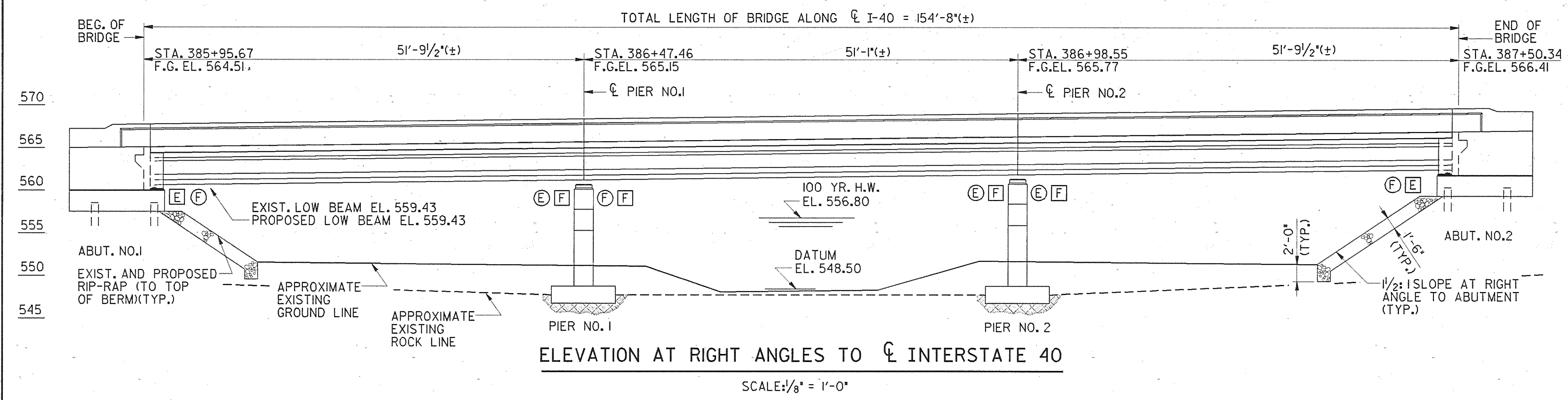


CONST. NO. 95001-3150-44		531	X081
PROJECT NO.	YEAR	SHEET NO.	
IR-40-5(88)230	1989		
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION
1	10-11-89	HVB	ADD PARAPET DRAINS

NOTE: THE FILLS AT THE ENDS OF THE BRIDGE SHALL BE IN PLACE AND THOROUGHLY COMPACTED BEFORE ANY ABUTMENT PILES ARE DRIVEN.

REFERENCE DRAWINGS
DWG. NO'S K-18-141 THRU K-18-146



LIST OF DRAWINGS
LATEST REV. DATE

TITLE OF DWG.	DWG. NO.	LATEST REV. DATE
LAYOUT OF BRIDGE NO. 1	M-216-1	
GENERAL NOTES	M-216-2	
ESTIMATED QUANTITIES	M-216-3	
FOUNDATION DATA	M-216-4	
SUPERSTRUCTURE	M-216-5	
SUPERSTRUCTURE DETAILS	M-216-6	
BRIDGE SCREED	M-216-7	
BRIDGE APPROACH	M-216-8	
PRESTRESSED BEAM DETAILS	M-216-9	
ABUTMENT NO. 1 & NO. 2	M-216-10	
PIER NO. 1 & NO. 2	M-216-11	
BILL OF STEEL (RT.LN.)	M-216-12	
BILL OF STEEL (LT.LN.)	M-216-13	

NOTES: ○ DENOTES EXISTING SUPPORT CONDITION
□ DENOTES PROPOSED SUPPORT CONDITION
E DENOTES EXPANSION
F DENOTES FIXED

HYDRAULIC DATA

DRAINAGE AREA	3.57 SQ. MI.
Q100	2809 C.F.S.
VELOCITY	4.20 F.P.S.
WATERWAY AREA	669 S.F.
OVERTOPPING EL.	562.30

LIST OF STANDARD DRAWINGS

TITLE OF DWG.	DWG. NO.	LATEST REV. DATE
STANDARD REINFORCEMENT		
BAR SUPPORT DETAILS	K-80-14	8-27-76
MISCELLANEOUS ABUTMENT AND DRAINAGE DETAILS	K-85-150	6-25-87
* BRIDGE RAILING CONCRETE PARAPET	M-28-1	11-01-88
* STANDARD PILE DETAILS	M-174-150	

* DENOTES: THESE DRAWINGS ARE TO BE PRINTED WITH PLANS

U.S.G.S. 1928 FLOOD DATA

DISCHARGE	4440 C.F.S.
MEAN VELOCITY	8.5 F.P.S.
WATERWAY AREA	521 S.F.

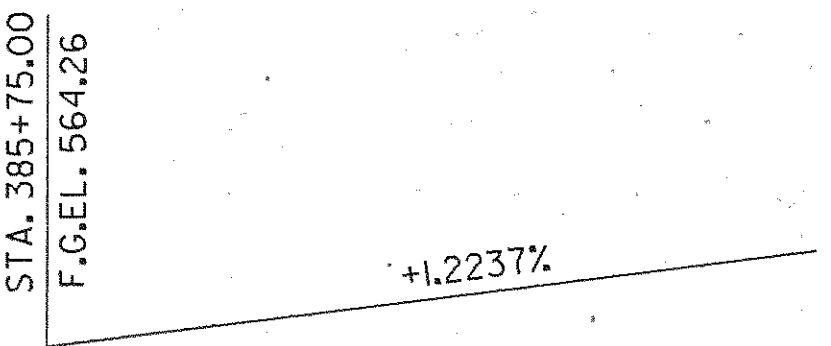
PARAPET DRAIN LOCATION

LEFT LANE	RIGHT LANE
STA. 386+12.93	STA. 386+12.93
STA. 386+30.20	STA. 386+30.20
STA. 386+73.00	STA. 386+73.00
STA. 387+24.45	STA. 387+24.45

NOTE: DRAINS TO BE LOCATED ON LOW SIDE OF BRIDGE. FOR DETAILS SEE STD. DWG. M-28-1A.

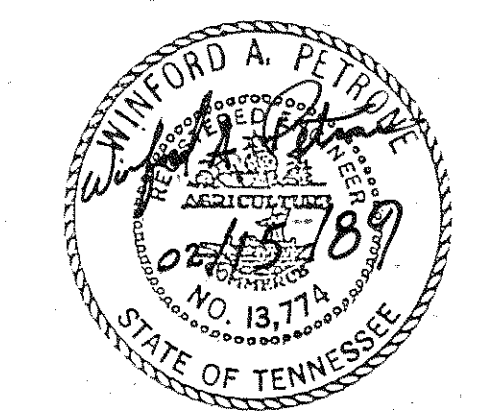
LIST OF SPECIAL PROVISIONS

NO.	REGARDING	LATEST REV. DATE
105A	APPROVAL OF SHOP DRAWINGS	7-21-87
604	CONCRETE STRUCTURES	11-6-87
604C	STRUCTURAL CONCRETE	1-26-88
604R	RIDEABILITY OF BRIDGE DECKS AND ROADWAY APPROACHES	1-20-89
615	PRECAST PRESTRESSED CONCRETE BRIDGE MEMBERS	5-18-88
709	MACHINED RIP-RAP	5-4-87
907A	EPOXY COATED REINFORCING STEEL	3-25-85



SKETCH SHOWING GRADE

FINISHED GRADE ELEVATIONS SHOWN ABOVE ARE BASED UPON ORIGINAL FINISHED GRADE PLUS 5".
NOTE: BENCH MARK FOR BRIDGE AND BRIDGE APPROACH CONSTRUCTION TO BE A PAINTED SQUARE ON NORTHERN END OF LEFT LANE ABUTMENT BEAM AT BEGINNING OF BRIDGE. THE BENCH MARK SHALL BE TRANSFERRED TO AN APPROPRIATE LOCATION PRIOR TO BEGINNING CONSTRUCTION. BENCH MARK ELEV. = 559.34.



DESIGN SPEED = 70 M.P.H.
TWO - 42'-0" ROADWAYS WITH CONCRETE PARAPET RAILS

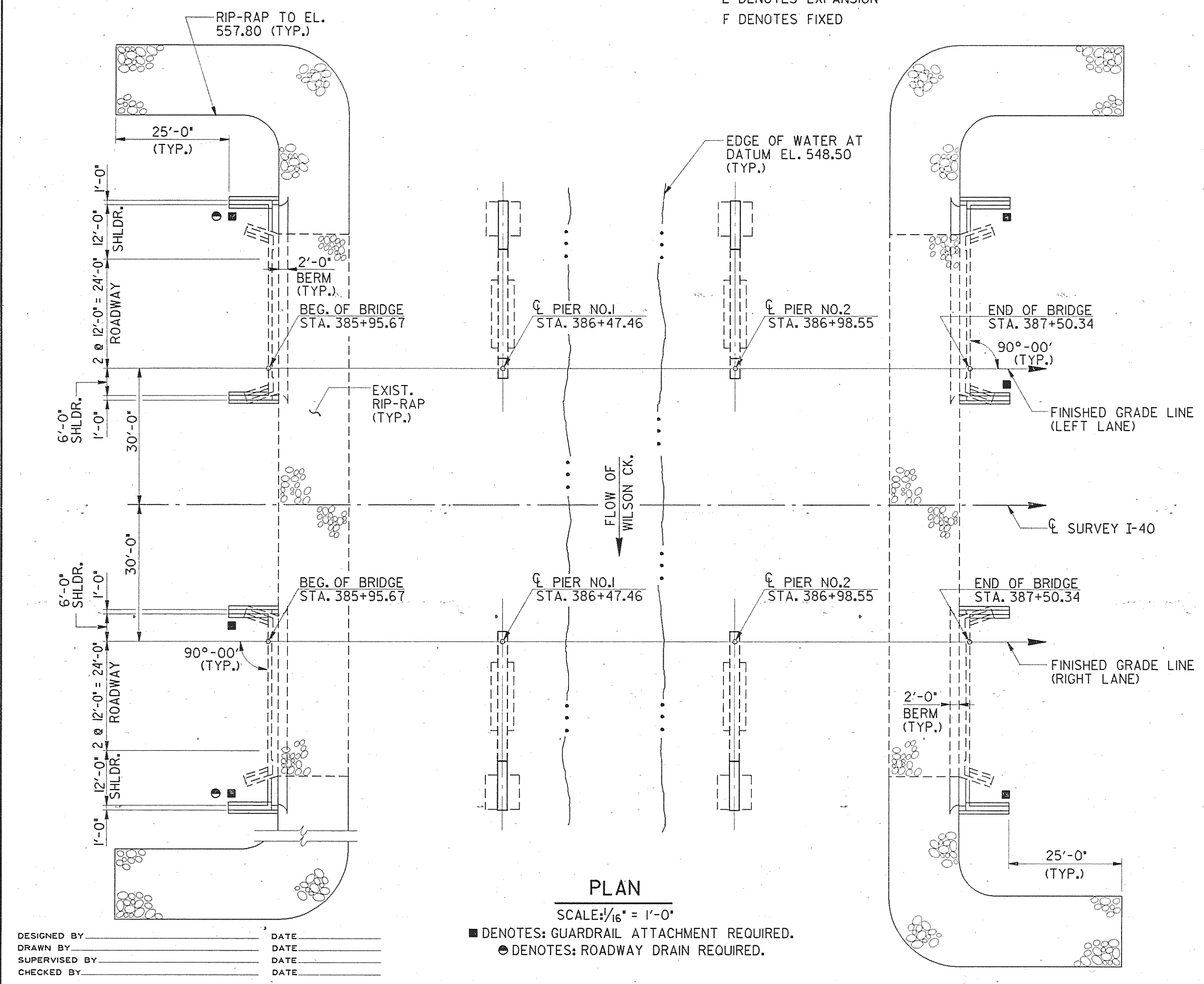
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS
LAYOUT OF BRIDGE NO. 1
LEFT AND RIGHT LANES
WIDENING OF INTERSTATE 40
OVER

WILSON CREEK
STATION 385+95.67
BR. ID. NO. 95100400011 (RT. LN.)
BR. ID. NO. 95100400012 (LT. LN.)
WILSON COUNTY

CORRECT *Edward P. Wasserman* 1989
ENGINEER OF STRUCTURES
APPROVED *Lewis Evans*
DIRECTOR OF HIGHWAYS

M-216-1

CLASS "A" GRADING "D" = 10 C.Y.



■ DENOTES: GUARDRAIL ATTACHMENT REQUIRED.
● DENOTES: ROADWAY DRAIN REQUIRED.

DESIGNED BY _____ DATE _____
DRAWN BY _____ DATE _____
SUPERVISED BY _____ DATE _____
CHECKED BY _____ DATE _____

PROJECT NO.	YEAR	SHEET NO.	
IR-40-5(88)230	1989		
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION

GENERAL NOTES:

SPECIFICATIONS: STANDARD ROAD AND BRIDGE SPECIFICATIONS OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION, (MARCH 1981 EDITION).

LOADING: HS20-44 WITH ALTERNATE MILITARY.

DESIGN SPECIFICATIONS: AASHTO 1983 EDITION WITH ADDENDA.

CONCRETE: TO BE CLASS "A" (CAST IN PLACE). F'c 3000 PSI. CLASS A CONCRETE FOR BRIDGE DECKS SHALL BE IN ACCORDANCE WITH SECTION 604 OF THE STANDARD SPECIFICATIONS EXCEPT AS MODIFIED BY SPECIAL PROVISION 604-C.

BRIDGE RAIL SYSTEM: BUILD PARAPETS ACCORDING TO STANDARD DRAWING M-28-1.

BRIDGE DECK SURFACE FINISH: TO BE IN ACCORDANCE WITH NOTE C, SHEET 2, OF SPECIAL PROVISION 604.

NOTE: THE CONTRACTOR SHALL CHECK THE LOCATION OF ALL EXISTING SUBSTRUCTURES AND VERIFY SPAN LENGTHS BEFORE FABRICATING GIRDERS.

NOTE: NO PERMANENT BRIDGE DECK FORMS ARE TO BE USED ON THIS STRUCTURE.

RIP-RAP: MACHINED RIP-RAP SHALL BE CLASS "A-1" IN ACCORDANCE WITH SPECIAL PROVISION 709 AND SHALL BE PAID FOR UNDER ITEM 709-05.06.

REINFORCING STEEL: TO BE ASTM A615 GRADE 60. STANDARD CRSI HOOK DETAILS APPLY UNLESS OTHERWISE NOTED ON BILL OF STEEL. SPACING DIMENSIONS ARE CENTER TO CENTER AND COVER DIMENSIONS ARE CLEAR DISTANCE UNLESS OTHERWISE NOTED. PLACING TOLERANCES ARE $\pm 1/2"$ FOR SPACING AND $-1/8"$ OR $+3/8"$ FOR COVER. THE SUFFIX "E", FOR BARS SO MARKED, DENOTES EPOXY COATED REINFORCEMENT. SEE SPECIAL PROVISION 907A.

SHOP DRAWINGS: SEE SPECIAL PROVISION NO. 105A.

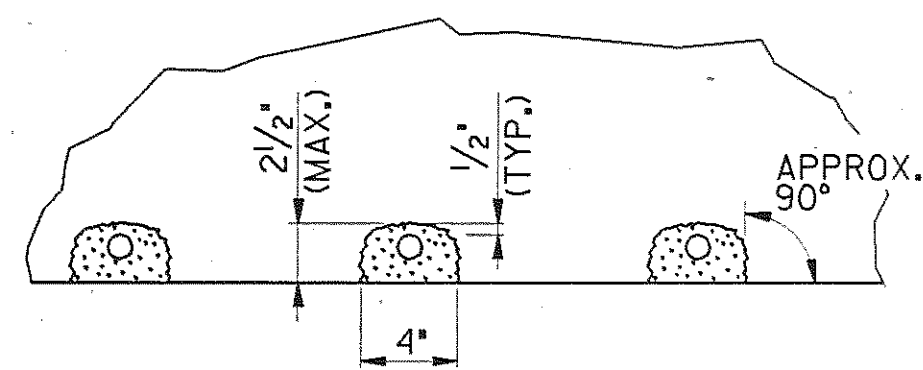
NON-PAY ITEMS: ONLY ITEMS SHOWN ON THE PROPOSAL AS PAY ITEMS WILL BE PAID FOR. COMPENSATION FOR ALL LABOR, MATERIALS, TOOLS, EQUIPMENT, AND INCIDENTALS FOR THE ENTIRE CONTRACT SHALL BE INCLUDED IN THE PRICE BID FOR PAY ITEMS.

PILES: TO BE HP10x42 DRIVEN TO REFUSAL ON ROCK OR A MINIMUM BEARING OF 50 TONS FOR THE ABUTMENTS.

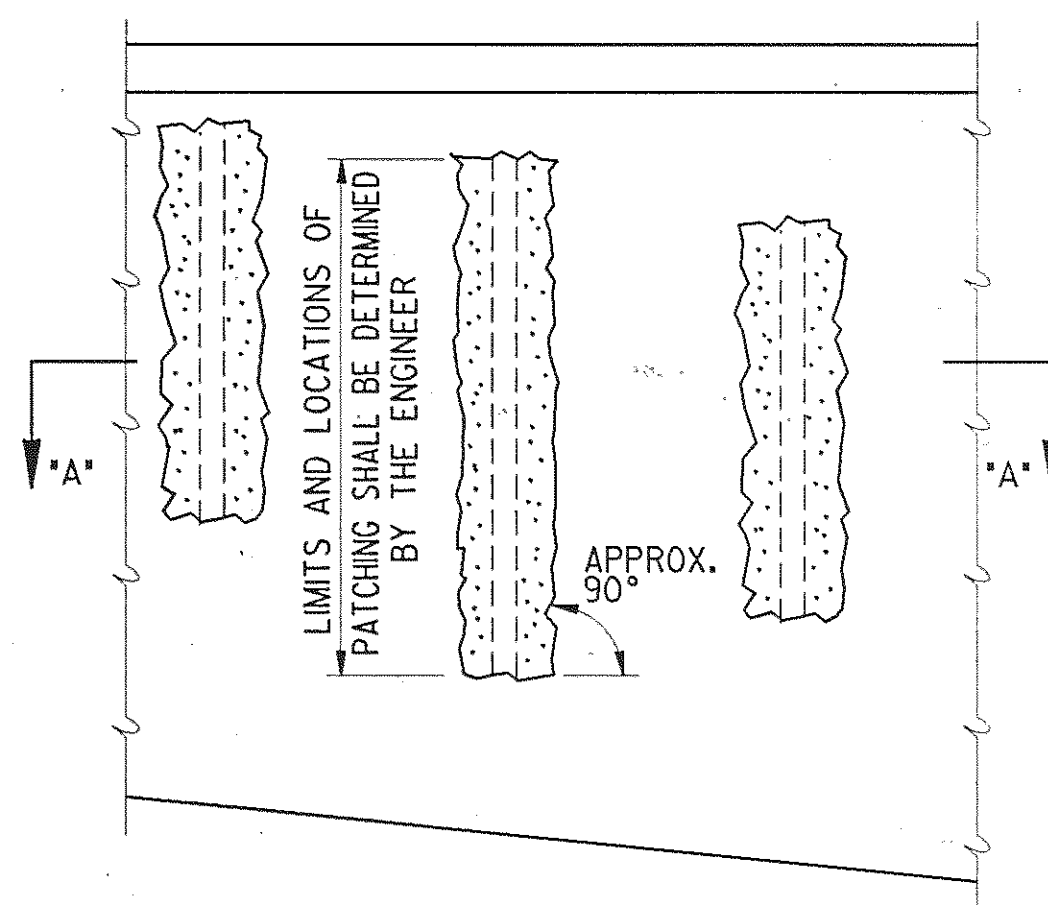
GROUTED BARS IN DRILLED HOLES: HORIZONTALLY DRILLED HOLES SHALL BE DRILLED $1/2"$ IN DIAMETER LARGER THAN THE BAR, CLEANED, PACKED WITH NON-SHRINK GROUT AND BAR DRIVEN TO ITS SEAT. VERTICALLY DRILLED HOLES SHALL BE DRILLED $1/4"$ IN DIAMETER LARGER THAN THE BAR, CLEANED, PACKED WITH EPOXY GROUT AND BAR DRIVEN TO ITS SEAT. ALL GROUTING MATERIAL SHALL BE APPROVED BY T.D.O.T. MATERIALS AND TESTS.

FOUNDATION PREPARATION: THE LUMP SUM BID FOR FOUNDATION PREPARATION SHALL BE FULL COMPENSATION TO THE CONTRACTOR FOR THE PREPARATION OF FOUNDATIONS FOR ALL SUBSTRUCTURES PRIOR TO POURING CONCRETE FOR FOOTINGS. THE CONTRACTOR SHALL BE PAID FOR EXCAVATION IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS AND THE CONTRACT UNIT BID PRICE FOR EACH EXCAVATION ITEM, EXCEPT THAT NO PERCENT INCREASE WILL BE ALLOWED FOR EXTRA DEPTH EXCAVATION. IF COFFERDAMS ARE REQUIRED, THEY SHALL BE IN ACCORDANCE WITH SECTION 204.09 OF THE STANDARD SPECIFICATIONS. THE COST OF ANY COFFERDAMS, SHORING, PUMPING, OR SEAL CONCRETE REQUIRED TO ESTABLISH THE PLANS FOOTING IS TO BE INCLUDED IN THE LUMP SUM PRICE BID FOR FOUNDATION PREPARATION.

SPECIAL NOTE - FOOTING FOR PIERS: AFTER EXCAVATION TO ROCK FOR FOOTING HAS BEEN COMPLETED, HOLES 6' DEEP SHALL BE DRILLED AT POINTS DESIGNATED BY THE ENGINEER. FROM THE RESULTS OBTAINED, THE ENGINEER SHALL DETERMINE THE FINAL FOOTING ELEVATIONS. NO REINFORCING STEEL FOR PIER COLUMNS SHALL BE ORDERED UNTIL FINAL FOOTING ELEVATIONS HAVE BEEN DETERMINED.



SECTION "A-A"



SKETCH "A"

(SHOWING ELEVATION VIEW OF CEMENTIOUS PATCH AT PIER CAPS)

CONCRETE PATCHING AT SUBSTRUCTURES

- LOCATIONS AND LIMITS OF ITEM 604-10.54 WILL BE DETERMINED BY THE ENGINEER; IN GENERAL, THESE WILL INCLUDE BUT NOT NECESSARILY BE LIMITED TO:
 - A) AREAS OF MODERATE HONEYCOMBING
 - B) AREAS ALONG THE LONGITUDINAL AXIS OF EXPOSED REINFORCEMENT AT THE PIER CAPS.

PROPOSED AREAS OF SUBSTRUCTURE REPAIR SHALL BE CHALKED-MARKED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER PRIOR TO PATCHING.

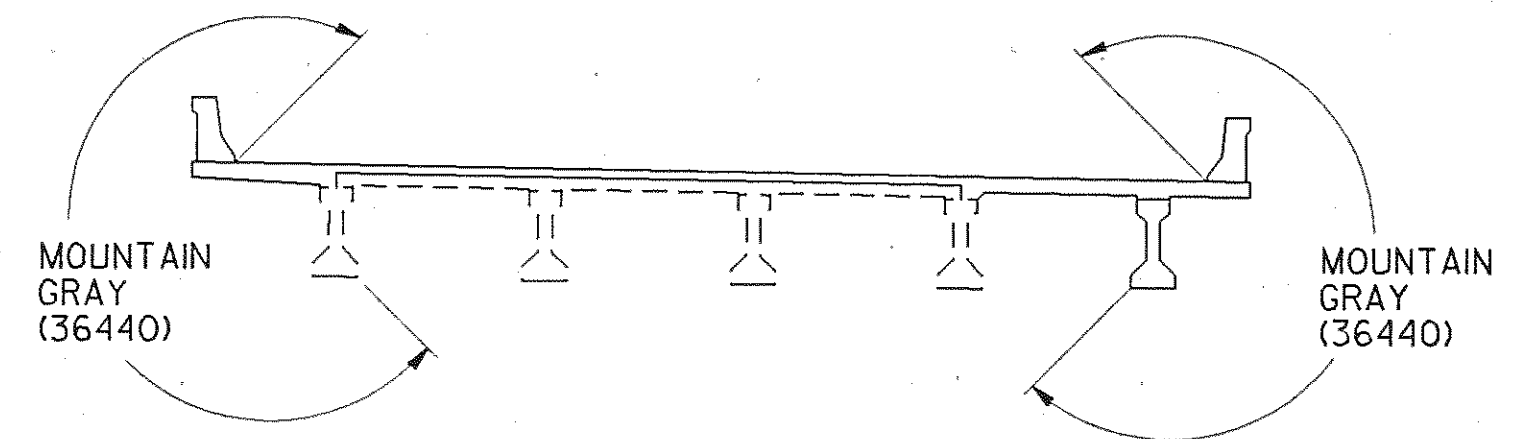
- REPAIRING OF HONEYCOMBED AREAS: SHALL CONSIST OF CHIPPING AND WIRE BRUSHING THE SURFACE TO REMOVE ALL LOOSE MATERIAL PRIOR TO APPLICATION OF APPROVED PATCH BONDING COMPOUND. THIS SHALL BE FOLLOWED BY APPLICATION OF AN APPROVED CEMENTIOUS PATCHING MATERIAL WHICH SHALL BE TROWELED FLUSH WITH ADJACENT EXISTING CONCRETE SURFACE.

- REPAIRING OF SPALLED AREAS ALONG EXISTING EXPOSED REINFORCEMENT: SHALL CONSIST OF THE FOLLOWING:
 - A) CHIP OUT DETERIORATED CONCRETE TO THE LIMITS INDICATED ON SKETCH "A".
 - B) BLAST CLEAN CHIPPED OUT AREAS TO REMOVE ALL LOOSE RUST AND CONCRETE.
 - C) APPLY AN APPROVED EPOXY BONDING MATERIAL TO THE SURFACE TO BE PATCHED AS WELL THE EXPOSED REINFORCEMENT.
 - D) APPLY AN APPROVED CEMENTIOUS PATCHING MATERIAL AND TROWEL SMOOTH AND FLUSH WITH EXISTING CONCRETE SURFACE.
 - E) CANTILEVER PORTIONS OF CAP BEAMS AT PIERS SHALL BE ADEQUATELY SHORED PRIOR TO AND DURING CHIPPING OPERATIONS TO PREVENT FAILURE BY LOSS OF SECTION. SHORING SHALL REMAIN IN PLACE UNTIL THE PATCHING MATERIAL HAS FULLY CURED.

- THE CEMENTIOUS PATCHING MATERIAL SHALL BE MODIFIED BY THE ADDITION OF AN ACRYLIC BINDER IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. THE PATCHING MATERIAL SHALL BE ONE OF THE FOLLOWING, OR AN APPROVED EQUAL, AS DETERMINED BY T.D.O.T. DIVISION OF MATERIALS AND TESTS;
 - QUICKCRETE RRR,
 - CGM HIGHWAY PATCH,
 - SET VERTIPATCH

THE CONTRACTOR SHALL SUPPLY THE ENGINEER WITH THE APPROPRIATE MANUFACTURER'S LITERATURE AND PLACEMENT INSTRUCTIONS FOR THE MATERIAL SELECTED.

