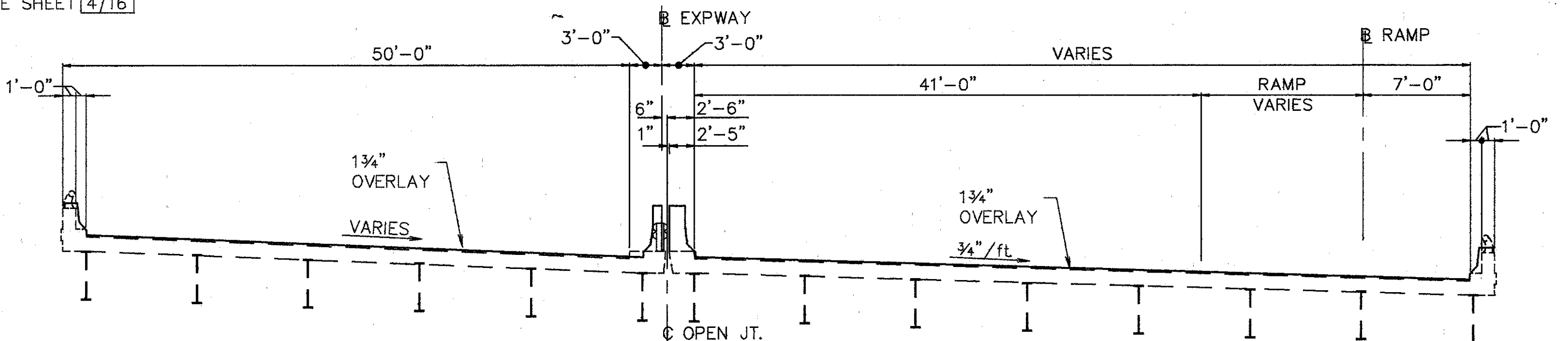
- INDICATES CONCRETE CAP TO BE REMOVED & REPLACED.



APPROACH SLAB WIDENING (SEE NOTE)

LOCATION	LEFT	EXISTING	RIGHT
REAR LEFT	9'-0"	54'-0"±	5'-0"
REAR RIGHT	5'-0"	42'-0"±	9'-0"
RAMP	3'-0"	16'-0"±	7'-0"
FWD. LEFT	9'-0"	36'-0"±	7'-0"
FWD. RIGHT	5'-0"	45'-6"±	7'-0"

**NOTE:**  
 EXISTING APPROACH SLABS ARE TO BE REMOVED AND REPLACED FULL WIDTH (WIDENED) TO ACCOMMODATE TRAFFIC ON THE SHOULDERS OF THE ROADWAY. VALUES LISTED IN THE 'LEFT' & 'RIGHT' COLUMNS ARE THE APPROX. WIDTHS OF THE APPROACH SLAB ADDITIONS. SEE SECT. Z-Z SHT. [12/16].



TYP. BRIDGE SECTION

**NOTES:**

- SEAL PARAPETS, BACKWALLS, AND PIERS. SEAL THREE SIDES OF PIERS 3E, 6E AND 6W WITH EPOXY (LEAVE SIDE OF COLUMNS AWAY FROM TRAFFIC UNSEALED). SEAL ALL OF PIERS 1W, 2W, 4W, 5W, 7W, 8W, 9W, 1E, 2E, 4E, 5E, 7E, 8E, 1B AND 2B EXCEPT THE TOP OF THE PIER CAPS. WORK TO BE PAID FOR UNDER ITEM SPECIAL - 'SEALING OF CONCRETE SURFACE'.
- FOR BARRIERS RETROFIT AT JUNCTION BOXES SEE JUNCTION BOX EXTENSION DETAIL, GENERAL DETAIL SHT. [4/16] SEE LIGHTING DETAILS FOR TYPE AND LOCATION.

**LEGEND**  
 DRAINAGE PIPING MODIFICATION

- (A) - INDICATES TYPE A MODIFICATION AS SHOWN ON SHT. [15&16/16]
- (O) - INDICATES NO WORK REQUIRED

FOR DRAINAGE PIPING REQUIREMENTS SEE GENERAL NOTE ON SHT. [2/16] & FOR DRAINAGE PIPING DETAILS AND APPROXIMATE NUMBER OF LINEAR FEET OF PIPE TO BE MODIFIED SEE SHT'S. [15&16/16]

**EXISTING STRUCTURE**

TYPE: CONTINUOUS STEEL GIRDER WITH REINFORCED CONCRETE DECK & SUBSTRUCTURE SPANS: LENGTHS VARY  
 ROADWAY: N.B. VARIES 50'-0" MIN. F/F CURBS S.B. VARIES 50'-0" MIN. F/F CURBS W/6'-0" MEDIAN  
 SKEW: NONE  
 LOADING FREQUENCY: C.F.=2000 (57) ADEQUATE FOR AASHO ALTERNATE LOADING  
 WEARING SURFACE: 1" MONOLITHIC CONCRETE  
 APPROACH SLABS: AS-1-54 (25'-0" LONG)  
 ALIGNMENT: VARIES, SEE PLAN  
 SUPERELEVATION: VARIES, SEE PLAN  
 CURB: 1'-0" EACH SIDE

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 DAYTON, OHIO 45402-1226  
 (513) 461-5660

**GENERAL PLAN**

BRIDGE NO. HAM-71-0154 OVER S.B. I-471  
 HAMILTON COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
L.A.T.M.	D.E.E.		M.A.A.	D.E.M11/11/94		

L.A.T.M. MAY 21, 1991 @ 10:38 AM  
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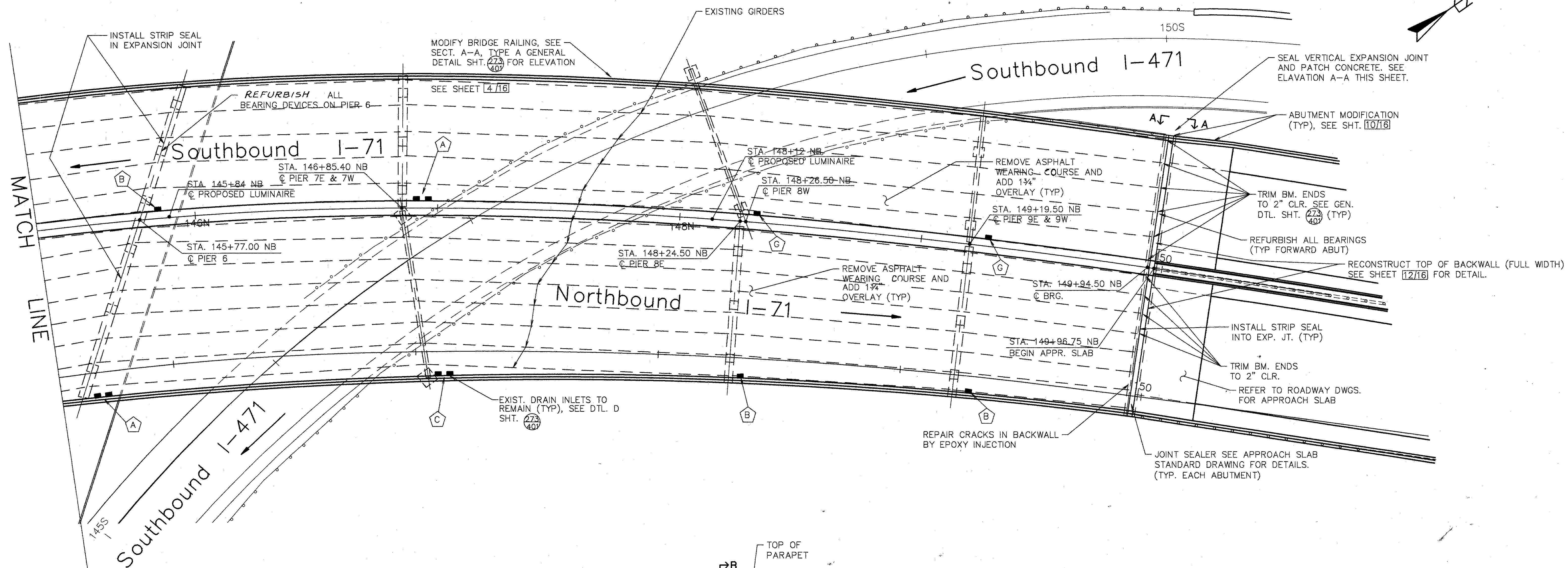
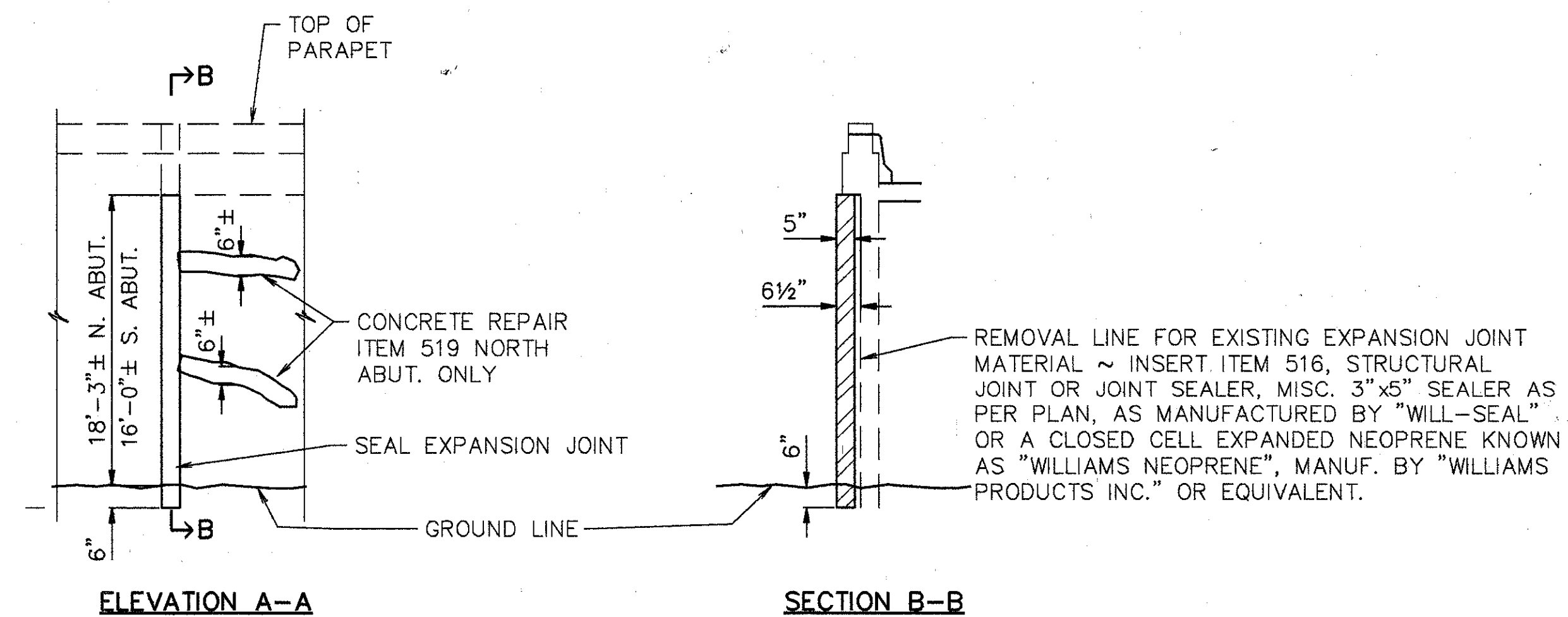


TABLE OF SPAN LENGTHS *							
N.B. ROADWAY		S.B. ROADWAY		RAMP B		N.B. & S.B. ROADWAY	
SPAN	LENGTH	SPAN	LENGTH	SPAN	LENGTH	SPAN	LENGTH
1E	100.4'	1W	122.3'	1B	83'	5E&W	126.3'
2E	125'	2W	137.5'	2B	128.5'	6E&W	70'
3E	86'	3W	91.5'	3B	125.9'	7E&W	108.4'
4E	108.7'	4W	69.3'			10E&W	75'
8E	139.1'	8W	141.1'				
9E	95'	9W	93'				

\* MEASURED ALONG BASELINE



SEAL EXPANSION JOINT & PATCHING DETAIL  
(NORTH ABUTMENT SHOWN ~ SOUTH ABUTMENT SIMILAR EXCEPT AS SHOWN)

FOR DRAINAGE PIPING MODIFICATION LEGEND AND NOTES SEE SHT. 1/16

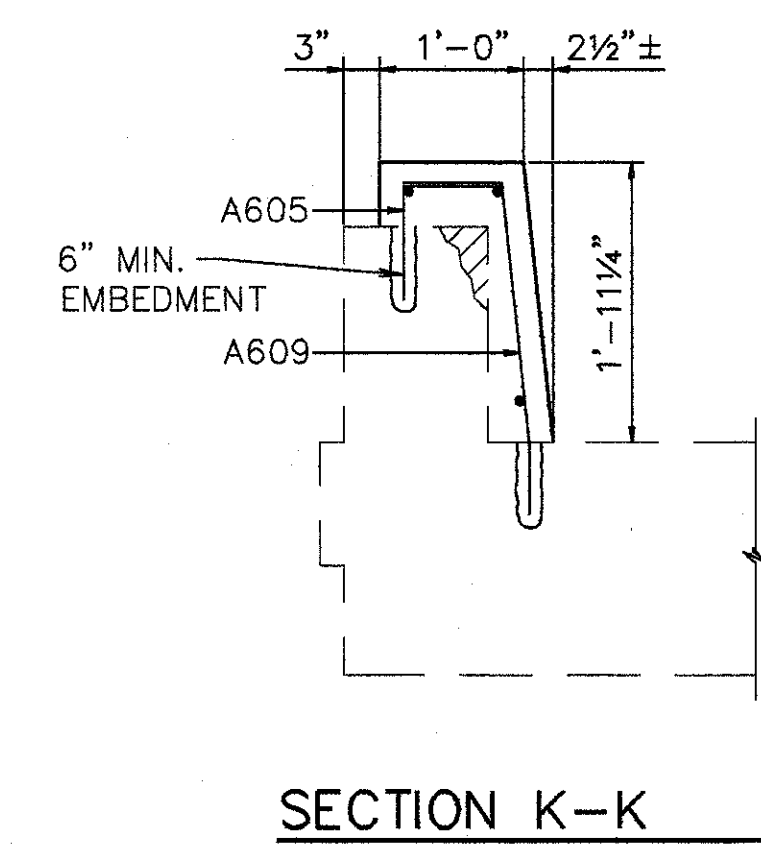
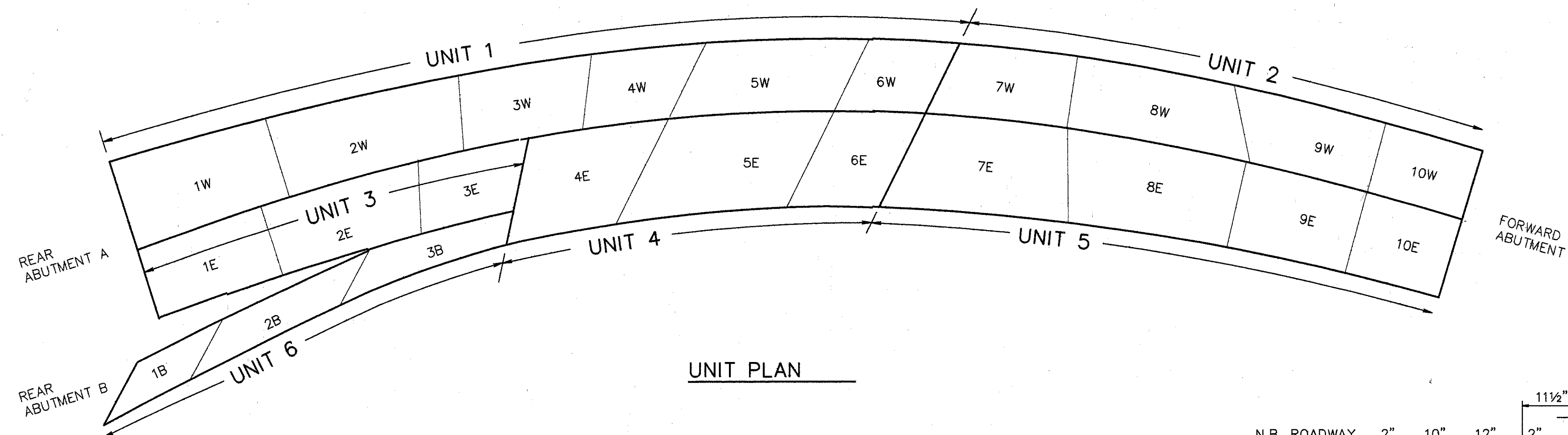
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 DAYTON, OHIO 45402-1226  
 (513) 461-5660

GENERAL PLAN

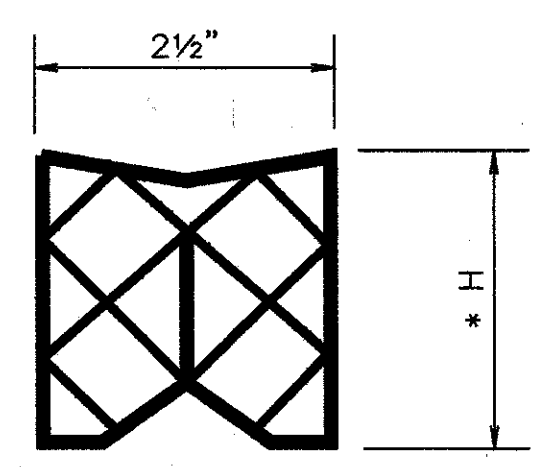
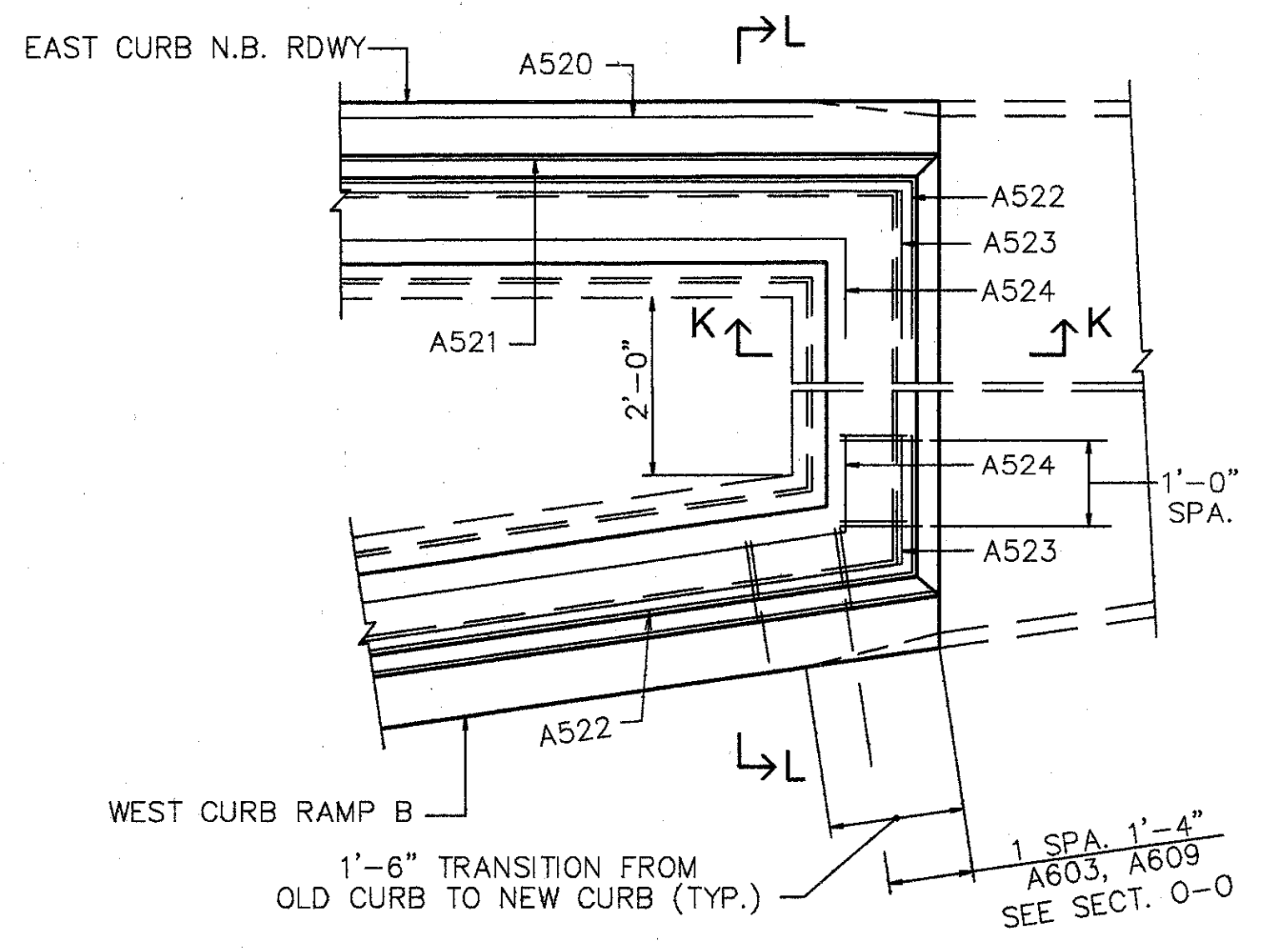
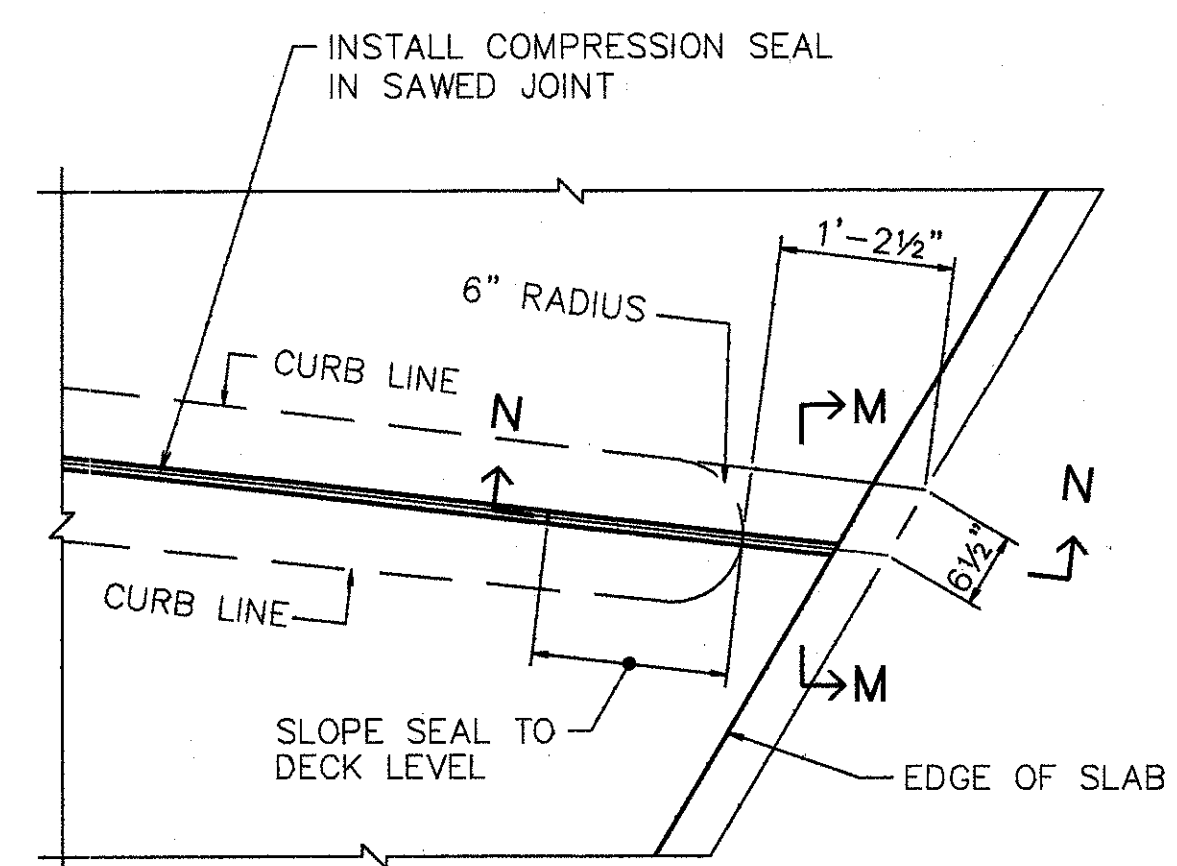
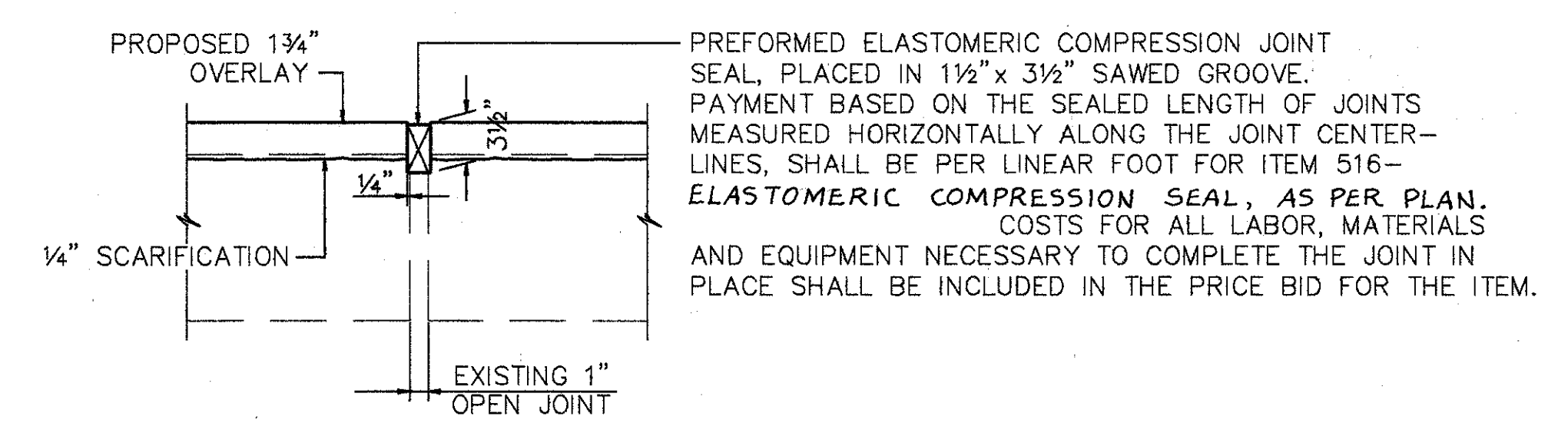
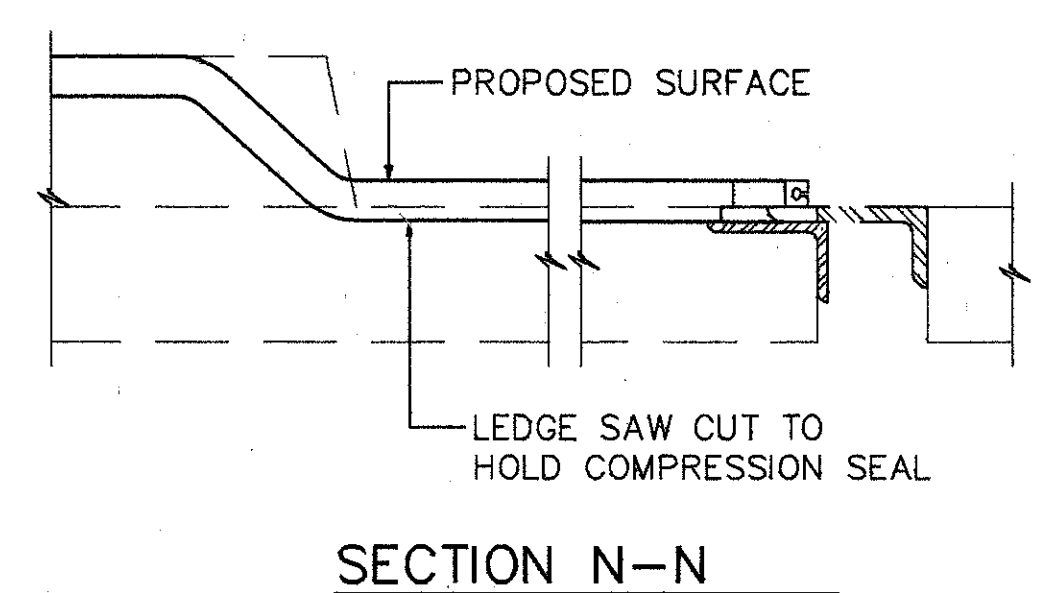
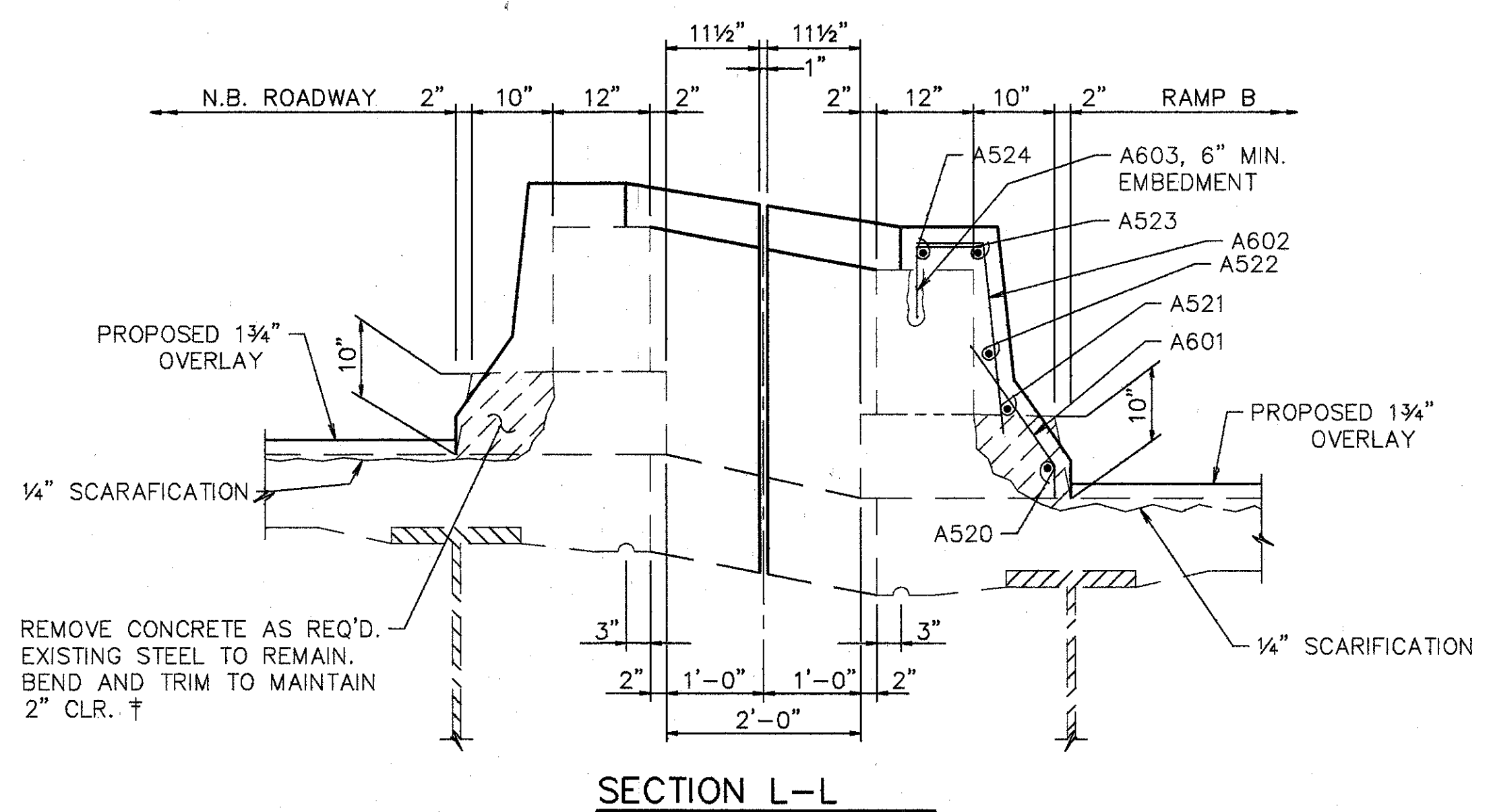
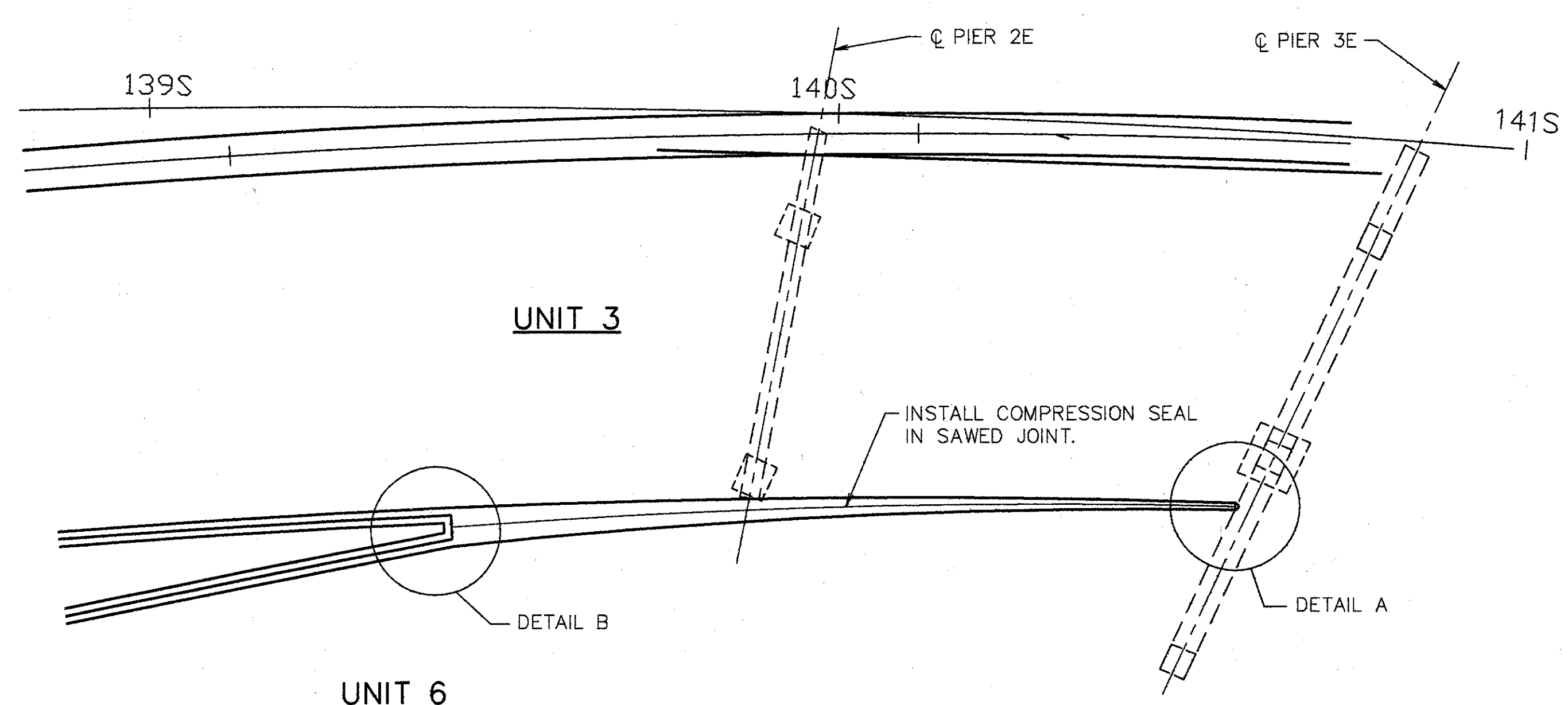
BRIDGE NO. HAM-71-0154  
OVER S.B. 471

HAMILTON COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
L.A.T.M.	D.E.E.		M.A.A.	D.E.M.	11/94	



† BARS SHALL REMAIN. CONTRACTOR SHALL EXERCISE CAUTION TO ENSURE THAT THESE BARS ARE NOT DAMAGED DURING THE CONCRETE REMOVAL OPERATION. ANY BARS DAMAGED AS A RESULT OF THE CONTRACTOR'S OPERATION, SHALL BE REPLACED OR REPAIRED BY THE CONTRACTOR AT HIS EXPENSE. METHOD OF REPAIR OR REPLACEMENT WILL BE AT THE DISCRETION OF THE DIRECTOR.



**NOTES**

WATSON BOWMAN'S WJ-250, D.S. BROWN'S CV-2502, ELASTOMER SEALS, INC.'S SM-2500, OR AN APPROVED ALTERNATE.

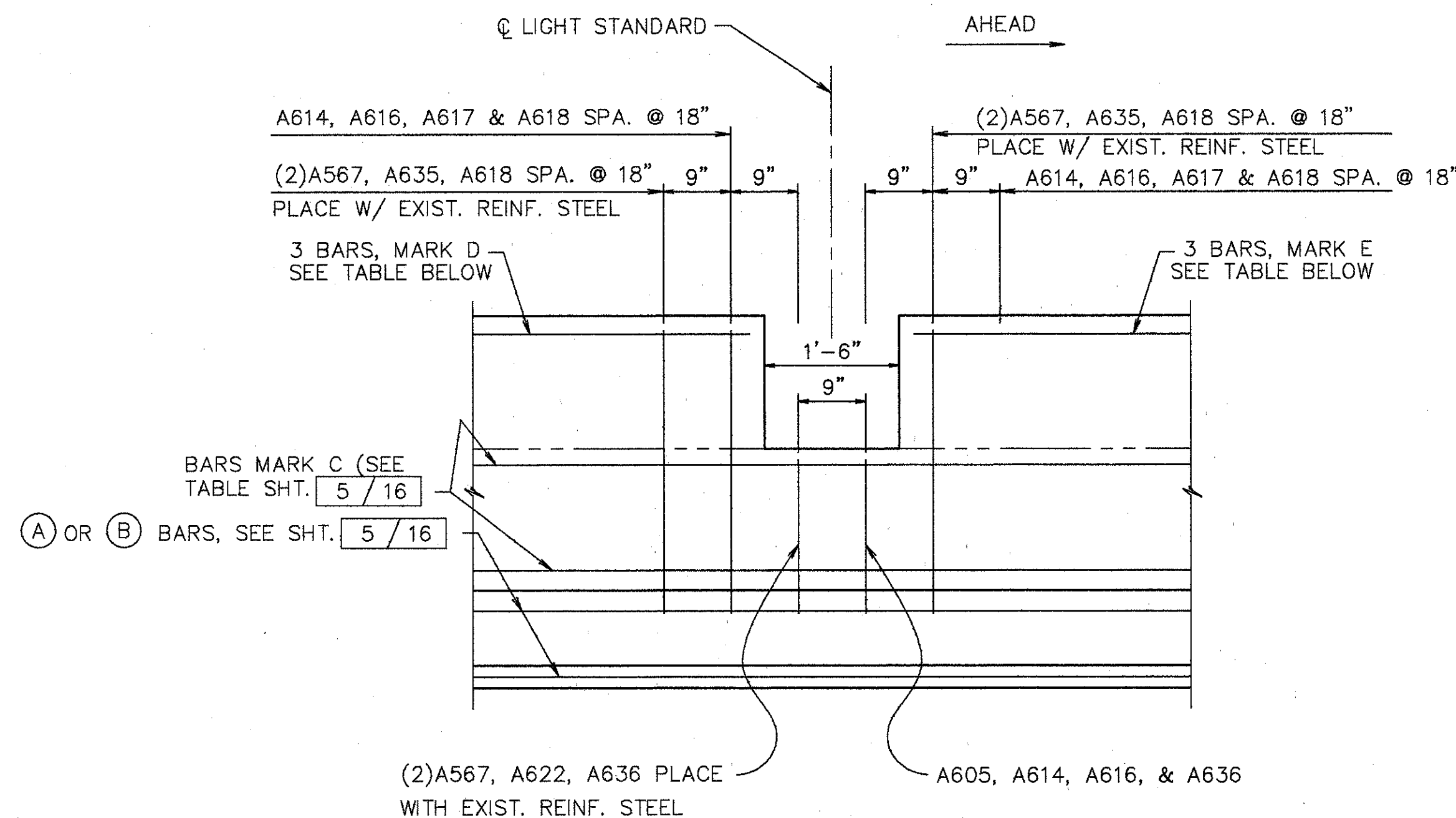
PLACEMENT OF COMPRESSION SEAL SHALL BE ACCORDING TO SECTION 451.13 & SHALL MEET REQUIREMENTS OF 705.11.

\* SEE MANUFACTURER'S CATALOG

	<b>WOOLPERT CONSULTANTS</b>			3/16
	409 E. MONUMENT AVENUE DAYTON, OHIO 45402-1228 (513) 461-5660			
	<b>CURB SECTIONS</b>			
	BRIDGE NO. HAM-71-0154 OVER S.B. 471			

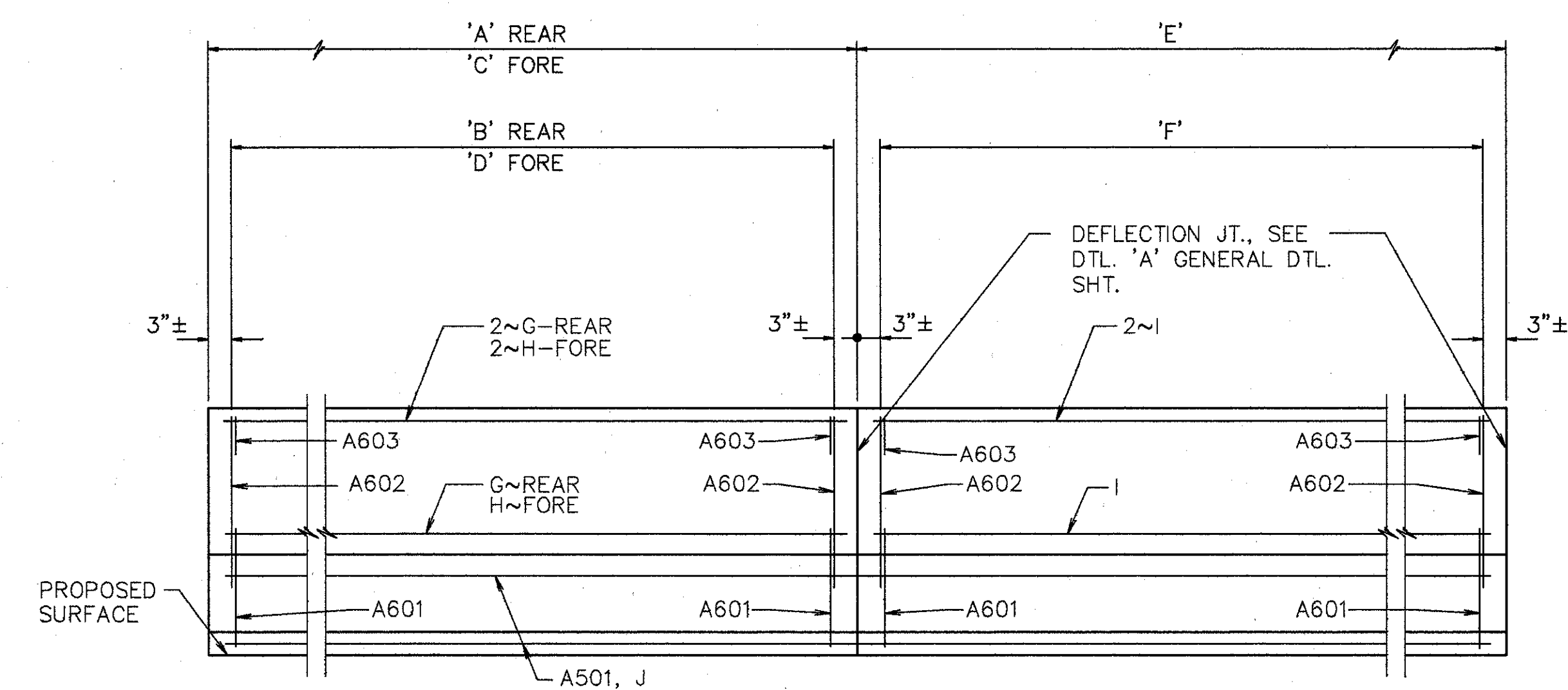
HAMILTON COUNTY					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
L.A.T.M.	D.E.E.		M.A.A.	D.E.M1/11/94	





ELEVATION SUPERSTRUCTURE PARAPET AT LIGHT STANDARD

STA. @ Q LAMP POST	PANEL TYPE	BAR MARK	
		D	E
141+28	Q	A569	A570
143+56	D	A571	A572
145+84	Q	A573	A574
148+12	P	A575	A575



ELEVATION SUPERSTRUCTURE PARAPET

LOCATION	REAR	FORE	INT	MARK			
	A	C	E	G	H	I	J
	B	D	F				
UNIT 1~LEFT WALL	15'-10 1/2" 13 SPA. @ 1'-2 1/4"	14'-4 7/8" 12 SPA. @ 1'-2"	37~17'-0" 14 SPA. @ 1'-2 1/4"	A505	A506	A504	A502
UNIT 2~LEFT WALL	14'-3 3/4" 12 SPA. @ 1'-1 3/4"	16'-0" 13 SPA. @ 1'-2 1/4"	22~17'-2" 14 SPA. @ 1'-2 1/4"	A506	A503	A507	A503
UNIT 3~RIGHT WALL	25'-2 7/8" 20 SPA. @ 1'-2 3/4"	15'-6" 13 SPA. @ 1'-1 3/4"	7~18'-0" 15 SPA. @ 1'-2"	A526	A524 FF A523 NF A522 NF LOW	A525	A520
UNIT 4~RIGHT WALL	14'-5 5/8" 12 SPA. @ 1'-2"	14'-5 5/8" 12 SPA. @ 1'-2"	15~17'-3" 14 SPA. @ 1'-2 1/2"	A506	A506	A507	A509
UNIT 5~RIGHT WALL	14'-6 3/8" 12 SPA. @ 1'-2"	16'-2 5/8" 13 SPA. @ 1'-2 1/2"	23~17'-5 1/2" 14 SPA. @ 1'-2 1/2"	A506	A503	A514	A510
UNIT 6~RIGHT RAMP WALL	23'-0" 19 SPA. @ 1'-2 1/4"	23'-3" 19 SPA. @ 1'-2 1/2"	17~17'-7" 14 SPA. @ 1'-2 3/4"	A512	A513	A511	A508
UNIT 6~LEFT RAMP WALL	27'-2" 22 SPA. @ 1'-2 1/2"	15'-5 3/4" 13 SPA. @ 1'-1 3/4"	9~17'-9" 14 SPA. @ 1'-2 3/4"	A512 FF A519 NF A519 NF LOW	A524 FF A523 NF A522 NF LOW	A511	A509

- NOTES:
- RF DENOTES RIGHT FORWARD
  - LF DENOTES LEFT FORWARD
  - RR DENOTES RIGHT REAR
  - LR DENOTES LEFT REAR
  - NF DENOTES NEAR FACE
  - FF DENOTES FAR FACE
  - RM DENOTES REAR MEDIAN
  - FM DENOTES FORWARD MEDIAN
  - R DENOTES RIGHT SIDE
  - L DENOTES LEFT SIDE
  - M DENOTES MEDIAN

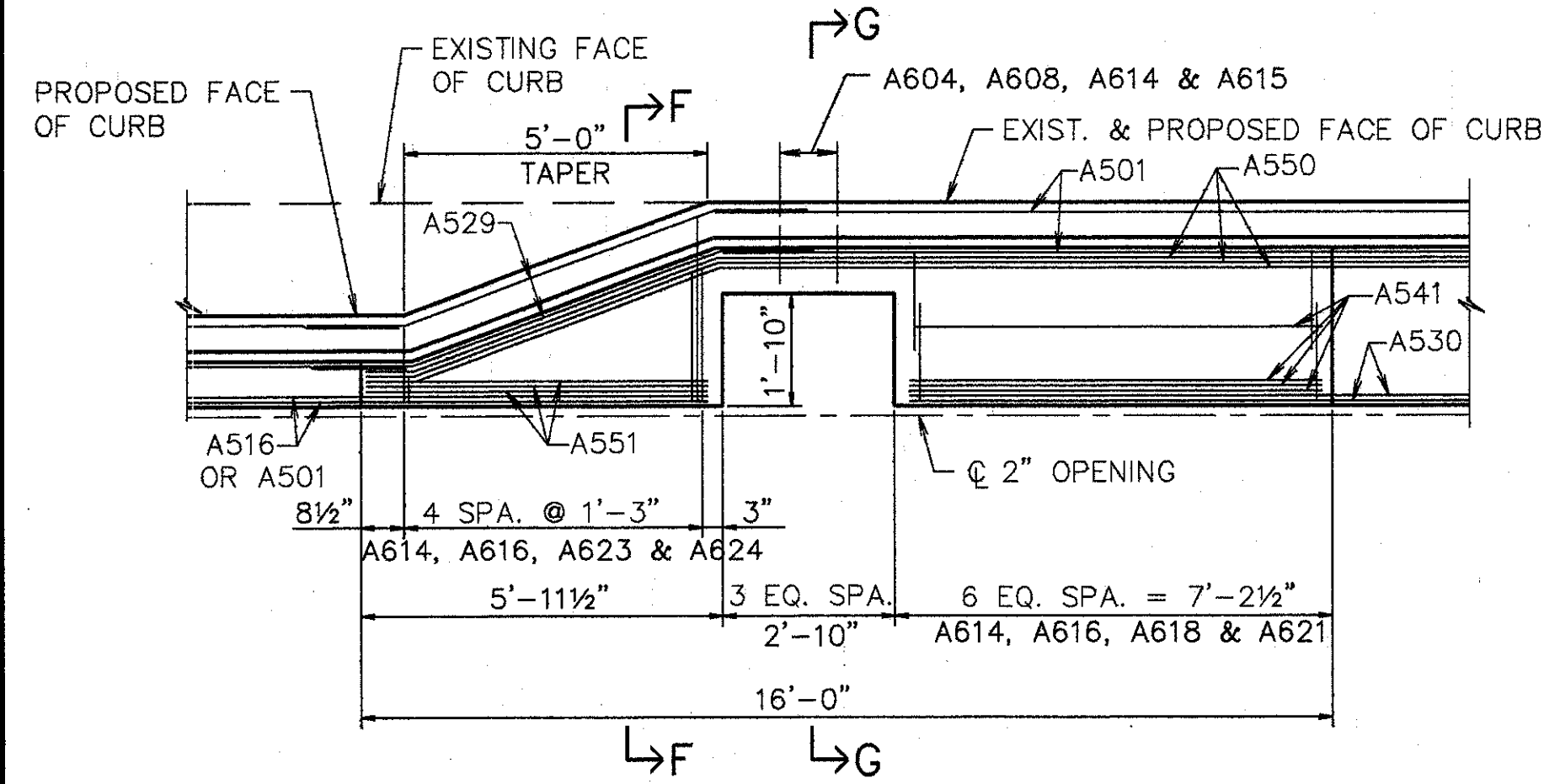
**WOOLPERT CONSULTANTS**  
 409 E. MONUMENT AVENUE  
 DAYTON, OHIO 45402-1226  
 (513) 461-5660

PARAPET ELEVATIONS  
 AND CURB SECTIONS  
 BRIDGE NO. HAM-71-0154  
 OVER S.B. 471  
 HAMILTON COUNTY

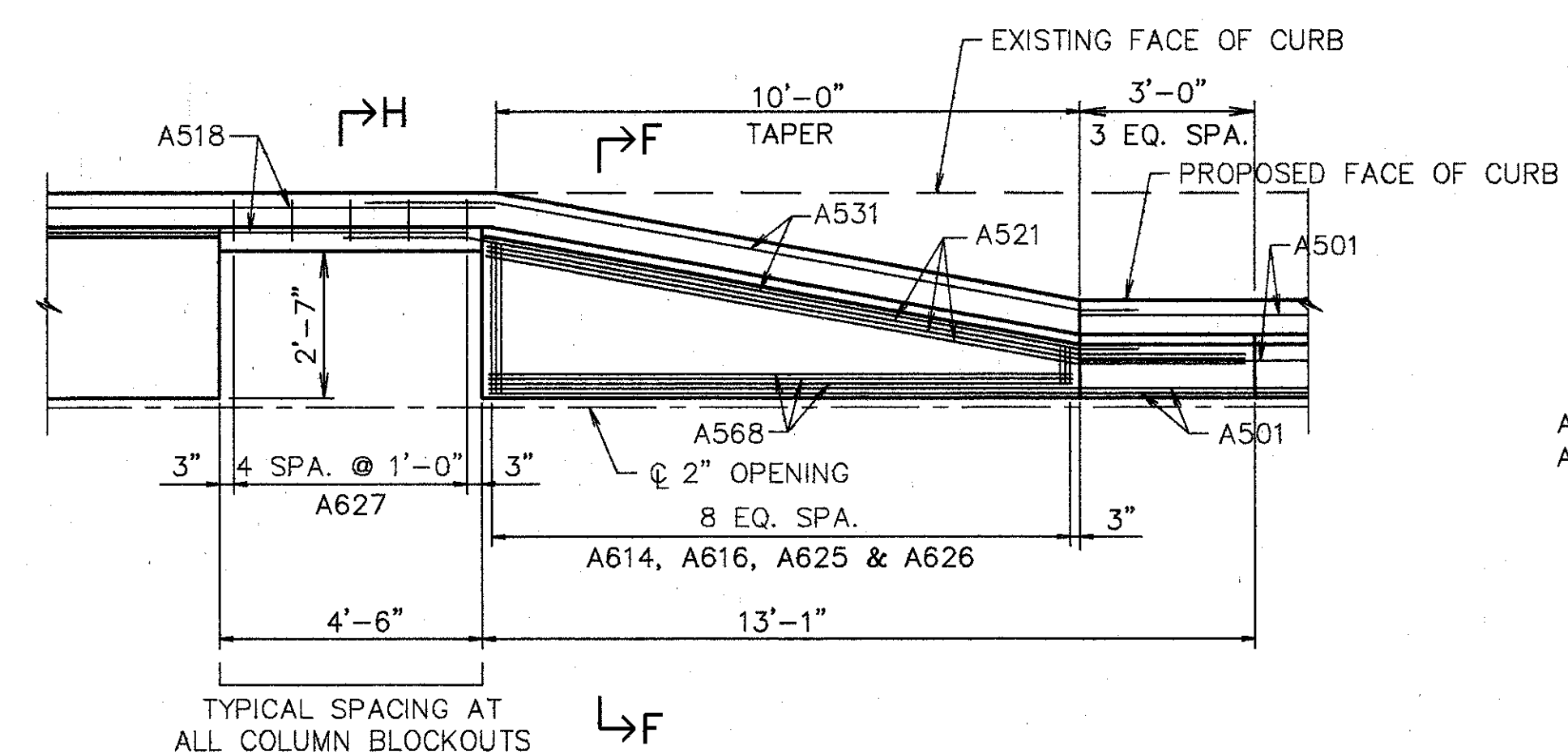
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L.A.T.M.	D.E.E.		M.A.A.	D.E.M1/11/94		



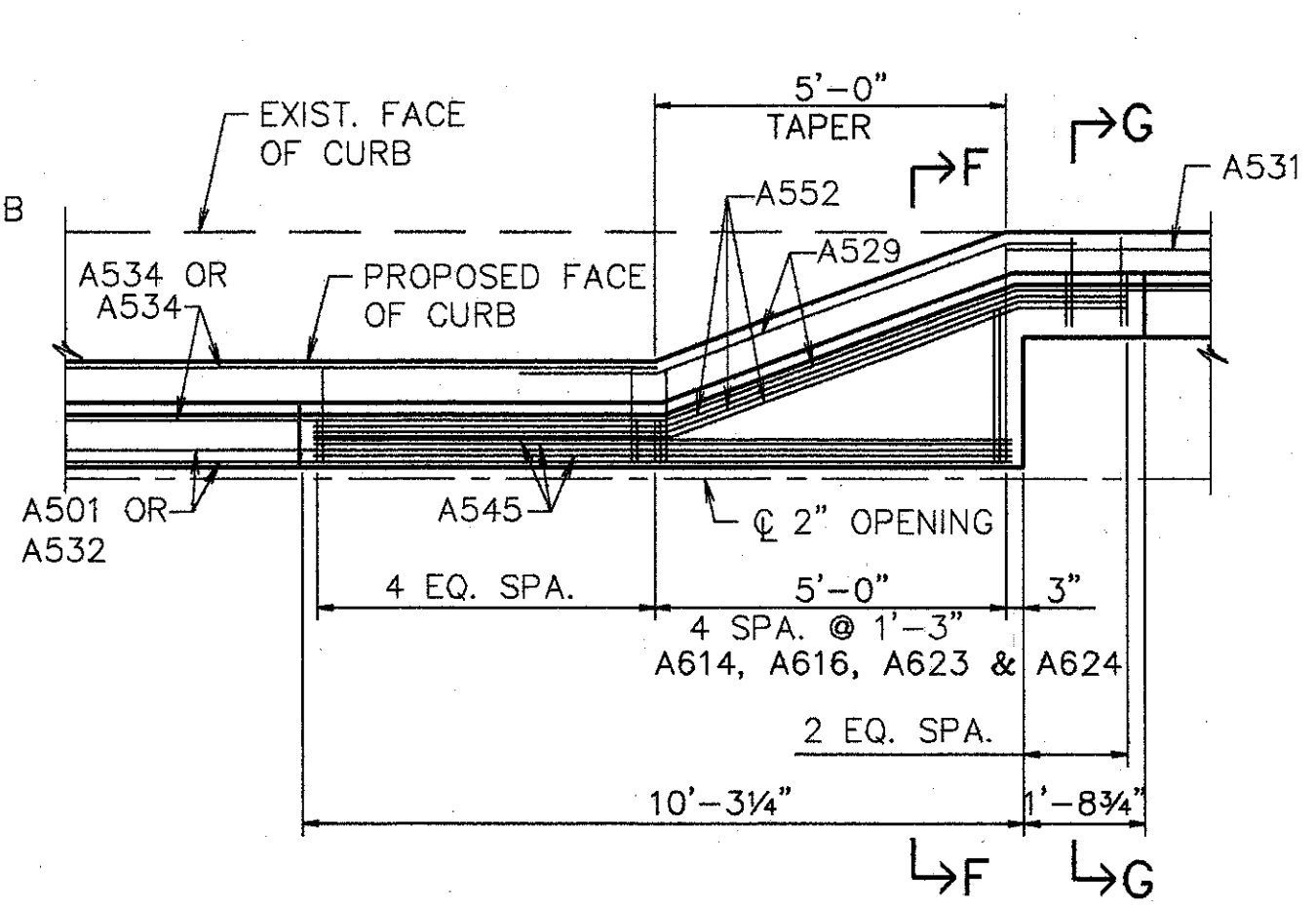




DETAIL QS1

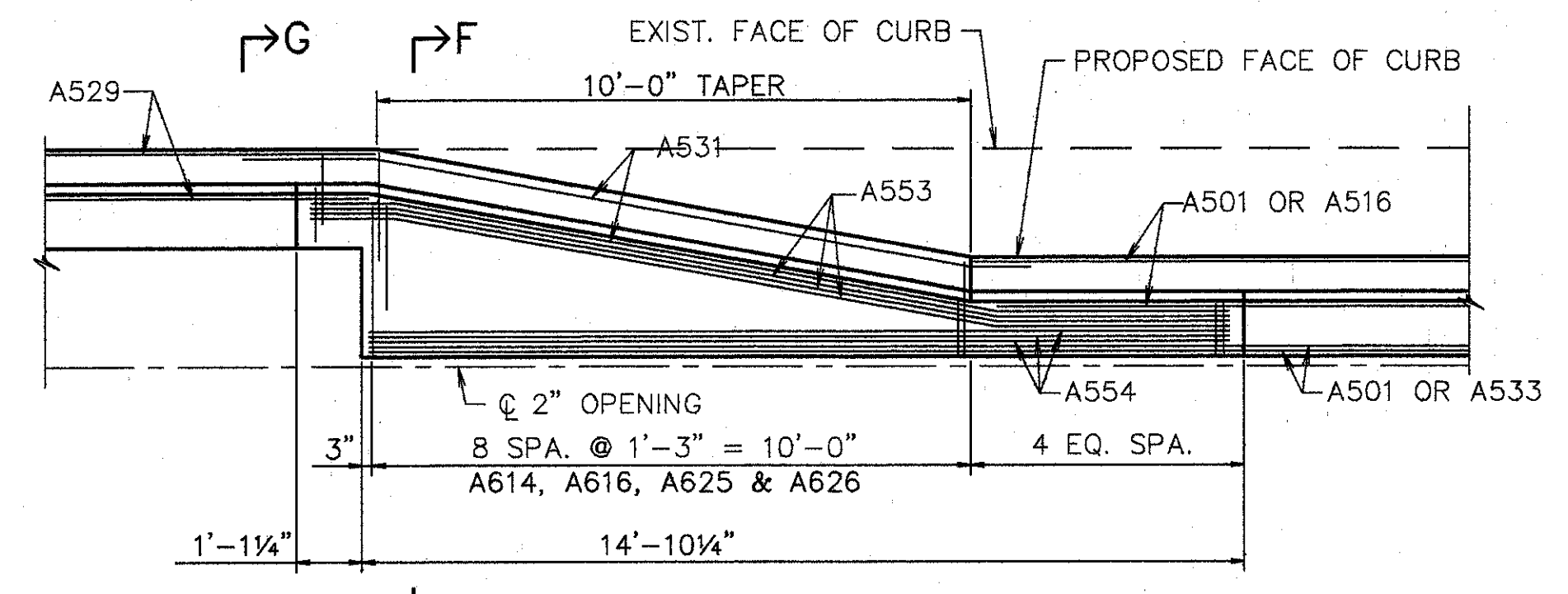


DETAIL KS1

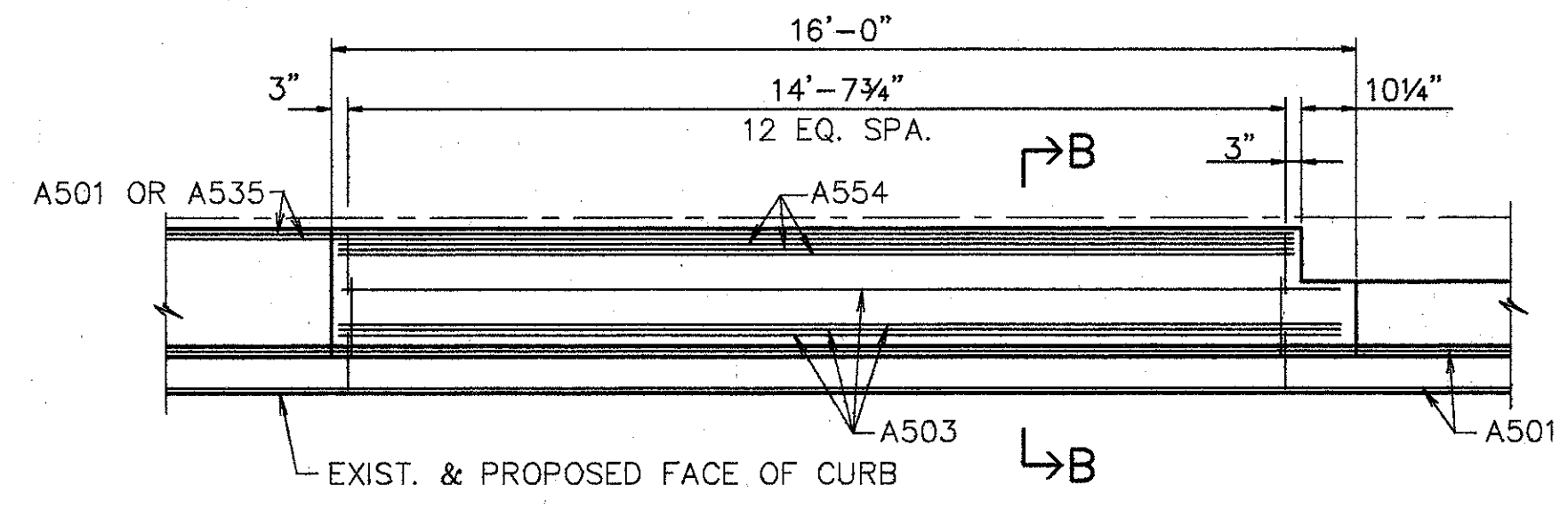


DETAIL MS1

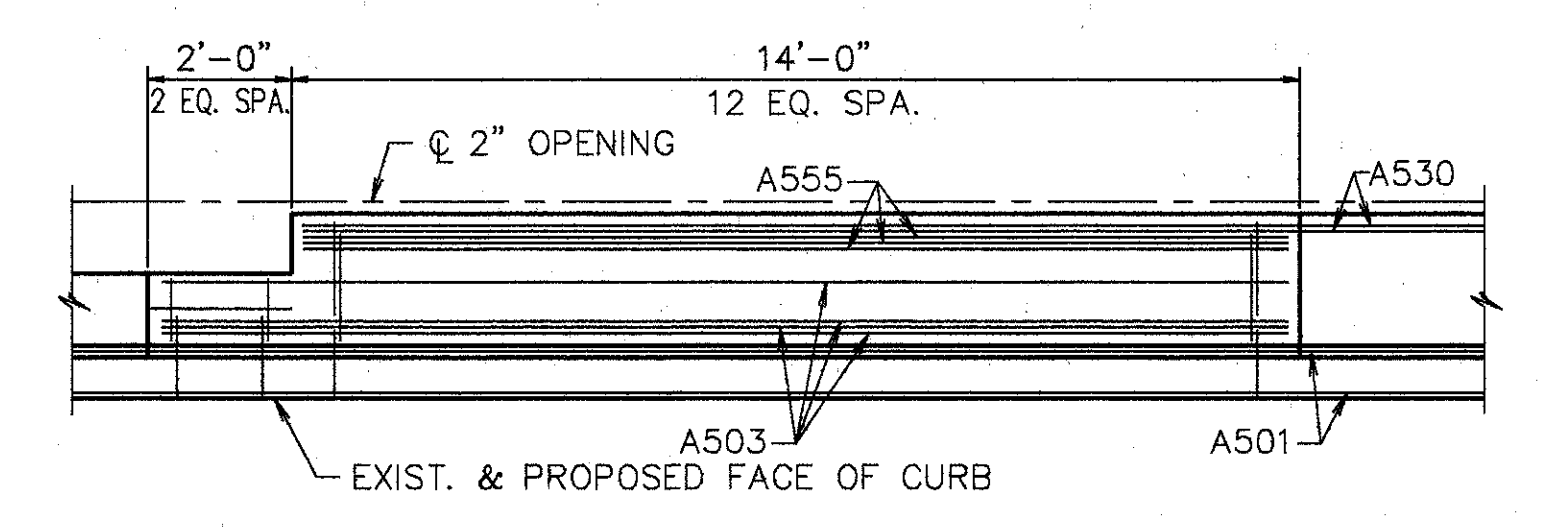
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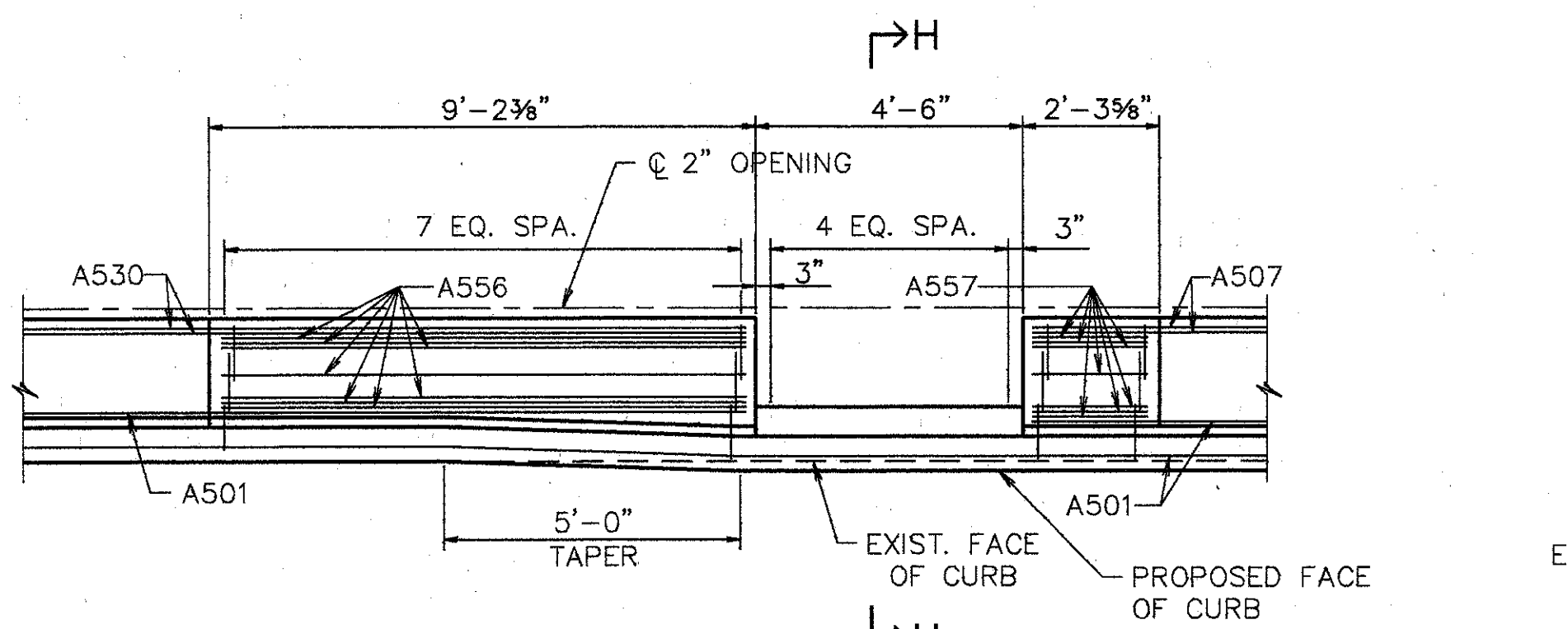
DETAIL QS2



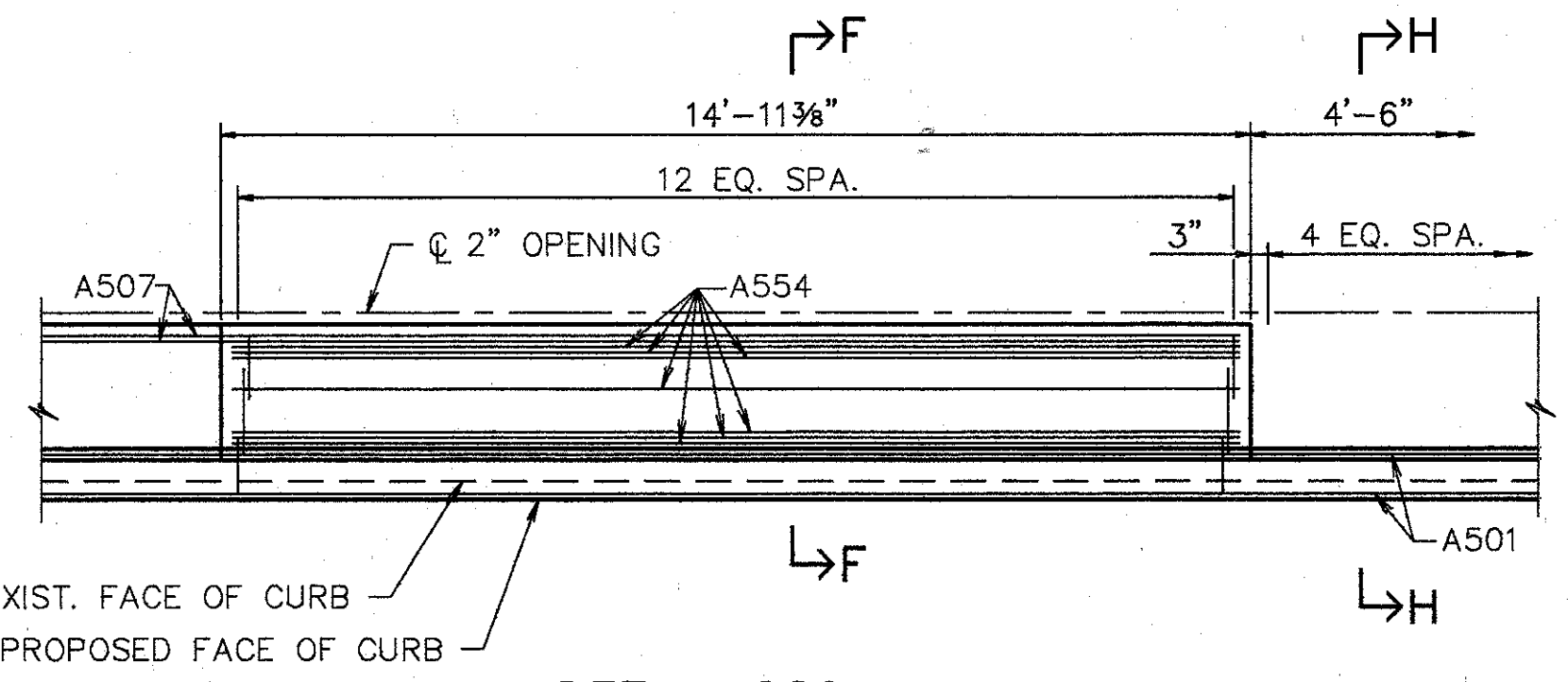
DETAIL QS3



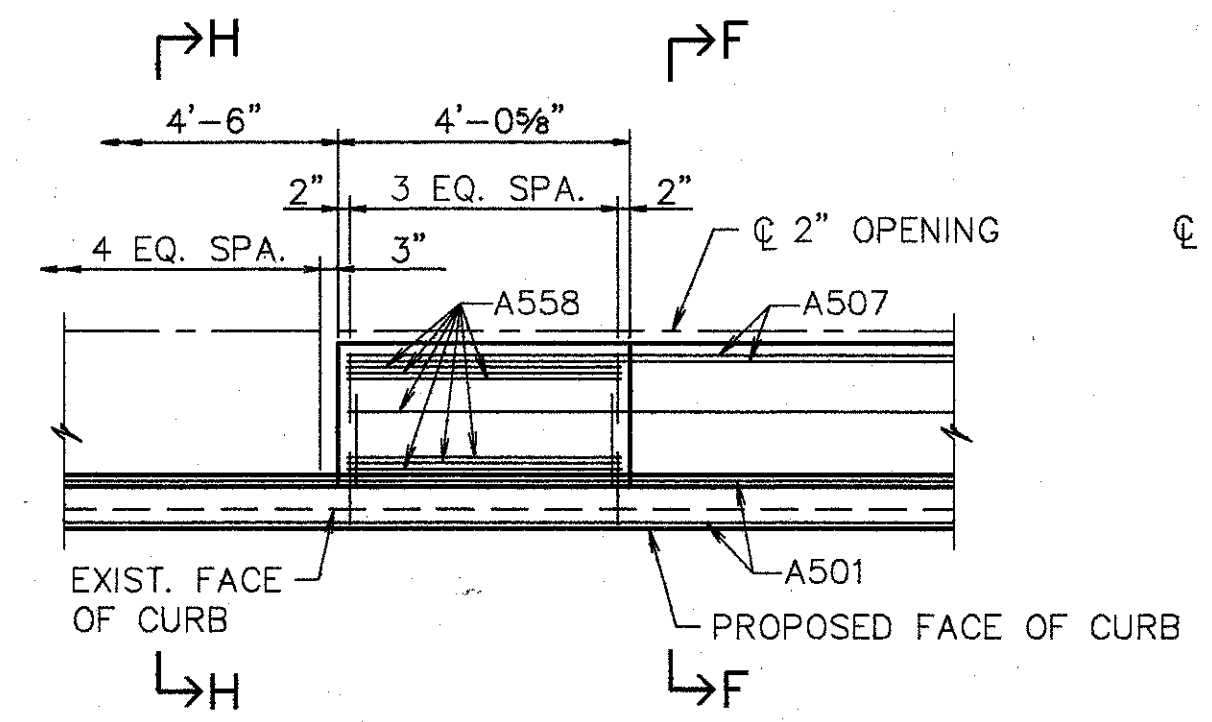
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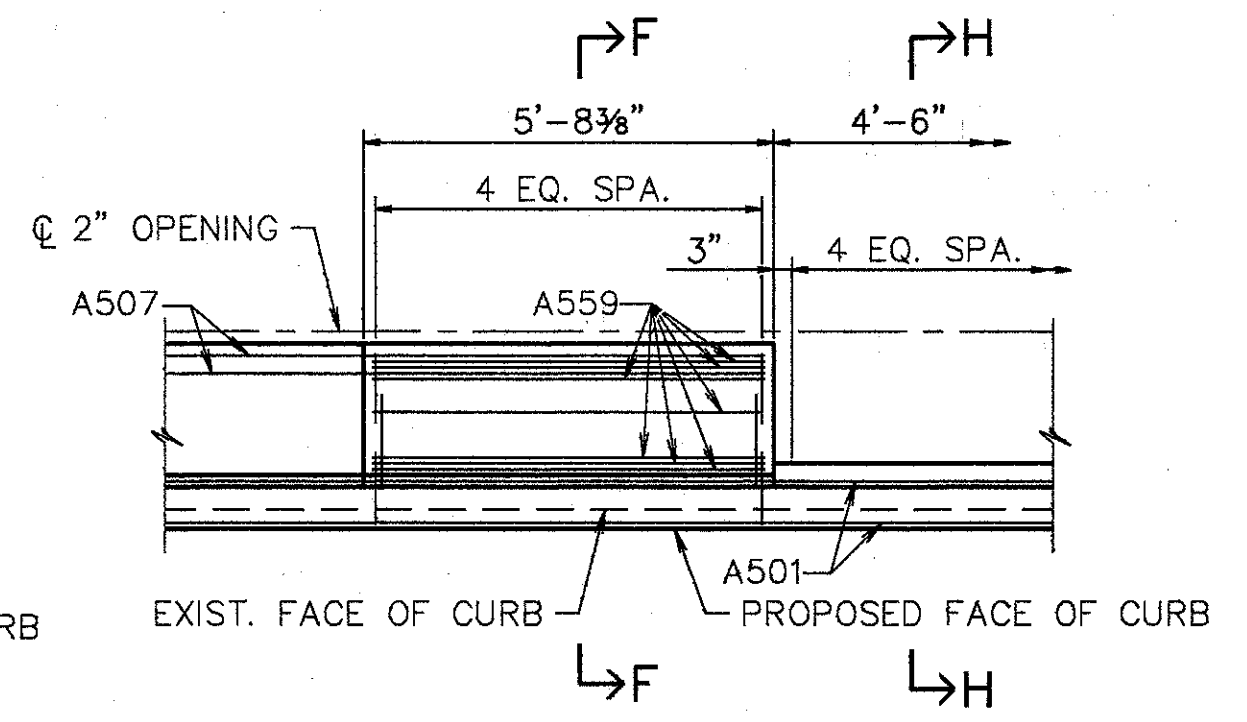
DETAIL QS5



DETAIL QS6



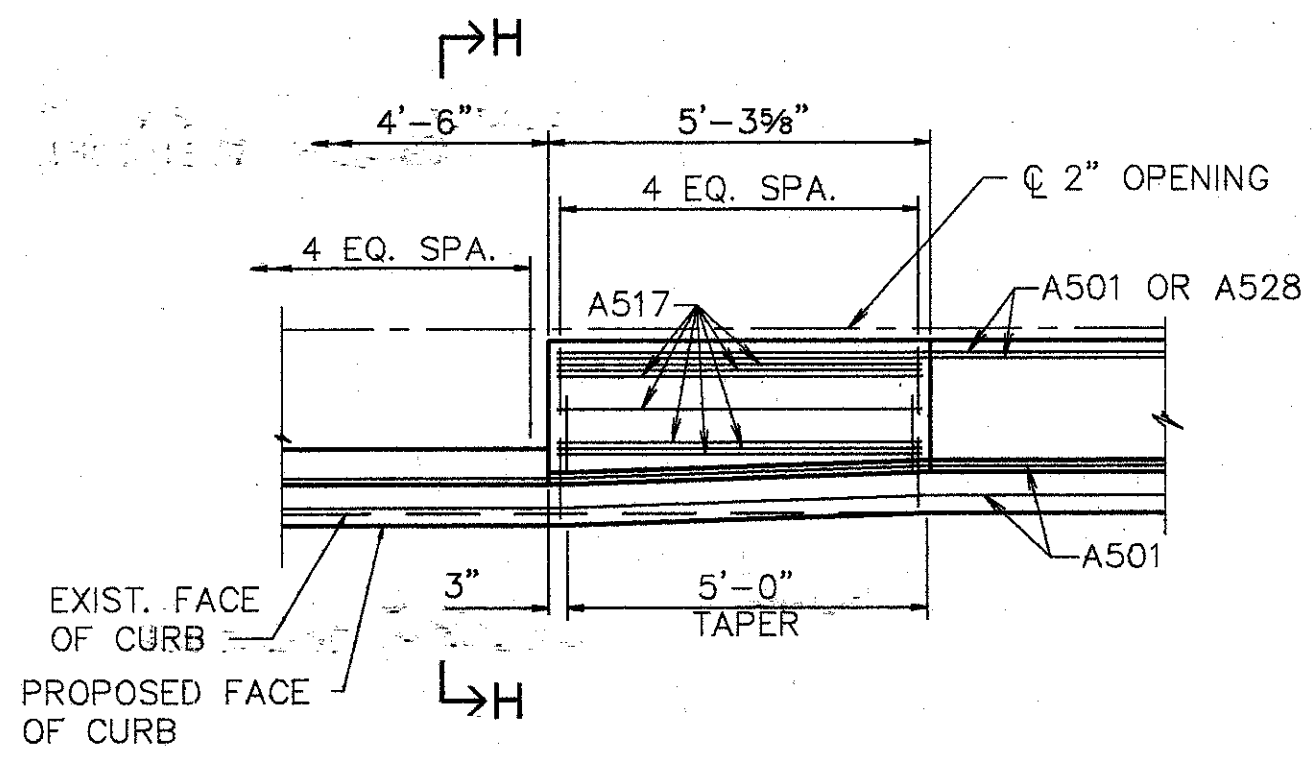
DETAIL GS1



DETAIL GS2

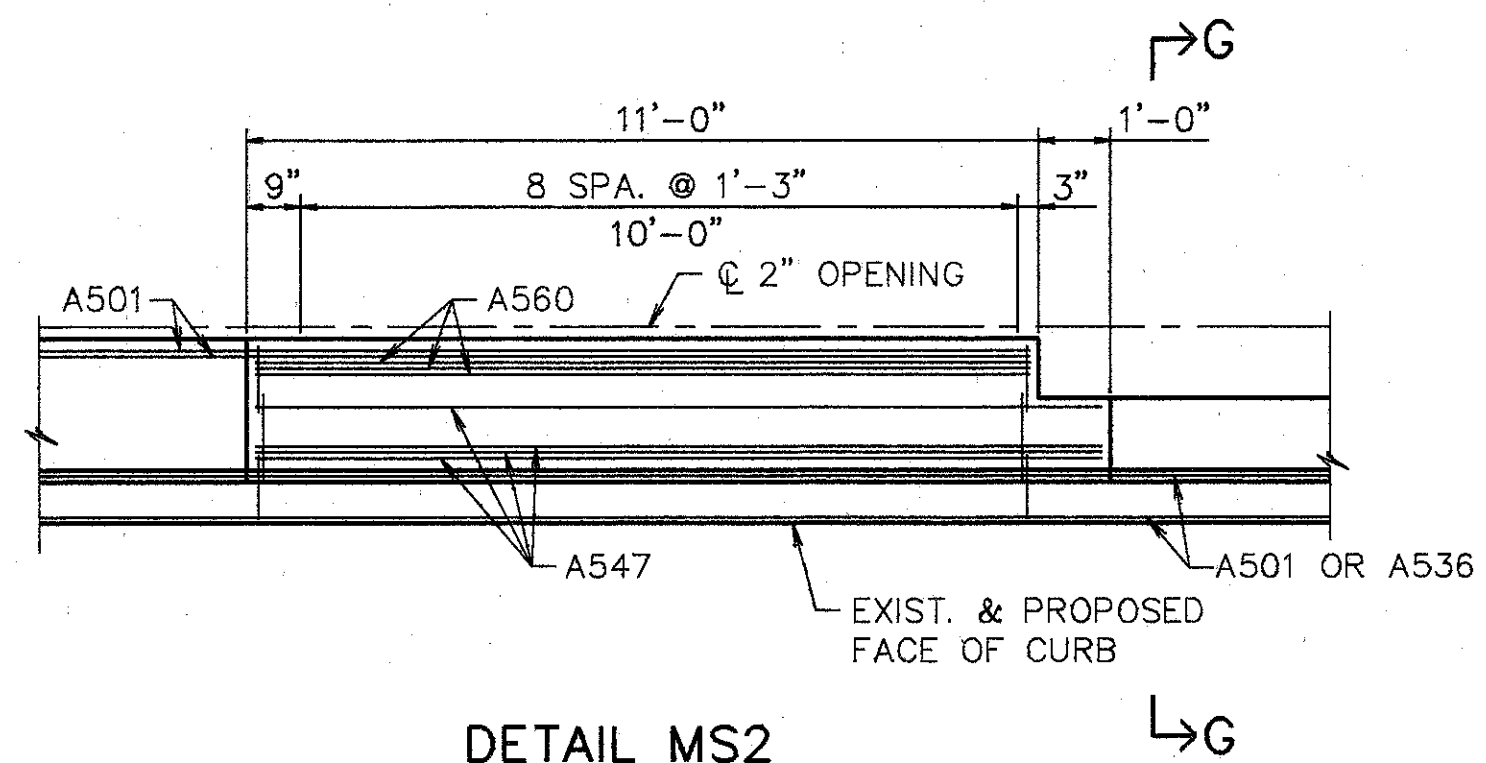
NOTE: STEEL TO BE BENT IN FIELD AS REQUIRED

NOTE: FOR SECTIONS SEE SHT. [11/16]

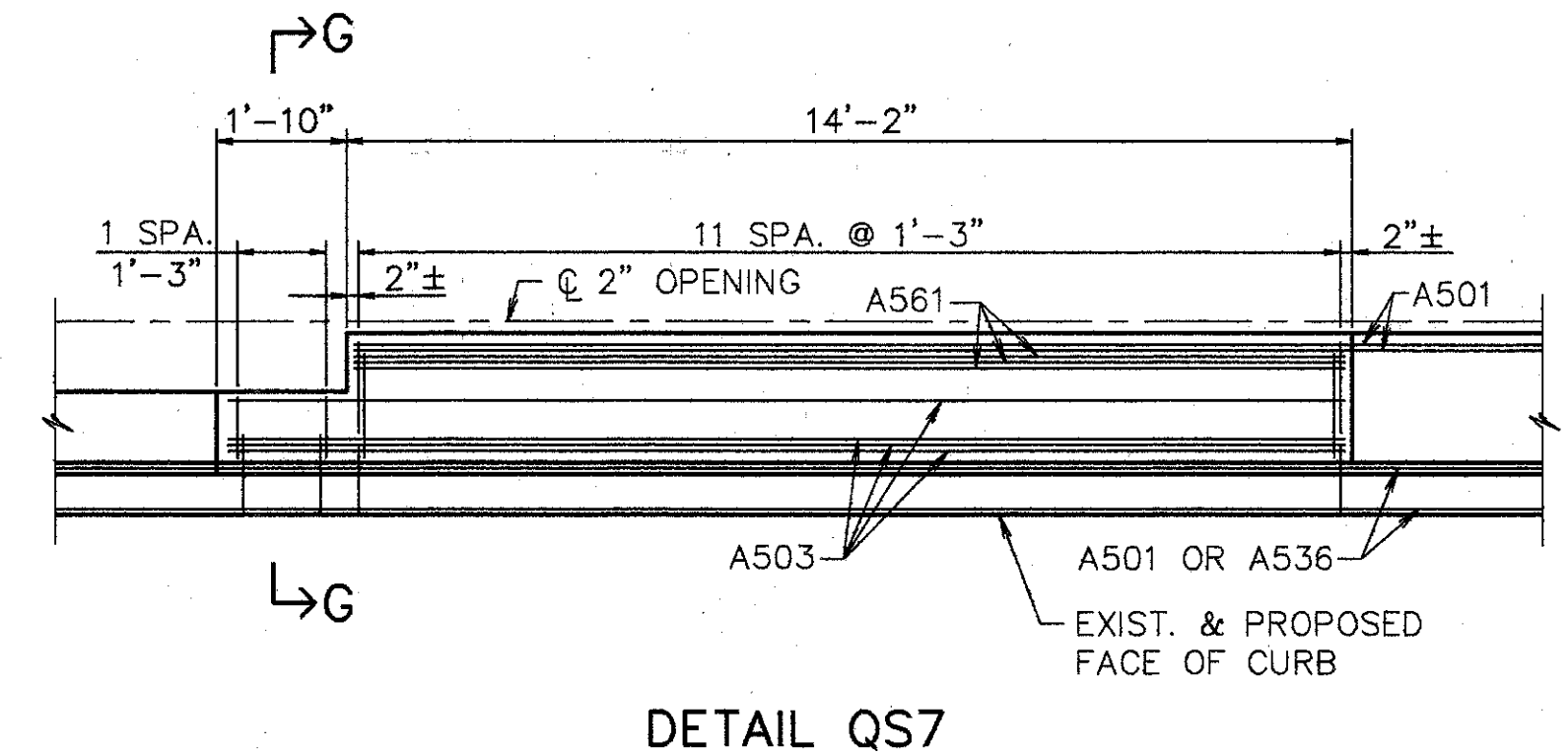


DETAIL HS1

NOTE: STEEL TO BE BENT IN FIELD AS REQUIRED



DETAIL MS2



DETAIL QS7

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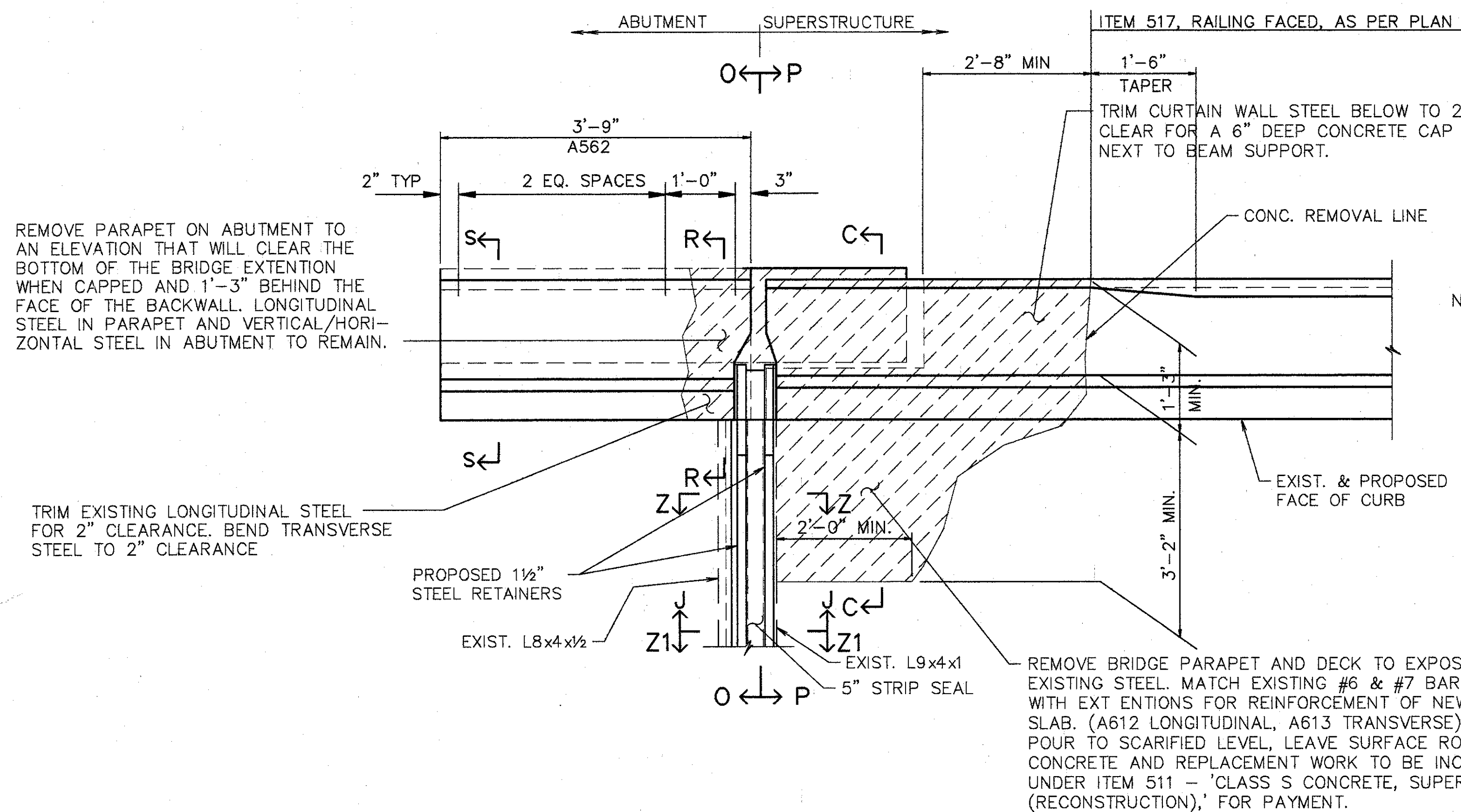
6/16

**MEDIAN DETAILS  
 PLAN VIEWS**

BRIDGE NO. HAM-71-0154  
 OVER S.B. 471

HAMILTON COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
L.A.T.M.	D.E.E.		M.A.A.	D.E.M.11/11/94		



PART - PLAN REAR ABUTMENT A (LEFT)

REMOVE PARAPET ON ABUTMENT TO AN ELEVATION THAT WILL CLEAR THE BOTTOM OF THE BRIDGE EXTENSION WHEN CAPPED AND 1'-3" BEHIND THE FACE OF THE BACKWALL. LONGITUDINAL STEEL IN PARAPET AND VERTICAL/HORIZONTAL STEEL IN ABUTMENT TO REMAIN.

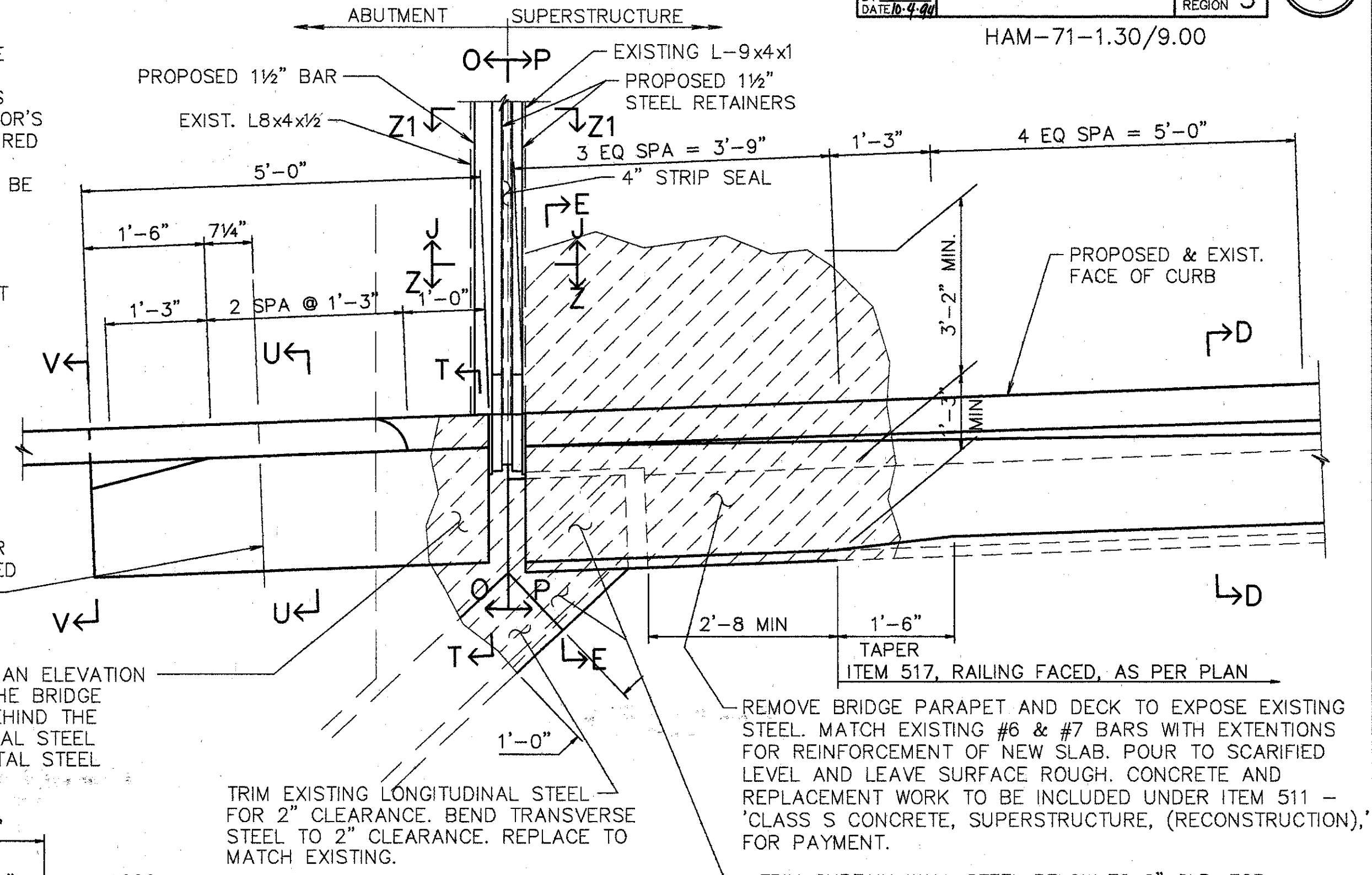
TRIM EXISTING LONGITUDINAL STEEL FOR 2" CLEARANCE. BEND TRANSVERSE STEEL TO 2" CLEARANCE

† BARS SHALL REMAIN. CONTRACTOR SHALL EXERCISE CAUTION TO ENSURE THAT THESE BARS ARE NOT DAMAGED DURING THE CONCRETE REMOVAL OPERATION. ANY BARS DAMAGED AS A RESULT OF THE CONTRACTOR'S OPERATION, SHALL BE REPLACED OR REPAIRED BY THE CONTRACTOR AT HIS EXPENSE. METHOD OF REPAIR OR REPLACEMENT WILL BE AT THE DISCRETION OF THE DIRECTOR.

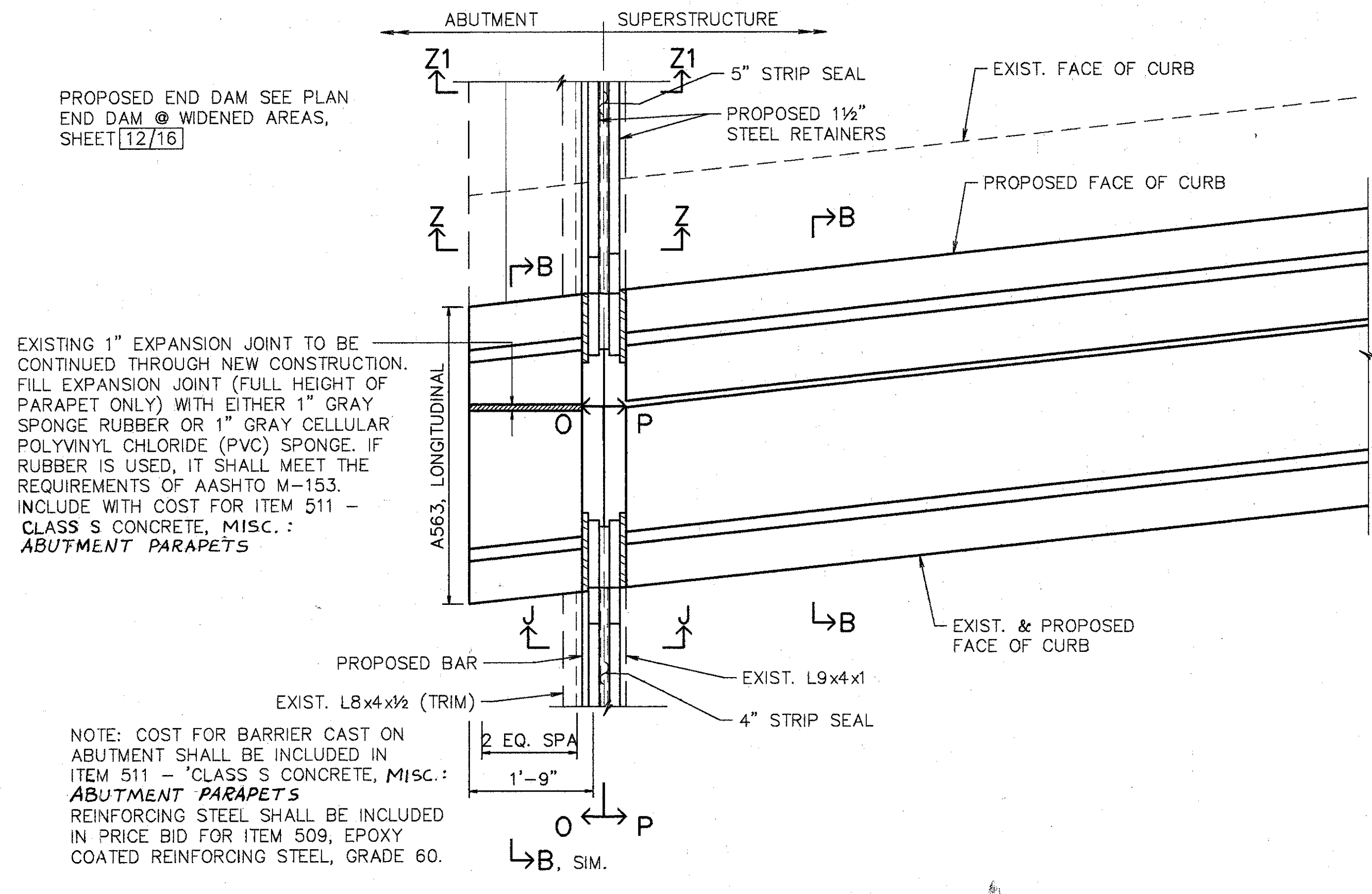
NOTE: COST TO REMOVE PORTIONS OF ABUTMENT AND SUPERSTRUCTURE TO BE INCLUDED IN PRICE BID FOR ITEM 202 - 'PORTION OF SUPERSTRUCTURE REMOVED.'

PROVIDE ANCHOR ASSEMBLIES FOR TYPE 'AT' OR 'AA' BRIDGE ASSEMBLIES AS PER STD. DWG. GR3. SEE ROADWAY DWGS. FOR TYPE LOCATION. PAYMENT TO BE INCLUDED WITH GUARDRAIL.

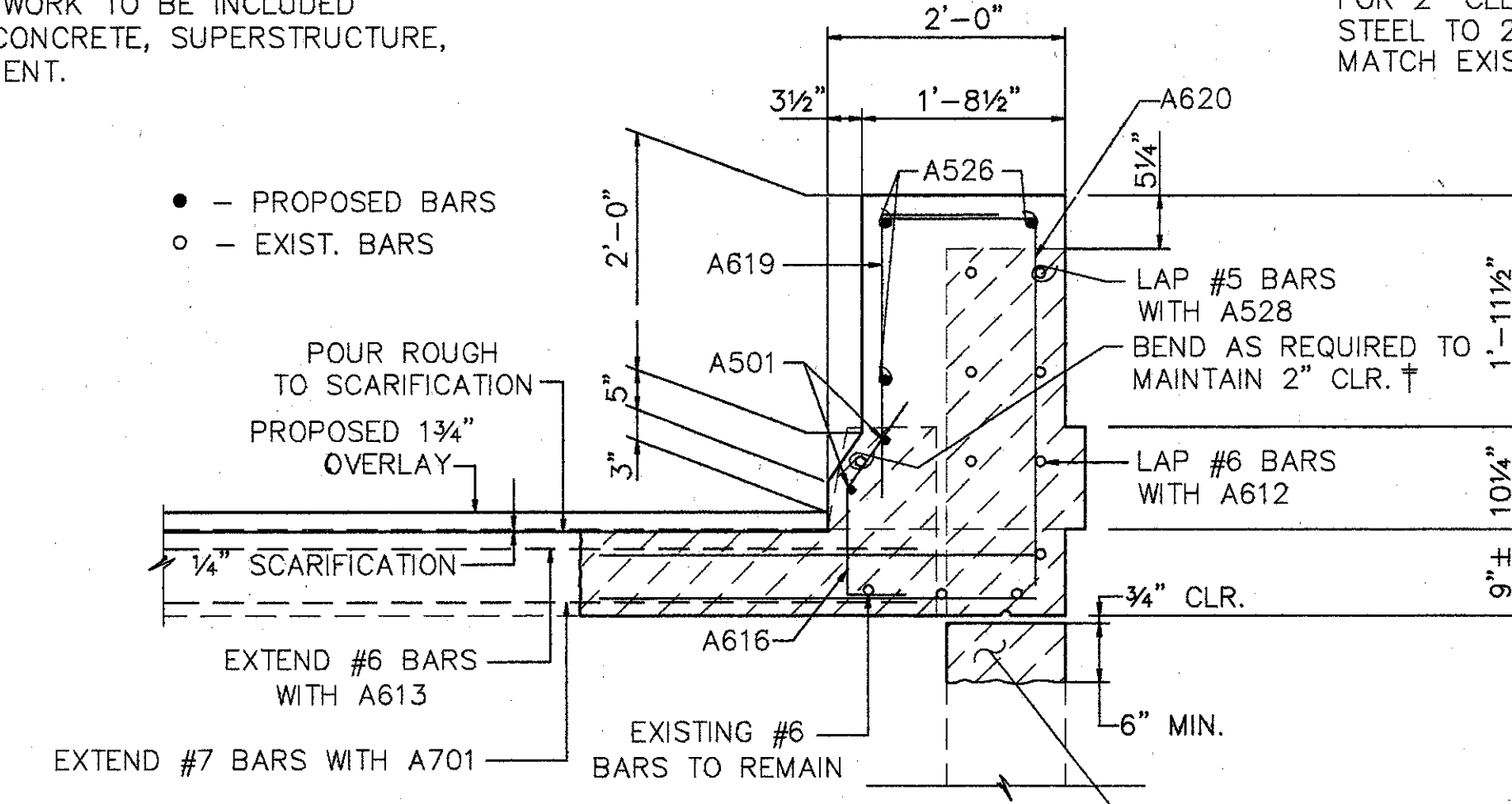
REMOVE PARAPET ON ABUTMENT TO AN ELEVATION THAT WILL CLEAR THE BOTTOM OF THE BRIDGE EXTENSION WHEN CAPPED AND 6" BEHIND THE FACE OF THE BACKWALL. LONGITUDINAL STEEL IN PARAPET AND VERTICAL/HORIZONTAL STEEL IN ABUTMENT TO REMAIN.



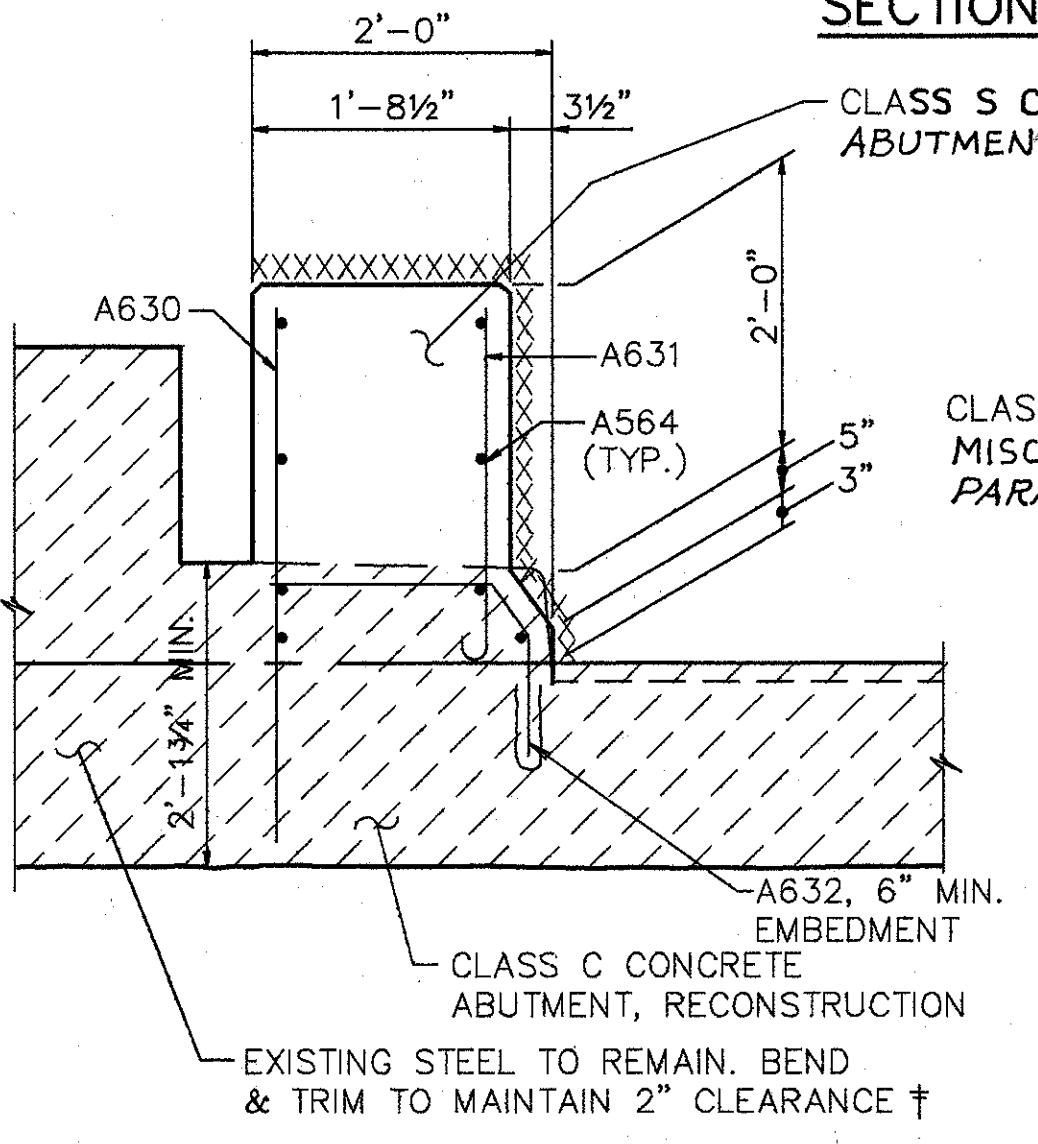
PART - PLAN REAR ABUTMENT A (RIGHT)



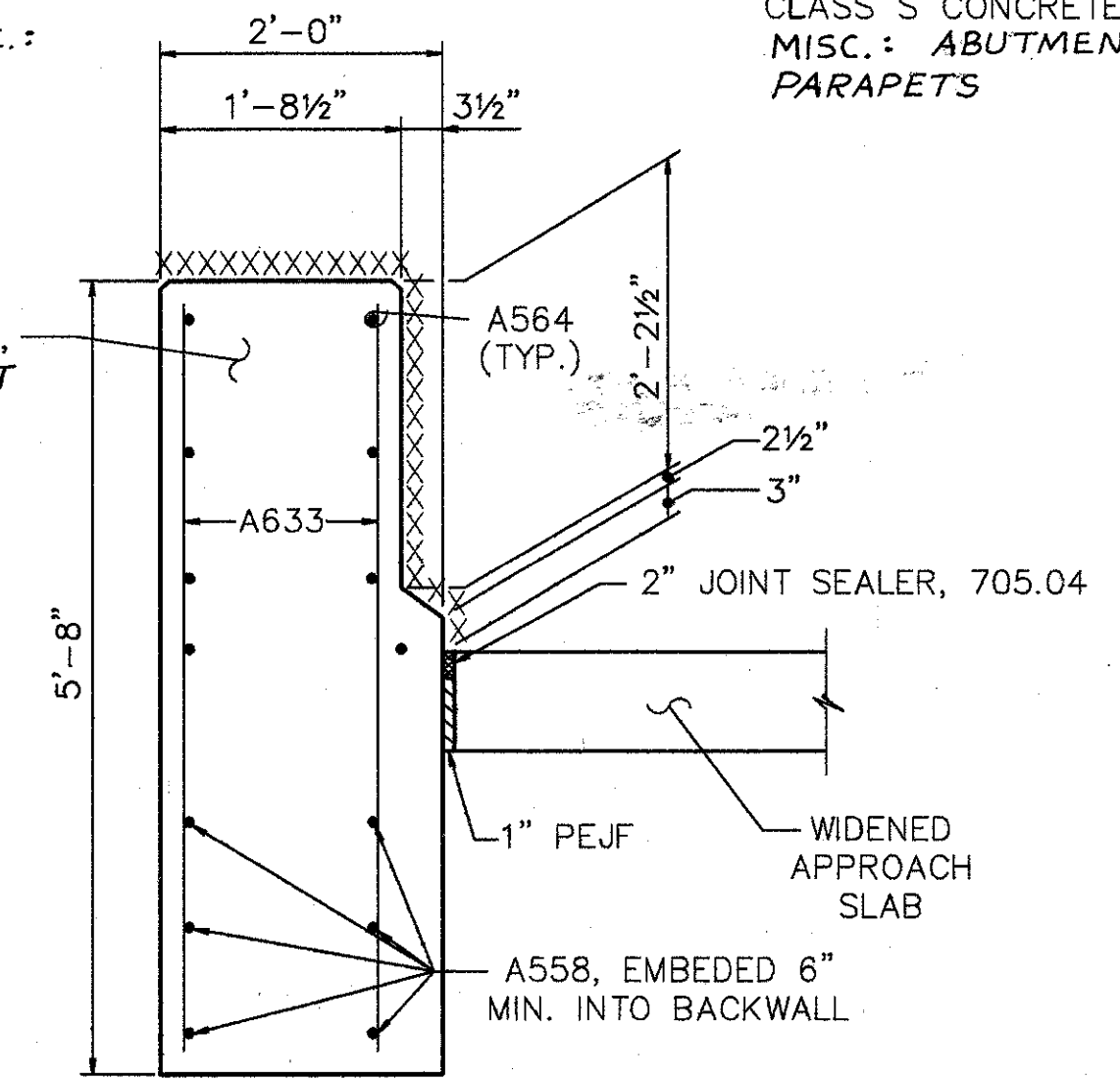
PART - PLAN REAR ABUTMENT A MEDIAN BARRIER



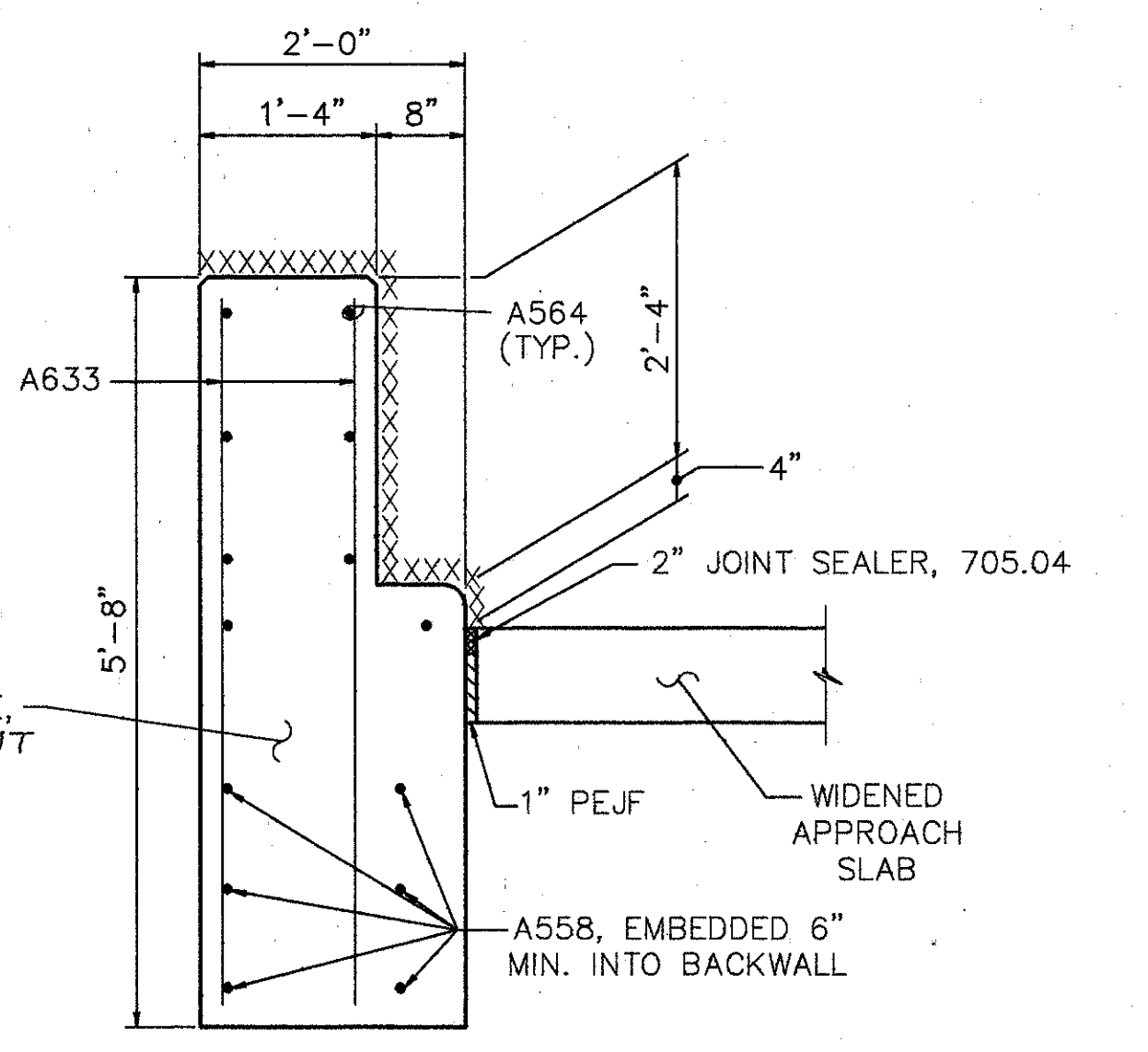
SECTION E-E



SECTION T-T



SECTION U-U



SECTION V-V

NOTE: FOR SECTIONS NOT SHOWN SEE SHT. 11&12/16

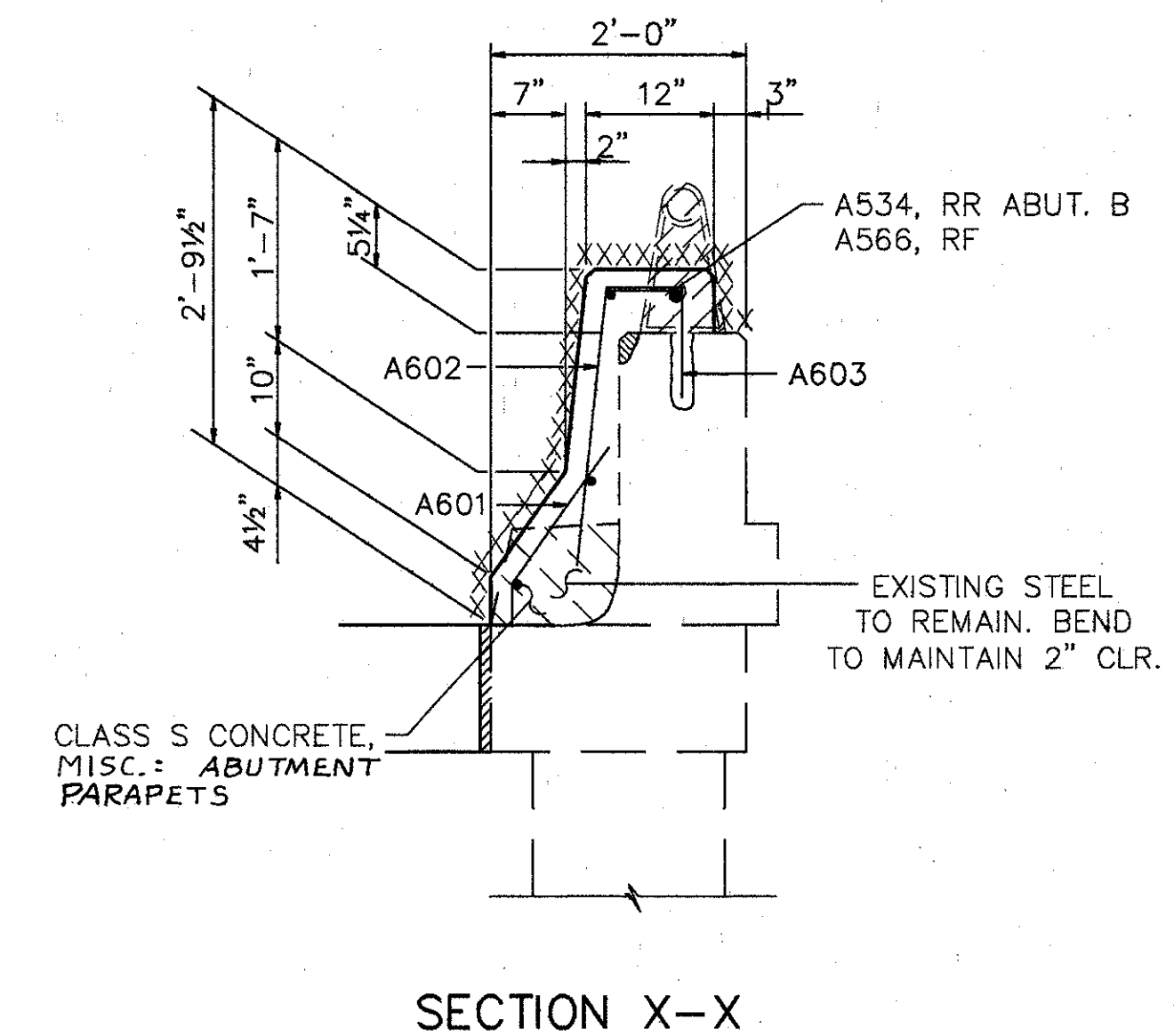
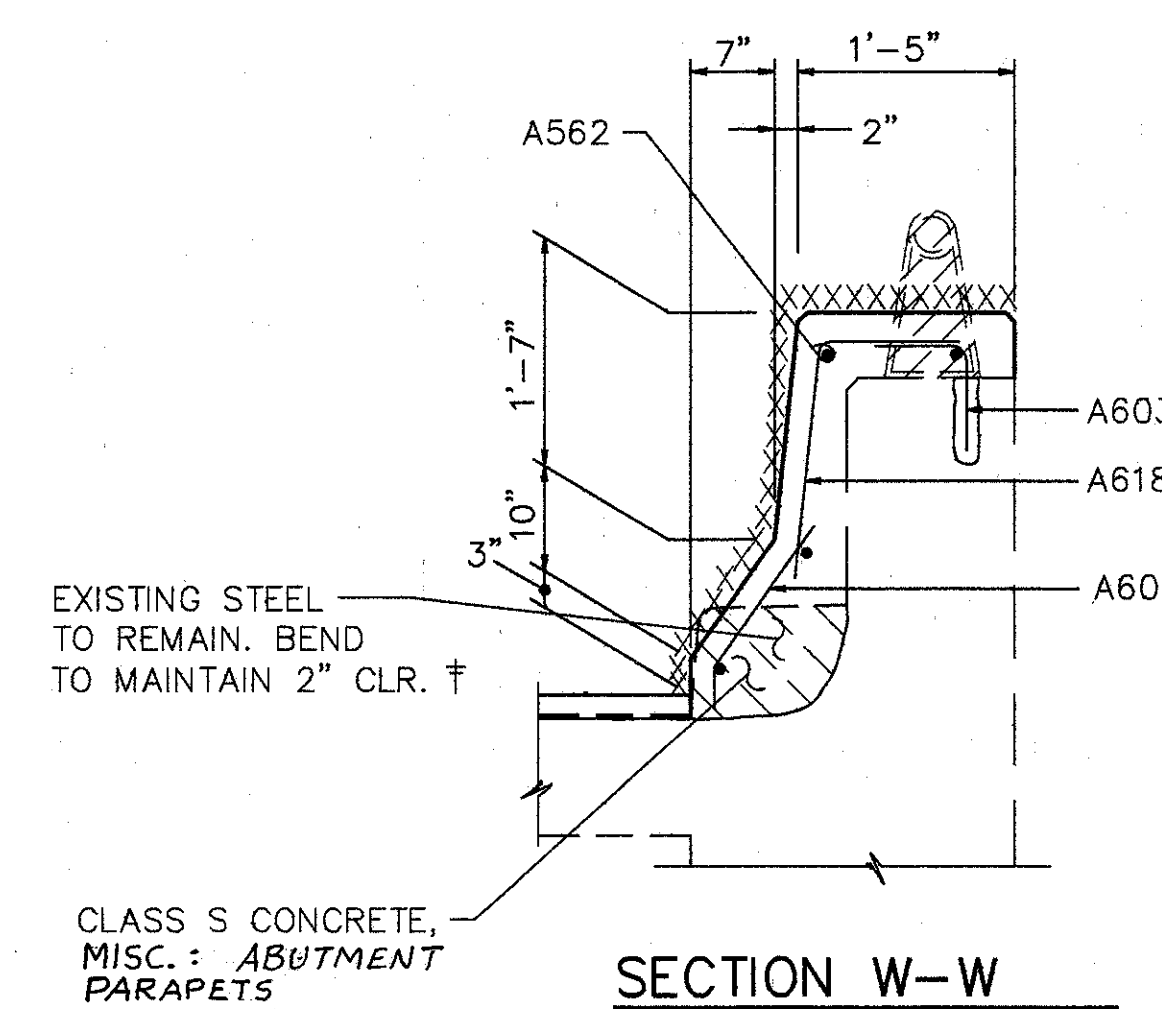
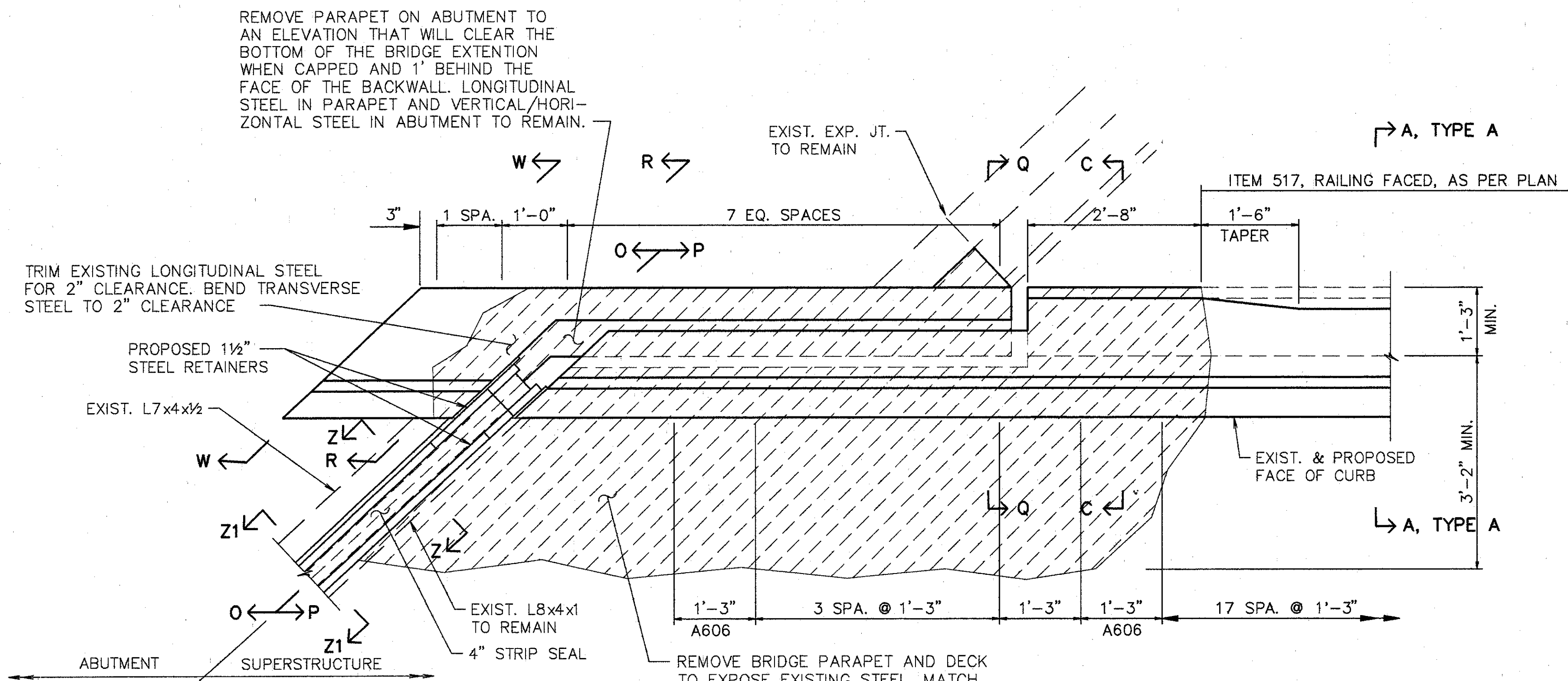
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**PART PLANS @ REAR ABUTMENT A**  
 BRIDGE NO. HAM-71-0154 L/R  
 OVER S.B. 471  
 HAMILTON COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
L.A.T.M.	D.E.E.		M.A.A.	D.E.M11/11/94		

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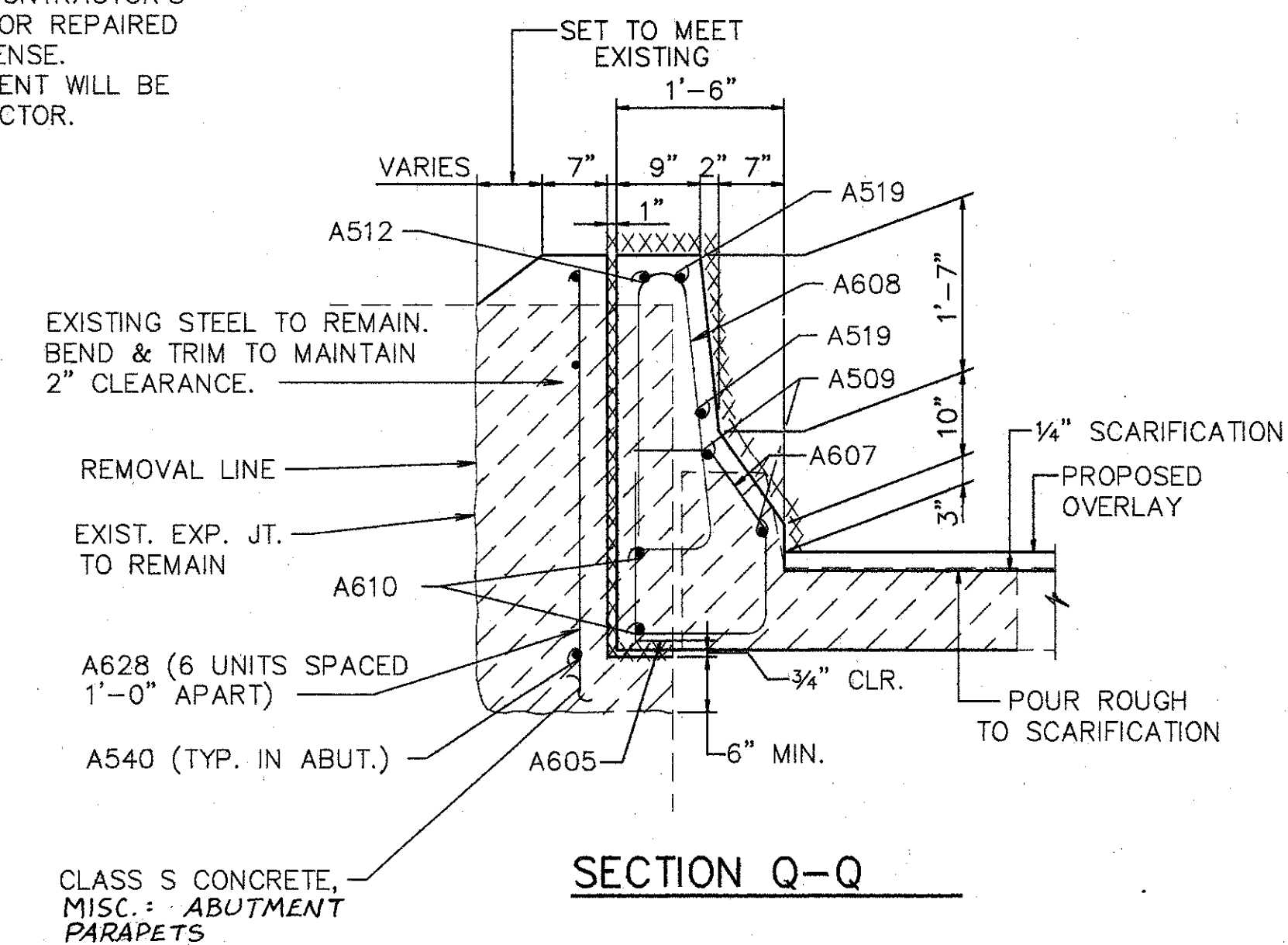
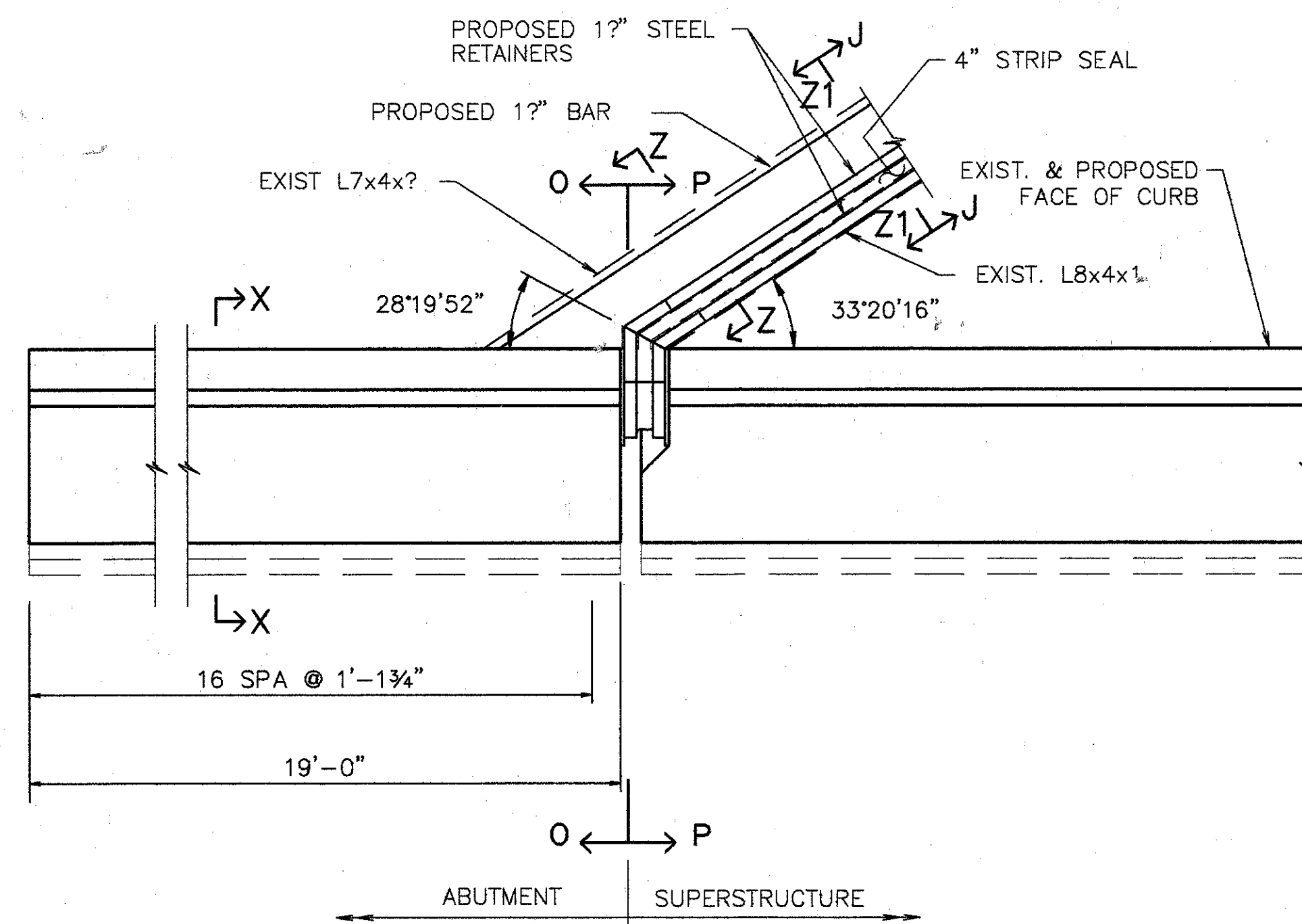




COSTS TO REMOVE PORTIONS OF ABUTMENT AND SUPERSTRUCTURE TO BE INCLUDED IN PRICE BID FOR ITEM 202 - 'PORTION OF STRUCTURE REMOVED.'

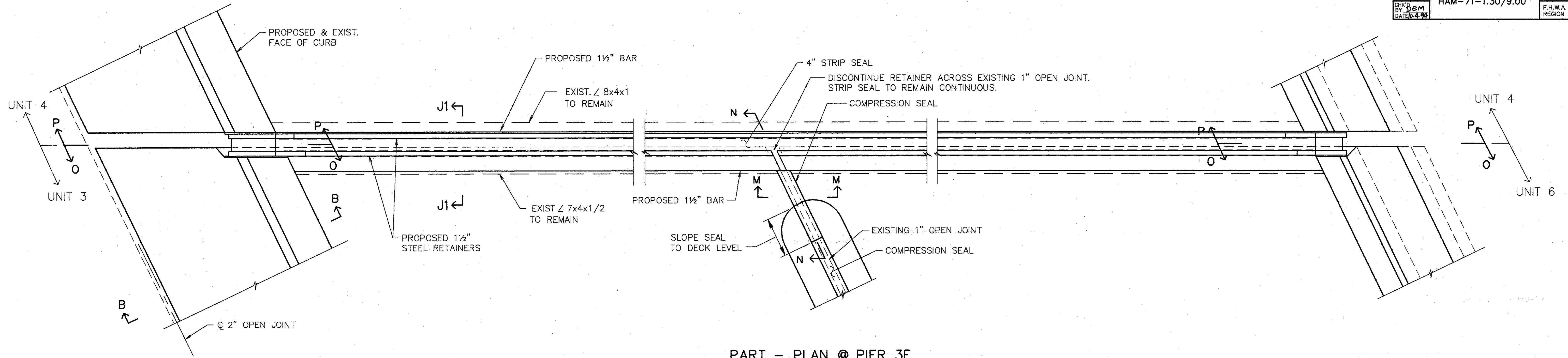
† BARS SHALL REMAIN. CONTRACTOR SHALL EXERCISE CAUTION TO ENSURE THAT THESE BARS ARE NOT DAMAGED DURING THE CONCRETE REMOVAL OPERATION. ANY BARS DAMAGED AS A RESULT OF THE CONTRACTOR'S OPERATION, SHALL BE REPLACED OR REPAIRED BY THE CONTRACTOR AT HIS EXPENSE. METHOD OF REPAIR OR REPLACEMENT WILL BE AT THE DISCRETION OF THE DIRECTOR.

PART - PLAN REAR ABUTMENT B (LEFT)

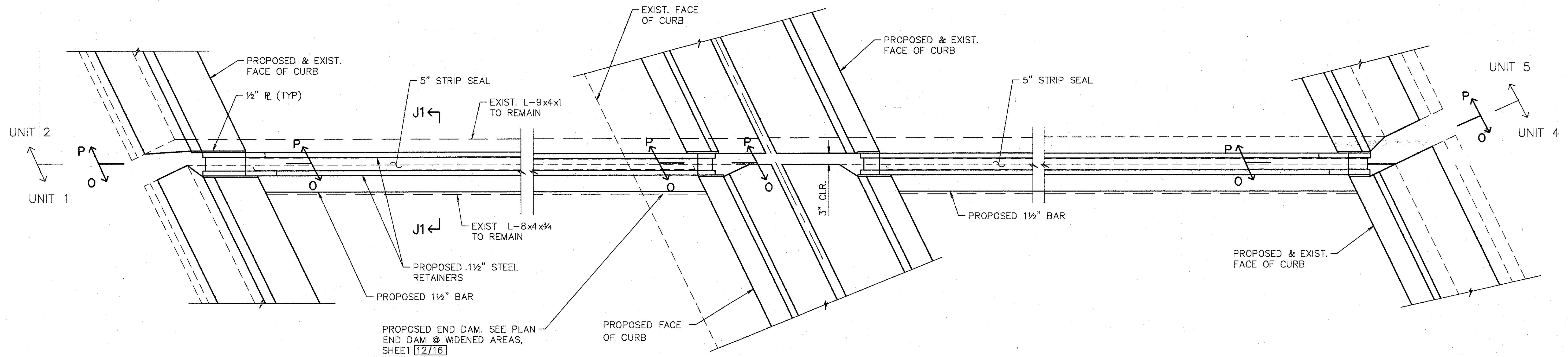


NOTE:  
 FOR SECTIONS NOT SHOWN SEE SHT. 11 & 12/16  
 FOR SECTION A-A SEE GEN. DTL. SHT. 273/40

		<b>WOOLPERT CONSULTANTS</b> 409 E. MONUMENT AVENUE DAYTON, OHIO 45402-1226 (513) 461-5660		8/16		
<b>PART PLANS @ REAR ABUTMENT B</b>						
BRIDGE NO. HAM-71-0154 L/R OVER S.B. 471						
HAMILTON COUNTY						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
L.A.T.M.	D.E.E.		M.A.A.	D.E.M11/11/94		



PART - PLAN @ PIER 3E



PART - PLAN @ PIER 6 E & W

NOTE:  
FOR SECTIONS NOT SHOWN  
SEE SHT. 3.11, & 12/16

	<b>WOOLPERT CONSULTANTS</b>	9/16
	409 E. MONUMENT AVENUE DAYTON, OHIO 45402-1226 (513) 461-5660	

PART PLANS @ INT. JOINTS

BRIDGE NO. HAM-71-0154 L/R  
OVER S.B. 471

HAMILTON COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
L.A.T.M.	D.E.E.		M.A.A.	D.E.M11/11/94		

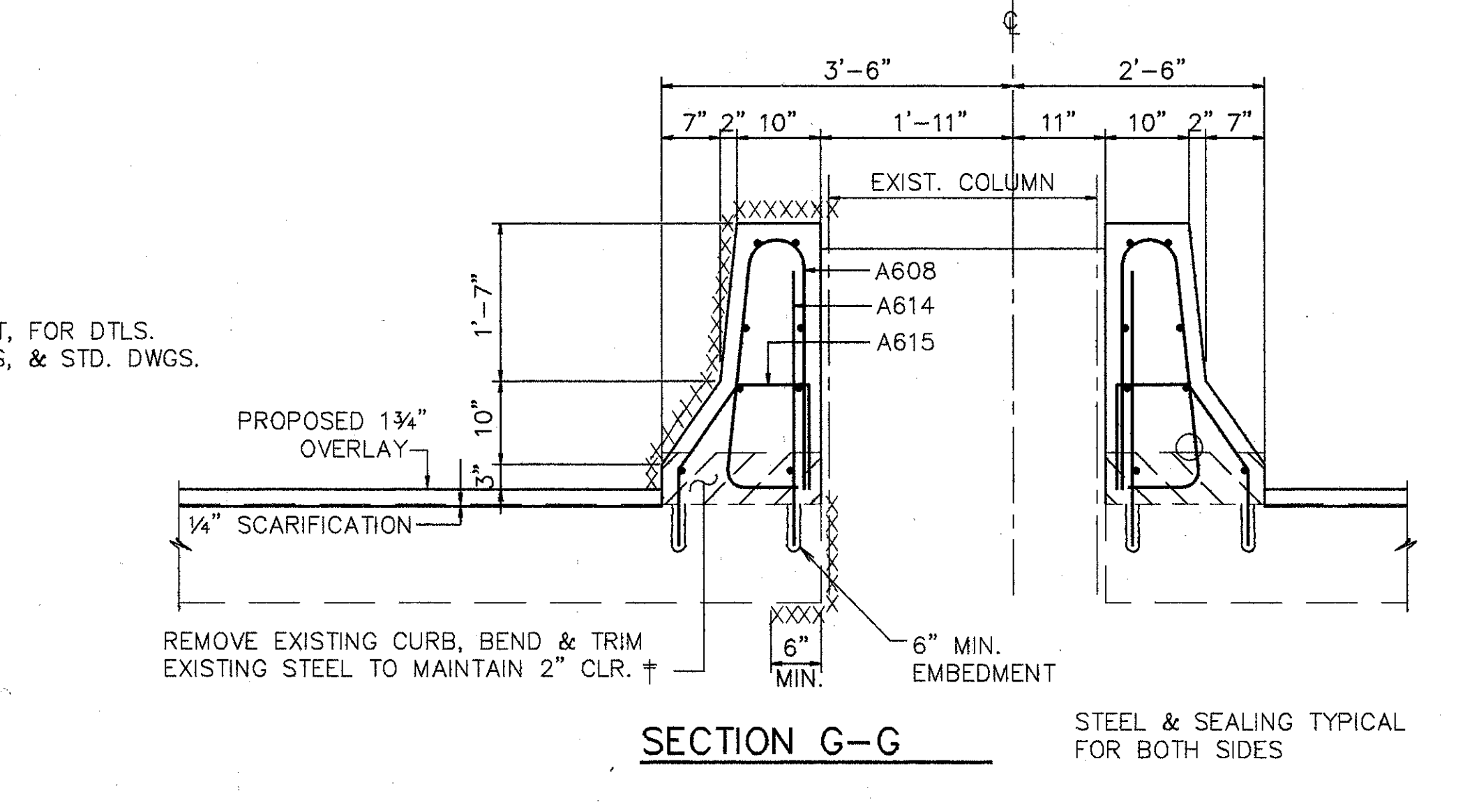
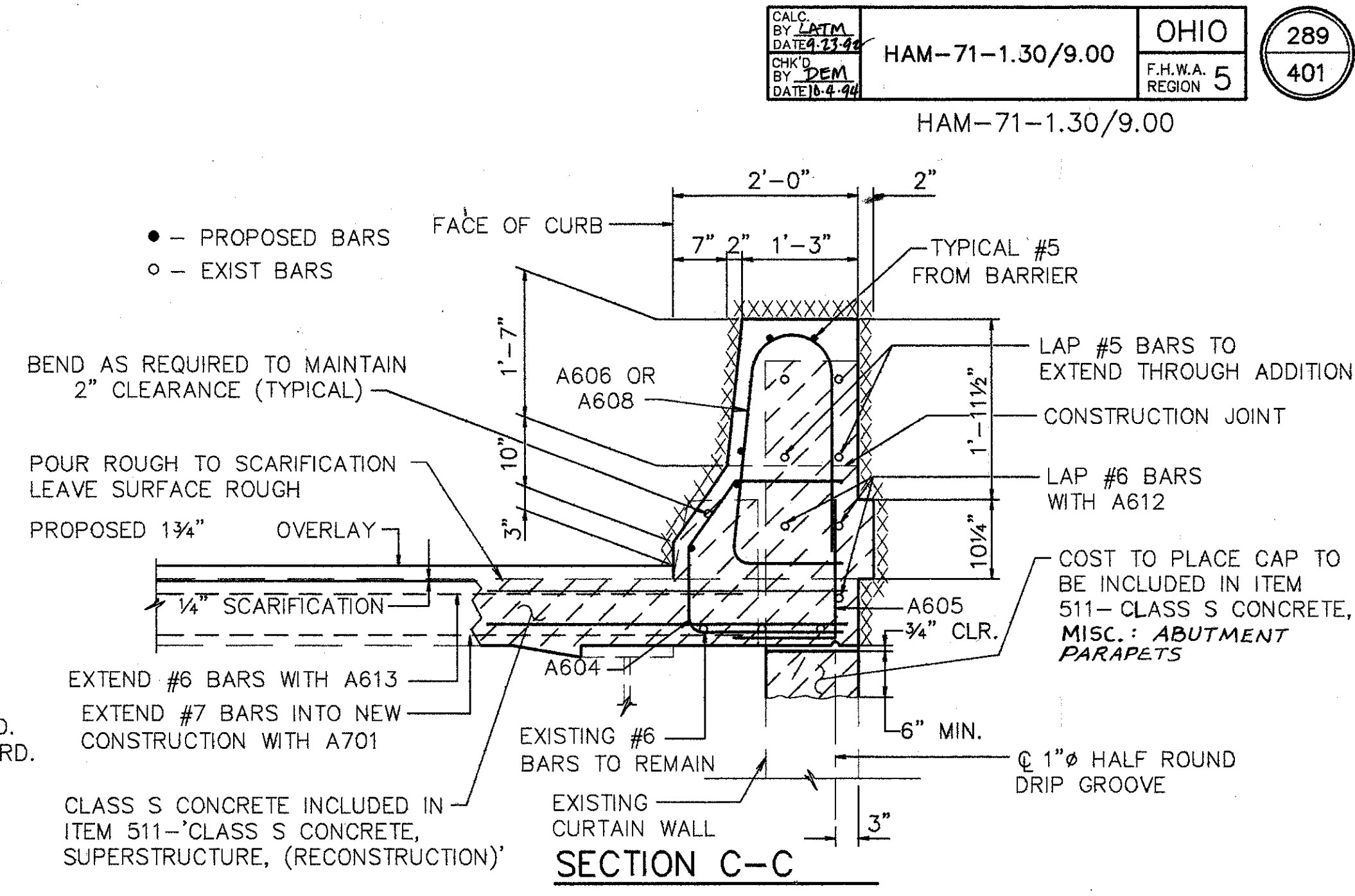
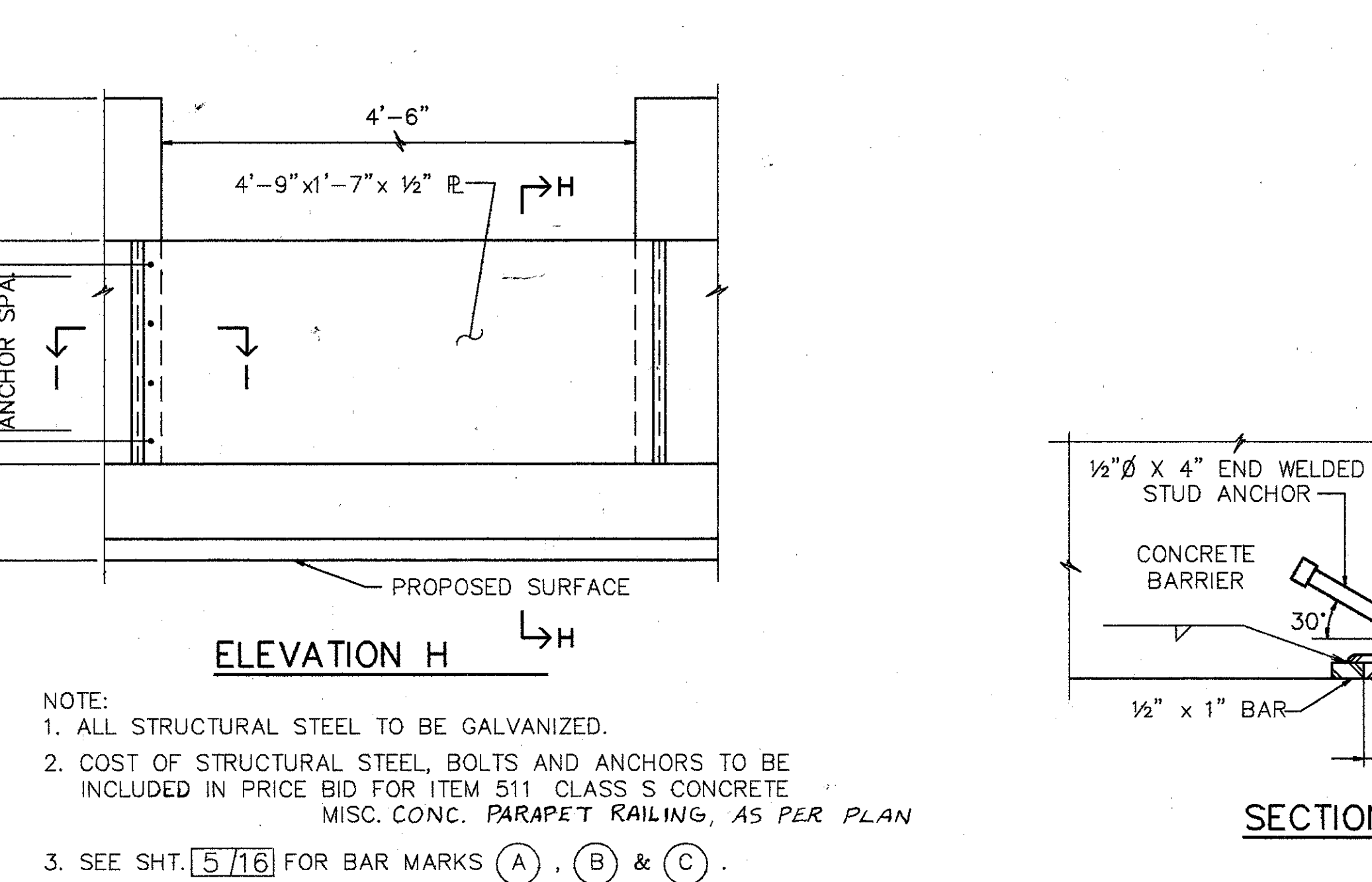
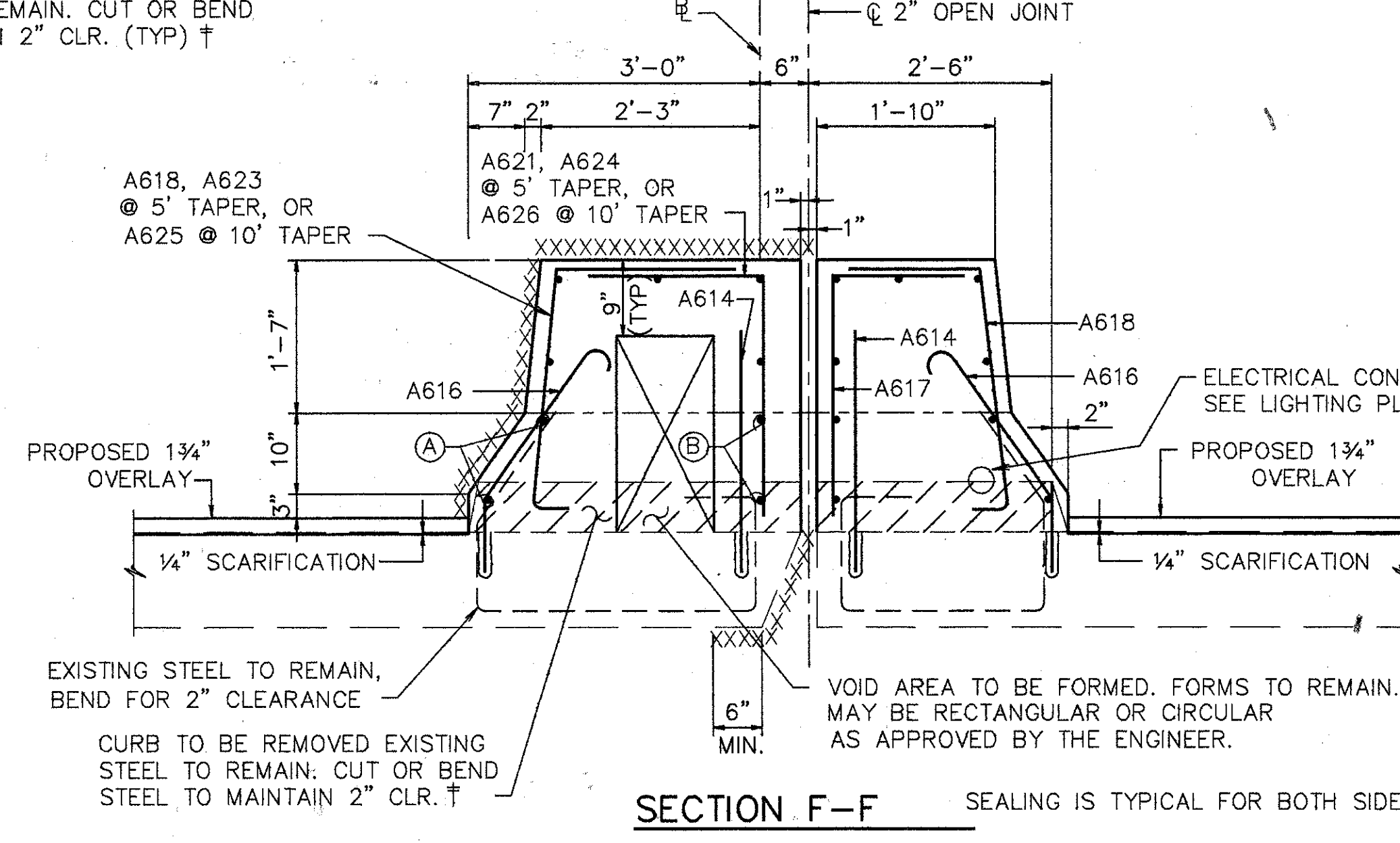
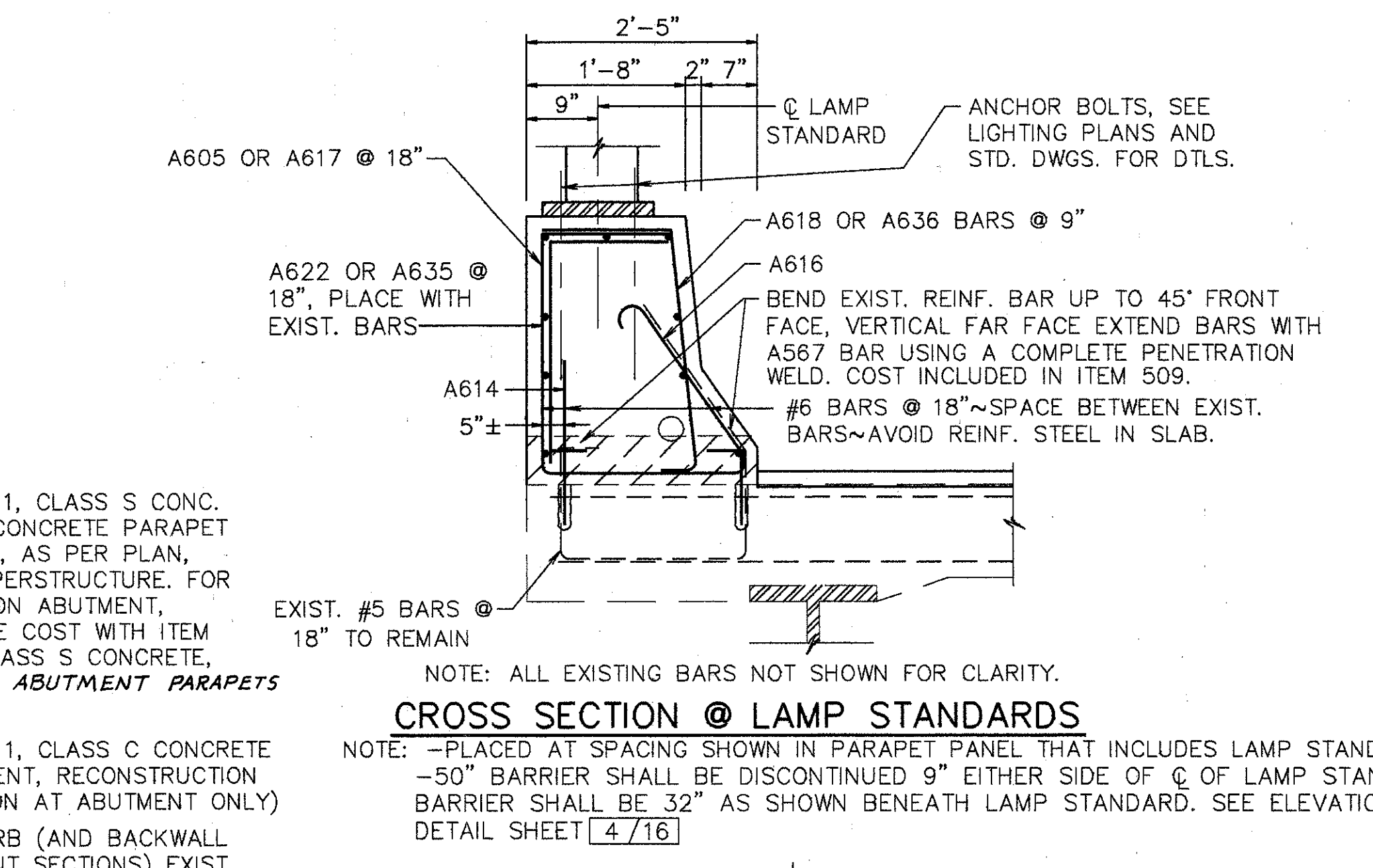
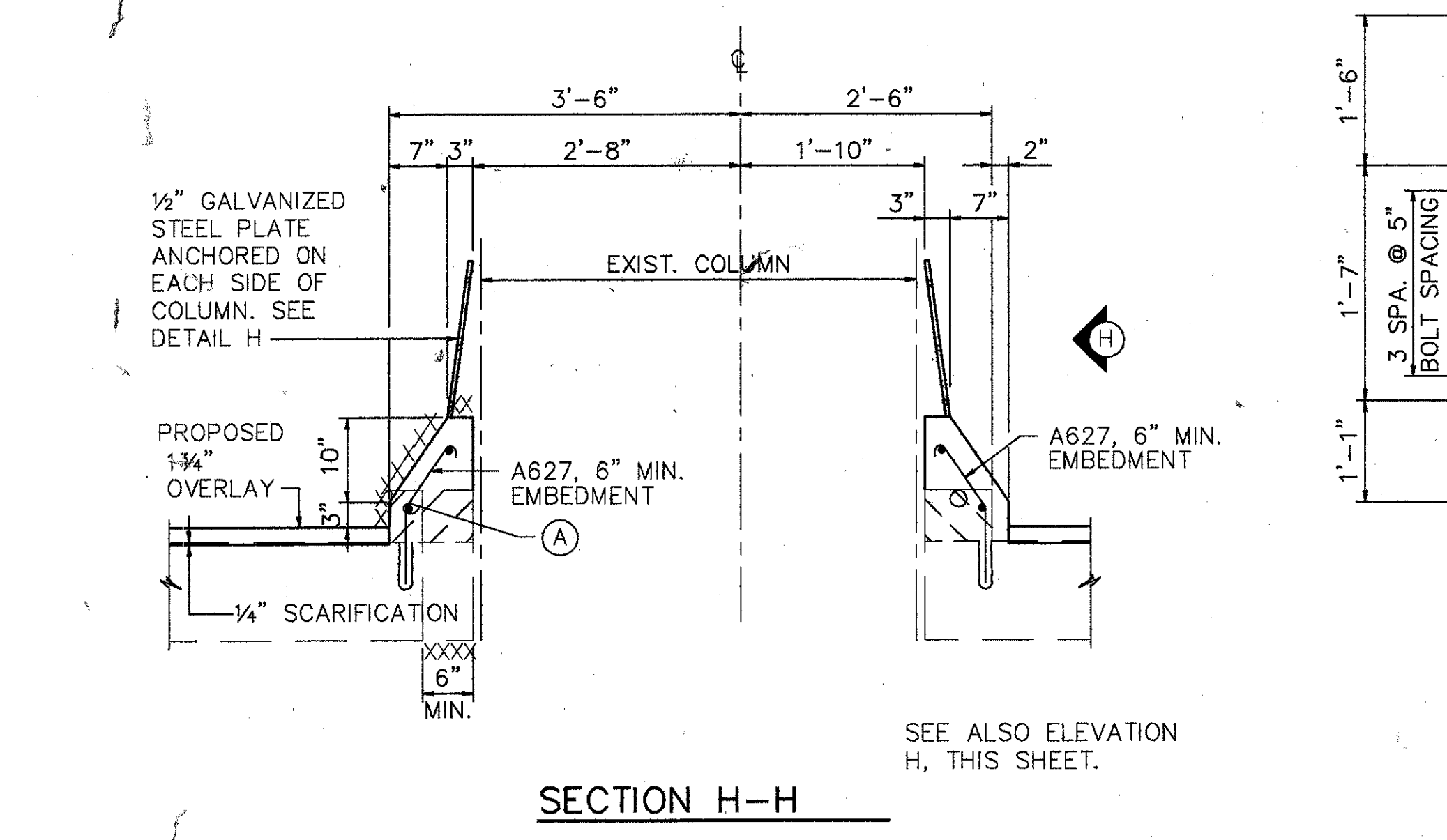
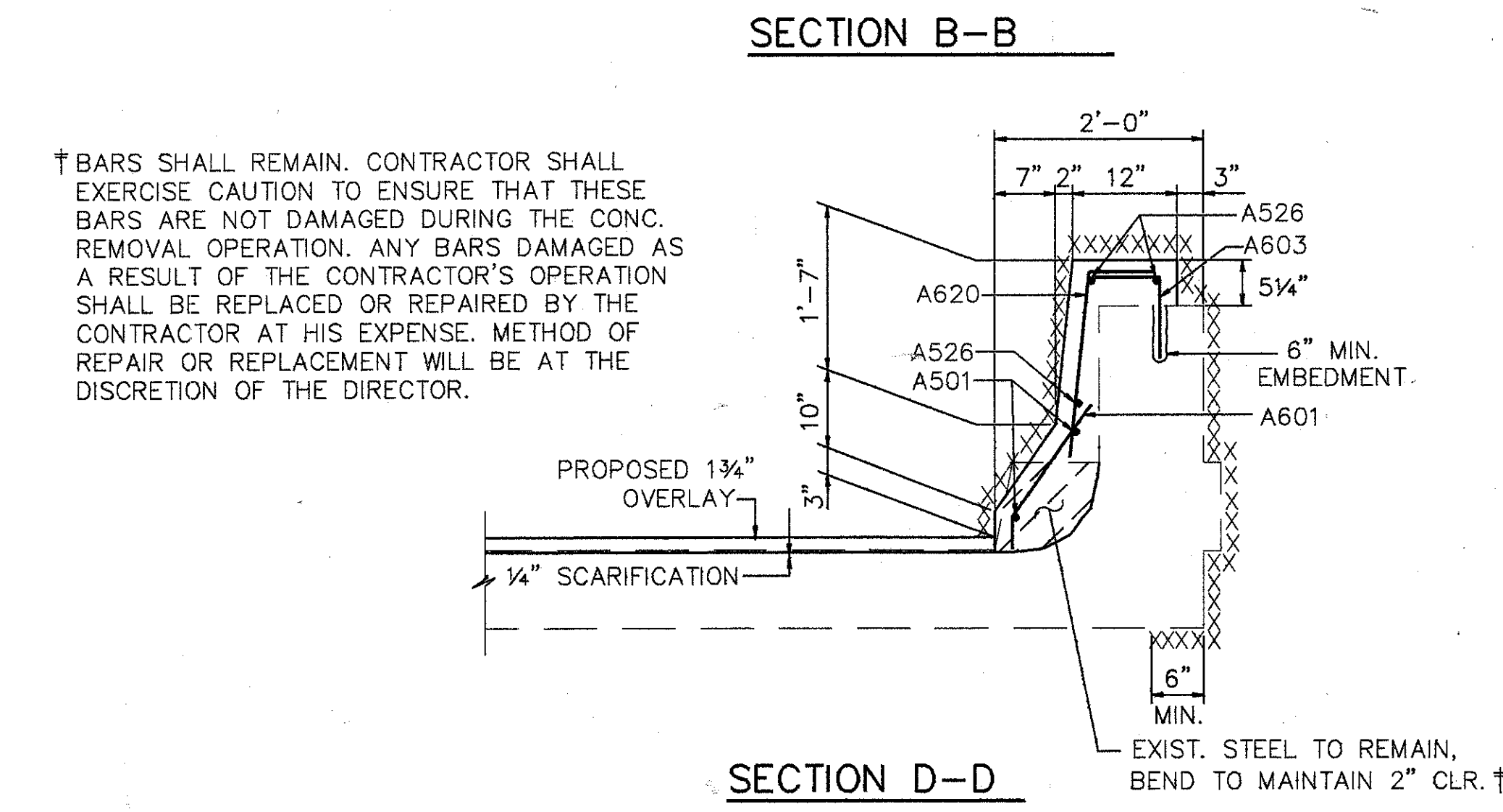
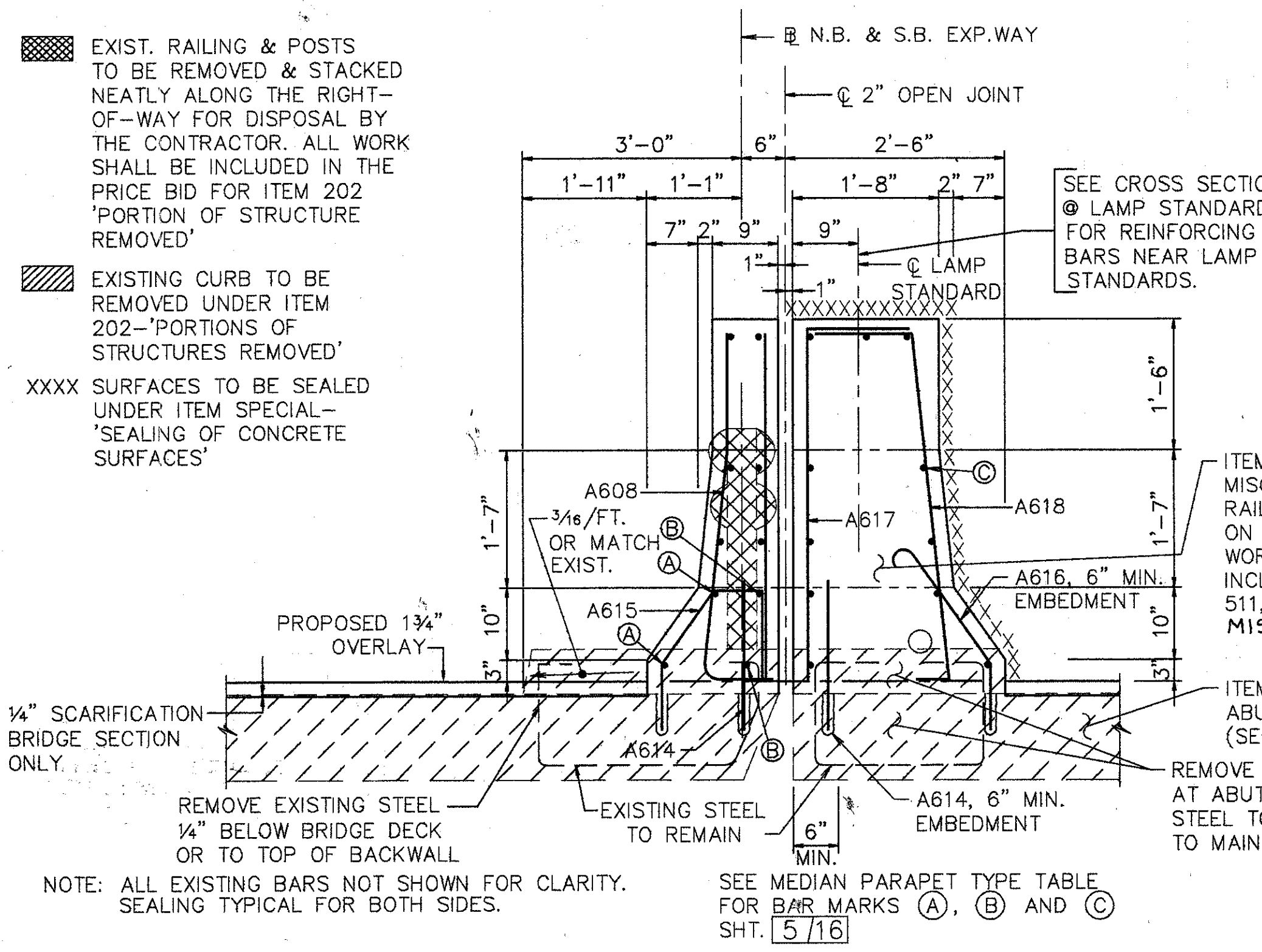




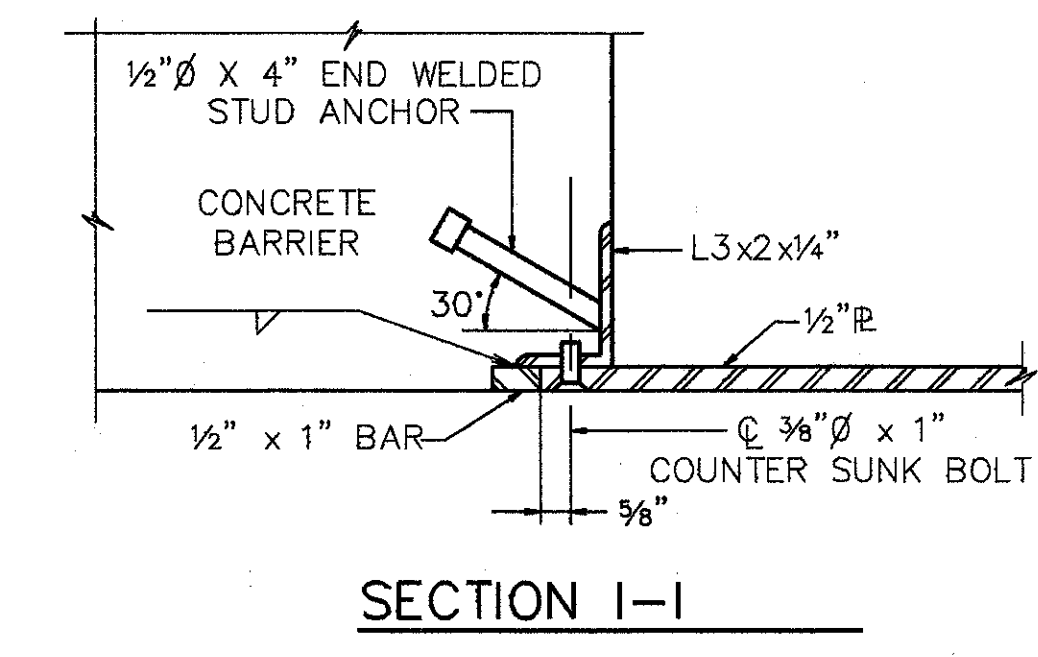
EXIST. RAILING & POSTS TO BE REMOVED & STACKED NEATLY ALONG THE RIGHT-OF-WAY FOR DISPOSAL BY THE CONTRACTOR. ALL WORK SHALL BE INCLUDED IN THE PRICE BID FOR ITEM 202 'PORTION OF STRUCTURE REMOVED'

EXISTING CURB TO BE REMOVED UNDER ITEM 202-'PORTIONS OF STRUCTURES REMOVED'

XXXX SURFACES TO BE SEALED UNDER ITEM SPECIAL-'SEALING OF CONCRETE SURFACES'



SEAL PARAPETS THE SAME AS OUTSIDE PARAPETS. SEE SECT. A-A, GENERAL DTL. SHT. [2/3]. PREFORMED EXP. JT. FILLER IN THE PARAPET DEFLECTION JOINTS MAY BE EITHER 1/4" GRAY SPONGE RUBBER OR 1/4" CELLULAR POLYVINYL CHLORIDE (PVC) SPONGE. IF RUBBER IS USED IT SHALL MEET THE REQUIREMENTS OF AASHTO M-153. CONCRETE PARAPETS ABOVE UPPER CONSTRUCTION JOINT SHALL BE PLACED IN ALTERNATE SECTIONS BY THE USE OF BULKHEADS. CLOSING SECTIONS SHALL BE PLACED AFTER REMOVAL OF BULKHEADS & AFTER PLACEMENT OF EXP. JT. FILLER. EXPOSED EDGES OF THE FILLER SHALL BE FLUSH W/THE SURFACE OF CONCRETE & SHALL BE FREE OF MORTAR.



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11/16

**PARAPET SECTIONS**

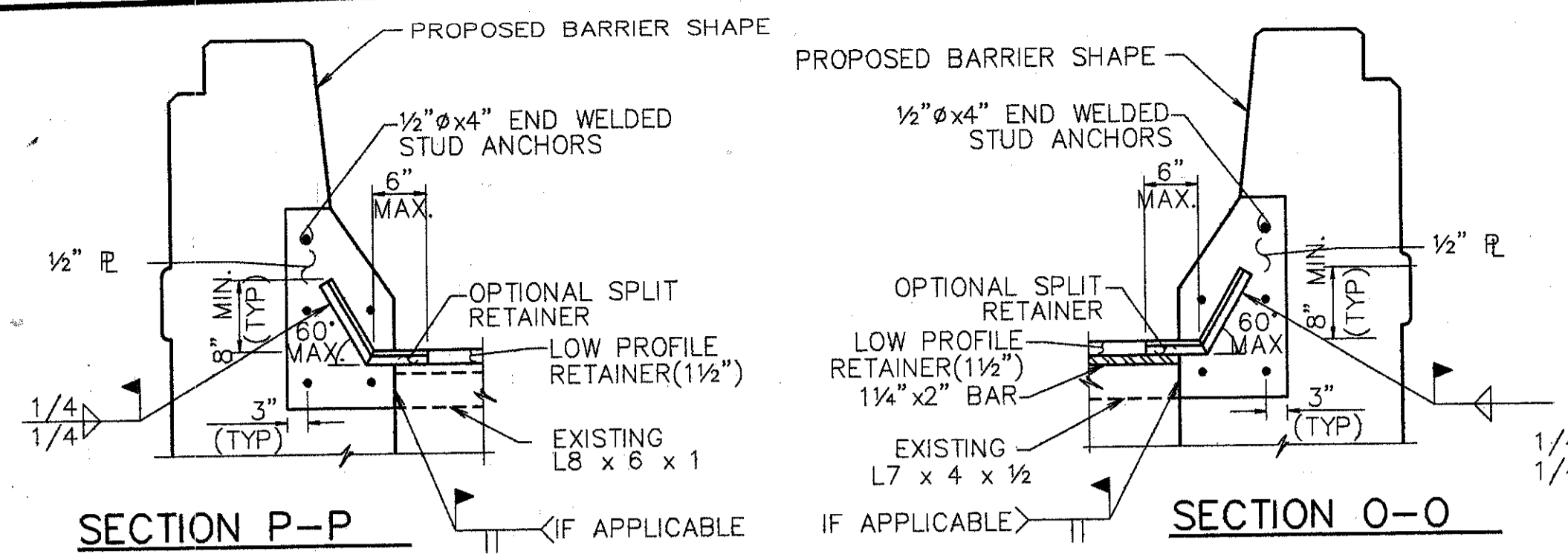
BRIDGE NO. HAM-71-0154  
 OVER S.B. 471

HAMILTON COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
L.A.T.M.	D.E.E.		M.A.A.		11/11/94	E.M.

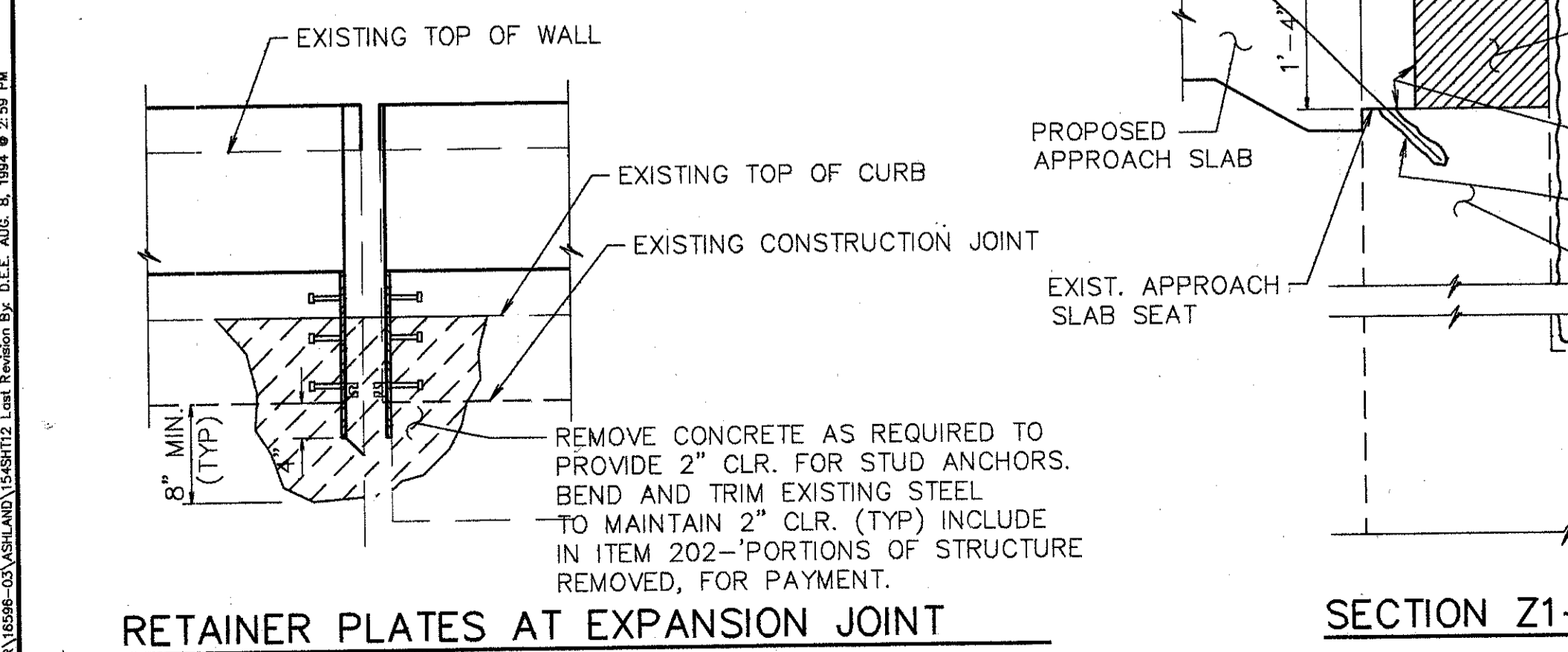
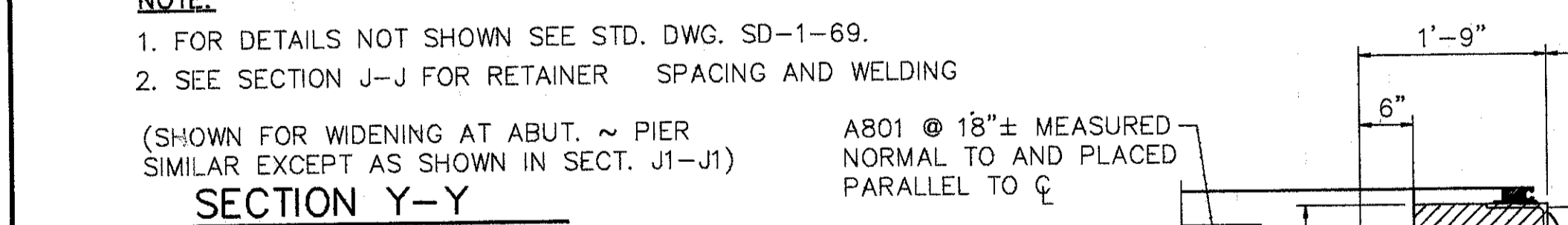
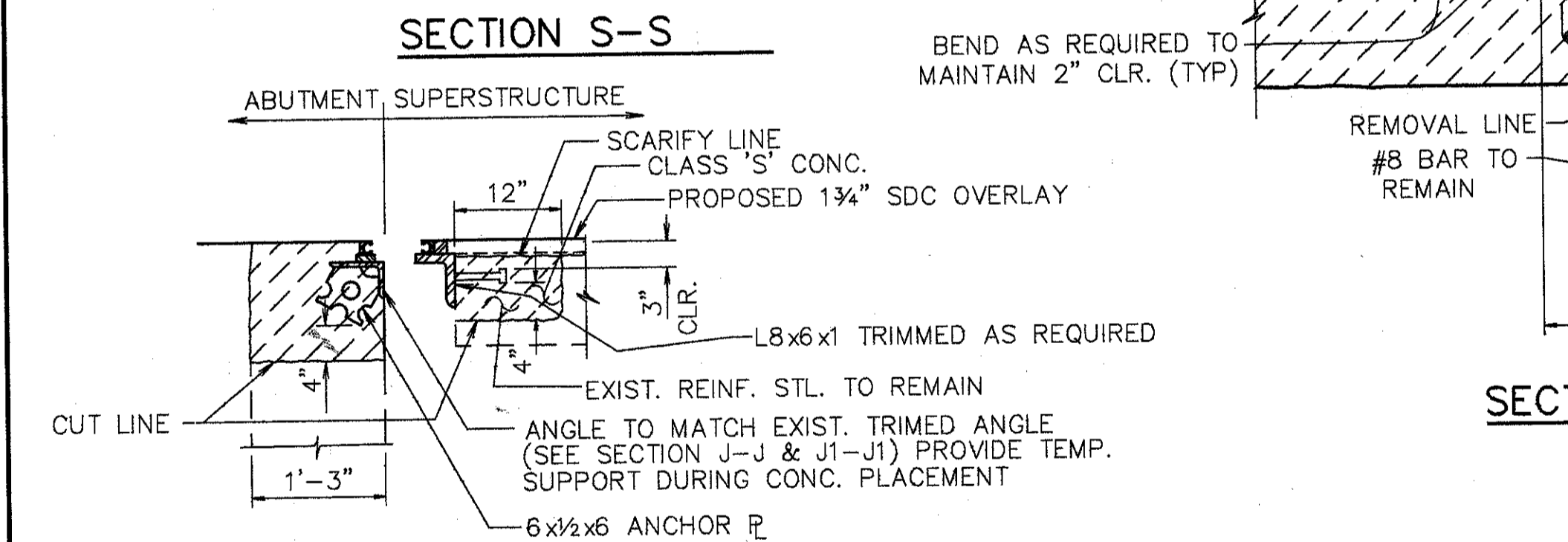
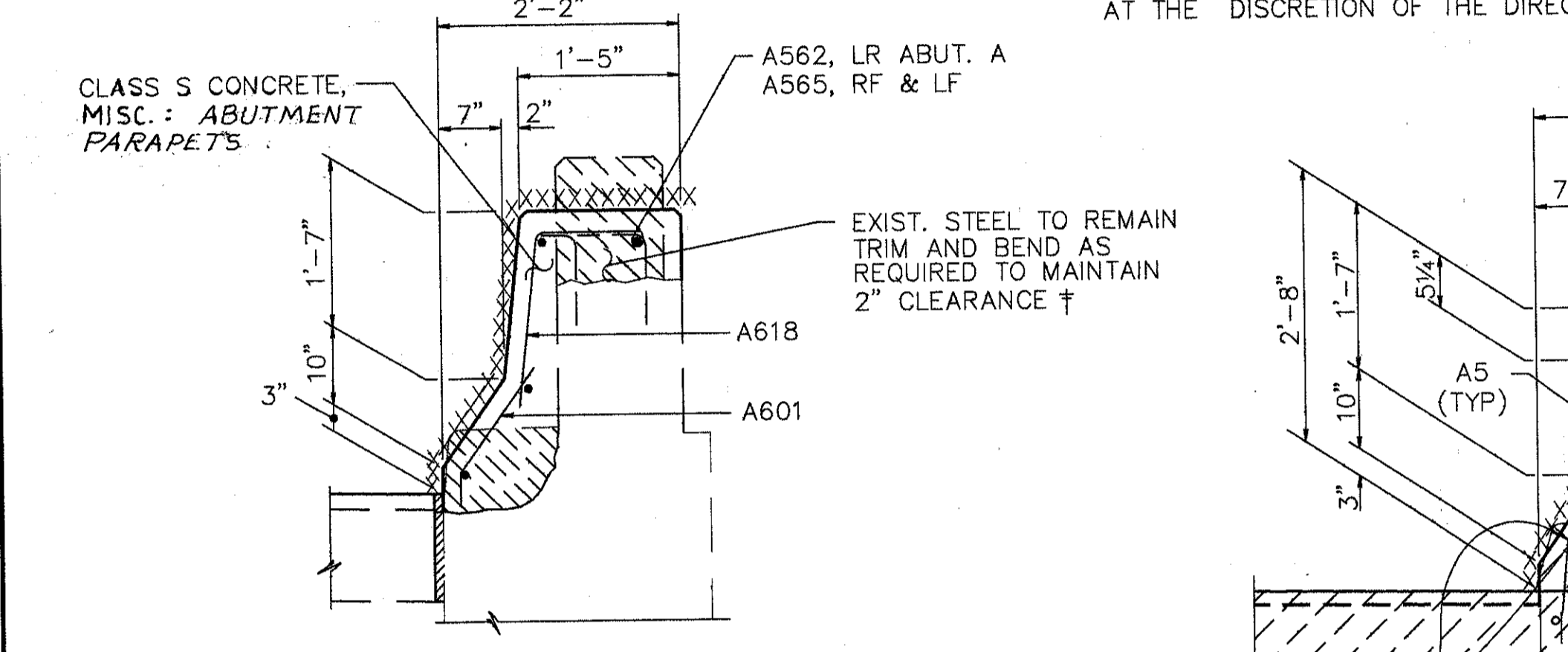
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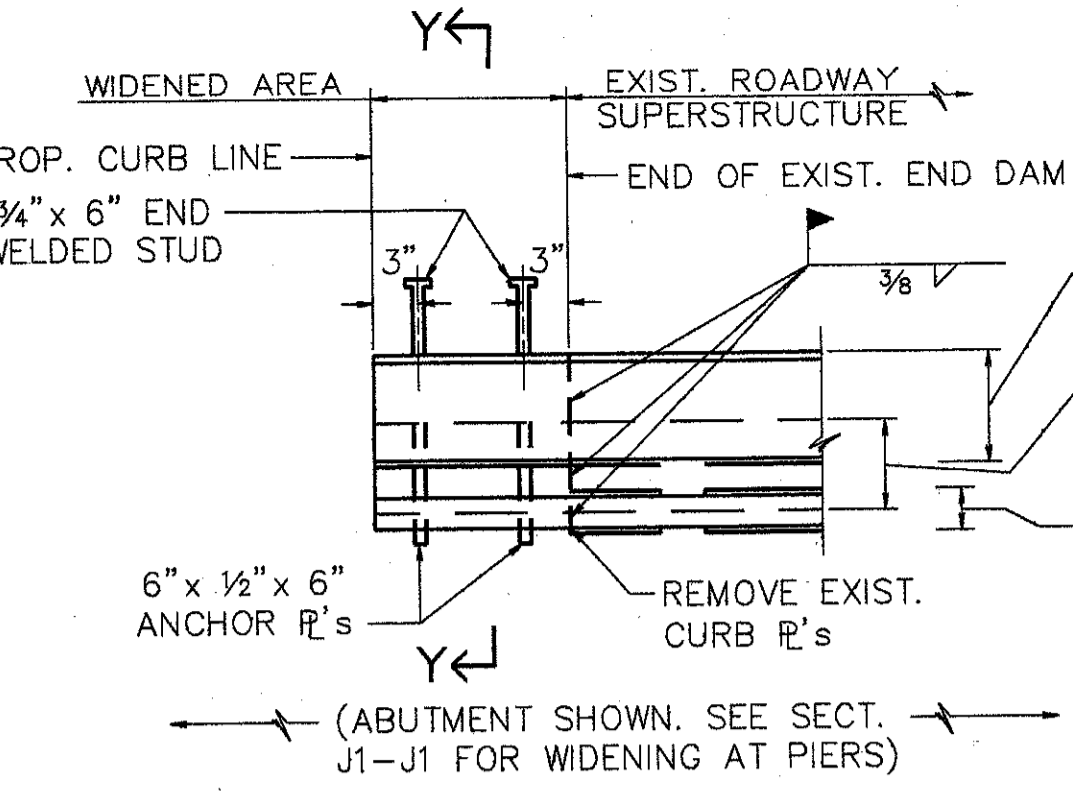
**NOTE:**  
 1. EXPANSION JT. DETAILS TO BE WORKED WITH STD. DWG. EXJ-4-87 SHTS. 1 thru 5.  
 2. WHEN PLATE IS RECESSED INTO ABUTMENT, CONCRETE BELOW PLATE SHALL BE SLOPED FROM BOTTOM OF THE PLATE TO THE END OF THE ABUTMENT TO DETER THE ACCUMULATION OF DEBRIS.

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EXIST. CURB & PARAPET TO BE REMOVED UNDER ITEM 202--'PORTIONS OF STRUCTURES REMOVED'.  
 EXIST. RAILING & POSTS TO BE REMOVED & STACKED NEATLY ALONG THE RIGHT-OF-WAY FOR DISPOSAL BY THE CONTRACTOR. ALL WORK SHALL BE INCLUDED IN THE PRICE BID FOR ITEM 202--'PORTIONS OF STRUCTURE REMOVED'.  
 SURFACES TO BE SEALED UNDER ITEM SPECIAL--'SEALING OF CONCRETE SURFACES'.

**NOTES:**  
 1. PREFORMED EXPANSION JT. FILLER & SEALER AT CORNERS AND SIDES OF THE APP. SLAB SHALL BE INCLUDED IN THE PRICE BID PER SQ. YD. FOR THE APPR. SLAB.  
 2. TYPE 'A' WATERPROOFING AT THE BRIDGE LIMIT END OF THE APPROACH SLAB (AS PER STD. DWG. AS-1-81) SHALL BE INCLUDED IN THE PRICE BID FOR ITEM 611--REINFORCED CONCRETE, APPROACH SLABS.



**NOTES:**  
 1. END DAM WIDENING SHOWN IS FOR THE WEST EDGE OF MEDIAN.  
 2. FOR DETAILS & DIMS. NOT SHOWN SEE STD. DWG. SD-1-69.

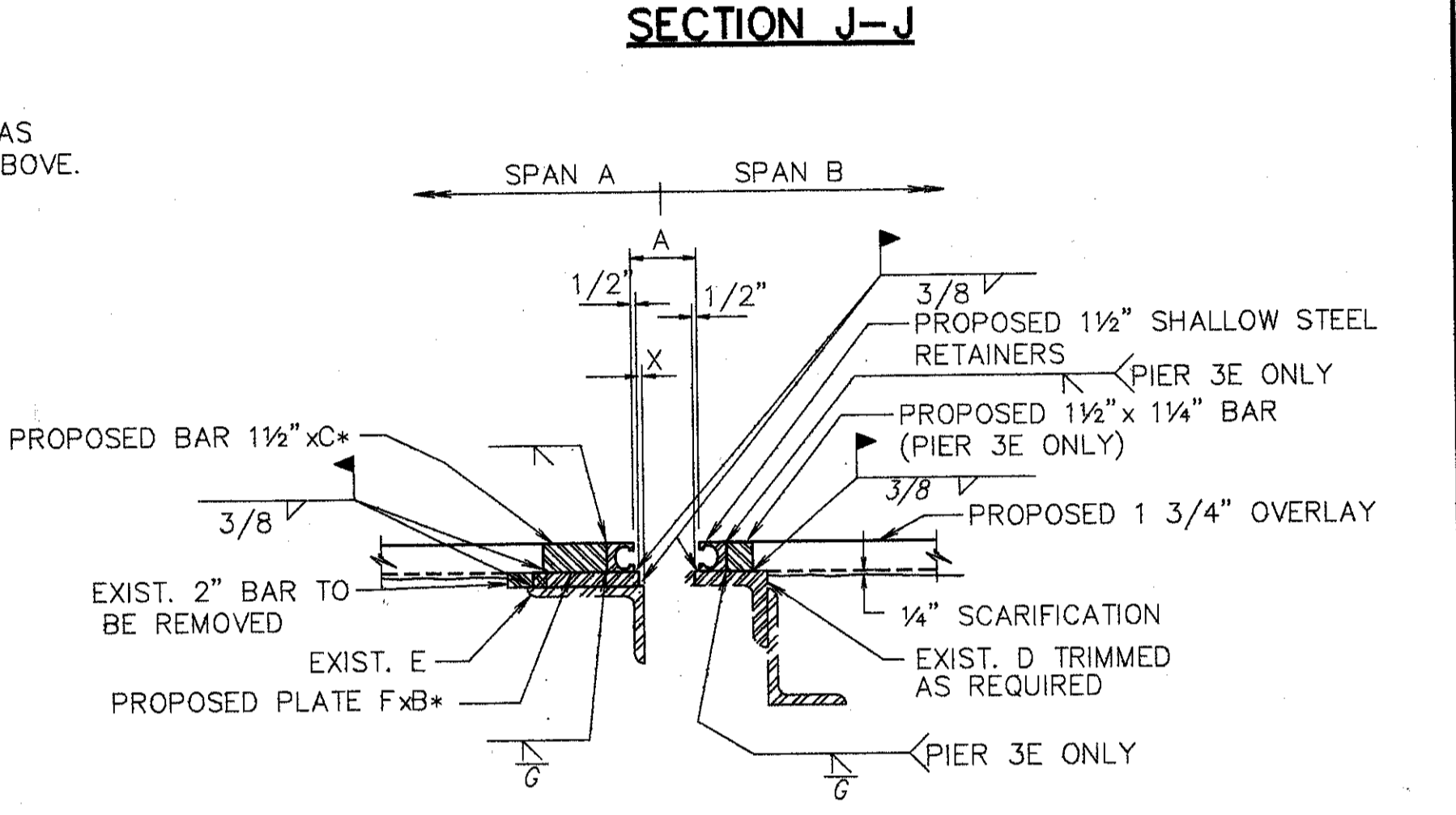
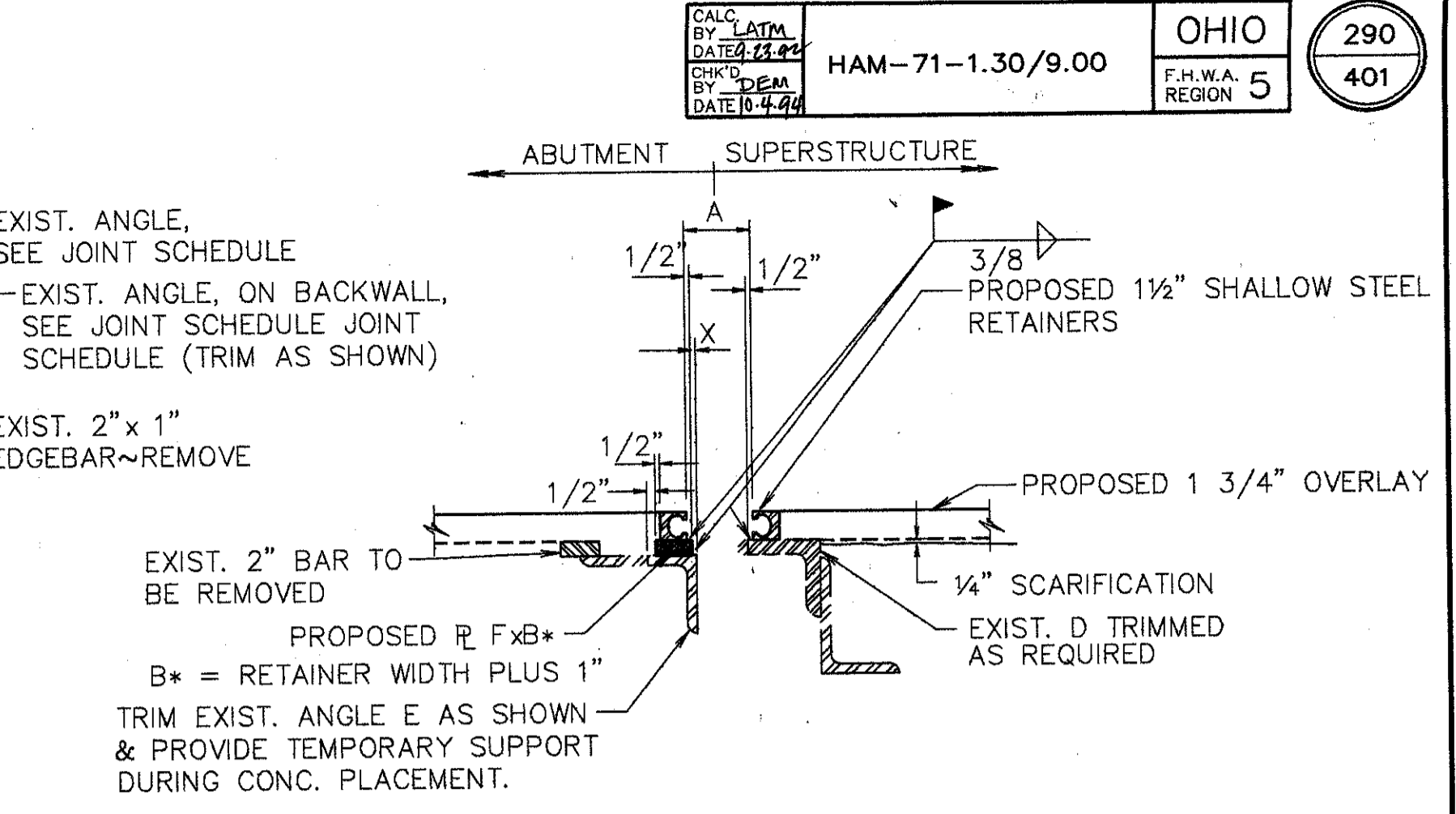
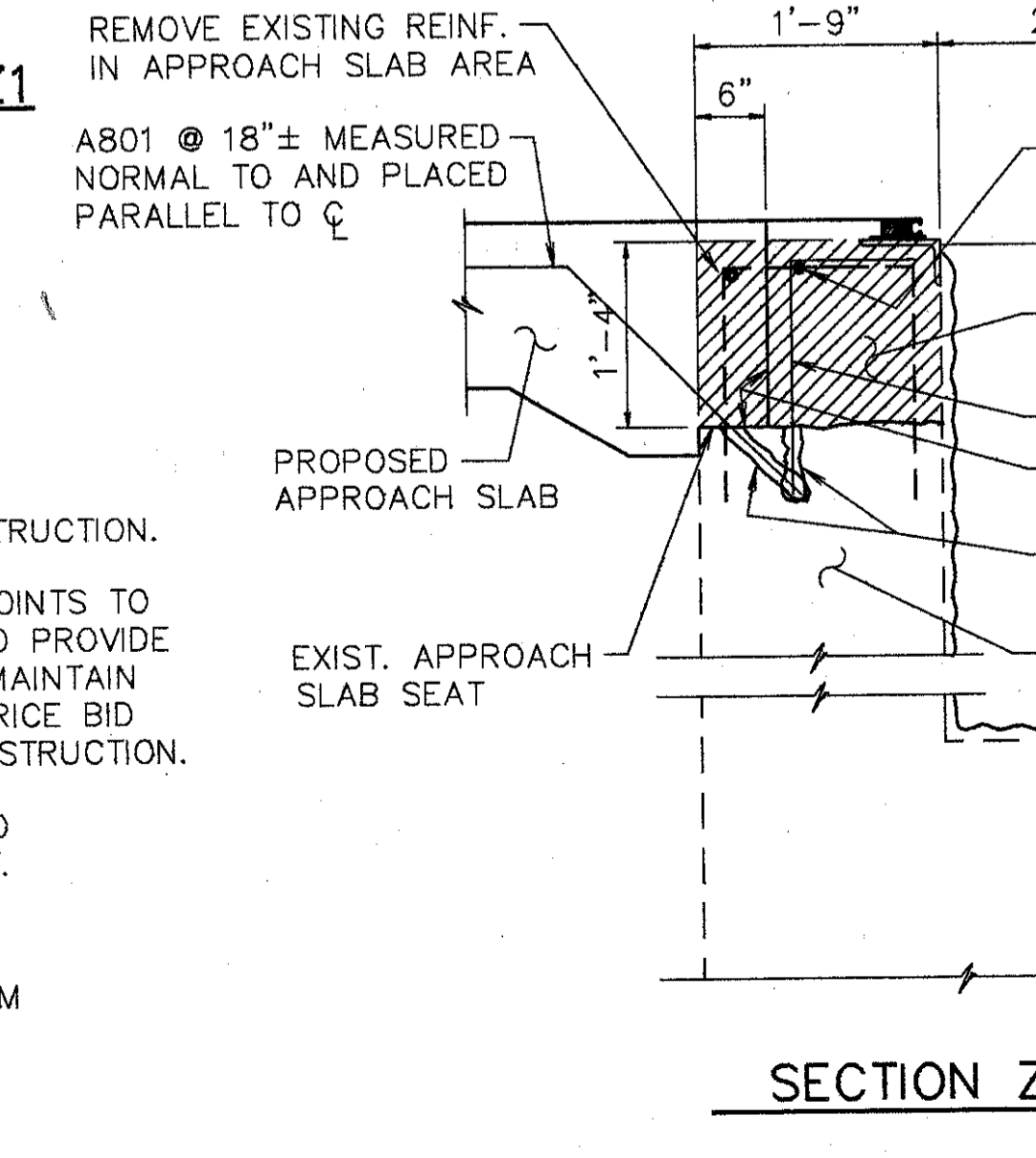
**PLAN END DAM WIDENED AREAS MEDIAN @ ABUTMENT**

FOR END DAM WIDENING AT PIERS PROVIDE NEW STEEL AS SECTION J1-J1. CONNECTION OF ANGLES AS DETAILED ABOVE.

TEMPERATURE	DIMENSION A							
	REAR LEFT	REAR RIGHT	REAR ABUT. B	PIER 3E	PIER 6	FORWARD LEFT	FORWARD RIGHT	
40° F	3 3/8	2 3/4	3 1/2	2 7/8	3 3/4	3 3/8	3 3/8	
50° F	3 3/8	2 3/4	3 3/8	2 3/4	3 3/8	3	3 1/8	
60° F	3	2 1/2	3 1/4	2 3/8	3 1/8	2 7/8	2 7/8	
70° F	2 3/4	2 1/4	3 1/8	2 1/2	2 3/4	2 3/4	2 3/8	
80° F	2 1/2	2 1/8	3	2 1/4	2 1/2	2 3/8	2 3/8	
90° F	2 1/4	2	2 7/8	2 1/8	2 1/8	2 1/2	2 1/8	

LOCATION	JOINT SCHEDULE			LOCATION	X
	D	E	F		
REAR ABUT. A	1.9x4x1	1.8x4x1/2	1 1/2"	REAR A-LEFT	1 3/4"
FORW. ABUT. & REAR ABUT. B	1.8x4x1	1.7x4x1/2	1"	REAR A-RIGHT	1/2"
PIER 3E	1.8x4x1	1.7x4x1/2	1"	REAR B	1/2"
PIER 6	1.9x4x1	1.8x4x3/4	1"	PIER 3E	1/2"
PIER 6	1.8x4x1	1.7x4x1/2	1"	PIER 6	1/2"
				FWD LEFT	1 1/8"
				FWD RIGHT	1 1/8"

TABLE A	RAMP ABUT. B		REAR ABUT. A		FORWARD ABUT.	
	L	R	L	R	L	R
SOUTH BOUND	-	-	A579	A576	A579	A578
NORTH BOUND	A577	A580	A576	A579	A576	A578



B\* = ANGLE LEG MINUS (1/2" + "X")  
 C\* = B\* MINUS WIDTH OF RETAINER MINUS 1"

**SECTION J1-J1**

**NOTES:**  
 1. CONTRACTOR TO VERIFY ALL DIMENSIONS PRIOR TO MODIFYING THE EXPANSION JOINT.  
 2. THE PRICE BID FOR ITEM 516--'STRUCTURAL EXPANSION JOINTS, INCLUDING ELASTOMERIC STRIP SEALS', SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, AND ANY OTHER INCIDENTAL ITEMS, AS DETAILED. REMOVAL OF CURB OR PARAPET AS SHOWN SHALL BE INCLUDED UNDER ITEM 202--'PORTIONS OF STRUCTURE REMOVED'.  
 3. FOR DETAILS NOT SHOWN REFER TO DRAWING EXJ-4-87 SHEETS 3 AND 4.  
 4. STRIP SEAL TO BE INSTALLED IN ONE CONTINUOUS PIECE (NO OPEN JOINTS).  
 5. PROVIDE TEMPORARY SUPPORT FOR END DAM DURING CONSTRUCTION. REMOVE TEMPORARY SUPPORT AS SOON AS CONCRETE HAS SET, PREFERABLY WITHIN TWO HOURS AFTER PLACING TO AVOID DAMAGE DUE TO EXPANSION AND CONTRACTION OF SUPERSTRUCTURE.

**NOTES FOR SECTION Z-Z & Z1-Z1**

① EXISTING REINFORCING STEEL TO REMAIN ~ REINFORCING STEEL DAMAGED TO BE REPLACED AT CONTRACTORS EXPENSE.  
 ② 1' MIN. EMBEDMENT (SEE DOWEL HOLE GENERAL NOTE) ITEM 510.  
 ③ TYPE 'A' WATERPROOFING (PAYMENT INCLUDED IN THE PRICE BID FOR APPROACH SLAB).  
 ④ CLASS 'C' CONCRETE, ABUTMENT RECONSTRUCTION.  
 ⑤ PROVIDE CONTRACTION AND EXPANSION JOINTS TO MATCH THOSE IN EXISTING BACKWALL AND PROVIDE CONSTRUCTION JOINTS AS REQUIRED TO MAINTAIN TRAFFIC. PAYMENT TO BE INCLUDED IN PRICE BID FOR ITEM 511 CLASS C CONCRETE RECONSTRUCTION.

EXISTING CONCRETE TO BE REMOVED INCLUDE IN ITEM 202 FOR PAYMENT.  
 SURFACE TO BE SEALED UNDER ITEM SPECIAL--'SEALING OF CONCRETE SURFACE, EPOXY'.

**WOOLPERT CONSULTANTS**  
 409 E. MONUMENT AVENUE  
 DAYTON, OHIO 45402-1226  
 (513) 461-5660

**MISCELLANEOUS DETAILS**

BRIDGE NO. HAM-71-0154  
 OVER S.B. 471

HAMILTON COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
L.A.T.M.	D.E.E.		M.A.A.	D.E.M11/11/94		

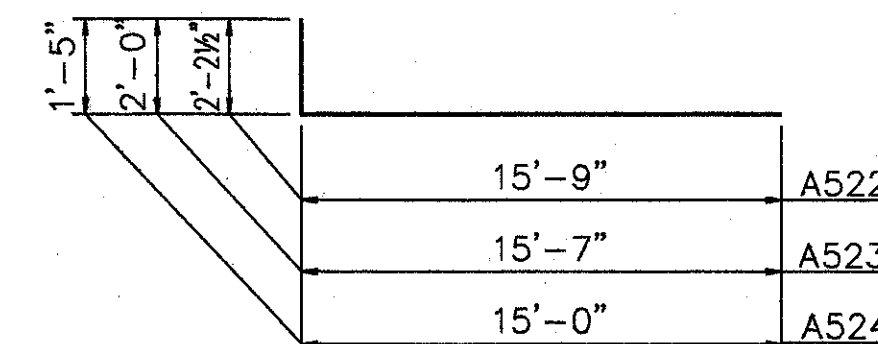
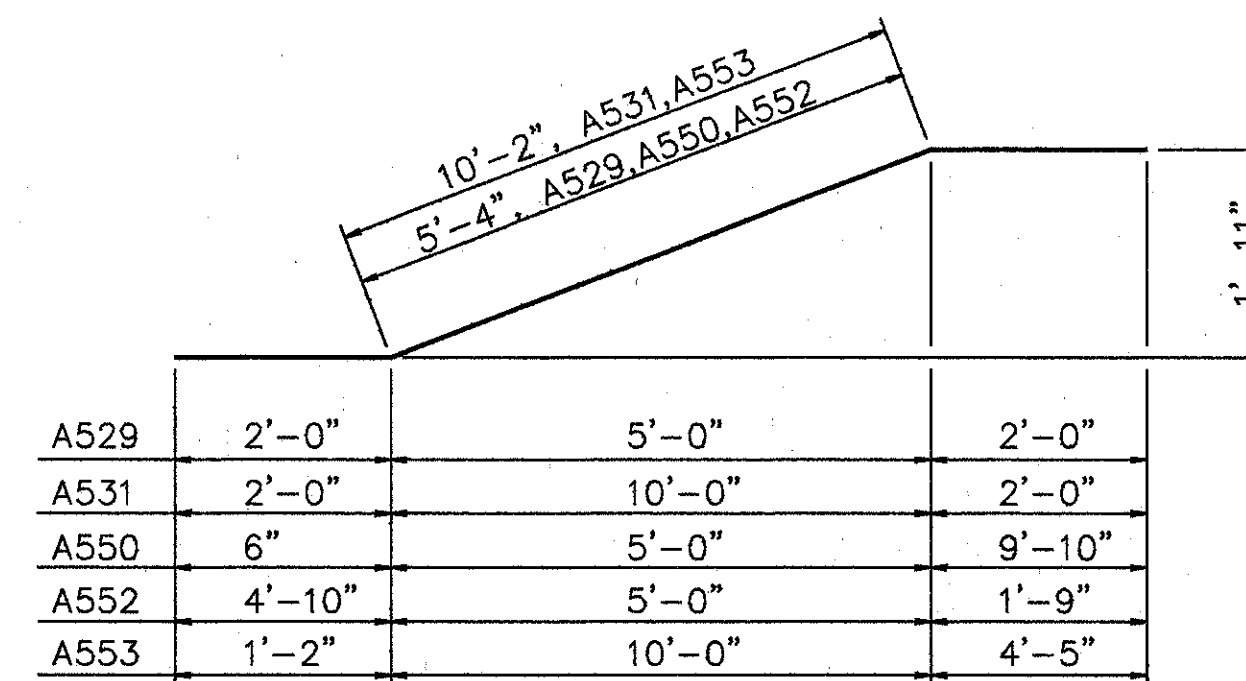
REINFORCING STEEL LIST

MARK	SHAPE	NUMBER	LENGTH	WEIGHT
A501	STR.	436	30'-0"	13642
A502	STR.	2	15'-0"	31
A503	STR.	477	15'-8"	7794
A504	STR.	111	16'-8"	1929
A505	STR.	3	15'-6"	48
A506	STR.	15	14'-0"	219
A507	STR.	119	16'-10"	2089
A508	STR.	3	9'-0"	28
A509	STR.	4	7'-6"	31
A510	STR.	2	12'-0"	13
A511	STR.	78	17'-3"	1403
A512	STR.	4	23'-10"	99
A513	STR.	3	22'-11"	72
A514	STR.	69	17'-1"	1229
A515	STR.	1	7'-10"	8
A516	STR.	4	10'-8"	45
A517	STR.	9	4'-10"	45
A518	STR.	2	18'-0"	38
A519	STR.	2	26'-8"	57
A520	STR.	2	26'-6"	55
A521	BNT. †	3	12'-8"	40
A522	BNT.	2	17'-10"	37
A523	BNT.	2	17'-6"	37
A524	BNT.	2	16'-4"	34
A525	STR.	21	17'-8"	387
A526	BNT. †	3	24'-10"	78
A527	STR.	7	8'-0"	58
A528	STR.	20	4'-0"	100
A529	BNT.	4	9'-4"	39
A530	STR.	4	22'-10"	95
A531	BNT.	4	14'-2"	59
A532	STR.	2	5'-0"	10
A533	STR.	4	19'-10"	83
A534	STR.	6	18'-6"	116
A535	STR.	2	9'-8"	20
A536	STR.	2	24'-8"	51
A537	STR.	8	25'-10"	216
A538	STR.	12	5'-2"	65

MARK	SHAPE	NUMBER	LENGTH	WEIGHT
A539	STR.	28	5'-5"	158
A540	STR.	288	6'-8"	2003
A541	STR.	10	6'-10"	71
A542	STR.	226	7'-2"	1689
A543	STR.	7	7'-8"	56
A544	STR.	14	8'-3"	120
A545	STR.	7	9'-9"	71
A546	STR.	7	10'-10"	79
A547	STR.	11	11'-8"	134
A548	STR.	19	13'-3"	263
A549	STR.	21	14'-8"	321
A550	BNT.	3	15'-7"	49
A551	STR.	3	5'-7"	18
A552	BNT.	3	11'-10"	37
A553	BNT.	3	15'-8"	49
A554	STR.	13	14'-6"	197
A555	STR.	3	13'-8"	43
A556	STR.	7	8'-10"	64
A557	STR.	7	1'-11"	14
A558	STR.	13	3'-8"	50
A559	STR.	7	5'-4"	39
A560	BNT.	3	10'-8"	36
A561	BNT.	3	13'-10"	43
A562	BNT.	4	3'-3"	14
A563	STR.	42	1'-3"	55
A564	BNT.	8	4'-8"	39
A565	STR.	8	3'-0"	25
A566	STR.	4	16'-0"	67
* A567	STR.	70	2'-0"	146
A568	STR.	5	12'-7"	66
A569	STR.	3	9'-6"	30
A570	STR.	3	4'-4"	14
A571	STR.	3	3'-11"	12
A572	STR.	3	4'-2"	13
A573	STR.	3	5'-11"	19
A574	STR.	3	7'-11"	25
A575	STR.	6	6'-5"	40
A576	STR.	3	8'-0"	25

MARK	SHAPE	NUMBER	LENGTH	WEIGHT
A577	STR.	1	8'-6"	9
A577	STR.	2	10'-0"	21
A577	STR.	3	12'-0"	38
A580	STR.	1	15'-9"	16
REPLACEMENT STEEL				900
SUB-TOTAL				37575

BENT BAR DETAILS



L.A.T.M. MAY 21, 1991 © 10:42 AM  
 65 STRAINING - CONSTRUCTION/REINFORCING LIST REVISION BY: BACH, JUN. 4, 1992 © 1:44 PM

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STEEL REINFORCEMENT LIST

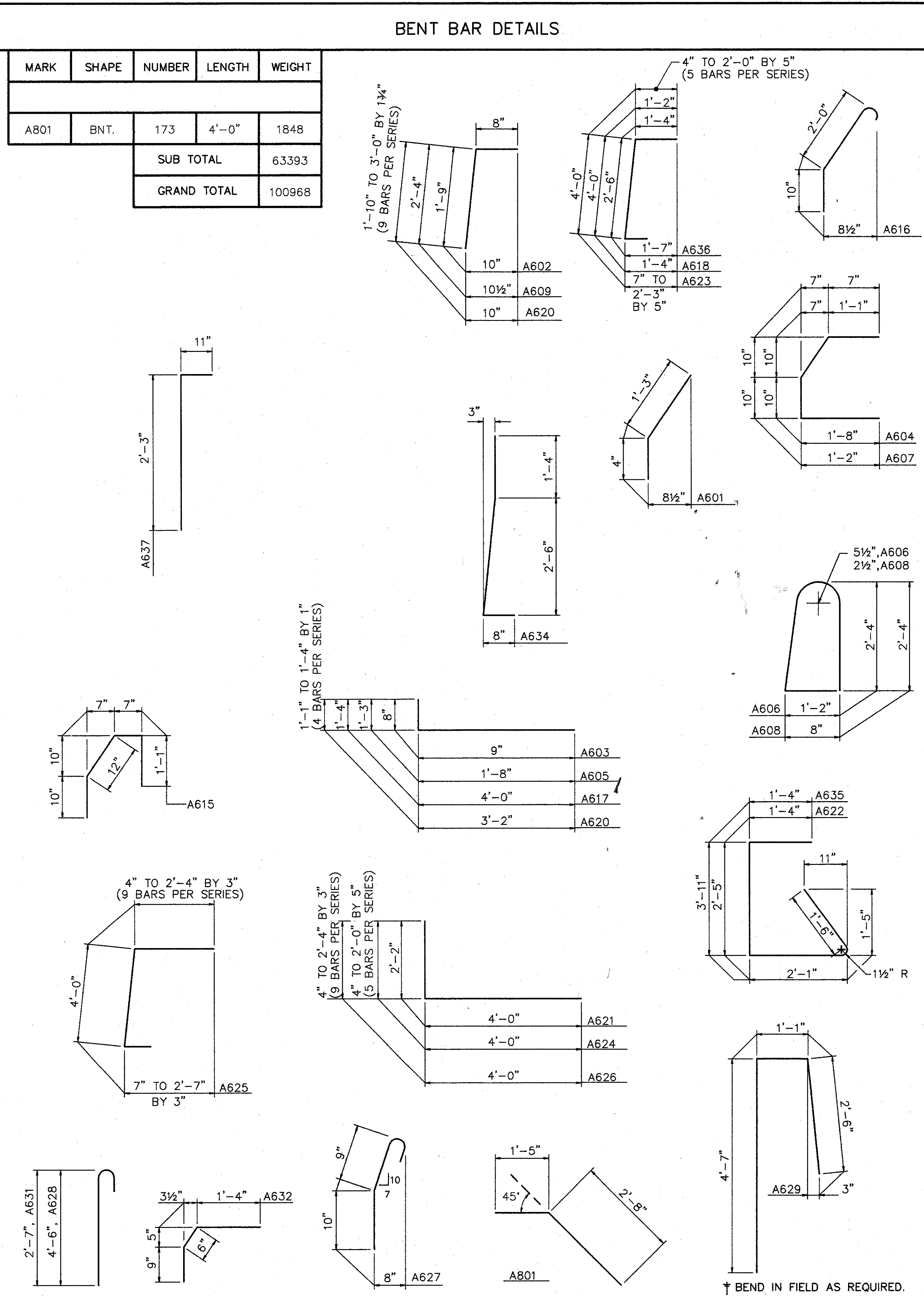
† BEND IN FIELD AS REQUIRED.  
 \* BAR TO BE WELDED WITH FULL PENETRATION WELD. BAR SHALL BE GRADE 40.

BRIDGE NO. HAM-71-0154  
 OVER S.B. 471

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
L.A.T.M.	D.E.E.		M.A.A.	D.E.M11/11/94		



REINFORCING STEEL LIST				
MARK	SHAPE	NUMBER	LENGTH	WEIGHT
A601	BNT.	2176	1'-6"	4902
A602	BNT.	2160	2'-5"	7840
A603	BNT.	2173	1'-3"	4080
A604	BNT.	19	4'-3"	121
A605	BNT.	32	2'-9"	132
A606	BNT.	19	6'-2"	176
A607	BNT.	4	3'-3"	20
A608	BNT.	17	5'-1"	130
A609	BNT.	6	3'-9"	34
A610	STR.	2	7'-6"	23
A611	STR.	8	3'-3"	39
A612	STR.	20	4'-3"	128
A613	STR.	8	3'-6"	42
A614	STR.	1855	2'-9"	7662
A615	BNT.	869	3'-2"	4133
A616	BNT.	990	2'-9"	4312
A617	BNT.	891	5'-2"	6914
A618	BNT.	961	5'-7"	8059
A619	BNT.	9	2'-4" TO 3'-6"	39
A620	BNT.	5	4'-1" TO 4'-4"	25
A621	BNT.	55	6'-0"	496
A622	BNT.	4	7'-0"	42
A623	BNT.	10	4'-9" TO 6'-5"	84
A624	BNT.	10	4'-2" TO 5'-10"	75
A625	BNT.	18	4'-9" TO 6'-9"	155
A626	BNT.	18	4'-2" TO 6'-2"	140
A627	BNT.	30	1'-5"	64
A628	BNT.	8	4'-9"	57
A629	BNT.	4	7'-10"	47
A630	STR.	862	3'-9"	4855
A631	BNT.	1	2'-11"	4
A632	BNT.	1	2'-5"	4
A633	STR.	8	5'-4"	64
A634	BNT.	862	4'-4"	5610
A635	BNT.	28	8'-6"	357
A636	BNT.	8	4'-4"	52
A637	BNT.	74	3'-0"	333



ITEM	ITEM EXT.	TOTAL	UNITS	DESCRIPTION
202	11200	LUMP SUM	L.S.	PORTIONS OF STRUCTURE REMOVED
202	2350I	12700	S.Y.	WEARING COURSE REMOVED (ASPHALT), AS PER PLAN
509	15830	100673	LBS.	EPOXY COATED REINFORCING STEEL, GRADE 60
510	12201	247	L.F.	DOWEL HOLES, AS PER PLAN
511	34450	14	C.Y.	CLASS S CONCRETE, MISC.: ABUTMENT PARAPETS
511	34400	8	C.Y.	CLASS S CONCRETE, SUPERSTRUCTURE (RECONSTRUCTION)
511	34450	483	C.Y.	CLASS S CONCRETE, MISC.: CONCRETE PARAPET RAILING, AS PER PLAN
511	45700	21	C.Y.	CLASS C CONCRETE, ABUTMENT (RECONSTRUCTION)
SPECIAL	51267500	5725	S.Y.	SEALING OF CONCRETE SURFACE *
SPECIAL	51267502	1090	S.Y.	SEALING OF CONCRETE SURFACE (EPOXY) *
513	21000	17	EACH	TRIMMING OF BEAM END
514	27704	LUMP	L.S.	FIELD PAINTING, MISC: FIELD PAINTING EXISTING STEEL, EEU *
516	10901	115	L.F.	ELASTOMERIC COMPRESSION SEAL, AS PER PLAN
516	11210	494	L.F.	STRUCTURAL EXP. JT., INCLUDING ELASTOMERIC STRIP SEALS
516	14600	195	L.F.	MISC. STRUCTURAL JOINT OR JOINT SEALER: 2"x4" SEALER, AS PER PLAN
516	45304	80	EACH	REFURBISH BEARING DEVICE
517	76201	2520	L.F.	RAILING FACED, AS PER PLAN (32" HIGH)
516	45307	4	EACH	REFURBISH BEARING DEVICE, AS PER PLAN
518	12800	13	EACH	SCUPPER MODIFICATION
518	63300	LUMP SUM	L.S.	STRUCTURE DRAINAGE, MISC: MODIFY DRAINAGE PIPING
519	11100	345	S.F.	PATCHING CONCRETE STRUCTURE
SPECIAL	51912600	160	L.F.	CONCRETE REPAIR BY EPOXY INJECTION *
625				FOR LIGHTING SUMMARY SEE LIGHTING PLANS
845	40210	14573	S.Y.	LATEX MODIFIED CONCRETE OVERLAY (1 1/2" THICK) ON EXISTING DECK
845	11000	224	C.Y.	LATEX MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS)
845	30000	1	C.Y.	FULL DEPTH REPAIR
SPECIAL	53000400	166	EACH	STRUCTURE MISC.: LATERAL BRACING GUSSET PLATE RETROFIT (INTERMEDIATE).
516	14600	500	L.F.	SEAL JOINT BETWEEN ABUTMENT AND CONCRETE SLOPE PROTECTION
518	63300	LUMP	L.S.	SCUPPER AND DRAINAGE PIPE CLEANOUT
601	21100	10	S.F.	REPAIR CONCRETE SLOPE PROTECTION
513	15501	200	LBS.	STRUCTURAL STEEL (MISC. AND CASTINGS), AS PER PLAN

- SCARIFY EXISTING DECK 1/4", AND REMOVE DETERIORATED CONCRETE AS DIRECTED BY THE ENGINEER. \* SEE PROPOSAL NOTE
- CLEAN AND PAINT ALL REAR ABUTMENT, PIER 3E AND PIER6 BEARINGS. REFURBISH ALL FORWARD ABUTMENT BEARINGS.
- MODIFY PARAPETS ON BRIDGE AND ABUTMENT AS PER PLAN (INCLUDING MEDIAN). **PROPOSED WORK**
- PLACE 1 1/4" THICK **LATEX** MODIFIED CONCRETE ON DECK.
- REFURBISH DRAINAGE PIPING.
- SEAL JOINTS, AS NOTED.
- SEAL TRANSVERSE EXPANSION JOINTS WITH STRIP SEALS. SEAL LONGITUDINAL EXPANSION JOINTS WHERE SPECIFIED WITH COMPRESSION SEALS.
- FILL BACKWALL CRACKS WITH EPOXY. RECONSTRUCT ABUTMENT BACKWALLS ABOVE APPROACH SLAB SEAT.
- TRIM BEAM ENDS.
- RETROFIT LATERAL BRACING. FOR DETAILS SEE SHEETS
- AT LEAST ONE LANE OF TRAFFIC SHALL BE MAINTAINED IN EACH DIRECTION AND ON THE BRIDGE AT ALL TIMES. FOR NOTES SEE MAINTENANCE OF TRAFFIC PLANS. MAINTENANCE OF TRAFFIC PLAN REQUIRES CONSTRUCTION PHASING LIMITS AT LANE CENTERLINES. DUE TO THESE LIMITS, OVERLAY AND BACKWALL CONSTRUCTION MAY REQUIRE SPECIAL ATTENTION.
- OTHER WORK AS DESCRIBED IN THESE PLANS.

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 DAYTON, OHIO 45402-1226  
 (513) 461-5660

14/16

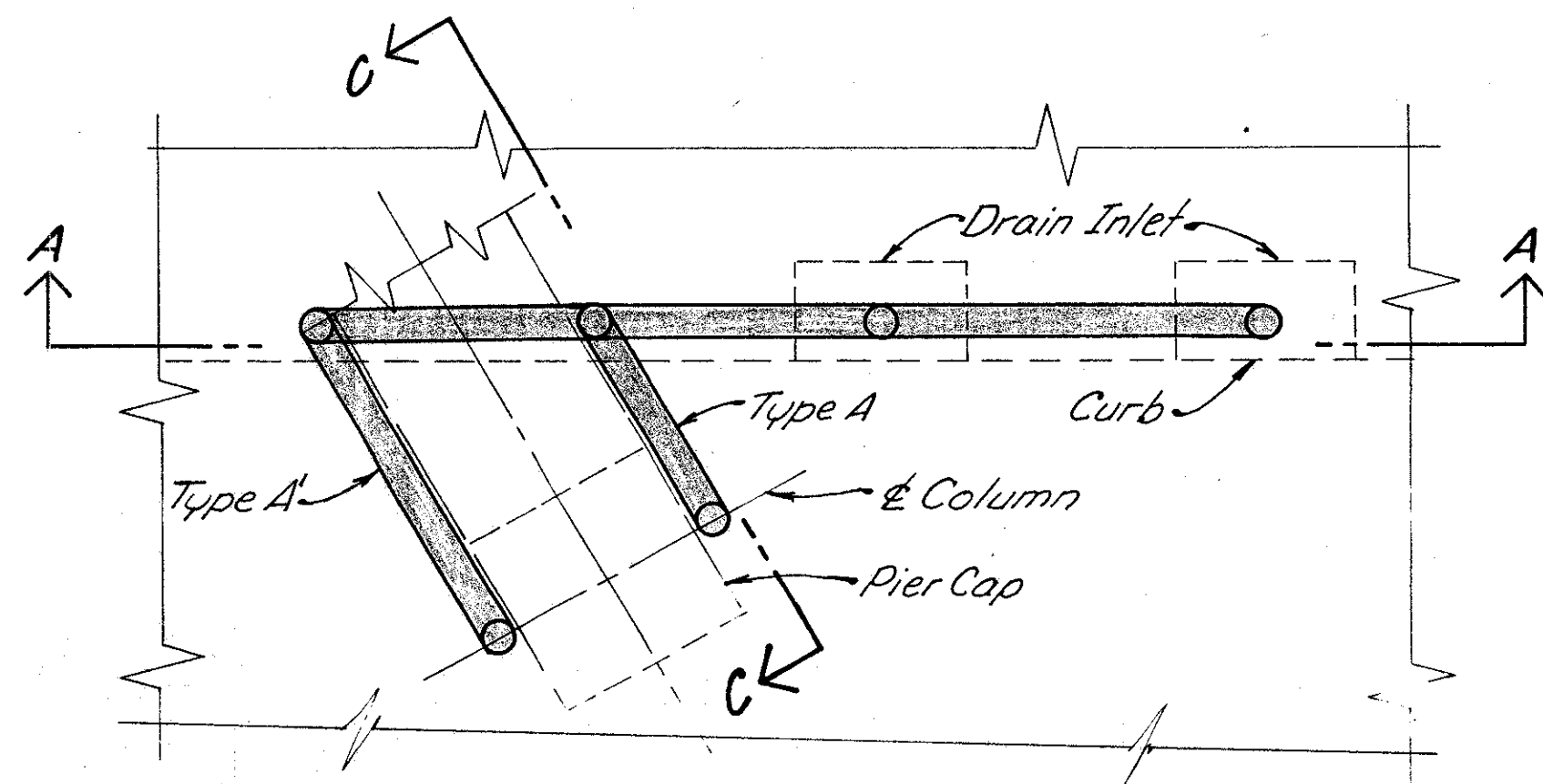
**QUANTITIES AND GENERAL NOTES**

BRIDGE NO. HAM-71-0154  
 OVER S.B. 471

HAMILTON COUNTY

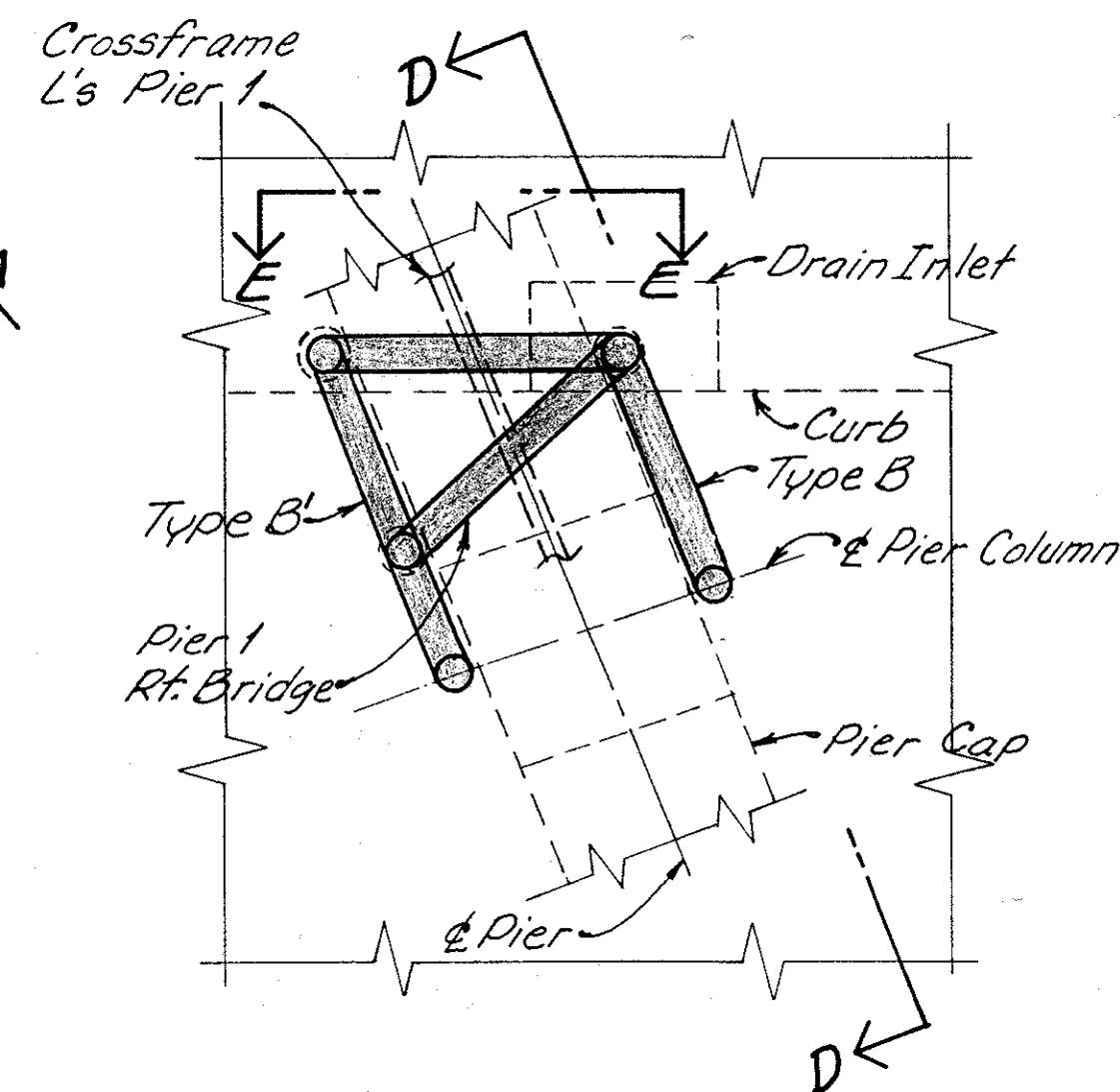
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
L.A.T.M.	D.E.E.		M.A.A.	D.E.M11/11/94		

L.A.T.M. MAY 21, 1991 © 10:44 AM  
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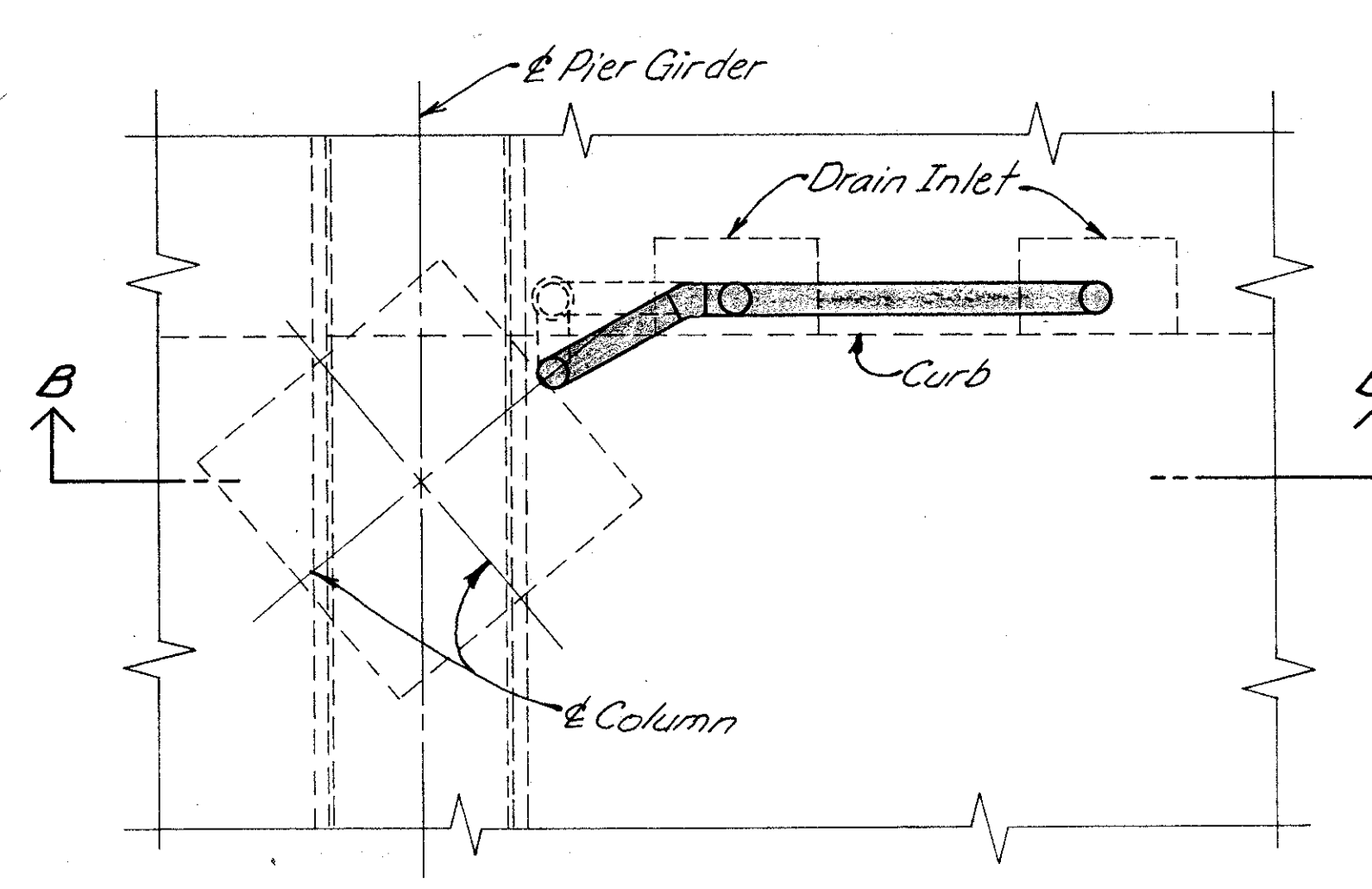


**PLAN FOR TYPE A OR A'**

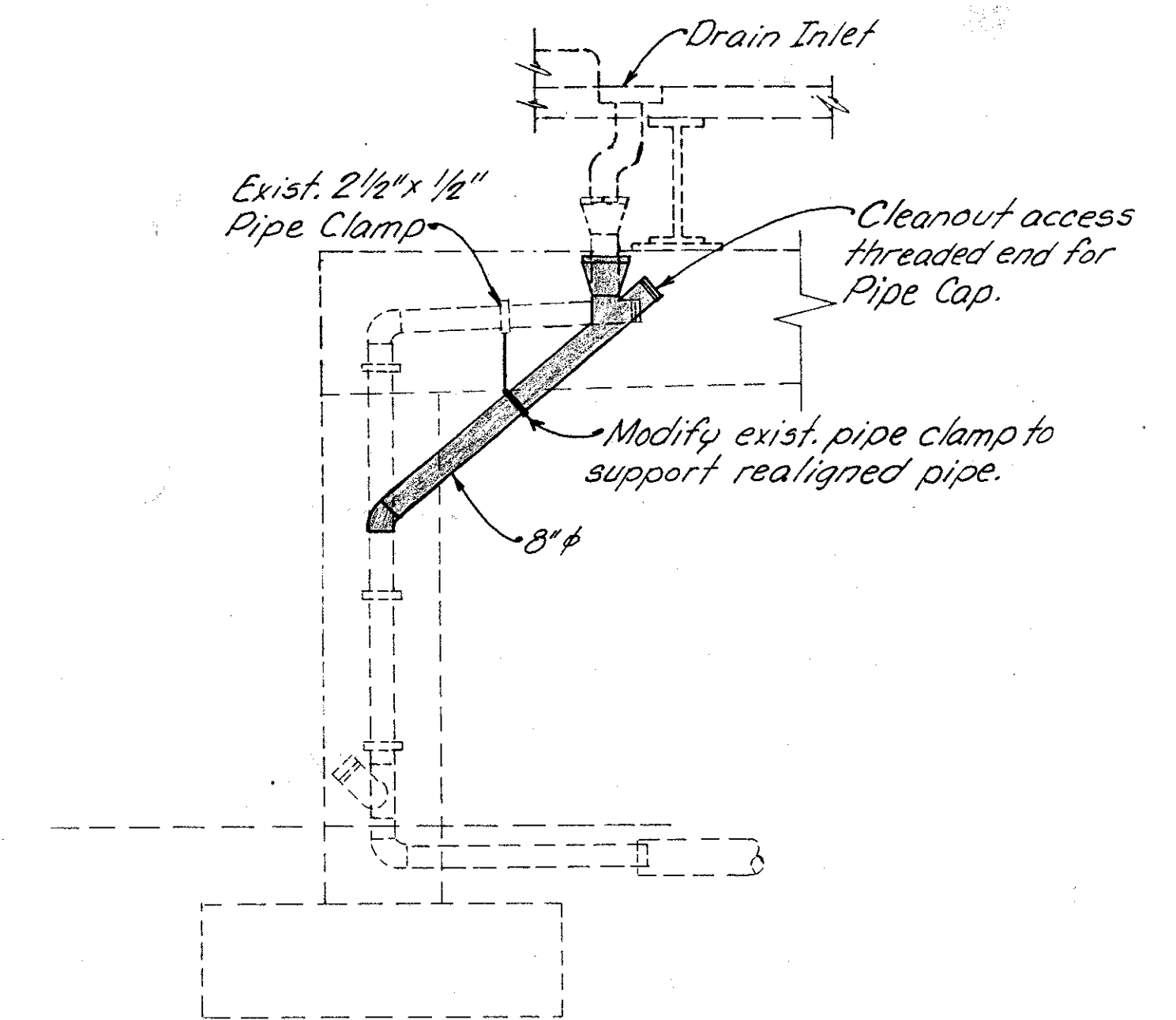
NOTE: Type of plan to be used depends on Location of Inlet with respect to pier. (See Site Plan)



**PLAN FOR TYPE B OR B'**

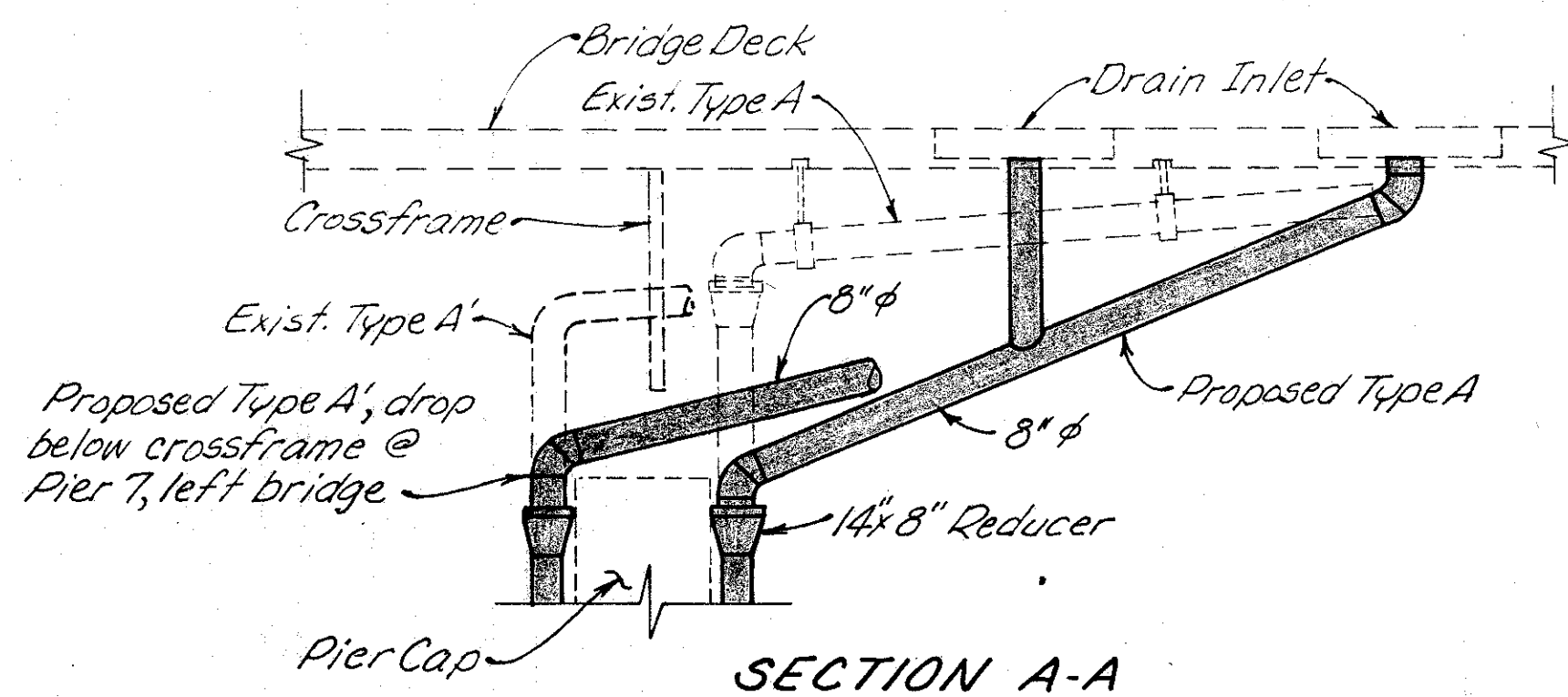


**PLAN FOR TYPE C**

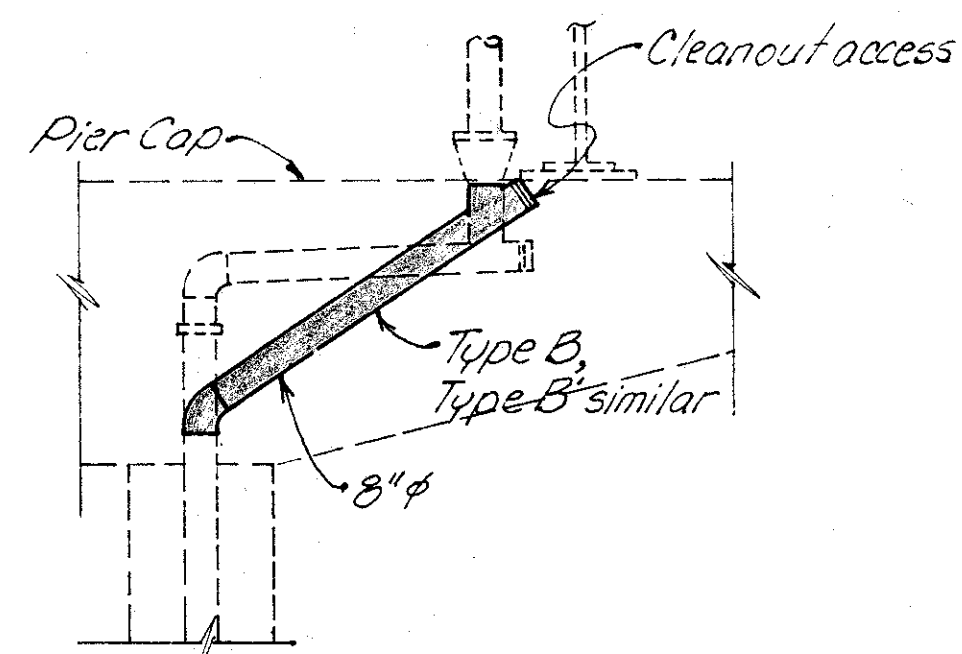


**SECTION C-C**

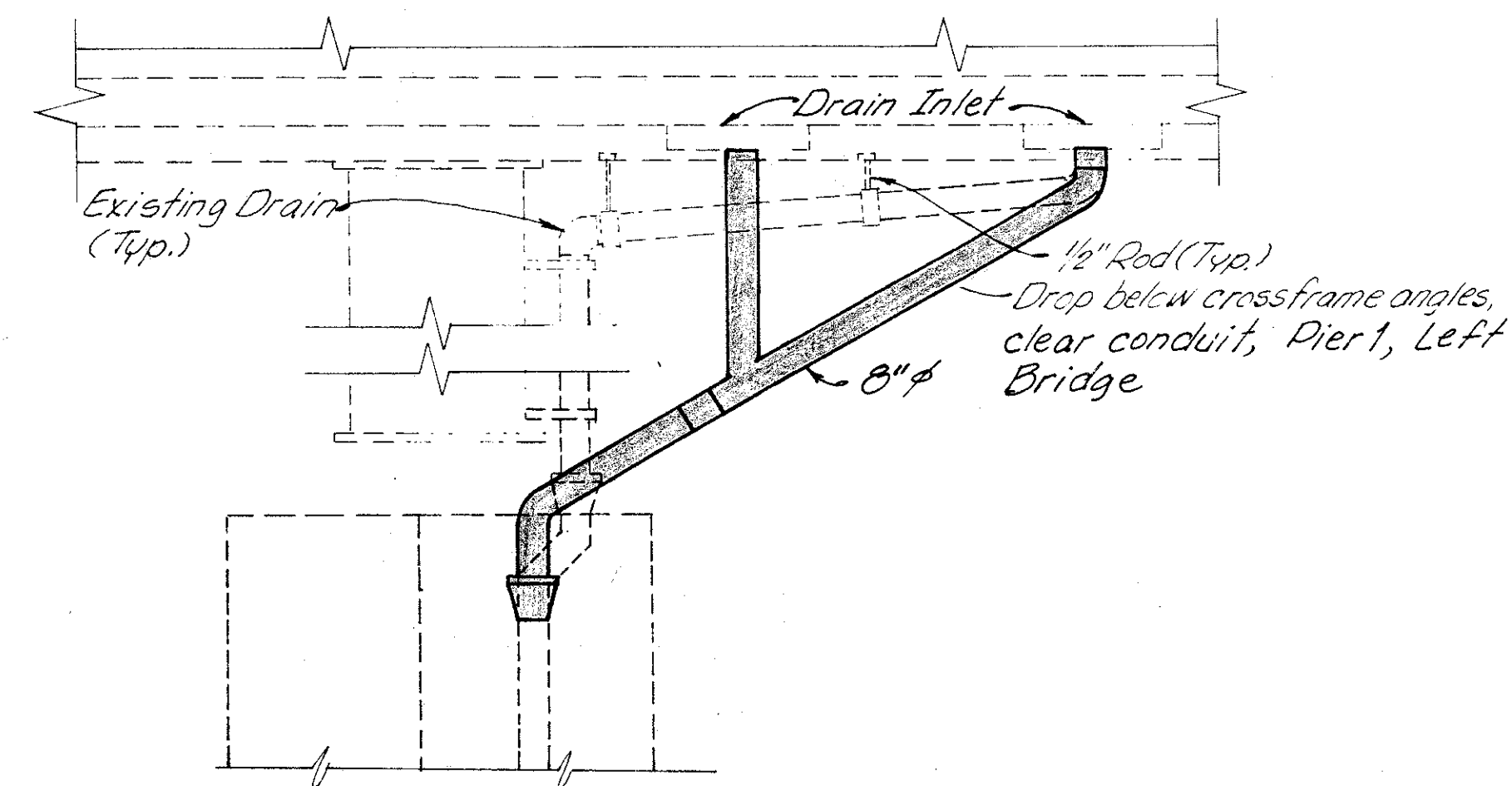
(Type A)  
(Type A' similar)



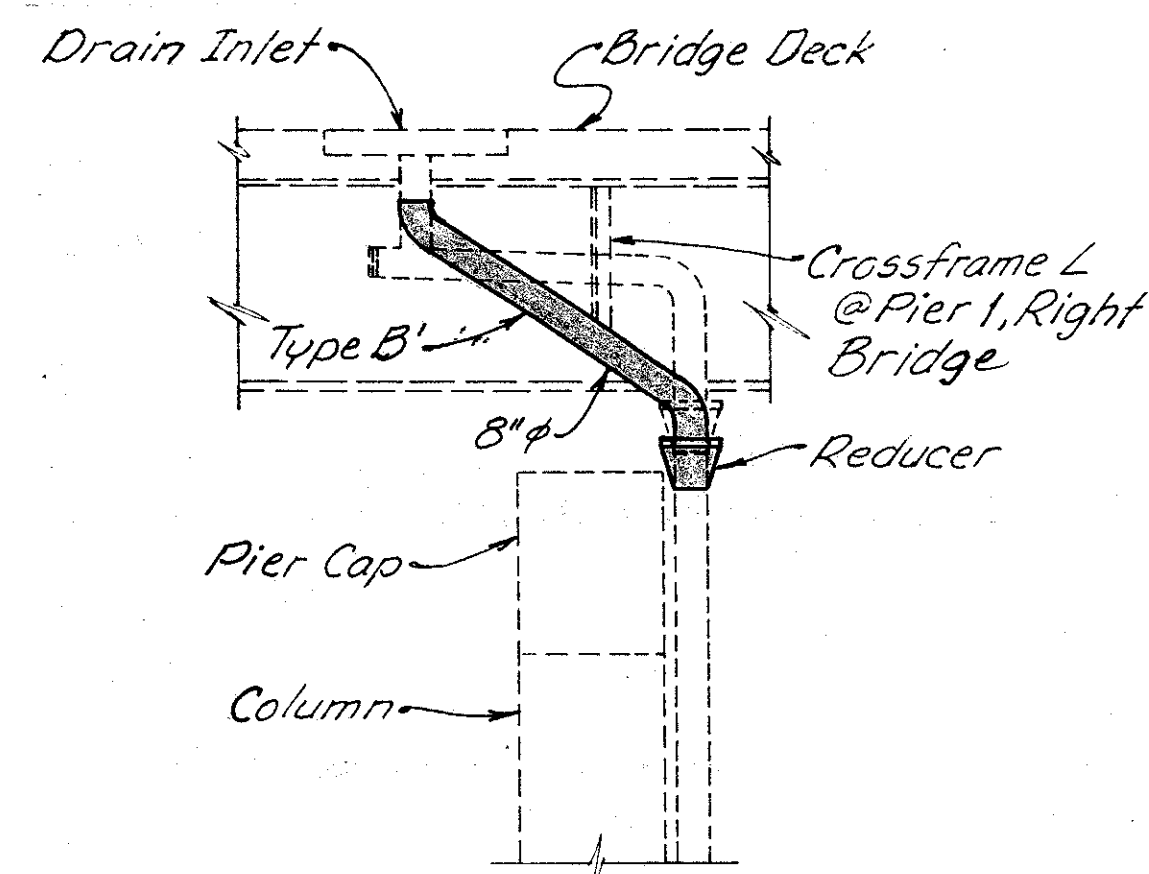
**SECTION A-A**



**SECTION D-D**



**SECTION B-B**



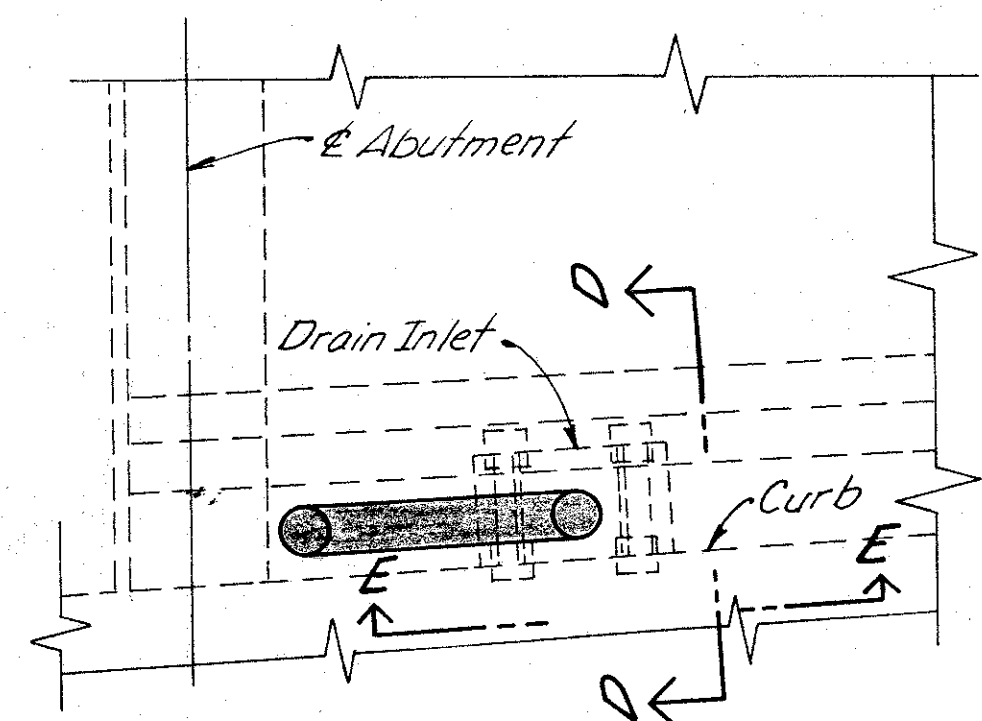
**SECTION E-E**

1. For drainage piping requirements see General Notes sht. 273  
401

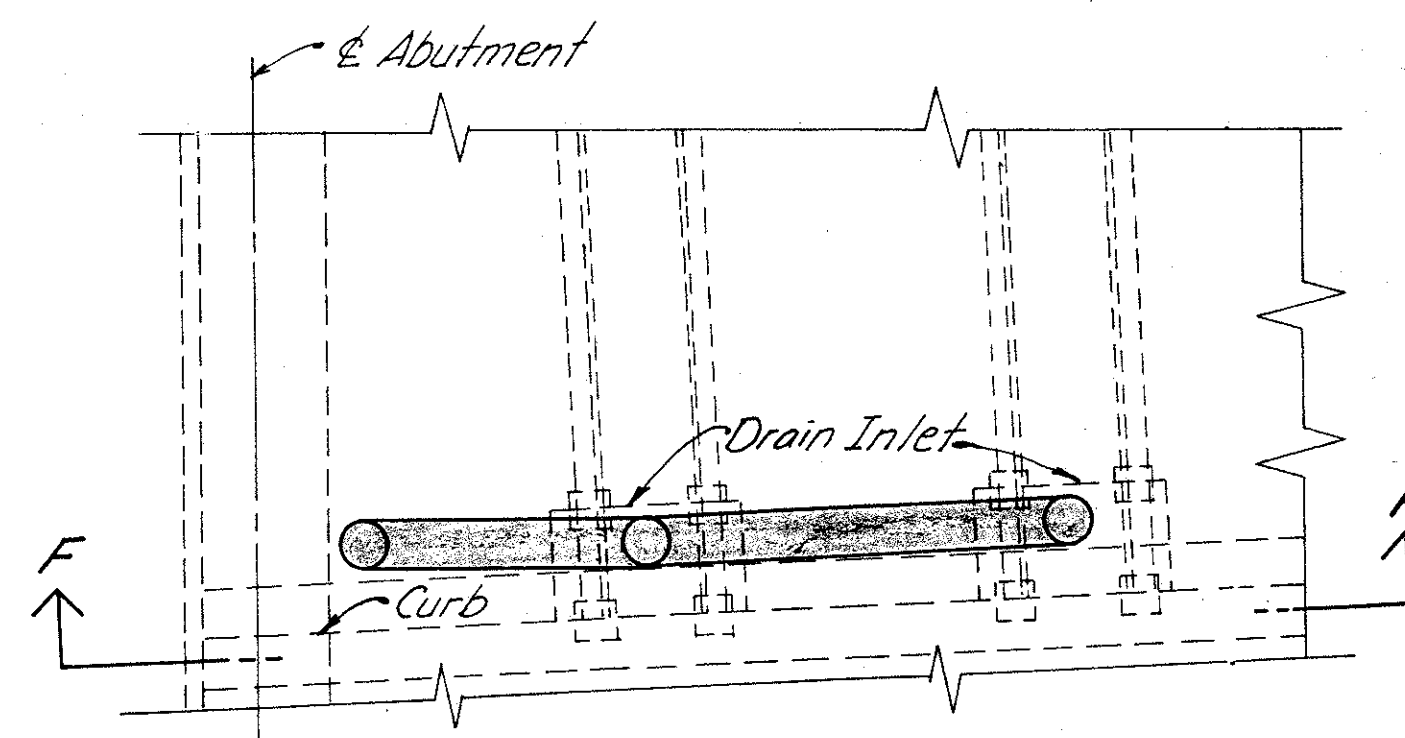
2. Approximate N<sup>o</sup> of Linear Feet of proposed 8" pipe (including specials) = 360'

		WOOLPERT CONSULTANTS 409 East Monument Avenue Dayton, Ohio 45402-1226		15 / 16	
<b>DRAINAGE DETAILS</b>					
BRIDGE NO. HAM-71-0154 OVER I-471					
HAMILTON COUNTY					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
D.E.M.	L.A.P.		D.E.M.	P.W.G.	11/11/94

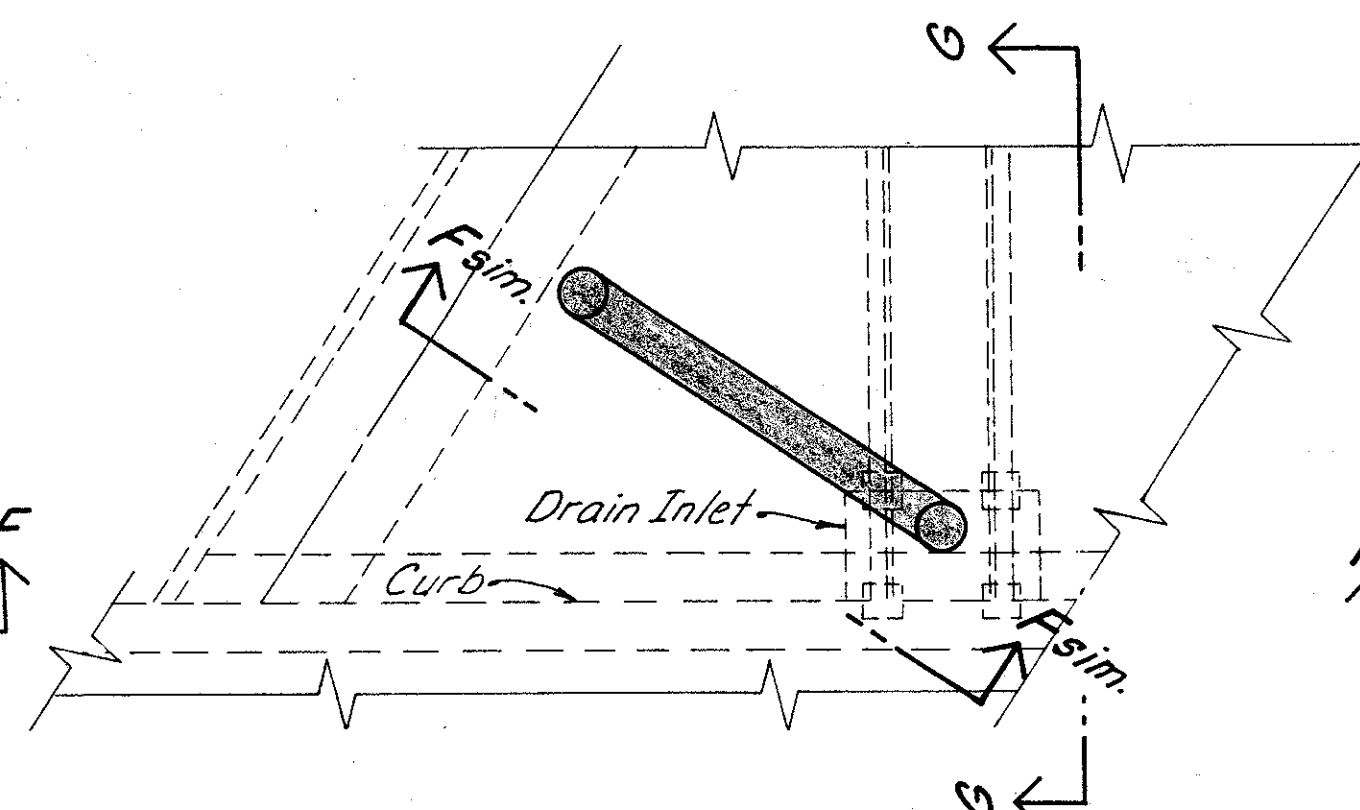




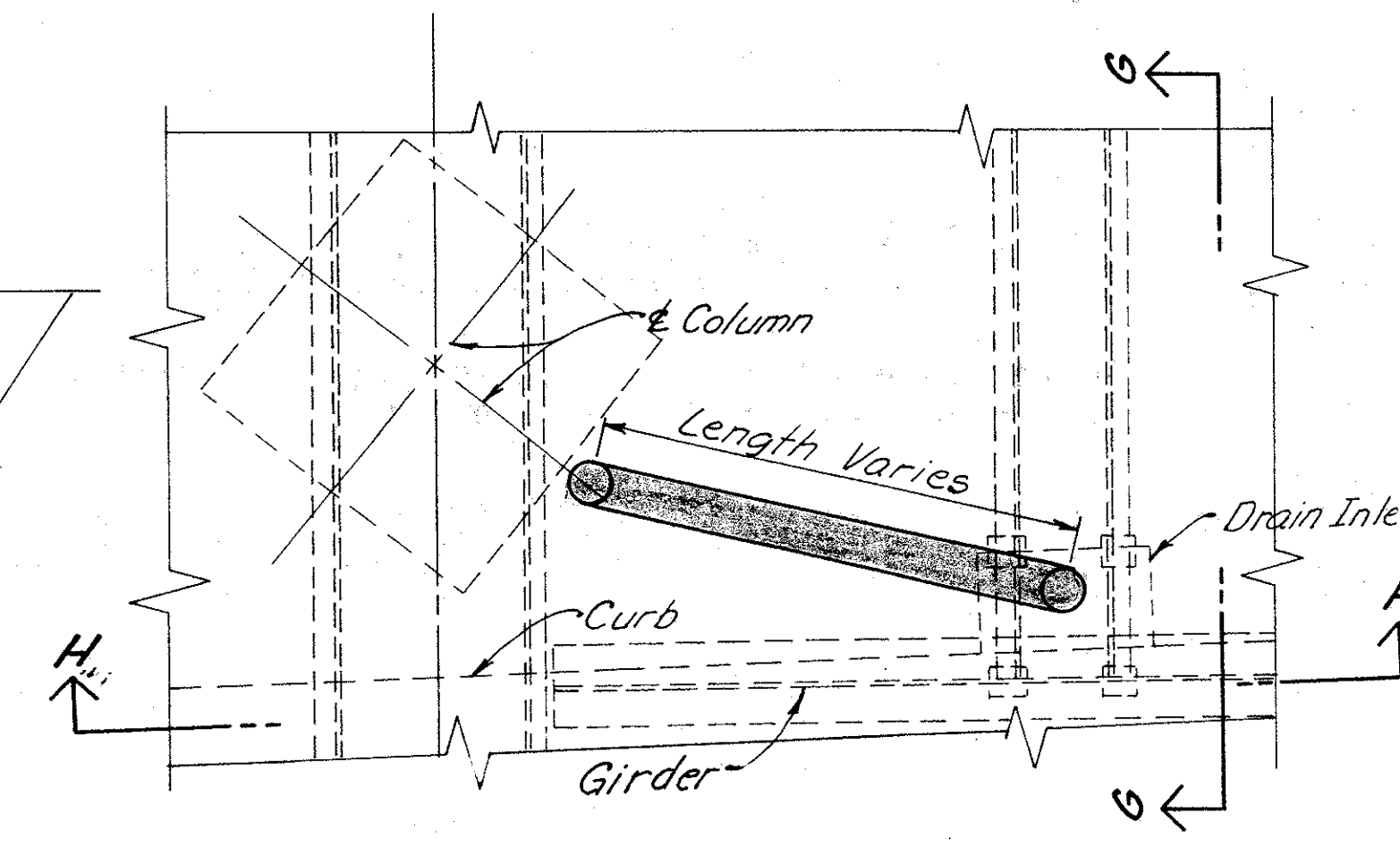
PLAN "TYPE D" DRAIN INLET AT SOUTH ABUTMENT A (N.B.)



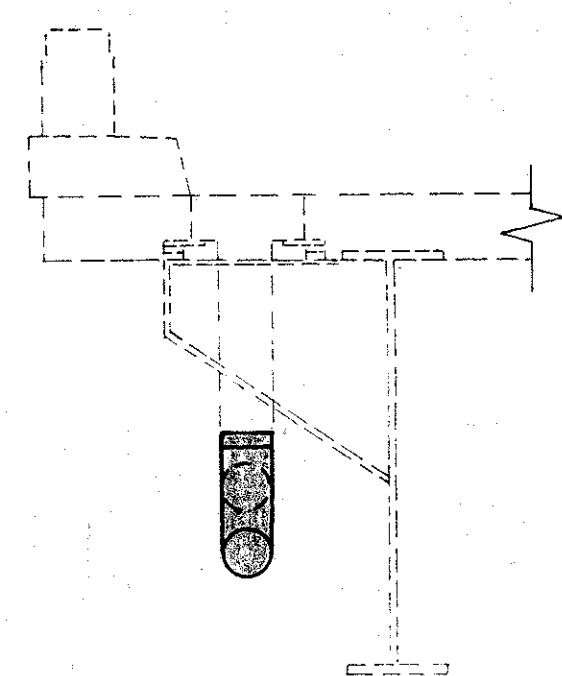
PLAN "TYPE E" DRAIN INLET AT SOUTH ABUTMENT A (S.B.)



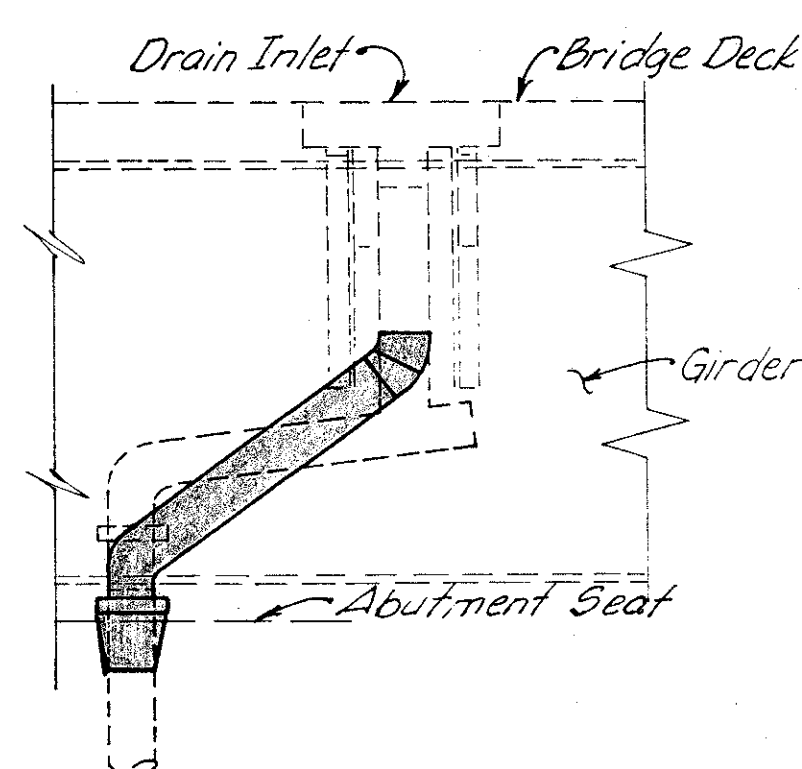
PLAN "TYPE F" DRAIN INLET AT SOUTH ABUTMENT B



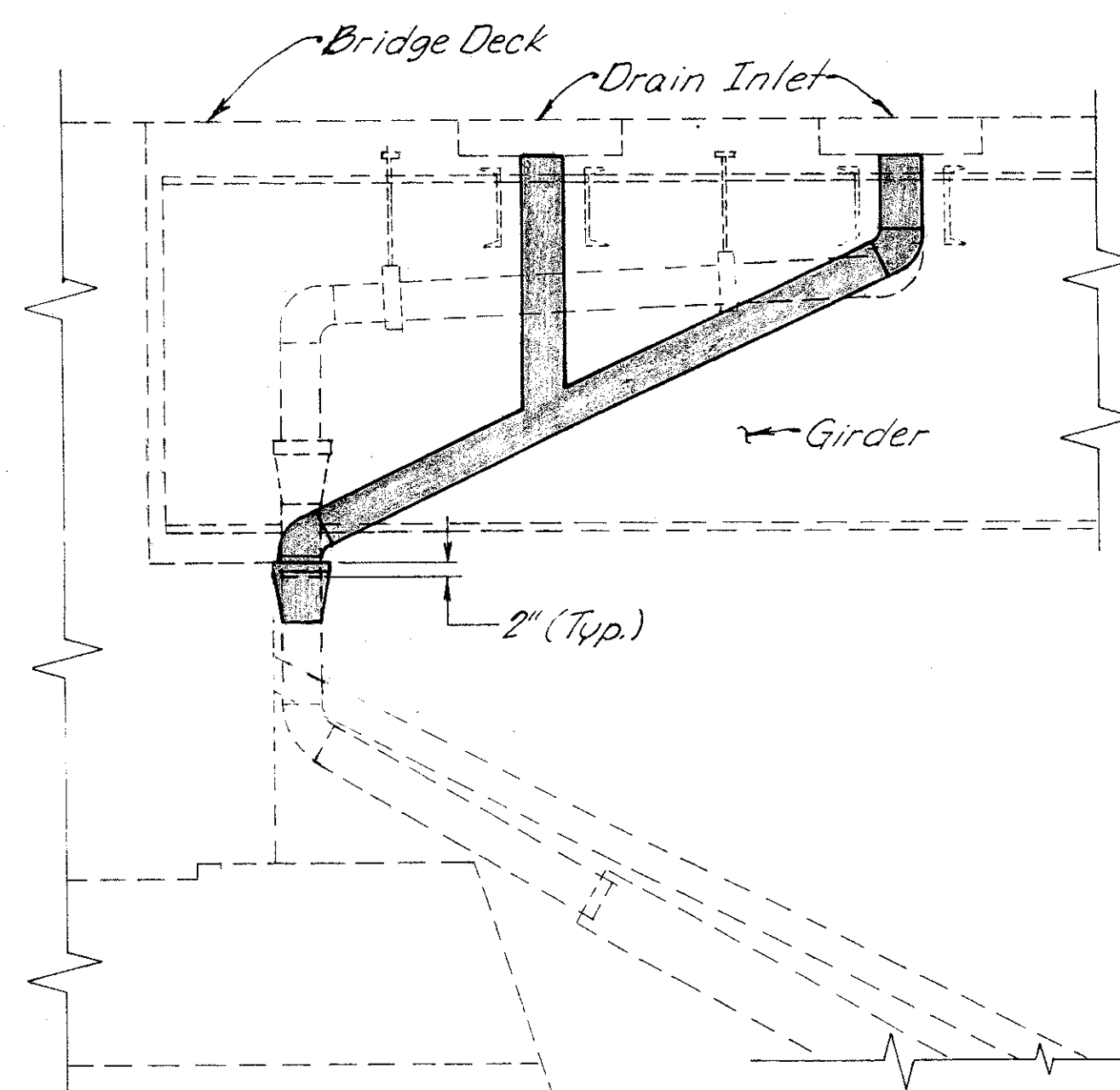
PLAN "TYPE G" DRAIN INLET AT FLOOR BEAMS



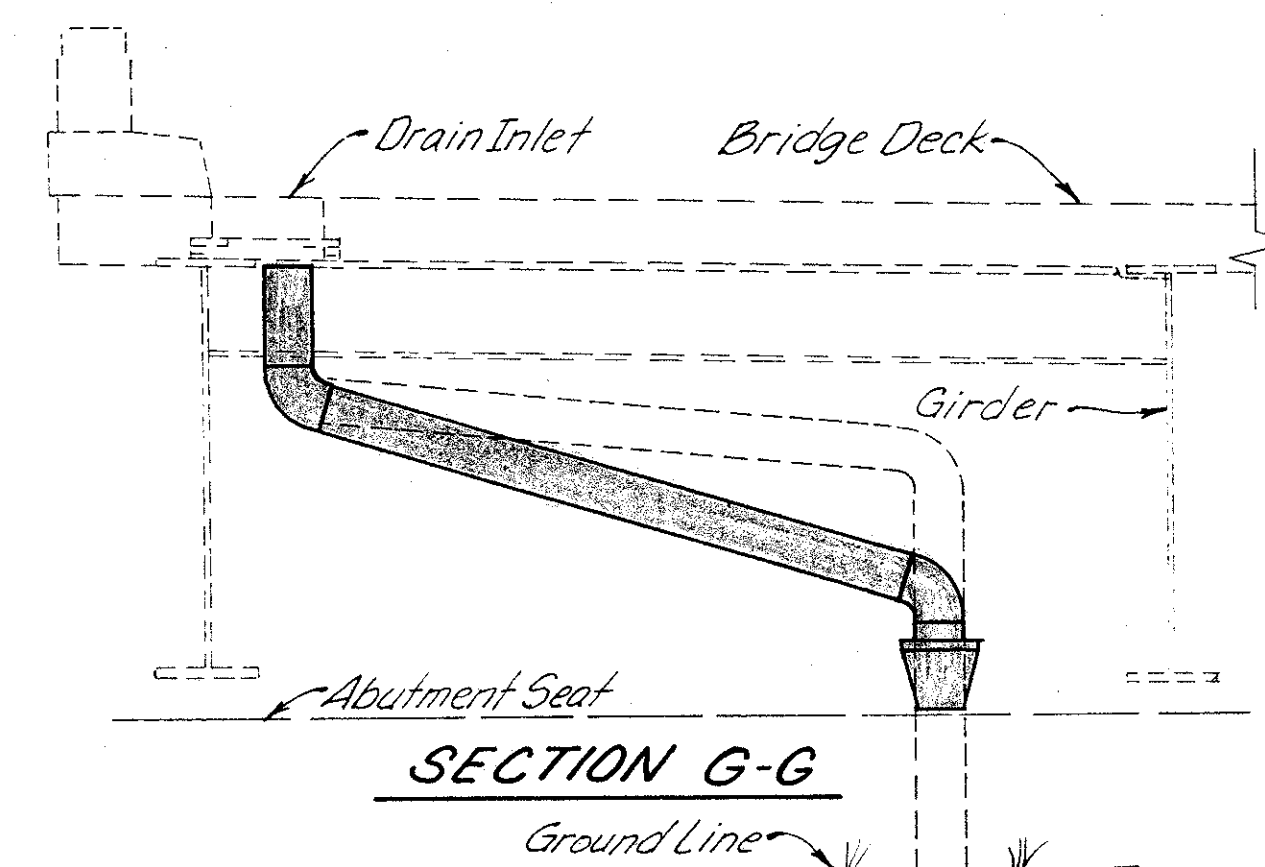
SECTION D-D



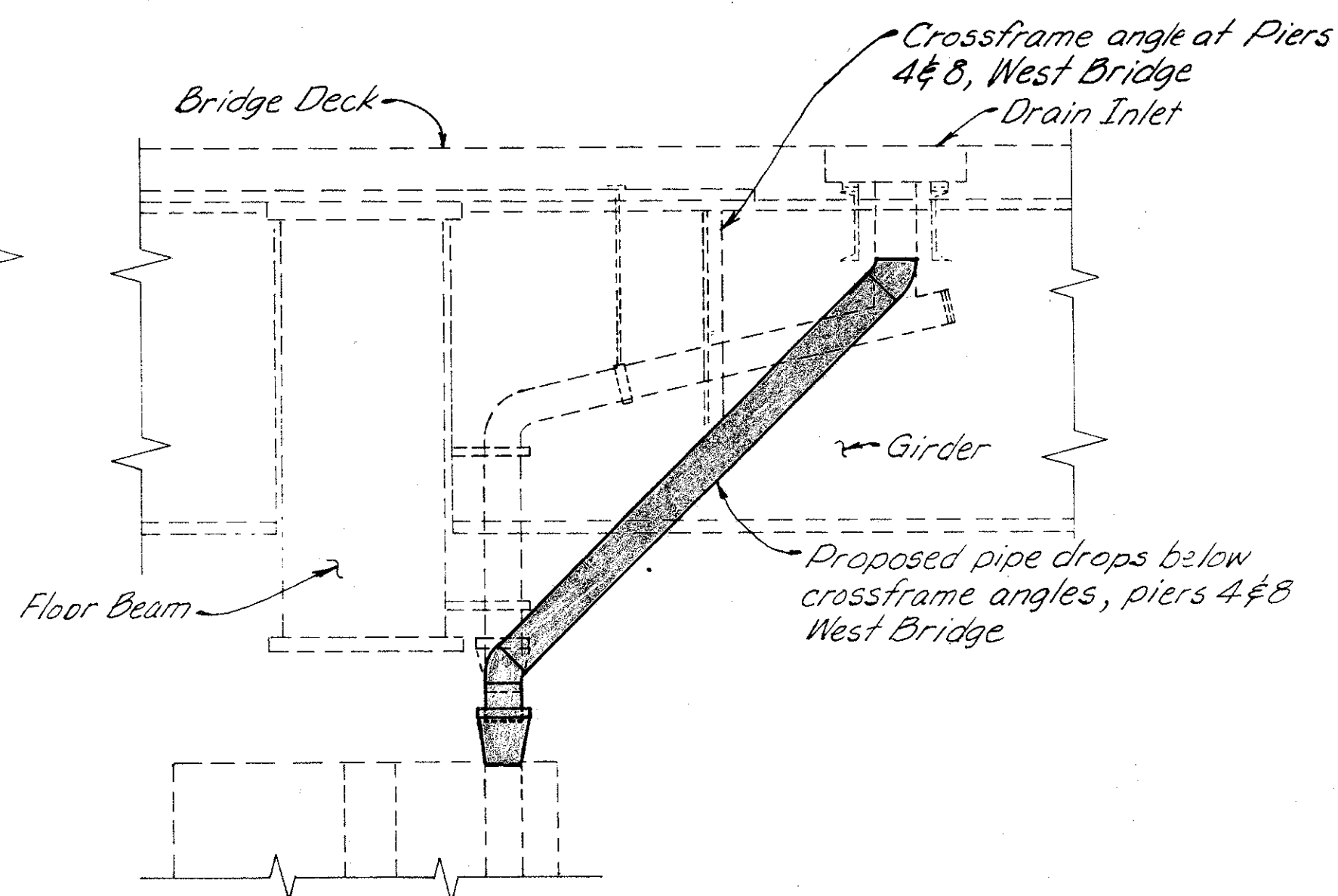
SECTION E-E



SECTION F-F



SECTION G-G



SECTION H-H

Note: Contractor may use eccentric reducer to provide clearance with column (Typ.)

For Notes see sht. 15/16



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Dayton, Ohio 45402-1226

16/16

DRAINAGE DETAILS

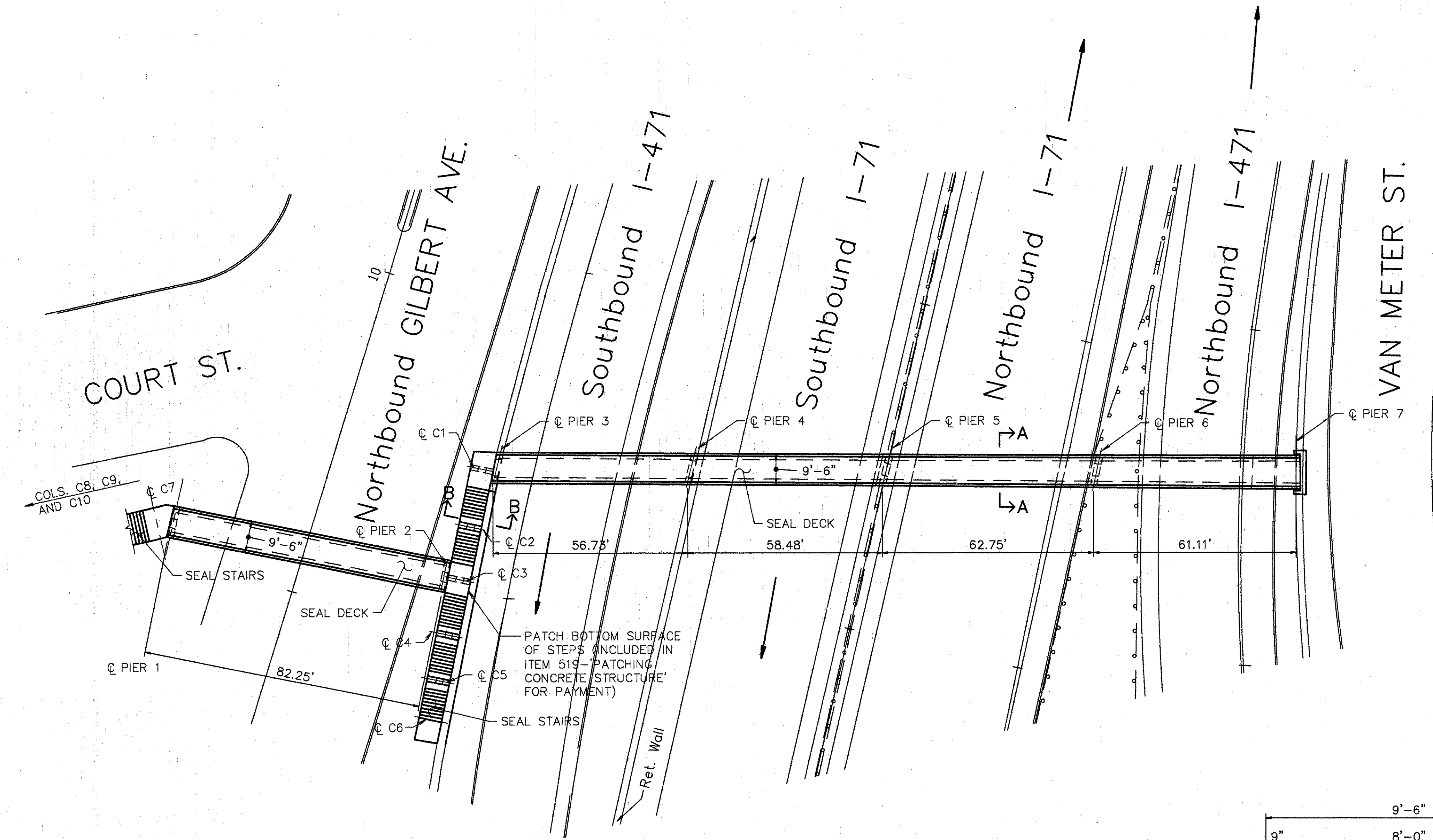
BRIDGE NO. HAM-71-0154  
OVER I-471

HAMILTON COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
D.E.M.	L.A.P.		D.E.M.	P.W.G.	11/11/99	

ITEM	ITEM EXT.	TOTAL	UNITS	DESCRIPTION
SPECIAL	51267500	792	S.Y.	SEALING OF CONCRETE SURFACE *
SPECIAL	51267502	246	S.Y.	SEALING OF CONCRETE SURFACE (EPOXY) *
514	27704	LUMP	L.S.	FIELD PAINTING, MISC. EXISTING STEEL, EEU *
519	11100	33	S.F.	PATCHING CONCRETE STRUCTURE
516	45304	4	EACH	REFURBISH BEARING DEVICE
518	63300	LUMP	L.S.	SCUPPER AND DRAINAGE PIPE CLEANOUT

\* SEE PROPOSAL NOTE



**NOTE:**

1. SEAL PIERS, COLUMNS C2, C4, C5, C8, & C9 TO BE SEALED UNDER ITEM SPECIAL-"SEALING OF CONCRETE SURFACES". ITEM SPECIAL-"SEALING OF CONCRETE SURFACES, EPOXY", PROVIDES SEALING OF C7 (LEAVE SOUTH FACE OF COL. UNSEALED), C3 (SOUTH UNSEALED), AND C1 (NORTH UNSEALED), AND PIER 1 (SOUTH UNSEALED), PIER 2 (NORTH UNSEALED), PIER 3 (SOUTH UNSEALED), PIERS 4, 5, & 6 (TOPS UNSEALED). COLS. C6, & C10 ARE EXCLUDED.

- ### PROPOSED WORK
1. SEAL BRIDGE DECK, STAIRS, & PIERS.
  2. PATCH BOTTOM SURFACE OF STEPS.
  3. REFURBISH ABUTMENT BEARINGS.
  4. TRAFFIC UNDER PEDESTRIAN BRIDGE SHALL BE MAINTAINED AT ALL TIMES. FOR NOTES SEE MAINTENANCE OF TRAFFIC PLANS. PEDESTRIAN TRAFFIC SHALL BE MAINTAINED AT ALL TIMES.
  5. OTHER WORK AS DESCRIBED IN THESE PLANS.

### EXISTING STRUCTURE

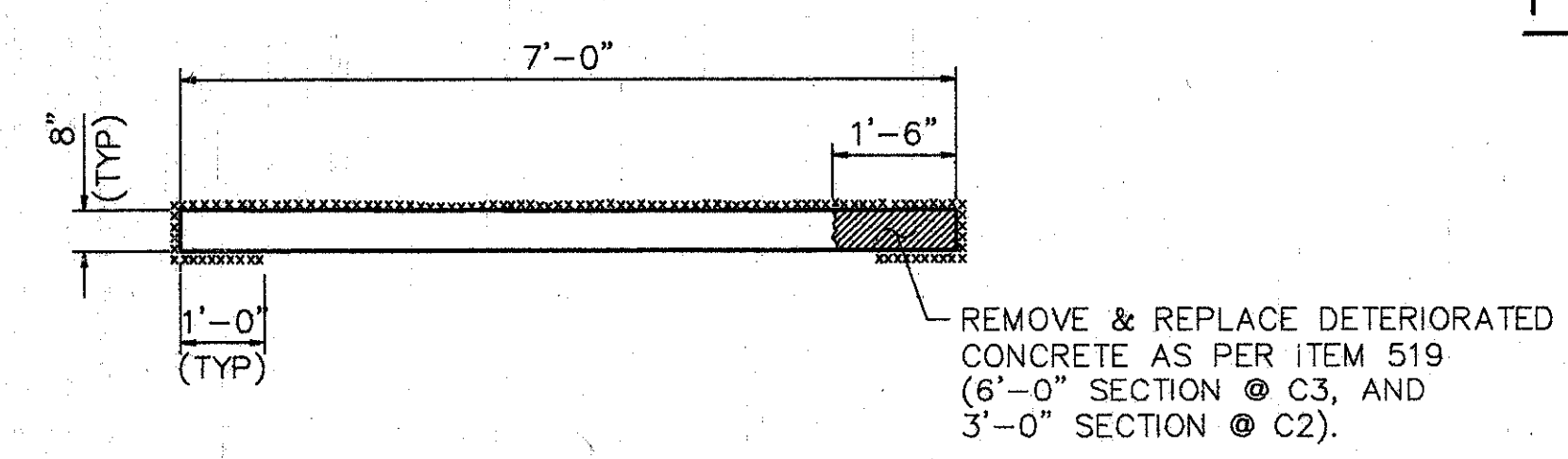
TYPE: 4 SPAN CONTINUOUS ROLLED BEAM WITH REINFORCED CONCRETE DECK & SUBSTRUCTURE. SINGLE SPAN PLATE GIRDER WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE.

SPANS: 56.73', 58.48', 62.75', 61.11' (ROLLED BEAM STRUCTURE)  
82.25' (PLATE GIRDER STRUCTURE)

WIDTH: 8'-0" CLEAR BETWEEN CURBS

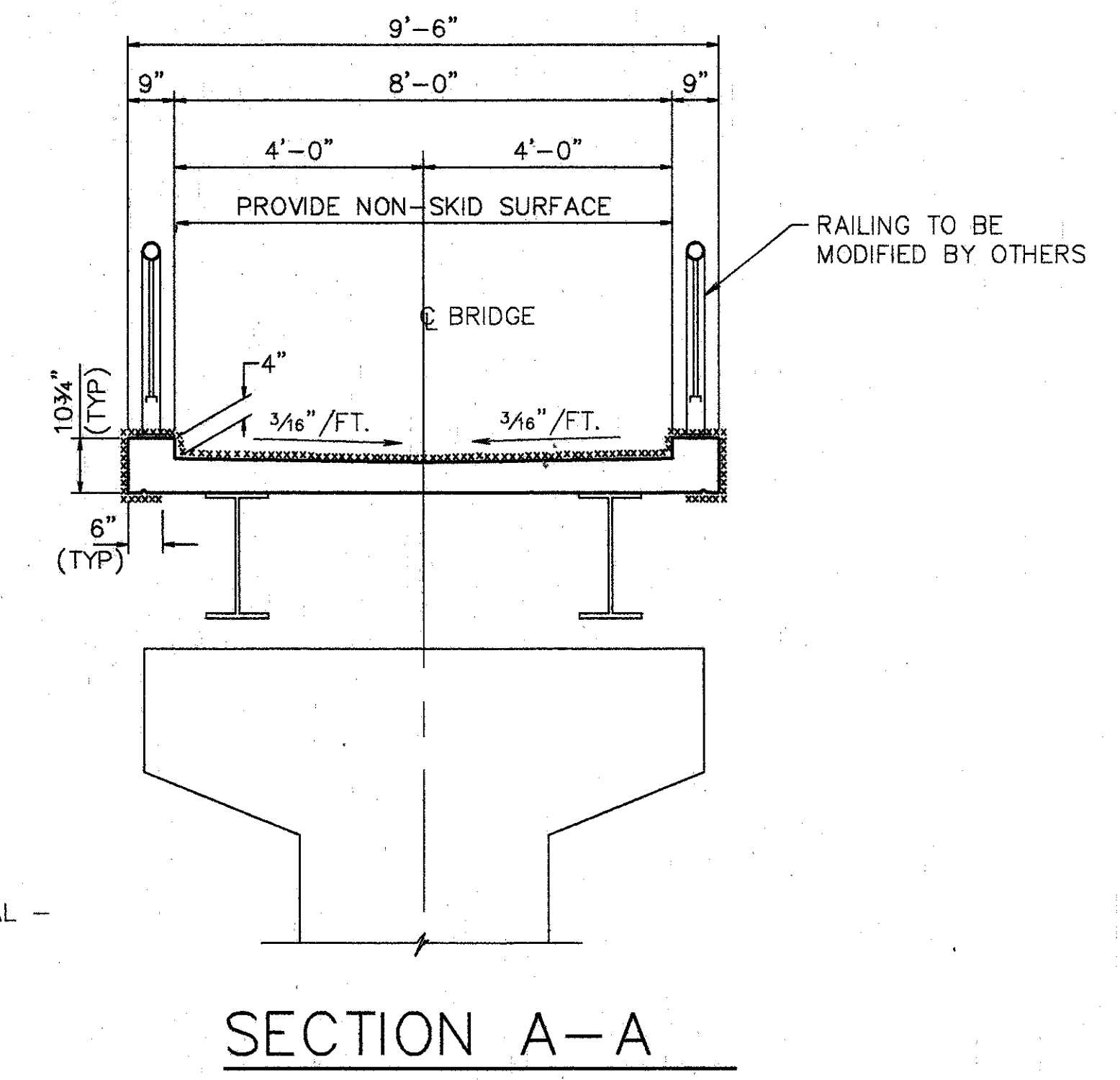
LOADING: 85lb./SQ. FT. (UNIFORM)

SKEW: AS SHOWN ON PLAN



**SECTION B-B**

**NOTE:**  
SEALING IS TYPICAL FOR ALL STAIRS, AND LANDINGS NOT ON GRADE.



**SECTION A-A**

XXX - SURFACES TO BE SEALED UNDER ITEM SPECIAL - SEALING OF CONCRETE SURFACES. PROVIDE A NON-SKID SURFACE WHERE SHOWN.

