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Logan Colbert

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PALMER ENGINEERING COMPANY
2817 ERICA PLACE
NASHVILLE, TN 37204
LOGAN COLBERT, P.E. NO. 117913

THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE FOR THE FOLLOWING SHEETS IN ACCORDANCE OF TENN. CODE ANN. §62-2-306.

SHEET NAME	SHEET NO.
SIGNATURE SHEET	SIG-1
TITLE SHEET	1
PROJECT COMMITMENTS	1A
ESTIMATED BRIDGE QUANTITIES & NOTES	2 (BR-132-356)
ESTIMATED ROADWAY QUANTITIES	2A
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SUPERSTRUCTURE REPAIRS	BR-132-358
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SUBSTRUCTURE REPAIRS (NBL)	BR-132-360
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YEAR	PROJECT NO.	SHEET NO.
2023	531075-M3-003	SIG-1

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SIGNATURE
SHEET

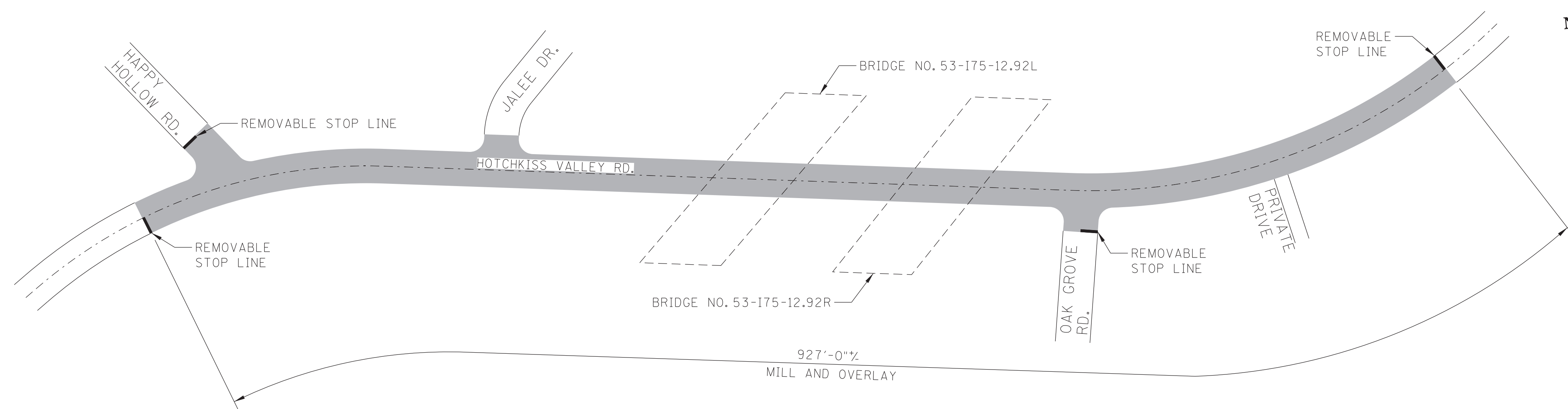
TYPE	YEAR	PROJECT NO.	SHEET NO.
BRIDGE REPAIR	2023	531075-M3-003	T1

TRAFFIC CONTROL SIGN QUANTITIES

TYPE	DESCRIPTION	SIZE (INCHES)		S.F.	I-75	HOTCHKISS	SIGNS (CONST.) 712-06, S.F.
		L	W				
G20-2	END ROAD WORK	48	x 24	8	4		32
W20-1	ROAD WORK 1 MILE	48	x 48	16	4		64
W20-1	ROAD WORK 1/2 MILE	48	x 48	16	4		64
W20-5L	LEFT LANE CLOSED 1/2 MILE	48	x 48	16	4		64
W20-5L	LEFT LANE CLOSED 1500 FT	48	x 48	16	4		64
W4-2L	LEFT LANE ENDS	48	x 48	16	4		64
W21-5R	RIGHT SHOULDER CLOSED 1500FT	48	x 48	16	4		64
W21-5R	RIGHT SHOULDER CLOSED	48	x 48	16	4		64
SUPPLEMENT	NEXT 1/2 MILE (ADVISORY PLAQUE)	36	x 18	4.5	4		18
G20-2	END ROAD WORK	36	x 18	4.5		2	9
R10-6	STOP HERE ON RED	24	x 36	6		4	24
R10-6(MOD)	STAY IN LANE TO EXTEND GREEN	30	x 42	8.75		2	17.5
R10-11A	NO TURN ON RED	30	x 30	6.25		4	25
SPECIAL	MAXIMUM XX MINUTE RED	30	x 30	6.25		4	25
SPECIAL	MAINTAIN XX MPH SPEED	42	x 36	10.5		2	21
SPECIAL	WAIT TURN ONLY IN DIRECTION OF ARROW	30	x 42	8.75		2	17.5
W1-4R	REVERSE CURVE (RIGHT)	36	x 36	9		2	18
W3-3	SIGNAL AHEAD (STOP)	36	x 36	9		2	18
W3-4	BE PREPARED TO STOP	36	x 36	9		4	36
W16-2P	1000 FT (ADVISORY PLAQUE)	24	x 18	3		2	6
W20-1	ROAD WORK AHEAD	36	x 36	9		2	18
W20-1	ROAD WORK 1/2 MILE	36	x 36	9		2	18
W20-1	ROAD WORK 1500 FT	36	x 36	9		2	18
W20-1	ROAD WORK 1000 FT	36	x 36	9		2	18
W20-1	ROAD WORK 500 FT	36	x 36	9		2	18
W20-4	ONE LANE ROAD 1500 FT	36	x 36	9		2	18
W20-7	FLAGGER (SYMBOL)	36	x 36	9		2	18
TOTAL							841

TRAFFIC CONTROL SPECIAL NOTES

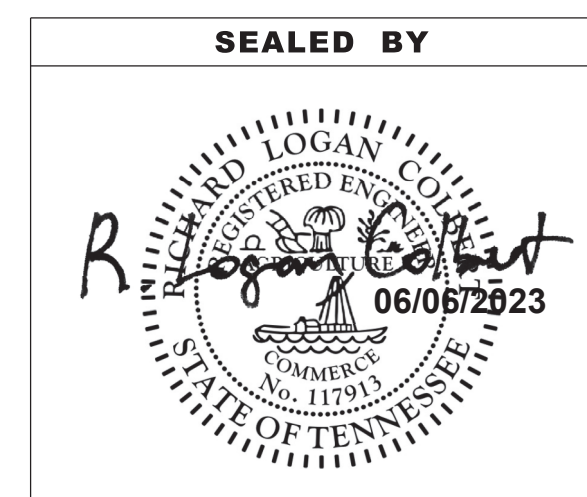
1. THESE TRAFFIC CONTROL PLANS DO NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF INSTALLING TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH THE CURRENT EDITION OF THE "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES."
2. CONSTRUCTION SIGNING SHOWN IN THESE PLANS IS TO SERVE AS A GUIDE ONLY. OTHER SIGNS MAY BE REQUIRED DURING VARIOUS PHASES OF CONSTRUCTION.
3. THE CONTRACTOR IS REQUIRED TO PROVIDE LANE SHIFTS WHERE NECESSARY TO ROUTE TRAFFIC AROUND CONSTRUCTION.
4. NO TRAFFIC SHALL BE DETOURED OR ROADWAY CLOSED, ABANDONED, OR REMOVED WITHOUT THE PRIOR APPROVAL OF THE ENGINEER.
5. ADVANCE WARNING SIGNS ARE TO BE PLACED PRIOR TO BEGINNING OF CONSTRUCTION AND REMAIN IN PLACE UNTIL THE COMPLETION OF THIS PROJECT.
6. PERMANENT SIGNS AND PERMANENT MARKINGS SHALL BE IN PLACE BEFORE COMPLETED ROADWAYS ARE OPEN TO TRAFFIC.
7. SEE THE CURRENT EDITION OF THE "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES" FOR TRAFFIC DETAILS NOT SHOWN, GENERAL TRAFFIC CONTROL NOTES, AND SIGN DETAILS.
8. CONTRACTOR TO COVER ALL CONFLICTING SIGNS DURING CONSTRUCTION. COVERINGS SHALL BE REMOVED AT COMPLETION OF CONSTRUCTION. COST ASSOCIATED WITH COVERING AND UNCOVERING SIGNS TO BE INCLUDED IN ITEM 712-06, SIGNS (CONSTRUCTION).
9. THE CONTRACTOR IS TO COORDINATE ALL LANE CLOSURES WITH THE TDOT REGIONAL OFFICE AND THE COUNTY ENGINEER.
10. MINIMUM TRAVEL LANE WIDTH ON INTERSTATE-75 TO BE 12 FEET (STRIPED).
11. MINIMUM TRAVEL LANE WIDTH ON HOTCHKISS VALLEY ROAD TO BE 10 FEET (STRIPED).
12. ALL PORTABLE CONCRETE BARRIERS (PCB) DEFLECT DURING AN IMPACT. CONTRACTOR SHALL EXERCISE CAUTION WHEN WORKING IMMEDIATELY BEHIND THE PCB.



ASPHALT OVERLAY PLAN VIEW

■ DENOTES: AREA TO BE COLD PLANED 1 1/4", AND NEW 1 1/4" GRADING "D" ASPHALT OVERLAY TO BE PLACED.

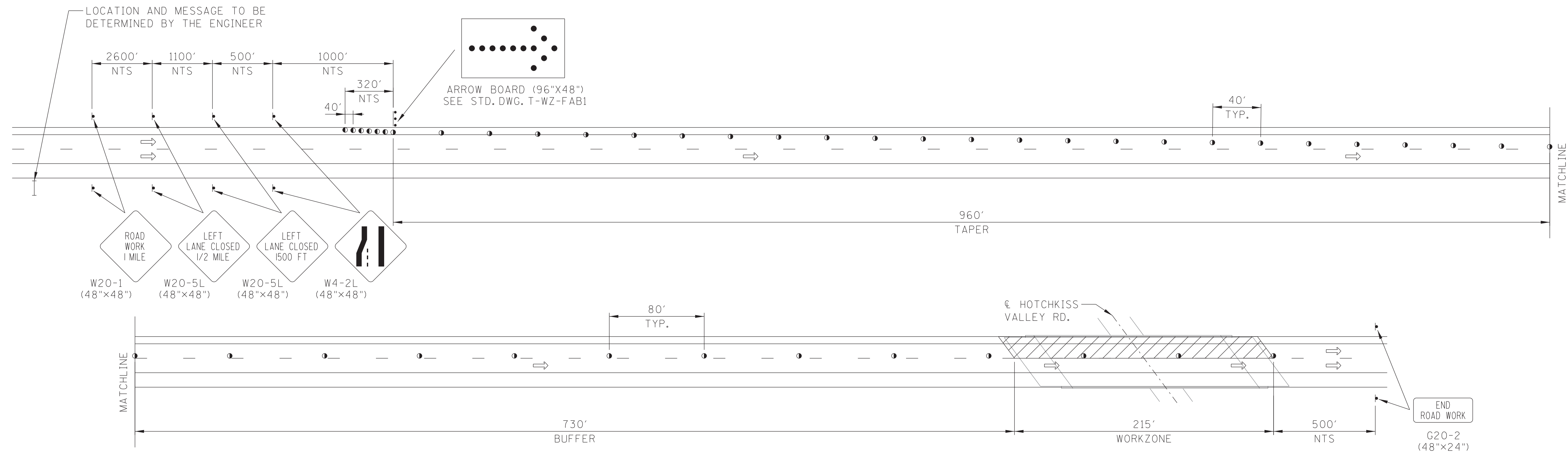
SEE SEC. 617 AND 906.04 OF THE TENNESSEE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

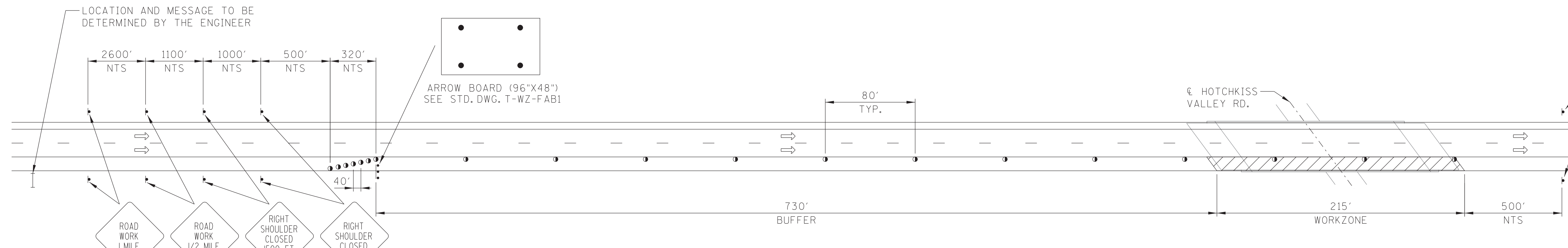
TRAFFIC CONTROL
PLANS AND NOTES

TYPE	YEAR	PROJECT NO.	SHEET NO.
BRIDGE REPAIR	2023	531075-M3-003	T2



PHASE I
NORTHBOUND I-75 SHOWN
SOUTHBOUND I-75 SIMILAR

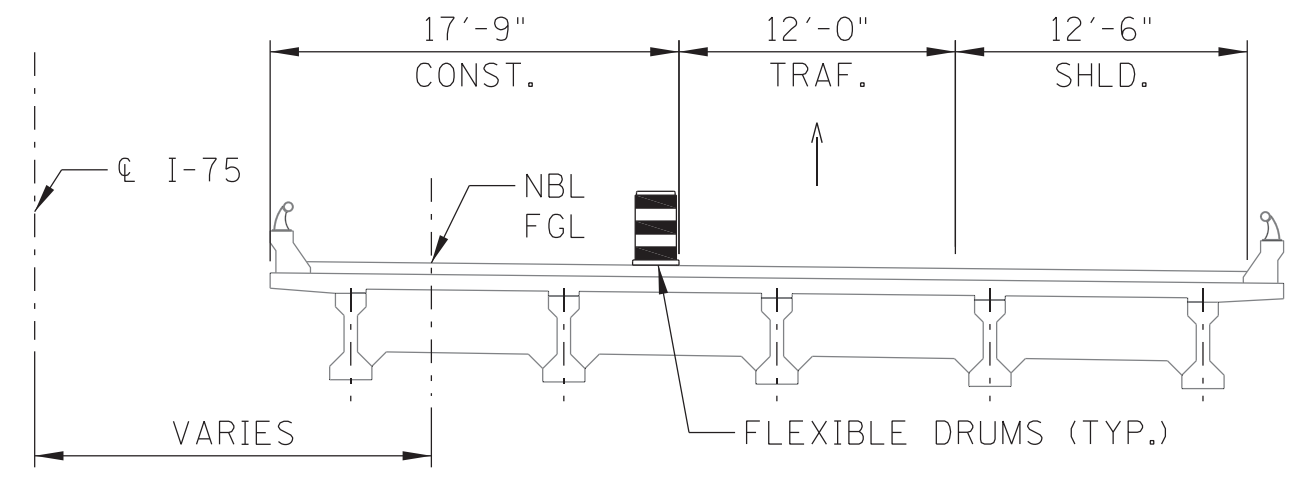
I-75 LANE CLOSURES SHALL BE RESTRICTED TO THE HOURS BETWEEN 7:00PM-6:00AM, SUNDAY-THURSDAY.



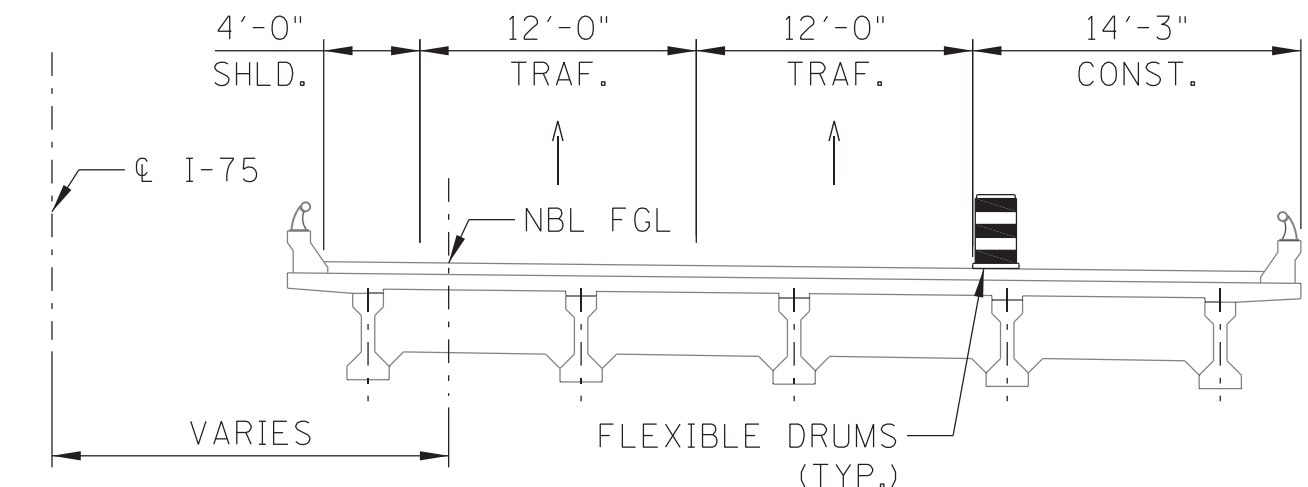
PHASE II
NORTHBOUND I-75 SHOWN
SOUTHBOUND I-75 SIMILAR

SEALED BY
R. Logan Colburn
REGISTERED ENGINEER
No. 117913
COMMERCIAL
STATE OF TENNESSEE
06/06/2023

TRAFFIC CONTROL LEGEND			
SYMBOL	ITEM	SYMBOL	ITEM
●	FLEXIBLE DRUMS	⇒	FLOW OF TRAFFIC
▨	WORK ZONE	NTS	NOT TO SCALE
⋯	FLASHING YELLOW ARROW BOARD	RSSL	REMOVABLE 8" SINGLE SOLID WHITE LINE
▬	SIGN	—	CHANGEABLE MESSAGE SIGN UNIT



PHASE I TYPICAL
NORTHBOUND I-75 LOOKING AHEAD
(SOUTHBOUND OPPOSITE HAND)



PHASE II TYPICAL
NORTHBOUND I-75 LOOKING AHEAD
(SOUTHBOUND OPPOSITE HAND)

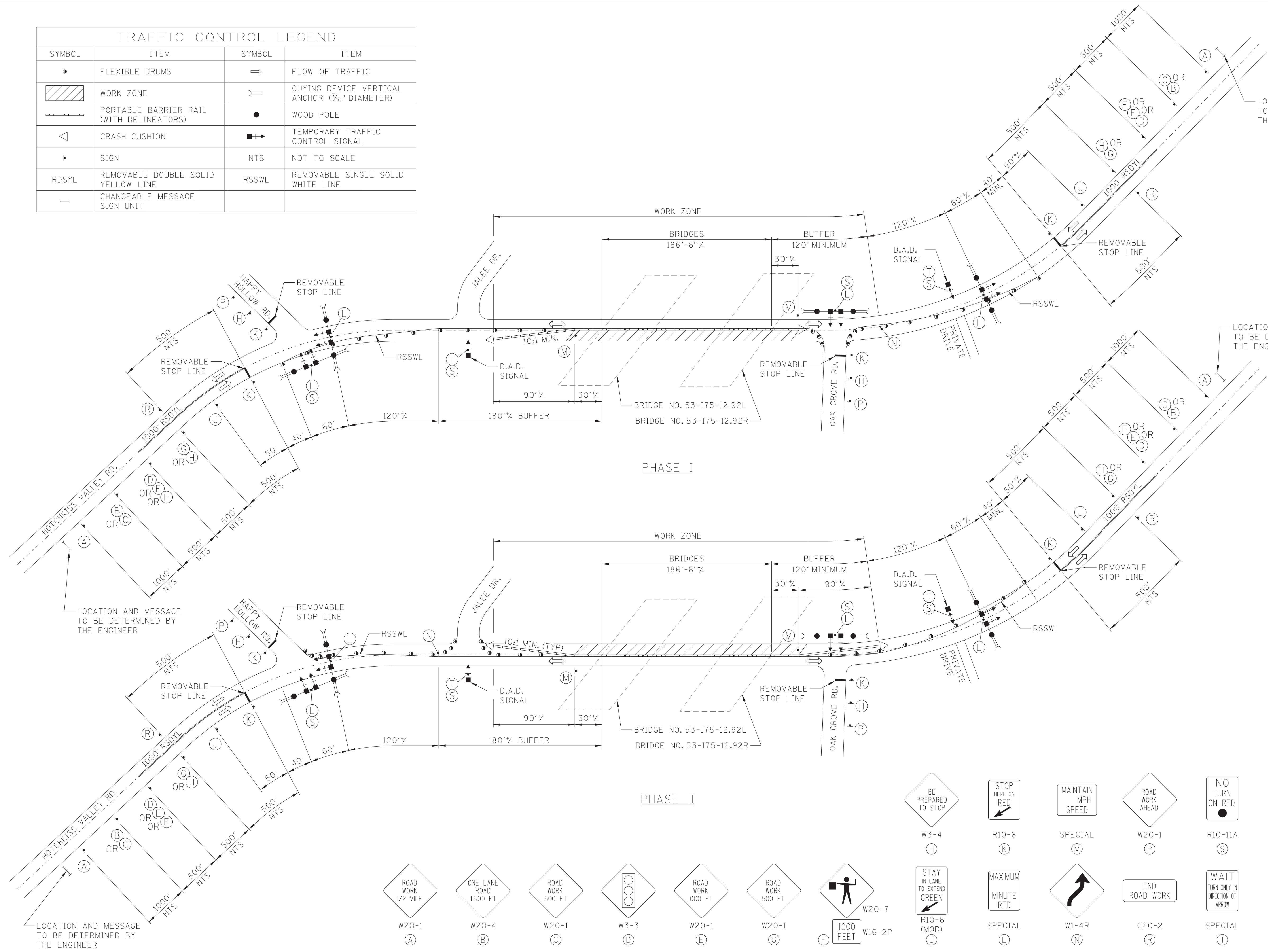
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLANS AND NOTES
INTERSTATE 75

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TYPE	YEAR	PROJECT NO.	SHEET NO.
BRIDGE REPAIR	2023	531075-M3-003	T3

TRAFFIC CONTROL LEGEND			
SYMBOL	ITEM	SYMBOL	ITEM
•	FLEXIBLE DRUMS	⇨	FLOW OF TRAFFIC
▨	WORK ZONE	⊥	GUYING DEVICE VERTICAL ANCHOR (7/16" DIAMETER)
— — —	PORTABLE BARRIER RAIL (WITH DELINEATORS)	•	WOOD POLE
◁	CRASH CUSHION	■→	TEMPORARY TRAFFIC CONTROL SIGNAL
▶	SIGN	NTS	NOT TO SCALE
RDSYL	REMOVABLE DOUBLE SOLID YELLOW LINE	RSSWL	REMOVABLE SINGLE SOLID WHITE LINE
—	CHANGEABLE MESSAGE SIGN UNIT		

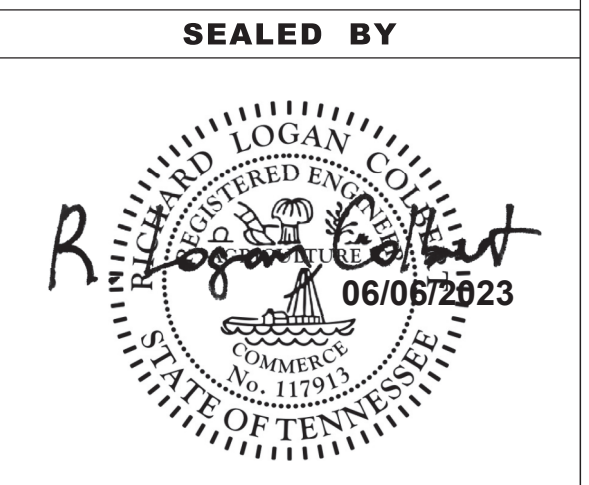
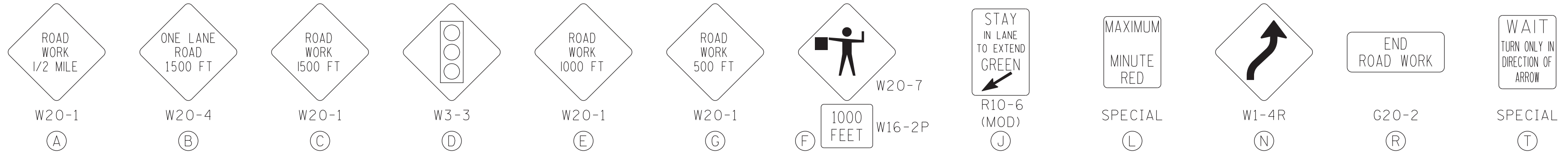


LOCATION AND MESSAGE TO BE DETERMINED BY THE ENGINEER

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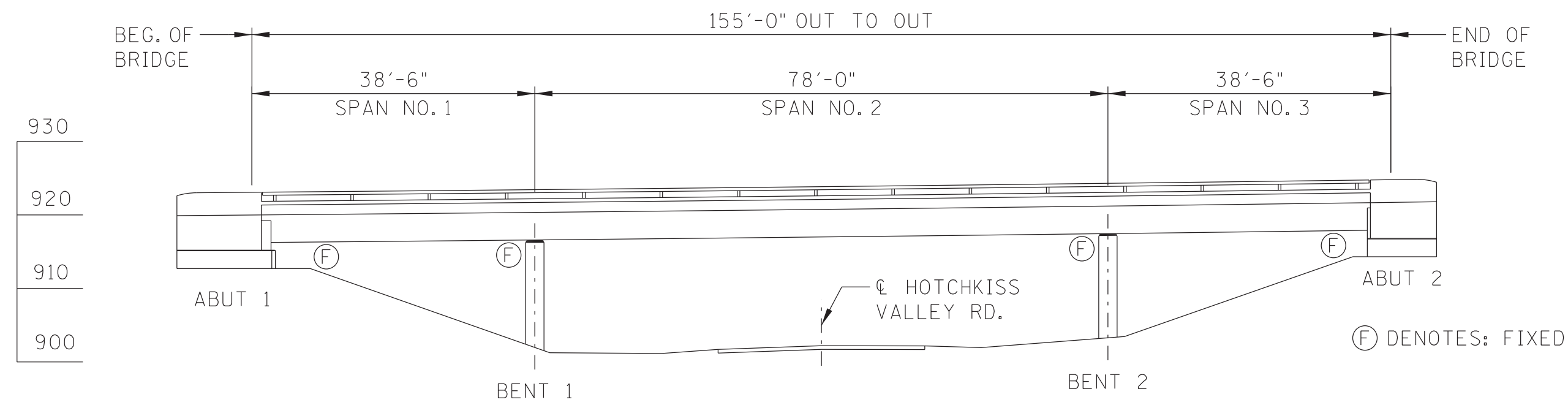
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLANS AND NOTES
HOTCHKISS VALLEY RD.

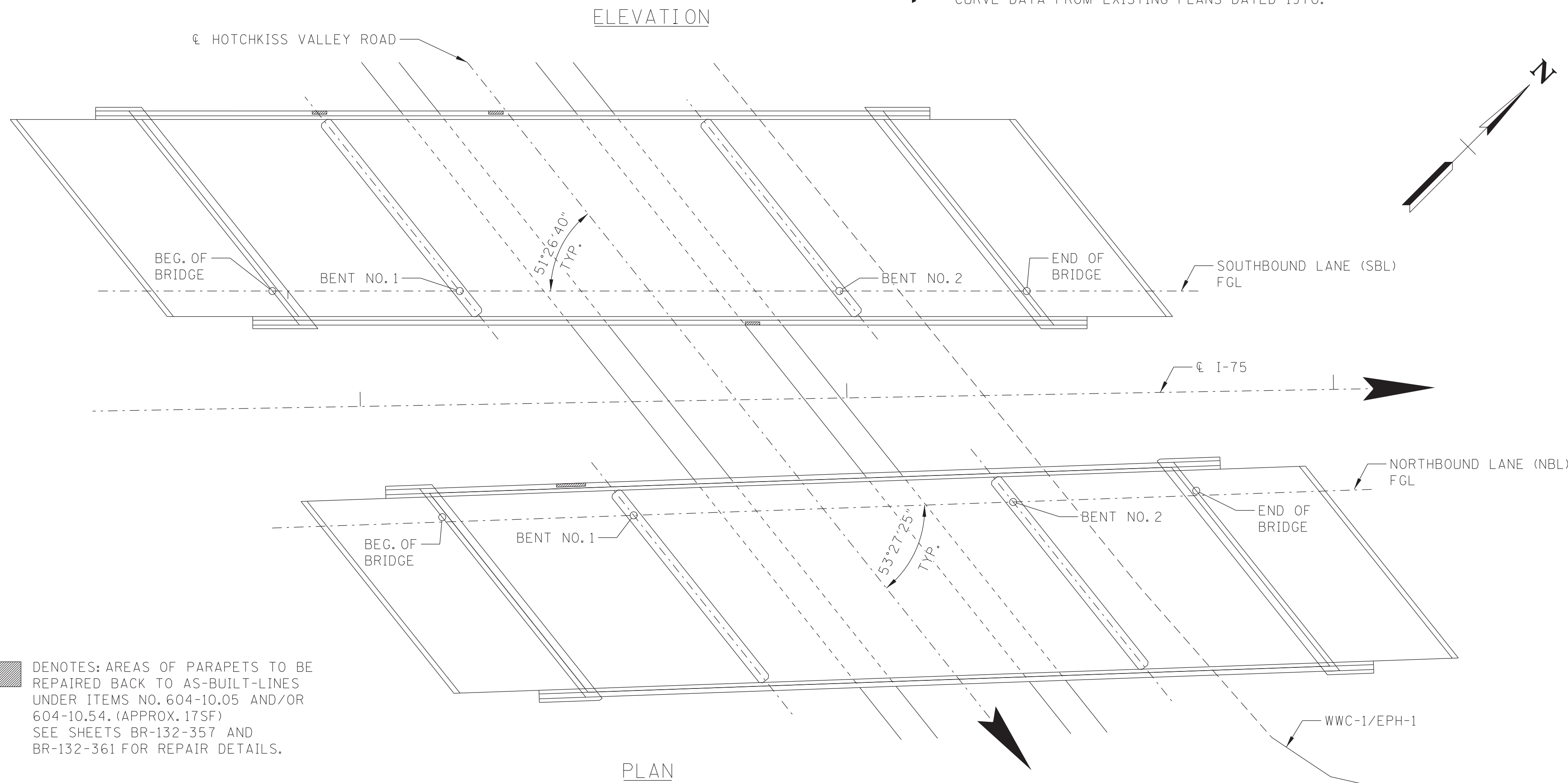
6/6/2023 8:00:41 AM J:\Structures\11685-37_Loudon_Co_I-75_over_Hotchkiss_Valley_Road\Drawings\Final_dgn\11685-37_RD_TRAF-UNDER.dgn

CONST. NO.:

PROJECT NO.	YEAR	SHEET NO.	
531075-M3-003	2023		
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION



ALL DIMENSIONS, ELEVATIONS, AND VERTICAL CURVE DATA FROM EXISTING PLANS DATED 1970.



I-75 POSTED SPEED LIMIT = 70 M.P.H.
I-75 AADT (2021) = 55,134
HOTCHKISS POSTED SPEED LIMIT = 35 M.P.H.
HOTCHKISS AADT (2021) = 1,172

SCOPE OF WORK:

1. PROVIDE REQUIRED TRAFFIC CONTROL AND PHASED CONSTRUCTION, MAINTAINING ONE LANE OF TRAFFIC USING A TRAFFIC LIGHT SYSTEM FOR HOTCHKISS VALLEY ROAD.
2. PROVIDE SHORT TERM LANE AND SHOULDER CLOSURES ON I-75 TO ALLOW FOR REPAIRS OF PARAPETS.
3. REPAIR DAMAGED PRESTRESSED CONCRETE BEAM (INTERIOR FASCIA BEAM ON SOUTHBOUND BRIDGE).
4. REPAIR DETERIORATED AREAS OF CONCRETE ON PARAPETS.
5. REPAIR DETERIORATED AREAS OF CONCRETE ON BEAMS, DIAPHRAGMS, AND SUBSTRUCTURE UNITS.
6. FILL IN VOIDS AT ABUTMENT/SLOPE PAVEMENT INTERFACE (ALL FOUR ABUTMENTS).
7. HIGH PRESSURE WATER WASH AND TEXTURE COAT TOP AND INSIDE FACE OF PARAPETS (WHITE).
8. HIGH PRESSURE WATER WASH AND TEXTURE COAT OUTSIDE OF PARAPETS, DECK OVERHANGS, BOTTOM AND OUTSIDE FACE OF FASCIA BEAMS, AND EXPOSED AREAS OF SUBSTRUCTURES (MOUNTAIN GRAY).
9. PLACE NEW VERTICAL CLEARANCE SIGNS ALONG HOTCHKISS VALLEY ROAD TO PROVIDE ADVANCE WARNING.
10. REMOVE ALL DIRT/DEBRIS/TRASH FROM SUBSTRUCTURES AND BELOW BRIDGE.
11. REMOVE VEGETATION INCLUDING TREES FOR A DISTANCE OF TEN FEET ALONG EACH SIDE OF THE BRIDGES AS DIRECTED BY THE ENGINEER.

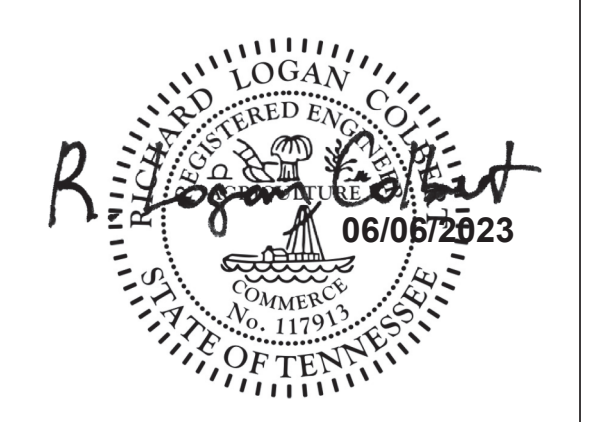
LIST OF BRIDGE DRAWINGS

DRAWING	DRAWING NO.	LAST REV. DATE
LAYOUT OF BRIDGES TO BE REPAIRED	BR-132-355	
ESTIMATED BRIDGE QUANTITIES & NOTES	BR-132-356	
SUPERSTRUCTURE	BR-132-357	
SUPERSTRUCTURE REPAIRS	BR-132-358	
SUBSTRUCTURE REPAIRS (SBL)	BR-132-359	
SUBSTRUCTURE REPAIRS (NBL)	BR-132-360	
CONCRETE REPAIR DETAILS	BR-132-361	

LIST OF BRIDGE REFERENCE DRAWINGS

(TO BE PRINTED WITH PLANS)
K-103-11 THRU K-103-25

SEALED BY



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

LAYOUT OF BRIDGES TO BE REPAIRED
I-75 OVER HOTCHKISS VALLEY ROAD
BRIDGE NO. 53-I75-12.92 L&R
FED. I.D. NO. 53100750031 & 53100750032
LOUDON COUNTY
2023

BR-132-355

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PIN NO.:	133081.00
DESIGN BY:	R.L. COLBERT
DRAWN BY:	M.D. SIMPSON
SUPERVISED BY:	G.S. WILSON
CHECKED BY:	R.L. COLBERT
DATE:	05/2023
DATE:	05/2023
DATE:	05/2023
DATE:	05/2023



CONST. NO.:

PROJECT NO.	YEAR	SHEET NO.	
531075-M3-003	2023	2	
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION

ESTIMATED BRIDGE QUANTITIES						
ITEM NO.	DESCRIPTION	UNIT	SB LANE	NB LANE	TOTAL	
(1)	201-05.31	VEGETATION REMOVAL	LS	0.5	0.5	1
(2)	202-01.02	REMOVAL OF ASBESTOS	LS	0.5	0.5	1
	604-04.02	APPLIED TEXTURE FINISH (EXISTING STRUCTURES)	S.Y.	868	865	1733
(3)	604-10.05	CONCRETE	S.F.	22	14	36
	604-10.42	CONCRETE REPAIRS	C.F.	5	1	6
(4)	604-10.54	CONCRETE REPAIRS	S.F.	22	14	36
	604-10.55	CONCRETE (FOUNDATION REPAIRS)	C.Y.	3	3	6
(5)	604-10.58	EPOXY INJECTION (INJECTION)	GAL.	3	7	10
(5)	604-10.62	EPOXY INJECTION REPAIR (COMPLETE AND IN PLACE)	L.F.	26	66	92
	604-10.69	PRESTRESSING STRAND SPLICE	EACH	1	-	1
	622-01	PNEUMATICALLY PLACED CONCRETE	S.F.	7	15	22

FOOTNOTES	
(1)	INCLUDES COST OF ALL LABOR, EQUIPMENT, AND MATERIALS NECESSARY FOR THE REMOVAL AND DISPOSAL OF VEGETATION WITHIN 10 FEET OF THE STRUCTURE, AND ANY OTHER LOCATIONS NECESSARY TO COMPLETE THE WORK, AS DIRECTED BY THE ENGINEER. WHERE POSSIBLE, STUMPS AND ROOTS ARE TO REMAIN TO PREVENT GROUND DISTURBANCE. ITEM COST ALSO INCLUDES REMOVAL OF TRASH AND DEBRIS FROM THE SUBSTRUCTURES AND BELOW THE BRIDGES.
(2)	INCLUDES ALL COSTS ASSOCIATED WITH REMOVAL, CONTAINMENT AND DISPOSAL OF ASBESTOS-CONTAINING MATERIALS (ACM). SEE PROJECT COMMITMENTS SHEET 1A AND SPECIAL PROVISION (SP) 202ACM.
(3)	INCLUDES COST OF ALL LABOR, EQUIPMENT, AND MATERIALS NECESSARY TO PLACE HIGH EARLY STRENGTH CONCRETE FOR REPAIR AREAS AT LOCATIONS INDICATED IN PLANS. QUANTITY ALSO INCLUDES AREAS OF OF REPAIR ON OUTSIDE FACE OF PARAPETS SHOWN ON SHEET BR-132-355.
(4)	INCLUDES COST OF ALL LABOR, EQUIPMENT, AND MATERIALS NECESSARY TO PLACE A POLYMER MODIFIED CEMENTITIOUS STRUCTURAL PATCHING MATERIAL FOR REPAIR AREAS AT LOCATIONS INDICATED IN PLANS. QUANTITY INCLUDES AREAS OF OF REPAIR ON OUTSIDE FACE OF PARAPETS SHOWN ON SHEET BR-132-355.
(5)	QUANTITY INCLUDES ALL CRACKS TO BE REPAIRED ON SUBSTRUCTURES, DIAPHRAGMS AND PARAPETS.

GENERAL NOTES

SPECIFICATIONS & LOADING

- (1) **SPECIFICATIONS:** STANDARD ROAD AND BRIDGE SPECIFICATIONS OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION (JANUARY 1, 2021 EDITION), AND THE 4TH EDITION (2017) AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS WITH INTERIMS.

STEEL, CONCRETE, REINFORCING, AND FORMING

- (2) **CONCRETE CURING:** ALL CONCRETE IN REPAIR AREAS SHALL BE CURED ACCORDING TO THE STANDARD SPECIFICATIONS.

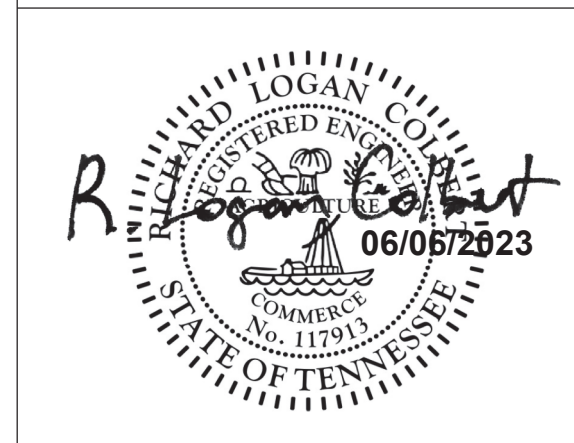
MISCELLANEOUS GENERAL NOTES

- (3) **REQUIREMENTS AND RESTRICTIONS FOR PHASE CONSTRUCTION**
- A. TWO 12FT TRAFFIC LANES SHALL BE MAINTAINED AT ALL TIMES IN EACH DIRECTION ON INTERSTATE 75.
 - B. A SINGLE 10FT TRAFFIC LANE SHALL BE MAINTAINED AT ALL TIMES ALONG HOTCHKISS VALLEY ROAD.
- (4) **FINISHING CONCRETE SURFACES:** CONCRETE FINISHING SHALL BE IN ACCORDANCE WITH SECTION 604.21 OF THE STANDARD SPECIFICATIONS. A CLASS I FINISH FOLLOWED BY AN APPLIED TEXTURE FINISH SHALL BE USED IN LIEU OF A CLASS II FINISH. NO TEXTURE FINISH SHALL BE APPLIED PRIOR TO COMPLETION OF PAVING AND HAULING OPERATIONS AT THE BRIDGE SITE. THE APPLIED TEXTURE FINISH SHALL BE MEASURED AND PAID FOR UNDER ITEM NO. 604-04.02.
- (5) **DEMOLITION:** THE CONTRACTOR SHALL TAKE SPECIAL CARE TO PROTECT ANY PARTS OF THE STRUCTURE THAT ARE NOT TO BE REMOVED SPECIFICALLY. CHIPPING HAMMERS OF THE 15 POUND CLASS SHALL BE USED TO REMOVE CONCRETE FROM BENEATH ANY REINFORCING STEEL. SAWING OR CUTTING OF THE CONCRETE IS ACCEPTABLE AS LONG AS ANY SPECIFIED PROJECTION OF THE EXISTING REINFORCING STEEL IS MAINTAINED. ALL DEVICES PROPOSED FOR CONCRETE DEMOLITION SHALL MEET THE APPROVAL OF THE ENGINEER.
- (6) THE CONTRACTOR IS NOT ALLOWED TO USE A HYDRAULIC RAM MOUNTED ON A BACKHOE (COMMONLY CALLED A HOE RAM), MINI EXCAVATOR, OR OTHER
- (7) **QUICK-SET PATCHING MATERIAL:** QUICK-SET PATCHING MATERIAL SHALL BE A POLYMER MODIFIED CEMENTITIOUS PATCHING MATERIAL. SEE TDOT QUALIFIED PRODUCTS LIST 13.009 POLY MOD CEMENT STRUCT PATCH VERT & OVER FOR ACCEPTABLE PATCHING MATERIALS.

SPECIAL NOTES

- (1) **HIGH EARLY STRENGTH CONCRETE:** CONCRETE FOR INDICATED AREAS OF REPAIR SHALL BE HIGH EARLY STRENGTH CONCRETE WITH A COMPRESSIVE STRENGTH OF F'C = 3,000 P.S.I. AT EIGHTEEN (18) HOURS. THE CONTRACTOR SHALL PROVIDE PROOF PRIOR TO BEGINNING WORK THAT THE PROPOSED CONCRETE MIX WILL OBTAIN THE REQUIRED PROPERTIES. PROOF SHALL BE PROVIDED BY AN INDEPENDENT TESTING COMPANY AND SUBMITTED TO THE MATERIALS AND TESTS DIVISION OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION FOR APPROVAL. TRAFFIC SHALL NOT BE PERMITTED ON ANY REPAIR AREA UNTIL TEST SPECIMENS ATTAIN A COMPRESSIVE STRENGTH OF 3,000 P.S.I. AND THE CONCRETE HAS BEEN IN PLACE A MINIMUM OF EIGHTEEN (18) HOURS.
- (2) **FORMS AND FALSEWORK:** ALL CONCRETE FORMS AND FALSEWORK SHALL BE REMOVED AFTER REPAIRS ARE COMPLETED. COST OF REMOVAL SHALL BE INCLUDED IN ITEMS BID ON. THIS WORK SHALL BE COMPLETED BEFORE FINAL PAYMENT IS APPROVED.
- (3) THE CONTRACTOR SHALL PROVIDE 100% CONVENTIONAL FALL PROTECTION FOR WORKERS INSTALLING DECKING ABOVE 15 FEET.
- (4) THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE STABILITY OF THE STRUCTURE DURING REPAIRS AND CONSTRUCTION.
- (5) ANY AREA DISTURBED OUTSIDE THE LIMITS OF THE CONSTRUCTION DURING THE LIFE OF THE PROJECT SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
- (6) **TEXTURE COATING CONTAINING ASBESTOS:** TEXTURE COAT REMOVAL WILL BE REQUIRED IN AREAS WHERE NEW CONCRETE WILL BE CAST AGAINST THE EXISTING CONCRETE SURFACE OR WHERE EPOXY INJECTION WILL BE PLACED. OTHER AREAS BEING TEXTURE-COATED ARE TO RECEIVE A WATER WASH AND BE OVERCOATED. TEXTURE-COAT DEBRIS IS TO BE COLLECTED AND DISPOSED OF IN ACCORDANCE WITH SPECIAL PROVISION 202ACM.