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING AREAS OF PATCH FAILURE DUE TO SHRINKAGE AND/OR DEBONDING OF PATCHES FROM EXISTING CONCRETE. THERE WILL BE NO ADDITIONAL COMPENSATION ALLOWED FOR REPAIRING OR REPLACEMENT OF FAILED PATCHES.
- THE COST OF CONCRETE PATCHING AND ALL MISCELLANEOUS LABOR AND MATERIALS SHALL BE INCLUDED IN THE PRICE BID FOR ITEM 604-10.54, CONCRETE REPAIRS, S.F.



APPLIED TEXTURE FINISH DETAIL

FINISHING CONCRETE SURFACES: CONCRETE FINISHING SHALL BE IN ACCORDANCE WITH SECTION 604.22 OF THE TENNESSEE STANDARD SPECIFICATION. AN APPLIED TEXTURE FINISH SHALL BE USED IN LIEU OF A CLASS 2 FINISH. THE COLOR OF THE FINISH SHALL BE SIMILAR TO MOUNTAIN GREY, FEDERAL SPECIFICATION NO. 36440, FEDERAL COLOR STANDARD NO. 595G, AND A COLOR SAMPLE SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL. NO TEXTURE FINISH SHALL BE APPLIED PRIOR TO COMPLETION OF PAVING AND HAULING OPERATIONS AT THE BRIDGE SITE. PAYMENT FOR THE APPLIED TEXTURE FINISH SHALL BE UNDER ITEM 604-04.01 OR 604-04.02. IN ADDITION TO THE ABOVE REQUIREMENTS MOUNTAIN GREY (36440) SHALL BE USED ON ALL EXPOSED ABUTMENT AND PIER SURFACES, WINGWALLS, AND BACKWALLS.

DESIGNED BY _____ DATE _____
 DRAWN BY _____ DATE _____
 SUPERVISED BY _____ DATE _____
 CHECKED BY _____ DATE _____

STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION
 BUREAU OF HIGHWAYS
GENERAL NOTES
 LEFT AND RIGHT LANES
 WIDENING OF INTERSTATE 40
 OVER
 WILSON CREEK
 STATION 385+95.67
 BR. ID. NO. 95I0040001 (RT. LN.)
 BR. ID. NO. 95I0040002 (LT. LN.)
 WILSON COUNTY
 CORRECT *Edward P. Wasserman* 1989
ENGINEER OF STRUCTURES
 APPROVED *Russell Evans*
DIRECTOR OF HIGHWAYS

CONST. NO. 95001-3150-44 531 X081			
PROJECT NO.	YEAR	SHEET NO.	
IR-40-5(88)230	1989		
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION
1	3-29-89	HMB	ADD NOTE 11

ESTIMATED QUANTITIES (LEFT LANE)

ITEM NO.	202-04.01	204-02.01	204-03.01	204-04.01	204-05	204-10.01	204-10.02	604-01.12	604-02.03	604-03.01	604-03.02	604-04.01
ITEM	REMOVAL OF STRUCTURES (BRIDGE No. 1) (LT. LN.) ⑪ L.S. ⑦	DRY EXCAVATION (BRIDGES) C.Y. ①	WET EXCAVATION (BRIDGES) C.Y. ①	ROCK EXCAVATION (BRIDGES) C.Y.	ROCK DRILLING (BRIDGES) L.F.	FOUNDATION PREPARATION (PIER NO. 1) (STA. 386+47.46) L.S. ⑨	FOUNDATION PREPARATION (PIER NO. 2) (STA. 386+98.55) L.S. ⑨	CLASS 'A' CONCRETE (BRIDGE DECK) C.Y.	EPOXY COATED REINFORCING STEEL LBS.	CLASS 'A' CONCRETE (BRIDGES) C.Y.	STEEL BAR REINFORCEMENT (BRIDGES) LBS.	APPLIED TEXTURE FINISH (NEW STRUCTURES) S.Y.
SUPERSTRUCTURE								154	30,162		717	
ABUTMENT No. 1		27								12	1,764	
PIER NO. 1		27	3	1	6					9	1,517	
PIER NO. 2		11	2	1	6					9	1,532	
ABUTMENT No. 2		28								12	1,764	
TOTAL	1	77	5	2	12	1	1	154	30,162	42	7,294	738

ESTIMATED QUANTITIES (LEFT LANE) CONT'D

ITEM NO.	604-04.02	604-10.50	604-10.54	604-36	606-02.03	615-01.03	620-03	709-05.06	710-09.01	710-09.02	920-02.19
ITEM	APPLIED TEXTURE FINISH (EXIST. STRUCTURES) S.Y.	BRIDGE DECK REPAIR (PARTIAL DEPTH OF SLAB) S.Y. ⑩	CONCRETE REPAIRS S.F. ⑩	SCARIFYING S.Y. ⑧	STEEL PILES (10 INCH) L.F.	PRESTRESSED CONCRETE I-BEAM (TYPE III) L.F. ②④	CONCRETE PARAPET L.F. ⑤	MACHINED RIP-RAP (CLASS A-1) TON	6" PERF. PIPE W/ VERTICAL DRAIN SYSTEM L.F. ③	6" PIPE UNDERDRAIN L.F.	EPOXY INJECTION L.F.
SUPERSTRUCTURE											
ABUTMENT No. 1					30			101	25	15	
PIER NO. 1			10								65
PIER NO. 2			3								18
ABUTMENT No. 2			1		31			101	25	15	
TOTAL	155	90	14	447	61	152	345	202	50	30	83

ESTIMATED QUANTITIES (RIGHT LANE)

ITEM NO.	202-04.02	204-02.01	204-03.01	204-04.01	204-05	204-10.03	204-10.04	604-01.12	604-02.03	604-03.01	604-03.02	604-04.01
ITEM	REMOVAL OF STRUCTURES (BRIDGE No. 1) (RT. LN.) ⑪ L.S. ⑦	DRY EXCAVATION (BRIDGES) C.Y. ①	WET EXCAVATION (BRIDGES) C.Y. ①	ROCK EXCAVATION (BRIDGES) C.Y.	ROCK DRILLING (BRIDGES) L.F.	FOUNDATION PREPARATION (PIER NO. 1) (STA. 386+47.46) L.S. ⑨	FOUNDATION PREPARATION (PIER NO. 2) (STA. 386+98.55) L.S. ⑨	CLASS 'A' CONCRETE (BRIDGE DECK) C.Y.	EPOXY COATED REINFORCING STEEL LBS.	CLASS 'A' CONCRETE (BRIDGES) C.Y.	STEEL BAR REINFORCEMENT (BRIDGES) LBS.	APPLIED TEXTURE FINISH (NEW STRUCTURES) S.Y.
SUPERSTRUCTURE								154	30,162		717	
ABUTMENT No. 1		27								12	1,764	
PIER NO. 1				1	6					9	1,517	
PIER NO. 2		11	4	1	6					10	1,585	
ABUTMENT No. 2		28								12	1,764	
TOTAL	1	66	4	2	12	1	1	154	30,162	43	7,347	738

ESTIMATED QUANTITIES (RIGHT LANE) CONT'D

ITEM NO.	604-04.02	604-10.50	604-10.54	604-36	606-02.03	615-01.03	620-03	709-05.06	710-09.01	710-09.02	920-02.19
ITEM	APPLIED TEXTURE FINISH (EXIST. STRUCTURES) S.Y.	BRIDGE DECK REPAIR (PARTIAL DEPTH OF SLAB) S.Y. ⑩	CONCRETE REPAIRS S.F. ⑩	SCARIFYING S.Y. ⑧	STEEL PILES (10 INCH) L.F.	PRESTRESSED CONCRETE I-BEAM (TYPE III) L.F. ②④	CONCRETE PARAPET L.F. ⑤	MACHINED RIP-RAP (CLASS A-1) TON	6" PERF. PIPE W/ VERTICAL DRAIN SYSTEM L.F. ③	6" PIPE UNDERDRAIN L.F.	EPOXY INJECTION L.F.
SUPERSTRUCTURE											
ABUTMENT No. 1					30			101	25	15	
PIER NO. 1			10								25
PIER NO. 2			10								
ABUTMENT No. 2					30			101	25	15	
TOTAL	155	45	20	447	60	152	345	202	50	30	25

- NOTES:**
- EXCAVATION BASED ON EXISTING GROUND.
 - COST OF ELASTOMERIC PADS, RUBBER BONDING CEMENT, AND DOWEL BARS TO BE INCLUDED IN THE COST OF PRESTRESSED BEAMS.
 - COST OF POLYETHYLENE SHEETING AND ALL MISCELLANEOUS ITEMS NECESSARY FOR INSTALLATION TO BE INCLUDED IN COST OF PERFORATED PIPE.
 - THE COST OF 12 INSERT ASSEMBLIES AND 48 7/8" x 4" HEX HEAD BOLTS, (A307), TO BE INCLUDED IN ITEM 620-03.
 - ALL REINFORCING STEEL IN THE PARAPET SHALL BE EPOXY COATED. COST TO BE INCLUDED IN THE PRICE BID FOR ITEM 620-03.
 - THE COST OF BITUMINOUS-FIBERBOARD, AND ALL MISCELLANEOUS JOINT MATERIAL TO BE INCLUDED IN BRIDGE ITEMS BID ON.
 - THE COST OF REMOVING THE EXTERIOR PORTION OF THE EXISTING SLAB, PORTIONS OF THE EXISTING ABUTMENT, AND THE BRIDGERAIL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 202-04.01 AND 202-04.02.
 - THE COST OF REMOVING ANY EXISTING ASPHALT OVERLAY SHALL BE INCLUDED IN THE UNIT PRICE BID FOR SCARIFYING.
 - SEE FOUNDATION PREPARATION NOTE ON DWG. NO. M-216-2.
 - ITEMS 604-10.50 AND 604-10.54 SHALL BE BID WITH THE CONTINGENCY THAT THESE ITEMS MAY BE INCREASED, DECREASED, OR ELIMINATED AS DIRECTED BY THE ENGINEER.
 - THE USE OF A RAMMER IS PROHIBITED FOR REMOVAL OF CONCRETE. SEE NOTES ON DWG. NO. M-216-6.

DESIGNED BY _____ DATE _____
 DRAWN BY _____ DATE _____
 SUPERVISED BY _____ DATE _____
 CHECKED BY _____ DATE _____

STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION
 BUREAU OF HIGHWAYS
**ESTIMATED QUANTITIES
 LEFT AND RIGHT LANES
 WIDENING OF INTERSTATE 40
 OVER
 WILSON CREEK
 STATION 385+95.67
 BR. ID. NO. 9510040001 (RT. LN.)
 BR. ID. NO. 9510040002 (LT. LN.)
 WILSON COUNTY**
 CORRECT *Edward P. Wasserman* 1989
 ENGINEER OF STRUCTURES
 APPROVED *Rexie Evans*
 DIRECTOR OF HIGHWAYS

PROJECT NO.	YEAR	SHEET NO.	
IR-40-5(100)229	1988		
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION

REQUIRED INFORMATION

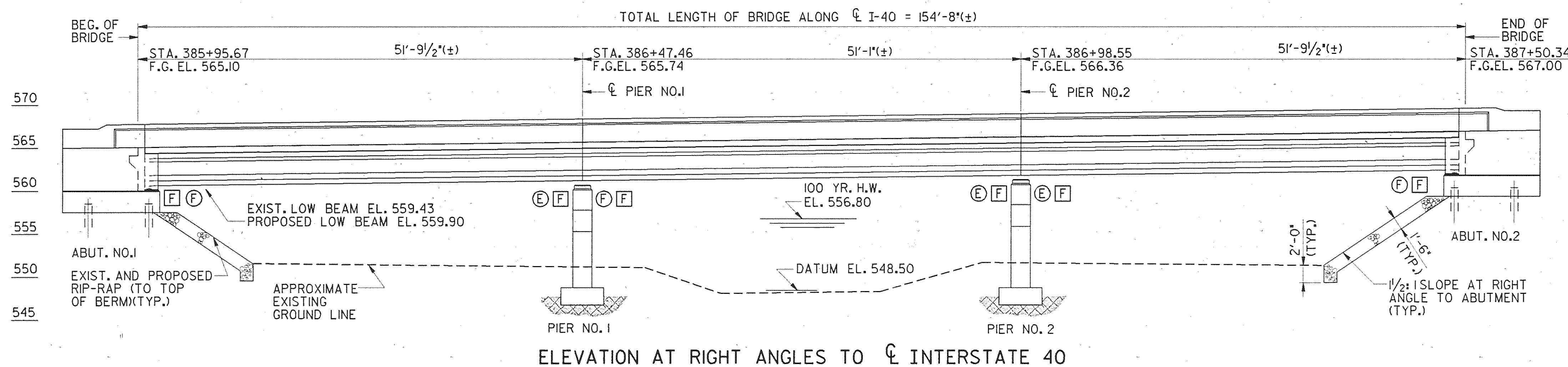
- ① APPROXIMATE EXISTING GROUND LINE AND ROCK LINE.
- ② SUFFICIENT GROUND AND CORING INFORMATION FOR BRIDGE FOUNDATION.

BENCH MARK

ELEVATION 559.34 TOP OF ABUTMENT BEAM, NORTH CORNER OF ABUTMENT NO.1 (LEFT LANE)

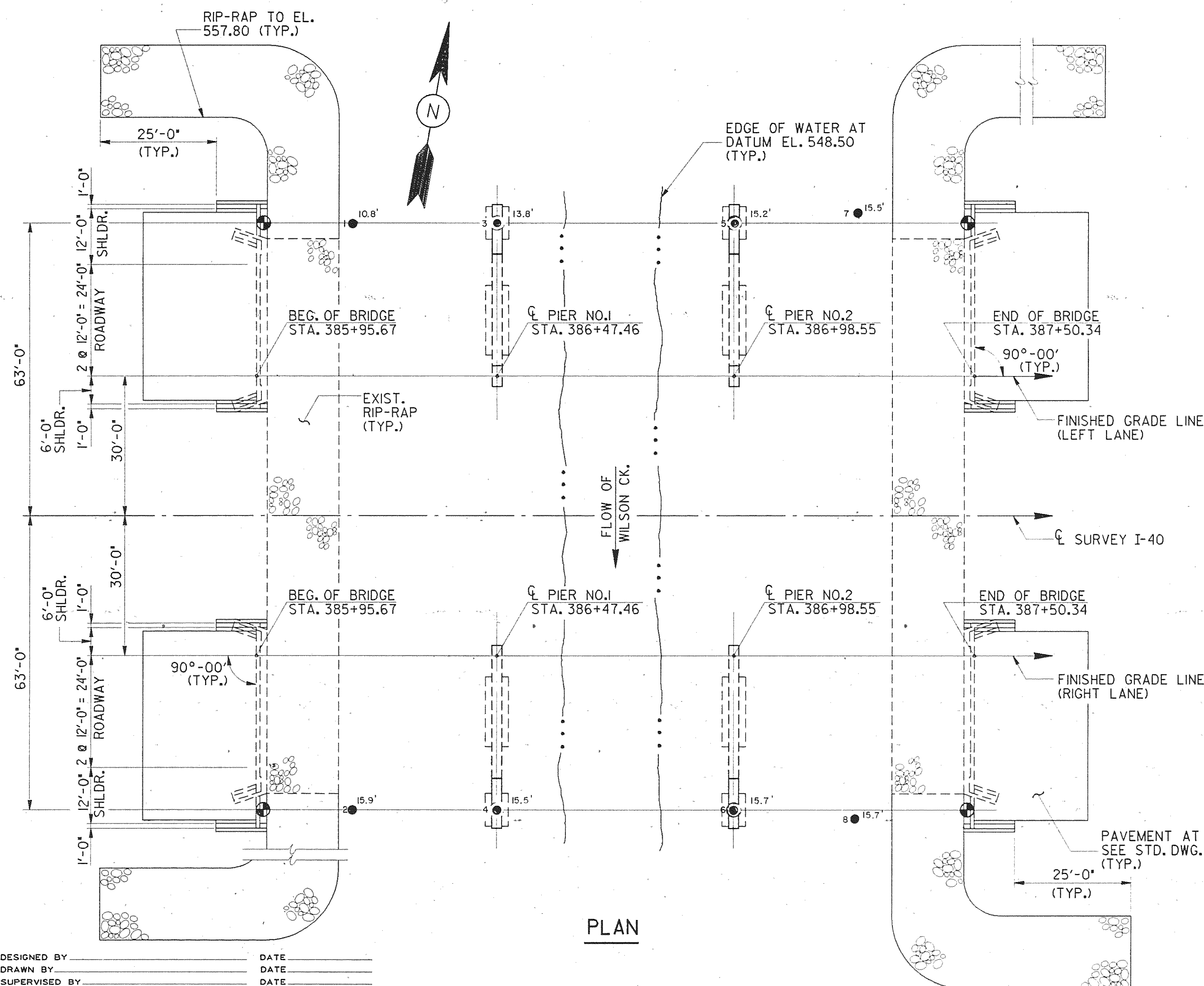
NOTE

THIS SHEET FOR FOUNDATION INVESTIGATION PURPOSE ONLY AND IS NOT TO BE USED FOR FINAL CONSTRUCTION STAKE-OUT PURPOSE.



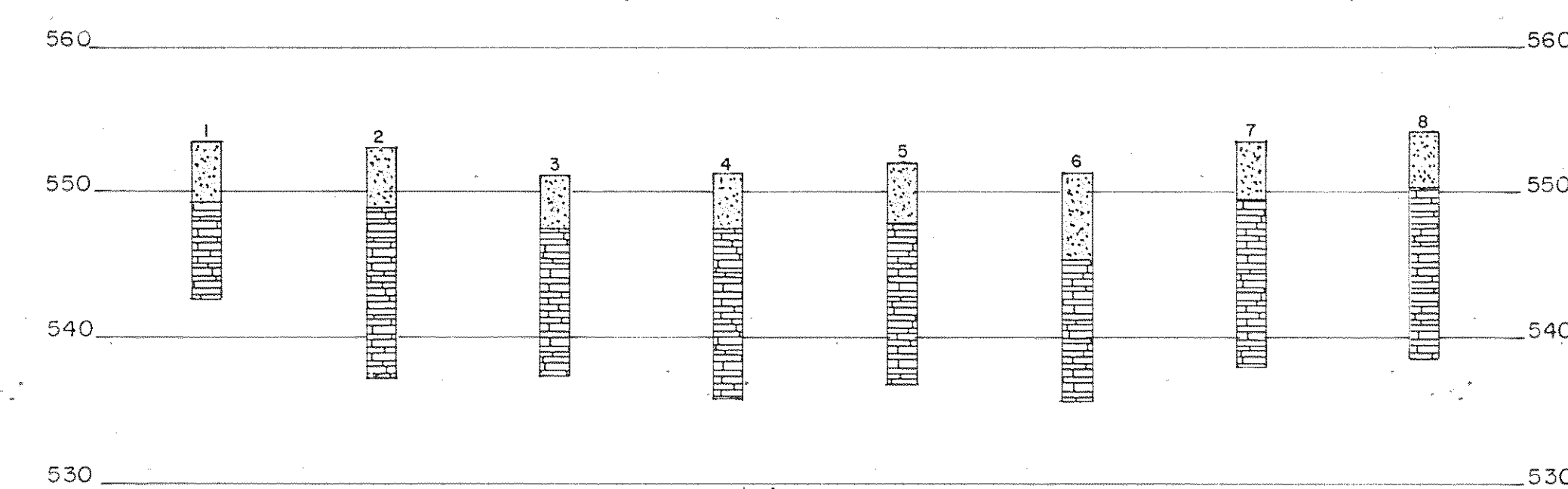
ELEVATION AT RIGHT ANGLES TO INTERSTATE 40

- NOTES: ○ DENOTES EXISTING SUPPORT CONDITION
 □ DENOTES PROPOSED SUPPORT CONDITION
 E DENOTES EXPANSION
 F DENOTES FIXED



PLAN

DESIGNED BY _____ DATE _____
 DRAWN BY _____ DATE _____
 SUPERVISED BY _____ DATE _____
 CHECKED BY _____ DATE _____



CORE NO. 5 15.2' DEPTH DRILLED

CLAY, SILTY
 LIMESTONE, SHALY

GROUND AND ROCK ELEVATIONS

1 553.6	3 551.1	5 551.9	7 553.5
2 549.6	4 547.3	6 547.6	8 549.5
3 553.0	4 551.2	6 551.3	8 554.2
4 549.0	5 537.3	7 545.3	8 550.2

PAVEMENT AT BRIDGE ENDS, SEE STD. DWG. K-86-144 (TYP.)

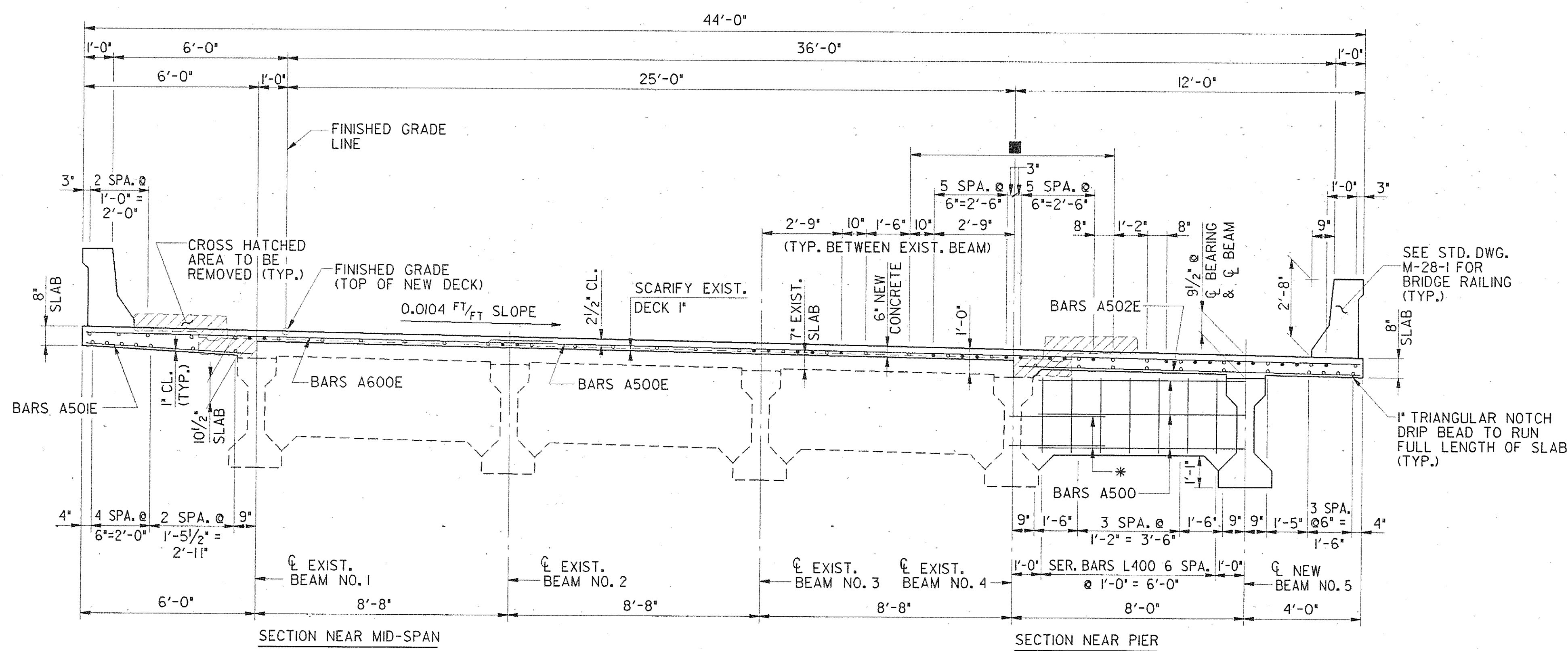
STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION
 BUREAU OF HIGHWAYS
FOUNDATION DATA
 LEFT AND RIGHT LANES
 WIDENING OF INTERSTATE 40
 OVER
 WILSON CREEK
 STATION 385+95.67
 BR. ID. NO. 95100400011 (RT. LN.)
 BR. ID. NO. 95100400012 (LT. LN.)
 WILSON COUNTY
 1988
 CORRECT *Edward P. Wasserman*
 ENGINEER OF STRUCTURES
 APPROVED *Louis Evans*
 DIRECTOR OF HIGHWAYS

CONST. NO. 95001-3150-44		531	X081
PROJECT NO.	YEAR	SHEET NO.	
IR-40-5(88)230	1989		
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION

NOTES:

WHEN POURING SLAB, PROVISIONS SHALL BE MADE FOR SETTING REINFORCING STEEL FOR PARAPET. THE PARAPET SHALL NOT BE POURED UNTIL THE SLAB IS POURED AND CURED. ALSO SEE DRAWING NO. M-28-1.

ALL GIRDERS TO BE SUPPORTED DURING CONSTRUCTION OF SLAB TO PREVENT ROTATION.



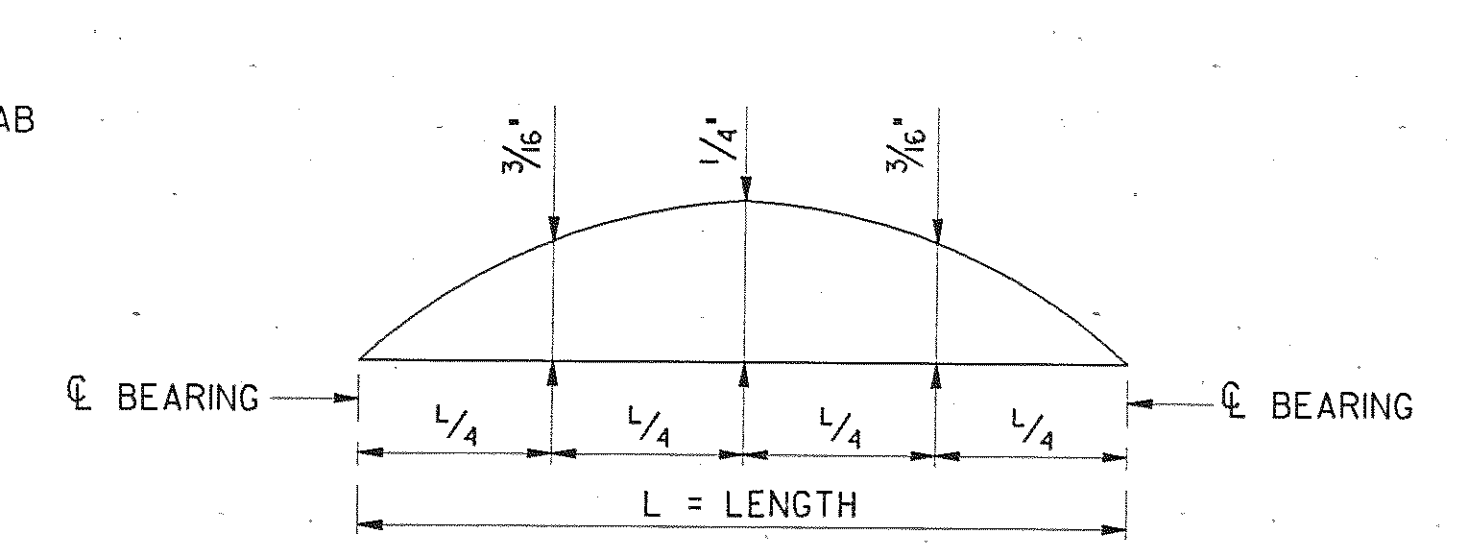
TYPICAL CROSS SECTION

(LOOKING FORWARD ON SURVEY RIGHT LANE)
(LOOKING BACK ON SURVEY LEFT LANE)

* DENOTES: BARS A504 @ 1'-0" (MAX.) DRILLED AND GROUTED INTO EXISTING BEAM WITH 5" MIN. EMBEDMENT. BARS A504 TO BE DRILLED 5 1/2" FROM END OF BEAM.