**PLAN**

**WOOLPERT CONSULTANTS**  
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DAYTON, OHIO 45402-1226  
(513) 461-5660

**GENERAL PLAN AND DETAILS**

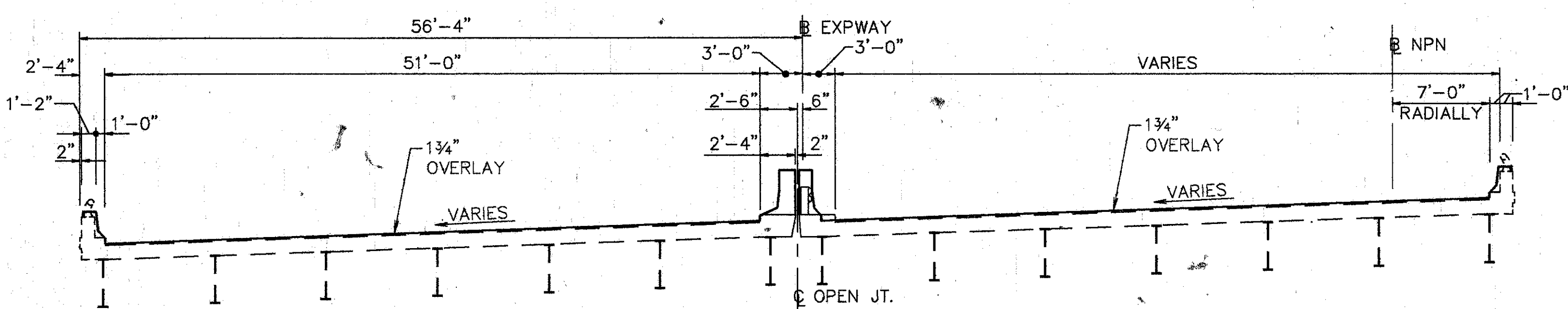
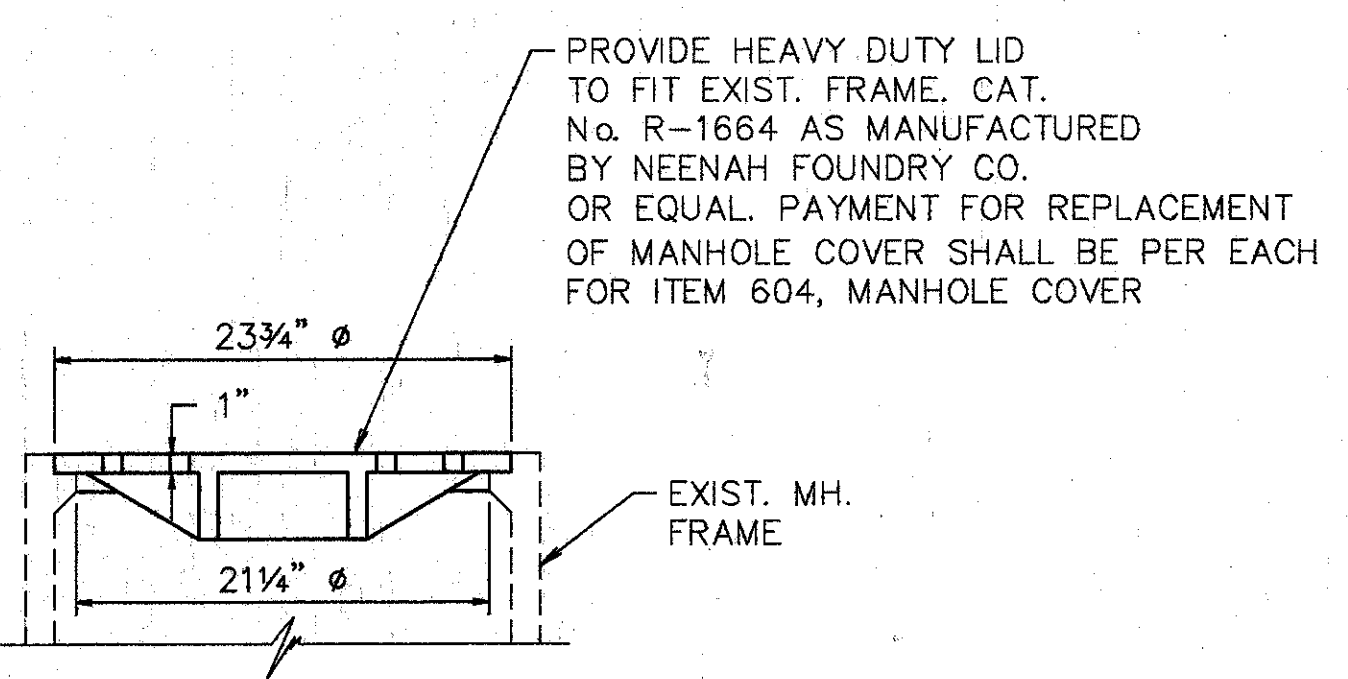
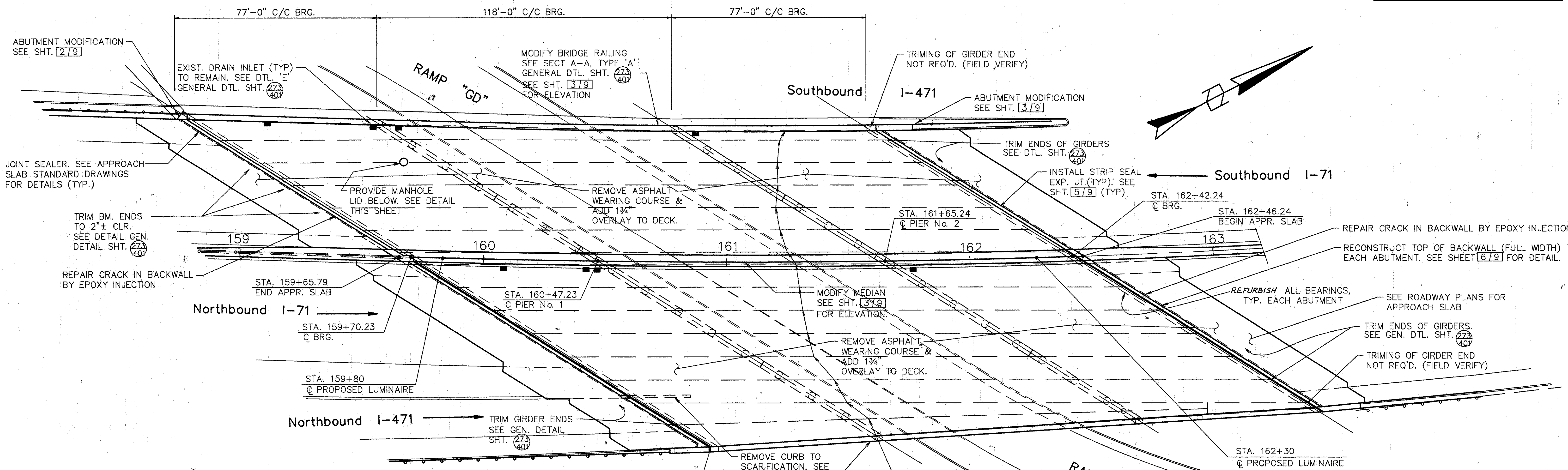
BRIDGE NO. HAM-71-0176  
OVER I-71

HAMILTON COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
L.A.T.M.	D.E.E.		M.A.A.	DEM	11/11/94	

Lot Plot MAY 15, 1991 @ 8:53 PM  
 C:\STRA\1030-03\71-0176 Lot Revision By: R.A.J. SEPT. 17, 1991 @ 8:22 AM





TYP. BRIDGE SECTION

- NOTES:
1. SEAL PARAPETS, BACKWALLS AND PIERS. SEAL ALL OF PIER EXCEPT TOP OF PIER CAP.
  2. SEE JUNCTION BOX EXTENSION DETAIL, GEN. DTL. SHT. 273 FOR BARRIER RETROFIT AT JUNCTION BOXES. REFER TO LIGHTING DETAILS FOR TYPE AND LOCATION OF BOXES AND LUMINAIRES.
  3. REFURBISH DRAINAGE PIPING. SEE SHT. 8&9/9

**EXISTING STRUCTURE**

TYPE: CONTINUOUS STEEL PLATE GIRDER WITH REINFORCED CONCRETE DECK & SUBSTRUCTURE  
 SPANS: 77'-0", 118'-0", 77'-0" C-C BRG'S  
 ROADWAY: 51'-0" F/F CURBS WITH 1'-0" CURB AND 3'-0" MEDIAN  
 SKEW: VARIES  
 LOADING FREQUENCY: C.F.=2000 (57) ADEQUATE FOR AASHO ALTERNATE LOADING  
 WEARING SURFACE: 1" MONOLITHIC CONCRETE  
 APPROACH SLABS: AS-1-54 (25'-0" LONG)  
 ALIGNMENT: COMPOUND CURVES  
 SUPERELEVATION: VARIES

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 (513) 461-5660

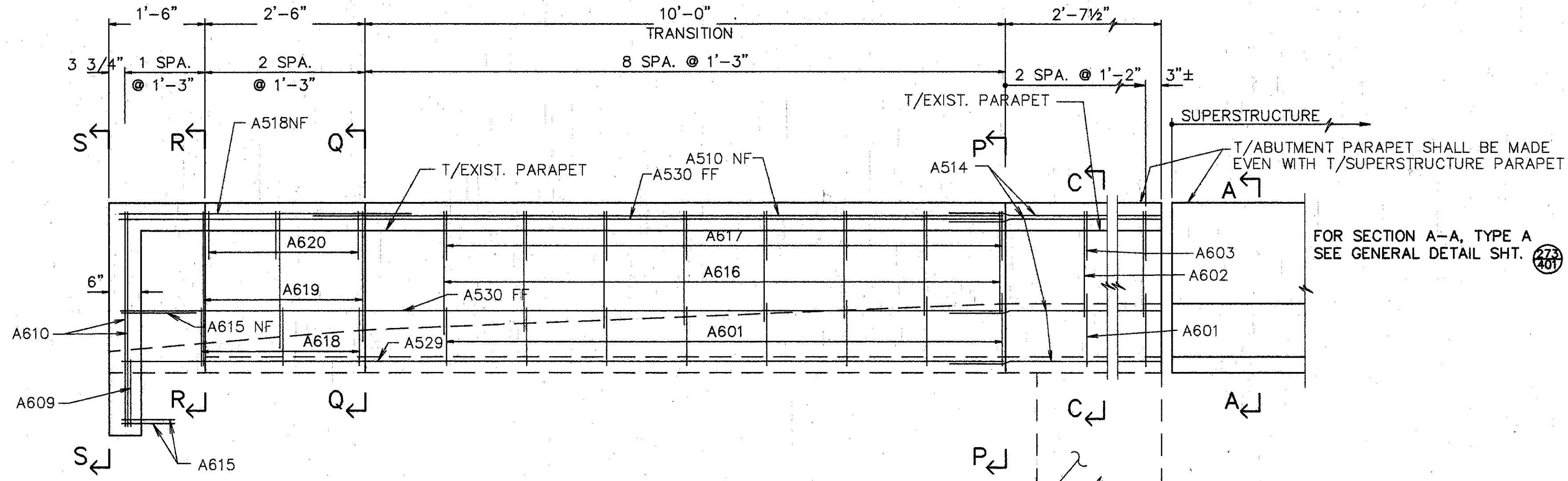
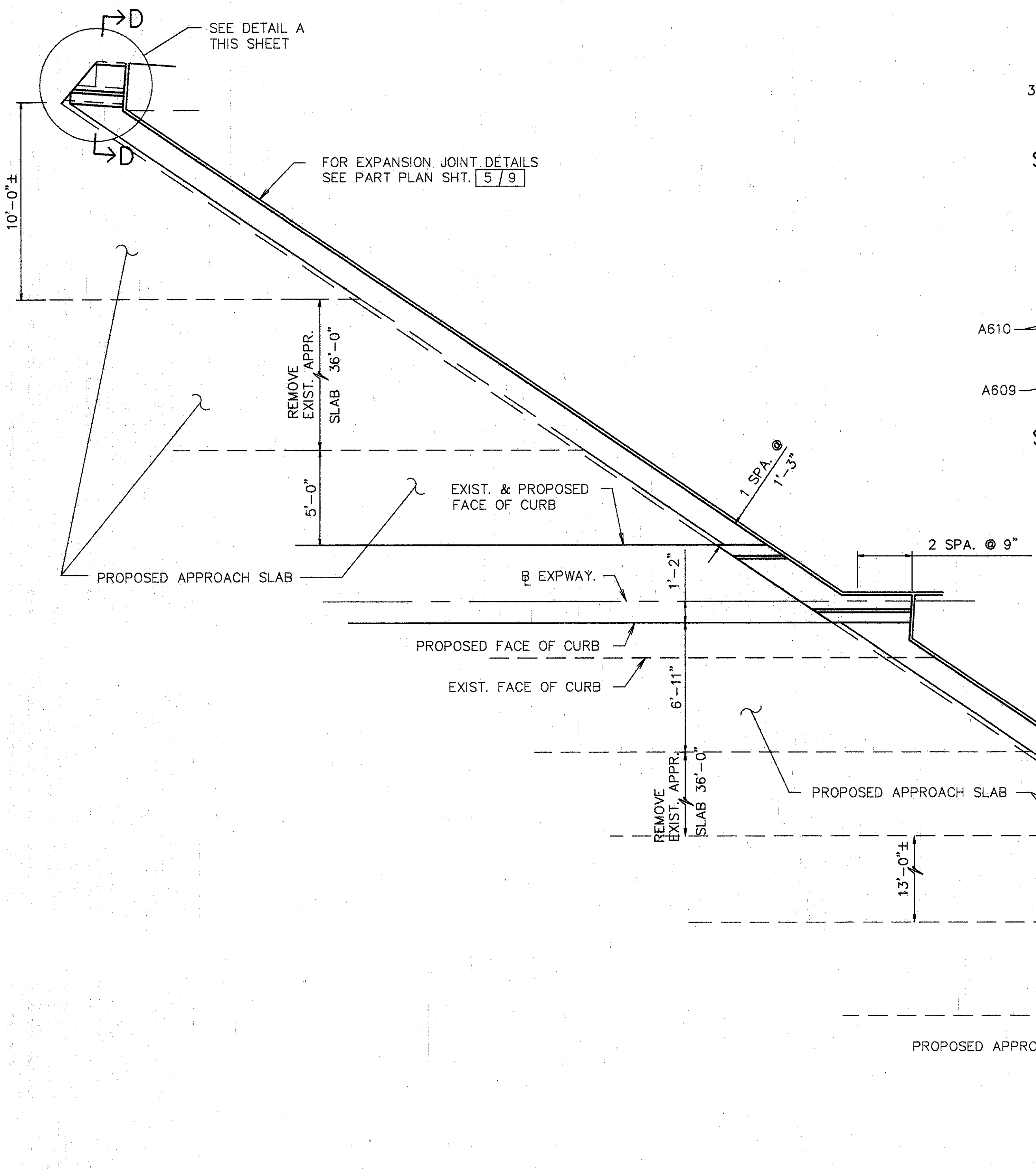
**GENERAL PLAN**

BRIDGE NO. HAM-71-0192 L/R  
OVER RAMP "GD"

HAMILTON COUNTY

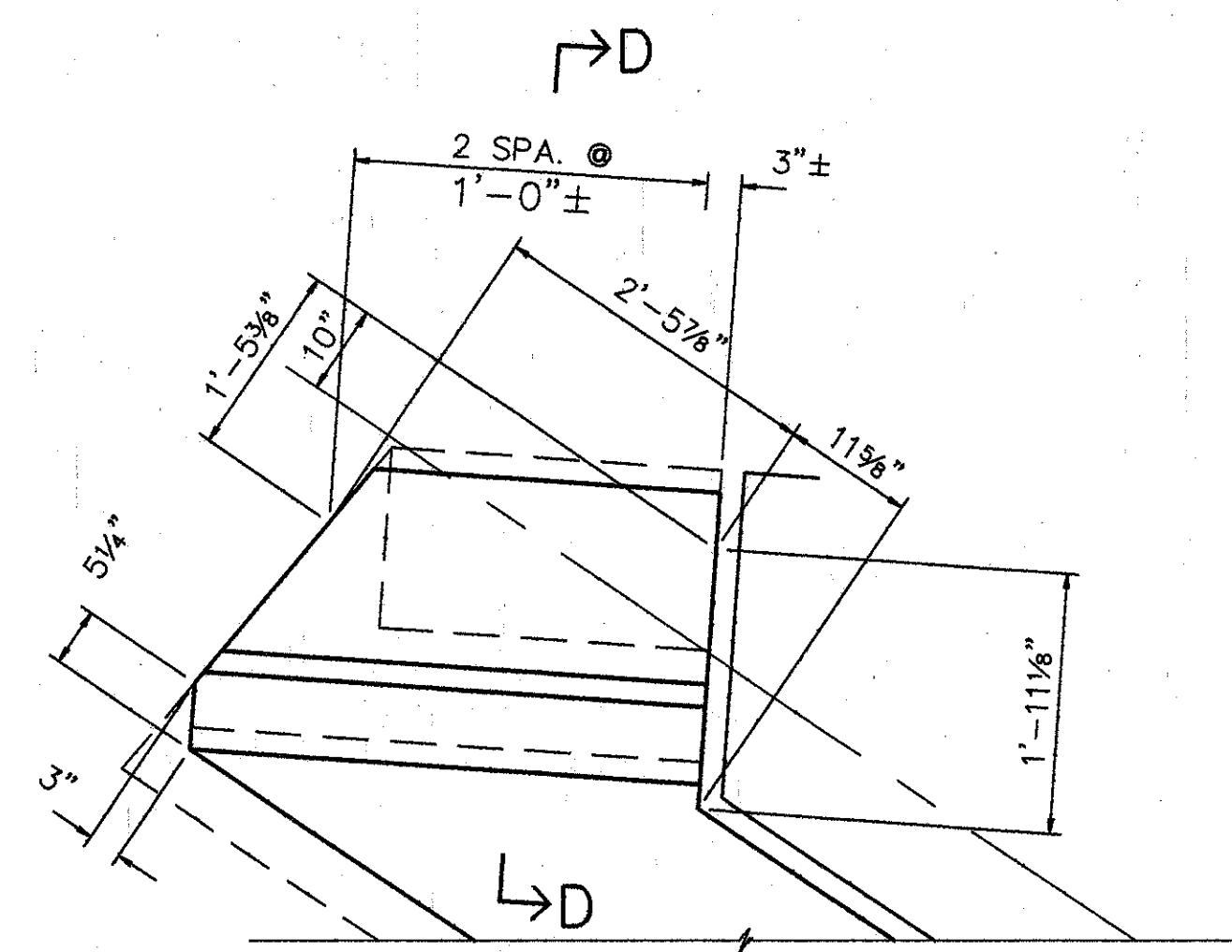
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
L.A.T.M.	D.E.E.		M.A.A.	DEM	11/11/94	

Lot 106 MAY 15, 1991 © 7:00 PM  
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ELEVATION - REAR RIGHT

NOTE:  
 COST FOR BARRIER CAST ON BACKWALL (INCLUDING EXPANSION JOINT TREATMENTS) SHALL BE INCLUDED IN ITEM 511 - CLASS S CONCRETE, MISC. ABUTMENT PARAPETS. COST FOR REINFORCING STEEL SHALL BE INCLUDED IN PRICE BID FOR ITEM 509-EPOXY COATED REINFORCING STEEL, GRADE 60.



DETAIL A

SECTIONS ARE FOUND ON SHEETS 4 & 6/9

PROVIDE ANCHOR ASSEMBLIES FOR TYPE "AT" OR "AA" BRIDGE TERMINAL ASSEMBLIES AS PER STD. DWG. GR3. SEE ROADWAY DWGS. FOR TYPE LOCATION. PAYMENT TO BE INCLUDED WITH GUARDRAIL.

PLAN - REAR ABUTMENT MODIFICATION

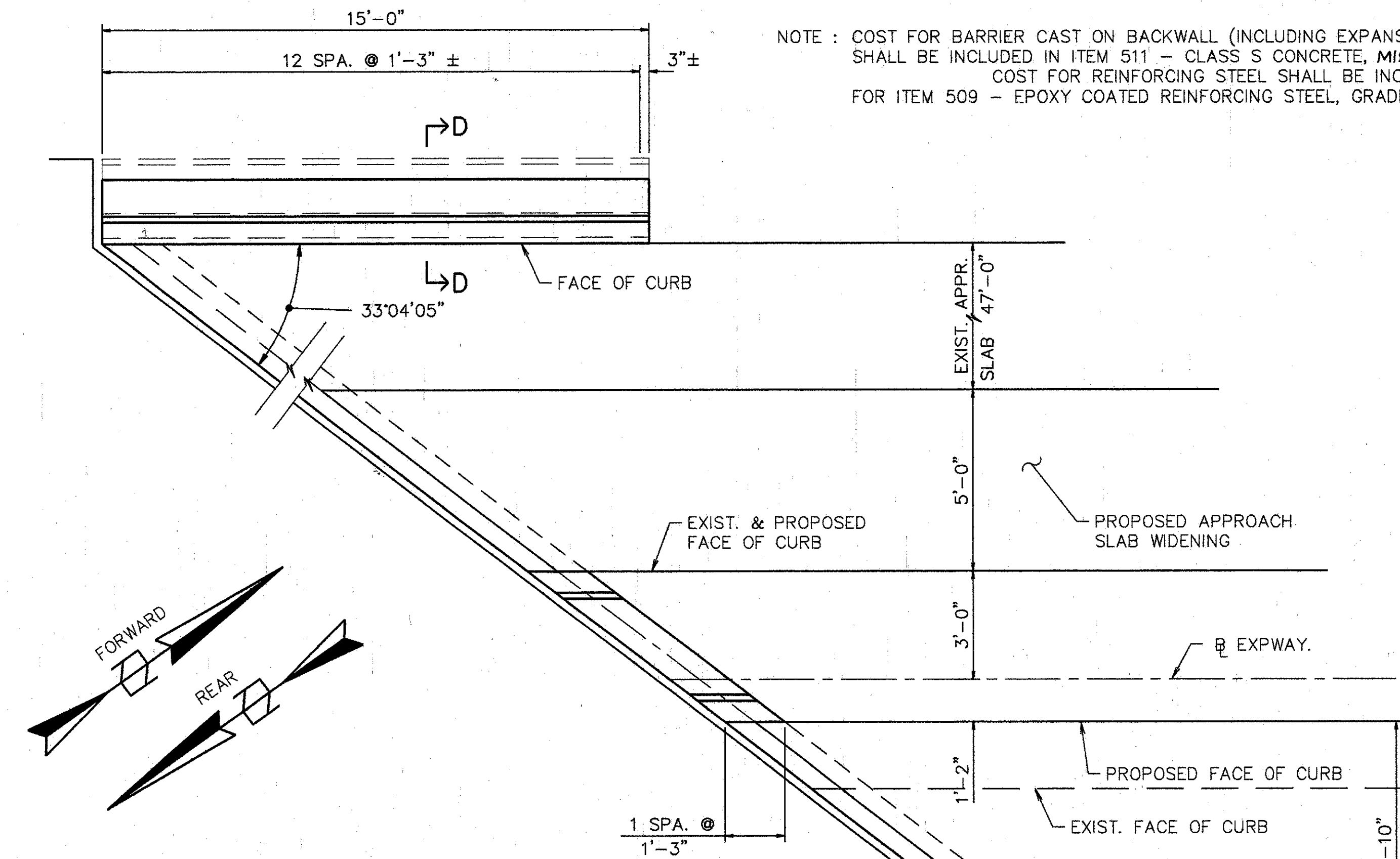
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**ABUTMENT PLAN & PARAPET ELEVATIONS**  
 BRIDGE NO. HAM-71-0192 L/R  
 OVER RAMP "GD"  
 HAMILTON COUNTY

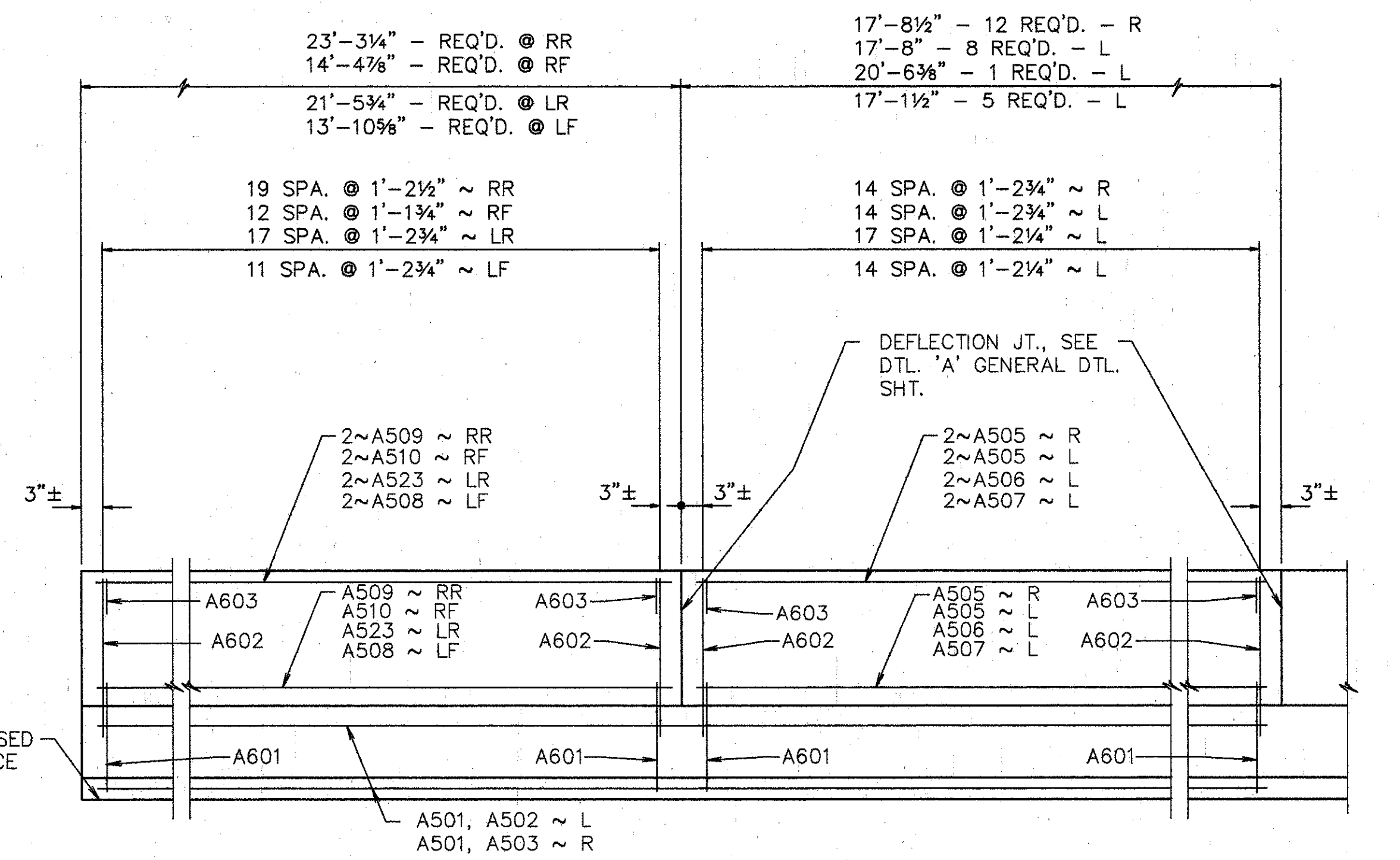
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L.A.T.M.	D.E.E.		M.A.A.	DEM	11/11/94	



NOTE: COST FOR BARRIER CAST ON BACKWALL (INCLUDING EXPANSION JOINT TREATMENTS) SHALL BE INCLUDED IN ITEM 511 - CLASS S CONCRETE, MISC.: ABUTMENT PARAPETS.  
 COST FOR REINFORCING STEEL SHALL BE INCLUDED IN PRICE FOR ITEM 509 - EPOXY COATED REINFORCING STEEL, GRADE 60.



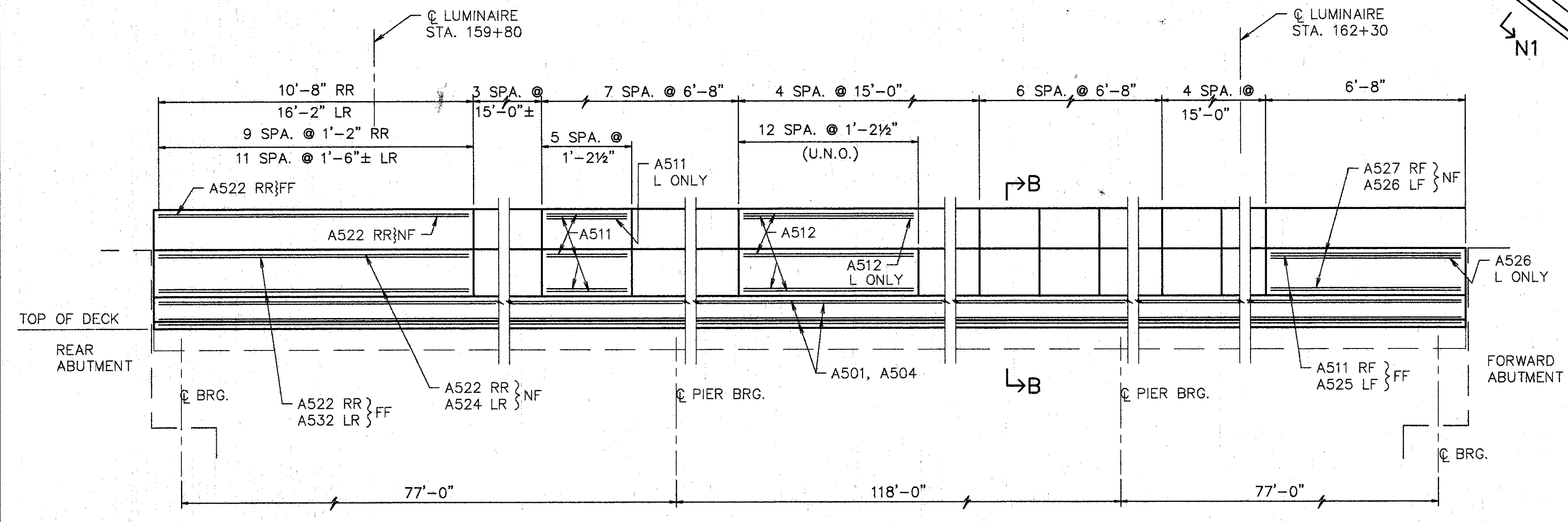
PLAN - FORWARD ABUTMENT MODIFICATION



ELEVATION SUPERSTRUCTURE PARAPET

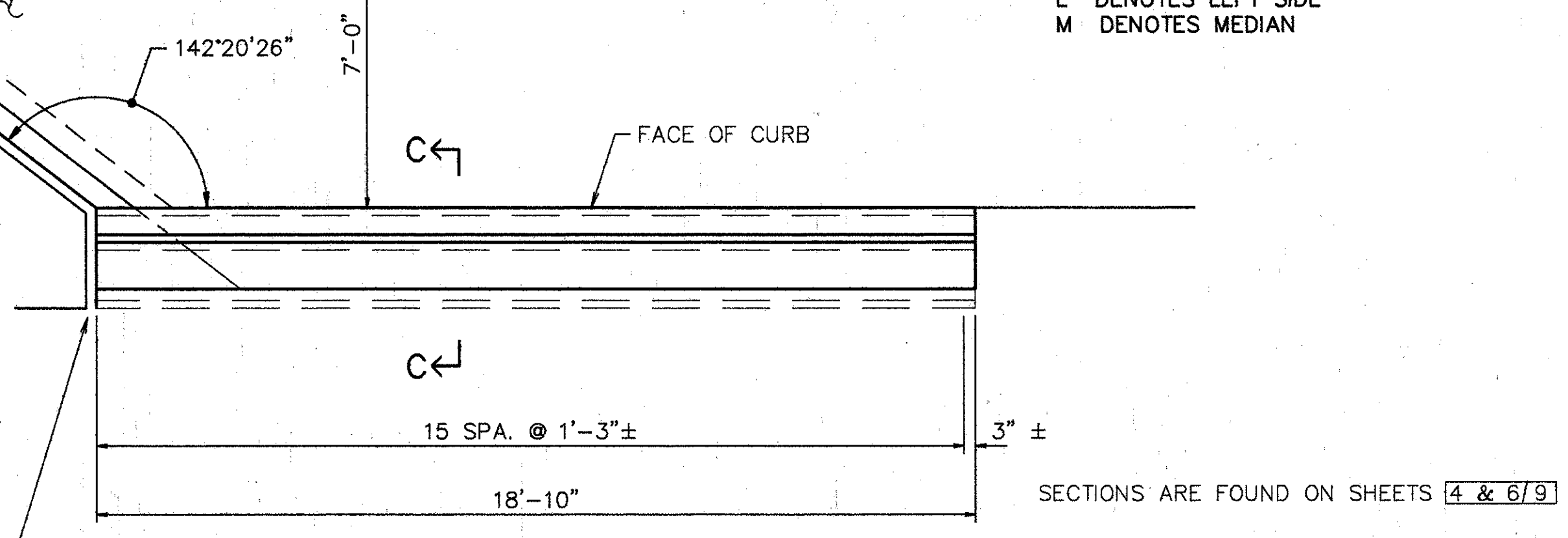
NOTES:  
 RF DENOTES RIGHT FORWARD  
 LF DENOTES LEFT FORWARD  
 RR DENOTES RIGHT REAR  
 LR DENOTES LEFT REAR  
 NF DENOTES NEAR FACE  
 FF DENOTES FAR FACE  
 RM DENOTES REAR MEDIAN  
 FM DENOTES FORWARD MEDIAN  
 R DENOTES RIGHT SIDE  
 L DENOTES LEFT SIDE  
 M DENOTES MEDIAN

FOR PARAPETS WITH LUMINAIRES, SEE LAMP STANDARD PARAPET PANEL ELEVATION, SHT. 4/9



MEDIAN PARAPET (BOTH SIDES; ELEV. OF RIGHT SHOWN, LEFT IS SIMILAR)  
 (MEASURED ALONG BACKFACE OF PARAPET)

NOTE: NF INDICATES ROAD SIDE FACE, FF INDICATES OUTSIDE FACE



FOR EXPANSION JOINT DETAILS SEE PART PLAN SHT. 5/9

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 3/9

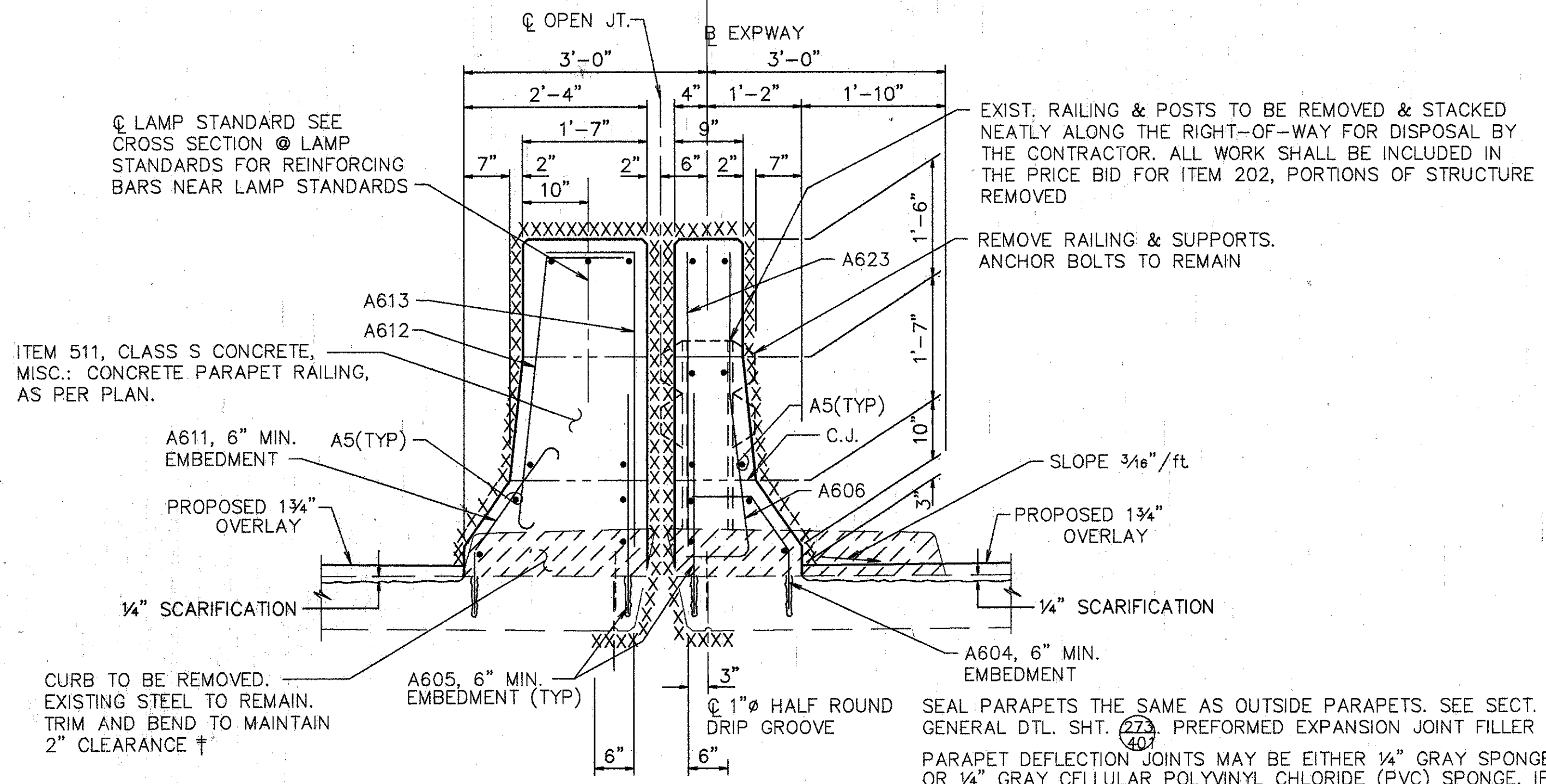
ABUTMENT PLAN &  
 PARAPET ELEVATIONS

BRIDGE NO. HAM-71-0192 L/R  
 OVER RAMP "GD"

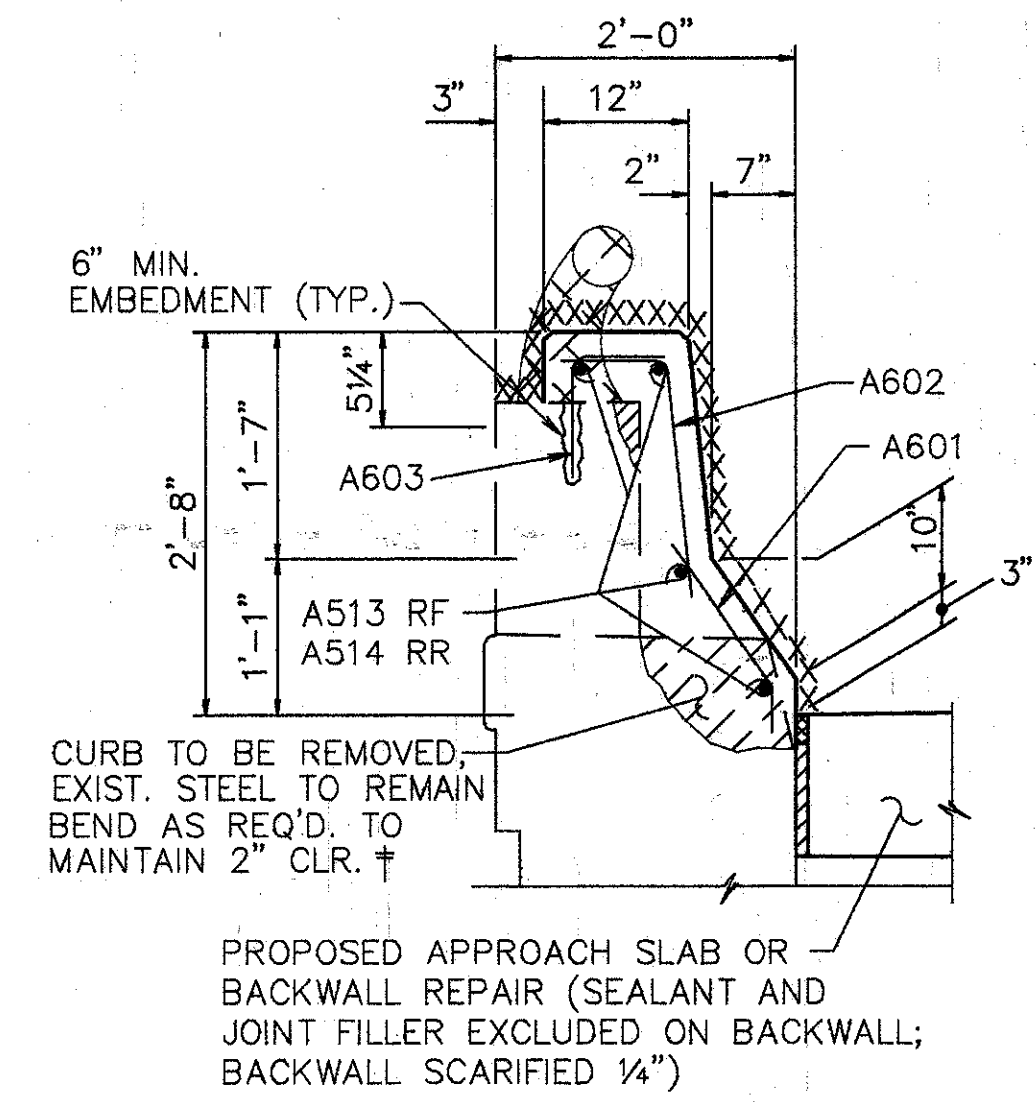
HAMILTON COUNTY

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L.A.T.M.	D.E.E.		M.A.A.	DEM11/11/94		

Last Plot MAY 15, 1991 @ 2:17 PM  
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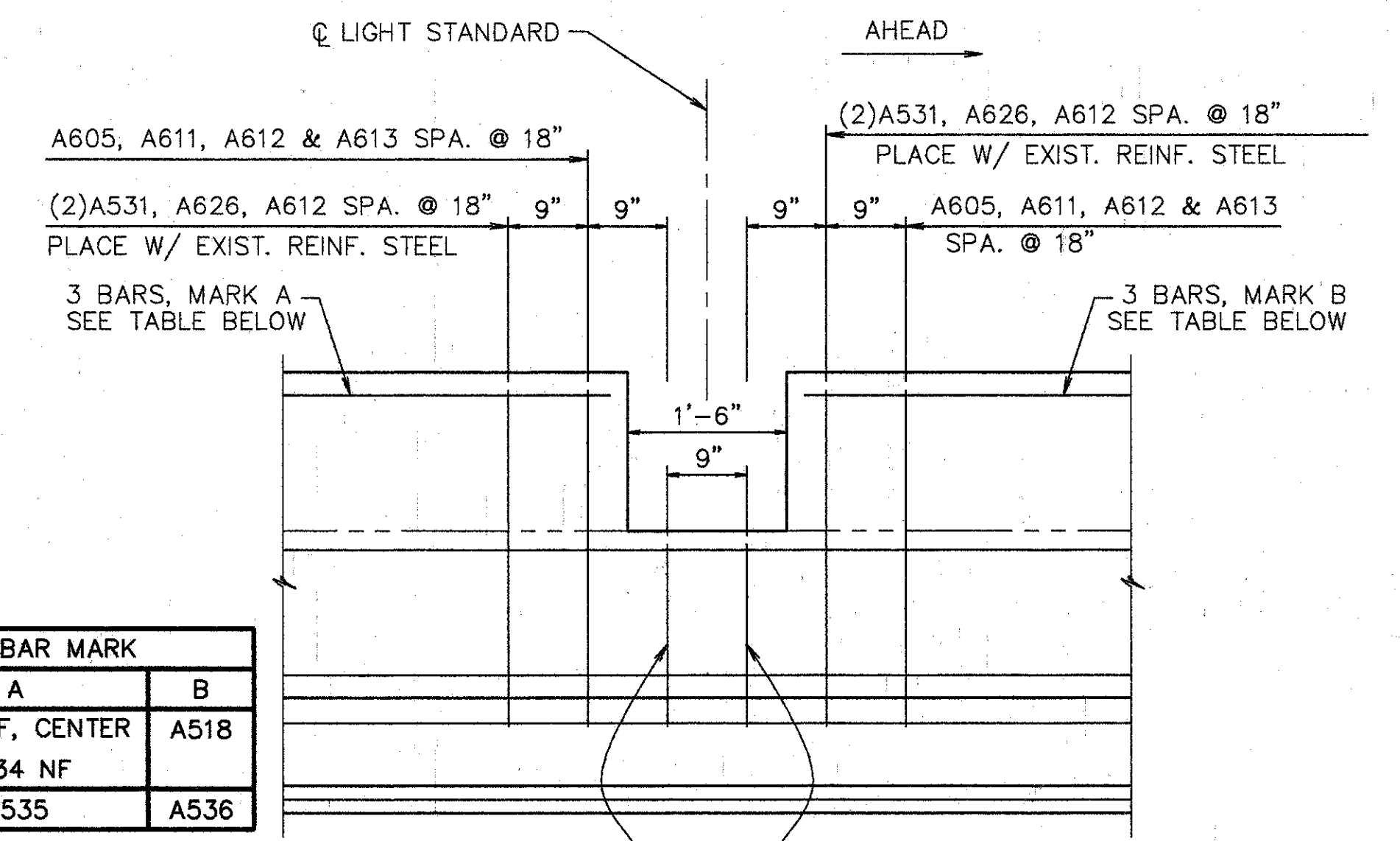


SECTION B-B

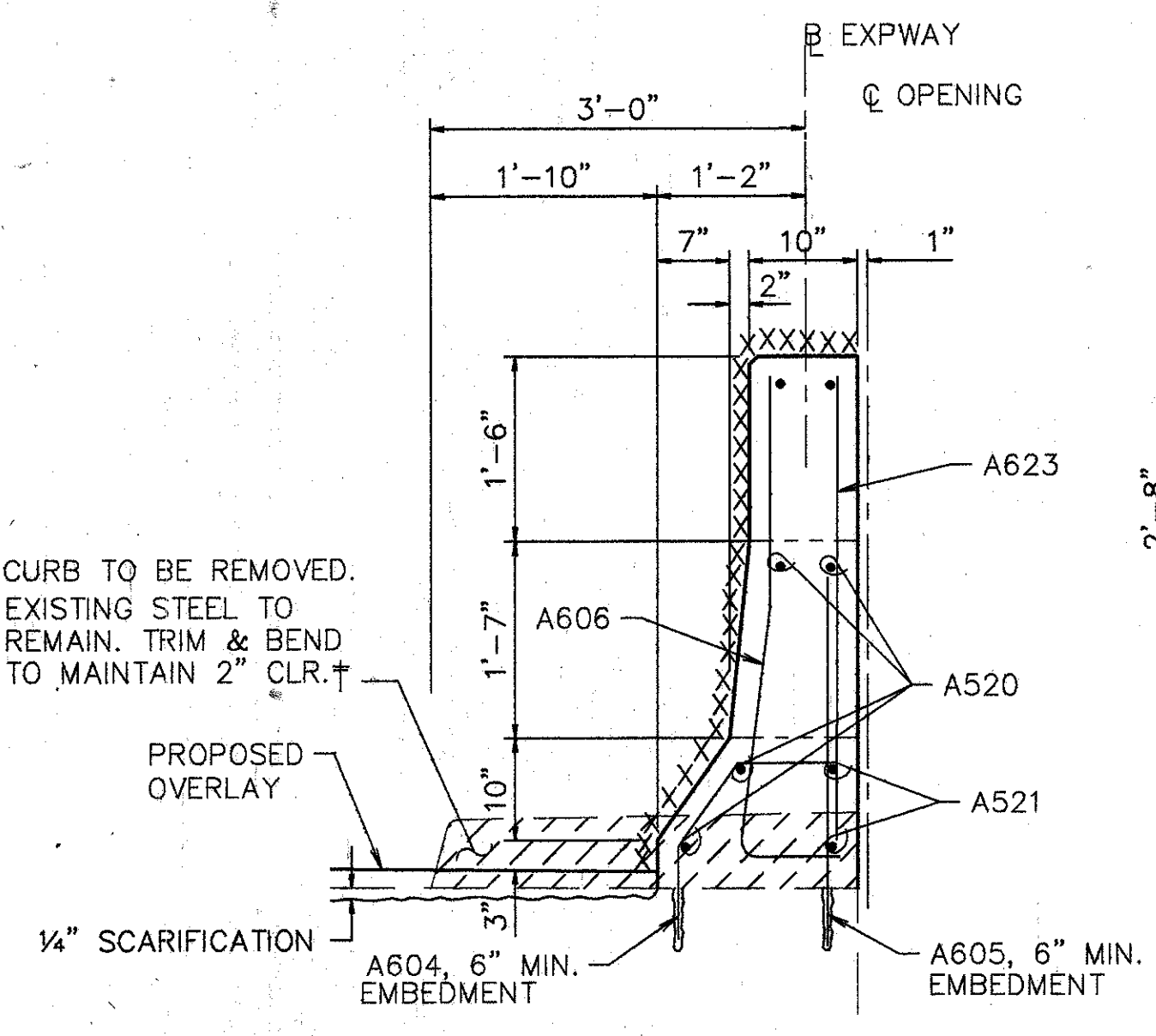


SECTION C-C

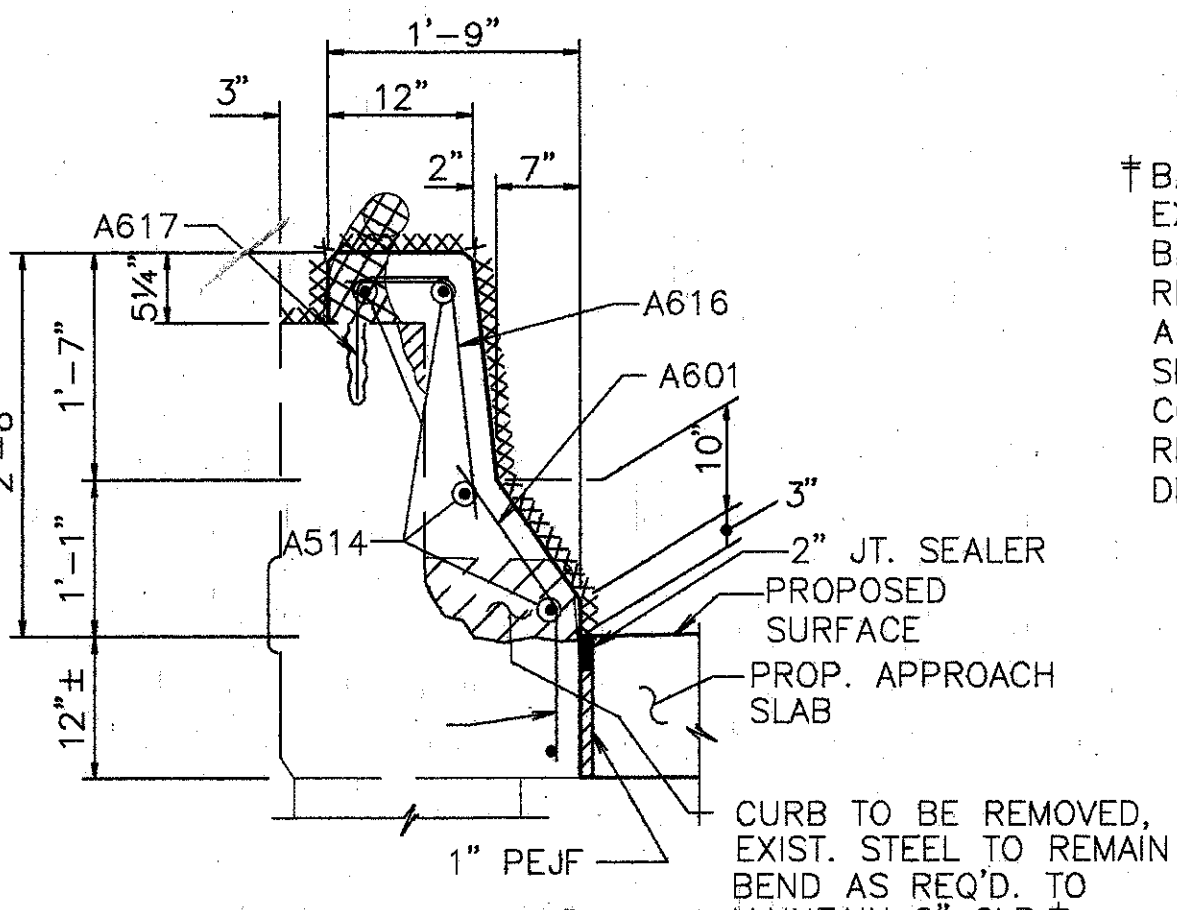
STA. @ C	BAR MARK	
	A	B
LAMP POST	A533 FF, CENTER	A518
159+80	A534 NF	
162+30	A535	A536



ELEVATION SUPERSTRUCTURE PARAPET AT LIGHT STANDARD

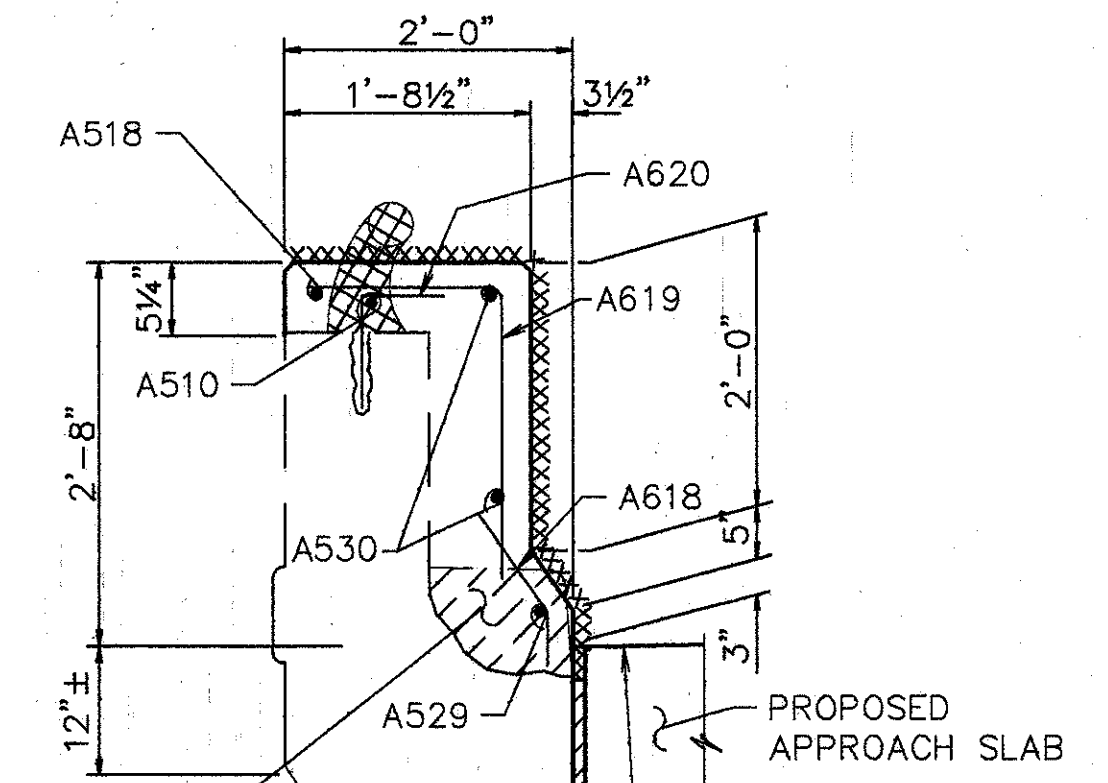


SECTION F-F

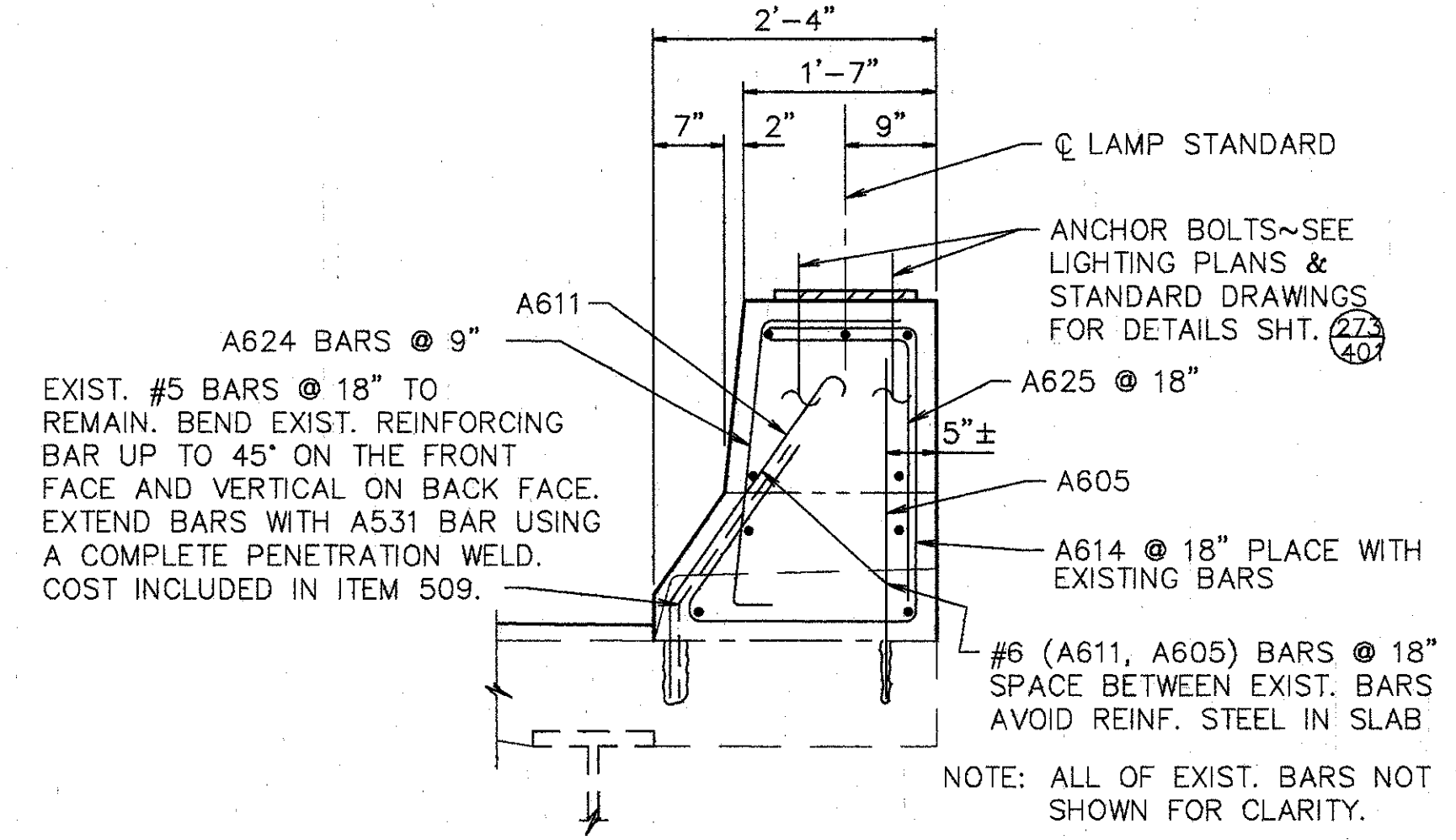


SECTION P-P

† BARS SHALL REMAIN. CONTRACTOR SHALL EXERCISE CAUTION TO ENSURE THAT THESE BARS ARE NOT DAMAGED DURING THE CONC. REMOVAL OPERATION. ANY BARS DAMAGED AS A RESULT OF THE CONTRACTOR'S OPERATION SHALL BE REPLACED OR REPAIRED BY THE CONTRACTOR AT HIS EXPENSE. METHOD OF REPAIR OR REPLACEMENT WILL BE AT THE DISCRETION OF THE DIRECTOR.



SECTION Q-Q

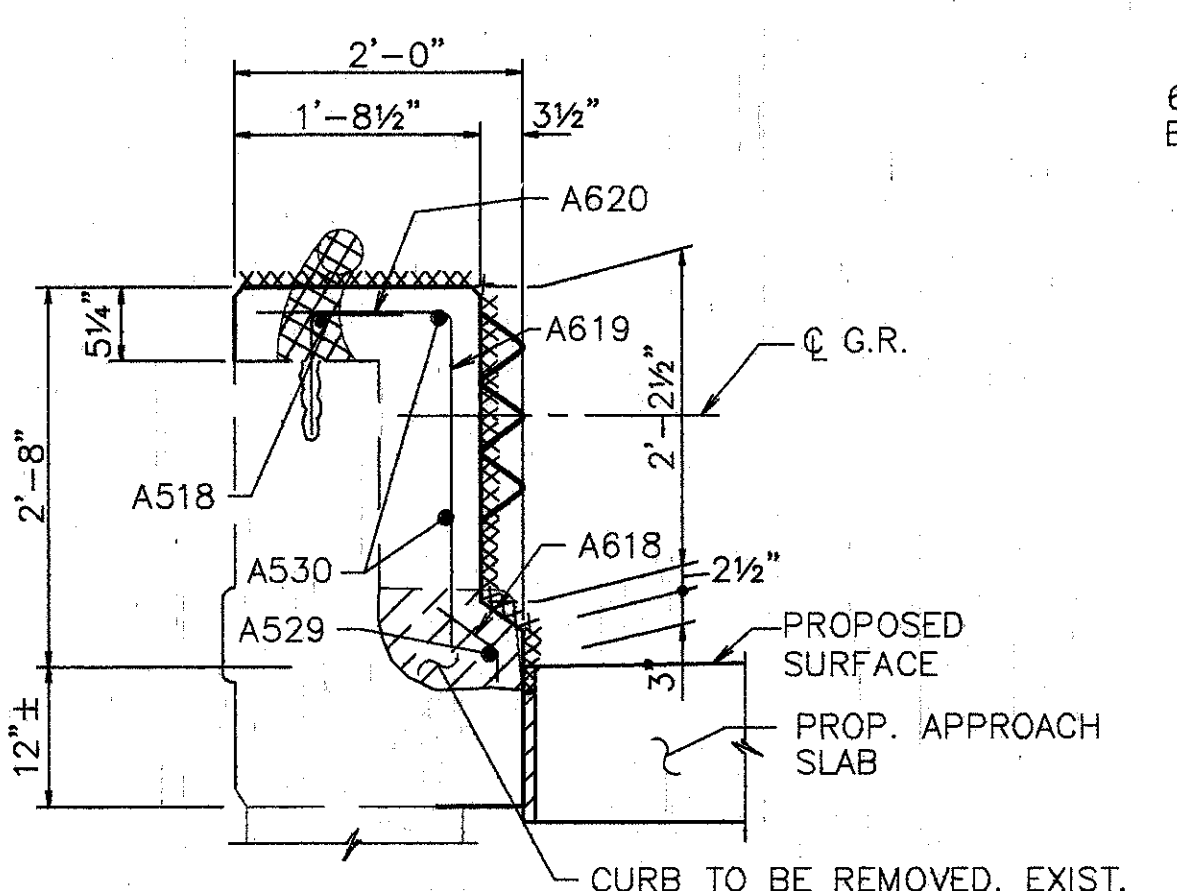


CROSS SECTION @ LAMP STANDARDS

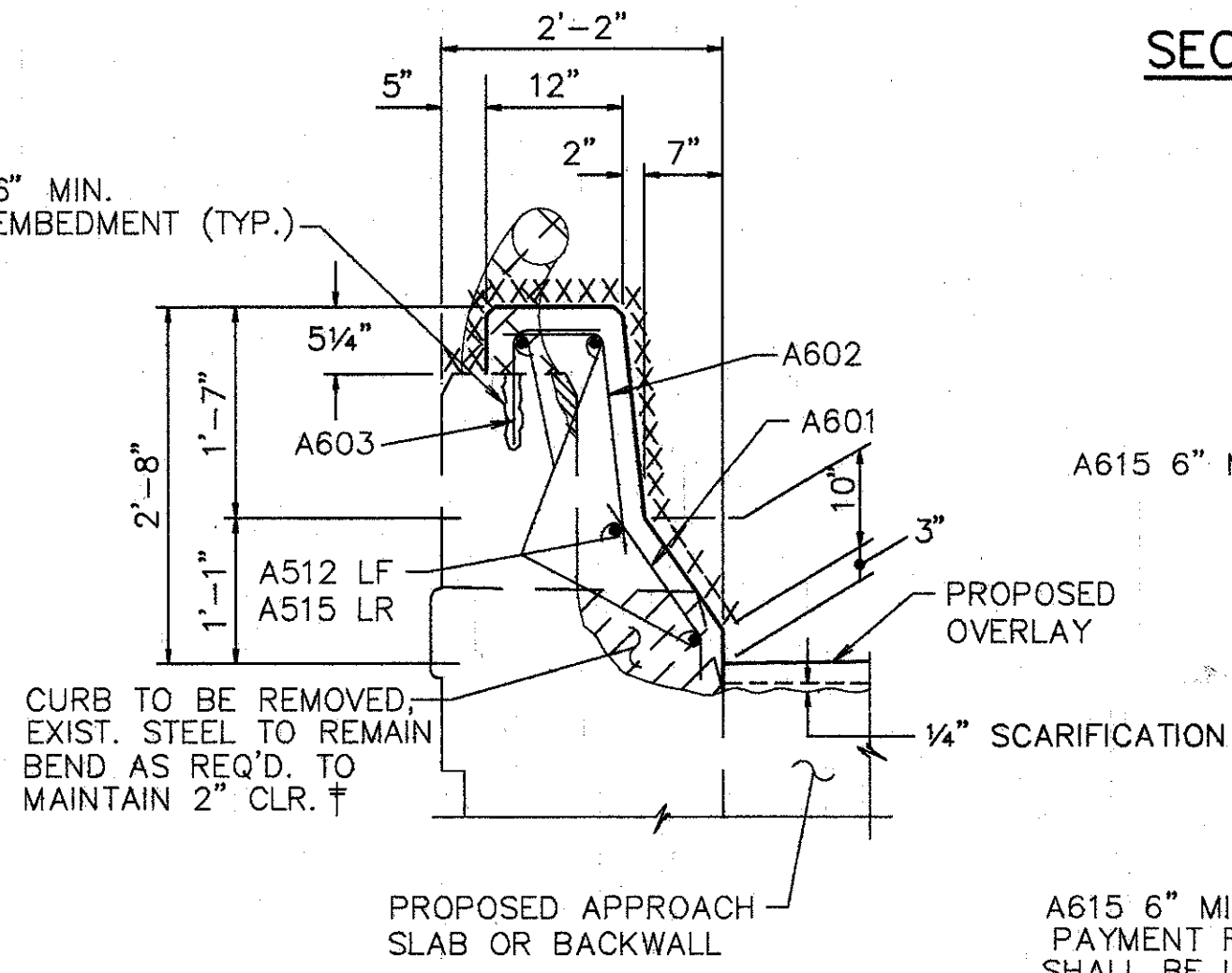
- EXIST. CURB & PARAPET TO BR REMOVED UNDER ITEM 202, PORTIONS OF STRUCTURE REMOVED
- EXIST. RAILING & POSTS TO BE REMOVED & STACKED NEATLY ALONG THE RIGHT-OF-WAY FOR DISPOSAL BY THE CONTRACTOR. ALL WORK SHALL BE INCLUDED IN THE PRICE BID FOR ITEM 202, PORTIONS OF STRUCTURE REMOVED
- XXXXXXXX SURFACES TO BE SEALED UNDER ITEM SPECIAL, SEALING OF CONCRETE SURFACE.

NOTES:

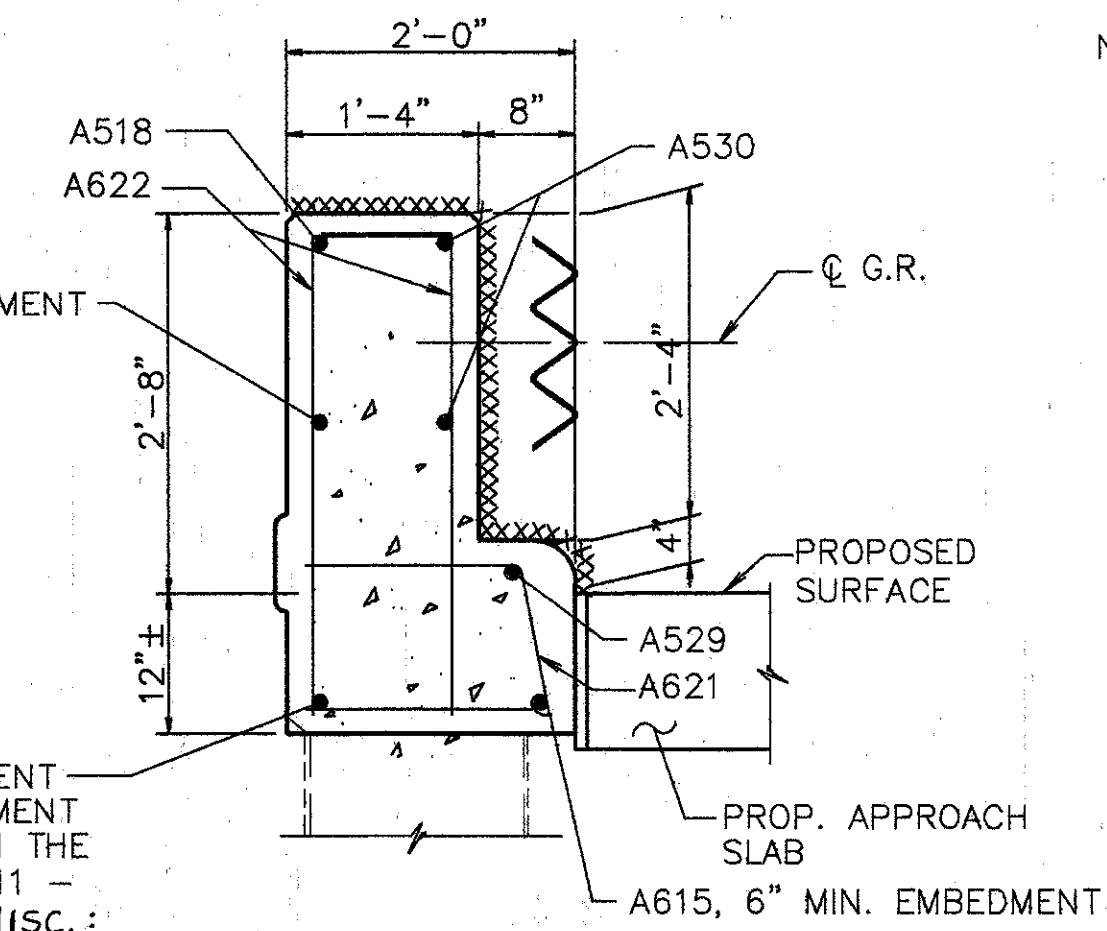
1. TYPE 'A' WATERPROOFING AT THE BRIDGE LIMIT END OF THE WIDENED APPR. SLAB (AS PER STD. DWG. AS-1-81) SHALL BE INCLUDED IN THE PRICE BID FOR ITEM 611 - APPROACH SLAB.



SECTION R-R



SECTION D-D



SECTION S-S

NOTES: BARS PLACED AT SPACING SHOWN IN PARAPET PANEL THAT INCLUDES LAMP STANDARD.

50" BARRIER SHALL BE DISCONTINUED 9" EITHER SIDE OF C LAMP STANDARD. BARRIER SHALL BE 32" AS SHOWN BENEATH LAMP STANDARD.

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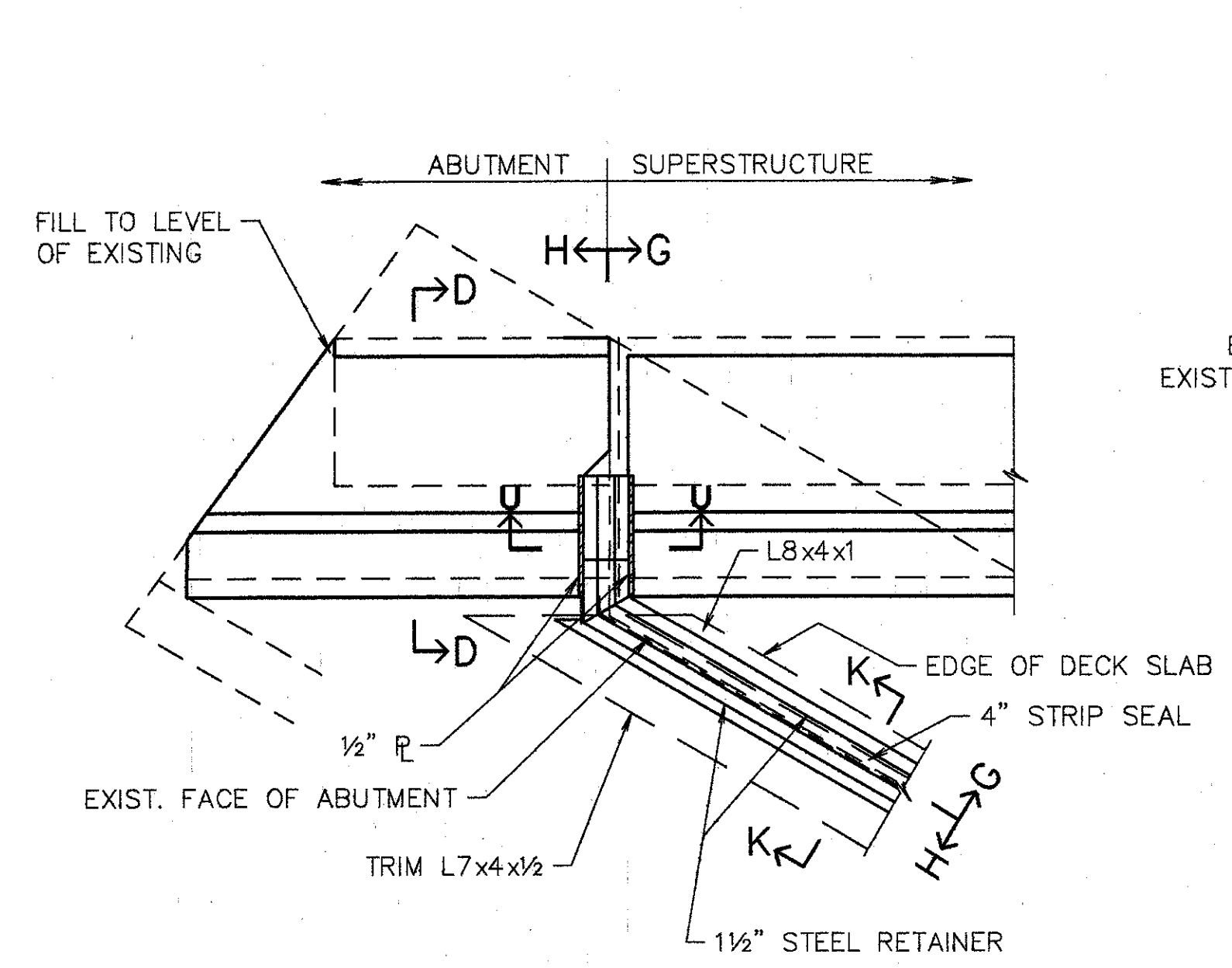
**PARAPET SECTIONS**

BRIDGE NO. HAM-71-0192 L/R  
 OVER RAMP "GD"

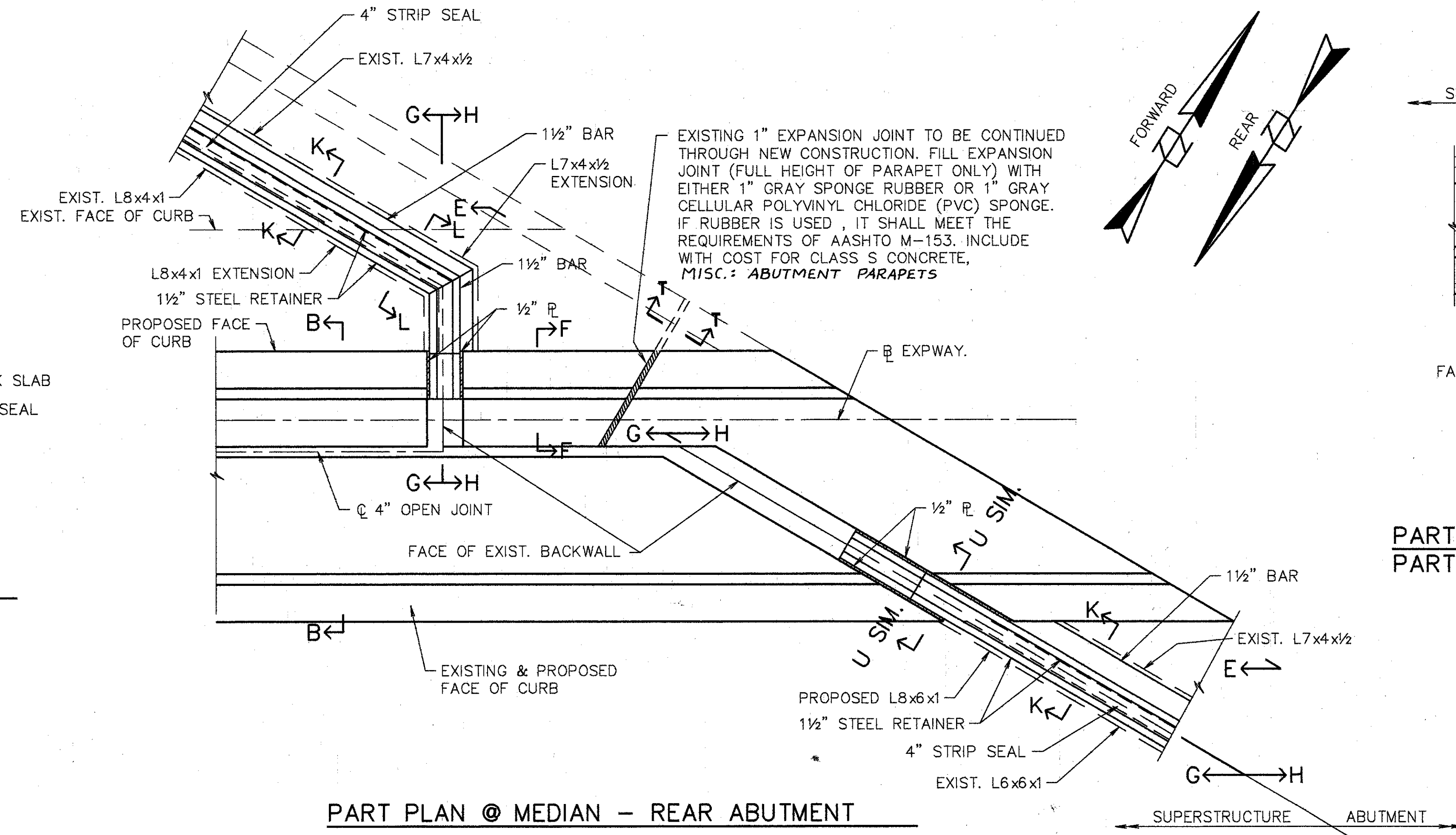
HAMILTON COUNTY

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L.A.T.M.	D.E.E.		M.A.A.	DEM11/11/94		

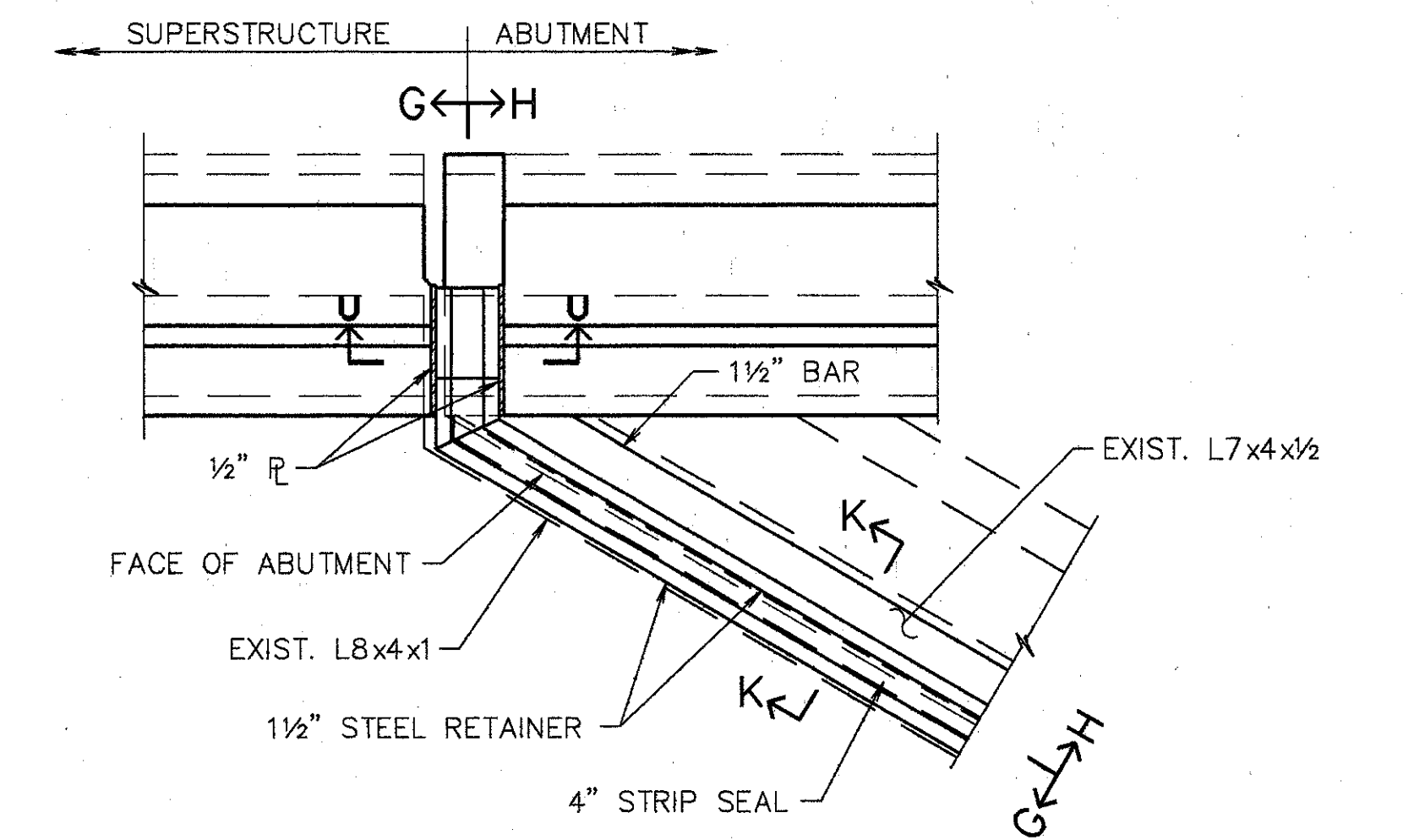




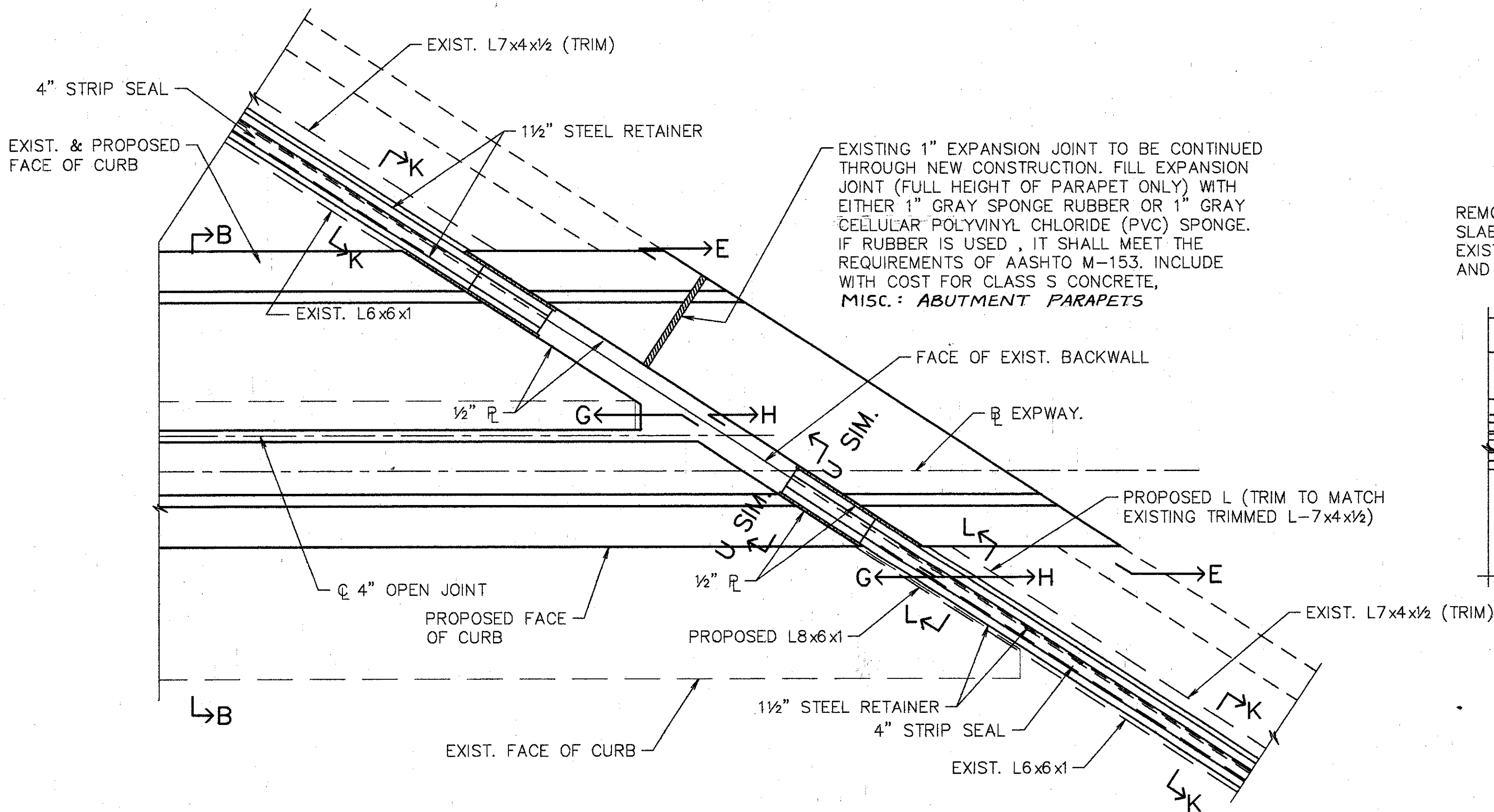
PART PLAN @ LEFT - REAR ABUTMENT  
 PART PLAN @ RIGHT - FORWARD SIMILAR



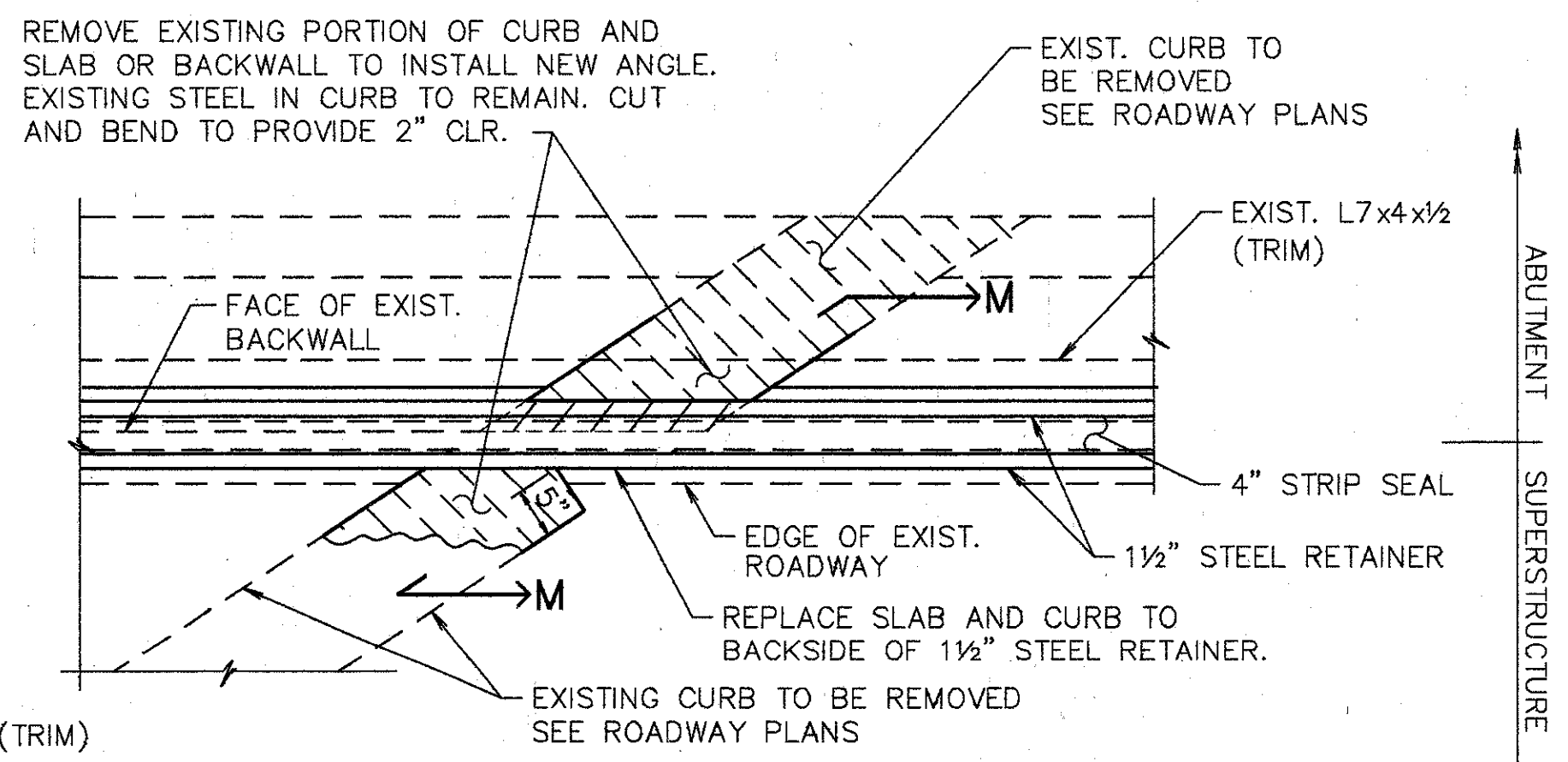
PART PLAN @ MEDIAN - REAR ABUTMENT



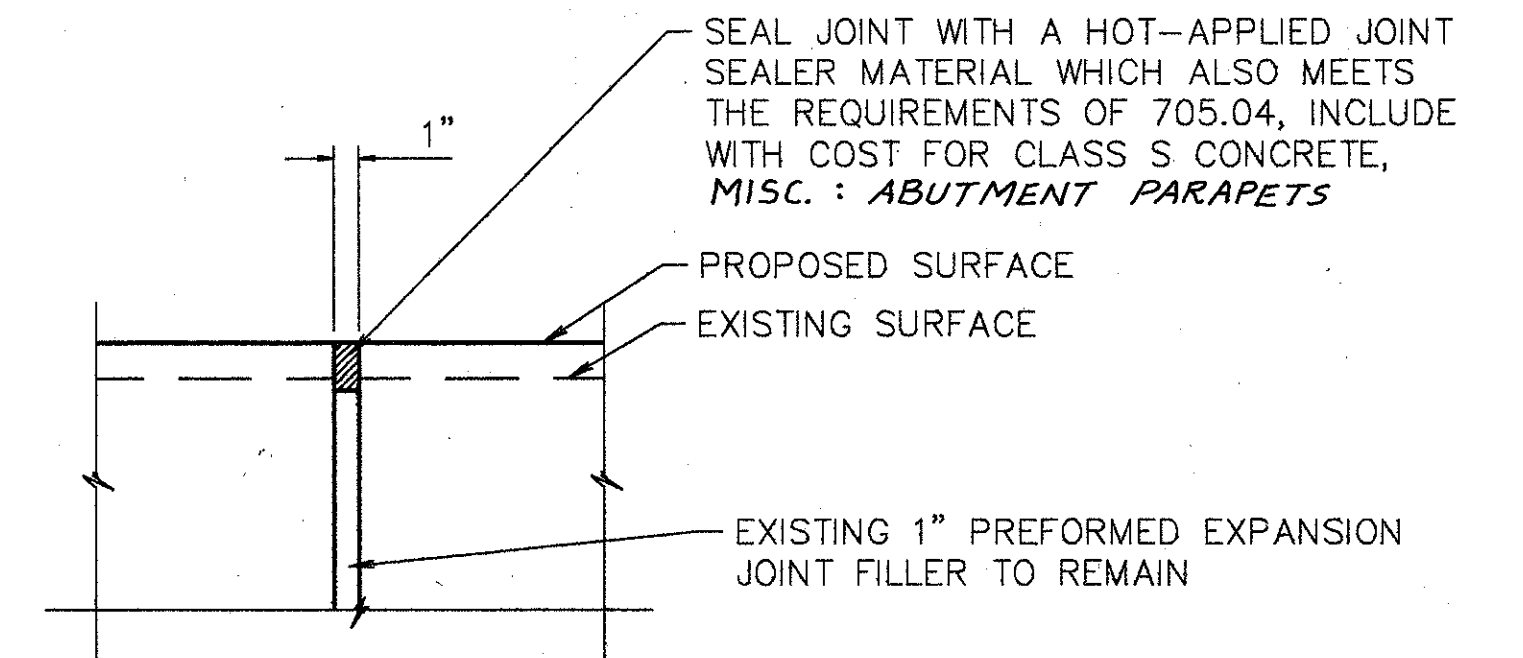
PART PLAN @ RIGHT - REAR ABUTMENT  
 PART PLAN @ LEFT - FORWARD SIMILAR



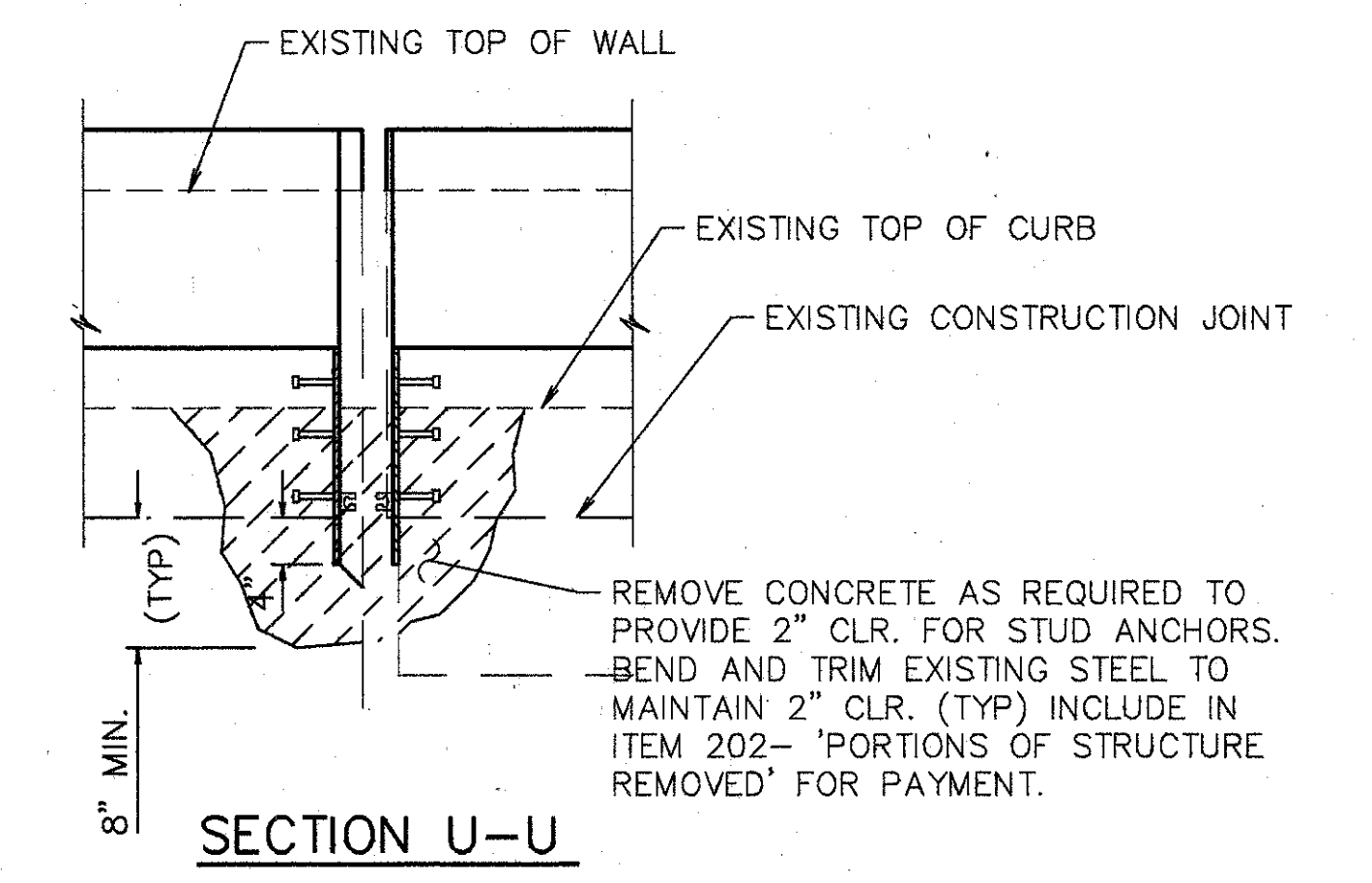
PART PLAN @ MEDIAN - FORWARD ABUTMENT



PART PLAN @ RAMP - REAR ABUTMENT



SECTION T-T



SECTION U-U

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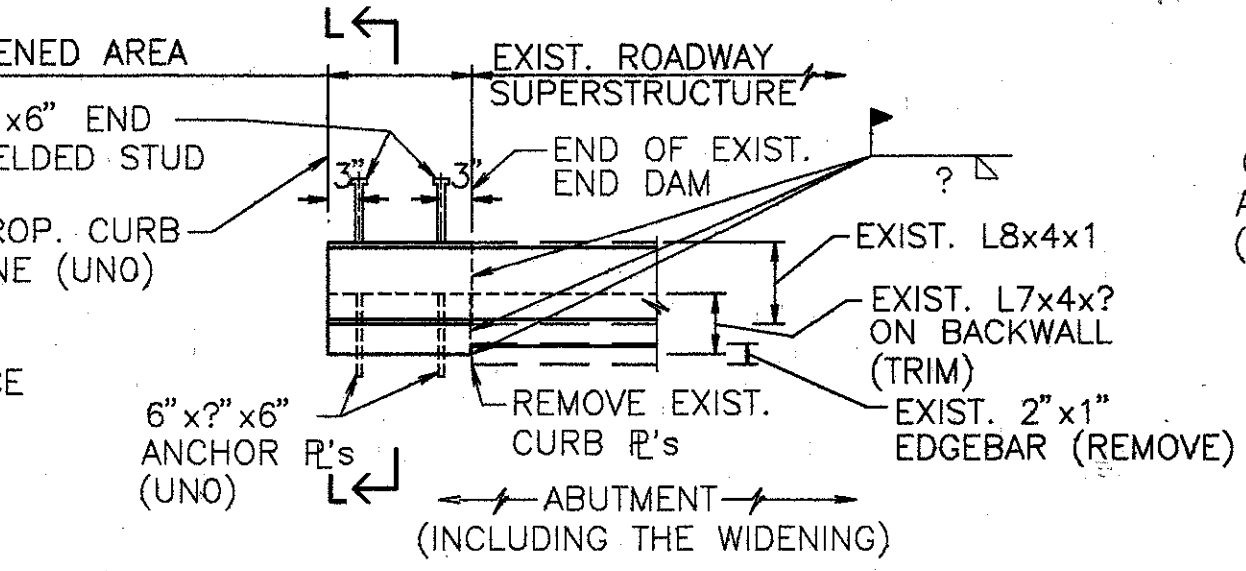
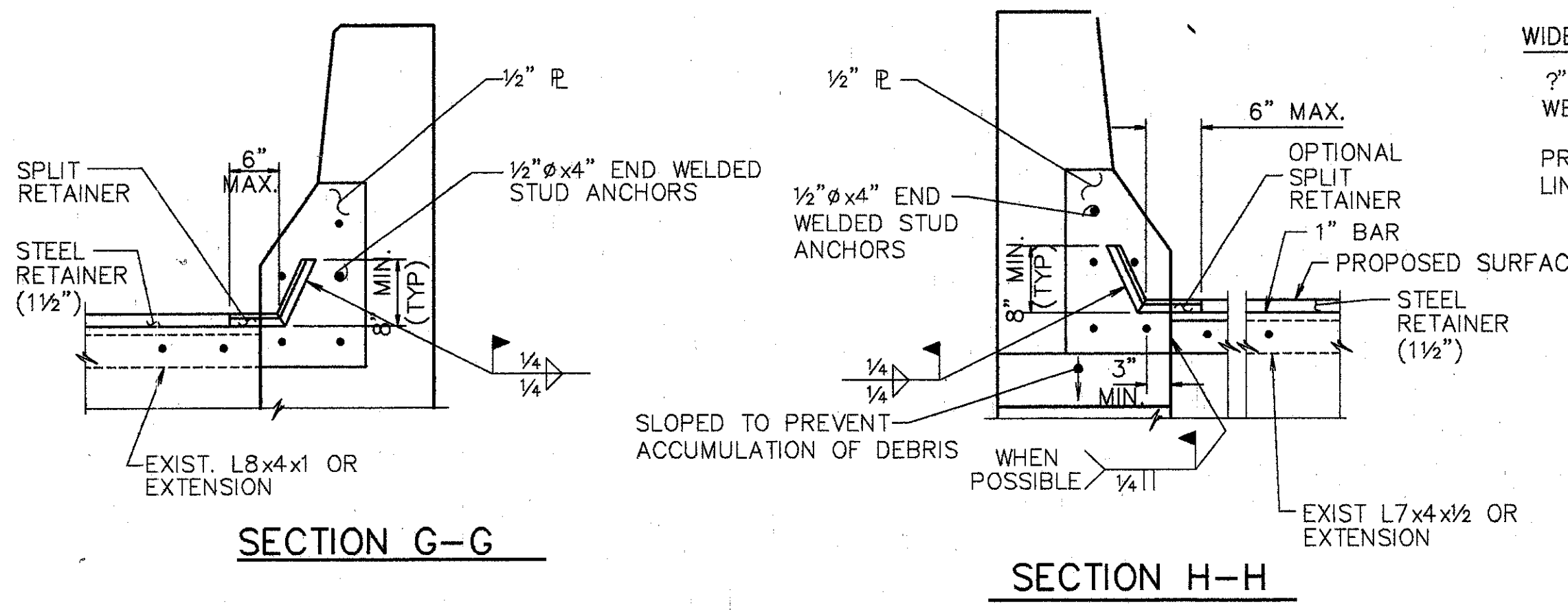
**STRIP SEAL EXPANSION JOINTS AT ABUTMENTS**

BRIDGE NO. HAM-71-0192 L/R  
 OVER RAMP "GD"

HAMILTON COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
L.A.T.M.	D.E.E.		M.A.A.	DEM	11/11/94	

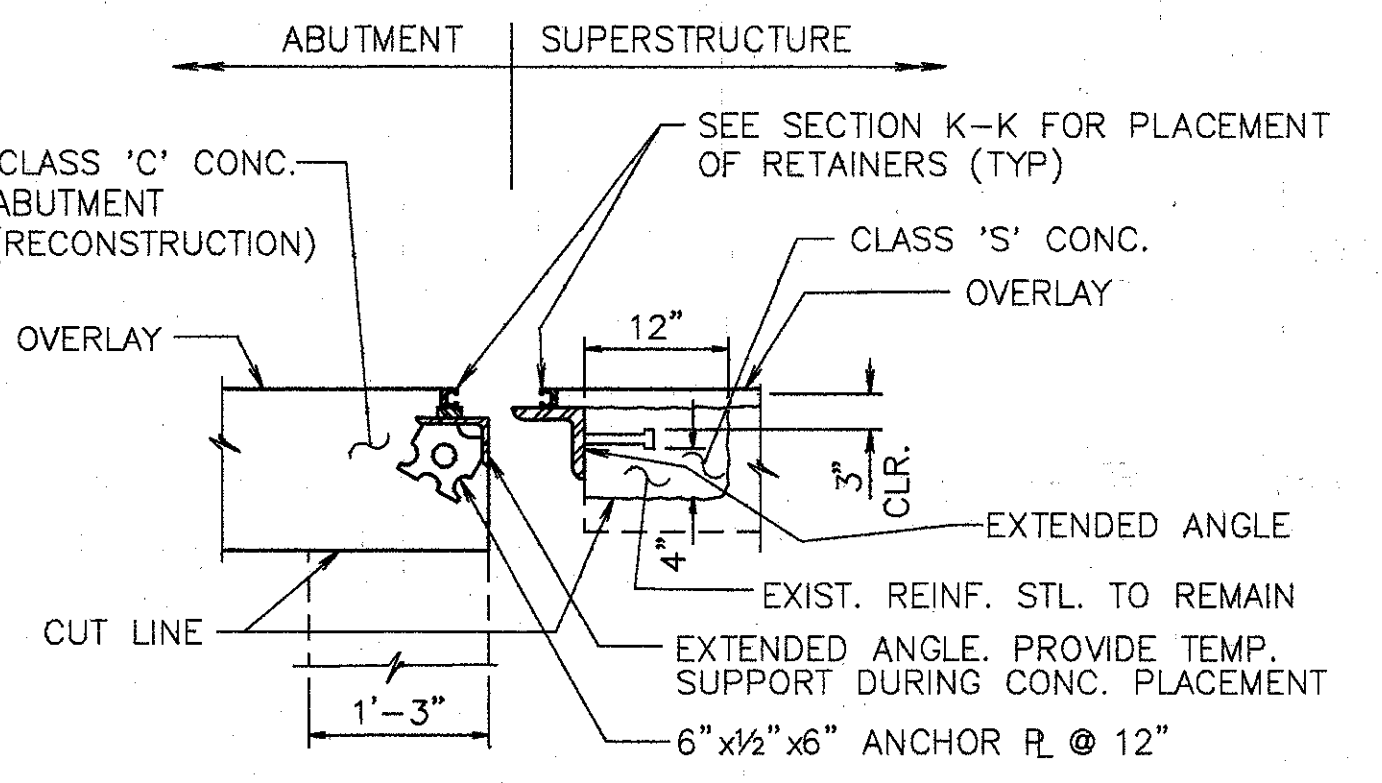
Plot Date: MAY 15, 1991 @ 2:21 PM  
 Plotter: HP-GL/PS-2000 (1024x1024) Left Revision By: RACH, JUN. 2, 1992 @ 4:00 PM



**PLAN END DAM @ WIDENED AREAS**

**NOTES:**

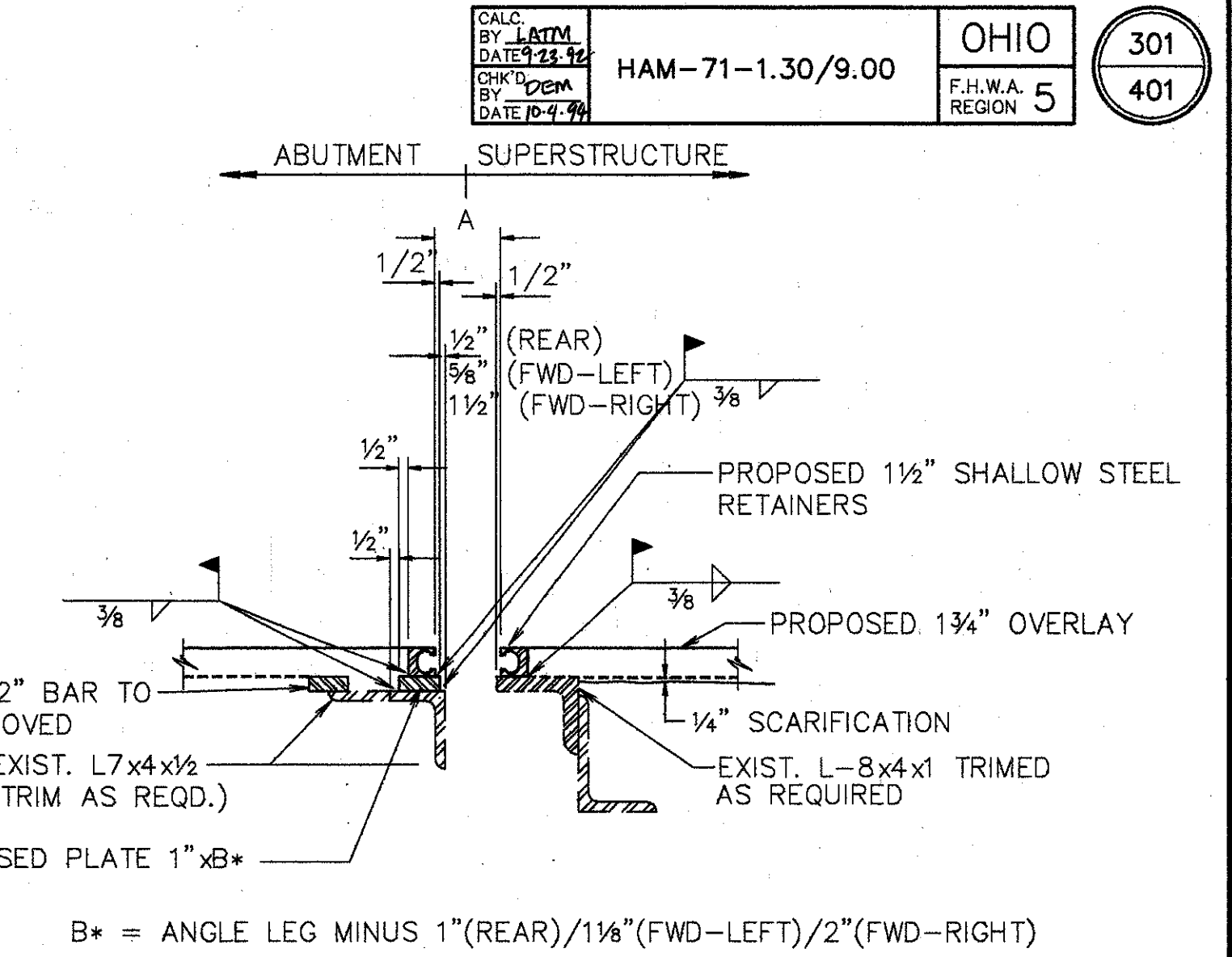
- END DAM WIDENING SHOWN IS FOR THE N.E. & S.W. CORNERS OF THE BRIDGE. THE N.W. & S.E. CORNERS ARE SIMILAR, BUT OPPOSITE HAND.
- FOR DETAILS & DIMS. NOT SHOWN SEE STD. DWG. SD-1-69.



**SECTION L-L**

**NOTE:**

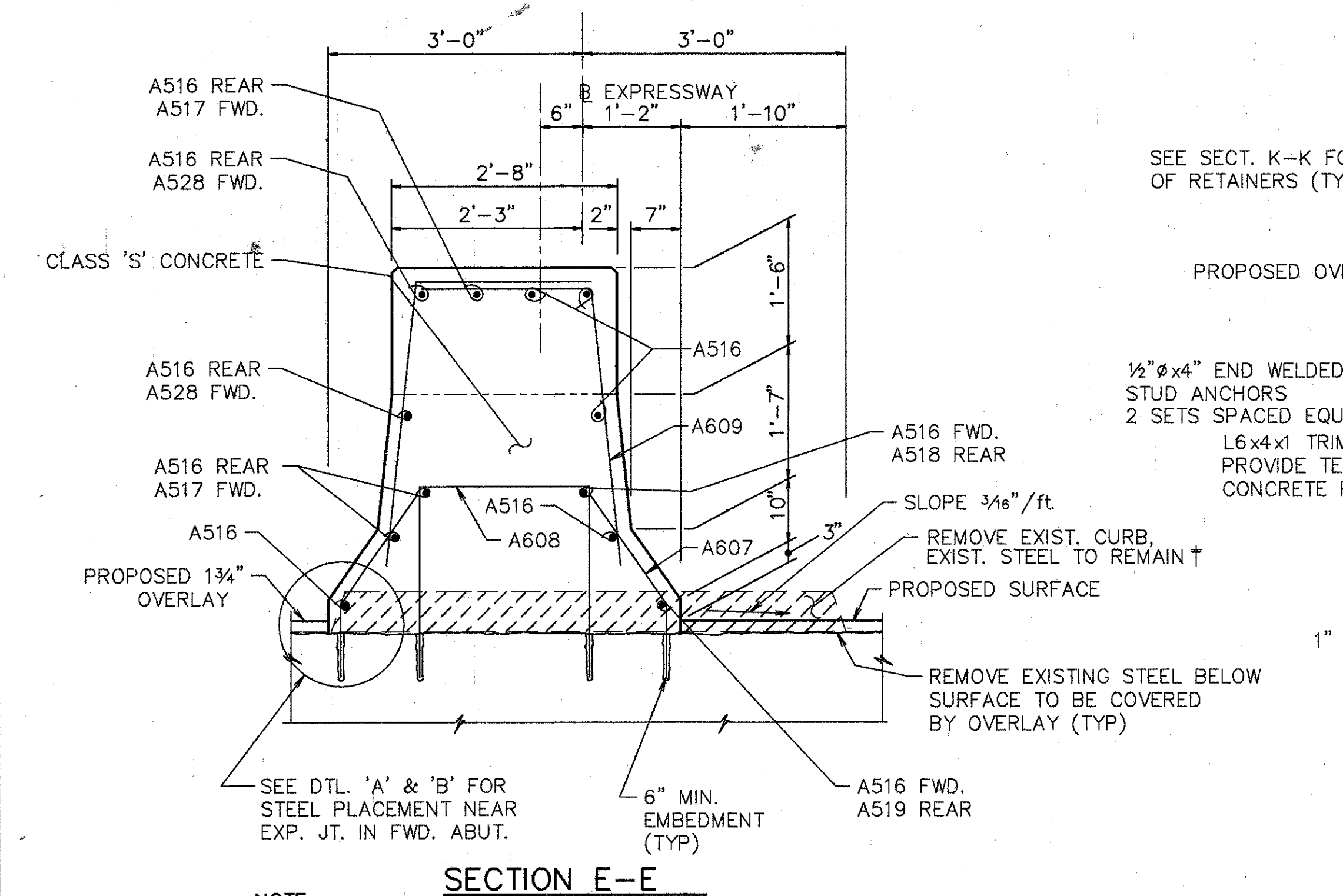
1. FOR DETAILS NOT SHOWN SEE STD. DWG. SD-1-69
2. SEE SECTION K-K FOR WELDING
3. SEE PLAN END DAM @ WIDENED AREAS, THIS SHEET.



**SECTION K-K**

**NOTES:**

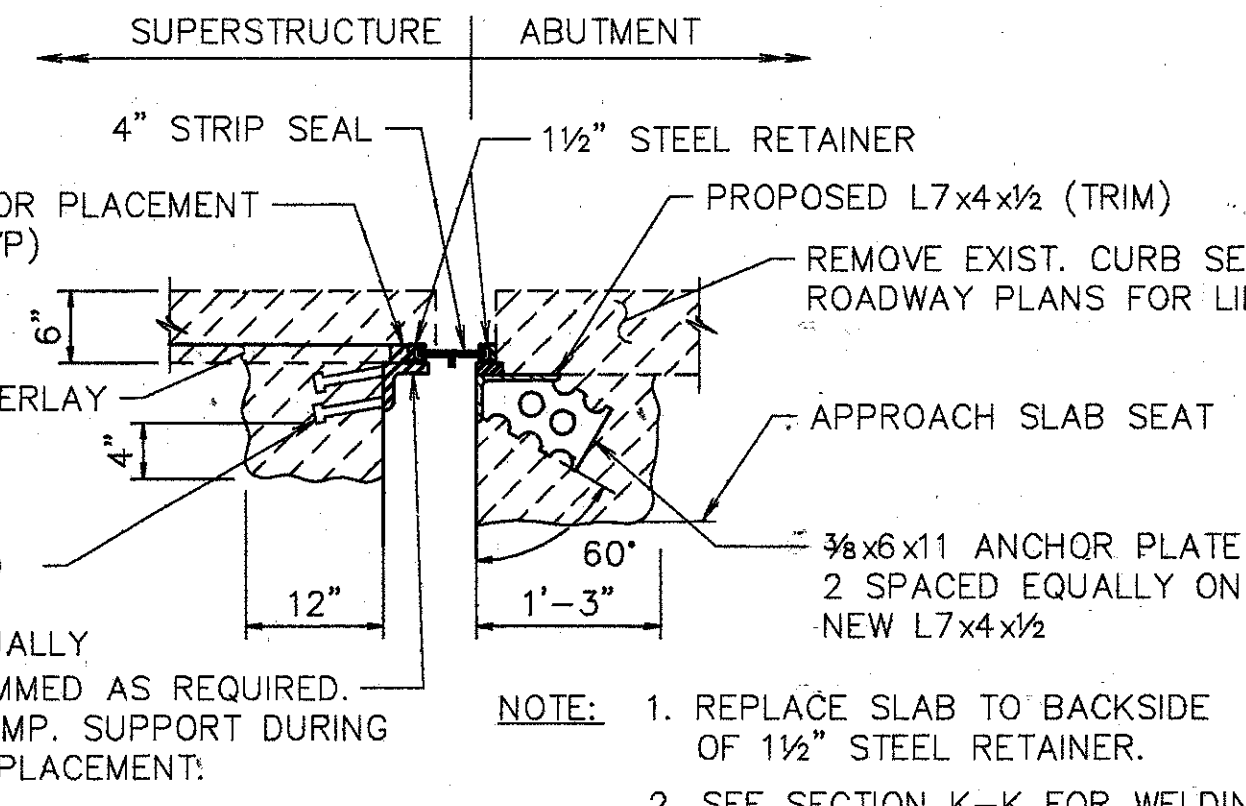
1. CONTRACTOR TO VERIFY ALL DIMENSIONS PRIOR TO MODIFYING THE EXPANSION JOINT.
2. THE PRICE BID FOR ITEM 516--STRUCTURAL EXPANSION JOINTS, INCLUDING ELASTOMERIC STRIP SEALS, SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, AND ANY OTHER INCIDENTAL ITEMS, AS DETAILED. REMOVAL OF CURB OR PARAPET AS SHOWN SHALL BE INCLUDED UNDER ITEM 202--PORTIONS OF STRUCTURE REMOVED.
3. FOR DETAILS NOT SHOWN REFER TO DRAWING EXJ-4-87 SHEETS 3 AND 4.
4. STRIP SEAL TO BE INSTALLED IN ONE CONTINUOUS PIECE (NO OPEN JOINTS).
5. PROVIDE TEMPORARY SUPPORT FOR ABUTMENT END DAM DURING CONSTRUCTION. REMOVE TEMPORARY SUPPORT AS SOON AS CONCRETE HAS SET, PREFERABLY WITHIN TWO HOURS AFTER PLACING TO AVOID DAMAGE DUE TO EXPANSION AND CONTRACTION OF SUPERSTRUCTURE.



**SECTION E-E**

**NOTE:**

BARS PLACED WITH SKEW.  
 WORK TO BE INCLUDED IN ITEM 511 - CLASS S CONCRETE, MISC.: ABUTMENT PARAPETS



**SECTION M-M**

**NOTE:**

1. REPLACE SLAB TO BACKSIDE OF 1 1/2" STEEL RETAINER.
2. SEE SECTION K-K FOR WELDING
3. SEE PLAN END DAM @ WIDENED AREAS, THIS SHEET.

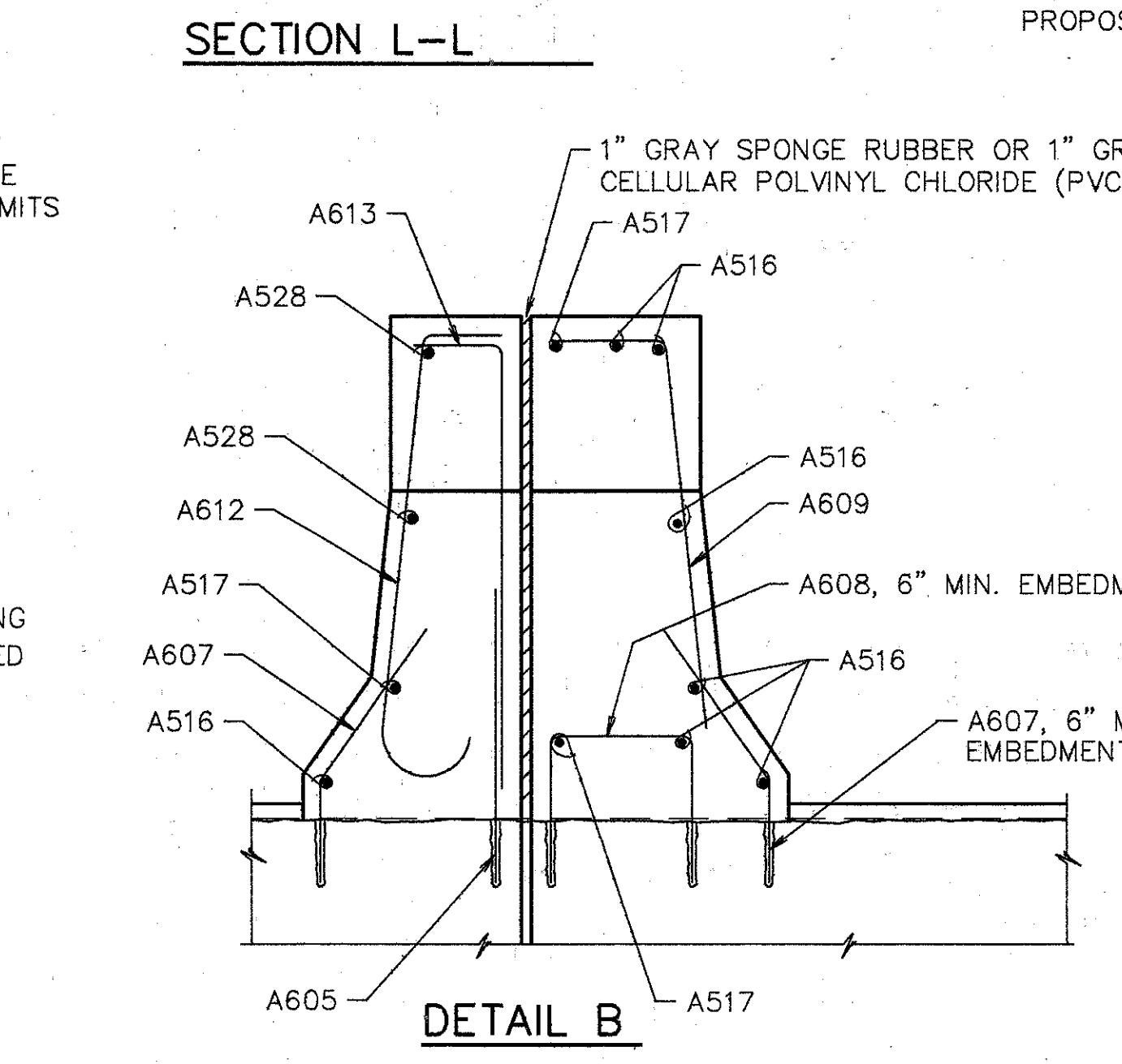
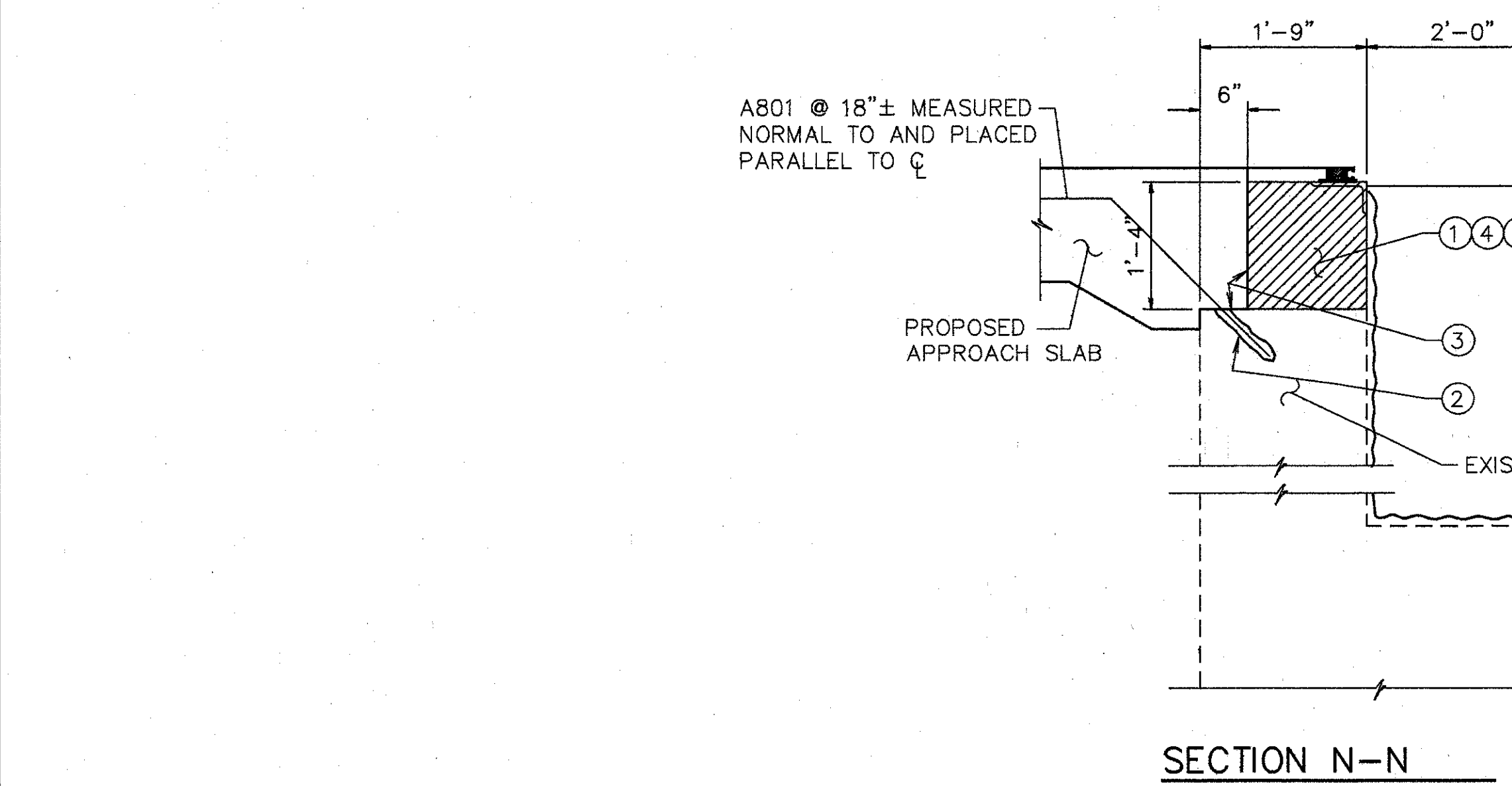


TABLE A	REAR ABUTMENT		FORWARD REAR	
	R	L	R	L
SOUTH BOUND	A542	A539	-	A538
NORTH BOUND	A537	A543	A541	A540
RAMP	-	A541	-	-

TEMPERATURE	DIM. 'A'	
	FORWARD	REAR
40° F	3 3/8"	3 1/2"
50° F	3 1/4"	3 1/2"
60° F	3 1/4"	3 3/8"
70° F	3 1/8"	3 3/8"
80° F	3"	3 1/4"
90° F	3"	3 1/4"

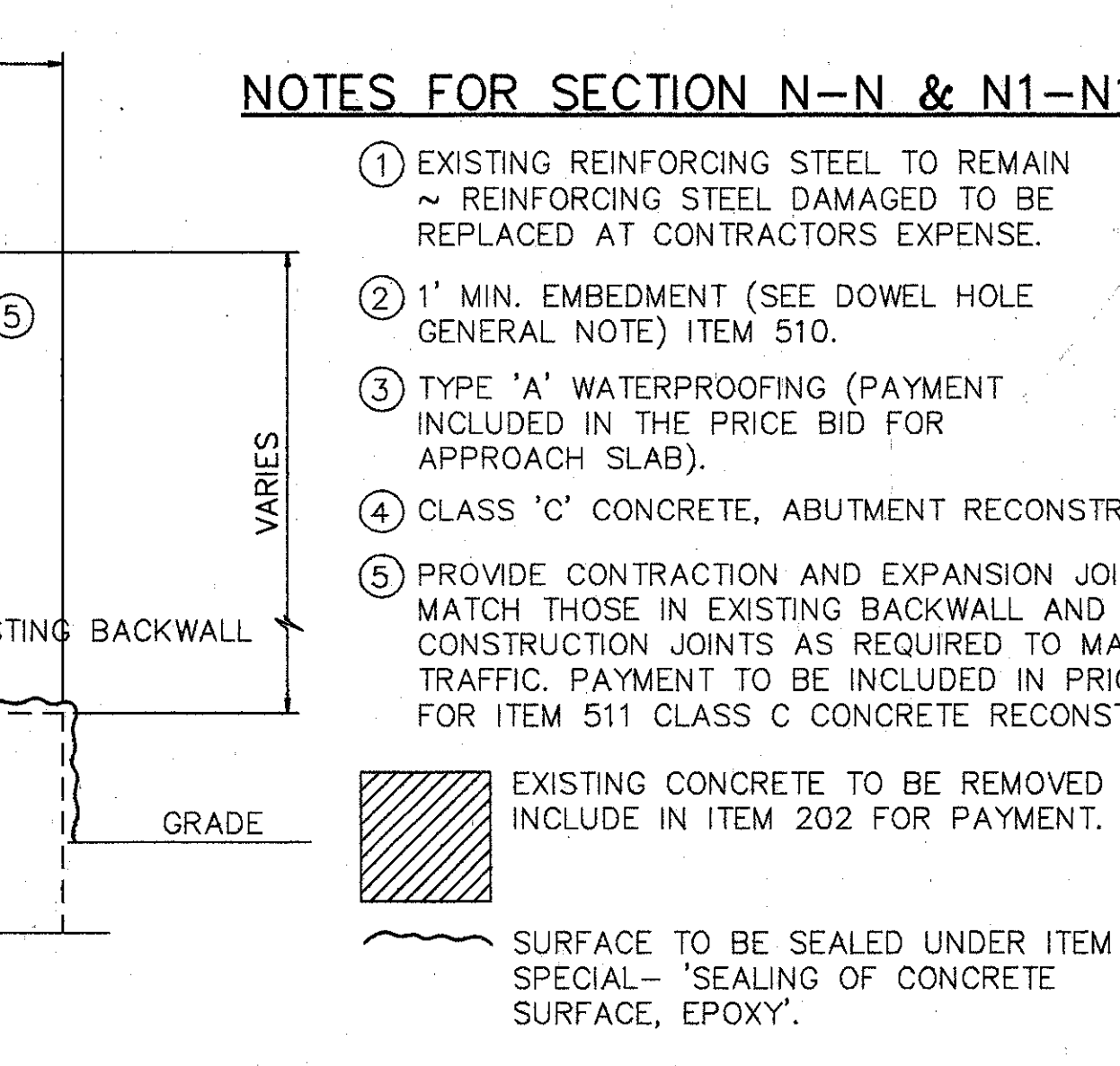


**SECTION N-N**

**NOTES FOR SECTION N-N & N1-N1**

1. EXISTING REINFORCING STEEL TO REMAIN ~ REINFORCING STEEL DAMAGED TO BE REPLACED AT CONTRACTOR'S EXPENSE.
2. 1' MIN. EMBEDMENT (SEE DOWEL HOLE GENERAL NOTE) ITEM 510.
3. TYPE 'A' WATERPROOFING (PAYMENT INCLUDED IN THE PRICE BID FOR APPROACH SLAB).
4. CLASS 'C' CONCRETE, ABUTMENT RECONSTRUCTION.
5. PROVIDE CONTRACTION AND EXPANSION JOINTS TO MATCH THOSE IN EXISTING BACKWALL AND PROVIDE CONSTRUCTION JOINTS AS REQUIRED TO MAINTAIN TRAFFIC. PAYMENT TO BE INCLUDED IN PRICE BID FOR ITEM 511 CLASS C CONCRETE RECONSTRUCTION.

EXISTING CONCRETE TO BE REMOVED INCLUDE IN ITEM 202 FOR PAYMENT.  
 SURFACE TO BE SEALED UNDER ITEM SPECIAL-- SEALING OF CONCRETE SURFACE, EPOXY.



**SECTION N1-N1**

**NOTES:**

REMOVE EXISTING REINF. IN APPROACH SLAB AREA

A801 @ 18" ± MEASURED NORMAL TO AND PLACED PARALLEL TO C

SEE TABLE A ABOVE FOR REINFORCING

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**STRIP SEAL EXPANSION JOINTS AT ABUTMENTS**  
 BRIDGE NO. HAM-0192 L/R OVER RAMP "GD"  
 HAMILTON COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
L.A.T.M.	D.E.E.		M.A.A.	DEM11/11/94		



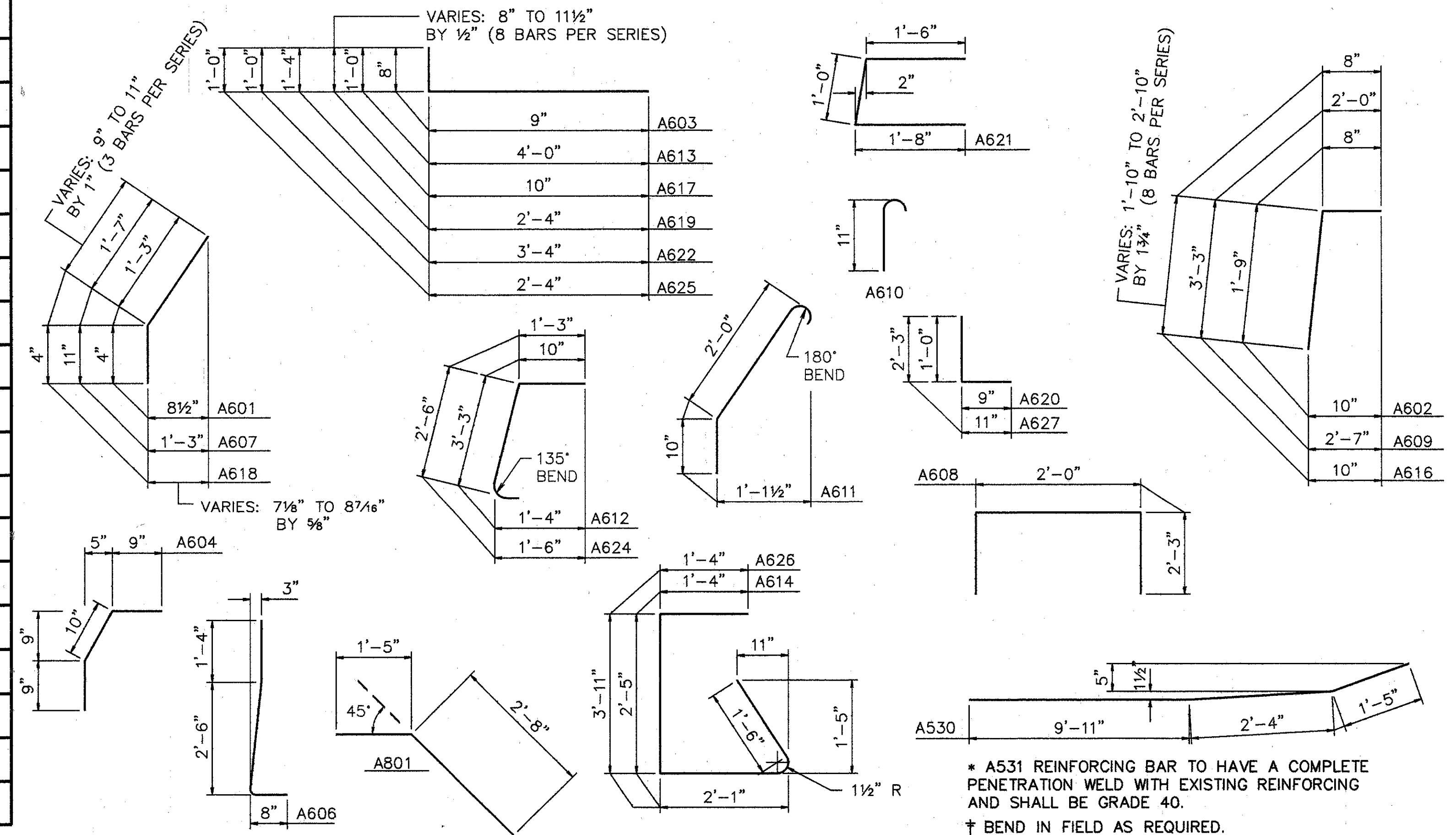
### REINFORCING STEEL LIST

MARK	SHAPE	NUMBER	LENGTH	WEIGHT	MARK	SHAPE	NUMBER	LENGTH	WEIGHT	MARK	SHAPE	NUMBER	LENGTH	WEIGHT
A501	STR.	106	30'-0"	3317	A539	BNT.	1	12'-10"	13	A613	BNT.	248	4'-10"	1800
A502	STR.	2	30'-7"	64	A540	BNT.	1	14'-6"	15	A614	BNT.	2	7'-0"	21
A503	STR.	2	25'-10"	54	A541	BNT.	2	15'-2"	32	A615	STR.	1	10"	1
A504	STR.	8	21'-9"	181	A542	STR.	1	21'-10"	23	A616	BNT.	8	2'-6" TO 3'-6"	36
A505	STR.	60	17'-2"	1074	A543	BNT.	1	27'-0"	28	A617	BNT.	8	1'-4" TO 1'-8"	18
A506	STR.	3	20'-0"	63						A618	BNT.	3	1'-2"	5
A507	STR.	15	16'-7"	259	A601	BNT.	498	1'-6"	1122	A619	BNT.	3	3'-6"	16
A508	STR.	3	13'-4"	42	A602	BNT.	490	2'-5"	1779	A620	BNT.	3	1'-7"	7
A509	STR.	3	22'-10"	71	A603	BNT.	490	1'-3"	920	A621	BNT.	1	3'-10"	6
A510	STR.	4	13'-9"	57	A604	BNT.	240	2'-2"	781	A622	BNT.	2	4'-2"	13
A511	STR.	169	6'-2"	1087	A605	STR.	470	2'-6"	1765	A623	STR.	240	3'-10"	1382
A512	STR.	132	14'-8"	2019	A606	BNT.	240	4'-4"	1561	A624	BNT.	4	4'-3"	26
A513	STR.	4	18'-4"	76	A607	BNT.	7	2'-5"	25	A625	BNT.	2	3'-2"	10
A514	STR.	4	4'-5"	18	A608	BNT.	4	6'-2"	37	A626	BNT.	19	8'-6"	243
A515	STR.	4	2'-4" TO 3'-1" BY 3"	11	A609	BNT.	7	5'-1"	53	A627	BNT.	118	3'-0"	532
A516	STR.	17	2'-3"	40	A610	BNT.	1	1'-2"	3	A801	BNT.	162	4'-0"	1730
A517	STR.	3	1'-3"	4	A611	BNT.	233	3'-4"	1165	REPLACEMENT STEEL			600	
A518	STR.	5	4'-0"	21	A612	BNT.	247	4'-9"	1762	TOTAL			26490	
A519	STR.	1	1'-6"	2										

ITEM	ITEM EXT.	TOTAL	UNITS	DESCRIPTION
202	11200	LUMP SUM	L.S.	PORTIONS OF STRUCTURE REMOVED
202	2350	1590	S.Y.	WEARING COURSE REMOVED (ASPHALT), AS PER PLAN
509	15824	26490	LBS.	EPOXY COATED REINFORCING STEEL, GRADE 60
510	12201	280	L.F.	DOWEL HOLES, AS PER PLAN
511	34450	13	C.Y.	CLASS S CONCRETE, MISC: ABUTMENT PARAPETS
511	34450	123	C.Y.	CLASS S CONCRETE, MISC.: CONCRETE PARAPET RAILING, AS PER PLAN
511	45700	32	C.Y.	CLASS C CONCRETE ABUTMENT (RECONSTRUCTION)
SPECIAL	51267500	2065	S.Y.	SEALING OF CONCRETE SURFACE *
SPECIAL	51267502	563	S.Y.	SEALING OF CONCRETE SURFACE (EPOXY) *
516	14600	100	L.F.	STRUCTURAL JOINT OR JOINT SEALER, MISC.: 2"x4" SEALER, AS PER PLAN
513	21000	31	EACH	TRIMMING OF BEAM END
516	11210	465	L.F.	STRUCTURAL EXP. JT., INCLUDING ELASTOMERIC STRIP SEAL
516	45304	32	EACH	REFURBISH BEARING DEVICE
517	76201	465	L.F.	RAILING FACED, AS PER PLAN (32" HIGH)
518	12800	8	EACH	SCUPPER MODIFICATION
518	63300	LUMP SUM	L.S.	STRUCTURE DRAINAGE, MISC: MODIFY DRAINAGE PIPING
519	11100	88	S.F.	PATCHING CONCRETE STRUCTURE
SPECIAL	51912600	16	L.F.	CONCRETE REPAIR BY EPOXY INJECTION
604	33400	1	EACH	MANHOLE COVER
845	40210	3750	S.Y.	LATEX MODIFIED CONCRETE OVERLAY (1 1/4" THICK) ON EXISTING DECK
845	11000	32	C.Y.	LATEX MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS)
845	30000	1	C.Y.	FULL DEPTH REPAIR
514	27704	LUMP	L.S.	FIELD PAINTING EXISTING STEEL, EEU *
516	14600	760	L.F.	SEAL JOINT BETWEEN ABUTMENT AND CONCRETE SLOPE PROTECTION
518	43300	LUMP	L.S.	SCUPPER AND DRAINAGE PIPE CLEANOUT
601	21100	12	S.Y.	REPAIR CONCRETE SLOPE PROTECTION

### BENT BAR DETAILS

\* SEE PROPOSAL NOTE



### PROPOSED WORK

1. SCARIFY EXISTING DECK 1/4", AND REMOVE DETERIORATED CONCRETE AS DIRECTED BY THE ENGINEER.
2. REFURBISH ALL ABUTMENT BEARINGS.
3. MODIFY PARAPETS ON THE SUPERSTRUCTURE & ABUTMENTS. SEAL PARAPETS AS SHOWN ON PLANS. (INSTALL PLATES FOR STRIP SEAL EXP. JT.).
4. PLACE 1 1/4" THICK LATEX MODIFIED CONCRETE ON DECK.
5. RECONSTRUCT ABUTMENT BACKWALLS ABOVE APPROACH SLAB SEAT.
6. SEAL ALL TRANSVERSE EXPANSION JOINTS WITH STRIP SEAL.
7. REFURBISH DRAINAGE PIPING.
8. TRIM BEAM ENDS TO 2" CLEARANCE (OR AS CLOSE TO 2" AS POSSIBLE).
9. AT LEAST ONE LANE OF TRAFFIC SHALL BE MAINTAINED IN EACH DIRECTION AND ON THE BRIDGE AT ALL TIMES. FOR NOTES SEE MAINTENANCE OF TRAFFIC PLANS. MAINTENANCE OF TRAFFIC PLAN REQUIRES CONSTRUCTION PHASING LIMITS AT LANE CENTERLINES. DUE TO THESE LIMITS, OVERLAY MAY REQUIRE SPECIAL ATTENTION.
10. OTHER WORK AS DESCRIBED IN THESE PLANS.

Let Pric MAY 15, 1991 @ 2:25 PM  
 G:\STR\9099-CV\9099.DWG Last Revision By: RACH MAY 15, 1994 @ 2:38 PM

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 DAYTON, OHIO 45402-1226  
 (513) 461-5660

**QUANTITIES AND GENERAL NOTES**

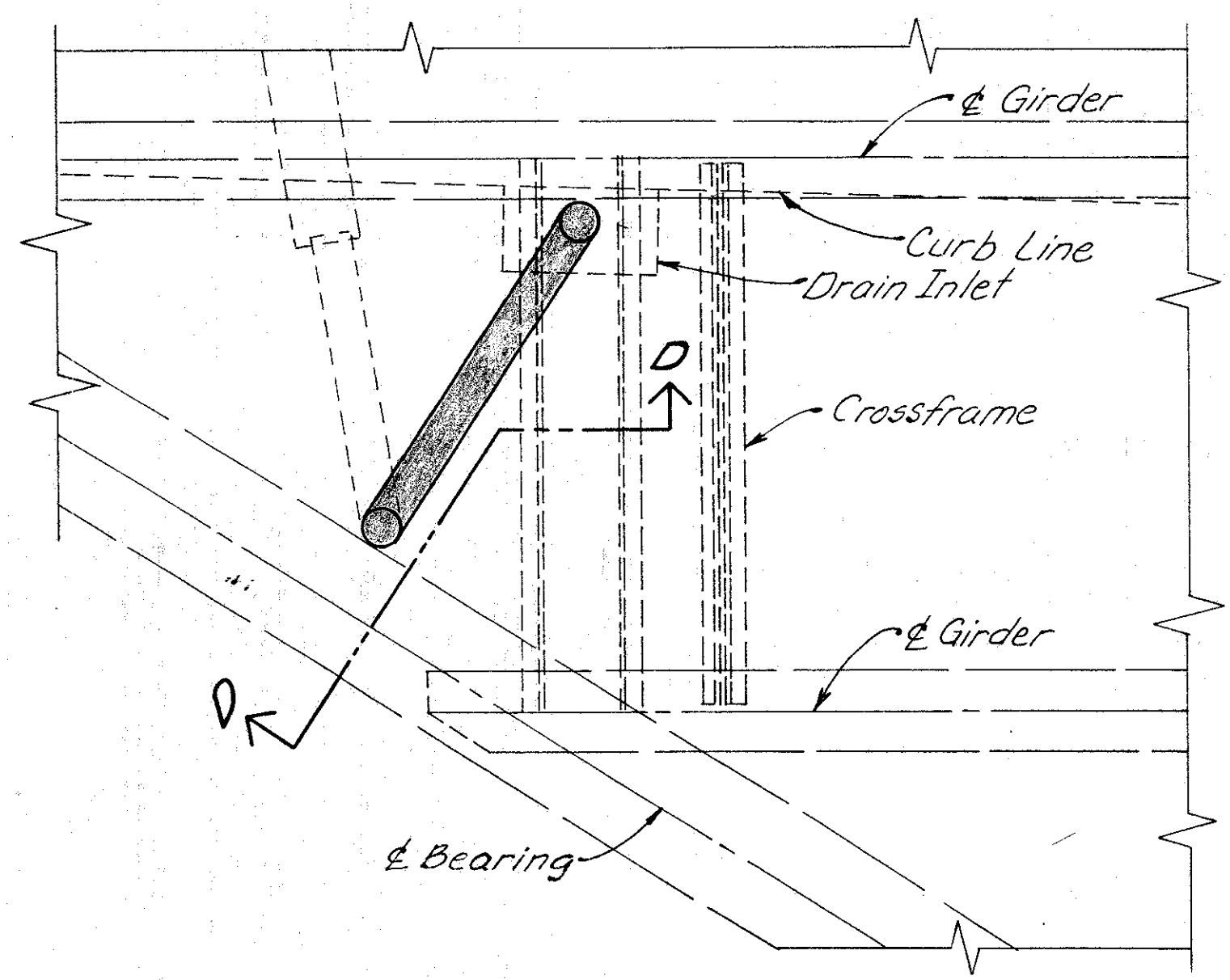
BRIDGE NO. HAM-0192 L/R  
 OVER RAMP "GD"

HAMILTON COUNTY

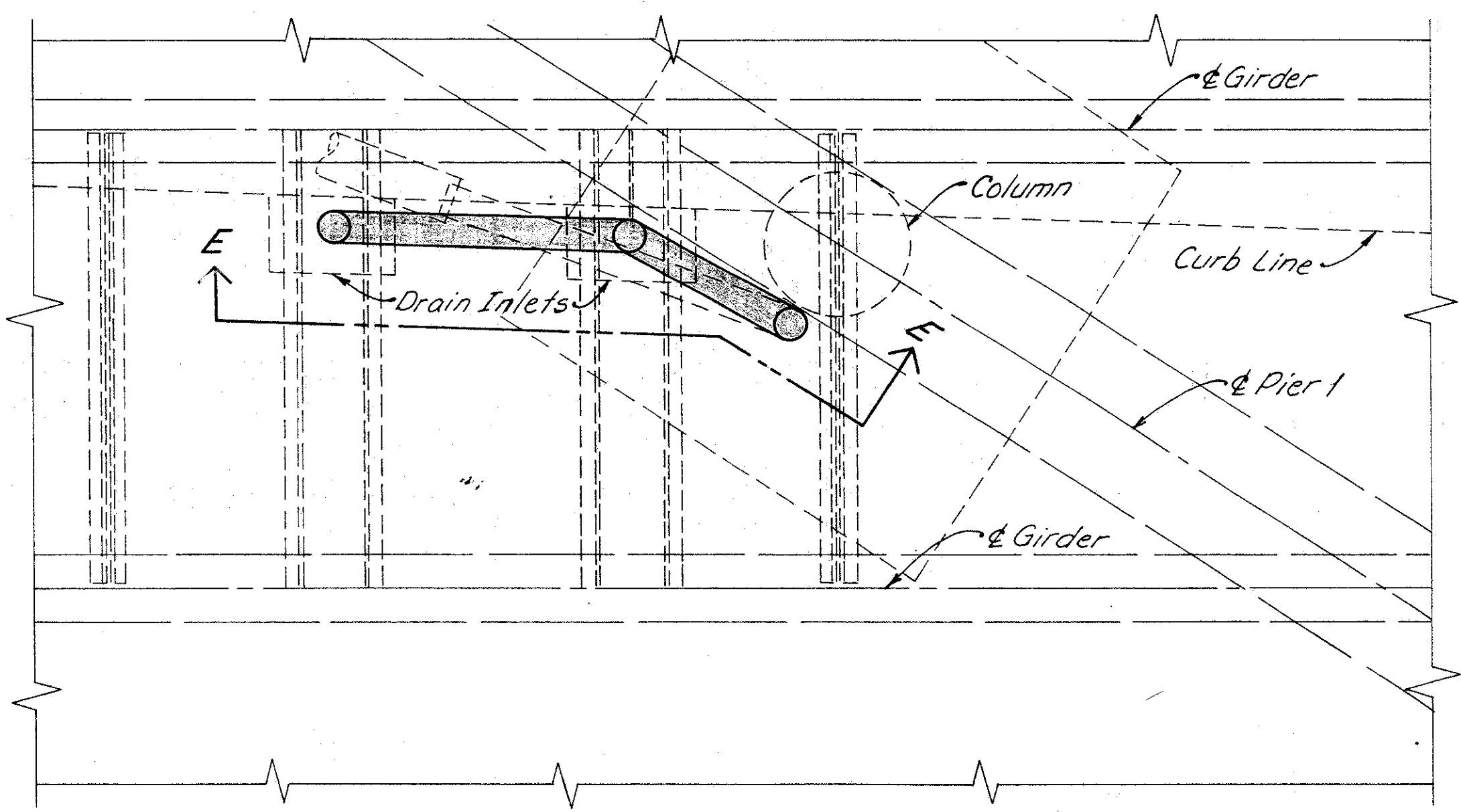
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L.A.T.M.	D.E.E.		M.A.A.	DEM11/11/94		

7/9

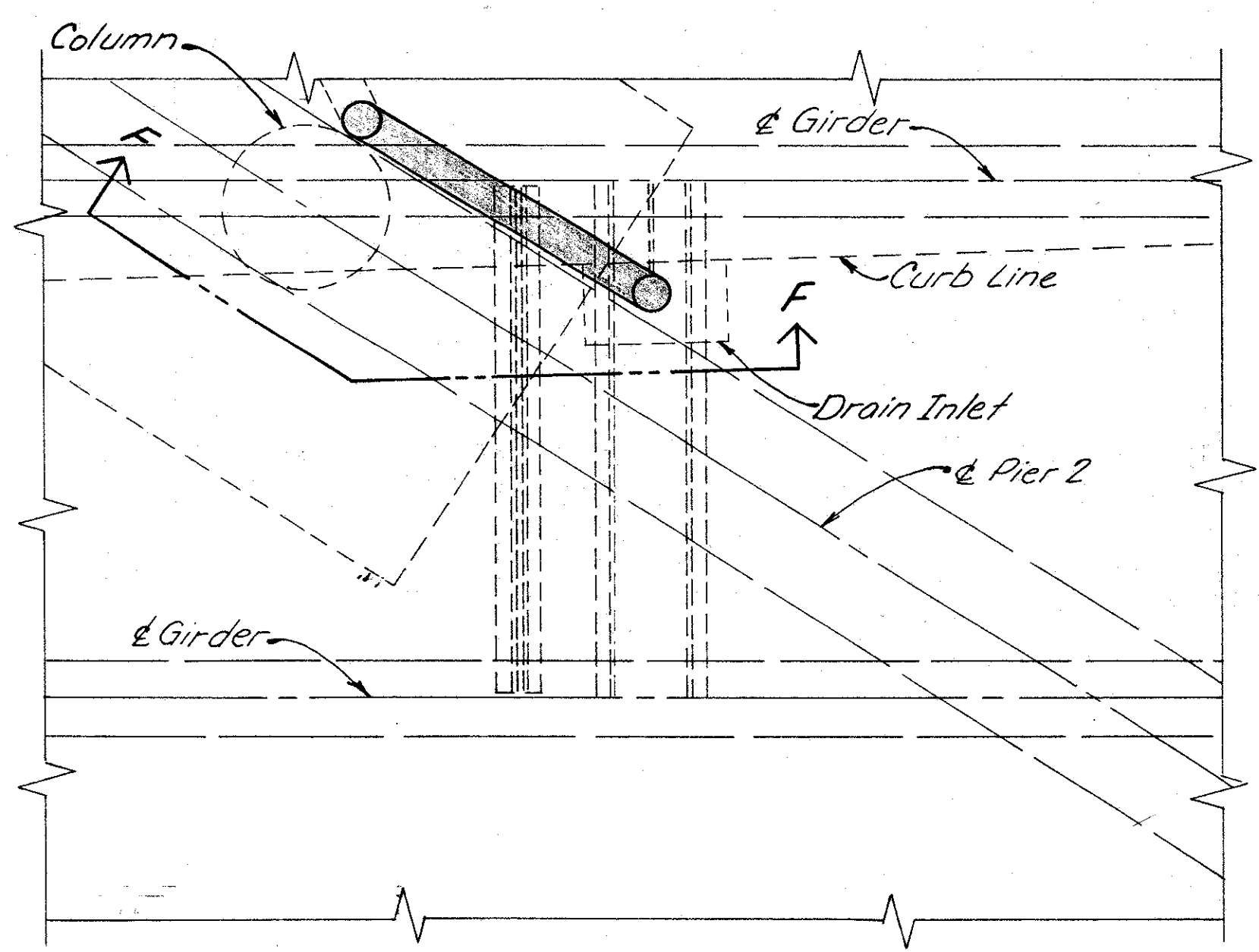
\* A531 REINFORCING BAR TO HAVE A COMPLETE PENETRATION WELD WITH EXISTING REINFORCING AND SHALL BE GRADE 40.  
 † BEND IN FIELD AS REQUIRED.



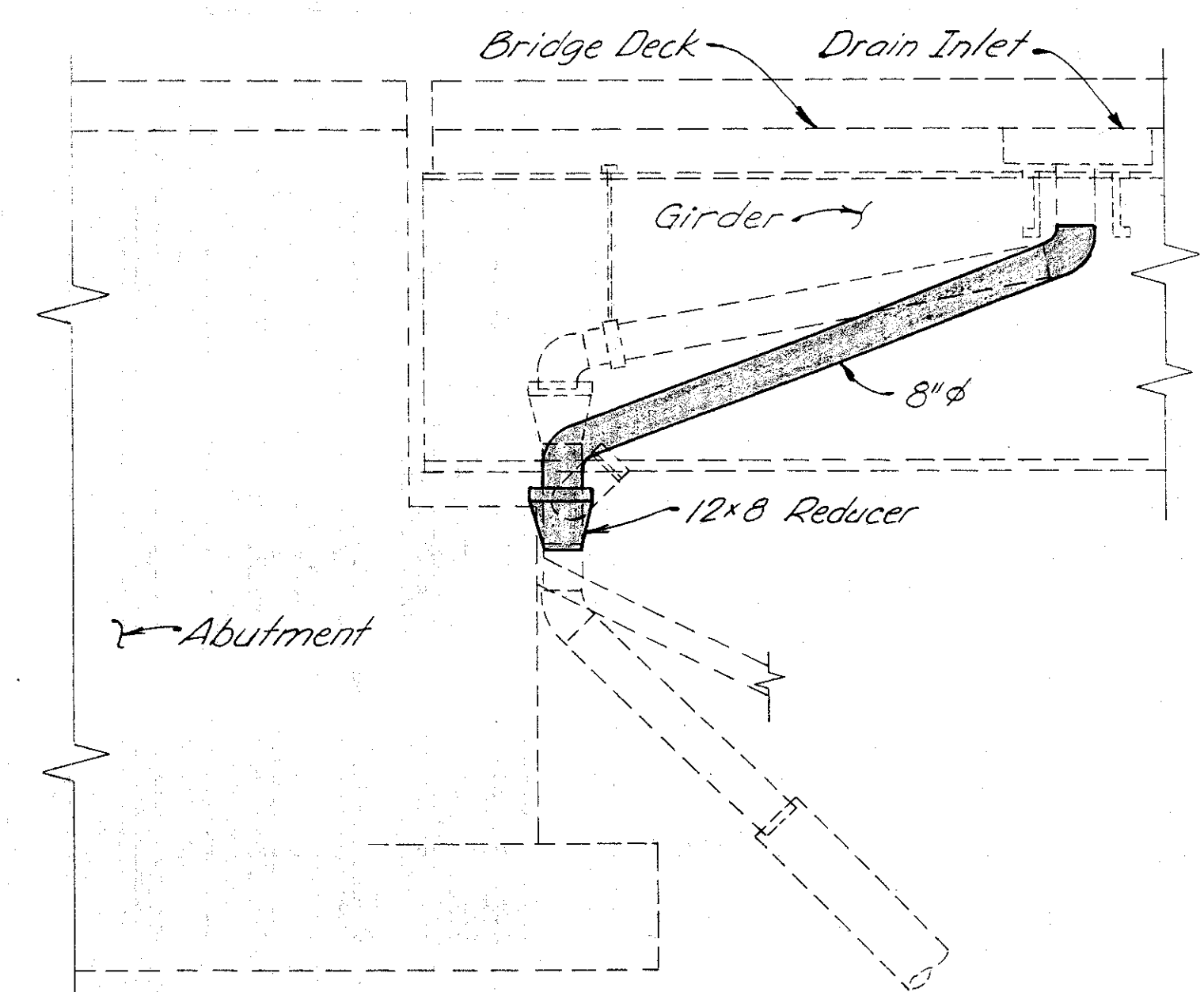
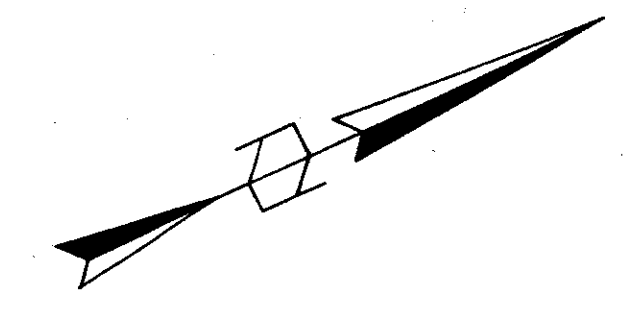
**PLAN FOR DRAIN INLET AT S. ABUT. OF NORTH BOUND ROADWAY**



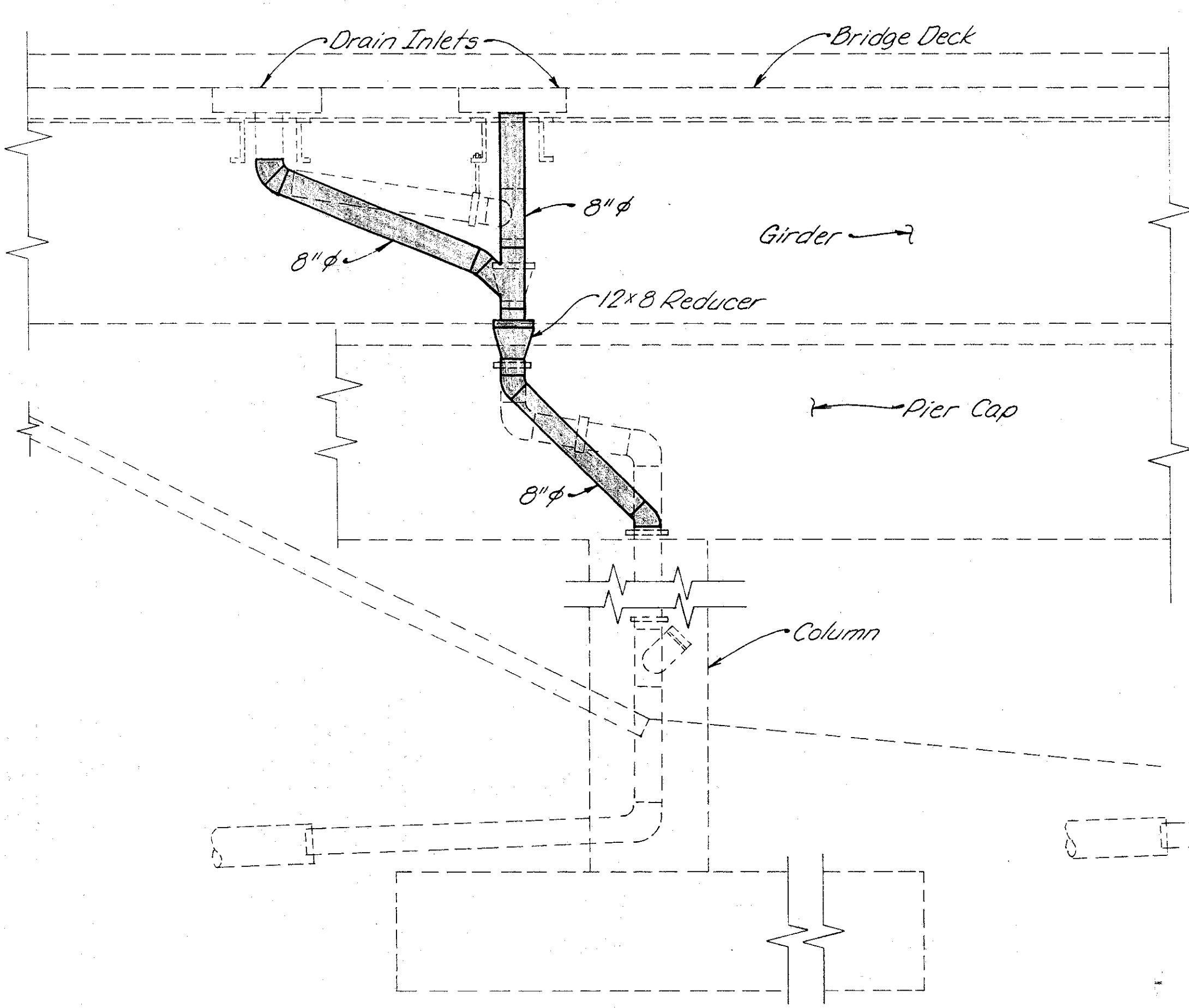
**PLAN FOR DRAIN INLET AT PIER NO. 1 OF NORTH BOUND ROADWAY**



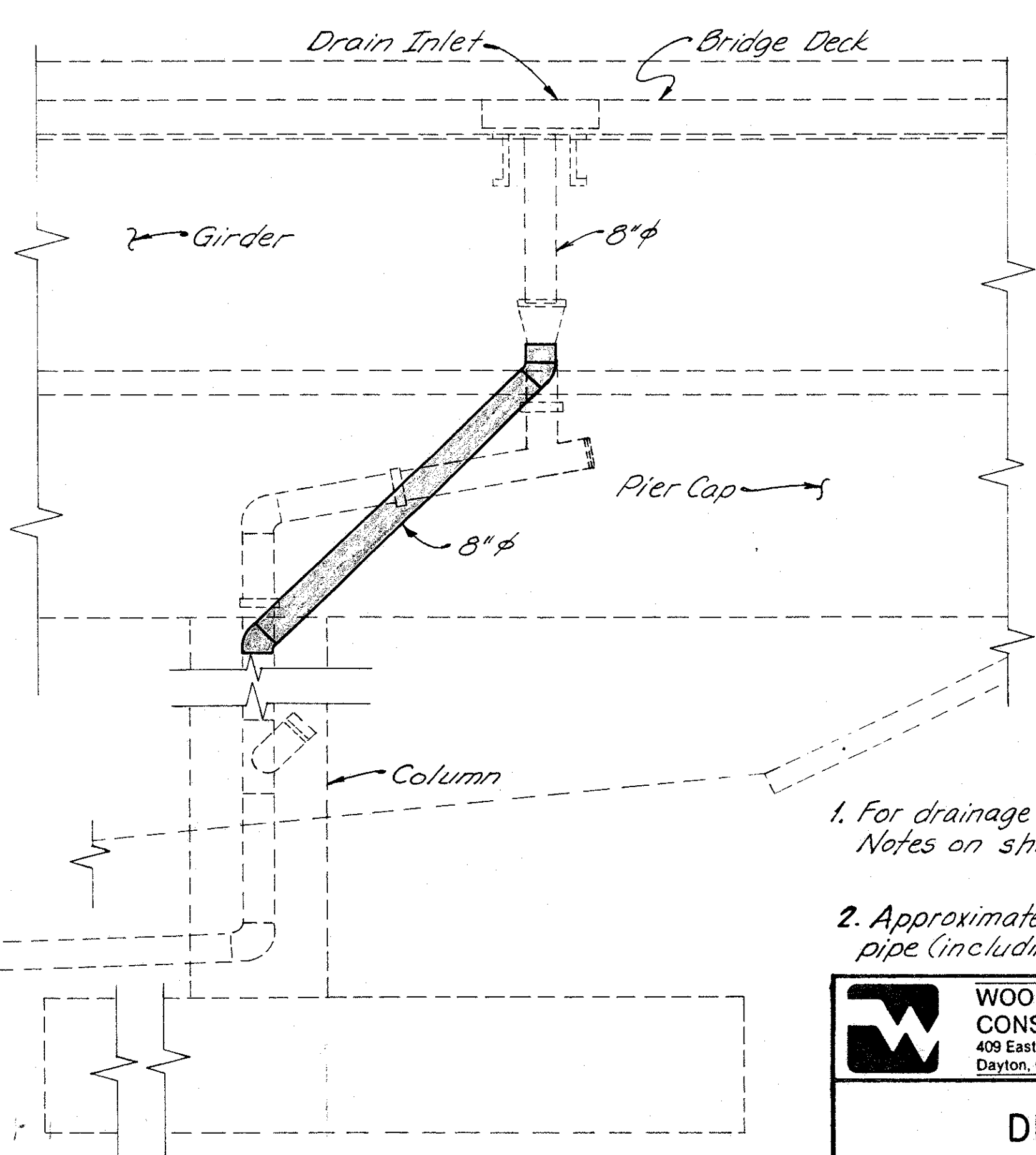
**PLAN FOR DRAIN INLET AT PIER NO. 2 OF NORTH BOUND ROADWAY**



**SECTION D-D**



**SECTION E-E**



**SECTION F-F**

1. For drainage piping requirements see General Notes on sheet 272
2. Approximate No of Linear Feet of proposed 8" pipe (including specials) = 75'

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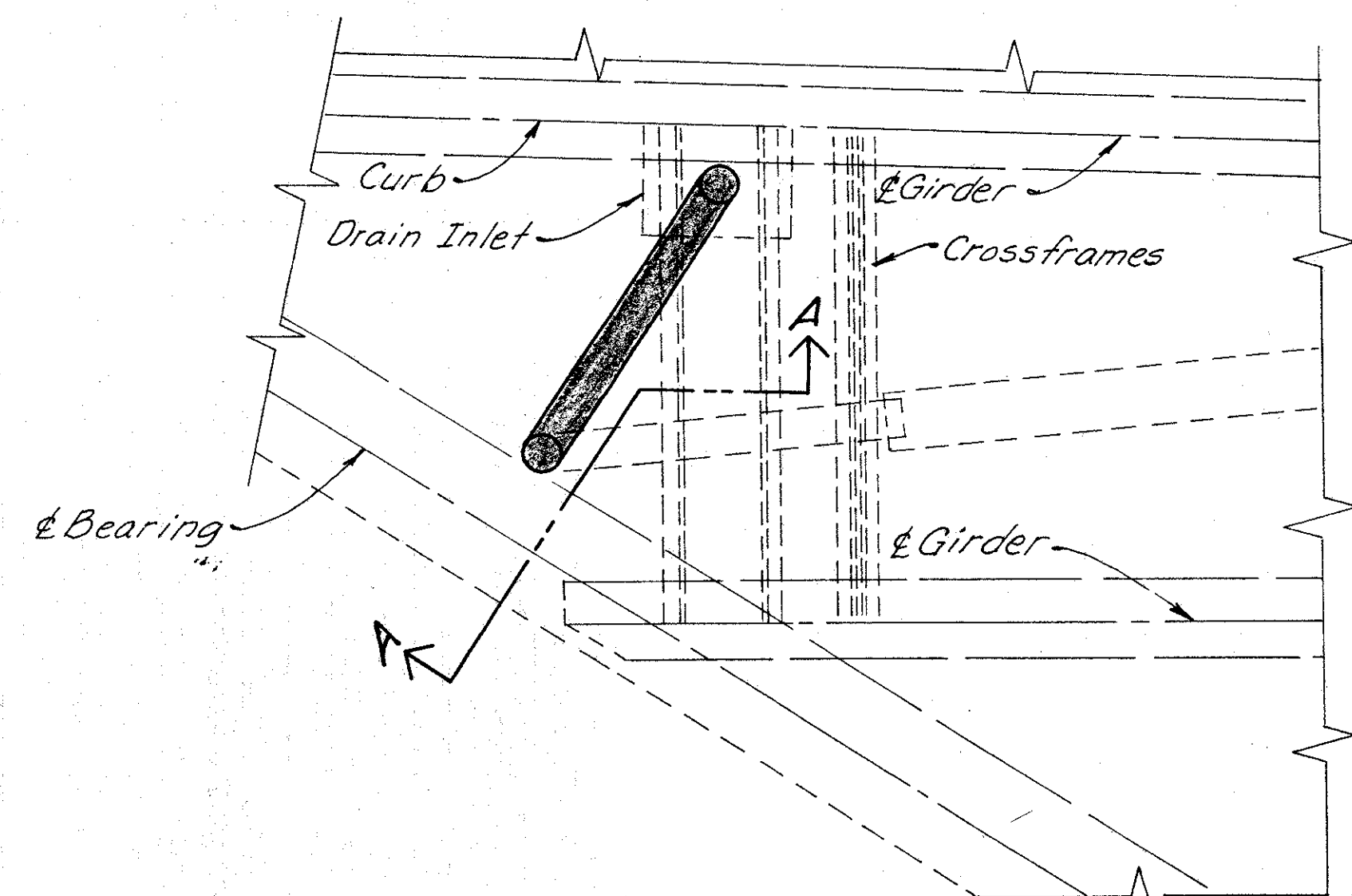
**DRAINAGE DETAILS**

BRIDGE NO. HAM-71-0192 L/R  
OVER RAMP GD

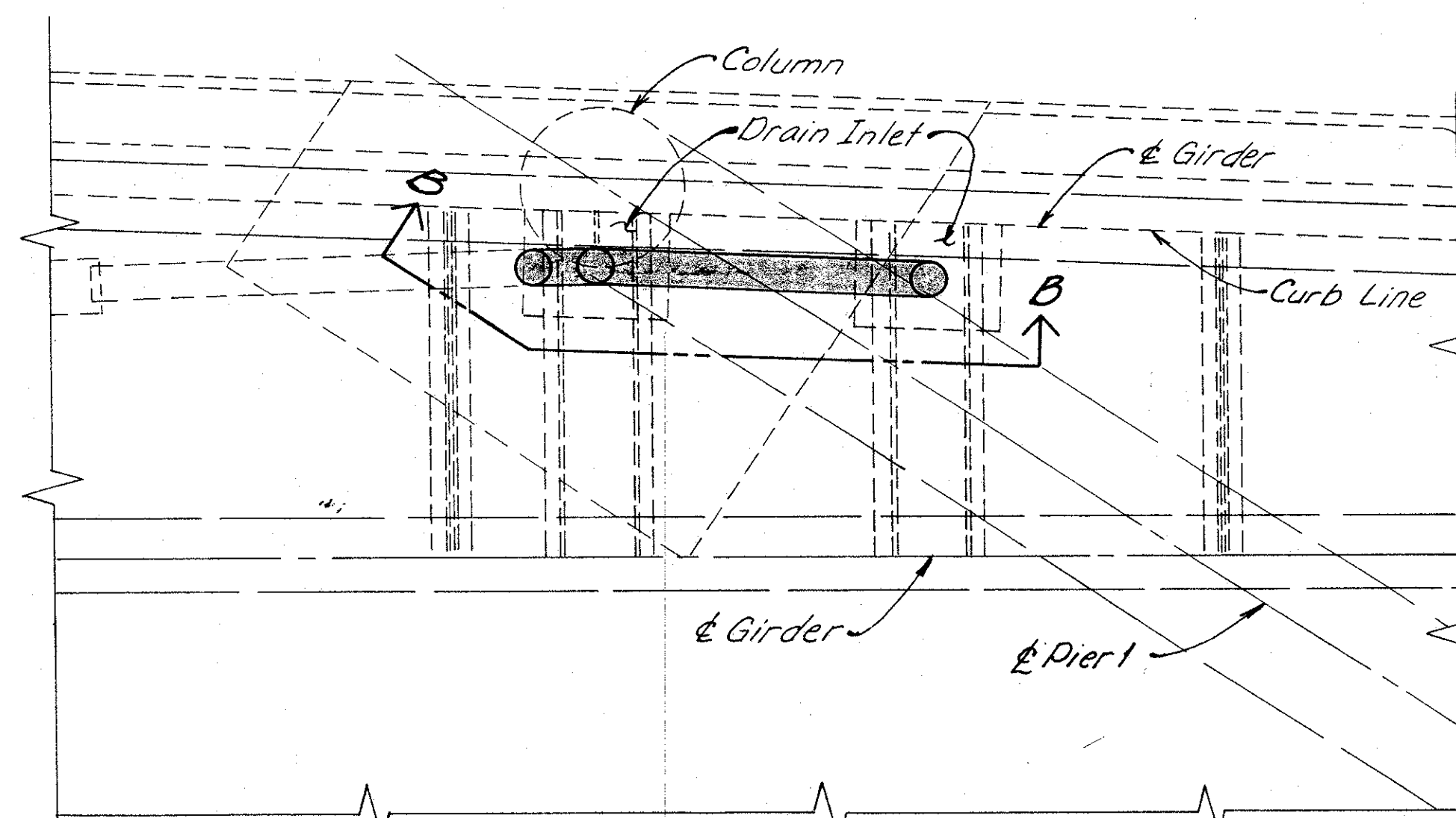
HAMILTON COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
D.E.M.	L.A.P.		D.E.M.	P.W.G.	11/11/94	

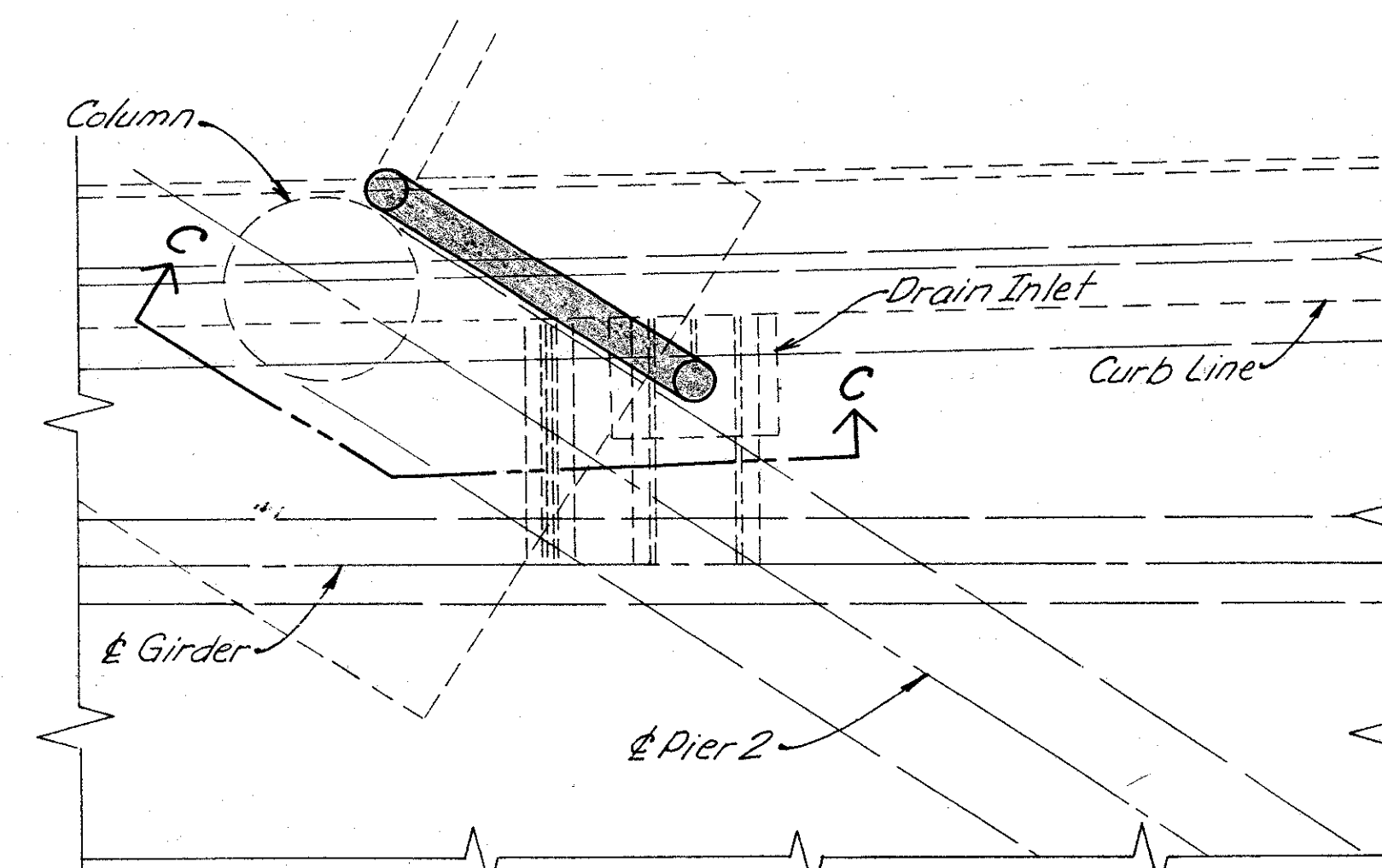




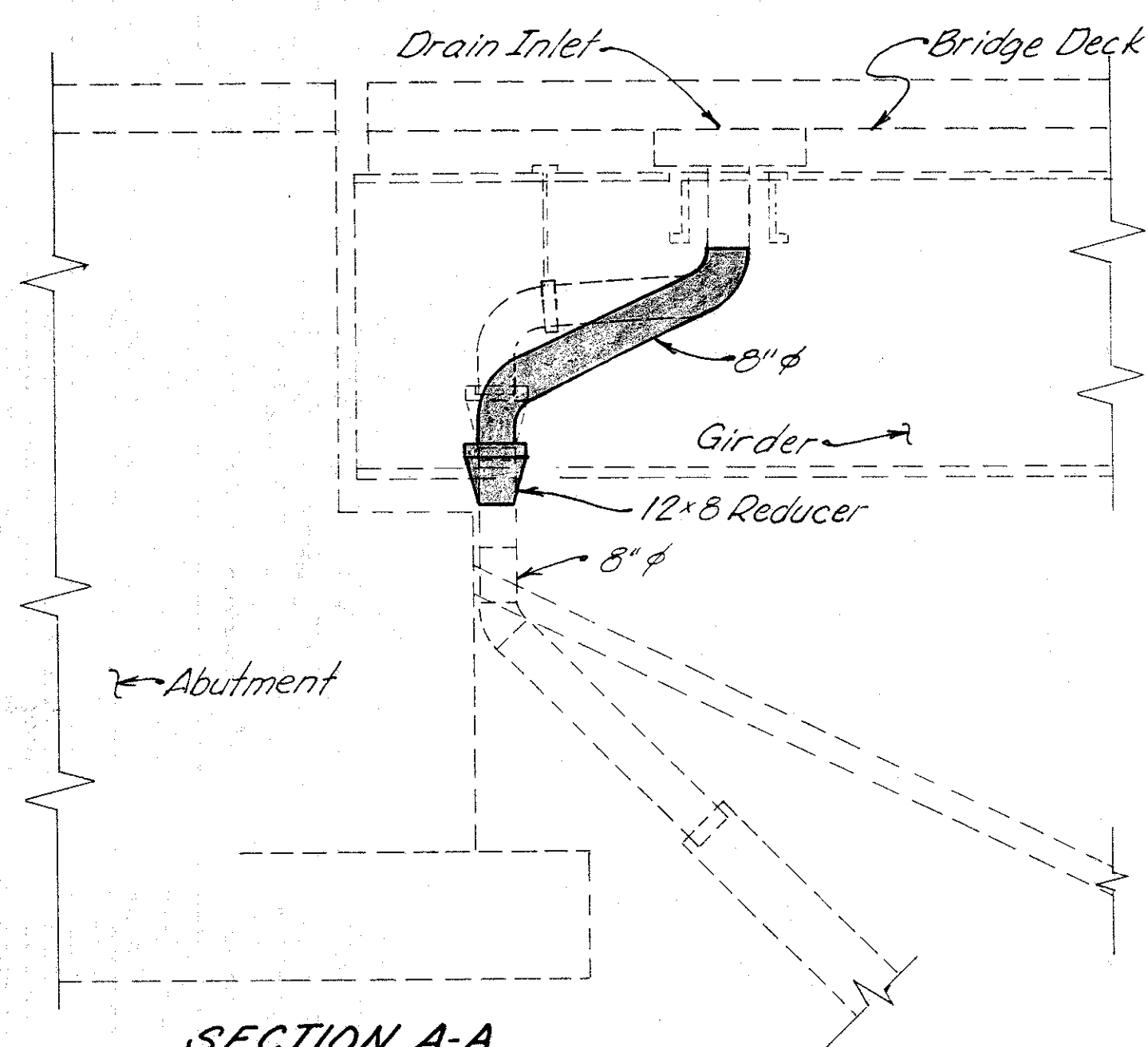
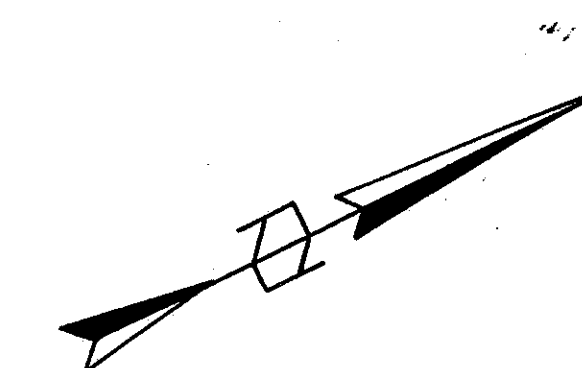
PLAN FOR DRAIN INLET AT S. ABUT. OF SOUTH BOUND ROADWAY



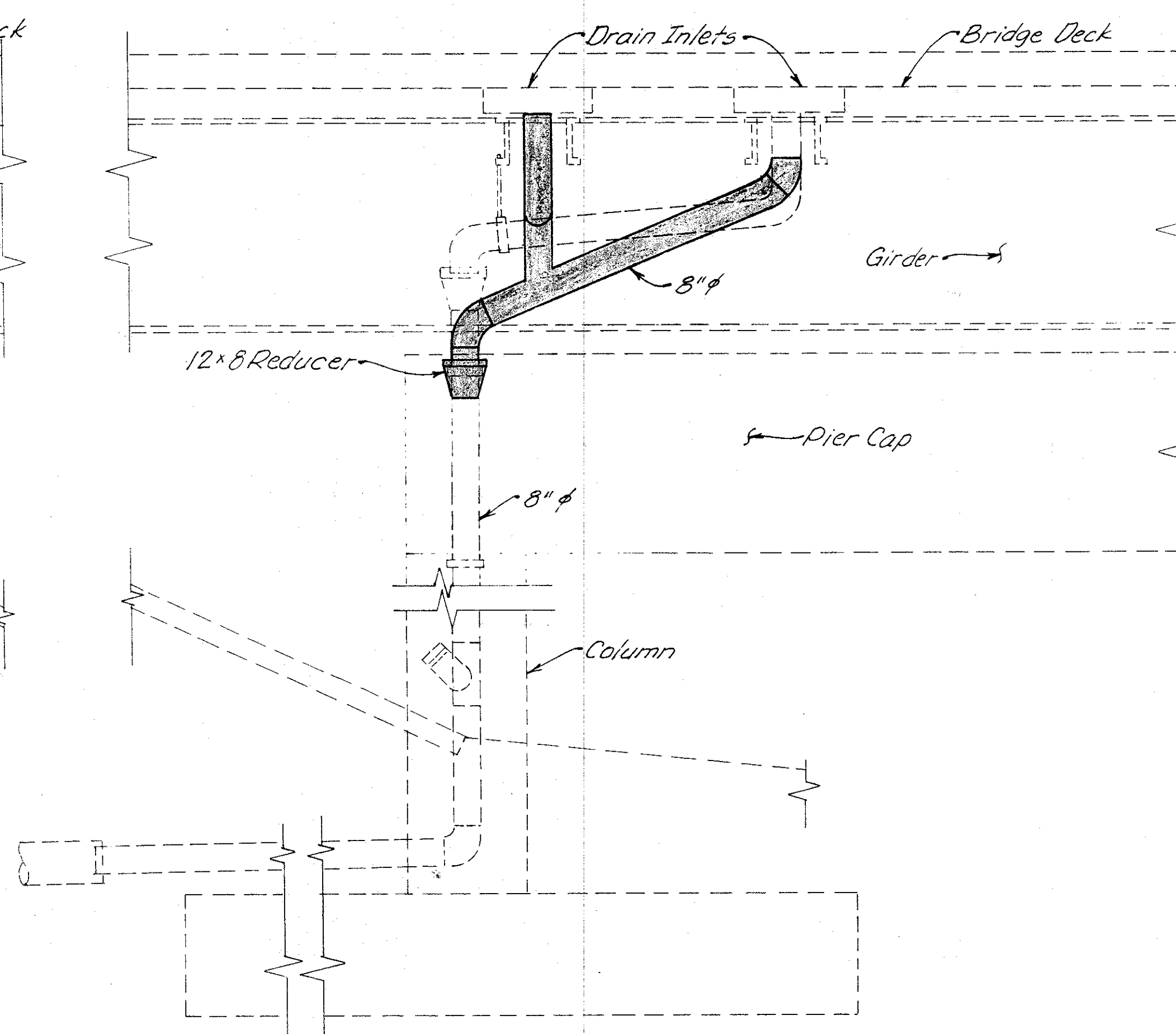
PLAN FOR DRAIN INLET AT PIER NO. 1 OF SOUTH BOUND ROADWAY



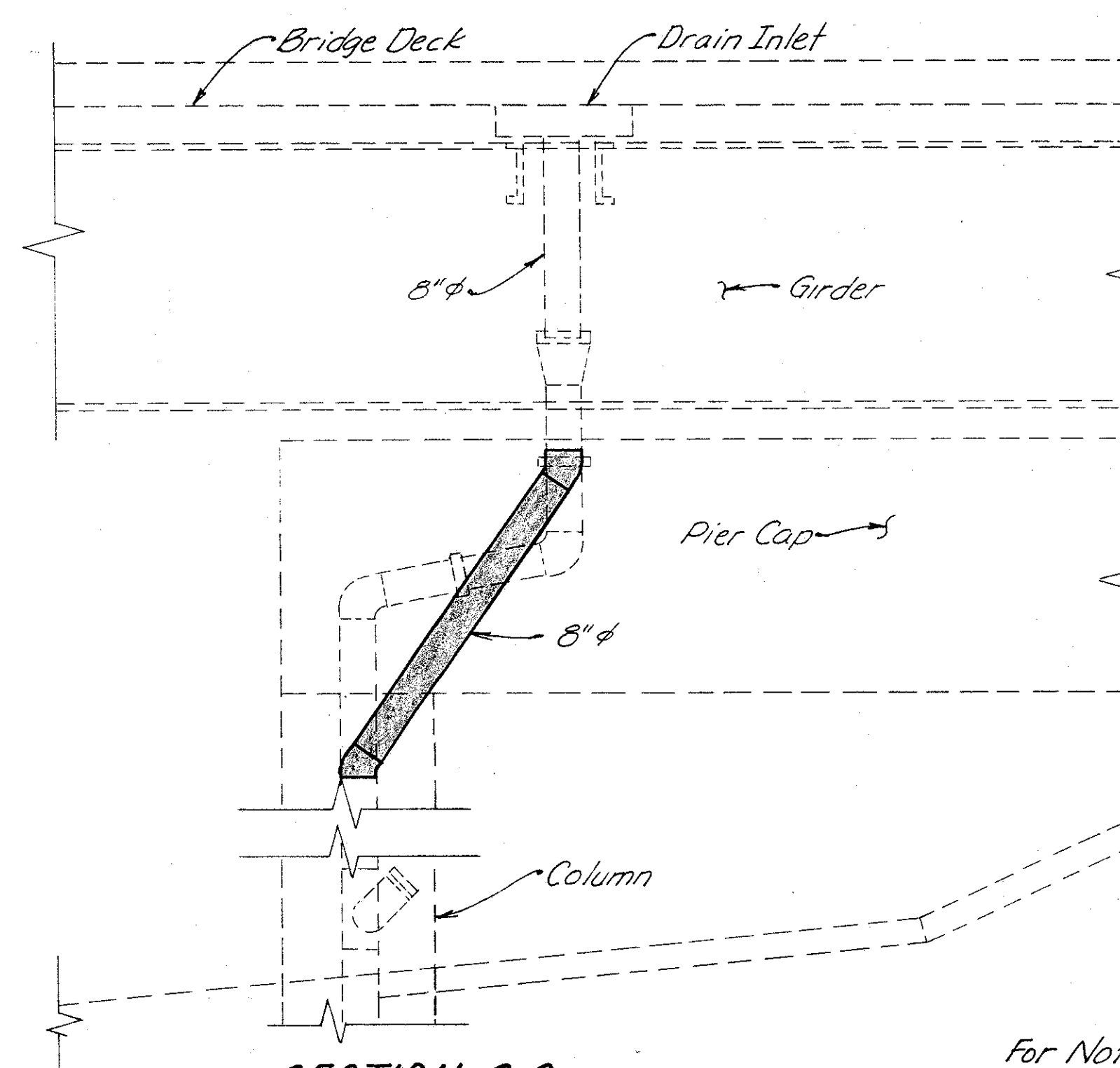
PLAN FOR DRAIN INLET AT PIER NO. 2 OF SOUTH BOUND ROADWAY



SECTION A-A



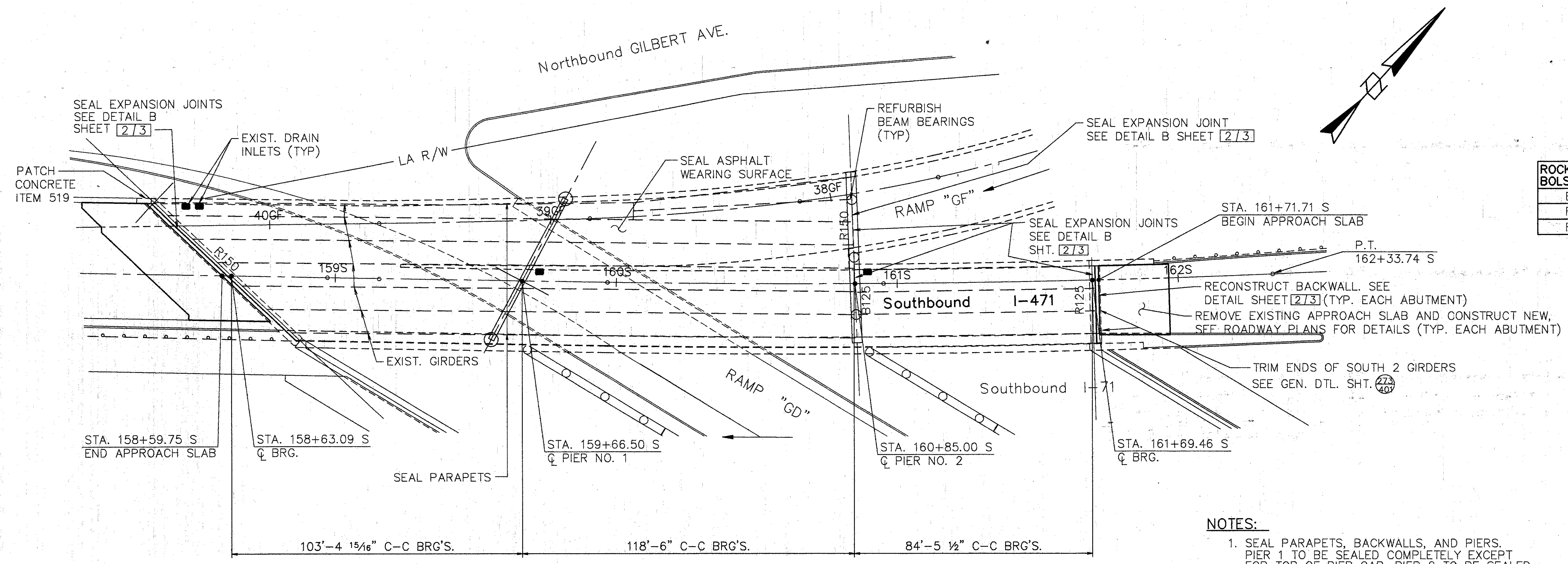
SECTION B-B



SECTION C-C

For Notes see sht. 303/401

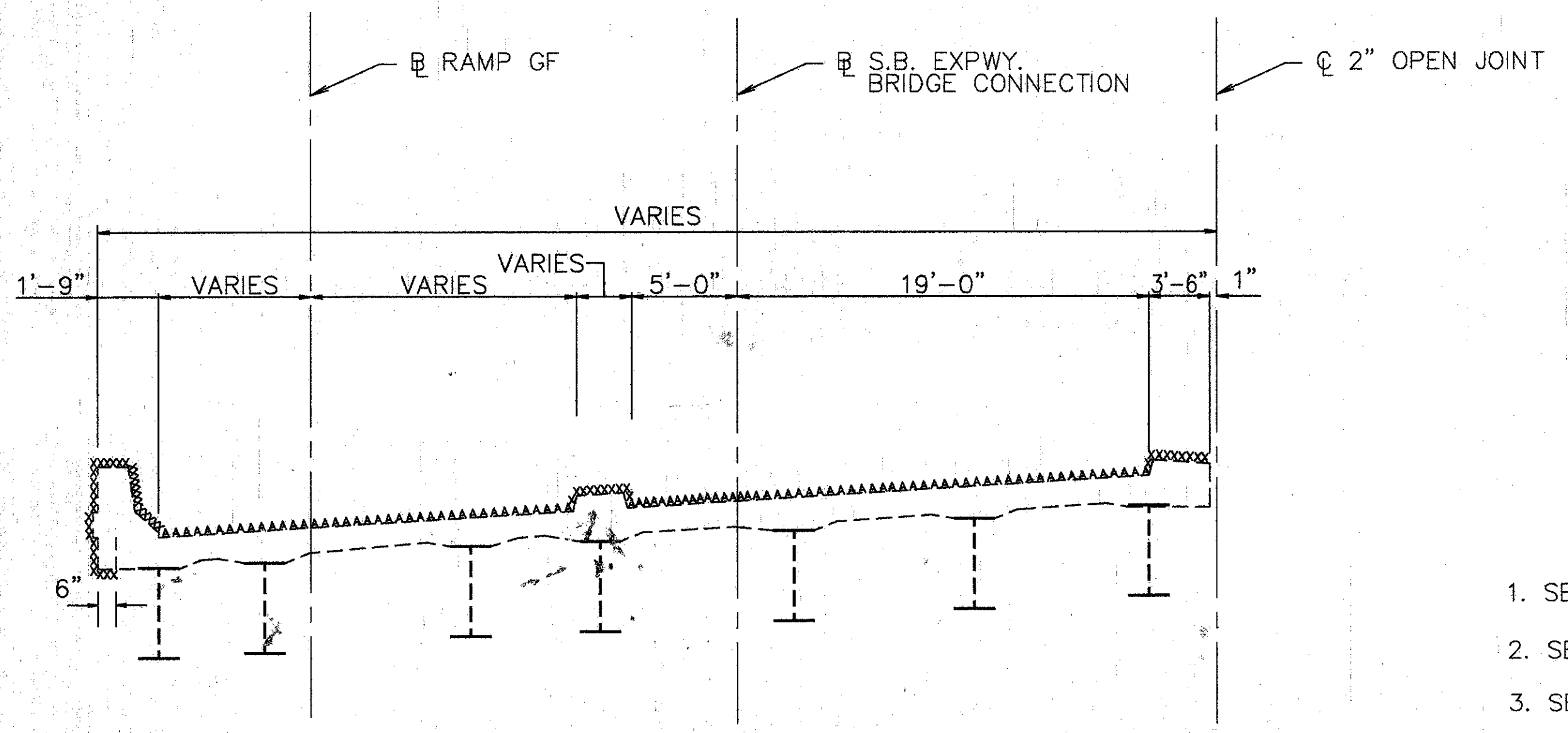
		WOOLPERT CONSULTANTS 409 East Monument Avenue Dayton, Ohio 45402-1226		9 / 9	
<b>DRAINAGE DETAILS</b>					
BRIDGE NO. HAM-71-0192 L/R OVER RAMP GD					
HAMILTON COUNTY					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
D.E.M.	L.A.P.		D.E.M.	P.W.G.	11/11/92



ROCKER OR BOLSTER SIZE	JACK CAPACITY REQ'D. (MIN.)
B125	100 TON
R125	100 TON
R150	125 TON

- NOTES:**
1. SEAL PARAPETS, BACKWALLS, AND PIERS. PIER 1 TO BE SEALED COMPLETELY EXCEPT FOR TOP OF PIER CAP. PIER 2 TO BE SEALED EXCEPT FOR 1/4 OF THE CIRCUMFERENCE AWAY FROM THE DIRECTION OF TRAFFIC.
  2. MODIFY DRAINAGE PIPING, SEE DETAIL SHT. [3/3]

**PLAN**



**TYP. BRIDGE SECTION**

XXXX SURFACES TO BE SEALED UNDER ITEM SPECIAL, SEALING OF CONCRETE SURFACES.

AAAA SURFACES TO BE SEALED UNDER ITEM SPECIAL, WATERPROOFING, MISC.: SEALING OF ASPHALT WEARING SURFACE.

**PROPOSED WORK**

1. SEAL PARAPETS, PIERS, AND BACKWALL.
2. SEAL ASPHALT WEARING SURFACE AND EXPANSION JOINT.
3. SEAL EXP. JOINTS WITH SEALANT.
4. RECONSTRUCT BACKWALLS ABOVE APPROACH SLAB SEAT.
5. REFURBISH DRAINAGE PIPING.
6. REFURBISH ALL ABUTMENT BEARINGS AND BEARINGS ON PIER 2.
7. TRIM BEAM ENDS.
8. ONE LANE OF TRAFFIC SHALL BE MAINTAINED ON THE BRIDGE AT ALL TIMES. FOR NOTES SEE MAINTENANCE OF TRAFFIC PLANS.
9. OTHER WORK AS DESCRIBED IN THESE PLANS.

**EXISTING STRUCTURE**

TYPE: CONTINUOUS STEEL GIRDER (SPAN 1 & 2) SIMPLE SPAN STEEL GIRDER (SPAN 3) WITH REINFORCED CONCRETE DECK & SUBSTRUCTURE

SPANS: 103.41', 118.50', & 84.46' C/C BRGS.

ROADWAY: VARIES, SEE PLAN

SKEW: VARIES, SEE PLAN

LOADING FREQUENCY: HS 20-44 AND THE INTERSTATE ALTERNATE LOADING

WEARING SURFACE: 1 1/2" ASPHALT CONCRETE

APPROACH SLABS: AS-1-67 (25'-0" LONG)

ALIGNMENT: VARIES, SEE PLAN

SUPERELEVATION: VARIES, SEE PLAN

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1/3

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**GENERAL PLAN**

BRIDGE NO. HAM-71-0192W  
 BRIDGE CONNECTION & RAMP OVER RAMP "GD"  
 HAMILTON COUNTY

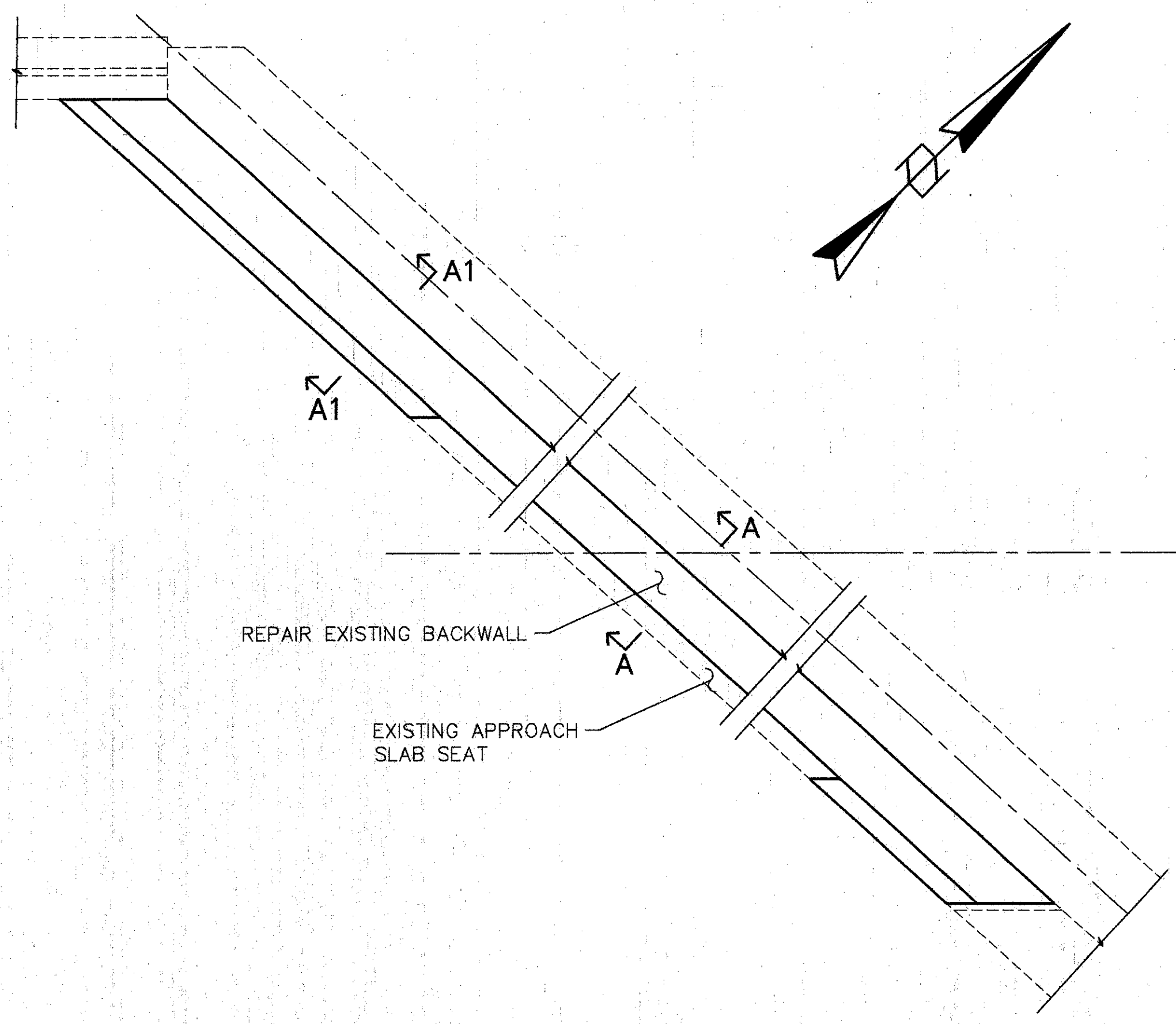
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L.A.T.M.	D.E.E.		M.A.A.	D.E.M11/11/94		

Last Plot: MAY 13, 1995 @ 4:29 PM  
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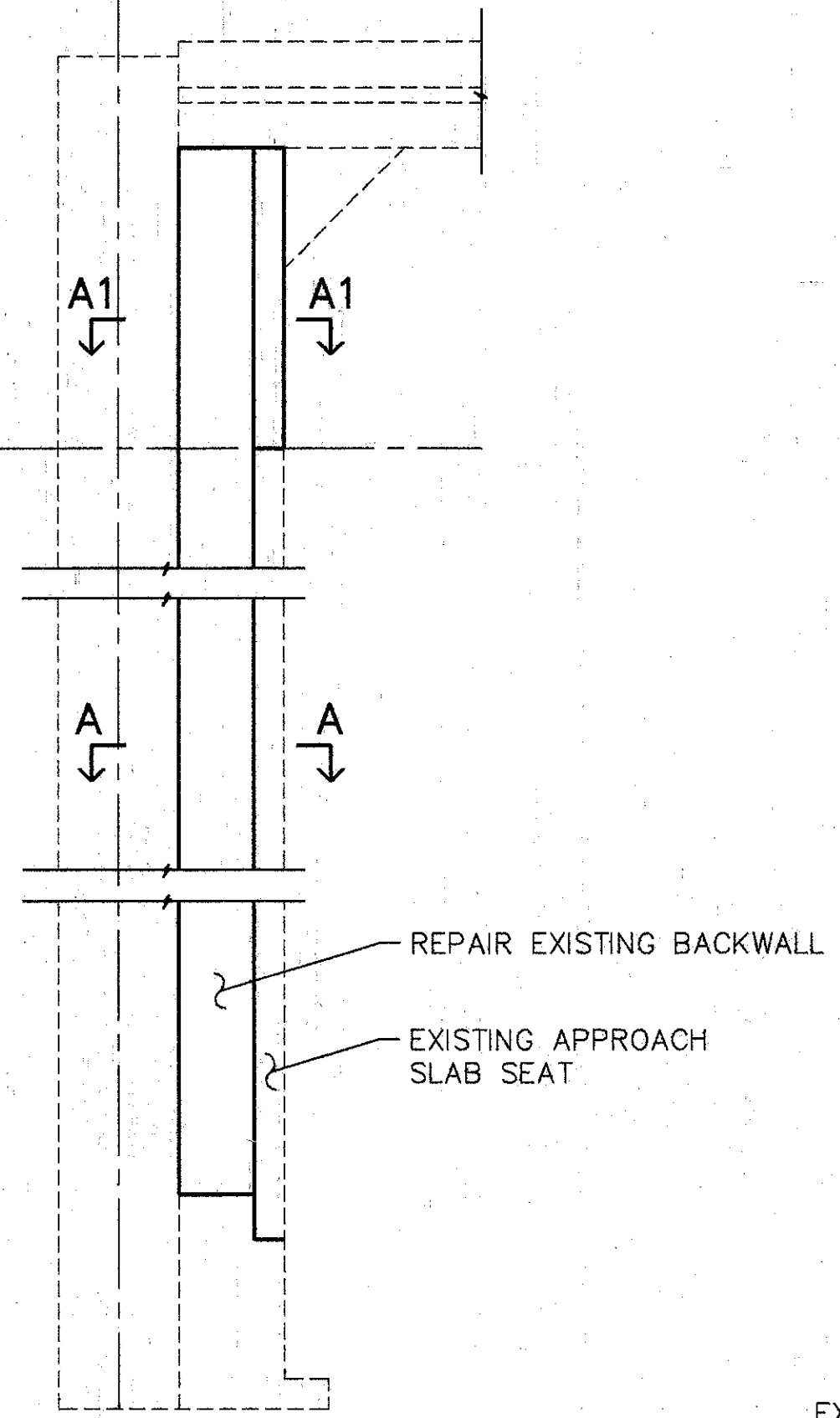


ITEM	ITEM EXT.	TOTAL	UNITS	DESCRIPTION
509	15820	741	LBS.	EPOXY COATED REINFORCING STEEL, GRADE 60
510	12201	71	L.F.	DOWEL HOLES AS PER PLAN.
514	27704	LUMP	L.S.	FIELD PAINTING EXISTING STEEL, EEU *
511	45700	6	C.Y.	CLASS C CONCRETE (RECONSTRUCTION) ABUTMENT
SPECIAL	51267200	1384	S.Y.	WATERPROOFING, MISC: SEALING ASPHALT WEARING SURFACE
SPECIAL	51267500	508	S.Y.	SEALING OF CONCRETE SURFACE *
SPECIAL	51267502	136	S.Y.	SEALING OF CONCRETE SURFACE (EPOXY) *
513	21000	4	EACH	TRIMMING OF BEAM END
516	14600	50	L.F.	STRUCTURAL JOINT OR JOINT SEALER, MISC.: 2"x4" SEALER, AS PER PLAN
516	31000	139	L.F.	JOINT SEALER, 705.04
516	45304	19	EACH	REFURBISH BEARING DEVICE
518	63300	LUMP SUM	L.S.	STRUCTURE DRAINAGE, MISC: MODIFY DRAINAGE PIPING
519	11100	4	S.F.	PATCHING CONCRETE STRUCTURES
516	14600	80	L.F.	SEAL JOINT BETWEEN ABUTMENT AND CONCRETE SLOPE PROTECTION
518	63300	LUMP	L.S.	SCUPPER AND DRAINAGE PIPE CLEANOUT
601	21100	3	S.Y.	REPAIR CONCRETE SLOPE PROTECTION

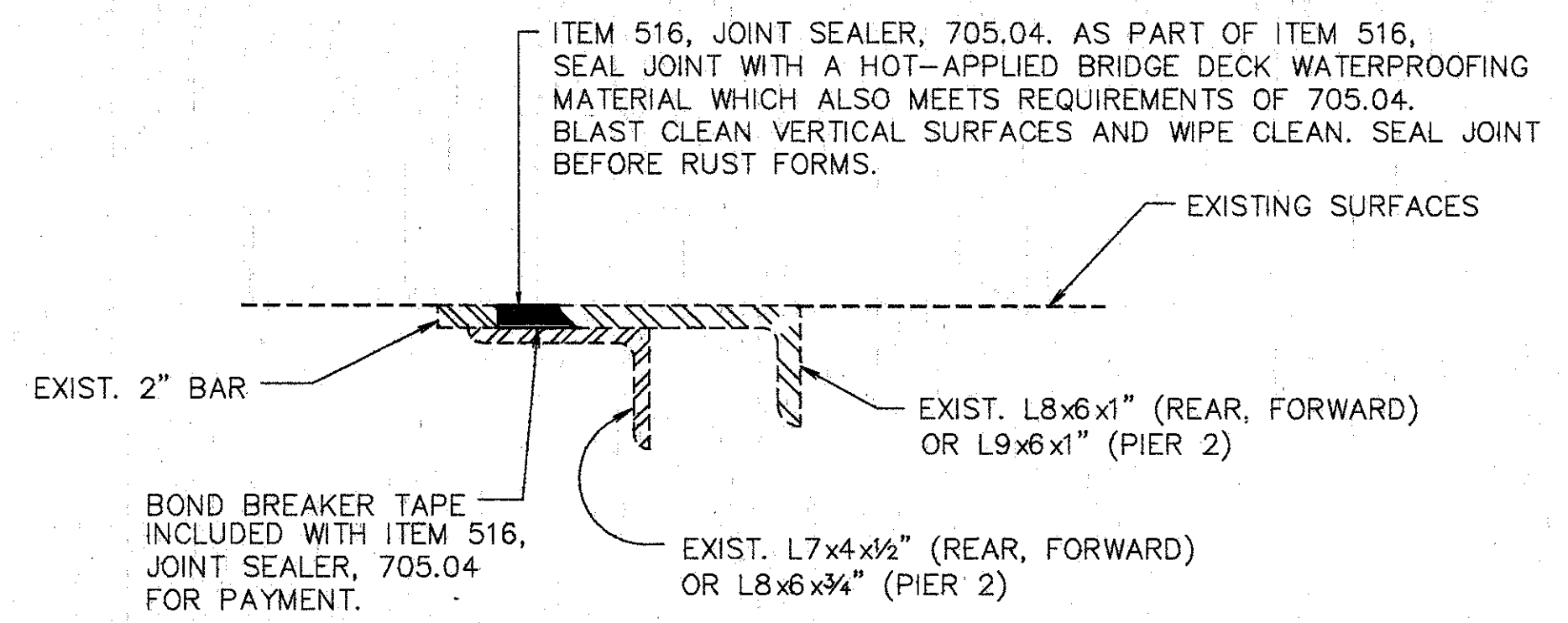
\* SEE PROPOSAL NOTE



FORWARD ABUTMENT

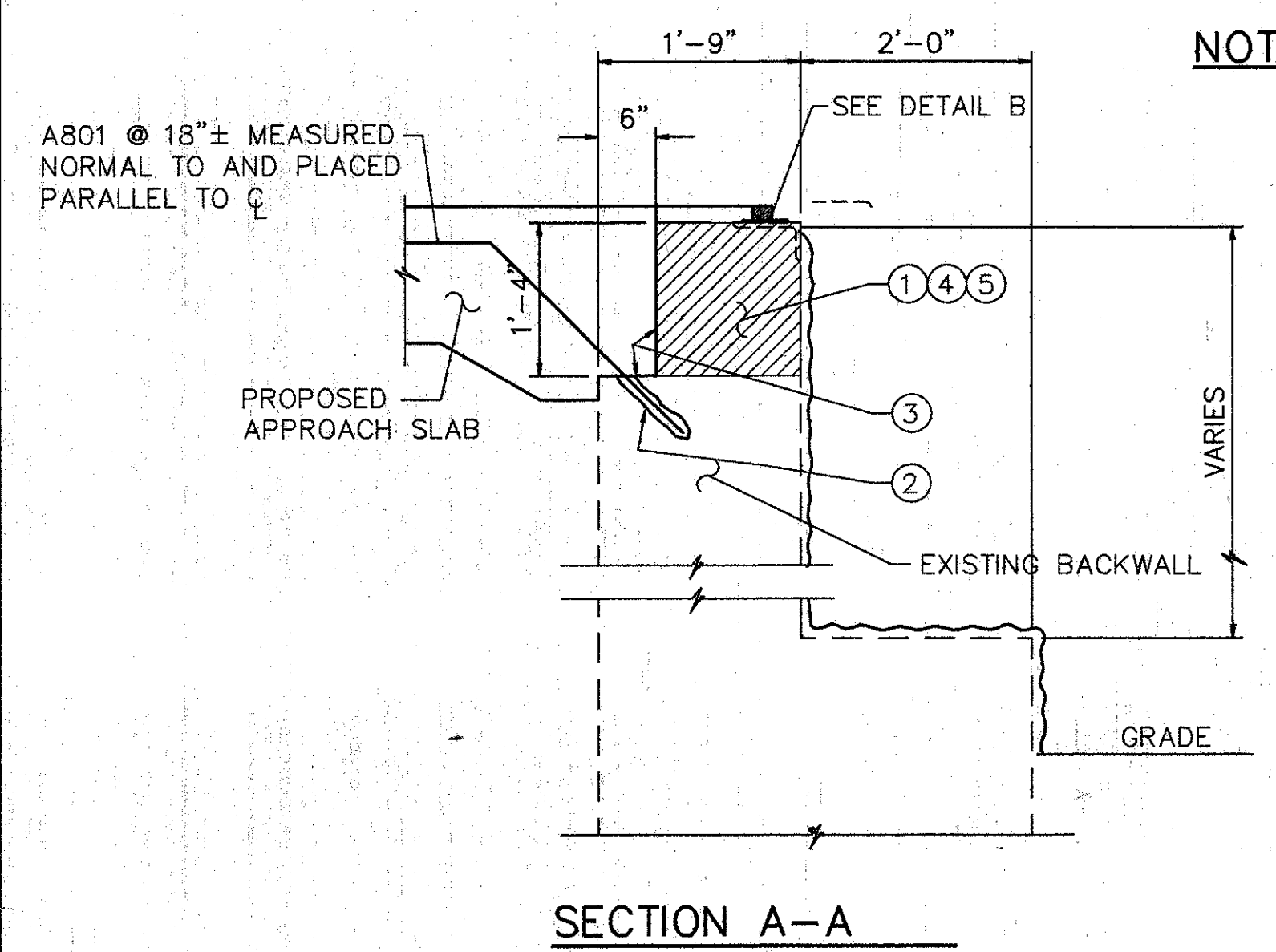


REAR ABUTMENT



DETAIL B

REINFORCING STEEL LIST				
MARK	SHAPE	NUMBER	LENGTH	WEIGHT
A501	STR.	1	7'-6"	8
A502	STR.	1	8'-0"	8
A503	STR.	1	14'-6"	15
A601	BNT.	24	3'-0"	108
A801	BNT.	7	4'-0"	502
REPLACEMENT STEEL				100
TOTAL				741

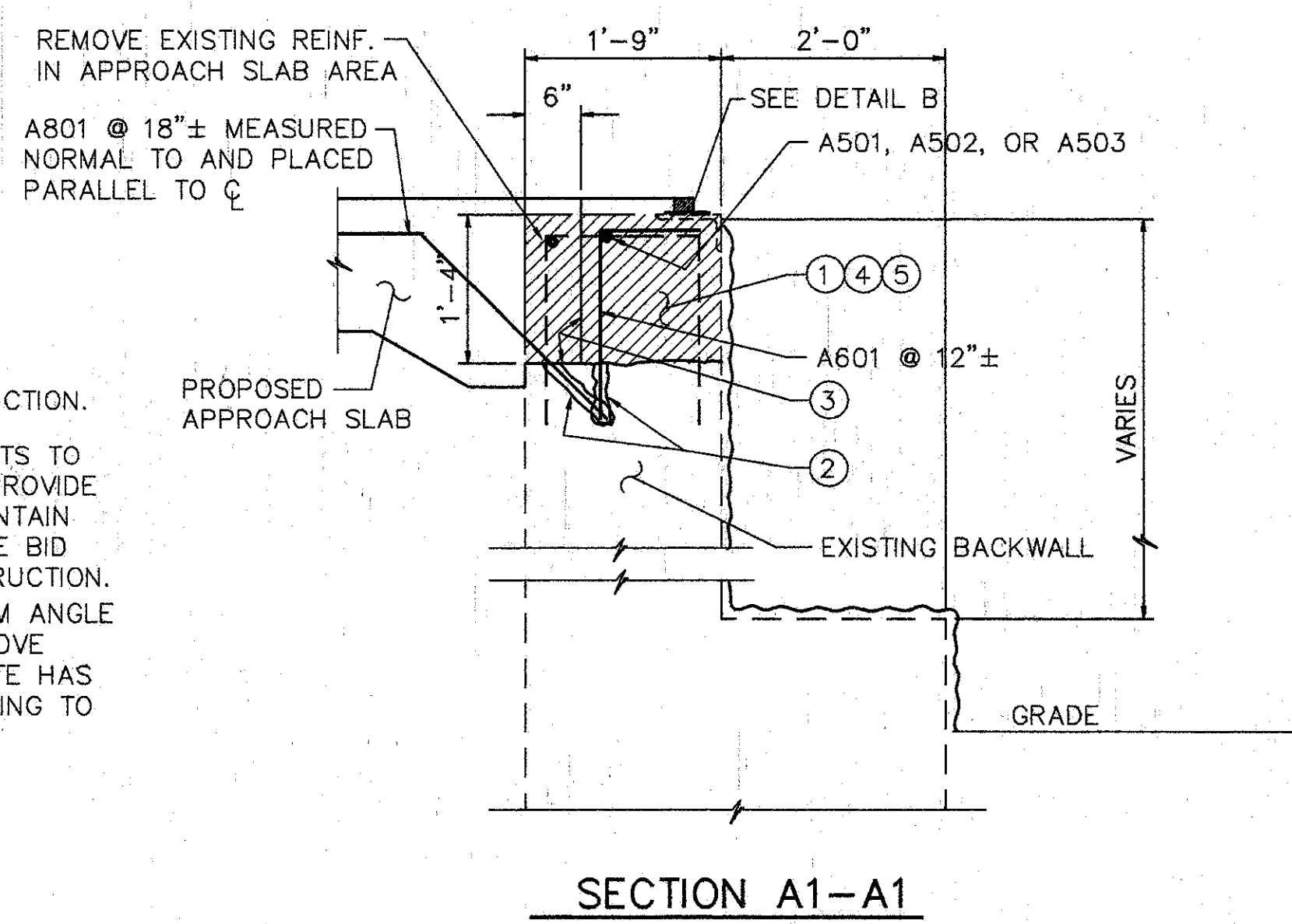


SECTION A-A

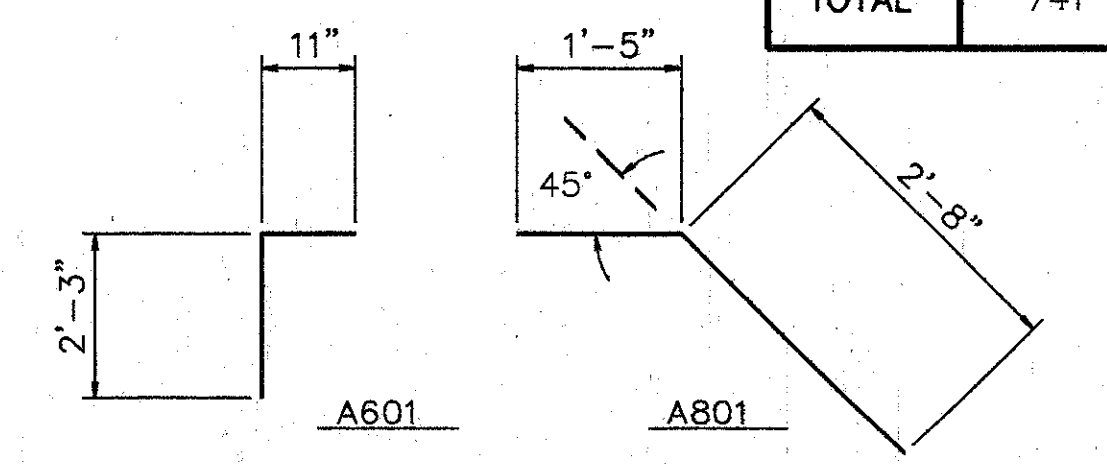
NOTES FOR SECTION A-A & A1-A1

- EXISTING REINFORCING STEEL TO REMAIN ~ REINFORCING STEEL DAMAGED TO BE REPLACED AT CONTRACTORS EXPENSE.
- 1' MIN. EMBEDMENT (SEE DOWEL HOLE GENERAL NOTE) ITEM 510.
- TYPE 'A' WATERPROOFING (PAYMENT INCLUDED IN THE PRICE BID FOR APPROACH SLAB).
- CLASS 'C' CONCRETE, ABUTMENT RECONSTRUCTION.
- PROVIDE CONTRACTION AND EXPANSION JOINTS TO MATCH THOSE IN EXISTING BACKWALL AND PROVIDE CONSTRUCTION JOINTS AS REQUIRED TO MAINTAIN TRAFFIC. PAYMENT TO BE INCLUDED IN PRICE BID FOR ITEM 511 CLASS C CONCRETE RECONSTRUCTION.
- PROVIDE TEMPORARY SUPPORT FOR END DAM ANGLE AT ABUTMENT DURING CONSTRUCTION. REMOVE TEMPORARY SUPPORT AS SOON AS CONCRETE HAS SET, PREFERABLY WITHIN 2HRS. AFTER PLACING TO TO AVOID DAMAGE DUE TO EXPANSION AND CONTRACTION OF SUPERSTRUCTURE.

EXISTING CONCRETE TO BE REMOVED INCLUDE IN ITEM 202 FOR PAYMENT.  
 SURFACE TO BE SEALED UNDER ITEM SPECIAL- 'SEALING OF CONCRETE SURFACE, EPOXY'.



SECTION A1-A1



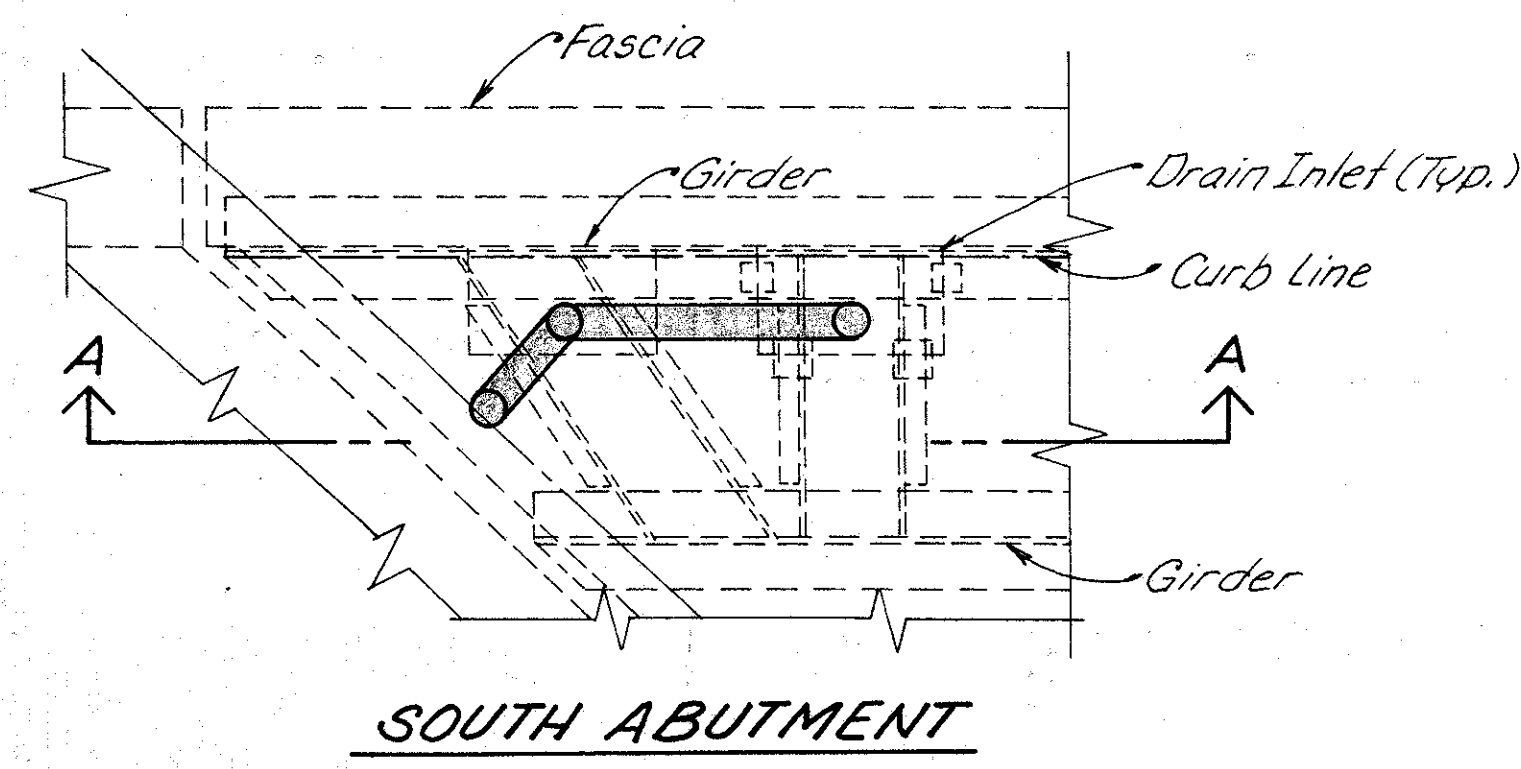
**WOOLPERT CONSULTANTS**  
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 DAYTON, OHIO 45402-1226  
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MISCELLANEOUS DETAILS

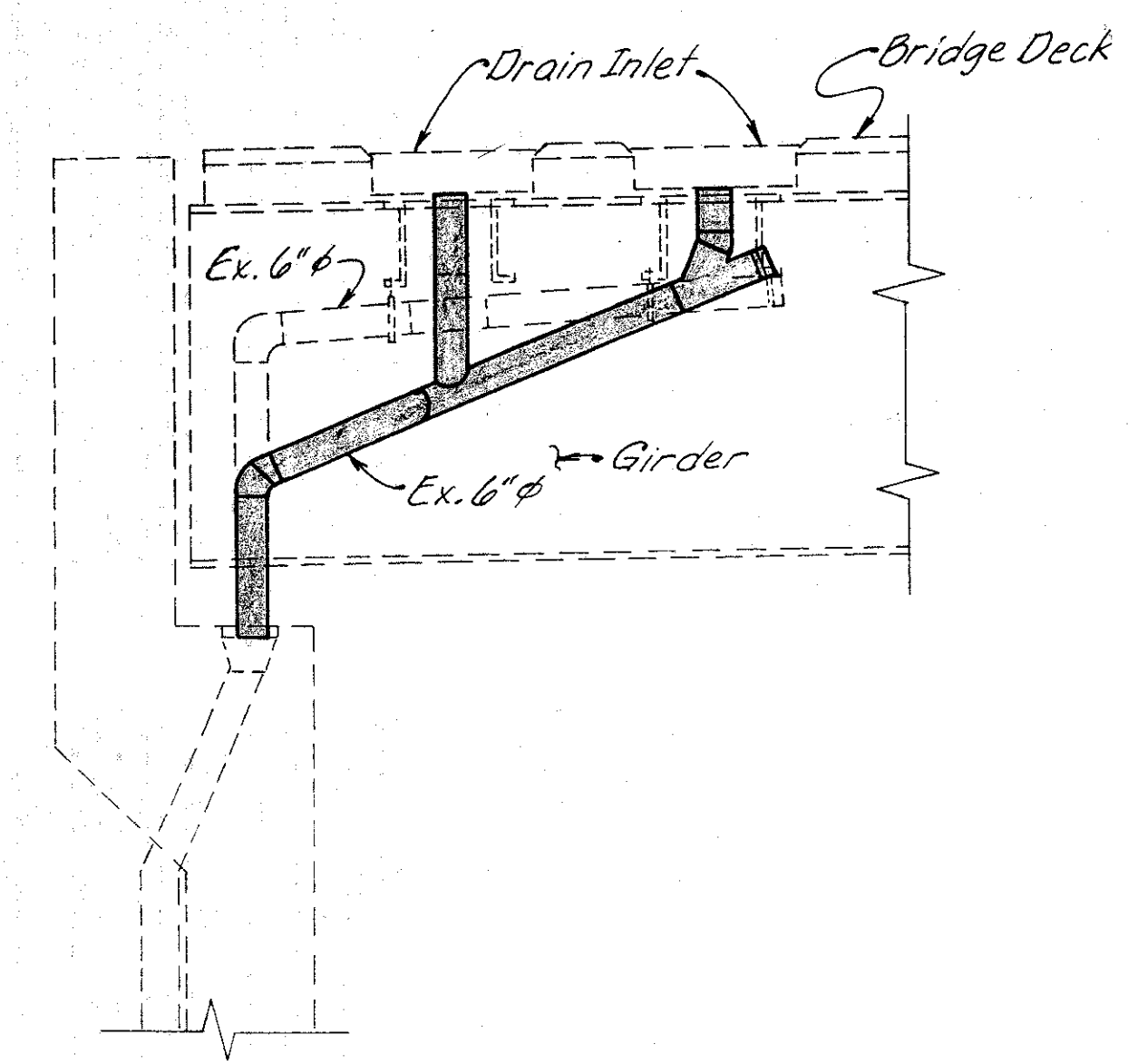
BRIDGE NO. HAM-71-0192W  
 BRIDGE CONNECTION & RAMP OVER RAMP 'GD'  
 HAMILTON COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
L.A.T.M.	D.E.E.		M.A.A.	D.E.M11/11/94		

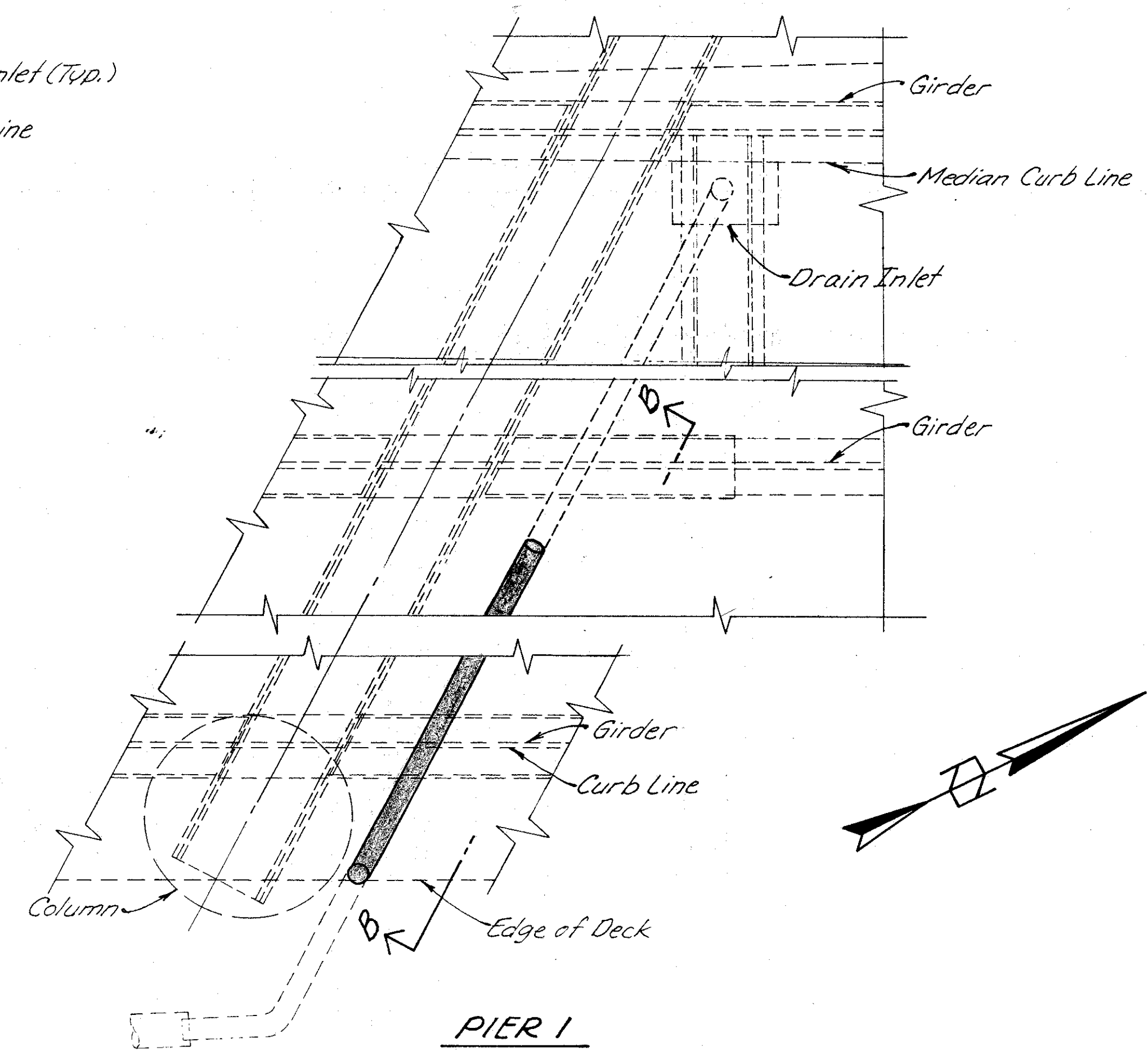
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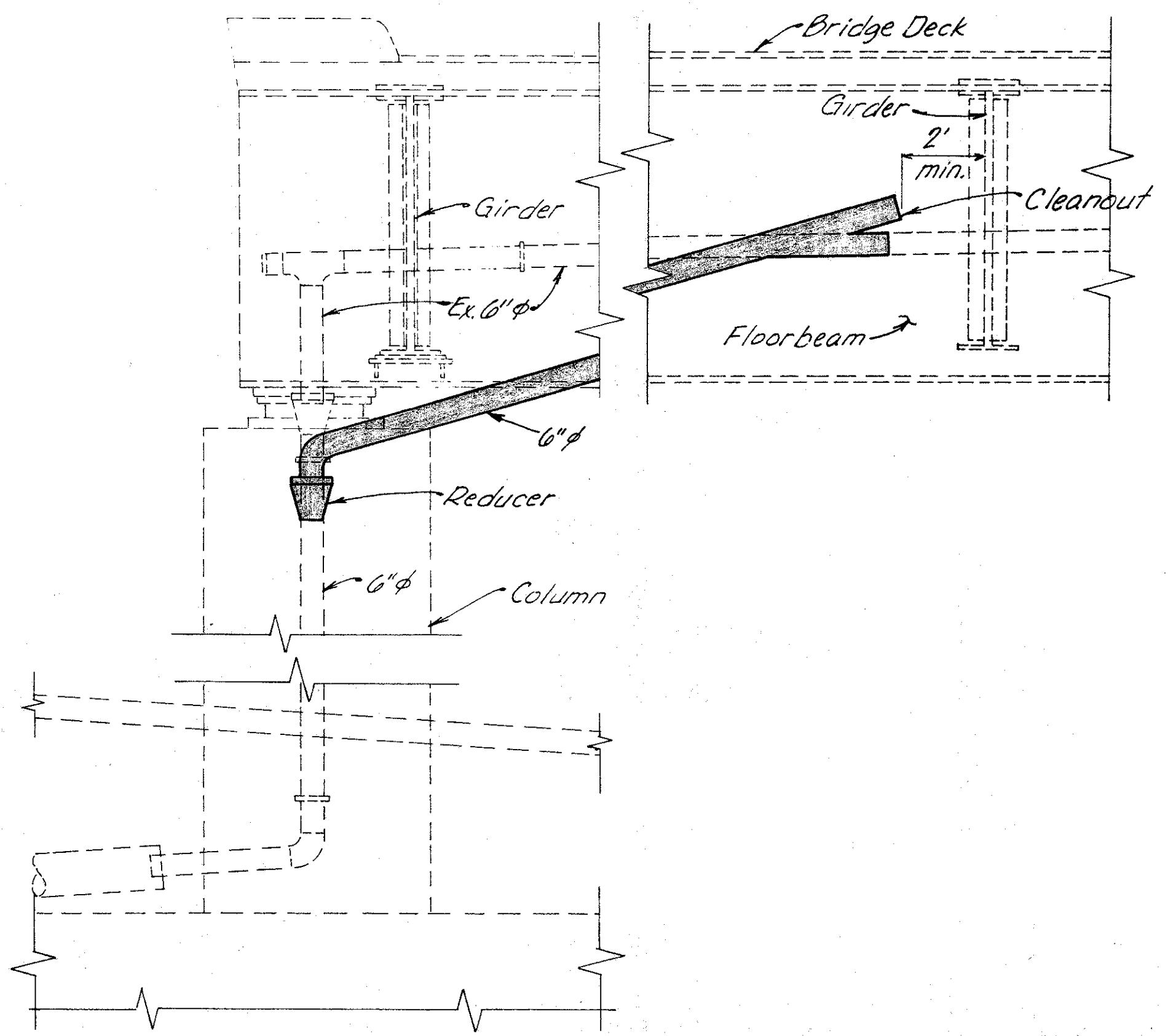
**SOUTH ABUTMENT**



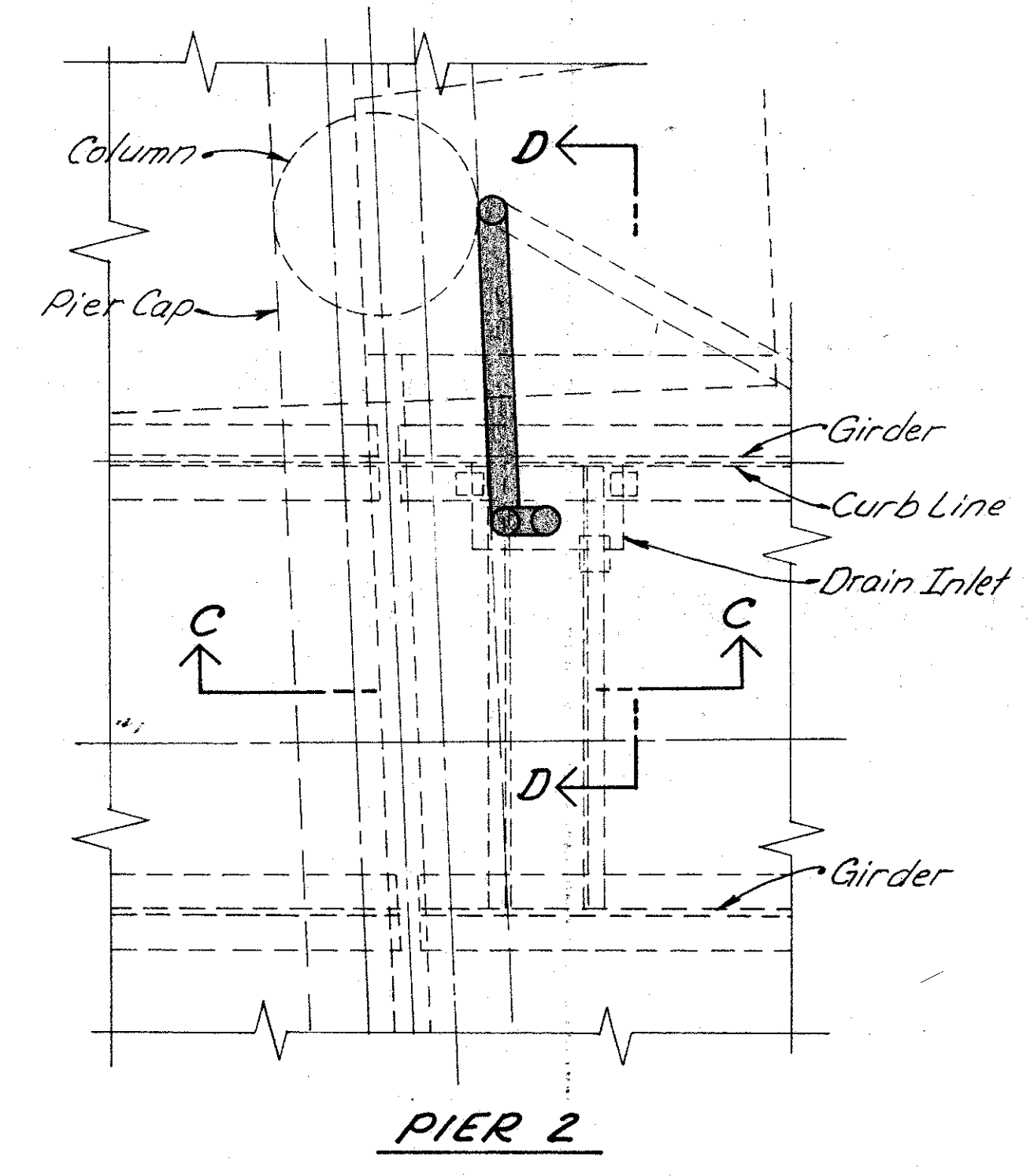
**SECTION A-A**



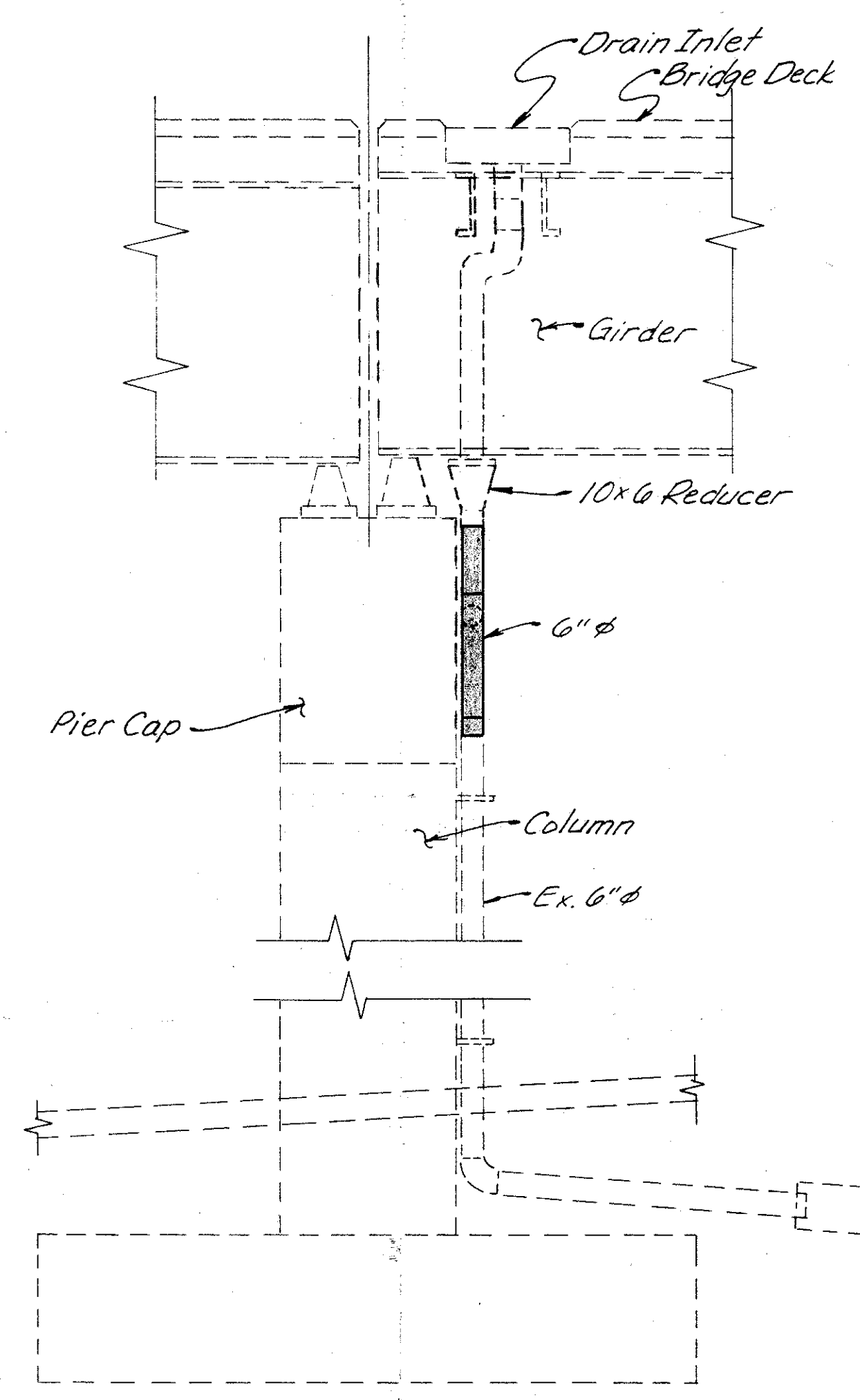
**PIER 1**



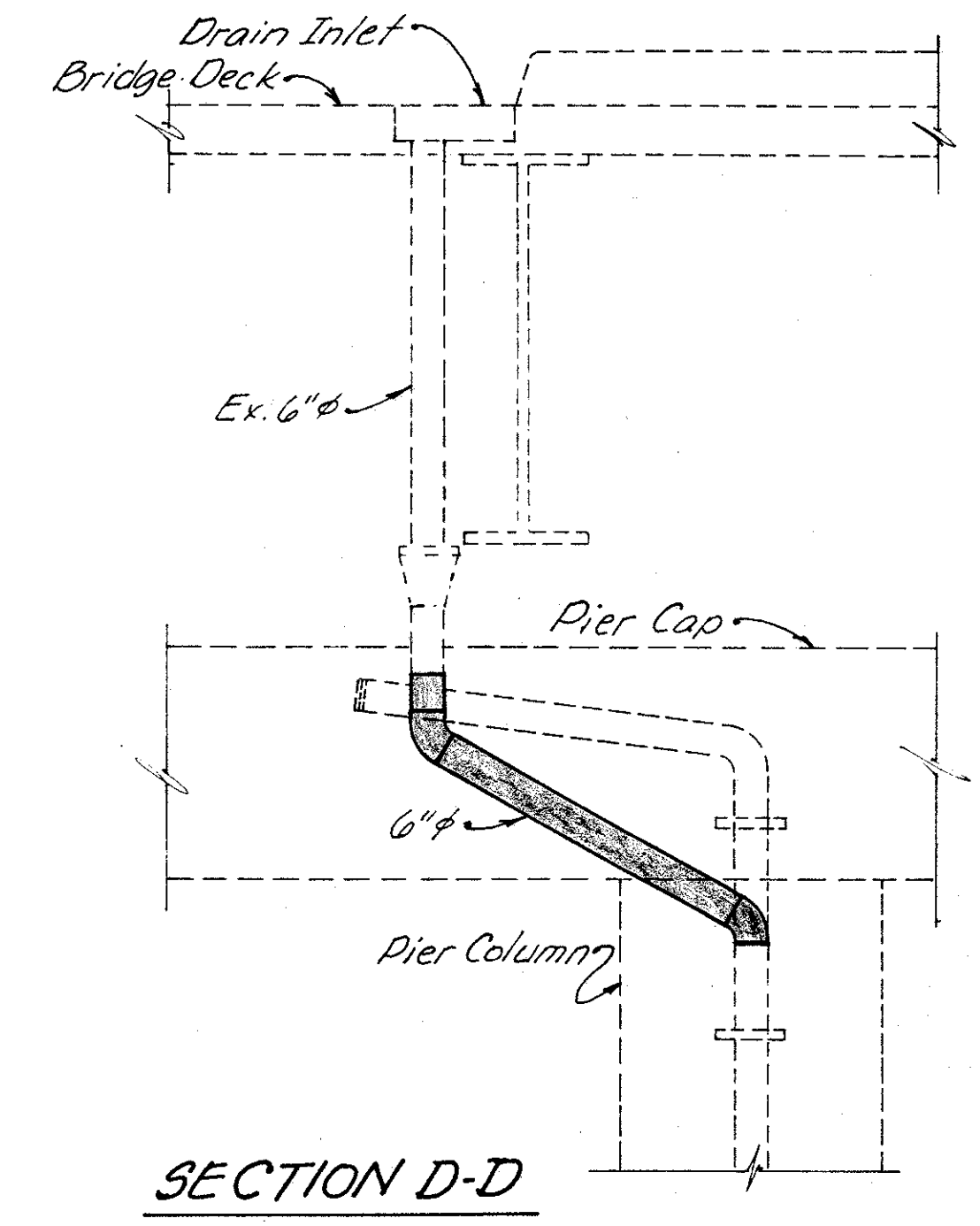
**SECTION B-B**



**PIER 2**



**SECTION C-C**



**SECTION D-D**

1. For drainage piping requirements see General Notes on sheet 273/401
2. Approximate No. of Linear Feet of proposed 6" φ pipe (including specials) = 60'



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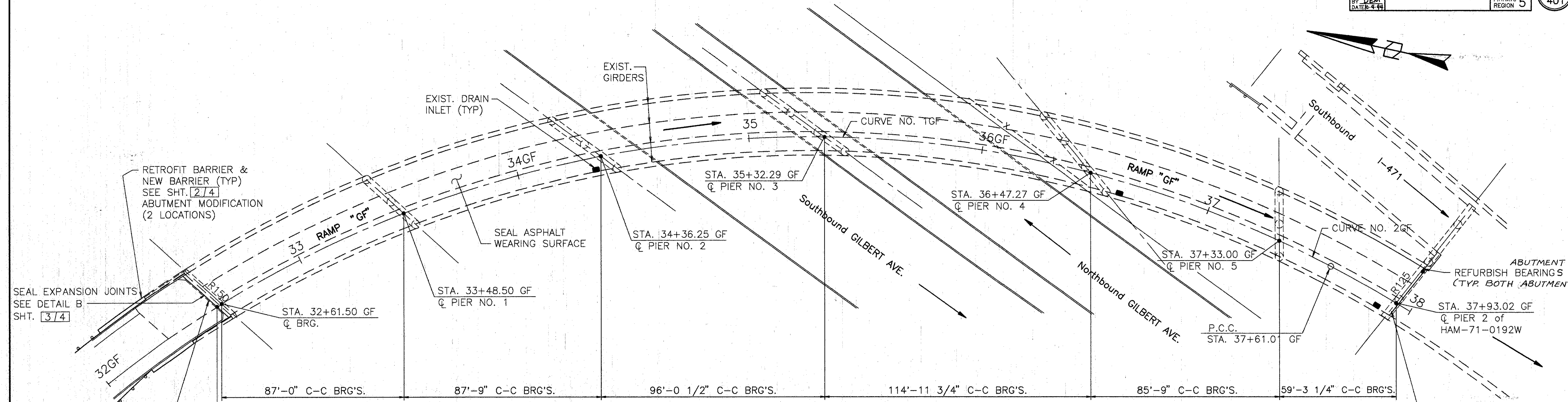
**DRAINAGE DETAILS**

BRIDGE NO. HAM-71-0192 W  
OVER RAMP GD

HAMILTON COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
D.E.M.	L.A.P.		DEM.	P.W.G.	11/11/99	





**PLAN**

- NOTES:
1. SEAL PARAPETS, BACKWALLS, AND PIERS. SEAL ALL OF PIERS EXCEPT T/PIER CAP. PIER 1 NOT TO BE SEALED. SEE DETAIL A, SHT. 3/4
  2. MODIFY DRAINAGE PIPING. SEE DETAILS SHT. 4/4

ROCKER SIZE	JACK CAPACITY REQ'D. (MIN.)
R150	125 TON
R125	100 TON

**EXISTING STRUCTURE**

TYPE: CONTINUOUS CURVED WELDED PLATE GIRDER W/REINFORCED CONCRETE DECK AND SUBSTRUCTURE  
 SPAN: 87.00', 87.75', 96.04', 114.98', 85.73', & 59.27' (SPANS 1 THRU 6) MEASURED ALONG BASELINE  
 ROADWAY: 26.5' F/F PARAPET  
 SKEW: VARIES  
 LIVE LOADING: HS 20-44 AND THE INTERSTATE ALTERNATE LOADING  
 SURFACE COURSE: 1 1/2" ASPHALT CONCRETE  
 APPROACH SLABS: AS-1-67 (25'-0" LONG)  
 ALIGNMENT: VARIES  
 SUPERELEVATION: VARIES

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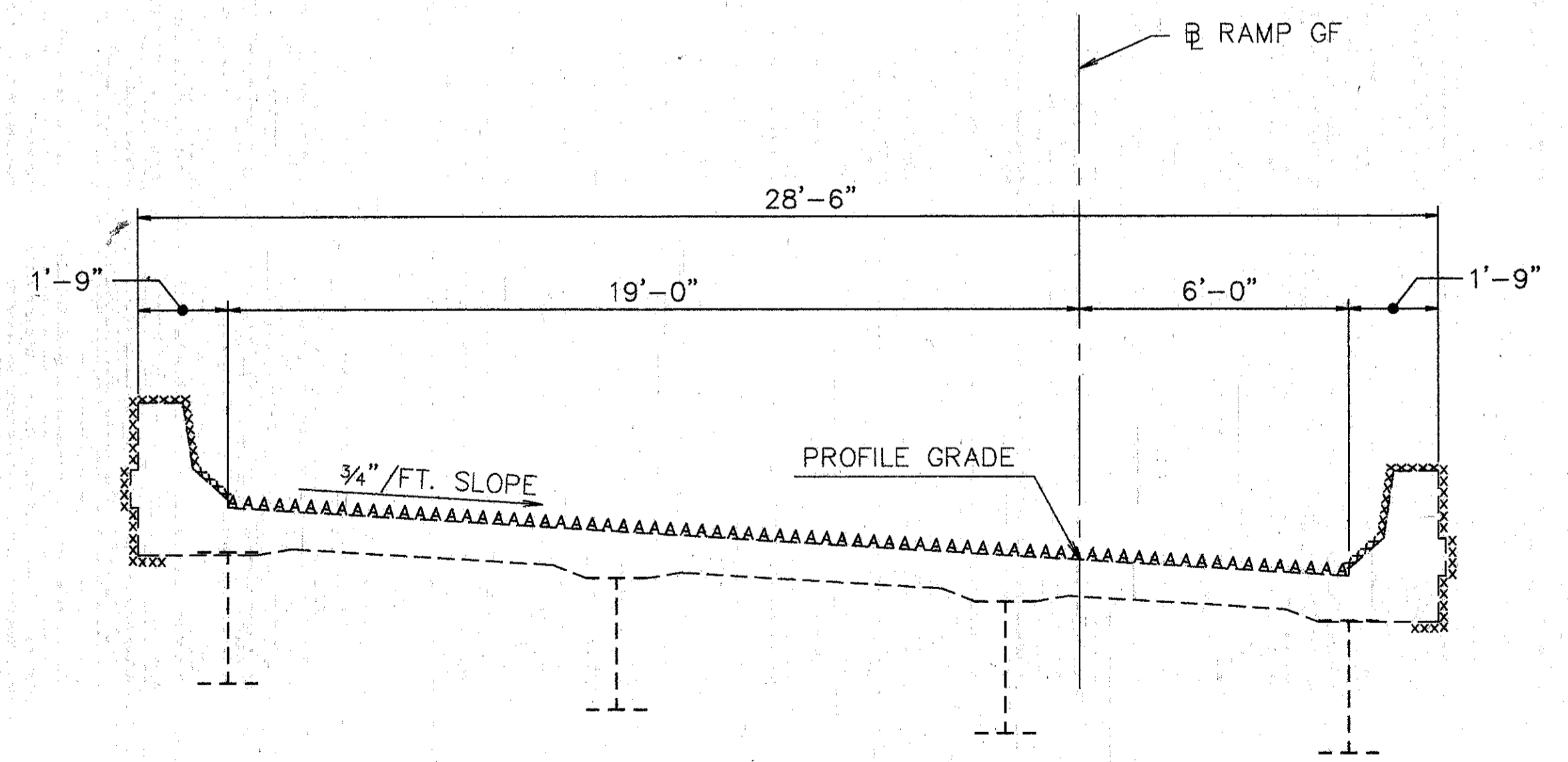
**GENERAL PLAN**

BRIDGE NO. HAM-71-0192N  
 RAMP 'GF' OVER PENN-CENTRAL RAILROAD & GILBERT AVENUE  
 HAMILTON COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
L.A.T.M.	D.E.E.		M.A.A.	D.E.	M/11/94	

**PROPOSED WORK**

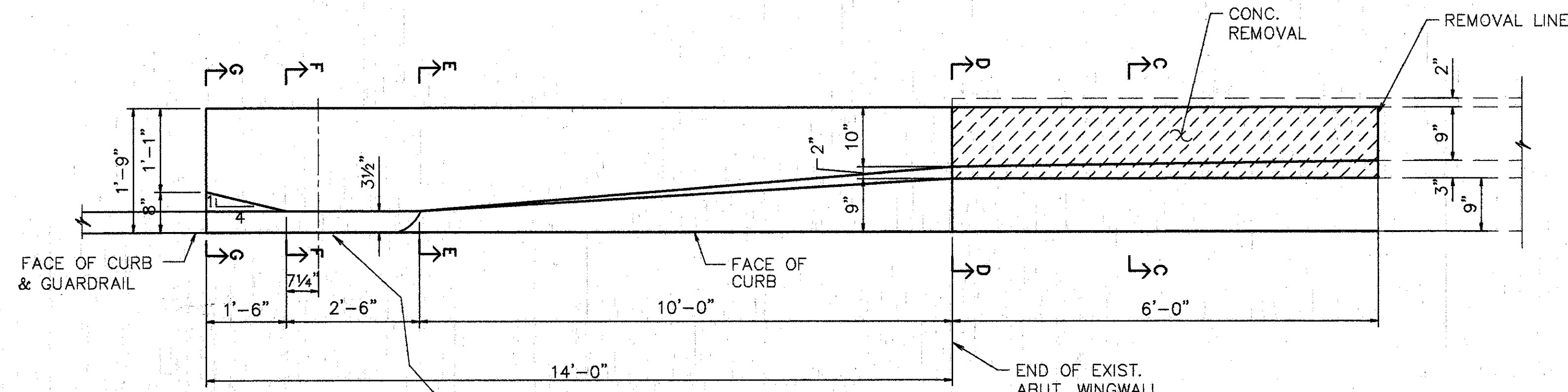
1. RETROFIT BARRIER & PLACE NEW BARRIER.
2. SEAL BACKWALL, PARAPETS AND PIERS.
3. SEAL ASPHALT WEARING SURFACE.
4. SEAL EXPANSION JOINT WITH SEALANT.
5. SEAL JOINTS AS NOTED.
6. REFURBISH BEARINGS.
7. REFURBISH DRAINAGE PIPING.
8. AT LEAST ONE LANE OF TRAFFIC SHALL BE MAINTAINED ON THE BRIDGE AT ALL TIMES. FOR NOTES SEE MAINTENANCE OF TRAFFIC PLANS.
9. OTHER WORK AS DESCRIBED IN THESE PLANS.



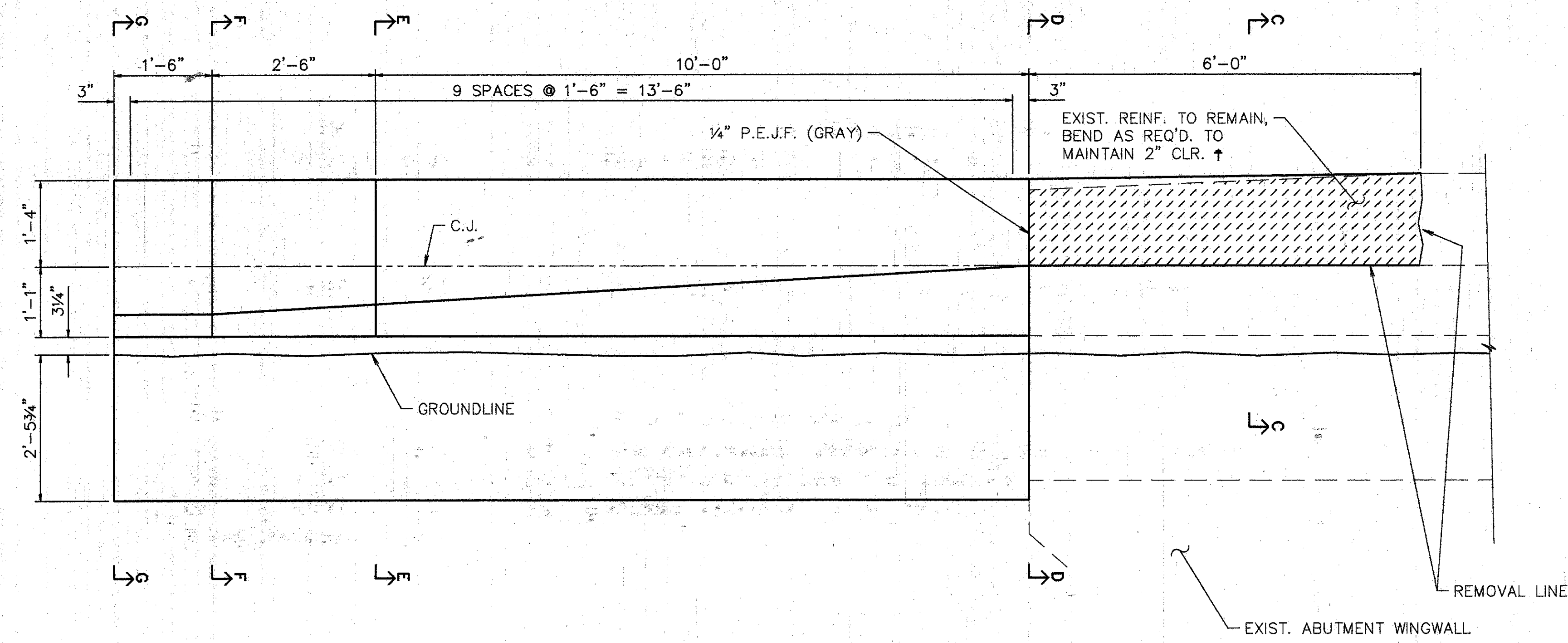
**TYP. BRIDGE SECTION**

- XXXX SURFACES TO BE SEALED UNDER ITEM SPECIAL-SEALING OF CONCRETE SURFACES.  
 AAAA SURFACES TO BE SEALED UNDER ITEM SPECIAL-WATERPROOFING, MISC: SEALING ASPHALT WEARING SURFACE.

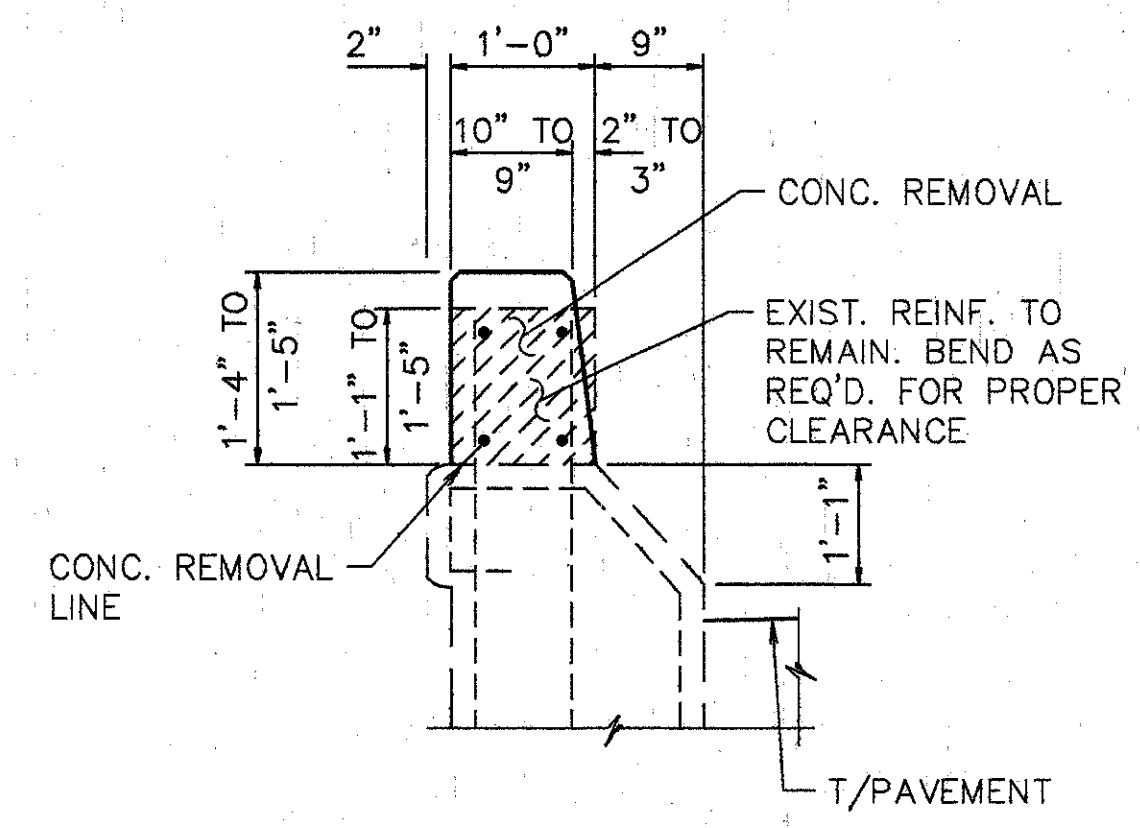
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 D.E.E. 12/2/94 7:48 AM  
 M.A.A. 12/2/94 7:48 AM



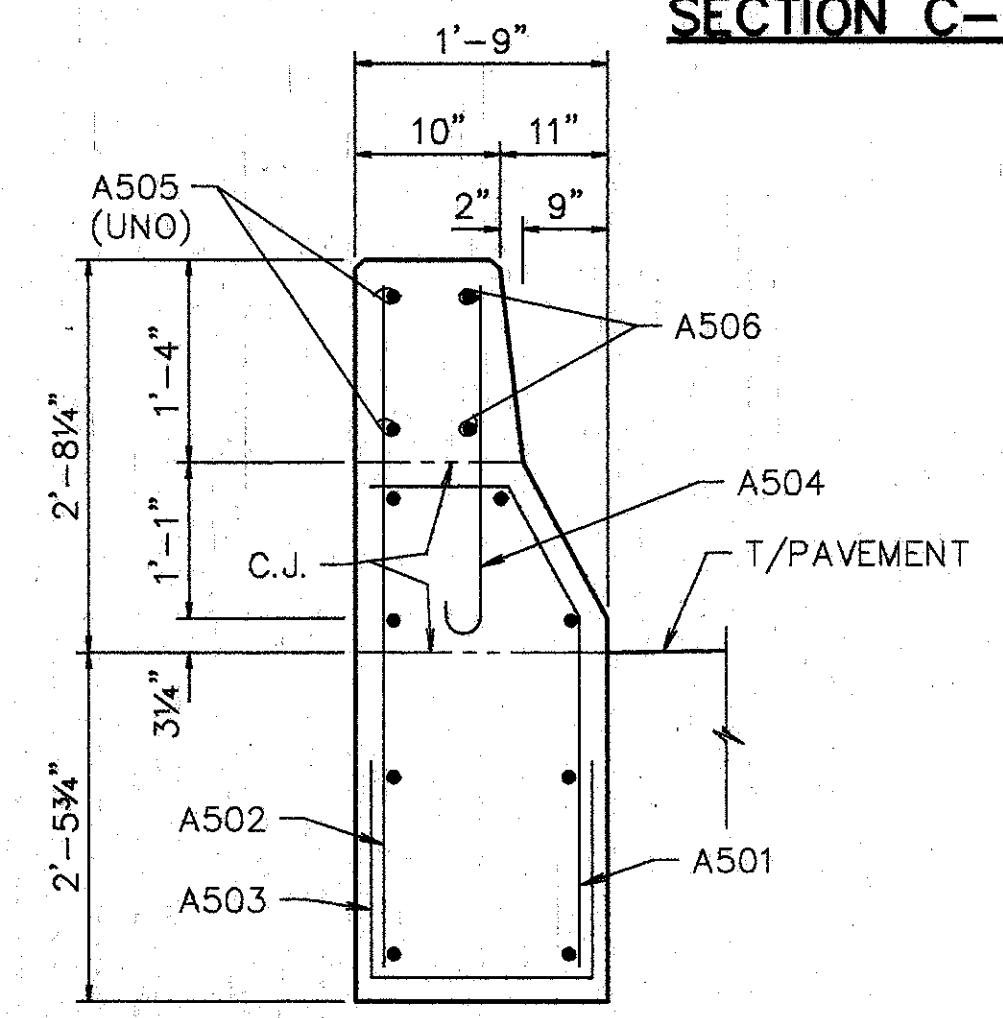
**PLAN - ABUTMENT MODIFICATION**



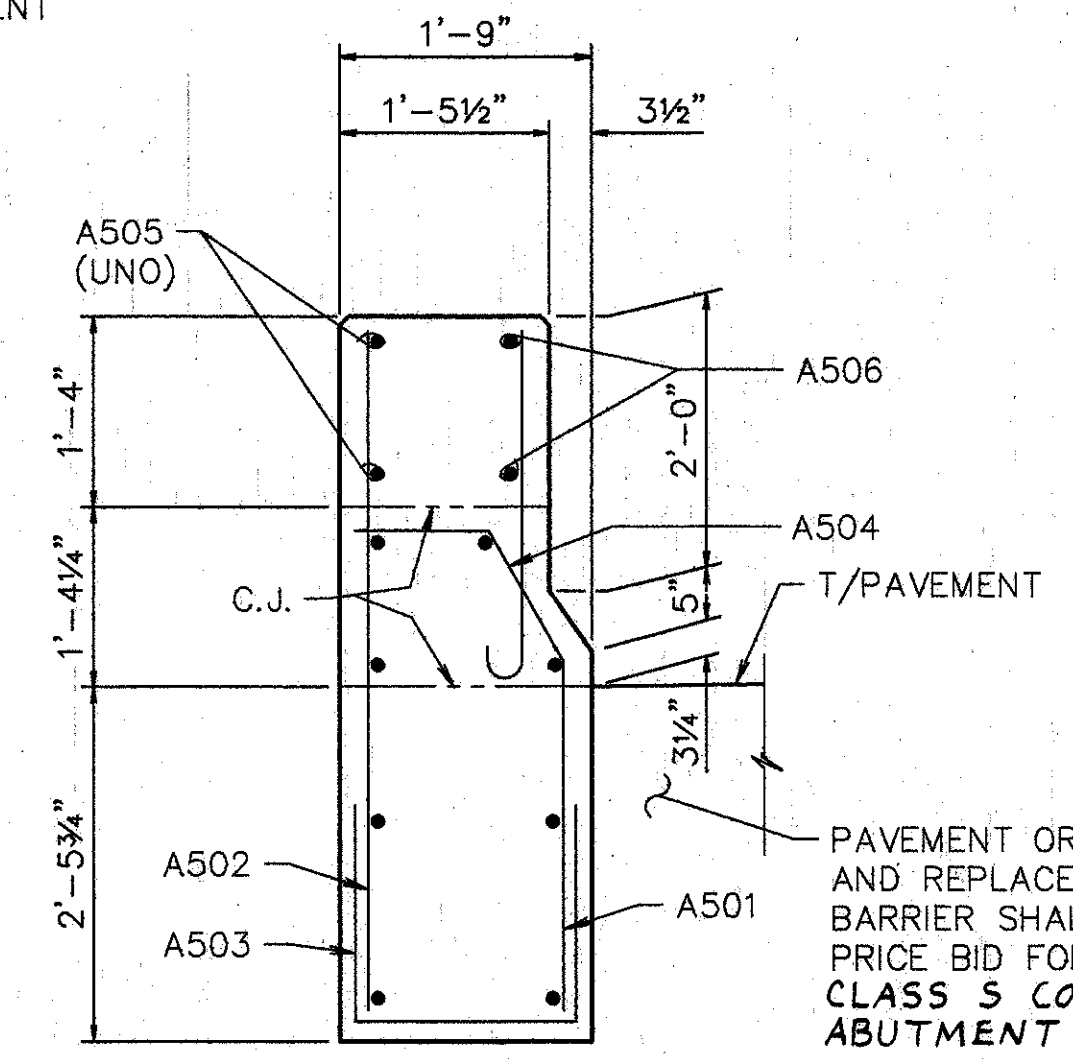
**ELEVATION - ABUTMENT MODIFICATION**



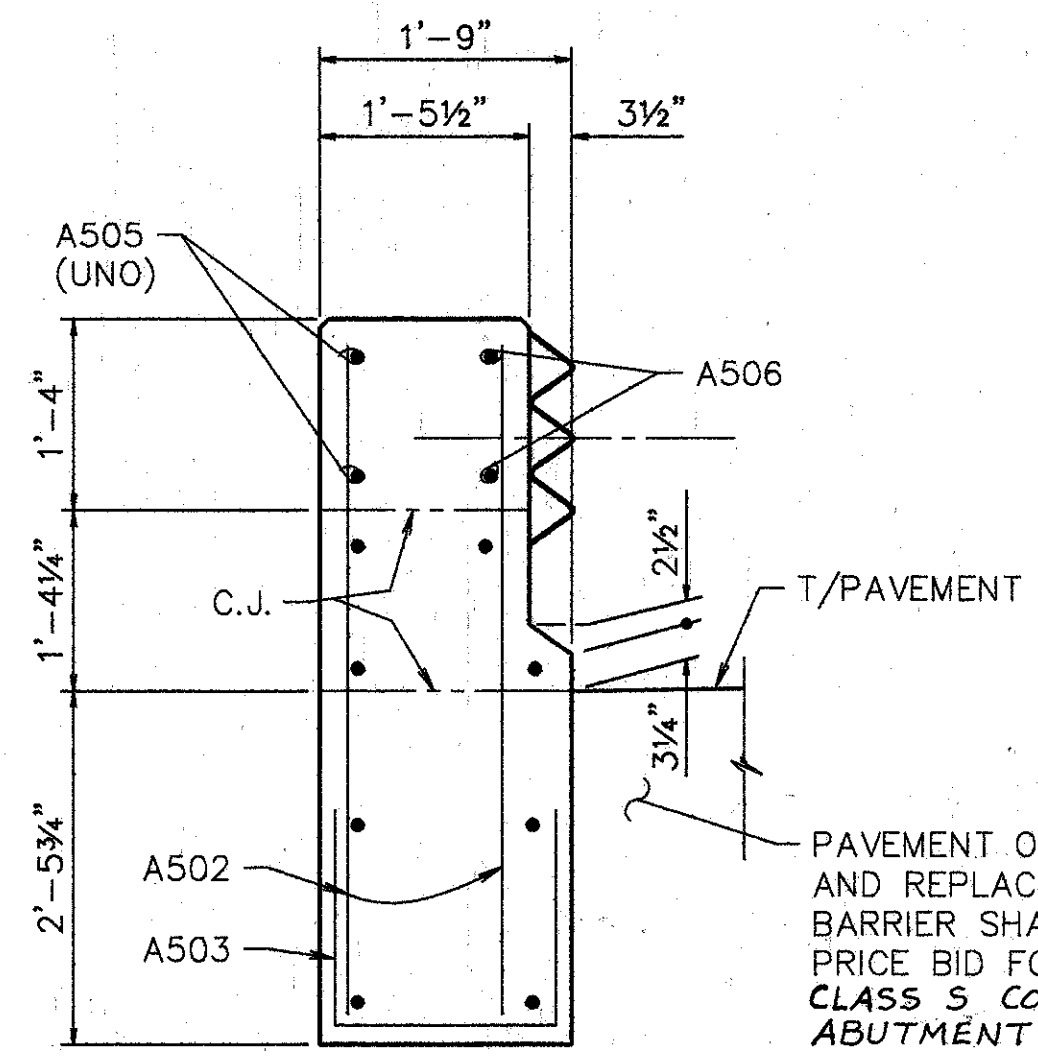
**SECTION C-C**



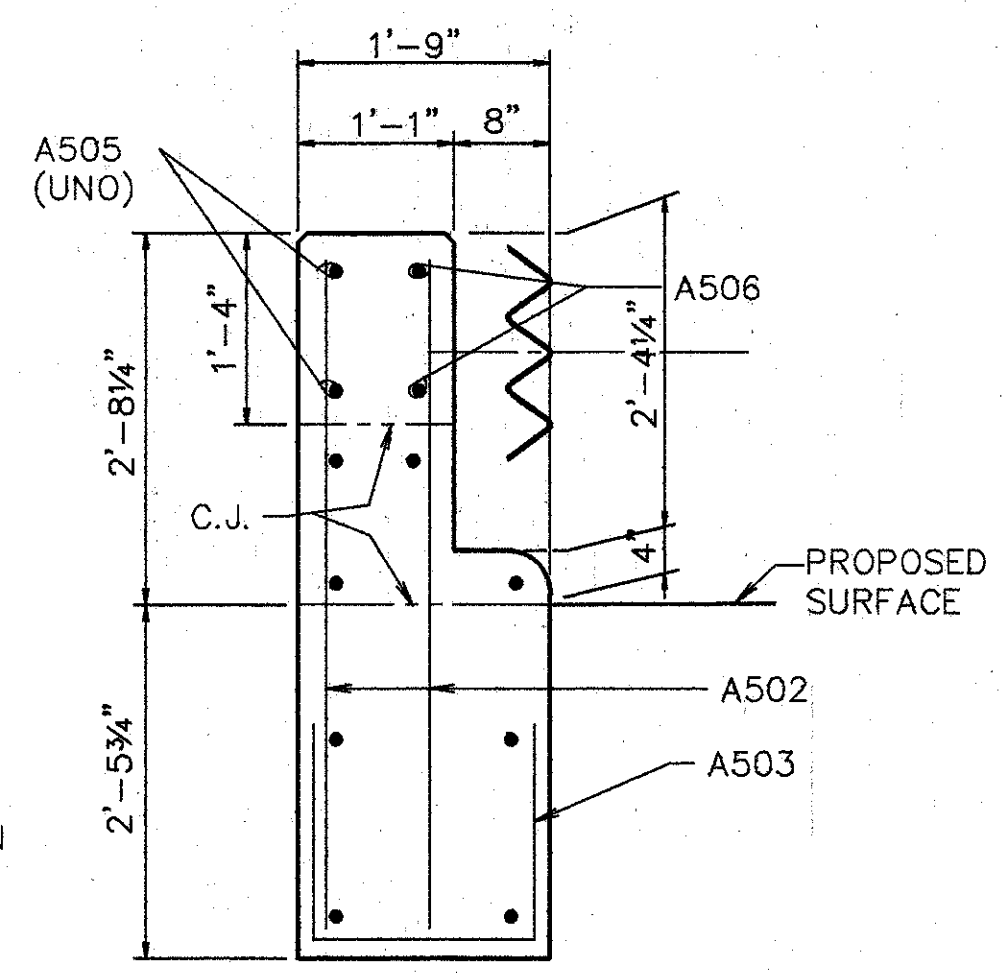
**SECTION D-D**



**SECTION E-E**



**SECTION F-F**



**SECTION G-G**

**NOTES:**  
 THE PRICE BID PER CUBIC YARD FOR ITEM 511, CLASS S CONCRETE, MISC.: **ABUTMENT PARAPETS** SHALL INCLUDE CLASS S CONCRETE, BACKFILL, REPLACING PORTIONS OF THE END OF EXISTING PARAPETS, AND OTHER WORK INCIDENTAL THERETO.  
 EPOXY COATED REINFORCING STEEL SHALL BE INCLUDED IN ITEM 509, 'EPOXY COATED REINFORCING STEEL, GRADE 60'.  
 EXISTING PARAPET TO BE REMOVED AND EXCAVATION SHALL BE INCLUDED IN ITEM 202 - PORTIONS OF STRUCTURE REMOVED.

PAVEMENT OR SOD REMOVED AND REPLACED TO CONSTRUCT BARRIER SHALL BE INCLUDED IN PRICE BID FOR **ITEM 511, CLASS S CONCRETE, MISC.: ABUTMENT PARAPETS**

PAVEMENT OR SOD REMOVED AND REPLACED TO CONSTRUCT BARRIER SHALL BE INCLUDED IN PRICE BID FOR **ITEM 511, CLASS S CONCRETE, MISC.: ABUTMENT PARAPETS**

† BARS SHALL REMAIN. CONTRACTOR SHALL EXERCISE CAUTION TO ENSURE THAT THESE BARS ARE NOT DAMAGED DURING THE CONCRETE REMOVAL OPERATION. ANY BARS DAMAGED AS A RESULT OF THE CONTRACTOR'S OPERATION SHALL BE REPLACED OR REPAIRED BY THE CONTRACTOR AT HIS EXPENSE. METHOD OF REPAIR OR REPLACEMENT WILL BE AT THE DISCRETION OF THE DIRECTOR.

