Broad St over Abandoned RR Spur Bridge Replacement
Project Narrative

The purpose for this project is to replace the existing structurally deficient bridge carrying E. Broad Street over abandoned RR spur with a new structure to eliminate a structurally deficient bridge from the City's inventory. The project is a "bridge only" replacement, meaning no increase to the existing roadway capacity is included in the scope of the project.

The project was submitted to the Urban design Committee in February 2023 and it was approved with 10 conditions. These conditions are listed in this packet, along with the responses to each one denoting that they have been incorporated. Therefore, the included plan set meets the concept conditions.

Following is the rendering from the February 2023 that remains an accurate depiction of the project.

City of Richmond
Department of Planning and Development Review

Urban Design Committee
Location, Character, and Extent

Address: 1554 E. Broad Street

Council District: 7

Description: Conceptual location, character, and extent review of the replacement of a bridge on E. Broad Street

For questions, please contact Alyson Oliver at (804)-646-3709 or alyson.oliver@rva.gov

Application for Urban Design Committee Review

Department of Planning and Development Review
Land Use Administration
900 E. Broad Street, Room 510
Richmond, Virginia 23219 | (804) 646-6335
https://www.rva.gov/planning-development-review/urban-design-committee

RICHMOND PLANNING & DEVELOPMENT REVIEW PDR

Application Type (select one)

- ☐ Location, Character, & Extent
- ☑ Section 17.05
- ☐ Other:
- ☐ Encroachment
- ☐ Design Overlay District

Review Type (select one)

- ☐ Conceptual
- ☑ Final

Project Information

Submission Date: 09/26/2024

Project Name: Broad St over Abandoned RR Spur Bridge Replacement

Project Address: 1554 E. Broad St

Brief Project Description (this is not a replacement for the required detailed narrative):

The purpose for this project is to replace the existing structurally deficient bridge carrying E. Broad Street over abandoned RR spur with a new structure to eliminate a structurally deficient bridge from the City's inventory. The project is a "bridge only" replacement, meaning no increase to the existing roadway capacity is included in the scope of the project. The project is 100% federally funded in the amount of $ 3,965,000.

Applicant Information (a City representative must be the applicant, with an exception for encroachments)

Name: Thomas Westbrook
Email: thomas.westbrook@rva.gov

City Agency: Public Works
Phone: (804) 646-3421

Main Contact (if different from Applicant): Gary Johnson

Company: Timmons Group
Phone: (804) 200-6351

Email: Gary.Johnson@timmons.com

Submittal Deadlines

All applications and support materials must be filed no later than 21 days prior to the scheduled meeting of the Urban Design Committee (UDC). Please see the schedule on page 3 as actual deadlines are adjusted due to City holidays. **Late or incomplete submissions will be deferred to the next meeting.**

Filing

It is important that the applicant discuss the proposal with appropriate City agencies, Zoning Administration staff, and area civic associations and residents prior to filing the application with the UDC. Applications should be emailed to the Urban Design Committee Secretary, Ray Roakes, at Raymond.roakes@rva.gov.

Background

The UDC is an 11 member committee created by City Council in 1968 whose purpose is to advise the City Planning Commission (CPC) on the design of projects on City property or right-of-way. The UDC provides advice of an aesthetic nature in connection with the performance of the duties of the Commission under Sections 17.05, 17.06, and 17.07 of the City Charter. The UDC also advises the Department of Public Works in regards to private encroachments in the public right-of-way.

Application for Urban Design Committee Review

Department of Planning and Development Review
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RICHMOND PLANNING & DEVELOPMENT REVIEW
PDR

Submission Requirements

- An electronic copy (PDF) of all application materials, which can be emailed, or delivered by FTP or USB.
- Plan sheets should be electronically scaled to be 11" x 17" if printed.
- All applications must include the attached application form and the support materials listed below, as applicable to the project, based on Review Type.

It is strongly recommended to request the Zoning Administration to review a project's compliance with the City Zoning Code prior to application to the UDC.

Conceptual Review:

- A detailed project narrative which includes the following: project purpose, background, and context, details of community outreach and copies of distributed materials if applicable, project budget and funding sources, description of construction program and estimated construction start date.
- A site plan for the project indicating site characteristics which include: building footprints, parking areas, pedestrian routes, recreation areas, open areas, and areas of future expansion.
- A set of floor plans and elevations, as detailed as possible. Precedent images if applicable.
- A landscaping plan which shows the general location and character of plant materials and notes any existing tree to be removed.

Final Review:

- A detailed project narrative which includes the following: project purpose, background, and context, details of community outreach and copies of distributed materials if applicable, project budget and funding sources, description of construction program, and estimated construction start date.
- A site plan for the project indicating site characteristics which include: building footprints, parking areas, pedestrian routes, recreation areas, open areas, and areas of future expansion.
- A set of floor plans and elevations, as detailed as possible. Elevations should show directly adjacent development.
- A landscaping plan that includes a complete plant schedule, the precise location of all plant materials, and a landscape maintenance analysis. The plant schedule must show number, size and type of each planting proposed. If existing trees are to be removed, their size, type, and location must be noted on the landscape plan.
- The location of all lighting units should be noted on a site plan, including wall-mounted, site, and parking lot lighting. Other site details such as benches, trash containers, and special paving materials should also be located. Include specification sheets for each item.
- Samples of all proposed exterior building materials, including but not limited to brick, mortar, shingles, siding, glass, paint, and stain colors. When an actual sample cannot be provided, a product information sheet that shows the item or a photo of an existing item may be substituted.

Review and Processing

- Once an application is received, it is reviewed by Staff, who compiles a report that is sent to the UDC.
- A copy of the report and the meeting agenda will be sent to the applicant prior to the meeting.
- At the UDC meeting, the applicant or a representative should be present or the application may be deferred to the next regularly scheduled meeting. It is also strongly suggested that a representative of the City Agency which will have final responsibility for the item be present.
- Once the UDC recommends action on the application, it is automatically placed on the agenda for the next City Planning Commission (CPC) meeting. Exceptions to this are encroachment applications, recommendations for which are forwarded to the Department of Public Works.
- At the Planning Commission meeting, the applicant or a representative should be present, or the application may be deferred to the next regularly scheduled meeting.

Application for Urban Design Committee Review

Department of Planning and Development Review
Land Use Administration
900 E. Broad Street, Room 510
Richmond, Virginia 23219 | (804) 646-6335
https://www.rva.gov/planning-development-review/urban-design-committee

Regular meetings are scheduled on the Thursday after the first Monday of each month at **10:00 a.m. in the 5th floor conference room of City Hall, 900 E. Broad Street**. Special meetings are scheduled as needed.

Meeting Schedule 2024

UDC Meetings	UDC Submission Deadlines	Anticipated Date of Planning Commission Following the UDC Meeting
January 4, 2024	December 14, 2023	January 16, 2024
February 8, 2024	January 18, 2024	February 20, 2024
March 7, 2024	February 15, 2024	March 19, 2024
April 4, 2024	March 14, 2024	April 16, 2024
May 9, 2024	April 18, 2024	May 21, 2024
June 6, 2024	May 16, 2024	June 18, 2024
July 11, 2024 [1]	June 13, 2024	July 16, 2024
August 8, 2024	July 18, 2024	August 20, 2024 [2]
September 5, 2024	August 15, 2024	September 17, 2024
October 10, 2024	September 19, 2024	October 15, 2024 [2]
November 7, 2024	October 17, 2024	November 19, 2024 [2]
December 5, 2024	November 14, 2024	December 17, 2024 [2]

[1]Thursday July 4, 2024 is a City of Richmond Holiday, the regularly scheduled UDC meeting was rescheduled for July 11, 2024.
[2]Dates may be canceled

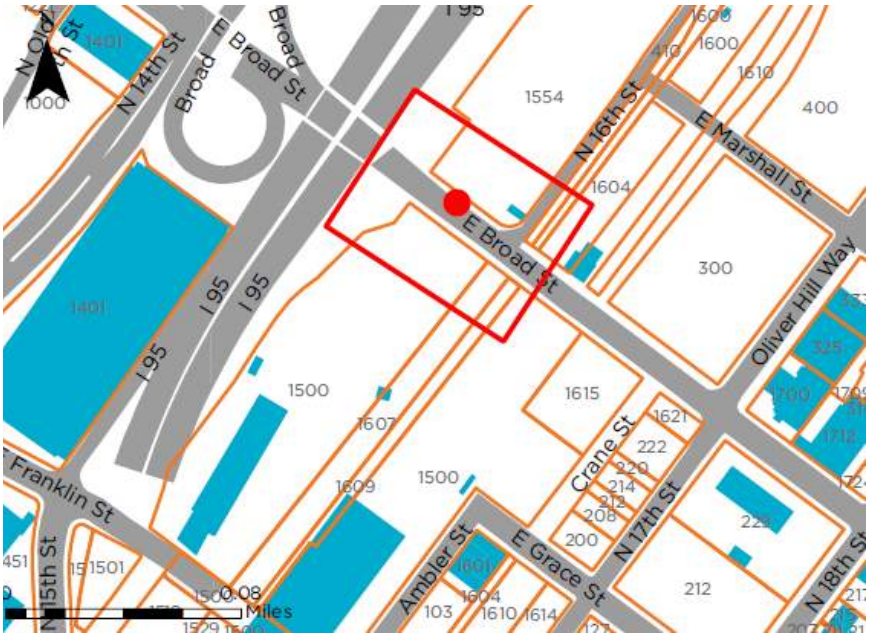
The Richmond Urban Design Committee is an 11 member advisory committee created by City Council in 1968. Its purpose is to advise the City Planning Commission on the design of City projects. The Urban Design Committee reviews projects for appropriateness in "location, character, and extent" and for consistency with the City's Master Plan and forwards recommendations to the City Planning Commission. The Urban Design Committee also advises the Department of Public Works in regards to private encroachments in the public right-of-way.

For more information, please contact the Urban Design Committee Secretary, Ray Roakes, at (804) 646-6335 and raymond.roakes@rva.gov.

Staff Report
City of Richmond, Virginia

Urban Design Committee

RICHMOND PLANNING & DEVELOPMENT REVIEW

UDC 2022-06	Final Review	Meeting Date: 10/10/2024
Applicant/Petitioner	Thomas Westbrook, City of Richmond Department of Public Works	
Project Description	final review of the replacement of a bridge on E. Broad Street.	
Project Location Address: 1554 E. Broad Street Property Owner: City of Richmond City of Richmond department of Public Works is proposing to replace and existing bridge on E. Broad Street due to structural deficiencies. The scope of work is "bridge only" as there will be no increase to roadway capacity.		
Staff Recommendation	Approval, with Conditions	
Staff Contact	Alyson Oliver, alyson.oliver@rva.gov, (804) 646-3709	
Previous Reviews	This application was reviewed at the February 2023 UDC meeting, where the committee voted to approve the submission with ten conditions. That approval letter is attached to this application.	
Staff Recommendations	See attached UDC approval letter dated 2/21/23. Also attached are responses to the approval letter conditions and the updated plan set.	

Findings of Fact

Site Description	The bridge is located within the City of Richmond limits on Broad Street over abandoned CSXT Right-of-Way, approximately 1,000 feet west of the intersection of Broad Street and 18th Street. The bridge is adjacent to the Lumpkin's Slave Jail and Richmond African Burial Ground. The project location map is provided in Attachment 1 of this report. The proposed tunnel will be constructed in the same location as the existing bridge.
Scope of Review	The proposed bridge replacement is subject to design review under Section 17.05 of the Richmond City Charter as a "public structure".
Project Description	The purpose for this project is to replace the existing structurally deficient bridge carrying Broad Street over CSXT Right-of-Way with a new structure to eliminate a structurally deficient bridge from the City's inventory. The existing bridge and approach roadway consists of a four-lane facility located in an urban area. The roadway is classified as a Primary Arterial with a posted speed limit of 25 mph. The existing 34-foot, single span structure was constructed in 1909 and consists of a concrete encased multisteel beam superstructure set on reinforced concrete substructure with slight skew. The framing system consists of 53 steel I-beams (16" deep) spaced at approximately 2'-0" on center. The bridge carries four travel lanes of Broad Street. The travel width of the existing bridge is approximately 42'-0" measured face-to-face of curb with an out-to-out width of approximately 66'-0". The land in the immediate vicinity of the project is generally urban with some historical areas nearby. .

UDC and CPC *APPROVAL*

2/21/2023

The application for **UDC 2023-012 CONCEPT AMENDMENT location, character, extent review of the replacement of a bridge on E. Broad Street; 1554 E. Broad Street** was reviewed by the Urban Design Committee, on February 9, 2023, and approved by the City of Richmond Planning Commission, on February 21, 2023, with the conditions of approval listed below.

Approved Conditions:

1. Applicant to show on plans that the Existing granite curbing and cobblestone underneath of the bridge be retained and protected during construction – for FINAL submission.
2. Applicant to coordinate final design of the bridge with the Department of Environmental Quality to analyze the project's impact on the existing floodplain and floodway.
3. Applicant to coordinate the review of the final design of the bridge with the Department of Historic Resources.
4. Applicant to coordinate the final design of the bridge with the Heritage Campus Project Management team.
5. Applicant to note on plans that any existing historic materials will be protected during construction, including existing masonry abutting the existing wingwalls on the southern side of the bridge – for FINAL submission.
6. Applicant to show on plans that an anti-graffiti sealant be applied to the existing abutments to protect against damage from vandalism, but also take into account potential for future art installation – for FINAL submission.
7. Applicant to revise plans to appropriately screen utilities from view that are installed on the underside of the bridge – for FINAL submission.
8. Applicant to provide results for 106 review for public outreach, African burial grounds related groups to be included, for FINAL application.
9. Applicant to show on plans that lighting be provided within the pedestrian culvert. Exhibits on lighting and finishes to be submitted to UDC for FINAL submission.
10. Applicant to show any trees that are damaged or removed during construction are replaced for FINAL submission.

Current plans, staff report, and a recording of the UDC meeting is available on the City of Richmond's Legistar Website which is linked here:
https://richmondva.legistar.com/MeetingDetail.aspx?ID=1067396&GUID=88132CE6-564A-4109-A5C0-B1F6B637F630&Options=info|&Search=

Should you have any questions please do not hesitate to contact me at 804-646-5467 or raymond.roakes@rva.gov.

Thank You,

Ray Roakes, Urban Design Committee Planner

PROJECT REVIEW COMMENT AND RESOLUTION SHEET				CODES: A. ACCEPT COMMENT—WILL BE CORRECTED, ADDED, OR CLARIFIED. B. DESIGNER WILL EVALUATE. C. DELETE COMMENT D. DEPARTMENT TO EVALUATE. E. INFORMATIONAL/NEXT PHASE REQUIREMENT	
CITY OF RICHMOND PROJECT NUMBER: 107702		**UPC NUMBER**: 118541		**REVIEWER(S)**: RAY ROAKES	**DATE**: 02/21/2023
DESCRIPTION: E. BROAD STREET OVER ABANDONED RR SPUR (127-1852) SUPERSTRUCTURE REPLACEMENT		**REVIEW PHASE & TYPE**: PRELIMINARY PLAN SUBMITTAL, 90% PLANS **PROJECT MANAGER:** T. WESTBROOK		**DISCIPLINE**: URBAN DESIGN COMMITTEE	**CRM**: (IF REQUIRED)
ITEM NO.	**DWG. NO.**[1]	**COMMENTS**	**CODE**[2]	**RESPONSE**[2]	**FINAL DISPOSITION**[3]
1.	G	Applicant to show on plans that the existing granite curbing and cobblestone underneath of the bridge be retained and protected during construction – for FINAL submission.	A	A note has been added to the General notes on sheet 2 that the existing granite curbing and cobblestone underneath of the bridge be retained and protected during construction.	
2.	G	Applicant to coordinate final design of the bridge with the Department of Environmental Quality to analyze the project's impact on the existing floodplain and floodway.	A	The scope of work is not in the floodplain or floodway.	
3.	G	Applicant to coordinate the review of the final design of the bridge with the Department of Historic Resources.	A	VDHR has reviewed the design and provided an adverse effect determination. We are currently finalizing the MOA, which includes final design review.	
4.	G	Applicant to coordinate the final design of the bridge with the Heritage Campus Project Management team.	A	The following groups were included in the Consulting Parties, as agreed to with the City in March 2023: Mr. Brian White Shockoe Partnership Mr. David Napier Shockoe Bottom Neighborhood Association Hon. Delores McQuinn, Chair Richmond City Council, Slave Trail Commission	

PROJECT REVIEW COMMENT AND RESOLUTION SHEET				CODES: A. ACCEPT COMMENT—WILL BE CORRECTED, ADDED, OR CLARIFIED. B. DESIGNER WILL EVALUATE. C. DELETE COMMENT D. DEPARTMENT TO EVALUATE. E. INFORMATIONAL/NEXT PHASE REQUIREMENT	
CITY OF RICHMOND PROJECT NUMBER: 107702		**UPC NUMBER**: 118541		**REVIEWER(S)**: RAY ROAKES	**DATE**: 02/21/2023
DESCRIPTION: E. BROAD STREET OVER ABANDONED RR SPUR (127-1852) SUPERSTRUCTURE REPLACEMENT		**REVIEW PHASE & TYPE**: PRELIMINARY PLAN SUBMITTAL, 90% PLANS **PROJECT MANAGER:** T. WESTBROOK		**DISCIPLINE**: URBAN DESIGN COMMITTEE	**CRM**: (IF REQUIRED)
ITEM NO.	**DWG. NO.**[1]	**COMMENTS**	**CODE**[2]	**RESPONSE**[2]	**FINAL DISPOSITION**[3]
				Ms. Ana Edwards, Chair Sacred Ground Historical Reclamation Project Ms. Ellen Chapman Steering Committee RVA Archaeology Mr. Justin Sarafin Director Preservation Virginia Ms. Cyane Crump Executive Director Historic Richmond Del. Cynthia Newbill The Rev. Benjamin P. Campbell St. Paul's Episcopal Church Ms. Kimberly Chen City of Richmond Department of Planning and Development Review Mr. Raymond Roakes Secretary Urban Design Committee	

5.	G	Applicant to note on plans that any existing historic materials will be protected during construction, including existing masonry abutting the existing wingwalls on the southern side of the bridge – for FINAL submission.	A	A note has been added to the General notes on sheet 2 that any existing historic materials will be protected during construction, including existing masonry abutting the existing wingwalls on the southern side of the bridge.	
6.	G	Applicant to show on plans that an anti-graffiti sealant be applied to the existing abutments to protect against damage from vandalism, but also take into account potential for future art installation – for FINAL submission.	A	A note has been added to the General notes on sheet 2 that an anti-graffiti sealant be applied to the existing abutments to protect against damage from vandalism, but also take into account potential for future art installation.	
7.	G	Applicant to revise plans to appropriately screen utilities from view that are installed on the underside of the bridge – for FINAL submission.	A	Plans have been revised to show that utilities are appropriately screened from view.	
8.	G	Applicant to provide results for 106 review for public outreach, African burial grounds related groups to be included, for FINAL application.	A	Please refer to the response to item 4	
9.	G	Applicant to show on plans that lighting be provided within the pedestrian culvert. Exhibits on lighting and finishes to be submitted to UDC for FINAL submission.	A	Plans show photometric plans for the lighting within the pedestrian culvert.	
10.	G	Applicant to show any trees that are damaged or removed during construction are replaced for FINAL submission.	A	A note has been added to the General notes on sheet 2 that any trees that are damaged or removed during construction are replaced.	

CITY OF RICHMOND, VIRGINIA
DEPARTMENT OF PUBLIC WORKS
ENGINEERING & TECHNICAL SERVICES

E. BROAD STREET OVER ABANDONED RR SPUR (127-1852) SUPERSTRUCTURE REPLACEMENT

UPC: 118541 CITY PROJECT #: 107702

FHWA XXX DATA XXXX

FHWA REGION	STATE	FEDERAL PROJECT NUMBER	STATE PROJECT NUMBER
	VA.		N/A

NOTE: THESE PLANS ARE UNFINISHED AND UNAPPROVED AND SHALL NOT BE USED FOR CONSTRUCTION.

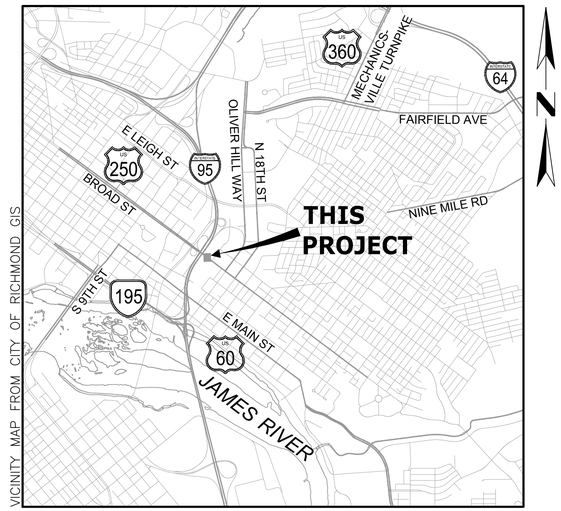
90% PLANS
08/16/2024

NOTE: ALL WORK TO BE PERFORMED WITHIN EXISTING CITY OF RICHMOND RIGHT-OF-WAY, EXISTING EASEMENTS, AND/OR PROPOSED EASEMENTS.

INDEX OF SHEETS

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE CITY OF RICHMOND.

THIS PROJECT IS TO BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST VERSIONS OF VDOT'S 2020 ROAD AND BRIDGE SPECIFICATIONS, 2016 ROAD AND BRIDGE STANDARDS, 2011 VIRGINIA WORK AREA PROTECTION MANUAL - REVISION 2, THE LATEST VERSION OF THE MUTCD AND AS AMENDED BY THE CONTRACT PROVISIONS.



VICINITY MAP

2,000' 0 2,000' 4,000'

SCALE: 1"=2,000'

08/16/2024

CITY OF RICHMOND

APPROVED FOR CONSTRUCTION	
DATE	PROJECT MANAGER
DATE	SURVEYS SUPERINTINDENT
DATE	CITY TRANSPORTATION ENGINEER
DATE	CAPITAL PROJECTS ADMINISTRATOR
DATE	CITY ENGINEER
DATE	DIRECTOR OF PUBLIC WORKS
DATE	MAINTENANCE ENGINEER

REVISIONS

NO.	DATE	COMMENTS

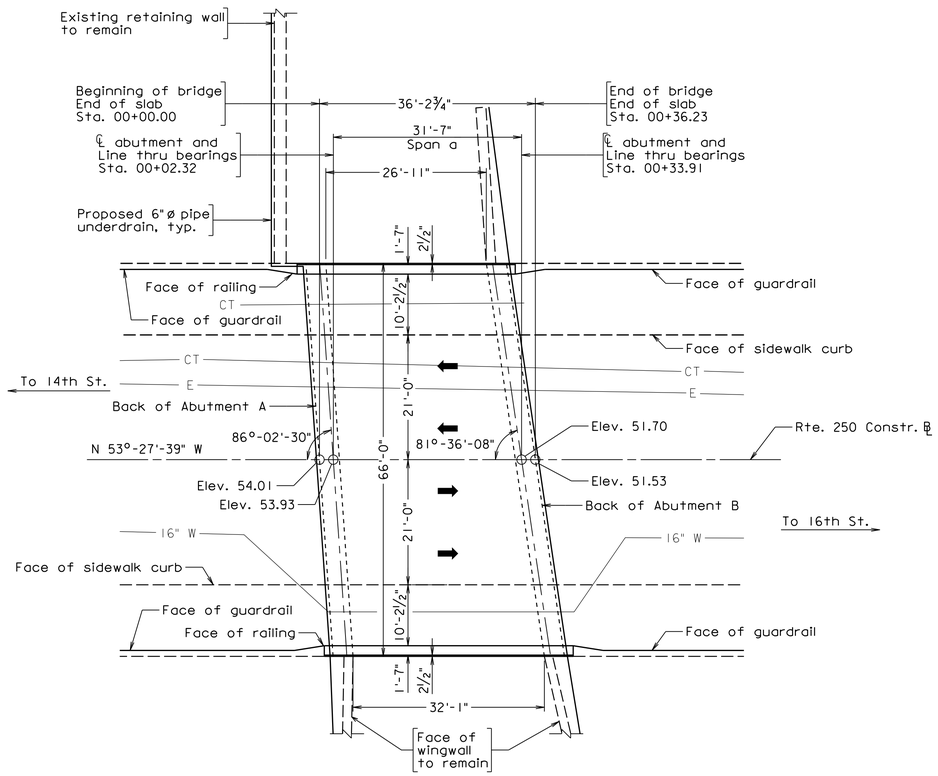
OWNER:
CITY OF RICHMOND
DEPT. OF PUBLIC WORKS
CITY HALL, RM 603, RICHMOND, VA
PROJECT MANAGER: THOMAS WESTBROOK
EMAIL: THOMAS.WESTBROOK@RVA.GOV
PHONE: (804) 646-3421

PROJECT ADDRESS: 1554 E. BROAD STREET
RICHMOND, VA 23219

TIMMONS GROUP
YOUR VISION ACHIEVED THROUGH OURS.
1001 Boulders Parkway, Suite 300 | Richmond, VA 23225
TEL 804.200.6500 FAX 804.560.1016 www.timmons.com
JOB# 39962.079

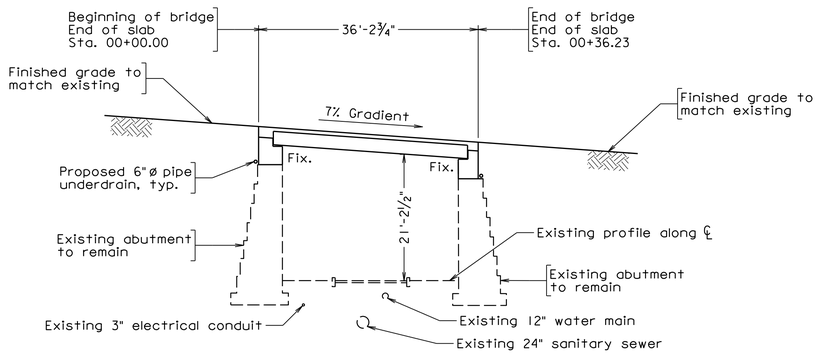
REVISIONS:

DRAWING NO.: O-29058



ABUTMENT A ABUTMENT B

PLAN



ABUTMENT A ABUTMENT B

DEVELOPED SECTION ALONG RTE. 250 CONSTR. ℄

DESIGN EXCEPTION(S):

None.

GENERAL NOTES:

Widths: 12'-0" sidewalk, 42'-0" roadway, 12'-0" sidewalk.
Overall width 66'-0" face-to-face of rails.

Span layout: 31'-7" prestressed concrete adjacent box beams.

Capacity: HL-93 loading.

Specifications:

Construction:	Virginia Department of Transportation Road and Bridge Specifications, 2020
Design:	AASHTO LRFD Bridge Design Specifications, 8th Edition, 2017; and VDOT Modifications.
Standards:	Virginia Department of Transportation Road and Bridge Standards, 2016, including all current revisions.

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

Design load includes 10 psf allowance for construction tolerances and construction methods.

Design load includess 15 psf allowance for future wearing surface.

Concrete in superstructure, deck slab, and sidewalk shall be Low Shrinkage Class A4 Modified in accordance with Section 217.12(b) except in rails, and terminal walls shall be Low Shrinkage Class A4 Modified in accordance with Section 217.12(a); in substructure shall be Class A3.

Prestressed concrete in adjacent box beams shall be Class A5 having a minimum compressive cylinder strength at 28 days equal to 5,000 psi and a minimum compressive cylinder strength a time of release of strands equal to 4000 psi.

All reinforcing steel shall be deformed and shall conform to ASTM A615 Grade 60 except for steels noted as Corrosion Resistant Reinforcing (CRR) which shall conform to Section 223 of the Specifications. 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.

The Class(es) of CRR steel(s) required on this project is/are noted on plan sheets and in the reinforcing steel schedule. Class III may be substituted for Class I.

Prestressing strands shall be uncoated, seven-wire, low-relaxation steel strands conforming to ASTM A416 Grade 270.

In addition, prior to construction, the mapped limits of site 44HE1099 will be marked in the field with orange safety fencing and no construction equipment or matierals will be placed on the site. As such, there will be no effect to site 44HE1099 as a result of the proposed project.

PRELIMINARY PLANS
THESE PLANS NOT TO BE USED FOR CONSTRUCTION

Scale: 1" = 12'-0"

SURVEYED BY:
SUPERVISED BY:
DESIGNED BY:

L:\21039962 Richmond CIP on-call\Task 121 Broad Street over CSX ROW\DWG\References\Current\39962_121-203C-BD2436.dwg | Plotted on — | by Gregory Kozlins

NOTES
1. Lot dimensions in parentheses are from deed.
2. Property owners correct as of December, 2018
3. Ordinance Number N/A
4. Adopted N/A
5. Accepted N/A

REFERENCES	REVISIONS

Existing Curb
- Curb & Gutter
- Sidewalk
- Basin
- Storm Sewer
- Sewer Manhole
- Sanitary Sewer (Gravity)
- Sanitary Sewer (Force Main)
- Gas Line
- Electric Line
- Telephone/Telegraph
- TV Cable
- Water Line
- Tree / Exist. Tree To Be Removed
- Property Line

-LEGEND-

Existing Curb Cut Ramp
- Coping
- Alley Crossing/Driveway
- Fire Hydrant
- Edge of Pavement
- Fence
- Cornerstone
- Property Pin
- Utility Pole

Proposed Sewer
- Manhole
- Basin
- Curb & Gutter
- Asphalt

Proposed Conc. Sidewalk
- Brick Sidewalk

Castings: Water Valve
- Water Meter
- Gas Drip
- Gas Valve
- Telephone Manhole
- Electric Manhole

Proposed Curb Cut Ramp
- Decorative Light
- Conduit
- Conduit (Conc. Encased)
- Retaining Wall

RICHMOND VIRGINIA
DEPARTMENT OF PUBLIC WORKS
RICHMOND, VIRGINIA

TIMMONS GROUP
ENGINEERING | DESIGN | TECHNOLOGY

E. BROAD STREET OVER ABANDONED RR SPUR (127-1852)
SUPERSTRUCTURE REPLACEMENT

GENERAL NOTES, PLAN, AND ELEVATION

DESIGN BY:	REVIEWED BY	FIELD NOTES	SCALE	DATE	SHEET	DRAWING NO.
DRAWN BY: CJK CHECKED BY: SYT ALC	GSJ		As noted	8/16/2024	1	0-29058

ESTIMATED QUANTITIES - SUBSTRUCTURE ONLY

		Concrete Class A3 CY	Corossion Resistant Reinf. Steel, Class I LBS	Struct. Excav. CY ⊗	Select Material Type I Min. CBR 30 TON	Porous Backfill CY ⊗	Geocomposite Wall Drain SY	Pipe Underdrain 6" LF
Abutment A	Neat	24.9	3000	———	———	———	1	175
	Footing	———	———	116.5	184	5	———	———
Abutment B	Neat	24.9	3000	———	———	———	1	140
	Footing	———	———	116.5	184	5	———	———
Total		49.8	6000	233	368	10	2	315

⊗ Denotes items to be paid for on the basis of plan quantities in accordance with current Road and Bridge Specifications.

LUMP SUM BID ITEMS

Mobilization	LS
Construction Surveying	LS
Environmental and Worker Protection (1852)	LS
Matierial Disposal (Str. No. 1852)	LS
Maintenance of Traffic	LS
Temporary Shoring	LS
Remove 20" Dia. Gas Line	LS
Remove 8" Dia. Water Line	LS
Remove 16" Dia. Water Line	LS
Remove telephone conduit system	LS
Dismantle and Remove Portion of Existing Structure Number 1852	LS

MISCELLANEOUS / ROAD ITEMS

Utility Item	Units	Quantity
NS Lighting - Remove & Rest Light Pole (Overhead)	EA	2
NS Lighting - Remove & Reset Light Pole (Streetlight)	EA	1
Flex. Pave. Tie-in Plaining 0"-2"	SY	460
Aggr. Base Material Type I No. 21A or 21B	TON	25
NS Saw-Cut Asphalt Concrete	LF	180
Asphalt Concrete Type SM-9.5A	TON	60
Asphalt Concrete Type IM-19.0A	TON	10
Asphalt Concrete Type BM-25.0D	TON	20
Type B Class I Pavement Line Marking 4" Yellow	LF	250
Type B Class I Pavement Line Marking 4" White	LF	63
Type B Class VI Contrast Pavement Marking 4"	LF	100
NS Curb - City of Richmond Curb (Granite)	LF	225
NS Sidewalk - Brick (Herringbone)	SY	218
Guardrail Gr-2 8' Post	LF	48
Fixed Object Attach. GR-F0A-1 Type I	EA	4
Demolition of Pavement (Flexible)	SY	145
NS Remove Exist. - Curb (Granite)	LF	225
NS Remove Exist. - Tree (4in. to 24in. Caliper)	EA	3
Remove Existing Guardrail	LF	164
NS Reset Exist. - Curb (Granite)	LF	225
NS Reset Exist. - Sign (Historical)	EA	1
Inlet Protection, Type B	EA	3
NS Tree - (Match Existing Species)	EA	3

⊗ Denotes items to be paid for on the basis of plan quantities in accordance with current Road and Bridge Specifications.

ESTIMATED QUANTITIES - SUPERSTRUCTURE

Item	Units	Quantity
Concrete Low Shrinkage Class A4 Modified (Lightweight)	CY	50
Bridge Deck Grooving ⊗	SY	162
NS Bridge Superstructure - Historic Concrete Parapet ⊗	LF	80
Shear Keys	CF	60
Prestressed Concrete Box Beams, 3' x 2'-3" (35'-40')	EA	8
Prestressed Concrete Box Beams, 4' x 2'-3" (35'-40')	EA	7
NS Bridge Superstructure - Prestressed Concrete Box Beams, 2' x 2'-3" (35'-40')	EA	1
Corrosion Resistant Reinforcing Steel Class I ⊗	EA	2
Corrosion Resistant Reinforcing Steel, Class III ⊗	LBS	3250
Waterproofing Epoxy Resin, Type EP-7	SY	58
NS Bridge Superstructure - Elastomeric Bearing	EA	56
NS Bridge Superstructure - Brick Sidewalk	SY	72

⊗ Denotes items to be paid for on the basis of plan quantities in accordance with current Road and Bridge Specifications.

GENERAL NOTES (CONTINUED):

Virginia Structure No. of existing bridge is 1852. Existing Plan No. is S-0.21.