SEALED BY



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

ESTIMATED BRIDGE QUANTITIES & NOTES
I-75 OVER HOTCHKISS VALLEY ROAD
BRIDGE NO. 53-I75-12.92 L&R
FED. I.D. NO. 53100750031 & 53100750032
LOUDON COUNTY
2023

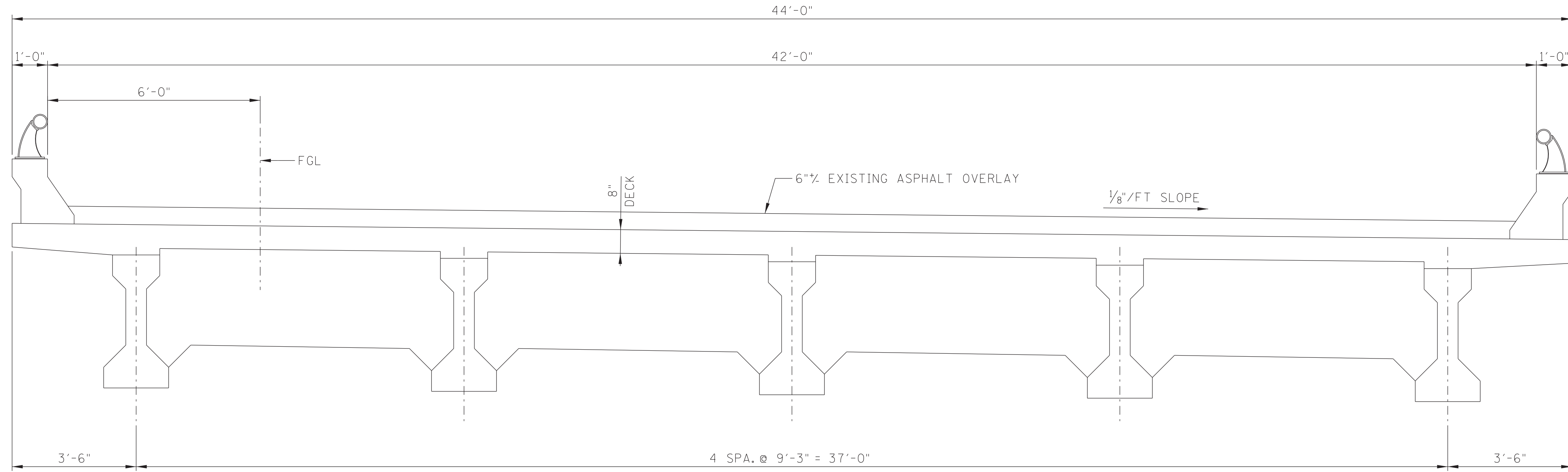
BR-132-356



PIN NO.: 133081.00
DESIGN BY: R.L. COLBERT DATE: 05/2023
DRAWN BY: M.D. SIMPSON DATE: 05/2023
SUPERVISED BY: G.S. WILSON DATE: 05/2023
CHECKED BY: R.L. COLBERT DATE: 05/2023

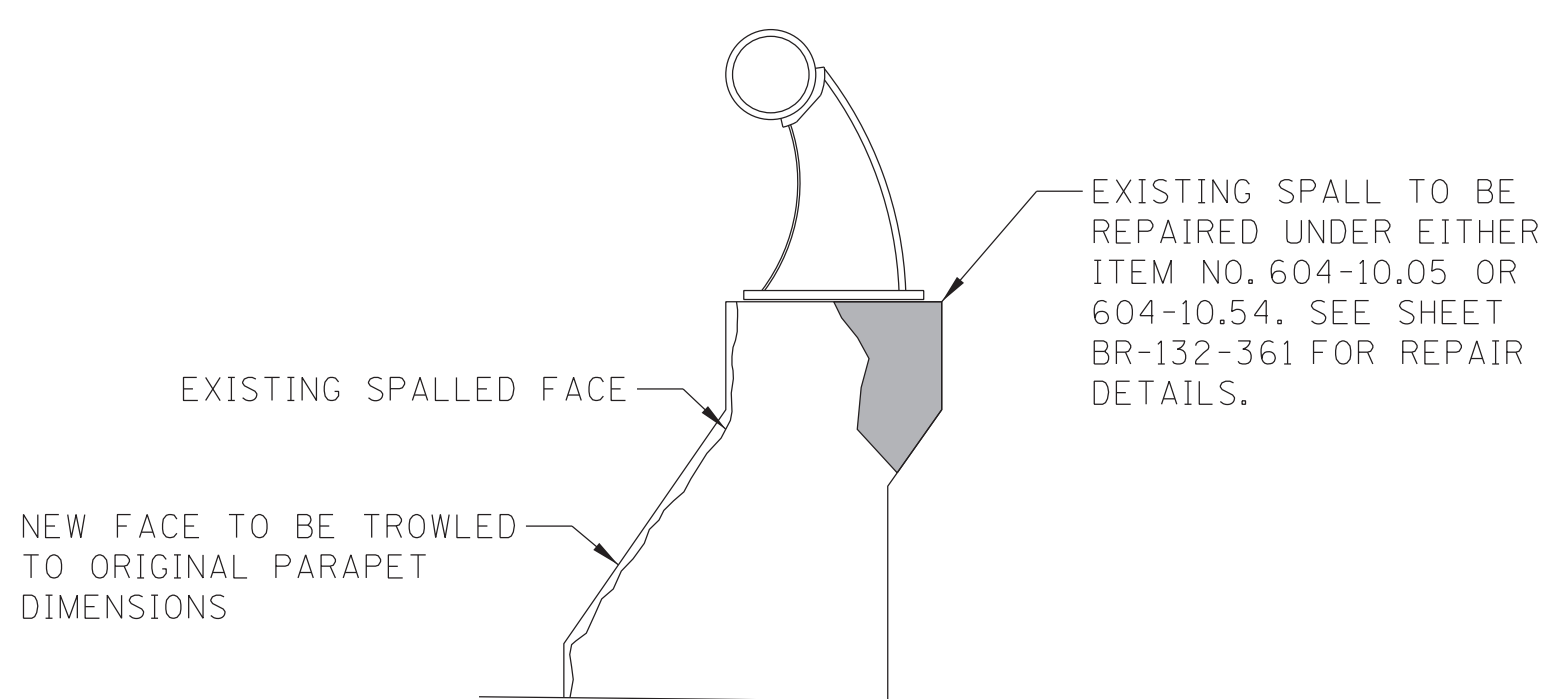
CONST. NO.:

PROJECT NO.	YEAR	SHEET NO.	
531075-M3-003	2023		
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION



TYPICAL SECTION @ MIDSPAN

LOOKING AHEAD - NORTHBOUND LANE
LOOKING BACK - SOUTHBOUND LANE

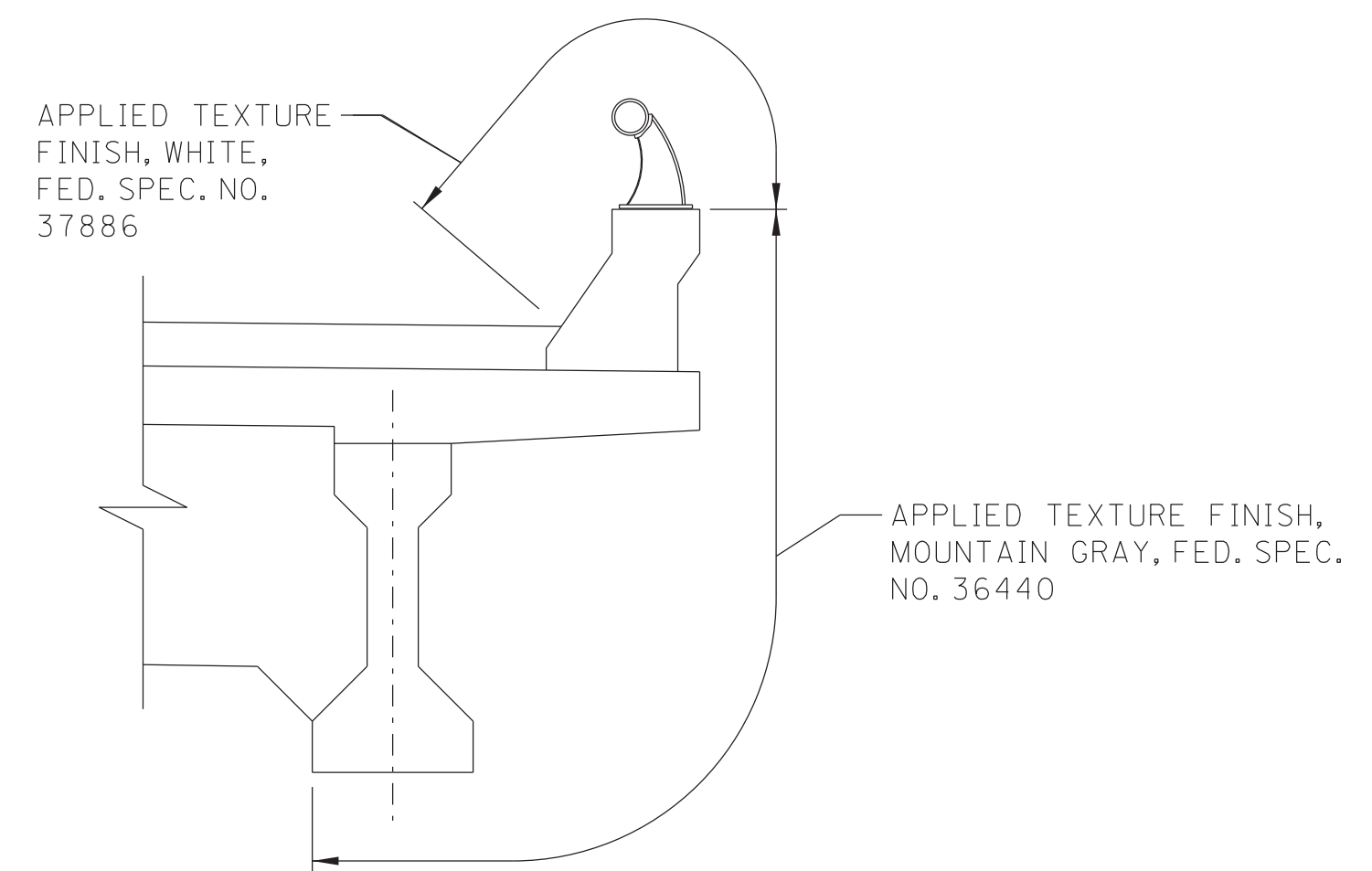


PARAPET FACE - SPALL REPAIRS

EXTREME CARE SHALL BE TAKEN WHEN REMOVING THE EXISTING SPALLED CONCRETE SO AS NOT TO DAMAGE THE EXISTING REINFORCING STEEL. ALL EXPOSED EXISTING REINFORCING STEEL SHALL RECEIVE A COMPLETE CLEANING TO REMOVE ALL RUST. ALL EXISTING REINFORCEMENT SHALL REMAIN IN PLACE. ALL WORK MUST MEET WITH THE FULL APPROVAL OF THE ENGINEER. ANY DAMAGE TO EXISTING REINFORCING STEEL INCURRED DURING THIS WORK SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

COST OF REMOVING SPALLED CONCRETE, CLEANING RAIL, COMPLETELY CLEANING EXPOSED REINFORCING STEEL, CONCRETE, LABOR AND ANY MISCELLANEOUS MATERIALS NECESSARY TO COMPLETE THE REPAIRS ON THE INSIDE FACE OF PARAPETS AS SHOWN SHALL BE INCLUDED IN ITEM NO. 622-01, PNEUMATICALLY PLACED CONCRETE, S.F.

IF SCALED REPAIR AREA IS MORE THAN 1/4" DEEPER THAN ORIGINAL PARAPET FACE, CONTRACTOR IS TO USE SIKAREPAIR 223 WITH SIKALATEX R. SIKATOP SEAL 107 SHALL BE USED FOR REPAIR AREAS SHALLOWER THAN 1/4".



APPLIED TEXTURE FINISH SKETCH

TYP. EACH SIDE, BOTH BRIDGES

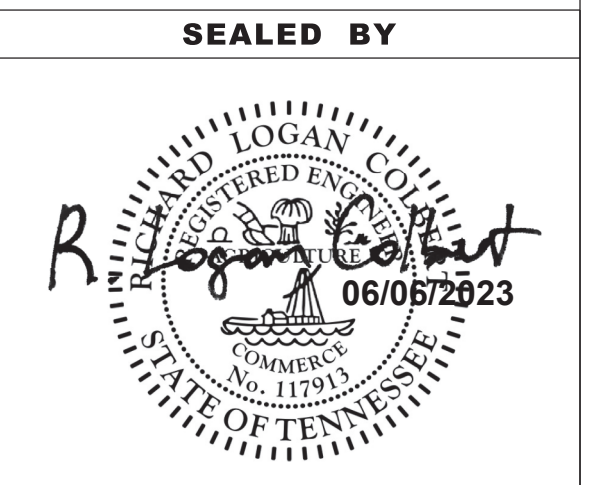
IN ADDITION TO THE SURFACES SHOWN IN THE APPLIED TEXTURE FINISH SKETCH, ALL EXPOSED SURFACES OF THE SUBSTRUCTURES SHALL RECEIVE AN APPLIED TEXTURE FINISH, MOUNTAIN GRAY, FED. SPEC. NO. 36440.

COST OF TEXTURE COATING SHALL BE INCLUDED IN ITEM NO. 604-04.02, APPLIED TEXTURE FINISH (EXISTING STRUCTURES), S.Y.

THE CONTRACTOR SHALL USE CONTAINMENT SCREENS OR OTHER MEASURES AS NECESSARY TO PREVENT ANY TEXTURE COATING FROM ENTERING THE ENVIRONMENT. CONTAINMENT MEASURES SHALL BE APPROVED BY THE ENGINEER, AND COST SHALL BE INCLUDED IN ITEMS BID ON.

THE EXISTING SURFACES THAT ARE TO RECEIVE A TEXTURE FINISH SHALL BE FREE OF ALL FLAKING TEXTURE COATING, RUST, DIRT, OIL, AND OTHER FOREIGN SUBSTANCES PRIOR TO THE APPLICATION OF THE TEXTURE FINISH. THE SURFACE SHALL BE CLEANED TO THE COMPLETE SATISFACTION OF THE ENGINEER USING A HIGH PRESSURE WATER WASH. COST TO BE INCLUDED IN ITEM NO. 604-04.02.

THE WASH WATER IS TO BE FILTERED, AND PAINT CHIPS AND DEBRIS SHALL BE COLLECTED PRIOR TO RELEASE OF WATER.



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE
I-75 OVER HOTCHKISS VALLEY ROAD
BRIDGE NO. 53-I75-12.92 L&R
FED. I.D. NO. 53100750031 & 53100750032
LOUDON COUNTY
2023

BR-132-357

6/6/2023 8:00:42 AM J:\Structures\11685-37_Loudon_Co_I-75_over_Hotchkiss_Valley_Road\Drawings\Final_dgn\11685-37_STR_SUP.DGN



PIN NO.: 133081.00
DESIGN BY: R.L. COLBERT DATE: 05/2023
DRAWN BY: M.D. SIMPSON DATE: 05/2023
SUPERVISED BY: G.S. WILSON DATE: 05/2023
CHECKED BY: R.L. COLBERT DATE: 05/2023

CONST. NO.:

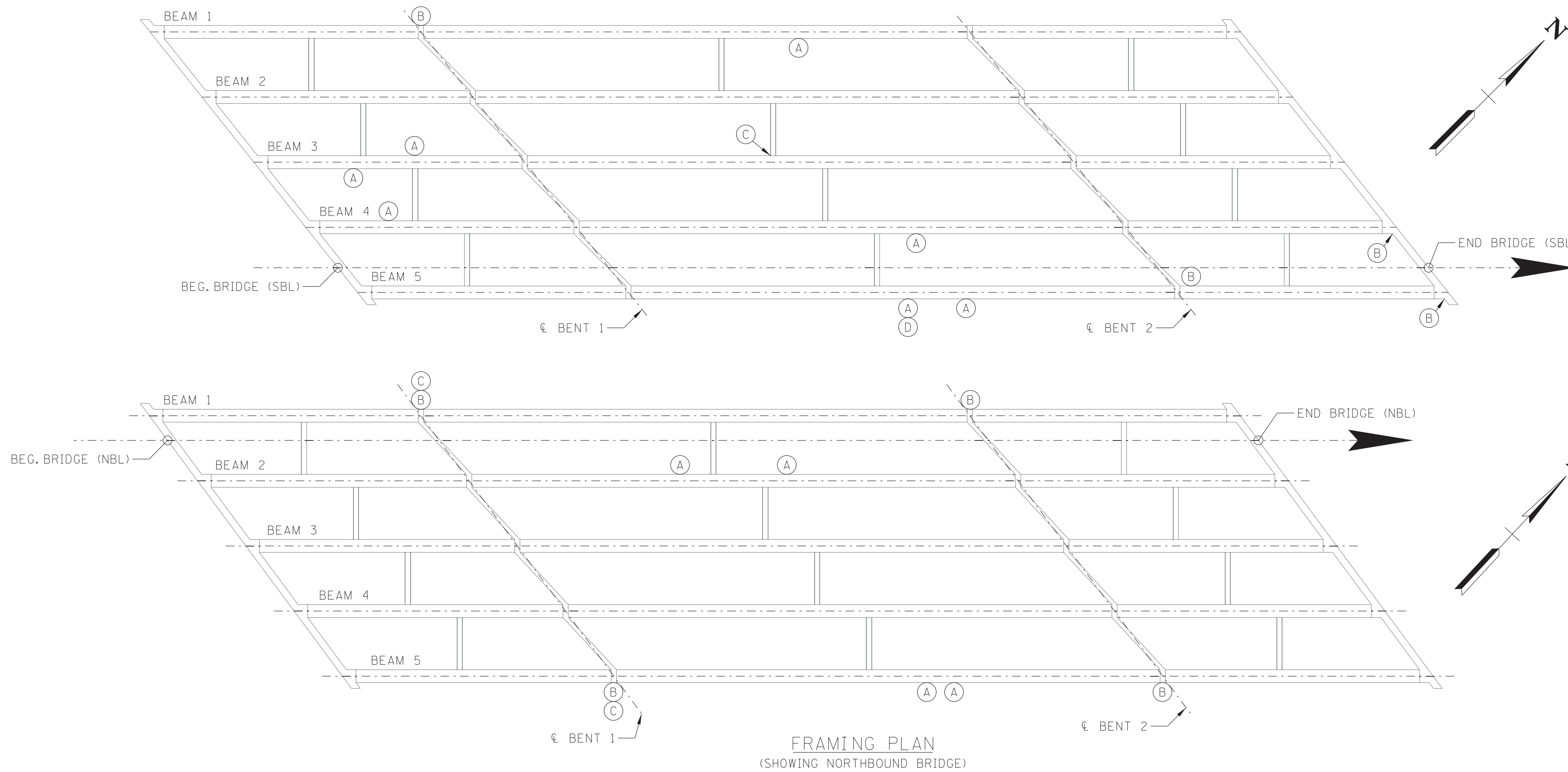
PROJECT NO.	YEAR	SHEET NO.	
531075-M3-003	2023		
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION

ESTIMATED QUANTITIES

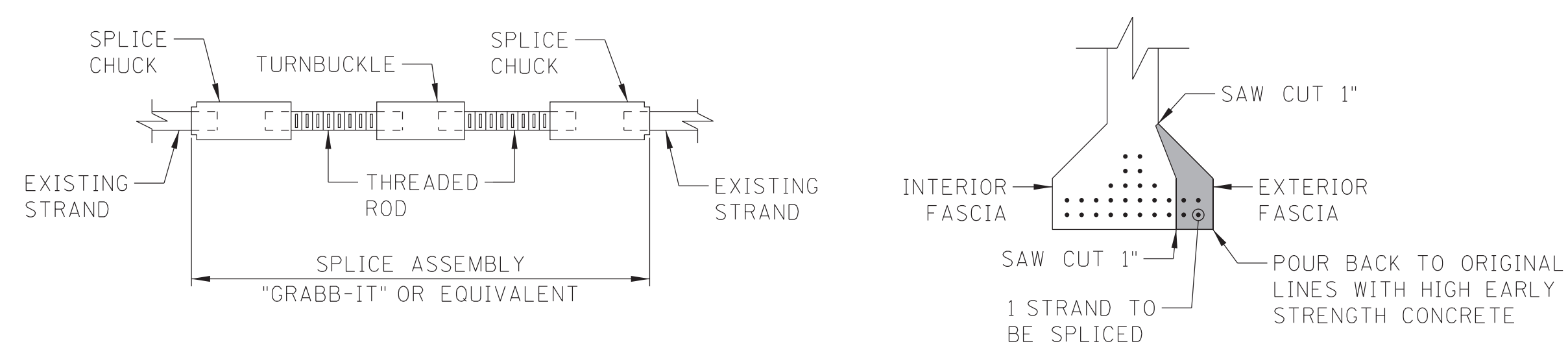
SOUTHBOUND BRIDGE			
LOCATION OF REPAIR	ITEM 604-10.42 APPROX. REPAIR AREAS (C.F.)	ITEM 604-10.62 APPROX. REPAIR AREAS (L.F.)	ITEM 604-10.05 AND/OR 604-10.54 APPROX. REPAIR AREAS (L.F.)
SPAN 1	1	4	-
SPAN 2	4	-	1
SPAN 3	-	10	-
TOTAL	5	14	1

NORTHBOUND BRIDGE			
LOCATION OF REPAIR	ITEM 604-10.42 APPROX. REPAIR AREAS (C.F.)	ITEM 604-10.62 APPROX. REPAIR AREAS (L.F.)	ITEM 604-10.05 AND/OR 604-10.54 APPROX. REPAIR AREAS (L.F.)
SPAN 1	-	16	1
SPAN 2	1	-	-
SPAN 3	-	16	-
TOTAL	1	32	1

- (A) DENOTES AREA TO BE REPAIRED UNDER ITEM NO. 604-10.42. SEE THIS SHEET FOR DETAILS SHOWING AREAS OF EXISTING SPALLED OR DELAMINATED CONCRETE SURFACES TO BE REMOVED AND REPAIRED.
- (B) DENOTES CRACK(S) TO BE REPAIRED UNDER ITEM NO. 604-10.58 AND 604-10.62. SEE EPOXY INJECTION NOTES ON SHEET BR-132-361.
- (C) DENOTES AREA TO BE REPAIRED UNDER ITEM NO. 604-10.05 AND/OR 604-10.54. SEE REPAIR DETAILS ON SHEET BR-132-361.
- (D) DENOTES LOCATION OF PRESTRESSING STRAND REPAIR. SEE STRAND SPLICE DETAIL THIS SHEET.



FRAMING PLAN
(SHOWING NORTHBOUND BRIDGE)

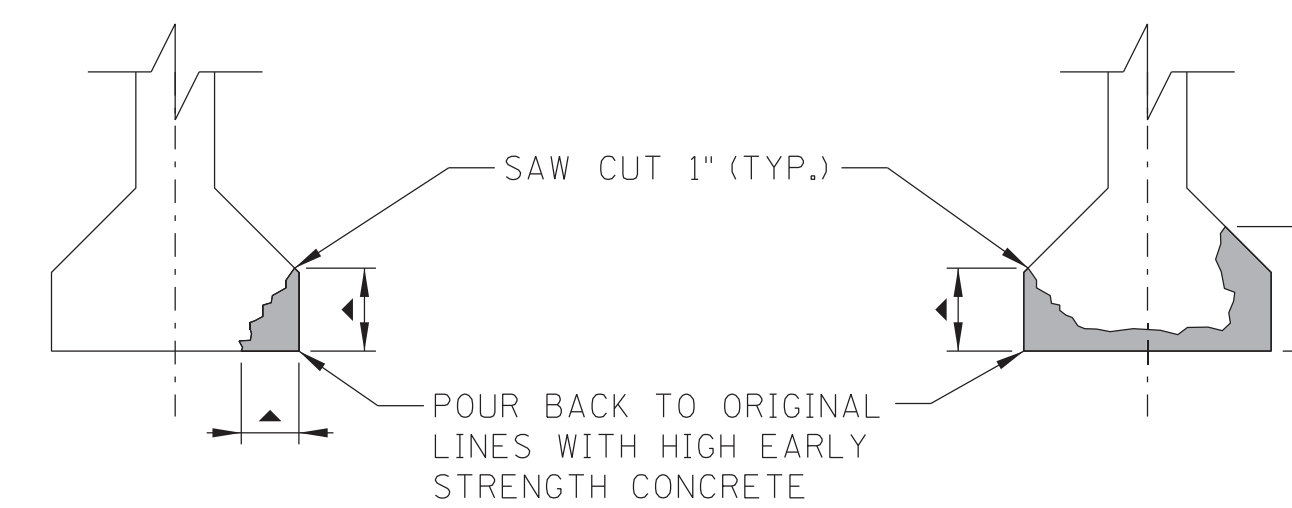


STRAND SPLICE DETAIL
(1 ASSEMBLY REQUIRED)

STRAND SPLICE ASSEMBLIES SHALL BE INSTALLED AND TORQUED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND DETAILS ON THIS SHEET. THE STRAND SPLICE ASSEMBLY SHALL BE A GRABB-IT CABLE SPLICE OR APPROVED EQUIVALENT. GRABB-IT CAN BE OBTAINED FROM PRESTRESSED SUPPLY, INC. AT 1-800-328-3086. TORQUE LUBRICATED SPLICE SLEEVES TO APPROXIMATELY 28,900 POUNDS. THE STRAND GRIPS MUST BE PREVENTED FROM ROTATING DURING TORQUEING.

THE COST OF SPLICE ASSEMBLY, INCLUDING TURN BUCKLES, SPLICE CHUCKS, AND INSTALLATION SHALL BE INCLUDED UNDER ITEM NO. 604-10.69, PRESTRESSING STRAND SPLICE, EACH.

THE COSTS OF ALL OTHER LABOR, EQUIPMENT, AND MATERIALS REQUIRED TO REPAIR THE BEAM AS DETAILED ON THIS SHEET SHALL BE INCLUDED IN ITEM NO. 604-10.42, CONCRETE REPAIRS, C.F.



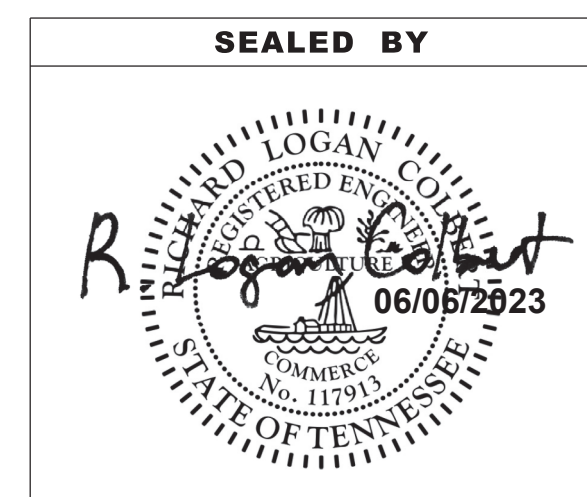
BEAM REPAIR DETAILS
(TYPICAL ALL BEAMS)

▲ REMOVE CONCRETE TO A DEPTH OF 3/4" BEHIND ANY EXPOSED PRESTRESSING STRAND OR REINFORCING STEEL. SEE PLAN AND DETAILS THIS SHEET FOR APPROX. LIMITS AND LOCATIONS. FINAL LIMITS AND LOCATIONS OF REPAIRS TO BE DESIGNATED BY THE ENGINEER.

THE COST OF REMOVING PORTIONS OF THE EXISTING CONCRETE WITHIN THE LIMITS SHOWN, SAW CUTTING, COMPLETELY CLEANING EXISTING REINFORCING STEEL, HIGH EARLY STRENGTH CONCRETE, FORMING, LABOR, AND ALL MISCELLANEOUS MATERIAL NECESSARY TO COMPLETE THE REPAIRS AS SHOWN SHALL BE INCLUDED IN PRICE BID FOR ITEM NO. 604-10.42, CONCRETE REPAIRS, C.F.

CONTRACTOR TO TAKE EXTREME CARE WHEN REMOVING DELAMINATED CONCRETE SO AS NOT TO DAMAGE EXISTING REINFORCING STEEL OR PRESTRESSING STRANDS. ANY DAMAGE INCURRED SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE. ALL EXISTING REINFORCING STEEL AND PRESTRESSING STRAND SHALL BE COMPLETELY CLEANED TO THE SATISFACTION OF THE ENGINEER BEFORE REPAIRING.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE STABILITY OF THE STRUCTURE DURING REPAIRS TO THE BEAMS. DETAILS OF ANY TEMPORARY SUPPORT SYSTEM OR FALSEWORK REQUIRED SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND SHALL MEET WITH THE FULL SATISFACTION OF THE ENGINEER BEFORE THE BEGINNING OF ANY BEAM REPAIR. COST TO BE INCLUDED IN ITEM NO. 604-10.42, CONCRETE REPAIRS, C.F.



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE REPAIRS
I-75 OVER HOTCHKISS VALLEY ROAD
BRIDGE NO. 53-175-12.92 L&R
FED. I.D. NO. 53100750031 & 53100750032
LOUDON COUNTY
2023

BR-132-358

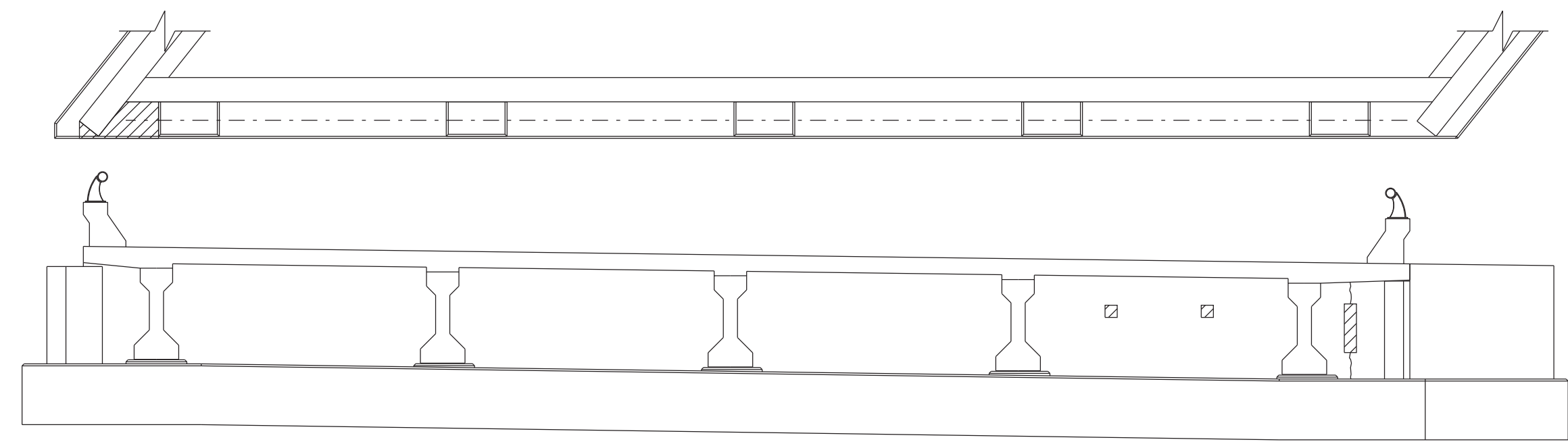
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Palmer ENGINEERING	PIN NO.: 133081.00
DESIGN BY: R.L. COLBERT	DATE: 05/2023
DRAWN BY: M.D. SIMPSON	DATE: 05/2023
SUPERVISED BY: G.S. WILSON	DATE: 05/2023
CHECKED BY: R.L. COLBERT	DATE: 05/2023

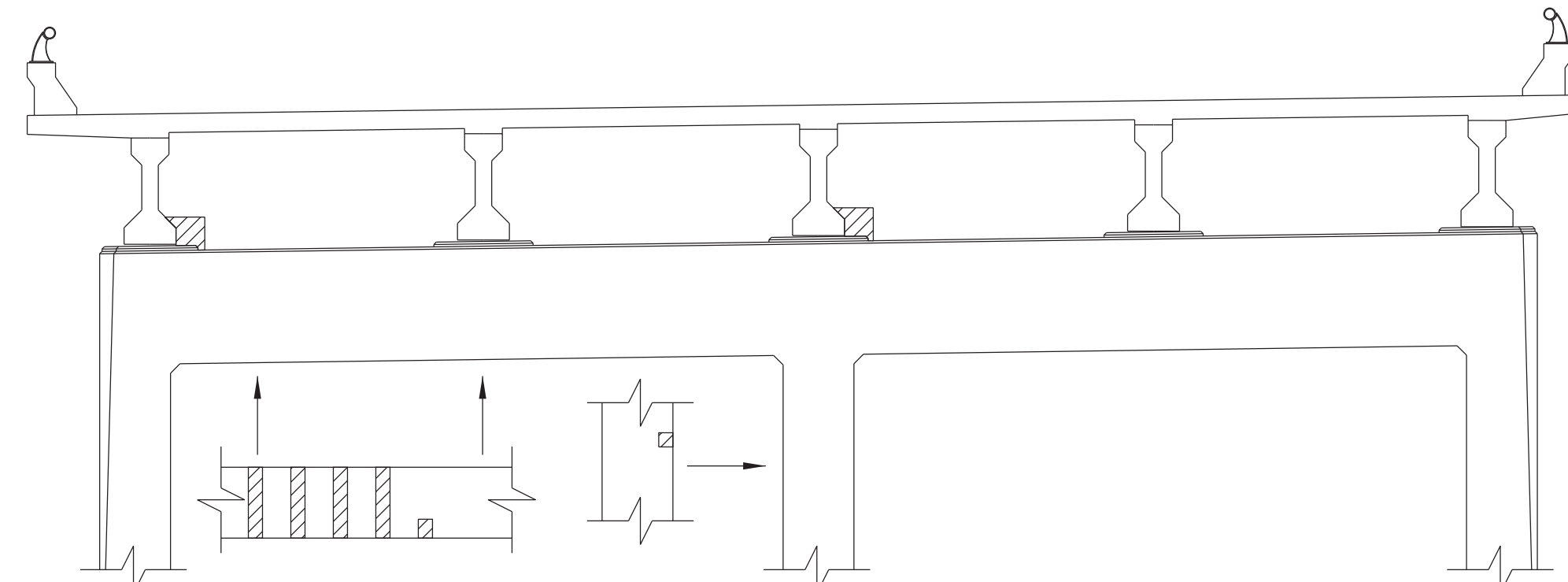
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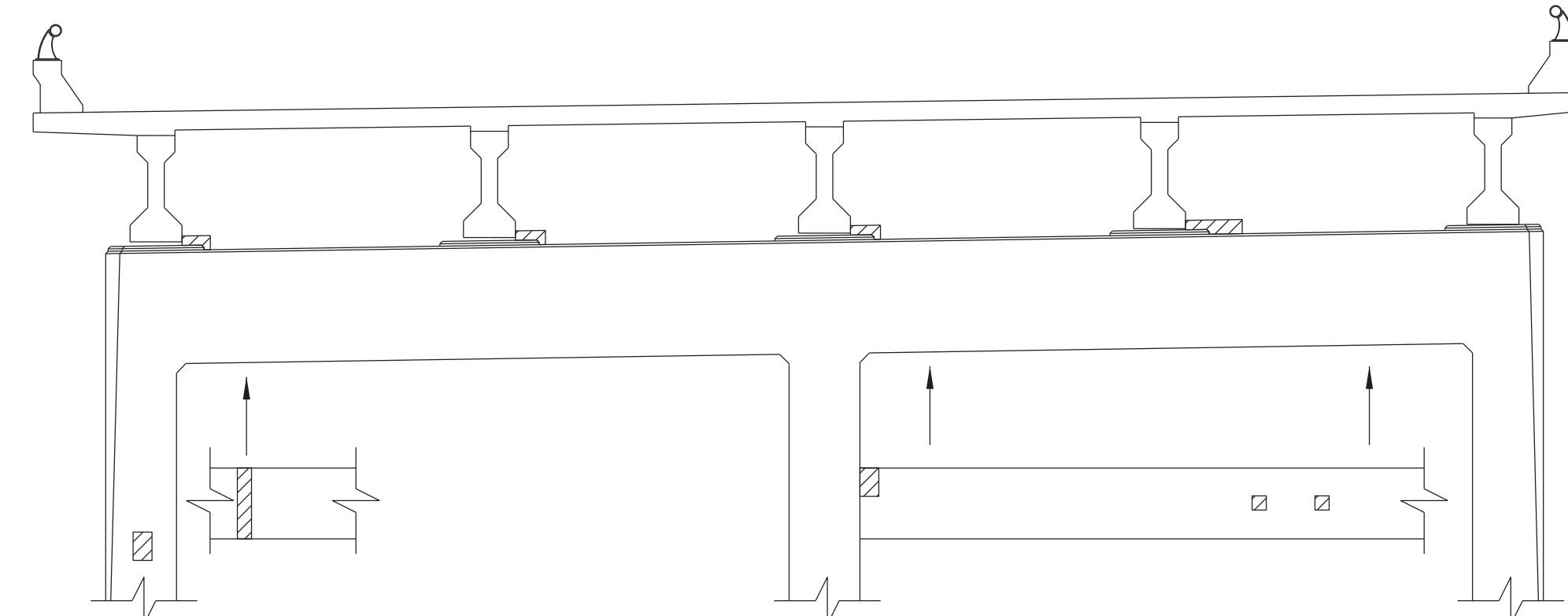
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 DESIGN BY: R.L. COLBERT DATE: 05/2023
 DRAWN BY: M.D. SIMPSON DATE: 05/2023
 SUPERVISED BY: G.S. WILSON DATE: 05/2023
 CHECKED BY: R.L. COLBERT DATE: 05/2023



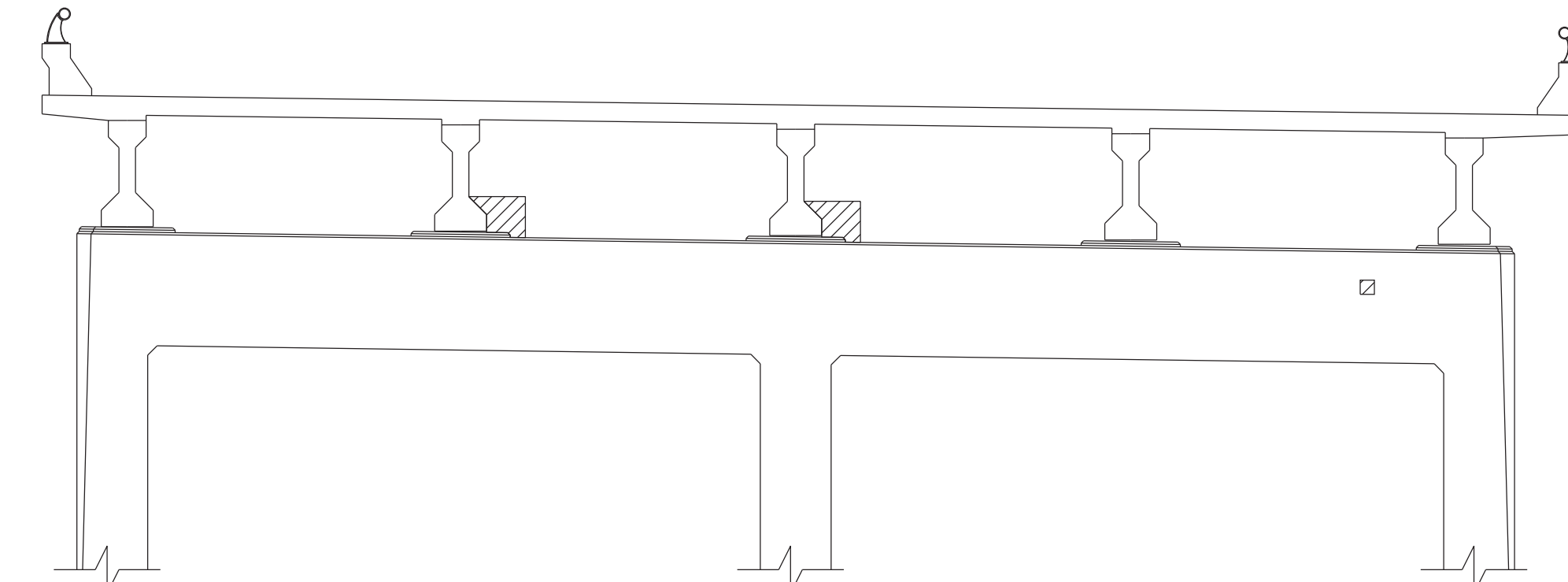
ABUTMENT 1
LOOKING BACK



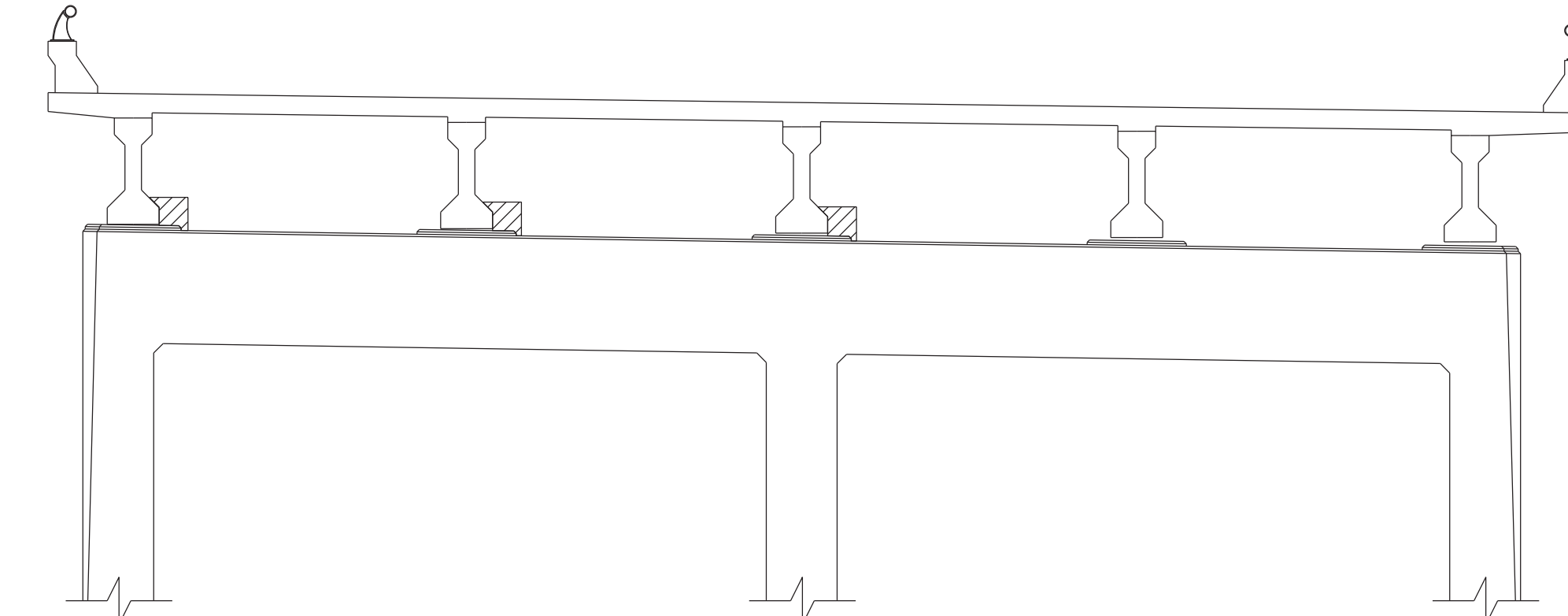
BENT 1
LOOKING AHEAD



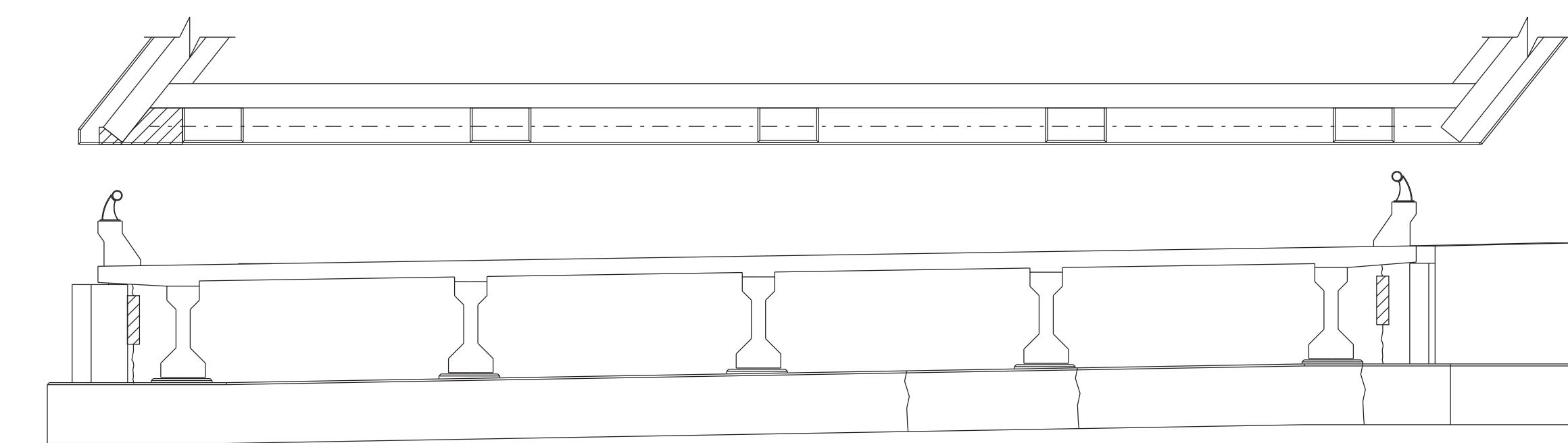
BENT 2
LOOKING AHEAD



BENT 1
LOOKING BACK



BENT 2
LOOKING BACK



ABUTMENT 2
LOOKING AHEAD

CONST. NO.:

PROJECT NO.	YEAR	SHEET NO.
531075-M3-003	2023	

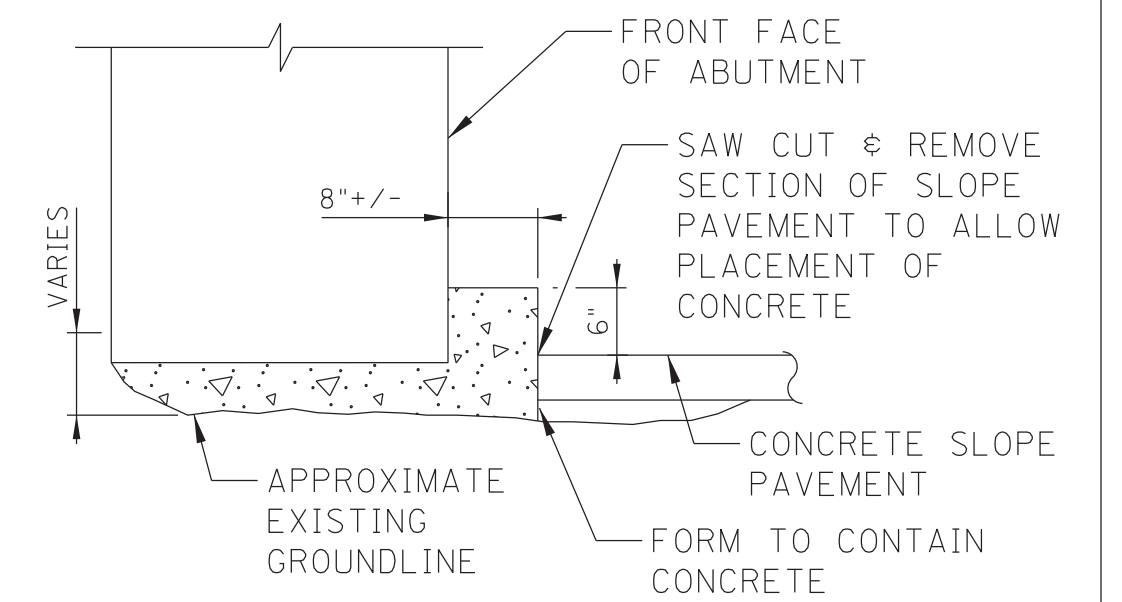
REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION

ESTIMATED QUANTITIES

LOCATION OF REPAIR	ITEM 604-10.05 AND/OR 604-10.54 APPROX. REPAIR AREAS (S.F.)	ITEM 604-10.62 APPROX. REPAIR AREAS (L.F.)	ITEM 604-10.55 APPROX. REPAIR AREAS (C.Y.)
ABUT. 1	8	4	0.5
BENT 1	10	-	-
BENT 2	7	-	-
ABUT. 2	8	8	0.5
TOTAL	33	12	1

- DENOTES AREA TO BE REPAIRED UNDER ITEM NO. 604-10.05 AND/OR 604-10.54. FOR DETAILS SHOWING AREAS OF EXISTING SPALLED OR DELAMINATED CONCRETE SURFACES TO BE REMOVED AND REPAIRED, SEE SHEET BR-132-361.
- DENOTES CRACK TO BE REPAIRED UNDER ITEM NO. 604-10.58 AND 604-10.62. SEE EPOXY INJECTION NOTES ON SHEET BR-132-361.