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 (513) 461-5660

**PARAPET SECTIONS**

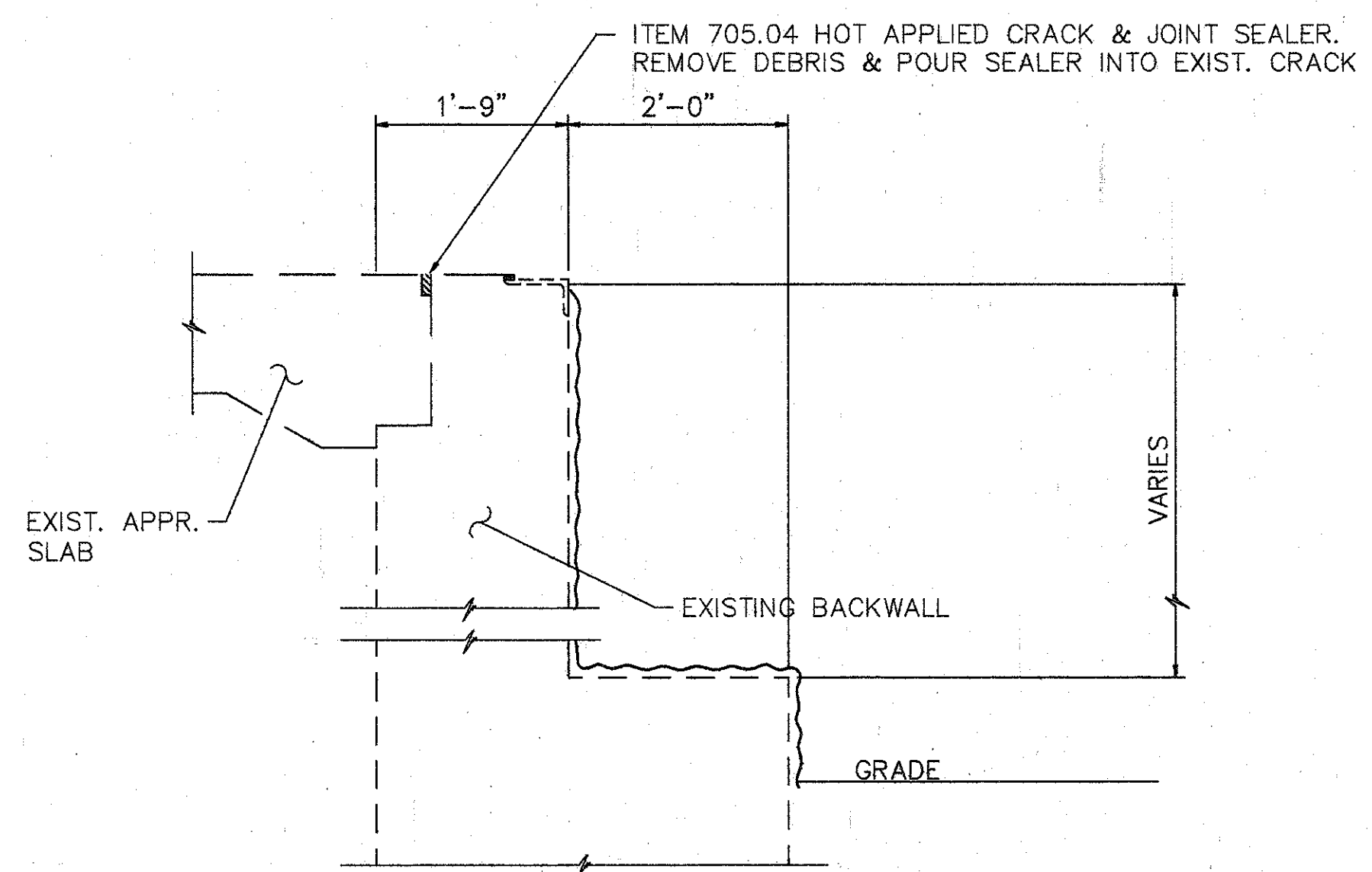
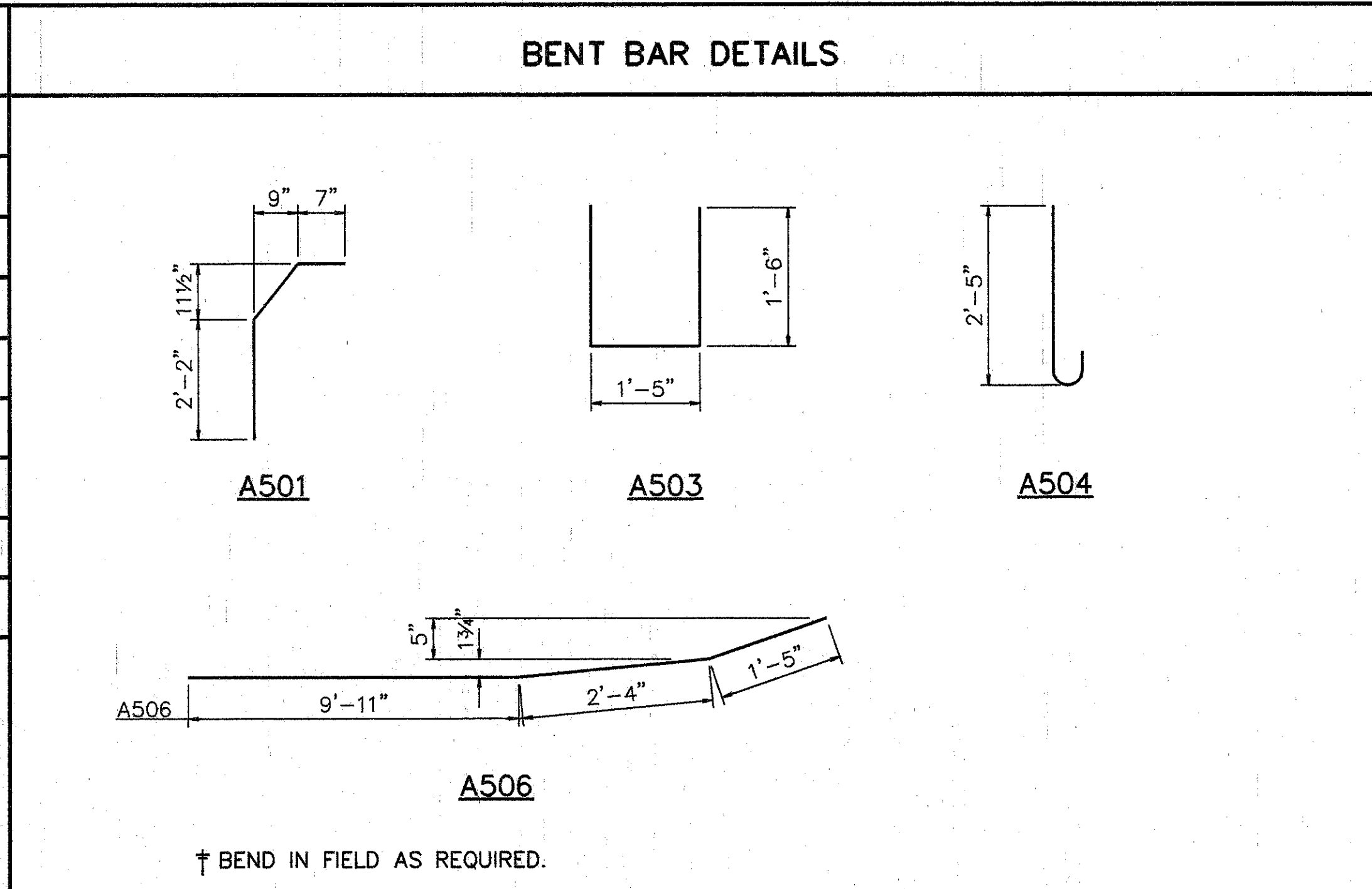
BRIDGE NO. HAM-71-0192N  
 RAMP 'GF' OVER PENN-CENTRAL

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
L.A.T.M.	D.E.E.		M.A.A.	D.E.M1	11/94	

Last File: MAY 15, 1994 @ 9:30 PM  
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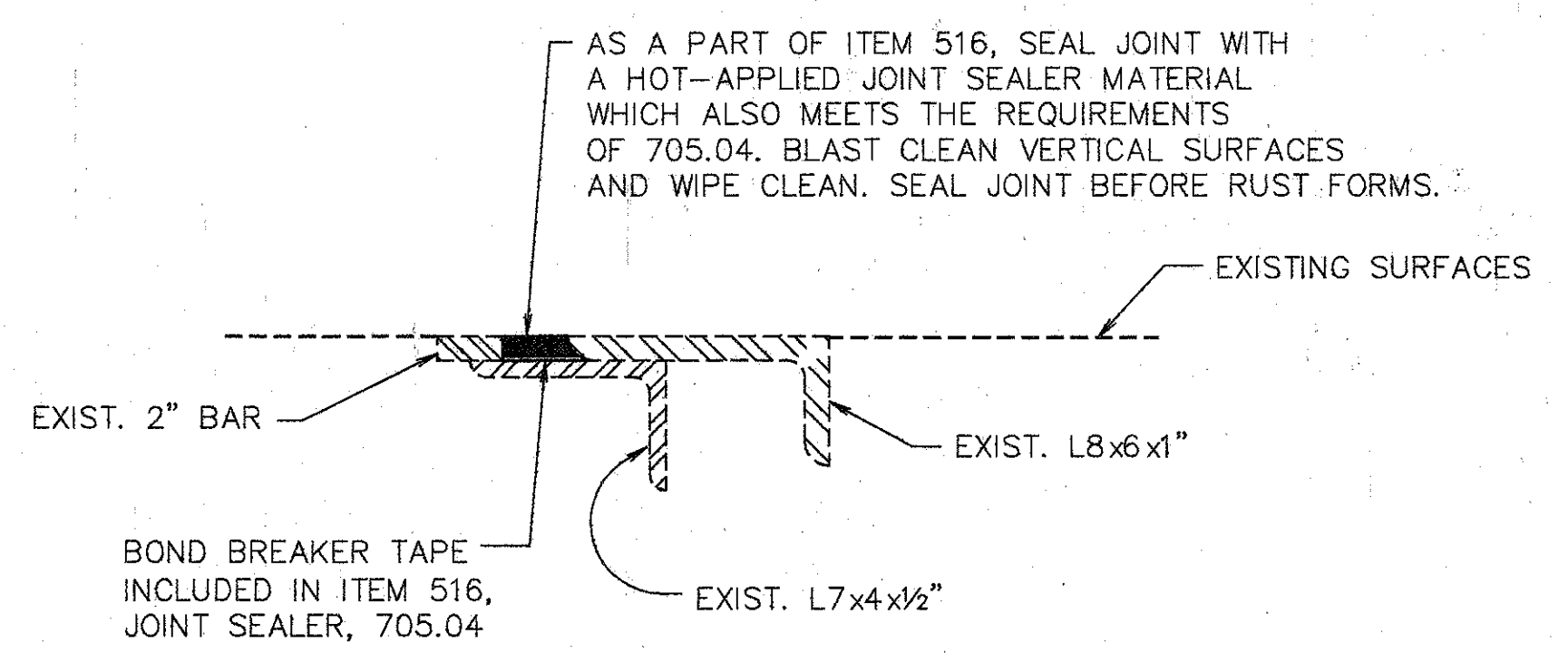
REINFORCING STEEL LIST				
MARK	SHAPE	NUMBER	LENGTH	WEIGHT
A501	BNT.	16	3'-10"	64
A502	STR.	24	4'-10"	121
A503	BNT.	20	4'-2"	87
A504	BNT.	16	3'-0"	50
A505	STR.	20	13'-6"	282
A506	BNT. †	4	13'-9"	57
REPLACEMENT STEEL				300
TOTAL				961



**DETAIL A**  
 SURFACE TO BE SEALED UNDER ITEM SPECIAL- 'SEALING OF CONCRETE SURFACE, EPOXY'.

ITEM	ITEM EXT.	TOTAL	UNITS	DESCRIPTION
202	11200	LUMP SUM	LBS.	PORTIONS OF STRUCTURE REMOVED
509	15820	961	LBS.	EPOXY COATED REINFORCING STEEL, GRADE 60
511	34450	10	C.Y.	CLASS S CONCRETE, MISC.: ABUTMENT PARAPETS
514	27704	LUMP	L.S.	FIELD PAINTING EXISTING STEEL, EEU *
SPECIAL	51267200	1520	S.Y.	WATERPROOFING, MISC: SEALING ASPHALT WEARING SURFACE
SPECIAL	51267500	898	S.Y.	SEALING OF CONCRETE SURFACE *
SPECIAL	51267502	36	S.Y.	SEALING OF CONCRETE SURFACE (EPOXY) *
516	14600	10	L.F.	STRUCTURAL JOINT OR JOINT SEALER, MISC.: 2" x 4" SEALER, AS PER PLAN
516	31000	46	L.F.	JOINT SEALER, 705.04
516	45304	8	EACH	REFURBISH BEARING DEVICE
518	63300	LUMP SUM	L.S.	STRUCTURE DRAINAGE, MISC: MODIFY DRAINAGE PIPING
519	11100	16	S.F.	PATCHING CONCRETE STRUCTURE
516	14600	125	L.F.	SEAL JOINT BETWEEN ABUTMENT AND CONCRETE SLOPE PROTECTION
518	63300	LUMP	L.S.	SCUPPER AND DRAINAGE PIPE CLEANOUT
601	21100	5	S.Y.	REPAIR CONCRETE SLOPE PROTECTION

\* SEE PROPOSAL NOTE



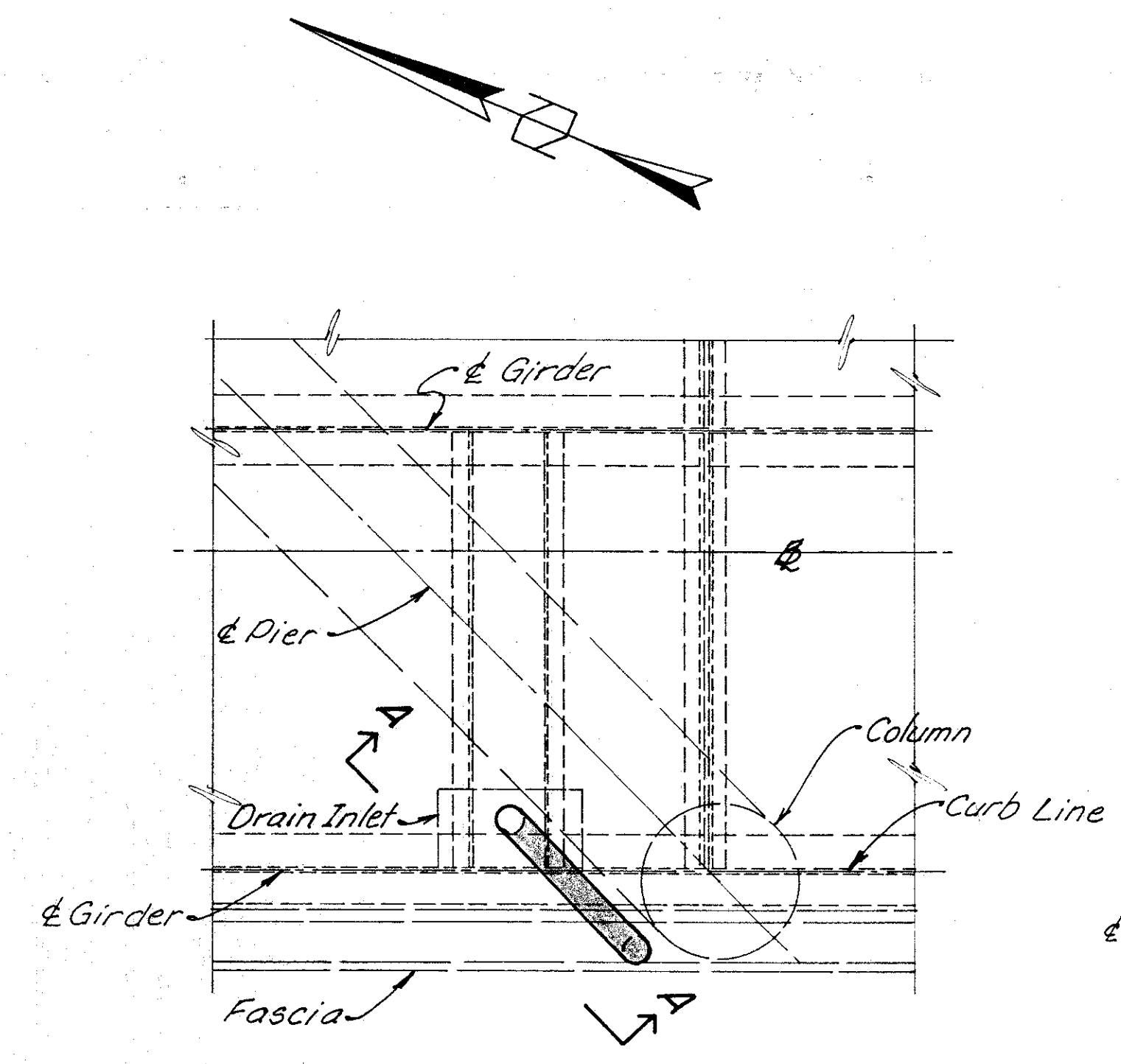
**DETAIL B**

**WOOLPERT CONSULTANTS**  
 409 E. MONUMENT AVENUE  
 DAYTON, OHIO 45402-1226  
 (513) 461-5660

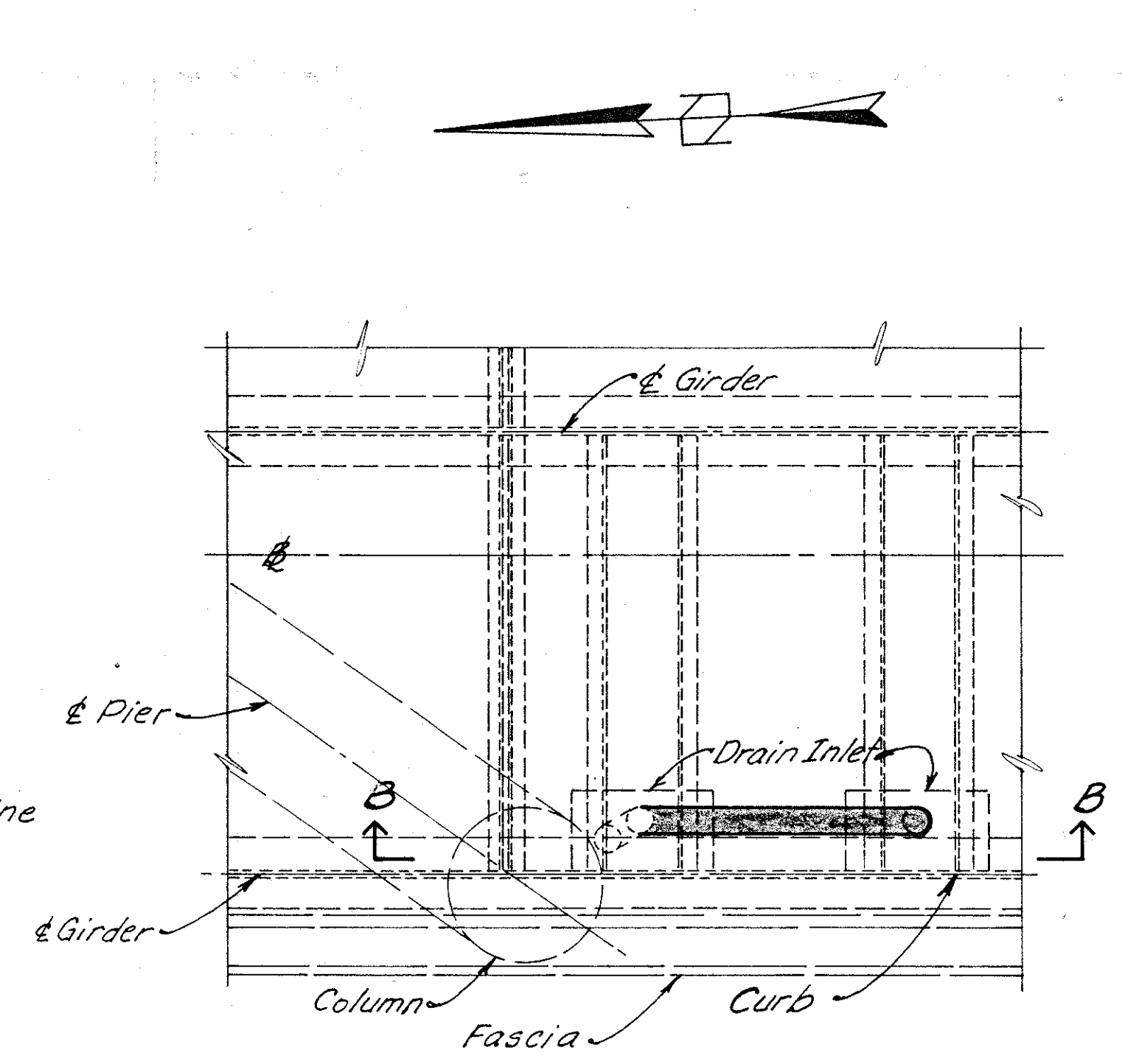
**MISCELLANEOUS DETAILS**

BRIDGE NO. HAM-71-0192N  
 RAMP 'GF' OVER PENN-CENTRAL  
 HAMILTON COUNTY

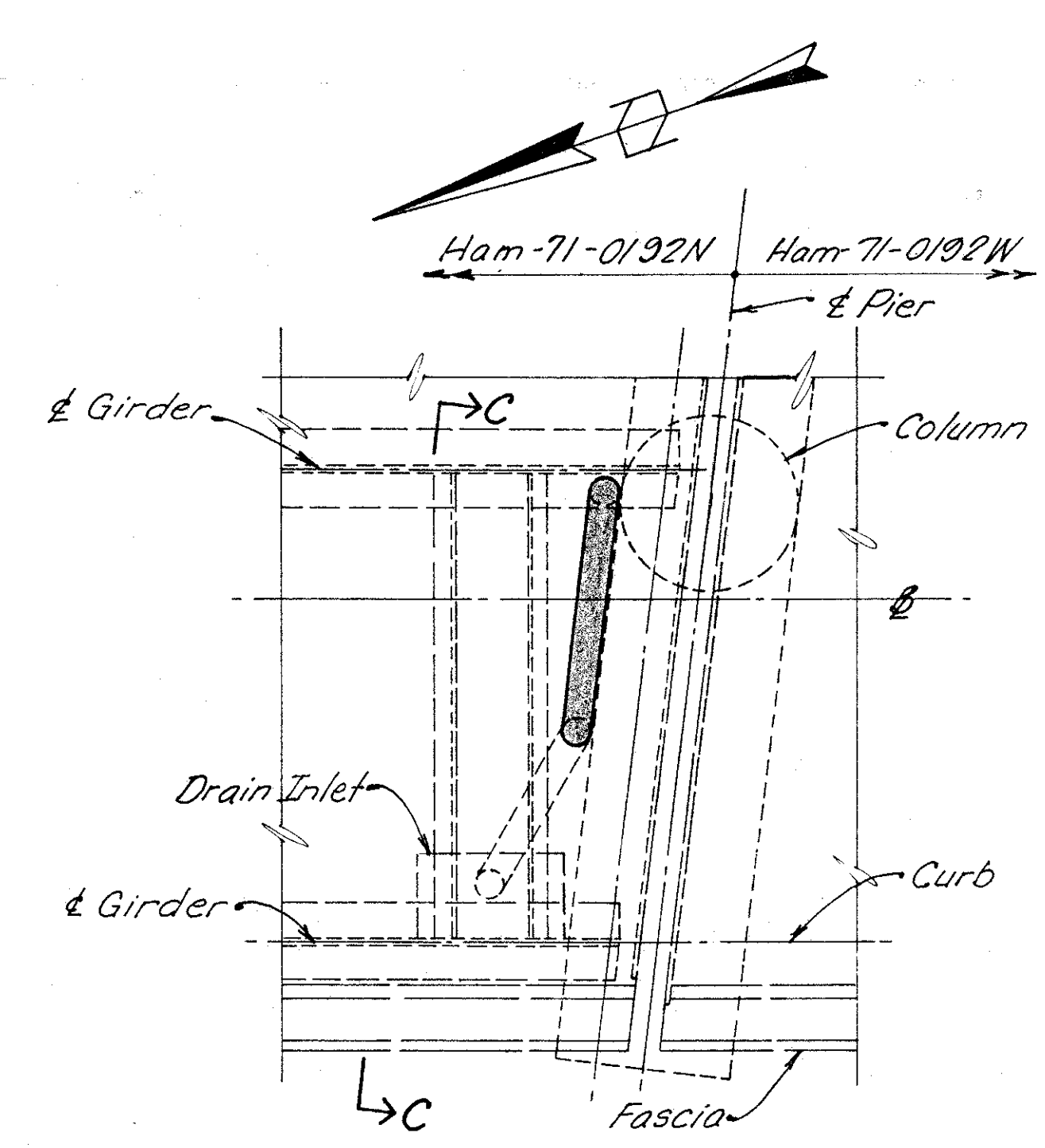
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
L.A.T.M.	D.E.E.		M.A.A.	D.E.M11/11/94		



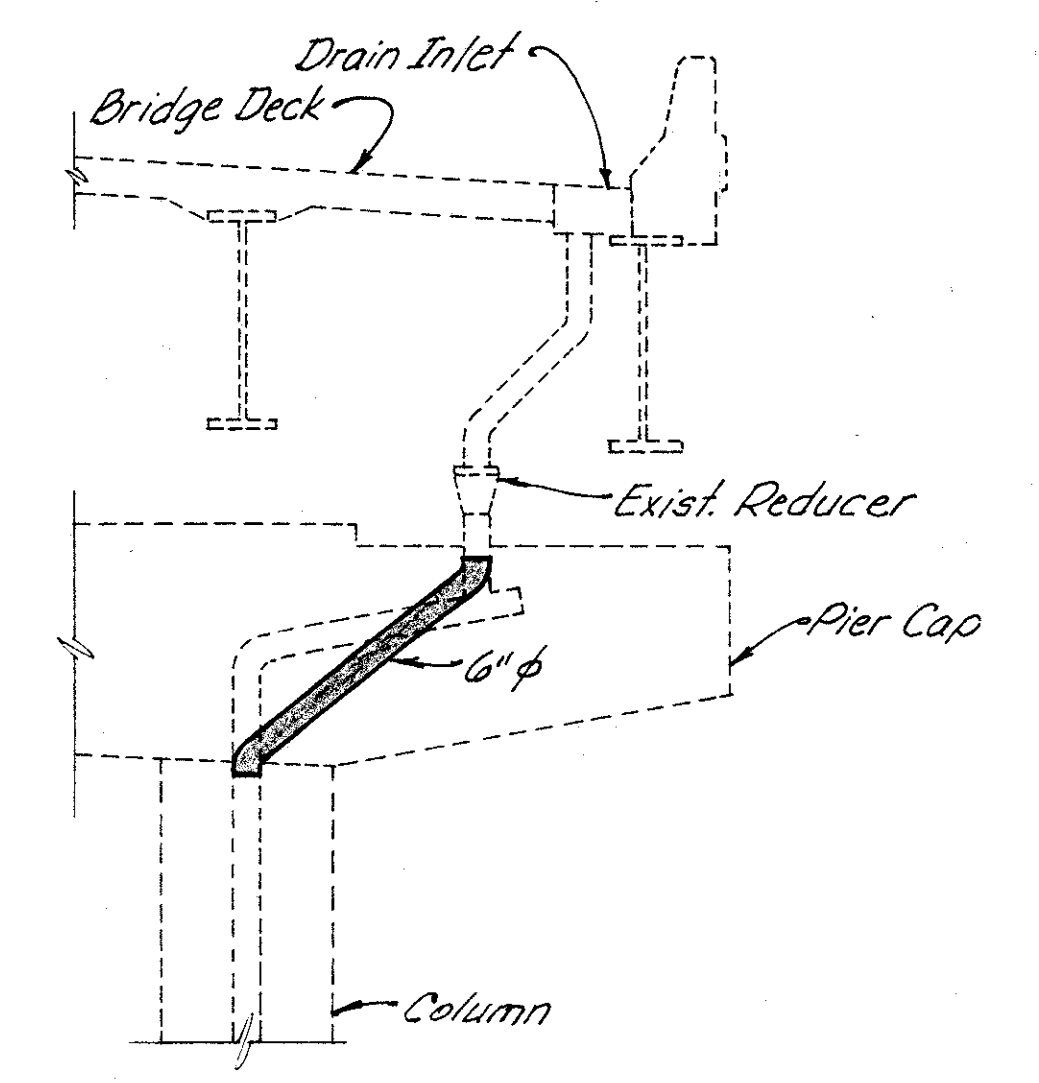
PIER 2



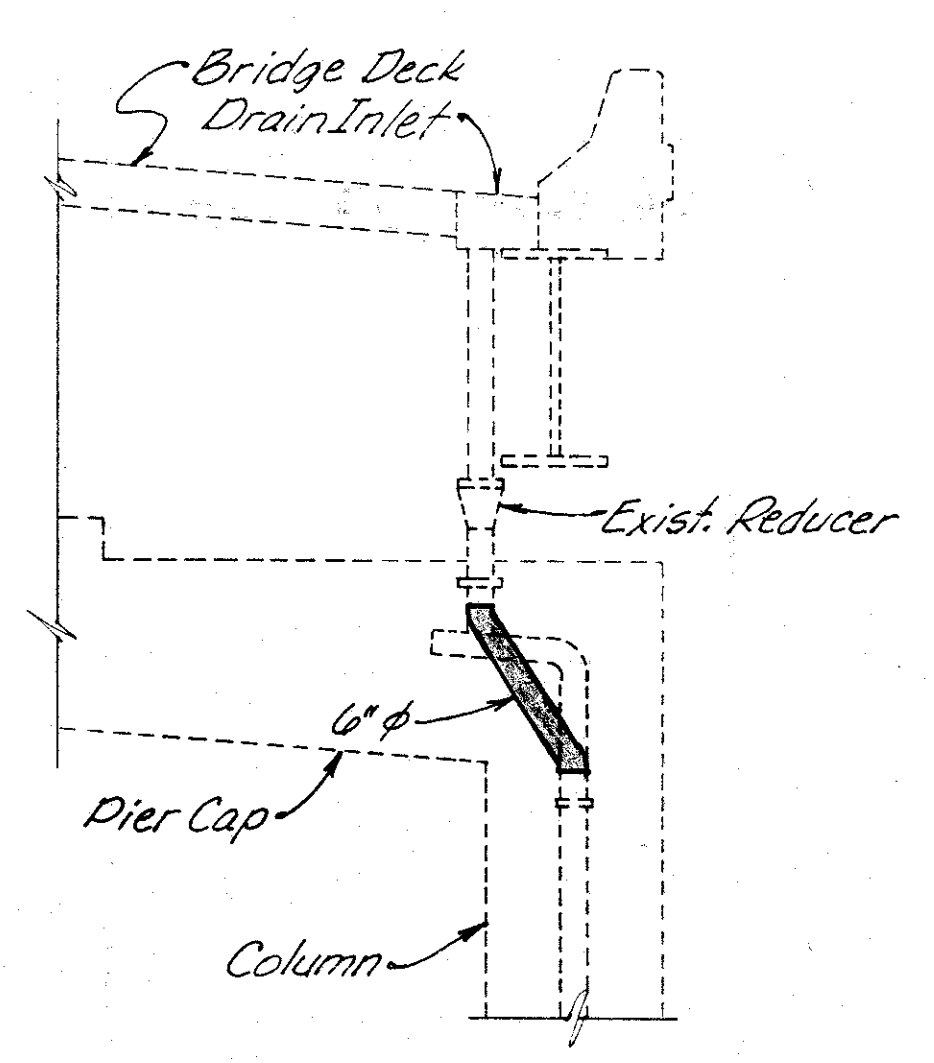
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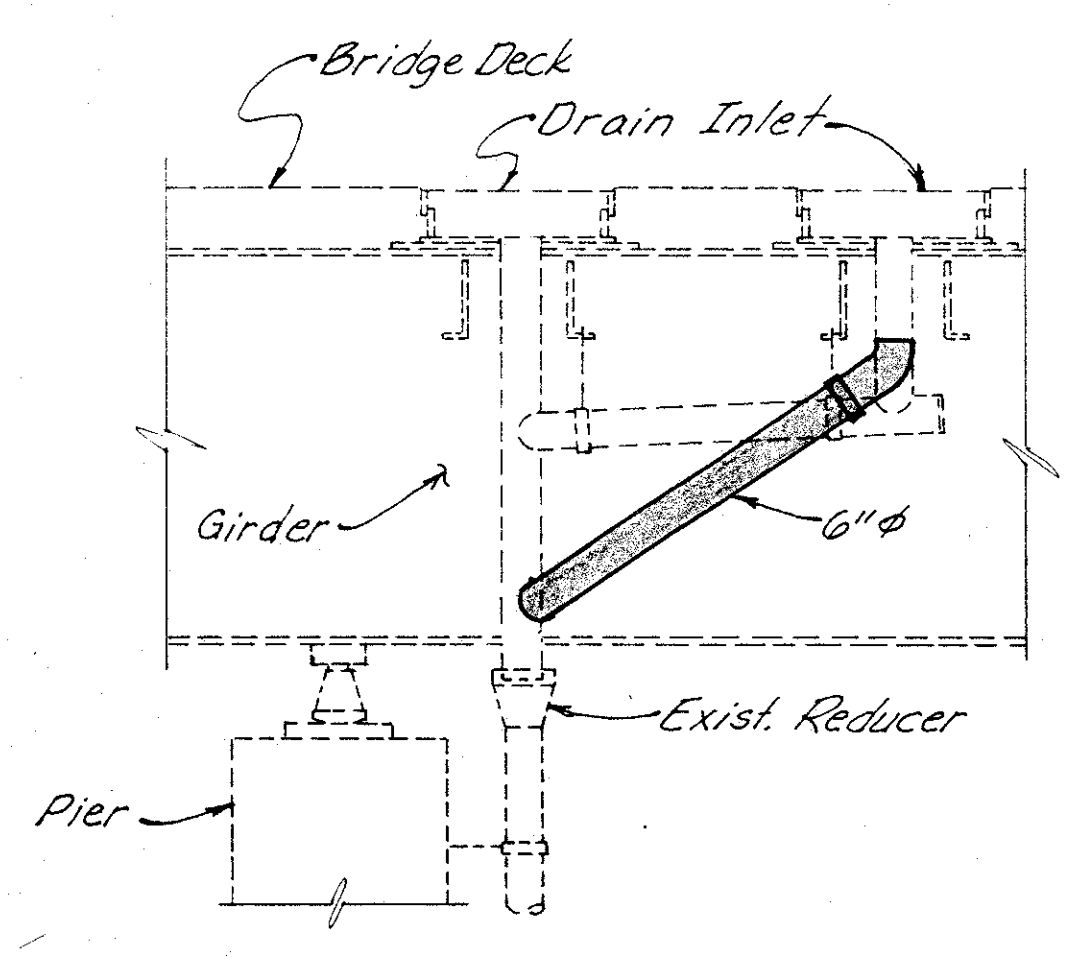
PIER 2 (BRIDGE 71-0192 W)



SECTION C-C



SECTION A-A

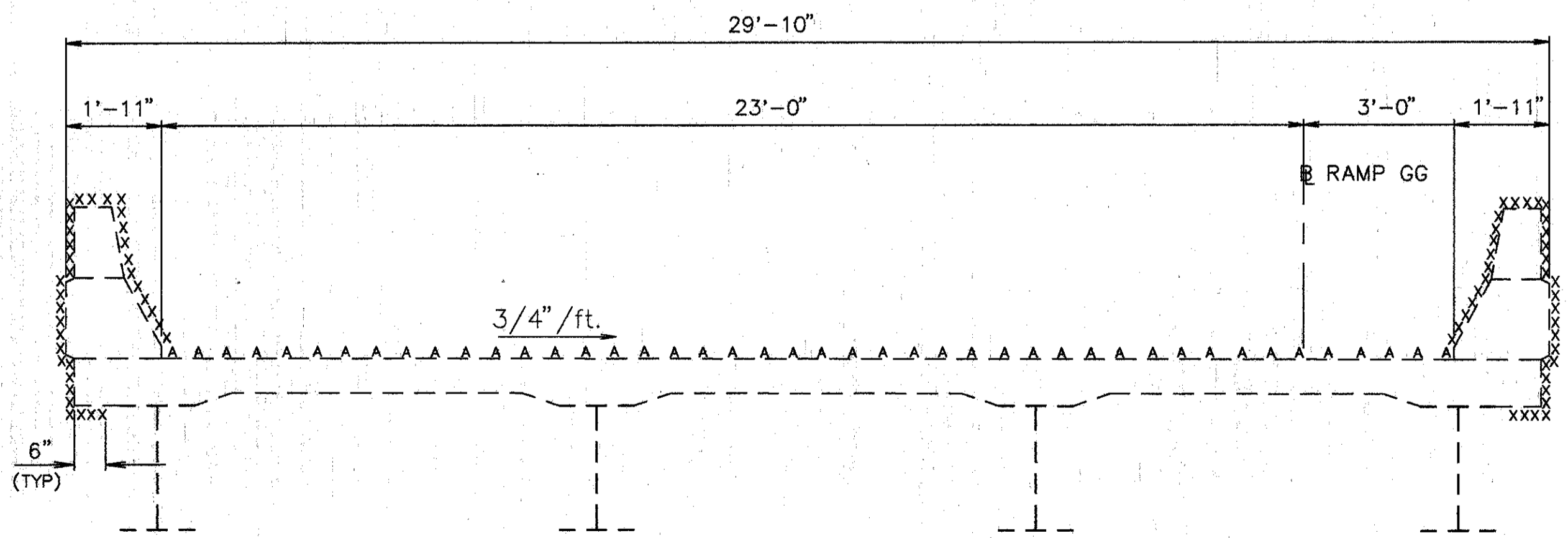
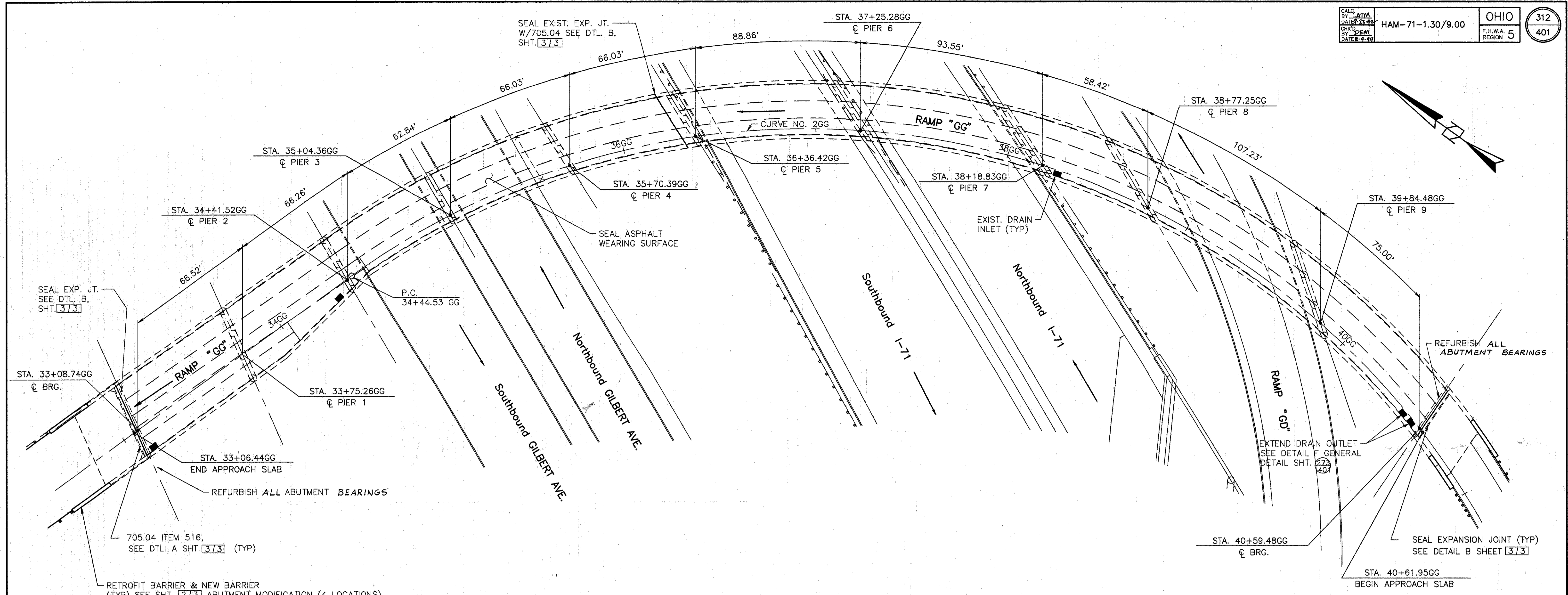


SECTION-B-B

1. For drainage piping requirements see General Notes on sheet 273 (401)
2. Approximate No of Linear Feet of proposed 6" pipe (including specials) = 30'

		<b>WOOLPERT CONSULTANTS</b> 409 East Monument Avenue Dayton, Ohio 45402-1226		4/4	
<b>DRAINAGE DETAILS</b>					
BRIDGE NO. HAM-71-0192 N OVER GILBERT AVENUE					
HAMILTON COUNTY					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
L.A.T.M.	RACH		M.A.A.	D.E.M.	11/11/99
					REVISED





TYPICAL BRIDGE SECTION

TABLE OF SPAN LENGTH

SPAN	LENGTH	SPAN	LENGTH
1	66.52'	6	88.86'
2	66.26'	7	93.55'
3	62.84'	8	58.42'
4	66.03'	9	107.23'
5	66.03'	10	75.00'

**NOTES:**  
 SEAL PARAPETS, PIERS, AND BACKWALLS (SEE DTL. A SHT. 3/3).  
 SEAL ALL PIERS, EXCEPT T/PIER CAP. DO NOT SEAL PIER 1.

XXXXX SURFACES TO BE SEALED UNDER ITEM SPECIAL, SEALING OF CONCRETE SURFACE.  
 AAAAA SURFACES TO BE SEALED UNDER ITEM SPECIAL, WATERPROOFING, MISC.: SEALING ASPHALT WEARING SURFACE.

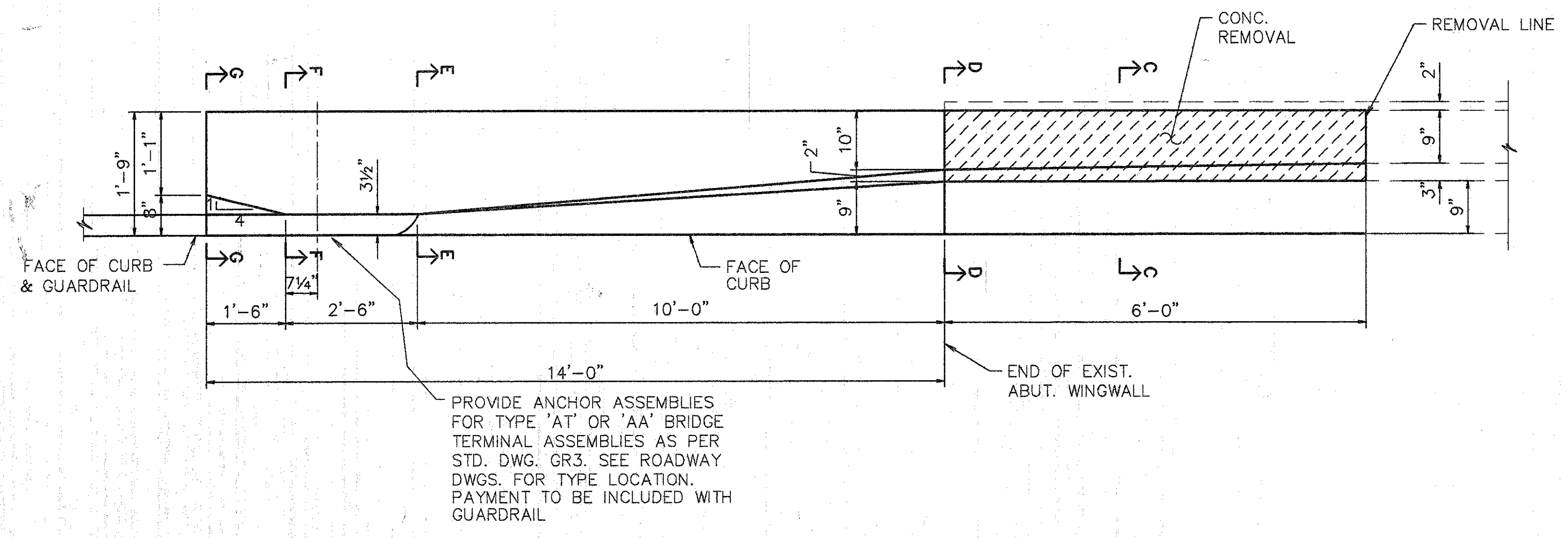
**EXISTING STRUCTURE**  
 TYPE: CONTINUOUS STEEL PLATE CURVED GIRDERS W/ REINF. CONC. DECK & SUBSTRUCTURE  
 SPANS: VARY, SEE TABULATION  
 ROADWAY: 26'-0" F-F CURBS (SPANS 4 THRU 10) VARIES (SPANS 1,2 & 3)  
 SKEW: VARIES  
 LIVE LOADING: HS 20-44 AND THE INTERSTATE ALTERNATE LOADING  
 WEARING SURFACE: 1 1/2" ASPHALT SURFACE COURSE  
 APPROACH SLABS: AS-1-67 (25'-0" LONG)  
 ALIGNMENT: VARIES  
 SUPERELEVATION: VARIES

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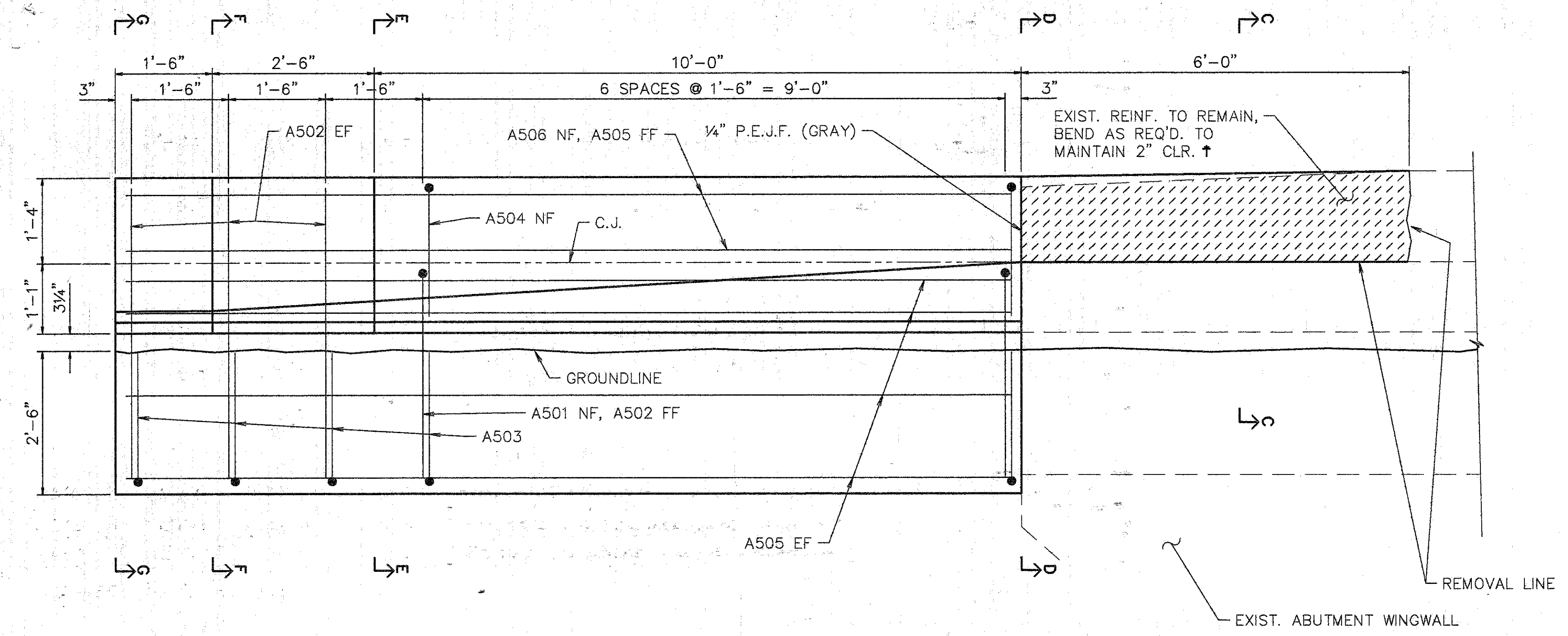
**GENERAL PLAN**  
 BRIDGE NO. HAM-71-0202  
 OVER INTERSTATE ROUTE 71  
 HAMILTON COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
L.A.T.M.	RACH		M.A.A.	D.E.M1	11/94	

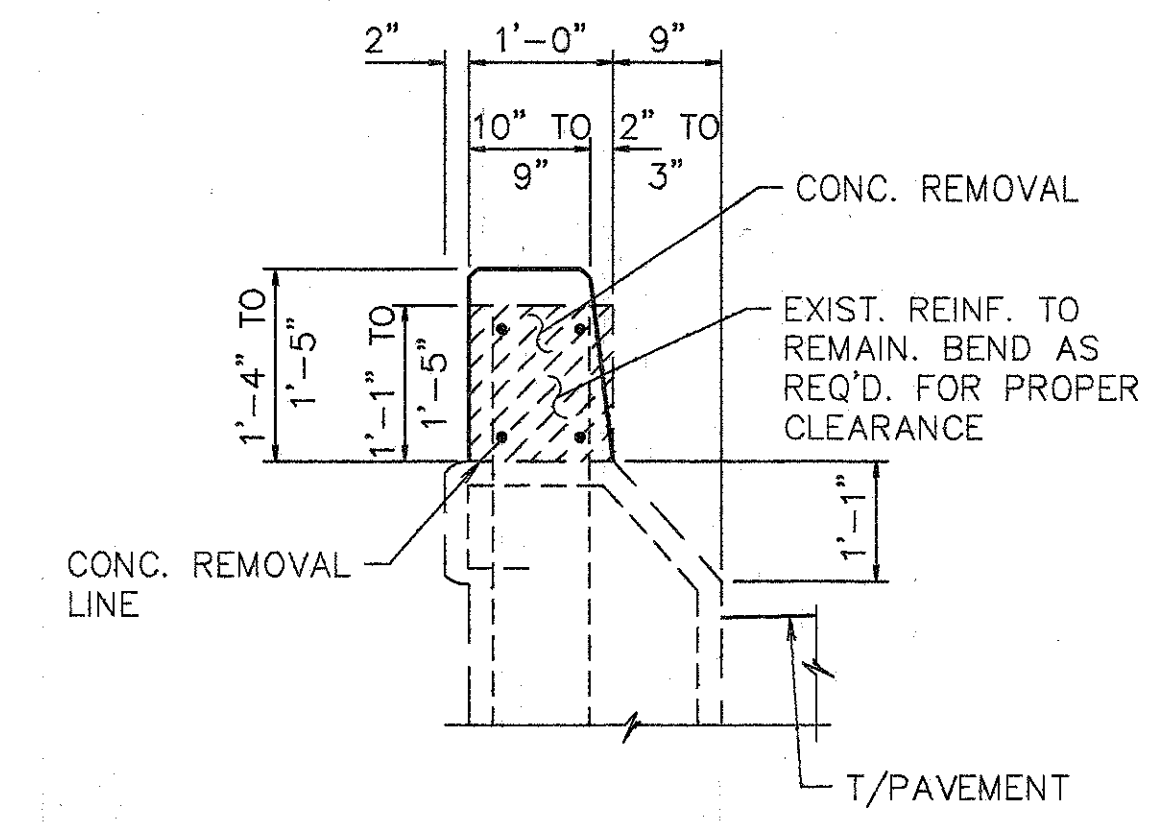
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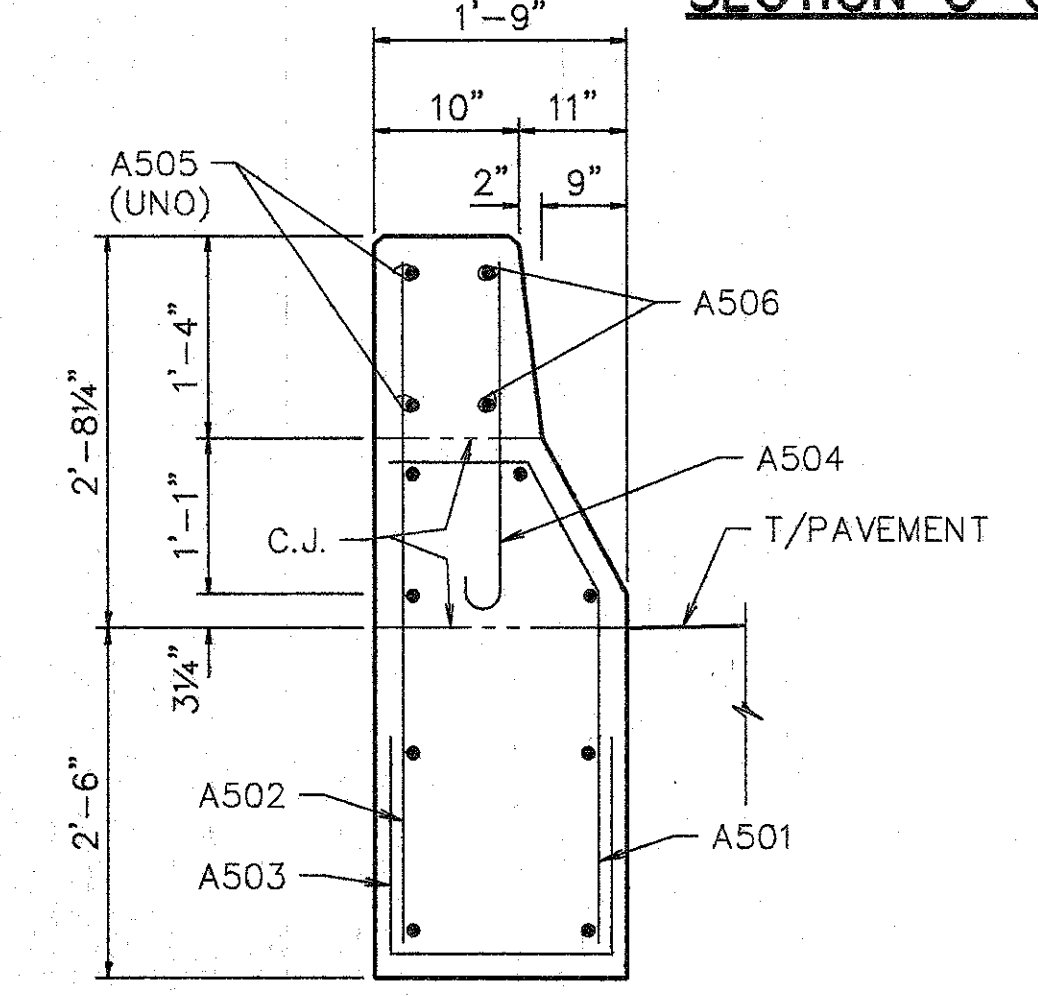
**PLAN - ABUTMENT MODIFICATION**



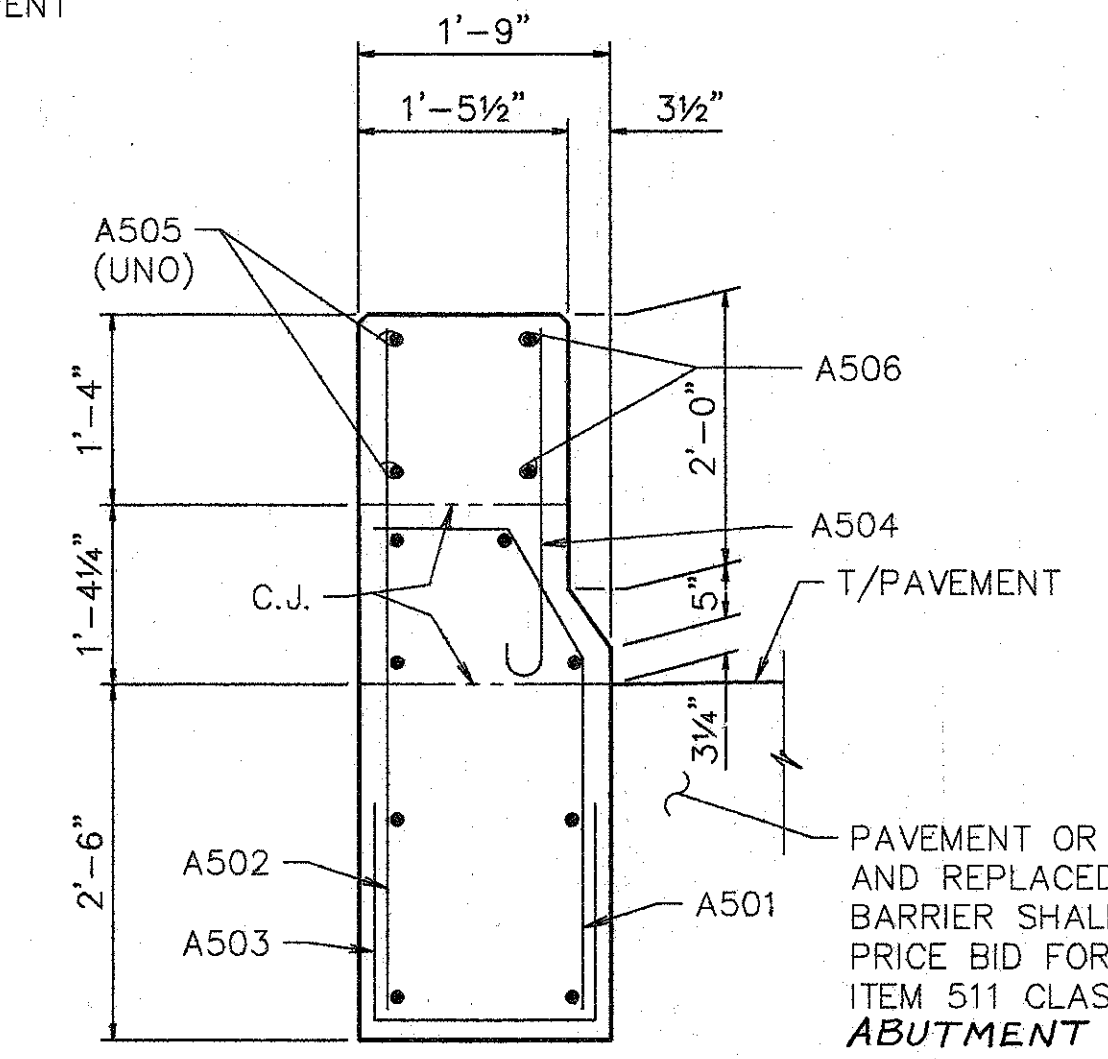
**ELEVATION - ABUTMENT MODIFICATION**



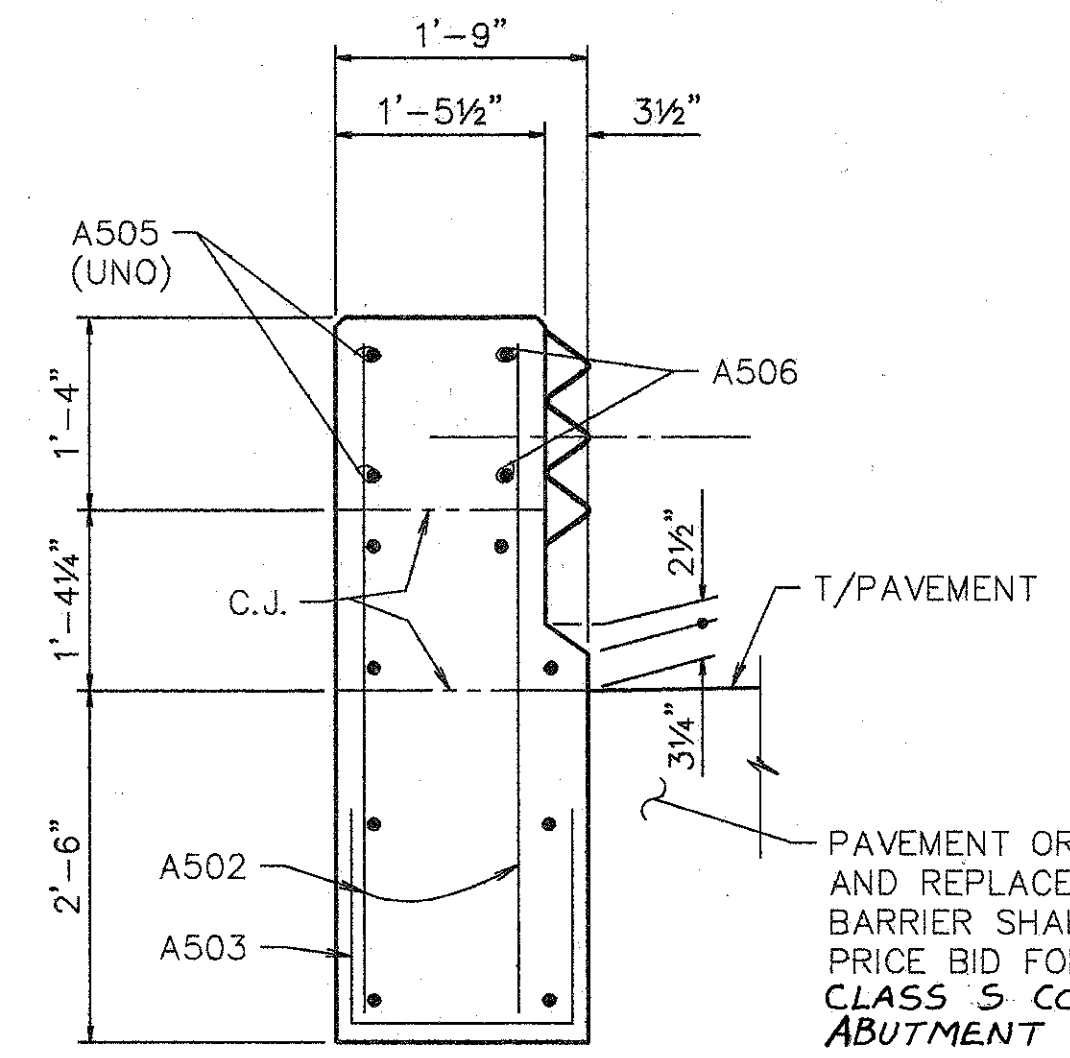
**SECTION C-C**



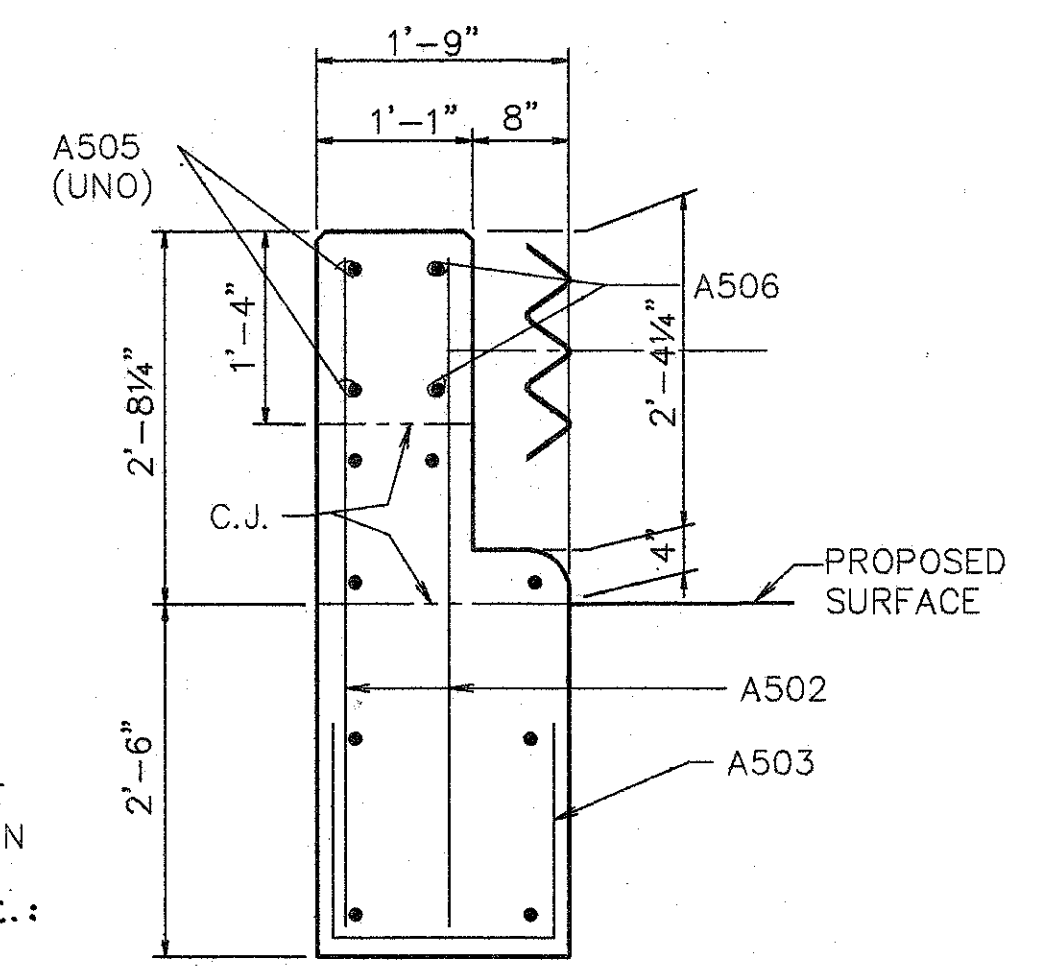
**SECTION D-D**



**SECTION E-E**



**SECTION F-F**



**SECTION G-G**

**NOTES:**  
 THE PRICE BID PER CUBIC YARD FOR ITEM 511, CLASS S CONCRETE, MISC.: **ABUTMENT PARAPETS** SHALL INCLUDE CLASS S CONCRETE, BACKFILL, REPLACING PORTIONS OF THE END OF EXISTING PARAPETS, 1/4" EXPANSION JOINT MATERIAL AND OTHER WORK INCIDENTAL THERETO.  
 EPOXY COATED REINFORCING STEEL SHALL BE INCLUDED IN ITEM 509, 'EPOXY COATED REINFORCING STEEL, GRADE 60'.  
 EXISTING PARAPET TO BE REMOVED AND EXCAVATION SHALL BE INCLUDED IN ITEM 202 - PORTIONS OF STRUCTURE REMOVED.

PAVEMENT OR SOD REMOVED AND REPLACED TO CONSTRUCT BARRIER SHALL BE INCLUDED IN PRICE BID FOR ITEM 511 CLASS S CONCRETE, MISC.: **ABUTMENT PARAPETS**

PAVEMENT OR SOD REMOVED AND REPLACED TO CONSTRUCT BARRIER SHALL BE INCLUDED IN PRICE BID FOR ITEM 511, CLASS S CONCRETE, MISC.: **ABUTMENT PARAPETS**

† BARS SHALL REMAIN. CONTRACTOR SHALL EXERCISE CAUTION TO ENSURE THAT THESE BARS ARE NOT DAMAGED DURING THE CONCRETE REMOVAL OPERATION. ANY BARS DAMAGED AS A RESULT OF THE CONTRACTOR'S OPERATION SHALL BE REPLACED OR REPAIRED BY THE CONTRACTOR AT HIS EXPENSE. METHOD OF REPAIR OR REPLACEMENT WILL BE AT THE DISCRETION OF THE DIRECTOR.

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**PARAPET SECTIONS**

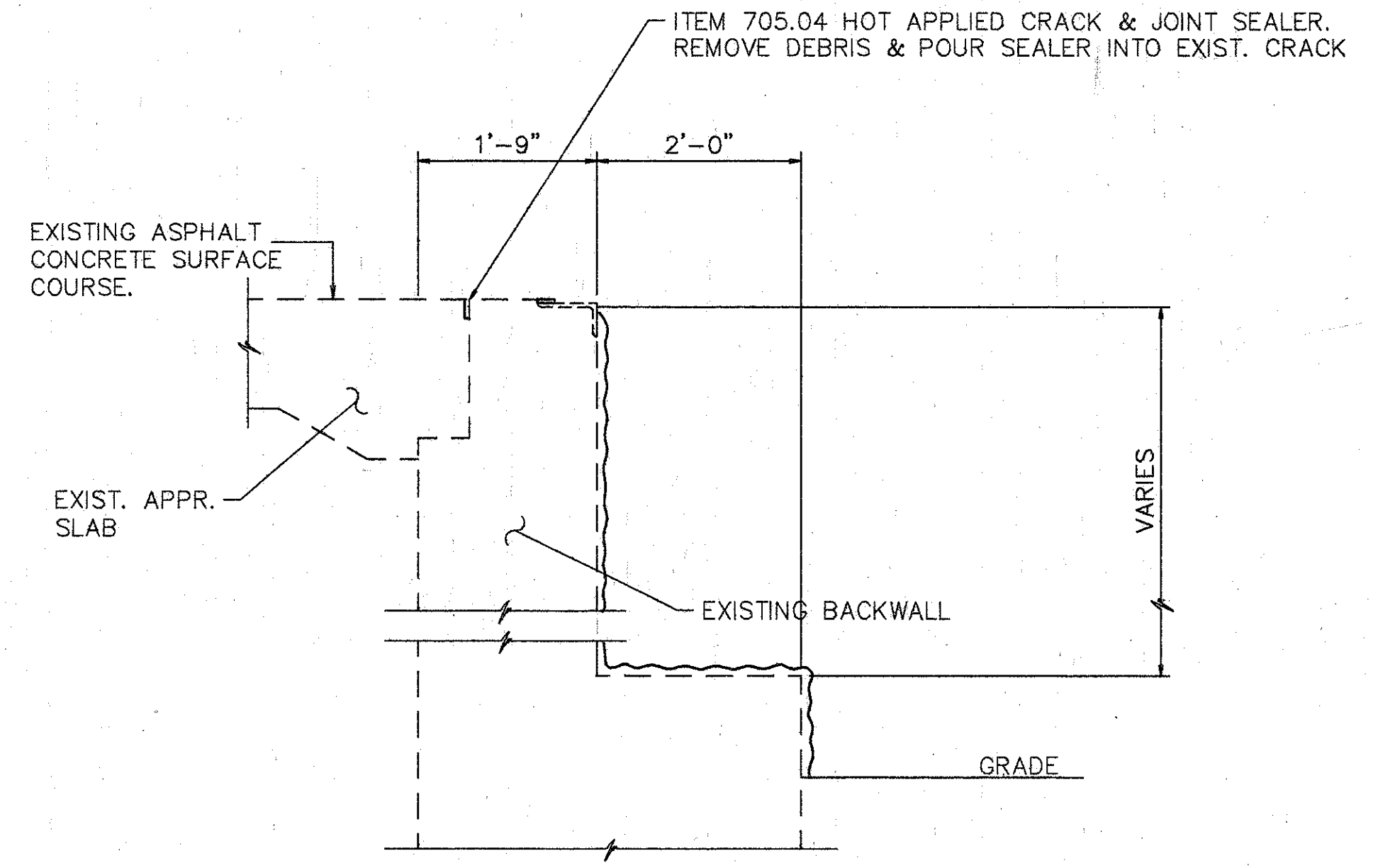
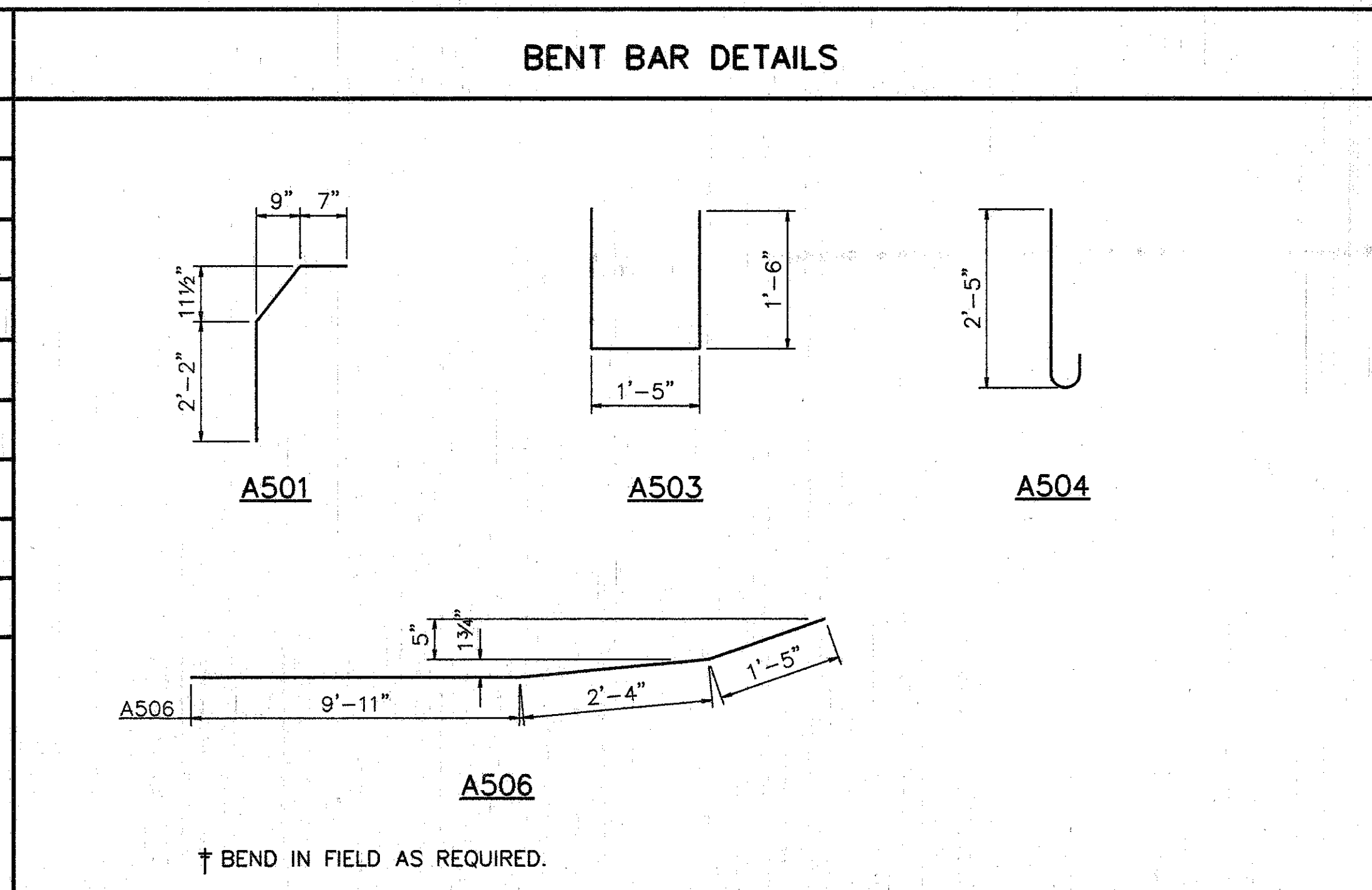
BRIDGE NO. HAM-71-0202  
 OVER INTERSTATE ROUTE 71  
 HAMILTON COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
L.A.T.M.	D.E.E.		M.A.A.	D.E.M1/11/94		

L&L PLOT MAY 15, 1991 @ 2:30 PM  
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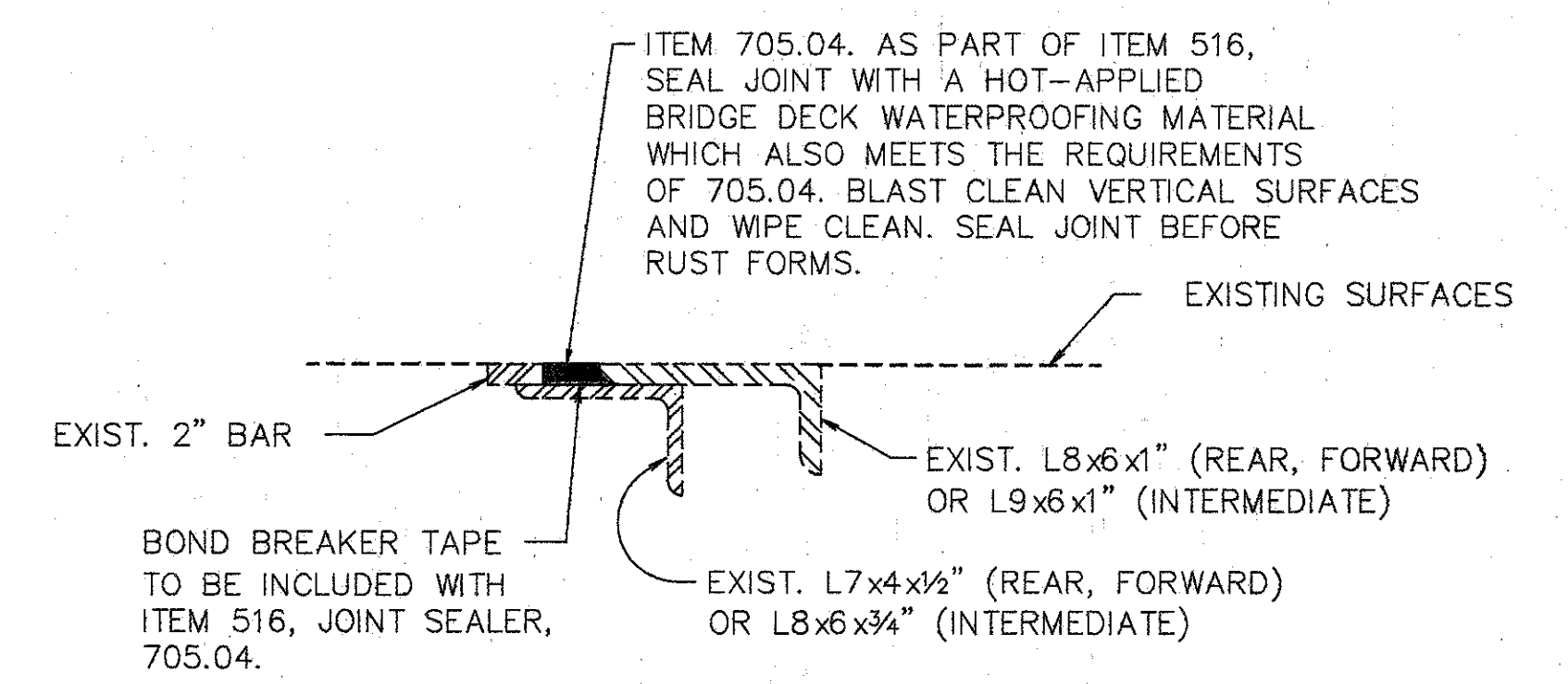
REINFORCING STEEL LIST				
MARK	SHAPE	NUMBER	LENGTH	WEIGHT
A501	BNT.	28	3'-10"	112
A502	STR.	52	4'-10"	262
A503	BNT.	40	4'-2"	174
A504	BNT.	28	3'-0"	88
A505	STR.	40	13'-6"	563
A506	BNT. †	8	13'-9"	115
REPLACEMENT STEEL				300
TOTAL				1614



**DETAIL A**  
SURFACE TO BE SEALED UNDER ITEM SPECIAL, SEALING OF CONCRETE SURFACE, (EPOXY).

ITEM	ITEM EXT.	TOTAL	UNITS	DESCRIPTION
202	11200	LUMP SUM	L.S.	PORTIONS OF STRUCTURE REMOVED
516	14600	50	L.F.	STRUCTURAL JOINT OR JOINT SEALER, MISC.: 2"x4" SEALER, AS PER PLAN
509	15820	1614	LBS.	EPOXY COATED REINFORCING STEEL, GRADE 60
511	34450	20	C.Y.	CLASS S CONCRETE, MISC.: ABUTMENT PARAPETS
SPECIAL	51267200	2342	S.Y.	WATERPROOFING, MISC: SEALING ASPHALT WEARING SURFACE
SPECIAL	51267500	1995	S.Y.	SEALING OF CONCRETE SURFACE *
SPECIAL	51267502	128	S.Y.	SEALING OF CONCRETE SURFACE (EPOXY) *
519	11100	12	S.F.	PATCHING CONCRETE STRUCTURE
514	27704	LUMP	L.S.	FIELD PAINTING, MISC: EXISTING STEEL, EEU *
516	31000	160	L.F.	JOINT SEALER, 705.04
516	45304	8	EACH	REFURBISH BEARING DEVICE
518	12700	2	EACH	SCUPPER, VERTICAL EXTENSION
516	14600	150	L.F.	SEAL JOINT BETWEEN ABUTMENT AND CONCRETE SLOPE PROTECTION
518	63300	LUMP	L.S.	SCUPPER AND DRAINAGE PIPE CLEANOUT
601	21100	5	S.Y.	REPAIR CONCRETE SLOPE PROTECTION

\* SEE PROPOSAL NOTE



**DETAIL B**

### PROPOSED WORK

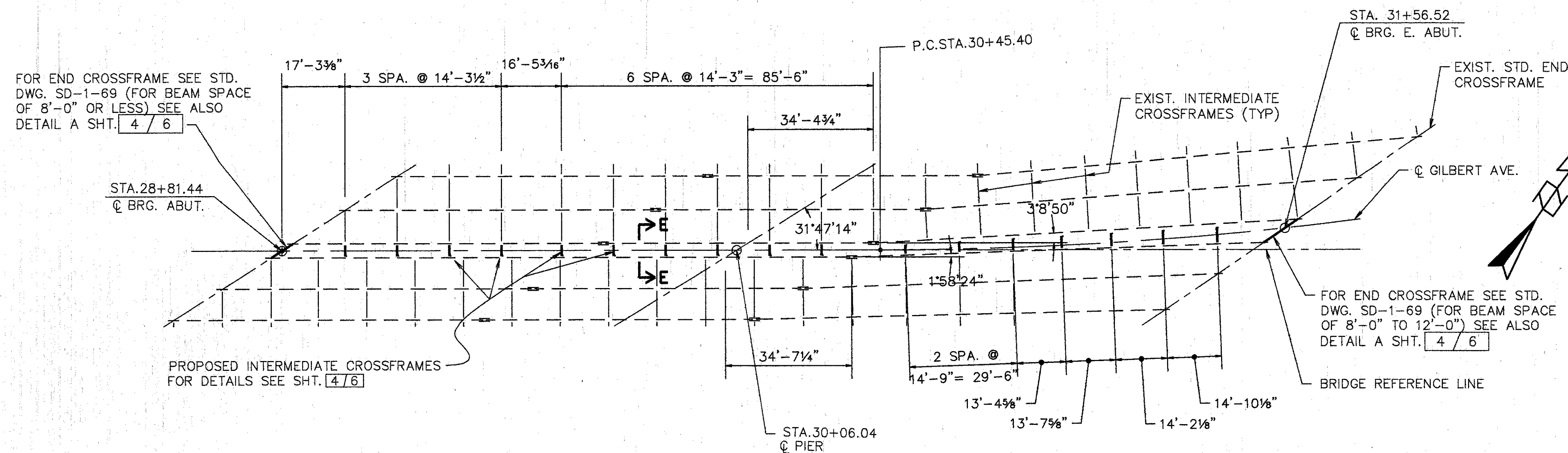
1. RETROFIT BARRIER & PLACE NEW BARRIER.
2. SEAL PARAPETS, PIERS, AND BACKWALL.
3. REFURBISH AND/OR PAINT ALL ABUTMENT BEARINGS.
4. SEAL ASPHALT WEARING SURFACE AND EXPANSION JOINT.
5. SEAL JOINTS AS NOTED.
6. AT LEAST ONE LANE OF TRAFFIC SHALL BE MAINTAINED ON THE BRIDGE AT ALL TIMES. FOR NOTES SEE MAINTENANCE OF TRAFFIC PLANS.
7. OTHER WORK AS DESCRIBED IN THESE PLANS.

<b>WOOLPERT CONSULTANTS</b> 409 E. MONUMENT AVENUE DAYTON, OHIO 45402-1226 (513) 461-5660		3 / 3
<b>MISCELLANEOUS DETAILS</b>		
BRIDGE NO. HAM-71-0202 OVER INTERSTATE ROUTE 71		
HAMILTON COUNTY		
DESIGNED	DRAWN	TRACED
L.A.T.M.	D.E.E.	M.A.A.
CHECKED	REVIEWED	DATE
M.A.A.	D.E.M11/11/94	

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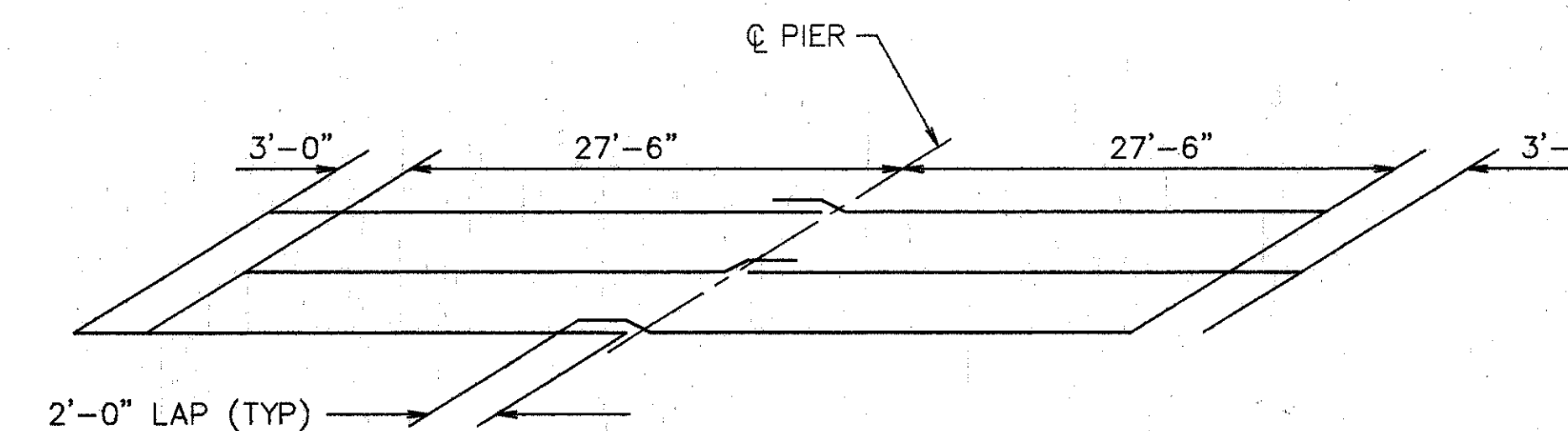






**MEDIAN FRAMING PLAN**

NOTE:  
PRIOR TO FABRICATION OF INTERMEDIATE CROSSFRAMES CONTRACTOR SHALL VERIFY LOCATION OF EXISTING STIFFENERS.



**DIAGRAM SHOWING STAGGER OF S608 BARS OVER PIER**

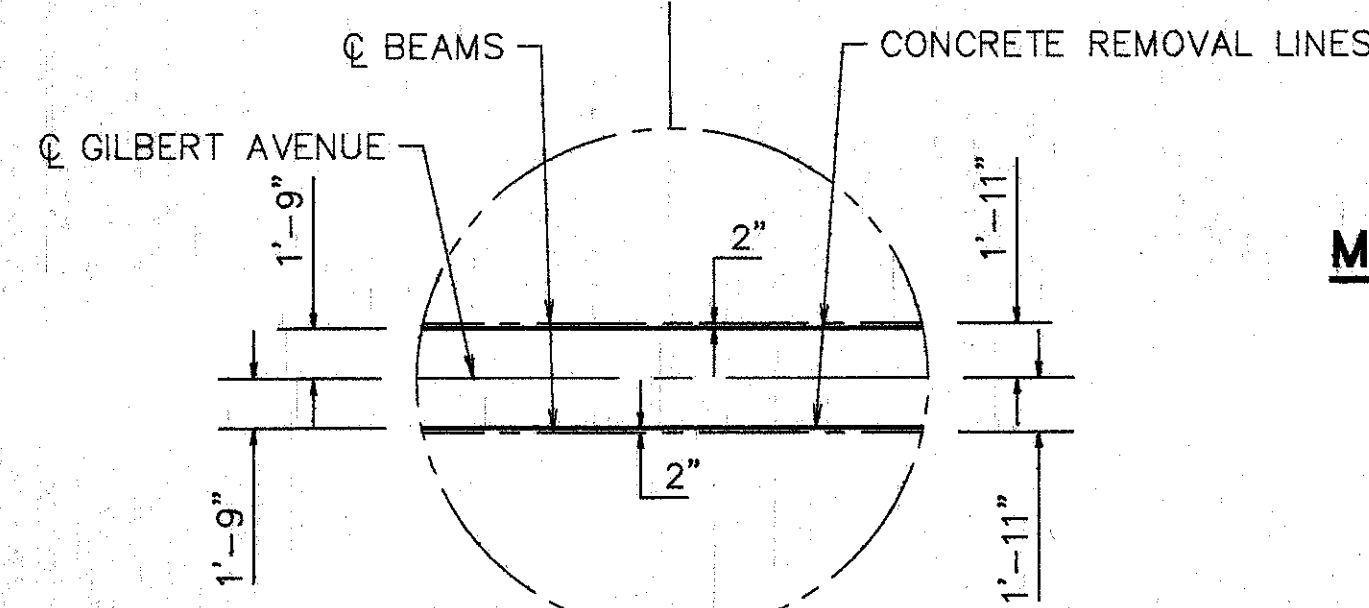
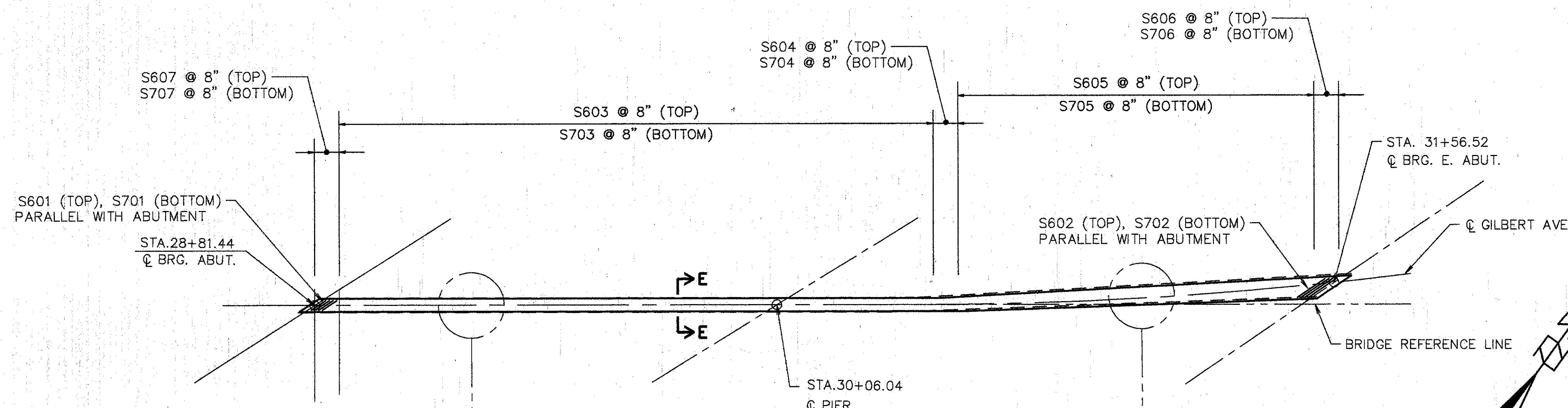
NOTE:

STRUCTURAL STEEL FOR PROPOSED INTERMEDIATE CROSS FRAMES SHALL BE PAID FOR AS ITEM 513, STRUCTURAL STEEL FOR REHABILITATION. STRUCTURAL STEEL UNDER THIS ITEM WILL NOT REQUIRE SHOP DRAWINGS PRIOR TO FABRICATION. THE CONTRACTOR SHALL MAKE NECESSARY MEASUREMENTS AND PREPARE SKETCHES, DRAWINGS, TABLES, ETC. THE ENGINEER SHALL HAVE THE AUTHORITY AND RESPONSIBILITY FOR ENSURING THAT THE FABRICATED STEEL IS ACCEPTABLE. TECHNICAL ASSISTANCE WILL BE PROVIDED ON REQUEST BY THE BUREAU OF BRIDGES. MILL TEST REPORTS AND SHIPPING DOCUMENTS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL TO ENSURE THAT THE DRAWINGS DEPICT THE STEEL AS ACTUALLY INCORPORATED INTO THE WORK. THE ENGINEER WILL THEN SEND ONE APPROVED SET TO THE BUREAU OF BRIDGES FOR INFORMATION. PAY WEIGHTS SHALL BE COMPUTED IN COMPLIANCE WITH 513 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS AND SUBMITTED TO THE ENGINEER FOR HIS REVIEW AND APPROVAL. THE FABRICATOR SHALL FURNISH A 35 MILLIMETER MICROFILM COPY OF EACH SHOP DRAWING, WHICH SHALL BE MOUNTED ON AN APERTURE CARD AS SPECIFIED IN 501.05.

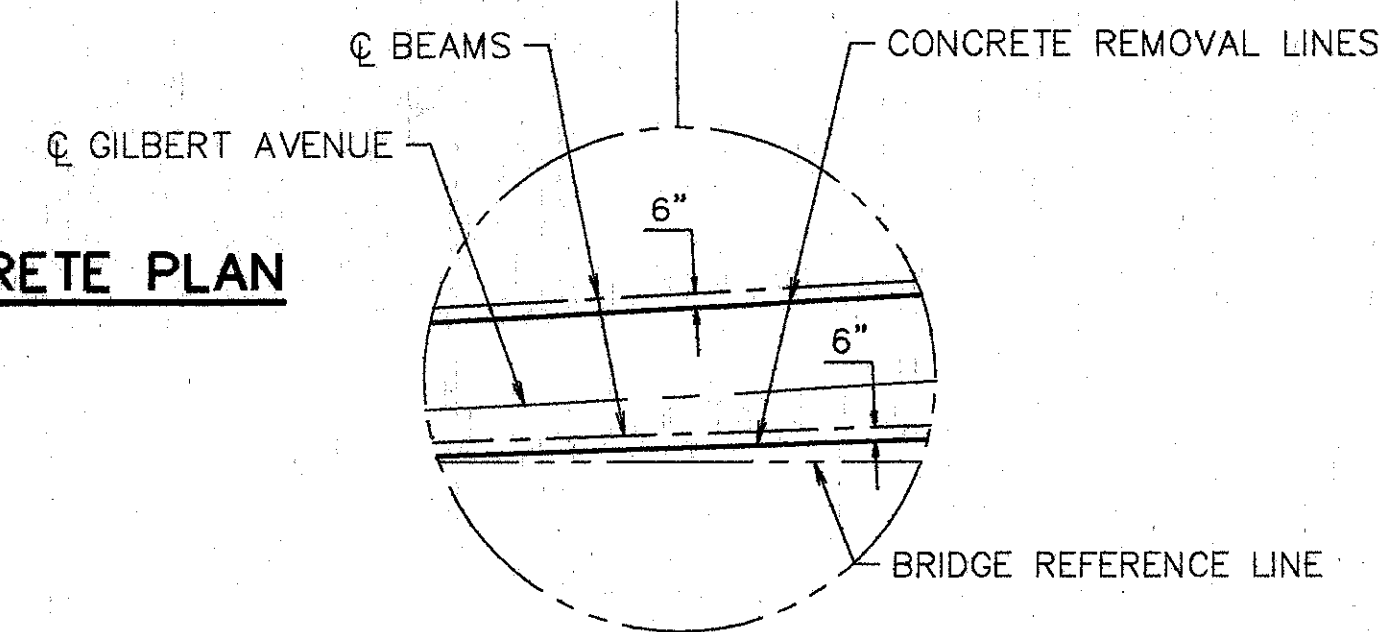
NEW STEEL SHALL BE PAINTED ACCORDING TO PROPOSAL NOTE "FIELD PAINTING OF NEW STEEL, SYSTEM IZEU." COST FOR PAINTING SHALL BE INCLUDED WITH ITEM SPECIAL - PAINTING OF NEW STEEL, SYSTEM IZEU, FOR PAYMENT.

FOR DETAILS NOT SHOWN SEE SHEET 4/6

FOR SECTION E-E SEE SHEET 5/6



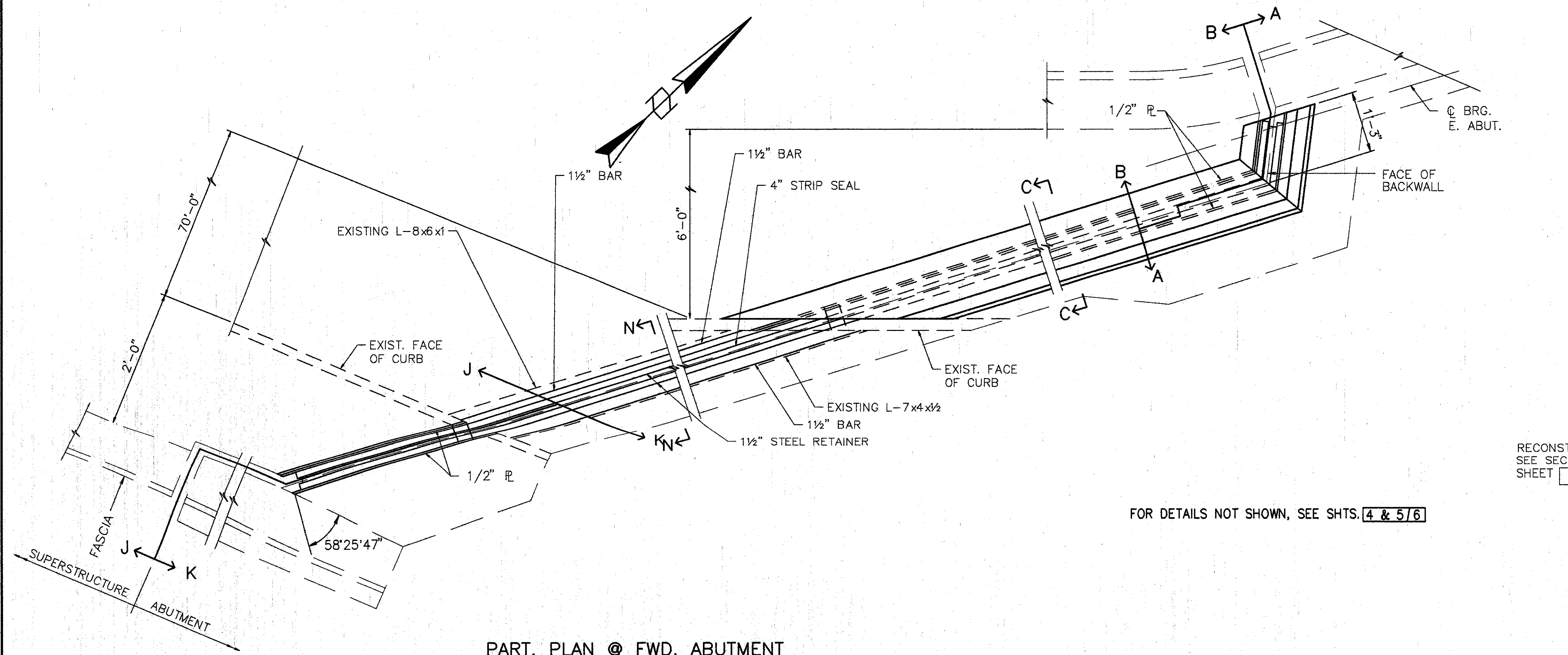
**MEDIAN CONCRETE PLAN**



	<b>WOOLPERT CONSULTANTS</b>	2/6
	409 E. MONUMENT AVENUE DAYTON, OHIO 45402-1226 (513) 461-5660	
	<b>MEDIAN PLAN</b>	

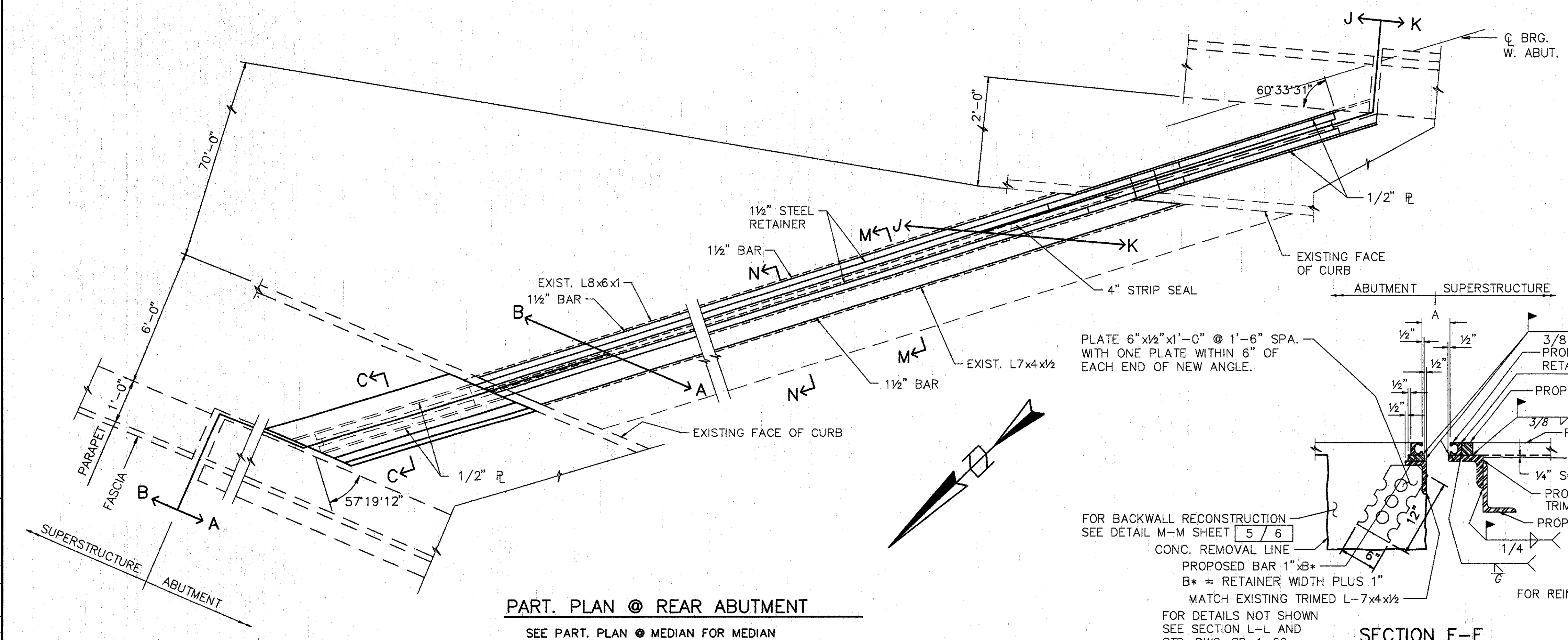
BRIDGE NO. HAM-22-0145 (HAM-71-0214)  
GILBERT AVENUE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
L.A.T.M.	Rach		M.A.A.	D.E.M.11/11/94		



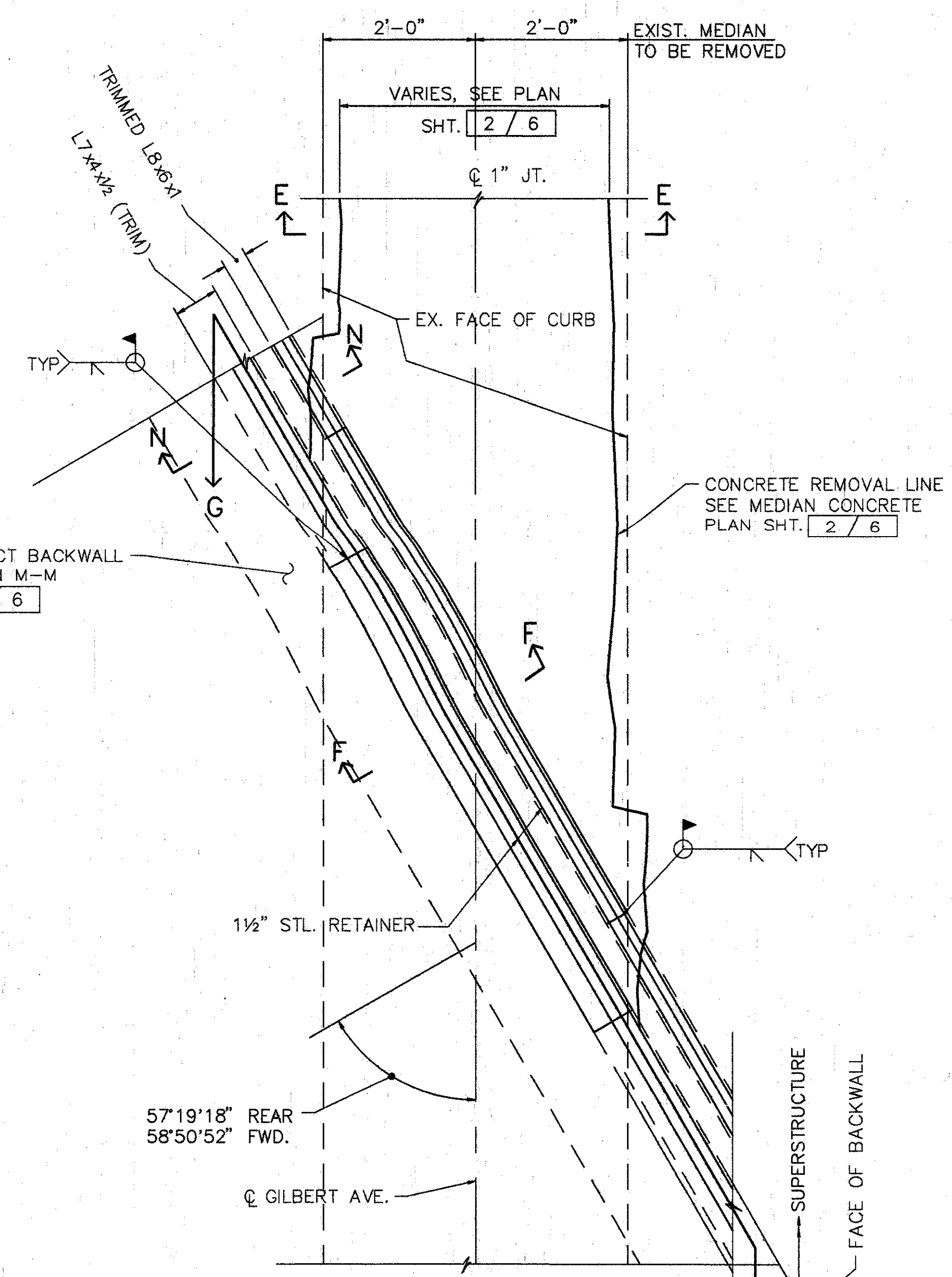
**PART. PLAN @ FWD. ABUTMENT**

SEE PART. PLAN @ MEDIAN FOR MEDIAN AND MEDIAN TREATMENT



**PART. PLAN @ REAR ABUTMENT**

SEE PART. PLAN @ MEDIAN FOR MEDIAN AND MEDIAN TREATMENT



**PART. PLAN MEDIAN @ REAR AND FORWARD ABUTMENTS**

REAR SHOWN, FWD. SIMILAR

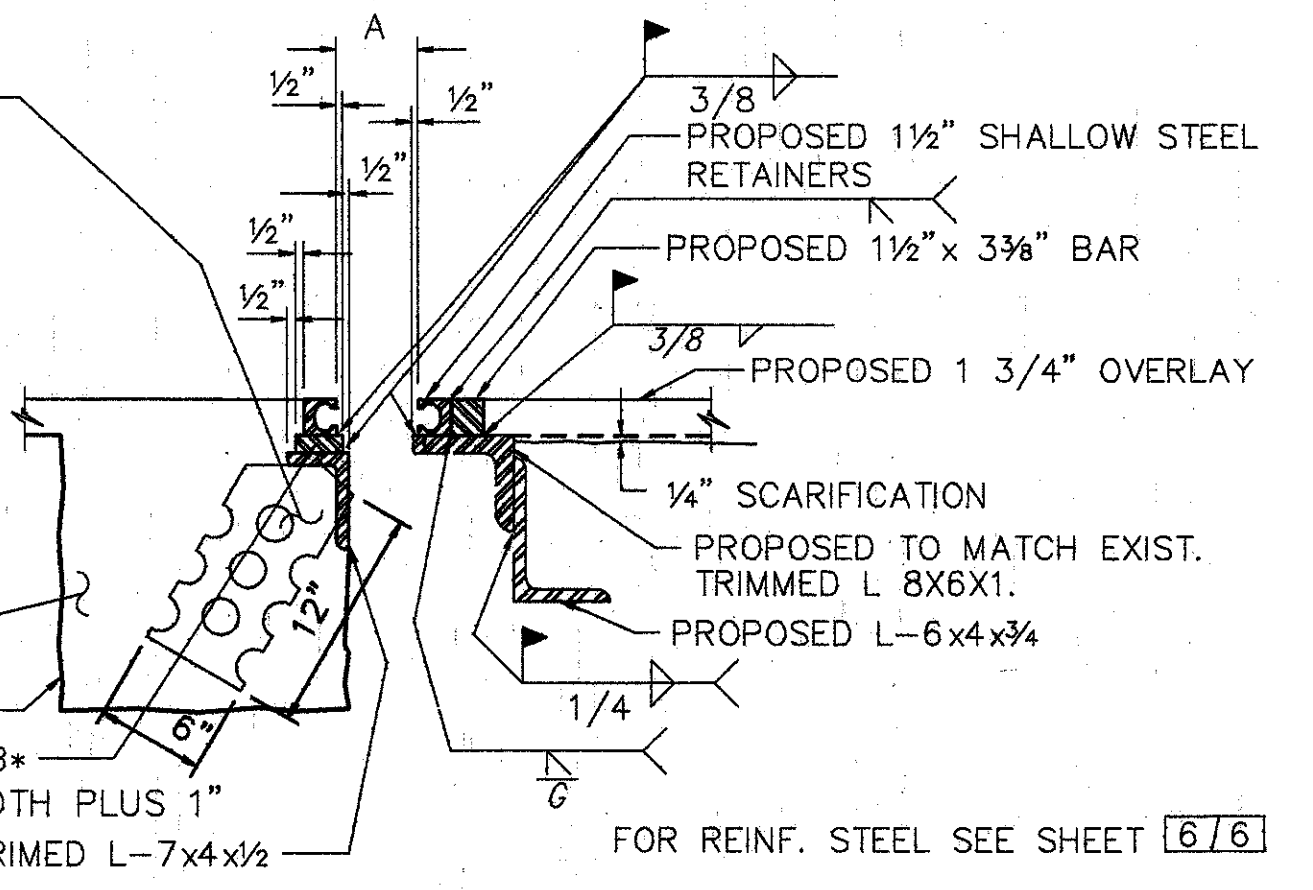
FOR DETAILS NOT SHOWN, SEE SHTS. 4 & 5/6

RECONSTRUCT BACKWALL  
 SEE SECTION M-M  
 SHEET 5/6

**NOTE:**  
 STOP STEEL RETAINER @ EXP. JT. IN ABUTMENT BACKWALL. PROVIDE BUTT JT. (NO WELD).

PLATE 6"x1/2"x1'-0" @ 1'-6" SPA. WITH ONE PLATE WITHIN 6" OF EACH END OF NEW ANGLE.

FOR BACKWALL RECONSTRUCTION SEE DETAIL M-M SHEET 5/6  
 CONC. REMOVAL LINE  
 PROPOSED BAR 1"x8"  
 B\* = RETAINER WIDTH PLUS 1"  
 MATCH EXISTING TRIMED L-7x4x1/2  
 FOR DETAILS NOT SHOWN SEE SECTION L-L AND STD. DWG. SD-1-69.



**SECTION F-F**

**WOOLPERT CONSULTANTS**  
 409 E. MONUMENT AVENUE  
 DAYTON, OHIO 45402-1226  
 (513) 461-5660

3/6

**PART PLANS @ ABUTMENTS**

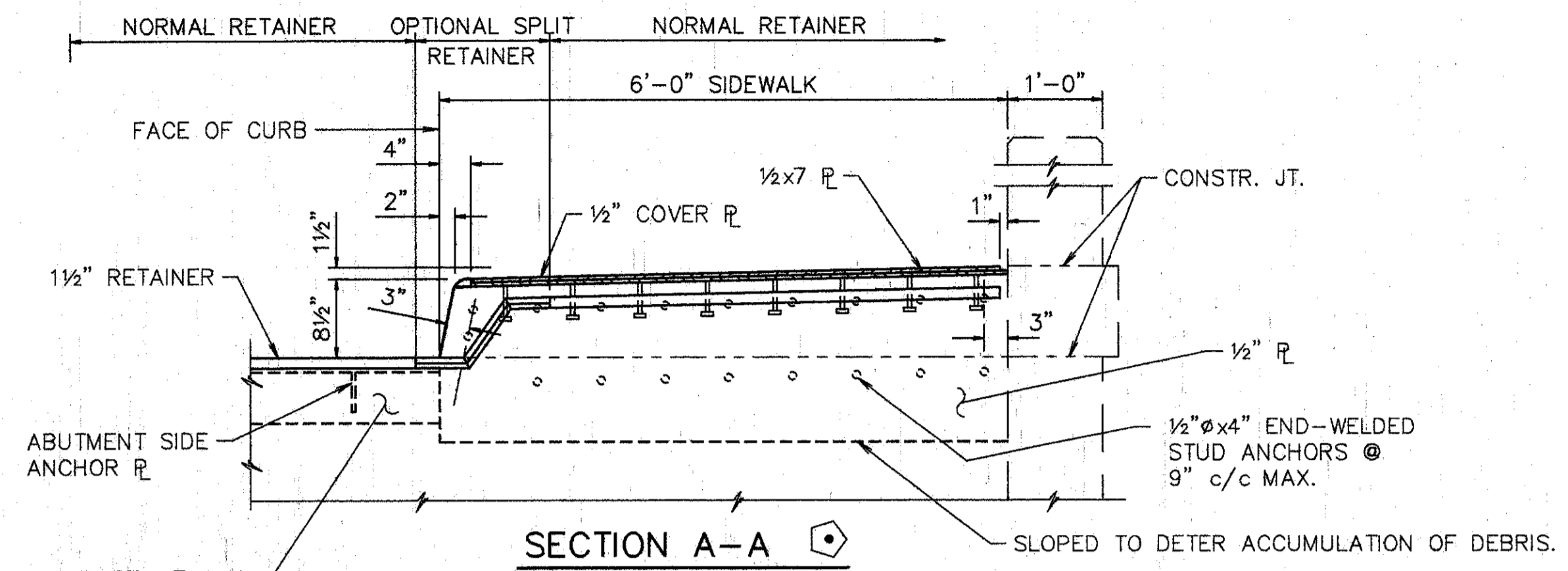
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 GILBERT AVENUE

HAMILTON COUNTY

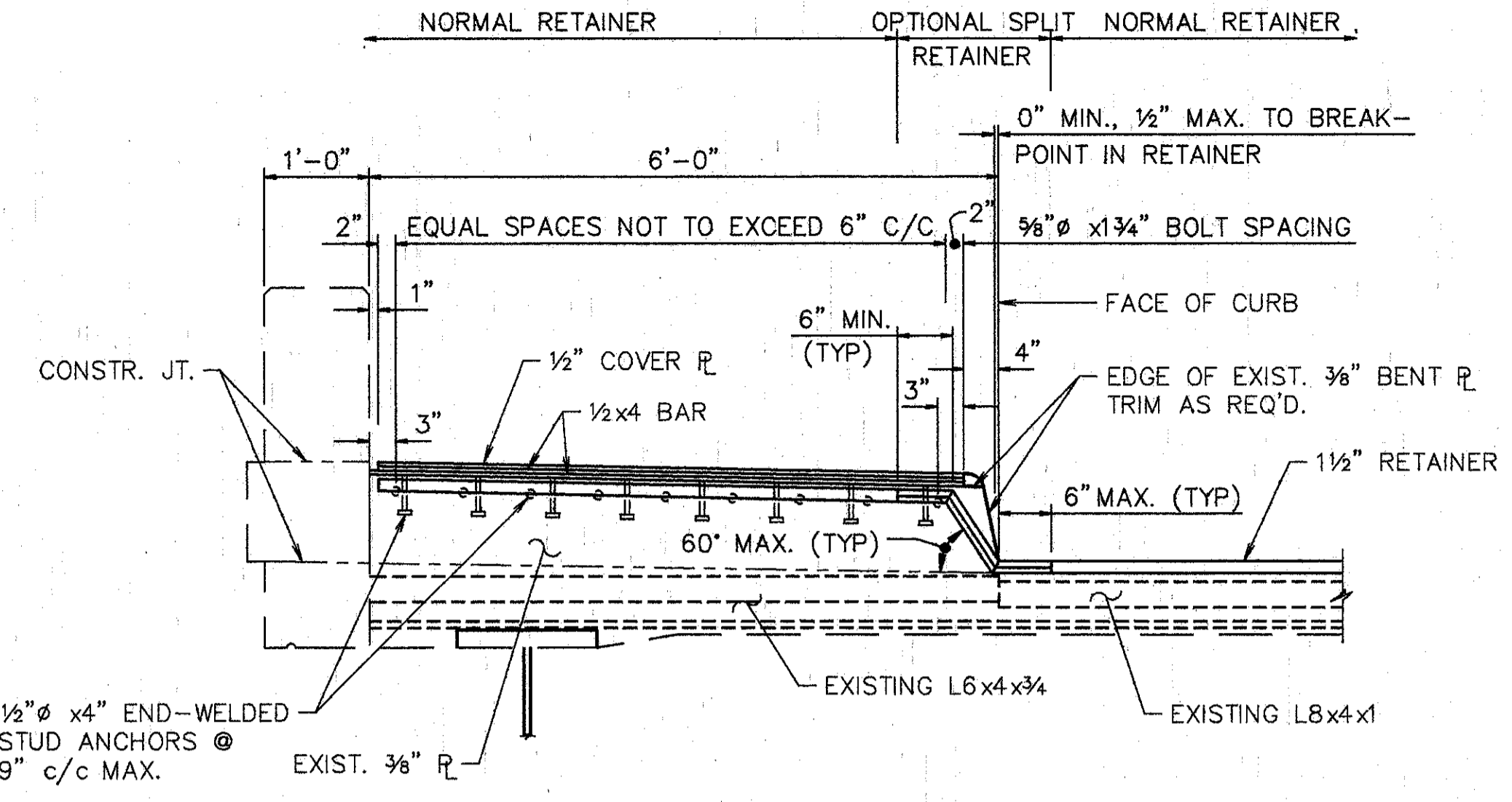
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L.A.T.M.	D.E.E.		M.A.A.	D.E.M1	11/94	

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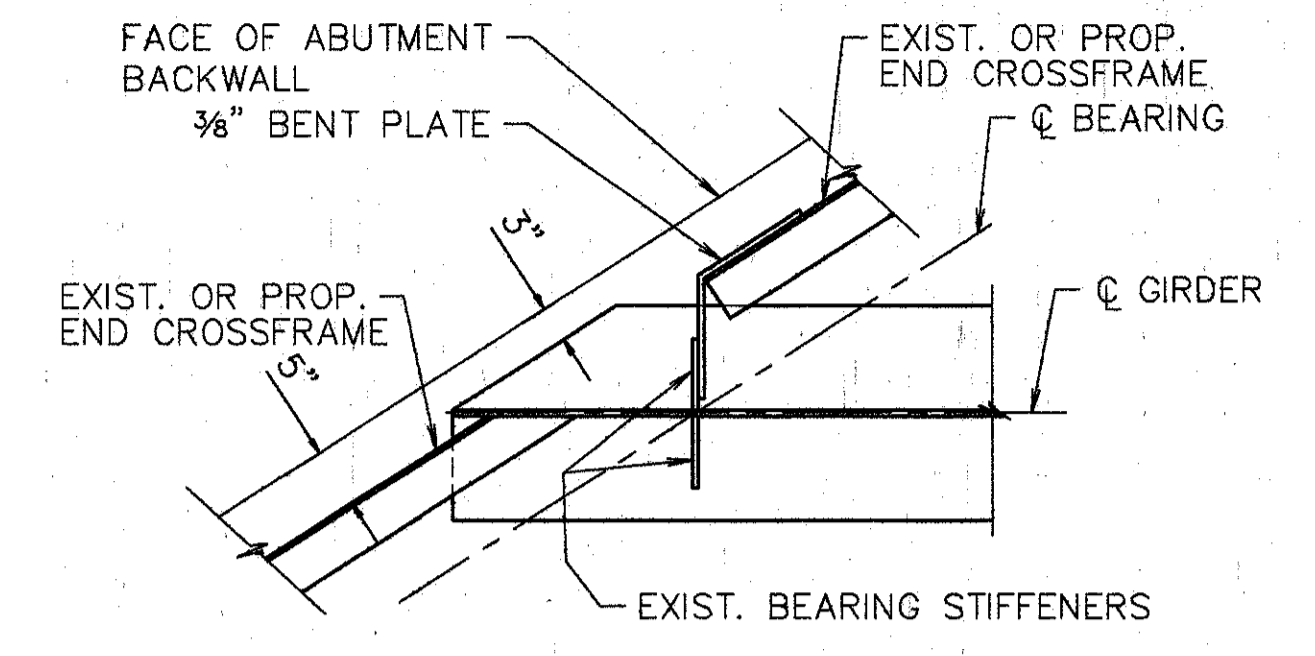




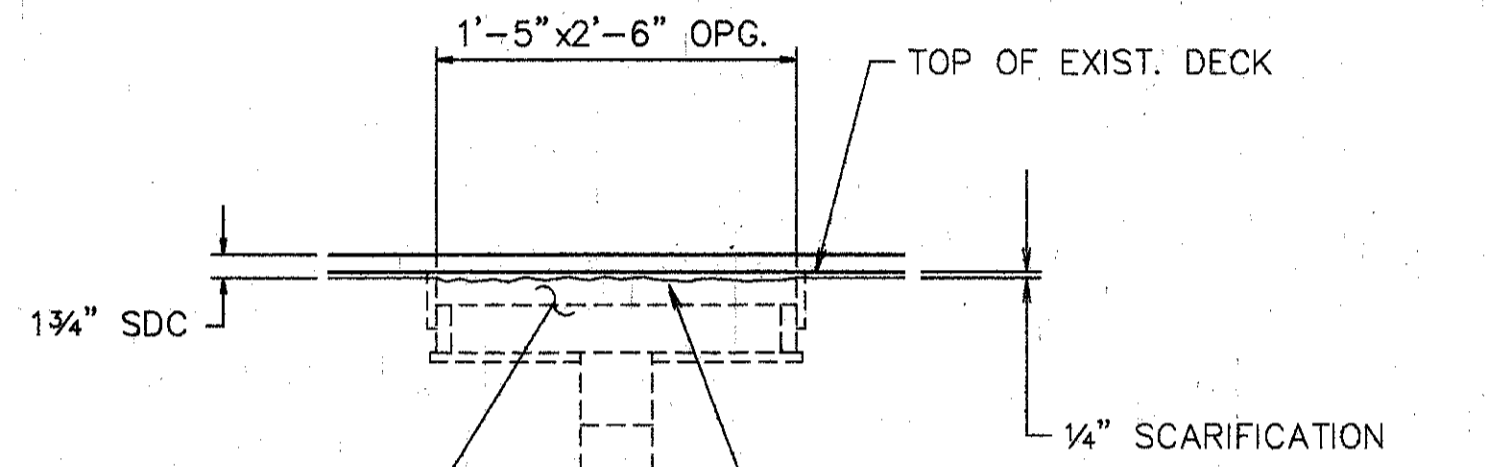
SECTION A-A  
 SLOPED TO DETER ACCUMULATION OF DEBRIS.  
 1/2" COVER PLATE  
 1/2" x 7" PLATE  
 1/2" x 4" END-WELDED STUD ANCHORS @ 9" C/C MAX.  
 1/2" RETAINER  
 1/2" x 4" BAR  
 1/2" x 1" BAR  
 1/2" x 2" BAR, IF REQUIRED TO MOVE RETAINER FURTHER FROM BENT PLATE, USE A THICKER 2" BAR.  
 EXISTING L6 x 4 x 3/4  
 1/2" x 4" BAR  
 1/2" STUD (TYP)  
 TOP OF SLAB CONSTR. JT.  
 1/2" x 2" BAR, IF REQUIRED TO MOVE RETAINER FURTHER FROM BENT PLATE, USE A THICKER 2" BAR.  
 EXISTING L6 x 4 x 3/4  
 EXISTING 3/8" BENT PLATE TRIM OR REPLACE, AS REQ'D.  
 4" STRIP SEAL  
 1/2" x 7" PLATE  
 1/2" COVER PLATE  
 1/2" x 1" BAR  
 1/2" x 4" BAR  
 1/2" STUD (TYP)  
 TOP OF SLAB CONSTR. JT.  
 1/2" x 2" BAR, IF REQUIRED TO MOVE RETAINER FURTHER FROM BENT PLATE, USE A THICKER 2" BAR.  
 EXISTING L6 x 4 x 3/4  
 EXISTING 3/8" BENT PLATE TRIM OR REPLACE, AS REQ'D.  
 4" STRIP SEAL



SECTION B-B  
 NOTE: REMOVE 3/8" BENT FORM PLATE  
 LEAVE L6 x 4 x 3/4 INTACT



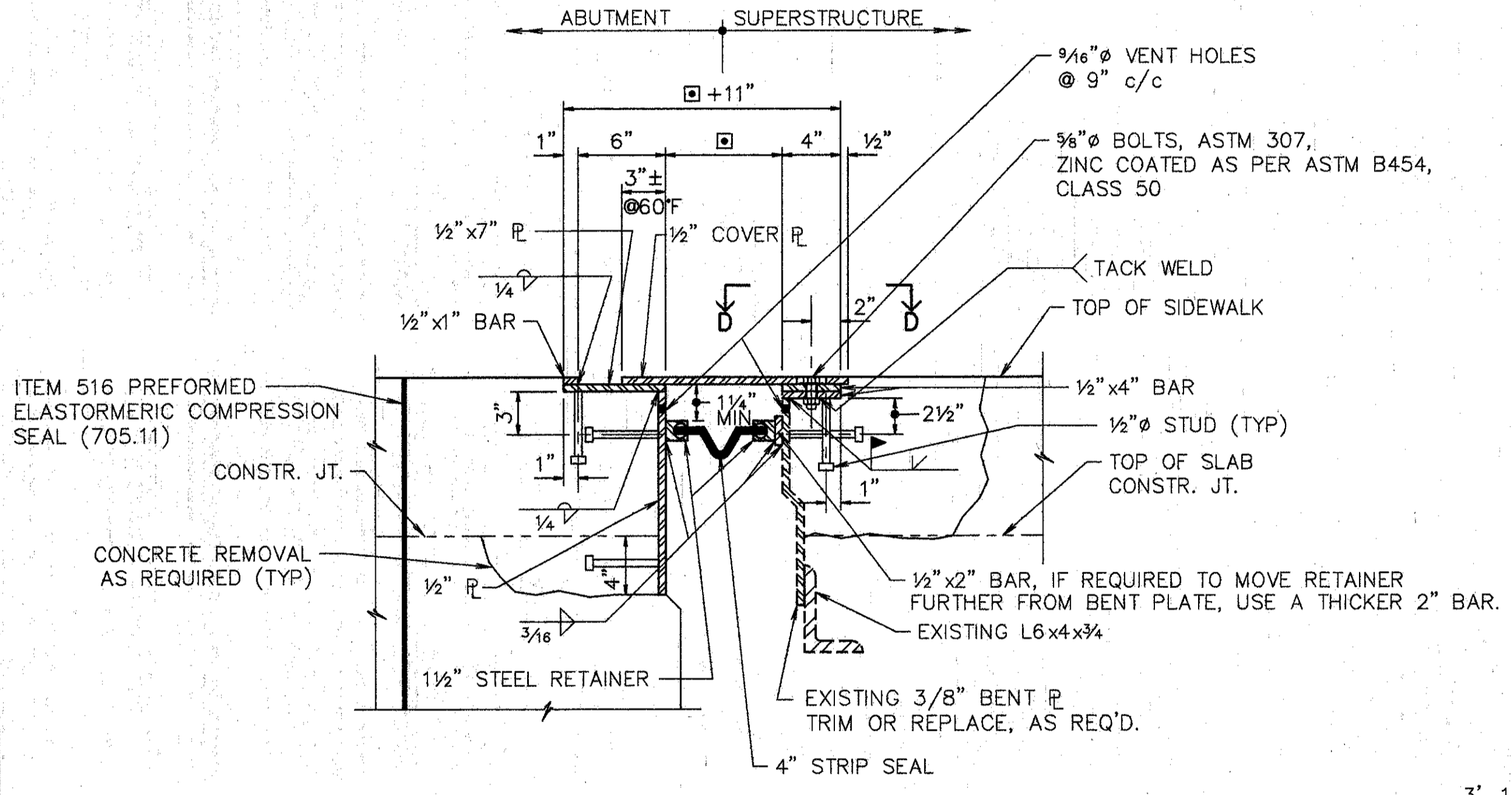
DETAIL A



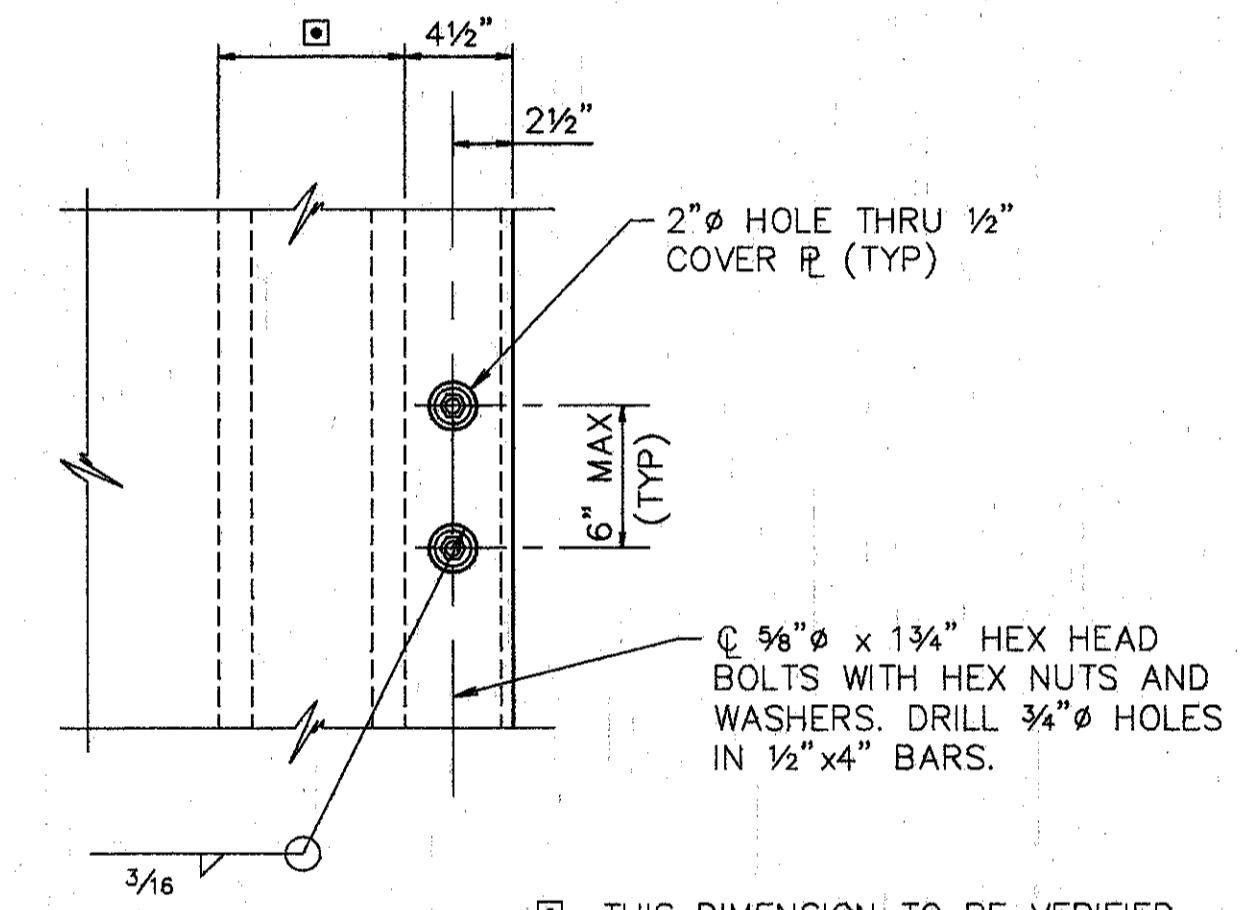
INLET ABANDONING  
 CLASS S CONCRETE, POUR TO SCARIFICATION ELEVATION, LEAVE SURFACE ROUGH  
 REMOVE PIPE TO 1'-0" BELOW GROUND LINE AND PLUG AS PER SECTION 202.09  
 REMOVE INLET GRATING AND PLUG AS PER SECTION 202.09, INCLUDED IN RECURRING DRAINAGE PIPE.

NOTES:

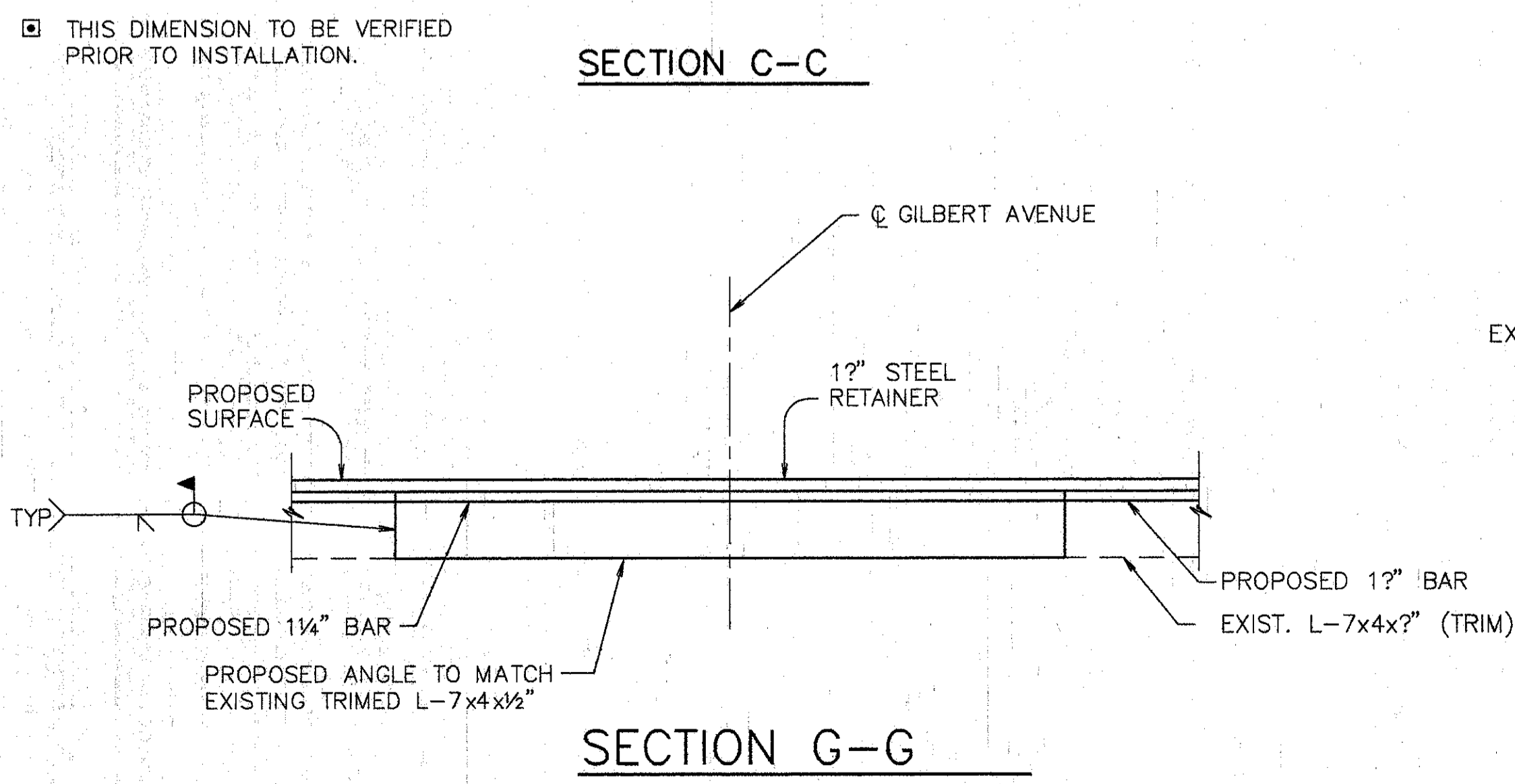
- STRUCTURAL STEEL FOR PROPOSED INTERMEDIATE CROSSFRAMES SHALL BE PAID FOR AS ITEM 513, STRUCTURAL STEEL FOR REHABILITATION. STRUCTURAL STEEL UNDER THIS ITEM WILL NOT REQUIRE SHOP DRAWINGS PRIOR TO FABRICATION. THE CONTRACTOR SHALL MAKE NECESSARY MEASUREMENTS AND PREPARE SKETCHES, DRAWINGS, TABLES, ETC. THE ENGINEER SHALL HAVE THE AUTHORITY AND RESPONSIBILITY FOR ENSURING THAT THE FABRICATED STEEL IS ACCEPTABLE. TECHNICAL ASSISTANCE WILL BE PROVIDED ON REQUEST BY THE BUREAU OF BRIDGES. MILL TEST REPORTS AND SHIPPING DOCUMENTS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL TO ENSURE THAT THE DRAWINGS DEPICT THE STEEL AS ACTUALLY INCORPORATED INTO THE WORK. THE ENGINEER WILL THEN SEND ONE APPROVED SET TO THE BUREAU OF BRIDGES FOR INFORMATION. PAY WEIGHTS SHALL BE COMPUTED IN COMPLIANCE WITH 513 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS AND SUBMITTED TO THE ENGINEER FOR HIS REVIEW AND APPROVAL. THE FABRICATOR SHALL FURNISH A 35 MILLIMETER MICROFILM COPY OF EACH SHOP DRAWING, WHICH SHALL BE MOUNTED ON A APERTURE CARD AS SPECIFIED IN 501.05.
- NEW STEEL SHALL BE PAINTED ACCORDING TO THE PROPOSAL NOTE 338 ENTITLED "PAINTING OF NEW STEEL, SYSTEM IZEU". COST FOR PAINTING SHALL BE INCLUDED WITH ITEM SPECIAL - PAINTING OF NEW STEEL, SYSTEM IZEU, FOR PAYMENT.



SECTION C-C

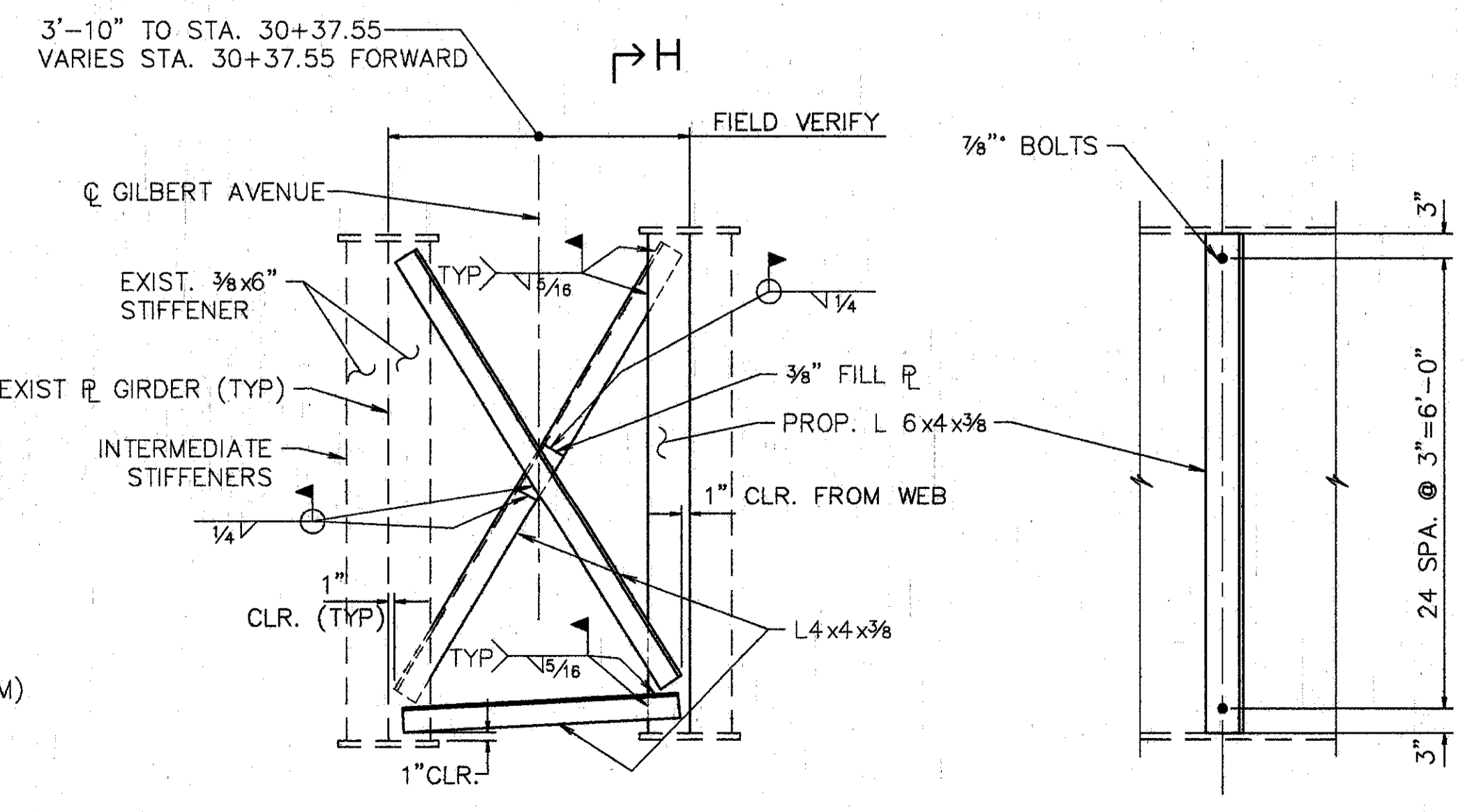


VIEW D-D

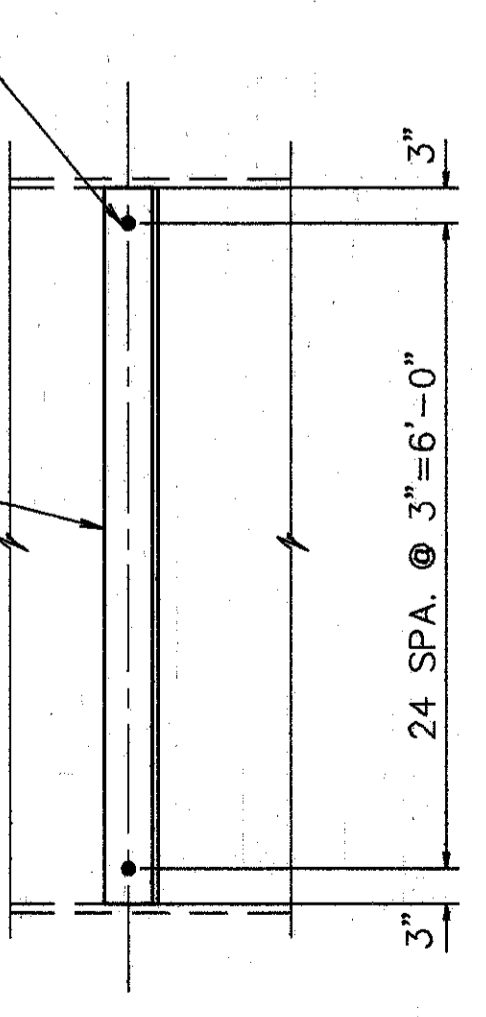


SECTION G-G

DISCONT. STEEL RETAINER AT EXP. JT. IN BACKWALL (TYP)



DETAIL E



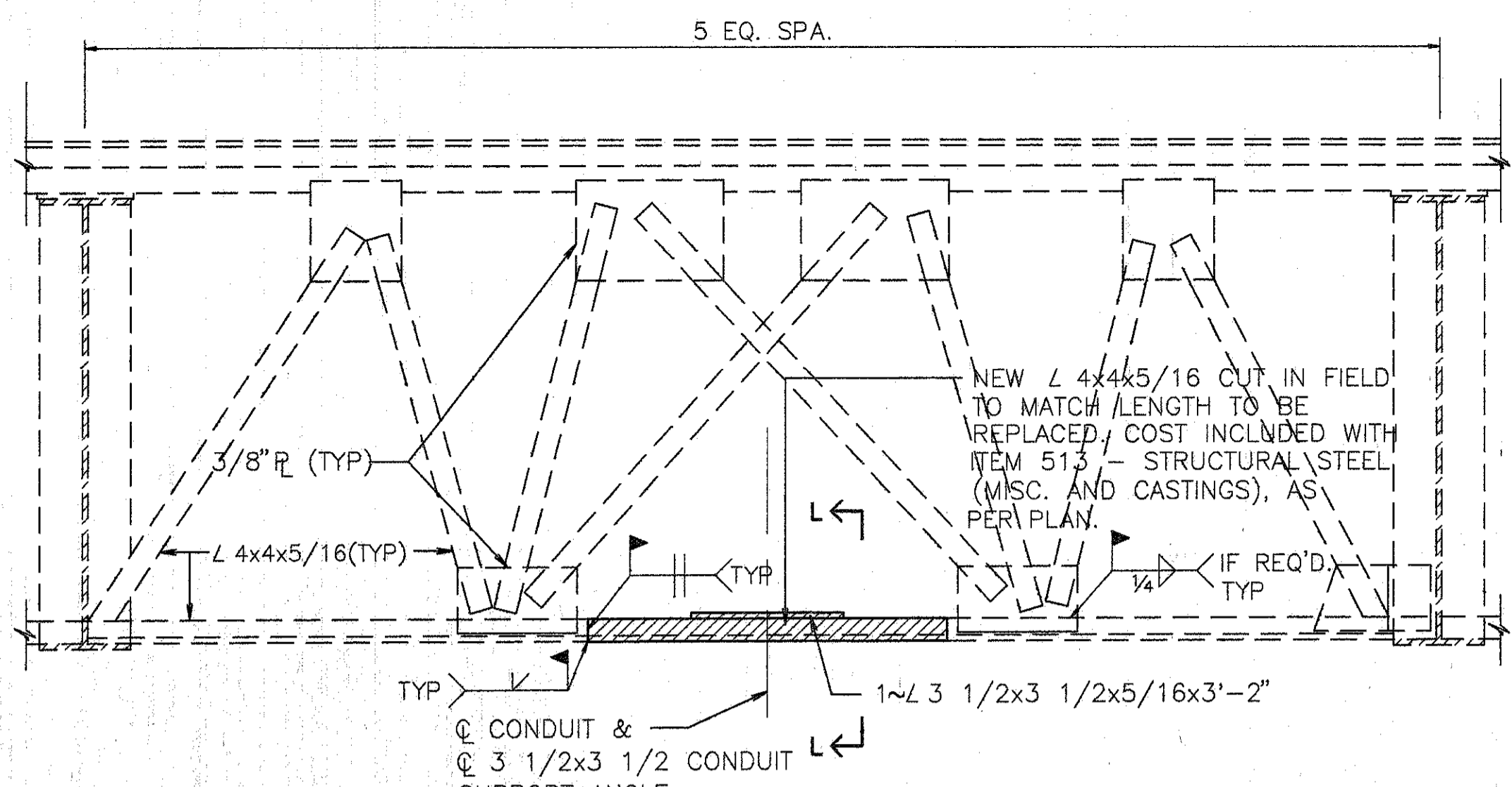
SECTION H-H

**WOOLPERT CONSULTANTS**  
 409 E. MONUMENT AVENUE  
 DAYTON, OHIO 45402-1226  
 (513) 461-5660

BRIDGE NO. HAM-22-0145 (HAM-71-0214)  
 GILBERT AVENUE  
 HAMILTON COUNTY

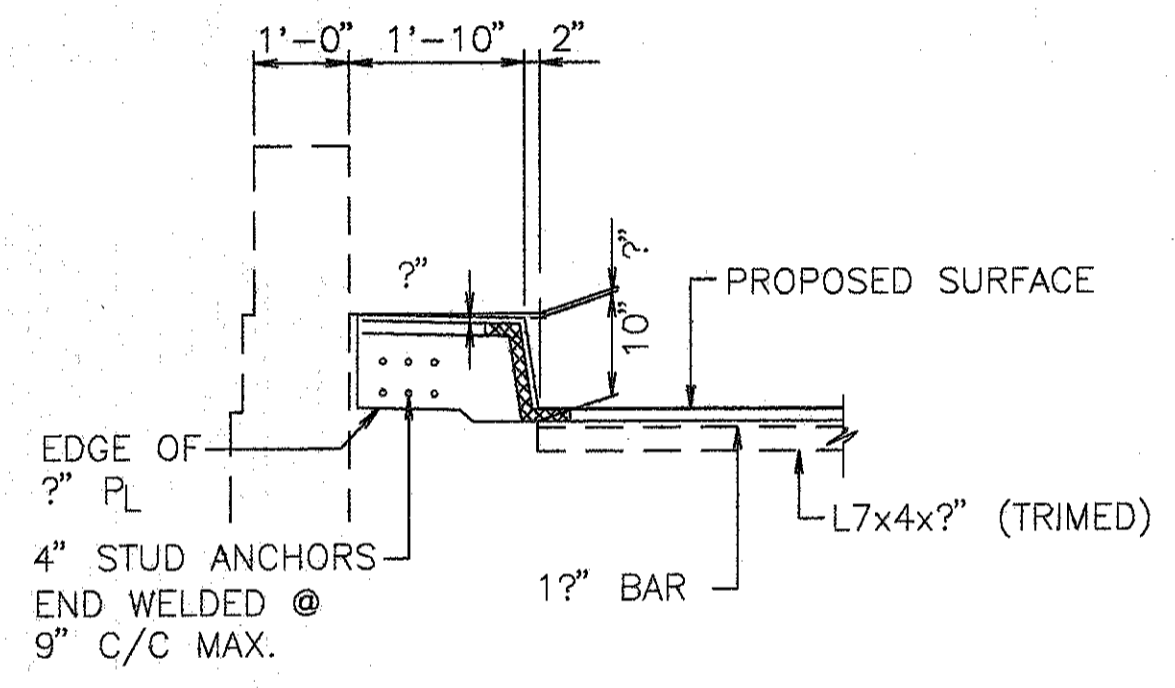
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISION
L.A.T.M.	D.E.E.		M.A.A.	D.E.M1/11/94		

Last File: JUN 20 1991 4:38 PM  
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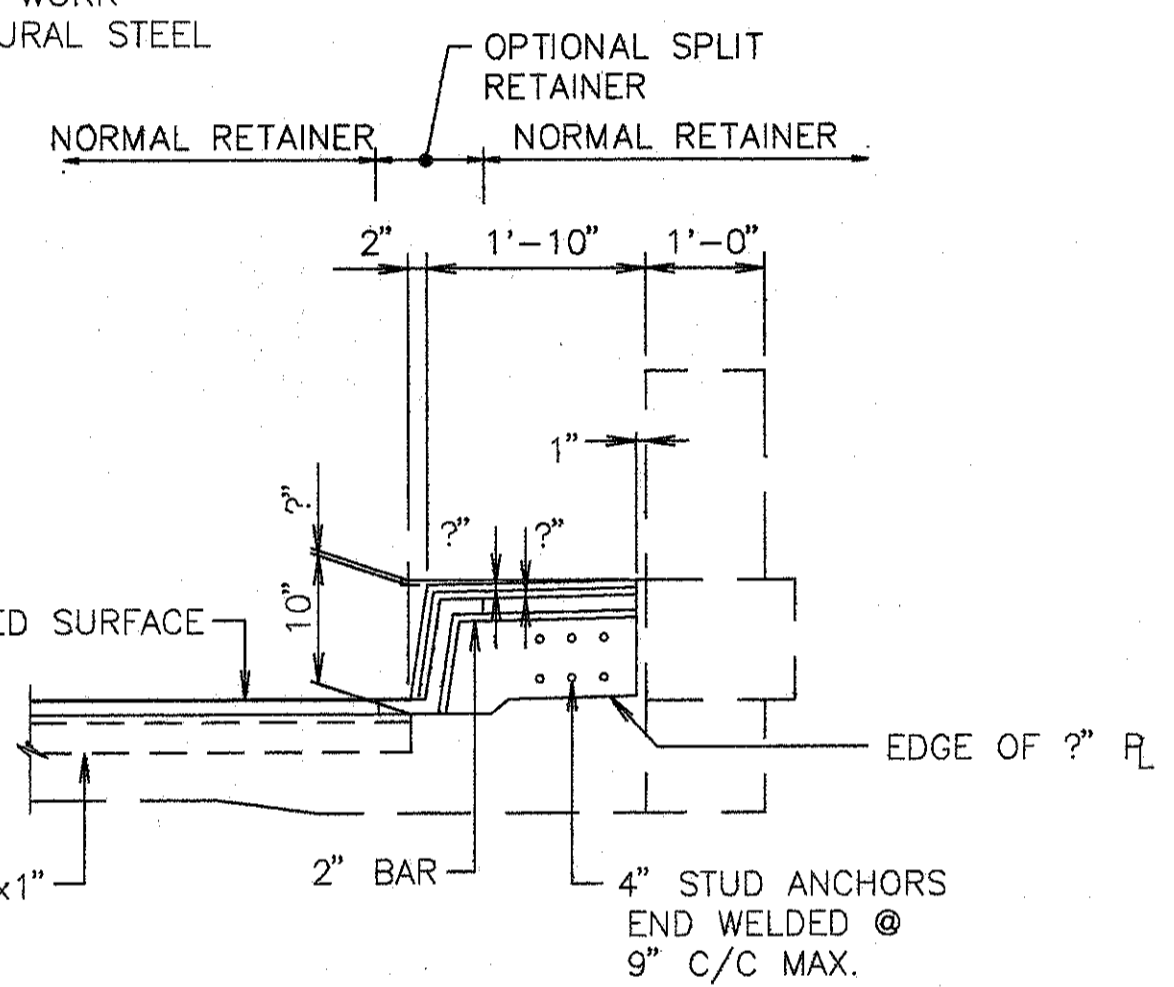
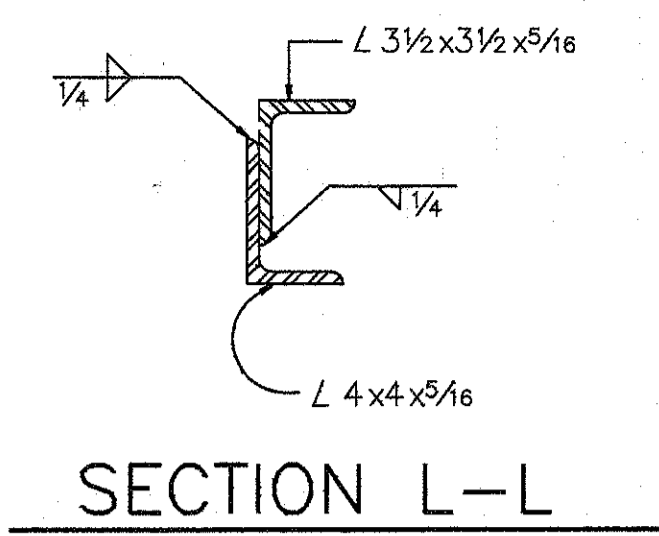


- NOTES:**
- CONTRACTOR IS TO CLEAN BOTTOM ANGLE AND REPLACE LENGTH OF ANGLE AS DIRECTED BY THE ENGINEER. SUPPORT EXIST. CONDUITS AS REQ'D.
  - PREPARE, PRIME, & PAINT BOTTOM ANGLES AS PER PROPOSAL NOTE "FIELD PAINTING OF EXIST. STEEL, USING EPOXY AND URETHANE (EPU)," AT LEAST 2" BEYOND NEW STEEL. ALL WORK TO BE INCLUDED IN PRICE BID FOR ITEM 513 - STRUCTURAL STEEL (MISC. AND CASTINGS), AS PER PLAN.

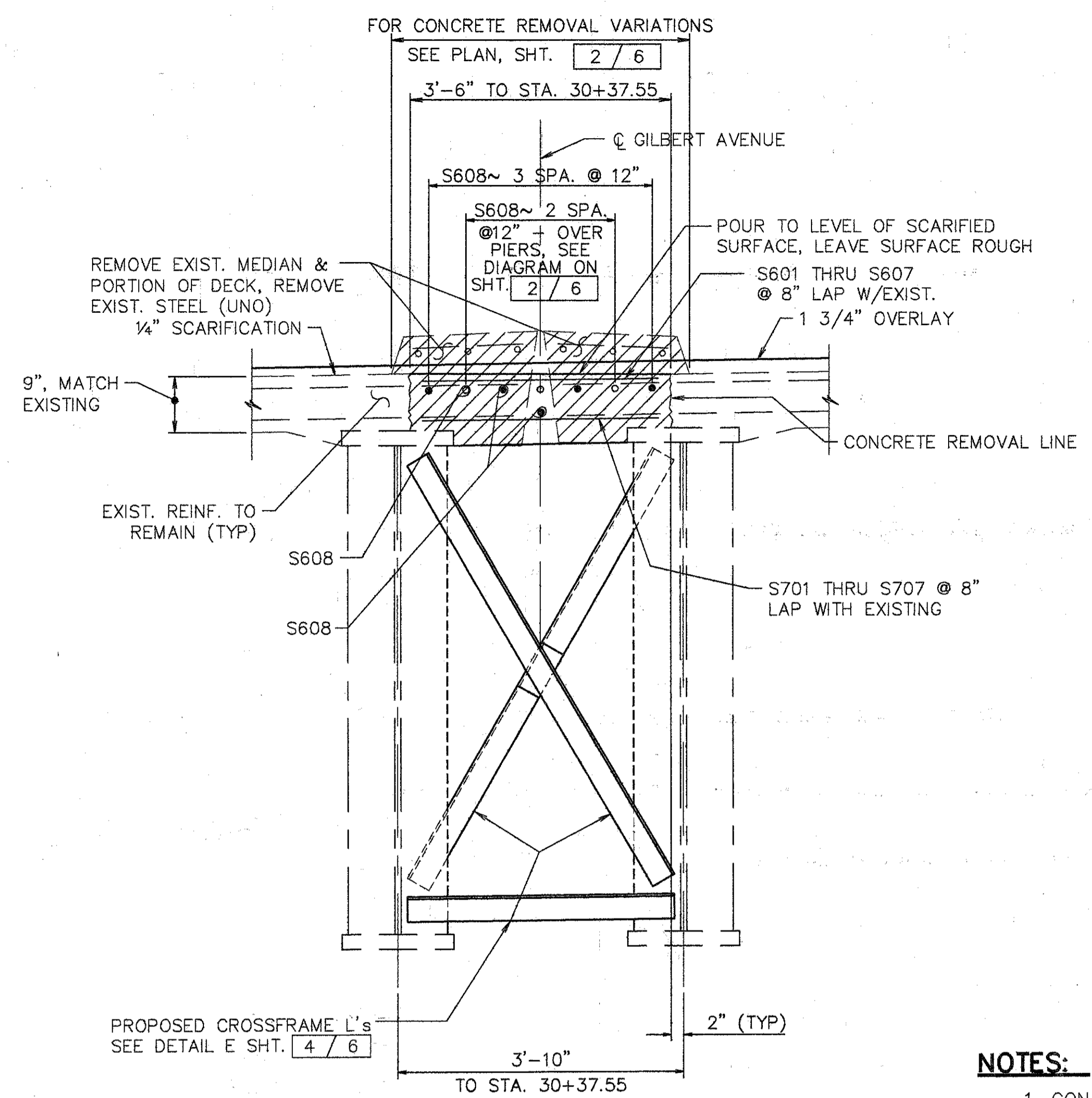
**END CROSSFRAME REPAIR**  
(FORWARD ABUTMENT ONLY)  
(2 TIMES)



**SECTION K-K**



**SECTION J-J**



NOTE: MIN. LAP FOR #6 BAR IS 2'-0"

**NOTES:**

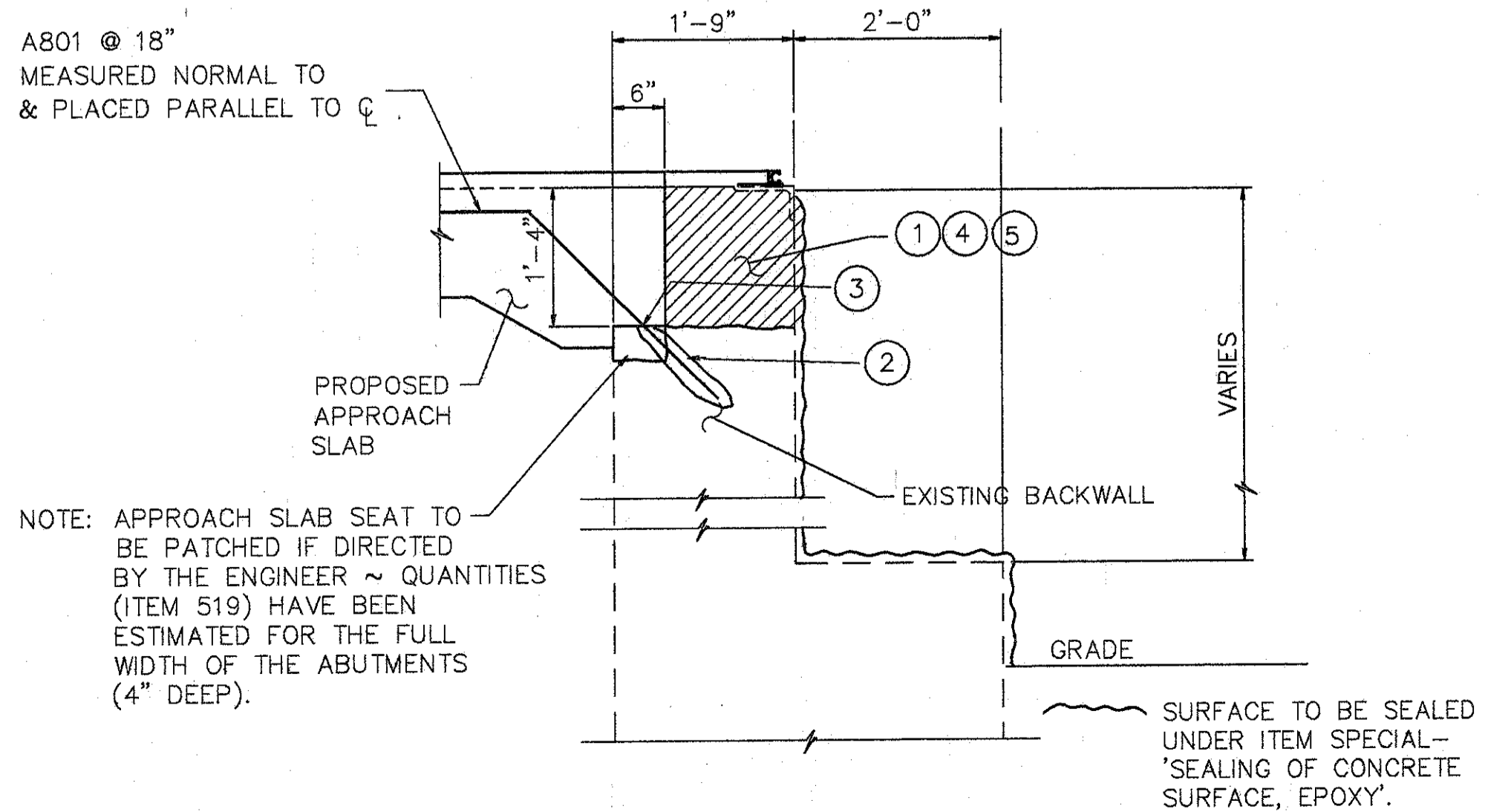
- CONTRACTOR TO VERIFY ALL DIMENSIONS PRIOR TO MODIFYING THE EXPANSION JOINT.
- THE PRICE BID FOR ITEM 516-'STRUCTURAL EXPANSION JOINTS, INCLUDING ELASTOMERIC STRIP SEALS', SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, AND ANY OTHER INCIDENTAL ITEMS, AS DETAILED. REMOVAL OF CURB OR PARAPET AS SHOWN SHALL BE INCLUDED UNDER ITEM 202-'PORTIONS OF STRUCTURE REMOVED'.
- FOR DETAILS NOT SHOWN REFER TO DRAWING EXJ-4-87 SHEETS 3 AND 4.
- STRIP SEAL TO BE INSTALLED IN ONE CONTINUOUS PIECE (NO OPEN JOINTS).
- PROVIDE TEMPORARY SUPPORT FOR ABUTMENT END DAM DURING CONSTRUCTION. REMOVE TEMPORARY SUPPORT AS SOON AS CONCRETE HAS SET, PREFERABLY WITHIN TWO HOURS AFTER PLACING TO AVOID DAMAGE DUE TO EXPANSION AND CONTRACTION OF SUPERSTRUCTURE.

**NOTES FOR SECTION M-M**

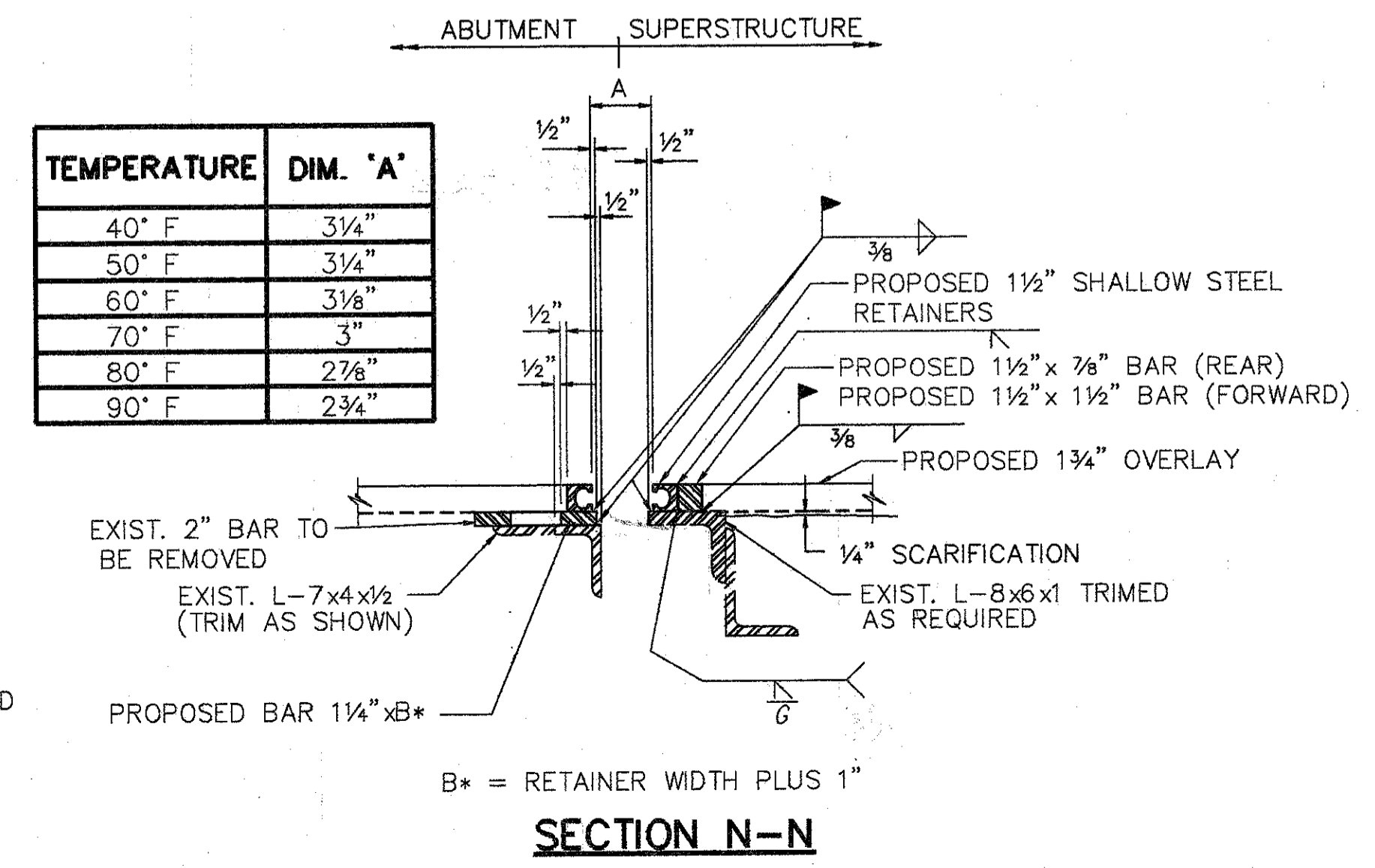
- EXISTING REINFORCING STEEL TO REMAIN ~ REINFORCING STEEL DAMAGED TO BE REPLACED AT CONTRACTORS EXPENSE.
- 1' MIN. EMBEDMENT (SEE DOWEL HOLE GENERAL NOTE) ITEM 510.
- TYPE 'A' WATERPROOFING (PAYMENT INCLUDED IN THE PRICE BID FOR APPROACH SLAB).
- CLASS 'C' CONCRETE, ABUTMENT RECONSTRUCTION.
- PROVIDE CONTRACTION AND EXPANSION JOINTS TO MATCH THOSE IN EXISTING BACKWALL AND PROVIDE CONSTRUCTION JOINTS AS REQUIRED TO MAINTAIN TRAFFIC. PAYMENT TO BE INCLUDED IN PRICE BID FOR ITEM 511 CLASS C CONCRETE RECONSTRUCTION.
- PROVIDE TEMPORARY SUPPORT FOR END DAM ANGLE AT ABUTMENT DURING CONSTRUCTION. REMOVE TEMPORARY SUPPORT AS SOON AS CONCRETE HAS SET, PREFERABLY WITHIN 2HRS. AFTER PLACING TO AVOID DAMAGE DUE TO EXPANSION AND CONTRACTION OF SUPERSTRUCTURE.

EXISTING CONCRETE TO BE REMOVED INCLUDE IN ITEM 202 FOR PAYMENT.

SURFACE TO BE SEALED UNDER ITEM SPECIAL- 'SEALING OF CONCRETE SURFACE, EPOXY'.



**SECTION M-M**



**WOOLPERT CONSULTANTS**  
409 E. MONUMENT AVENUE  
DAYTON, OHIO 45402-1226  
(513) 461-5660

**MISCELLANEOUS DETAILS**

BRIDGE NO. HAM-22-0145 (HAM-71-0214)  
GILBERT AVENUE

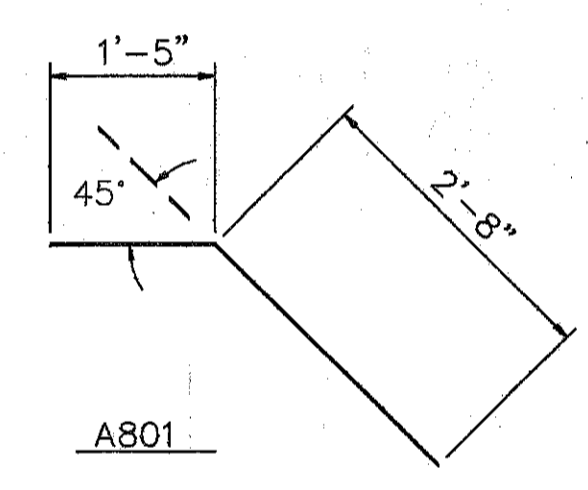
HAMILTON COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
L.A.T.M.	D.E.E.		M.A.A.	D.E.M	11'11'94	

L.M. Plot: JAN. 20, 1991 @ 5:00 PM  
 C:\STR\6666-CO\ASR\AND\DETAILS\END Crossframe Repair.dwg



REINFORCING STEEL LIST				
MARK	SHAPE	NUMBER	LENGTH	WEIGHT
S601	STR.	4	6'-3"	38
S602	STR.	4	18'-0"	108
S603	STR.	250	3'-4"	1252
S604	STR.	10	3'-4" TO 3'-8"	53
S605	STR.	145	3'-8" TO 5'-8"	1017
S606	STR.	7	1'-4" TO 5'-1"	34
S607	STR.	3	1'-4" TO 2'-8"	9
S608	STR.	56	30'-0"	2523
S701	STR.	4	6'-3"	51
S702	STR.	4	18'-0"	147
S703	STR.	250	3'-4"	1703
S704	STR.	10	3'-4" TO 3'-8"	72
S705	STR.	145	3'-8" TO 5'-8"	1384
S706	STR.	7	1'-4" TO 5'-1"	46
S707	STR.	3	1'-4" TO 2'-8"	12
A801	BNT.	96	4'-0"	1025
				9474
REPLACEMENT STEEL				600
<b>TOTAL</b>				<b>10074</b>




ITEM	ITEM EXT.	TOTAL	UNITS	DESCRIPTION
202	11200	LUMP SUM	L.S.	PORTIONS OF STRUCTURES REMOVED
<del>513</del>	<del>21000</del>	<del>13</del>	<del>EACH</del>	<del>TRIMMING OF BEAM END</del>
509	15820	10074	LBS.	EPOXY COATED REINFORCING STEEL, GRADE 60
510	12201	96	L.F.	DOWEL HOLES AS PER PLAN
511	34400	38	C.Y.	CLASS S CONCRETE, SUPERSTRUCTURE (RECONSTRUCTION) *
511	45700	19	C.Y.	CLASS C CONCRETE, ABUTMENT (RECONSTRUCTION)
SPECIAL	51267500	1319	S.Y.	SEALING OF CONCRETE SURFACE *
SPECIAL	51267502	1035	S.Y.	SEALING OF CONCRETE SURFACE (EPOXY) *
<del>516</del>	<del>14600</del>	<del>50</del>	<del>L.F.</del>	<del>STRUCTURAL JOINT OR JOINT SEALER, MISC.: 2" x 4" SEALER, AS PER PLAN</del>
513	15501	300	LBS.	STRUCTURAL STEEL (MISC. AND CASTING), AS PER PLAN
513	16000	5800	LBS.	STRUCTURAL STEEL FOR REHABILITATION
<del>514</del>	<del>00610</del>	<del>5800</del>	<del>LBS.</del>	<del>FIELD PAINTING OF NEW STEEL, SYSTEM IZEU*</del>
514	27704	LUMP	L.S.	FIELD PAINTING, MISC: EXISTING STEEL, EEU *
<del>516</del>	<del>45304</del>	<del>20</del>	<del>EACH</del>	<del>REFURBISH BEARING DEVICE</del>
516	10000	30	L.F.	PREFORMED ELASTOMERIC COMPRESSION JOINT SEAL (705.11)
<del>516</del>	<del>14600</del>	<del>100</del>	<del>L.F.</del>	<del>SEAL JOINT BETWEEN ABUTMENT AND CONCRETE SLOPE PROTECTION</del>
516	11210	320	L.F.	STRUCTURAL EXP. JT., INCLUDING ELASTOMERIC STRIP SEAL
<del>516</del>	<del>45307</del>	<del>1</del>	<del>EACH</del>	<del>REFURBISH BEARING DEVICE, AS PER PLAN</del>
518	12800	3	EACH	SCUPPER MODIFICATION
519	11100	235	S.F.	PATCHING CONCRETE STRUCTURE
SPECIAL	51912600	32	L.F.	CONCRETE REPAIR BY EPOXY INJECTION *
<del>845</del>	<del>40210</del>	<del>1976</del>	<del>S.Y.</del>	<del>LATEX MODIFIED CONCRETE OVERLAY (1 3/4" THICK) ON EXISTING DECK</del>
<del>845</del>	<del>11000</del>	<del>81</del>	<del>C.Y.</del>	<del>LATEX MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS)</del>
<del>845</del>	<del>30000</del>	<del>2</del>	<del>C.Y.</del>	<del>FULL DEPTH REPAIR</del>
518	63300	LUMP	L.S.	SCUPPER AND DRAINAGE PIPE CLEANOUT
601	21100	4	S.Y.	REPAIR CONCRETE SLOPE PROTECTION

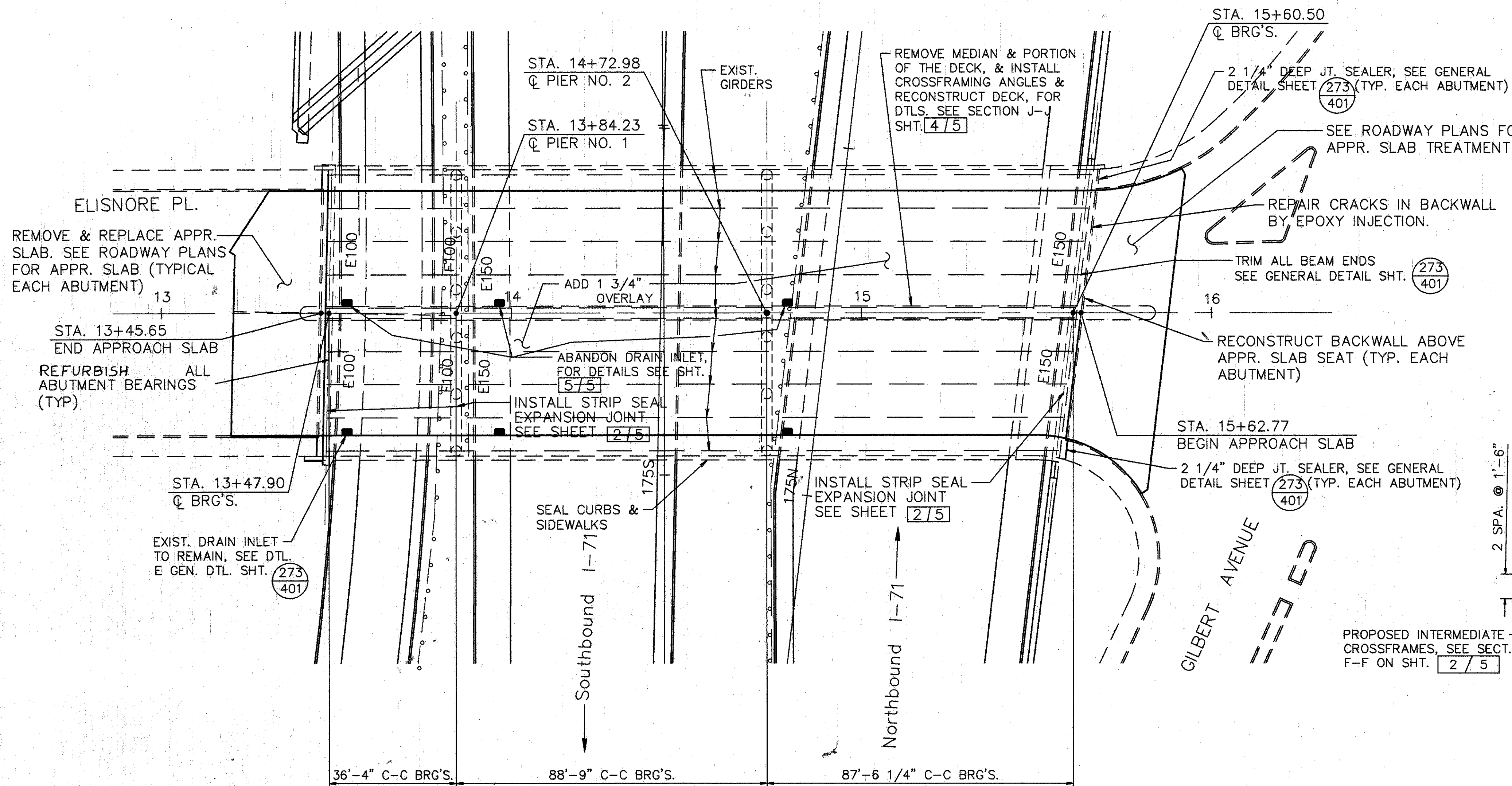
PROPOSED WORK

- SCARIFY EXISTING DECK 1/4" AND REMOVE DETERIORATED CONCRETE AS DIRECTED BY ENGINEER. (REMOVE LOOSE END DAM MATERIAL)
- REMOVE CONCRETE MEDIAN AND PORTION OF THE BRIDGE DECK. PLACE CROSSFRAME ANGLES AND RECONSTRUCT DECK.
- PLACE 1 3/4" THICK LATEX MODIFIED CONCRETE ON DECK.
- SEAL CURBS, PARAPETS, SIDEWALKS, PIERS, AND BACKWALLS.
- RECONSTRUCT BACKWALLS ABOVE APPROACH SLAB SEAT. PATCH APPROACH SLAB SEAT IF DIRECTED BY THE ENGINEER.
- SEAL TRANSVERSE EXPANSION JOINTS WITH STRIP SEAL.
- REPAIR BOTTOM CROSSFRAME ANGLES BETWEEN BEAMS 7 AND 8 AND BEAMS 8 AND 9 AT EAST ABUTMENT (FORWARD).
- REFURBISH ALL ABUTMENT BEARINGS.
- AT LEAST ONE LANE OF TRAFFIC SHALL BE MAINTAINED IN EACH DIRECTION AND ON THE BRIDGE AT ALL TIMES. FOR NOTES SEE MAINTENANCE OF TRAFFIC PLANS. MAINTENANCE OF TRAFFIC PLANS REQUIRES CONSTRUCTION PHASING LIMITS AT LANE CENTERLINES. DUE TO THESE LIMITS, OVERLAY AND ABUTMENT BACKWALL RECONSTRUCTION MAY REQUIRE SPECIAL ATTENTION.
- OTHER WORK AS DESCRIBED IN THESE PLANS.

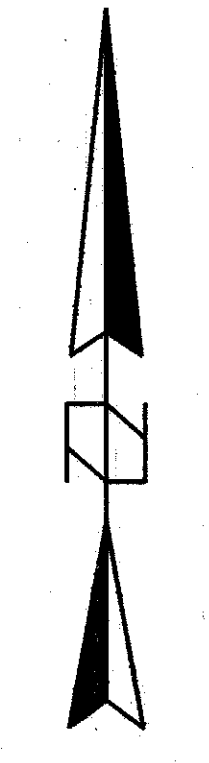
\* SEE PROPOSAL NOTE

Lot Plot J.N. 20, 1991 @ 5:09 PM  
 C:\STR\9459-CV\SHLAND\045591B.Cad Revision By: RACH MAY 15, 1994 @ 8:25 AM

 <b>WOOLPERT CONSULTANTS</b> 409 E. MONUMENT AVENUE DAYTON, OHIO 45402-1226 (513) 461-5660		6 / 6				
<b>QUANTITIES AND GENERAL NOTES</b> BRIDGE NO. HAM-22-0145 (HAM-71-0214) GILBERT AVENUE HAMILTON COUNTY						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
L.A.T.M.	D.E.E.		M.A.A.	D.E.M11/11/94		

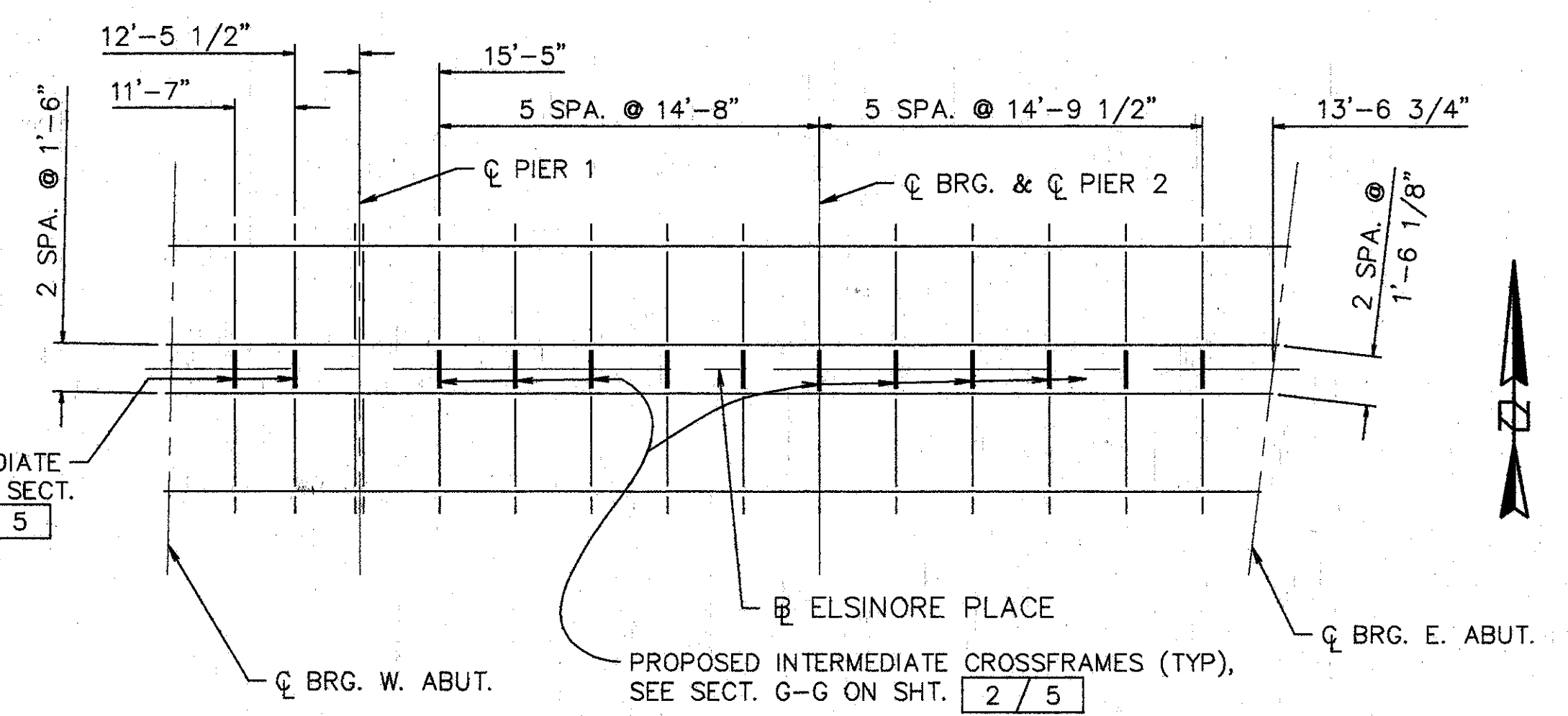


**PLAN**

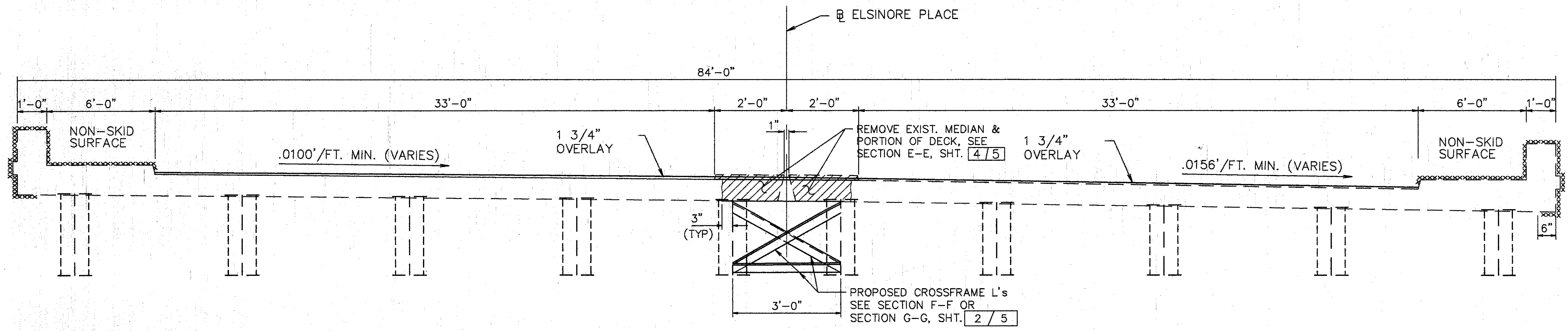


- NOTES:
1. SEAL CURBS, SIDEWALKS, PARAPETS, BACKWALLS, PIERS. SEAL PIER 1 COMPLETELY WITH EPOXY SEALER, EXCEPT 1/4 OF THE COLUMN CIRCUMFERENCE AWAY FROM THE DIRECTION OF TRAFFIC. SEAL PIER 2 COMPLETELY EXCEPT FOR THE TOP OF PIER CAP.
  2. MODIFY DRAINAGE PIPING, SEE DETAILS SHT. 5/5

FIXED OR SLIDING R SIZE	JACK CAPACITY REQ'D. (MIN.)
E100	75 TON
E150	125 TON
F150	125 TON



**FRAMING PLAN**



**TYP. BRIDGE SECTION**

xxxx SURFACES TO BE SEALED UNDER ITEM SPECIAL-SEALING OF CONCRETE SURFACES.

**EXISTING STRUCTURE**

TYPE: SIMPLE SPAN STEEL BEAM (SPAN 1) AND CONT. PLATE GIRDER (SPANS 2 & 3) W/REINF. CONCRETE DECK AND SUBSTRUCTURE  
 SPANS: 36'-4", 88'-9", 87'-6 1/4" C-C BRG'S (MEASURED ALONG BASELINE)  
 ROADWAY: 33'-0" F-F CURBS W/ 4'-0" MEDIAN AND TWO 6'-0" SIDEWALKS  
 SKEW: VARIES, SEE PLAN.  
 LOADING FREQUENCY: C.F.=2000 (57)  
 WEARING SURFACE: 1" MONOLITHIC CONCRETE  
 APPROACH SLABS: AS-1-54 (25'-0" LONG)  
 ALIGNMENT: TANGENT  
 SUPERELEVATION: VARIES

**WOOLPERT CONSULTANTS**  
 409 E. MONUMENT AVENUE  
 DAYTON, OHIO 45402-1226  
 (513) 461-5660

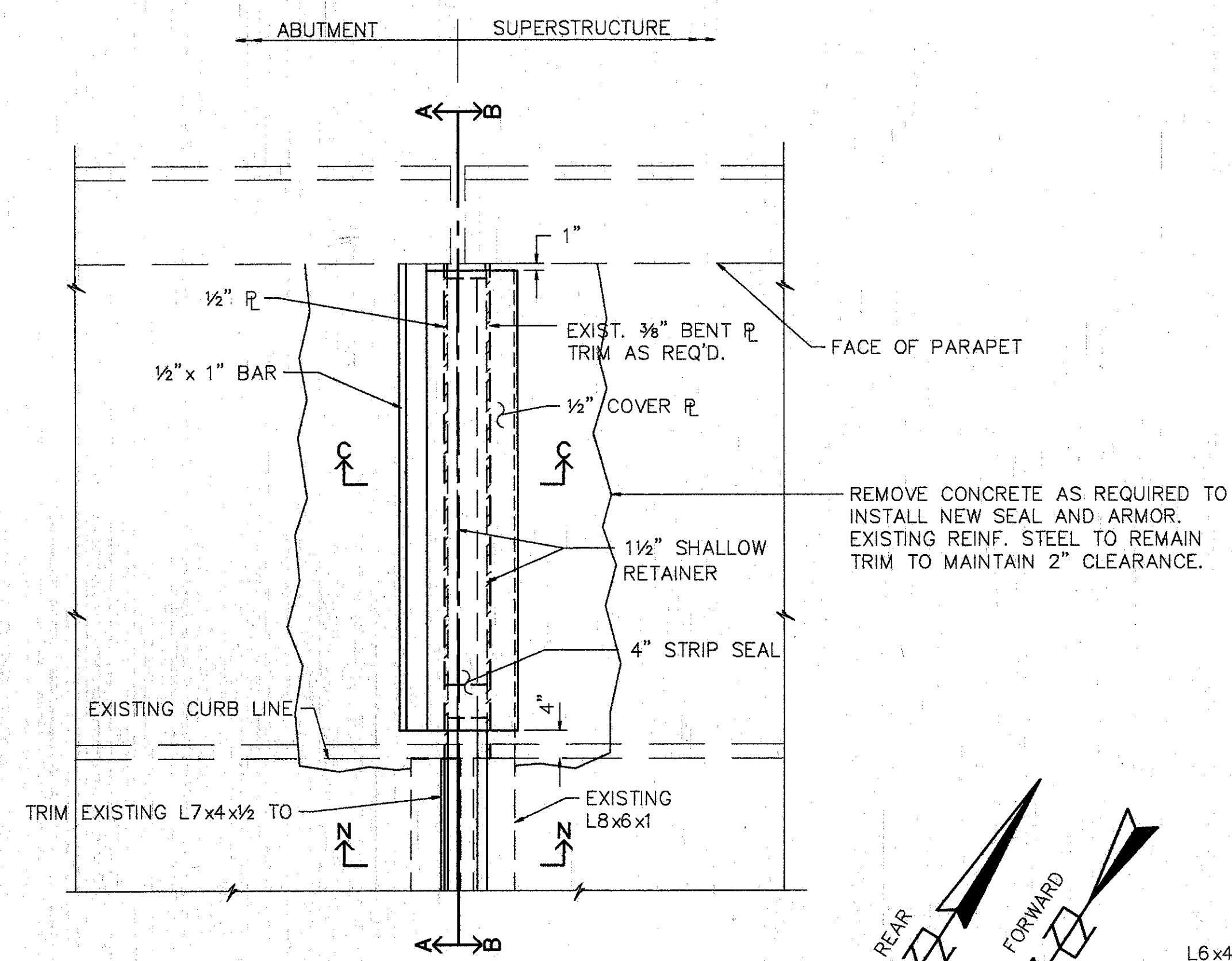
**GENERAL PLAN**

BRIDGE NO. HAM-71-0221 ELSINORE AVE.  
 OVER INTERSTATE ROUTE 71  
 HAMILTON COUNTY

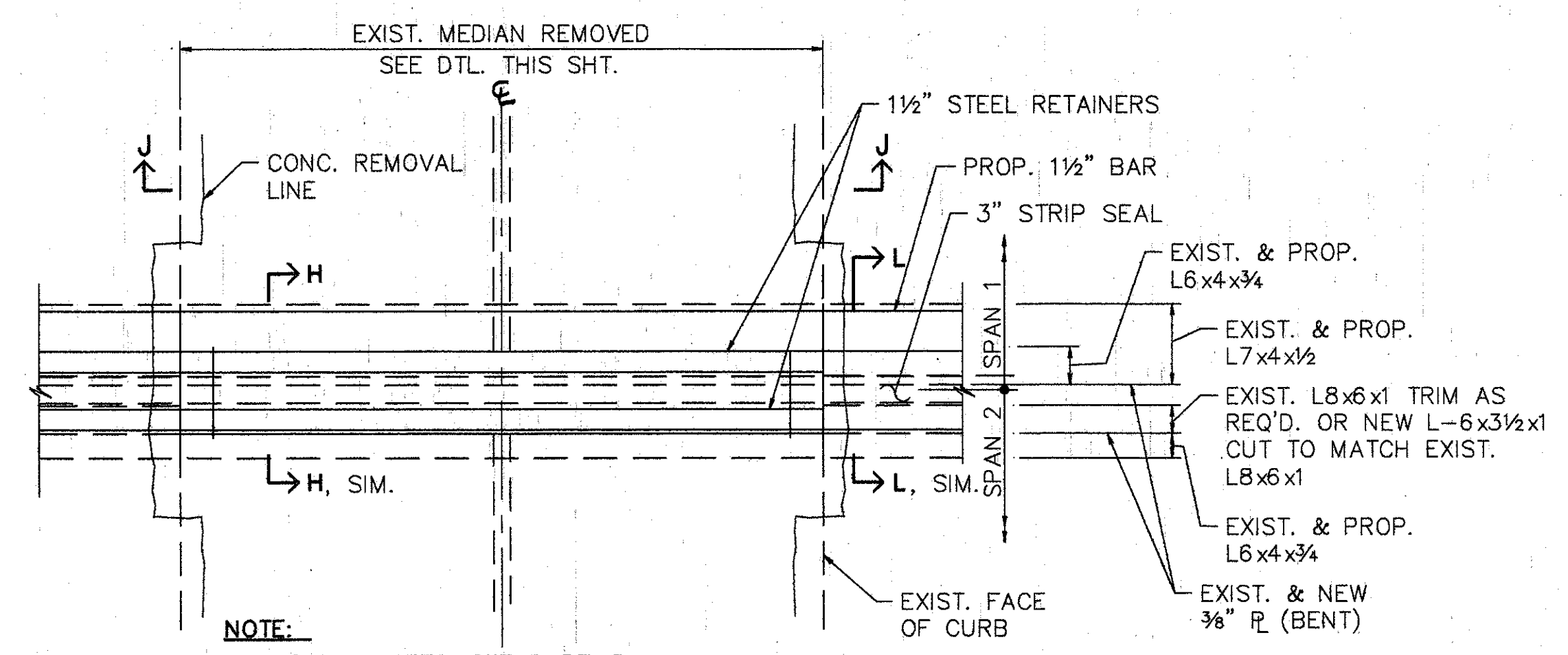
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
L.A.T.M.	R.M.R.		M.A.A.	D.E.M11/11/94		

Lett Plot: JUN 20 1994 @ 5:10 PM  
 & XREF: 6598-CV-SHAW-VI-0221 Lett Revision Bx: BACH MAY 18, 1994 @ 8:21 AM



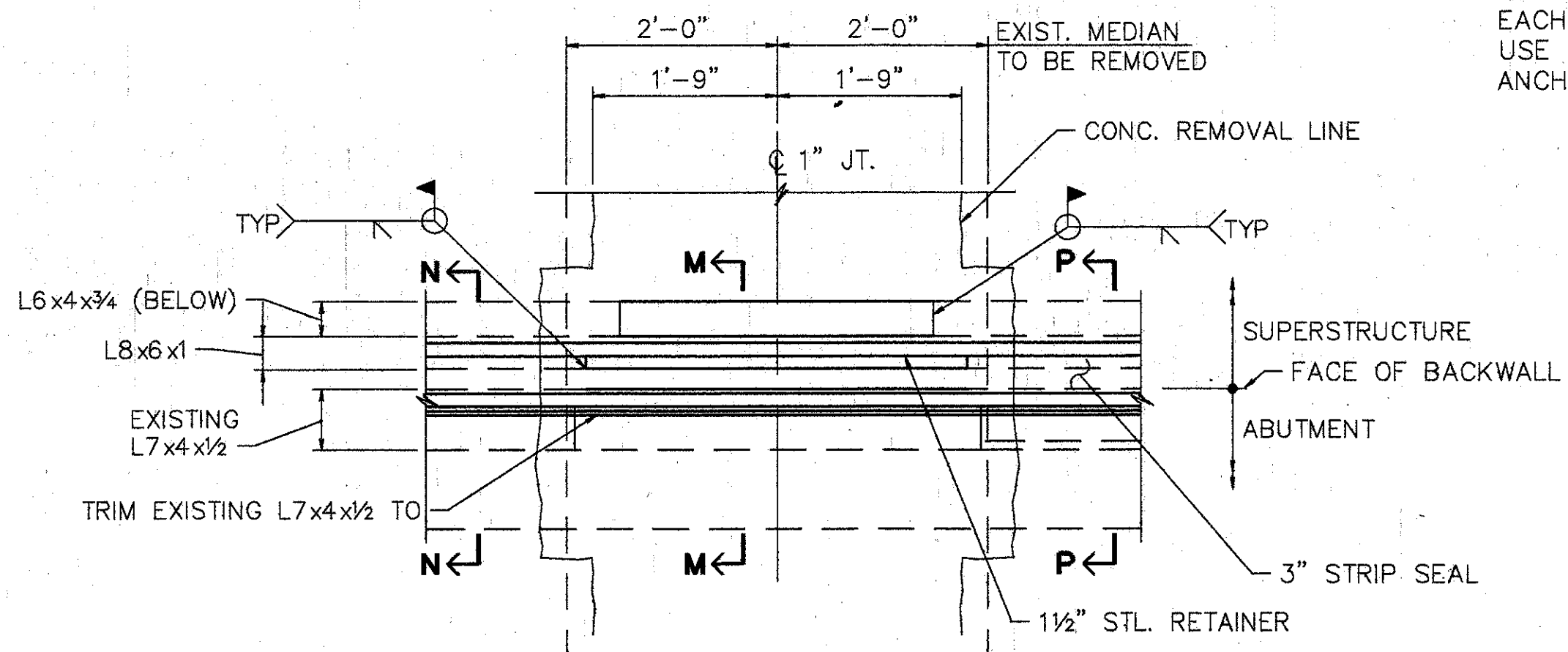


**PART PLAN SIDEWALK @ REAR ABUTMENT**  
 (LEFT SIDEWALK SHOWN, RIGHT SIDEWALK OPPOSITE HAND)  
 (SKEW = 1°07'09" LEFT FORWARD)

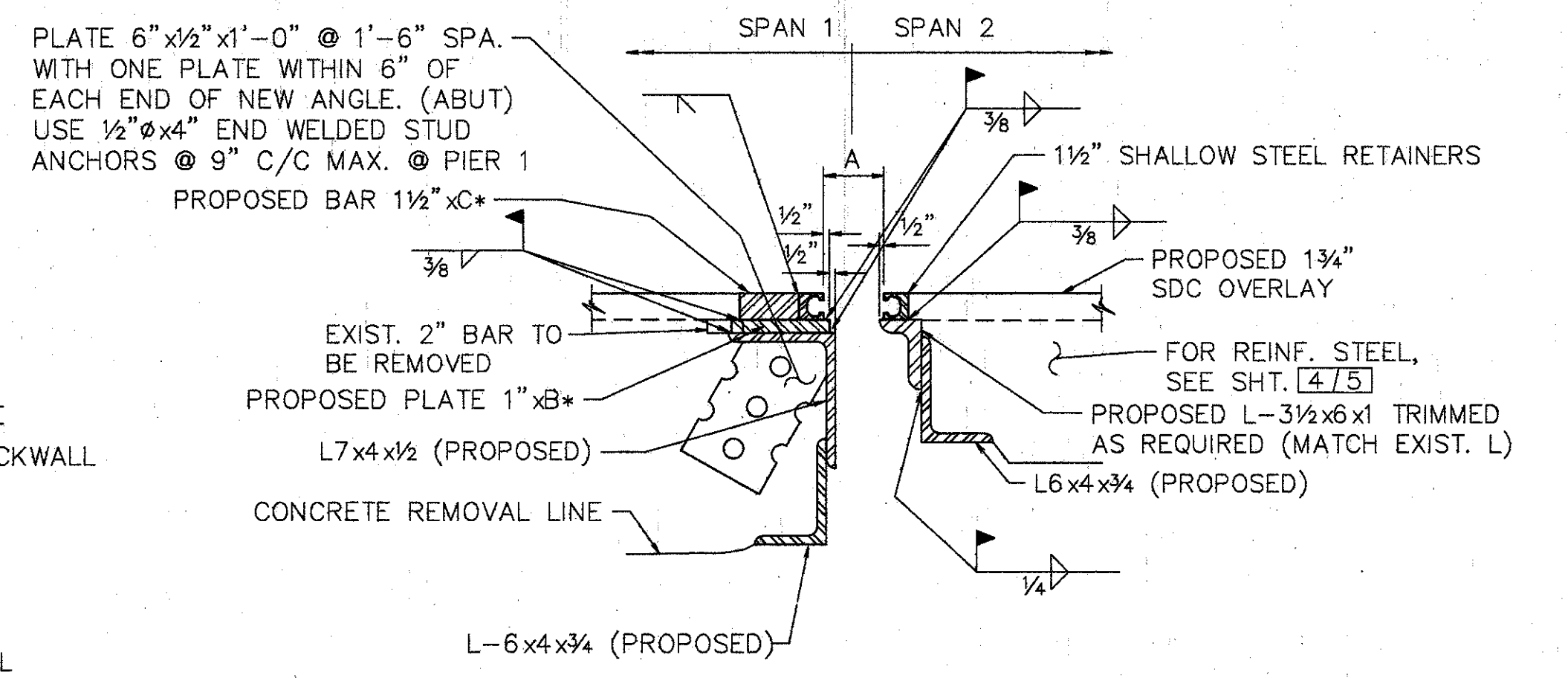


**PART. PLAN MEDIAN @ PIER 1**  
 (SKEW = NONE)

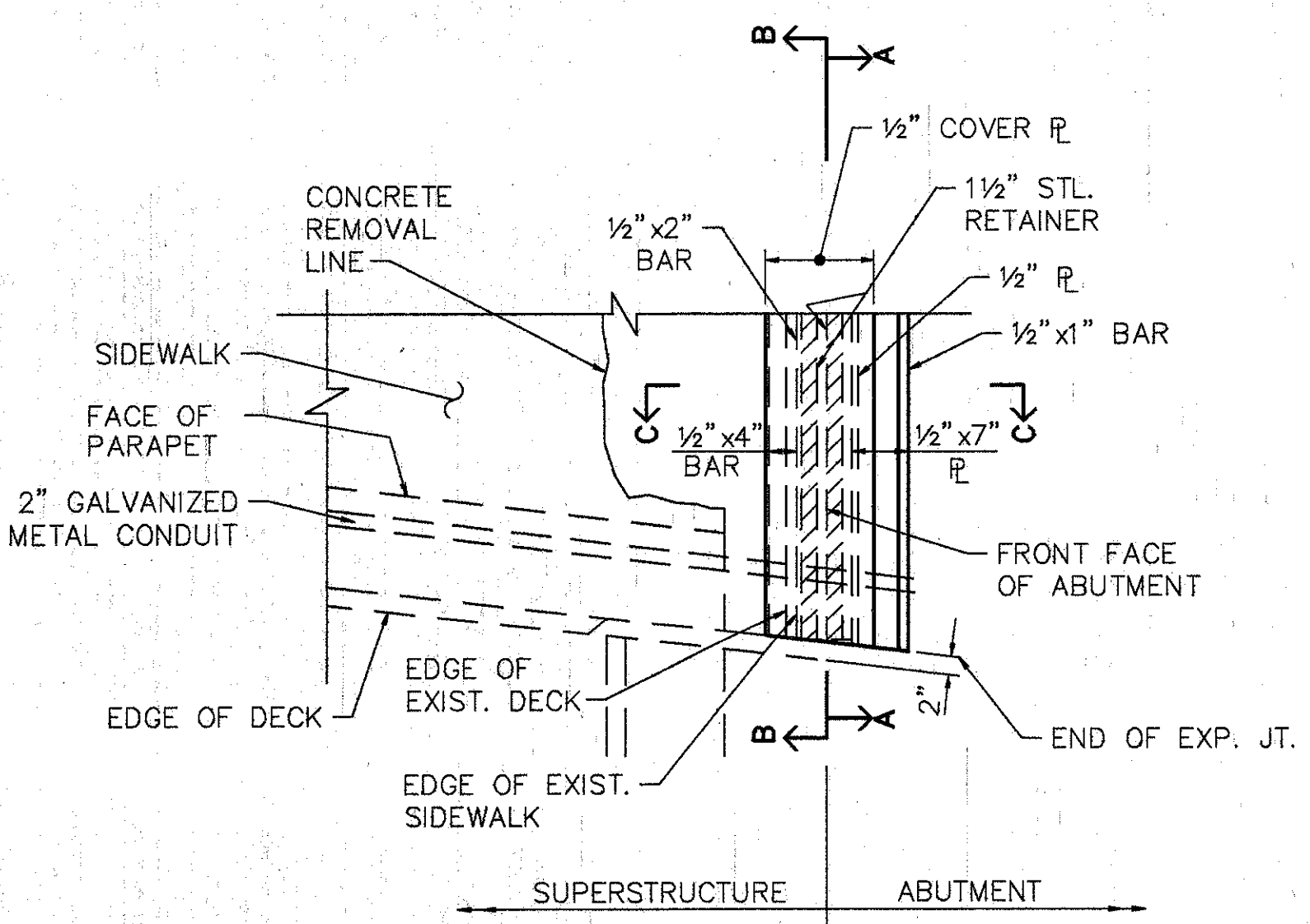
**PART. PLAN SIDEWALK @ PIER 1**  
 (RIGHT SIDEWALK SHOWN, LEFT SIDEWALK OPPOSITE HAND) (SKEW = NONE)



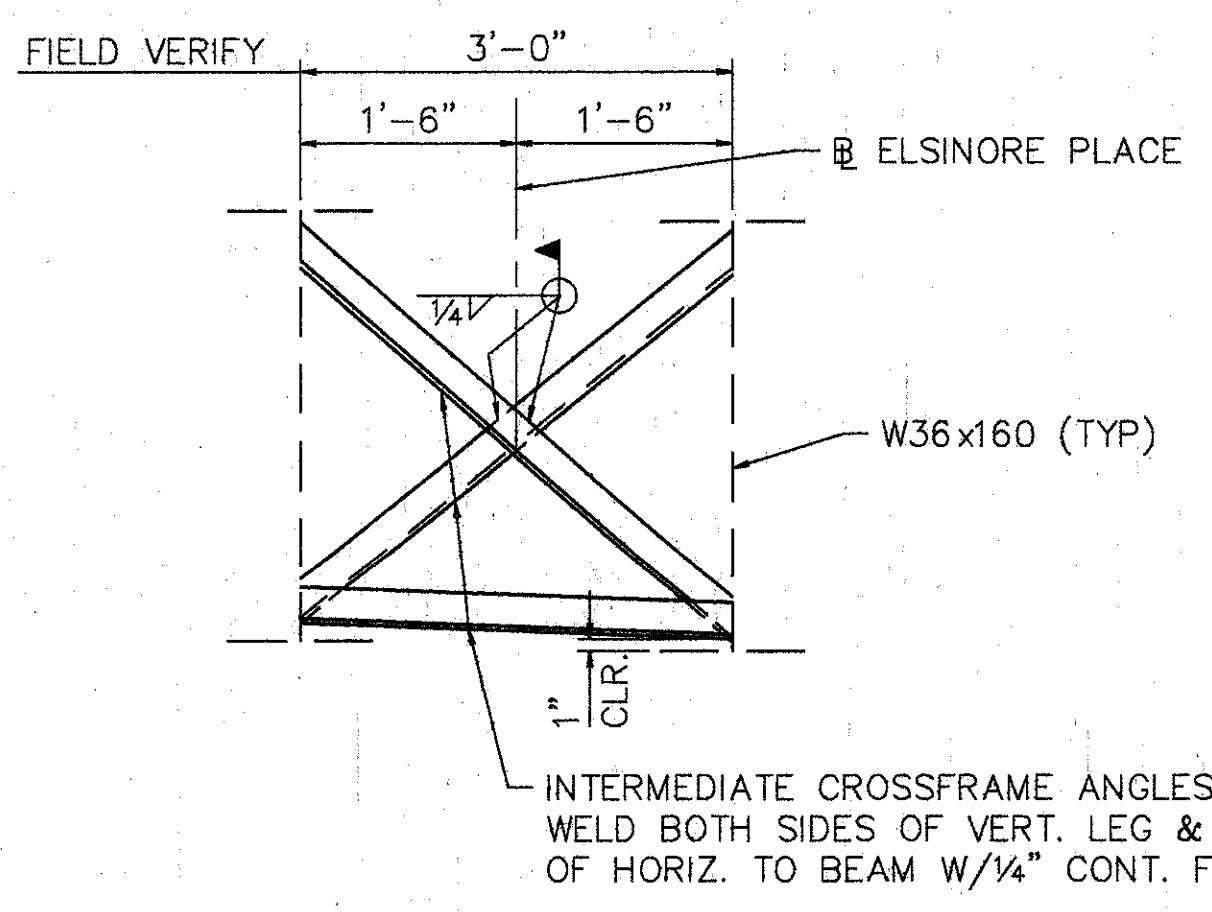
**PART. PLAN MEDIAN @ FWD. & REAR ABUTMENTS**  
 SKEW = 1°07'09" LEFT FORWARD~REAR ABUT.  
 SKEW = 6°43'30" LEFT FORWARD~FORWARD ABUT.



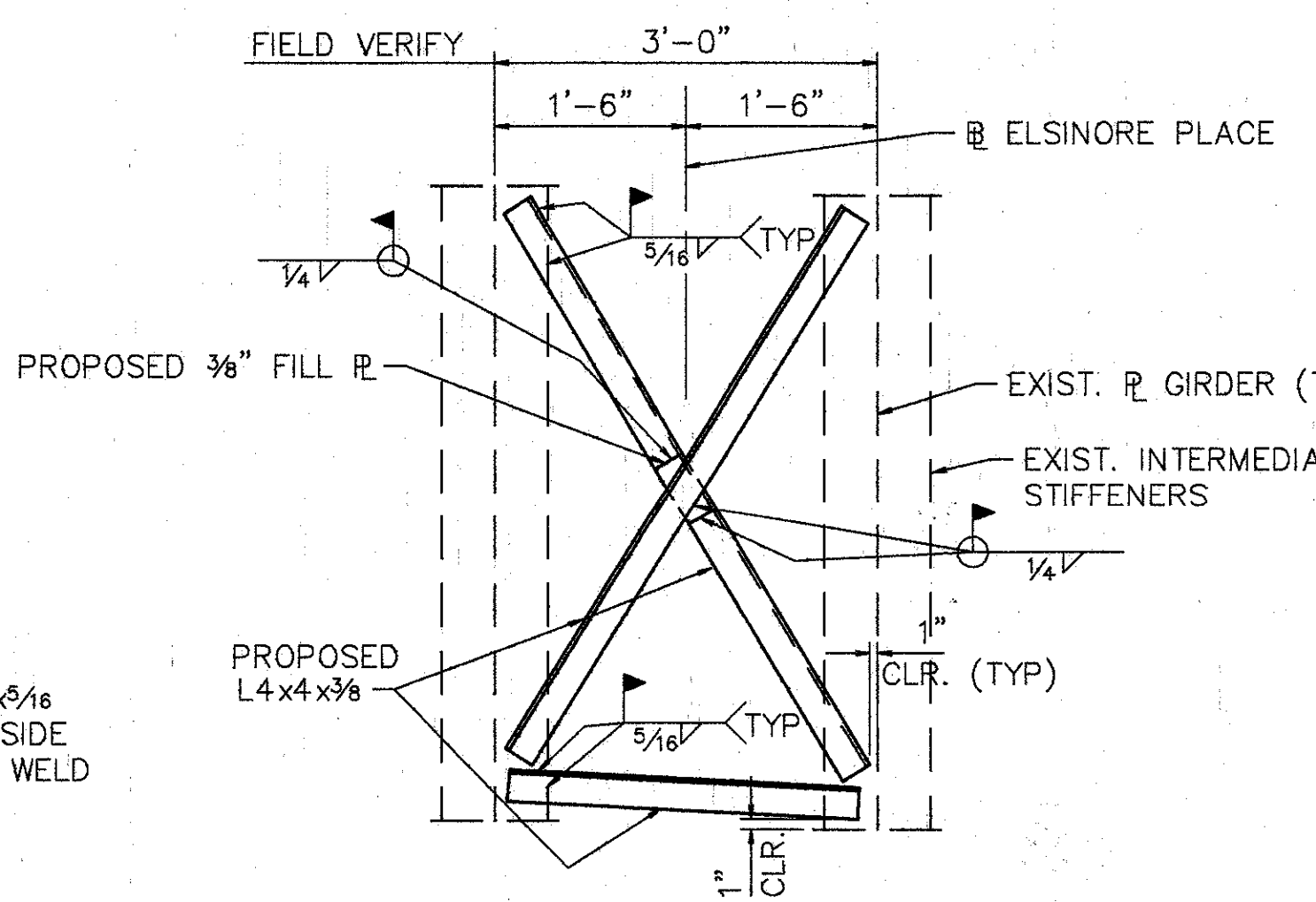
**SECTION H-H**  
 FOR DTLS NOT SHOWN SEE STD. DWG. SD-1-69.



**PART PLAN SIDEWALK @ FORWARD ABUTMENT**  
 (RIGHT SIDEWALK SHOWN, LEFT SIDEWALK OPPOSITE HAND (NO CONDUIT))  
 (SKEW = 6°43'30" LEFT FORWARD, SOUTHEAST CORNER VARIES)



**TYPICAL SPAN 1**  
**SECTION F-F**



**TYPICAL SPAN 2 & 3**  
**SECTION G-G**

- NOTES:**
- STRUCTURAL STEEL FOR PROPOSED INTERMEDIATE CROSSFRAMES, SHALL BE PAID FOR AS ITEM 513, STRUCTURAL STEEL FOR REHABILITATION. STRUCTURAL STEEL UNDER THIS ITEM WILL NOT REQUIRE SHOP DRAWINGS PRIOR TO FABRICATION. THE CONTRACTOR SHALL MAKE NECESSARY MEASUREMENTS AND PREPARE SKETCHES, DRAWINGS, TABLES, ETC. THE ENGINEER SHALL HAVE THE AUTHORITY AND RESPONSIBILITY FOR ENSURING THAT THE FABRICATED STEEL IS ACCEPTABLE. TECHNICAL ASSISTANCE WILL BE PROVIDED ON REQUEST BY THE BUREAU OF BRIDGES. MILL TEST REPORTS AND SHIPPING DOCUMENTS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL TO ENSURE THAT THE DRAWINGS DEPICT THE STEEL AS ACTUALLY INCORPORATED INTO THE WORK. THE ENGINEER WILL THEN SEND ONE APPROVED SET TO THE BUREAU OF BRIDGES FOR INFORMATION. PAY WEIGHTS SHALL BE COMPUTED IN COMPLIANCE WITH 513 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS AND SUBMITTED TO THE ENGINEER FOR HIS REVIEW AND APPROVAL. THE FABRICATOR SHALL FURNISH A 35 MILLIMETER MICROFILM COPY OF EACH SHOP DRAWING, WHICH SHALL BE MOUNTED ON AN APERTURE CARD AS SPECIFIED IN 501.05.
  - NEW STEEL SHALL BE PAINTED ACCORDING TO THE PROPOSAL NOTE ENTITLED "FIELD PAINTING OF NEW STEEL, SYSTEM IZEU". COST FOR PAINTING SHALL BE INCLUDED WITH ITEM SPECIAL - PAINTING OF NEW STEEL, SYSTEM IZEU, FOR PAYMENT.
  - FOR DETAILS NOT SHOWN SEE SHEET 3&4/5

**WOOLPERT CONSULTANTS**  
 409 E. MONUMENT AVENUE  
 DAYTON, OHIO 45402-1226  
 (513) 461-5660

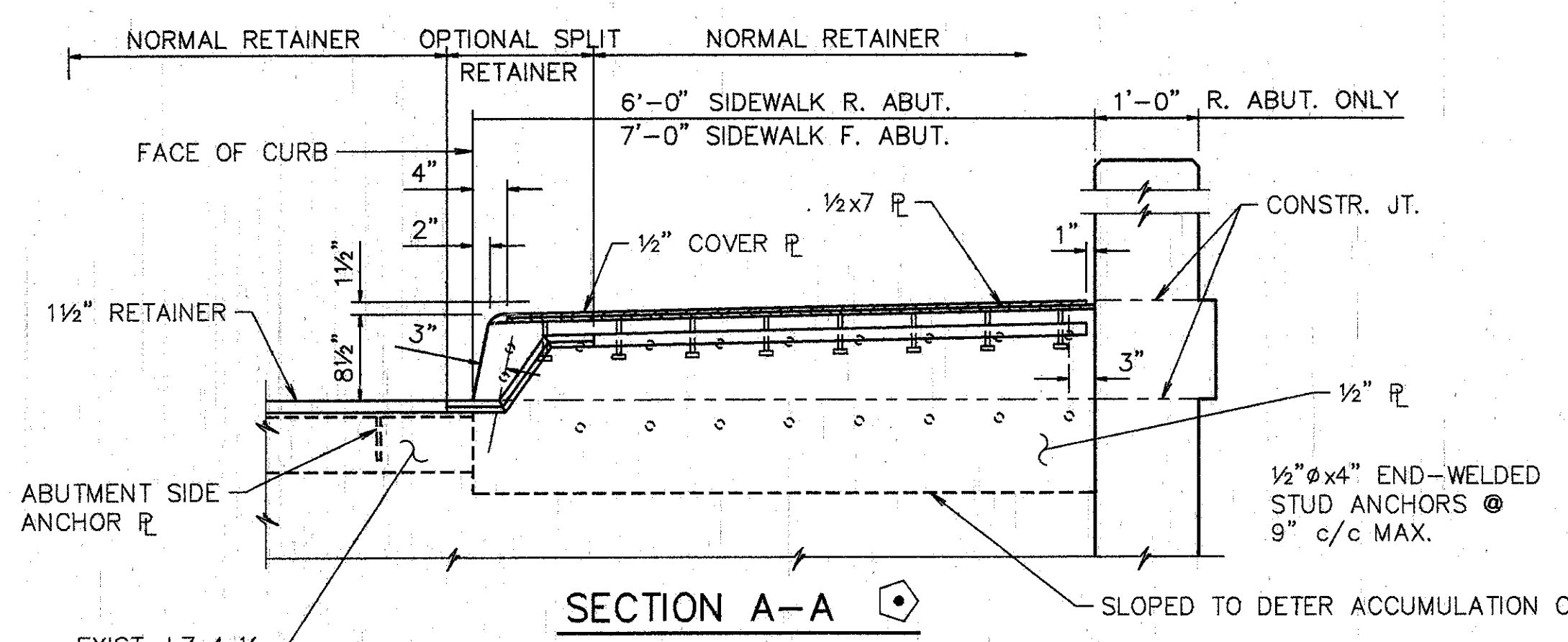
**EXPANSION JOINT DETAILS**

BRIDGE NO. HAM-71-0221 ELSINORE AVE.  
 OVER INTERSTATE ROUTE 71

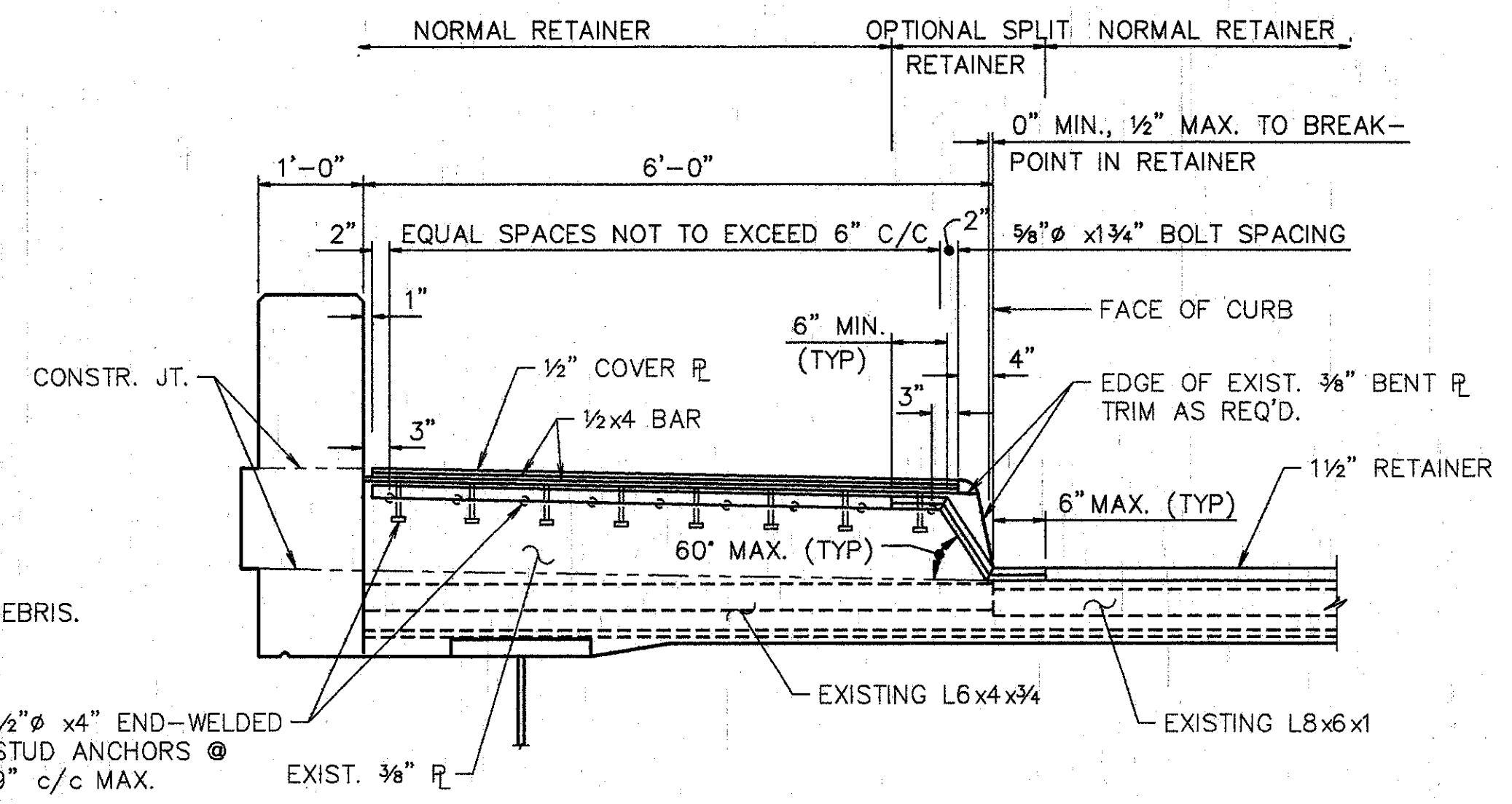
HAMILTON COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
L.A.T.M.	R.M.R.		M.A.A.	D.E.M1	11/94	

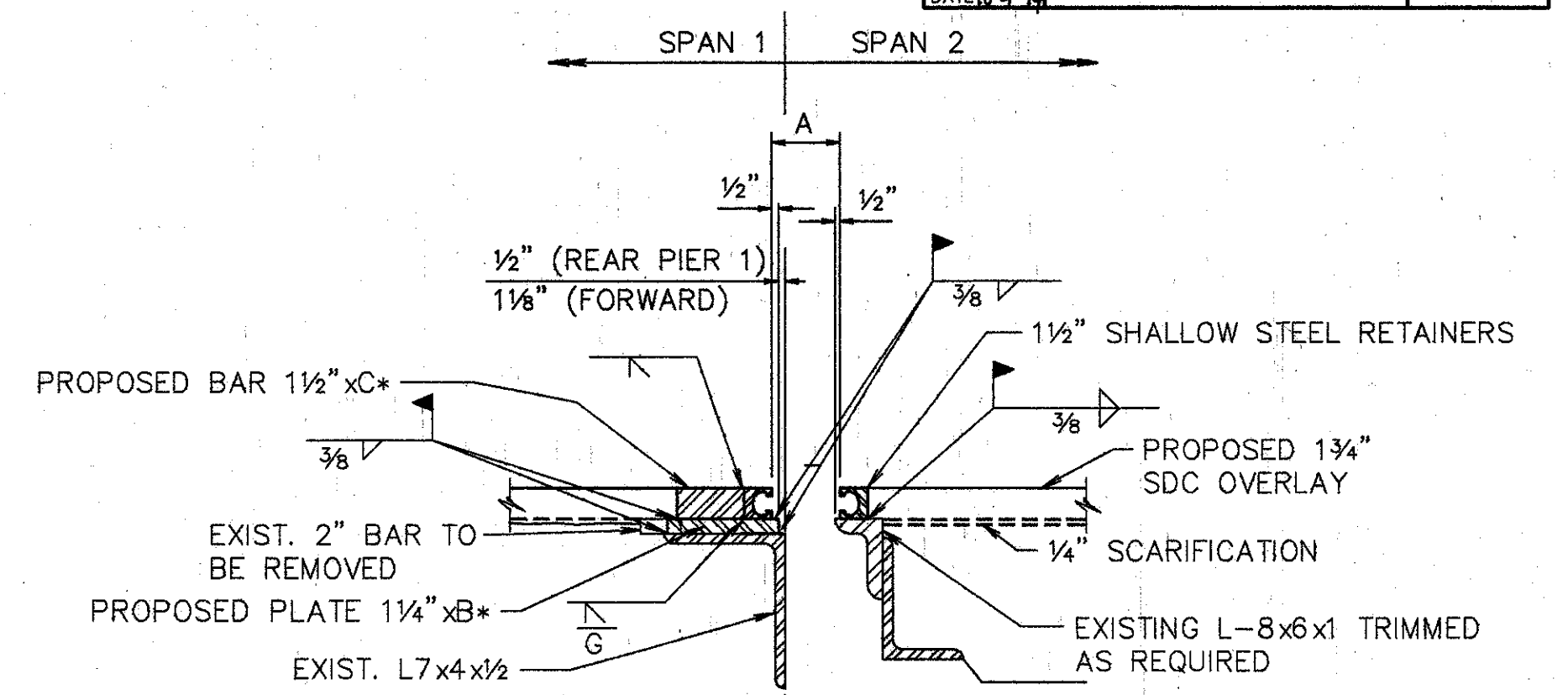
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 Plot: 01/05/95 09:00 AM



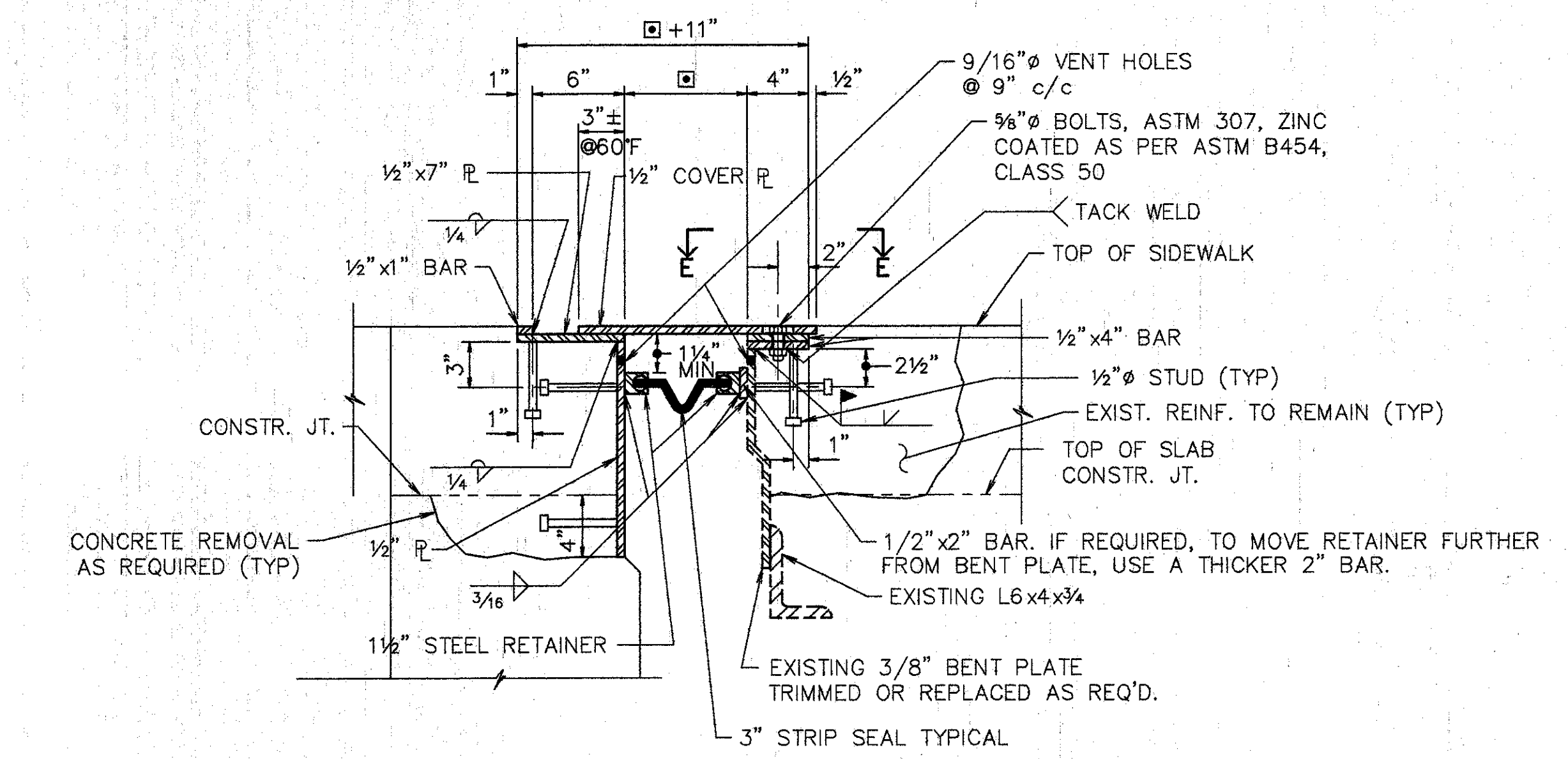
SECTION A-A  
 SIDEWALK AND PARAPET JOINT ARMOR ANCHORS:  
 IN LIEU OF THE 1/2" Ø END-WELDED STUDS SHOWN, ALTERNATE METHODS OF ANCHORING THE 1/2" PLATES MAY BE USED, SUBJECT TO APPROVAL BY THE DIRECTOR.



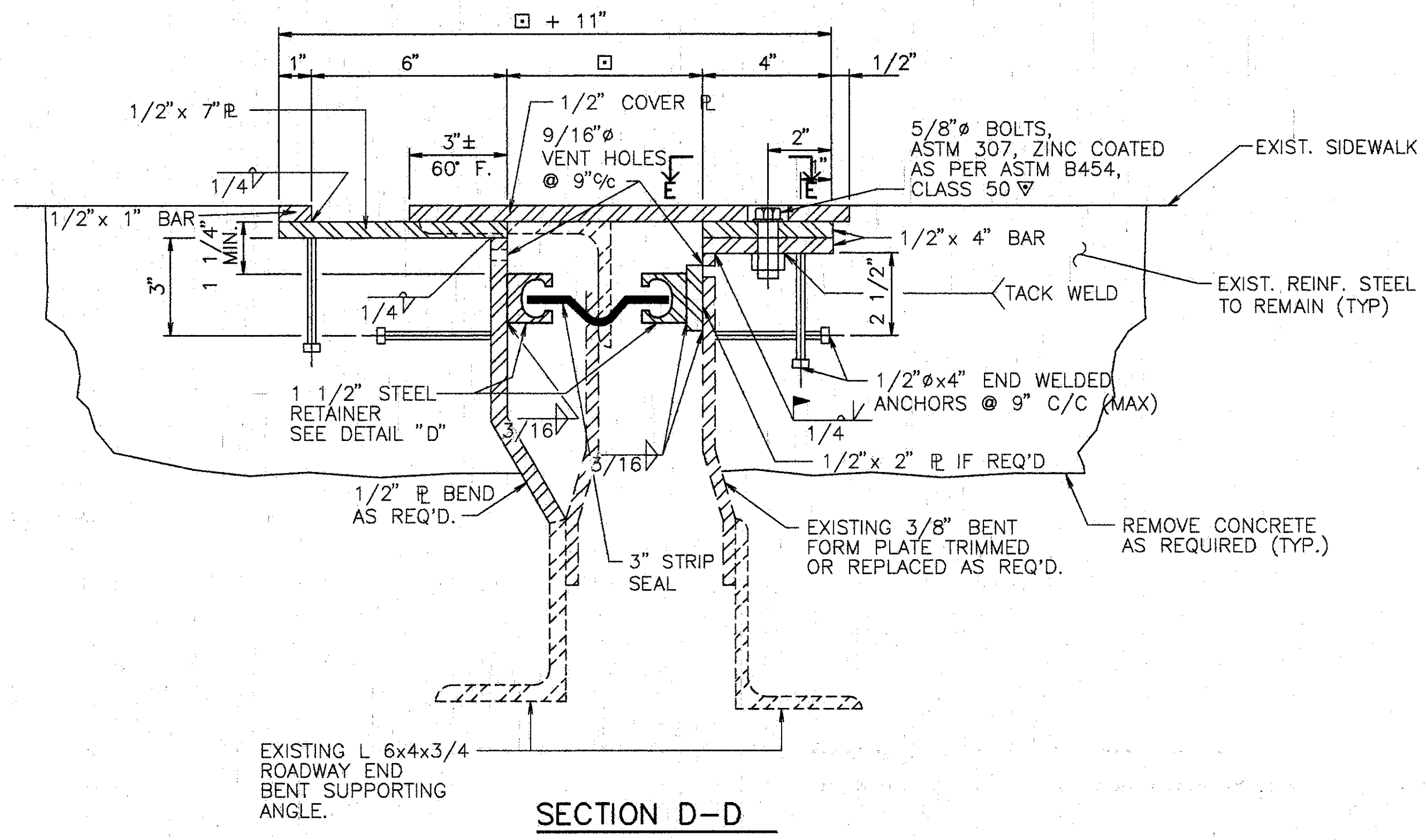
SECTION B-B  
 NOTE: REMOVE 3/8" BENT FORM PLATE  
 LEAVE L6 x 4 x 3/4 INTACT



SECTION L-L  
 FOR DTLS NOT SHOWN SEE  
 STD. DWG. SD-1-69.



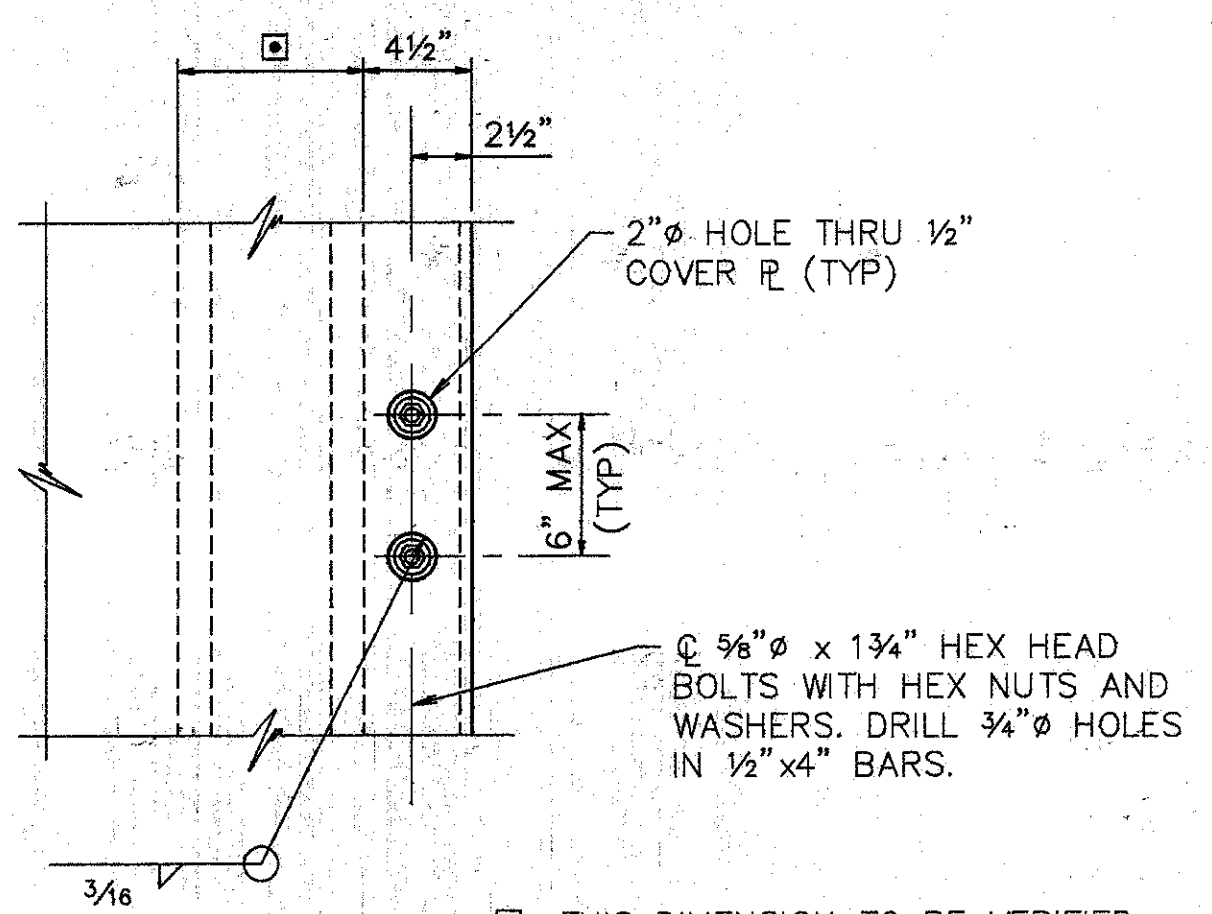
SECTION C-C  
 THIS DIMENSION TO BE VERIFIED  
 PRIOR TO INSTALLATION.



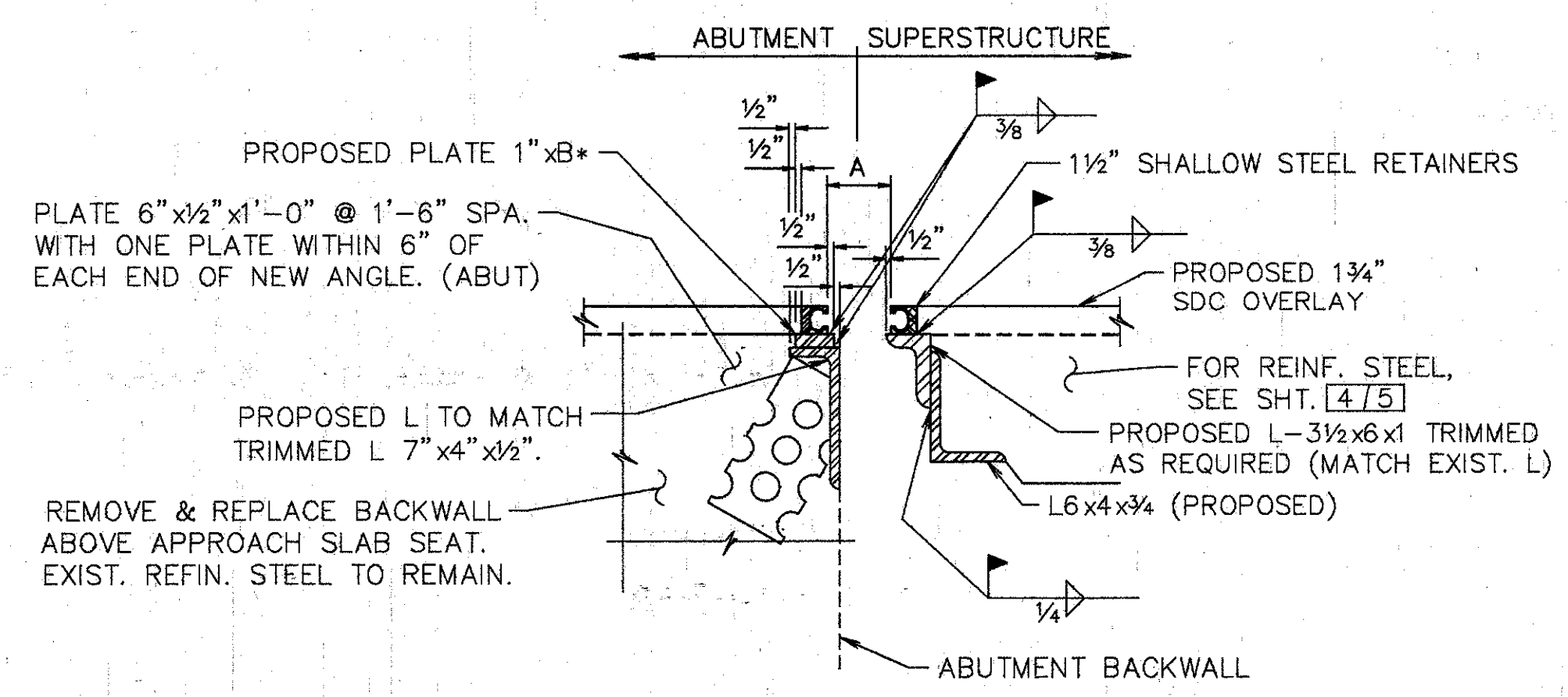
SECTION D-D

- NOTES:**
- CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO MODIFYING EXPANSION JOINT.
  - THE PRICE FOR ITEM 516 - 'STRUCTURAL EXPANSION JOINTS, INCLUDING ELASTOMERIC STRIP SEALS,' SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, AND ANY OTHER INCIDENTAL ITEMS, AS DETAILED. (REMOVAL OF CURB OR PARAPET AS SHOWN SHALL BE INCLUDED UNDER ITEM 202 - 'PORTIONS OF STRUCTURES REMOVED.')
  - FOR DETAILS NOT SHOWN REFER TO DRAWING EXJ-4-87 SHEETS 3 AND 4.
  - STRIP SEAL TO BE INSTALLED IN ONE CONTINUOUS PIECE (NO OPEN JOINTS).
  - PROVIDE TEMPORARY SUPPORT FOR ABUTMENT END DAM DURING CONSTRUCTION. REMOVE TEMPORARY SUPPORT AS SOON AS CONCRETE HAS SET, PREFERABLY WITHIN TWO HOURS AFTER PLACING TO AVOID DAMAGE DUE TO EXPANSION AND CONTRACTION OF SUPERSTRUCTURE.

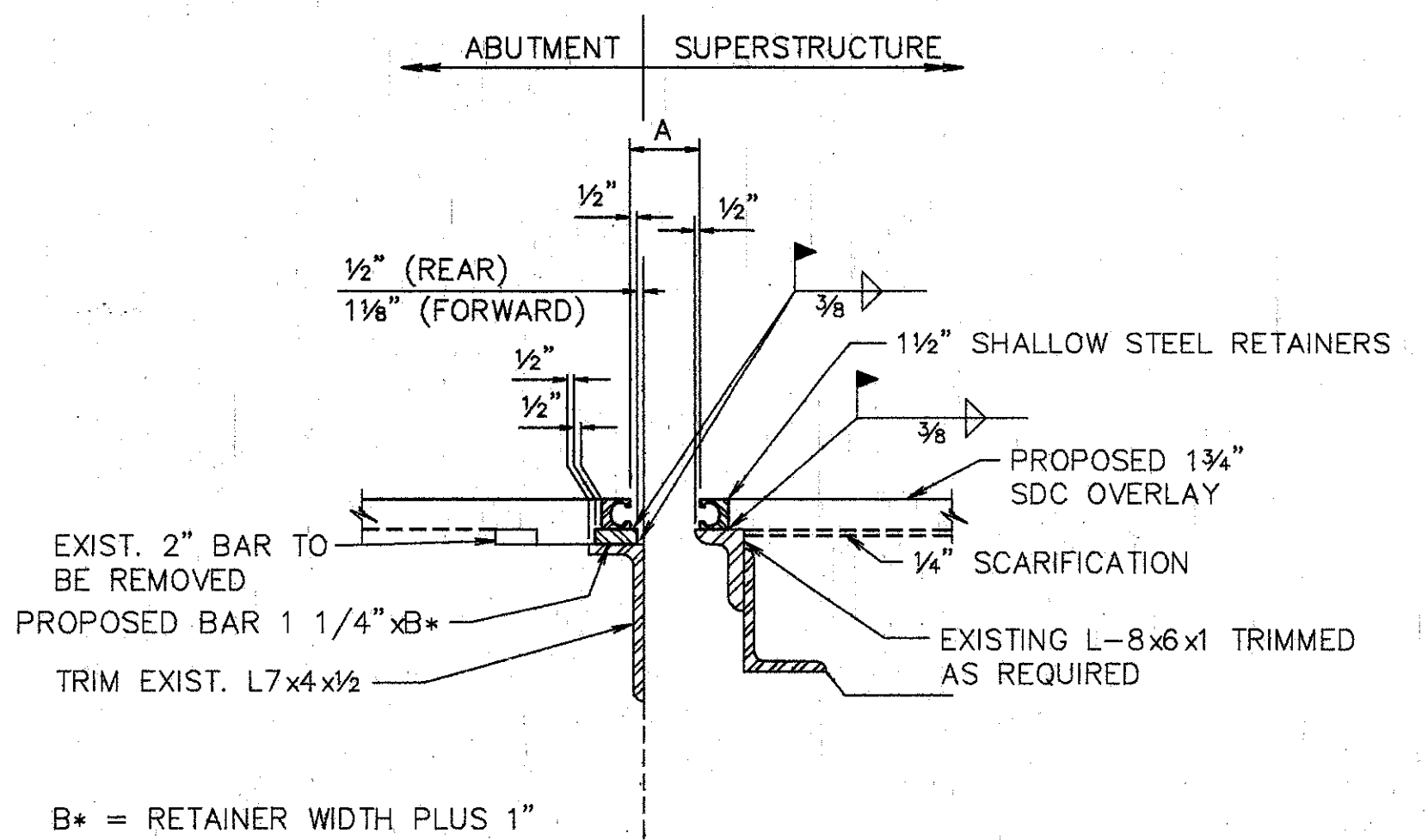
TEMPERATURE	DIM. 'A'		
	FORWARD	REAR	PIER 1
40° F	2 1/2"	2 3/4"	2 1/2"
50° F	2 1/2"	2 3/4"	2 1/2"
60° F	2 3/8"	2 3/4"	2 3/8"
70° F	2 3/8"	2 3/4"	2 3/8"
80° F	2 1/4"	2 3/4"	2 1/4"
90° F	2 1/4"	2 5/8"	2 1/4"



SECTION E-E  
 THIS DIMENSION TO BE VERIFIED  
 PRIOR TO INSTALLATION.



SECTION M-M  
 FOR DTLS NOT SHOWN SEE  
 STD. DWG. SD-1-69.



SECTION N-N  
 FOR DTLS NOT SHOWN SEE  
 STD. DWG. SD-1-69.

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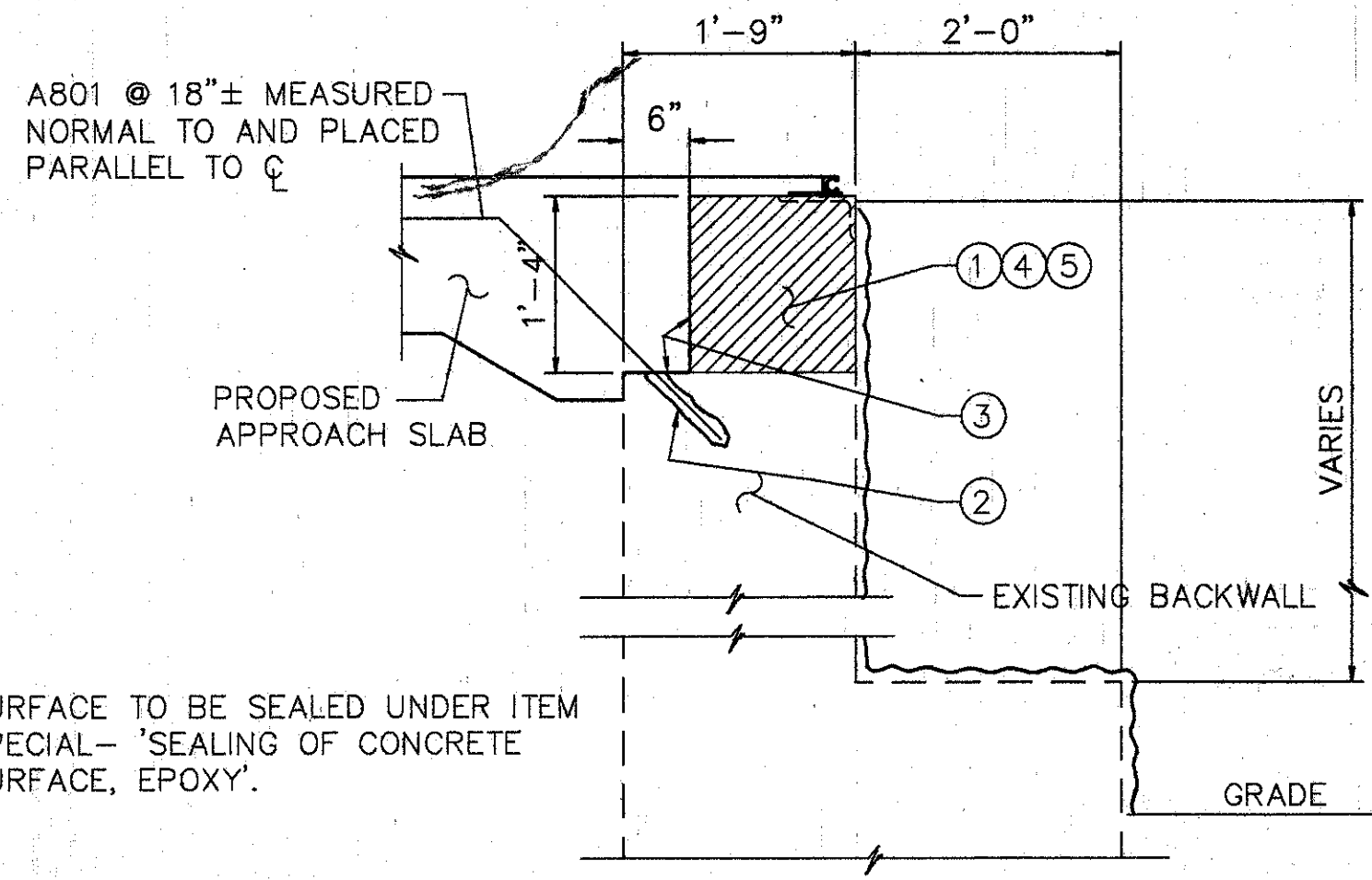
**MISCELLANEOUS DETAILS**

BRIDGE NO. HAM-71-0221 ELSINORE AVE.  
 OVER INTERSTATE ROUTE 71

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
L.A.T.M.	R.M.R.		M.A.A.	D.E.M1	11/94	

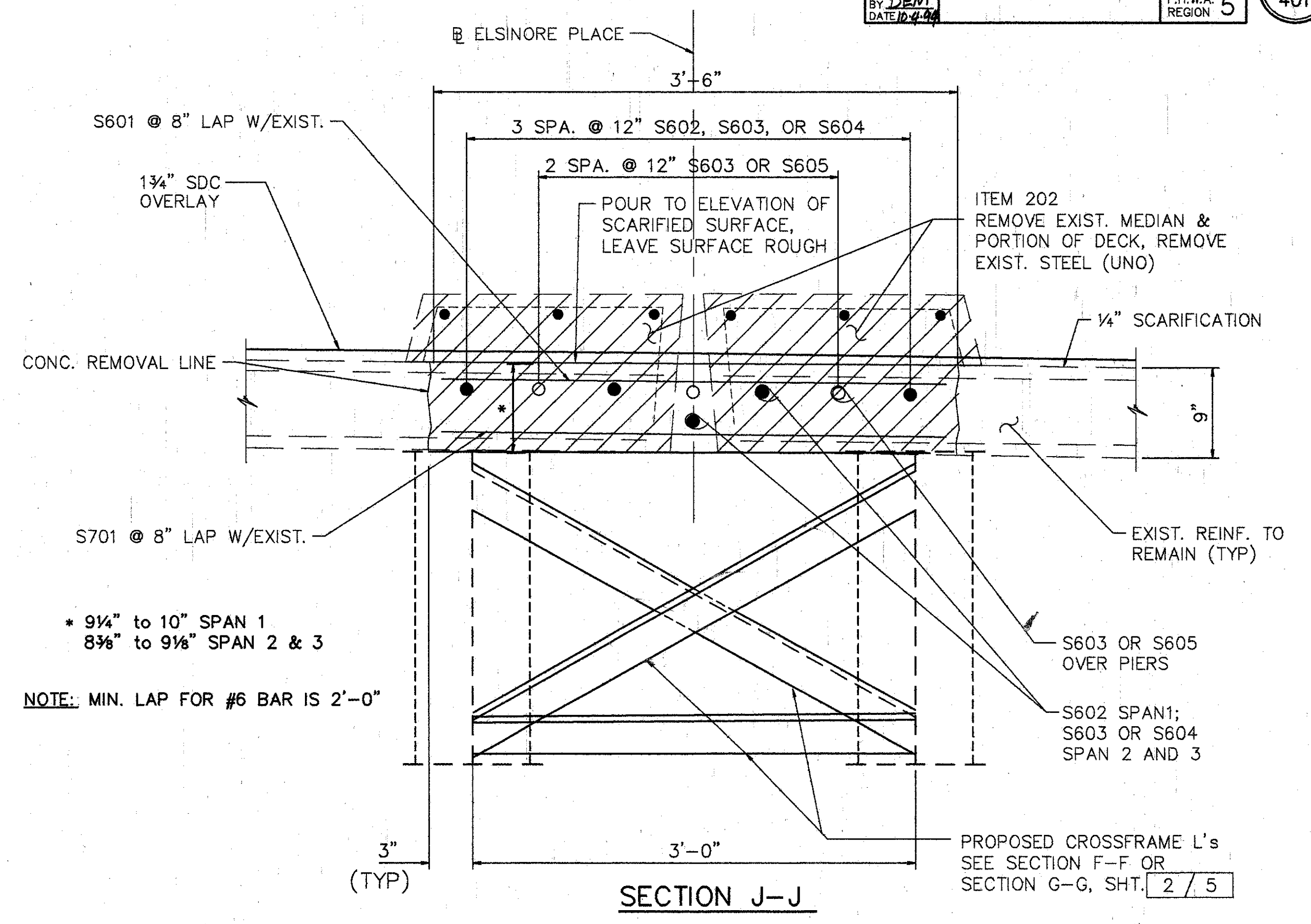
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- NOTES FOR SECTION P-P**
- EXISTING REINFORCING STEEL TO REMAIN ~ REINFORCING STEEL DAMAGED TO BE REPLACED AT CONTRACTORS EXPENSE.
  - 1' MIN. EMBEDMENT (SEE DOWEL HOLE GENERAL NOTE) ITEM 510.
  - TYPE 'A' WATERPROOFING (PAYMENT INCLUDED IN THE PRICE BID FOR APPROACH SLAB).
  - CLASS 'C' CONCRETE, ABUTMENT RECONSTRUCTION.
  - PROVIDE CONTRACTION AND EXPANSION JOINTS TO MATCH THOSE IN EXISTING BACKWALL AND PROVIDE CONSTRUCTION JOINTS AS REQUIRED TO MAINTAIN TRAFFIC. PAYMENT TO BE INCLUDED IN PRICE BID FOR ITEM 511 CLASS C CONCRETE RECONSTRUCTION.
- EXISTING CONCRETE TO BE REMOVED INCLUDE IN ITEM 202 FOR PAYMENT.

SECTION P-P



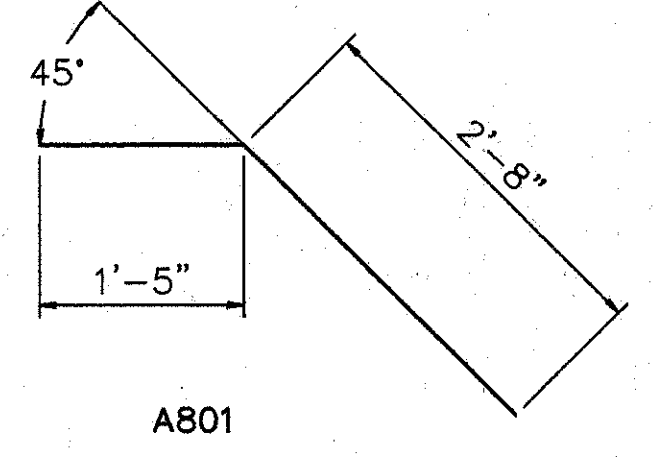
SECTION J-J

**CUT LINE CONSTRUCTION JOINT PREPARATION:**  
 SAW CUT BOUNDARIES OF PROPOSED CONCRETE REOVALS 1" DEEP. REMOVE CONCRETE TO A ROUGH SURFACE. WHERE PRACTICABLE, AT LEAST 2'-0" LENGTH OF PROTRUDING REINFORCING STEEL SHALL BE LEFT IN PLACE. INSTALL DOWEL BARS AS SPECIFIED. PRIOR TO CONCRETE PLACEMENT, ABRASIVELY CLEAN JOINT SURFACE AND EXPOSED REINFORCEMENT TO REMOVE LOOSE AND DISINTEGRATED CONCRETE AND LOOSE RUST. THEN, THE JOINT SURFACE AND EXPOSED REINFORCEMENT SHALL BE THOROUGHLY CLEANED OF ALL DIRT, DUST, OR OTHER FOREIGN MATERIAL BY THE USE OF WATER, AIR UNDER PRESSURE, OR OTHER METHODS THAT PRODUCE SATISFACTORY RESULTS. CONCRETE BONDING SURFACES SHALL BE WET WITHOUT FREE WATER AS CONCRETE IS PLACED.

**SUPERSTRUCTURE CONCRETE REMOVAL:**  
 REMOVAL SHALL BE 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, A HAMMER HEAVIER THAN 35 POUNDS, BUT NOT TO EXCEED 85 POUNDS, MAY BE USED AT THE APPROVAL OF THE ENGINEER. PNEUMATIC HAMMERS SHALL NOT BE PLACED IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE.

**REINFORCING STEEL LIST**

MARK	SHAPE	NUMBER	LENGTH	WEIGHT
S601	STR.	320	3'-4"	1608
S602	STR.	10	19'-0"	285
S603	STR.	33	30'-0"	1487
S604	STR.	5	7'-0"	53
S605	STR.	3	14'-0"	63
S701	STR.	320	3'-4"	2178
A801	BNT.	97	4'-0"	1036
REPLACEMENT STEEL				500
TOTAL				7210



X SEE PROPOSAL NOTE

ITEM	ITEM EXT.	TOTAL	UNITS	DESCRIPTION
202	11200	LUMP SUM	LUMP	PORTIONS OF STRUCTURES REMOVED
509	15830	7210	POUND	EPOXY COATED REINFORCING STEEL, GRADE 60
510	12201	97	LIN FT	DOWEL HOLES, AS PER PLAN
511	34400	23	CU YD	CLASS 'S' CONCRETE, SUPERSTRUCTURE (RECONSTRUCTION)
511	45700	10	CU YD	CLASS 'C' CONCRETE, ABUTMENT (RECONSTRUCTION)
SPECIAL	51267500	820	SQ YD	SEALING OF CONCRETE SURFACE *
SPECIAL	51267502	651	SQ YD	SEALING OF CONCRETE SURFACE (EPOXY) *
513	16000	1600	POUND	STRUCTURAL STEEL FOR REHABILITATION
513	21000	27	EACH	TRIMMING OF BEAM END
514	00610	1600	POUND	FIELD PAINTING OF NEW STEEL, SYSTEM IZEU *
514	27704	LUMP	L.S.	FIELD PAINTING, MISC.: EXISTING STEEL, EEU *
516	10000	24	LIN FT	PREFORMED ELASTOMERIC COMPRESSION JOINT SEAL (705.11)
516	11210	247	LIN FT	STRUCTURAL EXP. JT., INCLUDING ELASTOMERIC STRIP SEAL
513	15501	100	LBS.	STRUCTURAL STEEL (MISC. AND CASTINGS), AS PER PLAN
518	12800	3	EACH	SCUPPER MODIFICATION
518	63300	LUMP SUM	LUMP	STRUCTURE DRAINAGE, MISC.: MODIFY DRAINAGE PIPING
SPECIAL	51912600	29	LIN FT	CONCRETE REPAIR BY EPOXY INJECTION
845	40210	1690	SQ YD	LATEX MODIFIED CONCRETE OVERLAY (1 1/4" THICK)* ON EXISTING DECK
845	11000	16	CU YD	LATEX MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS)*
845	30000	1	CU YD	FULL DEPTH REPAIR
516	14600	50	L.F.	STRUCTURAL JOINT OR JOINT SEALER, MISC.: 2" x 4" SEALER, AS PER PLAN
516	45304	31	EACH	REFURBISH BEARING DEVICE

519	11100	62	S.F.	PATCHING CONCRETE STRUCTURE
516	14600	100	L.F.	SEAL JOINT BETWEEN ABUTMENT AND CONCRETE SLOPE PROTECTION

**PROPOSED WORK**

- SCARIFY EXISTING DECK 1/4" AND REMOVE DETERIORATED CONCRETE AS DIRECTED BY THE ENGINEER.
- REFURBISH ALL ABUTMENT BEARINGS.
- REMOVE CONCRETE MEDIAN AND PORTION OF THE DECK. PLACE CROSSFRAME ANGLES AND RECONSTRUCT DECK.
- PLACE 1 1/4" THICK LATEX MODIFIED CONCRETE ON DECK.
- SEAL CURBS, SIDEWALKS, PARAPET, PIERS, AND BACKWALL.
- SEAL JOINTS AS NOTED. RECONSTRUCT ABUTMENT BACKWALL ABOVE APPROACH SLAB SEAT.
- SEAL TRANSVERSE EXPANSION JOINTS WITH STRIP SEALS.
- TRIM BEAM ENDS TO 2" CLEARANCE.
- REFURBISH DRAINAGE PIPING.
- ONE LANE OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED ON THE BRIDGE AT ALL TIMES. PEDESTRIAN TRAFFIC SHALL BE MAINTAINED AT ALL TIMES. FOR NOTES SEE MAINTENANCE OF TRAFFIC PLANS.
- OTHER WORK AS DESCRIBED IN THESE PLANS.

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4 / 5

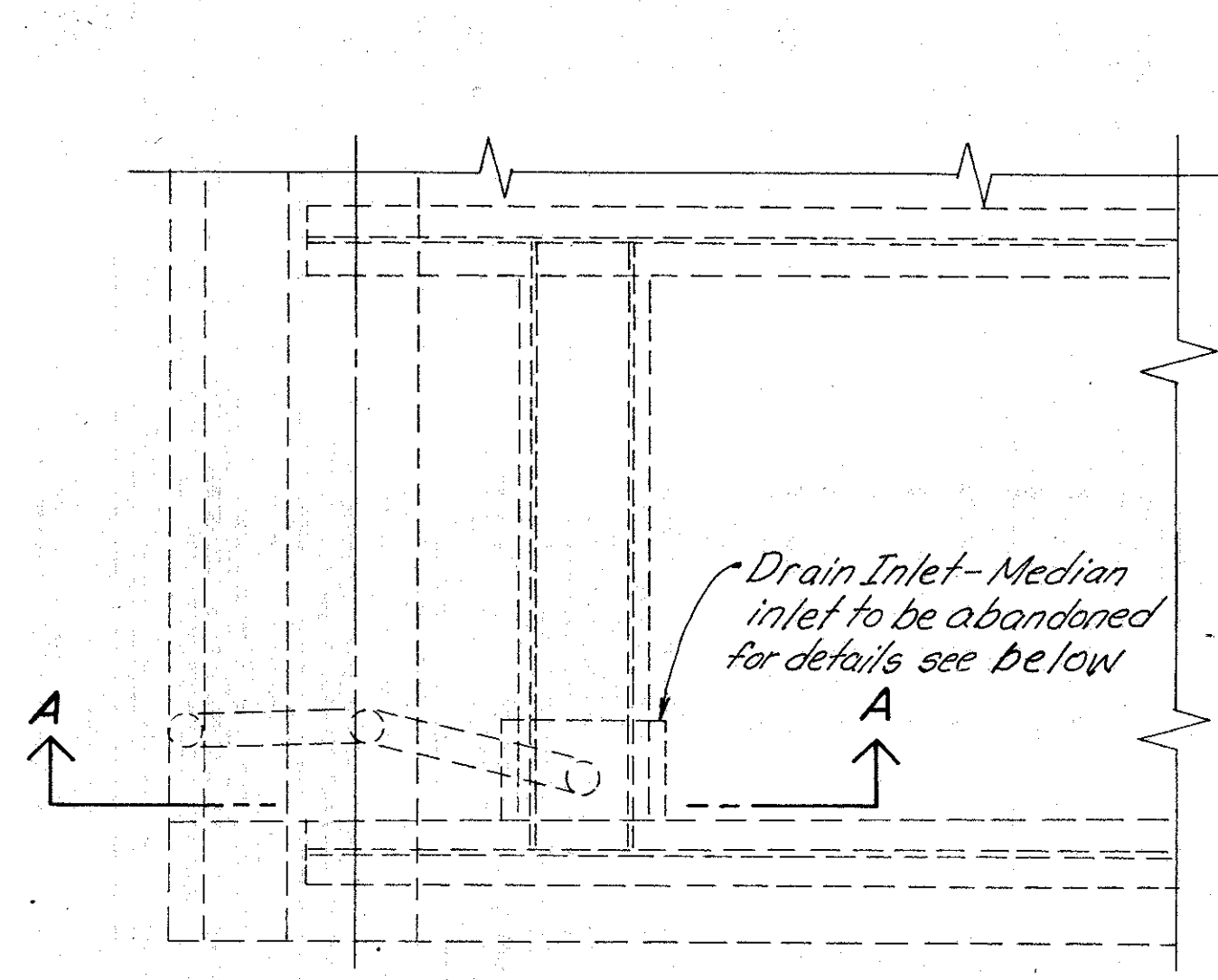
**QUANTITIES AND GENERAL NOTES**

BRIDGE NO. HAM-71-0221 ELSINORE AVE.  
 OVER INTERSTATE ROUTE 71

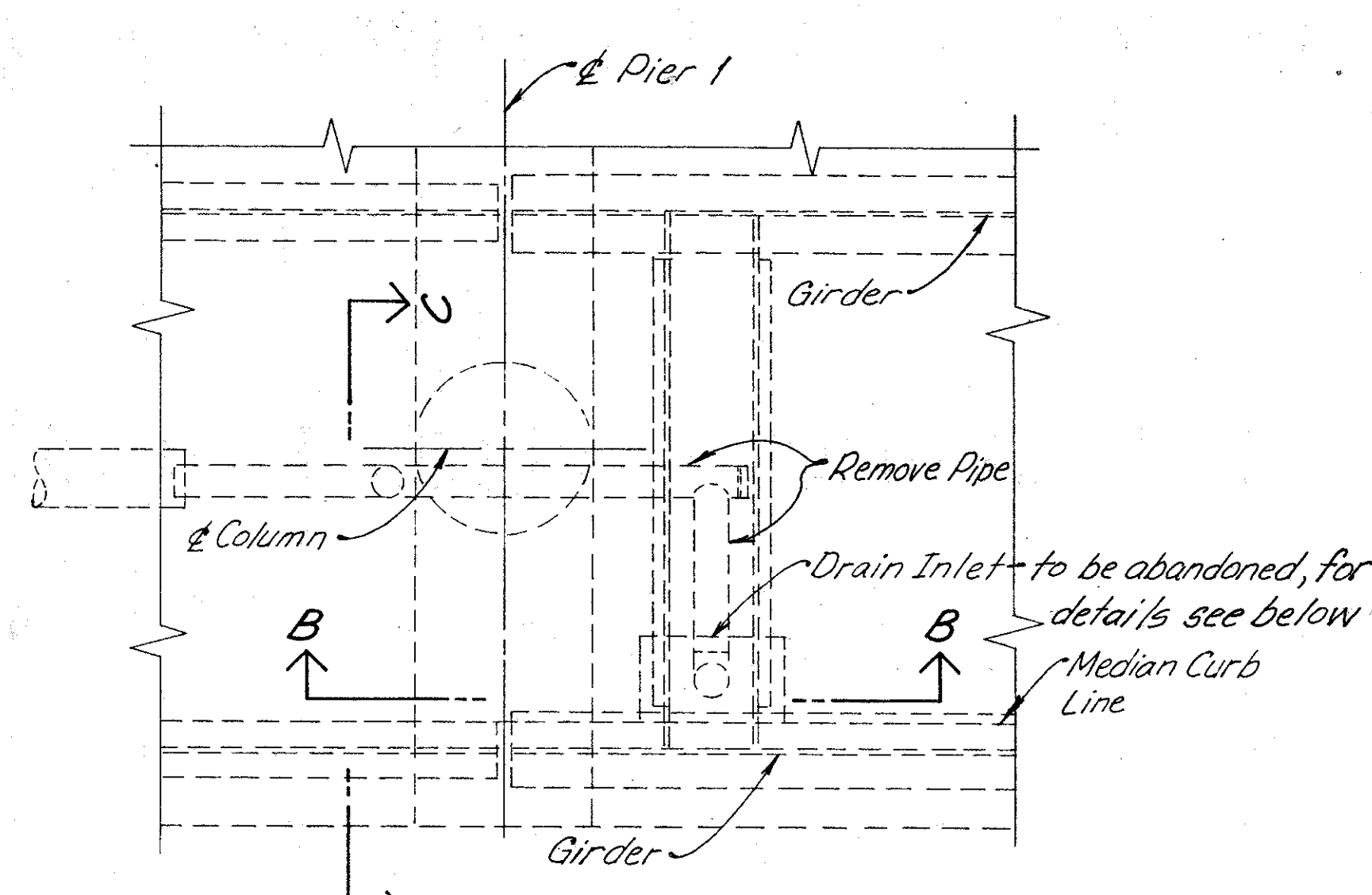
HAMILTON COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
L.A.T.M.	D.E.E.		M.A.A.	D.E.M11/11/94		

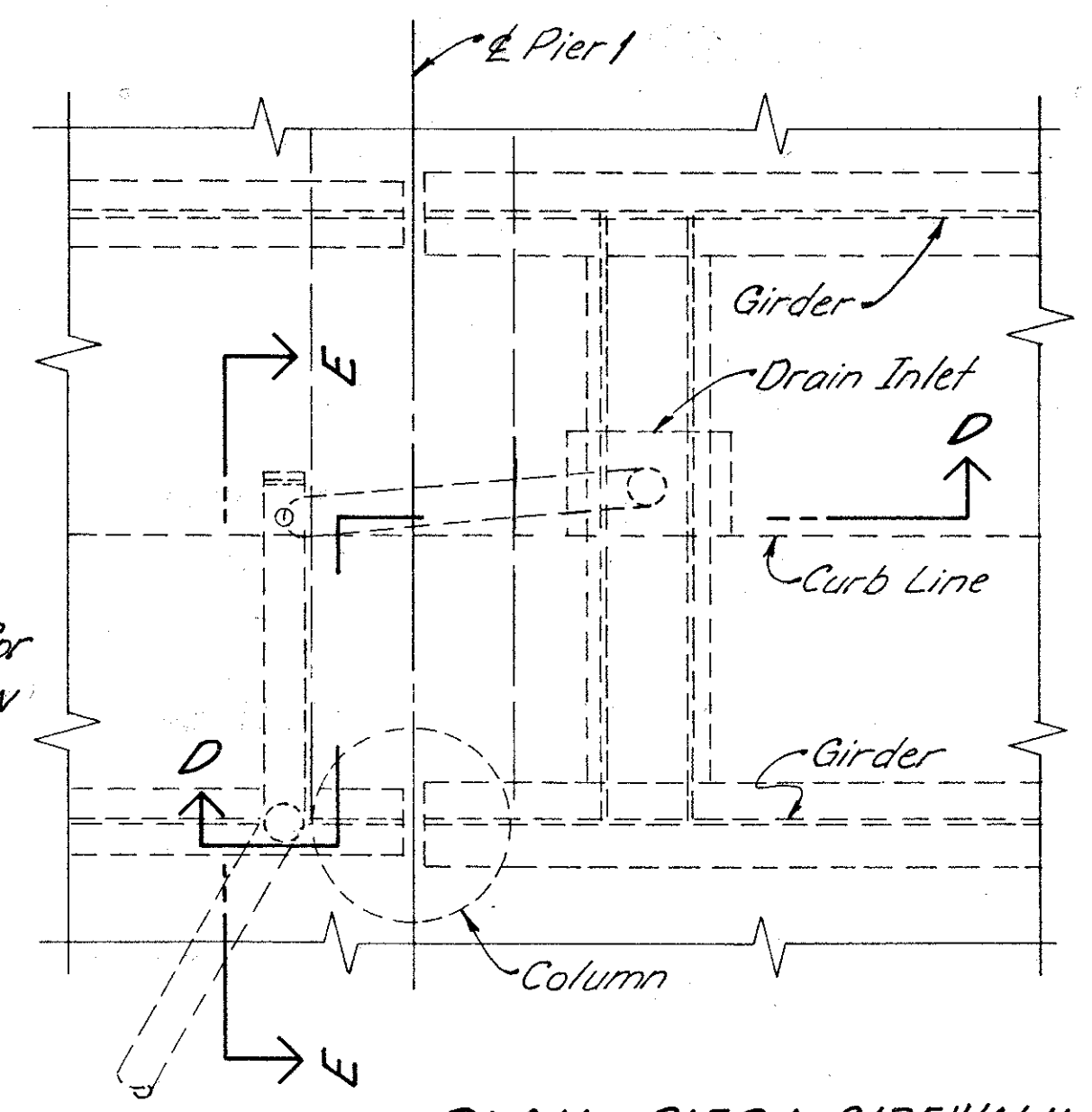
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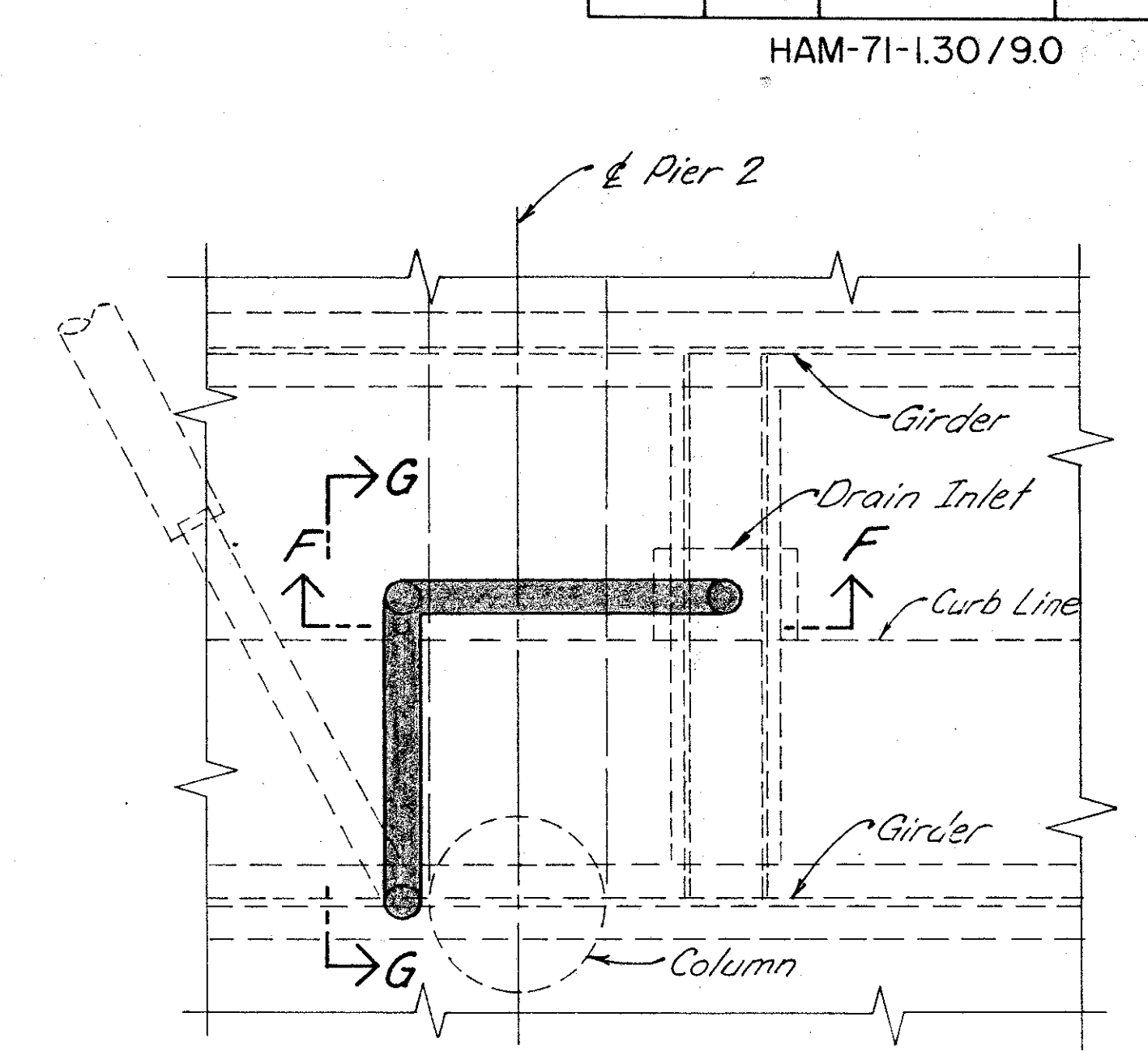
**PLAN WEST ABUTMENT**  
(No Work Req'd @ Sidewalk Inlet)



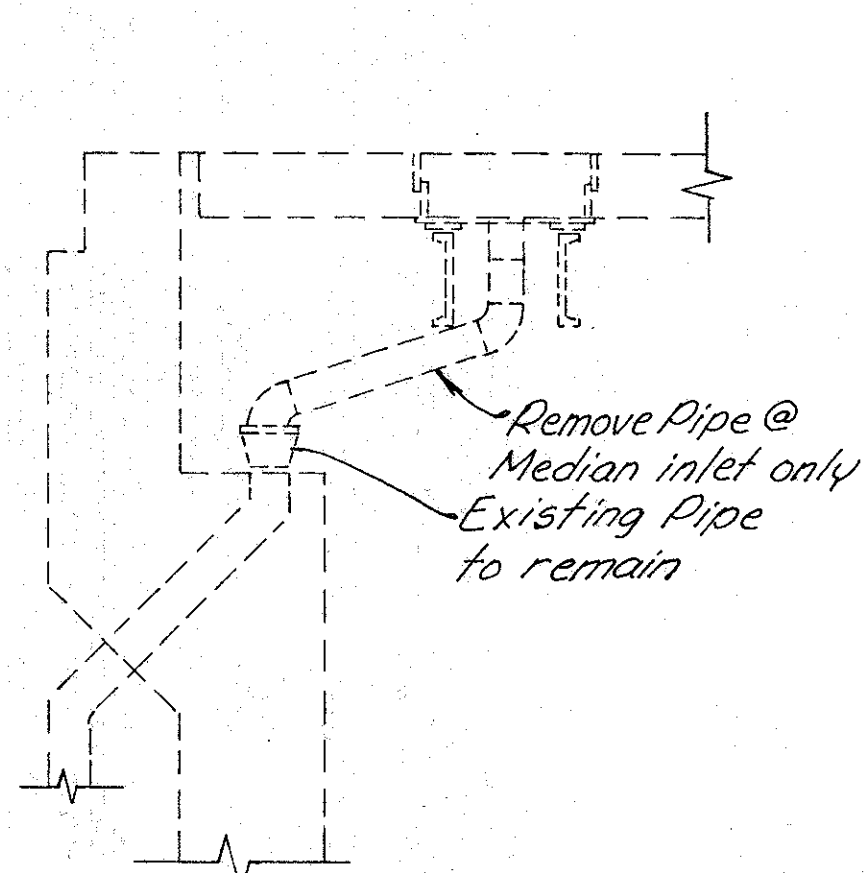
**PLAN PIER 1 MEDIAN**



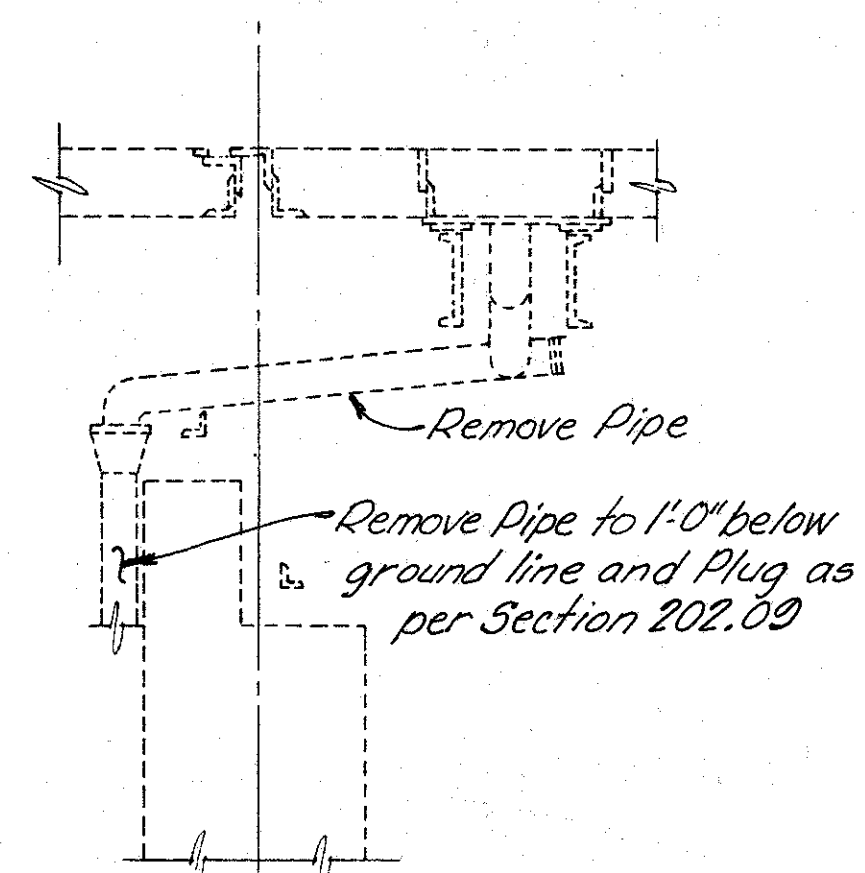
**PLAN PIER 1 SIDEWALK**  
(No Work Req'd)



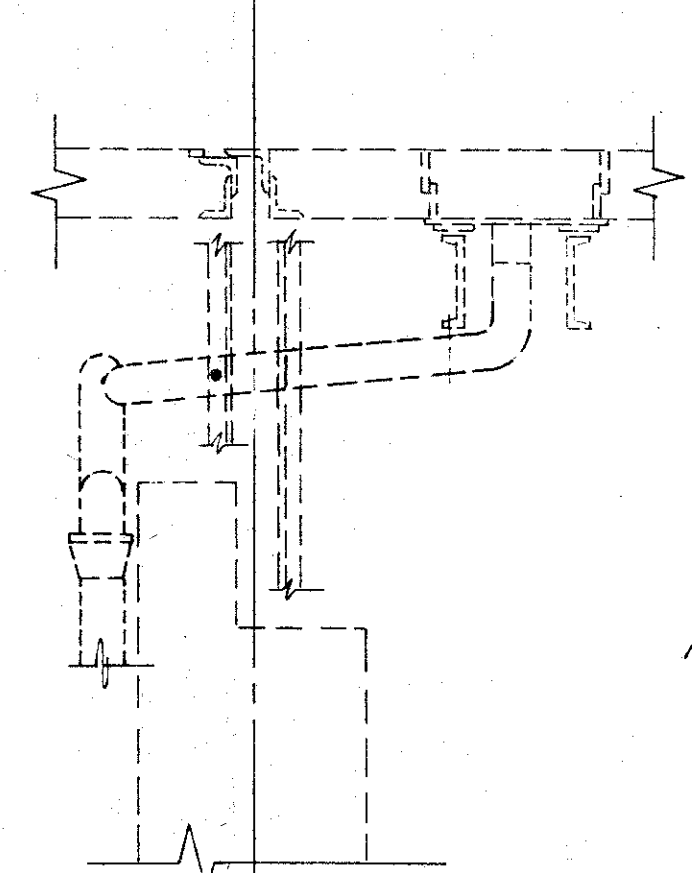
**PLAN PIER 2 Sidewalk**



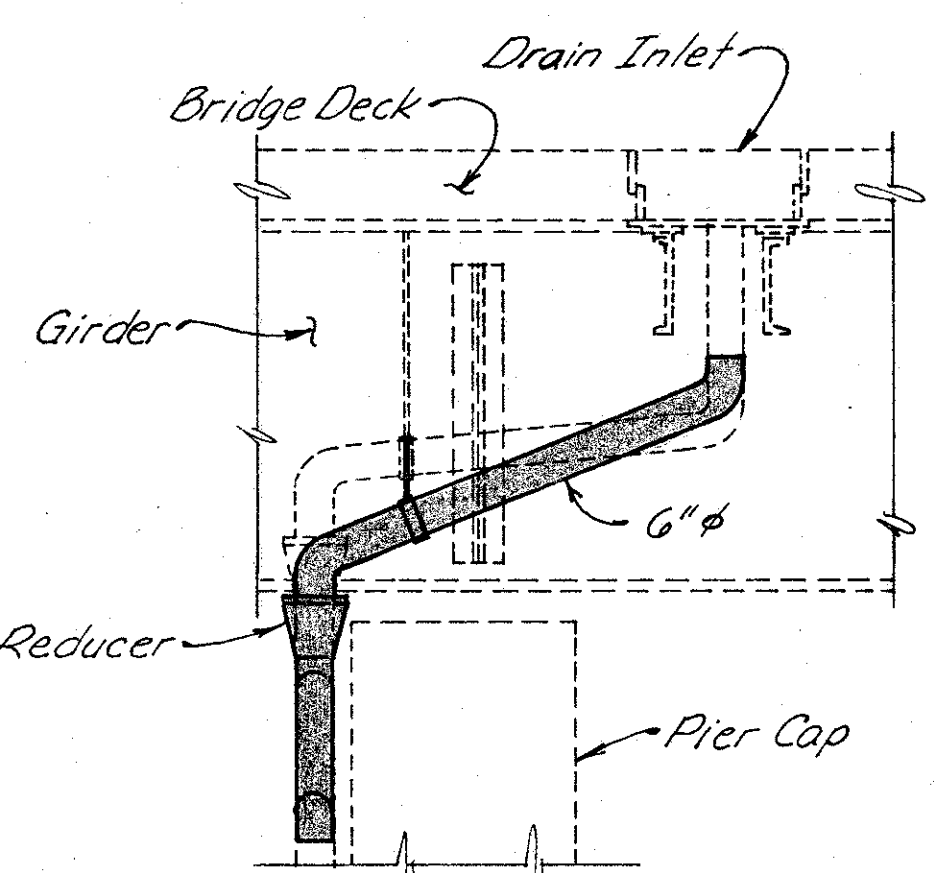
**SECTION A-A**



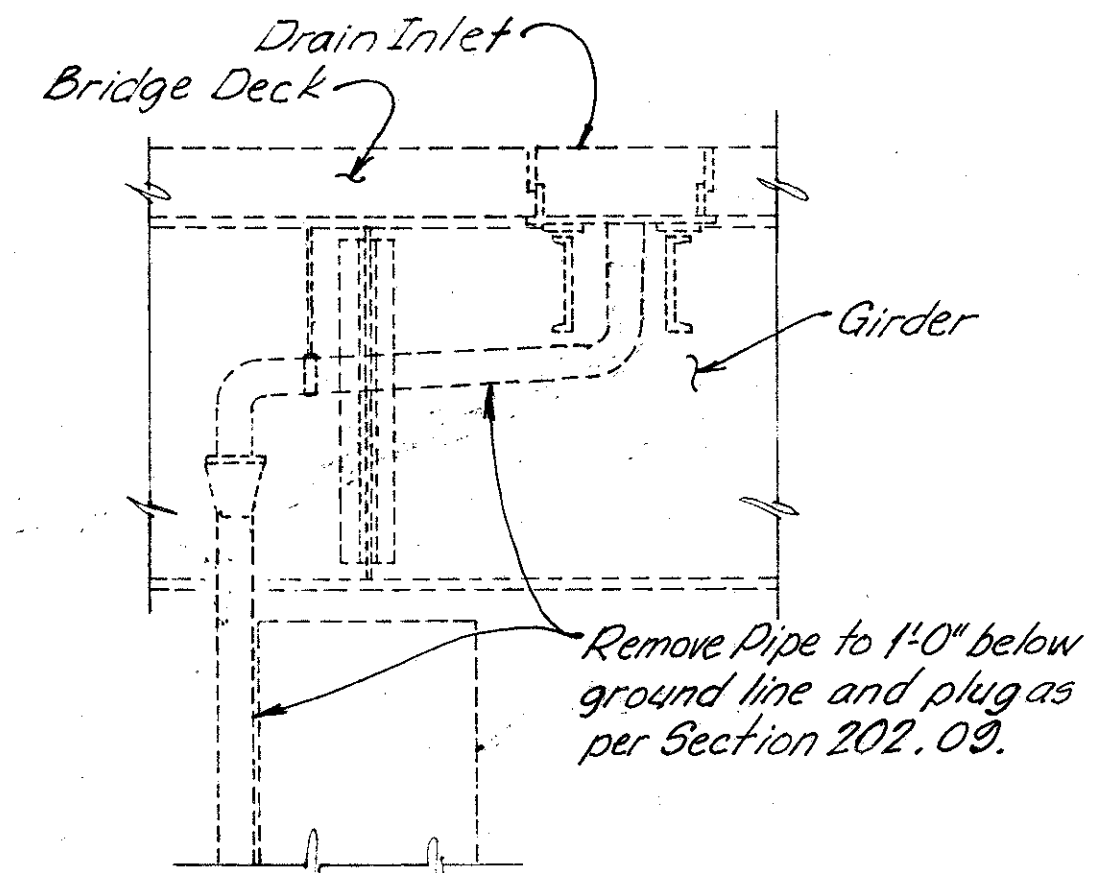
**SECTION B-B**



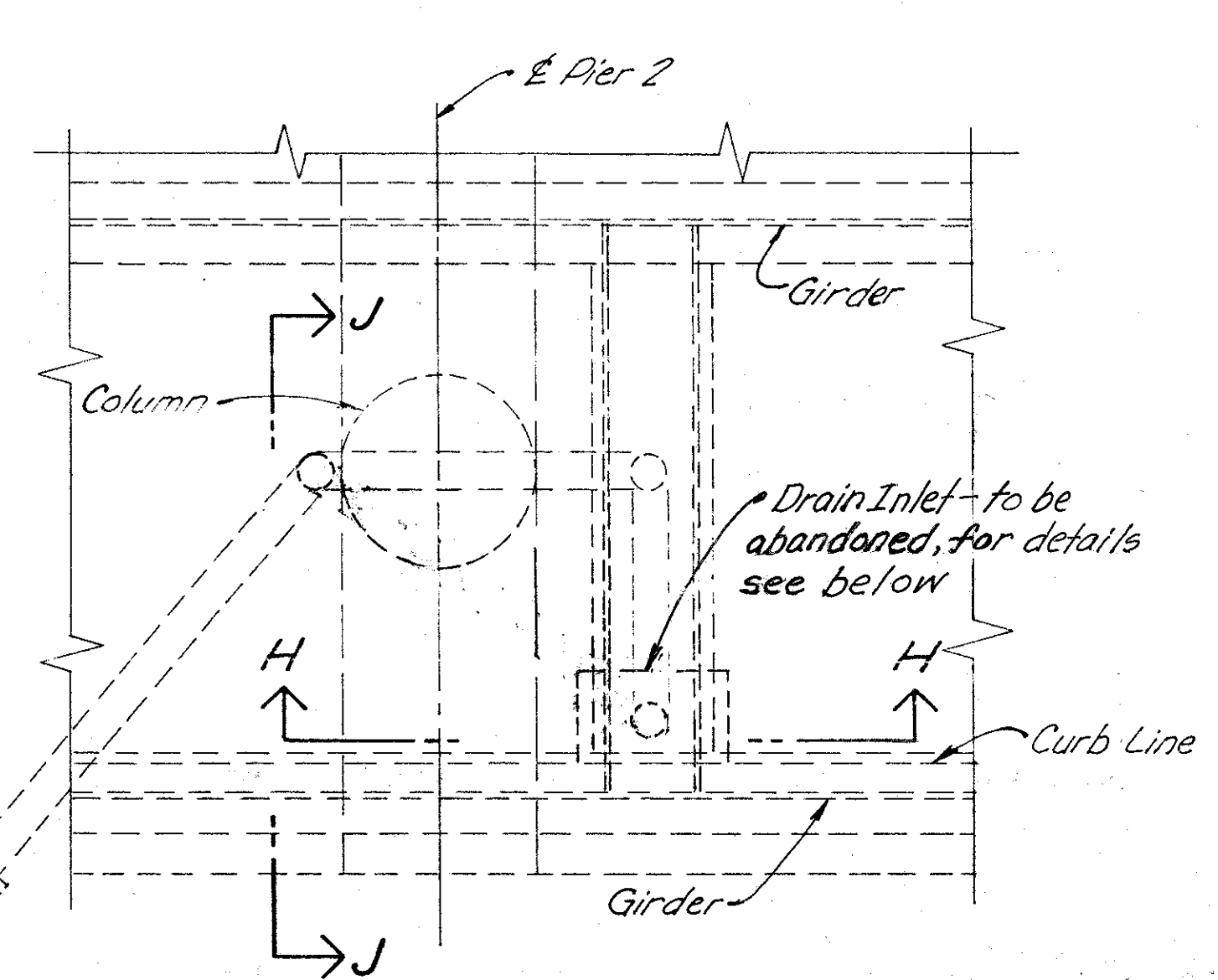
**SECTION D-D**



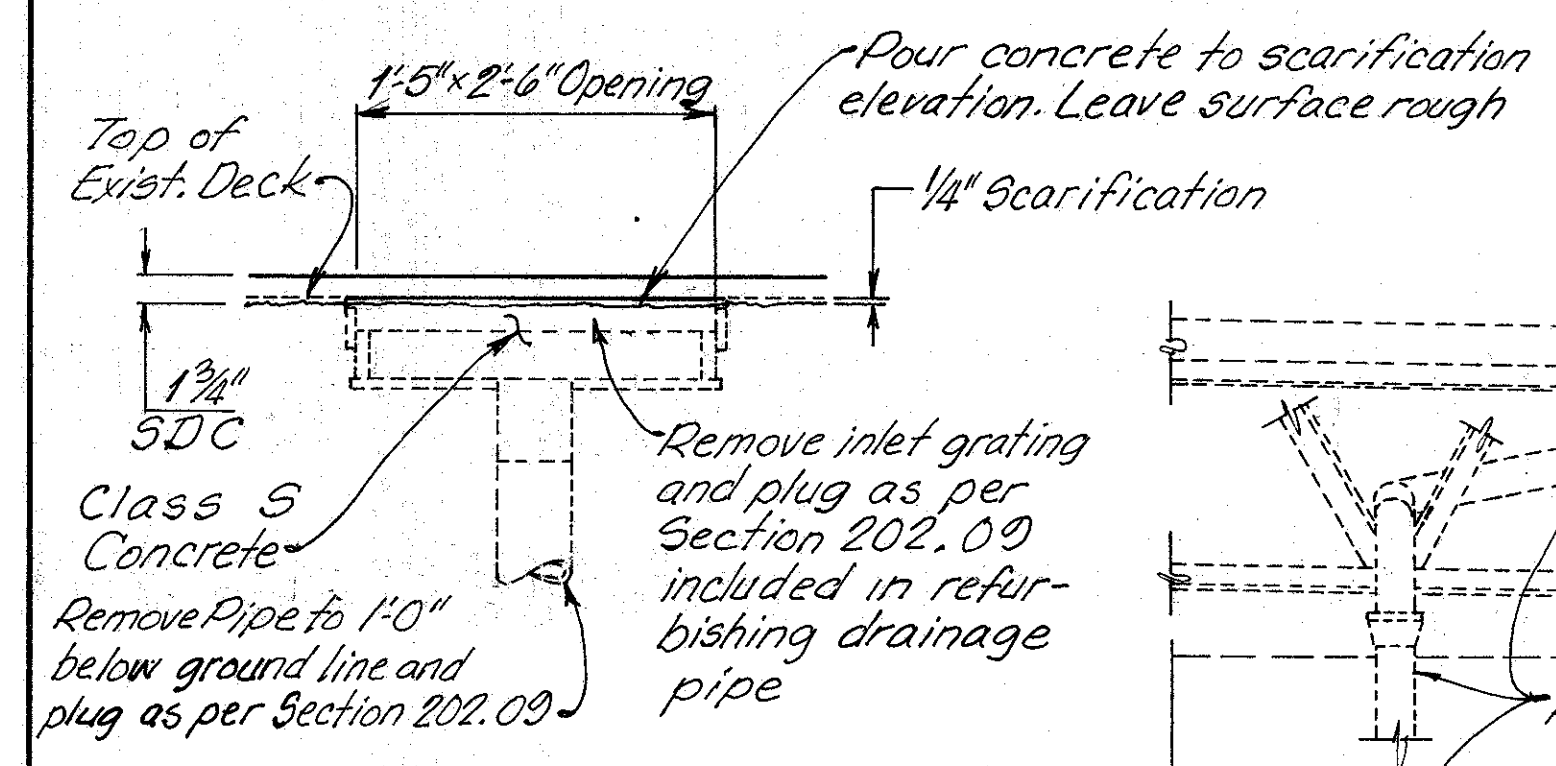
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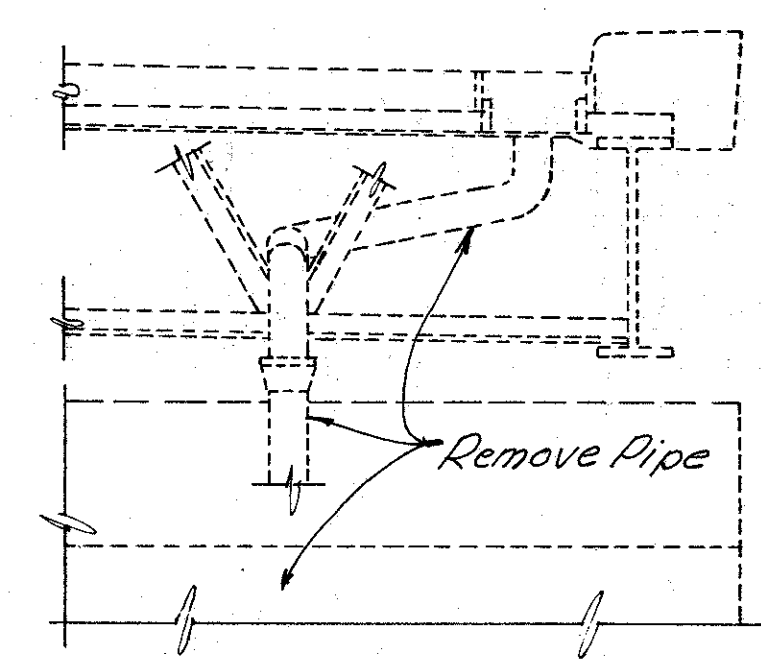
**SECTION H-H**



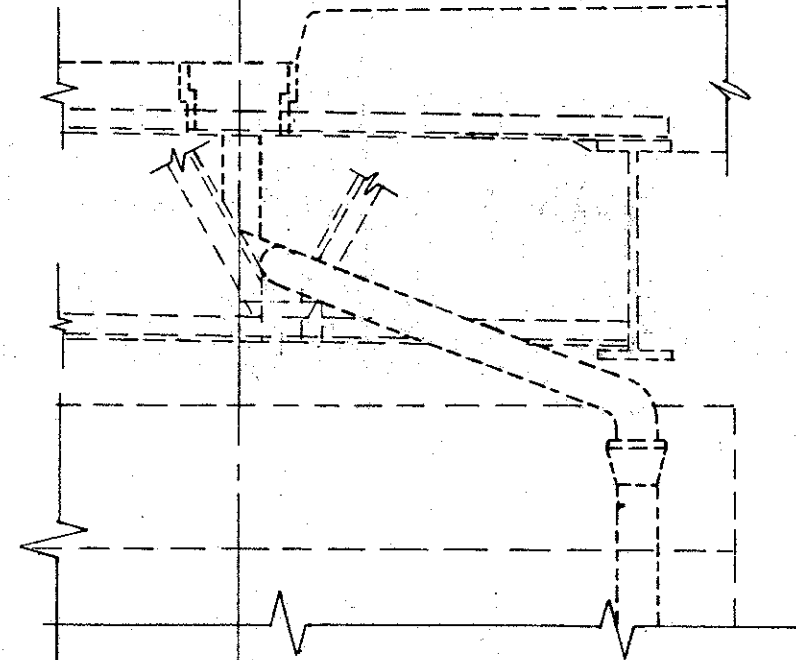
**PLAN PIER 2 Median**



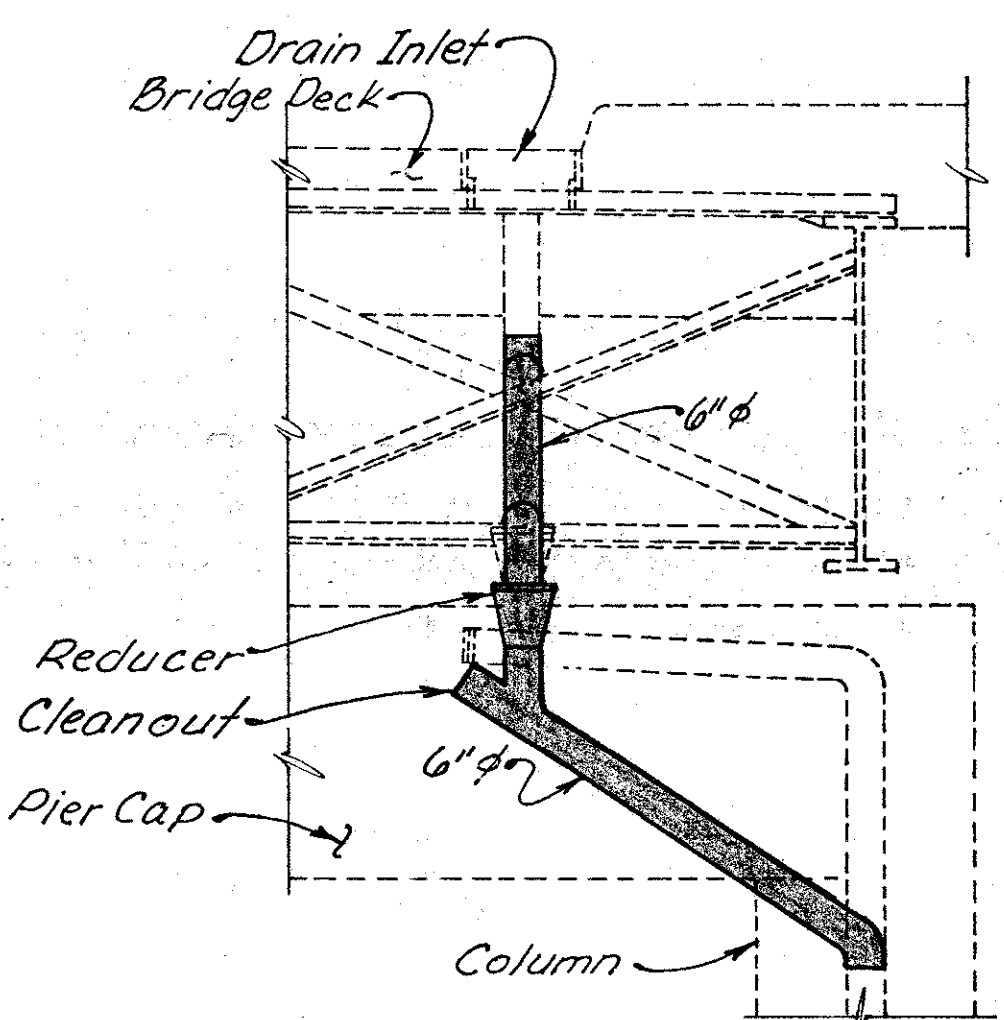
**SECTION SHOWING INLET ABANDONING (3 Total)**



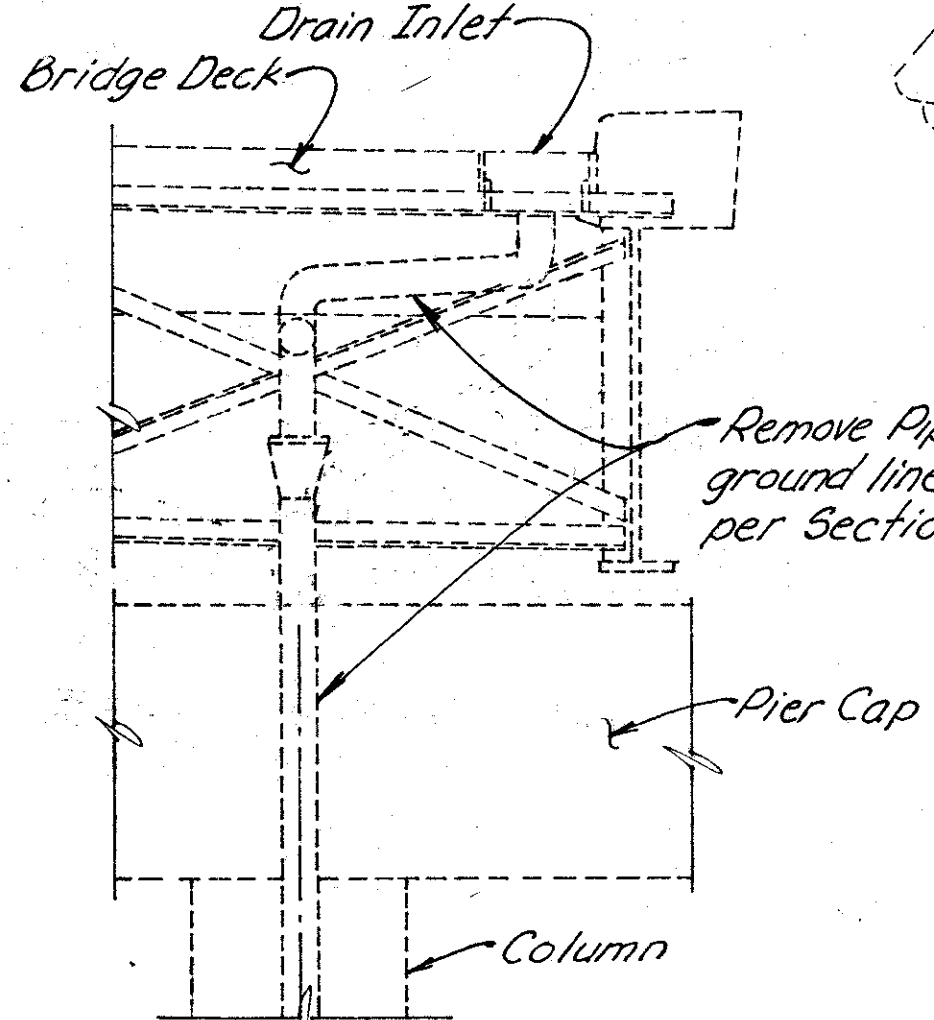
**SECTION C-C**



**SECTION E-E**



**SECTION G-G**



**SECTION J-J**

1. For Drainage piping requirements see General Notes or sheet 273 A01
2. Approximate No. Linear Feet of proposed 6" phi pipe (including specials) = 20'

	WOOLPERT CONSULTANTS 409 East Monument Avenue Dayton, Ohio 45402-1226	5/5
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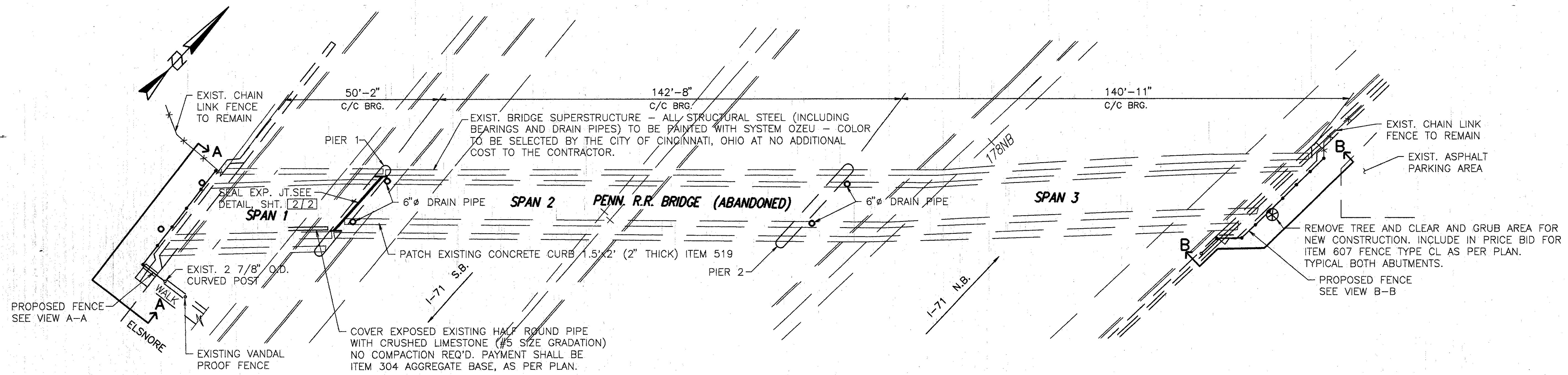
**DRAINAGE DETAILS**

BRIDGE NO. HAM-71-0221  
OVER I-71

HAMILTON COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
D.E.M.	RACH		L.A.T.	P.W.G.	11/11/94	





**SITE PLAN**

ITEM	ITEM EXT.	TOTAL	UNITS	DESCRIPTION
304	20001	3	CU YD	AGGREGATE BASE, AS PER PLAN
SPECIAL	51267500	401	SQ YD	SEALING OF CONCRETE SURFACES *
SPECIAL	51267502	245	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY) *
SPECIAL	51400050	56000	SQ FT	SURFACE PREPARATION OF EXISTING STEEL, SYSTEM OZEU *
SPECIAL	51400056	56000	SQ FT	FIELD PAINTING OF EXISTING STEEL, PRIME COAT, SYSTEM OZEU *
SPECIAL	51400060	56000	SQ FT	FIELD PAINTING OF EXISTING STEEL, INTERMEDIATE COAT, SYSTEM OZEU *
SPECIAL	51400066	56000	SQ FT	FIELD PAINTING OF EXISTING STEEL, FINISH COAT, SYSTEM OZEU *
SPECIAL	51400504	100	MAN HOUR	GRINDING FINES, TEARS, SLIVERS *
516	11211	20	LIN FT	STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL AS PER PLAN
519	11100	3	SQ FT	PATCHING CONCRETE STRUCTURE
607	20001	72	LIN FT	FENCE, TYPE CL, AS PER PLAN
607	20101	9	LIN FT	FENCE, TYPE CL, MISC. HT., AS PER PLAN
SPECIAL	6073990	15	LIN FT	VANDAL PROTECTION FENCE, 8' STRAIGHT, COATED FABRIC
516	14600	100	LIN FT	STRUCTURAL JOINT OR JOINT SEALER, MISC.: 2"x4" SEALER, AS PER PLAN
516	14600	50	LIN FT	SEAL JOINT BETWEEN ABUTMENT AND CONCRETE SLOPE PROTECTION
518	63300	LUMP	L.S.	SCUPPER AND DRAINAGE PIPE CLEANOUT
601	21100	2	S.Y.	REPAIR CONCRETE SLOPE PROTECTION

\* SEE PROPOSAL NOTE

**PROPOSED WORK**

1. INSTALL VANDAL PROTECTION FENCE.
2. SEAL DECK EXPANSION JOINT WITH STRIP SEAL.
3. PAINT STRUCTURAL STEEL WITH SYSTEM OZEU.
4. SEAL ABUTMENTS AND PIERS.
5. TRAFFIC SHALL BE MAINTAINED ON I-71 AT ALL TIMES. FOR NOTES, SEE MAINTENANCE OF TRAFFIC PLANS.
6. OTHER WORK AS DESCRIBED IN THESE PLANS.

