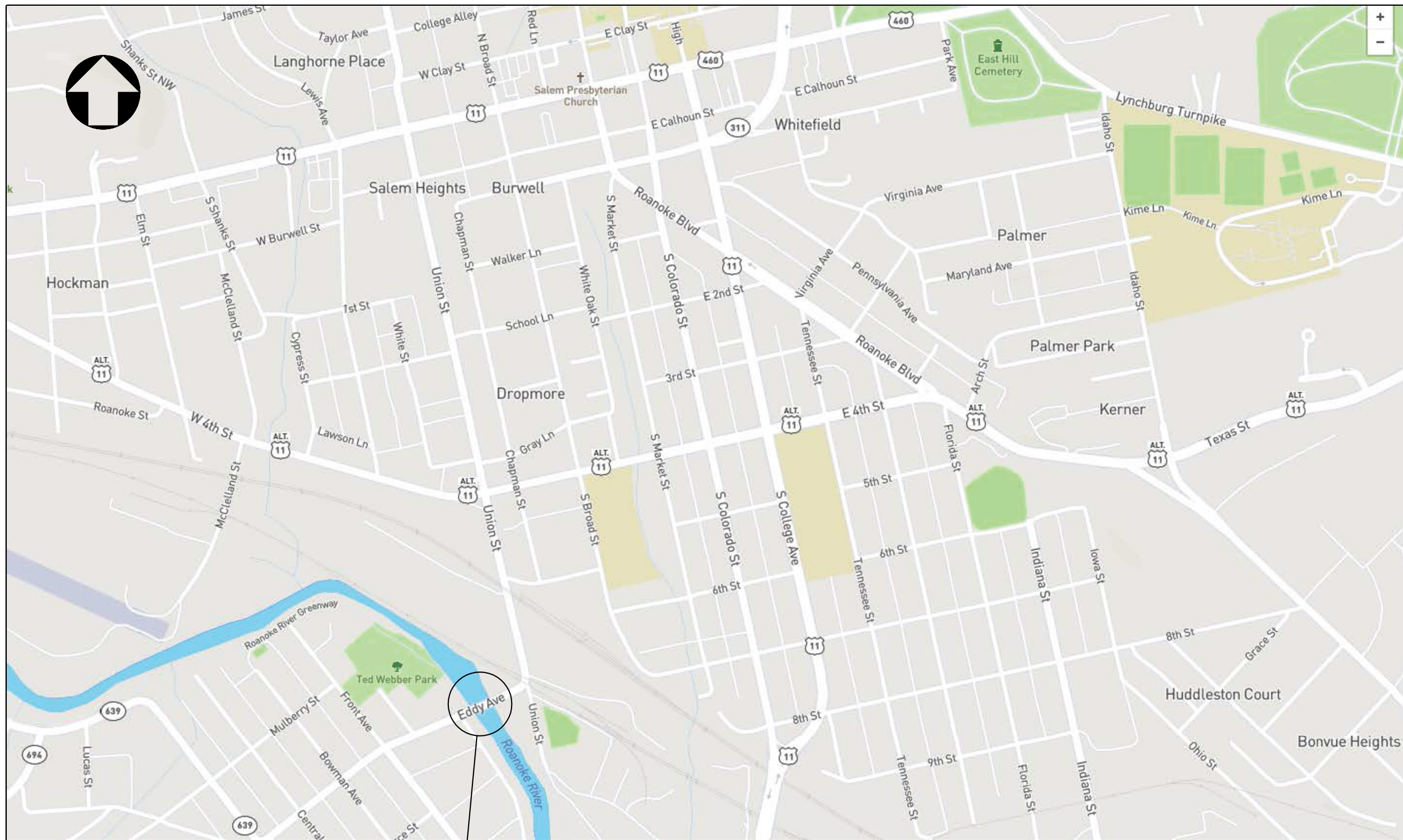




CITY OF SALEM, VIRGINIA

PROPOSED BRIDGE REPAIRS ON EDDY AVENUE OVER ROANOKE RIVER



GENERAL CONSTRUCTION NOTE:
THIS PROJECT SHALL BE CONSTRUCTED IN
ACCORDANCE WITH SUPPLEMENTAL SPECIFICATIONS,
VDOT ROAD AND BRIDGE SPECIFICATIONS DATED
2020 AND CURRENT REVISIONS AND VDOT ROAD
AND BRIDGE STANDARDS, 2016 AND CURRENT REVISIONS.

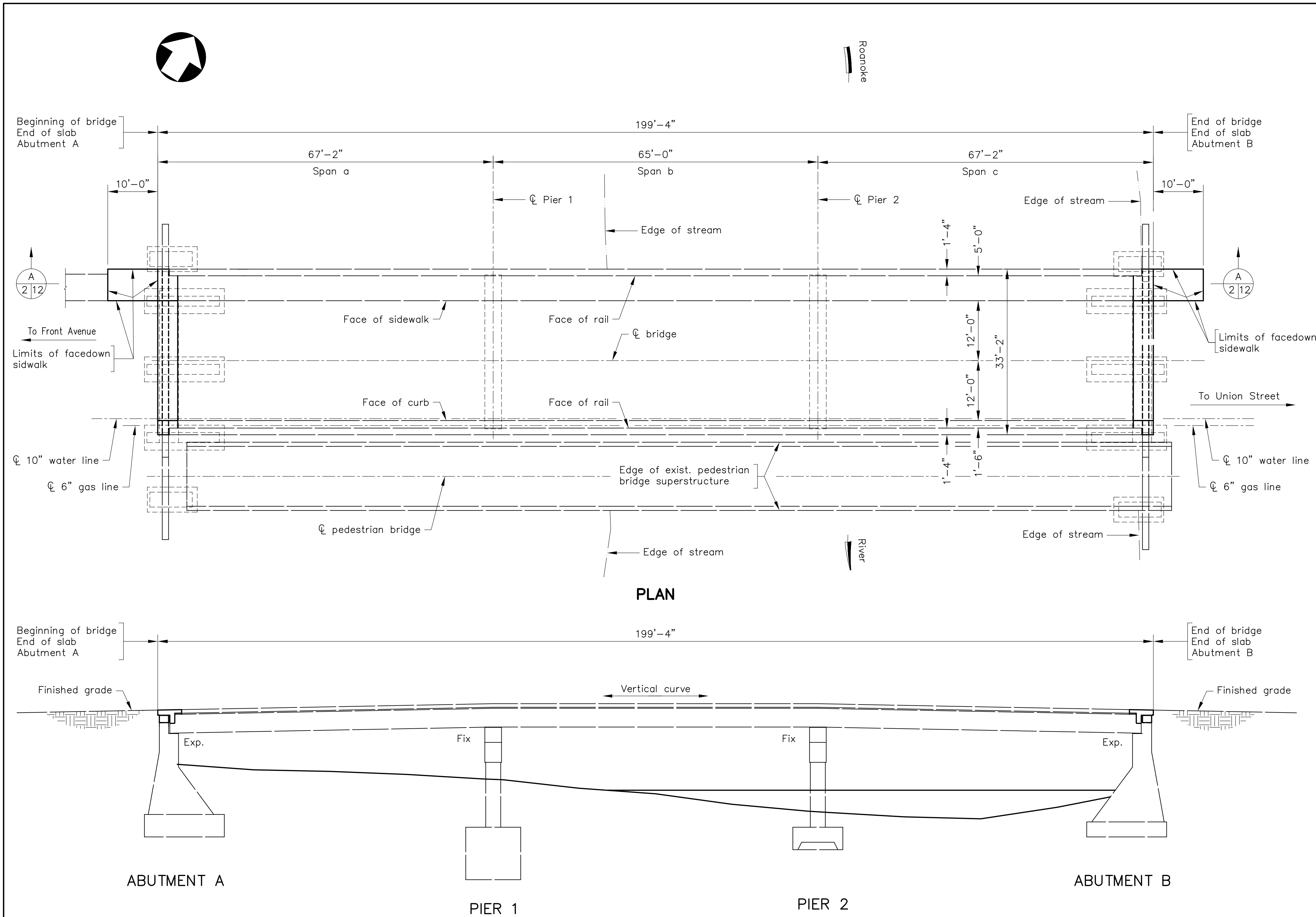
—	EXISTING OBJECT LINES
—	PROPOSED OBJECT LINES
- - -	EXISTING REINF. STEEL
—	PROPOSED REINF. STEEL
- - -	CUTTING PLANE LINE
—	CENTER LINE
- - -	HIDDEN LINES

PROJECT SITE
STR. NO. 8007

LOCATION MAP
Not to Scale

PLANS		REVISED			SCHWARTZ & ASSOCIATES, INC. CONSULTING ENGINEERS LYNCHBURG — ROANOKE		
			EDDY AVENUE OVER ROANOKE RIVER CITY OF SALEM, VA COVER SHEET				
DESIGNED BY: MBH		DRAWN BY: MBH				CHECKED BY: RWS	
SCALE: NOT TO SCALE		PROJECT NO.: NA					
DATE: JUNE 1, 2021		SHEET: 1 OF 21					
COMM. NO. 19035							

CADD REFERENCE NO.: BRIDGE19035.DWG



Scale: 3/32" = 1'-0" unless otherwise shown.

STATE	FEDERAL AID		STATE		SHEET NO.
	ROUTE	PROJECT	ROUTE	PROJECT	
VA.	—	—	—	—	2

GENERAL NOTE:

Widths: 5'-0" sidewalk; 24'-0" face to face curbs; 1'-6" safety curb

Span layout: 3 - 65'-0" simple prestressed concrete beam spans

Capacity: HS20 44 loading and modified military loading.

I. Specifications:

Construction: Virginia Department of Transportation Road and Bridge Specifications, 2020.

Design: AASHTO LRFD Bridge Design Specifications, 8th Edition, 2016 and VDOT Modifications.

Standards: Virginia Department of Transportation Road and Bridge Standards, 2016 including all current revisions.

II. General:

These plans are incomplete unless accompanied by the Supplemental Specifications and Special Provisions included in the contract documents.

This project is to be constructed in accordance with the Virginia Department of Transportation Work Area Protection Manual, August 2011 and current revisions.

Low permeability concrete shall be used in this project.

Permeability testing does not apply to this project.

All reinforcing steel shall be deformed and shall conform to ASTM A615 Grade 60 except for reinforcing steels noted as CRR (corrosion resistant reinforcement) which shall conform to applicable specifications noted on the special provisions. All reinforcing bar dimensions on the detailed drawings are to centers of bars except where otherwise noted and are subject to fabrication and construction tolerances.

Corrosion resistant reinforcing (CRR) steels shall conform to one or more of the three classes listed in the special provision. The minimum yield strength shall be 100 ksi for low carbon/chromium and 60 ksi for stainless clad steel or solid stainless steel. The class(es) of CRR steel(s) required on the project is/are noted on plan sheets and in the reinforcing steel schedule. Corrosion resistant reinforcing steel, Class II or Class III, may be substituted for Class I. Corrosion resistant reinforcing steel, Class III, may be substituted for Class II.

Bridge No. of existing bridge is 8007.

Existing as built bridge plans are available.

The locations and limits of all surface repairs on substructure shall be determined by the Engineer.

All concrete used for repairs, except for shotcrete repairs, shall be A4 P&R.


All of the concrete within a construction lane that is to be removed shall be removed before recasting any concrete within that construction lane unless otherwise directed by the engineer.

No concrete repairs shall be performed within a span lane that is under traffic unless approved by the engineer.

The use of stay-in-place forms will not be permitted.

The contractor shall provide engineer safe access to all areas of work throughout course of construction and for final inspection after work is complete.

For a continuation of General Notes, see Sheet 3.

				 SCHWARTZ & ASSOCIATES, INC. CONSULTING ENGINEERS 7331 TIMBERLAKE ROAD LYNCHBURG, VA.
				EDDY AVENUE OVER ROANOKE RIVER CITY OF SALEM, VA PLAN AND ELEVATION
No.	Description	Date		
REVISIONS				
For Table of Revisions, see Sheet 2.			COMM. NO. 19035	DESIGNED BY: MBH DRAWN BY: MBH CHECKED BY: RWS SCALE: AS NOTED PLAN NO.: NA DATE: JUNE 1, 2021 SHEET: 2 OF 21

CADD REFERENCE NO.: BRIDGE19035.DWG

GENERAL NOTES CONT'D.

Before proceeding with any work within or adjacent to the existing structure, the contractor shall become familiar with existing conditions. During construction operations, it shall be the contractor's responsibility to maintain the integrity of the existing structure where the existing structure is modified to accommodate new construction, and to protect from damage those portions of the structure which are to remain.

All areas disturbed on this project, not covered by other notes, shall be restored to its original or better conditions as directed by the Engineer. All costs for this work shall be included in other items.

The Contractor shall take extreme caution in his operations so that no damage is done to utilities in vicinity of the project limits. If any utilities are damaged by the Contractor, they shall be repaired at his expense and to the satisfaction of the Engineer.

All concrete areas blasted shall be blasted to a medium finish for a time sufficient to expose sound concrete and coarse aggregate with slight reveal (maximum reveal 1/4 inch), unless otherwise noted. They shall be blasted using a VDOT approved abrasive material.

The locations of existing utilities, including underground utilities, is indicated on the drawings insofar as their existences and location were known at the time of preparation of the drawings. However, nothing in these contract documents shall be construed as a guarantee that such utilities are in the locations indicated or that they actually exist, or that other utilities are not within the area of operations. The Contractor shall pay for any damage to and for maintenance and protection of existing utilities and structures.

Contractor shall exercise extreme caution when removing existing concrete so that none of the portion of the structure or reinforcing steel to remain in place is damaged. Existing concrete shall be removed with pneumatic hammer (max. weight 35 lbs.) except use 15 lb. hammer for final trim work. Pneumatic hammers shall be worked at an angle of 45 to 60 degrees (Section 412.03 (a)).

The Contractor shall submit to the Engineer a detailed plan for containing construction related material (i.e. shot blasting media, concrete debris, uncured concrete, etc.) and preventing its entry into the Roanoke River. This work shall be included in the price bid for appropriate bid items.

The Contractor shall plan and execute the work such that no more than 10,000 square feet of land disturbance occurs at any given time.

During construction blasting, contractor shall protect adjacent traffic from blowing sand and shot. All costs shall be included in other bid items.

The contractor shall verify in field, all dimensions, skew and elevations before beginning construction.

Concrete:

All new concrete shall have obtained full design strength before allowing traffic on new portion of structure.

Concrete to be used for repairs in superstructure and abutment reconstruction shall be Class A4 Post and Rail, unless otherwise noted.

Concrete in approach sidewalk shall be Class A3 General.

In areas of the structure where existing concrete is to be removed and replaced by new Class A4 concrete the requirements of Section 412 of the specifications shall apply,. except as amended below.

- Whenever existing reinforcing bars are exposed, concrete shall be removed no less than 1 inch behind the bar.
- Existing concrete shall be removed as shown on the plan details or as directed by the engineer, to horizontal and vertical planes only, and to sound concrete, taking care not to damage the existing reinforcing steel.
- Within twenty-four hours prior to placing new concrete, exposed reinforcing steel and faces of existing concrete shall be cleaned by abrasive blast cleaning. Reinforcing steel shall be blasted until corroded steel material and foreign material are removed to clean white metal. Concrete material shall be blasted for a time sufficient to expose sound concrete and coarse aggregate.
- Immediately prior to placing new concrete, exposed reinforcing steel and faces of existing concrete shall be cleaned of all dust and debris.
- The perimeter of all surface repair areas shall be saw cut 3/4"± deep in a generally rectangular pattern.
- All existing concrete that is removed shall be removed to horizontal and vertical planes only and to sound concrete.

All repairs to deck, sidewalks, curbs, and parapets will be measured and paid for as Type B Patching.

Blasting – General:

All concrete areas blasted shall be blasted for a time sufficient to expose sound concrete and coarse aggregate, unless otherwise noted. They shall be blasted using an abrasive material or a mixture of water (8,000 psi min.) and abrasive.

All reinforcing steel areas blasted shall be blasted until all concrete rust, scale, corroded steel material and foreign material are removed to clean white metal.

Blasting – For Bonding Epoxy and Epoxy Overlay:

Blasting, prior to application of bonding epoxy and epoxy overlay, shall be to a medium finish that is one sufficient to generally expose coarse aggregate with slight reveal – maximum reveal 1/4".

Reinforcing Steel:

Any existing reinforcing steel that is to remain in structure and is damaged in superstructure and substructure remodeling, as determined by the engineer, shall be corrected at the contractor's expense.

All costs associated with furnishing, fabricating, and installing reinforcing steel shall be included in other appropriate bid items.

All exposed reinforcing steel in concrete remodeling areas shall be blasted and covered with bonding epoxy immediately prior to recasting concrete.

Epoxies:

All construction joints shall be bonded with bonding epoxy. All bonding epoxy used on structure shall be Siki Armatec 110 EpoCem. All new concrete cast against hardened concrete shall be bonded to hardened concrete with bonding epoxy after sand blasting.

All new concrete cast in structure shall be bonded to existing concrete with bonding epoxy. Bonding epoxy used on structure shall be Sika Armatec 110 (or approved equivalent) unless otherwise noted on plans.

All costs related to bonding construction joints, as shown on these contract drawings, shall be included in cost bid for other items.

Incidentals:

The locations of existing utilities, including underground utilities, is indicated on the drawings insofar as their existence and location were known at the time of preparation of the drawings. However, nothing in these contract documents shall be construed as a guarantee that such utilities are in the location indicated or that they actually exist, or that other utilities are not within the area of operations. The contractor shall make all necessary investigations to determine the existence and locations of such utilities. The contractor shall pay for any damage to and for maintenance and protection of existing utilities and structures.

Any damaged shrubs, flowers, etc. shall be replaced with the original size and type that was damaged, as directed by the engineer. All costs shall be paid for by the contractor.

The costs of any necessary construction surveying shall be included in unit price bid for other items in contract.

All temporary erosion & siltation control shall be in accordance with Virginia Erosion & Sediment Control Handbook & these drawings & contract documents.

All costs for erosion & siltation control items, as directed by the engineer, shall be included in other bid items.

All costs for grading, shaping, seeding, fertilizing, liming, over seeding, furnishing and placing topsoil and mulching in disturbed areas on this project shall be included in other bid items.

Rev. No.	Sheets Revised	Date
TABLE OF REVISIONS		

Operations:

- Class A3 concrete:

All Class A3 Concrete cast in approach sidewalk shall be cast in no more than two continuous operations.

- Class A4 P&R Concrete:

All Class A4 P&R Concrete cast in each repair stage shall be cast in no more than two continuous operations per stage per bridge.

- Shotcrete:

The contractor shall prepare 50% of the shotcrete areas so that they will be ready for viewing at one time. Contractor shall then shotcrete 50% of the total areas in one continuous operation per bridge.

The Contractor shall contain all shotcrete overspray to prevent its entry into the Roanoke River, as directed by the Engineer.

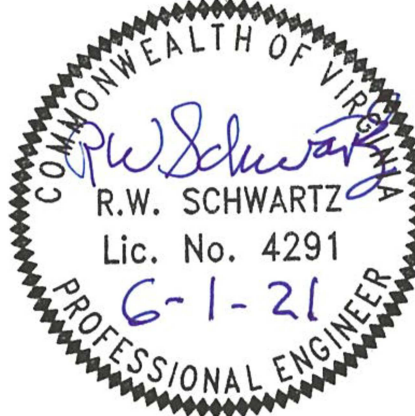

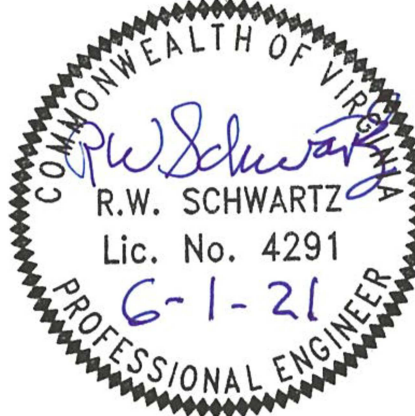
- Epoxy Overlay:

- The contractor shall schedule application of epoxy overlay in no more that two operations, so that all of each coat is applied in one continuous operation with the second coat following the first coat as soon as the first has dried sufficiently.

- Blasting:

- The contractor shall schedule application of epoxy overlay surface preparation in no more that two operations, so that all or each coat is applied in one continuous operation with the second coat following the first coat as soon as the first had dried sufficiently.

INDEX OF DRAWINGS	
SHEET NO.	DESCRIPTION
1	Cover
2	Plan and elevation
3	General notes continued and index of sheets
4	Estimated quantities
5	Construction Stages, & Sequence of Construction
6	Prestressed beam bearing details
7	Shotcrete, jacking notes, and dismantle and remove portion of existing structure
8	Abutment A backwall reconstruction details
9	Abutment B backwall reconstruction details
10	Diaphragm replacement details
11	Deck extension details
12	Reinforcing steel schedule & facedown sidewalk details
13	Toggle bolt details
14	Maintenance of traffic notes
15	Traffic mangement plan & road summary
16	Limits of flexible pavement planing & demolition
17	Sign layout – Stages 1 & 2
18	Sign layout – Stages 1 & 2
19	Notes for traffic control
20	Lane closure – Stage 1
21	Lane closure – Stage 2

				 <div>SCHWARTZ & ASSOCIATES, INC. CONSULTING ENGINEERS 7331 TIMBERLAKE ROAD LYNCHBURG, VA.</div>		
				<div>EDDY AVENUE OVER ROANOKE RIVER CITY OF SALEM, VA GENERAL NOTES CONTINUED AND INDEX OF DRAWINGS</div>		
No.	Description	Date				
REVISIONS						
			COMM. NO. 19035			
			DESIGNED BY: MBH	DRAWN BY: MBH		
			SCALE: AS NOTED	PLAN NO.: NA		
			DATE: JUNE 1, 2021	SHEET: 3 OF 21		

CADD REFERENCE NO.: BRIDGE19035.DWG

ESTIMATED QUANTITIES – SUBSTRUCTURE BID ITEMS						
		Shotcrete Type B	Abutment Backwall Reconstruction	Embedded Galvanic Anode (Substructure)	Structure Excavation	Select Material Type-1 Min. CBR-30
		SF	LF	EA	CY ☒	TONS
Abutment A	Neat	210	37	105	58	117
	Footing	–	–	–	–	–
Pier 1	Neat	–	–	–	–	–
	Footing	–	–	–	–	–
Pier 2	Neat	–	–	–	–	–
	Footing	–	–	–	–	–
Abutment B	Neat	292	37	146	58	117
	Footing	–	–	–	–	–
Totals		502	74	251	116	234

☒ – Denotes items to be paid for on basis of plan quantities in accordance with current road and bridge specifications.

LUMP SUM BID ITEMS	
Mobilization	LS
Maintenance of Traffic	LS
General Maintenance	LS
Dismantle and Remove Portion Existing Structure No. 8007	LS

ESTIMATED QUANTITY NOTES

Areas of the structure to be removed under the bid item "Dismantle and Remove Portion Existing Structure Number 8007" shall include but are not limited to the following: portions of deck, sidewalk, safety curb, located within the limits of the deck extensions and the portion of abutment back walls located within the reconstruction limits.

Price bid "Deck Slab Extension" shall include all costs of removing and disposing of the existing expansion joints, furnishing and placing Class A4 P&R concrete, supply and place all reinforcing steel, supply and install 1/2" expanded rubber joint sealer, 1" premolded joint filler, sandblast all existing concrete surfaces and existing reinforcing steel to remain in place, bonding epoxy, all cost for cutting & removing existing face-down curb located at downstream side of Abutment A, forming and furnishing concrete to re-cast face-down curb to match existing curb, furnishing and installing pourable joint sealer between end of deck slab extension and end of face-down curb, and supplying all materials, tools, equipment, and labor necessary to complete all perform work shown on these drawings.

Price bid "Abutment Reconstruction" shall include all costs of furnishing and placing Class A4 P&R concrete, supply and place all reinforcing steel, adhesive material, adhesive anchors, 1" premolded joint filler, sandblast all existing concrete surfaces and existing reinforcing steel to remain in place, bonding epoxy, and supply all materials, tools, equipment, and labor necessary to complete all perform work shown on these drawings.

All costs for dampproofing shall be included in price bid "Abutment Reconstruction".

All costs for furnishing and placing fast-setting Portland cement water-stop in the cavity between the existing waterline and concrete, as directed by the Engineer, shall be included in price bid "Abutment Reconstruction".



ESTIMATED QUANTITIES – SUPERSTRUCTURE ONLY		
Item	Units	Quantity
Patching Type B	SY	25
Patching Type C	SY	10
Deck Slab Extension	LF	67
Epoxy Overlay	SY	892
Bearing Pad Replacement (Abutment)	EA	8
Jacking Beams	EA	8
Replace End Diaphragms	EA	6
Embedded Galvanic Anode (Superstructure)	EACH	255
Replace Toggle Bolts TB-1	EACH	7
Replace Toggle Bolts TB-2	EACH	15

☒ – Denotes items to be paid for on basis of plan quantities in accordance with current road and bridge specifications.