The existing structure is designated a Type A structure in accordance with Sec. 411.

Refer to roadway plans for additional information on utilities, drainage and other project requirements.

Existing superstructure shall be removed in accordance with Section 413 of the Specification.

The Bridge Date Plate shall be installed in accordance with VDOT Road and Bridge Standards and obtained from the District Structure and Bridge Office.

Prior to the construction of the new structure, the existing superstructure and portion of backwall for bridge 1852 shall be dismantled and removed in accordance with applicable VDOT Standard Specifications

The Contractor shall be responsible for field verification of all dimensions and existing bridge conditions and shall notify the Department of any discrepancies and interferences before commencing work.

The Contractor is responsible to locate and maintain the existing water line and telephone lines during construction. The Contractor shall protect all buried, embedded, and suspended utilities during the repair work and coordinate with the corresponding utility agencies as necessary to complete the work. The cost of maintaining and protecting the utilities shall be incidental to the other work performed.

Existing granite curbing and cobblestone underneath the bridge shall be retained and protected during construction.

Any existing historic materials shall be protected during construction, including existing masonry abutting the existing wingwalls on the southern side of the bridge.

An anti-graffiti sealant shall be applied to existing abutments to protect against damage from vandalism.

Any trees that are damaged or removed during construction shall be replaced.

Rev. No.	Sheets Revised	Date

TABLE OF REVISIONS

PRELIMINARY PLANS

THESE PLANS NOT TO BE USED FOR CONSTRUCTION

SURVEYED BY:
SUPERVISED BY:
DESIGNED BY:

L:\21\03\09962 Richmond CIP on-call\Task 121 Broad Street over CSX ROW\DWG\Reference\Current\09962.121-203C-BID2436.dwg | Plotted on ---- | by Gregory Kozina

NOTES

1. Lot dimensions in parentheses are from deed.
2. Property owners correct as of December, 2018
3. Ordinance Number N/A
4. Adopted N/A
5. Accepted N/A

REFERENCES	REVISIONS

Existing Curb
- Curb & Gutter
- Sidewalk
- Basin
- Storm Sewer
- Sewer Manhole
- Sanitary Sewer (Gravity) SAN
- Sanitary Sewer (Force Main) FM
- Gas Line G
- Electric Line UGP
- Telephone/Telegraph UGT
- TV Cable UCATV
- Water Line W
- Tree / Exist. Tree To Be Removed
- Property Line

–LEGEND–

Existing Curb Cut Ramp
- Coping
- Alley Crossing/Driveway
- Fire Hydrant
- Edge of Pavement
- Fence
- Cornerstone
- Property Pin
- Utility Pole

Proposed Sewer
- Manhole
- Basin
- Curb & Gutter
- Asphalt

Proposed Conc. Sidewalk
- Brick Sidewalk

Castings: Water Valve
- Water Meter
- Gas Drip
- Gas Valve
- Telephone Manhole
- Electric Manhole

Proposed Curb Cut Ramp
- Decorative Light
- Conduit
- Conduit (Conc. Encased)
- Retaining Wall

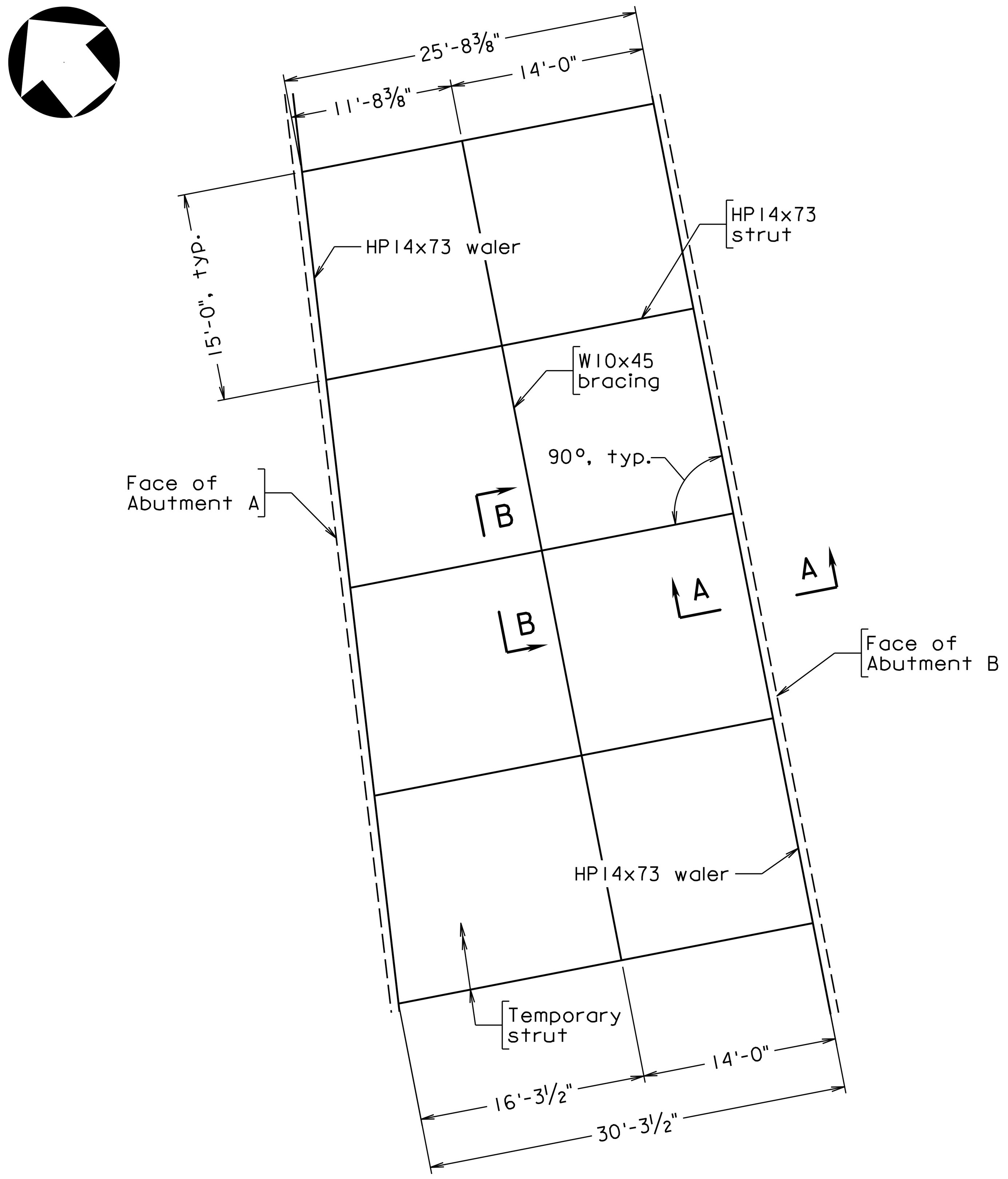
DEPARTMENT OF PUBLIC WORKS
RICHMOND, VIRGINIA

TIMMONS GROUP
ENGINEERING | DESIGN | TECHNOLOGY

E. BROAD STREET OVER ABANDONED RR SPUR (127-1852)
SUPERSTRUCTURE REPLACEMENT

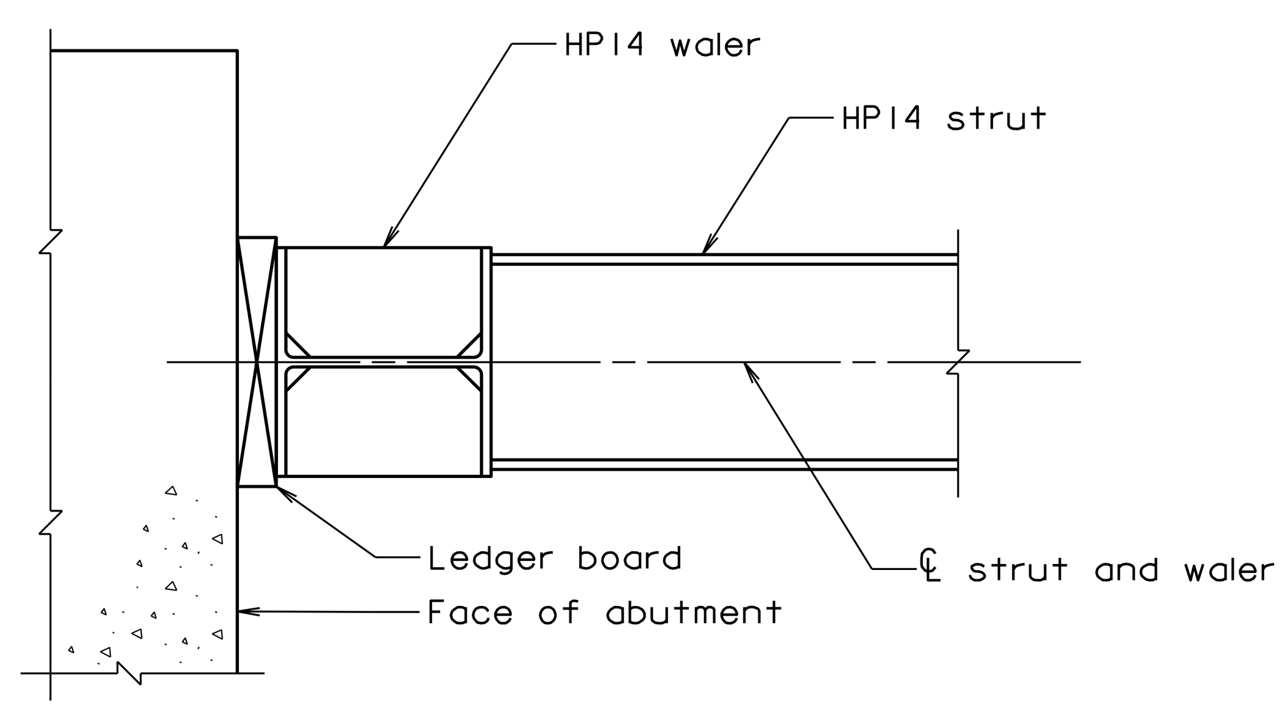
ESTIMATED QUANTITIES

DESIGN BY: GJK	REVIEWED BY GSJ	FIELD NOTES	SCALE	DATE	SHEET	DRAWING NO.
DRAWN BY: SYT			As noted	8/16/2024	2	0-29058
CHECKED BY: ALC						



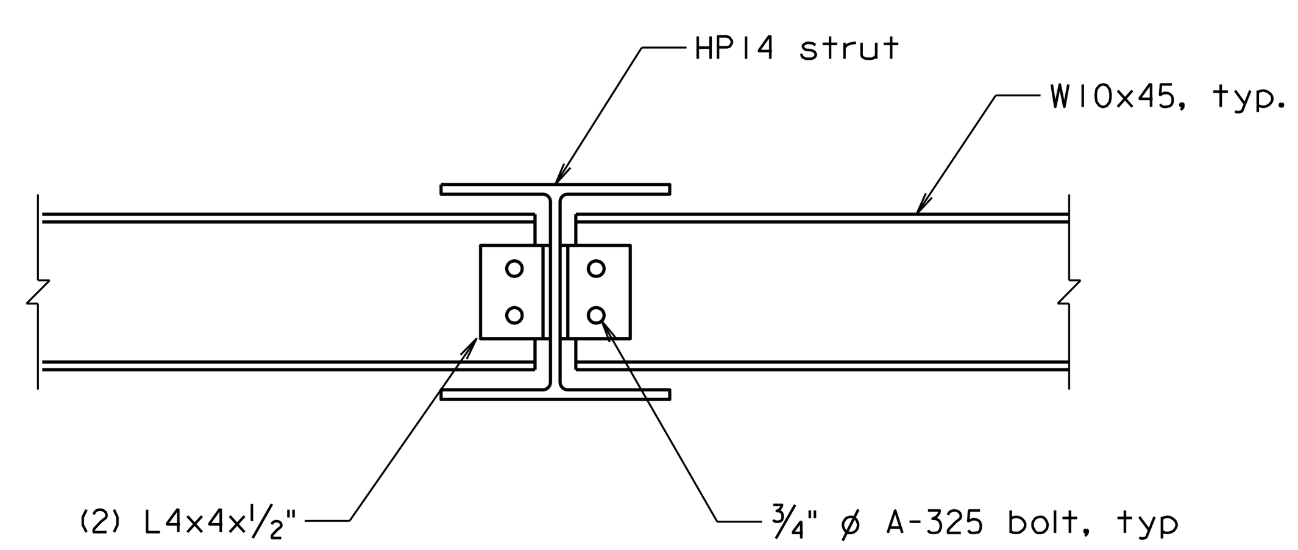
TEMPORARY BRACING PLAN

Scale: 1/8" = 1'-0"



SECTION A-A

Scale: 1" = 1'-0"



SECTION B-B

Scale: 1" = 1'-0"

Notes:

Temporary shoring system to be installed prior to demolition of existing structure.

Each primary temporary bracing member is design for a factored compression load of 324 kips and a service load of 216 kips.

Sequence of Construction
1. Install temporary bracing system.
2. HP14 walers shall be installed with ledger boards and shims to ensure a tight fit.
3. Temporary bracing system shall be installed level and at Elevation 90.70.
4. Demolish 4'-6" sidewalk and curb, install temporary curb and temporary pavement during non-peak hours.
5. Demolish 33'-6" of northern portion of existing bridge.
6. Demolish existing abutment backwall and rebuild to accommodate new beams.
7. Install 33'-0" of new bridge setting beams as noted on Sheet 7.
8. During Phase I construction only 6'-0" of the proposed sidewalk is to be installed to accommodate maintenance of traffic during Phase II.
9. After traffic is switched to the newly constructed bridge, begin Phase II demolition.
10. Prior to installed Phase II beams, remaining abutment backwall demolition and rebuild shall be completed.
11. Place remaining beams during Phase II construction phase.
12. Switch traffic to complete construction of sidewalk and curb.

PRELIMINARY PLANS

THESE PLANS NOT TO BE USED FOR CONSTRUCTION

SURVEYED BY: ....
SUPERVISED BY: ....
DESIGNED BY: ....

L:\210\39962 Richmond CIP on-call\Task 121 Broad Street over CSX ROW\DWG\References\Current\39962.121-203C-BD2436.dwg | Plotted on ---- | by Gregory Kozina

NOTES
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2. Property owners correct as of December, 2018
3. Ordinance Number N/A
4. Adopted N/A
5. Accepted N/A

REFERENCES

REVISIONS

-:LEGEND:-

Existing Curb; Curb & Gutter; Sidewalk; Basin; Storm Sewer; Sewer Manhole; Sanitary Sewer (Gravity) SAN; Sanitary Sewer (Force Main) FM; Gas Line G; Electric Line UGP; Telephone/Telegraph UGT; TV Cable UCATV; Water Line W; Tree / Exist. Tree To Be Removed; Property Line ℙ

Existing Curb Cut Ramp; Coping; Alley Crossing/Driveway; Fire Hydrant; Edge of Pavement; Fence; Cornerstone; Property Pin; Utility Pole

Proposed Sewer; Manhole; Basin; Curb & Gutter; Asphalt

Proposed Conc. Sidewalk; Brick Sidewalk

Castings: Water Valve; Water Meter; Gas Drip; Gas Valve; Telephone Manhole; Electric Manhole

Proposed Curb Cut Ramp; Decorative Light; Conduit; Conduit (Conc. Encased); Retaining Wall

RICHMOND VIRGINIA

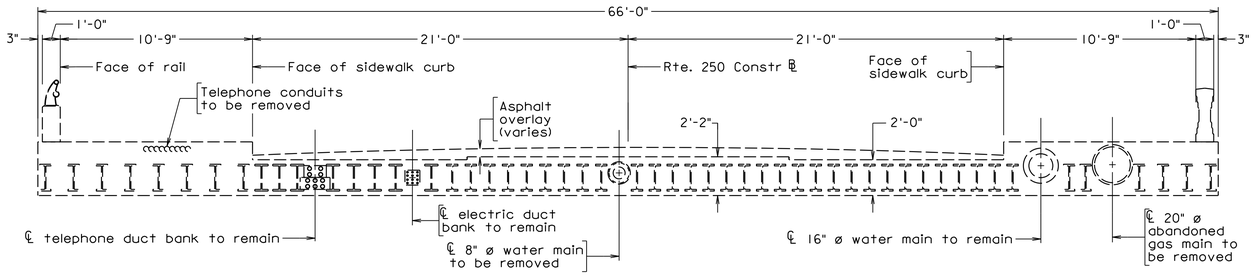
DEPARTMENT OF PUBLIC WORKS
RICHMOND, VIRGINIA

TIMMONS GROUP
ENGINEERING | DESIGN | TECHNOLOGY

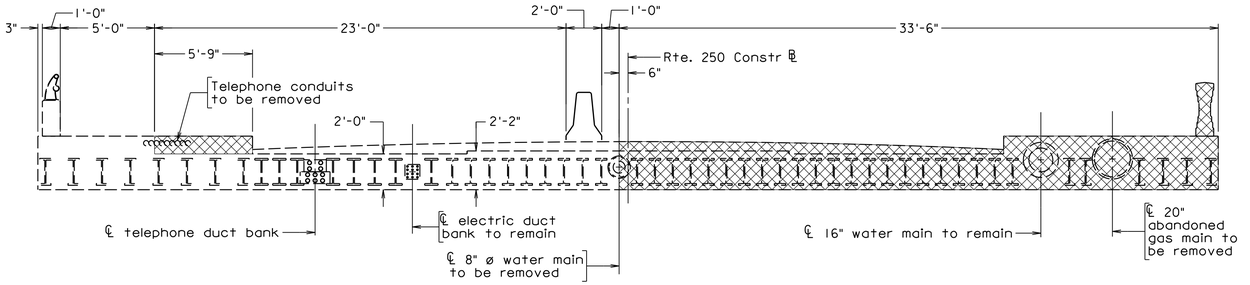
E. BROAD STREET OVER ABANDONED RR SPUR (127-1852)
SUPERSTRUCTURE REPLACEMENT

TEMPORARY SHORING DETAILS

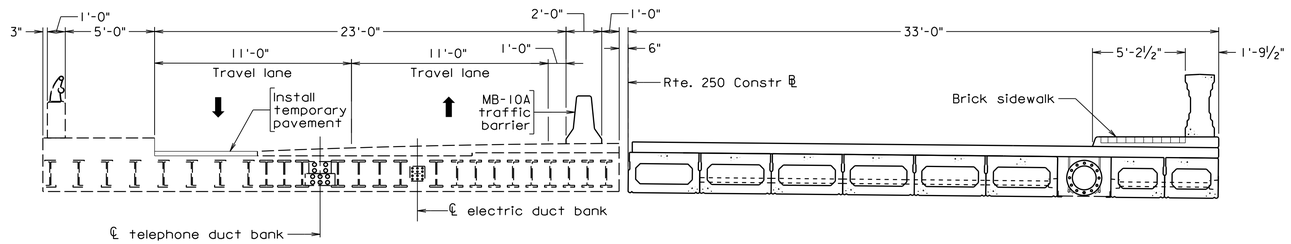
DESIGN BY: GJK DRAWN BY: SYT CHECKED BY: ALC	REVIEWED BY GSJ	FIELD NOTES	SCALE	DATE	SHEET	DRAWING NO.
			As noted	8/16/2024	3	0-29058



EXISTING TRANSVERSE SECTION



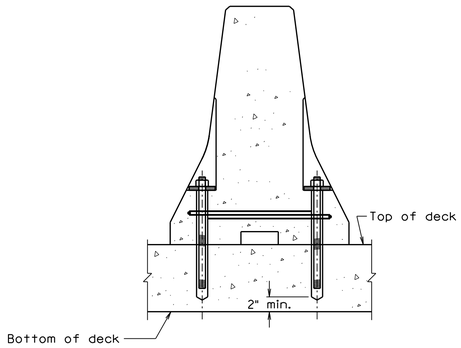
PHASE I - DEMOLITION



PHASE II - CONSTRUCTION

SEQUENCE OF CONSTRUCTION NOTES:

1. Brace abutments per details on sheet 3.
2. Set up Maintenance of Traffic devices and switch traffic pattern.
3. Dismantle and remove portion of existing structure denoted on plans in Phase 1 - Demolition.
4. Remove existing concrete at abutments as shown on sheet 6.
5. Place new concrete at abutments and shape bearing seats to accommodate new transverse section.
6. Place new superstructure including box beams, deck, sidewalk, and parapet.
7. Shift traffic and MOT devices.
8. Dismantle and remove portion of existing structure denoted on plans in Phase 2 - Demolition.
9. Remove existing concrete at abutments as shown on sheet 6.
10. Place new concrete at abutments and shape bearing seats to accommodate new transverse section.
11. Place new superstructure including box beams, deck, sidewalk, and parapet.
12. Place new striping and remove MOT devices.



TRAFFIC BARRIER SERVICE
CONRETE PARAPET (DOUBLE FACE)

NOTES:

1. Bolt down side adjacent to traffic.
2. For details not shown, see VDOT Road and Bridge Standards MB-11A.
3. After removing Temporary barrier, cut ⅞"ø bolt or threaded rod as low as practical below roadway surface and fill recess with epoxy bonding compound EP-4.
4. Anchor system shall be tested to provide a minimum pullout of 32,000 lbs. and installed according to manufacturer's recommendations.
5. Barrier shall be removed within 1 year of installation.

LEGEND:

Demolition

PRELIMINARY PLANS
THESE PLANS NOT TO BE USED FOR CONSTRUCTION

Scale: ¼" = 1'-0" unless noted otherwise

SURVEYED BY: .....
SUPERVISED BY: .....
DESIGNED BY: .....

L:\21039962 Richmond CIP on-call\Task 121 Broad Street over CSX ROW\DWG\Reference\Current\39962.121-2030-B02436.dwg | Plotted on — | by Gregory Kostra

NOTES
1. Lot dimensions in parentheses are from deed.
2. Property owners correct as of December, 2018
3. Ordinance Number N/A
4. Adopted N/A
5. Accepted N/A

REFERENCES | REVISIONS

Existing Curb
- Curb & Gutter
- Sidewalk
- Basin
- Storm Sewer
- Sewer Manhole
- Sanitary Sewer (Gravity) SAN
- Sanitary Sewer (Force Main) FM
- Gas Line G
- Electric Line UGP
- Telephone/Telegraph UGT
- TV Cable UGATV
- Water Line W
- Tree / Exist. Tree To Be Removed
- Property Line PL

-LEGEND:-

Existing Curb Cut Ramp
- Coping
- Alley Crossing/Driveway
- Fire Hydrant
- Edge of Pavement
- Fence
- Cornerstone
- Property Pin
- Utility Pole

Proposed Sewer
- Manhole
- Basin
- Curb & Gutter
- Asphalt

Proposed Conc. Sidewalk
- Brick Sidewalk

Castings:
- Water Valve
- Water Meter
- Gas Drip
- Gas Valve
- Telephone Manhole
- Electric Manhole

Proposed Curb Cut Ramp
- Decorative Light
- Conduit
- Conduit (Conc. Encased)
- Retaining Wall

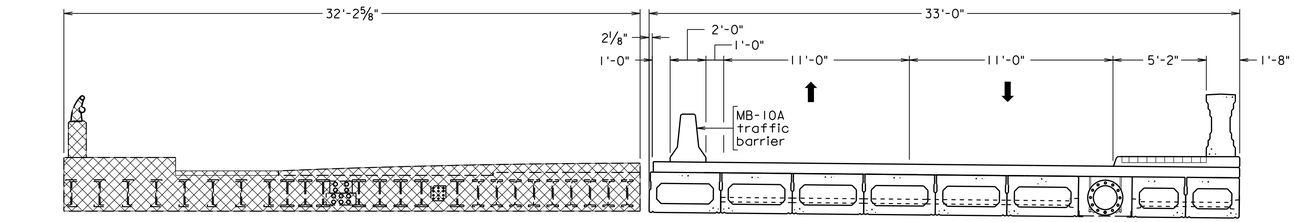
DEPARTMENT OF PUBLIC WORKS
RICHMOND, VIRGINIA

TIMMONS GROUP
ENGINEERING | DESIGN | TECHNOLOGY

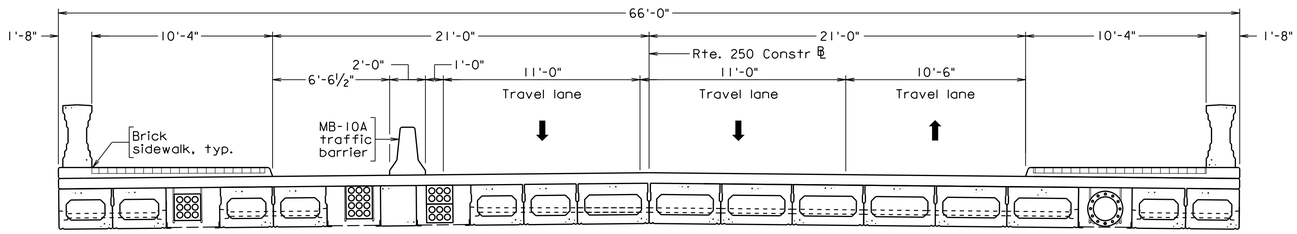
E. BROAD STREET OVER ABANDONED RR SPUR (127-1852)
SUPERSTRUCTURE REPLACEMENT

SEQUENCE OF CONSTRUCTION (1)

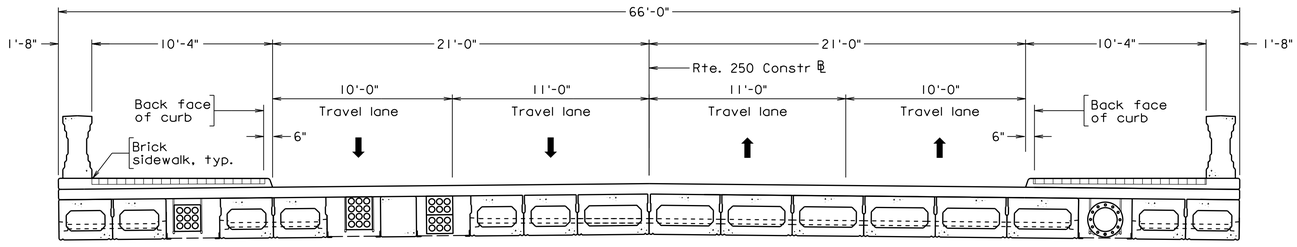
DESIGN BY: CJK	REVIEWED BY GSJ	FIELD NOTES	SCALE	DATE	SHEET	DRAWING NO.
DRAWN BY: SYT			As noted	8/16/2024	4	0-29058
CHECKED BY: ALC						



PHASE III - DEMOLITION



PHASE IV - CONSTRUCTION



COMPLETED PROPOSED STRUCTURE

LEGEND:

Demolition

Notes:

Contractor shall install Phase II sidewalk after superstructure is completed and travel lanes have been shifted.

PRELIMINARY PLANS

THESE PLANS NOT TO BE USED FOR CONSTRUCTION

Scale: ¼" = 1'-0" unless noted otherwise

NOTES

1. Lot dimensions in parentheses are from deed.
2. Property owners correct as of December, 2018
3. Ordinance Number N/A
4. Adopted N/A
5. Accepted N/A

REFERENCES | REVISIONS

Existing Curb
- Curb & Gutter
- Sidewalk
- Basin
- Storm Sewer
- Sewer Manhole
- Sanitary Sewer (Crawly) SAN
- Sanitary Sewer (Force Main) FM
- Gas Line G
- Electric Line UGP
- Telephone/Telegraph UGT
- TV Cable UCATV
- Water Line W
- Tree / Exist. Tree To Be Removed
- Property Line ℄

-LEGEND-

Existing Curb Cut Ramp
- Coping
- Alley Crossing/Driveway
- Fire Hydrant
- Edge of Pavement
- Fence
- Cornerstone
- Property Pin
- Utility Pole

Proposed Sewer
- Manhole
- Basin
- Curb & Gutter
- Asphalt

Proposed Conc. Sidewalk
- Brick Sidewalk

Castings: Water Valve
- Water Meter
- Gas Drip
- Gas Valve
- Telephone Manhole
- Electric Manhole

Proposed Curb Cut Ramp
- Decorative Light
- Conduit
- Conduit (Conc. Encased)
- Retaining Wall

RICHMOND VIRGINIA
DEPARTMENT OF PUBLIC WORKS
RICHMOND, VIRGINIA

TIMMONS GROUP
ENGINEERING | DESIGN | TECHNOLOGY

E. BROAD STREET OVER ABANDONED RR SPUR (127-1852)
SUPERSTRUCTURE REPLACEMENT

SEQUENCE OF CONSTRUCTION (2)

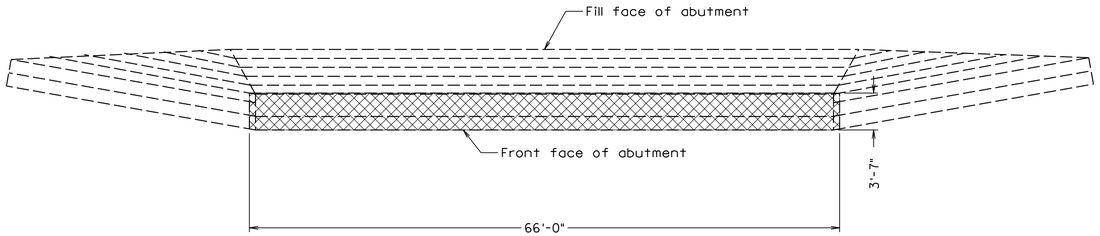
DESIGN BY: GJK	REVIEWED BY GSJ	FIELD NOTES	SCALE	DATE	SHEET	DRAWING NO.
DRAWN BY: SYT			As noted	8/16/2024	5	0-29058
CHECKED BY: ALC						

SURVEYED BY:
SUPERVISED BY:
DESIGNED BY:

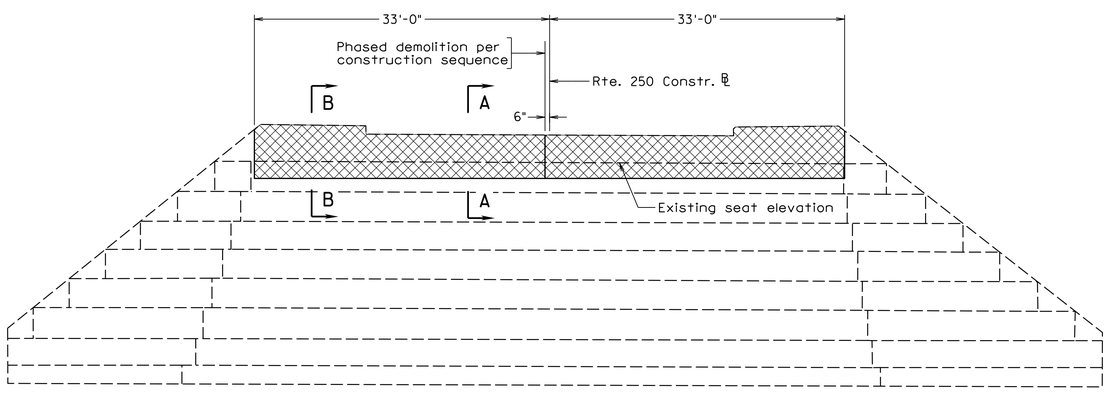
L:\2110\39962 Richmond CIP on-call\Task 121 Broad Street over CSX ROW\DWG\References\Current\39962.121-2030-BD2436.dwg | Plotted on — | by Gregory Kozina

Abutment A

Abutment B



PLAN



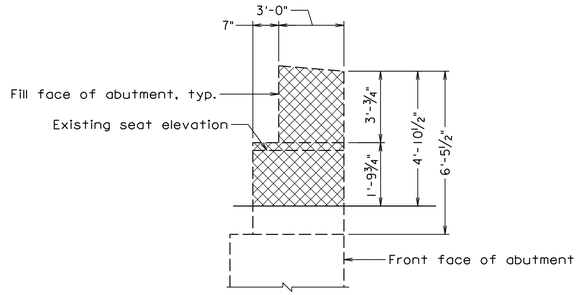
ELEVATION

Notes:

Dimensions and elevations shown are based on field survey and the As-built drawings and provided for reference only. All dimensions and elevations shall be verified in the field by the Contractor prior to beginning construction.

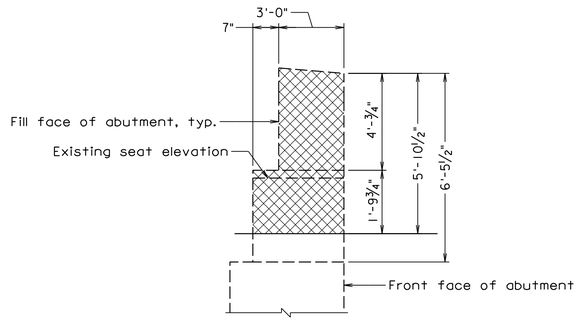
Demolition limits shown are based on existing structure information provided by the Engineer and an assumed replacement superstructure depth. Field verify all dimensions after partial demolition in complete. The dimensions and elevations recorded after the partial demolition completed shall be submitted to the Engineer for approval. The production of the precast beam shall not begin before these dimensions and elevations are recorded and approved. The dimension of the beams shall be finalized to match the existing roadway surface profile and elevation.

The Contractor is responsible for stability of the bridge at all phases of demolition and construction.



SECTION A-A

Scale: not to scale



SECTION B-B

Scale: not to scale

- Design assumes a box beam depth of 23", a bearing thickness of 1", and a concrete overlay of 7 1/2" thickness as shown on sheet 9.