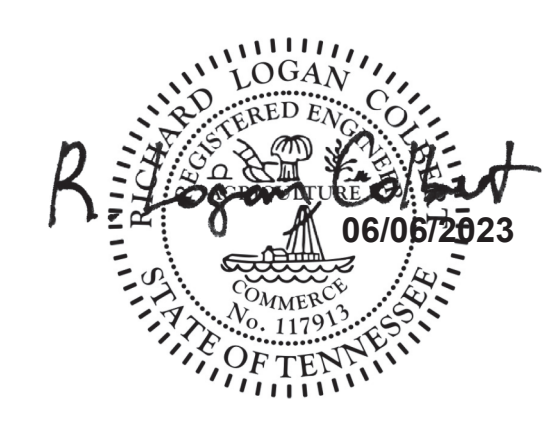


ABUTMENT VOID REPAIR

VOID REPAIR TO BE MADE AT BOTH ABUTMENTS FOR THE FULL ABUTMENT WIDTH.

ALL COSTS ASSOCIATED WITH REPAIR OF VOID AREA, INCLUDING ALL LABOR, EQUIPMENT, AND MISCELLANEOUS MATERIALS, SHALL BE INCLUDED IN ITEM NO. 604-10.55, CONCRETE (FOUNDATION REPAIRS), C.Y.

SEALED BY



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

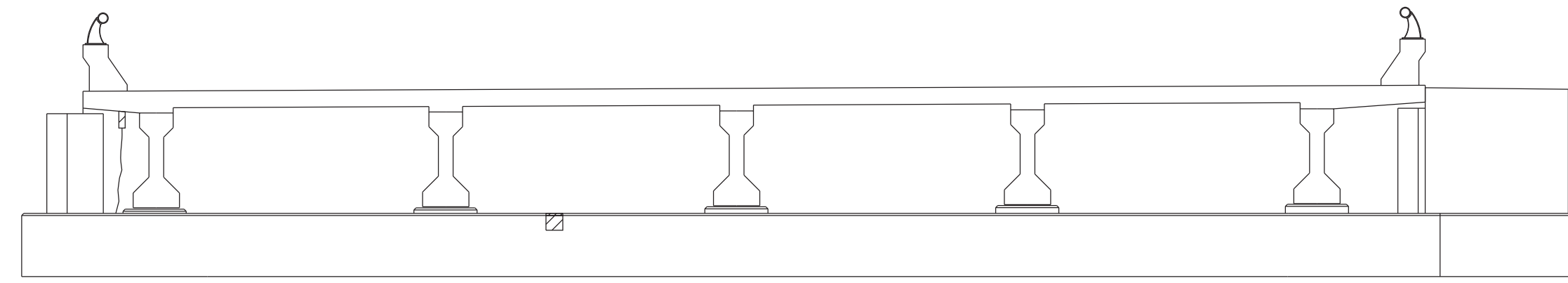
SUBSTRUCTURE REPAIRS (SBL)
 I-75 OVER HOTCHKISS VALLEY ROAD
 BRIDGE NO. 53-175-12.92 L&R
 FED. I.D. NO. 53100750031 & 53100750032
 LOUDON COUNTY
 2023

BR-132-359

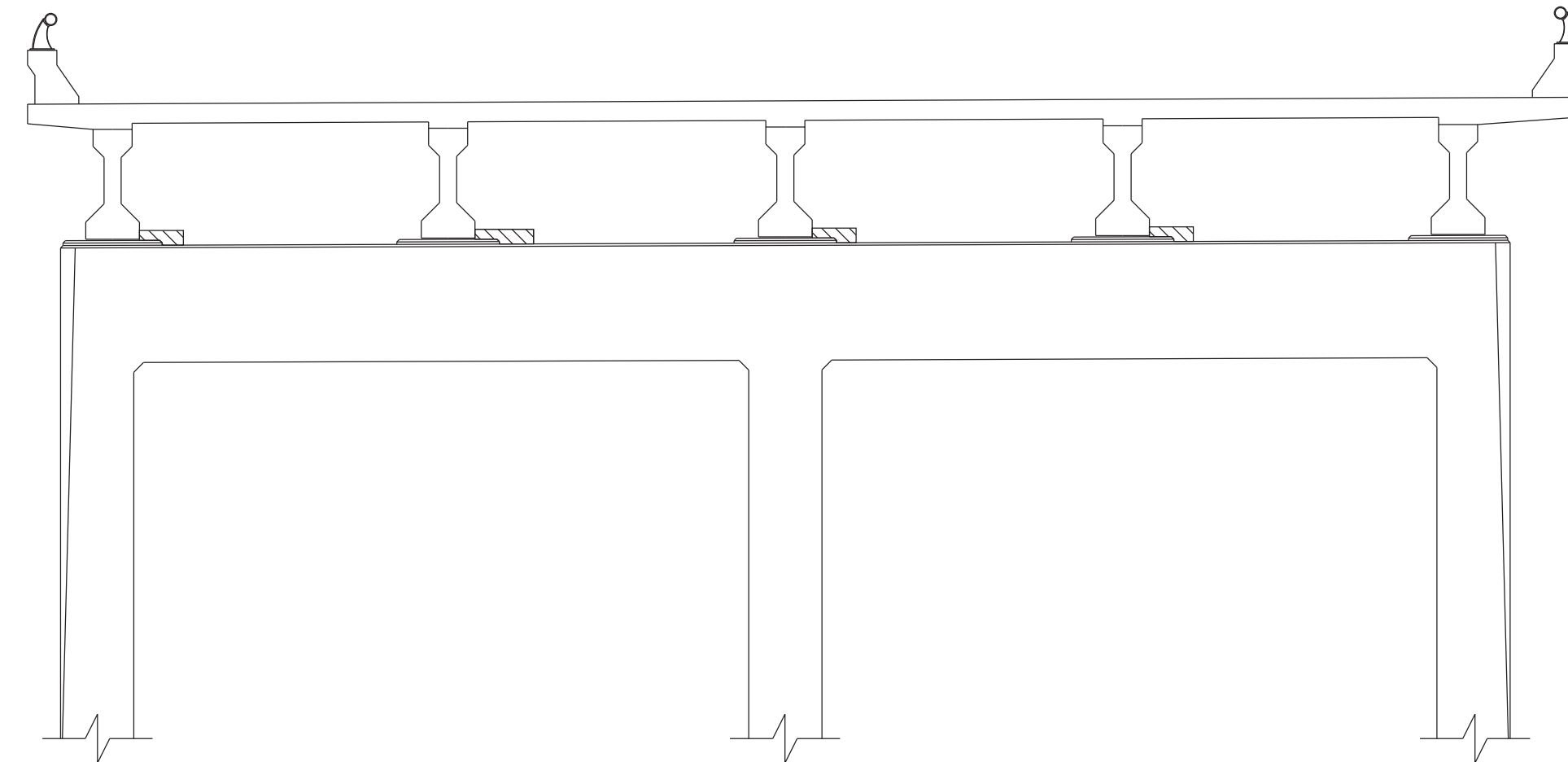
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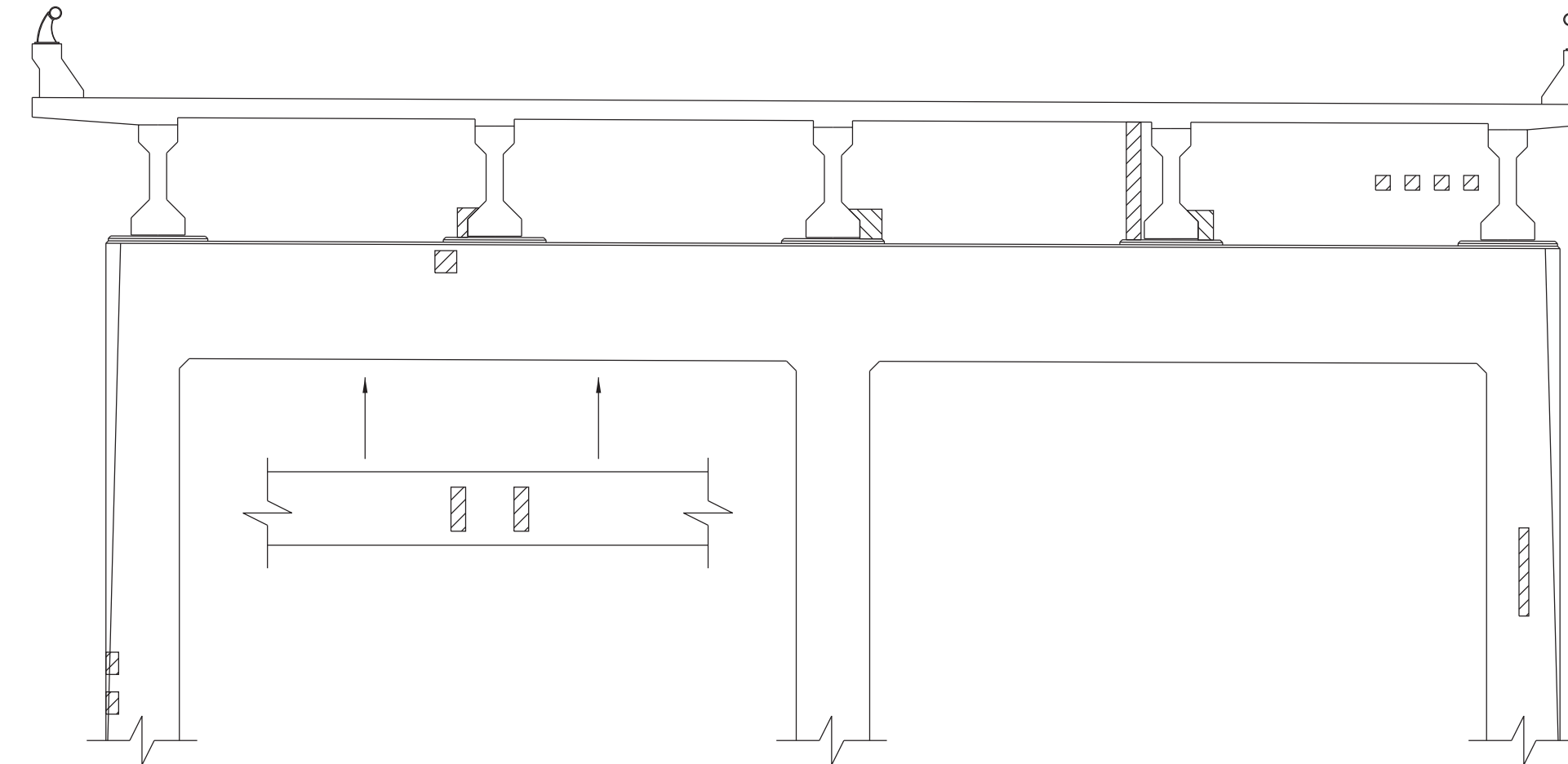
PIN NO.: 133081.00
 DESIGN BY: R.L. COLBERT DATE: 05/2023
 DRAWN BY: M.D. SIMPSON DATE: 05/2023
 SUPERVISED BY: G.S. WILSON DATE: 05/2023
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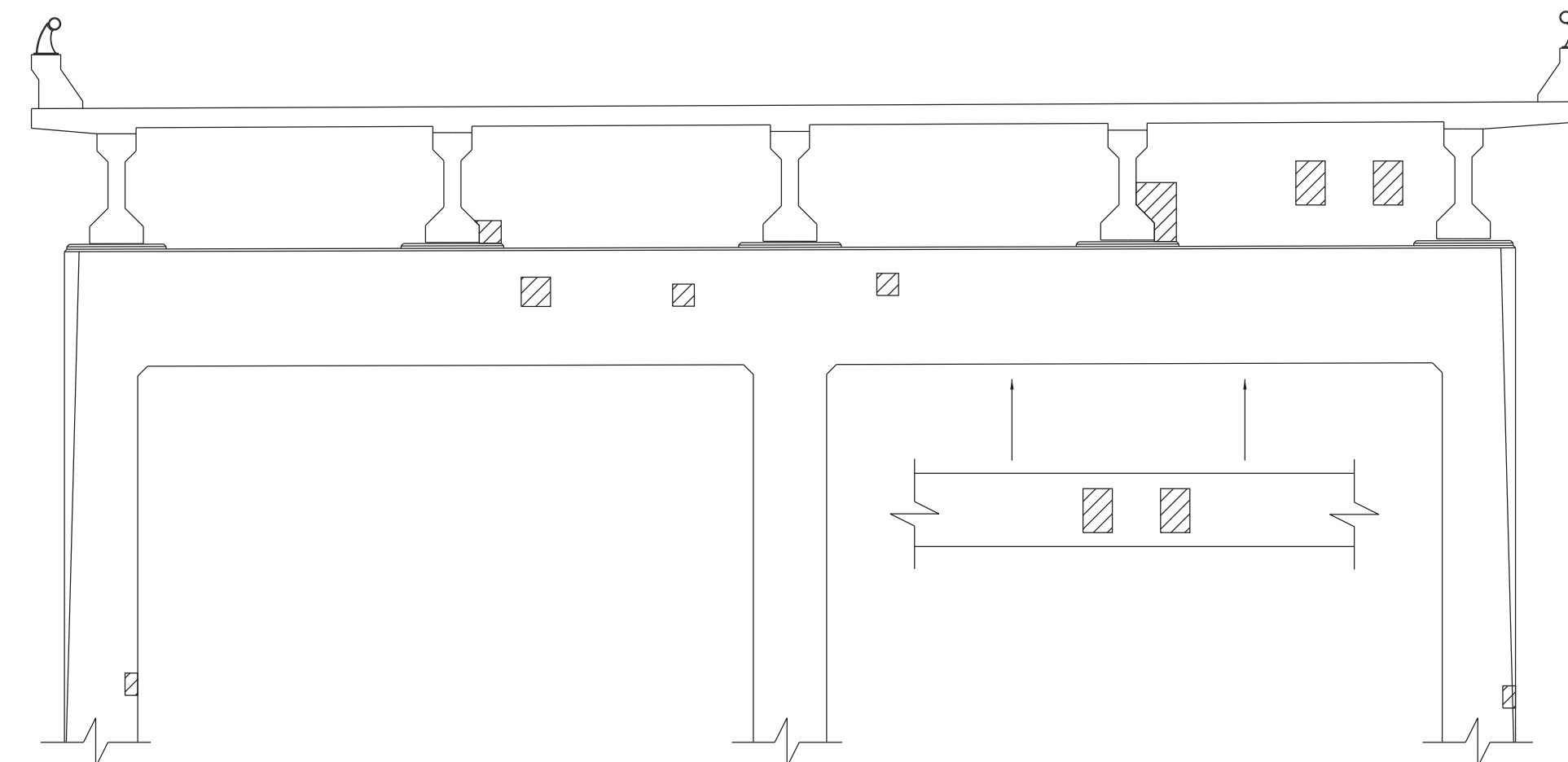
ABUTMENT 1
LOOKING BACK



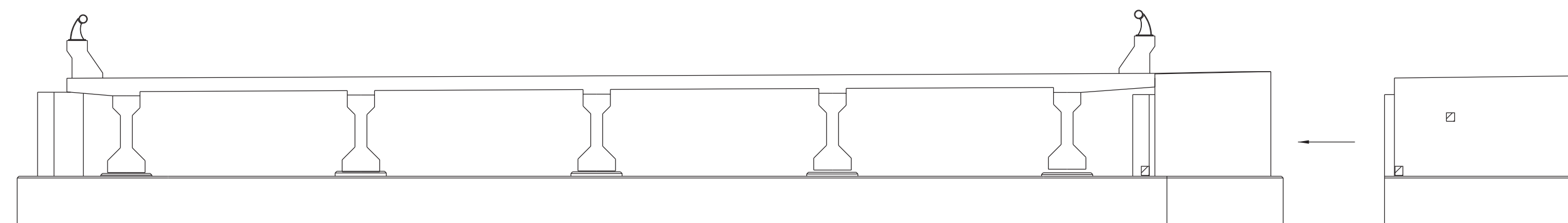
BENT 1
LOOKING AHEAD



BENT 1
LOOKING BACK



BENT 2
LOOKING AHEAD



ABUTMENT 2
LOOKING AHEAD

CONST. NO.:

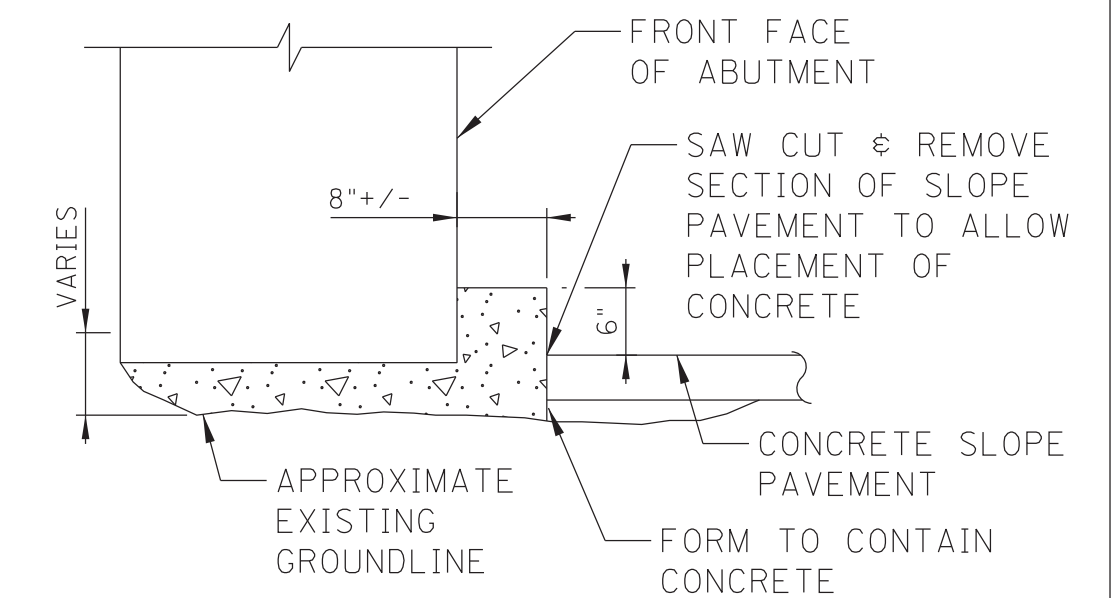
PROJECT NO.	YEAR	SHEET NO.	
531075-M3-003	2023		
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION

ESTIMATED QUANTITIES

LOCATION OF REPAIR	ITEM 604-10.05 AND/OR 604-10.54 APPROX. REPAIR AREAS (S.F.)	ITEM 604-10.62 APPROX. REPAIR AREAS (L.F.)	ITEM 604-10.55 APPROX. REPAIR AREAS (C.Y.)
ABUT. 1	1	4	0.5
BENT 1	10	-	-
BENT 2	8	-	-
ABUT. 2	1	-	0.5
TOTAL	20	4	1

DENOTES AREA TO BE REPAIRED UNDER ITEM NO. 604-10.05 AND/OR 604-10.54. FOR DETAILS SHOWING AREAS OF EXISTING SPALLED OR DELAMINATED CONCRETE SURFACES TO BE REMOVED AND REPAIRED, SEE SHEET BR-132-361.

DENOTES CRACK TO BE REPAIRED UNDER ITEM NO. 604-10.58 AND 604-10.62. SEE EPOXY INJECTION NOTES ON SHEET BR-132-361.

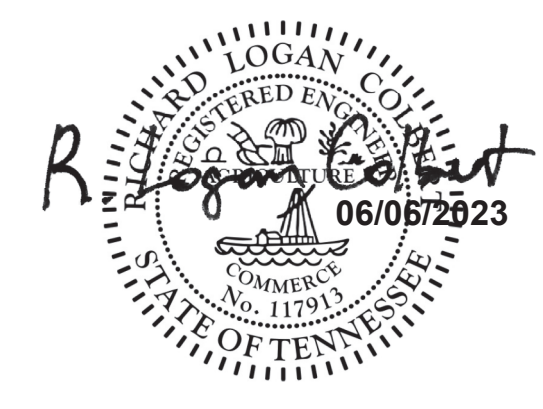


ABUTMENT VOID REPAIR

VOID REPAIR TO BE MADE AT BOTH ABUTMENTS FOR THE FULL ABUTMENT WIDTH.

ALL COSTS ASSOCIATED WITH REPAIR OF VOID AREA, INCLUDING ALL LABOR, EQUIPMENT, AND MISCELLANEOUS MATERIALS, SHALL BE INCLUDED IN ITEM NO. 604-10.55, CONCRETE (FOUNDATION REPAIRS), C.Y.

SEALED BY



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SUBSTRUCTURE REPAIRS (NBL)
I-75 OVER HOTCHKISS VALLEY ROAD
BRIDGE NO. 53-I75-12.92 L&R
FED. I.D. NO. 53100750031 & 53100750032
LOUDON COUNTY
2023

BR-132-360

CONST. NO.:

PROJECT NO.	YEAR	SHEET NO.	
531075-M3-003	2023		
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION

SPECIAL NOTES FOR EPOXY INJECTION

UNLESS OTHERWISE NOTED, THE INTENT OF THIS SPECIFICATION IS FOR DESIGNATED CRACKS TO BE INJECTED THEIR FULL LENGTH AND DEPTH.

DESIGNATED CRACKS SHALL BE INJECTED WITH AN APPROVED EPOXY RESIN ADHESIVE FILLING ALL VOIDS FOR THE CRACK DEPTH OR THICKNESS OF THE MEMBER. THE EPOXY RESIN ADHESIVE SHALL BE ON THE CURRENT QUALIFIED PRODUCTS LIST MAINTAINED BY THE DIVISION OF MATERIALS AND TEST. ALL CRACKS SHALL BE INJECTED USING AN ADHESIVE SUITABLE FOR THE FIELD CONDITIONS (CRACK WIDTH, TEMPERATURE, HUMIDITY, ETC.) RECOMMENDED BY THE ADHESIVE MANUFACTURER AS SHOWN ON MATERIAL DATA SHEETS. FOLLOWING INJECTION, ALL INJECTION PORTS AND CAPPING MATERIAL SHALL BE REMOVED FROM EXPOSED SURFACES LEAVING THE SURFACE SMOOTH AND FLUSH WITH THE SURROUNDING CONCRETE SURFACES. THIS WORK ALSO INCLUDES MAKING ANY EXISTING INJECTION PORTS (FROM A PREVIOUS REPAIR PROJECT) SMOOTH AND FLUSH WITH THE SURROUNDING CONCRETE SURFACES.

THE CONTRACTOR SHALL HAVE SUFFICIENT EXPERIENCE AND TRAINING TO PERFORM THE EPOXY INJECTION IN ACCORDANCE WITH THESE PLANS. PRIOR TO PERFORMING ANY WORK, THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER A WRITTEN PROCEDURE FOR PERFORMING THE EPOXY INJECTION. THE PROCEDURE SHALL DESCRIBE IN DETAIL HOW THE WORK WILL BE PERFORMED. THE PROCEDURE SHALL INCLUDE, BUT NOT BE LIMITED TO THE FOLLOWING INFORMATION:

- 1) DESCRIPTION OF EQUIPMENT.
 - A. THE INJECTION EQUIPMENT SHALL BE OF THE TYPE THAT MIXES ADHESIVE COMPONENTS AT THE INJECTION HEAD.
 - B. THE INJECTION EQUIPMENT SHALL BE CAPABLE OF DISCHARGING MIXED ADHESIVE AT ANY PRESSURE UP TO 300 PSI. THE INJECTION EQUIPMENT SHALL BE EQUIPPED WITH GAUGES WHICH CAN MEASURE THE INJECTION PRESSURE AND VOLUME.
- 2) EQUIPMENT CALIBRATION PROCEDURES AND SCHEDULE.
- 3) MATERIALS TO BE USED (INCLUDING MANUFACTURER DATA SHEETS).
 - A. CAPPING MATERIAL
 - B. EPOXY ADHESIVE (TYPE TO BE APPROPRIATE FOR CRACK SIZES TO BE INJECTED).
- 4) PORT SPACING
 - A. PORT SPACING SHALL NOT BE LESS THAN THE THICKNESS OF THE CONCRETE IN THAT LOCATION.
- 5) INJECTION SEQUENCE
 - A. INJECTION SHALL PROCEED FROM LOWER END OF CRACK ALONG ADJACENT PARTS.
 - B. SKIPPING OF PORTS DURING INJECTION SHALL NOT BE ALLOWED.

THE CONTRACTOR SHALL HAVE THE MANUFACTURER'S INSTRUCTIONS FOR PROPORTIONING AND MIXING AVAILABLE AT THE JOB SITE AT ALL TIMES AND SHALL ENSURE THAT THE EQUIPMENT IS SUPPLYING THE MIXED ADHESIVE IN THE CORRECT PROPORTIONS.

TO ENSURE PROPER MIXING AND PROPORTIONING, SAMPLES SHALL BE TAKEN FROM THE INJECTOR HEAD. SAMPLES SHALL BE TAKEN AT THE START OF EACH WORKDAY AND EACH TIME THE ADHESIVE RESERVOIRS ARE REFILLED. THE SAMPLES SHALL BE IN A TEST CUP. THE SAMPLE SHALL BE MONITORED TO ENSURE THAT THE CURE TIME IS IN COMPLIANCE WITH THE MANUFACTURER'S DATA SHEETS. IF THE SAMPLES DO NOT CURE IN THE SPECIFIED TIME THEN THE EQUIPMENT USED TO PRODUCE THE SAMPLE SHALL NOT BE USED UNTIL THE PROBLEM IS CORRECTED.

CORE SAMPLES SHALL BE TAKEN AS VERIFICATION OF THE QUALITY OF WORK. THE CONTRACTOR SHALL TAKE ONE (1) TWO (2) INCH DIAMETER (FULL DEPTH OF CONCRETE AT LOCATION CORED) CORE SAMPLE STARTING WITH THE FIRST REPAIR LOCATION THEN EVERY TENTH REPAIR LOCATION AFTERWARDS WORK SHALL NOT PROCEED UNTIL THE CORE SAMPLE IS TAKEN AND ACCEPTED. ALL CORE SAMPLES AND HOLES SHALL BE INDEXED FOR FUTURE REFERENCE. THE ENGINEER SHALL DESIGNATE ALL LOCATIONS TO BE CORED. IF ANY CORES SHOW UNACCEPTABLE RESULTS, ALL WORK SHALL BE STOPPED UNTIL THE CONTRACTOR SUBMITS A PROPOSAL FOR CORRECTING UNACCEPTABLE WORK.

THE INITIAL CORE WILL ALSO SERVE TO QUALIFY THE FOREMAN FOR THIS WORK. IF AT ANY TIME A NEW FOREMAN IS USED, HE SHALL BE QUALIFIED WITH A CORE SAMPLE.

THE CONTRACTOR, AT HIS EXPENSE, SHALL REPAIR ALL CORE HOLES WITH AN APPROVED CEMENTITIOUS PATCHING MATERIAL.

CORE SAMPLES SHALL BE VISUALLY INSPECTED TO CONFIRM THAT CRACKS ARE COMPLETELY FILLED WITH ADHESIVE. ANY CORE HAVING LESS THAN 95% OF THE CRACK FILLED WITH ADHESIVE SHALL BE CONSIDERED UNACCEPTABLE AND BE REJECTED.

CORE SAMPLES SHALL BE TESTED FOR BOND STRENGTH. SAMPLES MAY BE FRACTURED BY HAMMER BLOW TO CRACK AREA OR THROWN AT A HARD SURFACE. IF ADHESIVE FAILURE OCCURS BEFORE CONCRETE FAILURE, THE CORE SHALL BE CONSIDERED UNACCEPTABLE AND REJECTED.

PAYMENT FOR EPOXY INJECTION CRACK REPAIR SHALL BE MADE UNDER ITEM NUMBERS:

- 604-10.62, EPOXY INJECTION REPAIR (COMPLETE AND IN PLACE), L.F. AND
- 604-10.58, EPOXY INJECTION (INJECTION), GAL

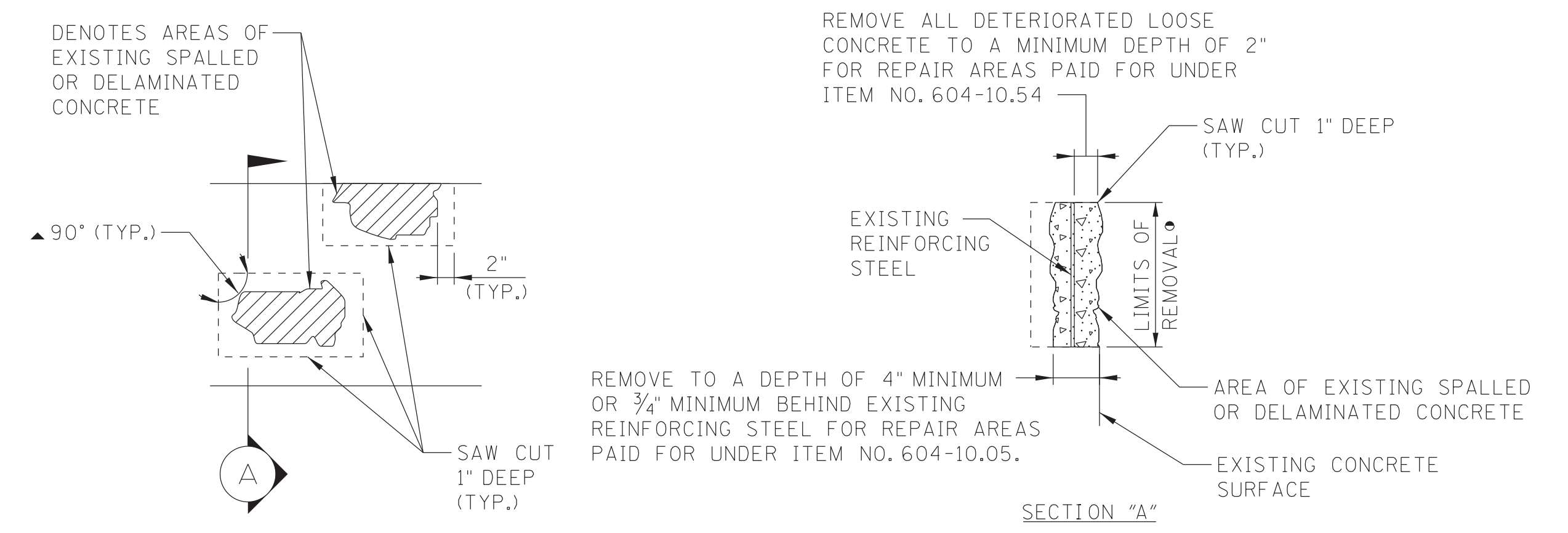
PRICE BID FOR ITEM NUMBER 604-10.62, EPOXY INJECTION REPAIR (COMPLETE AND IN PLACE), L.F., SHALL INCLUDE COST OF ALL LABOR AND MATERIALS (EXCEPT ADHESIVE) FOR GRINDING FOR SURFACE PREPARATION, CRACK PREPARATION, CAPPING, INJECTION OF ADHESIVE, ALL SAMPLING AND TESTING, REMOVAL OF CAPPING MATERIAL AND PORTS, AND OTHER INCIDENTALS. CRACKS SHALL BE MEASURED FOR PAYMENT ALONG THE LENGTH OF THE VISIBLE SURFACE CRACK.

PRICE BID ALSO INCLUDES ALL COSTS ASSOCIATED WITH MAKING THE EXISTING INJECTION PORTS (FROM A PREVIOUS REPAIR PROJECT) SMOOTH AND FLUSH WITH THE SURROUNDING CONCRETE SURFACE.

PRICE BID FOR ITEM NUMBER 604-10.58, EPOXY INJECTION (INJECTION), GAL, SHALL INCLUDE COST FOR ADHESIVE MATERIAL INJECTED ONLY.

NO PAYMENT SHALL BE MADE FOR REWORK DEEMED NECESSARY BY FAILURE OF ADHESIVE SAMPLES OR CORE SAMPLES.

ALL WORK INCLUDING SAMPLING AND TESTING SHALL BE IN THE PRESENCE OF THE ENGINEER OR HIS REPRESENTATIVE OR CONTRACT INSPECTORS. ANY WORK DONE WITHOUT INSPECTORS PRESENT SHALL NOT BE PAID FOR. THE CONTRACTOR SHALL PROVIDE THE ENGINEER WITH WEEKLY SCHEDULES OF WORK TO BE PERFORMED. SCHEDULES SHALL BE SUBMITTED AT LEAST THREE (3) DAYS IN ADVANCE OF WORK TO BE DONE. THE ENGINEER SHALL BE NOTIFIED OF ANY CHANGE IN THE SCHEDULE A MINIMUM OF TWENTY-FOUR (24) HOURS IN ADVANCE OF CHANGE.



DETAILS SHOWING AREAS OF EXIST. SPALLED OR DELAMINATED CONCRETE SURFACES TO BE REMOVED AND REPAIRED

- DENOTES: LIMITS AND LOCATION OF REPAIRS TO BE DESIGNATED BY THE ENGINEER.
- ▲ DENOTES: SAW CUT EXISTING CONCRETE SURFACES SO AS TO OBTAIN SQUARED CORNERS.

EXTREME CARE SHALL BE TAKEN WHEN REMOVING THE EXISTING SPALLED OR DELAMINATED CONCRETE SO AS NOT TO DAMAGE THE EXISTING REINFORCING STEEL. ALL EXPOSED EXISTING REINFORCING STEEL SHALL RECEIVE A COMPLETE CLEANING TO REMOVE ALL RUST. ALL EXISTING REINFORCEMENT SHALL REMAIN IN PLACE. ALL WORK MUST MEET WITH THE FULL APPROVAL OF THE ENGINEER.

THE ENGINEER SHALL HAVE THE OPTION OF DESIGNATING A SPALLED OR DELAMINATED AREA TO BE REPAIRED UNDER ITEM NO. 604-10.05 OR 604-10.54. PATCHING MATERIAL FOR ITEM NO. 604-10.05 SHALL BE HIGH EARLY STRENGTH CONCRETE. PATCHING MATERIAL FOR ITEM NO. 604-10.54 SHALL BE A POLYMER MODIFIED CEMENTITIOUS STRUCTURAL PATCHING MATERIAL. SEE QUALIFIED PRODUCTS LIST (SECTION B, OPL 13.009).

COST OF SAW CUTTING, REMOVING SPALLED OR DELAMINATED CONCRETE, CLEANING, PATCHING MATERIAL, LABOR, AND ANY MISCELLANEOUS MATERIALS NECESSARY TO COMPLETE THE REPAIRS AS SHOWN TO BE INCLUDED IN ITEM NO. 604-10.54, CONCRETE REPAIRS, S.F. OR ITEM NO. 604-10.05, CONCRETE, S.F.

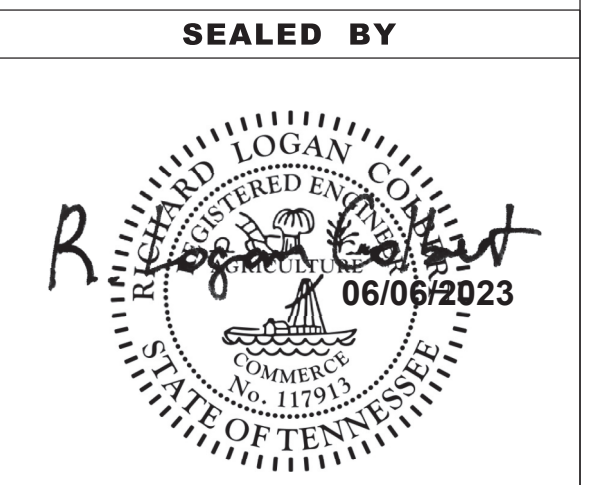
DURING SUBSTRUCTURE REPAIRS, ANY EXISTING REINFORCING STEEL EXHIBITING MORE THAN 20 PERCENT SECTION LOSS SHALL BE REPAIRED. EITHER NEW IN-KIND REINFORCING SHALL BE SPLICED TO THE EXISTING BARS OR THE BARS SHALL BE REPLACED AS DIRECTED BY THE ENGINEER. THE COST OF ANY NEW REINFORCING STEEL REQUIRED TO COMPLETE THE SUBSTRUCTURE REPAIRS SHALL BE INCLUDED IN ITEM NO. 604-10.05, CONCRETE, S.F. ANY DAMAGE TO EXISTING REINFORCING STEEL DURING CONCRETE REMOVAL SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

THE ENGINEER SHALL DESIGNATE ALL SPALLED OR DELAMINATED CONCRETE REPAIR AREAS IN THE FIELD. QUANTITIES GIVEN ARE APPROXIMATE.

POWER DRIVEN HAND TOOLS USED FOR REMOVAL OF UNSOUND CONCRETE ARE SUBJECT TO THE FOLLOWING RESTRICTIONS:

1. PNEUMATIC HAMMERS HEAVIER THAN THE 35 LB. CLASS SHALL NOT BE USED.
2. CHIPPING HAMMERS OF THE 15 LB. CLASS SHALL BE USED TO REMOVE CONCRETE FROM BEHIND REINFORCING STEEL.

PNEUMATICALLY PLACED CONCRETE IS NOT ALLOWED.



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CONCRETE REPAIR DETAILS
I-75 OVER HOTCHKISS VALLEY ROAD
BRIDGE NO. 53-I75-12.92 L&R
FED. I.D. NO. 53100750031 & 53100750032
LOUDON COUNTY
2023

BR-132-361

Palmer ENGINEERING	PIN NO.: 133081.00	
DESIGN BY: R.L. COLBERT	DATE: 05/2023	
DRAWN BY: M.D. SIMPSON	DATE: 05/2023	
SUPERVISED BY: G.S. WILSON	DATE: 05/2023	
CHECKED BY: R.L. COLBERT	DATE: 05/2023	

Index Of Sheets

SIG-1.....	SIGNATURE SHEET
1.....	TITLE SHEET
1A.....	PROJECT COMMITMENTS
2.....	ESTIMATED BRIDGE QUANTITIES & NOTES
2A.....	ESTIMATED ROADWAY QUANTITIES
2B.....	GENERAL AND SPECIAL NOTES
2C.....	ENVIRONMENTAL NOTES
2D.....	UTILITY NOTES
T1-T3.....	TRAFFIC CONTROL PLANS AND NOTES

STATE OF TENNESSEE DEPARTMENT OF TRANSPORTATION BUREAU OF ENGINEERING

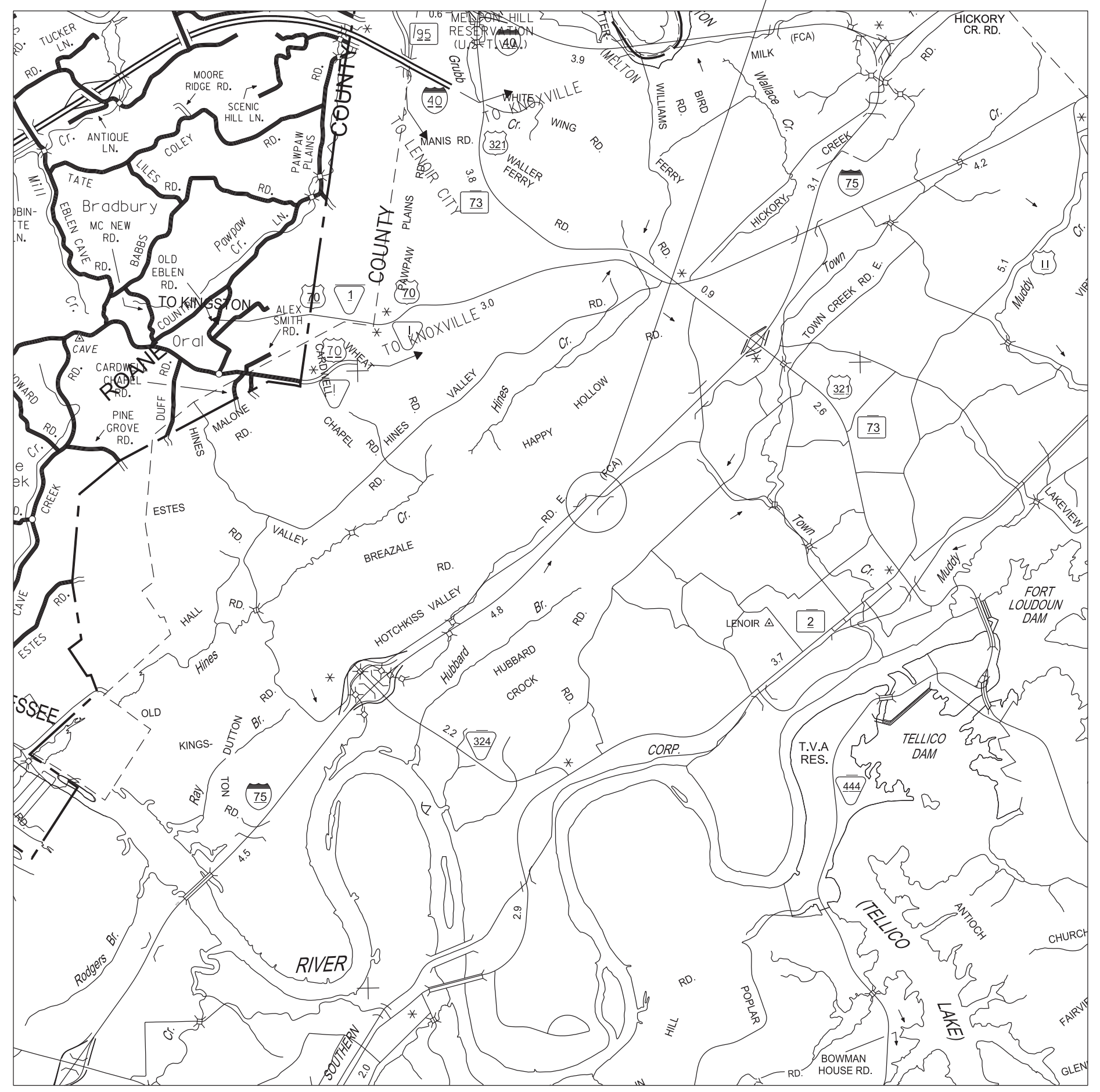
LOUDON COUNTY

BRIDGES (L&R) OVER HOTCHKISS VALLEY ROAD, LM 12.92

BRIDGE REPAIR

INTERSTATE 75

BRIDGE NO: 53-175-12.92 L&R



SCALE: 1" = 1 MILE

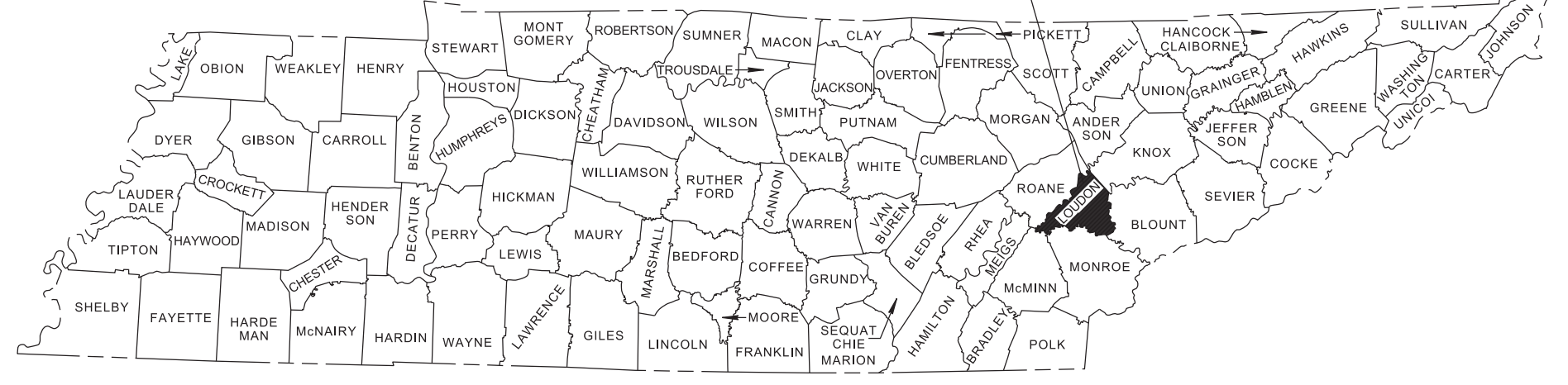
INTERSTATE-75	
AADT (2021)	55,134
POSTED SPEED	70 MPH

HOTCHKISS VALLEY RD.	
AADT (2021)	1,172
POSTED SPEED	35 MPH

TOTAL DISTURBED AREA = 0 ACRES

TENN.	YEAR	SHEET NO.
	2023	1
FED. AID PROJ. NO.		
STATE PROJ. NO.	531075-M3-003	
FED. BRIDGE ID NO.	53100750031 & 53100750032	

PROJECT LOCATION
BRIDGE ID. # 53100750031 & 53100750032



Standard Drawings

DRAWING NO.	CURRENT REVISION DATE	DESCRIPTION
ROADWAY DESIGN STANDARDS		
RD-A-1	02-20-20	STANDARD ABBREVIATIONS A THROUGH L
RD-A-2		STANDARD ABBREVIATIONS M THROUGH Z
RD-L-1	02-20-20	STANDARD LEGEND
RD-L-1A		STANDARD LEGEND
RD-L-5	02-20-20	STANDARD LEGEND FOR EROSION PREVENTION AND SEDIMENT CONTROL

TRAFFIC CONTROL APPURTENANCES

T-M-1	06-28-19	DETAILS OF PAVEMENT MARKINGS FOR CONVENTIONAL ROADS AND MARKING ABBREVIATIONS
T-M-2	06-28-19	DETAILS OF PAVEMENT MARKINGS FOR CONVENTIONAL ROADS
T-S-10	04-04-12	STANDARD MOUNTING DETAILS FLAT SHEET SIGNS ALUMINUM-STEEL DESIGN
T-S-19	06-12-20	STANDARD STEEL SIGN SUPPORTS
T-S-20	07-11-17	SIGN DETAILS
T-WZ-11	03-04-21	ONE LANE CLOSURE DETAIL ON DIVIDED HIGHWAYS
T-WZ-18	03-04-21	SHOULDER CLOSURE DETAIL FOR FREEWAYS AND DIVIDED HIGHWAYS
T-WZ-32	11-30-20	TRAFFIC CONTROL PLAN SIGNAL LAYOUT FOR TRAFFIC SIGNAL AT TWO LANE BRIDGE RECONSTRUCTION SITE
T-WZ-34	09-01-05	TRAFFIC CONTROL PLAN GENERAL NOTES FOR TRAFFIC SIGNAL AT TWO LANE BRIDGE RECONSTRUCTION SITE
T-WZ-35	04-02-12	TRAFFIC CONTROL PLAN PAY ITEM AND SIGN DETAILS FOR TRAFFIC SIGNAL AT TWO LANE BRIDGE RECONSTRUCTION SITE
T-WZ-FAB1		FLASHING YELLOW ARROW BOARD
T-WZ-PCB1	12-09-22	10 FOOT PORTABLE CONCRETE BARRIER RAIL
T-WZ-PCB2	12-09-22	20 FOOT PORTABLE CONCRETE BARRIER RAIL

SAFETY APPURTENANCES

S-CC-1	10-29-21	CRASH CUSHION
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SPECIAL NOTES

PROPOSALS MAY BE REJECTED BY THE COMMISSIONER IF ANY OF THE UNIT PRICES CONTAINED THEREIN ARE OBVIOUSLY UNBALANCED, EITHER EXCESSIVE OR BELOW THE REASONABLE COST ANALYSIS VALUE.