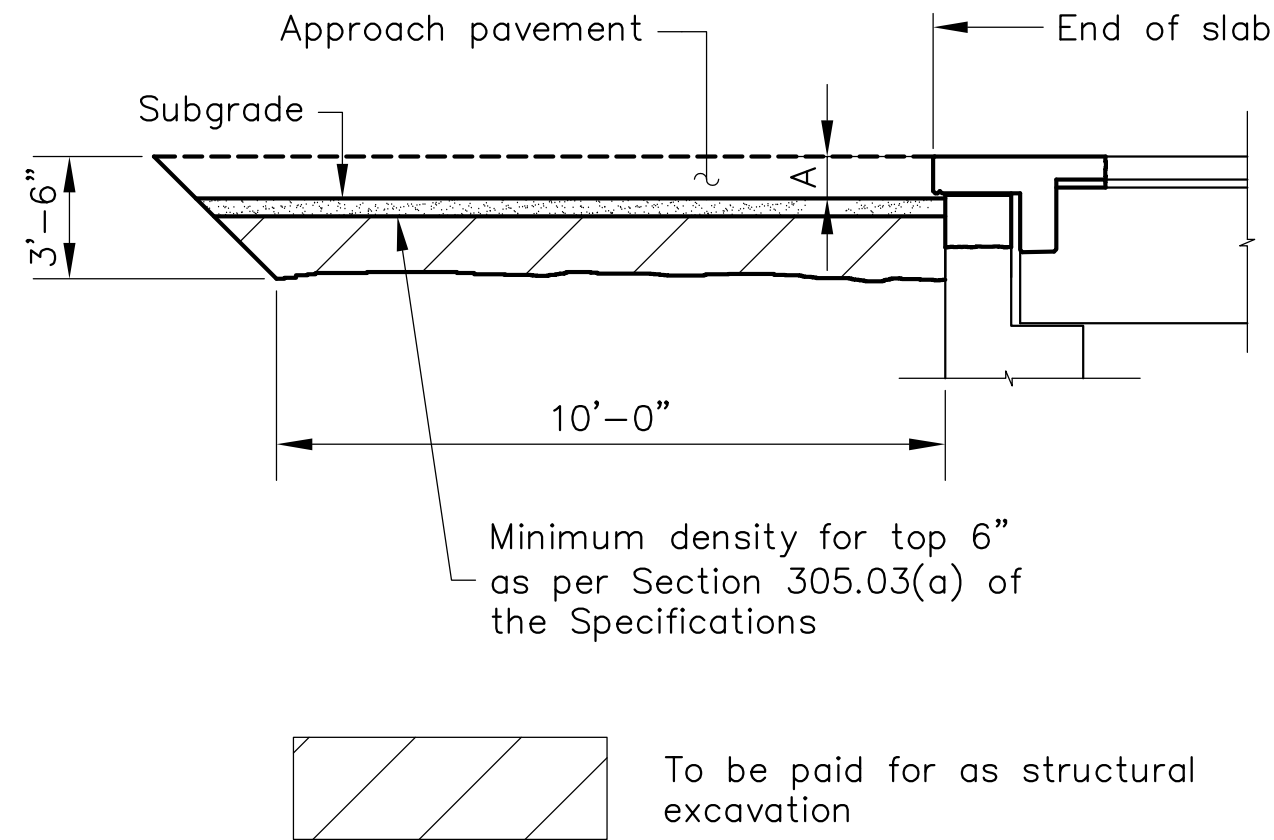
ESTIMATED QUANTITIES – ROADWAY SUMMARY		
Item	Units	Quantity
Ashpalt Concrete Type SM-9.5A ▲	TON	35
Asphalt Concrete Base Course BM-25.0A	TON	32
Aggr. Base Material Type I, Size #21-B (6% moist. correction)	TON	67
Demolition of Pavement	SY	78
Flexible Pavement Planing (0 – 2" depth)	SY	267
Facedown Sidewalk	SY	28
Type A Pavement Line Marking	LF	400
Type B, Class VI, Contrast Pavement Line Marking (4" yellow)	LF	400

▲ – Non-polishing aggregate

Rev. No.	Sheets Revised	Date
TABLE OF REVISIONS		

					SCHWARTZ & ASSOCIATES, INC. CONSULTING ENGINEERS 7331 TIMBERLAKE ROAD LYNCHBURG, VA.		
					EDDY AVENUE OVER ROANOKE RIVER CITY OF SALEM, VA ESTIMATED QUANTITIES		
					DESIGNED BY: MBH DRAWN BY: MBH CHECKED BY: RWS		
					SCALE: NOT TO SCALE PLAN NO.: NA		
					DATE: JUNE 1, 2021 SHEET: 4 OF 21		
No.	Description	Date					
REVISIONS			COMM. NO. 19035				

STATE	FEDERAL AID		STATE		SHEET NO.
	ROUTE	PROJECT	ROUTE	PROJECT	
VA.	—	—	—	—	4



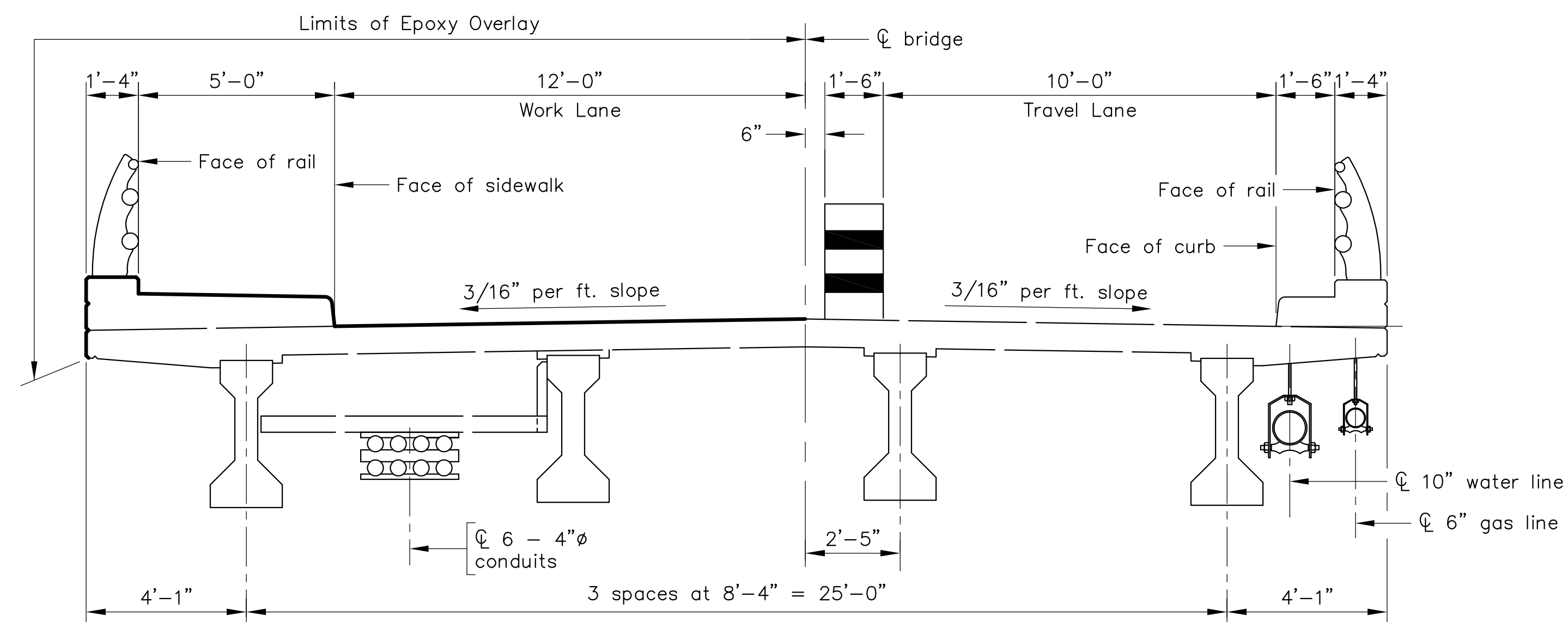
ABUTMENT BACKFILL DETAILS
Not to scale

STATE	FEDERAL AID		STATE		SHEET NO.
	ROUTE	PROJECT	ROUTE	PROJECT	
VA.	—	—	—	—	5

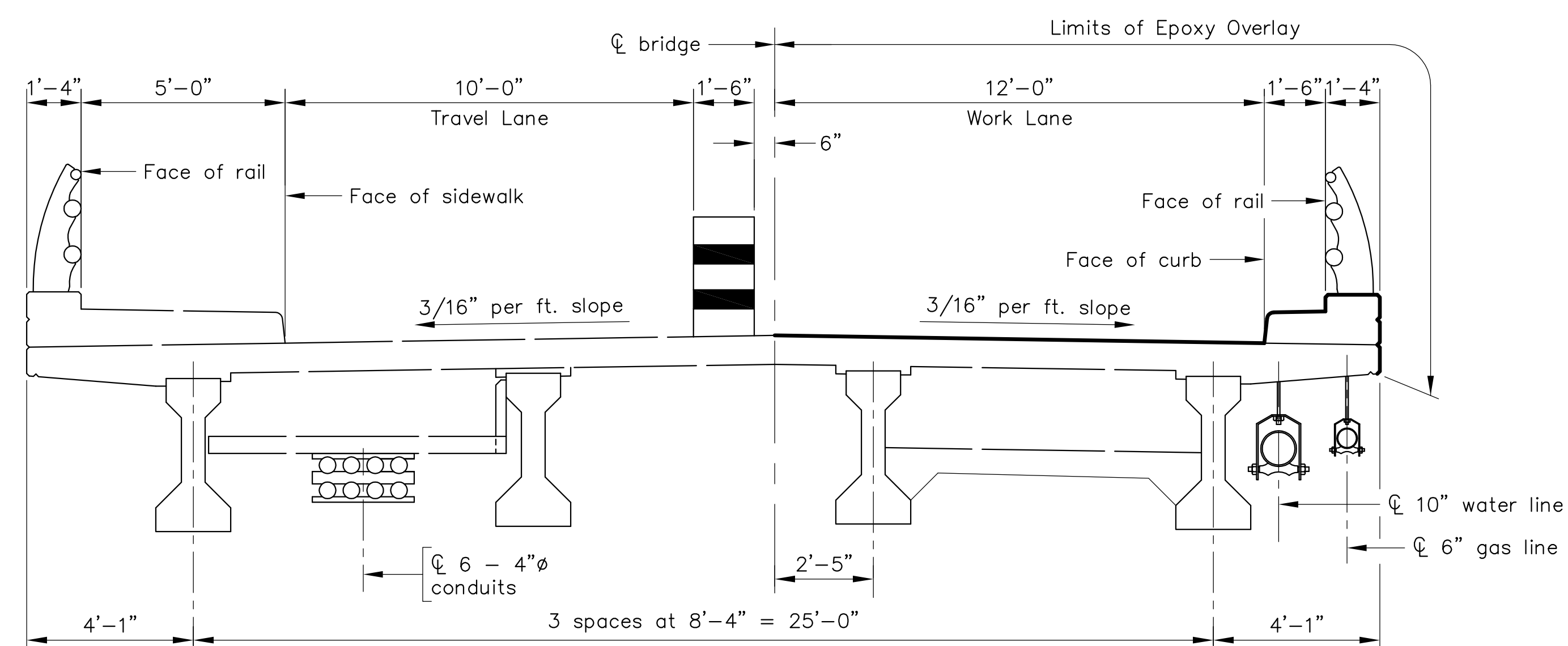
SEQUENCE OF CONSTRUCTION

1. Install Stage I traffic control.
2. Mill pavement at Abutments A & B approaches for Stage 1 and Stage 2.
3. Demo existing asphalt at Abutments A & B approaches.
4. Remove existing deck, diaphragms, sidewalk, and safety curb within the limits of the deck extension.
5. Remove the abutment back wall within the limits shown on the drawings.
6. Prepare, form, and pour diaphragms at both abutments.
7. Prepare, form, and pour back walls at both abutments.
8. Prepare, form, and pour deck extension at both abutments.
9. Repair deck as necessary with Type B and C patches.
10. Perform shotcrete repairs.
11. Place epoxy overlay on deck, deck fascia, sidewalk, safety curb, and terminal walls.
12. Prepare, form, and pour approach sidewalk at both abutments.
13. Repave approaches.
14. Remove Stage I traffic control.
15. Install Stage II traffic control.
16. Demo existing asphalt at Abutments A & B approaches.
17. Remove existing deck, diaphragms, sidewalk, and safety curb within the limits of the deck extension.
18. Remove the abutment back wall within the limits shown on the drawings.
19. Prepare, form, and pour diaphragms at both abutments.
20. Prepare, form, and pour back walls at both abutments.
21. Prepare, form, and pour deck extension at both abutments.
22. Repair deck as necessary with Type B and C patches.
23. Jack beams and replace bearings at both abutments.
24. Place epoxy overlay on deck, deck fascia, sidewalk, safety curb, and terminal walls.
25. Complete all general maintenance items.
26. Repave approaches.
27. Remove Stage II traffic control.
28. Perform general clean up.

Unless otherwise approved or directed by the Engineer, the Contractor shall plan and prosecute work in accordance with the above noted construction sequence.



STAGE 1 CONSTRUCTION – LOOKING TOWARDS ABUTMENT B
(Reinforcing steel not shown)





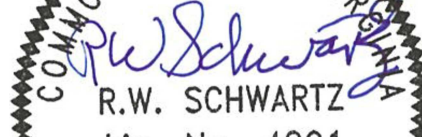
STAGE 2 CONSTRUCTION – LOOKING TOWARDS ABUTMENT B
(Reinforcing steel not shown)

Notes:

Epoxy overlay shall be applied to the following areas: top of deck, face of curbs, face of sidewalk, top of safety curb, top of sidewalk, faces of parapet, all surface areas of terminal walls, and exterior fascia for full length of bridge.

CADD REFERENCE NO.: Bridge19035.dwg

Scale: $3/8" = 1'-0"$ unless otherwise shown.

				 <p>SCHWARTZ & ASSOCIATES, INC. CONSULTING ENGINEERS 7331 TIMBERLAKE ROAD LYNCHBURG, VA.</p>
No.	Description	Date		<p>EDDY AVENUE OVER ROANOKE RIVER CITY OF SALEM, VA CONSTRUCTION STAGES & SEQUENCE OF CONSTRUCTION</p>
REVISIONS			COMM. NO. 19035	DESIGNED BY: MBH DRAWN BY: MBH CHECKED BY: RWS SCALE: AS NOTED PLAN NO.: NA DATE: JUNE 1, 2021 SHEET: 5 OF 21

STATE	FEDERAL AID		STATE	SHEET	
	ROUTE	PROJECT		ROUTE	PROJECT
VA.	—				6

Notes:

Material: Elastomer - 50 durometer hardness
Shim - ASTM A36 or A1011 mild steel
Standard steel pipe - ASTM A53 grade B

~~The Contractor may elect not to provide anchor bolt sleeves at any locations and cast the anchor bolts directly into concrete at their own risk and expense.~~

Elastomeric bearings shall be molded as a single unit.

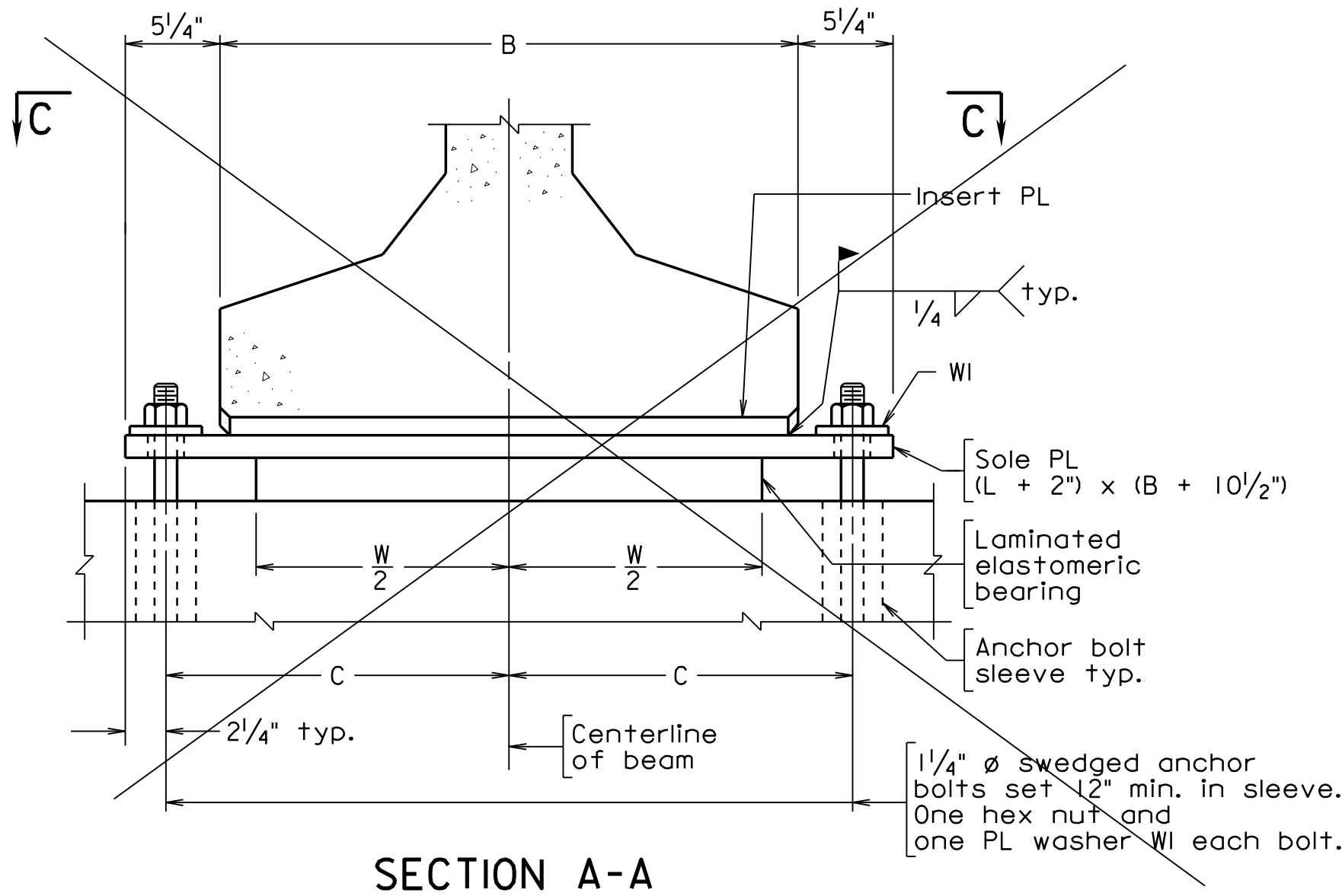
~~Bevel sole plates to grade shown in table. Minimum 3/4" thickness.~~

~~Insert plate shall provide uniform bearing over its entire contact area. For insert plate details, see sheet ---.~~

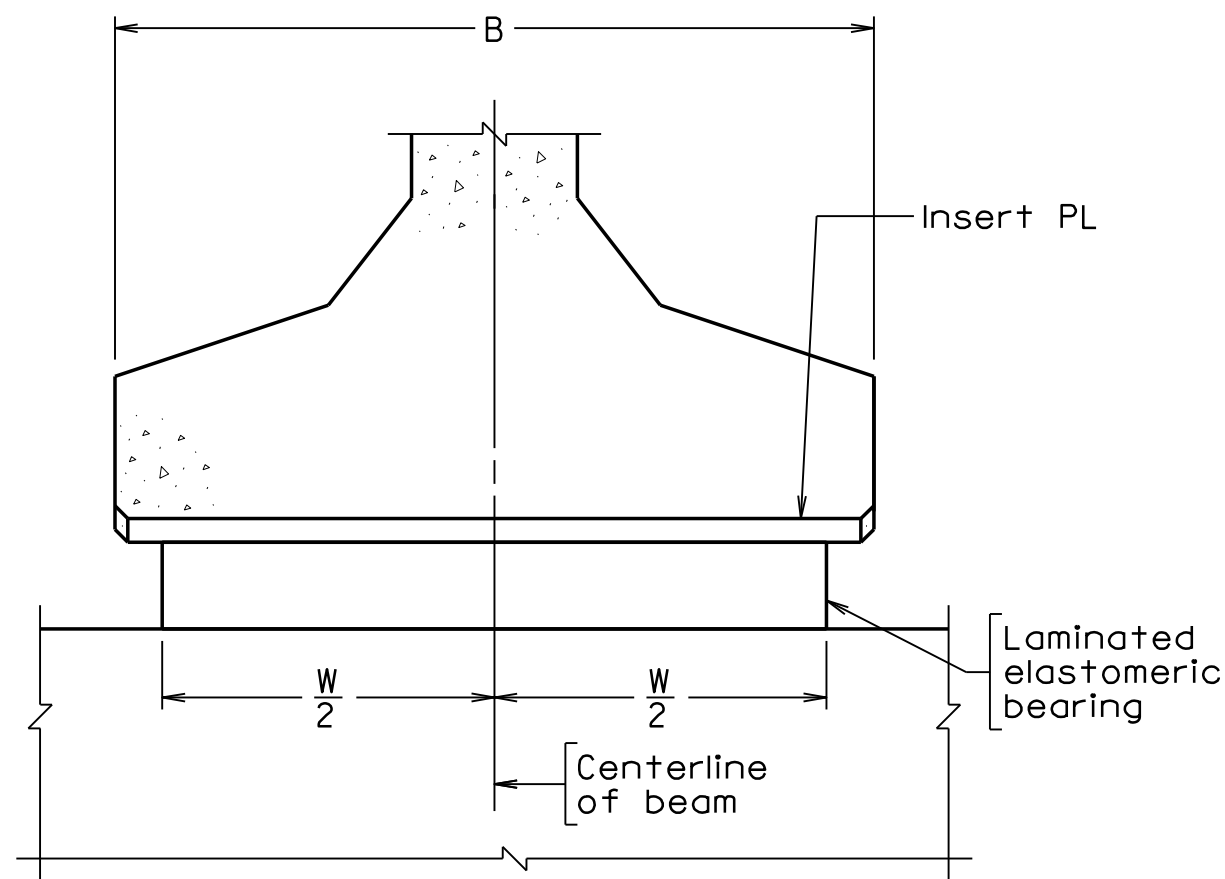
~~Sole plates, insert plates, anchor bolts, nuts and washers shall be galvanized.~~

* Centerline of beam (including center line and text) shall be marked on the top, bottom and side surfaces of the laminated elastomeric bearing prior to shipping. The markings shall be done with an indelible ink or flexible paint of contrasting color.

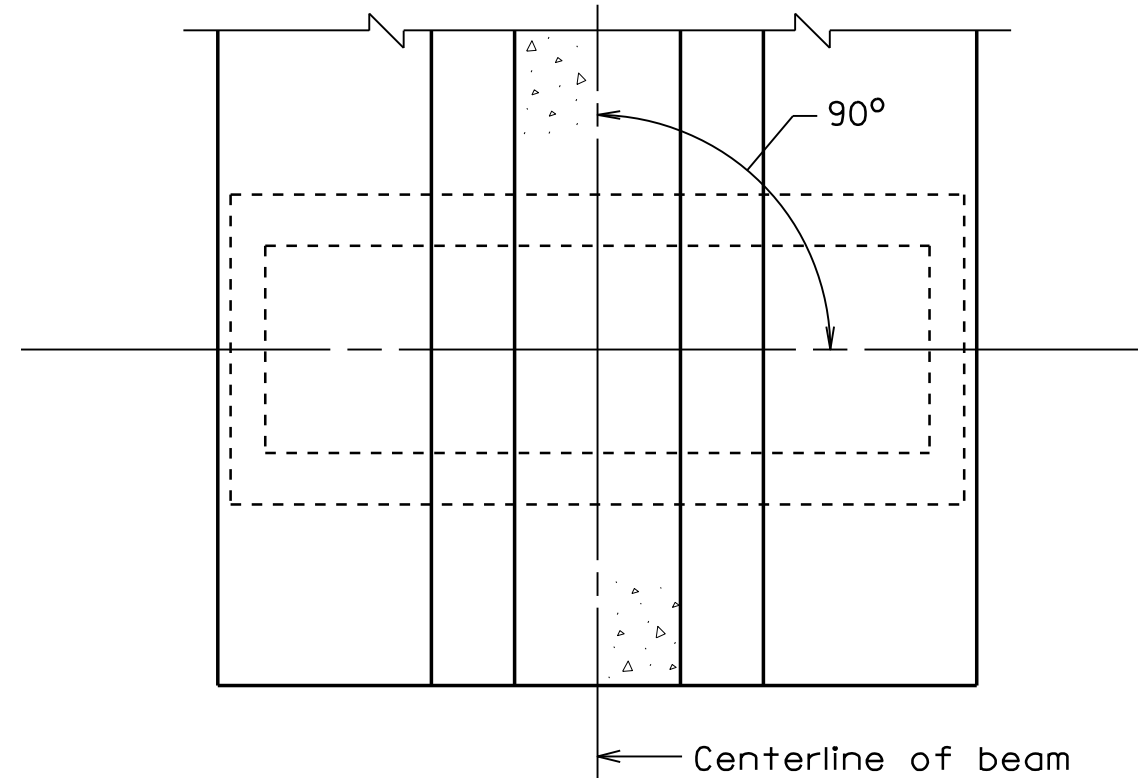
~~** For steel dowel and closure diaphragm details, see sheet ---.~~