LEGEND:

Demolition

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

SURVEYED BY:
SUPERVISED BY:
DESIGNED BY:

L:\2110\39962 Richmond CIP on-call\Task 121 Broad Street over CSX ROW\DWG\References\Current\39962.121-200C-BD2436.dwg | Plotted on — | by Gregory Koslna

NOTES

1. Lot dimensions in parentheses are from deed.
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3. Ordinance Number N/A
4. Adopted N/A
5. Accepted N/A

REFERENCES | REVISIONS

Existing Curb
- Curb & Gutter
- Sidewalk
- Basin
- Storm Sewer
- Sewer Manhole
- Sanitary Sewer (Gravity) SAN
- Sanitary Sewer (Force Main) FM
- Gas Line G
- Electric Line UGP
- Telephone/Telegraph UGT
- TV Cable UGATV
- Water Line W
- Tree / Exist. Tree To Be Removed
- Property Line ℄

-LEGEND-

Existing Curb Cut Ramp
- Coping
- Alley Crossing/Driveway
- Fire Hydrant
- Edge of Pavement
- Fence
- Cornerstone
- Property Pin
- Utility Pole

Proposed Sewer
- Manhole
- Basin
- Curb & Gutter
- Asphalt

Proposed Conc. Sidewalk
- Brick Sidewalk

Castings: Water Valve
- Water Meter
- Gas Drip
- Gas Valve
- Telephone Manhole
- Electric Manhole

Proposed Curb Cut Ramp
- Decorative Light
- Conduit
- Conduit (Conc. Encased)
- Retaining Wall

RICHMOND VIRGINIA
DEPARTMENT OF PUBLIC WORKS
RICHMOND, VIRGINIA

TIMMONS GROUP
ENGINEERING | DESIGN | TECHNOLOGY

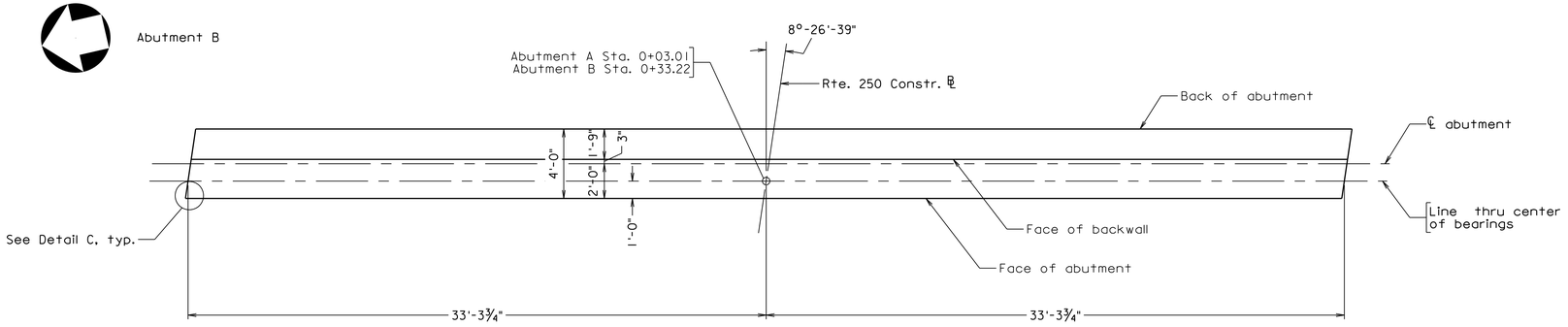
E. BROAD STREET OVER ABANDONED RR SPUR (127-1852)
SUPERSTRUCTURE REPLACEMENT

ABUTMENT DEMOLITION PLAN AND ELEVATION

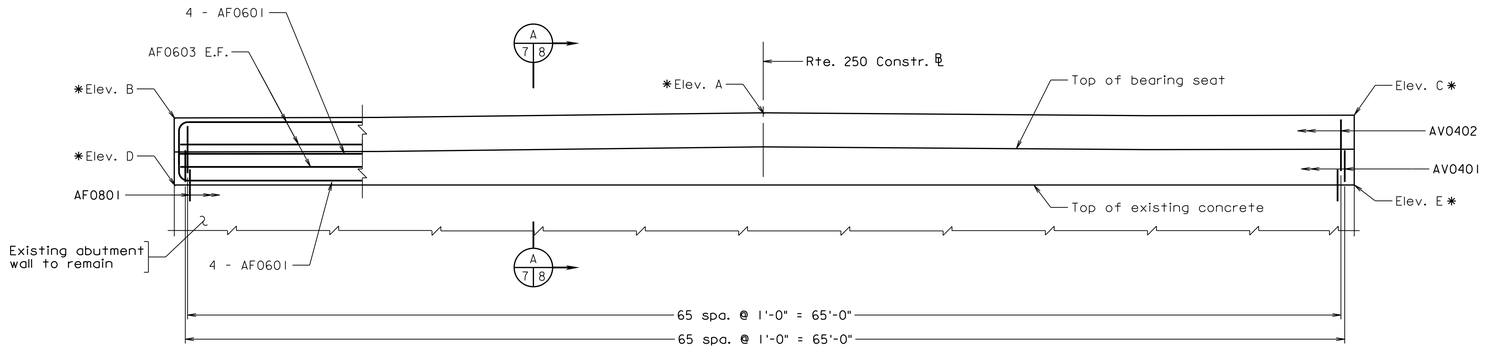
DESIGN BY: GJK	REVIEWED BY GSJ	FIELD NOTES	SCALE	DATE	SHEET	DRAWING NO.
DRAWN BY: SYT			As noted	8/16/2024	6	0-29058
CHECKED BY: ALC						

Abutment A

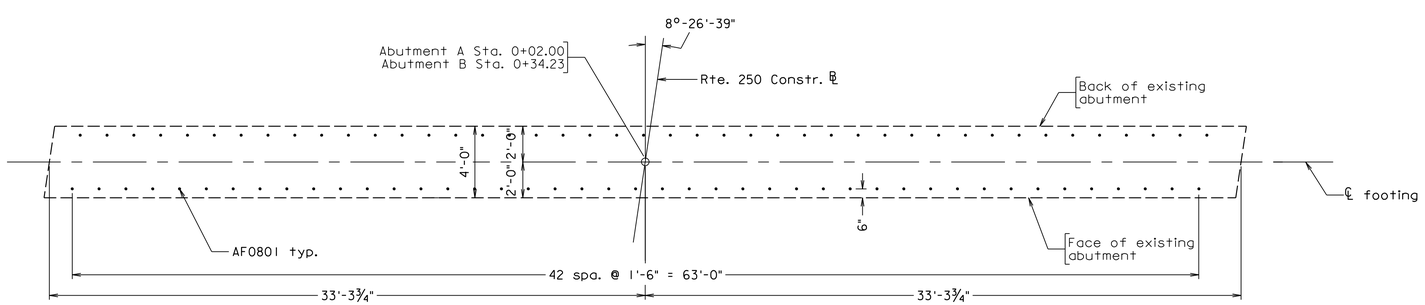
Abutment B



PLAN



ELEVATION



ABUTMENT PLAN AND DOWEL LAYOUT

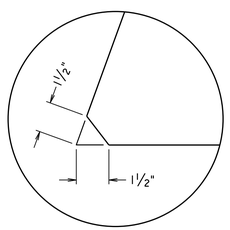
Notes:

Box beams shall not be placed until footing concrete achieves a minimum strength of 3000 psi.

All chamfers shall be ¾".

Abutment	Elev. A	Elev. B	Elev. C	Elev. D	Elev. E
A	52.68	52.39	52.54	48.78	48.78
B	50.45	50.16	50.31	46.55	46.55

✱ Elevations shown are at the back of backwall



DETAIL C

Typical at acute angles
Not to scale

Scale: ¼" = 1'-0" unless otherwise shown

SURVEYED BY:
SUPERVISED BY:
DESIGNED BY:

L:\21\039962 Richmond CIP on-call\Task 121 Broad Street over CSX ROW\DWG\Reference\Current\039962_121-2030-B02435.dwg | Plotted on — | by Gregory Kozlins

NOTES

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4. Adopted N/A
5. Accepted N/A

REFERENCES

REVISIONS

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- Tree / Exist. Tree To Be Removed
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--LEGEND:--

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- Conduit (Conc. Encased)
- Retaining Wall

RICHMOND VIRGINIA

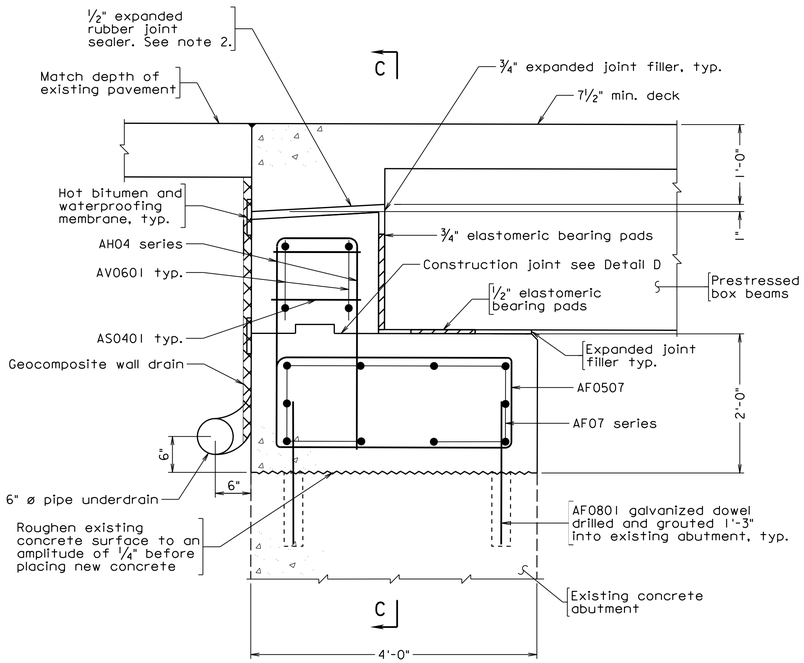
DEPARTMENT OF PUBLIC WORKS
RICHMOND, VIRGINIA

TIMMONS GROUP
ENGINEERING | DESIGN | TECHNOLOGY

E. BROAD STREET OVER ABANDONED RR SPUR (127-1852)
SUPERSTRUCTURE REPLACEMENT

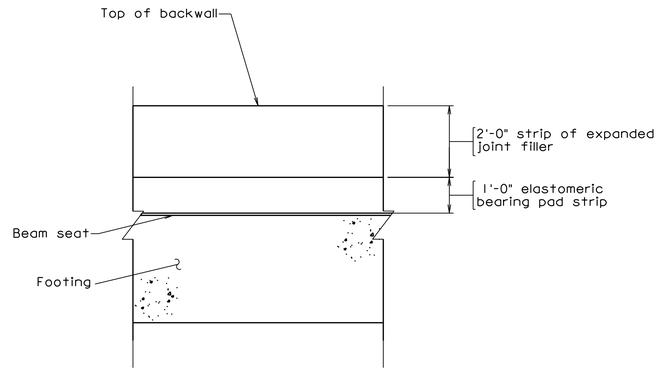
ABUTMENT RECONSTRUCTION PLAN AND ELEVATION

DESIGN BY: CJK DRAWN BY: SYT CHECKED BY: ALC	REVIEWED BY GSJ	FIELD NOTES	SCALE As noted	DATE 8/16/2024	SHEET 7	DRAWING NO. 0-29058



SECTION (A 7|8)

Scale: 1" = 1'-0"

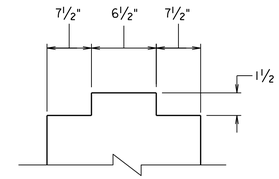


SECTION C

Scale: ½" = 1'-0"

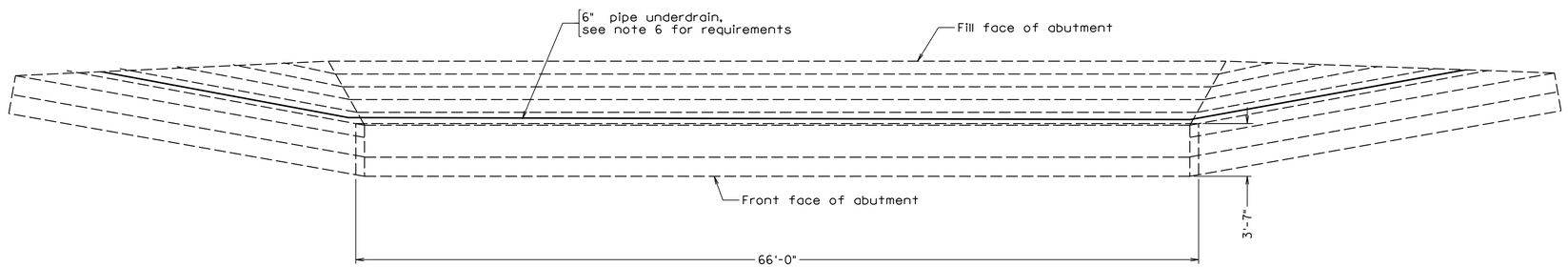
Notes:

1. All chamfers shall be ¾".
2. The expanded rubber joint filler shall extend the full length of the abutment.
3. Beam seat elevations given in Sheets 7-12 are at face of backwall, slope beam down at Abutment A and up at Abutment B to match existing grade.
4. Firmly attached vertical bearing to beam to ensure it stays in the proper location during the placement of the backwall.
5. Shear key shall be cleaned prior to placement of backwall per the Specification.
6. 6" diameter pipe underdrain shall be a perforated pipe wrapped with geotextile fabric. Slope pipe to drain from ℄ to surface of fill/cut. The pipe shall be a minimum 6" below the surface of final grade, the pipe shall daylight past the end of the existing wingwalls.



DETAIL D

N.T.S.



PLAN

Scale: ¼" = 1'-0" unless otherwise shown

SURVEYED BY: .....
SUPERVISED BY: .....
DESIGNED BY: .....

L:\21039962 Richmond CIP on-call\Task 121 Broad Street over CSX ROW\DWG\Reference\Current\39962.121-2030-BD2436.dwg | Plotted on — | by Gregory Kozlins

NOTES

1. Lot dimensions in parentheses are from deed.
2. Property owners correct as of December, 2018
3. Ordinance Number N/A
4. Adopted N/A
5. Accepted N/A

REFERENCES

REVISIONS

Existing Curb
- Curb & Gutter
- Sidewalk
- Basin
- Storm Sewer
- Sewer Manhole
- Sanitary Sewer (Gravity) SAN
- Sanitary Sewer (Force Main) FM
- Gas Line G
- Electric Line UGP
- Telephone/Telegraph UGT
- TV Cable UGATV
- Water Line W
- Tree / Exist. Tree To Be Removed
- Property Line

--LEGEND:--

Existing Curb Cut Ramp
- Coping
- Alley Crossing/Driveway
- Fire Hydrant
- Edge of Pavement
- Fence
- Cornerstone
- Property Pin
- Utility Pole

Proposed Sewer
- Manhole
- Basin
- Curb & Gutter
- Asphalt

Proposed Conc. Sidewalk
- Brick Sidewalk

Castings:
- Water Valve
- Water Meter
- Gas Drip
- Gas Valve
- Telephone Manhole
- Electric Manhole

Proposed Curb Cut Ramp
- Decorative Light
- Conduit
- Conduit (Conc. Encased)
- Retaining Wall

RICHMOND VIRGINIA

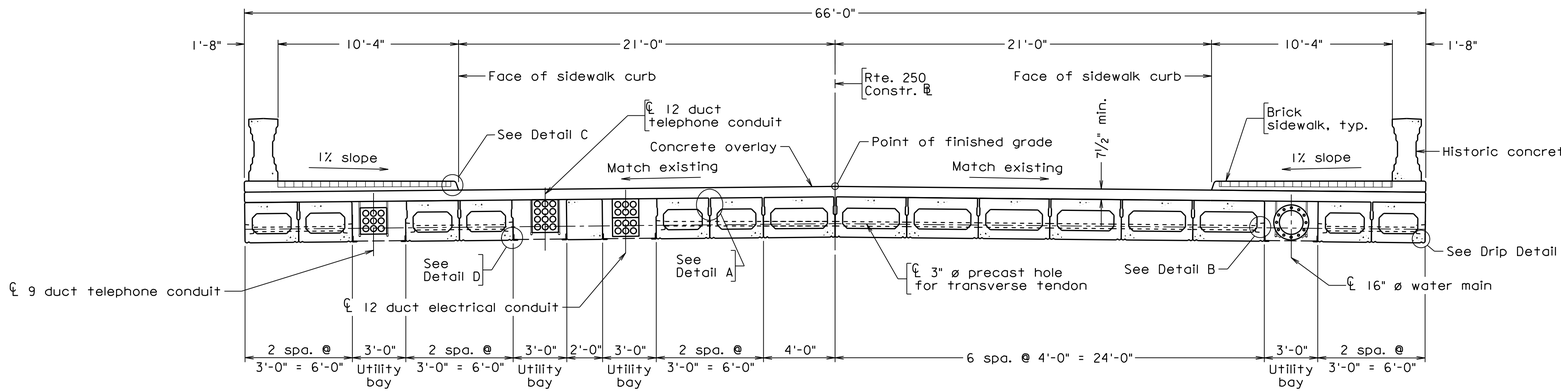
DEPARTMENT OF PUBLIC WORKS
RICHMOND, VIRGINIA

TIMMONS GROUP
ENGINEERING | DESIGN | TECHNOLOGY

E. BROAD STREET OVER ABANDONED RR SPUR (127-1852)
SUPERSTRUCTURE REPLACEMENT

ABUTMENT DETAILS

DESIGN BY: CJK DRAWN BY: SYT CHECKED BY: ALC	REVIEWED BY GSJ	FIELD NOTES	SCALE As noted	DATE 8/16/2024	SHEET 8	DRAWING NO. 0-29058



TRANSVERSE SECTION

Scale: ¾" = 1'-0"

Notes:

For waterproofing details, see sheet 16.

For deck slab and sidewalk reinforcement details, see sheet 17.

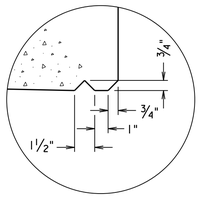
For rail details, see sheets 18-20.

Brick sidewalk shall composed of solid clay bricks and be founded on a ½" thick setting bed.

Transverse tendons shall be 1¼" diameter smooth rods conforming to ASTM A449 with 8" long threaded ends tensioned to 30,000 lbs. The rod shall have a washer and nut at each end. Rods, nuts, washer and 1" x 5" x 5" steel plated shall be galvanized. Where the length of transverse tendon required is greater than or equal to 20 feet, ½" diameter, coated, seven-wire low-relaxation Grade 270 strand tensioned to 31.600 lbs. may be used in lieu of rods.

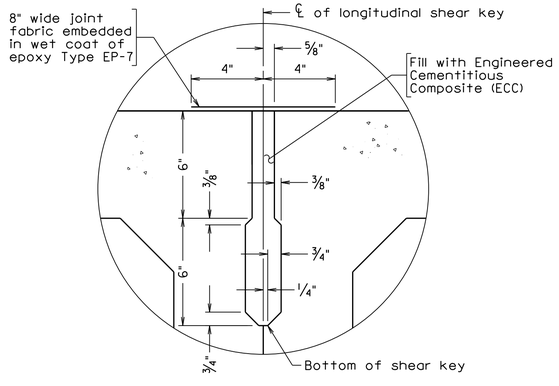
Grout for shear keys shall be Engineered Cementitious Composite (ECC). Grouting of shear keys shall be done in one continuous operation without interruption for the entire length of the shear keys for each span.

Post-tensioning of transverse tendons and the casting of parapets shall not be done until all grouting of keys are completed and the ECC has reached a minimum strength of 4000 psi.



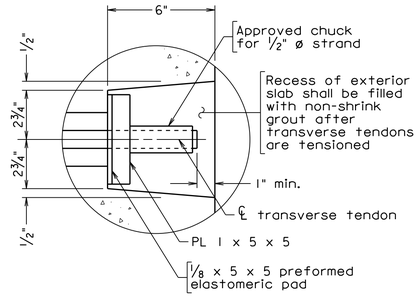
DRIP DETAIL

Not to scale



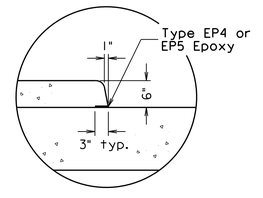
DETAIL A

Overlay and joint fabric not shown
All shear key dimensions typ. each side
Scale: 3" = 1'-0"



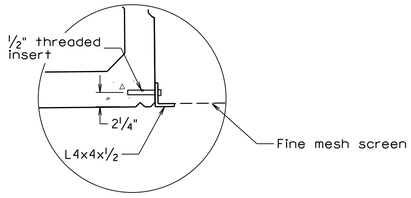
DETAIL B

Not to scale



DETAIL C

Not to scale



DETAIL D

Not to scale

SURVEYED BY:
SUPERVISED BY:
DESIGNED BY:

L:\2110\29962 Richmond CIP on-call\Task 121 Broad Street over CSX ROW\DWG\References\Current\29962.121-200C-BD2436.dwg | Plotted on — | by Gregory Koshia

PRELIMINARY PLANS

THESE PLANS NOT TO BE USED FOR CONSTRUCTION

NOTES

1. Lot dimensions in parentheses are from deed.
2. Property owners correct as of December, 2018
3. Ordinance Number N/A
4. Adopted N/A
5. Accepted N/A

REFERENCES	REVISIONS

Existing Curb
- Curb & Gutter
- Sidewalk
- Basin
- Storm Sewer
- Sewer Manhole
- Sanitary Sewer (Gravity) SAN
- Sanitary Sewer (Force Main) FM
- Gas Line G
- Electric Line UGP
- Telephone/Telegraph UGT
- TV Cable UGATV
- Water Line W
- Tree / Exist. Tree To Be Removed
- Property Line ℄

--LEGEND--

Existing Curb Cut Ramp
- Coping
- Alley Crossing/Driveway
- Fire Hydrant
- Edge of Pavement
- Fence
- Cornerstone
- Property Pin
- Utility Pole

Proposed Sewer
- Manhole
- Basin
- Curb & Gutter
- Asphalt

Proposed Conc. Sidewalk
- Brick Sidewalk

Castings Water Valve
- Water Meter
- Gas Drip
- Gas Valve
- Telephone Manhole
- Electric Manhole

Proposed Curb Cut Ramp
- Decorative Light
- Conduit
- Conduit (Conc. Encased)
- Retaining Wall

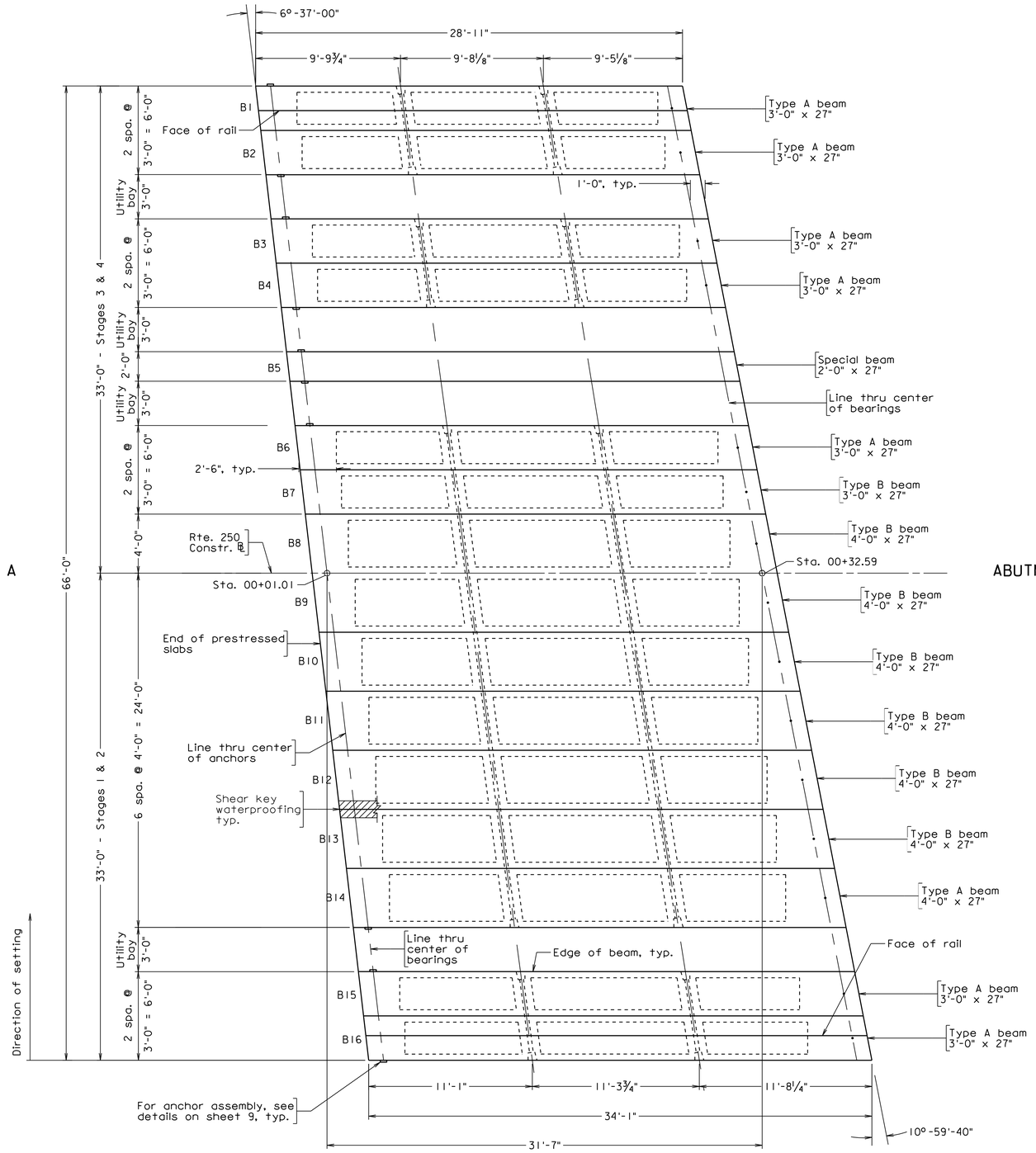
DEPARTMENT OF PUBLIC WORKS
RICHMOND, VIRGINIA

TIMMONS GROUP
ENGINEERING | DESIGN | TECHNOLOGY

E. BROAD STREET OVER ABANDONED RR SPUR (127-1852)
SUPERSTRUCTURE REPLACEMENT

TRANSVERSE SECTION AND DETAILS

DESIGN BY: GJK	REVIEWED BY GSJ	FIELD NOTES	SCALE	DATE	SHEET	DRAWING NO.
DRAWN BY: SYT			As noted	8/16/2024	9	0-29058
CHECKED BY: ALC						



ABUTMENT A

ABUTMENT B

ERECTION DIAGRAM

Scale: ¼" = 1'-0"

Notes:

For prestressed concrete beam details, see sheets 11-15.

For shear key dimensions, see Detail A on sheet 9.

PRELIMINARY PLANS

THESE PLANS NOT TO BE USED FOR CONSTRUCTION

SURVEYED BY:
SUPERVISED BY:
DESIGNED BY:

L:\2110\39962 Richmond CIP on-call\Task 121 Broad Street over CSX ROW\DWG\References\Current\39962,121,203C-BD2436.dwg | Plotted on — | by Gregory Kozina

NOTES

1. Lot dimensions in parentheses are from deed.
2. Property owners correct as of December, 2018
3. Ordinance Number N/A
4. Adopted N/A
5. Accepted N/A

REFERENCES

REVISIONS

Existing Curb
- Curb & Gutter
- Sidewalk
- Basin
- Storm Sewer
- Sewer Manhole
- Sanitary Sewer (County)
- Sanitary Sewer (Force Main)
- Gas Line
- Electric Line
- Telephone/Telegraph
- TV Cable
- Water Line
- Tree / Exist. Tree To Be Removed
- Property Line

--LEGEND--

Existing Curb Cut Ramp
- Coping
- Alley Crossing/Driveway
- Fire Hydrant
- Edge of Pavement
- Fence
- Cornerstone
- Property Pin
- Utility Pole

Proposed Sewer
- Manhole
- Basin
- Curb & Gutter
- Asphalt

Proposed Conc. Sidewalk
- Brick Sidewalk

Castings: Water Valve
- Water Meter
- Gas Drip
- Gas Valve
- Telephone Manhole
- Electric Manhole

Proposed Curb Cut Ramp
- Decorative Light
- Conduit
- Conduit (Conc. Encased)
- Retaining Wall

RICHMOND VIRGINIA

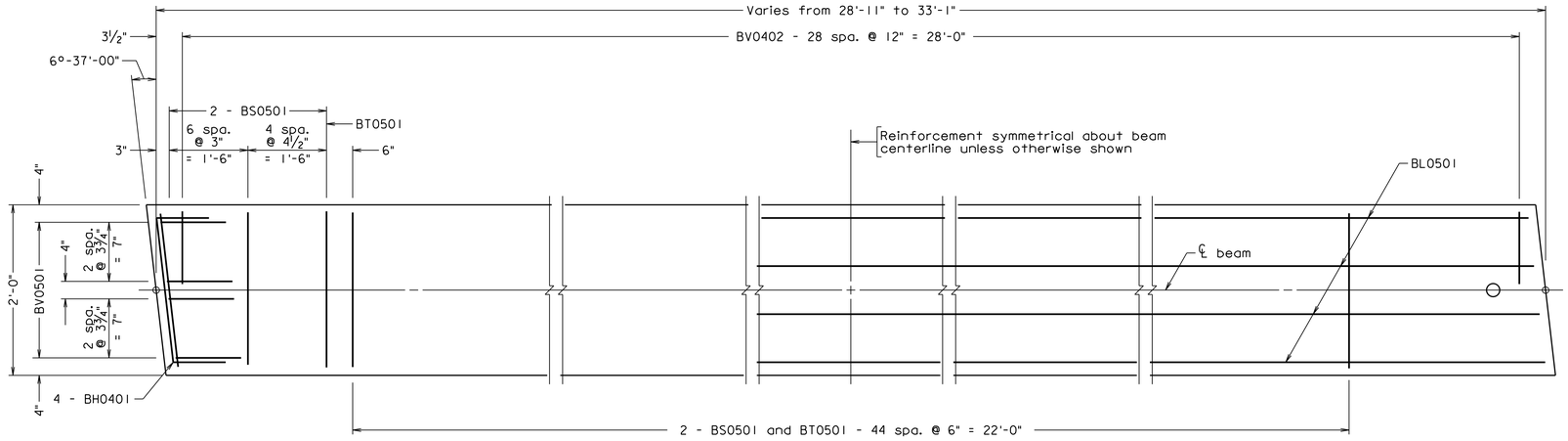
DEPARTMENT OF PUBLIC WORKS
RICHMOND, VIRGINIA

TIMMONS GROUP
ENGINEERING | DESIGN | TECHNOLOGY

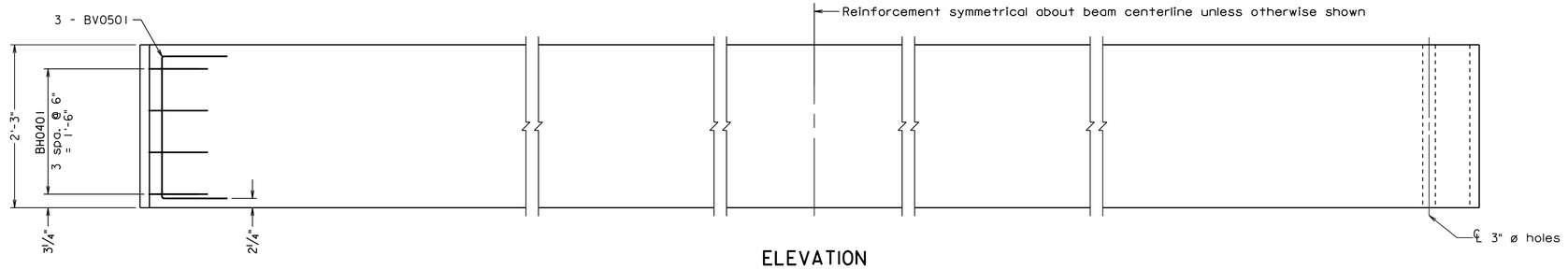
E. BROAD STREET OVER ABANDONED RR SPUR (127-1852)
SUPERSTRUCTURE REPLACEMENT

ERECTION DIAGRAM

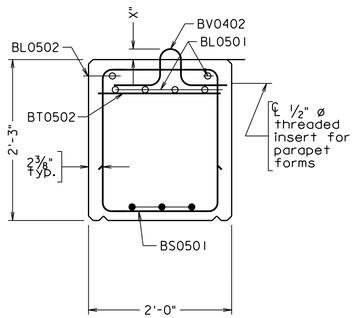
DESIGN BY: GJK	REVIEWED BY GSJ	FIELD NOTES	SCALE	DATE	SHEET	DRAWING NO.
DRAWN BY: SYT			As noted	8/16/2024	10	0-29058
CHECKED BY: ALC						



PLAN

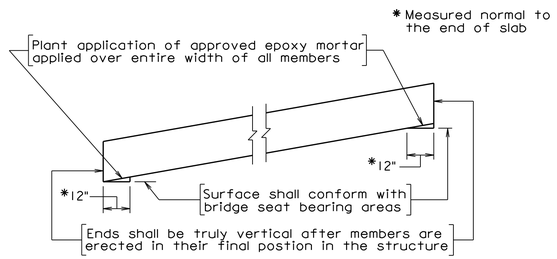


ELEVATION



REINFORCING DETAILS

Scale: 1" = 1'-0"



SLABS ON GRADIENT IN EXCESS OF 1%

Notes:

All reinforcing bars shall be Corrosion Resistant Reinforcing Steel, Class III.

BS series may be slightly shifted as directed by the Engineer to clear 3" ø hole for transverse tendon.

In lieu of splicing two reinforcing bars to form each stirrup, the stirrup may be made from one single bar.

The Contractor may submit an alternate prestressing strand pattern to the Engineer for approval.

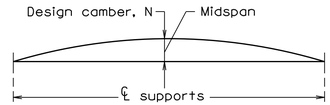
The Contractor has the option of stressing two courtesy strands each to 8,000 lbs at the locations indicated.

Box corners damaged during construction shall be restored to their shape as shown on the plans by an approved epoxy mortar.

Contractor shall determine location and spacing of ½" ø threaded inserts for parapet forms.

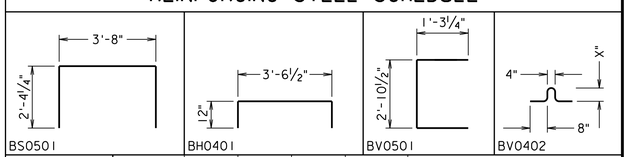
Design and detailing of these plans are based on the design camber(s) at erection (see Prestressing Steel Data Table) and the maximum tolerance for camber differential from design camber at erection indicated in the Specifications. Design camber at erection is computed using Precast Prestressed Concrete Institute (PCI) multipliers.

For dowels, see sheet 10.



CAMBER DIAGRAM

REINFORCING STEEL SCHEDULE



Slab Size	Mark	No.	Size	Pin ø	Length	Location
2'-3" x 27" Fascia beam	BH0401		#4	3"	5'-4"	End horizontal
	BL0501		#5	——		Longitudinal bars
	BL0502		#5	——		Top longitudinal
	BS0501		#5	2½"	8'-2"	Stirrup
	BT0501		#5	——	3'-8"	Top transverse
	BV0501		#5	3¾"	5'-2"	End vertical
	BV0402		#4	3"		Composite vertical

Dimensions in bending diagram are out-to-out of bars.