THIS PROJECT TO BE CONSTRUCTED UNDER THE STANDARD SPECIFICATIONS OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION DATED JANUARY 1, 2021 AND ADDITIONAL SPECIFICATIONS AND SPECIAL PROVISIONS CONTAINED IN THE PLANS AND IN THE PROPOSAL CONTRACT.

TDOT REPAIR OFFICE PROJECT MANAGER : ROCKY CHRISTY

DESIGNED BY : PALMER ENGINEERING COMPANY

DESIGNER : LOGAN COLBERT, P.E. CHECKED BY : SCOTT WILSON, P.E.

P.E. NO. 531075-M3-003

PIN NO. 133081.00

LIST OF BRIDGE DRAWINGS

LAYOUT OF BRIDGES TO BE REPAIRED	BR-132-355
ESTIMATED BRIDGE QUANTITIES & NOTES	BR-132-356
SUPERSTRUCTURE	BR-132-357
SUPERSTRUCTURE REPAIRS	BR-132-358
SUBSTRUCTURE REPAIRS (SBL)	BR-132-359
SUBSTRUCTURE REPAIRS (NBL)	BR-132-360
CONCRETE REPAIR DETAILS	BR-132-361

*LIST OF BRIDGE REFERENCE DRAWINGS

(* TO BE PRINTED WITH PLANS)
K-103-11 THRU K-103-25

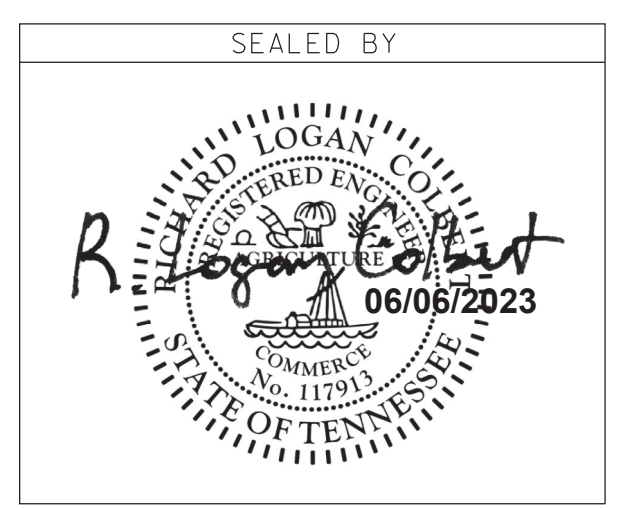
LIST OF SPECIAL PROVISIONS

202ACM REMOVAL OF ASBESTOS CONTAINING MATERIAL (ACM)

APPROVED: 
WILL REID, CHIEF ENGINEER

DATE: _____

APPROVED: 
HOWARD H. ELEY, COMMISSIONER



U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

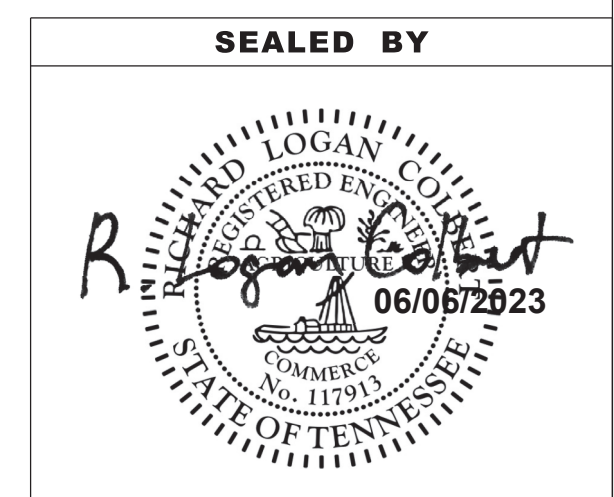
APPROVED: _____
DIVISION ADMINISTRATOR DATE

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TYPE	YEAR	PROJECT NO.	SHEET NO.
BRIDGE REPAIR	2023	531075-M3-003	1A

PROJECT COMMITMENTS			
COMMITMENT ID	SOURCE DIVISION	DESCRIPTION	STA. / LOCATION
EDEC001	ENVIRONMENTAL DIVISION, ECOLOGY	IN ACCORDANCE WITH THE PROGRAMMATIC CONSULTATION BETWEEN USFWS, FHWA, AND TDOT ADDRESSING CLIFF SWALLOW AND BARN SWALLOW NESTING SITES, 09/16/2020, CLIFF SWALLOW AND BARN SWALLOW NESTS, EGGS, OR BIRDS (YOUNG AND ADULTS) WILL NOT BE DISTURBED BETWEEN APRIL 15 AND JULY 31. FROM AUGUST 1 TO APRIL 14, NESTS CAN BE REMOVED OR DESTROYED, AND MEASURES MAY BE IMPLEMENTED TO PREVENT FUTURE NEST BUILDING AT THE SITE.	ENTIRE BRIDGE(S)
EDHZ001	ENVIRONMENTAL DIVISION, HAZARDOUS MATERIALS	ASBESTOS CONTAINING MATERIAL (ACM) SURVEYS WERE COMPLETED ON THE FOLLOWING BRIDGES AND ASBESTOS WAS DETECTED IN THE TEXTURE COATINGS ON ALL BRIDGES. PLEASE SEE THE REPORTS FOR FURTHER DETAILS AND PHOTOGRAPHS. BRIDGE NO. 53100750031 I-75 NB OVER HOTCHKISS VALLEY ROAD LM 12.92 (53-10075-12.92R) HAS 4000 SQUARE FEET OF GRAY TEXTURE COATINGS AT 2% CHRYSOTILE. BRIDGE NO. 53100750032 I-75 SB OVER HOTCHKISS VALLEY ROAD LM 12.92 (53-10075-12.92L) HAS 4000 SQUARE FEET OF GRAY AND WHITE TEXTURE COATINGS AT 2% CHRYSOTILE.	ENTIRE BRIDGE(S)
EDHZ002	ENVIRONMENTAL DIVISION, HAZARDOUS MATERIALS	THE STATE OF TENNESSEE ASBESTOS ACCREDITATION REQUIREMENTS (TDEC RULES CHAPTER 1200-01-20) MANDATES THAT ACM ABATEMENT WORK BE PERFORMED BY AN ACCREDITED FIRM (CONTRACTOR) USING ACCREDITED ABATEMENT WORKERS AND SUPERVISORS. ABATEMENT OF THIS MATERIAL SHALL BE ACCOMPLISHED PER SP202ACM SPECIAL PROVISION REGARDING REMOVAL OF ASBESTOS-CONTAINING MATERIALS. ACM ABATEMENT SHOULD BE COMPLETED PRIOR TO ANY DEMOLITION ACTIVITIES IF POSSIBLE. PRIOR TO THE DEMOLITION OR REHABILITATION OF ANY STRUCTURE (BRIDGE OR BUILDING), THE CONTRACTOR IS REQUIRED TO SUBMIT THE NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS STANDARD 10-DAY NOTICE OF DEMOLITION TO THE TDEC DIVISION OF AIR POLLUTION CONTROL (PER TDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (JANUARY 1, 2021) SECTIONS 107.08D AND 202.03).	ENTIRE BRIDGE(S)

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**STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION**

**PROJECT
COMMITMENTS**

TYPE	YEAR	PROJECT NO.	SHEET NO.
BRIDGE REPAIR	2023	531075-M3-003	2A

ESTIMATED ROADWAY QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	QUANTITY
(1) 411-01.10	ACS MIX(PG64-22) GRADING D	TON	183
415-01.02	COLD PLANING BITUMINOUS PAVEMENT	S.Y.	2566
(2) 712-01	TRAFFIC CONTROL	LS	1
(3) 712-02.10	PORTABLE BARRIER RAIL (MASH TL-3)	L.F.	430
(4) 712-02.60	TEMPORARY WORK ZONE CRASH CUSHION (MASH TL-3)	EACH	2
712-04.01	FLEXIBLE DRUMS (CHANNELIZING)	EACH	111
712-04.50	BARRIER RAIL DELINEATOR	EACH	14
(5) 712-06	SIGNS (CONSTRUCTION)	S.F.	841
712-08.03	ARROW BOARD (TYPE C)	EACH	2
(6) 712-08.10	MOBILE MESSAGE SIGN UNIT W/ATTENUATOR	HOUR	264
712-09.02	REMOVABLE PAVEMENT MARKING (8" BARRIER LINE)	L.F.	1700
712-09.04	REMOVABLE PAVEMENT MARKING (STOP LINE)	L.F.	48
713-16.01	CHANGEABLE MESSAGE SIGN UNIT	EACH	4
713-16.20	SIGNS (VERTICAL CLEARANCE)	EACH	3
716-05.01	PAINTED PAVEMENT MARKING (4" LINE)	L.M.	1
717-01	MOBILIZATION	LS	1
(7) 730-40	TEMPORARY TRAFFIC SIGNAL SYSTEM	EACH	1

FOOTNOTES

(1)	QUANTITY INCLUDES COST OF 1.2 TON OF BITUMINOUS MATERIAL FOR TACK COAT (T.C.) AT RATE OF 0.10 GAL/S.Y. (COLD PLANED AREAS)
(2)	ALL COSTS ASSOCIATED WITH INSTALLING, STORING, AND RE-INSTALLING ALL TRAFFIC CONTROL DEVICES DURING AND BETWEEN THE DIFFERENT TRAFFIC CONTROL PHASES SHALL BE INCLUDED IN THE PRICE BID FOR EACH ITEM. DURING THE TIME BETWEEN DIFFERENT TRAFFIC CONTROL PHASES, THE CONTRACTOR SHALL STORE ALL TRAFFIC CONTROL DEVICES IN A PROPER LOCATION THAT WILL NOT INTERFERE WITH THE TRAFFIC FLOW. ALL WORK MUST MEET THE FULL APPROVAL OF THE TDOT ENGINEER.
(3)	ITEM INCLUDES COST OF INSTALLING AND RELOCATING PORTABLE BARRIER RAIL.
(4)	THIS ITEM SHALL BE A PORTABLE ENERGY ABSORBING TERMINAL MEETING THE REQUIREMENTS OF AASHTO MASH FOR TEST LEVEL 3. THE UNIT BID ITEM WILL INCLUDE FURNISHING AND INSTALLING ALL COMPONENTS AS SHOWN ON THE MANUFACTURER'S DRAWINGS.
(5)	ANY LOSS OR DAMAGE TO THE SIGNS SHALL BE PAID FOR BY THE CONTRACTOR.
(6)	SEE SPECIAL PROVISION SP712PTQ. QUANTITY ASSUMES 2 QUEUE TRUCKS IN EACH DIRECTION AND WORK WILL OCCUR IN BOTH DIRECTIONS AT THE SAME TIME.
(7)	ITEM INCLUDES TEMPORARY SIGNALS AND 2 (TWO) HORIZON (OR APPROVED EQUAL) D.A.D. SIGNALS LOCATED AS SHOWN IN THE TRAFFIC CONTROL PLANS.

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NEW VERTICAL CLEARANCE SIGNS

	<p>ITEM NO. 713-16.20, SIGNS (VERTICAL CLEARANCE), EACH YELLOW FLORESCENT BACKGROUND; BLACK (REF.) COPY 0.100" SHEET ALUMINUM SUPPORT TYPE U3, LENGTH = 13'-0" MINIMUM VERTICAL CLEARANCE = 5'-0"</p> <p>LOCATION = INTERSECTION W/ OLD HWY 95</p>
	<p>ITEM NO. 713-16.20, SIGNS (VERTICAL CLEARANCE), EACH YELLOW FLORESCENT BACKGROUND; BLACK (REF.) COPY 0.100" SHEET ALUMINUM SUPPORT TYPE U3, LENGTH = 13'-0" MINIMUM VERTICAL CLEARANCE = 5'-0"</p> <p>LOCATION = INTERSECTION W/ SUGARLIMB ROAD</p>
	<p>ITEM NO. 713-16.20, SIGNS (VERTICAL CLEARANCE), EACH YELLOW FLORESCENT BACKGROUND; BLACK (REF.) COPY 0.100" SHEET ALUMINUM SUPPORT TYPE U3, LENGTH = 13'-0" MINIMUM VERTICAL CLEARANCE = 5'-0"</p> <p>LOCATION = REPLACEMENT OF EXISTING SIGN ON WEST SIDE OF BRIDGES</p>

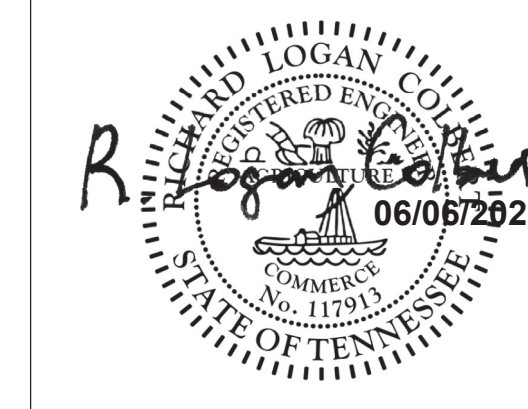
NEW PERMANENT VERTICAL CLEARANCE WARNING SIGNS SHALL BE PLACED ON HOTCHKISS VALLEY ROAD NEAR INTERSECTIONS WITH OLD HWY 95 AND SUGARLIMB ROAD.

ADDITIONALLY, THE EXISTING CLEARANCE SIGN TO THE WEST OF THE BRIDGES SHALL BE REPLACED WITH A NEW SIGN AS DETAILED ABOVE.

THE NEW SIGNS SHALL BE FABRICATED AS DETAILED IN THE "MANUAL FOR UNIFORM TRAFFIC CONTROL DEVICES" (CURRENT EDITION). SIGN POSTS SHALL COMPLY WITH TDOT STANDARD DRAWING T-S-19. ALSO SEE STANDARD DRAWINGS T-S-10 AND T-S-20 FOR MOUNTING AND PLACEMENT DETAILS.

COST OF ALL LABOR, MATERIAL, AND EQUIPMENT TO FABRICATE AND INSTALL NEW SIGNS AND POSTS, AND TO REMOVE AND DISPOSE OF EXISTING SIGN, TO BE INCLUDED IN THE PRICE BID FOR ITEM NO. 713-16.20 SIGNS (VERTICAL CLEARANCE), EACH.

SEALED BY



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

ESTIMATED
ROADWAY
QUANTITIES

TYPE	YEAR	PROJECT NO.	SHEET NO.
BRIDGE REPAIR	2023	531075-M3-003	2B

GENERAL NOTES

GRADING

- (1) ANY AREA THAT IS DISTURBED OUTSIDE LIMITS OF CONSTRUCTION DURING THE LIFE OF THIS PROJECT SHALL BE REPAIRED BY THE CONTRACTOR AT HIS EXPENSE.
- (3) THE CONTRACTOR SHALL NOT DISPOSE OF ANY MATERIAL EITHER ON OR OFF STATE-OWNED R.O.W. IN A REGULATORY FLOOD WAY AS DEFINED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) WITHOUT APPROVAL BY FEMA. ALL MATERIAL SHALL BE DISPOSED OF IN UPLAND (NON-WETLAND) AREAS AND ABOVE ORDINARY HIGH WATER OF ANY ADJACENT WATERCOURSE. THIS DOES NOT ELIMINATE THE NEED TO OBTAIN ANY OTHER LICENSES OR PERMITS THAT MAY BE REQUIRED BY ANY OTHER FEDERAL, STATE OR LOCAL AGENCY.

MISCELLANEOUS

- (3) NOTHING IN THE GENERAL NOTES OR SPECIAL PROVISIONS SHALL RELIEVE THE CONTRACTOR FROM HIS RESPONSIBILITIES TOWARD THE SAFETY AND CONVENIENCE OF THE GENERAL PUBLIC AND THE RESIDENTS ALONG THE PROPOSED CONSTRUCTION AREA.

ROAD CLOSURE

- (1) NO LESS THAN SEVEN (7) DAYS PRIOR TO THE CLOSURE OF THE ROAD, THE CONTRACTOR SHALL NOTIFY THE FOLLOWING INDIVIDUALS OR AGENCIES COMPLETELY DESCRIBING THE AFFECTED ROADS AND THE APPROXIMATE DURATION OF THE CONSTRUCTION: THESE PARTIES INCLUDE, BUT ARE NOT LIMITED TO: (1) LOCAL LAW ENFORCEMENT OFFICE, (2) LOCAL FIRE DEPARTMENT, (3) AMBULANCE SERVICE, (4) LOCAL SCHOOL SUPERINTENDENT, (5) UNITED STATES POSTAL SERVICE, AND (6) LOCAL ROAD SUPERINTENDENT.

PAVEMENT MARKINGS

FINAL PAVEMENT MARKING

- (13) PERMANENT PAVEMENT LINE MARKINGS SHALL BE REFLECTORIZED PAINT INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAY'S WORK. SHORT, UNMARKED SECTIONS SHALL NOT BE ALLOWED. THESE MARKINGS WILL BE MEASURED AND PAID FOR UNDER ITEM NO. 716-05.01, PAINTED PAVEMENT MARKING (4IN LINE), L.M.

DETOURS, LANE SHIFTS AND MEDIAN CROSS-OVERS

- (17) BEFORE OPENING THE LANE SHIFT TO TRAFFIC, THE TRANSITIONAL MARKINGS ON THE EXISTING ROADWAY MUST BE IN PLACE. THESE MARKINGS WILL BE MEASURED AND PAID FOR UNDER ITEM NO. 712-09.02 PER L.F. ALL EXISTING MARKINGS IN THE AREA OF THESE TRANSITIONAL MARKINGS SHALL BE OBLITERATED AND ALL EXISTING RAISED PAVEMENT MARKERS SHALL BE REMOVED TO ELIMINATE CONFLICTING MARKINGS. REMOVAL OF THE EXISTING CONFLICTING MARKINGS AND RAISED PAVEMENT MARKERS WILL NOT BE MEASURED AND PAID FOR DIRECTLY, BUT THE COST WILL BE INCLUDED IN ITEM NO. 712-01, TRAFFIC CONTROL, LUMP SUM.

CONSTRUCTION WORK ZONE & TRAFFIC CONTROL

- (1) ADVANCED WARNING SIGNS SHALL NOT BE DISPLAYED MORE THAN FORTY-EIGHT (48) HOURS BEFORE PHYSICAL CONSTRUCTION BEGINS. SIGNS MAY BE ERECTED UP TO ONE WEEK BEFORE NEEDED, IF THE SIGN FACE IS FULLY COVERED.
- (2) IF THE CONTRACTOR MOVES OFF THE PROJECT, HE SHALL COVER OR REMOVE ALL UNNEEDED SIGNS AS DIRECTED BY THE ENGINEER. COSTS OF REMOVAL, COVERING, AND REINSTALLING SIGNS SHALL NOT BE MEASURED AND PAID FOR SEPARATELY, BUT ALL COSTS SHALL BE INCLUDED IN THE ORIGINAL UNIT PRICE BID FOR ITEM NO. 712-06, SIGNS (CONSTRUCTION) PER SQUARE FOOT.
- (3) A LONG TERM BUT SPORADIC USE WARNING SIGN, SUCH AS A FLAGGER SIGN, MAY REMAIN IN PLACE WHEN NOT REQUIRED PROVIDED THE SIGN FACE IS FULLY COVERED.
- (4) TRAFFIC CONTROL DEVICES SHALL NOT BE DISPLAYED OR ERECTED UNLESS RELATED CONDITIONS ARE PRESENT NECESSITATING WARNING.

- (5) USE OF BARRICADES, PORTABLE BARRIER RAILS, AND DRUMS SHALL BE LIMITED TO THE IMMEDIATE AREAS OF CONSTRUCTION WHERE A HAZARD IS PRESENT. THESE DEVICES SHALL NOT BE STORED ALONG THE ROADWAY WITHIN THIRTY (30) FEET OF THE EDGE OF THE TRAVELED WAY BEFORE OR AFTER USE UNLESS PROTECTED BY GUARDRAIL, BRIDGE RAIL, AND/OR BARRIERS INSTALLED FOR OTHER PURPOSES FOR ROADWAYS WITH CURRENT ADT'S LESS THAN 1500 AND DESIGN SPEED OF LESS THAN 60 MPH. THIS DISTANCE SHALL INCREASE TO FORTY-FIVE (45) FEET FOR ROADWAYS WITH CURRENT ADT'S OF 1500 OR GREATER AND DESIGN SPEED OF 60 MPH OR GREATER OR ON THE OUTSIDE OF A HORIZONTAL CURVE. THESE DEVICES SHALL BE REMOVED FROM THE CONSTRUCTION WORK ZONE WHEN THE ENGINEER DETERMINES THEY ARE NO LONGER NEEDED. WHERE THERE IS INSUFFICIENT RIGHT-OF-WAY TO PROVIDE FOR THIS REQUIRED SETBACK, THE CONTRACTOR SHALL DETERMINE THE ALTERNATE LOCATIONS AND REQUEST THE ENGINEER'S APPROVAL TO USE THEM.
- (6) THE CONTRACTOR SHALL NOT BE PERMITTED TO PARK ANY VEHICLES OR CONSTRUCTION EQUIPMENT DURING PERIODS OF INACTIVITY, WITHIN THIRTY (30) FEET OF THE EDGE OF PAVEMENT WHEN THE LANE IS OPEN TO TRAFFIC UNLESS PROTECTED BY GUARDRAIL, BRIDGE RAIL, AND/OR BARRIERS INSTALLED FOR OTHER PURPOSES FOR ROADWAYS WITH CURRENT ADT'S LESS THAN 1500 AND DESIGN SPEED OF LESS THAN 60 MPH. THIS DISTANCE SHALL BE INCREASED TO FORTY-FIVE (45) FEET FOR ROADWAYS WITH CURRENT ADT'S OF 1500 OR GREATER AND DESIGN SPEED OF 60 MPH OR GREATER OR ON THE OUTSIDE OF A HORIZONTAL CURVE. PRIVATELY OWNED VEHICLES SHALL NOT BE ALLOWED TO PARK WITHIN THIRTY (30) FEET OF AN OPEN TRAFFIC LANE AT ANY TIME UNLESS PROTECTED AS DESCRIBED ABOVE FOR ROADWAYS WITH CURRENT ADT'S LESS THAN 1500 AND DESIGN SPEED OF LESS THAN 60 MPH. THIS DISTANCE SHALL BE INCREASED TO FORTY-FIVE (45) FEET FOR ROADWAYS WITH CURRENT ADT'S OF 1500 OR GREATER AND DESIGN SPEED OF 60 MPH OR GREATER OR ON THE OUTSIDE OF A HORIZONTAL CURVE. WHERE THERE IS INSUFFICIENT RIGHT-OF-WAY TO PROVIDE FOR THIS REQUIRED SETBACK, THE CONTRACTOR SHALL DETERMINE THE ALTERNATE LOCATIONS AND REQUEST THE ENGINEER'S APPROVAL TO USE THEM.
- (7) ALL DETOUR AND CONSTRUCTION SIGNING SHALL BE IN STRICT ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

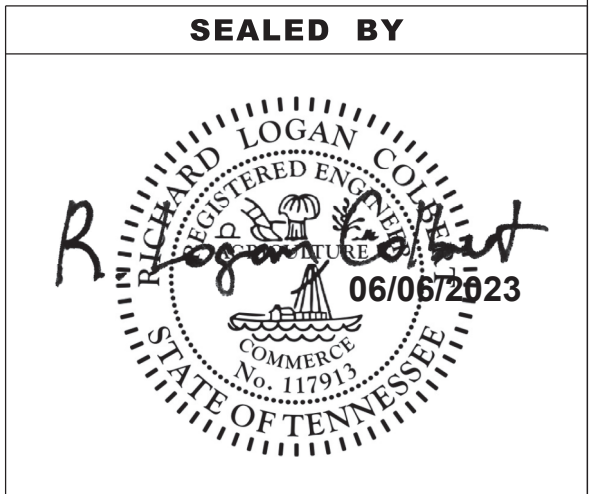
SPECIAL NOTES

DEMOLITION

DEMOLITION, REPAIR, OR REHABILITATION OF BRIDGES

- (1) THE CONTRACTOR SHALL VERIFY THAT AN ASBESTOS SURVEY HAS BEEN COMPLETED PRIOR TO ANY DEMOLITION, REPAIR OR REHABILITATIONS ACTIVITIES (NOT INCLUDING ASPHALT MILLING OR OVERLAY).
- (2) ASBESTOS-CONTAINING MATERIALS (ACM) ABATEMENT IS THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE COMPLETED PRIOR TO ANY DEMOLITION, REPAIR OR REHABILITATION OF BRIDGE(S). ABATEMENT SHOULD BE ACCOMPLISHED PER SP202ACM SPECIAL PROVISION REGARDING REMOVAL OF ASBESTOS-CONTAINING MATERIALS. STATE OF TENNESSEE ASBESTOS ACCREDITATION REQUIREMENTS (TCA 1200-01-20) MANDATE THAT ACM ABATEMENT WORK BE PERFORMED BY AN ACCREDITED FIRM (CONTRACTOR) USING ACCREDITED ABATEMENT WORKERS AND SUPERVISORS.
- (3) THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUBMITTING A NOTICE TO THE TDEC, DIVISION OF AIR POLLUTION CONTROL TEN (10) DAYS IN ADVANCE OF ANY ACM ABATEMENT, DEMOLITION, OR MAJOR REPAIR INVOLVING THE REMOVAL/REPLACEMENT OF A STRUCTURAL COMPONENT.

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

GENERAL AND
SPECIAL NOTES

TYPE	YEAR	PROJECT NO.	SHEET NO.
BRIDGE REPAIR	2023	531075-M3-003	2C

ENVIRONMENTAL NOTES

ENVIRONMENTAL GENERAL NOTES

NATURAL RESOURCES

- (1) SOIL MATERIALS MUST BE PREVENTED FROM ENTERING WATERS OF THE STATE/U.S. EPSC MEASURES TO PROTECT NATURAL RESOURCES AND WATER QUALITY SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD. APPROPRIATE EPSC MEASURES MUST BE INSTALLED ALONG THE BASE OF ALL FILLS AND CUTS, ON THE DOWNHILL SIDE OF STOCKPILED SOIL, AND ALONG NATURAL RESOURCES IN CLEARED AREAS TO PREVENT SEDIMENT MIGRATION INTO STREAMS, WETLANDS OR OTHER NATURAL FEATURES IN ACCORDANCE WITH TDOT STANDARDS. EPSC MEASURES SHALL BE INSTALLED ON THE CONTOUR, ENTRENCHED AND STAKED, AND EXTEND THE WIDTH OF THE AREA TO BE CLEARED.
- (2) NEW CHANNEL CONSTRUCTION SHALL BE COMPLETED IN THE DRY AND STABILIZED FOR AT LEAST 72 HOURS PRIOR TO DIVERTING WATER FROM THE EXISTING AND/OR TEMPORARY CHANNEL.
- (3) INSTREAM EPSC DEVICES REQUIRE THE TDOT ENVIRONMENTAL DIVISION, PERMITS SECTION REVIEW AND MUST BE PROCESSED BY THE PERMITS SECTION TO OBTAIN WATER QUALITY PERMITS.
- (4) THE OPERATION OF EQUIPMENT IN WATERS OF THE STATE/U.S., INCLUDING WETLANDS AND EPHEMERAL, INTERMITTENT, AND PERENNIAL STREAMS, IS NOT ALLOWED.
- (5) THE WIDTH OF THE FILL ASSOCIATED WITH TEMPORARY CROSSINGS SHALL BE LIMITED TO THE MINIMUM NECESSARY FOR THE ACTUAL CROSSING, NOT TO EXCEED THE WIDTH SPECIFIED IN THE STANDARD DRAWING.
- (6) STREAM BEDS SHALL NOT BE USED AS TRANSPORTATION ROUTES FOR CONSTRUCTION EQUIPMENT. TEMPORARY CULVERT CROSSINGS SHALL BE LIMITED TO ONE POINT PER STREAM AND EPSC MEASURES SHALL BE USED WHERE THE STREAM BANKS ARE DISTURBED. WHERE THE STREAMBED IS NOT COMPOSED OF BEDROCK, A PAD OF CLEAN ROCK SHALL BE USED AT THE CROSSING POINT AND CULVERTED TO PREVENT THE IMPOUNDMENT OF WATER FLOW. CLEAN ROCK IS ROCK OF VARIOUS TYPE AND SIZE, DEPENDING UPON APPLICATION, WHICH CONTAINS NO FINES, SOILS, OR OTHER WASTES OR CONTAMINANTS. OTHER MATERIALS USED FOR ALL TEMPORARY FILLS SHALL BE COMPLETELY REMOVED IN THEIR ENTIRETY AFTER THE WORK IS COMPLETED AND THE AFFECTED AREAS RETURNED TO PREEXISTING ELEVATIONS. ALL TEMPORARY CROSSINGS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. DWG. EC-STR-25 UNLESS SPECIFICALLY ADDRESSED IN THE EPSC PLANS. ALTERNATIVELY, PLACING A TEMPORARY BRIDGE (E.G. BAILEY BRIDGE OR EQUIVALENT, TIMBERS, ETC.) FROM TOP OF BANK TO TOP OF BANK OR THE APPROPRIATE USE OF BARGES AT THE CROSSING TO AVOID DISTURBANCE OF THE STREAMBED IS AN ACCEPTABLE OPTION.
- (7) HEAVY EQUIPMENT WORKING IN WETLANDS WITH PERMITTED TEMPORARY IMPACTS SHALL BE PLACED ON MATS, OR OTHER MEASURES MUST BE TAKEN TO MINIMIZE SOIL DISTURBANCE AND COMPACTION UNLESS SPECIFICALLY ADDRESSED IN THE CONSTRUCTION PLANS. ANY MATS AND OTHER MEASURES USED FOR HEAVY EQUIPMENT SHALL BE REMOVED IN THEIR ENTIRETY AFTER THE WORK IS COMPLETED. ALL AFFECTED AREAS SHOULD BE RETURNED TO PRE-EXISTING CONDITIONS.
- (8) WETLANDS SHALL NOT BE USED AS EQUIPMENT STORAGE, STAGING, OR TRANSPORTATION AREAS, UNLESS SPECIFICALLY PROVIDED FOR IN THE CONSTRUCTION PLANS AND PERMITS.
- (9) THE CONTRACTOR SHALL TAKE APPROPRIATE STEPS PRIOR TO ANY CONSTRUCTION AND MAINTENANCE ACTIVITIES TO ENSURE THAT ENVIRONMENTAL FEATURES (E.G., STREAMS, WETLANDS, SPRINGS, ETC.) ARE NOT IMPACTED BEYOND PERMITTED LOCATIONS. IF THE CONTRACTOR OR TDOT INSPECTOR IS UNSURE OF THE IDENTITY OF AN ENVIRONMENTAL FEATURE, THE INSPECTOR SHALL CONTACT THE TDOT REGION ENVIRONMENTAL TECH GROUP IMMEDIATELY.

SPECIES

- (10) NO ACTIVITY MAY SUBSTANTIALLY DISRUPT THE MOVEMENT OF THOSE SPECIES OF AQUATIC LIFE INDIGENOUS TO THE WATER BODY, INCLUDING THOSE SPECIES THAT NORMALLY MIGRATE THROUGH THE AREA.

- (11) SHOULD CLIFF SWALLOW OR BARN SWALLOW NESTS, EGGS, OR BIRDS (YOUNG AND ADULTS) BE PRESENT, THE CONTRACTOR SHALL CONTACT THE REGIONAL ECOLOGY OFFICE TO DETERMINE IF SEASONAL RESTRICTIONS WILL BE NECESSARY. GENERALLY, BIRDS, NESTS, AND EGGS MAY NOT BE DISTURBED BETWEEN APRIL 15 AND JULY 31. FROM AUGUST 1 TO APRIL 14, NESTS CAN BE REMOVED OR DESTROYED SO LONG AS BIRDS OR EGGS ARE NOT PRESENT, AND MEASURES IMPLEMENTED TO PREVENT FUTURE NEST BUILDING AT THE SITE (I.E., CLOSING OFF AREA USING NETTING).
- (12) IF THE REMOVAL OF ANY TREES WITH A DIAMETER AT BREAST HEIGHT (DBH) GREATER THAN 3 INCHES IS DEEMED NECESSARY THE TDOT SUPERVISOR SHALL CONTACT THE TDOT ENVIRONMENTAL DIVISION, ECOLOGY SECTION IMMEDIATELY.

PERMITS, PLANS & RECORDS

- (13) THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR AND OBTAIN ANY NECESSARY ENVIRONMENTAL PERMITS OR APPROVALS, INCLUDING BUT NOT LIMITED TO ARCHAEOLOGY, ECOLOGY, HISTORICAL, HAZARDOUS MATERIALS, AIR AND NOISE, TDEC ARAP/401, USACE SECTION 404, TVA SECTION 26A, AND TDEC NPDES PERMITS, FROM FEDERAL, STATE AND/OR LOCAL AGENCIES REGARDING ANY MATERIAL AND STAGING AREAS AND THE OPERATION OF ANY PROJECT-DEDICATED ASPHALT AND/OR CONCRETE PLANTS TO BE USED. ANY SUCH PERMITS SHALL BE SUPPLIED TO THE TDOT PROJECT RESPONSIBLE PARTY PRIOR TO THE USE OF THE PERMITTED AREA(S).
- (14) ANY DISAGREEMENT BETWEEN THE CONSTRUCTION PLANS, THE PROJECT AS CONSTRUCTED, AND THE PERMIT(S) ISSUED FOR THE PROJECT, SHALL BE BROUGHT TO THE ATTENTION OF THE TDOT PROJECT RESPONSIBLE PARTY. THE ENVIRONMENTAL DIVISION, DESIGN DIVISION, AND HEADQUARTERS CONSTRUCTION OFFICE SHALL BE CONTACTED IN THESE INSTANCES AND DECIDE WHICH HAS PRECEDENCE AND WHETHER PERMIT OR PLANS REVISIONS ARE NEEDED. IN GENERAL, PERMIT CONDITIONS WILL PREVAIL.
- (15) IF A CHANGE IN PROJECT SCOPE OCCURS DURING CONSTRUCTION, INCLUDING VALUE ENGINEERING, THE TDOT PERMIT SECTION SHALL BE CONTACTED TO DETERMINE WHETHER PERMIT REVISIONS ARE NEEDED. THE ROADWAY DESIGN DIVISION SHALL BE CONTACTED TO DETERMINE IF ANY PLAN REVISIONS ARE NEEDED.
- (16) THE CONTRACTOR SHALL REVIEW ALL EXISTING PERMITS TO ENSURE THAT WORK AT PERMITTED SITES DOES NOT EXCEED EXPIRATION DATE. IF WORK IS GOING TO BE CONTINUED AFTER EXPIRATION DATES, THE CONTRACTOR SHALL CONTACT THE TDOT PROJECT RESPONSIBLE PARTY TO COMMENCE PERMIT RENEWAL PROCESS.
- (17) ALL WATER QUALITY PERMITS SHALL BE POSTED NEAR THE MAIN ENTRANCE OF THE CONSTRUCTION SITE ACCESSIBLE TO THE PUBLIC. THE NAME, COMPANY NAME, EMAIL ADDRESS, TELEPHONE NUMBER AND ADDRESS OF THE PROJECT SITE OWNER, OPERATOR, OR A LOCAL CONTACT PERSON WITH A BRIEF DESCRIPTION OF THE PROJECT SHALL ALSO BE POSTED. IF POSTING THIS INFORMATION NEAR A MAIN ENTRANCE IS INFEASIBLE, THE INFORMATION SHALL BE PLACED IN A PUBLICLY ACCESSIBLE LOCATION NEAR WHERE THE CONSTRUCTION IS ACTIVELY UNDERWAY AND MOVED AS NECESSARY. THIS LOCATION SHALL BE POSTED AT THE CONSTRUCTION SITE. ALL POSTINGS SHALL BE MAINTAINED IN LEGIBLE CONDITION.

SUPPORT ACTIVITIES

- (18) MATERIALS AND STAGING AREAS SHALL NOT AFFECT ANY WATERS OF THE STATE/U.S. UNLESS THESE AREAS ARE SPECIFICALLY COVERED BY ENVIRONMENTAL PERMITS, OBTAINED SOLELY BY THE CONTRACTOR. THE CONTRACTOR SHALL REVIEW ALL EXISTING PERMITS TO ENSURE THAT WORK AT PERMITTED SITES DOES NOT EXCEED EXPIRATION DATES. IF WORK IS GOING TO BE CONTINUED AFTER EXPIRATION DATES, THE CONTRACTOR SHALL CONTACT THE TDOT PROJECT RESPONSIBLE PARTY TO COMMENCE PERMIT RENEWAL PROCESS.

ENVIRONMENTAL SPECIAL NOTES

ENVIRONMENTAL

- (1) STAFF FROM THE TDOT ENVIRONMENTAL DIVISION COMPLIANCE AND FIELD SERVICES OFFICE SHALL BE INVITED TO ALL PRE-CONSTRUCTION MEETINGS.

ECOLOGY

- (2) STAFF FROM THE TDOT ENVIRONMENTAL DIVISION OR A DESIGNEE SHALL ADVISE THE CONTRACTOR DURING THE PRE-CONSTRUCTION MEETING WHEN ENVIRONMENTAL DIVISION PERSONNEL OR A DESIGNATED CONSULTANT WILL NEED TO BE ONSITE FOR WORK BEING DONE WHICH COULD AFFECT WATERS OF THE STATE/U.S. OR SPECIES.
- (3) STAFF FROM THE TDOT ENVIRONMENTAL DIVISION OR A DESIGNEE SHALL ATTEND THE PRE-CONSTRUCTION MEETING FOR ALL PROJECTS WHICH HAVE THREATENED OR ENDANGERED SPECIES OR CRITICAL HABITAT PROXIMAL TO SCHEDULED WORK. THIS WILL PROVIDE THE OPPORTUNITY TO ENSURE THAT PERSONNEL INCLUDING THE CONTRACTOR'S PERSONNEL AND SUBCONTRACTORS ARE MADE AWARE OF THE NECESSARY PRECAUTIONS THAT MUST BE FOLLOWED.
- (4) ALL PROJECTS WITH LEGALLY PROTECTED SPECIES OR CRITICAL HABITAT IDENTIFIED SHALL HAVE MEASURES IN PLACE TO CONTAIN CONCRETE DUST, CEMENT DUST AND ALL OTHER MATERIALS. THESE MATERIALS ARE NOT ALLOWED TO ENTER WATERS OF THE STATE/U.S.

PROJECT COMMITMENTS

- (5) SEE PROJECT COMMITMENTS, SHEET 1A, FOR DETAILS RELATING TO SPECIAL ENVIRONMENTAL COMMITMENTS REQUIRED BY THIS PROJECT.

SCOPE OF WORK

- (6) SEE SHEET BR-132-355 FOR PROJECT SCOPE OF WORK.

SPECIAL NOTE TO CONTRACTOR

- (7) CONTRACTOR SHALL USE EXTREME CARE AND TAKE ANY MEASURE NECESSARY TO ENSURE THAT NO DEBRIS IS DROPPED INTO THE STREAM. THIS SHALL BE ACCOMPLISHED BY THE USE OF BASKETS, NETTING, WRAPPING, WORK PLATFORM, OR OTHER SIMILARLY EFFECTIVE MEANS. ANY DEBRIS WHICH IS ALLOWED TO DROP ON THE BANKS BELOW THE BRIDGE SHALL NOT BE ALLOWED TO ENTER THE STREAM AND SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR. COST OF REMOVING AND DISPOSING OF DEBRIS SHALL BE INCLUDED IN ITEMS BID ON.

SEALED BY



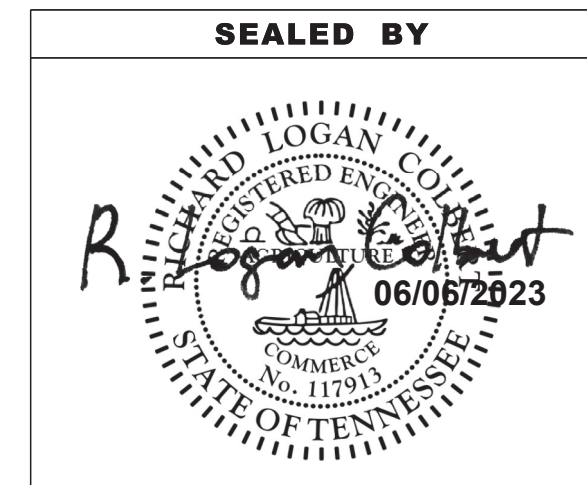
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

ENVIRONMENTAL
NOTES

TYPE	YEAR	PROJECT NO.	SHEET NO.
BRIDGE REPAIR	2023	531075-M3-003	2D

UTILITY NOTES

- (1) THE LOCATIONS OF UTILITIES SHOWN WITHIN THESE PLANS ARE APPROXIMATE ONLY. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES. ABOVE GRADE AND UNDERGROUND UTILITIES SHOWN WERE TAKEN FROM VISIBLE APPURTENANCES AT THE SITE, PUBLIC RECORDS, AND/OR MAPS PREPARED BY OTHERS. THEREFORE, RELIANCE UPON THE TYPE, SIZE, AND LOCATION OF UTILITIES SHOWN SHOULD BE DONE SO WITH THIS CIRCUMSTANCE CONSIDERED. DETAILED VERIFICATION OF EXISTENCE, LOCATION, AND DEPTH SHOULD ALSO BE MADE PRIOR TO ANY DECISION RELATIVE THERETO IS MADE. AVAILABILITY AND COST OF SERVICE SHOULD BE CONFIRMED WITH THE APPROPRIATE UTILITY COMPANY. IN TENNESSEE, IT IS A REQUIREMENT, PER "THE UNDERGROUND UTILITY DAMAGE PREVENTION ACT", THAT ANYONE WHO ENGAGES IN EXCAVATION MUST NOTIFY ALL KNOWN UNDERGROUND UTILITY OWNERS, NO LESS THAN THREE (3) OR NOT MORE THAN TEN (10) WORKING DAYS PRIOR TO THE DATE OF THEIR INTENT TO EXCAVATE AND ALSO TO AVOID ANY POSSIBLE HAZARD OR CONFLICT. NOTIFICATION BY CALLING THE TENNESSEE ONE CALL SYSTEM, INC., AT 1-800-351-1111 AS REQUIRED BY TCA 65-31-106 WILL BE REQUIRED.
- (2) UNLESS OTHERWISE NOTED, ALL UTILITY ADJUSTMENTS WILL BE PERFORMED BY THE UTILITY OR ITS REPRESENTATIVE. THE CONTRACTOR AND UTILITY OWNERS WILL BE REQUIRED TO COOPERATE WITH EACH OTHER IN ORDER TO EXPEDITE THE WORK REQUIRED BY THIS CONTRACT. ON CONTRACTS WHERE CONSTRUCTION STAKES, LINES, AND GRADES ARE CONTRACT ITEMS, THE CONTRACTOR WILL BE REQUIRED TO PROVIDE RIGHT-OF-WAY OR SLOPE STAKES, DITCH OR STREAM BED GRADES, OR OTHER ESSENTIAL SURVEY STAKING TO PREVENT CONFLICTS WITH THE HIGHWAY CONSTRUCTION. FREQUENTLY, THIS WILL BE REQUIRED AS THE FIRST ITEM OF WORK AND AT ANY LOCATION ON THE PROJECT DIRECTED BY THE ENGINEER.
- (3) THE CONTRACTOR WILL PROVIDE ALL NECESSARY PROTECTIVE MEASURES TO SAFEGUARD EXISTING UTILITIES FROM DAMAGE DURING CONSTRUCTION OF THIS PROJECT. IN THE EVENT THAT SPECIAL EQUIPMENT IS REQUIRED TO WORK OVER AND AROUND THE UTILITIES, THE CONTRACTOR WILL BE REQUIRED TO FURNISH SUCH EQUIPMENT. THE COST OF PROTECTING UTILITIES FROM DAMAGE AND FURNISHING SPECIAL EQUIPMENT WILL BE INCLUDED IN THE PRICE BID FOR OTHER ITEMS OF CONSTRUCTION.
- (4) PRIOR TO SUBMITTING HIS BID, THE CONTRACTOR WILL BE SOLELY RESPONSIBLE FOR CONTACTING OWNERS OF ALL AFFECTED UTILITIES IN ORDER TO DETERMINE THE EXTENT TO WHICH UTILITY RELOCATIONS AND/OR ADJUSTMENTS WILL HAVE UPON THE SCHEDULE OF WORK FOR THE PROJECT. WHILE SOME WORK MAY BE REQUIRED 'AROUND' UTILITY FACILITIES THAT WILL REMAIN IN PLACE, OTHER UTILITY FACILITIES MAY NEED TO BE ADJUSTED CONCURRENTLY WITH THE CONTRACTOR'S OPERATIONS. ADVANCE CLEAR CUTTING MAY BE REQUIRED BY THE ENGINEER AT ANY LOCATION WHERE CLEARING IS CALLED FOR IN THE SPECIFICATIONS AND CLEAR CUTTING IS NECESSARY FOR A UTILITY RELOCATION. ANY ADDITIONAL COST WILL BE INCLUDED IN THE UNIT PRICE BID FOR THE CLEARING ITEM SPECIFIED IN THE PLANS.
- (5) THE CONTRACTOR SHALL NOTIFY EACH INDIVIDUAL UTILITY OWNER OF HIS PLAN OF OPERATION IN THE AREA OF THE UTILITIES. PRIOR TO COMMENCING WORK, THE CONTRACTOR SHALL CONTACT THE UTILITY OWNERS AND REQUEST THEM TO PROPERLY LOCATE THEIR RESPECTIVE UTILITY ON THE GROUND. THIS NOTIFICATION SHALL BE GIVEN AT LEAST THREE (3) BUSINESS DAYS PRIOR TO COMMENCEMENT OF OPERATIONS AROUND THE UTILITY IN ACCORDANCE WITH TCA 65-31-106. NOTIFICATION BY CALLING THE TENNESSEE ONE CALL SYSTEM, INC AT 1-800-351-1111 WILL BE REQUIRED.



**STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION**

UTILITY NOTES

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LIST OF DRAWINGS

LAYOUT OF BRIDGES
 PLAN AND ELEVATION BRIDGE NO. 3A
 PLAN AND ELEVATION BRIDGE NO. 3B
 ABUTMENTS BRIDGE NO. 3A
 ABUTMENTS BRIDGE NO. 3B
 ABUTMENTS
 ABUTMENT DETAILS
 BENTS BRIDGE NO. 3A
 BENTS BRIDGE NO. 3B
 Superstructure Details Bridge No. 3A
 Superstructure Details Bridge No. 3A
 Superstructure Details Bridge No. 3B
 Superstructure Details Bridge No. 3B

K-103-11 SLAB REINF. AND PREST. BEAMS
 K-103-12 PRESTRESSED BEAM DETAILS
 K-103-13 REINFORCING STEEL SCHEDULE BR. NO. 3A
 K-103-14 REINFORCING STEEL SCHEDULE BR. NO. 3B
 K-103-15 BRIDGERAILING CONC. PARAPET W/STR. TUBING
 K-103-16 STANDARD PILE SPLICE DETAILS
 K-103-17 STANDARD REINFORCING BAR SUPPORT
 K-103-18 DETAILS
 K-103-19 STANDARD DRAWING REINFORCED
 K-103-20 CONCRETE PAVEMENT AT BRIDGE END
 K-103-21 MISC. ABUTMENT AND DRAINAGE DETAILS
 K-103-22
 K-103-23
 K-103-24
 K-103-25
 K-103-26
 K-103-27
 K-38-154A
 H-5-111
 K-80-14
 K-86-144
 K-85-150

FED. ROAD DIST. NO.	TENN	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
3			52	496
FED. AID PROJ. NO.		I-75-2(9)74		
STATE PROJ. NO.		5-27-72 BR		

ESTIMATED QUANTITIES

ITEM NO.	ITEM	EXCAVATION CU. YDS.		CONCRETE CLASS 'A' CU. YDS.	REINF. STEEL LBS.	HP10x42 PILES LIN. FT.	PARAPET RAILING LIN. FT.	PRESTRESSED CONCRETE I-BEAM TYPE II LIN. FT.	LINSEED OIL TREATMENT SQ. YDS.	6" PERFORATED C.M. PIPE 18 GA. BACKFILL MATERIAL LIN. FT.	6" C.M. PIPE (18 GA.) LIN. FT.
		DRY	Rock								
BRIDGE 3A SOUTHBOUND	Superstructure	-	-	216.2	74,431	-	305	747	892	-	-
	Abutment No. 1 #	62	-	66.8	15,748	440	-	-	-	141	65
	Bent No. 1	57	-	41.4	8,949	238	-	-	-	-	-
	Bent No. 2	63	-	41.4	8,949	280	-	-	-	-	-
	Abutment No. 2 #	62	-	67.9	15,620	530	-	-	-	141	65
Totals	244	-	433.7	123,697	1488	305	747	1174	130	30	
BRIDGE 3B NORTHBOUND	Superstructure	-	-	215.3	74,518	-	305	748	892	-	-
	Abutment No. 1 #	62	-	66.4	15,685	430	-	-	-	63	17
	Bent No. 1	55	-	40.7	8,829	252	-	-	-	-	-
	Bent No. 2	58	-	40.7	8,829	224	-	-	-	-	-
	Abutment No. 2 #	62	-	67.8	15,557	420	-	-	-	141	63
Totals	237	-	430.9	123,418	1326	305	748	1174	126	34	
Totals Both Bridges		481	-	864.6	247,115	2814	610	1495	2348*	256	64

Excavation based on lower road profile.
 The cost of 24 threaded steel inserts and 24-1/8" x 4" hex head bolts (A307) to be included in bridge items bid on.
 Bridge Deck Segments: The bridge deck and roadway approach slabs shall be settled in accordance with the special provision regarding...
 The cost of Bituminous-Fiberboard and all miscellaneous Joint Material to be included in bridge items bid on.
 The cost of Rubber Bonding Cement, Elastomeric Pads and dowel bars to be included in the cost of Prestressed Beams.
 * The Wing Post Quantities on the Abutments & Conc. Pavt. at Bridge End Quantities are included in the Abutment Quantities. Quantities include 167.3 cu. yds. Cl. A Conc.; 45,864 lbs. Reinf. Steel; 240 lin. ft. HP10x42; and 564 sq. yds. Linseed Oil Treatment.

GENERAL NOTES: SPECIFICATIONS: Standard Road and Bridge Specifications of the Tennessee Department of Highways (1968 Edition).

LOADING: HS20-44 with Alternate Military Loading.

DESIGN SPECIFICATIONS: A.A.S.H.O. 1969 Edition with addenda.

CONCRETE: To be Class 'A' f'c = 3,000 p.s.i. cast in place. See Special Provision regarding Sec. 604 concrete Structures

REINFORCING STEEL: To be ASTM A615, Gr. 40. Std. CRSI hook details apply unless otherwise noted on Bill of Steel. Bending dimensions shown are based on Grade 40. Spacing dimensions are center to center unless otherwise noted on detail drawings.

JOINT SEALER: See Special Provisions, Type II, Class 'A' or 'B'.

PILE NOTE: Piles to be HP10x42 driven to refusal on rock or a minimum bearing of 42 Tons for the bents and 30 Tons for the Abutments.

SPECIAL NOTE: Foundations for bents shall be excavated to the pile cut-off elevations shown; rod soundings shall then be made as directed by the Engineer. From the results obtained the Bridge Engineer will decide if piles will be used or the footings carried to rock. Cost of rod sounding to be included in items bid on.

BRIDGE RAIL NOTE: Build Bridge Rail according to Standard Drawing K-38-154A. Dimensions shown are measured along centerline of base plates.

ELASTOMETRIC BEARING PAD: See Tennessee Standard Specifications Section 908.13.

LINSEED OIL PROTECTIVE TREATMENT: Surface receiving a Textured Coated Finish shall not receive a Linseed Oil Treatment. See Special Provisions Regarding Sec. 604 Concrete Structures and Linseed Oil Treatment Quantity Note this Sheet.

FINISHING CONCRETE SURFACES: Concrete finishing shall be in accordance with Section 604.22 of the Tenn. Std. Spec. except as modified by the Special Provision Regarding Section 604 Concrete Structures. A Textured Coated Finish shall be used in lieu of a Class 2 Finish. The color of the finish shall be similar to Polomino Biege and a color sample shall be submitted to the Bridge Engineer for approval. The cost of Finishing Concrete Surfaces is to be included in the cost of Class A Concrete.

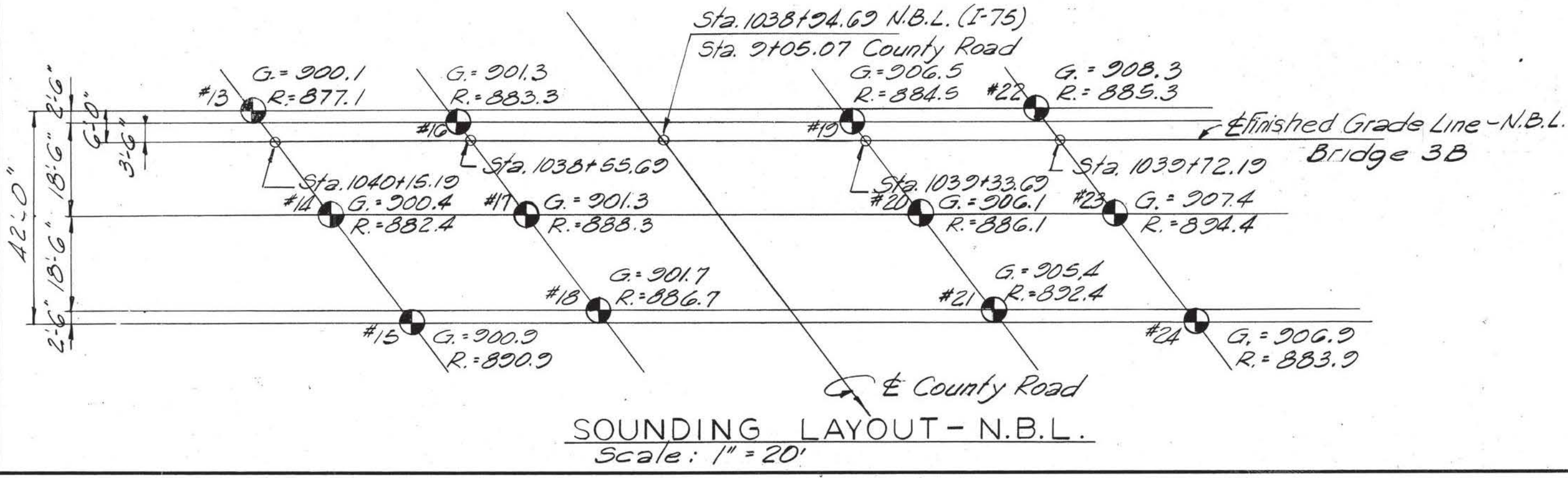
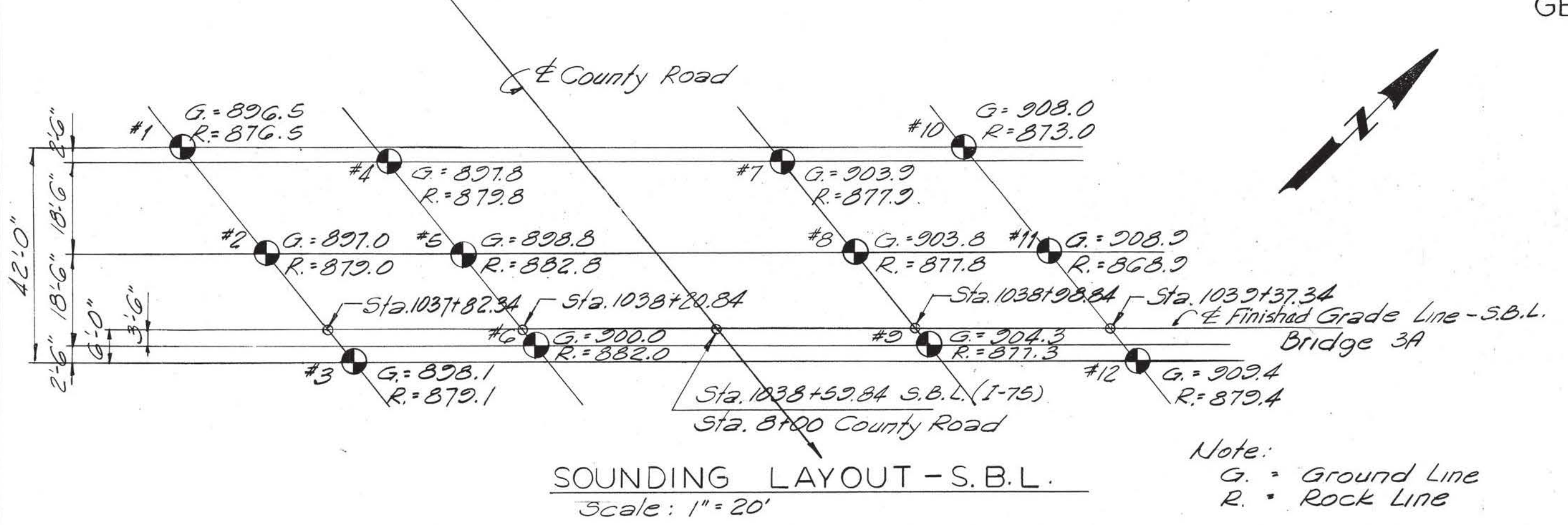
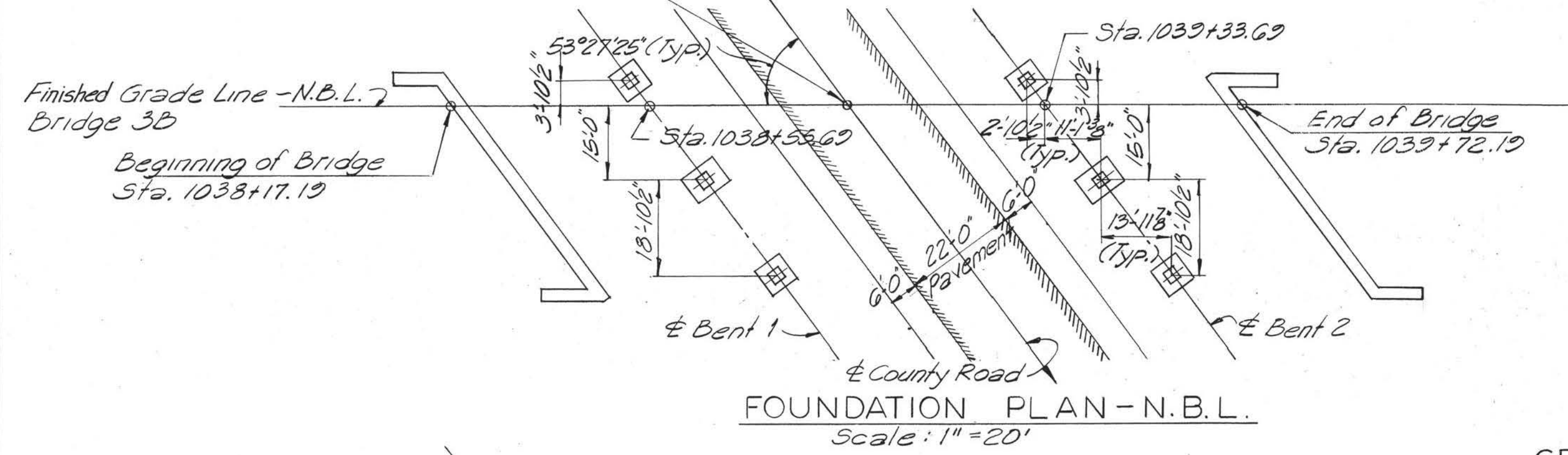
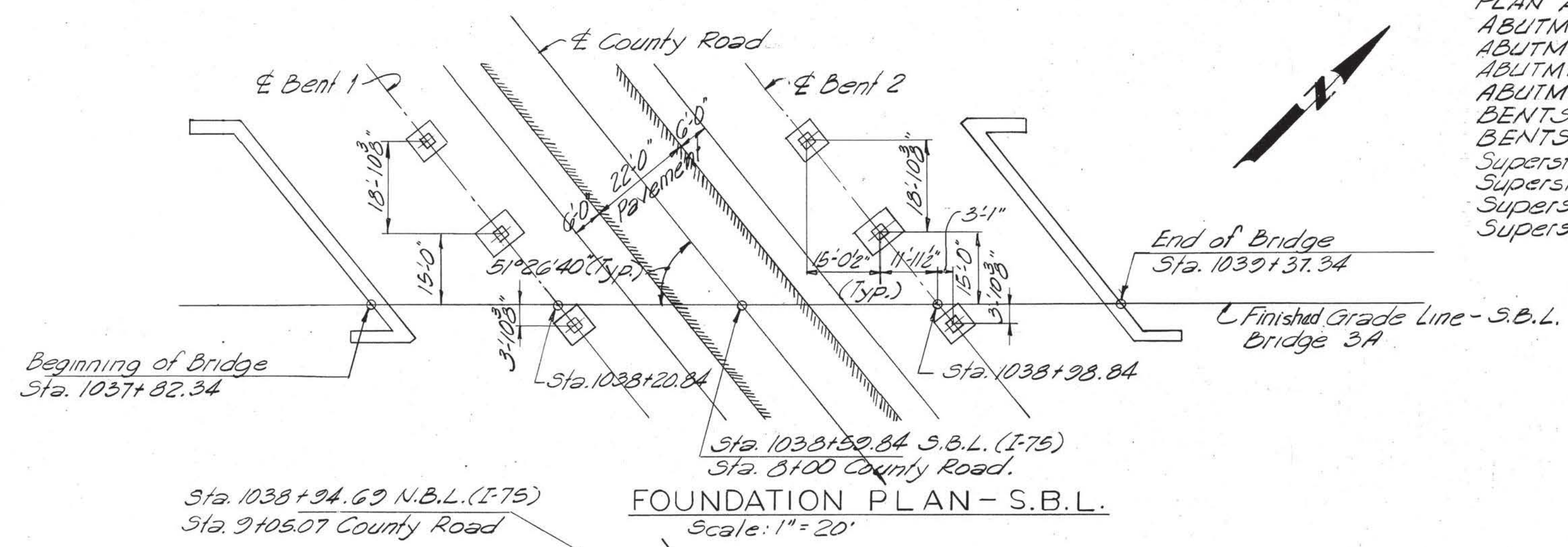
CONTINUOUS PRECAST PRESTRESSED I-BEAM WITH CONCRETE DECK SLAB
 Est. 1992 A.D.T. = 29,900
 2-42'-0" BRIDGES WITH PARAPETS.

STATE OF TENNESSEE
 DEPARTMENT OF HIGHWAYS
 NASHVILLE

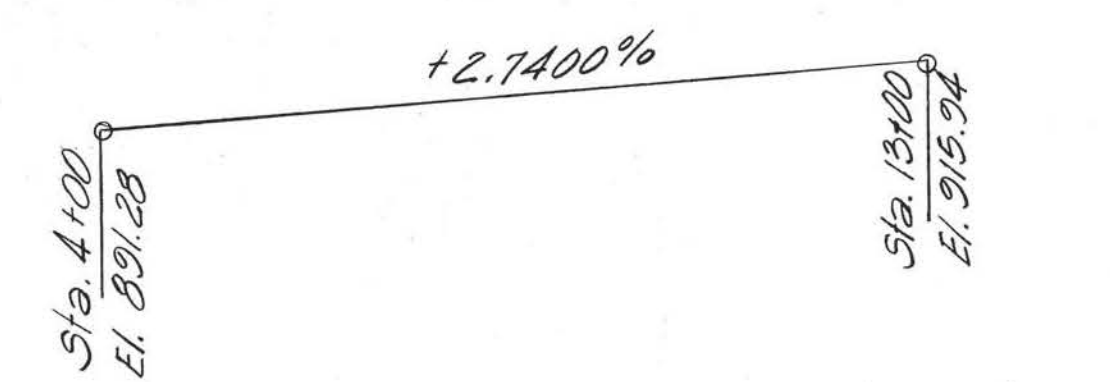
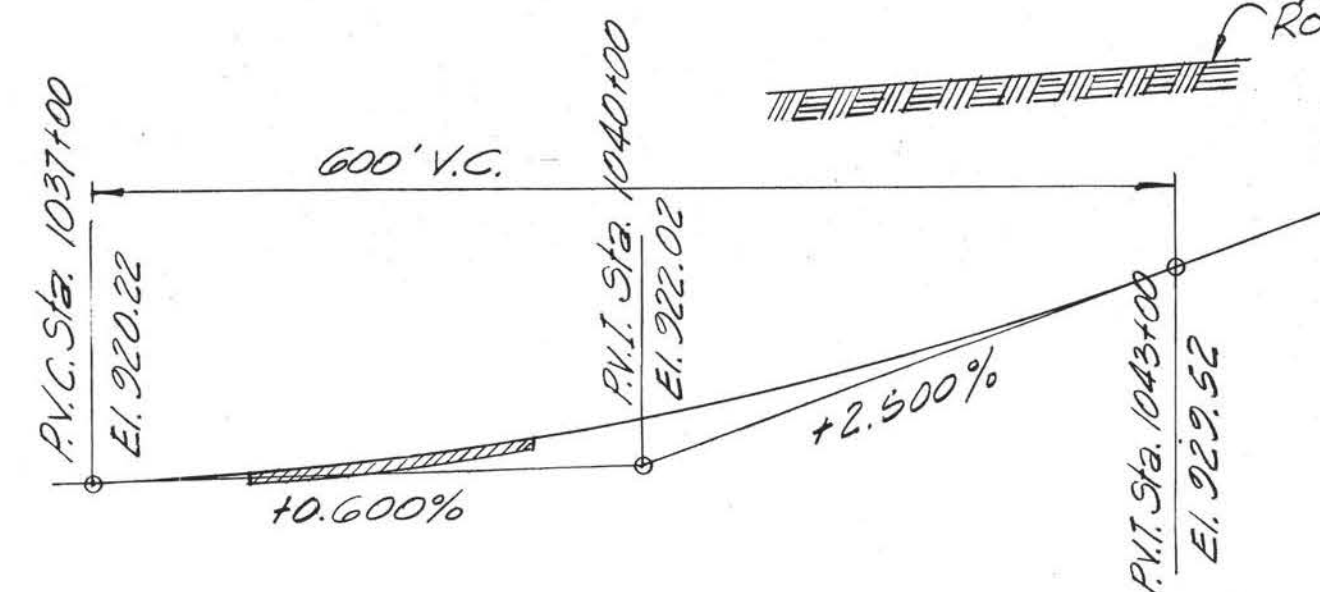
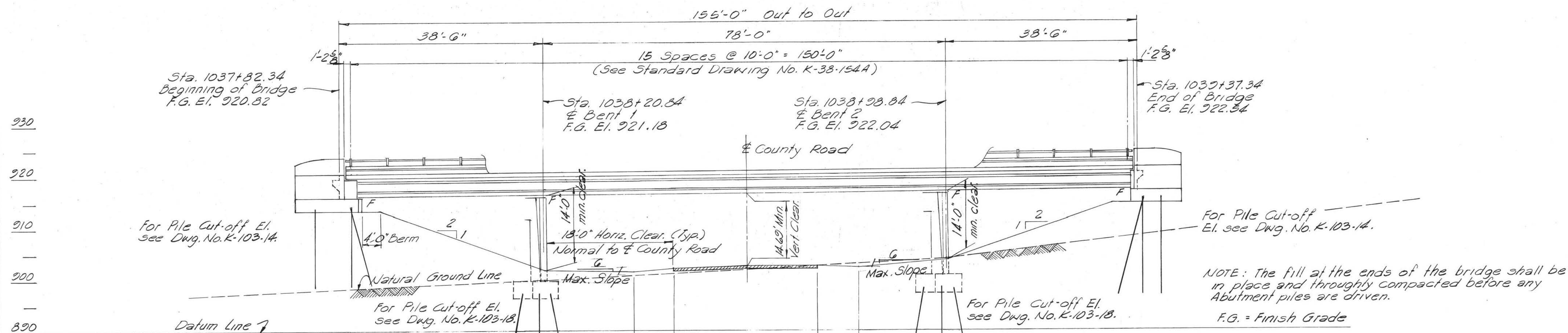
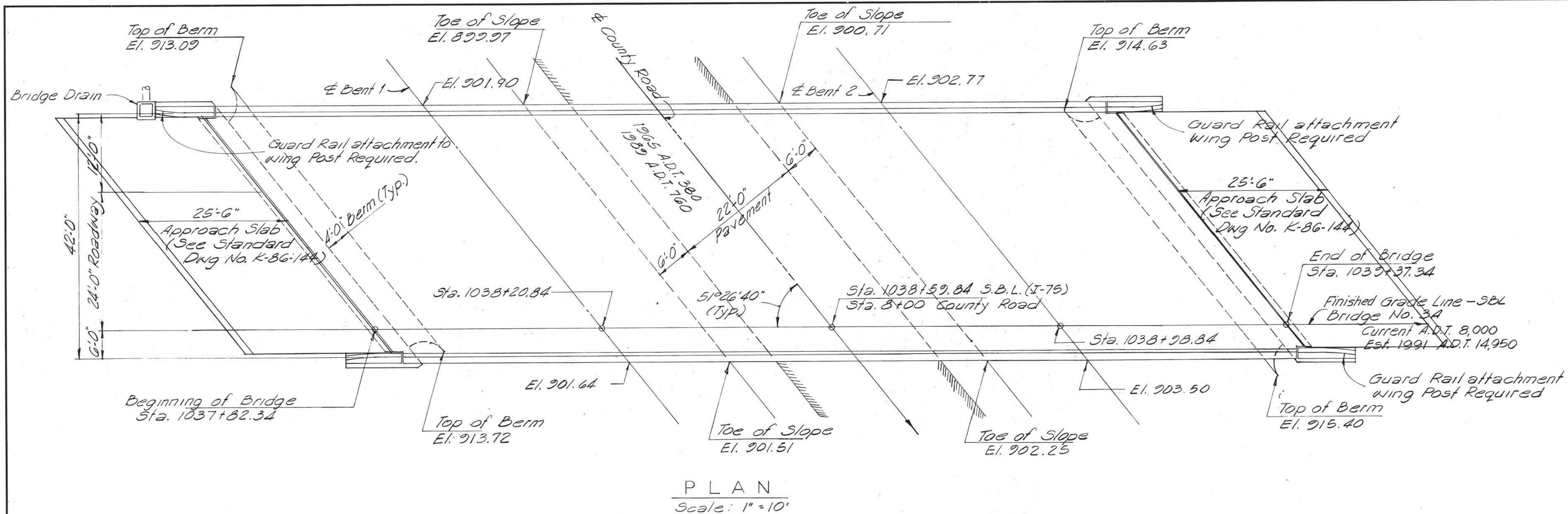
PROJECT I-75
 OVER COUNTY ROAD
 AT STA. 1038+59.84 BRIDGE NO. 3A
 AT STA. 1038+94.69 BRIDGE NO. 3B
 LOUDON COUNTY, TENN.
 LAYOUT OF BRIDGES

MID-SOUTH ENGINEERING CO., INC.
 820 BROADWAY, N.E. KNOXVILLE, TENNESSEE

SCALE	DESIGNED: PCW	QUANTITIES	DATE
As Noted	DRAWN: BC	COMP: PCW	Dec.
	TRACED: BC	CK'D: BEC	1970
	CHECKED: PCW		



FED. ROAD DIST. NO.	TENN	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
3			53	496
FED. AID PROJ. NO.		I-75-2(9)74		
STATE PROJ. NO.				

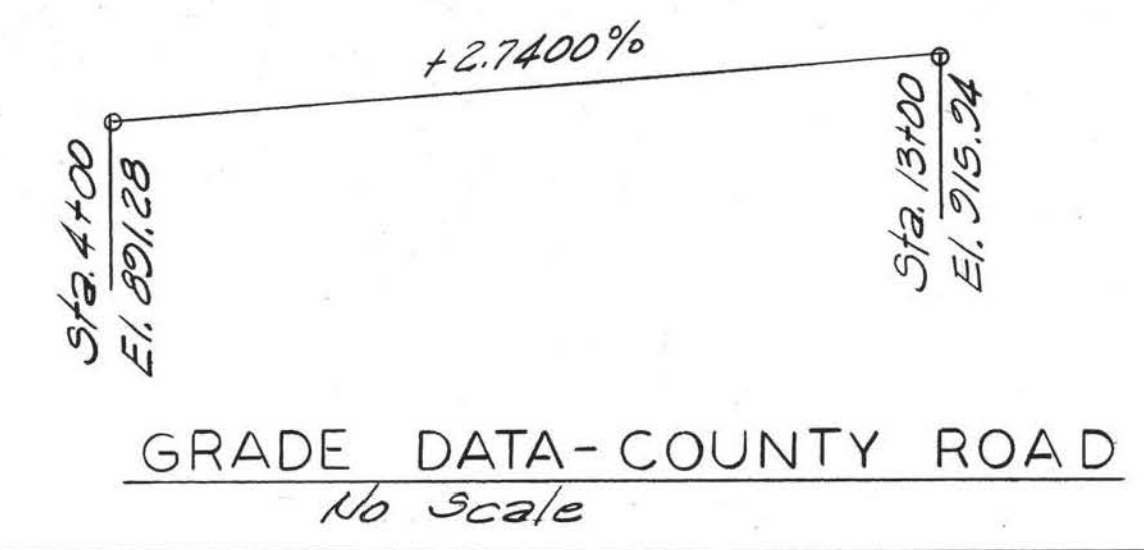
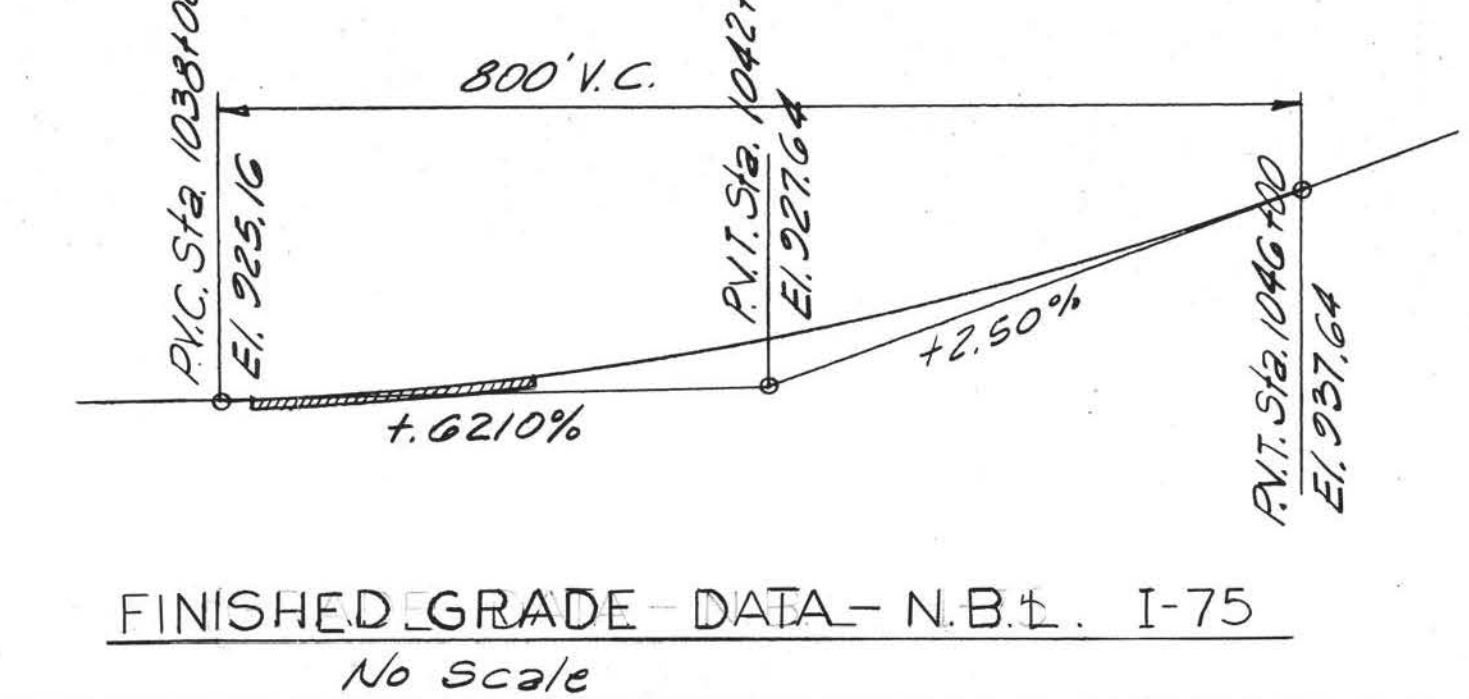
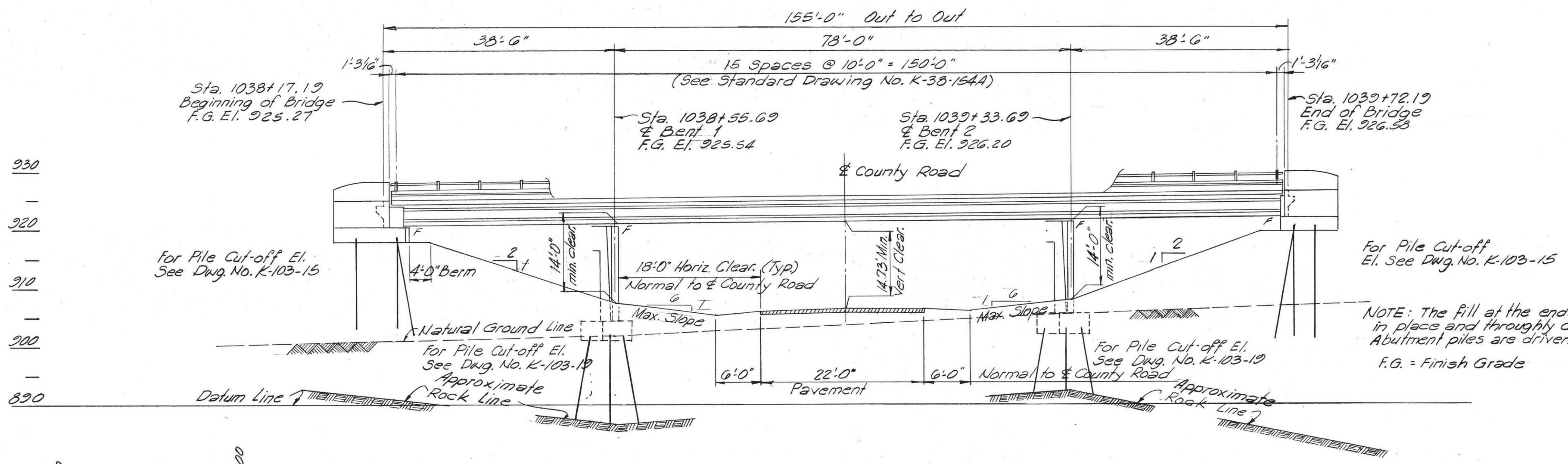
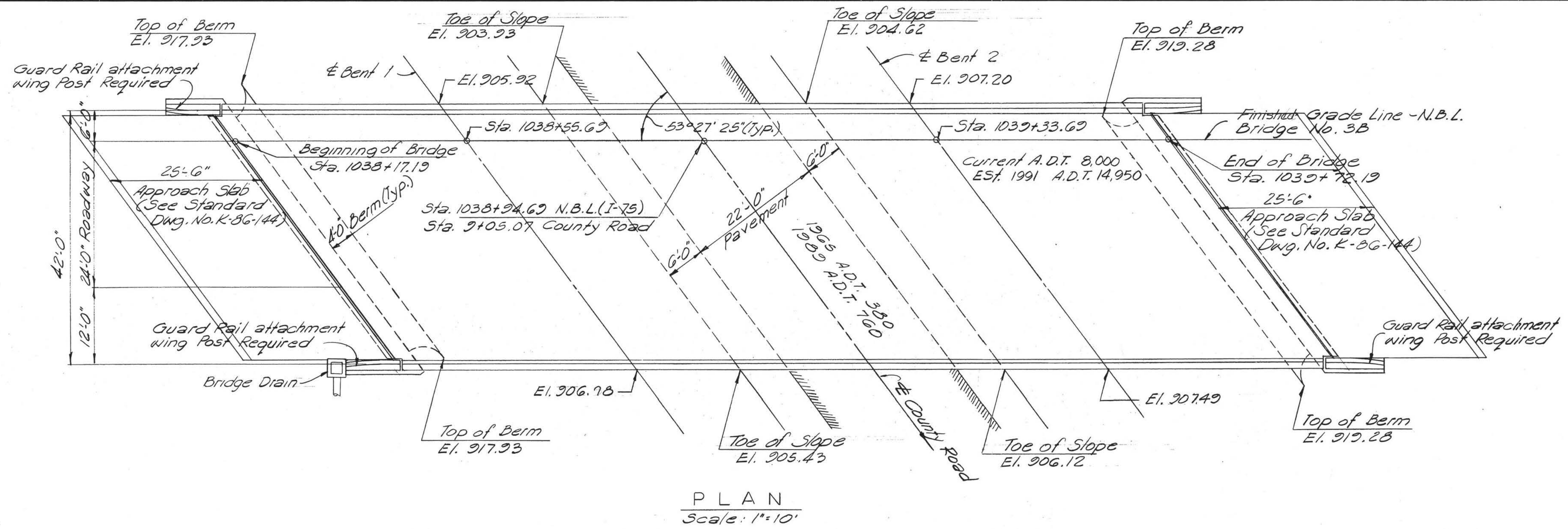


STATE OF TENNESSEE DEPARTMENT OF HIGHWAYS NASHVILLE			
PROJECT I-75 SOUTHBOUND LANE OVER COUNTY ROAD AT STA. 1038+59.84 BRIDGE NO. 3A LOUDON COUNTY, TENN. PLAN AND ELEVATION			
MID-SOUTH ENGINEERING CO., INC. 820 BROADWAY, N.E. KNOXVILLE, TENNESSEE			
SCALE As Noted	DESIGNED: PCW DRAWN: BC TRACED: BC CHECKED: PCW	QUANTITIES COMP.: PCW CK'D.: BEC	DATE DEC. 1970

K-103-12

MICROFILMED

FED. ROAD DIST. NO.	TENN	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
3			54	496
FED. AID PROJ. NO.		I-75-2(9)74		
STATE PROJ. NO.				



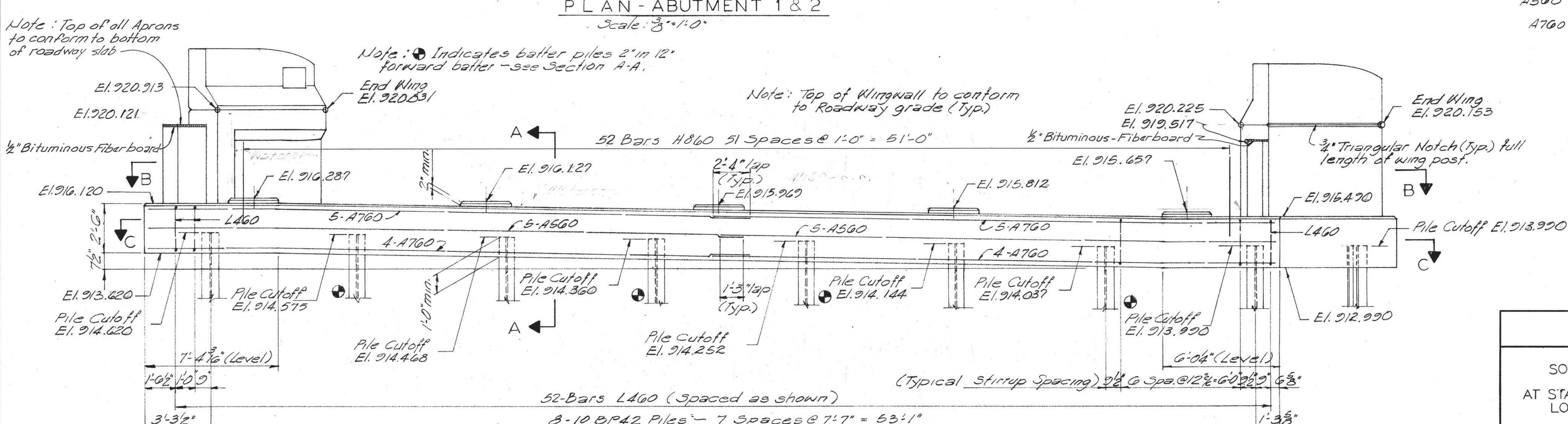
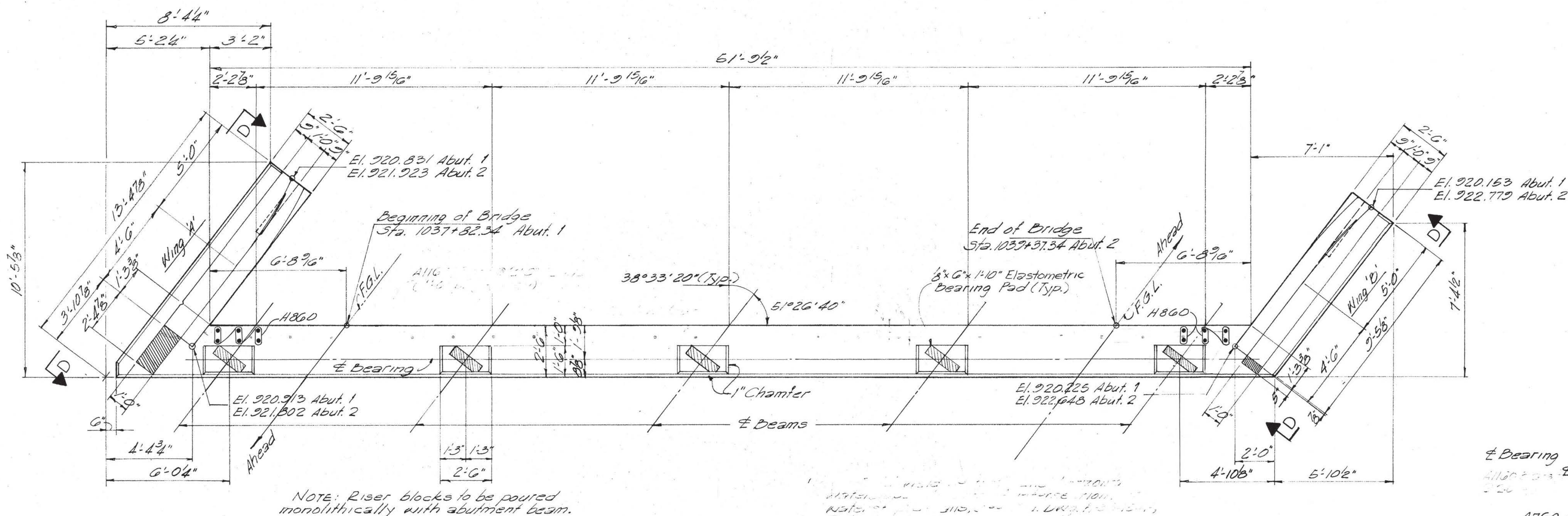
NOTE: The fill at the ends of the bridge shall be in place and thoroughly compacted before any Abutment piles are driven.
F.G. = Finish Grade

STATE OF TENNESSEE DEPARTMENT OF HIGHWAYS NASHVILLE			
PROJECT I-75 NORTHBOUND LANE OVER COUNTY ROAD AT STA. 1038+94.69 BRIDGE NO. 3B LOUDON COUNTY, TENN. PLAN AND ELEVATION			
MID-SOUTH ENGINEERING CO., INC. 820 BROADWAY, N.E. KNOXVILLE, TENNESSEE			
SCALE As Noted	DESIGNED: PCW DRAWN: BEC TRACED: BEC CHECKED: PCW	QUANTITIES COMP.: PCW CKD.: BEC	DATE Dec. 1970

K-103-13

MICROFILMED

FED. ROAD DIST. NO.	TENN	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
		I-75-2(9)74	55	496	



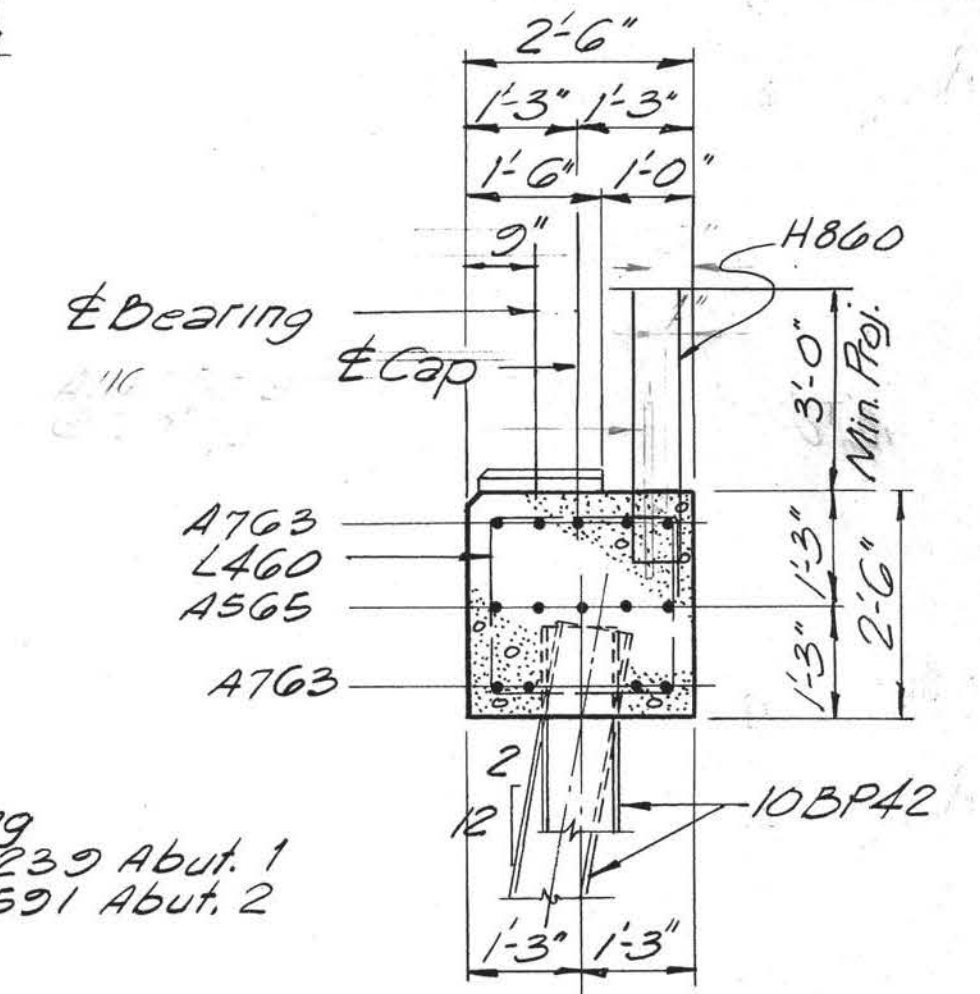
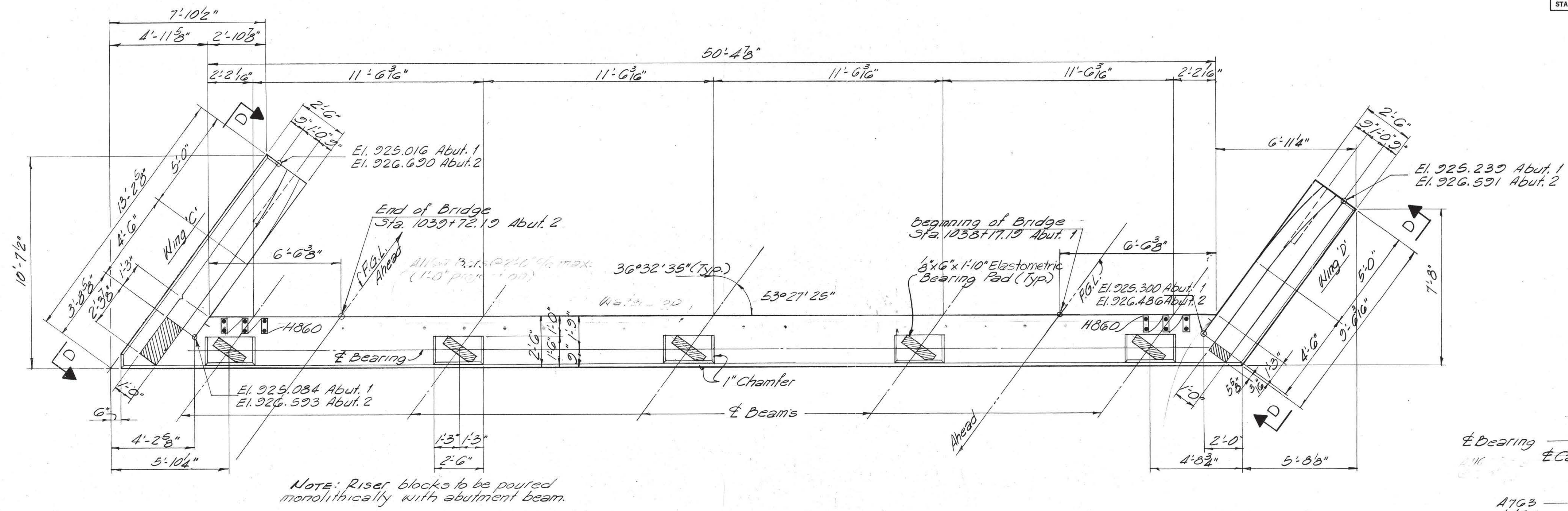
STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS
NASHVILLE

PROJECT I - 75
SOUTHBOUND LANE OVER
COUNTY ROAD
AT STA. 1038+59.84 BRIDGE NO. 3A
LOUDON COUNTY, TENN.
ABUTMENTS

MID-SOUTH ENGINEERING CO., INC.
820 BROADWAY, N.E. KNOXVILLE, TENNESSEE

SCALE: As Noted	DESIGNED: PCW DRAWN: BC TRACED: BC CHECKED: PCW	QUANTITIES COMP: PCW CK'D: BEC	DATE Dec. 1970
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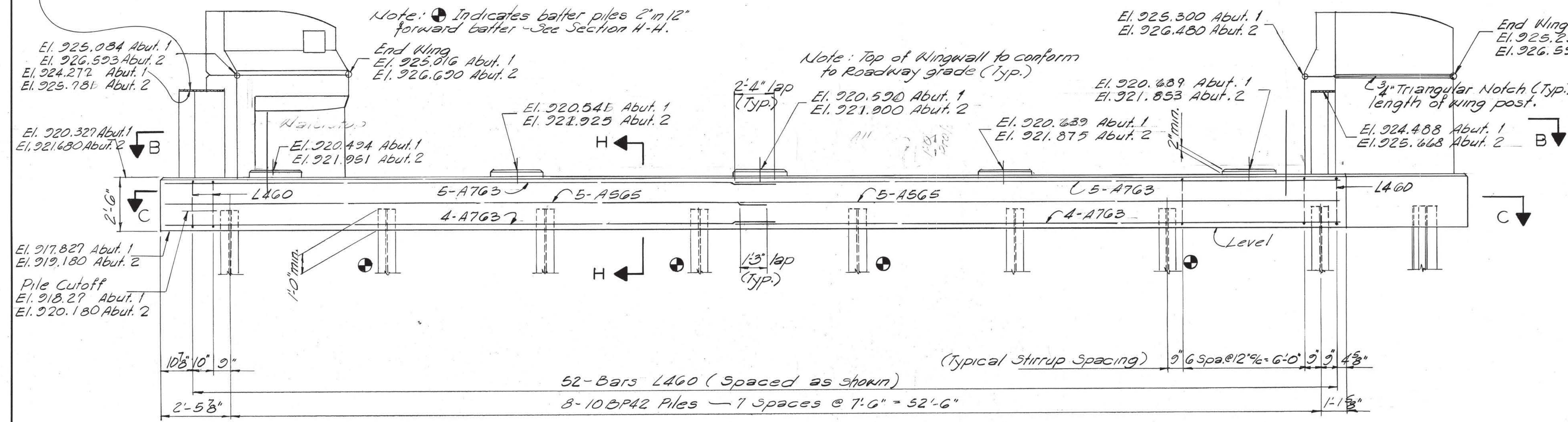
FED. ROAD DIST. NO.	TENN	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
3			56	496
FED. AID PROJ. NO.	I-75-2(9) 74			
STATE PROJ. NO.				