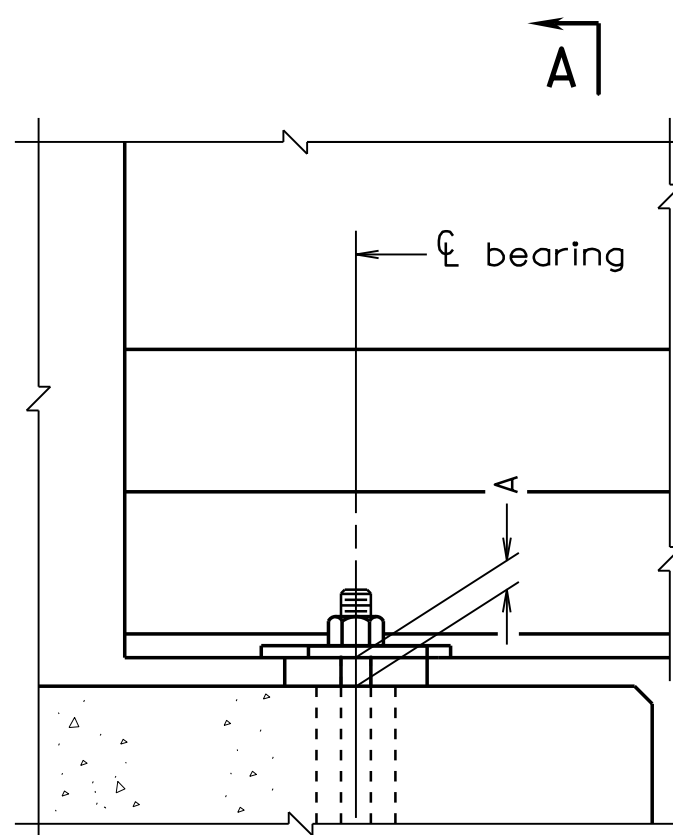
SECTION A-A



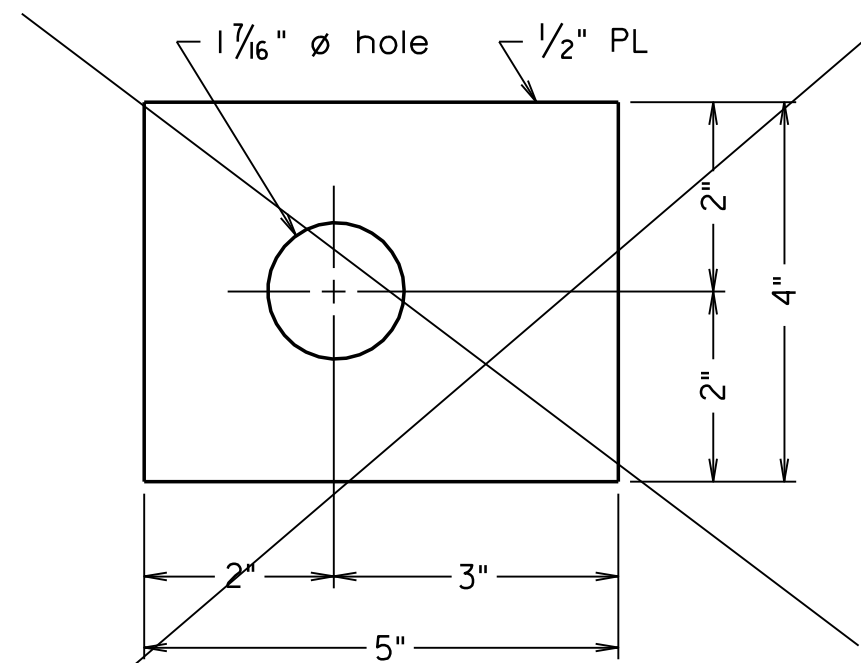
SECTION B-B



SECTION C-C



ABUTMENT ELEVATION

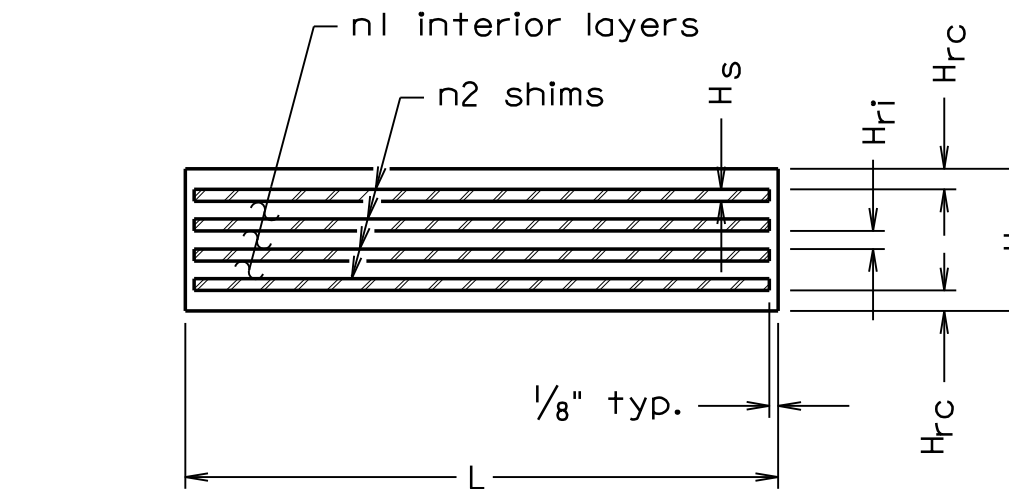
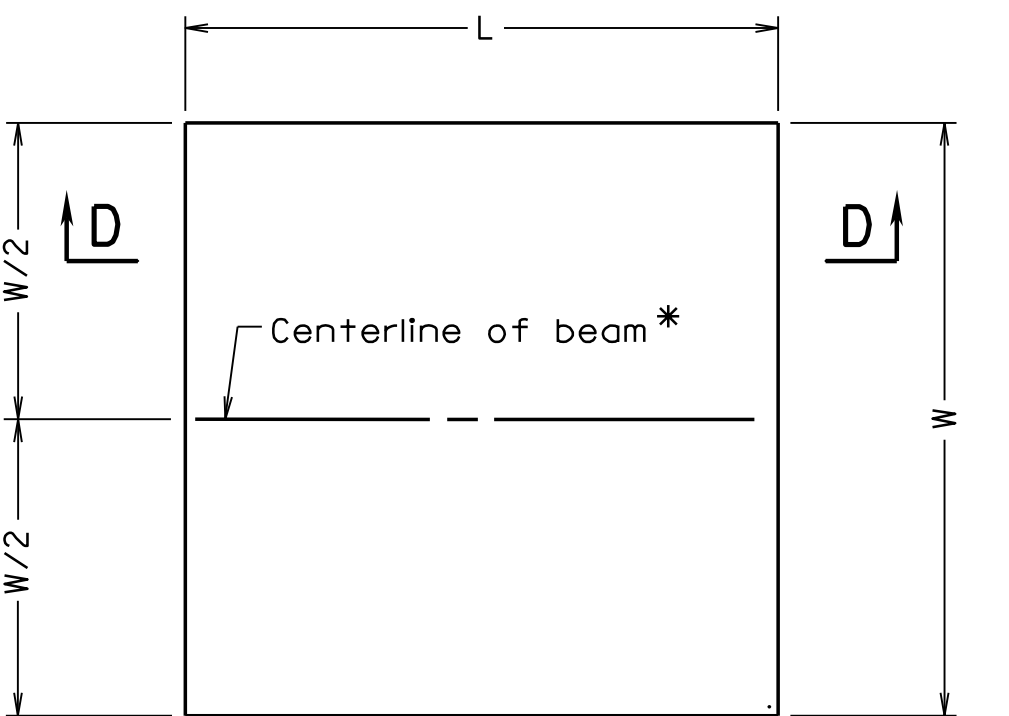
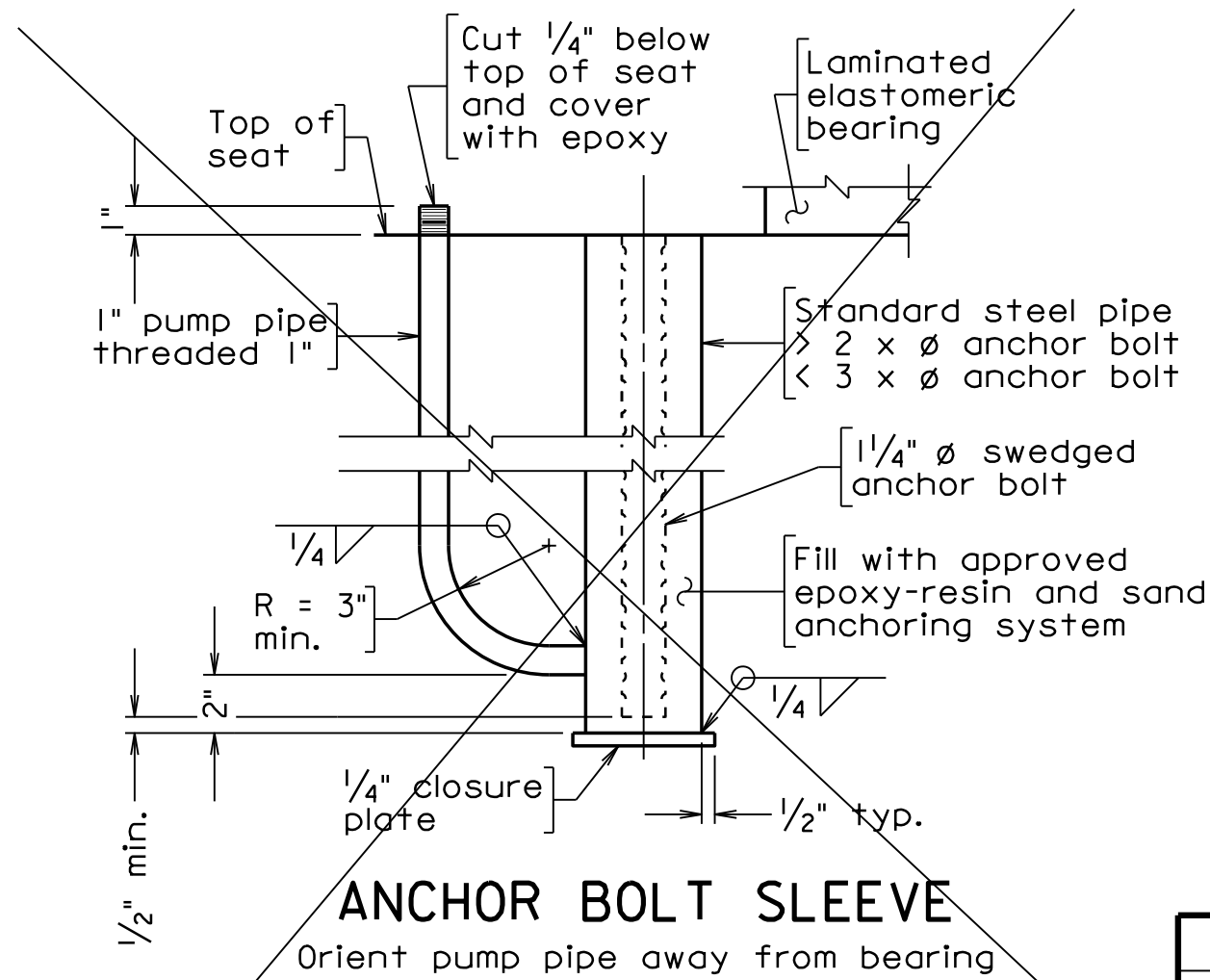


WASHER WI

Beam Type	B	C
I	1'-6"	12"
II	1'-10"	1'-2"
IV	2'-2"	1'-4"
V	2'-4"	1'-5"
VI	2'-4"	1'-5"
post-series	2'-8"	1'-7"

Span	Abut.	Pier	Girder	Bearing Type	A			Laminated	Elastomeric	Bearing		Grade %	Total Load (kips)
						W	L	H	H _{RC}	n1 @ H _{R1}	n2 @ H _S		
1	A	-	1 & 4	exp	1.9800	15	11	1.9800	0.25	3 @ 0.36	4 @ 0.100	+1.92	159
1	A	-	2 & 3	exp	1.9800	15	11	1.9800	0.25	3 @ 0.36	4 @ 0.100	+1.92	155
3	B	-	1 & 4	exp	1.9800	15	11	1.9800	0.25	3 @ 0.36	4 @ 0.100	-1.92	159
3	B	-	2 & 3	exp	1.9800	15	11	1.9800	0.25	3 @ 0.36	4 @ 0.100	-1.92	155

All dimensions in table are in inches.



SECTION D-D
LAMINATED ELASTOMERIC BEARING

COMMONWEALTH OF VIRGINIA DEPARTMENT OF TRANSPORTATION			
STRUCTURE AND BRIDGE DIVISION			
PRESTRESSED BEAM BEARING DETAILS			
No.	Description	Date	Revisions
Designed: MBH	Drawn: MBH	Checked: RWS	
Date	6/1/2021	Plan No.	BBD-8
Sheet No.	6 of 21		

bba8.dgn

01-30-2018

BBD-8

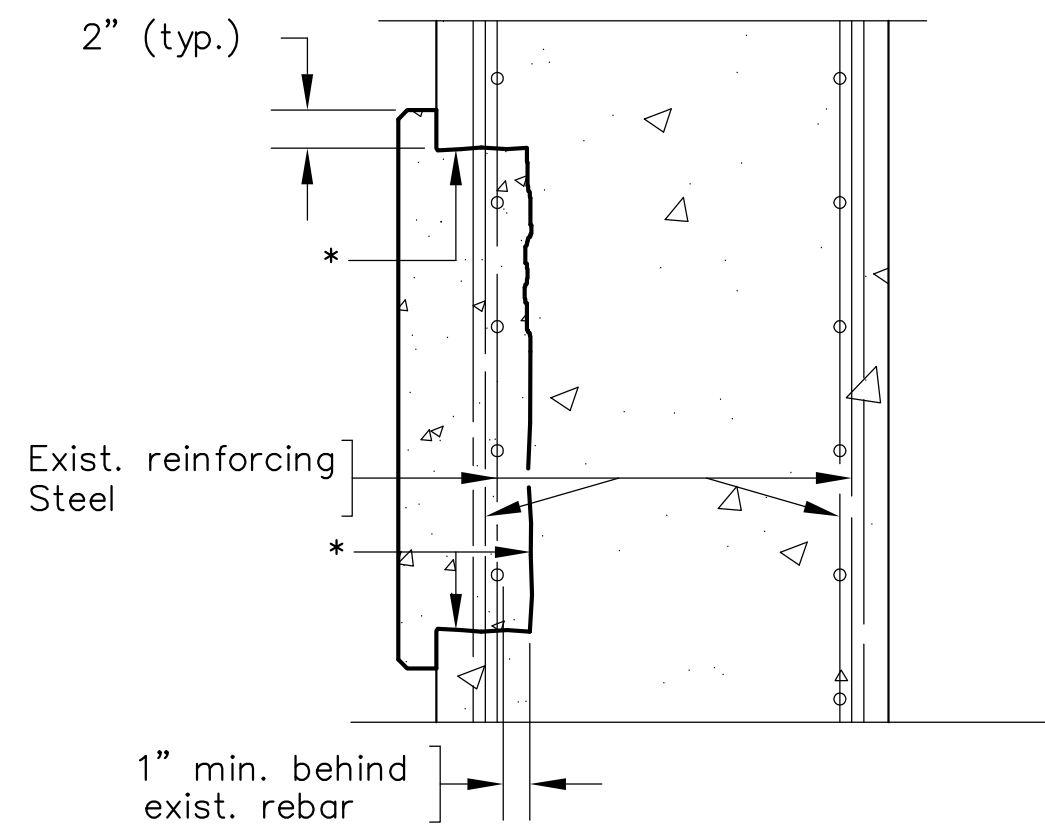


Schwartz and Assoc.
7331 Timberlake Road
Lynchburg, VA

Not to scale

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STATE	FEDERAL AID		STATE		SHEET NO.
	ROUTE	PROJECT	ROUTE	PROJECT	
VA.	—	—	—	—	7



TYPICAL SECTION

Not to scale

NOTES ON SHOTCRETE- TYPE B

Shotcrete shall be used to cover exposed reinforcing steel, areas where reinforcing steel is corroded, and other areas of concrete deterioration, as directed by the engineer.

All patching shall be done with shotcrete.

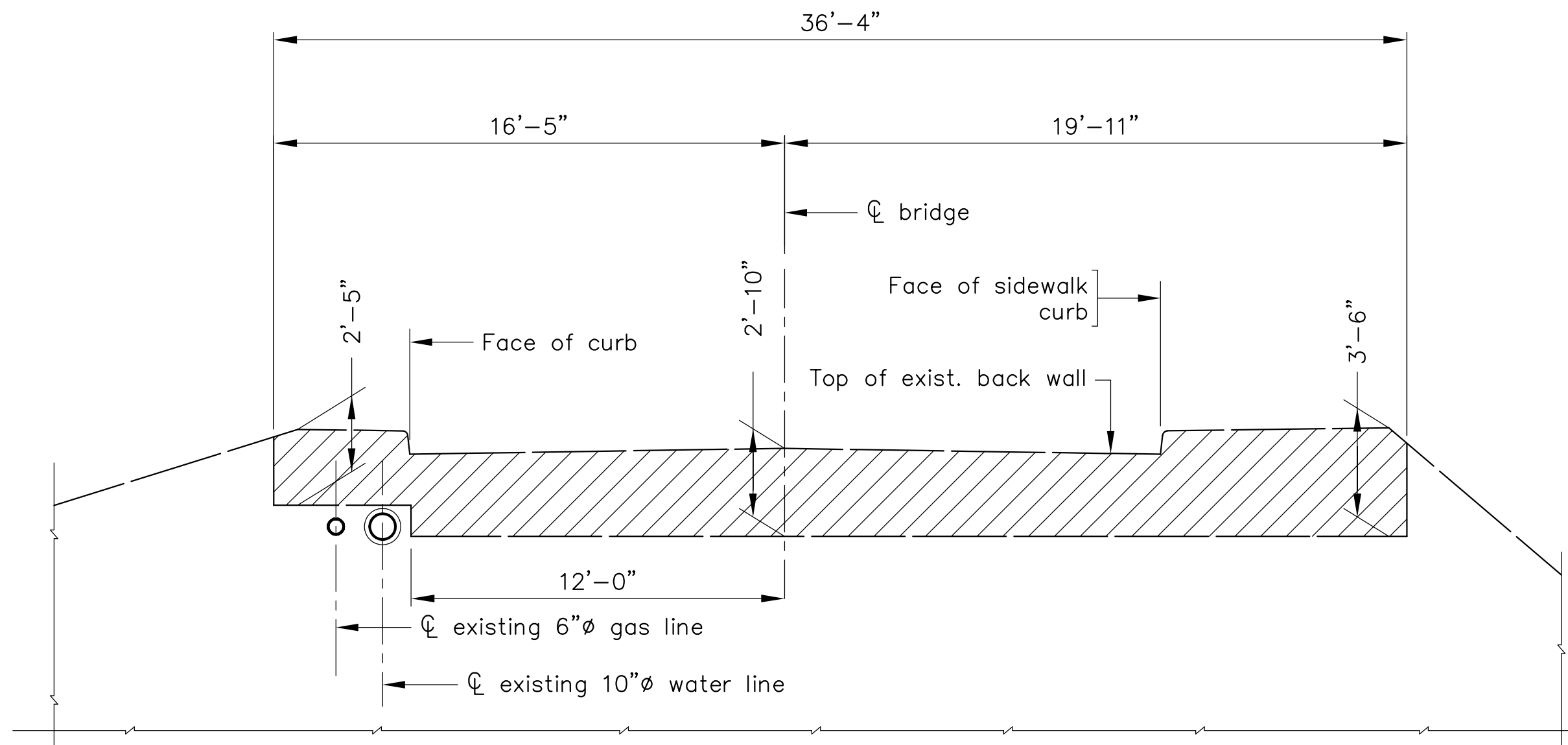
Remove existing concrete to sound concrete and in areas of Corroded reinforcing, as directed by the engineer, taking Care not to damage any existing reinforcing steel. Sandblast exposed reinforcing and faces of existing concrete that will contact the shotcrete.

There shall be a minimum cover of 2 3/4" on all exposed reinforcing steel (including shotcrete containing silica fume).

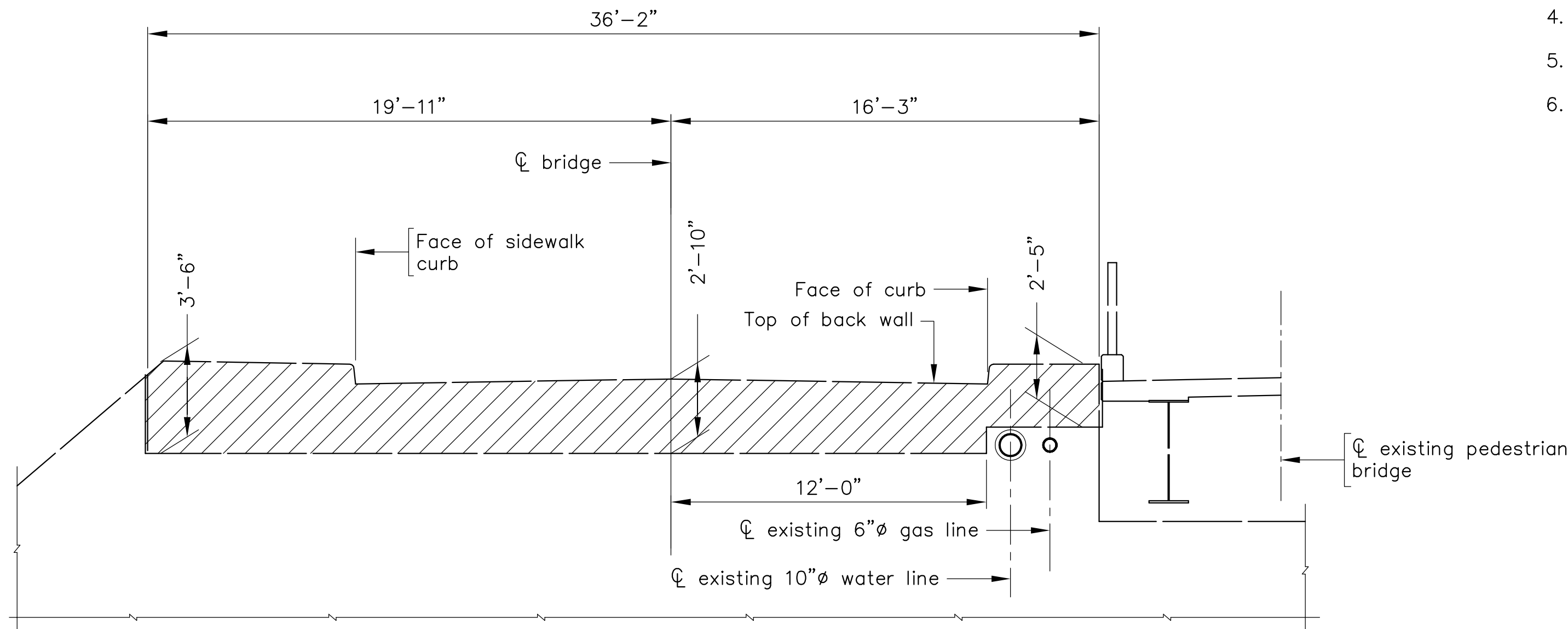
Locations of shotcrete will be determined in field by the engineer.

The Contractor shall contain all shotcrete overspray to prevent its entry into the Roanoke River, as directed by the Engineer.

TYPICAL DETAIL OF SHOTCRETE - TYPE B



ABUTMENT A



— Denotes limits of dismantle and remove portion of existing structure.

ABUTMENT B

LIMITS OF DISMANTLE AND REMOVE PORTION EXISTING STRUCTURE

Not to scale

All materials and workmanship shall be in accordance with Section 412 of the Virginia Department of Transportation Road and Bridge Specifications, 2020 and all applicable special provisions and these contract drawings.

The contractor shall submit a jacking and blocking plan in accordance with Section 412 of the Virginia Department of Transportation Road and Bridge Specifications, 2020 and all applicable special provisions.

Jacks shall be operated in accordance with manufactures requirements. Jacks shall be maintained in a plumb position and beams shall be jacked vertically. Jacks shall be positioned such that they are centered directly under the existing diaphragm.

Prior to jacking the Contractor shall ensure there are no obstacles preventing the span from being lifted.

All jacks shall shall be self locking.

Contractor shall use seasoned oak blocks, they shall be be shimmed level as required.

Contractor shall only jack beams 1/4" maximum.

Structural steel shall be ASTM A709 Grade 36.

No jacking shall take place under live load.

Contractor must use a 8" x 8" x 2" steel plate between the jack and wood block.

All horizontal distances shown in elevation views are measured along the CL of existing diaphragm.

Jacking Sequence:

1. Remove existing anchor bolt nuts and washers from beams to be jacked.
2. Position jacks, seasoned oak blocks, and 8"x8"x2" steel plate.
3. Jack beams.
4. Replace bearings under beams to be jacked.
5. Let jacks down, remove jacks and blocks.
6. Reinstall anchor bolt nuts and washers. Do not overtighten anchor bolt nuts.