Number of bars shown in table are per beam per beam type.

PRESTRESSING STEEL DATA TABLE

Strand Type	Beam Size	No. of strands per row						Distance from bottom of beam						Total number of strands per beam	Pre-stressing force per strand lbs.	Design Camber, N	
		Row 1	Row 2	Row 3	Row 4	Row 5	Row 6	Row 1 in.	Row 2 in.	Row 3 in.	Row 4 in.	Row 5 in.	Row 6 in.			At Release in.	At Erection in.
0.6" ø Low Relaxation Strands	4'-0" x 27" Type B	3												3	43,940	0.058	0.027

Scale: ¾" = 1'-0" unless otherwise noted

PRELIMINARY PLANS

THESE PLANS NOT TO BE USED FOR CONSTRUCTION

SURVEYED BY:
SUPERVISED BY:
DESIGNED BY:

L:\21\0\39962 Richmond CIP on-call\Task 121 Broad Street over CSX ROW\DWG\References\Current\39962-121-203C-BD2436.dwg | Plotted on — | by Gregory Kozina

NOTES

1. Lot dimensions in parentheses are from deed.
2. Property owners correct as of December, 2018
3. Ordinance Number N/A
4. Adopted N/A
5. Accepted N/A

REFERENCES

REVISIONS

Existing Curb
- Curb & Gutter
- Sidewalk
- Basin
- Storm Sewer
- Sewer Manhole
- Sanitary Sewer (Gravity) — SAN
- Sanitary Sewer (Force Main) — FM
- Gas Line — G
- Electric Line — UGP
- Telephone/Telegraph — UGT
- TV Cable — UCATV
- Water Line — W
- Tree / Exist. Tree To Be Removed
- Property Line — P

--LEGEND--

Existing Curb Cut Ramp
- Coping
- Alley Crossing/Driveway
- Fire Hydrant
- Edge of Pavement
- Fence
- Cornerstone
- Property Pin
- Utility Pole

Proposed Sewer
- Manhole
- Basin
- Curb & Gutter
- Asphalt

Proposed Conc. Sidewalk
- Brick Sidewalk

Castings:
- Water Valve
- Water Meter
- Gas Drip
- Gas Valve
- Telephone Manhole
- Electric Manhole

Proposed Curb Cut Ramp
- Decorative Light
- Conduit
- Conduit (Conc. Encased)
- Retaining Wall

RICHMOND VIRGINIA

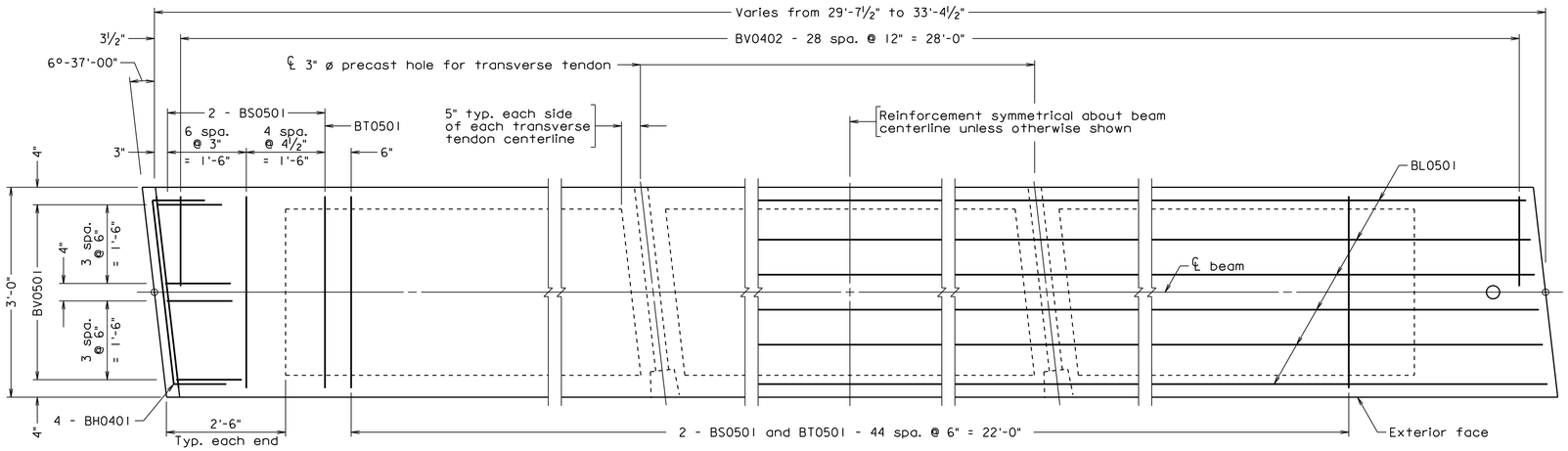
DEPARTMENT OF PUBLIC WORKS
RICHMOND, VIRGINIA

TIMMONS GROUP
ENGINEERING | DESIGN | TECHNOLOGY

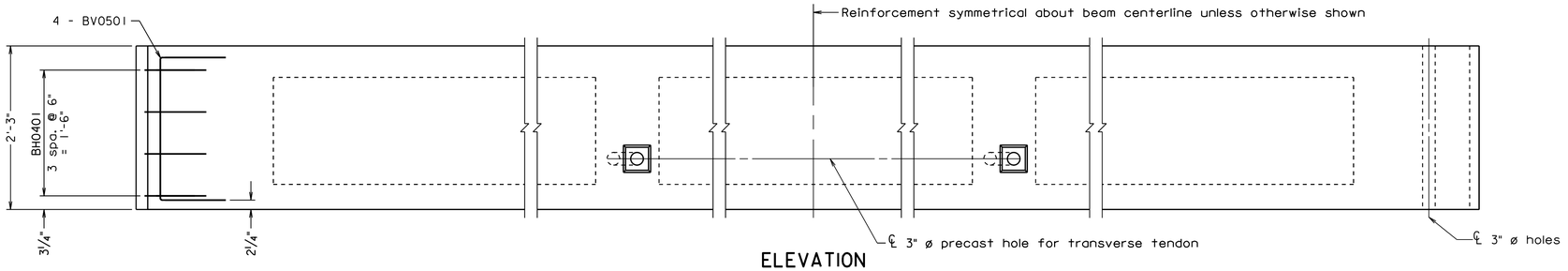
E. BROAD STREET OVER ABANDONED RR SPUR (127-1852)
SUPERSTRUCTURE REPLACEMENT

SPECIAL BEAM DETAILS

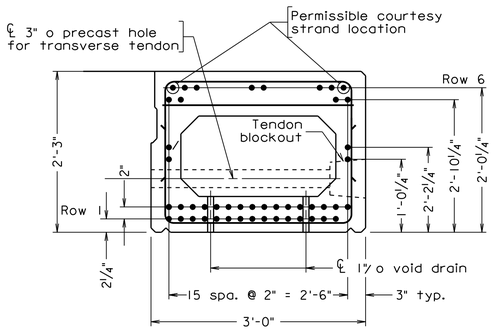
DESIGN BY: CJK DRAWN BY: SYT CHECKED BY: ALC	REVIEWED BY GSJ	FIELD NOTES	SCALE: As noted	DATE: 8/16/2024	SHEET: 11	DRAWING NO.: 0-29058



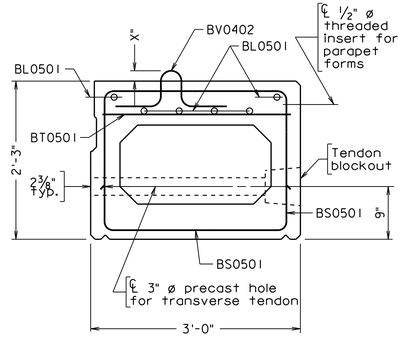
PLAN



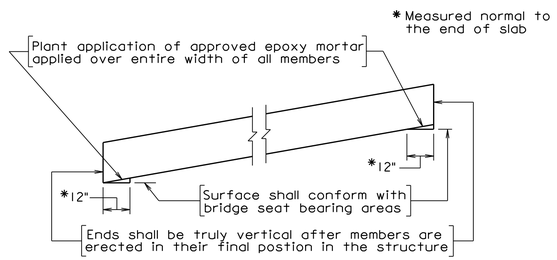
ELEVATION



STRAND PATTERN
Scale: 1" = 1'-0"



REINFORCING DETAILS
Scale: 1" = 1'-0"



SLABS ON GRADIENT IN EXCESS OF 1%

Notes:

All reinforcing bars shall be Corrosion Resistant Reinforcing Steel, Class I.

BS series may be slighty shifted as directed by the Engineer to clear 3" ø hole for transverse tendon.

In lieu of splicing two reinforcing bars to form each stirrup, the stirrup may be made from one single bar.

The Contractor may submit an alternate prestressing strand pattern to the Engineer for approval.

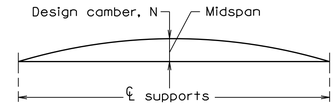
The Contractor has the option of stressing two courtesy strands each to 8,000 lbs at the locations indicated.

Box corners damaged during construction shall be restored to their shape as shown on the plans by an approved epoxy mortar.

Contractor shall determine location and spacing of ½" ø threaded inserts for parapet forms.

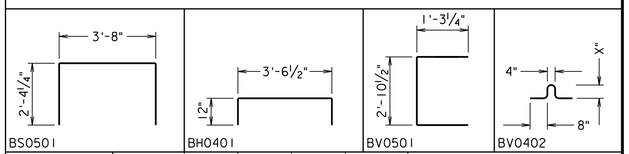
Design and detailing of these plans are based on the design camber(s) at erection (see Prestressing Steel Data Table) and the maximum tolerance for camber differential from design camber at erection indicated in the Specifications. Design camber at erection is computed using Precast/Prestressed Concrete Institute (PCI) multipliers.

For precast hole for transverse tendon locations, see sheet 10.



CAMBER DIAGRAM

REINFORCING STEEL SCHEDULE



Slab Size	Mark	No.	Size	Pin ø	Length	Location
3'-0" x 27" Exterior beam Type A	BH0401		#4	3"	5'-4"	End horizontal
	BL0501		#5	——		Top longitudinal
	BS0501		#5	2½"	8'-2"	Stirrup
	BT0501		#5	——	3'-8"	Top transverse
	BV0501		#5	3¾"	5'-2"	End vertical
	BV0402		#4	3"		Composite vertical

Dimensions in bending diagram are out-to-out of bars.

Number of bars shown in table are per beam per beam type.

PRESTRESSING STEEL DATA TABLE

Strand Type	Beam Size	No. of strands per row						Distance from bottom of beam						Total number of strands per beam	Pre-stressing force per strand lbs.	Design Camber, N	
		Row 1	Row 2	Row 3	Row 4	Row 5	Row 6	Row 1 in.	Row 2 in.	Row 3 in.	Row 4 in.	Row 5 in.	Row 6 in.			At Release in.	At Erection in.
0.6" ø Low Relaxation Strands	4'-0" x 27" Type A	3												3	43,940	0.058	0.027

DEAD LOAD DEFLECTION DIAGRAM Scale: ¾" = 1'-0" unless otherwise noted

PRELIMINARY PLANS
THESE PLANS NOT TO BE USED FOR CONSTRUCTION

SURVEYED BY:
SUPERVISED BY:
DESIGNED BY:

PBT-3 08-08-2018

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NOTES
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2. Property owners correct as of December, 2018
3. Ordinance Number N/A
4. Adopted N/A
5. Accepted N/A

REFERENCES | REVISIONS

Existing Curb, Curb & Gutter, Sidewalk, Basin, Storm Sewer, Sewer Manhole, Sanitary Sewer (Gravity), Sanitary Sewer (Force Main), Gas Line, Electric Line, Telephone/Telegraph, TV Cable, Water Line, Tree / Exist. Tree To Be Removed, Property Line

-LEGEND-
Existing Curb Ramp, Coping, Alley Crossing/Driveway, Fire Hydrant, Edge of Pavement, Fence, Cornerstone, Property Pin, Utility Pole
Proposed Sewer, Manhole, Basin, Curb & Gutter, Asphalt
Proposed Conc. Sidewalk, Brick Sidewalk
Castings: Water Valve, Water Meter, Gas Drip, Gas Valve, Telephone Manhole, Electric Manhole
Proposed Curb Cut Ramp
Decorative Light, Conduit, Conduit (Conc. Encased), Retaining Wall

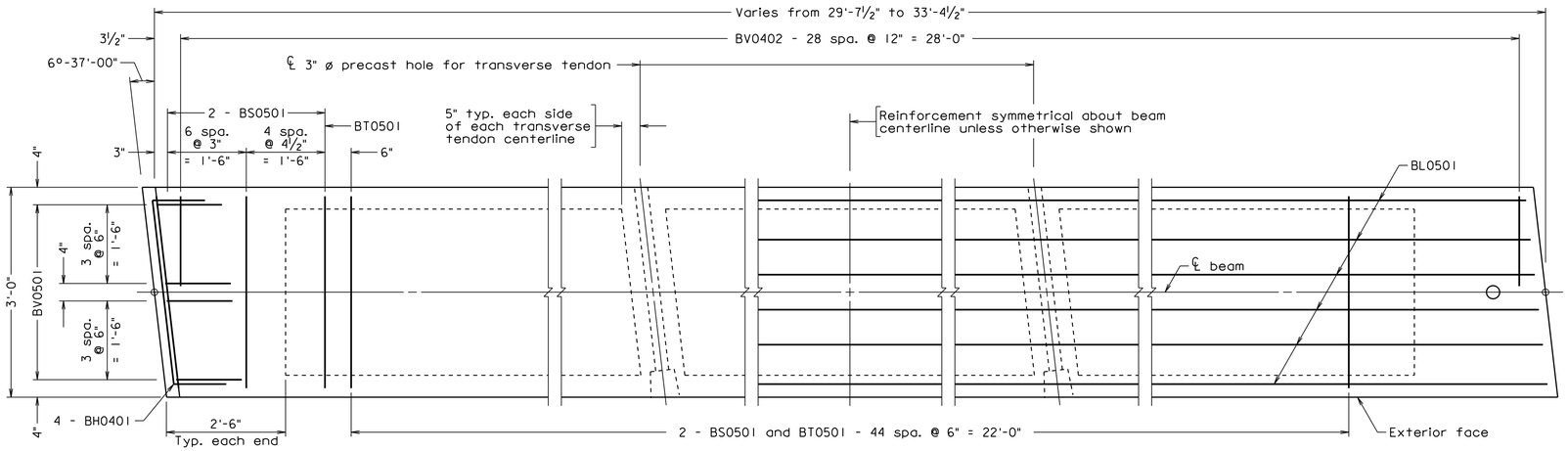
RICHMOND VIRGINIA
DEPARTMENT OF PUBLIC WORKS
RICHMOND, VIRGINIA

TIMMONS GROUP
ENGINEERING | DESIGN | TECHNOLOGY

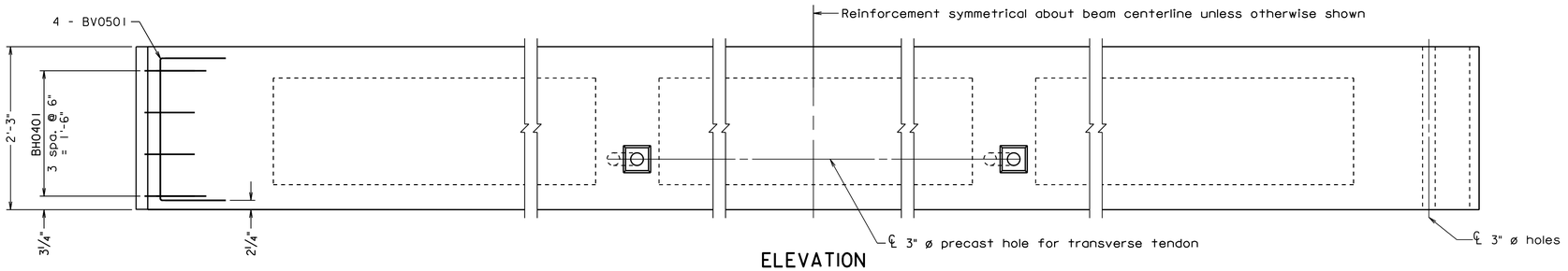
E. BROAD STREET OVER ABANDONED RR SPUR (127-1852)
SUPERSTRUCTURE REPLACEMENT

3'-0" x 27" EXTERIOR BEAM TYPE A TRANSVERSE TENDONS

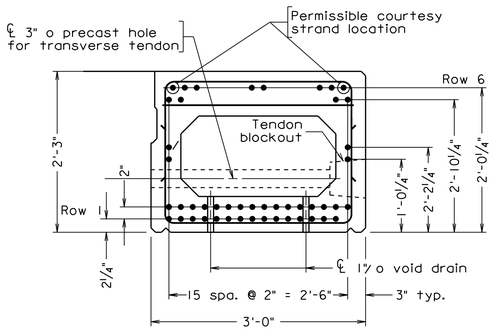
DESIGN BY: CJK DRAWN BY: SYT CHECKED BY: ALC	REVIEWED BY GSJ	FIELD NOTES	SCALE: As noted	DATE: 8/16/2024	SHEET: 12	DRAWING NO.: 0-29058



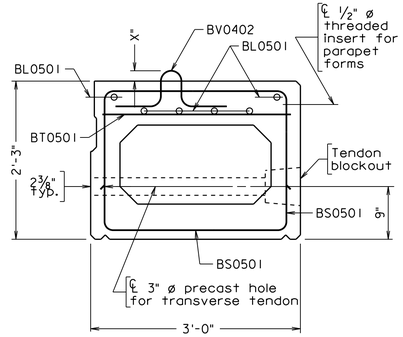
PLAN



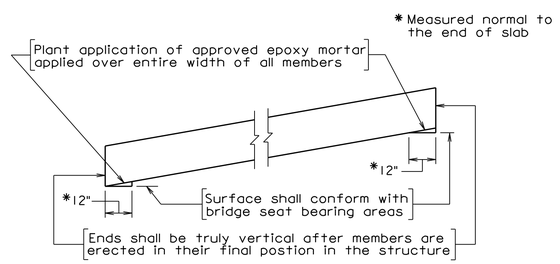
ELEVATION



STRAND PATTERN
Scale: 1" = 1'-0"



REINFORCING DETAILS
Scale: 1" = 1'-0"



SLABS ON GRADIENT IN EXCESS OF 1%

Notes:

All reinforcing bars shall be Corrosion Resistant Reinforcing Steel, Class I.

BS series may be slighty shifted as directed by the Engineer to clear 3" ø hole for transverse tendon.

In lieu of splicing two reinforcing bars to form each stirrup, the stirrup may be made from one single bar.

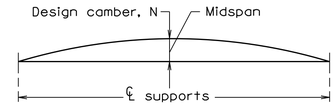
The Contractor may submit an alternate prestressing strand pattern to the Engineer for approval.

The Contractor has the option of stressing two courtesy strands each to 8,000 lbs at the locations indicated.

Box corners damaged during construction shall be restored to their shape as shown on the plans by an approved epoxy mortar.

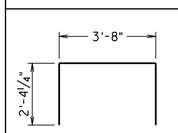
Contractor shall determine location and spacing of ½" ø threaded inserts for parapet forms.

Design and detailing of these plans are based on the design camber(s) at erection (see Prestressing Steel Data Table) and the maximum tolerance for camber differential from design camber at erection indicated in the Specifications. Design camber at erection is computed using Precast/Prestressed Concrete Institute (PCI) multipliers.

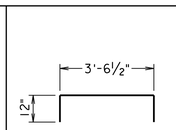


CAMBER DIAGRAM

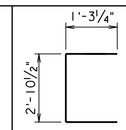
REINFORCING STEEL SCHEDULE



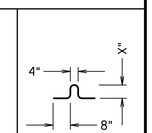
BS0501



BH0401



BV0501



BV0402

Slab Size	Mark	No.	Size	Pin ø	Length	Location
3'-0" x 27" Exterior beam Type A	BH0401		#4	3"	5'-4"	End horizontal
	BL0501		#5	——		Top longitudinal
	BS0501		#5	2½"	8'-2"	Stirrup
	BT0501		#5	——	3'-8"	Top transverse
	BV0501		#5	3¾"	5'-2"	End vertical
	BV0402		#4	3"		Composite vertical

Dimensions in bending diagram are out-to-out of bars.

Number of bars shown in table are per beam per beam type.

PRESTRESSING STEEL DATA TABLE

Strand Type	Beam Size	No. of strands per row						Distance from bottom of beam						Total number of strands per beam	Pre-stressing force per strand lbs.	Design Camber, N	
		Row 1	Row 2	Row 3	Row 4	Row 5	Row 6	Row 1 in.	Row 2 in.	Row 3 in.	Row 4 in.	Row 5 in.	Row 6 in.			At Release in.	At Erection in.
0.6" ø Low Relaxation Strands	4'-0" x 27" Type A	3												3	43,940	0.058	0.027

DEAD LOAD DEFLECTION DIAGRAM Scale: ¾" = 1'-0" unless otherwise noted

PRELIMINARY PLANS
THESE PLANS NOT TO BE USED FOR CONSTRUCTION

SURVEYED BY:
SUPERVISED BY:
DESIGNED BY:

08-08-2018

PBT-4

L:\21\0\39962 Richmond CIP on-call\Task 121 Broad Street over CSX ROW\DWG\References\Current\39962-121-203C-BD2436.dwg | Plotted on — | by Gregory Kozina

NOTES
1. Lot dimensions in parentheses are from deed.
2. Property owners correct as of December, 2018
3. Ordinance Number N/A
4. Adopted N/A
5. Accepted N/A

REFERENCES | REVISIONS

-LEGEND-
Existing Curb
- Curb & Gutter
- Sidewalk
- Basin
- Storm Sewer
- Sewer Manhole
- Sanitary Sewer (Gravity) — SAN
- Sanitary Sewer (Force Main) — FM
- Gas Line — G
- Electric Line — UGP
- Telephone/Telegraph — UGT
- TV Cable — UCATV
- Water Line — W
- Tree / Exist. Tree To Be Removed
- Property Line

Existing Curb Cut Ramp
- Coping
- Alley Crossing/Driveway
- Fire Hydrant
- Edge of Pavement
- Fence
- Cornerstone
- Property Pin
- Utility Pole

Proposed Sewer
- Manhole
- Basin
- Curb & Gutter
- Asphalt

Proposed Conc. Sidewalk
- Brick Sidewalk

Castings: Water Valve
- Water Meter
- Gas Drip
- Gas Valve
- Telephone Manhole
- Electric Manhole

Proposed Curb Cut Ramp
- Decorative Light
- Conduit
- Conduit (Conc. Encased)
- Retaining Wall

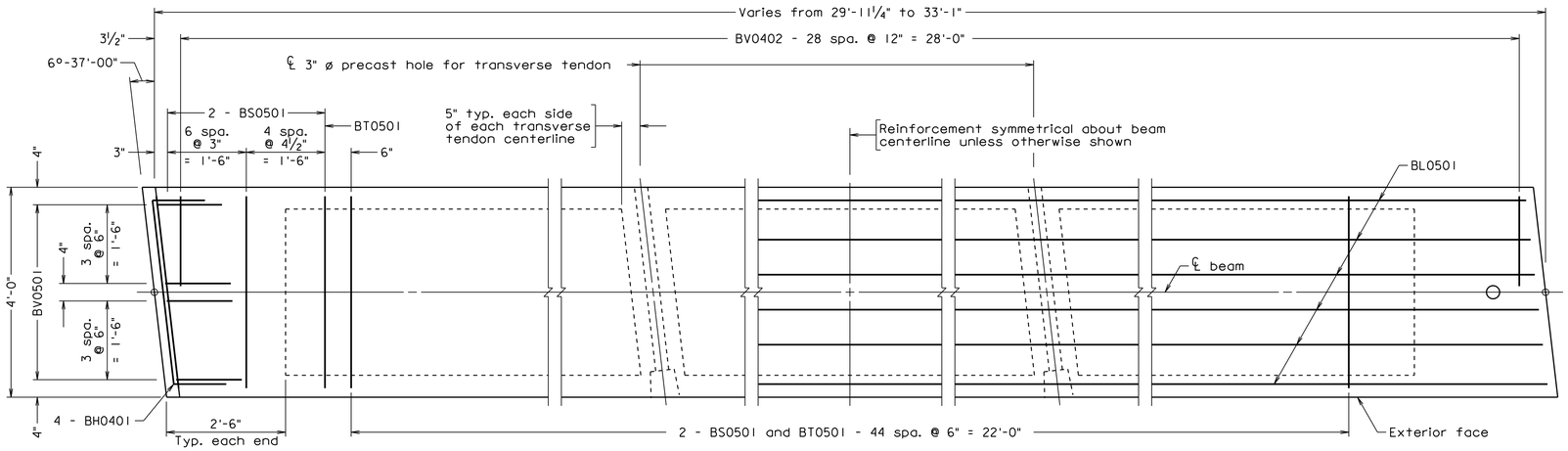
RICHMOND VIRGINIA
DEPARTMENT OF PUBLIC WORKS
RICHMOND, VIRGINIA

TIMMONS GROUP
ENGINEERING | DESIGN | TECHNOLOGY

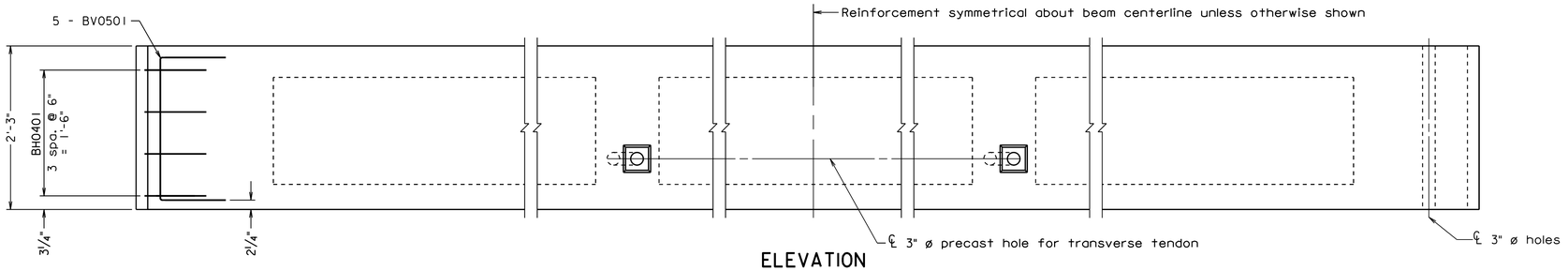
E. BROAD STREET OVER ABANDONED RR SPUR (127-1852)
SUPERSTRUCTURE REPLACEMENT

3'-0" x 27" INTERIOR BEAM TYPE B TRANSVERSE TENDONS

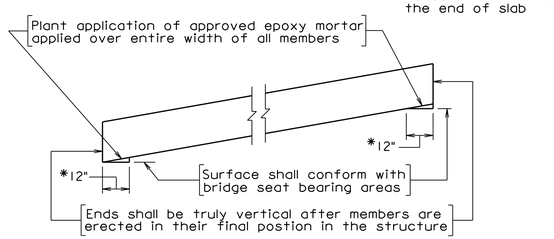
DESIGN BY: CJK	REVIEWED BY GSJ	FIELD NOTES	SCALE	DATE	SHEET	DRAWING NO.
DRAWN BY: SYT			As noted	8/16/2024	13	0-29058
CHECKED BY: ALC						



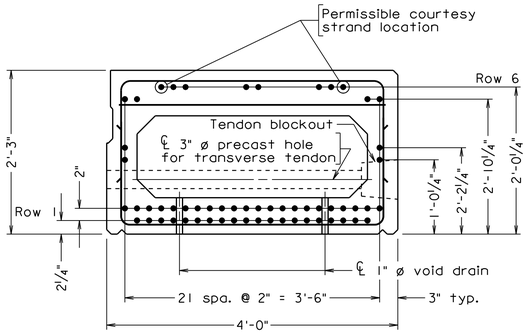
PLAN



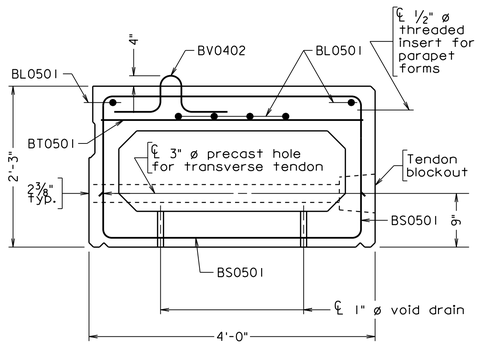
ELEVATION



SLABS ON GRADIENT IN EXCESS OF 1%



STRAND PATTERN
Scale: 1" = 1'-0"



REINFORCING DETAILS
Scale: 1" = 1'-0"

Notes:

All reinforcing bars shall be Corrosion Resistant Reinforcing Steel, Class III.

BS series may be slighty shifted as directed by the Engineer to clear 3" ø hole for transverse tendon.

In lieu of splicing two reinforcing bars to form each stirrup, the stirrup may be made from one single bar.

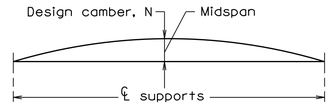
The Contractor may submit an alternate prestressing strand pattern to the Engineer for approval.

The Contractor has the option of stressing two courtesy strands each to 8,000 lbs at the locations indicated.

Box corners damaged during construction shall be restored to their shape as shown on the plans by an approved epoxy mortar.

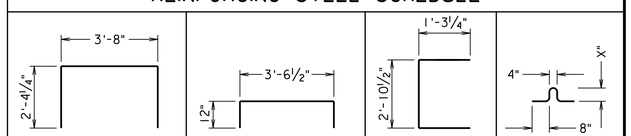
Design and detailing of these plans are based on the design camber(s) at erection (see Prestressing Steel Data Table) and the maximum tolerance for camber differential from design camber at erection indicated in the Specifications. Design camber at erection is computed using Precast/Prestressed Concrete Institute (PCI) multipliers.

For locations of precast hole for transverse tendon, see sheet 10.



CAMBER DIAGRAM

REINFORCING STEEL SCHEDULE



Slab Size	Mark	No.	Size	Pin ø	Length	Location
4'-0" x 27" Exterior beam Type B	BH0401		#4	3"	5'-4"	End horizontal
	BL0501		#5	——		Top longitudinal
	BS0501		#5	2½"	8'-2"	Stirrup
	BT0501		#5	——	3'-8"	Top transverse
	BV0501		#5	3¾"	5'-2"	End vertical
	BV0402		#4	3"		Composite vertical

Dimensions in bending diagram are out-to-out of bars.

Number of bars shown in table are per beam per beam type.