Note: Tops of Aprons to conform to bottom of roadway slab.

Note: ⊙ Indicates batter piles 2" in 12" forward batter - See Section H-H.

Note: Top of Wingwall to conform to Roadway grade (Typ.)



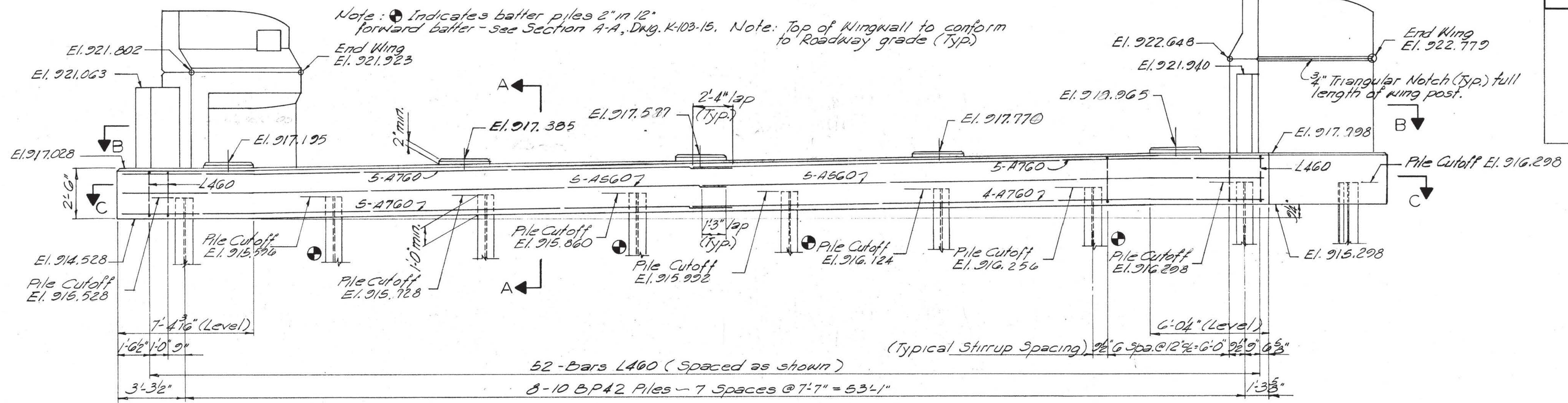
ELEVATION-ABUTMENT
(Looking back on Survey)
Scale: 3/8"=1'-0"

Note: For Sections B-B & C-C, See Dwg. K-103-16.
For Elevation D-D, See Dwg. K-103-17.

STATE OF TENNESSEE DEPARTMENT OF HIGHWAYS NASHVILLE			
PROJECT I-75 NORTHBOUND LANE OVER COUNTY ROAD AT STA. 1038+94.69 BRIDGE NO. 3B LOUDON COUNTY, TENN. ABUTMENTS			
MID-SOUTH ENGINEERING CO., INC. 820 BROADWAY, N.E. KNOXVILLE, TENNESSEE			
SCALE As Noted	DESIGNED: PCW DRAWN: BC TRACED: BC CHECKED: PCW	QUANTITIES COMP.: PCW CK'D: BEC	DATE Dec. 1970

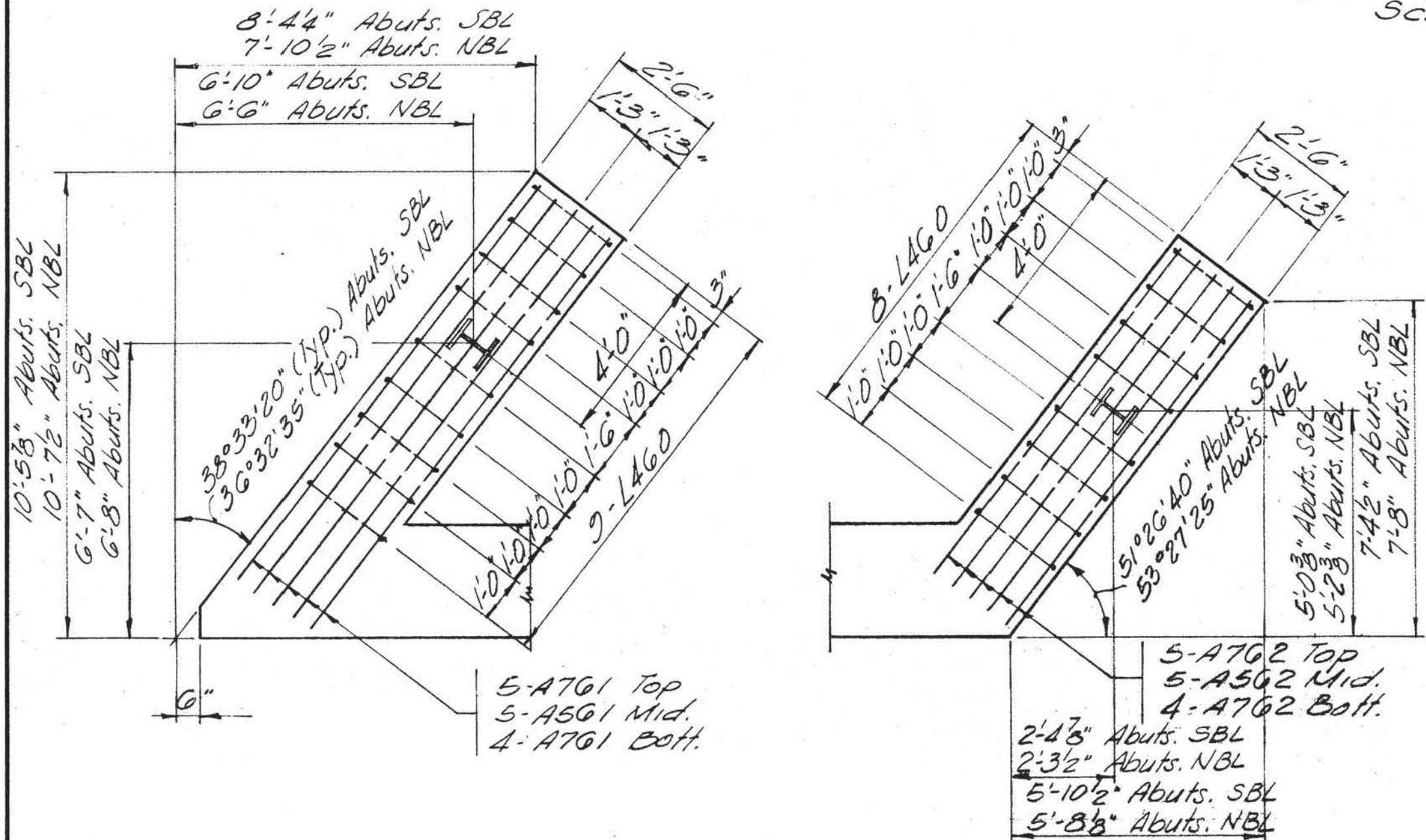
MICROFILMED

FED. ROAD DIST. No.	TENN	FEDERAL AID PROJECT No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
		I-75-2(9)74		57	496

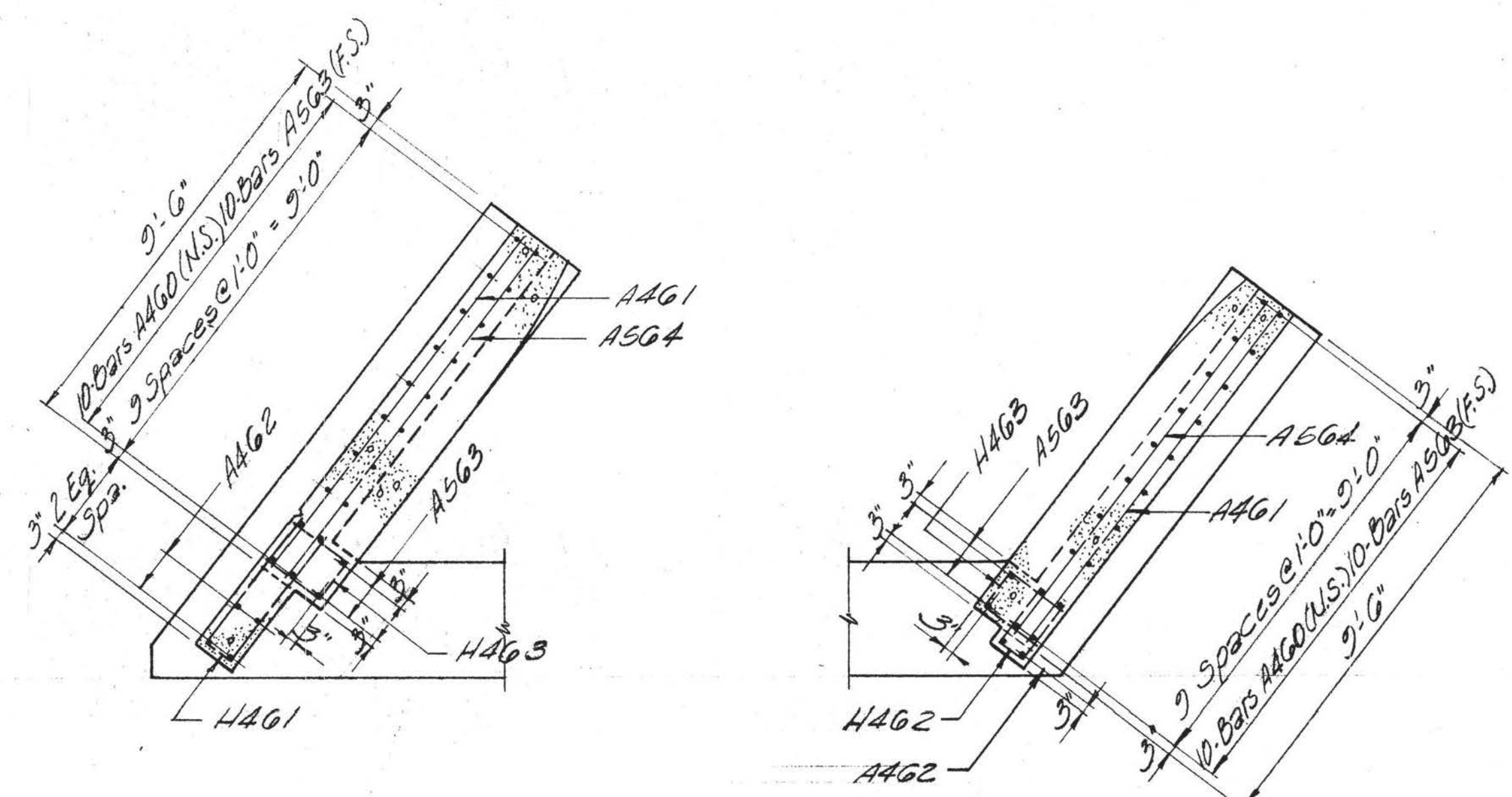


ELEVATION-ABUTMENT 2 SBL
(Looking Ahead on Survey)
Scale: 3" = 1'-0"

Note: Piles in Wingwalls not shown. See Part Section C-C for location. Cutoff El. 915.528



PART SECTION C-C ABUTMENTS SBL & NBL
Scale: 3" = 1'-0"



PART SECTION B-B ABUTMENTS SBL & NBL
Scale: 3" = 1'-0"

STATE OF TENNESSEE DEPARTMENT OF HIGHWAYS NASHVILLE			
PROJECT I-75 I-75 OVER COUNTY ROAD AT STA. 1038+59.84 BRIDGE NO.3A AT STA. 1038+94.69 BRIDGE NO.3B LOUDON COUNTY, TENN. ABUTMENTS			
MID-SOUTH ENGINEERING CO., INC. 820 BROADWAY, N.E. KNOXVILLE, TENNESSEE			
SCALE As Noted	DESIGNED: PCW DRAWN: BC TRACED: BC CHECKED: PCW	QUANTITIES COMP: PCW CK'D: BEC	DATE Dec. 1970

K-103-16

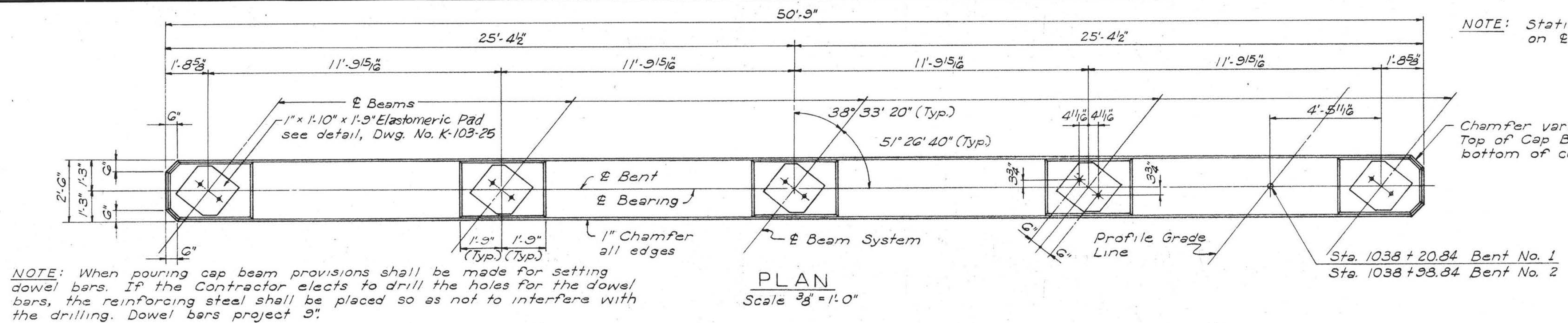
MICROFILMED

FED. ROAD DIST. NO.	TENN.	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
		1-75-2(9)74		59	496

3121/72 Mid-South-Sloped beam cap, revised quantities

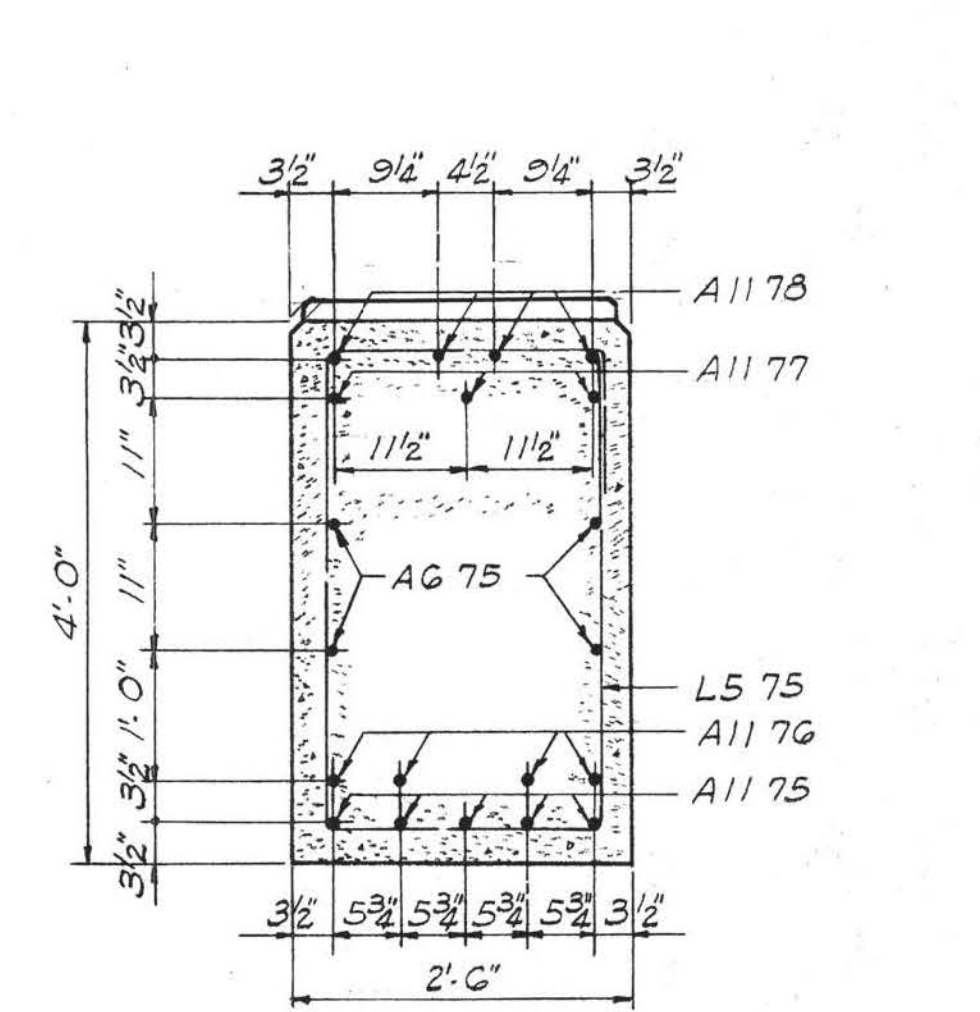
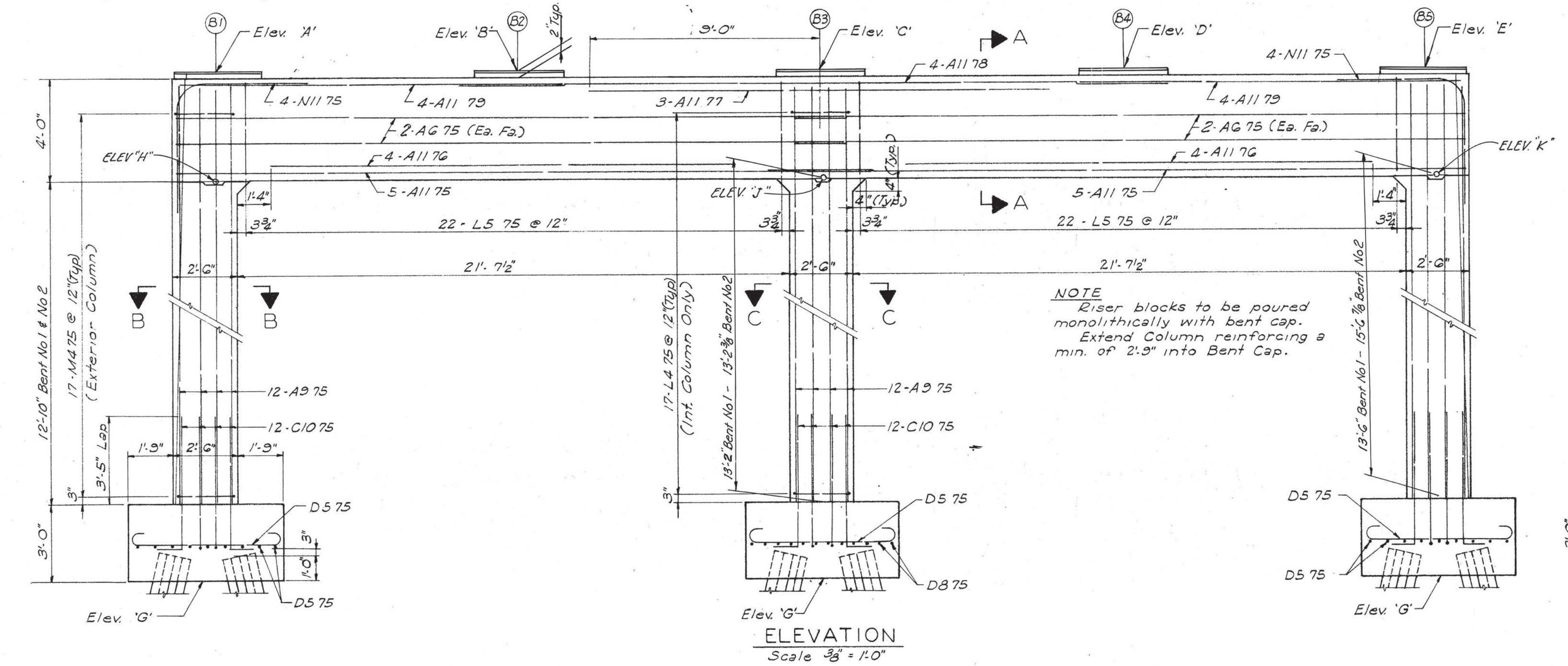
NOTE: Stations are measured on E I-75.

Chamfer varies from 6" at Top of Cap Beam to 3" at bottom of column.



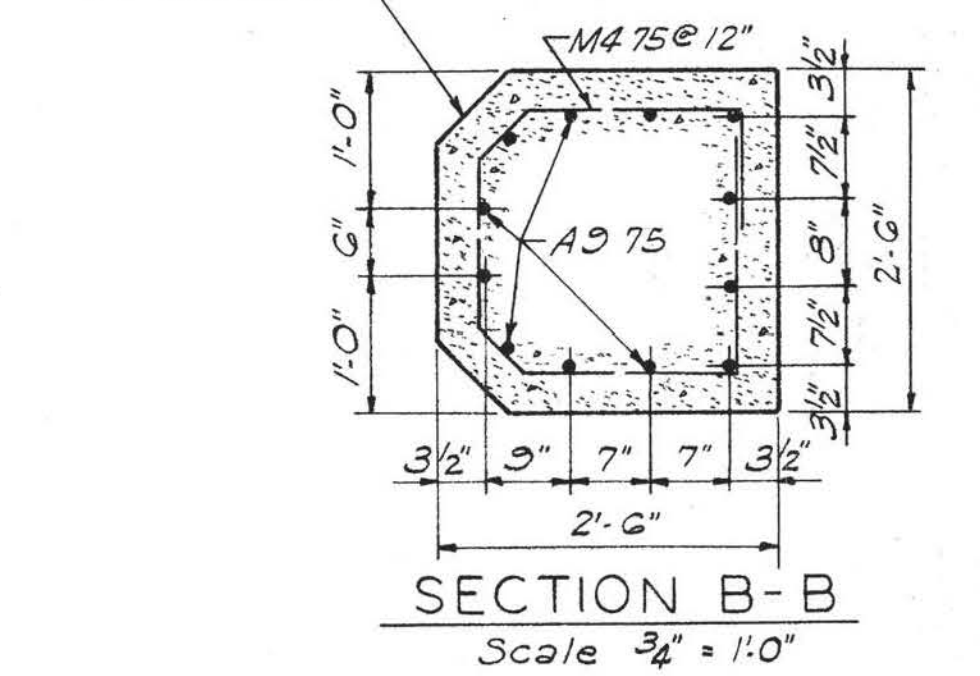
NOTE: When pouring cap beam provisions shall be made for setting dowel bars. If the Contractor elects to drill the holes for the dowel bars, the reinforcing steel shall be placed so as not to interfere with the drilling. Dowel bars project 9".

ESTIMATE OF QUANTITIES					
ITEM	ITEM NO.	UNIT	BENT #1	BENT #2	
Class 'A' Concrete	604-03.01	Cu. Yds.	41.4	41.4	
Reinforcing Steel	604-03.02	Lbs.	8,949	8,949	



SECTION A-A Scale 3/4" = 1'-0"

Chamfer varies from 6" at Top of Cap Beam to 3" at bottom of Column



SECTION B-B Scale 3/4" = 1'-0"

Batter 2:12

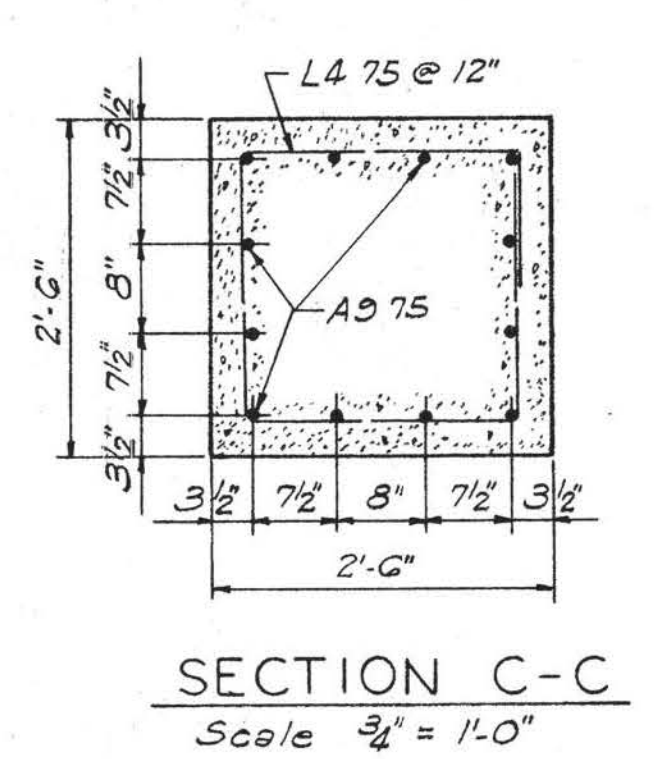
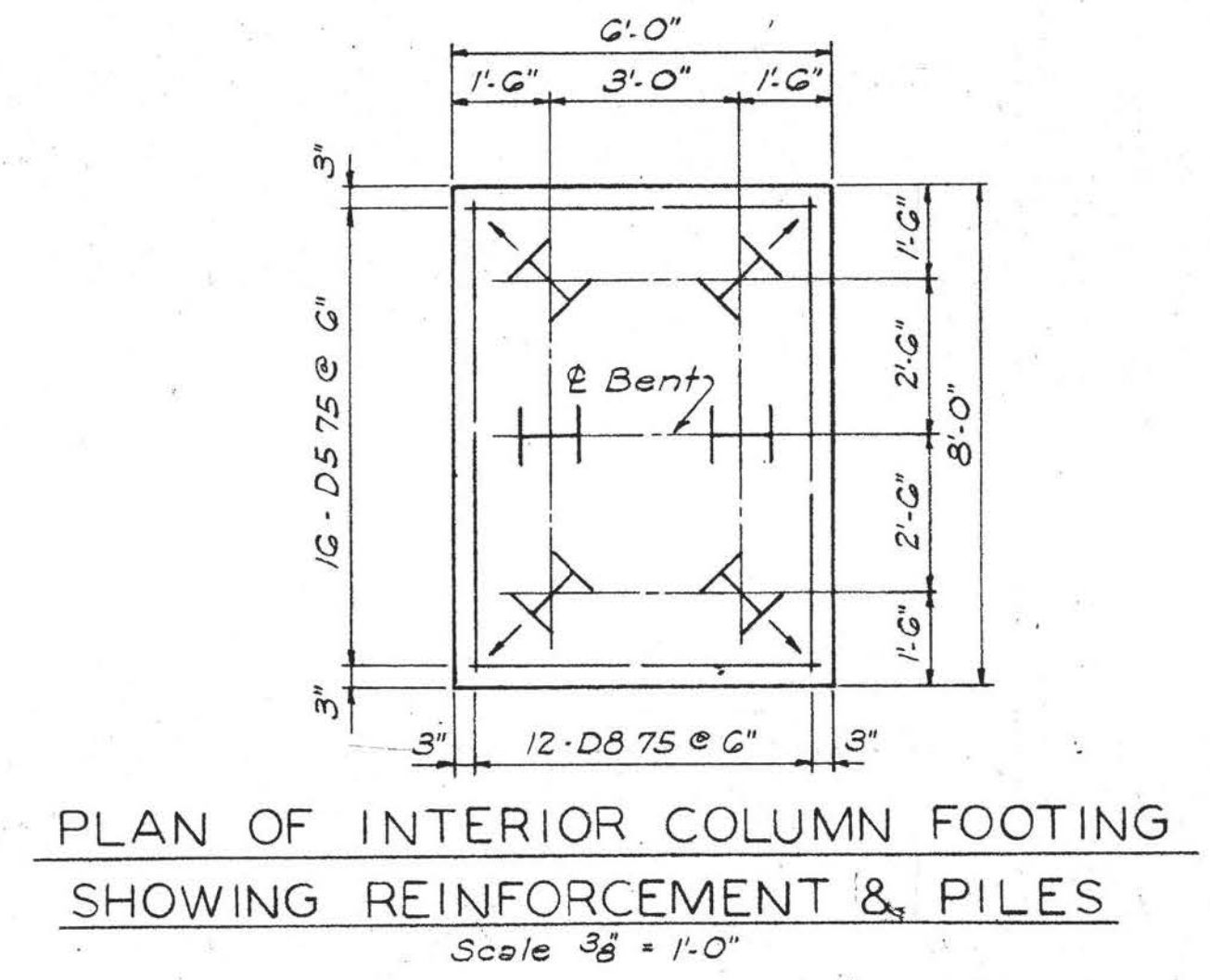
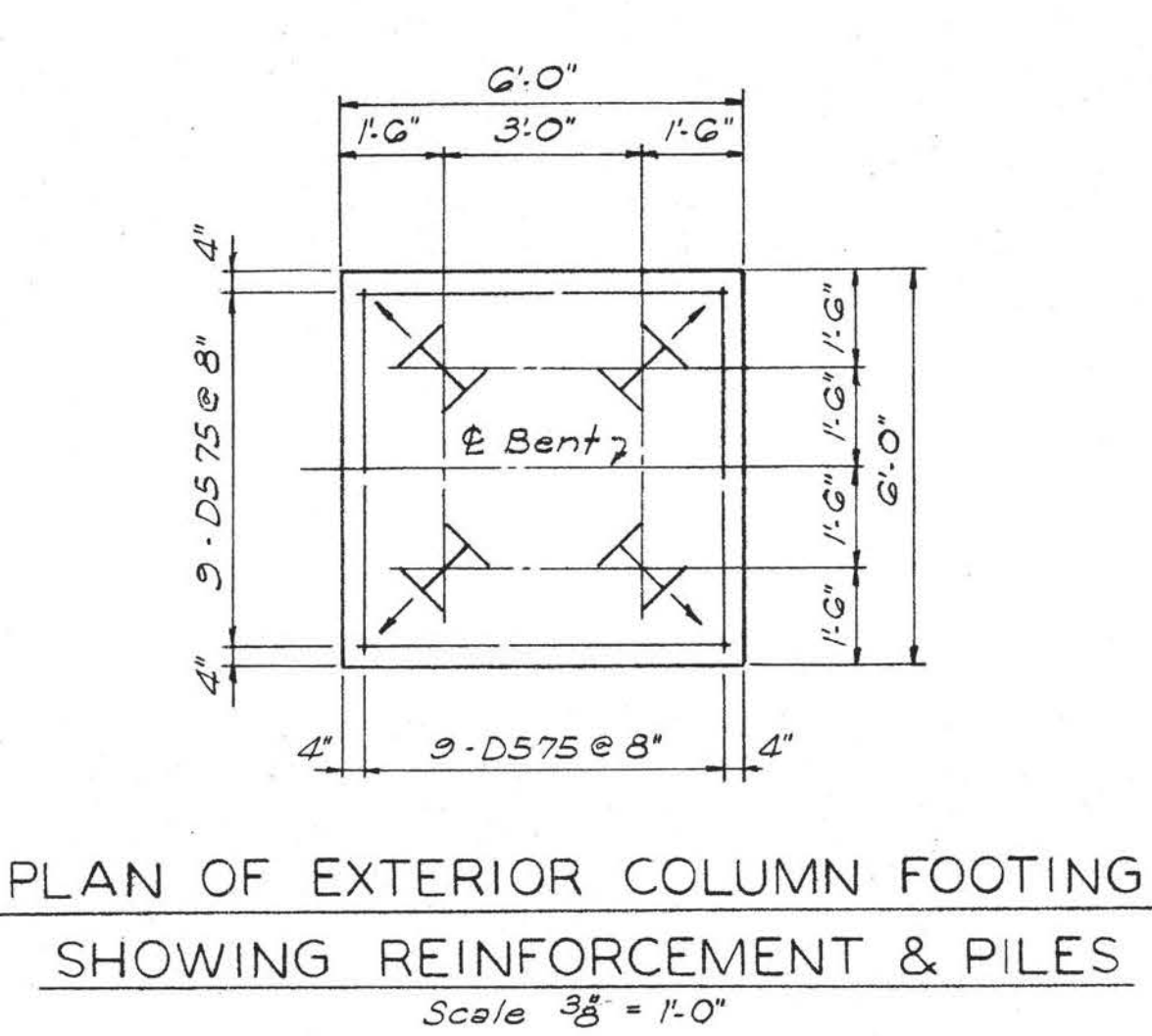


TABLE OF ELEVATION		
	BENT #1	BENT #2
Elev. 'A'	915.889	916.686
Elev. 'B'	916.052	916.867
Elev. 'C'	916.218	917.051
Elev. 'D'	916.385	917.236
Elev. 'E'	916.553	917.422
Elev. 'G'	895.89	896.69
Elev. 'H'	911.72	912.52
Elev. 'J'	912.05	912.89
Elev. 'K'	912.39	913.26

MICROFILMED

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS
NASHVILLE

PROJECT I - 75
NORTHBOUND LANE OVER
COUNTY ROAD
AT STA. 1038+59.84 BRIDGE NO. 3A
LOUDON COUNTY, TENN.
BENTS

MID-SOUTH ENGINEERING CO., INC.
820 BROADWAY, N.E. KNOXVILLE, TENNESSEE

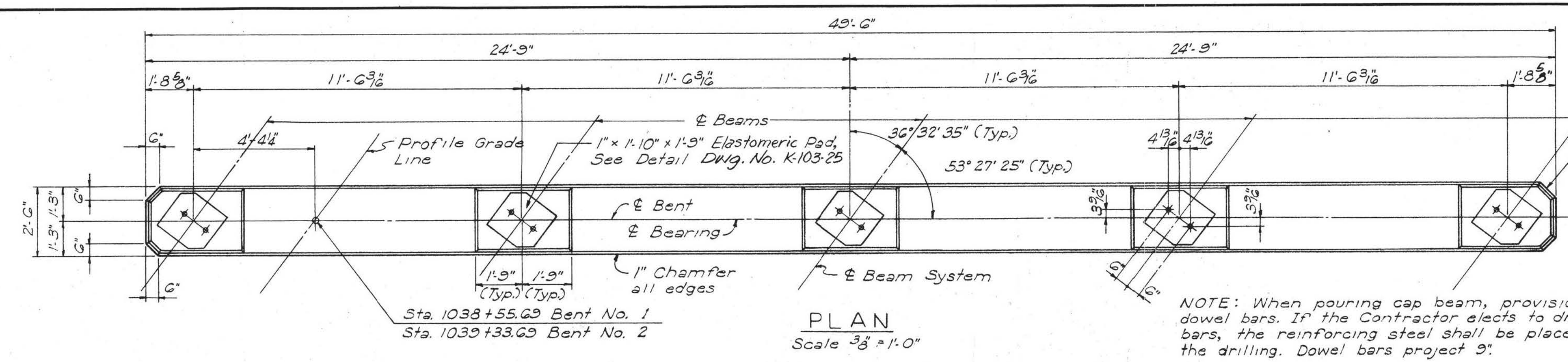
SCALE	DESIGNED: PCW	QUANTITIES	DATE
As Noted	DRAWN: TB	COMP: PCW	Dec.
	TRACED: TB	CK'D: BFC	1970
	CHECKED: PCW		

K-103-18

FED. ROAD DIST. NO.	TENN	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
		I-75-2(9)74		60	496

3-21-72 Mid-South-Sloped beam cap, quantities

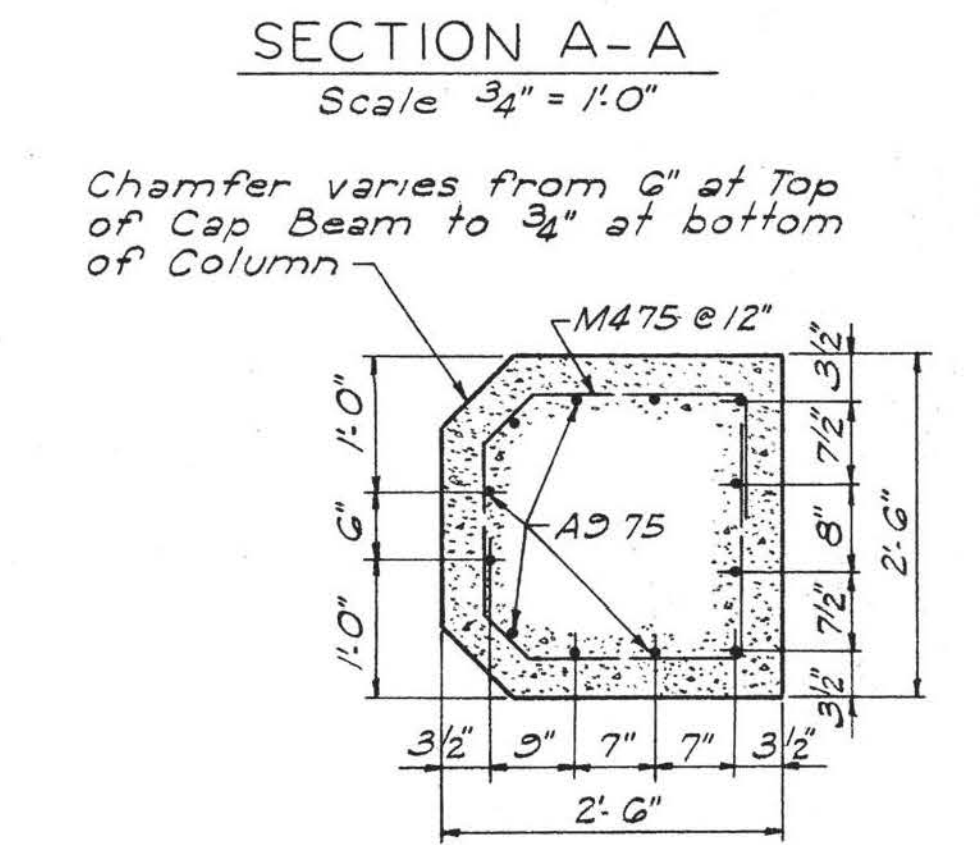
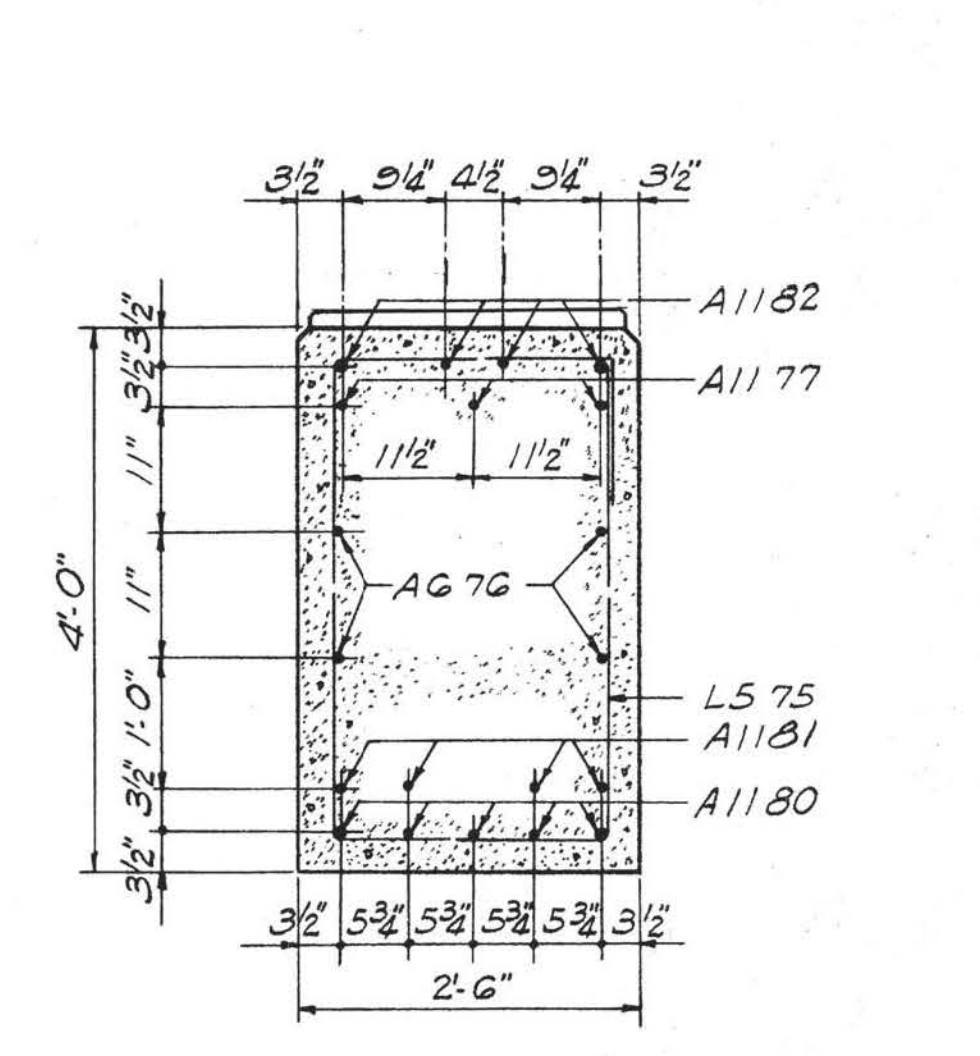
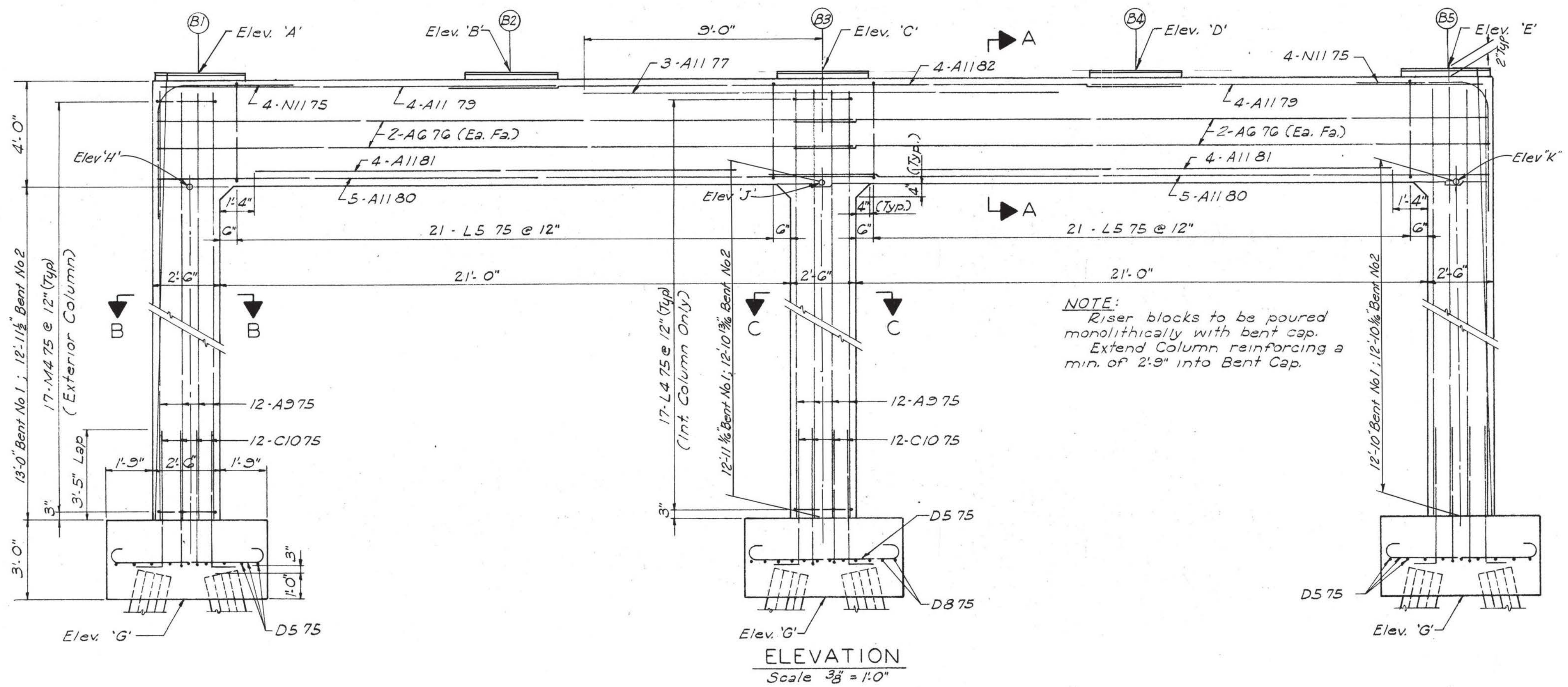
NOTE: Stations are measured on E I-75.