JACKING AND BLOCKING NOTES

CADD REFERENCE NO.: BRIDGE19035.DWG

Not to Scale

					SCHWARTZ & ASSOCIATES, INC. CONSULTING ENGINEERS 7331 TIMBERLAKE ROAD LYNCHBURG, VA.		
					EDDY AVENUE OVER ROANOKE RIVER CITY OF SALEM, VA SHOTCRETE, JACKING NOTES, AND DISMANTLE AND REMOVE STRUCTURE		
No.	Description	Date			DESIGNED BY: MBH DRAWN BY: MBH CHECKED BY: RWS		
REVISIONS					SCALE: AS NOTED PLAN NO.: NA		
					DATE: JUNE 1, 2021 SHEET: 7 OF 21		

STATE	FEDERAL AID		STATE		SHEET NO.
	ROUTE	PROJECT	ROUTE	PROJECT	
VA.	—	—	—	—	8

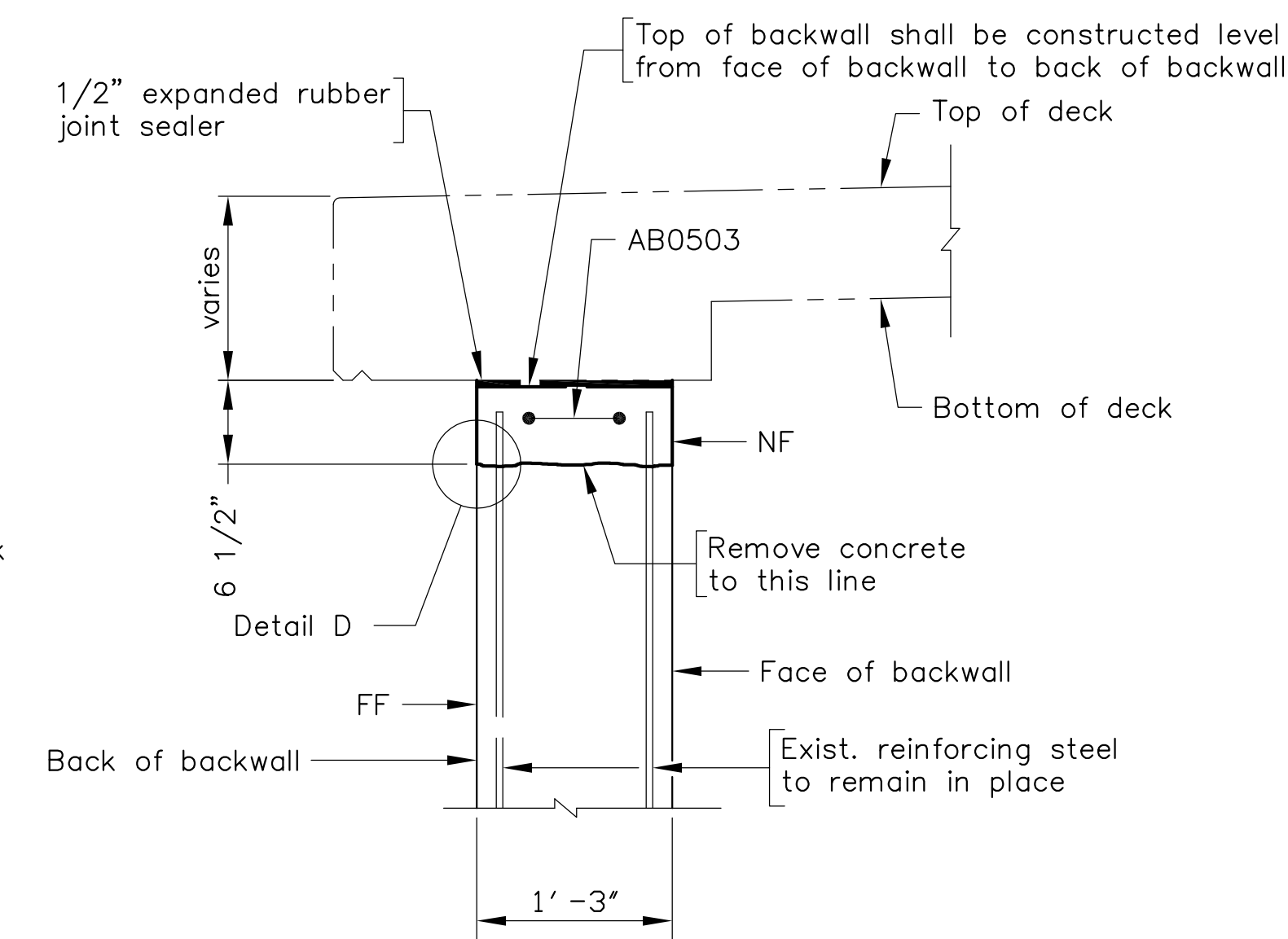
Use 3" min. concrete cover from face of bar to face of concrete.

All cost for furnishing, fabricating, and installing reinforcing steel shall be included in price bid for "Abutment Backwall Reconstruction".

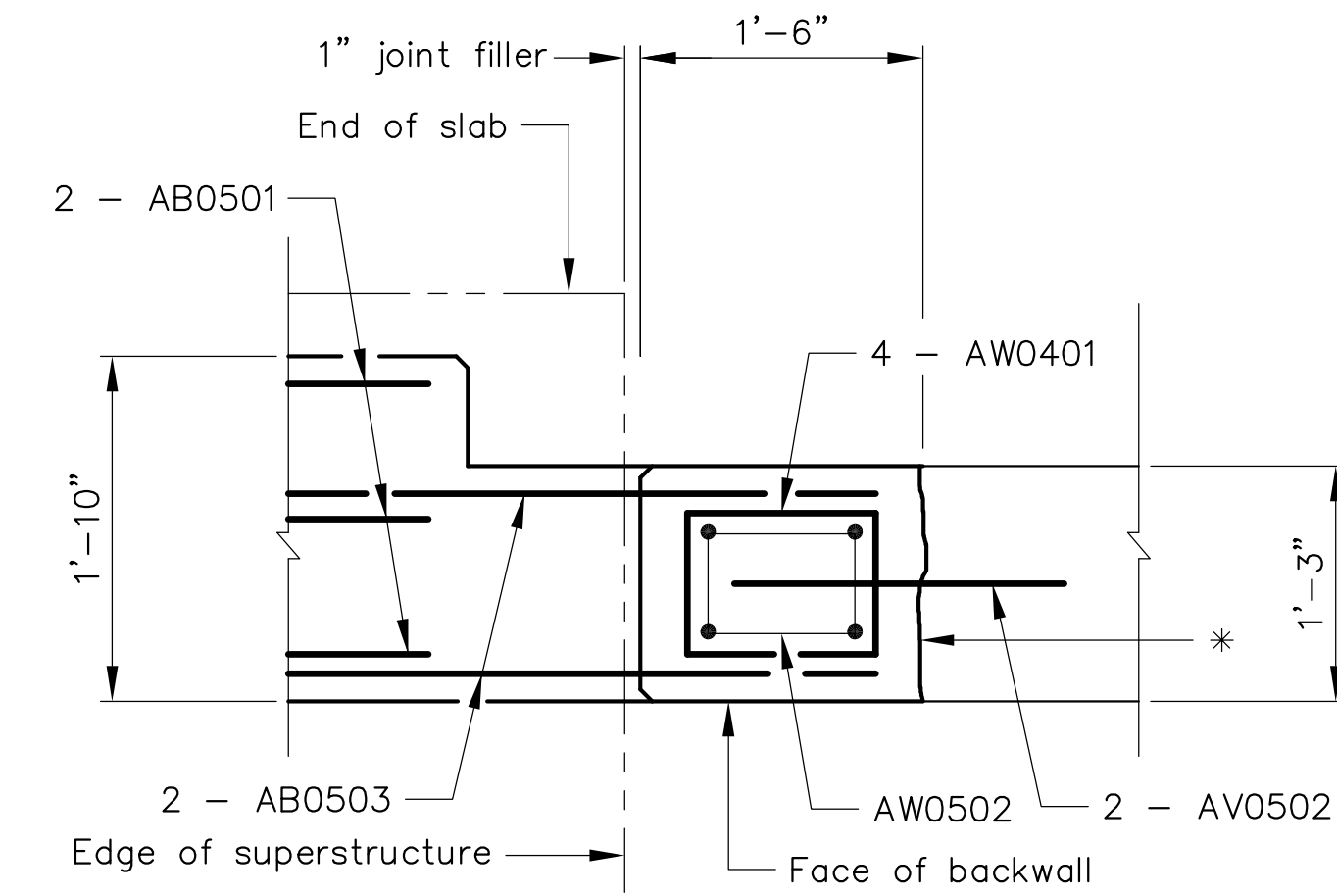
Cut and field bend existing backwall reinforcing and incorporate as much length as possible into new concrete as directed by the Engineer.

Adhesive anchors AV0502 and AV0503 shall be epoxied into existing concrete 9".

All cost associated with removing, storing, and re-installing split rail fence and chain link fence shall be included in unit price bid "Abutment Backwall Reconstruction".

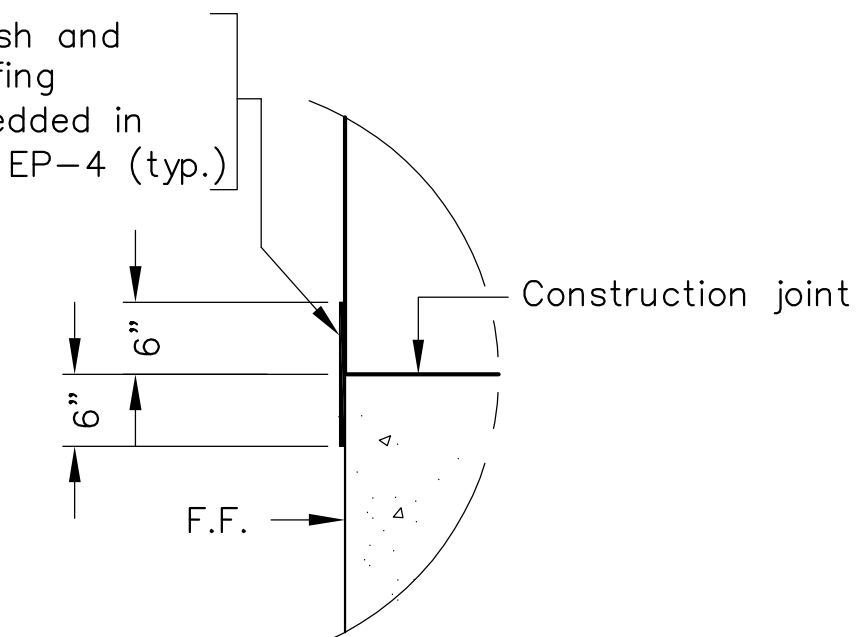


PART SECTION E-E
Scale: 1" = 1'-0"

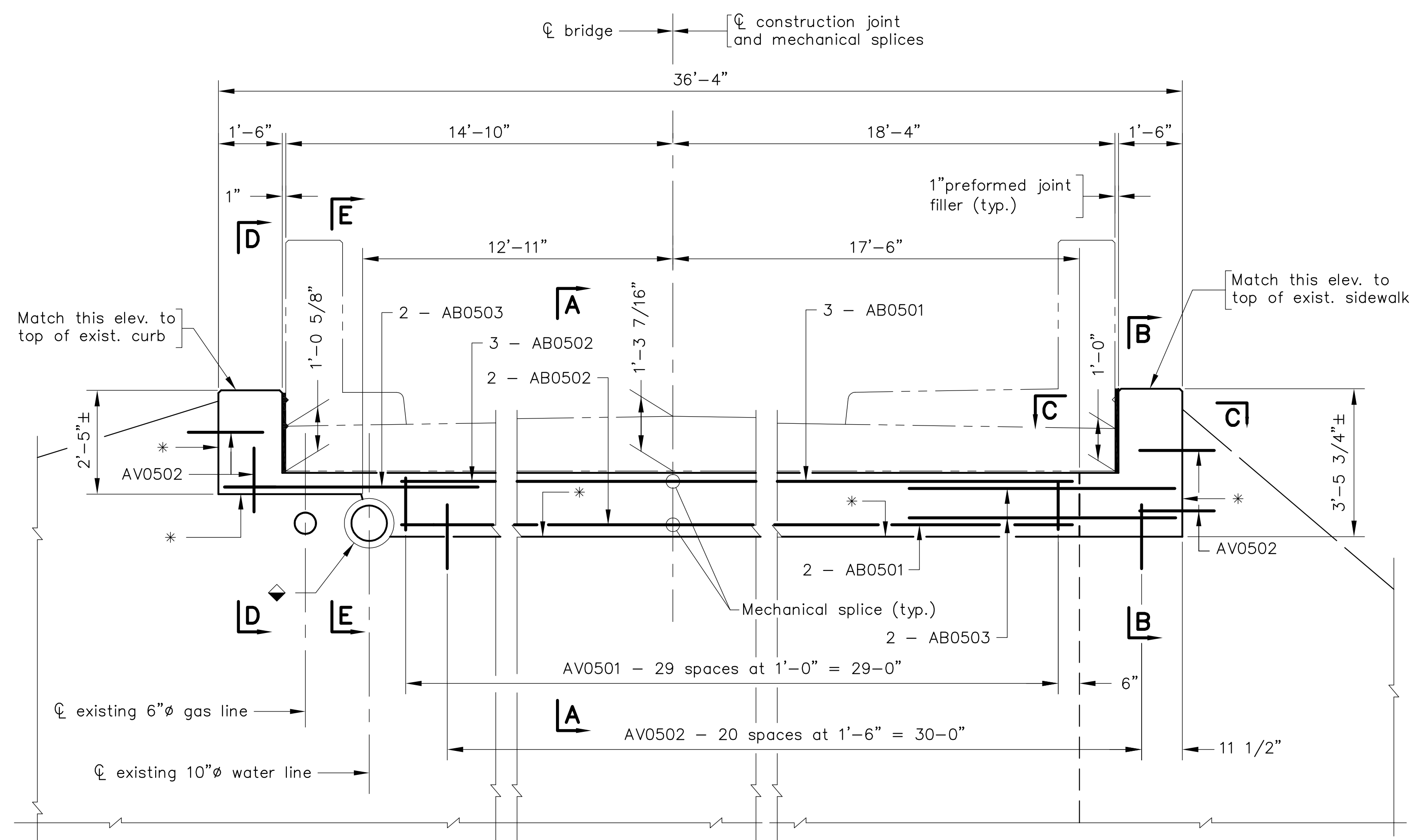


PART SECTION C-C
Scale: 1" = 1'-0"

Blast to a light finish and seal with waterproofing fabric (12" strip) bedded in epoxy bonding type EP-4 (typ.)

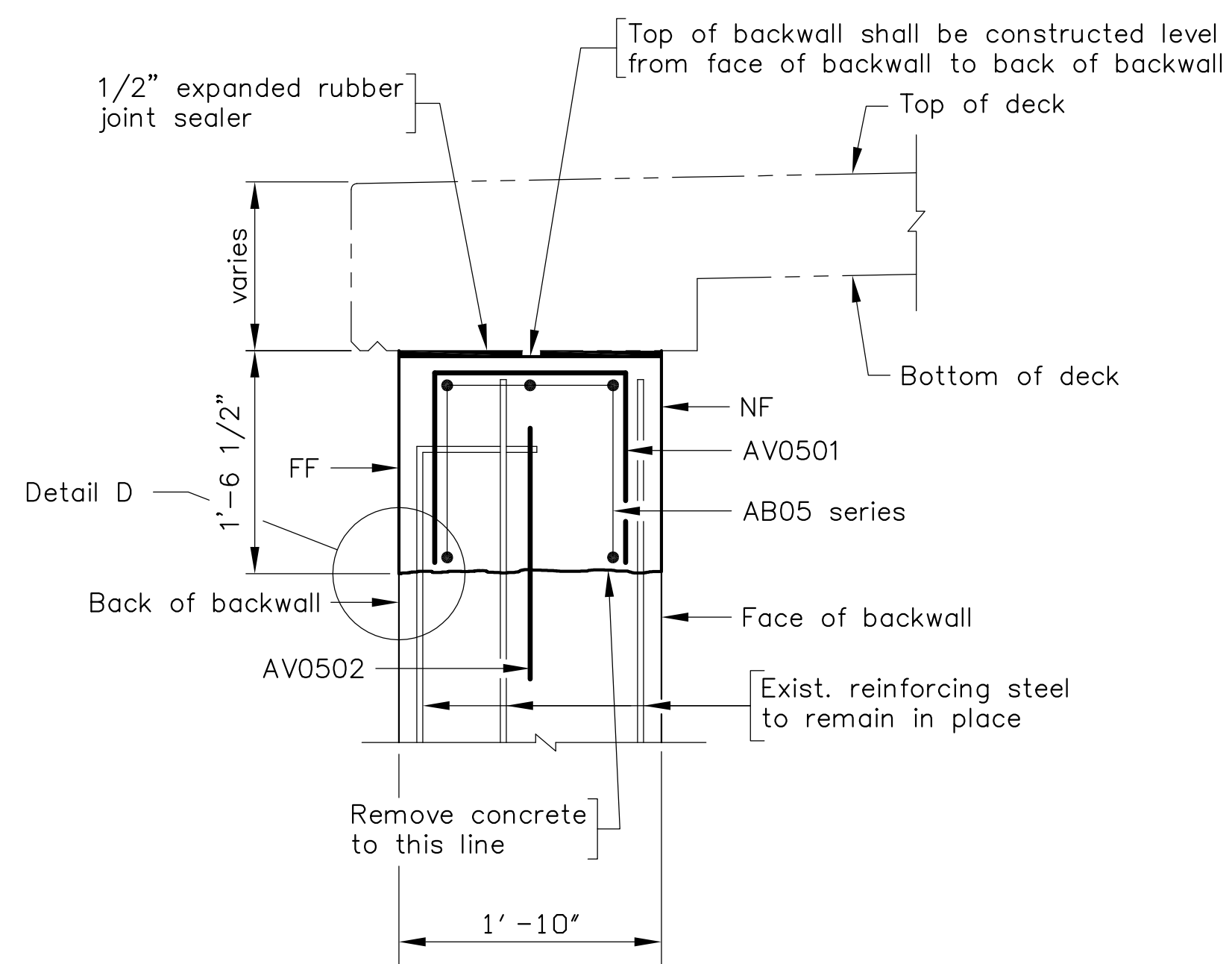


DETAIL D
Scale: $3/4" = 1'-0"$

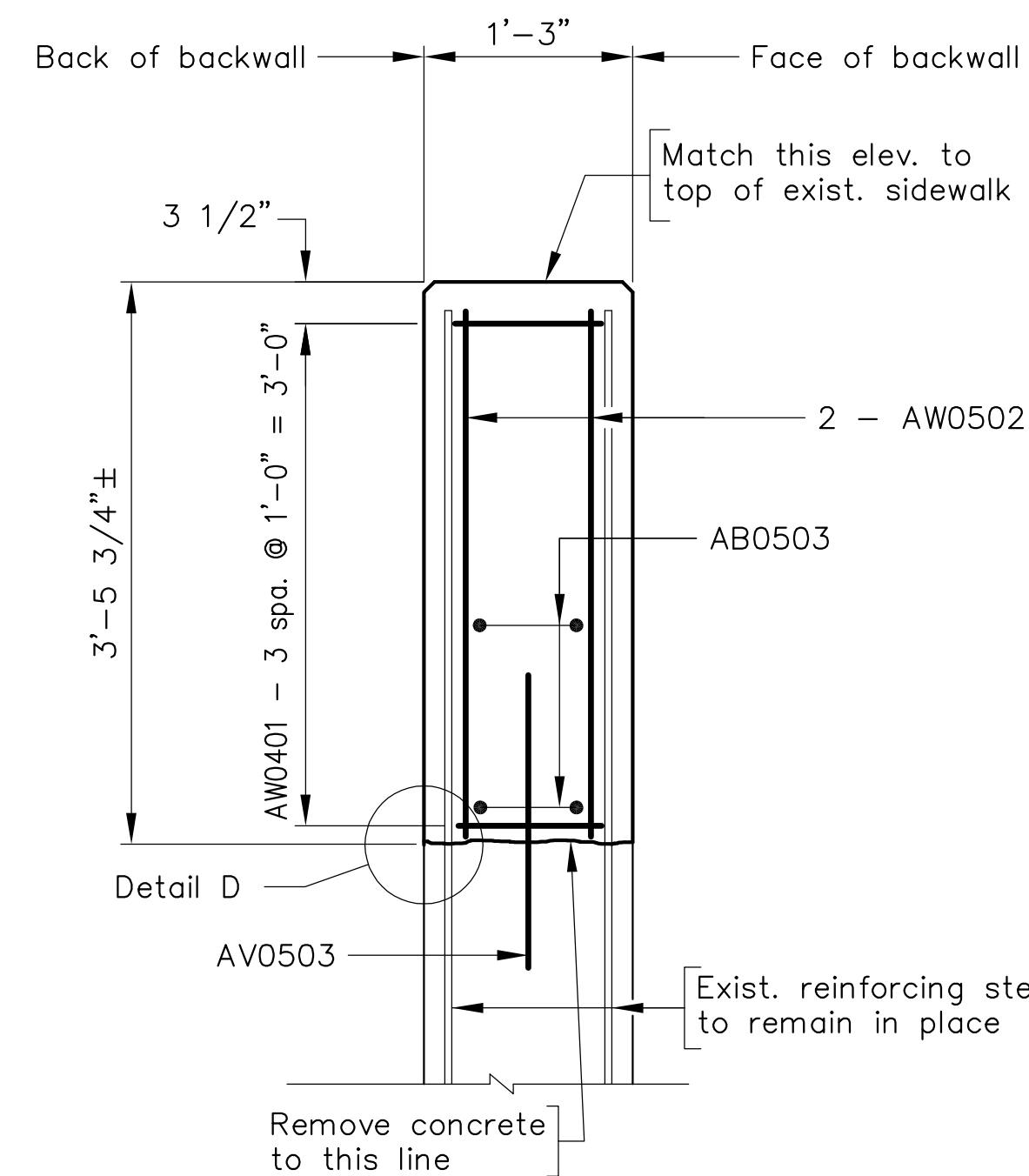


◆ - Cavity between outer surface of waterline and concrete shall be filled with a fast-setting, Portland cement water-stop.

PART ELEVATION





PART SECTION A-A
Scale: 1" = 1'-0"



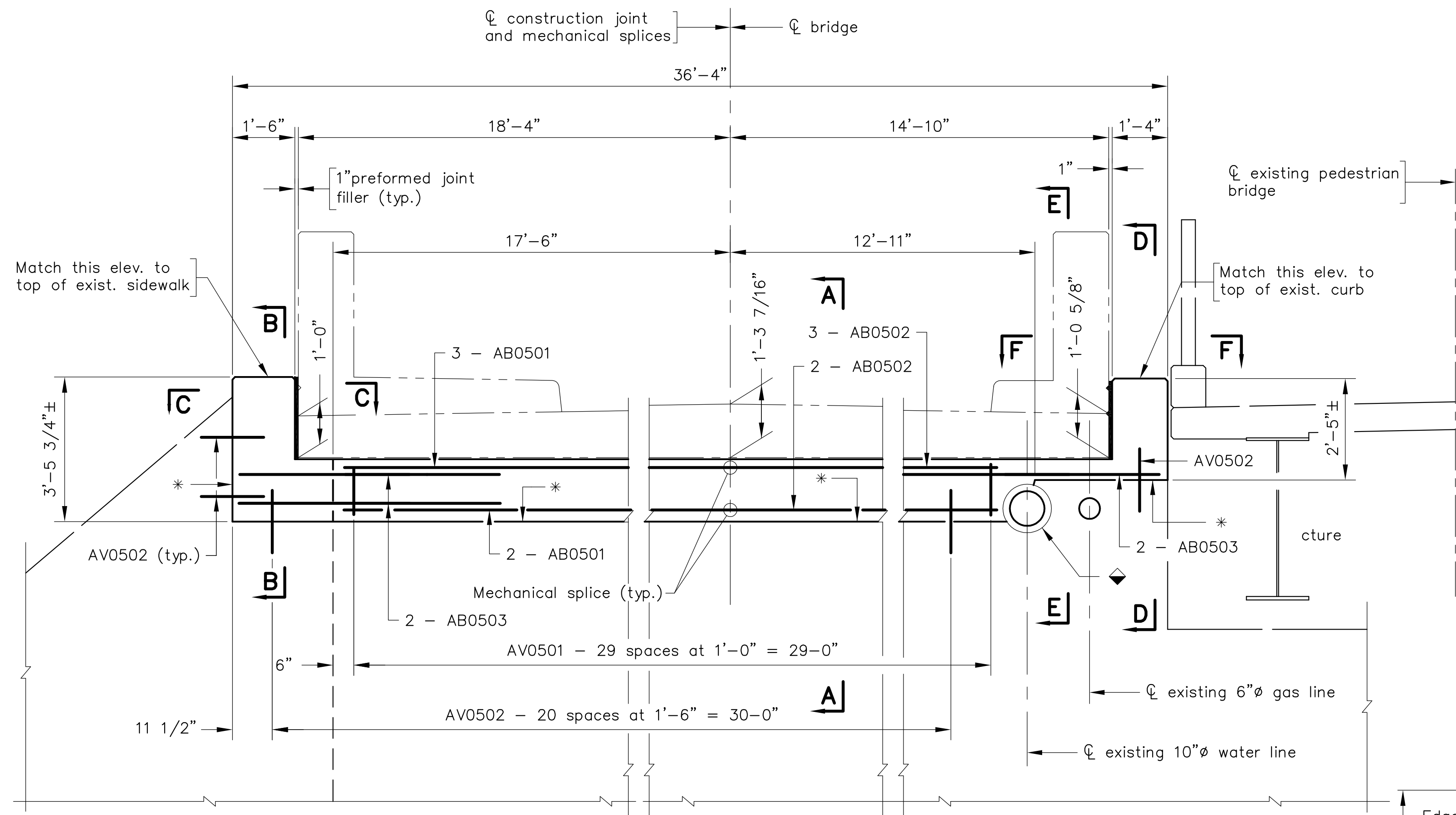
PART SECTION B-B
Scale: 1" = 1'-0"

Scale: 1/2" = 1'-0" unless otherwise shown.