**CONCRETE SURFACES TO BE SEALED**

1. ABUTMENT BACKWALL, SEAT AND EXPOSED BREASTWALL - EPOXY.
2. PIER 1 ~ TOP WITH EPOXY, EXPOSED STEM WITH NON-EPOXY.
3. PIER 2 ~ TOP AND SIDES OF STEM WITH NON-EPOXY.

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**GENERAL SITE PLAN, NOTES, AND ESTIMATED QUANTITIES**

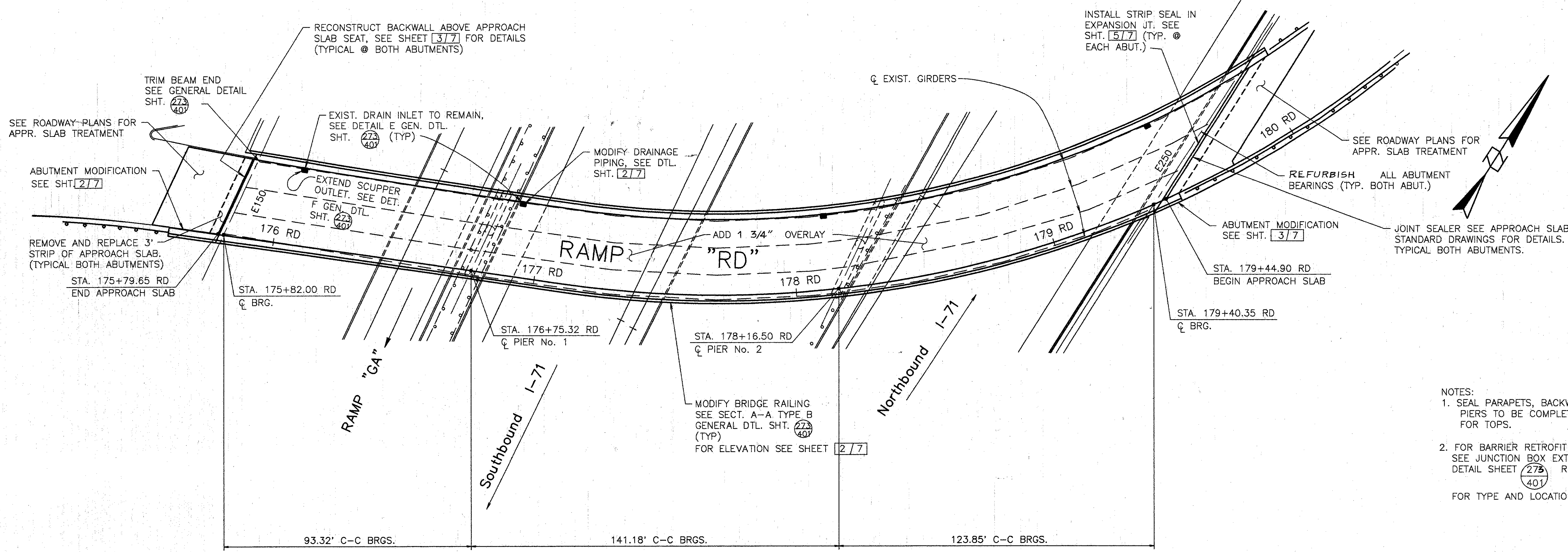
BRIDGE NO. HAM-71-0226  
 PENN. R.R. OVER I-71  
 HAMILTON COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
L.A.T.M.	D.E.E.		M.A.A.	DEM	11/11/94	

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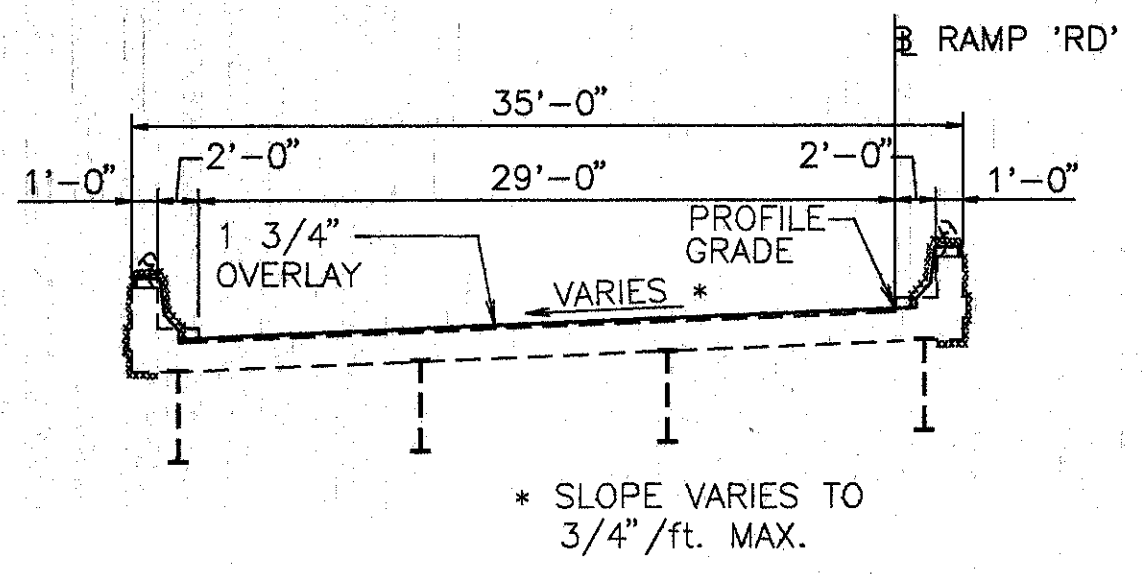






- NOTES:
1. SEAL PARAPETS, BACKWALLS, AND PIERS. PIERS TO BE COMPLETELY SEALED EXCEPT FOR TOPS.
  2. FOR BARRIER RETROFIT AT JUNCTION BOXES, SEE JUNCTION BOX EXTENSION DETAIL, GENERAL DETAIL SHEET 2/3 401 REFER TO LIGHTING DETAILS FOR TYPE AND LOCATION.

PLAN



TYP. BRIDGE SECTION

SLIDING OR FIXED P SIZE	JACK CAPACITY REQ'D. (MIN)
E150	100 TON
E250	150 TON

**EXISTING STRUCTURE**  
 TYPE: CONTINUOUS STEEL GIRDER WITH REINFORCED CONCRETE DECK & SUBSTRUCTURE  
 SPANS: 93.32', 141.18' & 123.85' C/C BRGS.  
 MEASURED ALONG C  
 ROADWAY: 29'-0" F/F CURBS  
 SKEW: VARIES, SEE PLAN  
 LOADING FREQUENCY: C.F.=2000 (57) ADEQUATE FOR AASHO ALTERNATE LOADING  
 WEARING SURFACE: 1" MONOLITHIC CONCRETE  
 APPROACH SLABS: AS-1-54 (25'-0" LONG)  
 ALIGNMENT: TANGENT & 14'00"00" CURVE LEFT  
 SUPERELEVATION: VARIES, SEE PLAN  
 CURB: 2'-0" EACH SIDE

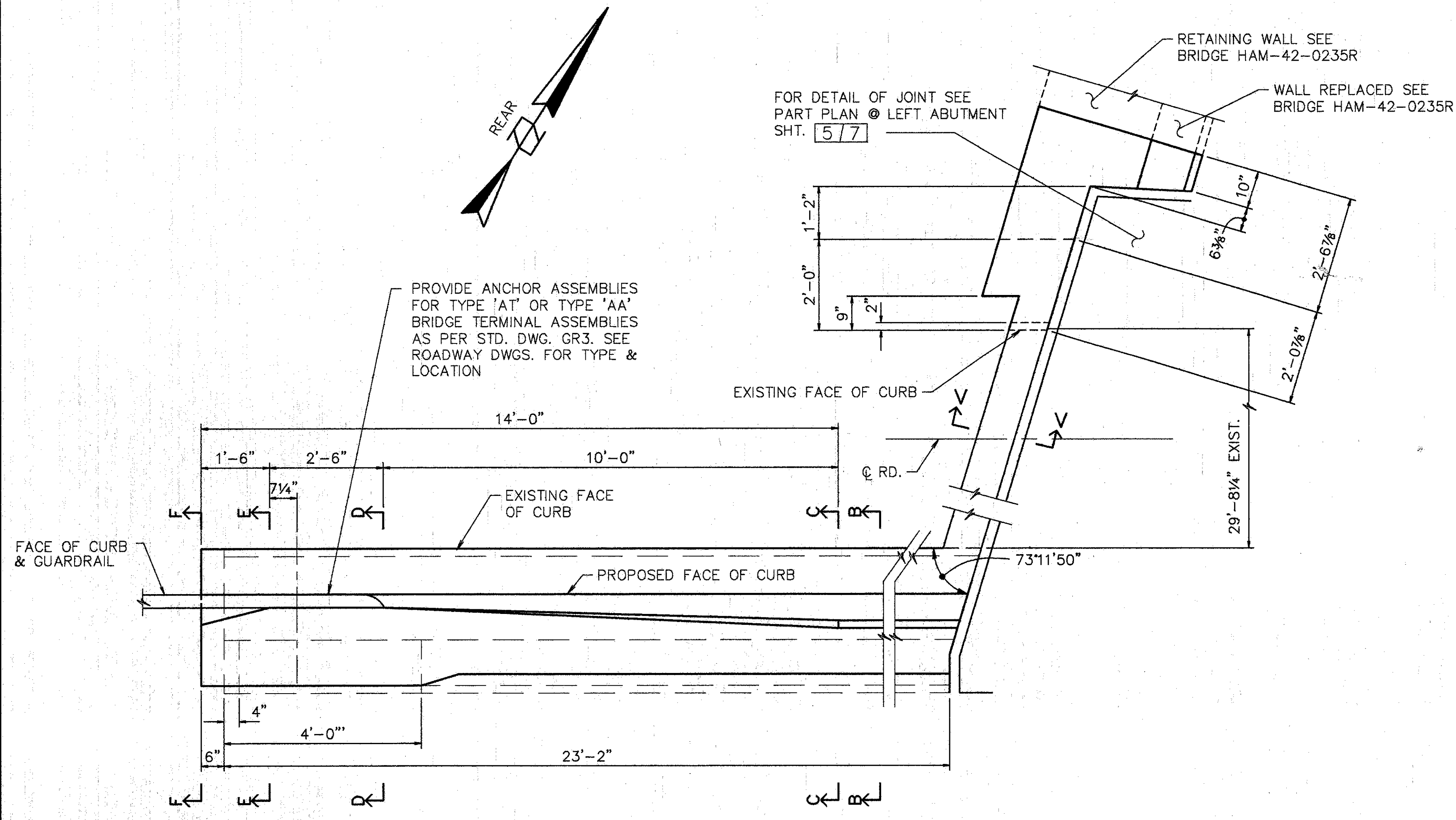
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GENERAL PLAN

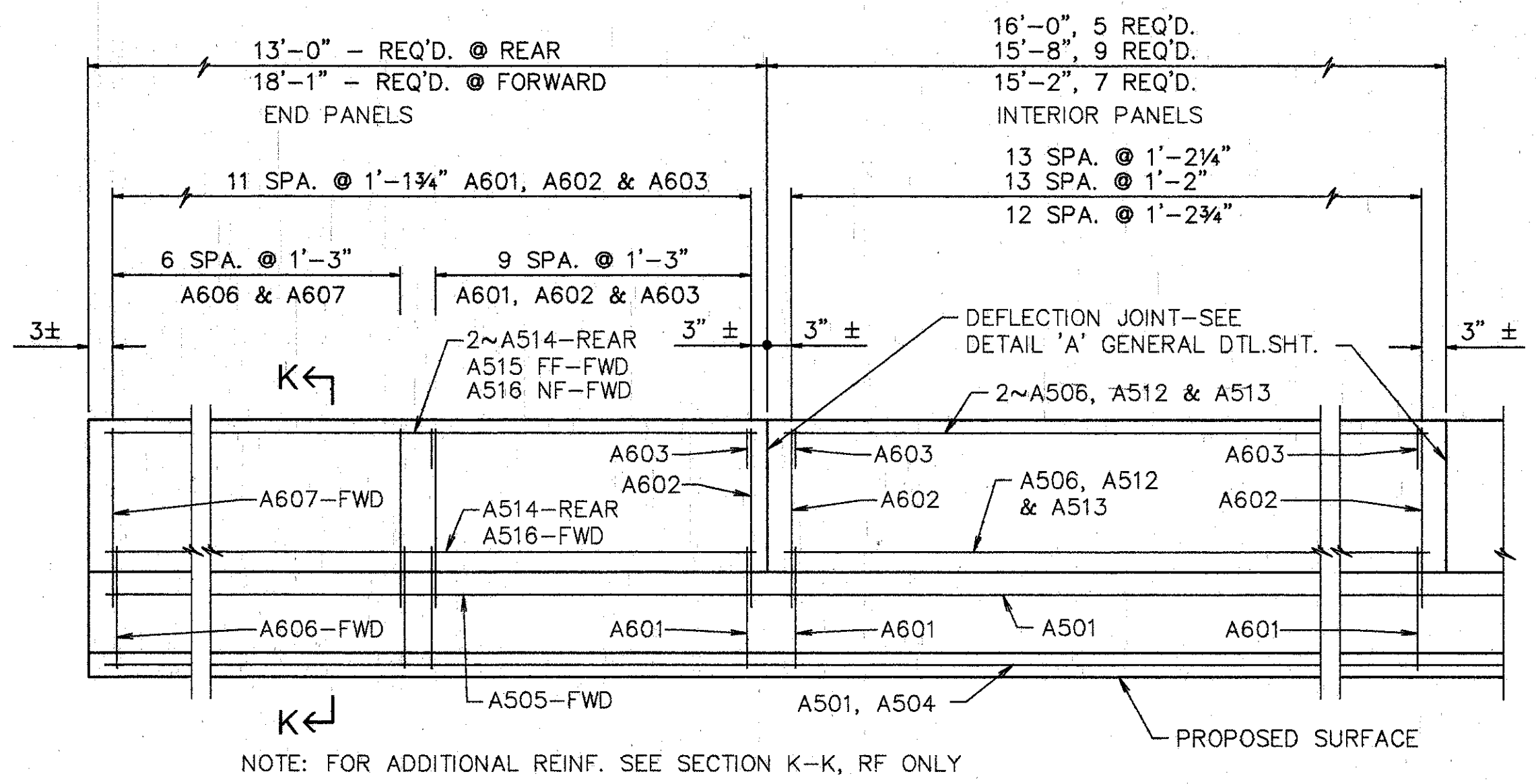
BRIDGE NO. HAM-71-0228 RAMP OVER I-71  
 HAMILTON COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
L.A.T.M.	D.E.E.		M.A.A.	DEM	11/11/94	

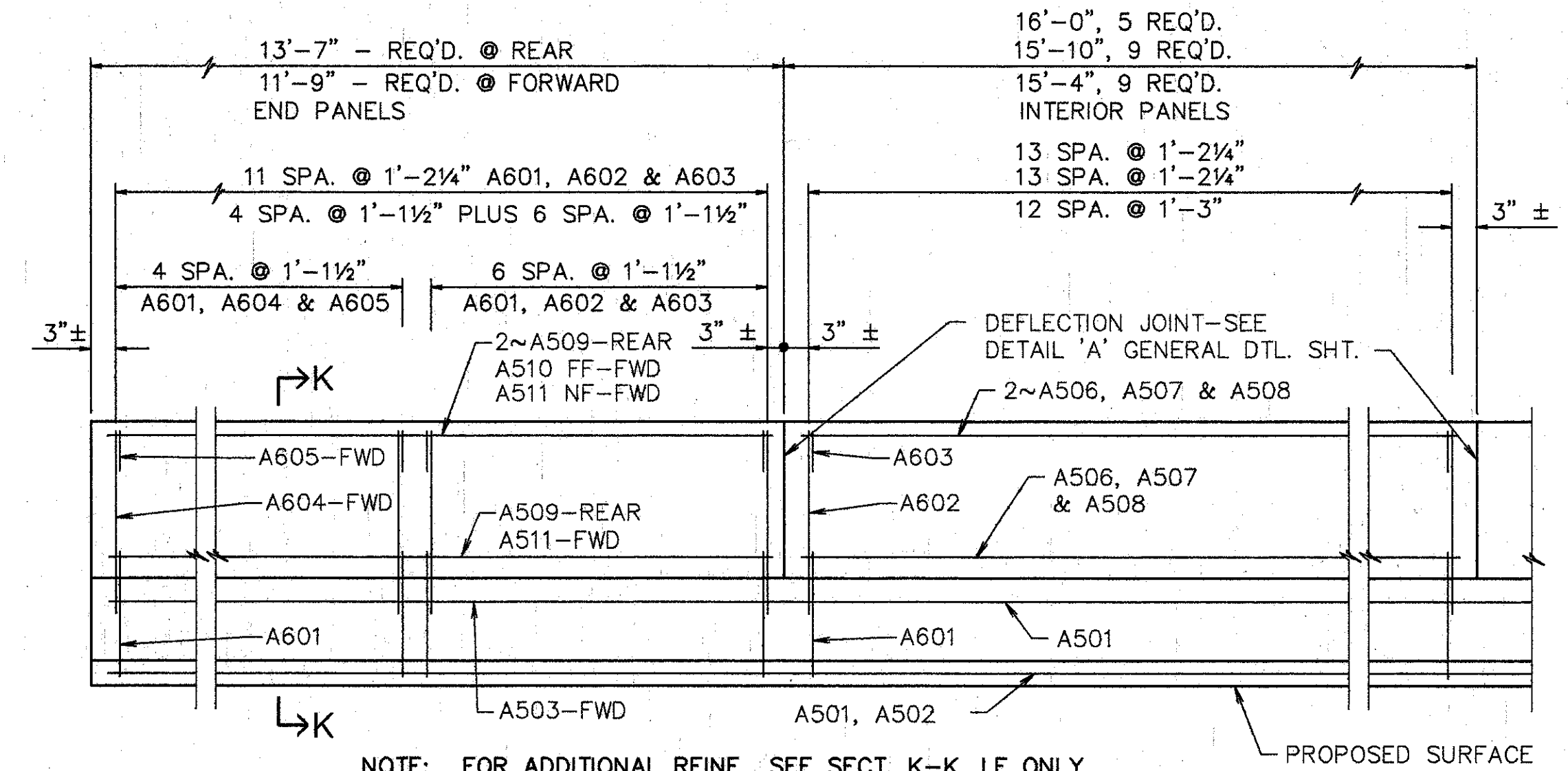
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PLAN - REAR ABUTMENT MODIFICATION

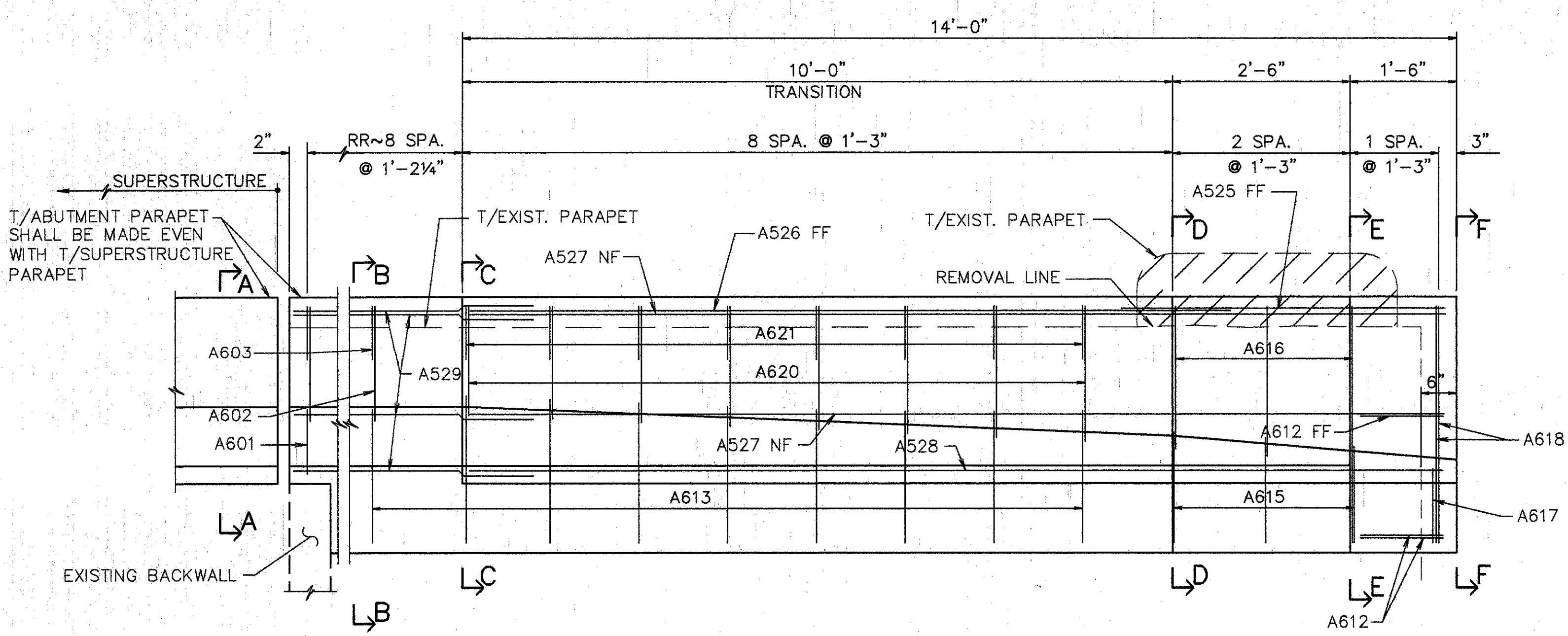


ELEVATION SUPERSTRUCTURE PARAPET - RIGHT



ELEVATION SUPERSTRUCTURE PARAPET - LEFT

- NOTES:
- L DENOTES LEFT SIDE
  - R DENOTES RIGHT SIDE
  - RF DENOTES RIGHT FORWARD
  - LF DENOTES LEFT FORWARD
  - RR DENOTES RIGHT REAR
  - LR DENOTES LEFT REAR
  - NF DENOTES NEAR FACE
  - FF DENOTES FAR FACE



ELEVATION RIGHT-REAR

FOR DETAILS NOT SHOWN, SEE SHTS. 3, 4, & 577

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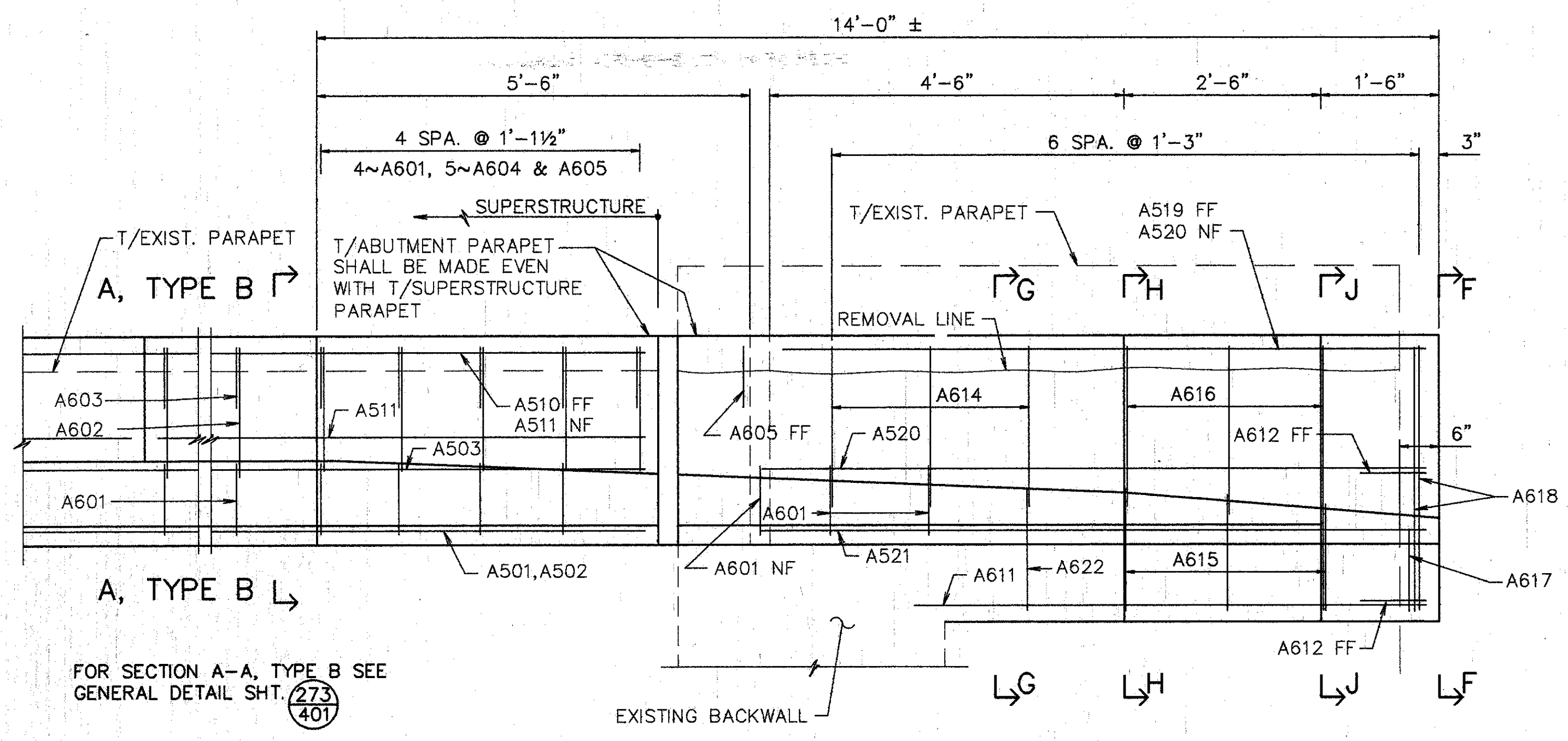
**ABUTMENT PLAN & PARAPET ELEVATIONS**  
 BRIDGE NO. HAM-71-0228 RAMP OVER I-71  
 HAMILTON COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
L.A.T.M.	D.E.E.		M.A.A.	DEM11/11/94		

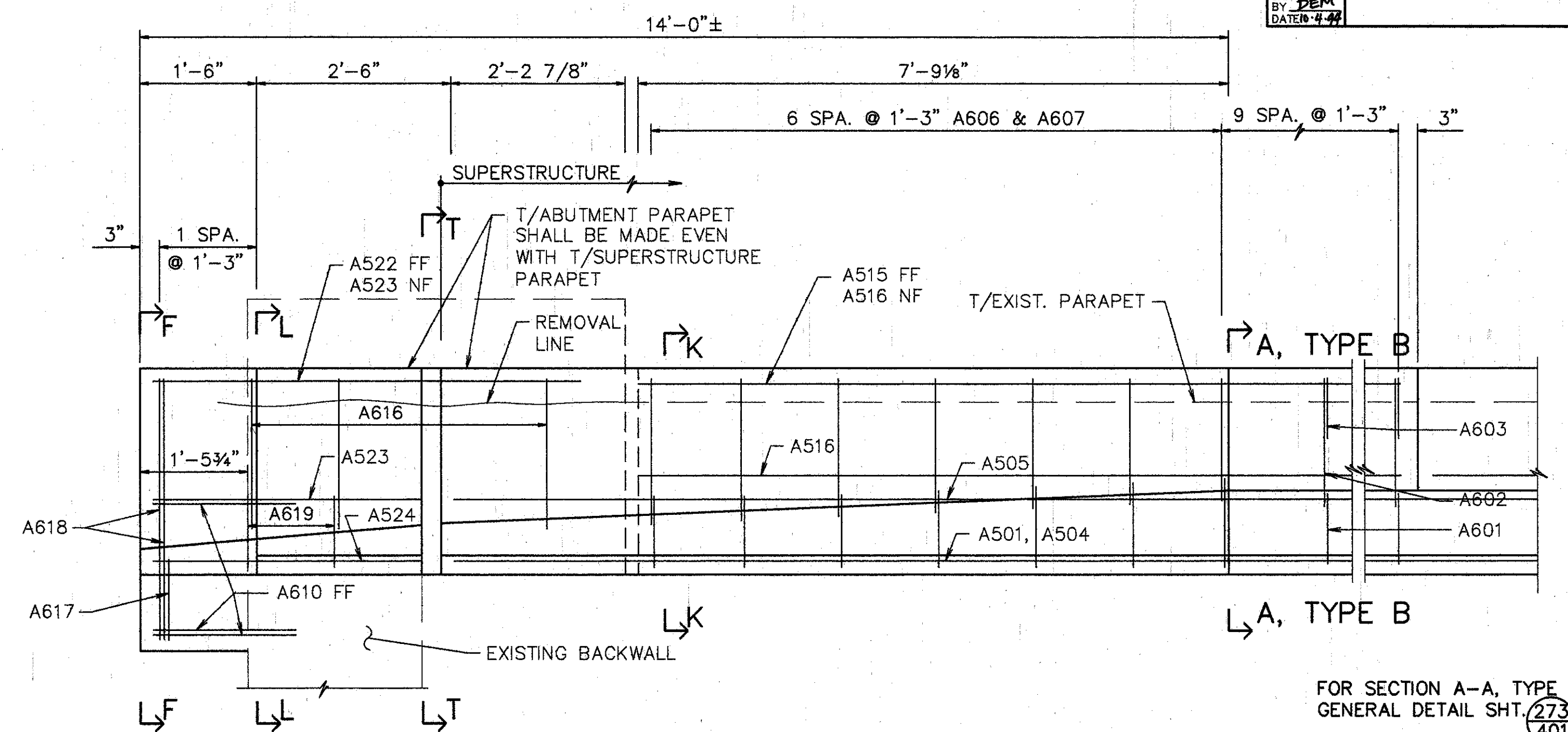
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FOR SECTION A-A SEE GENERAL DETAIL SHT. 273 401





ELEVATION LEFT-FORWARD



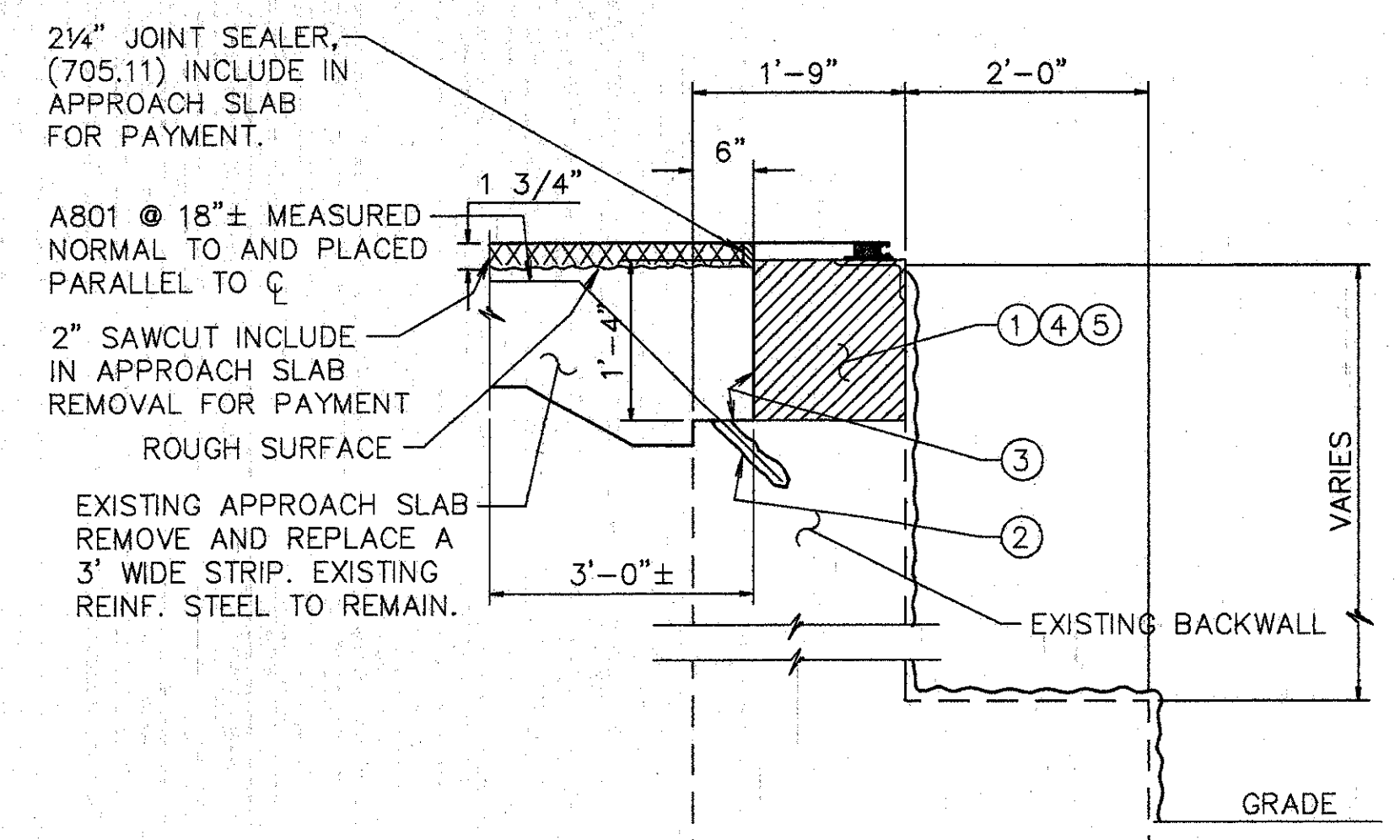
ELEVATION RIGHT-FORWARD

NOTES FOR SECTION V-V

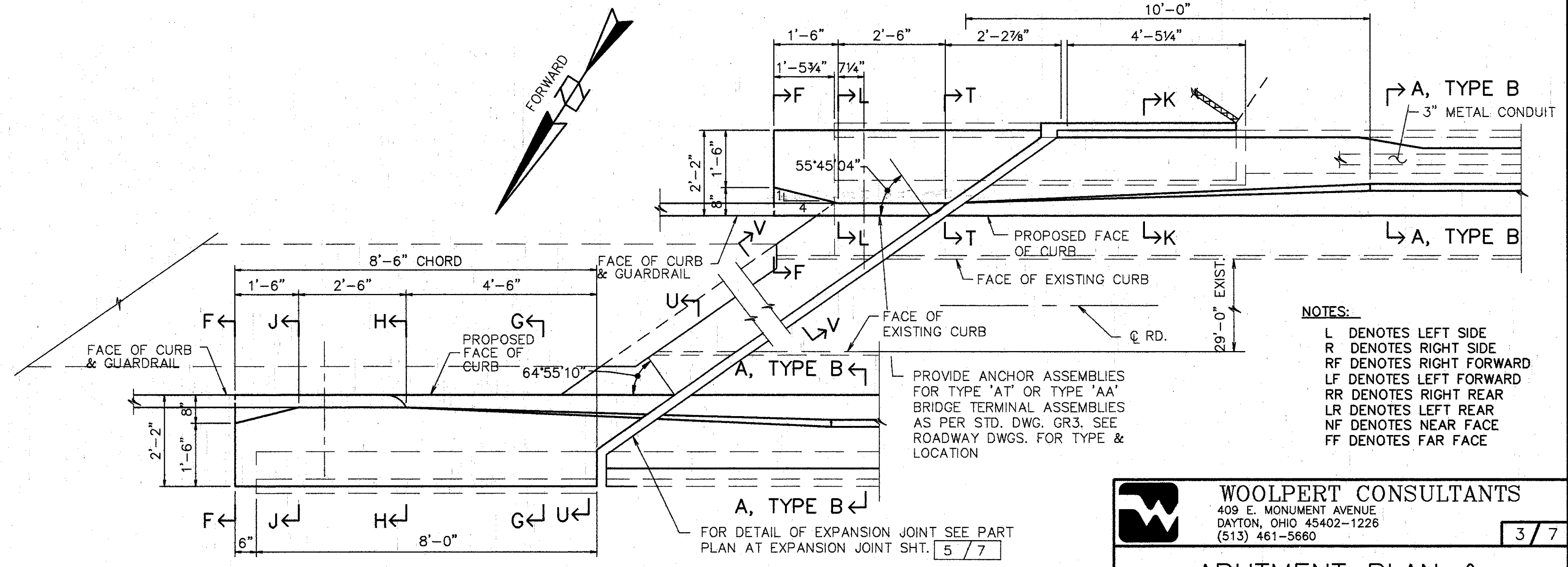
- 1 EXISTING REINFORCING STEEL TO REMAIN ~ REINFORCING STEEL DAMAGED TO BE REPLACED AT CONTRACTORS EXPENSE.
- 2 1' MIN. EMBEDMENT (SEE DOWEL HOLE GENERAL NOTE) ITEM 510.
- 3 TYPE 'A' WATERPROOFING (PAYMENT INCLUDED IN THE PRICE BID FOR APPROACH SLAB).
- 4 CLASS 'C' CONCRETE, ABUTMENT RECONSTRUCTION.
- 5 PROVIDE CONTRACTION AND EXPANSION JOINTS TO MATCH THOSE IN EXISTING BACKWALL AND PROVIDE CONSTRUCTION JOINTS AS REQUIRED TO MAINTAIN TRAFFIC. PAYMENT TO BE INCLUDED IN PRICE BID FOR ITEM 511 CLASS C CONCRETE RECONSTRUCTION.

EXISTING CONCRETE TO BE REMOVED INCLUDE IN ITEM 202 FOR PAYMENT.

SURFACE TO BE SEALED UNDER ITEM SPECIAL- 'SEALING OF CONCRETE SURFACE, EPOXY'.



SECTION V-V



PLAN - FORWARD ABUTMENT MODIFICATION

- NOTES:
- L DENOTES LEFT SIDE
  - R DENOTES RIGHT SIDE
  - RF DENOTES RIGHT FORWARD
  - LF DENOTES LEFT FORWARD
  - RR DENOTES RIGHT REAR
  - LR DENOTES LEFT REAR
  - NF DENOTES NEAR FACE
  - FF DENOTES FAR FACE

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**ABUTMENT PLAN & PARAPET ELEVATIONS**

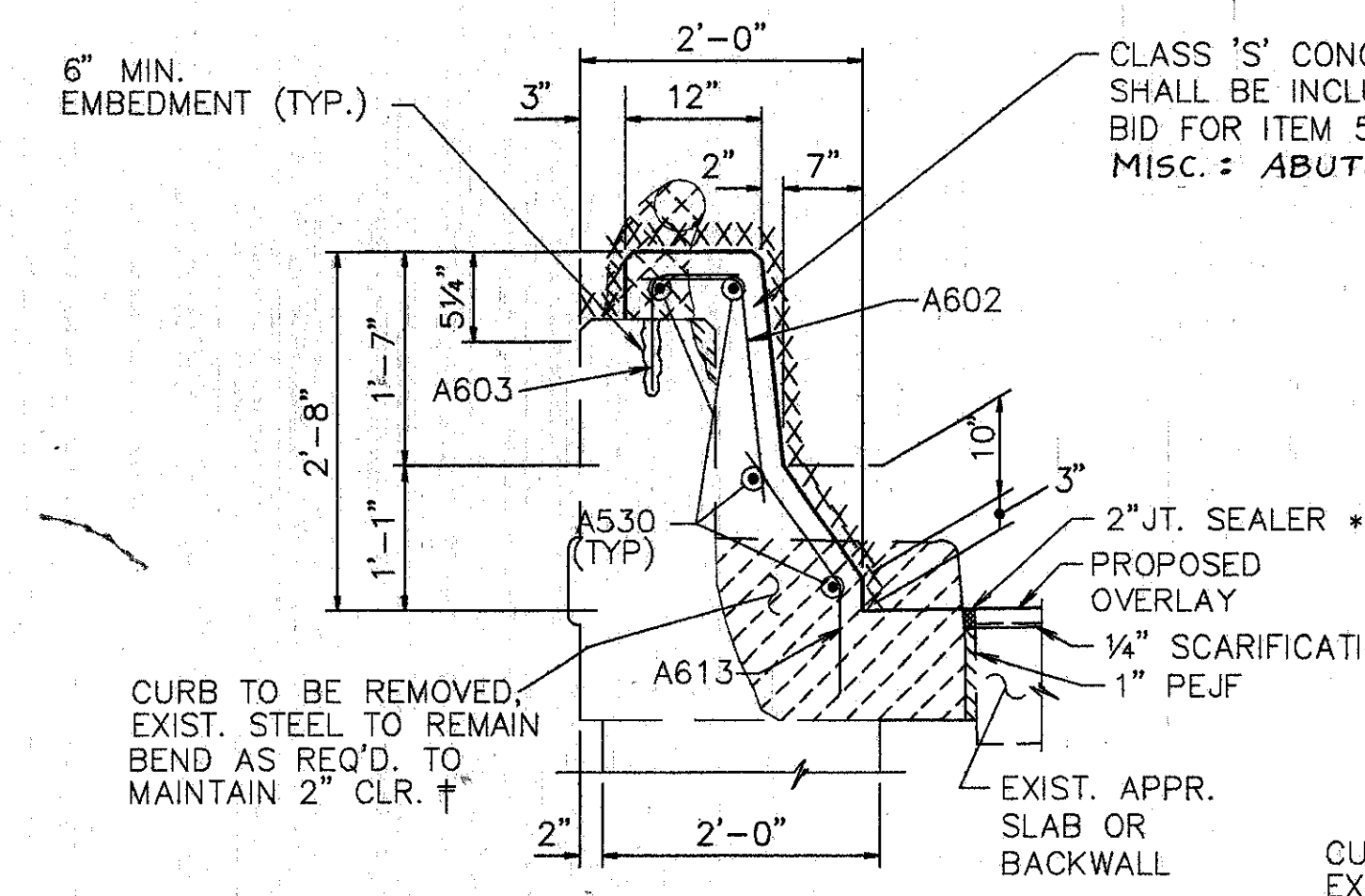
BRIDGE NO. HAM-71-0228 RAMP OVER I-71

HAMILTON COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
L.A.T.M.	D.E.E.		M.A.A.	DEM11/11/94		

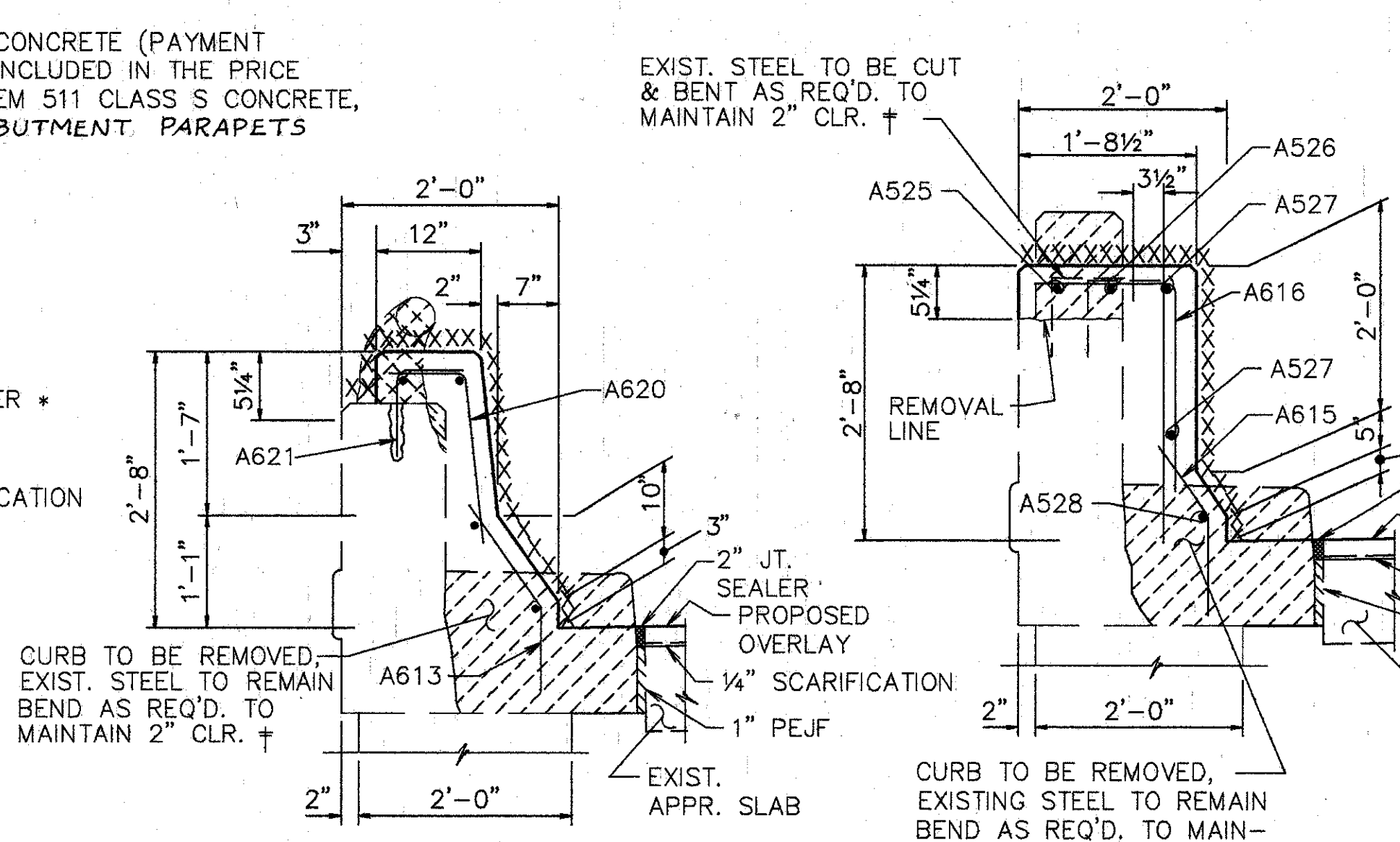
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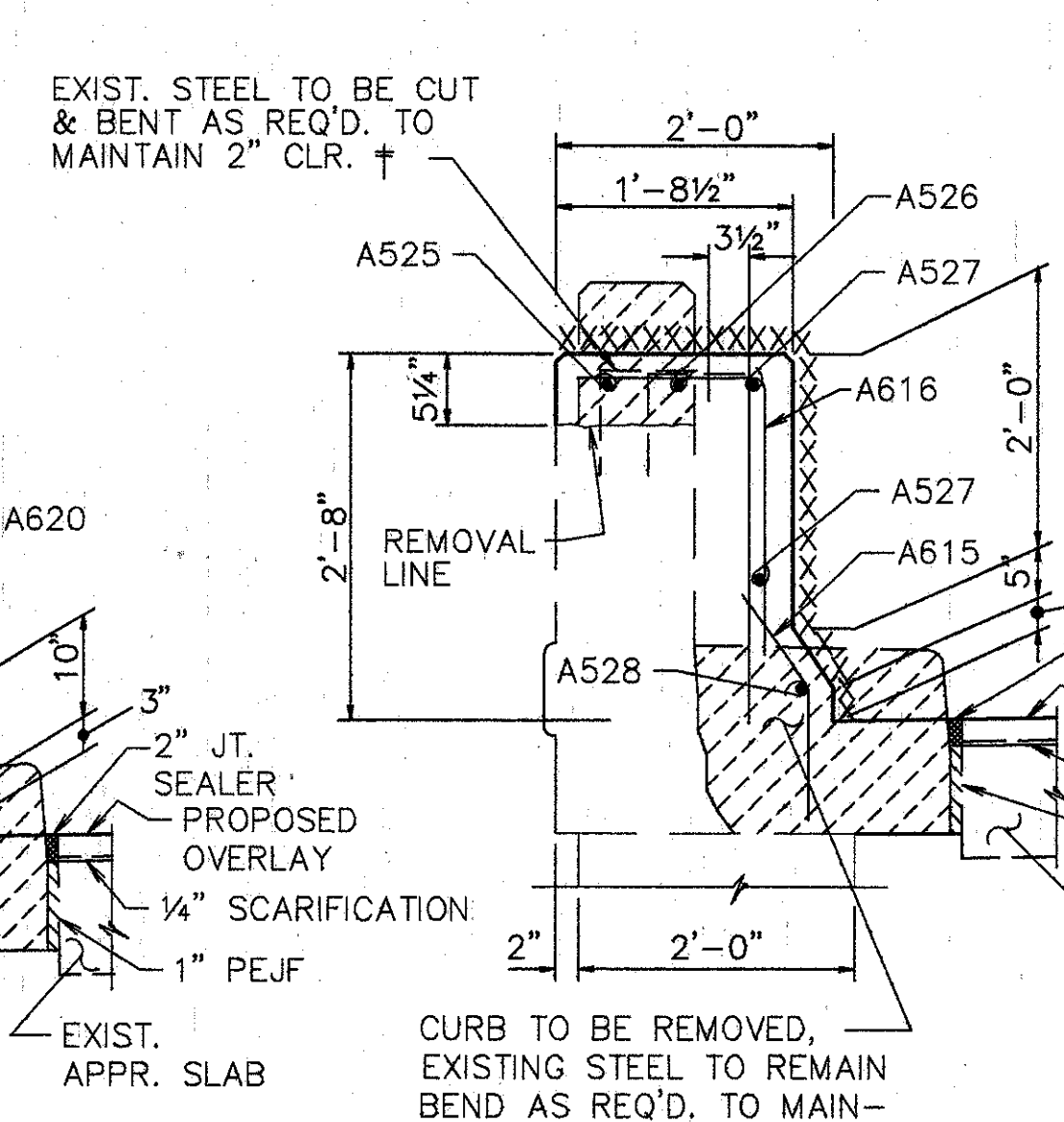


**SECTION B-B**  
 \* 2" JOINT SEALER & 1" PEJF ARE PLACED ONLY WHEN SECTION IS NEXT TO APPROACH SLAB.

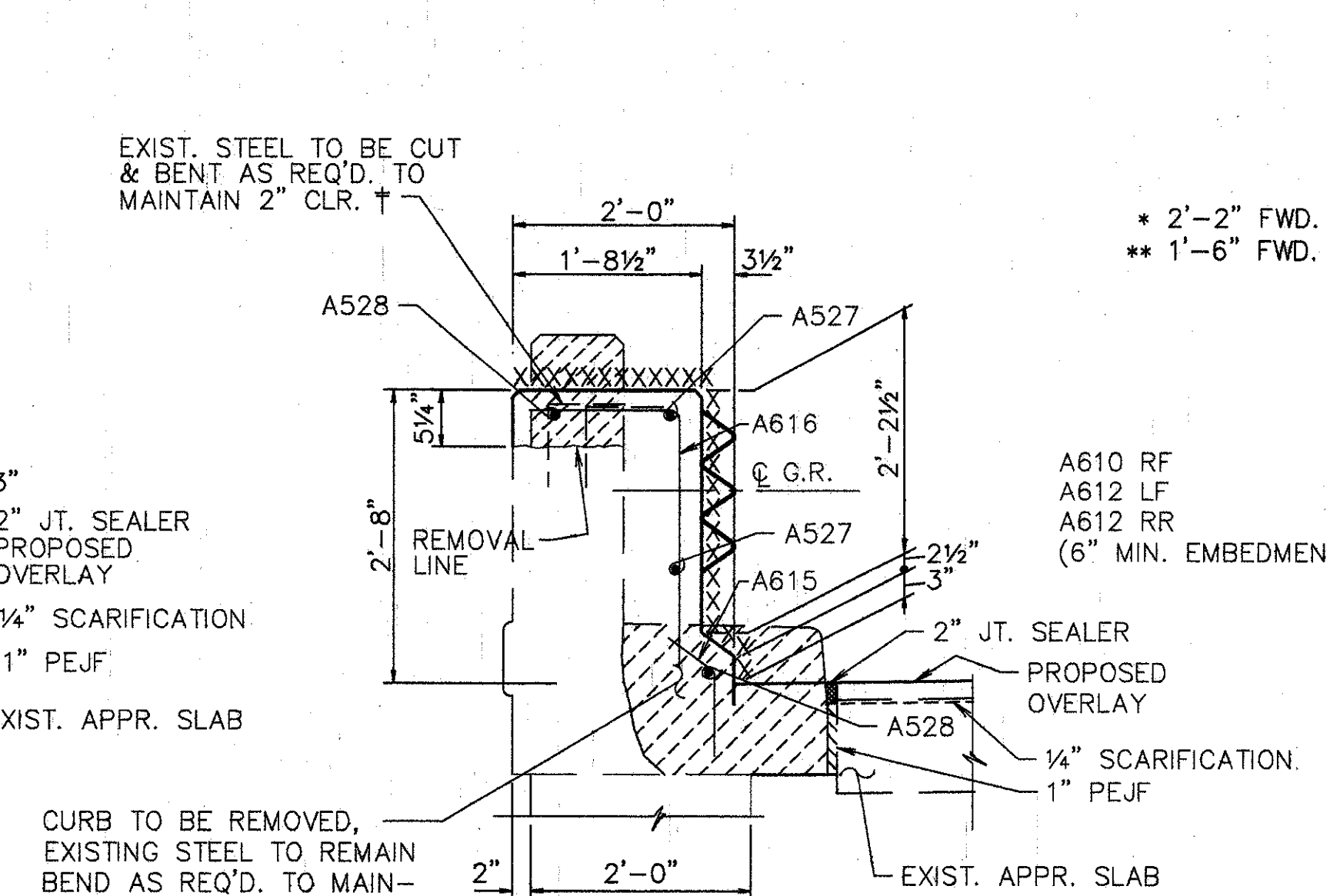
NOTE: WHEN SECTION IS ON BACKWALL, CONCRETE SHALL BE REMOVED TO THE SCARIFICATION LEVEL ONLY AND THE A613 BARS SHALL BE EMBEDDED (6" MIN) INTO ABUTMENT. FOR REFERENCE SEE SECTION A-A TYPE B, GEN. DTL. 27/407



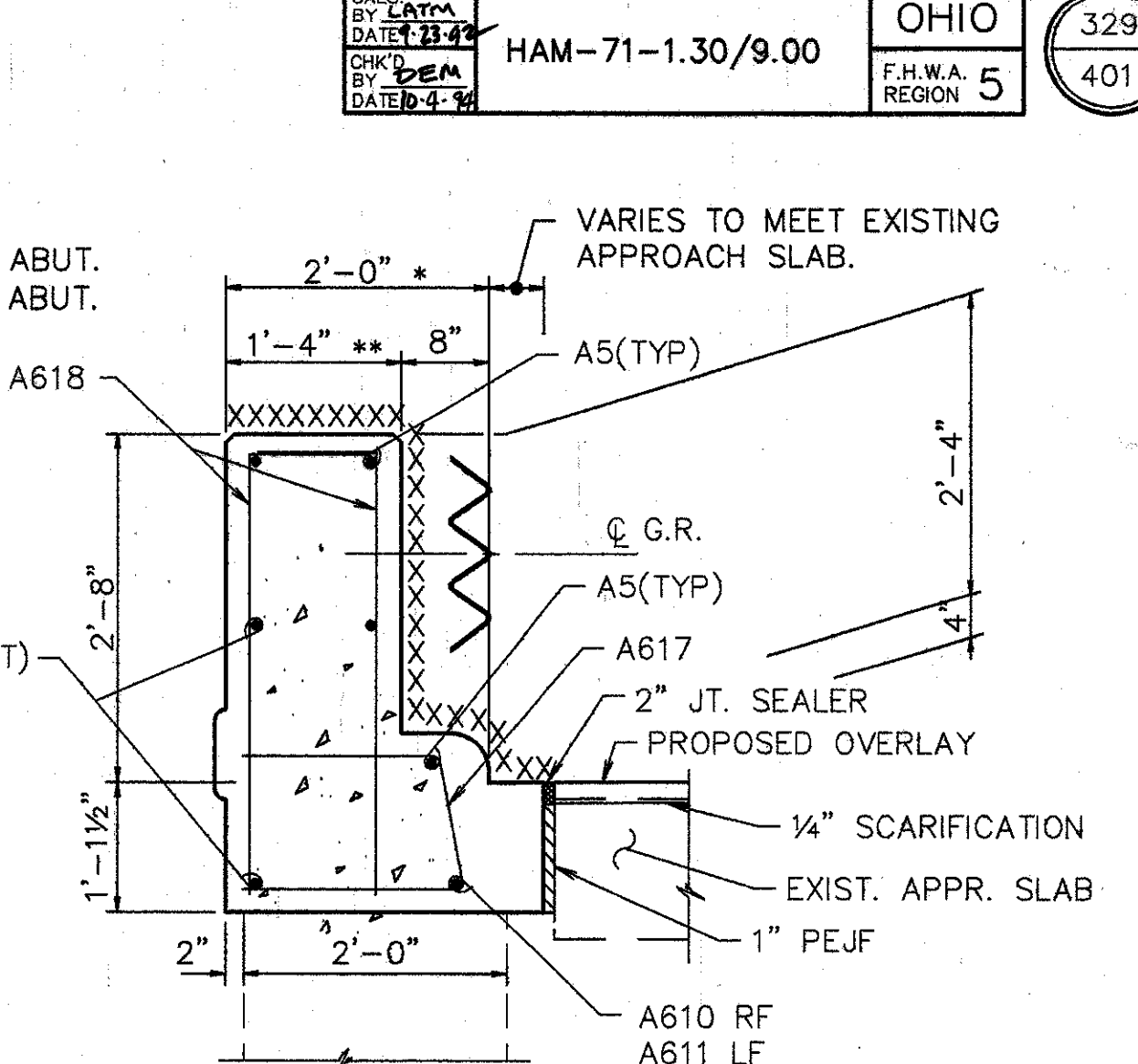
**SECTION C-C**



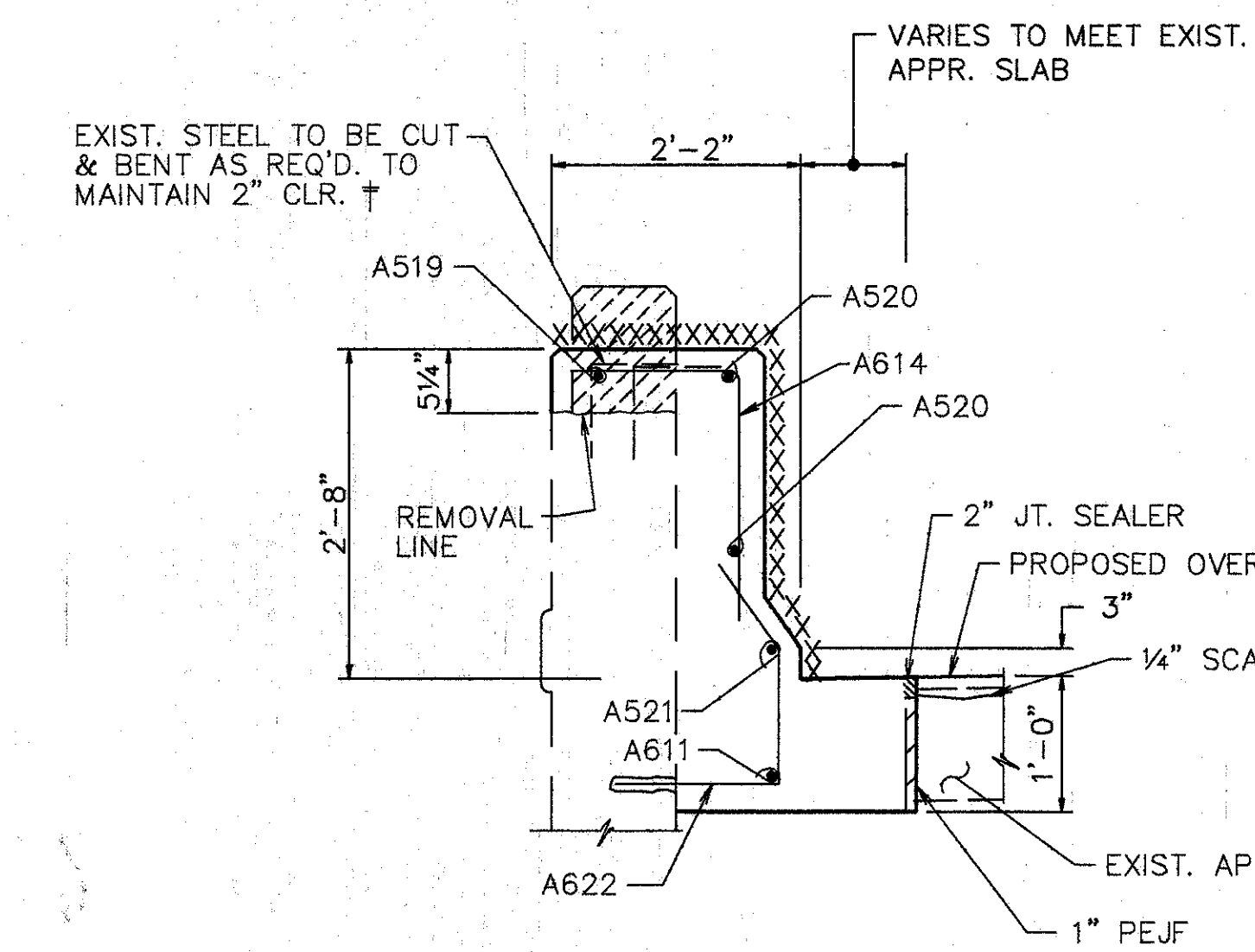
**SECTION D-D**



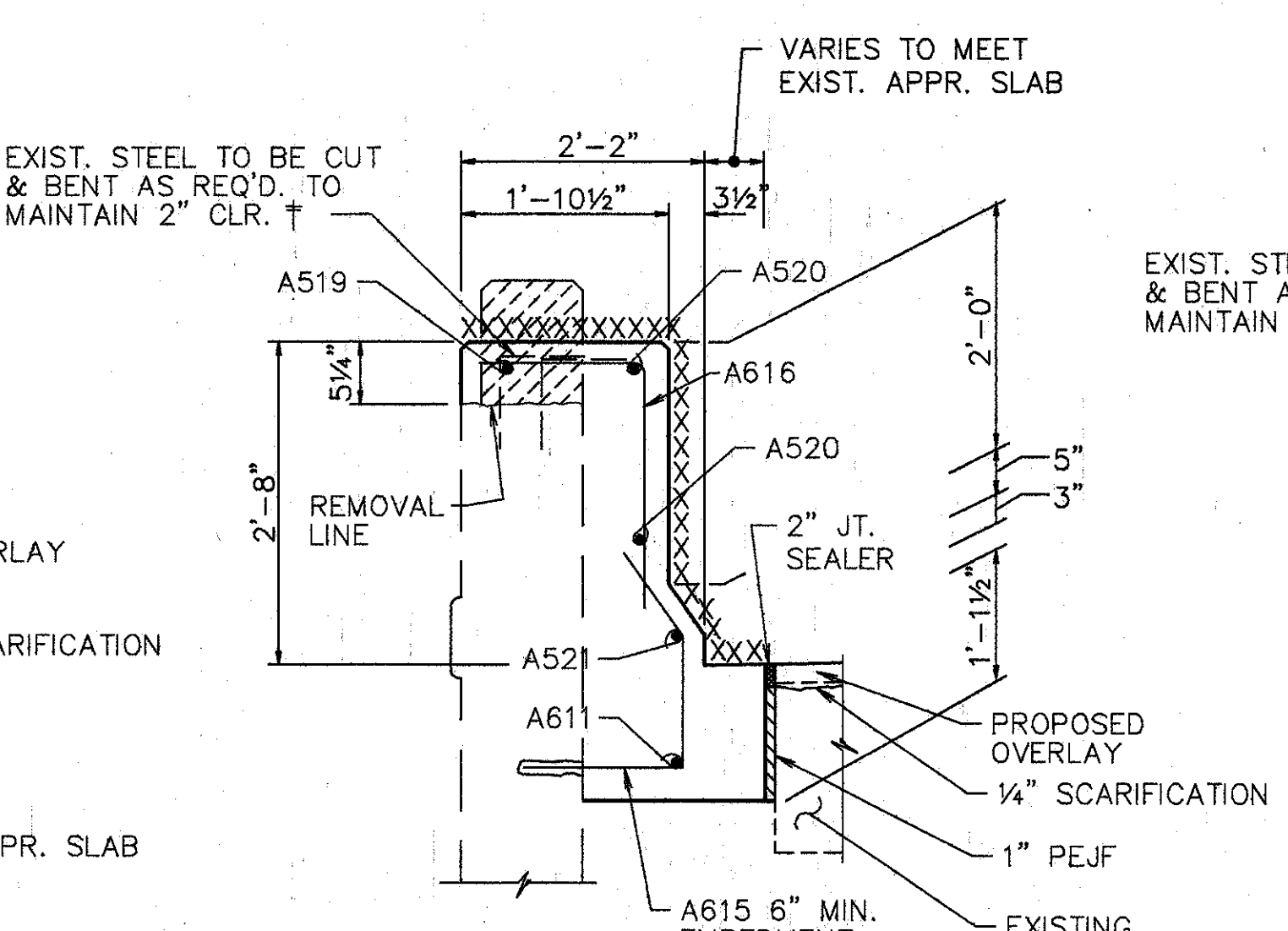
**SECTION E-E**



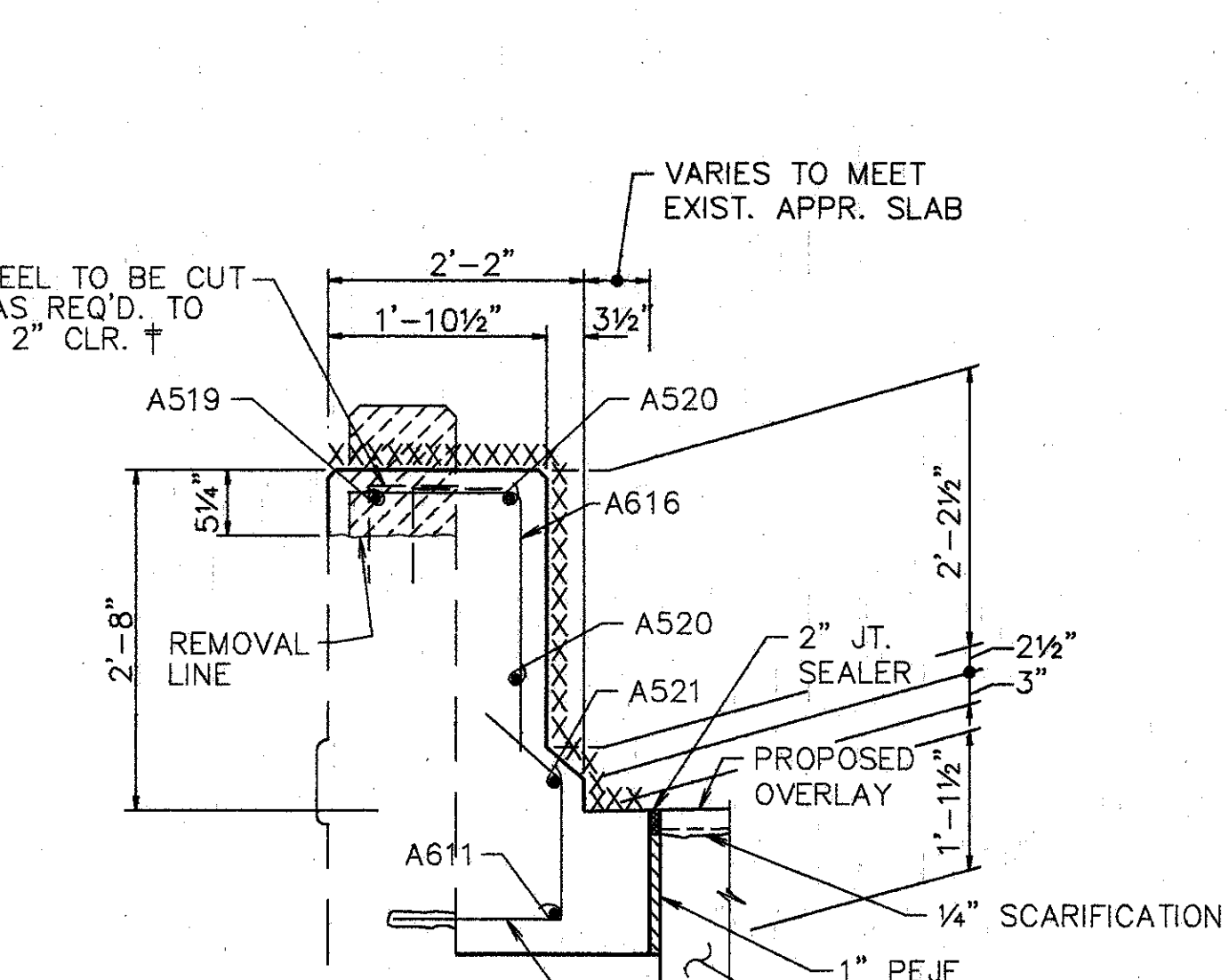
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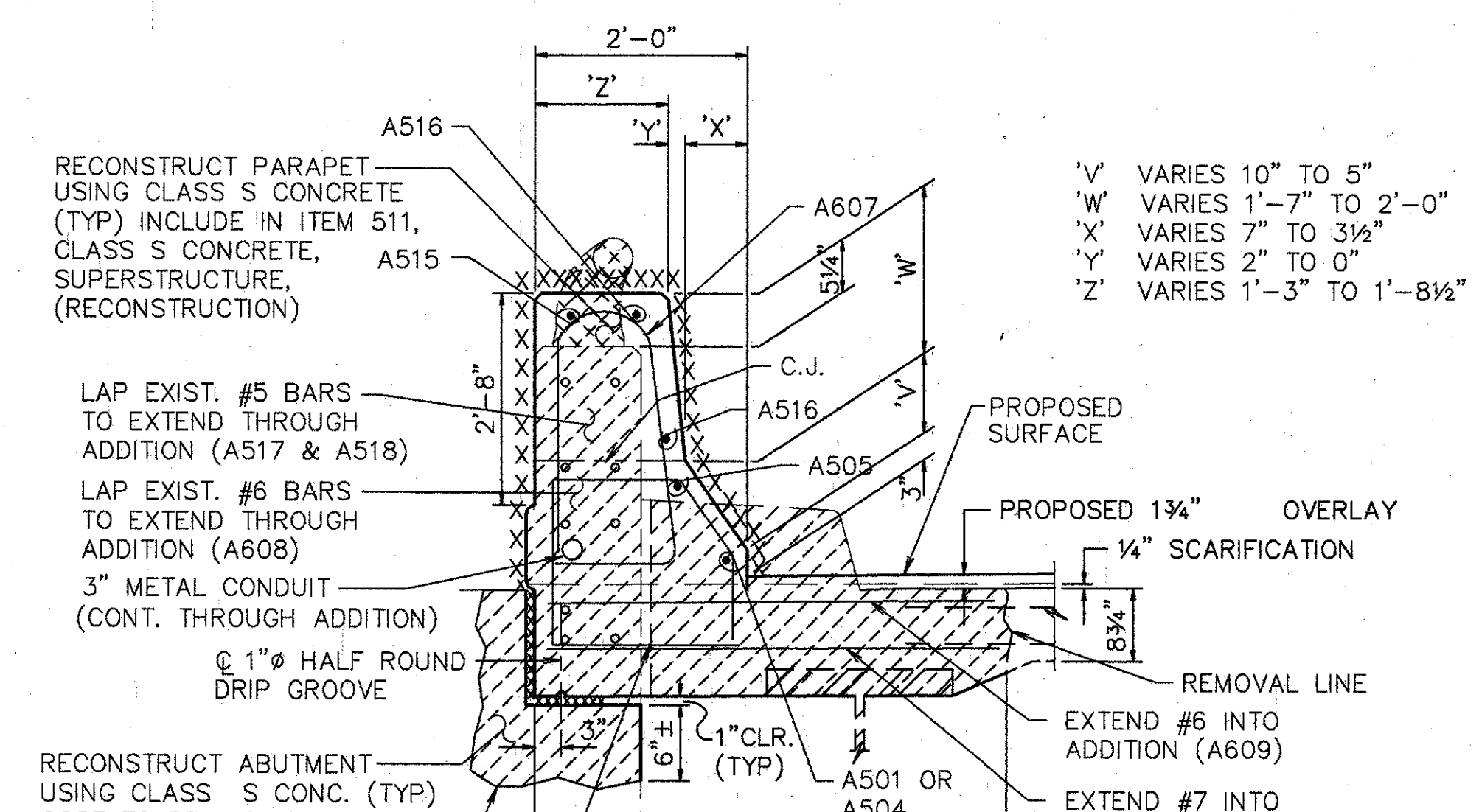
**SECTION G-G**



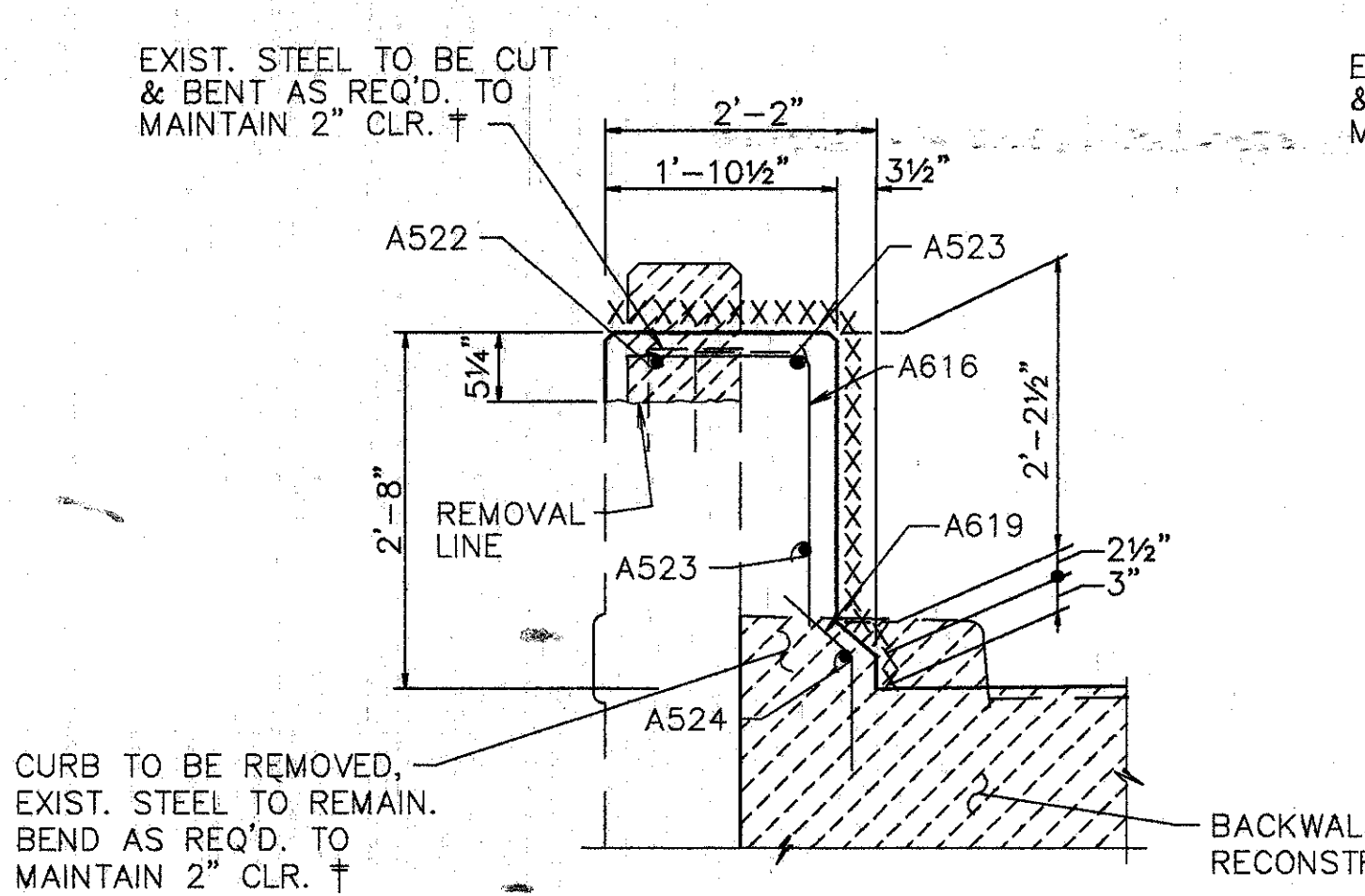
**SECTION H-H**



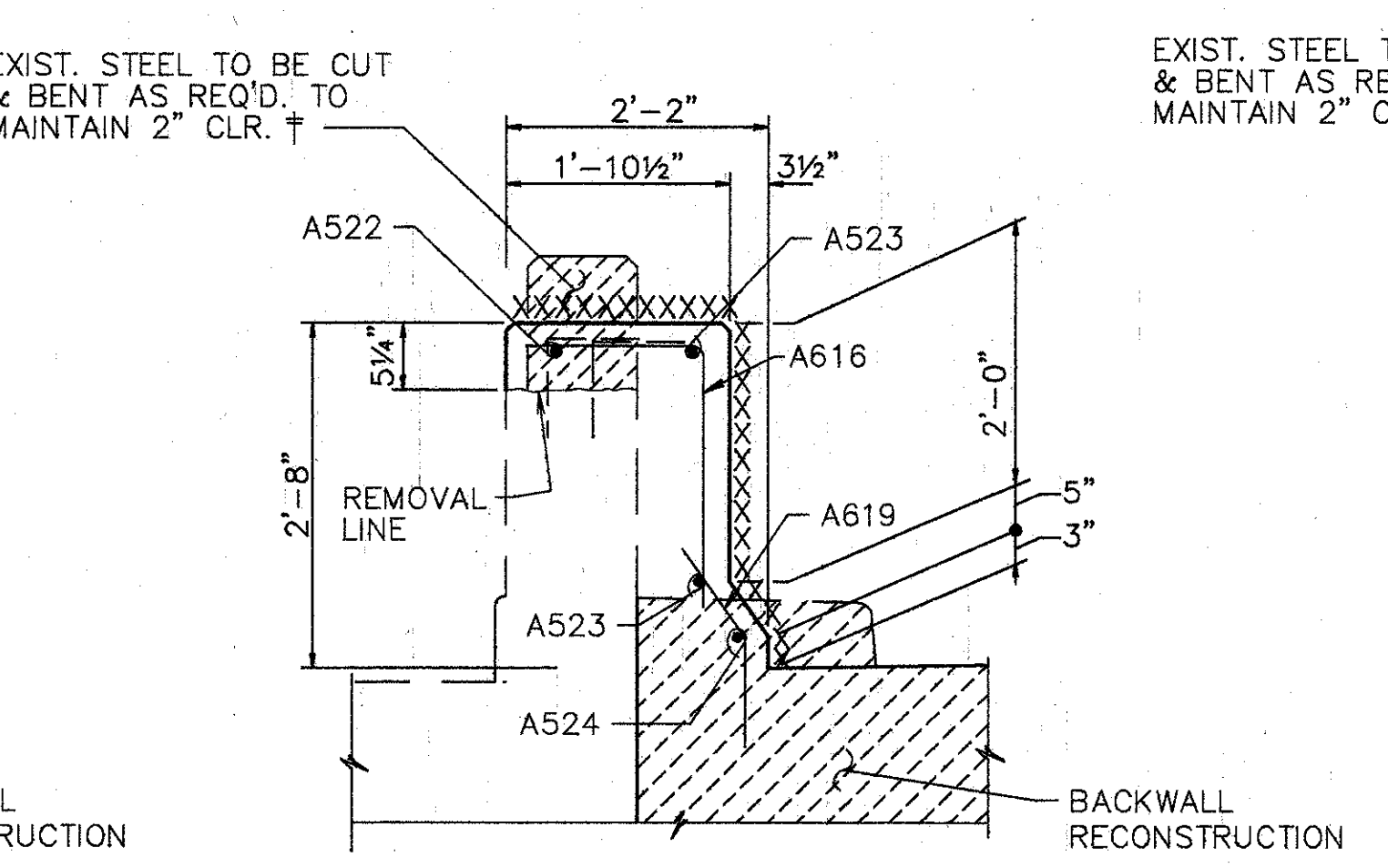
**SECTION J-J**



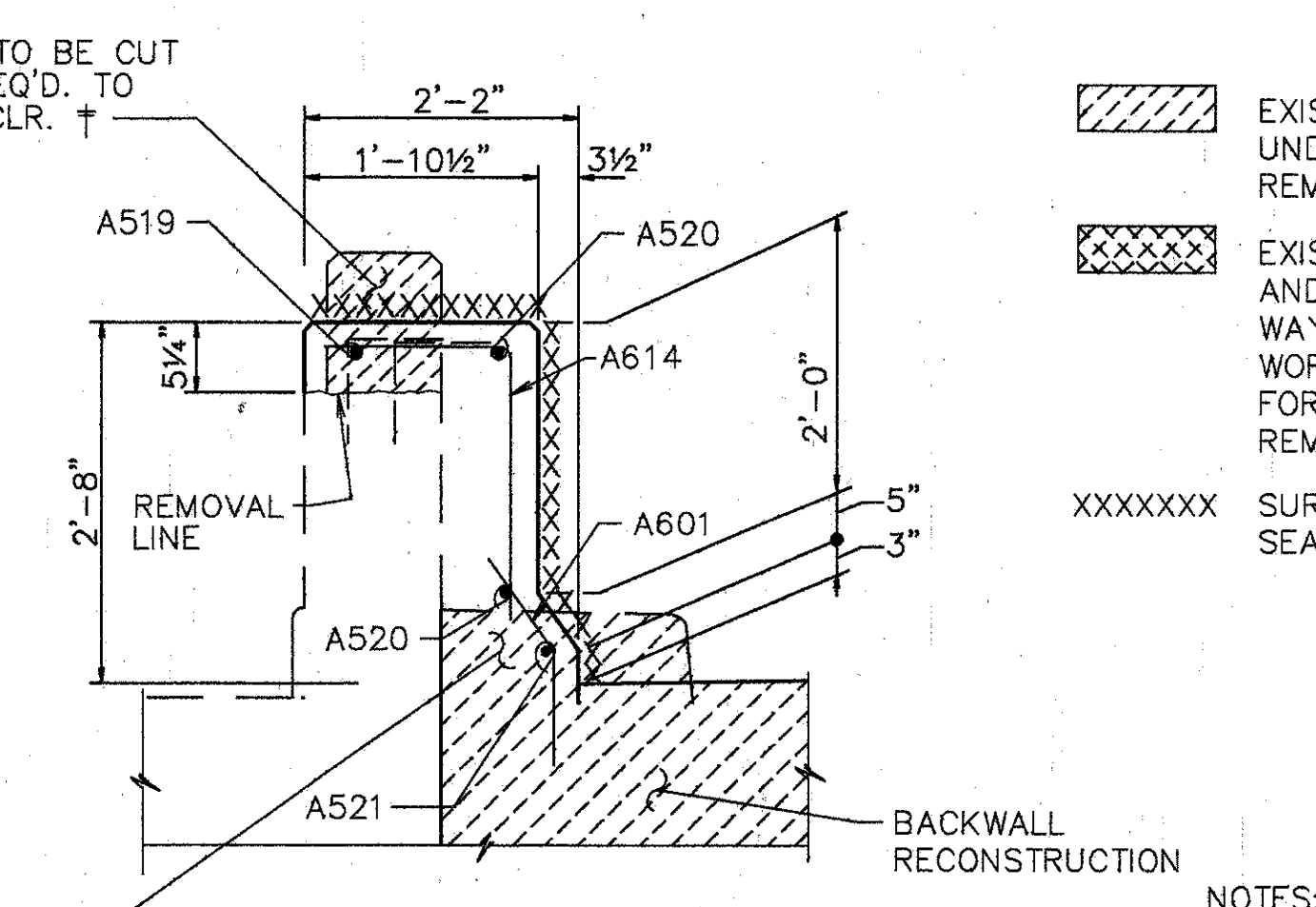
**SECTION K-K**



**SECTION L-L**



**SECTION T-T**



**SECTION U-U**

- EXISTING CURB AND PARAPET TO BE REMOVED UNDER ITEM 202-PORIONS OF STRUCTURES REMOVED.
- EXISTING RAILING & POSTS TO BE REMOVED AND STACKED NEATLY ALONG THE RIGHT OF WAY FOR DISPOSAL BY THE CONTRACTOR. ALL WORK SHALL BE INCLUDED IN THE PRICE BID FOR ITEM 202-PORIONS OF STRUCTURE REMOVED.
- XXXXXXX SURFACES TO BE SEALED UNDER ITEM SPECIAL- SEALING OF CONCRETE SURFACES.

† BARS SHALL REMAIN. CONTRACTOR SHALL EXERCISE CAUTION TO ENSURE THAT THESE BARS ARE NOT DAMAGED DURING THE CONC. REMOVAL OPERATION. ANY BARS DAMAGED AS A RESULT OF THE CONTRACTOR'S OPERATION SHALL BE REPLACED OR REPAIRED BY THE CONTRACTOR AT HIS EXPENSE. METHOD OF REPAIR OR REPLACEMENT WILL BE AT THE DISCRETION OF THE DIRECTOR.

- NOTES:
- PREFORMED EXPANSION JOINT FILLER AND SEALER AT SIDES OF APPROACH SLAB SHALL BE INCLUDED IN THE PRICE BID FOR ITEM 611, APPROACH SLAB.

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**PARAPET SECTIONS**

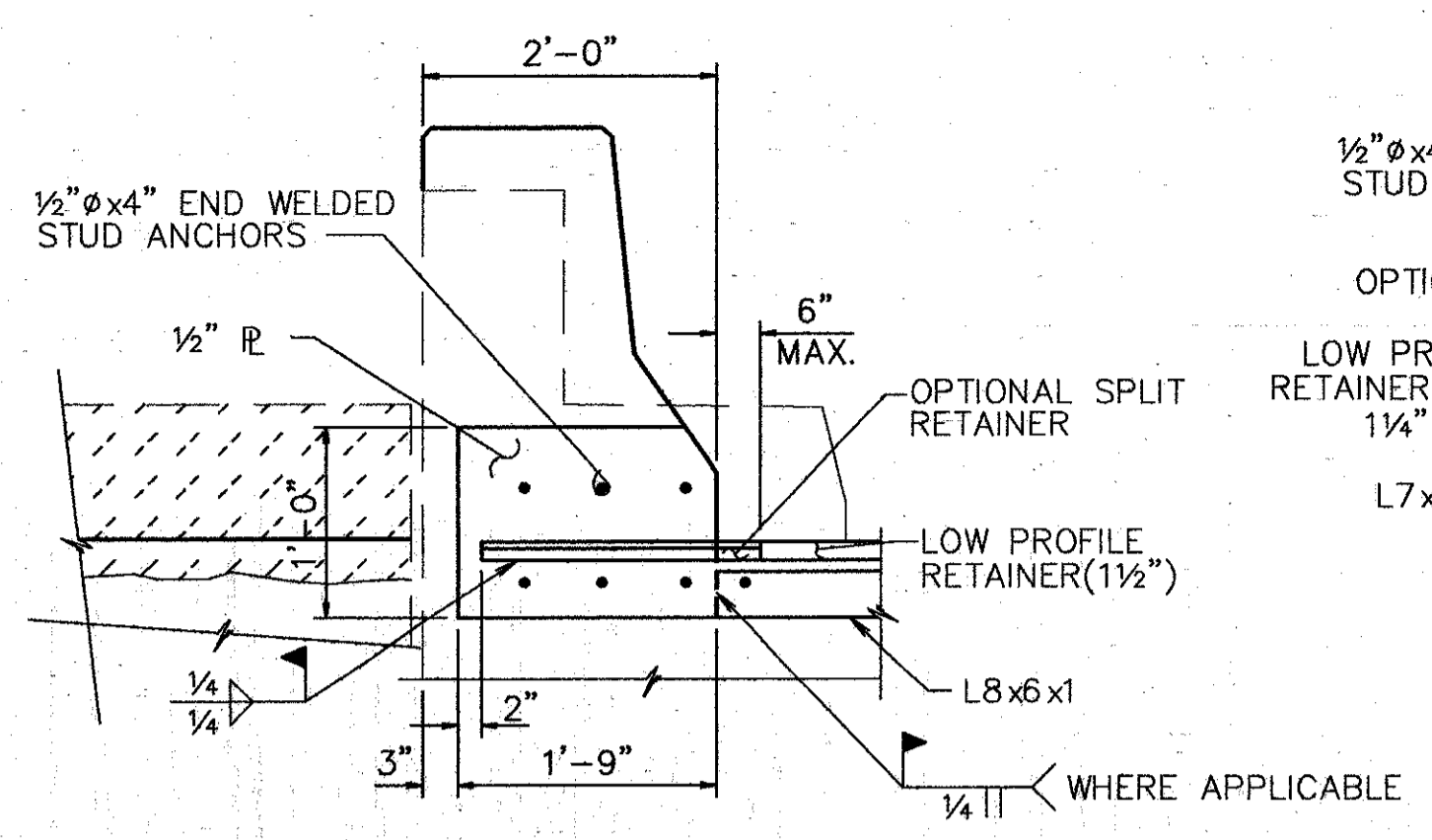
BRIDGE NO. HAM-71-0228 RAMP OVER I-71

HAMILTON COUNTY

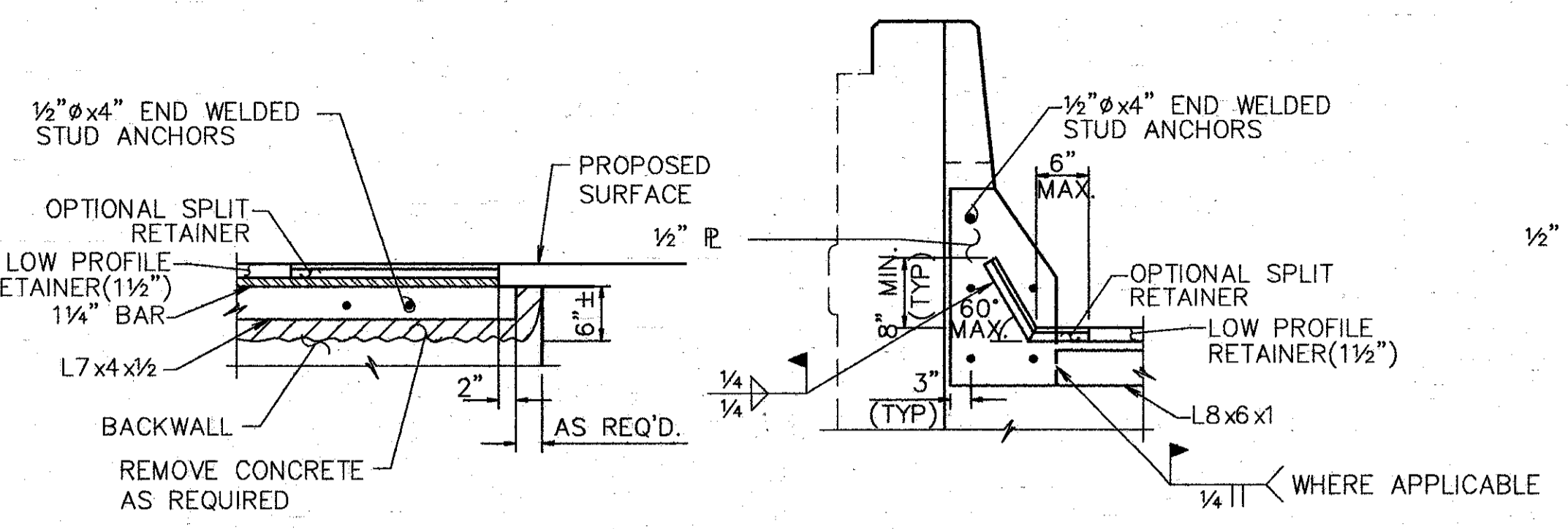
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
L.A.T.M.	D.E.E.		M.A.A.	DEM11/11/94		

L.A.T.M. MAY 05, 1991 © 7:30 PM  
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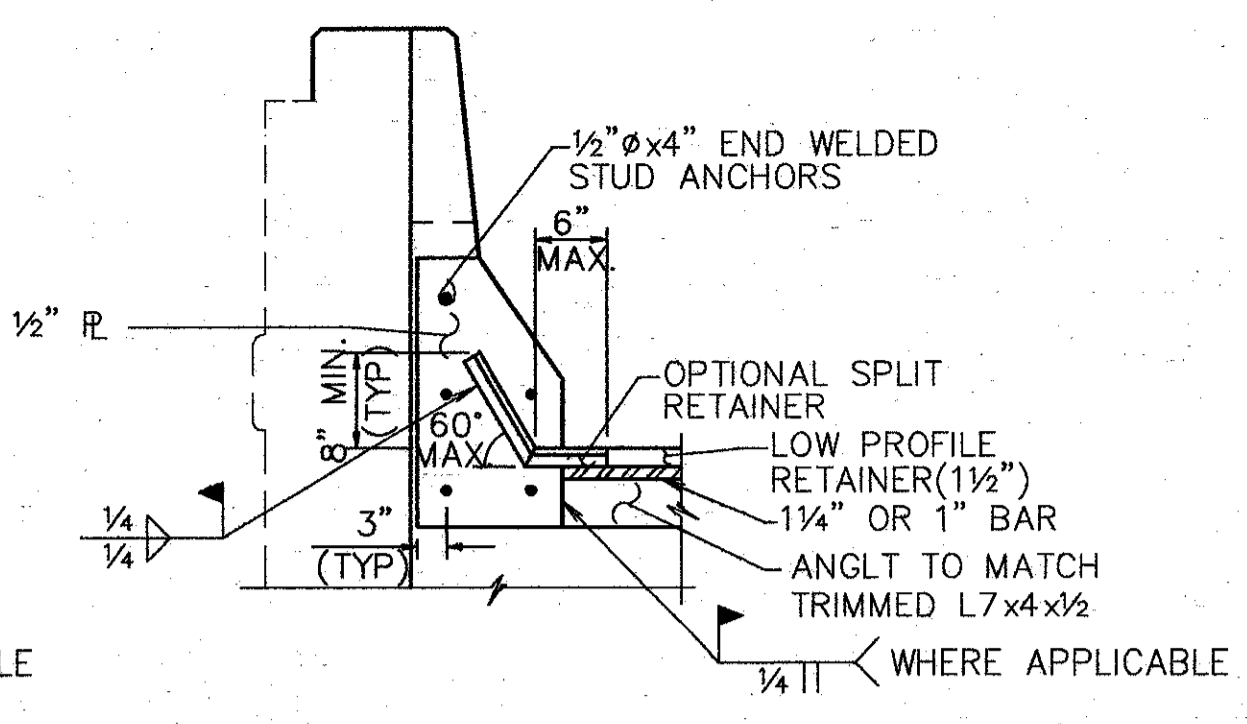




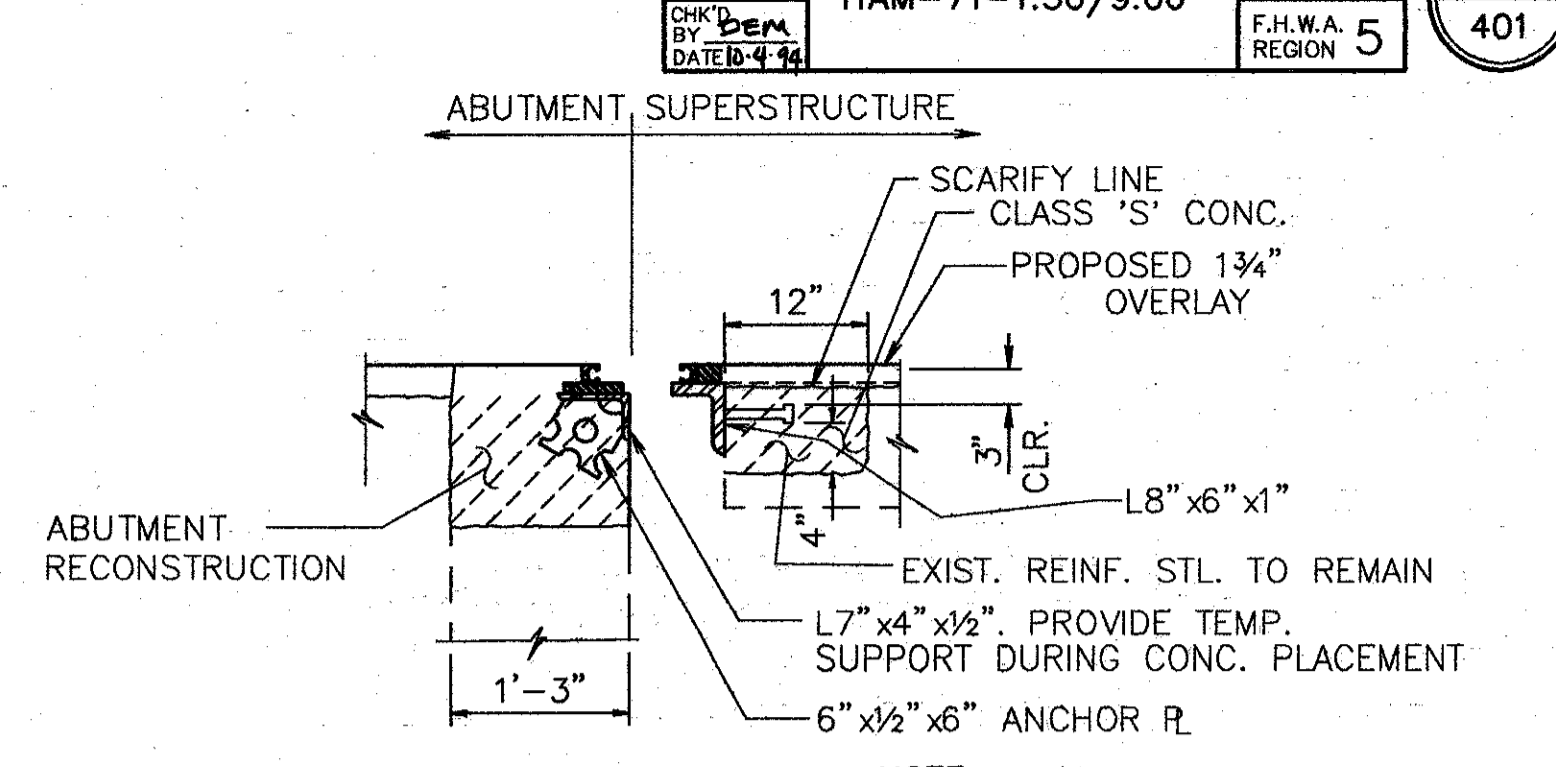
SECTION M-M



SECTION N-N SECTION P-P



SECTION Q-Q

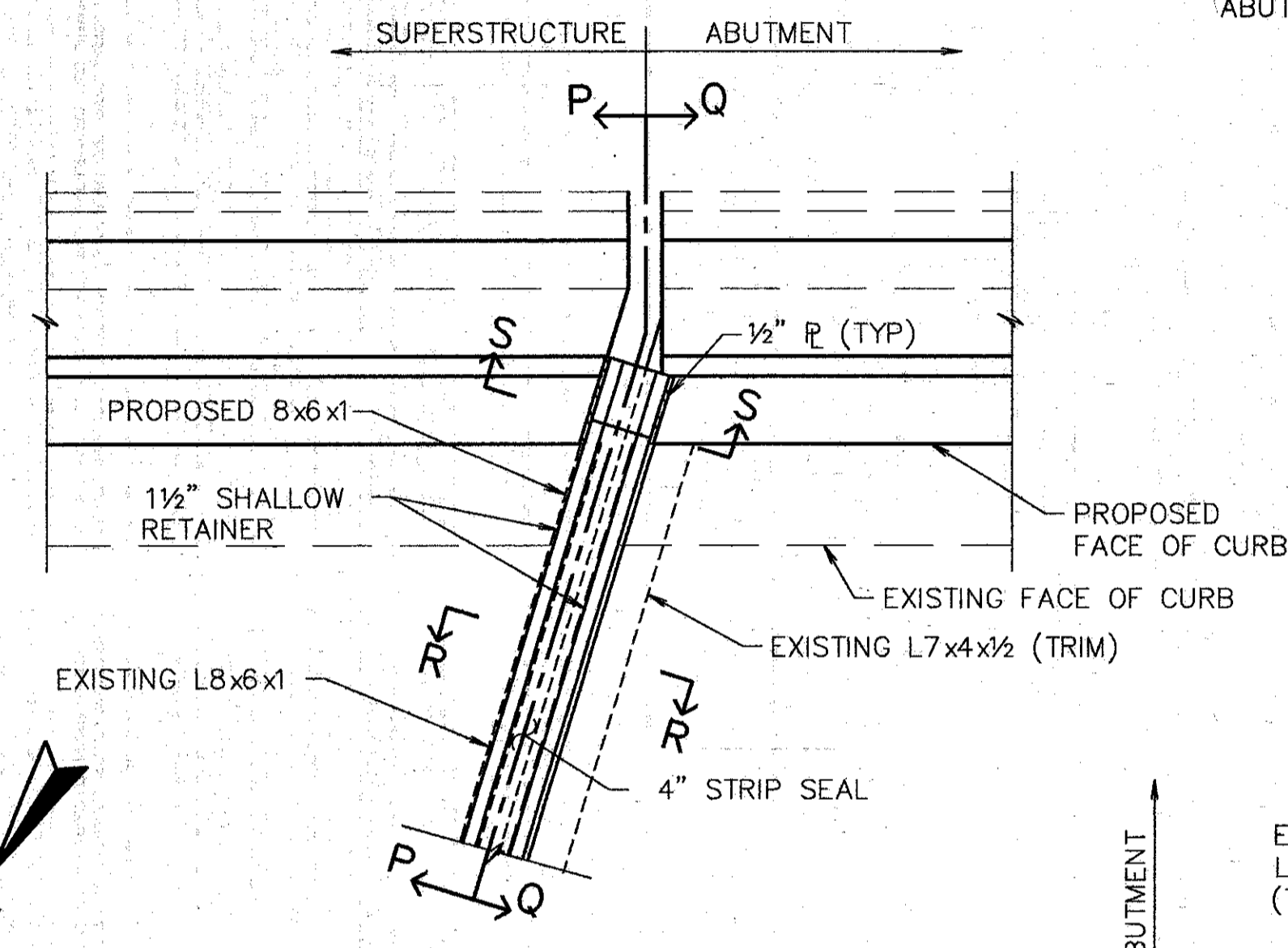


SECTION X-X

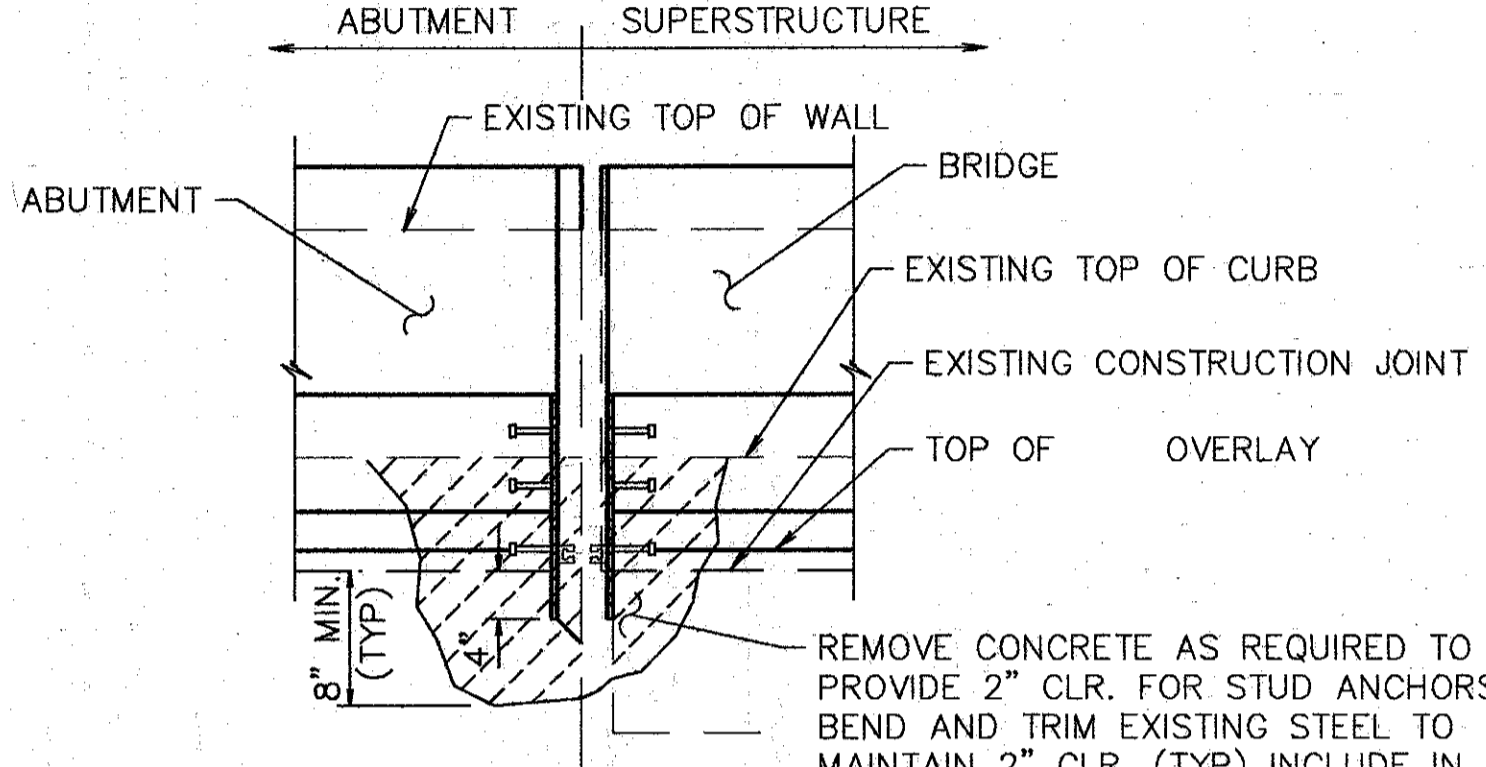
- NOTE:
- FOR DETAILS NOT SHOWN SEE STD. DWG. SD-1-69.
  - SEE SECTION R-R FOR RETAINER SPACING AND WELDING

- NOTE:
- EXPANSION JT. DETAILS TO BE WORKED WITH STD. DWG. EXJ-4-87 SHTS. 1 thru 5.
  - WHEN PLATE IS RECESSED INTO ABUTMENT, CONCRETE BELOW PLATE SHALL BE SLOPED FROM BOTTOM OF THE PLATE TO THE END OF THE ABUTMENT TO DETER ACCUMULATION OF DEBIS.
  - CROSS SECTIONS VARY.

TEMPERATURE	DIM. 'A'	
	FORWARD	REAR
40° F	3 3/8"	2 3/4"
50° F	3 5/8"	2 5/8"
60° F	3 1/2"	2 3/8"
70° F	3 1/2"	2 1/4"
80° F	3 3/8"	2 1/8"
90° F	3 3/8"	1 7/8"

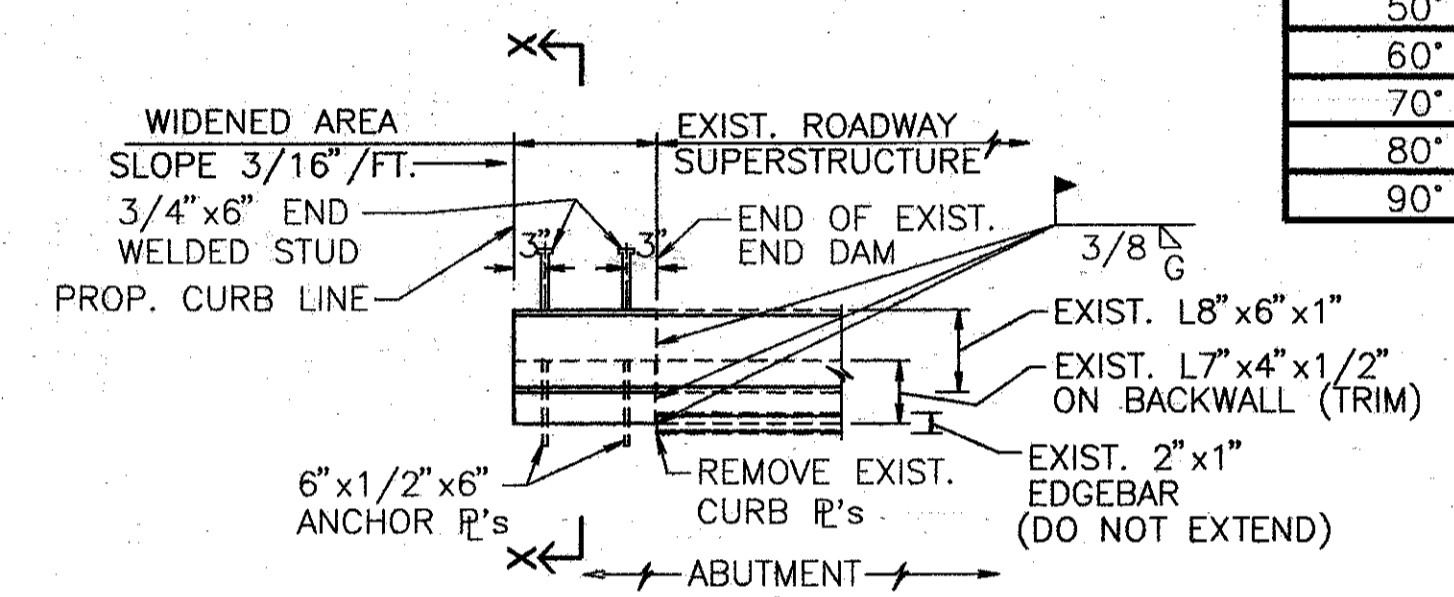


PART PLAN @ RIGHT - REAR ABUTMENT



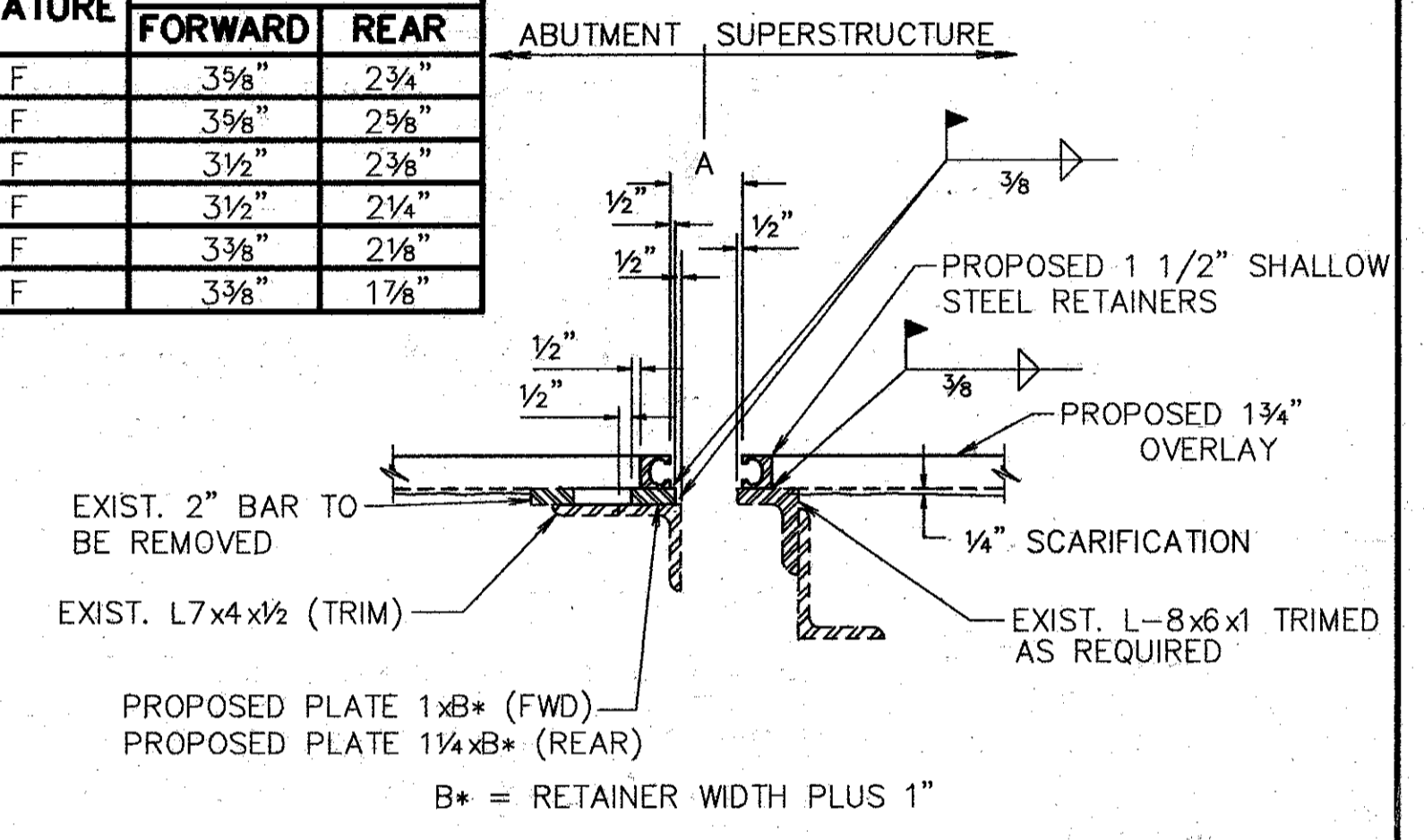
SECTION S-S

OPPOSITE HAND FOR LEFT FORWARD AND RIGHT REAR.



PLAN END DAM @ WIDENED AREAS (SKEW NOT SHOWN)

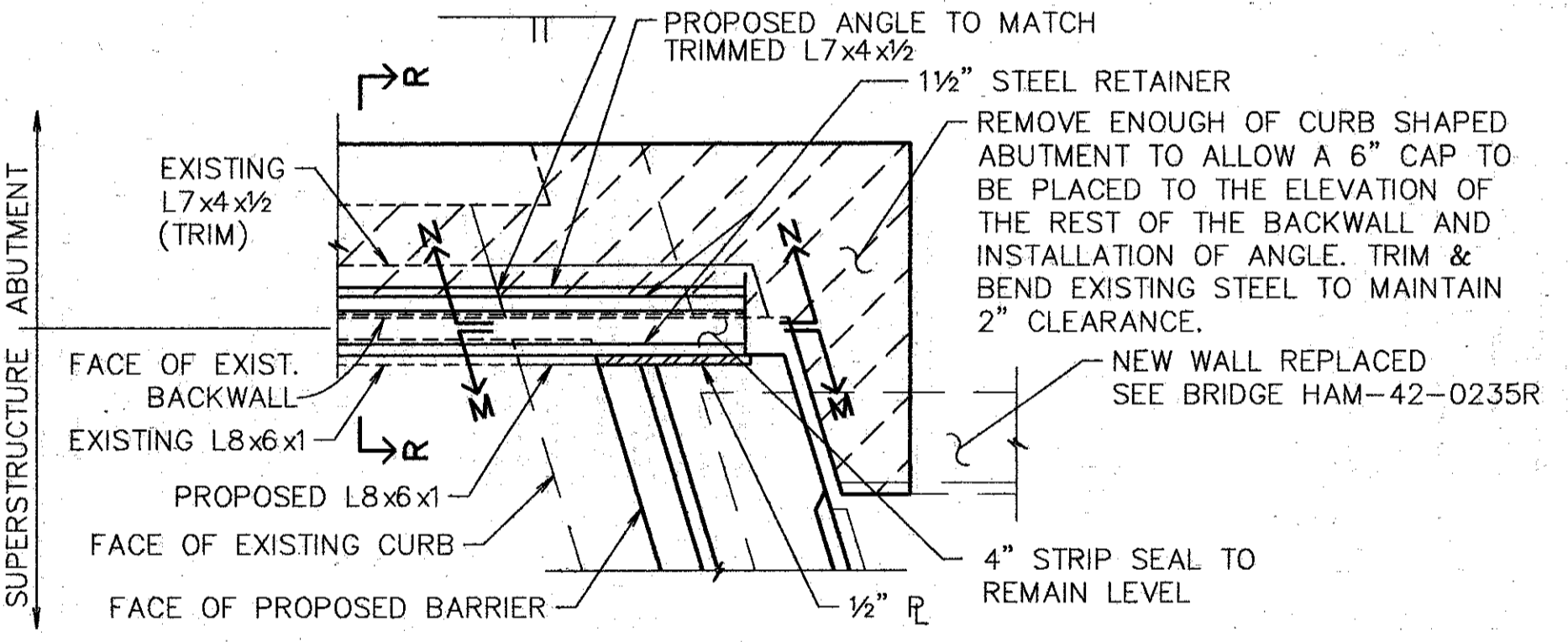
- NOTES:
- END DAM WIDENING SHOWN IS FOR THE R.F. & L.R. CORNERS OF THE BRIDGE. THE L.F. & R.R. CORNERS ARE SIMILAR, BUT OPPOSITE HAND. (SKEW NOT SHOWN)
  - FOR DETAILS & DIMS. NOT SHOWN SEE STD. DWG. SD-1-69.
  - PROPOSED STRIP SEAL OMITTED FOR CLARITY



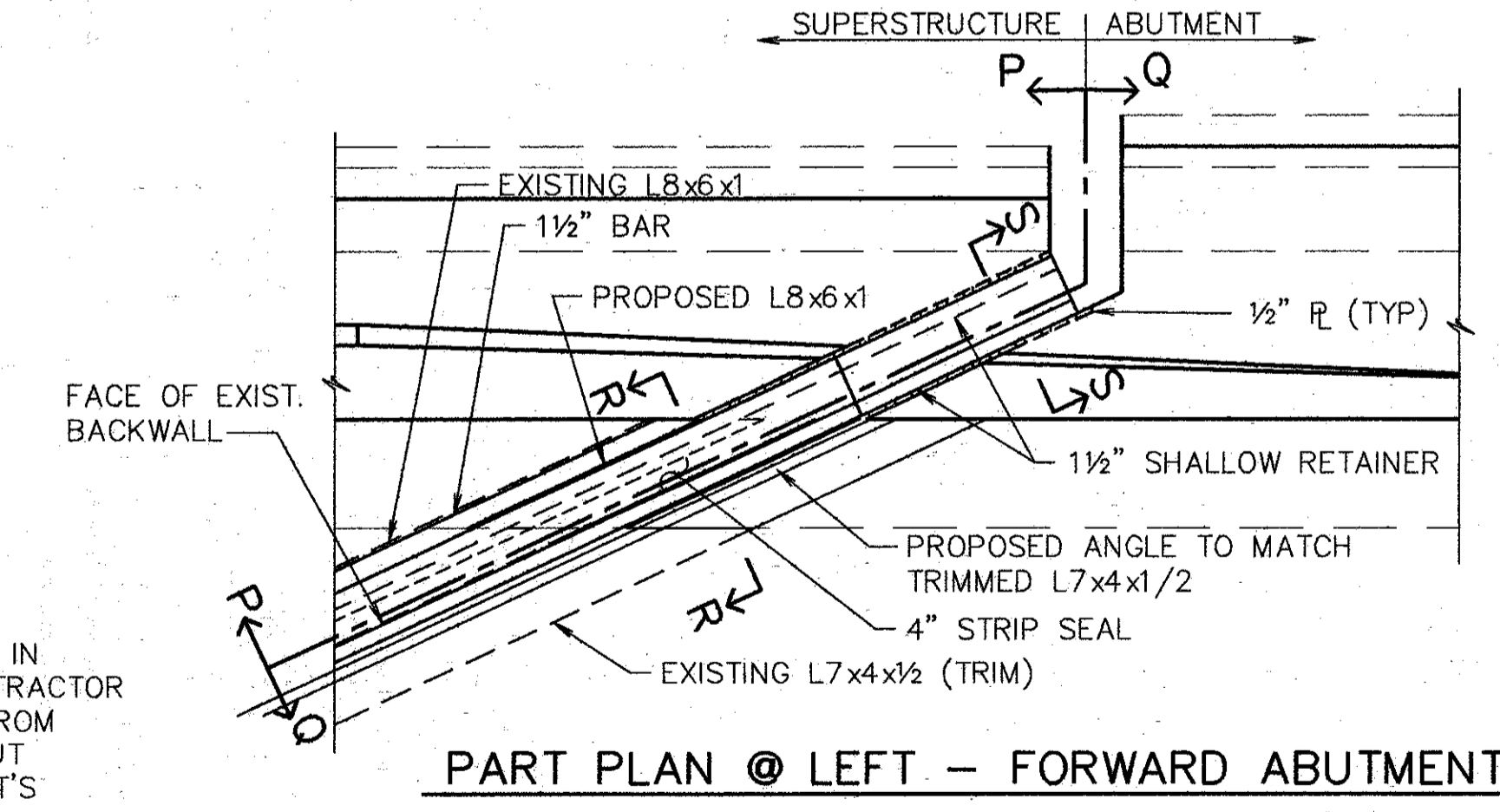
SECTION R-R

- NOTES:
- CONTRACTOR TO VERIFY ALL DIMENSIONS PRIOR TO MODIFYING THE EXPANSION JOINT.
  - THE PRICE BID FOR ITEM 516--'STRUCTURAL EXPANSION JOINTS, INCLUDING ELASTOMERIC STRIP SEALS', SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, AND ANY OTHER INCIDENTAL ITEMS, AS DETAILED. REMOVAL OF CURB OR PARAPET AS SHOWN SHALL BE INCLUDED UNDER ITEM 202--'PORTIONS OF STRUCTURE REMOVED.
  - FOR DETAILS NOT SHOWN REFER TO DRAWING EXJ-4-87 SHEETS 3 AND 4.
  - STRIP SEALS TO BE INSTALLED IN ONE CONTINUOUS PIECE (NO OPEN JOINTS).
  - PROVIDE TEMPORARY SUPPORT FOR ABUTMENT END DAM DURING CONSTRUCTION. REMOVE TEMPORARY SUPPORT AS SOON AS CONCRETE HAS SET, PREFERABLY WITHIN TWO HOURS AFTER PLACING TO AVOID DAMAGE DUE TO EXPANSION AND CONTRACTION OF SUPERSTRUCTURE.

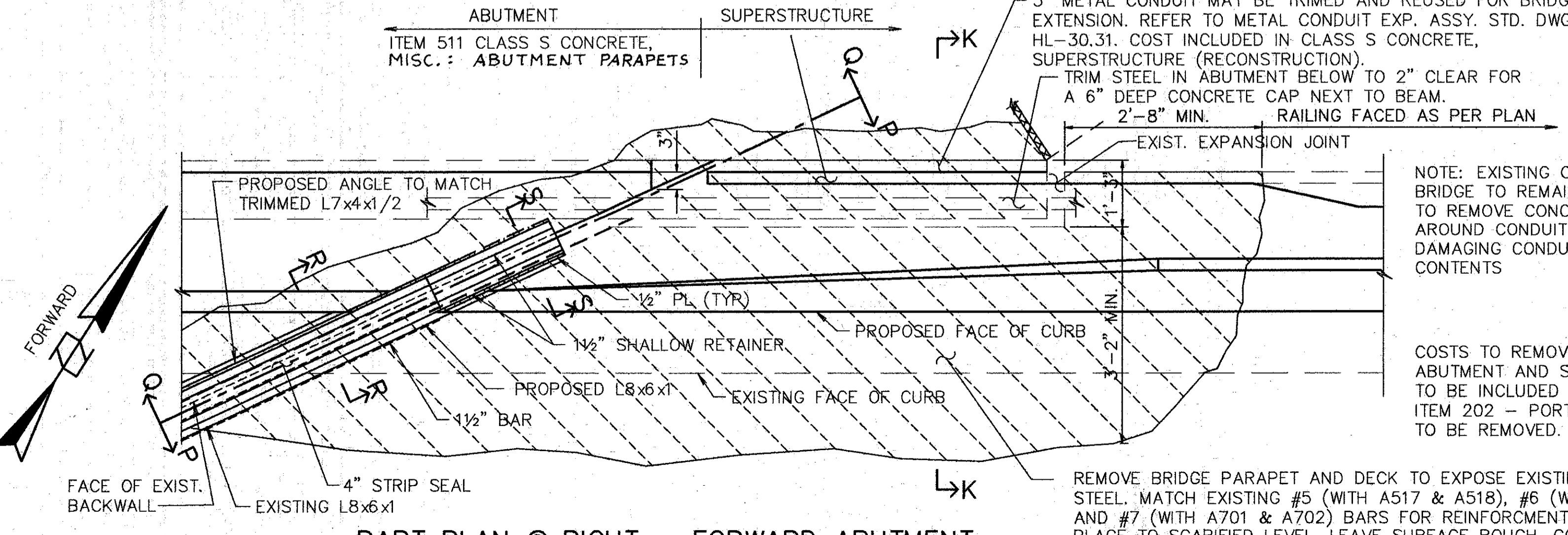
REMOVE CONCRETE AS REQUIRED ON ABUTMENT TO AN ELEVATION THAT WILL CLEAR THE BOTTOM OF THE BRIDGE EXTENSION WHEN CAPPED AND 1'-0" BEHIND FACE OF BACKWALL. LONGITUDINAL STEEL IN PARAPET AND VERT./HORIZ. STEEL IN ABUTMENT TO REMAIN. TRIM EXISTING LONGITUDINAL STEEL FOR 2" CLEAR. BEND TRANSVERSE STEEL TO 2" CLEAR.



PART PLAN @ LEFT - REAR ABUTMENT



PART PLAN @ LEFT - FORWARD ABUTMENT



PART PLAN @ RIGHT - FORWARD ABUTMENT

3" METAL CONDUIT MAY BE TRIMMED AND REUSED FOR BRIDGE EXTENSION. REFER TO METAL CONDUIT EXP. ASSY. STD. DWG. HL-30.31. COST INCLUDED IN CLASS S CONCRETE, SUPERSTRUCTURE (RECONSTRUCTION). TRIM STEEL IN ABUTMENT BELOW TO 2" CLEAR FOR A 6" DEEP CONCRETE CAP NEXT TO BEAM. 2'-8" MIN. RAILING FACED AS PER PLAN

NOTE: EXISTING CONDUIT IN BRIDGE TO REMAIN. CONTRACTOR TO REMOVE CONCRETE FROM AROUND CONDUIT WITHOUT DAMAGING CONDUIT OR IT'S CONTENTS

COSTS TO REMOVE PORTIONS OF ABUTMENT AND SUPERSTRUCTURE TO BE INCLUDED IN PRICE BID FOR ITEM 202 - PORTION OF STRUCTURE TO BE REMOVED.

REMOVE BRIDGE PARAPET AND DECK TO EXPOSE EXISTING STEEL. MATCH EXISTING #5 (WITH A517 & A518), #6 (WITH A608 & A609), AND #7 (WITH A701 & A702) BARS FOR REINFORCEMENT OF NEW SLAB. PLACE TO SCARIFIED LEVEL. LEAVE SURFACE ROUGH. CONCRETE AND REPLACEMENT WORK TO BE INCLUDED UNDER ITEM 511 CLASS S CONCRETE, SUPERSTRUCTURE (RECONSTRUCTION) FOR PAYMENT.

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**STRIP SEAL EXPANSION JOINTS AT ABUTMENTS**  
 BRIDGE NO. HAM-71-0228 RAMP  
 OVER I-71  
 HAMILTON COUNTY

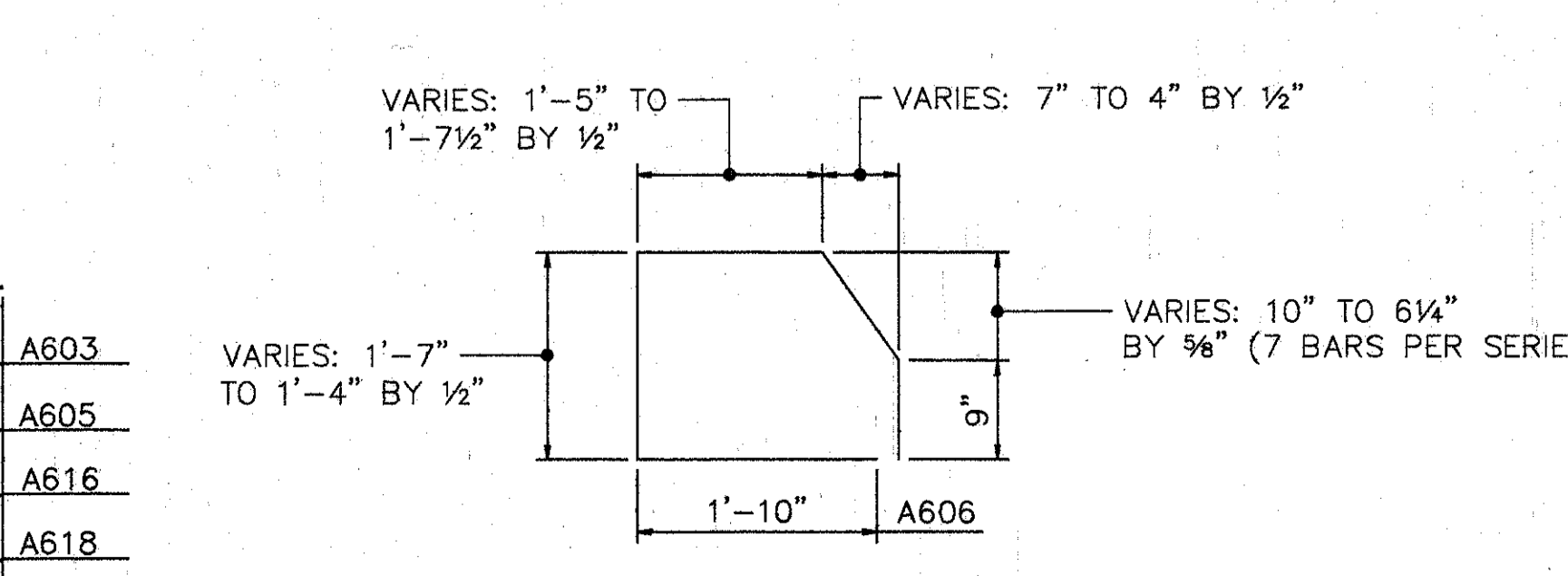
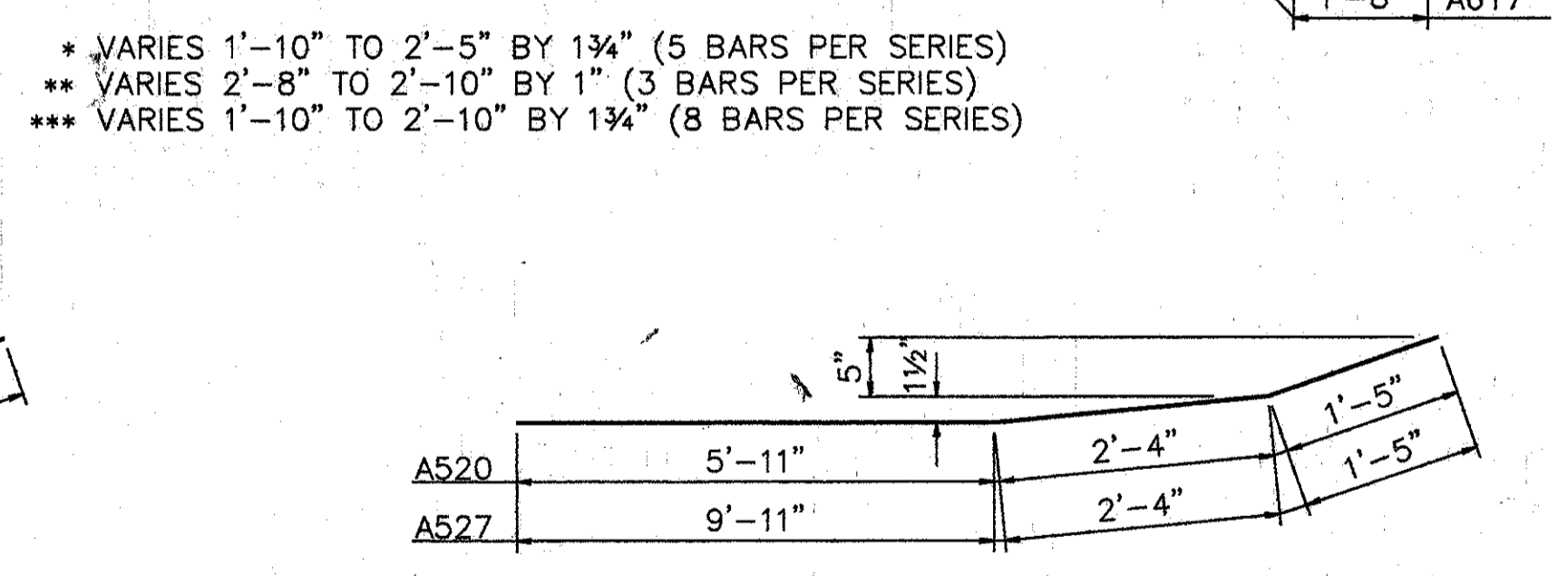
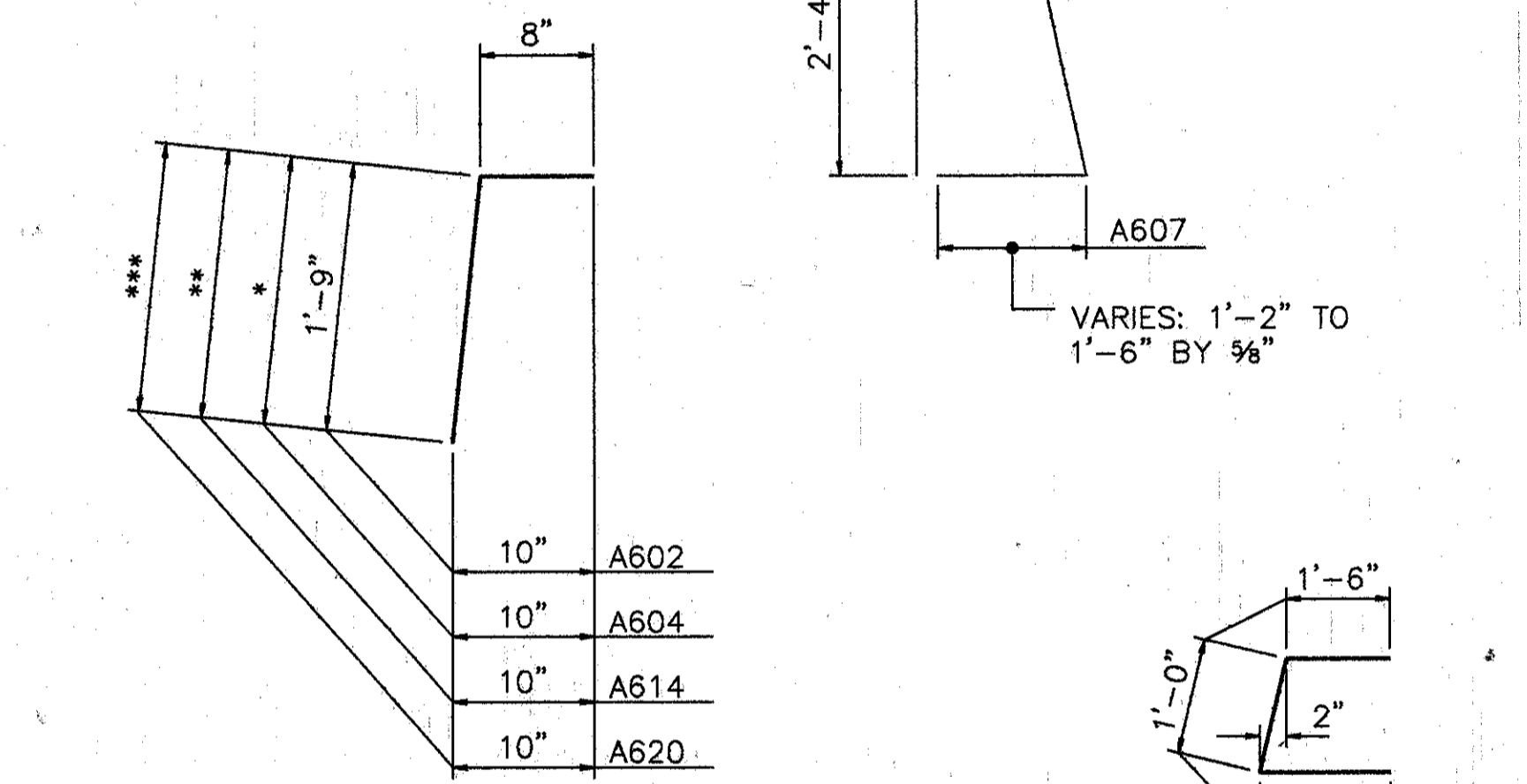
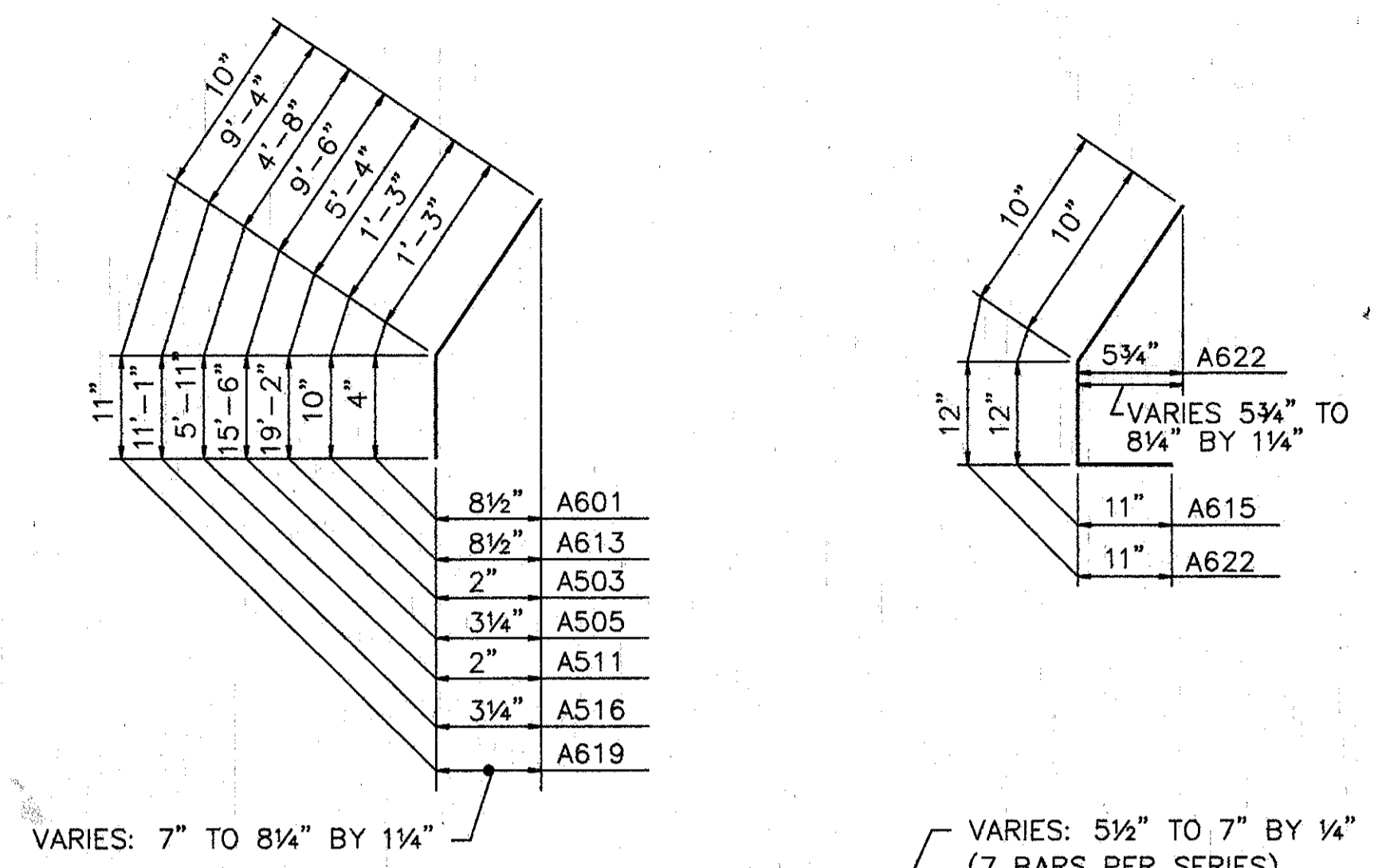
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
L.A.T.M.	D.E.E.		M.A.A.	DEM11/11/94		



REINFORCING STEEL LIST

BENT BAR DETAILS

MARK	SHAPE	NUMBER	LENGTH	WEIGHT	MARK	SHAPE	NUMBER	LENGTH	WEIGHT
PARAPETS					PARAPETS				
A501	STR.	50	30'-0"	1565	A609	STR.	10	3'-11"	59
A502	STR.	1	24'-6"	26	A610	STR.	3	1'-10"	8
A503	BNT.	1	24'-6"	26	A611	STR.	1	6'-3"	9
A504	STR.	1	25'-0"	26	A612	STR.	5	10"	6
A505	BNT.	1	25'-0"	26	A613	BNT.	15	2'-0"	45
A506	STR.	30	15'-8"	490	A614	BNT.	3	3'-4" TO 3'-6"	14
A507	STR.	27	15'-6"	437	A615	BNT.	6	2'-6"	23
A508	STR.	27	15'-0"	422	A616	BNT.	6	3'-6"	32
A509	STR.	3	13'-5"	42	A617	BNT.	3	3'-10"	17
A510	STR.	1	11'-5"	12	A618	BNT.	6	4'-2"	38
A511	BNT.	2	10'-7"	22	A619	BNT.	2	2'-6"	8
A512	STR.	27	15'-4"	432	A620	STR.	8	2'-6" TO 3'-6"	36
A513	STR.	21	14'-10"	325	A621	BNT.	8	1'-3" TO 1'-11"	19
A514	STR.	3	12'-7"	39	A622	BNT.	1	2'-6"	4
A515	STR.	1	19'-7"	20	A701	STR.	8	3'-11"	47
A516	BNT.	2	20'-5"	43	A702	STR.	2	4'-9"	14
A517	STR.	2	6'-10"	14					
A518	STR.	2	7'-9"	16	A801	BNT.	42	4'-0"	449
A519	STR.	1	8'-2"	9	REPLACEMENT STEEL				300
A520	BNT.	2	9'-7"	20	TOTAL				10509
A521	BNT. †	1	10'-1"	11					
A522	STR.	1	4'-8"	5					
A523	BNT.	2	3'-9"	8					
A524	BNT. †	1	3'-8"	4					
A525	STR.	1	5'-0"	5					
A526	STR.	1	11'-0"	11					
A527	BNT.	2	13'-8"	29					
A528	BNT. †	1	13'-8"	14					
A529	STR.	4	11'-6"	48					
A601	BNT.	648	1'-6"	1460					
A602	BNT.	647	2'-5"	2349					
A603	BNT.	647	1'-3"	1215					
A604	BNT.	5	2'-6" TO 3'-1"	21					
A605	BNT.	6	1'-3" TO 1'-7"	26					
A606	BNT.	7	5'-11" TO 6'-6"	65					
A607	BNT.	7	6'-2" TO 6'-5"	66					
A608	STR.	3	7'-1"	32					



† BEND IN FIELD AS REQUIRED.

ITEM	ITEM EXT.	TOTAL	UNITS	DESCRIPTION
202	11200	LUMP SUM	L.S.	PORTIONS OF STRUCTURE REMOVED
509	15820	10509	LBS.	EPOXY COATED REINFORCING STEEL, GRADE 60
510	12201	42	L.F.	DOWEL HOLES, AS PER PLAN.
511	34400	5	C.Y.	CLASS S CONCRETE, SUPERSTRUCTURE (RECONSTRUCTION)
511	34450	7	C.Y.	CLASS S CONCRETE, MISC.: ABUTMENT PARAPETS
511	45700	7	C.Y.	CLASS C CONCRETE, ABUTMENT RECONSTRUCTION
SPECIAL	51267500	850	S.Y.	SEALING OF CONCRETE SURFACE *
SPECIAL	51267502	271	S.Y.	SEALING OF CONCRETE SURFACE (EPOXY) *
513	21000	1	EACH	TRIMMING OF BEAM END
514	27704	LUMP	L.S.	FIELD PAINTING, MISC: EXISTING STEEL, EEU *
516	14600	10	L.F.	STRUCTURAL JOINT OR JOINT SEALER, MISC.: 2"x4" SEALER, AS PER PLAN
516	11210	107	L.F.	STRUCTURAL EXP. JT., INCLUDING ELASTOMERIC STRIP SEAL
517	76201	745	L.F.	RAILING FACED, AS PER PLAN
516	45304	8	EACH	REFURBISH BEARING DEVICE
518	12700	1	EACH	SCUPPER, VERTICAL EXTENSION
518	12800	4	EACH	SCUPPER MODIFICATION
518	63300	LUMP SUM	L.S.	STRUCTURE DRAINAGE, MISC: MODIFY DRAINAGE PIPING
519	11100	2	S.F.	PATCHING CONCRETE STRUCTURE
845	40210	1275	S.Y.	LATEX MODIFIED CONCRETE OVERLAY (1 3/4" THICK) ON EXISTING DECK
845	11000	46	C.Y.	LATEX MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS)
845	30000	1	C.Y.	FULL DEPTH REPAIR
516	14600	50	L.F.	SEAL JOINT BETWEEN ABUTMENT AND CONCRETE SLOPE PROTECTION
518	63300	LUMP	L.S.	SCUPPER AND DRAINAGE PIPE CLEANOUT
601	21100	2	S.Y.	REPAIR CONCRETE SLOPE PROTECTION

- \* SEE PROPOSAL NOTE
1. MODIFY PARAPETS ON THE SUPERSTRUCTURE & ABUTMENTS. SEAL PARAPETS AS SHOWN ON PLANS. (INSTALL PLATES FOR STRIP SEAL EXP. JT.).
  2. SCARIFY EXISTING DECK 1/4", AND REMOVE DETERIORATED CONCRETE AS DIRECTED BY THE ENGINEER.
  3. REFURBISH ALL ABUTMENT BEARINGS.
  4. PLACE 1 3/4" THICK LATEX MODIFIED CONCRETE ON DECK.
  5. RECONSTRUCT BACKWALLS ABOVE APPROACH SLAB SEAT.
  6. SEAL EXPANSION JOINT WITH STRIP SEAL.
  7. SEAL PARAPETS, BACKWALLS, AND PIERS.
  8. REFURBISH DRAINAGE PIPING AND EXTEND SCUPPER.
  9. TRIM BEAM ENDS.
  10. REPLACE GUARDRAIL AND INSTALL HYDRO-CELL IMPACT BARRIER AS SHOWN ON ROADWAY PLANS.
  11. AT LEAST ONE LANE OF TRAFFIC SHALL BE MAINTAINED IN EACH DIRECTION AND ON THE BRIDGE AT ALL TIMES. FOR NOTES SEE MAINTENANCE OF TRAFFIC PLANS. AT ALL TIMES. MAINTENANCE OF TRAFFIC PLAN REQUIRES CONSTRUCTION PHASING LIMITS AT LANE CENTERLINES. DUE TO THESE LIMITS, OVERLAY MAY REQUIRE SPECIAL ATTENTION.
  12. OTHER WORK AS DESCRIBED IN THESE PLANS.

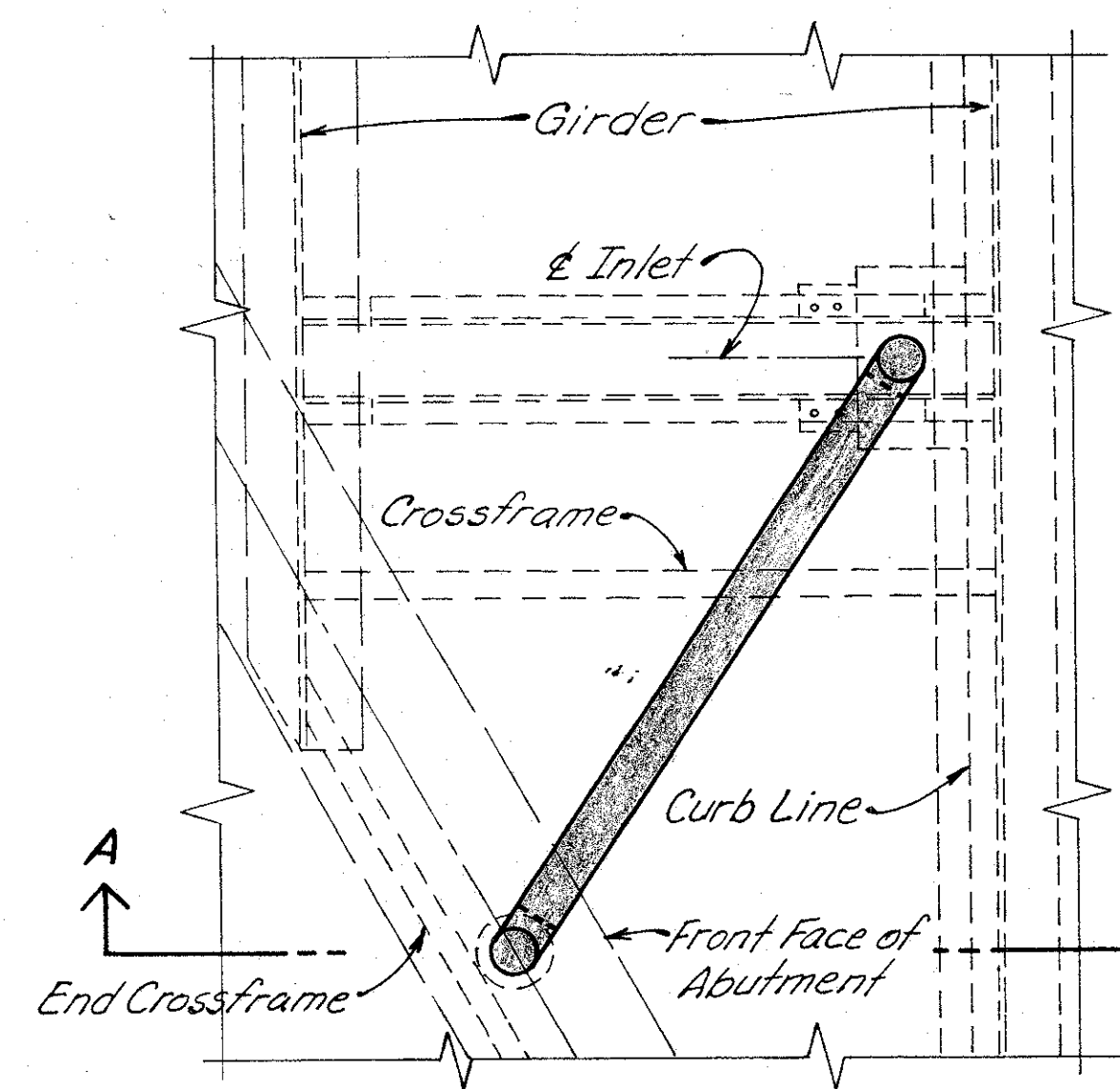
PROPOSED WORK

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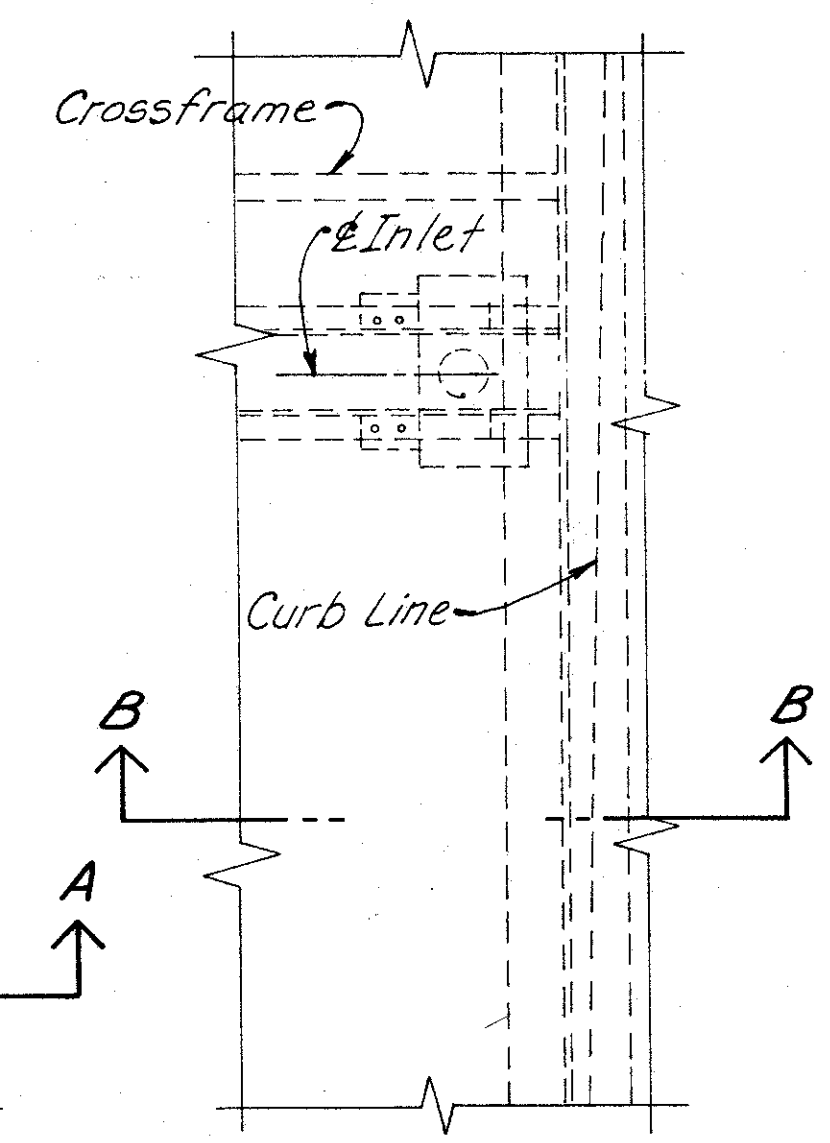
QUANTITIES AND GENERAL NOTES  
 BRIDGE NO. HAM-71-0228 RAMP OVER I-71  
 HAMILTON COUNTY

DESIGNED: L.A.T.M. DRAWN: D.E.E. TRACED: M.A.A. CHECKED: M.A.A. REVIEWED: DEM11/11/94 DATE: REVISOR:

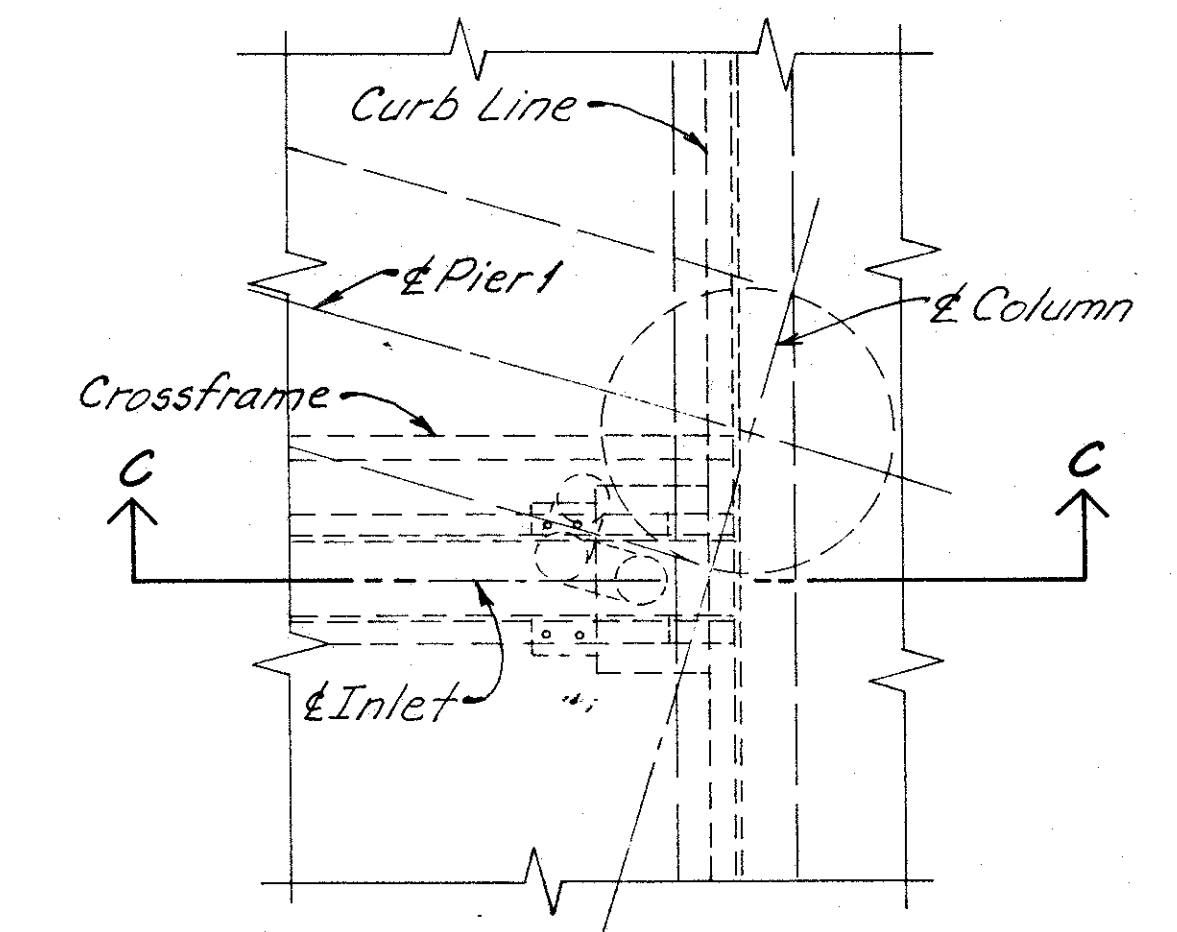




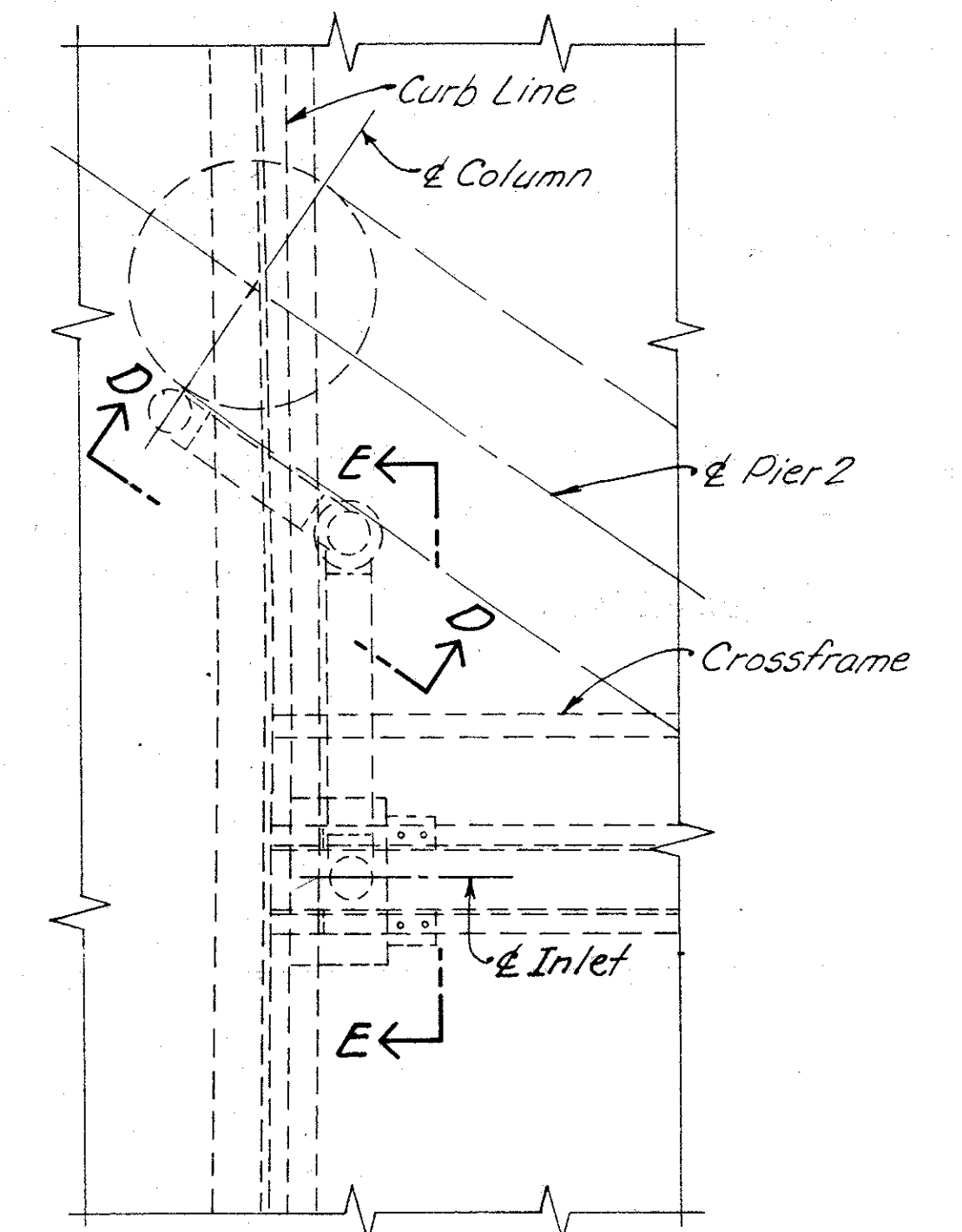
**PLAN EAST ABUTMENT**



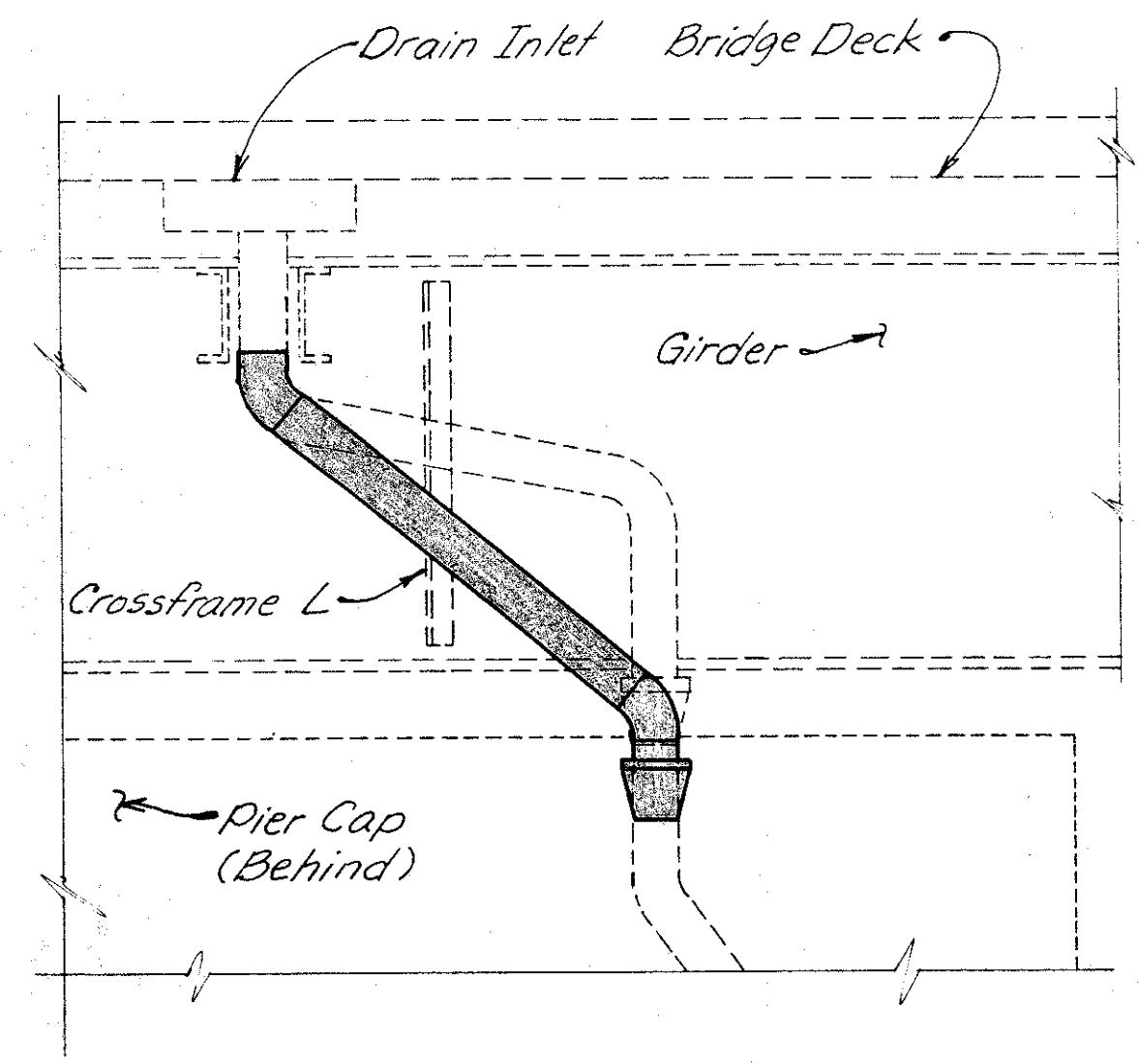
**PLAN WEST ABUTMENT**



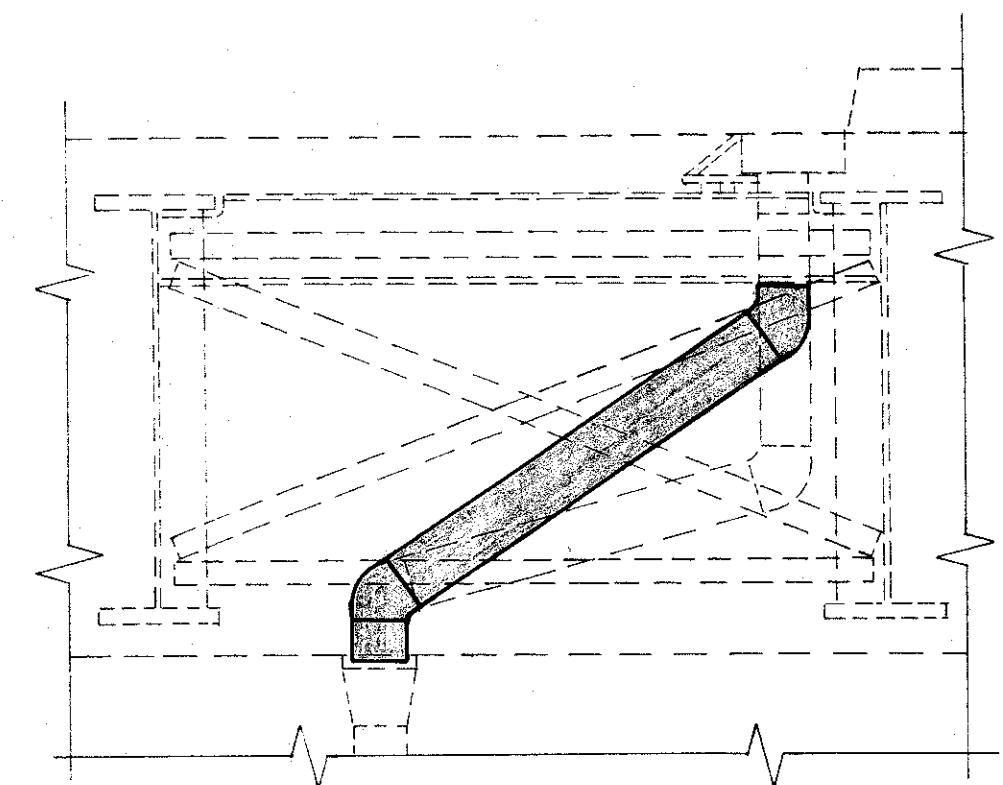
**PLAN PIER 1**



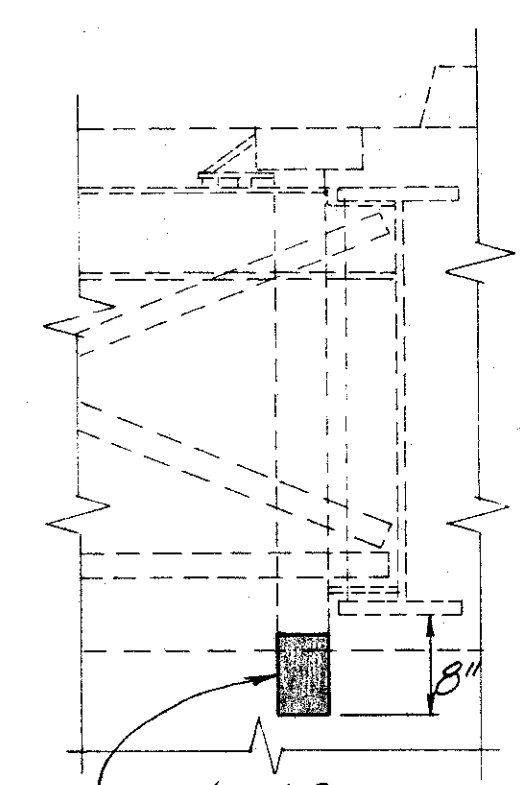
**PLAN PIER 2**



**SECTION E-E**

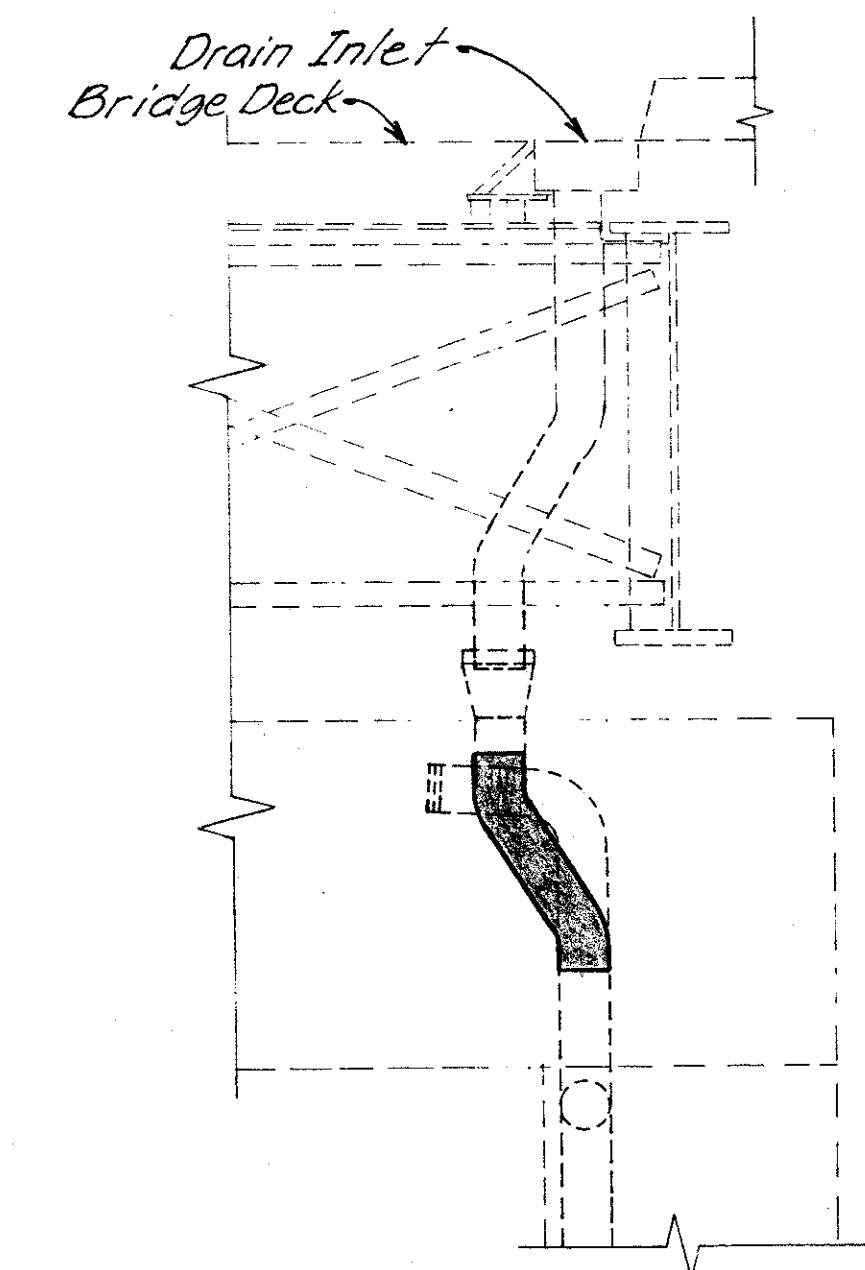


**SECTION A-A**

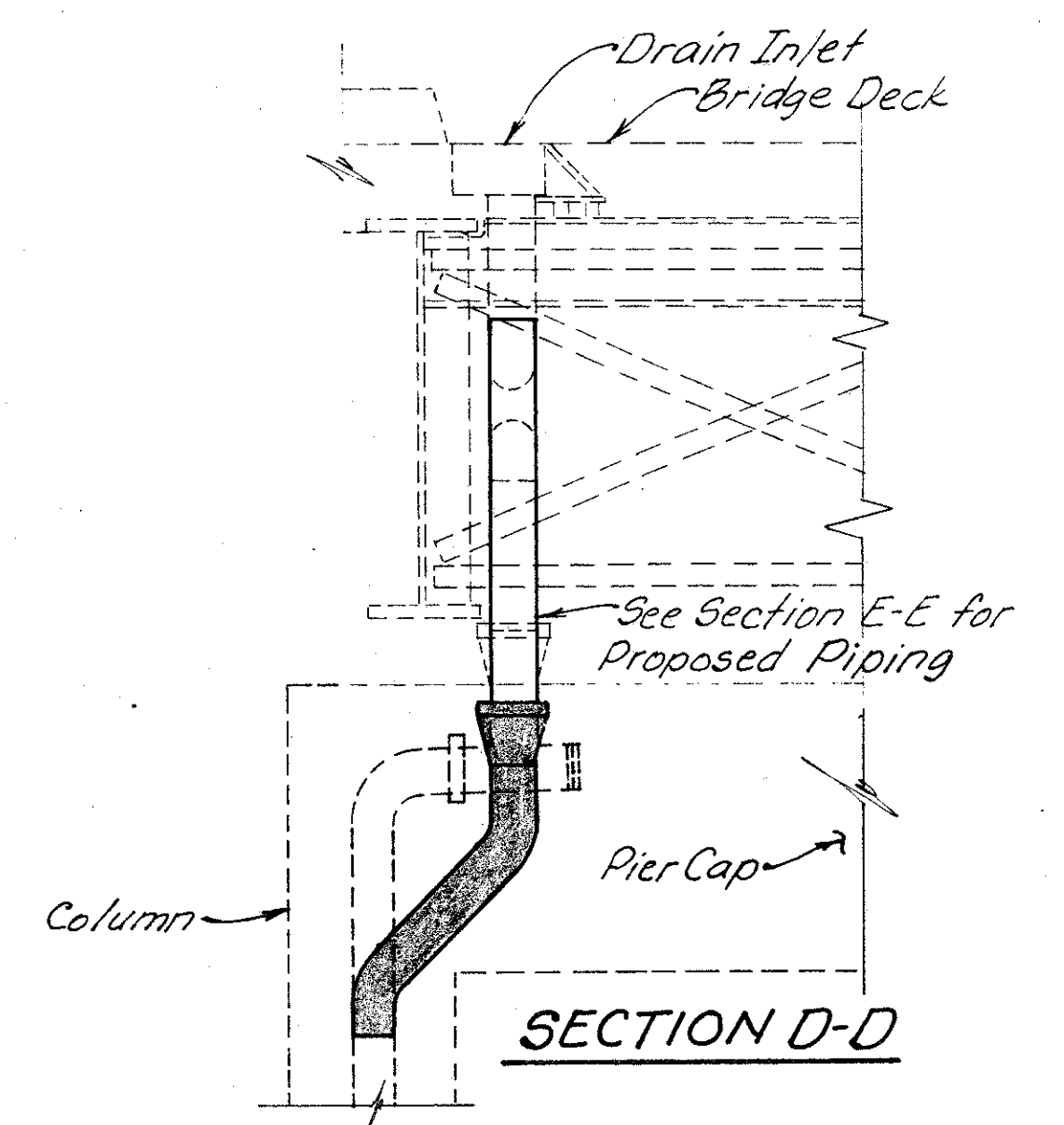


**SECTION B-B**

Extend Scupper, paid for as Item 518, for details see Sht. (273/401)



**SECTION C-C**

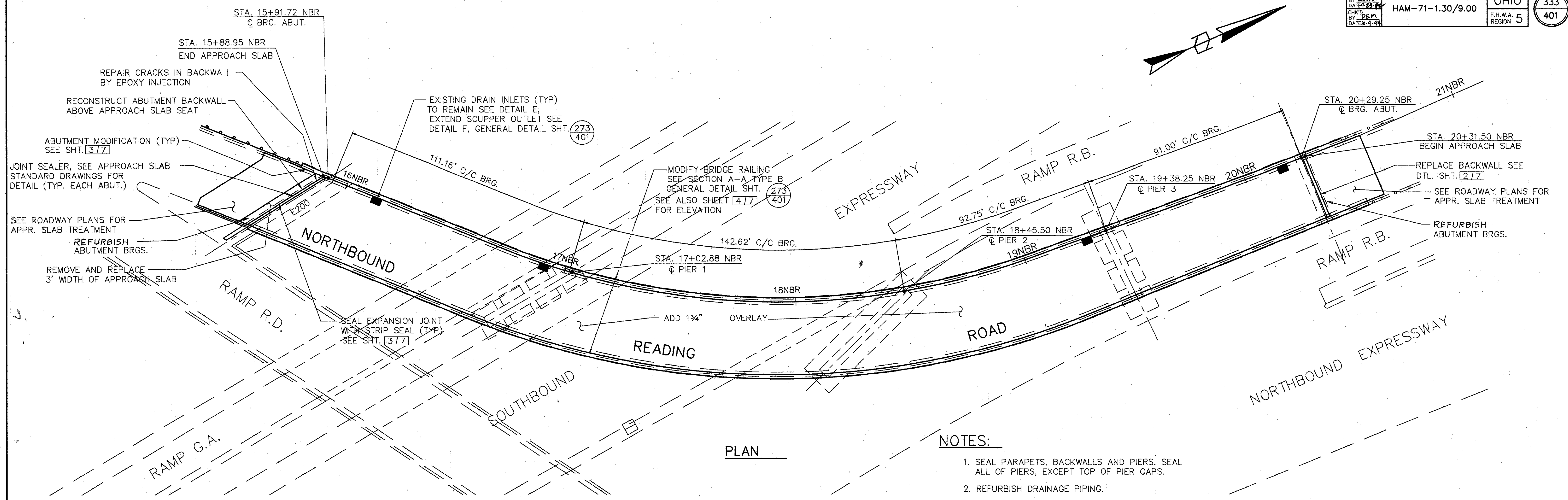


**SECTION D-D**

1. For Drainage piping requirements see General Notes on Sht. (273/401)
2. Approximate No. of Linear Feet of proposed 8" pipe (including specials) = 35'

<b>WOOLPERT CONSULTANTS</b> 409 East Monument Avenue Dayton, Ohio 45402-1226		7/7
<b>DRAINAGE DETAILS</b>		
BRIDGE NO. HAM-71-0228 OVER 1-71		
HAMILTON COUNTY		
DESIGNED L.A.T.M.	DRAWN L.A.P.	TRACED M.A.A. CHECKED D.E.M. REVIEWED DATE 11/11/94 REVISED

350 0 pny e 333-401

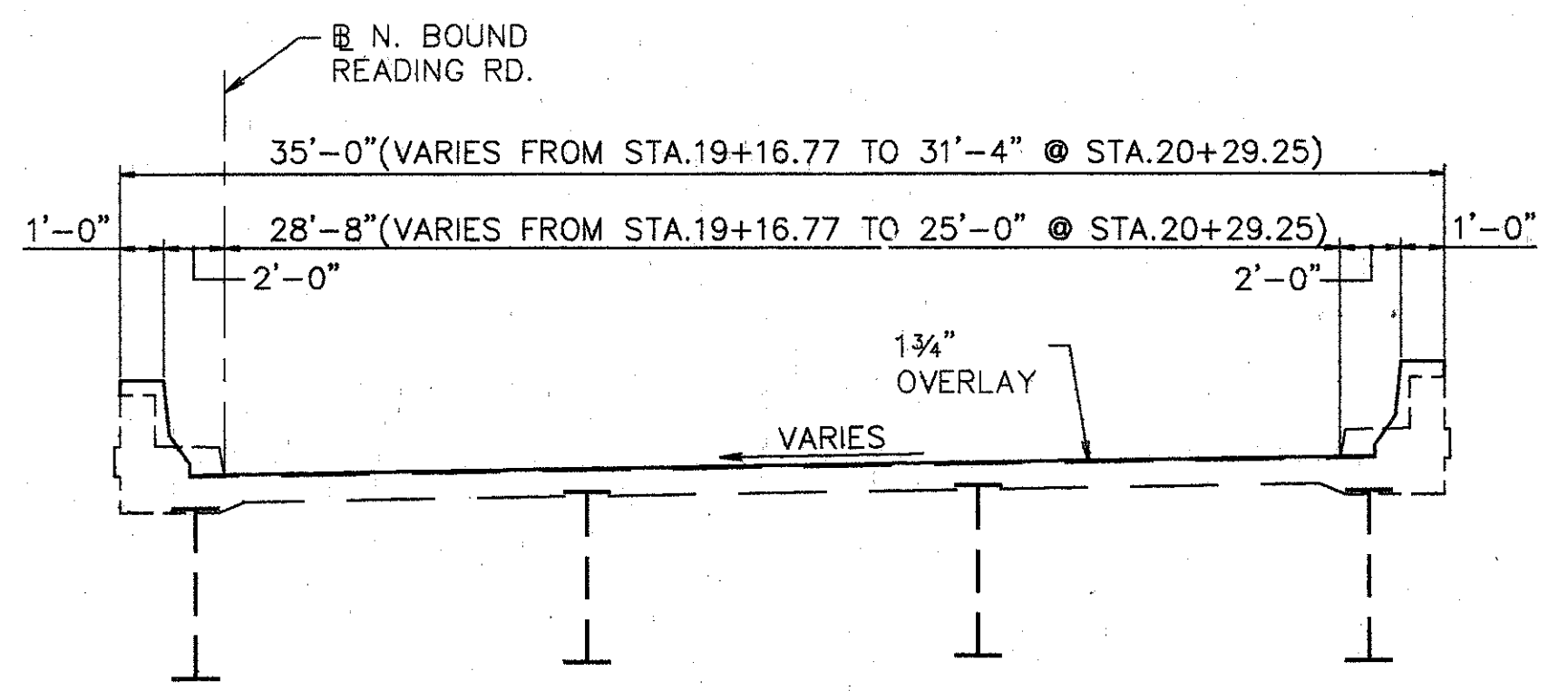


PLAN

NOTES:

1. SEAL PARAPETS, BACKWALLS AND PIERS. SEAL ALL OF PIERS, EXCEPT TOP OF PIER CAPS.
2. REFURBISH DRAINAGE PIPING.
3. SEE JUNCTION BOX EXTENSION DETAIL GENERAL DTL. SHT. (273/401) FOR BARRIER RETROFIT AT JUNCTION BOXES. REFER TO LIGHTING DETAILS FOR TYPE & LOCATION.

SLIDING PLATE SIZE	JACK CAPACITY REQ'D. (MIN)
E200	150 TON
E150	100 TON



TYPICAL BRIDGE SECTION

EXISTING STRUCTURE

TYPE: CONTINUOUS STEEL PLATE GIRDERS WITH REINFORCED CONCRETE DECK & SUBSTRUCTURE  
 SPANS: 111.16', 142.62', 92.75', 91.00', C/C BRG. MEASURED ALONG B  
 ROADWAY: VARIES 25' TO 29' F/F CURBS WITH 2'-0" SAFETY CURBS  
 LOADING FREQUENCY: C.F.=2000 (57) ADEQUATE FOR AASHO ALTERNATE LOADING  
 WEARING SURFACE: 1" MONOLITHIC CONCRETE  
 APPROACH SLABS: AS-1-54 (25'-0" LONG)  
 ALIGNMENT: VARIES  
 SUPERELEVATION: VARIES

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GENERAL PLAN

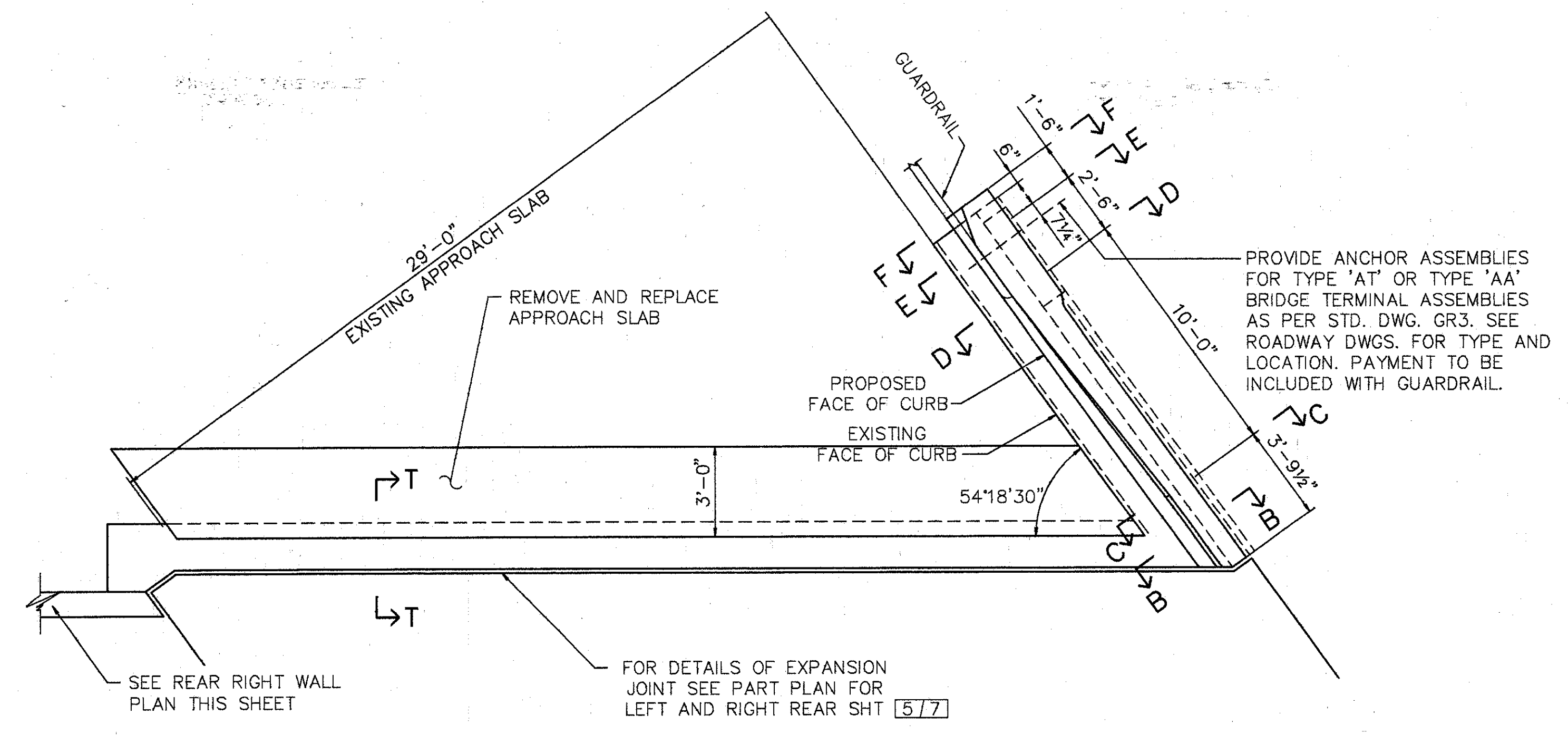
BRIDGE NO. HAM-42-0235 R (HAM-71-0229 L)  
 NORTHBOUND READING ROAD OVER SOUTHBOUND (I-71)  
 HAMILTON COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
L.A.T.M.	D.E.E.		M.A.A.	D.E.M.	11/11/94	

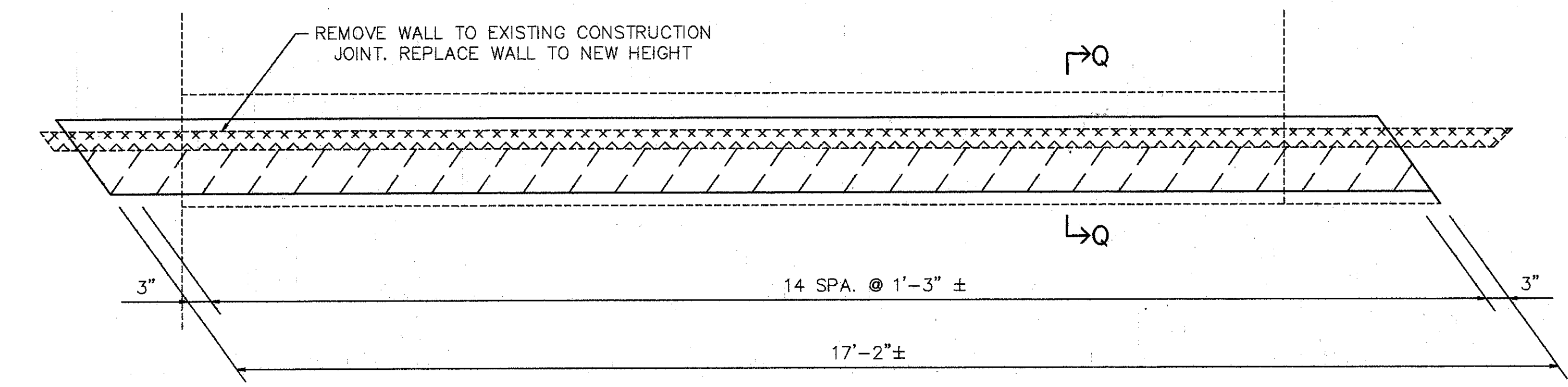
L.A.T.M. MAY 10, 1991 @ 4:22 PM  
 © STRAIN/SHAW CONSULTANTS INC. 1993 APR. 13, 1993 @ 8:10 AM  
 L.A.T.M. MAY 10, 1991 @ 4:22 PM  
 © STRAIN/SHAW CONSULTANTS INC. 1993 APR. 13, 1993 @ 8:10 AM



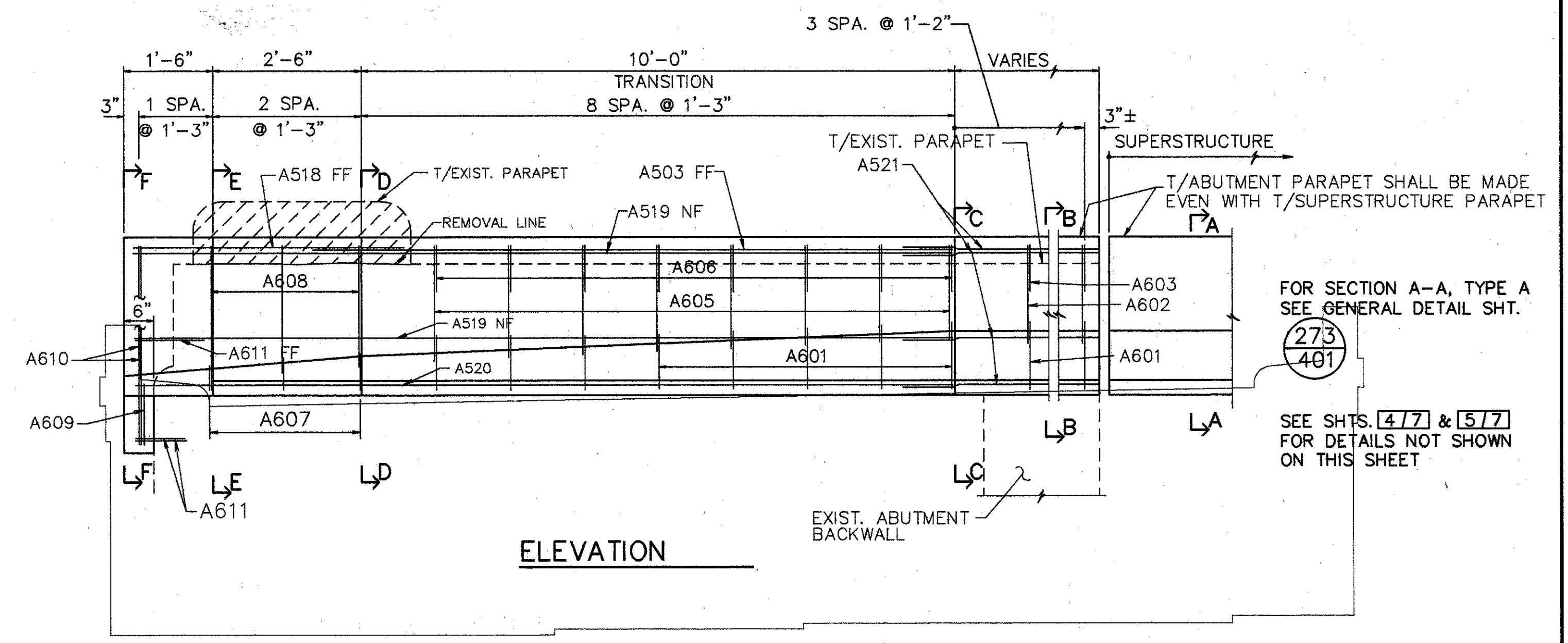




**PLAN-REAR ABUTMENT MODIFICATION**



**REAR RIGHT WALL PLAN**

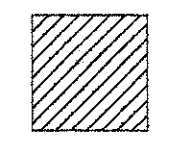


**ELEVATION**

- NOTES:**
- L DENOTES LEFT SIDE
  - R DENOTES RIGHT SIDE
  - RF DENOTES RIGHT FORWARD
  - LF DENOTES LEFT FORWARD
  - RR DENOTES RIGHT REAR
  - LR DENOTES LEFT REAR
  - NF DENOTES NEAR FACE
  - FF DENOTES FAR FACE

**NOTES FOR SECTION T-T**

- ① EXISTING REINFORCING STEEL TO REMAIN - REINFORCING STEEL DAMAGED TO BE REPLACED AT CONTRACTORS EXPENSE.
- ② 1" MIN. EMBEDMENT (SEE DOWEL HOLE GENERAL NOTE) ITEM 510.
- ③ TYPE 'A' WATERPROOFING (PAYMENT INCLUDED IN THE PRICE BID FOR APPROACH SLAB).
- ④ CLASS 'C' CONCRETE, ABUTMENT RECONSTRUCTION.
- ⑤ PROVIDE CONTRACTION AND EXPANSION JOINTS TO MATCH THOSE IN EXISTING BACKWALL AND PROVIDE CONSTRUCTION JOINTS AS REQUIRED TO MAINTAIN TRAFFIC. PAYMENT TO BE INCLUDED IN PRICE BID FOR ITEM 511 CLASS C CONCRETE RECONSTRUCTION.



EXISTING CONCRETE TO BE REMOVED INCLUDE IN ITEM 202 FOR PAYMENT.

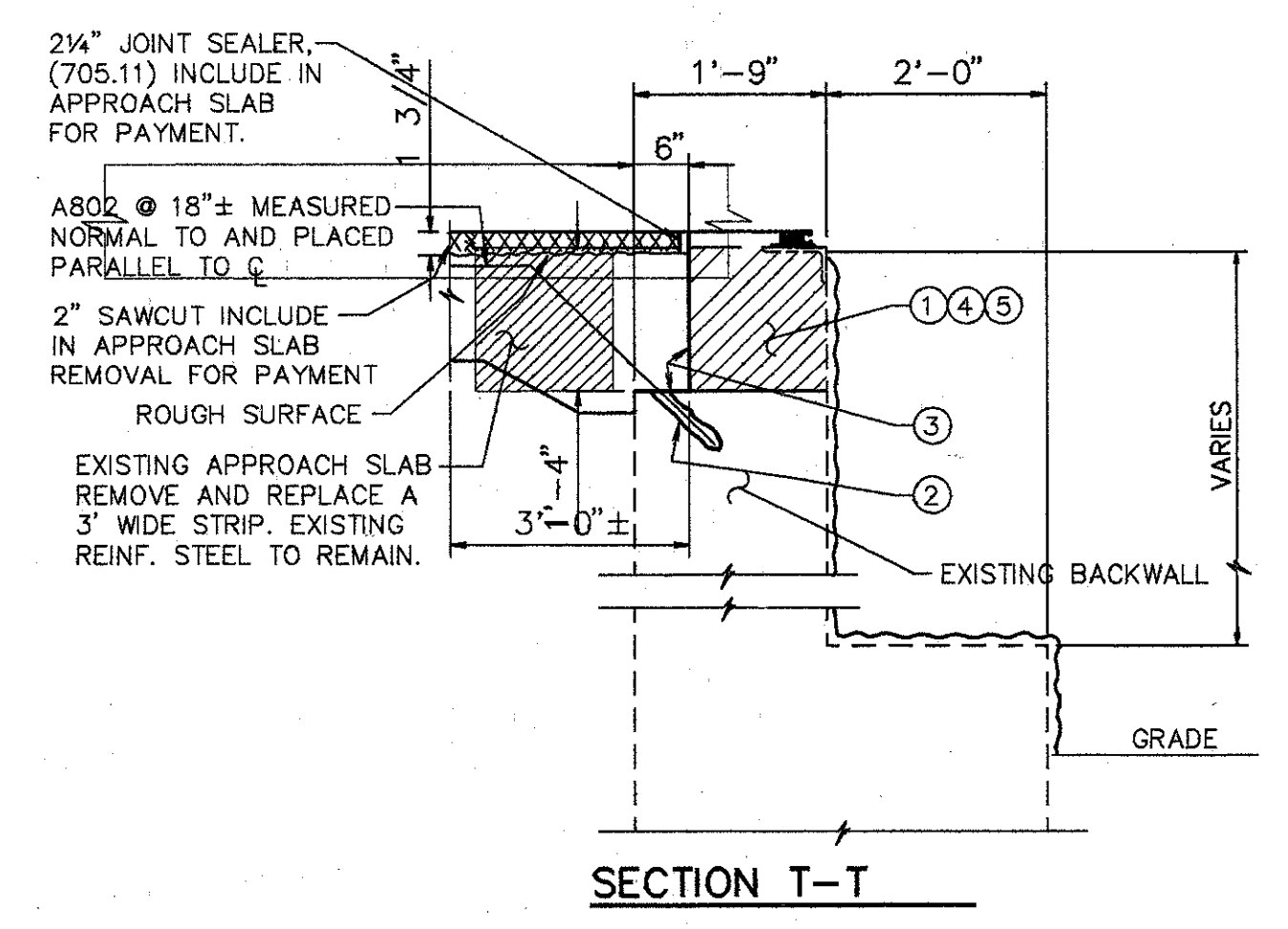
SURFACE TO BE SEALED UNDER ITEM SPECIAL- 'SEALING OF CONCRETE SURFACE, EPOXY'.

EXIST. CURB & PARAPET TO BE REMOVED UNDER ITEM 202-'PORTIONS OF STRUCTURES REMOVED'.

EXIST. RAILING & POSTS TO BE REMOVED & STACKED NEATLY ALONG THE RIGHT-OF-WAY FOR DISPOSAL BY THE CONTRACTOR. ALL WORK SHALL BE INCLUDED IN THE PRICE BID FOR ITEM 202-'PORTIONS OF STRUCTURE REMOVED'.

XXXXXX SURFACES TO BE SEALED UNDER ITEM SPECIAL-'SEALING OF CONCRETE SURFACES'.

- NOTES:**
1. PREFORMED EXPANSION JT. FILLER & SEALER AT CORNERS AND SIDES OF THE APP. SLAB SHALL BE INCLUDED IN THE PRICE BID PER SQ. YD. FOR THE APPR. SLAB.



**SECTION T-T**

ADDITIONAL SECTIONS ON SHEET 477

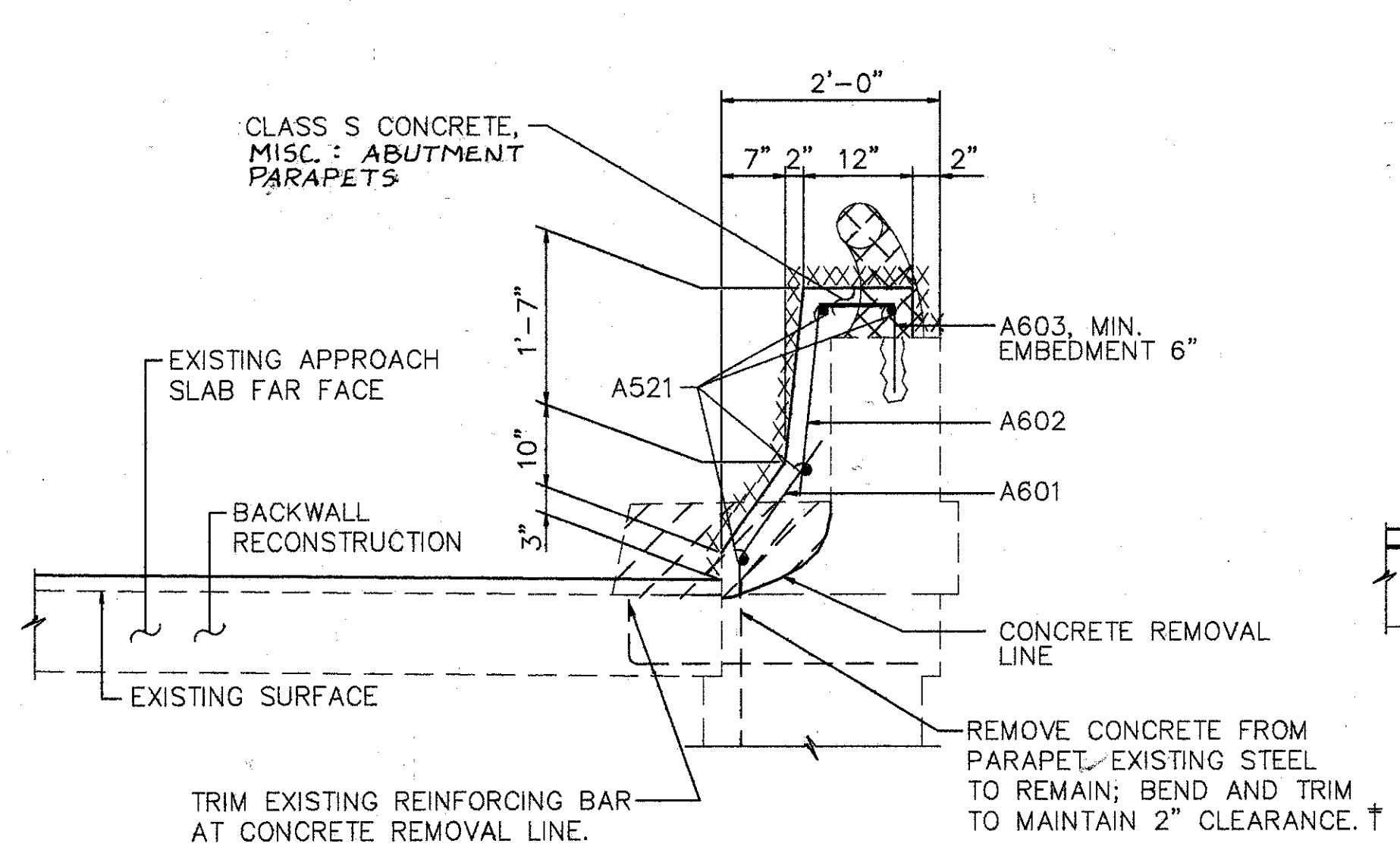
**WOOLPERT CONSULTANTS**  
 409 E. MONUMENT AVENUE  
 DAYTON, OHIO 45402-1226  
 (513) 461-5660

**REAR ABUTMENT & PARAPET ELEVATIONS**  
 BRIDGE NO. HAM-42-0235 R (HAM-71-0229 L)

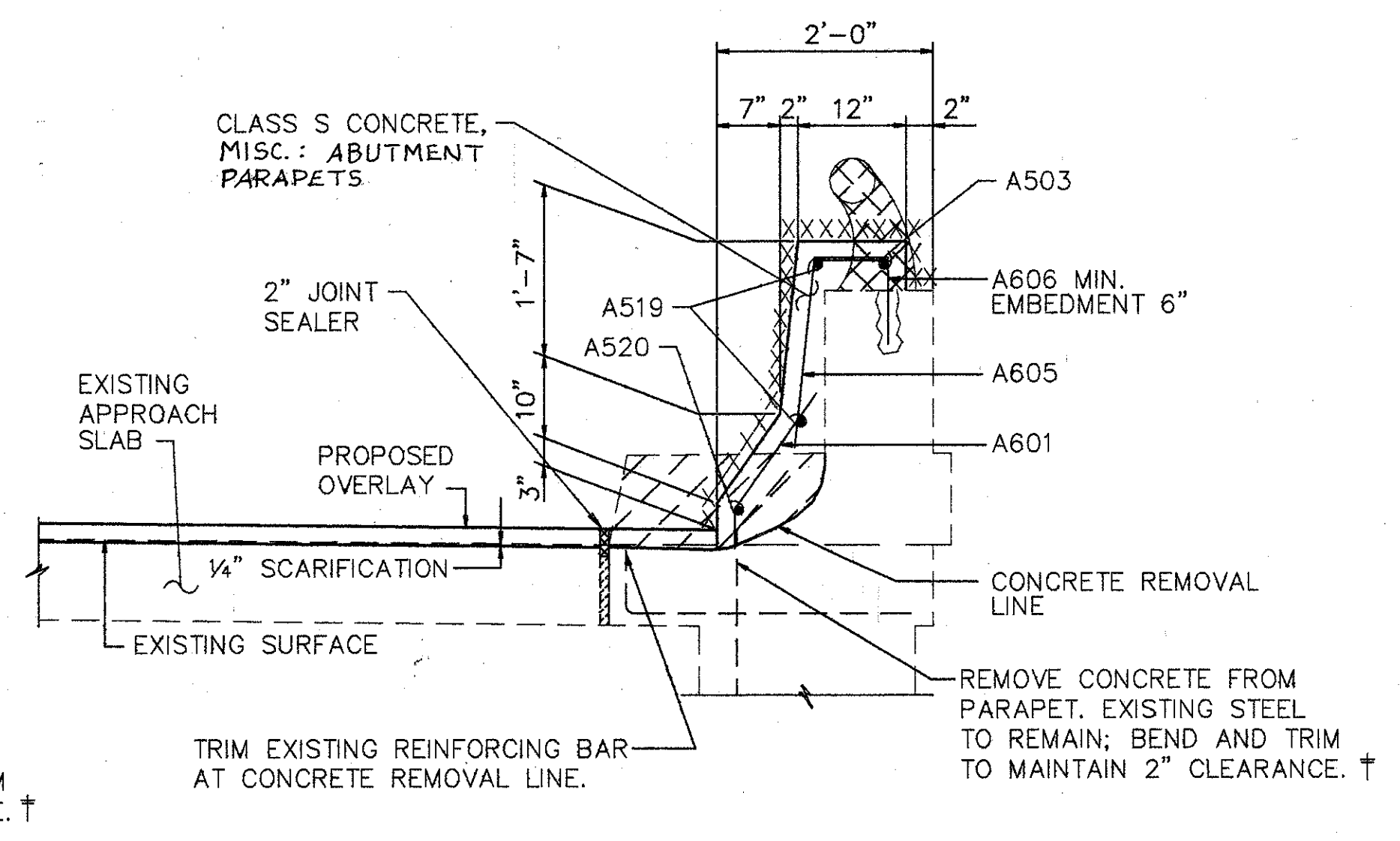
HAMILTON COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
L.A.T.M.	D.E.E.		M.A.A.	D.E.M.	11/94	

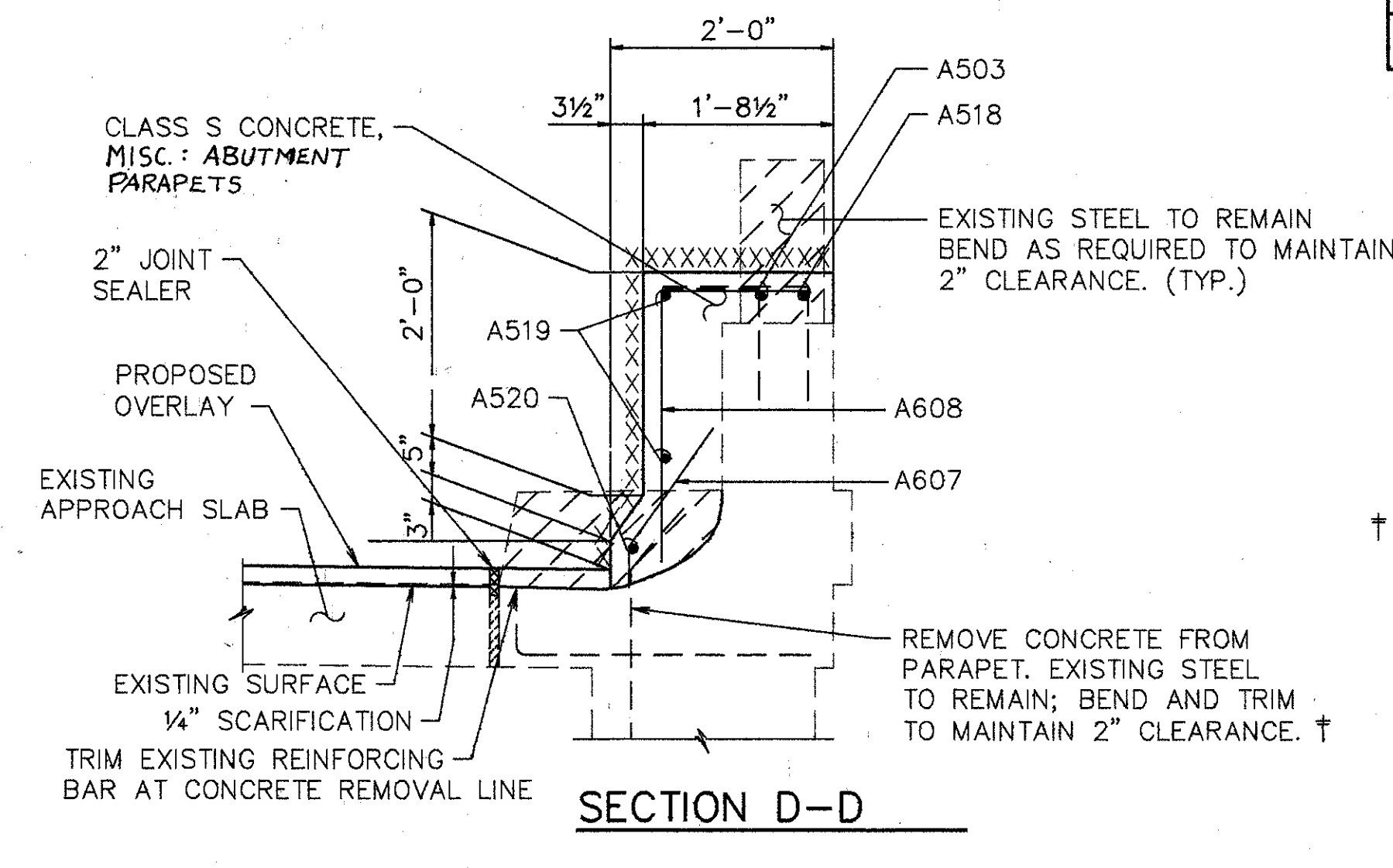




SECTION B-B

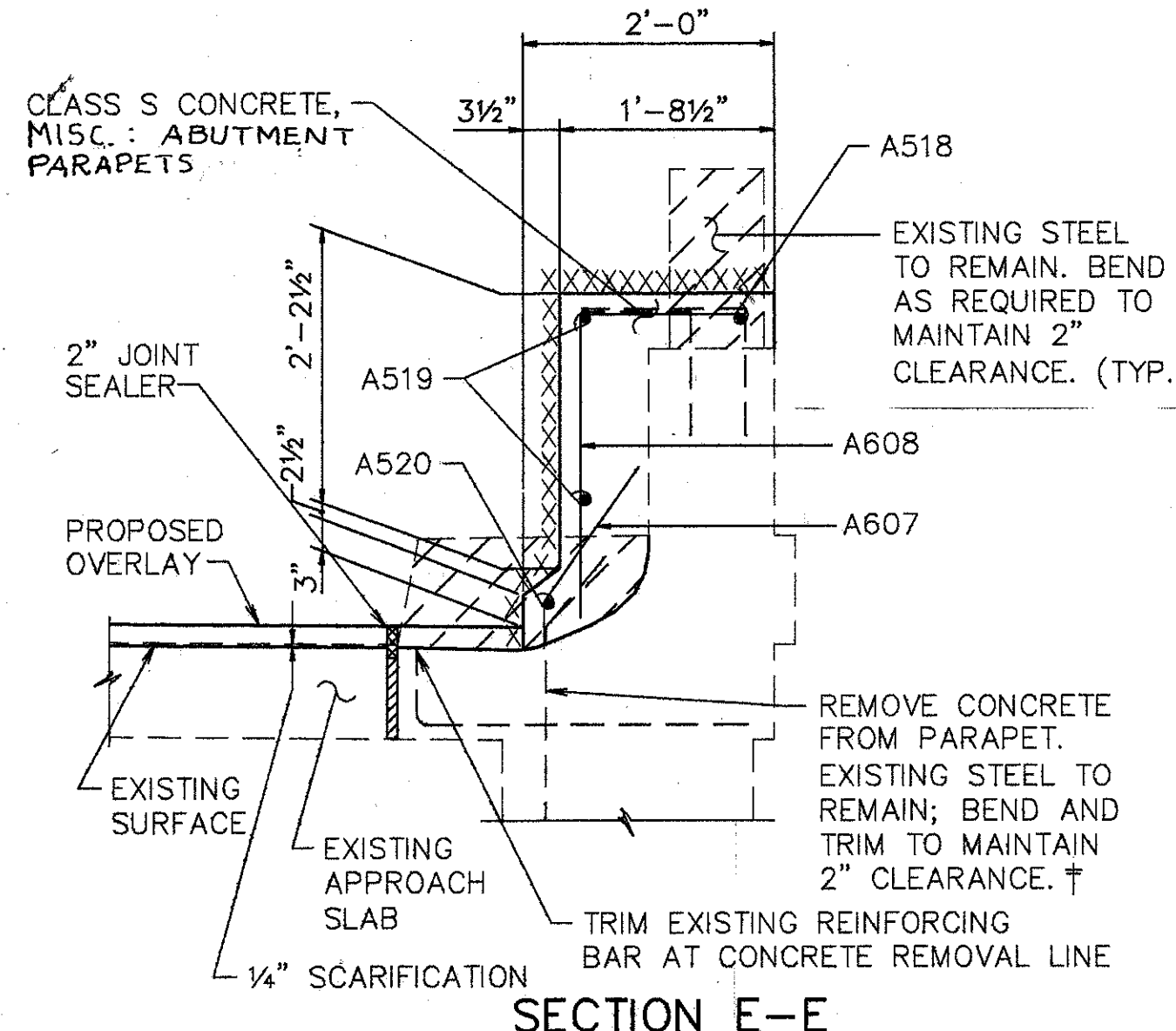


SECTION C-C

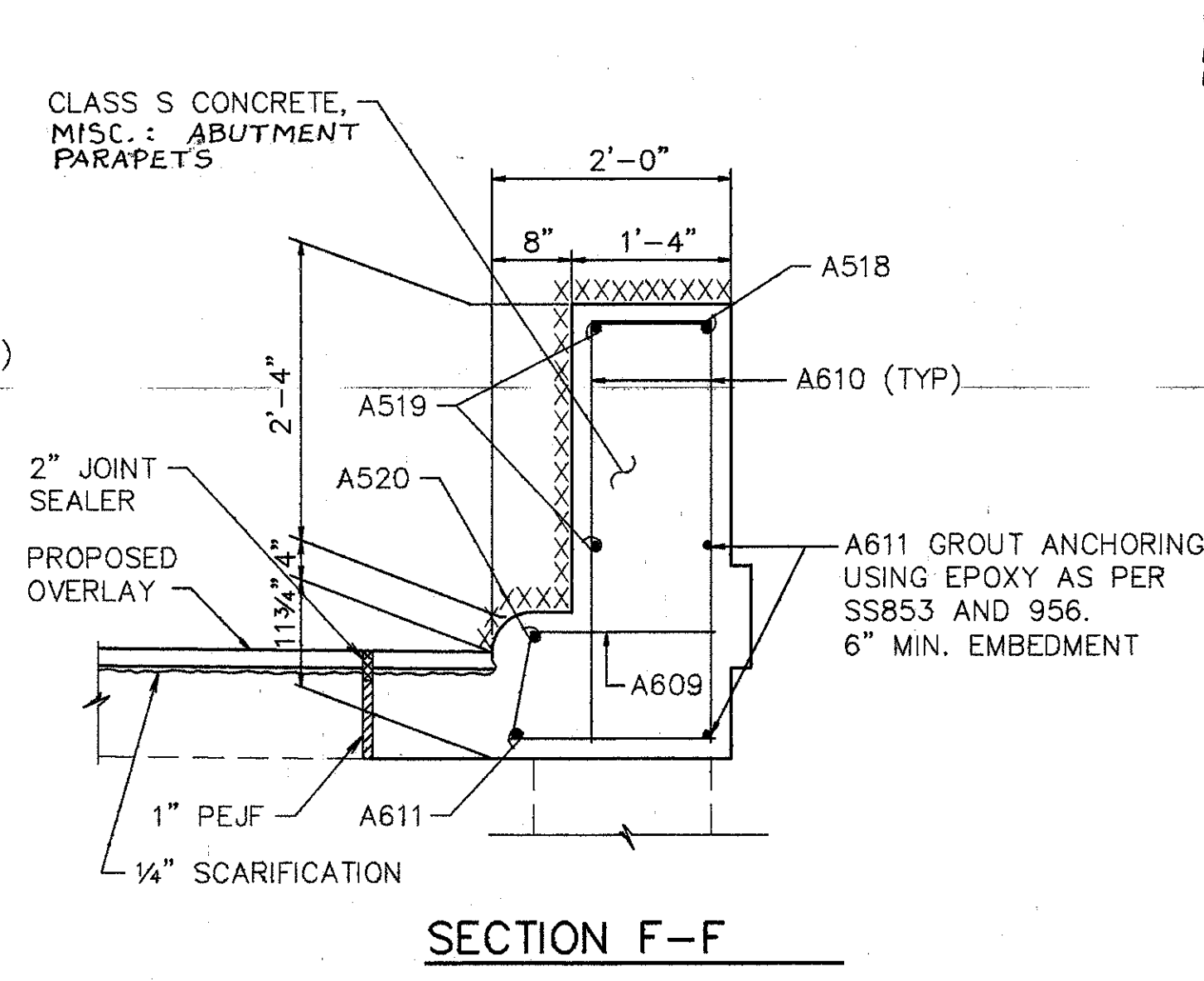


SECTION D-D

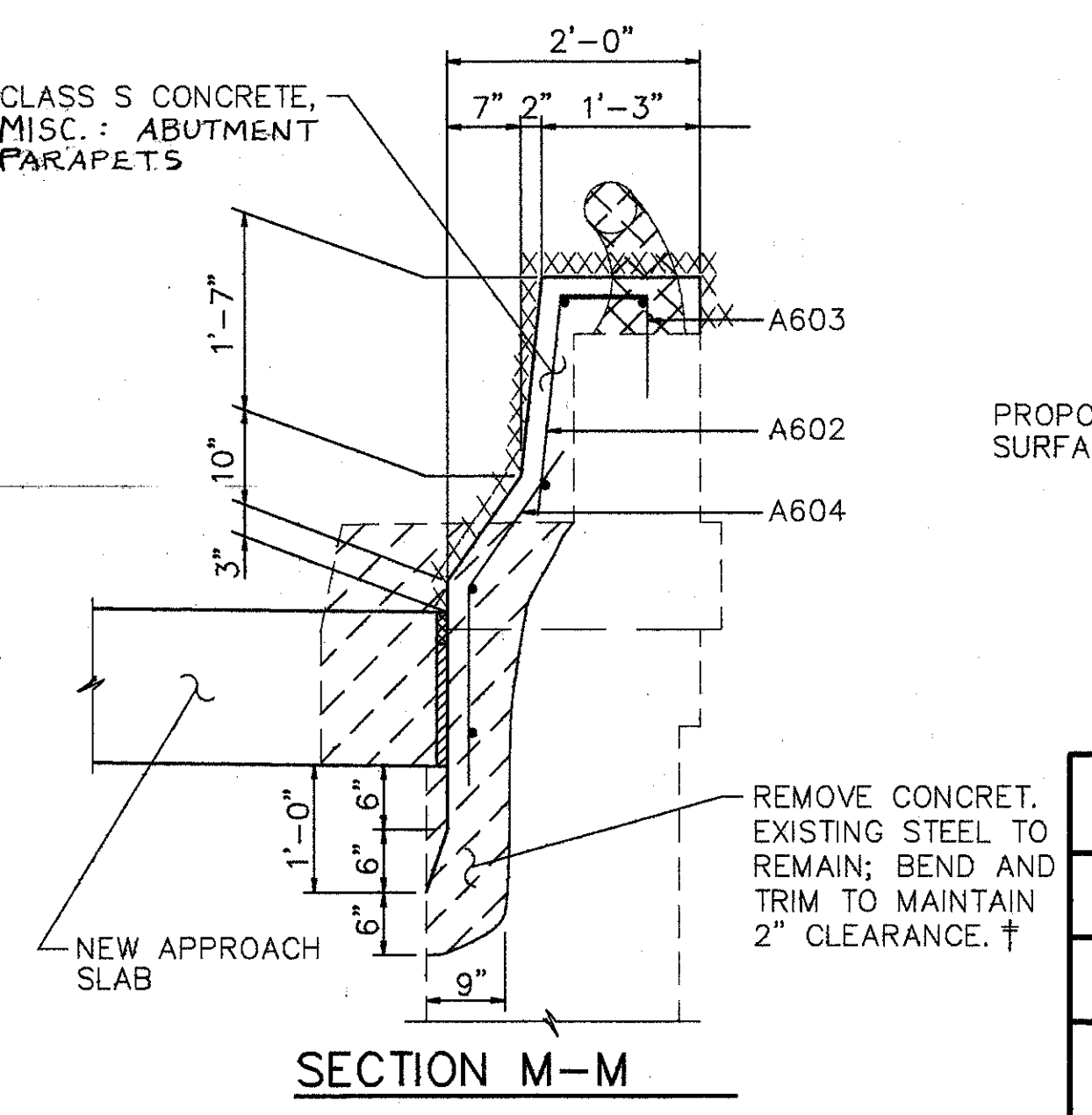
† BARS SHALL REMAIN. CONTRACTOR SHALL EXERCISE CAUTION TO ENSURE THAT THESE BARS ARE NOT DAMAGED DURING THE CONC. REMOVAL OPERATION. ANY BARS DAMAGED AS A RESULT OF THE CONTRACTOR'S OPERATION SHALL BE REPLACED OR REPAIRED BY THE CONTRACTOR AT HIS EXPENSE. METHOD OF REPAIR OR REPLACEMENT WILL BE AT THE DISCRETION OF THE DIRECTOR.



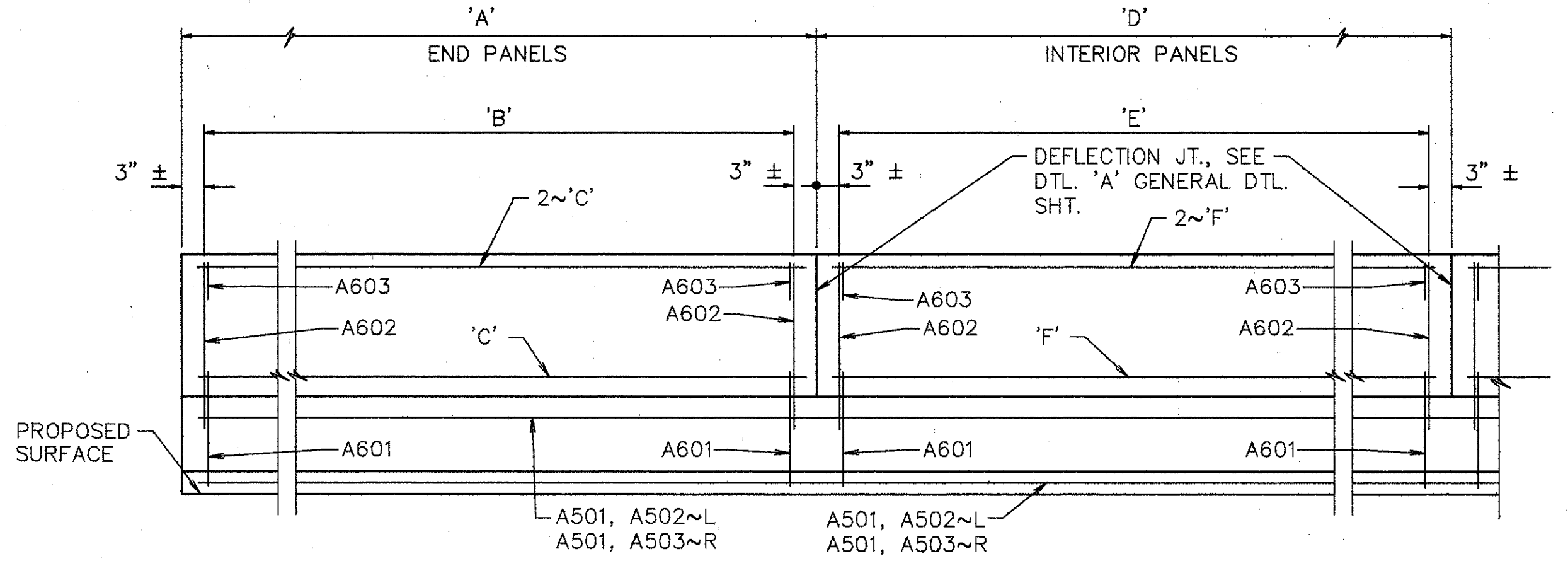
SECTION E-E



SECTION F-F

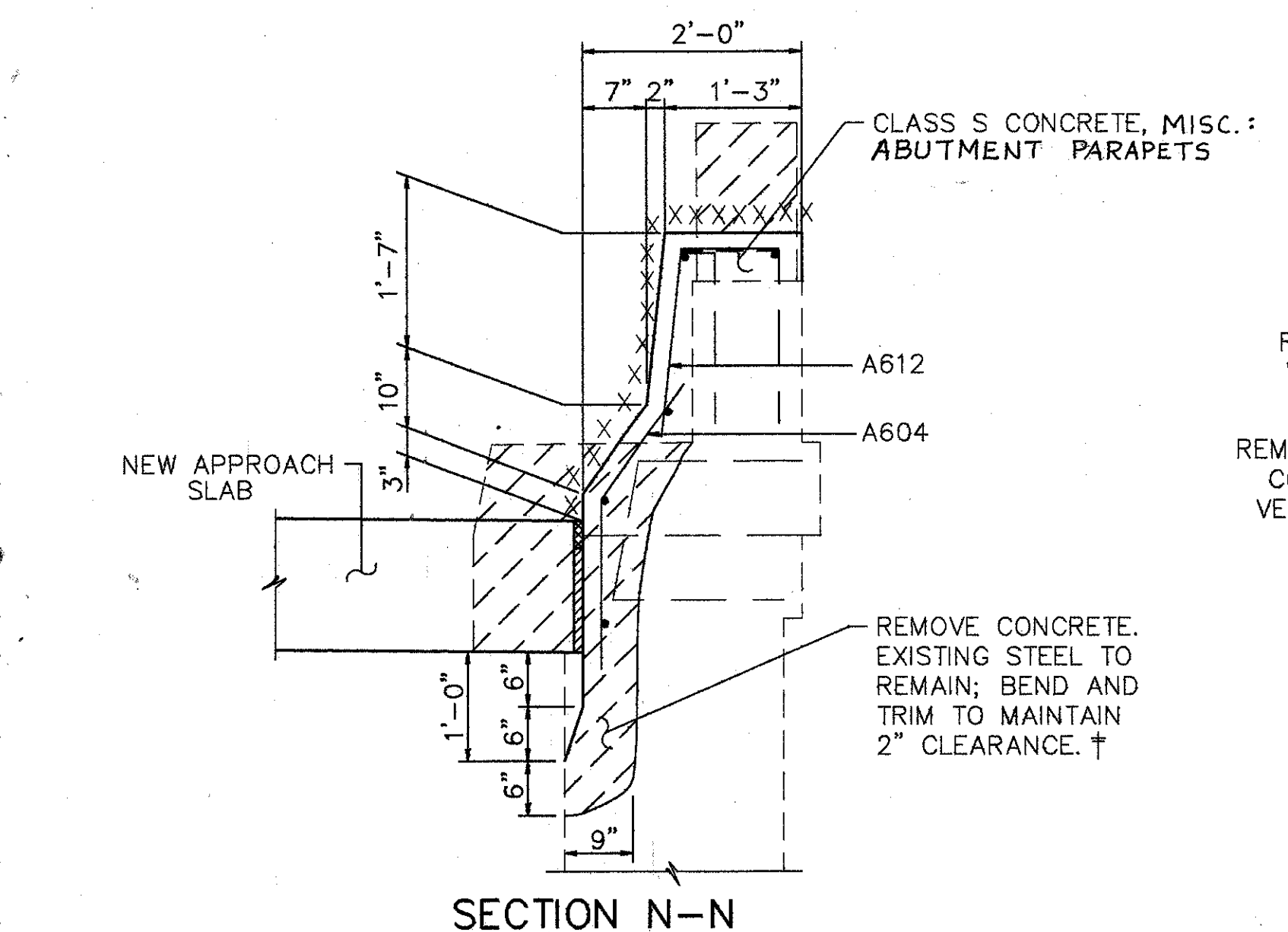


SECTION M-M

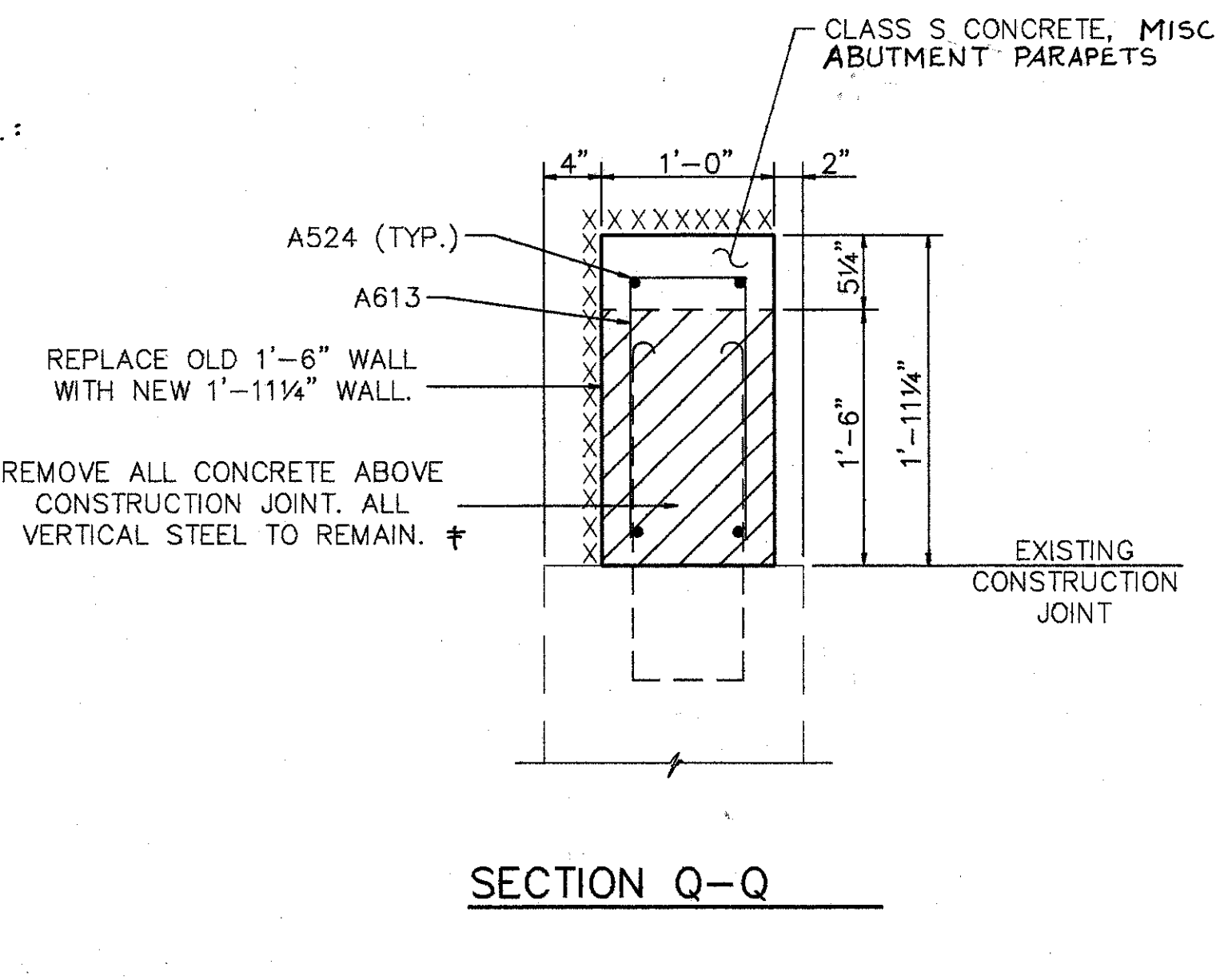


ELEVATION SUPERSTRUCTURE PARAPET

LOCATION	A	B	C	D	E	F
SPAN 1~LEFT WALL	13'-4" 17'-2"	12 SPA. @ 1'-1" 14 SPA. @ 1'-2 1/4"	A512 A510	5~16'-2"	13 SPA. @ 1'-2 1/2"	A504
SPAN 2~LEFT WALL	14'-9 1/2" 17'-6"	12 SPA. @ 1'-2 1/4" 14 SPA. @ 1'-2 1/4"	A508 A511	7~15'-8"	13 SPA. @ 1'-2"	A505
SPAN 3~LEFT WALL	13'-7 1/2"	11 SPA. @ 1'-2 1/2"	A507	5~15'-6"	12 SPA. @ 1'-3"	A506
SPAN 4~LEFT WALL	15'-7 1/2" 12'-11 5/8"	13 SPA. @ 1'-2" 11 SPA. @ 1'-1 3/4"	A509 A513	4~15'-8"	13 SPA. @ 1'-2"	A505
SPAN 1-3 RIGHT WALL	13'-10 7/8" 14'-10"	11 SPA. @ 1'-2 3/4" 12 SPA. @ 1'-2 1/2"	A516 A515	23~16'-0"	13 SPA. @ 1'-2 1/4"	A514
SPAN 4~RIGHT WALL	16'-4" 12'-8"	13 SPA. @ 1'-2 3/4" 10 SPA. @ 1'-2 3/4"	A502 A517	4~15'-4"	12 SPA. @ 1'-3"	A506



SECTION N-N



SECTION Q-Q

- EXIST. CURB & PARAPET TO BE REMOVED UNDER ITEM 202-'PORTIONS OF STRUCTURES REMOVED'.
- EXIST. RAILING & POSTS TO BE REMOVED & STACKED NEATLY ALONG THE RIGHT-OF-WAY FOR DISPOSAL BY THE CONTRACTOR. ALL WORK SHALL BE INCLUDED IN THE PRICE BID FOR ITEM 202-'PORTIONS OF STRUCTURE REMOVED'.
- SURFACES TO BE SEALED UNDER ITEM SPECIAL-'SEALING OF CONCRETE SURFACES'.

- NOTES:
- TYPE "A" WATERPROOFING AT THE BRIDGE LIMIT END OF THE APPROACH SLAB (AS PER STD. DWG. AS-1-81) SHALL BE INCLUDED IN THE PRICE BID FOR ITEM 611 APPROACH SLAB.

- NOTES:
- L DENOTES LEFT SIDE
  - R DENOTES RIGHT SIDE
  - RF DENOTES RIGHT FORWARD
  - LF DENOTES LEFT FORWARD
  - RR DENOTES RIGHT REAR
  - LR DENOTES LEFT REAR
  - NF DENOTES NEAR FACE
  - FF DENOTES FAR FACE

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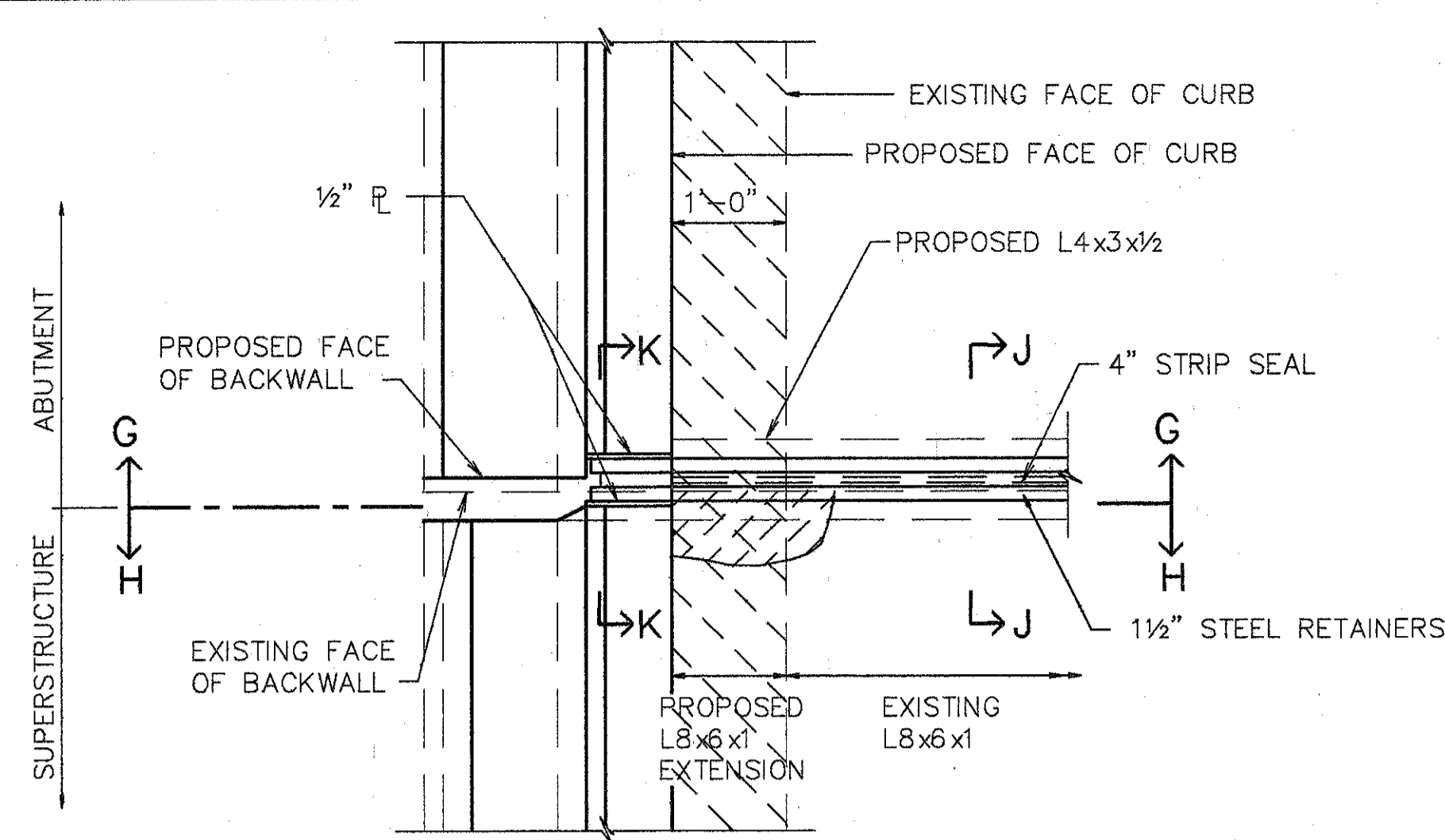
4 / 7

## PARAPET SECTIONS

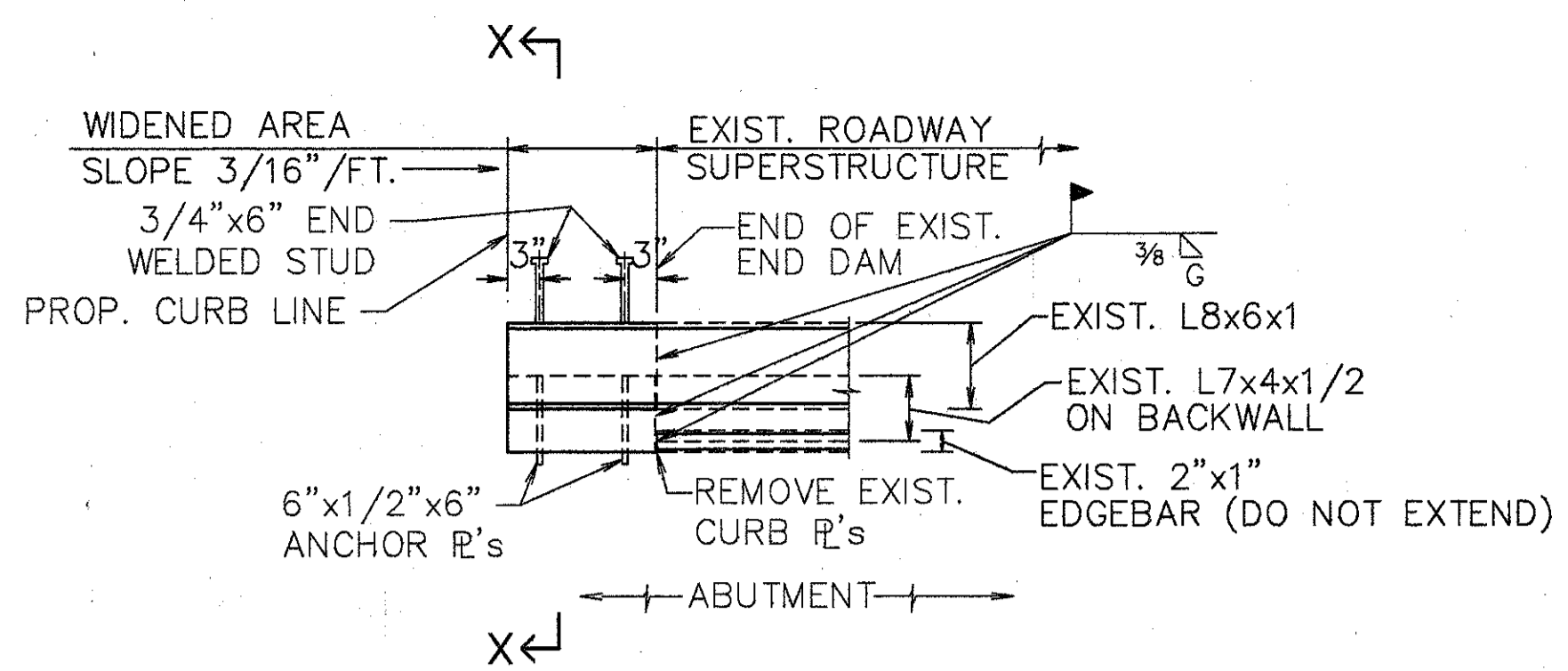
BRIDGE NO. HAM-42-0235 R (HAM-71-0229 L)  
 NORTHBOUND READING ROAD  
 OVER SOUTHBOUND (I-71)  
 HAMILTON COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
L.A.T.M.	D.E.E.		M.A.A.			

Last Print: MAY 15, 1991 @ 5:03 PM  
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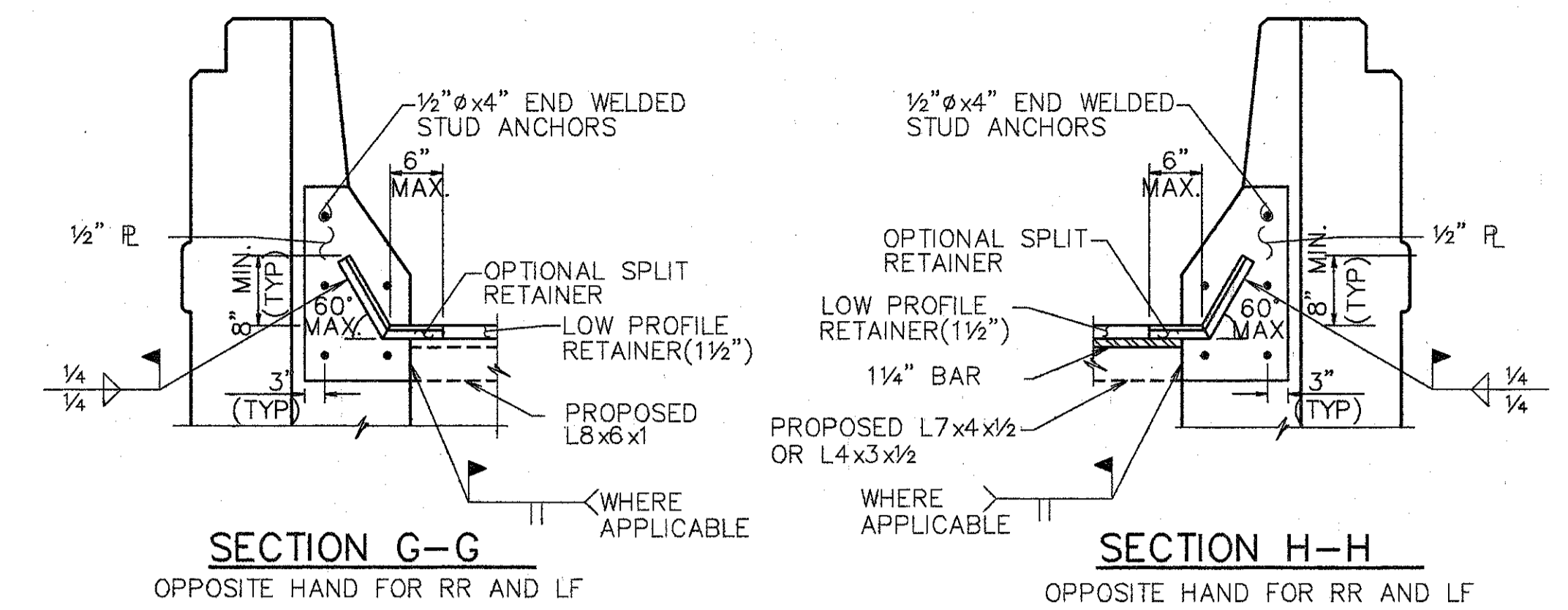


NOTE:  
 1. SEE PLAN END DAM @ WIDENED AREAS FOR ANGLE EXTENSIONS.



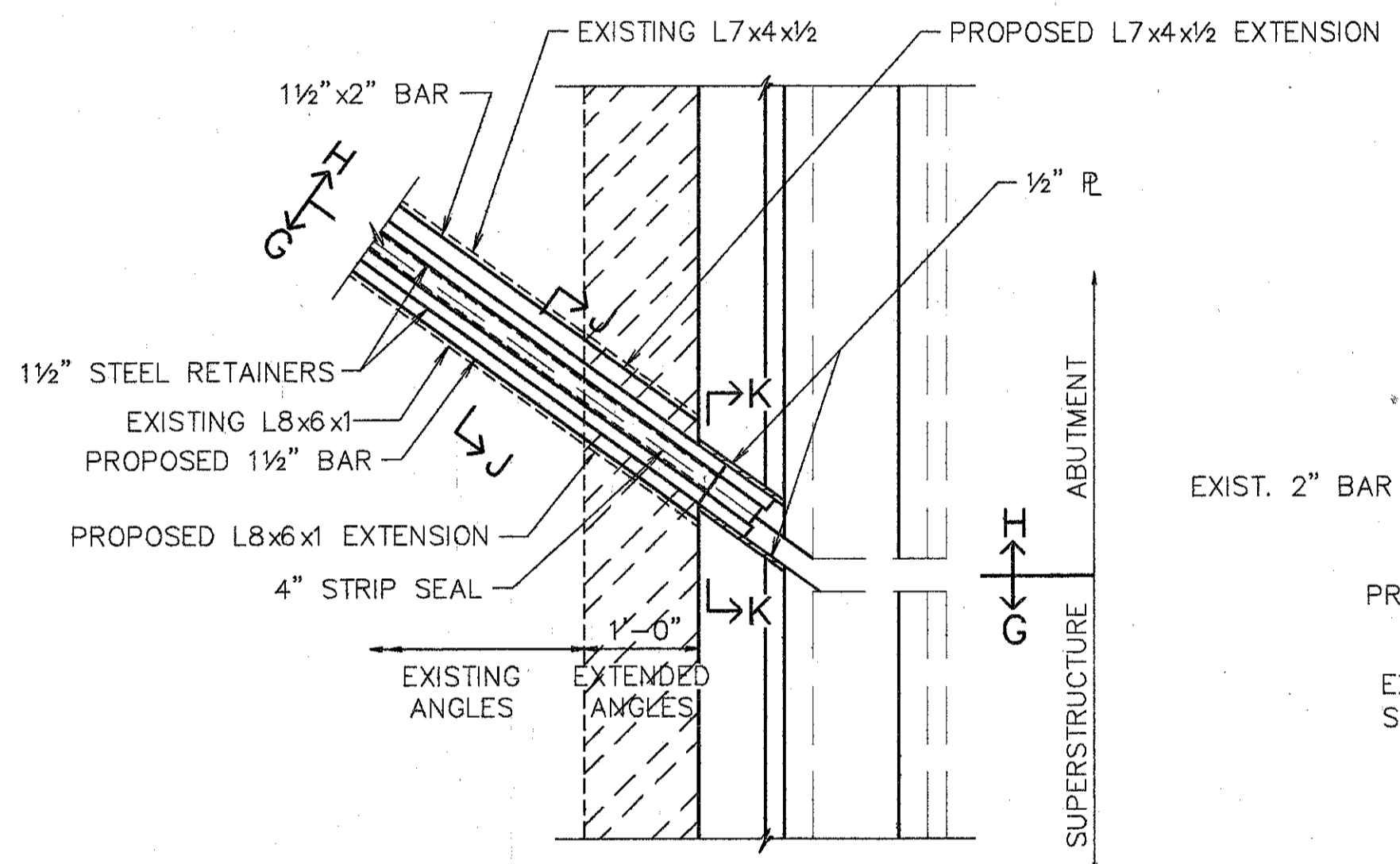
**PLAN END DAM @ WIDENED AREAS  
 (SKEW NOT SHOWN)**

- NOTES:
- END DAM WIDENING SHOWN IS FOR THE R.F. & L.R. CORNERS OF THE BRIDGE. THE L.F. & R.R. CORNERS ARE SIMILAR, BUT OPPOSITE HAND. (SKEW NOT SHOWN)
  - FOR DETAILS & DIMS. NOT SHOWN SEE STD. DWG. SD-1-69.
  - STRIP SEAL OMITTED FOR CLARITY.

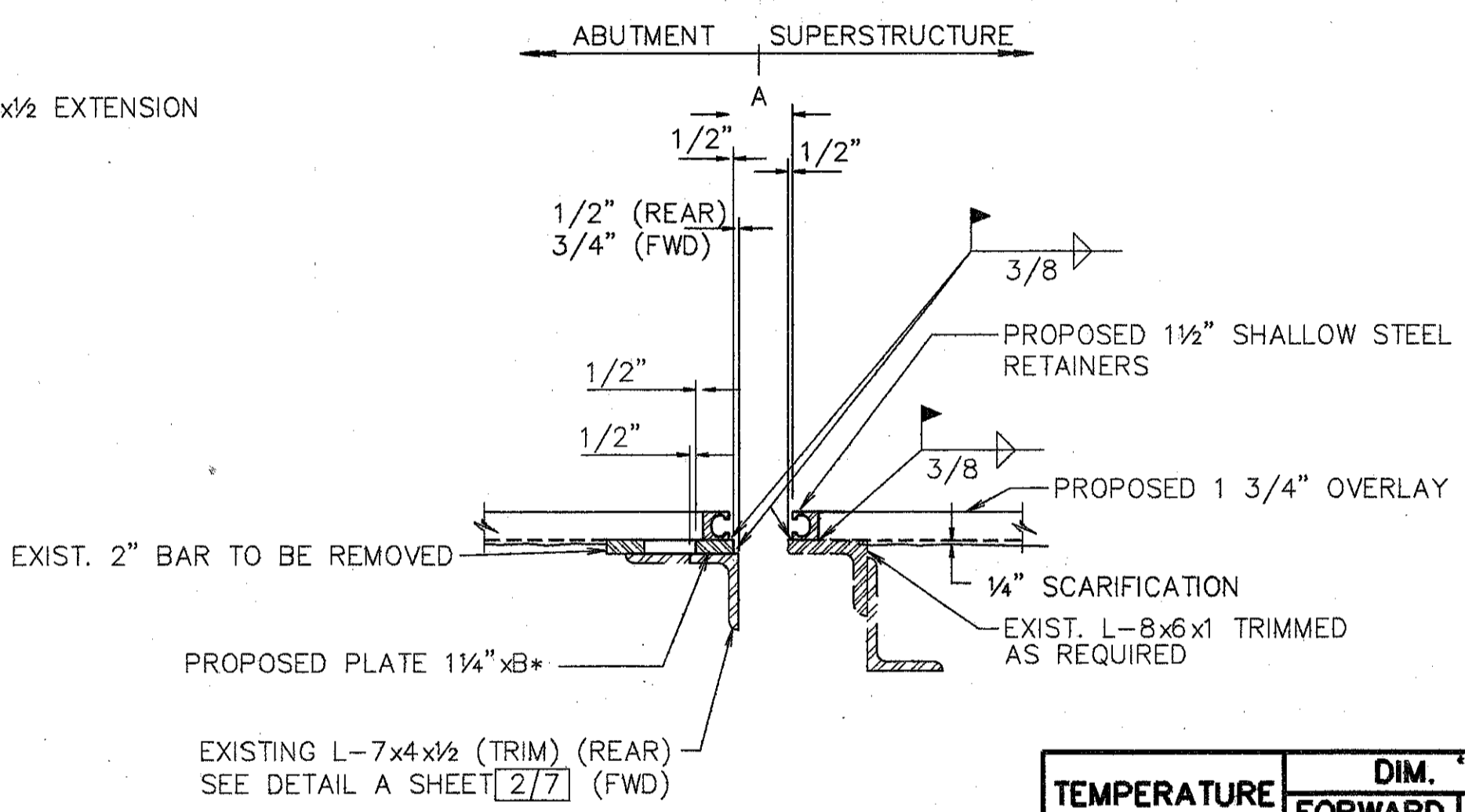


- NOTE:
- EXPANSION JT. DETAILS TO BE WORKED WITH STD. DWG. EXJ-4-87 SHTS. 1 thru 5.
  - WHEN PLATE IS RECESSED INTO ABUTMENT, CONCRETE BELOW PLATE SHALL BE SLOPED FROM BOTTOM OF THE PLATE TO THE END OF THE ABUTMENT TO DETER THE ACCUMULATION OF DEBIS.

**PART PLAN @ LEFT FORWARD  
 RIGHT FORWARD OPPOSITE HAND**



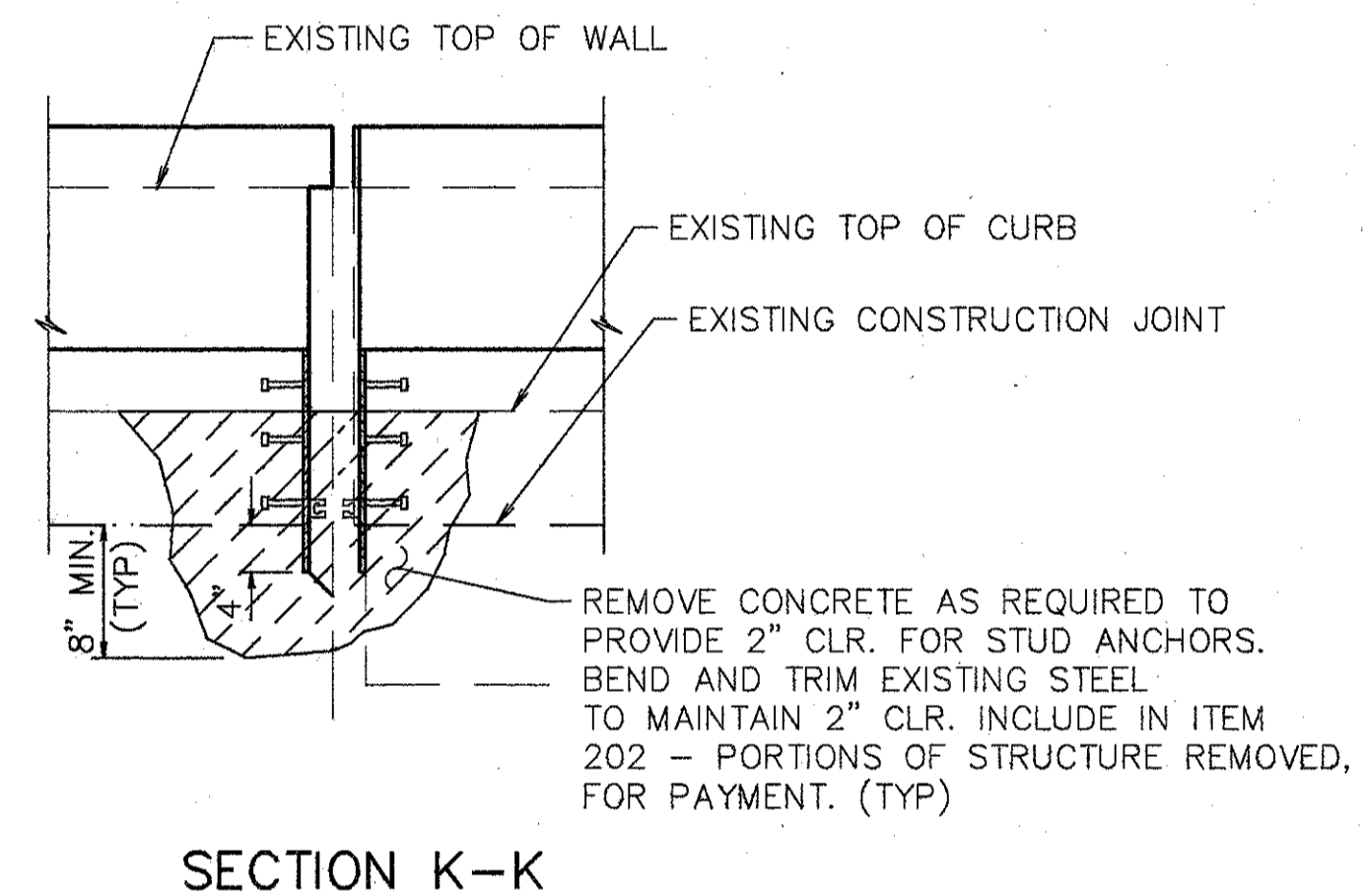
**PART PLAN @ LEFT REAR**



**SECTION J-J**

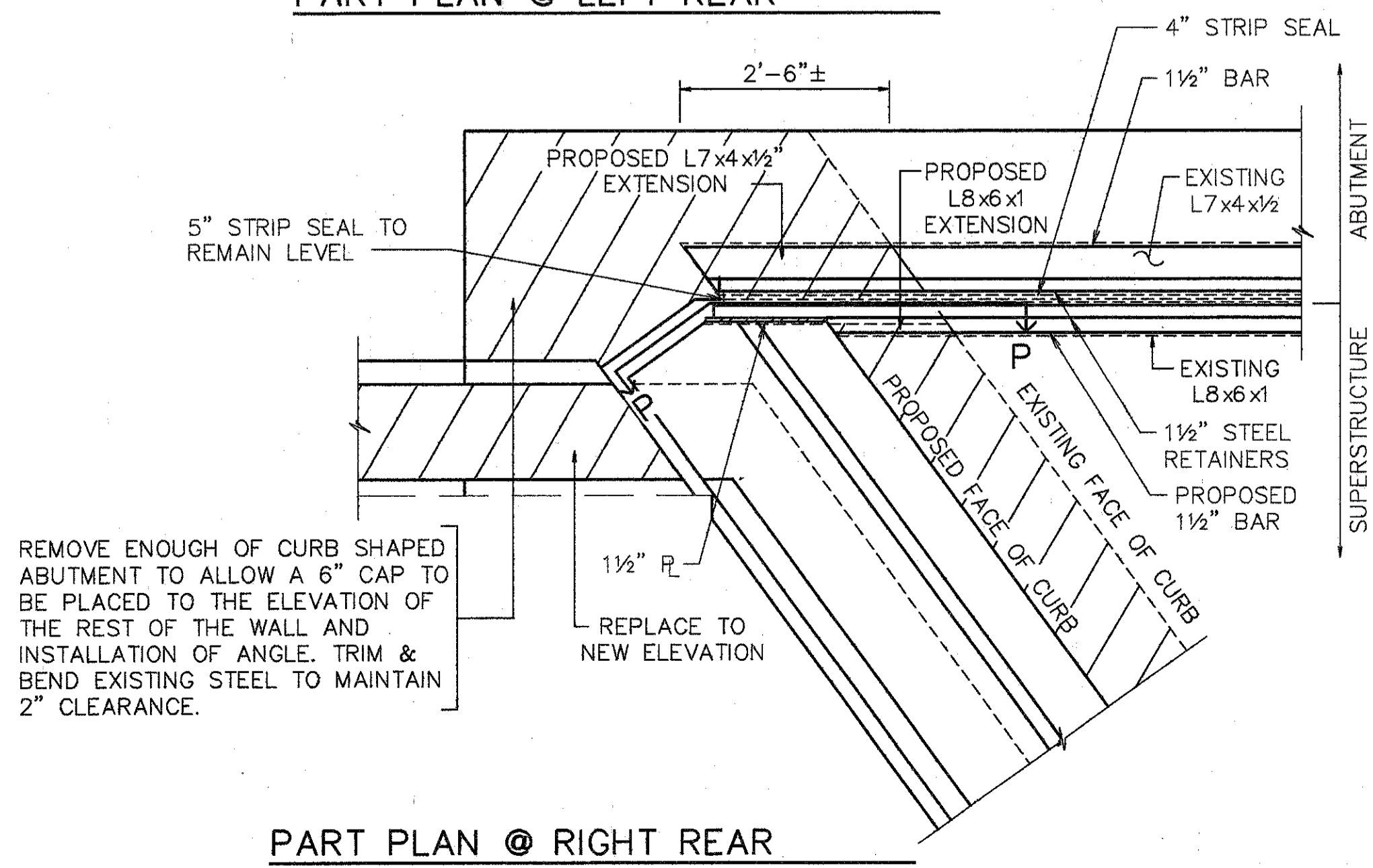
TEMPERATURE	DIM. 'A'	
	FORWARD	REAR
40° F	3 1/8"	3 1/4"
50° F	3"	3 1/8"
60° F	2 7/8"	3"
70° F	2 3/4"	2 7/8"
80° F	2 5/8"	2"
90° F	2 1/2"	2 1/2"

- NOTES:
- CONTRACTOR TO VERIFY ALL DIMENSIONS PRIOR TO MODIFYING THE EXPANSION JOINT.
  - THE PRICE BID FOR ITEM 516--"STRUCTURAL EXPANSION JOINTS, INCLUDING ELASTOMERIC STRIP SEALS", SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, AND ANY OTHER INCIDENTAL ITEMS, AS DETAILED. REMOVAL OF CURB OR PARAPET AS SHOWN SHALL BE INCLUDED UNDER ITEM 202--"PORTIONS OF STRUCTURE REMOVED."
  - FOR DETAILS NOT SHOWN REFER TO DRAWING EXJ-4-87 SHEETS 3 AND 4.
  - STRIP SEAL TO BE INSTALLED IN ONE CONTINUOUS PIECE (NO OPEN JOINTS).
  - PROVIDE TEMPORARY SUPPORT FOR ABUTMENT END DAM DURING CONSTRUCTION. REMOVE TEMPORARY SUPPORT AS SOON AS CONCRETE HAS SET, PREFERABLY WITHIN TWO HOURS AFTER PLACING TO AVOID DAMAGE DUE TO EXPANSION AND CONTRACTION OF SUPERSTRUCTURE.



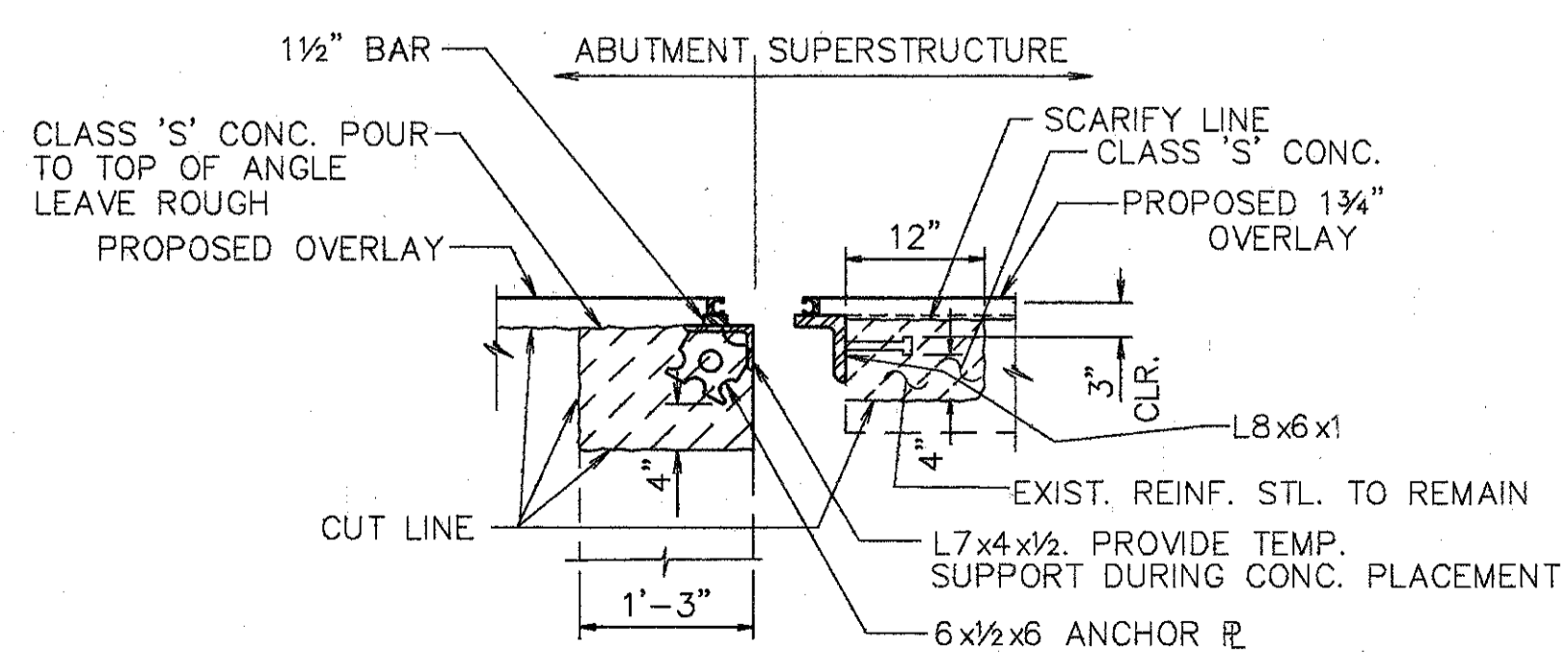
**SECTION K-K**

NOTE: IF PORTION OF DECK OR ABUTMENT PARAPET IS TO BE REPLACED, THE 1/2" PLATES SHALL BE INSTALLED ALONG WITH THE NEW PARAPET.



**PART PLAN @ RIGHT REAR**

REMOVE ENOUGH OF CURB SHAPED ABUTMENT TO ALLOW A 6" CAP TO BE PLACED TO THE ELEVATION OF THE REST OF THE WALL AND INSTALLATION OF ANGLE. TRIM & BEND EXISTING STEEL TO MAINTAIN 2" CLEARANCE.



**SECTION X-X**

- NOTE:
- FOR DETAILS NOT SHOWN SEE STD. DWG. SD-1-69.
  - SEE SECTION J-J FOR RETAINER SPACING AND WELDING

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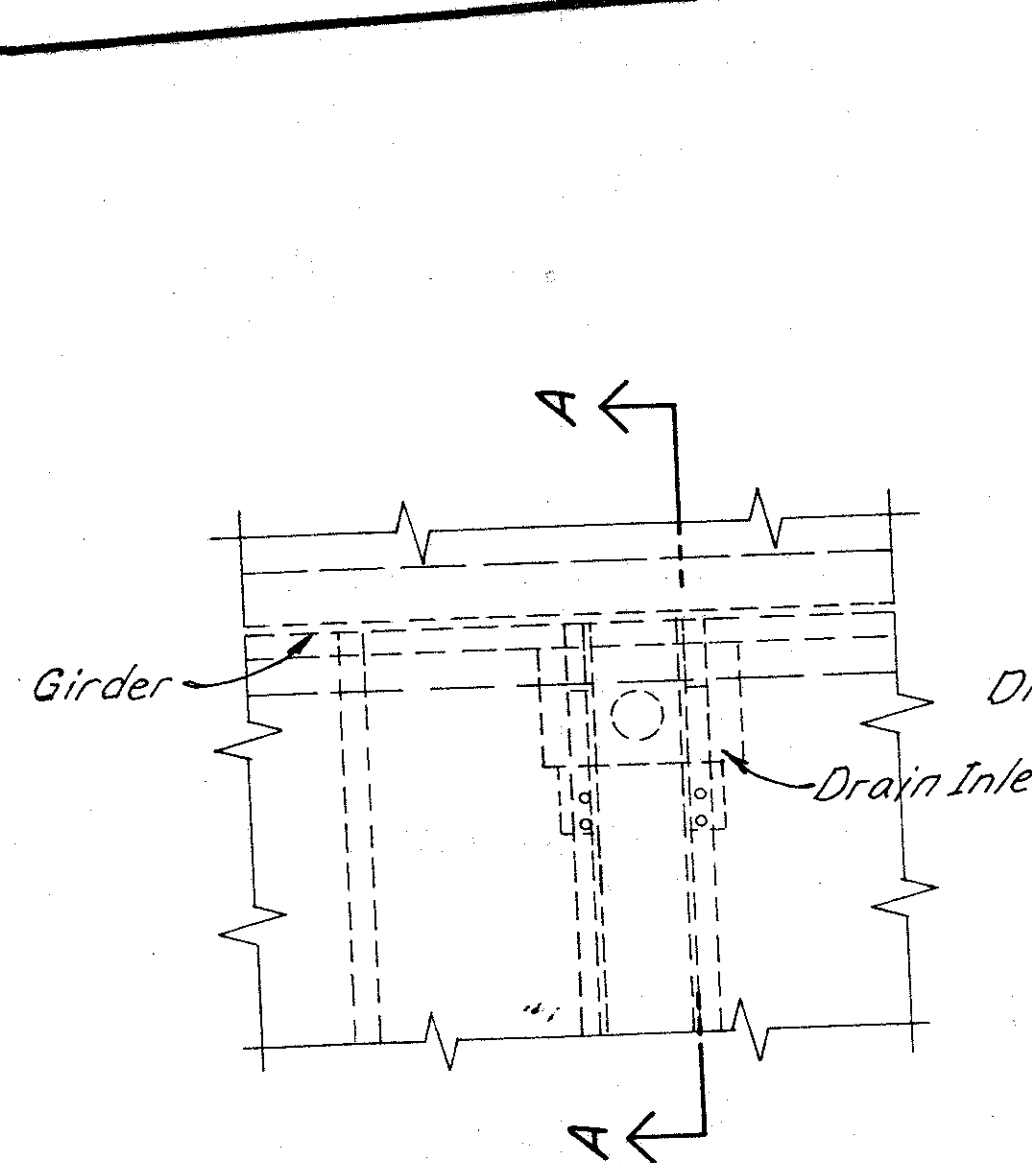
**EXPANSION JOINT PART PLANS**  
 BRIDGE NO. HAM-42-0235 R (HAM-71-0229 L)  
 NORTHBOUND READING ROAD OVER SOUTHBOUND (I-71)  
 HAMILTON COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
L.A.T.M.	D.E.E.		M.A.A.	D.E.M11/11/94		

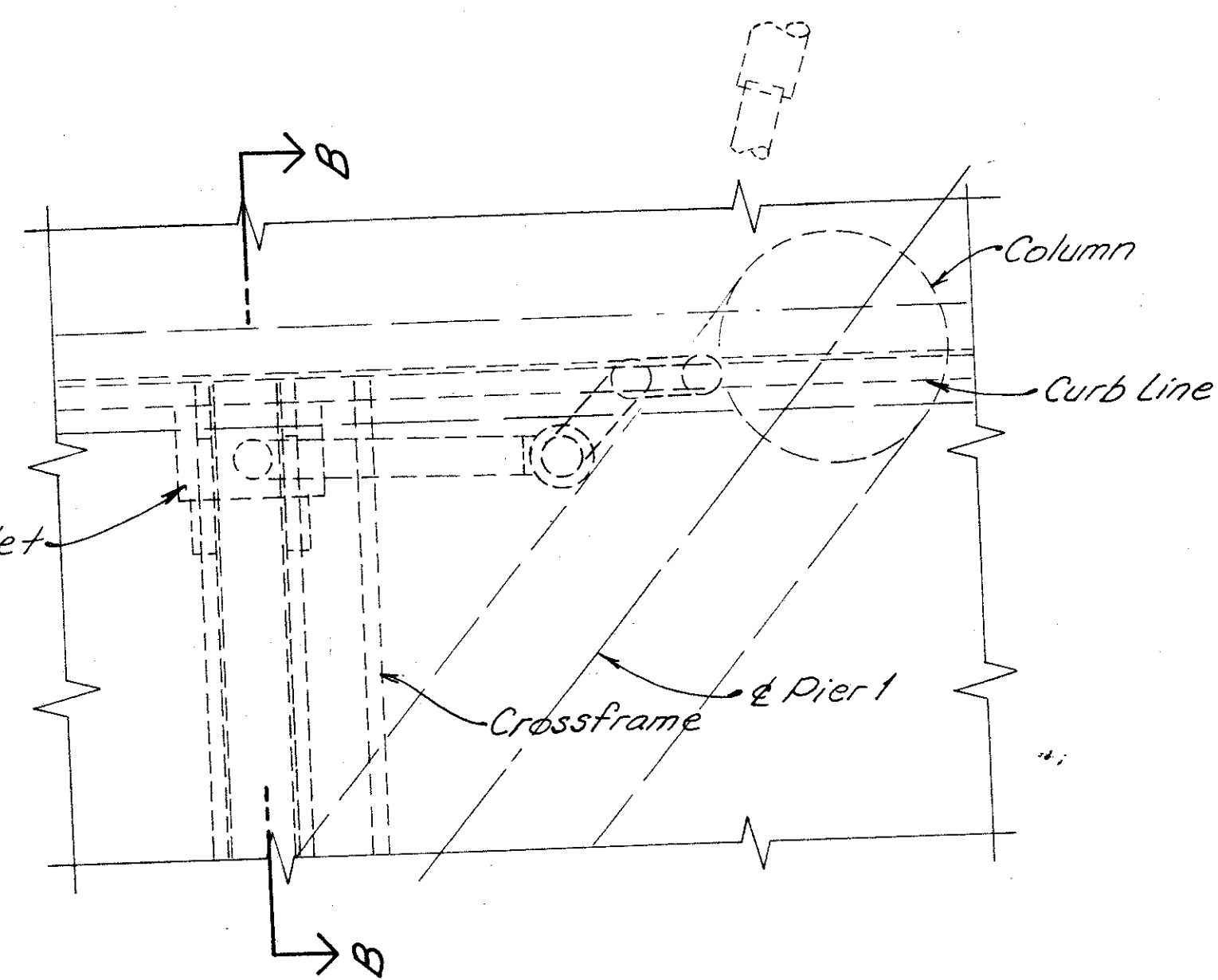
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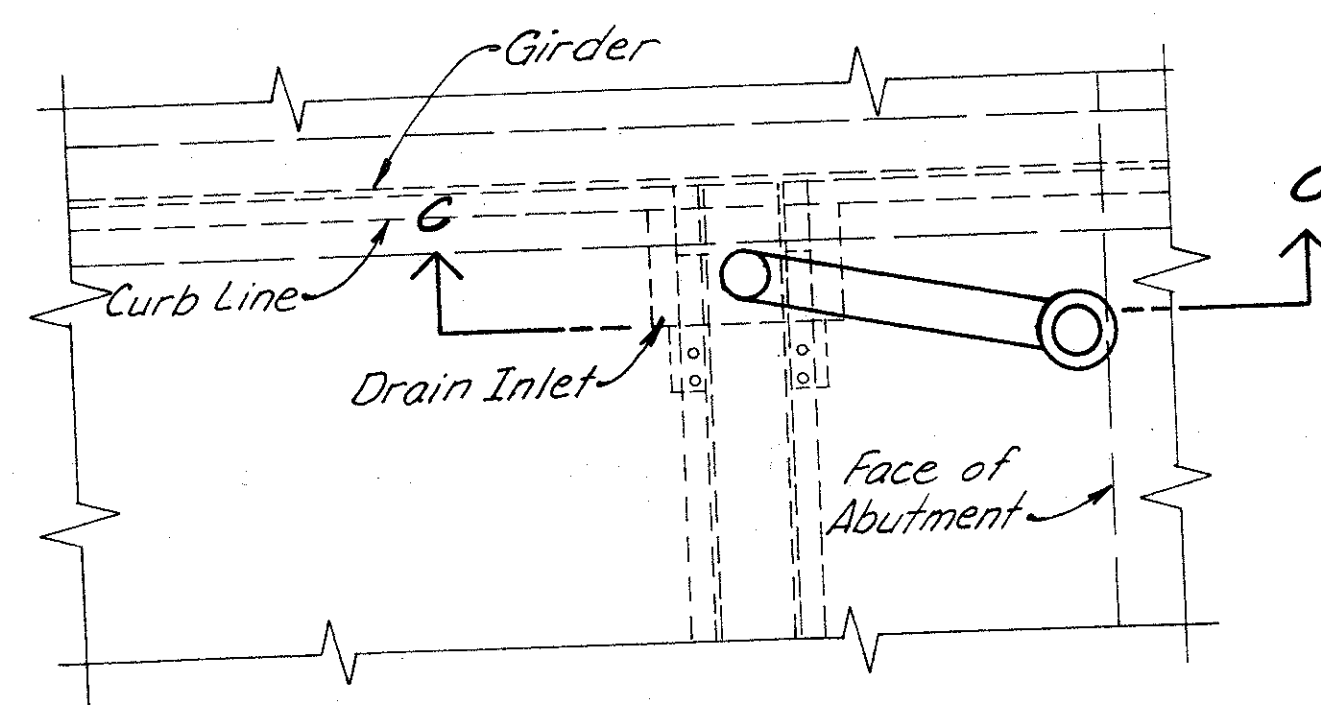




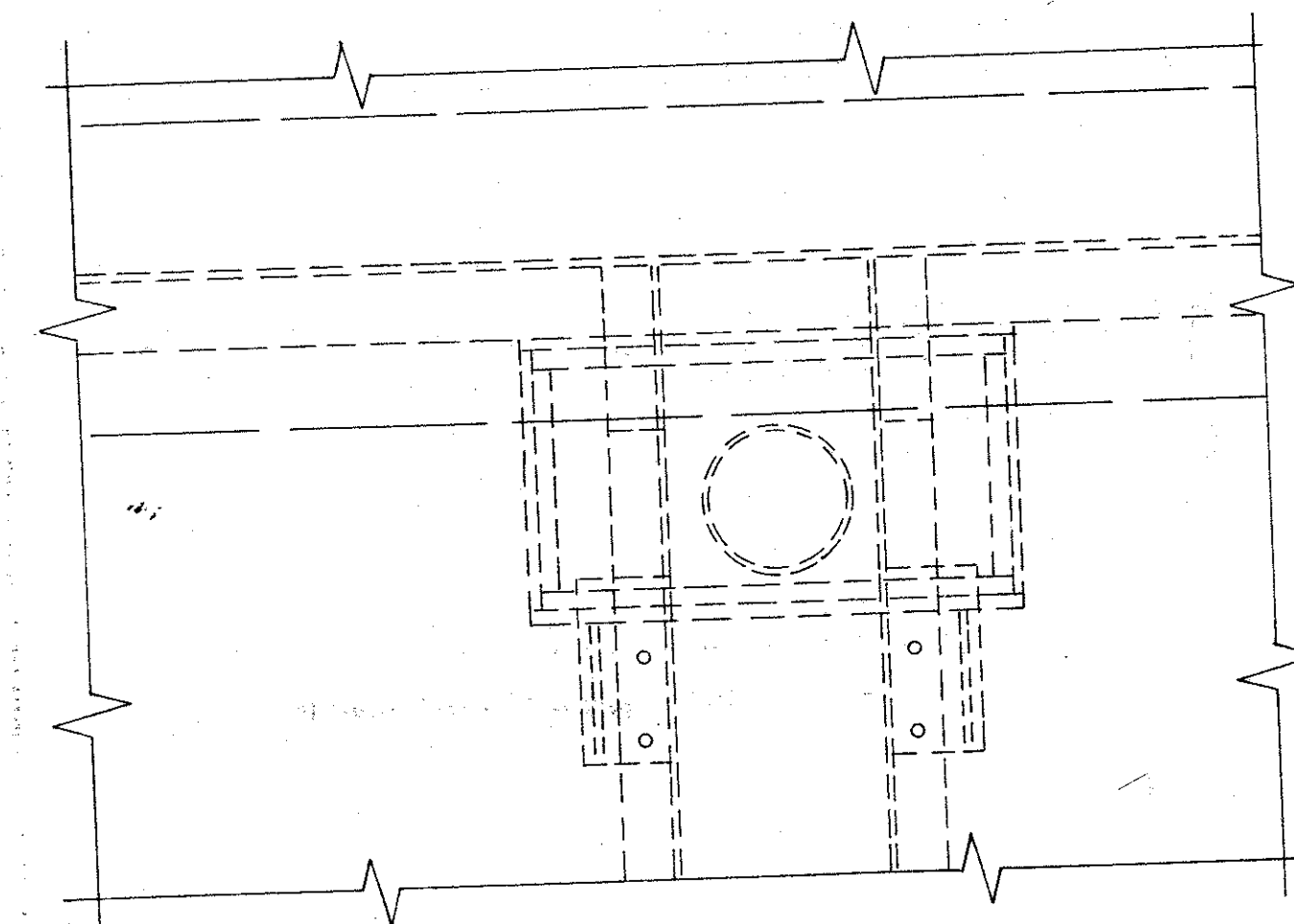
PLAN WEST ABUTMENT



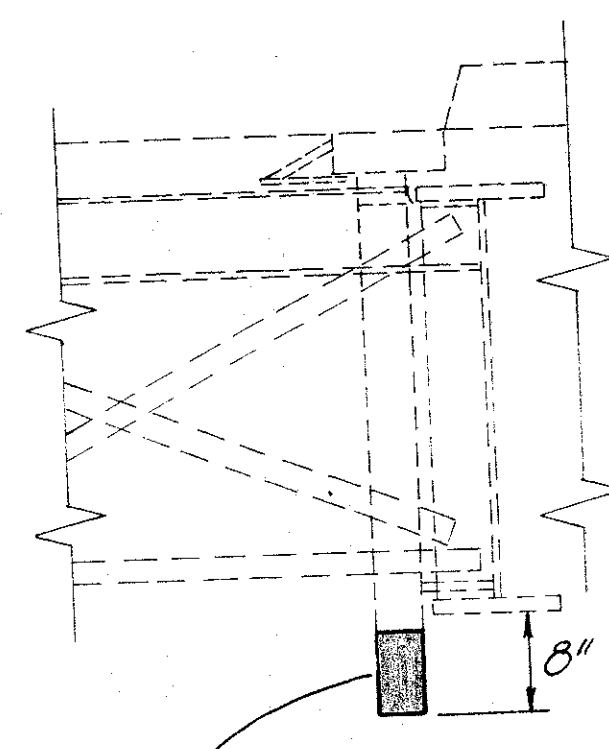
PLAN PIER 1  
-NO WORK REQUIRED-



PLAN NORTH ABUTMENT

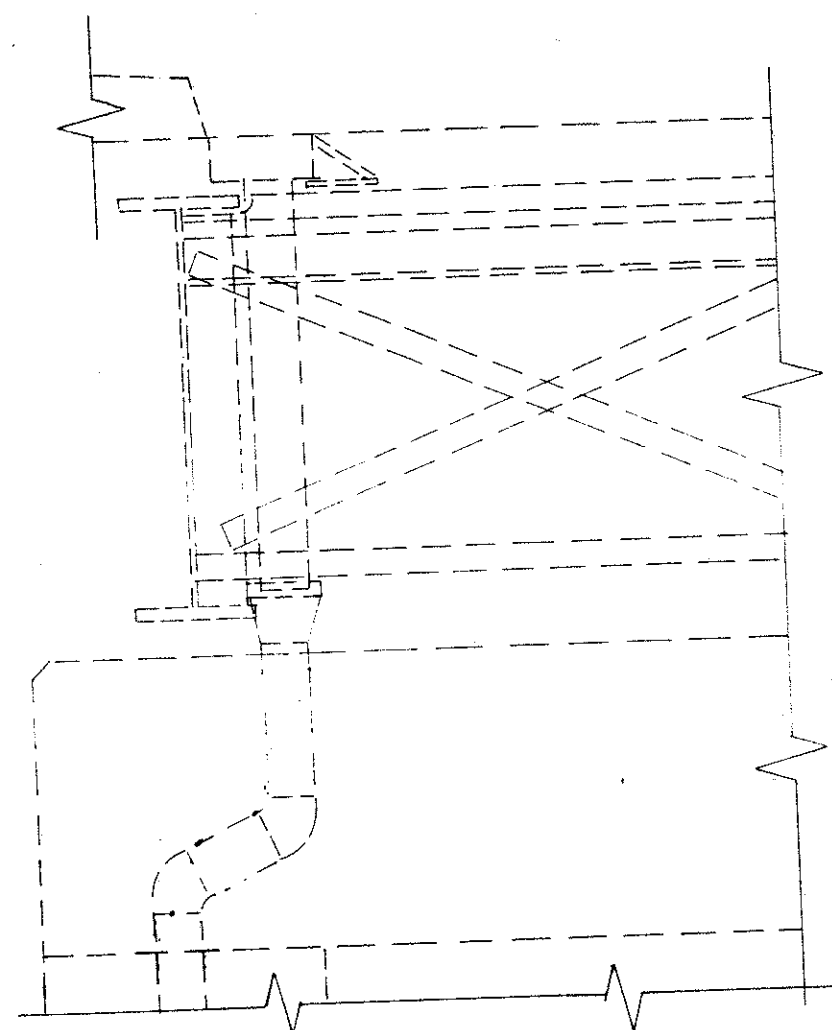


TYPICAL DRAIN INLET SUPPORT DETAIL

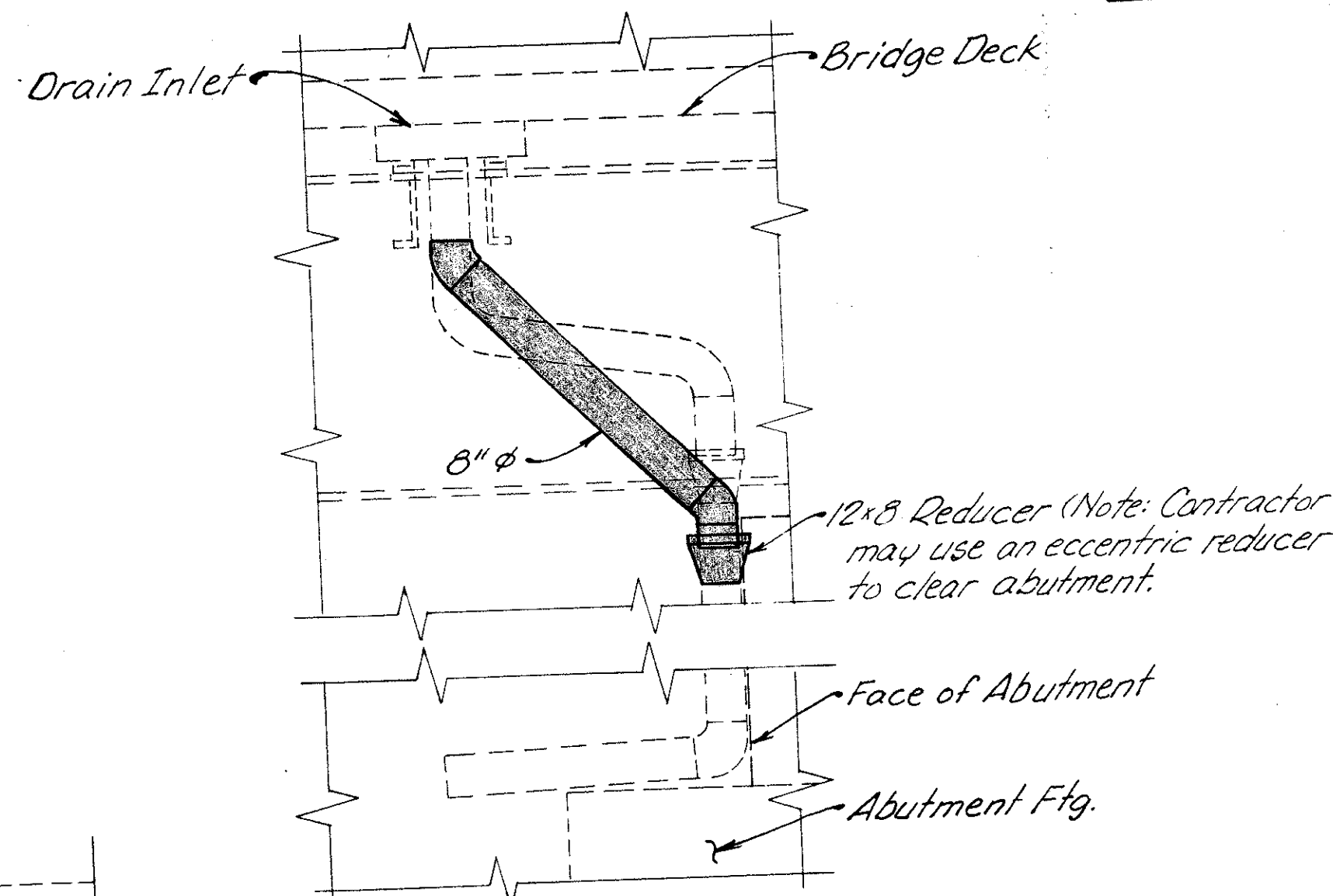


Extend Scupper, paid for as Item 510, for details see Sht. (273/401)

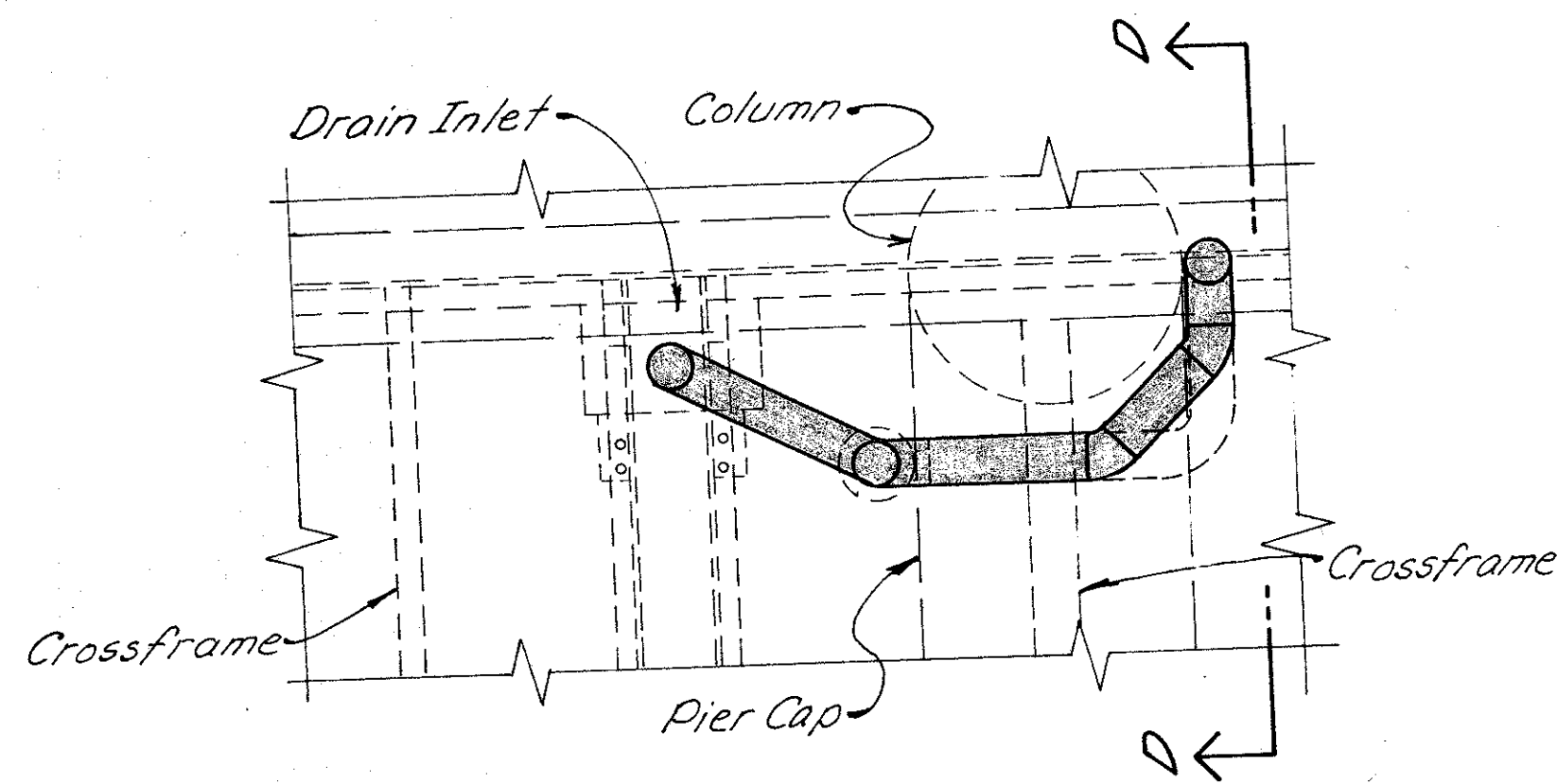
SECTION A-A



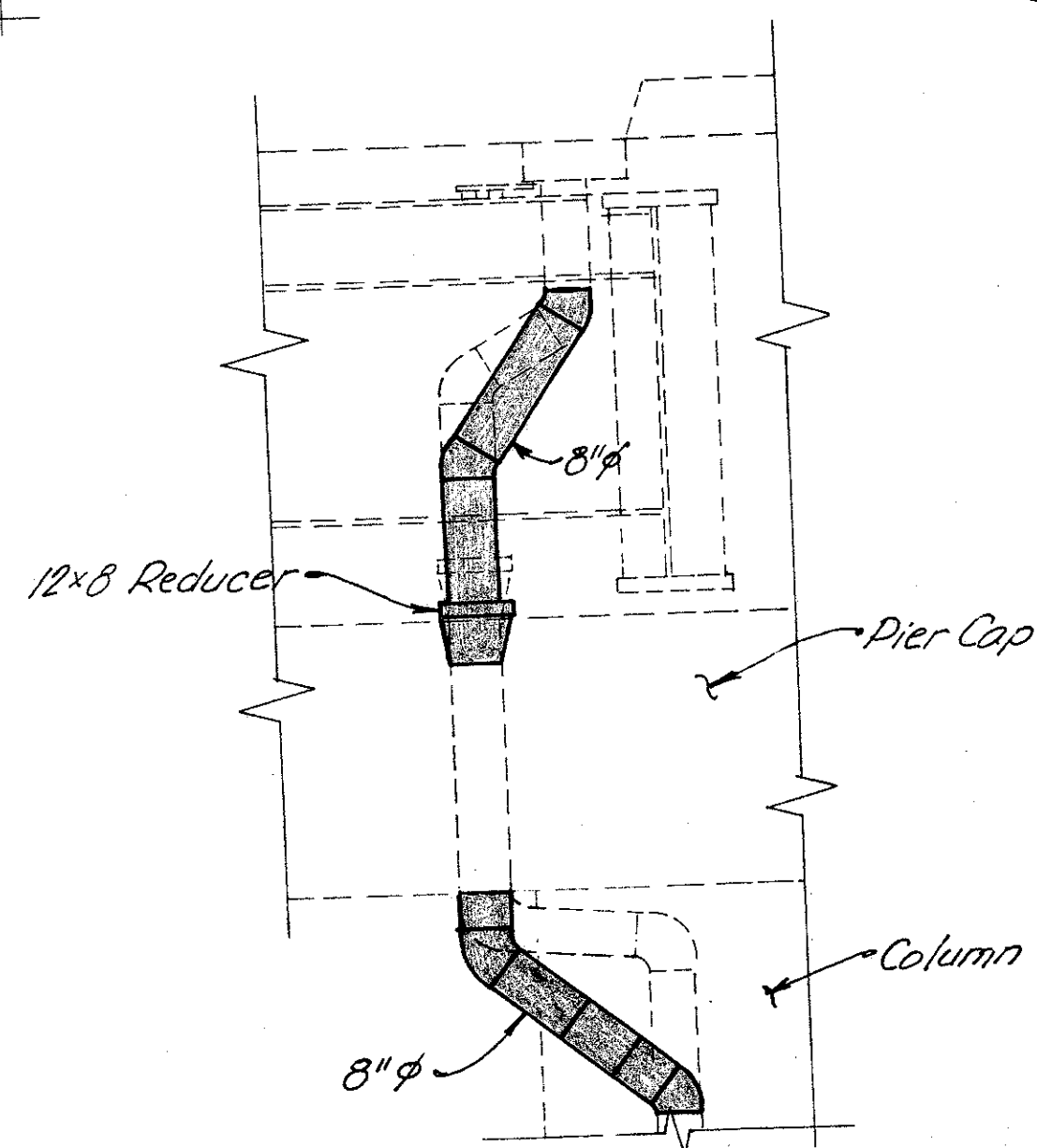
SECTION B-B



SECTION C-C



PLAN PIER 3

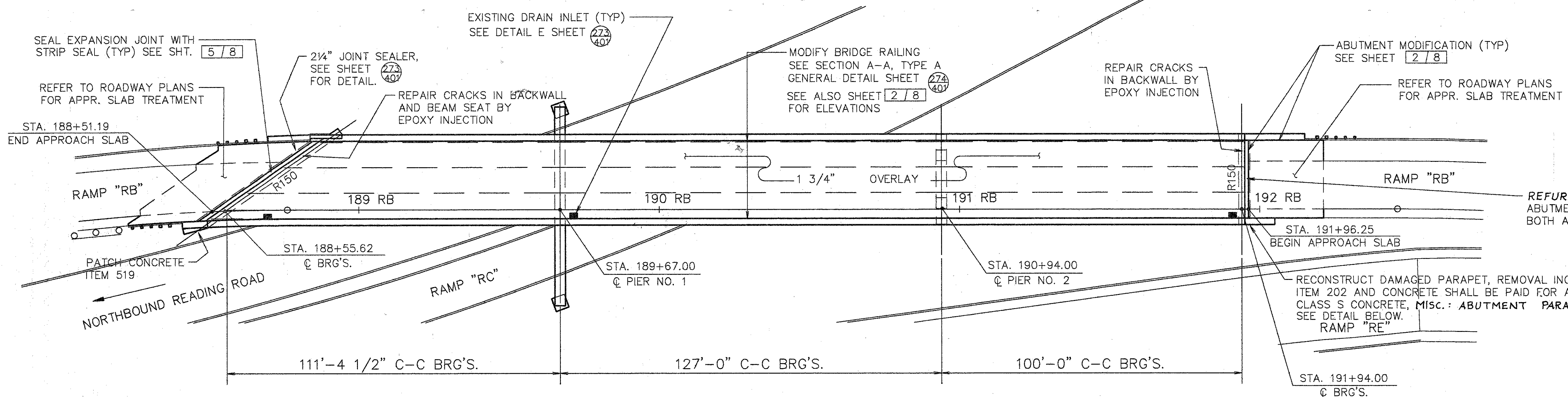


SECTION D-D

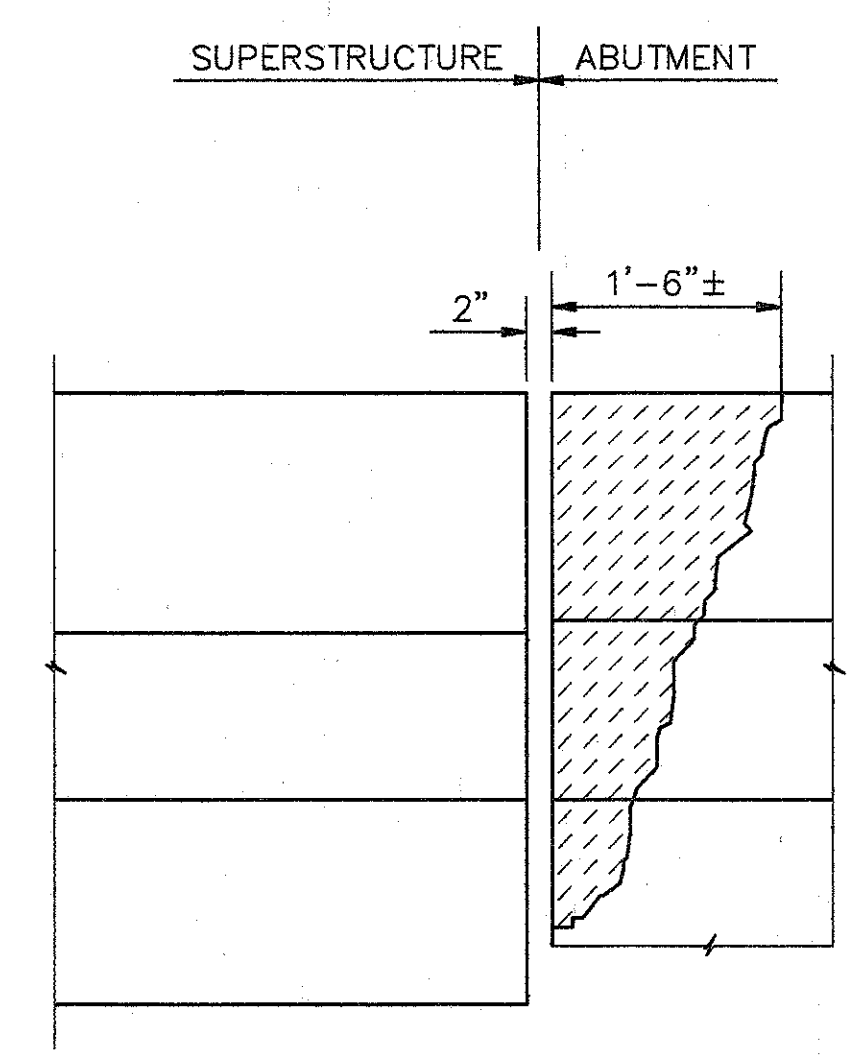
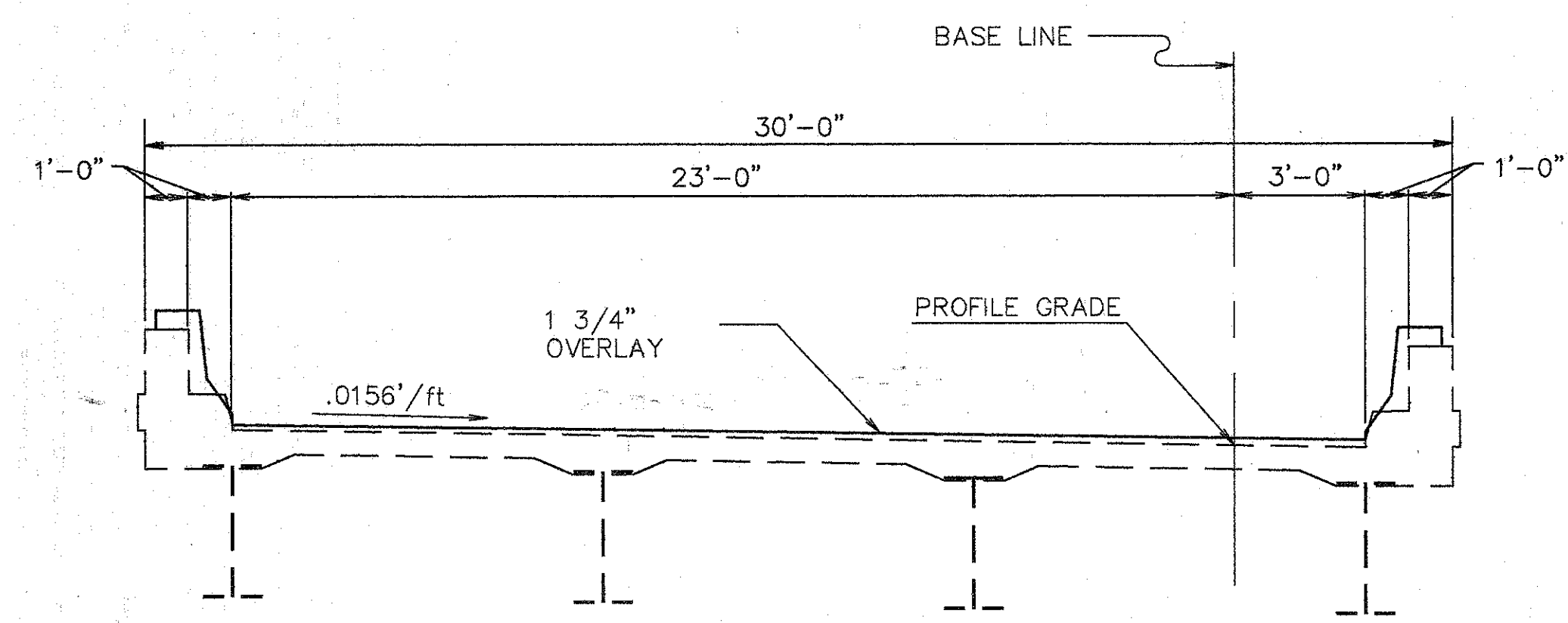
1. For drainage piping requirements see General Notes on sht. (273/401)
2. Approximate No. of Linear Feet of proposed 8"  $\phi$  pipe (including specials) = 25'

<b>WOOLPERT CONSULTANTS</b> 409 East Monument Avenue Dayton, Ohio 45402-1226		7/7
<b>DRAINAGE DETAILS</b>		
BRIDGE NO. HAM-42-0235 R OVER I-71		
HAMILTON COUNTY		
DESIGNED L.A.T.M.	DRAWN L.A.P.	TRACED D.E.M.
CHECKED P.W.G.	REVIEWED 11/11/94	DATE REVIS





- NOTE:**
1. SEAL PARAPETS, BACKWALLS, AND PIERS. SEAL PIERS COMPLETELY EXCEPT TOP OF COLUMNS & TOP OF PIER CAP.
  2. SEE JUNCTION BOX EXTENSION DETAIL SHT. 273/407 FOR BARRIER RETROFIT AT JUNCTION BOXES. REFER TO LIGHTING DETAILS FOR TYPE & LOCATION.