PRESTRESSING STEEL DATA TABLE

Strand Type	Beam Size	No. of strands per row						Distance from bottom of beam						Total number of strands per beam	Pre-stressing force per strand lbs.	Design Camber, N	
		Row 1	Row 2	Row 3	Row 4	Row 5	Row 6	Row 1 in.	Row 2 in.	Row 3 in.	Row 4 in.	Row 5 in.	Row 6 in.			At Release in.	At Erection in.
0.6" ø Low Relaxation Strands	4'-0" x 27" Type B	5												5	43,940	0.093	0.111

DEAD LOAD DEFLECTION DIAGRAM

Scale: ¾" = 1'-0" unless otherwise noted

PRELIMINARY PLANS
THESE PLANS NOT TO BE USED FOR CONSTRUCTION

SURVEYED BY:
SUPERVISED BY:
DESIGNED BY:

PBT-4 08-08-2018

L:\21\0\39962 Richmond CIP on-call\Task 121 Broad Street over CSX ROW\DWG\References\Current\39962-121-203C-BD2436.dwg | Plotted on — | by Gregory Kozina

NOTES
1. Lot dimensions in parentheses are from deed.
2. Property owners correct as of December, 2018
3. Ordinance Number N/A
4. Adopted N/A
5. Accepted N/A

REFERENCES | REVISIONS

Existing Curb
- Curb & Gutter
- Sidewalk
- Basin
- Storm Sewer
- Sewer Manhole
- Sanitary Sewer (Gravity)
- Sanitary Sewer (Force Main)
- Gas Line
- Electric Line
- Telephone/Telegraph
- TV Cable
- Water Line
- Tree / Exist. Tree To Be Removed
- Property Line

--LEGEND--

Existing Curb Cut Ramp
- Coping
- Alley Crossing/Driveway
- Fire Hydrant
- Edge of Pavement
- Fence
- Cornerstone
- Property Pin
- Utility Pole

Proposed Sewer
- Manhole
- Basin
- Curb & Gutter
- Asphalt

Proposed Conc. Sidewalk
- Brick Sidewalk

Castings: Water Valve
- Water Meter
- Gas Drip
- Gas Valve
- Telephone Manhole
- Electric Manhole

Proposed Curb Cut Ramp
- Decorative Light
- Conduit
- Conduit (Conc. Encased)
- Retaining Wall

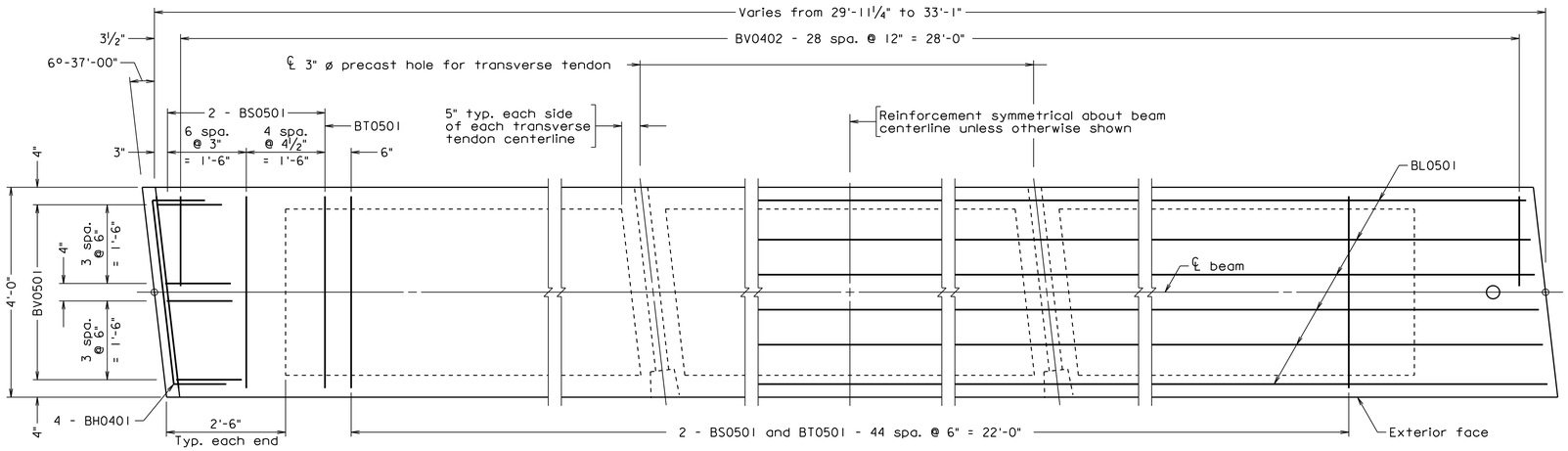
RICHMOND VIRGINIA
DEPARTMENT OF PUBLIC WORKS
RICHMOND, VIRGINIA

TIMMONS GROUP
ENGINEERING | DESIGN | TECHNOLOGY

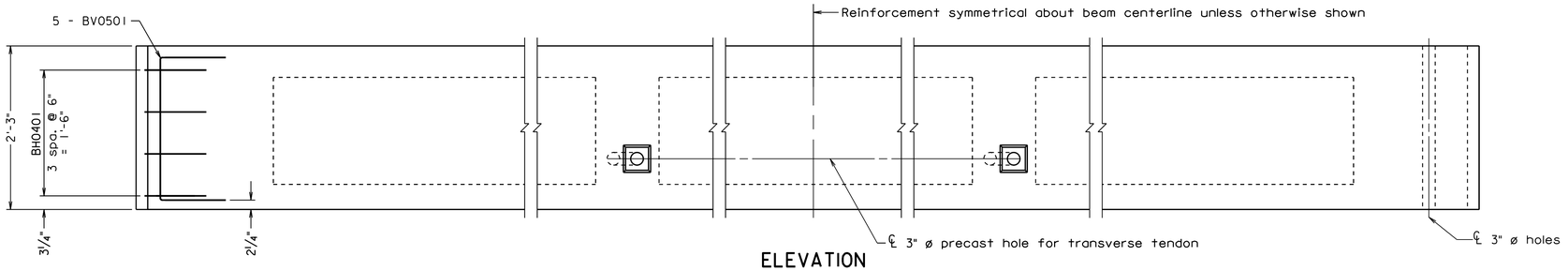
E. BROAD STREET OVER ABANDONED RR SPUR (127-1852)
SUPERSTRUCTURE REPLACEMENT

4'-0" x 27" EXTERIOR BEAM TYPE A TRANSVERSE TENDONS

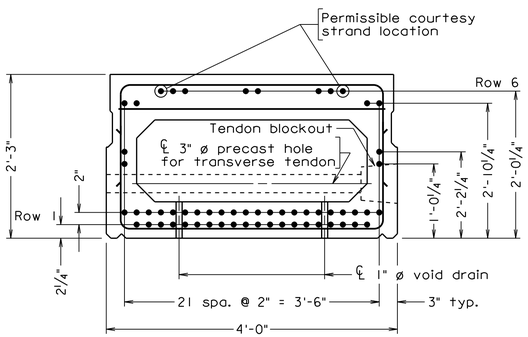
DESIGN BY: CJK DRAWN BY: SYT CHECKED BY: ALC	REVIEWED BY GSJ	FIELD NOTES	SCALE As noted	DATE 8/16/2024	SHEET 14	DRAWING NO. 0-29058



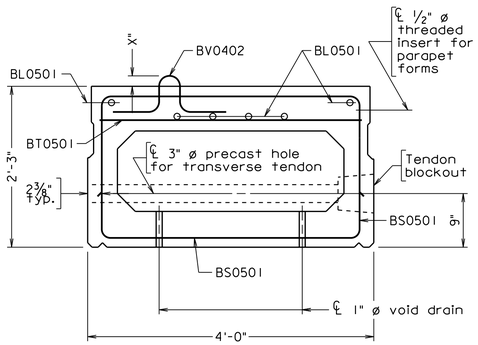
PLAN



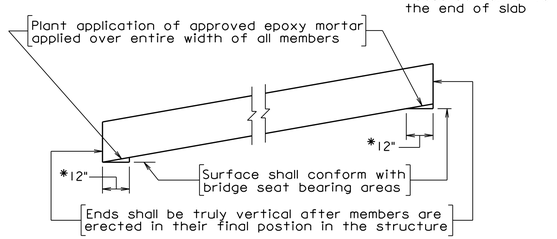
ELEVATION



STRAND PATTERN
Scale: 1" = 1'-0"



REINFORCING DETAILS
Scale: 1" = 1'-0"



SLABS ON GRADIENT IN EXCESS OF 1%

Notes:

All reinforcing bars shall be Corrosion Resistant Reinforcing Steel, Class III.

BS series may be slighty shifted as directed by the Engineer to clear 3" ø hole for transverse tendon.

In lieu of splicing two reinforcing bars to form each stirrup, the stirrup may be made from one single bar.

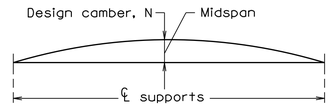
The Contractor may submit an alternate prestressing strand pattern to the Engineer for approval.

The Contractor has the option of stressing two courtesy strands each to 8,000 lbs at the locations indicated.

Box corners damaged during construction shall be restored to their shape as shown on the plans by an approved epoxy mortar.

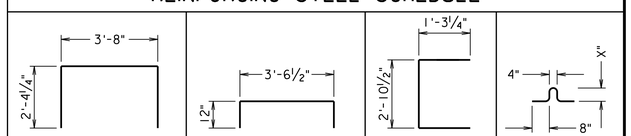
Design and detailing of these plans are based on the design camber(s) at erection (see Prestressing Steel Data Table) and the maximum tolerance for camber differential from design camber at erection indicated in the Specifications. Design camber at erection is computed using Precast/Prestressed Concrete Institute (PCI) multipliers.

For location of precast holes for transverse tendons, see sheet 10.



CAMBER DIAGRAM

REINFORCING STEEL SCHEDULE



Slab Size	Mark	No.	Size	Pin ø	Length	Location
4'-0" x 27" Exterior beam Type B	BH0401		#4	3"	5'-4"	End horizontal
	BL0501		#5	——		Top longitudinal
	BS0501		#5	2½"	8'-2"	Stirrup
	BT0501		#5	——	3'-8"	Top transverse
	BV0501		#5	3¾"	5'-2"	End vertical
	BV0402		#4	3"		Composite vertical

Dimensions in bending diagram are out-to-out of bars.

Number of bars shown in table are per beam per beam type.

PRESTRESSING STEEL DATA TABLE

Strand Type	Beam Size	No. of strands per row						Distance from bottom of beam						Total number of strands per beam	Pre-stressing force per strand lbs.	Design Camber, N	
		Row 1	Row 2	Row 3	Row 4	Row 5	Row 6	Row 1 in.	Row 2 in.	Row 3 in.	Row 4 in.	Row 5 in.	Row 6 in.			At Release in.	At Erection in.
0.6" ø Low Relaxation Strands	4'-0" x 27" Type B	5												5	43,940	0.093	0.111

DEAD LOAD DEFLECTION DIAGRAM

Scale: ¾" = 1'-0" unless otherwise noted

PRELIMINARY PLANS
THESE PLANS NOT TO BE USED FOR CONSTRUCTION

SURVEYED BY:
SUPERVISED BY:
DESIGNED BY:

PBT-4 08-08-2018

L:\21\0\39962 Richmond CIP on-call\Task 121 Broad Street over CSX ROW\DWG\References\Current\39962_121-203C-BD2436.dwg | Plotted on — | by Gregory Kozina

NOTES
1. Lot dimensions in parentheses are from deed.
2. Property owners correct as of December, 2018
3. Ordinance Number N/A
4. Adopted N/A
5. Accepted N/A

REFERENCES | REVISIONS

Existing Curb
- Curb & Gutter
- Sidewalk
- Basin
- Storm Sewer
- Sewer Manhole
- Sanitary Sewer (Gravity) — SAN
- Sanitary Sewer (Force Main) — FM
- Gas Line — G
- Electric Line — UGP
- Telephone/Telegraph — UGT
- TV Cable — UCATV
- Water Line — W
- Tree / Exist. Tree To Be Removed
- Property Line — P

--LEGEND--

Existing Curb Cut Ramp
- Coping
- Alley Crossing/Driveway
- Fire Hydrant
- Edge of Pavement
- Fence
- Cornerstone
- Property Pin
- Utility Pole

Proposed Sewer
- Manhole
- Basin
- Curb & Gutter
- Asphalt

Proposed Conc. Sidewalk
- Brick Sidewalk

Castings:
- Water Valve
- Water Meter
- Gas Drip
- Gas Valve
- Telephone Manhole
- Electric Manhole

Proposed Curb Cut Ramp
- Decorative Light
- Conduit
- Conduit (Conc. Encased)
- Retaining Wall

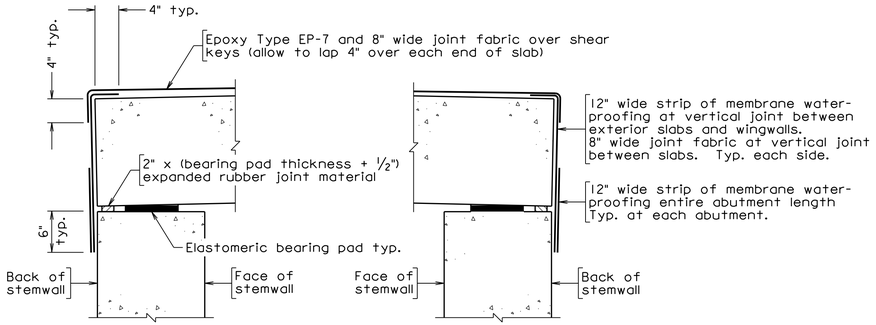
RICHMOND VIRGINIA
DEPARTMENT OF PUBLIC WORKS
RICHMOND, VIRGINIA

TIMMONS GROUP
ENGINEERING | DESIGN | TECHNOLOGY

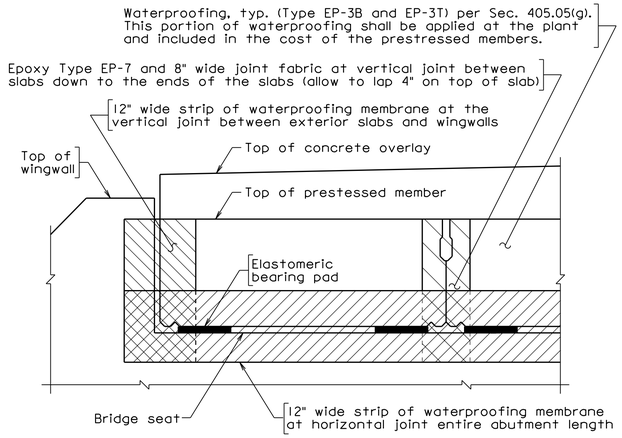
E. BROAD STREET OVER ABANDONED RR SPUR (127-1852)
SUPERSTRUCTURE REPLACEMENT

4'-0" x 27" INTERIOR BEAM TYPE B TRANSVERSE TENDONS

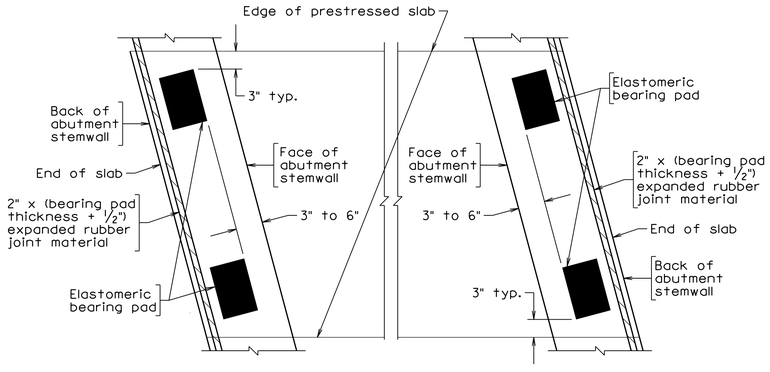
DESIGN BY: CJK DRAWN BY: SYT CHECKED BY: ALC	REVIEWED BY GSJ	FIELD NOTES	SCALE: As noted	DATE: 8/16/2024	SHEET: 15	DRAWING NO.: 0-29058



WATERPROOFING MEMBRANE DETAIL



END OF SLAB VIEW AT ABUTMENTS



PART PLAN AT ABUTMENT A PART PLAN AT ABUTMENT B

END BEARING DETAILS

Notes:

Details shown for 4'-0" x 18" prestressed concrete voided slab. Details similar for other widths and depths.

The Contractor shall adjust bearing pads or bridge seats as directed by the Engineer where prestressed members are not in full bearing with the pads or where the pads are not in full bearing with the seats. Cost of any adjustment shall be included in other bid items.

Procedure for sealing shear keys and pier joint utilizing Epoxy EP-7 and joint fabric:

Surface preparation shall be in accordance with Section 416 and application guidelines, Epoxy EP-7 and sand shall be in accordance with Section 431 of the Specifications. All Epoxy Type EP-7 shall be field applied (i.e., not applied at the plant).

1. Prepare deck surface.

2. Apply a coat of epoxy to the slab ends at the shear keys and then set the joint fabric into the wet epoxy. Allow enough joint fabric to provide for a 4" min. lap on top of slabs. Apply additional epoxy over the joint fabric to thoroughly wet the joint fabric. Remove any air pockets under the joint fabric using a short nap paint roller.

3. Apply the first coat of epoxy to slab surface over the grouted shear keys and set the joint fabric (continuous over pier joints) into the wet epoxy. Allow enough joint fabric to provide for a 4" min. lap down the slab ends. Apply additional epoxy over the joint fabric to thoroughly wet the joint fabric and provide sufficient free epoxy to engage the sand. Remove any air pockets under the joint fabric using a short nap paint roller. Apply sand and allow epoxy and sand to cure and then remove loose sand.

4. Apply the first coat of epoxy over pier joint and set the joint fabric into the wet epoxy. Apply additional epoxy over the joint fabric to thoroughly wet the joint fabric and provide sufficient free epoxy to engage the sand. Remove any air pockets under the joint fabric using a short nap paint roller. Apply sand and allow epoxy and sand to cure and then remove loose sand.

5. Apply a second coat of epoxy and sand over shear keys and pier joint. Remove loose sand after epoxy has cured.

6. Any epoxy spills outside the limits of the shear key treatment shall be covered with sand while the epoxy is still wet.

The cost of Epoxy Type EP-7, sand and joint fabric shall be included in the cost of the prestressed members.

Joint fabric from the VDOT Special Products Evaluation List under Joint Fabrics shall be used.

Notes for End of Slab Membrane Waterproofing:

The membrane shall be applied to the end of slabs at abutments at the vertical joint between exterior slabs and wingwalls and the horizontal joint as shown in END OF SLAB VIEW AT ABUTMENTS.

The membrane shall consist of a Type III preformed membrane system in accordance with Section 429 of the Specifications. The cost of the membrane shall be included in the cost of the prestressed members.

PRELIMINARY PLANS

THESE PLANS NOT TO BE USED FOR CONSTRUCTION

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

SURVEYED BY:
SUPERVISED BY:
DESIGNED BY:

L:\21\039\02 Richmond CIP on-call\Task 121 Broad Street over CSX ROW\DWG\References\Current\39962,121-203C-BD2436.dwg | Plotted on — | by Gregory Kozina

NOTES

1. Lot dimensions in parentheses are from deed.
2. Property owners correct as of December, 2018
3. Ordinance Number N/A
4. Adopted N/A
5. Accepted N/A

REFERENCES	REVISIONS

-LEGEND-

Existing Curb
- Curb & Gutter
- Sidewalk
- Basin
- Storm Sewer
- Sewer Manhole
- Sanitary Sewer (Gravity)
- Sanitary Sewer (Force Main)
- Gas Line
- Electric Line
- Telephone/Telegraph
- TV Cable
- Water Line
- Tree / Exist. Tree To Be Removed
- Property Line

Existing Curb Cut Ramp
- Coping
- Alley Crossing/Driveway
- Fire Hydrant
- Edge of Pavement
- Fence
- Cornerstone
- Property Pin
- Utility Pole

Proposed Sewer
- Manhole
- Basin
- Curb & Gutter
- Asphalt

Proposed Conc. Sidewalk
- Brick Sidewalk

Castings: Water Valve
- Water Meter
- Gas Drip
- Gas Valve
- Telephone Manhole
- Electric Manhole

Proposed Curb Cut Ramp
- Decorative Light
- Conduit
- Conduit (Conc. Encased)
- Retaining Wall

RICHMOND VIRGINIA

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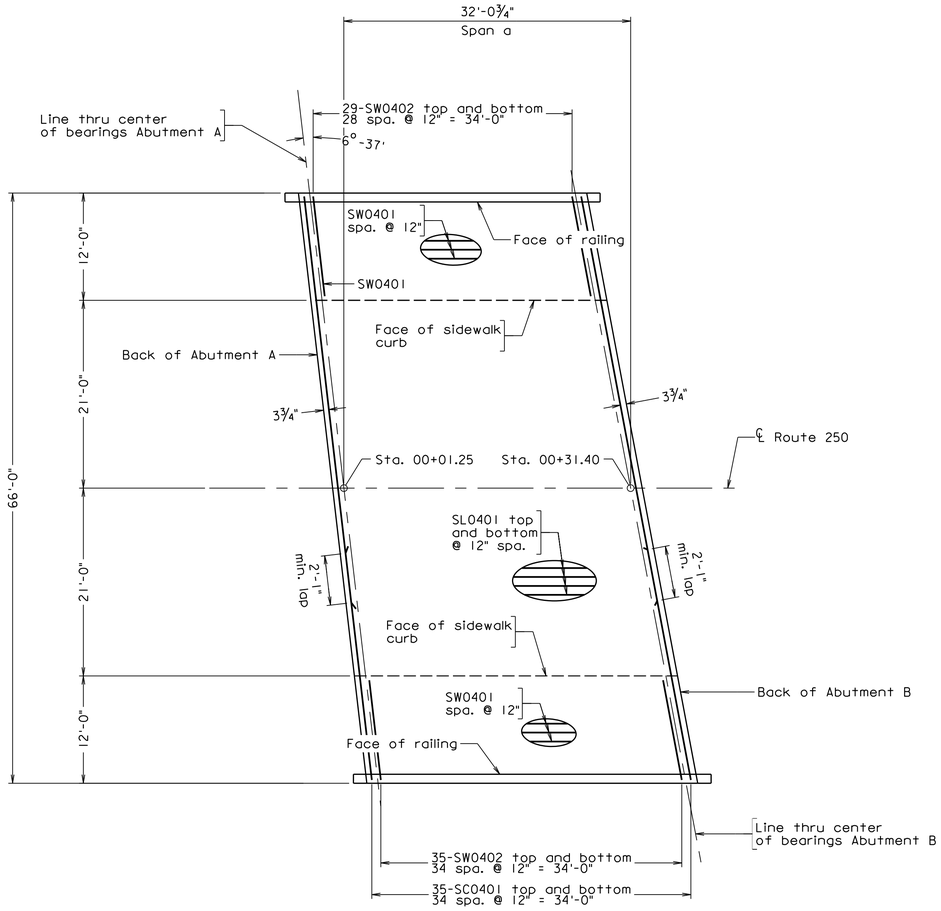
RICHMOND, VIRGINIA

TIMMONS GROUP
ENGINEERING | DESIGN | TECHNOLOGY

E. BROAD STREET OVER ABANDONED RR SPUR (127-1852)
SUPERSTRUCTURE REPLACEMENT

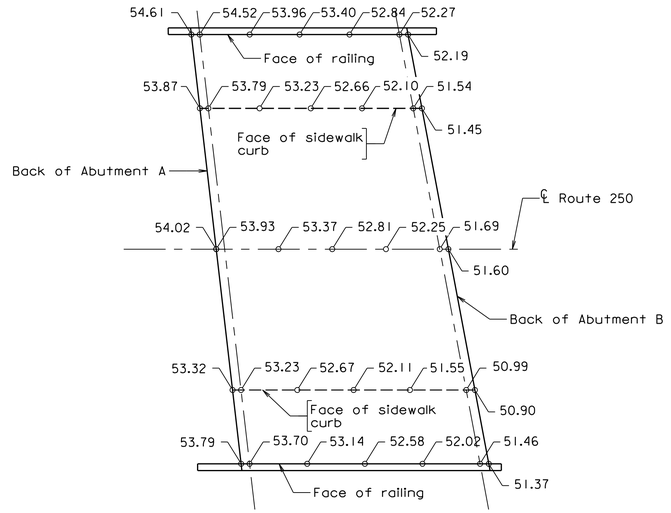
END BEARING AND WATERPROOFING DETAILS

DESIGN BY: CJK	REVIEWED BY GSJ	FIELD NOTES	SCALE	DATE	SHEET	DRAWING NO.
DRAWN BY: SYT			As noted	8/16/2024	16	0-29058
CHECKED BY: ALC						



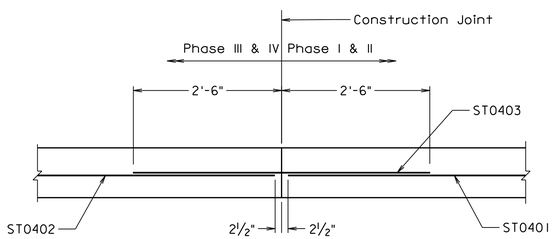
DECK SLAB PLAN

Scale: 1/8" = 1'-0"



DECK SLAB ELEVATIONS

Not to scale



PART SECTION AT CONSTRUCTION JOINT

Not to scale

PRELIMINARY PLANS

THESE PLANS NOT TO BE USED FOR CONSTRUCTION

SURVEYED BY:
SUPERVISED BY:
DESIGNED BY:

L:\21\0\39962 Richmond CIP on-call\Task 121 Broad Street over CSX ROW\DWG\References\Current\39962-121-203C-BD2436.dwg | Plotted on — | by Gregory Kostina

NOTES

1. Lot dimensions in parentheses are from deed.
2. Property owners correct as of December, 2018
3. Ordinance Number N/A
4. Adopted N/A
5. Accepted N/A

REFERENCES

REVISIONS

Existing Curb
- Curb & Gutter
- Sidewalk
- Basin
- Storm Sewer
- Sewer Manhole
- Sanitary Sewer (Gravity) SAN
- Sanitary Sewer (Force Main) FM
- Gas Line G
- Electric Line UGP
- Telephone/Telegraph UGT
- TV Cable UCATV
- Water Line W
- Tree / Exist. Tree To Be Removed
- Property Line

-LEGEND-

Existing Curb Cut Ramp
- Coping
- Alley Crossing/Driveway
- Fire Hydrant
- Edge of Pavement
- Fence
- Cornerstone
- Property Pin
- Utility Pole

Proposed Sewer
- Manhole
- Basin
- Curb & Gutter
- Asphalt

Proposed Conc. Sidewalk
- Brick Sidewalk

Castings:
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- Water Meter
- Gas Drip
- Gas Valve
- Telephone Manhole
- Electric Manhole

Proposed Curb Cut Ramp
- Decorative Light
- Conduit
- Conduit (Conc. Encased)
- Retaining Wall

RICHMOND VIRGINIA

DEPARTMENT OF PUBLIC WORKS
RICHMOND, VIRGINIA

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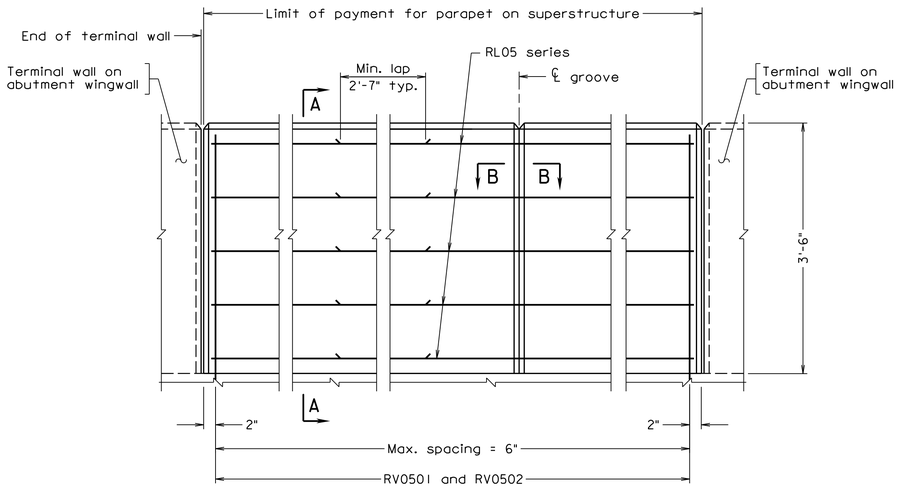
ENGINEERING | DESIGN | TECHNOLOGY

E. BROAD STREET OVER ABANDONED RR SPUR (127-1852)
SUPERSTRUCTURE REPLACEMENT

DECK SLAB PLAN AND ELEVATIONS

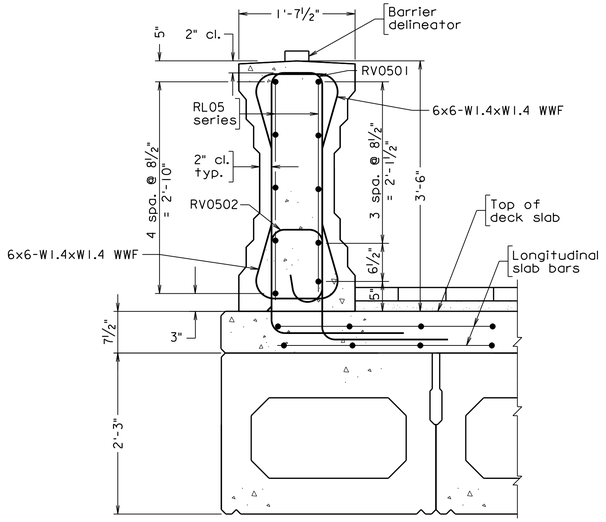
DESIGN BY: CJK DRAWN BY: SYT CHECKED BY: ALC	REVIEWED BY GSJ	FIELD NOTES	SCALE As noted	DATE 8/16/2024	SHEET 17	DRAWING NO. 0-29058



ABUTMENT A
Terminal wall on wingwall

ABUTMENT B
Terminal wall on wingwall

ELEVATION



SECTION A-A
Transverse rebars in deck slab not shown for clarity

Notes:

Plan dimensions shown are measured in the respective horizontal and vertical planes.

The Contractor shall determine all dimensions and details necessary for installation.

All concrete shall be Low Shrinkage Class A4 Modified.

All bevels for concrete shall be ¾".

The reinforcing steel shown has been detailed based on a standard ¼" per foot cross slope and for an 8½" slab depth. The Contractor shall adjust the reinforcing steel as required for other cross slopes and slab depths.

All reinforcing steel shall be Corrosion Resistant Reinforcing Steel, Class III.

For details and reinforcing steel schedule of terminal wall, see sheet 18.

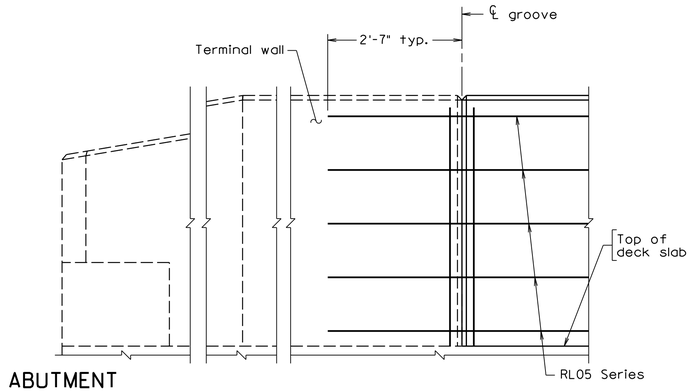
Use groove and deflection joint over pier without joint in deck slab.

Spacing of grooves is to be approximately 8'-0". If lighting standard is used (see bridge conduit system), groove shall be located approximately 4'-0" from centerline of light standard. Spacing of deflection joints shall not exceed three groove spaces.

Barrier delineator size, color and spacing shall be in accordance with the Specifications.

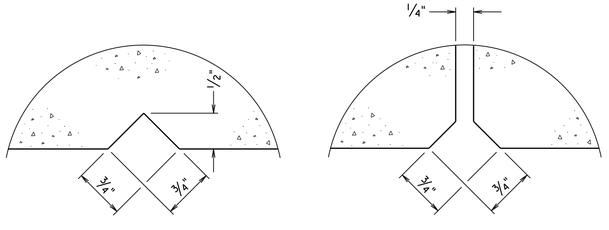
Parapet (including terminal wall) shall not be extruded if pedestrian fencing will be attached.

For elevations, sections, and architectural details, see sheet 19.



ABUTMENT

PART ELEVATION
Terminal wall on superstructure

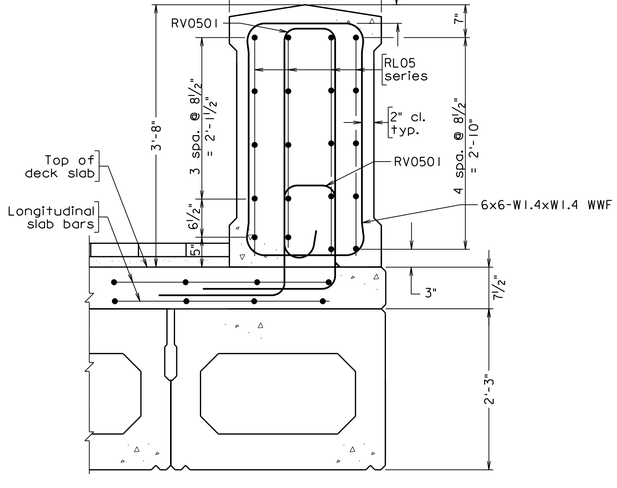


SECTION B-B
Full scale

Groove detail for both sides of parapet

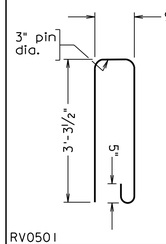
SECTION C-C
Full scale

Deflection joint detail for both sides of parapet

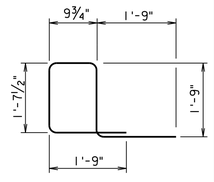


SECTION (A / 2018)
Transverse rebars in deck slab not shown for clarity

REINFORCING STEEL SCHEDULE



RV0501



RV0502

Mark	Size	No.	Length	Pin ø	Location
RL05	#5	·	·	—	Parapet
·	·	·	·	·	·
RV0501	#5	·	7'-4½"	3¾"	Parapet
RV0502	#5	·	7'-1½"	3¾"	Parapet

Dimensions in bending diagram are out-to-out of bars.

PRELIMINARY PLANS
THESE PLANS NOT TO BE USED FOR CONSTRUCTION

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

SURVEYED BY:
SUPERVISED BY:
DESIGNED BY:

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NOTES
1. Lot dimensions in parentheses are from deed.
2. Property owners correct as of December, 2018
3. Ordinance Number N/A
4. Adopted N/A
5. Accepted N/A

REFERENCES	REVISIONS

Existing Curb
- Curb & Gutter
- Sidewalk
- Basin
- Storm Sewer
- Sewer Manhole
- Sanitary Sewer (Gravity)
- Sanitary Sewer (Force Main)
- Gas Line
- Electric Line
- Telephone/Telegraph
- TV Cable
- Water Line
- Tree / Exist. Tree To Be Removed
- Property Line

--LEGEND:--

Existing Curb Cut Ramp
- Coping
- Alley Crossing/Driveway
- Fire Hydrant
- Edge of Pavement
- Fence
- Cornerstone
- Property Pin
- Utility Pole

Proposed Sewer
- Manhole
- Basin
- Curb & Gutter
- Asphalt

Proposed Conc. Sidewalk
- Brick Sidewalk

Castings:
- Water Valve
- Water Meter
- Gas Drip
- Gas Valve
- Telephone Manhole
- Electric Manhole

Proposed Curb Cut Ramp
- Decorative Light
- Conduit
- Conduit (Conc. Encased)
- Retaining Wall

RICHMOND VIRGINIA
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TIMMONS GROUP
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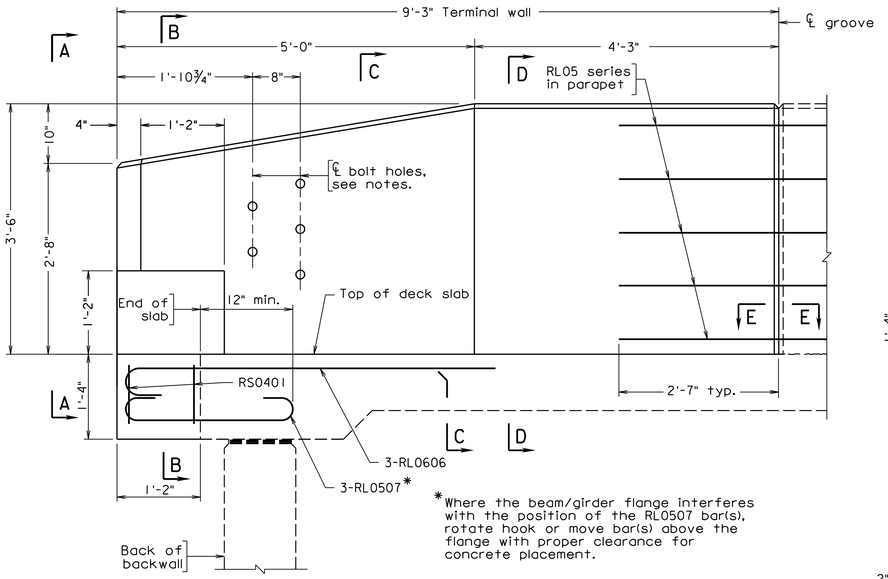
E. BROAD STREET OVER ABANDONED RR SPUR (127-1852)
SUPERSTRUCTURE REPLACEMENT

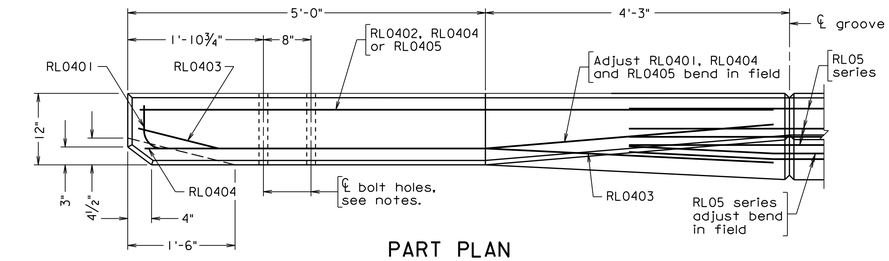
HISTORICAL CONCRETE PARAPET

DESIGN BY: GJK DRAWN BY: SYT CHECKED BY: ALC	REVIEWED BY GSJ	FIELD NOTES	SCALE As noted	DATE 8/16/2024	SHEET 18	DRAWING NO. 0-29058

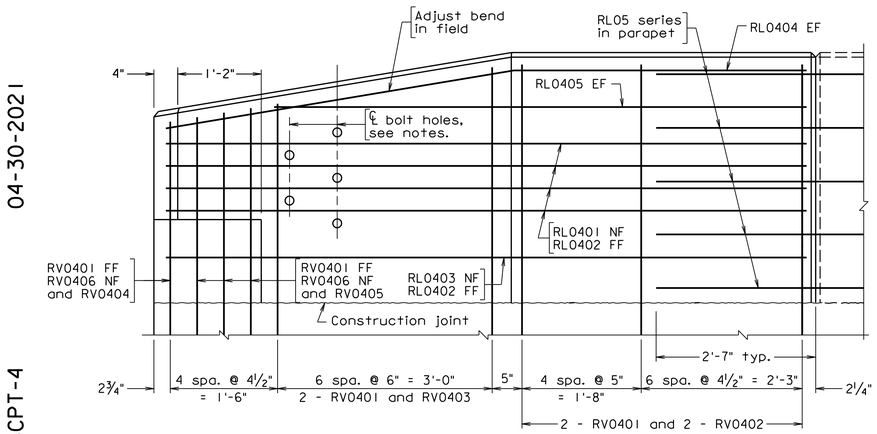


*Where the beam/girder flange interferes with the position of the RL0507 bar(s), rotate hook or move bar(s) above the flange with proper clearance for concrete placement.