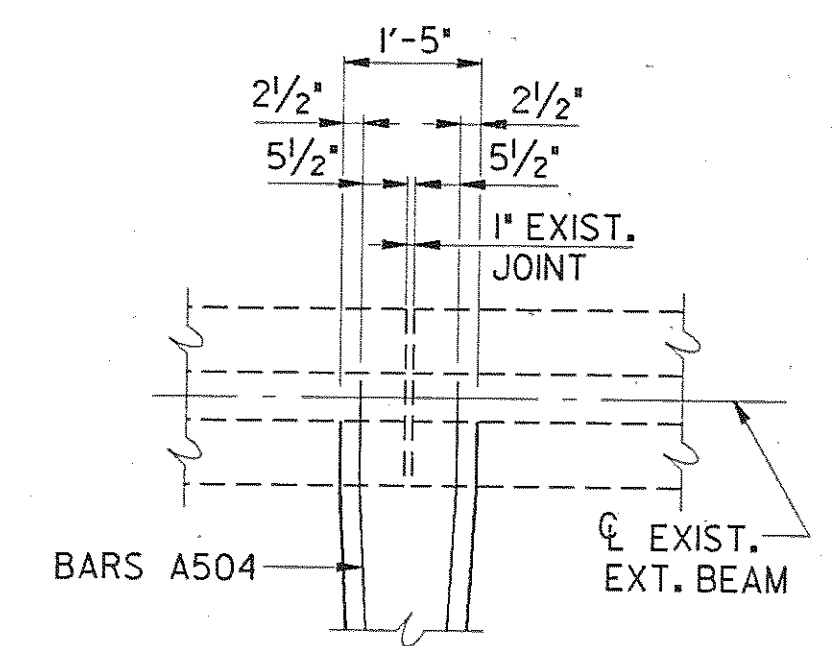
■ DENOTES: PLAN OF MAIN REINFORCEMENT
○ DENOTES: BARS A503E 3/4" BARS A503E 3/4" BARS A504E
● DENOTES: MAIN REINFORCEMENT

NOTE: NO PERMANENT BRIDGE DECK FORMS ARE TO BE USED ON THIS STRUCTURE.

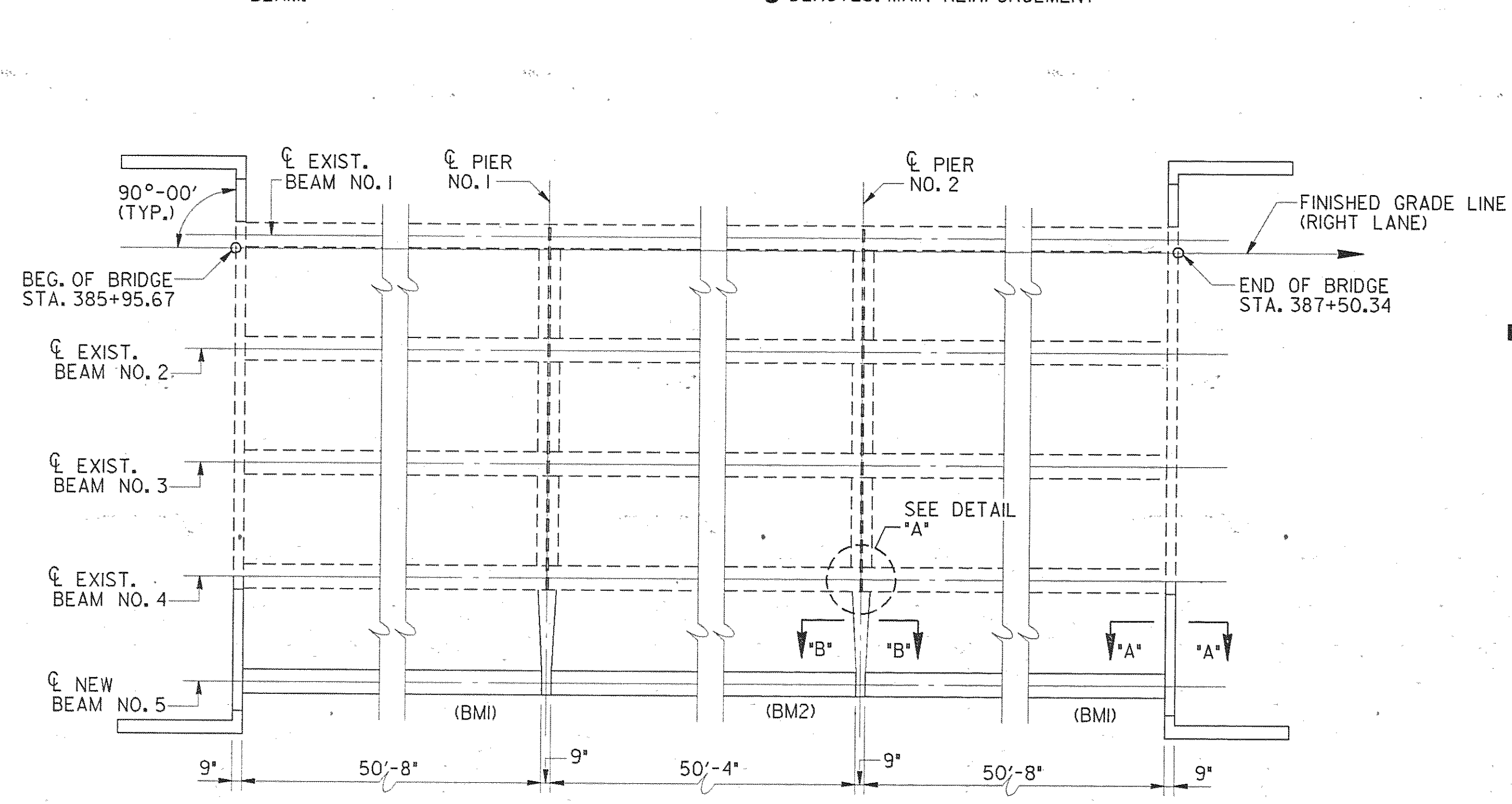


DEAD LOAD CORRECTION CURVE

THIS CURVE IS FOR DEAD LOAD SLAB AND ALL DEAD LOADS THAT ARE APPLIED AFTER SLAB IS IN PLACE.



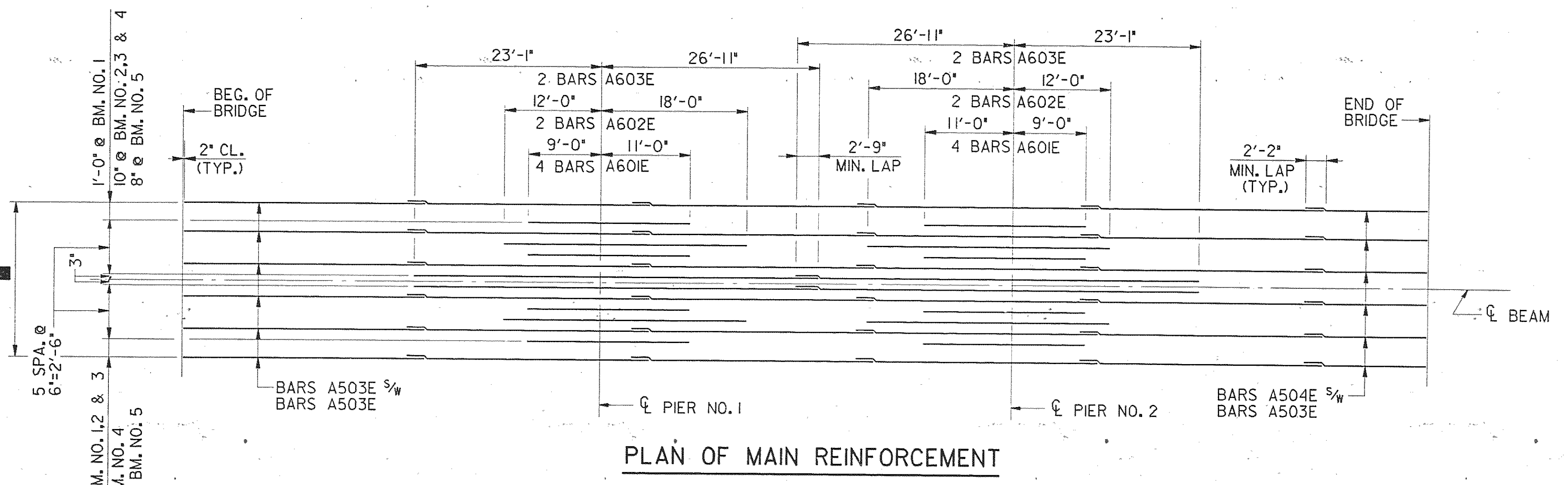
DETAIL "A"



FRAMING PLAN

(RIGHT LANE SHOWN)
(LEFT LANE OPPOSITE HAND)

NOTE: FOR SECTION "A-A" AND SECTION "B-B" SEE DWG. NO. M-216-6.



PLAN OF MAIN REINFORCEMENT

ESTIMATED QUANTITIES

ITEM	CLASS "A" CONCRETE (BRIDGE DECK) C.Y.	STEEL BAR REINFORCEMENT	EPOXY COATED REINFORCING STEEL
		LBS.	LBS.
LEFT LANE	154	717	30,162
RIGHT LANE	154	717	30,162

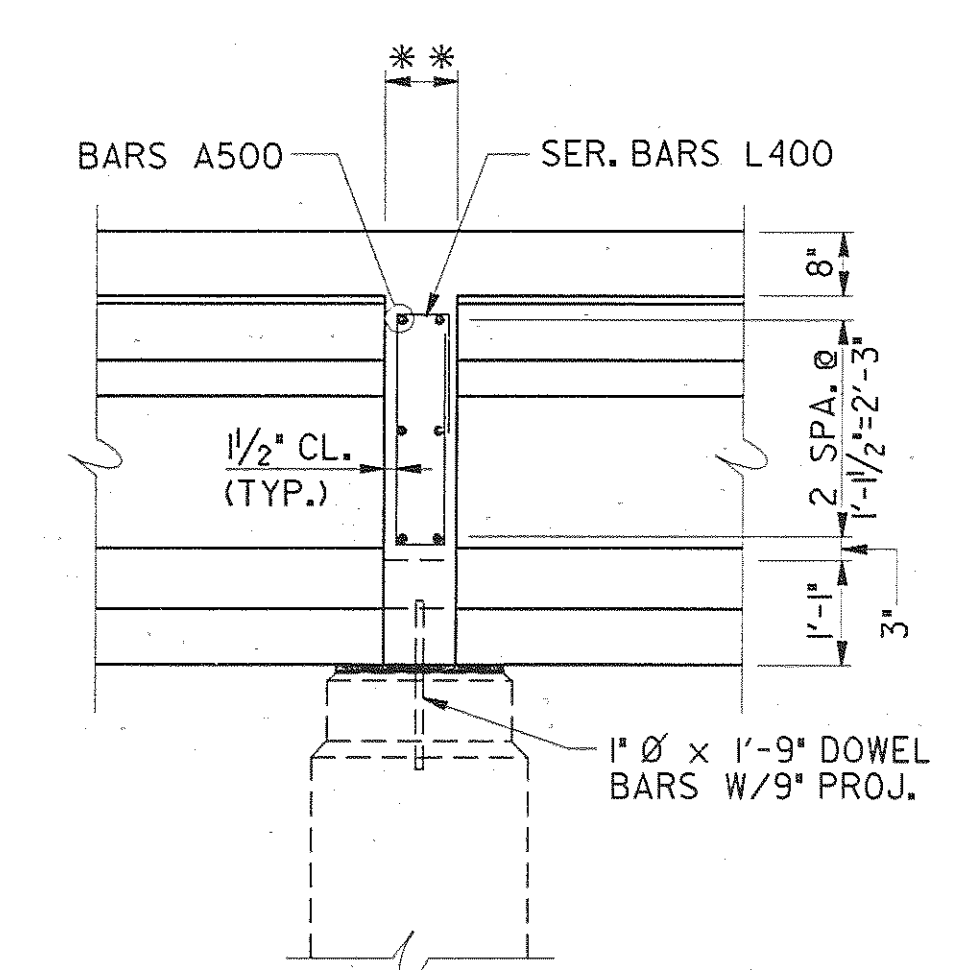
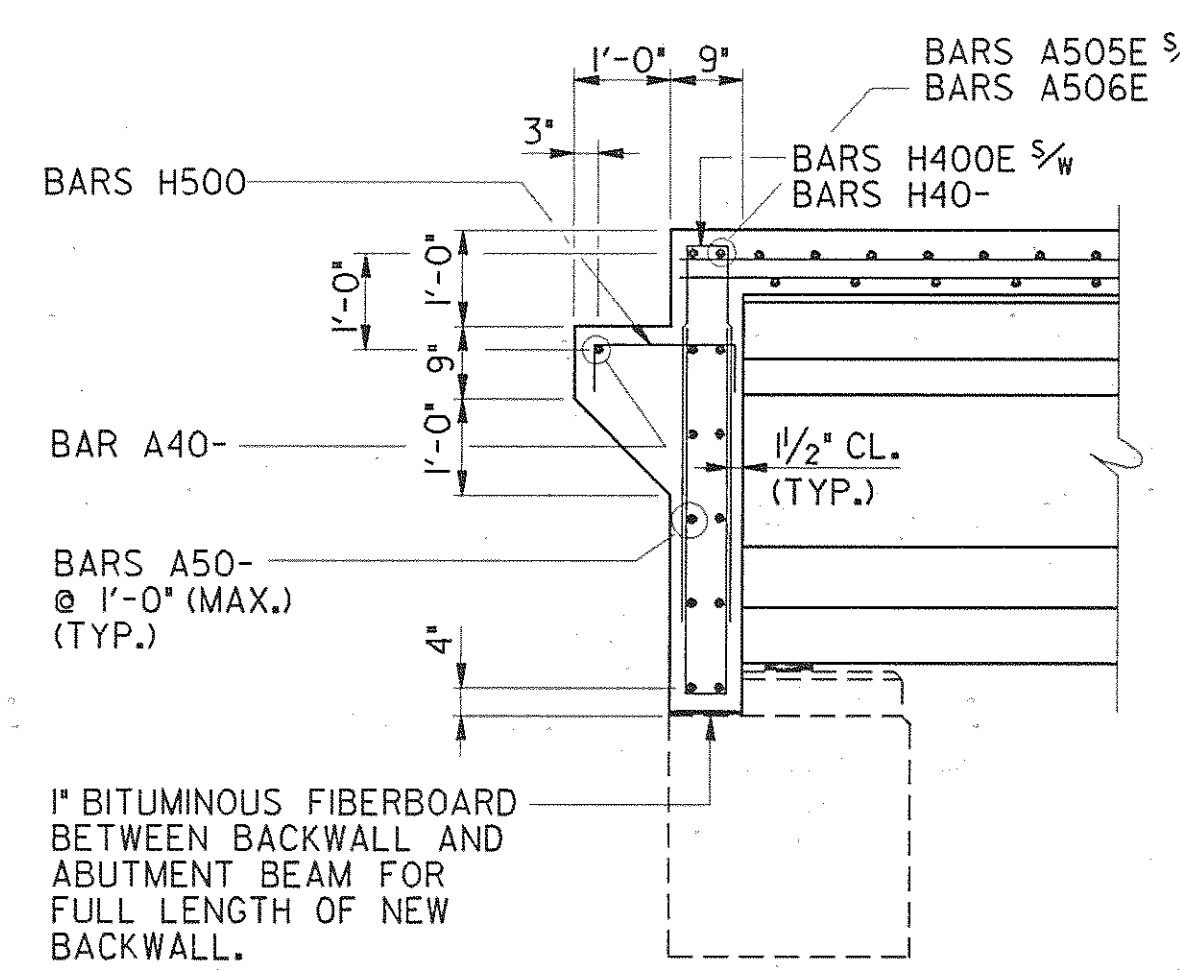
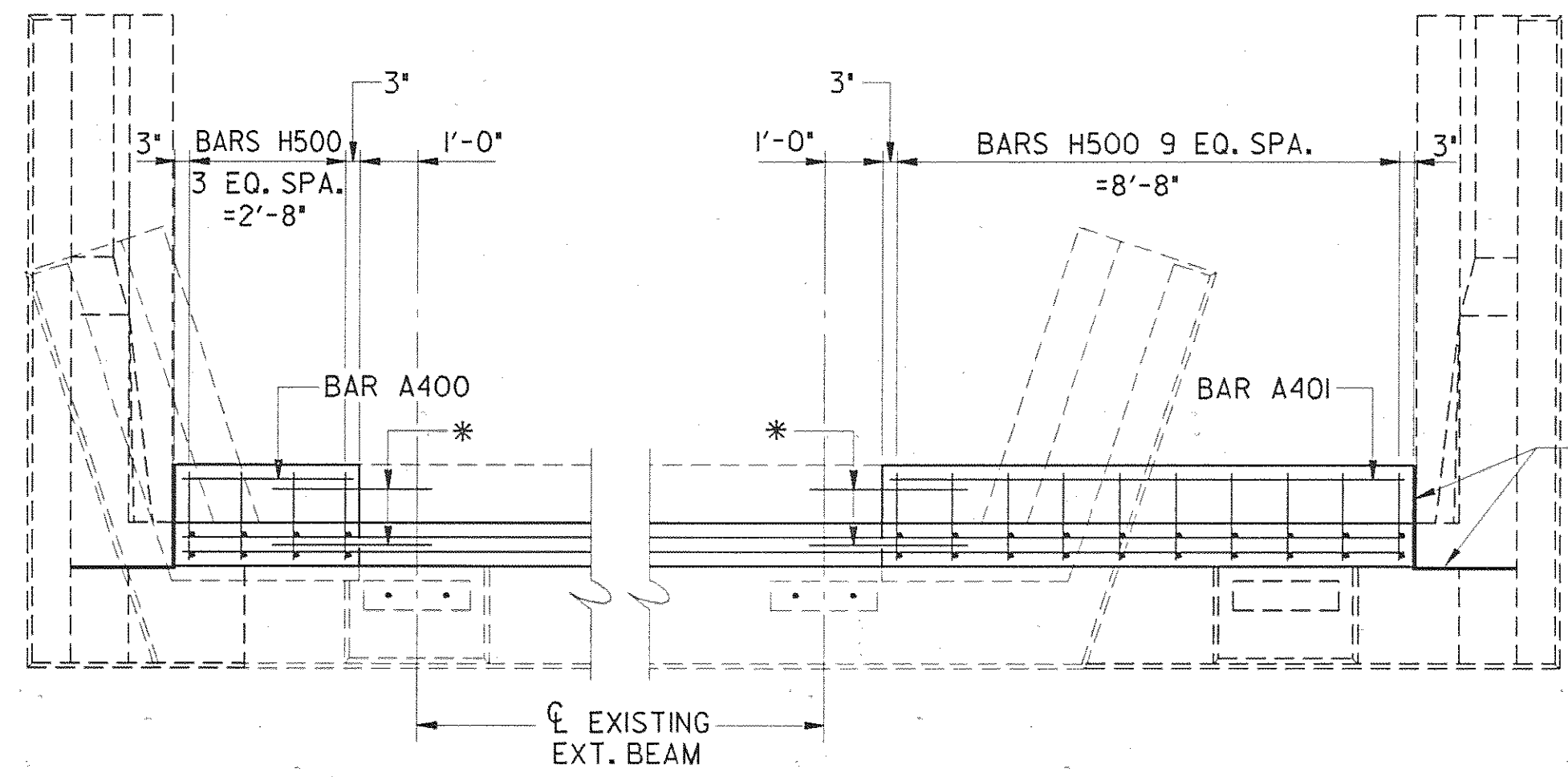
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS
SUPERSTRUCTURE
LEFT AND RIGHT LANES
WIDENING OF INTERSTATE 40
OVER
WILSON CREEK
STATION 385+95.67
BR. ID. NO. 9510040001 (RT. LN.)
BR. ID. NO. 9510040002 (LT. LN.)
WILSON COUNTY

CORRECT *Edward P. Wasserman* 1989
ENGINEER OF STRUCTURES
APPROVED *Louis Evans*
DIRECTOR OF HIGHWAYS

DESIGNED BY _____ DATE _____
DRAWN BY _____ DATE _____
SUPERVISED BY _____ DATE _____
CHECKED BY _____ DATE _____

CONST. NO. 95001-3150-44 531 X081

PROJECT NO.	YEAR	SHEET NO.	
IR-40-5(88)230	1989		
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION
1	2-29-89	HMB	ADD NOTE

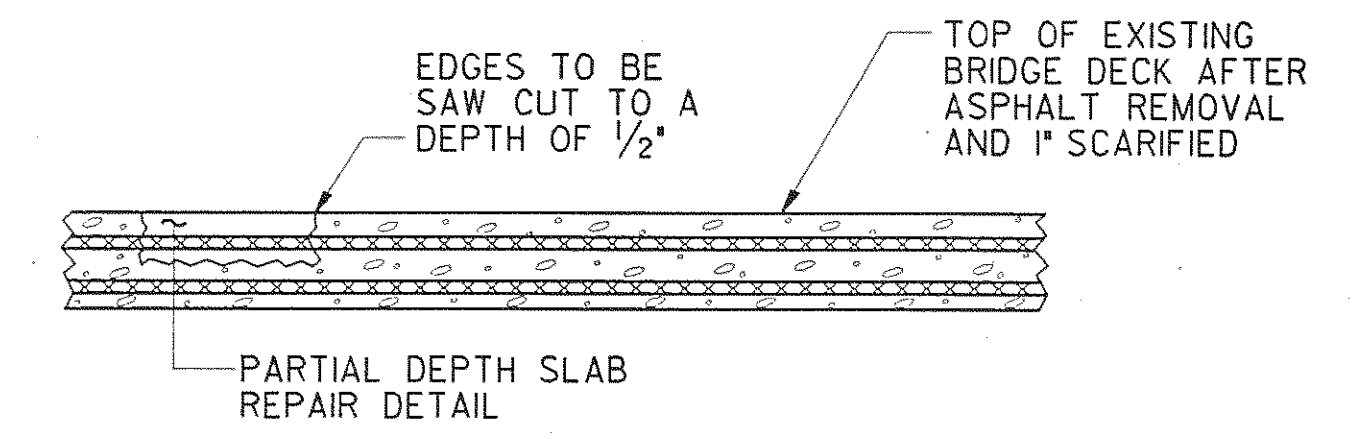
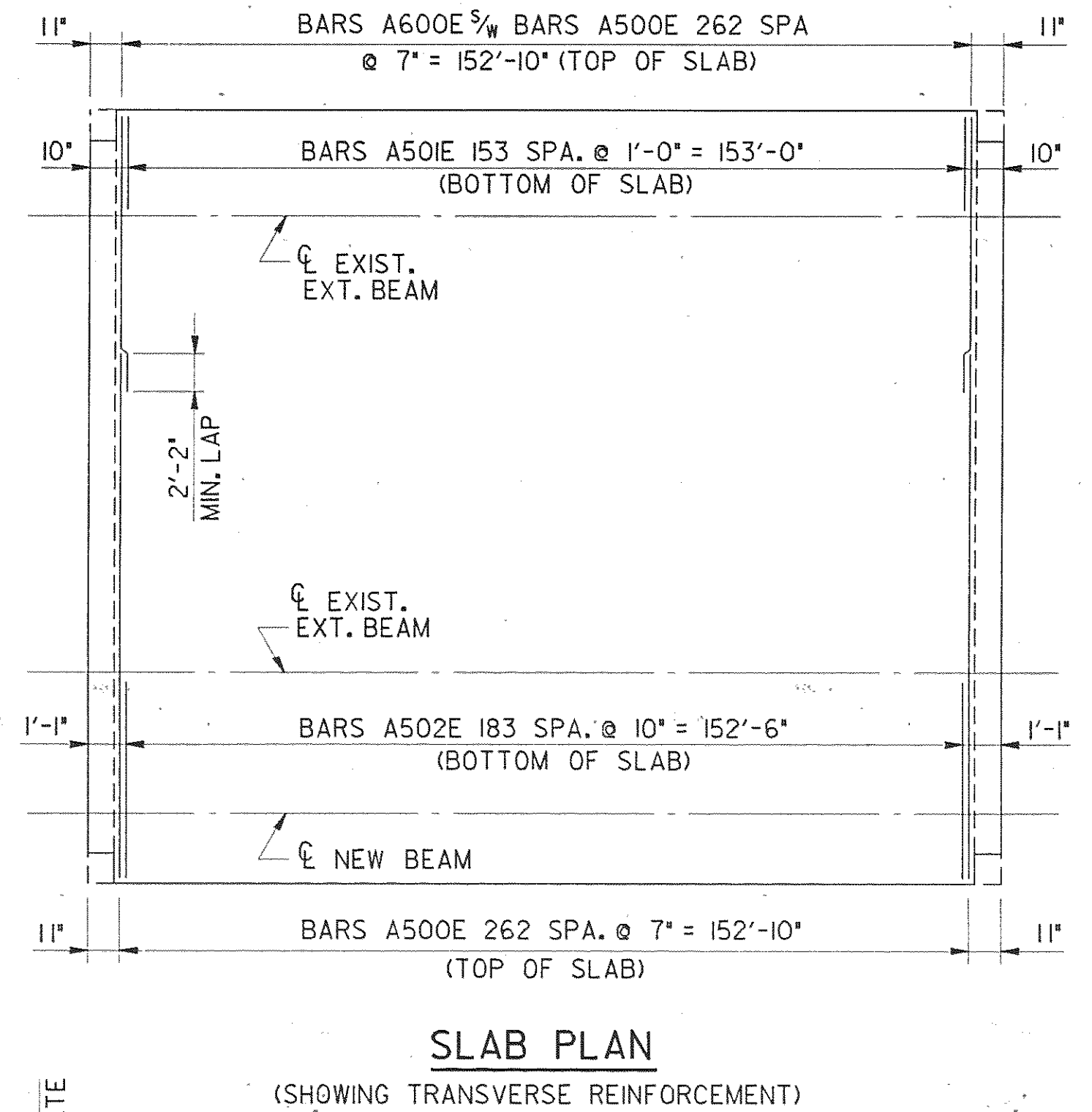
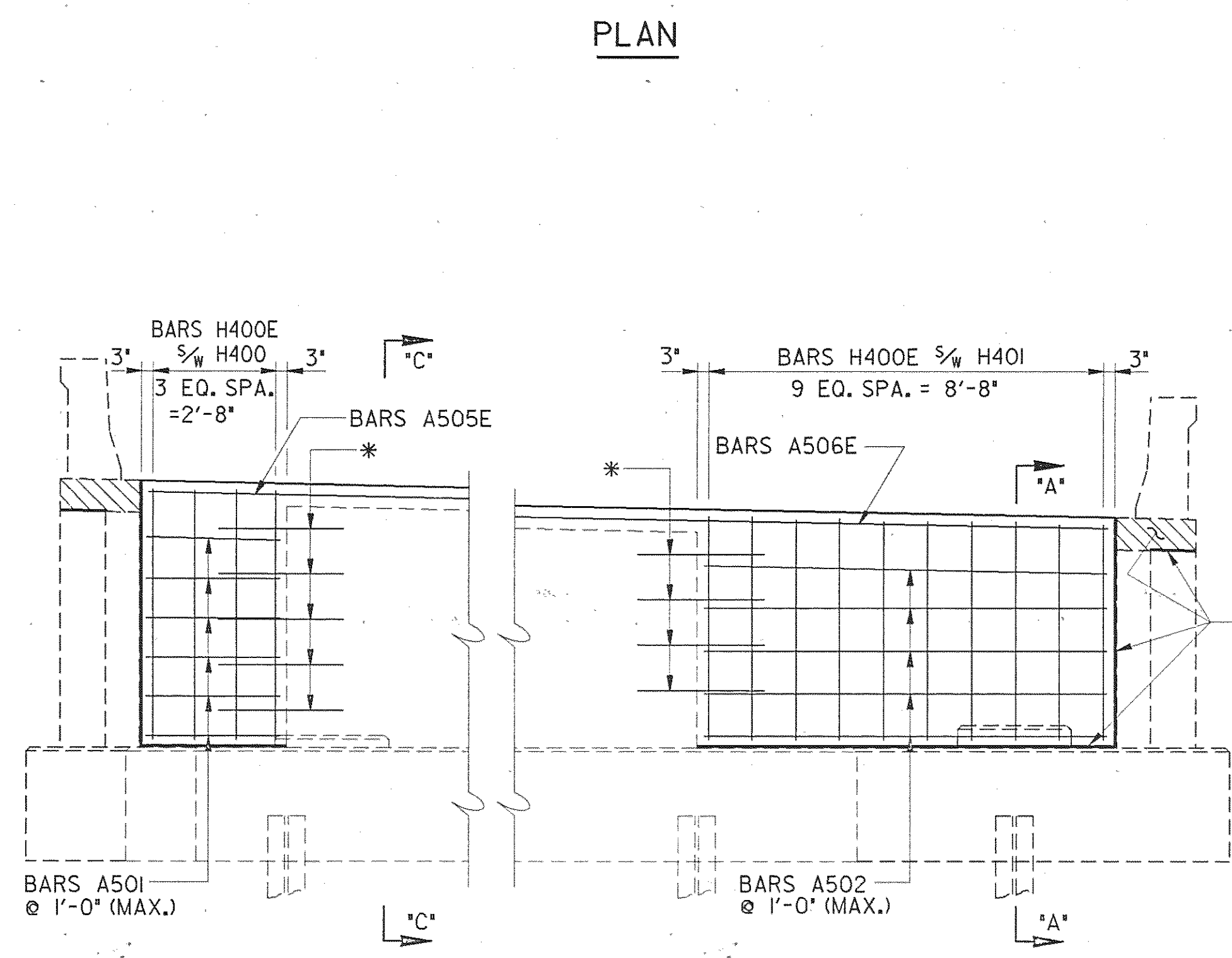