ROCKER OR BOLSTER SIZE	JACK CAPACITY REQ'D. (MIN)
R150	125 TON

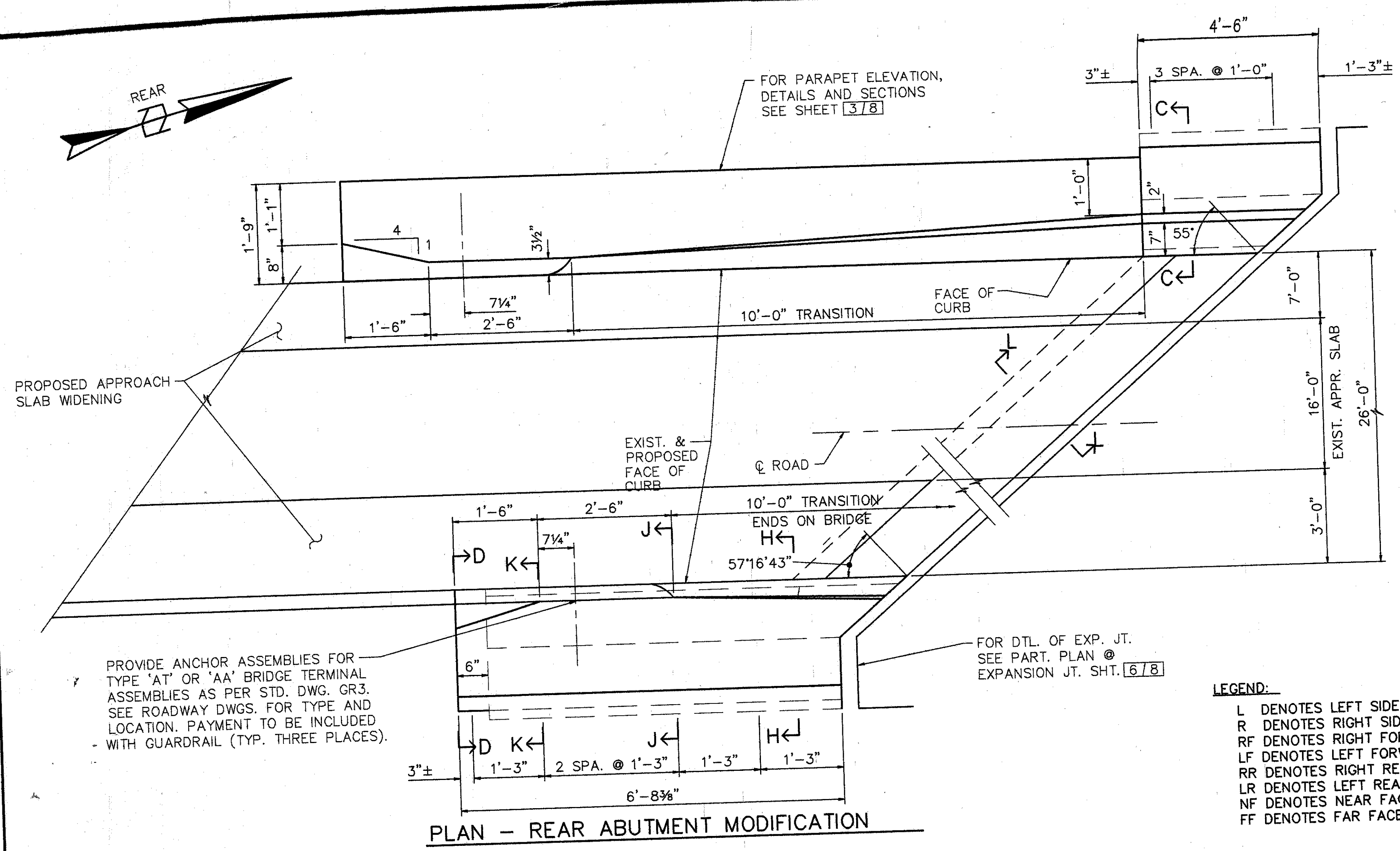
**EXISTING STRUCTURE**

TYPE: CONTINUOUS STEEL PLATE GIRDER WITH REINFORCED CONCRETE DECK & SUBSTRUCTURE  
 SPANS: 111'-4 1/2", 127'-0", 100'-0" C/C BRG'S  
 ROADWAY: 26'-0" F/F CURBS W/1'-0" CURBS (28'-0" F/F PARAPETS)  
 SKEW: 0° (PIERS 1 & 2 & N. ABUT.) 55° S. ABUT. (MEASURED FROM FORWARD TANGENT)  
 LOAD FREQUENCY: CF=2000 (57) ADEQUATE FOR AASHO ALTERNATE LOADING  
 WEARING SURFACE: 1" MONOLITHIC CONCRETE  
 APPROACH SLABS: AS-1-54 (25'-0" LONG)  
 ALIGNMENT: VARIES  
 SUPERELEVATION: VARIES

**WOOLPERT CONSULTANTS**  
 409 E. MONUMENT AVENUE  
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 (513) 481-5660

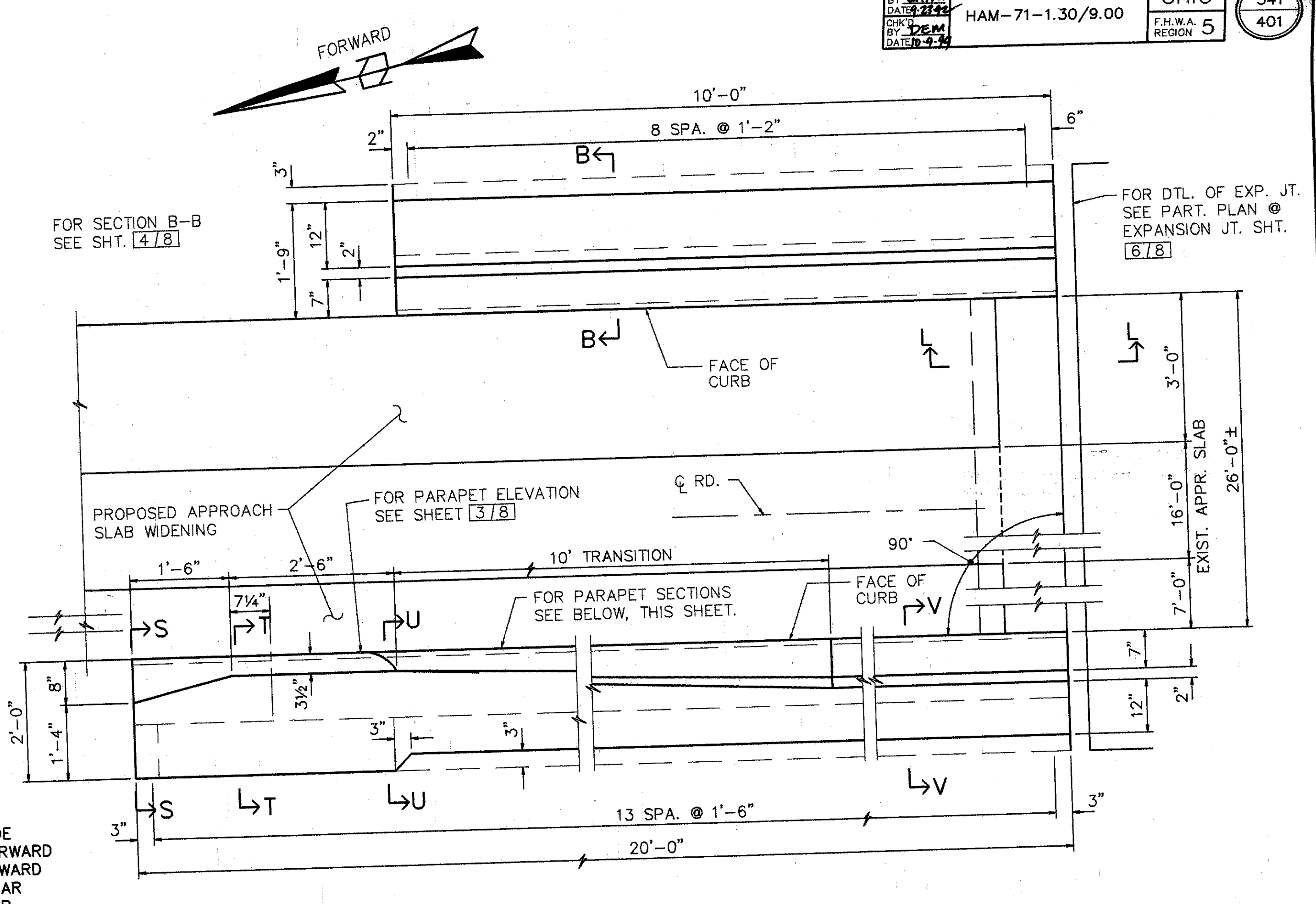
<b>GENERAL PLAN</b>					
BRIDGE NO. HAM-42-0257R OVER N.B. READING ROAD					
HAMILTON COUNTY					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
L.A.T.M.	D.E.E.		M.A.A.	D.E.M11/11/94	

Lett Plot: MAY 05, 1991 @ 4:23 PM  
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PLAN - REAR ABUTMENT MODIFICATION

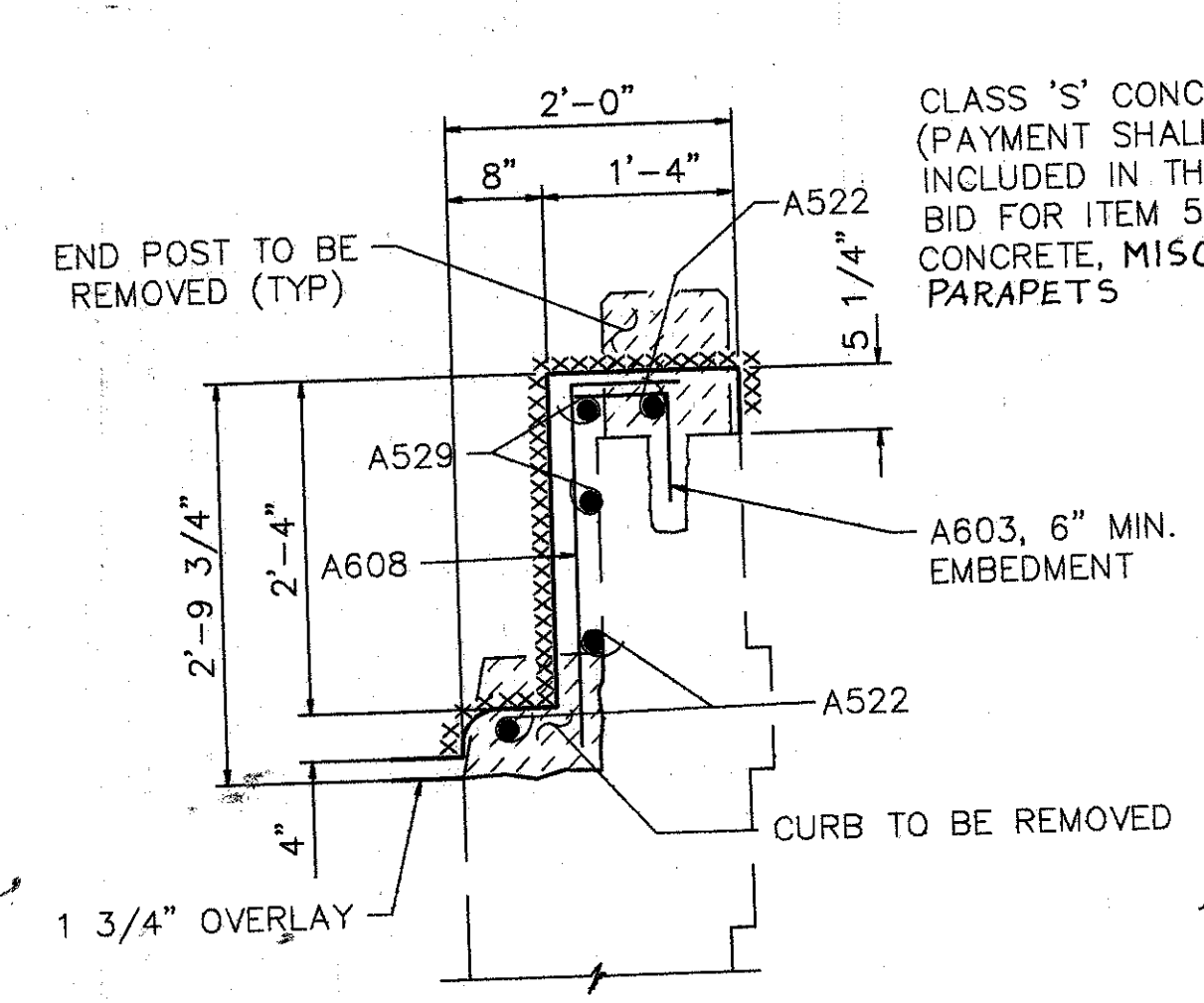
FOR SECTION D-D SEE SHT. [4/8]  
 FOR SECTIONS H-H, J-J, & K-K SEE SHT. [5/8]



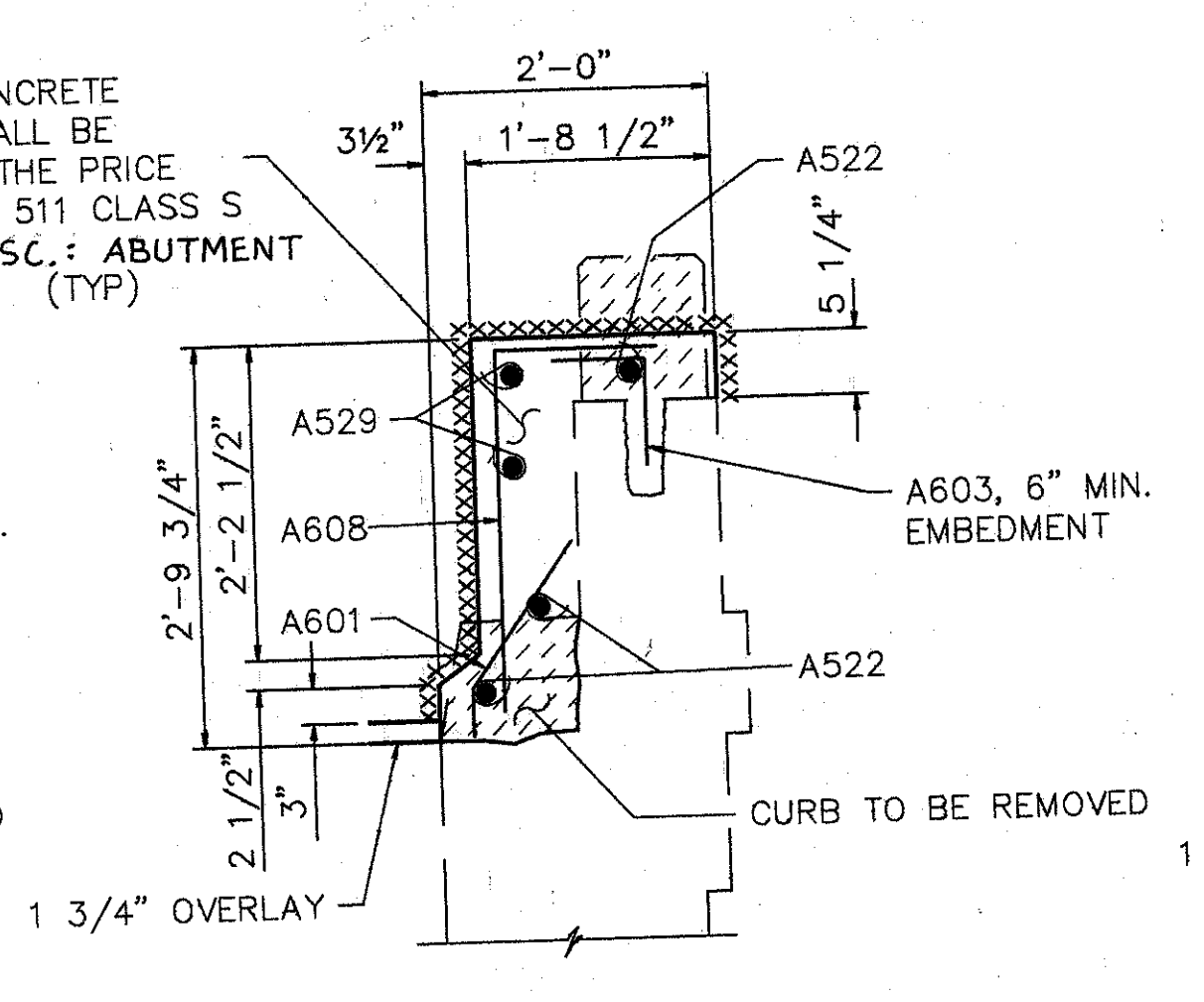
PLAN - FORWARD ABUTMENT MODIFICATION

LEGEND:  
 L DENOTES LEFT SIDE  
 R DENOTES RIGHT SIDE  
 RF DENOTES RIGHT FORWARD  
 LF DENOTES LEFT FORWARD  
 RR DENOTES RIGHT REAR  
 LR DENOTES LEFT REAR  
 NF DENOTES NEAR FACE  
 FF DENOTES FAR FACE

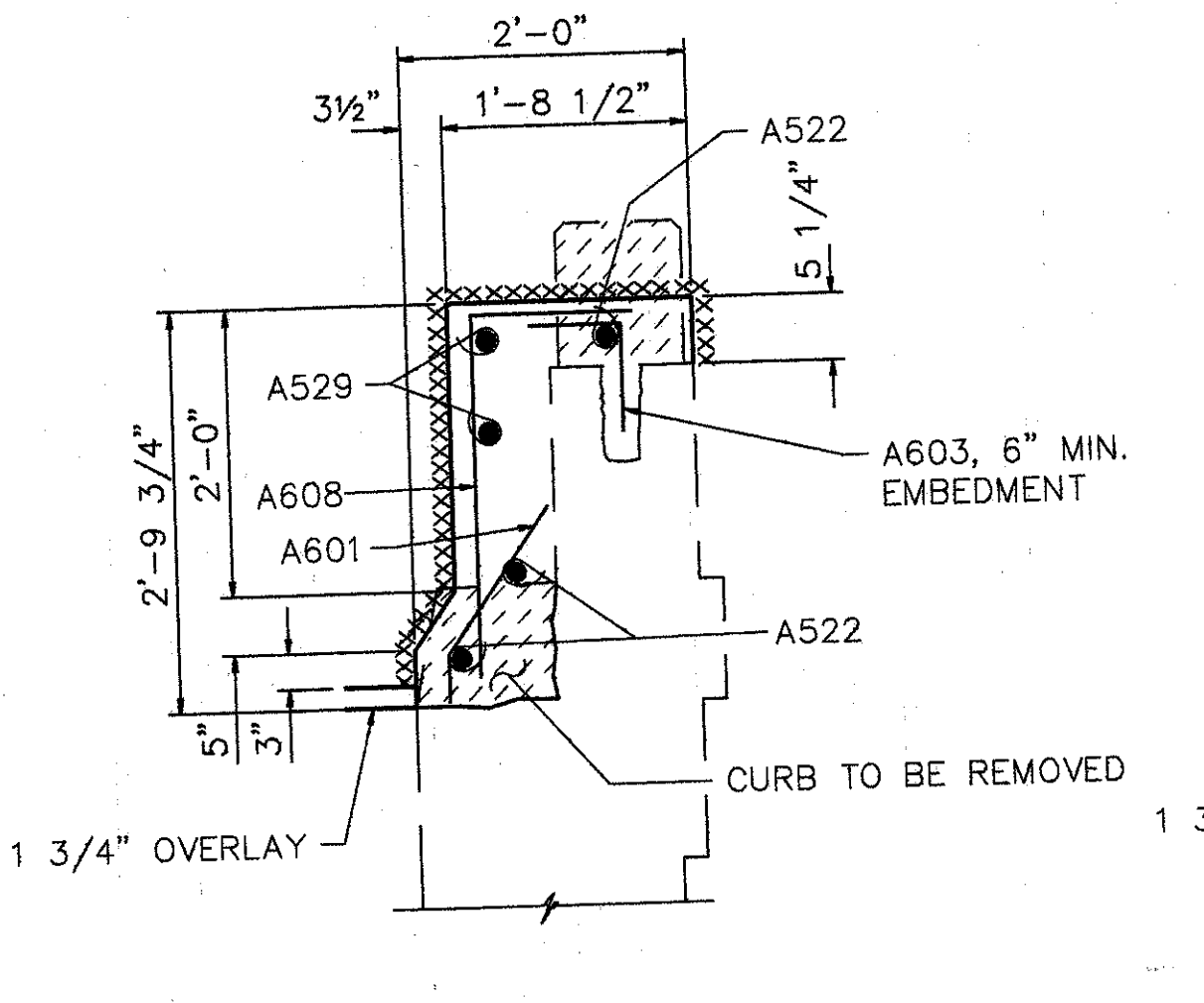
- NOTES:
1. PREFORMED EXPANSION JOINT FILLER AND SEALER AT CORNERS AND SIDES OF THE APPR. SLAB SHALL BE INCLUDED IN THE PRICE BID PER SQ. YD. FOR THE APPROACH SLAB.
  2. TYPE A WATERPROOFING AT THE BRIDGE LIMIT END OF THE WIDENED APPROACH SLAB (AS PER STD. DWG. AS-1-81) SHALL BE INCLUDED IN THE PRICE BID FOR ITEM 611 APPROACH SLAB.
  3. LAP ALL #5 BARS IN PARAPET 2'-0".
- \*\*\*\*\* SURFACES TO BE SEALED UNDER ITEM SPECIAL- SEALING OF CONCRETE SURFACES.



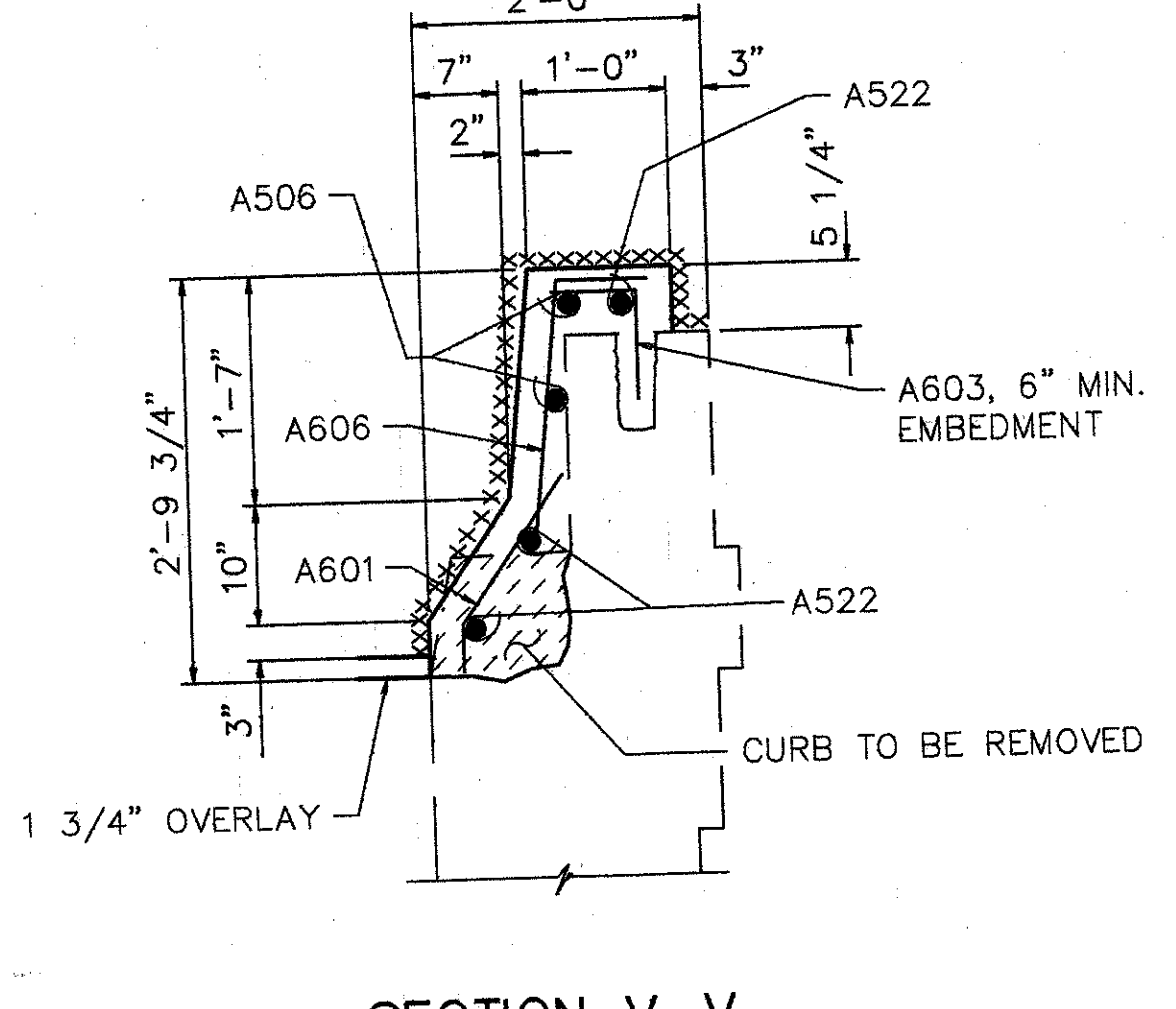
SECTION S-S



SECTION T-T



SECTION U-U



SECTION V-V

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 409 E. MONUMENT AVENUE  
 DAYTON, OHIO 45402-1226  
 (513) 461-5660

**ABUTMENT PLAN & PARAPET ELEVATIONS**

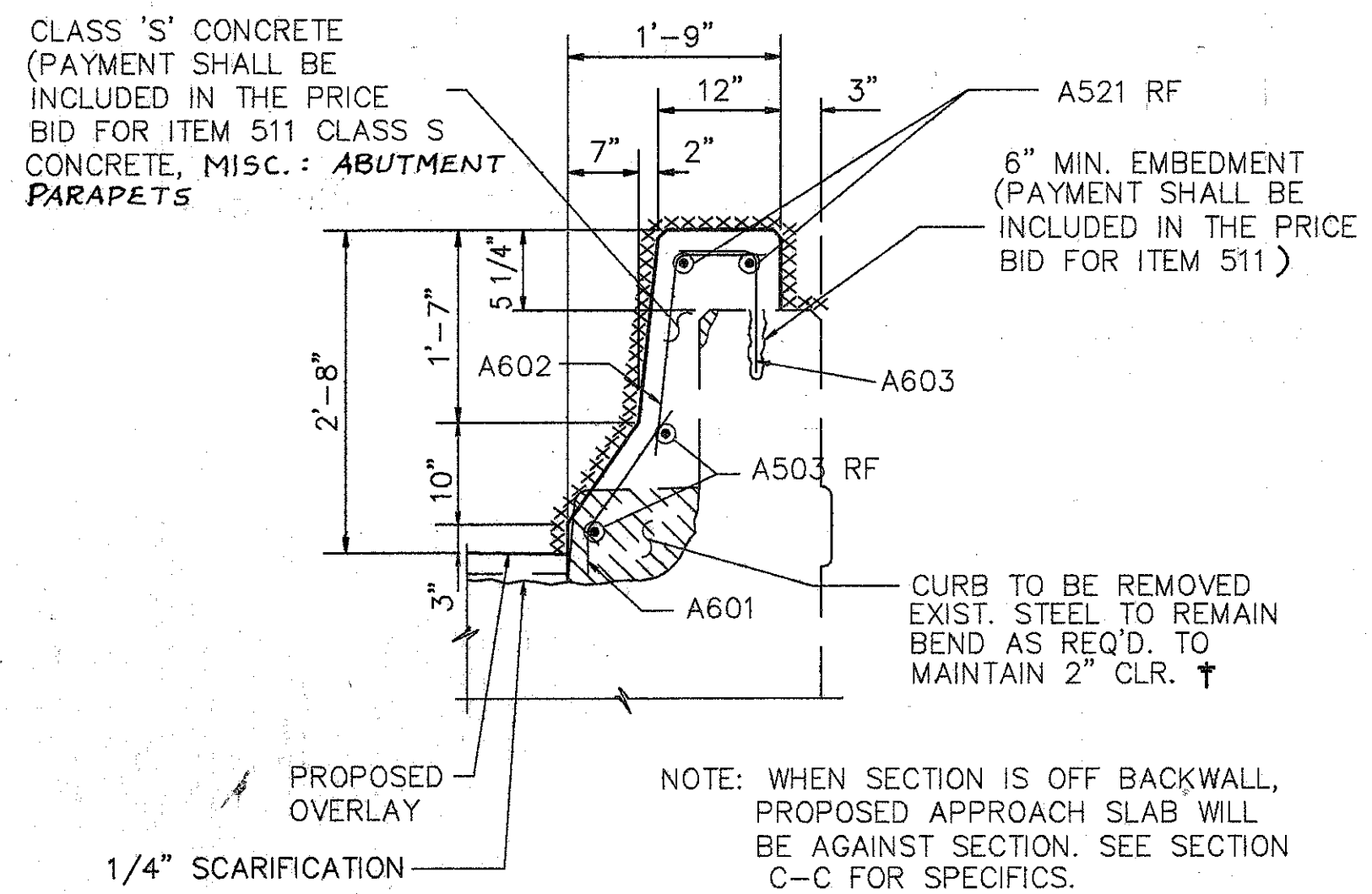
BRIDGE NO. HAM-42-0257R  
 OVER N.B. READING ROAD

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
L.A.T.M.	D.E.E.		M.A.A.	D.E.M11/11/94		

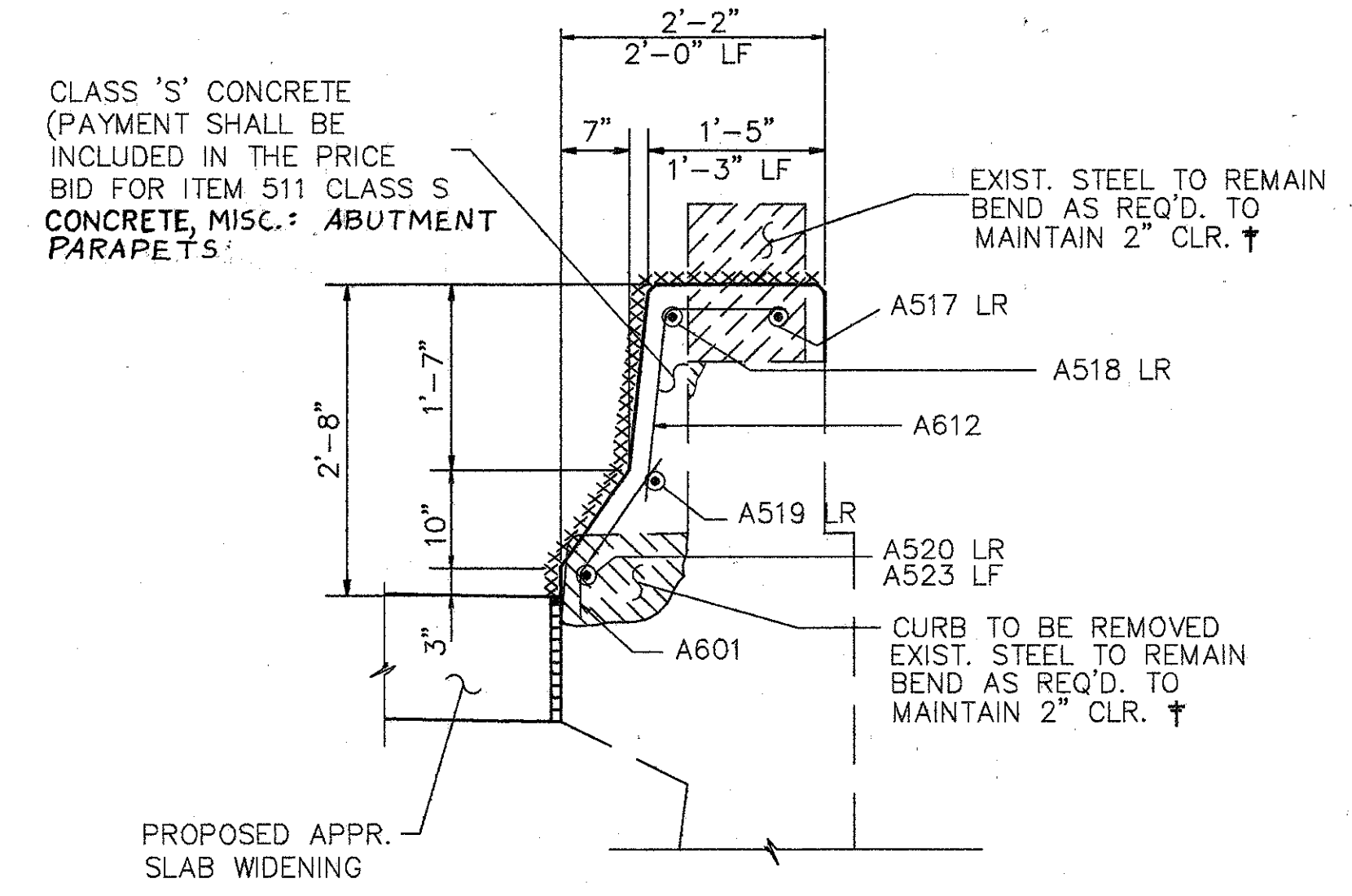
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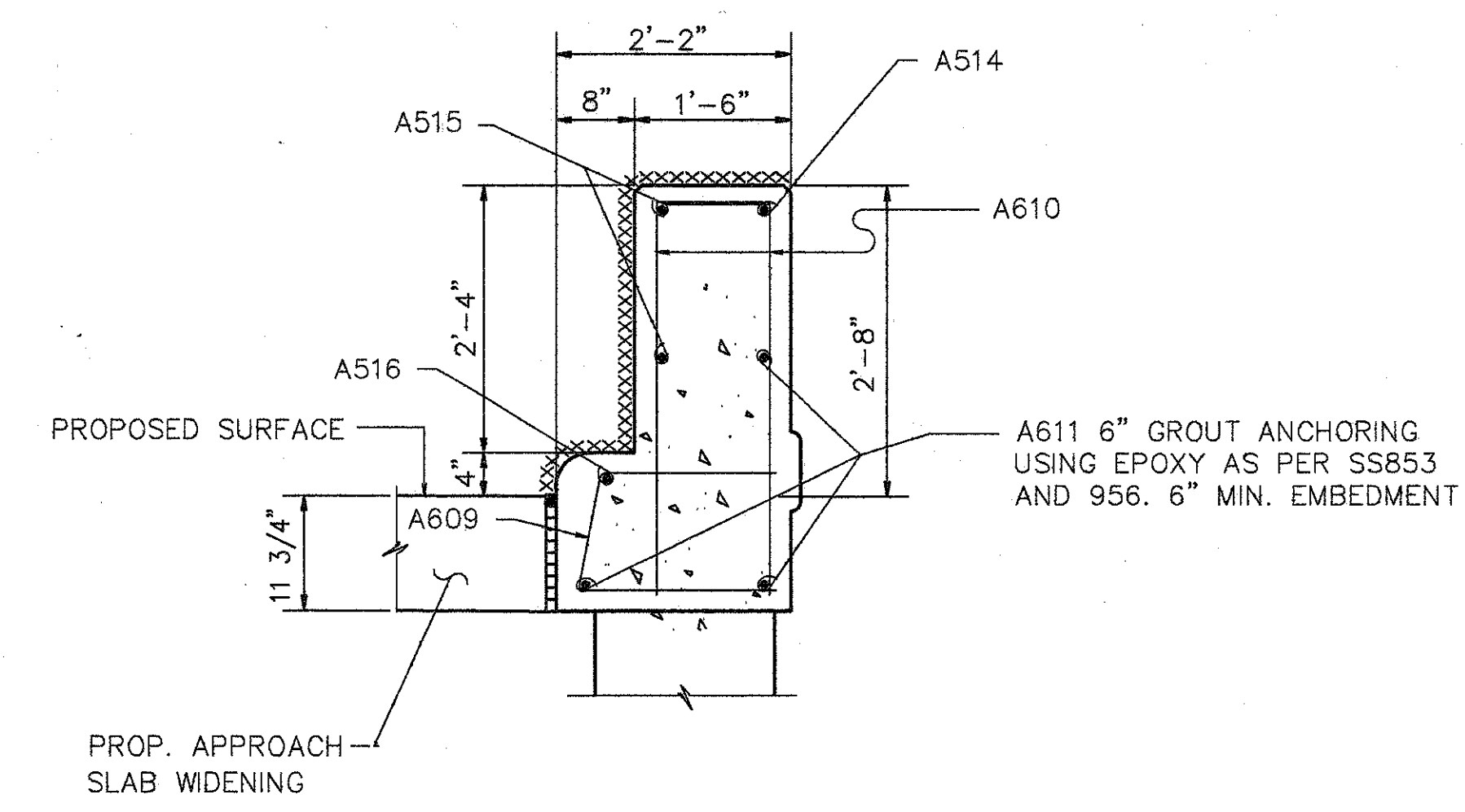




SECTION B-B



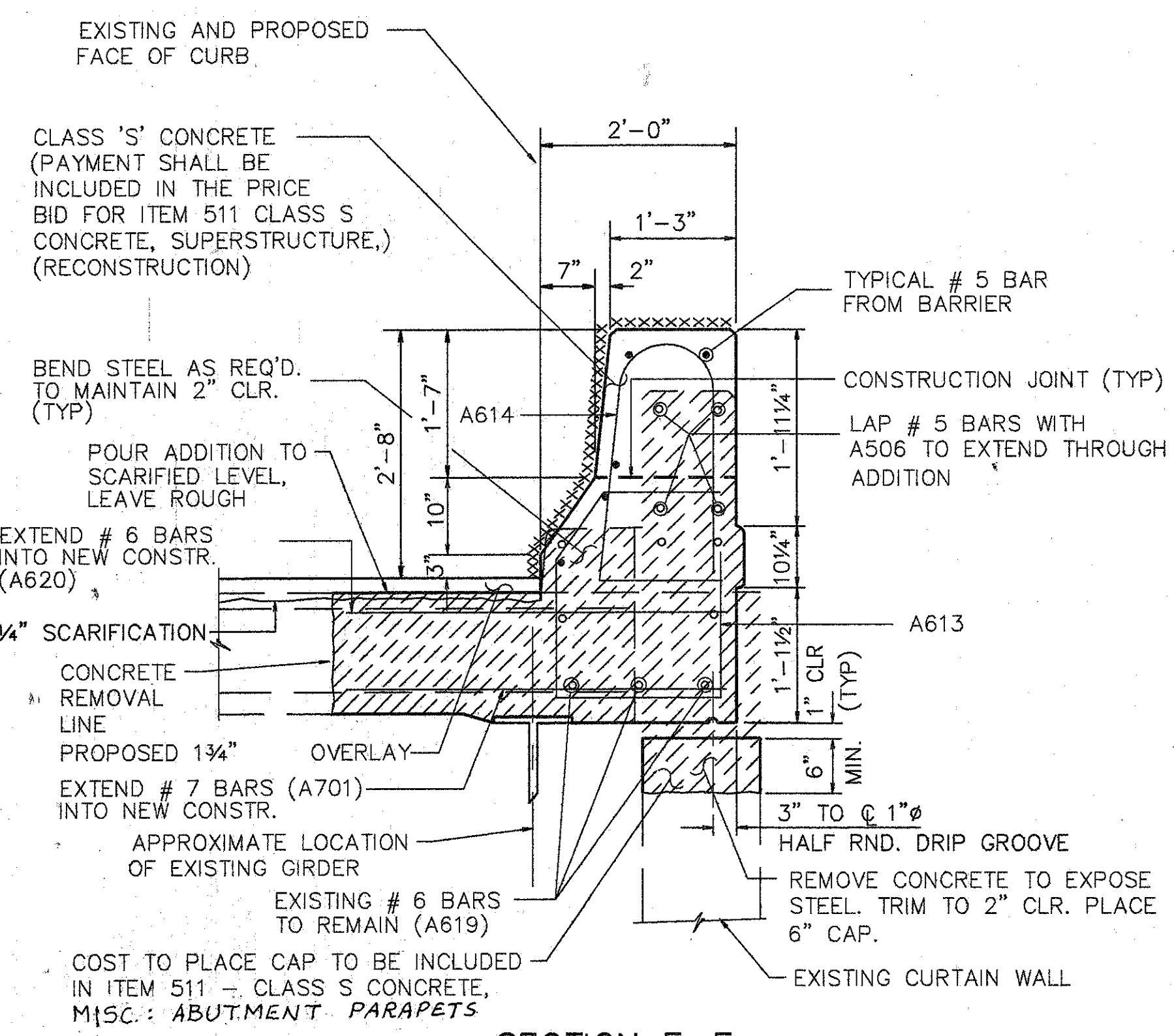
SECTION C-C



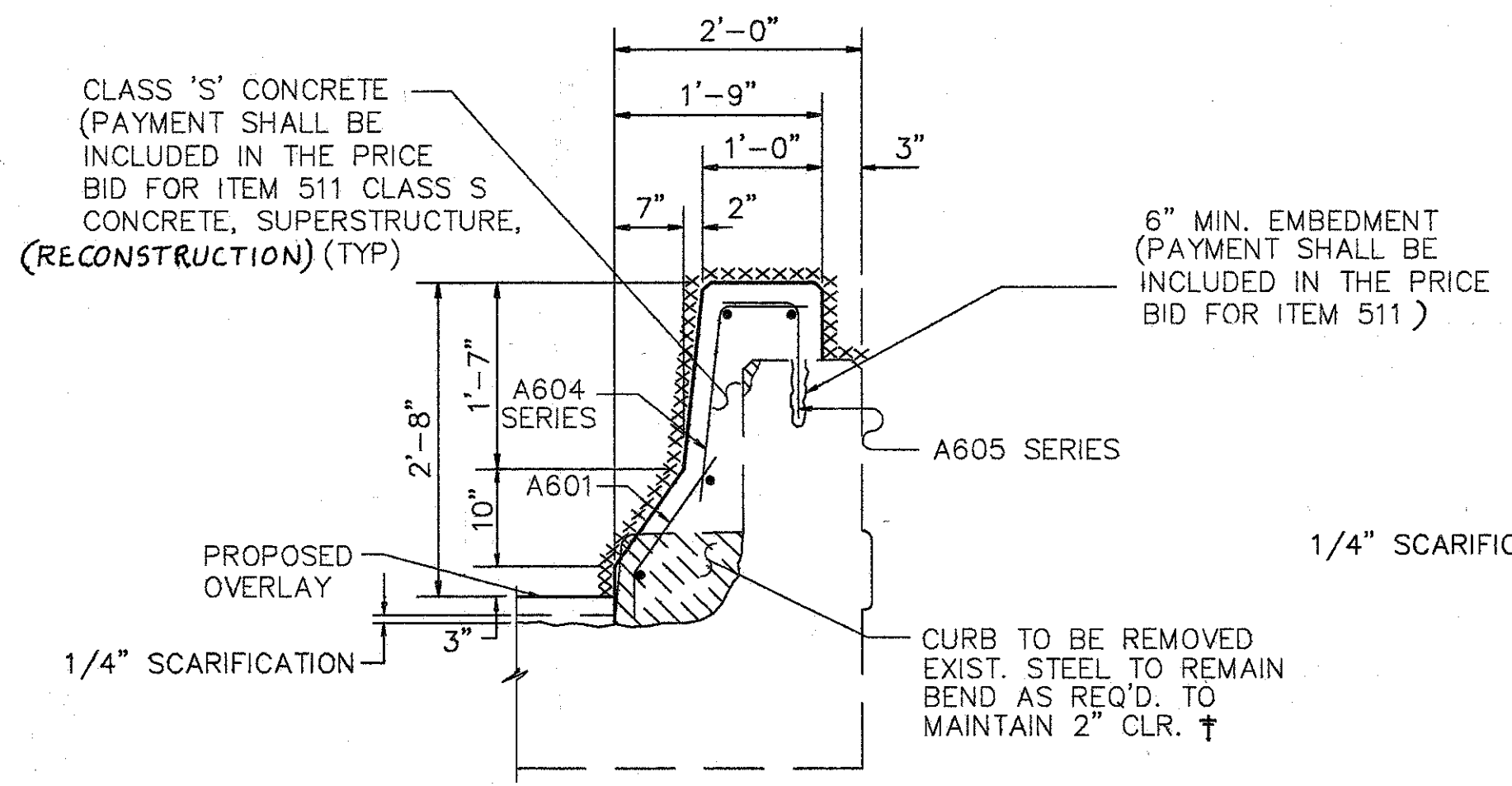
SECTION D-D

NOTE:  
 WHEN SECTION IS ON BACKWALL, EXISTING BACKWALL WILL BE AGAINST SECTION. SEE SECTION B-B FOR SPECIFICS.

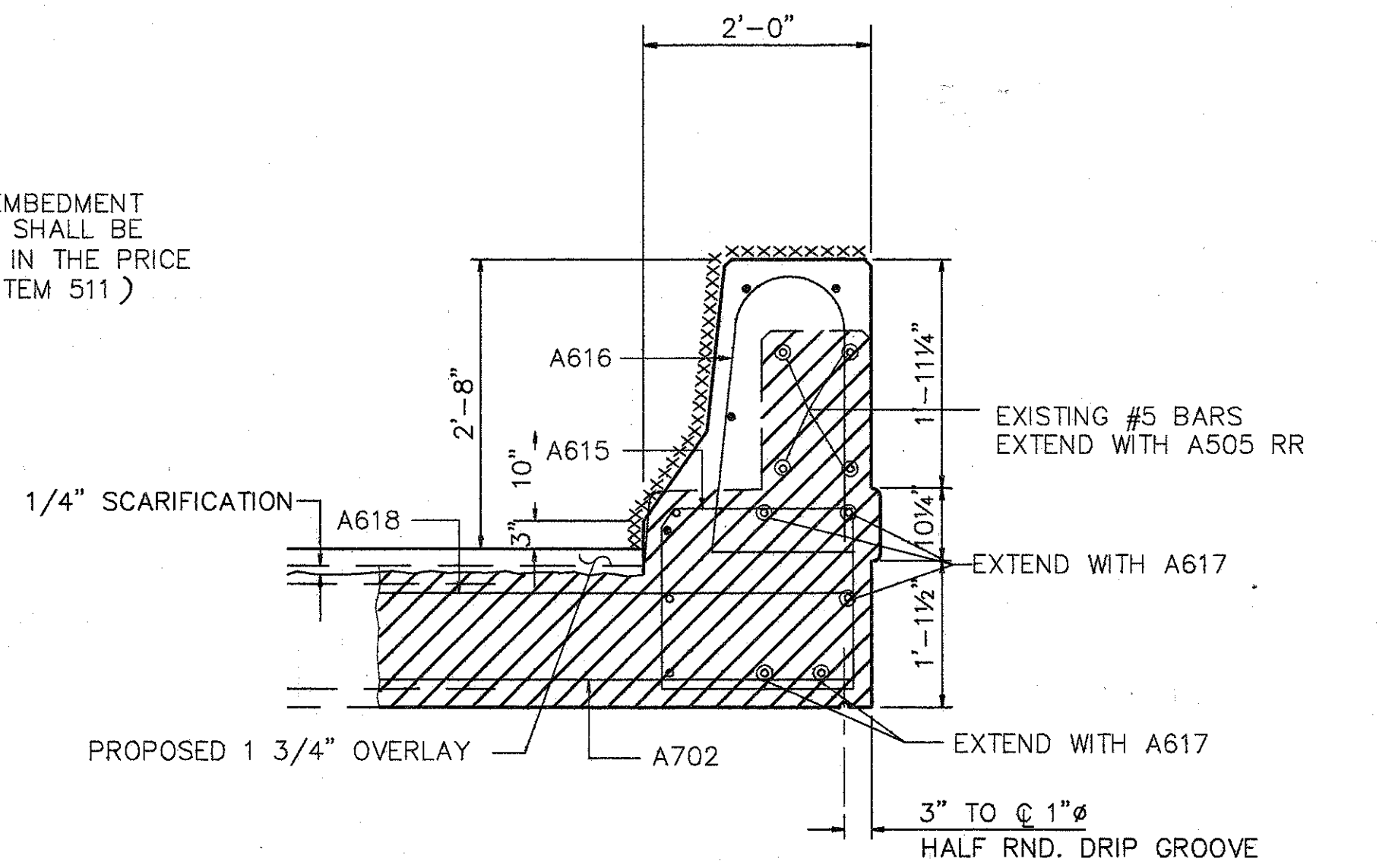
† BARS SHALL REMAIN. CONTRACTOR SHALL EXERCISE CAUTION TO ENSURE THAT THESE BARS ARE NOT DAMAGED DURING THE CONCRETE REMOVAL OPERATION. ANY BARS DAMAGED AS A RESULT OF THE CONTRACTOR'S OPERATION SHALL BE REPLACED OR REPAIRED BY THE CONTRACTOR AT HIS EXPENSE. METHOD OF REPAIR OR REPLACEMENT WILL BE AT THE DISCRETION OF THE DIRECTOR.



SECTION E-E



SECTION F-F



SECTION G-G

NOTE: SECTION G-G IS LOCATED WITHIN 10'-0" TAPER FOR GUARDRAIL TERMINAL ASSEMBLY. TAPER OCCURS BETWEEN SECTION F-F AND SECTION J-J.

- EXISTING CURB AND PARAPET TO BE REMOVED UNDER ITEM 202--PORTIONS OF STRUCTURES REMOVED.
- EXISTING RAILING & POSTS TO BE REMOVED & STACKED NEATLY ALONG THE RIGHT OF WAY FOR DISPOSAL BY THE CONTRACTOR. ALL WORK SHALL BE INCLUDED IN THE PRICE BID FOR ITEM 202--PORTIONS OF STRUCTURE REMOVED.

\*\*\*\*\* SURFACES TO BE SEALED UNDER ITEM SPECIAL-- SEALING OF CONCRETE SURFACES.

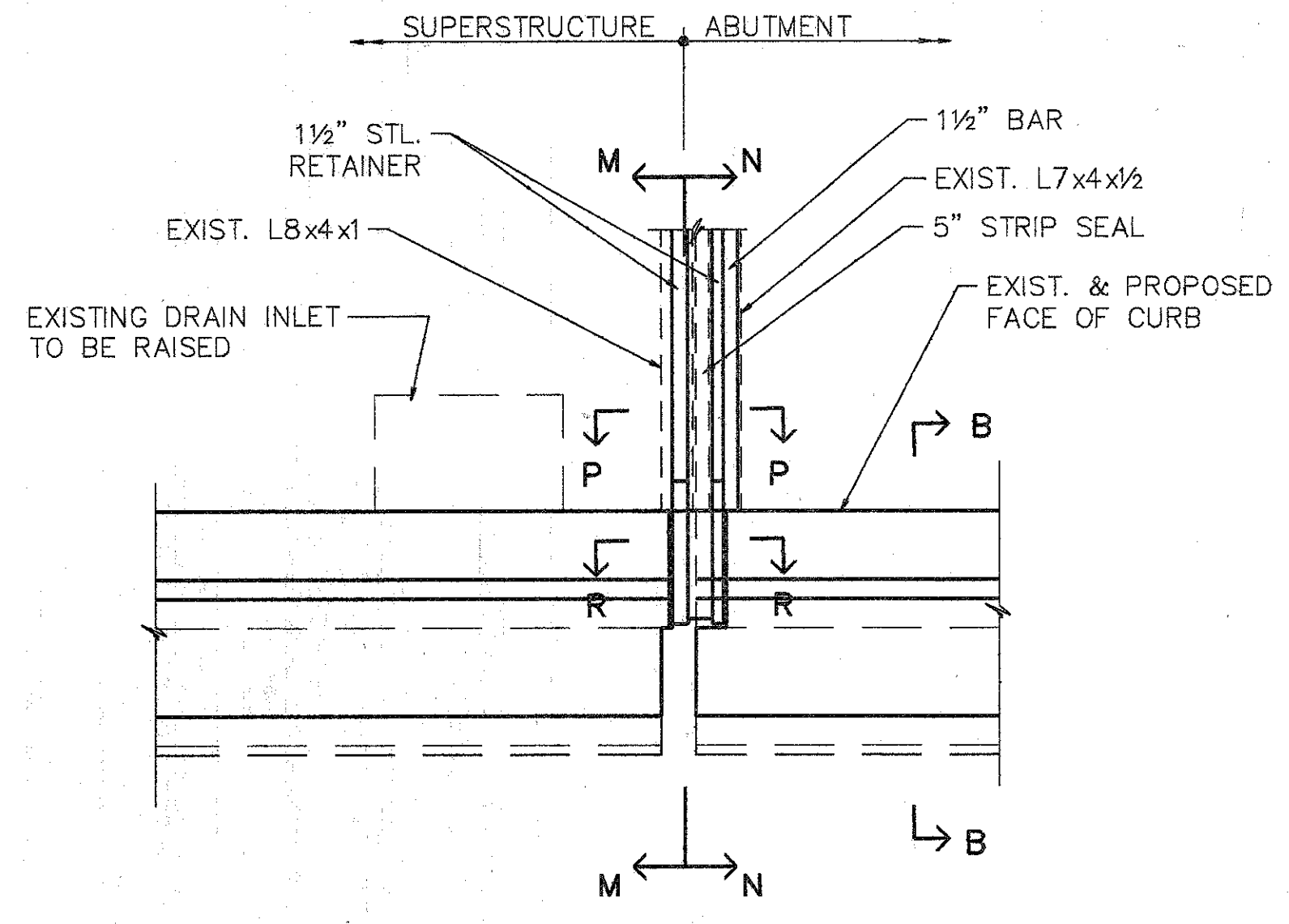
- NOTES:
1. PREFORMED EXPANSION JOINT FILLER AND SEALER AT CORNERS AND SIDES IF THE APPROACH SLAB SHALL BE INCLUDED IN THE PRICE BID PER SQ. YD. FOR THE APPROACH SLAB.
  2. TYPE A WATERPROOFING AT THE BRIDGE LIMIT END OF THE WIDENING APPROACH SLAB (AS PER STD. DWG. AS-1-81) SHALL BE INCLUDED IN THE PRICE BID FOR ITEM 611 APPROACH SLAB.

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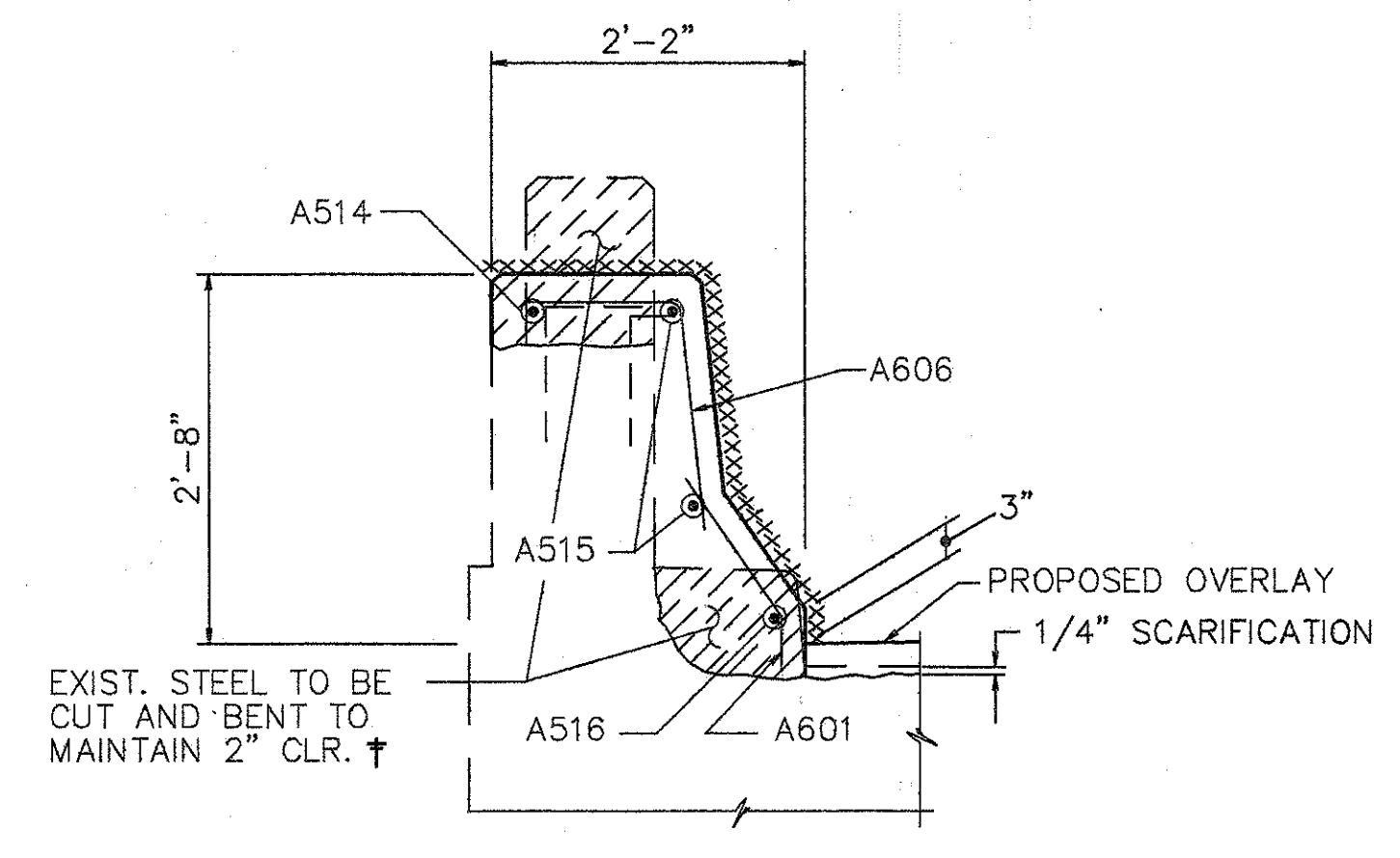
PARAPET SECTIONS AND DETAILS						
BRIDGE NO. HAM-42-0257 R OVER I-71						
HAMILTON						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
L.A.T.M.	D.E.E.		M.A.A.	D.E.M11/11/94		

LAST FILED MAY 15, 1991 @ 5:14 PM  
 COUNTY OF OHIO DEPARTMENT OF TRANSPORTATION



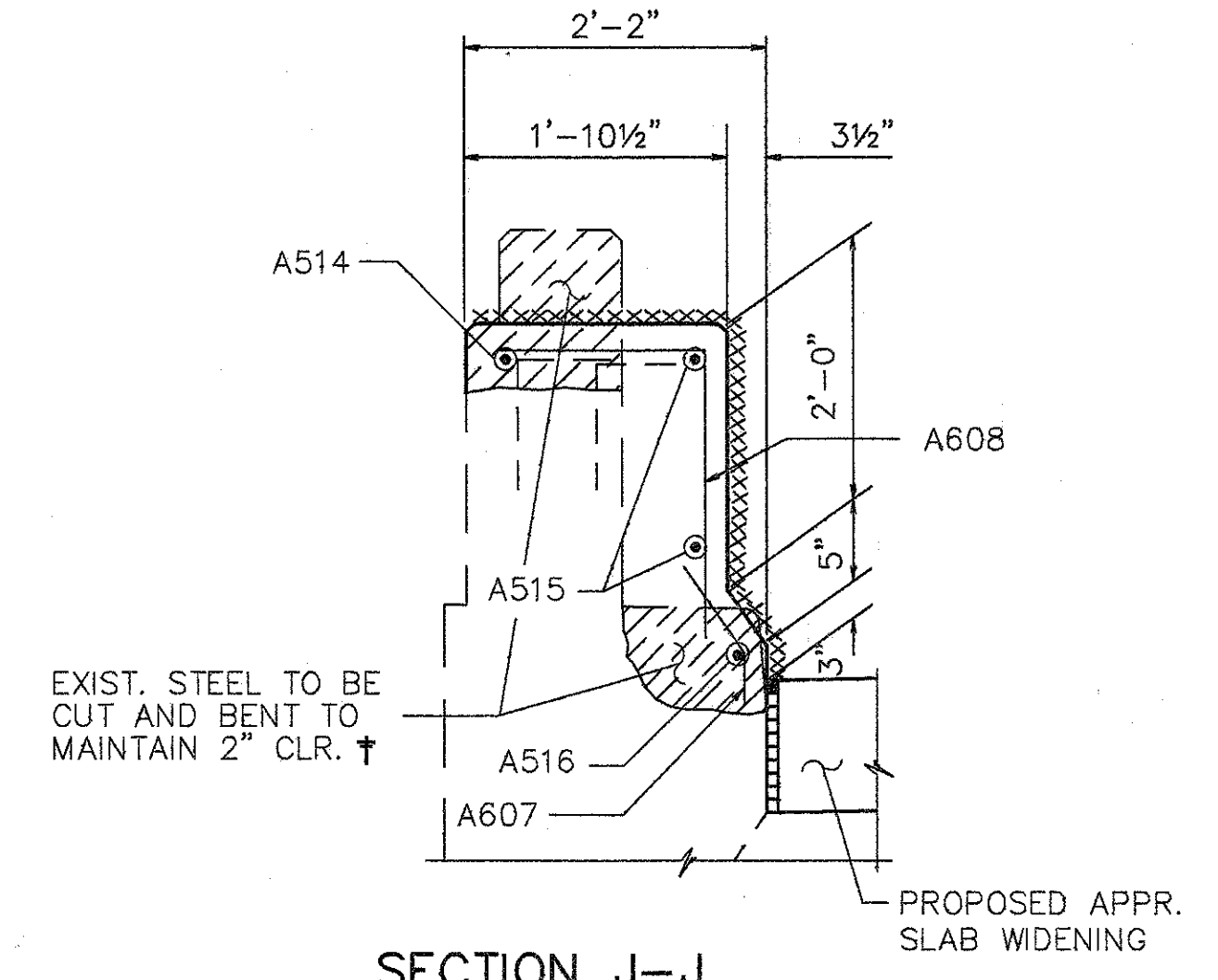


**EXP. JT. PART PLAN @ FORWARD ABUTMENT (RIGHT)**  
 RIGHT PARAPET SHOWN, LEFT PARAPET OPPOSITE HAND (NO DRAIN INLET)

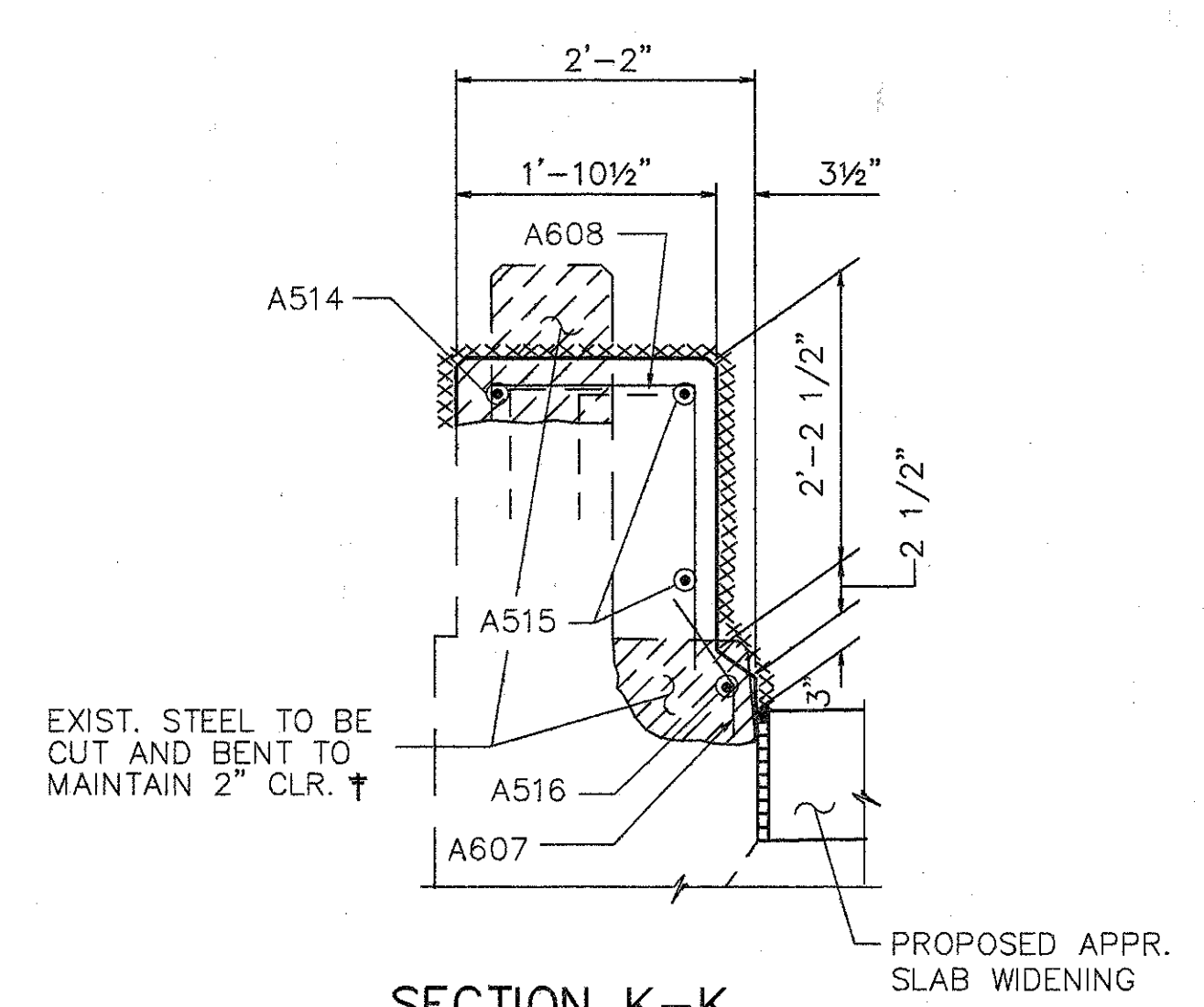


**SECTION H-H**

NOTE: SECTION H-H IS LOCATED WITHIN 10'-0" TAPER FOR GUARDRAIL TERMINAL ASSEMBLY. TAPER OCCURS BETWEEN SECTION F-F AND SECTION J-J.

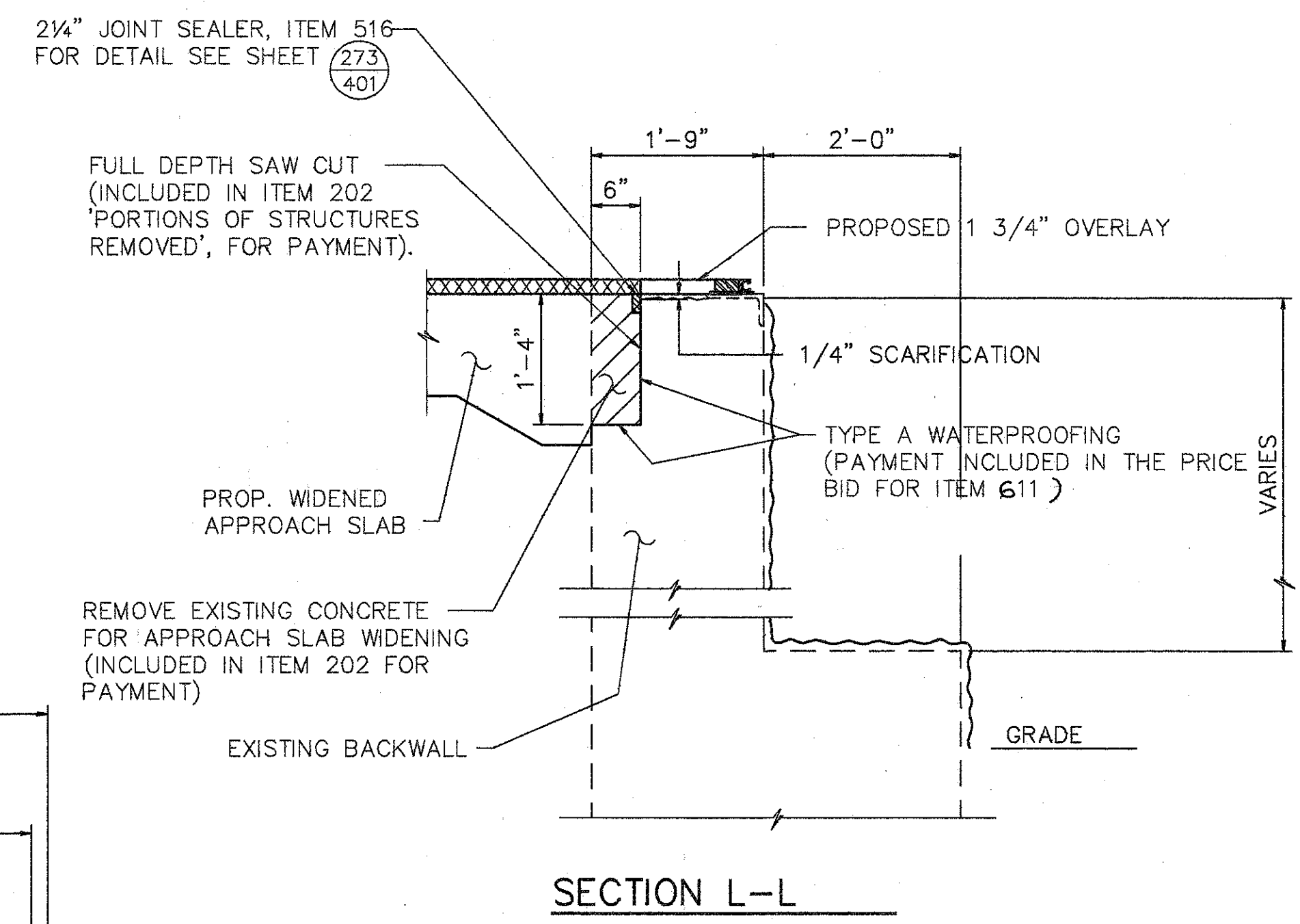


**SECTION J-J**



**SECTION K-K**

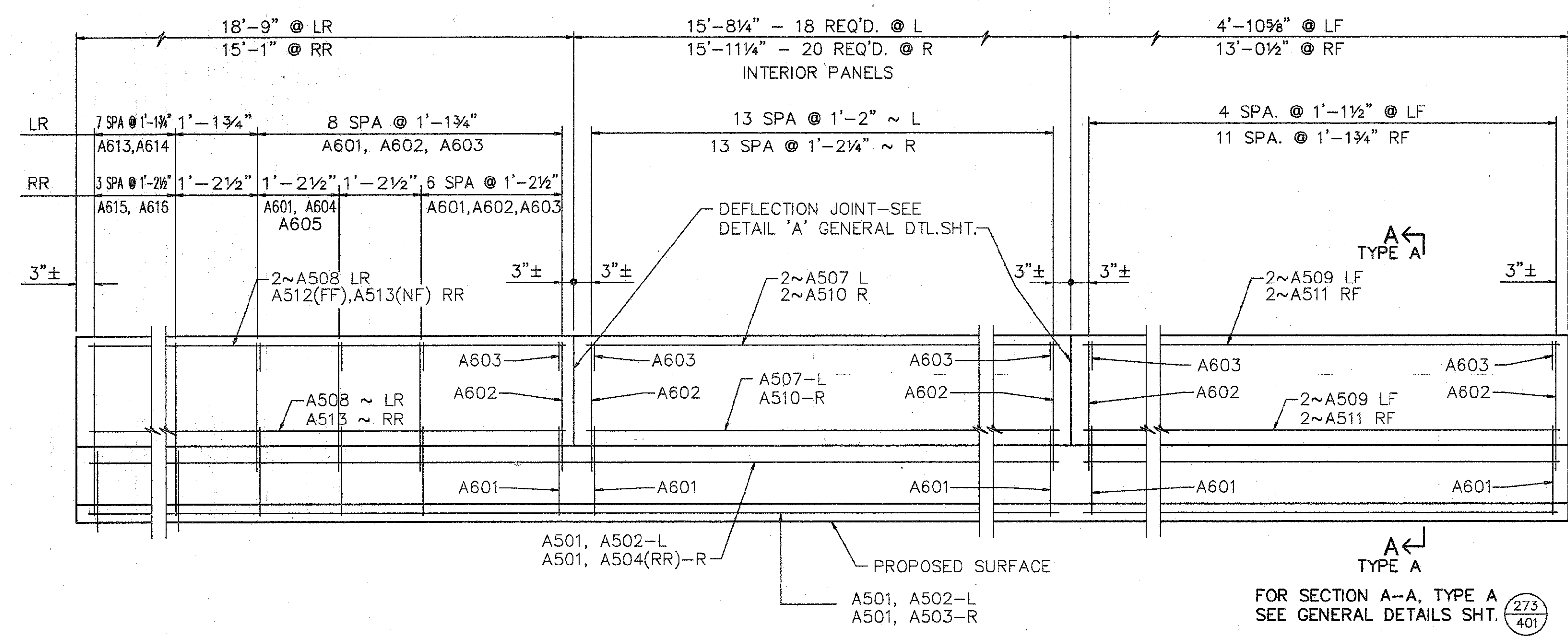
† BARS SHALL REMAIN. CONTRACTOR SHALL EXERCISE CAUTION TO ENSURE THAT THESE BARS ARE NOT DAMAGED DURING THE CONCRETE REMOVAL OPERATION. ANY BARS DAMAGED AS A RESULT OF THE CONTRACTOR'S OPERATION SHALL BE REPLACED OR REPAIRED BY THE CONTRACTOR AT HIS EXPENSE. METHOD OF REPAIR OR REPLACEMENT WILL BE AT THE DISCRETION OF THE DIRECTOR.



**SECTION L-L**

- EXISTING CURB AND PARAPET TO BE REMOVED UNDER ITEM 202-PORCTIONS OF STRUCTURES REMOVED.
- EXISTING RAILING & POSTS TO BE REMOVED & STACKED NEATLY ALONG THE RIGHT OF WAY FOR DISPOSAL BY THE CONTRACTOR. ALL WORK SHALL BE INCLUDED IN THE PRICE BID FOR ITEM 202-PORCTIONS OF STRUCTURE REMOVED.
- xxxxxx SURFACES TO BE SEALED UNDER ITEM SPECIAL- SEALING OF CONCRETE SURFACES.

- NOTES:
1. PREFORMED EXPANSION JOINT FILLER AND SEALER AT CORNERS AND SIDES IF THE APPROACH SLAB SHALL BE INCLUDED IN THE PRICE BID PER SQ. YD. FOR THE APPROACH SLAB.
  2. TYPE A WATERPROOFING AT THE BRIDGE LIMIT END OF THE WIDENING APPROACH SLAB (AS PER STD. DWG. AS-1-81) SHALL BE INCLUDED IN THE PRICE BID FOR ITEM 611 APPROACH SLAB.



**ELEVATION SUPERSTRUCTURE PARAPET**

- LEGEND:**
- L DENOTES LEFT SIDE
  - R DENOTES RIGHT SIDE
  - RF DENOTES RIGHT FORWARD
  - LF DENOTES LEFT FORWARD
  - RR DENOTES RIGHT REAR
  - LR DENOTES LEFT REAR
  - NF DENOTES NEAR FACE
  - FF DENOTES FAR FACE

FOR SECTIONS NOT SHOWN ON THIS SHEET SEE SHEET 3&6/7

FOR SECTIONS NOT SHOWN ON THIS SHEET SEE SHEET 3,4,&7/8

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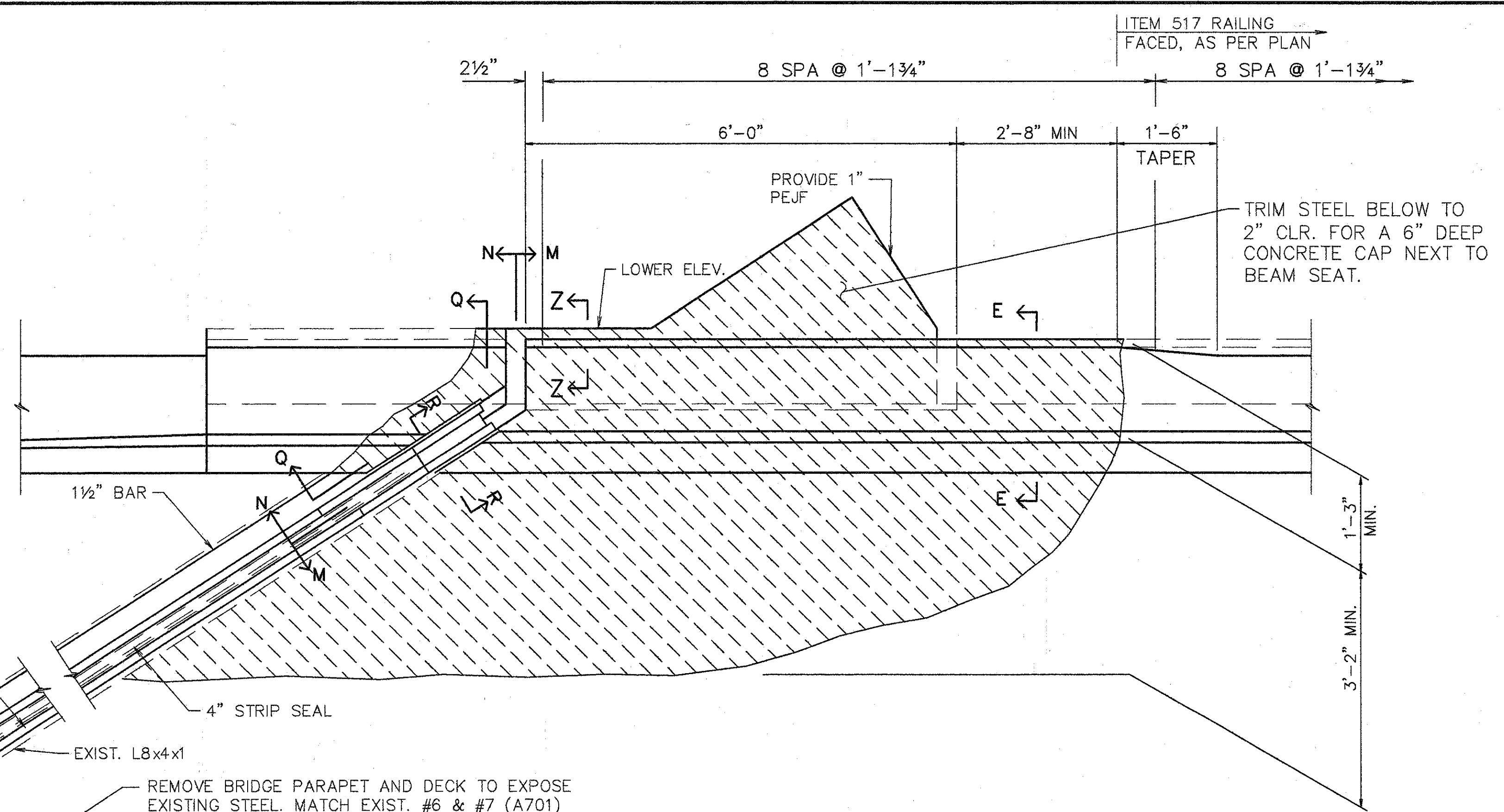
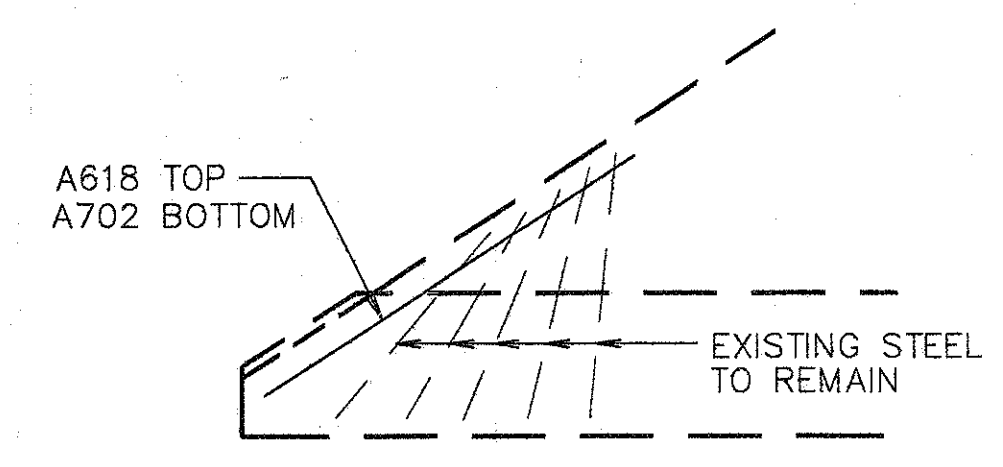
**PARAPET ELEVATION, SECTIONS AND DETAILS**  
 BRIDGE NO. HAM-42-0257 R  
 OVER I-71

HAMILTON

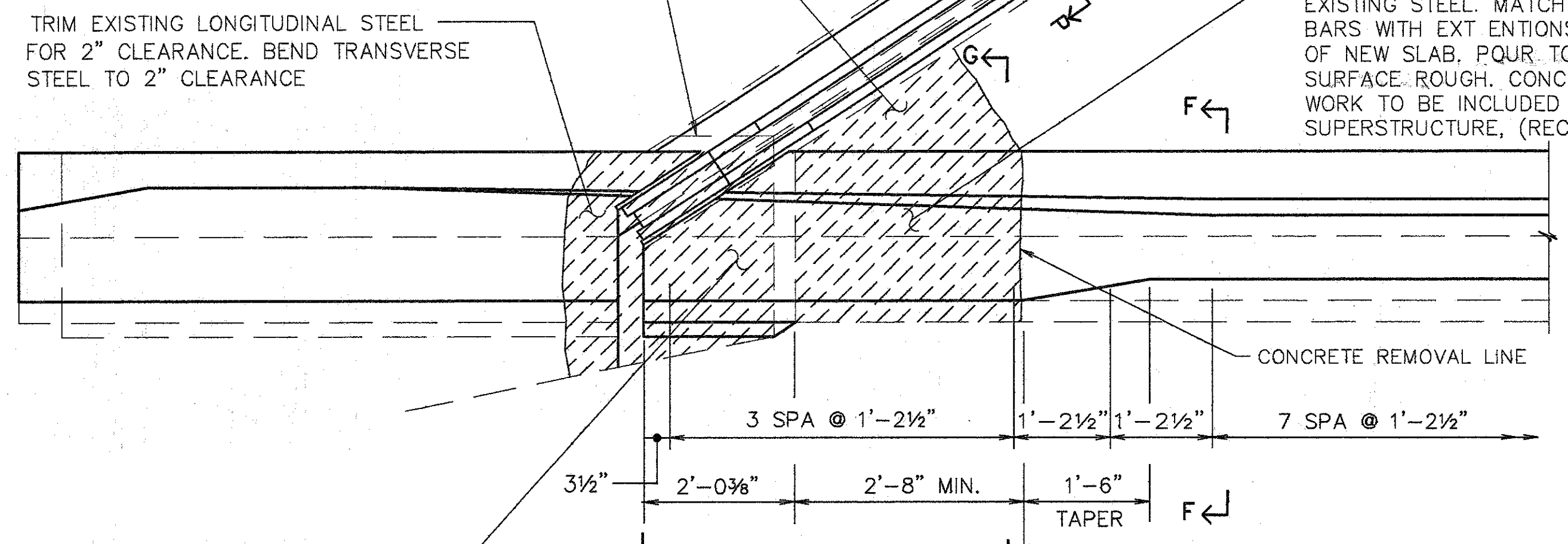
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
L.A.T.M.	D.E.E.		M.A.A.	D.E.M11/11/94		

5/8

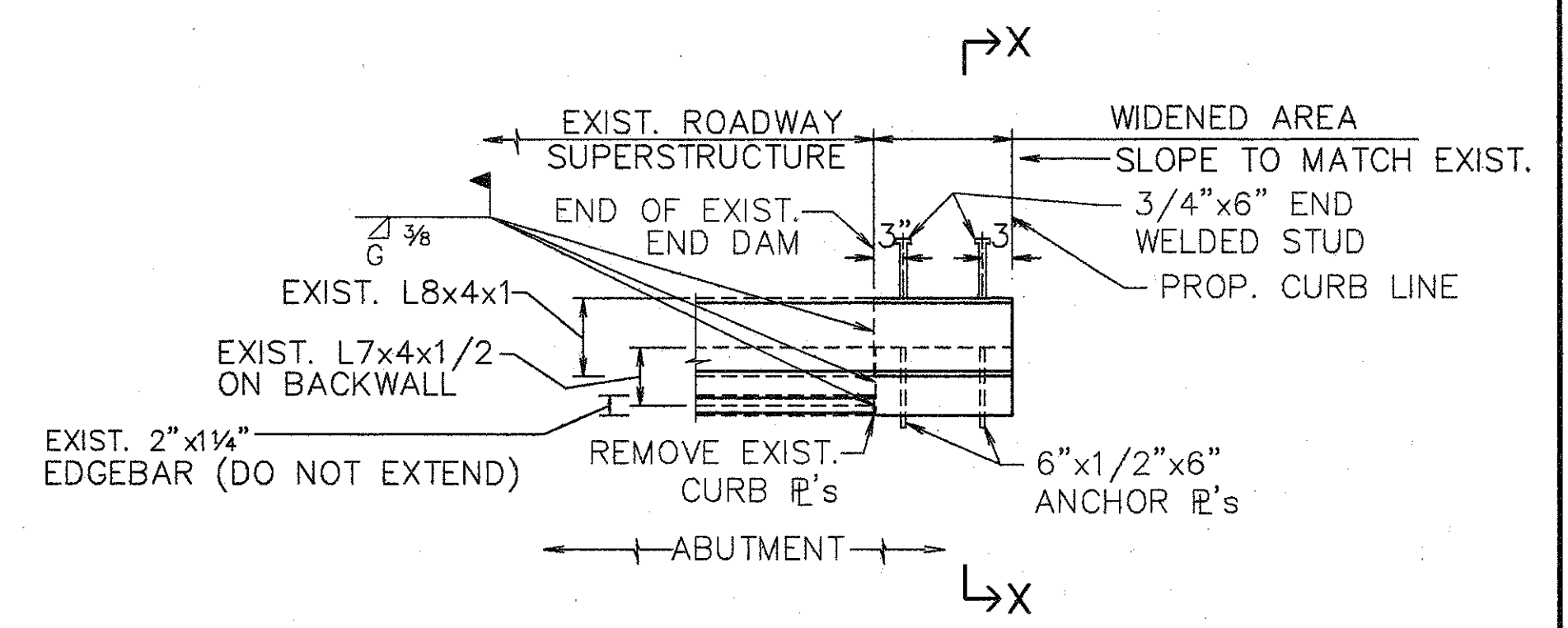
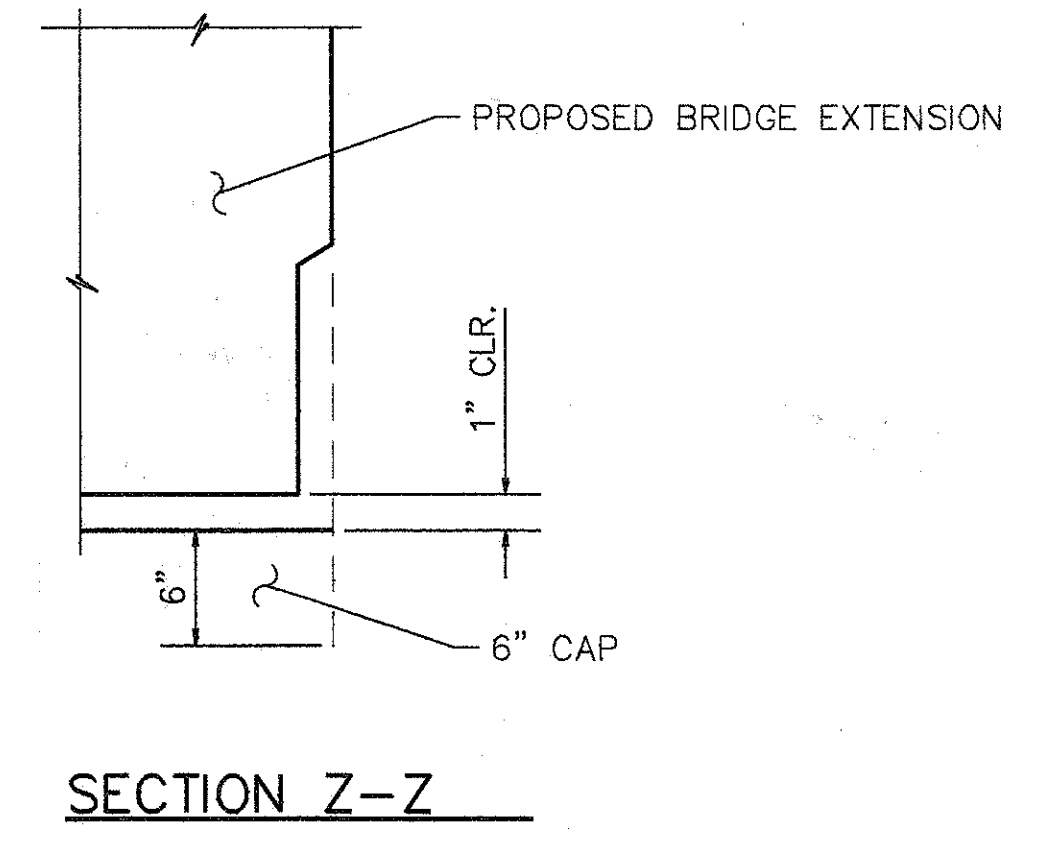
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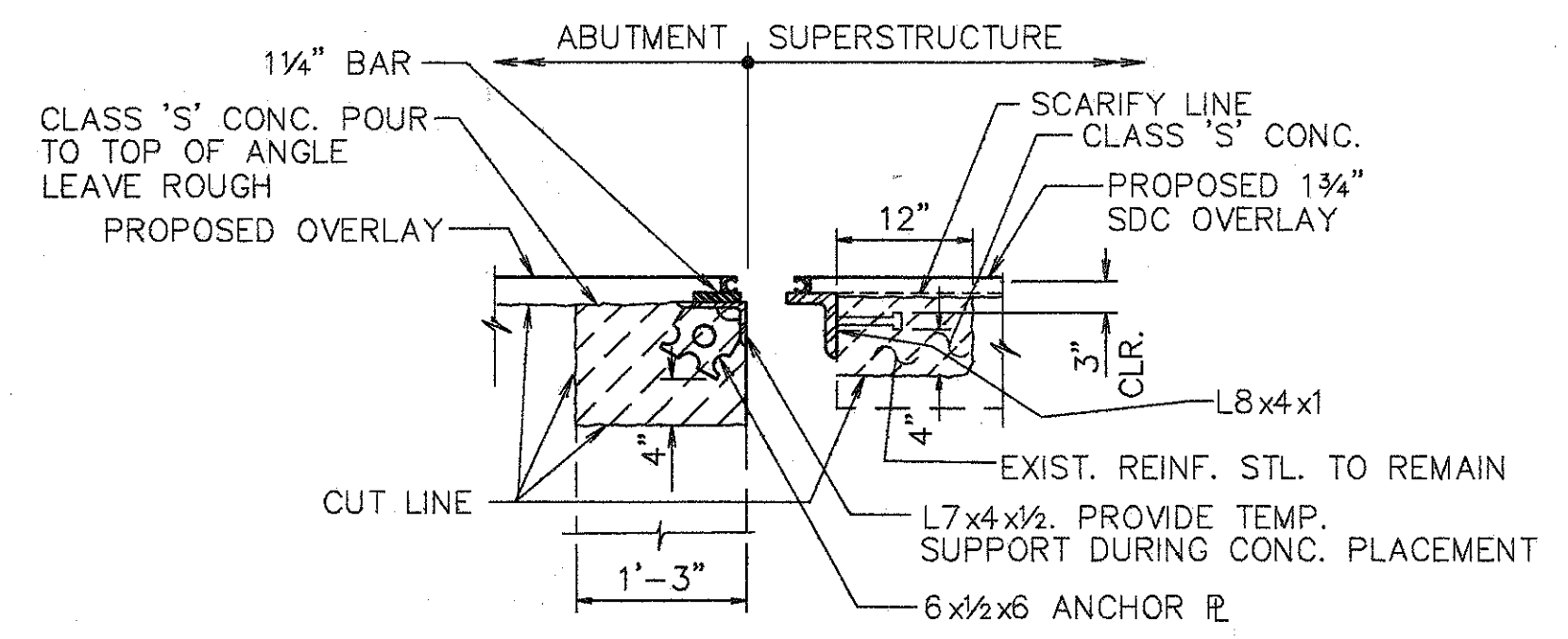
SEE DETAIL B FOR PLACEMENT OF SLAB STEEL  
 1 1/2" STEEL RETAINER  
 EXIST. L7x4x1/2  
 EXIST. L8x4x1  
 4" STRIP SEAL  
 REMOVE BRIDGE PARAPET AND DECK TO EXPOSE EXISTING STEEL. MATCH EXIST. #6 & #7 (A701) BARS WITH EXT. ENTIONS FOR REINFORCEMENT OF NEW SLAB. POUR TO SCARIFIED LEVEL. LEAVE SURFACE ROUGH. CONCRETE AND REPLACEMENT WORK TO BE INCLUDED UNDER ITEM 511 S CONCRETE, SUPERSTRUCTURE, (RECONSTRUCTION) FOR PAYMENT.



TRIM EXISTING LONGITUDINAL STEEL FOR 2" CLEARANCE. BEND TRANSVERSE STEEL TO 2" CLEARANCE  
 REMOVE PARAPET ON ABUTMENT TO AN ELEVATION THAT WILL CLEAR THE BOTTOM OF THE BRIDGE EXTENSION WHEN CAPPED AND 1'-0" BEHIND THE FACE OF THE BACKWALL. LONGITUDINAL STEEL IN PARAPET AND VERT./HORIZ. STEEL IN ABUTMENT TO REMAIN. MAINTAIN 1" CLR. BETWEEN SUPERSTRUCTURE SLAB & ABUTMENT CONCRETE BOTH HORIZ. AND VERTICALLY (TYP REAR ABUT.)  
 ITEM 517 RAILING FACED, AS PER PLAN



**NOTES:**  
 - FOR DETAILS & DIMS. NOT SHOWN SEE STD. DWG. SD-1-69.



**NOTE:**  
 1. FOR DETAILS NOT SHOWN SEE STD. DWG. SD-1-69.  
 2. SEE SECTION J-J FOR RETAINER SPACING AND WELDING

FOR SECTIONS NOT SHOWN ON THIS SHEET SEE 4, 5, & 7 / 8

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**EXPANSION JOINT DETAILS**

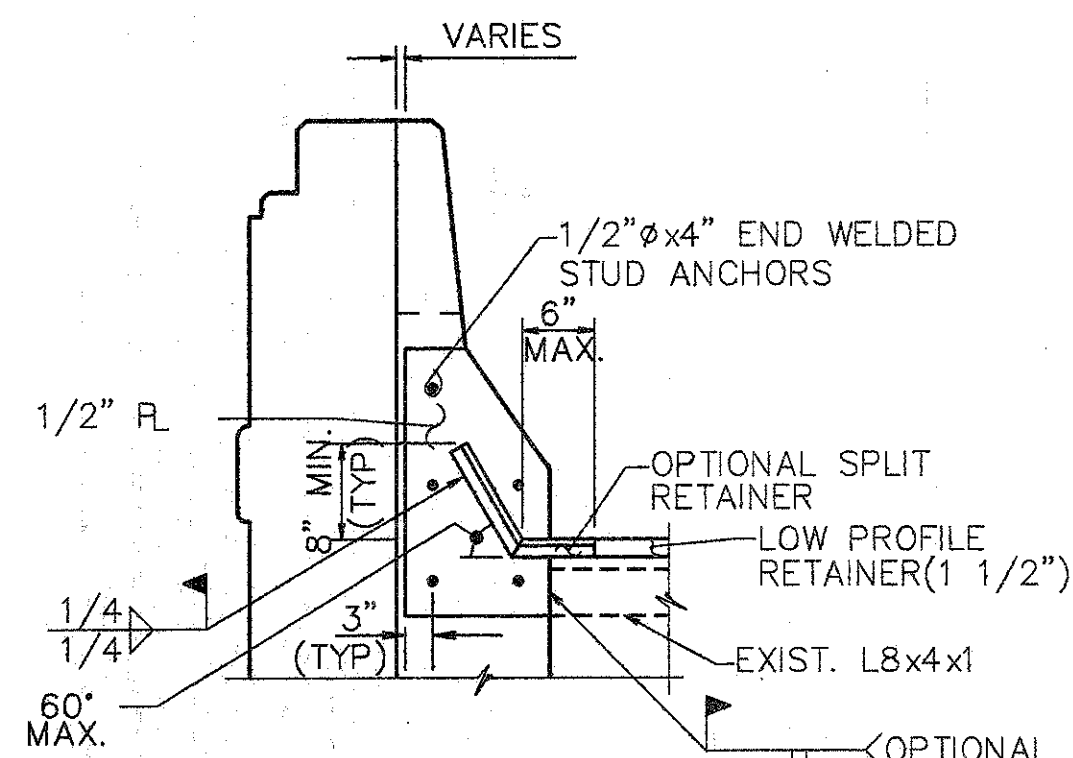
BRIDGE NO. HAM-42-0257R  
 OVER N.B. READING ROAD  
 HAMILTON COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
L.A.T.M.	D.E.E.		M.A.A.	D.E.M11/11/94		

6 / 8

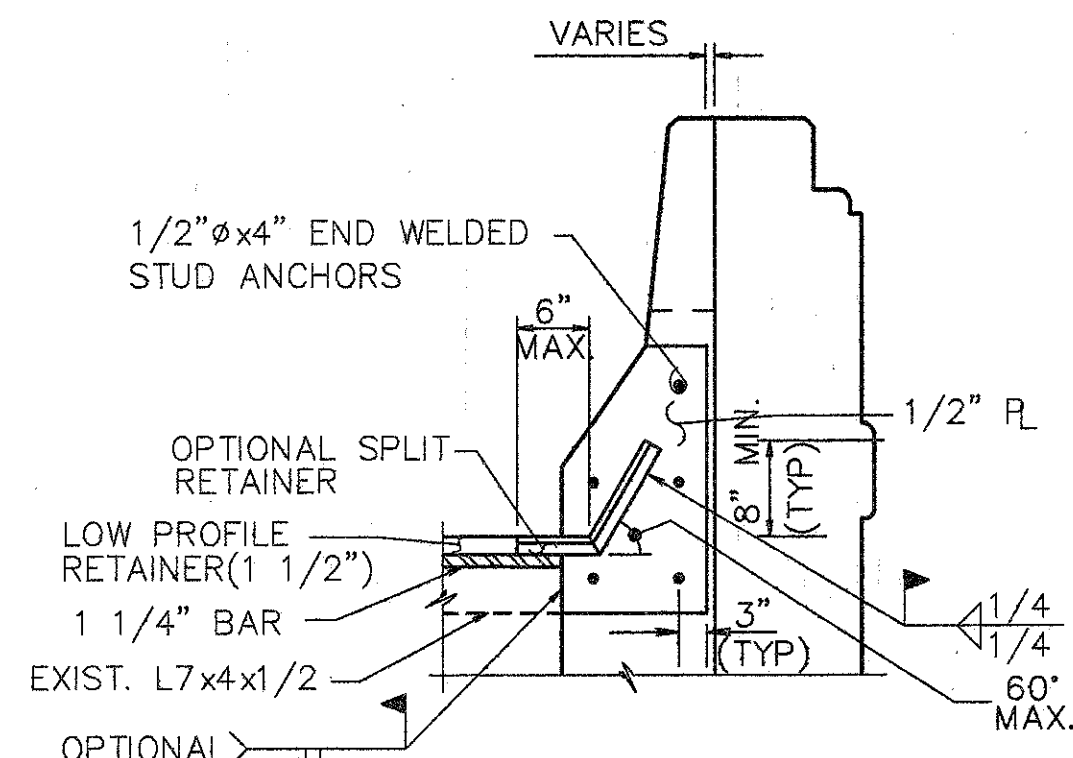
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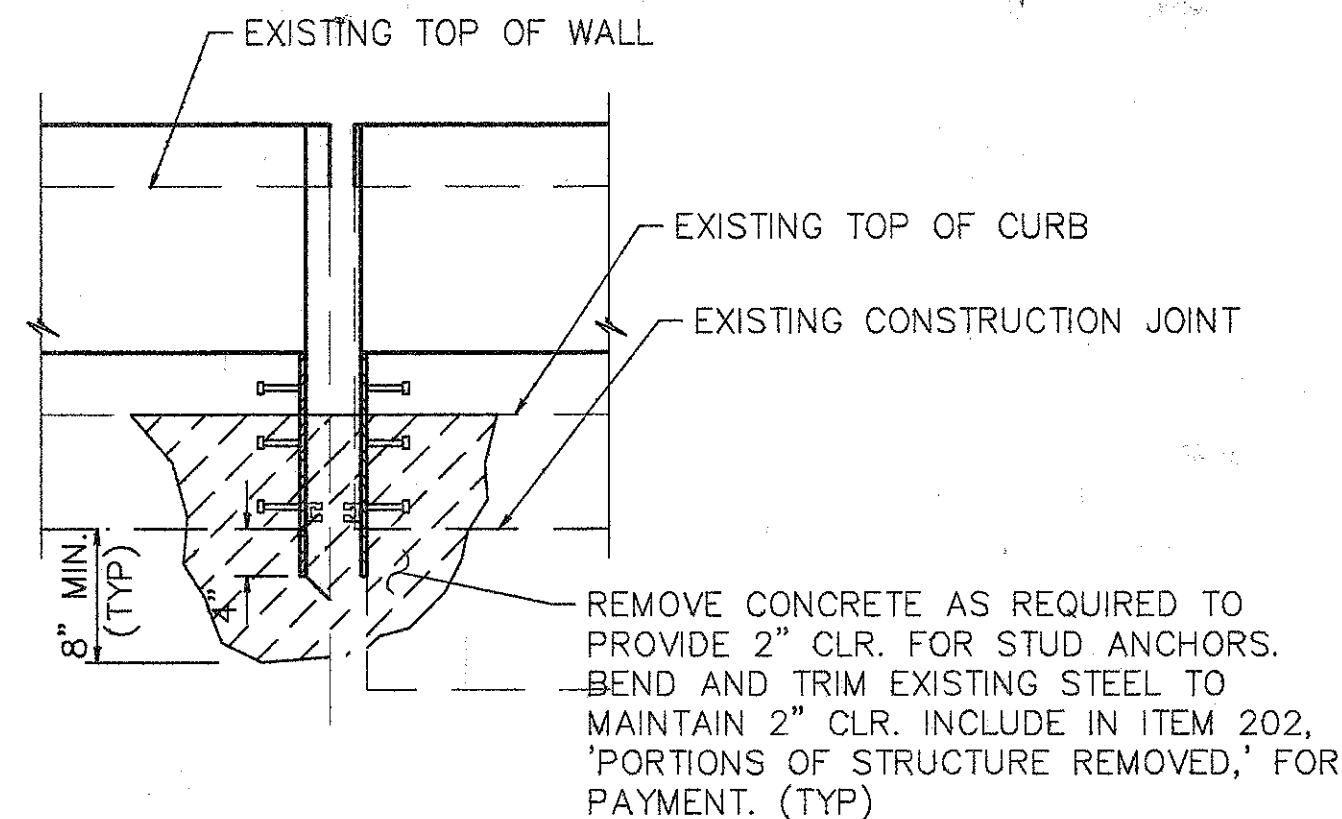
SECTION M-M

LR & RF SHOWN, LF & RR OPPOSITE HAND

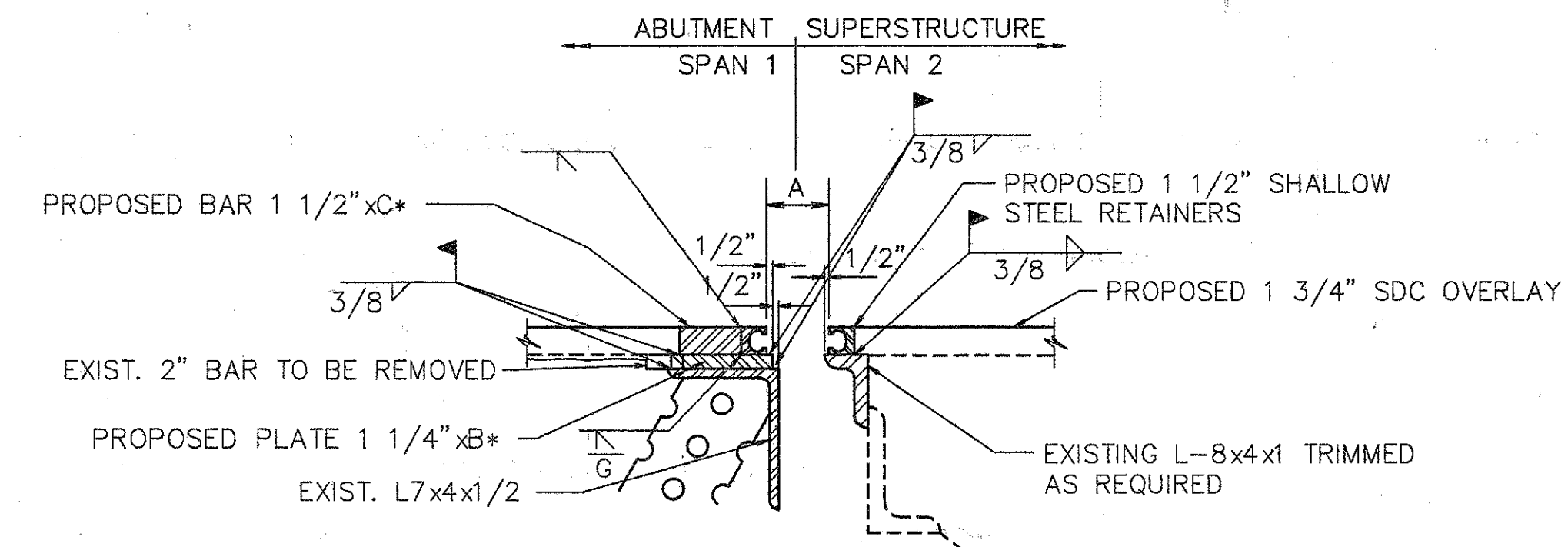


SECTION N-N

LR & RF SHOWN, LF & RR OPPOSITE HAND



SECTION R-R



SECTION P-P

B\* = ANGLE LEG MINUS 1"  
 C\* = B\* MINUS WIDTH OF RETAINER MINUS 1"

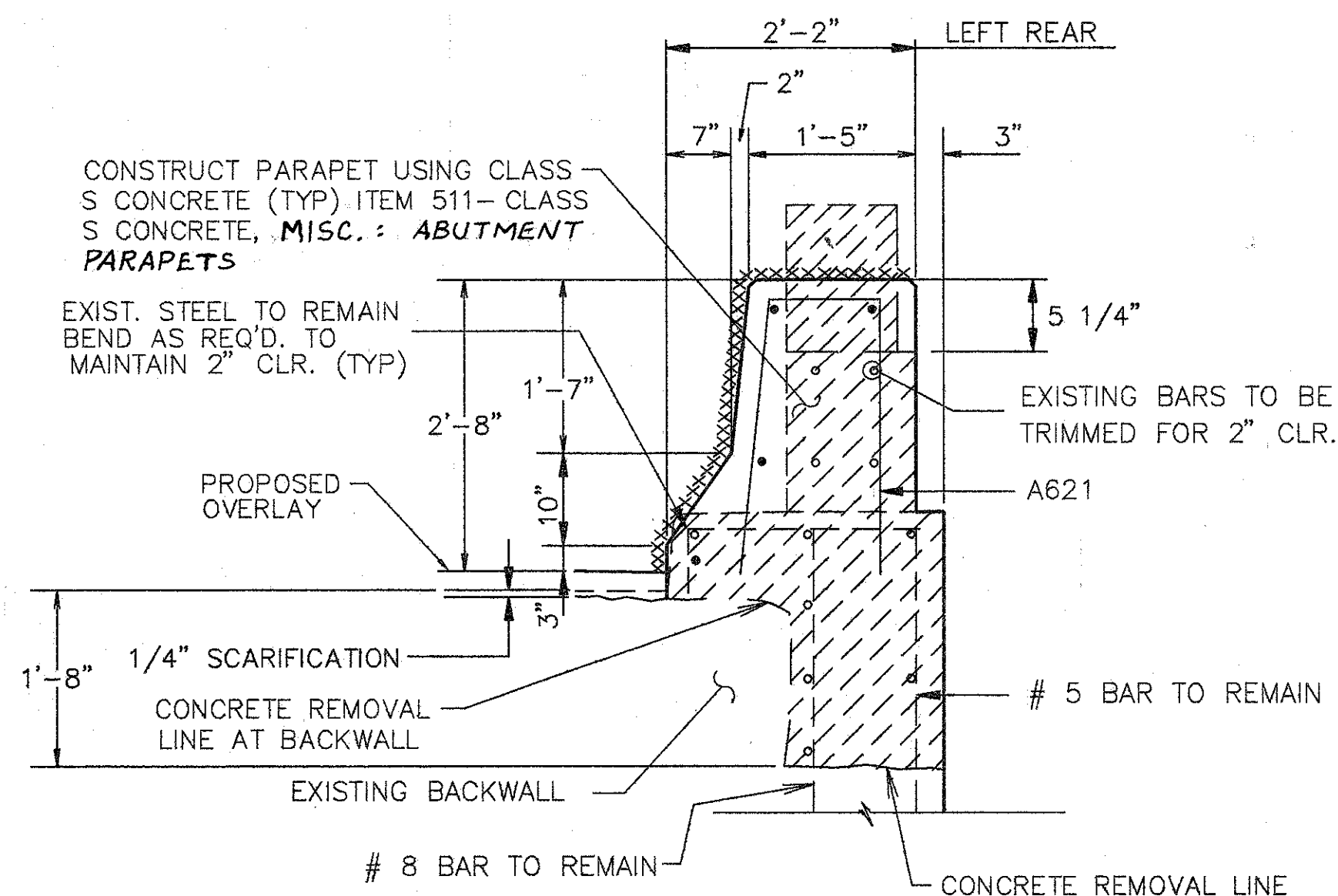
NOTES:

- CONTRACTOR TO VERIFY ALL DIMENSIONS PRIOR TO MODIFYING THE EXPANSION JOINT.
- THE PRICE BID FOR ITEM 516-'STRUCTURAL EXPANSION JOINTS, INCLUDING ELASTOMERIC STRIP SEALS', SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, AND ANY OTHER INCIDENTAL ITEMS, AS DETAILED. REMOVAL OF CURB OR PARAPET AS SHOWN SHALL BE INCLUDED UNDER ITEM 202-'PORTIONS OF STRUCTURE REMOVED.'
- FOR DETAILS NOT SHOWN REFER TO DRAWING EXJ-4-87 SHEETS 3 AND 4.

TEMPERATURE	DIM. 'A'	
	FORWARD	REAR
40° F	3 1/2"	3 1/8"
50° F	3 1/4"	3 1/8"
60° F	3 1/8"	3"
70° F	3"	3"
80° F	2 3/4"	2 7/8"
90° F	2 1/2"	2 7/8"

NOTE:

- EXPANSION JT. DETAILS TO BE WORKED WITH STD. DWG. EXJ-4-87 SHTS. 1 thru 5.
- WHEN PLATE IS RECESSED INTO ABUTMENT, CONCRETE BELOW PLATE SHALL BE SLOPED FROM BOTTOM OF THE PLATE TO THE END OF THE ABUTMENT TO DETER THE ACCUMULATION OF DEBIS.



SECTION Q-Q

NOTE: SECTION Q-Q AT RIGHT REAR IS WITHIN 10'-0" TAPER FOR GUARDRAIL TERMINAL ASSEMBLY. TAPER OCCURS BETWEEN SECTIONS F-F AND SECTIONS J-J.

FOR SECTIONS NOT SHOWN THIS SHEET SEE SHEET 4&5/8

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 (513) 461-5660

EXPANSION JOINT DETAILS

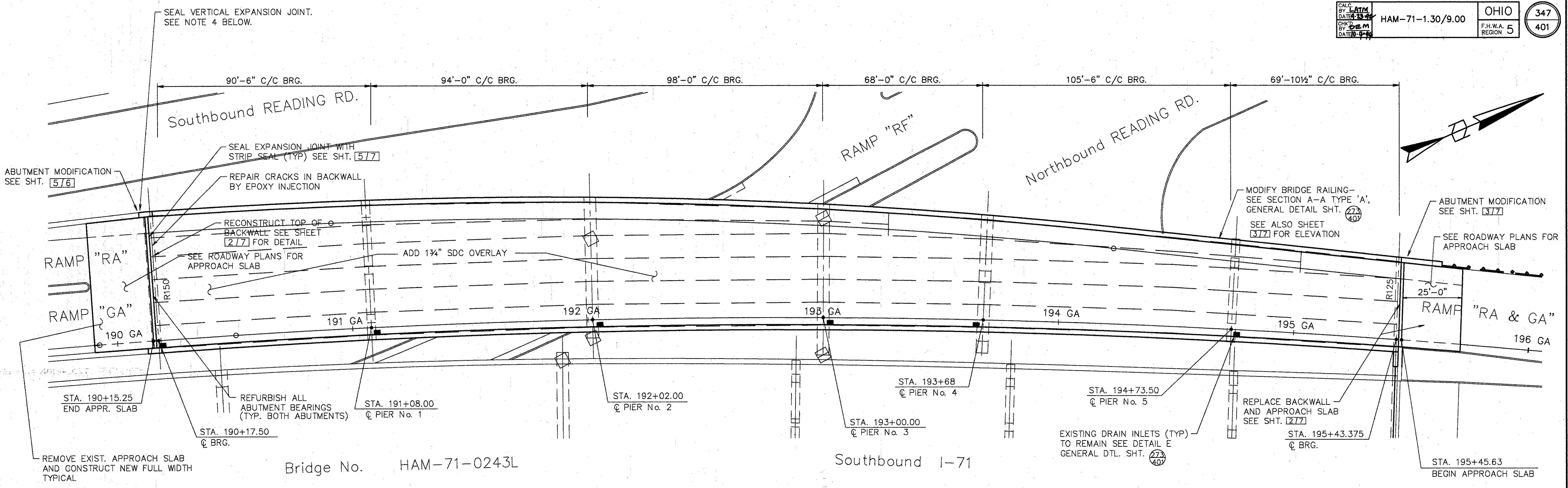
BRIDGE NO. HAM-42-0257R  
 OVER N.B. READING ROAD

HAMILTON COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
L.A.T.M.	D.E.E.		M.A.A.	D.E.M11/11/94		



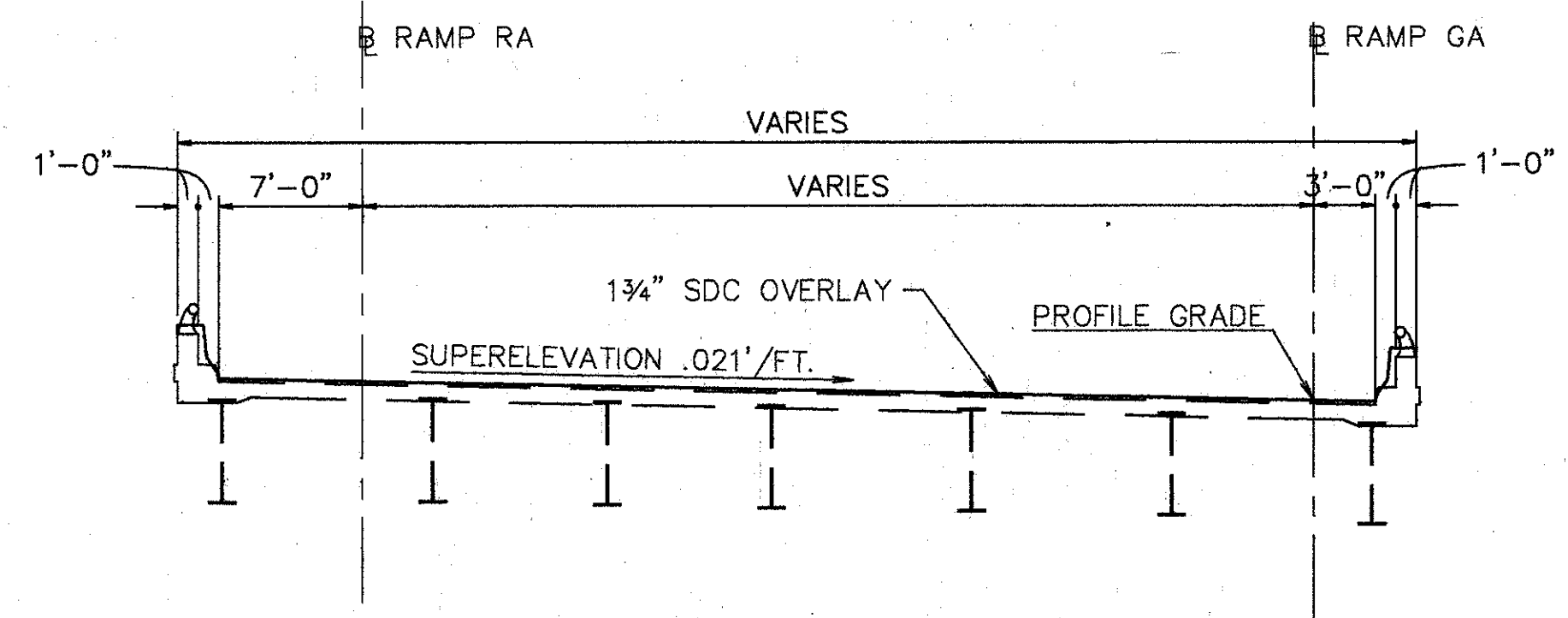




**PLAN**

- NOTE:
1. SEAL PARAPETS, BACKWALLS AND PIERS. SEAL ALL OF PIERS EXCEPT TOP OF PIER CAP (PIER 1 & 5) AND TOP OF COLUMNS (PIERS 2, 3 & 4).
  2. REFURBISH DRAINAGE PIPING.
  3. SEE JUNCTION BOX EXTENSION DETAIL GENERAL DETAIL SHT. [273] 401 FOR BARRIER RETROFIT AT JUNCTION BOXES. SEE LIGHTING DETAILS. FOR TYPE AND LOCATION.
  4. CLEAN EXISTING EXPANSION JOINT TO A DEPTH OF 6 1/2" ± x 12'-6" ± ABOVE GRADE AND 6" ± BELOW GRADE. INSERT ITEM 516, STRUCTURAL JOINT OR JOINT SEALER, MISC. 3"x5" SEALER AS PER PLAN AS MANUFACTURED BY "WILL-SEAL" OR CLOSED CELL EXPANDED NEOPRENE KNOWN AS "WILLIAMS NEOPRENE", MANUFACTURED BY WILLIAMS PRODUCTS INC., OR EQUIVALENT.

ROCKER SIZE	JACK CAPACITY REQ'D. (MIN)
R125	100 TON
R150	100 TON



**EXISTING STRUCTURE**

TYPE: CONTINUOUS STEEL PLATE GIRDERS WITH REINFORCED CONCRETE DECK & SUBSTRUCTURE  
 SPANS: 90'-6", 94'-0", 98'-0", 68'-0", 105'-6", 69'-10 1/2" C/C BEARINGS  
 ROADWAY: VARIES W/1'-0" CURBS  
 SKEW: C PIER NO.3 IS RADIAL; THE C OF THE OTHER PIERS & ABUTMENTS C BRG. ARE PARALLEL TO C PIER NO.3  
 LOADING FREQUENCY: C.F.=2000 (57) ADEQUATE FOR AASHO ALTERNATE LOADING  
 WEARING SURFACE: 1" MONOLITHIC CONCRETE  
 APPROACH SLABS: AS-1-54 (25'-0" LONG)  
 ALIGNMENT: VARIES  
 SUPERELEVATION: VARIES

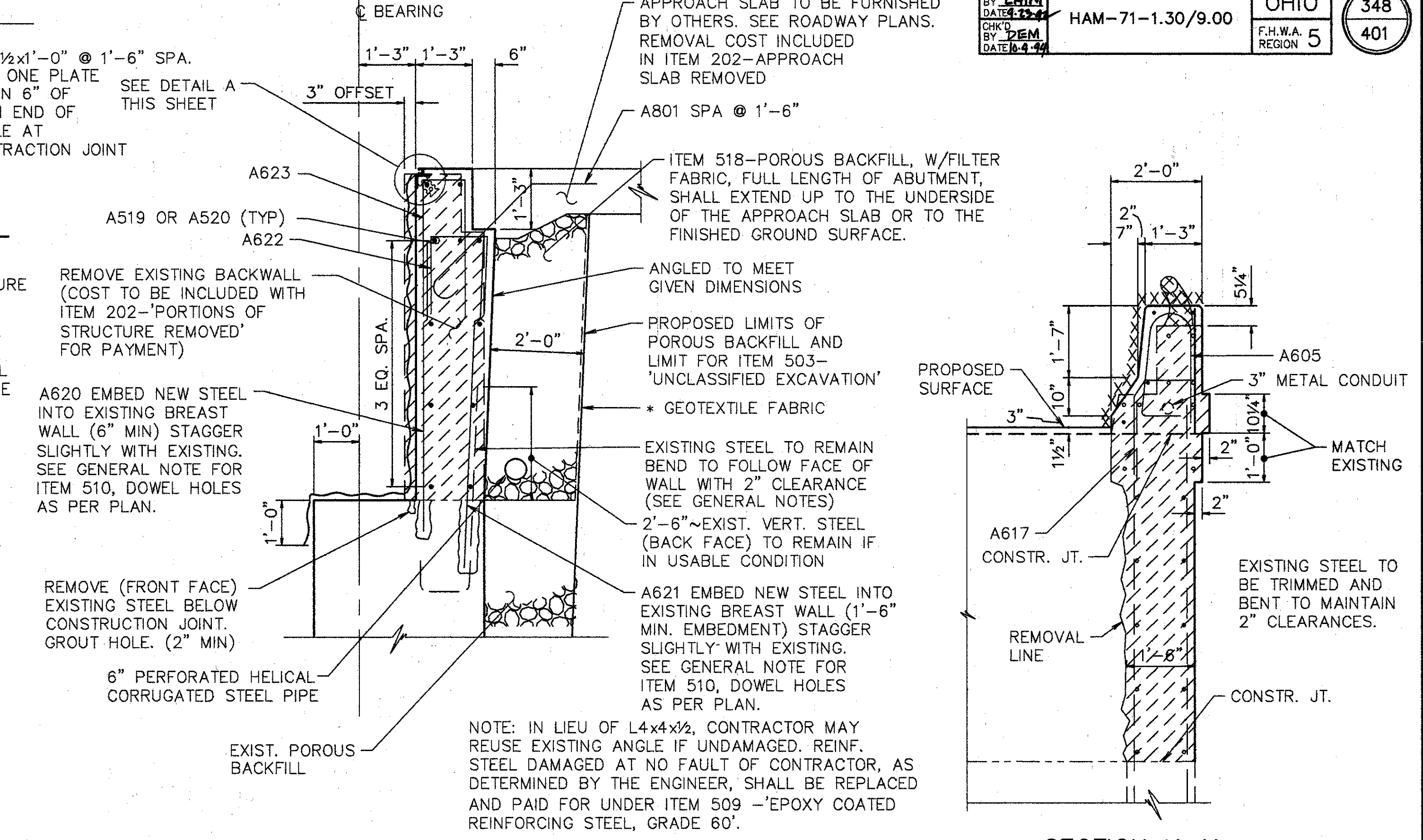
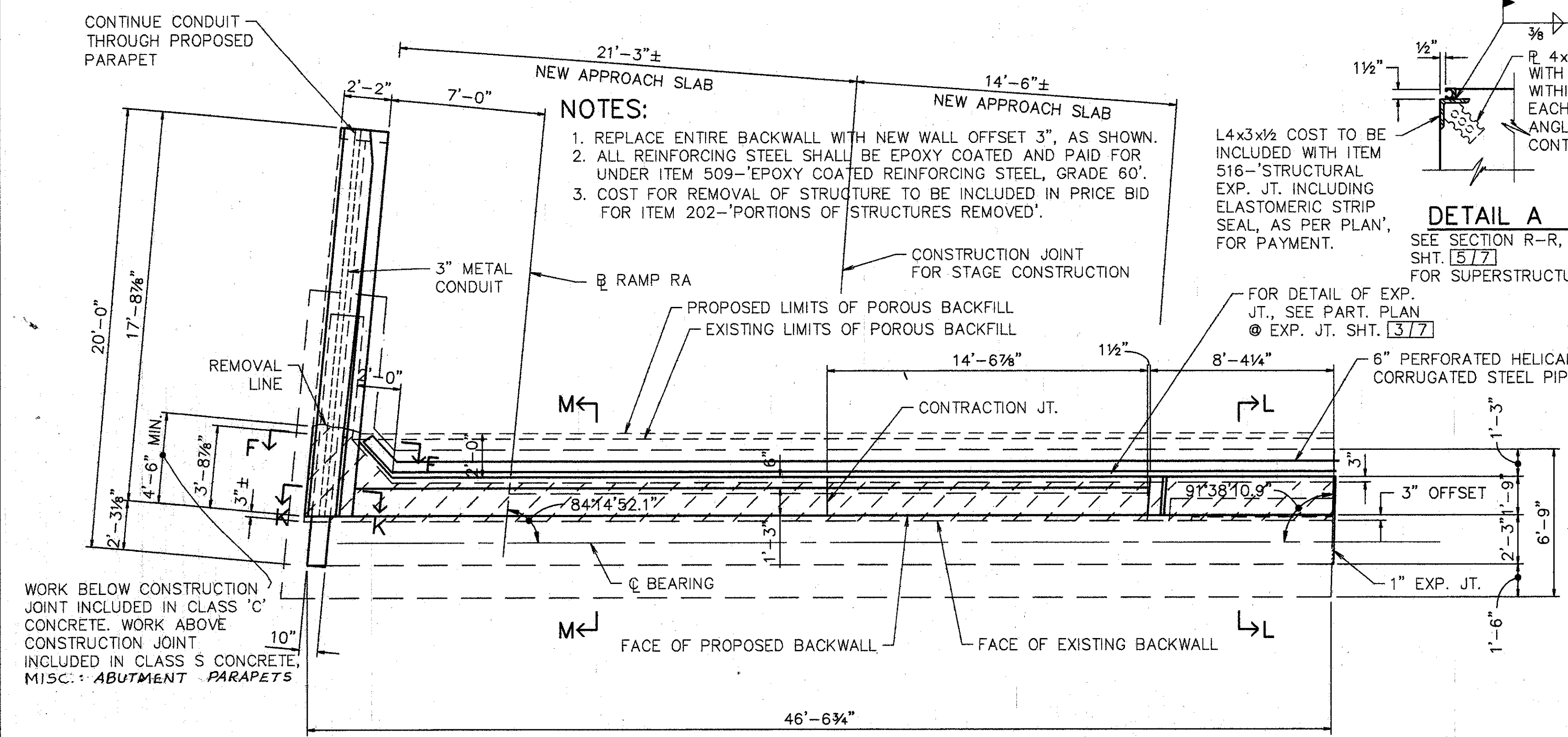
**WOOLPERT CONSULTANTS**  
 409 E. MONUMENT AVENUE  
 DAYTON, OHIO 45402-1226  
 (513) 461-5660

**GENERAL PLAN**

BRIDGE NO. HAM-42-0264R  
 OVER RAMP RF, NORTHBOUND READING RD. AND EDEN PARK ENT.  
 HAMILTON COUNTY

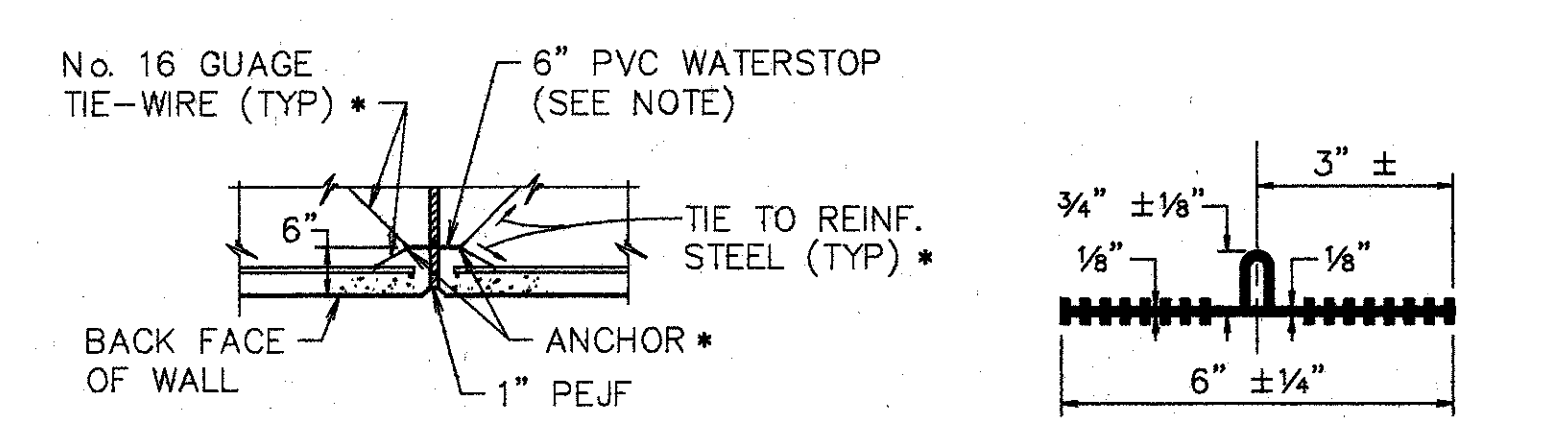
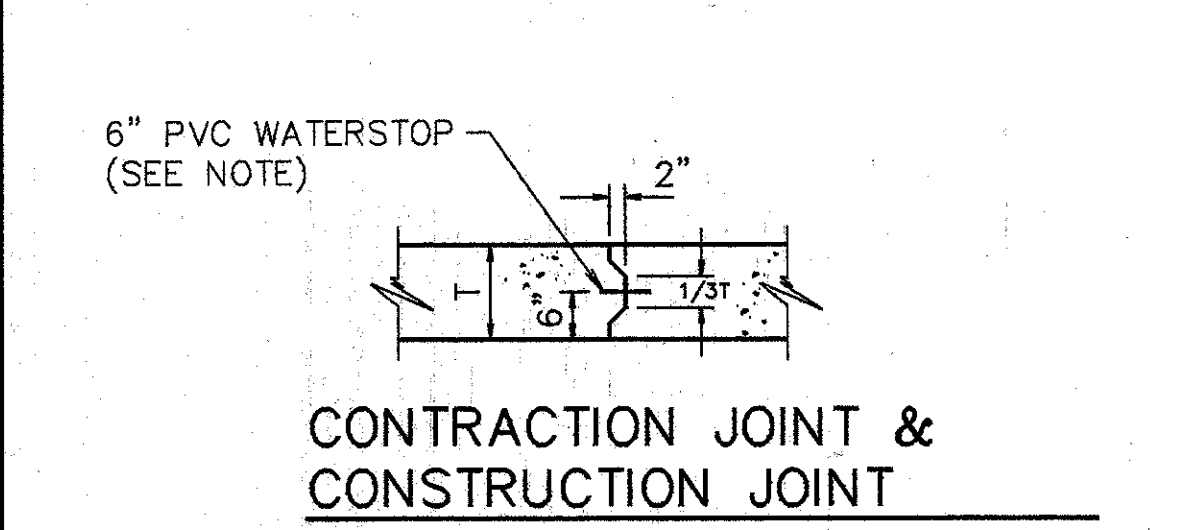
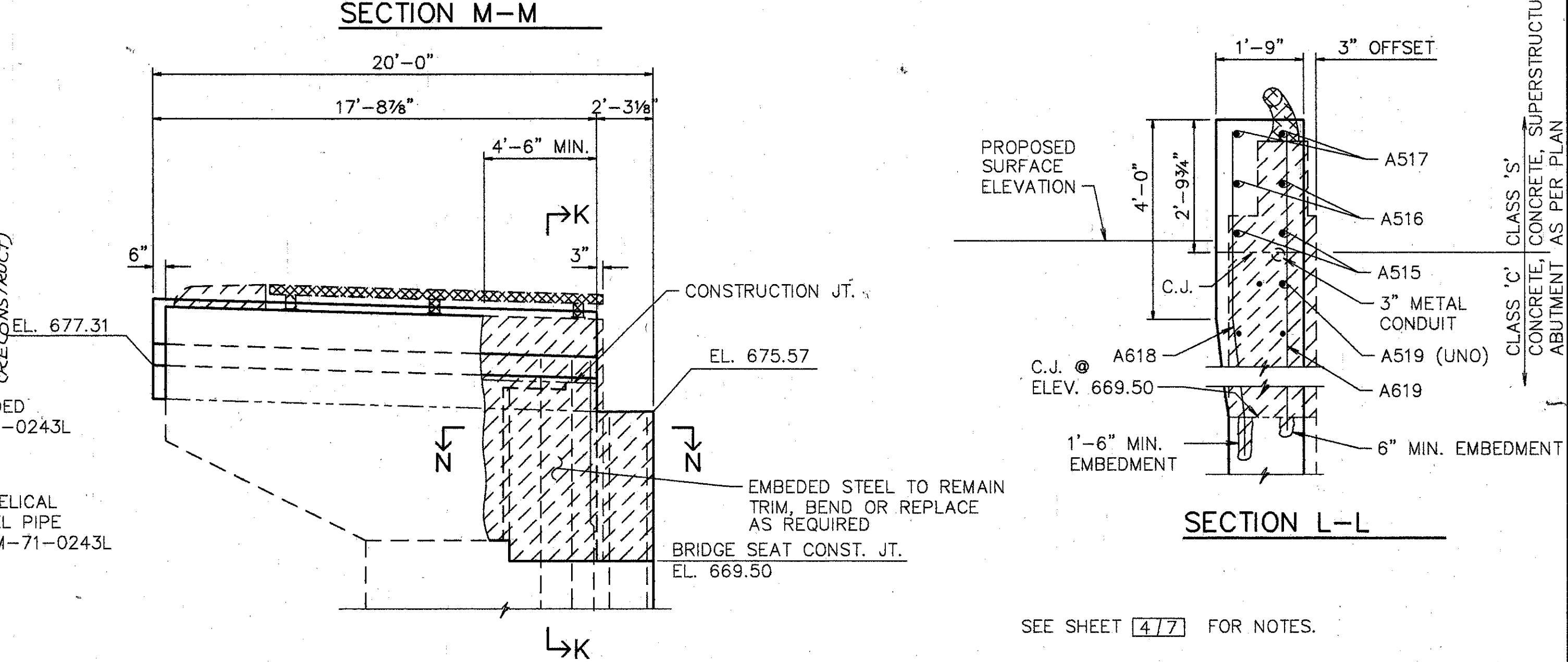
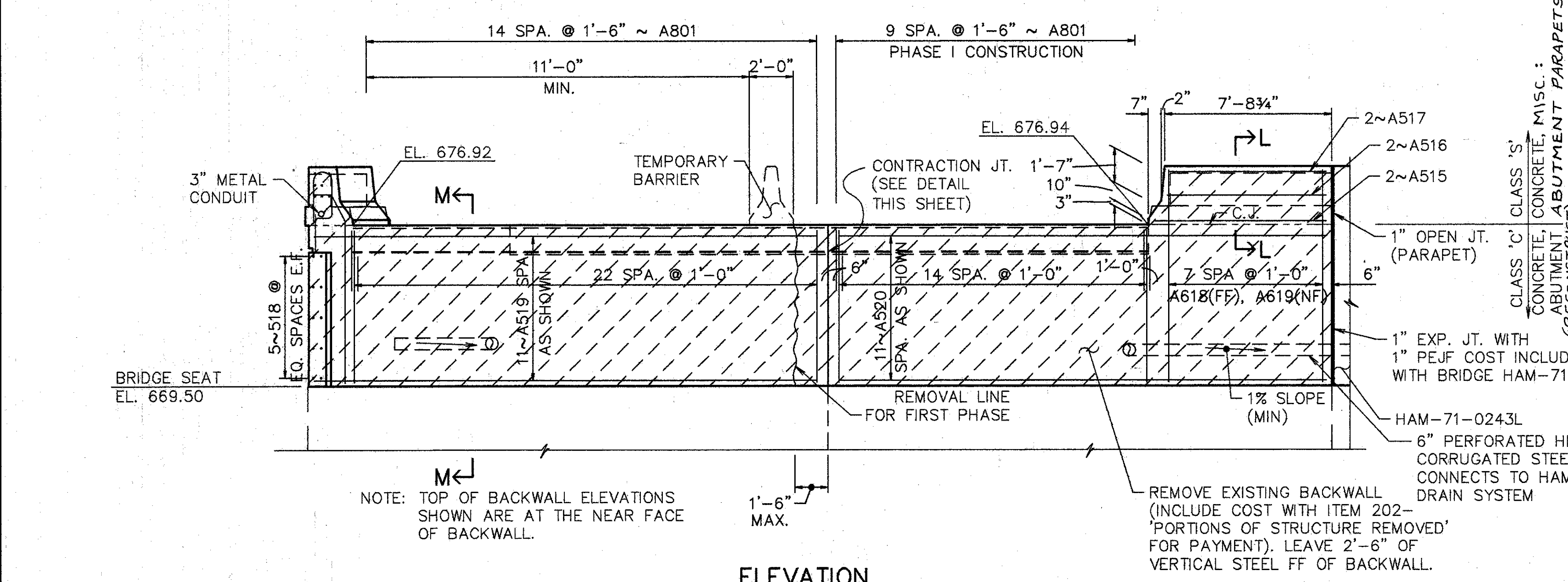
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L.A.T.M.	D.E.E.		M.A.A.	DEM	11/11/94	

Plot Date: MAY 15, 1995 8:45 PM  
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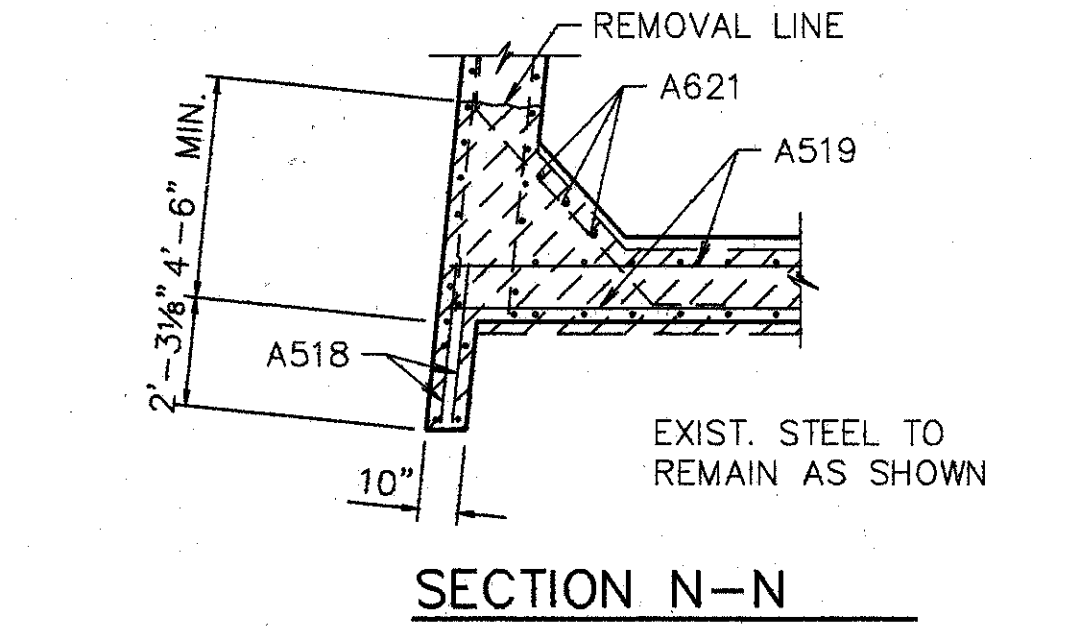
**FORWARD ABUTMENT PLAN**

\* GEOTEXTILE FABRIC SHALL CONFORM TO 712.09 TYPE A AND BE INCLUDED WITH THE POROUS BACKFILL FOR PAYMENT.



\* FOR THE FIRST POUR, THE WATERSTOP SHOULD BE HELD SECURELY IN PLACE BY THE USE OF SPLIT FORMS AND TIE-WIRES. FOR THE SECOND POUR, SECURE THE FREE END OF WATERSTOP IN PROPER POSITION WITH TIE-WIRES. ALTERNATE METHODS, AS APPROVED BY THE ENGINEER, MAY BE USED TO INSURE THE CORRECT POSITIONING OF THE WATERSTOP.

6" PVC WATERSTOP SHALL BE CENTERED ON THE CONTRACTION JOINTS AND EXPANSION JOINTS ABOVE THE ABUTMENT AND WINGWALL FOOTERS. THE WATERSTOP SHALL BE CAPABLE OF ACCOMMODATING 1 1/2" OF JOINT MOVEMENT.



**WOOLPERT CONSULTANTS**  
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 9513) 461-5660

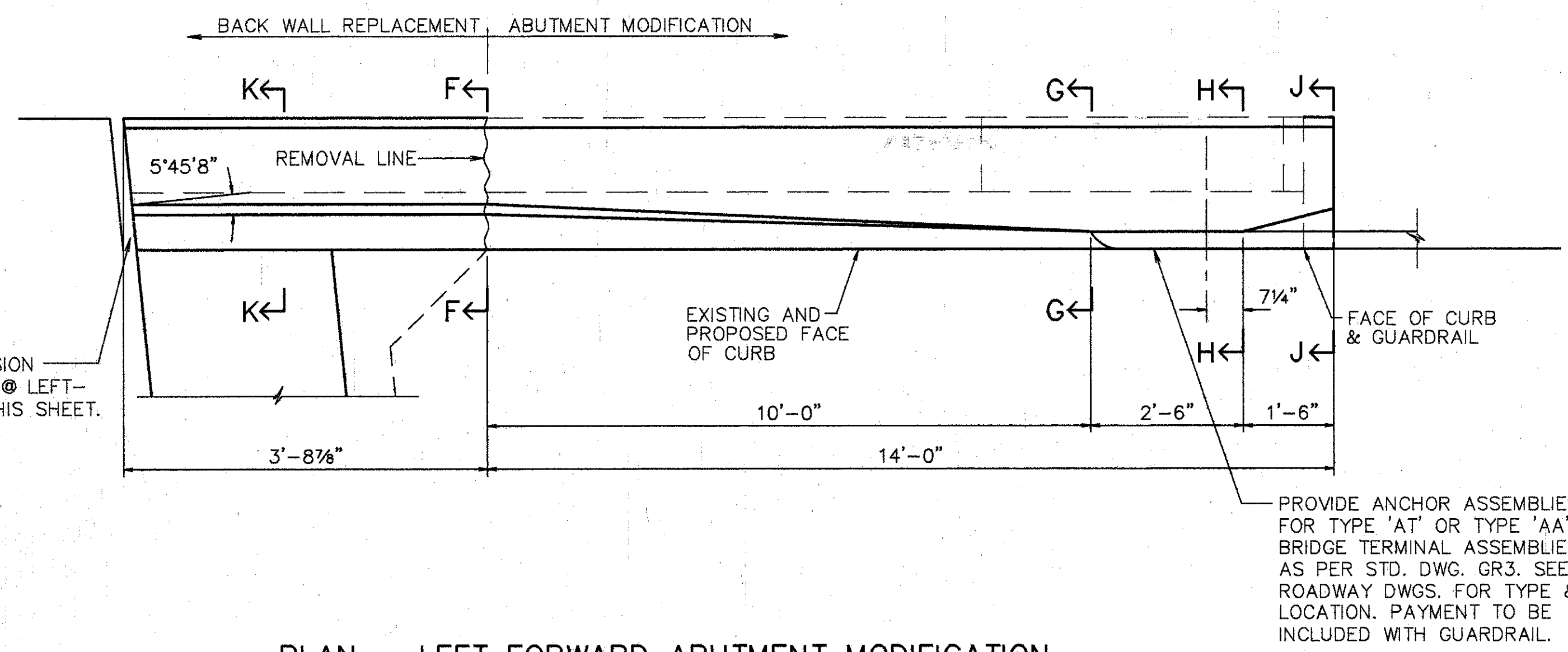
**NORTH ABUTMENT**

BRIDGE NO. HAM-42-0264R  
 OVER RAMP RF, NORTHBOUND READING RD. AND EDEN PARK ENT.  
 HAMILTON COUNTY

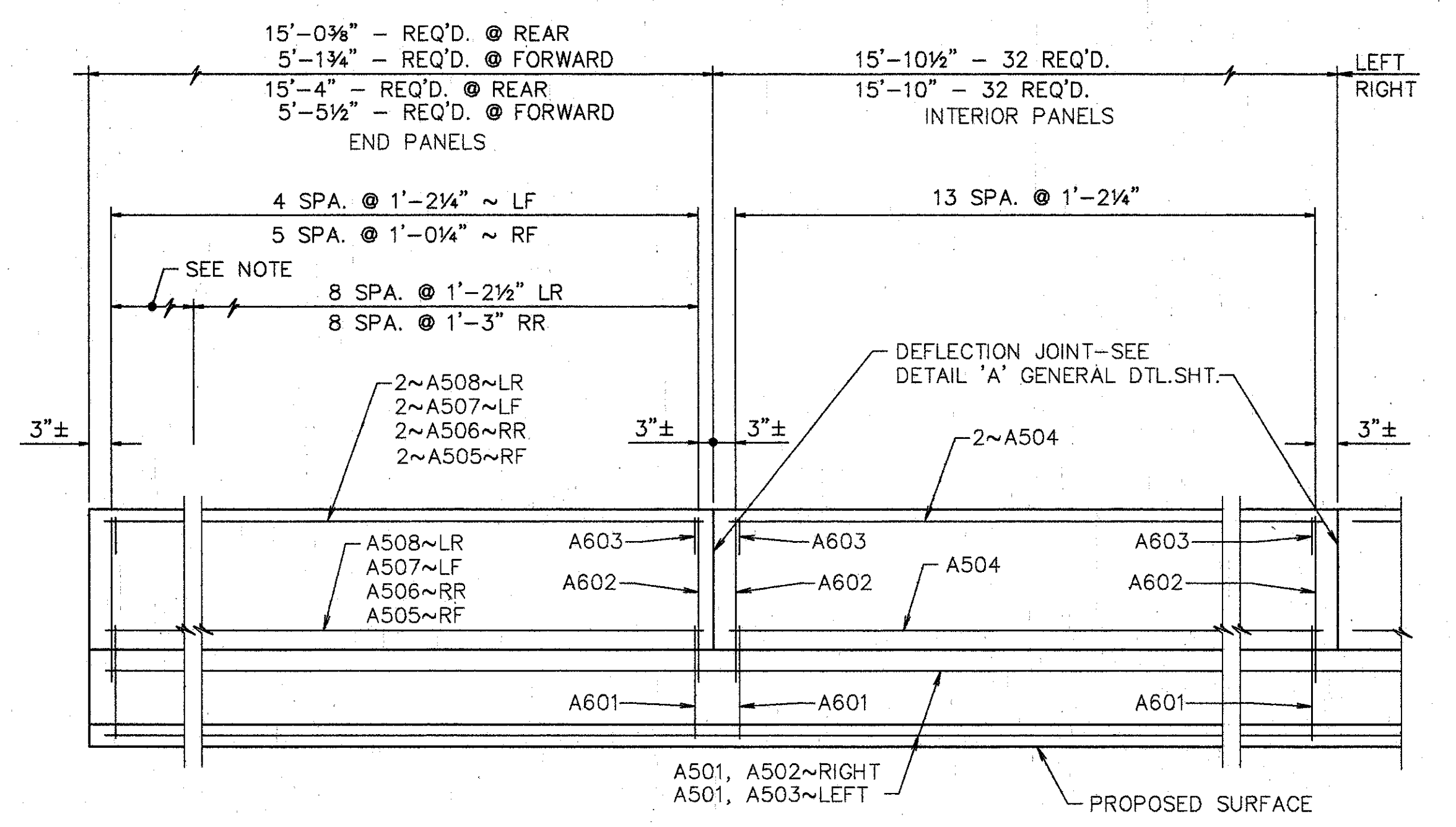
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L.A.T.M.	D.E.E.		M.A.A.	DEM	11/11/94	

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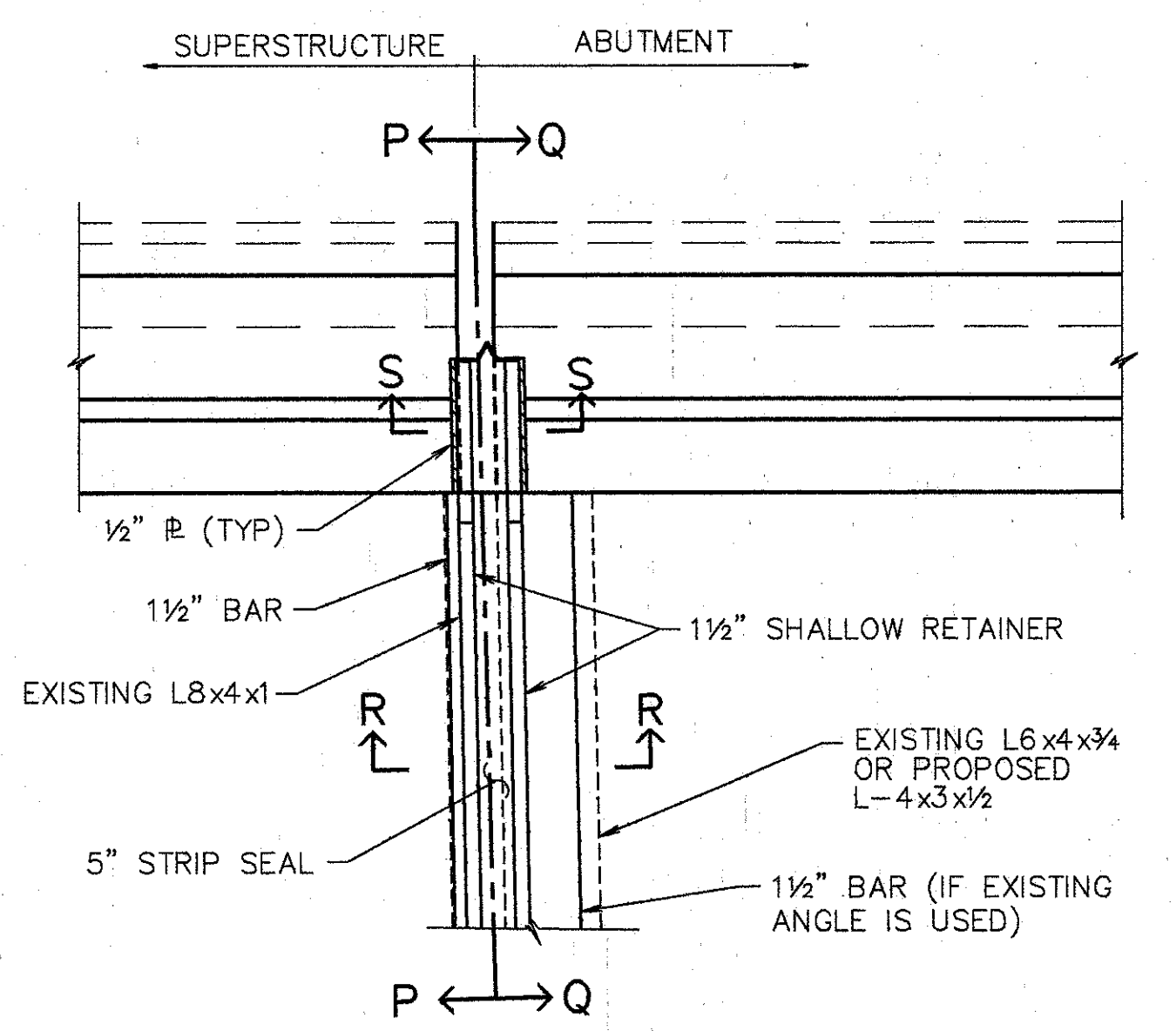




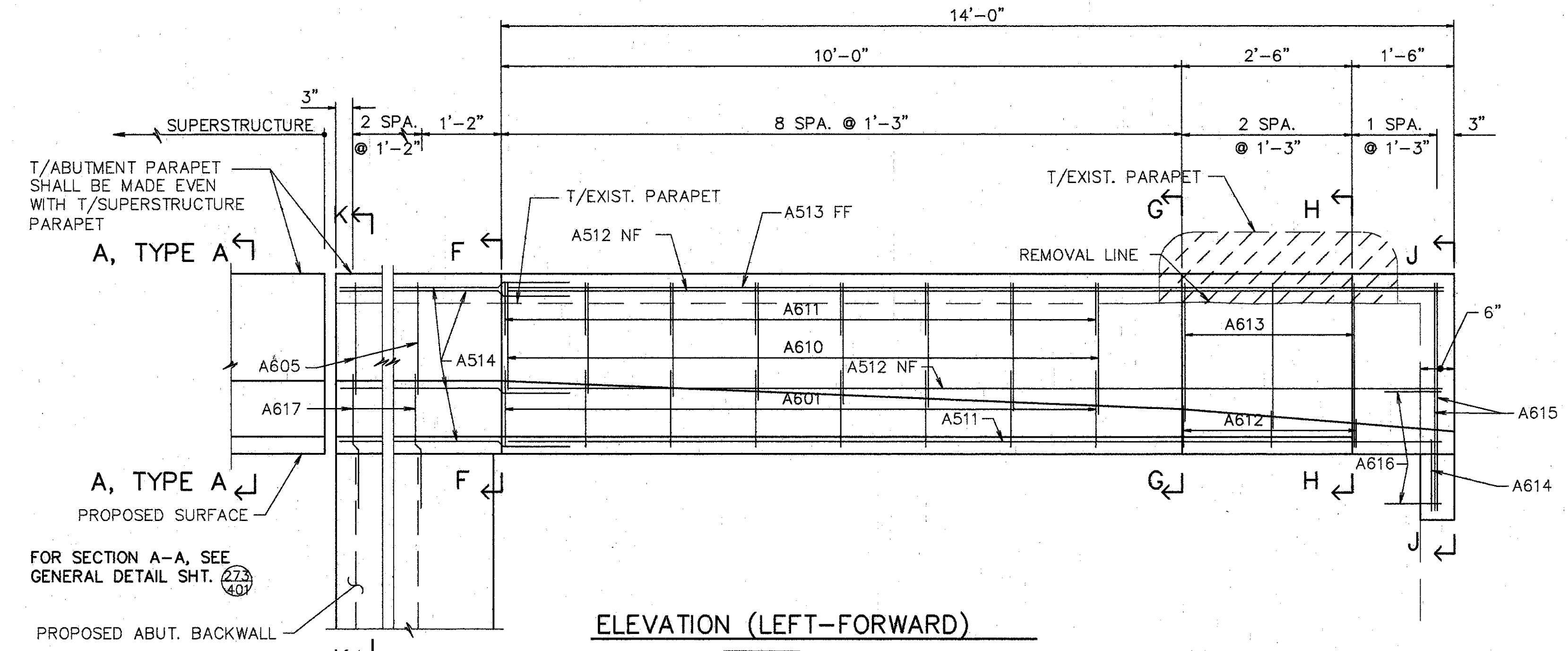
PLAN - LEFT FORWARD ABUTMENT MODIFICATION



ELEVATION SUPERSTRUCTURE PARAPET



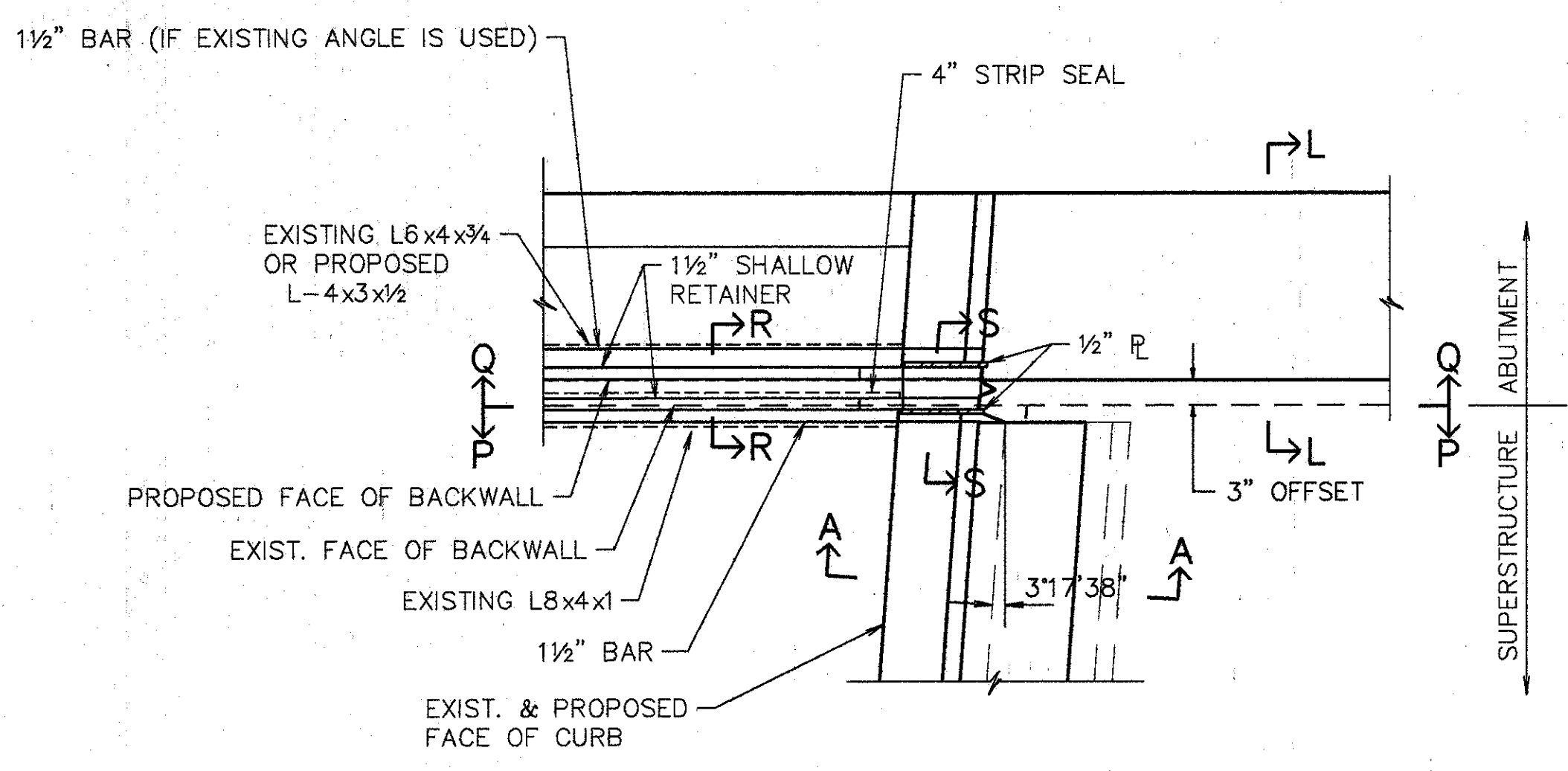
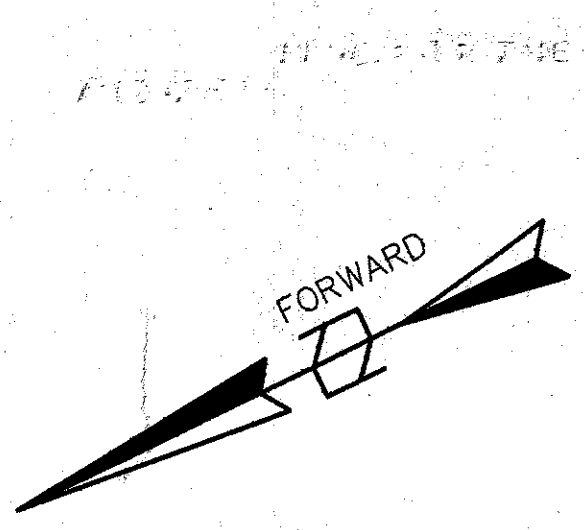
PART PLAN @ LEFT-FORWARD ABUTMENT



ELEVATION (LEFT-FORWARD)

SEE SHEETS 2&4/7 FOR NOTES AND ADDITIONAL SECTIONS NOT SHOWN

FOR DETAIL OF EXPANSION JOINT SEE PART PLAN @ LEFT-FORWARD ABUTMENT THIS SHEET.



PART PLAN @ RIGHT-FORWARD ABUTMENT

- NOTES:  
 1. TYPE "A" WATERPROOFING AT THE BRIDGE LIMIT END OF THE APPROACH SLAB (AS PER STD. DWG. AS-1-81) SHALL BE INCLUDED IN THE PRICE BID FOR ITEM 611 APPROACH SLAB.

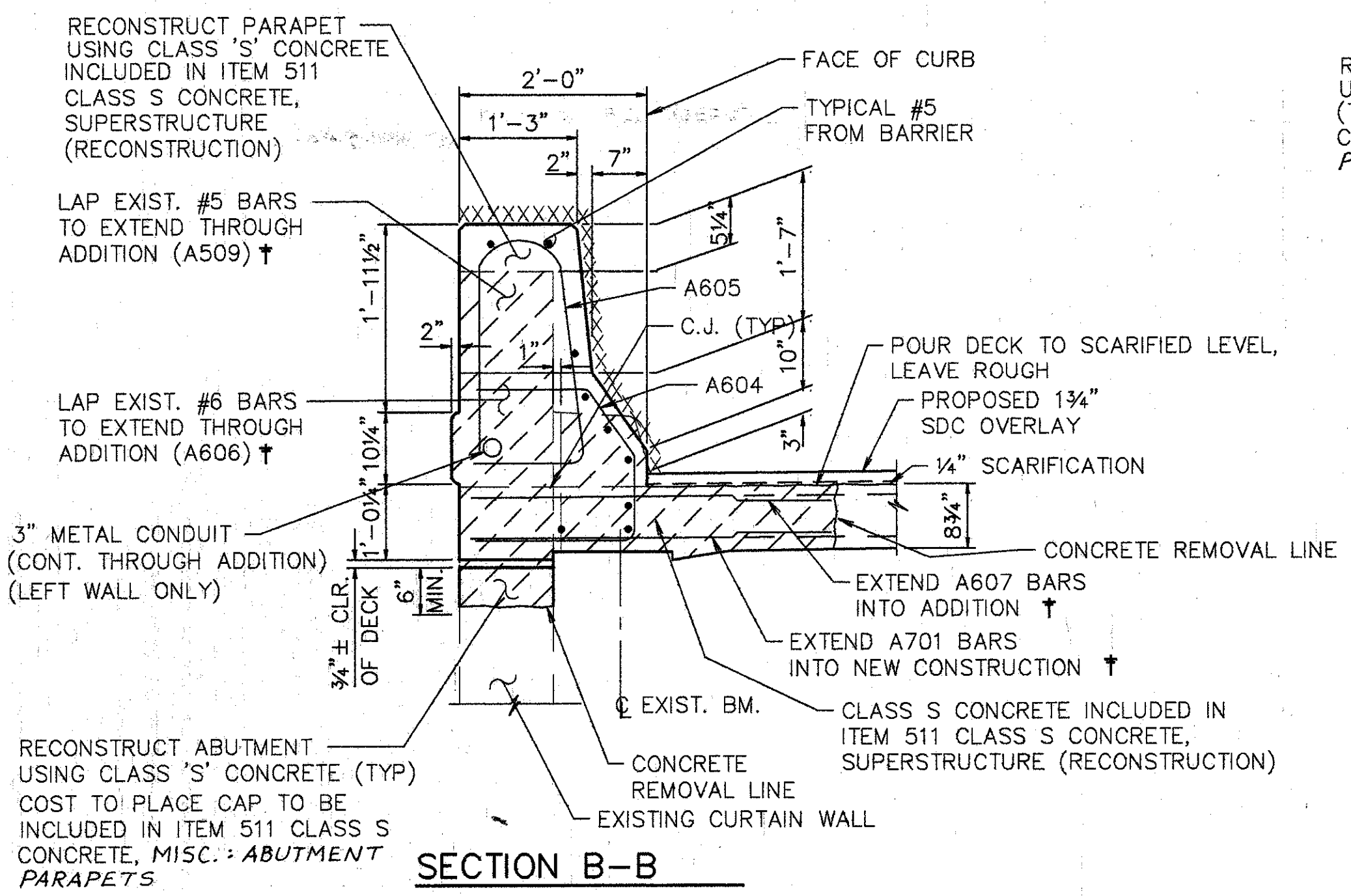
- NOTES:  
 L DENOTES LEFT SIDE  
 R DENOTES RIGHT SIDE  
 RF DENOTES RIGHT FORWARD  
 LF DENOTES LEFT FORWARD  
 RR DENOTES RIGHT REAR  
 LR DENOTES LEFT REAR  
 NF DENOTES NEAR FACE  
 FF DENOTES FAR FACE  
 EF DENOTES EACH FACE

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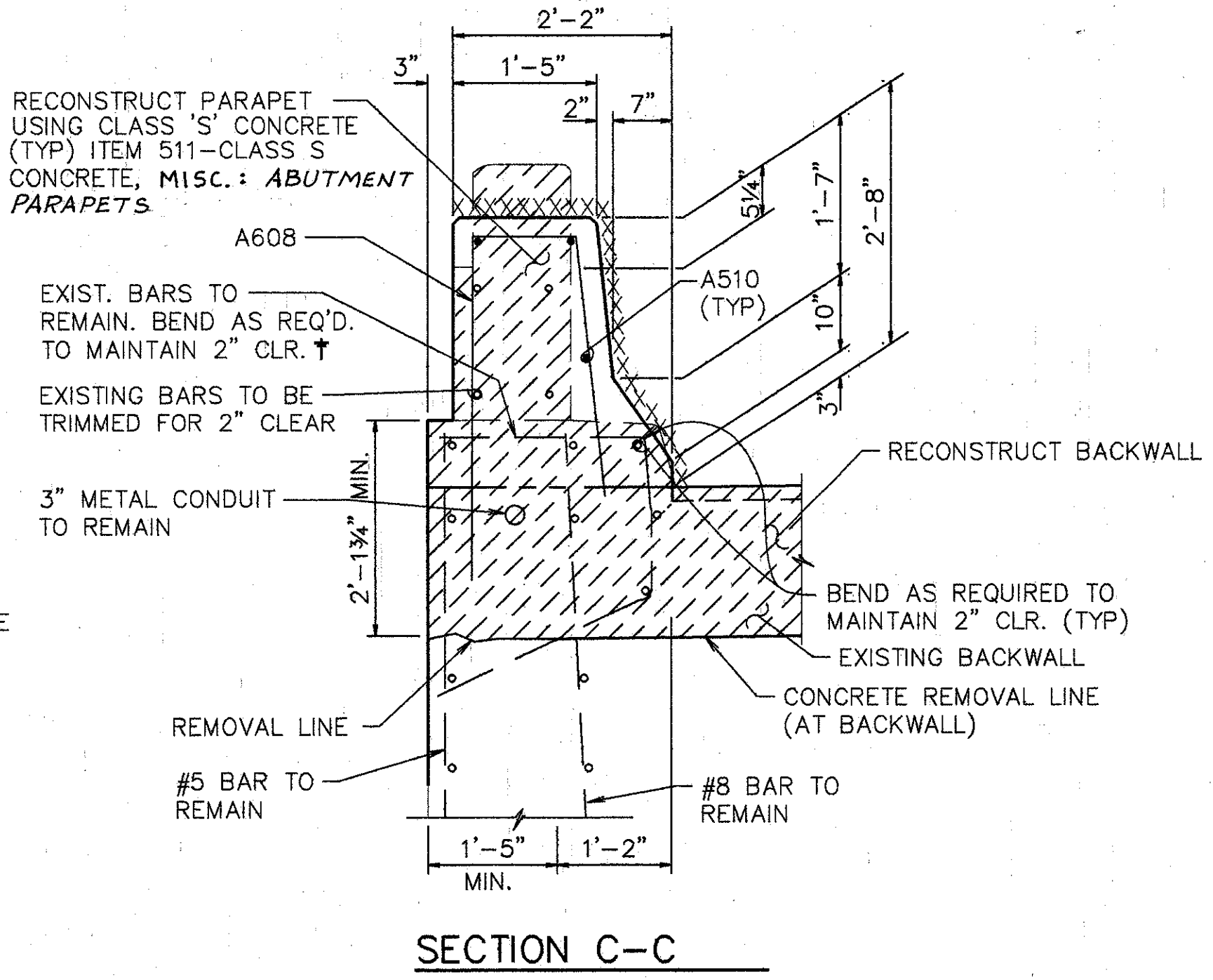
**ABUTMENT PLAN & PARAPET ELEVATIONS**  
 BRIDGE NO. HAM-42-0264R  
 OVER RAMP RF, NORTHBOUND READING RD. AND EDEN PARK ENT.  
 HAMILTON COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
L.A.T.M.	D.E.E.		M.A.A.	DEM	11/11/94	

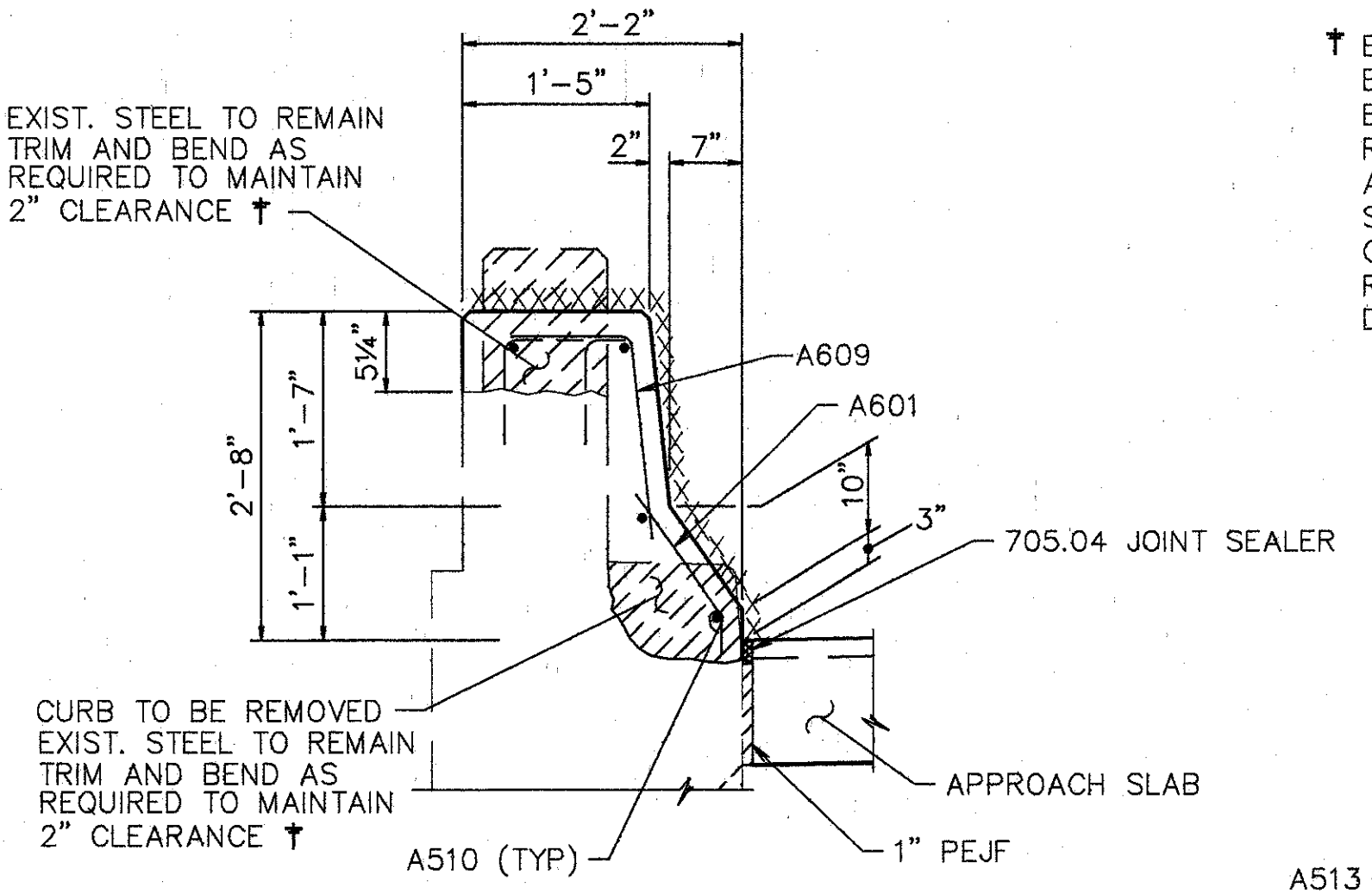
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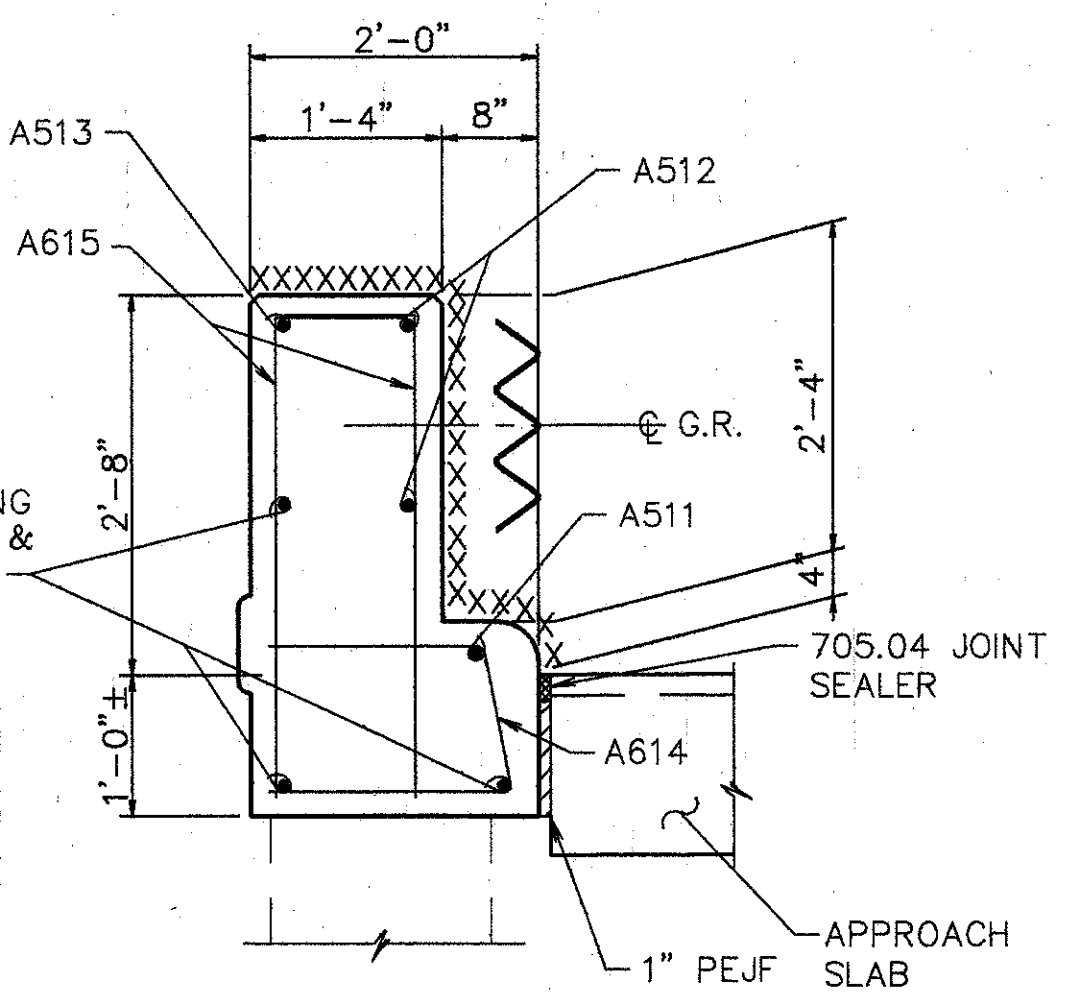
SECTION B-B



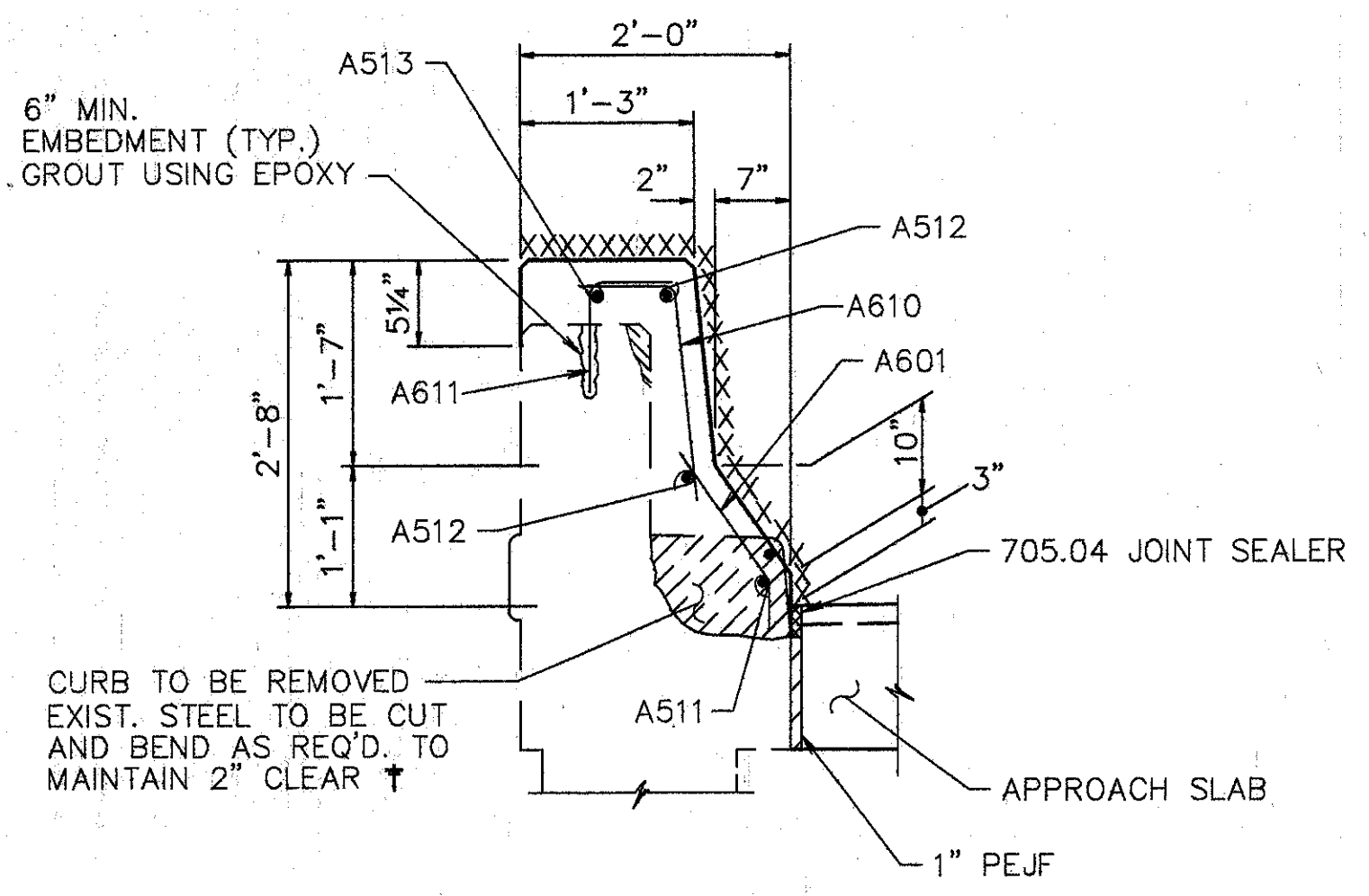
SECTION C-C



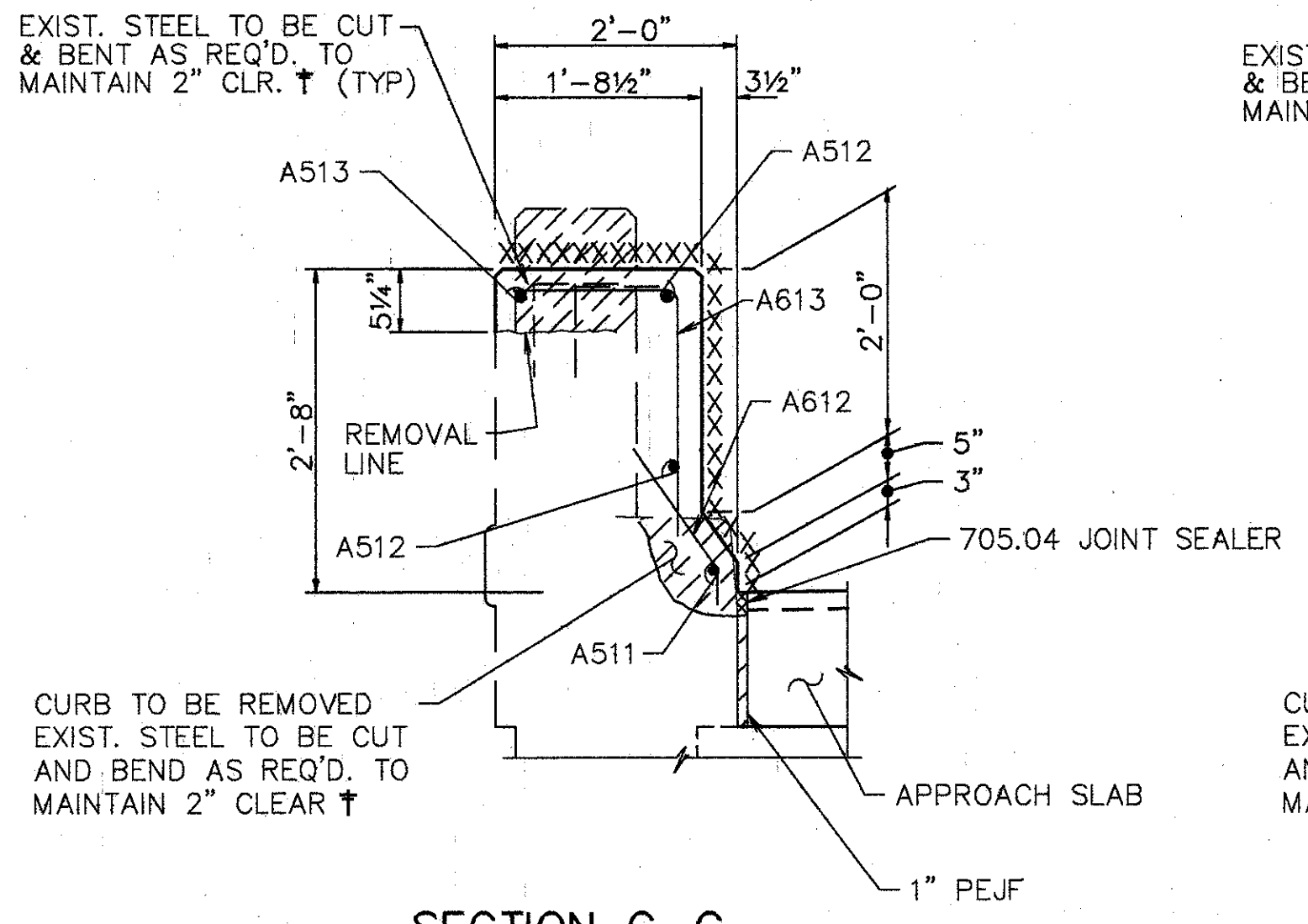
SECTION D-D



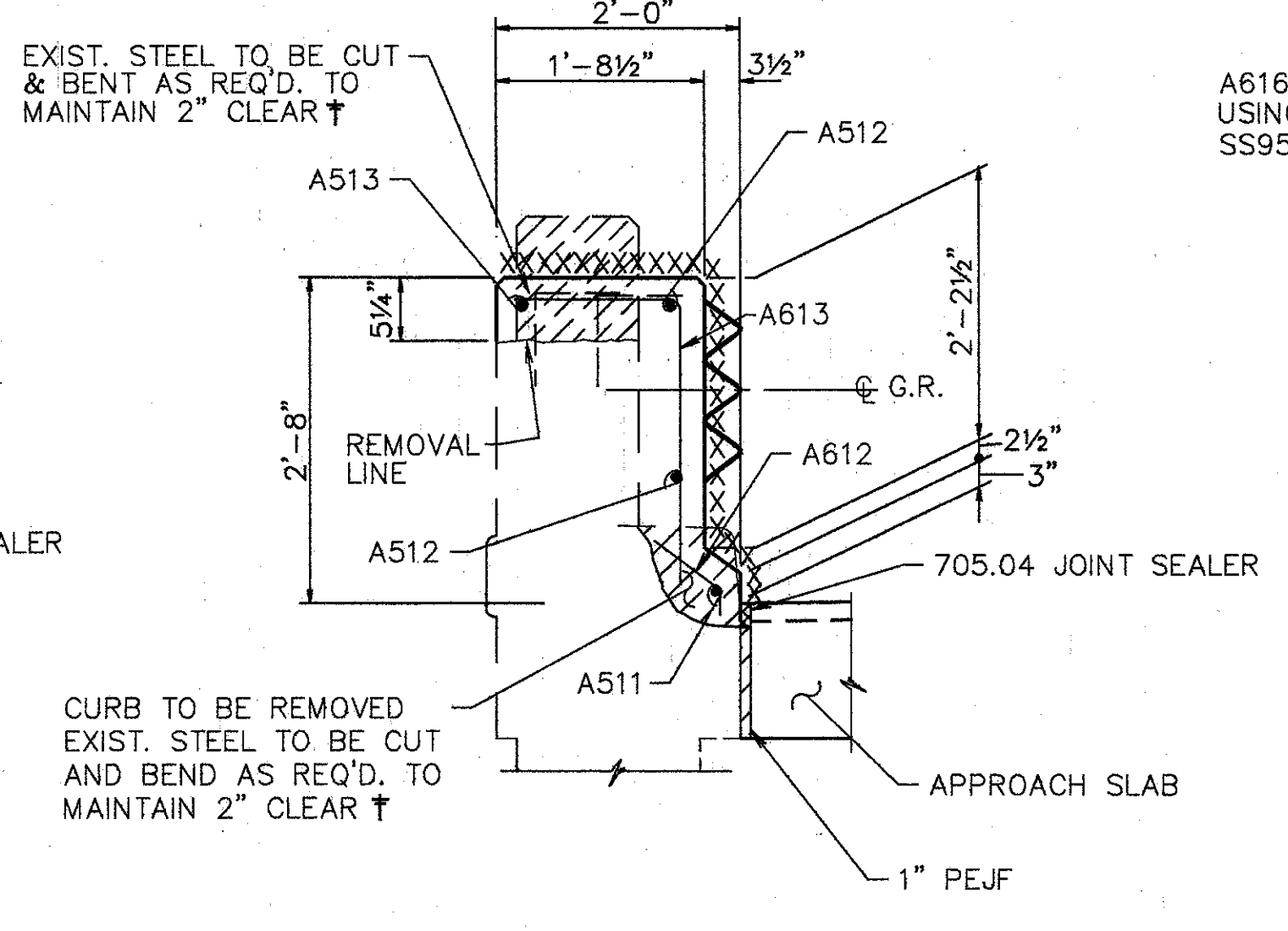
SECTION J-J



SECTION F-F

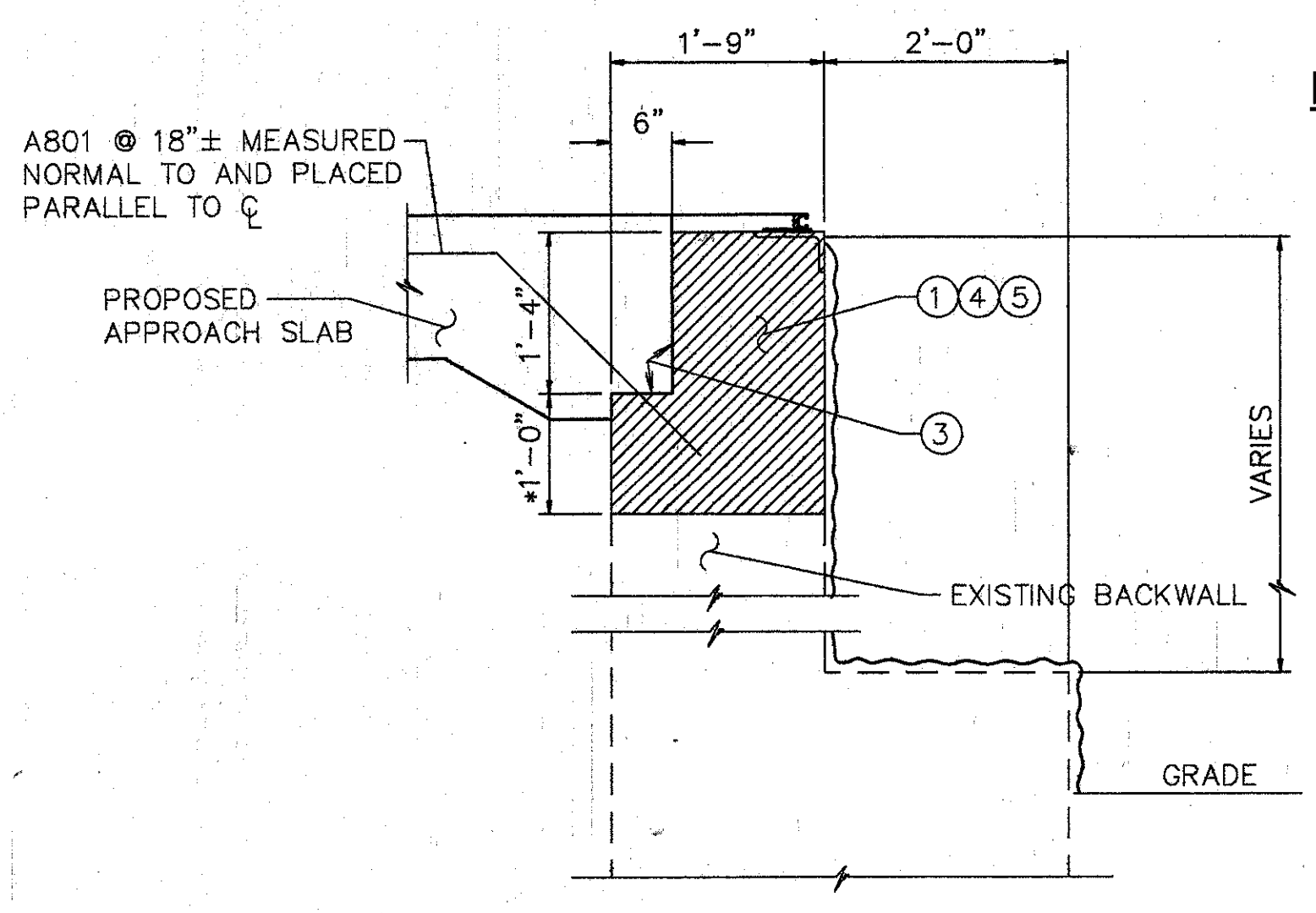


SECTION G-G



SECTION H-H

A616 (UNO) GROUT ANCHORING USING EPOXY AS PER SS853 & SS956. 6" MIN. EMBEDMENT



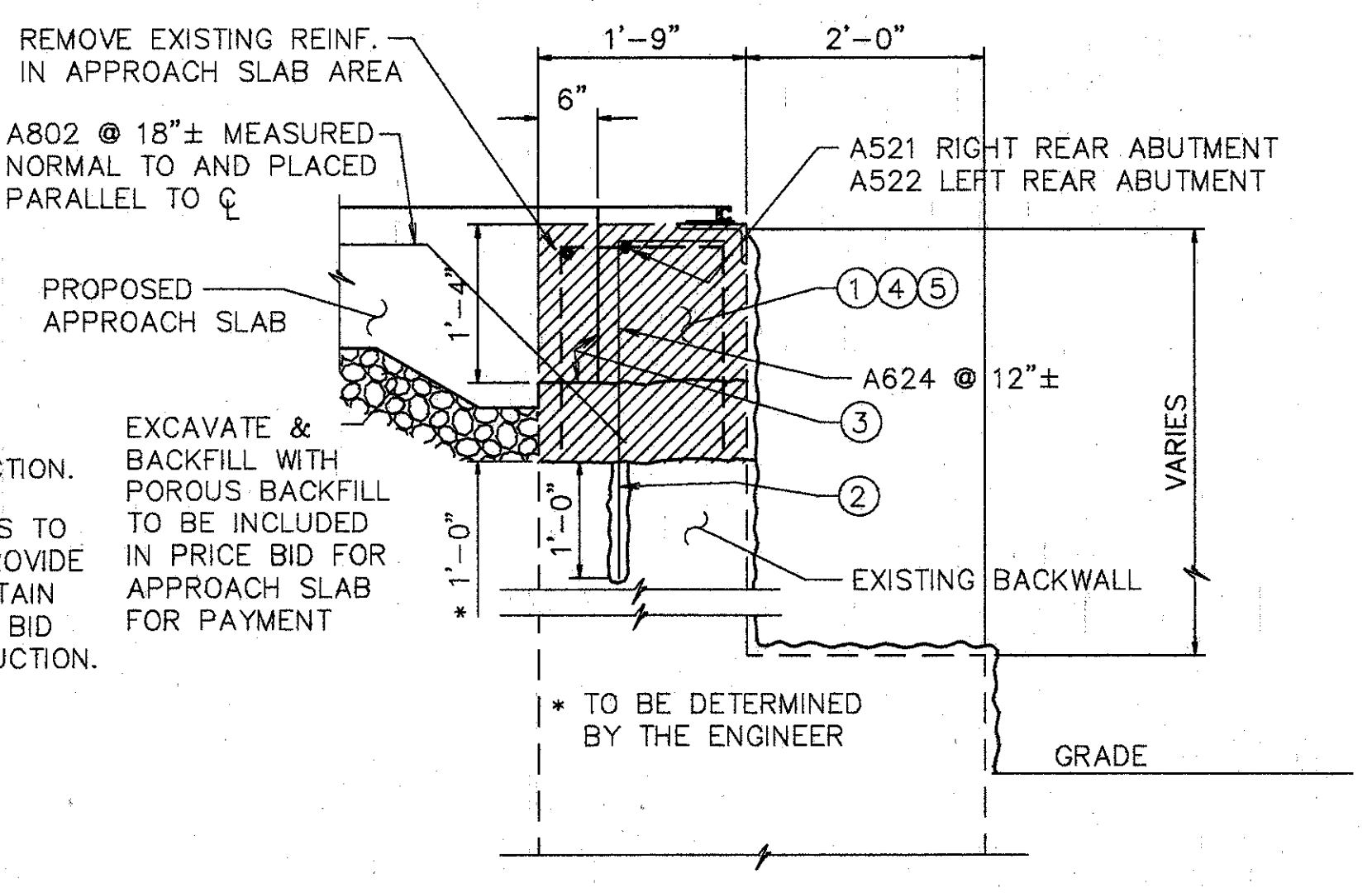
SECTION E-E

NOTES FOR SECTION E-E & T-T

- EXISTING REINFORCING STEEL TO REMAIN ~ REINFORCING STEEL DAMAGED TO BE REPLACED AT CONTRACTOR'S EXPENSE.
- 1' MIN. EMBEDMENT (SEE DOWEL HOLE GENERAL NOTE) ITEM 510.
- TYPE 'A' WATERPROOFING (PAYMENT INCLUDED IN THE PRICE BID FOR APPROACH SLAB).
- CLASS 'C' CONCRETE, ABUTMENT RECONSTRUCTION.
- PROVIDE CONTRACTION AND EXPANSION JOINTS TO MATCH THOSE IN EXISTING BACKWALL AND PROVIDE CONSTRUCTION JOINTS AS REQUIRED TO MAINTAIN TRAFFIC. PAYMENT TO BE INCLUDED IN PRICE BID FOR ITEM 511 CLASS C CONCRETE RECONSTRUCTION.

EXISTING CONCRETE TO BE REMOVED INCLUDE IN ITEM 202 FOR PAYMENT.

SURFACE TO BE SEALED UNDER ITEM SPECIAL- SEALING OF CONCRETE SURFACE, EPOXY.



SECTION T-T

- EXISTING CURB AND PARAPET TO BE REMOVED UNDER ITEM 202, PORTIONS OF STRUCTURES REMOVED.
- EXISTING RAILING & POSTS TO BE REMOVED & STACKED NEATLY ALONG THE RIGHT OF WAY FOR DISPOSAL BY THE CONTRACTOR. ALL WORK SHALL BE INCLUDED IN THE PRICE BID FOR ITEM 202, PORTIONS OF STRUCTURE REMOVED.
- XXXXXX SURFACES TO BE SEALED UNDER ITEM SPECIAL, SEALING OF CONCRETE SURFACES.
- ~~~~~ SURFACE TO BE SEALED UNDER ITEM SPECIAL, SEALING OF CONCRETE SURFACES, EPOXY.

- NOTES:
- TYPE 'A' WATERPROOFING AT THE BRIDGE LIMIT END OF THE APPROACH SLAB (AS PER STD. DWG. AS-1-81) SHALL BE INCLUDED IN THE PRICE BID FOR ITEM 611 APPROACH SLAB.
  - FOR ADDITIONAL SECTIONS SEE SHEET 2&5 / 7

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PARAPET SECTIONS

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 OVER RAMP RF, NORTHBOUND READING RD. AND EDEN PARK ENT.  
 HAMILTON COUNTY

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L.A.T.M.	D.E.E.		M.A.A.	DEM	11/11/94	

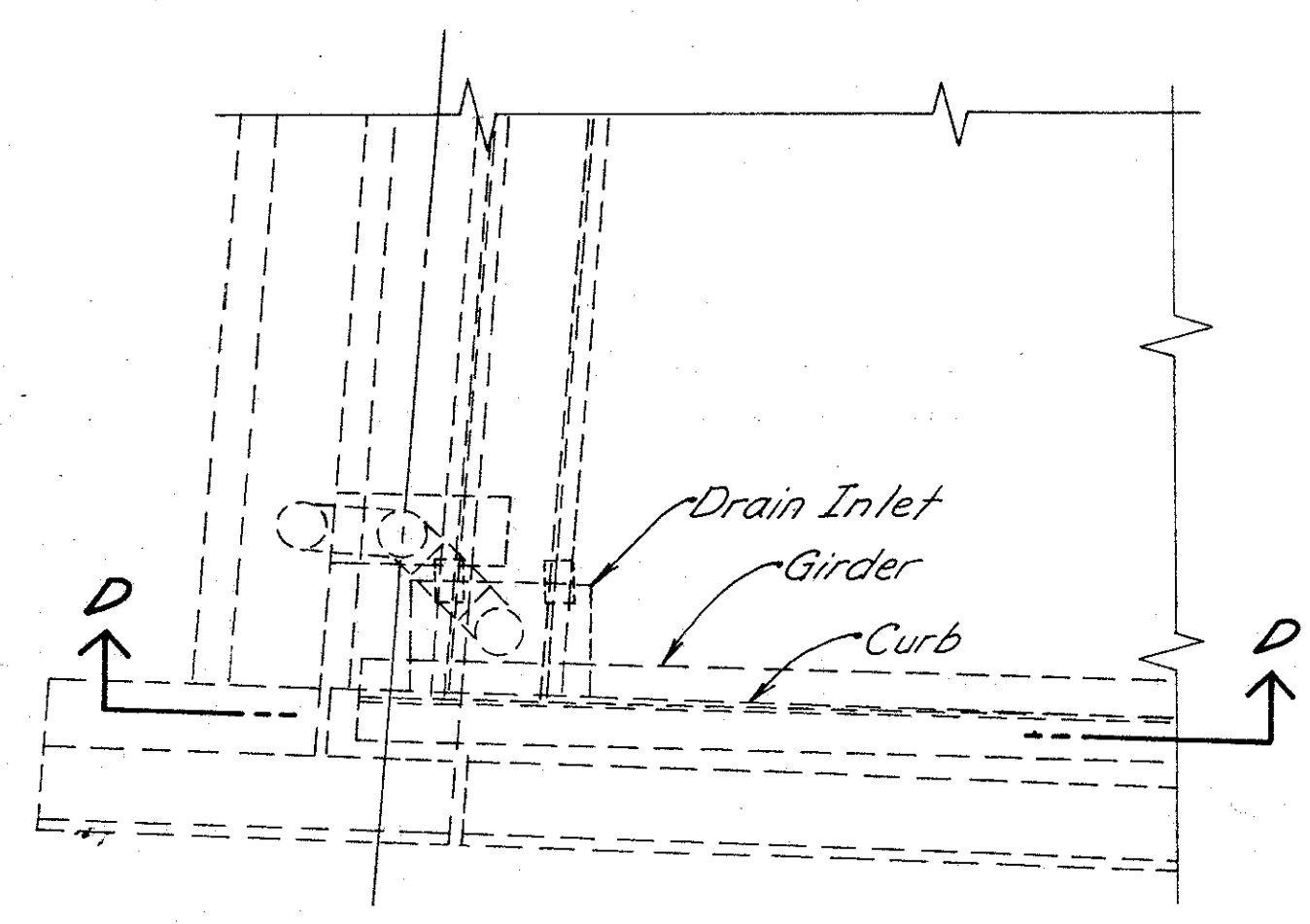




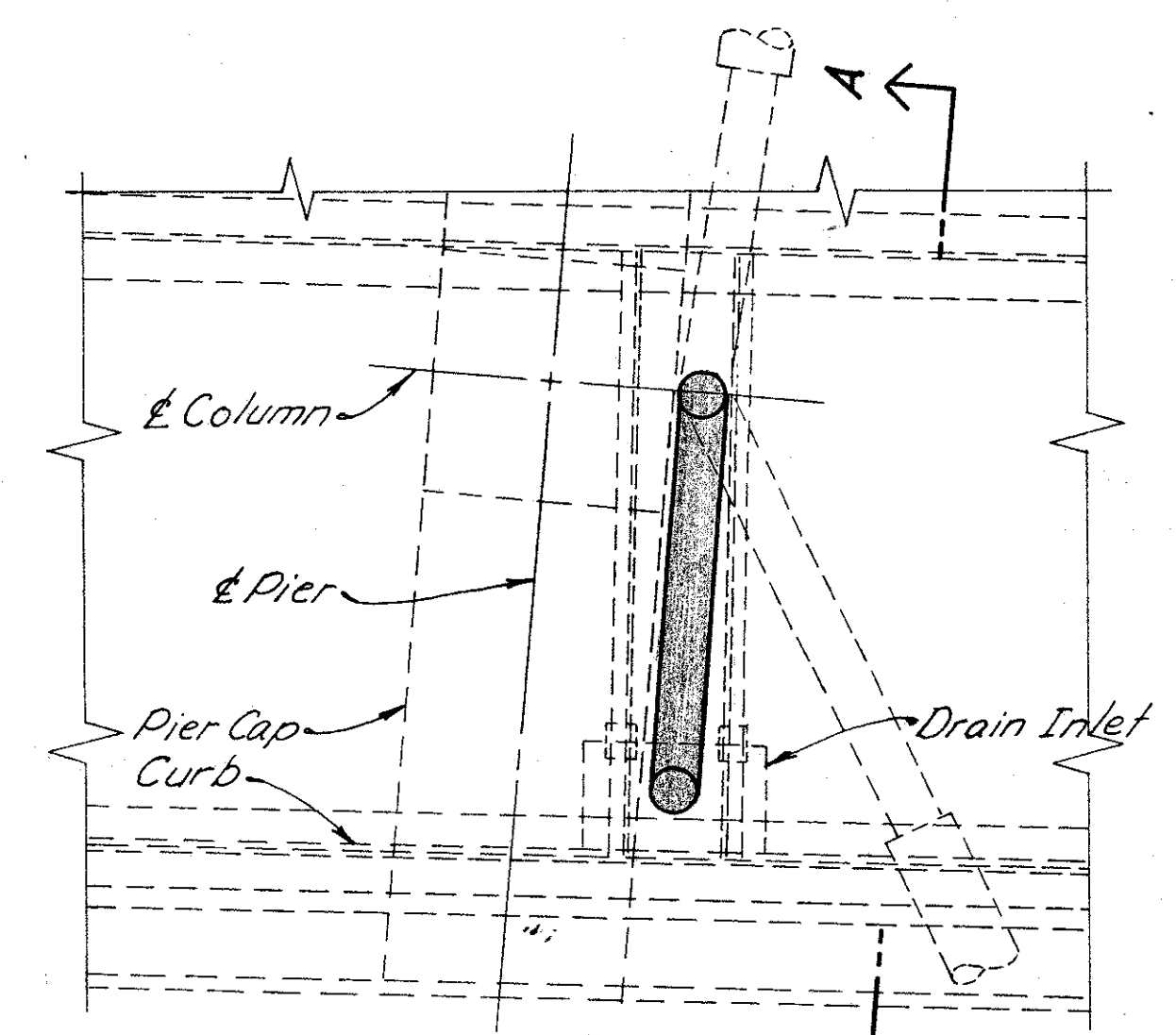




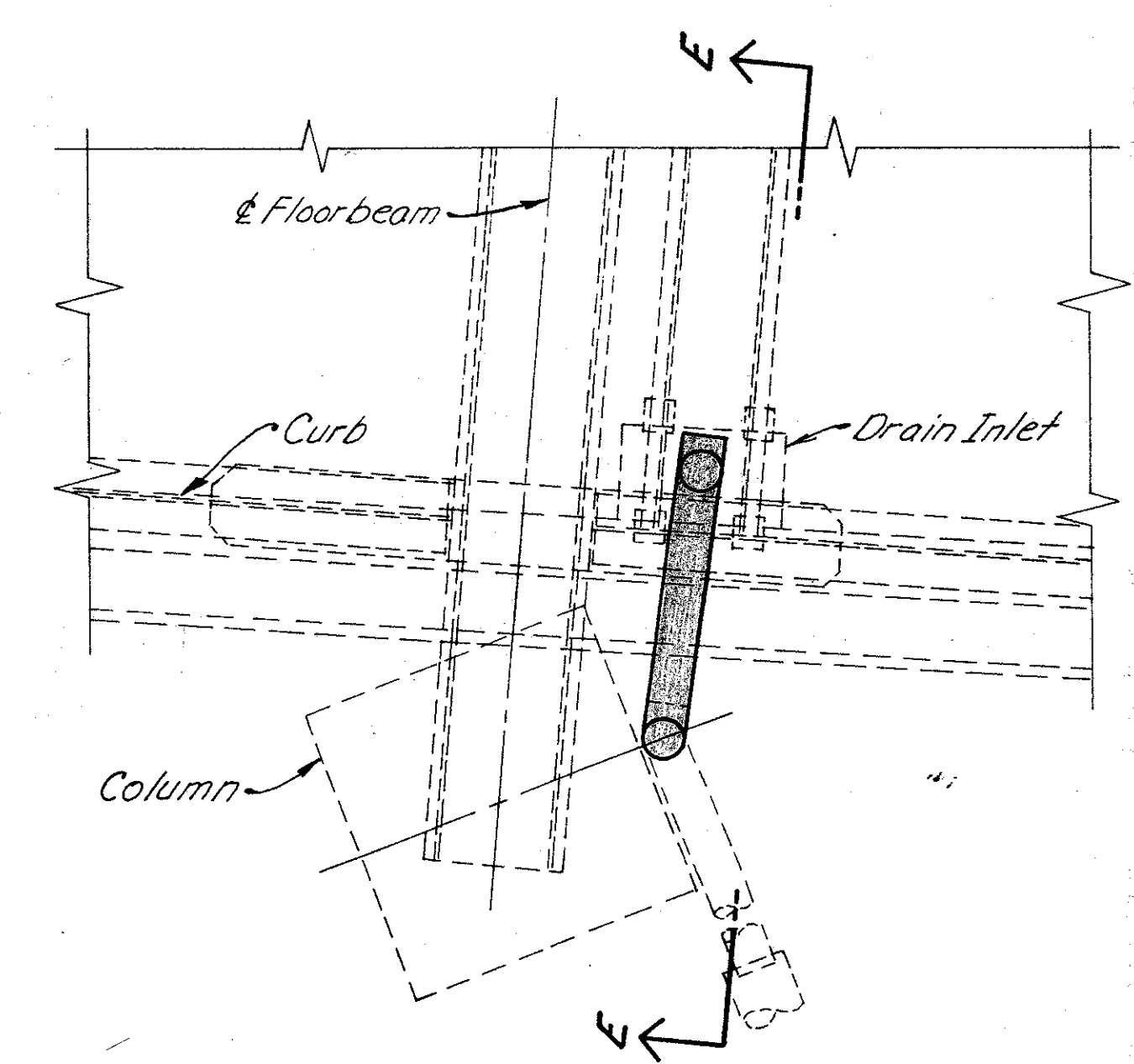
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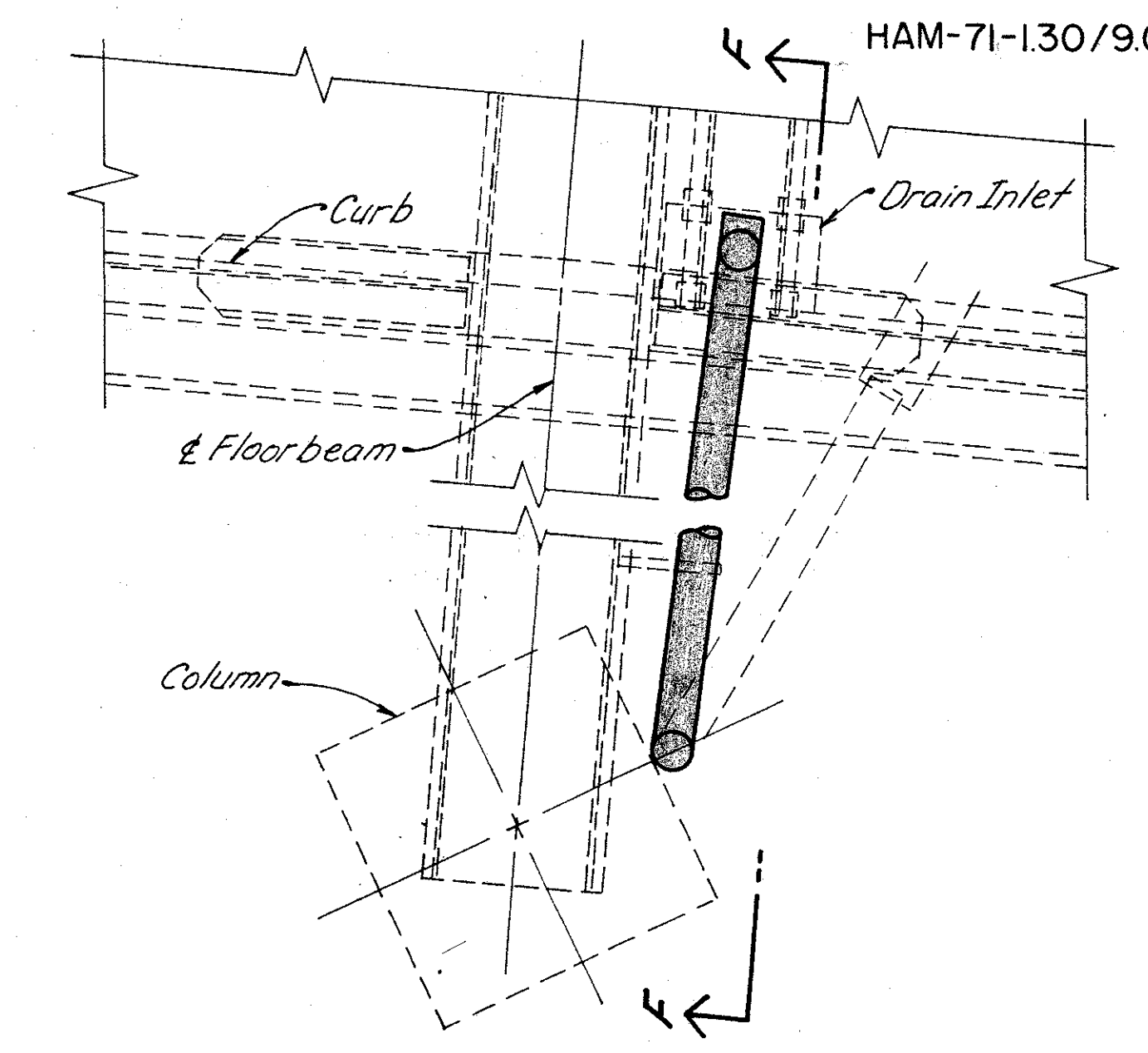
PLAN FOR DRAIN INLET AT SOUTH ABUTMENT  
(No Work Req'd)



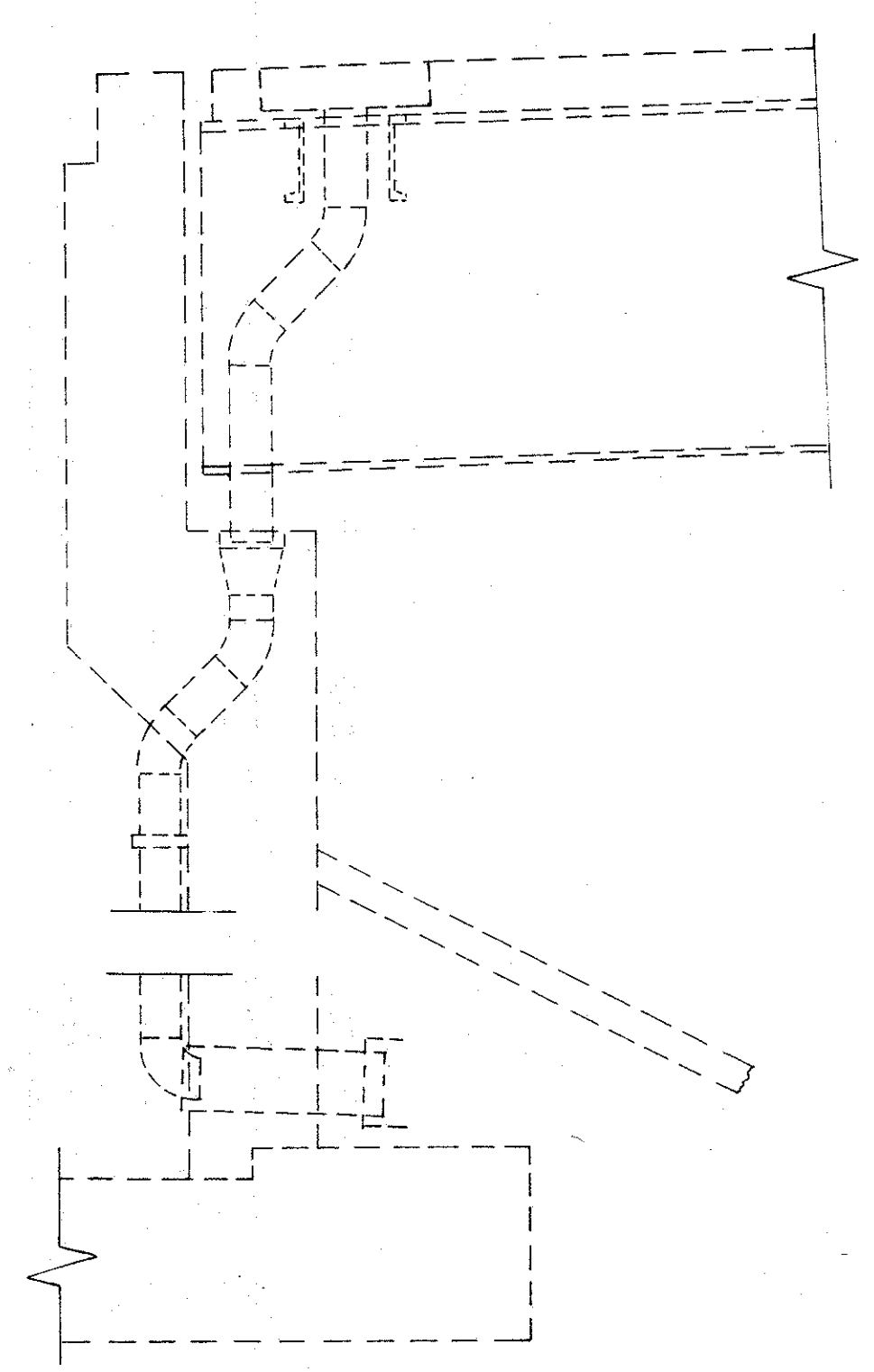
PLAN FOR DRAIN INLET AT PIER 1  
(Pier 5 Similar)



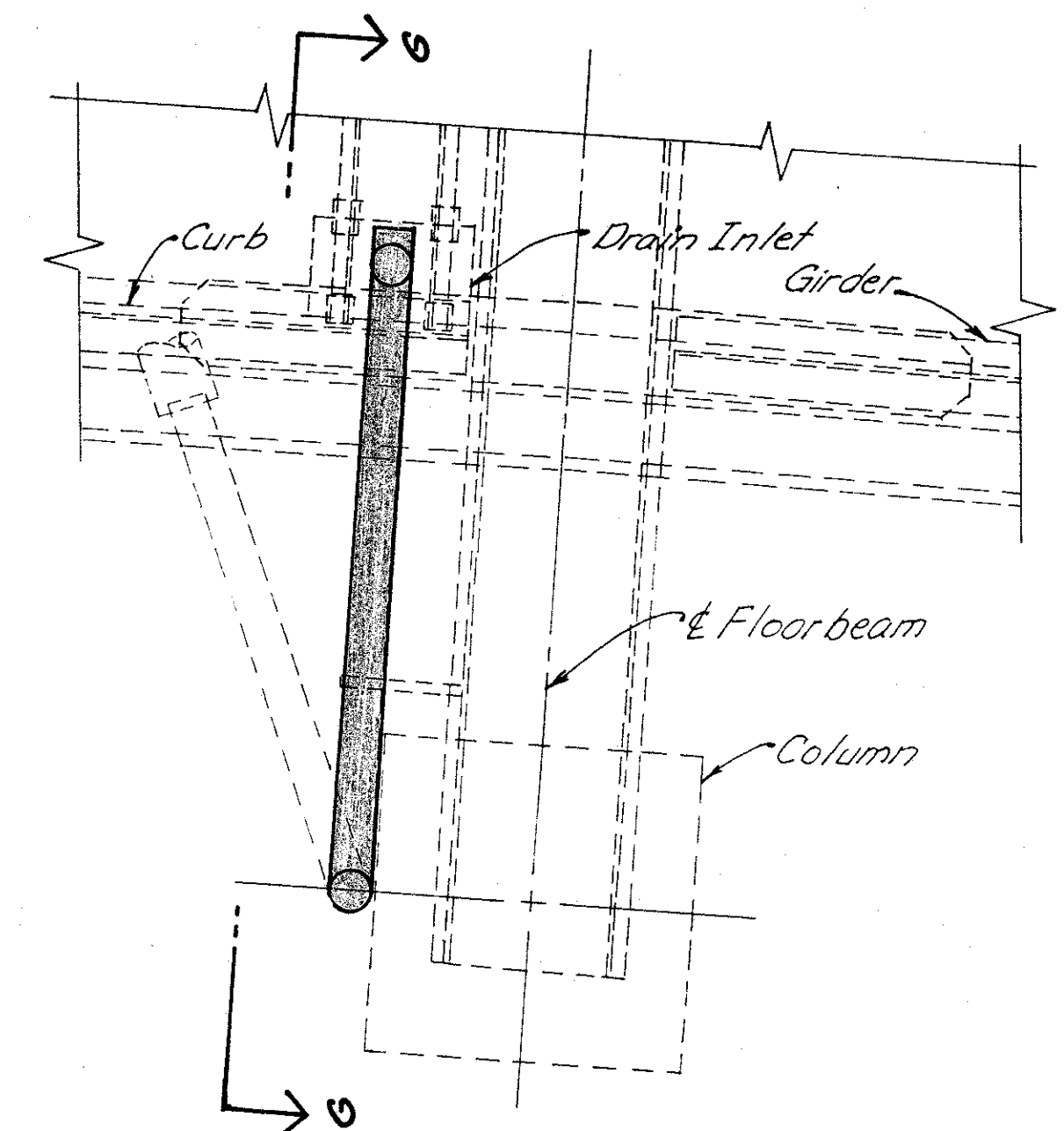
PLAN FOR DRAIN INLET AT PIER 2



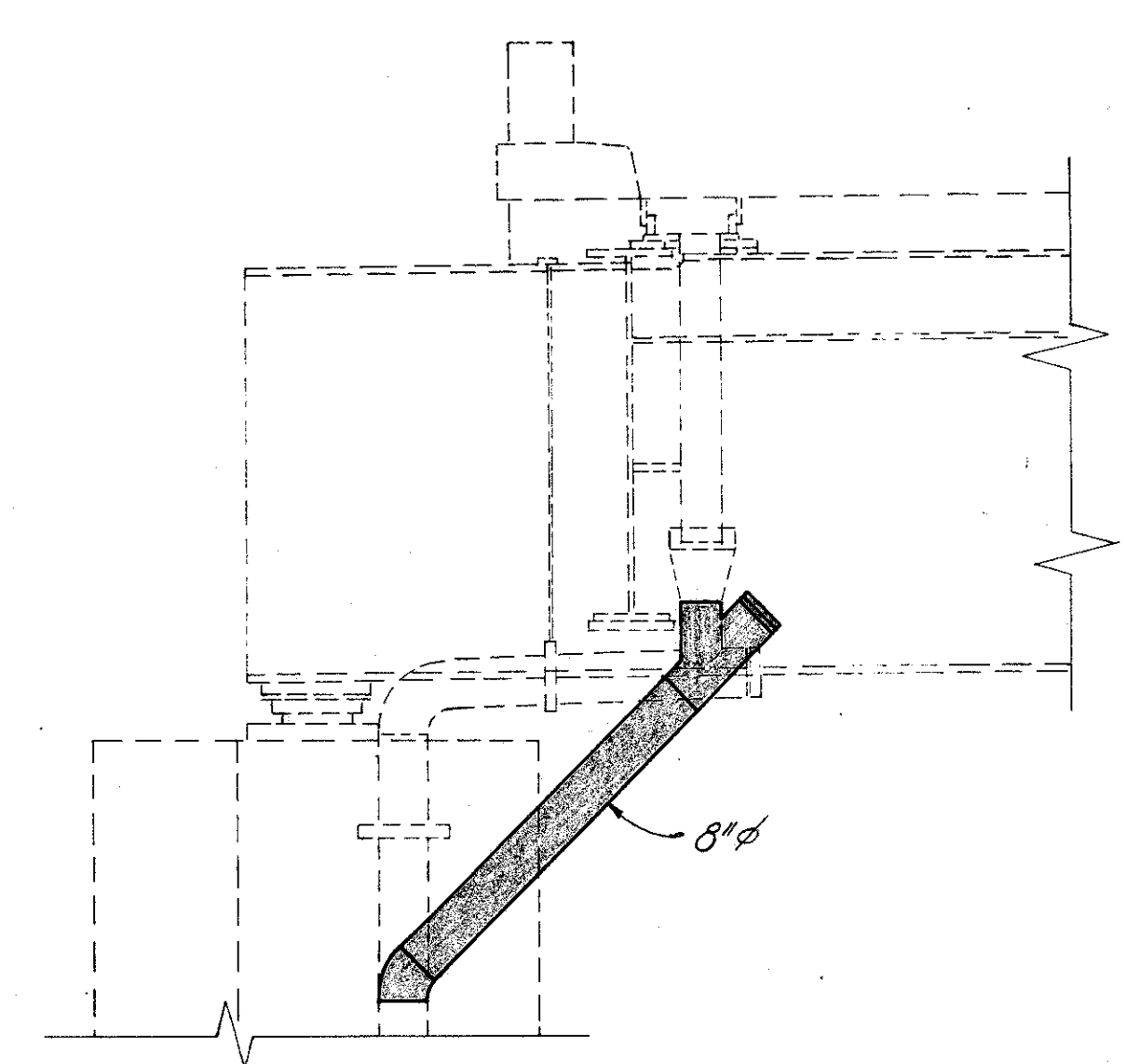
PLAN FOR DRAIN INLET AT PIER 3



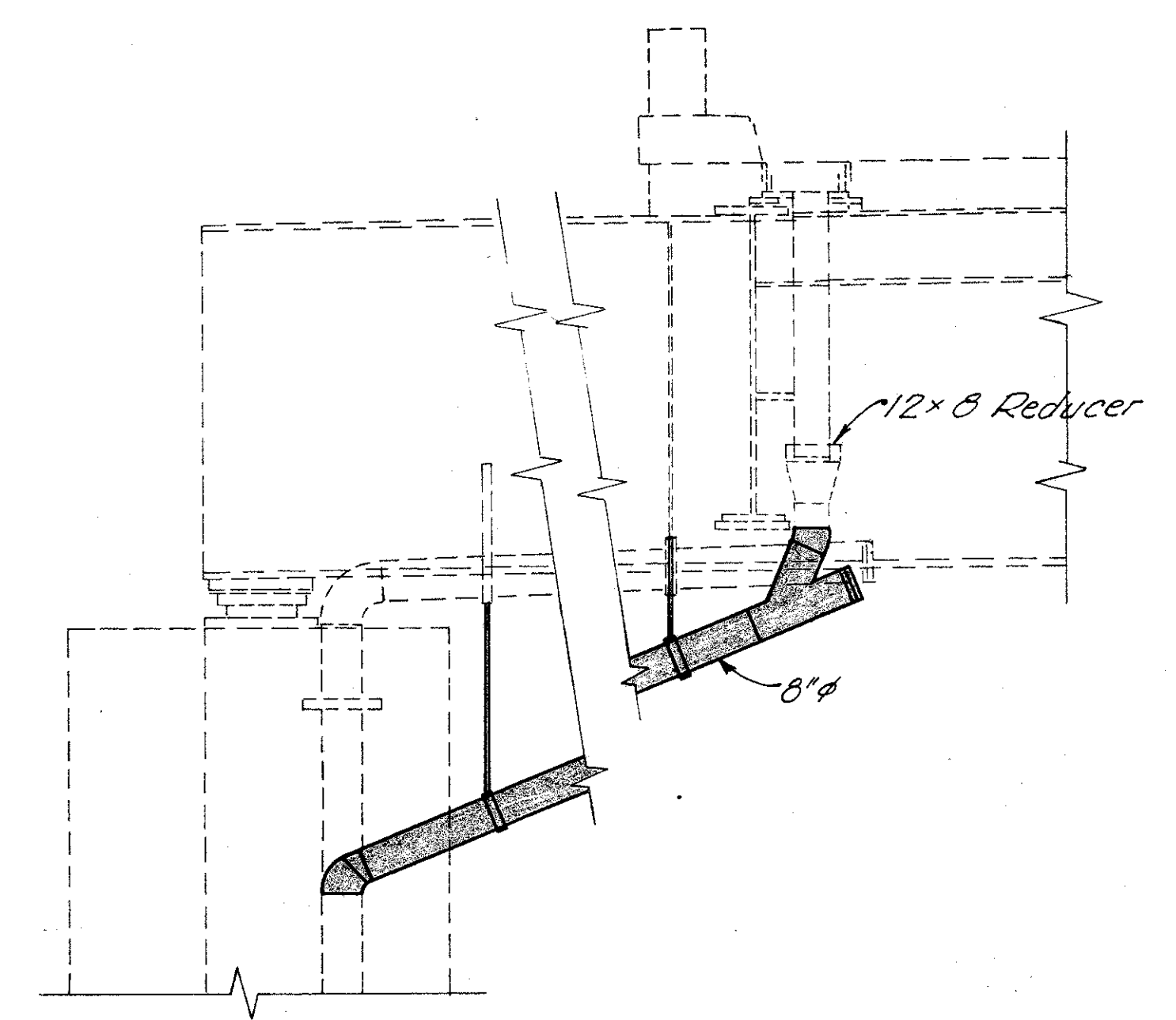
SECTION D-D



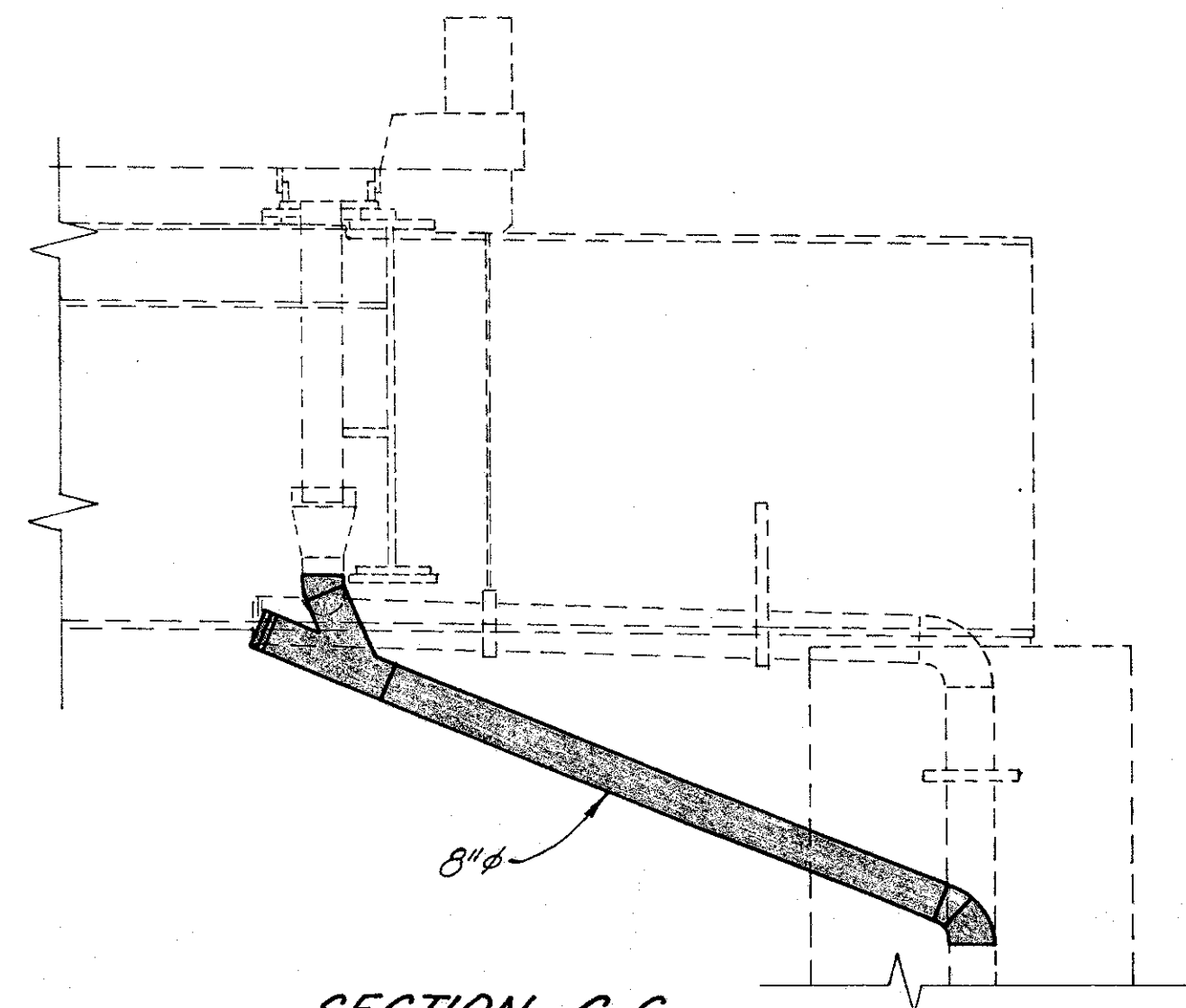
PLAN FOR DRAIN INLET AT PIER 4



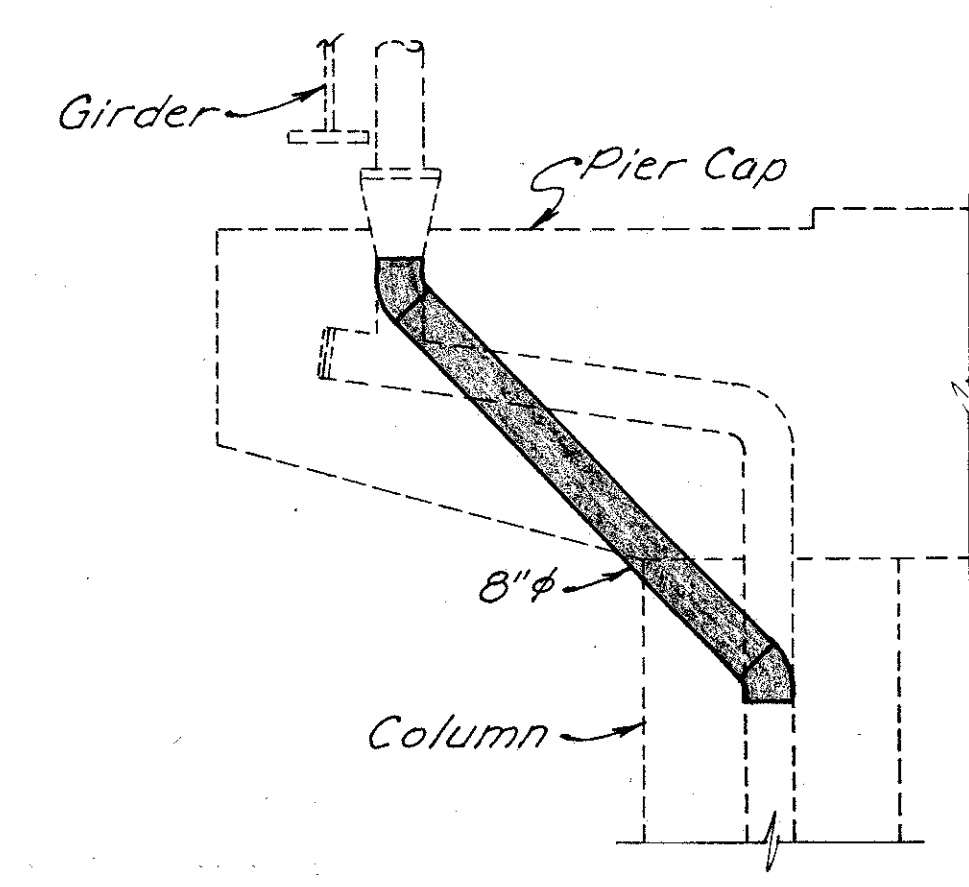
SECTION E-E



SECTION F-F



SECTION G-G



SECTION A-A

- For drainage piping requirements see General Notes on sheet 273 401
- Approximate No of Linear Feet of proposed 8" pipe (including specials) = 106

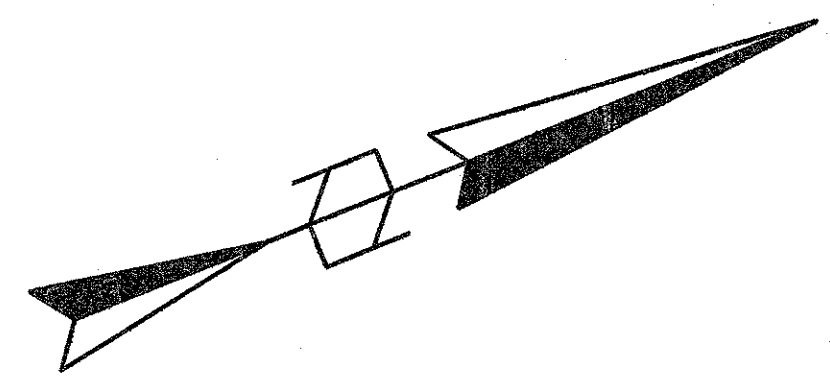
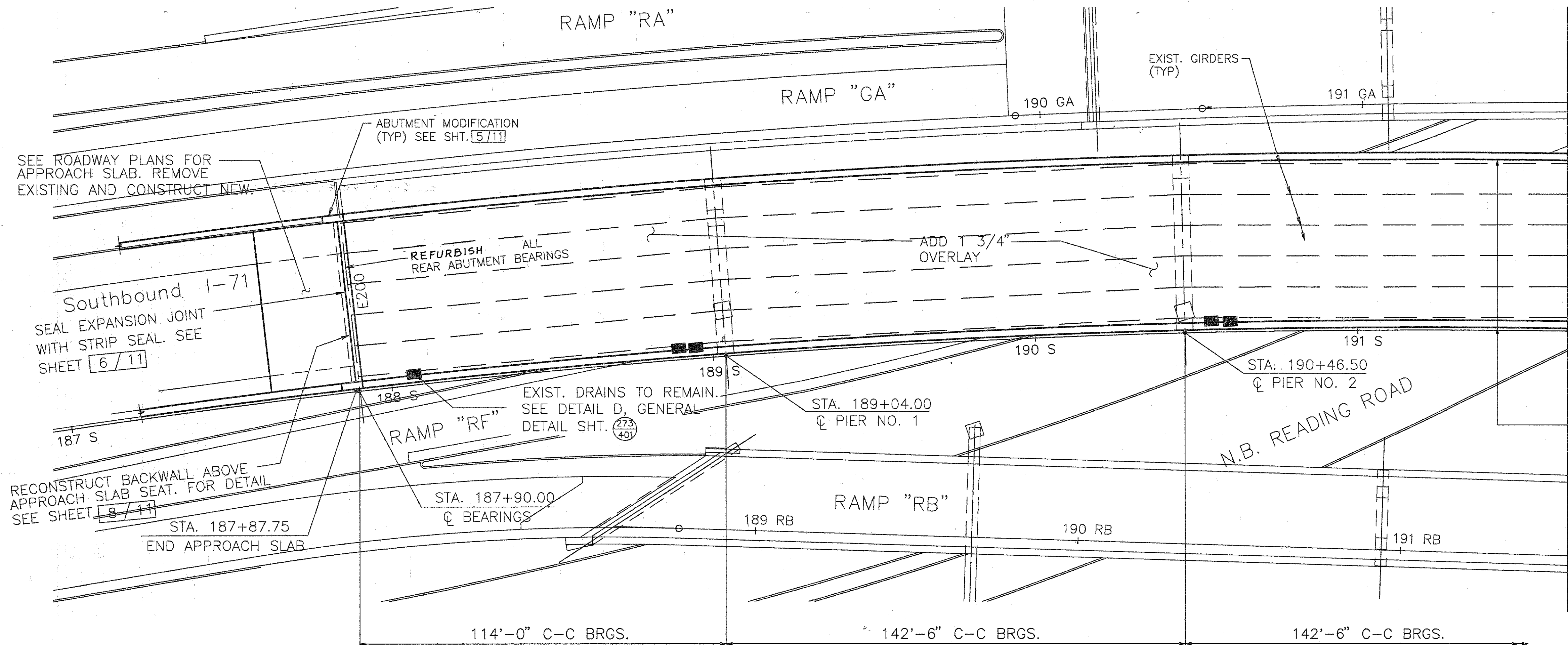
**WOOLPERT CONSULTANTS**  
409 East Monument Avenue  
Dayton, Ohio 45402-1226

**DRAINAGE DETAILS**

BRIDGE NO. HAM-42-0264 R  
OVER READING ROAD

HAMILTON COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
L.A.T.M.	RACH		DE.M.	P.W.G.	11/11/94	



SEE ROADWAY PLANS FOR APPROACH SLAB. REMOVE EXISTING AND CONSTRUCT NEW.

Southbound I-71  
SEAL EXPANSION JOINT WITH STRIP SEAL. SEE SHEET 6/11

RECONSTRUCT BACKWALL ABOVE APPROACH SLAB SEAT. FOR DETAIL SEE SHEET 8/11

ABUTMENT MODIFICATION (TYP) SEE SHT. 5/11

REFURBISH REAR ABUTMENT ALL BEARINGS

ADD 1 3/4" OVERLAY

EXIST. DRAINS TO REMAIN. SEE DETAIL D, GENERAL DETAIL SHT. 273/401

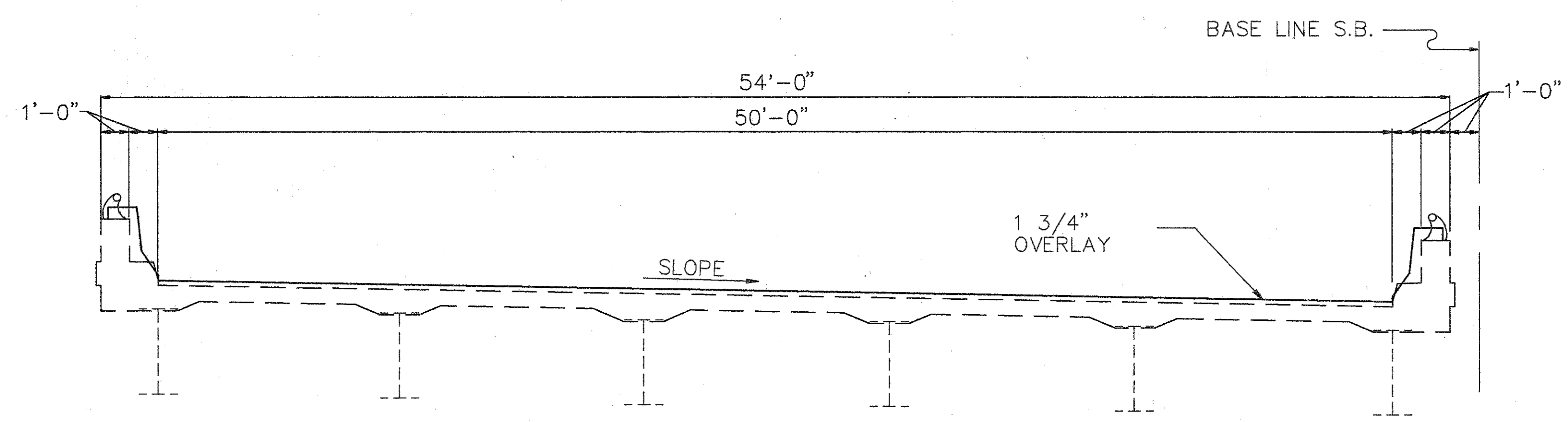
MATCH LINE

MODIFY BRIDGE RAILING. SEE SECTION A-A TYPE "A" GENERAL DETAIL SHEET 273/401 FOR ELEVATION SEE SHT. 5/11

- NOTE: 1. SEAL PARAPETS, BACKWALLS, AND PIERS.  
2. SEE JUNCTION BOX EXTENSION DETAIL GENERAL DETAIL SHT. 273/401 FOR BARRIER RETROFIT AT JUNCTION BOXES.

SLIDING R SIZE	JACK CAPACITY REQ'D. (MIN)
E200	125 TON
E150	125 TON

PLAN



TYPICAL BRIDGE SECTION

EXISTING STRUCTURE

TYPE: CONTINUOUS STEEL PLATE GIRDERS WITH REINFORCED CONCRETE DECK & SUBSTRUCTURE  
 SPANS: 114'-0", 142'-6", 142'-6", 98'-0", 90'-6", 94'-6", 68'-6" (SPAN LENGTHS MEASURED ALONG R)  
 ROADWAY: 50'-0" F/F CURBS W/1'-0" CURBS =52'-0" F/F PARAPETS  
 SKEW: 90°(TANGENT TO CURVE)  
 LOADING FREQUENCY: CF=2000(57) ADEQUATE FOR AASHO ALTERNATE LOADING  
 WEARING SURFACE: 1" MONOLITHIC CONCRETE  
 APPROACH SLABS: AS-1-54 (25'-0" LONG)  
 ALIGNMENT: VARIES, SEE PLAN  
 SUPERELEVATION: VARIES, SEE PLAN

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GENERAL PLAN

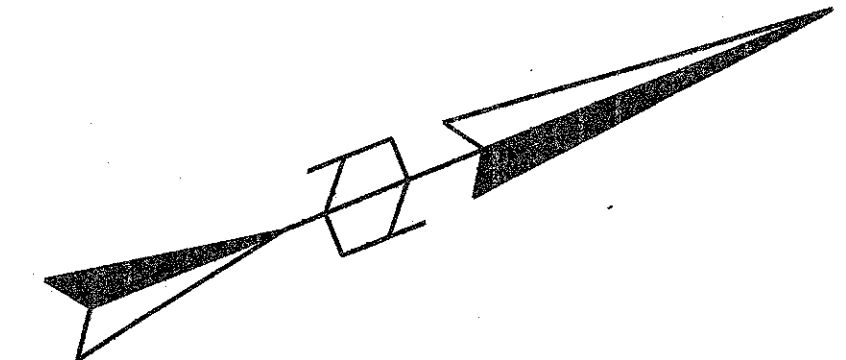
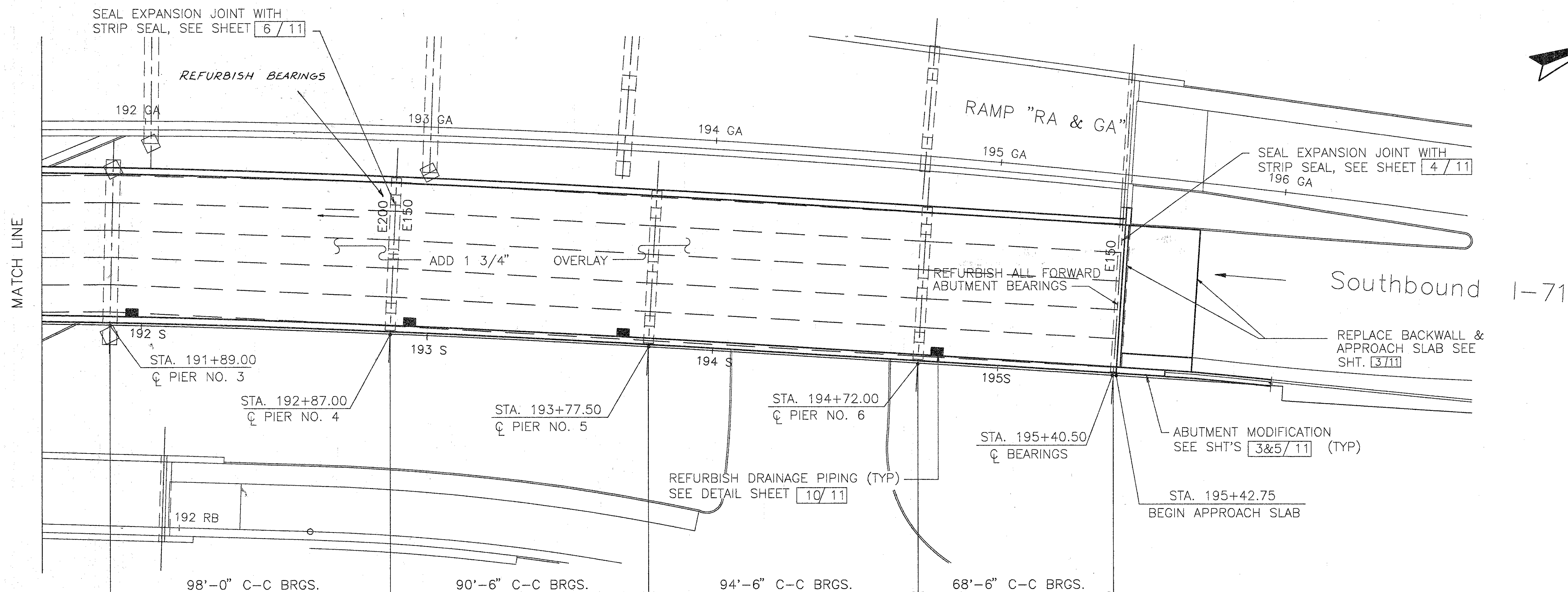
BRIDGE NO. HAM-71-0243L  
 OVER N.B. READING ROAD

HAMILTON COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
L.A.T.M.	D.E.E.		M.A.A.	D.E.M.	11/94	

Last Plot: MAY 15, 1991 @ 8:29 PM  
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PLAN

NOTES:

- SEAL PARAPETS, BACKWALLS, AND PIERS. SEAL ALL OF PIERS 1 THRU 3, 5 AND 6 EXCEPT THE TOP OF THE PIERS CAPS. SEAL ALL OF PIER 4 EXCEPT 1/4 OF THE AREA OF COLUMNS AWAY FROM TRAFFIC.
- SEE JUNCTION BOX EXTENSION DETAIL. GENERAL DETAIL SHT. 273/401 FOR BARRIER RETROFIT AT JUNCTION BOXES.

SLIDING R SIZE	JACK CAPACITY REQ'D. (MIN)
E200	125 TON
E150	125 TON

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2 / 11

**GENERAL PLAN**

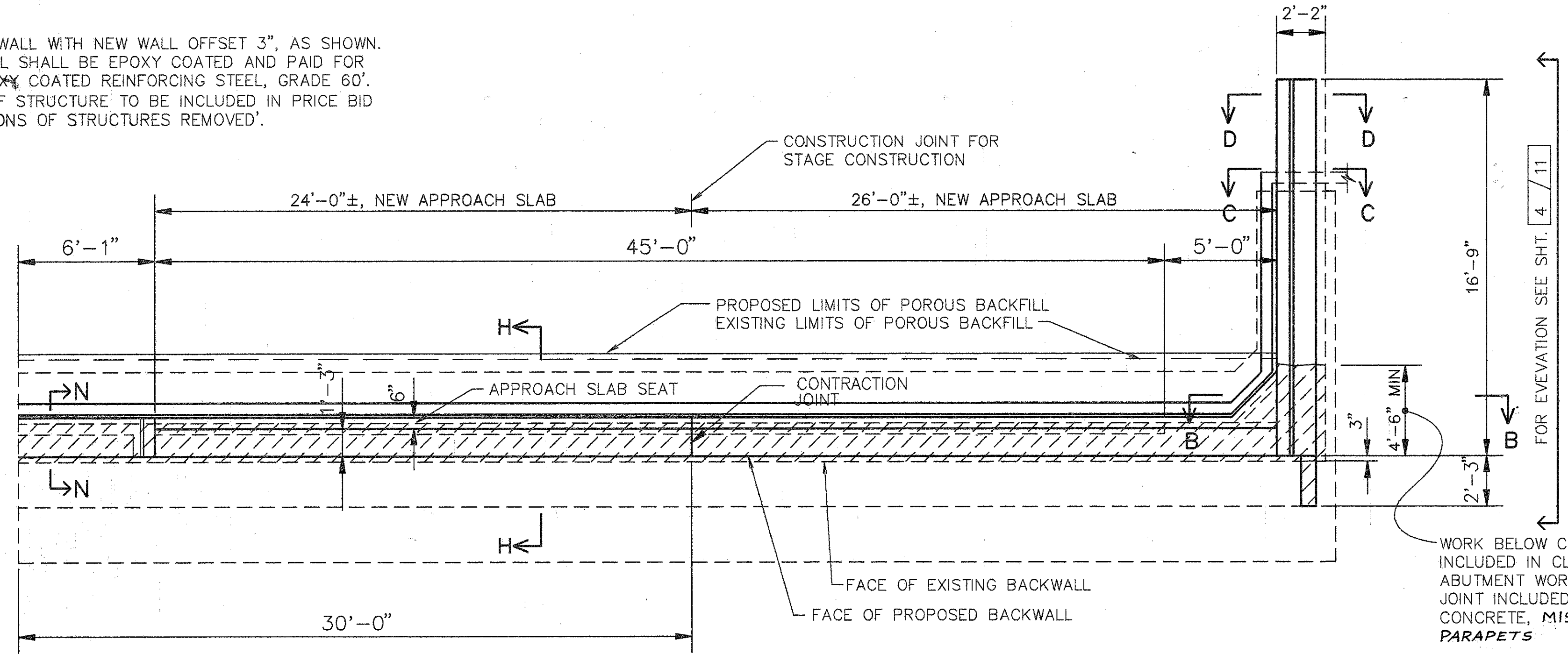
BRIDGE NO. HAM-71-0243L  
 OVER N.B. READING ROAD

HAMILTON COUNTY

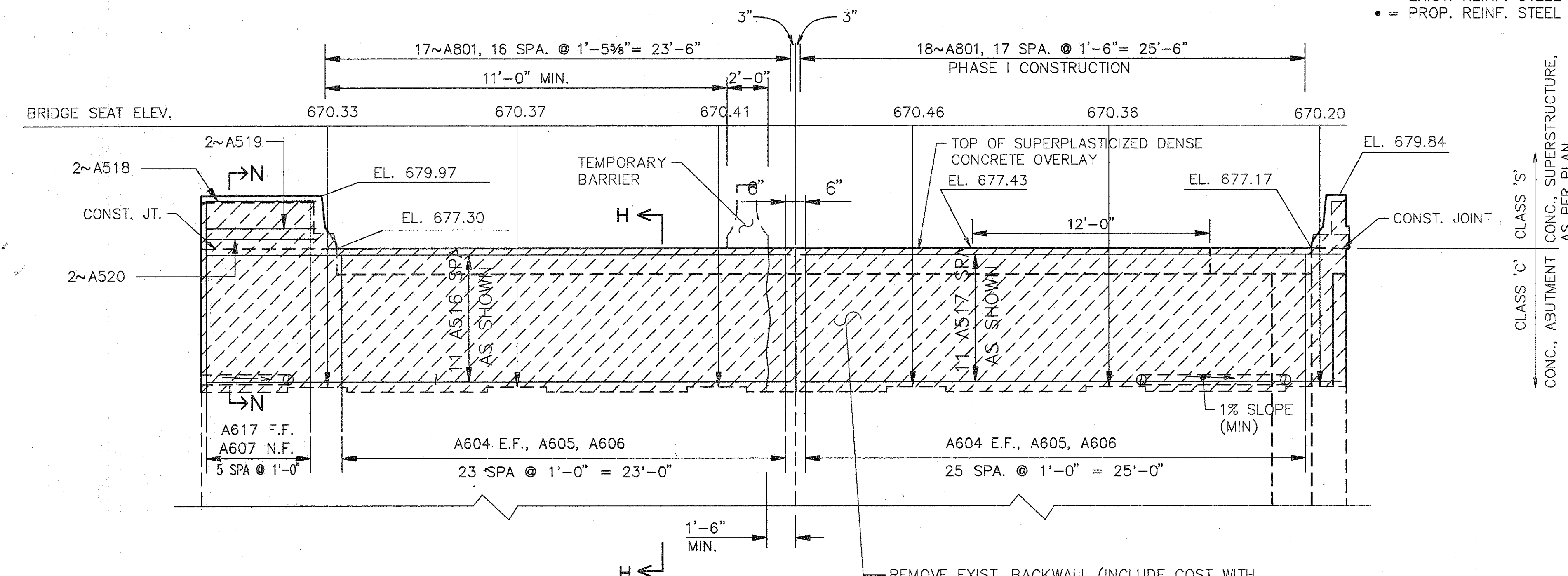
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
L.A.T.M.	D.E.E.		M.A.A.	D.E.M11/11/94		

**NOTES:**

1. REPLACE ENTIRE BACKWALL WITH NEW WALL OFFSET 3", AS SHOWN.
2. ALL REINFORCING STEEL SHALL BE EPOXY COATED AND PAID FOR UNDER ITEM 509-'EPOXY COATED REINFORCING STEEL, GRADE 60'.
3. COST FOR REMOVAL OF STRUCTURE TO BE INCLUDED IN PRICE BID FOR ITEM 202-'PORTIONS OF STRUCTURES REMOVED'.



**PLAN-FORWARD ABUTMENT**

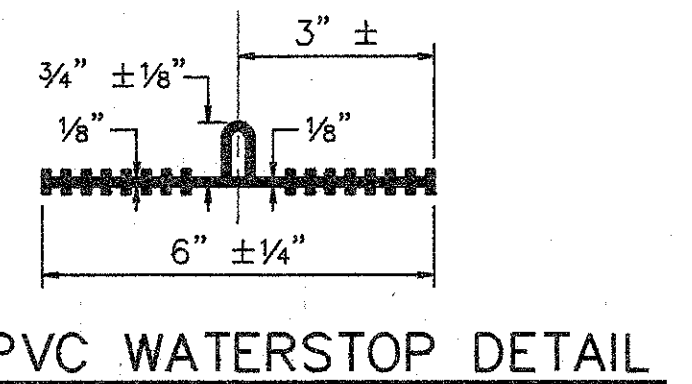
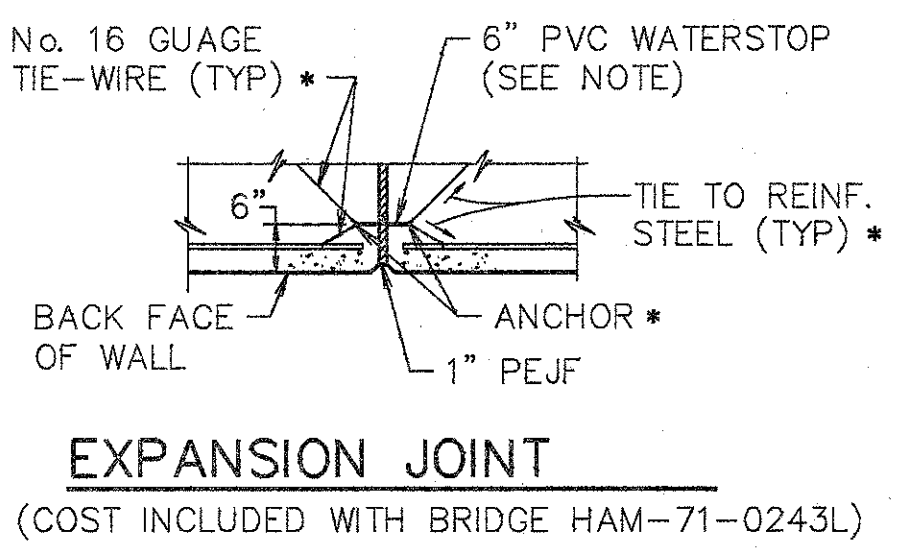
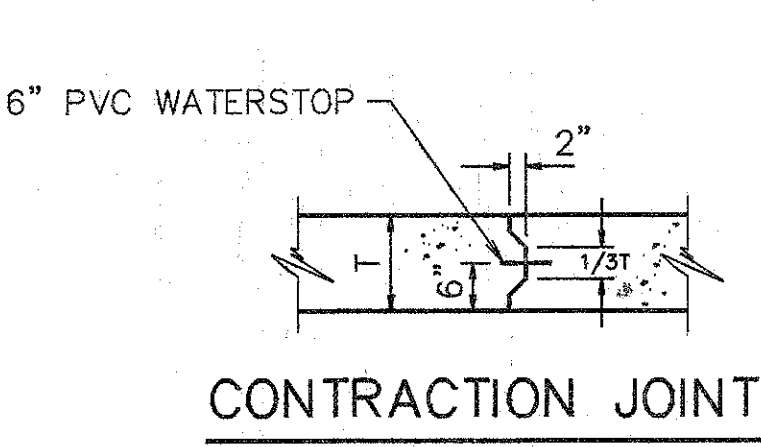


**ELEVATION-FORWARD ABUTMENT**

NOTE: 1" EXP. JOINT WITH 1" PREFORMED EXPANSION JOINT FILLER INCLUDED WITH BRIDGE NO. HAM-71-0243L QUANTITIES FOR PAYMENT

REMOVE EXIST. BACKWALL (INCLUDE COST WITH ITEM 202-PORTIONS OF STRUCTURE REMOVED FOR PAYMENT) LEAVE 2'-6" OF VERTICAL STEEL FF OF BACKWALL

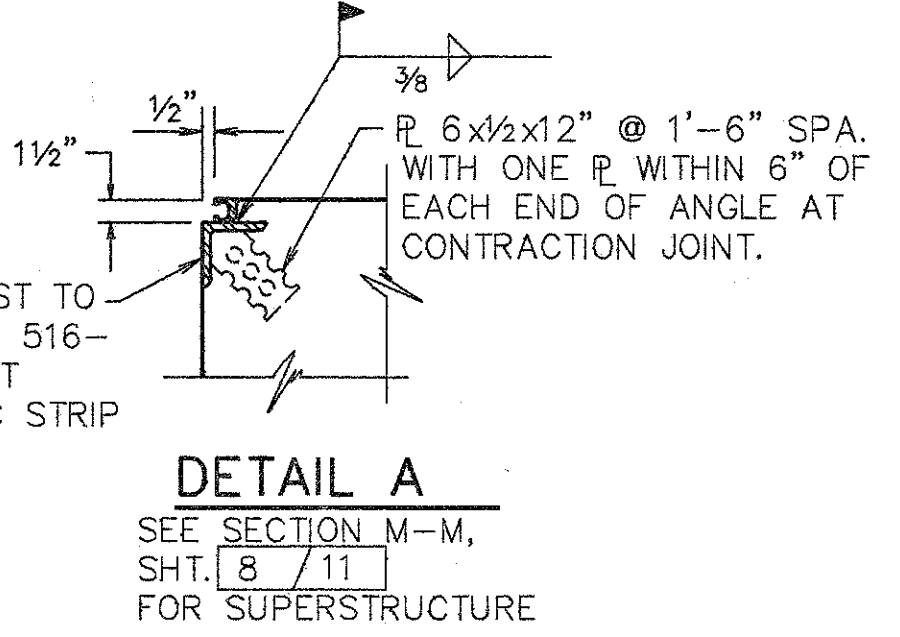
NOTE: ALL ELEVATIONS AND DIMENSIONS SHOWN HAVE BEEN TAKEN FROM CONSTRUCTION DRAWINGS. CONTRACTOR TO VERIFY PRIOR TO CONSTRUCTION. THE STEEL EXPANSION JOINT SHALL SERVE AS A TEMPLATE FOR THE TOP OF THE BACKWALL.



\* FOR THE FIRST POUR, THE WATERSTOP SHOULD BE HELD SECURELY IN PLACE BY THE USE OF SPLIT FORMS AND TIE-WIRES. FOR THE SECOND POUR, SECURE THE FREE END OF WATERSTOP IN PROPER POSITION WITH TIE-WIRES. ALTERNATE METHODS, AS APPROVED BY THE ENGINEER, MAY BE USED TO INSURE THE CORRECT POSITIONING OF THE WATERSTOP.

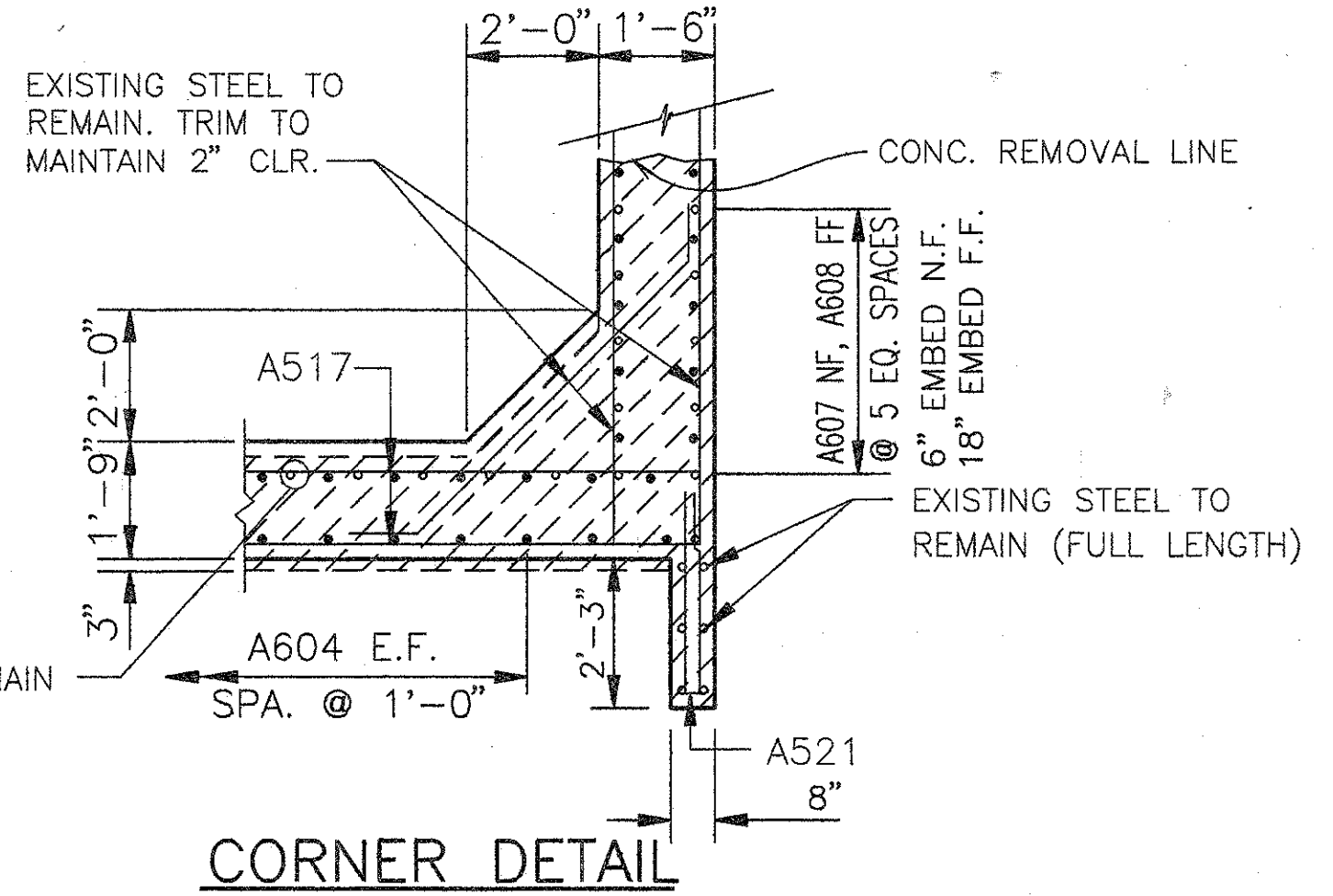
6" PVC WATERSTOP SHALL BE CENTERED ON THE CONTRACTION JOINTS AND EXPANSION JOINTS ABOVE THE ABUTMENT BEAM SEAT AND 6" BELOW APPROACH SLAB SEAT OR GRADE AS APPLICABLE. THE WATERSTOP SHALL BE CAPABLE OF ACCOMMODATING 1/2" OF JOINT MOVEMENT.

PROPOSED L4x3x1/2. COST TO BE INCLUDED WITH ITEM 516-'STRUCTURAL EXP. JOINT INCLUDING ELASTOMERIC STRIP SEAL, FOR PAYMENT.

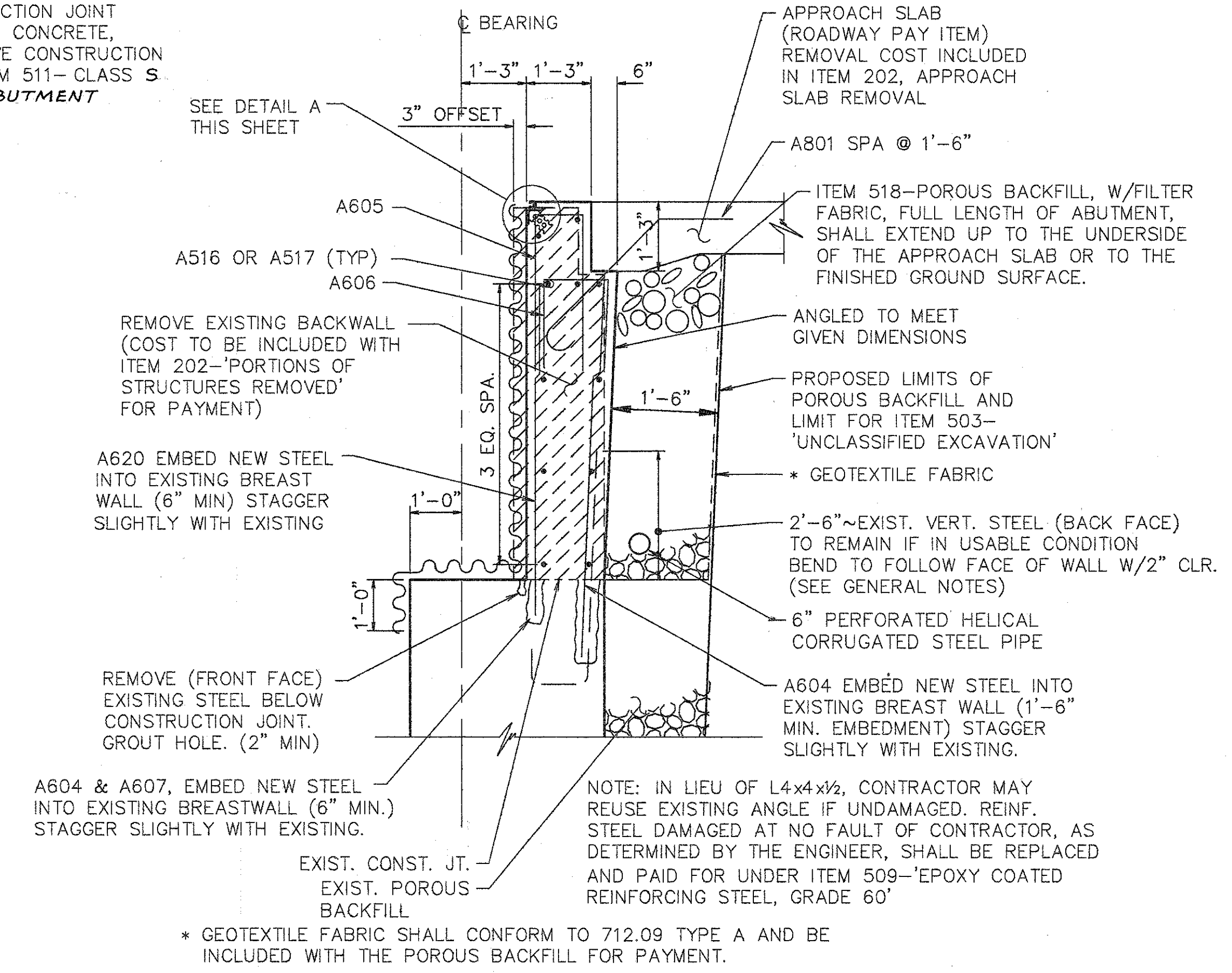


**DETAIL A**  
 SEE SECTION M-M, SHT. 8/11 FOR SUPERSTRUCTURE

2'-6" OF EXISTING VERTICAL STEEL AT BACK FACE TO REMAIN IF IN USABLE CONDITION



**CORNER DETAIL**



**SECTION H-H**

~~~~~ SURFACE TO BE SEALED UNDER ITEM SPECIAL-'SEALING OF CONCRETE SURFACES, EPOXY'

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3/11

**FORWARD ABUTMENT BACKWALL REPLACEMENT**

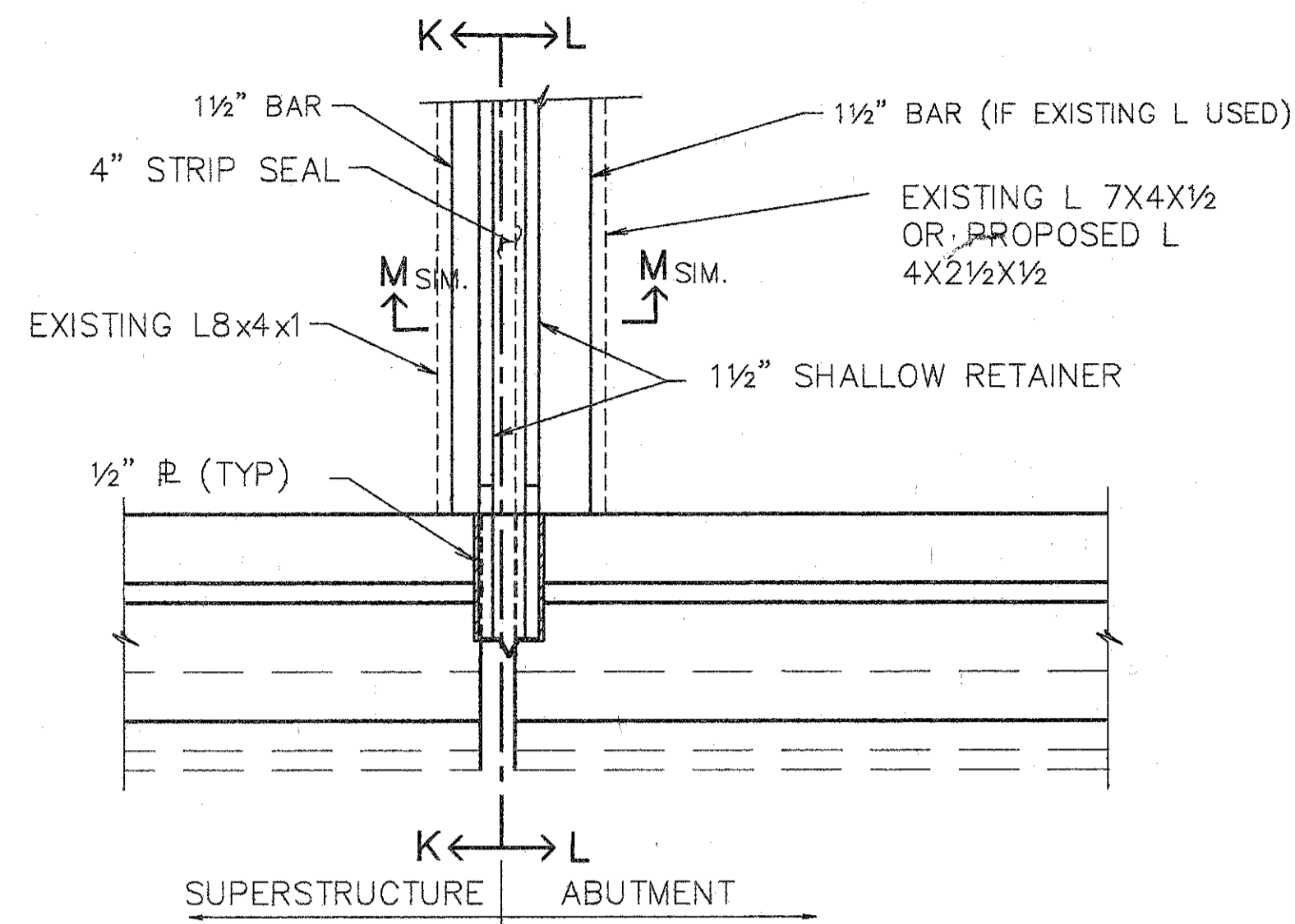
BRIDGE NO. HAM-71-0243L  
 OVER N.B. READING ROAD

HAMILTON COUNTY

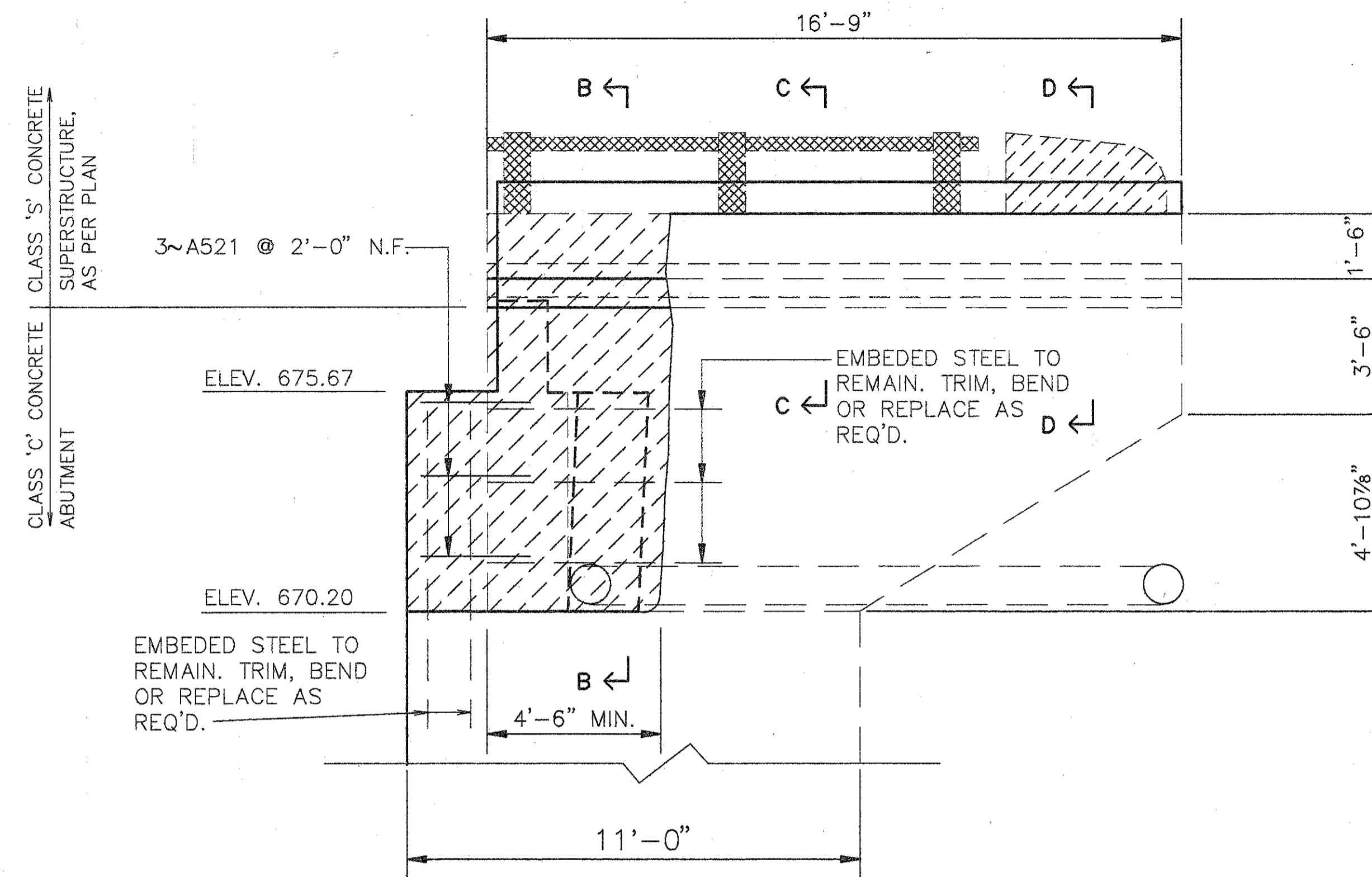
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| DESIGNED | DRAWN  | TRACED | CHECKED | REVIEWED      | DATE | REVISED |
| L.A.T.M. | D.E.E. |        | M.A.A.  | D.E.M11/11/94 |      |         |

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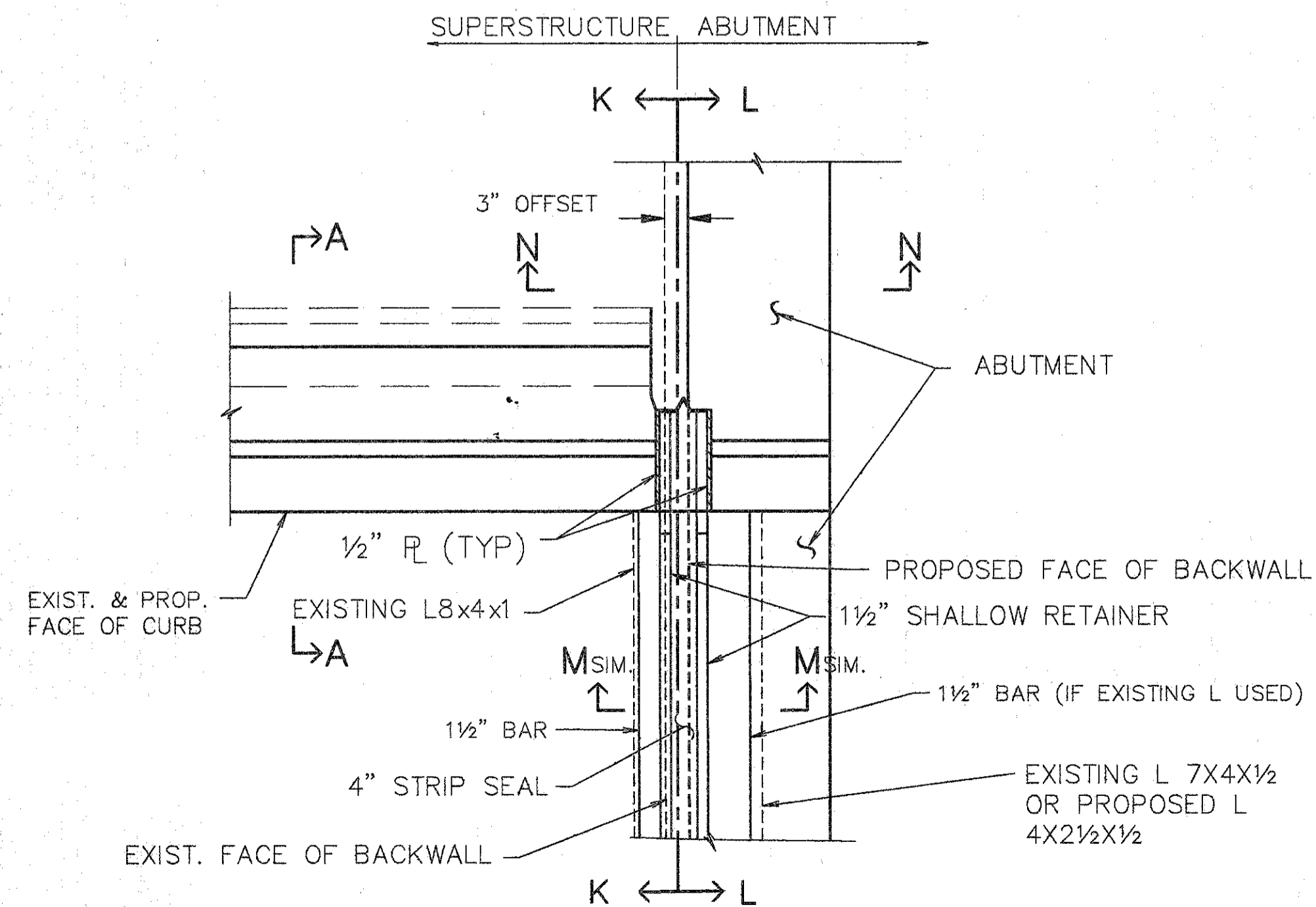




PART PLAN @ RIGHT FORWARD




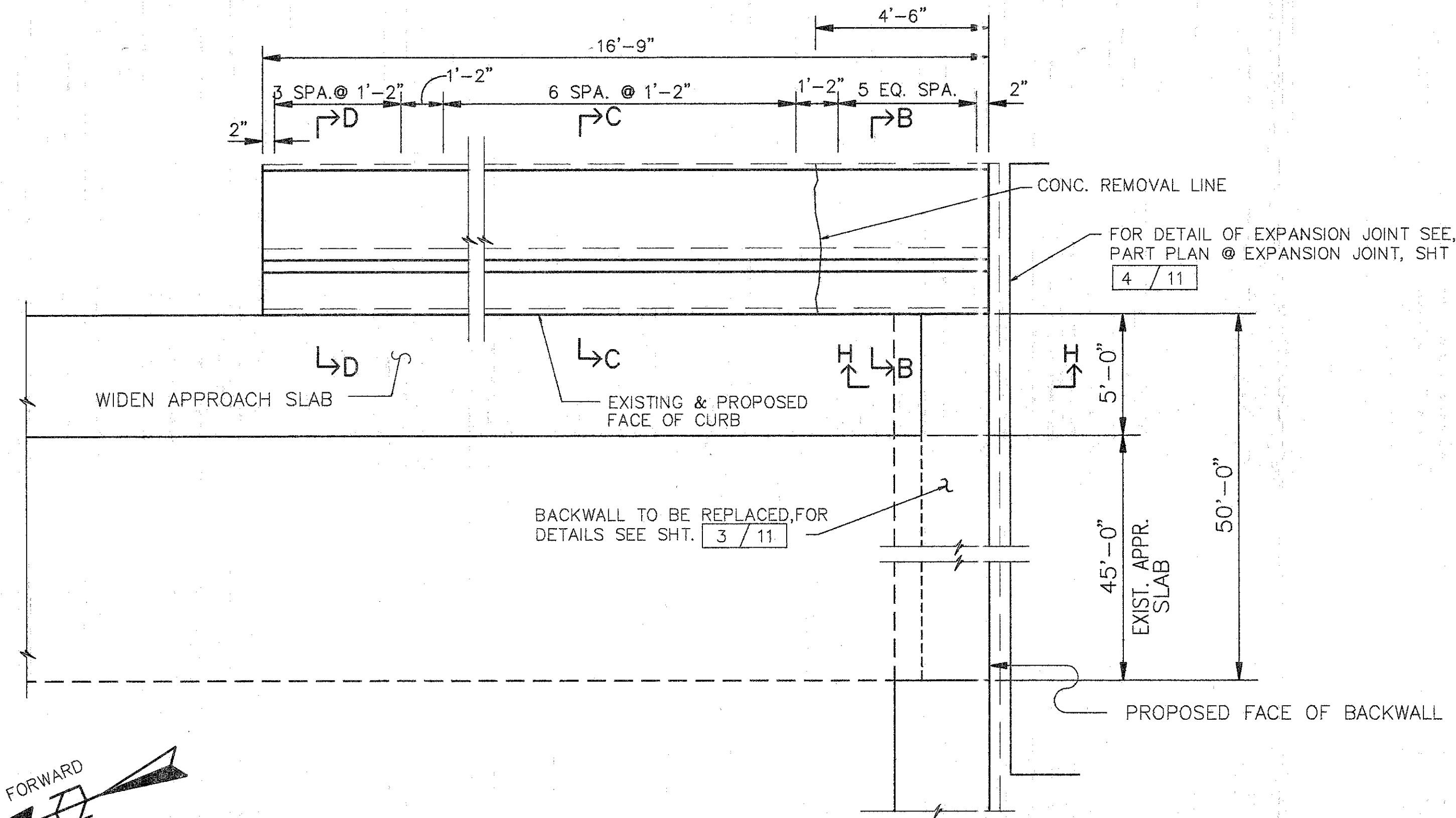
ELEVATION FORWARD WINGWALL (RIGHT)



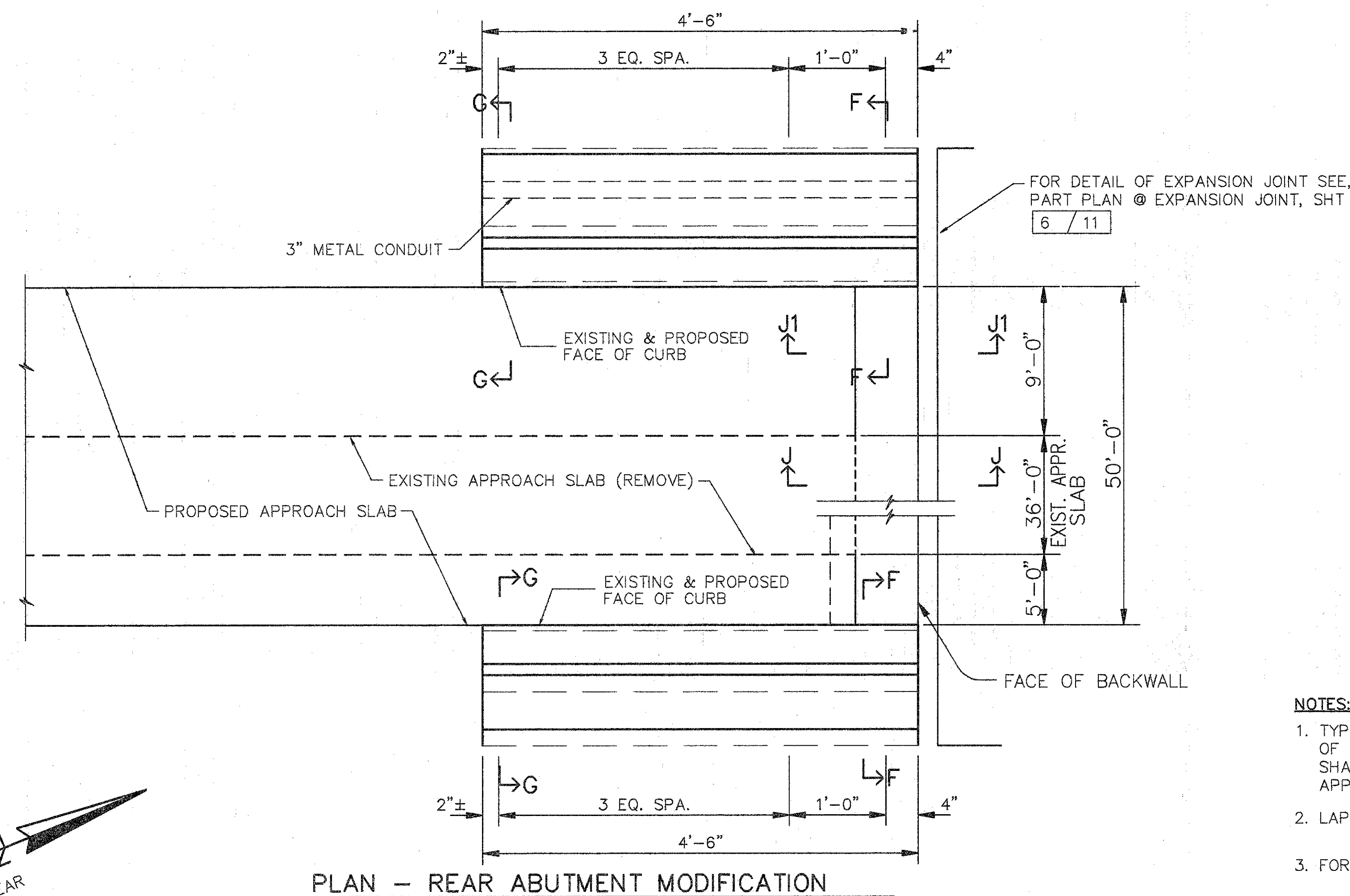
PART PLAN @ LEFT FORWARD

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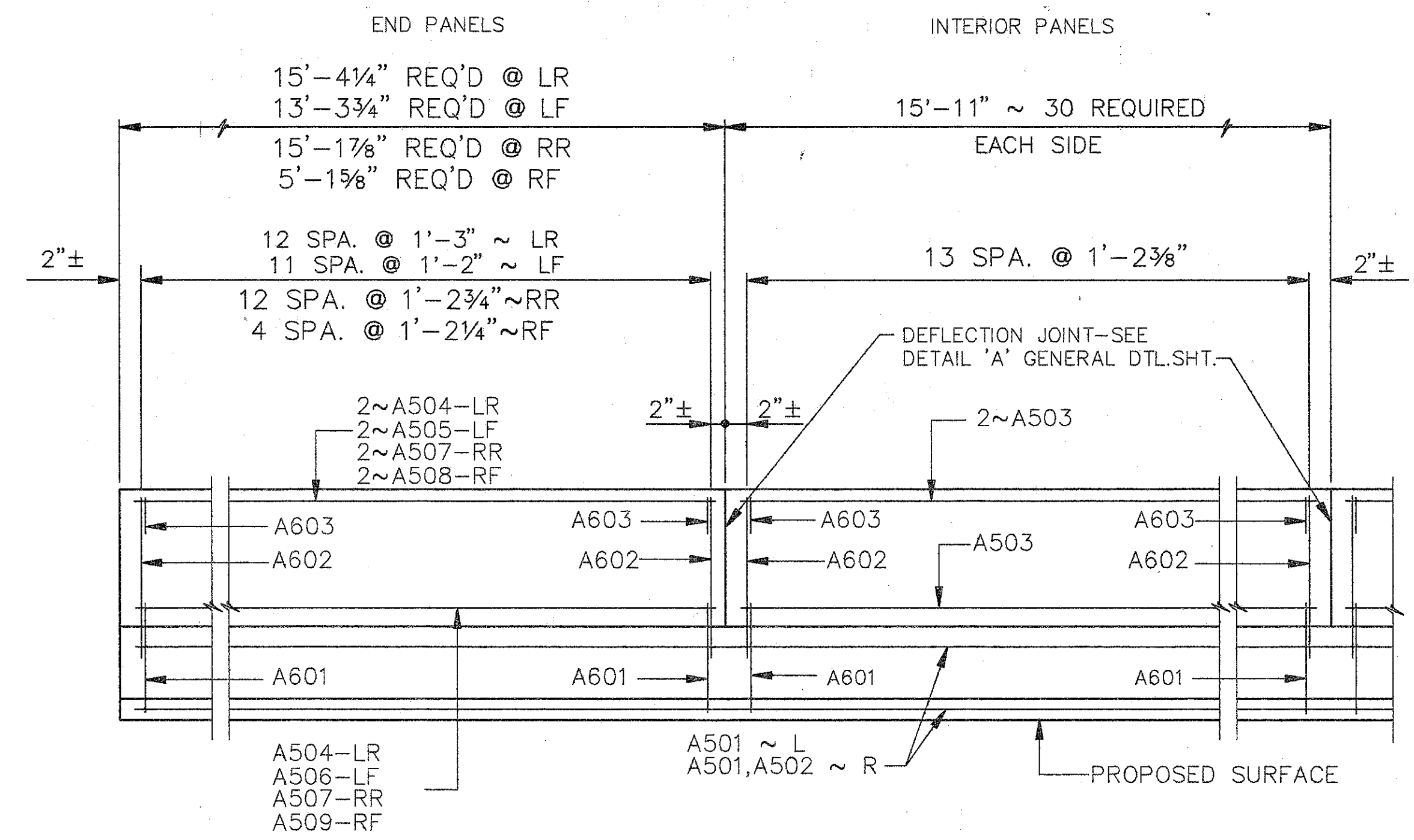
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|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|--------|---------|---------------|------|---------|
|  <b>WOOLPERT CONSULTANTS</b><br>409 E. MONUMENT AVENUE<br>DAYTON, OHIO 45402-1226<br>(513) 461-5660 |        | 4 / 11 |         |               |      |         |
| <b>FORWARD ABUTMENT AND<br/>EXPANSION JOINT</b>                                                                                                                                          |        |        |         |               |      |         |
| BRIDGE NO. HAM-71-0243L<br>OVER N.B. READING ROAD                                                                                                                                        |        |        |         |               |      |         |
| HAMILTON COUNTY                                                                                                                                                                          |        |        |         |               |      |         |
| DESIGNED                                                                                                                                                                                 | DRAWN  | TRACED | CHECKED | REVIEWED      | DATE | REVISED |
| L.A.T.M.                                                                                                                                                                                 | D.E.E. |        | M.A.A.  | D.E.M11/11/94 |      |         |



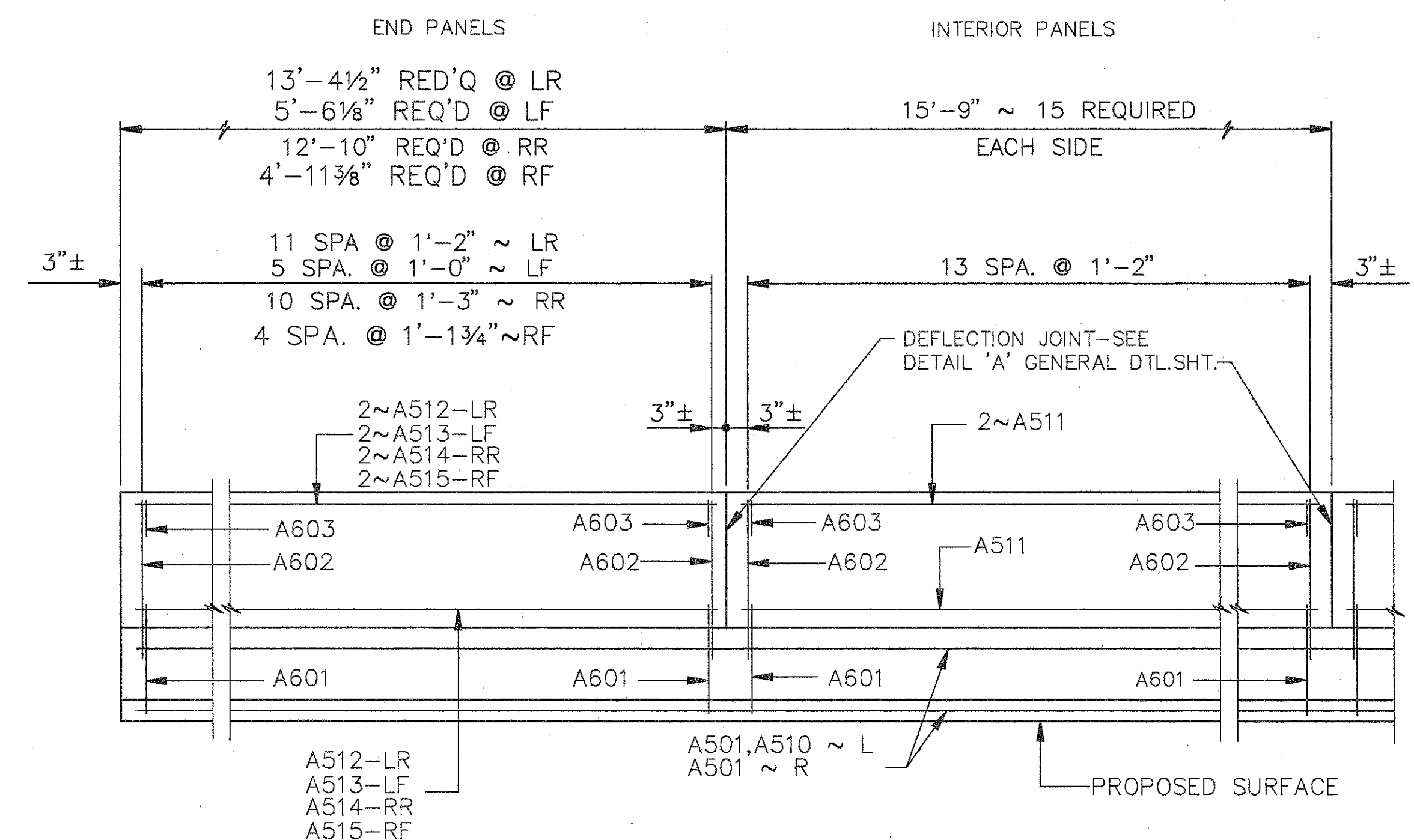
PLAN - FORWARD ABUTMENT MODIFICATION



PLAN - REAR ABUTMENT MODIFICATION



ELEVATION SUPERSTRUCTURE PARAPET (SPANS 1-4)



ELEVATION SUPERSTRUCTURE PARAPET (SPANS 5-7)

- NOTES:
- TYPE 'A' WATERPROOFING AT THE BRIDGE LIMIT END OF THE APPROACH SLAB (AS PER STD. DWG. AS-1-81) SHALL BE INCLUDED IN THE PRICE BID FOR ITEM 611 APPROACH SLAB.
  - LAP NO.5 BARS, IN PARAPETS, 2'-0".
  - FOR PARAPET SECTIONS SEE SHT. 7/11

- NOTES:
- L DENOTES LEFT SIDE
  - R DENOTES RIGHT SIDE
  - RF DENOTES RIGHT FORWARD
  - LF DENOTES LEFT FORWARD
  - RR DENOTES RIGHT REAR
  - LR DENOTES LEFT REAR
  - NF DENOTES NEAR FACE
  - FF DENOTES FAR FACE

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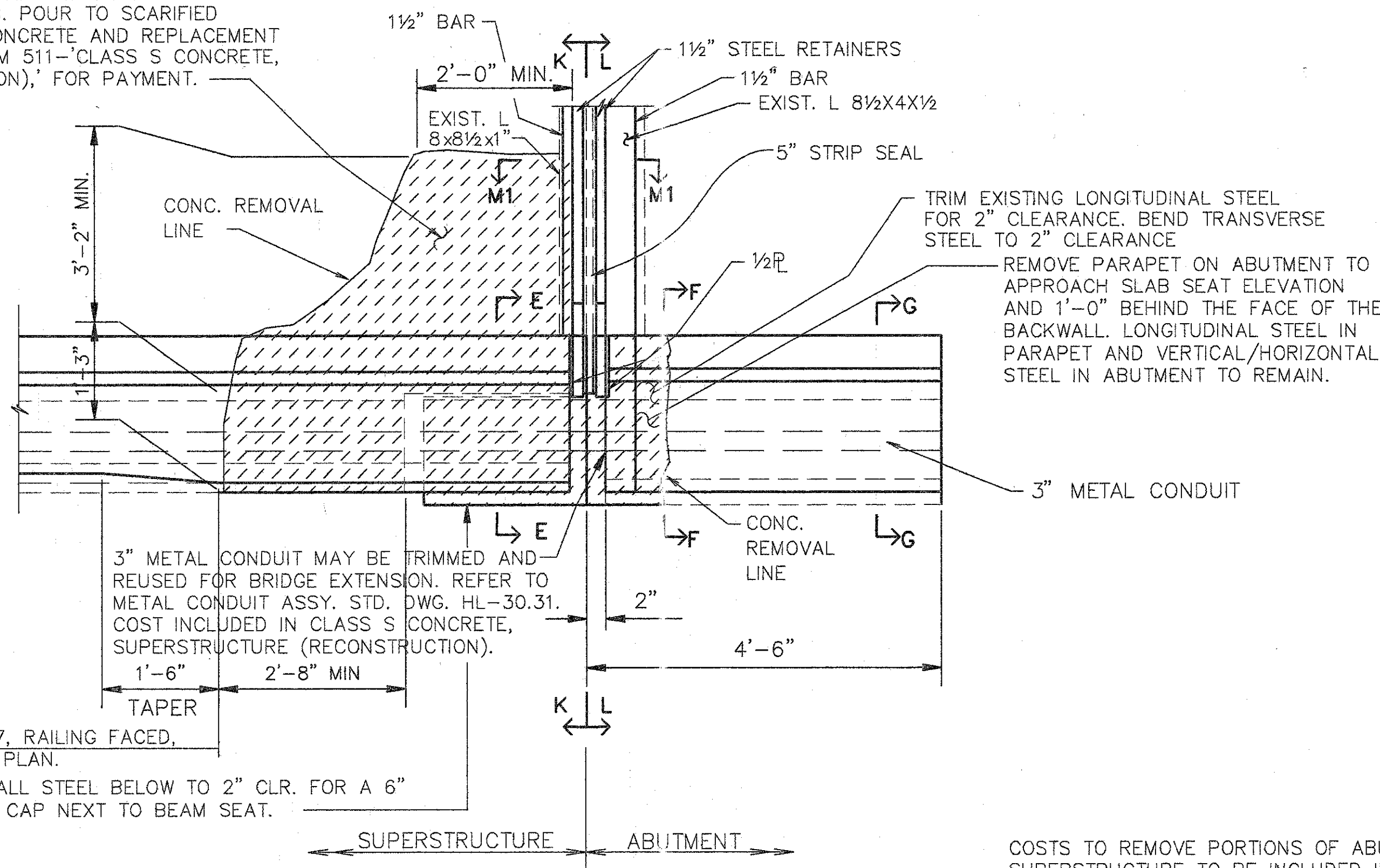
**SUPER.-PARAPET-ABUT. DETAILS AND MODIFICATIONS**  
 BRIDGE NO. HAM-71-0243L  
 OVER N.B. READING ROAD  
 HAMILTON COUNTY

|          |        |        |         |               |      |         |
|----------|--------|--------|---------|---------------|------|---------|
| DESIGNED | DRAWN  | TRACED | CHECKED | REVIEWED      | DATE | REVISED |
| L.A.T.M. | D.E.E. |        | M.A.A.  | D.E.M11/11/94 |      |         |

Last Plot: MAY 15, 1994 @ 8:37 PM  
 G:\SERV\6699-ADV\ASPLAND\CALC\SH17.DWG Last Revision By: D.E.E. APR. 5, 1994 @ 8:42 AM



REMOVE BRIDGE PARAPET AND DECK TO EXPOSE EXISTING STEEL. MATCH EXISTING #6 & #7 BARS WITH EXTENTIONS FOR REINFORCEMENT OF NEW SLAB. POUR TO SCARIFIED LEVEL. LEAVE SURFACE ROUGH. CONCRETE AND REPLACEMENT WORK TO BE INCLUDED UNDER ITEM 511-'CLASS S CONCRETE, SUPERSTRUCTURE, (RECONSTRUCTION),' FOR PAYMENT.