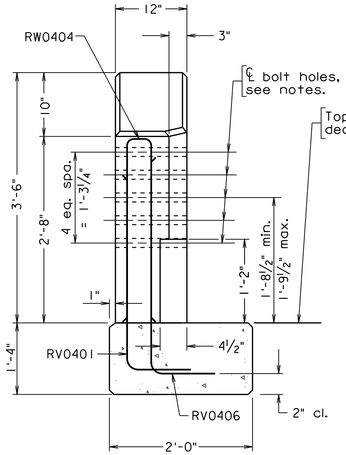
DECK SLAB EXTENSION ABUTMENT



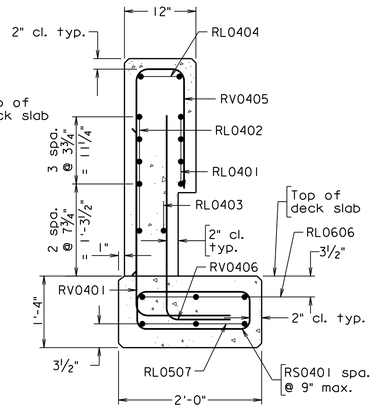
PART PLAN



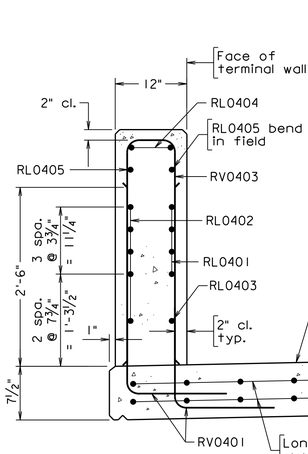
TERMINAL WALL - ELEVATION



VIEW A-A

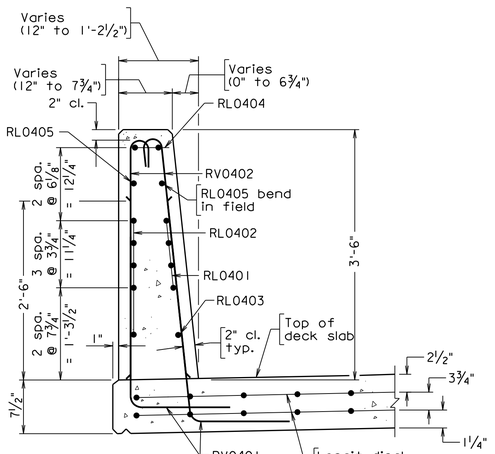


SECTION B-B



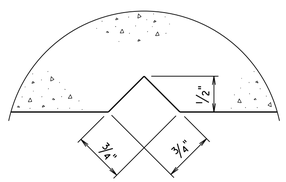
SECTION C-C

Transverse slab bar not shown for clarity



SECTION D-D

Transverse bars in deck slab and RL05 series extended from parapet not shown for clarity



SECTION E-E

Full scale

Groove detail for both sides of parapet

Notes:

Plan dimensions shown are measured in the respective horizontal and vertical planes.

The Contractor shall determine all dimensions and details necessary for installation.

All concrete shall be Low Shrinkage Class A4 Modified.

All bevels for concrete shall be ¾".

All reinforcing steel shall be Corrosion Resistant Reinforcing Steel, Class III.

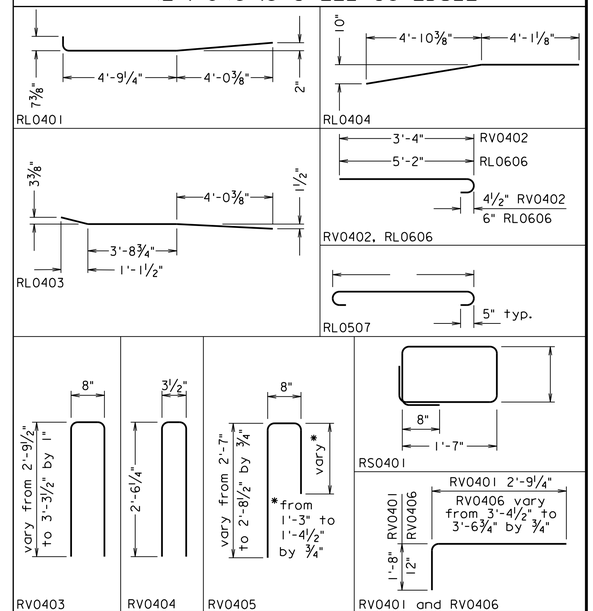
For details and reinforcing steel schedule of parapet on superstructure, see sheet 18.

Each terminal wall shall be cast as one piece.

Terminal walls are detailed to take guardrail attachment for MGS.

Holes, where shown, shall be formed with sleeves of 1¼" diameter nominal pipe.

REINFORCING STEEL SCHEDULE



Mark	Size	No.	Length	Pin ø	Location
RL0401	#4		9'-5"	6"	Terminal wall
RL0402	#4		8'-11"	——	Terminal wall
RL0403	#4		8'-11⅛"	3"	Terminal wall
RL0404	#4		9'-0⅜"	3"	Terminal wall
RL0405	#4		7'-7½"	——	Terminal wall
RL0606	#6		5'-10½"	4½"	Terminal wall end support
RL0507	#5			3¾"	Terminal wall end support
RS0401	#4			3¾"	Terminal wall end support
RV0401	#4		4'-4"	——	Terminal wall
RV0402	#4		3'-10"	3"	Terminal wall
RV0403	#4		from 6'-1" to 7'-1"	3"	Terminal wall
RV0404	#4		5'-2"	3"	Terminal wall
RV0405	#4		from 4'-4" to 4'-7"	3"	Terminal wall
RV0406	#4		from 4'-4" to 4'-7"	3"	Terminal wall

Dimensions in bending diagram are out-to-out of bars.

PRELIMINARY PLANS

THESE PLANS NOT TO BE USED FOR CONSTRUCTION

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

NOTES

1. Lot dimensions in parentheses are from deed.
2. Property owners correct as of December, 2018
3. Ordinance Number N/A
4. Adopted N/A
5. Accepted N/A

REFERENCES | REVISIONS

-LEGEND:-

Existing Curb
- Curb & Gutter
- Sidewalk
- Basin
- Storm Sewer
- Sewer Manhole
- Sanitary Sewer (Gravity)
- Sanitary Sewer (Force Main)
- Gas Line
- Electric Line
- Telephone/Telegraph
- TV Cable
- Water Line
- Tree / Exist. Tree To Be Removed
- Property Line

Existing Curb Cut Ramp
- Coping
- Alley Crossing/Driveway
- Fire Hydrant
- Edge of Pavement
- Fence
- Cornerstone
- Property Pin
- Utility Pole

Proposed Sewer
- Manhole
- Basin
- Curb & Gutter
- Asphalt

Proposed Conc. Sidewalk
- Brick Sidewalk

Castings:
- Water Valve
- Water Meter
- Gas Drip
- Gas Valve
- Telephone Manhole
- Electric Manhole

Proposed Curb Cut Ramp
- Decorative Light
- Conduit
- Conduit (Conc. Encased)
- Retaining Wall

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RICHMOND, VIRGINIA

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E. BROAD STREET OVER ABANDONED RR SPUR (127-1852)
SUPERSTRUCTURE REPLACEMENT

42" SSCP TERMINAL WALL (SSCPT-2)

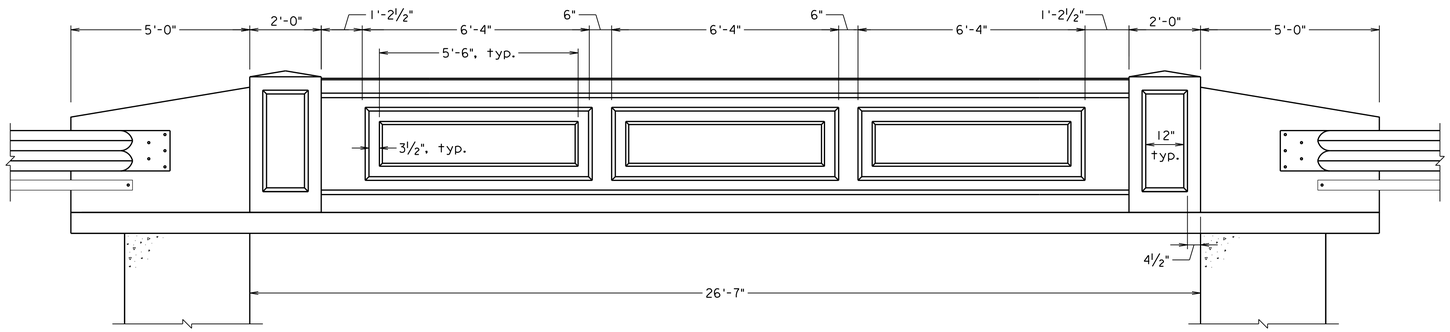
DESIGN BY: CJK	REVIEWED BY GSJ	FIELD NOTES	SCALE	DATE	SHEET	DRAWING NO.
DRAWN BY: SYT			As noted	8/16/2024	19	0-29058
CHECKED BY: ALC						

04-30-2021

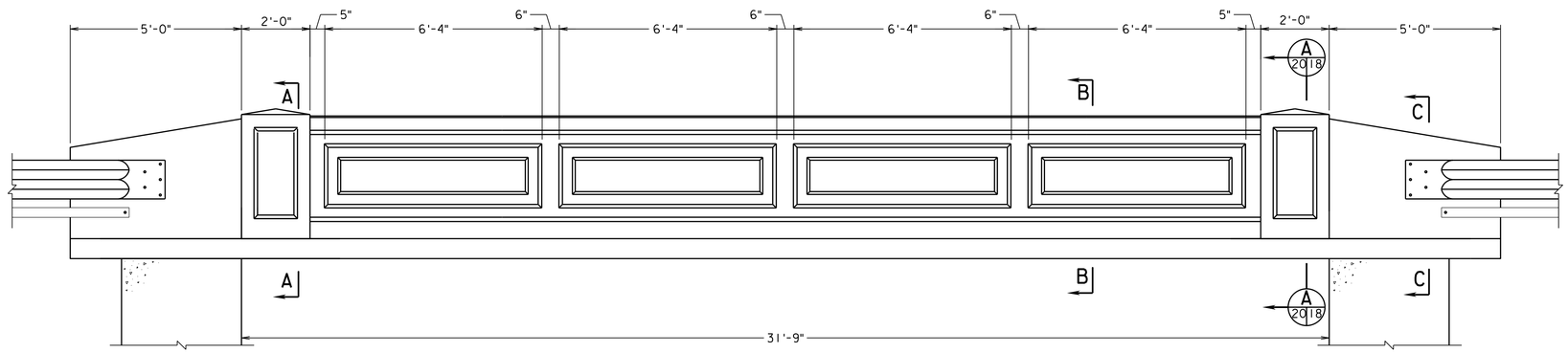
SSCPT-4

SURVEYED BY:
SUPERVISED BY:
DESIGNED BY:

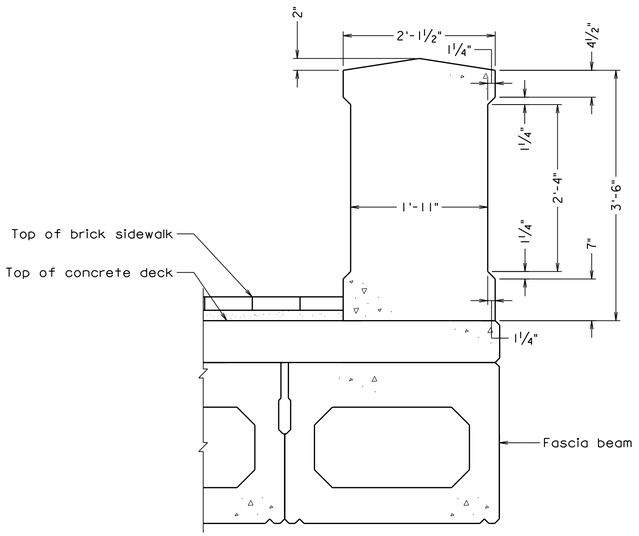
L:\21\03\0962 Richmond CIP on-call\Task 121 Broad Street over CSX ROW\DWG\Reference\Current\03962.121-203C-BD2436.dwg | Plotted on — | by Gregory Kotha



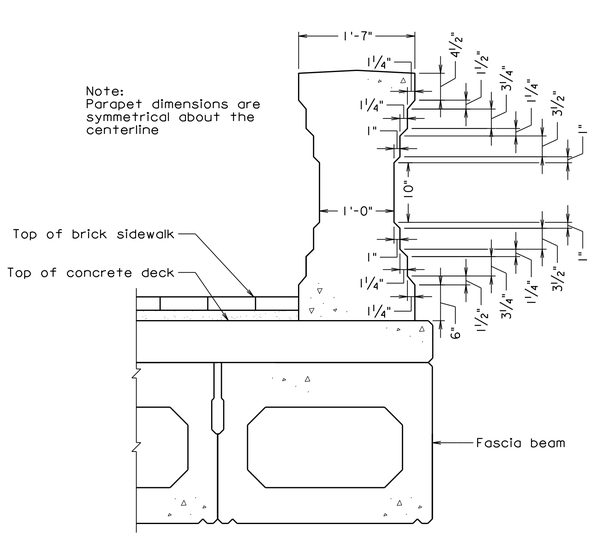
North Elevation Interior Face



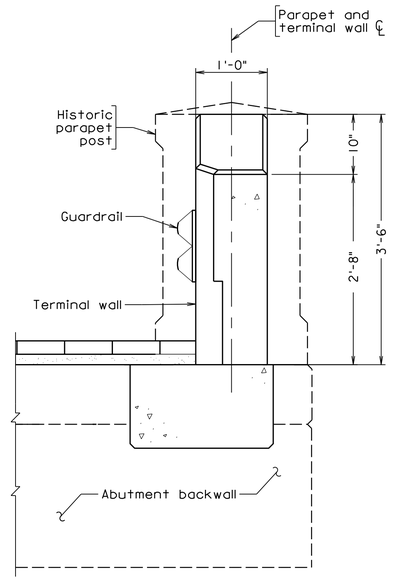
South Elevation Interior Face



Section A-A



Section B-B



Section C-C

Note:
The appearance of the parapets emulates the orginial north parapet. The new parapets will both have this appearance to restore the original look of the bridges as the original south parapet was removed in the 1970's. The intent of this parapet is to replicate, to the closest extent possible, the historic existing parapet.

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

PRELIMINARY PLANS

THESE PLANS NOT TO BE USED FOR CONSTRUCTION

SURVEYED BY:
SUPERVISED BY:
DESIGNED BY:

L:\2110\39962 Richmond CIP on-call\Task 121 Broad Street over CSX ROW\DWG\References\Current\39962.121-2030-B02436.dwg | Plotted on — | by Gregory Koslna

NOTES

1. Lot dimensions in parentheses are from deed.
2. Property owners correct as of December, 2018
3. Ordinance Number N/A
4. Adopted N/A
5. Accepted N/A

REFERENCES	REVISIONS

Existing Curb
- Curb & Gutter
- Sidewalk
- Basin
- Storm Sewer
- Sewer Manhole
- Sanitary Sewer (Gravity)
- Sanitary Sewer (Force Main)
- Gas Line
- Electric Line
- Telephone/Telegraph
- TV Cable
- Water Line
- Tree / Exist. Tree To Be Removed
- Property Line

-LEGEND-

Existing Curb Cut Ramp
- Coping
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- Fire Hydrant
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- Cornerstone
- Property Pin
- Utility Pole

Proposed Sewer
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Proposed Conc. Sidewalk
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Proposed Curb Cut Ramp
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- Conduit (Conc. Encased)
- Retaining Wall

RICHMOND VIRGINIA

DEPARTMENT OF PUBLIC WORKS
RICHMOND, VIRGINIA

TIMMONS GROUP
ENGINEERING | DESIGN | TECHNOLOGY

E. BROAD STREET OVER ABANDONED RR SPUR (127-1852)
SUPERSTRUCTURE REPLACEMENT

HISTORICAL CONCRETE PARAPET ELEVATIONS AND SECTIONS

DESIGN BY: GJK	REVIEWED BY GSJ	FIELD NOTES	SCALE	DATE	SHEET	DRAWING NO.
DRAWN BY: SYT			As noted	8/16/2024	20	0-29058
CHECKED BY: ALC						

GENERAL CONSTRUCTION NOTES

1. THE CONTRACTOR SHALL PERFORM ALL WORK AND CONSTRUCTION OF ALL ITEMS WITHIN THE EXISTING CITY OF RICHMOND RIGHT-OF-WAY. CONTRACTOR SHALL BE RESPONSIBLE TO OBTAIN AN APPROVED WORK IN STREETS PERMIT (WISP).

2. THIS PROJECT TO BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST APPLICABLE STANDARDS AND SPECIFICATIONS OF THE CITY OF RICHMOND, THE LATEST STANDARDS AND SPECIFICATIONS OF THE VIRGINIA DEPARTMENT OF TRANSPORTATION (VDOT), AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), AND AS AMENDED BY CONTRACT PROVISIONS AND THE COMPLETE PAPER COPY OF THE PLAN ASSEMBLY.

3. PRIOR TO CONSTRUCTION OR EXCAVATION, THE CONTRACTOR SHALL ASSUME THE RESPONSIBILITY OF LOCATING ANY UNDERGROUND UTILITIES (PUBLIC OR PRIVATE) THAT MAY EXIST WITHIN THE AREA OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING, AT THE CONTRACTOR'S EXPENSE, ANY EXISTING UTILITIES DAMAGED DURING CONSTRUCTION.

4. THE CONTRACTOR SHALL CALL "MISS UTILITY" 48 HOURS PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL VERIFY THE LOCATION AND ELEVATION OF ALL UNDERGROUND UTILITIES SHOWN ON PLANS IN AREAS OF CONSTRUCTION PRIOR TO STARTING WORK. THE CONTRACTOR SHALL CONTACT THE ENGINEER IMMEDIATELY IF THE LOCATION OR ELEVATION OF KNOWN UTILITIES IS DIFFERENT FROM THAT SHOWN ON THE PLANS, IF THERE APPEARS TO BE A CONFLICT, AND/OR UPON DISCOVERY OF ANY UTILITY THAT IS NOT SHOWN ON PLAN.

5. ALL UTILITY SERVICE INTERRUPTIONS SHALL BE KEPT AT AN ABSOLUTE MINIMUM. THE CONTRACTOR SHALL PROVIDE THE CITY WITH A DETAILED PLAN AND SCHEDULE FOR SERVICE INTERRUPTIONS A MINIMUM OF 72 HOURS IN ADVANCE. THE CONTRACTOR SHALL ENSURE THAT SERVICE IS PROVIDED TO SURROUNDING PROPERTIES DURING CONSTRUCTION. THE AFFECTED PROPERTY OWNERS SHALL BE NOTIFIED 48 HOURS IN ADVANCE OF SERVICE INTERRUPTIONS.

6. EXISTING UTILITIES THAT ARE IN CONFLICT AND MAY NEED TO BE REMOVED OR RELOCATED WILL BE COORDINATED BY THE CITY. RELOCATIONS OF CITY FACILITIES WILL BE ADMINISTERED BY THE CITY DEPARTMENT OF PUBLIC UTILITIES (DPU). IN CASE OF EMERGENCIES OF UTILITY BREAKAGE/CONFLICT, CONTACT:
   - 6.1. GAS - 646-8300, 646-8309, 646-8310
   - 6.2. WATER - 646-8300, 646-8309, 646-8310
   - 6.3. SEWER - 646-8600, 646-8426
   - 6.4. POWER - 888-667-3000

7. ALL UTILITY CLEARANCES ARE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE OBTAINED PRIOR TO CONSTRUCTION. EXCAVATION WITHIN 1.5' OF GAS OR ELECTRIC LINES SHALL BE PERFORMED BY HAND.

8. THE CONTRACTOR SHALL ADEQUATELY SUPPORT, AND BE RESPONSIBLE FOR, ALL UTILITY LINES EXPOSED AS A RESULT OF CONSTRUCTION ACTIVITY SHOWN ON THE PLANS.

9. ALL UTILITIES THAT ARE WITHIN THE CONSTRUCTION AREA SHALL BE RAISED TO GRADE. THE CONTRACTOR SHALL ENSURE THAT ALL VALVES, DRIPS, PURGES, MANHOLES, OR OTHER BOXES ASSOCIATED WITH ALL UTILITIES IN THE CONSTRUCTION AREA ARE ADJUSTED PROPERLY TO THE NEW GRADE.

10. DURING EXCAVATION FOR INSTALLATION, THE CONTRACTOR SHALL TAKE CARE TO ENSURE THAT NO UTILITIES OR MAIN LINES ARE EXPOSED OR DAMAGED DURING THE EXCAVATION PROCESS. ANY VEGETATION OR LANDSCAPING THAT IS TO BE PLANTED SHALL NOT BE PLACED DIRECTLY OVER ANY UTILITY MAIN.

11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ANY AND ALL NECESSARY CONSTRUCTION PERMITS, AND FURNISH COPIES TO THE ENGINEER, PRIOR TO COMMENCING CONSTRUCTION ACTIVITY.

12. ALL WORK SHALL BE SUBJECT TO INSPECTION BY DESIGNATED CITY OFFICIALS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFICATION TO THE CHIEF INSPECTOR AND THE CITY TRAFFIC ENGINEERING DIVISION 72 HOURS PRIOR TO THE START OF WORK.

13. VERTICAL DATUM IS BASED ON MEAN SEA LEVEL (NAVD 88). HORIZONTAL CONTROLS ARE BASED ON VIRGINIA STATE PLANE COORDINATE GRID, SOUTH ZONE, NORTH AMERICAN DATUM OF 1983 (NAD 83).

14. ANY DEVIATION FROM THE APPROVED PLANS AND/OR STANDARDS AND SPECIFICATIONS MUST BE APPROVED BY THE CITY TRAFFIC ENGINEERING DIVISION IN WRITING PRIOR TO START OF WORK. IF A CONFLICT IS FOUND TO EXIST, THE CONTRACTOR SHALL NOTIFY THE CITY TRAFFIC ENGINEERING DIVISION BEFORE ANY WORK IS STARTED.

15. IN ACCORDANCE WITH HANDICAP ACCESSIBILITY REQUIREMENTS, ALL APPLICABLE CODES AND REQUIREMENTS FOR ACCESSIBILITY FOR DISABLED PERSONS SHALL BE STRICTLY COMPLIED WITH.

16. DEMOLITION OF EXISTING ASPHALT PAVEMENT TO BE IN ACCORDANCE WITH CITY OF RICHMOND SPECIFICATIONS.

17. THE CONTRACTOR SHALL SUBMIT A SEPARATE INTERSECTION TRANSITION PLAN TO THE CITY OF RICHMOND TRAFFIC ENGINEERING DIVISION A MINIMUM OF 48 HOURS PRIOR TO COMMENCEMENT OF INTERSECTION CONSTRUCTION. INCLUDED IN THIS PLAN SHALL BE TRAFFIC MAINTENANCE PROCEDURES TO BE USED DURING CONSTRUCTION. SEE TRAFFIC MANAGEMENT PLAN NARRATIVE ON THIS SHEET.

18. INSTALLATION DIMENSIONS SHOWN WITHIN THE PLANS ARE TYPICAL. MODIFICATIONS SHALL BE MADE AS REQUIRED, UNDER APPROVAL FROM THE INSPECTOR AND THE ENGINEER.

19. DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE CITY OF RICHMOND OR THE INSPECTOR.

20. THE CONTRACTOR SHALL PROVIDE ACCESS THROUGH THE SITE AS DIRECTED BY THE ENGINEER AT ALL TIMES DURING CONSTRUCTION AND SHALL ENSURE THE SAFETY OF PEDESTRIANS/BICYCLISTS FROM VEHICULAR TRAFFIC AND CONSTRUCTION HAZARDS.

21. THE CONTRACTOR SHALL NOTIFY THE SURVEYS DIVISION OF THE CITY OF RICHMOND'S DEPARTMENT OF PUBLIC WORKS (646-0436 OR 646-5404) AT LEAST 48 HOURS PRIOR TO ANY ACTIVITIES WHICH MAY DISTURB THE LOCATION OR THE STABILITY OF ANY RIGHT-OF-WAY CORNERSTONE OR MARKER. THE CONTRACTOR WILL COORDINATE HIS WORK WITH THE SURVEYS DIVISION REPRESENTATIVE REGARDING THE PLACEMENT OR REPLACEMENT OF R/W CORNERSTONES OR MARKERS IN ANY AREAS BEING AFFECTED BY CONSTRUCTION. ALL PLACEMENT OR REPLACEMENT OF R/W CORNERSTONES OR MARKERS WILL BE PERFORMED BY SURVEYS DIVISION. THE CONTRACTOR WILL BE RESPONSIBLE FOR REIMBURSING THE CITY FOR ANY COSTS ASSOCIATED WITH REPLACING ANY R/W CORNERSTONES OR MARKERS THAT ARE DISTURBED WITHOUT GIVING PROPER NOTIFICATION.

22. ALL STREET EXCAVATION AND/OR RESTORATION SHALL BE DONE IN ACCORDANCE WITH THE CITY OF RICHMOND'S RIGHT OF WAY EXCAVATION AND RESTORATION MANUAL.

23. CONSTRUCTION SHALL BE PROHIBITED ON STREETS BETWEEN THE HOURS OF 7:00 AM TO 9:00 AM AND 4:00 PM TO 6:00 PM, MONDAY THROUGH FRIDAY.

24. IF THE CONTRACTOR WISHES TO PERFORM WORK DURING EVENING HOURS AND/OR WEEKENDS, HE MUST FIRST RECEIVE WRITTEN APPROVAL FROM THE CITY PROJECT MANAGER.

25. CLEARING AND GRUBBING SHALL BE CONFINED TO THOSE AREAS NEEDED FOR CONSTRUCTION. NO TREES OR SHRUBS IN UN-GRADED AREAS SHALL BE CUT WITHOUT THE PERMISSION OF THE CITY PROJECT MANAGER.

26. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLING BASIC EROSION AND SEDIMENT CONTROLS AS NECESSARY. THIS INCLUDES INLET PROTECTION FOR ALL DROP INLETS THAT ARE DOWNSTREAM OF THE PROJECT AREAS THAT INCLUDE SOIL DISTURBANCE AND SILT FENCE FOR ANY LAND DISTURBANCE THAT OCCURS OUTSIDE OF THE ROADWAY. THE CONTRACTOR WILL REFERENCE THE EROSION AND SEDIMENT CONTROL NOTES LOCATED WITHIN THIS SHEET.

27. CONSTRUCTION STAKING SHALL BE DONE ONLY BY A PROFESSIONAL ENGINEER OR LAND SURVEYOR REGISTERED IN THE COMMONWEALTH OF VIRGINIA. THE ENGINEER/SURVEYOR EMPLOYED BY THE CONTRACTOR SHALL BE RESPONSIBLE FOR PREPARATION OF A DETAILED STAKING PLAN AND HAVING THAT PLAN REVIEWED AND APPROVED PRIOR TO START OF WORK BY THE ENGINEER.

28. THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE ADEQUATE AND POSITIVE SITE DRAINAGE THROUGHOUT CONSTRUCTION. ANY SUBGRADE SOILS WHICH HAVE BEEN WEAKENED DUE TO INADEQUATE DRAINAGE, SATURATION AND/OR DISTURBANCE BY CONSTRUCTION SHALL BE UNDER-CUT AND REPLACED WITH COMPACTED STRUCTURAL FILL AT NO ADDITIONAL COST TO THE CITY.

29. WHENEVER THE CONTRACTOR'S OPERATIONS AFFECT VEHICULAR OR PEDESTRIAN TRAFFIC, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF ANY AND ALL SAFETY CONTROL DEVICES IN ACCORDANCE WITH THE VDOT WORK AREA PROTECTION MANUAL AND AS DEEMED NECESSARY BY THE CITY OF RICHMOND AND THE ENGINEER.

30. ALL SIGNS, MAILBOXES, AND MARKINGS IN CONFLICT WITH ROADWAY CONSTRUCTION SHALL BE REMOVED AND RESET. ANY SIGNS OR MARKINGS NOT RESET SHALL REMAIN PROPERTY OF THE CITY OF RICHMOND.

31. NO LANDSCAPING OF ANY TYPE SHALL BE PLACED WITHIN A THREE FOOT RADIUS OF ANY FIRE HYDRANT. LANDSCAPING IN THE AREA OF FIRE HYDRANTS SHALL BE OF THE TYPE THAT WILL NOT ENCROACH ON THE REQUIRED THREE FOOT CLEAR RADIUS ON MATURITY OF GROWTH.

32. AT THE END OF EACH WORK DAY, THE CONTRACTOR SHALL ENSURE A MINIMUM 6:1 PAVEMENT WEDGE EXISTS AT THE EDGE OF ANY MILLED OR SAW-CUT PAVEMENT EDGES. THE EDGE SHALL BE DELINEATED BY GROUP II CHANNELIZING DEVICES IN ACCORDANCE WITH THE VDOT WORK AREA PROTECTION MANUAL.

33. ALL BORROW EXCAVATION AND EMBANKMENT MATERIALS USED TO CONSTRUCT EMBANKMENTS FOR THIS PROJECT SHALL MEET A MINIMUM CBR VALUE OF 10.0 AND SHALL BE PLACED AND COMPACTED IN ACCORDANCE WITH SECTION 303.04(h) OF THE 2016 ROAD AND BRIDGE SPECIFICATIONS OR AS APPROVED BY THE CITY PROJECT MANAGER.

34. IF FIELD CONDITIONS ARE FOUND TO VARY FROM SURVEY DATA OR FROM WHAT IS SHOWN ON THE PLANS, THE CONTRACTOR IS TO NOTIFY THE THE CITY OF RICHMOND TRAFFIC ENGINEERING DIVISION AND THE ENGINEER OF RECORD IMMEDIATELY, PRIOR TO PROCEEDING WITH CONSTRUCTION.

35. THE INTENT OF THE PROPOSED ROADWAY TYPICAL SECTIONS, CROSS SECTIONS AND PROFILES IS TO REPRESENT A MILLING AND OVERLAY OPERATION IN THE AREAS DEPICTED AS SUCH ON THE PLAN SHEETS. CONTRACTOR SHALL USE STANDARD MILLING AND OVERLAY PROCEDURE TO RESURFACE THE ROADWAY AND MATCH EXISTING GRADES.

36. WHEN STANDARD CITY OF RICHMOND GRANITE CURB IS SPECIFIED ON A RADIUS (SUCH AS AT A STREET INTERSECTION), THE ENGINEER MAY APPROVE A DECREASE IN THE CROSS-SLOPE OF THE GUTTER TO FACILITATE PROPER DRAINAGE.

37. ALL WORK TO BE PERFORMED WITHIN EXISTING CITY OF RICHMOND RIGHT OF WAY.

38. ALL REFERENCES TO STD. OR STANDARD ITEMS IN PLAN ASSEMBLY REFER TO VDOT STANDARD ITEMS FOUND IN VDOT ROAD AND BRIDGE STANDARDS (LATEST VERSION).

39. LIMITS OF SIDEWALK AND CURB CONSTRUCTION ARE MINIMUM LIMITS. CONTRACTOR SHALL TIE TO NEAREST JOINT OR CREATE NO LESS THAN A 4' GAP BETWEEN JOINTS ON FINAL CONCRETE SIDEWALK OR CURB.

40. THE CONTRACTOR SHALL SET UTILITIES TO GRADE AS NEEDED. THE CONTRACTOR SHALL ROTATE MANHOLE FRAMES AND COVERS TO AVOID CONFLICTS WITH PROPOSED CURB OR OTHER SIDE FEATURES.

41. CURB RAMPS AND THEIR EXTENTS AS SHOWN IN THESE PLANS ARE APPROXIMATE. CONTRACTOR SHALL ENSURE THAT ALL CURBS RAMPS ARE COMPLIANT WITH THE TECHNICAL REQUIREMENTS SET FORTH IN THE PROWAG GUIDELINES.

42. DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE CITY OF RICHMOND.

THIS PROJECT IS TO BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST VERSIONS OF VDOT'S 2020 ROAD AND BRIDGE SPECIFICATIONS, 2016 ROAD AND BRIDGE STANDARDS, 2011 VIRGINIA WORK AREA PROTECTION MANUAL - REVISION2, THE LATEST VERSION OF THE MUTCD, AND AS AMENDED BY THE CONTRACT PROVISIONS.