SPECIAL NOTE FOR DOWEL BARS AT PIERS: TOP OF DOWELS TO BE COVERED WITH 1/2" OF COMPRESSIBLE MATERIAL AND THE 9" PROJECTION WRAPPED WITH 2 LAYERS OF WATER-PROOF PAPER.

NOTE: SUPPORT DIAPHRAGMS SHALL BE POURED CONCURRENTLY WITH THE DECK SLAB AND INCLUDED IN THE QUANTITY FOR ITEM 604-01.12.

NOTE: THE BACKWALL SHALL NOT BE POURED UNTIL THE GIRDERS ARE IN PLACE. THE TOP 1'-0" OF THE BACKWALL SHALL BE POURED CONCURRENTLY WITH THE END OF SLAB.

** DENOTES: DIAPHRAGM VARIES FROM 9" AT NEW BEAM TO 1'-5" AT WEB OF EXISTING BEAM.



NOTE: REMOVE CONCRETE IN ALL DELAMINATED AREAS TO A DEPTH OF 3/4" BELOW THE TOP MAT OF REINFORCING STEEL. ALL REINFORCING STEEL IN AREAS OF DECK REPAIR SHALL BE BLAST CLEANED. LOCATIONS AND LIMITS OF COMPLETE AND PARTIAL DEPTH DECK REPAIR SHALL BE DESIGNATED BY THE ENGINEER, UNDER THE DIRECTION OF THE T.D.O.T. DIVISION OF STRUCTURES. PARTIAL DEPTH DECK REPAIR WILL BE PAID FOR UNDER ITEM 604-10.50, BRIDGE DECK REPAIR (PARTIAL DEPTH OF SLAB), S.Y.

NOTE: CONCRETE FOR DECK REPAIR SHALL BE POURED WHEN POURING THE 6" NEW DECK. THE COST OF THE CONCRETE BELOW THE SCARIFICATION LEVEL TO BE INCLUDED IN ITEM 604-10.50.

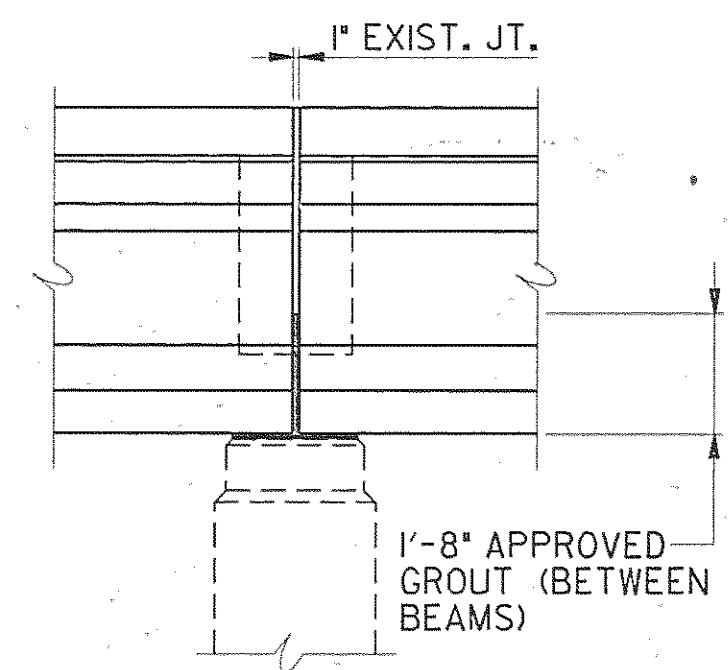
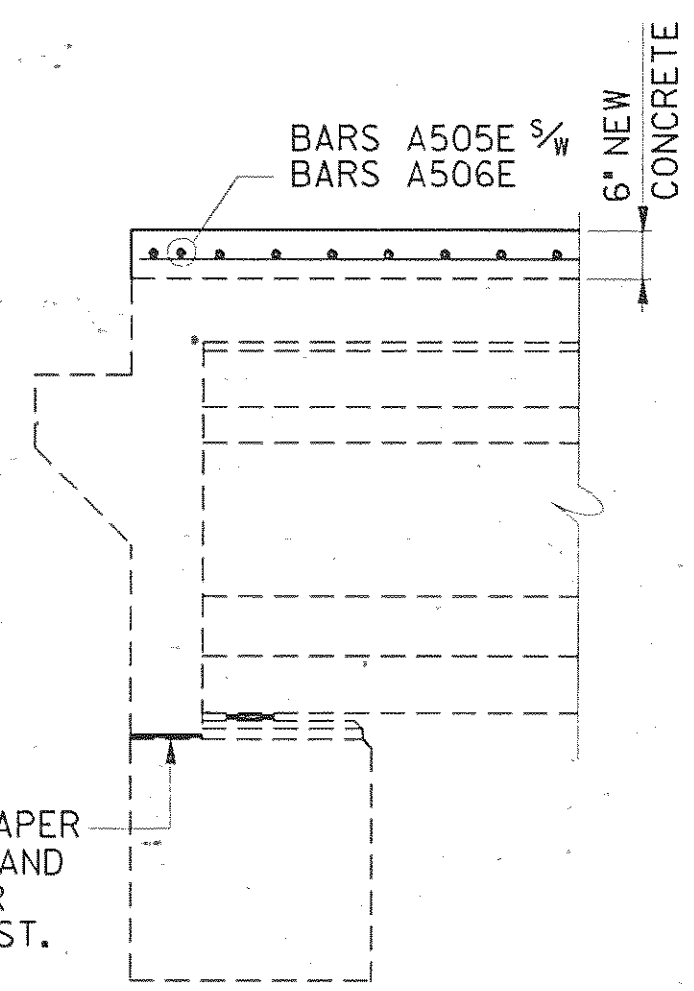
NOTE: ITEM 604-10.50 SHALL BE BID WITH THE CONTINGENCY THAT IT MAY BE INCREASED, DECREASED OR ELIMINATED AS DIRECTED BY THE ENGINEER.

(LOOKING FORWARD ON SURVEY END OF BRIDGE R.L.)
(LOOKING BACK ON SURVEY BEG. OF BRIDGE L.L.)
(B.O.B. R.L. AND E.O.B. L.L. OPPOSITE HAND)

* DENOTES: BARS A503 @ 1'-0" (MAX.) DRILLED AND GROUTED INTO EXISTING BACKWALL AND ROADWAY BRACKET WITH 1'-3" EMBEDMENT.

□ DENOTES: BITUMINOUS FIBERBOARD TO BE AFFIXED TO WINGS WITH FOUR-1/2" LONG CONCRETE MASONRY NAILS PER PIECE.

ONE LAYER OF TARPAPER BETWEEN BACKWALL AND ABUTMENT BEAM FOR FULL LENGTH OF EXIST. BACKWALL.



NOTE: GROUT TO BE NON-SHRINK, NON-METALLIC AND SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 5,000 P.S.I. ALL GROUTING MATERIAL SHALL BE APPROVED BY T.D.O.T. MATERIALS AND TESTS.

NOTE: POWER DRIVEN HAND TOOLS USED FOR REMOVAL OF UNSOUND CONCRETE IN MAKING PARTIAL DEPTH REPAIRS ARE SUBJECT TO THE FOLLOWING RESTRICTIONS: 1) PNEUMATIC HAMMERS HEAVIER THAN 35 POUND CLASS SHALL NOT BE USED. 2) CHIPPING HAMMERS OF THE 15 POUND CLASS SHALL BE USED TO REMOVE CONCRETE FROM BENEATH ANY REINFORCING STEEL.

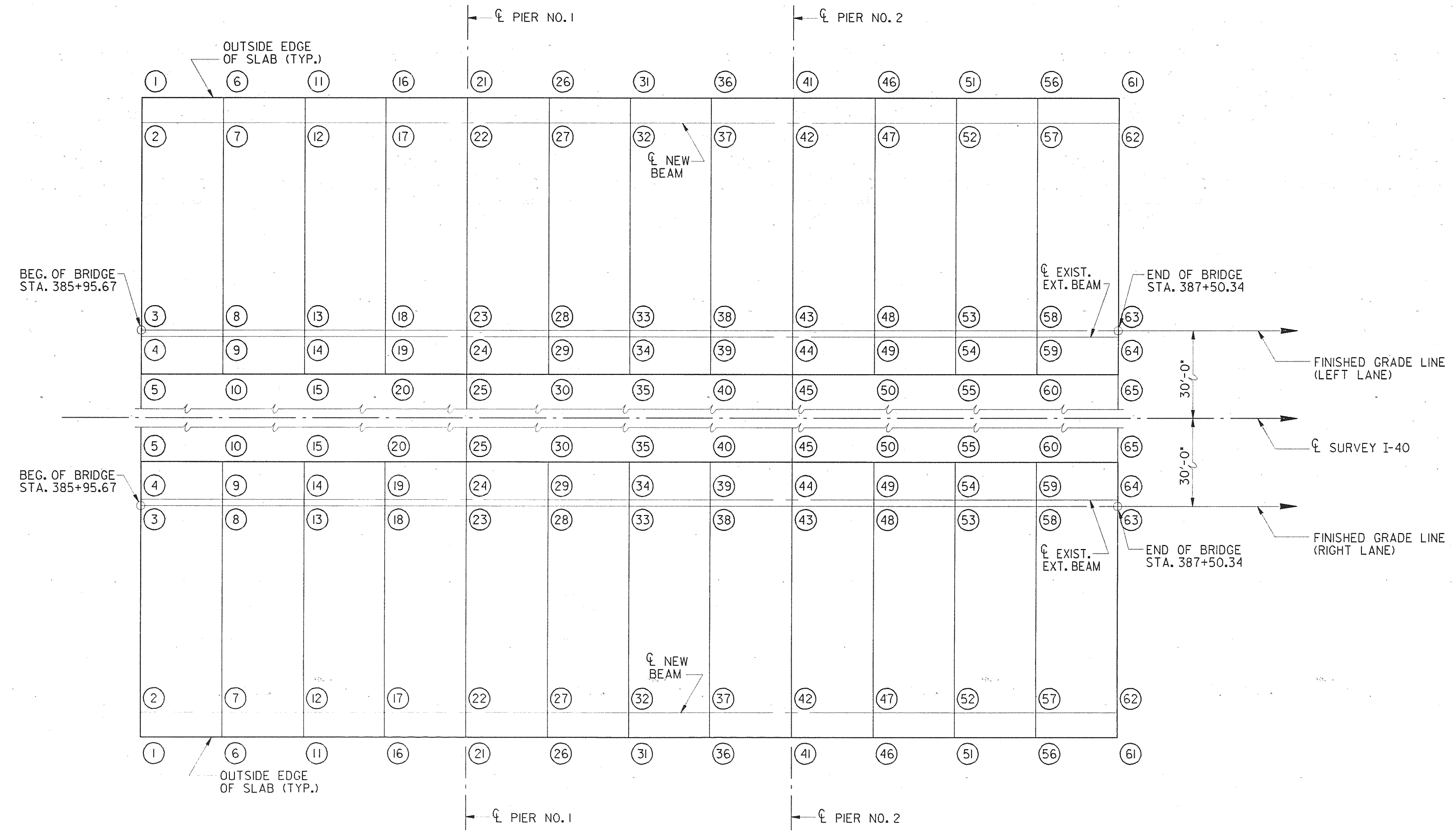
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS
SUPERSTRUCTURE DETAILS
LEFT AND RIGHT LANES
WIDENING OF INTERSTATE 40
OVER
WILSON CREEK
STATION 385+95.67
BR. ID. NO. 95100400011 (RT. LN.)
BR. ID. NO. 95100400012 (LT. LN.)
WILSON COUNTY

CORRECT *Edward P. Wasserman* 1989
ENGINEER OF STRUCTURES

APPROVED *Lucius Evans*
DIRECTOR OF HIGHWAYS

DESIGNED BY _____ DATE _____
DRAWN BY _____ DATE _____
SUPERVISED BY _____ DATE _____
CHECKED BY _____ DATE _____

CONST. NO. 95001-3150-44		531	X081
PROJECT NO.	YEAR	SHEET NO.	
IR-40-5(88)230	1989		
REVISIONS			
NO.	DATE	BY	BREF DESCRIPTION



BRIDGE SCREED PLAN

NOTE: SEE SHEET NO. M-216-1 FOR B.M. TO BE USED FOR BRIDGE AND BRIDGE APPROACH ELEVATIONS.

TABLE OF STATIONS AND ELEVATIONS

POINT	STATION	ELEVATION	POINT	STATION	ELEVATION	POINT	STATION	ELEVATION	POINT	STATION	ELEVATION	POINT	STATION	ELEVATION
1	385+95.67	564.13	14	386+21.57	564.84	27	386+60.23	564.96	40	386+85.78	565.69	53	387+24.45	566.09
2	385+95.67	564.17	15	386+21.57	564.90	28	386+60.23	565.30	41	386+98.55	565.39	54	387+24.45	566.10
3	385+95.67	564.51	16	386+34.51	564.60	29	386+60.23	565.31	42	386+98.55	565.43	55	387+24.45	566.16
4	385+95.67	564.52	17	386+34.51	564.65	30	386+60.23	565.38	43	386+98.55	565.77	56	387+37.39	565.86
5	385+95.67	564.59	18	386+34.51	564.99	31	386+73.01	565.07	44	386+98.55	565.78	57	387+37.39	565.90
6	386+08.62	564.29	19	386+34.51	565.00	32	386+73.01	565.12	45	386+98.55	565.84	58	387+37.39	566.25
7	386+08.62	564.33	20	386+34.51	565.06	33	386+73.01	565.46	46	387+11.50	565.55	59	387+37.39	566.26
8	386+08.62	564.67	21	386+47.46	564.76	34	386+73.01	565.47	47	387+11.50	565.59	60	387+37.39	566.32
9	386+08.62	564.68	22	386+47.46	564.80	35	386+73.01	565.53	48	387+11.50	565.93	61	387+50.34	566.02
10	386+08.62	564.74	23	386+47.46	565.15	36	386+85.78	565.23	49	387+11.50	565.94	62	387+50.34	566.06
11	386+21.57	564.45	24	386+47.46	565.16	37	386+85.78	565.27	50	387+11.50	566.00	63	387+50.34	566.41
12	386+21.57	564.49	25	386+47.46	565.22	38	386+85.78	565.62	51	387+24.45	565.70	64	387+50.34	566.42
13	386+21.57	564.83	26	386+60.23	564.92	39	386+85.78	565.63	52	387+24.45	565.75	65	387+50.34	566.48

DESIGNED BY _____ DATE _____
 DRAIN BY _____ DATE _____
 SUPERVISED BY _____ DATE _____
 CHECKED BY _____ DATE _____

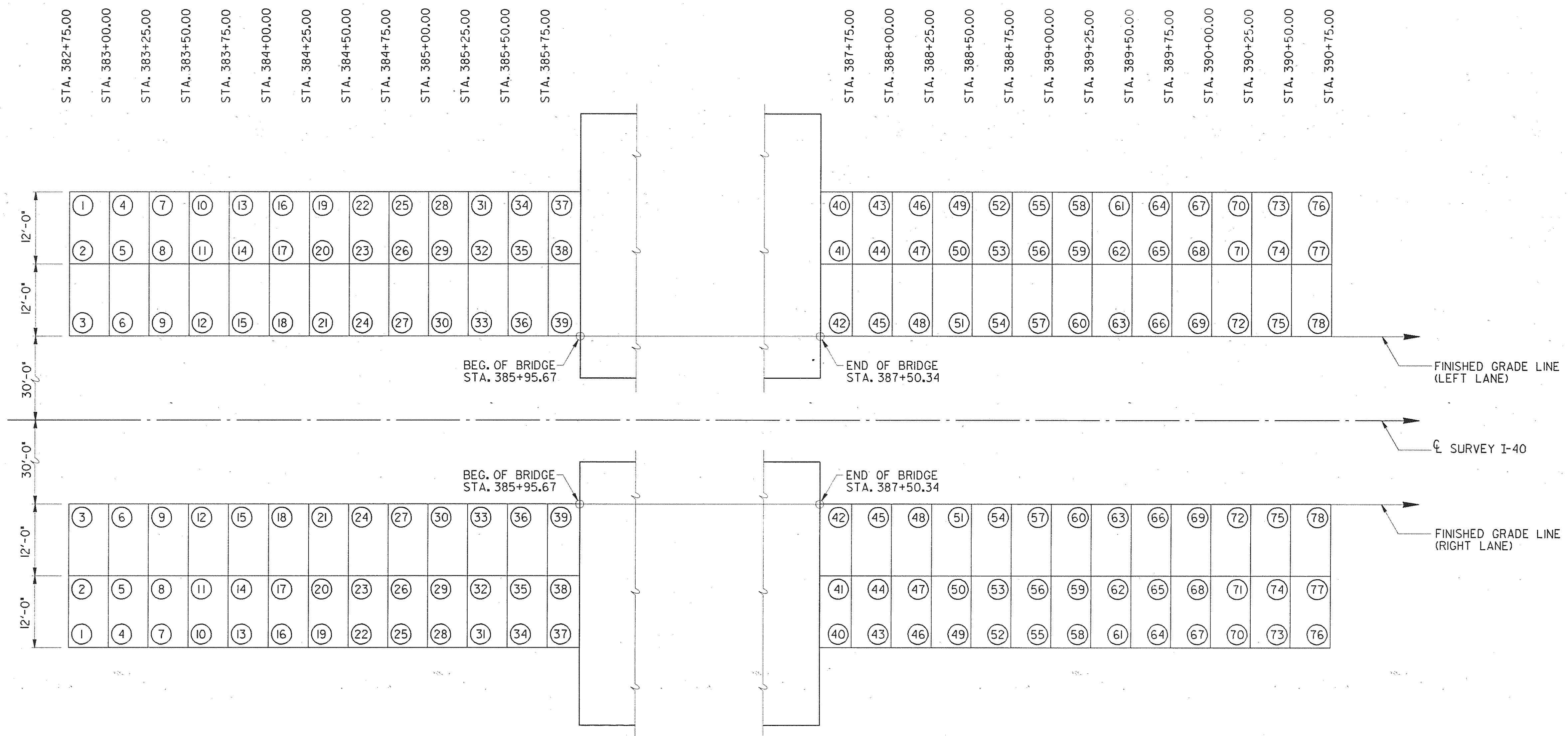
CORRECT *Edward P. Wasserman* 1989
 ENGINEER OF STRUCTURES
 APPROVED *Louis Evans*
 DIRECTOR OF HIGHWAYS

14-FEB-89 13:22:33 -- 052:100.002:10868WBRS.DGN

CONST. NO. 95001-3150-44 531 X081

PROJECT NO.	YEAR	SHEET NO.
IR-40-5(88)230	1989	

REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION



BRIDGE APPROACH PLAN

LEFT LANE TABLE OF STATIONS AND ELEVATIONS RIGHT LANE

POINT	STATION	ELEVATION	POINT	STATION	ELEVATION	POINT	STATION	ELEVATION	POINT	STATION	ELEVATION	POINT	STATION	ELEVATION	POINT	STATION	ELEVATION
1	382+75.00	562.17	27	384+75.00	563.38	53	388+75.00	567.90	1	382+75.00	562.37	27	384+75.00	563.44	53	388+75.00	567.97
2	382+75.00	562.41	28	385+00.00	563.14	54	388+75.00	568.14	2	382+75.00	562.61	28	385+00.00	563.18	54	388+75.00	568.21
3	382+75.00	562.65	29	385+00.00	562.35	55	389+00.00	567.96	3	382+75.00	562.85	29	385+00.00	563.39	55	389+00.00	568.05
4	383+00.00	562.10	30	385+00.00	562.56	56	389+00.00	568.20	4	383+00.00	562.31	30	385+00.00	563.60	56	389+00.00	568.29
5	383+00.00	562.34	31	385+25.00	563.41	57	389+00.00	568.44	5	383+00.00	562.55	31	385+25.00	563.43	57	389+00.00	568.53
6	383+00.00	562.58	32	385+25.00	563.59	58	389+25.00	568.26	6	383+00.00	562.79	32	385+25.00	563.61	58	389+25.00	568.38
7	383+25.00	562.07	33	385+25.00	563.78	59	389+25.00	568.50	7	383+25.00	562.31	33	385+25.00	563.79	59	389+25.00	568.62
8	383+25.00	562.31	34	385+50.00	563.70	60	389+25.00	568.74	8	383+25.00	562.55	34	385+50.00	563.71	60	389+25.00	568.86
9	383+25.00	562.55	35	385+50.00	563.86	61	389+50.00	568.56	9	383+25.00	562.79	35	385+50.00	563.86	61	389+50.00	568.70
10	383+50.00	562.17	36	385+50.00	564.01	62	389+50.00	568.80	10	383+50.00	562.31	36	385+50.00	564.01	62	389+50.00	568.94
11	383+50.00	562.41	37	385+75.00	564.01	63	389+50.00	569.04	11	383+50.00	562.55	37	385+75.00	564.01	63	389+50.00	569.18
12	383+50.00	562.65	38	385+75.00	564.14	64	389+75.00	568.86	12	383+50.00	562.79	38	385+75.00	564.14	64	389+75.00	569.02
13	383+75.00	562.28	39	385+75.00	564.26	65	389+75.00	569.10	13	383+75.00	562.38	39	385+75.00	564.26	65	389+75.00	569.26
14	383+75.00	562.52	40	387+75.00	566.46	66	389+75.00	569.34	14	383+75.00	562.62	40	387+75.00	566.46	66	389+75.00	569.50
15	383+75.00	562.76	41	387+75.00	566.58	67	390+00.00	569.18	15	383+75.00	562.86	41	387+75.00	566.58	67	390+00.00	569.34
16	384+00.00	562.39	42	387+75.00	566.71	68	390+00.00	569.42	16	384+00.00	562.50	42	387+75.00	566.71	68	390+00.00	569.58
17	384+00.00	562.63	43	388+00.00	566.76	69	390+00.00	569.66	17	384+00.00	562.74	43	388+00.00	566.76	69	390+00.00	569.82
18	384+00.00	562.87	44	388+00.00	566.92	70	390+25.00	569.50	18	384+00.00	562.98	44	388+00.00	566.92	70	390+25.00	569.67
19	384+25.00	562.53	45	388+00.00	567.07	71	390+25.00	569.74	19	384+25.00	562.63	45	388+00.00	567.07	71	390+25.00	569.91
20	384+25.00	562.77	46	388+25.00	567.06	72	390+25.00	569.98	20	384+25.00	562.87	46	388+25.00	567.09	72	390+25.00	570.15
21	384+25.00	563.01	47	388+25.00	567.25	73	390+50.00	569.84	21	384+25.00	563.11	47	388+25.00	567.27	73	390+50.00	569.97
22	384+50.00	562.70	48	388+25.00	567.43	74	390+50.00	570.08	22	384+50.00	562.78	48	388+25.00	567.45	74	390+50.00	570.21
23	384+50.00	562.94	49	388+50.00	567.36	75	390+50.00	570.32	23	384+50.00	563.02	49	388+50.00	567.41	75	390+50.00	570.45
24	384+50.00	563.18	50	388+50.00	567.57	76	390+75.00	570.12	24	384+50.00	563.26	50	388+50.00	567.62	76	390+75.00	570.30
25	384+75.00	562.90	51	388+50.00	567.78	77	390+75.00	570.86	25	384+75.00	562.96	51	388+50.00	567.83	77	390+75.00	570.54
26	384+75.00	563.14	52	388+75.00	567.66	78	390+75.00	570.60	26	384+75.00	563.20	52	388+75.00	567.73	78	390+75.00	570.78