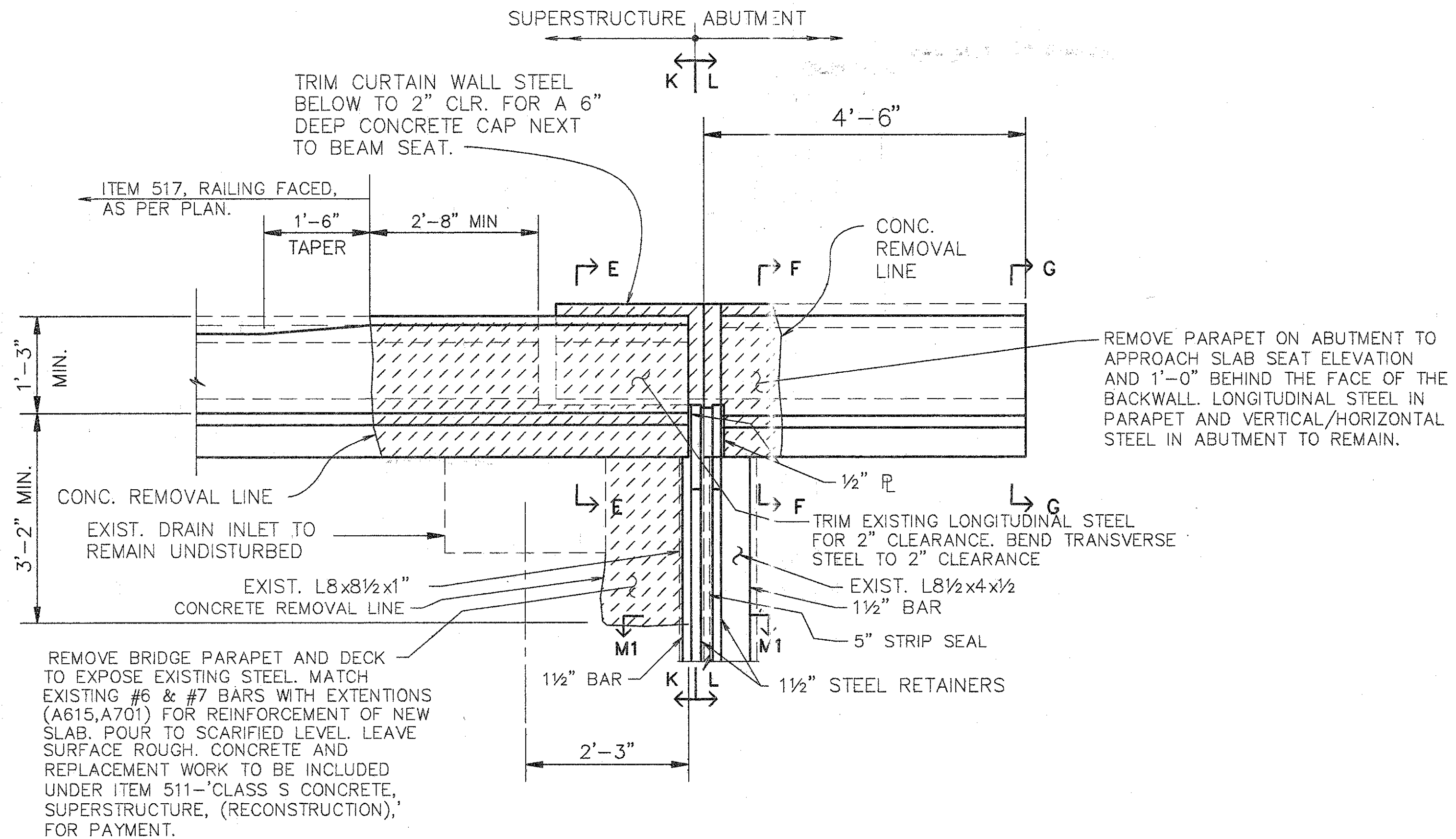
**PART PLAN @ LEFT REAR**

EXIST. CONDUIT IN BRIDGE TO REMAIN. CONTRACTOR TO REMOVE CONCRETE FROM AROUND CONDUIT WITHOUT DAMAGING CONDUIT OR ITS CONTENTS.

3" METAL CONDUIT MAY BE TRIMMED AND REUSED FOR BRIDGE EXTENSION. REFER TO METAL CONDUIT ASSY. STD. DWG. HL-30.31. COST INCLUDED IN CLASS S CONCRETE, SUPERSTRUCTURE (RECONSTRUCTION).

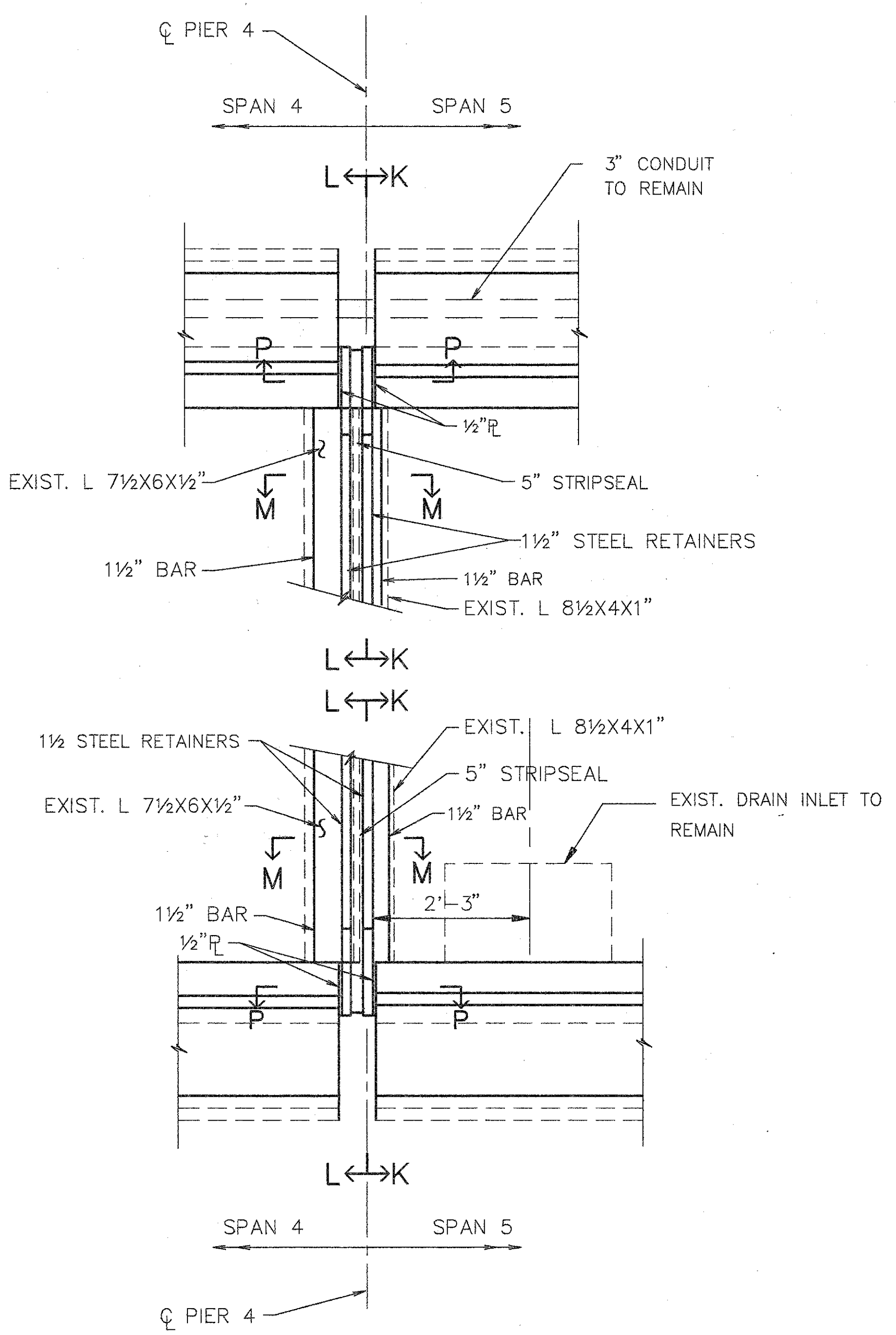
COSTS TO REMOVE PORTIONS OF ABUTMENT AND SUPERSTRUCTURE TO BE INCLUDED IN PRICE BID FOR ITEM 202-'PORTION OF STRUCTURE REMOVED.'

ITEM 517, RAILING FACED, AS PER PLAN.  
 TRIM CURTAIN WALL STEEL BELOW TO 2" CLR. FOR A 6" DEEP CONCRETE CAP NEXT TO BEAM SEAT.



**PART PLAN @ RIGHT REAR**

REMOVE BRIDGE PARAPET AND DECK TO EXPOSE EXISTING STEEL. MATCH EXISTING #6 & #7 BARS WITH EXTENTIONS (A615,A701) FOR REINFORCEMENT OF NEW SLAB. POUR TO SCARIFIED LEVEL. LEAVE SURFACE ROUGH. CONCRETE AND REPLACEMENT WORK TO BE INCLUDED UNDER ITEM 511-'CLASS S CONCRETE, SUPERSTRUCTURE, (RECONSTRUCTION),' FOR PAYMENT.



**PART PLAN - INTERMEDIATE EXPANSION JOINT**

FOR DETAILS NOT SHOWN, SEE SHT. 7&8/11

**WOOLPERT CONSULTANTS**  
 409 E. MONUMENT AVENUE  
 DAYTON, OHIO 45402-1226  
 (513) 461-5660

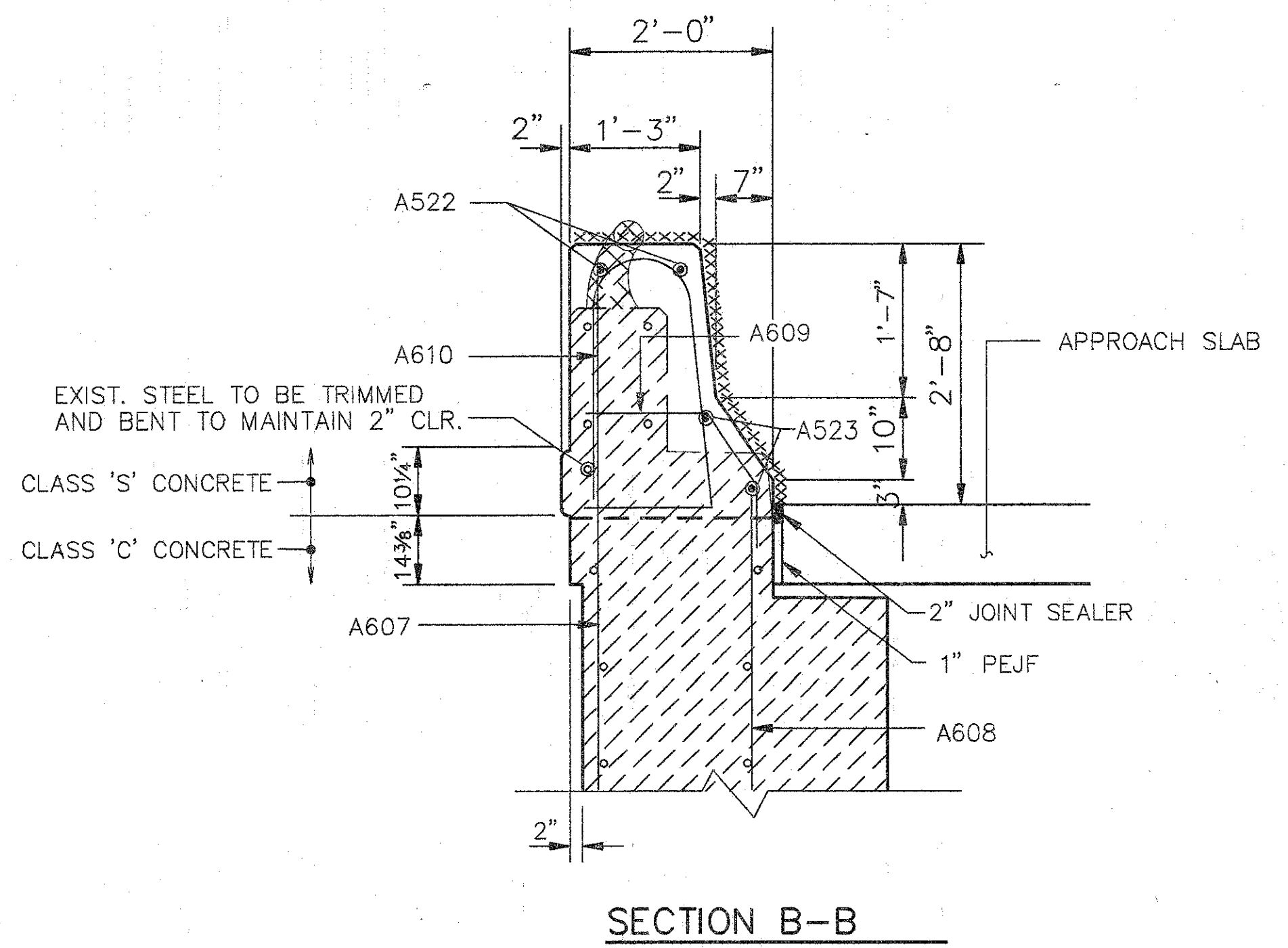
**EXPANSION JOINT DETAILS**

BRIDGE NO. HAM-71-0243L  
 OVER N.B. READING ROAD

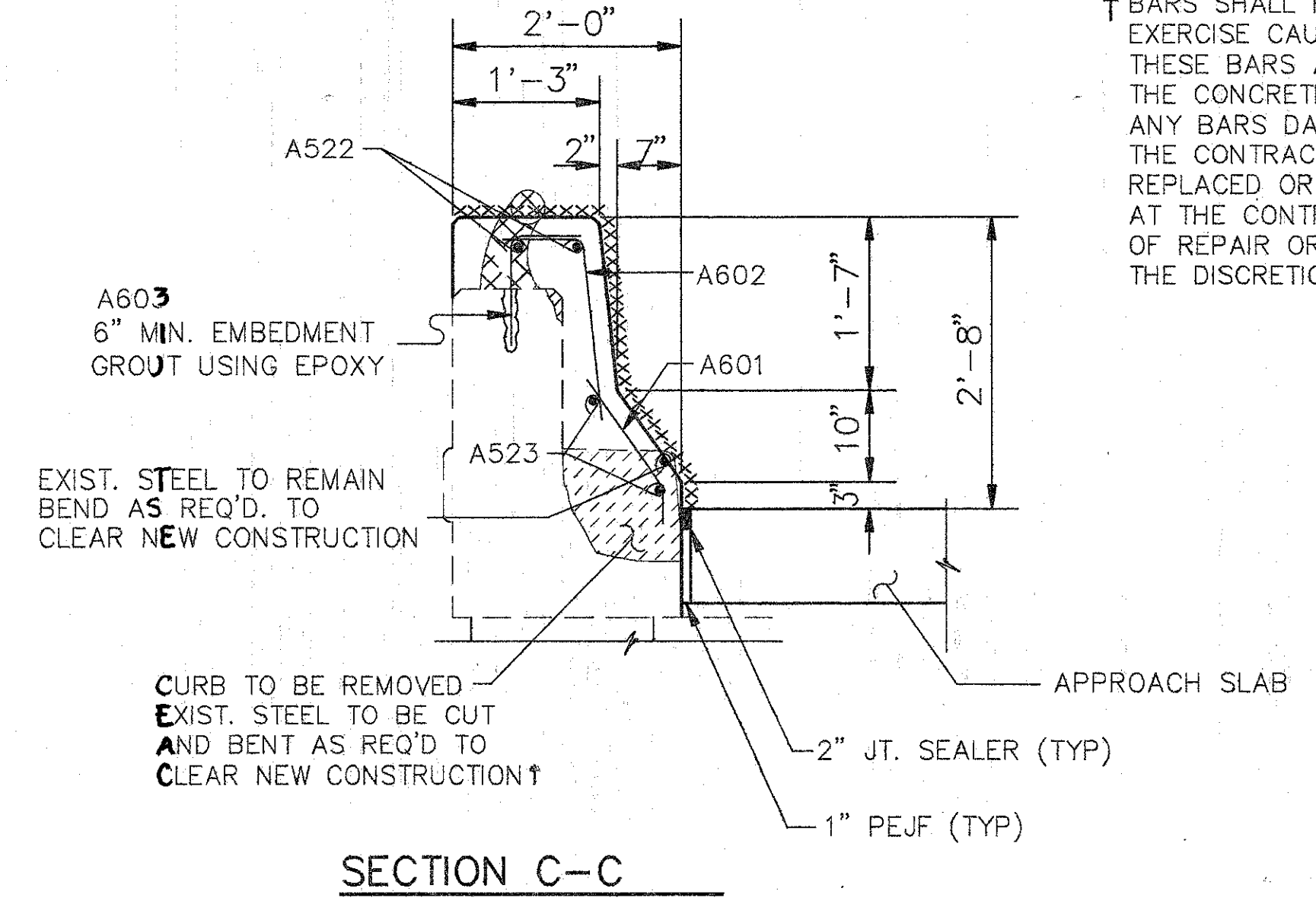
HAMILTON COUNTY

|          |        |        |         |               |      |         |
|----------|--------|--------|---------|---------------|------|---------|
| DESIGNED | DRAWN  | TRACED | CHECKED | REVIEWED      | DATE | REVISED |
| L.A.T.M. | D.E.E. |        | M.A.A.  | D.E.M11/11/94 |      |         |

L.A.T.M. MAY 15, 1994 @ 9:30 AM  
 G. STRAINING-CO. S.H. AND ZALUSKIS L.A.T.M. REVISION BY: D.E.E. APR. 5, 1994 @ 9:10 AM

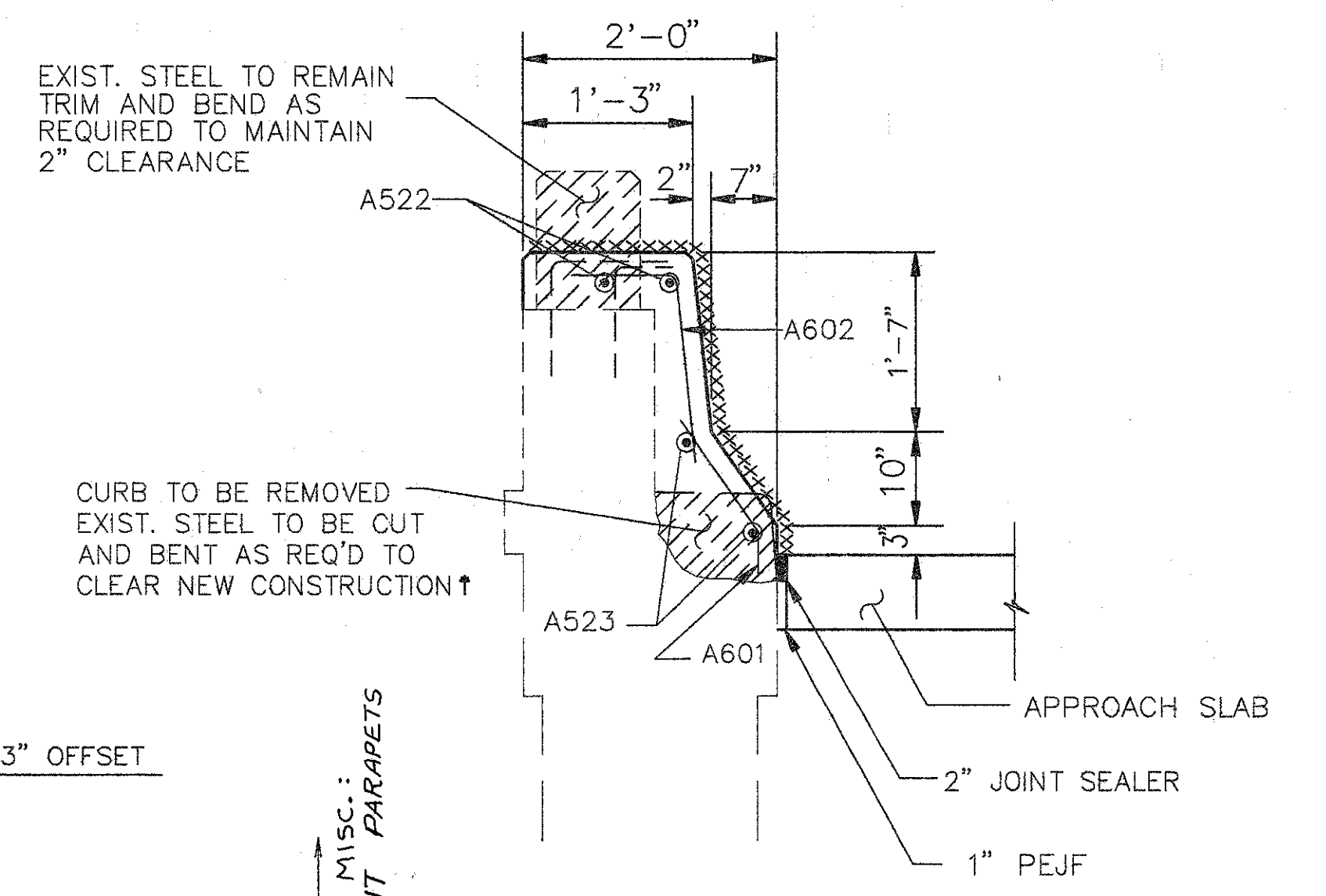


SECTION B-B

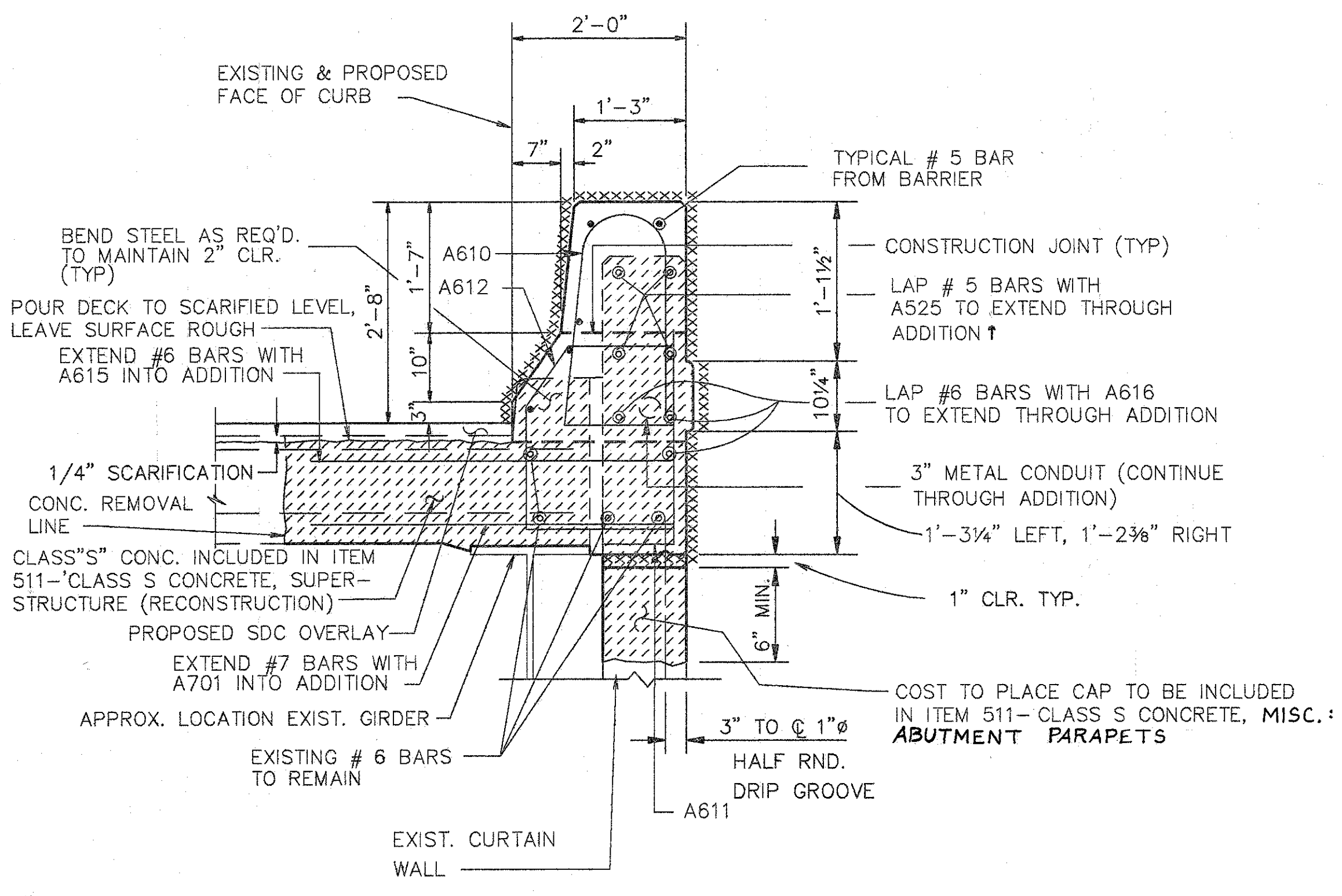


SECTION C-C

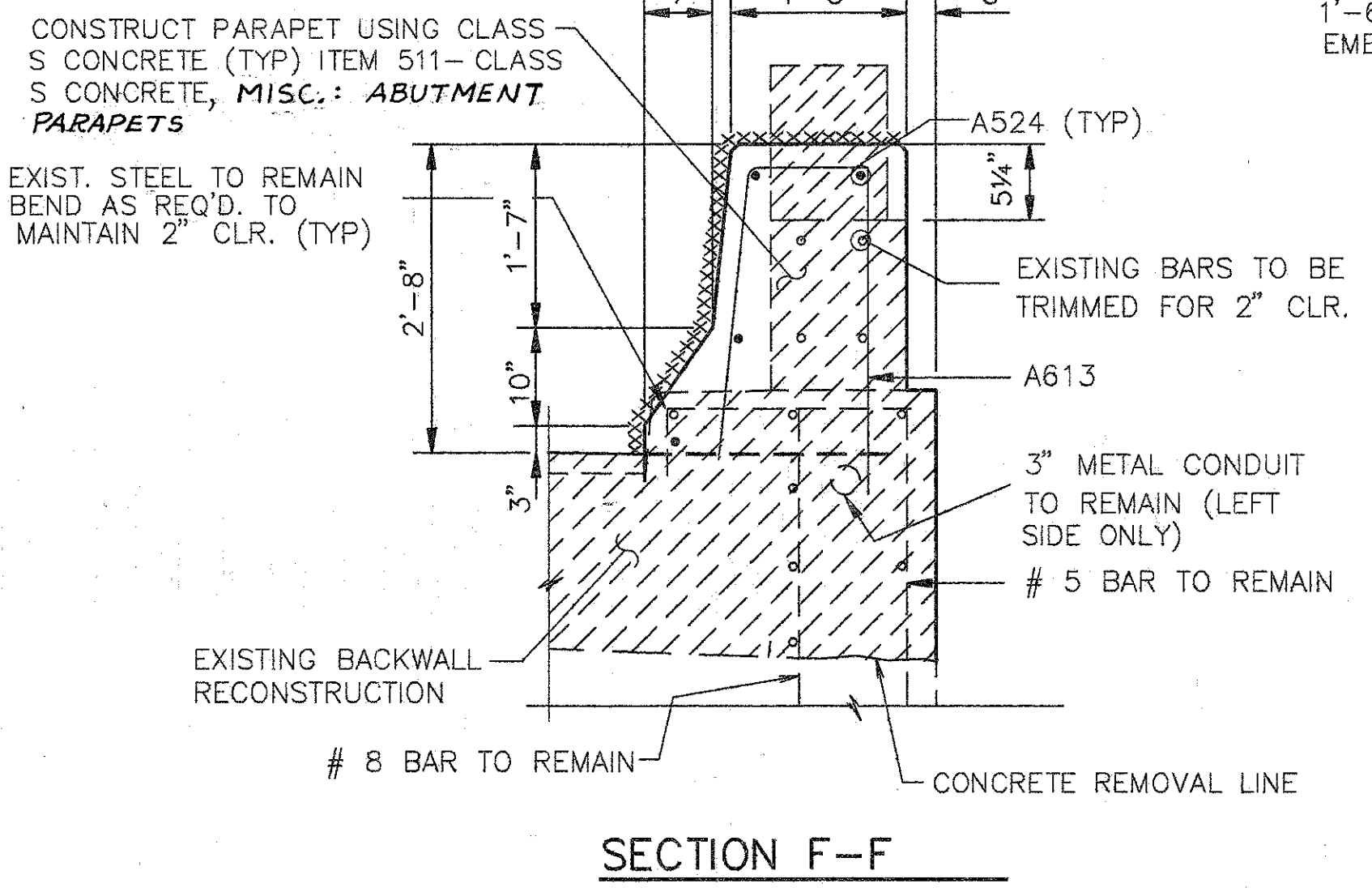
↑ BARS SHALL REMAIN. CONTRACTOR SHALL EXERCISE CAUTION TO ENSURE THAT THESE BARS ARE NOT DAMAGED DURING THE CONCRETE REMOVAL OPERATION. ANY BARS DAMAGED AS A RESULT OF THE CONTRACTOR'S OPERATION SHALL BE REPLACED OR REPAIRED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE. METHOD OF REPAIR OR REPLACEMENT WILL BE AT THE DISCRETION OF THE DIRECTOR.



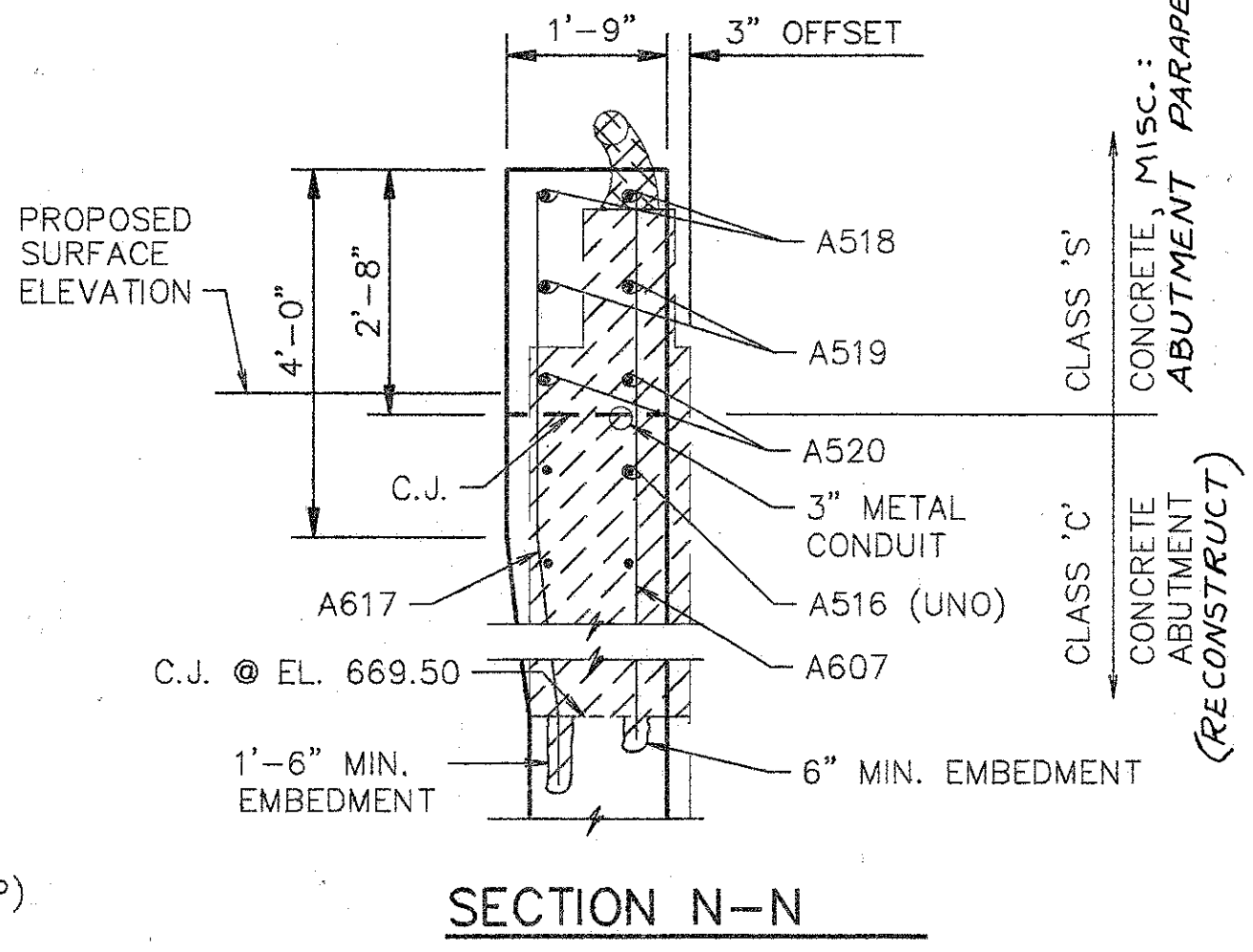
SECTION D-D



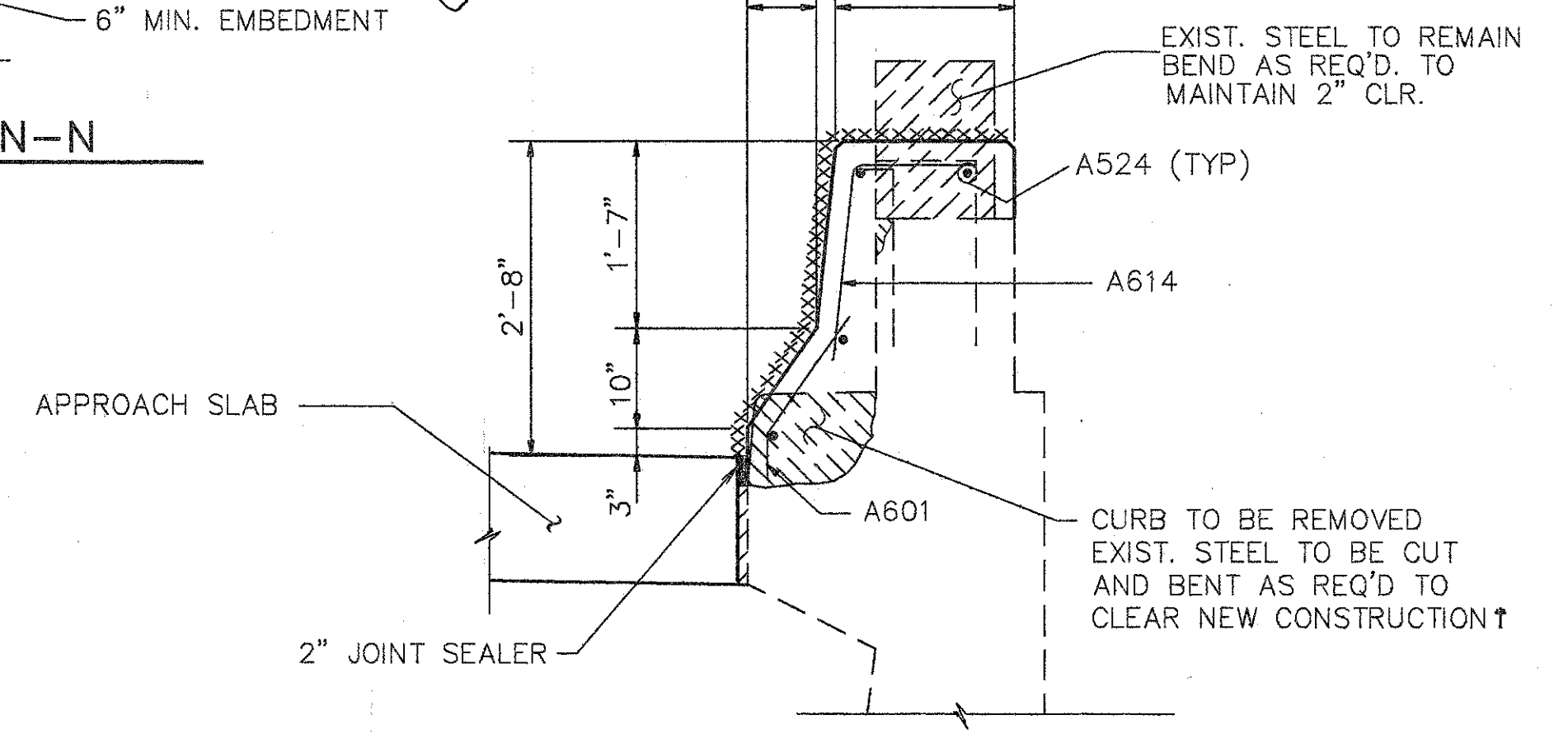
SECTION E-E



SECTION F-F



SECTION N-N



SECTION G-G

- NOTES:
- TYPE 'A' WATERPROOFING AT THE BRIDGE LIMIT END OF THE APPROACH SLAB (AS PER STD. DWG. AS-1-81) SHALL BE INCLUDED IN THE PRICE BID FOR ITEM 611 APPROACH SLAB.

- EXISTING CURB AND PARAPET TO BE REMOVED UNDER ITEM 202-PORCTIONS OF STRUCTURES REMOVED.
- EXISTING RAILING & POSTS TO BE REMOVED & STACKED NEATLY ALONG THE RIGHT OF WAY FOR DISPOSAL BY THE CONTRACTOR. ALL WORK SHALL BE INCLUDED IN THE PRICE BID FOR ITEM 202 PORTIONS OF STRUCTURES REMOVED.
- \*\*\*\*\* SURFACES TO BE SEALED UNDER ITEM SPECIAL-SEALING OF CONCRETE SURFACES.
- EXISTING REINFORCING STEEL

NOTE:  
 COST FOR WORK TO RECONSTRUCT BRIDGE DECK AND PARAPET SHALL BE INCLUDED IN ITEM 511-CLASS S CONCRETE, SUPERSTRUCTURE, (RECONSTRUCTION). REINFORCING STEEL IS INCLUDED IN ITEM 509-EPOXY COATED REINFORCING STEEL, GRADE 60, FOR PAYMENT.

FOR ADDITIONAL SECTIONS NOT SHOWN HERE SEE SHT. 8/11

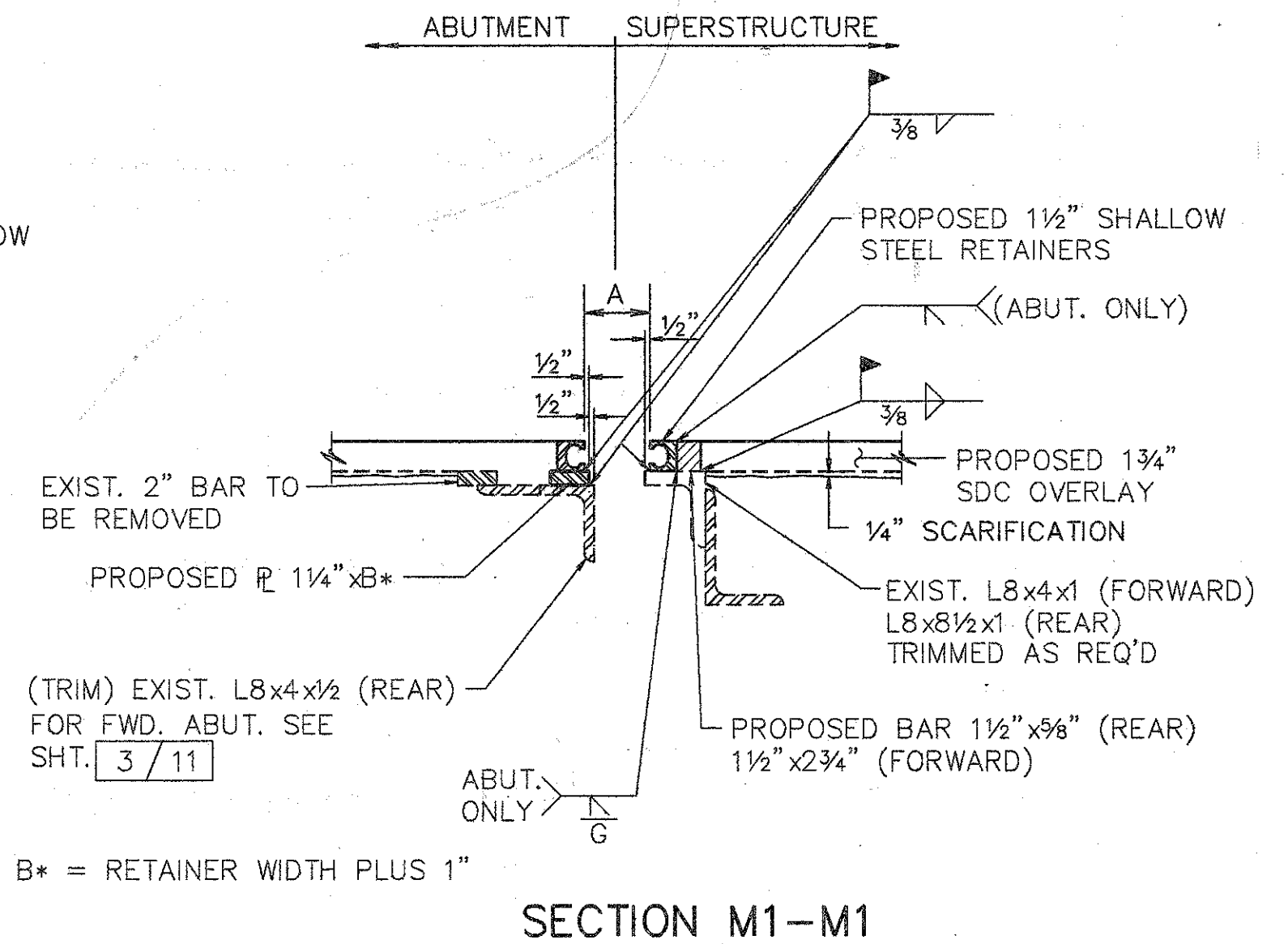
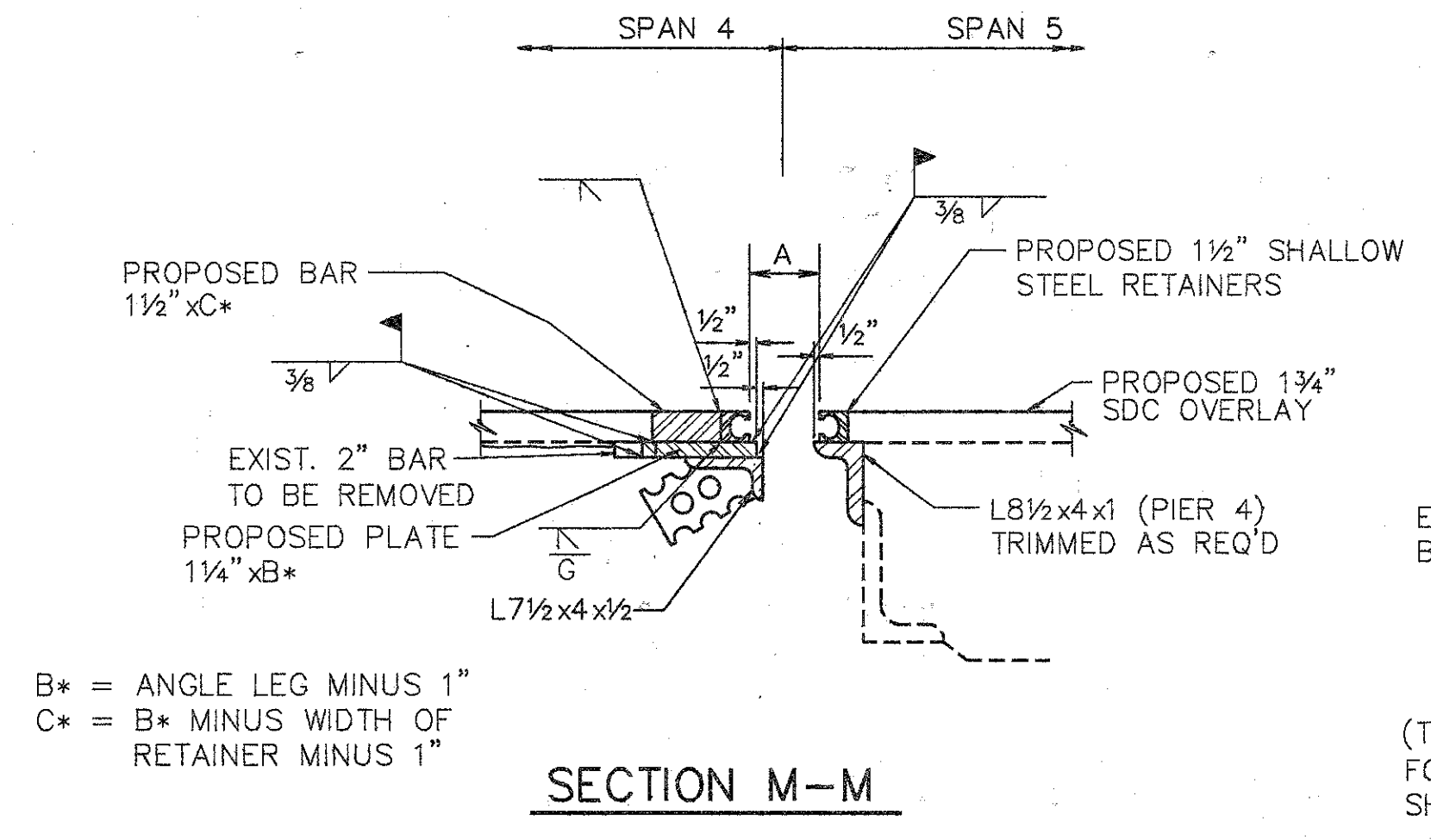
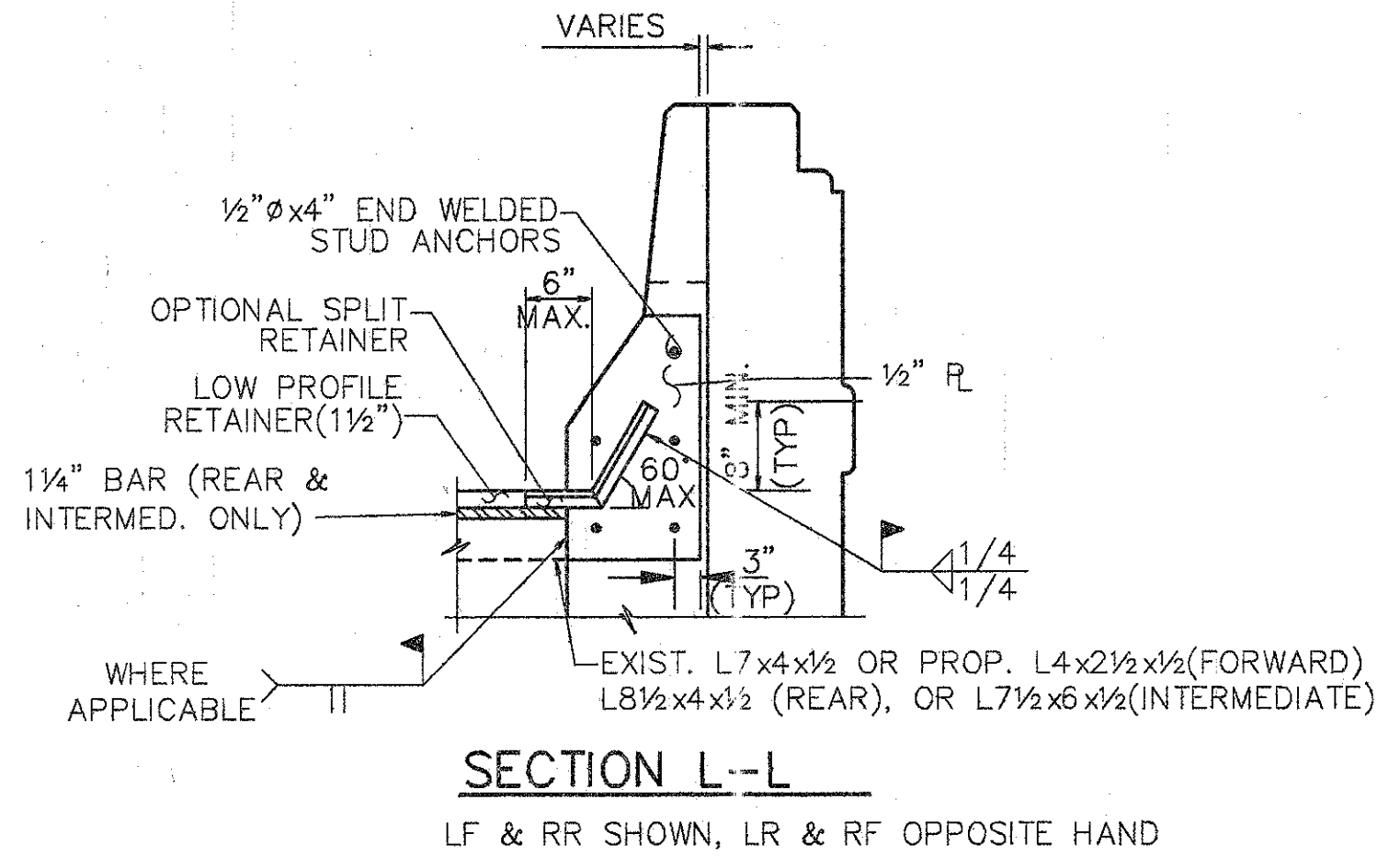
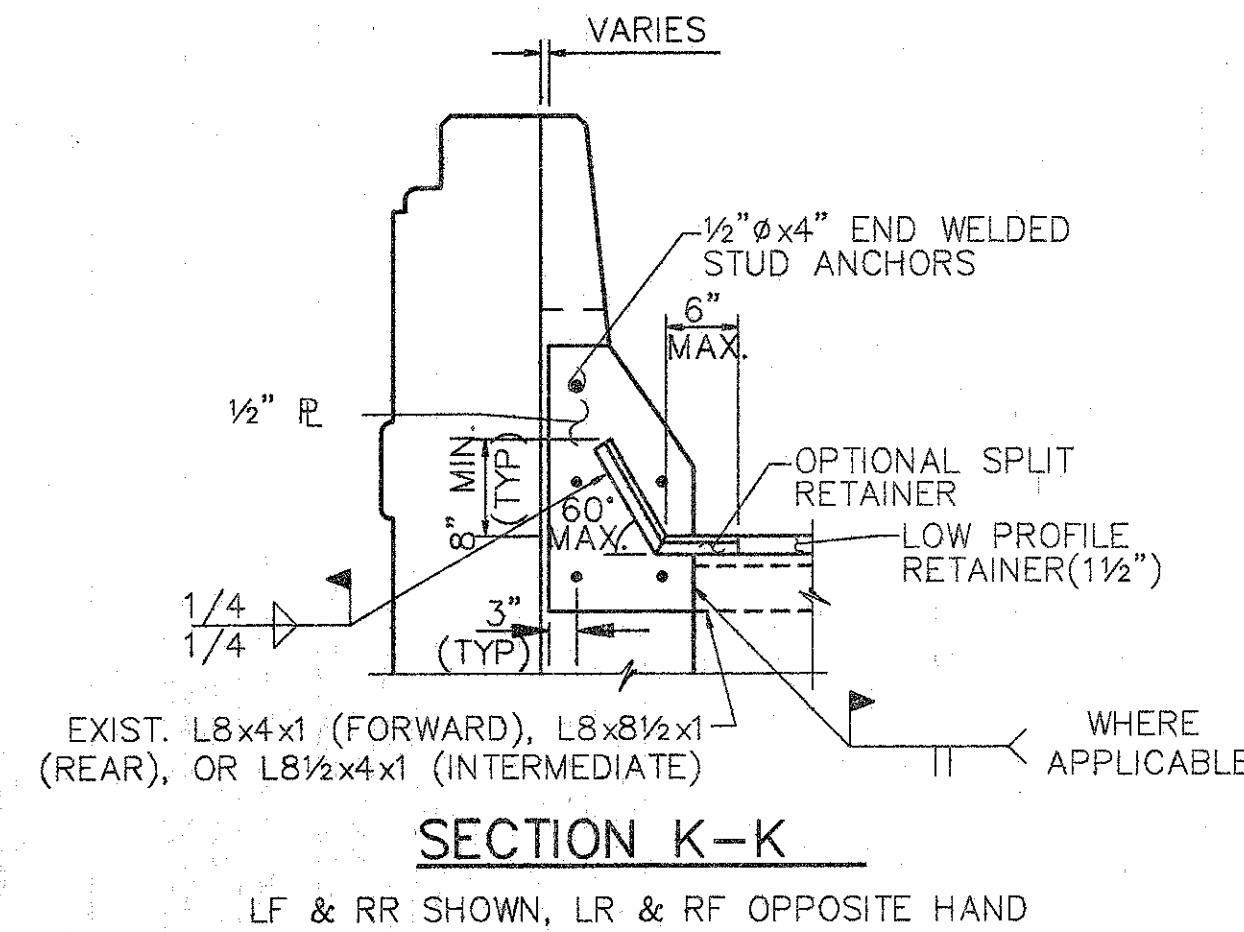
**WOOLPERT CONSULTANTS**  
 409 E. MONUMENT AVENUE  
 DAYTON, OHIO 45402-1226  
 (513) 461-5660

**PARAPET SECTIONS AND DETAILS**  
 BRIDGE NO. HAM-71-0243L  
 OVER N.B. READING ROAD  
 HAMILTON COUNTY

|          |        |        |         |               |      |         |
|----------|--------|--------|---------|---------------|------|---------|
| DESIGNED | DRAWN  | TRACED | CHECKED | REVIEWED      | DATE | REVISED |
| L.A.T.M. | D.E.E. |        | M.A.A.  | D.E.M11/11/94 |      |         |

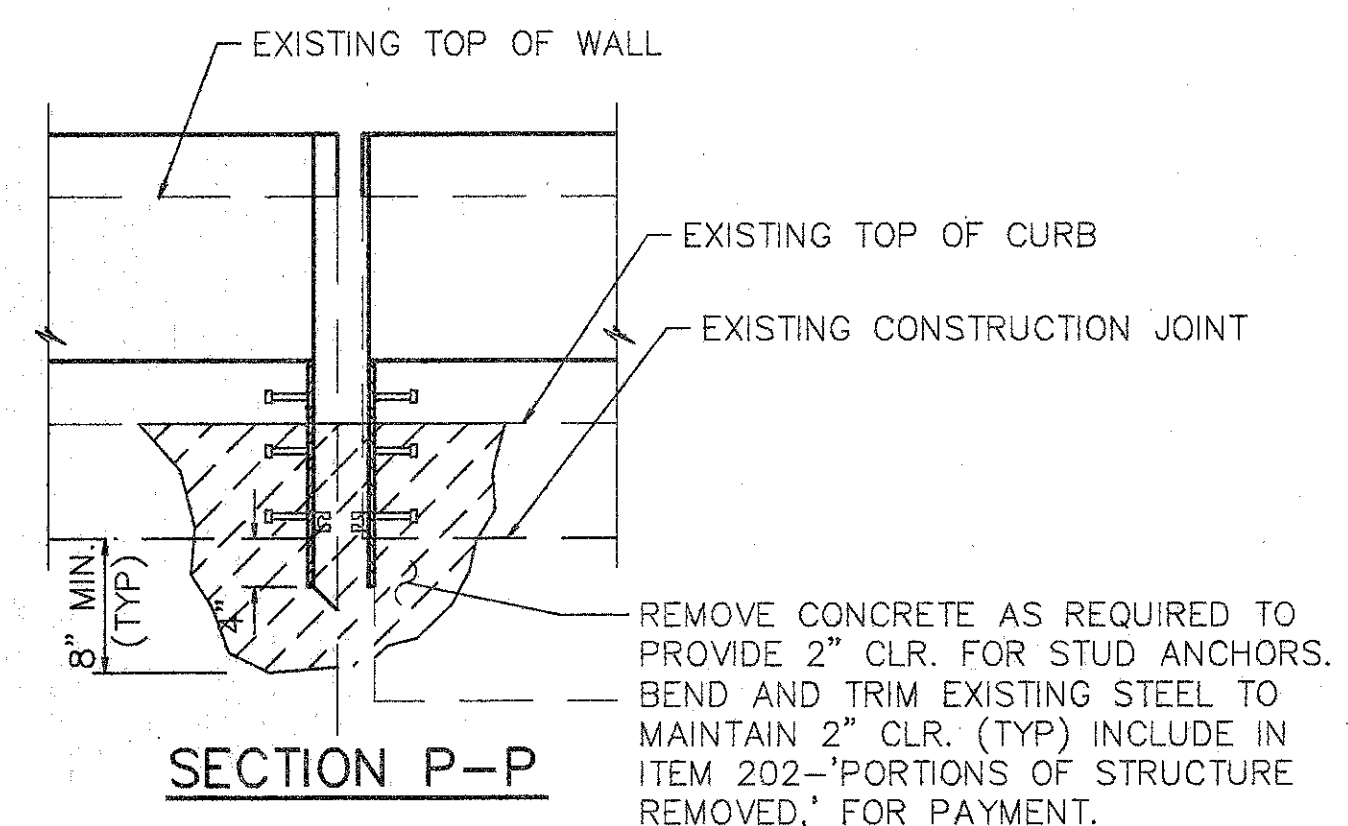
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**NOTE:**

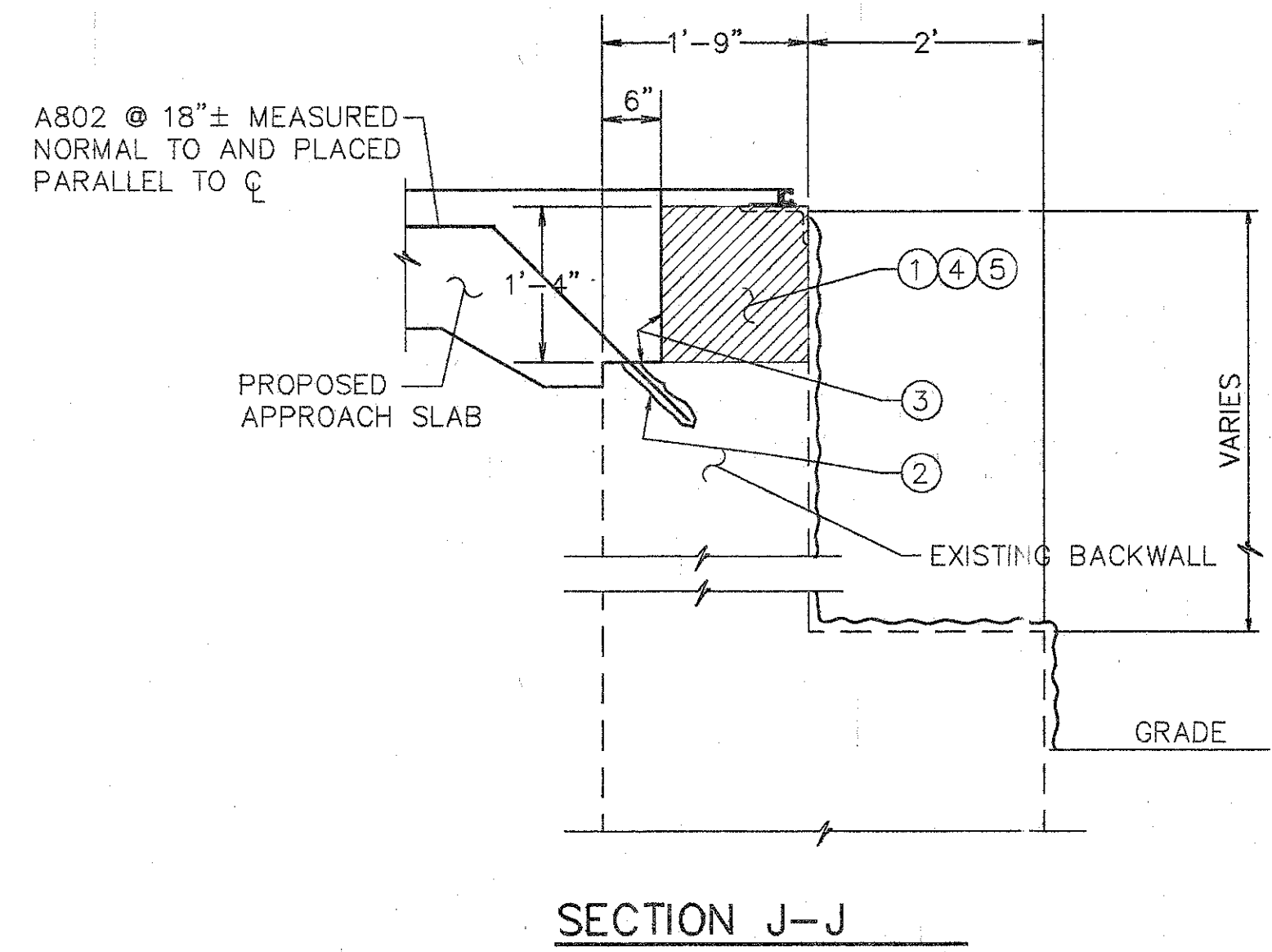
- EXPANSION JT. DETAILS TO BE WORKED WITH STD. DWG. EXJ-4-87 SHTS. 1 thru 5.
- WHEN PLATE IS RECESSED INTO ABUTMENT, CONCRETE BELOW PLATE SHALL BE SLOPED FROM BOTTOM OF THE PLATE TO THE END OF THE ABUTMENT TO DETER THE ACCUMULATION OF DEBIS.



**NOTES:**

- CONTRACTOR TO VERIFY ALL DIMENSIONS PRIOR TO MODIFYING EXPANSION JOINT.
- THE PRICE BID FOR ITEM 516- 'STRUCTURAL EXPANSION JOINTS, INCLUDING ELASTOMERIC STRIP SEALS, SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, AND ANY OTHER INCIDENTAL ITEMS, AS DETAILED. (REMOVAL OF CURB OR PARAPET AS SHOWN SHALL BE INCLUDED UNDER ITEM 202- 'PORTIONS OF STRUCTURE REMOVED').
- FOR DETAILS NOT SHOWN REFER TO DWG. EXJ-4-87 SHTS. 3 AND 4.
- STRIP SEAL TO BE INSTALLED IN ONE CONTINUOUS PIECE (NO OPEN JOINTS).
- PROVIDE TEMPORARY SUPPORT FOR ABUTMENT END DAM DURING CONSTRUCTION. REMOVE TEMPORARY SUPPORT AS SOON AS CONCRETE HAS SET, PREFERABLY WITHIN TWO HOURS AFTER PLACING TO AVOID DAMAGE DUE TO EXPANSION AND CONTRACTION OF SUPERSTRUCTURE.

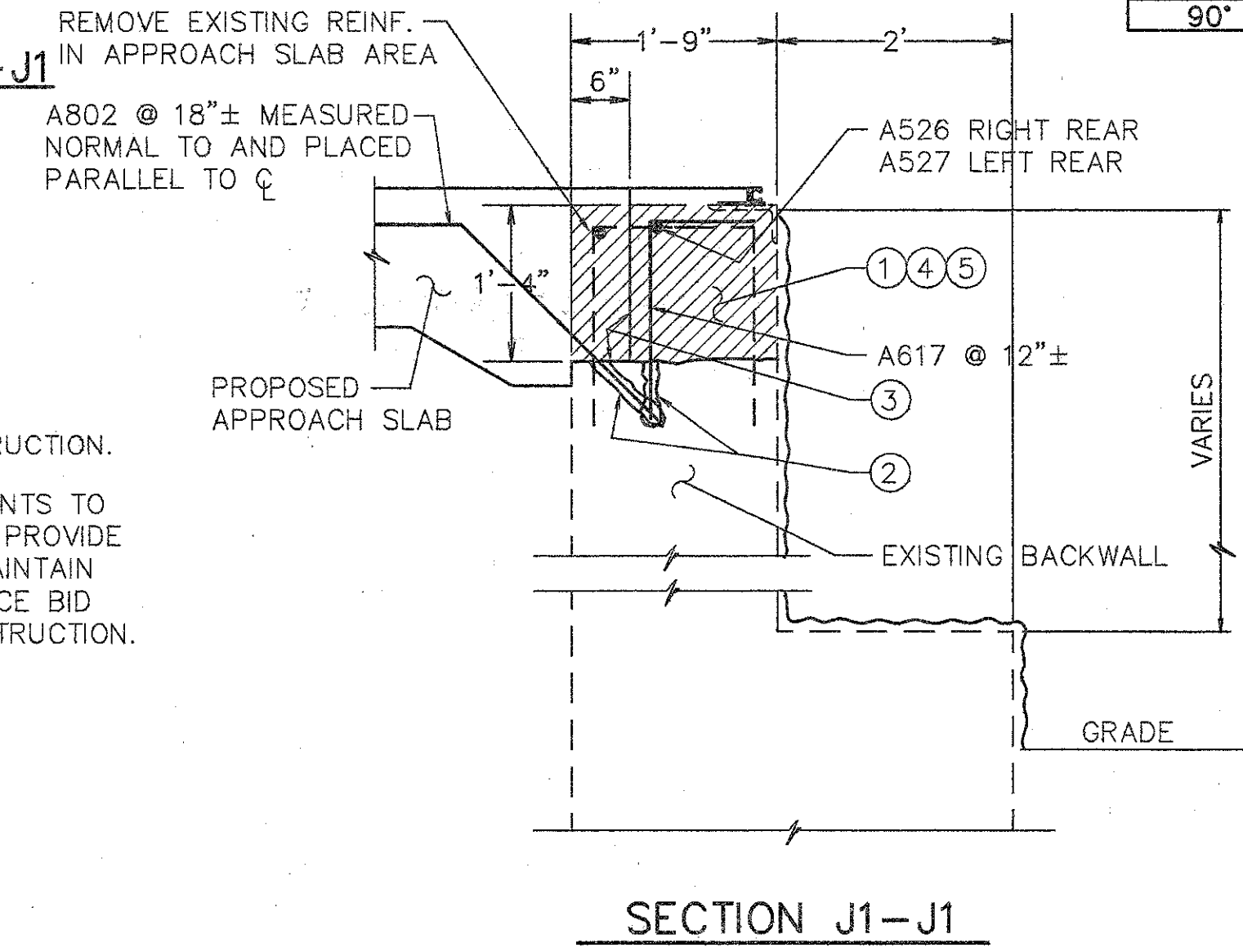
| TEMPERATURE | DIM. 'A' |        |         |
|-------------|----------|--------|---------|
|             | REAR     | PIER 4 | FORWARD |
| 40° F       | 3 5/8"   | 3 1/2" | 3"      |
| 50° F       | 3 1/2"   | 3 1/8" | 2 7/8"  |
| 60° F       | 3 1/4"   | 2 7/8" | 2 3/4"  |
| 70° F       | 3"       | 2 5/8" | 2 5/8"  |
| 80° F       | 2 7/8"   | 2 3/8" | 2 1/2"  |
| 90° F       | 2 5/8"   | 2 1/8" | 2 3/8"  |



**NOTES FOR SECTION J-J & J1-J1**

- EXISTING REINFORCING STEEL TO REMAIN ~ REINFORCING STEEL DAMAGED TO BE REPLACED AT CONTRACTORS EXPENSE.
- 1' MIN. EMBEDMENT (SEE DOWEL HOLE GENERAL NOTE) ITEM 510.
- TYPE 'A' WATERPROOFING (PAYMENT INCLUDED IN THE PRICE BID FOR APPROACH SLAB).
- CLASS 'C' CONCRETE, ABUTMENT RECONSTRUCTION.
- PROVIDE CONTRACTION AND EXPANSION JOINTS TO MATCH THOSE IN EXISTING BACKWALL AND PROVIDE CONSTRUCTION JOINTS AS REQUIRED TO MAINTAIN TRAFFIC. PAYMENT TO BE INCLUDED IN PRICE BID FOR ITEM 511 CLASS C CONCRETE RECONSTRUCTION.

EXISTING CONCRETE TO BE REMOVED INCLUDE IN ITEM 202 FOR PAYMENT.  
 SURFACE TO BE SEALED UNDER ITEM SPECIAL- 'SEALING OF CONCRETE SURFACE, EPOXY'.



**WOOLPERT CONSULTANTS**  
 409 E. MONUMENT AVENUE  
 DAYTON, OHIO 45402-1226  
 (513) 461-5660

**MISCELLANEOUS DETAILS**  
 BRIDGE NO. HAM-71-0243L  
 OVER N.B. READING ROAD  
 HAMILTON COUNTY

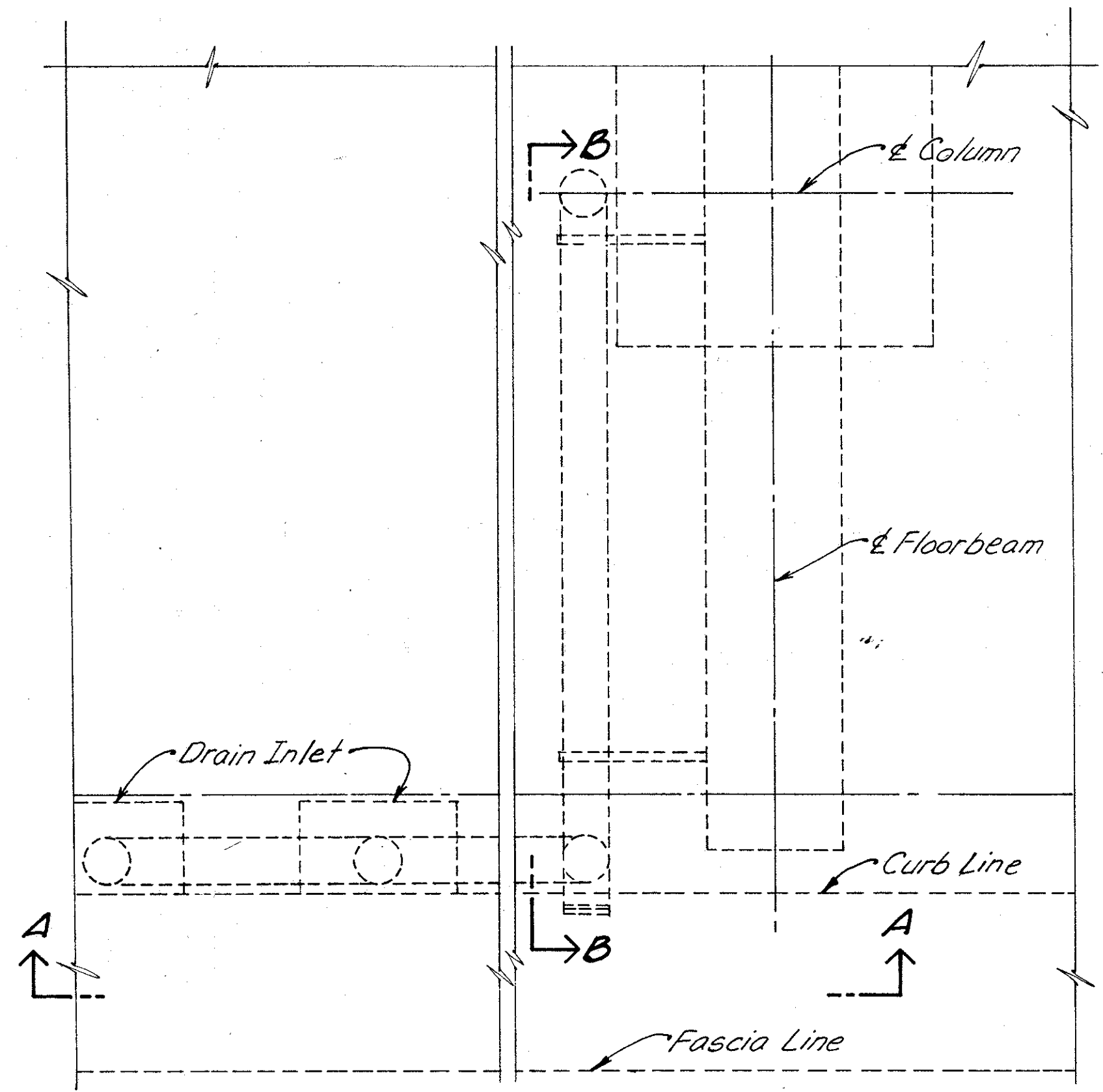
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|----------|--------|--------|---------|---------------|------|---------|
| DESIGNED | DRAWN  | TRACED | CHECKED | REVIEWED      | DATE | REVISED |
| L.A.T.M. | D.E.E. |        | M.A.A.  | D.E.M11/11/94 |      |         |

Left Plot MAY 05, 1991 @ 5:39 PM  
 C:\STN\10594-01\ASH\AMD\243511R Last Revision By: RACH OCT. 12, 1994 @ 8:19 AM

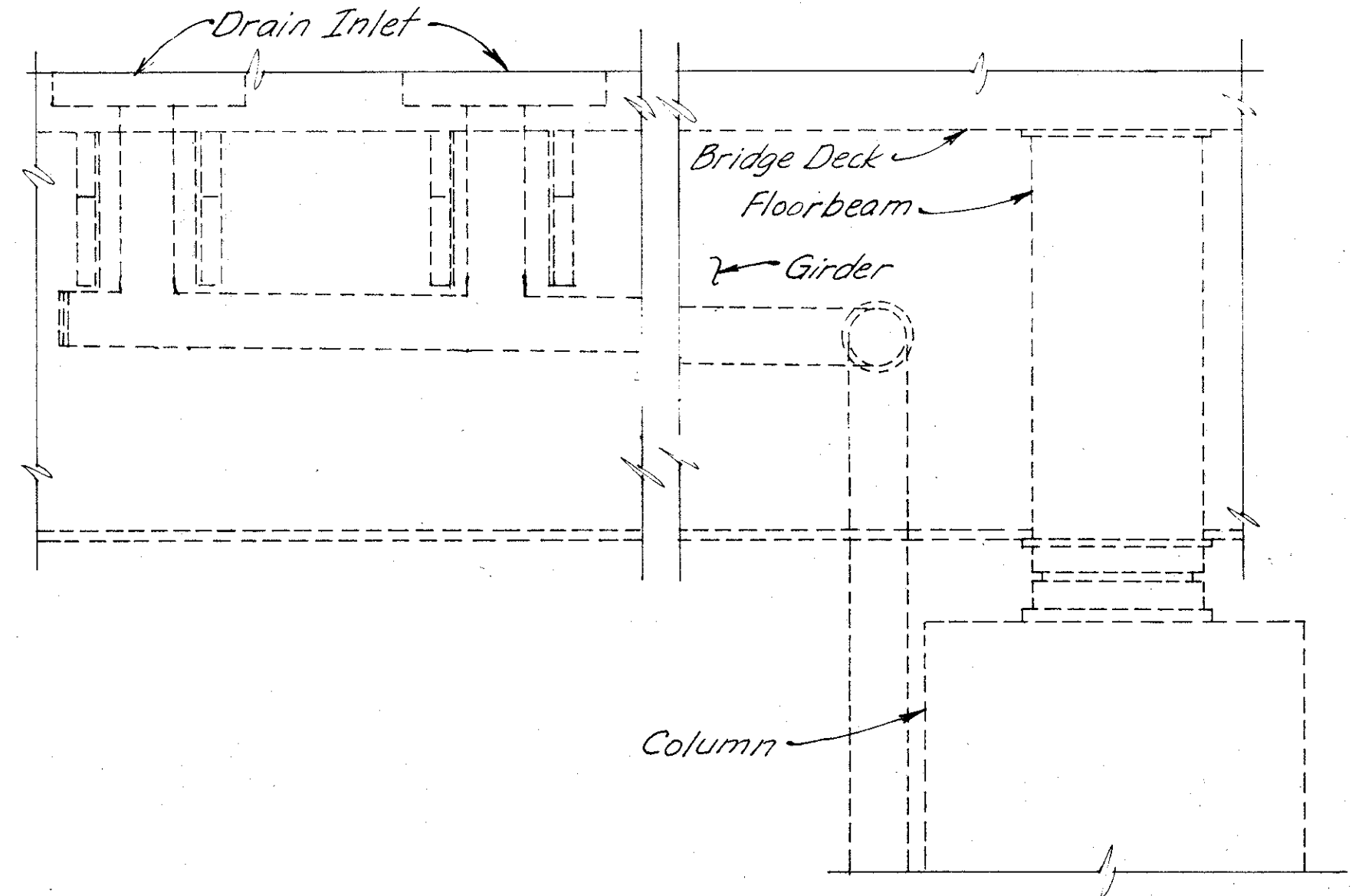




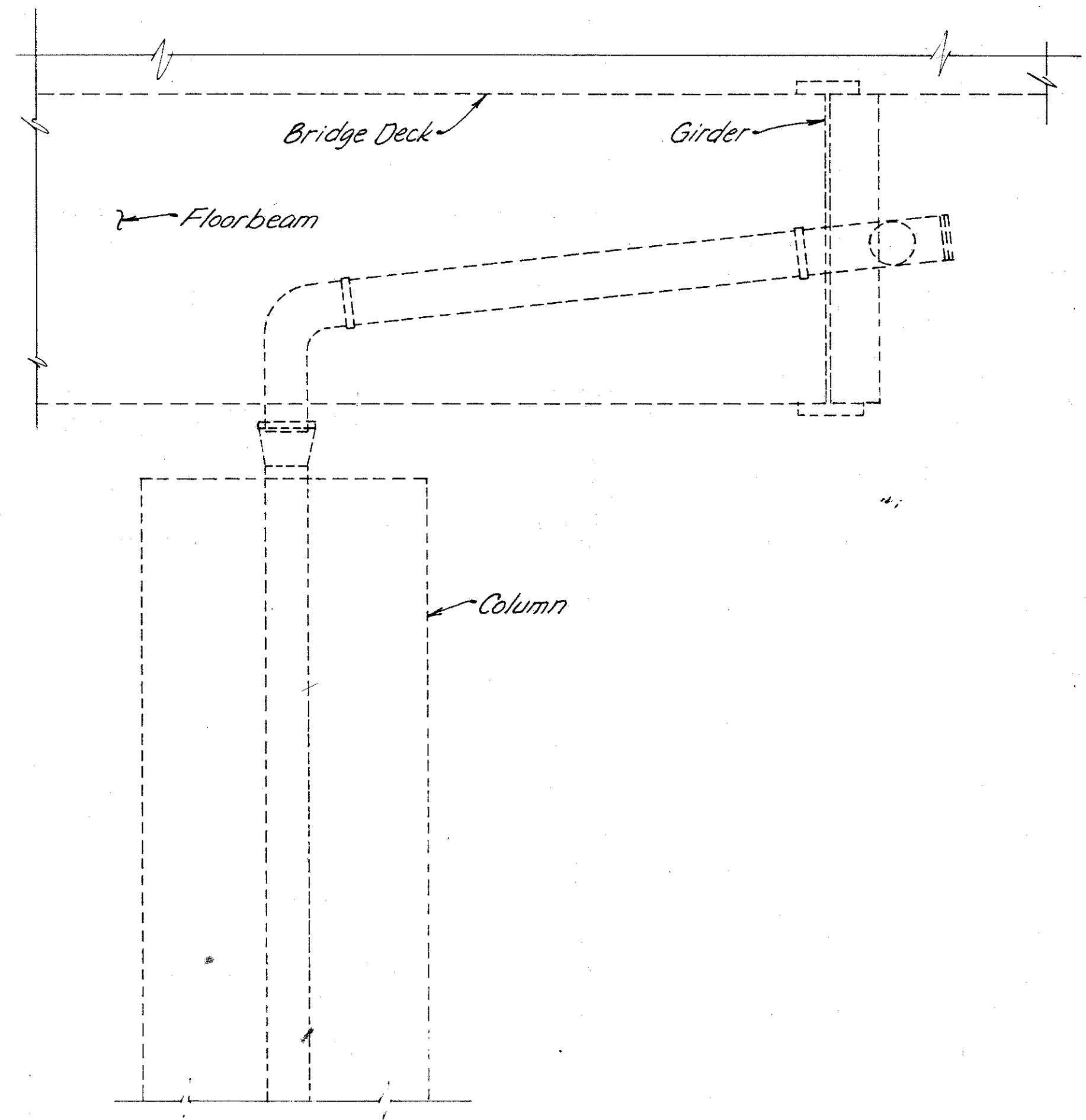




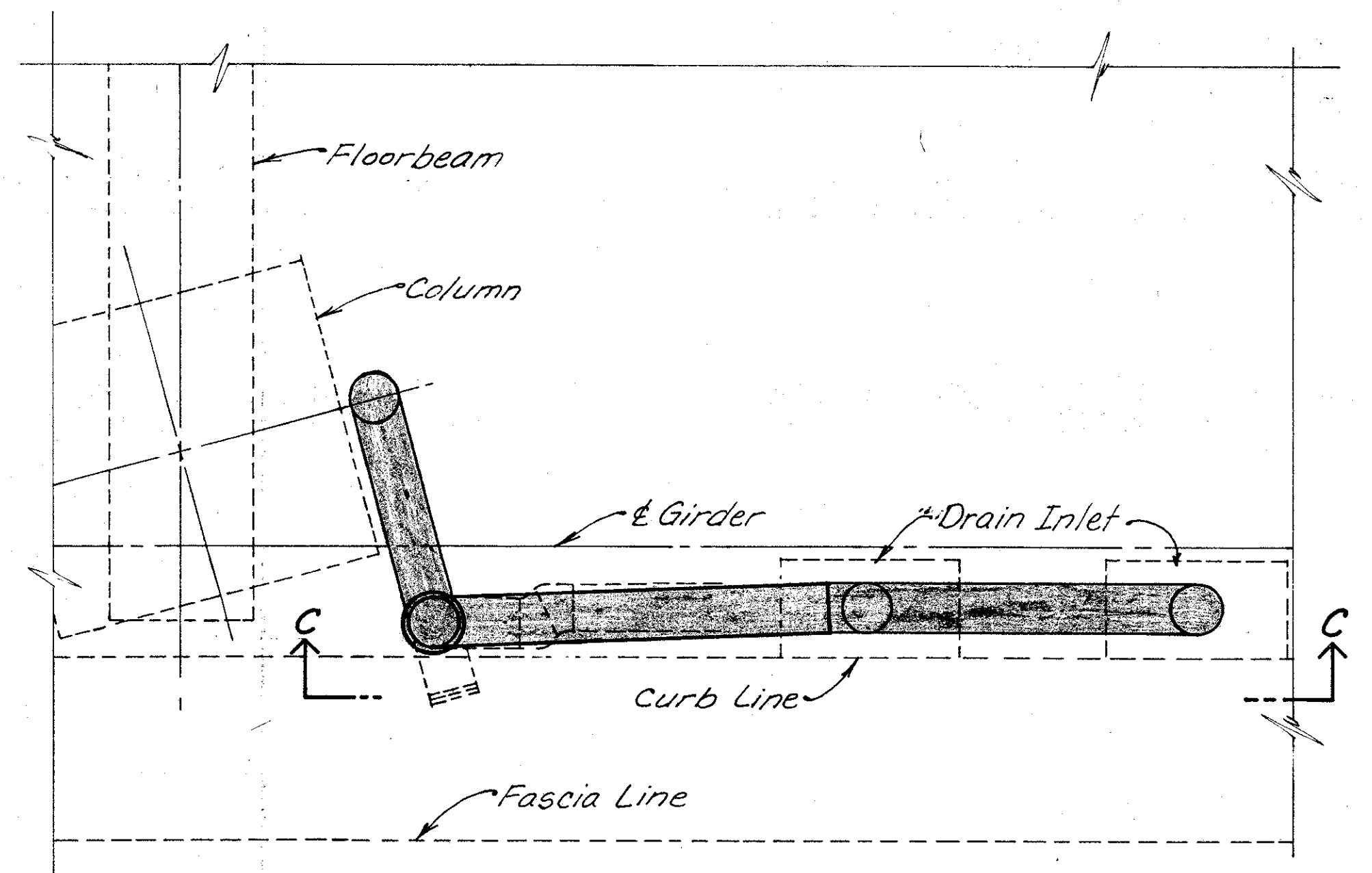
**PLAN FOR TYPE D**  
At Pier 1 (No Work Required)



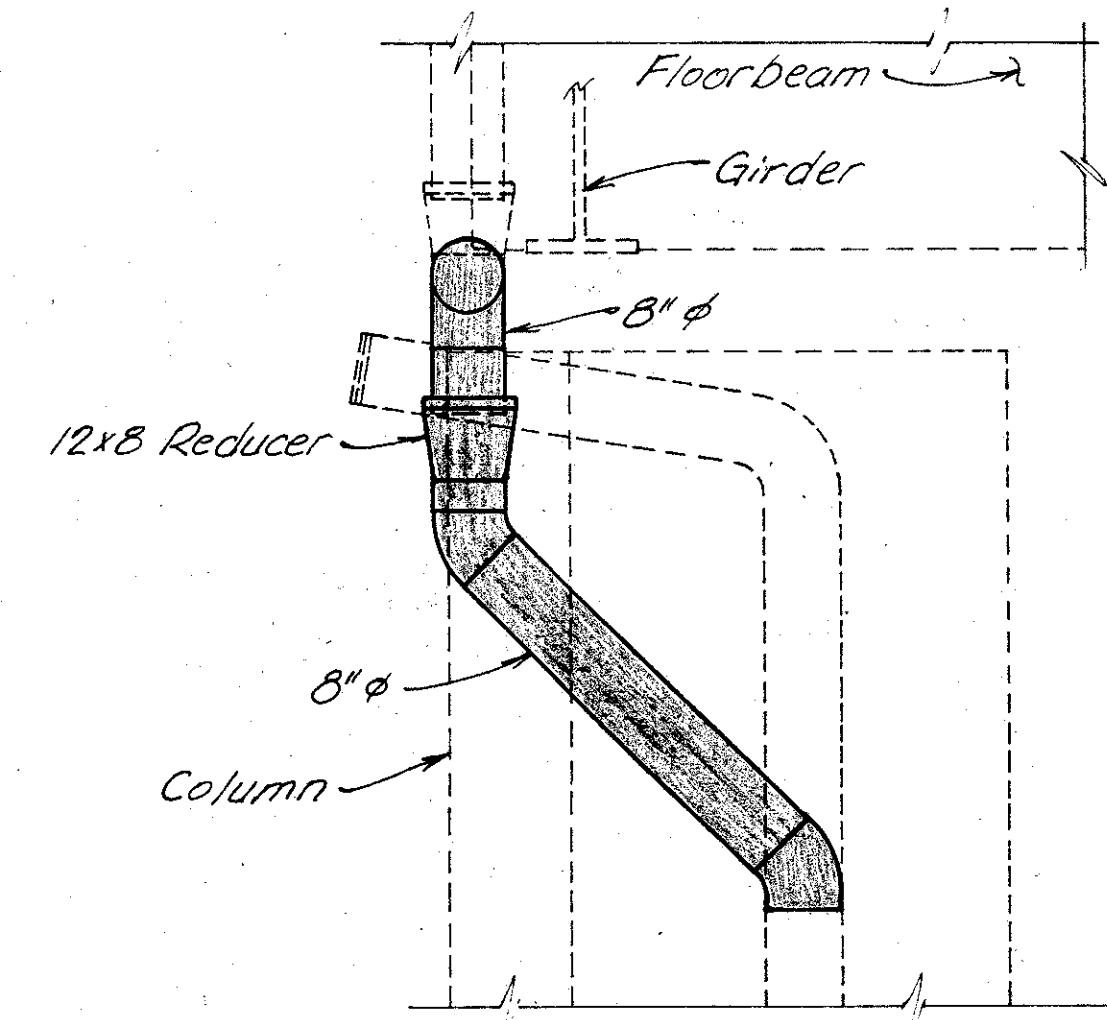
**SECTION A-A**



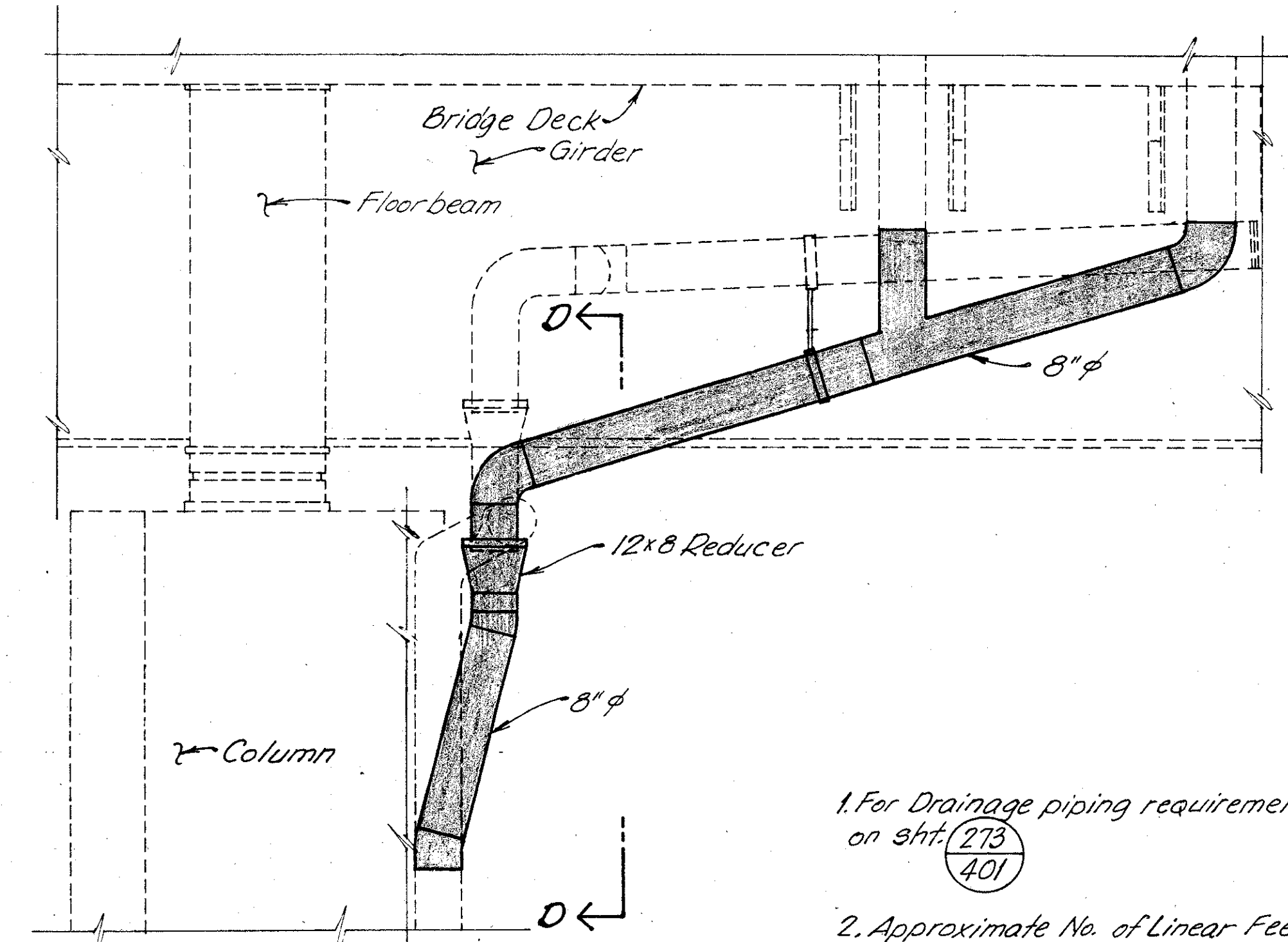
**SECTION B-B**



**PLAN FOR TYPE E**  
At Pier 2



**SECTION D-D**



**SECTION C-C**

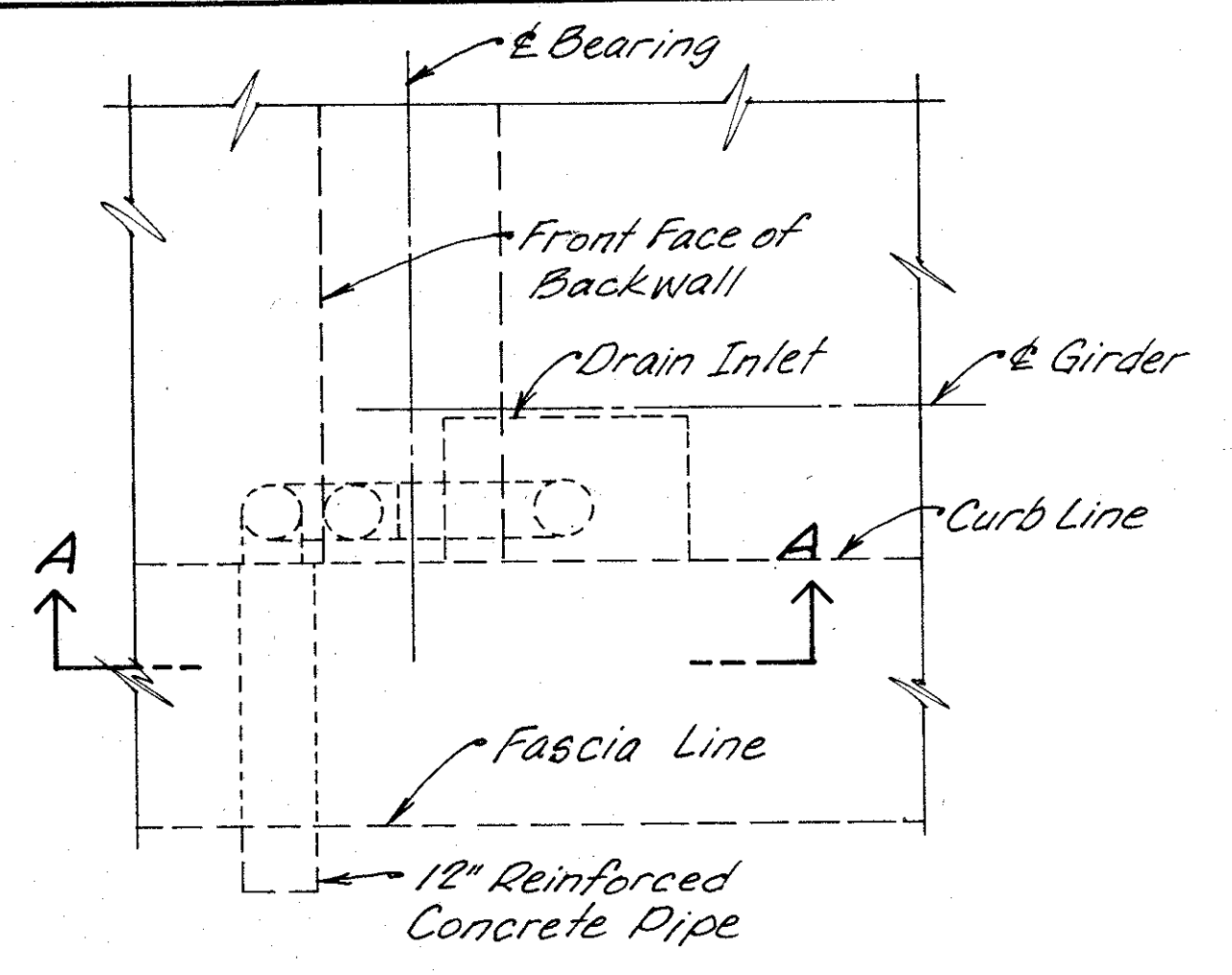
1. For Drainage piping requirements see General Notes on sht. (273) 401
2. Approximate No. of Linear Feet of proposed 8" pipe (including specials) = 70'

**WOOLPERT CONSULTANTS**  
409 East Monument Avenue  
Dayton, Ohio 45402-1226

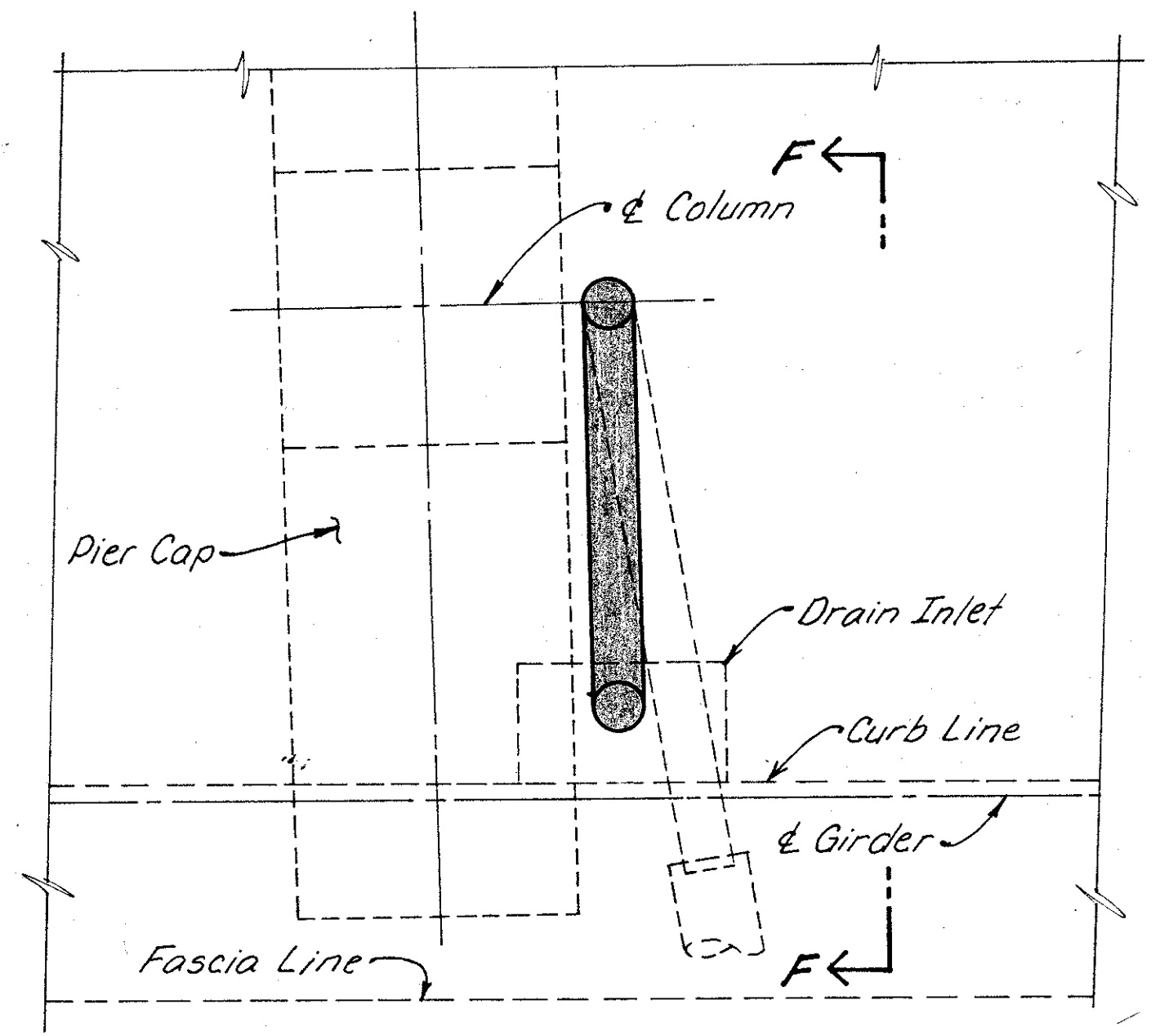
**DRAINAGE DETAILS**

BRIDGE NO. HAM-71-0243L  
OVER RAMP RF, NORTHBOUND READING ROAD AND EDEN PARK ENTRANCE

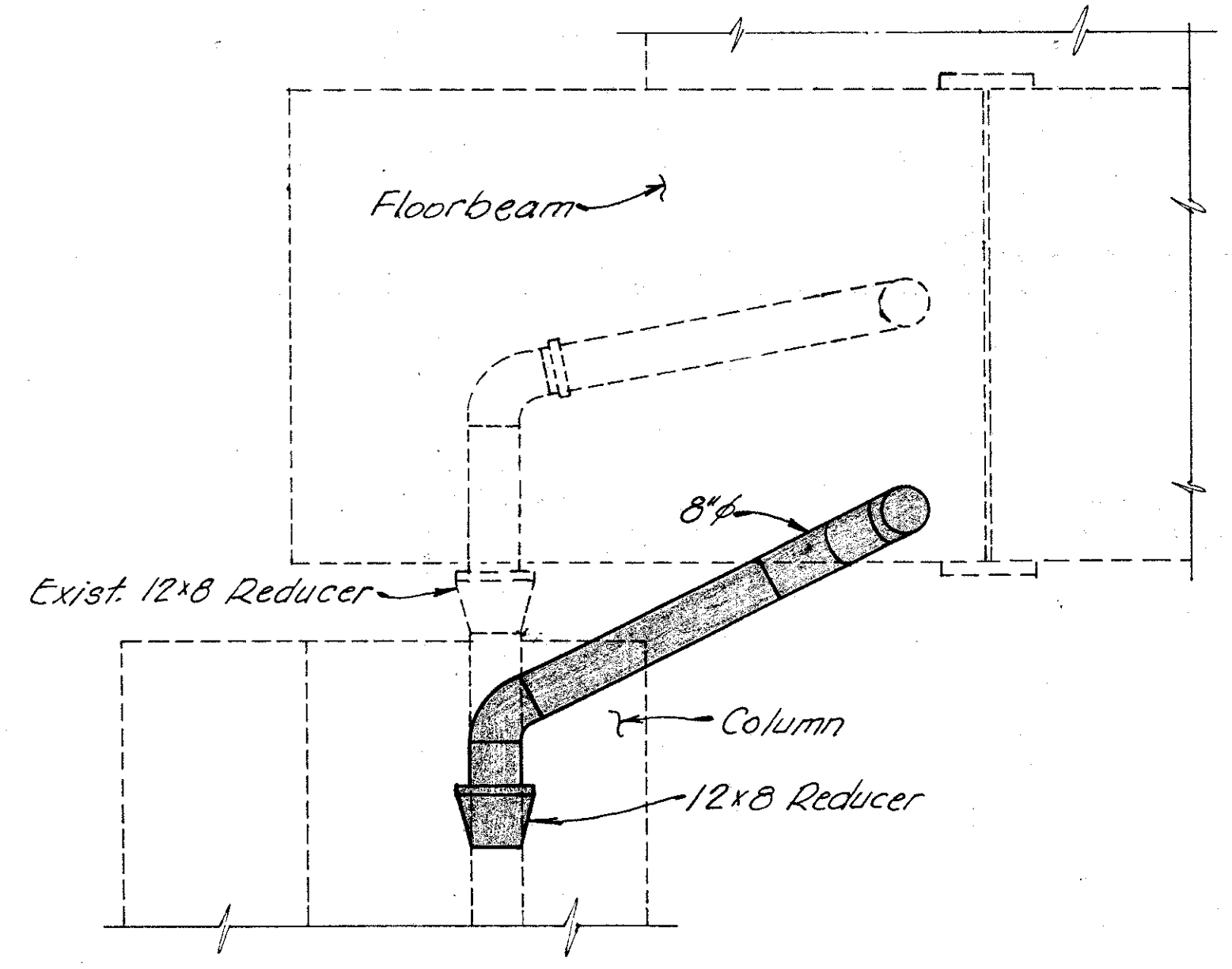
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| HAMILTON COUNTY |        |        |         |          |          |
| DESIGNED        | DRAWN  | TRACED | CHECKED | REVIEWED | DATE     |
| L.A.T.A.        | L.A.P. |        | D.E.M.  | P.W.G.   | 11/11/94 |



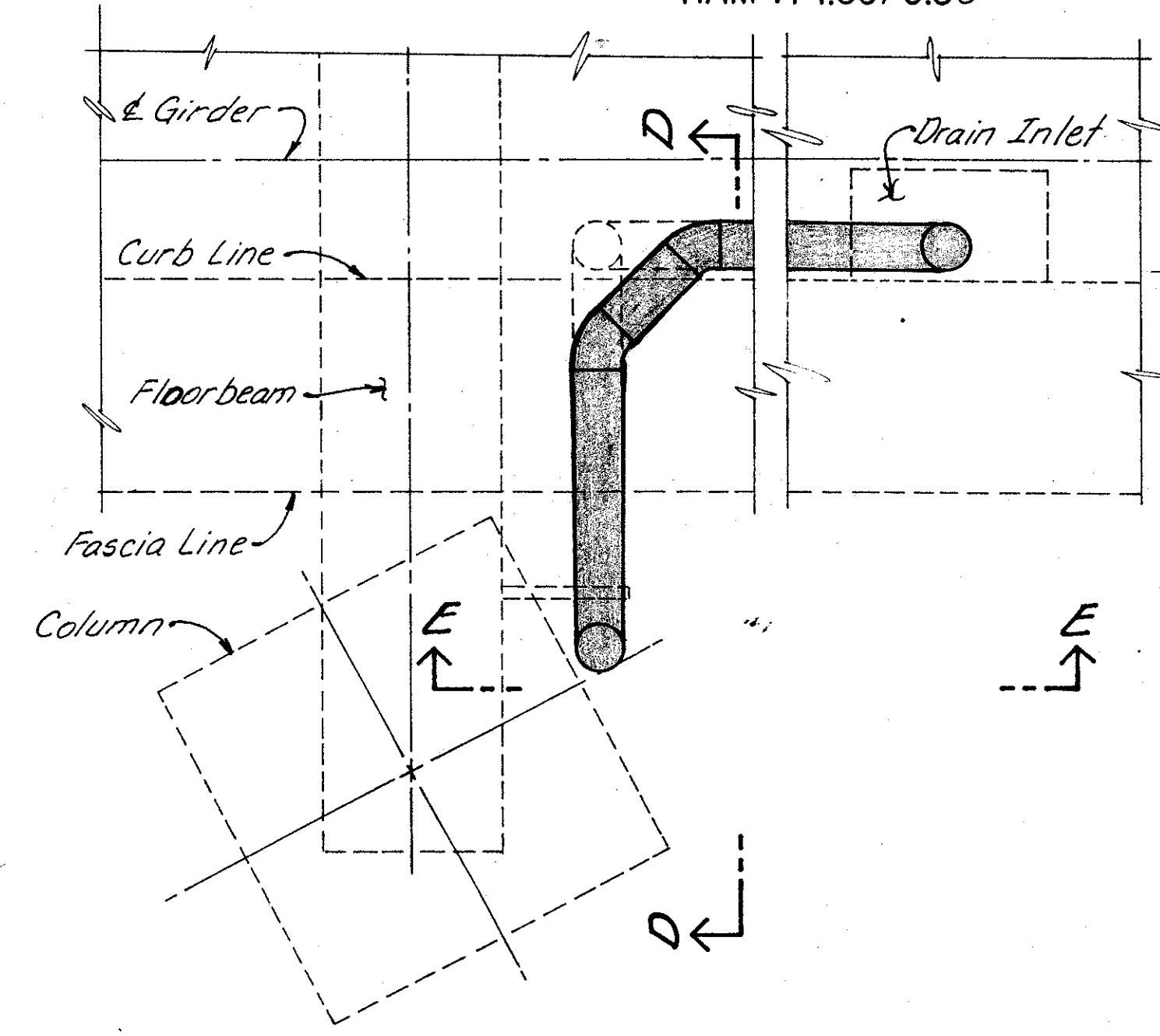
**PLAN FOR TYPE C (Rear Abutment)**  
- NO WORK REQUIRED -



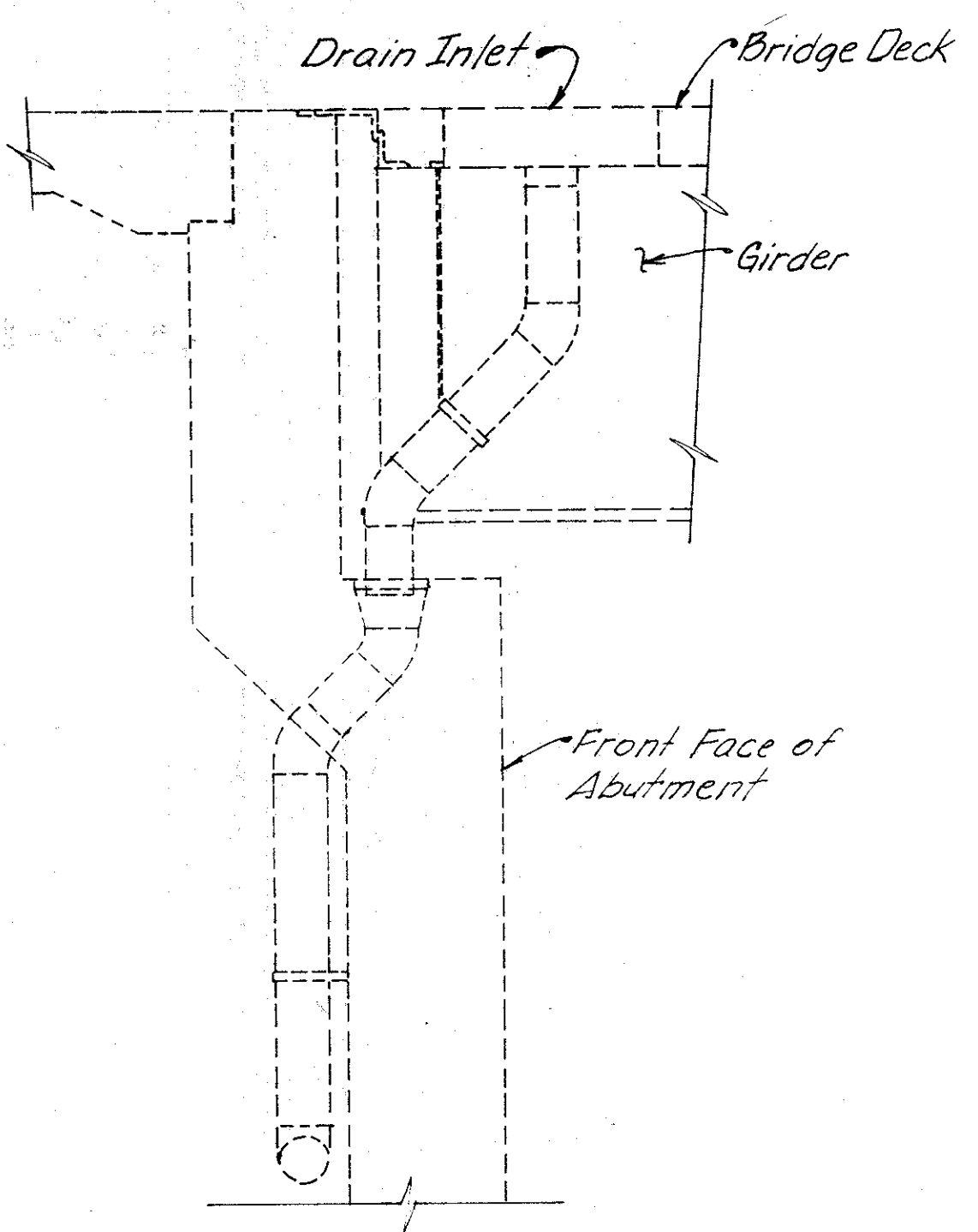
**PLAN FOR TYPE B**  
At Pier 6



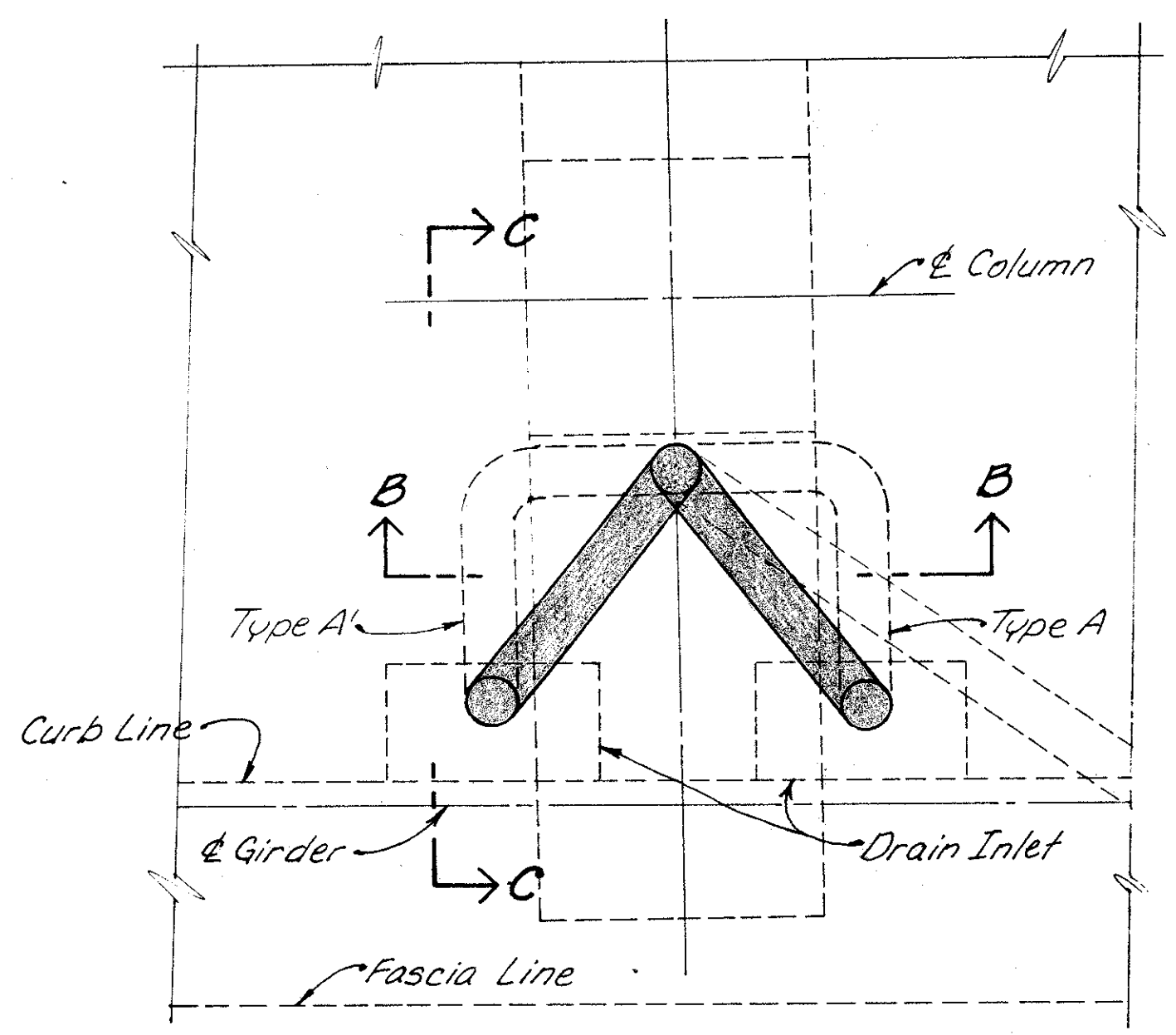
**SECTION D-D**



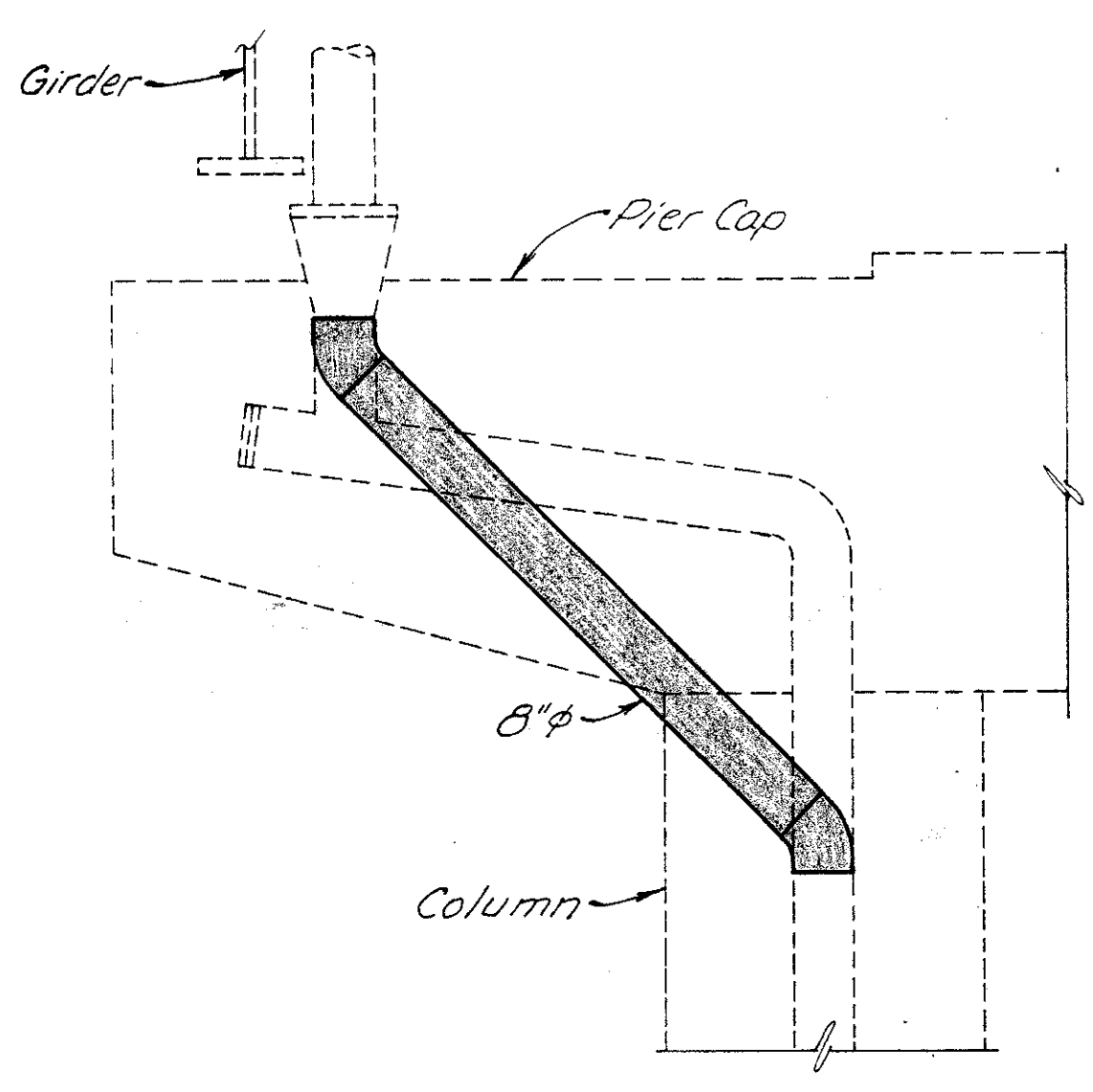
**PLAN FOR TYPE F**  
At Pier 3



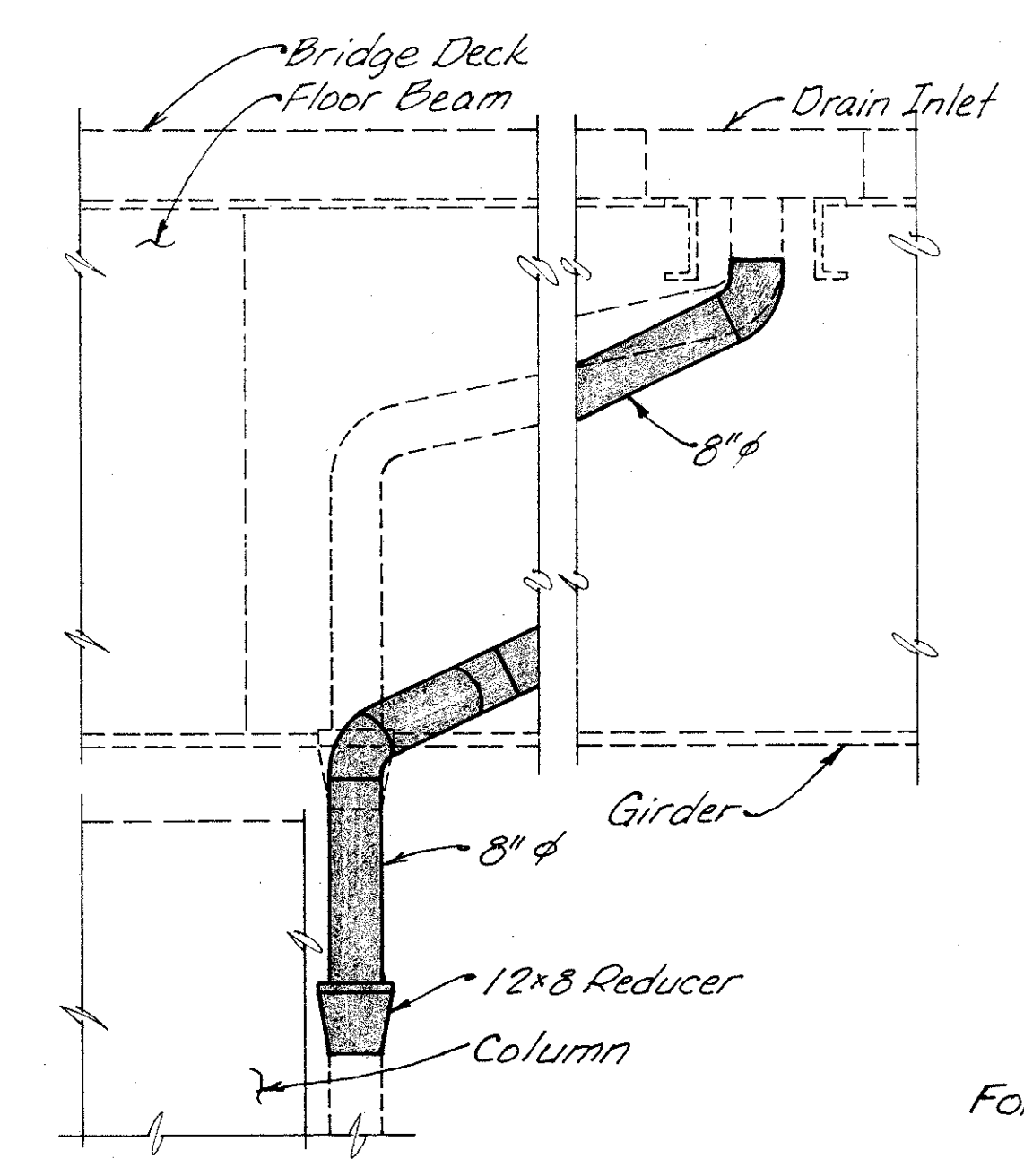
**SECTION A-A**



**PLAN FOR TYPE A OR A'**  
Type A At Pier 4, Type A' At Pier 5

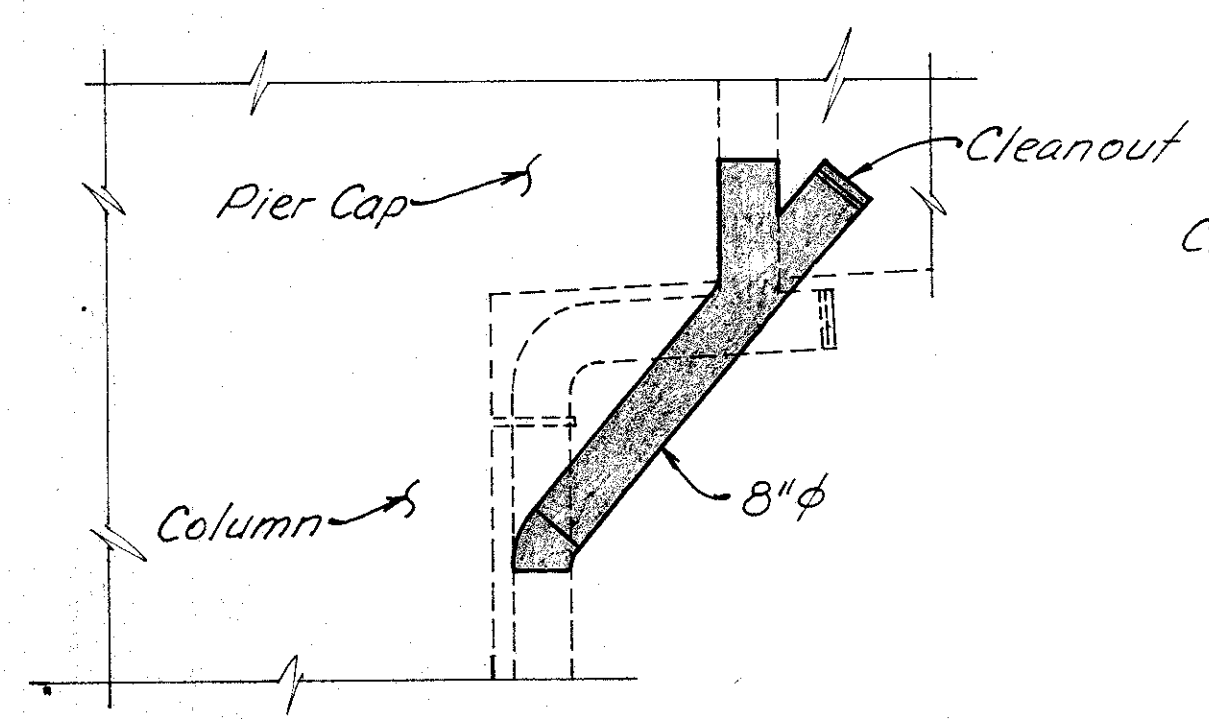


**SECTION F-F**

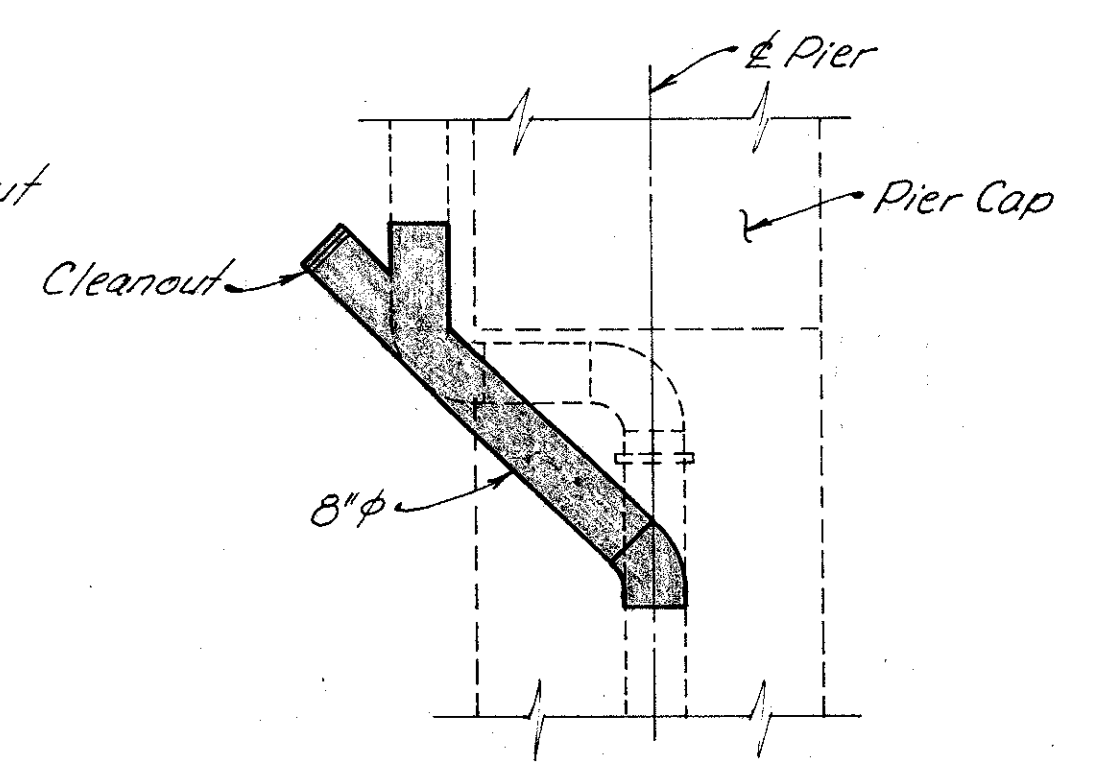


**SECTION E-E**

For Notes see sh. 10/11



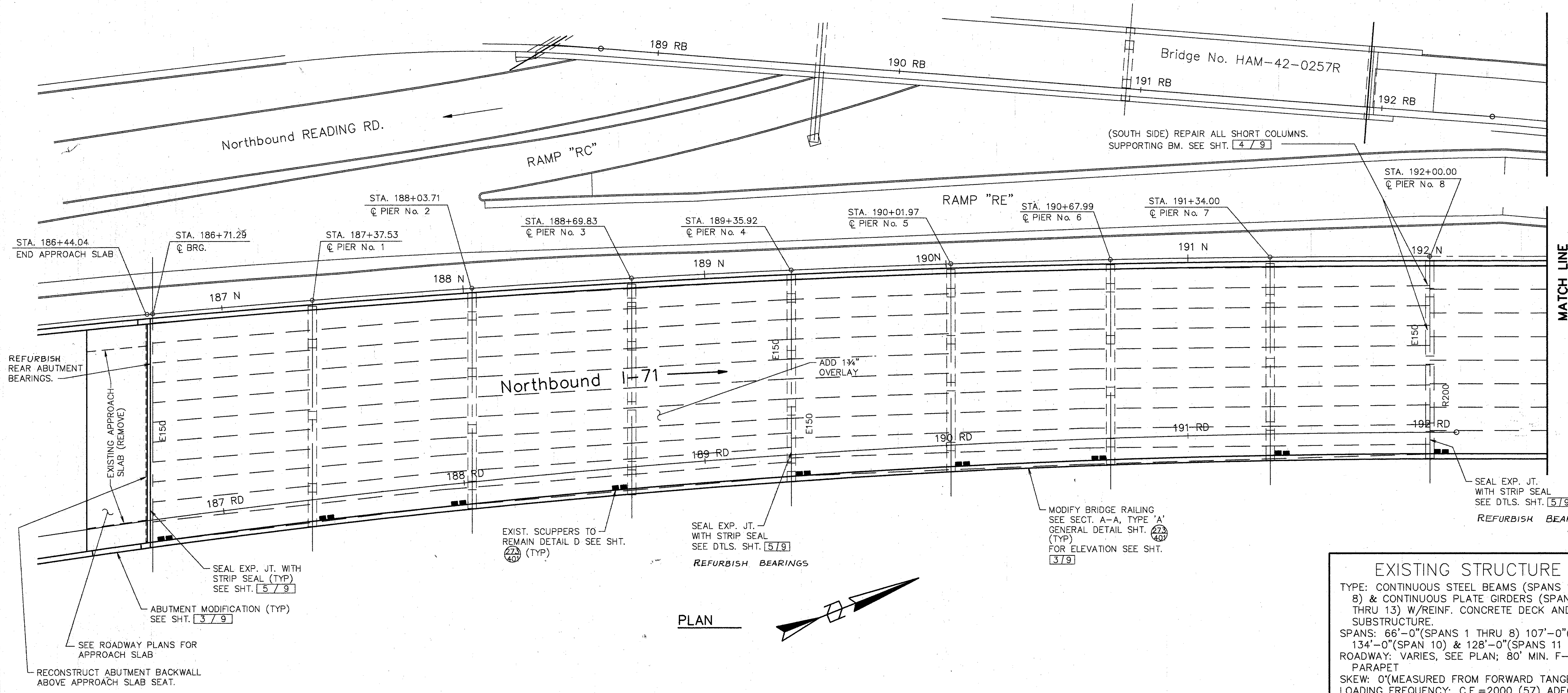
**SECTION C-C**  
Type A' shown. Type A same but opposite hand.



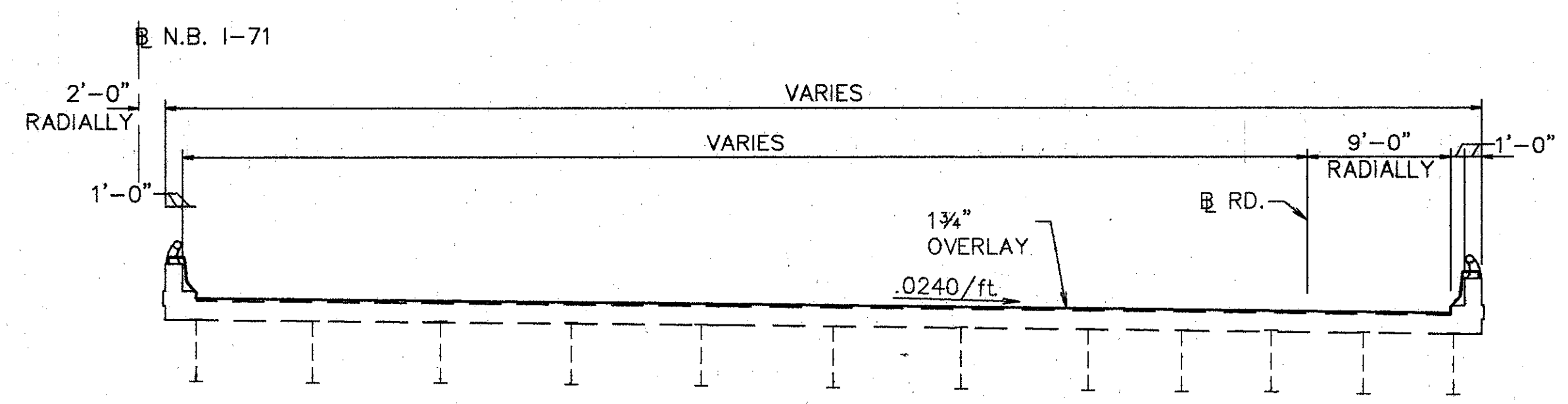
**SECTION B-B**  
Type A' shown. Type A same but opposite hand.

|                                                                                            |        |        |          |
|--------------------------------------------------------------------------------------------|--------|--------|----------|
| <b>W</b> WOOLPERT CONSULTANTS<br>409 East Monument Avenue<br>Dayton, Ohio 45402-1228       |        | 11/11  |          |
| <b>DRAINAGE DETAILS</b>                                                                    |        |        |          |
| BRIDGE NO. HAM-71-0243L<br>OVER RAMP RF, NORTHBOUND READING ROAD AND<br>EDEN PARK ENTRANCE |        |        |          |
| HAMILTON COUNTY                                                                            |        |        |          |
| DESIGNED                                                                                   | DRAWN  | TRACED | CHECKED  |
| L.A.T.M.                                                                                   | L.A.P. | DEM.   | P.W.G.   |
|                                                                                            |        |        | 11/11/99 |
|                                                                                            |        |        | REVIS    |





PLAN



TYP. BRIDGE SECTION

| ROCKER OR SLIDING P. | JACK CAPACITY REQ'D. (MIN) |
|----------------------|----------------------------|
| R200                 | 150 TON                    |
| E150                 | 75 TON                     |

**EXISTING STRUCTURE**

TYPE: CONTINUOUS STEEL BEAMS (SPANS 1 THRU 8) & CONTINUOUS PLATE GIRDERS (SPANS 9 THRU 13) W/REINF. CONCRETE DECK AND SUBSTRUCTURE.

SPANS: 66'-0" (SPANS 1 THRU 8) 107'-0" (SPAN 9) 134'-0" (SPAN 10) & 128'-0" (SPANS 11 THRU 13)

ROADWAY: VARIES, SEE PLAN; 80' MIN. F-F PARAPET

SKEW: 0' (MEASURED FROM FORWARD TANGENT)

LOADING FREQUENCY: C.F.=2000 (57) ADEQUATE FOR A.A.S.H.O. ALTERNATE LOADING

WEARING SURFACE: 1" MONOLITHIC CONCRETE

APPROACH SLABS: AS-1-54 (25'-0" LONG)

ALIGNMENT: SEE PLAN

SUPERELEVATION: VARIES, SEE PLAN

**WOOLPERT CONSULTANTS**  
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 DAYTON, OHIO 45402-1226  
 (513) 461-5660

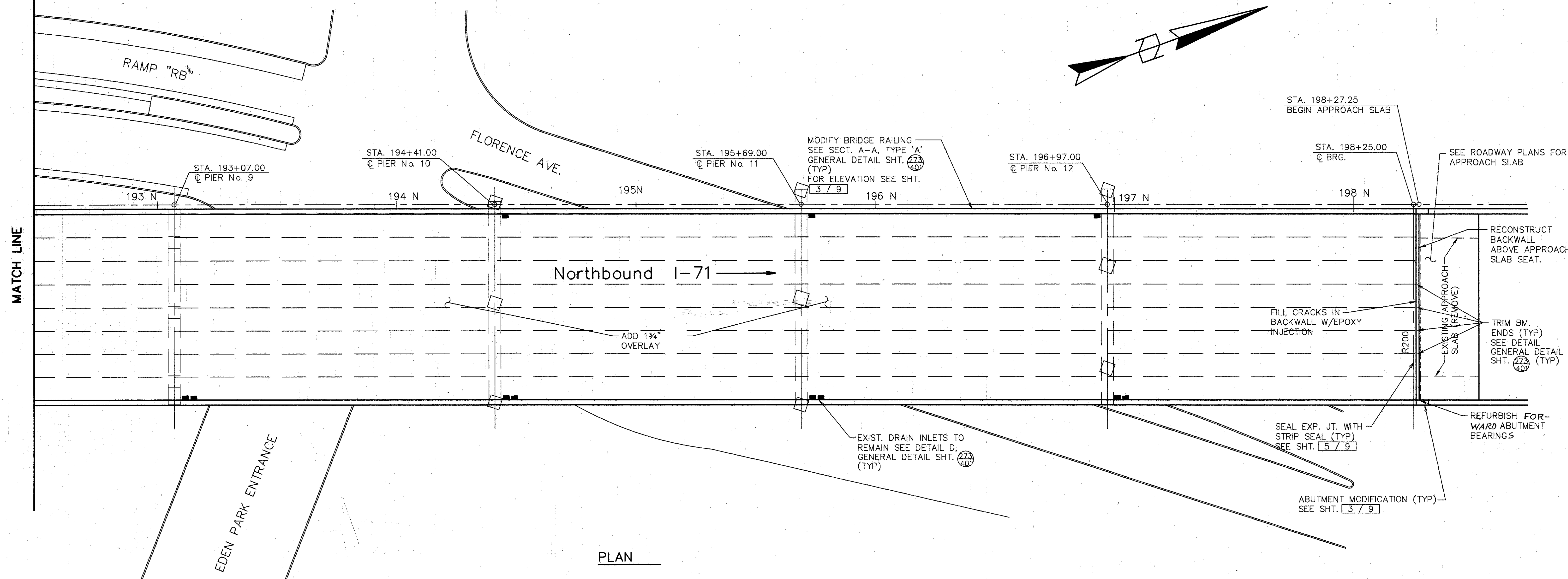
GENERAL PLAN

BRIDGE NO. HAM-71-0243 R  
 OVER EDEN PARK ENTR.

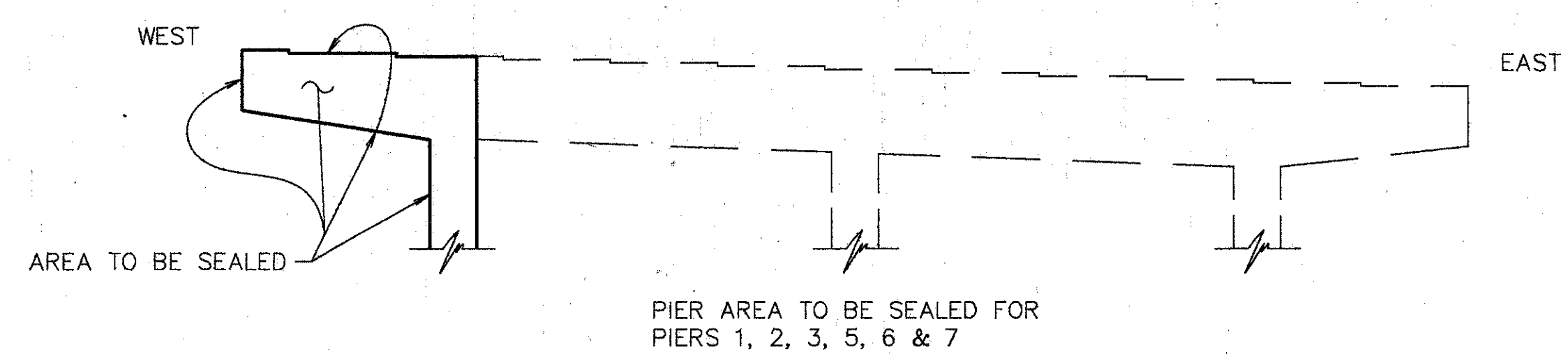
HAMILTON COUNTY

|          |        |        |         |          |          |         |
|----------|--------|--------|---------|----------|----------|---------|
| DESIGNED | DRAWN  | TRACED | CHECKED | REVIEWED | DATE     | REVISED |
| L.A.T.M. | D.E.E. |        | M.A.A.  | DEM      | 11/11/94 |         |

Lot# 104 MAY 15, 1991 © 7:11 PM  
 C:\STR\10596-00\235871.Lot# Revision By: RACH OCT. 7, 1992 © 8:56 AM



PLAN



NOTES:

1. MODIFY DRAINAGE PIPING. SEE SHT. 7/9
2. SEAL PARAPETS, BACKWALLS & PIERS. SEAL PIERS 1, 2, 3, 5, 6, & 7 WITH EPOXY OR NON-EPOXY. SEAL ONLY THE WEST PORTION AS DETAILED ON THIS SHT. SEAL PIERS 4 & 8 WITH EPOXY. SEAL COMPLETELY EXCEPT FOR 1/4 THE COLUMN PERIMETER AWAY FROM TRAFFIC. SEAL PIER 9 THRU 12 WITH EPOXY OR NON-EPOXY. SEAL COMPLETELY EXCEPT FOR TOPS OF COLUMNS.
3. SEE JUNCTION BOX EXTENSION DETAIL GENERAL DETAIL SHT. 273/407 FOR BARRIER RETROFIT AT JUNCTION BOXES. REFER TO LIGHTING PLANS FOR TYPE AND LOCATION.

**WOOLPERT CONSULTANTS**  
 409 E. MONUMENT AVENUE  
 DAYTON, OHIO 45402-1226  
 (513) 461-5660

GENERAL PLAN

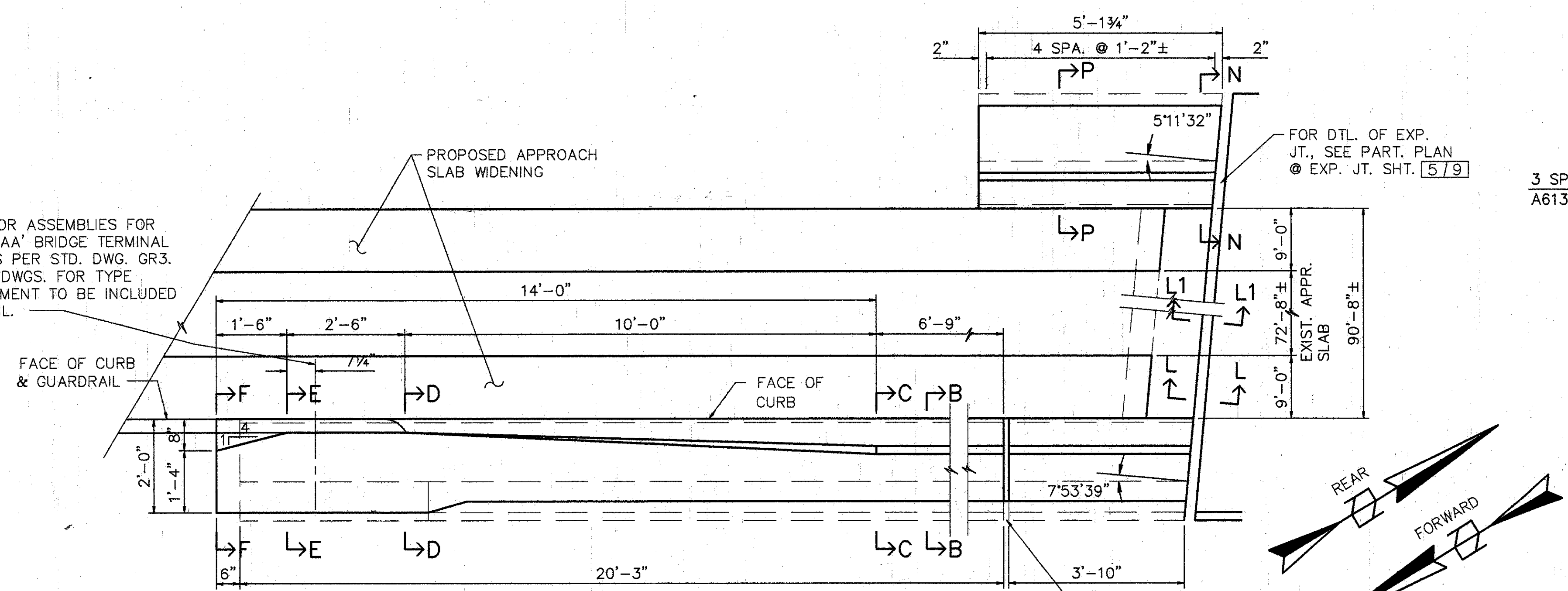
BRIDGE NO. HAM-71-0243 R  
 OVER EDEN PARK ENTR.

|                 |        |        |         |          |          |
|-----------------|--------|--------|---------|----------|----------|
| HAMILTON COUNTY |        |        |         |          |          |
| DESIGNED        | DRAWN  | TRACED | CHECKED | REVIEWED | DATE     |
| L.A.T.M.        | D.E.E. |        | M.A.A.  | DEM      | 11/11/94 |

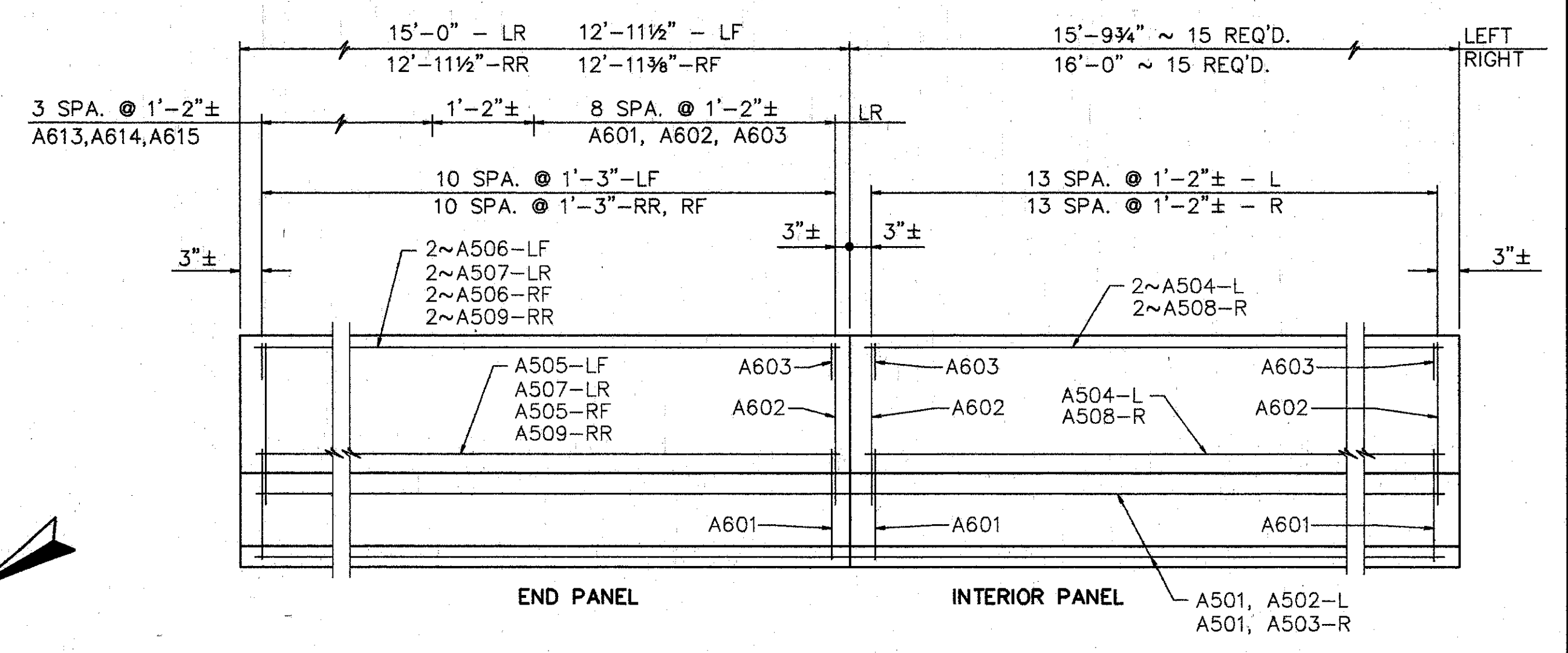
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 User: L.A.T.M.  
 Date: OCT. 7, 1992 @ 9:54 AM



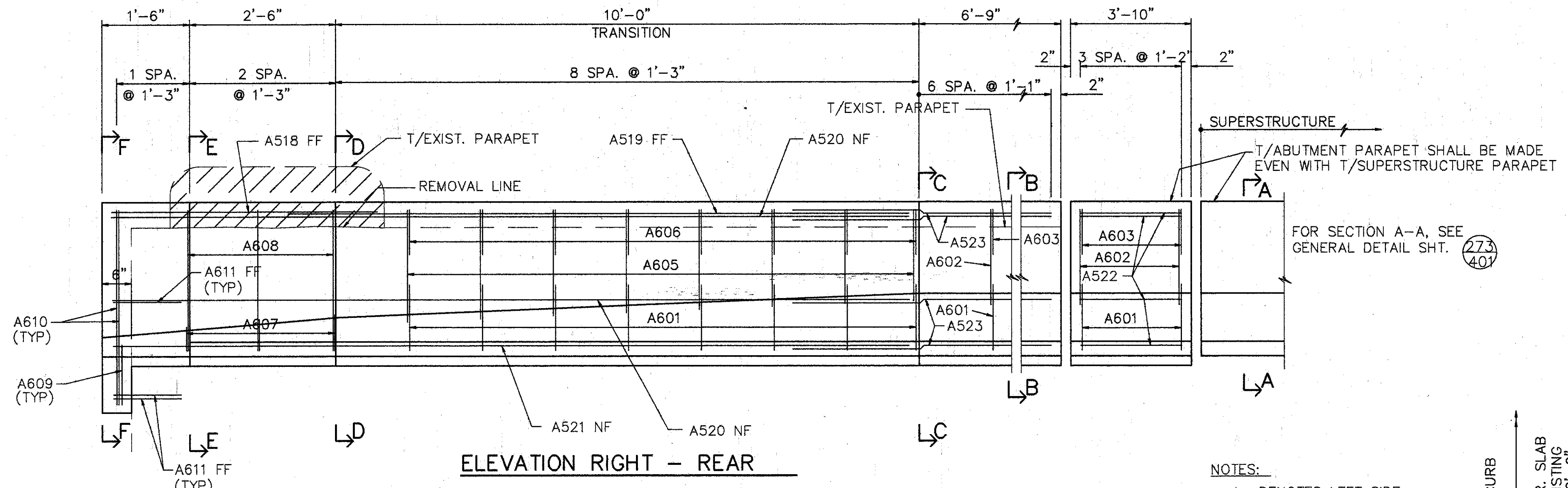
PROVIDE ANCHOR ASSEMBLIES FOR TYPE 'AT' OR 'AA' BRIDGE TERMINAL ASSEMBLIES AS PER STD. DWG. GR3. SEE ROADWAY DWGS. FOR TYPE LOCATION. PAYMENT TO BE INCLUDED WITH GUARDRAIL.



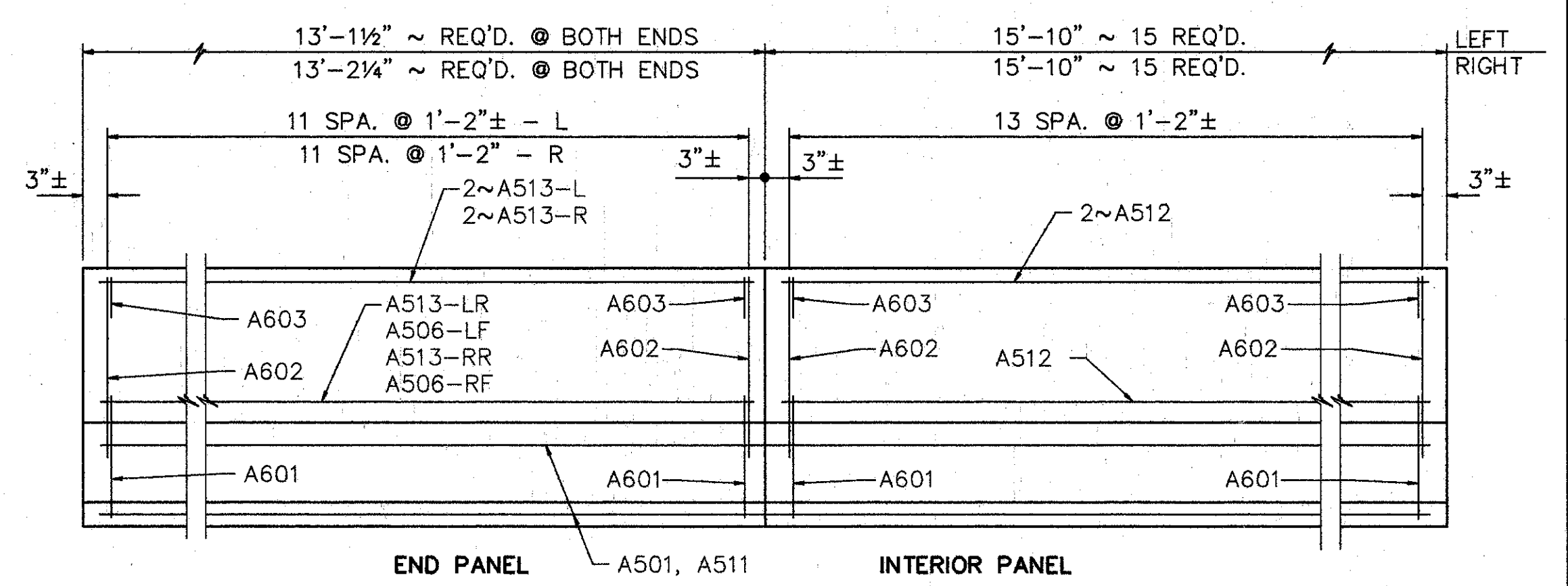
PLAN - ABUTMENT MODIFICATION (REAR)



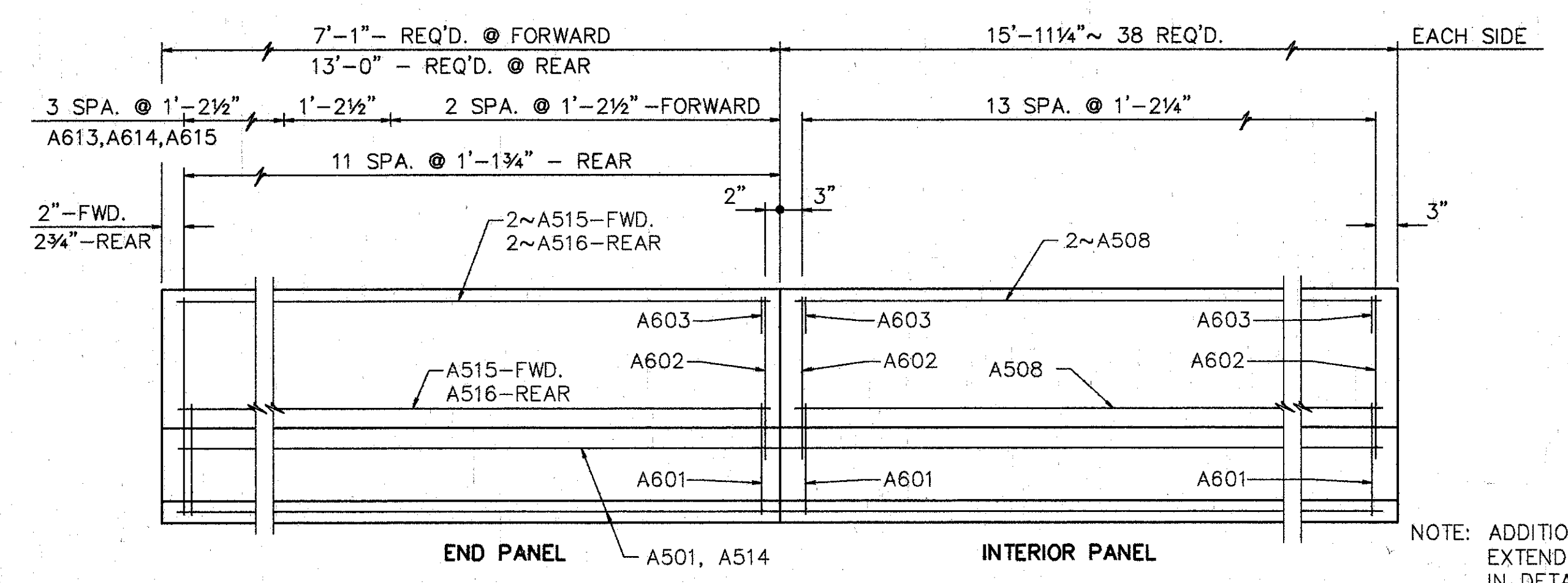
ELEVATION SUPERSTRUCTURE PARAPET SPAN 1-4



ELEVATION RIGHT - REAR



ELEVATION SUPERSTRUCTURE PARAPET SPAN 5-8

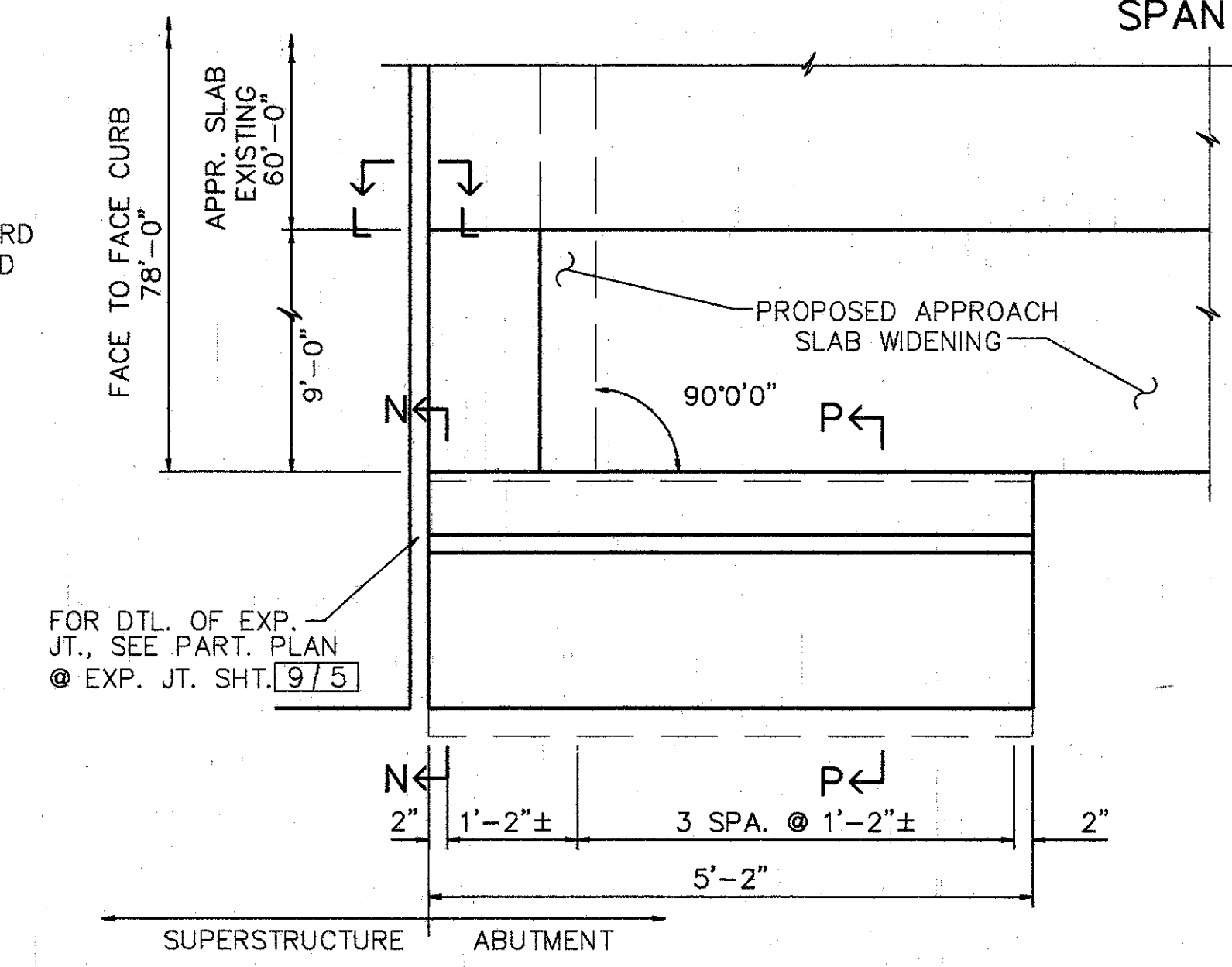


ELEVATION SUPERSTRUCTURE PARAPET SPAN 9-13

NOTES:  
 L DENOTES LEFT SIDE  
 R DENOTES RIGHT SIDE  
 RF DENOTES RIGHT FORWARD  
 LF DENOTES LEFT FORWARD  
 RR DENOTES RIGHT REAR  
 LR DENOTES LEFT REAR  
 NF DENOTES NEAR FACE  
 FF DENOTES FAR FACE

SEE NOTES SHT. [4/9]

NOTE: ADDITIONAL A510 & A616 EXTEND EXISTING AS NOTED IN DETAIL.

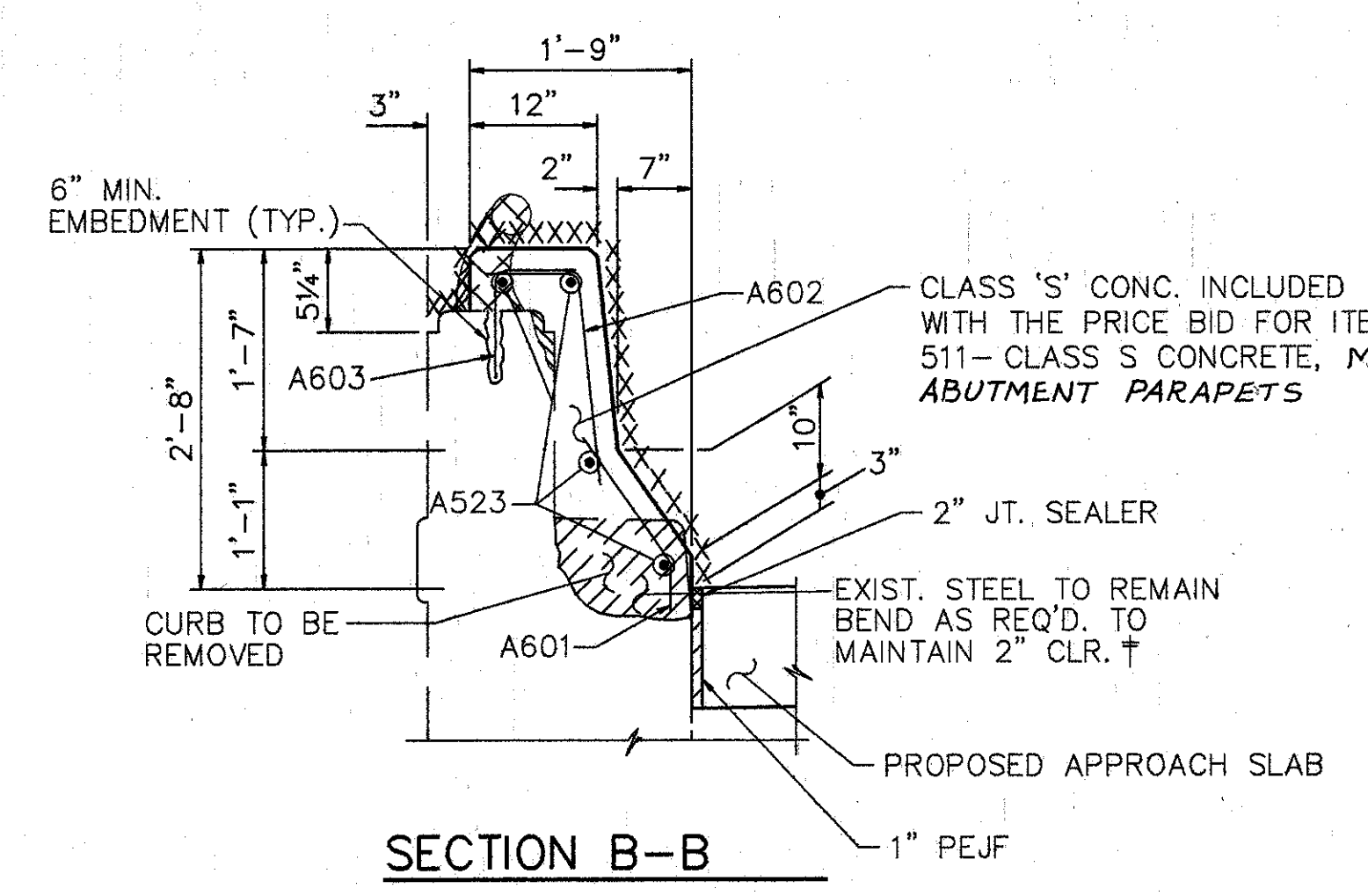


PLAN - ABUTMENT MODIFICATION (FORWARD) RIGHT WALL SHOWN, LEFT IS OPPOSITE HAND

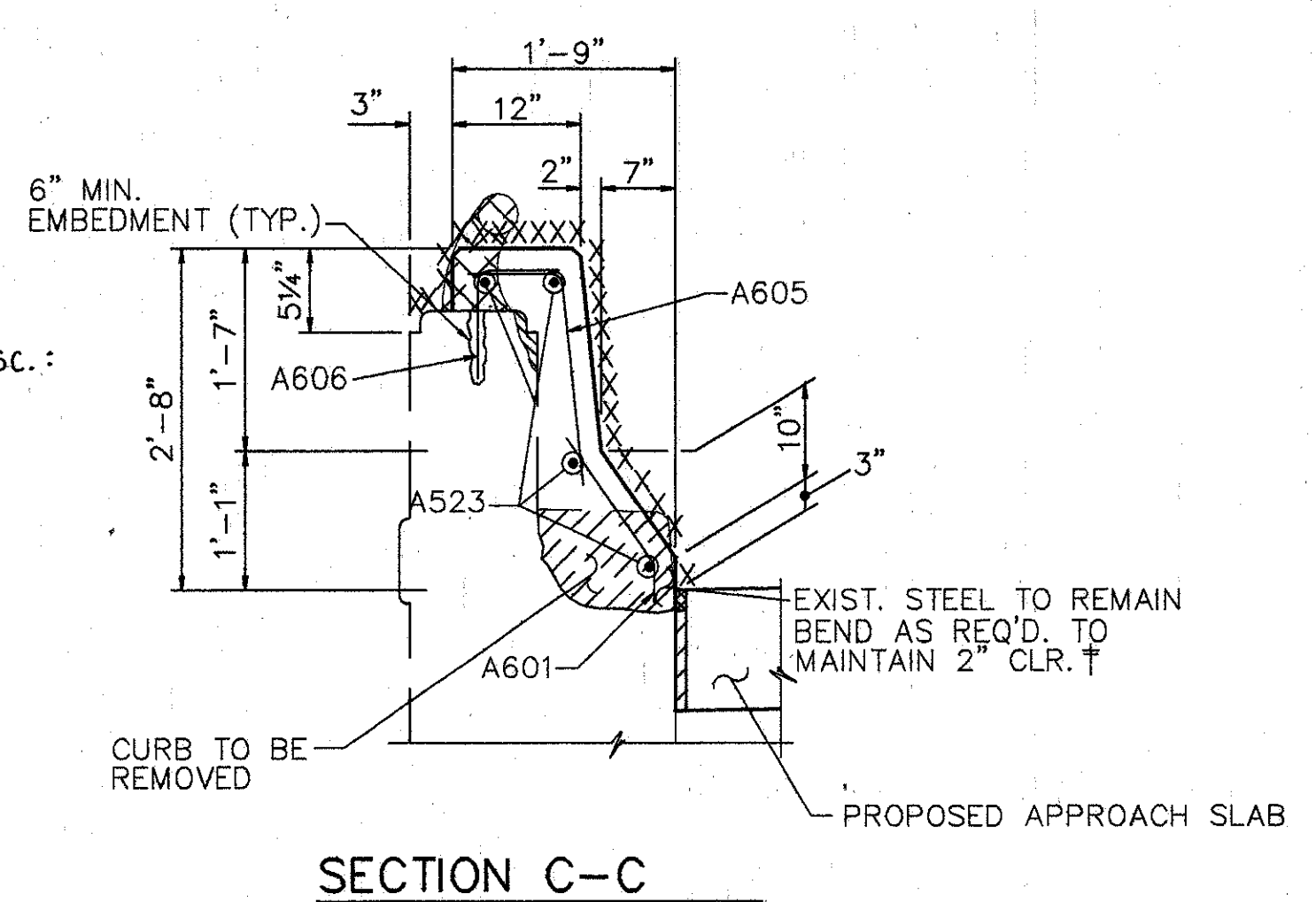
**WOOLPERT CONSULTANTS**  
 409 E. MONUMENT AVENUE  
 DAYTON, OHIO 45402-1226  
 (513) 461-5660

**PARAPET SECTIONS AND DETAILS**  
 BRIDGE NO. HAM-71-0243 R  
 OVER EDEN PARK  
 HAMILTON COUNTY

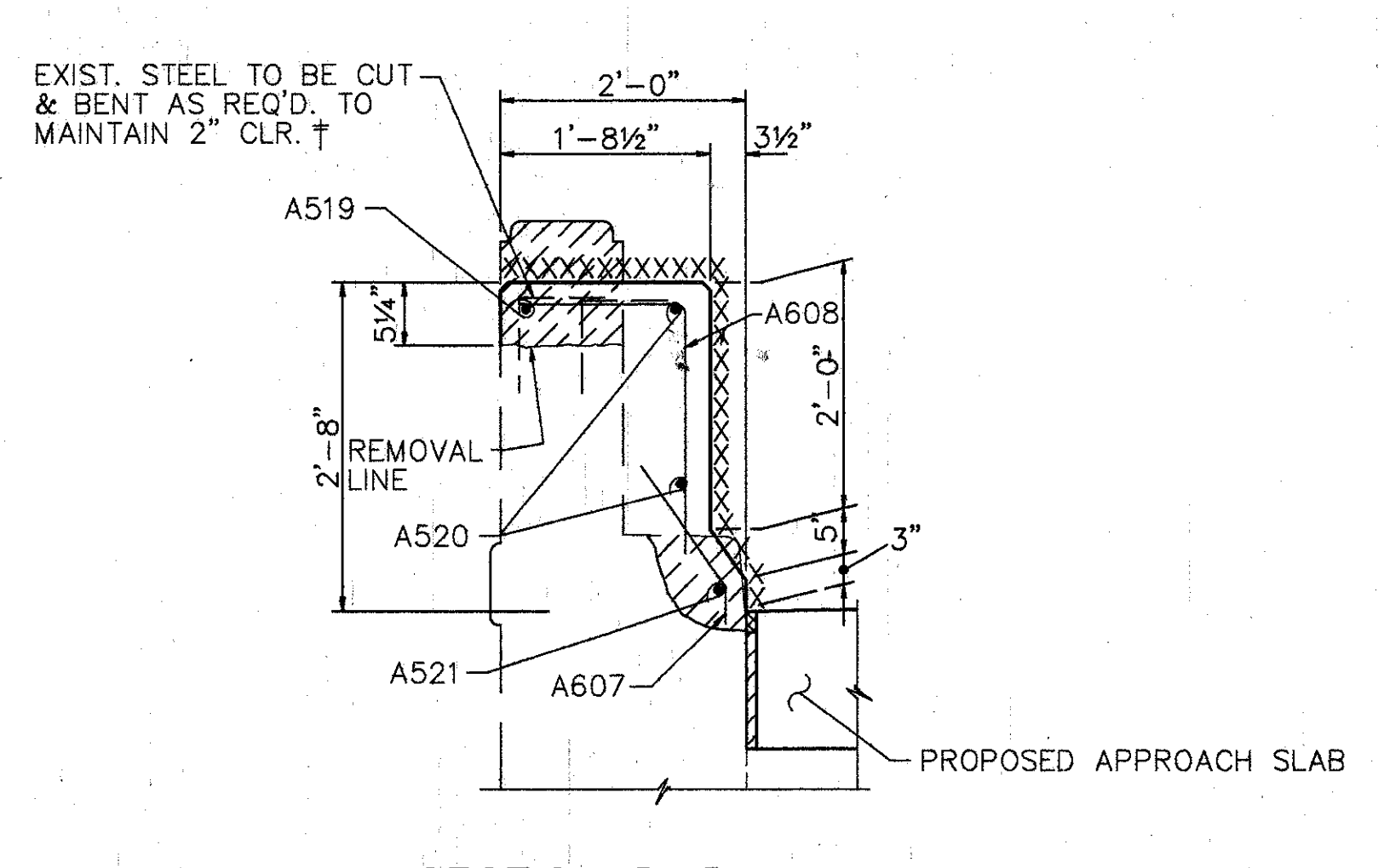
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|----------|--------|--------|---------|----------|----------|---------|
| DESIGNED | DRAWN  | TRACED | CHECKED | REVIEWED | DATE     | REVISED |
| L.A.T.M. | D.E.E. |        | M.A.A.  | DEM      | 11/11/94 |         |



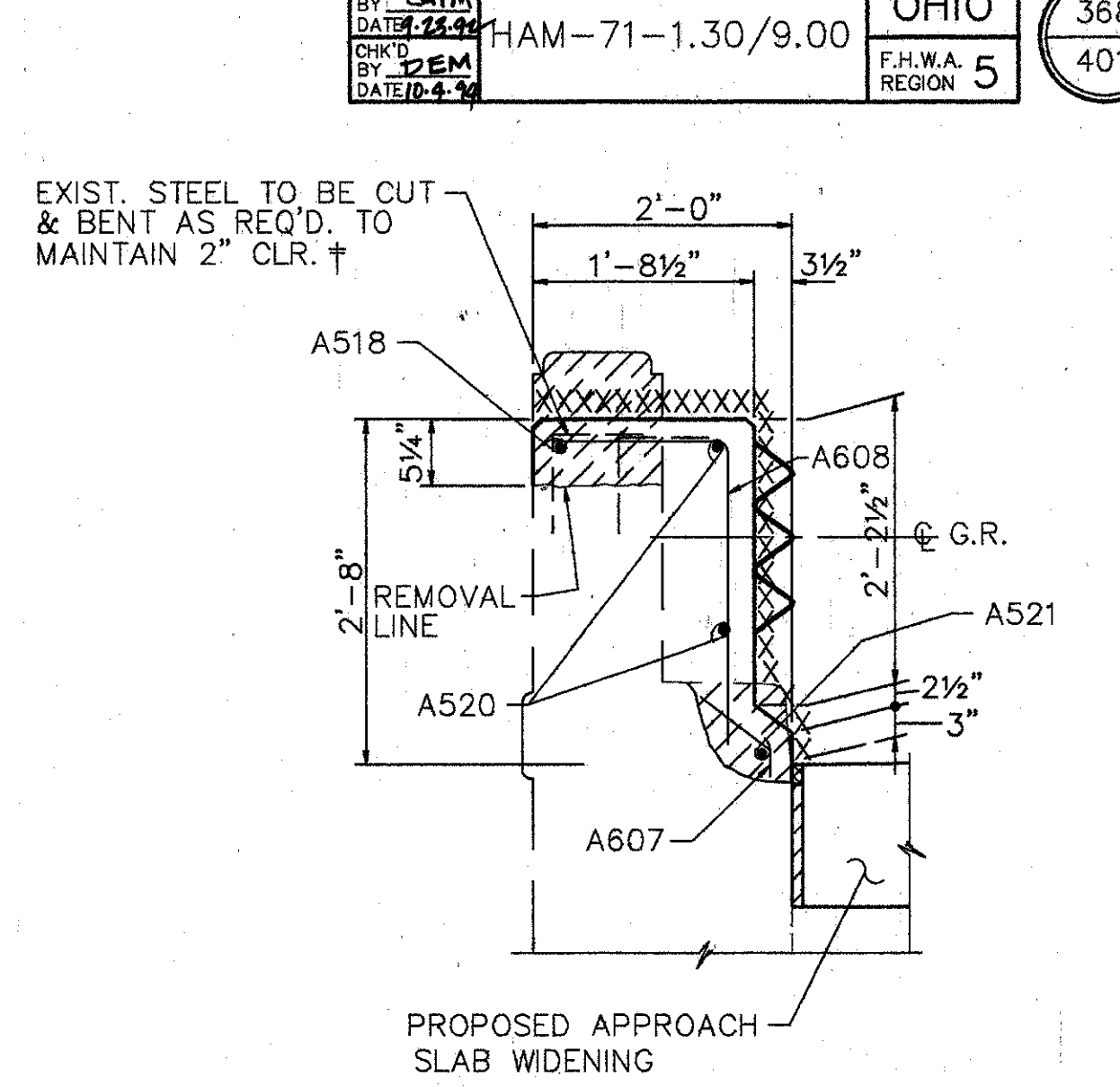
SECTION B-B



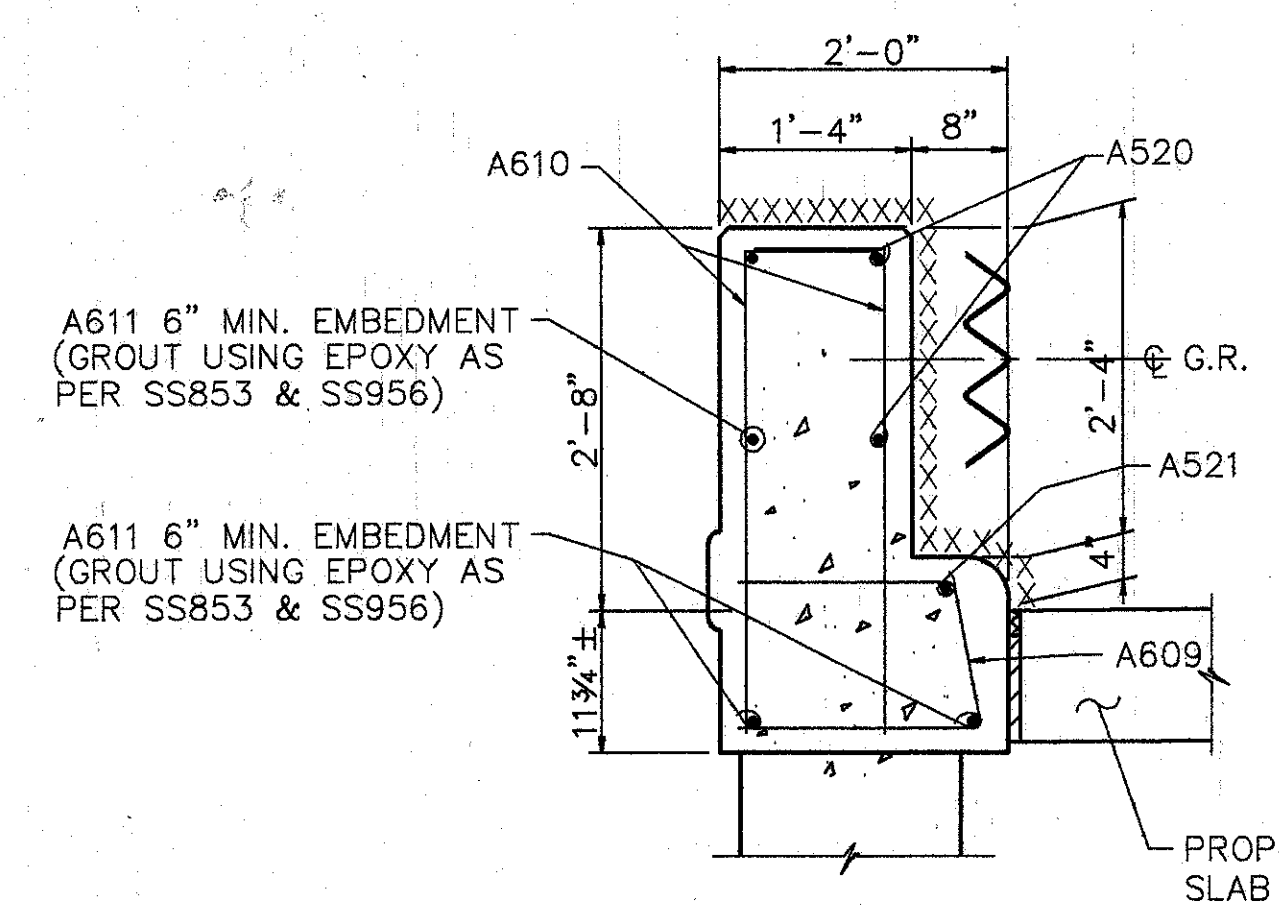
SECTION C-C



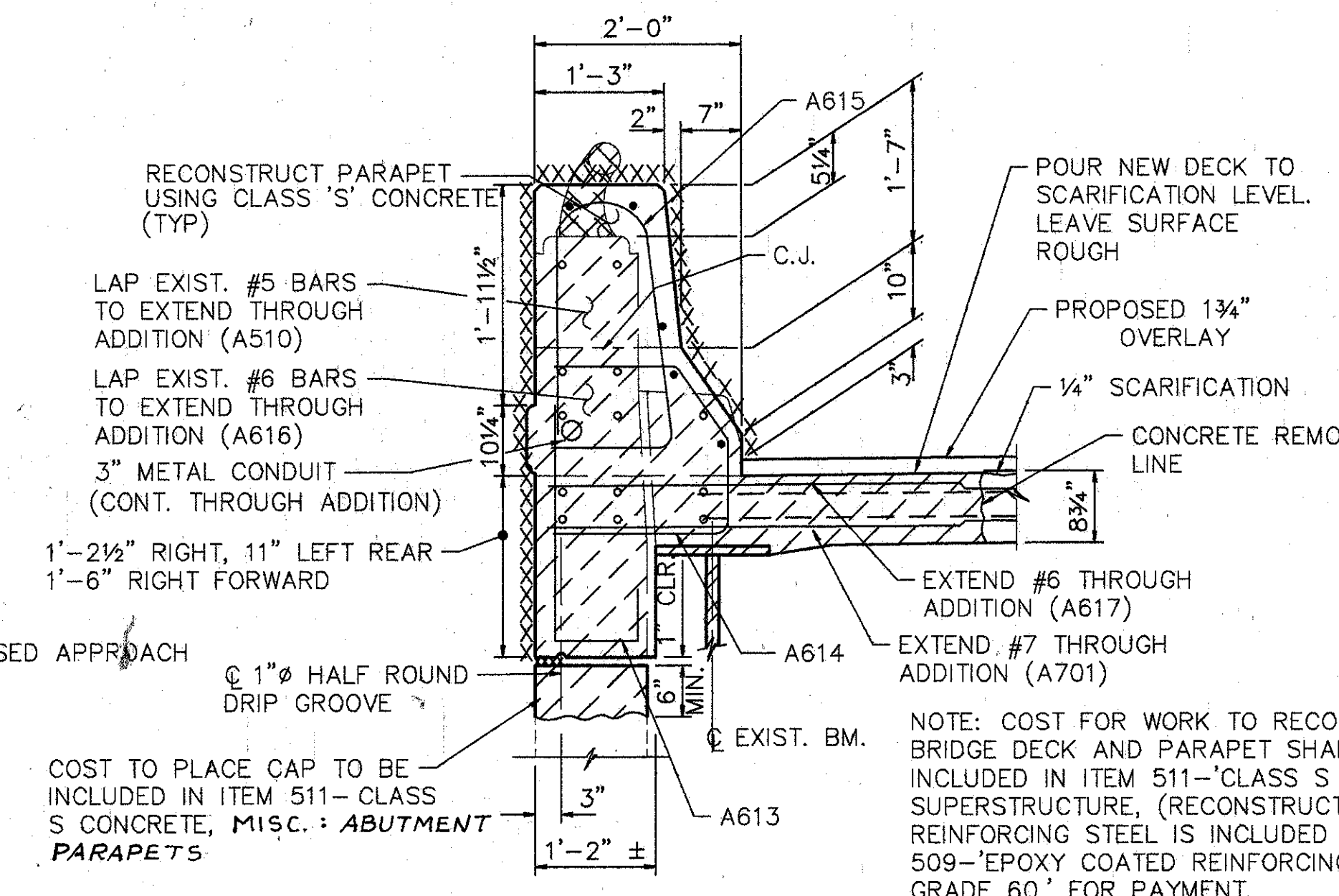
SECTION D-D



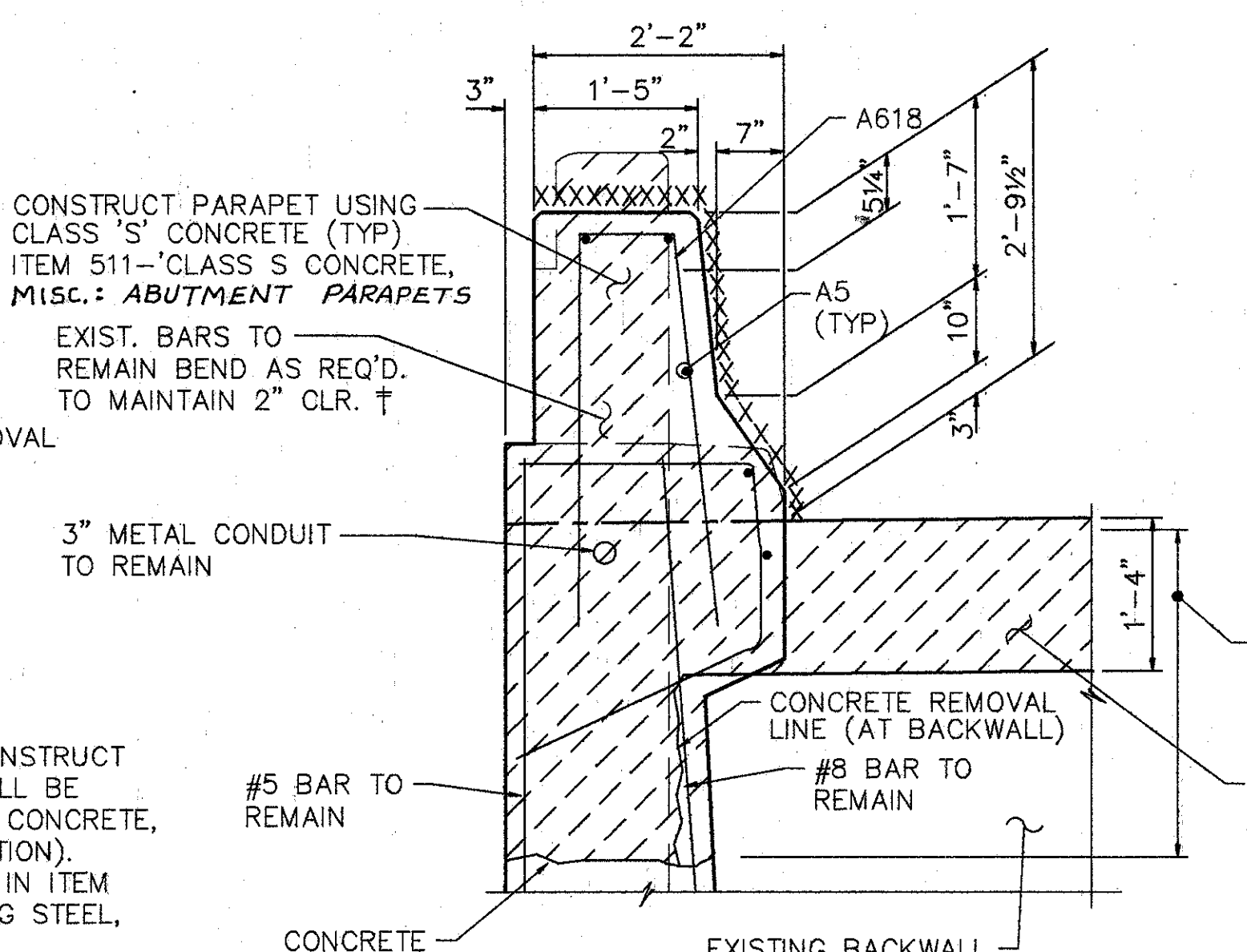
SECTION E-E



SECTION F-F



SECTION M-M

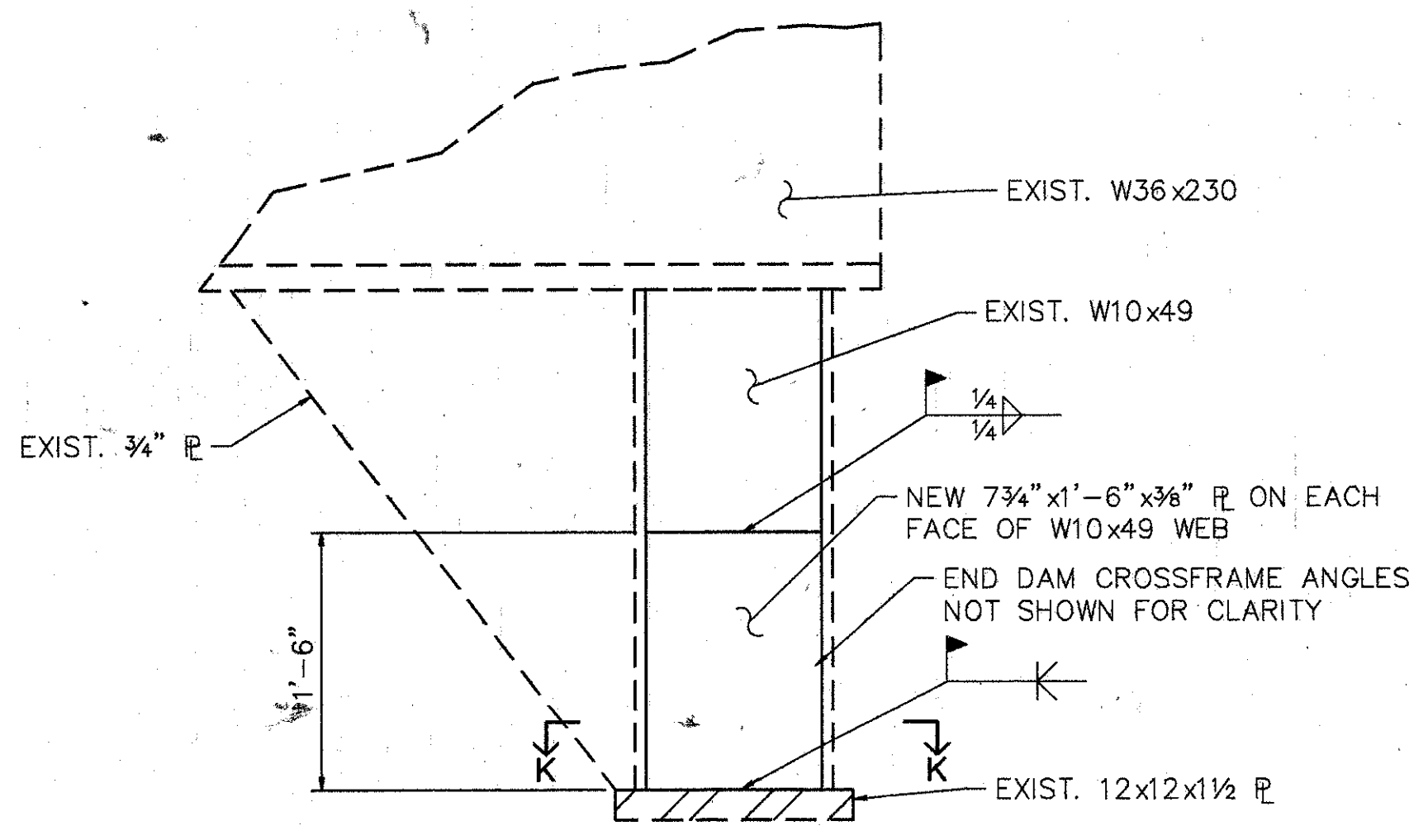


SECTION N-N

† BARS SHALL REMAIN. CONTRACTOR SHALL EXERCISE CAUTION TO ENSURE THAT THESE BARS ARE NOT DAMAGED DURING THE CONC. REMOVAL OPERATION. ANY BARS DAMAGED AS A RESULT OF THE CONTRACTOR'S OPERATION SHALL BE REPLACED OR REPAIRED BY THE CONTRACTOR AT HIS EXPENSE. METHOD OF REPAIR OR REPLACEMENT WILL BE AT THE DISCRETION OF THE DIRECTOR.

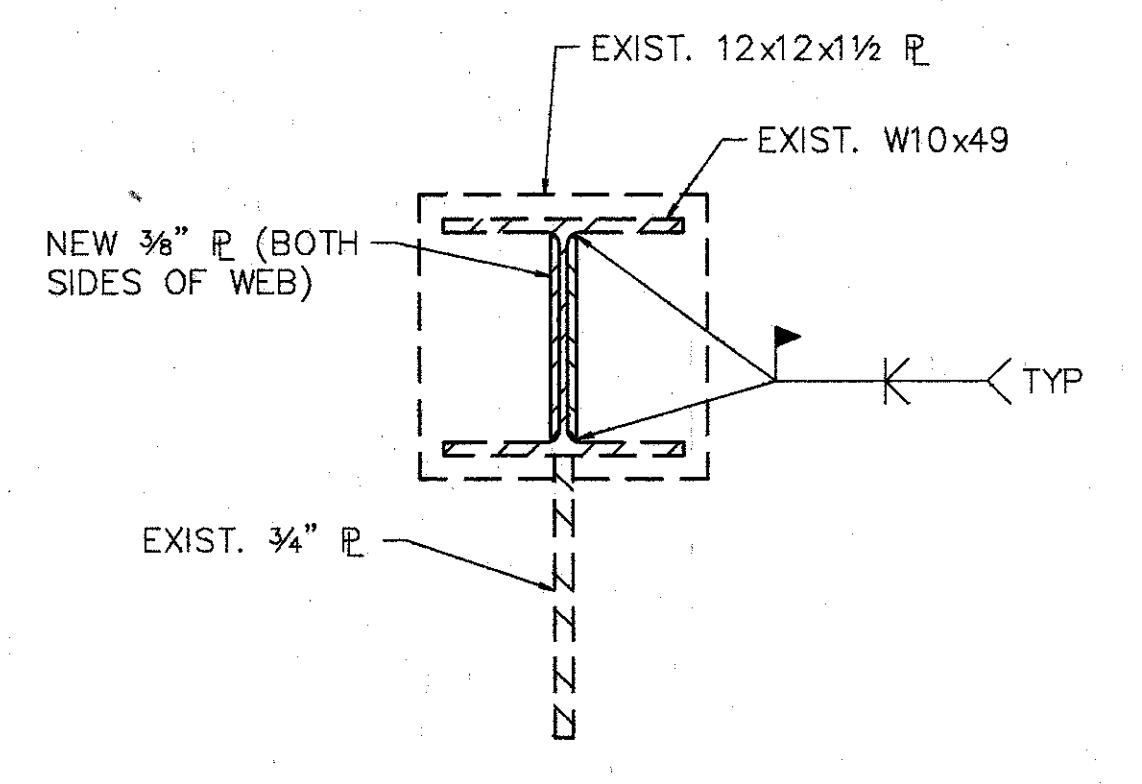
EXIST. CURB & PARAPET TO BE REMOVED UNDER ITEM 202-PORTIONS OF STRUCTURES REMOVED.  
 EXIST. RAILING & POSTS TO BE REMOVED & STACKED NEATLY ALONG THE RIGHT-OF-WAY FOR DISPOSAL BY THE CONTRACTOR. ALL WORK SHALL BE INCLUDED IN THE PRICE BID FOR ITEM 202-PORTIONS OF STRUCTURE REMOVED.  
 XXXXXX SURFACES TO BE SEALED UNDER ITEM SPECIAL-SEALING OF CONCRETE SURFACES.

NOTES:  
 1. TYPE 'A' WATERPROOFING AT THE BRIDGE LIMIT END OF THE APPROACH SLAB (AS PER STD. DWG. AS-1-81) SHALL BE INCLUDED IN THE PRICE BID FOR ITEM 611 APPROACH SLAB.



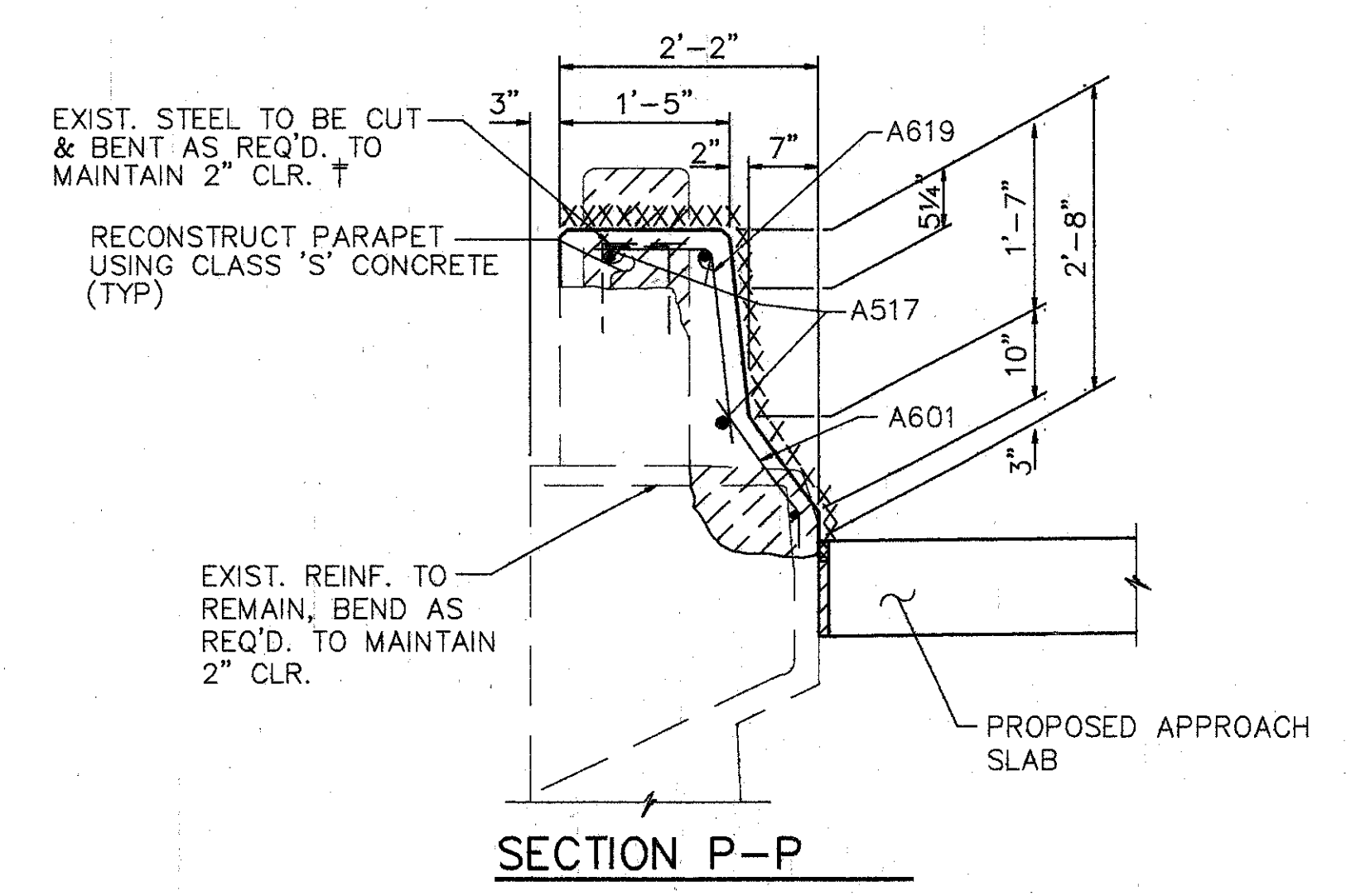
ELEVATION

NOTE: CLEAN EXISTING STRUCTURAL STEEL AND REMOVE DETERIORATED STEEL PRIOR TO ADDING STEEL PLS. COST TO BE INCLUDED IN ITEM 513, STRUCTURAL STEEL (MISC. AND CASTINGS), AS PER PLAN



SECTION K-K

NOTE: PREPARE, PRIME AND PAINT ALL STEEL SURFACES WITHIN 6'-0" OF THE C OF PIER No. 8. COST FOR THIS WORK SHALL BE INCLUDED IN LUMP SUM BID FOR ITEM 513, STRUCTURAL STEEL (MISC. & CASTINGS), AS PER PLAN. THE SYSTEM UTILIZED IS SPECIFIED IN THE PROPOSAL NOTE ENTITLED, "FIELD PAINTING OF EXIST. STEEL, USING EPOXY & URETHANE (EPU).



SECTION P-P

SHORT COL. REPAIR DETAIL

COST TO REPAIR SHORT COLUMNS SHALL BE PER POUND INCLUDED IN ITEM 513 - STRUCTURAL STEEL (MISC. AND CASTINGS), AS PER PLAN.

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4 / 9

**PARAPET DETAILS AND SHORT COL. REPAIR DETAIL**  
 BRIDGE NO. HAM-71-0243 R  
 OVER EDEN PARK

HAMILTON COUNTY

|          |        |        |         |          |          |         |
|----------|--------|--------|---------|----------|----------|---------|
| DESIGNED | DRAWN  | TRACED | CHECKED | REVIEWED | DATE     | REVISED |
| L.A.T.M. | D.E.E. |        | M.A.A.  | DEM      | 11/11/94 |         |

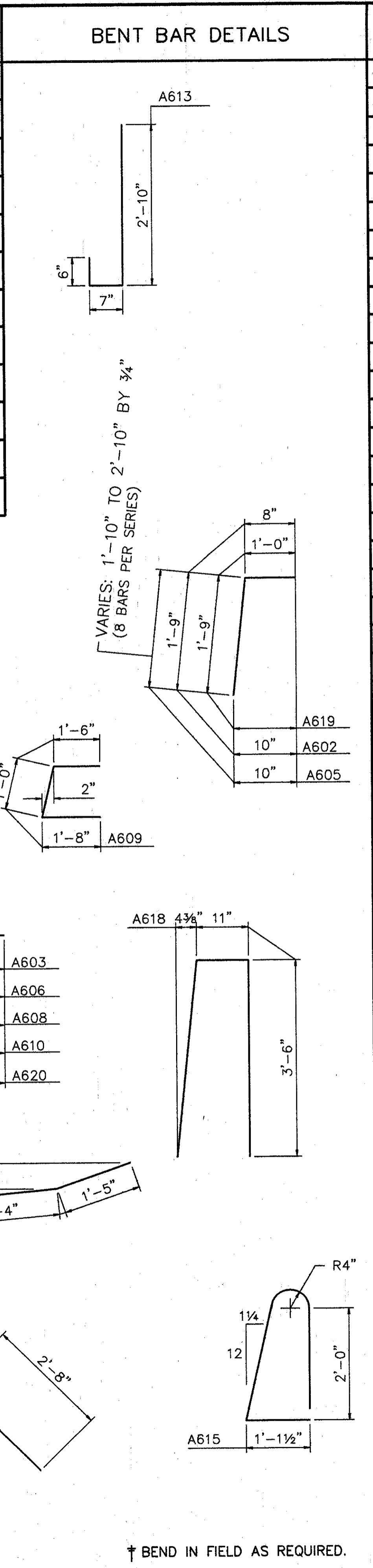
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 Plot Scale: 1/8" = 1'-0"  
 Plot Range: Full  
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 Plot Font Angle: 0







| REINFORCING STEEL LIST |        |          |                |        |
|------------------------|--------|----------|----------------|--------|
| MARK                   | SHAPE  | NUMBER   | LENGTH         | WEIGHT |
| A501                   | STR.   | 160      | 30'-0"         | 5006   |
| A502                   | STR.   | 2        | 13'-3"         | 28     |
| A503                   | STR.   | 2        | 13'-11"        | 29     |
| A504                   | STR.   | 45       | 15'-4"         | 720    |
| A505                   | STR.   | 2        | 12'-4"         | 26     |
| A506                   | STR.   | 6        | 12'-7"         | 79     |
| A507                   | STR.   | 3        | 14'-8"         | 46     |
| A508                   | STR.   | 273      | 15'-7"         | 4437   |
| A509                   | BNT.   | 3        | 12'-5"         | 39     |
| A510                   | BNT.   | 12       | 4'-5"          | 55     |
| A511                   | STR.   | 4        | 11'-5"         | 48     |
| A512                   | STR.   | 90       | 15'-6"         | 1455   |
| A513                   | STR.   | 10       | 12'-9"         | 133    |
| A514                   | STR.   | 4        | 9'-9"          | 41     |
| A515                   | STR.   | 6        | 6'-11"         | 43     |
| A516                   | STR.   | 6        | 12'-8"         | 79     |
| A517                   | STR.   | 12       | 4'-8"          | 58     |
| A518                   | STR.   | 1        | 5'-0"          | 5      |
| A519                   | STR.   | 1        | 11'-0"         | 11     |
| A520                   | BNT.   | 2        | 13'-8"         | 29     |
| A521                   | BNT. † | 1        | 13'-8"         | 14     |
| A522                   | STR.   | 4        | 3'-6"          | 15     |
| A523                   | STR.   | 4        | 8'-7"          | 36     |
| A524                   | STR.   | 4        | 12'-0"         | 50     |
| A601                   | BNT.   | 2054     | 1'-6"          | 4628   |
| A602                   | BNT.   | 2034     | 2'-5"          | 7383   |
| A603                   | BNT.   | 2034     | 1'-3"          | 3819   |
| A604                   |        | NOT USED |                |        |
| A605                   | BNT.   | 8        | 2'-6" TO 3'-6" | 36     |
| A606                   | BNT.   | 8        | 1'-3" TO 1'-6" | 17     |
| A607                   | BNT.   | 3        | 1'-2"          | 6      |
| A608                   | BNT.   | 3        | 3'-6"          | 16     |
| A609                   | BNT.   | 1        | 3'-10"         | 6      |
| A610                   | BNT.   | 2        | 4'-2"          | 13     |
| A611                   | STR.   | 3        | 1'-2"          | 5      |
| A612                   |        | NOT USED |                |        |
| A613                   | BNT.   | 12       | 3'-7"          | 65     |
| A614                   | BNT.   | 12       | 4'-4"          | 78     |



| ITEM    | ITEM EXT. | TOTAL    | UNITS | DESCRIPTION                                                          |
|---------|-----------|----------|-------|----------------------------------------------------------------------|
| 202     | 11200     | LUMP SUM | L.S.  | PORTIONS OF STRUCTURE REMOVED                                        |
| 509     | 15824     | 31289    | LBS.  | EPOXY COATED REINFORCING STEEL, GRADE 60                             |
| 510     | 12201     | 154      | L.F.  | DOWEL HOLES, AS PER PLAN                                             |
| 511     | 34450     | 5        | C.Y.  | CLASS S CONCRETE, MISC.: ABUTMENT PARAPETS                           |
| 511     | 34400     | 6        | C.Y.  | CLASS S CONCRETE, SUPERSTRUCTURE, RECONSTRUCTION                     |
| 511     | 45700     | 12       | C.Y.  | CLASS C CONCRETE, ABUTMENT RECONSTRUCTION                            |
| SPECIAL | 51267500  | 3088     | S.Y.  | SEALING OF CONCRETE SURFACE *                                        |
| SPECIAL | 51267502  | 682      | S.Y.  | SEALING OF CONCRETE SURFACE (EPOXY) *                                |
| 513     | 15501     | 1550     | LBS.  | STRUCTURAL STEEL (MISC. AND CASTINGS), AS PER PLAN                   |
| 513     | 21000     | 4        | EACH  | TRIMMING OF BEAM END                                                 |
| 516     | 14600     | 25       | L.F.  | STRUCTURAL JOINT OR JOINT SEALER, MISC.: 2"x4" SEALER, AS PER PLAN   |
| 514     | 27704     | LUMP     | L.S.  | FIELD PAINTING, MISC: EXISTING STEEL, EEU X                          |
| 516     | 11210     | 338      | L.F.  | STRUCTURAL EXP. JT. ELASTOMERIC STRIP SEAL                           |
| 516     | 45304     | 58       | EACH  | REFURBISH BEARING DEVICE                                             |
| 516     | 45307     | 15       | EACH  | REFURBISH BEARING DEVICE, AS PER PLAN                                |
| 517     | 76201     | 2310     | L.F.  | RAILING FACED, AS PER PLAN                                           |
| 516     | 14600     | 235      | L.F.  | SEAL JOINT BETWEEN ABUTMENT AND CONCRETE SLOPE PROTECTION            |
| 518     | 63300     | LUMP SUM | L.S.  | STRUCTURE DRAINAGE, MISC: MODIFY DRAINAGE PIPING                     |
| SPECIAL | 51912600  | 20       | L.F.  | EPOXY INJECTION *, CONCRETE REPAIR                                   |
| 518     | 63300     | LUMP     | L.S.  | SCUPPER AND DRAINAGE PIPE CLEANOUT                                   |
| 601     | 21100     | 8        | S.Y.  | REPAIR CONCRETE SLOPE PROTECTION                                     |
| 625     |           |          |       | FOR LIGHTING SUMMARY SEE LIGHTING PLANS.                             |
| SPECIAL | 53000400  | 120      | EACH  | STRUCTURE MISC: LATERAL BRACING GUSSET PLATE RETROFIT(INTERMEDIATE). |
| 845     | 40210     | 10400    | S.Y.  | LATEX MODIFIED CONCRETE OVERLAY (1 3/4" THICK) ON EXISTING DECK      |
| 845     | 11000     | 101      | C.Y.  | LATEX MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS)                 |
| 845     | 30000     | 2        | C.Y.  | FULL DEPTH REPAIR                                                    |

\* SEE PROPOSAL NOTE

### PROPOSED WORK

- MODIFY PARAPETS ON THE SUPERSTRUCTURE & ABUTMENTS. SEAL PARAPETS AS SHOWN ON PLANS. (REMOVE PORTION OF ABUTMENT PARAPETS AND BRIDGE DECK TO ALLOW APPROPRIATE CLEARANCES FOR THE STRIP SEAL INSTALLATION. INSTALL PLATES FOR THE STRIP SEAL EXPANSION JOINT WHEN POURING SLAB EXTENTIONS. CAP ABUTMENT WALL AT REMOVAL LOCATION. INSTALL METAL CONDUIT EXPANSION ASSEMBLY HL-30.31)
- SCARIFY EXISTING DECK 1/4", AND REMOVE DETERIORATED CONCRETE AS DIRECTED BY THE ENGINEER.
- REFURBISH ABUTMENT BEARINGS.
- CLEAN AND REPAINT BEAMS AS DIRECTED.
- REPAIR SHORT COLUMNS SUPPORTING BEAMS. PREPARE, PRIME AND PAINT SURFACES IN THIS AREA.
- PLACE 1 3/4" THICK LATEX MODIFIED CONCRETE ON DECK.
- SEAL JOINTS AS NOTED.
- SEAL EXPANSION JOINT WITH STRIP SEAL.
- REPLACE GUARDRAIL AS SHOWN ON ROADWAY PLANS.
- REPAIR BACKWALL CRACKS WITH EPOXY INJECTION.
- REFURBISH DRAINAGE PIPING.
- TRIM BEAM ENDS.
- RETROFIT LATERAL BRACING. FOR DETAILS SEE SHEETS 401A THRU 401A 401
- AT LEAST ONE LANE OF TRAFFIC SHALL BE MAINTAINED IN EACH DIRECTION AND ON THE BRIDGE AT ALL TIMES. FOR NOTES SEE MAINTAINANCE OF TRAFFIC PLANS. MAINTENANCE OF TRAFFIC PLAN REQUIRES CONSTRUCTION PHASING LIMITS AT LANE CENTERLINES. DUE TO THESE LIMITS, OVERLAY MAY REQUIRE SPECIAL ATTENTION.
- OTHER WORK AS DESCRIBED IN THESE PLANS.

CALC BY: LHM  
 DATE: 11/22/99  
 CHECK BY: DEM  
 DATE: 4-4-00

HAM-71-1.30/9.00

OHIO REGION 5

370 401

Lead Plot: MAY 15, 1991 @ 7:49 PM  
 S:\DATA\6566-CO\ASSETS\LEAD.PLOT

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 DAYTON, OHIO 45402-1226  
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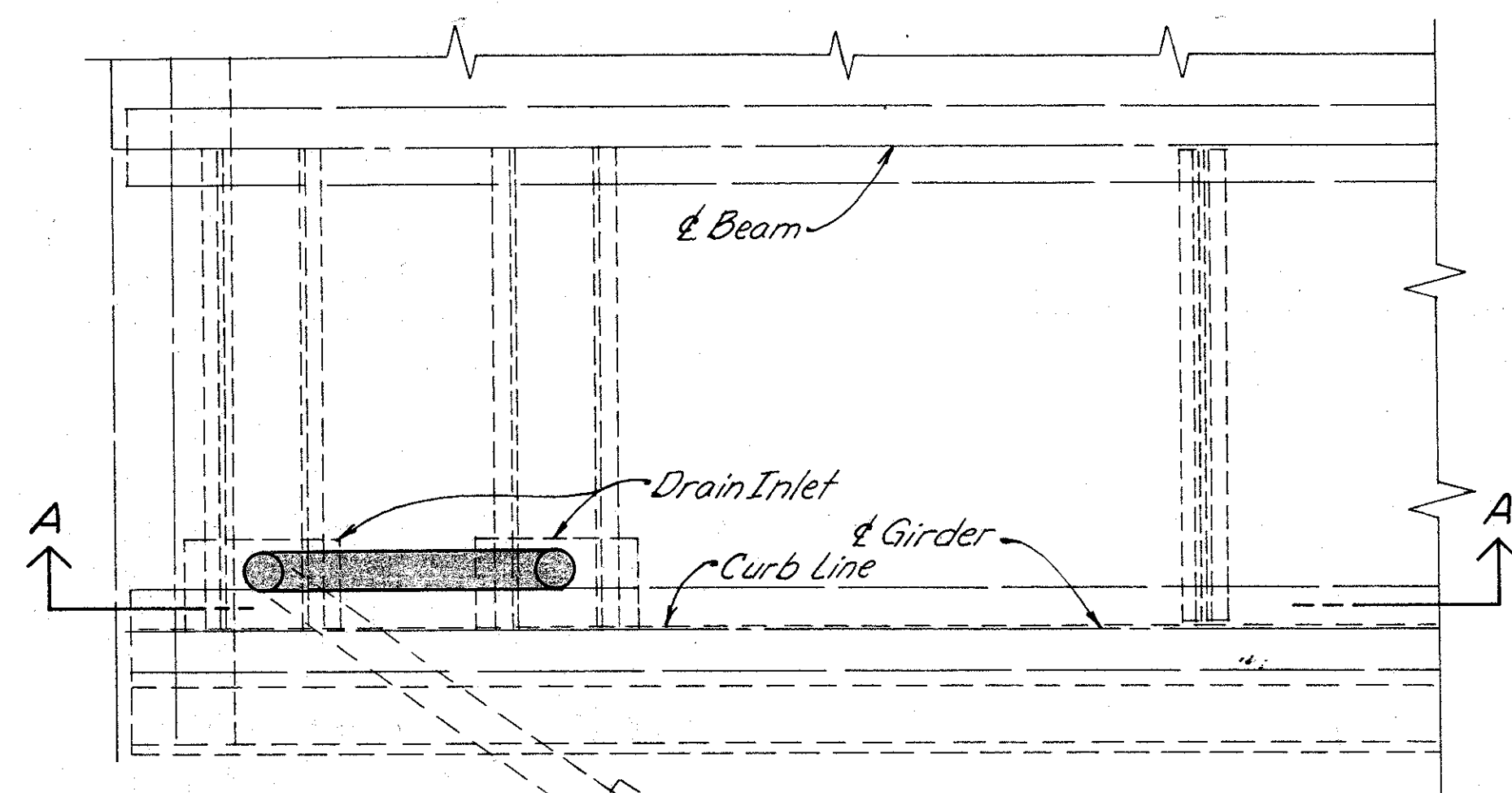
### QUANTITIES AND GENERAL NOTES

BRIDGE NO. HAM-71-0243 R  
 OVER EDEN PARK

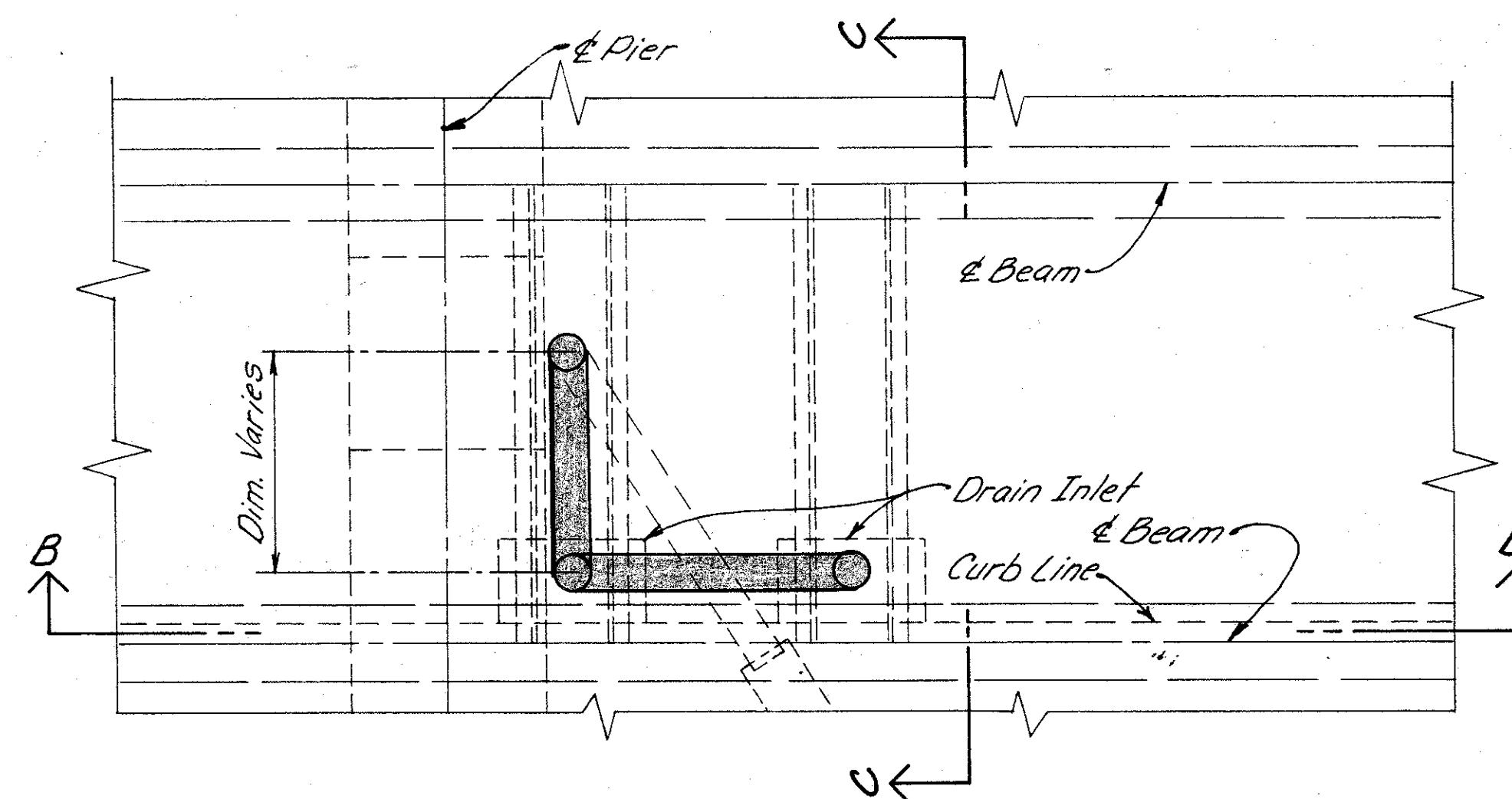
HAMILTON COUNTY

|          |        |        |         |          |          |         |
|----------|--------|--------|---------|----------|----------|---------|
| DESIGNED | DRAWN  | TRACED | CHECKED | REVIEWED | DATE     | REVISED |
| L.A.T.M. | D.E.E. |        | M.A.A.  | DEM      | 11/11/94 |         |

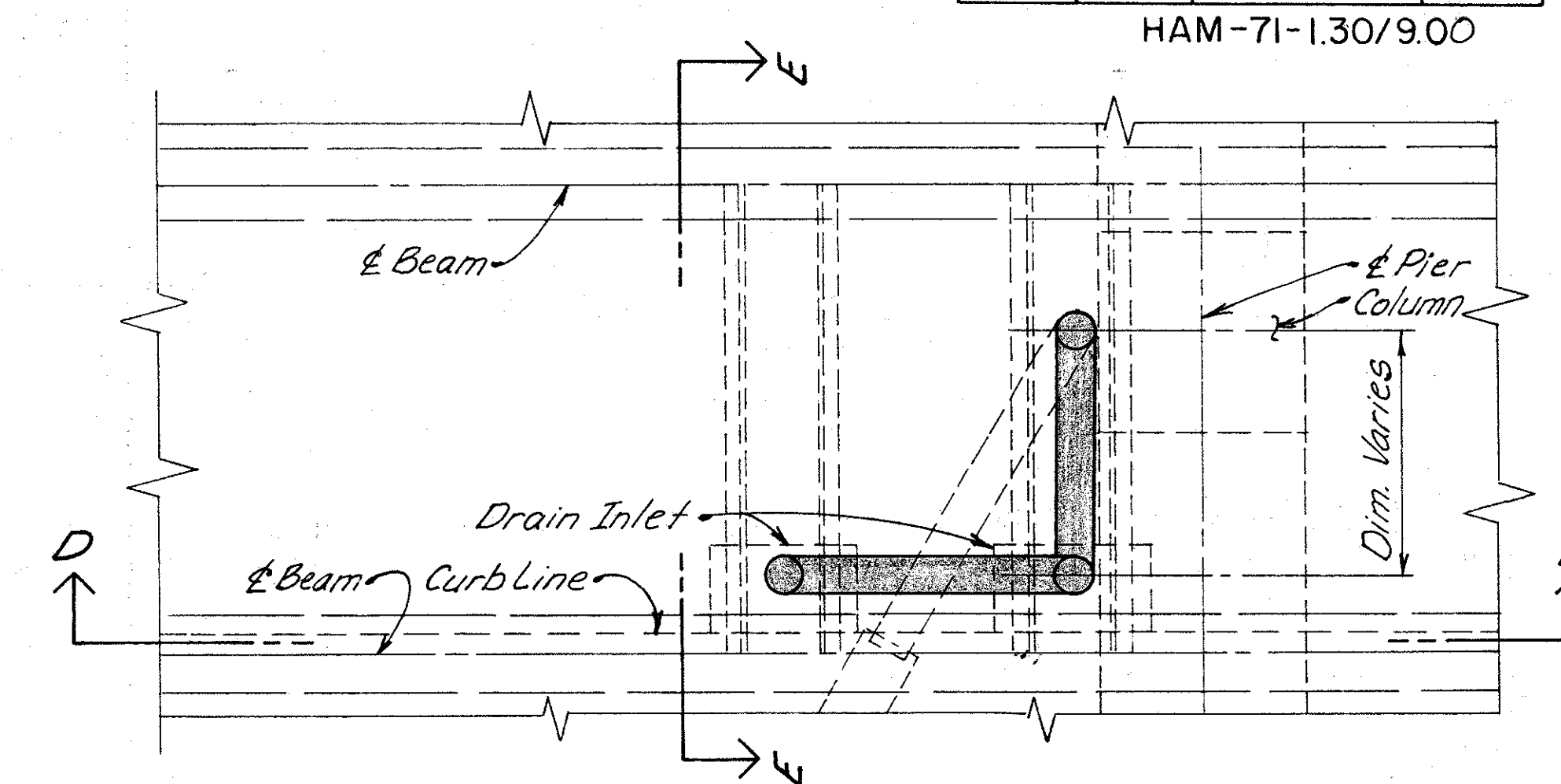




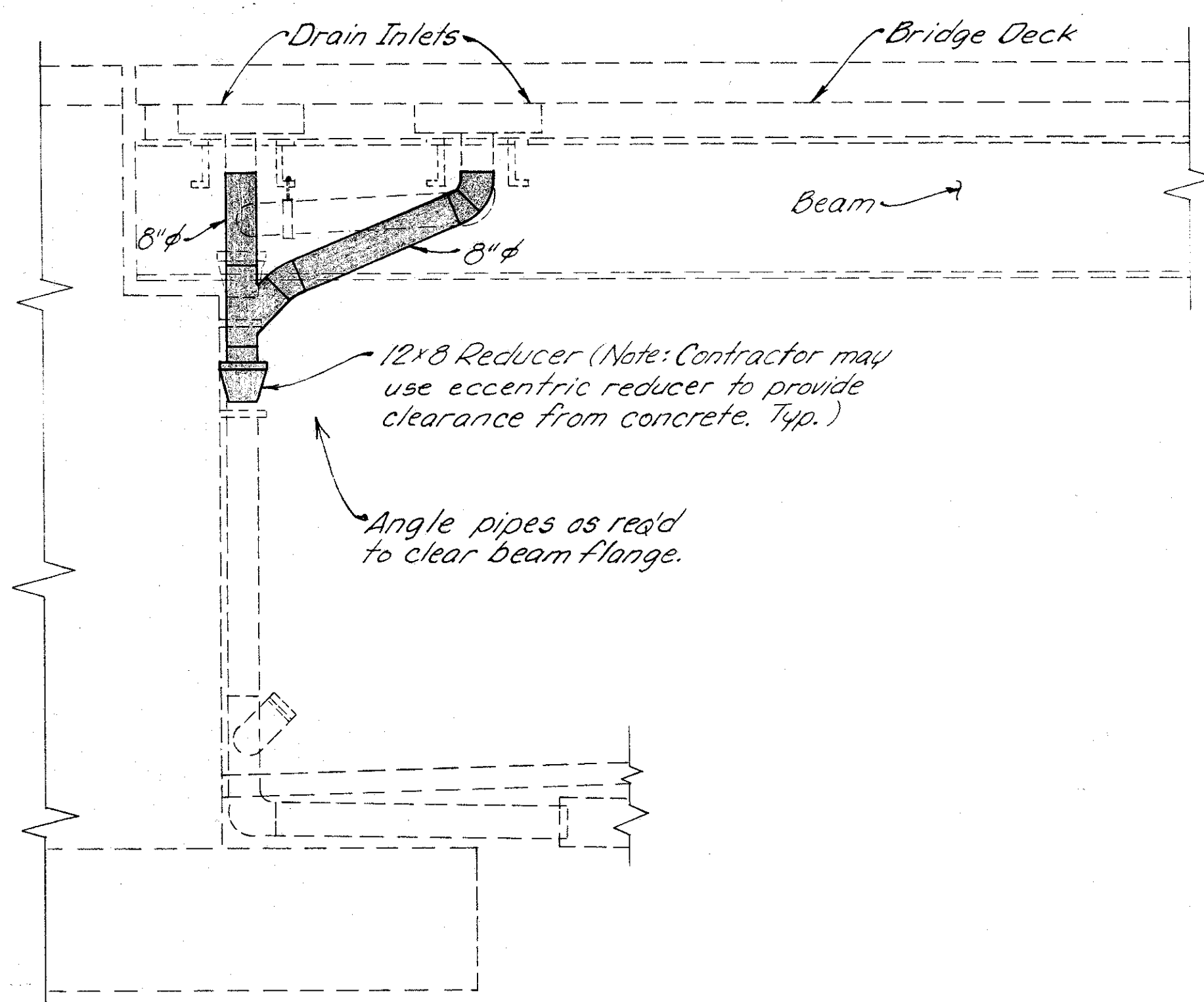
**PLAN FOR DRAIN INLET AT SOUTH ABUTMENT**



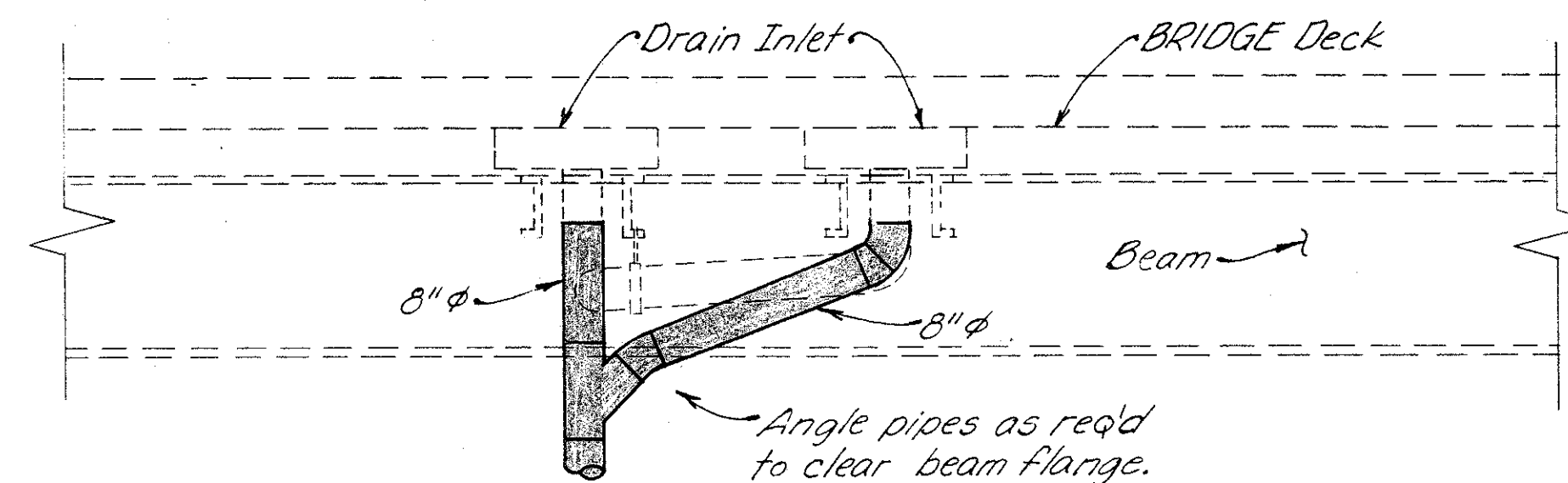
**PLAN FOR DRAIN INLET AT PIER 1, 4, 5 & 7**



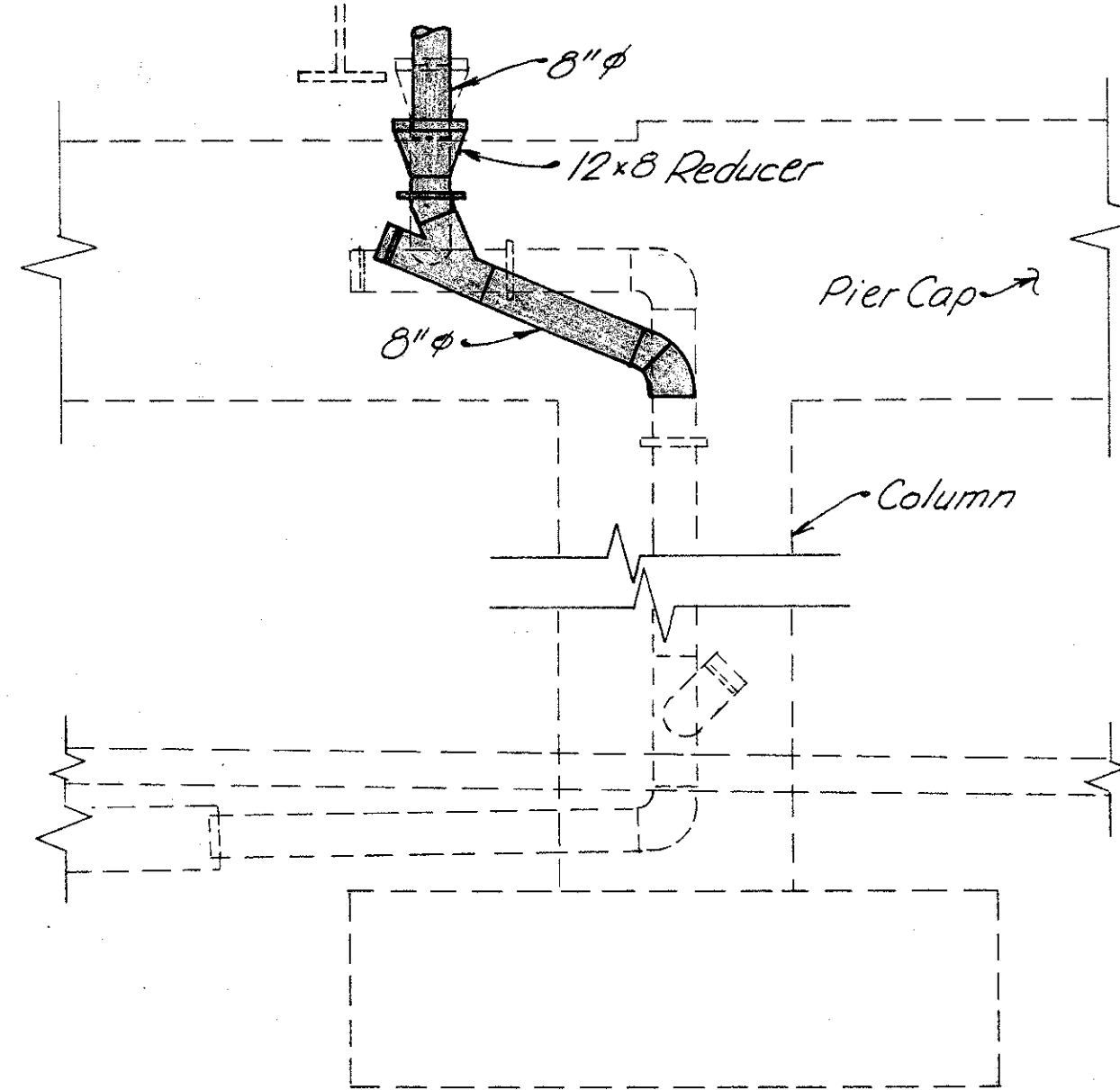
**PLAN FOR DRAIN INLET AT PIER 2, 3 & 6**



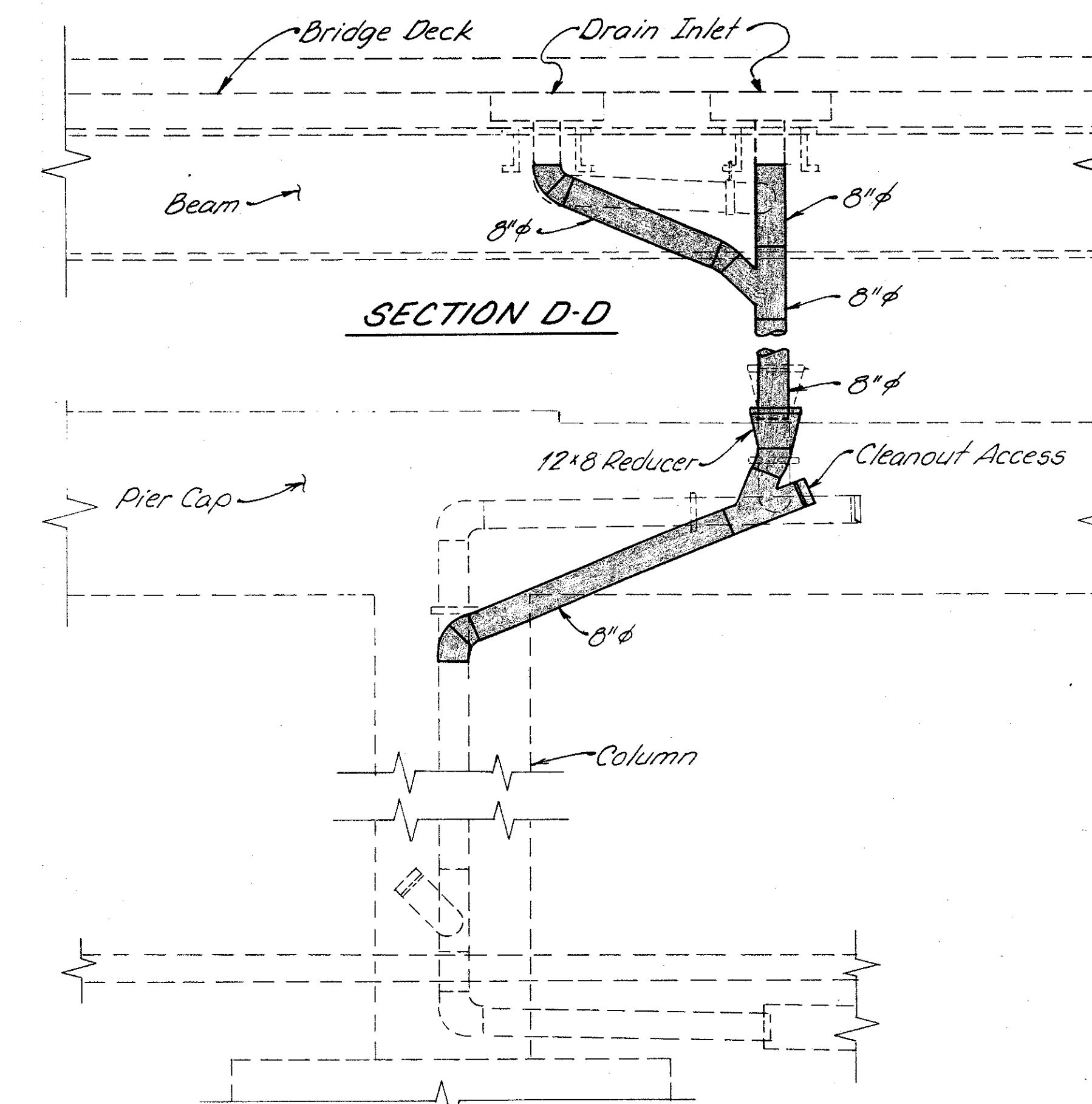
**SECTION A-A**



**SECTION B-B**



**SECTION C-C**



**SECTION D-D**

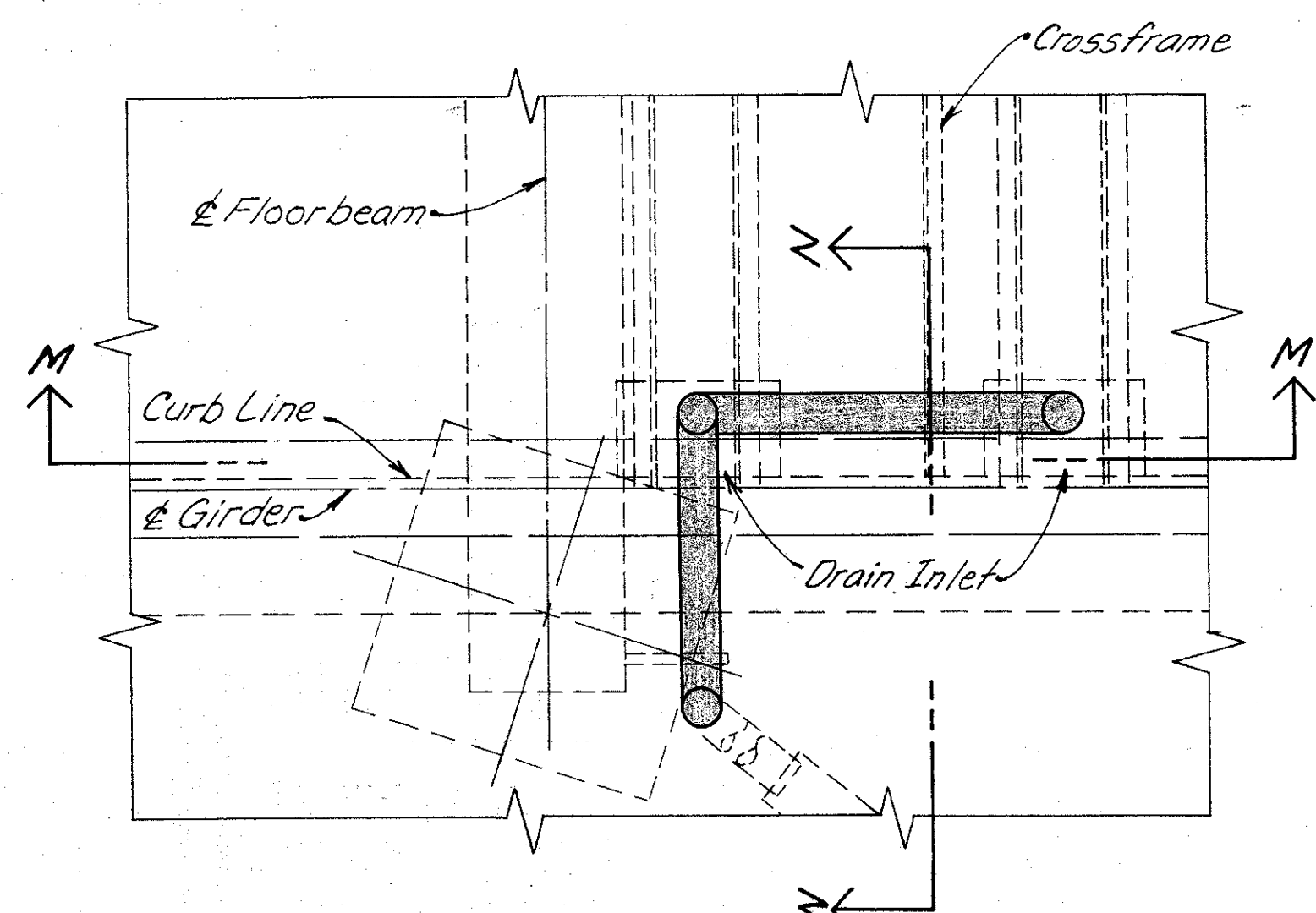
1. For drainage piping requirements see General Notes on sheet (273/401)
2. Approximate N<sup>o</sup> of Feet of proposed 8" pipe (including specials) = 330'

|                                                                                    |          |          |
|------------------------------------------------------------------------------------|----------|----------|
| <b>WOOLPERT CONSULTANTS</b><br>409 East Monument Avenue<br>Dayton, Ohio 45402-1226 |          | 7 / 9    |
| <b>DRAINAGE DETAILS</b>                                                            |          |          |
| BRIDGE NO. HAM-71-0243R<br>OVER EDEN PARK ENTRANCE<br>AND FLORENCE AVE.            |          |          |
| HAMILTON COUNTY                                                                    |          |          |
| DESIGNED                                                                           | DRAWN    | TRACED   |
| L.A.T.M.                                                                           | L.A.R.   | DE.M.    |
| CHECKED                                                                            | REVIEWED | DATE     |
| DE.M.                                                                              | P.W.G.   | 11/11/94 |
| REVISED                                                                            |          |          |

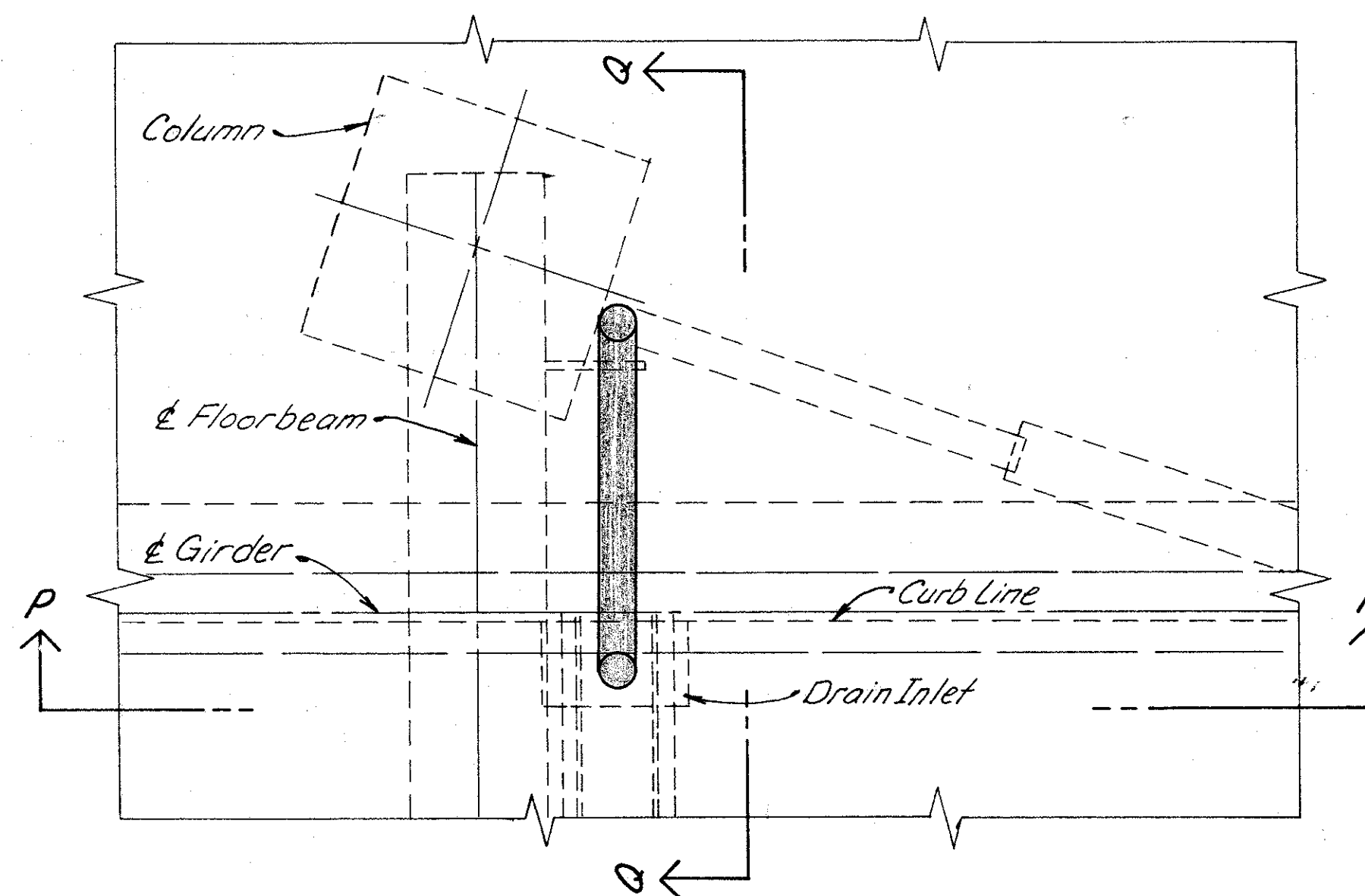
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|-----------------|-------|---------|
| F.H.W.A. REGION | STATE | PROJECT |
| 5               | OHIO  |         |

372  
401

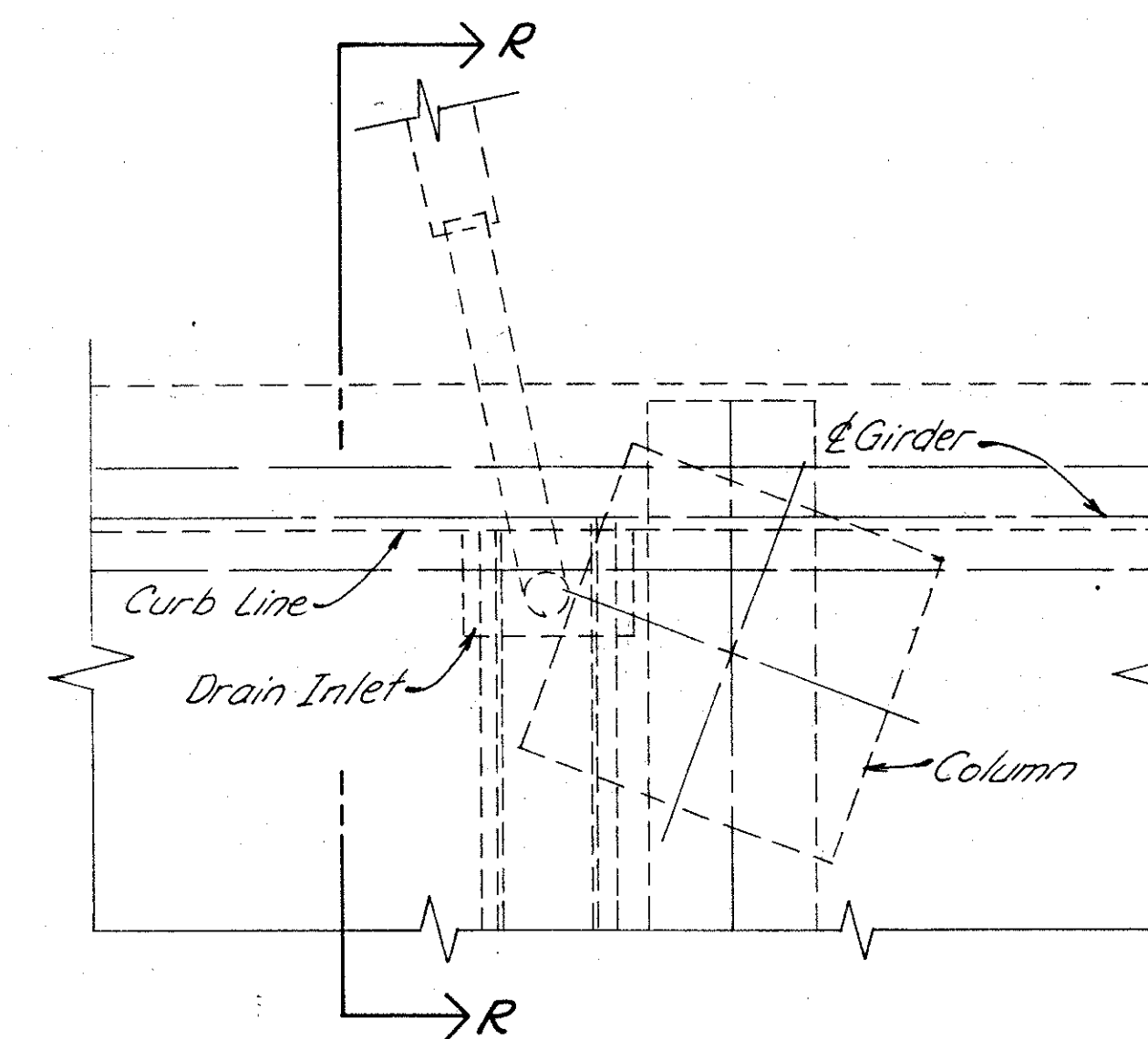
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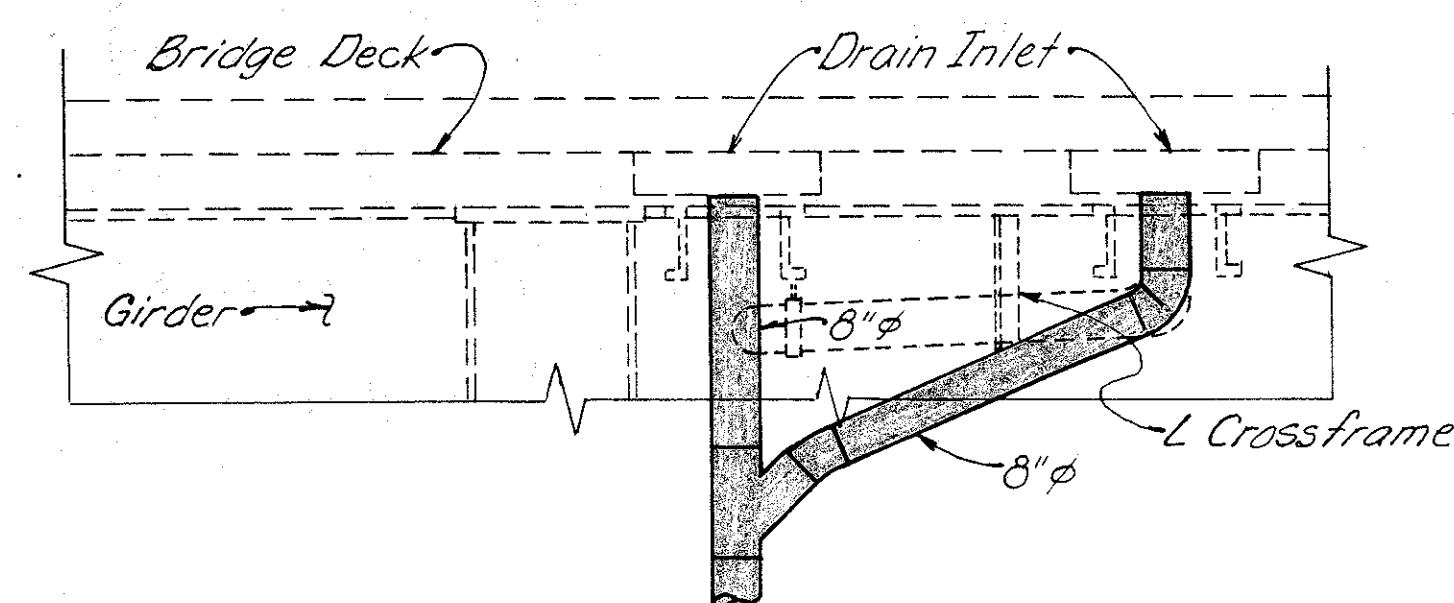
PLAN FOR DRAIN INLET AT EAST SIDE OF PIER 11



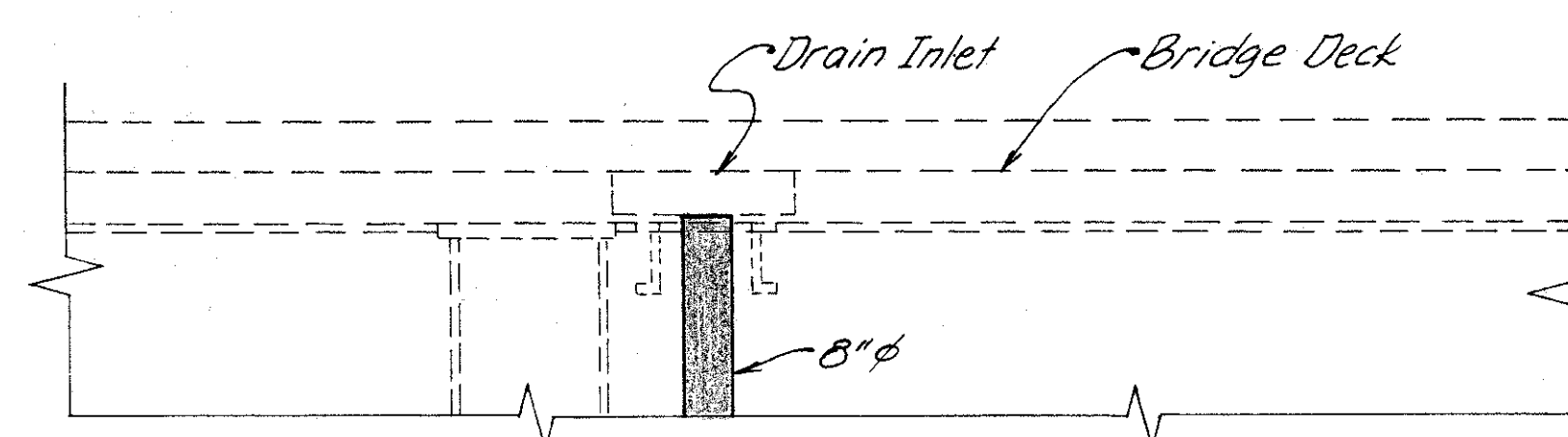
PLAN FOR DRAIN INLET AT WEST SIDE OF PIER 10 & 11



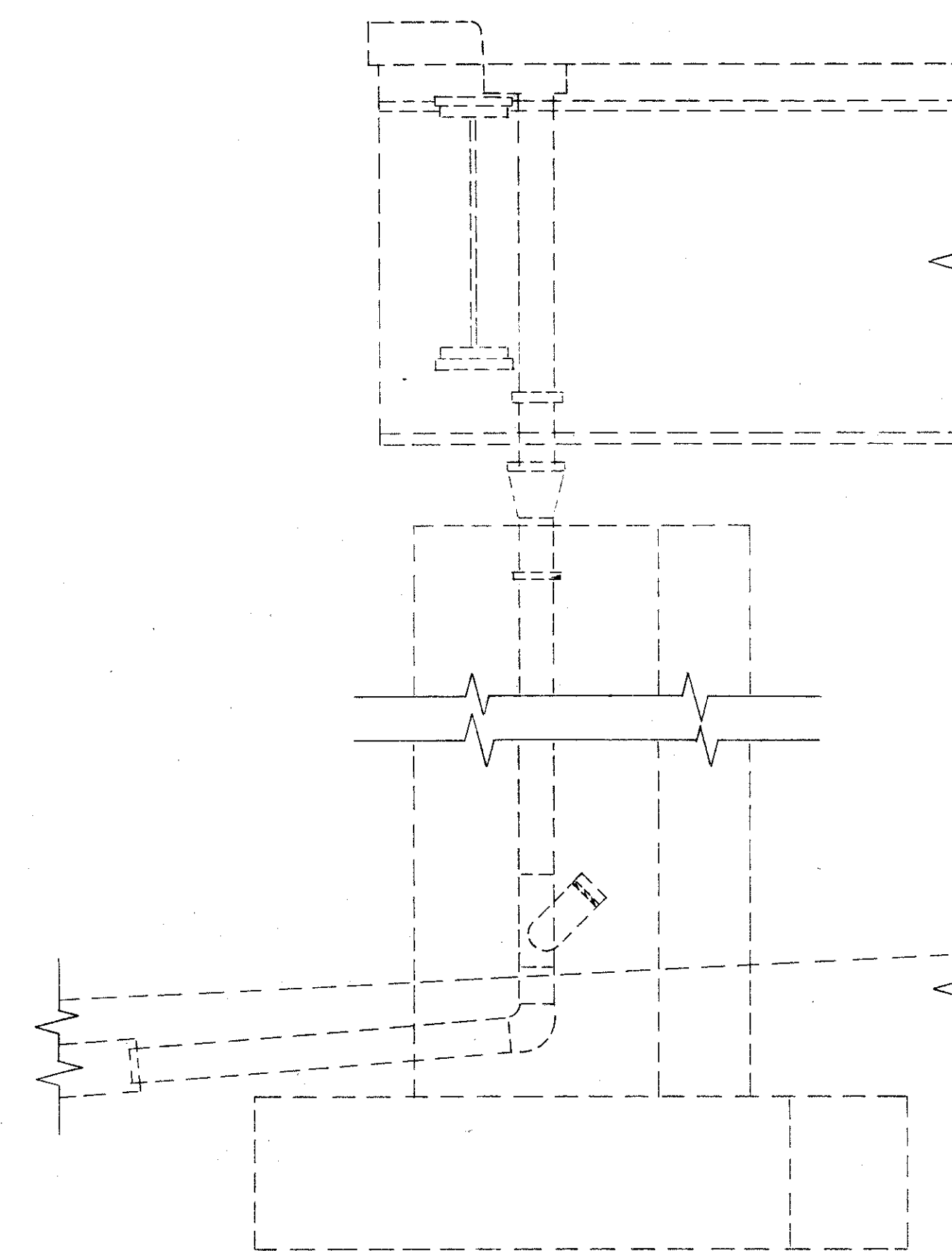
PLAN FOR DRAIN INLET AT WEST SIDE OF PIER 12  
-NO WORK REQUIRED-



SECTION M-M

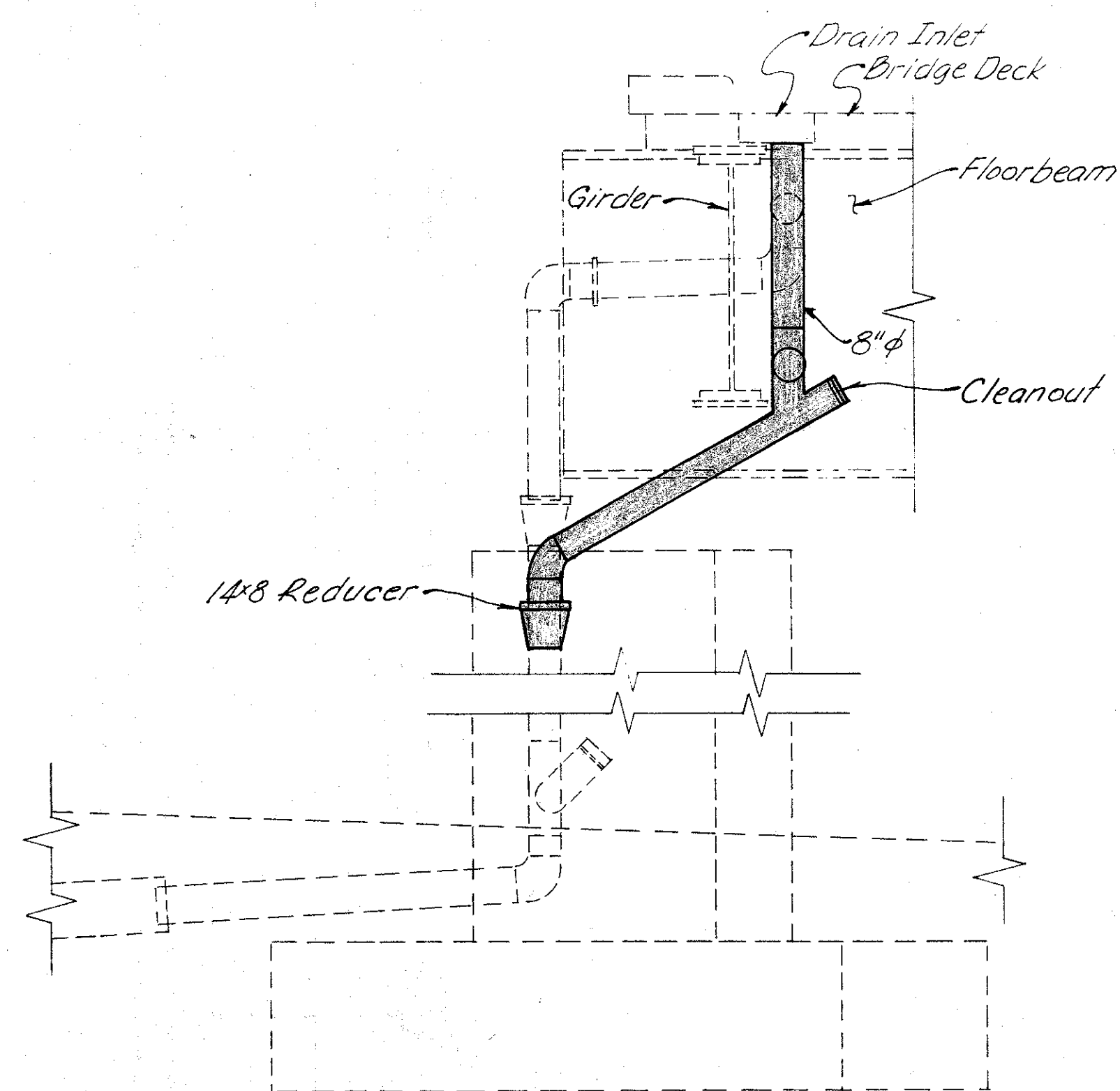


SECTION P-P

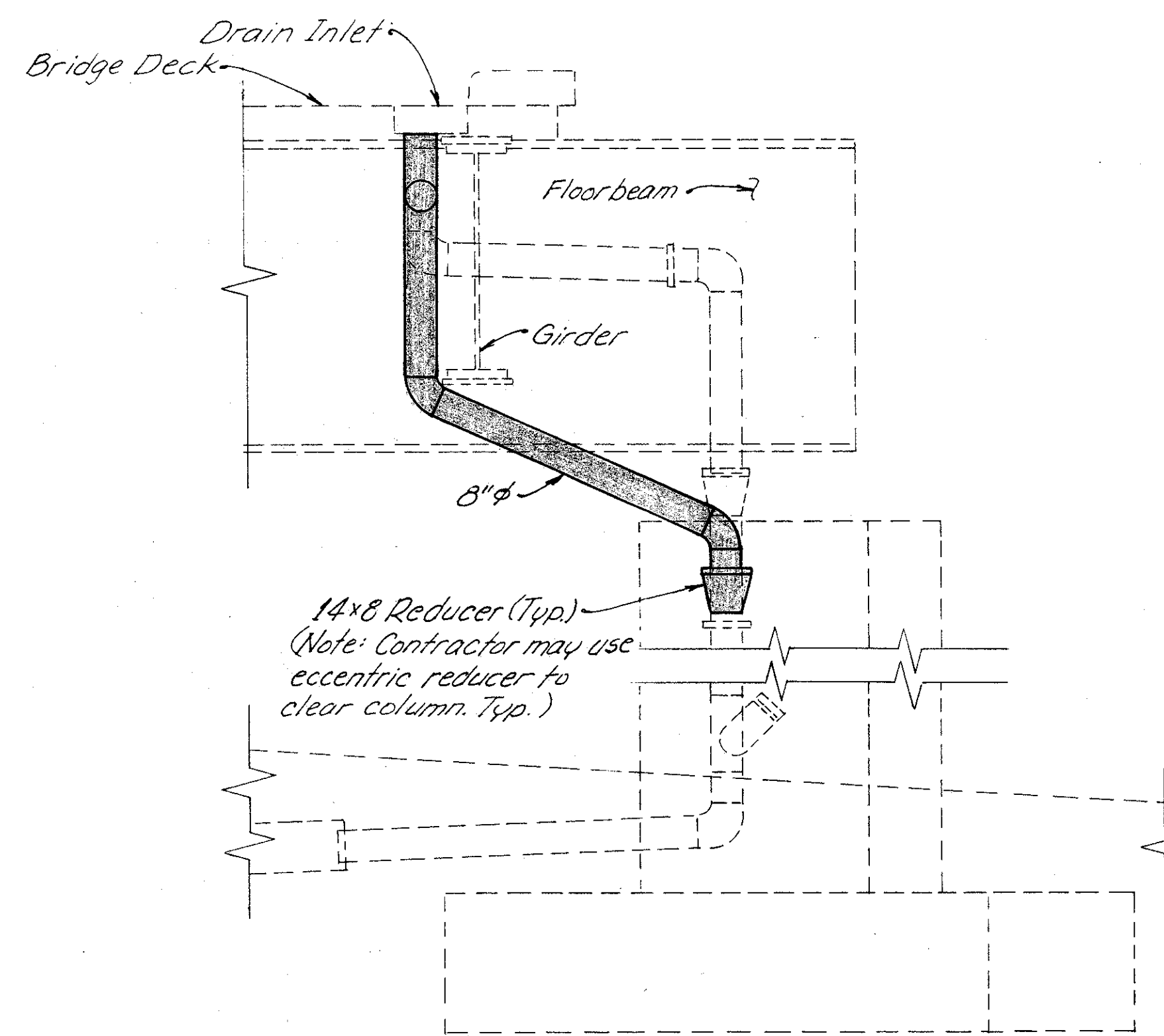


SECTION R-R

For Notes see sheet 7/9



SECTION N-N



SECTION Q-Q



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Dayton, Ohio 45402-1226

8/9

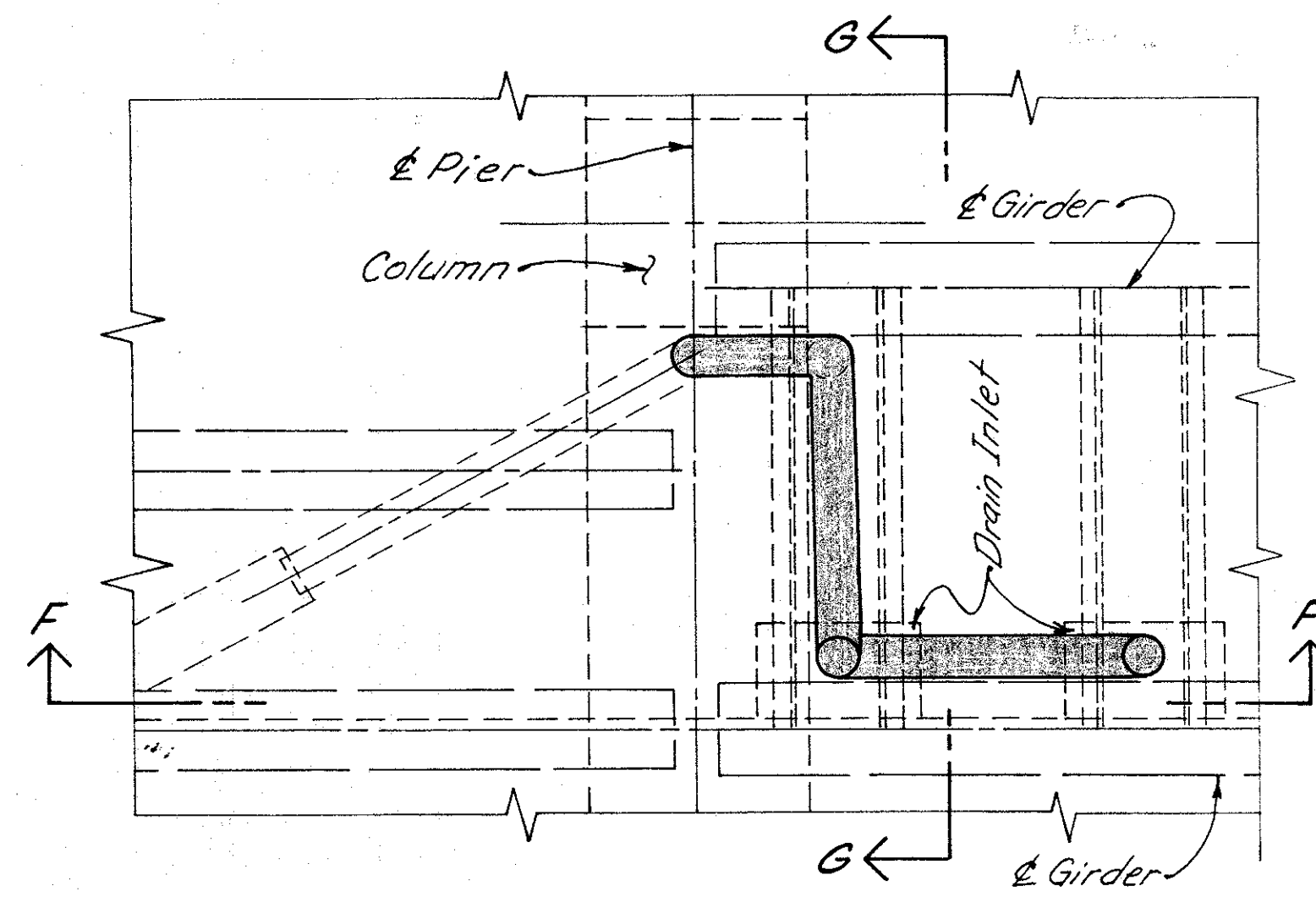
**DRAINAGE DETAILS**

BRIDGE NO. HAM-71-0243 R  
OVER EDEN PARK ENTRANCE  
AND FLORENCE AVE.