PAVEMENT MARKING AND SIGNING NOTES

1. THE CONTRACTOR SHALL PREPARE THE PAVEMENT SURFACE FOR PROPER ADHESION. ANY SWEEPING OR REMOVAL OF DEBRIS, GRAVEL, DIRT, OR OTHER FOREIGN MATERIALS SHALL BE CONSIDERED AS INCIDENTAL TO THE INSTALLATION.

2. THE CONTRACTOR SHALL REMOVE COMPLETELY, ALL PREVIOUS PAVEMENT MARKINGS, WHICH, IN THE OPINION OF THE PROJECT MANAGER, CONFLICT WITH THE NEW PAVEMENT MARKINGS.

3. UNLESS OTHERWISE SPECIFIED, THE BASIS OF MEASUREMENT SHALL BE ALONG THE LONGITUDINAL CENTERLINE OF PAVEMENT MARKINGS. MEASUREMENT FOR LEGENDS SHALL BE PER MESSAGE, COMPLETE AND IN PLACE.

4. PRIOR TO APPLICATION, THE CONTRACTOR SHALL FIELD CHECK AND LOCATE ALL PAVEMENT MARKINGS TO THE SATISFACTION OF THE PROJECT MANAGER.

5. ALL MARKINGS IMPROPERLY APPLIED OR LOCATED SHALL BE REMOVED AND CORRECTLY REAPPLIED, AT THE CONTRACTOR'S EXPENSE.

6. THERMOPLASTIC PAVEMENT MARKINGS SHALL NOT BE INSTALLED AT ANYTIME WITHIN A FORTY-EIGHT (48) HOUR PERIOD FOLLOWING A RAINFALL.

7. MARKING MATERIAL SHALL BE APPLIED AT THE SPECIFIED DIMENSIONS AND AT A RATE TO RESULT IN A MARKING THICKNESS OF 90 MILS ± 5 MILS (NOT INCLUDING GLASS BEAD TOP DRESSING).

8. THE MARKINGS SHALL BE PROVIDED IN SPECIFIED WIDTHS AND SHAPES. PREFORMED WORKS AND SYMBOLS SHALL CONFORM TO THE APPLICABLE SHAPES AND SIZES OUTLINED IN THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" FOR STREETS AND HIGHWAYS, LATEST EDITION.

9. THE CONTRACTOR SHALL ENSURE THAT A 4" DIAMETER PVC SLEEVE IS PLACED IN IMPERVIOUS AREAS SUCH AS CONCRETE SIDEWALKS TO PERMIT THE INSTALLATION OF GROUND-MOUNTED SIGNS AT THESE LOCATIONS.

10. UNLESS OTHERWISE SPECIFIED ON THE PLANS OR IN CONTRACT DOCUMENTS, ALL PAVEMENT MARKINGS AND LEGENDS IN THE PUBLIC RIGHT-OF-WAY SHALL BE IN ACCORDANCE WITH CITY OF RICHMOND AND VDOT SPECIFICATIONS.

11. SIGNS SHALL BE ERECTED ON POSTS WHERE DESIGNATED IN ACCORDANCE WITH THE PAVEMENT MARKING AND SIGNING PLANS. THEY SHALL CONFORM TO THE CURRENT VDOT SPECIFICATIONS AND STANDARDS. EXISTING SIGNS NOT NEEDED SHALL BE REMOVED AND TURNED OVER TO THE DEPARTMENT OF PUBLIC WORKS DESIGNATED LOCATION.

12. STOP BAR PAVEMENT MARKINGS, SOLID WHITE LINES BEING 2' WIDE, SHALL COMPLETELY TRAVERSE ALL TRAFFIC LANES IN THE APPROACHING DIRECTION.

13. CENTERLINES ON UNDIVIDED ROADWAYS SHALL BE SOLID DOUBLE YELLOW LINES, 4" WIDE, SEPARATED BY A 4" SPACE

STORMWATER MANAGEMENT SUMMARY

THIS PROJECT UTILIZES THE TECHNICAL CRITERIA OF PART IIB (9VAC25-870-62 TO 9VAC25-870-92) FOR DETERMINING ITS POST-DEVELOPMENT STORMWATER MANAGEMENT DESIGN.

THE TOTAL PROJECT DISTURBANCE IS 43,280 SF, WHICH IS LESS THAN ONE (1) ACRE.

THE PROJECT IS ENTIRELY OUTSIDE ANY MAPPED RPA'S OR RMA'S.

GIVEN THESE CIRCUMSTANCES, THE PROJECT IS EXEMPT FROM THE VIRGINIA STORMWATER MANAGEMENT ACT UNDER 62.1-44.15:34.C.4.

THEREFORE, THE STORMWATER MANAGEMENT DESIGN WILL ADHERE TO THE MINIMUM STANDARDS OF 9VAC25-840.

ALL DRAINAGE INLETS WITHIN THE PROJECT AREA TO HAVE SURROUNDING PAVEMENT RESHAPED TO ENSURE PROPER DRAINAGE FLOW TO THE EXISTING STORMWATER SYSTEM.

SEWER

- SAN — EXIST. SANITARY SEWER
- SAN — PROP. SANITARY SEWER
- EXIST. SANITARY MANHOLE
- PROP. SANITARY MANHOLE
- EXIST. CLEAN OUT
- PROP. CLEAN OUT

WATER

- W — EXIST. WATER LINE
- W — PROPOSED WATER LINE
- WV — EXIST. WATER VALVE
- WM — EXIST. WATER METER
- FH — EXIST. FIRE HYDRANT
- EXIST. WATER LINE PLUG
- EXIST. SPRINKLER BOX

MISCELLANEOUS UTILITIES

- EXIST. LIGHT POLE
- EXIST. UTILITY POLE
- EXIST. GUY WIRE
- OHP — EXIST. OVERHEAD ELECTRIC
- UGP — EXIST. UNDERGROUND ELECTRIC LINE
- EXIST. GAS VALVE
- EXIST. GAS METER
- G — EXIST. GAS LINE
- EXIST. TELEPHONE PEDESTAL
- UGT — EXIST. UNDERGROUND TELEPHONE LINE
- UGT — EXIST. COMMUNICATION DUCT BANK
- OHT — EXIST. OVERHEAD TELEPHONE LINE
- UCATV — EXIST. UNDERGROUND CABLE TV LINE
- OCATV — EXIST. OVERHEAD CABLE TV LINE
- UFO — EXIST. FIBER OPTIC LINE
- EXIST. ELECTRICAL TRANSFORMER
- EXIST. ELECTRIC METER
- EXIST. CABLE TV PEDESTAL
- EXIST. FIBER OPTIC BOX

STORM

- EXIST. STORM SEWER
- PROP. STORM SEWER
- 1 — EXIST. DROP INLET & STRUCTURE NO.
- 1 — PROP. DROP INLET & STRUCTURE NO.
- EXIST. STORM SEWER MANHOLE
- PROP. STORM SEWER MANHOLE
- BENCH MARK #1 — BENCH MARK
- B-1 — APPROX. BORING LOCATION
- EXIST. PAVED DITCH
- PROP. CLEARING LIMITS
- EXIST. TREE LINE
- EXIST. SHRUB
- EXIST. TREE
- 200 — EXIST. CONTOUR
- 200 — PROP. CONTOUR
- EXIST. C/L SWALE
- EXIST. SIGN
- PROP. SIGN
- WETLANDS
- WATERS OF THE U.S.

EROSION & SEDIMENT CONTROL

1. THE CONTRACTOR SHALL INSTALL AND MAINTAIN EROSION/SILTATION CONTROL STRUCTURES AS DESCRIBED ON THE PLANS OR AS REQUIRED BY FIELD CONDITIONS AND/OR THE CITY INSPECTOR. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED CONTINUOUSLY THROUGHOUT THE PERIOD IN WHICH AREAS ARE EXCAVATED AND SHALL BE CHECKED BEFORE AND AFTER EVERY RAINFALL.

2. DISPOSE OF EXCAVATED MATERIALS OFF-SITE AT AN APPROVED LOCATION.

3. WHERE CONSTRUCTION VEHICLE ACCESS ROUTES INTERSECT PAVED PUBLIC ROADS, PROVISIONS SHALL BE MADE TO MINIMIZE THE TRANSPORT OF SEDIMENT BY VEHICULAR TRACKING ONTO THE PAVED SURFACE. WHERE SEDIMENT IS TRANSPORTED ONTO A PUBLIC ROAD SURFACE, THE ROAD SHALL BE CLEANED THOROUGHLY AT THE END OF EACH DAY. SEDIMENT SHALL BE REMOVED BY SHOVELING OR SWEEPING. STREET WASHING SHALL BE ALLOWED ONLY AFTER SEDIMENT IS REMOVED IN THIS MANNER.

4. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION OR AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED, UNLESS OTHERWISE AUTHORIZED BY THE CITY PROJECT MANAGER OR ENGINEER.

5. NO LAND DISTURBANCE SHALL OCCUR OUTSIDE THE AREAS AS SHOWN ON THIS PLAN WITHOUT A SEPARATE PLAN APPROVAL FROM THE CITY OF RICHMOND.

6. INSTALL STORM DRAIN INLET PROTECTION AS SHOWN ON THE PLANS FOR ALL INLETS, EXISTING AND PROPOSED, THROUGHOUT CONSTRUCTION TO PROTECT SEDIMENT RUNOFF FROM ENTERING THE STORM SYSTEM.

SURVEYED BY: TIMMONS GROUP
SUPERVISED BY: CMK
DESIGNED BY: DDG

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NOTES

1. Lot dimensions in parentheses are from deed.
2. Property owners correct as of December, 2018
3. Ordinance Number N/A
4. Adopted N/A
5. Accepted N/A

REFERENCES

REVISIONS

-:LEGEND:-

- Existing Curb
  - Curb & Gutter
  - Sidewalk
  - Basin
  - Storm Sewer
  - Sewer Manhole
  - Sanitary Sewer (Gravity) — SAN
  - Sanitary Sewer (Force Main) — FM
  - Gas Line — G
  - Electric Line — UGP
  - Telephone/Telegraph — UGT
  - TV Cable — UCATV
  - Water Line — W
  - Tree / Exist. Tree To Be Removed
  - Property Line
- Existing Curb Cut Ramp
  - Coping
  - Alley Crossing/Driveway
  - Fire Hydrant
  - Edge of Pavement
  - Fence
  - Cornerstone
  - Property Pin
  - Utility Pole
- Proposed Sewer
  - Manhole
  - Basin
  - Curb & Gutter
  - Asphalt
- Proposed Conc. Sidewalk
  - Brick Sidewalk
- Castings: Water Valve
  - Water Meter
  - Gas Drip
  - Gas Valve
  - Telephone Manhole
  - Electric Manhole
- Proposed Curb Cut Ramp
  - Decorative Light
  - Conduit
  - Conduit (Conc. Encased)
  - Retaining Wall

RICHMOND VIRGINIA

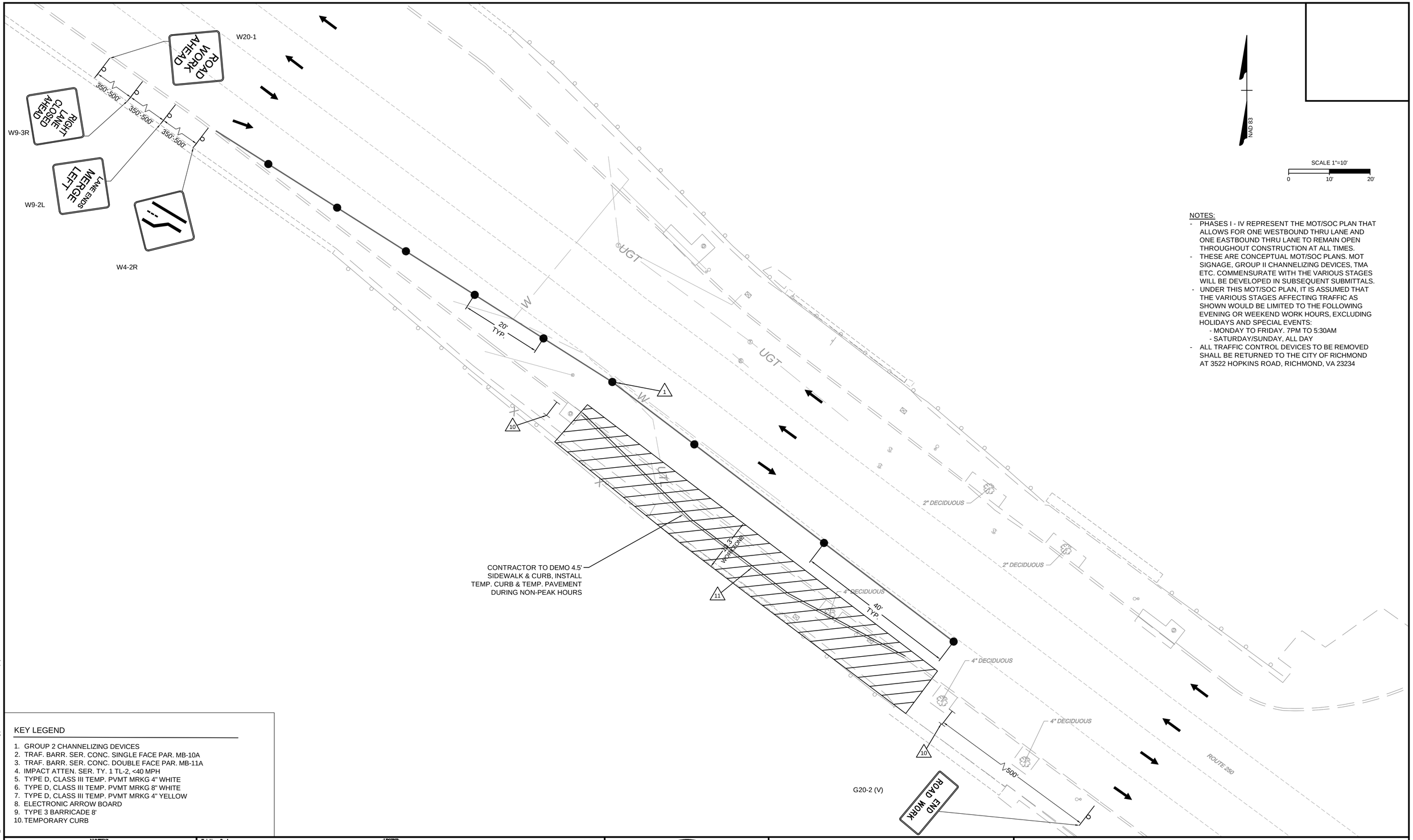
DEPARTMENT OF PUBLIC WORKS
RICHMOND, VIRGINIA

TIMMONS GROUP
ENGINEERING | DESIGN | TECHNOLOGY

RTE 250 OVER ABANDONED CSX ROW

ROADWAY GENERAL NOTES

DESIGN BY: DDG DRAWN BY: RAW CHECKED BY: CMK	REVIEWED BY	FIELD NOTES	SCALE	DATE	SHEET	DRAWING NO.
		FB-XX, pp XX-XX		08/16/2024	21	



NOTES:

- PHASES I - IV REPRESENT THE MOT/SOC PLAN THAT ALLOWS FOR ONE WESTBOUND THRU LANE AND ONE EASTBOUND THRU LANE TO REMAIN OPEN THROUGHOUT CONSTRUCTION AT ALL TIMES.
- THESE ARE CONCEPTUAL MOT/SOC PLANS. MOT SIGNAGE, GROUP II CHANNELIZING DEVICES, TMA ETC. COMMENSURATE WITH THE VARIOUS STAGES WILL BE DEVELOPED IN SUBSEQUENT SUBMITTALS.
- UNDER THIS MOT/SOC PLAN, IT IS ASSUMED THAT THE VARIOUS STAGES AFFECTING TRAFFIC AS SHOWN WOULD BE LIMITED TO THE FOLLOWING EVENING OR WEEKEND WORK HOURS, EXCLUDING HOLIDAYS AND SPECIAL EVENTS:
  - MONDAY TO FRIDAY. 7PM TO 5:30AM
  - SATURDAY/SUNDAY, ALL DAY
- ALL TRAFFIC CONTROL DEVICES TO BE REMOVED SHALL BE RETURNED TO THE CITY OF RICHMOND AT 3522 HOPKINS ROAD, RICHMOND, VA 23234

KEY LEGEND

1. GROUP 2 CHANNELIZING DEVICES
2. TRAF. BARR. SER. CONC. SINGLE FACE PAR. MB-10A
3. TRAF. BARR. SER. CONC. DOUBLE FACE PAR. MB-11A
4. IMPACT ATTEN. SER. TY. 1 TL-2, <40 MPH
5. TYPE D, CLASS III TEMP. PVMT MRKG 4" WHITE
6. TYPE D, CLASS III TEMP. PVMT MRKG 8" WHITE
7. TYPE D, CLASS III TEMP. PVMT MRKG 4" YELLOW
8. ELECTRONIC ARROW BOARD
9. TYPE 3 BARRICADE 8'
10. TEMPORARY CURB

SURVEYED BY: ..... TIMMONS GROUP
SUPERVISED BY: ..... CMK
DESIGNED BY: ..... DDG

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NOTES

1. Lot dimensions in parentheses are from deed.
2. Property owners correct as of December, 2018
3. Ordinance Number N/A
4. Adopted N/A
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REFERENCES	REVISIONS

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- Basin
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- Sewer Manhole
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- Sanitary Sewer (Force Main) — FM
- Gas Line — G
- Electric Line — UGP
- Telephone/Telegraph — UGT
- TV Cable — UCATV
- Water Line — W
- Tree / Exist. Tree To Be Removed
- Property Line — PL

--LEGEND:--

Existing Curb Cut Ramp
- Coping
- Alley Crossing/Driveway
- Fire Hydrant
- Edge of Pavement
- Fence
- Cornerstone
- Property Pin
- Utility Pole

Proposed Sewer
- Manhole
- Basin
- Curb & Gutter
- Asphalt

Proposed Conc. Sidewalk
- Brick Sidewalk

Castings Water Valve
- Water Meter
- Gas Drip
- Gas Valve
- Telephone Manhole
- Electric Manhole

Proposed Curb Cut Ramp
- Decorative Light
- Conduit
- Conduit (Conc. Encased)
- Retaining Wall

RICHMOND VIRGINIA

DEPARTMENT OF PUBLIC WORKS
RICHMOND, VIRGINIA

TIMMONS GROUP
ENGINEERING | DESIGN | TECHNOLOGY

RTE 250 OVER ABANDONED CSX ROW

MAINTENANCE OF TRAFFIC PHASE I

DESIGN BY: DDG DRAWN BY: RAW CHECKED BY: CMK	REVIEWED BY	FIELD NOTES FB-XX, pp XX-XX	SCALE 1" = 10'	DATE 08/16/2024	SHEET 22	DRAWING NO.

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SURVEYED BY: TIMMONS GROUP
SUPERVISED BY: CMK
DESIGNED BY: DDG

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2. Property owners correct as of December, 2018
3. Ordinance Number N/A
4. Adopted N/A
5. Accepted N/A

REFERENCES

REVISIONS

-:LEGEND:-

Existing Curb
- Curb & Gutter
- Sidewalk
- Basin
- Storm Sewer
- Sewer Manhole
- Sanitary Sewer (Gravity)
- Sanitary Sewer (Force Main)
- Gas Line
- Electric Line
- Telephone/Telegraph
- TV Cable
- Water Line
- Tree / Exist. Tree To Be Removed
- Property Line

Existing Curb Cut Ramp
- Coping
- Alley Crossing/Driveway
- Fire Hydrant
- Edge of Pavement
- Fence
- Cornerstone
- Property Pin
- Utility Pole

Proposed Sewer
- Manhole
- Basin
- Curb & Gutter
- Asphalt

Proposed Conc. Sidewalk
- Brick Sidewalk

Castings: Water Valve
- Water Meter
- Gas Drip
- Gas Valve
- Telephone Manhole
- Electric Manhole

Proposed Curb Cut Ramp
- Decorative Light
- Conduit
- Conduit (Conc. Encased)
- Retaining Wall

RICHMOND VIRGINIA

DEPARTMENT OF PUBLIC WORKS
RICHMOND, VIRGINIA

TIMMONS GROUP
ENGINEERING | DESIGN | TECHNOLOGY

RTE 250 OVER ABANDONED CSX ROW
MAINTENANCE OF TRAFFIC PHASE II

DESIGN BY: DDG DRAWN BY: RAW CHECKED BY: CMK	REVIEWED BY	FIELD NOTES	SCALE	DATE	SHEET	DRAWING NO.
		FB-XX, pp XX-XX	1" = 10'	08/16/2024	23	

SURVEYED BY: TIMMONS GROUP
SUPERVISED BY: CMK
DESIGNED BY: DDG

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KEY LEGEND

1. GROUP 2 CHANNELIZING DEVICES
2. TRAF. BARR. SER. CONC. SINGLE FACE PAR. MB-10A
3. TRAF. BARR. SER. CONC. DOUBLE FACE PAR. MB-11A
4. IMPACT ATTEN. SER. TY. 1 TL-2, <40 MPH
5. TYPE D, CLASS II TEMP. PVMT MRKG 4" WHITE
6. TYPE D, CLASS II TEMP. PVMT MRKG 8" WHITE
7. TYPE D, CLASS II TEMP. PVMT MRKG 4" YELLOW
8. ELECTRONIC ARROW BOARD
9. TYPE 3 BARRICADE 8'
10. TEMPORARY CURB

NAD 83

SCALE 1"=10'
0 10' 20'

W4-2R
END ROAD WORK
G20-2 (V)
350'-500'
ROAD WORK AHEAD
W20-1
RIGHT LANE CLOSED AHEAD
W9-3R
LANE ENDS MERGE LEFT
W9-2L
500'
W9-2L
32.5' WORK ZONE
W9-2L

WESTBOUND BROAD ST
ADVANCE WARNING SIGNS

MATCHLINE BELOW
W4-2L
R4-V7R
KEEP RIGHT
W9-3L
LEFT LANE CLOSED AHEAD
350'-500'
W20-1
ROAD WORK AHEAD
G20-2(V)
END ROAD WORK

MATCHLINE ABOVE FOR ADVANCE WARNING SIGNS

ROUTE 250

NOTES

1. Lot dimensions in parentheses are from deed.
2. Property owners correct as of December, 2018
3. Ordinance Number N/A
4. Adopted N/A
5. Accepted N/A

REFERENCES	REVISIONS

Existing Curb
- Curb & Gutter
- Sidewalk
- Basin
- Storm Sewer
- Sewer Manhole
- Sanitary Sewer (Gravity) SAN
- Sanitary Sewer (Force Main) FM
- Gas Line G
- Electric Line UGP
- Telephone/Telegraph UGT
- TV Cable UCATV
- Water Line W
- Tree / Exist. Tree To Be Removed /
- Property Line PL

-LEGEND:-
Existing Curb Cut Ramp
- Coping
- Alley Crossing/Driveway
- Fire Hydrant
- Edge of Pavement
- Fence
- Cornerstone
- Property Pin
- Utility Pole

Proposed Sewer
- Manhole
- Basin
- Curb & Gutter
- Asphalt

Proposed Conc. Sidewalk
- Brick Sidewalk

Castings Water Valve
- Water Meter
- Gas Drip
- Gas Valve
- Telephone Manhole
- Electric Manhole

Proposed Curb Cut Ramp
- Decorative Light
- Conduit
- Conduit (Conc. Encased)
- Retaining Wall

DEPARTMENT OF PUBLIC WORKS
RICHMOND, VIRGINIA

TIMMONS GROUP
ENGINEERING | DESIGN | TECHNOLOGY

RTE 250 OVER ABANDONED CSX ROW

MAINTENANCE OF TRAFFIC PHASE III

DESIGN BY: DDG DRAWN BY: RAW CHECKED BY: CMK	REVIEWED BY	FIELD NOTES FB-XX, pp XX-XX	SCALE AS SHOWN	DATE 08/16/2024	SHEET 24	DRAWING NO.

SURVEYED BY: TIMMONS GROUP
SUPERVISED BY: CMK
DESIGNED BY: DDG

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SCALE 1"=10'
0 10' 20'

NAD 83

END ROAD WORK G20-2(V)

500'

BROAD ST.

I-95 NB

REBUILD CURB & SIDEWALK;
REMOVE TEMP. PAVEMENT & TEMP. CURB

UGT

W

X

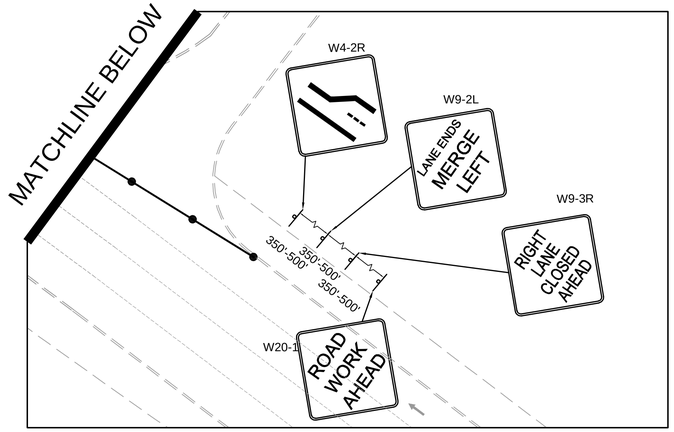
UTL

14.5'
WORK ZONE

11'
11'
10.5'

ROUTE 250

MATCHLINE BELOW



MATCHLINE ABOVE FOR ADVANCE WARNING SIGNS

KEY LEGEND

1. GROUP 2 CHANNELIZING DEVICES
2. TRAF. BARR. SER. CONC. SINGLE FACE PAR. MB-10A
3. TRAF. BARR. SER. CONC. DOUBLE FACE PAR. MB-11A
4. IMPACT ATTEN. SER. TY. 1 TL-2, <40 MPH
5. TYPE D, CLASS II TEMP. PVMT MRKG 4" WHITE
6. TYPE D, CLASS II TEMP. PVMT MRKG 8" WHITE
7. TYPE D, CLASS II TEMP. PVMT MRKG 4" YELLOW
8. ELECTRONIC ARROW BOARD
9. TYPE 3 BARRICADE 8'
10. TEMPORARY CURB

NOTES

1. Lot dimensions in parentheses are from deed.
2. Property owners correct as of December, 2018
3. Ordinance Number N/A
4. Adopted N/A
5. Accepted N/A

REFERENCES	REVISIONS

Existing Curb
- Curb & Gutter
- Sidewalk
- Basin
- Storm Sewer
- Sewer Manhole
- Sanitary Sewer (Gravity) SAN
- Sanitary Sewer (Force Main) FM
- Gas Line G
- Electric Line UGP
- Telephone/Telegraph UGT
- TV Cable UGATV
- Water Line W
- Tree / Exist. Tree To Be Removed
- Property Line

--LEGEND:--

Existing Curb Cut Ramp
- Coping
- Alley Crossing/Driveway
- Fire Hydrant
- Edge of Pavement
- Fence
- Cornerstone
- Property Pin
- Utility Pole

Proposed Sewer
- Manhole
- Basin
- Curb & Gutter
- Asphalt

Proposed Conc. Sidewalk
- Brick Sidewalk

Castings: Water Valve
- Water Meter
- Gas Drip
- Gas Valve
- Telephone Manhole
- Electric Manhole

Proposed Curb Cut Ramp
- Decorative Light
- Conduit
- Conduit (Conc. Encased)
- Retaining Wall

RICHMOND VIRGINIA

DEPARTMENT OF PUBLIC WORKS
RICHMOND, VIRGINIA

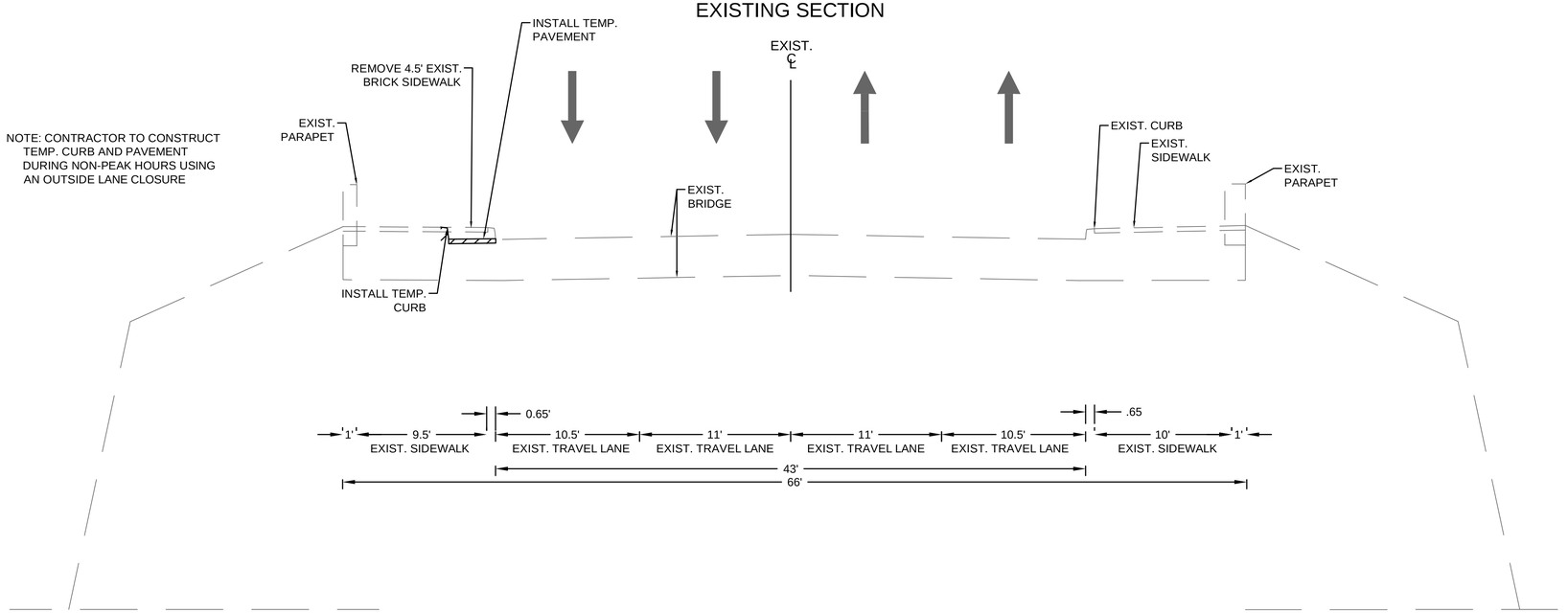
TIMMONS GROUP
ENGINEERING | DESIGN | TECHNOLOGY

RTE 250 OVER ABANDONED CSX ROW

MAINTENANCE OF TRAFFIC PHASE IV

DESIGN BY: DDG	REVIEWED BY	FIELD NOTES	SCALE	DATE	SHEET	DRAWING NO.
DRAWN BY: RAW		FB-XX, pg XX-XX	AS SHOWN	08/16/2024	25	
CHECKED BY: CMK						

E. BROAD STREET TUNNEL
EXISTING SECTION



PHASE I: SEQUENCE OF CONSTRUCTION

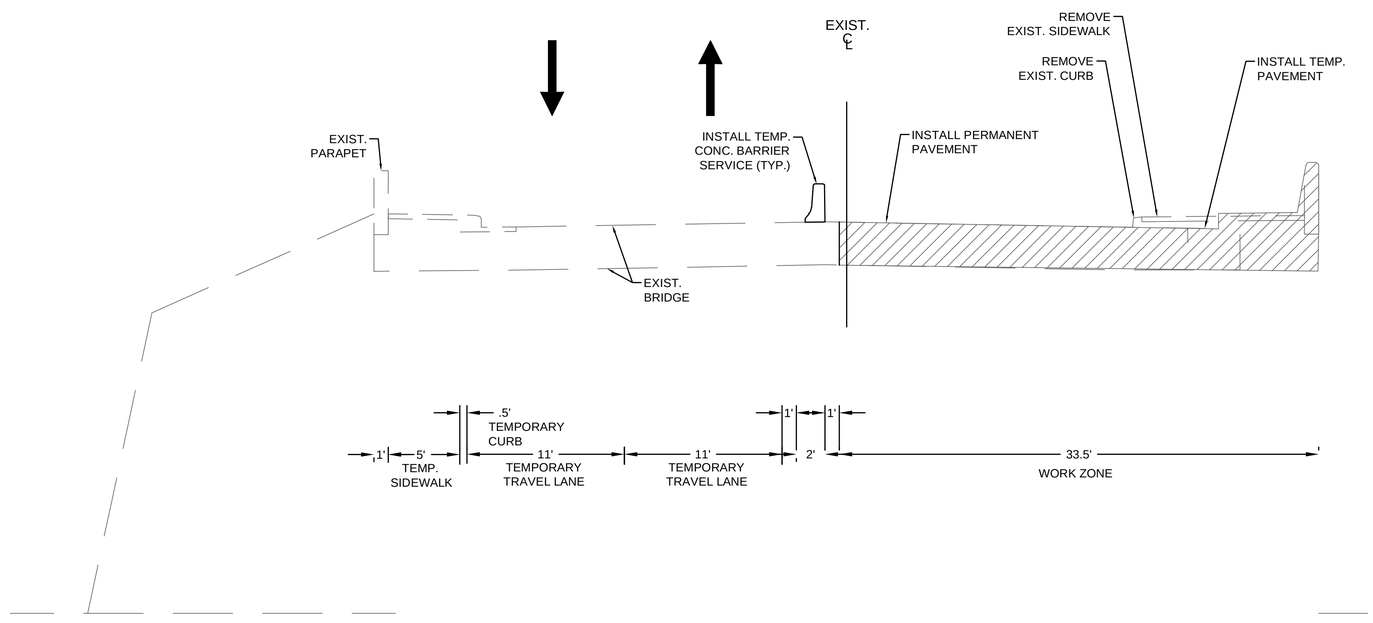
1. ALL EXISTING TRAFFIC LANES ON BROAD STREET TO REMAIN OPERABLE DURING THIS PHASE;
2. CONSTRUCT DRAINAGE IMPROVEMENTS;
3. CONSTRUCT TEMPORARY CURB AND PAVEMENT;
4. PLACE CULVERT (PHASE 1A); AND
5. PLACE AS MUCH FILL AS POSSIBLE WHILE MAINTAINING EXISTING TRAFFIC FLOW OF EXISTING BROAD STREET (PHASE 1B)

DENOTES CONSTRUCTION THIS PHASE

GENERAL NOTES:

A. RTE. 250 MAINLINE THROUGH LANES MUST BE 10' MIN. / 11' DESIRABLE
B. CONTRACTOR TO COORDINATE WITH CONTRACTS IN VICINITY ON MOT PHASING

E. BROAD STREET TUNNEL
PHASE I SOC/MOT



PHASE II: SEQUENCE OF CONSTRUCTION

1. REDUCE BROAD STREET TRAFFIC TO ONE LANE IN EACH DIRECTION USING SOUTHERN SIDE OF ROADWAY;
2. DEMOLISH NORTHERN SECTION OF EXISTING BRIDGE;
3. PLACE FILL AND CONSTRUCT TEMPORARY ROADWAY AND TEMPORARY SIDEWALK;
4. SWITCH TRAFFIC TO NORTHERN SIDE OF ROAD (ONE LANE IN EACH DIRECTION)

DENOTES CONSTRUCTION THIS PHASE

SCALE 1"=5'
0 5' 10'

SURVEYED BY: TIMMONS GROUP
SUPERVISED BY: CMK
DESIGNED BY: DDG

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NOTES

1. Lot dimensions in parentheses are from deed.
2. Property owners correct as of December, 2018
3. Ordinance Number N/A
4. Adopted N/A
5. Accepted N/A

REFERENCES	REVISIONS

Existing Curb
- Curb & Gutter
- Sidewalk
- Basin
- Storm Sewer
- Sewer Manhole
- Sanitary Sewer (Gravity)
- Sanitary Sewer (Force Main)
- Gas Line
- Electric Line
- Telephone/Telegraph
- TV Cable
- Water Line
- Tree / Exist. Tree To Be Removed
- Property Line

-LEGEND:-

Existing Curb Cut Ramp
- Coping
- Alley Crossing/Driveway
- Fire Hydrant
- Edge of Pavement
- Fence
- Cornerstone
- Property Pin
- Utility Pole

Proposed Sewer
- Manhole
- Basin
- Curb & Gutter
- Asphalt

Proposed Conc. Sidewalk
- Brick Sidewalk

Castings Water Valve
- Water Meter
- Gas Drip
- Gas Valve
- Telephone Manhole
- Electric Manhole

Proposed Curb Cut Ramp
- Decorative Light
- Conduit
- Conduit (Conc. Encased)
- Retaining Wall

RICHMOND VIRGINIA
DEPARTMENT OF PUBLIC WORKS
RICHMOND, VIRGINIA

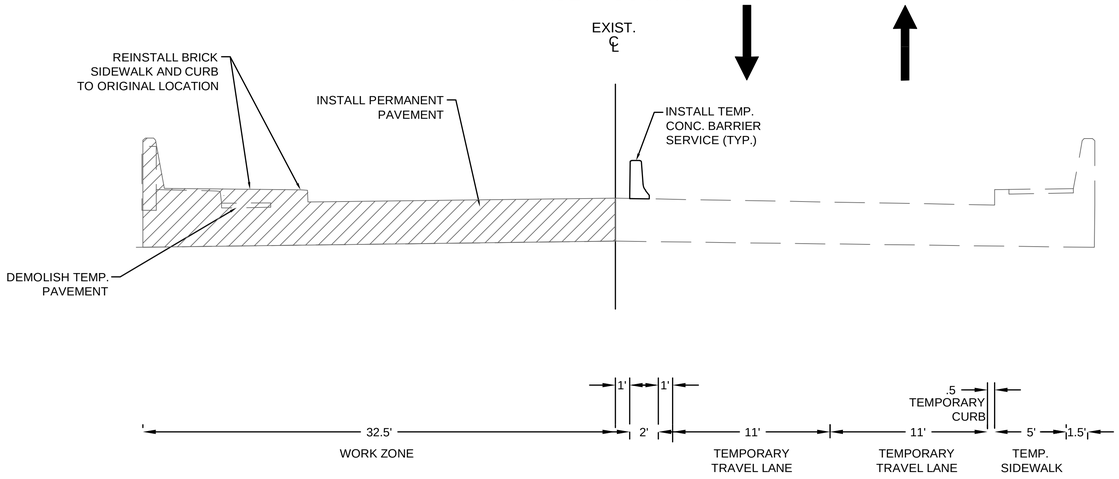
TIMMONS GROUP
ENGINEERING | DESIGN | TECHNOLOGY

RTE 250 OVER ABANDONED CSX ROW

SEQUENCE OF CONSTRUCTION PHASE I & PHASE II

DESIGN BY: DDG DRAWN BY: RAW CHECKED BY: CMK	REVIEWED BY	FIELD NOTES FB-XX, pp XX-XX	SCALE 1" = 5'	DATE 08/16/2024	SHEET 26	DRAWING NO.