NOTE: SEE SHEET NO. M-216-1 FOR B.M. TO BE USED FOR BRIDGE AND BRIDGE APPROACH ELEVATIONS.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS
BRIDGE APPROACH
LEFT AND RIGHT LANES
WIDENING OF INTERSTATE 40
OVER
WILSON CREEK
STATION 385+95.67
BR. ID. NO. 9510040001 (RT. LN.)
BR. ID. NO. 9510040002 (LT. LN.)
WILSON COUNTY

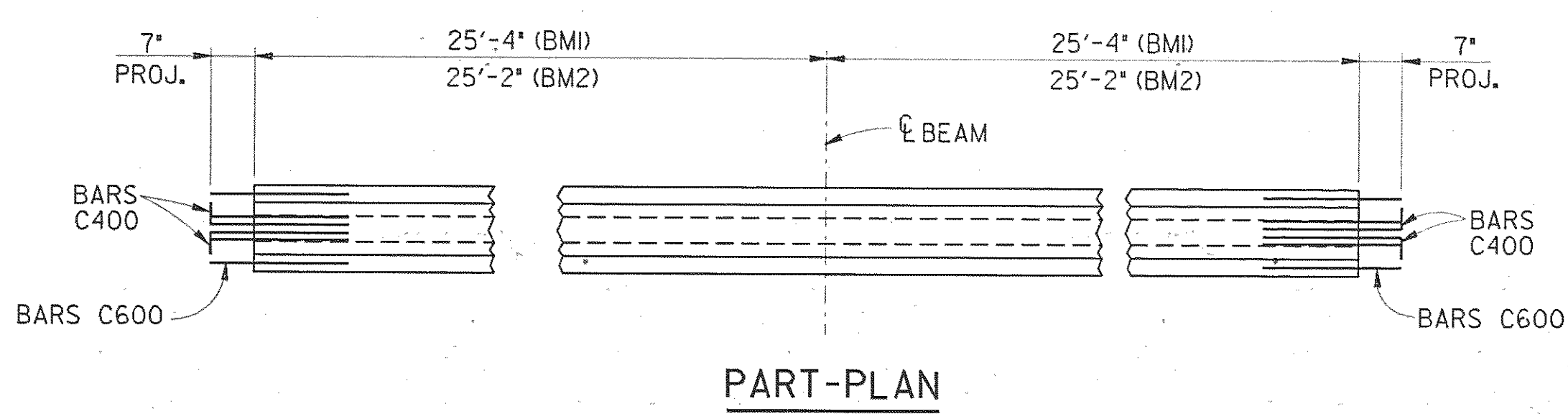
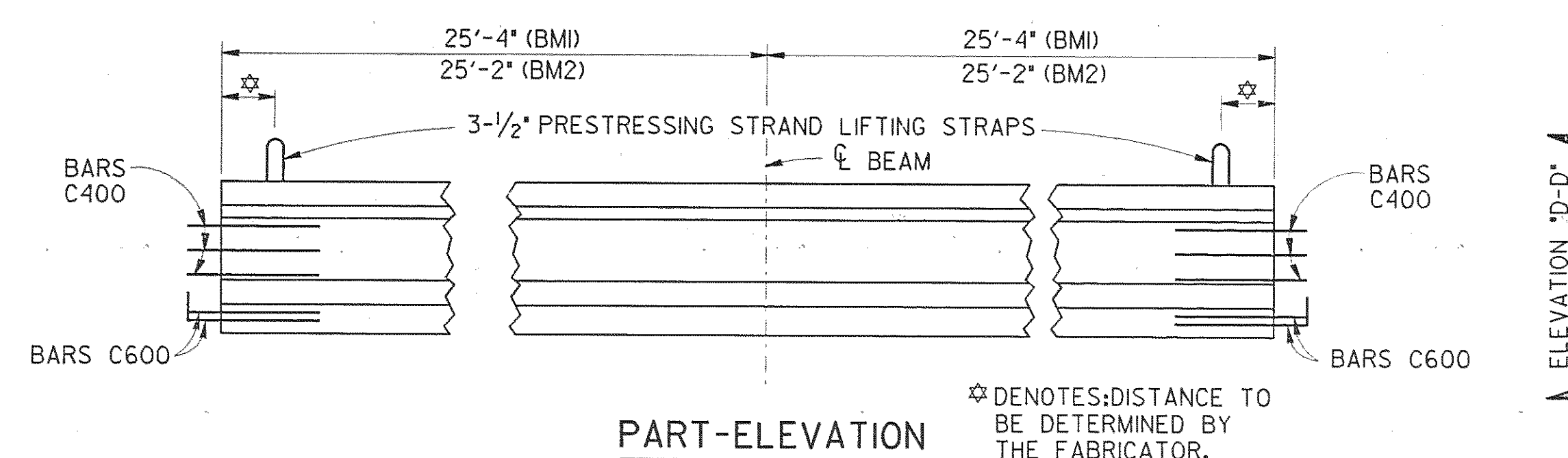
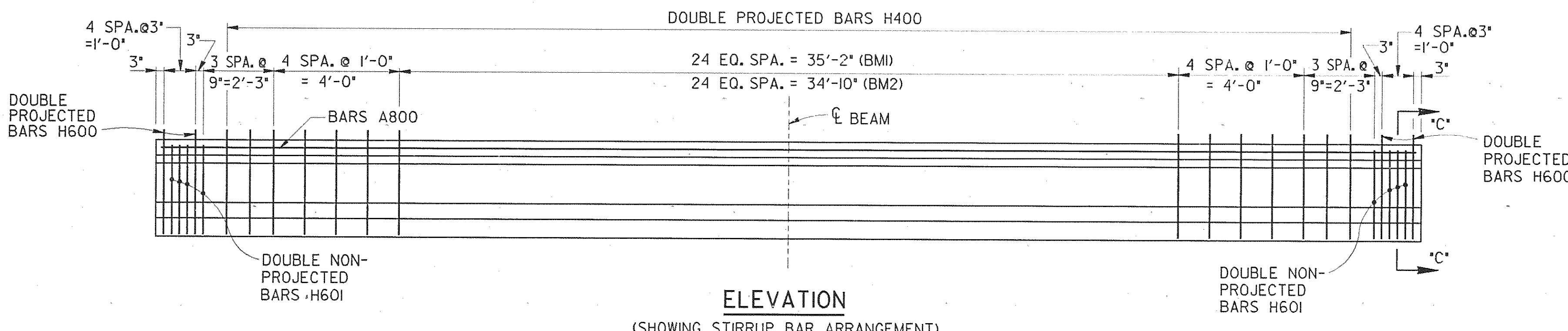
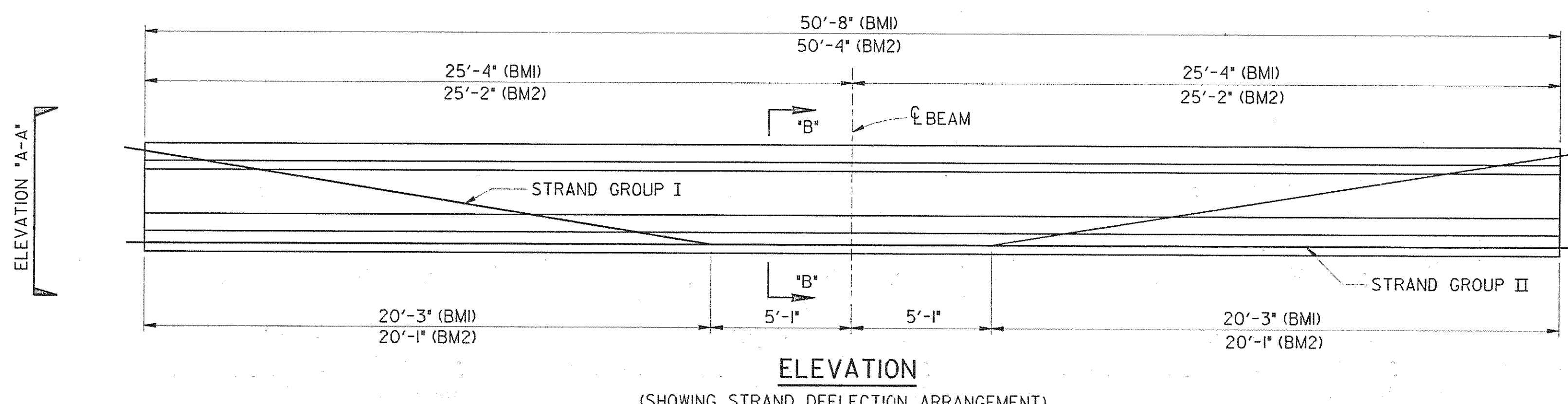
CORRECT *Edward P. Wasserman* 1989
ENGINEER OF STRUCTURES
APPROVED *Louis Evans*
DIRECTOR OF HIGHWAYS

DESIGNED BY _____ DATE _____
DRAWN BY _____ DATE _____
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CONST. NO. 95001-3150-44 531 X081

PROJECT NO.	YEAR	SHEET NO.
IR-40-5(88)230	1989	

REVISIONS			
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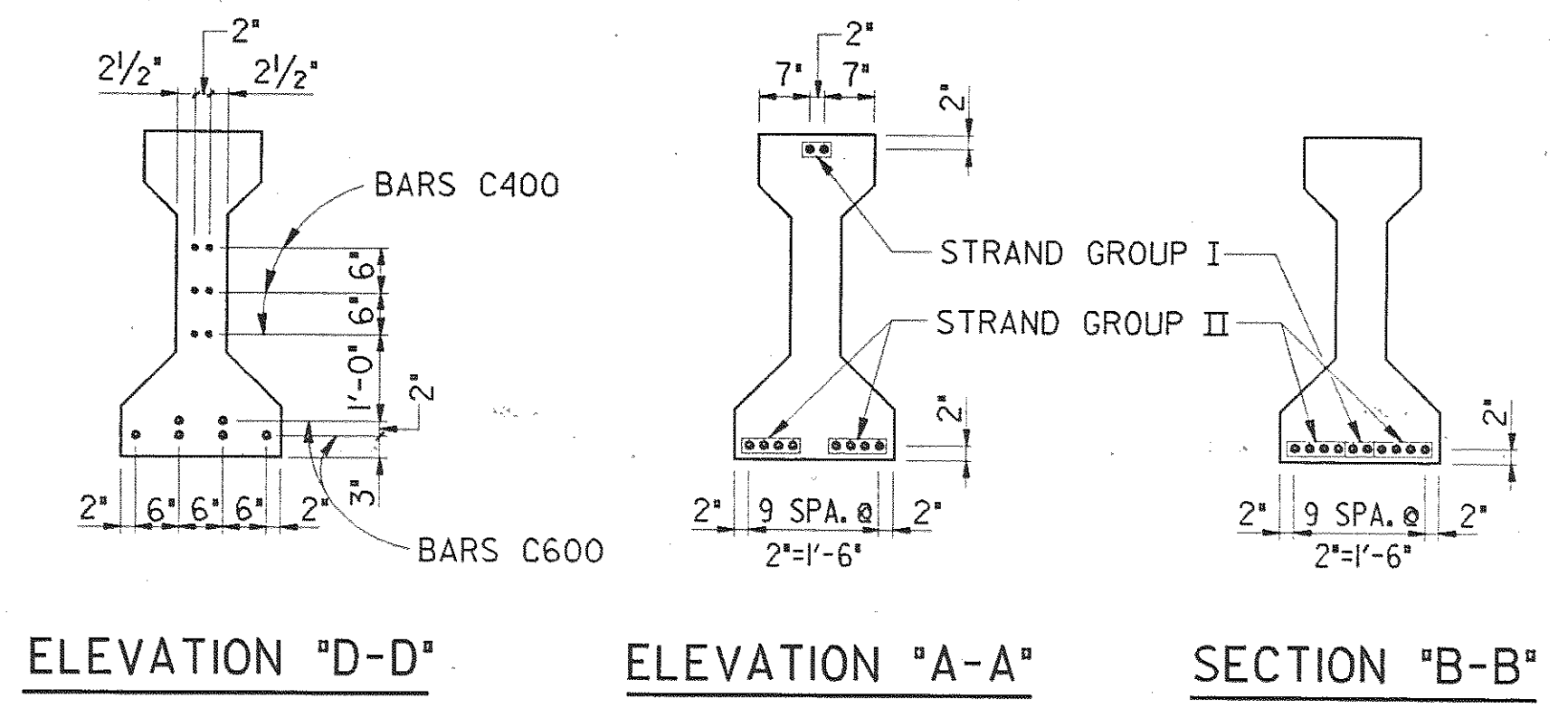
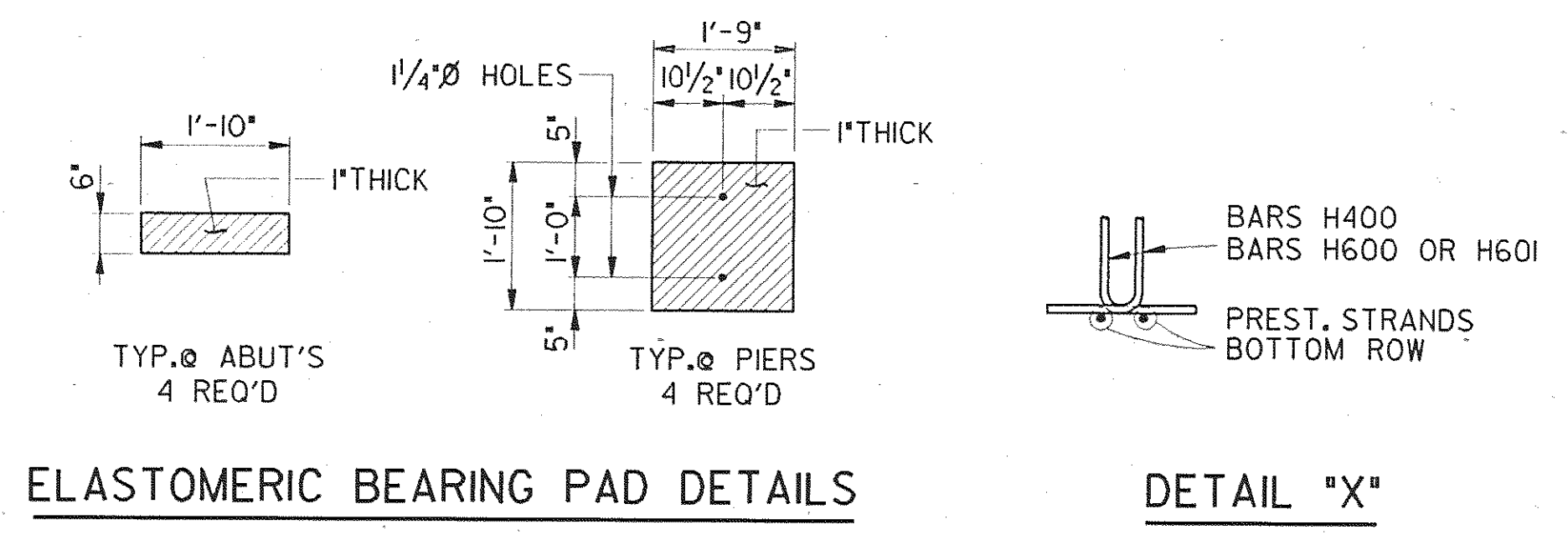
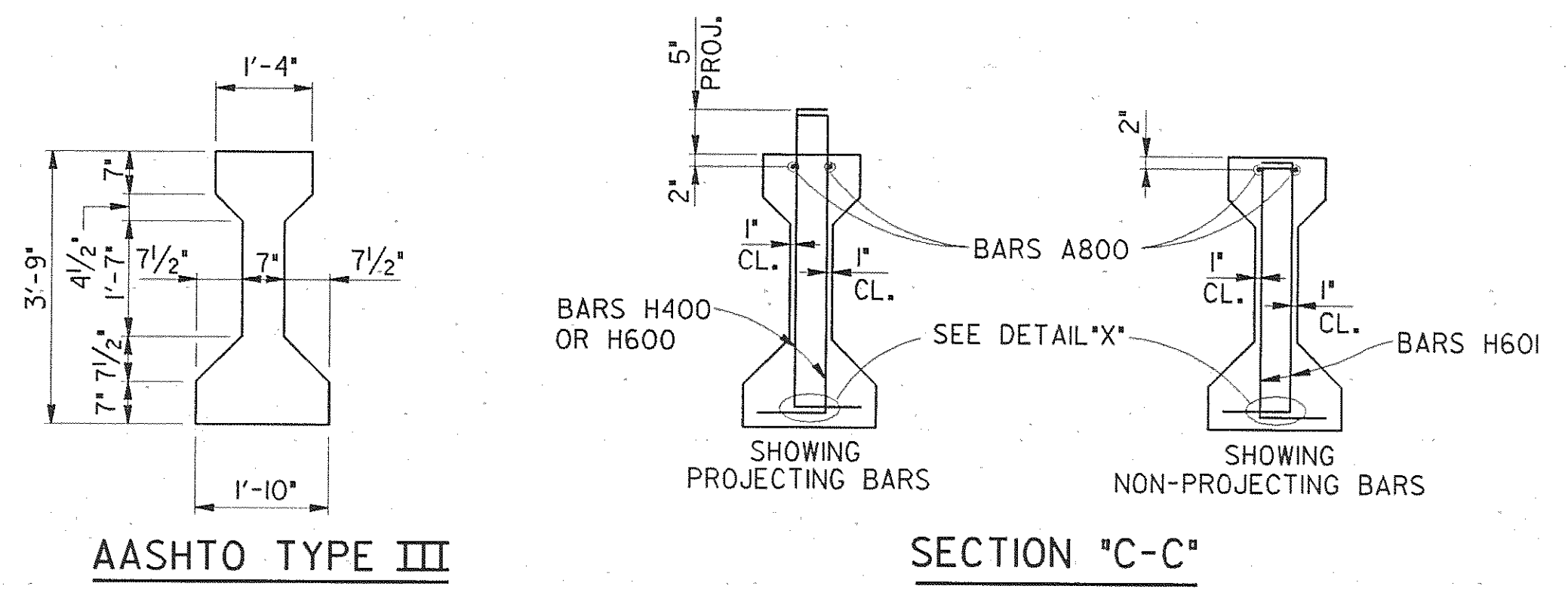
BILL OF STEEL
(PER BEAM)

BAR	SIZE	BMI		BM2	
		NO. REQ'D.	LENGTH	NO. REQ'D.	LENGTH
A800	8	2	50'-4"	2	50'-0"
C400	4	12	3'-0"	12	3'-0"
C600	6	12	3'-0"	12	3'-0"
H400	4	74	5'-4"	74	5'-4"
H600	6	8	5'-4"	8	5'-4"
H601	6	16	4'-9"	16	4'-9"

ESTIMATED QUANTITIES
(PER BEAM)

BEAM	NO. BEAMS REQ'D.	CLASS A* CONCRETE C.Y.	REINFORCING STEEL LB.	PRESTRESSING STRANDS (LOW RELAXATION) LB.
BMI	4	7	789	269
BM2	2	7	787	267

NOTE: COST OF ELASTOMERIC PADS, 8 DOWEL BARS, AND RUBBER BONDING CEMENT TO BE INCLUDED IN THE COST OF PRESTRESSED BEAM.



NOTES:

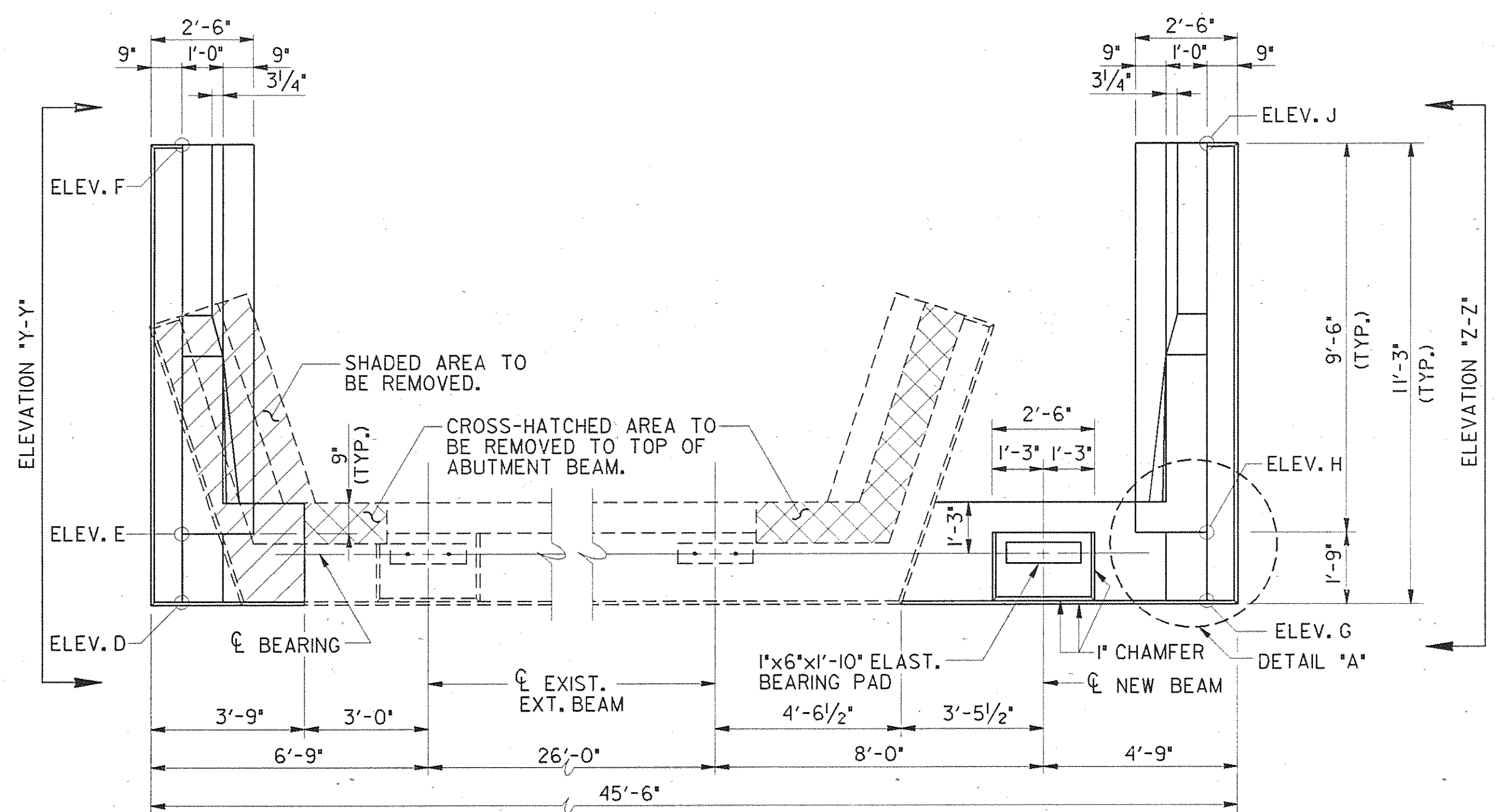
- 1) THE TOP OF ALL BEAMS TO BE ROUGH FLOATED. AT APPROXIMATELY THE TIME OF INITIAL SET, THE TOP OF THE BEAMS SHALL ALSO BE SCRUBBED TRANSVERSELY WITH A COARSE WIRE BRUSH TO REMOVE ALL LAITANCE AND PRODUCE A ROUGH SURFACE. WHERE PRECAST SLAB PANELS ARE TO BE USED AND SET ON BITUMINOUS FIBERBOARD, THE OUTER TWO INCHES OF THE TOP FLANGE MAY BE TROWELED.
- 2) MILD STEEL REINFORCING SHALL BE ASTM A615 GRADE 60.
- 3) ALL PRESTRESSING STRANDS TO BE 1/2" Ø ASTM GRADE 270K, 7 WIRE UNCOATED STRESS RELIEVED LOW RELAXATION PRESTRESSING STRANDS.
- 4) ALL BEAMS ARE AASHTO-PCI STANDARD TYPE III.
- 5) AFTER THE BEAM IS REMOVED FROM THE PRESTRESSING BED, BARS C600 AND C400 SHALL BE BENT A SUFFICIENT AMOUNT SO AS TO PERMIT THE 'C' BARS OF ADJOINING BEAM TO MESH WHEN IN THE ERECTED POSITION.
- 6) THE PRESTRESSING STRANDS SHALL BE LEFT PROJECTING 3" ± FROM THE ENDS OF THE BEAMS. THERE SHALL NOT BE ANY PROTECTIVE COATING PLACED ON THE ENDS OF THE BEAMS OR ON THE PROJECTING STRANDS.
- 7) THE CONCRETE FOR THIS CONSTRUCTION SHALL BE OF SUCH PROPERTIES AS TO ATTAIN A COMPRESSIVE STRENGTH OF NOT LESS THAN 5,000 PSI AT THE AGE OF 28 DAYS AND STRESS TRANSFER SHALL NOT BE MADE TO THE BRIDGE MEMBER UNTIL THE TEST SPECIMENS INDICATE THAT THE CONCRETE HAS REACHED A COMPRESSIVE STRENGTH OF AT LEAST 4,000 PSI. SEE GENERAL NOTES FOR CONCRETE FINISHING.
- 8) AN INITIAL FORCE OF 3,003 LBS. SHALL BE APPLIED TO EACH STRAND IN ALL BEAMS.
- 9) PRESTRESSING STRANDS SHALL NOT BE GREATER THAN NOMINAL 1/2" DIAMETER.
- 10) THE SEQUENCE FOR TRANSFER OF STRESS OR THE CUTTING STRANDS SHALL BE IN ACCORDANCE WITH ARTICLE 615.14 OF THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" AND SHALL BE SHOWN ON THE APPROVED SHOP DRAWINGS. AT NO TIME SHALL MORE THAN 1/6 TH OF THE TOTAL PRESTRESSING FORCE BE ECCENTRIC ABOUT THE CENTERLINE OF THE BEAM.
- 11) FIXED END DOWELS TO BE 1" Ø x 1'-9".
- 12) ELASTOMERIC PADS TO BE 1" x 6" x 1'-10" AT ABUTMENTS AND 1" x 1'-9" x 1'-10" WITH 1/4" Ø HOLES AT PIERS.

STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION
 BUREAU OF HIGHWAYS
PRESTRESSED BEAM DETAILS
LEFT AND RIGHT LANES
WIDENING OF INTERSTATE 40
OVER
 WILSON CREEK
 STATION 385+95.67
 BR. ID. NO. 9510040001 (RT. LN.)
 BR. ID. NO. 9510040002 (LT. LN.)
 WILSON COUNTY

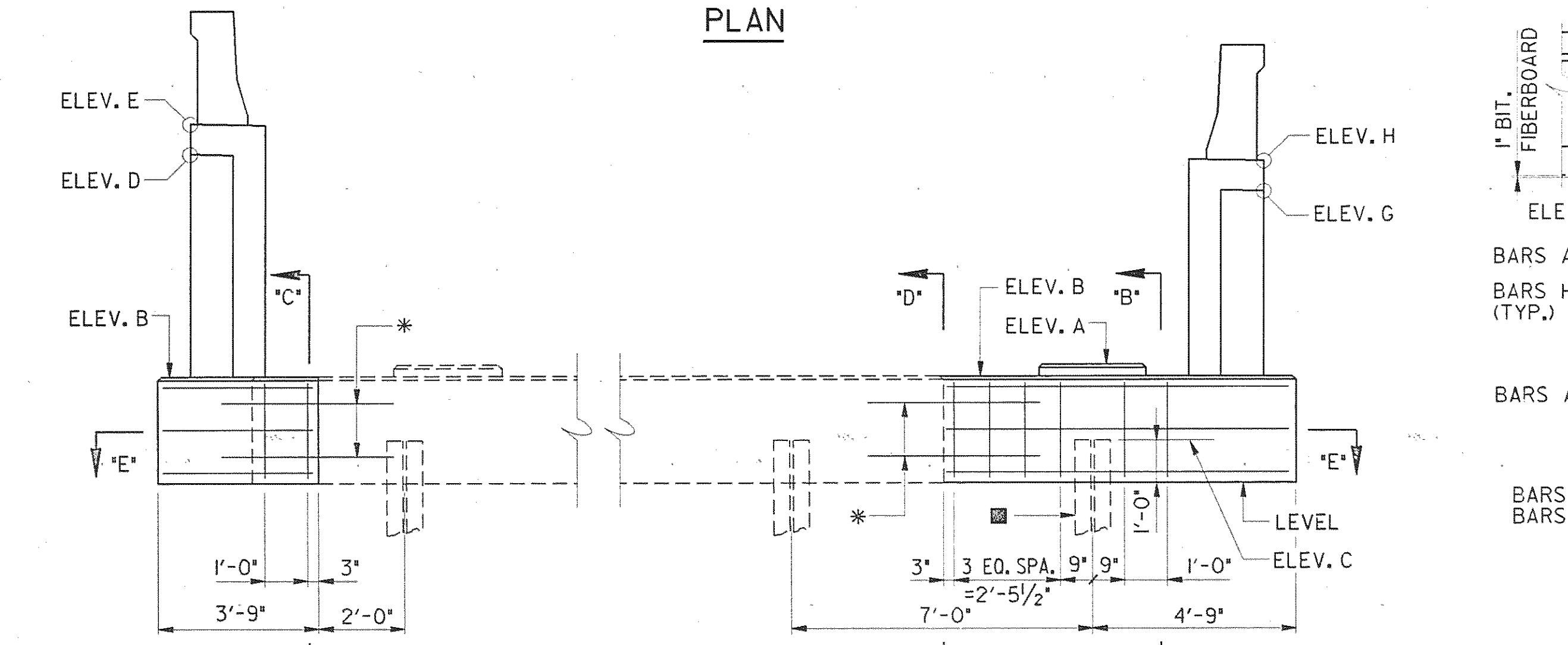
CORRECT *Edward P. Wasserman* 1989
 ENGINEER OF STRUCTURES
 APPROVED *Louis Evans*
 DIRECTOR OF HIGHWAYS

CONST. NO. 95001-3150-44		531	X081
PROJECT NO.	YEAR	SHEET NO.	
IR-40-5(88)230	1989		
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION

⊙ DENOTES: EXISTING PILE TO BE CUT-OFF BELOW BOTTOM OF NEW WING BEAM.



PLAN

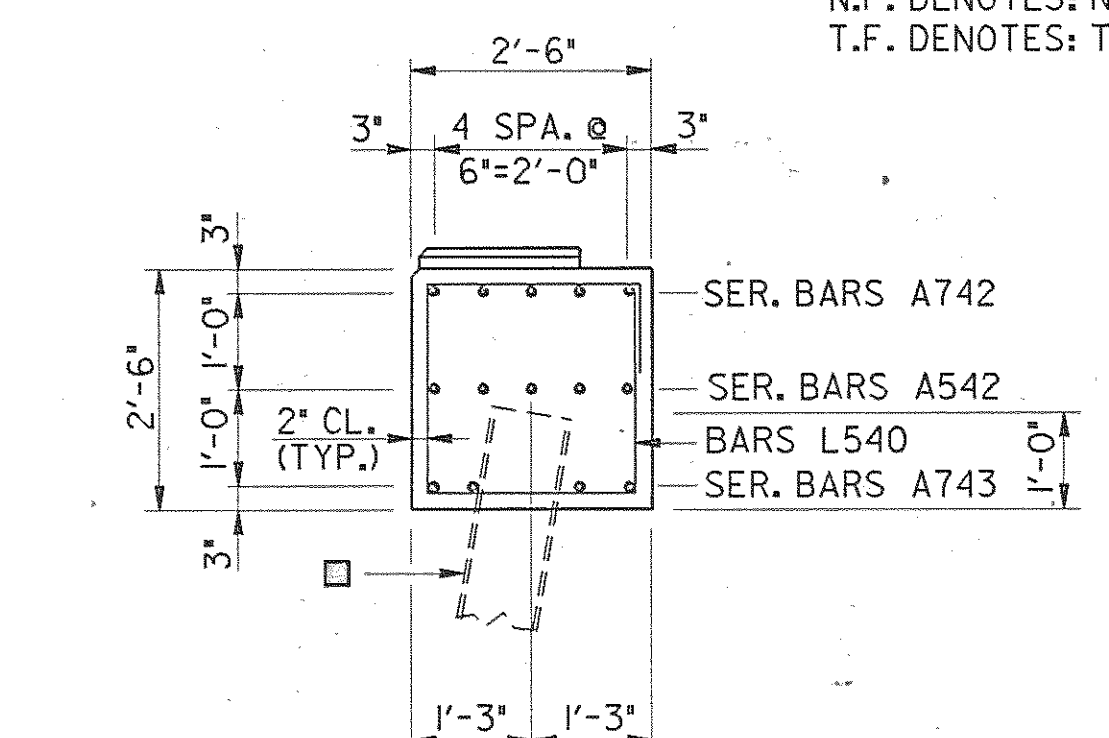


ELEVATION

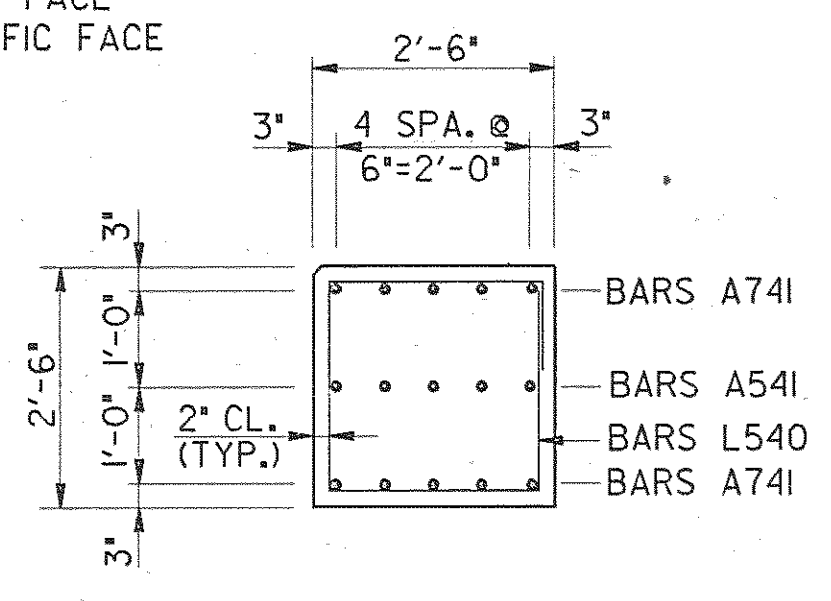
(LOOKING FORWARD ON SURVEY ABUT. NO.2 R.L.)
(LOOKING BACK ON SURVEY ABUT. NO.1 L.L.)
(ABUT. NO.1 R.L. AND ABUT. NO.2 L.L. OPPOSITE HAND)

□ DENOTES: BATTER PILE FORWARD 2:12
N.F. DENOTES: NEAR FACE
T.F. DENOTES: TRAFFIC FACE

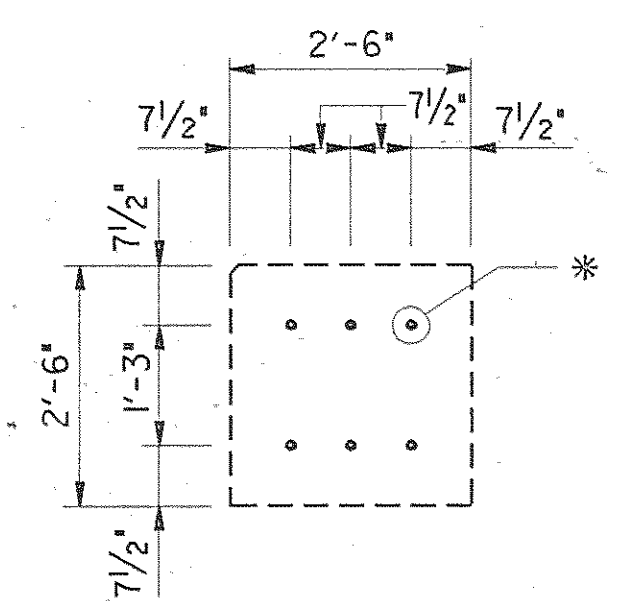
* DENOTES: BARS A744 DRILLED AND GROUDED INTO EXISTING ABUTMENT BEAM WITH 1'-9" EMBEDMENT.



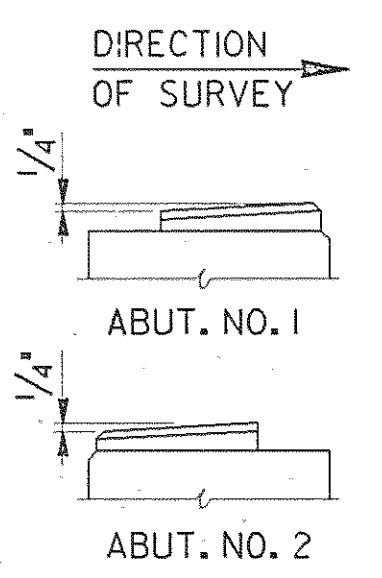
SECTION "B-B"



SECTION "C-C"



SECTION "D-D"



RISER BLOCK SLOPE DETAIL

DESIGNED BY _____ DATE _____
DRAWN BY _____ DATE _____
SUPERVISED BY _____ DATE _____
CHECKED BY _____ DATE _____

TABLE OF ELEVATIONS

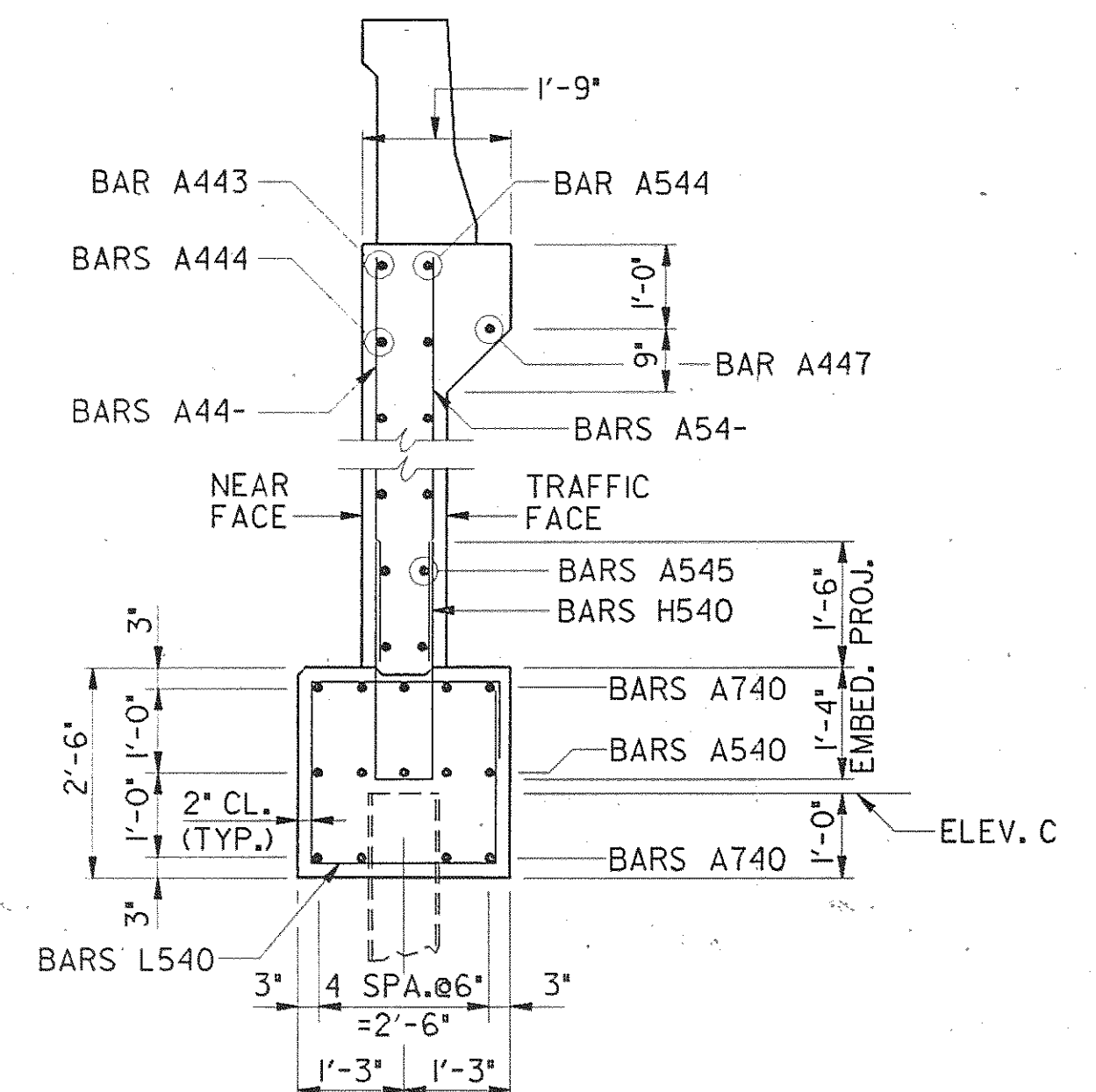
	ITEM	"A"	"B"	"C"	"D"	"E"	"F"	"G"	"H"	"J"
LEFT LANE	ABUTMENT NO. 1	559.56	559.35	557.85	563.91	564.59	564.48	563.45	564.14	564.02
	ABUTMENT NO. 2	561.42	561.21	559.71	565.74	566.47	566.59	565.28	566.01	566.13
RIGHT LANE	ABUTMENT NO. 1	559.56	559.35	557.85	563.91	564.59	564.48	563.45	564.14	564.02
	ABUTMENT NO. 2	561.42	561.21	559.71	565.74	566.47	566.59	565.28	566.01	566.13

ELEVATION "Z-Z"

SECTION "E-E"

ELEVATION "Y-Y"

SECTION "A-A"



DETAIL "A"

NOTES:

- WHEN POURING WINGWALLS, PROVISIONS SHALL BE MADE FOR SETTING REINFORCING STEEL FOR WINGPOST AND PARAPET. FOR DETAILS OF WINGPOST AND PARAPET SEE STANDARD DRAWING NO. M-28-1.
- RISER BLOCK TO BE POURED MONOLITHICALLY WITH ABUTMENT BEAM.
- COST OF BRIDGE RAIL AND POST IS TO BE INCLUDED IN THE COST OF BRIDGE RAIL SYSTEM.
- TOP OF APRON WALL TO CONFORM TO BOTTOM OF ROADWAY SLAB.
- DASH LINES INDICATE EXISTING ABUTMENT.
- RISER BLOCK BEARING PAD SURFACES TO CONFORM TO BOTTOM OF BEAM GRADE.

ESTIMATED QUANTITIES

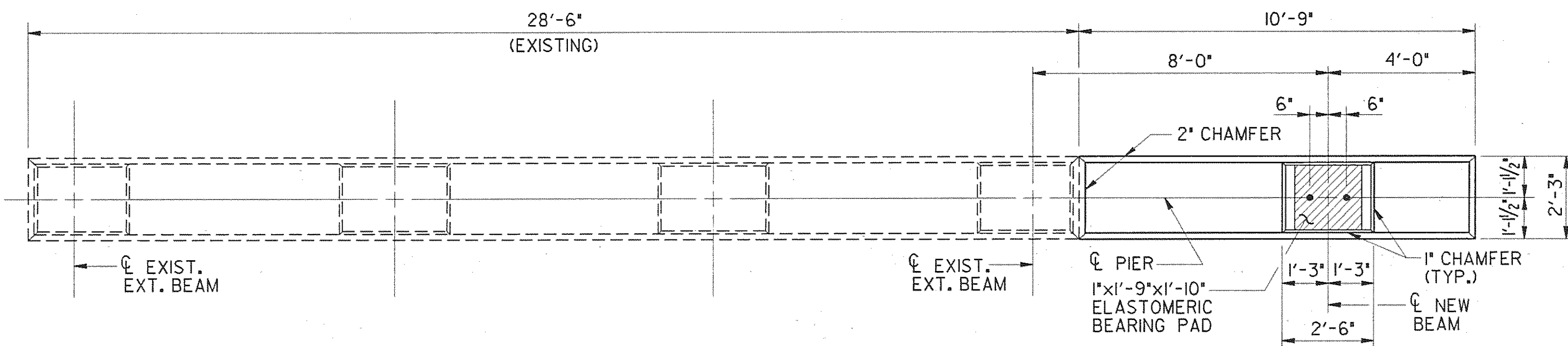
	ITEM	CLASS "A" CONCRETE C.Y.	STEEL BAR REINFORCEMENT LBS.
LEFT LANE	ABUTMENT NO. 1	12	1764
	ABUTMENT NO. 2	12	1764
RIGHT LANE	ABUTMENT NO. 1	12	1764
	ABUTMENT NO. 2	12	1764

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS
ABUTMENT NO. 1 & NO. 2
LEFT AND RIGHT LANES
WIDENING OF INTERSTATE 40
OVER
WILSON CREEK
STATION 385+95.67
BR. ID. NO. 9510040001 (RT. LN.)
BR. ID. NO. 9510040002 (LT. LN.)
WILSON COUNTY

CORRECT *Edward P. Wasserman* 1989
ENGINEER OF STRUCTURES
APPROVED *Louis Evans*
DIRECTOR OF HIGHWAYS

PROJECT NO.	YEAR	SHEET NO.
IR-40-5(88)230	1989	

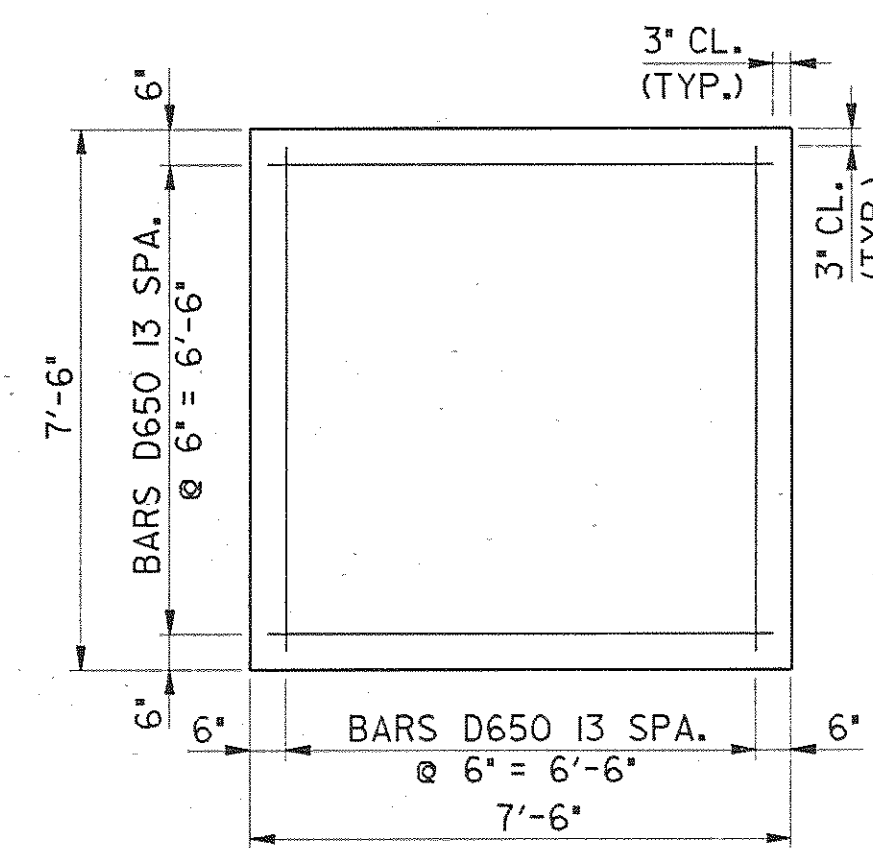
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION



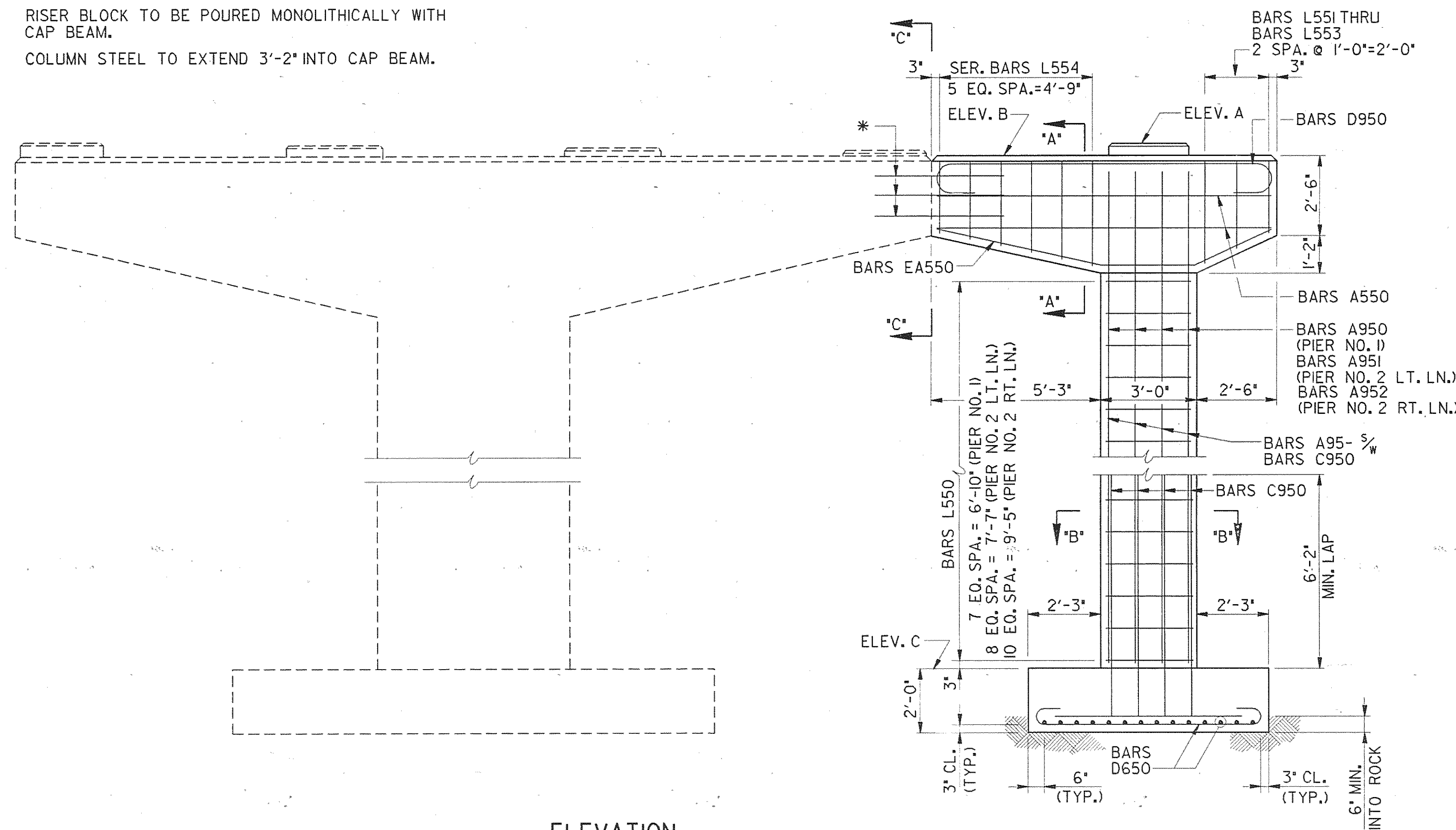
PLAN

NOTES:

WHEN POURING CAP BEAM, PROVISIONS SHALL BE MADE FOR SETTING DOWEL BARS. DOWEL BAR PROJECTION TO BE 9".
 RISER BLOCK TO BE POURED MONOLITHICALLY WITH CAP BEAM.
 COLUMN STEEL TO EXTEND 3'-2" INTO CAP BEAM.