					SCHWARTZ & ASSOCIATES, INC. CONSULTING ENGINEERS 7331 TIMBERLAKE ROAD LYNCHBURG, VA.		
					EDDY AVENUE OVER ROANOKE RIVER CITY OF SALEM, VA ABUTMENT A BACKWALL RECONSTRUCTION DETAILS		
No.	Description	Date			DESIGNED BY: MBH DRAWN BY: MBH CHECKED BY: RWS SCALE: AS NOTED PLAN NO.: NA DATE: JUNE 1, 2021 SHEET: 8 OF 21		
REVISIONS			COMM. NO. 19035				

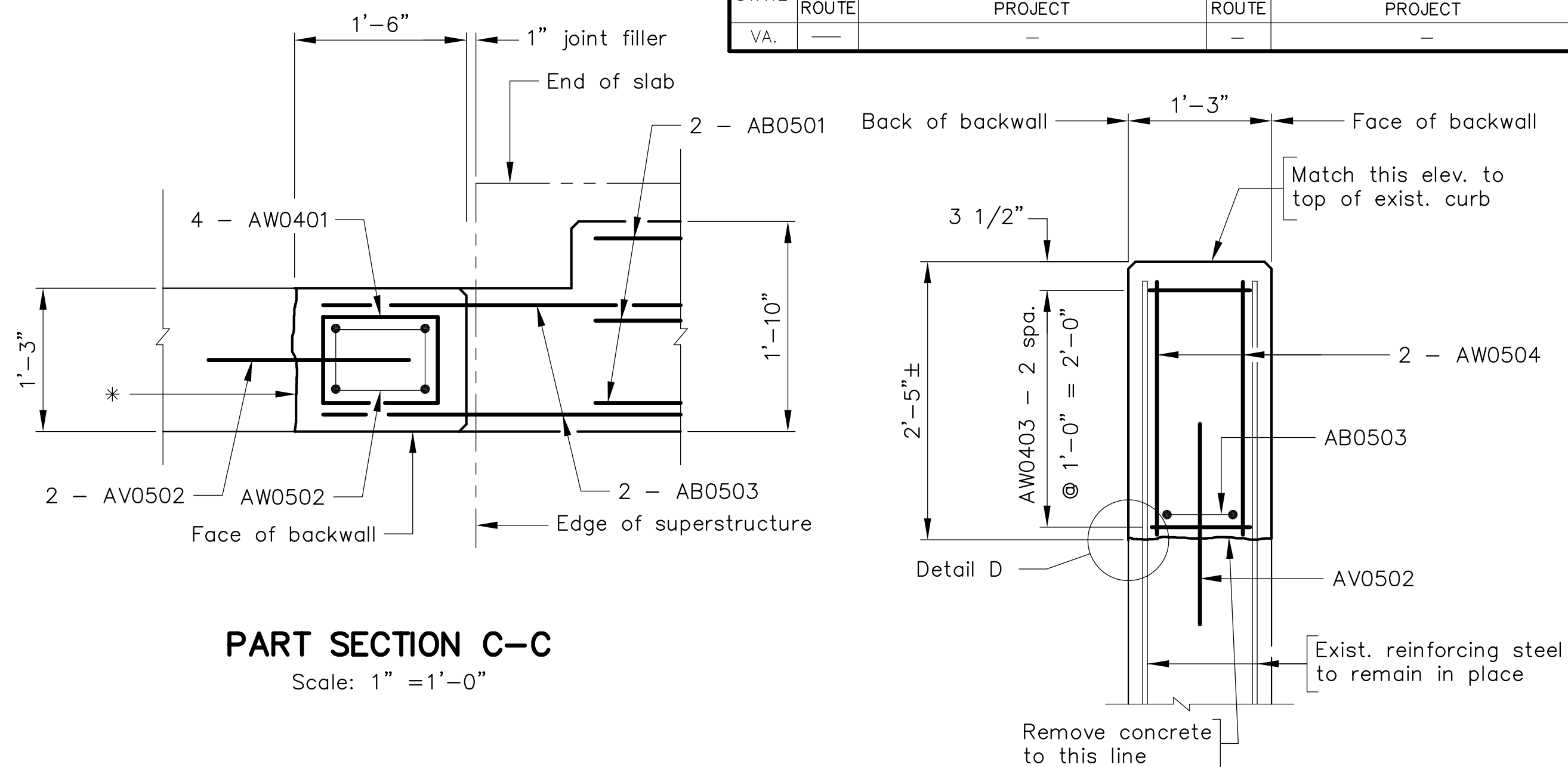
CADD REFERENCE NO.: BRIDGE19035.DWG

STATE	FEDERAL AID		STATE	SHEET
	ROUTE	PROJECT		
VA.				9



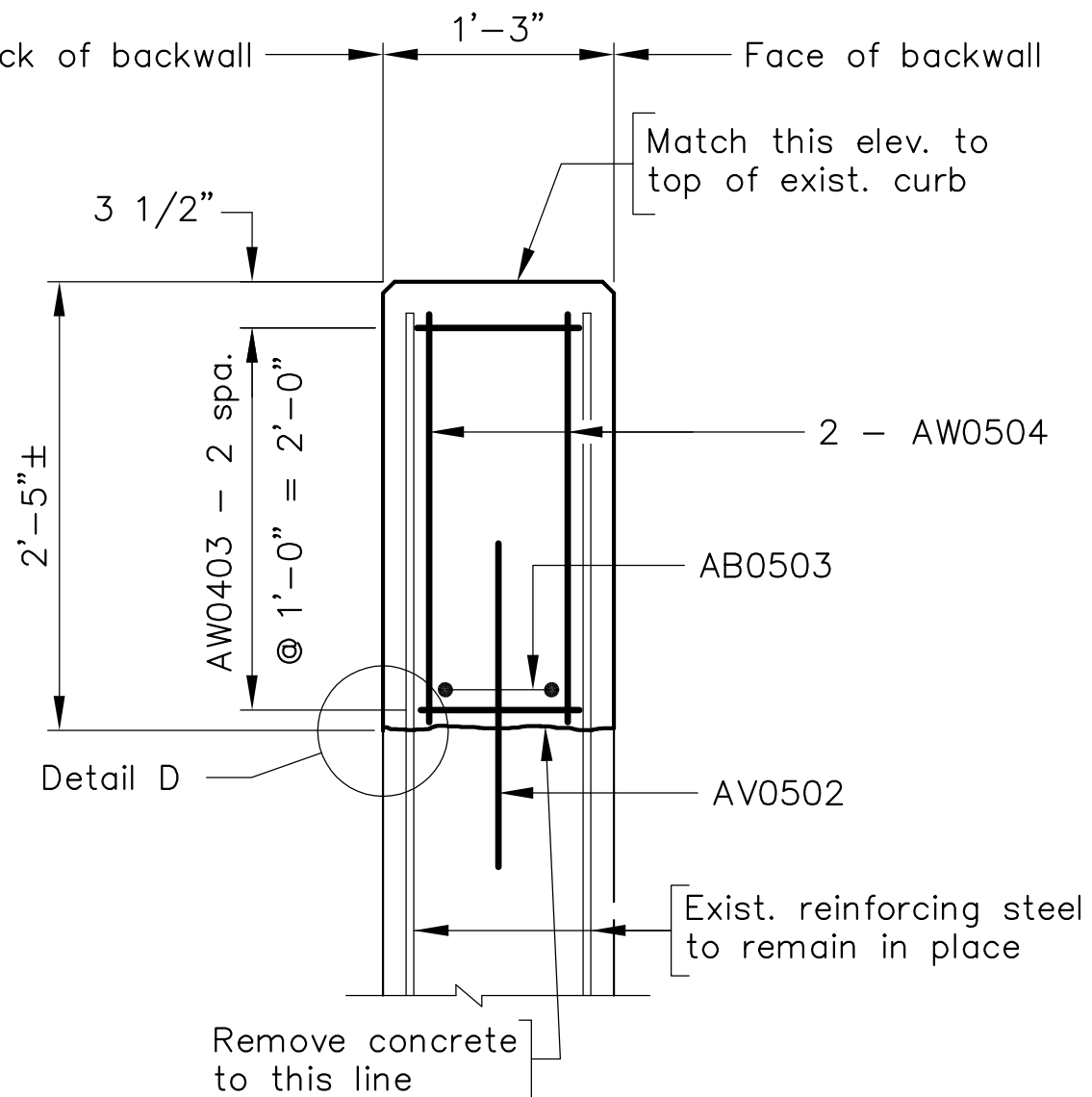
PART ELEVATION

- * - Remove existing concrete to this line.
- ◆ - Cavity between outer surface of waterline and concrete shall be filled with a fast-setting, Portland cement water-stop.



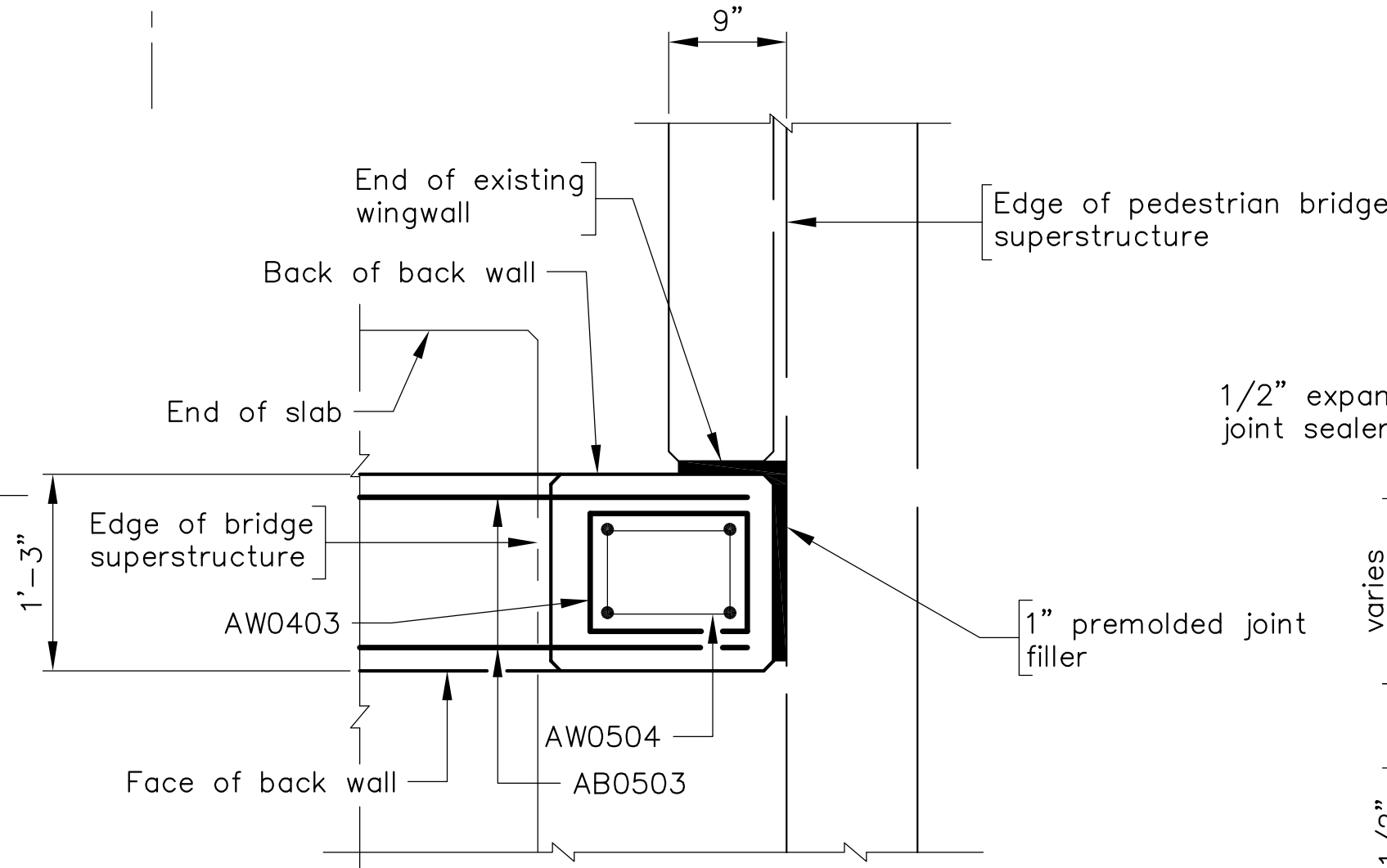
PART SECTION C-C

Scale: 1" = 1'-0"



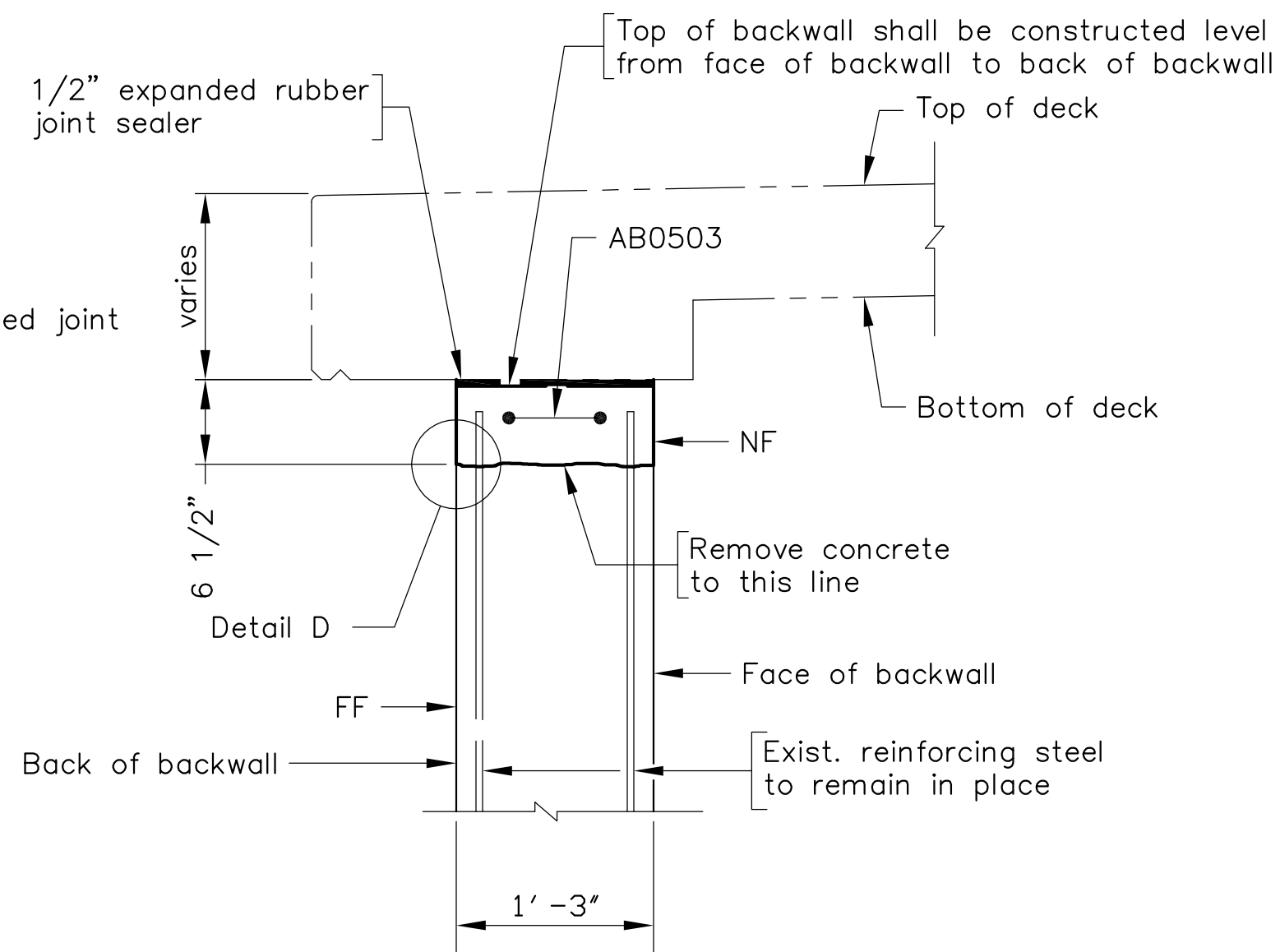
PART SECTION D-D

Scale: 1" = 1'-0"



PART VIEW F-F

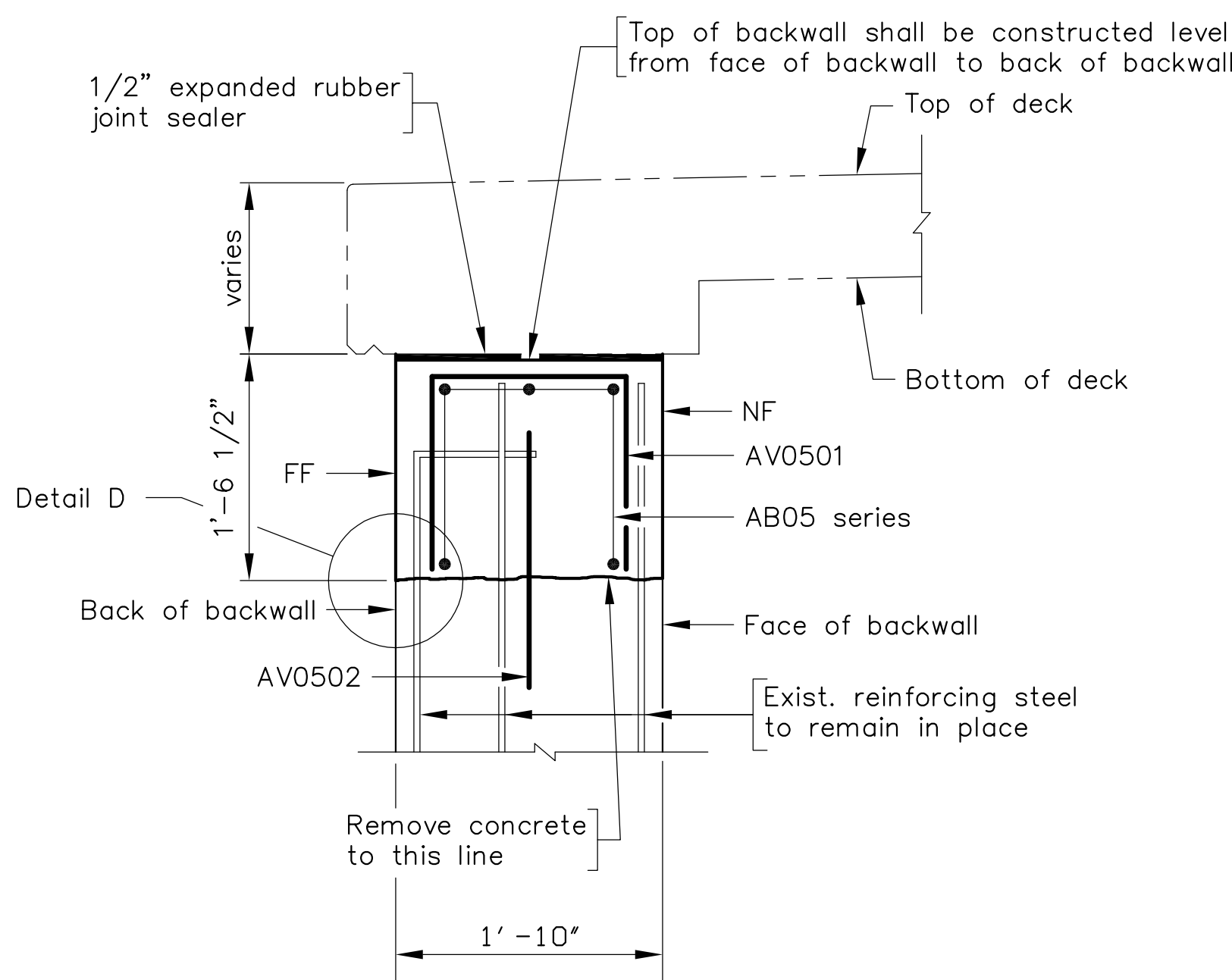
Scale: 1" = 1'-0"



PART SECTION E-E

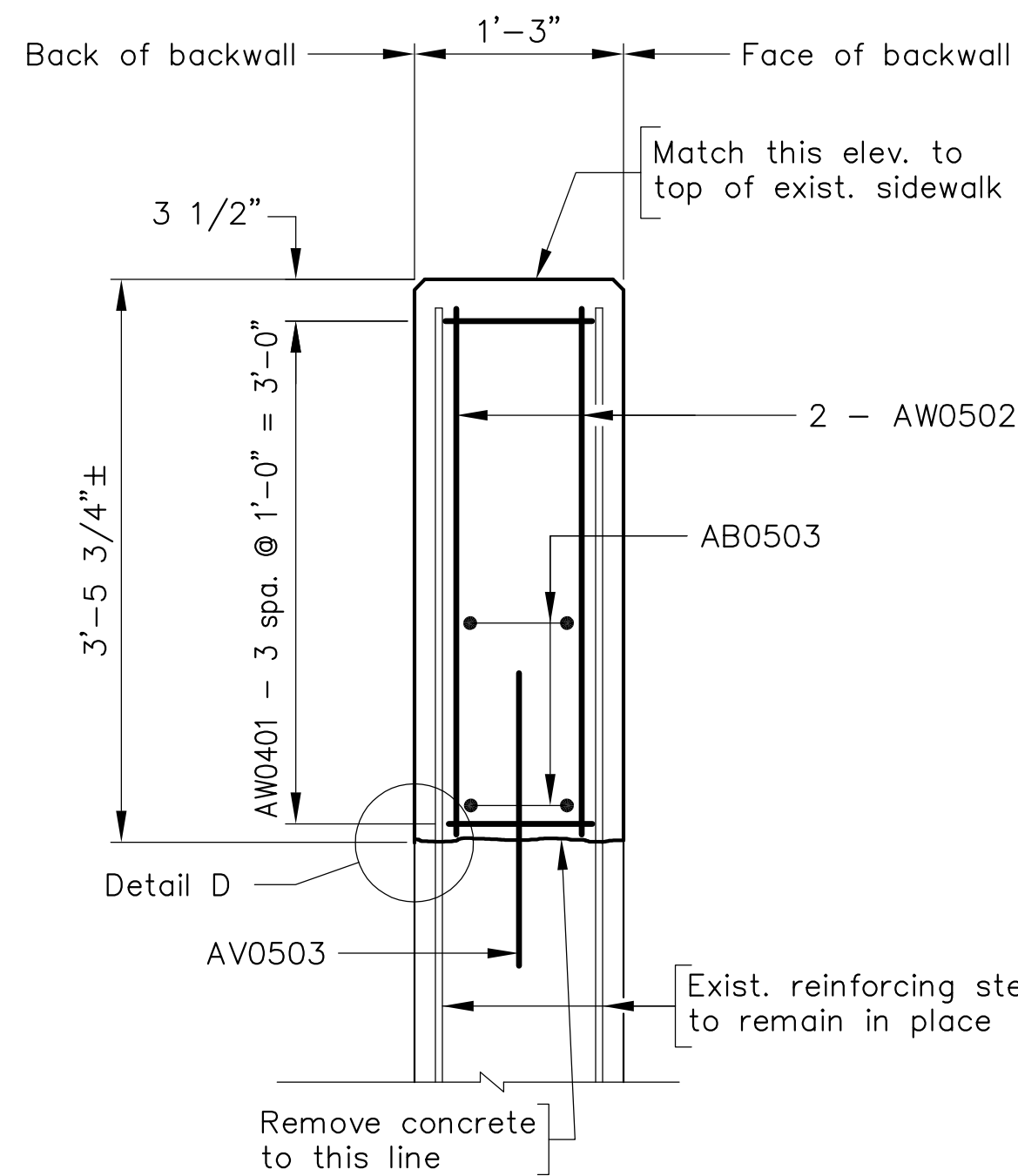
Scale: 1" = 1'-0"

Note:
See sheet 8 for abutment notes.