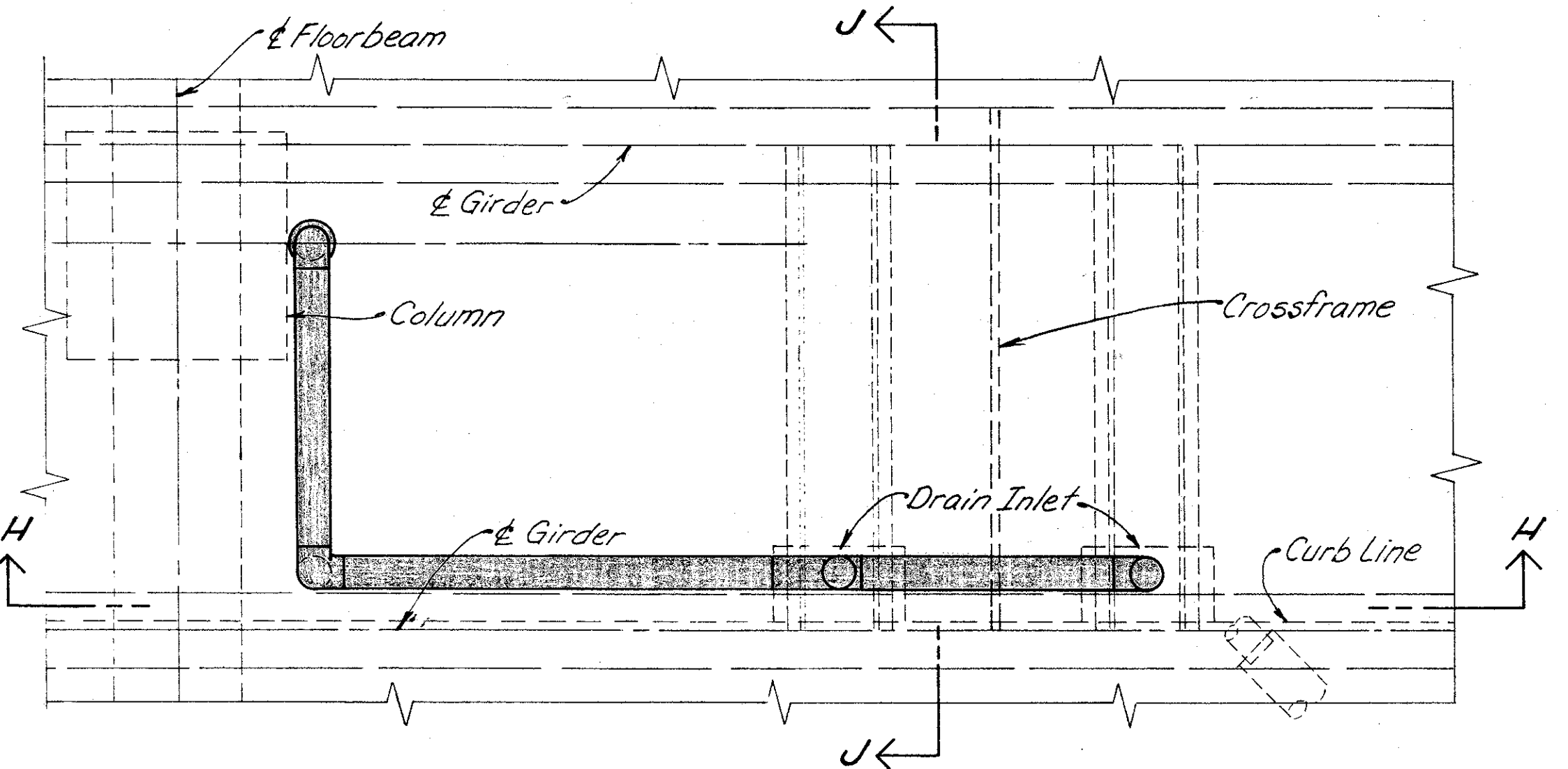
HAMILTON COUNTY

|          |        |        |         |          |          |         |
|----------|--------|--------|---------|----------|----------|---------|
| DESIGNED | DRAWN  | TRACED | CHECKED | REVIEWED | DATE     | REVISED |
| L.A.T.M. | L.A.R. |        | DE.M.   | P.W.G.   | 11/11/94 |         |

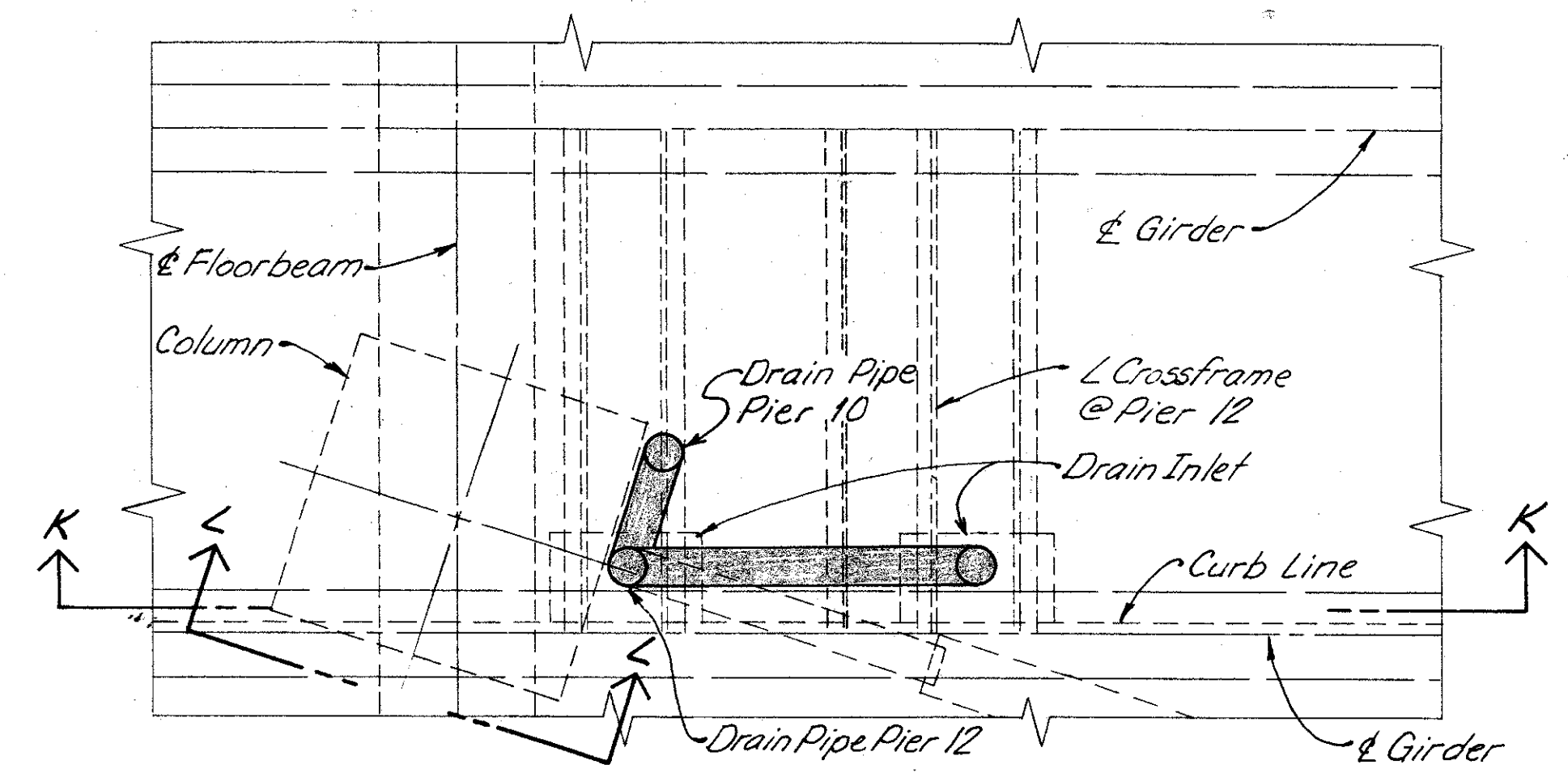




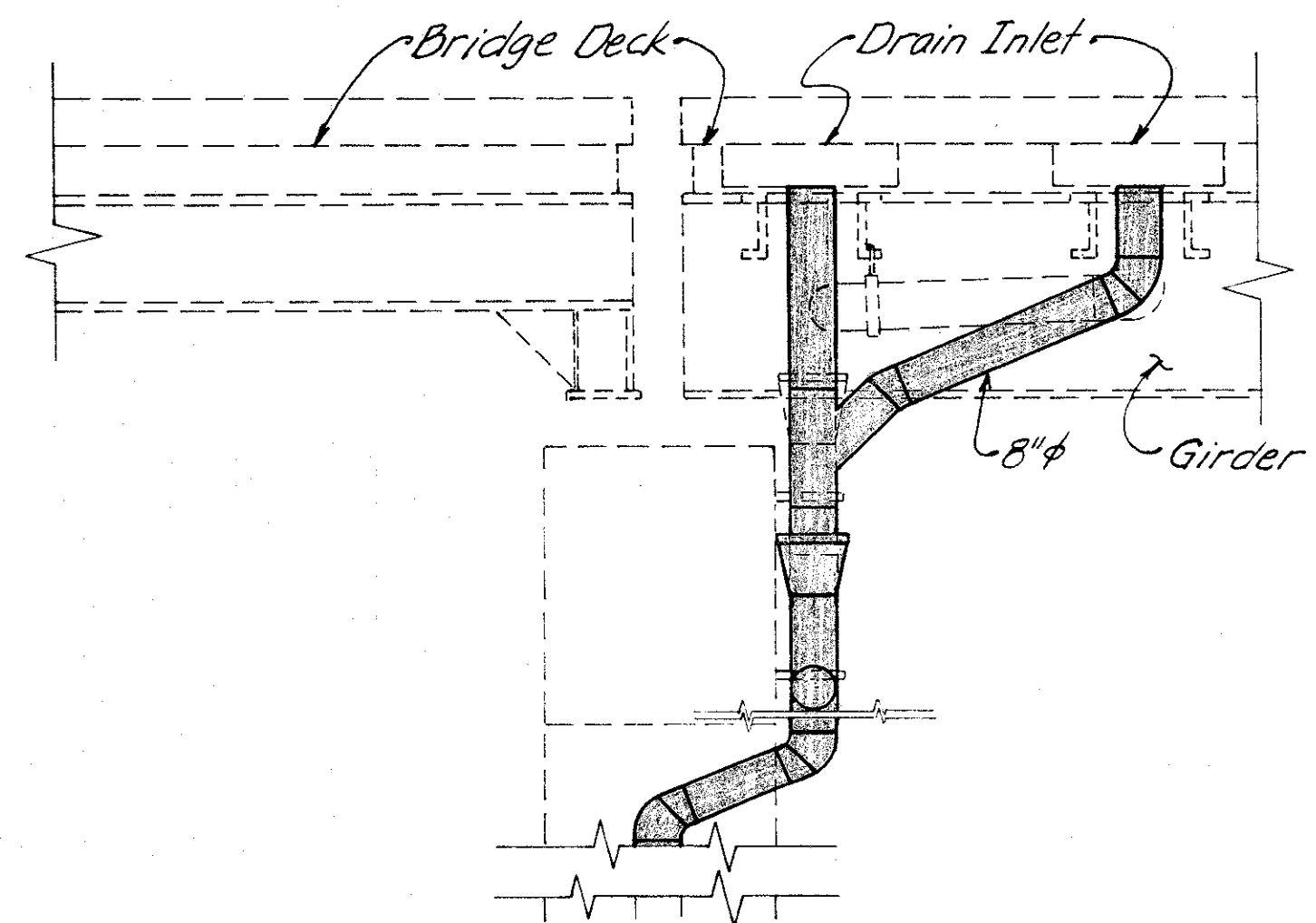
PLAN FOR DRAIN INLET AT PIER 8



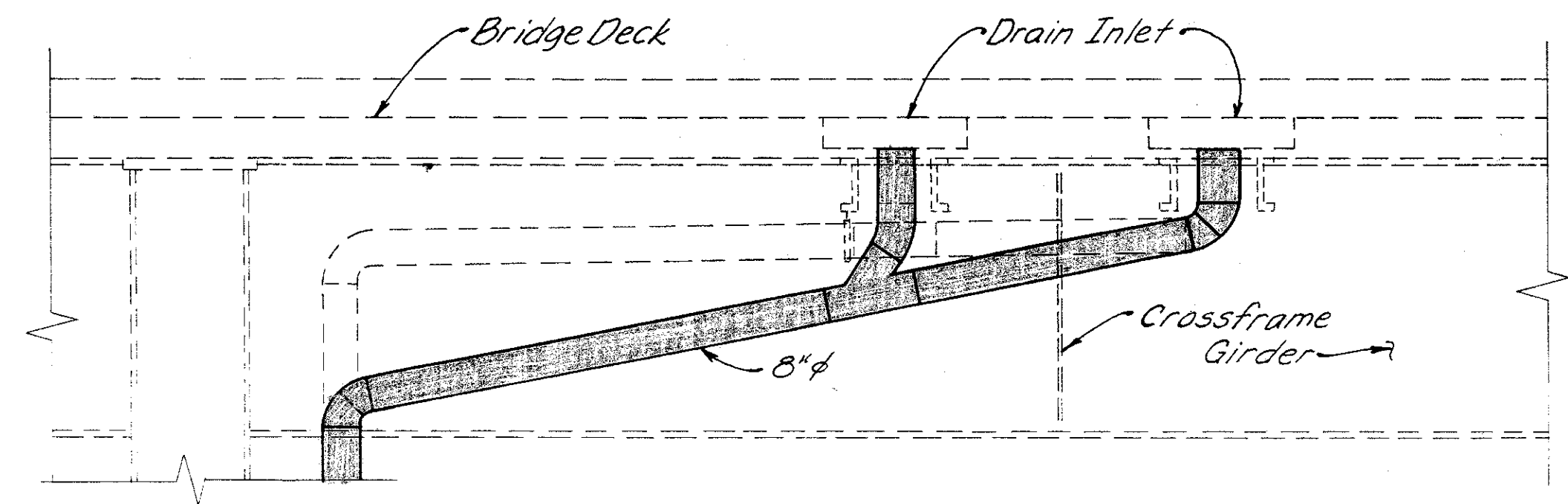
PLAN FOR DRAIN INLET AT PIER 9



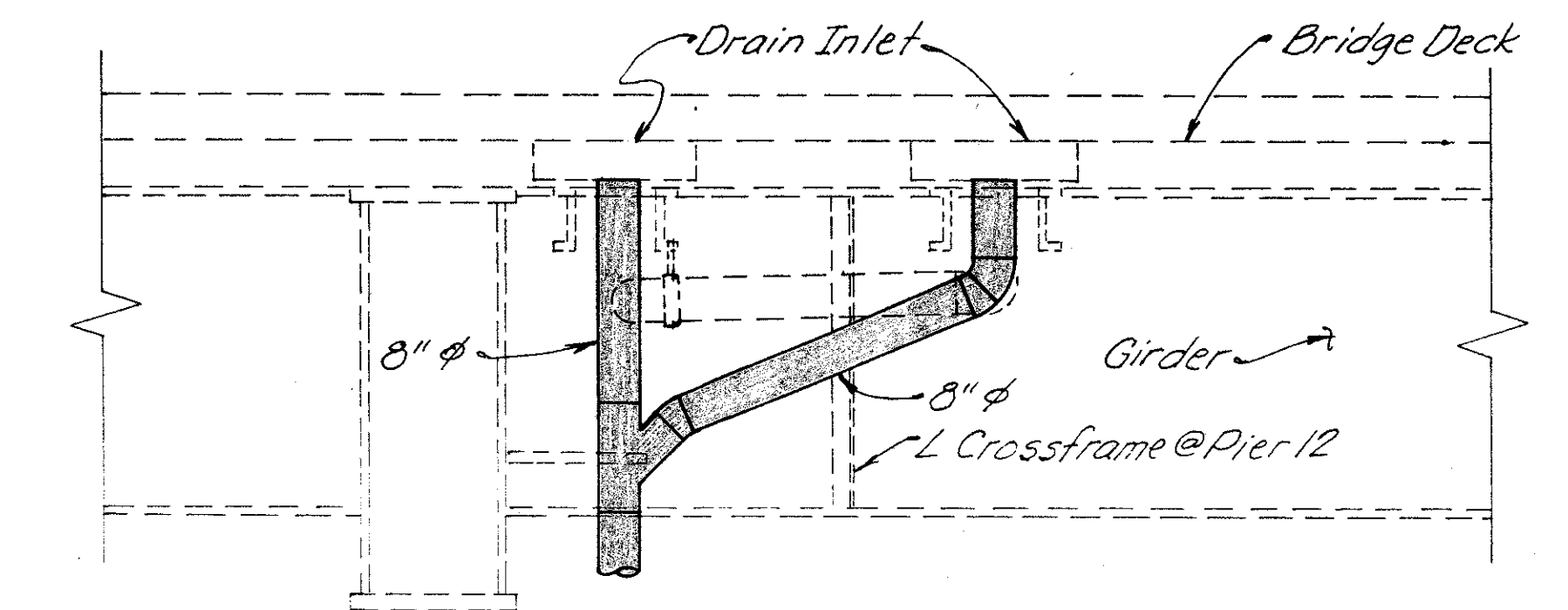
PLAN FOR DRAIN INLET AT EAST SIDE OF PIER 10/12



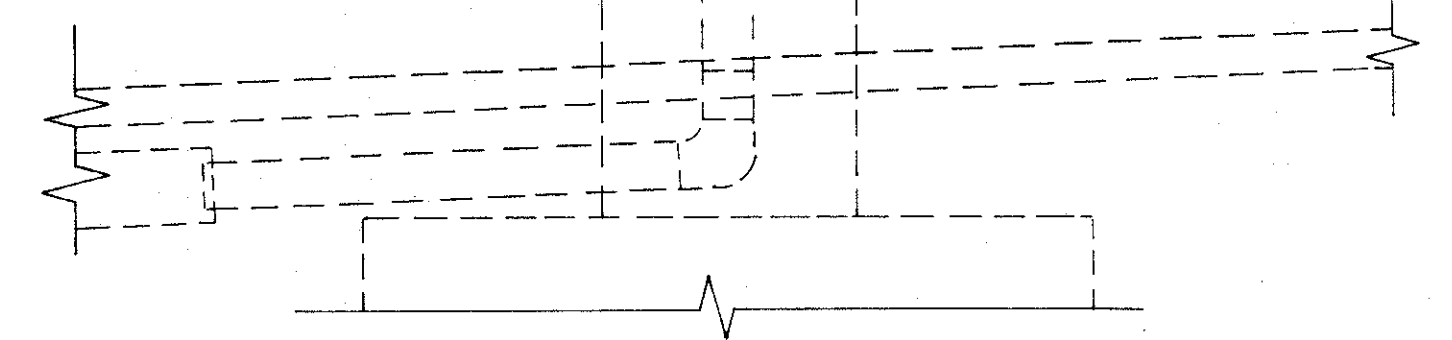
SECTION F-F



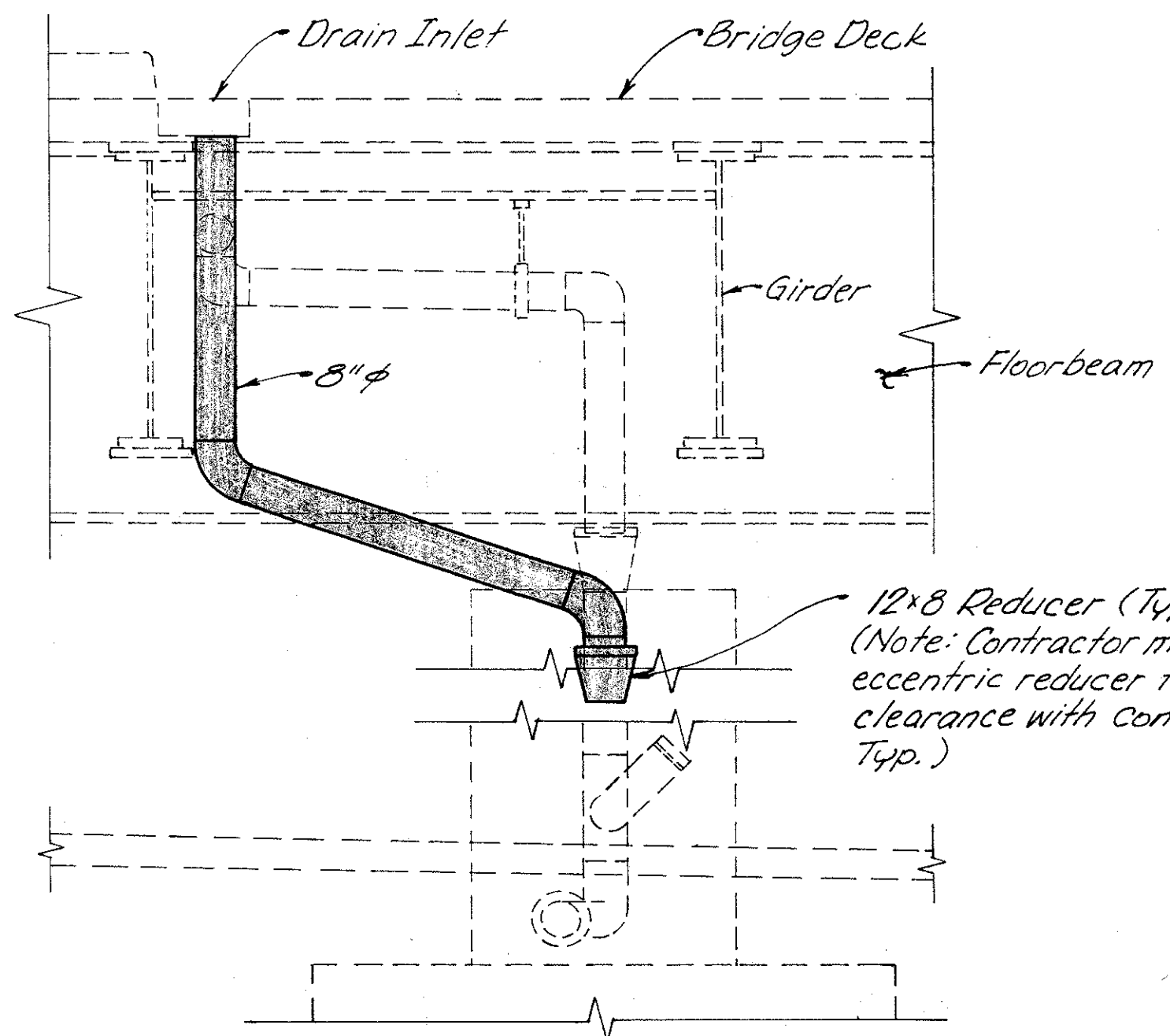
SECTION H-H



SECTION K-K

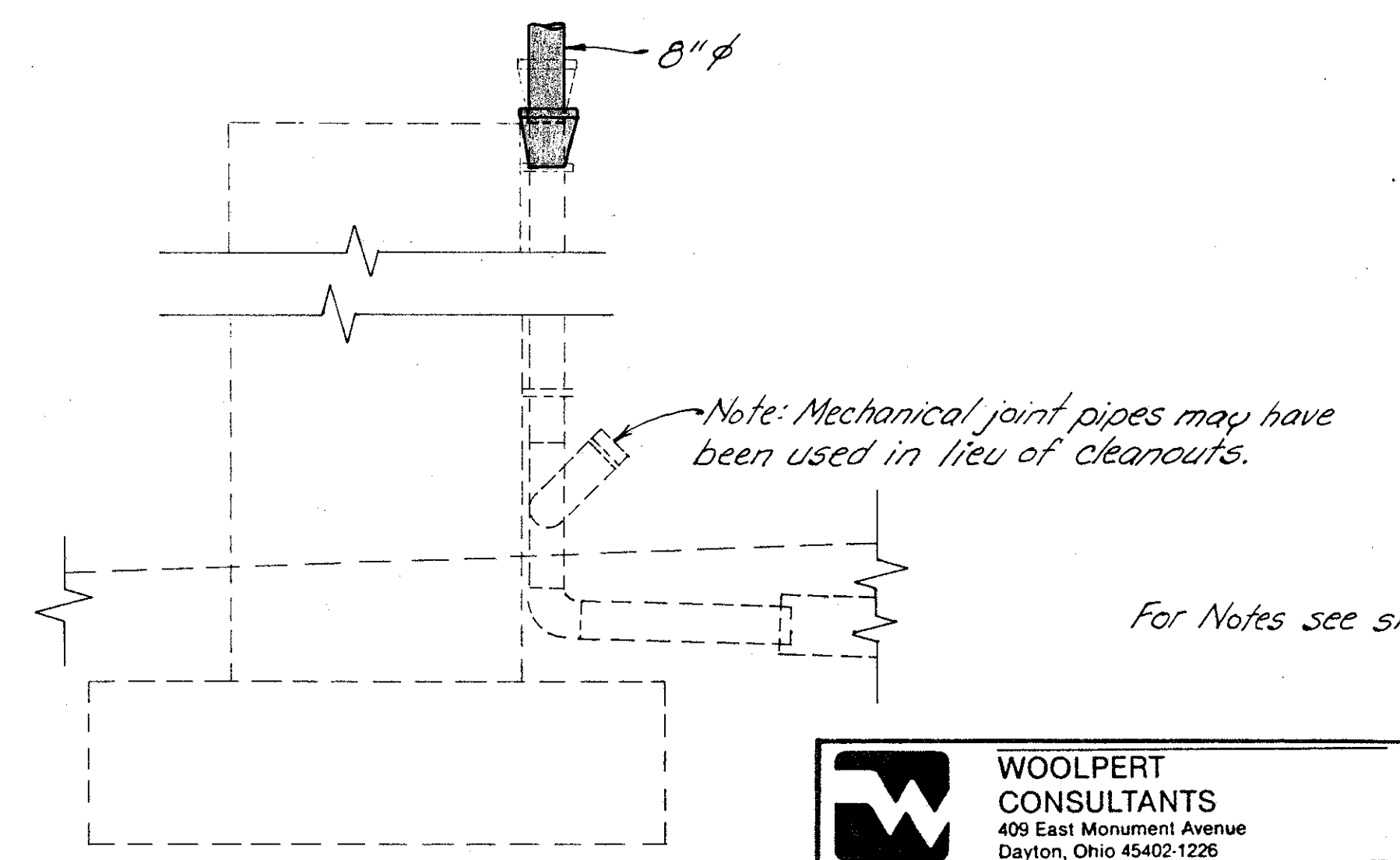


SECTION G-G



SECTION J-J

12x8 Reducer (Typ.)  
(Note: Contractor may use eccentric reducer to provide clearance with concrete. Typ.)



SECTION L-L

Note: Mechanical joint pipes may have been used in lieu of cleanouts.

For Notes see sht. 7/9

|                                                                          |        |                                                                             |         |          |          |
|--------------------------------------------------------------------------|--------|-----------------------------------------------------------------------------|---------|----------|----------|
|                                                                          |        | WOOLPERT CONSULTANTS<br>409 East Monument Avenue<br>Dayton, Ohio 45402-1226 |         | 9/9      |          |
| <b>DRAINAGE DETAILS</b>                                                  |        |                                                                             |         |          |          |
| BRIDGE NO. HAM-71-0243 R<br>OVER EDEN PARK ENTRANCE<br>AND FLORENCE AVE. |        |                                                                             |         |          |          |
| HAMILTON COUNTY                                                          |        |                                                                             |         |          |          |
| DESIGNED                                                                 | DRAWN  | TRACED                                                                      | CHECKED | REVIEWED | DATE     |
| L.A.T.M.                                                                 | L.A.P. |                                                                             | D.E.M.  | P.W.G.   | 11/11/94 |
| REVISED                                                                  |        |                                                                             |         |          |          |

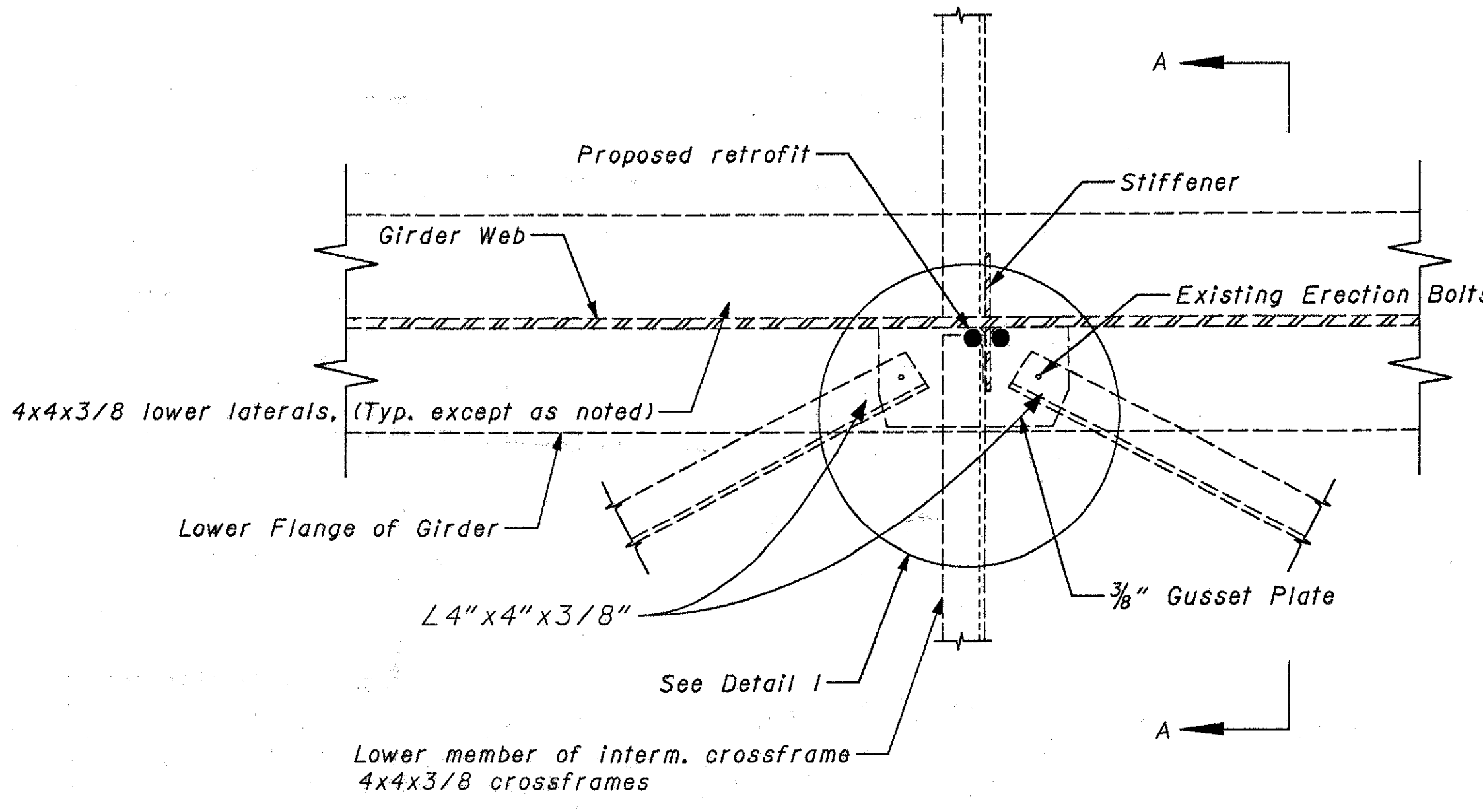
### ITEM SPECIAL - LATERAL BRACING GUSSET PLATE RETROFIT UPGRADE

This work shall consist of the following sequence of operations performed on one lateral bracing gusset plate:

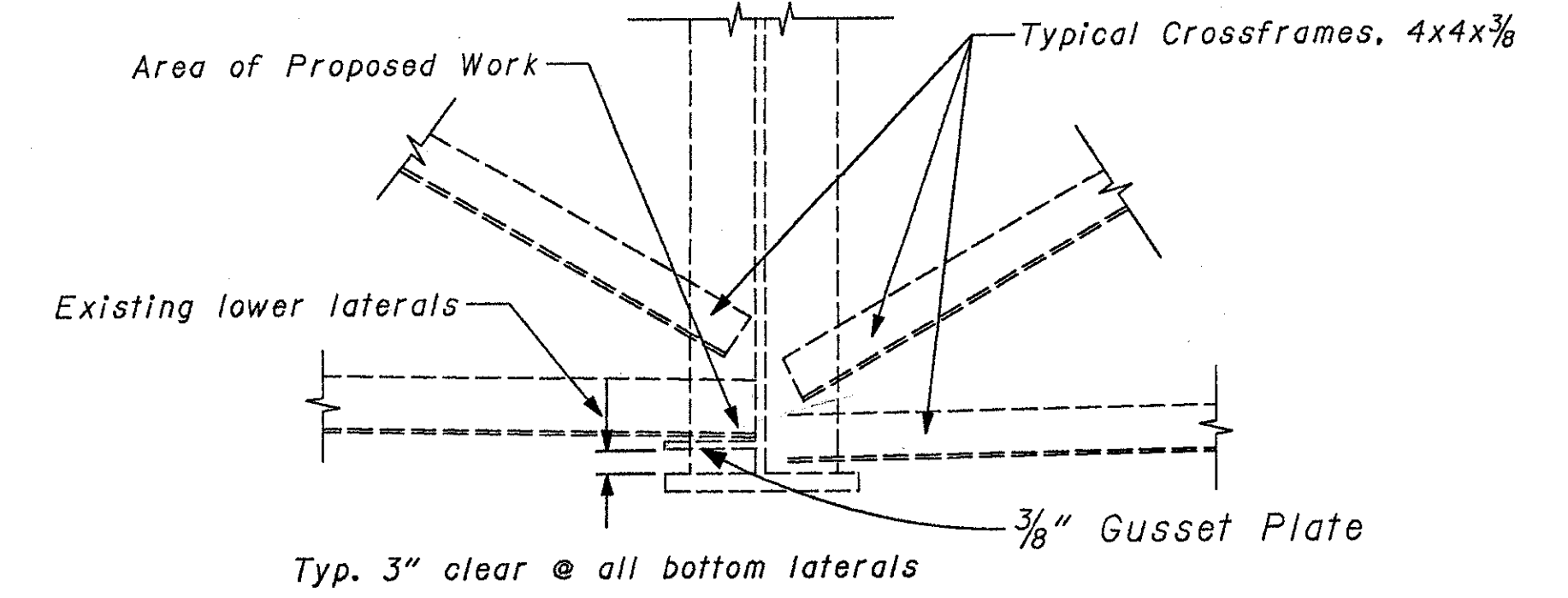
1. Drill the two 3 inch or six 2 inch vertical holes through the gusset plate removing the gusset plate to web and gusset plate to stiffener fillet welds at the locations without gouging the web or stiffener. See retrofit details contained herein. If the bolts are found to interfere with the retrofit, the bolts may be removed prior to drilling and replaced after the retrofit is performed.
2. Drill the two 3 inch or six 2 inch vertical holes through the gusset plate removing the outside corners of the gusset plate without gouging the web.
3. Any remaining fillet welds at the gusset plate shall be ground so that the resulting surfaces of the web and stiffener are smooth. Extreme care shall be taken to ensure the full thickness of the web is maintained and no undercut, gouging or overgrinding of the web takes place. If the holes of step 1 and step 2 did not touch the face of the adjacent surface, the hole shall be ground so that a 1 inch minimum radius results.

The accepted number of retrofits described herein will be paid for at the contract unit price per location, which price and payment shall be full compensation for furnishing all material, labor, and equipment necessary to clean, drill, cut and grind the lateral bracing gusset retrofit area. A single location is considered to be one drilling operation, i.e. one or three holes depending on whether option A or option B is the selected method of retrofit. Payment will be made at the contract price bid under:

| ITEM    | UNIT | DESCRIPTION                                                                  |
|---------|------|------------------------------------------------------------------------------|
| Special | Each | Structure Misc: Lateral Bracing Gusset Plate Retrofit Upgrade (Intermediate) |



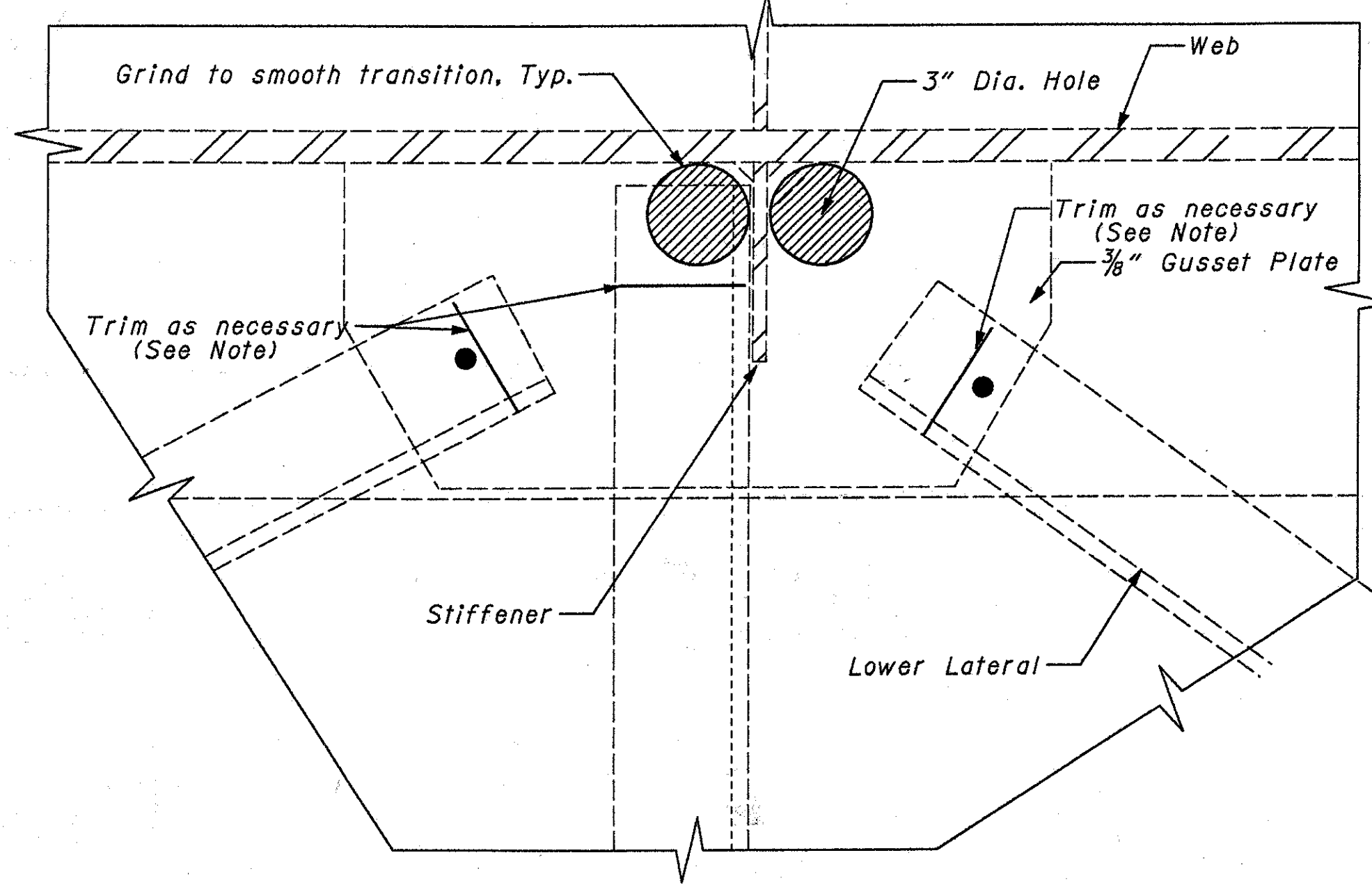
DETAILS OF BOTTOM LATERALS  
(EXISTING LOWER LATERAL CONNECTION DETAIL)



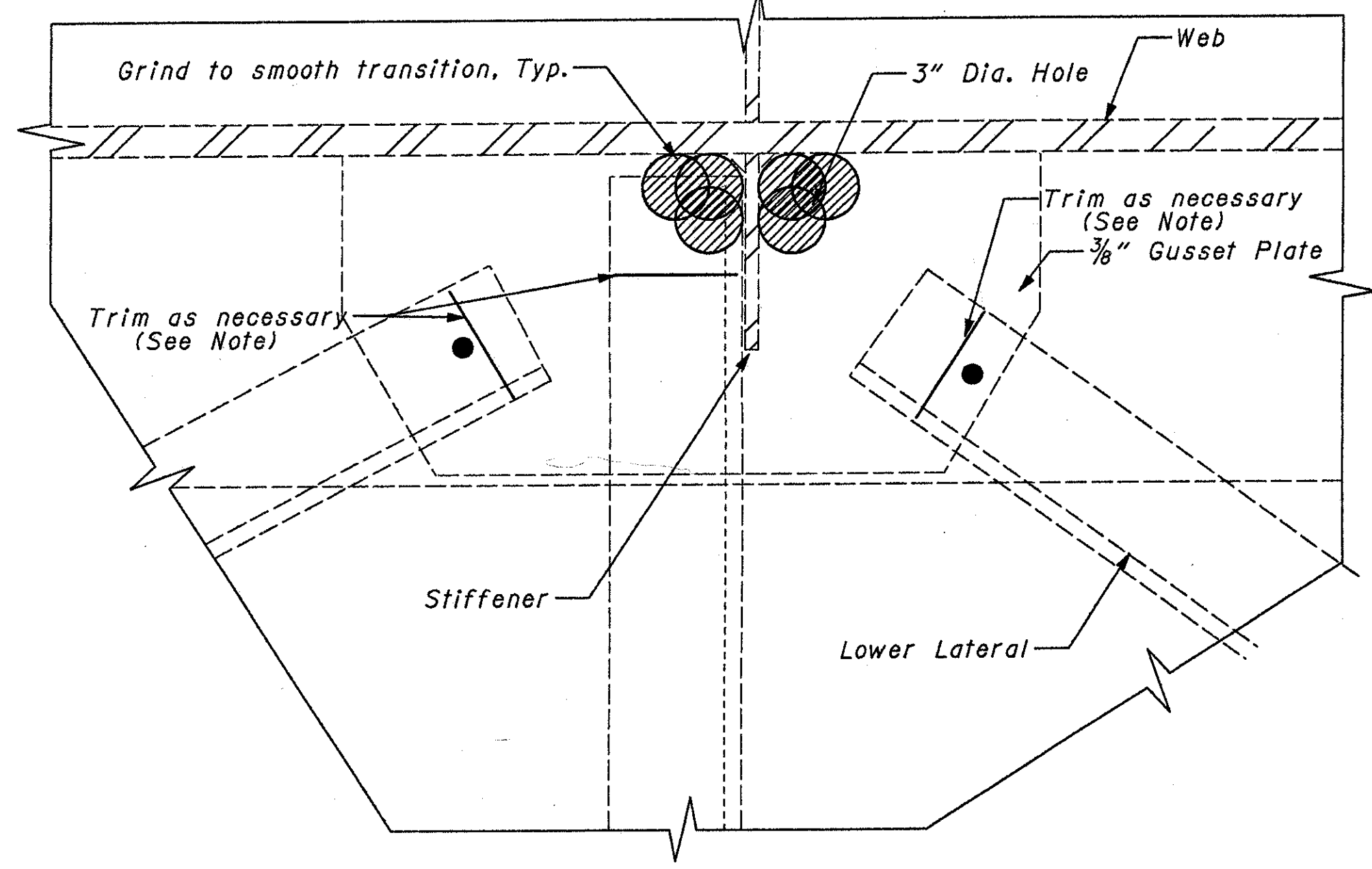
SECTION A-A

### CUTTING OF VERTICAL LEGS

At certain locations the lower lateral bracing and/or the horizontal member of the crossframe may have a section of its vertical leg cut in order to drill the holes as deemed necessary by the Engineer. If so the Contractor may cut the minimal amount of the vertical leg that the Engineer deems necessary to remove. The Contractor shall make the cut leaving a smooth arc or grind it smooth after the cut. Any damage done by the Contractor thru neglect or carelessness shall be repaired by him at no additional cost to the State of Ohio. The above work shall be included in Item Special - Structure Misc.: Lateral Bracing Gusset Plate Retrofit Upgrade (Intermediate) for payment.



DETAIL I OPTION A



DETAIL I OPTION B

|                                                                                   |       |          |         |      |           |
|-----------------------------------------------------------------------------------|-------|----------|---------|------|-----------|
| STATE OF OHIO<br>DEPARTMENT OF TRANSPORTATION<br>DISTRICT 8 BRIDGE DEPARTMENT 1/6 |       |          |         |      |           |
| Lower Lateral Retrofit<br>Typical Details<br>1R-71<br>Hamilton County             |       |          |         |      |           |
| DESIGNED                                                                          | DRAWN | REVIEWED | CHECKED | DATE | REVISIONS |
| SDC                                                                               | SDC   | RLE      | RLE     |      |           |



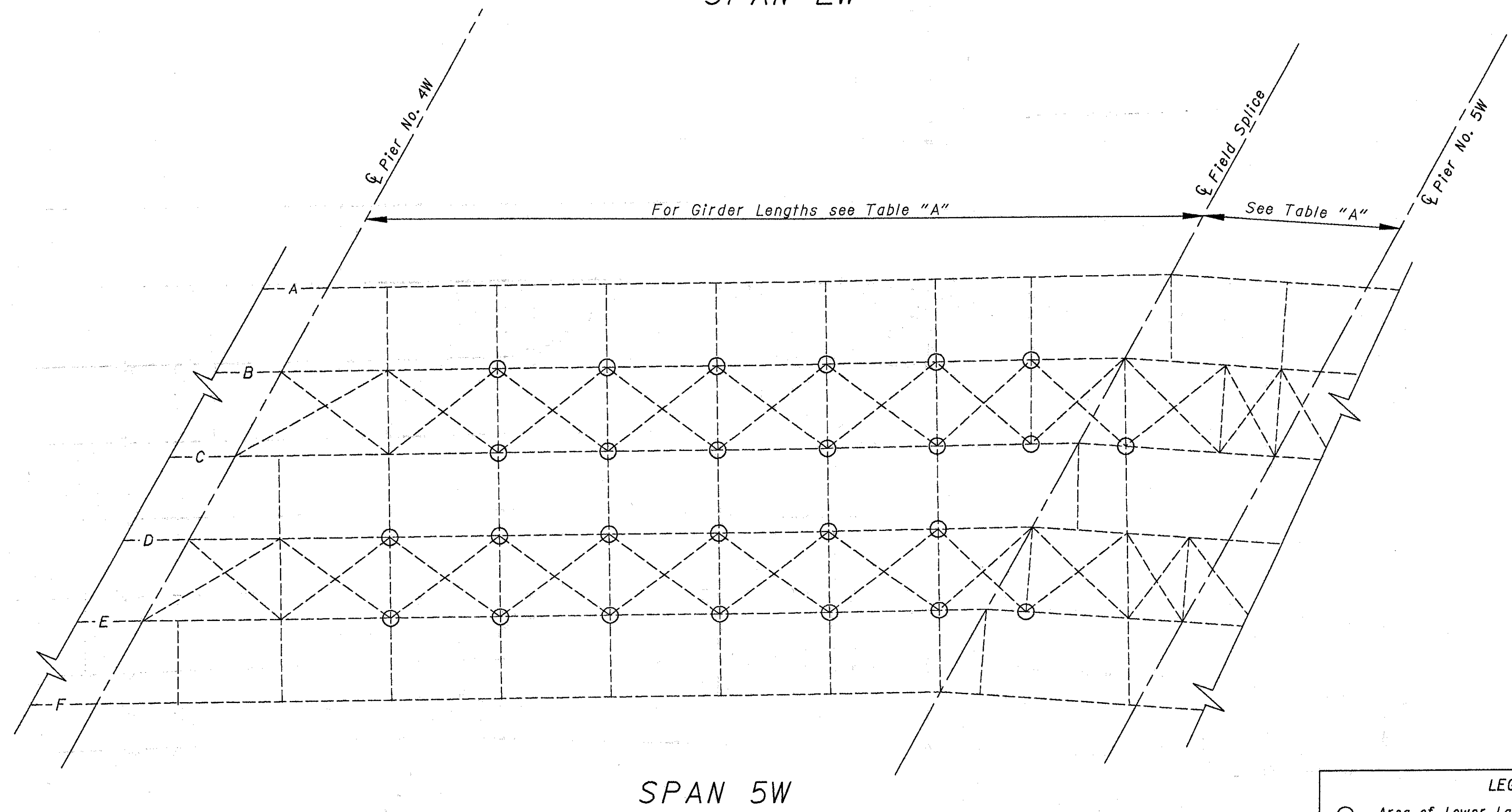
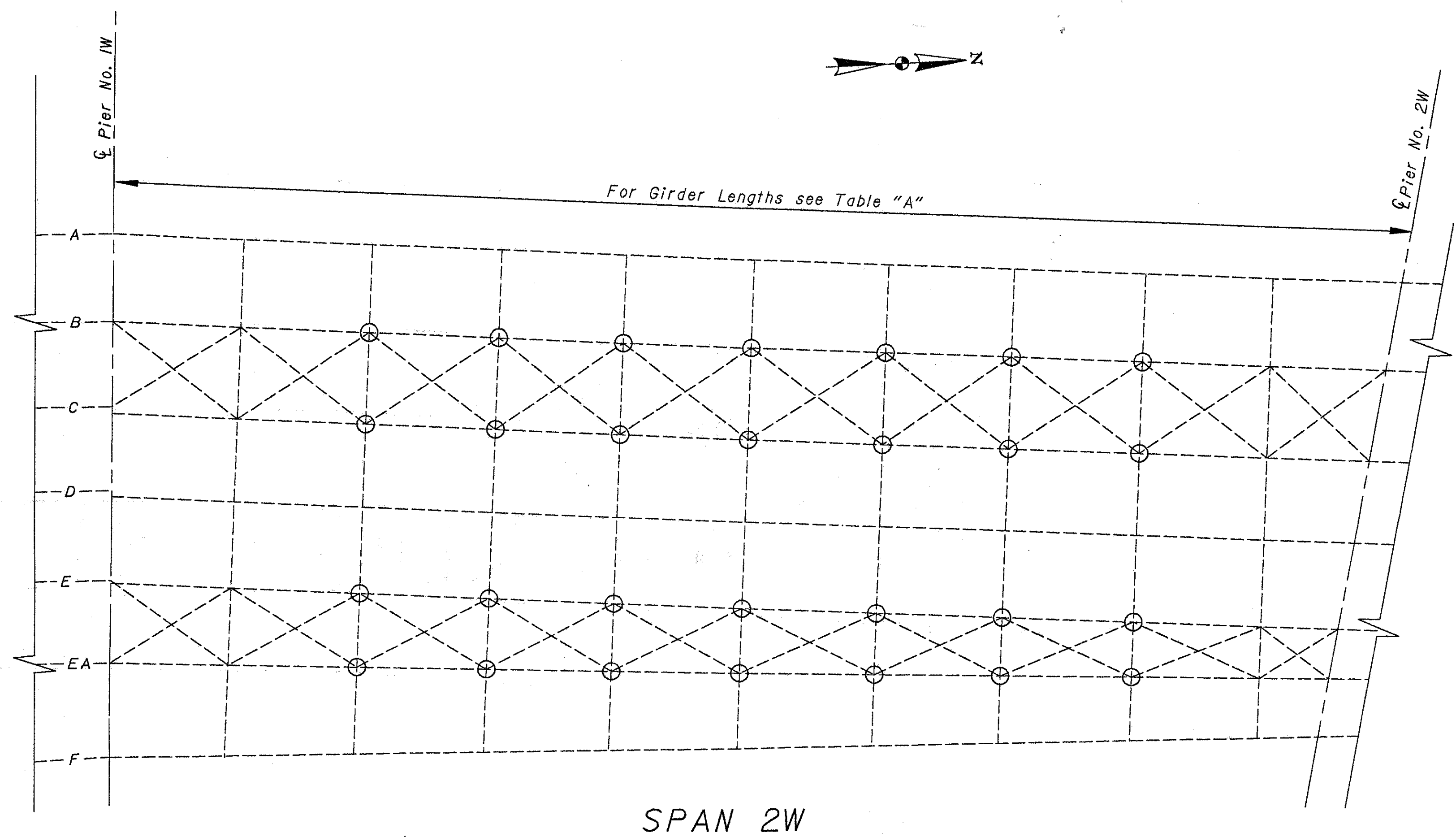


TABLE "A"

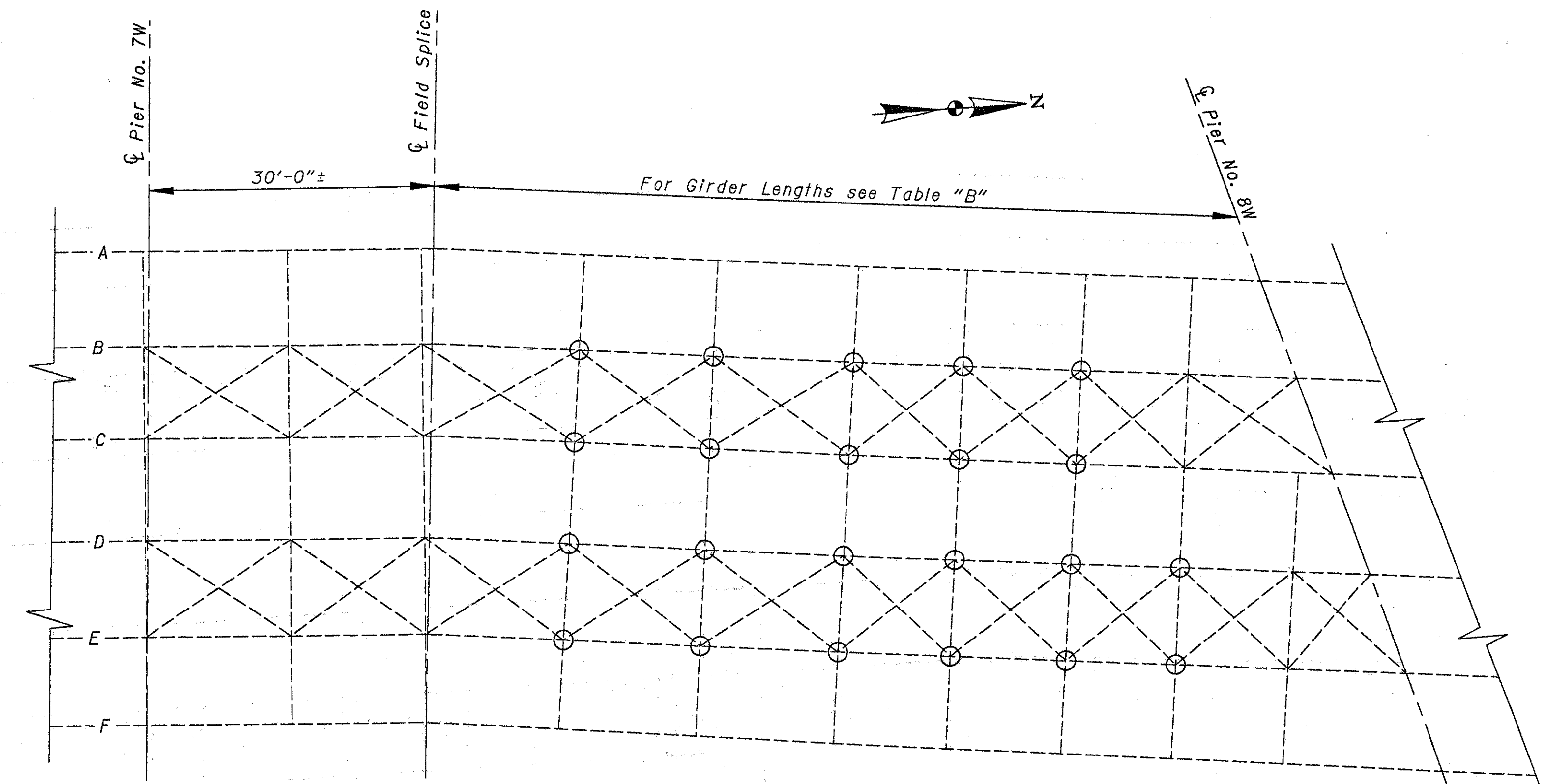
| GIRDER | UNIT 1                                 |                                        |                                       |
|--------|----------------------------------------|----------------------------------------|---------------------------------------|
|        | Span 2W                                | Center of Pier 4W to Center of Splice  | Center of Splice to Center of Pier 5W |
| A      | 149'-11 <sup>1</sup> / <sub>16</sub> " | 102'-8 <sup>1</sup> / <sub>2</sub> "   | 21'-10 <sup>1</sup> / <sub>16</sub> " |
| B      | 147'-8 <sup>5</sup> / <sub>16</sub> "  | 103'-1"                                | 21'-10 <sup>1</sup> / <sub>16</sub> " |
| C      | 145'-4 <sup>7</sup> / <sub>8</sub> "   | 103'-3 <sup>3</sup> / <sub>8</sub> "   | 21'-10 <sup>1</sup> / <sub>16</sub> " |
| D      | 143'-1 <sup>1</sup> / <sub>2</sub> "   | 103'-10 <sup>1</sup> / <sub>4</sub> "  | 21'-10 <sup>1</sup> / <sub>16</sub> " |
| E      | 140'-10 <sup>1</sup> / <sub>8</sub> "  | 103'-10 <sup>7</sup> / <sub>16</sub> " | 21'-11"                               |
| EA     | 139'-0 <sup>7</sup> / <sub>8</sub> "   | -                                      | -                                     |
| F      | 137'-4 <sup>9</sup> / <sub>16</sub> "  | 103'-10 <sup>5</sup> / <sub>8</sub> "  | 22'-0 <sup>1</sup> / <sub>8</sub> "   |

LEGEND  
 ○ Area of Lower Lateral Retrofit Locations  
 See Details of Retrofits on Sheet 1/6.

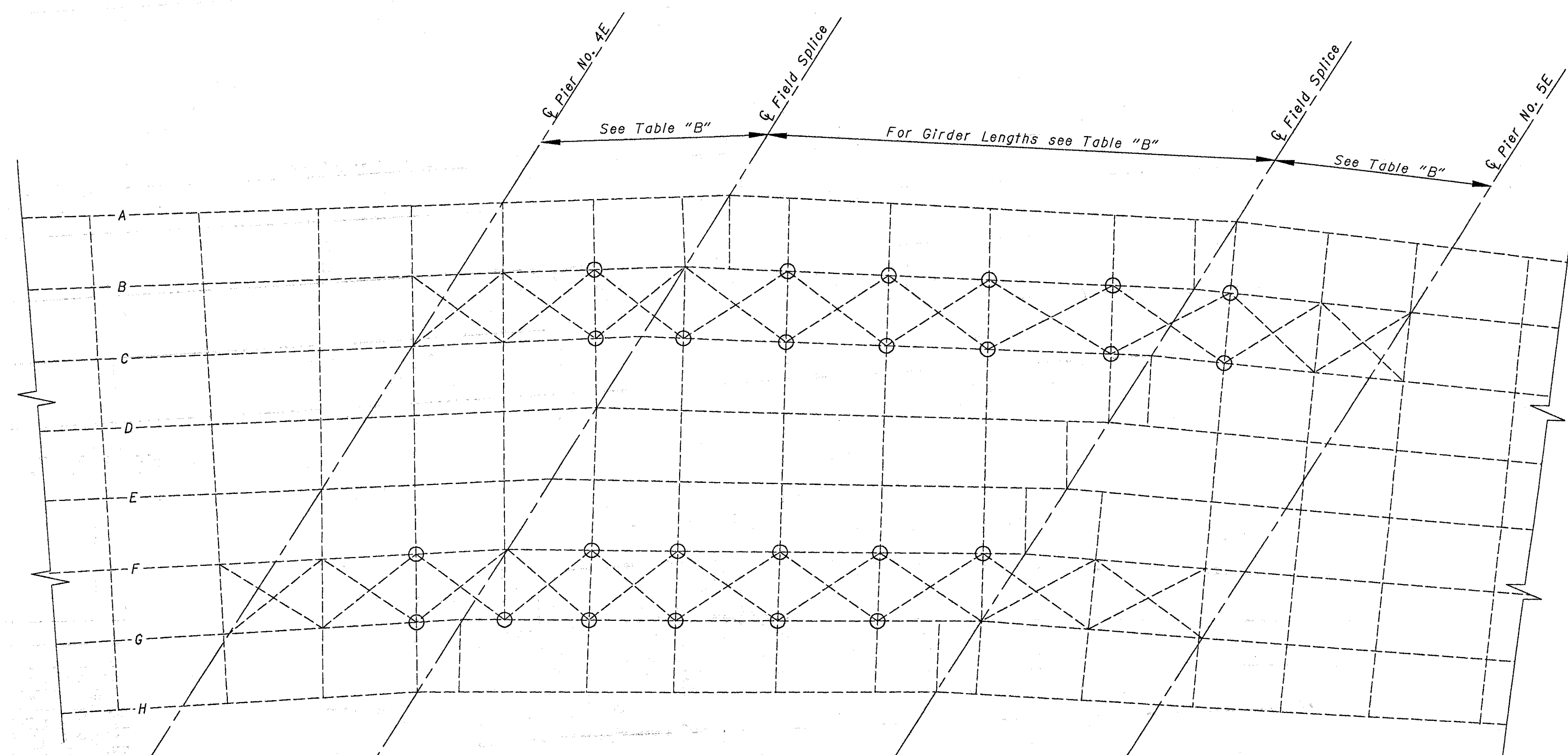
STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION  
 DISTRICT 8 BRIDGE DEPARTMENT

FRAMING PLAN UNIT 1  
 BRIDGE NO. HAM-71-0154  
 over Southbound I-471  
 Hamilton County

|          |       |          |         |      |           |
|----------|-------|----------|---------|------|-----------|
| DESIGNED | DRAWN | REVIEWED | CHECKED | DATE | REVISIONS |
| SDC      | SDC   | RLE      | RLE     |      |           |



SPAN 8W



SPAN 5E

TABLE "B"

| GIRDER | UNIT 2                                 |                                       | UNIT 4                                |                                      |
|--------|----------------------------------------|---------------------------------------|---------------------------------------|--------------------------------------|
|        | ② Splice to ② Pier 8W                  | ② Pier 4E to ② Splice                 | ② Splice to ② Splice                  | ② Splice to ② Pier 5E                |
| A      | 92'-11 <sup>1</sup> / <sub>16</sub> "  | 30'-10"                               | 66'-4 <sup>1</sup> / <sub>16</sub> "  | 29'-7 <sup>1</sup> / <sub>16</sub> " |
| B      | 95'-8 <sup>9</sup> / <sub>16</sub> "   | 30'-11 <sup>9</sup> / <sub>16</sub> " | 66'-7 <sup>1</sup> / <sub>2</sub> "   | 29'-8 <sup>5</sup> / <sub>16</sub> " |
| C      | 99'-4 <sup>1</sup> / <sub>16</sub> "   | 31'-0 <sup>1</sup> / <sub>16</sub> "  | 66'-10 <sup>9</sup> / <sub>16</sub> " | 29'-10 <sup>1</sup> / <sub>2</sub> " |
| D      | 102'-11 <sup>9</sup> / <sub>16</sub> " | 31'-2 <sup>1</sup> / <sub>8</sub> "   | 67'-2 <sup>9</sup> / <sub>16</sub> "  | 30'-0 <sup>1</sup> / <sub>16</sub> " |
| E      | 106'-7 <sup>1</sup> / <sub>16</sub> "  | 31'-3 <sup>3</sup> / <sub>4</sub> "   | 67'-5 <sup>1</sup> / <sub>16</sub> "  | 30'-1 <sup>5</sup> / <sub>8</sub> "  |
| F      | 110'-3 <sup>5</sup> / <sub>16</sub> "  | 31'-5 <sup>1</sup> / <sub>2</sub> "   | 67'-8 <sup>5</sup> / <sub>16</sub> "  | 30'-3 <sup>3</sup> / <sub>4</sub> "  |
| G      | -                                      | 31'-7 <sup>1</sup> / <sub>16</sub> "  | 68'-0 <sup>1</sup> / <sub>16</sub> "  | 30'-4 <sup>7</sup> / <sub>8</sub> "  |
| H      | -                                      | 31'-9 <sup>1</sup> / <sub>2</sub> "   | 68'-3 <sup>1</sup> / <sub>8</sub> "   | 30'-6 <sup>3</sup> / <sub>16</sub> " |

LEGEND  
 ○ Area of Lower Lateral Retrofit Locations  
 See Details of Retrofits on Sheet 1/6.

STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION  
 DISTRICT 8 BRIDGE DEPARTMENT 3/26

FRAMING PLAN UNITS 2&4  
 BRIDGE NO. HAM-71-0154  
 over Southbound I-471  
 Hamilton County

|          |       |          |         |      |           |
|----------|-------|----------|---------|------|-----------|
| DESIGNED | DRAWN | REVIEWED | CHECKED | DATE | REVISIONS |
| SDC      | SDC   | RLE      | RLE     |      |           |



DATE: \_\_\_\_\_  
 BY: \_\_\_\_\_  
 CHECKED: \_\_\_\_\_  
 DATE: \_\_\_\_\_

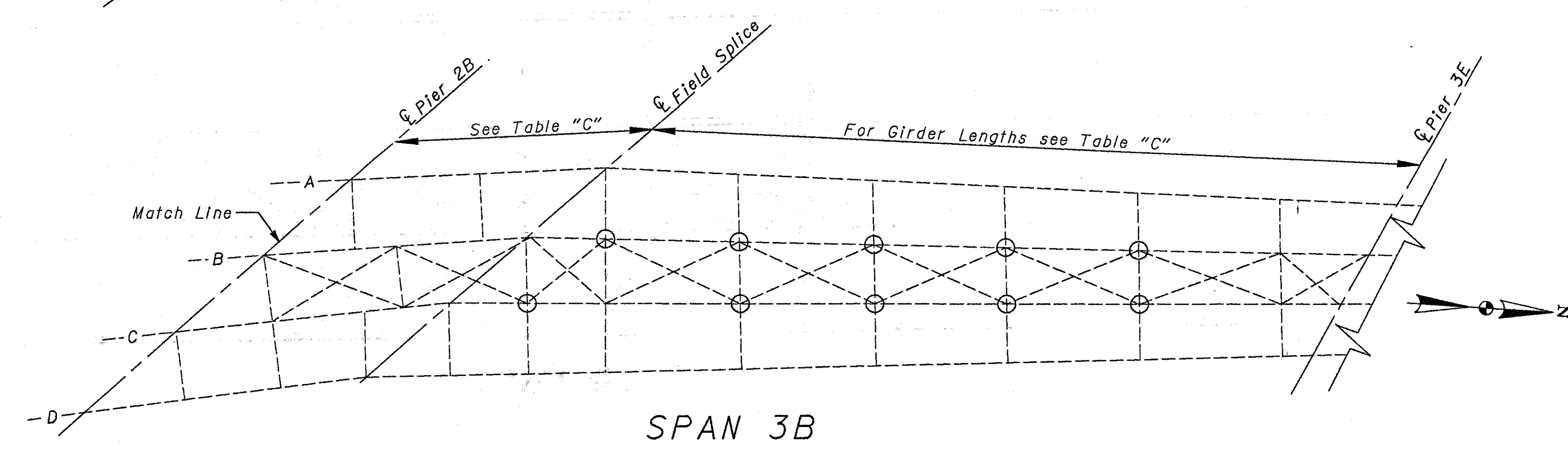
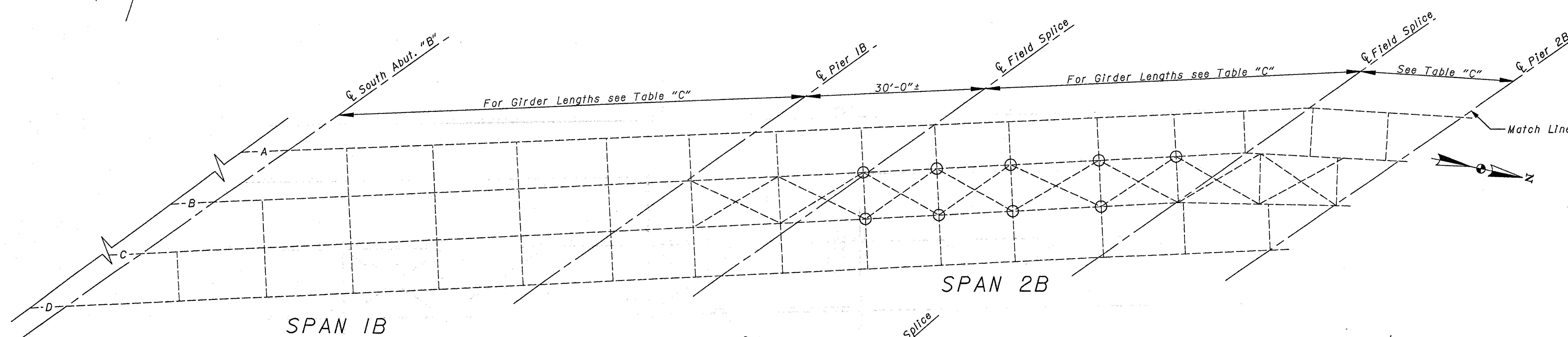
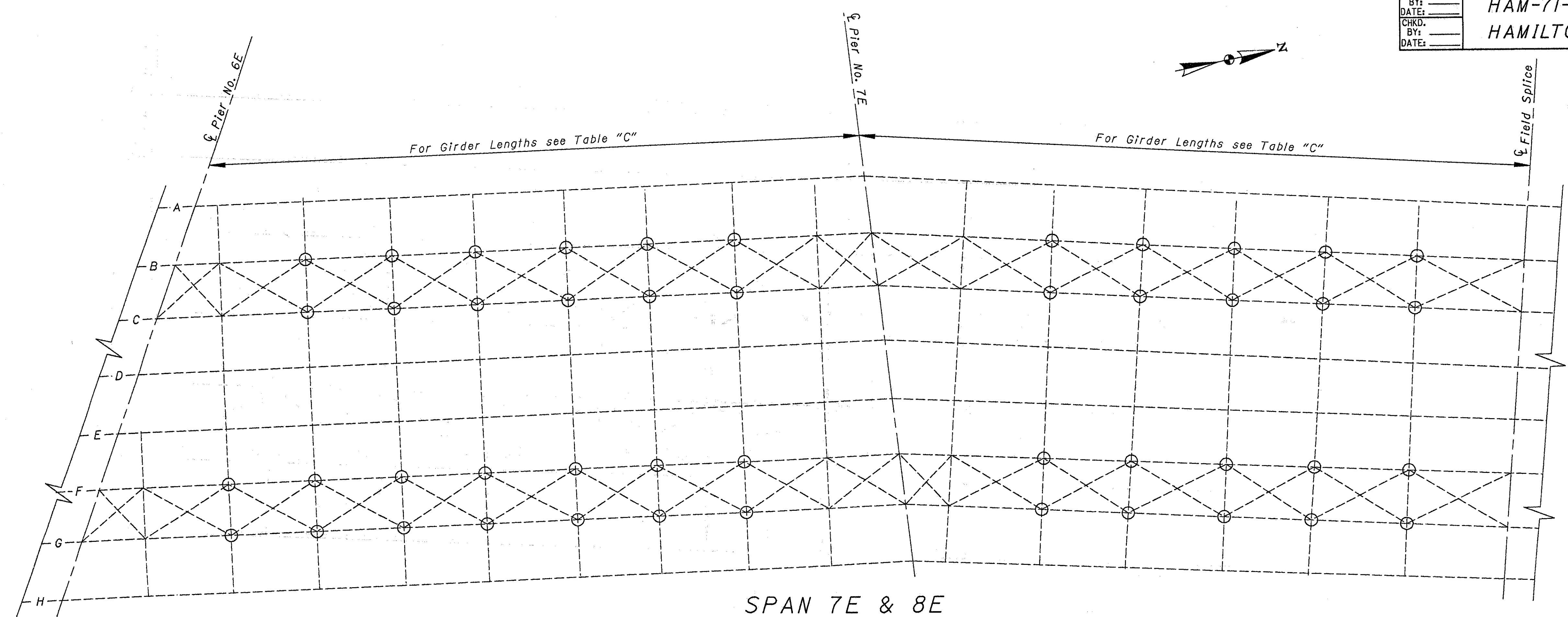


TABLE "A"

| GIRDER | UNIT 5    |                       | UNIT 6               |                       |                       |                       |
|--------|-----------|-----------------------|----------------------|-----------------------|-----------------------|-----------------------|
|        | Span 7E   | ¢ Pier 7E to ¢ Splice | ¢ Splice to ¢ Splice | ¢ Splice to ¢ Pier 2B | ¢ Pier 2B to ¢ Splice | ¢ Splice to ¢ Pier 3E |
| A      | 109'-9½"  | 108'-5½"              | 64'-5½"              | 27'-9½"               | 27'-8¾"               | 86'-2¾"               |
| B      | 114'-1"   | 106'-7½"              | 65'-11½"             | 28'-7½"               | 28'-5½"               | 91'-10¼"              |
| C      | 118'-4¾"  | 104'-10½"             | 67'-6"               | 29'-5½"               | 29'-3¾"               | 97'-6¾"               |
| D      | 122'-8½"  | 103'-0½"              | 67'-6"               | 31'-0½"               | 30'-10¾"              | 103'-3¼"              |
| E      | 126'-11½" | 101'-2½"              | -                    | -                     | -                     | -                     |
| F      | 131'-3¾"  | 99'-5¼"               | -                    | -                     | -                     | -                     |
| G      | 135'-6¾"  | 97'-7¾"               | -                    | -                     | -                     | -                     |
| H      | 139'-10½" | 95'-9½"               | -                    | -                     | -                     | -                     |

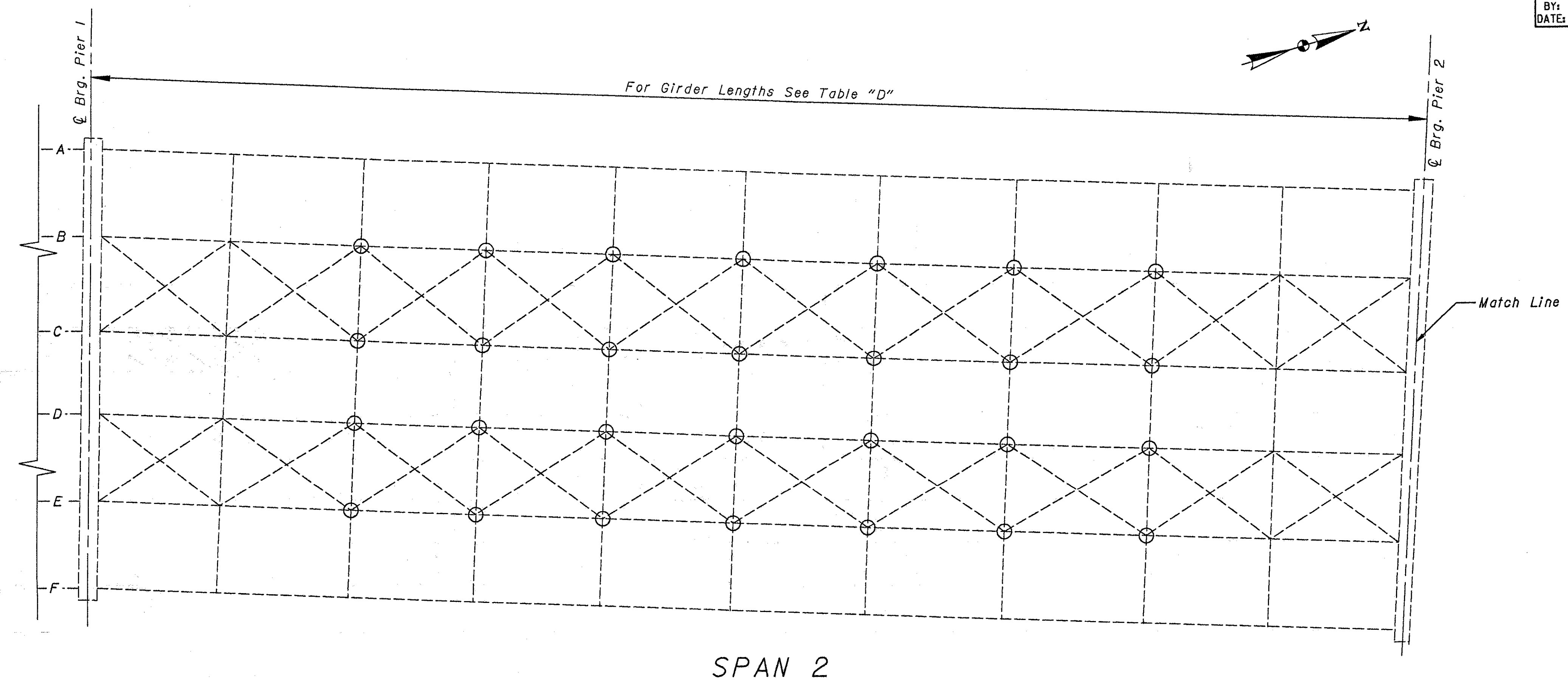
LEGEND

○ Area of Lower Lateral Retrofit Locations  
 See Details of Retrofits on Sheet 1/6.

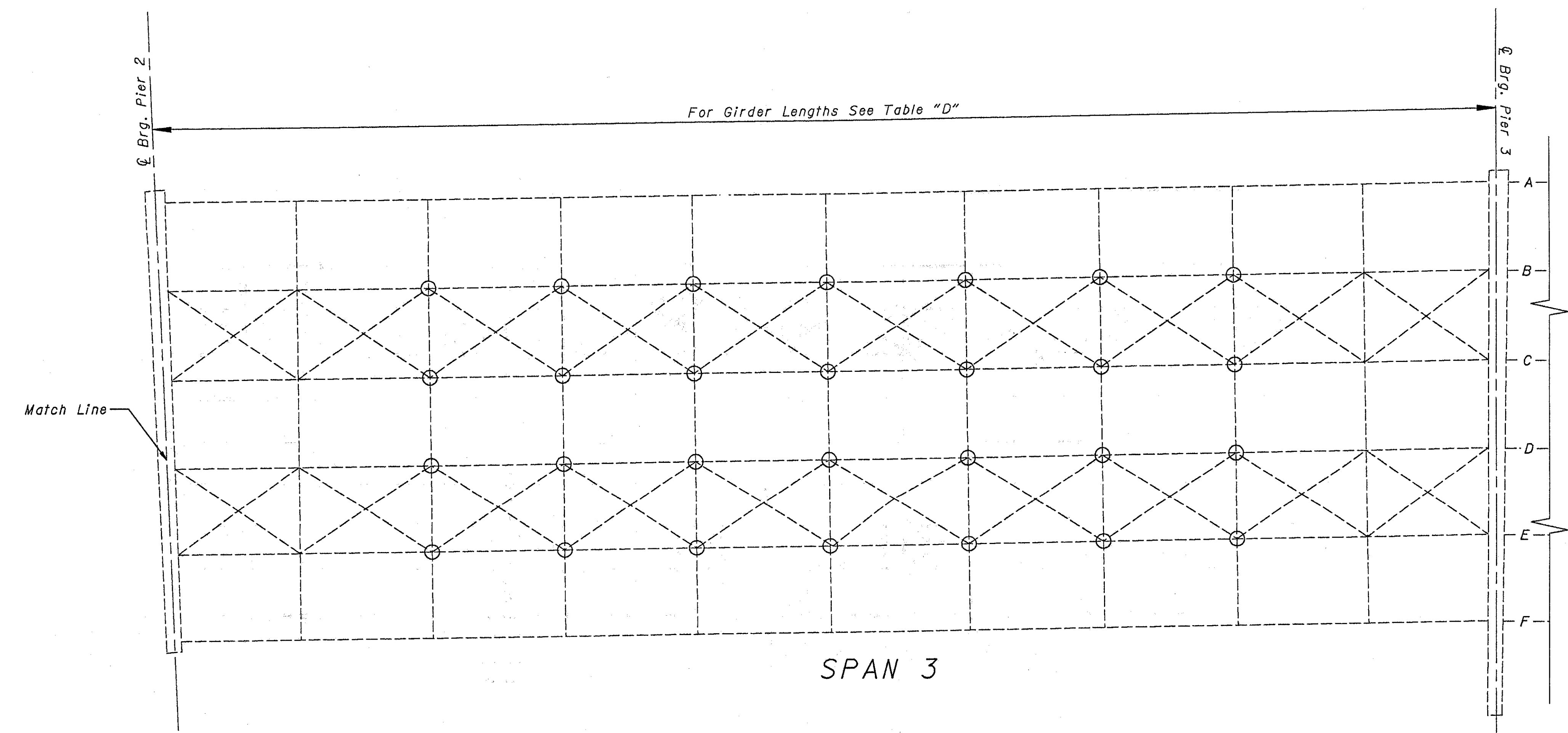
STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION  
 DISTRICT 8 BRIDGE DEPARTMENT 4/6

FRAMING PLAN UNITS 5&6  
 BRIDGE NO. HAM-71-0154  
 over Southbound I-471  
 Hamilton County

|          |       |          |         |      |           |
|----------|-------|----------|---------|------|-----------|
| DESIGNED | DRAWN | REVIEWED | CHECKED | DATE | REVISIONS |
| SDC      | SDC   | RLE      | RLE     |      |           |



SPAN 2



SPAN 3

TABLE "D"

| GIRDER | Span 2       | Span 3       |
|--------|--------------|--------------|
| A      | 145'-11/8"   | 144'-11 5/8" |
| B      | 144'-7 1/16" | 144'-6 3/8"  |
| C      | 144'-1 1/16" | 144'-0 3/4"  |
| D      | 143'-8"      | 143'-7 5/16" |
| E      | 143'-2 1/4"  | 143'-1 1/8"  |
| F      | 142'-8 3/16" | 142'-8 1/16" |

LEGEND  
 ○ Area of Lower Lateral Retrofit Locations  
 See Details of Retrofits on Sheet 1/6.

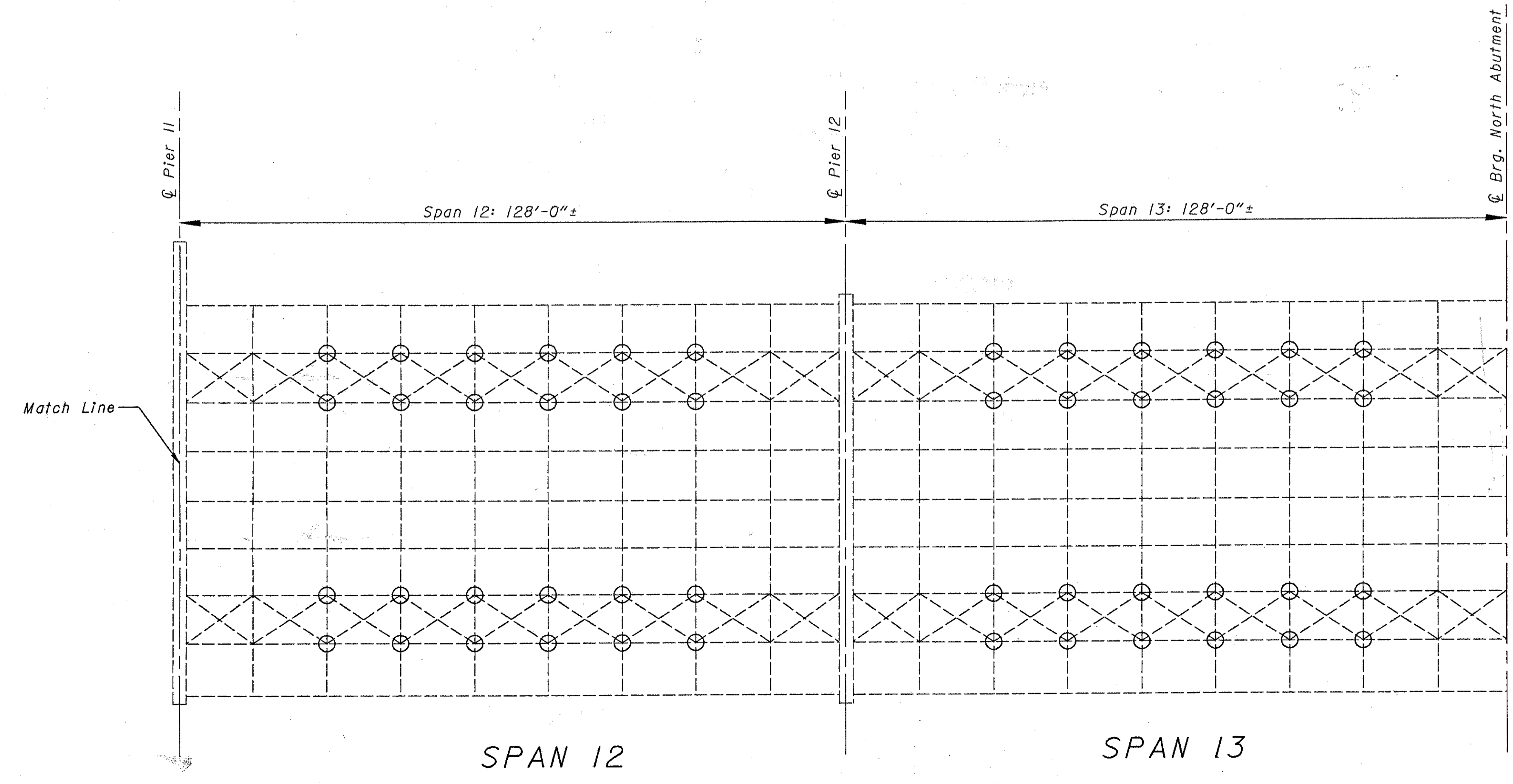
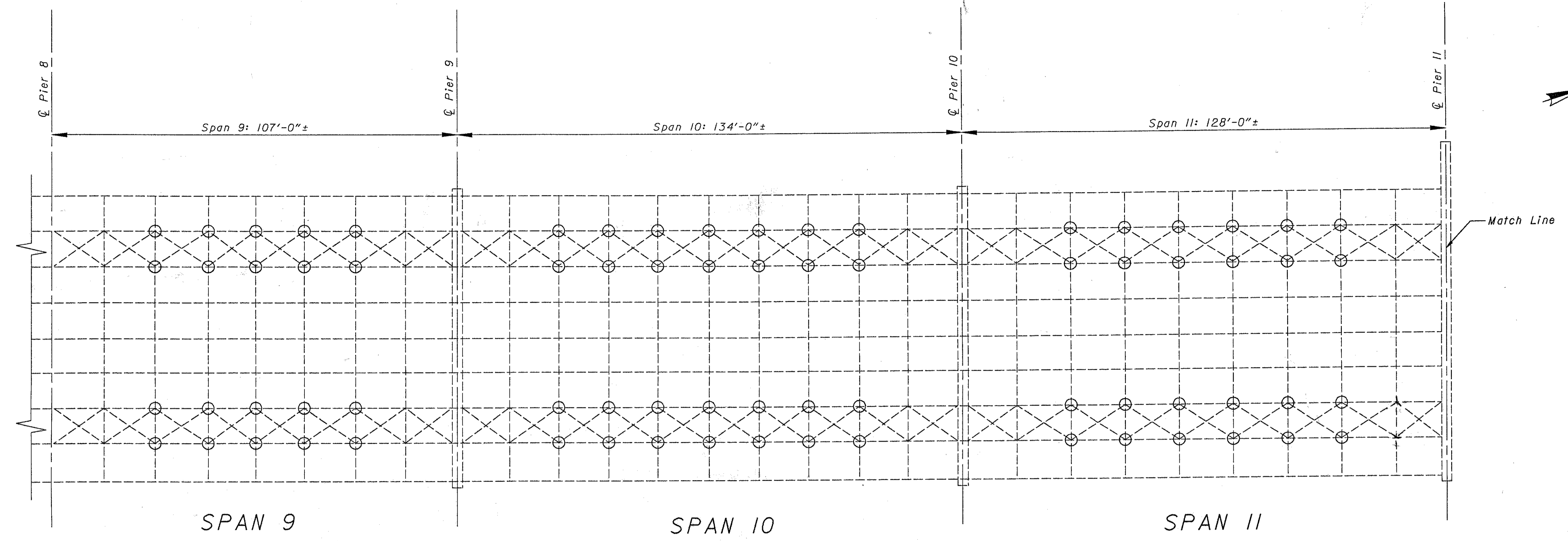
STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION  
 DISTRICT 8 BRIDGE DEPARTMENT 5/6

FRAMING PLAN  
 BRIDGE NO. HAM-71-0243L  
 over Eden Pk. Entrance, US 42  
 Hamilton County

| DESIGNED | DRAWN | REVIEWED | CHECKED | DATE | REVISIONS |
|----------|-------|----------|---------|------|-----------|
| SDC      | SDC   | RLE      | RLE     |      |           |



REVISIONS



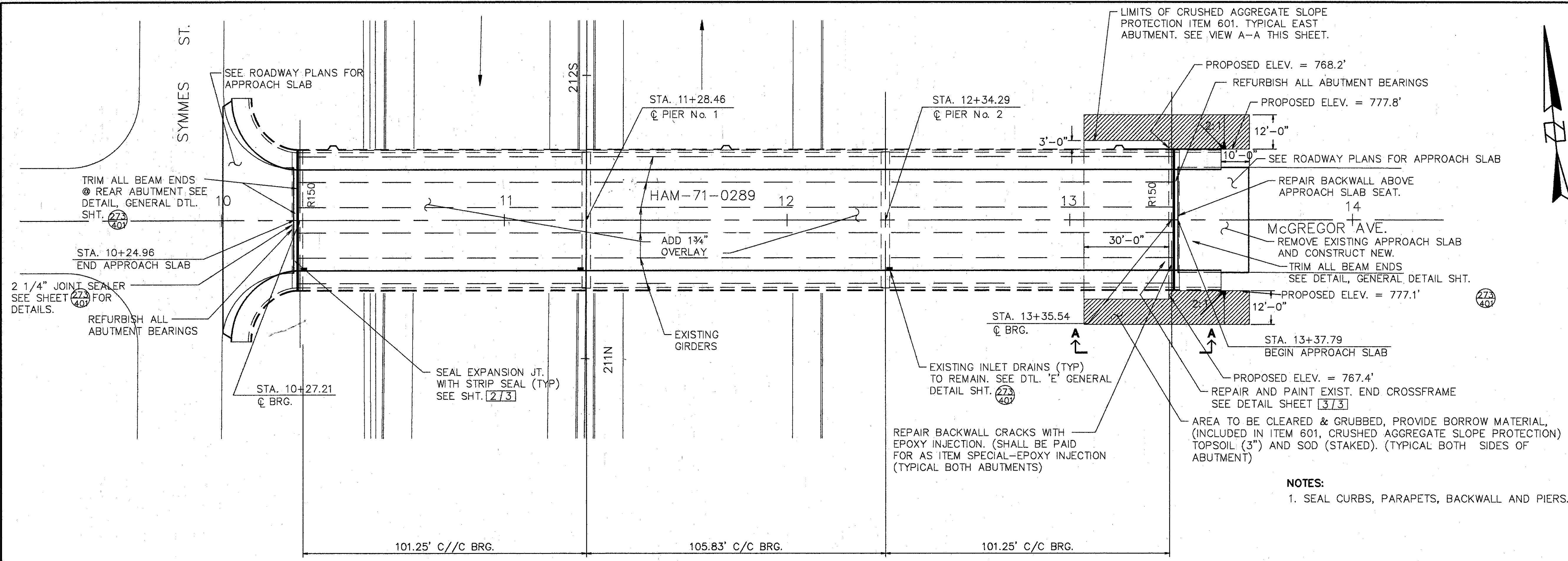
**LEGEND**

○ Area of Lower Lateral Retrofit Locations  
See Details of Retrofits on Sheet 1/6.

STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION  
DISTRICT 8 BRIDGE DEPARTMENT 6/6

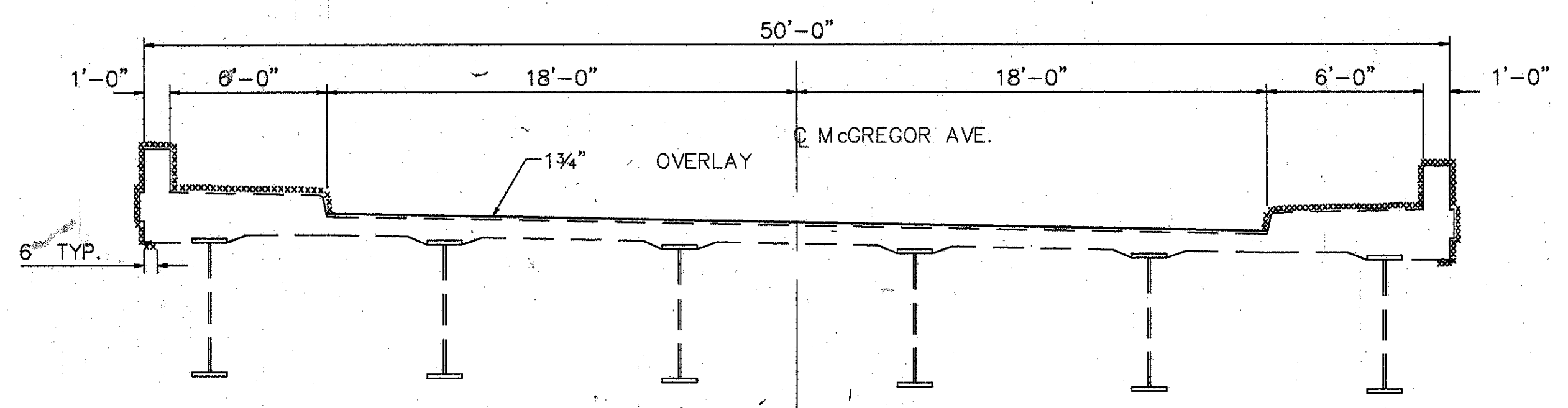
FRAMING PLAN  
BRIDGE NO. HAM-71-0243R  
over Eden Pk. Entrance, US 42  
Hamilton County

| DESIGNED | DRAWN | REVIEWED | CHECKED | DATE | REVISIONS |
|----------|-------|----------|---------|------|-----------|
| SDC      | SDC   | RLE      | RLE     |      |           |



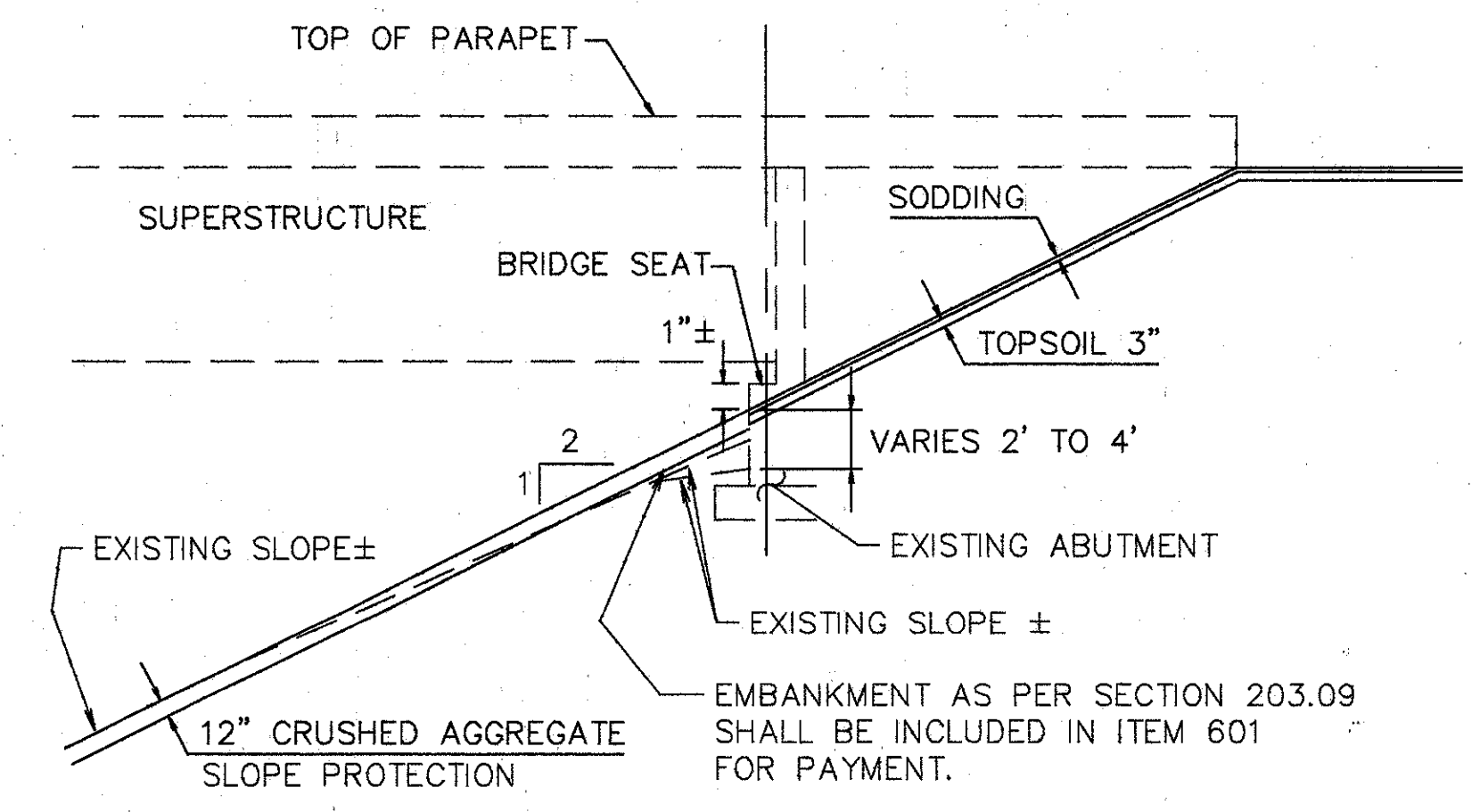
PLAN

| ROCKER OR BOLSTER SIZE | JACK CAPACITY REQ'D. (MIN) |
|------------------------|----------------------------|
| R150                   | 100 TON                    |



TYP. BRIDGE SECTION

XXXX SURFACES TO BE SEALED UNDER ITEM SPECIAL-SEALING OF CONCRETE SURFACES'



VIEW A-A SLOPE PROTECTION REPAIR

N.T.S.

EXISTING STRUCTURE

TYPE: 3 SPAN CONTINUOUS PLATE GIRDER WITH REINFORCED CONCRETE DECK & SUBSTRUCTURE  
 SPANS: 101.25', 105.83', 101.25' C/C BEARING MEASURED ALONG BASE LINE  
 ROADWAY: 36'-0" F/F CURBS  
 SIDEWALK: 6'-0" BOTH SIDES  
 SKEW: NONE  
 LOADING FREQUENCY: C.F.=400 (57)  
 WEARING SURFACE: 1" MONOLITHIC CONCRETE  
 APPROACH SLABS: AS-1-54 (25'-0" LONG)  
 ALIGNMENT: TANGENT  
 SUPERELEVATION: AS SHOWN

**WOOLPERT CONSULTANTS**  
 409 E. MONUMENT AVENUE  
 DAYTON, OHIO 45402-1226  
 (513) 461-5660

GENERAL PLAN

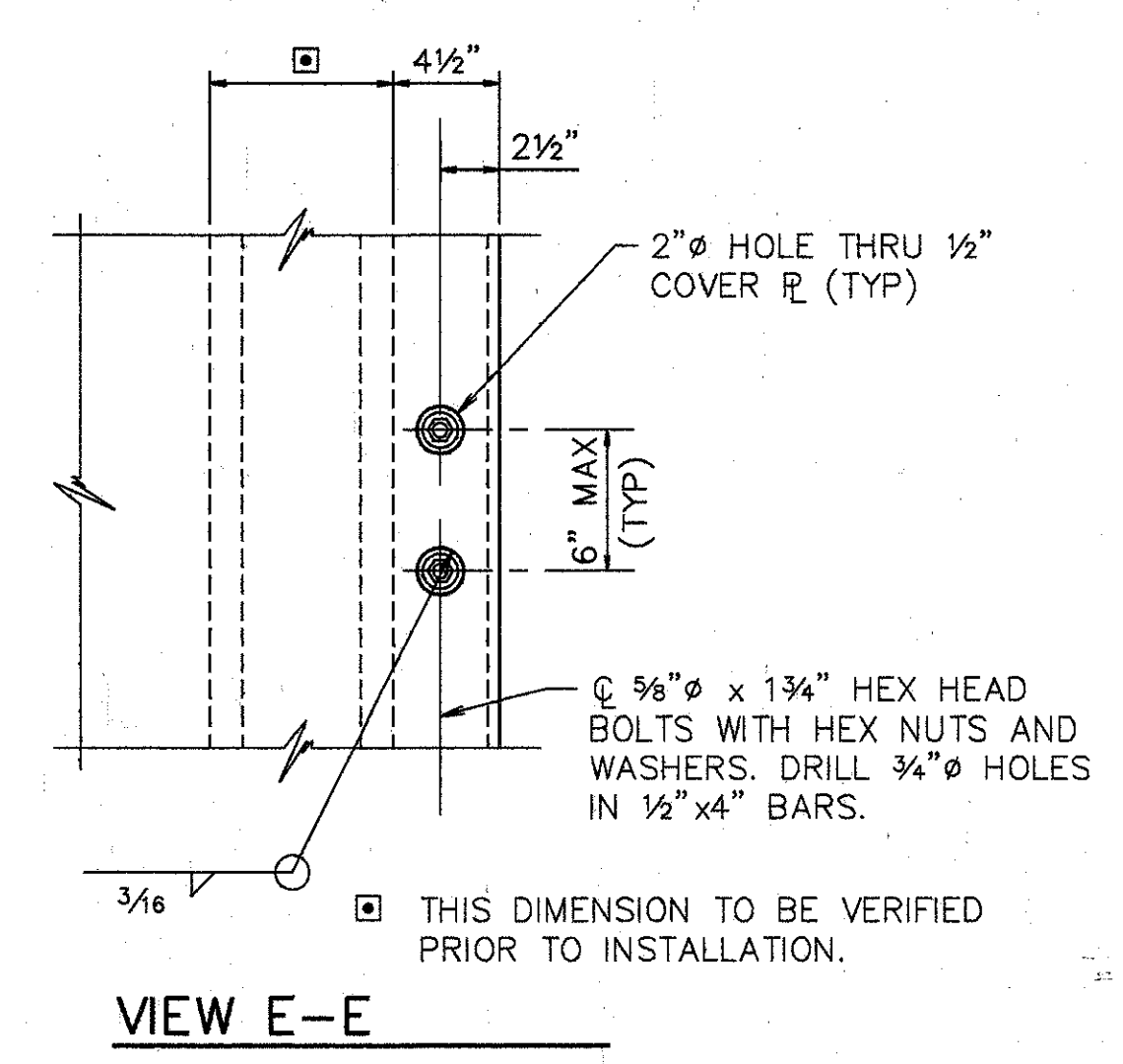
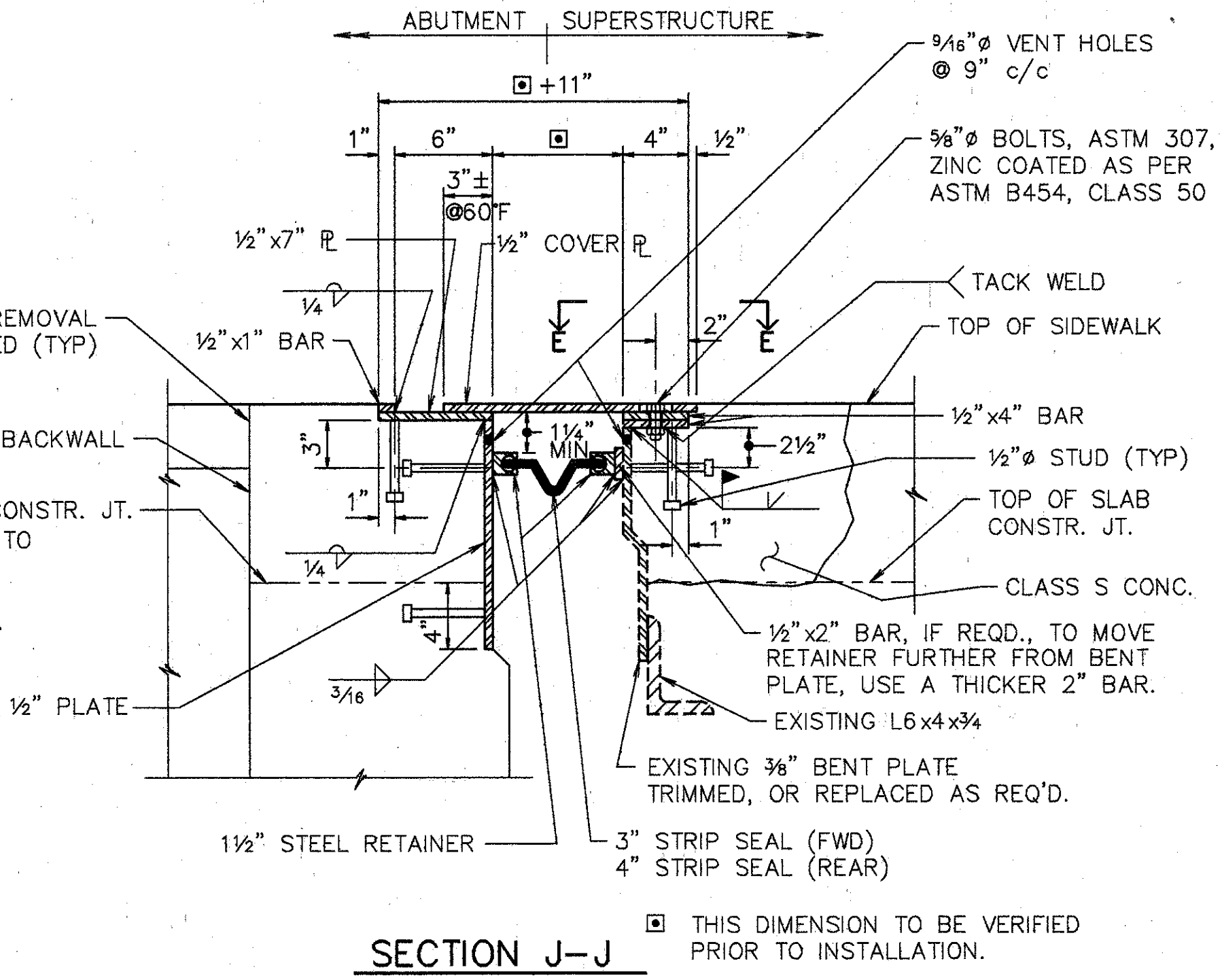
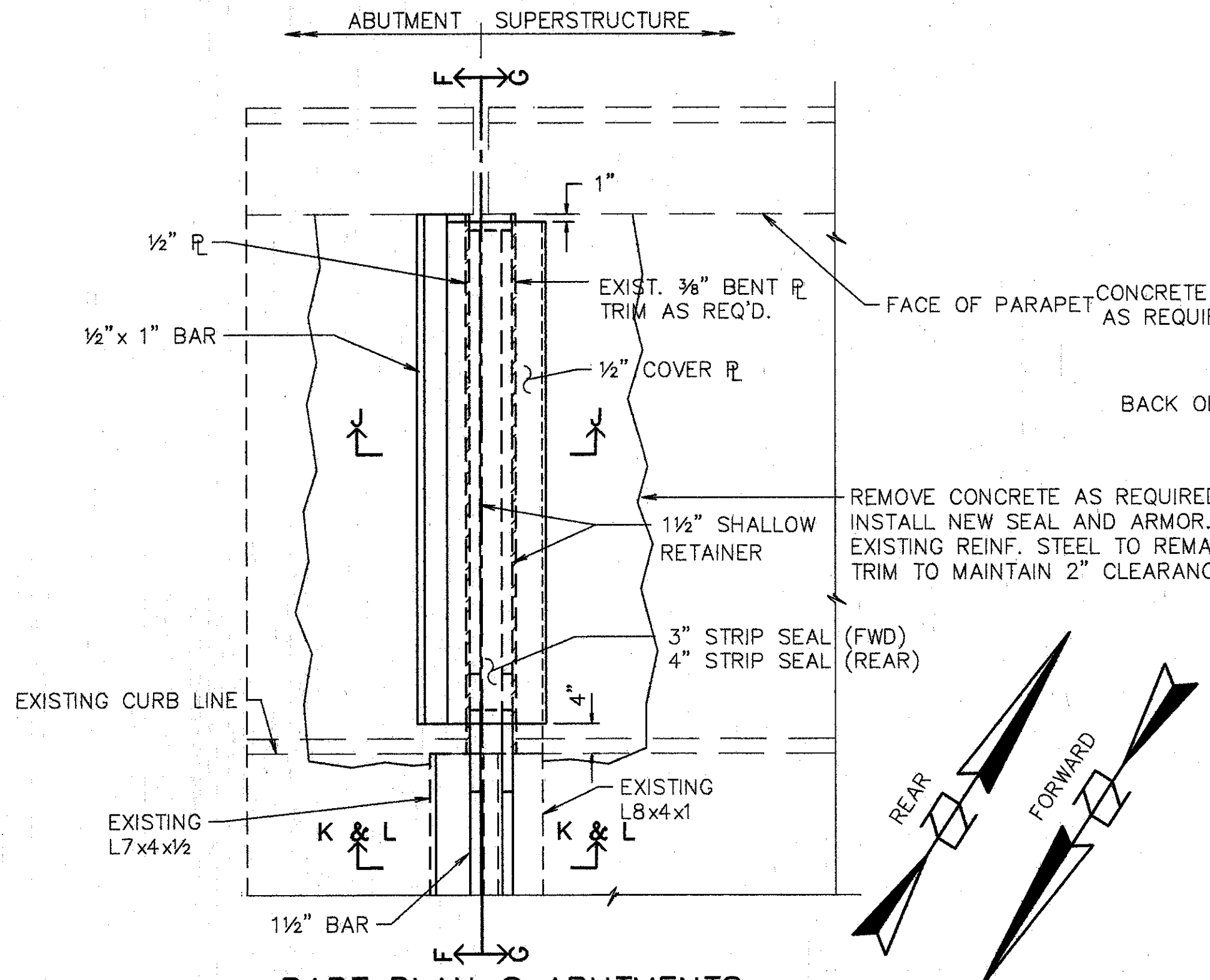
BRIDGE NO. HAM-71-0289  
 OVER INTERSTATE ROUTE 71

HAMILTON COUNTY

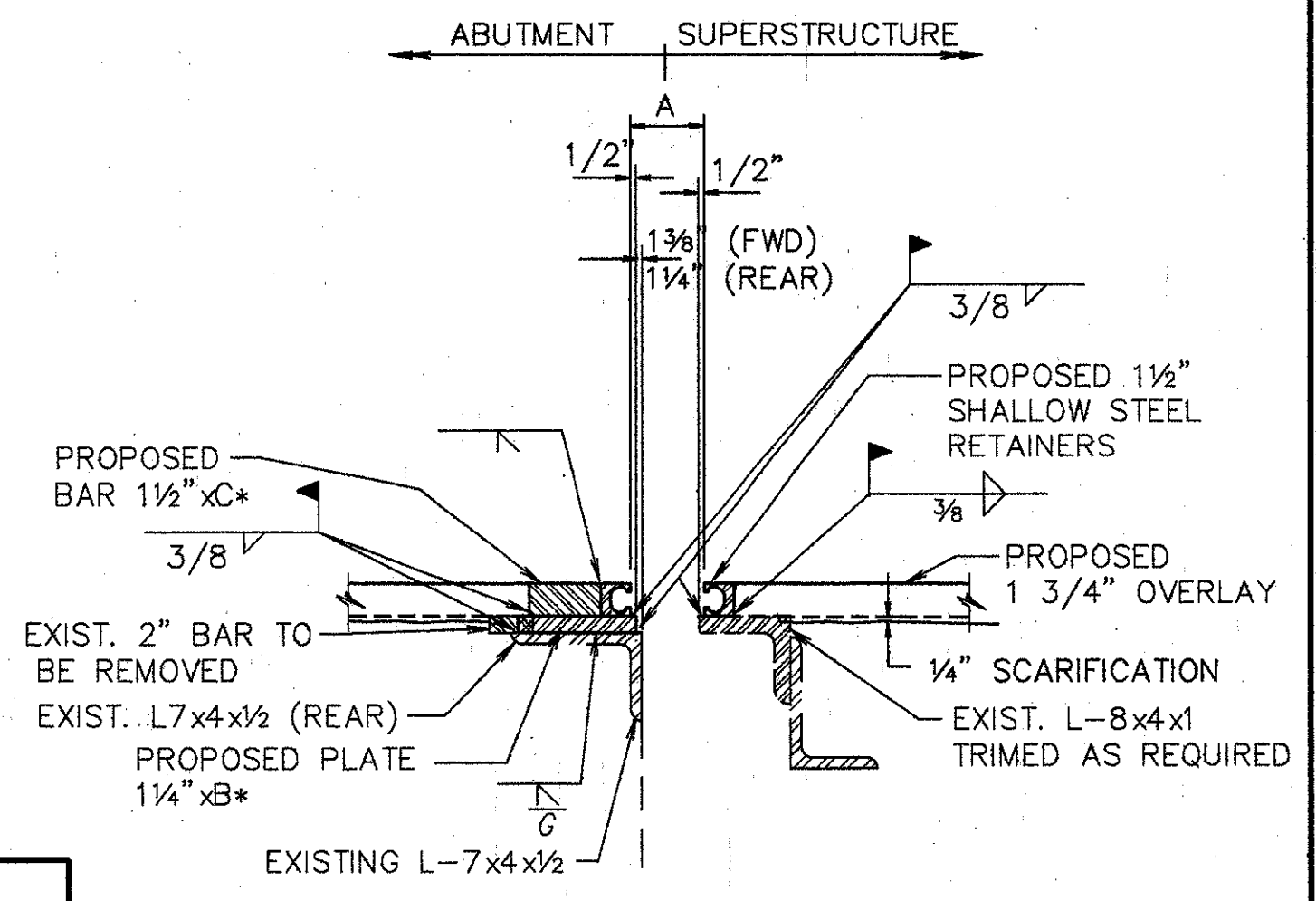
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|----------|--------|--------|---------|---------------|------|---------|
| DESIGNED | DRAWN  | TRACED | CHECKED | REVIEWED      | DATE | REVISED |
| L.A.T.M. | D.E.E. |        | M.A.A.  | D.E.M11/11/94 |      |         |

Lot Plot MAY 15, 1991 @ 2:13 PM  
 © STR/16594-03/71-0289 Lot. Revision By: RACH MAY 17, 1994 @ 2:40 PM

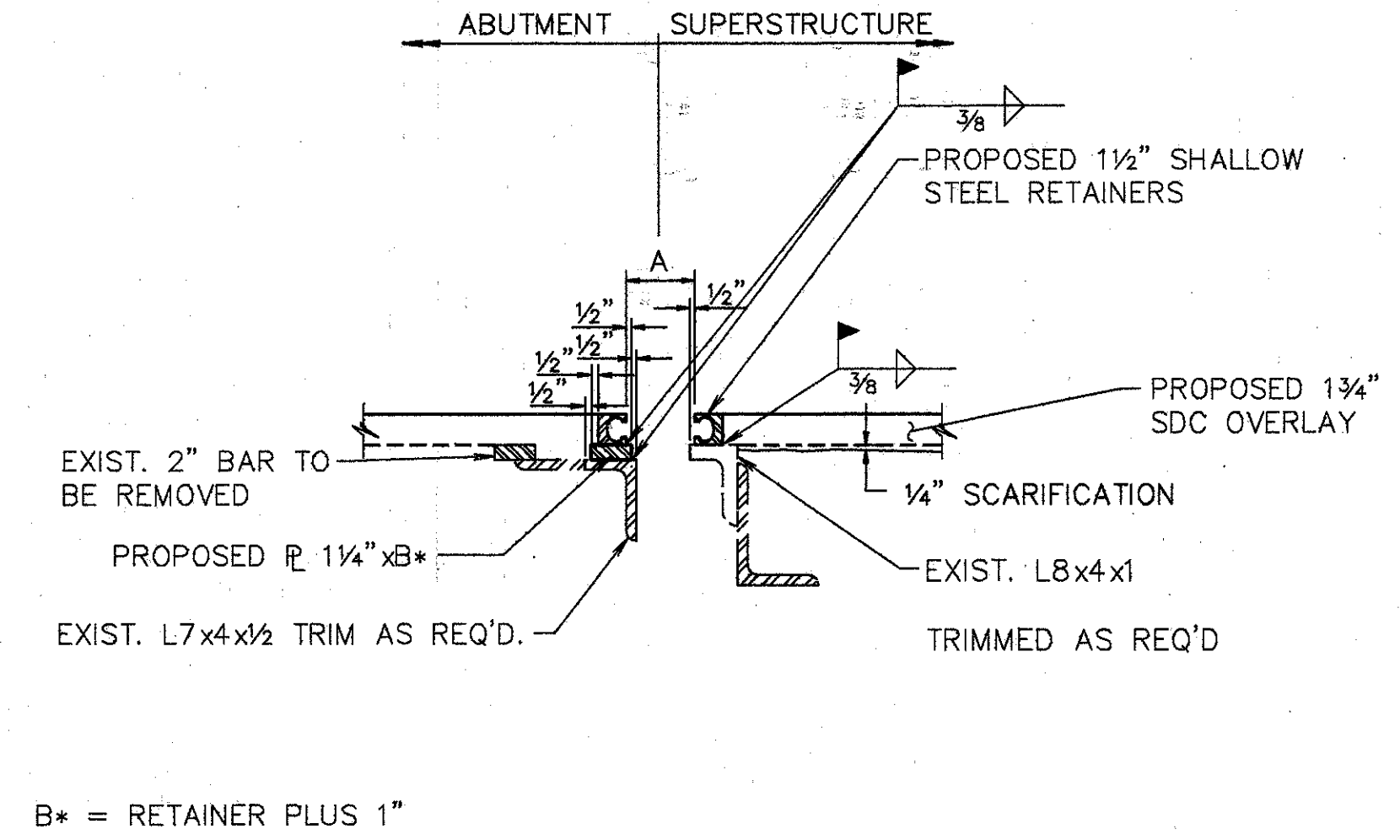
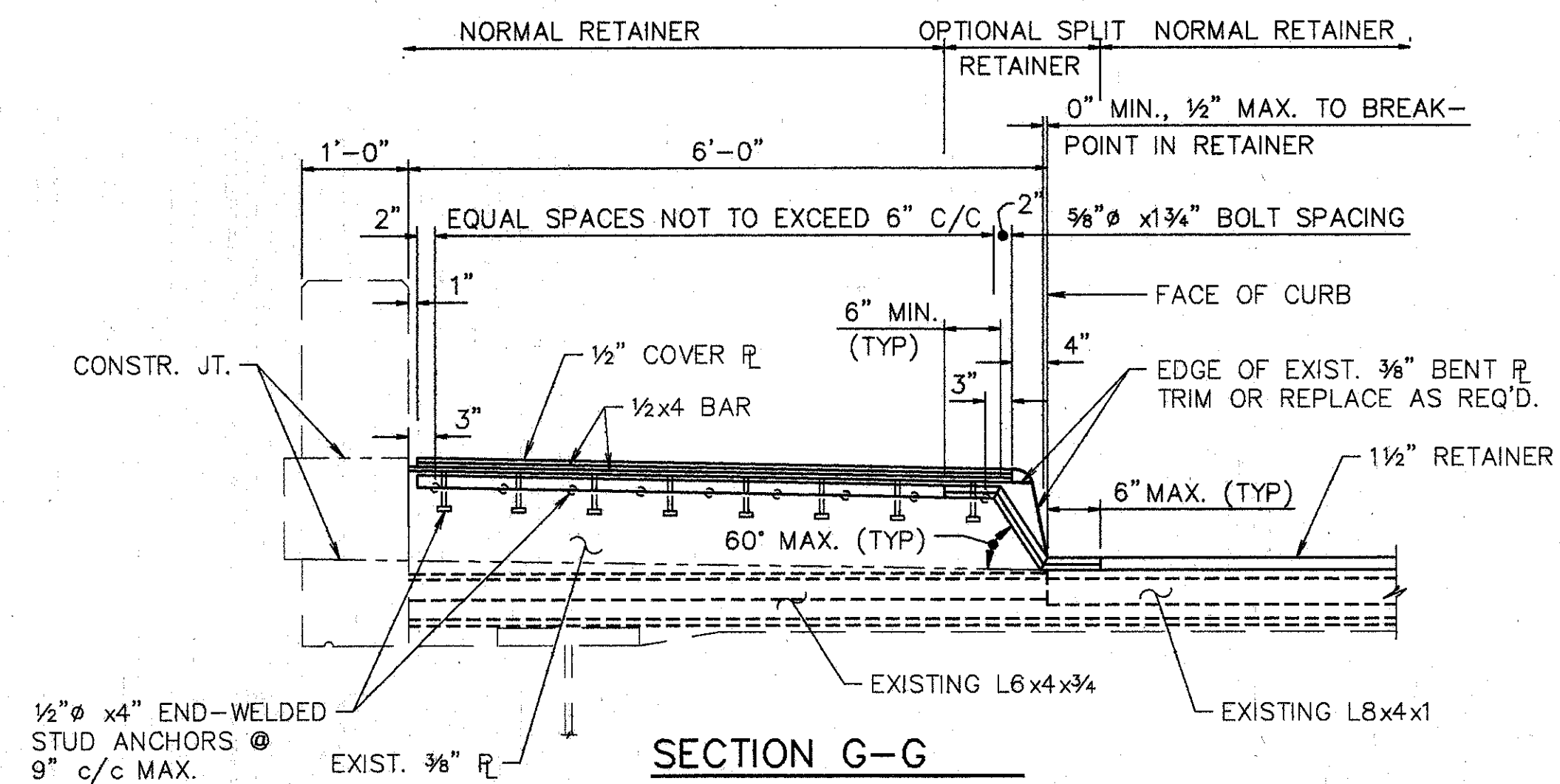




| TEMPERATURE | DIM. 'A' |        |
|-------------|----------|--------|
|             | FORWARD  | REAR   |
| 40° F       | 2 5/8"   | 3 3/8" |
| 50° F       | 2 5/8"   | 3 1/4" |
| 60° F       | 2 1/2"   | 3"     |
| 70° F       | 2 3/8"   | 2 7/8" |
| 80° F       | 2 3/8"   | 2 3/4" |
| 90° F       | 2 1/4"   | 2 1/2" |

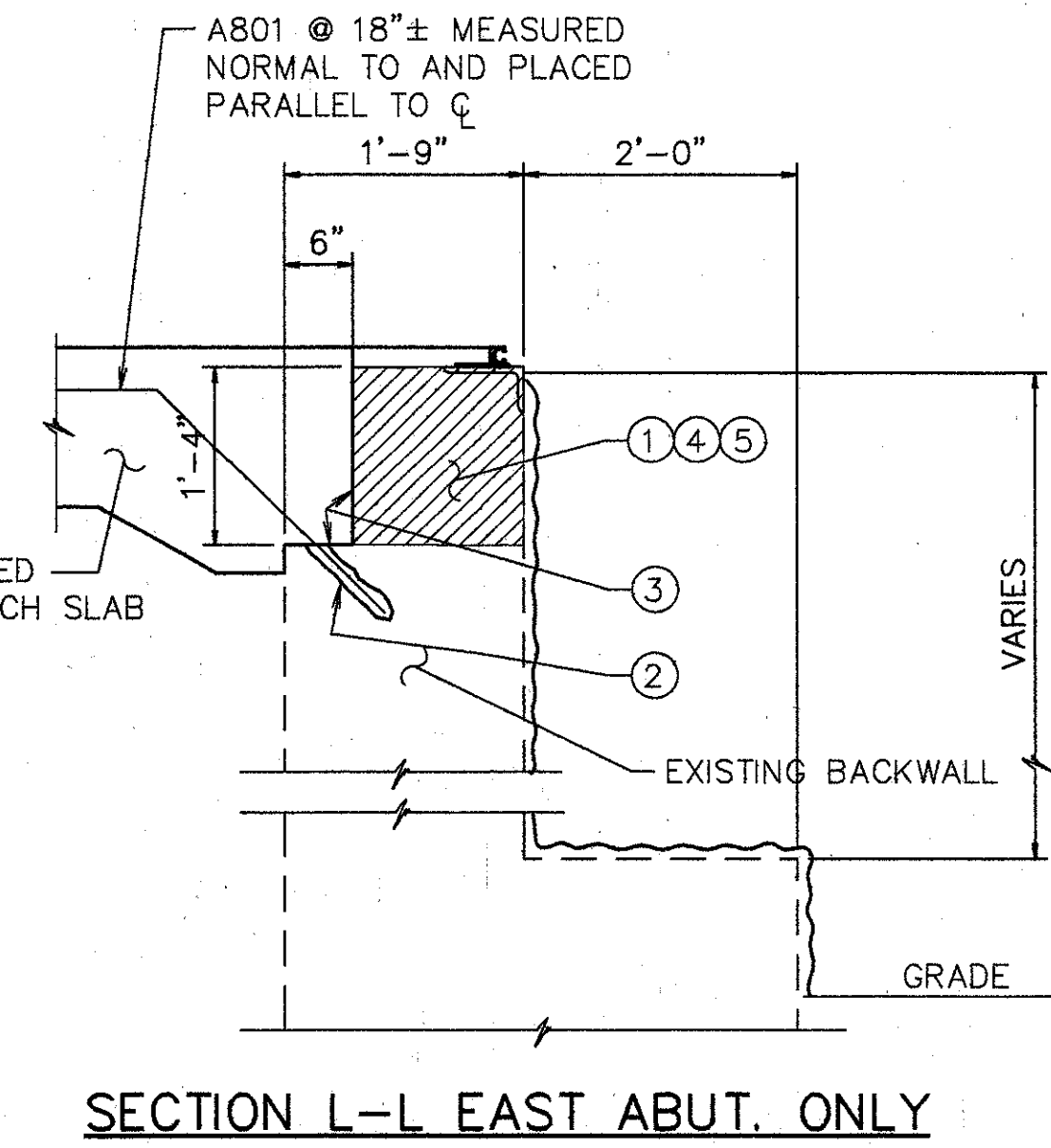
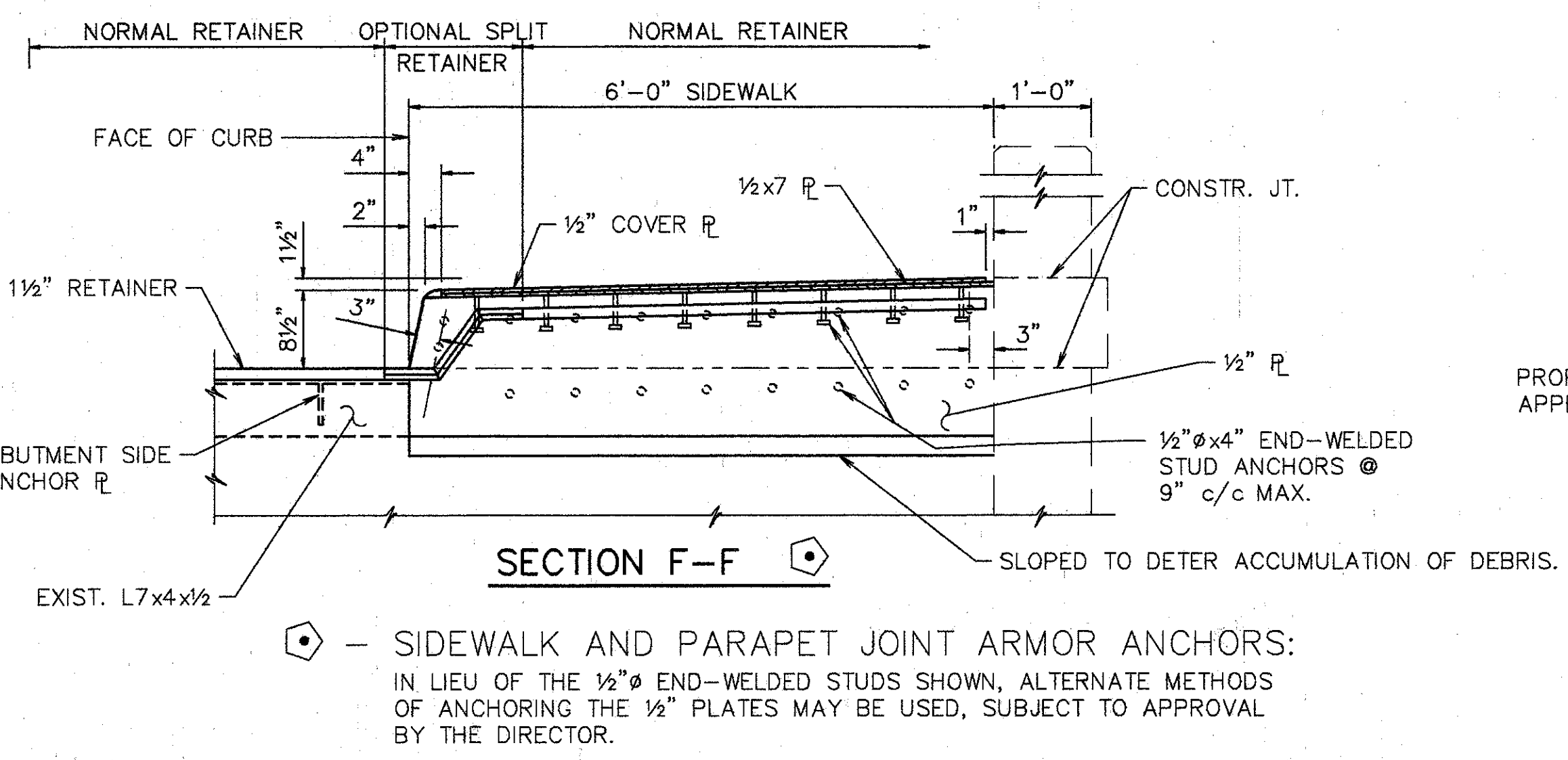
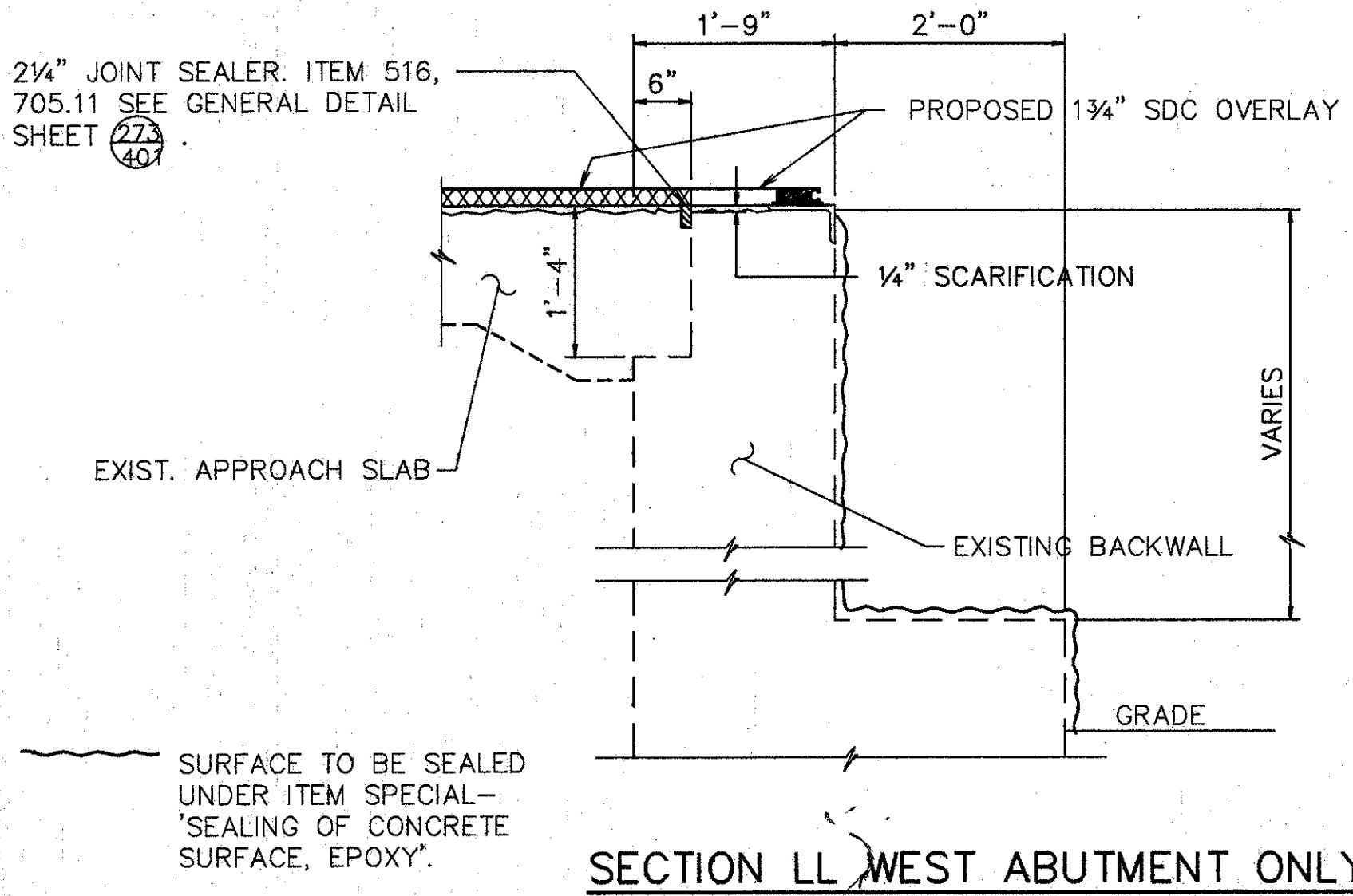


- NOTES:**
- CONTRACTOR TO VERIFY ALL DIMENSIONS PRIOR TO MODIFYING THE EXPANSION JOINT.
  - THE PRICE BID FOR ITEM 516-'STRUCTURAL EXPANSION JOINTS, INCLUDING ELASTOMERIC STRIP SEALS', SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, AND ANY OTHER INCIDENTAL ITEMS, AS DETAILED. REMOVAL OF CURB OR PARAPET AS SHOWN SHALL BE INCLUDED UNDER ITEM 202-'PORTIONS OF STRUCTURE REMOVED'.
  - FOR DETAILS NOT SHOWN REFER TO DRAWING EXJ-4-87 SHEETS 3 AND 4.
  - STRIP SEAL TO BE INSTALLED IN ONE CONTINUOUS PIECE (NO OPEN JOINTS).
  - PROVIDE TEMPORARY SUPPORT FOR ABUTMENT END DAM DURING CONSTRUCTION. REMOVE TEMPORARY SUPPORT AS SOON AS CONCRETE HAS SET, PREFERABLY WITHIN TWO HOURS AFTER PLACING TO AVOID DAMAGE DUE TO EXPANSION AND CONTRACTION OF SUPERSTRUCTURE.



**NOTES FOR SECTION L-L**

- EXISTING REINFORCING STEEL TO REMAIN ~ REINFORCING STEEL DAMAGED TO BE REPLACED AT CONTRACTORS EXPENSE.
  - 1' MIN. EMBEDMENT (SEE DOWEL HOLE GENERAL NOTE) ITEM 510.
  - TYPE 'A' WATERPROOFING (PAYMENT INCLUDED IN THE PRICE BID FOR APPROACH SLAB).
  - CLASS 'C' CONCRETE, ABUTMENT RECONSTRUCTION.
  - PROVIDE CONTRACTION AND EXPANSION JOINTS TO MATCH THOSE IN EXISTING BACKWALL AND PROVIDE CONSTRUCTION JOINTS AS REQUIRED TO MAINTAIN TRAFFIC. PAYMENT TO BE INCLUDED IN PRICE BID FOR ITEM 511 CLASS C CONCRETE RECONSTRUCTION.
- EXISTING CONCRETE TO BE REMOVED INCLUDE IN ITEM 202 FOR PAYMENT.  
 SURFACE TO BE SEALED UNDER ITEM SPECIAL- 'SEALING OF CONCRETE SURFACE, EPOXY'.



**WOOLPERT CONSULTANTS**  
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 DAYTON, OHIO 45402-1226  
 (513) 461-5660

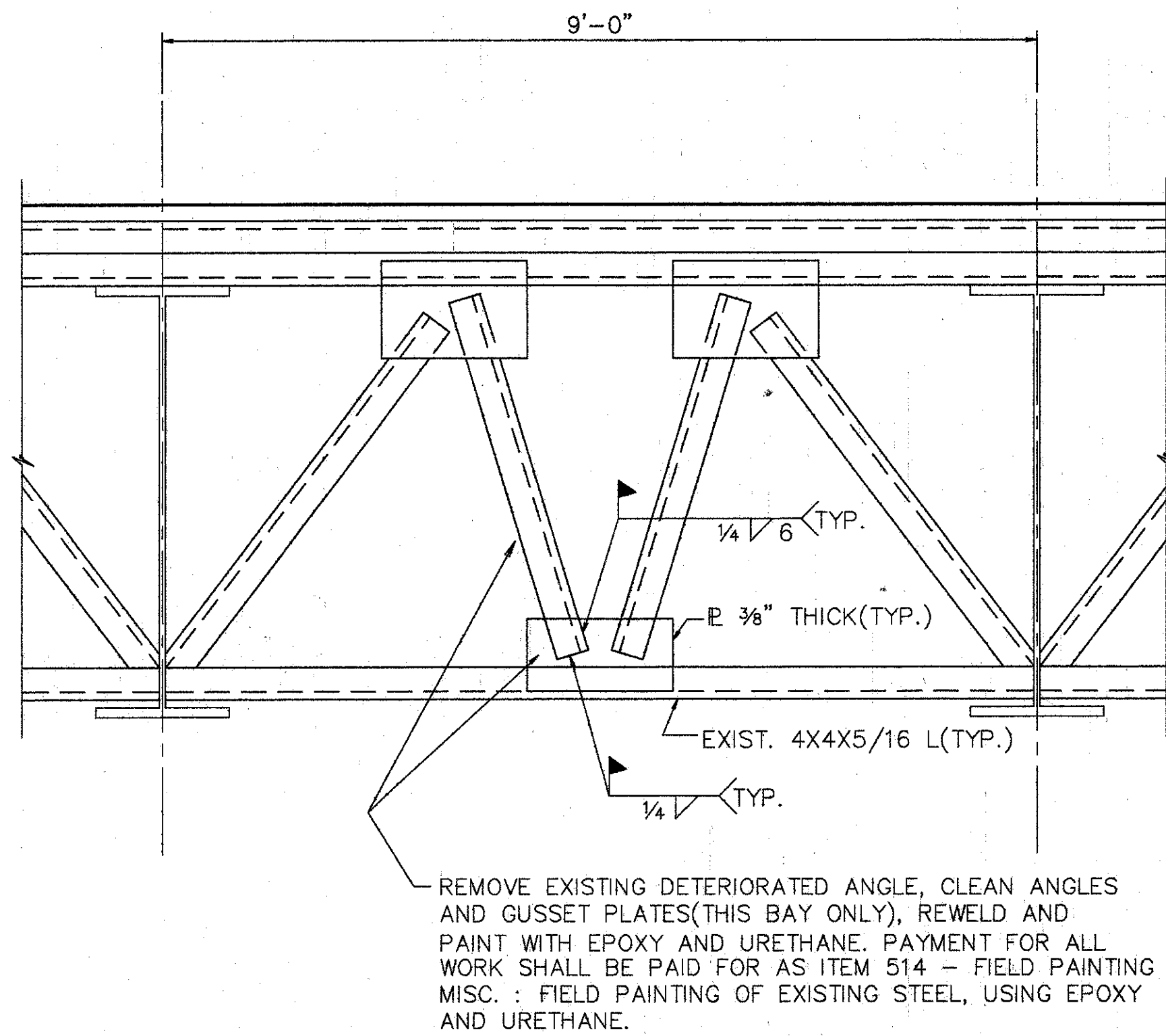
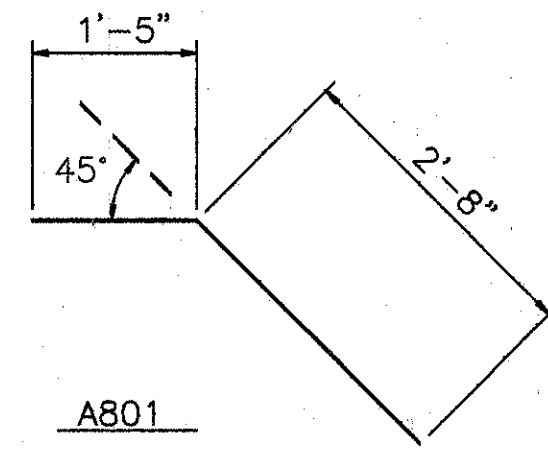
**MISCELLANEOUS DETAILS**

BRIDGE NO. HAM-71-0289  
 OVER I-71  
 HAMILTON COUNTY

|          |        |        |         |          |       |         |
|----------|--------|--------|---------|----------|-------|---------|
| DESIGNED | DRAWN  | TRACED | CHECKED | REVIEWED | DATE  | REVISED |
| L.A.T.   | L.A.P. |        | M.A.A.  | D.E.M.   | 11/94 |         |

Laid Out: MAY 21, 1991 @ 10:33 AM  
 C:\STN\10596-CV\0289S12.Lot Revision By: D.E.E. APR. 8, 1994 @ 2:05 PM

| REINFORCING STEEL LIST |       |        |        |        |
|------------------------|-------|--------|--------|--------|
| MARK                   | SHAPE | NUMBER | LENGTH | WEIGHT |
| A801                   | BNT.  | 114    | 4'-0"  | 267    |
| REPLACEMENT STEEL      |       |        |        | 400    |
| TOTAL                  |       |        |        | 667    |



REMOVE EXISTING DETERIORATED ANGLE, CLEAN ANGLES AND GUSSET PLATES (THIS BAY ONLY), REWELD AND PAINT WITH EPOXY AND URETHANE. PAYMENT FOR ALL WORK SHALL BE PAID FOR AS ITEM 514 - FIELD PAINTING MISC.: FIELD PAINTING OF EXISTING STEEL, USING EPOXY AND URETHANE.

**REPAIR AND PAINT EXIST. END CROSSFRAME**

SCALE: 3/4"=1'-0"

| ITEM    | ITEM EXT. | TOTAL    | UNITS | DESCRIPTION                                                    |
|---------|-----------|----------|-------|----------------------------------------------------------------|
| 201     | 11000     | LUMP SUM | L.S.  | CLEARING AND GRUBING                                           |
| 202     | 11200     | LUMP SUM | L.S.  | PORTIONS OF STRUCTURE REMOVED                                  |
| 509     | 15820     | 667      | LBS.  | EPOXY COATED REINFORCING STEEL, GRADE 60                       |
| 510     | 12201     | 25       | L.F.  | DOWEL HOLES AS PER PLAN                                        |
| 511     | 45700     | 3        | C.Y.  | CLASS C CONCRETE, ABUTMENT, RECONSTRUCTION                     |
| SPECIAL | 51267500  | 1337     | S.Y.  | SEALING OF CONCRETE SURFACE *                                  |
| SPECIAL | 51267502  | 140      | S.Y.  | SEALING OF CONCRETE SURFACE (EPOXY) *                          |
| 513     | 21000     | 12       | EACH  | TRIMMING OF BEAM END                                           |
| 514     | 27704     | LUMP SUM | L.S.  | FIELD PAINTING, MISC.: FIELD PAINTING OF EXISTING STEEL, EEU X |
| 516     | 14600     | 50       |       |                                                                |
| 516     | 10000     | 54       | L.F.  | PREFORMED ELASTOMERIC COMPRESSION JOINT SEAL (705.11)          |
| 516     | 11210     | 101      | L.F.  | STRUCTURAL EXP. JT., INCLUDING ELASTOMERIC STRIP SEAL          |
| 516     | 14600     | 50       | L.F.  | SEAL JOINT BETWEEN ABUTMENT AND CONCRETE SLOPE PROTECTION      |
| 516     | 45304     | 12       | EACH  | REFURBISH BEARING DEVICE                                       |
| 518     | 12800     | 3        | EACH  | SCUPPER MODIFICATION                                           |
| SPECIAL | 51912600  | 109      | L.F.  | CONCRETE REPAIR BY EPOXY INJECTION *                           |
| 518     | 63300     | LUMP     | L.S.  | SCUPPER AND DRAINAGE PIPE CLEANOUT                             |
| 845     | 40210     | 1249     | S.Y.  | LATEX MODIFIED CONCRETE OVERLAY (1 3/4" THICK) ON EXIST        |
| 845     | 11000     | 85       | C.Y.  | LATEX MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS)           |
| 845     | 30000     | 1        | C.Y.  | FULL DEPTH REPAIR                                              |
| 601     | 21100     | 2        | S.Y.  | REPAIR CONCRETE SLOPE PROTECTION                               |
| 601     | 20000     | 210      | S.Y.  | CRUSHED AGGREGATE SLOPE PROTECTION                             |
| 653     | 10000     | 12       | C.Y.  | TOPSOIL FURNISHED AND PLACED                                   |
| 660     | 25000     | 140      | S.Y.  | STAKED SODDING                                                 |

\* SEE PROPOSAL NOTE

**PROPOSED WORK**

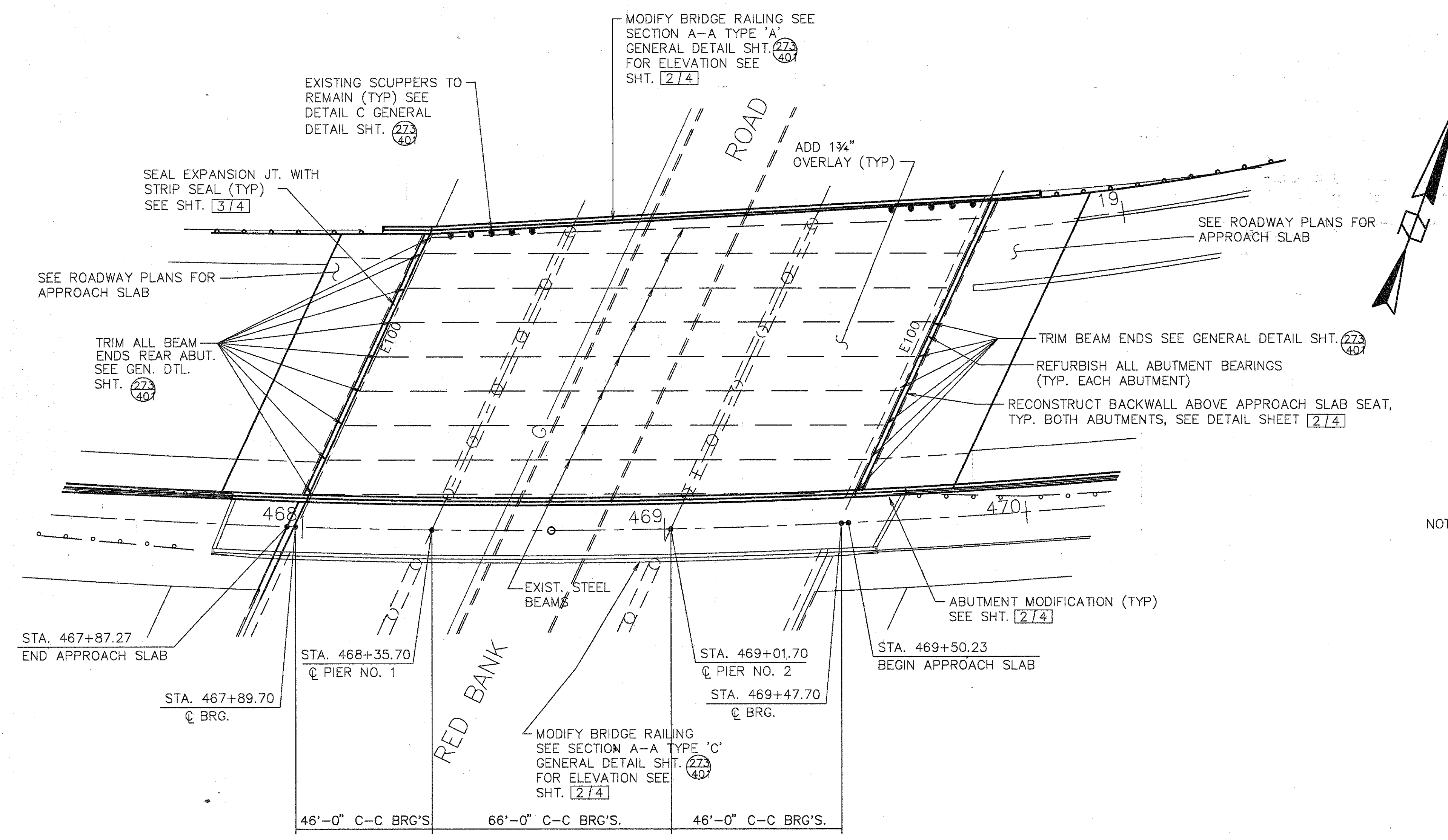
- SCARIFY EXISTING DECK 1/4", AND REMOVE DETERIORATED CONCRETE AS DIRECTED BY THE ENGINEER.
- REFURBISH ALL ABUTMENT BEARINGS.
- PLACE 1 3/4" THICK MODIFIED CONCRETE ON DECK AND APPROACH SLAB.
- SEAL CURBS, PARAPETS, BACKWALL AND PIERS.
- SEAL JOINTS, AS NOTED.
- SEAL EXPANSION JOINT WITH STRIP SEAL.
- TRIM BEAM ENDS.
- AT LEAST ONE LANE OF TRAFFIC SHALL BE MAINTAINED IN EACH DIRECTION AND ON THE BRIDGE AT ALL TIMES. FOR NOTES SEE MAINTENANCE OF TRAFFIC PLANS. MAINTENANCE OF TRAFFIC PLAN REQUIRES CONSTRUCTION PHASING LIMITS AT LANE CENTERLINES. DUE TO THESE LIMITS, OVERLAY MAY REQUIRE SPECIAL ATTENTION.
- FILL CRACKS IN BACK WALL WITH EPOXY.
- RECONSTRUCT EAST ABUTMENT BACKWALL ABOVE APPROACH SLAB SEAT.
- REPAIR SLOPE PROTECTION EAST ABUTMENT.
- OTHER WORK AS DESCRIBED IN THESE PLANS.

|                                                                       |                  |                           |            |
|-----------------------------------------------------------------------|------------------|---------------------------|------------|
| CALC. BY: L.A.T.M.<br>DATE: 05-94<br>CHK'D. BY: D.E.M.<br>DATE: 04-94 | HAM-71-1.30/9.00 | OHIO<br>F.H.W.A. REGION 5 | 376<br>401 |
|-----------------------------------------------------------------------|------------------|---------------------------|------------|

|                                     |        |                                                                                                    |         |          |       |         |
|-------------------------------------|--------|----------------------------------------------------------------------------------------------------|---------|----------|-------|---------|
|                                     |        | <b>WOOLPERT CONSULTANTS</b><br>409 E. MONUMENT AVENUE<br>DAYTON, OHIO 45402-1226<br>(513) 461-5660 |         | 3 / 3    |       |         |
| <b>QUANTITIES AND GENERAL NOTES</b> |        |                                                                                                    |         |          |       |         |
| BRIDGE NO. HAM-71-0289<br>OVER I-71 |        |                                                                                                    |         |          |       |         |
| HAMILTON COUNTY                     |        |                                                                                                    |         |          |       |         |
| DESIGNED                            | DRAWN  | TRACED                                                                                             | CHECKED | REVIEWED | DATE  | REVISED |
| L.A.T.M.                            | D.E.E. |                                                                                                    | M.A.A.  | D.E.M.   | 11/94 |         |

L.A.T.M. MAY 21, 1994 @ 10:33 AM  
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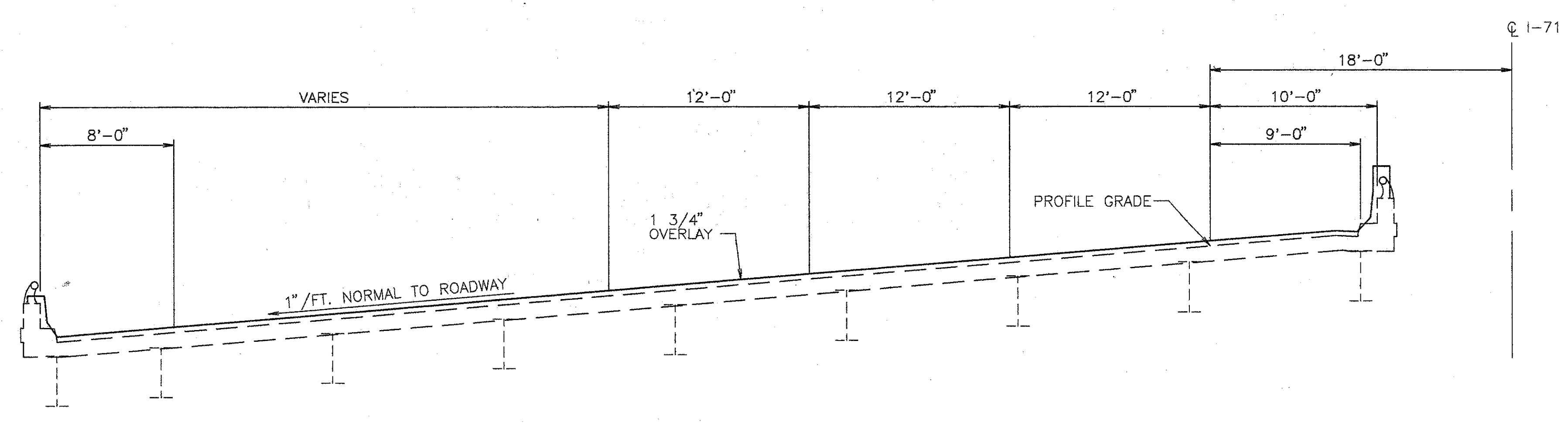




PLAN

- NOTES:
1. EXTEND ALL SCUPPERS— FOR DETAIL SEE GENERAL DETAIL SHEET [273]
  2. SEAL PARAPETS, BACKWALLS AND PIERS. SEAL ALL OF PIERS EXCEPT TOP OF PIER CAP.
  3. SEE JUNCTION BOX EXTENSION DETAIL GENERAL DETAIL SHT. FOR BARRIER RETROFIT AT JUNCTION BOXES. FOR TYPE AND LOCATION REFER TO LIGHTING DETAILS.


|                          |                            |
|--------------------------|----------------------------|
| SLIDING OR FIXED R. SIZE | JACK CAPACITY REQ'D. (MIN) |
| E100                     | 75 TON                     |



TYP. BRIDGE SECTION

EXISTING STRUCTURE

TYPE: CONTINUOUS STEEL BEAM WITH REINFORCED CONCRETE DECK & SUBSTRUCTURE  
 SPANS: 46'-0", 66'-0", 46'-0"  
 ROADWAY: VARIES  
 SKEW: 24°54'00" LT. FORWARD  
 LOADING FREQUENCY: C.F.=2000 (57) ADEQUATE FOR AASHO ALTERNATE LOADING  
 WEARING SURFACE: 1" MONOLITHIC CONCRETE  
 APPROACH SLABS: AS-1-54 (25'-0" LONG)  
 ALIGNMENT: 3'-00' CURVE TO THE LEFT  
 SUPERELEVATION: 1"/FT.


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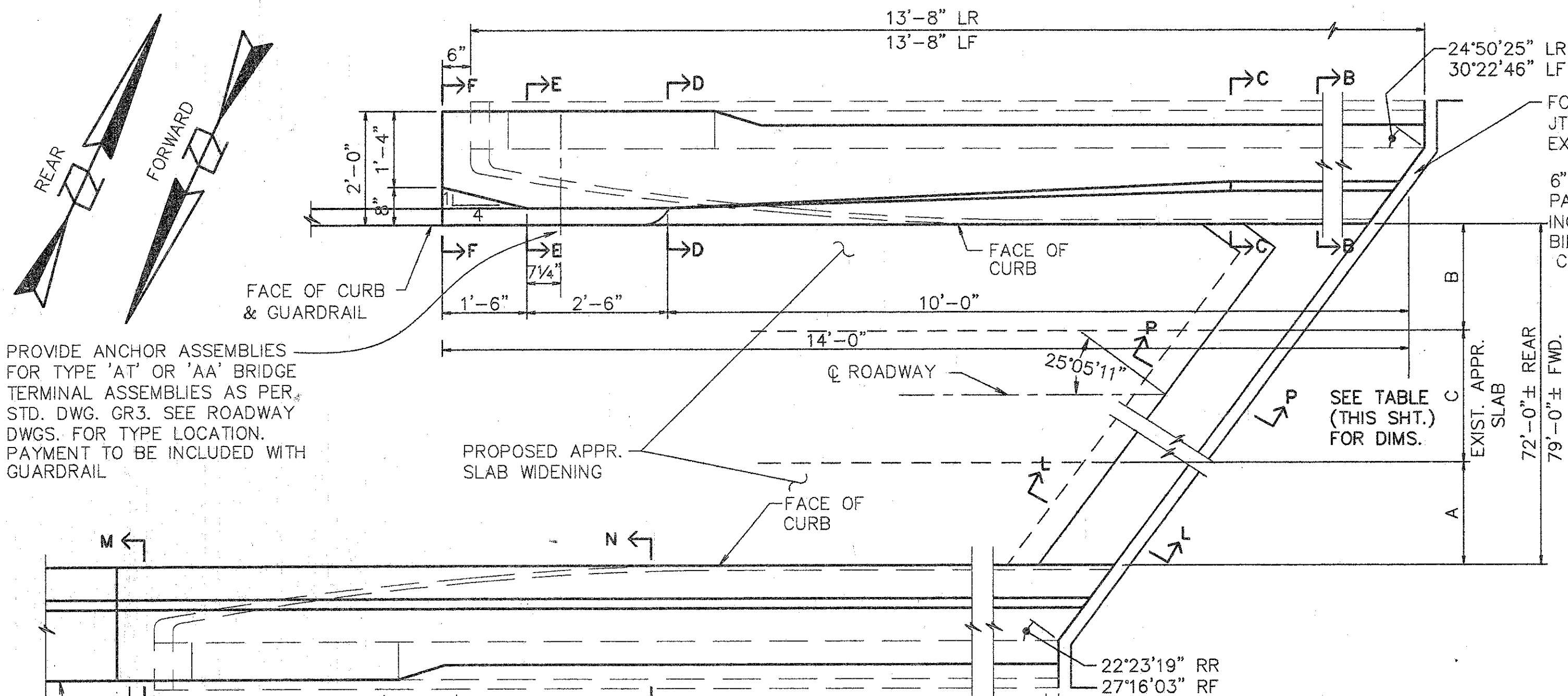
GENERAL PLAN

BRIDGE NO. HAM-71-0965 L  
 OVER RED BANK ROAD

HAMILTON COUNTY

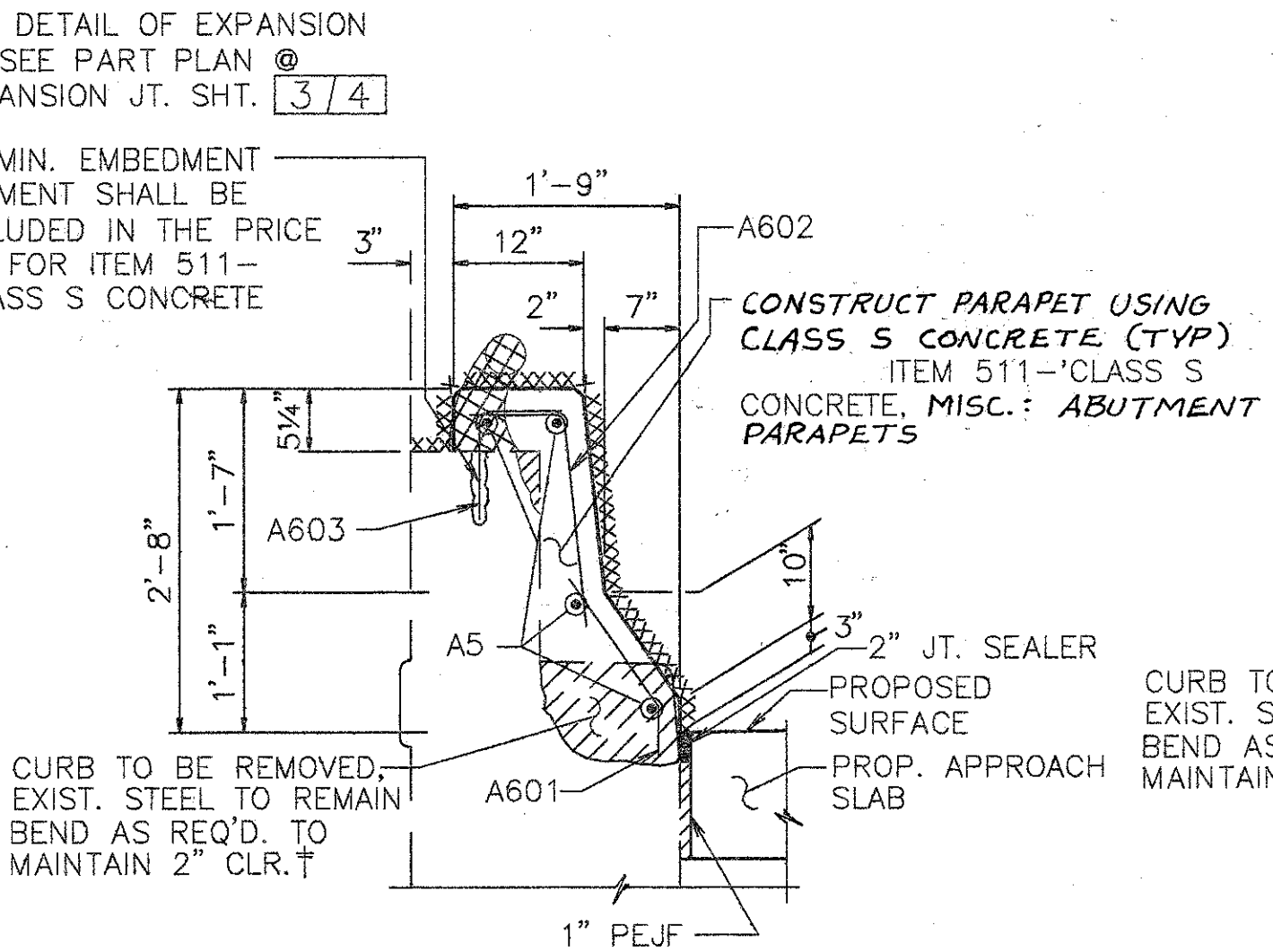
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|----------|--------|--------|---------|----------|----------|---------|
| DESIGNED | DRAWN  | TRACED | CHECKED | REVIEWED | DATE     | REVISED |
| L.A.T.M. | D.E.E. |        | M.A.A.  | D.E.M.   | 11/11/94 |         |

LAM-71-1.30-9.00-0965 L  
 11/11/94 4:31 PM  
 LAM-71-1.30-9.00-0965 L  
 11/11/94 4:31 PM

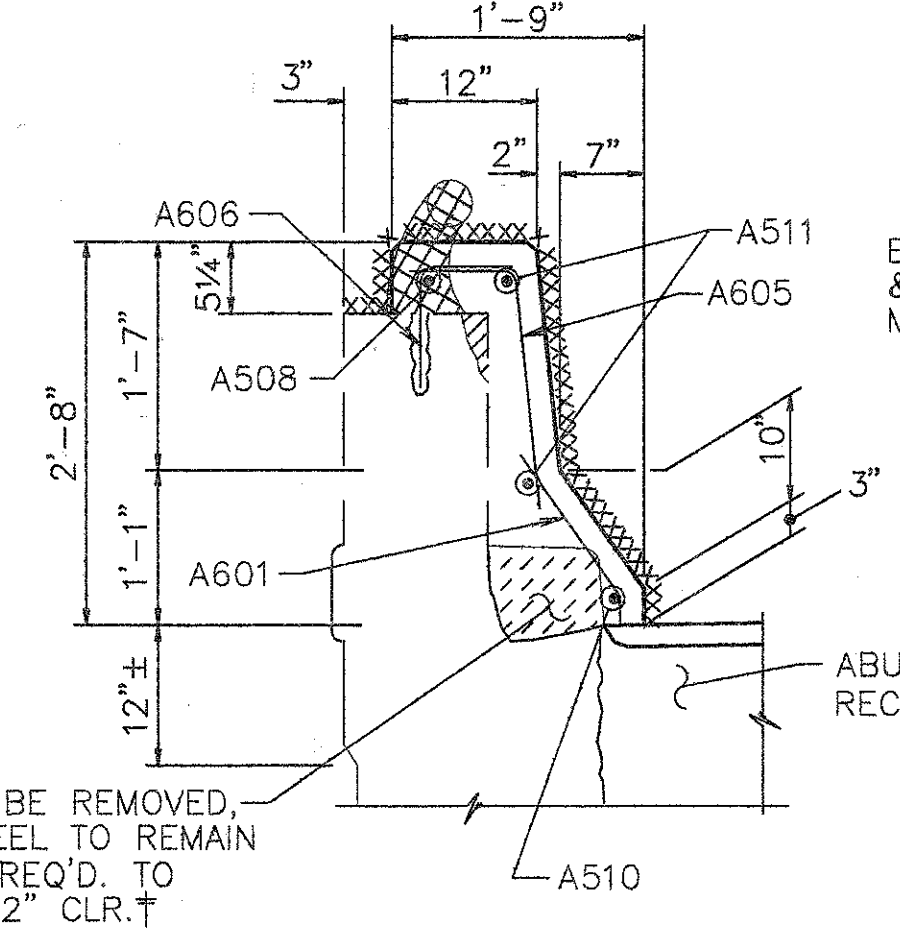


| LOCATION | DIMENSIONS |        |        |
|----------|------------|--------|--------|
|          | A          | B      | C      |
| FORWARD  | 6'-9"±     | 9'-9"± | 62'-6" |
| REAR     | 8'-6"±     | 7'-6"± | 56'-0" |

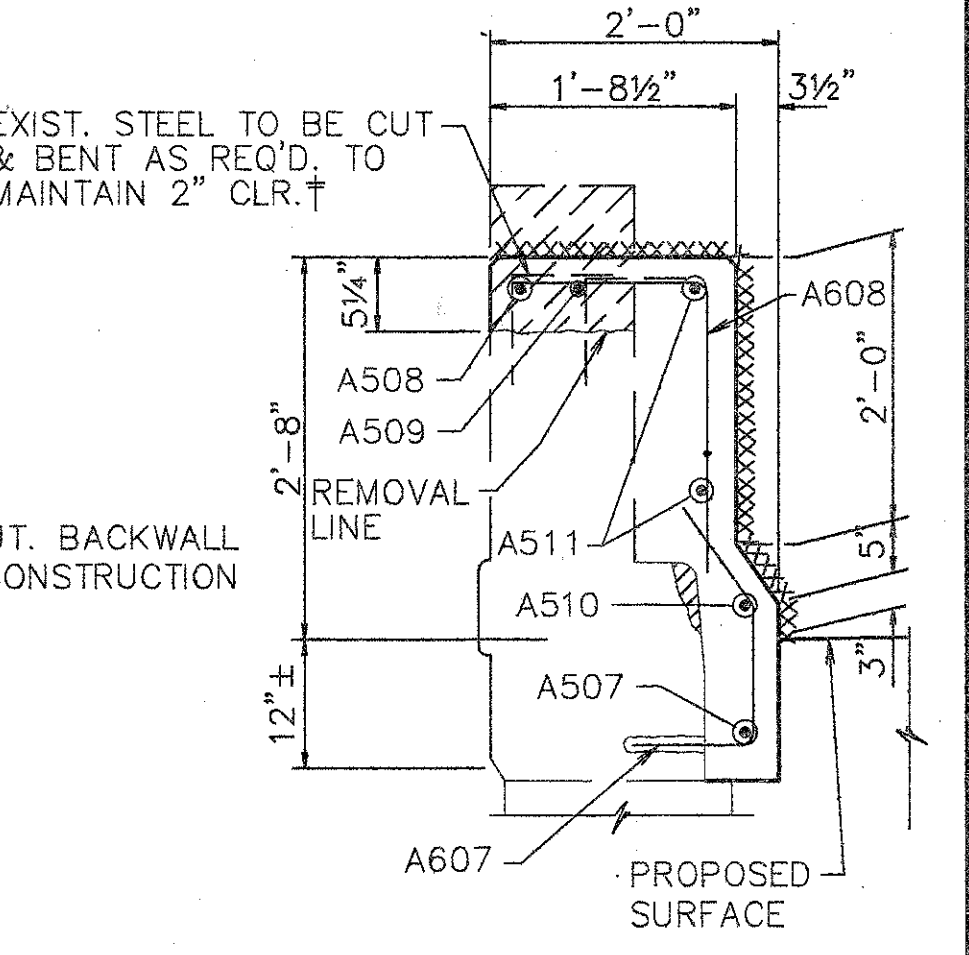
**PLAN - ABUTMENT MODIFICATION**  
 (REAR SHOWN, FWD. OPPOSITE HAND)



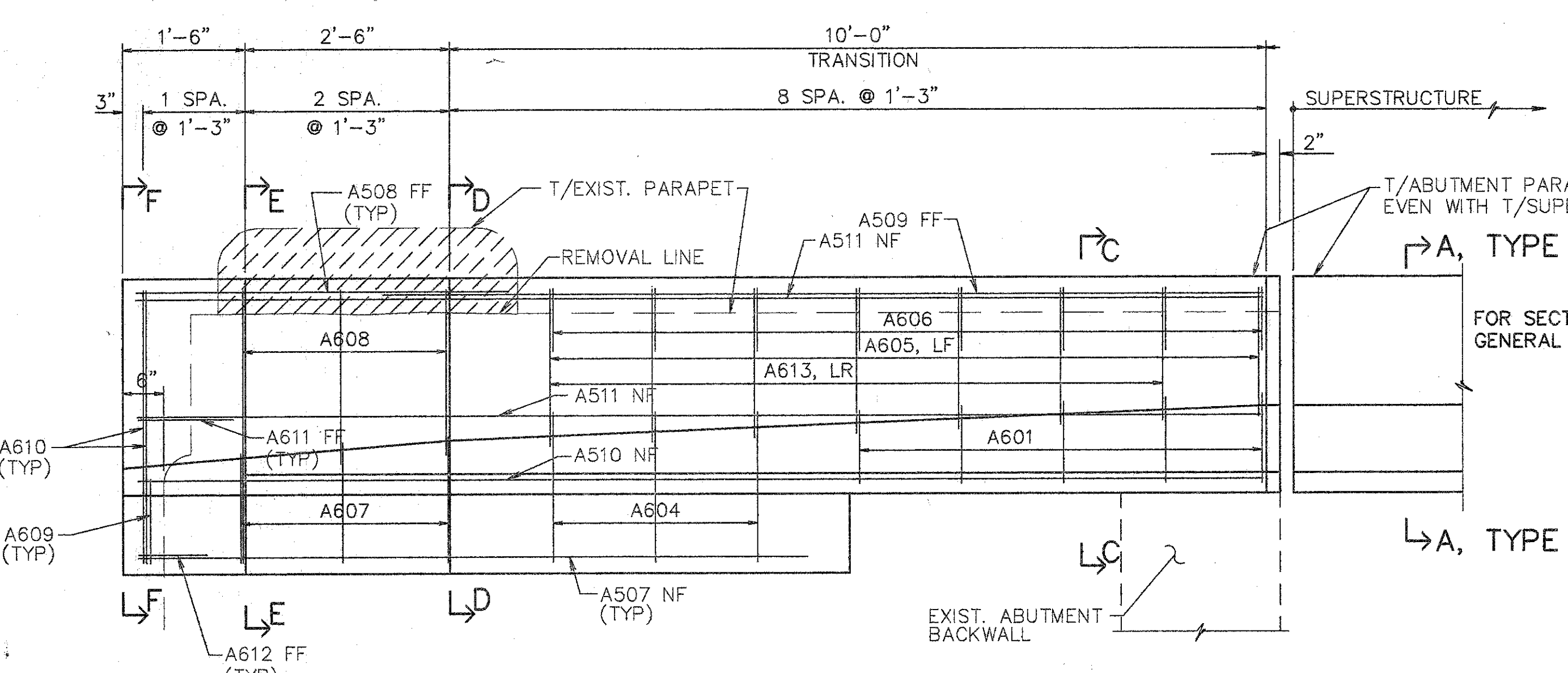
**SECTION C-C**



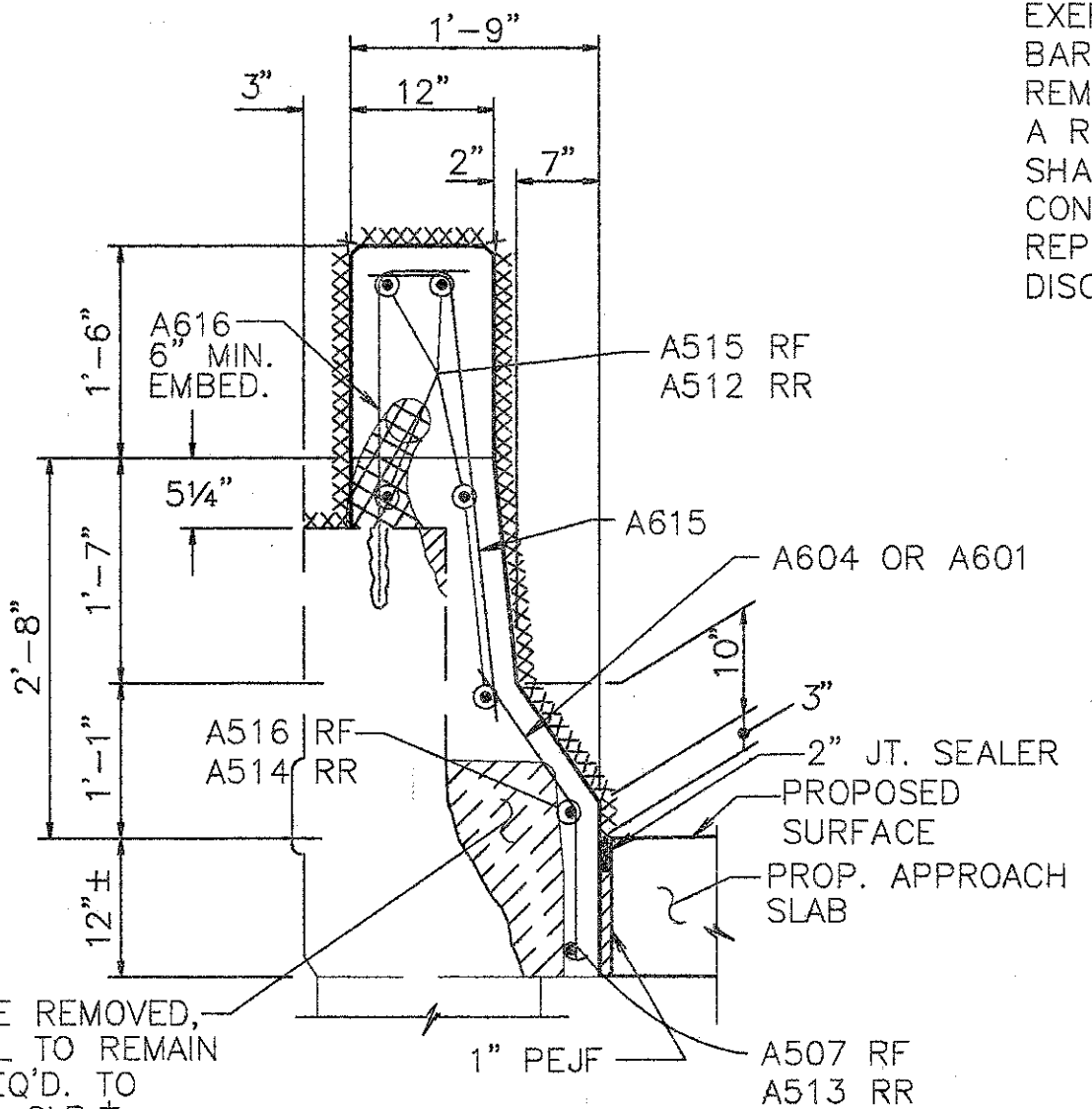
**SECTION B-B**



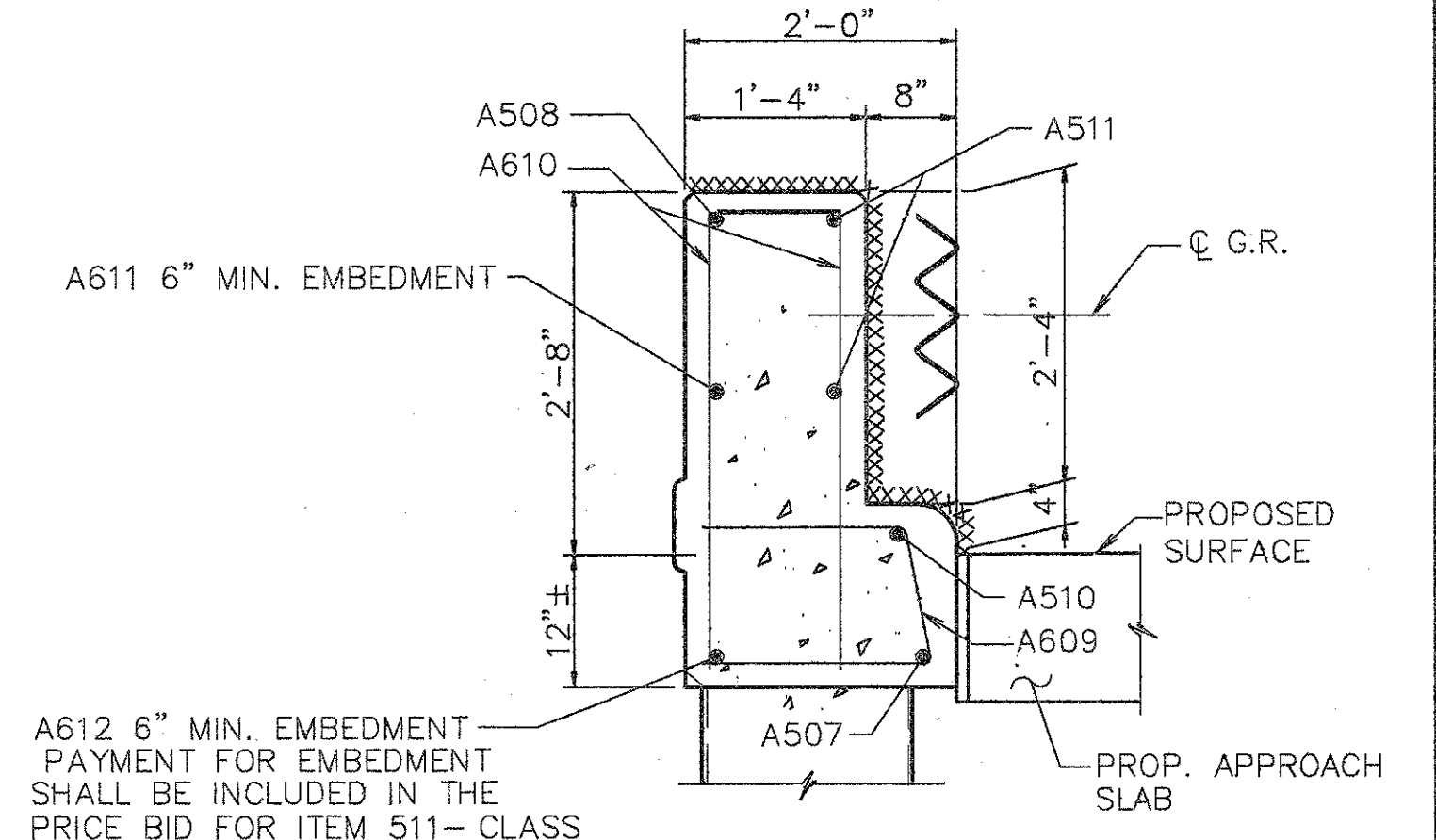
**SECTION D-D**



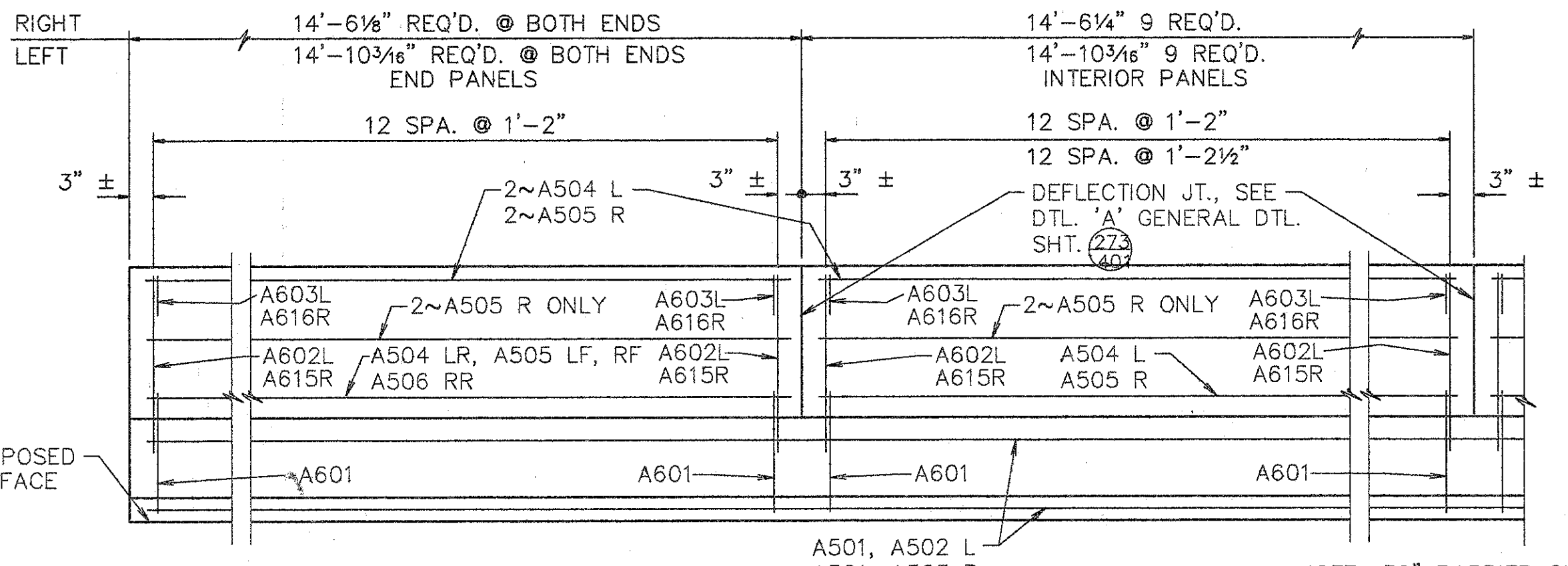
**ELEVATION - LEFT WALL**



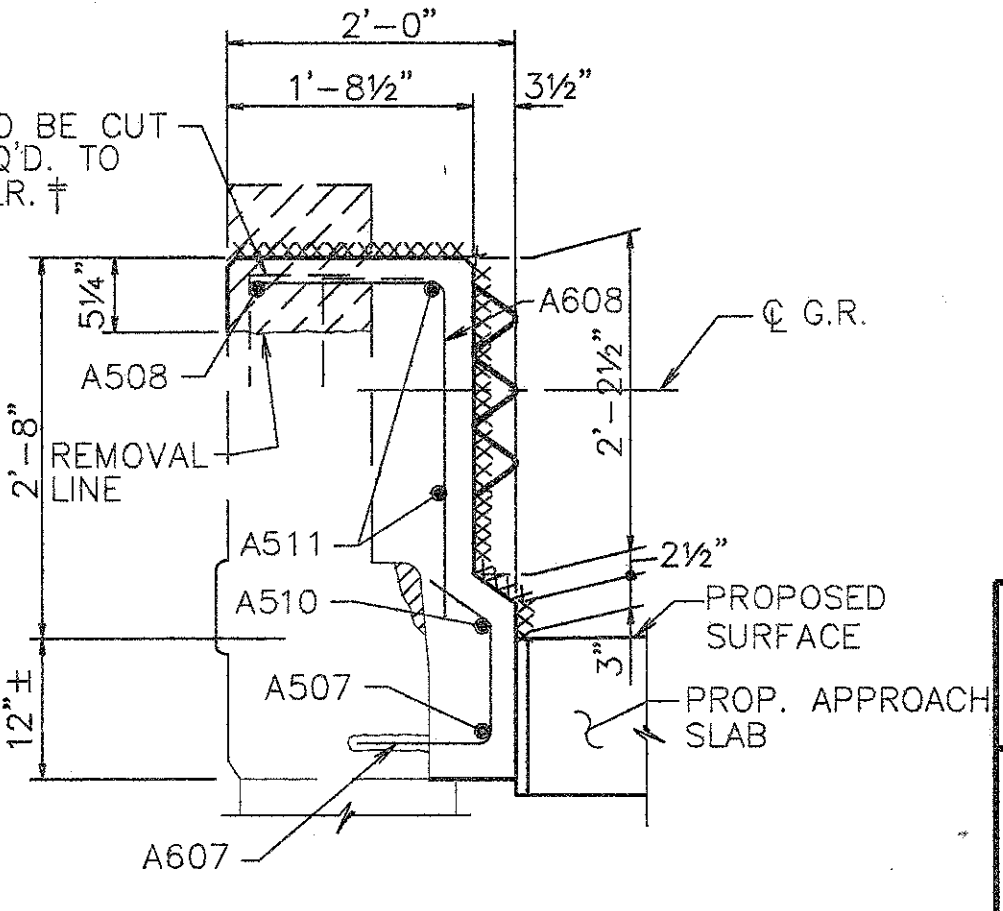
**SECTION N-N**



**SECTION F-F**



**ELEVATION SUPERSTRUCTURE PARAPET**



**SECTION E-E**

- EXIST. CURB & PARAPET TO BE REMOVED UNDER ITEM 202-'PORTIONS OF STRUCTURES REMOVED'.
- EXIST. RAILING & POSTS TO BE REMOVED & STACKED NEATLY ALONG THE RIGHT-OF-WAY FOR DISPOSAL BY THE CONTRACTOR. ALL WORK SHALL BE INCLUDED IN THE PRICE BID FOR ITEM 202-'PORTIONS OF STRUCTURE REMOVED'.
- XXXXXX SURFACES TO BE SEALED UNDER ITEM SPECIAL-'SEALING OF CONCRETE SURFACES'.

- NOTES:**
- L DENOTES LEFT SIDE
  - R DENOTES RIGHT SIDE
  - RF DENOTES RIGHT FORWARD
  - LF DENOTES LEFT FORWARD
  - RR DENOTES RIGHT REAR
  - LR DENOTES LEFT REAR
  - NF DENOTES NEAR FACE
  - FF DENOTES FAR FACE

- NOTES:**
1. TYPE "A" WATERPROOFING AT THE BRIDGE LIMIT END OF THE APPROACH SLAB (AS PER STD. DWG. AS-1-81) SHALL BE INCLUDED IN THE PRICE BID FOR ITEM 611 APPROACH SLAB.

† BARS SHALL REMAIN. CONTRACTOR SHALL EXERCISE CAUTION TO ENSURE THAT THESE BARS ARE NOT DAMAGED DURING THE CONC. REMOVAL OPERATION. ANY BARS DAMAGED AS A RESULT OF THE CONTRACTOR'S OPERATION SHALL BE REPLACED OR REPAIRED BY THE CONTRACTOR AT HIS EXPENSE. METHOD OF REPAIR OR REPLACEMENT WILL BE AT THE DISCRETION OF THE DIRECTOR.

EXIST. STEEL TO BE CUT & BENT AS REQ'D. TO MAINTAIN 2" CLR.†

FOR DETAILS NOT SHOWN SEE SHT. 3/4

NOTE: 32" BARRIER ON LEFT  
 50" BARRIER ON RIGHT

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**PARAPET SECTIONS AND DETAILS**

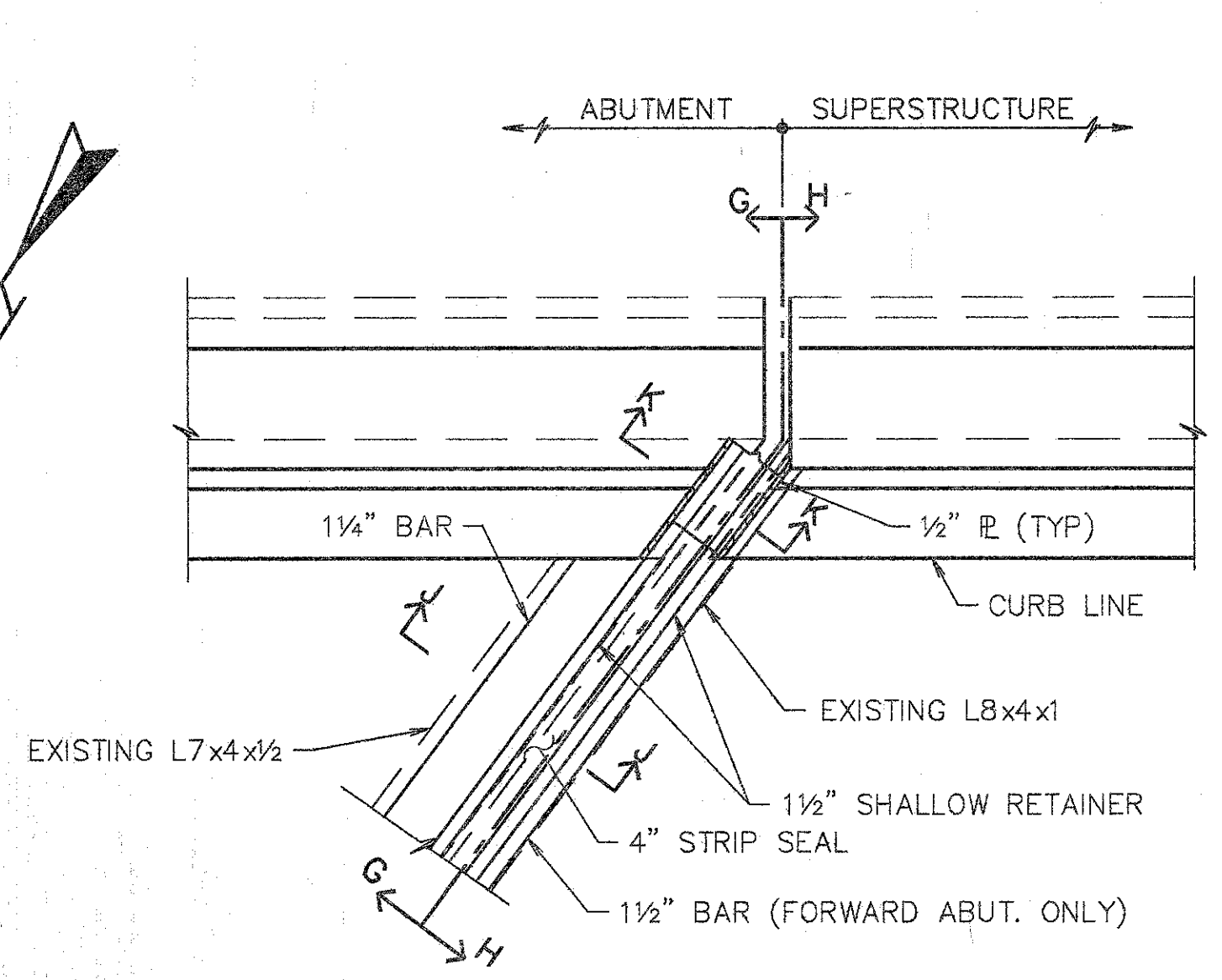
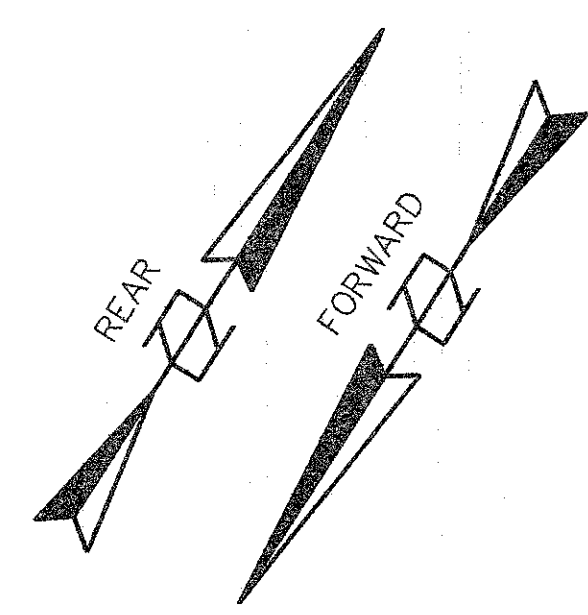
BRIDGE NO. HAM-71-0965 L  
 OVER RED BANK ROAD

HAMILTON COUNTY

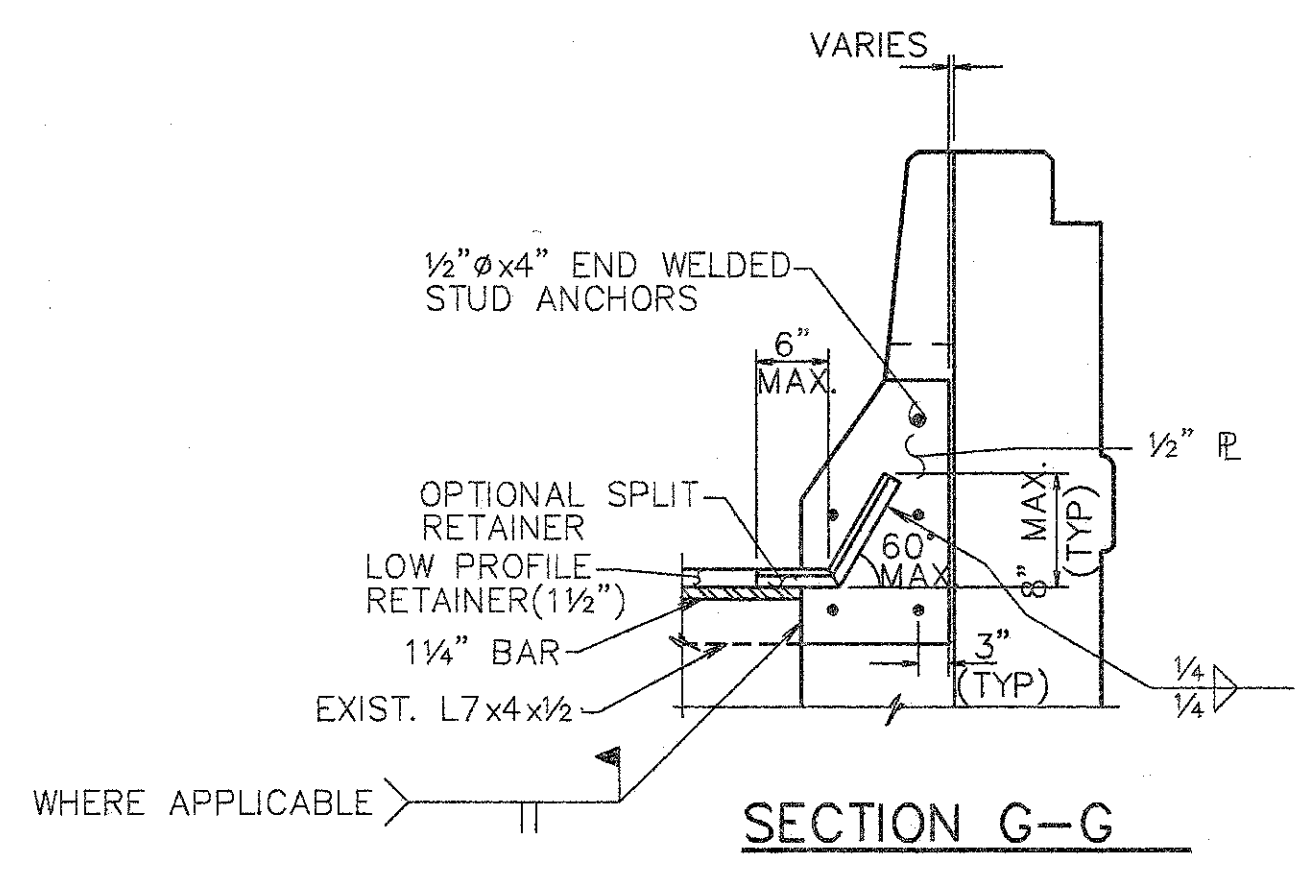
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|----------|--------|--------|---------|----------|-------|---------|
| L.A.T.M. | D.E.E. |        | M.A.A.  | D.E.E.   | 11/94 |         |

L.A.T.M. MAY 15, 1991 © 5:48 PM  
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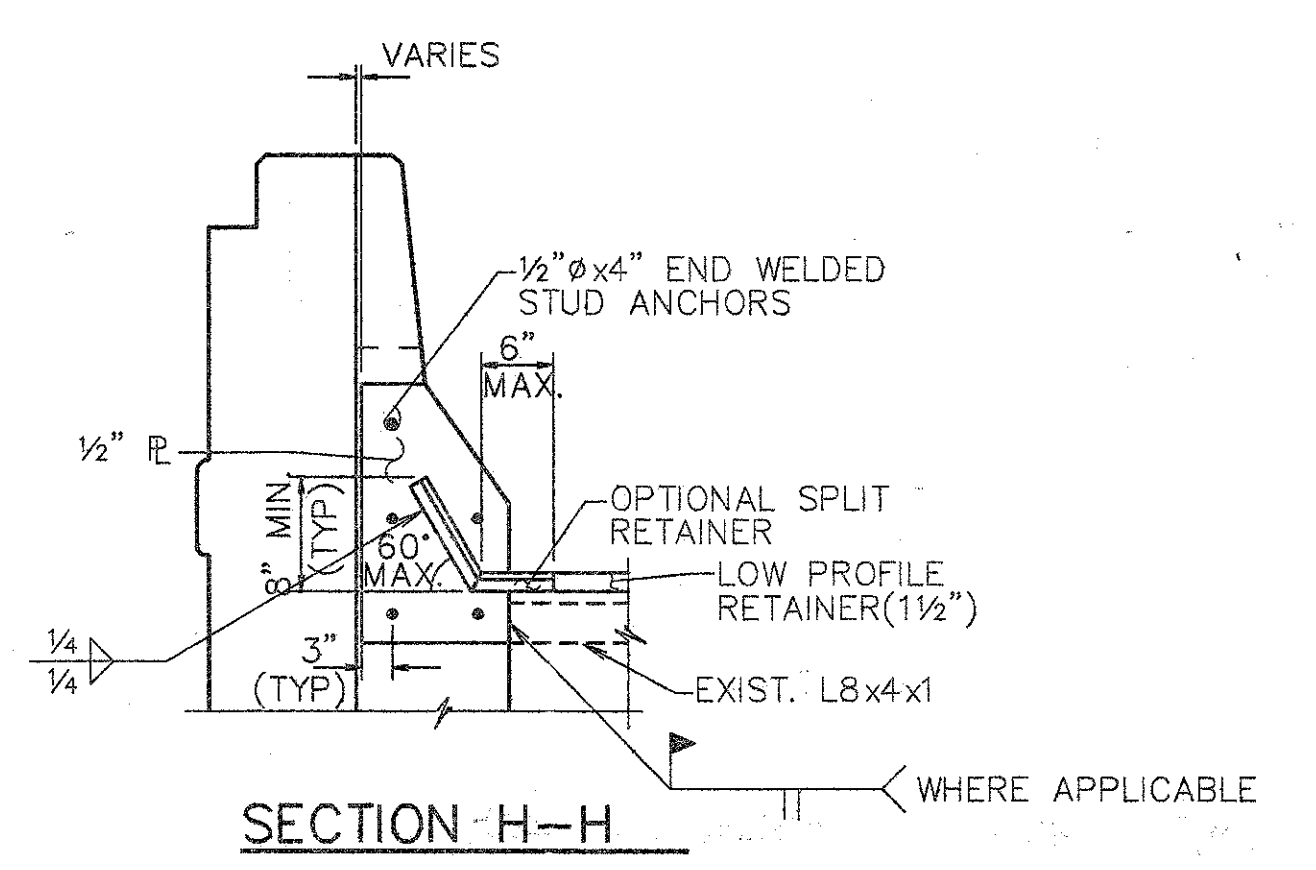




PART PLAN @ ABUTMENTS

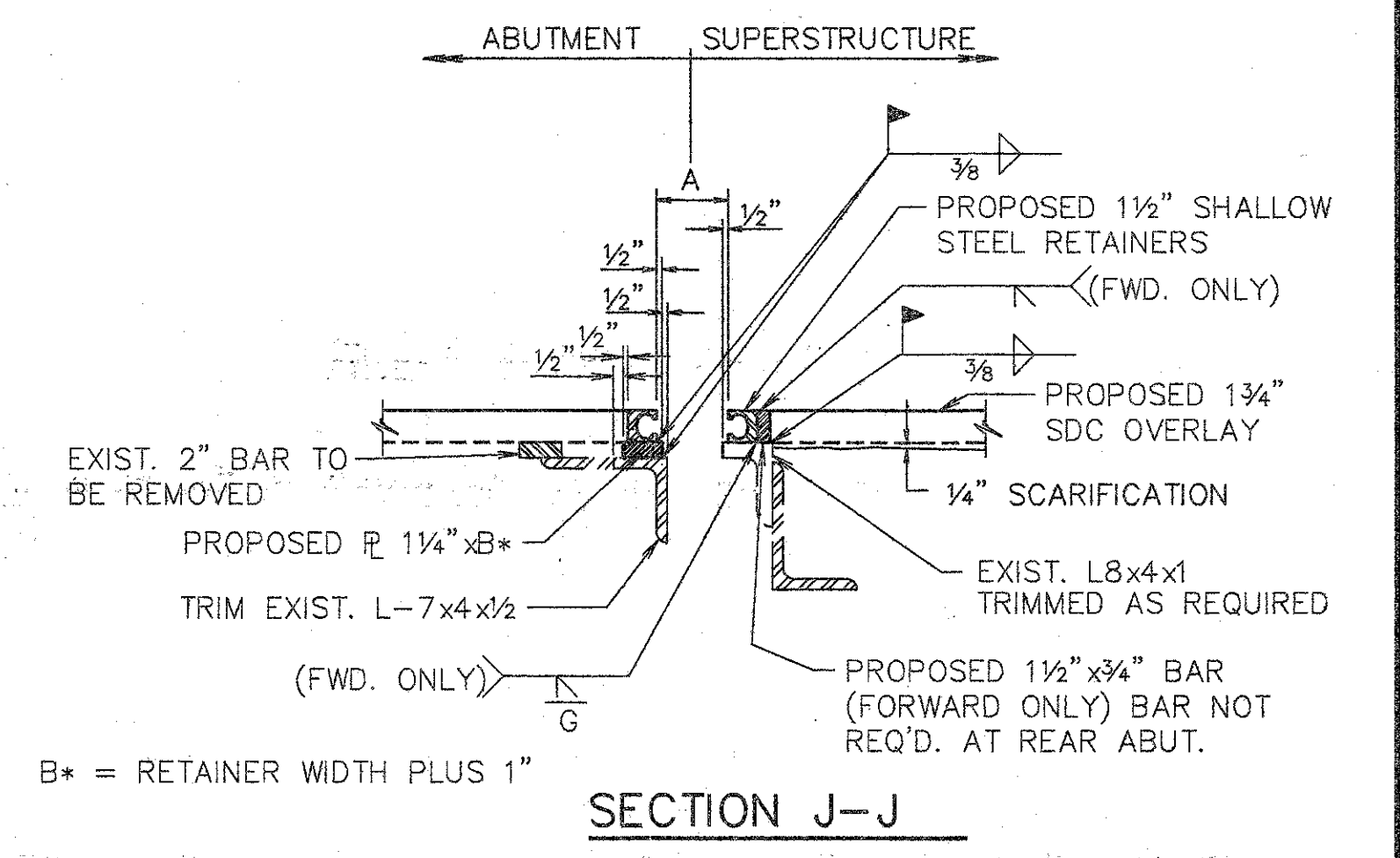


SECTION G-G



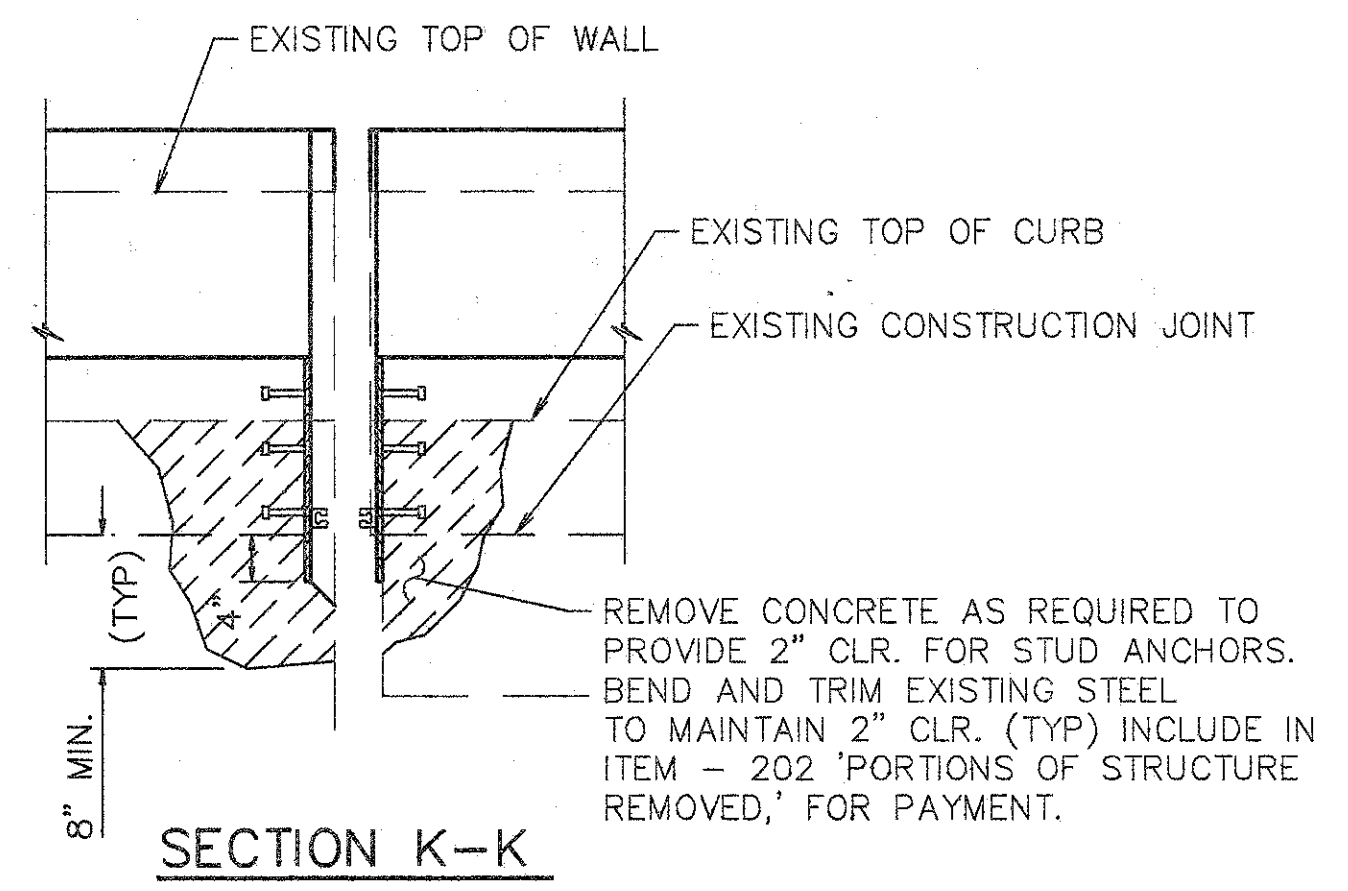
SECTION H-H

- NOTES:
1. EXPANSION JT. DETAILS TO BE WORKED WITH STD. DWG. EXJ-4-87 SHTS. 1 thru 5.
  2. WHEN PLATE IS RECESSED INTO ABUTMENT, CONCRETE BELOW PLATE SHALL BE SLOPED FROM BOTTOM OF THE PLATE TO THE END OF THE ABUTMENT TO DETER ACCUMULATION OF DEBIS.

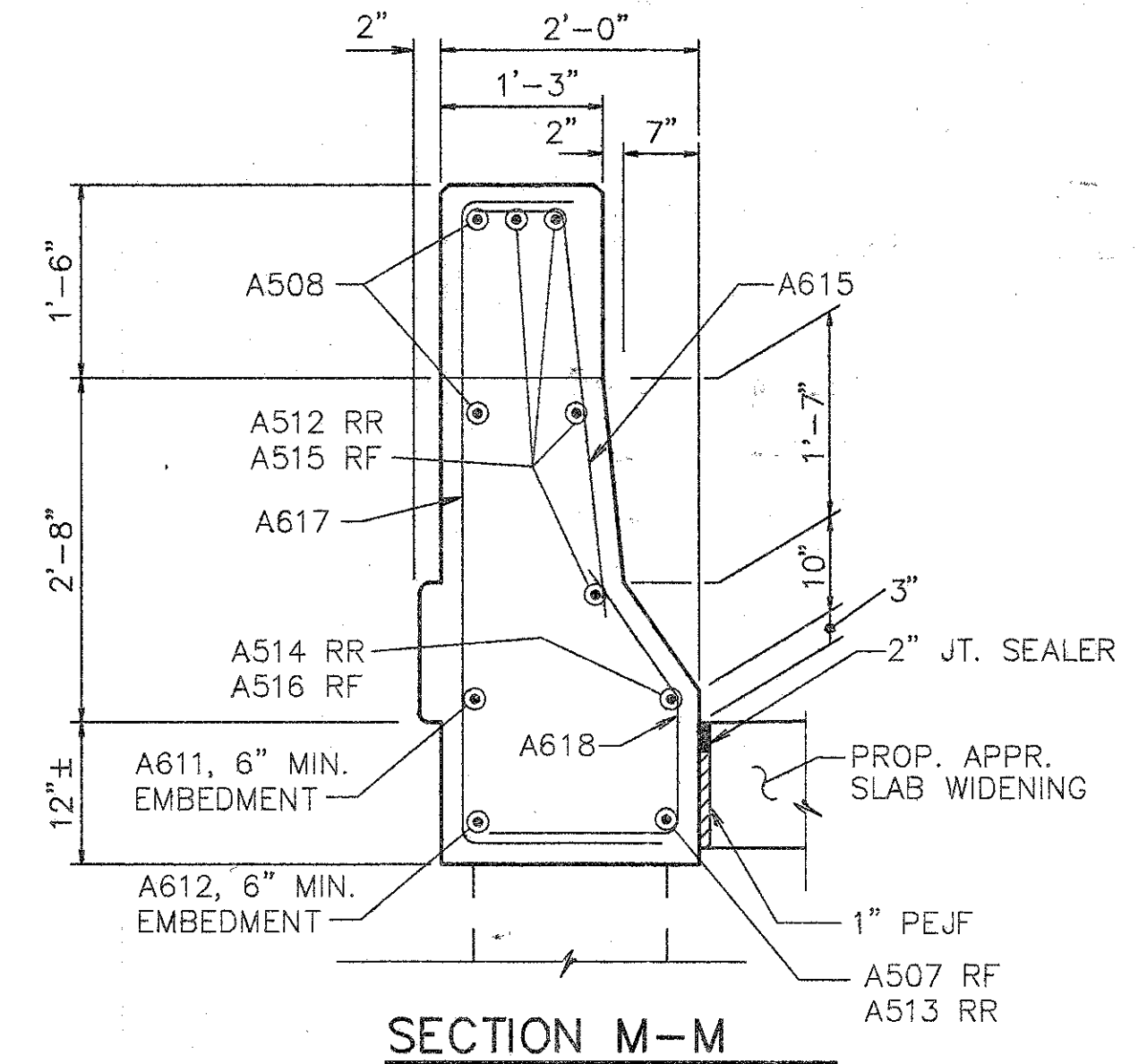


SECTION J-J

- NOTES:
1. CONTRACTOR TO VERIFY ALL DIMENSIONS PRIOR TO MODIFYING EXPANSION JOINT.
  2. THE PRICE BID FOR ITEM 516--'STRUCTURAL EXPANSION JOINTS, INCLUDING ELASTOMERIC STRIP SEALS, SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, AND ANY OTHER INCIDENTAL ITEMS, AS DETAILED. (REMOVAL OF CURB OR PARAPET AS SHOWN SHALL BE INCLUDED UNDER ITEM 202-- 'PORTIONS OF STRUCTURE REMOVED').
  3. FOR DETAILS NOT SHOWN REFER TO DWG. EXJ-4-87 SHTS. 3 AND 4.
  4. STRIP SEAL TO BE INSTALLED IN ONE CONTINUOUS PIECE (NO OPEN JOINTS).
  5. PROVIDE TEMPORARY SUPPORT FOR ABUTMENT END DAM DURING CONSTRUCTION. REMOVE TEMPORARY SUPPORT AS SOON AS CONCRETE HAS SET, PREFERABLY WITHIN TWO HOURS AFTER PLACING TO AVOID DAMAGE DUE TO EXPANSION AND CONTRACTION OF SUPERSTRUCTURE.

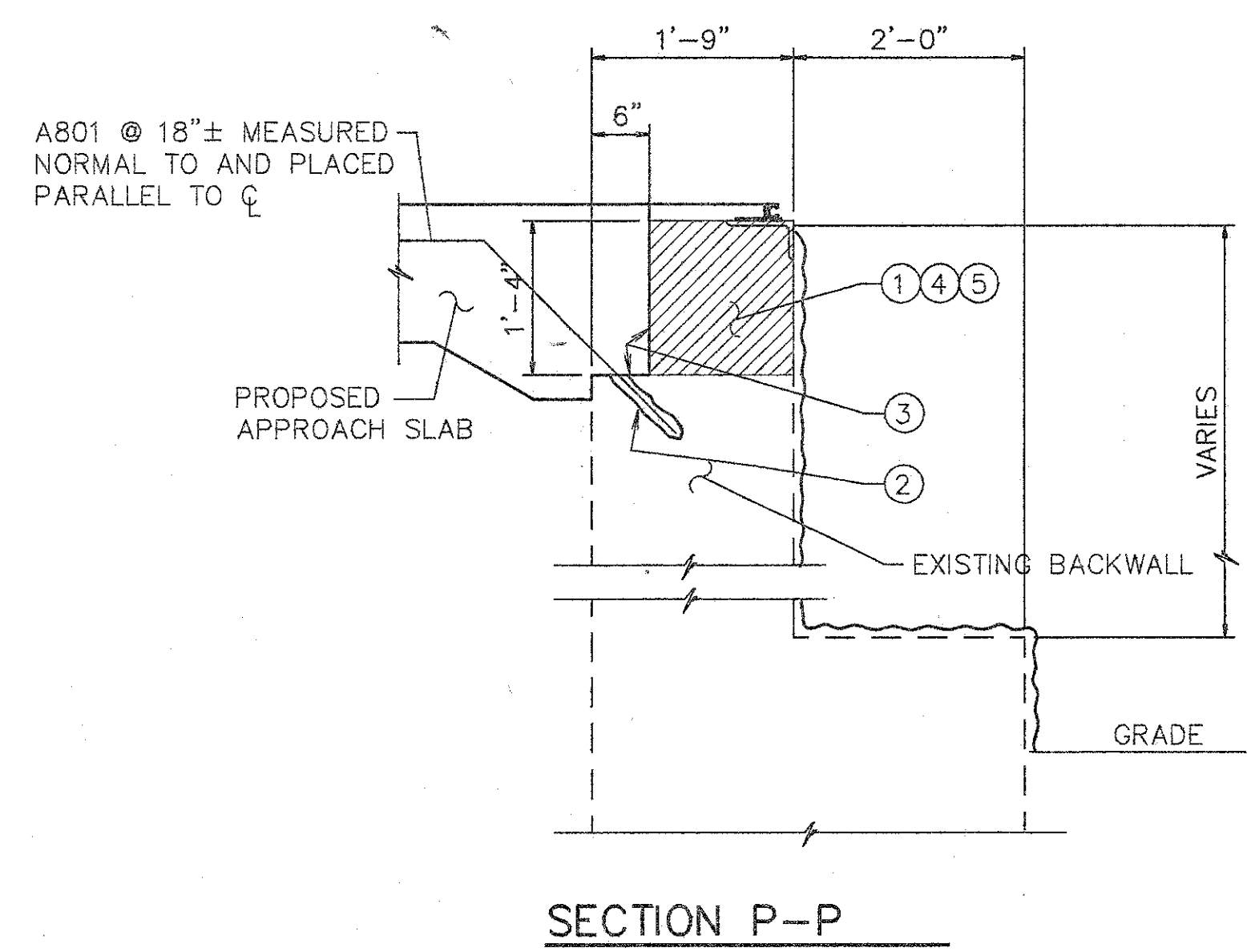


SECTION K-K



SECTION M-M

| TEMPERATURE | DIM. 'A' |         |
|-------------|----------|---------|
|             | REAR     | FORWARD |
| 40° F       | 3 1/2"   | 3 1/8"  |
| 50° F       | 3 3/8"   | 3 1/8"  |
| 60° F       | 3 1/4"   | 3 1/8"  |
| 70° F       | 3 1/4"   | 3"      |
| 80° F       | 3 1/8"   | 3"      |
| 90° F       | 3"       | 3"      |

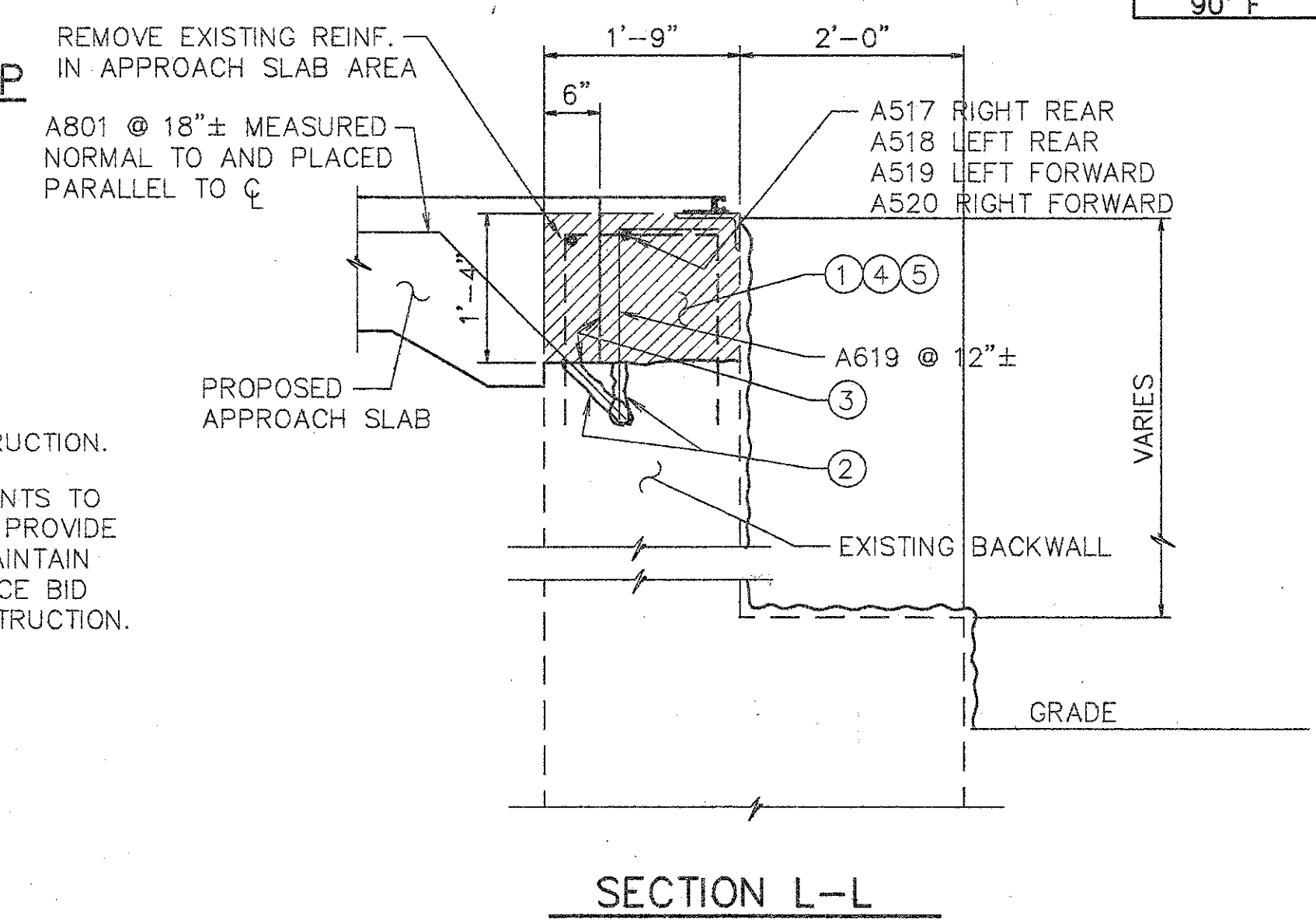


SECTION P-P

NOTES FOR SECTION L-L & P-P

1. EXISTING REINFORCING STEEL TO REMAIN ~ REINFORCING STEEL DAMAGED TO BE REPLACED AT CONTRACTORS EXPENSE.
2. 1' MIN. EMBEDMENT (SEE DOWEL HOLE GENERAL NOTE) ITEM 510.
3. TYPE 'A' WATERPROOFING (PAYMENT INCLUDED IN THE PRICE BID FOR APPROACH SLAB).
4. CLASS 'C' CONCRETE, ABUTMENT RECONSTRUCTION.
5. PROVIDE CONTRACTION AND EXPANSION JOINTS TO MATCH THOSE IN EXISTING BACKWALL AND PROVIDE CONSTRUCTION JOINTS AS REQUIRED TO MAINTAIN TRAFFIC. PAYMENT TO BE INCLUDED IN PRICE BID FOR ITEM 511 CLASS C CONCRETE RECONSTRUCTION.

EXISTING CONCRETE TO BE REMOVED INCLUDE IN ITEM 202 FOR PAYMENT.  
 SURFACE TO BE SEALED UNDER ITEM SPECIAL- 'SEALING OF CONCRETE SURFACE, EPOXY'.



SECTION L-L

SEE NOTES ON SHT. [2/4]

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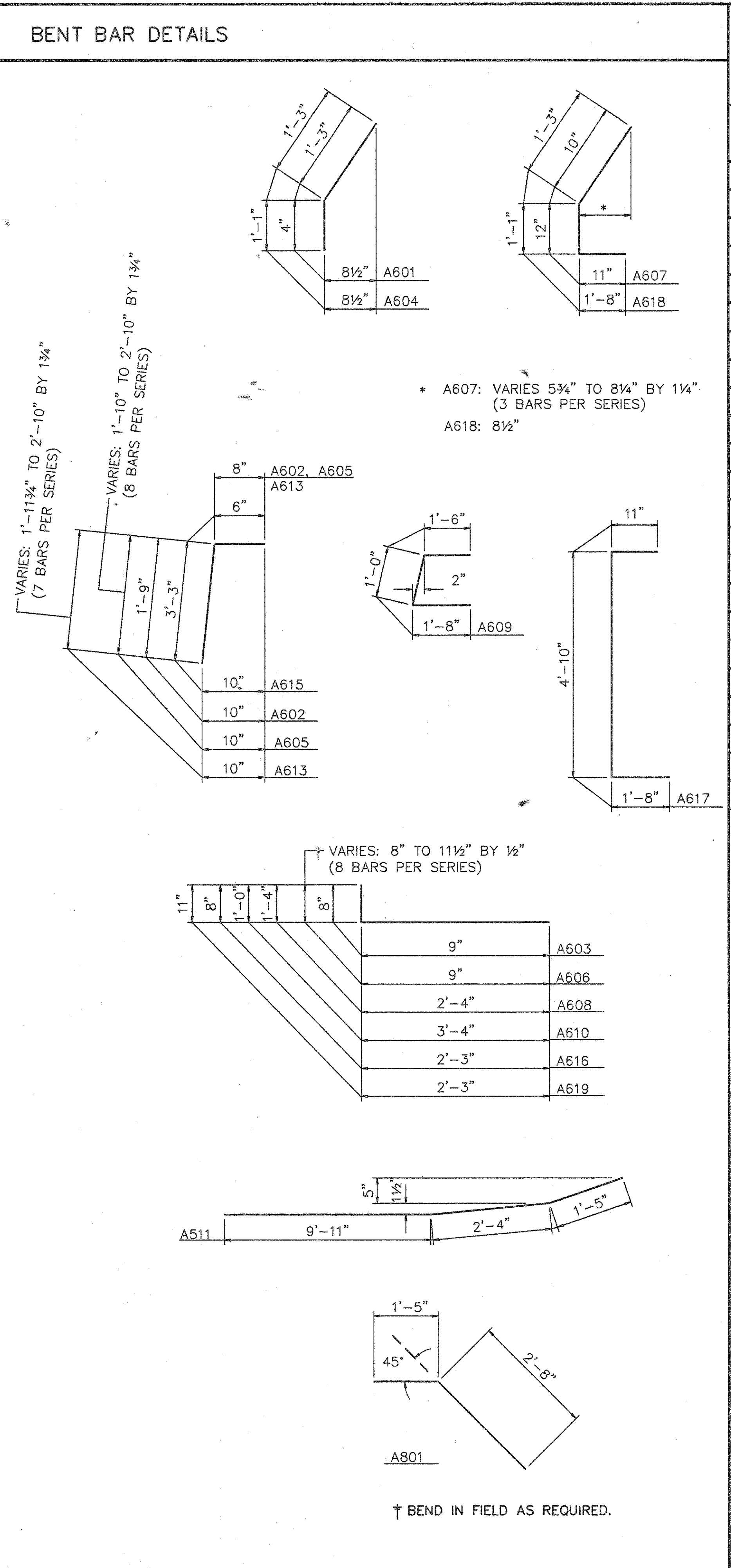
MISCELLANEOUS DETAILS

BRIDGE NO. HAM-71-0965 L  
 OVER RED BANK ROAD  
 HAMILTON COUNTY

| DESIGNED | DRAWN  | TRACED | CHECKED | REVIEWED     | DATE | REVISED |
|----------|--------|--------|---------|--------------|------|---------|
| L.A.T.M. | D.E.E. |        | M.A.A.  | D.E.M1/11/94 |      |         |

| REINFORCING STEEL LIST |          |        |                 |        |
|------------------------|----------|--------|-----------------|--------|
| MARK                   | SHAPE    | NUMBER | LENGTH          | WEIGHT |
| A501                   | STR.     | 20     | 30'-0"          | 626    |
| A502                   | STR.     | 2      | 23'-0"          | 48     |
| A503                   | STR.     | 2      | 19'-9"          | 41     |
| A504                   | STR.     | 32     | 14'-4"          | 478    |
| A505                   | STR.     | 55     | 14'-2"          | 813    |
| A506                   | STR.     | 1      | 14'-0"          | 15     |
| A507                   | STR.     | 3      | 8'-0"           | 25     |
| A508                   | STR.     | 6      | 5'-0"           | 31     |
| A509                   | STR.     | 2      | 11'-0"          | 23     |
| A510                   | BNT.†    | 2      | 13'-8"          | 28     |
| A511                   | BNT.     | 4      | 13'-8"          | 57     |
| A512                   | STR.     | 4      | 20'-8"          | 86     |
| A513                   | STR.     | 1      | 14'-2"          | 15     |
| A514                   | STR.     | 1      | 21'-0"          | 22     |
| A515                   | STR.     | 4      | 13'-10"         | 58     |
| A516                   | STR.     | 1      | 13'-6"          | 14     |
| A517                   | STR.     | 1      | 12'-9"          | 13     |
| A518                   | STR.     | 1      | 10'-9"          | 11     |
| A519                   | STR.     | 1      | 11'-1"          | 12     |
| A520                   | STR.     | 1      | 13'-2"          | 14     |
| A601                   | BNT.     | 314    | 1'-6"           | 707    |
| A602                   | BNT.     | 142    | 2'-5"           | 515    |
| A603                   | BNT.     | 143    | 1'-3"           | 268    |
| A604                   | BNT.     | 12     | 2'-3"           | 41     |
| A605                   | BNT.     | 8      | 2'-6" to 3'-6"  | 36     |
| A606                   | BNT.     | 16     | 1'-3" to 1'-6"  | 34     |
| A607                   | BNT.     | 6      | 2'-6"           | 22     |
| A608                   | BNT.     | 6      | 3'-6"           | 32     |
| A609                   | BNT.     | 2      | 3'-10"          | 12     |
| A610                   | BNT.     | 4      | 4'-2"           | 25     |
| A611                   | STR.     | 4      | 1'-2"           | 7      |
| A612                   | STR.     | 4      | 10"             | 5      |
| A613                   | BNT.     | 7      | 2'-7¾" to 3'-6" | 32     |
| A614                   | NOT USED |        |                 |        |
| A615                   | BNT.     | 172    | 3'-7"           | 926    |
| A616                   | BNT.     | 171    | 2'-9"           | 706    |
| A617                   | BNT.     | 2      | 7'-1"           | 21     |
| A618                   | BNT.     | 2      | 3'-9"           | 11     |

| REINFORCING STEEL LIST |       |        |        |        |
|------------------------|-------|--------|--------|--------|
| MARK                   | SHAPE | NUMBER | LENGTH | WEIGHT |
| A619                   | BNT.  | 40     | 3'-0"  | 126    |
| A801                   | BNT.  | 101    | 4'-0"  | 1079   |
| REPLACEMENT STEEL      |       |        |        | 300    |
| TOTAL                  |       |        |        | 7335   |



| ITEM    | ITEM EXT. | TOTAL    | UNITS | DESCRIPTION                                                        |
|---------|-----------|----------|-------|--------------------------------------------------------------------|
| 202     | 11200     | LUMP SUM | L.S.  | PORTIONS OF STRUCTURE REMOVED                                      |
| 509     | 15820     | 7335     | LBS.  | EPOXY COATED REINFORCING STEEL, GRADE 60                           |
| 510     | 12201     | 141      | L.F.  | DOWEL HOLES, AS PER PLAN                                           |
| 511     | 34450     | 10       | C.Y.  | CLASS S CONCRETE, MISC.: ABUTMENT PARAPETS                         |
| 511     | 45700     | 12       | C.Y.  | CLASS C CONCRETE, ABUTMENT RECONSTRUCTION                          |
| 514     | 27704     | LUMP     | L.S.  | FIELD PAINTING EXISTING STEEL, EEU X                               |
| SPECIAL | 51267500  | 909      | S.Y.  | SEALING OF CONCRETE SURFACE *                                      |
| SPECIAL | 51267502  | 149      | S.Y.  | SEALING OF CONCRETE SURFACE (EPOXY) *                              |
| 513     | 21000     | 15       | EACH  | TRIMMING OF BEAM END                                               |
| 516     | 11210     | 170      | L.F.  | STRUCTURAL EXP. JT., INCLUDING ELASTOMERIC STRIP SEAL              |
| 516     | 45304     | 18       | EACH  | REFURBISH BEARING DEVICE                                           |
| 516     | 14600     | 26       | L.F.  | STRUCTURAL JOINT OR JOINT SEALER, MISC.: 2"x4" SEALER, AS PER PLAN |
| 519     | 11100     | 27       | S.F.  | PATCHING CONCRETE STRUCTURE                                        |
| 517     | 76201     | 164      | L.F.  | RAILING FACED, AS PER PLAN (32" HIGH)                              |
| 517     | 76201     | 160      | L.F.  | RAILING FACED, AS PER PLAN (50" HIGH)                              |
| 518     | 12700     | 9        | EACH  | SCUPPER, VERTICAL EXTENSION                                        |
| 518     | 63300     | LUMP     | L.S.  | SCUPPER AND DRAINAGE PIPE CLEANOUT                                 |
| 625     |           |          |       | FOR LIGHTING SUMMARY SEE LIGHTING PLANS.                           |
| 845     | 40210     | 1370     | S.Y.  | LATEX MODIFIED CONCRETE MISC. OVERLAY (1¾" THICK) ON EXISTING DECK |
| 845     | 11000     | 13       | C.Y.  | LATEX MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS)               |
| 845     | 30000     | 1        | C.Y.  | FULL DEPTH REPAIR                                                  |

- \* SEE PROPOSAL NOTE
- ### PROPOSED WORK
- MODIFY PARAPETS ON THE SUPERSTRUCTURE & ABUTMENTS. (INSTALL PLATES FOR STRIP SEAL EXP. JT.)
  - SCARIFY EXISTING DECK ¼", AND REMOVE DETERIORATED CONCRETE AS DIRECTED BY THE ENGINEER.
  - REFURBISH ALL ABUTMENT BEARINGS.
  - PLACE 1¾" THICK LATEX MODIFIED CONCRETE ON DECK.
  - SEAL PARAPETS, PIERS, AND BACKWALL.
  - RECONSTRUCT ABUTMENT BACKWALL ABOVE APPROACH SLAB SEAT.
  - SEAL EXPANSION JOINT WITH STRIP SEAL.
  - REPLACE GUARDRAIL AS SHOWN ON ROADWAY PLANS.
  - TRIM BEAM ENDS TO 2" CLEARANCE. (OR AS CLOSE TO 2" AS POSSIBLE)
  - EXTEND SCUPPERS TO 8" BELOW BRIDGE BEAMS.
  - AT LEAST ONE LANE OF TRAFFIC SHALL BE MAINTAINED IN EACH DIRECTION AND ON THE BRIDGE AT ALL TIMES. FOR NOTES SEE MAINTAINANCE OF TRAFFIC PLANS. MAINTENANCE OF TRAFFIC PLAN REQUIRES CONSTRUCTION PHASING LIMITS AT LANE CENTERLINES. DUE TO THESE LIMITS, OVERLAY MAY REQUIRE SPECIAL ATTENTION.
  - OTHER WORK AS DESCRIBED IN THESE PLANS.

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4 / 4

### QUANTITIES AND GENERAL NOTES

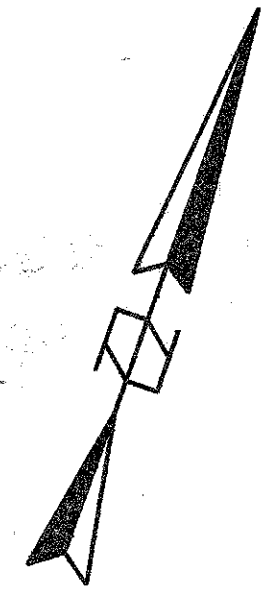
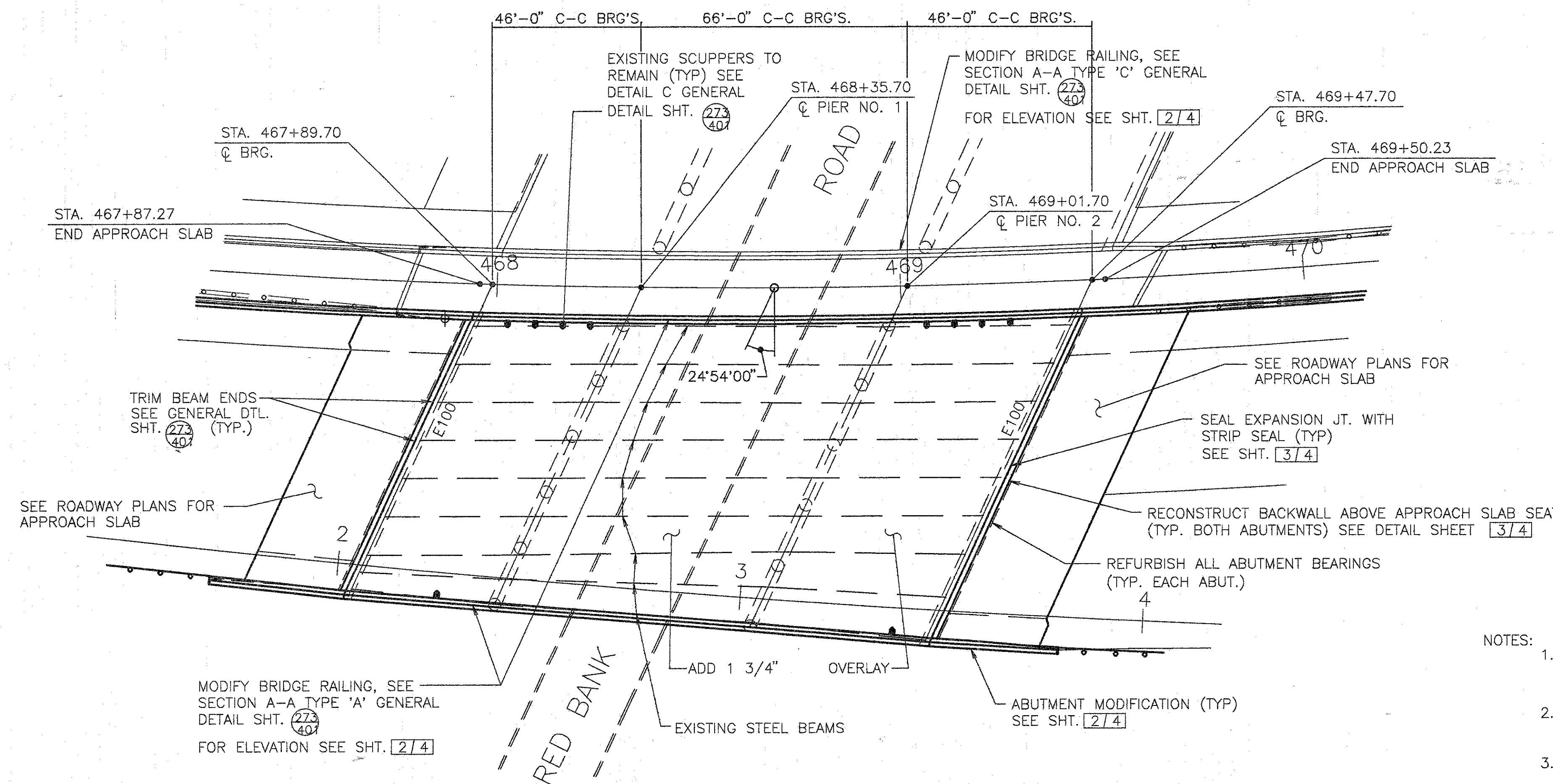
BRIDGE NO. HAM-71-0965 L  
 OVER RED BANK ROAD

HAMILTON COUNTY

|          |        |        |         |               |      |         |
|----------|--------|--------|---------|---------------|------|---------|
| DESIGNED | DRAWN  | TRACED | CHECKED | REVIEWED      | DATE | REVISED |
| L.A.T.M. | D.E.E. |        | M.A.A.  | D.E.M11/11/94 |      |         |

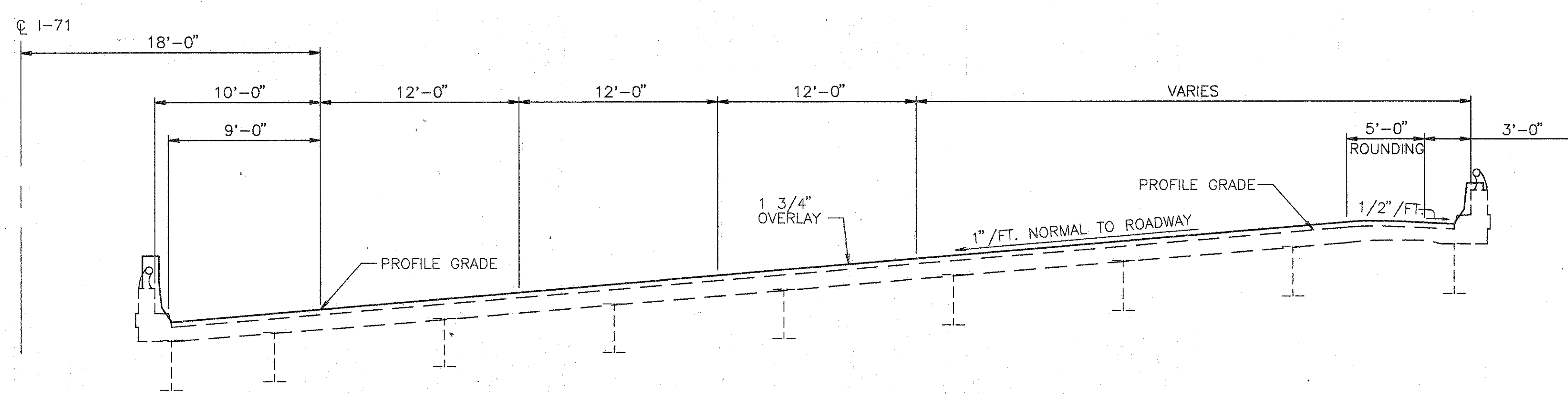
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| SLIDING OR FIXED | JACK CAPACITY REQ'D. (MIN) |
|------------------|----------------------------|
| E100             | 75 TON                     |

- NOTES:
1. EXTEND ALL SCUPPERS—FOR DETAIL SEE GENERAL DETAIL SHEET. (273/40)
  2. SEAL PARAPETS, BACKWALLS AND PIERS. SEAL ALL OF PIERS EXCEPT TOP OF PIER CAP.
  3. SEE JUNCTION BOX EXTENSION DETAIL GENERAL DETAIL SHT. FOR BARRIER RETROFIT AT JUNCTION BOXES. REFER TO LIGHTING DETAILS TYPE AND LOCATION.



TYP. BRIDGE SECTION

EXISTING STRUCTURE

TYPE: CONTINUOUS STEEL BEAM WITH REINFORCED CONCRETE DECK & SUBSTRUCTURE  
 SPANS: 46'-0", 66'-0", 46'-0"  
 ROADWAY: VARIES  
 SKEW: 24°54'00" LT. FORWARD  
 LOADING FREQUENCY: C.F.=2000 (57) ADEQUATE FOR AASHO ALTERNATE LOADING  
 WEARING SURFACE: 1" MONOLITHIC CONCRETE  
 APPROACH SLABS: AS-1-54 (25'-0" LONG)  
 ALIGNMENT: 3'-00' CURVE TO THE LEFT  
 SUPERELEVATION: 1"/FT.

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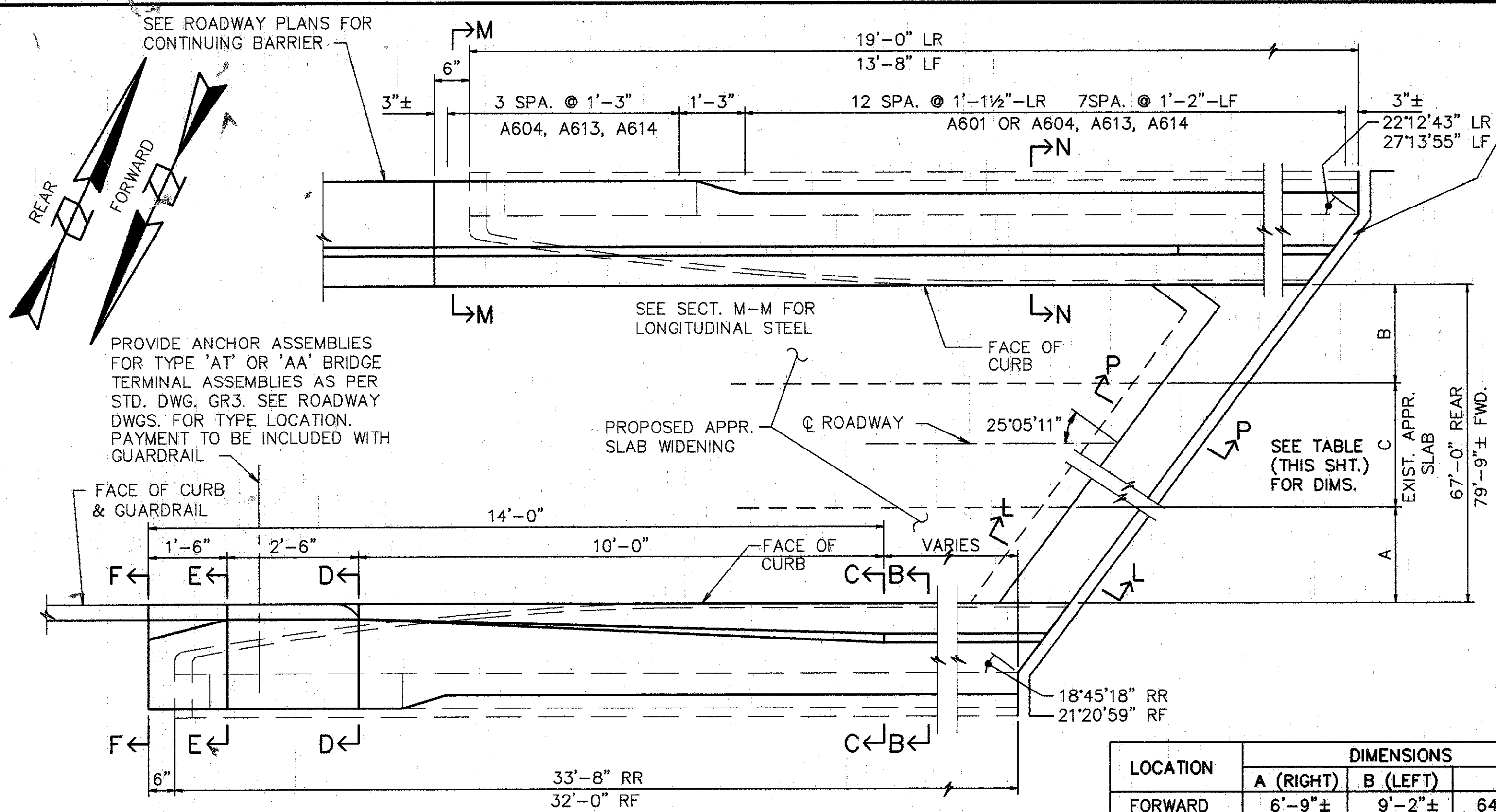
GENERAL PLAN

BRIDGE NO. HAM-71-0965R  
 OVER RED BANK ROAD

HAMILTON COUNTY

| DESIGNED | DRAWN  | TRACED | CHECKED | REVIEWED     | DATE | REVISED |
|----------|--------|--------|---------|--------------|------|---------|
| L.A.T.M. | D.E.E. |        | M.A.A.  | D.E.M1/11/94 |      |         |

Last Plot: MAY 15, 1995 @ 4:33 PM  
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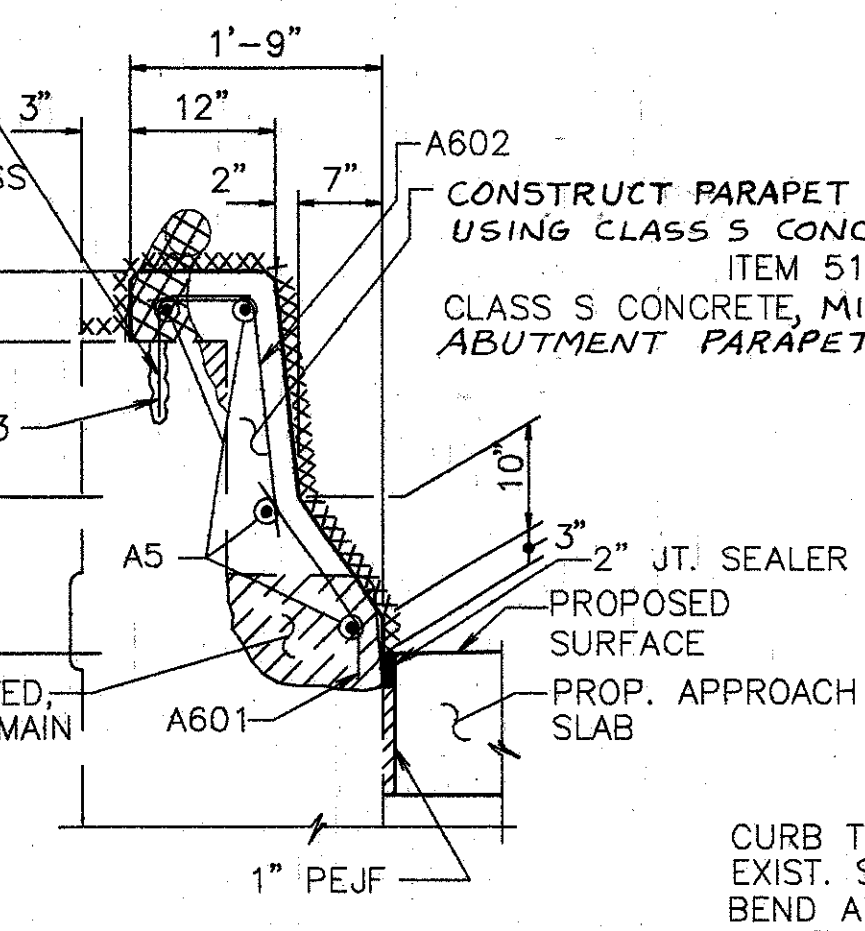


| LOCATION | DIMENSIONS |          |         |
|----------|------------|----------|---------|
|          | A (RIGHT)  | B (LEFT) | C       |
| FORWARD  | 6'-9"±     | 9'-2"±   | 64'-0"  |
| REAR     | 6'-8"±     | 9'-3"    | 51'-6"± |

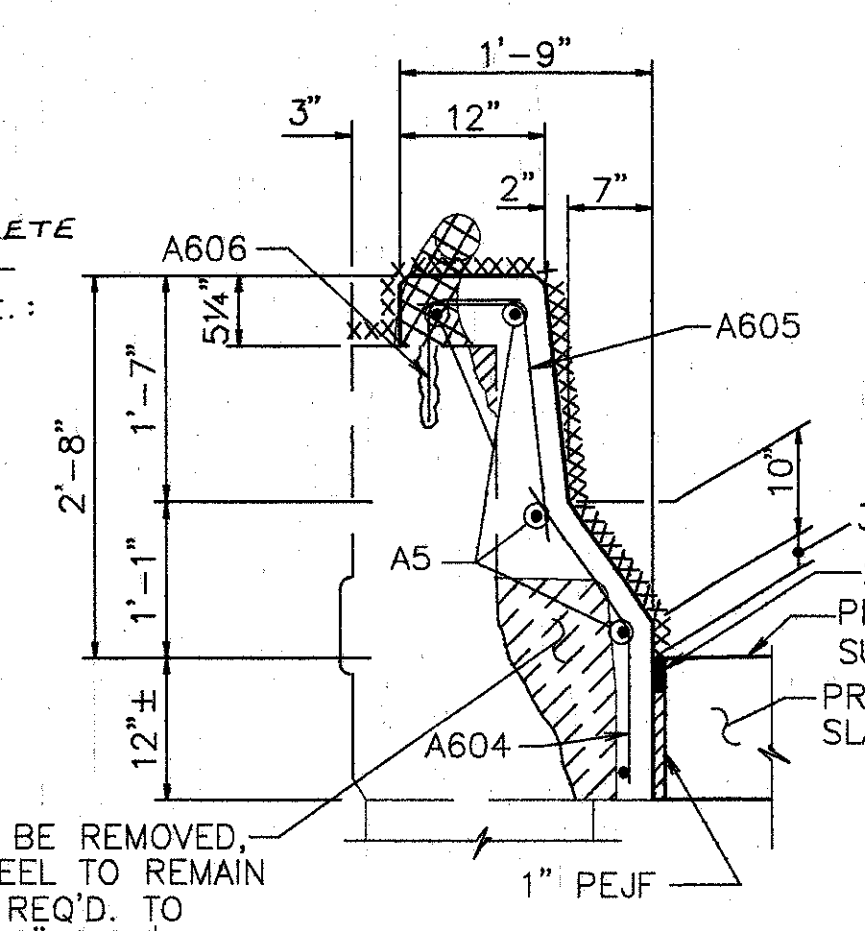
**PLAN - ABUTMENT MODIFICATION**  
 (REAR SHOWN, FWD. OPPOSITE HAND SAME SKEW)

FOR DTL. OF EXP. JT. SEE PART. PLAN @ EXP. JT. SHT. 3/4

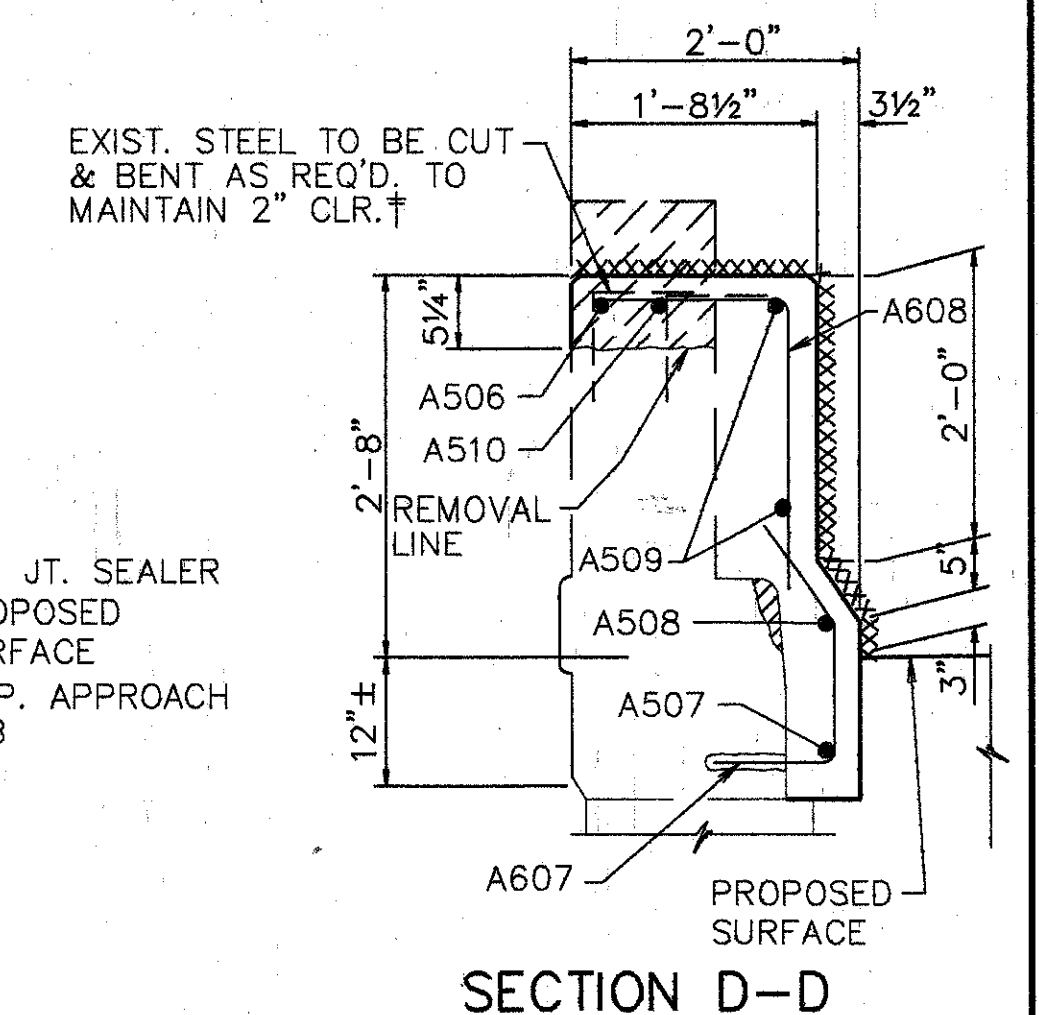
6" MIN. EMBEDMENT PAYMENT SHALL BE INCLUDED IN THE PRICE BID FOR ITEM 511-CLASS S CONCRETE



**SECTION B-B**

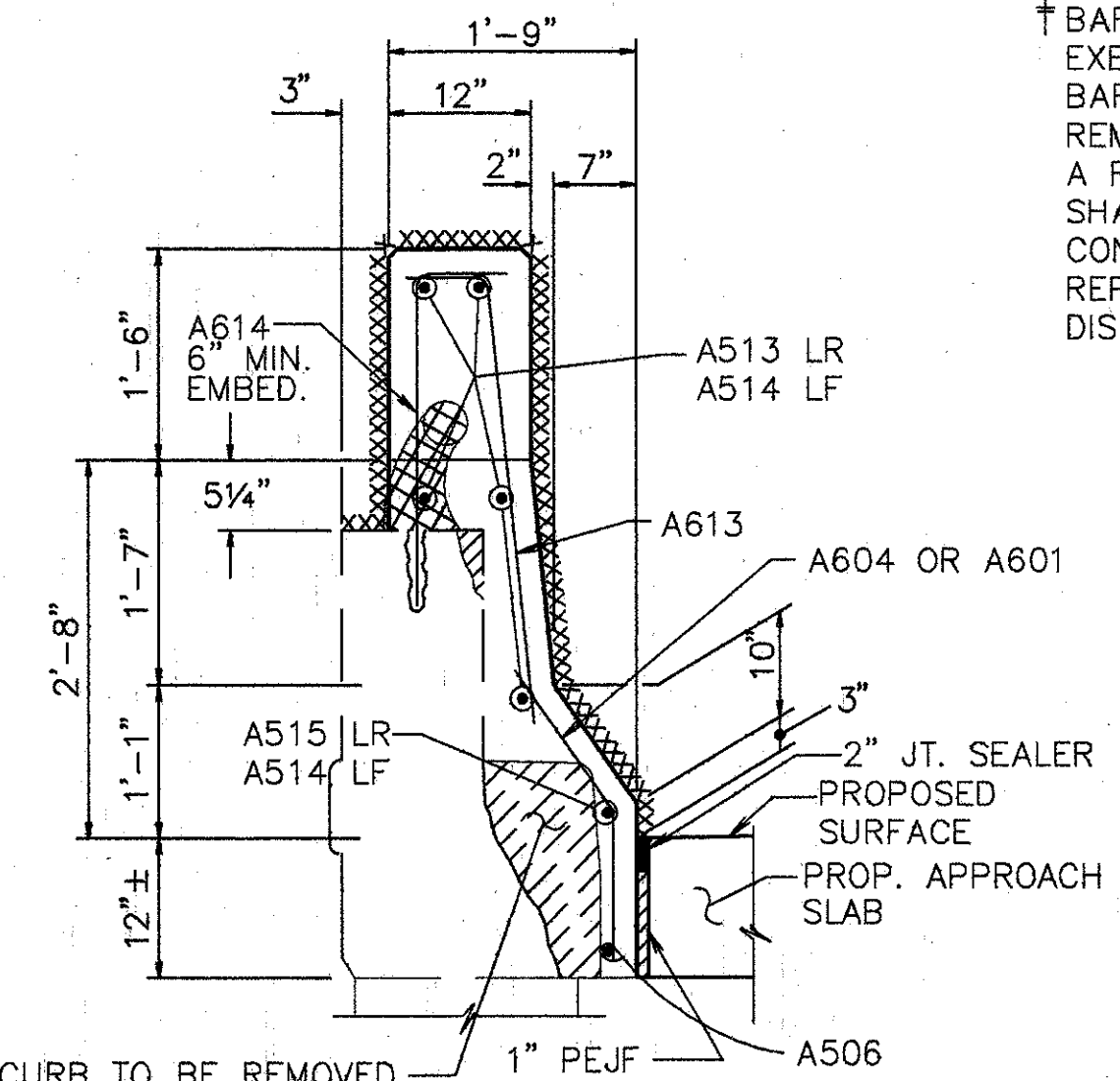


**SECTION C-C**

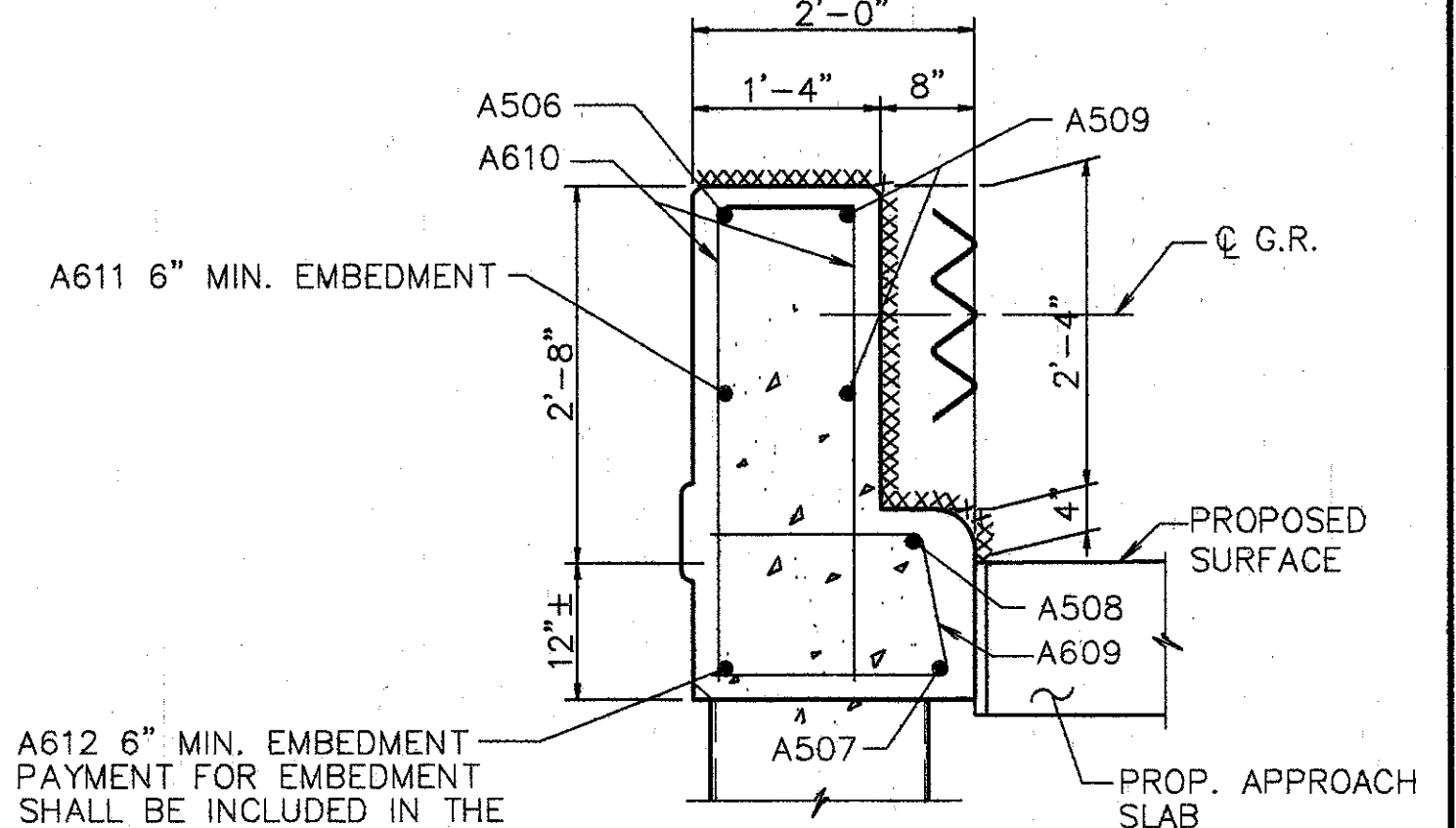


**SECTION D-D**

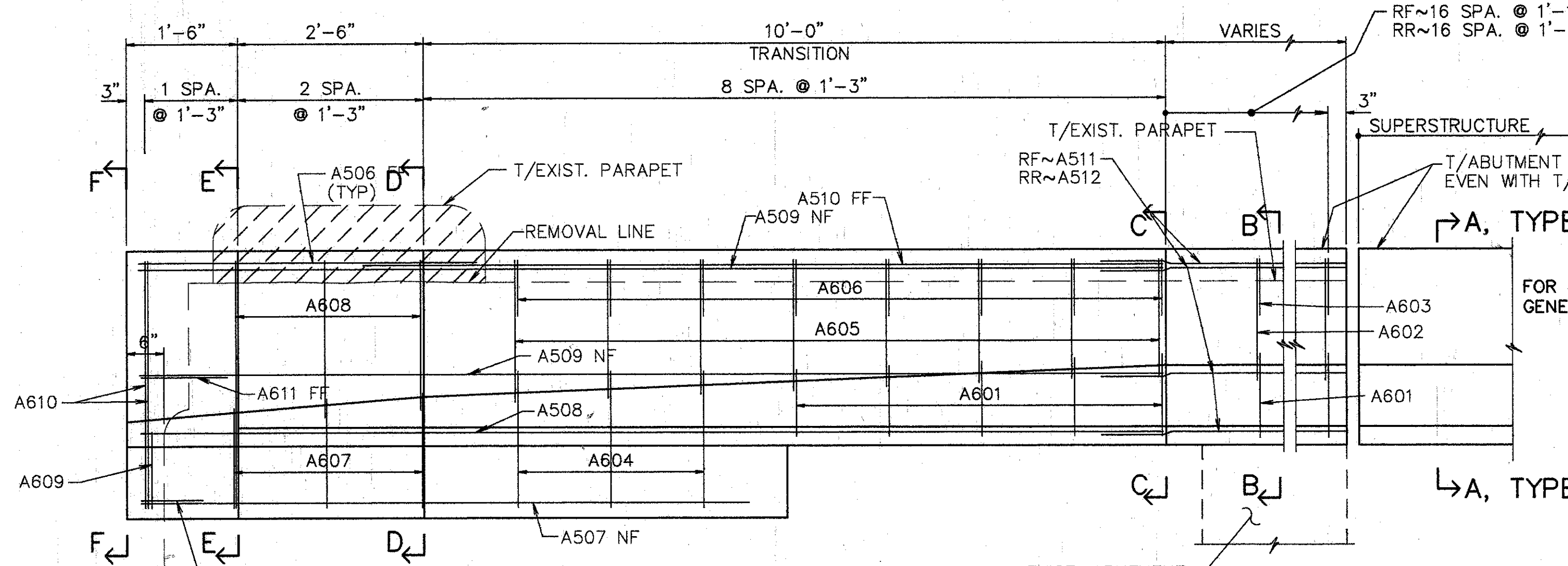
† BARS SHALL REMAIN. CONTRACTOR SHALL EXERCISE CAUTION TO ENSURE THAT THESE BARS ARE NOT DAMAGED DURING THE CONC. REMOVAL OPERATION. ANY BARS DAMAGED AS A RESULT OF THE CONTRACTOR'S OPERATION SHALL BE REPLACED OR REPAIRED BY THE CONTRACTOR AT HIS EXPENSE. METHOD OF REPAIR OR REPLACEMENT WILL BE AT THE DISCRETION OF THE DIRECTOR.



**SECTION N-N**



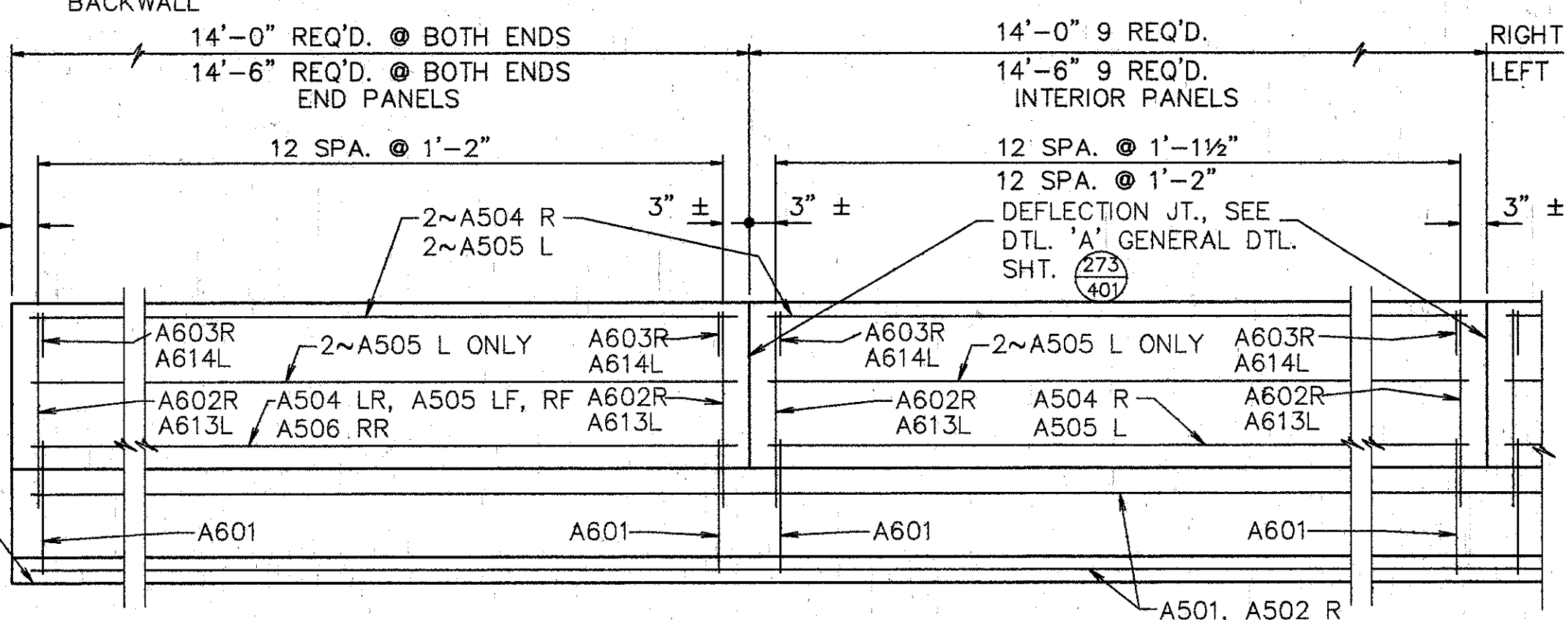
**SECTION F-F**



**ELEVATION - RIGHT WALL**

→ A, TYPE A LEFT, TYPE C RIGHT

↳ A, TYPE A LEFT, TYPE C RIGHT



**ELEVATION SUPERSTRUCTURE PARAPET**

- EXIST. CURB & PARAPET TO BE REMOVED UNDER ITEM 202--PORTIONS OF STRUCTURE REMOVED.
- EXIST. RAILING & POSTS TO BE REMOVED & STACKED NEATLY ALONG THE RIGHT-OF-WAY FOR DISPOSAL BY THE CONTRACTOR. ALL WORK SHALL BE INCLUDED IN THE PRICE BID FOR ITEM 202--PORTIONS OF STRUCTURE REMOVED.
- XXXXXXXX SURFACES TO BE SEALED UNDER ITEM SPECIAL--SEALING OF CONCRETE SURFACES.

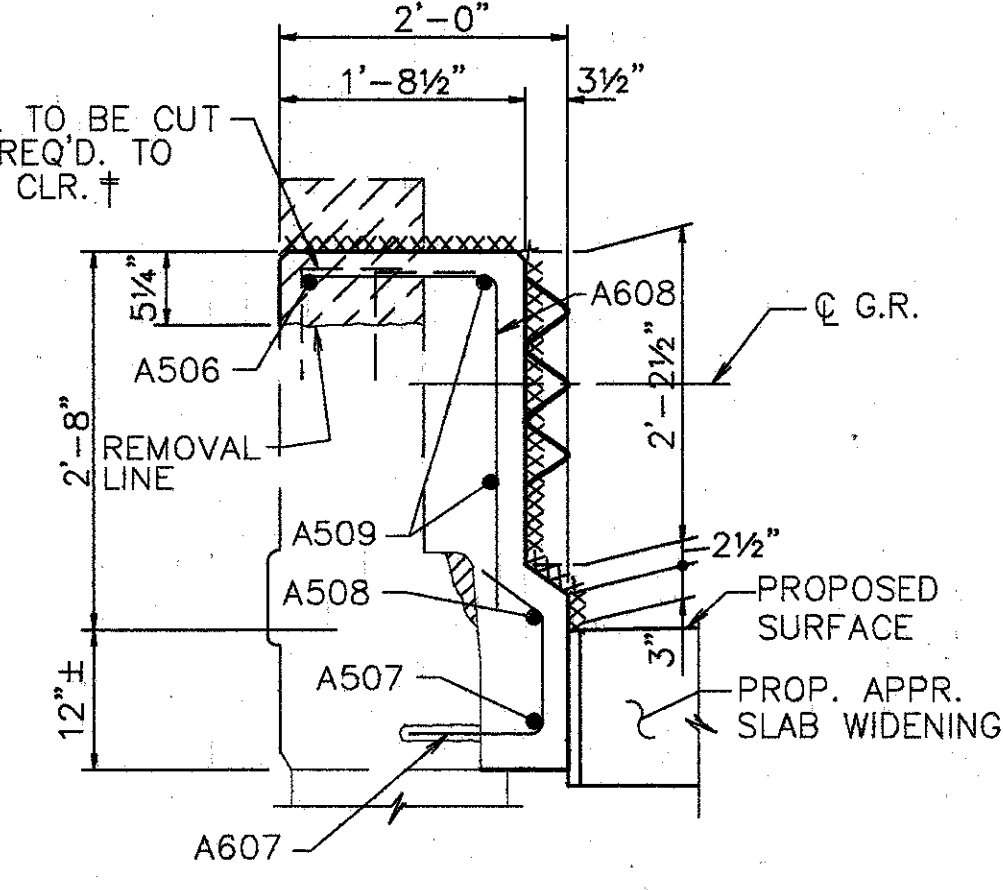
- NOTES:**
- L DENOTES LEFT SIDE
  - R DENOTES RIGHT SIDE
  - RF DENOTES RIGHT FORWARD
  - LF DENOTES LEFT FORWARD
  - RR DENOTES RIGHT REAR
  - LR DENOTES LEFT REAR
  - NF DENOTES NEAR FACE
  - FF DENOTES FAR FACE

- NOTES:**
- TYPE "A" WATERPROOFING AT THE BRIDGE LIMIT END OF THE APPROACH SLAB (AS PER STD. DWG. AS-1-81) SHALL BE INCLUDED IN THE PRICE BID FOR ITEM 611 APPROACH SLAB.

CURB TO BE REMOVED, EXIST. STEEL TO REMAIN BEND AS REQ'D. TO MAINTAIN 2" CLR.†

**SECTION N-N**

EXIST. STEEL TO BE CUT & BENT AS REQ'D. TO MAINTAIN 2" CLR.†



**SECTION E-E**

NOTE: 32" BARRIER ON LEFT  
 50" BARRIER ON RIGHT

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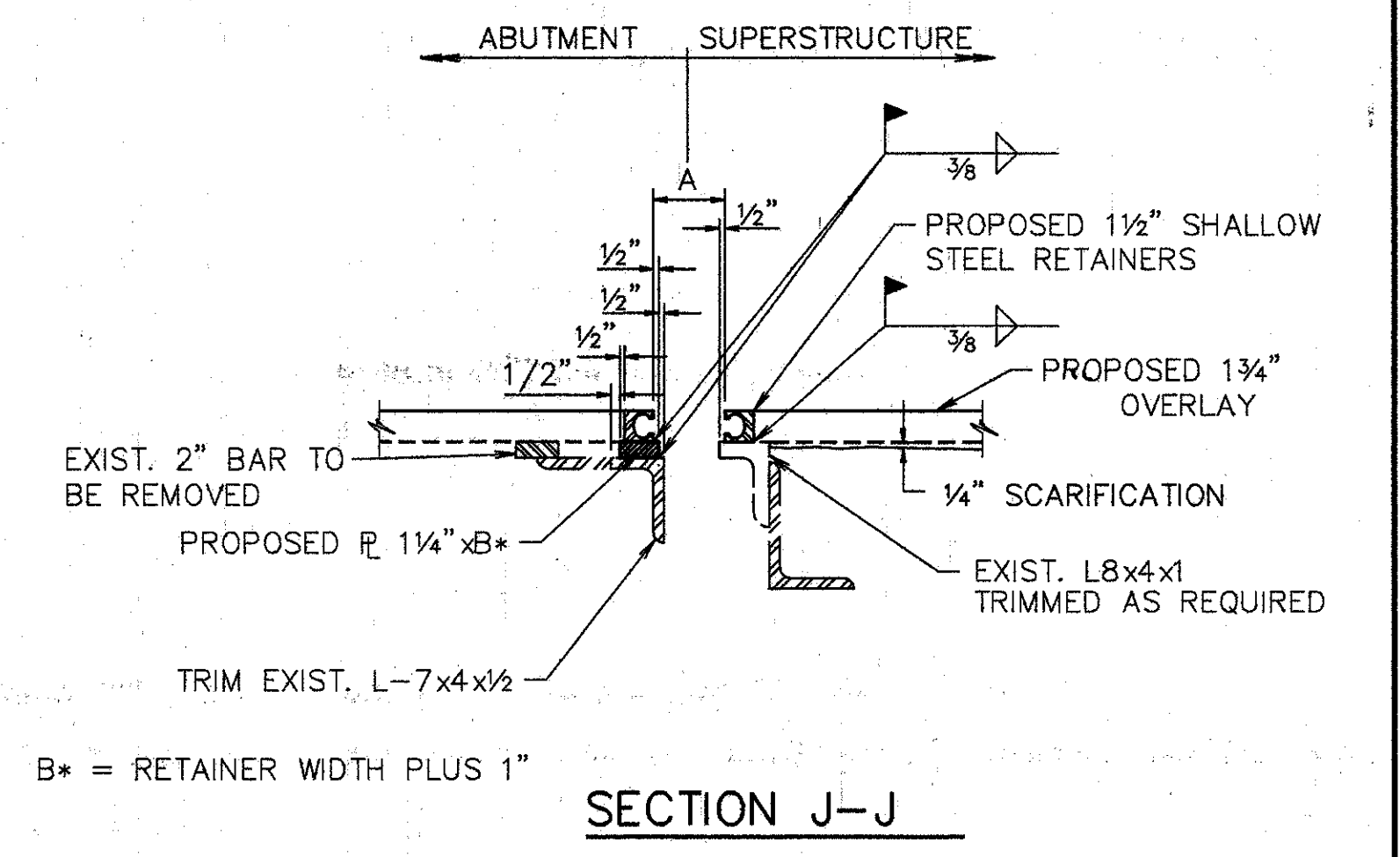
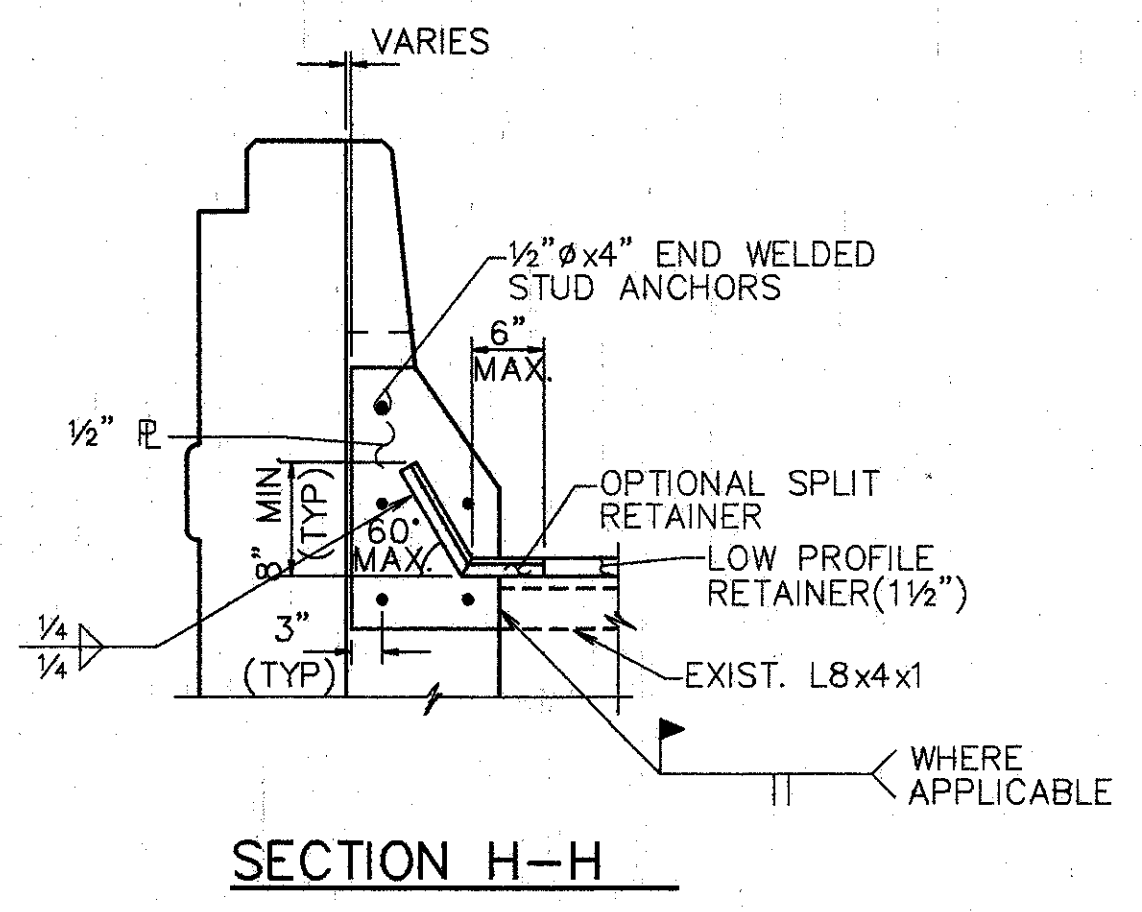
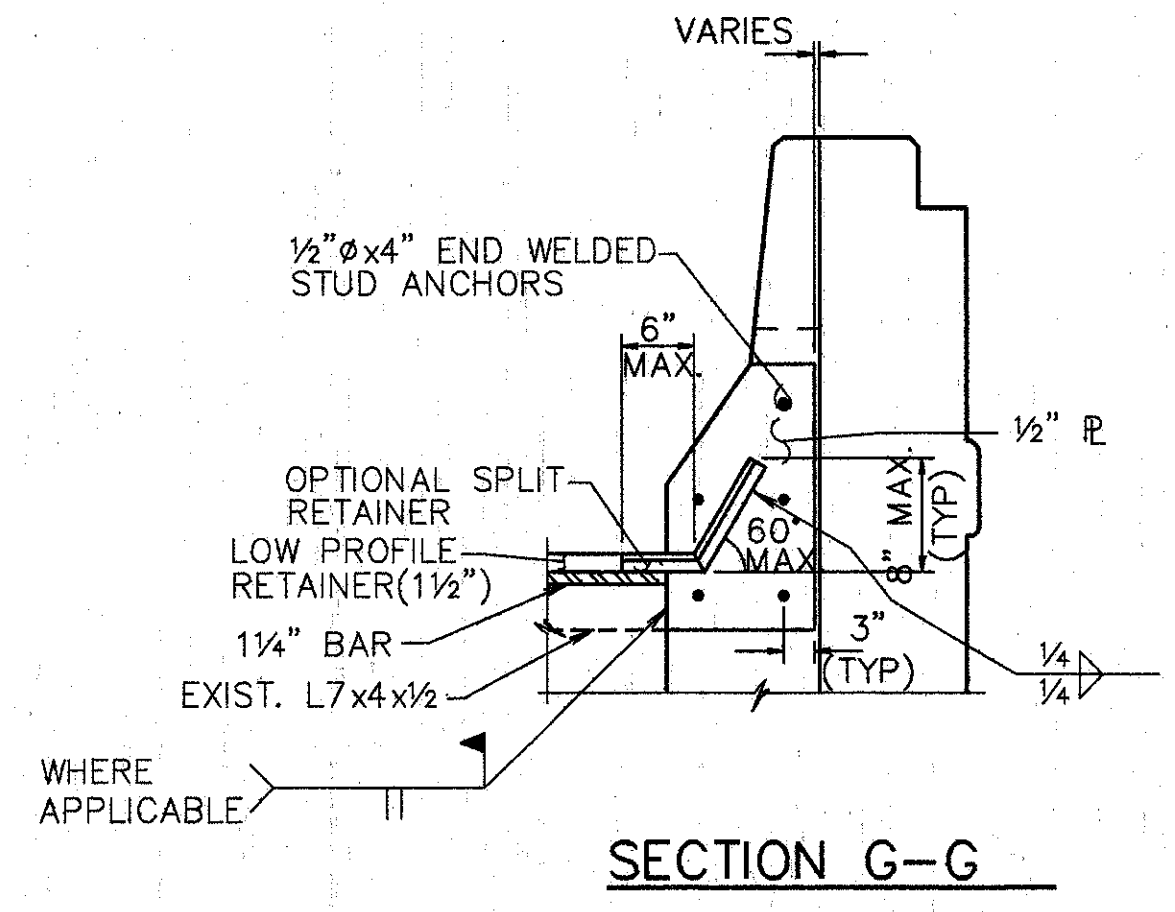
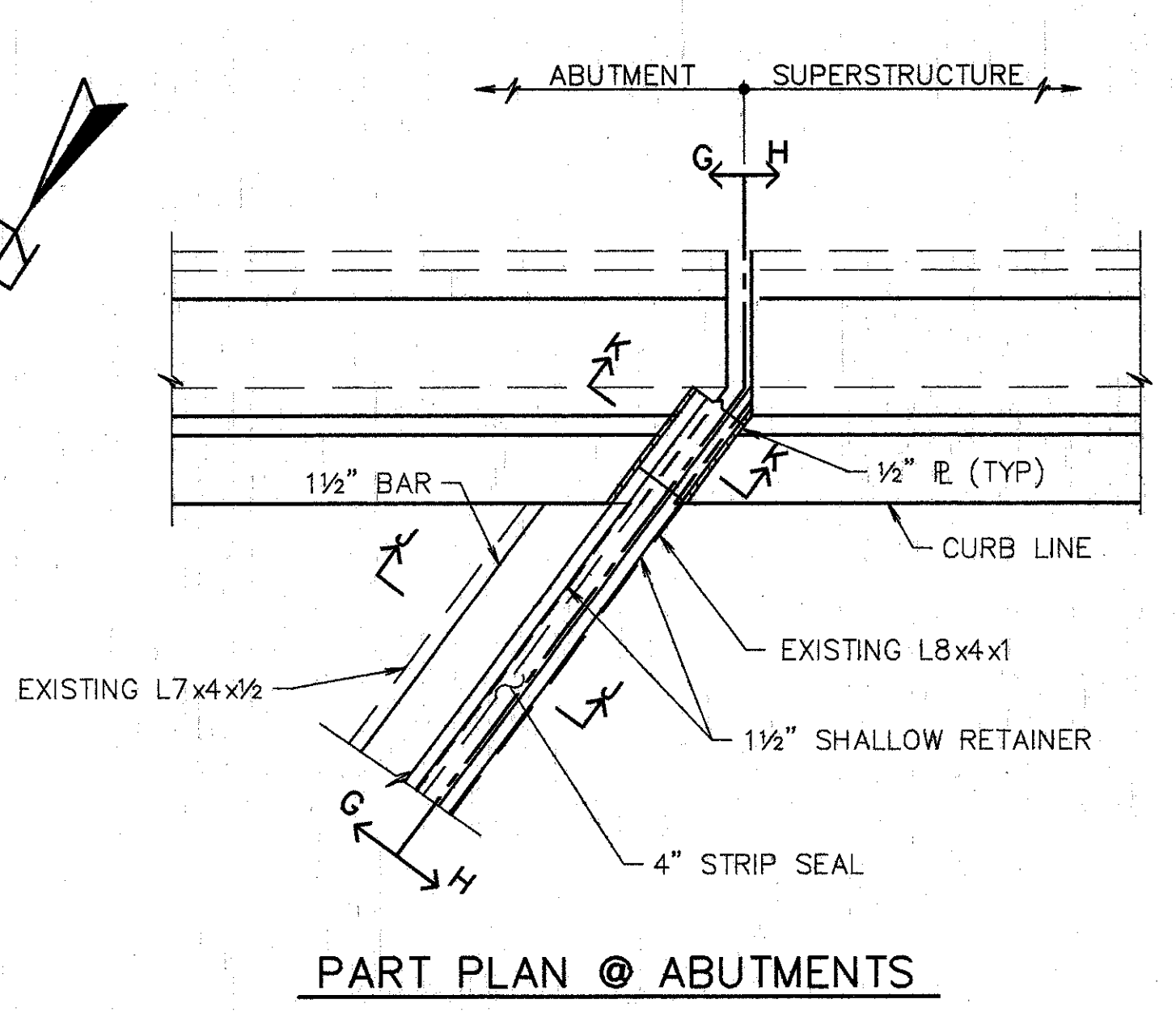
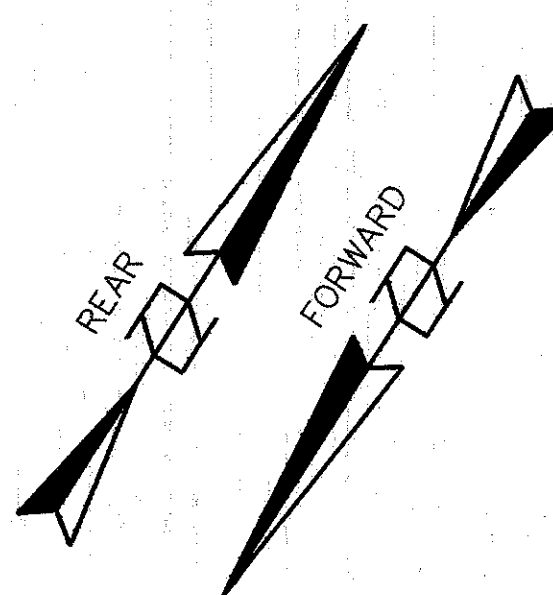
**PARAPET SECTIONS AND DETAILS**

BRIDGE NO. HAM-71-0965 R  
 OVER RED BANK ROAD  
 HAMILTON COUNTY

| DESIGNED | DRAWN  | TRACED | CHECKED | REVIEWED | DATE  | REVISED |
|----------|--------|--------|---------|----------|-------|---------|
| L.A.T.M. | D.E.E. |        | M.A.A.  | D.E.M    | 11/94 |         |

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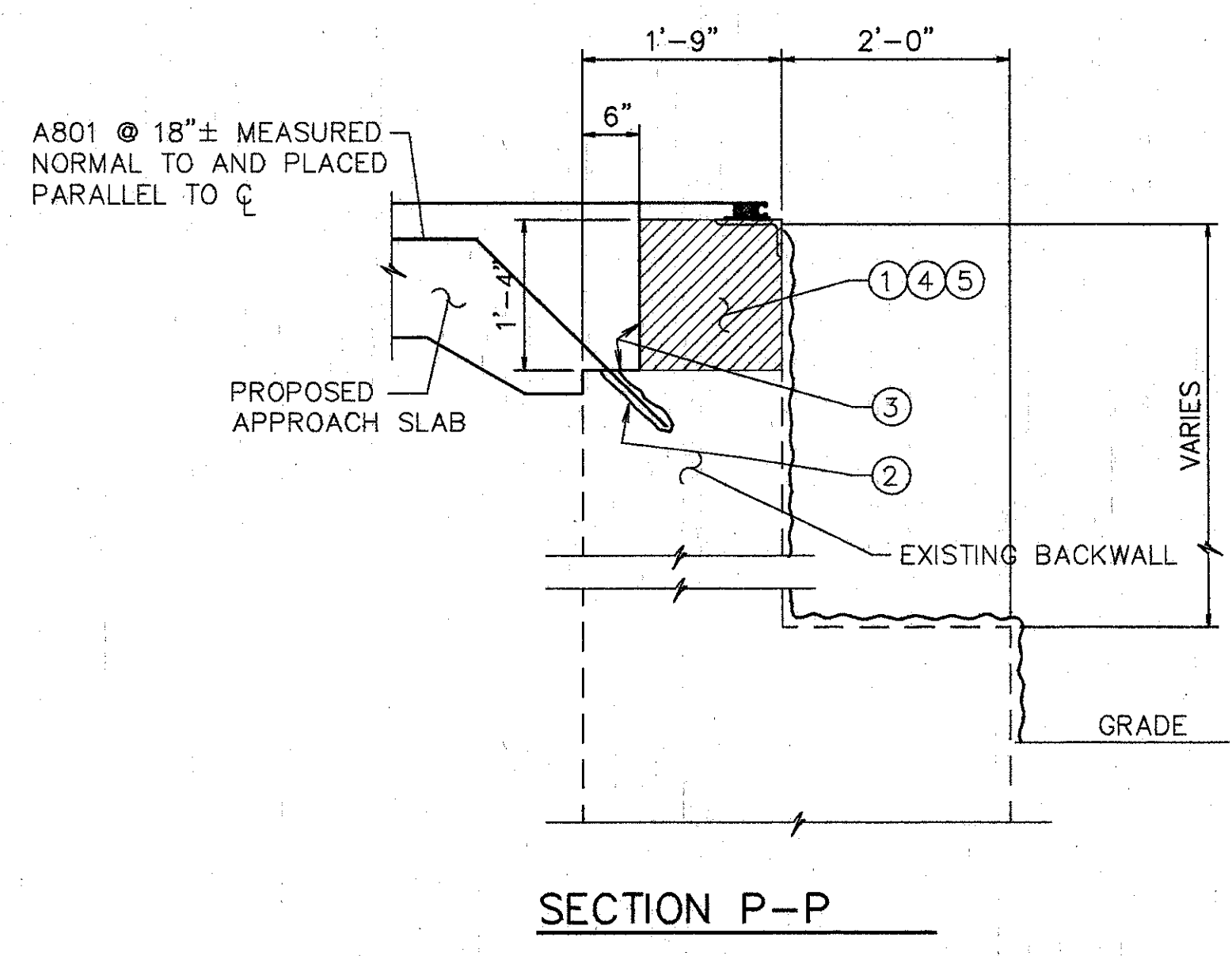
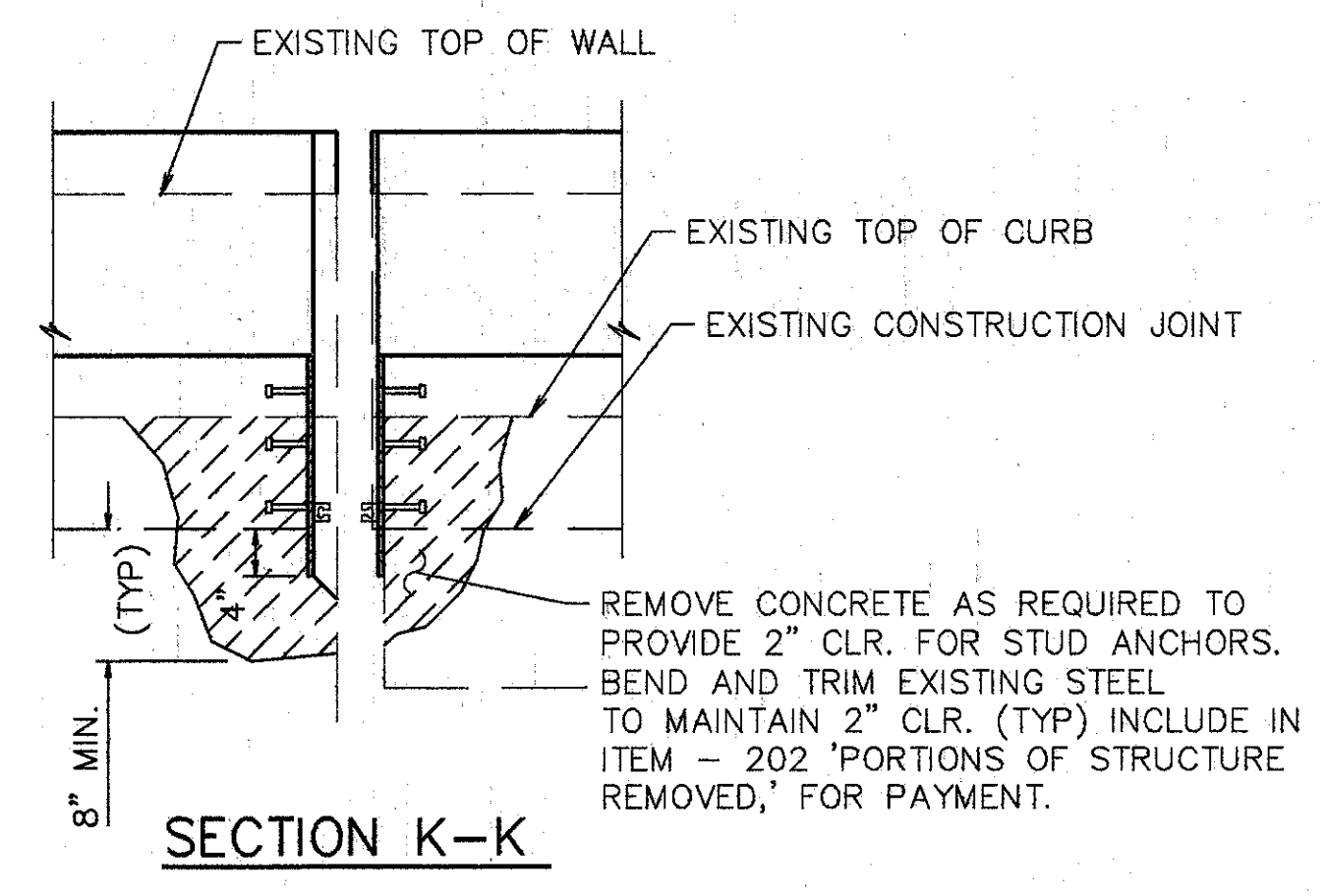
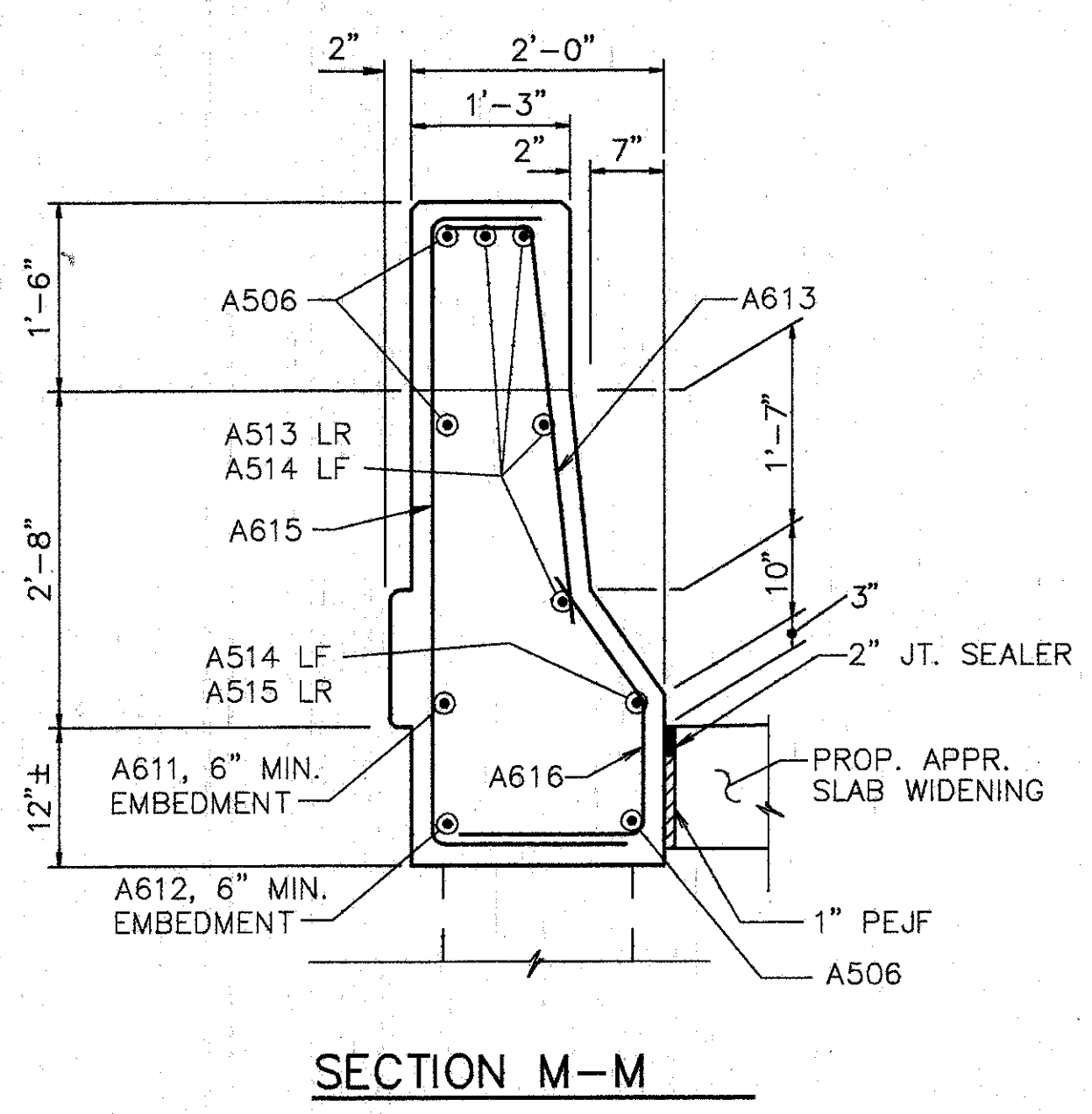




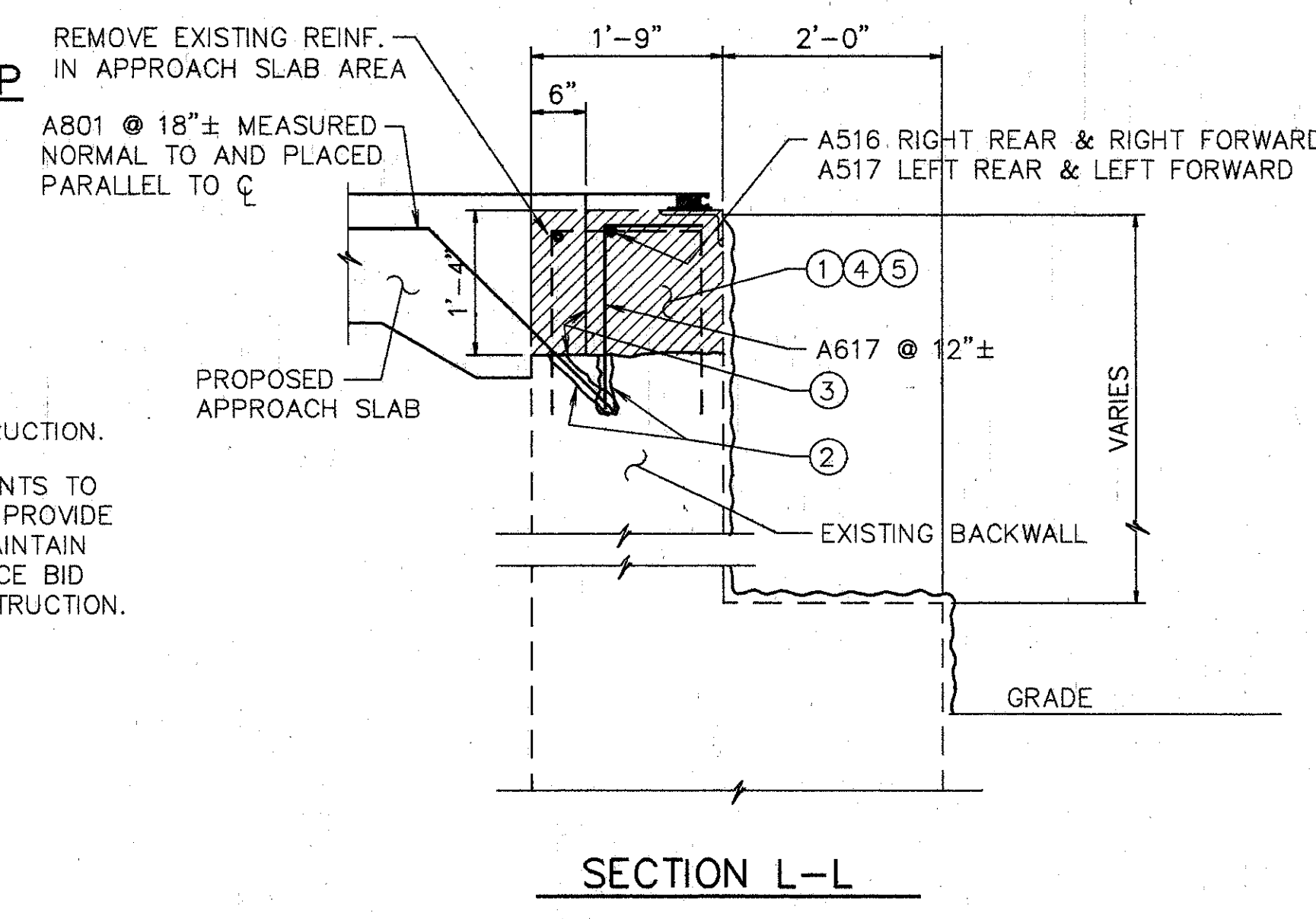
- NOTES:**
1. EXPANSION JT. DETAILS TO BE WORKED WITH STD. DWG. EXJ-4-87 SHTS. 1 thru 5.
  2. WHEN PLATE IS RECESSED INTO ABUTMENT, CONCRETE BELOW PLATE SHALL BE SLOPED FROM BOTTOM OF THE PLATE TO THE END OF THE ABUTMENT TO DETER ACCUMULATION OF DEBIS.