Chamfer varies from 6" at Top of Cap Beam to 3/4" at bottom of column.

NOTE: When pouring cap beam, provisions shall be made for setting dowel bars. If the Contractor elects to drill the holes for the dowel bars, the reinforcing steel shall be placed so as not to interfere with the drilling. Dowel bars project 9".

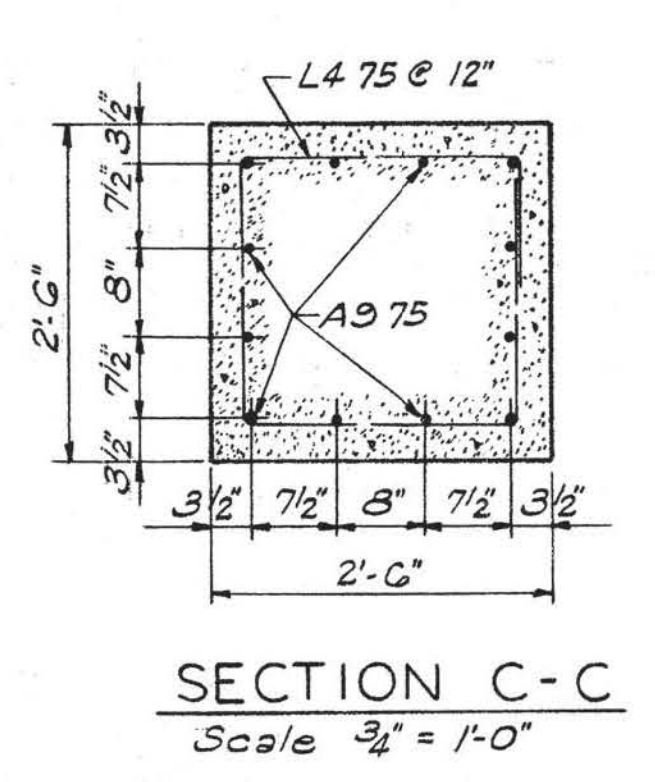
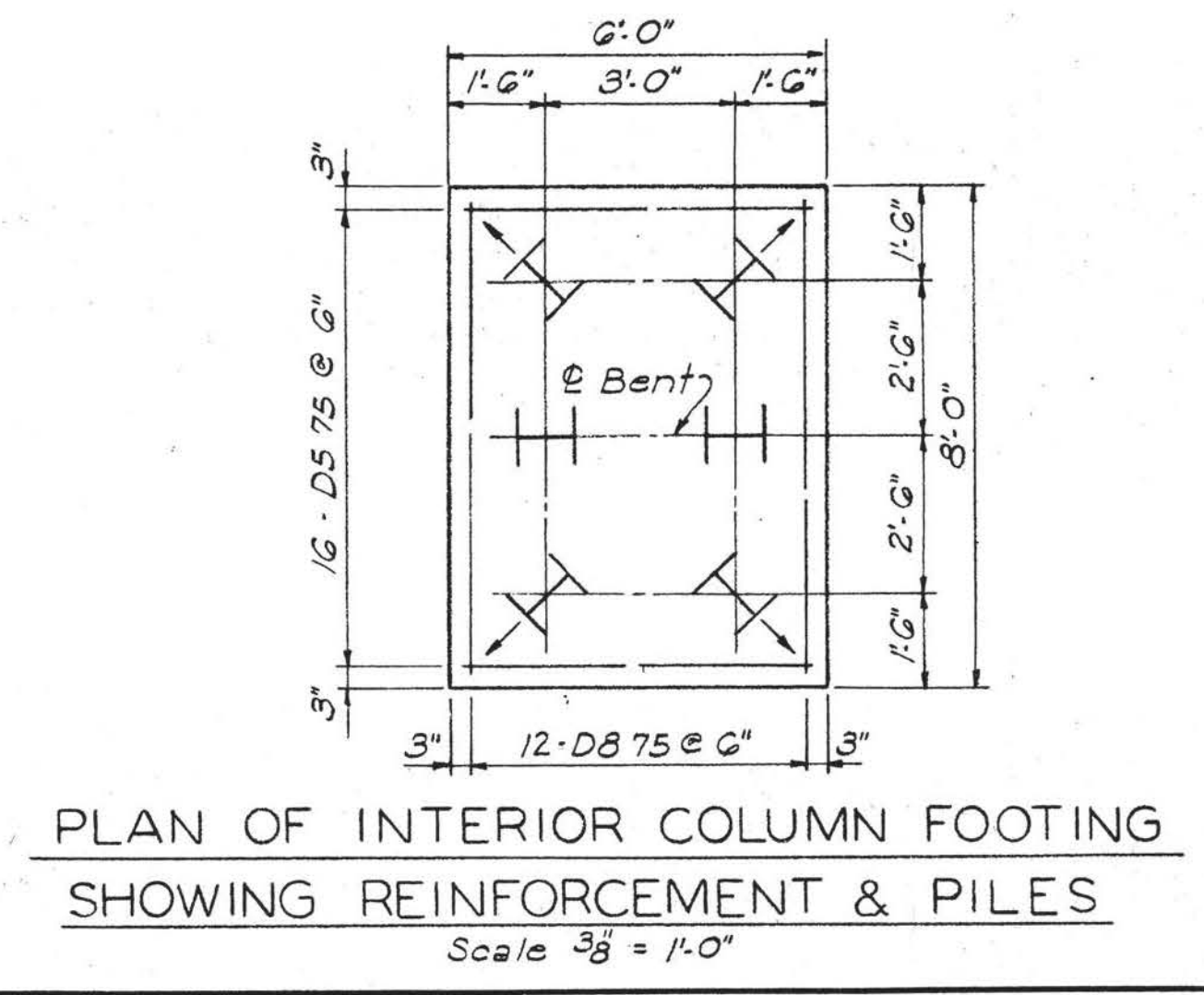
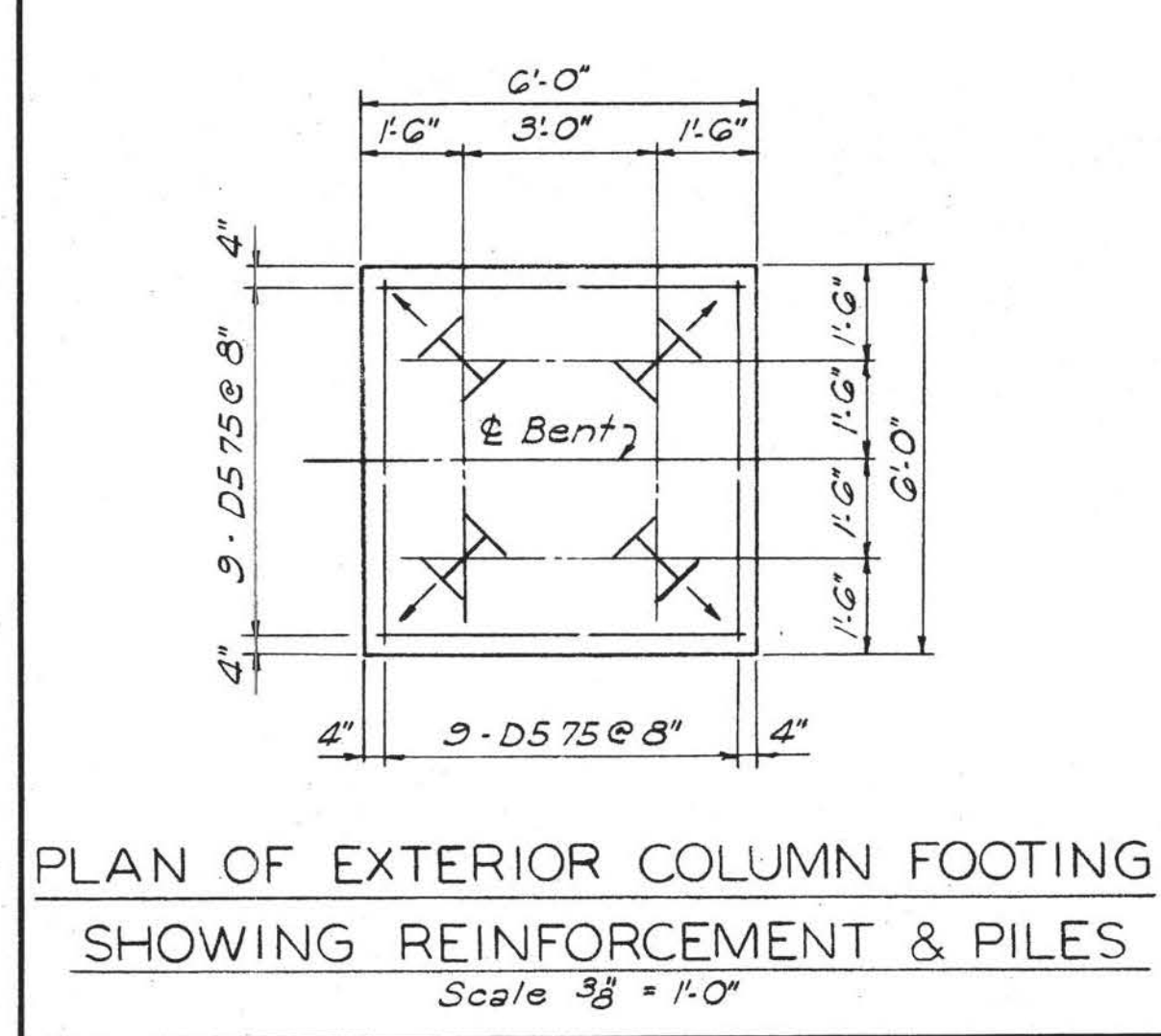
ESTIMATE OF QUANTITIES				
ITEM	ITEM NO.	UNIT	BENT #1	BENT #2
Class 'A' Concrete	604-03.01	Cu. Yds.	40.7	40.7
Reinforcing Steel	604-03.02	Lbs.	8,830	8,830



Chamfer varies from 6" at Top of Cap Beam to 3/4" at bottom of Column

Batter 2:12

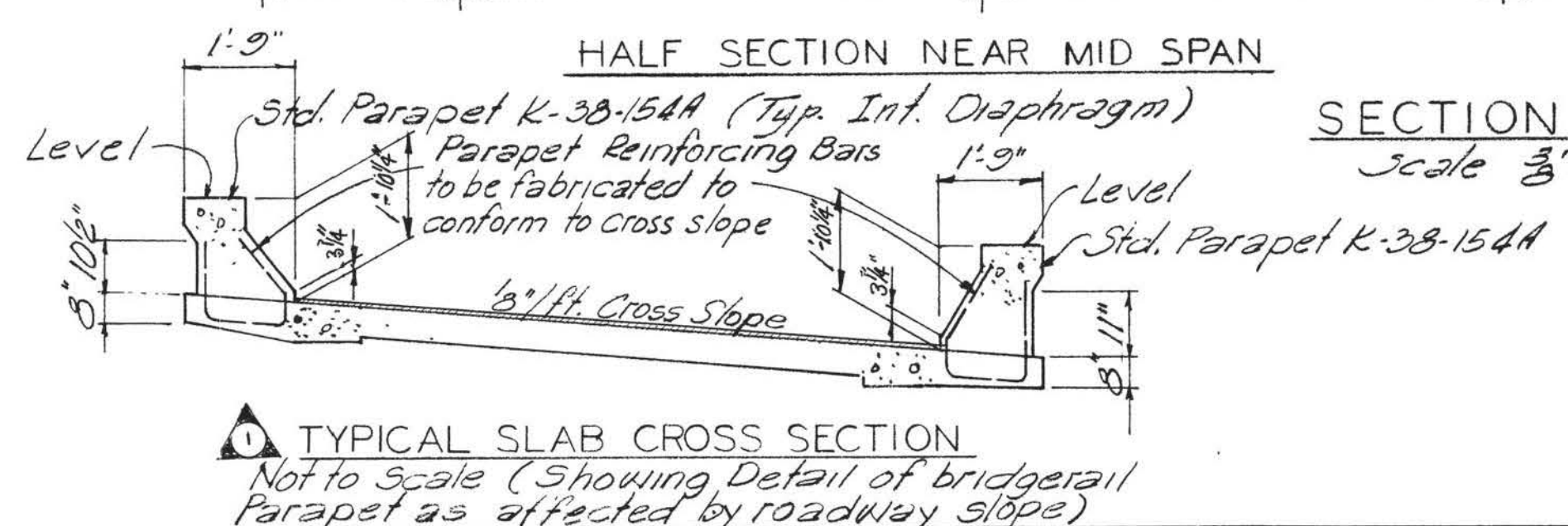
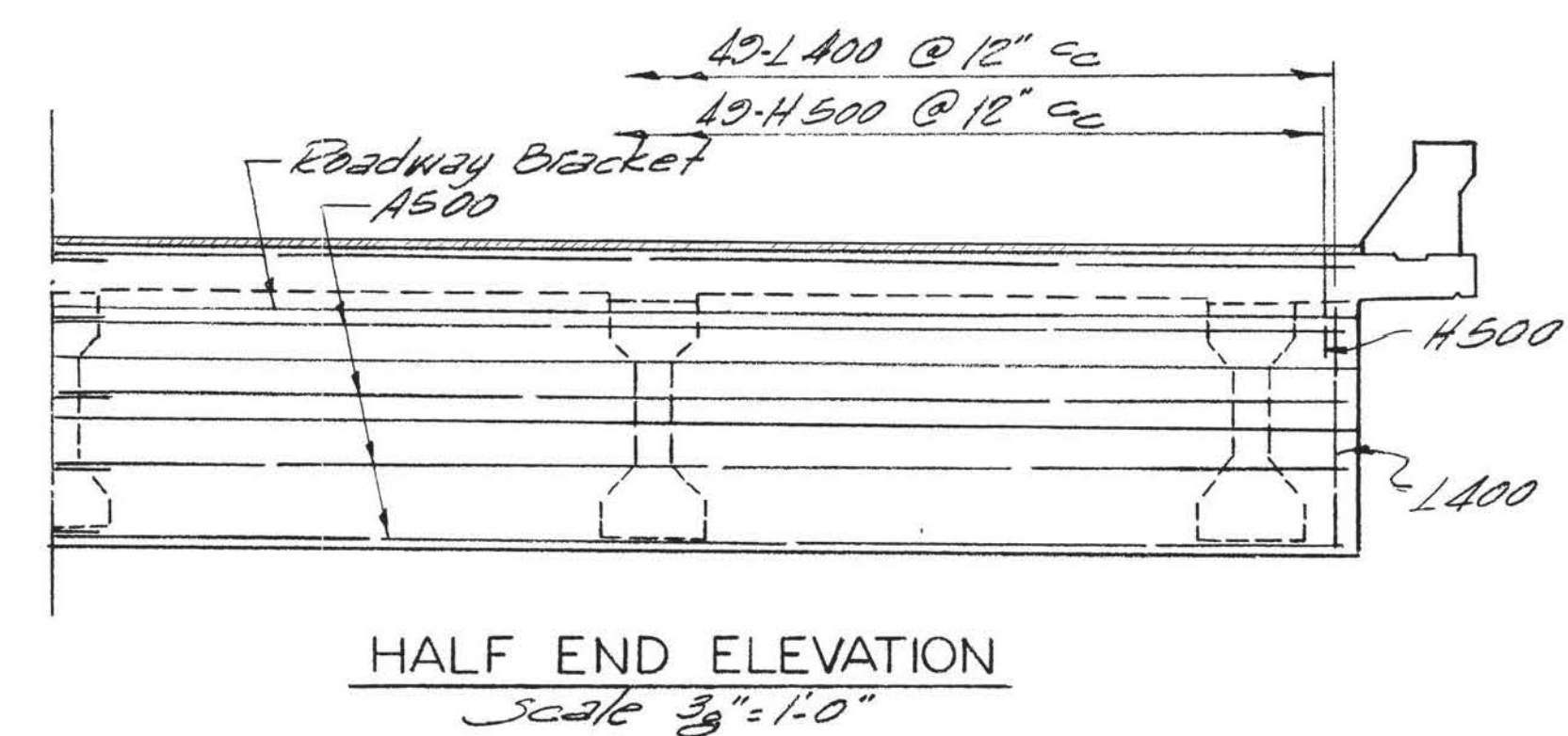
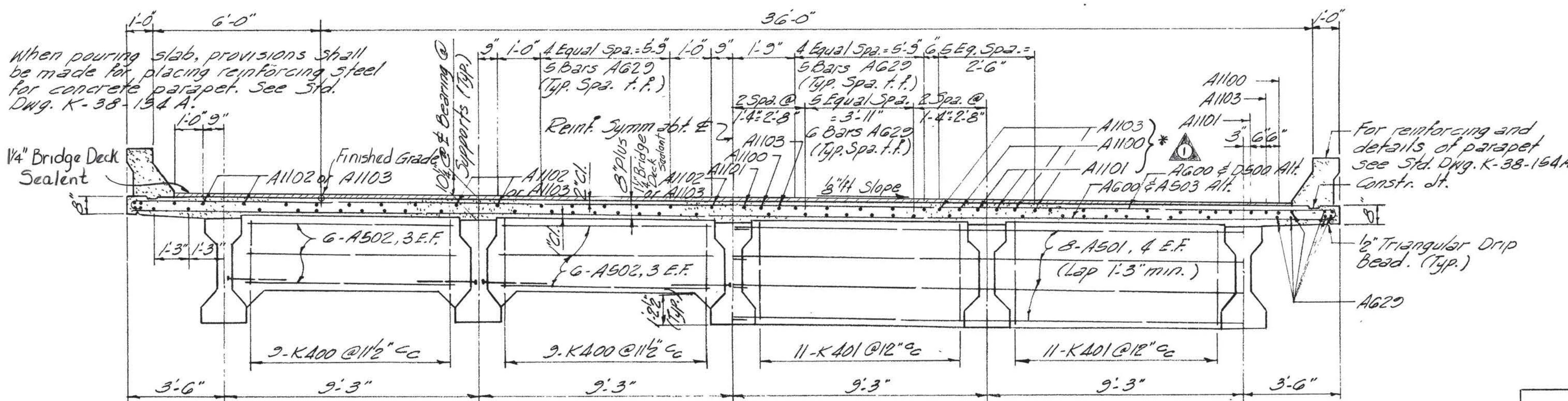
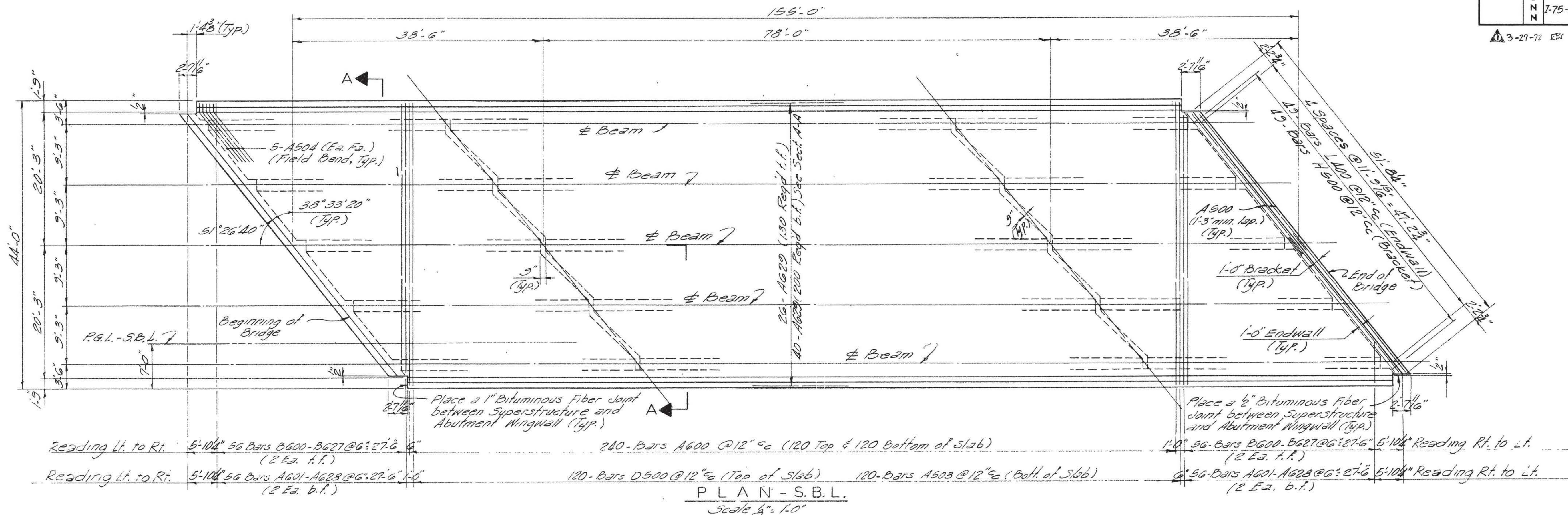
TABLE OF ELEVATION		
	BENT #1	BENT #2
Elev. 'A'	920.872	921.525
Elev. 'B'	920.828	921.493
Elev. 'C'	920.784	921.463
Elev. 'D'	920.741	921.432
Elev. 'E'	920.700	921.403
Elev. 'G'	900.70	901.40
Elev. 'H'	916.70	917.36
Elev. 'J'	916.62	917.30
Elev. 'K'	916.53	917.24



MICROFILMED

FED. ROAD DIST. NO.	TENN.	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
		1-75-2(9)74		61	496

3-27-72 EBI Parapet Dimensions & Note



SECTION A-A Scale 3/8" = 1'-0"
 * Note: For Spacing of Main Reinforcing, See Dwg. K-103-24

ESTIMATED QUANTITIES		
ITEM NO.	ITEM	QUANTITY
604-03.01	Class A Concrete C.Y.	216.2
604-03.02	Steel Bar Reinforcing Lb.	74,431

NOTE - slab construction joints may be located at the contractors option, except no joint may be located closer than one fifth span length from an interior support. The contractor shall make provisions during placement of slab to prevent the exterior beam from twisting. No equipment shall be permitted on the bridge until all pours are made and the concrete is properly cured.

STATE OF TENNESSEE
 DEPARTMENT OF HIGHWAYS
 NASHVILLE

PROJECT 1 - 75
 SOUTHBOUND LANE OVER
 COUNTY ROAD
 AT STA. 1038 + 59.84 BRIDGE NO. 3A
 LOUDON COUNTY, TENN.
 SUPERSTRUCTURE DETAILS

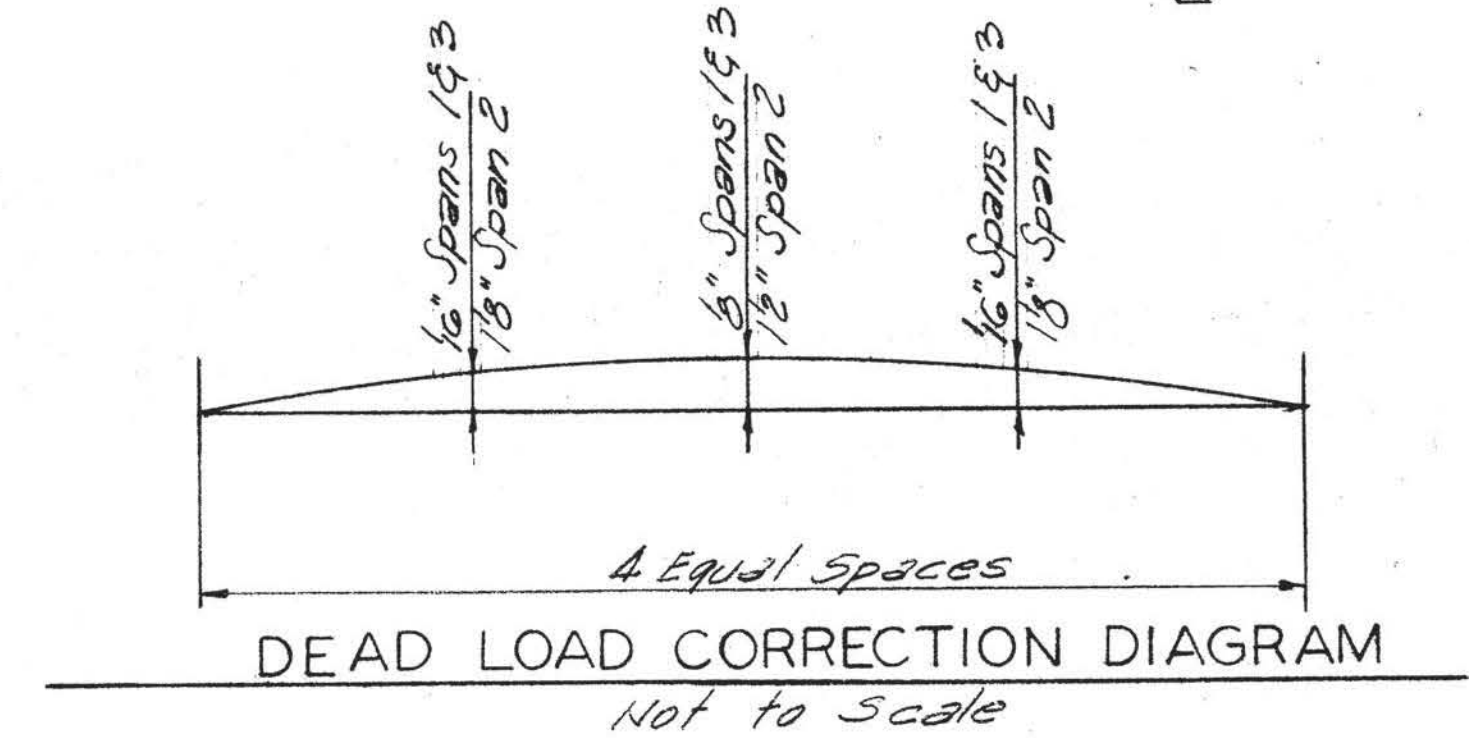
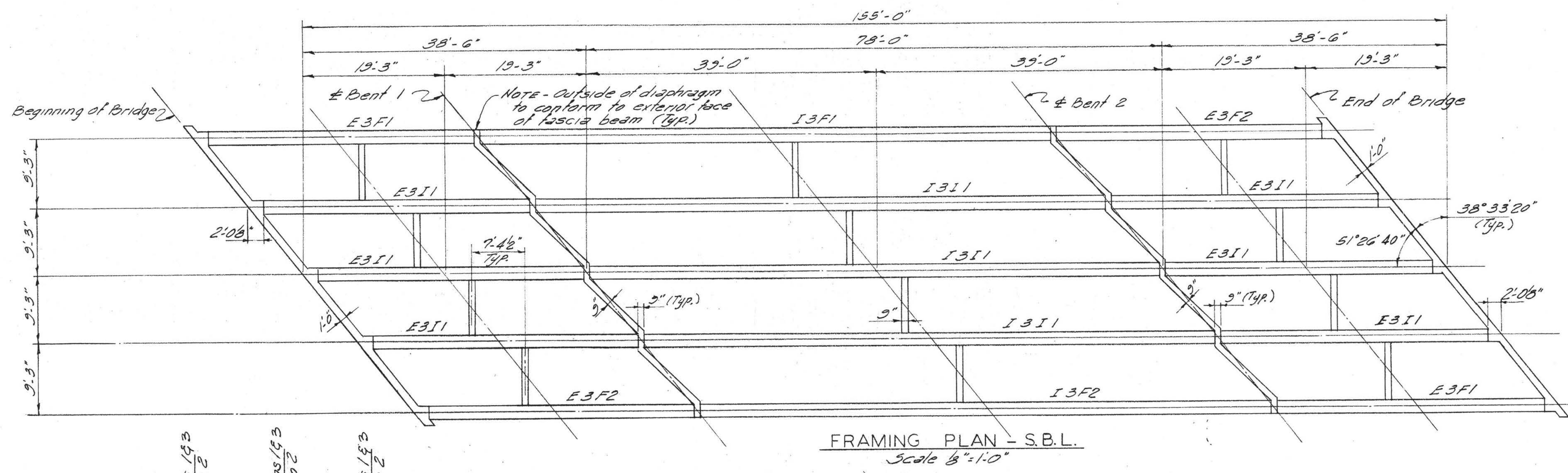
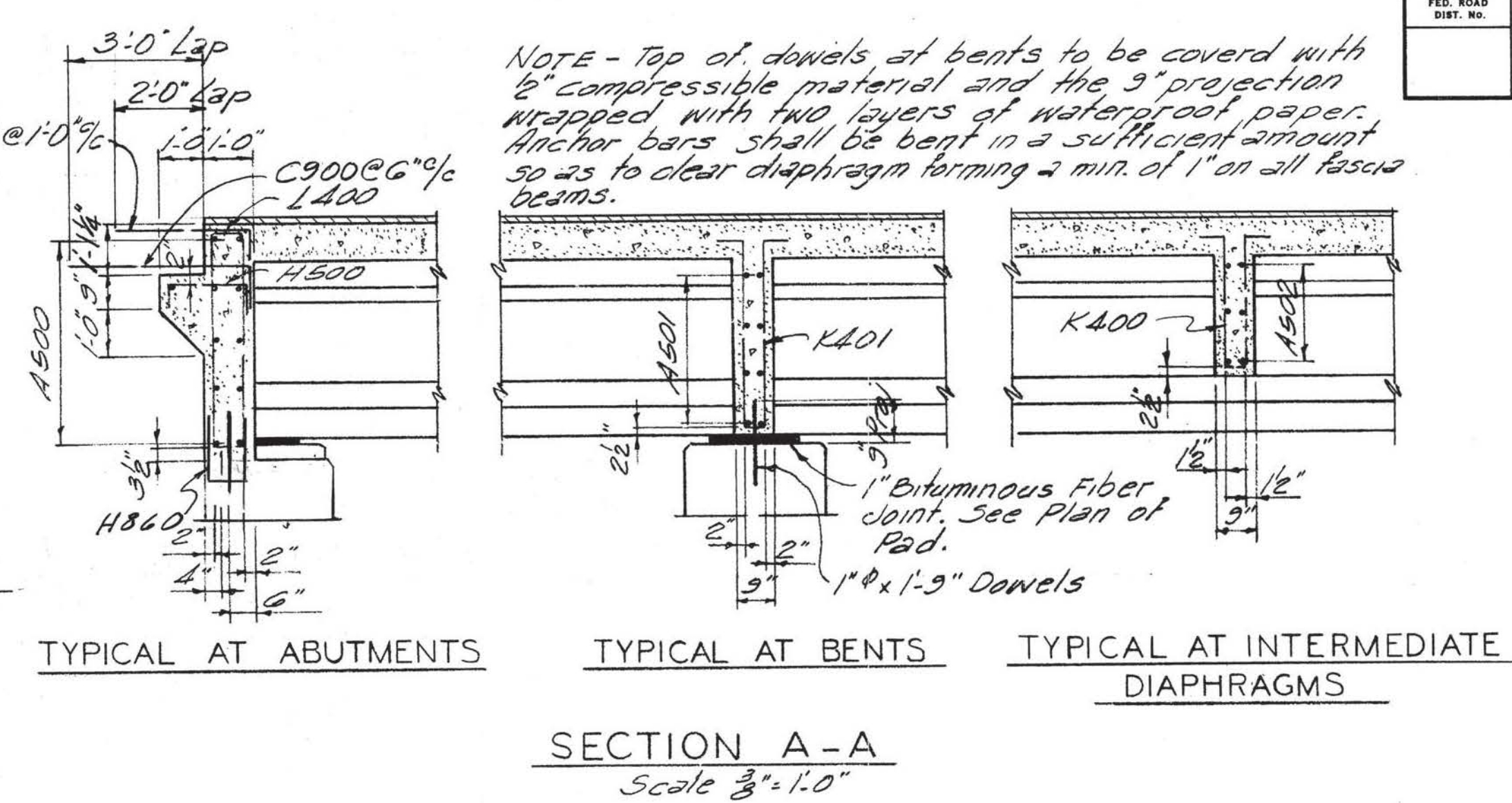
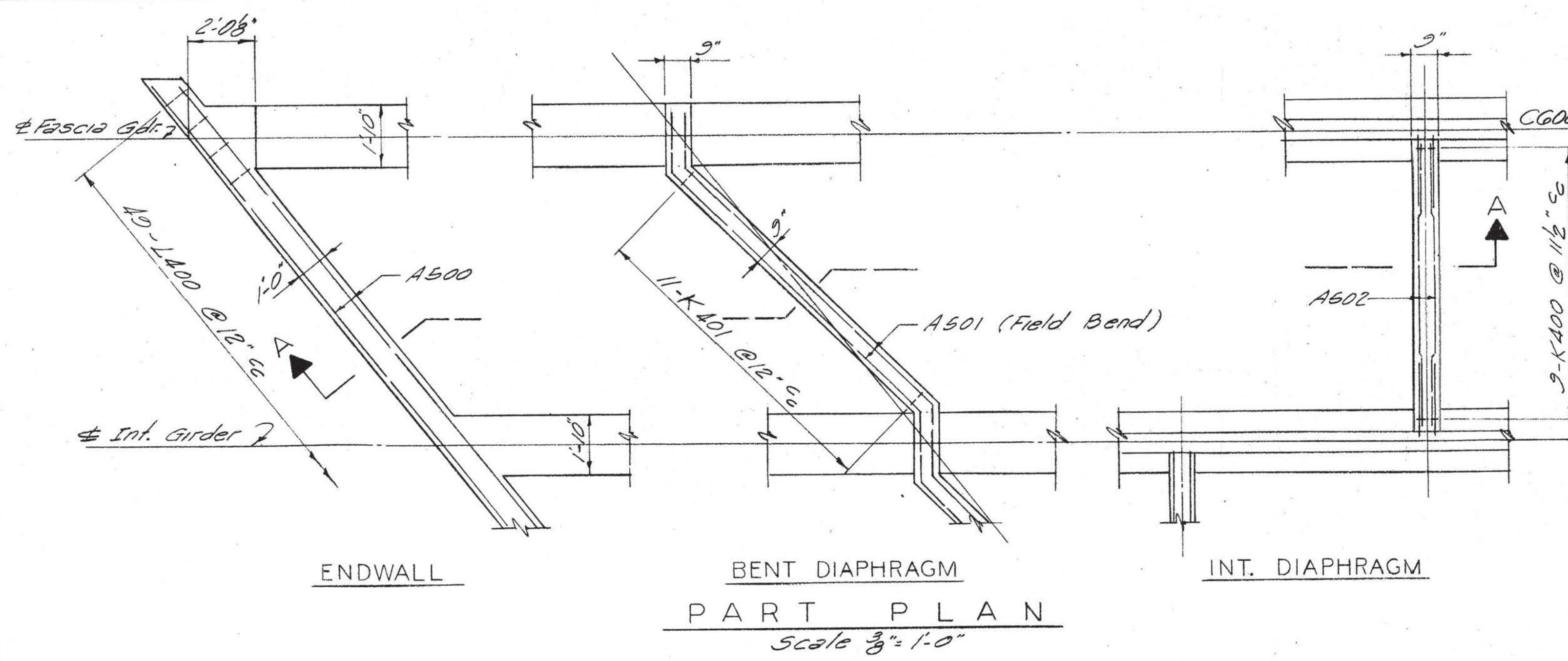
MID-SOUTH ENGINEERING CO., INC.
 820 BROADWAY, N.E. KNOXVILLE, TENNESSEE

SCALE As Noted	DESIGNED: PCW DRAWN: PCW TRACED: PCW CHECKED: PCW	QUANTITIES COMP: PCW CK'D: BEC	DATE Dec 1970
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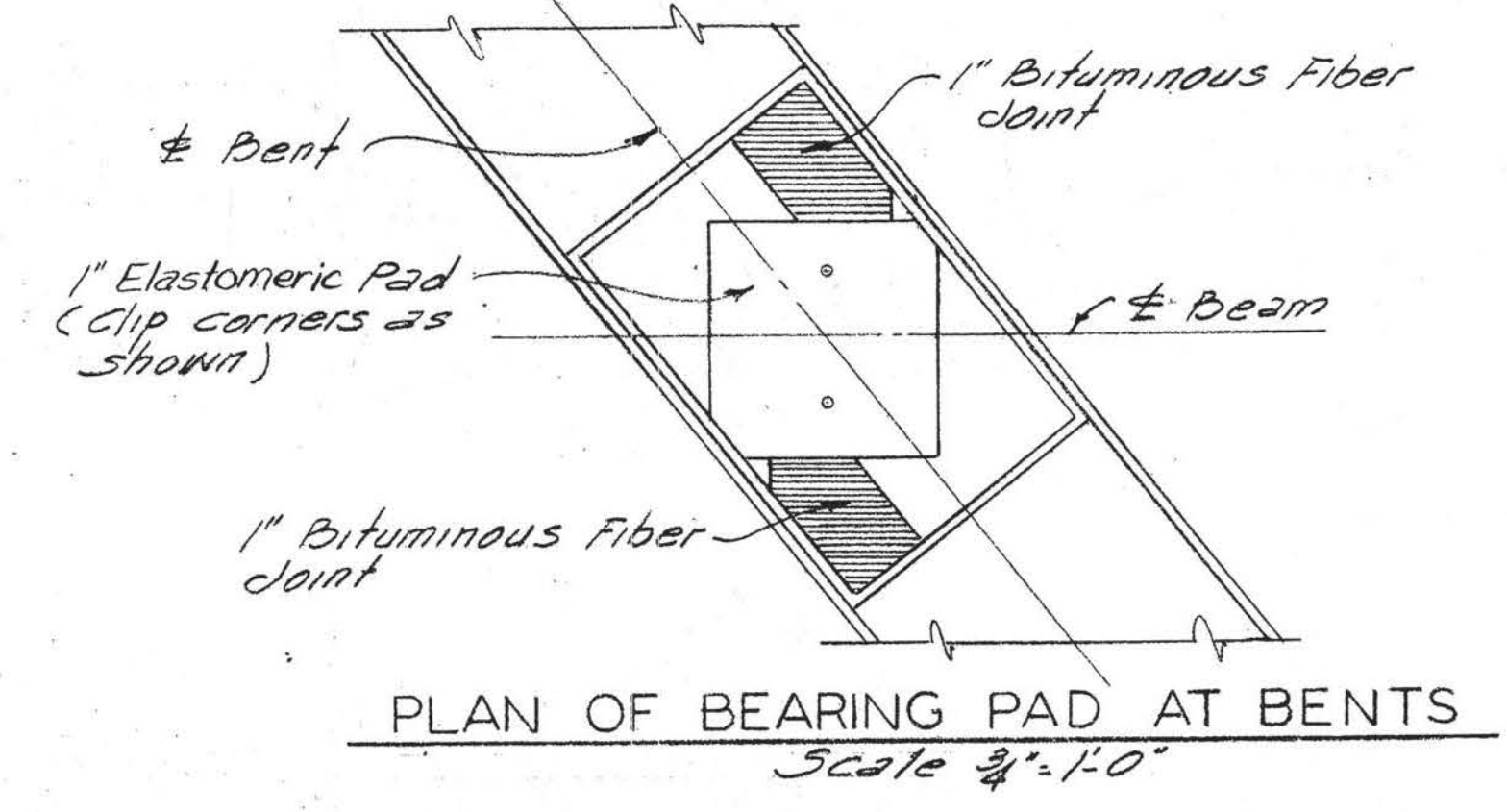
K-103-20

MICROFILMED

FED. ROAD DIST. NO.	TENN.	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
		1-75-2(9)74		62	496



NOTE - This curve is for dead load slab and all dead loads that are applied after slab is in place and, when applied as camber, shall be corrected to compensate for the effects due to vertical curve.

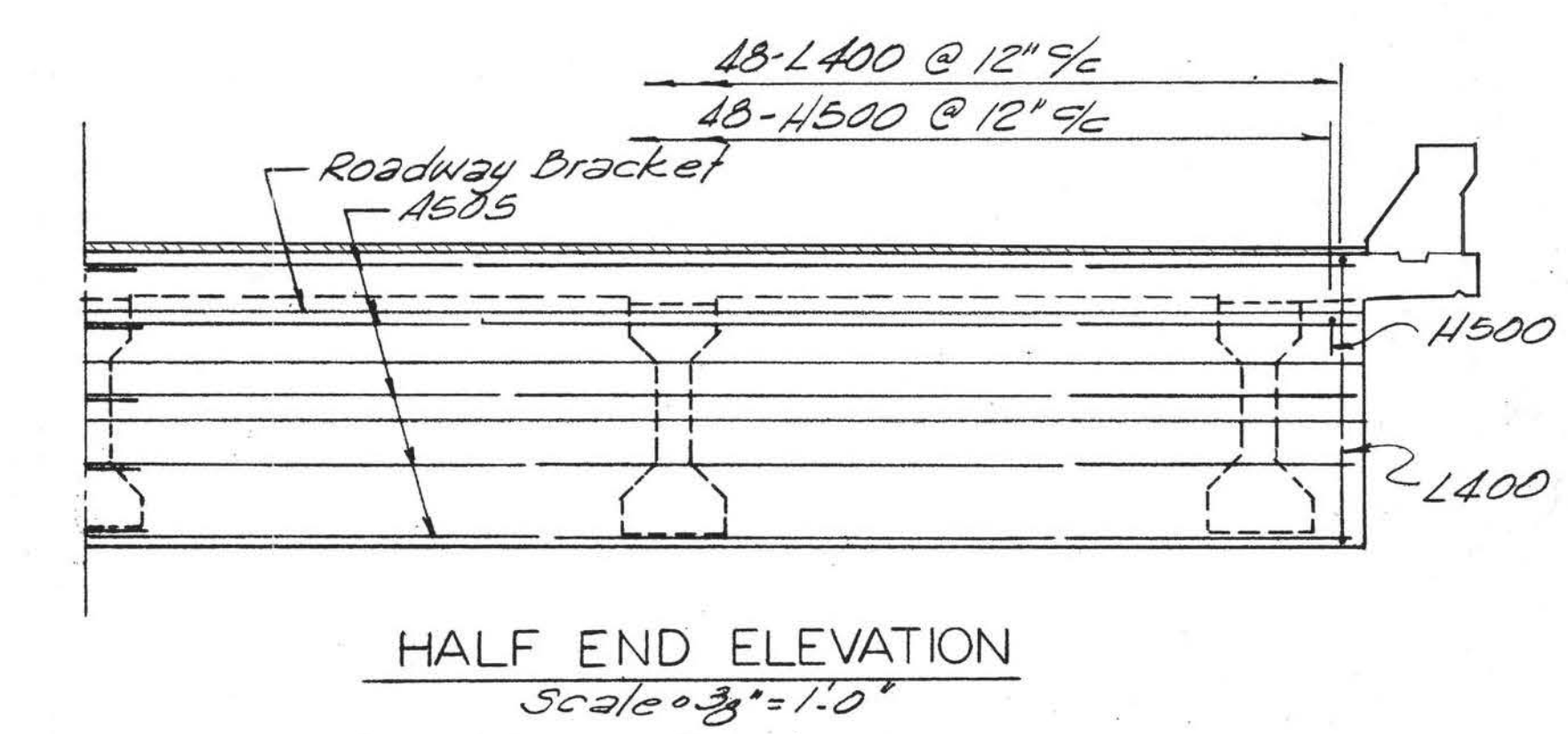
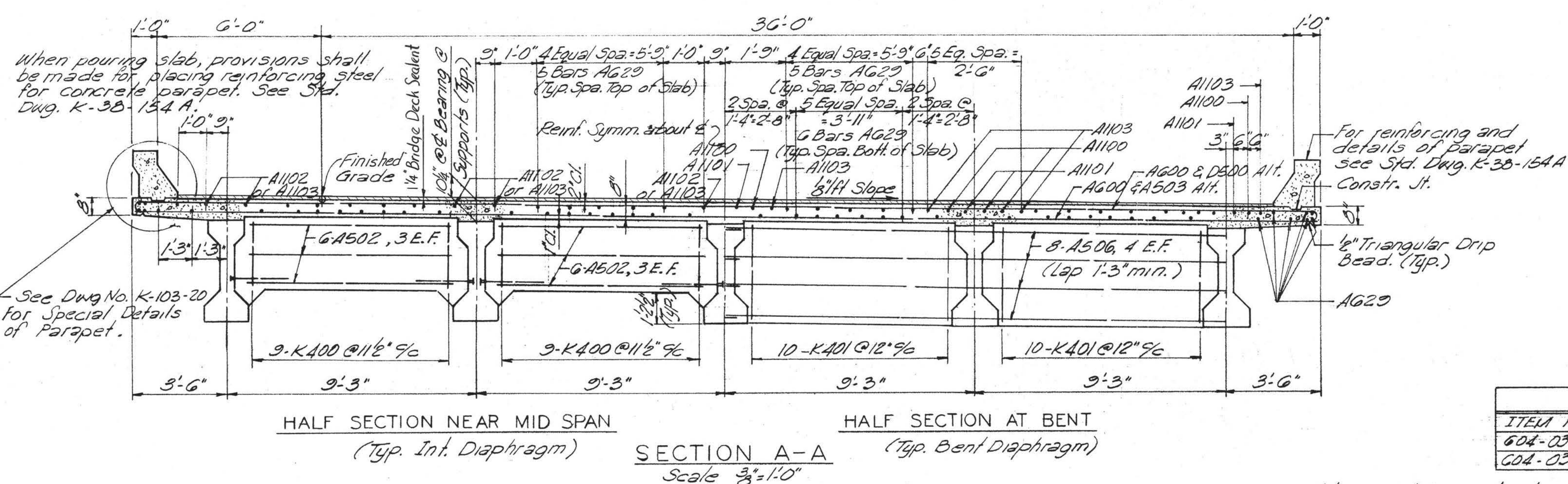
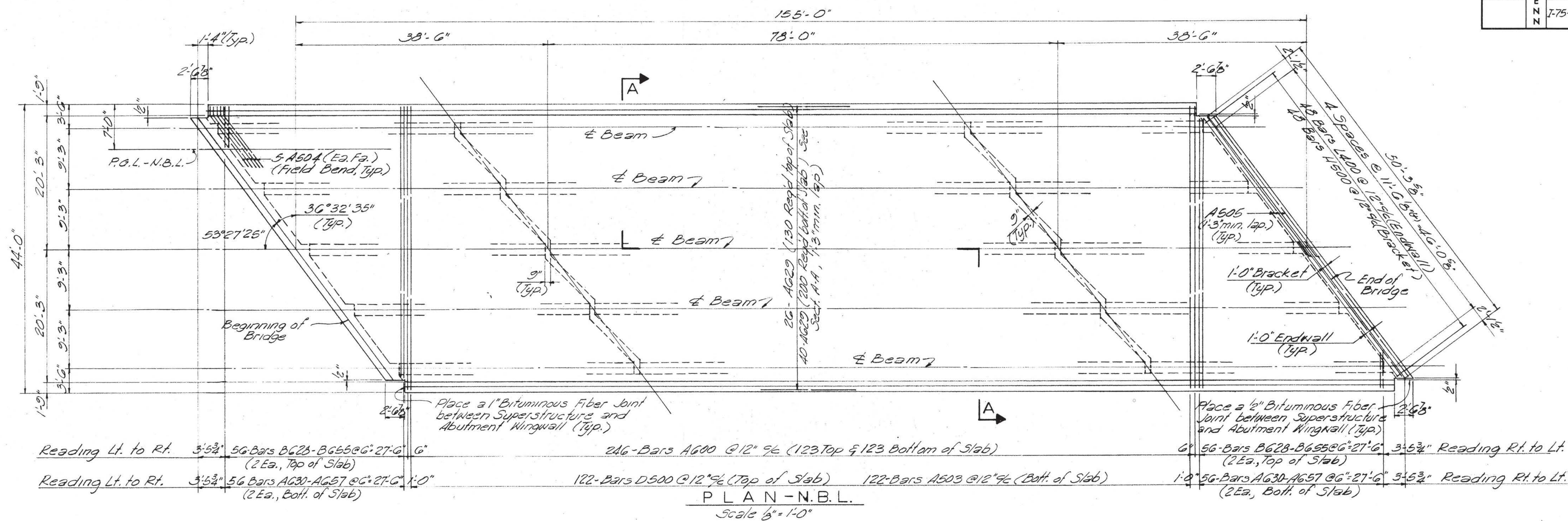


STATE OF TENNESSEE DEPARTMENT OF HIGHWAYS NASHVILLE			
PROJECT 1-75 SOUTHBOUND LANE OVER COUNTY ROAD AT STA. 1038+59.84 BRIDG NO. 3A LOUDON COUNTY, TENN. SUPERSTRUCTURE DETAILS			
MID-SOUTH ENGINEERING CO., INC. 820 BROADWAY, N.E. KNOXVILLE, TENNESSEE			
SCALE As Noted	DESIGNED: PCW DRAWN: BK TRACED: BK CHECKED: PCW	QUANTITIES COMP: PCW CK'D: BEC	DATE Dec 1970

K-103-21

MICROFILMED

FED. ROAD DIST. NO.	TENN	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
		1-75-2(9)74		63	496



ESTIMATED QUANTITIES		
ITEM No.	ITEM	QUANTITY
604-03.01	Class "A" Concrete C.Y.	215.3
604-03.02	Steel Bar Reinforcing Lb	74,518

Note - Slab construction joints may be located at the contractors option, except no joint may be located closer than one fifth span length from an interior support. The contractor shall make provisions during placement of slab to prevent the exterior beam from twisting. No equipment shall be permitted on the bridge until all pours are made and the concrete is properly cured.