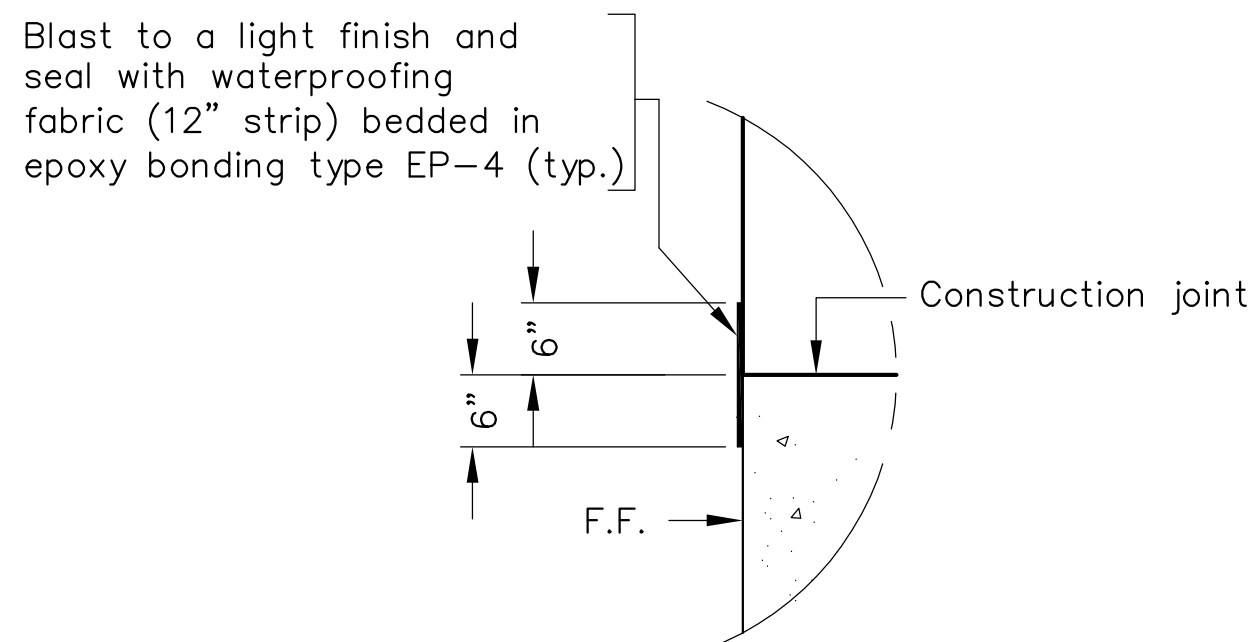
PART SECTION A-A

Scale: 1" = 1'-0"



PART SECTION B-B

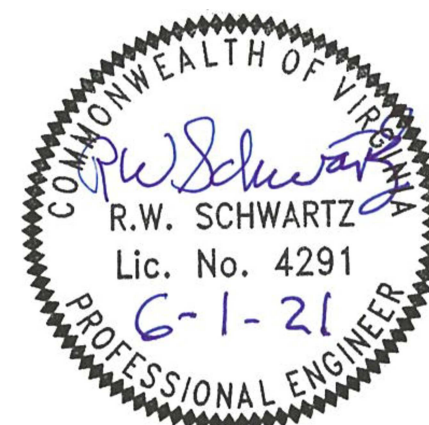

Scale: 1" = 1'-0"



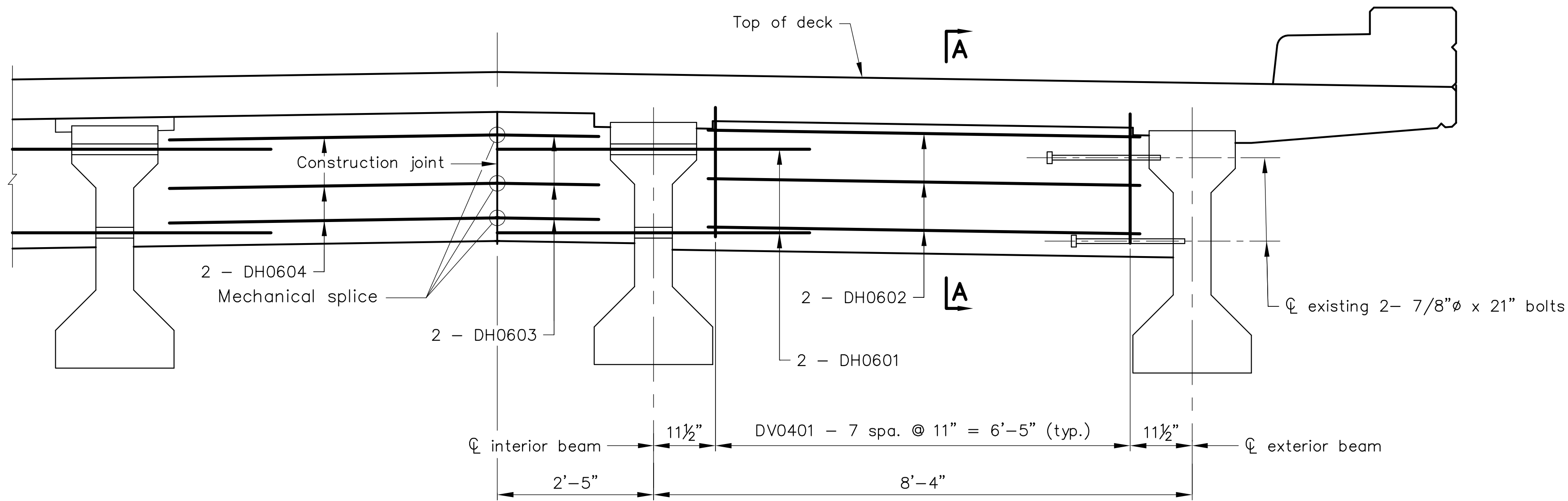
DETAIL D

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

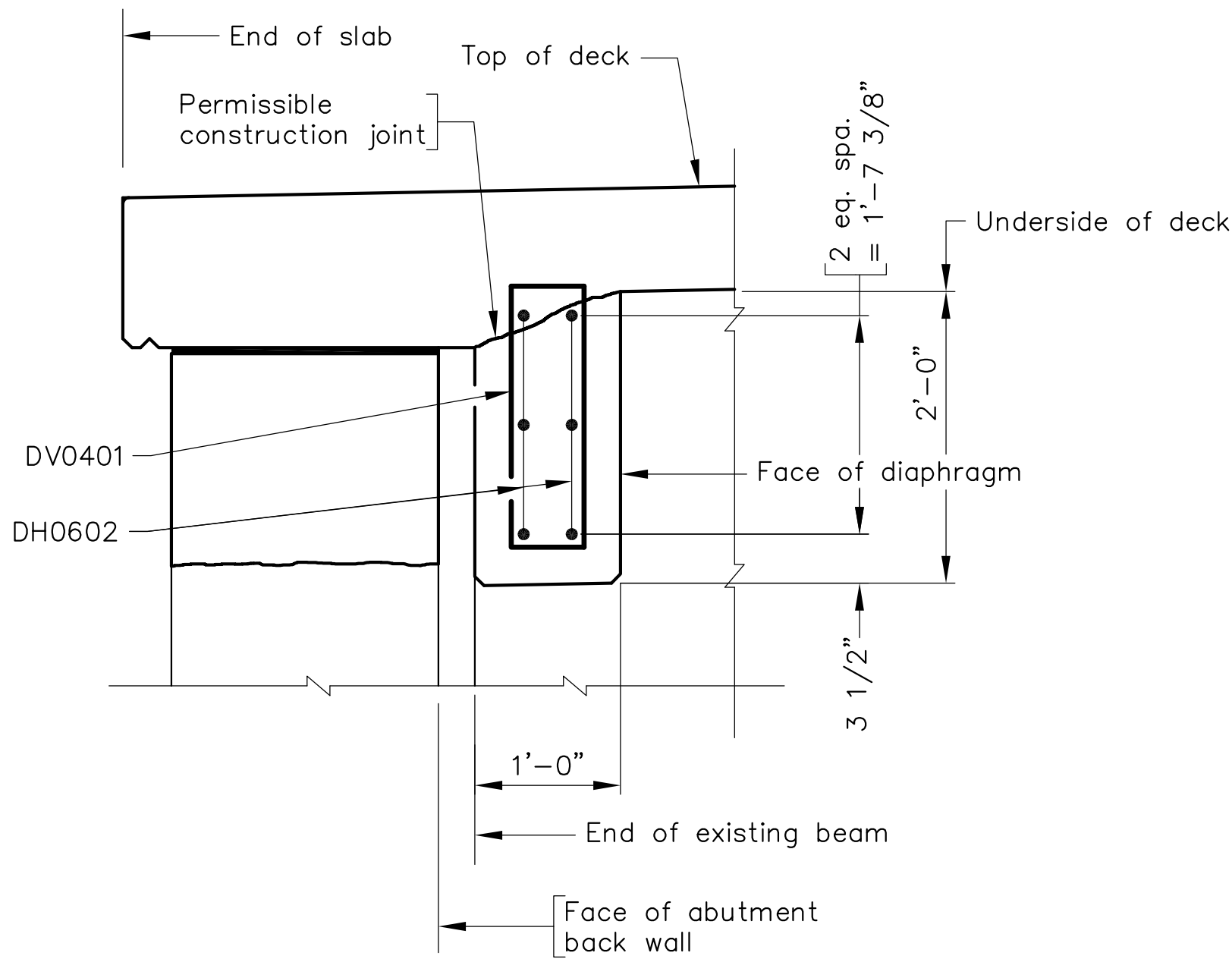
Scale: 1/2" = 1'-0" unless otherwise shown.

					SCHWARTZ & ASSOCIATES, INC.		
					CONSULTING ENGINEERS 7331 TIMBERLAKE ROAD LYNCHBURG, VA.		
				EDDY AVENUE OVER ROANOKE RIVER CITY OF SALEM, VA ABUTMENT B BACKWALL RECONSTRUCTION DETAILS			
No.	Description	Date		DESIGNED BY: MBH DRAWN BY: MBH CHECKED BY: RWS			
REVISIONS				SCALE: AS NOTED PLAN NO.: NA			
				DATE: JUNE 1, 2021 SHEET: 9 OF 21			

STATE	FEDERAL AID		STATE		SHEET NO.
	ROUTE	PROJECT	ROUTE	PROJECT	
VA.	---	-	-	-	10



PART TRANSVERSE SECTION - AT ABUTMENT
(Abutment B shown, Abutment A similar except opposite hand)



SECTION A-A
Scale: 1" = 1'-0"

Scale: 3/4" = 1'-0" unless otherwise shown.

Notes:

See Sheet 11 for deck extension details and reinforcement.

See Sheets 8 & 9 for abutment backwall reconstruction details and reinforcement.

The Contractor shall take care not to damage existing precast pre-stressed bulb-tee beams during removal of existing diaphragms.

The Contractor shall take care not to damage existing 7/8"Ø x 21" long bolts located on exterior beams.

All reinforcing steel shall be Class I corrosion resistant.

All concrete for diaphragms shall be A4 P&R.

All chamfers shall be 3/4".

Concrete shall provide 3" clear concrete cover.

All existing concrete removed shall be removed to horizontal and vertical planes and to sound concrete.

All concrete areas blasted shall be blasted to a medium finish for a time sufficient to expose sound concrete and coarse aggregate with slight reveal (maximum reveal 1/4 inch), unless otherwise noted. They shall be blasted using a VDOT approved abrasive material.

All construction joints shall be bonded with bonding epoxy. All bonding epoxy used on structure shall be Siki Armatex 110 EpoCem. All new concrete cast against hardened concrete shall be bonded to hardened concrete with bonding epoxy after sand blasting.

All costs related to bonding construction joints, as shown on these contract drawings, shall be included in price bid "Replace End Diaphragms".

Contractor shall exercise extreme caution when removing existing concrete so that none of the portion of the existing structure or reinforcing steel to remain in place is damaged. Existing concrete shall be removed with pneumatic hammer (max. weight 35 lbs.) except use 15 lb. hammer for final trim work. Any damage to the existing structure or reinforcing steel shall be repaired at no cost to the City of Salem.

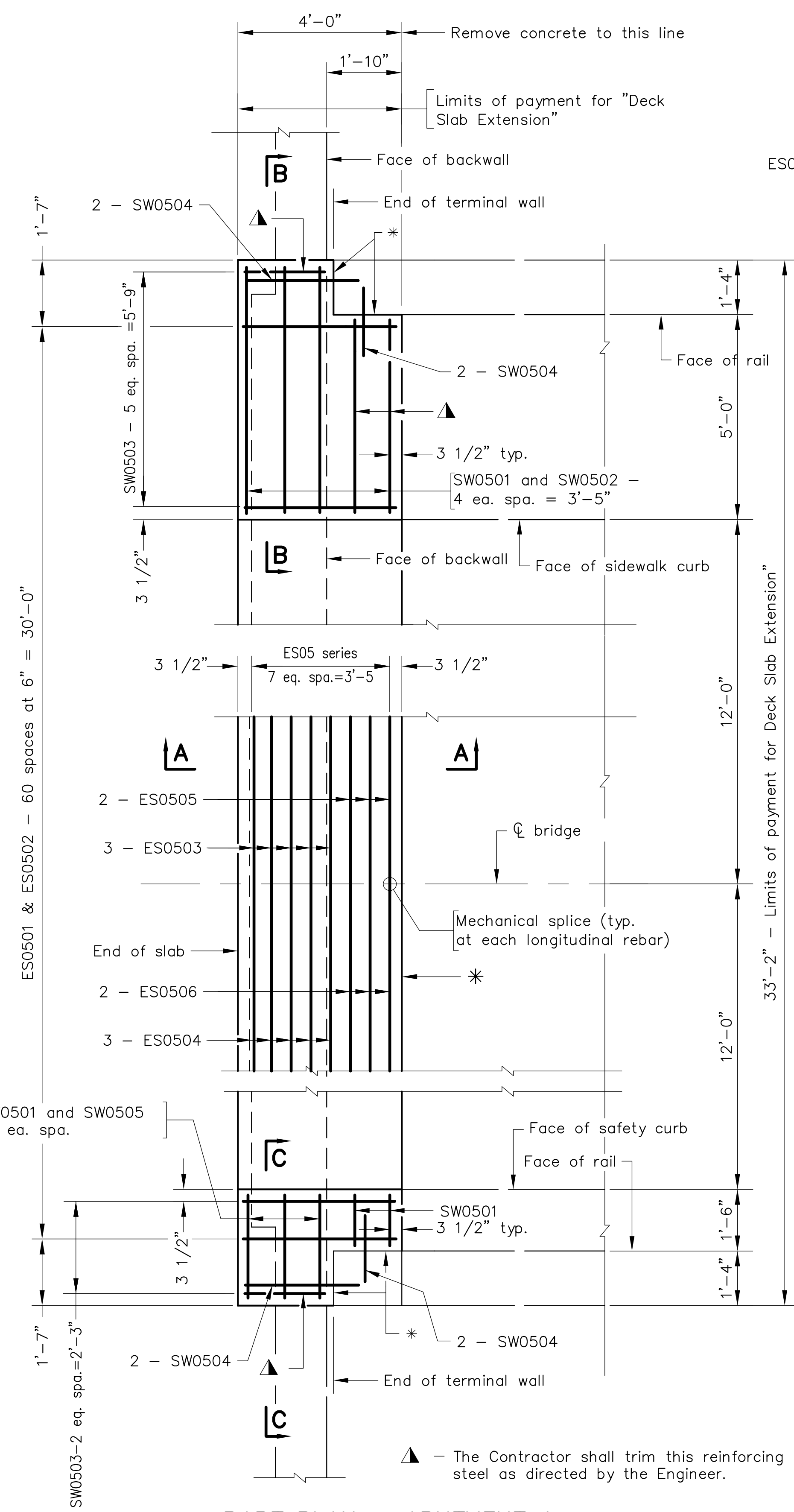
See sheet 12 for reinforcing steel diagram.

All cost for furnishing, fabricating, and installing reinforcing steel shall be included in price bid for "Replace End Diaphragms".

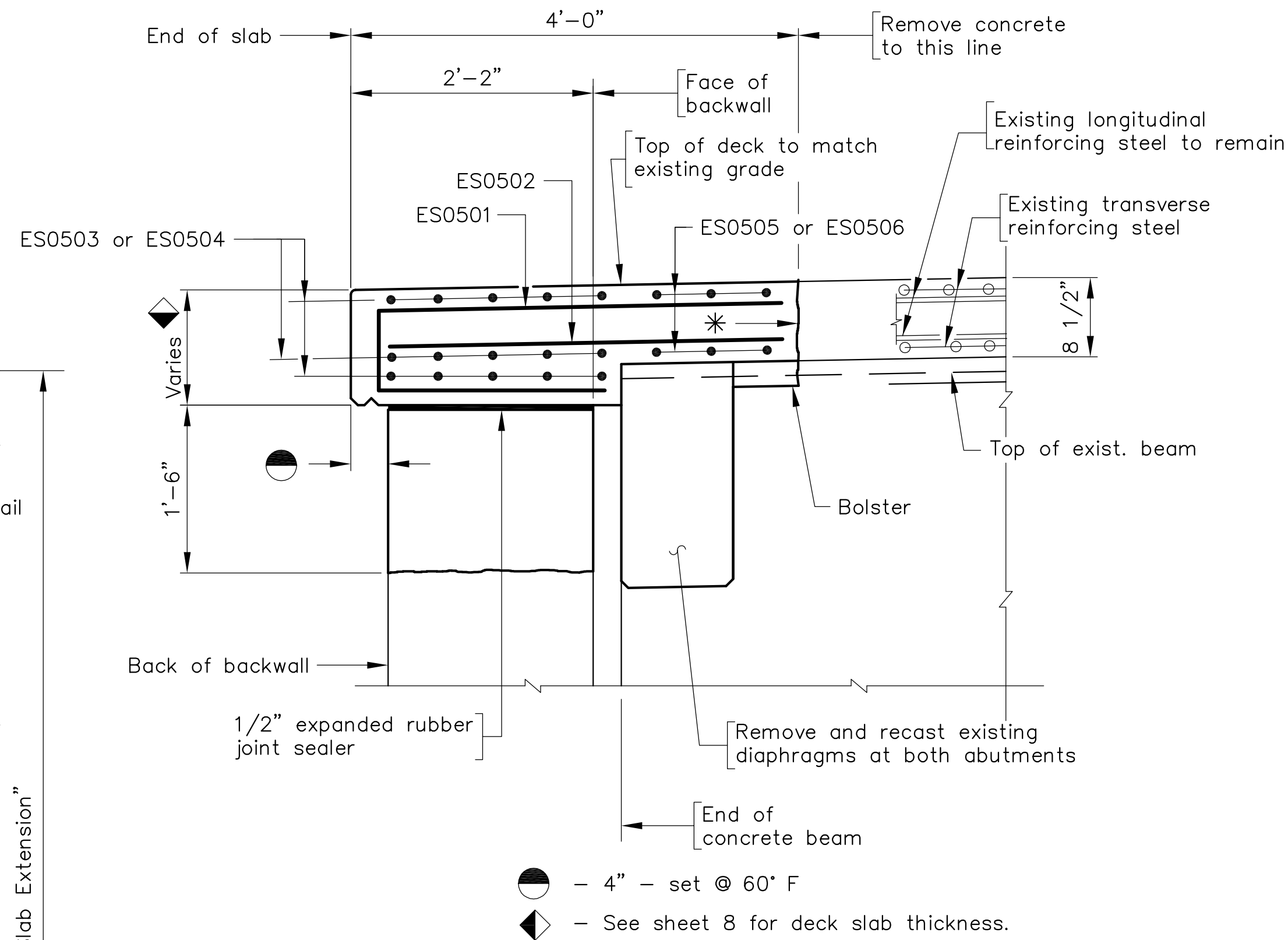
					SCHWARTZ & ASSOCIATES, INC. CONSULTING ENGINEERS 7331 TIMBERLAKE ROAD LYNCHBURG, VA.		
					EDDY AVENUE OVER ROANOKE RIVER CITY OF SALEM, VA DIAPHRAGM REPLACEMENT DETAILS		
No.	Description	Date			DESIGNED BY: MBH DRAWN BY: MBH CHECKED BY: RWS		
REVISIONS					SCALE: AS NOTED PLAN NO.: NA		
					DATE: JUNE 1, 2021 SHEET: 10 OF 21		

CADD REFERENCE NO.:16016.DWG

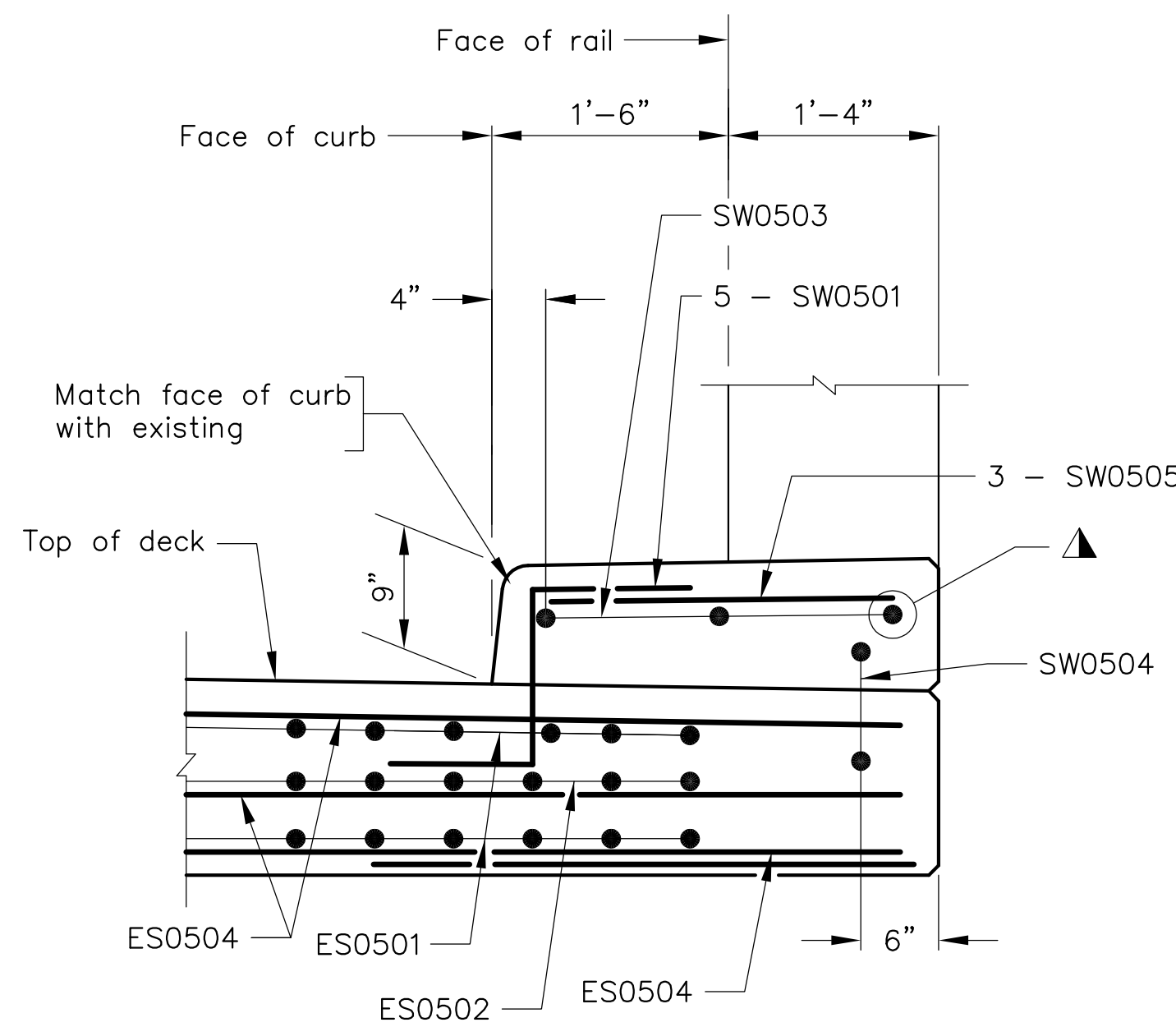
CADD REFERENCE NO.: BRIDGE19035.DWG



PART PLAN - ABUTMENT A
(Abutment B similar)



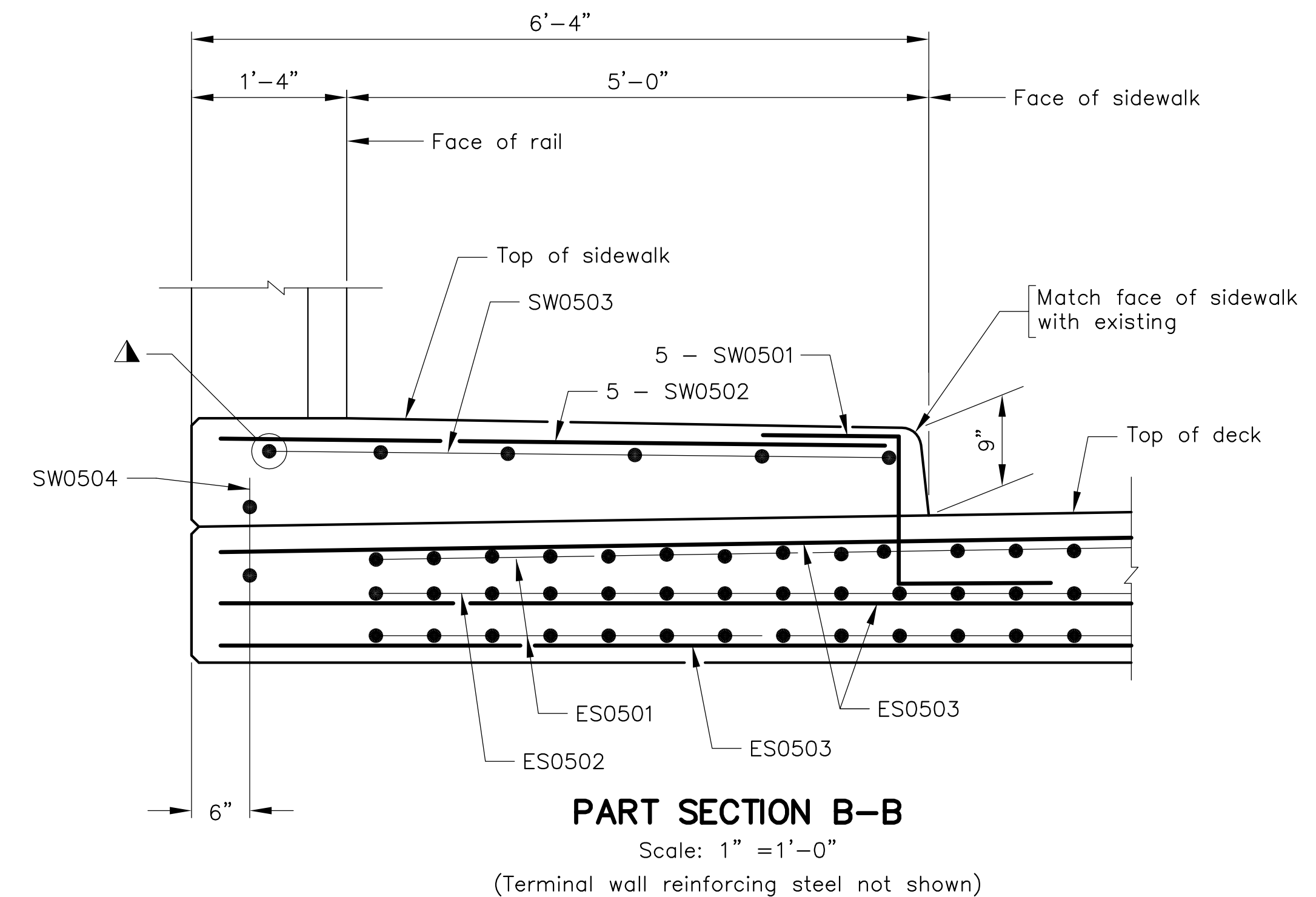
PART SECTION A-A
Scale: 1" = 1'-0"



PART SECTION C-C
Scale: 1" = 1'-0"
(Terminal wall reinforcing steel not shown)

Scale: 1/2" = 1'-0" unless otherwise shown.