- NOTES:**
1. CONTRACTOR TO VERIFY ALL DIMENSIONS PRIOR TO MODIFYING EXPANSION JOINT.
  2. THE PRICE BID FOR ITEM 516-'STRUCTURAL EXPANSION JOINTS, INCLUDING ELASTOMERIC STRIP SEALS, SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, AND ANY OTHER INCIDENTAL ITEMS, AS DETAILED. (REMOVAL OF CURB OR PARAPET AS SHOWN SHALL BE INCLUDED UNDER ITEM 202-'PORTIONS OF STRUCTURE REMOVED').
  3. FOR DETAILS NOT SHOWN REFER TO DWG. EXJ-4-87 SHTS. 3 AND 4.
  4. STRIP SEAL TO BE INSTALLED IN ONE CONTINUOUS PIECE (NO OPEN JOINTS).
  5. PROVIDE TEMPORARY SUPPORT FOR ABUTMENT END DAM DURING CONSTRUCTION. REMOVE TEMPORARY SUPPORT AS SOON AS CONCRETE HAS SET, PREFERABLY WITHIN TWO HOURS AFTER PLACING TO AVOID DAMAGE DUE TO EXPANSION AND CONTRACTION OF SUPERSTRUCTURE.

| TEMPERATURE | DIM. 'A' |         |
|-------------|----------|---------|
|             | REAR     | FORWARD |
| 40° F       | 3 1/2"   | 3 1/8"  |
| 50° F       | 3 3/8"   | 3 1/8"  |
| 60° F       | 3 1/4"   | 3 1/8"  |
| 70° F       | 3 1/4"   | 3"      |
| 80° F       | 3 1/8"   | 3"      |
| 90° F       | 3"       | 3"      |



- NOTES FOR SECTION L-L & P-P**
- ① EXISTING REINFORCING STEEL TO REMAIN ~ REINFORCING STEEL DAMAGED TO BE REPLACED AT CONTRACTORS EXPENSE.
  - ② 1' MIN. EMBEDMENT (SEE DOWEL HOLE GENERAL NOTE) ITEM 510.
  - ③ TYPE 'A' WATERPROOFING (PAYMENT INCLUDED IN THE PRICE BID FOR APPROACH SLAB).
  - ④ CLASS 'C' CONCRETE, ABUTMENT RECONSTRUCTION.
  - ⑤ PROVIDE CONTRACTION AND EXPANSION JOINTS TO MATCH THOSE IN EXISTING BACKWALL AND PROVIDE CONSTRUCTION JOINTS AS REQUIRED TO MAINTAIN TRAFFIC. PAYMENT TO BE INCLUDED IN PRICE BID FOR ITEM 511 CLASS C CONCRETE RECONSTRUCTION.
- EXISTING CONCRETE TO BE REMOVED INCLUDE IN ITEM 202 FOR PAYMENT.
- SURFACE TO BE SEALED UNDER ITEM SPECIAL-'SEALING OF CONCRETE SURFACE, EPOXY'.



SEE NOTES ON SHT. 2/4

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**MISCELLANEOUS DETAILS**

BRIDGE NO. HAM-71-0965 R  
 OVER RED BANK ROAD

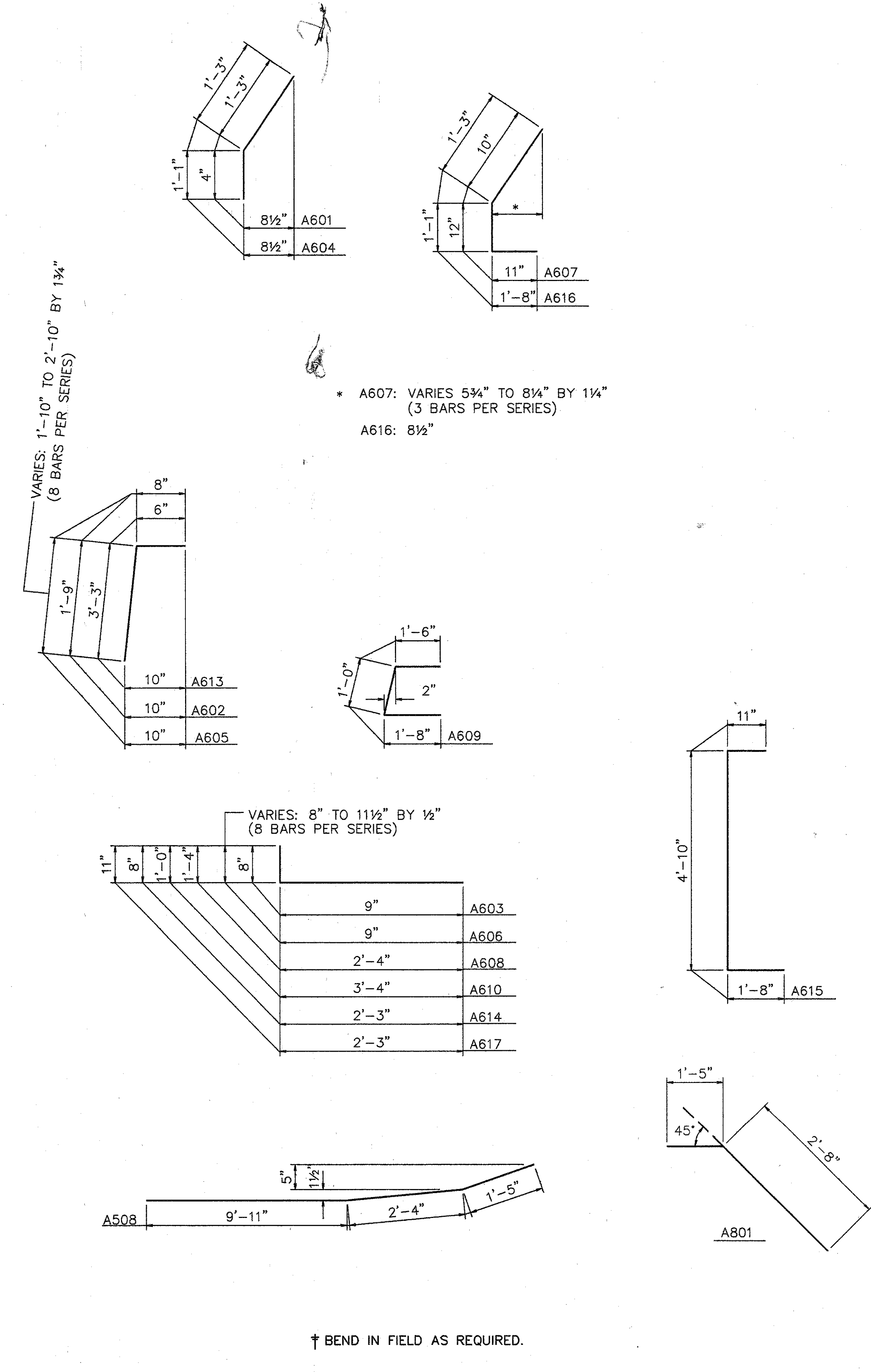
HAMILTON COUNTY

|          |        |        |         |          |          |         |
|----------|--------|--------|---------|----------|----------|---------|
| DESIGNED | DRAWN  | TRACED | CHECKED | REVIEWED | DATE     | REVISED |
| L.A.T.M. | D.E.E. |        | M.A.A.  | D.E.E.   | 11/11/94 |         |

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| REINFORCING STEEL LIST |        |        |                |        |
|------------------------|--------|--------|----------------|--------|
| MARK                   | SHAPE  | NUMBER | LENGTH         | WEIGHT |
| A501                   | STR.   | 20     | 30'-0"         | 626    |
| A502                   | STR.   | 2      | 13'-9"         | 29     |
| A503                   | STR.   | 2      | 19'-3"         | 40     |
| A504                   | STR.   | 33     | 13'-6"         | 465    |
| A505                   | STR.   | 55     | 14'-0"         | 803    |
| A506                   | STR.   | 8      | 5'-0"          | 42     |
| A507                   | STR.   | 2      | 13'-8"         | 29     |
| A508                   | BNT. † | 2      | 13'-8"         | 29     |
| A509                   | BNT.   | 4      | 13'-8"         | 57     |
| A510                   | STR.   | 2      | 11'-0"         | 23     |
| A511                   | STR.   | 4      | 20'-4"         | 85     |
| A512                   | STR.   | 4      | 22'-0"         | 92     |
| A513                   | STR.   | 4      | 19'-0"         | 79     |
| A514                   | STR.   | 5      | 13'-8"         | 71     |
| A515                   | STR.   | 1      | 18'-10"        | 20     |
| A516                   | STR.   | 2      | 10'-6"         | 22     |
| A517                   | STR.   | 2      | 13'-2"         | 27     |
| A601                   | BNT.   | 346    | 1'-6"          | 780    |
| A602                   | BNT.   | 173    | 2'-5"          | 628    |
| A603                   | BNT.   | 175    | 1'-3"          | 329    |
| A604                   | BNT.   | 12     | 2'-3"          | 41     |
| A605                   | BNT.   | 16     | 2'-6" to 3'-6" | 72     |
| A606                   | BNT.   | 16     | 1'-3" to 1'-7" | 34     |
| A607                   | BNT.   | 6      | 2'-6"          | 23     |
| A608                   | BNT.   | 6      | 3'-6"          | 32     |
| A609                   | BNT.   | 2      | 3'-10"         | 12     |
| A610                   | BNT.   | 4      | 4'-2"          | 25     |
| A611                   | STR.   | 4      | 1'-2"          | 7      |
| A612                   | STR.   | 4      | 10"            | 5      |
| A613                   | BNT.   | 172    | 3'-7"          | 926    |
| A614                   | BNT.   | 170    | 2'-9"          | 702    |
| A615                   | BNT.   | 2      | 7'-1"          | 21     |
| A616                   | BNT.   | 2      | 3'-9"          | 11     |
| A617                   | BNT.   | 40     | 3'-0"          | 180    |
| A801                   | BNT.   | 101    | 4'-0"          | 1079   |
| REPLACEMENT STEEL      |        |        |                | 300    |
| TOTAL                  |        |        |                | 7746   |

BENT BAR DETAILS



| ITEM    | TOTAL    | UNITS     | DESCRIPTION                                                        |
|---------|----------|-----------|--------------------------------------------------------------------|
| 202     | 11200    | LUMP SUM  | PORTIONS OF STRUCTURE REMOVED                                      |
| 509     | 15820    | 7746 LBS. | EPOXY COATED REINFORCING STEEL, GRADE 60                           |
| 510     | 12201    | 141 L.F.  | DOWEL HOLES AS PER PLAN                                            |
| 511     | 34450    | 13 C.Y.   | CLASS S CONCRETE, MISC.: ABUTMENT PARAPETS                         |
| 511     | 45700    | 11 C.Y.   | CLASS C CONCRETE, ABUTMENT (RECONSTRUCTION)                        |
| SPECIAL | 51267500 | 905 S.Y.  | SEALING OF CONCRETE SURFACE *                                      |
| SPECIAL | 51267502 | 243 S.Y.  | SEALING OF CONCRETE SURFACE (EPOXY) *                              |
| 513     | 21000    | 18 EACH   | TRIMMING OF BEAM END                                               |
| 514     | 27704    | LUMP L.S. | FIELD PAINTING EXISTING STEEL, EEU X                               |
| 516     | 14600    | 35 L.F.   | STRUCTURAL JOINT OR JOINT SEALER, MISC.: 2"x4" SEALER, AS PER PLAN |
| 516     | 11210    | 166 L.F.  | STRUCTURAL EXP. JT., INCLUDING ELASTOMERIC STRIP SEAL              |
| 516     | 45304    | 18 EACH   | REFURBISH BEARING DEVICE                                           |
| 517     | 76201    | 154 L.F.  | RAILING FACED, AS PER PLAN (32" HIGH)                              |
| 517     | 76201    | 160 L.F.  | RAILING FACED, AS PER PLAN (50" HIGH)                              |
| 518     | 12700    | 10 EACH   | SCUPPER, VERTICAL EXTENSION                                        |
| 519     | 11100    | 3 S.F.    | PATCHING CONCRETE STRUCTURE                                        |
| 625     |          |           | FOR LIGHTING SUMMARY SEE LIGHTING PLANS.                           |
| 518     | 63300    | LUMP L.S. | SCUPPER AND DRAINAGE PIPE CLEANOUT                                 |
| 845     | 40210    | 1326 S.Y. | LATEX MODIFIED CONCRETE OVERLAY (1 1/4" THICK) ON EXISTING DECK    |
| 845     | 11000    | 13 C.Y.   | LATEX MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS)               |
| 845     | 30000    | 1 C.Y.    | FULL DEPTH REPAIR                                                  |

\* SEE PROPOSAL NOTE

PROPOSED WORK

- MODIFY PARAPETS ON THE SUPERSTRUCTURE & ABUTMENTS. SEAL PARAPETS AS SHOWN ON PLANS. (INSTALL PLATES FOR STRIP SEAL EXP. JT.).
- SCARIFY EXISTING DECK 1/4", AND REMOVE DETERIORATED CONCRETE AS DIRECTED BY THE ENGINEER.
- REFURBISH ALL ABUTMENT BEARINGS.
- PLACE 1 1/4" THICK LATEX MODIFIED CONCRETE ON DECK.
- SEAL PARAPETS, PIERS, AND BACKWALL.
- RECONSTRUCT ABUTMENT BACKWALL ABOVE APPROACH SLAB SEAT.
- SEAL EXPANSION JOINT WITH STRIP SEAL.
- REPLACE GUARDRAIL AS SHOWN ON ROADWAY PLANS.
- TRIM BEAM ENDS.
- EXTEND SCUPPERS TO 8" BELOW BRIDGE BEAMS.
- AT LEAST ONE LANE OF TRAFFIC SHALL BE MAINTAINED IN EACH DIRECTION AND ON THE BRIDGE AT ALL TIMES. FOR NOTES SEE MAINTENANCE OF TRAFFIC PLANS. MAINTENANCE OF TRAFFIC PLAN REQUIRES CONSTRUCTION PHASING LIMITS AT LANE CENTERLINES. DUE TO THESE LIMITS, OVERLAY MAY REQUIRE SPECIAL ATTENTION.
- OTHER WORK AS DESCRIBED IN THESE PLANS.

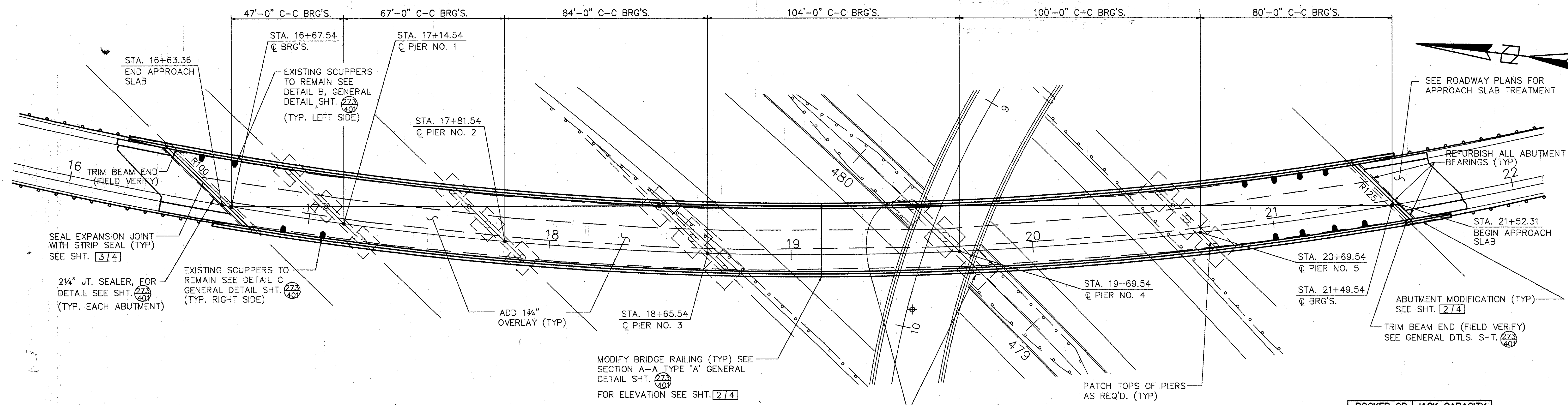
**WOOLPERT CONSULTANTS**  
 409 E. MONUMENT AVENUE  
 DAYTON, OHIO 45402-1226  
 (513) 461-5660

**QUANTITIES AND GENERAL NOTES**  
 BRIDGE NO. HAM-71-0965 R  
 OVER RED BANK ROAD  
 HAMILTON COUNTY

|          |        |        |         |               |      |         |
|----------|--------|--------|---------|---------------|------|---------|
| DESIGNED | DRAWN  | TRACED | CHECKED | REVIEWED      | DATE | REVISED |
| L.A.T.M. | D.E.E. |        | M.A.A.  | D.E.M11/11/94 |      |         |

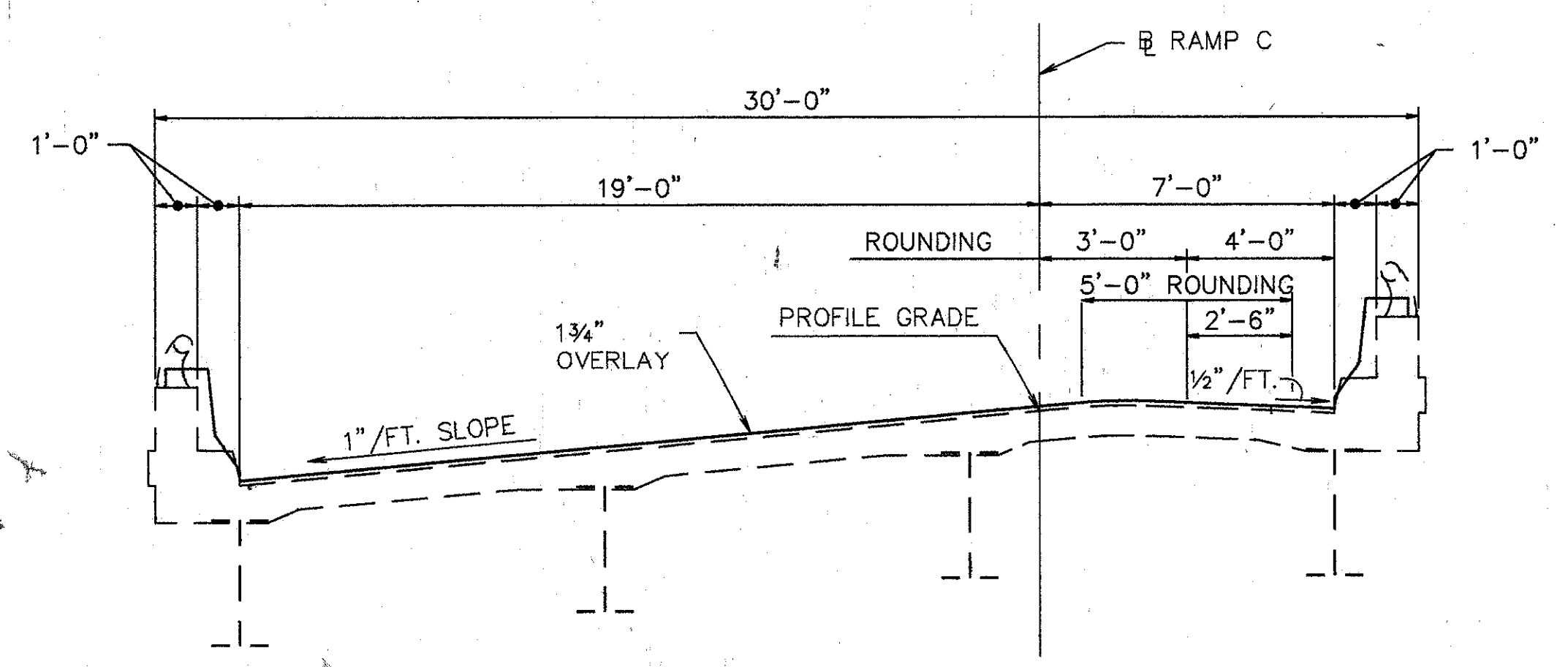
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PLAN

| ROCKER OR BOLSTER SIZE | JACK CAPACITY REQ'D. (MIN) |
|------------------------|----------------------------|
| R100                   | 75 TON                     |
| R125                   | 100 TON                    |



TYP. BRIDGE SECTION

- NOTES:
1. EXTEND SCUPPERS- SEE DETAIL F GENERAL DETAIL SHEET 273
  2. SEAL PARAPETS, BACKWALLS AND PIERS 3, 4 & 5. SEAL PIERS COMPLETELY EXCEPT FOR TOPS OF PIER CAPS. PIER 4 SEALING QUANTITIES BELOW TOP OF CAP ARE INCLUDED IN BRIDGE 71-0987 FOR PAYMENT.
  3. SEE JUNCTION BOX EXTENSION DETAIL GENERAL DETAIL SHEET 273 FOR BARRIER RETROFIT AT JUNCTION BOXES. REFER TO LIGHTING DETAILS FOR TYPE AND LOCATION.
  4. PAINT EXIST. STEEL STRUCTURE WITH SYSTEM OZEU.

EXISTING STRUCTURE

TYPE: CONTINUOUS STEEL GIRDER WITH REINFORCED CONCRETE DECK & SUBSTRUCTURE.  
 SPANS: 47'-0", 67'-0", 84'-0", 104'-0", 100'-0" & 80'-0"  
 ROADWAY: 28'-0" F-F PARAPET  
 SKEW: 43'-23'-17" RT. FORWARD  
 LOADING FREQUENCY: C.F.=400 (57)  
 WEARING SURFACE: 1" MONOLITHIC CONCRETE  
 APPROACH SLABS: AS-1-54 (25'-0" LONG)  
 ALIGNMENT: 4'-00'-00" CURVE TO THE LEFT  
 SUPERELEVATION: 0.0833'/FT.  
 CURB: 1'-0" EACH SIDE

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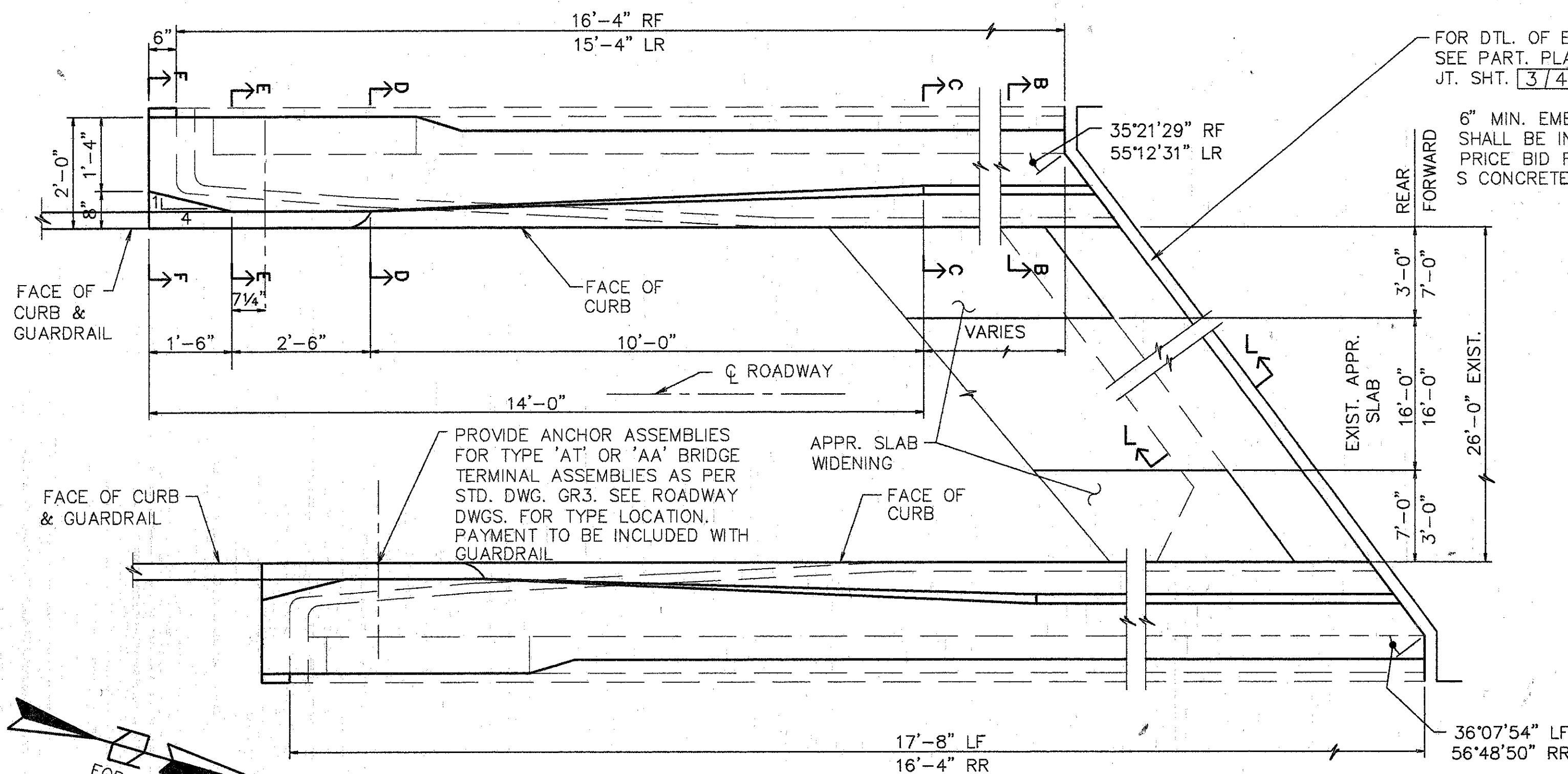
GENERAL PLAN

BRIDGE NO. HAM-71-0986  
 OVER INTERSTATE ROUTE 71

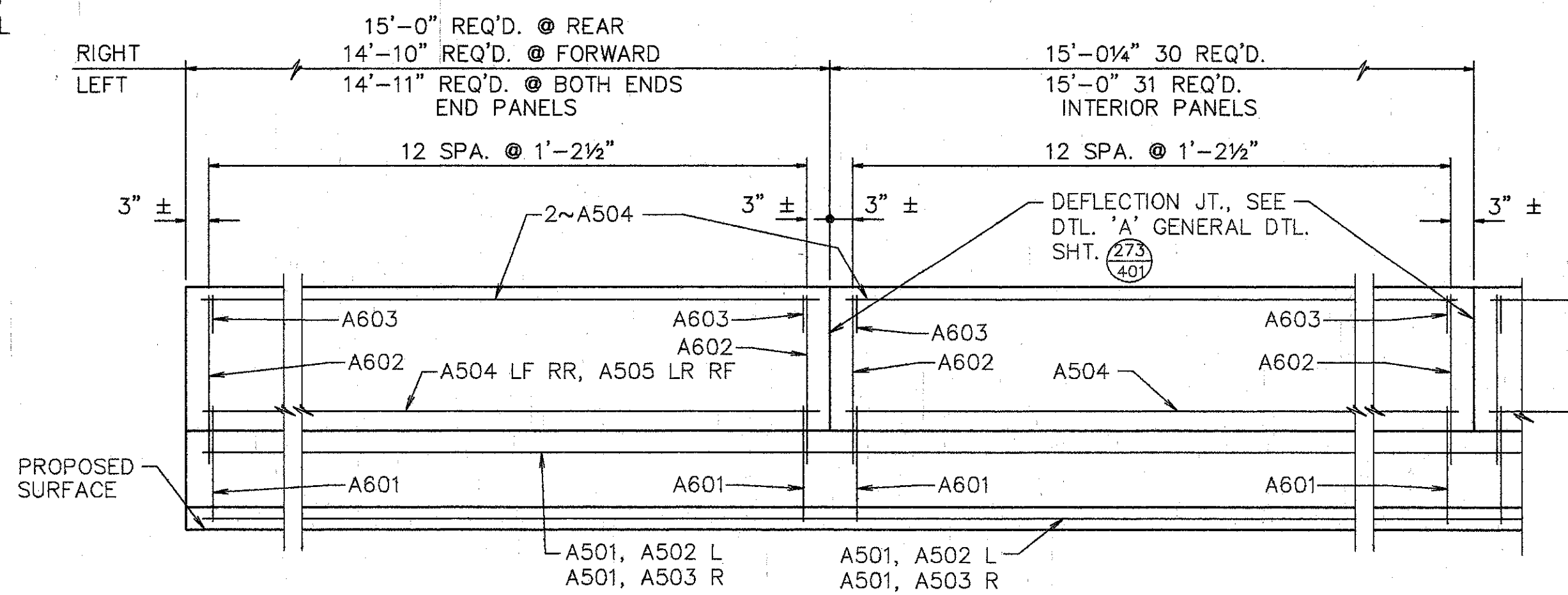
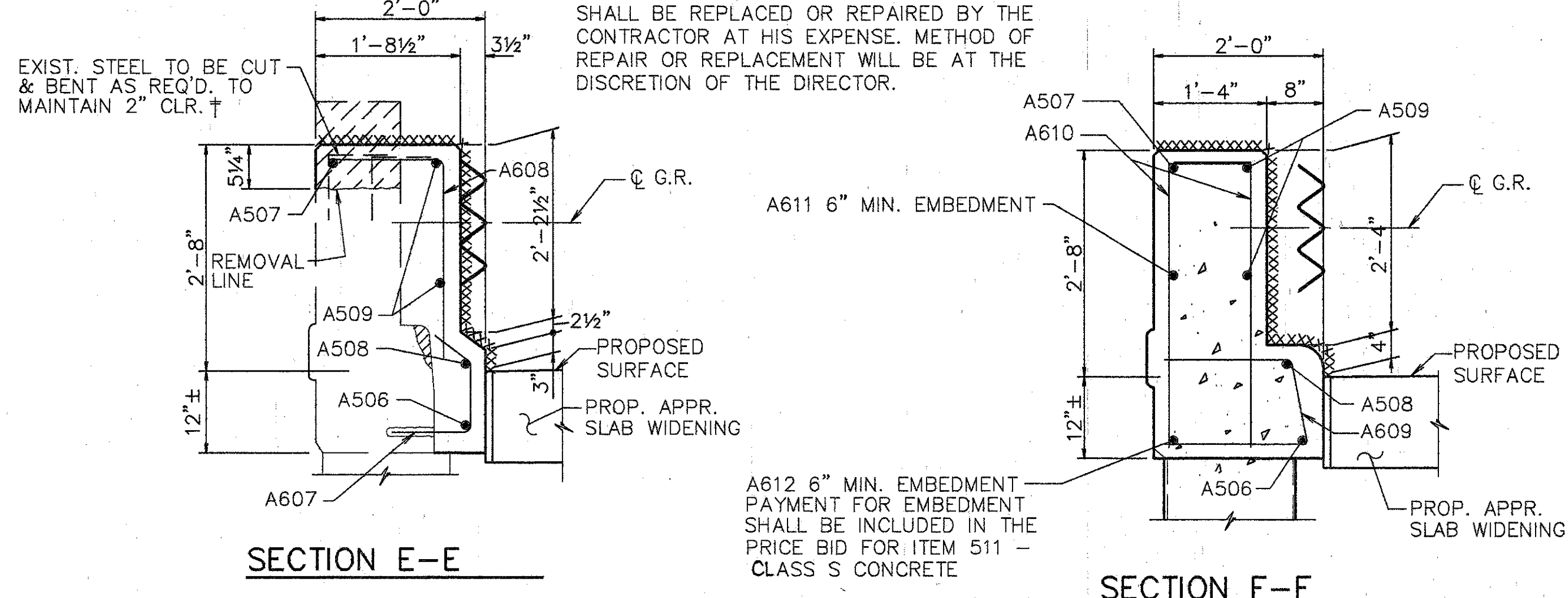
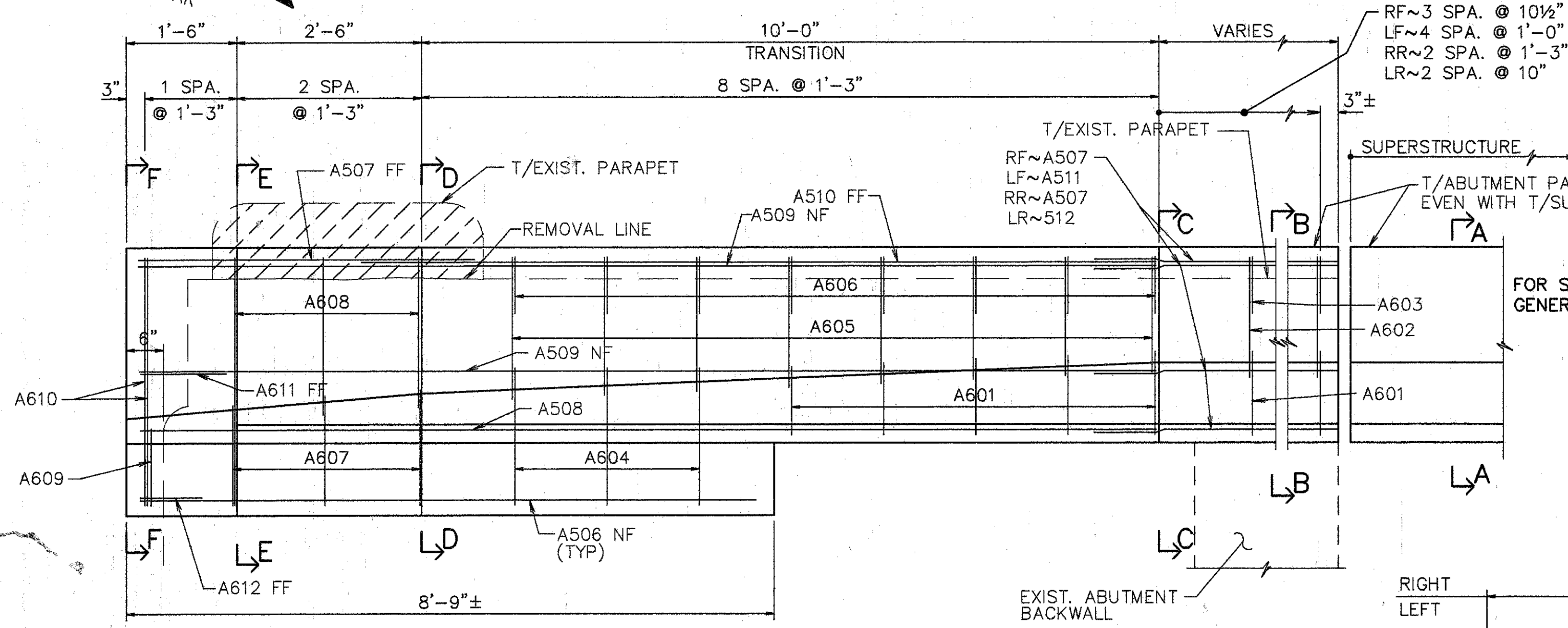
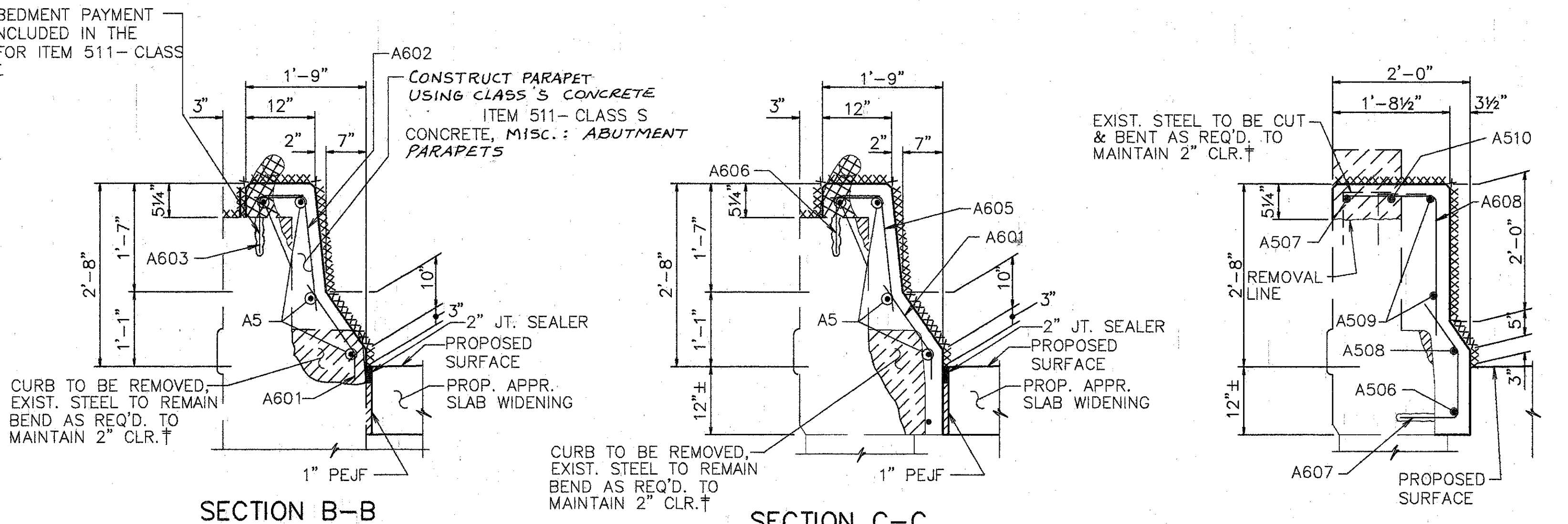
HAMILTON COUNTY

| DESIGNED | DRAWN  | TRACED | CHECKED | REVIEWED      | DATE | REVISED |
|----------|--------|--------|---------|---------------|------|---------|
| L.A.T.   | L.A.P. |        | M.A.A.  | D.E.M11/11/94 |      |         |

Plot Date: MAY 05, 1994 4:35 PM  
 Plot Path: C:\WORK\PROJECTS\HAM-71-0986\HAM-71-0986.dwg  
 Plot Device: HP-GL/2  
 Plot Scale: 1:1  
 Plot Orientation: Landscape  
 Plot Date: OCT 6, 1992 8:43 AM



PLAN - ABUTMENT MODIFICATION  
 REAR ABUT. SHOWN, FWD. ABUT. OPPOSITE HAND SAME SKEW



NOTE:  
 FOR SECTIONS NOT SHOWN THIS SHEET SEE SHT. 3/4

**WOOLPERT CONSULTANTS**  
 409 E. MONUMENT AVENUE  
 DAYTON, OHIO 45402-1226  
 (513) 461-5660

**PARAPET SECTIONS AND DETAILS**

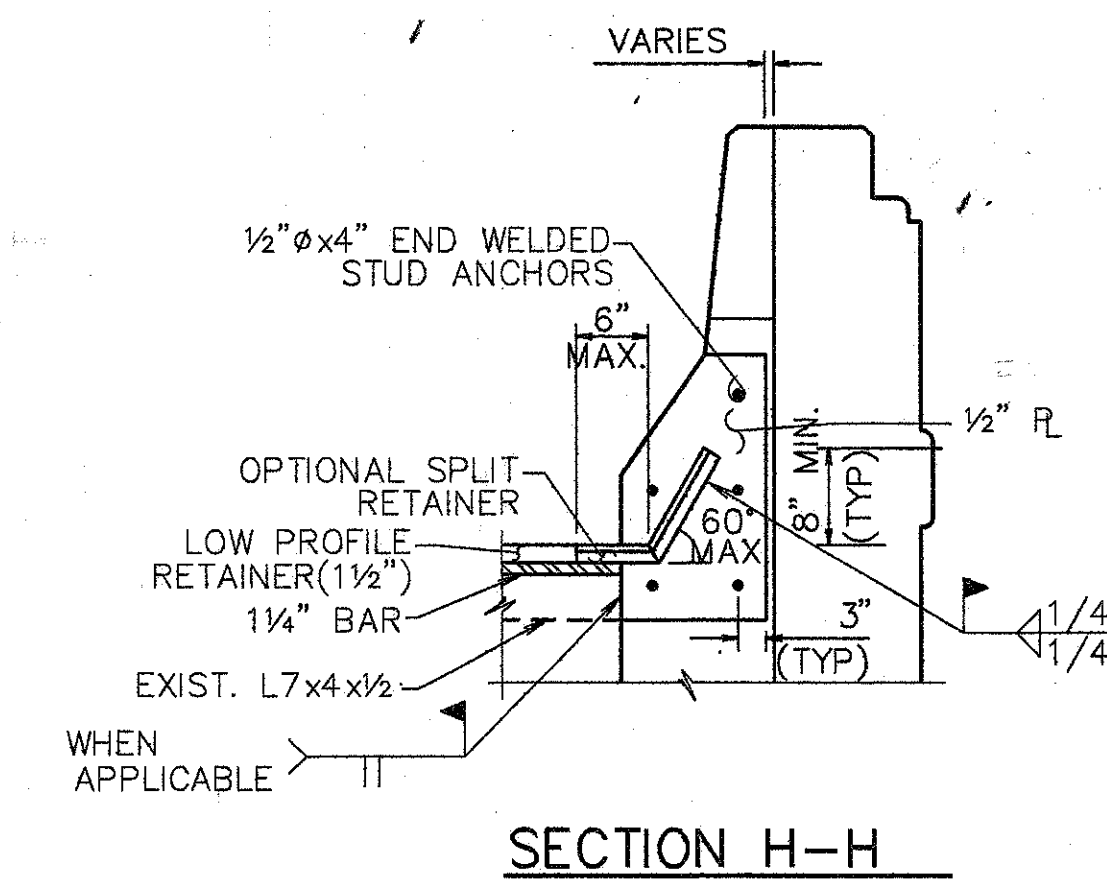
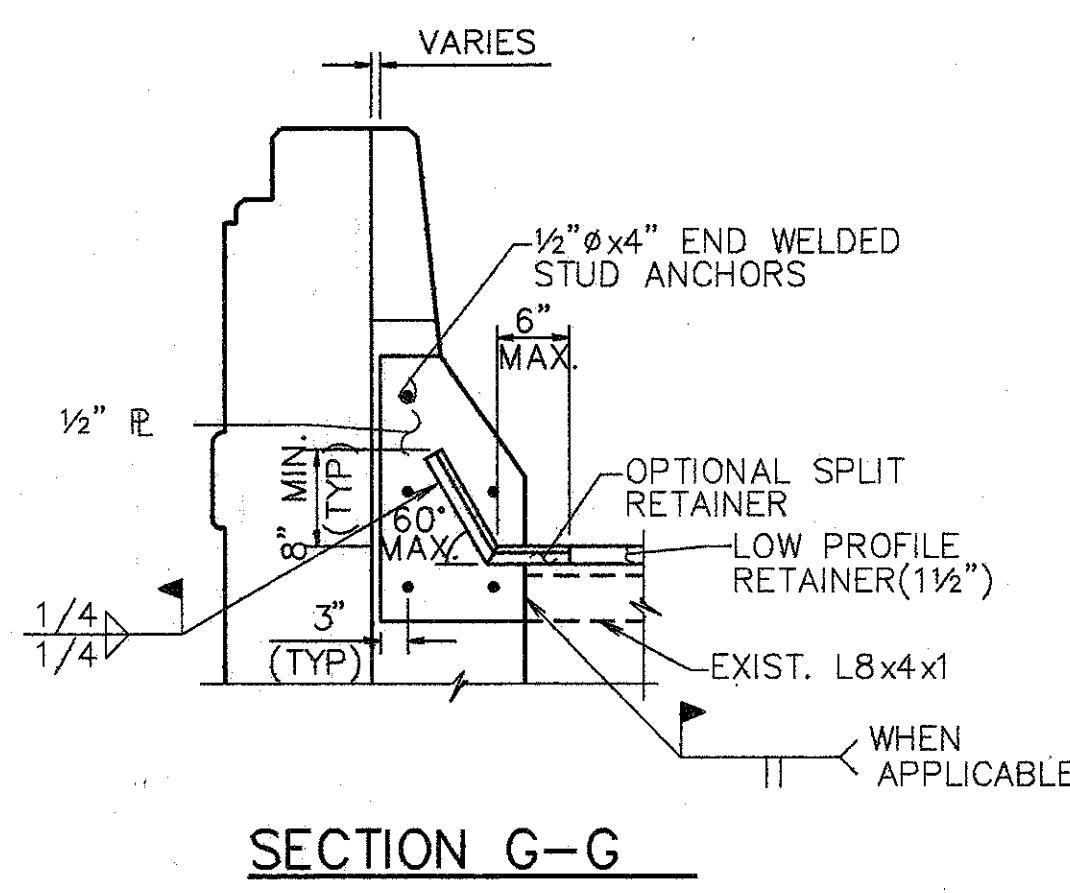
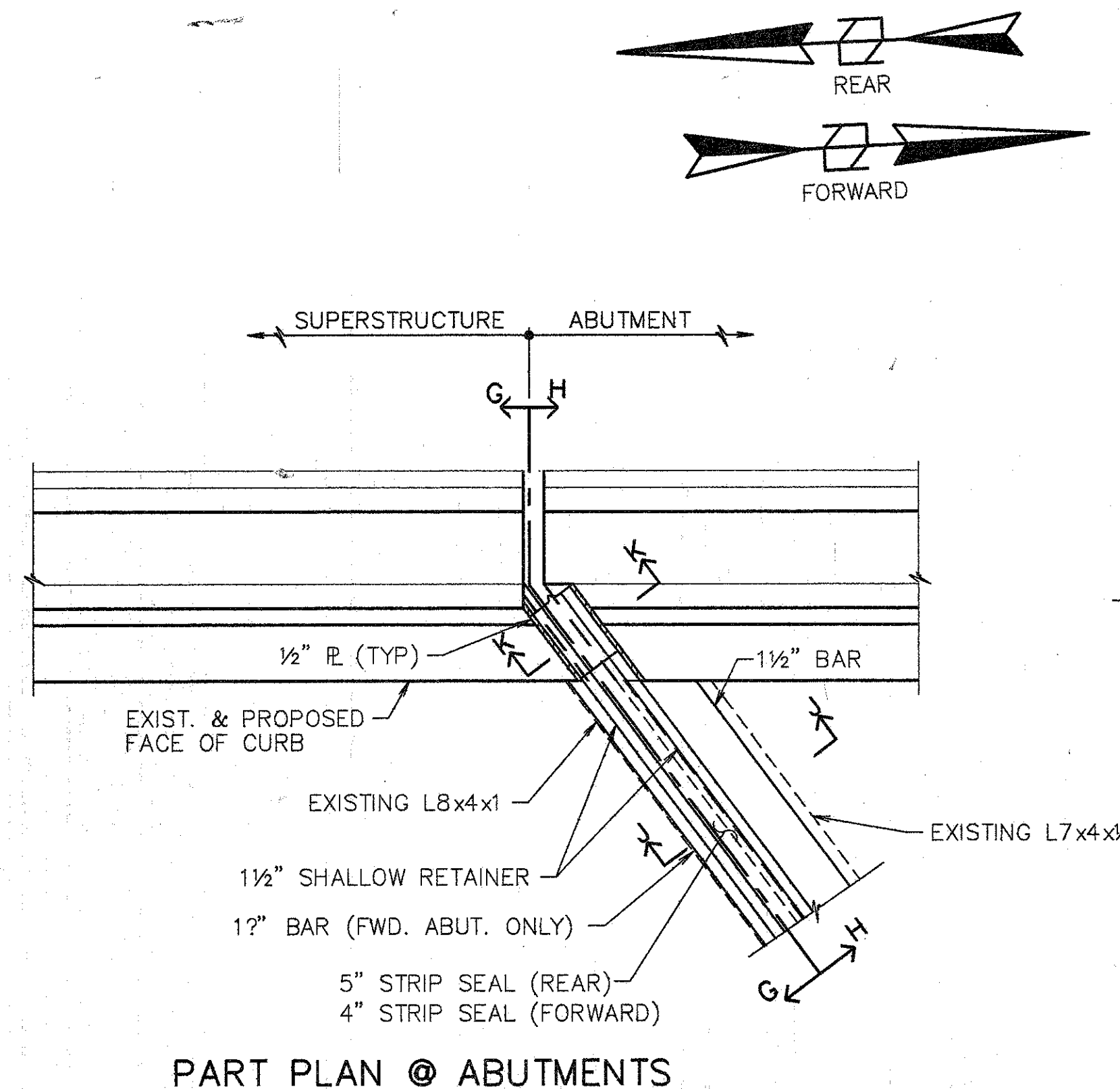
BRIDGE NO. HAM-71-0986  
 OVER I-71

HAMILTON COUNTY

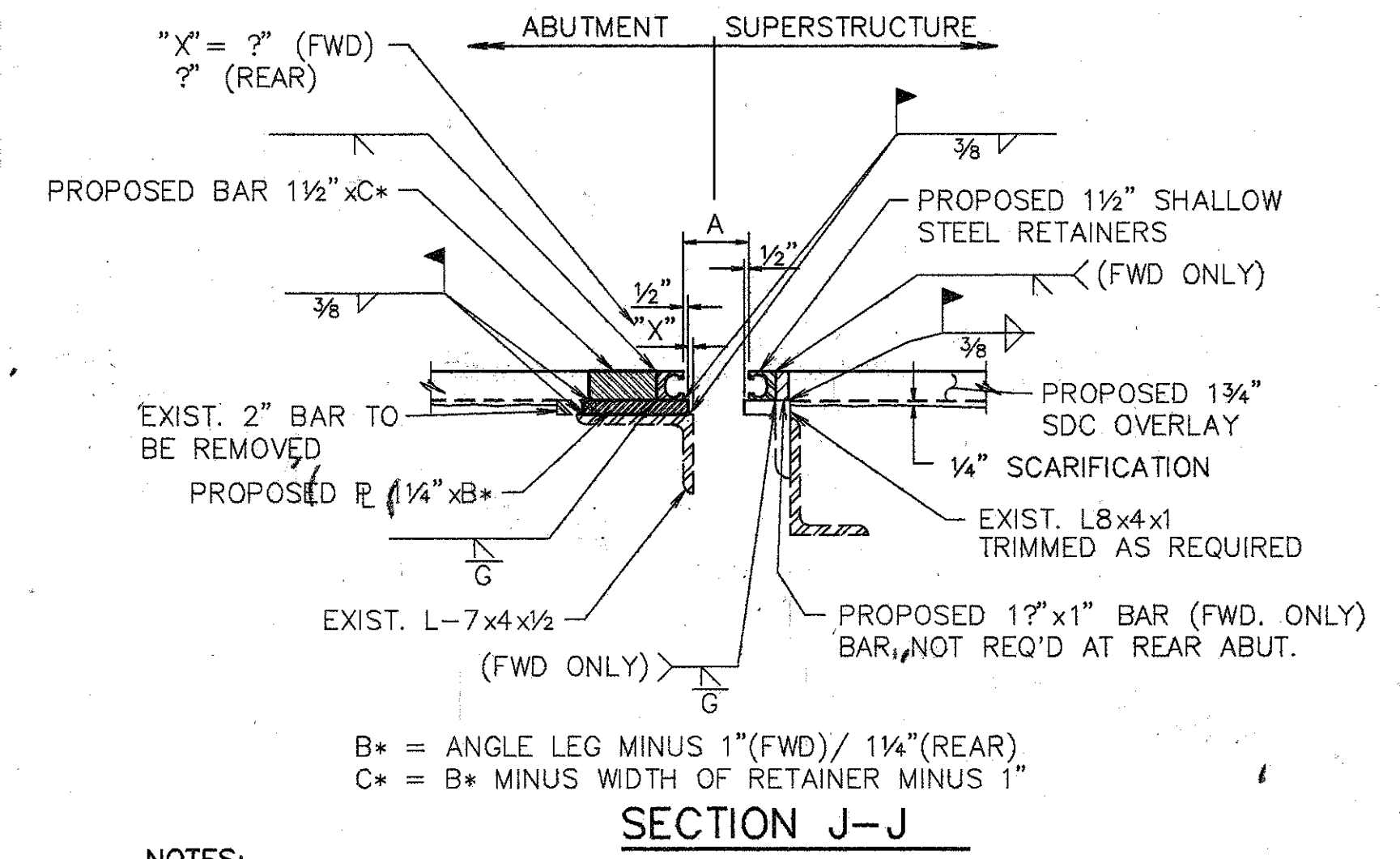
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| DESIGNED | DRAWN  | TRACED | CHECKED | REVIEWED    | DATE | REVISED |
| L.A.T.   | R.M.J. |        | M.A.A.  | D.E.M/11/94 |      |         |

Last Print: MAY 18, 1995 @ 8:01 AM  
 © STRYDOM-CONCRETE AND ASSOCIATES, INC.



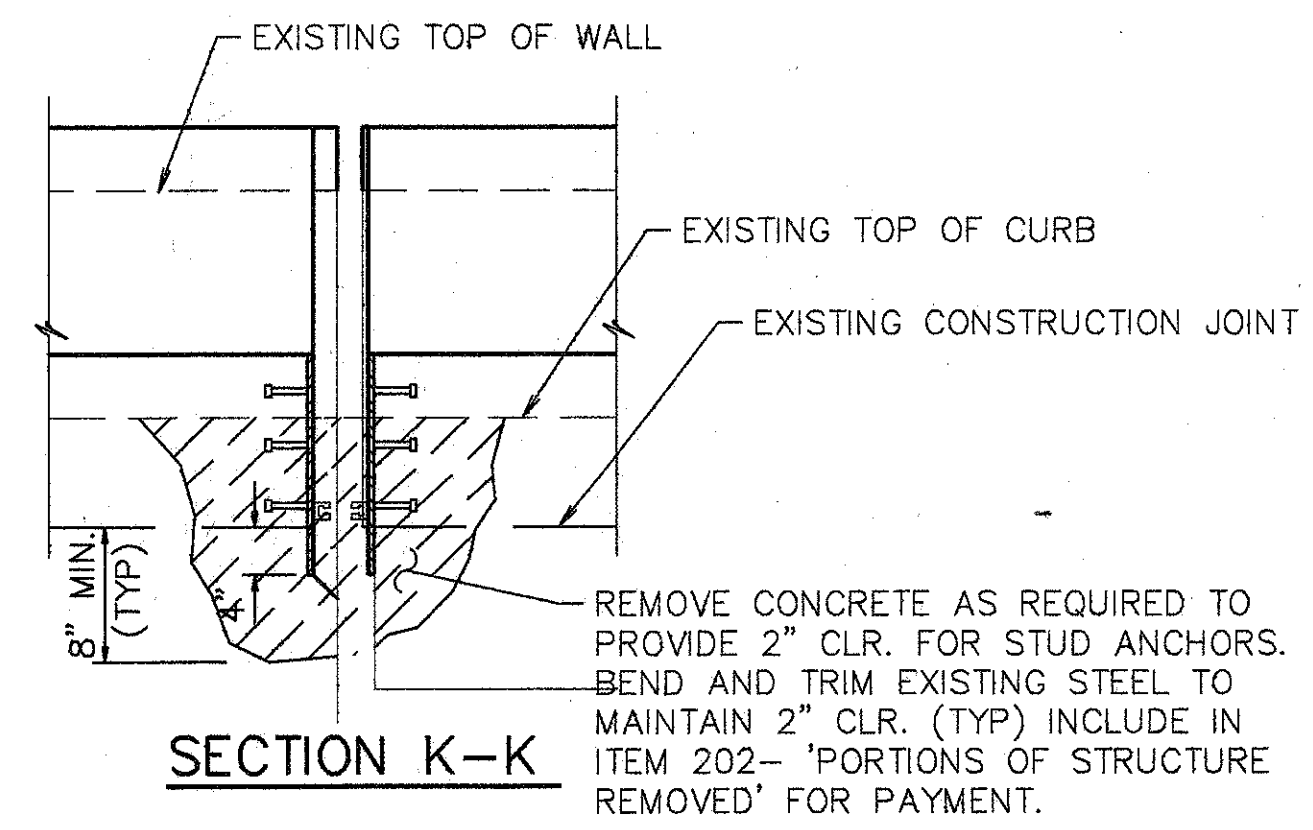
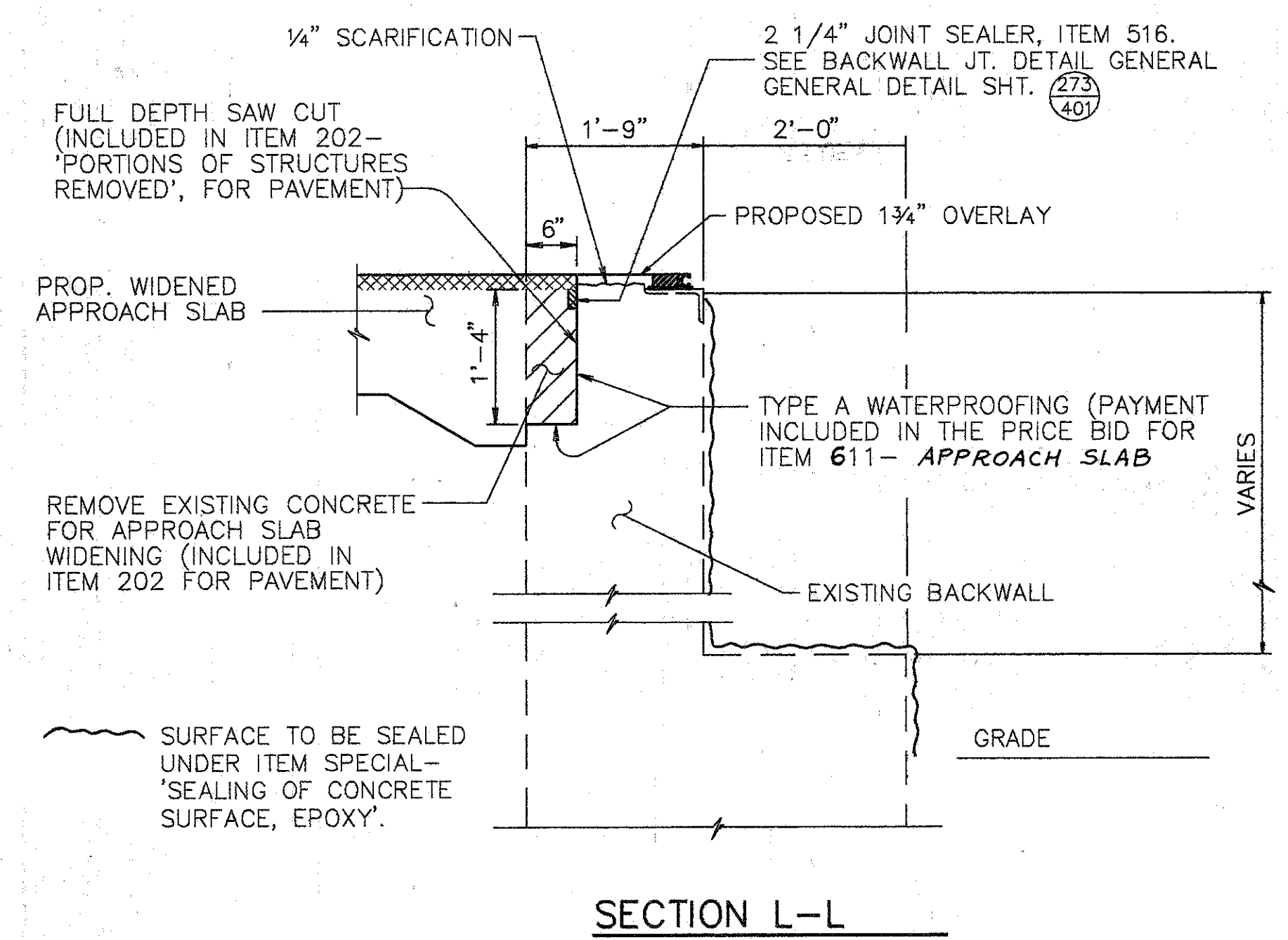


- NOTE:**
- EXPANSION JT. DETAILS TO BE WORKED WITH STD. DWG. EXJ-4-87 SHTS. 1 thru 5.
  - WHEN PLATE IS RECESSED INTO ABUTMENT, CONCRETE BELOW PLATE SHALL BE SLOPED FROM BOTTOM OF THE PLATE TO THE END OF THE ABUTMENT TO DETER THE ACCUMULATION OF DEBIS.



- NOTES:**
- CONTRACTOR TO VERIFY ALL DIMENSIONS PRIOR TO MODIFYING EXPANSION JOINT.
  - THE PRICE BID FOR ITEM 516-STRUCTURAL EXPANSION JOINTS, INCLUDING ELASTOMERIC STRIP SEALS, SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, AND ANY OTHER INCIDENTAL ITEMS, AS DETAILED. (REMOVAL OF CURB OR PARAPET AS SHOWN SHALL BE INCLUDED UNDER ITEM 202- 'PORTIONS OF STRUCTURE REMOVED').
  - FOR DETAILS NOT SHOWN REFER TO DWG. EXJ-4-87 SHTS. 3 AND 4.

| TEMPERATURE | DIM. 'A' |         |
|-------------|----------|---------|
|             | REAR     | FORWARD |
| 40° F       | 3 3/8"   | 3"      |
| 50° F       | 3 1/4"   | 2 7/8"  |
| 60° F       | 3"       | 2 3/4"  |
| 70° F       | 2 7/8"   | 2 3/4"  |
| 80° F       | 2 5/8"   | 2 5/8"  |
| 90° F       | 2 1/2"   | 2 1/2"  |



NOTE:  
 FOR NOTES SEE SHT. 2 / 4

**WOOLPERT CONSULTANTS**  
 409 E. MONUMENT AVENUE  
 DAYTON, OHIO 45402-1226  
 (513) 461-5660

3 / 4

**MISCELLANEOUS DETAILS**

BRIDGE NO. HAM-71-0986  
 OVER INTERSTATE ROUTE 71

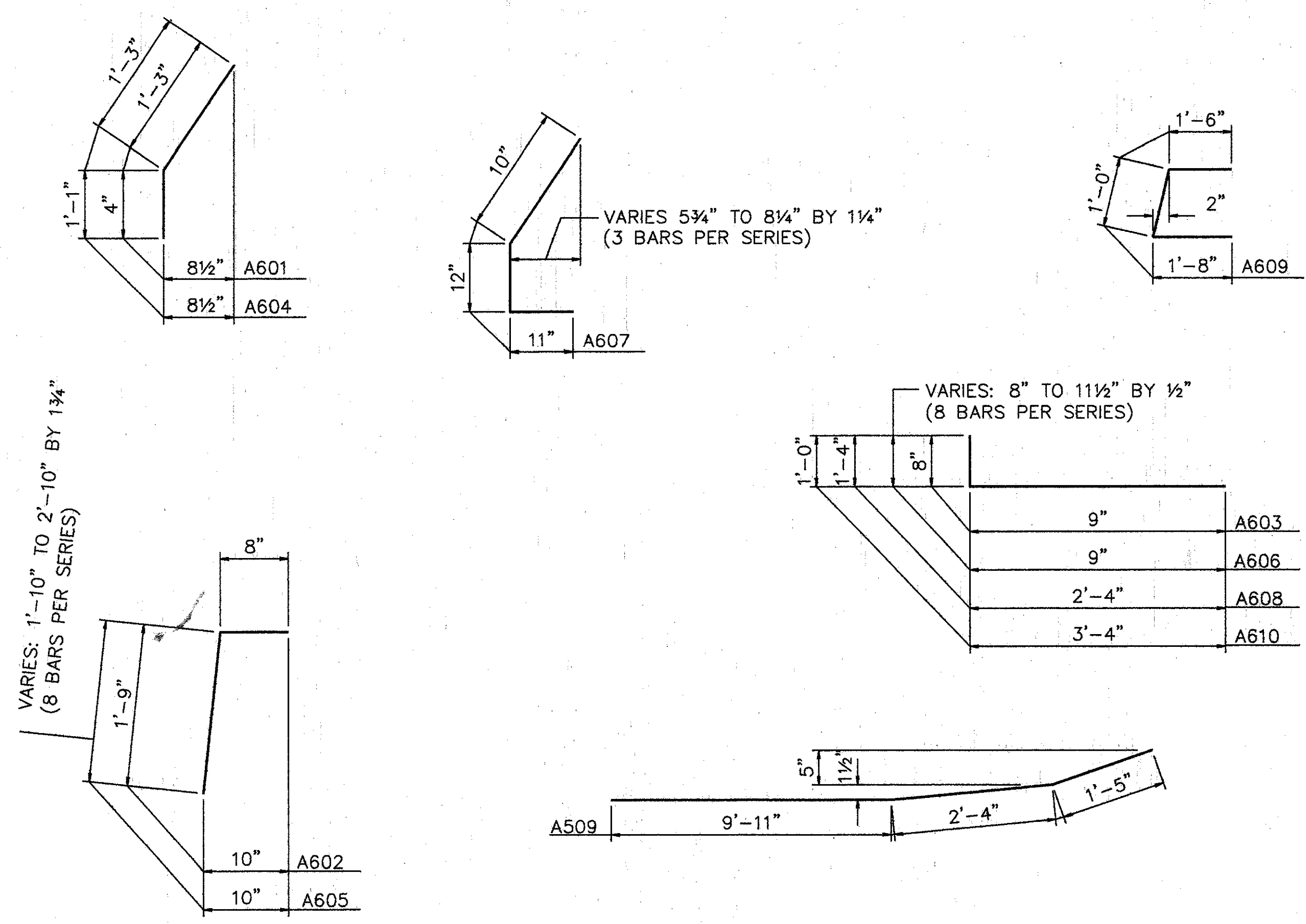
HAMILTON COUNTY

|          |        |        |         |          |       |         |
|----------|--------|--------|---------|----------|-------|---------|
| DESIGNED | DRAWN  | TRACED | CHECKED | REVIEWED | DATE  | REVISED |
| L.A.T.   | L.A.P. |        | M.A.A.  | D.E.M1   | 11/94 |         |

Last Print: MAY 15, 1994 @ 8:02 PM  
 G:\STRV\16206-C03\STRV\AND\COMBES\T3.Lauf Revision By: RACH OCT. 6, 1992 @ 12:56 PM

| REINFORCING STEEL LIST |        |        |                |               |
|------------------------|--------|--------|----------------|---------------|
| MARK                   | SHAPE  | NUMBER | LENGTH         | WEIGHT        |
| A501                   | STR.   | 68     | 30'-0"         | 2128          |
| A502                   | STR.   | 2      | 17'-8"         | 37            |
| A503                   | STR.   | 2      | 5'-1"          | 11            |
| A504                   | STR.   | 193    | 14'-6"         | 2919          |
| A505                   | STR.   | 2      | 14'-4"         | 30            |
| A506                   | STR.   | 4      | 8'-3"          | 34            |
| A507                   | STR.   | 12     | 5'-0"          | 63            |
| A508                   | BNT. † | 4      | 13'-8"         | 57            |
| A509                   | BNT.   | 8      | 13'-8"         | 114           |
| A510                   | STR.   | 4      | 11'-0"         | 46            |
| A511                   | STR.   | 4      | 6'-0"          | 25            |
| A512                   | STR.   | 4      | 4'-6"          | 19            |
| A601                   | BNT.   | 876    | 1'-6"          | 1974          |
| A602                   | BNT.   | 856    | 2'-5"          | 3111          |
| A603                   | BNT.   | 856    | 1'-3"          | 1607          |
| A604                   | BNT.   | 12     | 2'-3"          | 41            |
| A605                   | BNT.   | 32     | 2'-6" to 3'-6" | 144           |
| A606                   | BNT.   | 32     | 1'-4" to 1'-8" | 72            |
| A607                   | BNT.   | 12     | 2'-6"          | 45            |
| A608                   | BNT.   | 12     | 3'-6"          | 63            |
| A609                   | BNT.   | 4      | 3'-10"         | 23            |
| A610                   | BNT.   | 8      | 4'-2"          | 50            |
| A611                   | STR.   | 4      | 1'-2"          | 7             |
| A612                   | STR.   | 4      | 10"            | 5             |
| REPLACEMENT STEEL      |        |        |                | 300           |
| <b>TOTAL</b>           |        |        |                | <b>12,925</b> |

BENT BAR DETAILS



† BEND IN FIELD AS REQUIRED.

PROPOSED WORK

1. MODIFY PARAPETS ON THE SUPERSTRUCTURE & ABUTMENTS. SEAL PARAPETS AS SHOWN ON PLANS. (INSTALL PLATES FOR STRIP SEAL EXP. JT.).
2. SCARIFY EXISTING DECK 1/4", AND REMOVE DETERIORATED CONCRETE AS DIRECTED BY THE ENGINEER.
3. REFURBISH ALL ABUTMENT BEARINGS.
4. PLACE 1 3/4" THICK **LATEX** MODIFIED CONCRETE ON DECK AND APPROACH SLABS.
5. SEAL PARAPETS, PIERS, AND BACKWALL.
6. SEAL JOINTS, AS NOTED.
7. SEAL EXPANSION JOINT WITH STRIP SEAL.
8. REPLACE GUARDRAIL AS SHOWN ON ROADWAY PLANS.
9. TRIM BEAM ENDS TO 2" CLEARANCE (OR AS CLOSE TO 2" AS POSSIBLE).
10. EXTEND SCUPPERS.
11. PAINT EXISTING STEEL STRUCTURE.
12. AT LEAST ONE LANE OF TRAFFIC SHALL BE MAINTAINED ON THE BRIDGE AT ALL TIMES. FOR NOTES SEE MAINTAINANCE OF TRAFFIC PLANS.
13. OTHER WORK AS DESCRIBED IN THESE PLANS.

| ITEM    | ITEM EXT. | TOTAL    | UNITS    | DESCRIPTION                                                                              |
|---------|-----------|----------|----------|------------------------------------------------------------------------------------------|
| 202     | 11200     | LUMP SUM | L.S.     | PORTIONS OF STRUCTURE REMOVED                                                            |
| 509     | 15820     | 12925    | LBS.     | EPOXY COATED REINFORCING STEEL, GRADE 60                                                 |
| 511     | 34450     | 8        | C.Y.     | CLASS S CONCRETE, MISC.: ABUTMENT PARPETS                                                |
| SPECIAL | 51267500  | 140      | S.Y.     | SEALING OF CONCRETE SURFACE *                                                            |
| SPECIAL | 51267502  | 92       | S.Y.     | SEALING OF CONCRETE SURFACE (EPOXY) *                                                    |
| 513     | 21000     | 2        | EACH     | TRIMMING OF BEAM END                                                                     |
| SPECIAL | 51400050  | 24,900   | S.F.     | SURFACE PREPARATION OF EXIST. STEEL, SYSTEM OZEU *                                       |
| SPECIAL | 51400056  | 24,900   | S.F.     | FIELD PAINTING OF EXIST STEEL, PRIME COAT, SYSTEM OZEU *                                 |
| SPECIAL | 51400060  | 24,900   | S.F.     | FIELD PAINTING OF EXIST STEEL, INTERMEDIATE COAT, SYSTEM OZEU *                          |
| SPECIAL | 51400066  | 24,900   | S.F.     | FIELD PAINTING OF EXIST STEEL, FINISH COAT, SYSTEM OZEU *                                |
| SPECIAL | 51400504  | 100      | MAN HOUR | GRINDING FINS, TEARS, AND SLIVERS *                                                      |
| SPECIAL | 51400508  | 2672     | L.F.     | GRINDING FLANGE EDGES *                                                                  |
| 516     | 10000     | 79       | L.F.     | PREFORMED ELASTOMERIC COMPRESSION JOINT SEAL (705.11)                                    |
| 516     | 11210     | 83       | L.F.     | STRUCTURAL EXP. JT., INCLUDING ELASTOMERIC STRIP SEAL                                    |
| 516     | 45304     | 8        | EACH     | REFURBISH BEARING DEVICE                                                                 |
| 517     | 76201     | 976      | L.F.     | RAILING FACED, AS PER PLAN (32" HIGH)                                                    |
| 518     | 63300     | LUMP     | L.S.     | SCUPPER AND DRAINAGE PIPE CLEANOUT                                                       |
| 518     | 12700     | 12       | EACH     | SCUPPER, VERTICAL EXTENSION                                                              |
| 518     | 12800     | 6        | EACH     | SCUPPER MODIFICATION                                                                     |
| SPECIAL | 51912600  | 23       | L.F.     | CONCRETE REPAIR BY EPOXY INJECTION *                                                     |
| 519     | 11100     | 5        | S.F.     | PATCHING CONCRETE STRUCTURE                                                              |
| 625     |           |          |          | FOR LIGHTING SUMMARY SEE LIGHTING PLANS.                                                 |
| 845     | 40210     | 1420     | S.Y.     | <b>LATEX</b> MODIFIED CONCRETE, <sup>MISC.</sup> OVERLAY (1 1/4" THICK) ON EXISTING DECK |
| 845     | 11000     | 56       | C.Y.     | <b>LATEX</b> MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS)                              |
| 845     | 30000     | 1        | C.Y.     | FULL DEPTH REPAIR                                                                        |

\* SEE PROPOSAL NOTE

**WOOLPERT CONSULTANTS**  
 409 E. MONUMENT AVENUE  
 DAYTON, OHIO 45402-1226  
 (513) 461-5660

4 / 4

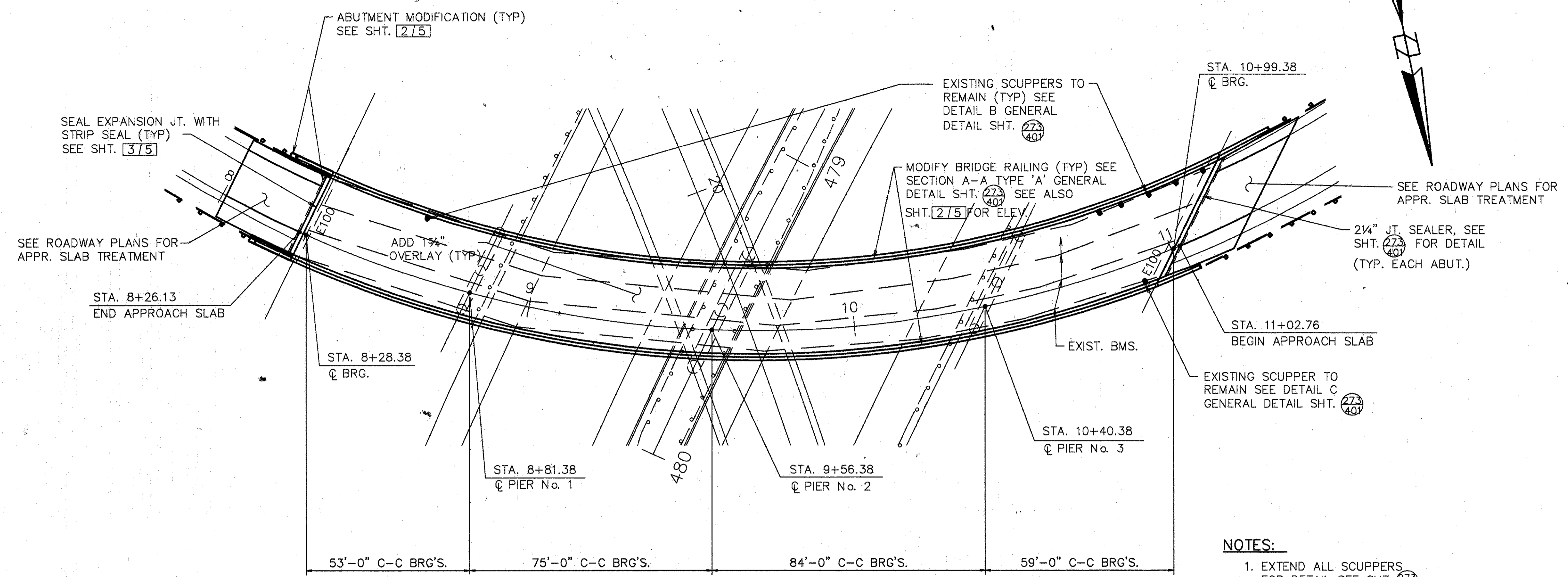
**QUANTITIES AND GENERAL NOTES**

BRIDGE NO. HAM-71-0986  
 OVER INTERSTATE ROUTE 71  
 HAMILTON COUNTY

|          |        |        |         |               |      |         |
|----------|--------|--------|---------|---------------|------|---------|
| DESIGNED | DRAWN  | TRACED | CHECKED | REVIEWED      | DATE | REVISED |
| L.A.T.   | L.A.P. |        | M.A.A.  | D.E.M11/11/94 |      |         |

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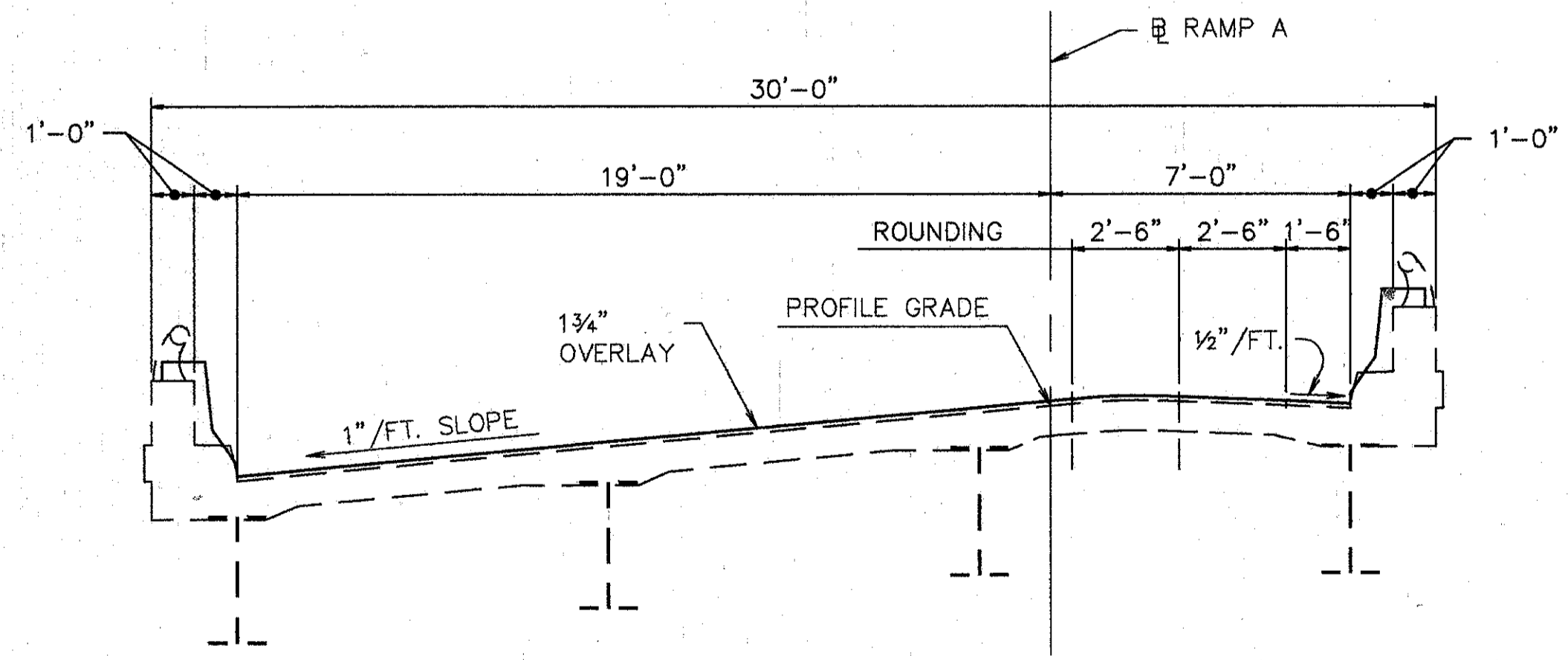




PLAN

NOTES:

1. EXTEND ALL SCUPPERS FOR DETAIL SEE SHT. 273/401
2. SEAL PARAPETS, BACKWALL, & PIERS. SEAL ALL OF PIERS EXCEPT TOP OF PIER CAP. SEALING PIER 2 COLUMNS ABOVE TOP OF CONCRETE PIER CAP IS INCLUDED IN IN BRIDGE HAM-71-0987 FOR PAYMENT.
3. SEE JUNCTION BOX EXTENSION DTL., GENERAL DTL. SHT. 273/401 FOR BARRIER RETROFIT AT JUNCTION BOXES.
4. PAINT EXIST. STEEL STRUCTURE, INCLUDING BEARINGS, WITH SYSTEM OZEU.



TYP. BRIDGE SECTION

| SLIDING R SIZE | JACK CAPACITY REQ'D. (MIN) |
|----------------|----------------------------|
| E100           | 75 TON                     |

EXISTING STRUCTURE

TYPE: CONTINUOUS STEEL BEAM WITH REINFORCED CONCRETE DECK & SUBSTRUCTURE  
 SPANS: 53'-0", 75'-0", 84'-0", & 59'-0"  
 ROADWAY: 28'-0" F/F PARAPET  
 SKEW: 24'-15'-12" LT. FORWARD  
 LOADING FREQUENCY: C.F.=400 (57)  
 WEARING SURFACE: 1" MONOLITHIC CONCRETE  
 APPROACH SLABS: AS-1-54 (25'-0" LONG)  
 ALIGNMENT: 17'-0" HORIZ. CURVE TO THE LEFT  
 SUPERELEVATION: 1" / FT.  
 CURB: 1'-0" EACH SIDE

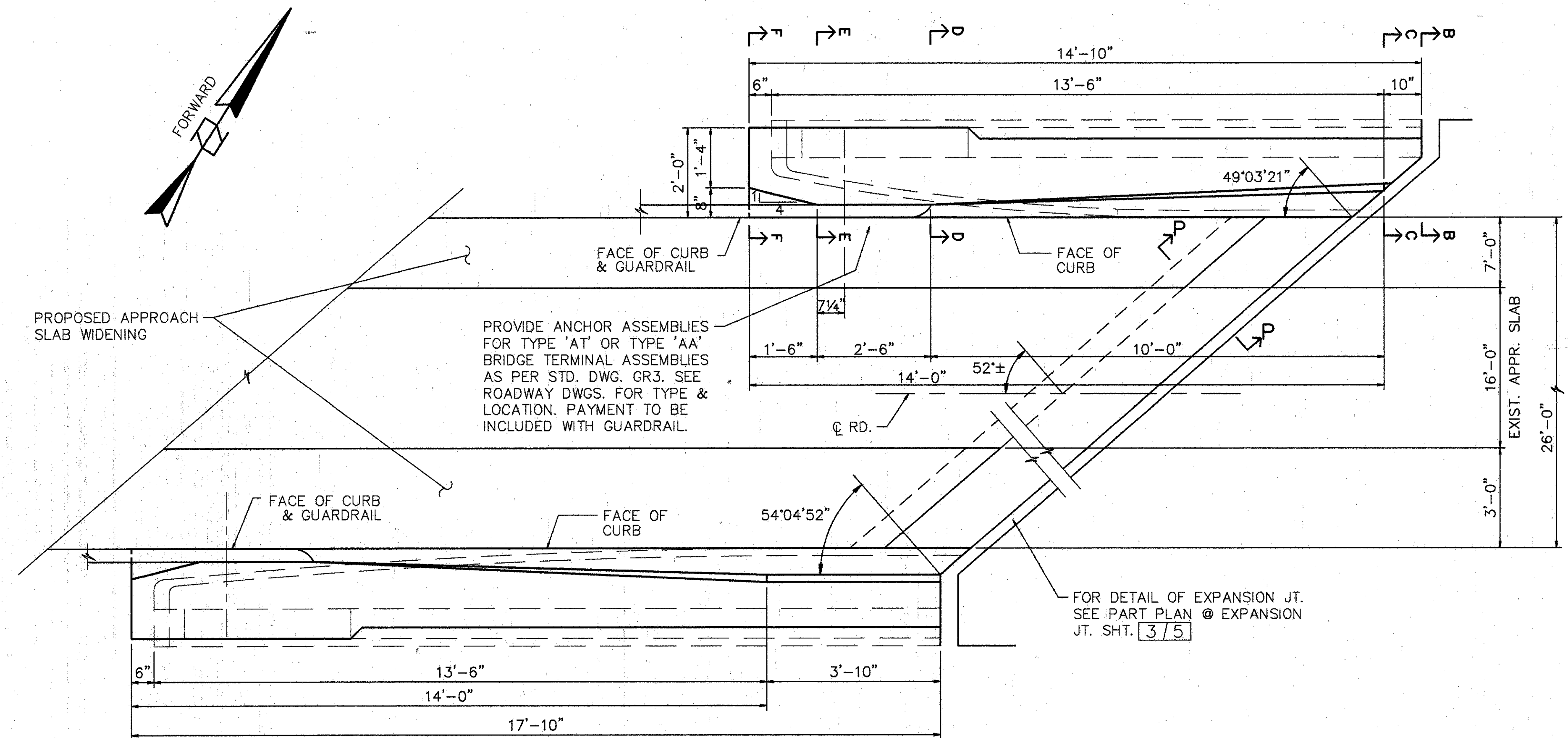
**WOOLPERT CONSULTANTS**  
 409 E. MONUMENT AVENUE  
 DAYTON, OHIO 45402-1226  
 (513) 461-5660

GENERAL PLAN

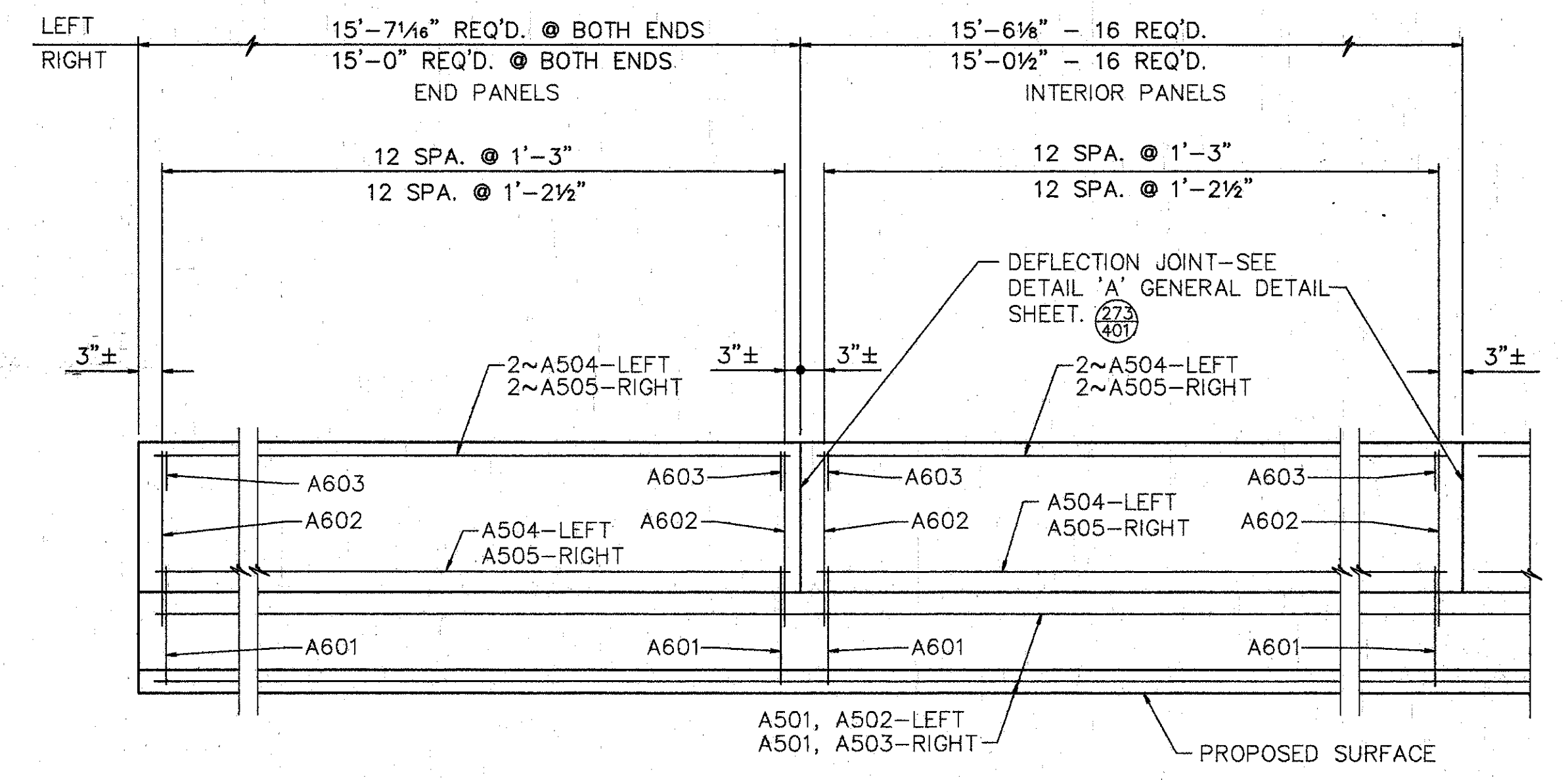
BRIDGE NO. HAM-71-0987  
 OVER I-71

|          |        |        |         |               |      |         |
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| L.A.T.   | L.A.P. |        | M.A.A.  | D.E.M11/11/94 |      |         |

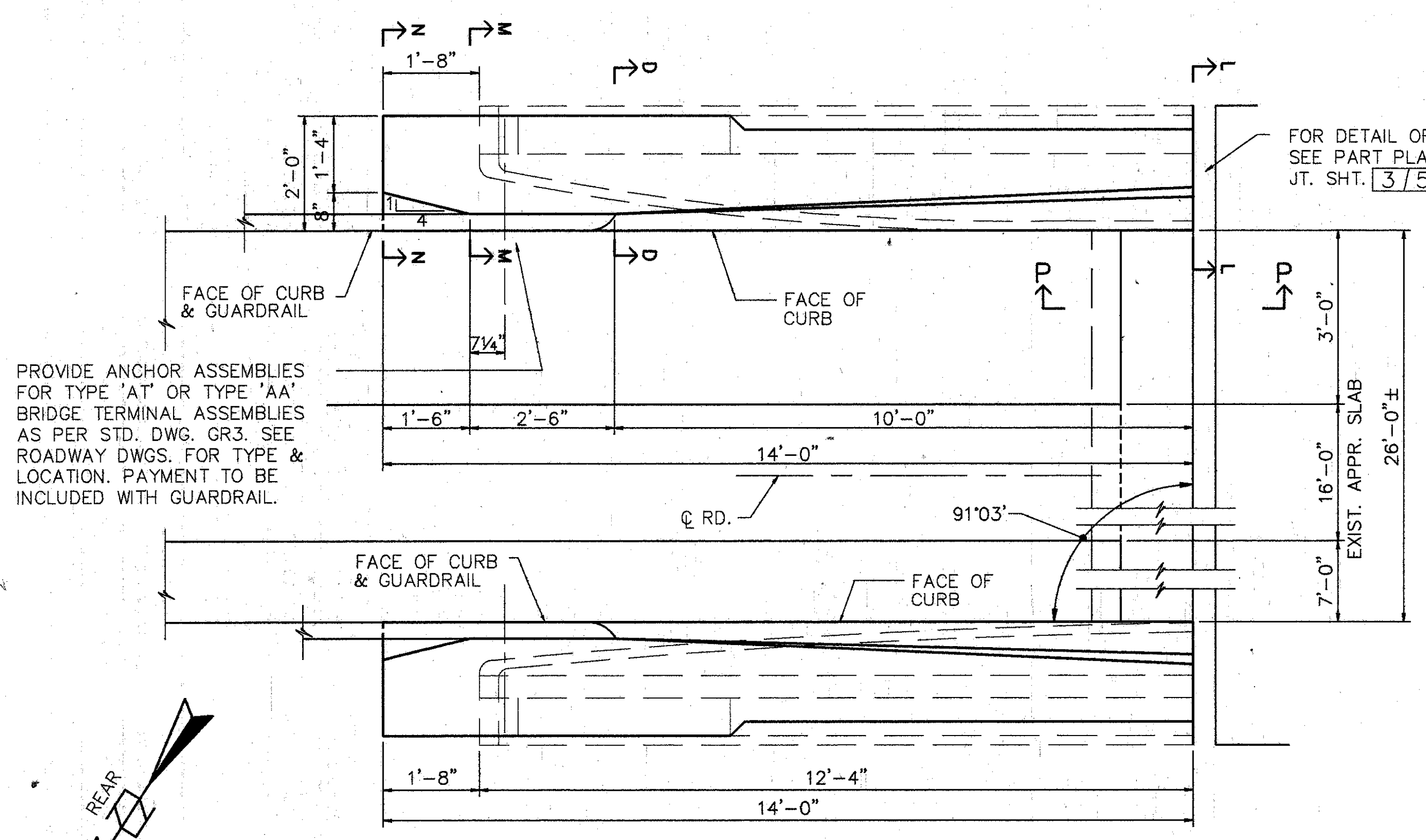
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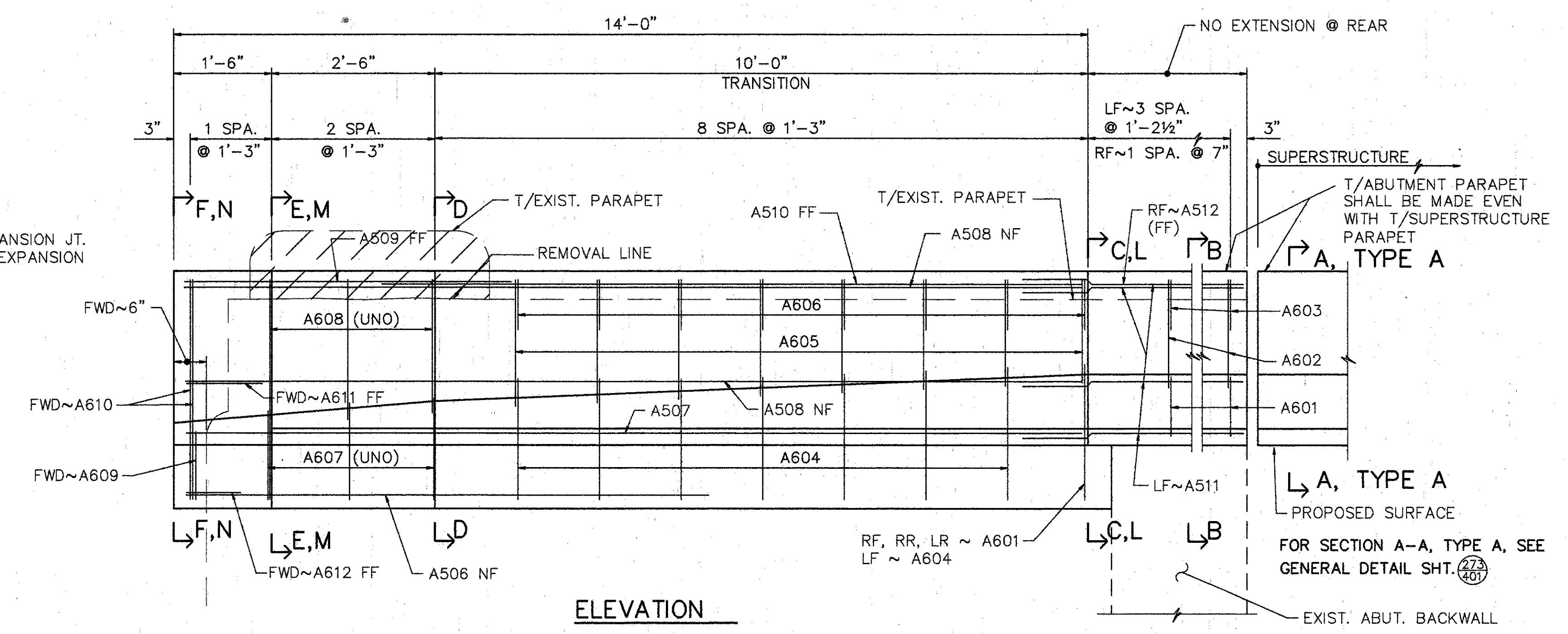
PLAN - FORWARD ABUTMENT MODIFICATION



ELEVATION SUPERSTRUCTURE PARAPET



PLAN - REAR ABUTMENT MODIFICATION



ELEVATION

NOTE: SEE SECTIONS D-D, L-L, M-M AND N-N FOR MODIFICATIONS AT REAR ABUTMENT AND BAR DESIGNATIONS NOT SHOWN.  
 FORWARD ABUT. USES SECT. C-C, D-D, E-E AND F-F  
 REAR ABUT. USES SECT. L-L, D-D, M-M AND N-N  
 SEE SHT. 4/5

- NOTES:
1. PREFORMED EXPANSION JOINT FILLER AND SEALER AT CORNERS AND SIDES OF THE APPROACH SLAB SHALL BE INCLUDED IN THE PRICE BID PER SQ. YD. FOR THE APPROACH SLAB.
  2. TYPE A WATERPROOFING AT THE BRIDGE LIMIT END OF THE WIDENED APPROACH SLAB (AS PER STD. DWG. AS-1-81) SHALL BE INCLUDED IN THE PRICE BID FOR ITEM 611 APPROACH SLAB.

- NOTES:
- L DENOTES LEFT SIDE
  - R DENOTES RIGHT SIDE
  - RF DENOTES RIGHT FORWARD
  - LF DENOTES LEFT FORWARD
  - RR DENOTES RIGHT REAR
  - LR DENOTES LEFT REAR
  - NF DENOTES NEAR FACE
  - FF DENOTES FAR FACE

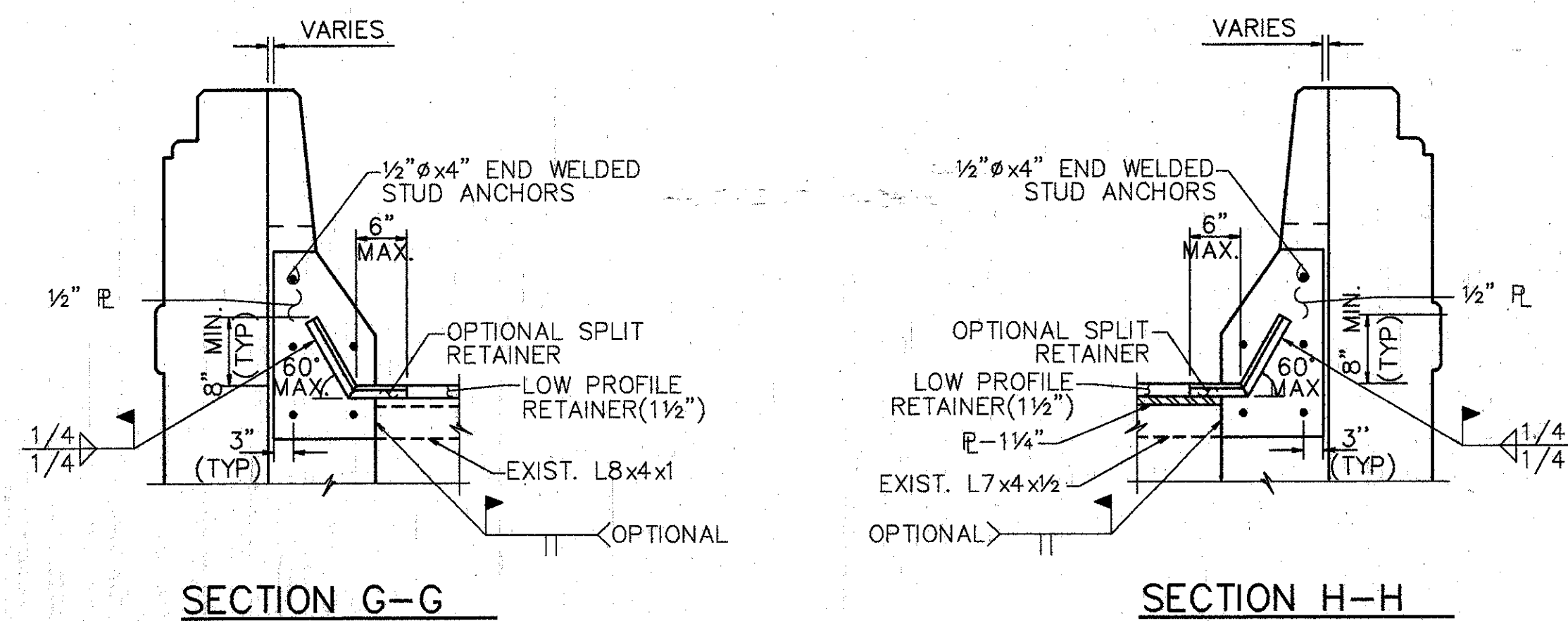
**WOOLPERT CONSULTANTS**  
 409 E. MONUMENT AVENUE  
 DAYTON, OHIO 45402-1226  
 (513) 461-5680

**ABUTMENT PLAN & PARAPET ELEVATIONS**  
 BRIDGE NO. HAM-71-0987  
 OVER I-71  
 HAMILTON COUNTY

|          |        |        |         |               |      |         |
|----------|--------|--------|---------|---------------|------|---------|
| DESIGNED | DRAWN  | TRACED | CHECKED | REVIEWED      | DATE | REVISED |
| L.A.T.   | L.A.P. |        | M.A.A.  | D.E.M11/11/94 |      |         |

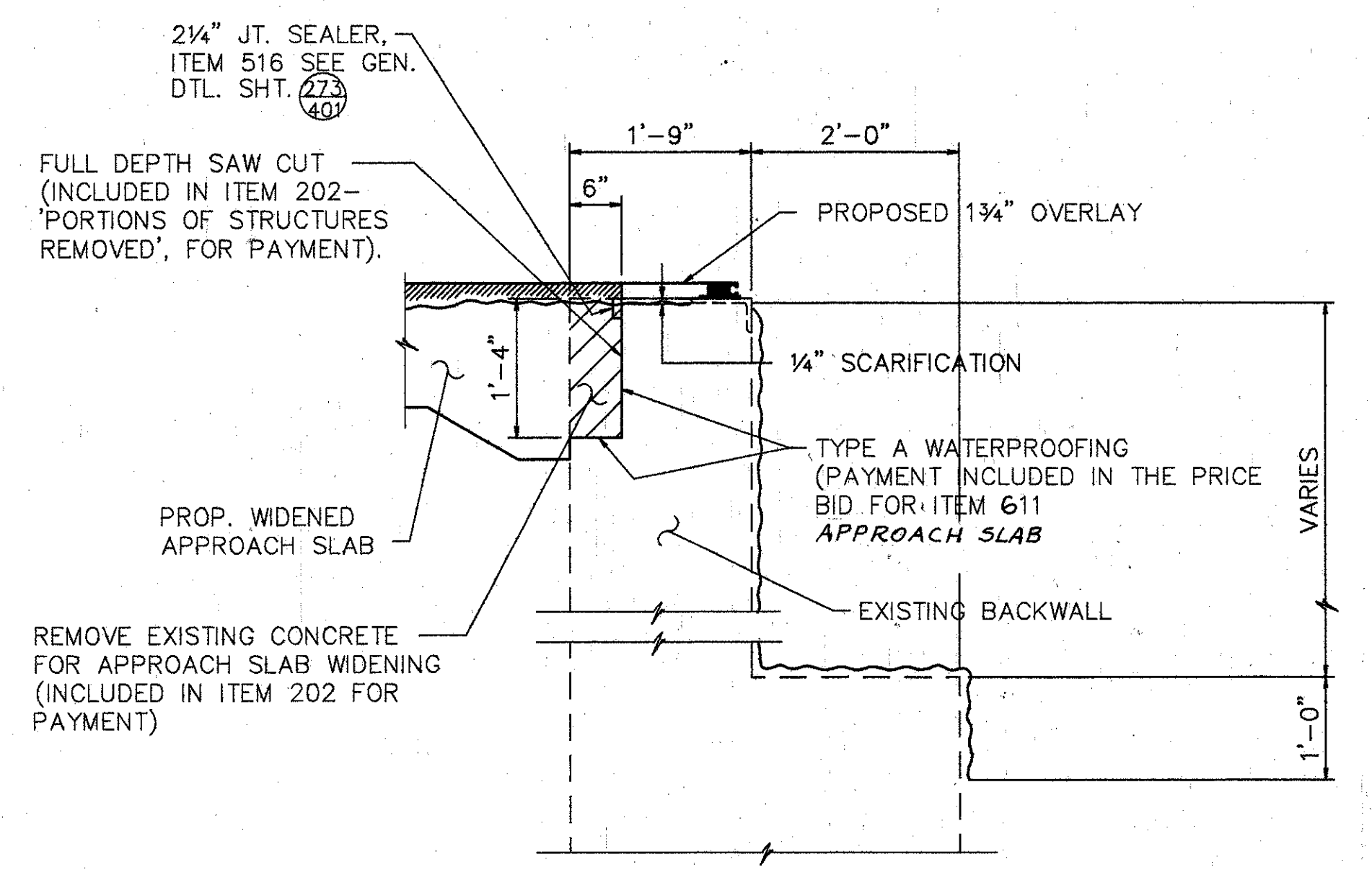
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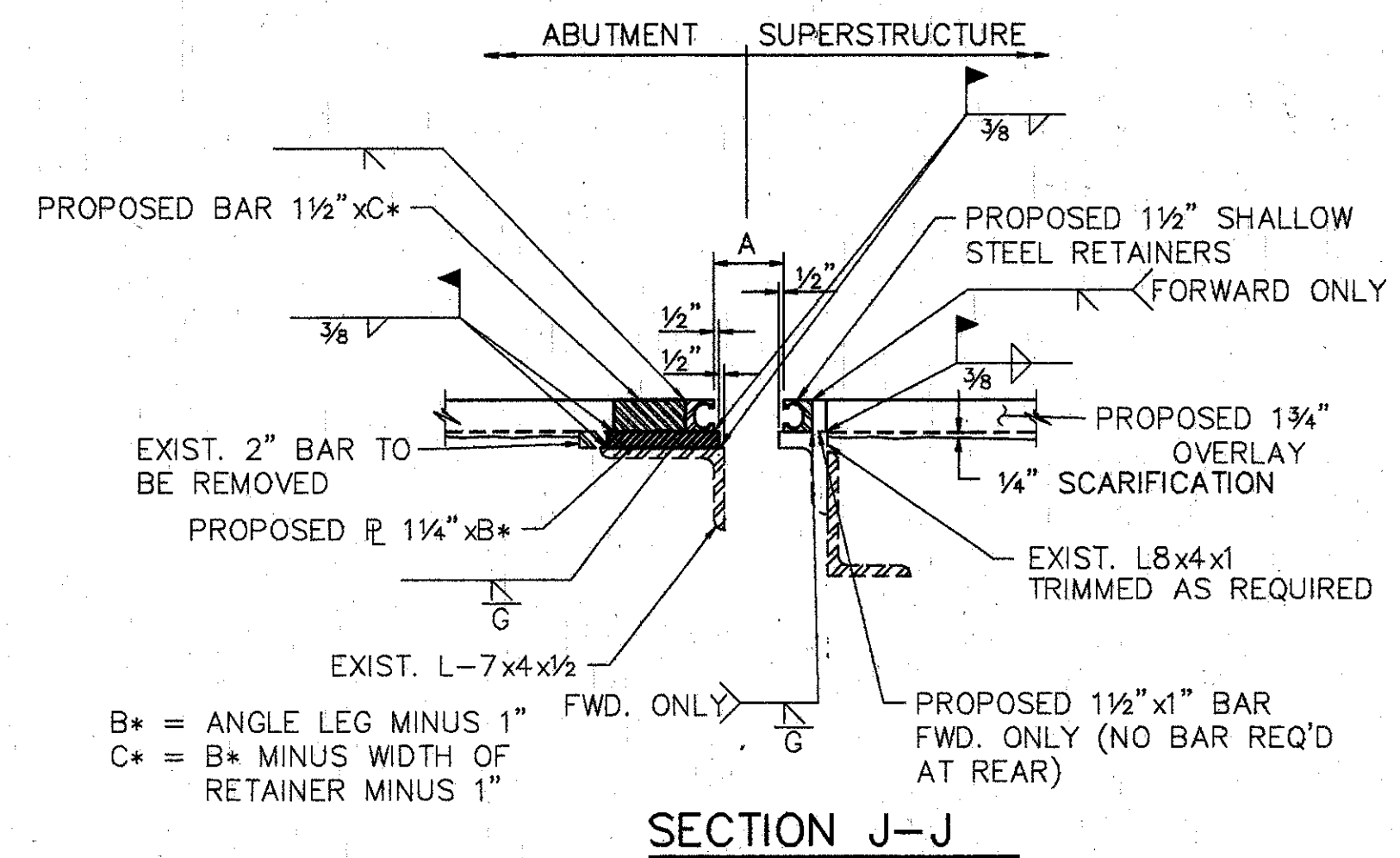
**NOTE:**

- EXPANSION JT. DETAILS TO BE WORKED WITH STD. DWG. EXJ-4-87 SHTS. 1 thru 5.
- WHEN PLATE IS RECESSED INTO ABUTMENT, CONCRETE BELOW PLATE SHALL BE SLOPED FROM BOTTOM OF THE PLATE TO THE END OF THE ABUTMENT TO DETER THE ACCUMULATION OF DEBIS.



**SECTION P-P**

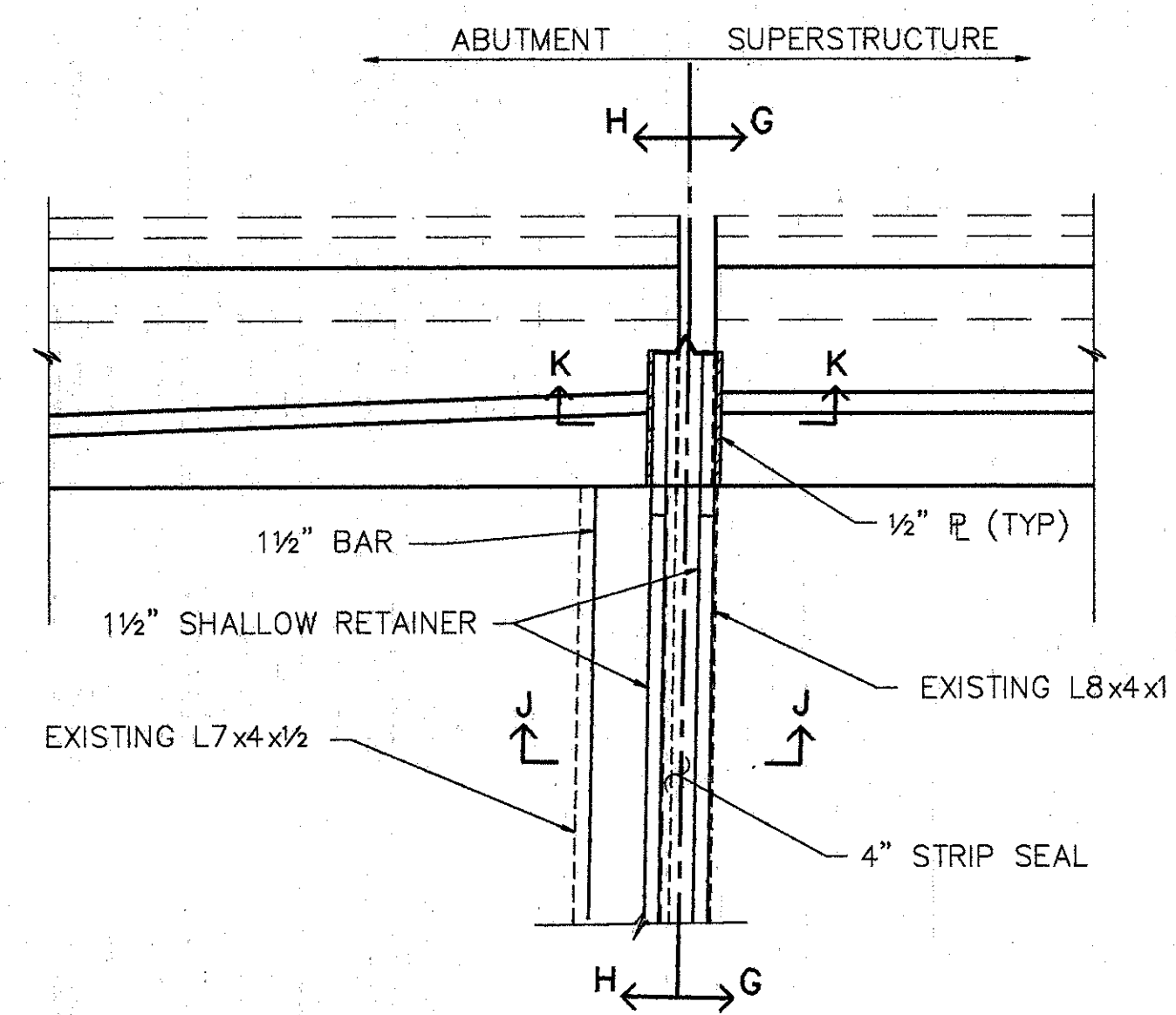
SURFACE TO BE SEALED UNDER ITEM SPECIAL- 'SEALING OF CONCRETE SURFACE, EPOXY'.



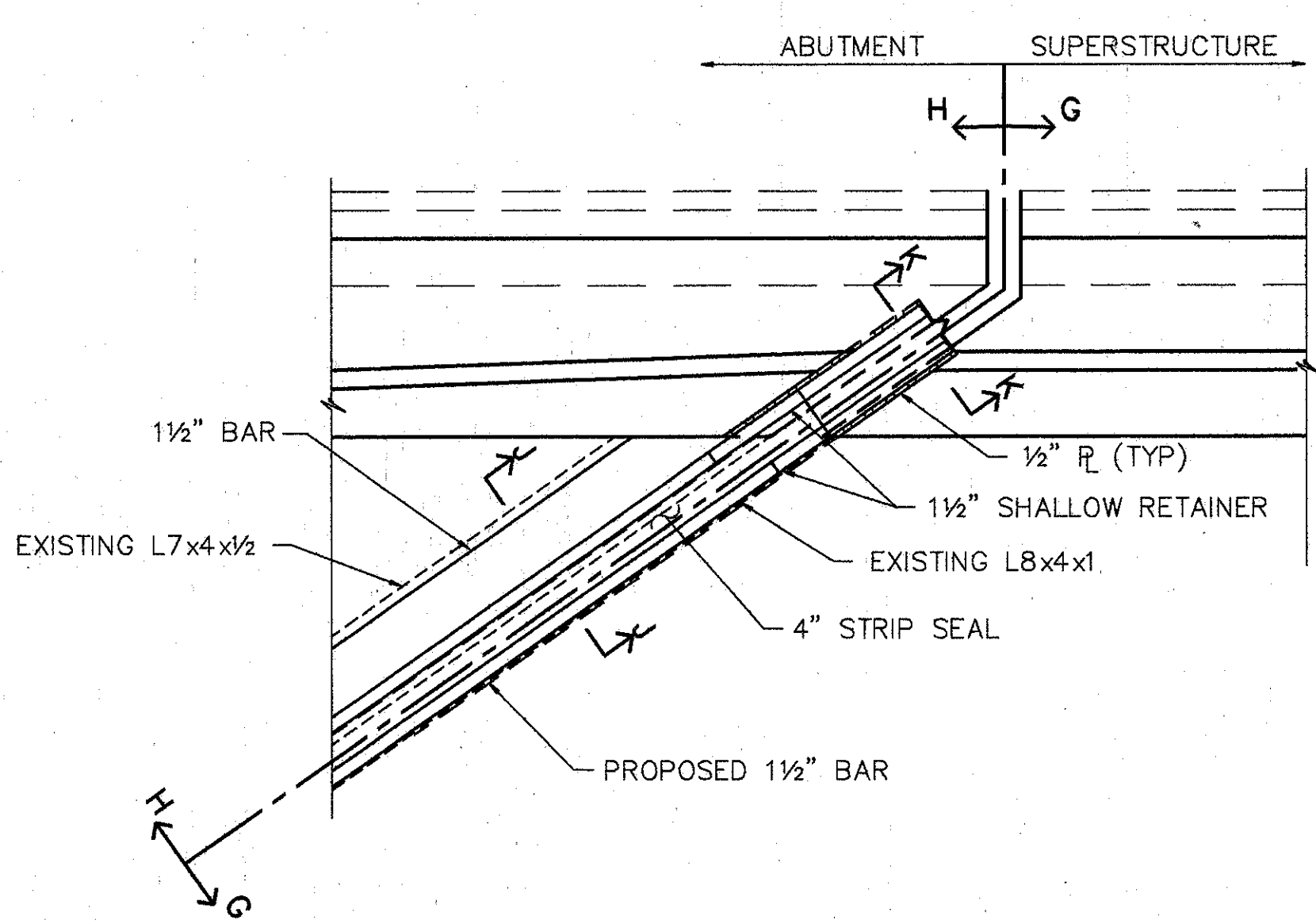
**NOTES:**

- CONTRACTOR TO VERIFY ALL DIMENSIONS PRIOR TO MODIFYING EXPANSION JOINT.
- THE PRICE BID FOR ITEM 516- 'STRUCTURAL EXPANSION JOINTS, INCLUDING ELASTOMERIC STRIP SEALS, SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, AND ANY OTHER INCIDENTAL ITEMS, AS DETAILED. (REMOVAL OF CURB OR PARAPET AS SHOWN SHALL BE INCLUDED UNDER ITEM 202- 'PORTIONS OF STRUCTURE REMOVED').
- FOR DETAILS NOT SHOWN REFER TO DWG. EXJ-4-87 SHTS. 3 AND 4.

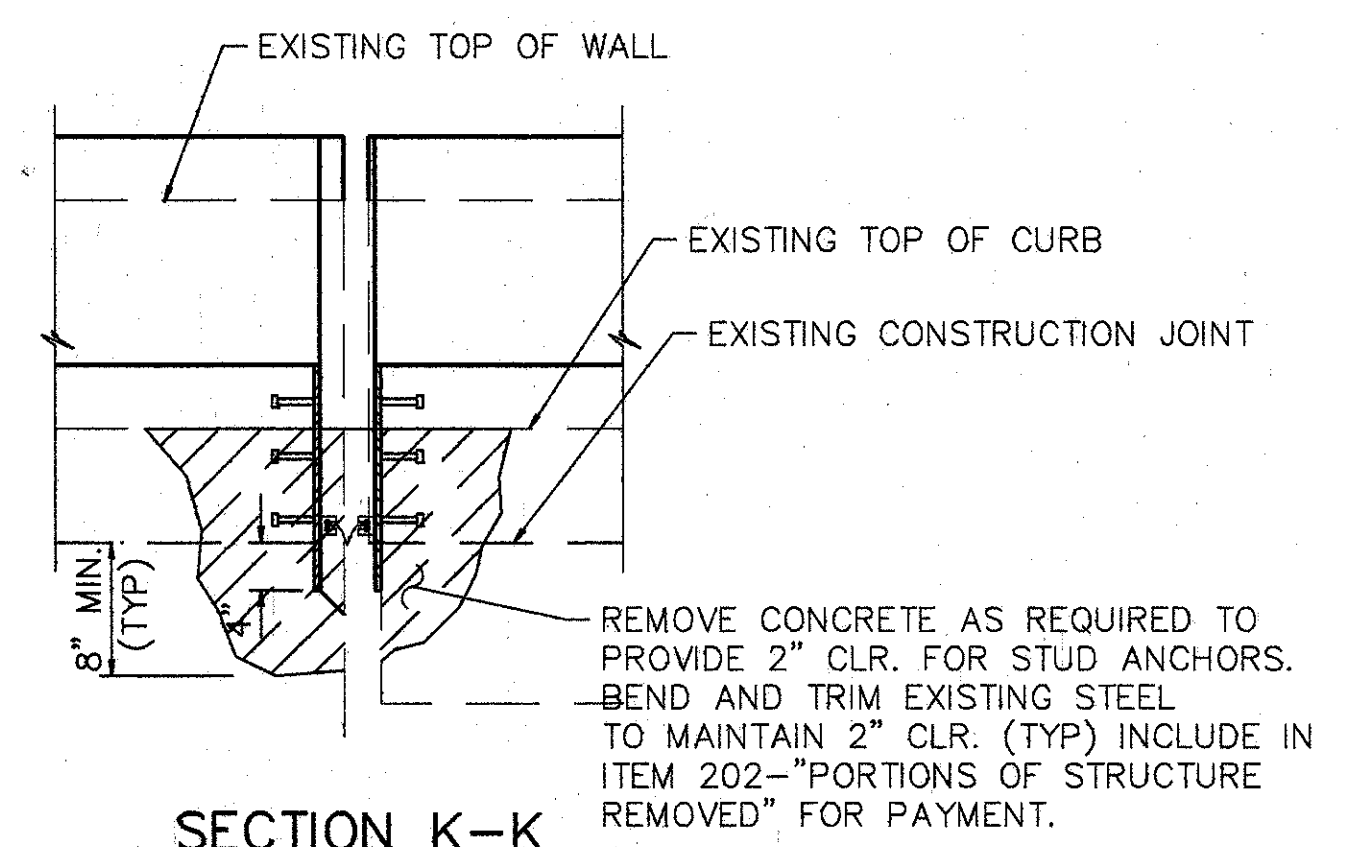
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| 60° F       | 2 3/4"   |
| 70° F       | 2 3/4"   |
| 80° F       | 2 5/8"   |
| 90° F       | 2 1/2"   |



**PART PLAN - REAR ABUTMENT (RIGHT)**  
(LEFT OPPOSITE HAND)



**PART PLAN - FORWARD ABUTMENT (RIGHT)**  
(LEFT OPPOSITE HAND)



**SECTION K-K**

SEE NOTES ON SHEET [2/5].

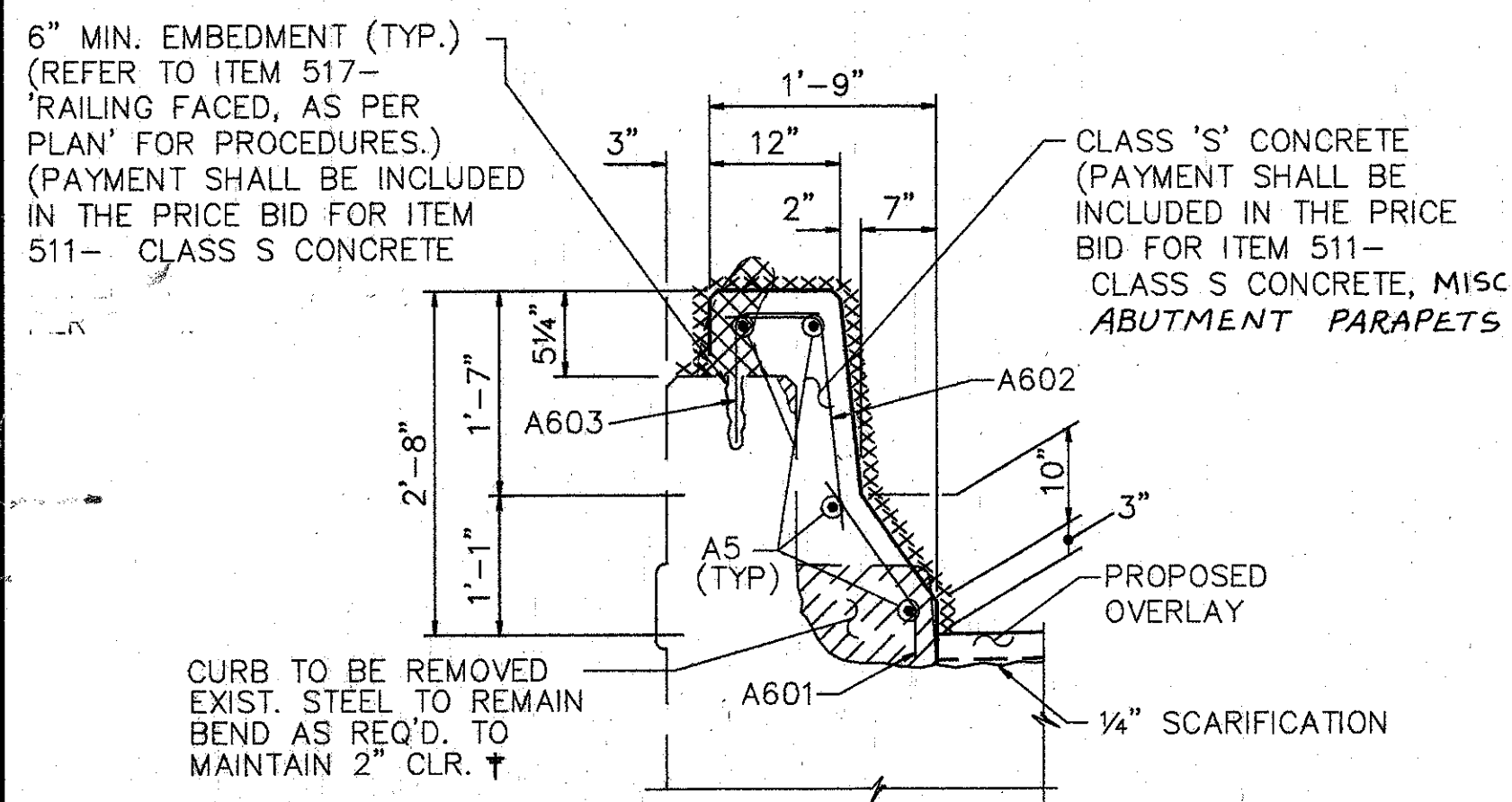
**WOOLPERT CONSULTANTS**  
 409 E. MONUMENT AVENUE  
 DAYTON, OHIO 45402-1226  
 (513) 461-5660

BRIDGE NO. HAM-71-0987  
 OVER I-71  
 HAMILTON COUNTY

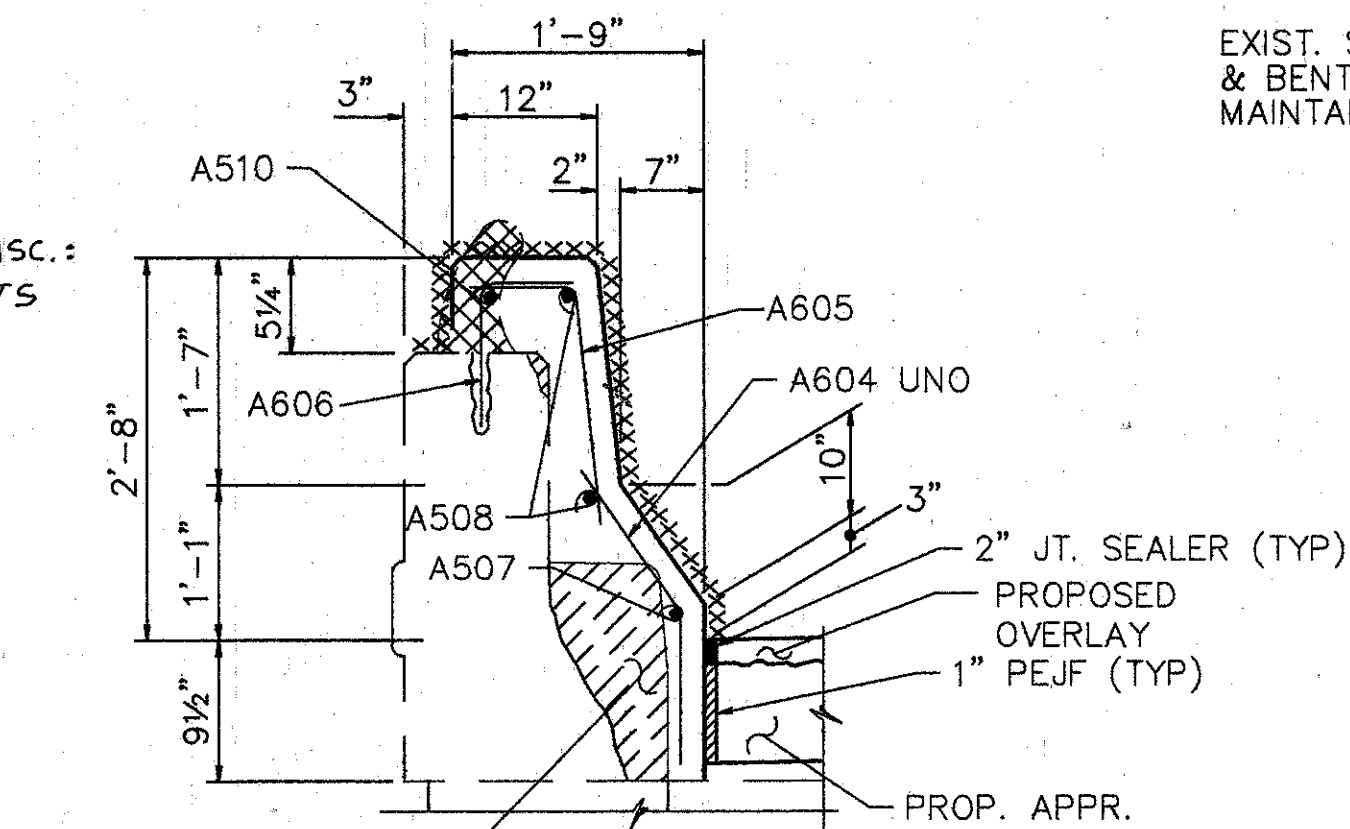
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| DESIGNED | DRAWN  | TRACED | CHECKED | REVIEWED      | DATE | REVISED |
| L.A.T.   | L.A.P. |        | M.A.A.  | D.E.M11/11/94 |      |         |

3 / 5

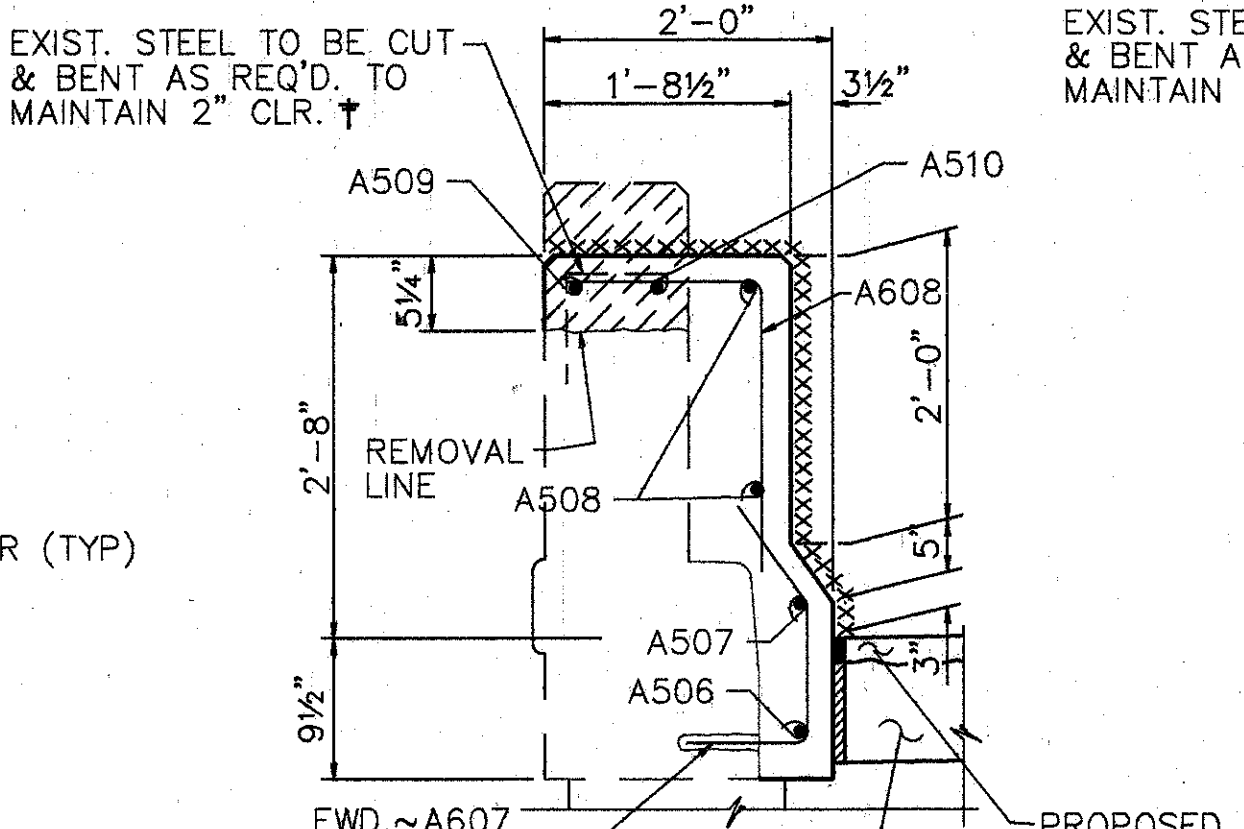
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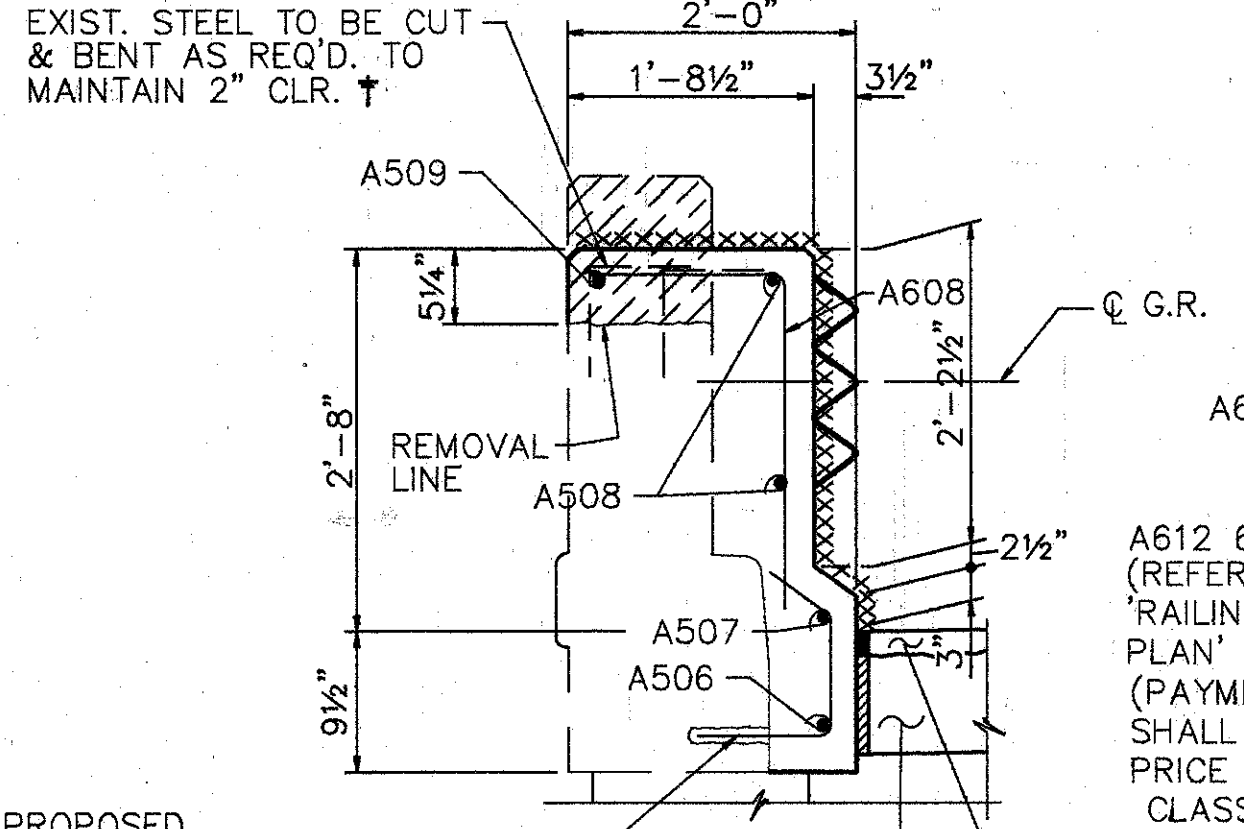
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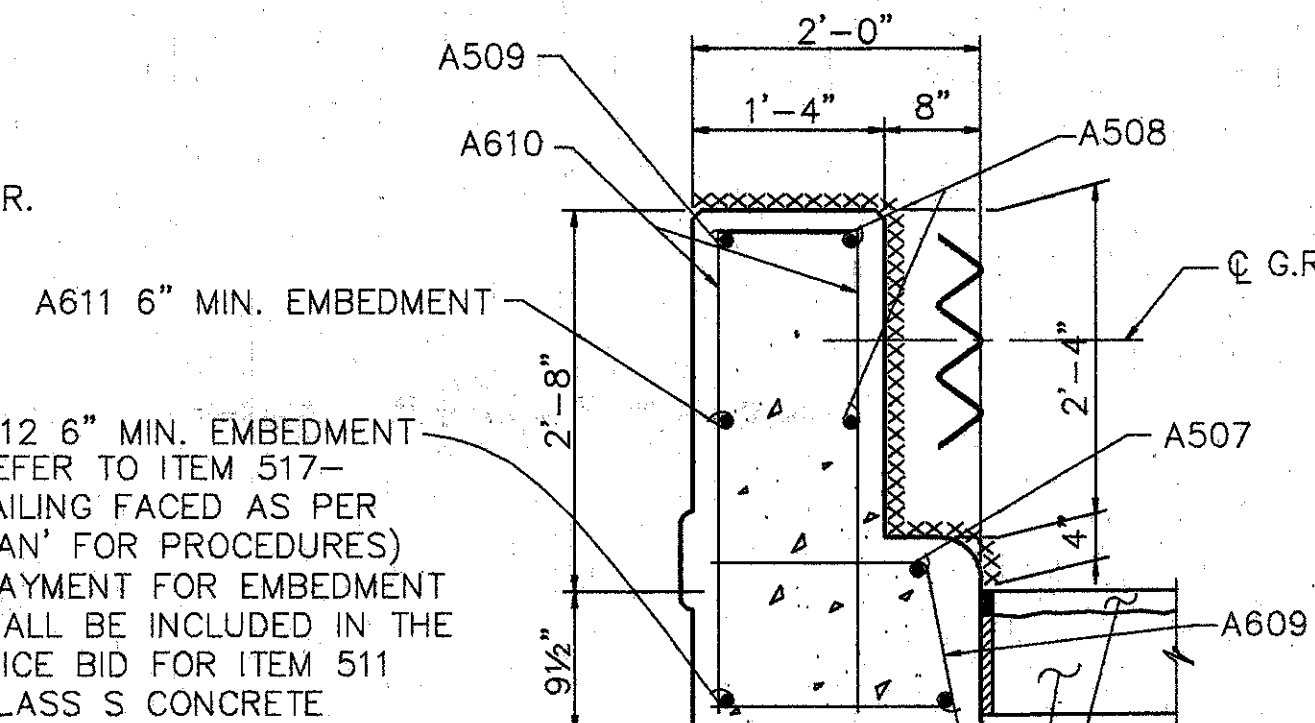
SECTION C-C



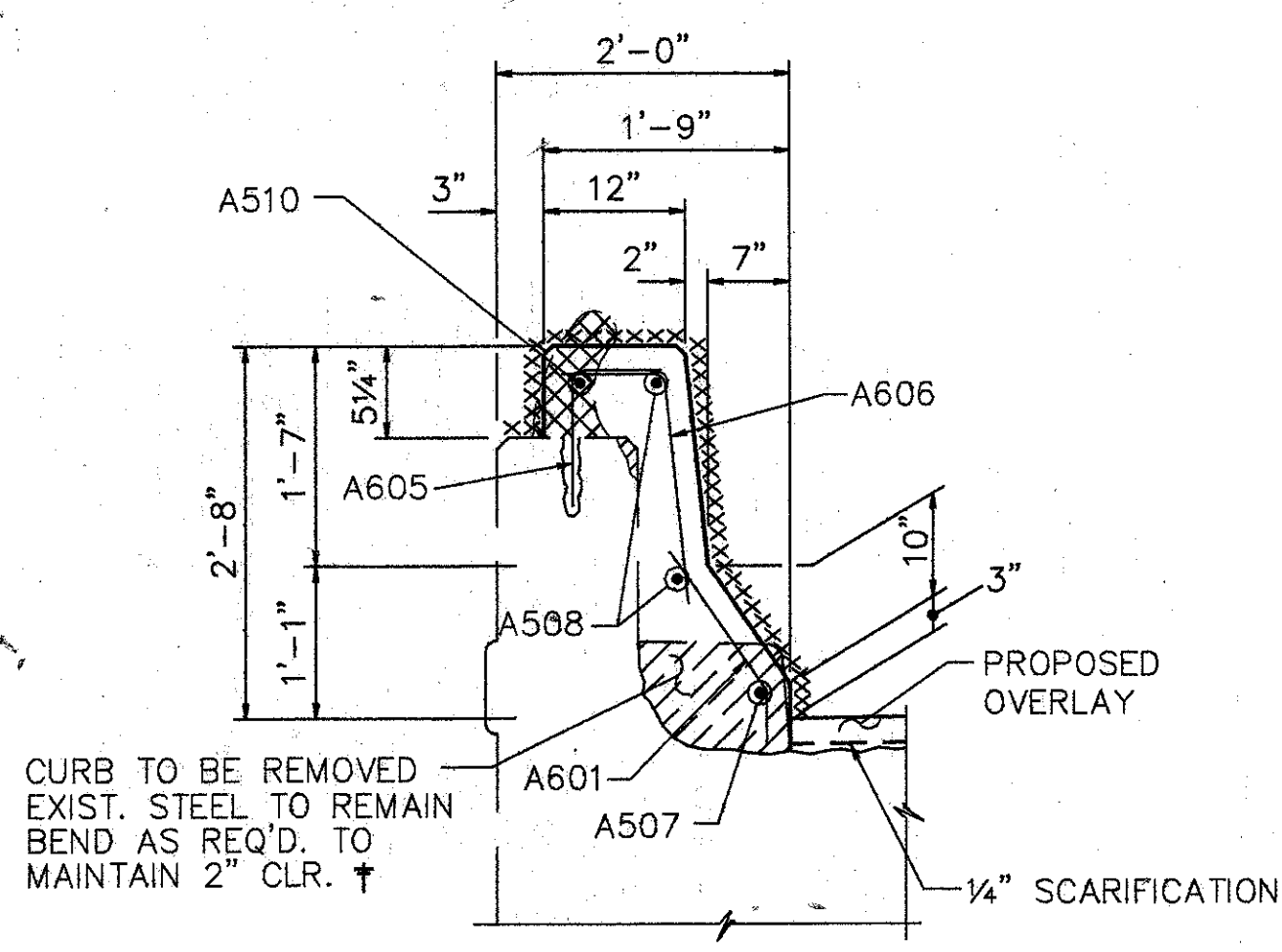
SECTION D-D



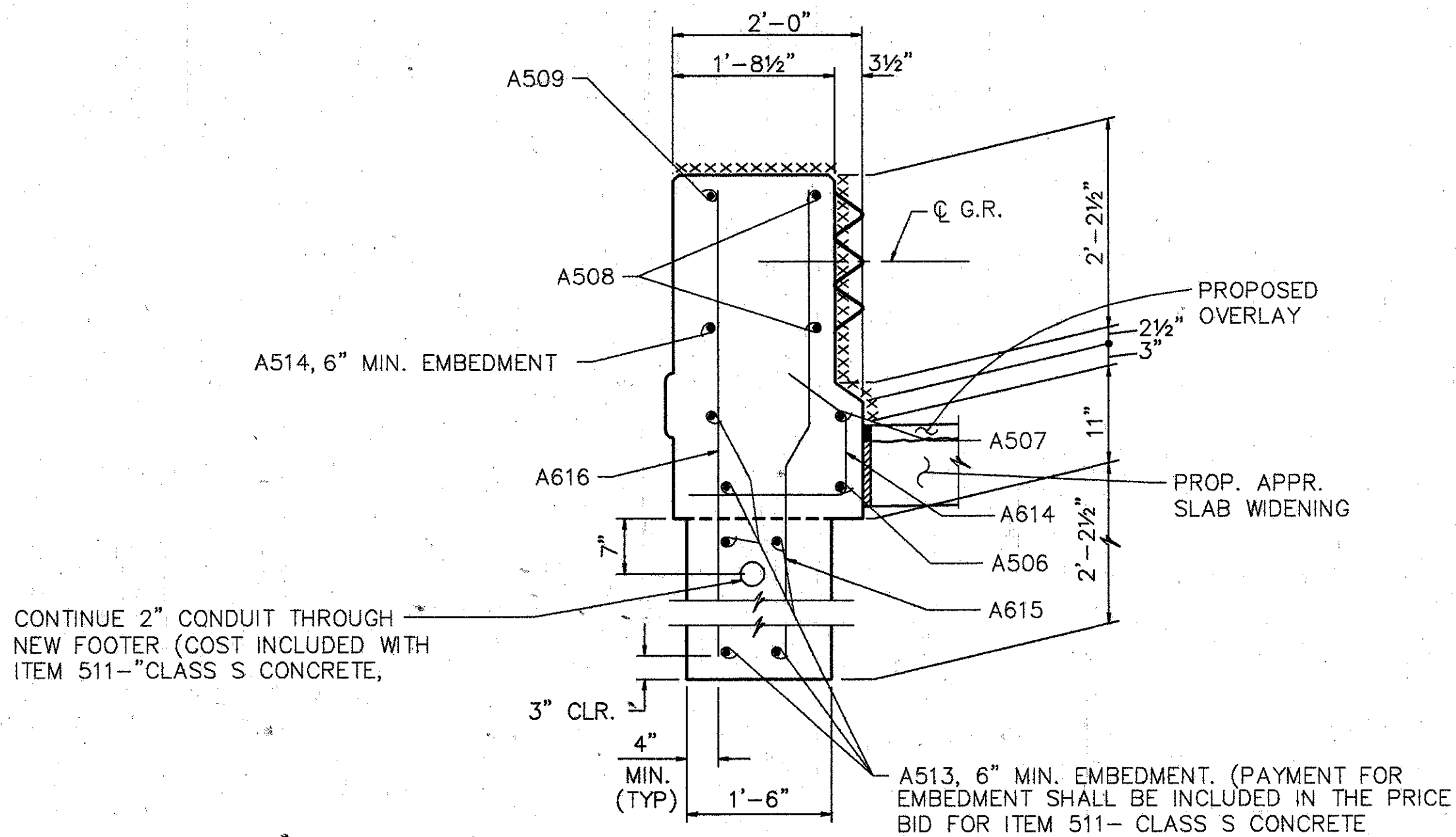
SECTION E-E



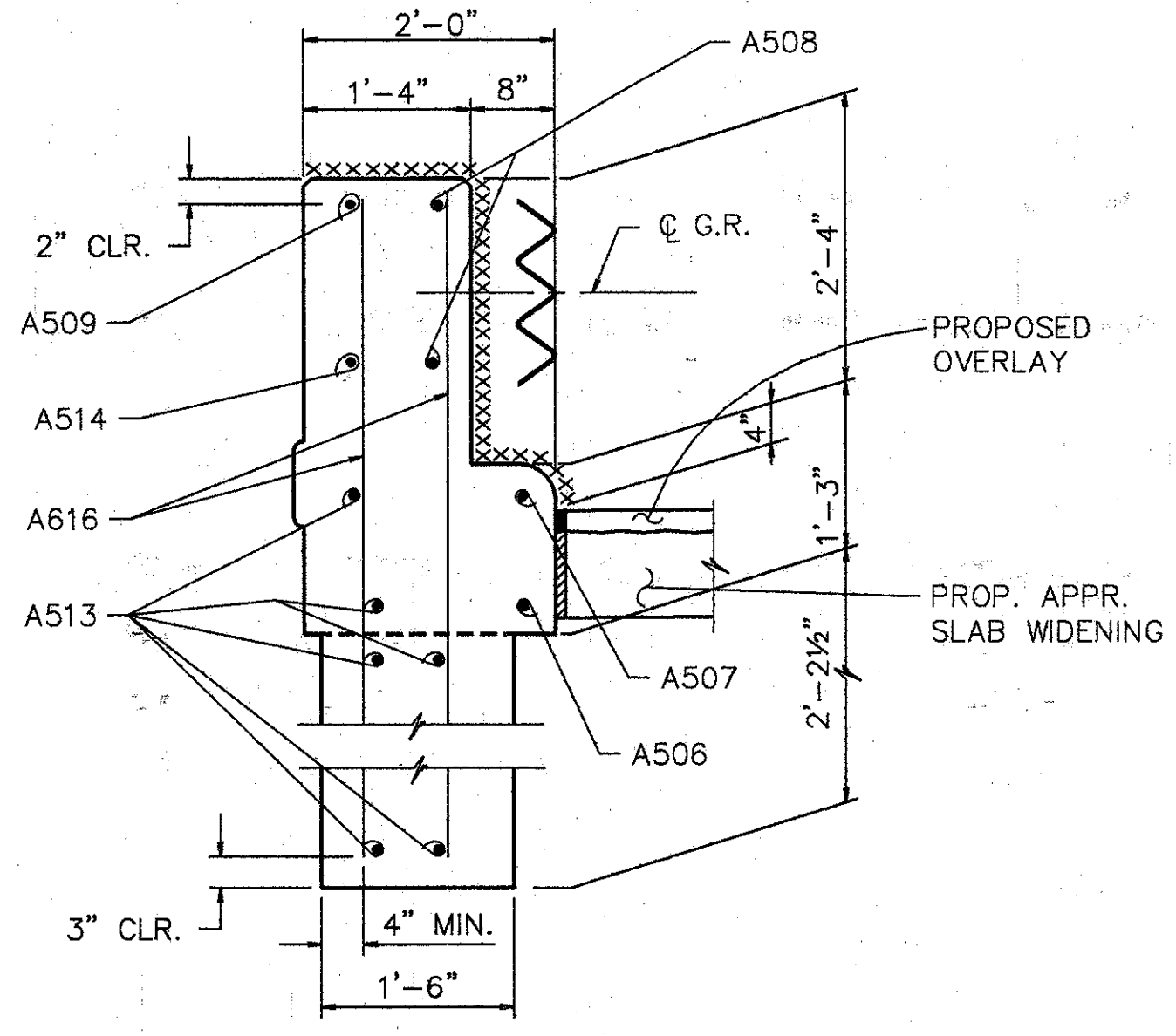
SECTION F-F



SECTION L-L



SECTION M-M



SECTION N-N

† BARS SHALL REMAIN. CONTRACTOR SHALL EXERCISE CAUTION TO INSURE THAT THESE BARS ARE NOT DAMAGED DURING THE CONCRETE REMOVAL OPERATION. ANY BARS DAMAGED AS A RESULT OF THE CONTRACTOR'S OPERATION SHALL BE REPLACED OR REPAIRED BY THE CONTRACTOR AT HIS EXPENSE. METHOD OF REPAIR OR REPLACEMENT WILL BE AT THE DISCRETION OF THE DIRECTOR.

EXISTING CURB AND PARAPET TO BE REMOVED UNDER ITEM 202-PORIONS OF STRUCTURE REMOVED.

EXISTING RAILING & POSTS TO BE REMOVED & STACKED NEATLY ALONG THE RIGHT OF WAY FOR DISPOSAL BY THE CONTRACTOR. ALL WORK SHALL BE INCLUDED IN THE PRICE BID FOR ITEM 202-PORIONS OF STRUCTURE REMOVED.

xxxxxxx SURFACES TO BE SEALED UNDER ITEM SPECIAL-SEALING OF CONCRETE SURFACES.

- NOTES:
1. PREFORMED EXPANSION JOINT FILLER AND SEALER AT CORNERS AND SIDES OF THE APPROACH SLAB SHALL BE INCLUDED IN THE PRICE BID PER SQ. YD. FOR THE APPROACH SLAB.
  2. TYPE A WATERPROOFING AT THE BRIDGE LIMIT END OF THE WIDENING APPROACH SLAB (AS PER STD. DWG. AS-1-81) SHALL BE INCLUDED IN THE PRICE BID FOR ITEM 611- APPROACH SLAB

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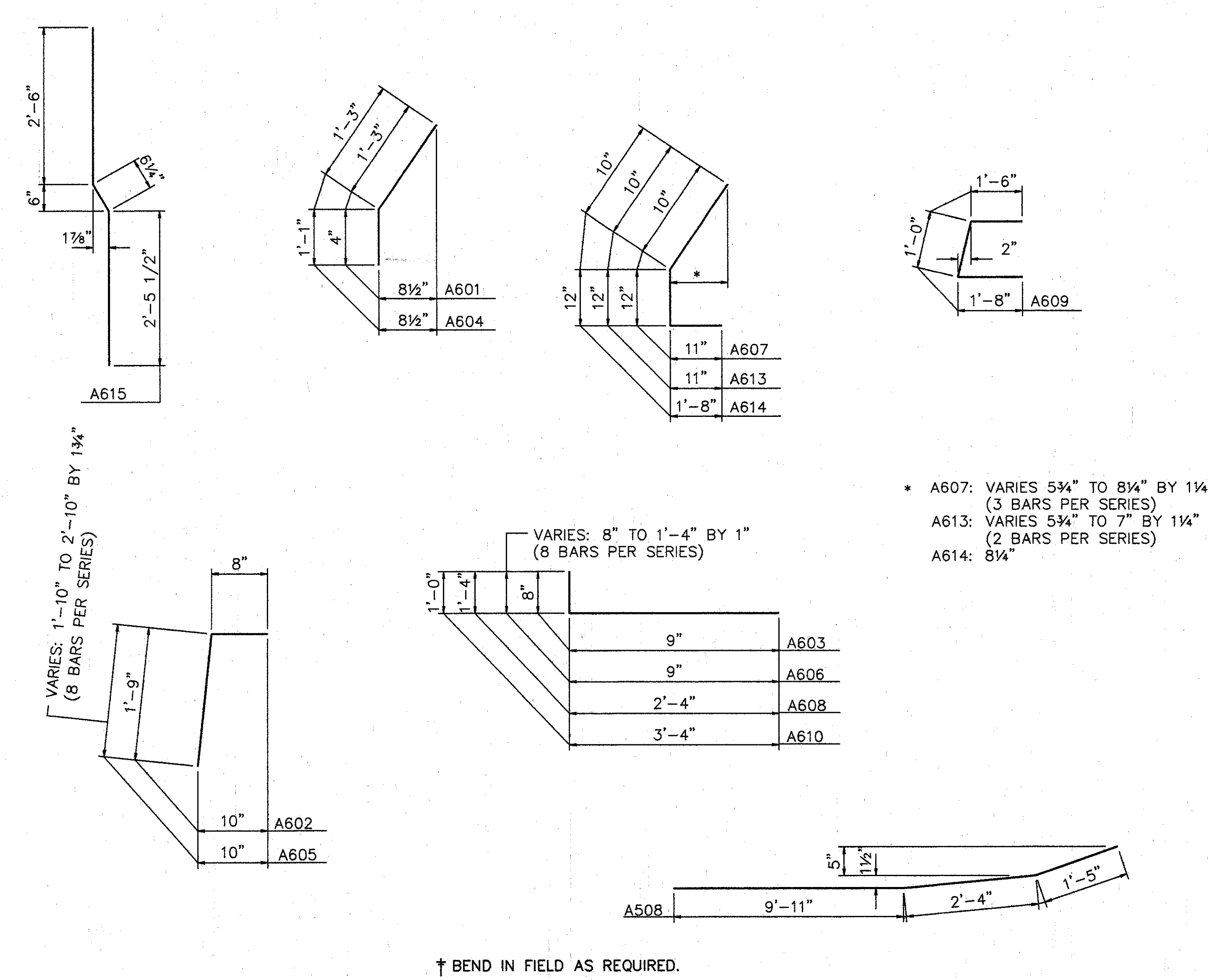
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|-------------------------------------|--------|--------|---------|---------------|------|---------|
| PARAPET SECTIONS AND DETAILS        |        |        |         |               |      |         |
| BRIDGE NO. HAM-71-0987<br>OVER 1-71 |        |        |         |               |      |         |
| HAMILTON COUNTY                     |        |        |         |               |      |         |
| DESIGNED                            | DRAWN  | TRACED | CHECKED | REVIEWED      | DATE | REVISED |
| L.A.T.                              | L.A.P. |        | M.A.A.  | D.E.M11/11/94 |      |         |

Last Pk. MAY 15, 1991 @ 8:11 PM  
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| REINFORCING STEEL LIST |       |        |                 |        |
|------------------------|-------|--------|-----------------|--------|
| MARK                   | SHAPE | NUMBER | LENGTH          | WEIGHT |
| PARAPETS               |       |        |                 |        |
| A501                   | STR.  | 36     | 30'-0"          | 1126   |
| A502                   | STR.  | 2      | 27'-0"          | 56     |
| A503                   | STR.  | 2      | 19'-10"         | 41     |
| A504                   | STR.  | 54     | 15'-2"          | 854    |
| A505                   | STR.  | 54     | 14'-8"          | 826    |
| A506                   | STR.  | 4      | 8'-0"           | 33     |
| † A507                 | BNT.  | 4      | 13'-8"          | 57     |
| A508                   | BNT.  | 8      | 13'-8"          | 114    |
| A509                   | STR.  | 4      | 5'-0"           | 21     |
| A510                   | STR.  | 4      | 11'-0"          | 46     |
| A511                   | STR.  | 4      | 6'-4"           | 26     |
| A512                   | STR.  | 1      | 2'-8"           | 3      |
| A513                   | STR.  | 12     | 2'-0"           | 25     |
| A514                   | STR.  | 2      | 2'-4"           | 5      |
| A601                   | BNT.  | 475    | 1'-6"           | 1070   |
| A602                   | BNT.  | 471    | 2'-5"           | 1710   |
| A603                   | BNT.  | 472    | 1'-3"           | 886    |
| A604                   | BNT.  | 29     | 2'-3"           | 98     |
| A605                   | BNT.  | 32     | 2'-6" TO 3'-6"  | 144    |
| A606                   | BNT.  | 32     | 1'-3" TO 1'-11" | 76     |
| A607                   | BNT.  | 6      | 2'-6"           | 23     |
| A608                   | BNT.  | 10     | 3'-6"           | 53     |
| A609                   | BNT.  | 2      | 3'-10"          | 12     |
| A610                   | BNT.  | 4      | 4'-2"           | 25     |
| A611                   | STR.  | 2      | 1'-2"           | 4      |
| A612                   | STR.  | 2      | 10"             | 3      |
| A613                   | BNT.  | 4      | 2'-6"           | 15     |
| A614                   | BNT.  | 2      | 3'-3"           | 10     |
| A615                   | BNT.  | 2      | 5'-5"           | 16     |
| A616                   | STR.  | 6      | 5'-4"           | 48     |
| REPLACEMENT STEEL      |       |        |                 | 300    |
| TOTAL                  |       |        |                 | 7726   |

BENT BAR DETAILS



† BEND IN FIELD AS REQUIRED.

PROPOSED WORK

1. MODIFY PARAPETS ON THE SUPERSTRUCTURE & ABUTMENTS. SEAL PARAPETS AS SHOWN ON PLANS. (INSTALL PLATES FOR STRIP SEAL EXP. JT.).
2. SCARIFY EXISTING DECK 1/4", AND REMOVE DETERIORATED CONCRETE AS DIRECTED BY THE ENGINEER.
3. PLACE 1 3/4" THICK **LATEX** MODIFIED CONCRETE ON DECK.
4. SEAL PARAPETS, BACKWALL, AND PIERS.
5. SEAL JOINTS, AS NOTED.
6. SEAL EXPANSION JOINT WITH STRIP SEAL.
7. PLACE GUARDRAIL AS SHOWN ON ROADWAY PLANS.
8. EXTEND SCUPPERS.
9. PAINT EXISTING STEEL STRUCTURE.
10. AT LEAST ONE LANE OF TRAFFIC SHALL BE MAINTAINED ON THE BRIDGE AT ALL TIMES. FOR NOTES SEE MAINTENANCE OF TRAFFIC PLANS.
11. OTHER WORK AS DESCRIBED IN THESE PLANS.
12. REFURBISH ABUTMENT BEARINGS

| ITEM    | ITEM EXT. | TOTAL    | UNITS    | DESCRIPTION                                                                            |
|---------|-----------|----------|----------|----------------------------------------------------------------------------------------|
| 202     | 11200     | LUMP SUM | L.S.     | PORTIONS OF STRUCTURE REMOVED                                                          |
| 509     | 15820     | 7726     | LBS.     | EPOXY COATED REINFORCING STEEL, GRADE 60                                               |
| 511     | 34450     | 8        | C.Y.     | CLASS S CONCRETE, MISC.: ABUTMENT PARAPETS                                             |
| SPECIAL | 51267500  | 804      | S.Y.     | SEALING OF CONCRETE SURFACE *                                                          |
| SPECIAL | 51267502  | 56       | S.Y.     | SEALING OF CONCRETE SURFACE (EPOXY) *                                                  |
| SPECIAL | 51400050  | 14,350   | S.F.     | SURFACE PREPARATION OF EXIST. STEEL, SYSTEM OZEU *                                     |
| SPECIAL | 51400056  | 14,350   | S.F.     | FIELD PAINTING OF EXIST STEEL, PRIME COAT, SYSTEM OZEU *                               |
| SPECIAL | 51400060  | 14,350   | S.F.     | FIELD PAINTING OF EXIST STEEL, INTERMEDIATE COAT, SYSTEM OZEU *                        |
| SPECIAL | 51400066  | 14,350   | S.F.     | FIELD PAINTING OF EXIST STEEL, FINISH COAT, SYSTEM OZEU *                              |
| SPECIAL | 51400504  | 100      | MAN HOUR | GRINDING FINES, TEARS, AND SLIVERS *                                                   |
| 516     | 10000     | 66       | L.F.     | PREFORMED ELASTOMERIC COMPRESSION JOINT SEAL (705.11)                                  |
| 516     | 11210     | 71       | L.F.     | STRUCTURAL EXP. JT. INCLUDING ELASTOMERIC STRIP SEAL                                   |
| 516     | 45304     | 8        | EACH     | REFURBISH BEARING DEVICE                                                               |
| 517     | 76201     | 550      | L.F.     | RAILING FACED, AS PER PLAN (32" HIGH)                                                  |
| 518     | 63300     | LUMP     | L.S.     | SCUPPER AND DRAINAGE PIPE CLEANOUT                                                     |
| 518     | 12700     | 7        | EACH     | SCUPPER, VERTICAL EXTENSION                                                            |
| 518     | 12800     | 6        | EACH     | SCUPPER MODIFICATION                                                                   |
| 625     |           |          |          | FOR LIGHTING SUMMARY SEE LIGHTING PLANS.                                               |
| 519     | 11100     | 125      | S.F.     | PATCHING CONCRETE STRUCTURE                                                            |
| 845     | 40210     | 804      | S.Y.     | <b>LATEX</b> MODIFIED CONCRETE <sup>MISC</sup> OVERLAY (1 3/4" THICK) ON EXISTING DECK |
| 845     | 11000     | 16       | C.Y.     | <b>LATEX</b> MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS)                            |
| 845     | 30000     | 1        | C.Y.     | FULL DEPTH REPAIR                                                                      |

\* SEE PROPOSAL NOTE

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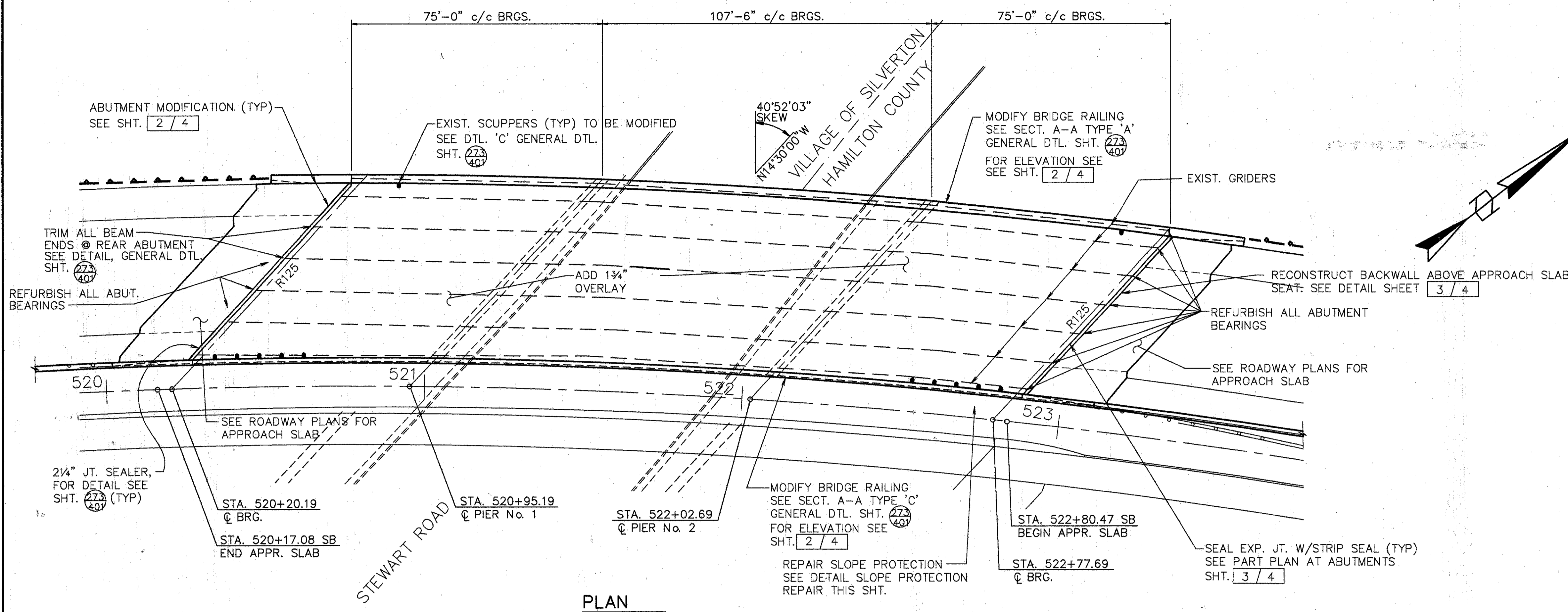
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**QUANTITIES AND GENERAL NOTES**

BRIDGE NO. HAM-71-0987  
 OVER I-71

HAMILTON COUNTY

|          |        |        |         |               |      |         |
|----------|--------|--------|---------|---------------|------|---------|
| DESIGNED | DRAWN  | TRACED | CHECKED | REVIEWED      | DATE | REVISED |
| L.A.T.   | L.A.P. |        | M.A.A.  | D.E.M11/11/94 |      |         |

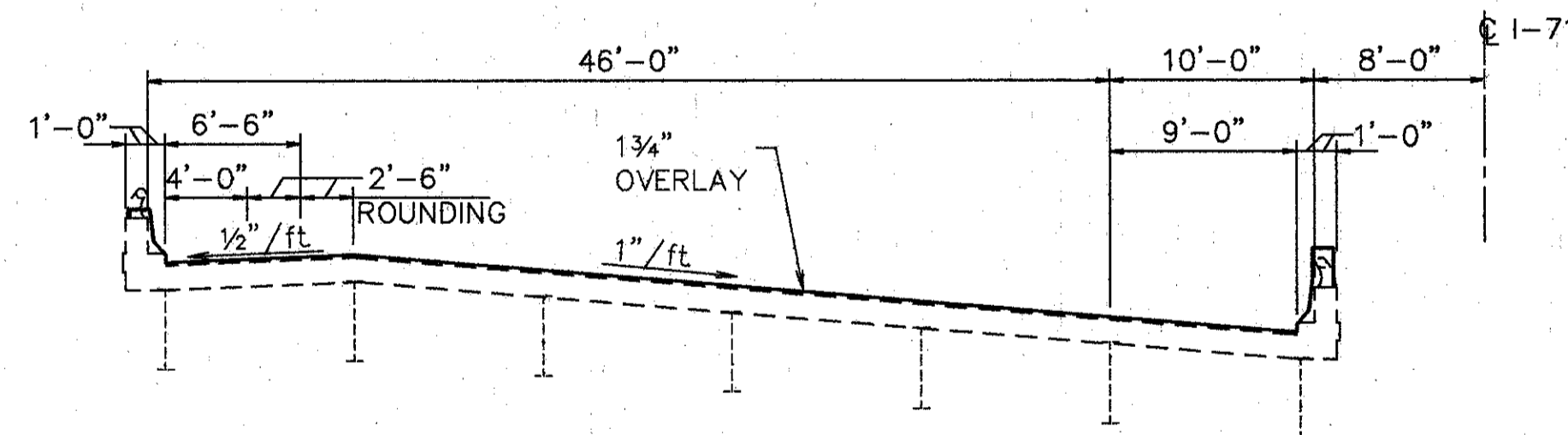


PLAN

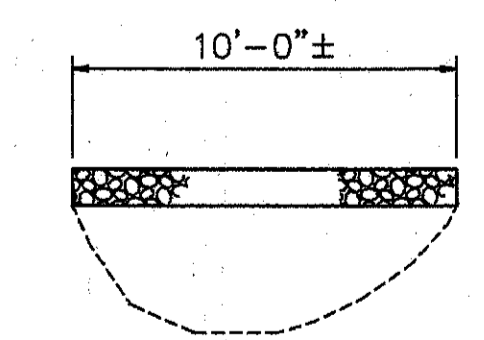
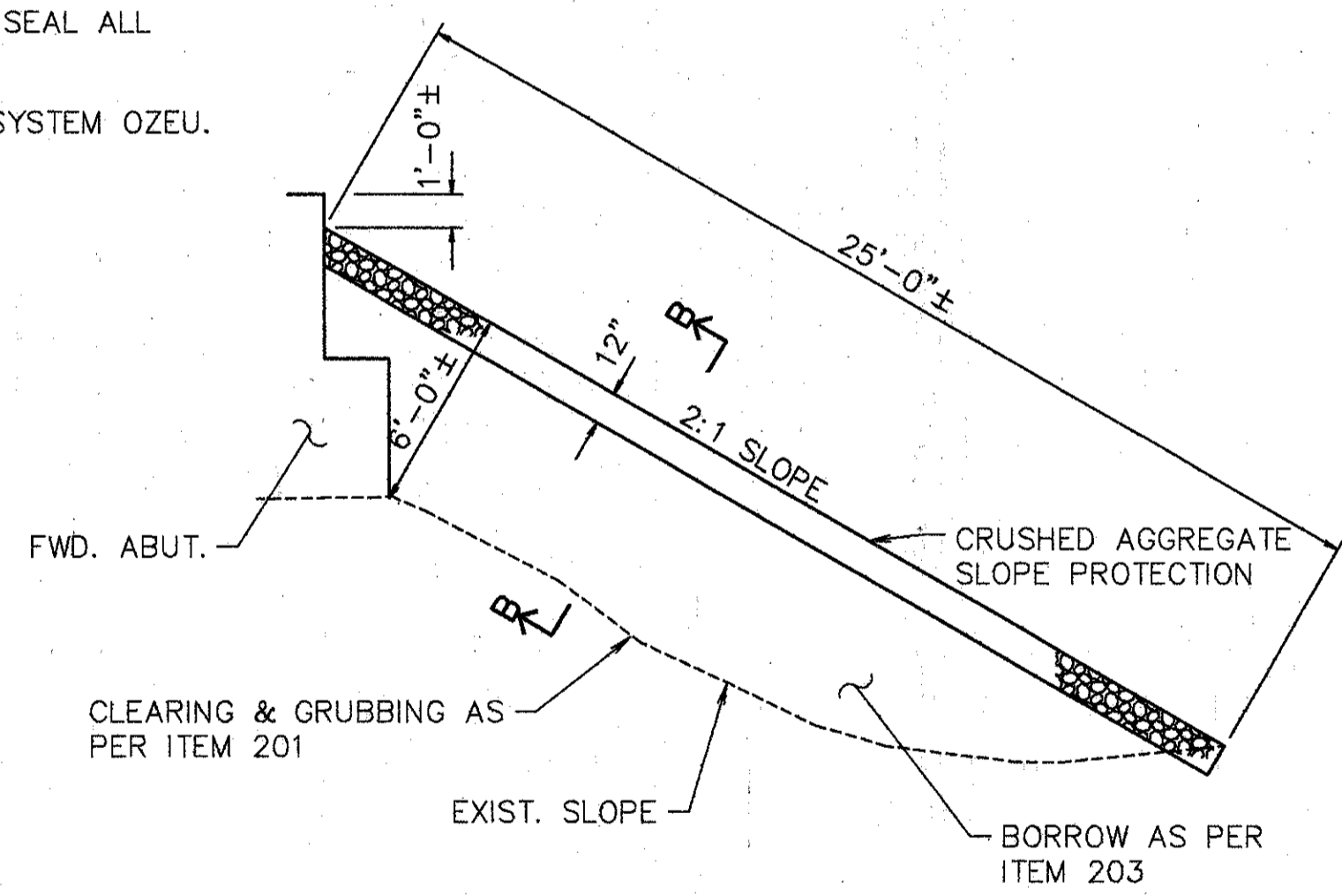
| ROCKER OR BOLSTER SIZE | JACK CAPACITY REQ'D. (MIN) |
|------------------------|----------------------------|
| R125                   | 100 TON                    |

NOTES:

1. EXTEND ALL SCUPPERS. FOR DTL. SEE GEN. DTL. SHT. 2/4
2. SEAL PARAPETS, PIERS, AND BACKWALL. SEAL ALL OF PIERS EXCEPT TOPS OF PIER CAPS.
3. PAINT EXISTING STEEL STRUCTURE WITH SYSTEM OZEU.



TYP. BRIDGE SECTION



SECTION B-B

SLOPE PROTECTION REPAIR

SLOPE PROTECTION REPAIR SHALL BE PAID FOR AS ITEM 601 CRUSHED AGGREGATE SLOPE PROTECTION AS PER PLAN. THE PRICE BID PER SQ. YARD SHALL INCLUDE CLEARING & GRUBBING AND BORROW AS REQUIRED TO CONFORM TO THE SLOPE AS SHOWN.

EXISTING STRUCTURE

TYPE: CONTINUOUS STEEL GIRDER WITH REINFORCED CONCRETE DECK & SUBSTRUCTURE  
 SPANS: 75'-0", 107'-6", 75'-0"  
 ROADWAY: 56'-0" F/F PARAPET  
 SKEW: 40°-52'-03" LT. FORWARD  
 LOADING FREQUENCY: C.F.=2000 (57) ADEQUATE FOR A.A.S.H.O. ALTERNATE LOADING  
 WEARING SURFACE: 1" MONOLITHIC CONCRETE  
 APPROACH SLABS: AS-1-54 (25'-0" LONG)  
 ALIGNMENT: 3" HORIZONTAL CURVE TO THE RIGHT  
 SUPERELEVATION: 0.0833'/FT.  
 CURB: 1'-0" EACH SIDE

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GENERAL PLAN

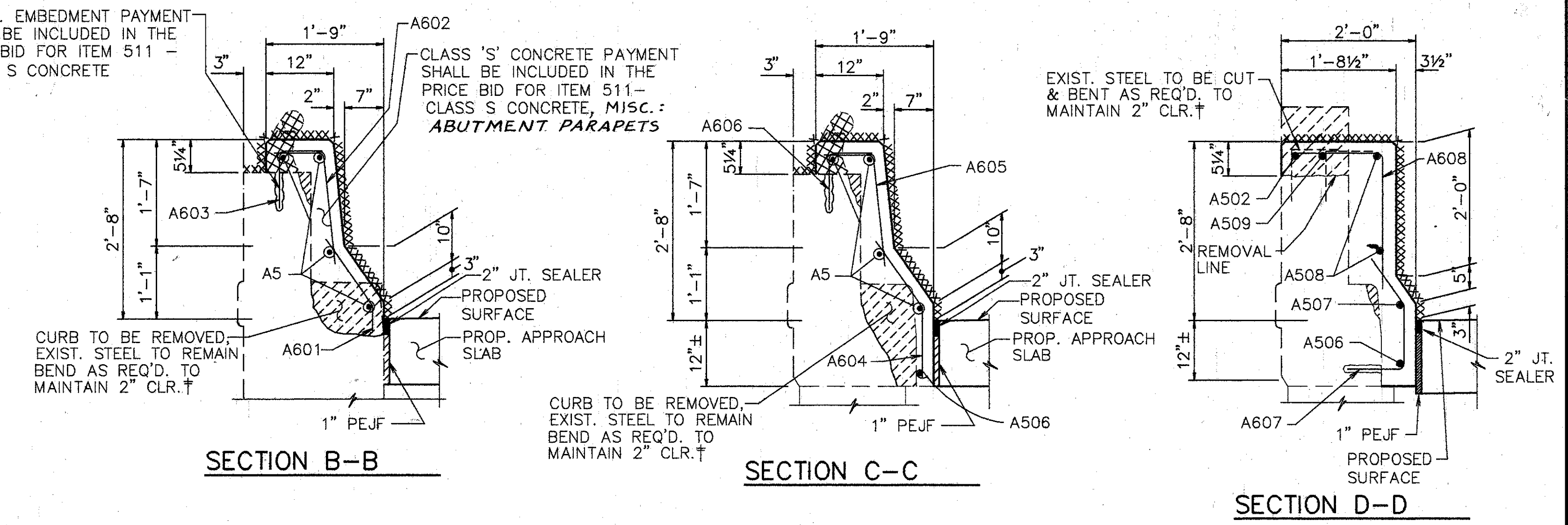
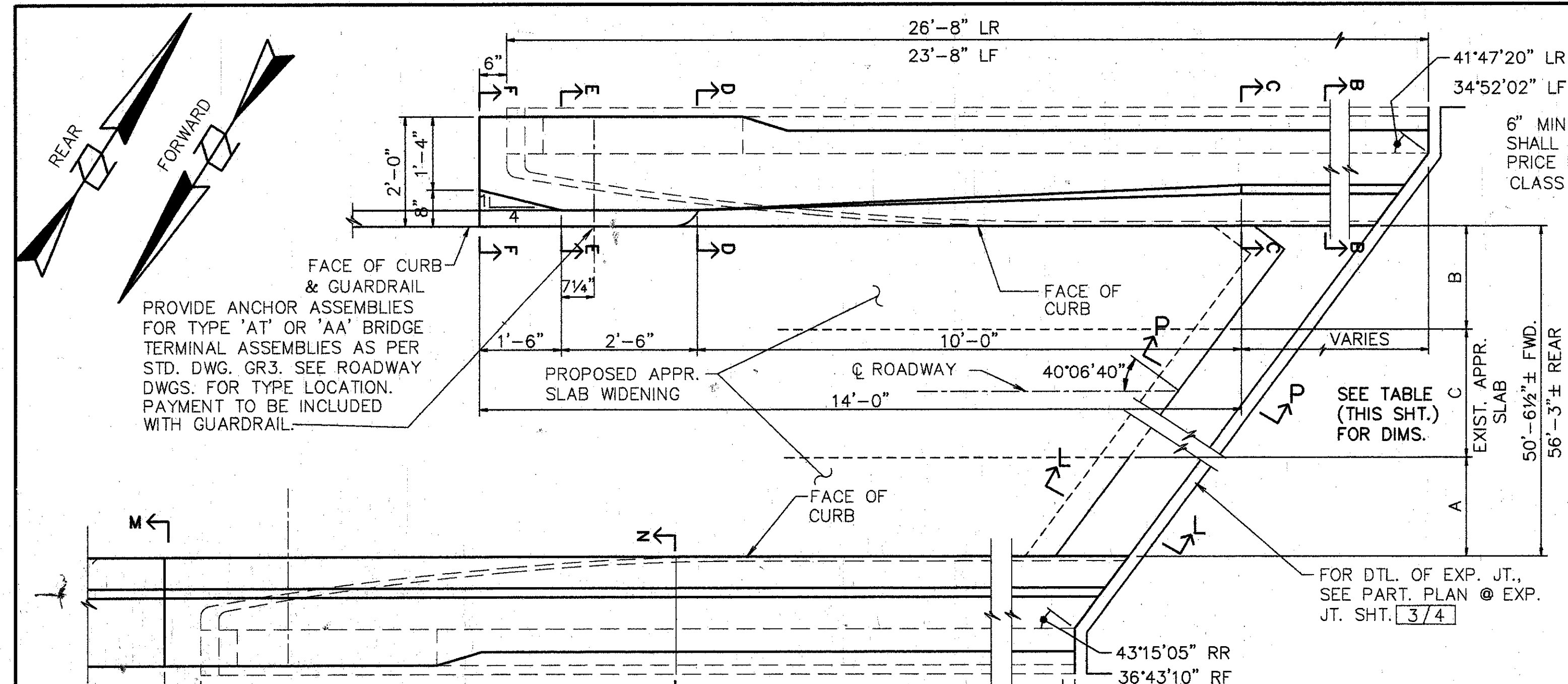
BRIDGE NO. HAM-71-1063 L  
 OVER CO. RD. NO.327

HAMILTON COUNTY

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|----------|--------|--------|---------|---------------|------|---------|
| DESIGNED | DRAWN  | TRACED | CHECKED | REVIEWED      | DATE | REVISED |
| L.A.T.M. | D.E.E. |        | M.A.A.  | D.E.M11/11/94 |      |         |

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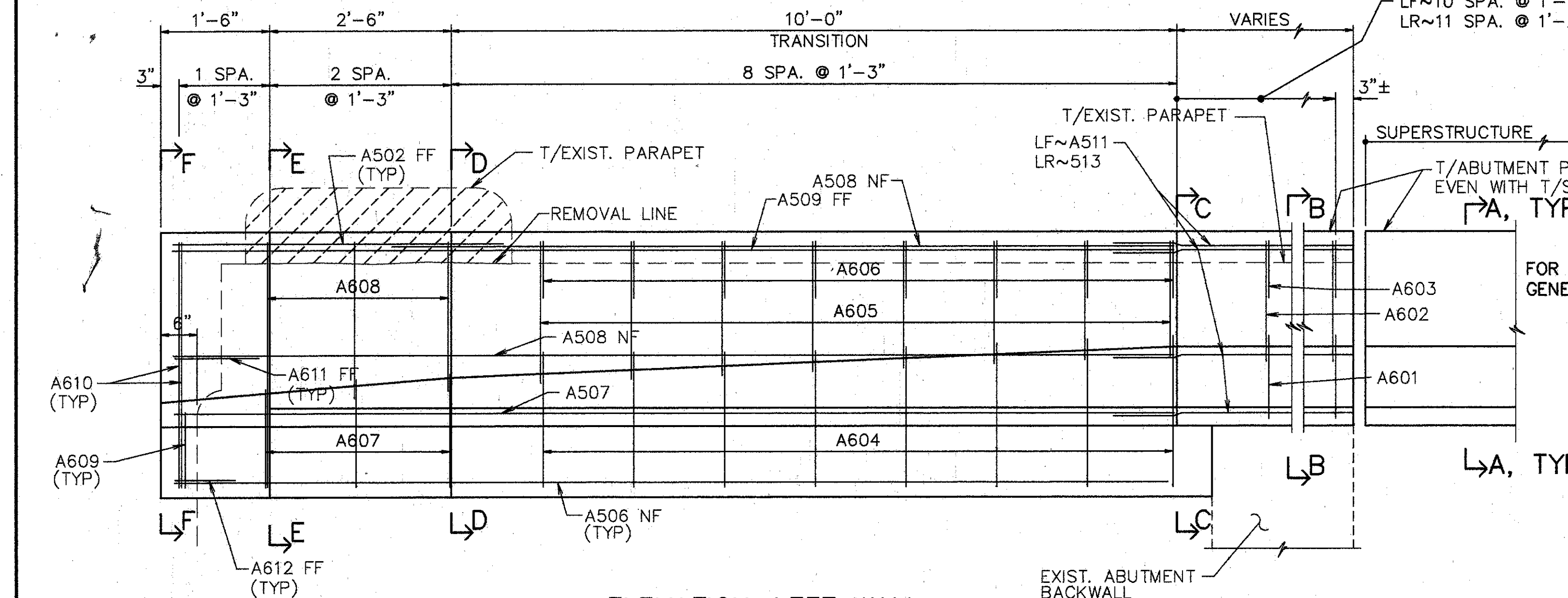




| LOCATION | DIMENSIONS |        |            |
|----------|------------|--------|------------|
|          | A          | B      | C          |
| FORWARD  | 7'-8 1/2"  | 9'-2"  | 33'-8"     |
| REAR     | 8'-6 3/4"  | 10'-2" | 37'-6 1/4" |

**PLAN - ABUTMENT MODIFICATION**

REAR SHOWN, FORWARD OPPOSITE HAND (SAME SKEW ANGLE).  
 SEE GENERAL PLAN FOR WINGWALL ORIENTATION AT FORWARD ABUTMENT.



**ELEVATION-LEFT WALL**

- EXIST. CURB & PARAPET TO BE REMOVED UNDER ITEM 202-"PORTIONS OF STRUCTURE REMOVED".
- EXIST. RAILING & POSTS TO BE REMOVED & STACKED NEATLY ALONG THE RIGHT-OF-WAY FOR DISPOSAL BY THE CONTRACTOR. ALL WORK SHALL BE INCLUDED IN THE PRICE BID FOR ITEM 202-"PORTIONS OF STRUCTURE REMOVED".
- XXXXXX SURFACES TO BE SEALED UNDER ITEM SPECIAL-"SEALING OF CONCRETE SURFACES".

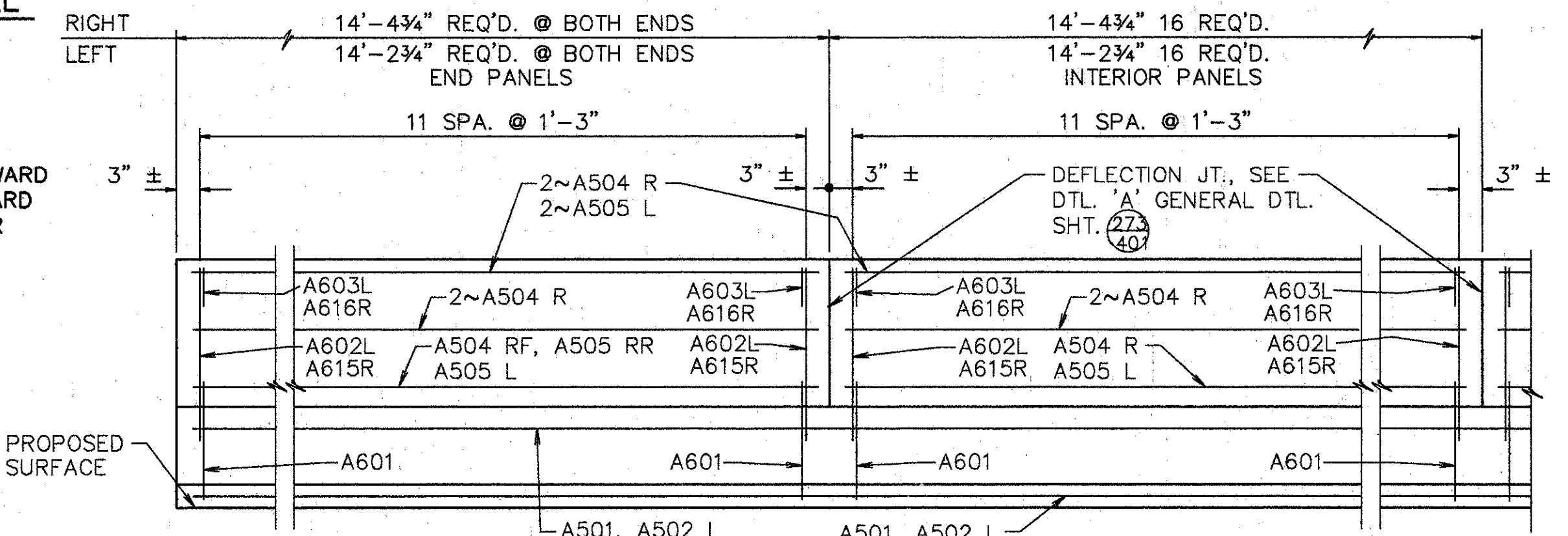
- NOTES:**
- L DENOTES LEFT SIDE
  - R DENOTES RIGHT SIDE
  - RF DENOTES RIGHT FORWARD
  - LF DENOTES LEFT FORWARD
  - RR DENOTES RIGHT REAR
  - LR DENOTES LEFT REAR
  - NF DENOTES NEAR FACE
  - FF DENOTES FAR FACE

- NOTES:**
- TYPE "A" WATERPROOFING AT THE BRIDGE LIMIT END OF THE APPROACH SLAB (AS PER STD. DWG. AS-1-81) SHALL BE INCLUDED IN THE PRICE BID FOR ITEM 611 APPROACH SLAB.

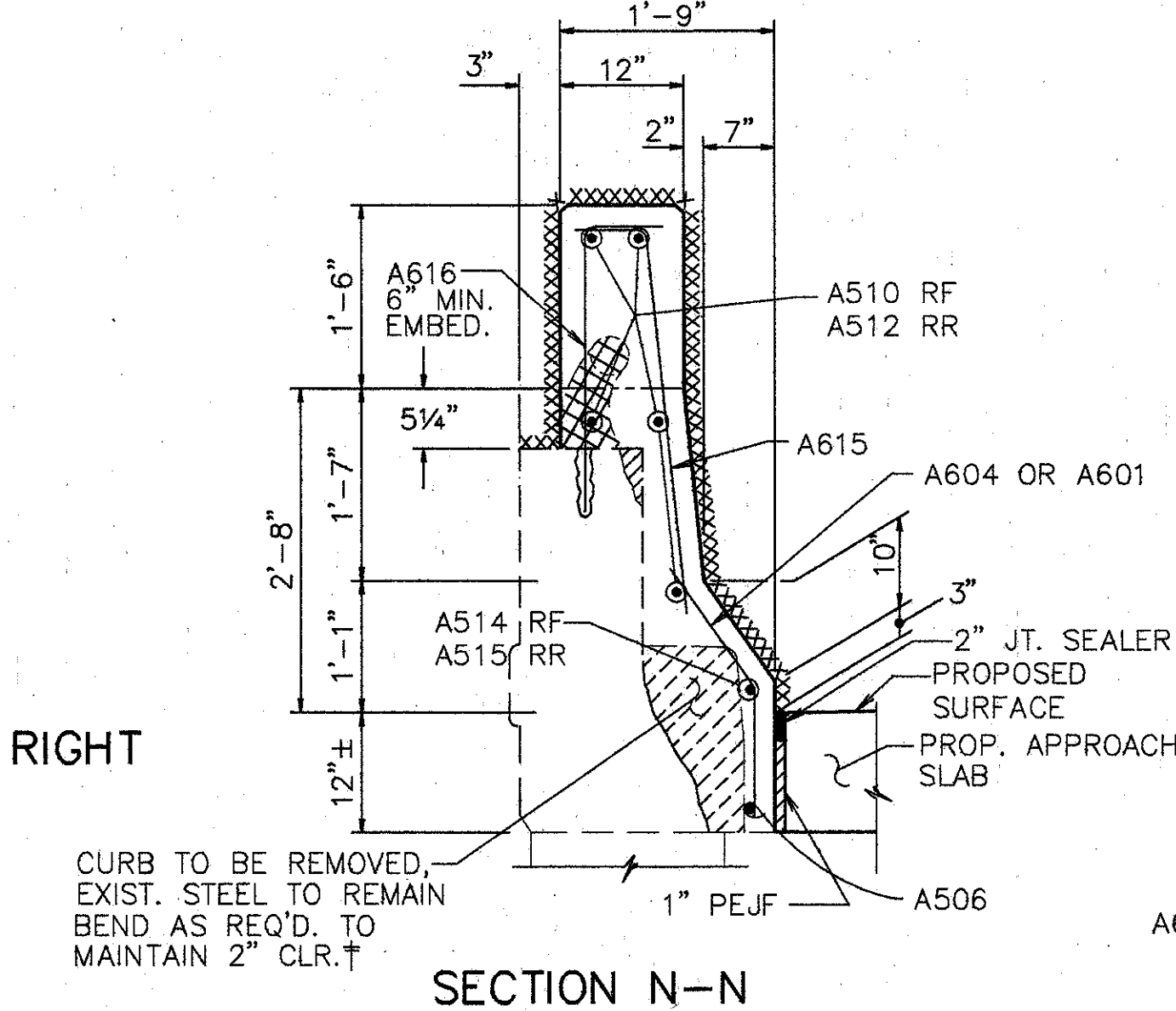
FOR SECTION A-A SEE GENERAL DETAIL SHT. 273

SECTION A-A, TYPE A LEFT, TYPE C RIGHT

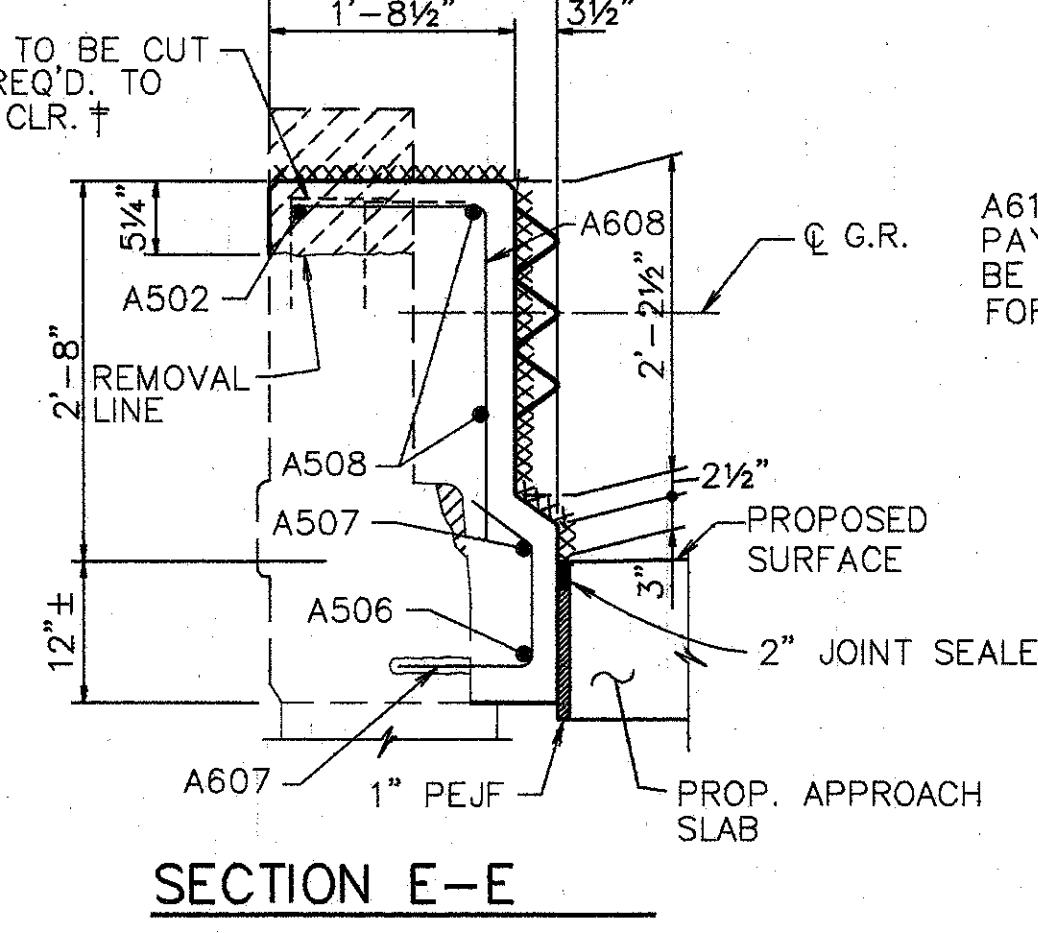
NOTE: 32" BARRIER ON LEFT  
 50" BARRIER ON RIGHT



**ELEVATION SUPERSTRUCTURE PARAPET**

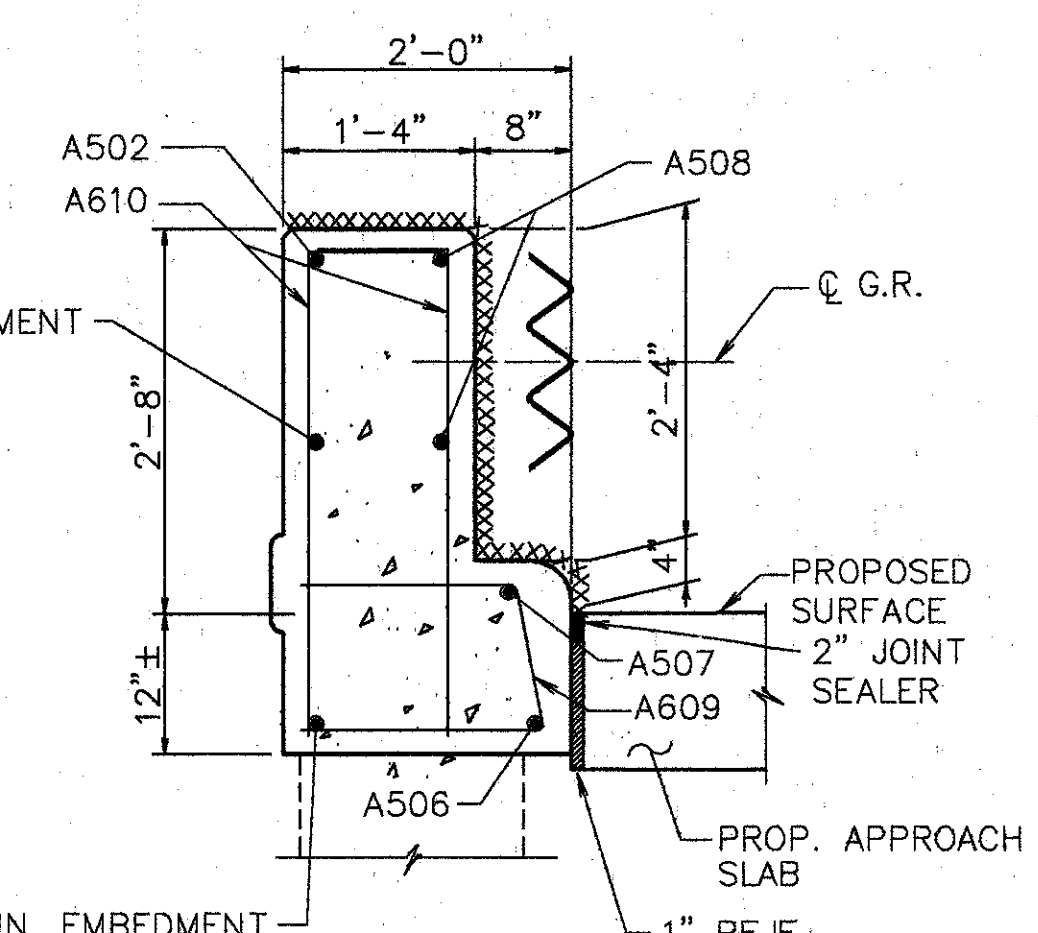


**SECTION N-N**



**SECTION E-E**

† BARS SHALL REMAIN. CONTRACTOR SHALL EXERCISE CAUTION TO ENSURE THAT THESE BARS ARE NOT DAMAGED DURING THE CONC. REMOVAL OPERATION. ANY BARS DAMAGED AS A RESULT OF THE CONTRACTOR'S OPERATION SHALL BE REPLACED OR REPAIRED BY THE CONTRACTOR AT HIS EXPENSE. METHOD OF REPAIR OR REPLACEMENT WILL BE AT THE DISCRETION OF THE DIRECTOR.



**SECTION F-F**

A612 6" MIN. EMBEDMENT PAYMENT FOR EMBEDMENT SHALL BE INCLUDED IN THE PRICE BID FOR ITEM 511 - CLASS S CONCRETE

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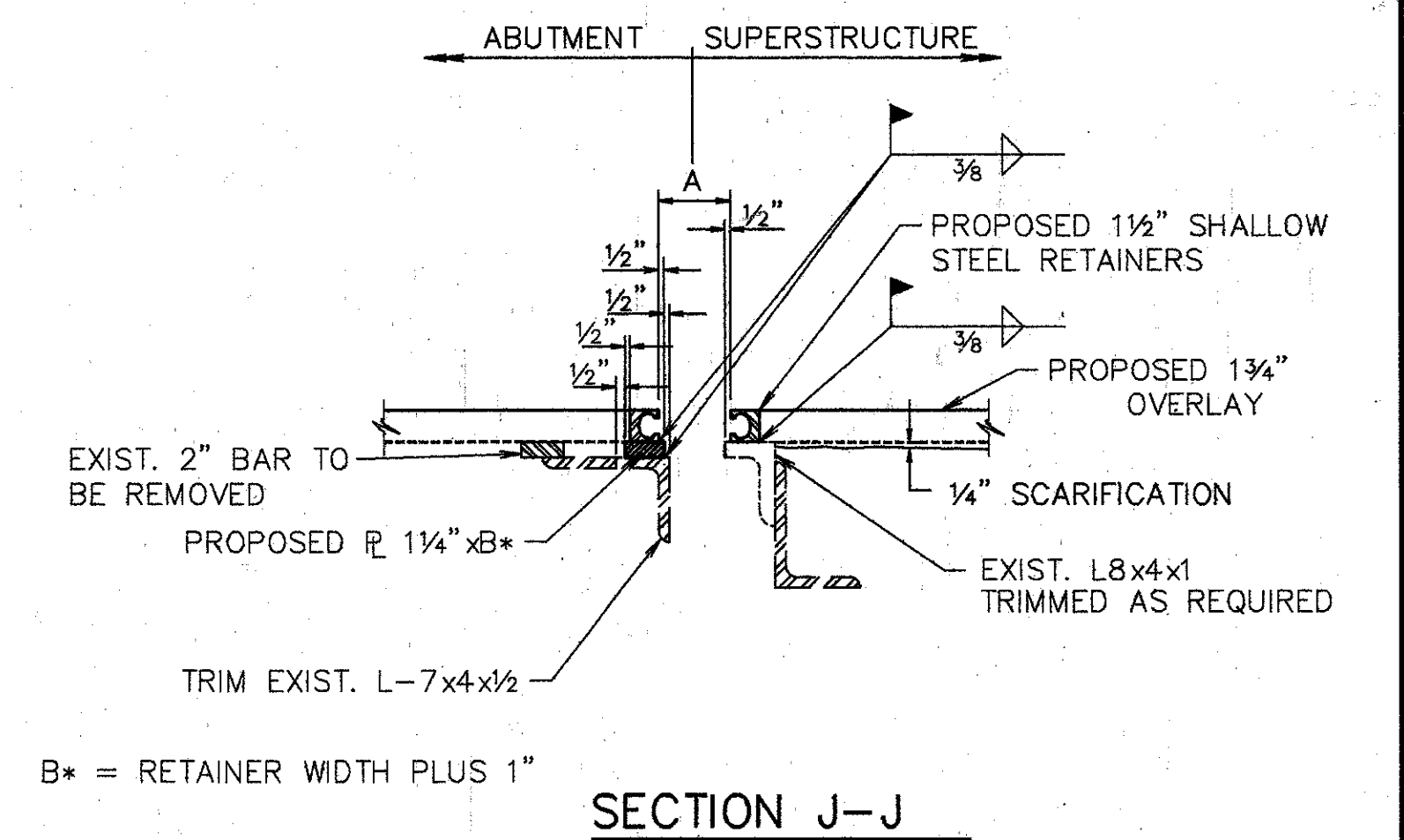
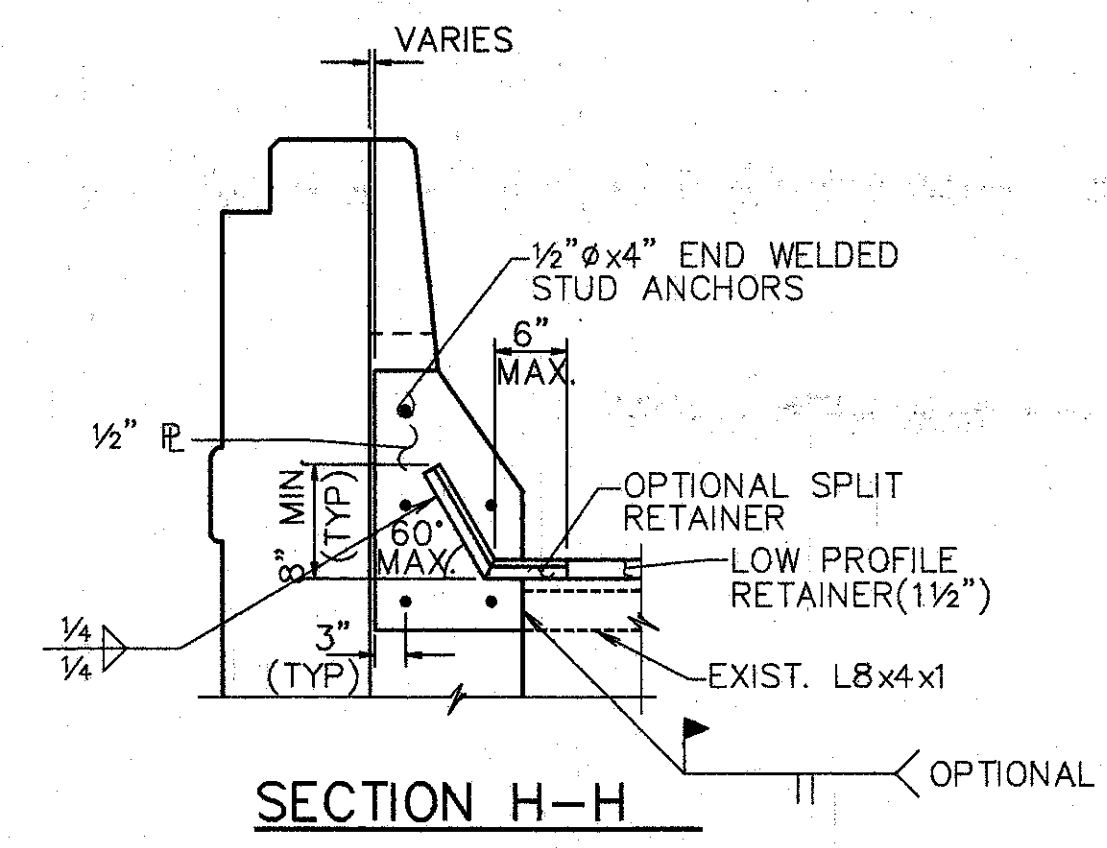
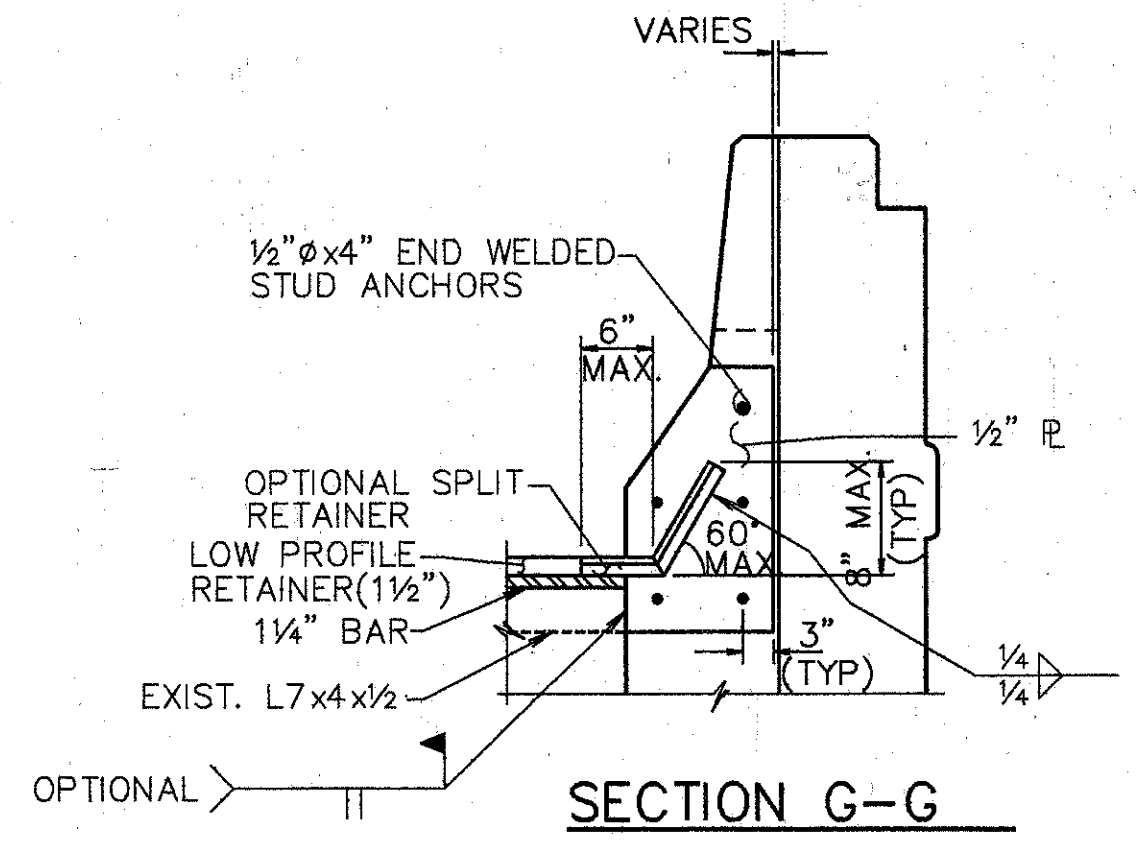
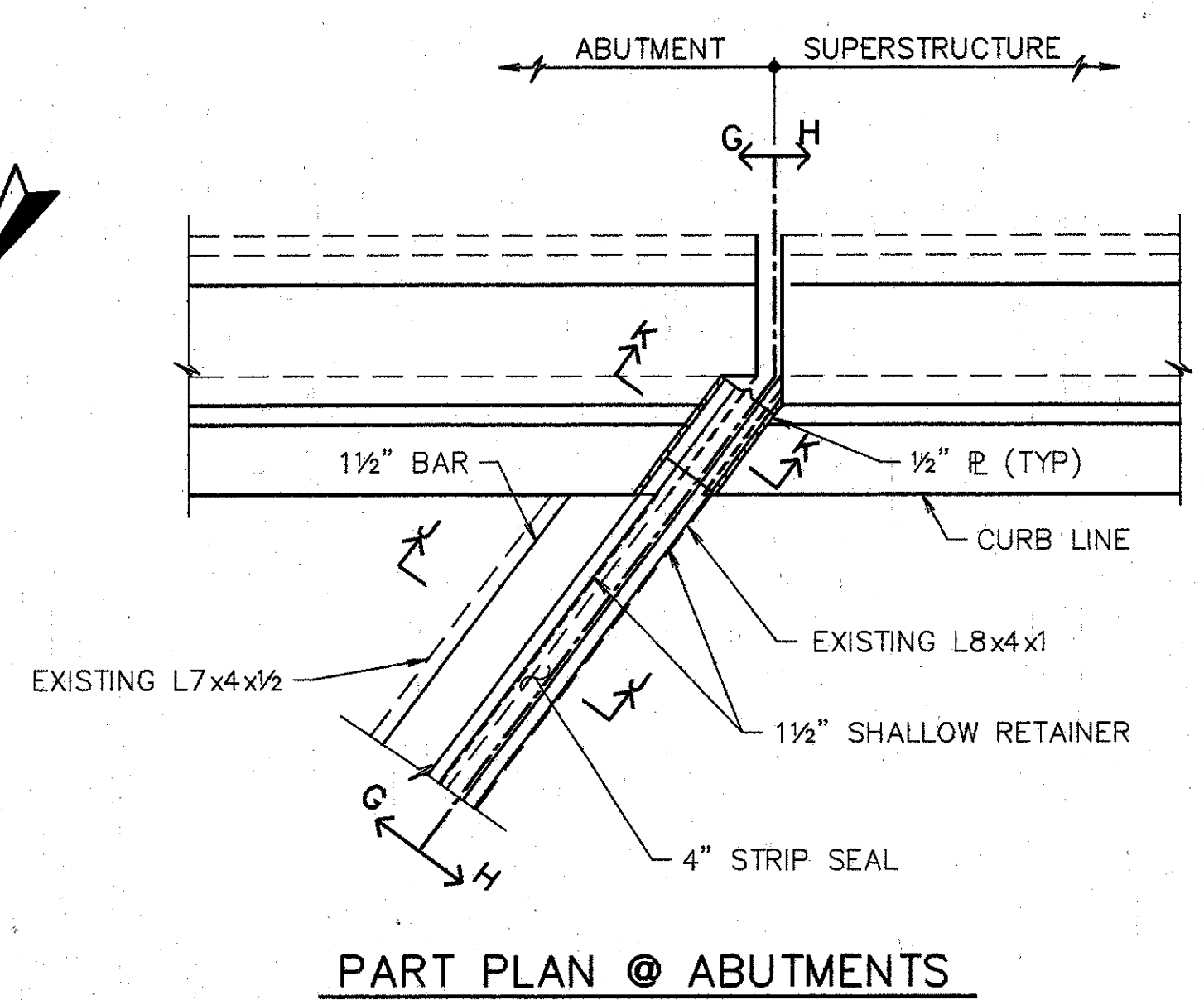
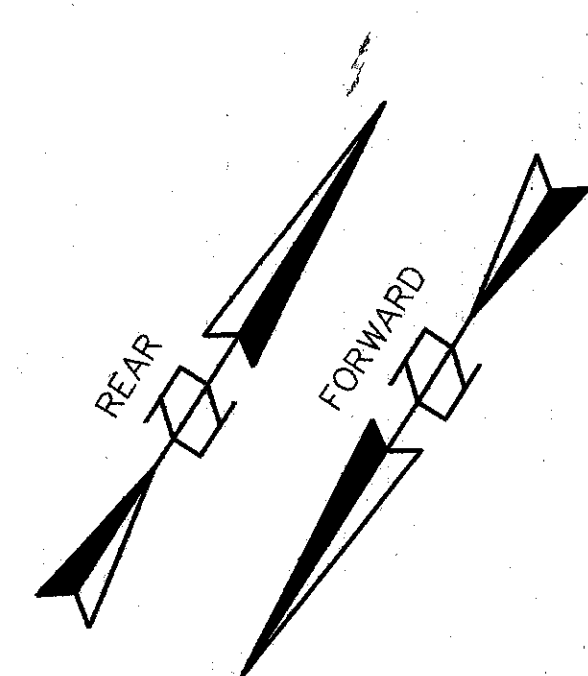
**PARAPET SECTIONS AND DETAILS**

BRIDGE NO. HAM-71-1063 L  
 OVER CO. RD. No. 327

HAMILTON COUNTY

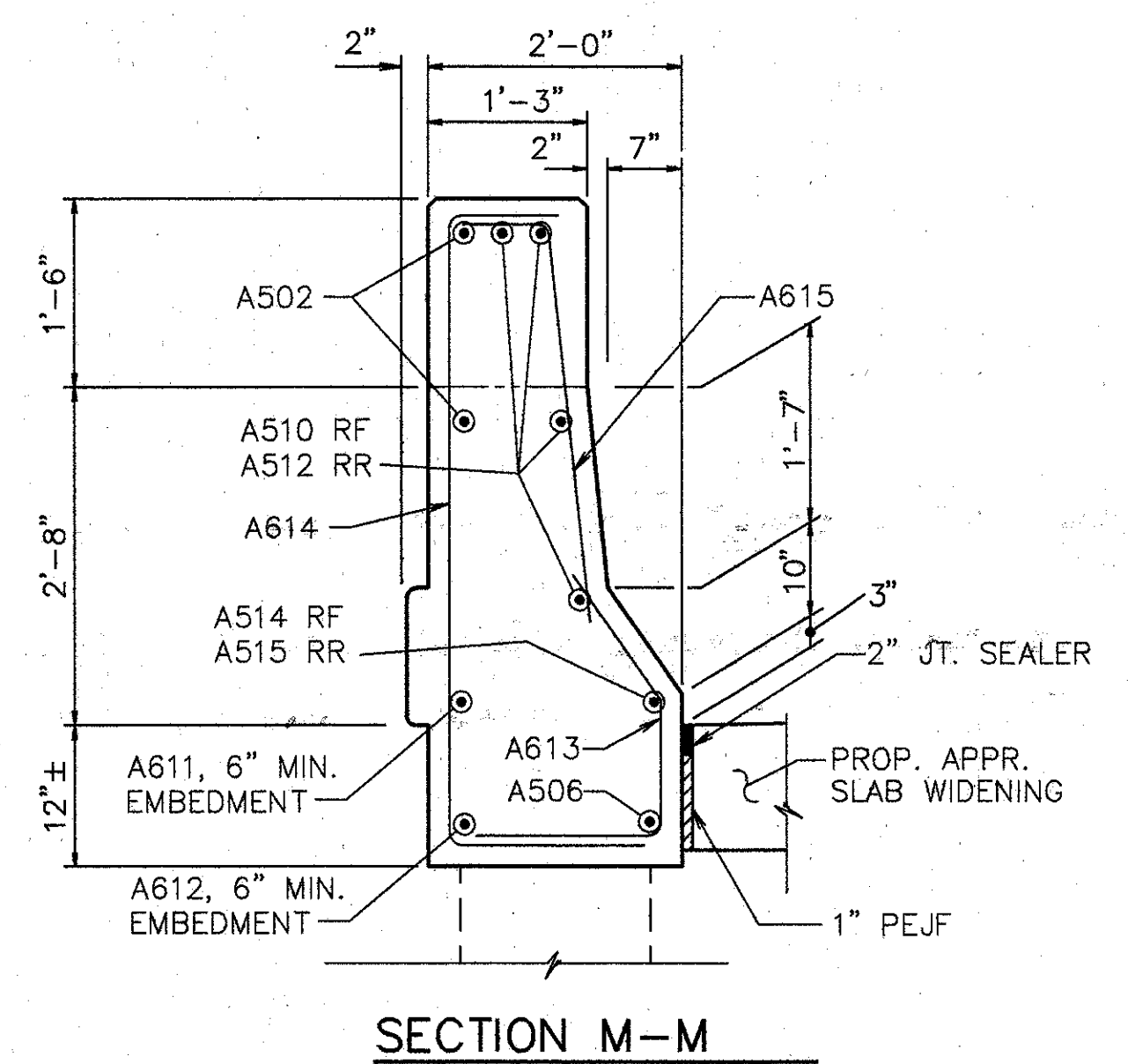
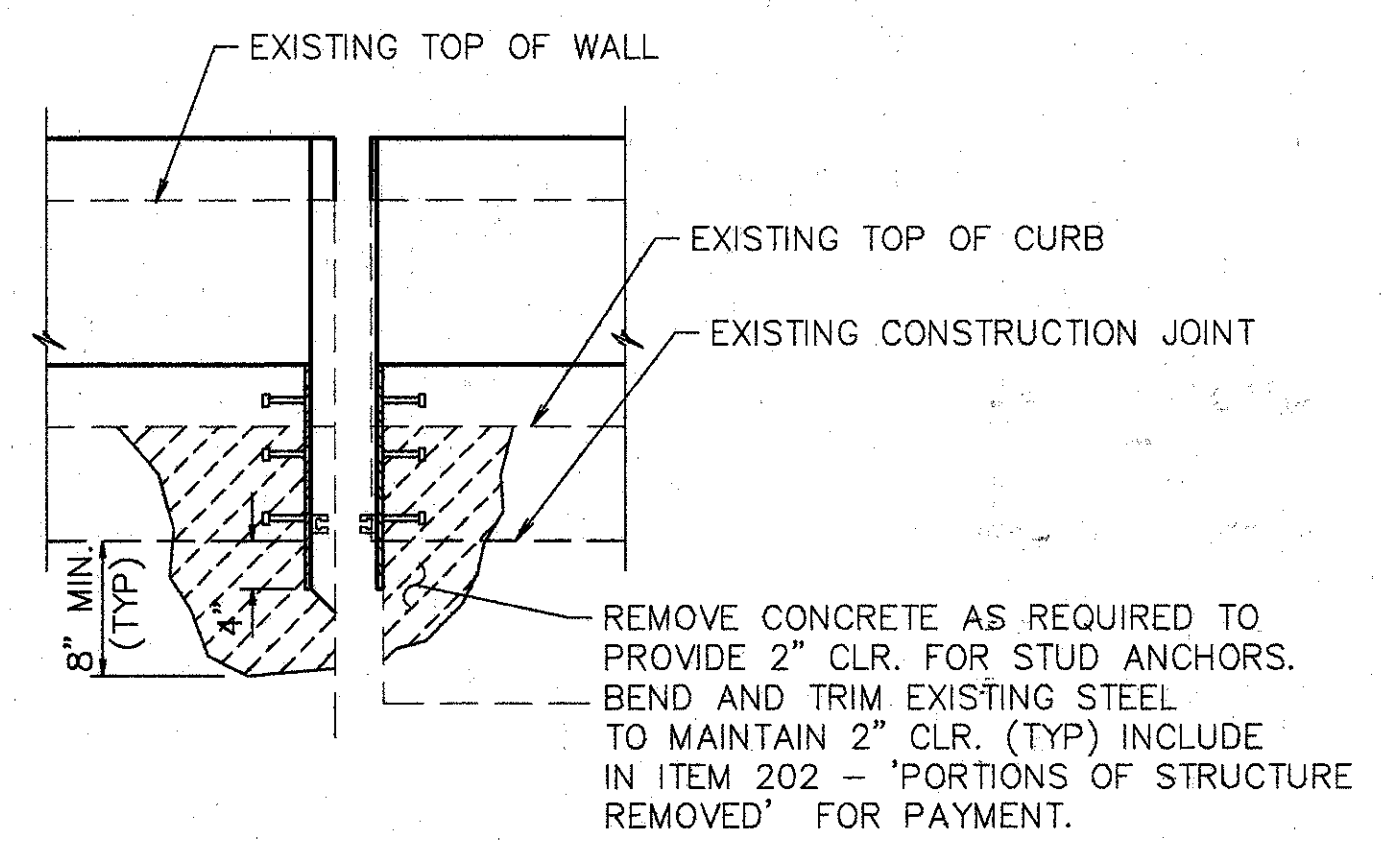
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| DESIGNED | DRAWN  | TRACED | CHECKED | REVIEWED     | DATE | REVISED |
| L.A.T.M. | D.E.E. |        | M.A.A.  | D.E.M1/11/94 |      |         |

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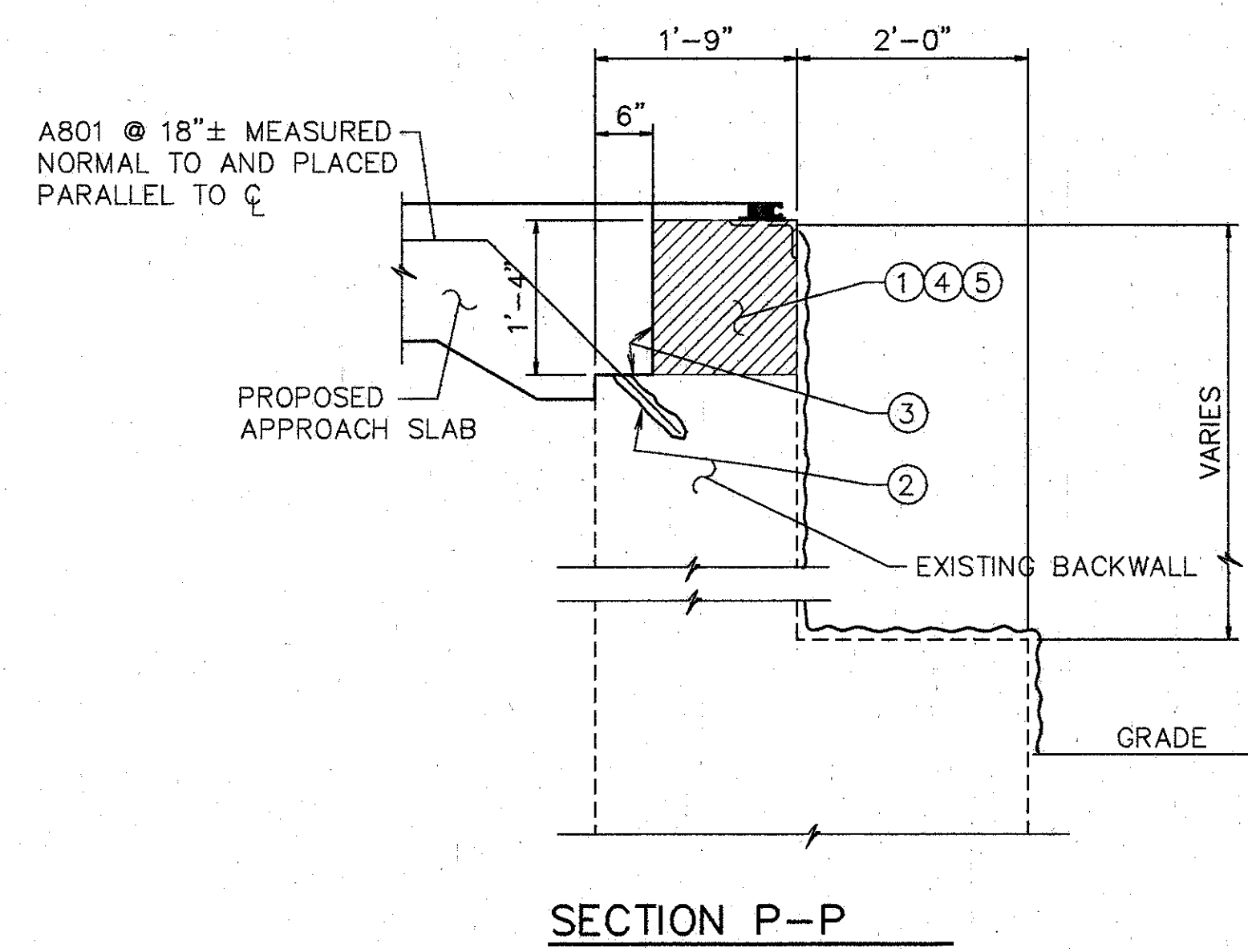


- NOTES:**
1. EXPANSION JT. DETAILS TO BE WORKED WITH STD. DWG. EXJ-4-87 SHTS. 1 thru 5.
  2. WHEN PLATE IS RECESSED INTO ABUTMENT, CONCRETE BELOW PLATE SHALL BE SLOPED FROM BOTTOM OF THE PLATE TO THE END OF THE ABUTMENT TO DETER ACCUMULATION OF DEBIS.

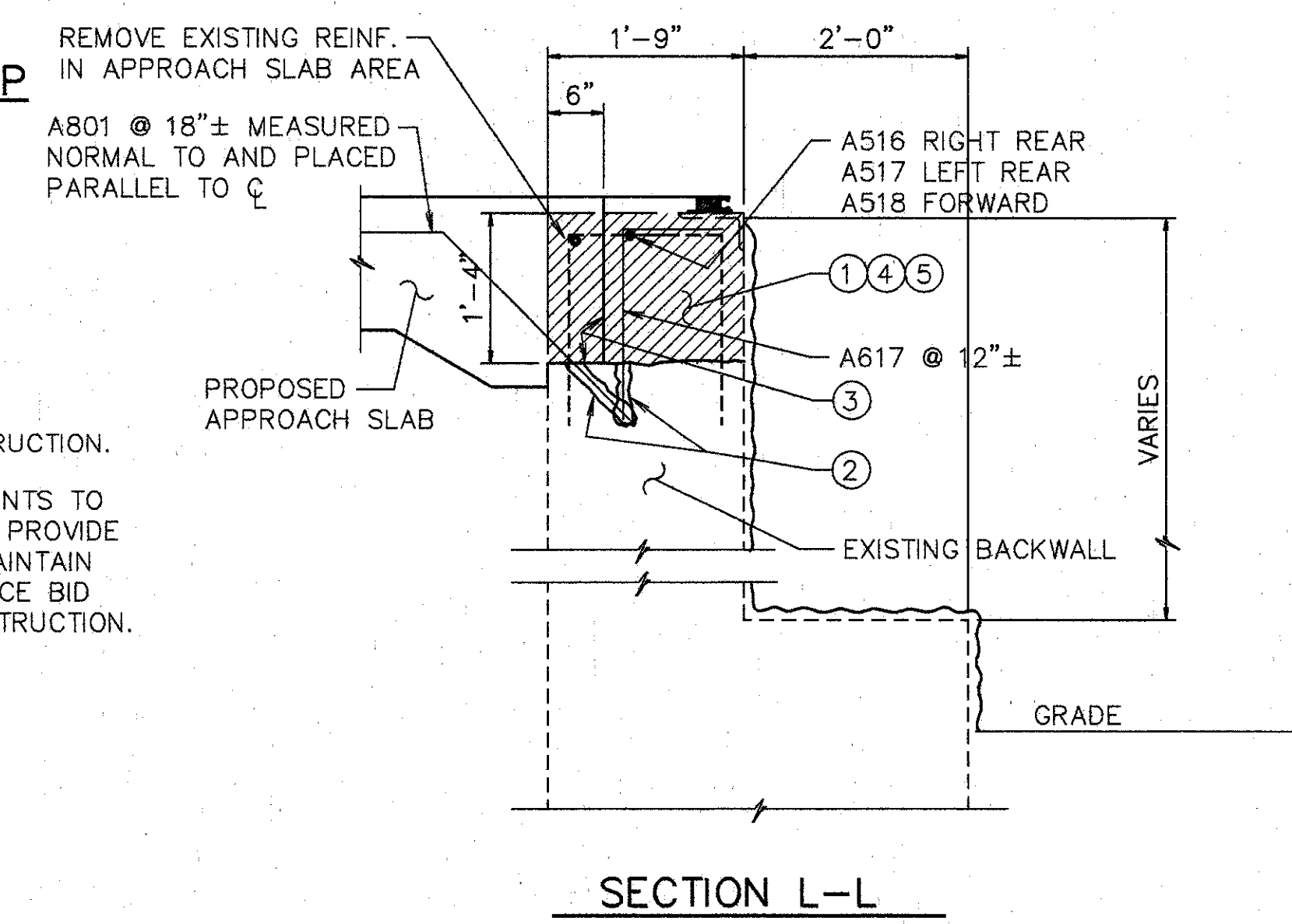
- NOTES:**
1. CONTRACTOR TO VERIFY ALL DIMENSIONS PRIOR TO MODIFYING EXPANSION JOINT.
  2. THE PRICE BID FOR ITEM 516-'STRUCTURAL EXPANSION JOINTS, INCLUDING ELASTOMERIC STRIP SEALS, SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, AND ANY OTHER INCIDENTAL ITEMS, AS DETAILED. (REMOVAL OF CURB OR PARAPET AS SHOWN SHALL BE INCLUDED UNDER ITEM 202-'PORTIONS OF STRUCTURE REMOVED').
  3. FOR DETAILS NOT SHOWN REFER TO DWG. EXJ-4-87 SHTS. 3 AND 4.
  4. STRIP SEAL TO BE INSTALLED IN ONE CONTINUOUS PIECE (NO OPEN JOINTS).
  5. PROVIDE TEMPORARY SUPPORT FOR ABUTMENT END DAM DURING CONSTRUCTION. REMOVE TEMPORARY SUPPORT AS SOON AS CONCRETE HAS SET, PREFERABLY WITHIN TWO HOURS AFTER PLACING TO AVOID DAMAGE DUE TO EXPANSION AND CONTRACTION OF SUPERSTRUCTURE.



| TEMPERATURE | DIM. 'A' |         |
|-------------|----------|---------|
|             | REAR     | FORWARD |
| 40° F       | 3 1/8"   | 3 1/8"  |
| 50° F       | 3"       | 3 1/8"  |
| 60° F       | 2 7/8"   | 3"      |
| 70° F       | 2 3/4"   | 3"      |
| 80° F       | 2 1/2"   | 3"      |
| 90° F       | 2 1/2"   | 2 7/8"  |



- NOTES FOR SECTION L-L & P-P**
1. EXISTING REINFORCING STEEL TO REMAIN ~ REINFORCING STEEL DAMAGED TO BE REPLACED AT CONTRACTORS EXPENSE.
  2. 1' MIN. EMBEDMENT (SEE DOWEL HOLE GENERAL NOTE) ITEM 510.
  3. TYPE 'A' WATERPROOFING (PAYMENT INCLUDED IN THE PRICE BID FOR APPROACH SLAB).
  4. CLASS 'C' CONCRETE, ABUTMENT RECONSTRUCTION.
  5. PROVIDE CONTRACTION AND EXPANSION JOINTS TO MATCH THOSE IN EXISTING BACKWALL AND PROVIDE CONSTRUCTION JOINTS AS REQUIRED TO MAINTAIN TRAFFIC. PAYMENT TO BE INCLUDED IN PRICE BID FOR ITEM 511 CLASS C CONCRETE RECONSTRUCTION.
- EXISTING CONCRETE TO BE REMOVED INCLUDE IN ITEM 202 FOR PAYMENT.  
 SURFACE TO BE SEALED UNDER ITEM SPECIAL-'SEALING OF CONCRETE SURFACE, EPOXY'.



SEE NOTES ON SHT. [2/4]

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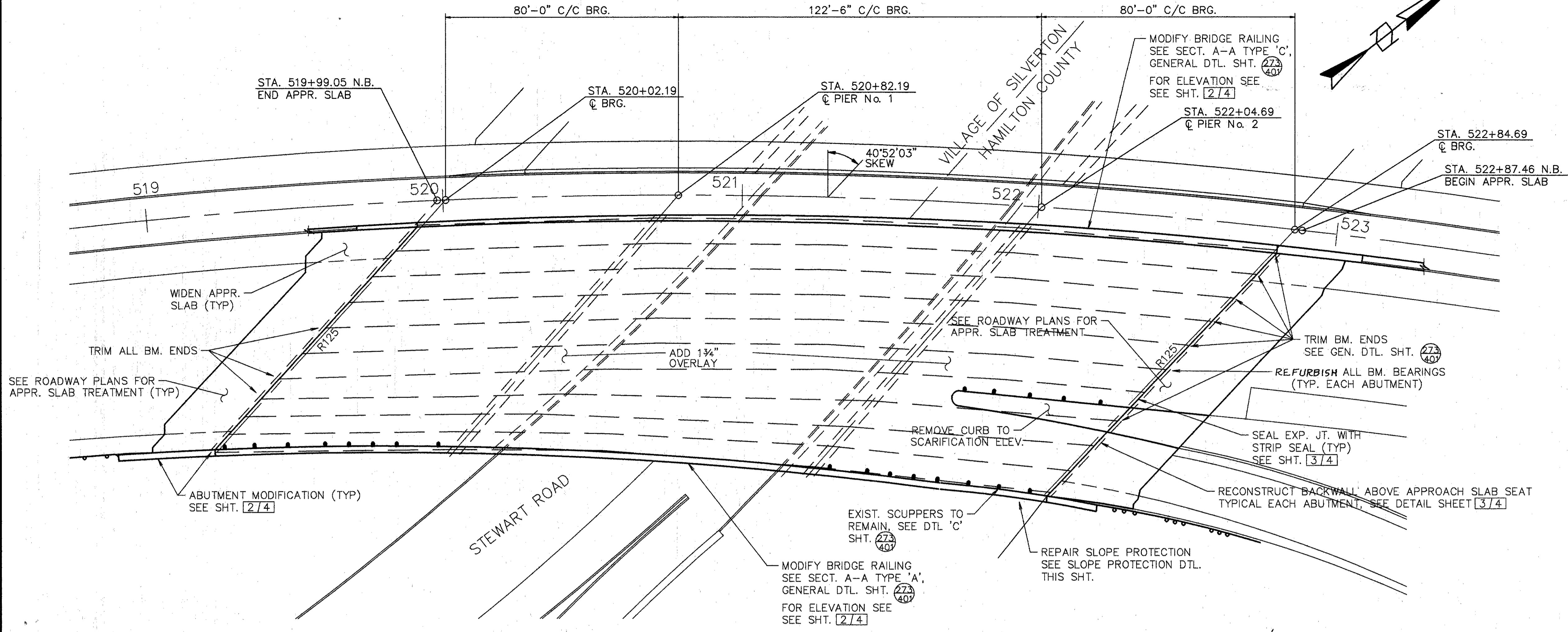
**MISCELLANEOUS DETAILS**  
 BRIDGE NO. HAM-71-1063 L  
 OVER CO. RD. No. 327  
 HAMILTON COUNTY

|          |        |        |         |          |       |         |
|----------|--------|--------|---------|----------|-------|---------|
| DESIGNED | DRAWN  | TRACED | CHECKED | REVIEWED | DATE  | REVISED |
| L.A.T.M. | D.E.E. |        | M.A.A.  | D.E.M.   | 11/94 |         |

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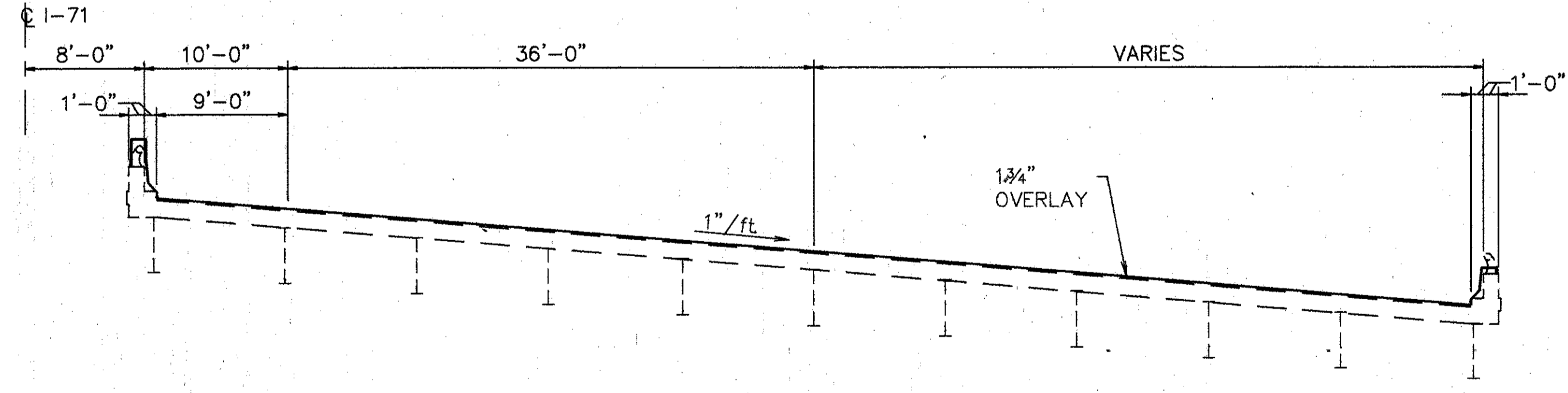




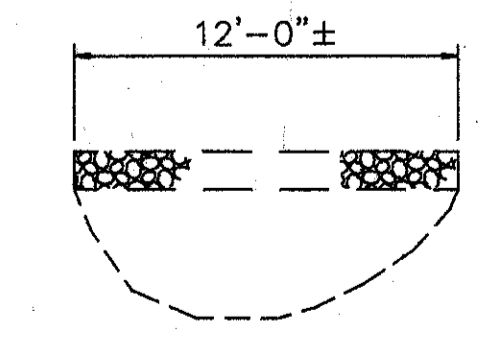
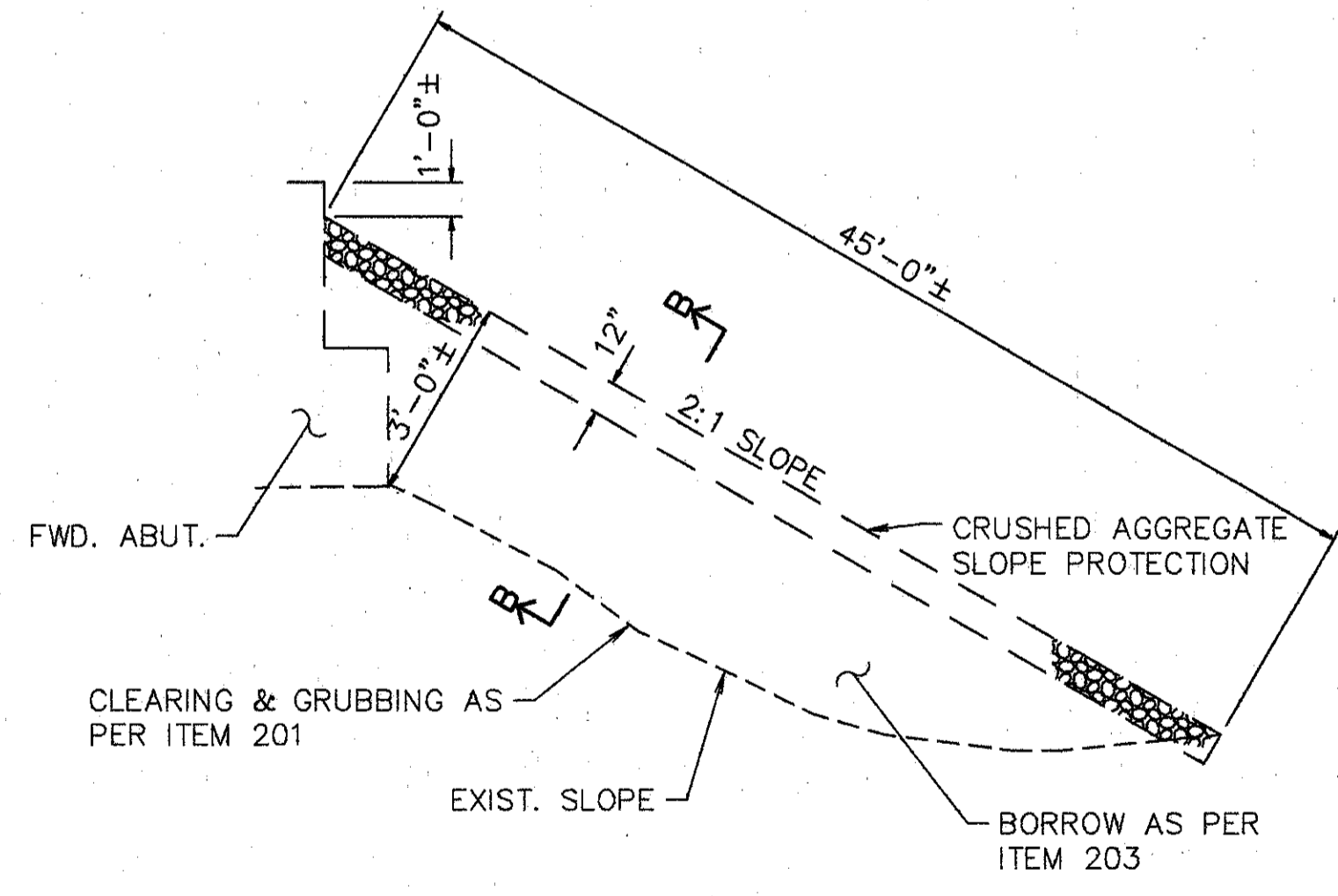


- NOTES:**
- EXTEND ALL SCUPPERS. FOR DTL., SEE GEN. DTL. SHT. 2/3
  - SEAL PARAPETS, PIERS, & BACKWALLS.
  - PAINT EXIST. STEEL STRUCTURE WITH SYSTEM OZEU.

| ROCKER OR BOLSTER SIZE | JACK CAPACITY REQ'D. (MIN) |
|------------------------|----------------------------|
| R125                   | 100 TON                    |



TYP. BRIDGE SECTION



SECTION B-B

**SLOPE PROTECTION REPAIR**

SLOPE PROTECTION REPAIR SHALL BE PAID FOR AS ITEM 601, CRUSHED AGGREGATE SLOPE PROTECTION AS PER PLAN. THE PRICE BID PER SQ. YARD SHALL INCLUDE CLEARING & GRUBBING, AND BORROW AS REQUIRED TO CONFORM TO THE SLOPE AS SHOWN.

**EXISTING STRUCTURE**

TYPE: CONTINUOUS STEEL GIRDER WITH REINFORCED CONCRETE DECK & SUBSTRUCTURE  
 SPANS: 80'-0", 122'-6", 80'-0"  
 ROADWAY: VARIES F-F PARAPET  
 SKEW: 40°-52'-03" LT. FORWARD  
 LOADING FREQUENCY: C.F.=2000 (57) ADEQUATE FOR A.A.S.H.T.O. ALTERNATE LOADING  
 WEARING SURFACE: 1" MONOLITHIC CONCRETE  
 APPROACH SLABS: AS-1-54 (25'-0" LONG)  
 ALIGNMENT: 3' HORIZONTAL CURVE TO THE RIGHT  
 SUPERELEVATION: 0.0833'/FT.  
 CURB: 1'-0" EACH SIDE

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**GENERAL PLAN**

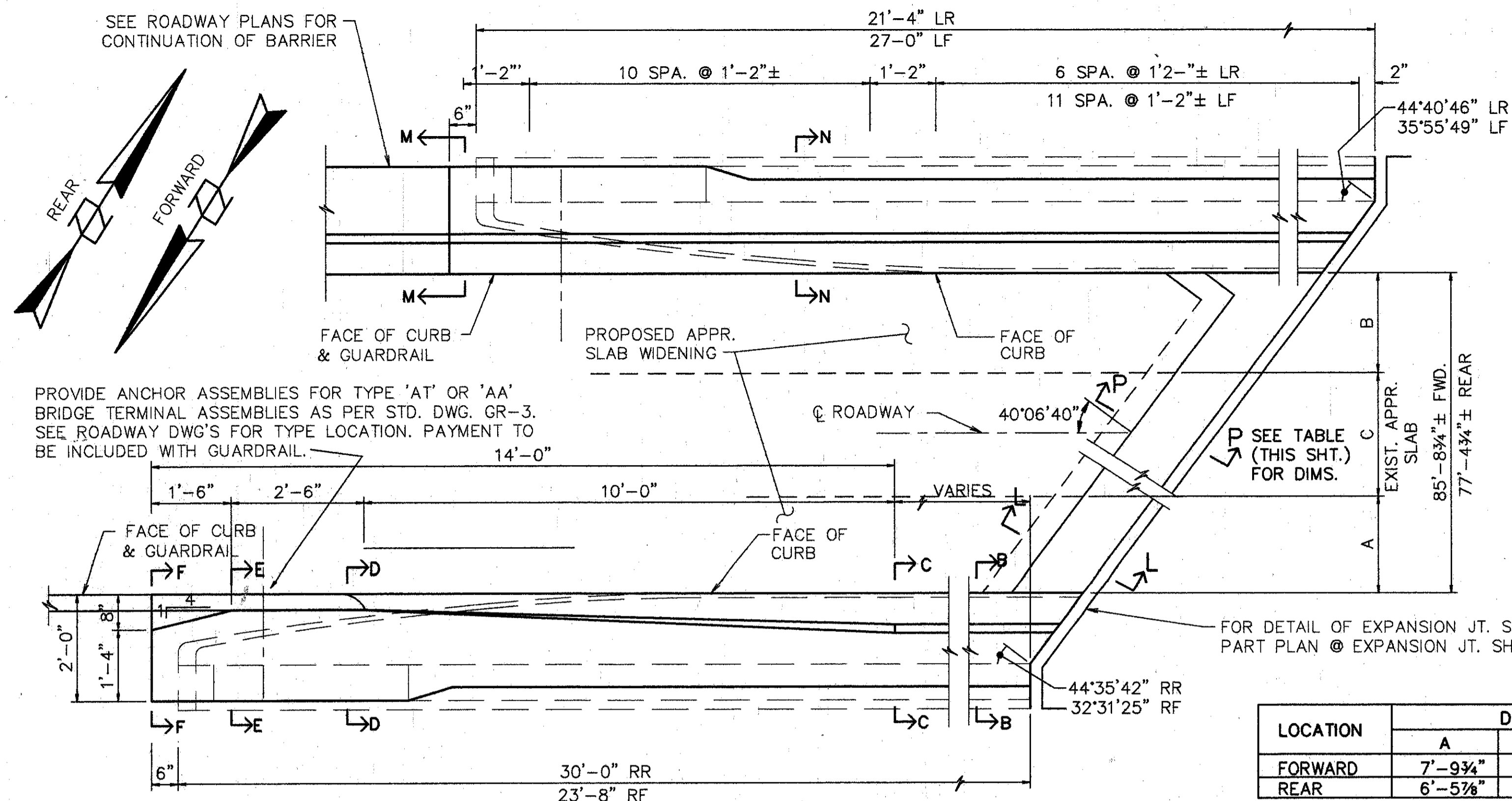
BRIDGE NO. HAM-71-1063 R  
 OVER CO. RD. NO.327

HAMILTON COUNTY

| DESIGNED | DRAWN  | TRACED | CHECKED | REVIEWED      | DATE | REVISED |
|----------|--------|--------|---------|---------------|------|---------|
| L.A.T.M. | D.E.E. |        | M.A.A.  | D.E.M11/11/94 |      |         |

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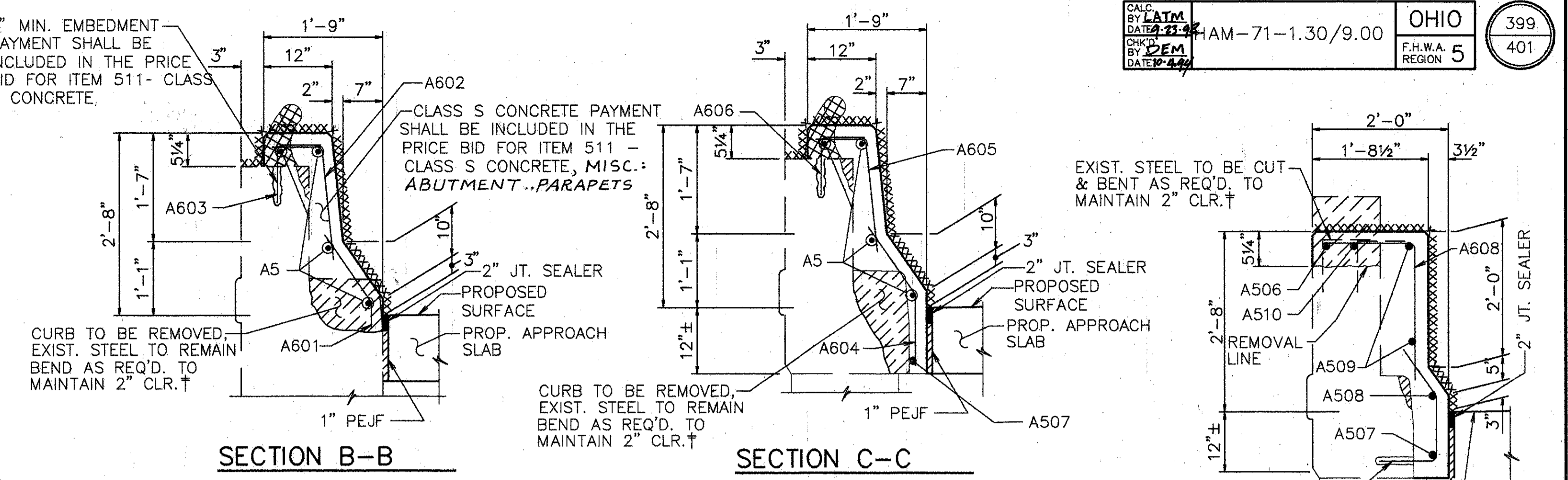




**PLAN - ABUTMENT MODIFICATION**

REAR SHOWN, FORWARD OPPOSITE HAND W/SAME SKEW (SEE GENERAL PLAN FOR WINGWALL ORIENTATION FOR FORWARD ABUTMENT)

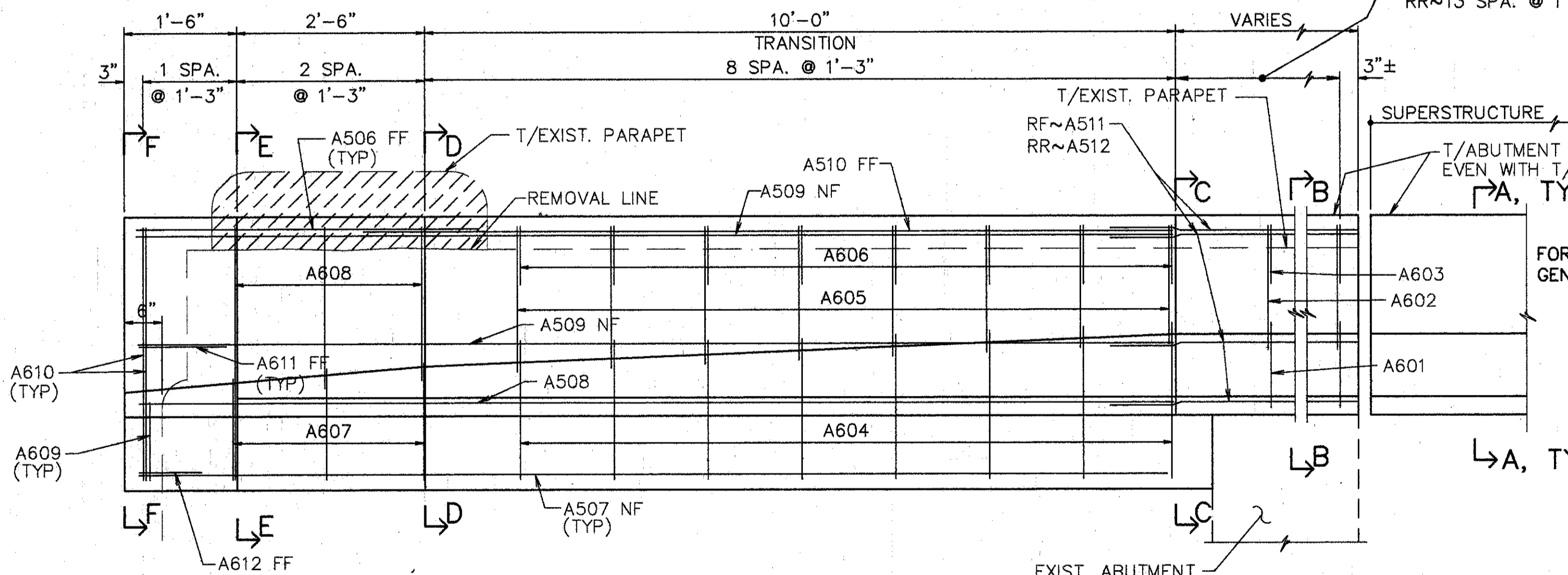
| LOCATION | DIMENSIONS |            |             |
|----------|------------|------------|-------------|
|          | A          | B          | C           |
| FORWARD  | 7'-9 3/4"  | 6'-11 3/4" | 70'-11 1/4" |
| REAR     | 6'-5 7/8"  | 11'-2"     | 59'-8 7/8"  |



**SECTION B-B**

**SECTION C-C**

**SECTION D-D**



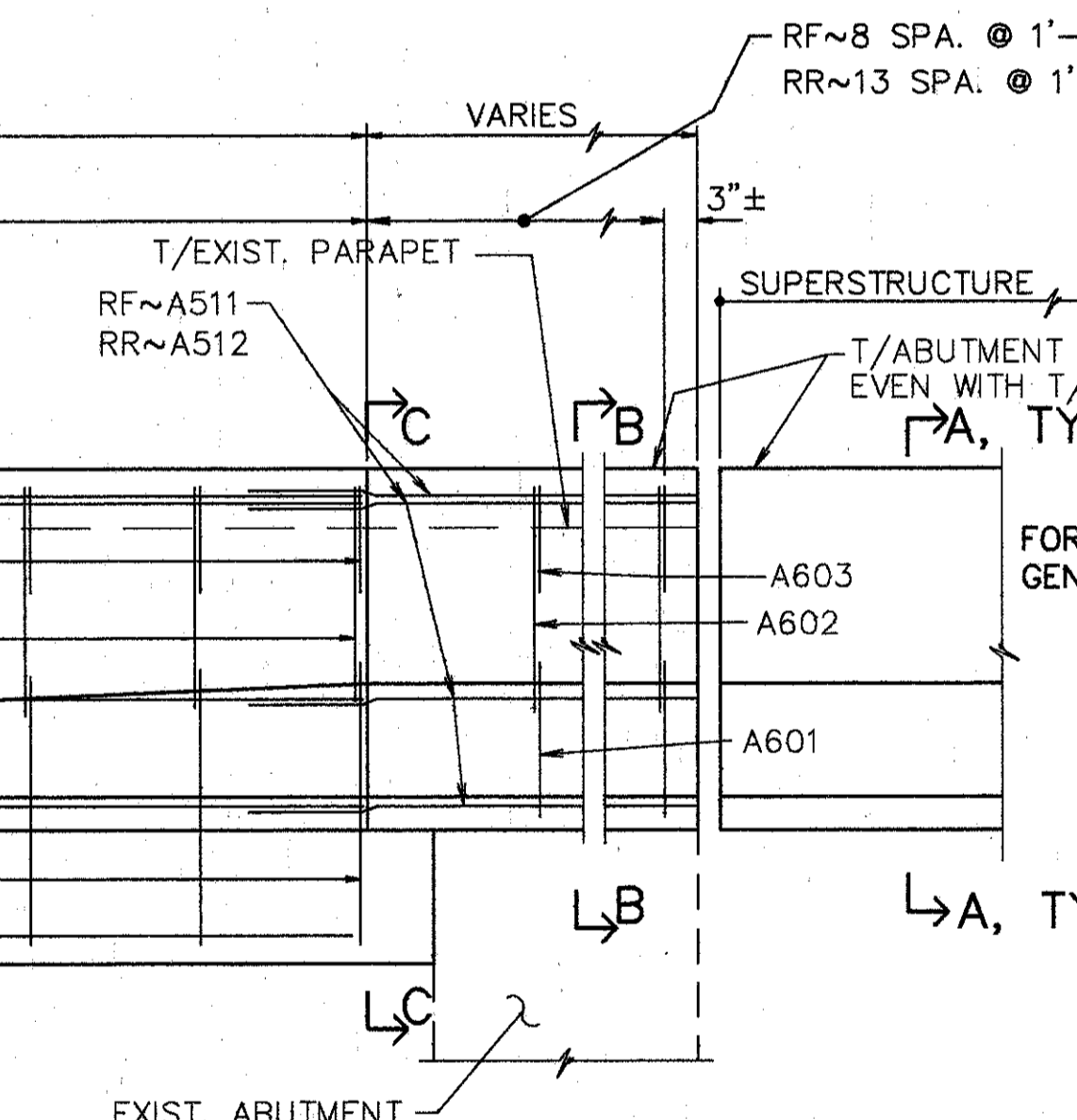
**ELEVATION - RIGHT WALL**

(FORWARD SHOWN, REAR OPPOSITE)

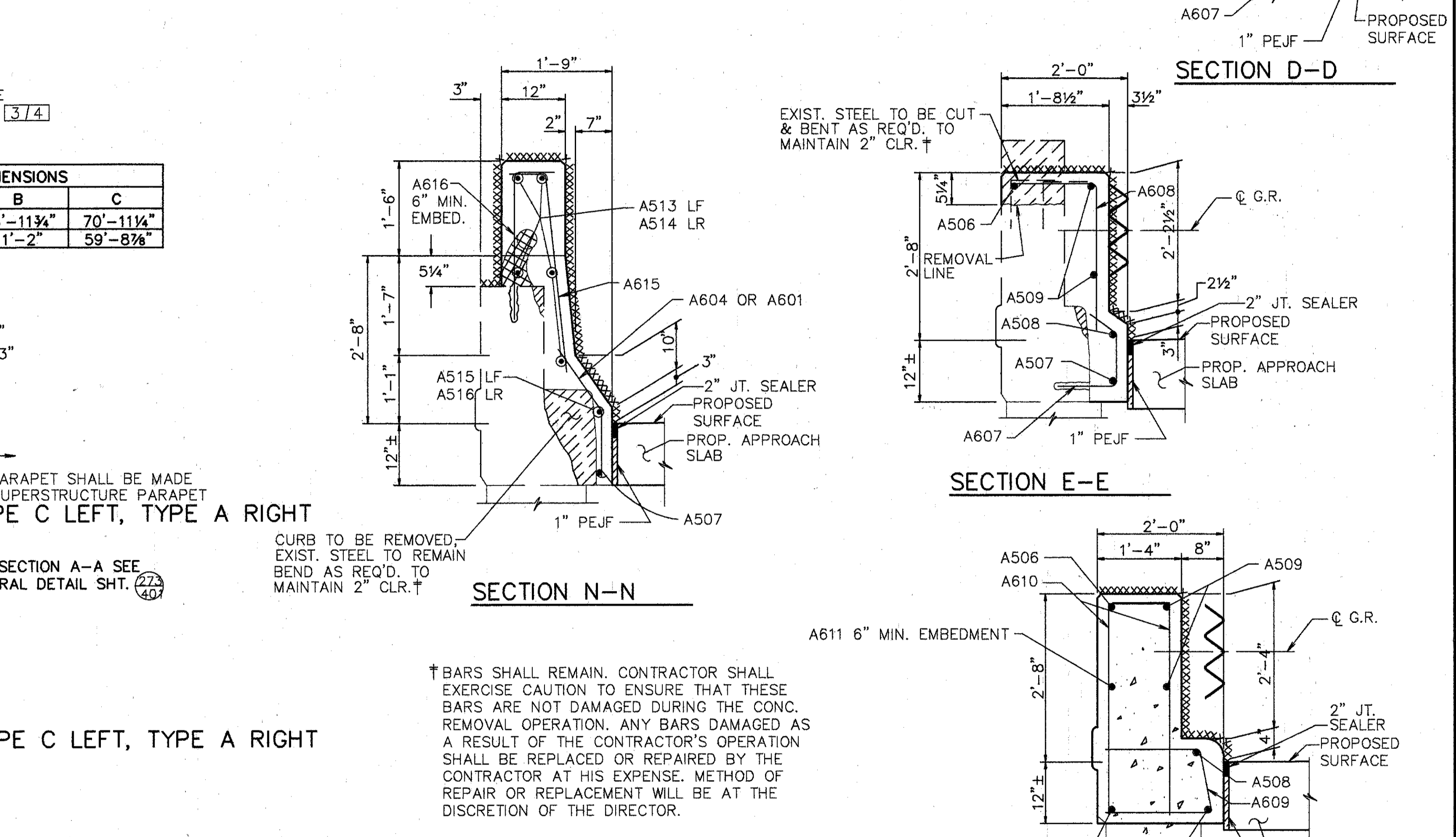
- EXIST. CURB & PARAPET TO BE REMOVED UNDER ITEM 202 - PORTIONS OF STRUCTURES REMOVED.
- EXIST. RAILING & POSTS TO BE REMOVED & STACKED NEATLY ALONG THE RIGHT-OF-WAY FOR DISPOSAL BY THE CONTRACTOR. ALL WORK SHALL BE INCLUDED IN THE PRICE BID FOR ITEM 202 - PORTIONS OF STRUCTURE REMOVED.
- XXXXXX SURFACES TO BE SEALED UNDER ITEM SPECIAL - SEALING OF CONCRETE SURFACES.

- NOTES:**
- L DENOTES LEFT SIDE
  - R DENOTES RIGHT SIDE
  - RF DENOTES RIGHT FORWARD
  - LF DENOTES LEFT FORWARD
  - RR DENOTES RIGHT REAR
  - LR DENOTES LEFT REAR
  - NF DENOTES NEAR FACE
  - FF DENOTES FAR FACE

- NOTES:**
- TYPE "A" WATERPROOFING AT THE BRIDGE LIMIT END OF THE APPROACH SLAB (AS PER STD. DWG. AS-1-81) SHALL BE INCLUDED IN THE PRICE BID FOR ITEM 611 APPROACH SLAB.



**ELEVATION SUPERSTRUCTURE PARAPET**



**SECTION E-E**

**SECTION N-N**

**SECTION F-F**

† BARS SHALL REMAIN. CONTRACTOR SHALL EXERCISE CAUTION TO ENSURE THAT THESE BARS ARE NOT DAMAGED DURING THE CONC. REMOVAL OPERATION. ANY BARS DAMAGED AS A RESULT OF THE CONTRACTOR'S OPERATION SHALL BE REPLACED OR REPAIRED BY THE CONTRACTOR AT HIS EXPENSE. METHOD OF REPAIR OR REPLACEMENT WILL BE AT THE DISCRETION OF THE DIRECTOR.

NOTE: FOR SECTIONS NOT SHOWN SEE SHEET 3/4

NOTE: 50" BARRIER ON LEFT 32" BARRIER ON RIGHT

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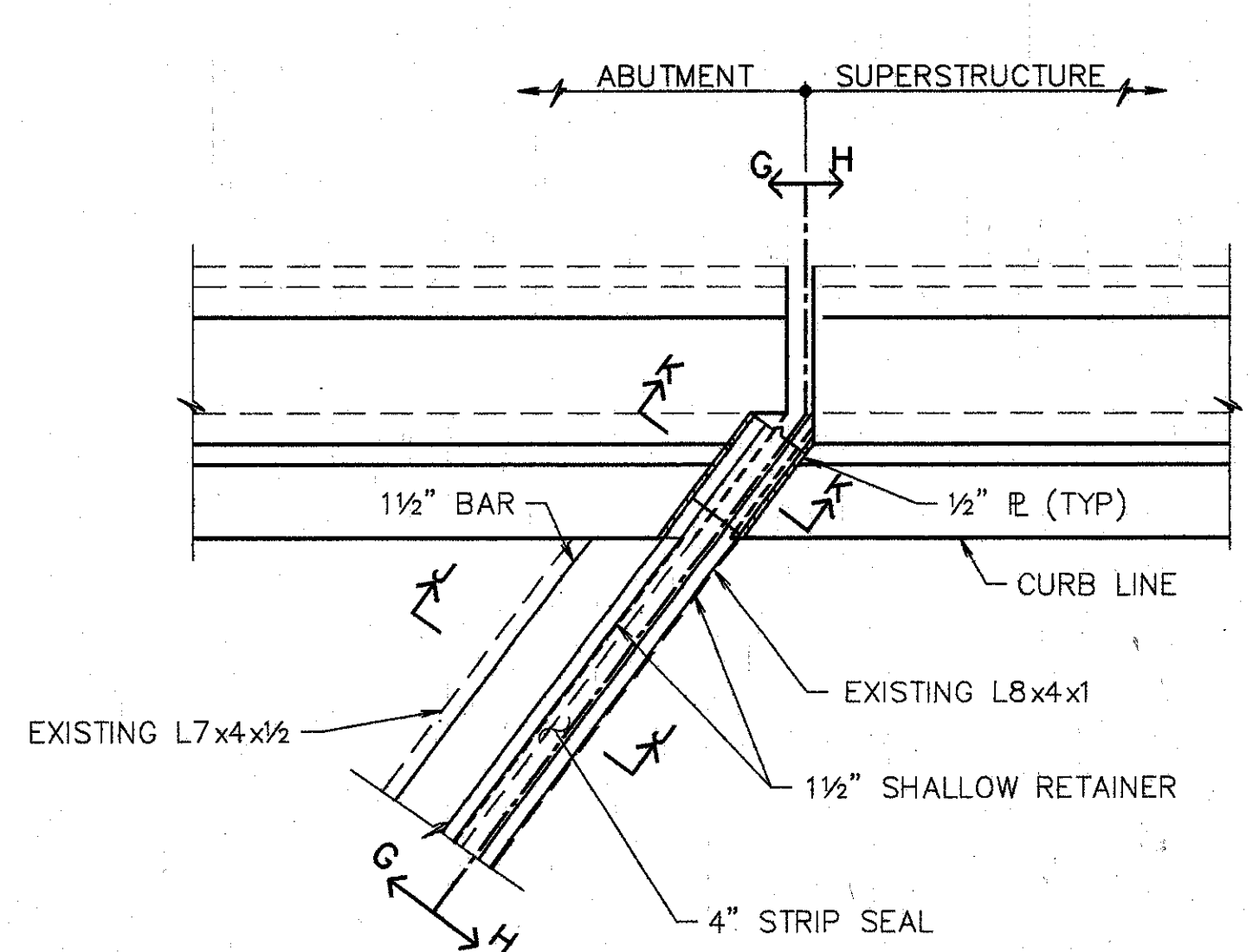
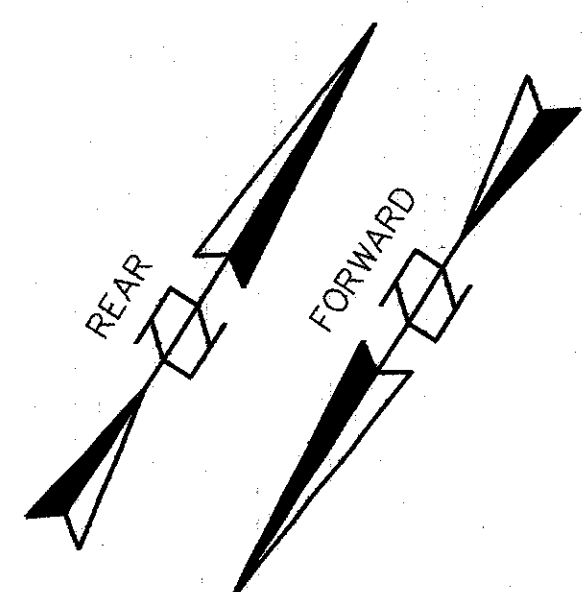
**PARAPET SECTIONS AND DETAILS**

BRIDGE NO.: HAM-71-1063 R  
 OVER CO. RD. No. 327

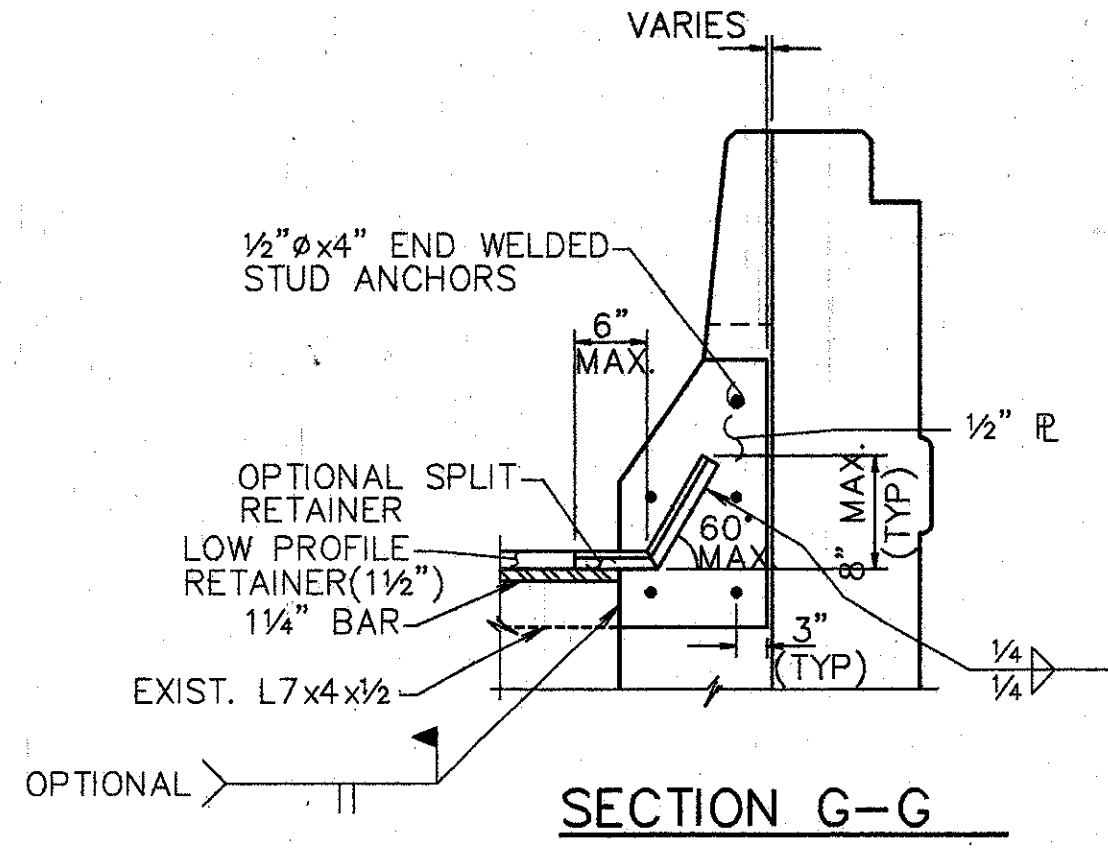
HAMILTON COUNTY

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|----------|--------|--------|---------|-------------|------|---------|
| DESIGNED | DRAWN  | TRACED | CHECKED | REVIEWED    | DATE | REVISED |
| L.A.T.M. | D.E.E. |        | M.A.A.  | D.E.M/11/94 |      |         |

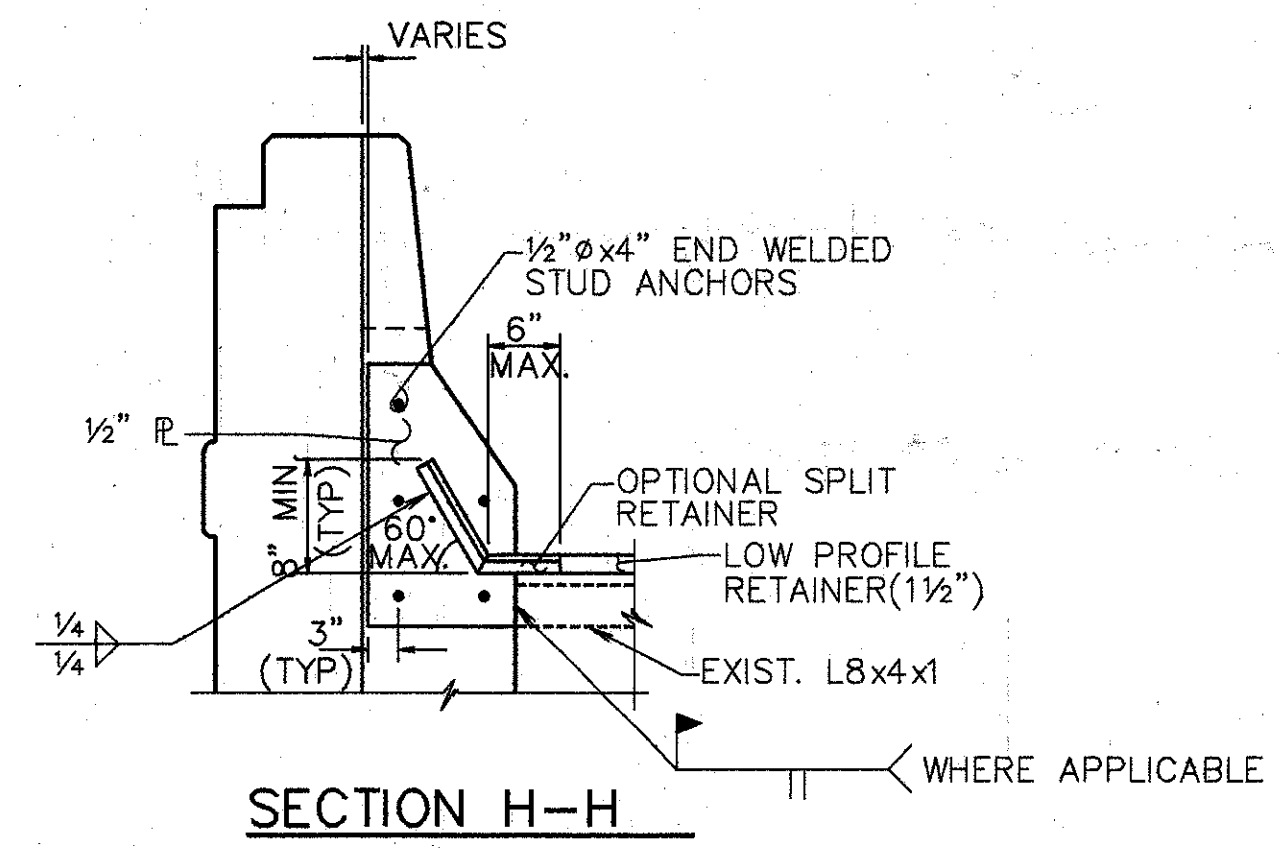
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 OCT. 5, 1990 @ 10:27 AM  
 Last Revision By: RACH



**PART PLAN @ ABUTMENTS**

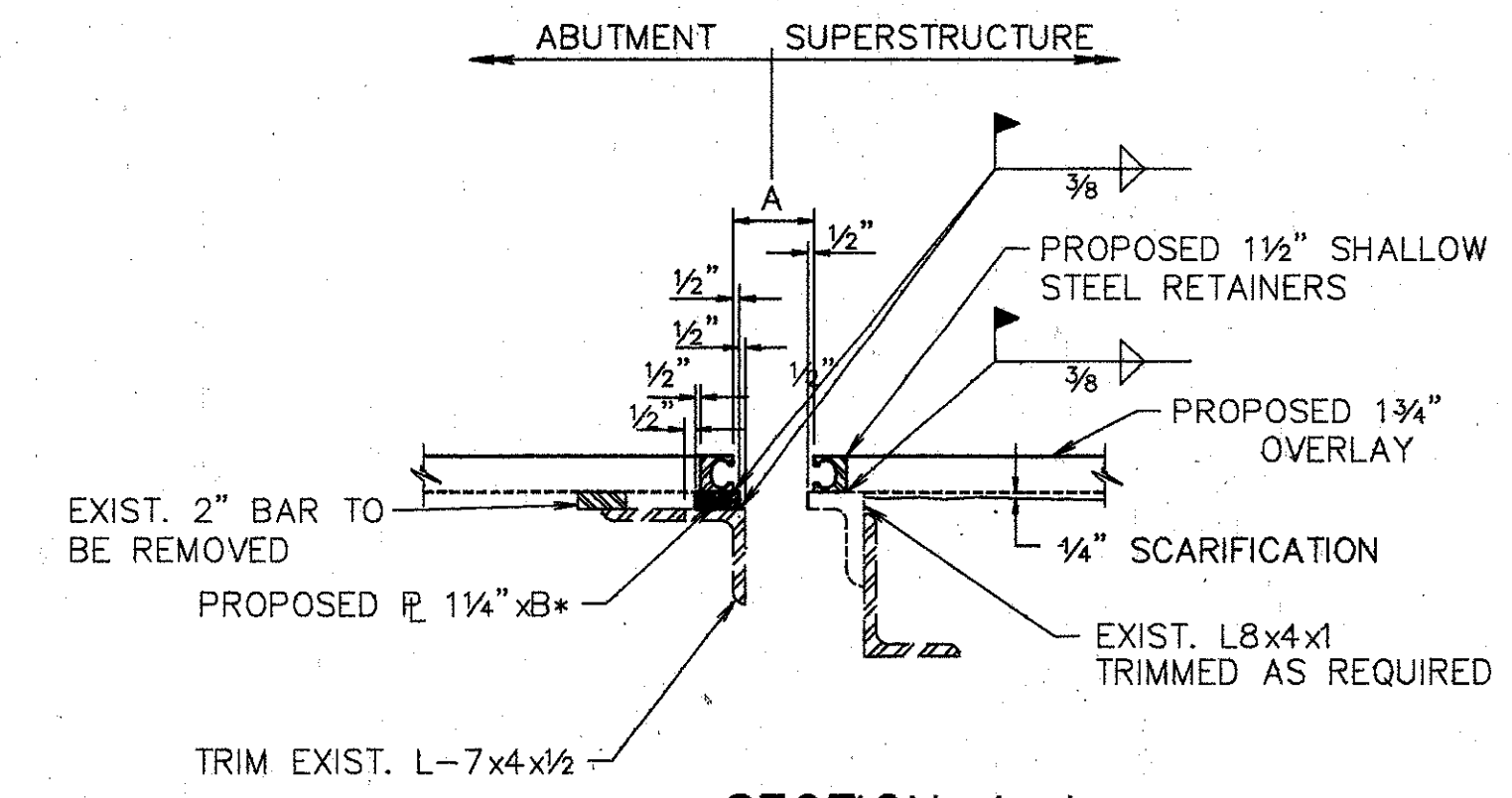


**SECTION G-G**



**SECTION H-H**

- NOTES:**
- EXPANSION JT. DETAILS TO BE WORKED WITH STD. DWG. EXJ-4-87 SHTS. 1 thru 5.
  - WHEN PLATE IS RECESSED INTO ABUTMENT, CONCRETE BELOW PLATE SHALL BE SLOPED FROM BOTTOM OF THE PLATE TO THE END OF THE ABUTMENT TO DETER ACCUMULATION OF DEBIS.

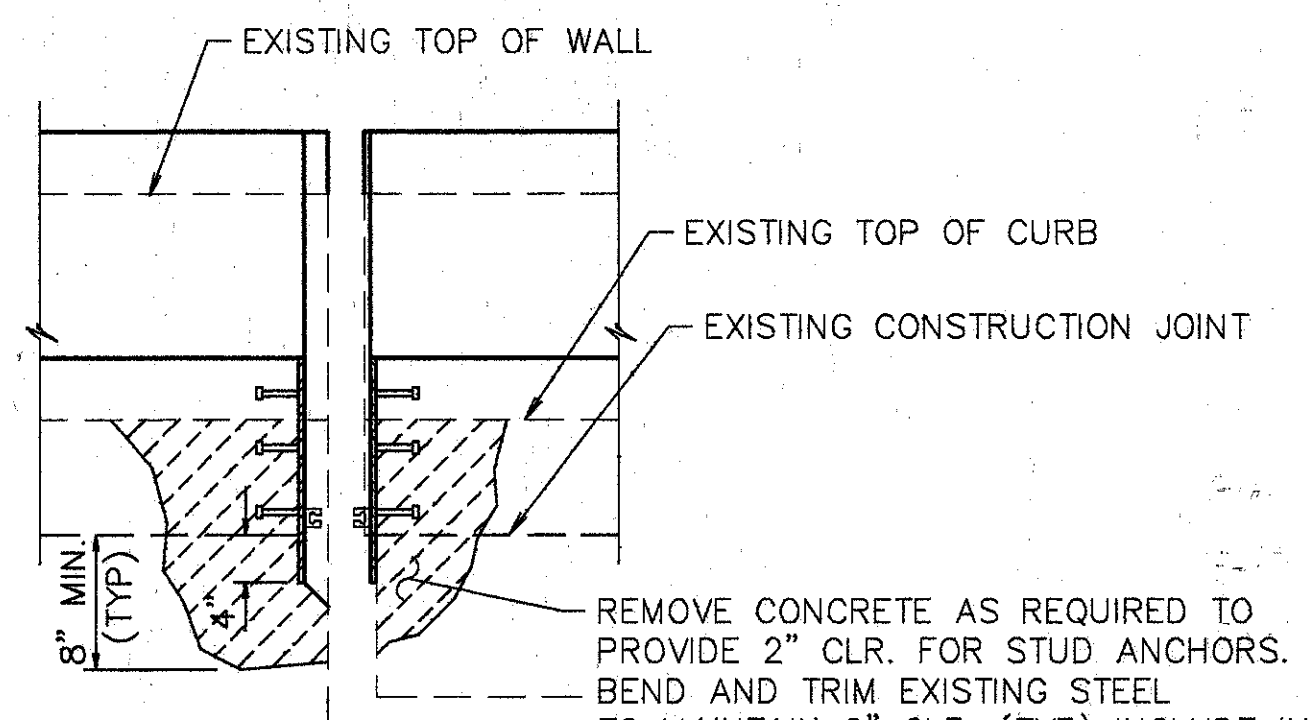


**SECTION J-J**

B\* = RETAINER WIDTH PLUS 1"

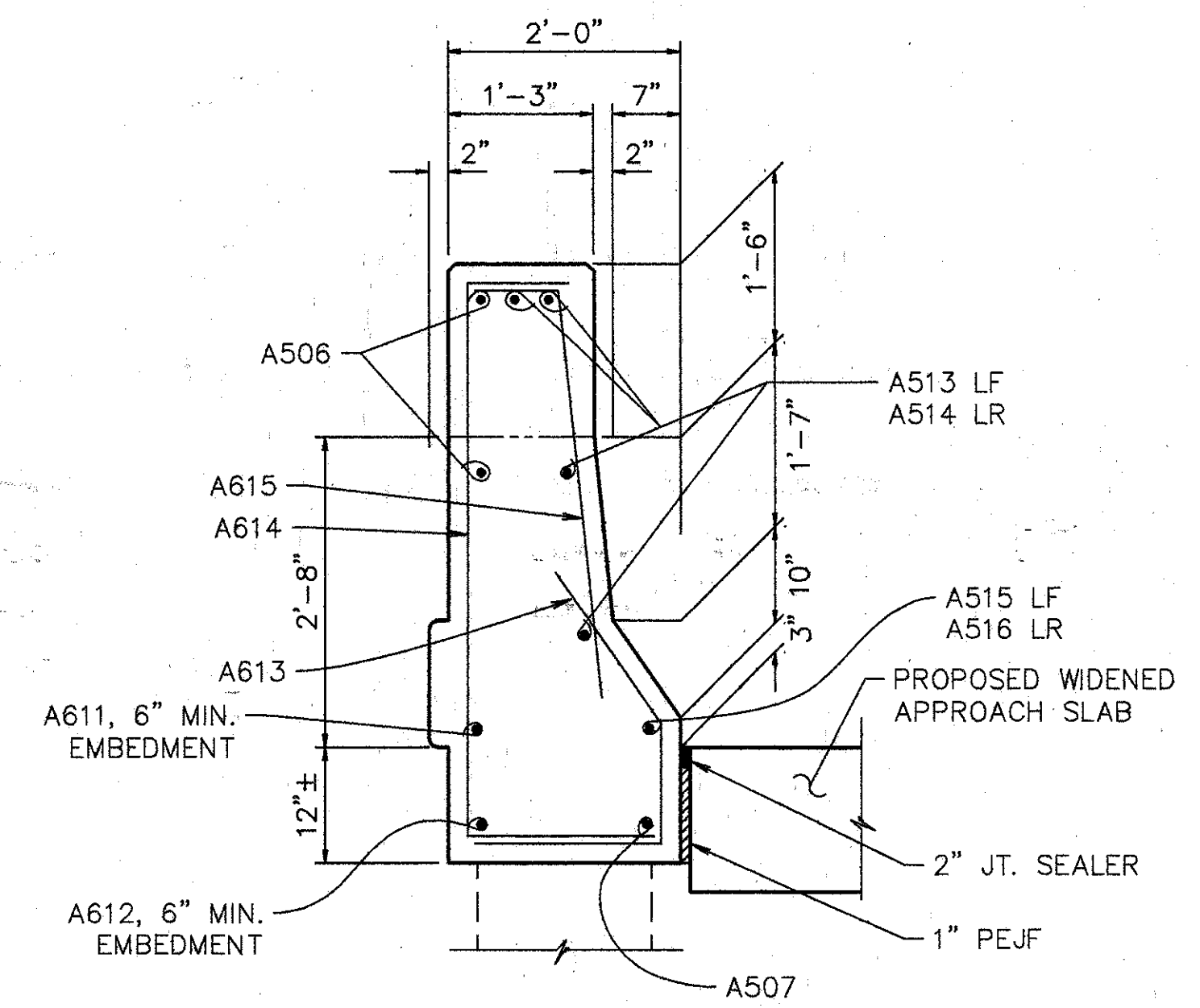
- NOTES:**
- CONTRACTOR TO VERIFY ALL DIMENSIONS PRIOR TO MODIFYING EXPANSION JOINT.
  - THE PRICE BID FOR ITEM 516-STRUCTURAL EXPANSION JOINTS, INCLUDING ELASTOMERIC STRIP SEALS, SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, AND ANY OTHER INCIDENTAL ITEMS, AS DETAILED. (REMOVAL OF CURB OR PARAPET AS SHOWN SHALL BE INCLUDED UNDER ITEM 202- 'PORTIONS OF STRUCTURE REMOVED').
  - FOR DETAILS NOT SHOWN REFER TO DWG. EXJ-4-87 SHTS. 3 AND 4.
  - STRIP SEAL TO BE INSTALLED IN ONE CONTINUOUS PIECE (NO OPEN JOINTS).
  - PROVIDE TEMPORARY SUPPORT FOR ABUTMENT END DAM DURING CONSTRUCTION. REMOVE TEMPORARY SUPPORT AS SOON AS CONCRETE HAS SET, PREFERABLY WITHIN TWO HOURS AFTER PLACING TO AVOID DAMAGE DUE TO EXPANSION AND CONTRACTION OF SUPERSTRUCTURE.

| TEMPERATURE | DIM. 'A' |         |
|-------------|----------|---------|
|             | REAR     | FORWARD |
| 40° F       | 3 1/8"   | 3 1/8"  |
| 50° F       | 3"       | 3 1/8"  |
| 60° F       | 2 7/8"   | 3"      |
| 70° F       | 2 3/4"   | 3"      |
| 80° F       | 2 3/4"   | 3"      |
| 90° F       | 2 3/8"   | 2 7/8"  |

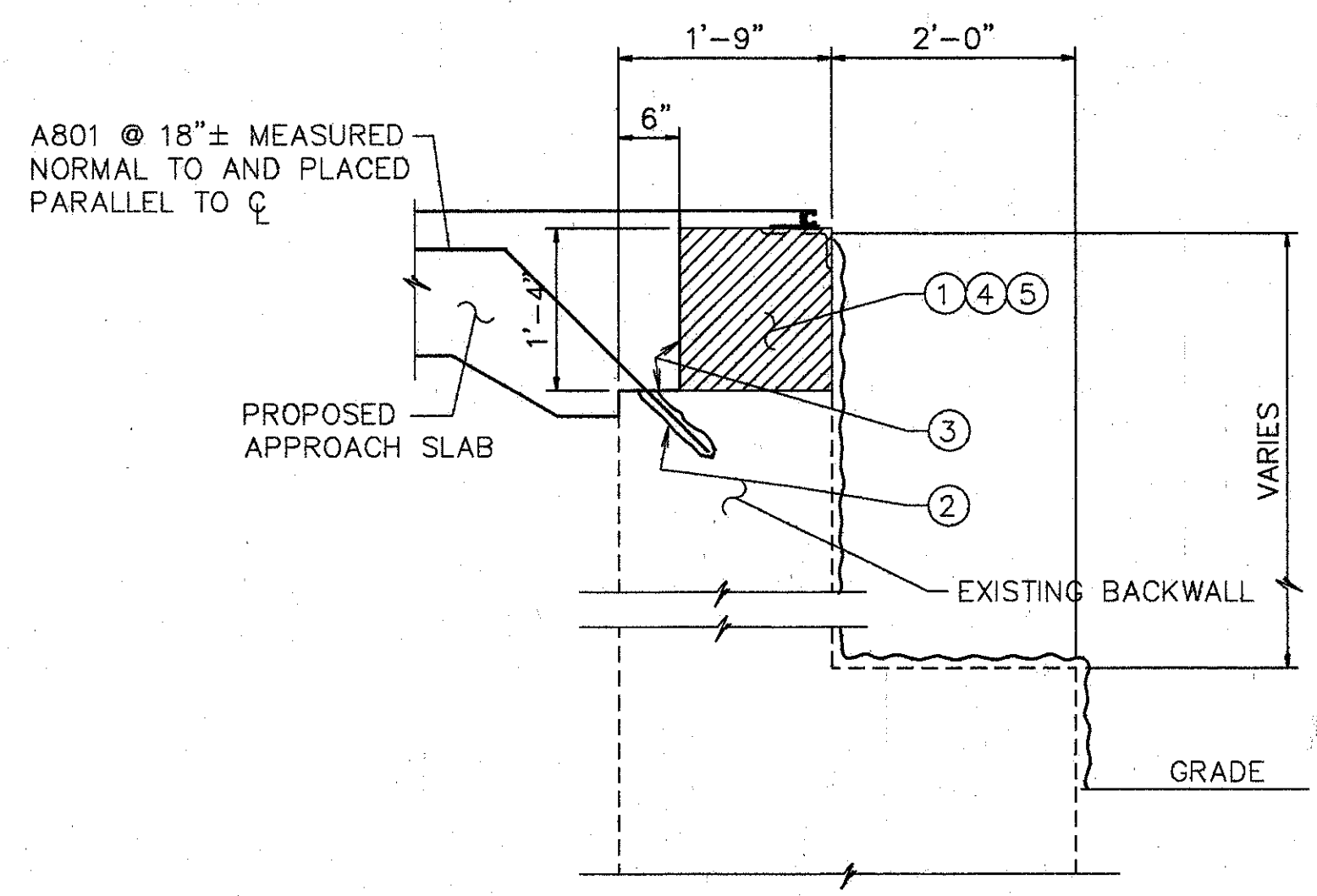


**SECTION K-K**

REMOVE CONCRETE AS REQUIRED TO PROVIDE 2" CLR. FOR STUD ANCHORS. BEND AND TRIM EXISTING STEEL TO MAINTAIN 2" CLR. (TYP) INCLUDE IN ITEM 202- 'PORTIONS OF STRUCTURE REMOVED' FOR PAYMENT.



**SECTION M-M**



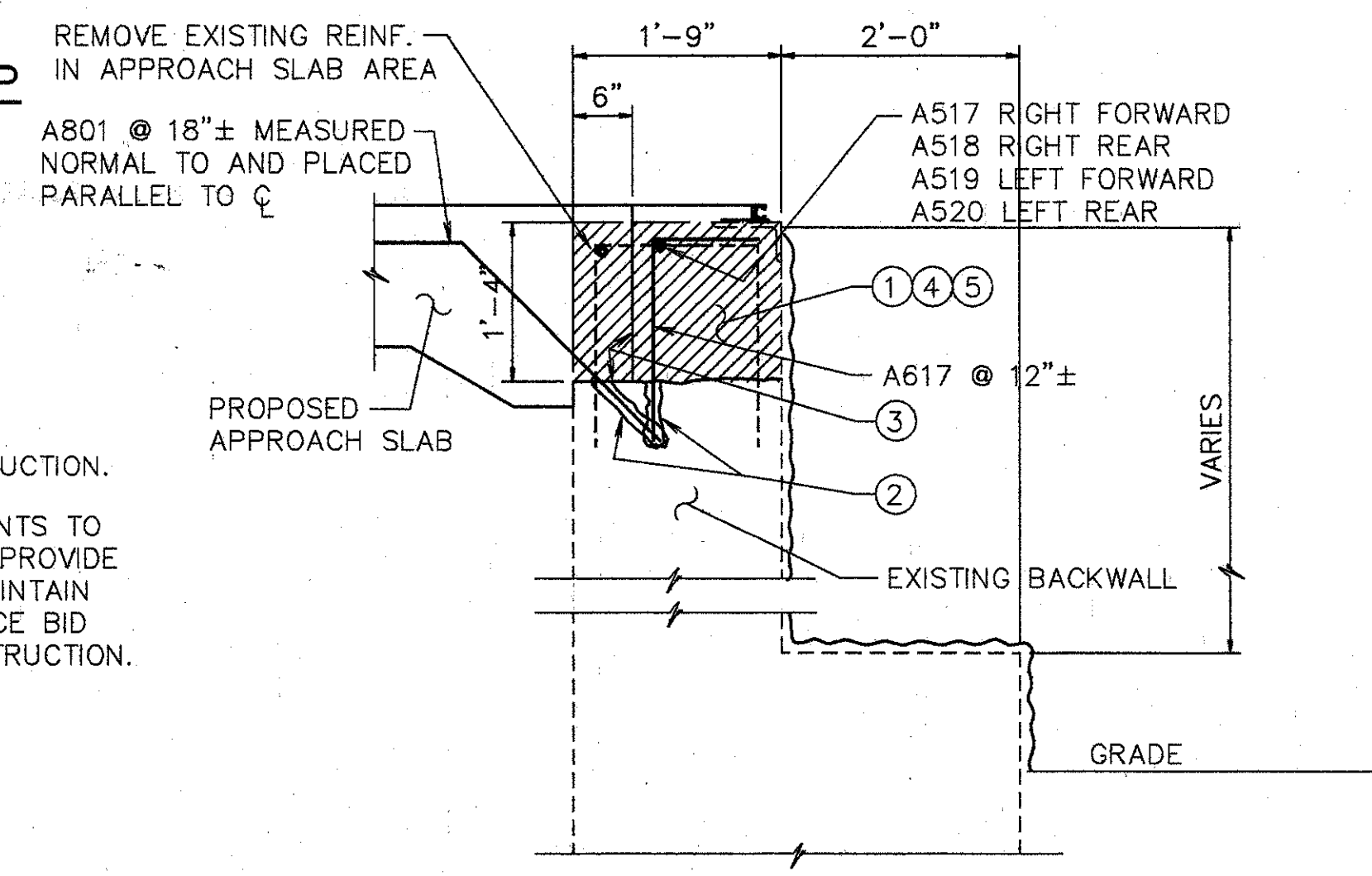
**SECTION P-P**

**NOTES FOR SECTION L-L & P-P**

- EXISTING REINFORCING STEEL TO REMAIN ~ REINFORCING STEEL DAMAGED TO BE REPLACED AT CONTRACTORS EXPENSE.
- 1' MIN. EMBEDMENT (SEE DOWEL HOLE GENERAL NOTE) ITEM 510.
- TYPE 'A' WATERPROOFING (PAYMENT INCLUDED IN THE PRICE BID FOR APPROACH SLAB).
- CLASS 'C' CONCRETE, ABUTMENT RECONSTRUCTION.
- PROVIDE CONTRACTION AND EXPANSION JOINTS TO MATCH THOSE IN EXISTING BACKWALL AND PROVIDE CONSTRUCTION JOINTS AS REQUIRED TO MAINTAIN TRAFFIC. PAYMENT TO BE INCLUDED IN PRICE BID FOR ITEM 511 CLASS C CONCRETE RECONSTRUCTION.

EXISTING CONCRETE TO BE REMOVED INCLUDE IN ITEM 202 FOR PAYMENT.

SURFACE TO BE SEALED UNDER ITEM SPECIAL- 'SEALING OF CONCRETE SURFACE, EPOXY'.



**SECTION L-L**

SEE NOTES SHT. 2/4

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**MISCELLANEOUS DETAILS**

BRIDGE NO. HAM-71-1063 R  
 OVER CO. RD. No. 327

HAMILTON COUNTY

|          |        |        |         |          |       |         |
|----------|--------|--------|---------|----------|-------|---------|
| DESIGNED | DRAWN  | TRACED | CHECKED | REVIEWED | DATE  | REVISED |
| L.A.T.M. | D.E.E. |        | M.A.A.  | D.E.M1   | 11/94 |         |