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS
NASHVILLE

PROJECT I-75
NORTHBOUND LANE OVER
COUNTY ROAD
AT STA. 1038+94.69 BRIDGE NO.3B
LOUDON COUNTY, TENN.
SUPERSTRUCTURE DETAILS

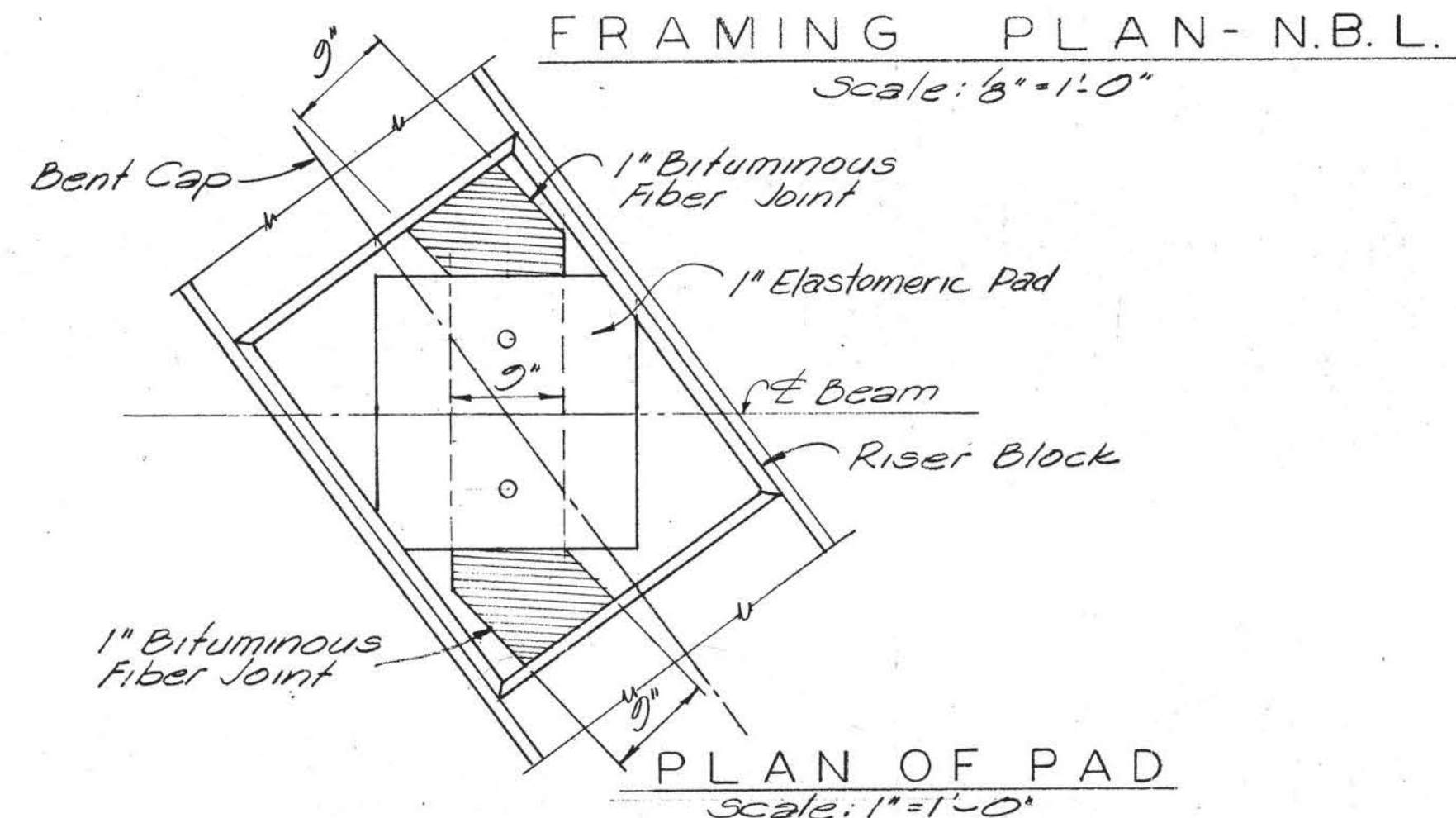
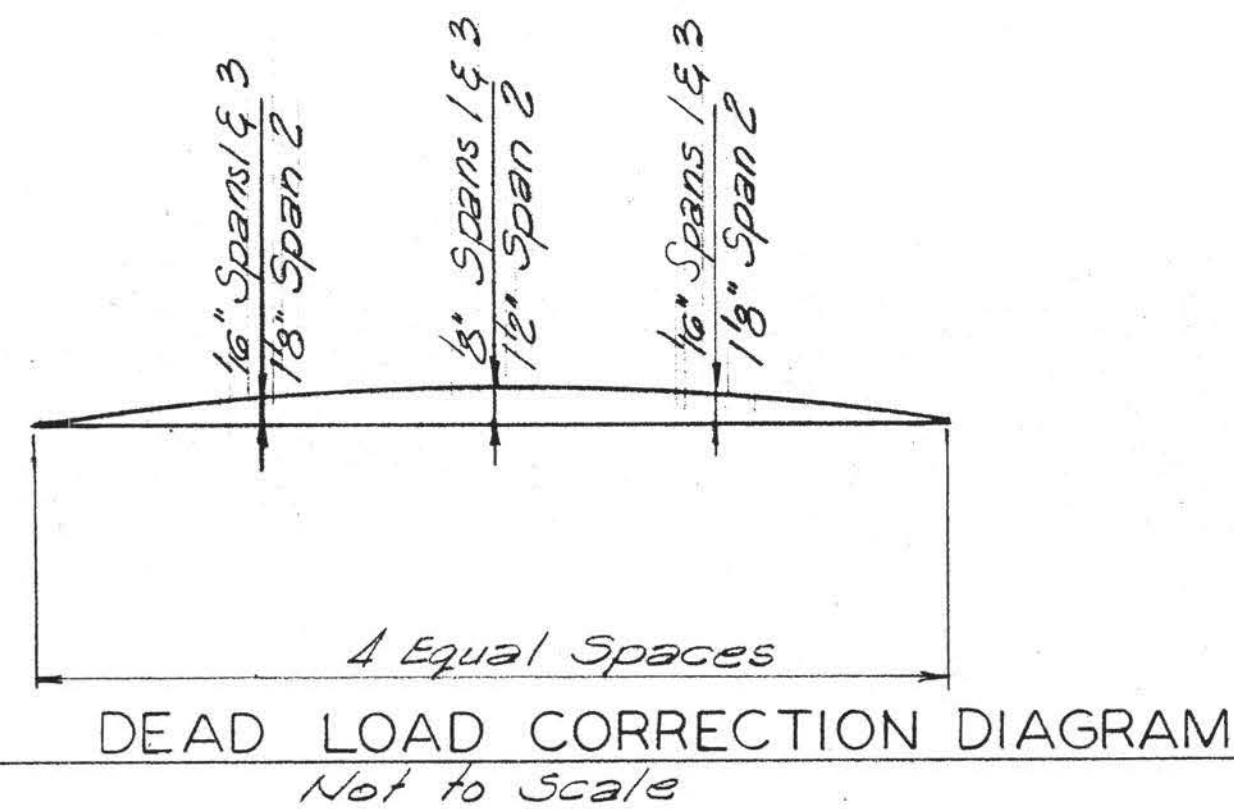
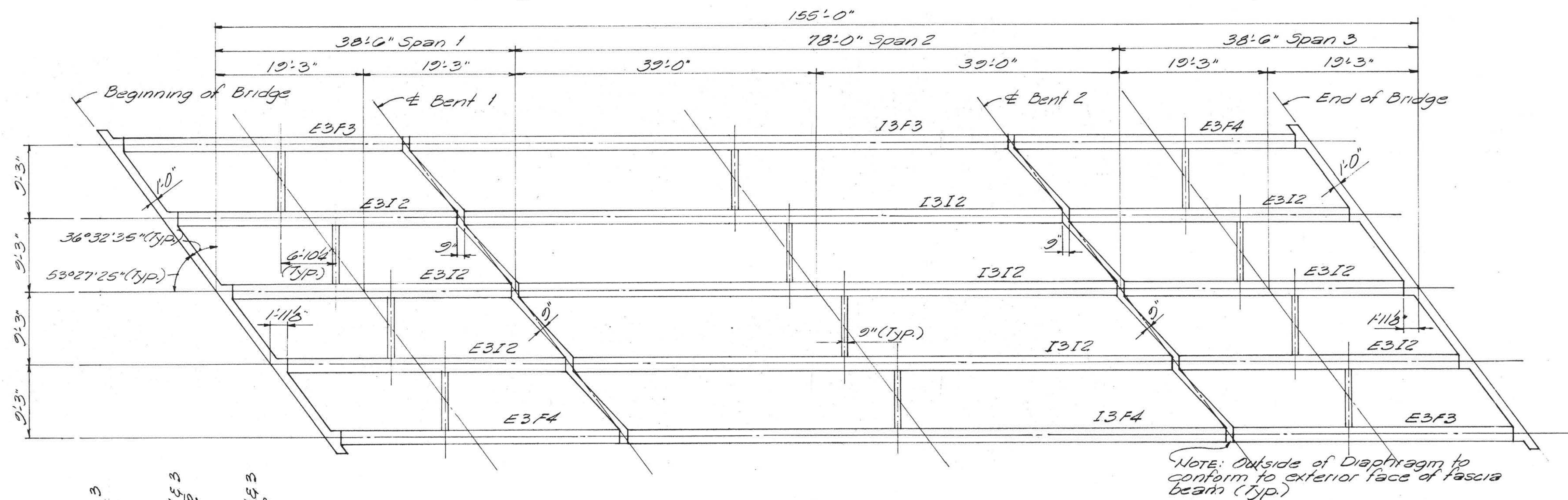
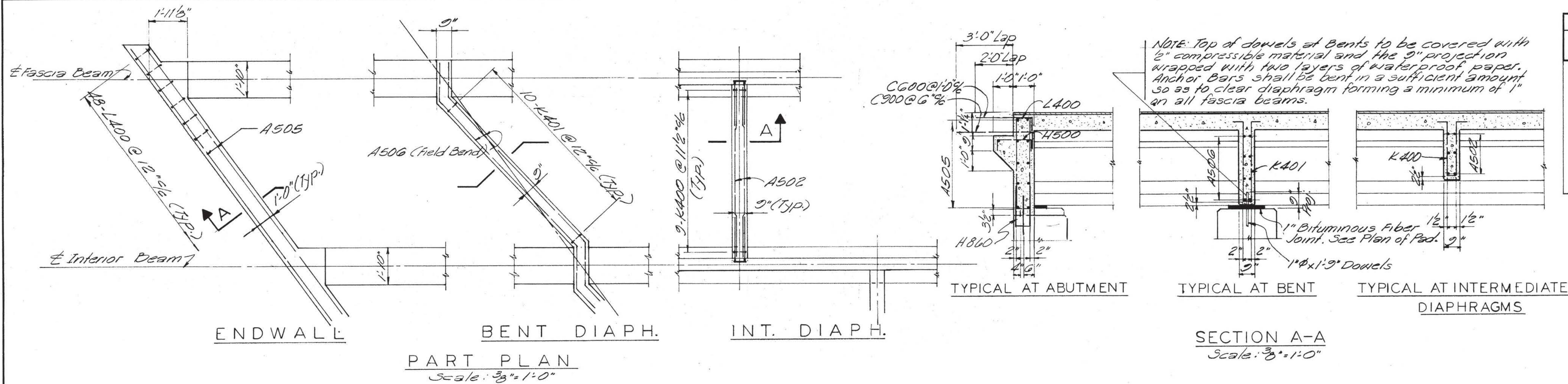
MID-SOUTH ENGINEERING CO., INC.
820 BROADWAY, N.E. KNOXVILLE, TENNESSEE

SCALE	DESIGNED: PCW	QUANTITIES	DATE
As Noted	DRAWN: BEC	COMP: PCW	Dec
	TRACED: BEC	CK'D: BEC	1970
	CHECKED: PCW		

K-103-22

MICROFILMED

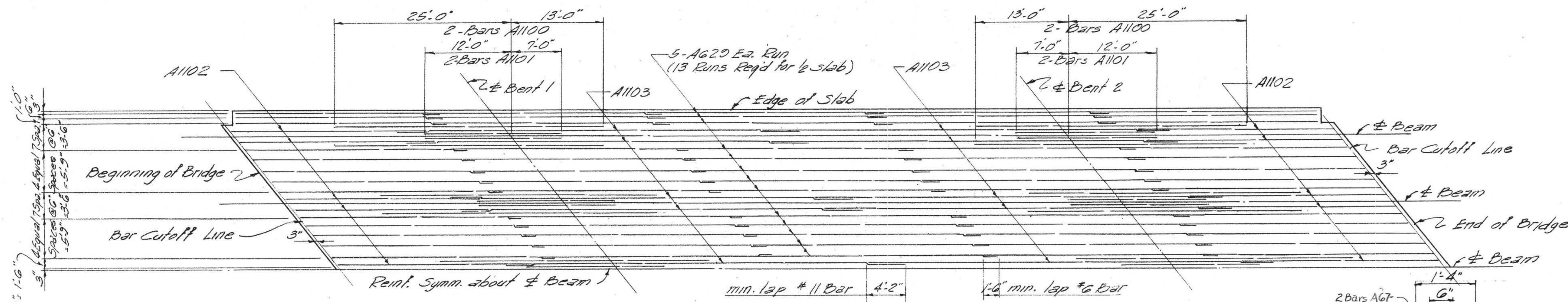
FED. ROAD DIST. NO.	TENN	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
		1-75-2(9)74		64	496



STATE OF TENNESSEE DEPARTMENT OF HIGHWAYS NASHVILLE			
PROJECT I - 75 NORTHBOUND LANE OVER COUNTY ROAD AT STA. 1038+94.69 BRIDGE NO. 3B LOUDON COUNTY, TENN. SUPERSTRUCTURE DETAILS			
MID-SOUTH ENGINEERING CO., INC. 820 BROADWAY, N.E. KNOXVILLE, TENNESSEE			
SCALE As Noted	DESIGNED: PCW DRAWN: BEC TRACED: BEC CHECKED: PCW	QUANTITIES COMP: PCW CK'D: BEC	DATE Dec. 1970

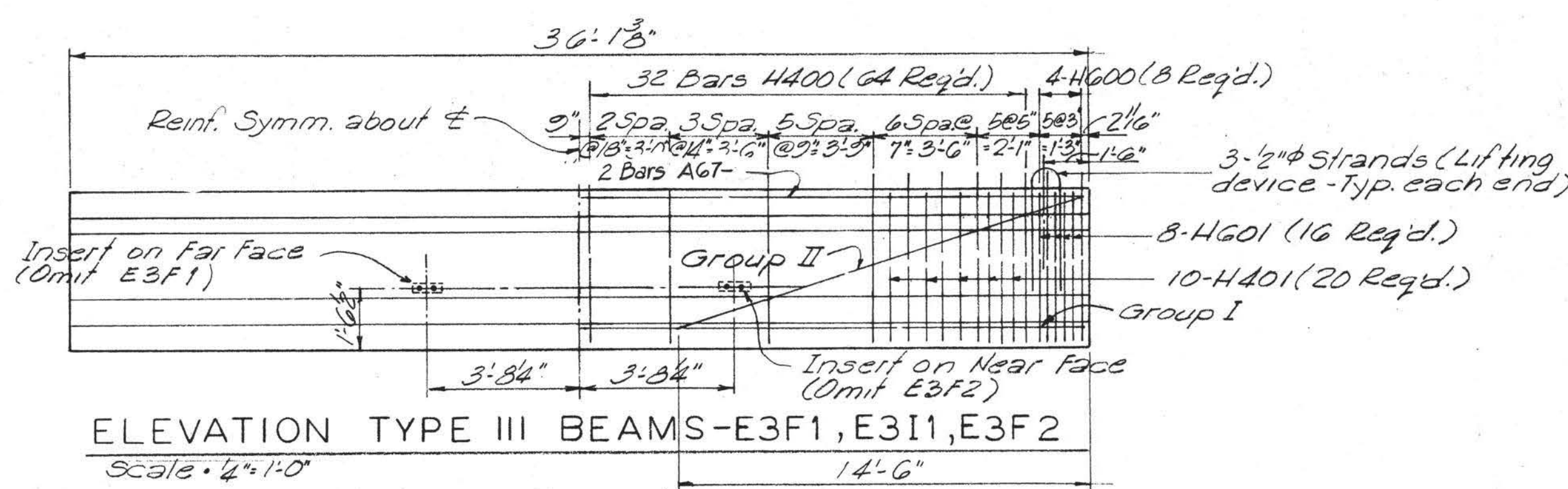
K-103-23

FED. ROAD DIST. NO.	TENN.	FEDERAL AID PROJECT No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
		1-75-2(9)74		65	496

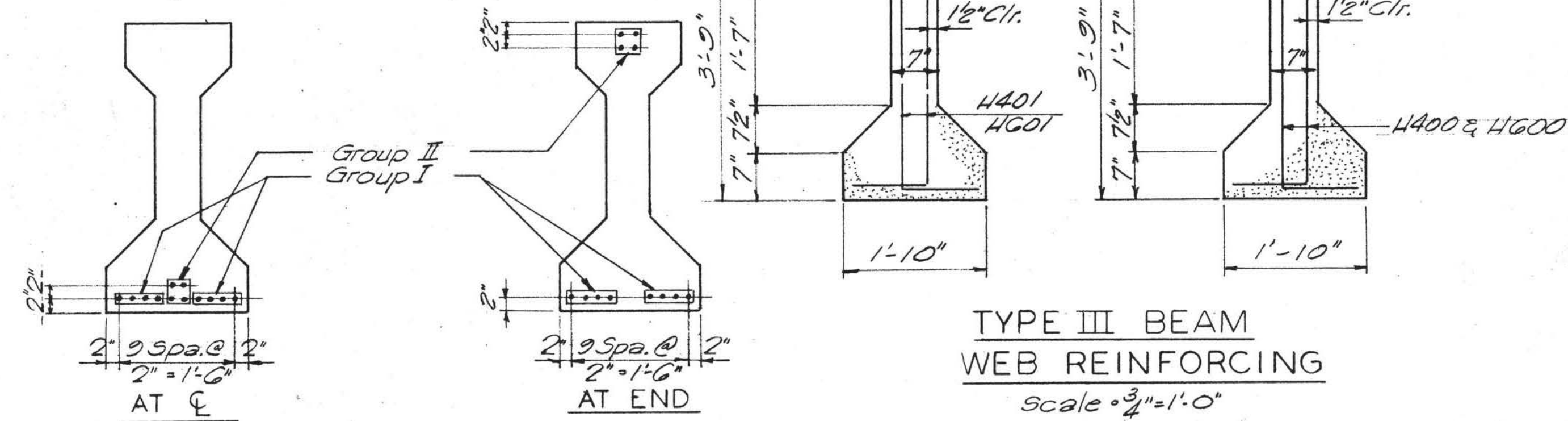


HALF PLAN OF REINF. STEEL TOP OF SLAB-S.B.L.

Scale 8"=1'-0"
(H.B.L. Reinforcement is same)

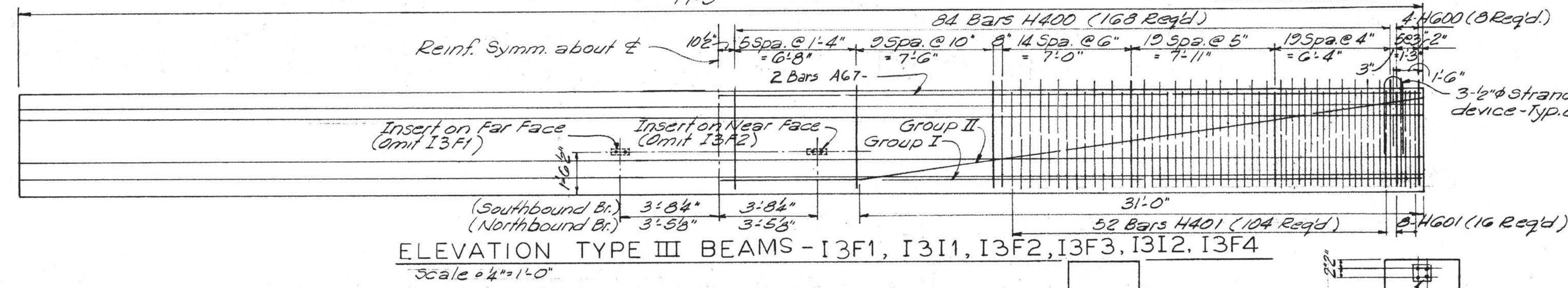


ELEVATION TYPE III BEAMS-E3F1, E3I1, E3F2
Scale 4"=1'-0"

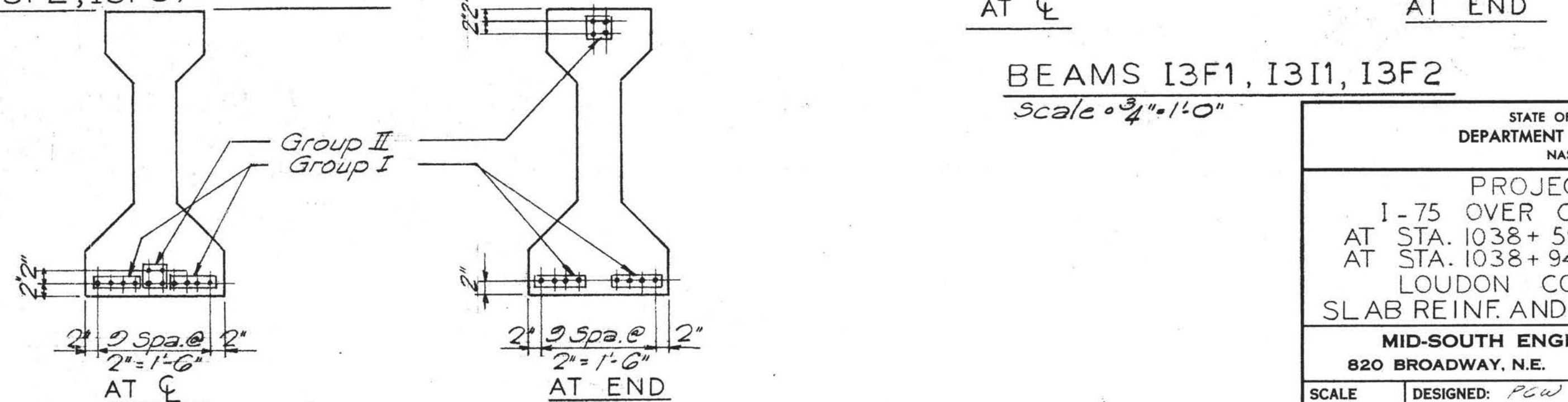


BEAMS E3F1, E3I1, E3F2
Scale 3/4"=1'-0"

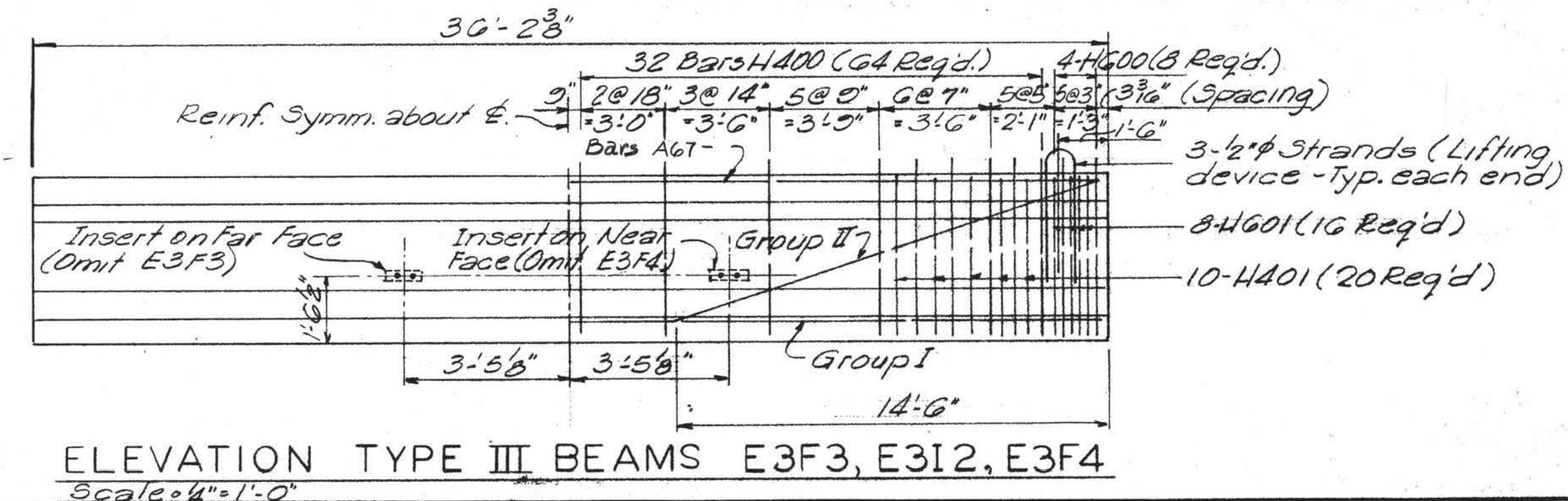
TYPE III BEAM
WEB REINFORCING
Scale 3/4"=1'-0"



ELEVATION TYPE III BEAMS - I3F1, I3I1, I3F2, I3F3, I3I2, I3F4
Scale 4"=1'-0"



BEAMS I3F1, I3I1, I3F2
Scale 3/4"=1'-0"



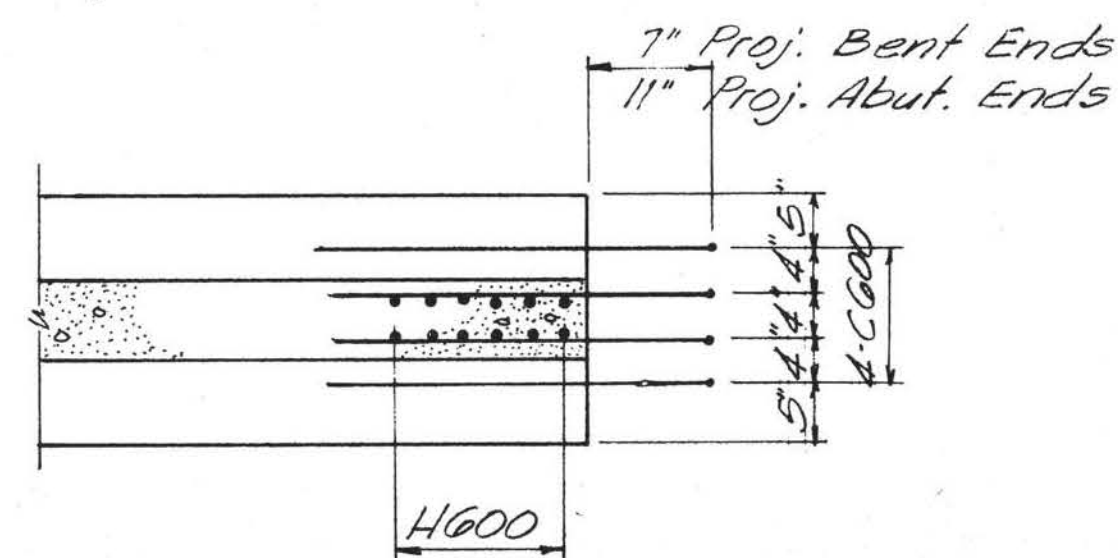
ELEVATION TYPE III BEAMS E3F3, E3I2, E3F4
Scale 4"=1'-0"

STATE OF TENNESSEE DEPARTMENT OF HIGHWAYS NASHVILLE			
PROJECT 1-75 I-75 OVER COUNTY ROAD AT STA. 1038+59.84 BRIDGE NO.3A AT STA. 1038+94.69 BRIDGE NO.3B LOUDON COUNTY TENN. SLAB REINF. AND PREST. BEAMS			
MID-SOUTH ENGINEERING CO., INC. 820 BROADWAY, N.E. KNOXVILLE, TENNESSEE			
SCALE As Noted	DESIGNED: P.W. DRAWN: P.W. TRACED: B.C. CHECKED: P.W.	QUANTITIES COMP.: P.W. CK'D.: B.C.	DATE Dec. 1970

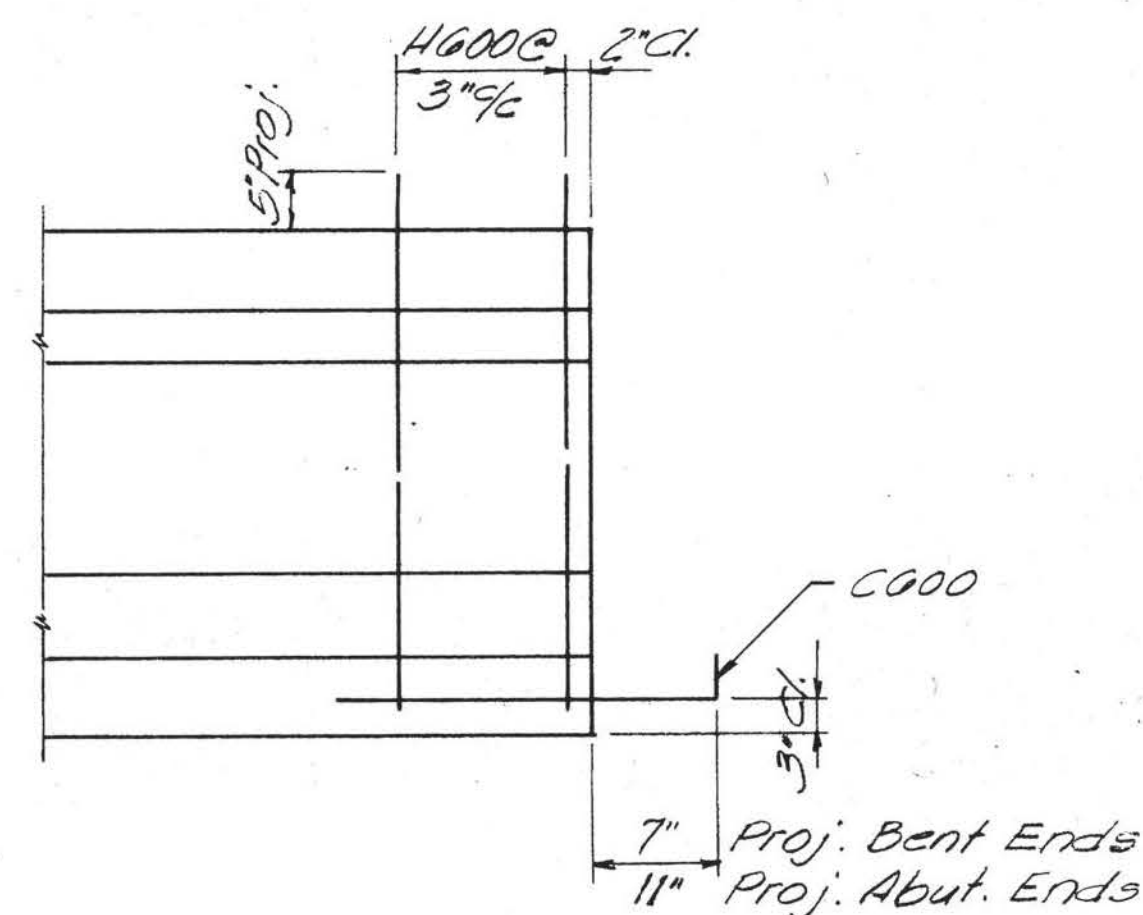
K-103-24

MICROFILMED

FED. ROAD DIST. NO.	TENN	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
		I-75-2(9)74		66	496



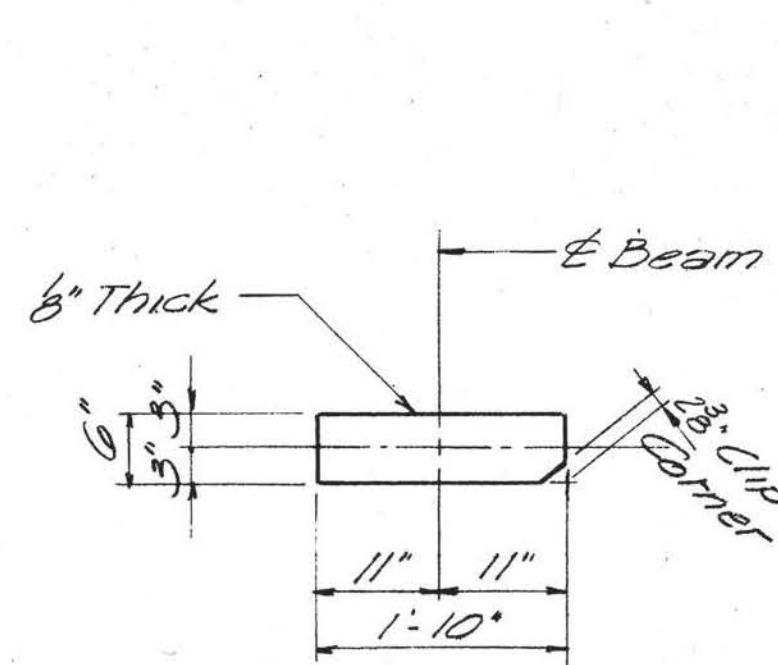
PLAN



ELEVATION

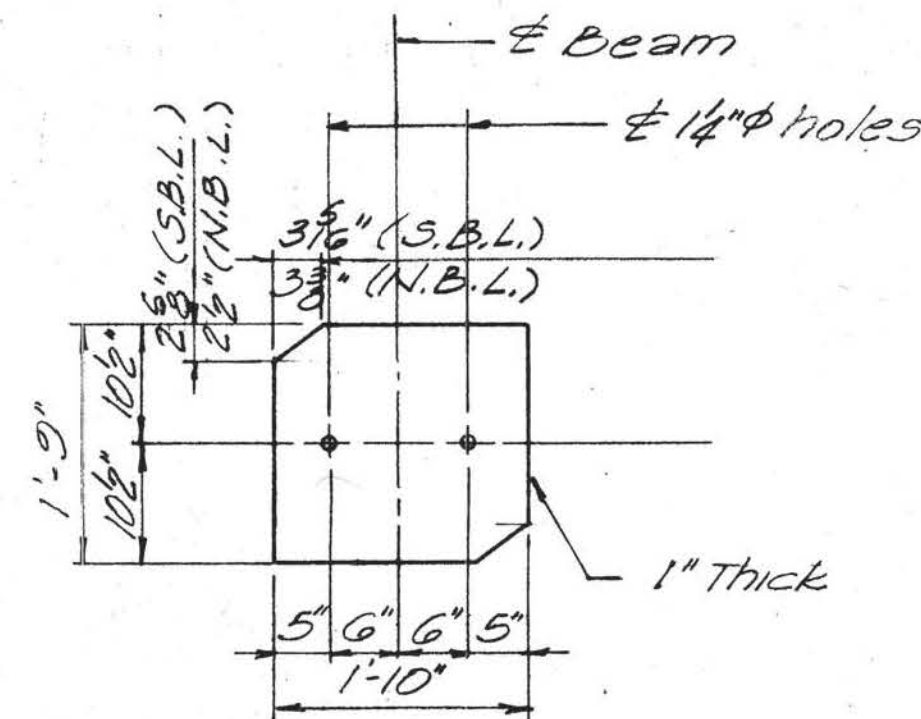
TYPICAL AT BEAM ENDS

Scale = 3/4" = 1'-0"



BEARING PAD AT ABUTMENTS

(20 Required)
Scale = 3/4" = 1'-0"



BEARING PAD AT BENTS

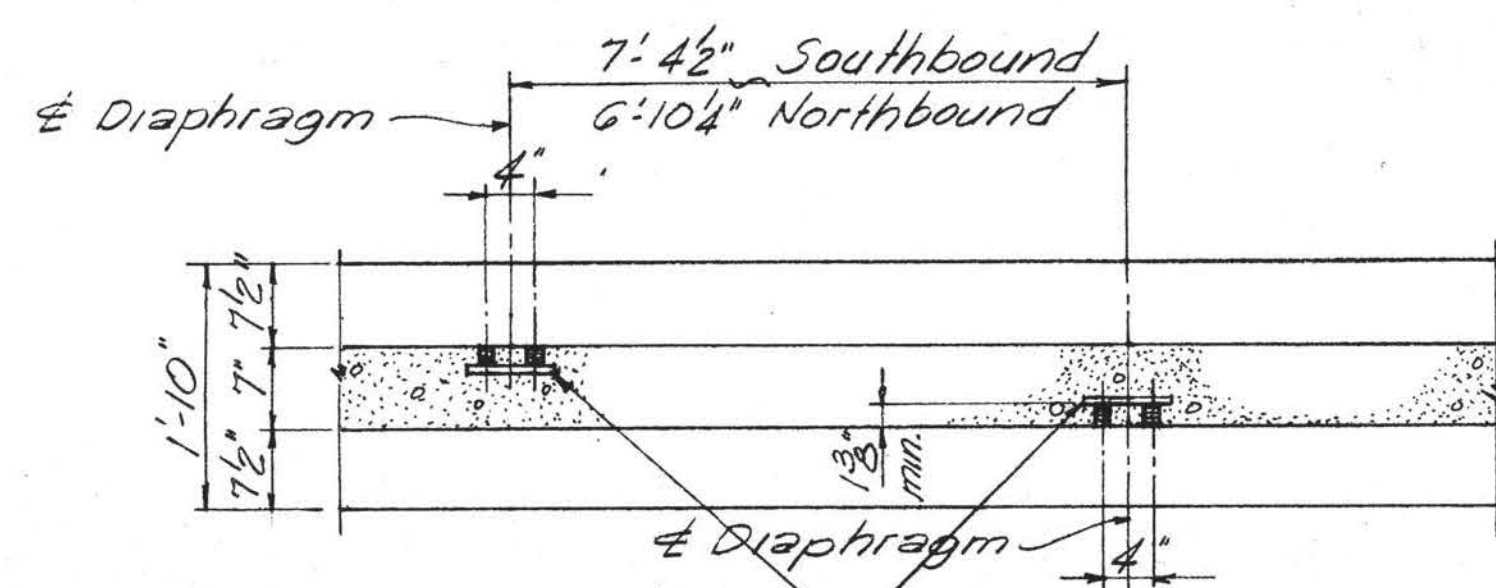
(20 Required)
Scale = 3/4" = 1'-0"

BILL OF STEEL - EACH BEAM

Bar	Size	Number Required			Bending Dim.	Length
		E3F1 E3I1 E3F2	I3F1 I3I1 I3F2	E3F3 E3I2 E3F4		
C600	6	8	8	8		2'-10"
H400	4	64	168	64		5'-5"
H401	4	20	104	20		4'-10"
H600	6	8	8	8		5'-5"
H601	6	16	16	16		4'-10"
A670	6		4			39'-0"
A671		2		2		35'-0"

NOTES

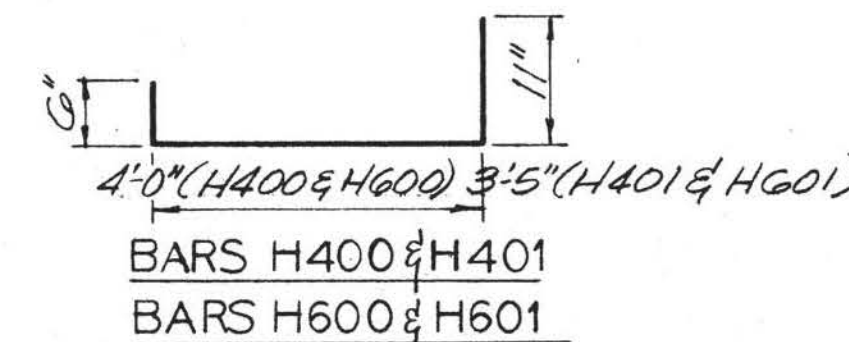
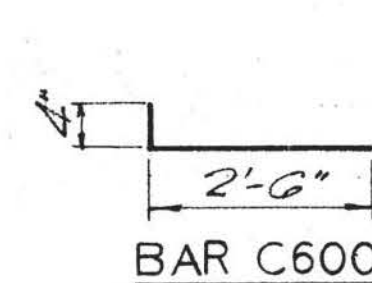
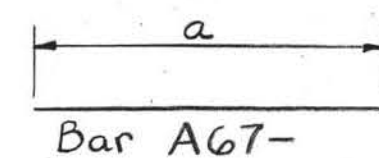
- The top of all beams are to be rough floated. At approximately the time of initial set, the top of the beams will also be scrubbed transversely with a coarse wire brush to remove all laitance and produce a rough surface.
- Inserts for diaphragm are to be double threaded type (Cast in place). 3/4" diameter threaded rods for inserts are to provide a 2'-0" splice with the diaphragm reinforcement.
- Anchorage at bents to be accomplished by 2 dowels 1" x 1'-0".
- Mild steel reinforcing shall be A.S.T.M. A615.
- All prestressing strands to be 2" high strength type 270K 7 wire uncoated stress-relieved prestressing strands.
- An initial force of 28,910 Lbs. shall be applied to each strand in all beams, except as noted on drawings.
- All beams are A.A.S.H.O. P.C.I. Standard type III.
- After the beam is removed from the prestressing bed, bars C600 shall be bent horizontally a sufficient amount so as to permit bars C600 of adjoining beam to mesh when in the erected position.
- 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.
- Size 17 coarse aggregate will be permitted in the concrete.
- Elastomeric pads to be 3/8" x 6" x 1'-10" at abutment ends and 1" x 1'-10" x 1'-9" with 1/2" holes at bents.
- The concrete for this construction shall be of such properties as to attain a compressive strength of not less than 5000+ p.s.i. 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 4000+ p.s.i. See layout for concrete finishing note.
- Cost of Elastomeric pads and dowel bars to be included in the cost of prestressed beam.



SECTION SHOWING THREADED INSERTS

Scale = 3/4" = 1'-0"

Inserts for 3/4" threaded bar. Omit on exterior face of exterior beam.



ESTIMATED QUANTITIES - EACH BEAM

Beam	Rods	Inserts	5000 p.s.i. Conc. Cu. Yds.	Prestressing Steel - Lbs.	Reinforcing Steel - Lbs.
E3F1, E3F2	2	1	5.20	267	621
E3I1	4	2	5.20	267	621
I3F1, I3F2	2	1	11.13	1213	1393
I3I1	4	2	11.13	1213	1393
E3F3, E3F4	2	1	5.21	267	621
E3I2	4	2	5.21	267	621

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS
NASHVILLE

PROJECT I-75
I-75 OVER COUNTY ROAD
AT STA. 1038+59.84 BRIDGE NO.3A
AT STA. 1038+94.69 BRIDGE NO.3B
LOUDON COUNTY, TENN.
PRESTRESSED BEAM DETAILS

MID-SOUTH ENGINEERING CO., INC.
820 BROADWAY, N.E. KNOXVILLE, TENNESSEE

SCALE	DESIGNED: PCW	QUANTITIES	DATE
As Noted	DRAWN: BEC	COMP: PCW	Dec
	TRACED: BEC	CKD: BEC	1970
	CHECKED: PCW		

K-103-25