STATE	ROUTE	FEDERAL AID PROJECT	ROUTE	STATE PROJECT	SHEET NO.
VA.					11



PART SECTION B-B
Scale: 1" = 1'-0"
(Terminal wall reinforcing steel not shown)

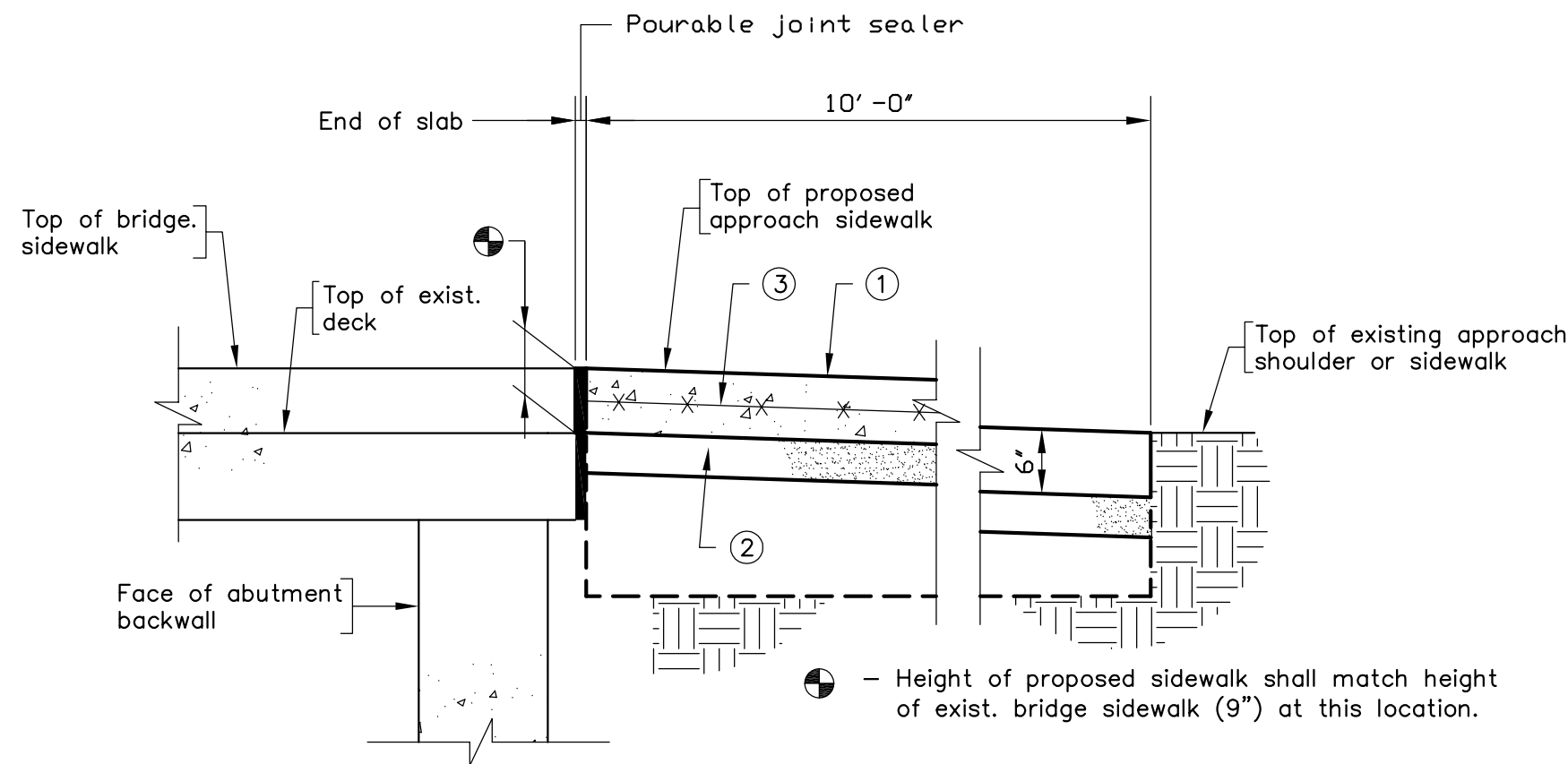
			SCHWARTZ & ASSOCIATES, INC. CONSULTING ENGINEERS 7331 TIMBERLAKE ROAD LYNCHBURG, VA.		
			EDDY AVENUE OVER ROANOKE RIVER CITY OF SALEM, VA DECK EXTENSION DETAILS		
No.	Description	Date	DESIGNED BY: MBH	DRAWN BY: MBH	CHECKED BY: RWS
REVISIONS			SCALE: AS NOTED	PLAN NO.: NA	
			DATE: JUNE 1, 2021	SHEET: 11 OF 21	

CADD REFERENCE NO.: BRIDGE19035.DWG

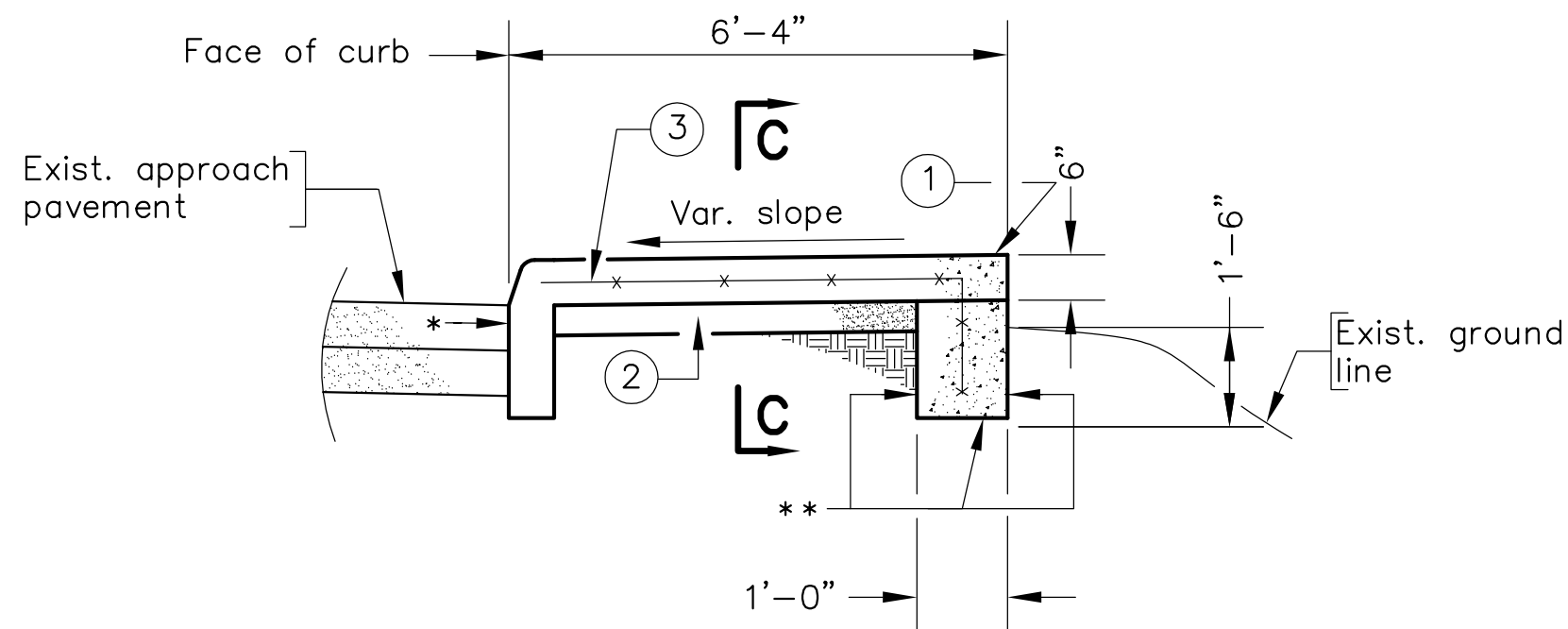
REINFORCING STEEL SCHEDULE											
AV0501	AW0401	AW0403	AW0405	SW0501	ES0501	DV0401					
Mark	Size	No.	Pin	Length	Location	Mark	Size	No.	Pin	Length	Location
AB0501	5	10	—	17'-4"	Abutment						
AB0502	5	10	—	11'-10"	Abutment						
AB0503	5	12	—	8'-4"	Abutment						
AV0501	5	60	2 1/2"	3'-4 1/4"	Abutment						
AV0502	5	49	—	1'-9"	Abutment						
AW0401	4	11	2"	4'-6"	Abutment						
AW0502	5	8	—	3'-2"	Abutment						
AW0403	4	3	2"	3'-4"	Abutment						
AW0504	5	8	—	2'-1"	Abutment						
DV0401	4	48	2"	4'-7 3/4"	Diaphragms						
DH0601	6	16	—	6'-0"	Diaphragms						
DH0602	6	24	—	6'-6"	Diaphragms						
DH0603	6	12	—	1'-6"	Diaphragms						
DH0604	6	12	—	5'-0"	Diaphragms						
ES0501	5	122	2 1/2"	5'-11"	Deck						
ES0502	5	122	—	3'-8"	Deck						
ES0503	5	30	—	18'-0"	Deck						
ES0504	5	30	—	14'-6"	Deck						
ES0505	5	12	—	16'-9"	Deck						
ES0506	5	12	—	13'-3"	Deck						
SW0501	5	20	3 3/4"	2'-9"	Sidewalk						
SW0502	5	10	—	5'-9"	Sidewalk						
SW0503	5	18	—	3'-7"	Sidewalk						
SW0504	5	16	—	1'-9"	Sidewalk						
SW0505	5	3	—	2'-3"	Sidewalk						

Dimensions in Bending Diagram are out-to-out of bars.
Reinforcing steel shall be corrosion resistant Class I.

* — Contractor shall saw cut exist. asphalt along face of curb and remove existing asphalt sidewalk within the limits.
** — Cast this section unformed



SECTION C-C
Scale: 1" = 1'-0"

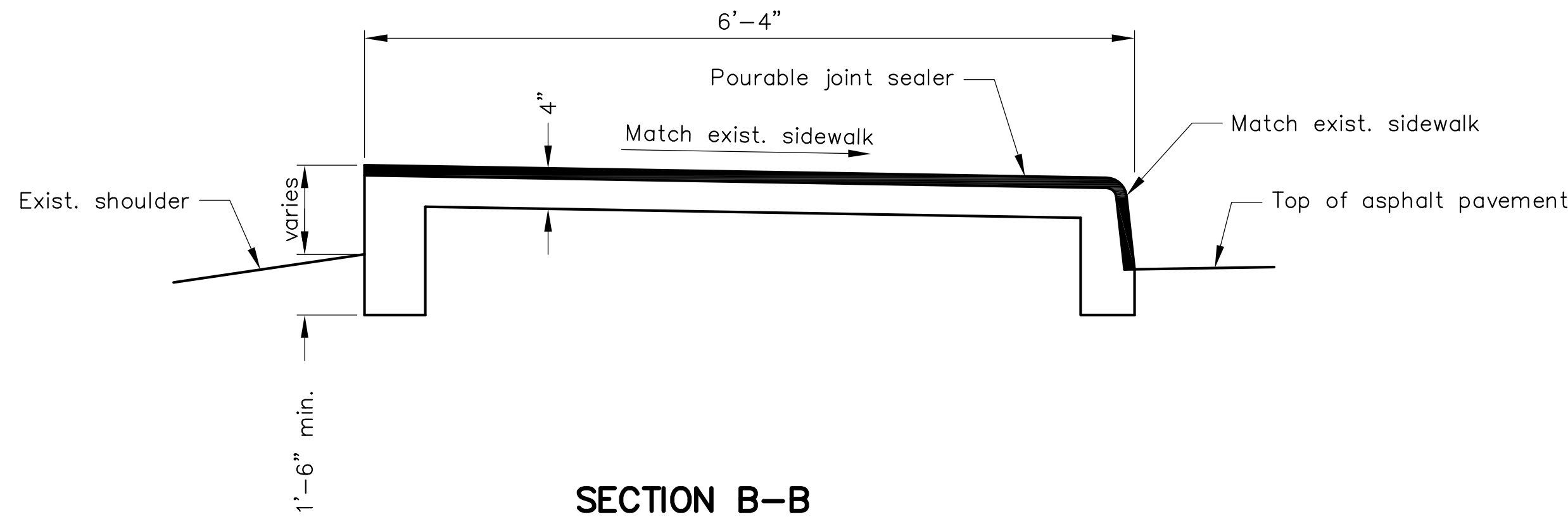
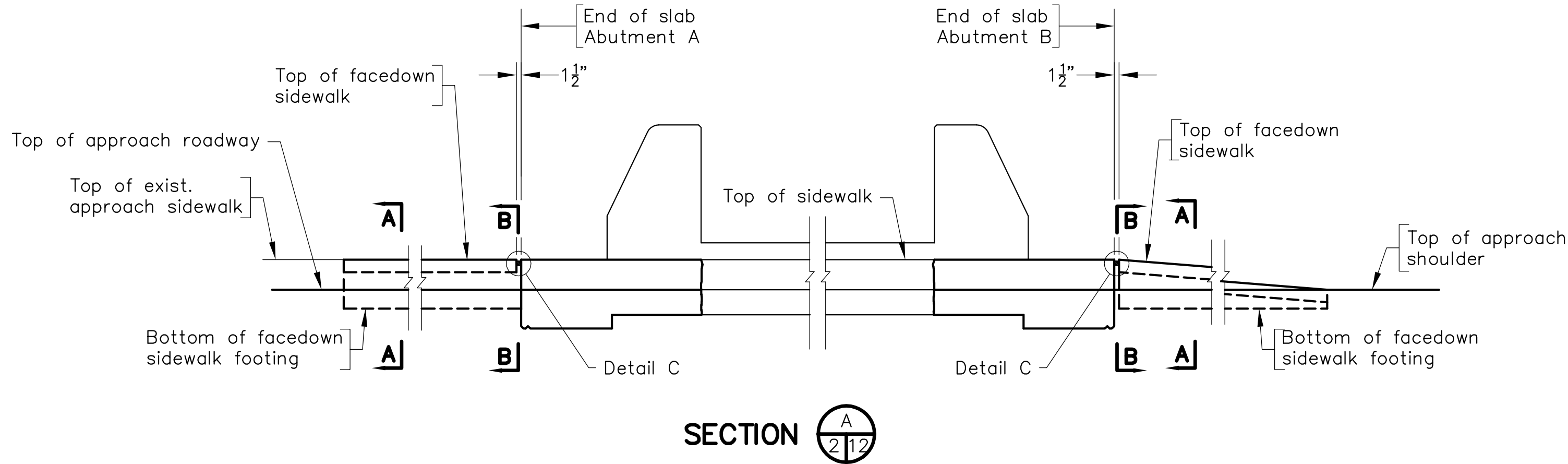


SECTION A-A
Not to scale

- LEGEND
- ① Concrete, Class A3
 - ② Compacted aggregate base material, Type I, size no. 21-A (4" depth)
 - ③ 6"X6" W2.9 X W2.9 welded wire fabric

Scale: 1" = 1'-0" unless otherwise shown.

STATE	FEDERAL AID		STATE		SHEET NO.
	ROUTE	PROJECT	ROUTE	PROJECT	
VA.	—	—	—	—	12



SECTION B-B
Scale: 1" = 1'-0"

Notes:

See Sheet 11 for deck extension details details.

Concrete for facedown sidewalk shall be Class A3 General.

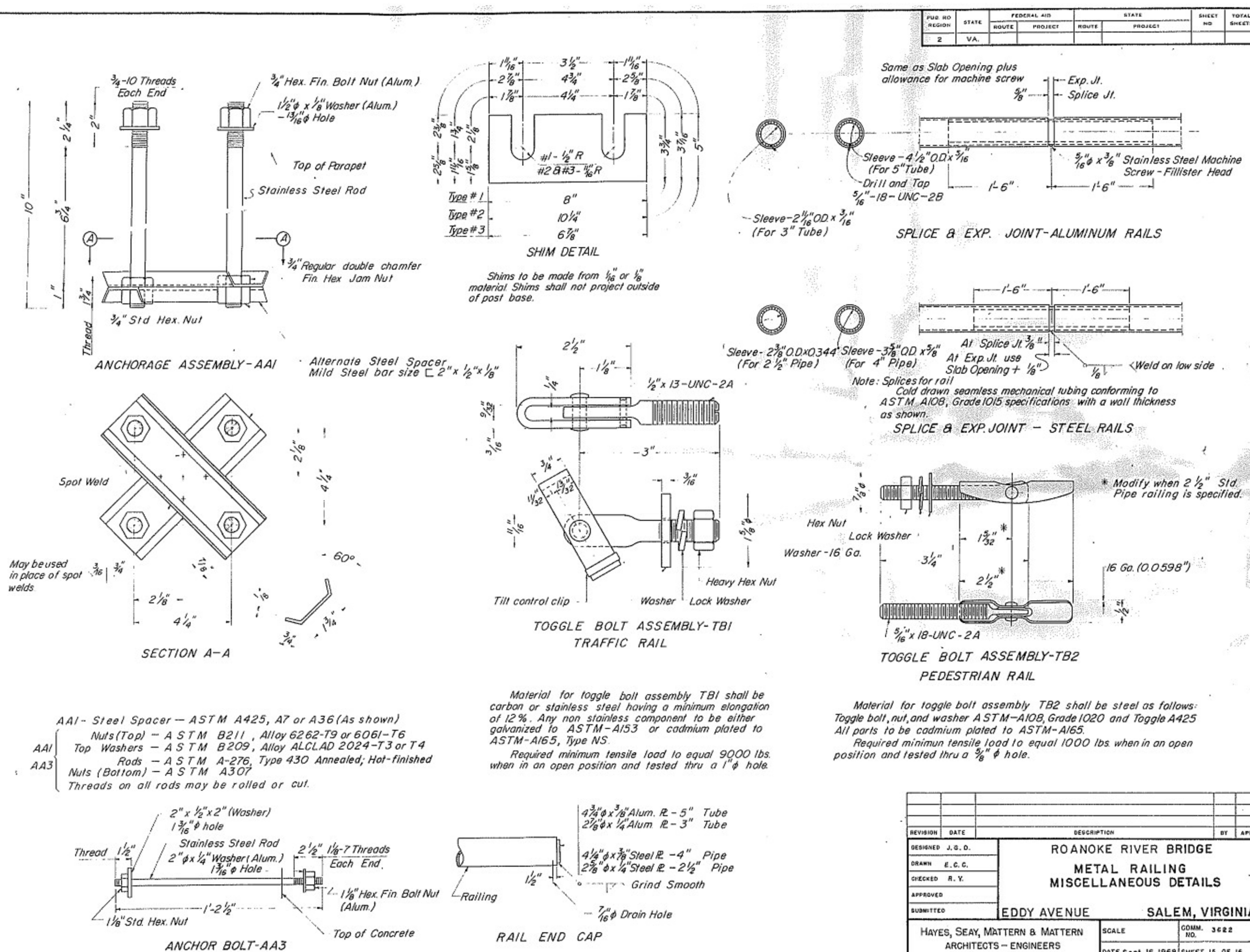
All cost associated with Pourable joint sealer (1 1/2") shall be included in price bid "Facedown Sidewalk".

All costs associated with removing, storing, and re-installing wooden split rail fence at Abutment A shall be included in price bid "Facedown Sidewalk".

The Contractor shall install plastic sleeve for wooden split rail fence post at Abutment A that matches existing conditions. All costs associated with the plastic sleeve shall be included in price bid "Facedown Sidewalk".

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STATE	FEDERAL AID		STATE		SHEET NO.
	ROUTE	PROJECT	ROUTE	PROJECT	
VA.	—	—	—	—	13



REVISION	DATE	DESCRIPTION	BY	APP
DESIGNED	J. G. D.	ROANOKE RIVER BRIDGE METAL RAILING MISCELLANEOUS DETAILS EDDY AVENUE SALEM, VIRGINIA		
DRAWN	E. C. C.			
CHECKED	R. V.			
APPROVED				
SUBMITTED				
HAYES, SEAY, MATTERN & MATTERN ARCHITECTS - ENGINEERS		SCALE	COMM. NO. 3622 DATE Sept. 16, 1968 SHEET 15 OF 16	

CADD REFERENCE NO.: BRIDGE19035.DWG

Not to scale

				 <p>SCHWARTZ & ASSOCIATES, INC. CONSULTING ENGINEERS 7331 TIMBERLAKE ROAD LYNCHBURG, VA.</p>	<p>EDDY AVENUE OVER ROANOKE RIVER CITY OF SALEM, VA TOGGLE BOLT DETAILS</p>	DESIGNED BY: MBH	DRAWN BY: MBH	CHECKED BY: RWS
						SCALE: AS NOTED	PLAN NO.: NA	
						DATE: JUNE 1, 2021	SHEET: 13 OF 21	
No.	Description	Date						
REVISIONS			COMM. NO. 19035					

MAINTENACE OF TRAFFIC GENERAL NOTES

GENERAL

Unless otherwise approved or directed by the Engineer, the Contractor shall plan and execute the work in accordance with the Maintenance of Traffic Plans.

Traffic control devices and safety measures shall comply with

- USDOT Manual of Uniform Traffic Control Devices (2009)
- Virginia Work Area Protection Manual, 2011 with Rev. 1, 2015 and current revisions.
- VDOT Road and Bridge Standards (2016)
- VDOT Road and Bridge Specifications (2020)

The suggested traffic control features depict the major traffic control items. Daily control of traffic including the placement, maintenance and removal of traffic control devices shall be the Contractor's responsibility.

It is not the intent of the traffic control features designated on the plans to enumerate every detail which must be considered during the construction, but only to indicate the general handling of traffic. The Contractor shall submit a detailed traffic control plan to the Engineer for approval prior to beginning construction.

The Engineer shall be notified at least 72 hours prior to any modifications to existing pavement markings.

The clear zone shall be maintained free of parked equipment and stored materials or otherwise protected in accordance with the Work Area Protection Manual.

All Signs, Group 2 Channelizing Devices, Temporary Traffic Signals, barricades, and any other devices used in the construction zone shall be furnished by the Contractor and shall be kept clean and properly aligned at all times.

All traffic signs required for this project shall be furnished, erected and maintained by the Contractor.

The work shall be performed in one lane at a time so that the other lane is kept open to traffic. Unless otherwise directed, a clear roadway width of no less than 10'-0" shall be maintained for traffic.

Group 2 channeling Devices, Pavement Markings and Type III Barricade, shall be installed as directed by the Engineer. Eradication of existing pavement marking shall be performed as directed by the Engineer.

Prior to any ground disturbance activities, the contractor shall contact Miss Utility.

Contractor shall install 10' width restriction signs prior to any lane closures on Eddy Avenue bridge (see sheets 17 & 18). Contractor shall contact DMV, Christi Gayne (804) 497-7145, 10 days prior to implementing lane width restrictions and when lane width restrictions are removed. This will help avoid issues with over width vehicles typically allowed by permits.

Before construction begins, the Contractor shall submit a detailed plan for review and approval to the Engineer for protecting pedestrian traffic on the trail that crosses under this bridge. The trail shall remain open at all times during construction. All costs for submitting detailed protection plan, furnishing, installation and removal of all proposed protection devices shall be included in Lump Sum bid "Maintenance of Traffic".

The contractor shall work around all utilities on this project.

One (1) sidewalk shall remain open to pedestrian traffic at all times during construction. Contractor shall submit a detailed sidewalk detour plan to the Engineer for review and approval prior to any sidewalk closures. All costs shall be included in Lump Sum bid "Maintenance of Traffic".

SIGNS

Construction signs shall be furnished, installed and maintained by the Contractor.

Sign spacing and location shall be adjusted to fit field conditions as directed by the Engineer.

All construction signs that govern traffic flow through the work zone shall be covered or removed and stored away from traffic when not in use.

The Contractor shall temporarily cover any existing signs that are contrary to construction signs and uncover these at the completion of the project as directed by the Engineer.

CONSTRUCTION PAVEMENT MARKINGS

All temporary pavement markings shall be furnished and installed by the Contractor.

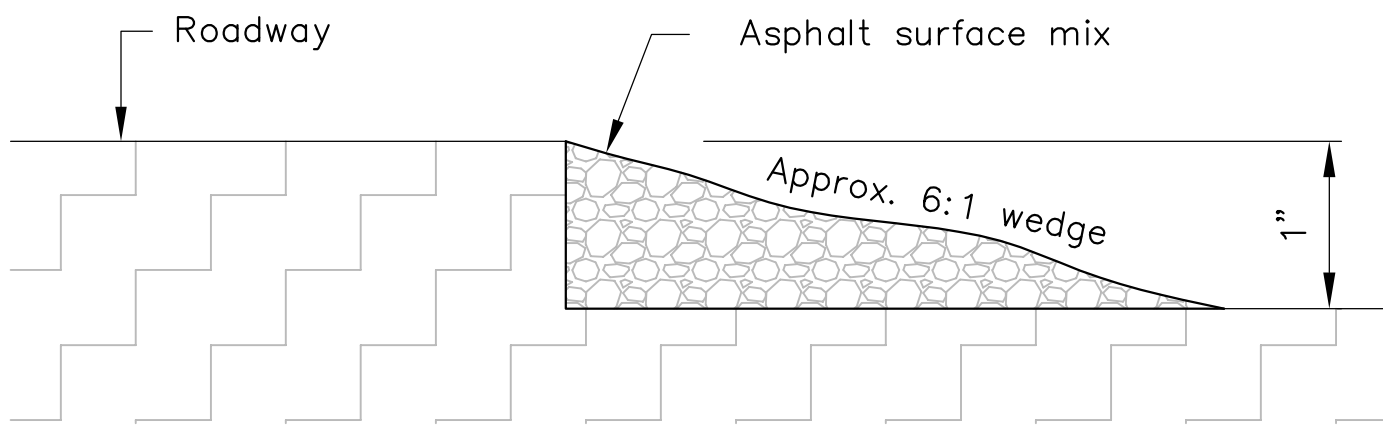
All temporary pavement markings shall be 'Type D, Class III'.

PERMENANT PAVEMENT MARKINGS

All permanent pavement markings shall be furnished and installed by the Contractor as shown on this sheet.

STATE	FEDERAL AID		STATE		SHEET
ROUTE	PROJECT		ROUTE	PROJECT	
VA.	—		—	—	
				14	


TEMPORARY WEDGE DETAIL



All areas milled below existing pavement shall be backfilled with asphalt surface mix to form an approximate 6:1 wedge against the existing pavement surface for the safety and protection of vehicular traffic. All costs for furnishing, placement, maintaining and removal of 6:1 wedge shall be included in Lump Sum bid for "Maintenance of Traffic" and no additional compensation will be allowed.

CADD REFERENCE NO.: BRIDGE19035.DWG

Not to Scale

				 <div>SCHWARTZ & ASSOCIATES, INC. CONSULTING ENGINEERS 7331 TIMBERLAKE ROAD LYNCHBURG, VA.</div>	EDDY AVENUE OVER ROANOKE RIVER CITY OF SALEM, VA MAINTENENCE OF TRAFFIC NOTES			
					DESIGNED BY: MBH DRAWN BY: MBH CHECKED BY: RWS			
					SCALE: AS NOTED		PLAN NO.: NA	
					DATE: JUNE 1, 2021		SHEET: 14 OF 21	
					COMM. NO. 19035			
No.	Description	Date						
REVISIONS								
For Table of Revisions, see Sheet 2.								