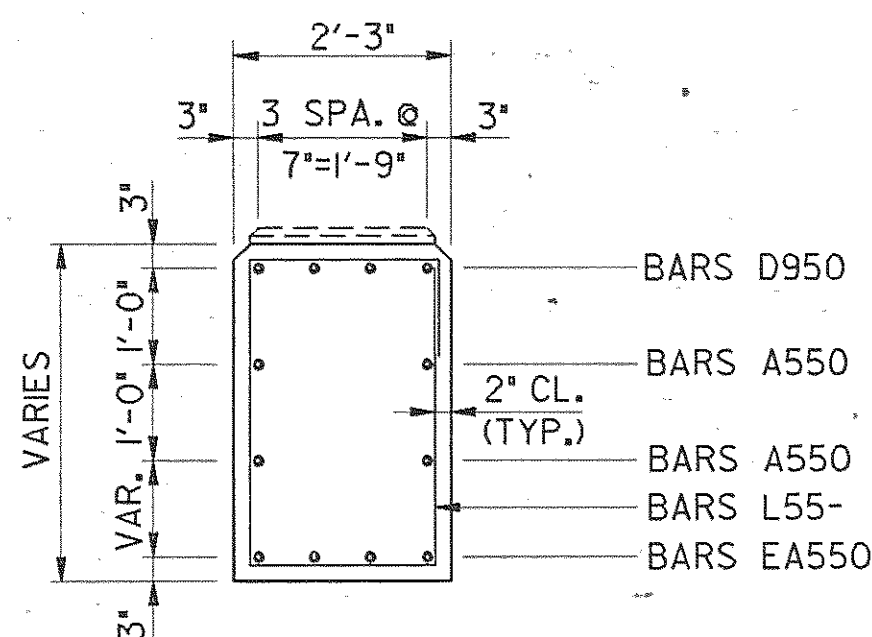


PLAN OF FOOTING
(SHOWING REINFORCEMENT)

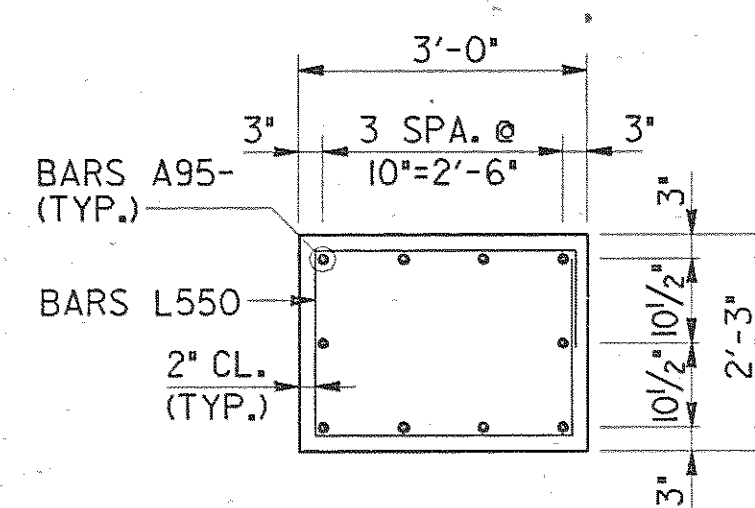


ELEVATION

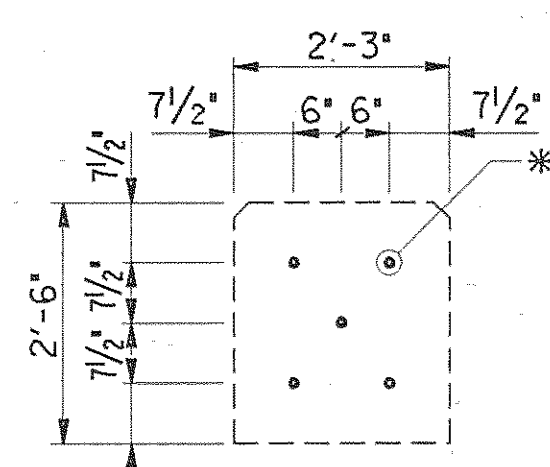
(LOOKING FORWARD ON SURVEY RIGHT LANE)
(LOOKING BACK ON SURVEY LEFT LANE)



SECTION "A-A"

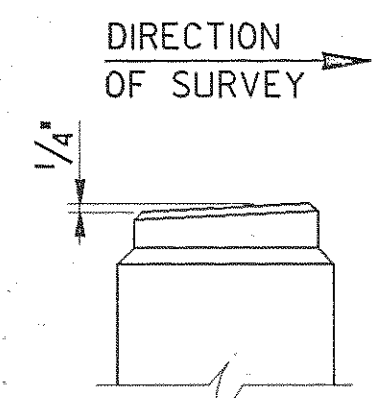


SECTION "B-B"

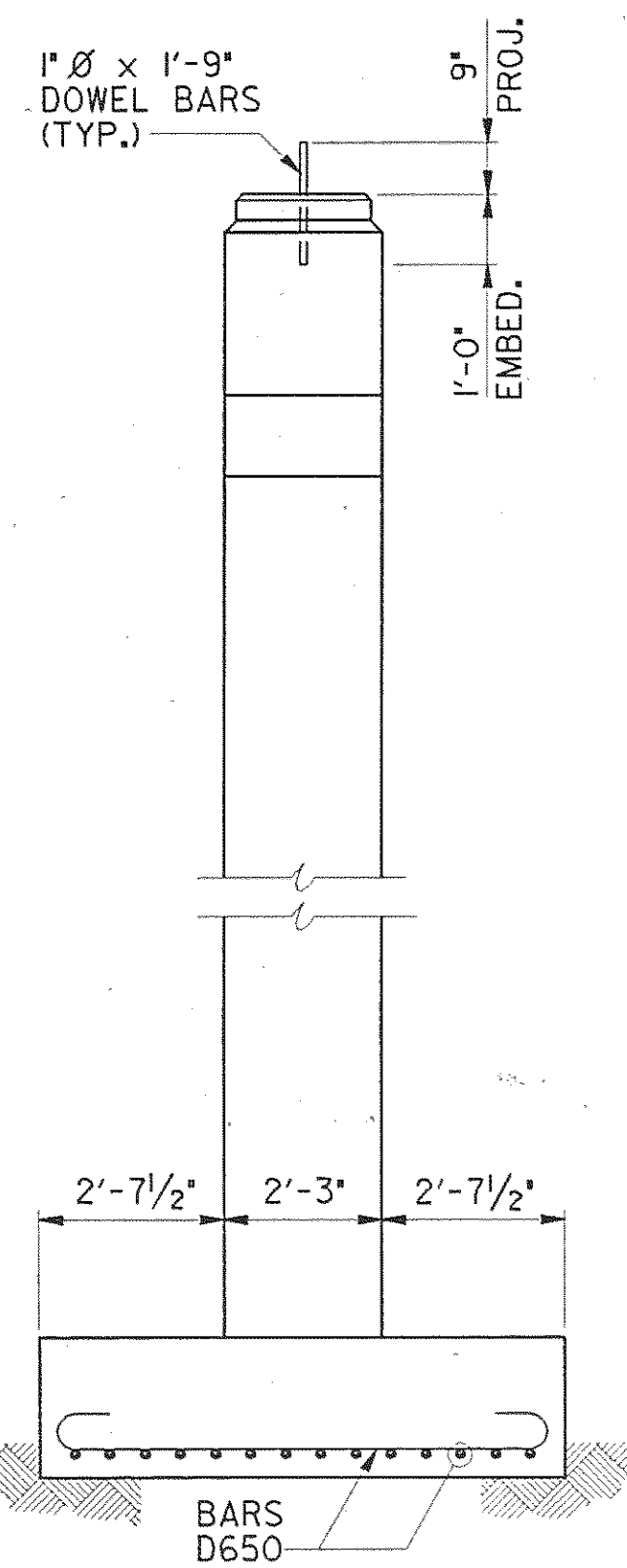


SECTION "C-C"

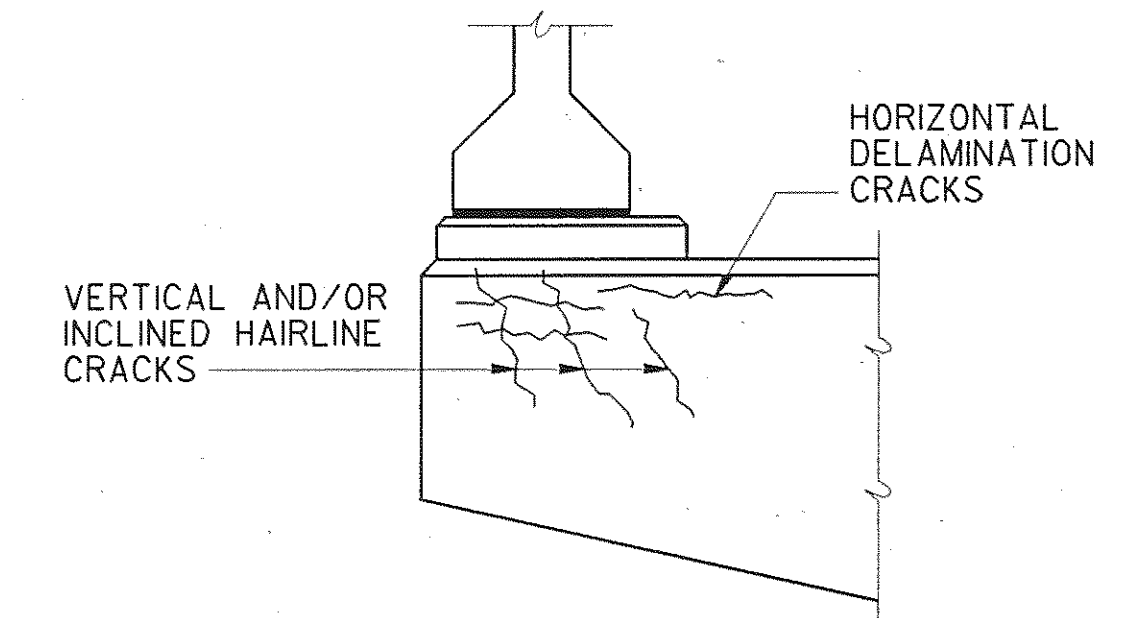
* DENOTES BARS A750 DRILLED AND GROUTED INTO EXISTING PIER CAP WITH 1'-9" EMBEDMENT.



RISER BLOCK
SLOPE DETAIL



END ELEVATION



SKETCH "B"

(SHOWING EXISTING PIER ELEVATION AT CRACKS IN BEARING AREAS OF BEAMS)

EPOXY INJECTION REPAIR AT PIER CAPS

VERTICAL HAIRLINE AND HORIZONTAL DELAMINATION CRACKS IN BEARING AREAS OF PIER CAPS SHALL BE REPAIRED BY EPOXY INJECTION (SEE SKETCH "B"). EPOXY INJECTION SHALL BE PERFORMED BY EXPERIENCED T.D.O.T. CERTIFIED APPLICATOR PERSONNEL. ALL EPOXY INJECTION GROUTING MATERIAL SHALL BE APPROVED BY T.D.O.T. MATERIALS AND TEST.

PROPOSED AREAS OF EPOXY INJECTION SHALL BE CHALK-MARKED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER PRIOR TO COMMENCING REPAIRS BY EPOXY INJECTION. THE COST OF EPOXY AND ALL MISCELLANEOUS LABOR AND MATERIALS SHALL BE INCLUDED IN THE PRICE BID FOR ITEM 920-02.19, EPOXY INJECTION, L.F. ITEM 920-02.19 SHALL BE BID ON THE CONTINGENCY THAT IT MAY BE INCREASED OR DECREASED AS DIRECTED BY THE ENGINEER.

TABLE OF ELEVATIONS

ITEM	"A"	"B"	"C"
LEFT LANE PIER NO. 1	560.18	559.80	548.80
LEFT LANE PIER NO. 2	560.80	560.43	548.68
RIGHT LANE PIER NO. 1	560.18	559.80	548.80
RIGHT LANE PIER NO. 2	560.80	560.43	548.85

ESTIMATED QUANTITIES

ITEM	CLASS "A" CONCRETE C.Y.	STEEL BAR REINFORCEMENT LBS.
LEFT LANE PIER NO. 1	9	1,517
LEFT LANE PIER NO. 2	9	1,532
RIGHT LANE PIER NO. 1	9	1,517
RIGHT LANE PIER NO. 2	10	1,585

STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION
 BUREAU OF HIGHWAYS
PIER NO. 1 & NO. 2
 LEFT AND RIGHT LANES
 WIDENING OF INTERSTATE 40
 OVER
 WILSON CREEK
 STATION 385+95.67
 BR. ID. NO. 9510040001 (RT. LN.)
 BR. ID. NO. 9510040002 (LT. LN.)
 WILSON COUNTY

CORRECT *Edward P. Wasserman* 1989
 ENGINEER OF STRUCTURES
 APPROVED *Lewis Evans*
 DIRECTOR OF HIGHWAYS

14-FEB-89 13:24:06 -- CS21E00.00210868WPR.DGN

BILL OF STEEL

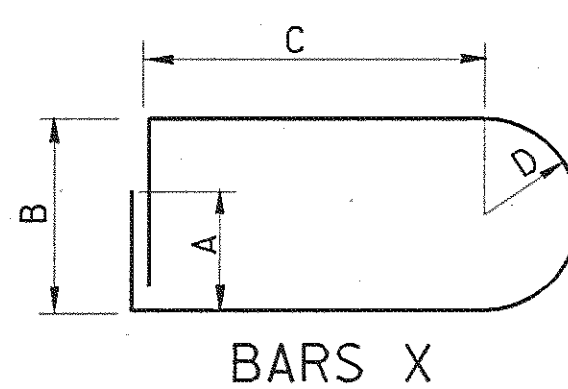
CONST. NO. 95001-3150-44 531 X081

PROJECT NO. YEAR SHEET NO.
IR-40-5(88)230 1989

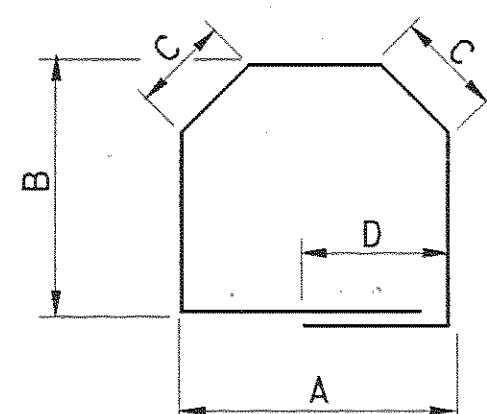
Main table with columns: SUPERSTRUCTURE, ABUTMENT NO. 1, ABUTMENT NO. 2, PIER NO. 1 & NO. 2. Columns include BARS, LOCATION, SIZE, NO. REQ'D, BENDING DIMENSIONS (A, B, C, D), and LENGTH.

REVISIONS

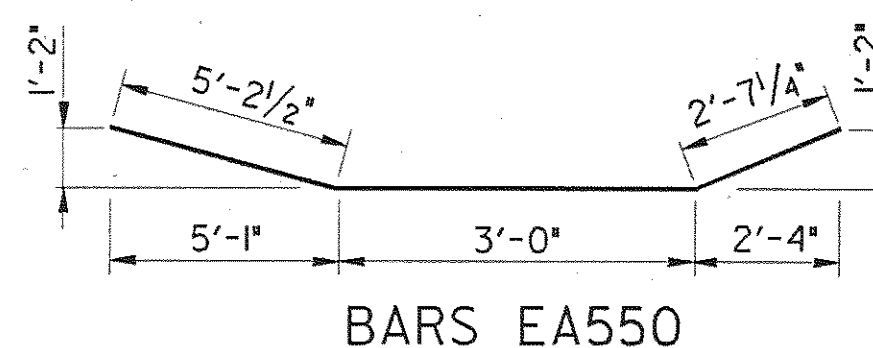
Table with columns: NO., DATE, BY, BRIEF DESCRIPTION.



BAR X



BAR M

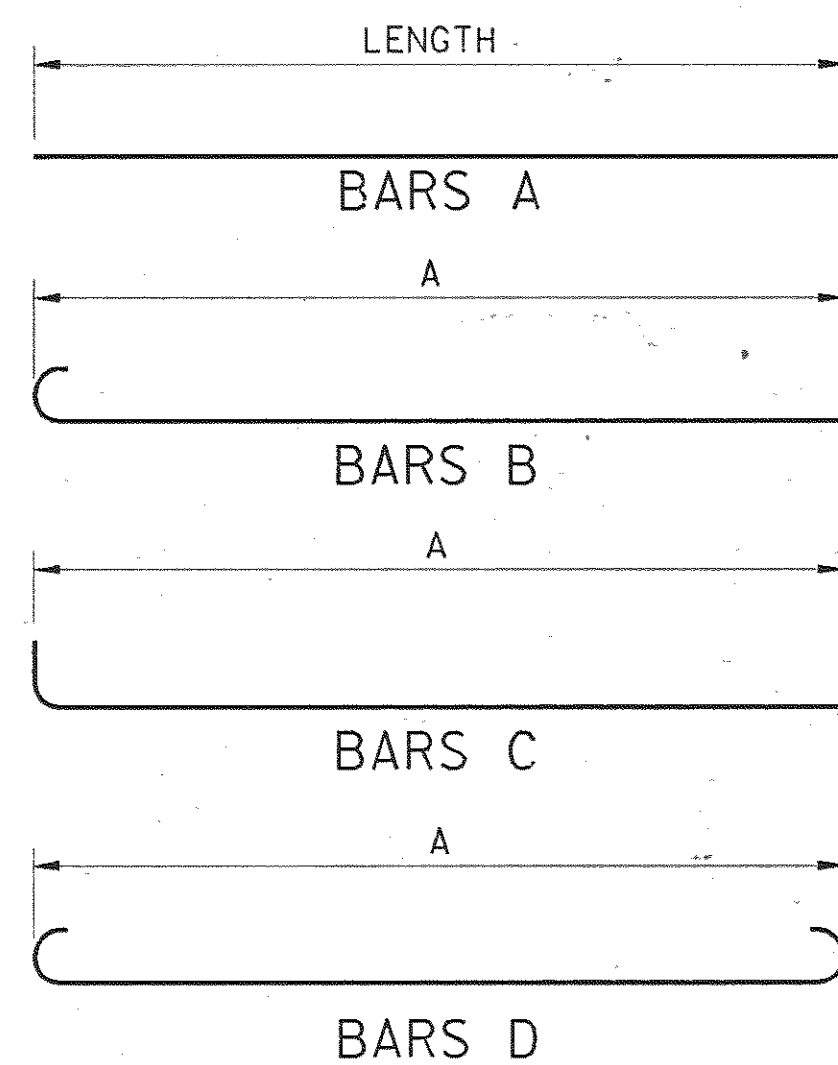


BAR EA550

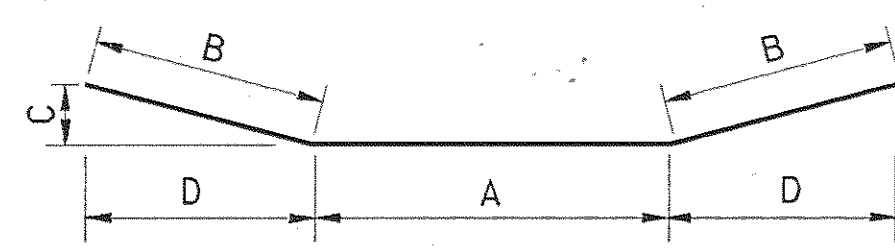
REINFORCING STEEL CODE

Table with columns: Type, Size, Series. Row 1: A, 5, 06.

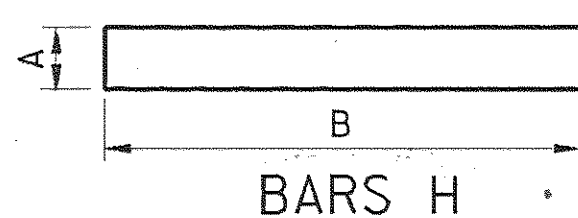
NOTE: Dimensions shown on this sheet are outside to outside of Bar. Standard C.R.S.I. hook details shall apply, except as noted.



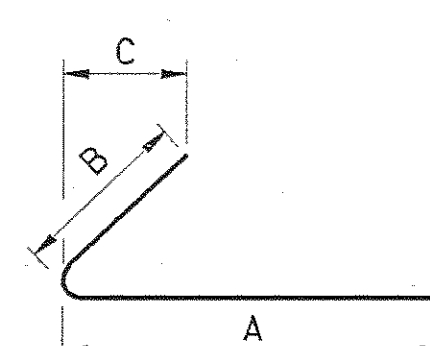
BAR D



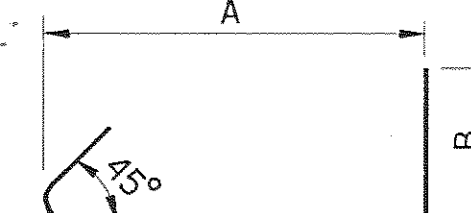
BAR E



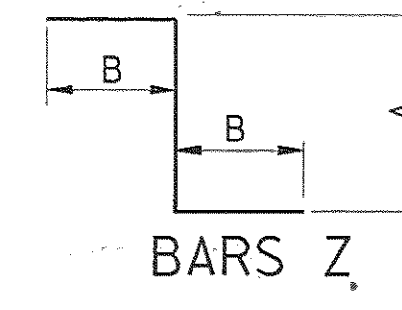
BAR H



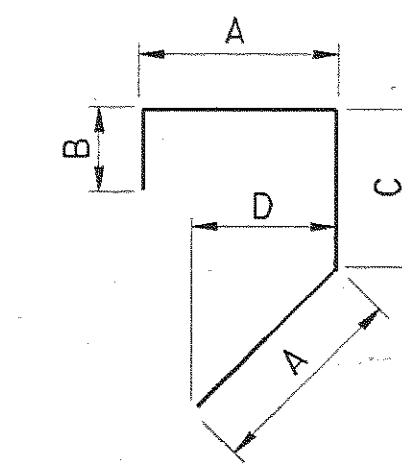
BAR CB



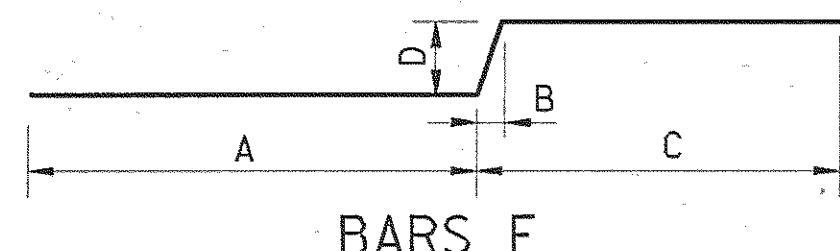
BAR YB



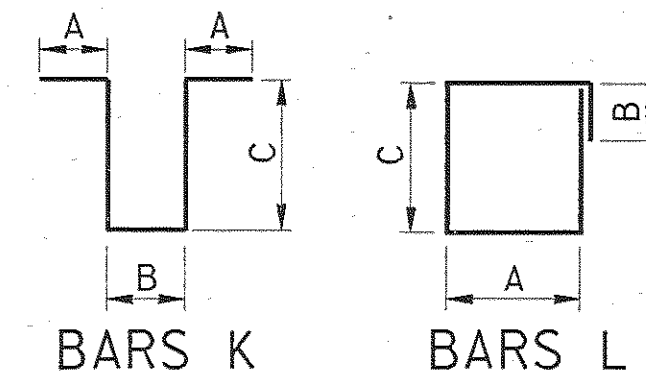
BAR Z



BAR J

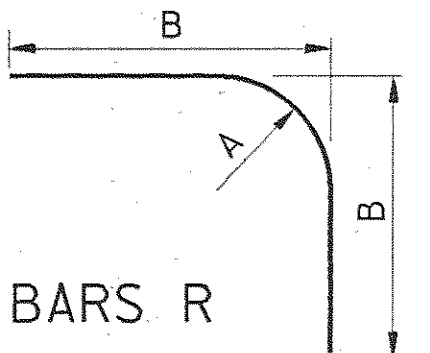


BAR F



BAR K

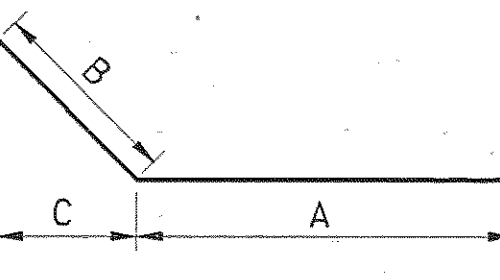
BAR L



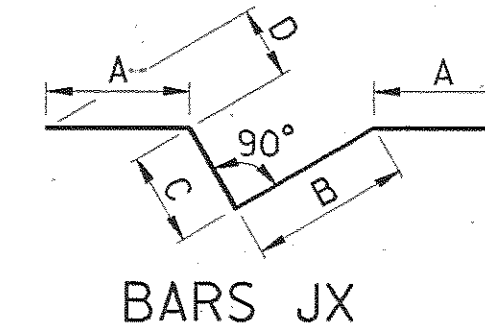
BAR R



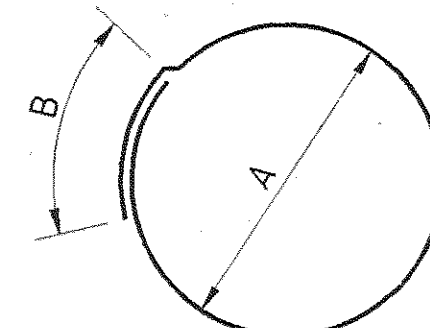
BAR YA



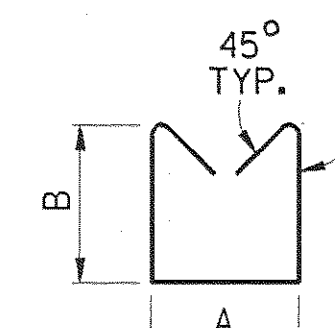
BAR CD



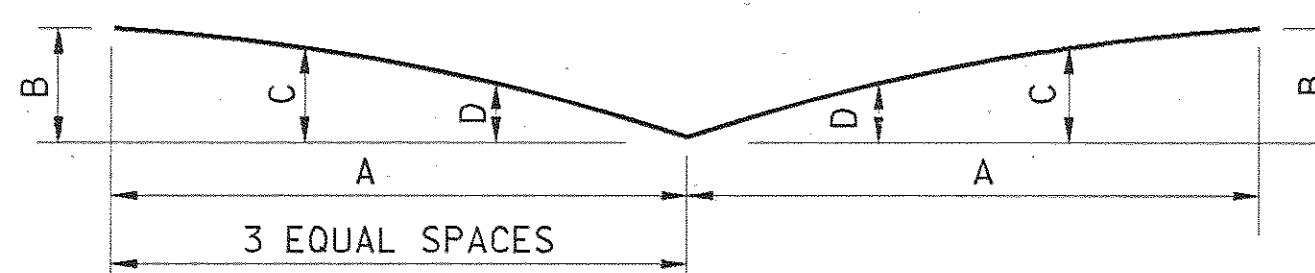
BAR JX



BAR T



BAR S



BAR V

DESIGNED BY: DATE:
DRAWN BY: DATE:
SUPERVISED BY: DATE:
CHECKED BY: DATE:

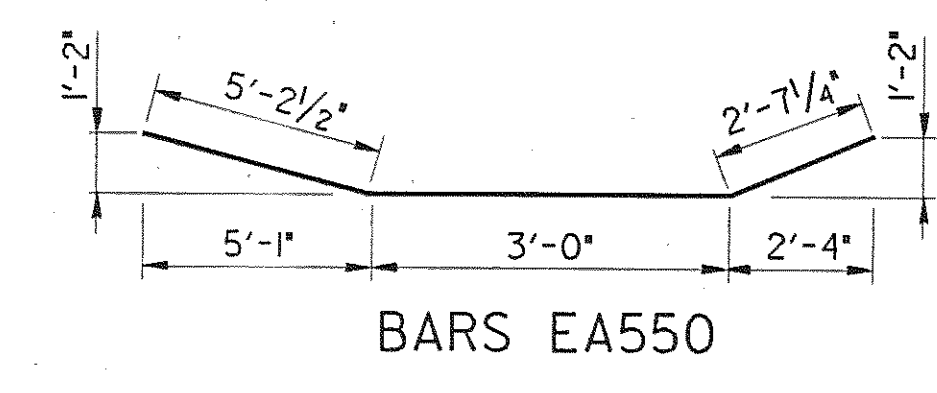
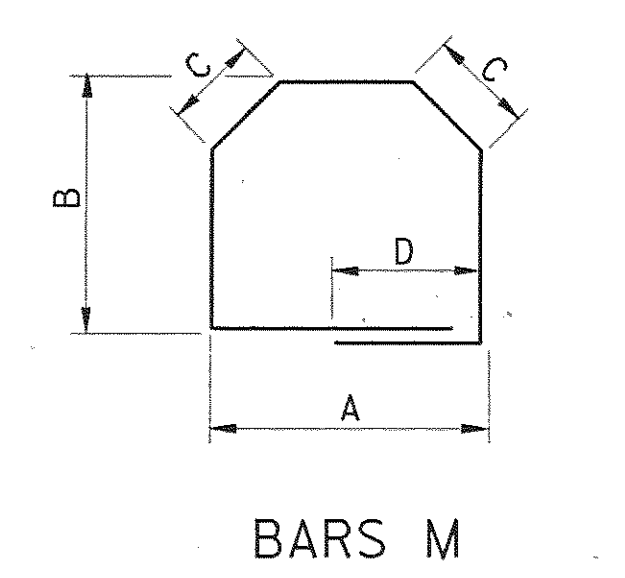
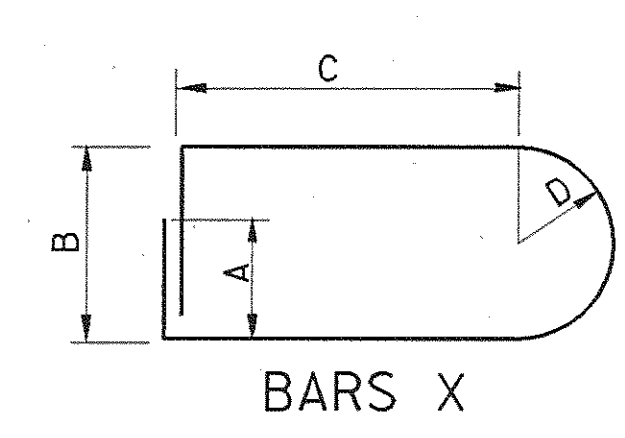
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS
BILL OF STEEL
RIGHT LANE
WIDENING OF INTERSTATE 40
OVER
WILSON CREEK
STATION 385+95.67
BR. ID. NO. 95100400011 (RT. LN.)
WILSON COUNTY
1989

CORRECT Edward P. Wasserman
ENGINEER OF STRUCTURES
APPROVED Louis Evans
DIRECTOR OF HIGHWAYS

BILL OF STEEL

CONST. NO. 95001-3150-44 531 X081
 PROJECT NO. YEAR SHEET NO.
 IR-40-5(88)230 1989

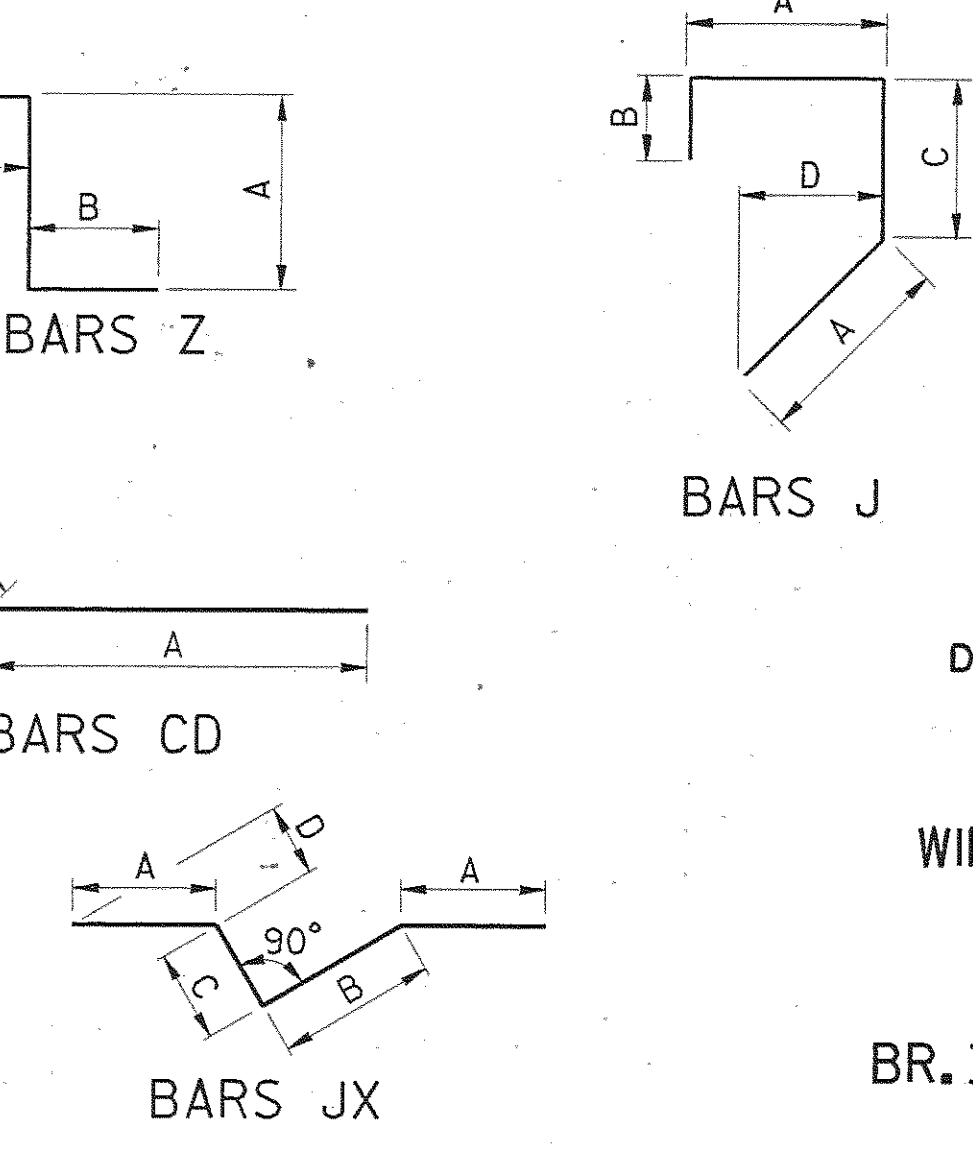
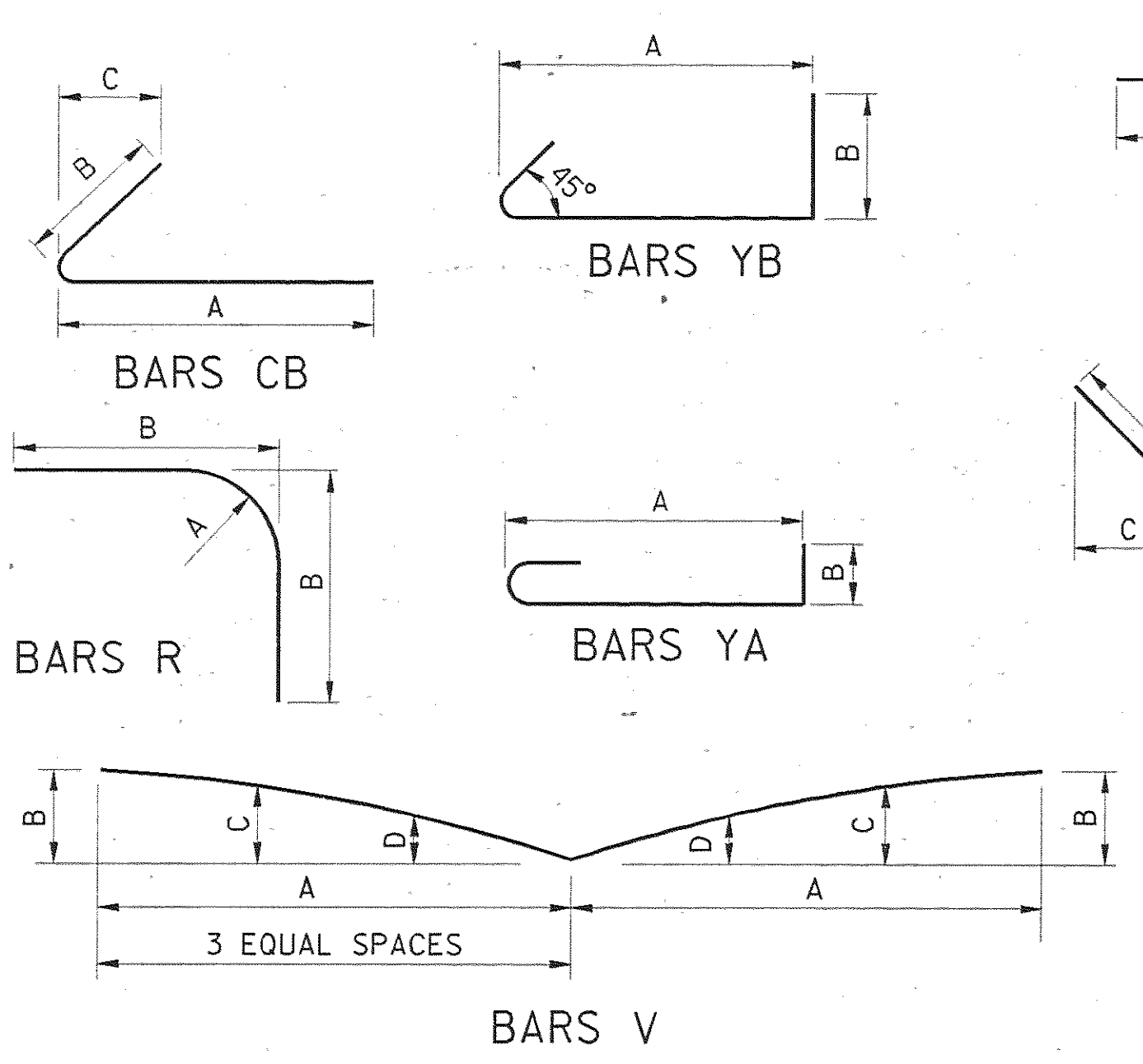
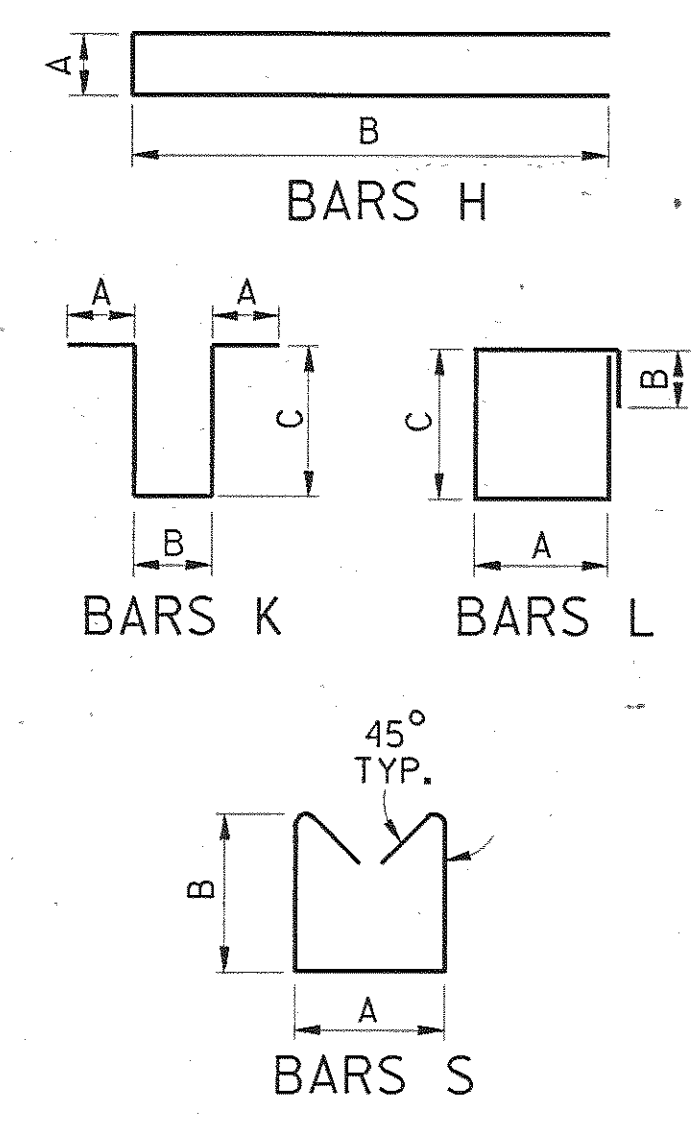
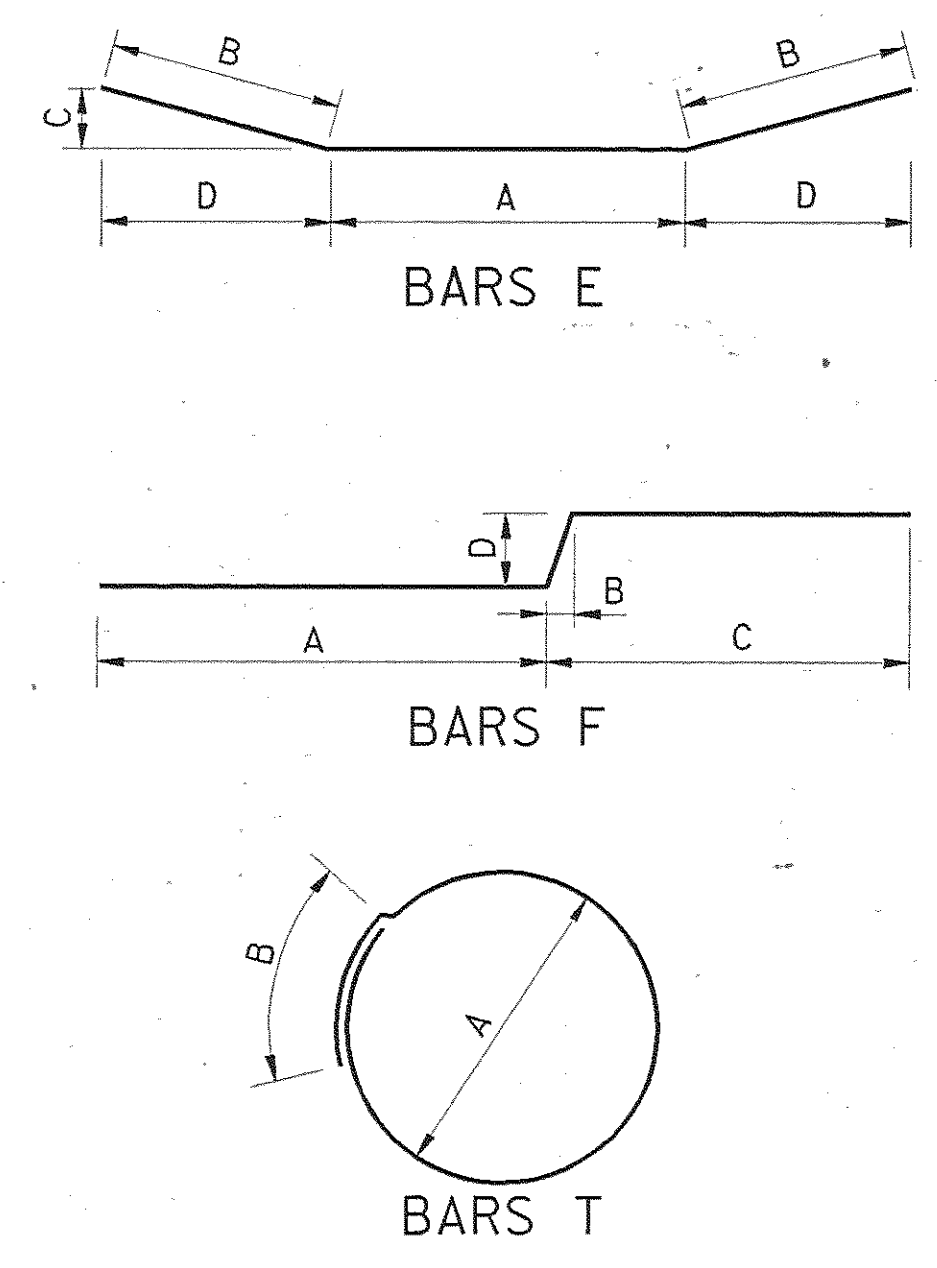
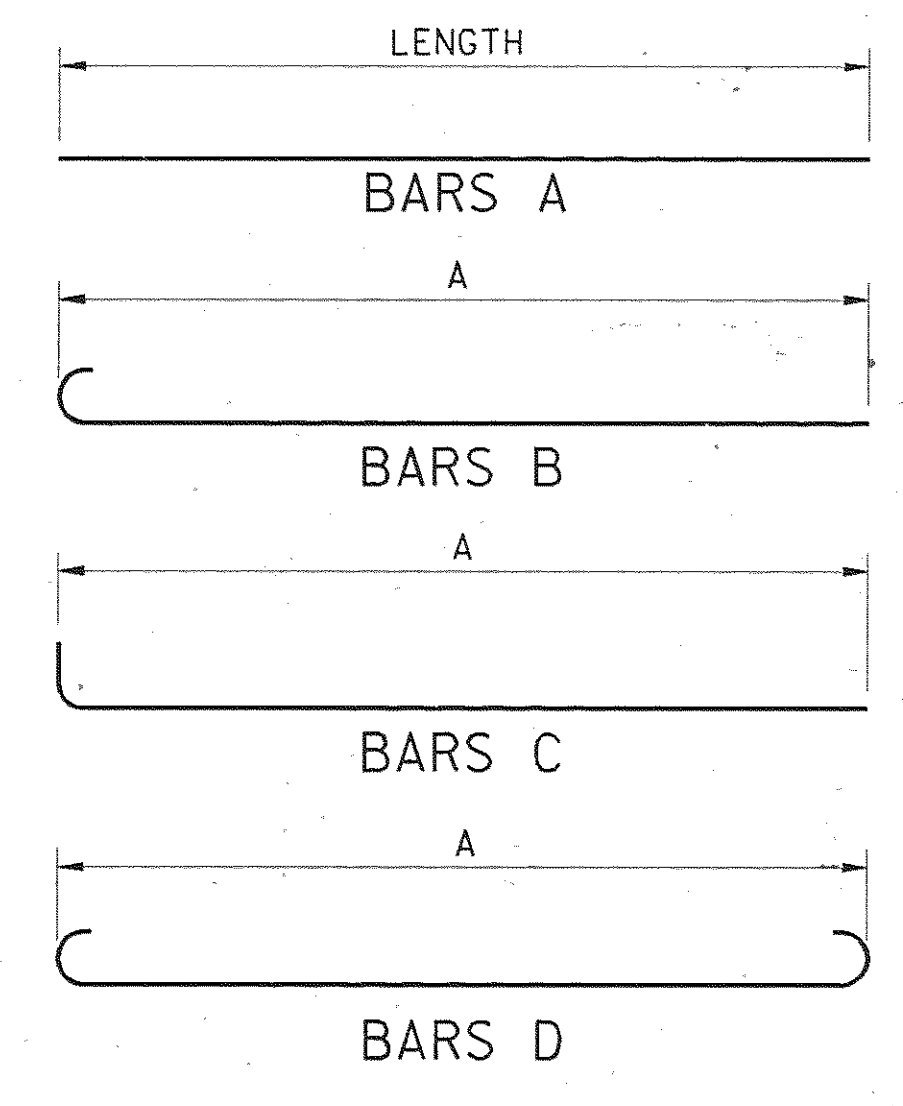
SUPERSTRUCTURE										ABUTMENT NO. 1					ABUTMENT NO. 2					PIER NO. 1 & NO. 2																					
BARS	LOCATION	SIZE	NO. REQ'D	BENDING DIMENSIONS				LENGTH	BARS	LOCATION	SIZE	NO. REQ'D	BENDING DIMENSIONS				LENGTH	BARS	LOCATION	SIZE	NO. REQ'D	BENDING DIMENSIONS				LENGTH															
				A	B	C	D						A	B	C	D						A	B	C	D																
EPOXY																																									
A500E	SLAB	5	263					30'-0"	A440	ABUT. BEAM	4	12					2'-10"	A440	ABUT. BEAM	4	12					2'-10"	A550	CAPBEAM	5	8							10'-5"				
A501E	SLAB	5	154					5'-8"	A441	APRON WALL	4	4					4'-2"	A441	APRON WALL	4	4					4'-2"	A750	CAPBEAM	7	10							4'-0"				
A502E	SLAB	5	184					11'-8"	A442	WINGWALL	4	12					4'-11"	A442	WINGWALL	4	12					4'-11"	A950	COLUMN	9	10							10'-3"				
A503E	SLAB	5	250					30'-0"	A443	WINGWALL	4	2					9'-2"	A443	WINGWALL	4	2					9'-2"	A951	COLUMN	9	10							11'-0"				
A504E	SLAB	5	50					15'-2"	A444	WINGWALL	4	11					10'-10"	A444	WINGWALL	4	11					10'-10"	C950	FOOTING	9	20	7'-10"						9'-5"				
A505E	SLAB	5	4					12'-3"	A445	APRON WALL	4	4					3'-9"	A445	APRON WALL	4	4					3'-9"	D650	FOOTING	6	56	7'-0"						8'-4"				
A506E	SLAB	5	4					30'-0"	A446	WINGWALL	4	12					4'-5"	A446	WINGWALL	4	12					4'-5"	D950	CAPBEAM	9	8	10'-5"						12'-11"				
A600E	SLAB	6	263					15'-10"	A447	WING BKT.	4	2					8'-5"	A447	WING BKT.	4	2					8'-5"	EA550	CAPBEAM	5	8							10'-10"				
A601E	SLAB	6	40					20'-0"	A540	WING BEAM	5	10					10'-11"	A540	WING BEAM	5	10					10'-11"	L550	COLUMN	5	17	2'-8"	1'-0"	1'-11"					10'-2"			
A602E	SLAB	6	20					30'-0"	A541	ABUT. BEAM	5	5					3'-5"	A541	ABUT. BEAM	5	5					3'-5"	L551	CAPBEAM	5	2	1'-11"	1'-0"	2'-3"					9'-4"			
A603E	SLAB	6	20					50'-0"	SER.	ABUT. BEAM	5	1	BARS VARY IN LENGTH FROM 7'-2" TO 7'-10" IN INC. OF 2" (5 BARS)				37'-6"	SER.	ABUT. BEAM	5	1	BARS VARY IN LENGTH FROM 7'-2" TO 7'-10" IN INC. OF 2" (5 BARS)				37'-6"	L552	CAPBEAM	5	2	1'-11"	1'-0"	2'-9"					10'-4"			
H400E	BACKWALL	4	28	6"	3'-4"			7'-2"	A542																		L553	CAPBEAM	5	2	1'-11"	1'-0"	3'-2 1/2"					11'-3"			
REGULAR																																									
A400	RDWY. BKT.	4	2					2'-11"	A543	WINGWALL	5	10					4'-11"	A543	WINGWALL	5	10					4'-11"	SER.	CAPBEAM	5	2	1'-11"	1'-0"							62'-0"		
A401	RDWY. BKT.	4	2					8'-11"	A544	WINGWALL	5	2					9'-2"	A544	WINGWALL	5	2					9'-2"	L554					DIM. 'C' VAR. IN LENGTH FROM 2'-2 3/4" TO 3'-3 1/4" IN INC. OF 2/4" (6 BARS)									
A500	DIAPHRAGM	5	12					7'-2"	A545	WINGWALL	5	11					10'-10"	A545	WINGWALL	5	11					10'-10"															
A501	BACKWALL	5	24					2'-11"	A546	WINGWALL	5	10					4'-5"	A546	WINGWALL	5	10					4'-5"															
A502	BACKWALL	5	20					8'-11"	A740	WING BEAM	7	18					10'-11"	A740	WING BEAM	7	18					10'-11"															
A503	BACKWALL	5	22					2'-9"	A741	ABUT. BEAM	7	10					3'-5"	A741	ABUT. BEAM	7	10					3'-5"															
A504	DIAPHRAGM	5	8					3'-2"	SER.	ABUT. BEAM	7	1	BARS VARY IN LENGTH FROM 7'-2" TO 7'-10" IN INC. OF 2" (5 BARS)				37'-6"	SER.	ABUT. BEAM	7	1	BARS VARY IN LENGTH FROM 7'-2" TO 7'-10" IN INC. OF 2" (5 BARS)				37'-6"															
H400	BACKWALL	4	8	6"	3'-4"			7'-2"	A742																																
H401	BACKWALL	4	20	6"	2'-10"			6'-2"	SER.	ABUT. BEAM	7	1	BARS VARY IN LENGTH FROM 7'-1" TO 7'-10" IN INC. OF 3" (4 BARS)				29'-10"	SER.	ABUT. BEAM	7	1	BARS VARY IN LENGTH FROM 7'-1" TO 7'-10" IN INC. OF 3" (4 BARS)				29'-10"															
H500	RDWY. BKT.	5	28	1'-5"	6"			2'-5"	A743																																
SER.	DIAPHRAGM	4	2		1'-0"	2'-6"		53'-5"	A744	ABUT. BEAM	7	12					4'-0"	A744	ABUT. BEAM	7	12					4'-0"															
L400				DIM. 'A' VAR. IN LENGTH FROM 6" TO 1'-1 1/2" IN INC. OF 1/4" (7 BARS)						H440	WINGWALL	4	13	6"	1'-5"		3'-4"	H440	WINGWALL	4	13	6"	1'-5"			3'-4"															
									H540	WINGWALL	5	20	8"	2'-10"		6'-4"	H540	WING BEAM	5	20	8"	2'-10"			6'-4"																
									L540	BEAM	5	25	2'-2"	1'-0"	2'-2"	9'-8"	L540	BEAM	5	25	2'-2"	1'-0"	2'-2"		9'-8"																
									L541	ABUT. BEAM	5	1	2'-3"	1'-0"	2'-2"	9'-10"	L541	ABUT. BEAM	5	1	2'-3"	1'-0"	2'-2"		9'-10"																



REINFORCING STEEL CODE

Type	Size	Series
A	5	06

NOTE: Dimensions shown on this sheet are outside to outside of Bar. Standard C.R.S.I. hook details shall apply, except as noted.



DESIGNED BY _____ DATE _____
 DRAWN BY _____ DATE _____
 SUPERVISED BY _____ DATE _____
 CHECKED BY _____ DATE _____

STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION
 BUREAU OF HIGHWAYS
 BILL OF STEEL
 LEFT LANE
 WIDENING OF INTERSTATE 40
 OVER
 WILSON CREEK
 STATION 385+95.67
 BR. ID. NO. 95100400012 (LT. LN.)
 WILSON COUNTY
 1989

CORRECT *Edward P. Wasserman*
 ENGINEER OF STRUCTURES
 APPROVED *Kevin Evans*
 DIRECTOR OF HIGHWAYS