STATE	FEDERAL AID		STATE		SHEET NO.
	ROUTE	PROJECT	ROUTE	PROJECT	
VA.	---	-	-	-	15

TRAFFIC MANAGEMENT PLAN

PROJECT DESCRIPTION

This project entails maintenance repair of Eddy Avenue over Roanoke River (Structure No. 8007) located in the City Of Salem, Virginia. Eddy Avenue is classified as an Urban Collector with a posted speed limit of 25 mph with 1 lane going in each direction (2018 ADT 4,200). The existing travel lanes will be affected by the project work. Travelers include Local Residents, Commuters, Trucks and through Vehicles.

The approach roadway improvements extend approximately 100’ to the East and West of the Bridge Approach Slabs. Speed limit is based on existing regulatory signs. Speed limit shall remain 35 mph during construction.

This project is a Type A, Category I Project.

SPECIAL DETAILS

Special details for Maintenance of Traffic are shown on Sheets 17–21.

PUBLIC COMMUNICATIONS PLAN

NOTIFICATIONS:

The contractor shall provide advanced Notifications of all Lane Closures (72 hours minimum) to the City Engineer and Project Manager. The City Engineer will communicate with all agencies and schools in close proximity, radio, television and emergency services, as determined appropriate.

TRANSPORTATION OPERATIONS PLAN:

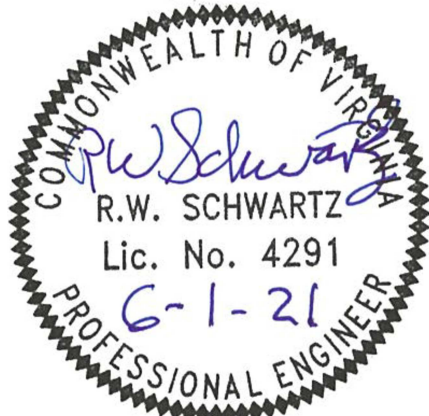

- 1) The following is a list of local emergency contact agencies:

Virginia State Police Division Area 10 – (540) 375–3078
City of Salem Police – (540) 375–3078
City Fire Department – (540) 375–3080
911 Center – 911
Haz–Mat Center (if spills involved) – 911
- 2) Procedures to respond to traffic incidents that may occur in the work zone:

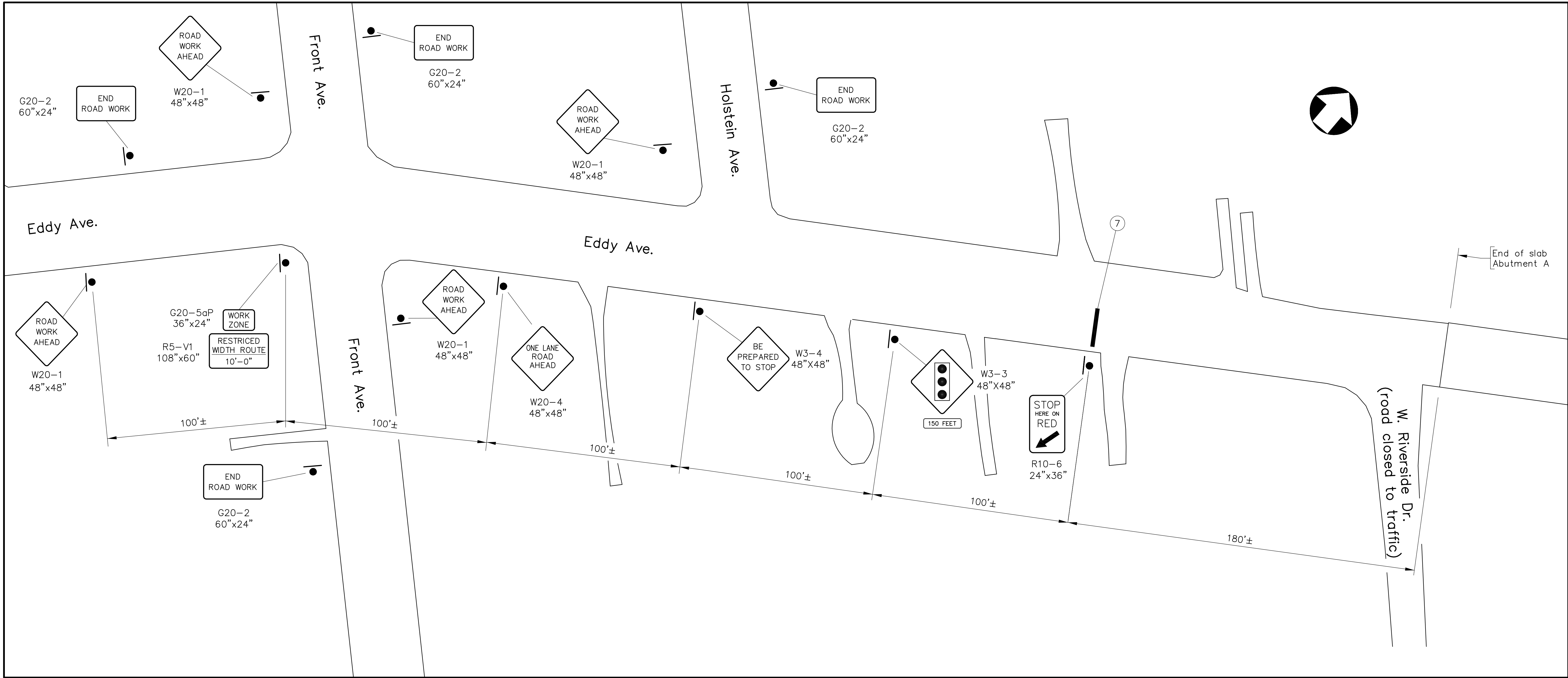
a) Contractor to notify City Police and Inspector in charge.

b) Depending upon severity of incident, Contractor may have to shut down work.

c) Upon arrival on scene, City Police to determine response necessary to allow traveling public around incident.

d) Inspector to notify Construction Manager of incident.
- 3) Process of Notification of incident to be followed is:
- Contractor to call:
- | |
|--|
| Project Inspector –
Inspector To Be Determined |
| Project Manager (Construction Manager) –
TBD |
| City Engineer –
William Simpson, P.E. ---- 540–375–3032 |
- 4) The City Police will take control of the incident and direct its clearing and restoration to normal traffic conditions.
- 5) The City Police report of the incident will be reviewed by the City Engineer and Construction Engineer to determine if any modification to the Temporary Traffic Control Plan is necessary. If it is necessary to alter the plan, then a meeting will be called with the Contractor, City project personnel, Engineer and City Police (if necessary) to discuss modification and implementation of an improved traffic control plan.
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|--------------------------------------|-------------|------|---|---|--|
| | | |  |  <div>SCHWARTZ & ASSOCIATES, INC.
CONSULTING ENGINEERS
7331 TIMBERLAKE ROAD
LYNCHBURG, VA.</div> | |
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| No. | Description | Date | | | |
| REVISIONS | | | | | |
| For Table of Revisions, see Sheet 2. | | | | | |
| | | | COMM. NO. 19035 | | |
| | | | DESIGNED BY: MBH | DRAWN BY: MBH | |
| | | | SCALE: AS NOTED | CHECKED BY: RWS | |
| | | | DATE: JUNE 1, 2021 | PLAN NO.: NA | |
| | | | | SHEET: 15 OF 21 | |
- CADD REFERENCE NO.: BRIDGE19035.DWG
- Not to Scale

STATE	FEDERAL AID		STATE		SHEET NO.
	ROUTE	PROJECT	ROUTE	PROJECT	
VA.	—	—	—	—	17



SIGN LAYOUT – STAGES 1 & 2

LEGEND

- Type III Barricade (L=8') req'd.
- Temporary construction sign
- Group 2 channelizing devices
- Illuminated flashing amber arrow, Type C
- Pavement line eradication
- ← Traffic pattern

Note:
See Sheet 19 for additional traffic control notes.

TEMPORARY CONSTRUCTION ITEMS

- ① Group 2 channelizing devices at 20' spa.
- ② 4" Construction pavement marking (Type D, Class III – white)
- ③ 8" Construction pavement marking (Type D, Class III – white)
- ④ 4" Construction pavement marking (Type D, Class III – yellow)
- ⑤ 8" Construction pavement marking (Type D, Class III – Yellow)
- ⑥ Eradication of pavement line markings (Double Yellow)
- ⑦ 24" Construction pavement marking (Type D, Class III – white)

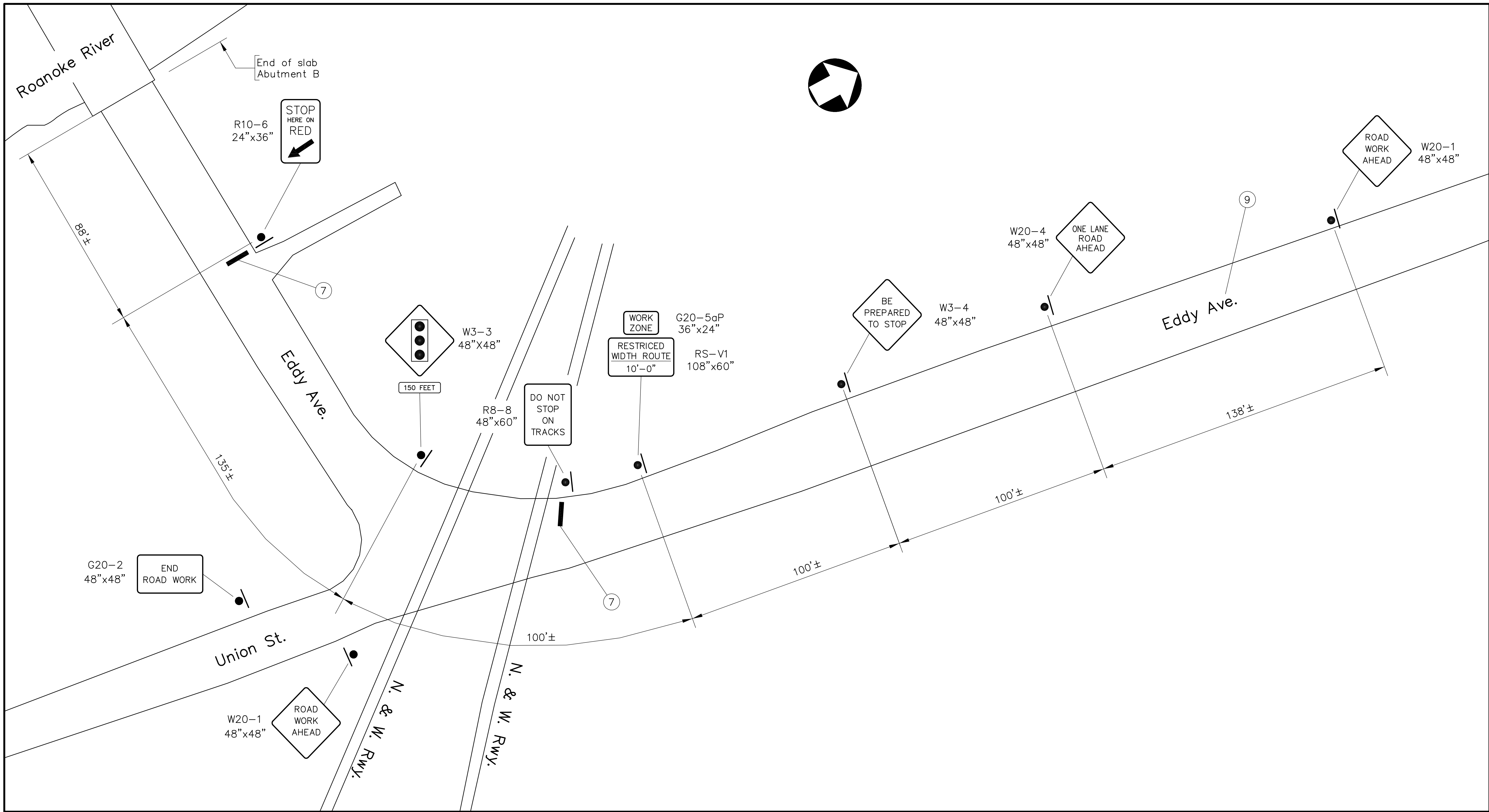
					SCHWARTZ & ASSOCIATES, INC. CONSULTING ENGINEERS 7331 TIMBERLAKE ROAD LYNCHBURG, VA.
			EDDY AVENUE OVER ROANOKE RIVER CITY OF SALEM, VA SIGN LAYOUT – STAGES 1 & 2		
No.	Description	Date	DESIGNED BY: MBH	DRAWN BY: MBH	CHECKED BY: RWS
REVISIONS			SCALE: AS NOTED	PLAN NO.: NA	
For Table of Revisions, see Sheet 2.			DATE: JUNE 1, 2021	SHEET: 17 OF 21	

COMM. NO. 19035

Not to Scale

CADD REFERENCE NO.: BRIDGE19035.DWG

STATE	FEDERAL AID		STATE		SHEET NO.
	ROUTE	PROJECT	ROUTE	PROJECT	
VA.	—	—	—	—	18



SIGN LAYOUT – STAGES 1 & 2

LEGEND


- ☒ - Type III Barricade (L=8') req'd.
- - Temporary construction sign
- - Group 2 channelizing devices
- ⌈ - Illuminated flashing amber arrow, Type C
- X— - Pavement line eradication
- ← - Traffic pattern

TEMPORARY CONSTRUCTION ITEMS

- ① Group 2 channelizing devices at 20' spa.
- ② 4" Construction pavement marking (Type D, Class III – white)
- ③ 8" Construction pavement marking (Type D, Class III – white)
- ④ 4" Construction pavement marking (Type D, Class III – yellow)
- ⑤ 8" Construction pavement marking (Type D, Class III – Yellow)
- ⑥ Eradication of pavement line markings (Double Yellow)
- ⑦ 24" Construction pavement marking (Type D, Class III – white)

Note:
See Sheet 19 for additional traffic control notes.

Not to Scale

				 <div>SCHWARTZ & ASSOCIATES, INC. CONSULTING ENGINEERS 7331 TIMBERLAKE ROAD LYNCHBURG, VA.</div>
No.	Description	Date		EDDY AVENUE OVER ROANOKE RIVER CITY OF SALEM, VA SIGN LAYOUT – STAGES 1 & 2
REVISIONS				
For Table of Revisions, see Sheet 2.				
			COMM. NO. 19035	DESIGNED BY: MBH DRAWN BY: MBH CHECKED BY: RWS SCALE: AS NOTED PLAN NO.: NA DATE: JUNE 1, 2021 SHEET: 18 OF 21

CADD REFERENCE NO.: BRIDGE19035.DWG

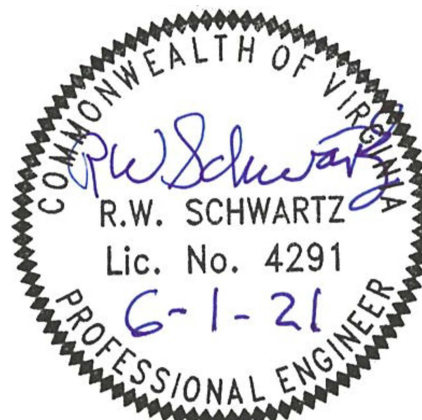

CADD REFERENCE NO.: BRIDGE19035.DWG

Notes for traffic control:

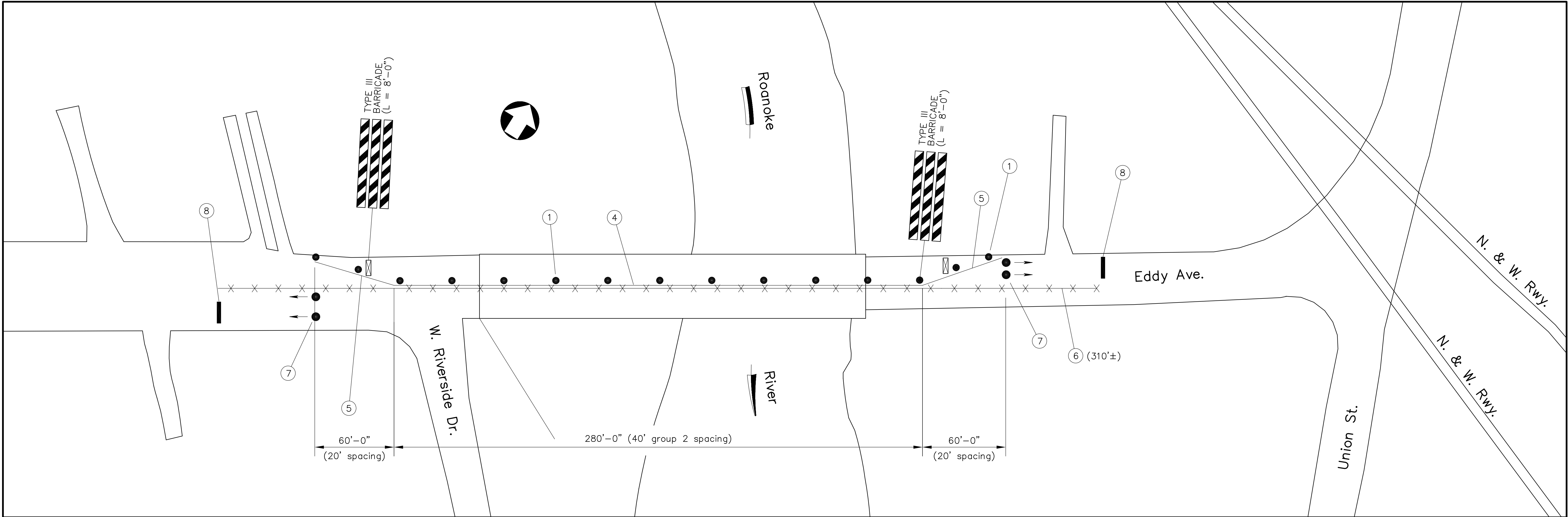
1. Sign spacing shall be adjusted to fit field conditions, as directed by the Engineer.
2. All signs, drums, Type III Barricades, and any other devices used in construction zones shall be kept clean and properly aligned at all times.
3. All signs that govern traffic flow through a construction zone shall be covered or removed and stored away from traffic when not in use.
4. Contractor shall temporarily cover any existing sign who's message contradicts temporary construction signs during construction and uncover them at the completion of the project, as directed by the Engineer.
5. All signs shall be field located as directed by the Engineer.
6. All signage shall be diamond grade (fluorescent prismatic lens sheeting).
7. Prior to any ground disturbance activities, the Contractor shall contact Miss. Utility.
8. The Contractor shall work around all overhead utilities on this project.
9. All construction signing shall be fabricated and installed in accordance with the 2011 Virginia Work Area Protection Manual & current revisions, the 2009 MUTCD, the Virginia Supplement to the MUTCD, the Standard Highway Sign Manual, the 2020 Virginia Road and Bridge Specification and the 2016 Virginia Road and Bridge Standards.
10. All temporary construction pavement line marking shall be done in accordance with the most current edition of the Virginia Work Area Protection Manual.

STATE	FEDERAL AID		STATE		SHEET NO.
	ROUTE	PROJECT	ROUTE	PROJECT	
VA.	—	—	—	—	19

Scale: 3/32" =1'-0" unless otherwise shown.

				 <div>SCHWARTZ & ASSOCIATES, INC. CONSULTING ENGINEERS 7331 TIMBERLAKE ROAD LYNCHBURG, VA.</div>	
No.	Description	Date			
REVISIONS					
For Table of Revisions, see Sheet 2.			COMM. NO. 19035	EDDY AVENUE OVER ROANOKE RIVER CITY OF SALEM, VA TRAFFIC CONTROL NOTES	
			DESIGNED BY: MBH	DRAWN BY: MBH	
			SCALE: AS NOTED	CHECKED BY: RWS	
			DATE: JUNE 1, 2021	PLAN NO.: NA	
				SHEET: 19 OF 21	

STATE	FEDERAL AID		STATE		SHEET NO.
	ROUTE	PROJECT	ROUTE	PROJECT	
VA.	—	—	—	—	21



LANE CLOSURE – STAGE 1

LEGEND


- ▤ - Type III Barricade (L=8') req'd.
- - Temporary construction sign
- - Group 2 channelizing devices
- ⏏ - Illuminated flashing amber arrow, Type C
- ✕ - Pavement line eradication

TEMPORARY CONSTRUCTION ITEMS

- ① Group 2 channelizing devices
- ② 4" Construction pavement marking (Type D, Class III - white)
- ③ 8" Construction pavement marking (Type D, Class III - white)
- ④ 4" Construction pavement marking (Type D, Class III - yellow)
- ⑤ 8" Construction pavement marking (Type D, Class III - Yellow)
- ⑥ Eradication of pavement line markings (Double Yellow)
- ⑦ Temporary Traffic Control Signal
- ⑧ 24" Construction pavement marking (Type D, Class III - white)

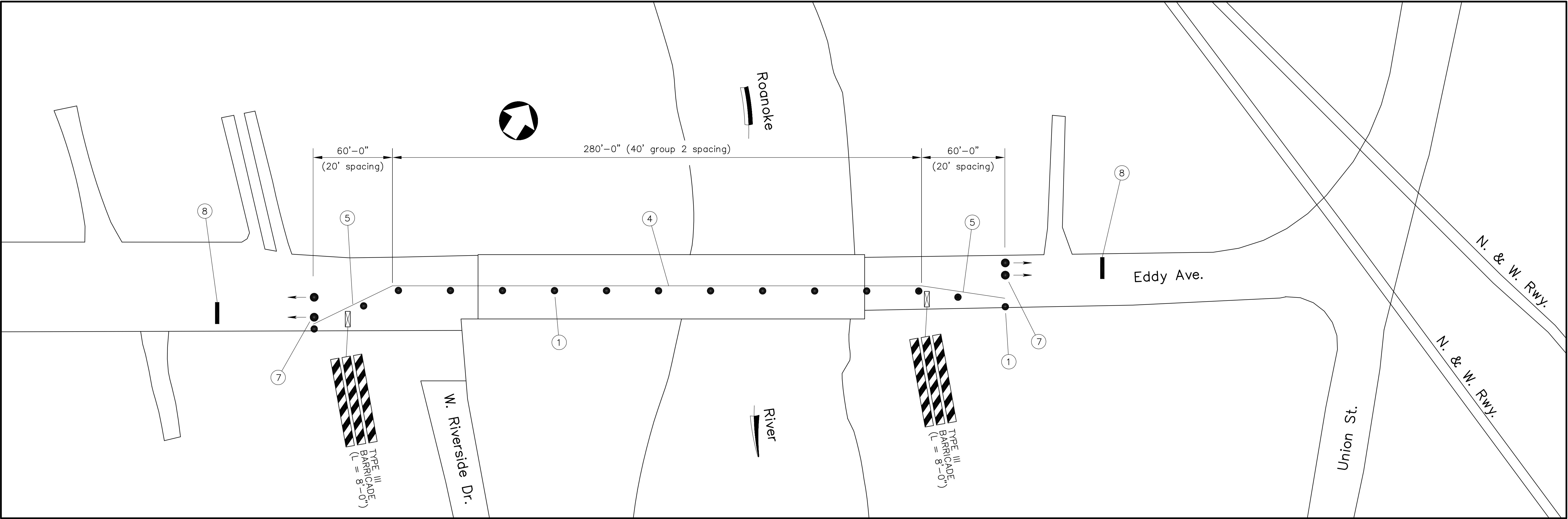
Note:
10'-0" min. clr. roadway shall be maintained at all times.
See Sheet 19 for additional traffic control notes.

Not to Scale

					SCHWARTZ & ASSOCIATES, INC.		
					CONSULTING ENGINEERS 7331 TIMBERLAKE ROAD LYNCHBURG, VA.		
				EDDY AVENUE OVER ROANOKE RIVER CITY OF SALEM, VA LANE CLOSURE – STAGE 1			
No.	Description	Date		DESIGNED BY: MBH DRAWN BY: MBH CHECKED BY: RWS SCALE: AS NOTED PLAN NO.: NA DATE: JUNE 1, 2021 SHEET: 20 OF 21			
REVISIONS							
For Table of Revisions, see Sheet 2.			COMM. NO. 19035				

CADD REFERENCE NO.: BRIDGE19035.DWG

STATE	FEDERAL AID		STATE		SHEET NO.
	ROUTE	PROJECT	ROUTE	PROJECT	
VA.	—	—	—	—	20



LANE CLOSURE – STAGE 2

LEGEND

- ▤ - Type III Barricade (L=8') req'd.
- - Temporary construction sign
- - Group 2 channelizing devices
- ⌈ - Illuminated flashing amber arrow, Type C
- ✕ - Pavement line eradication

TEMPORARY CONSTRUCTION ITEMS

- ① Group 2 channelizing devices
- ② 4" Construction pavement marking (Type D, Class III – white)
- ③ 8" Construction pavement marking (Type D, Class III – white)
- ④ 4" Construction pavement marking (Type D, Class III – yellow)
- ⑤ 8" Construction pavement marking (Type D, Class III – Yellow)
- ⑥ Eradication of pavement line markings (Double Yellow)
- ⑦ Temporary Traffic Control Signal
- ⑧ 24" Construction pavement marking (Type D, Class III – white)

Note:
10'–0" min. clr. roadway shall be maintained at all times.
See Sheet 19 for additional traffic control notes.

Not to Scale

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					CONSULTING ENGINEERS 7331 TIMBERLAKE ROAD LYNCHBURG, VA.		
				EDDY AVENUE OVER ROANOKE RIVER CITY OF SALEM, VA LANE CLOSURE – STAGE 2			
No.	Description	Date		DESIGNED BY: MBH DRAWN BY: MBH CHECKED BY: RWS SCALE: AS NOTED PLAN NO.: NA DATE: JUNE 1, 2021 SHEET: 21 OF 21			
REVISIONS				COMM. NO. 19035			
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