E. BROAD STREET TUNNEL
PHASE III SOC/MOT

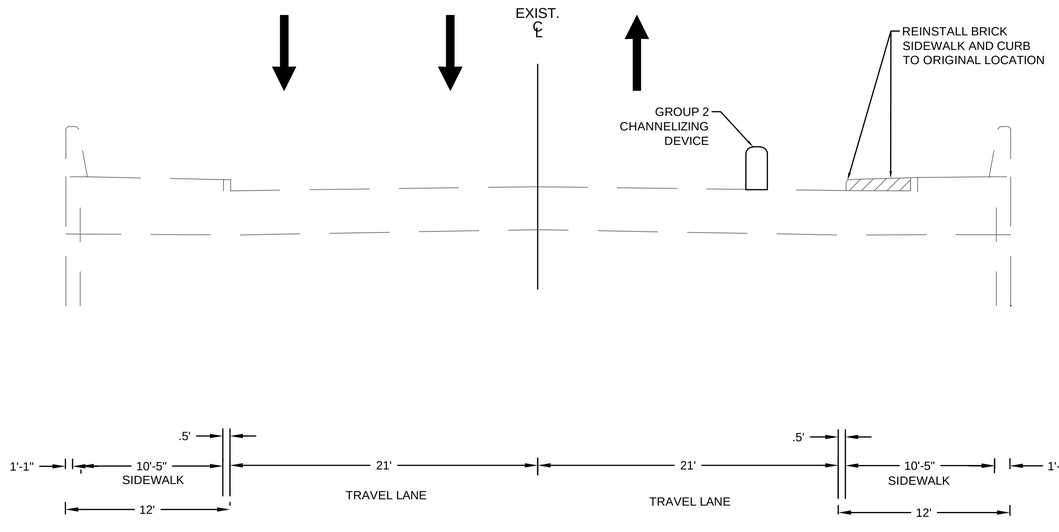


PHASE III: SEQUENCE OF CONSTRUCTION

1. DEMOLISH SOUTHERN SECTION OF EXISTING BRIDGE;
2. PLACE FILL AND CONSTRUCT PERMANENT ROADWAY AND SIDEWALK;
3. SWITCH TRAFFIC TO NORTH SIDE OF THE ROAD.

DENOTES CONSTRUCTION THIS PHASE

E. BROAD STREET TUNNEL
PHASE IV SOC/MOT



PHASE IV: SEQUENCE OF CONSTRUCTION

1. CONSTRUCT NORTHSIDE CURB AND SIDEWALK IN PERMANENT POSITION.
2. STRIPE BROAD STREET FOR PRE-CONSTRUCTION OPERATIONS

DENOTES CONSTRUCTION THIS PHASE

SCALE 1"=5'
0 5' 10'

SURVEYED BY: .....
SUPERVISED BY: TIMMONS GROUP
DESIGNED BY: CMK
DDG

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NOTES

1. Lot dimensions in parentheses are from deed.
2. Property owners correct as of December , 2018
3. Ordinance Number N/A
4. Adopted N/A
5. Accepted N/A

REFERENCES	REVISIONS

Existing Curb
- Curb & Gutter
- Sidewalk
- Basin
- Storm Sewer
- Sewer Manhole
- Sanitary Sewer (Gravity)
- Sanitary Sewer (Force Main)
- Gas Line
- Electric Line
- Telephone/Telegraph
- TV Cable
- Water Line
- Tree / Exist. Tree To Be Removed
- Property Line

--LEGEND:--

Existing Curb Cut Ramp
- Coping
- Alley Crossing/Driveway
- Fire Hydrant
- Edge of Pavement
- Fence
- Cornerstone
- Property Pin
- Utility Pole

Proposed Sewer
- Manhole
- Basin
- Curb & Gutter
- Asphalt

Proposed Conc. Sidewalk
- Brick Sidewalk

Castings: Water Valve
- Water Meter
- Gas Drip
- Gas Valve
- Telephone Manhole
- Electric Manhole

Proposed Curb Cut Ramp
- Decorative Light
- Conduit
- Conduit (Conc. Encased)
- Retaining Wall

DEPARTMENT OF PUBLIC WORKS
RICHMOND, VIRGINIA

TIMMONS GROUP
ENGINEERING | DESIGN | TECHNOLOGY

RTE 250 OVER ABANDONED CSX ROW

SEQUENCE OF CONSTRUCTION PHASE III & PHASE IV

DESIGN BY: DDG DRAWN BY: RAW CHECKED BY: CMK	REVIEWED BY	FIELD NOTES FB-XX, pg XX-XX	SCALE 1" = 5'	DATE 08/16/2024	SHEET 27	DRAWING NO.

KEY LEGEND
1. 4" DOUBLE SOLID YELLOW LINE
2. 4" SINGLE DASHED WHITE LINE (10' DASH, 30' SKIP)
3. CITY OF RICHMOND GRANITE CURB
4. FIXED OBJECT ATTACH. GR-FOA-1, TYPE I
5. GUARDRAIL GR-2 8' POST
6. 24" SOLID WHITE LINE (CROSSWALK, STOP BAR)
NOTE: UNLESS OTHERWISE SPECIFIED, ALL PAVEMENT MARKINGS SHALL BE VDOT TYPE B, CLASS I THERMOPLASTIC.
PAVEMENT RESURFACING*
DEMOLITION OF EX. PAVEMENT
NEW PAVEMENT
BRICK SIDEWALK (MATCH EXIST.)
CONCRETE
Hawk Signal not part of LCE review
BROAD ST
I-95 NB
NAD 83
SCALE 1"=10'
0
10'
20'
HAWK SIGNAL RECENTLY CONSTRUCTED BY OTHERS
TIE TO EXISTING GUARDRAIL
REMOVE AND RESET OVERHEAD LIGHT POLE
REMOVE AND RESET HISTORICAL MARKER SIGN
RELOCATE UNDERGROUND TELEPHONE LINE
REMOVE AND RESET LIGHT POLE
REMOVE AND REPLACE EXIST. TREE AND TREE PIT
TIE TO EXISTING GUARDRAIL
REMOVE AND REPLACE EXIST. TREE AND TREE PIT
HAWK SIGNAL RECENTLY CONSTRUCTED BY OTHERS
TIE TO EXISTING GUARDRAIL
SANITARY MANHOLE
TOP=29.87
INV. IN=41.61
C/L INV.=22.96
APPEARS ABANDONED
IRON ROD FOUND
RELOCATE UNDERGROUND POWER LINE
RELOCATE WATER LINE
REMOVE AND REPLACE EXIST. TREE AND TREE PIT
REMOVE AND RESET OVERHEAD LIGHT POLE
TIE TO EXISTING GUARDRAIL
APPROXIMATE LOCATION OF EXPOSED OLD PIPE IN ABOVE BRIDGE
EAST BROAD STREET
U.S. RTE. 250
UGP
12" PVC
3" PVC
24" METAL
15" METAL
12" METAL
12" METAL
10" DECIDUOUS
DOUBLE STACKED PIPES SIZE ±
ROUTE 250
I-95 RICHMOND-PETERSBURG TURNPIKE
VAR. WIDTH R/W
N82°32'39"E
57.00'
APPROX. LOCATION
25' JAMES RIVER
FLOOD PROTECTION SYSTEM
EASEMENT
236, PG. 389
CITY OF RICHMOND, VIRGINIA
INST. #11-8838
1554 E. MARSHALL ST.
PARCEL ID:E0000213006
APPROXIMATE LOCATION OF 40' SEWER EASEMENT APPROVED MAY 16, 1924 SEE D.P.W. DWG 1923 D.B. 365A
R=35.00'
L=55.38'
Δ=90°37'30"
CB=N81°48'49"E
C=49.77'
BROAD STREET (ROUTE 250)
ROADWAY TYPICAL SECTION
NOT TO SCALE
INSET A
POINT OF FINISHED GRADE
2.00%
2.0%
2.00%
2.0%
6"
1'
10.33'
SIDEWALK
10'
THRU LANE
11'
THRU LANE
11'
THRU LANE
1'
10'
THRU LANE
6"
10.33'
SIDEWALK
INSET A
1 BRICK SIDEWALK TO MATCH EXISTING
2 4" (MIN.) AGGREGATE BASE MATERIAL (TYPE 1 NO. 21B)
3 CITY OF RICHMOND GRANITE CURB
4 2" ASPHALT CONCRETE SURFACE COURSE (SM-12.5D)
5 2" ASPHALT CONCRETE INTERMEDIATE COURSE (IM-19.0D)
6 4" ASPHALT CONCRETE BASE COURSE (BM-25.0)
7 8" AGGREGATE BASE MATERIAL (TYPE 1 NO. 21B)

SURVEYED BY: TIMMONS GROUP
SUPERVISED BY: CMK
DESIGNED BY: DDG

NOTES
1. Lot dimensions in parentheses are from deed.
2. Property owners correct as of December, 2018
3. Ordinance Number N/A
4. Adopted N/A
5. Accepted N/A

REFERENCES | REVISIONS

DEPARTMENT OF PUBLIC WORKS
RICHMOND, VIRGINIA

TIMMONS GROUP
ENGINEERING | DESIGN | TECHNOLOGY

RTE 250 OVER ABANDONED CSX ROW

PROPOSED ROADWAY & PAVEMENT MARKING PLAN

DESIGN BY: DDG DRAWN BY: RAW CHECKED BY: CMK	REVIEWED BY	FIELD NOTES FB-XX, pp XX-XX	SCALE 1" = 10'	DATE 08/16/2024	SHEET 28	DRAWING NO.

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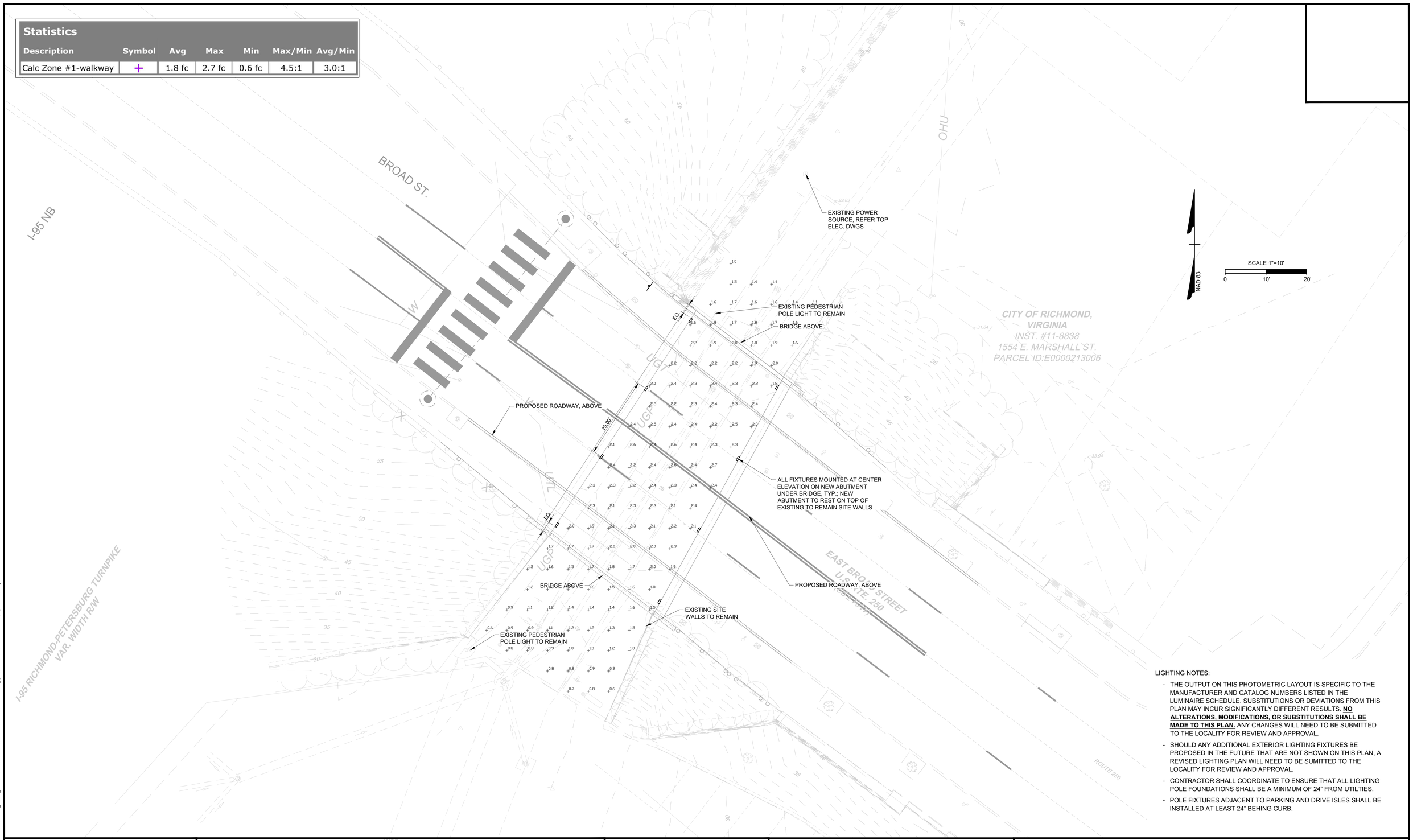
Statistics						
Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Calc Zone #1-walkway	+	1.8 fc	2.7 fc	0.6 fc	4.5:1	3.0:1



LIGHTING NOTES:

- THE OUTPUT ON THIS PHOTOMETRIC LAYOUT IS SPECIFIC TO THE MANUFACTURER AND CATALOG NUMBERS LISTED IN THE LUMINAIRE SCHEDULE. SUBSTITUTIONS OR DEVIATIONS FROM THIS PLAN MAY INCUR SIGNIFICANTLY DIFFERENT RESULTS. **NO ALTERATIONS, MODIFICATIONS, OR SUBSTITUTIONS SHALL BE MADE TO THIS PLAN.** ANY CHANGES WILL NEED TO BE SUBMITTED TO THE LOCALITY FOR REVIEW AND APPROVAL.
- SHOULD ANY ADDITIONAL EXTERIOR LIGHTING FIXTURES BE PROPOSED IN THE FUTURE THAT ARE NOT SHOWN ON THIS PLAN, A REVISED LIGHTING PLAN WILL NEED TO BE SUMITTED TO THE LOCALITY FOR REVIEW AND APPROVAL.
- CONTRACTOR SHALL COORDINATE TO ENSURE THAT ALL LIGHTING POLE FOUNDATIONS SHALL BE A MINIMUM OF 24" FROM UTILTIES.
- POLE FIXTURES ADJACENT TO PARKING AND DRIVE ISLES SHALL BE INSTALLED AT LEAST 24" BEHING CURB.

SURVEYED BY: ..... TIMMONS GROUP
SUPERVISED BY: ..... CMK
DESIGNED BY: ..... KJH

\\timmons.com\gfx\2020\203\39962-Richmond\088-203-E_Broad_Tunnel\DWG\Sheet\CD\39962.088.203C-LUMEN.dwg | Plotted on 8/13/2024 1:46 PM | by Harrison Figan

NOTES

1. Lot dimensions in parentheses are from deed.
2. Property owners correct as of December, 2018
3. Ordinance Number N/A
4. Adopted N/A
5. Accepted N/A

REFERENCES	REVISIONS

Existing Curb
- Curb & Gutter
- Sidewalk
- Basin
- Storm Sewer
- Sewer Manhole
- Sanitary Sewer (Gravity) — SAN
- Sanitary Sewer (Force Main) — FM
- Gas Line — G
- Electric Line — UGP
- Telephone/Telegraph — UGT
- TV Cable — UCATV
- Water Line — W
- Tree / Exist. Tree To Be Removed
- Property Line — P

--LEGEND:--

Existing Curb Cut Ramp
- Coping
- Alley Crossing/Driveway
- Fire Hydrant
- Edge of Pavement
- Fence
- Cornerstone
- Property Pin
- Utility Pole

Proposed Sewer
- Manhole
- Basin
- Curb & Gutter
- Asphalt

Proposed Conc. Sidewalk
- Brick Sidewalk

Castings: Water Valve
- Water Meter
- Gas Drip
- Gas Valve
- Telephone Manhole
- Electric Manhole

Proposed Curb Cut Ramp
- Decorative Light
- Conduit
- Conduit (Conc. Encased)
- Retaining Wall

DEPARTMENT OF PUBLIC WORKS
RICHMOND, VIRGINIA

TIMMONS GROUP
ENGINEERING | DESIGN | TECHNOLOGY

E. BROAD STREET TUNNEL

PROPOSED PHOTOMETRIC PLAN

DESIGN BY: LVC DRAWN BY: LVC CHECKED BY: LVC	REVIEWED BY	FIELD NOTES FB-XX, pp XX-XX	SCALE 1" = 10'	DATE 08/16/2024	SHEET 29	DRAWING NO.

Premium Nixalite® Model W

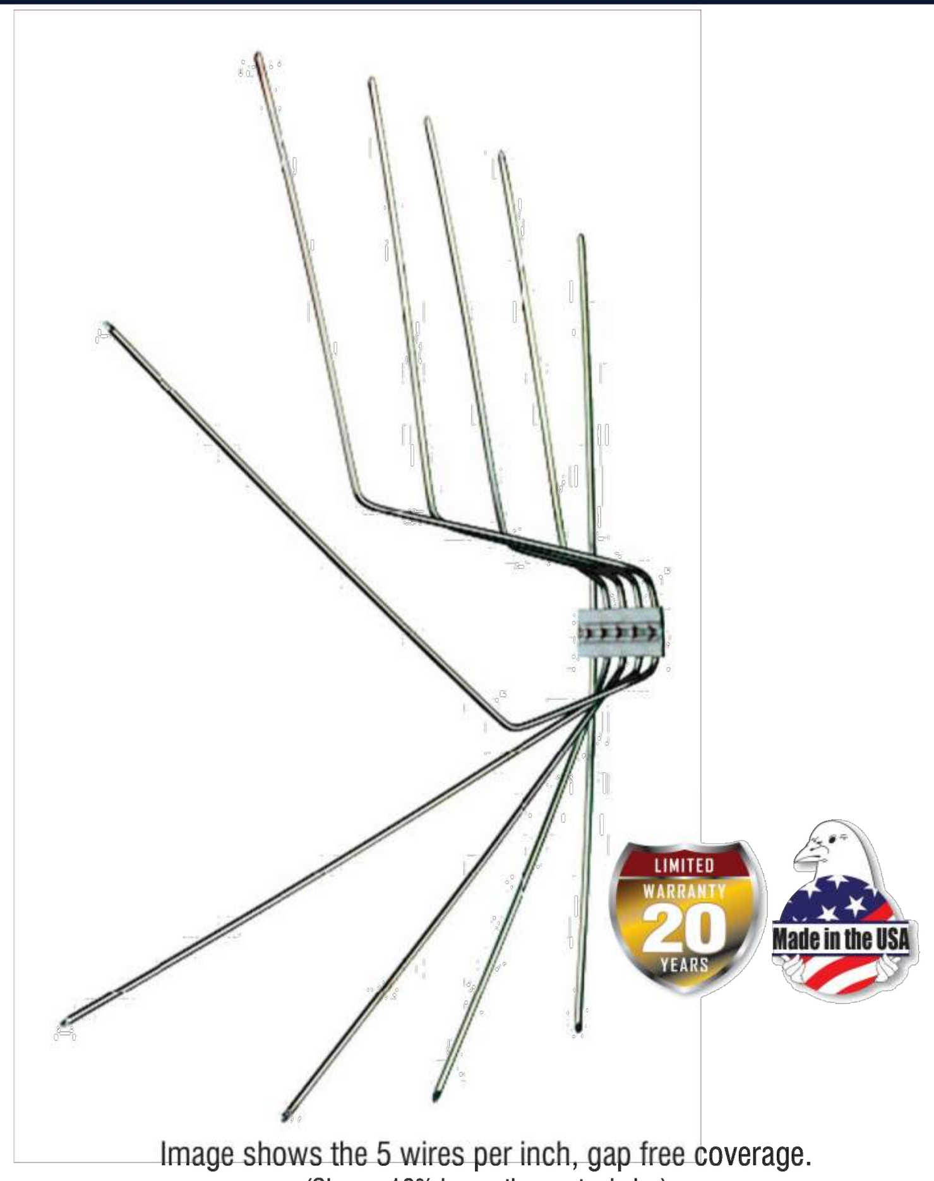
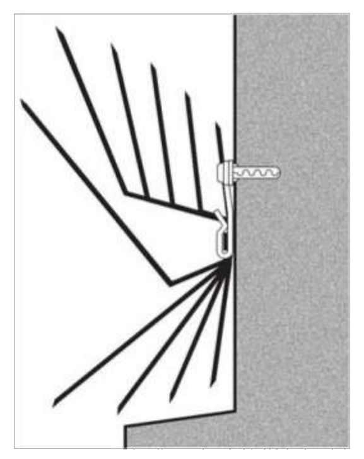


Image shows the 5 wires per inch, gap free coverage.
(Shown 10% larger than actual size)



Nixalite® Premium Model W

- Made in the USA with stainless steel produced in the USA!
- All stainless steel, no plastic!
- 20 Year Workmanship Warranty
- 3” Wide, 5.5” High
- Strip Lengths: 24” & 48”
- ¼” wide flexible base strip
- 120 points/foot
- 180° gap free coverage
- ColorCoat Option available
- Blunt-Tip Option available

Model W Applications:

Installed on vertical surfaces only. Do not install on horizontal surfaces. Install over surfaces that are 2.5” or less. Use with Premium Model S Nixalite for climbing animal control or to deter mud nest building birds. Contact Nixalite for more details.

ColorCoat Option:

Color powder coating option with 6 standard colors. Contact Nixalite of America Inc for details.

Blunt-Tip Option:

Blunt Tip option is not available for Model W Nixalite.

Nixalite® of America Inc - 1025 16th Ave - East Moline, IL 61244
birdcontrol@nixalite.com - www.nixalite.com

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BIRD SPIKES : NIXALITE MODEL W BIRD SPIKES OR APPROVED EQUAL

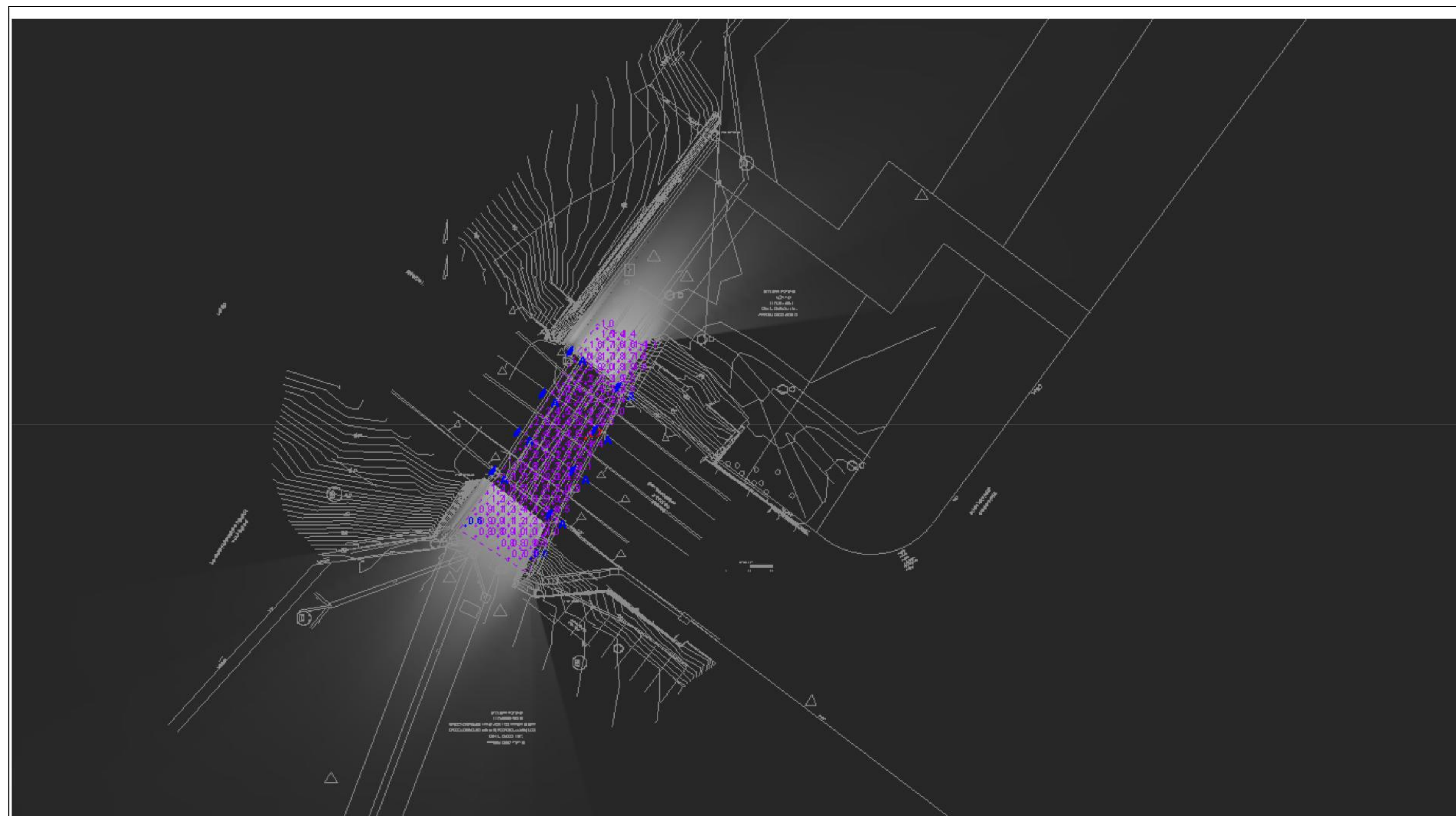
(BIRD SPIKES SHALL BE WALL MOUNTED ABOVE LIGHT FIXTURES AND CENTERED ON FIXTURE, CUT TO WIDTH OF LIGHT FIXTURE)

Statistics

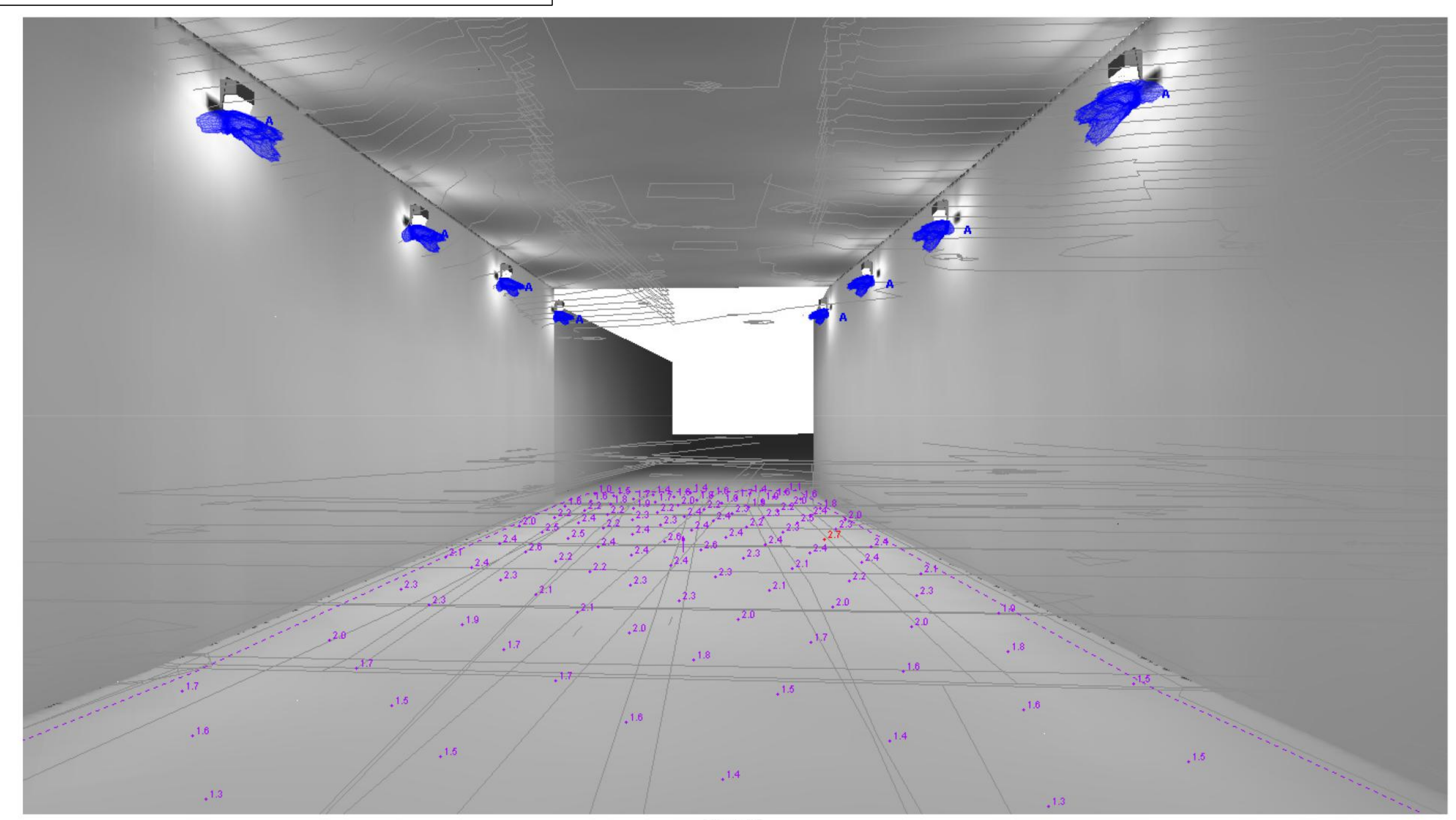
Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Calc Zone #1-walkway	+	1.8 fc	2.7 fc	0.6 fc	4.5:1	3.0:1

Schedule

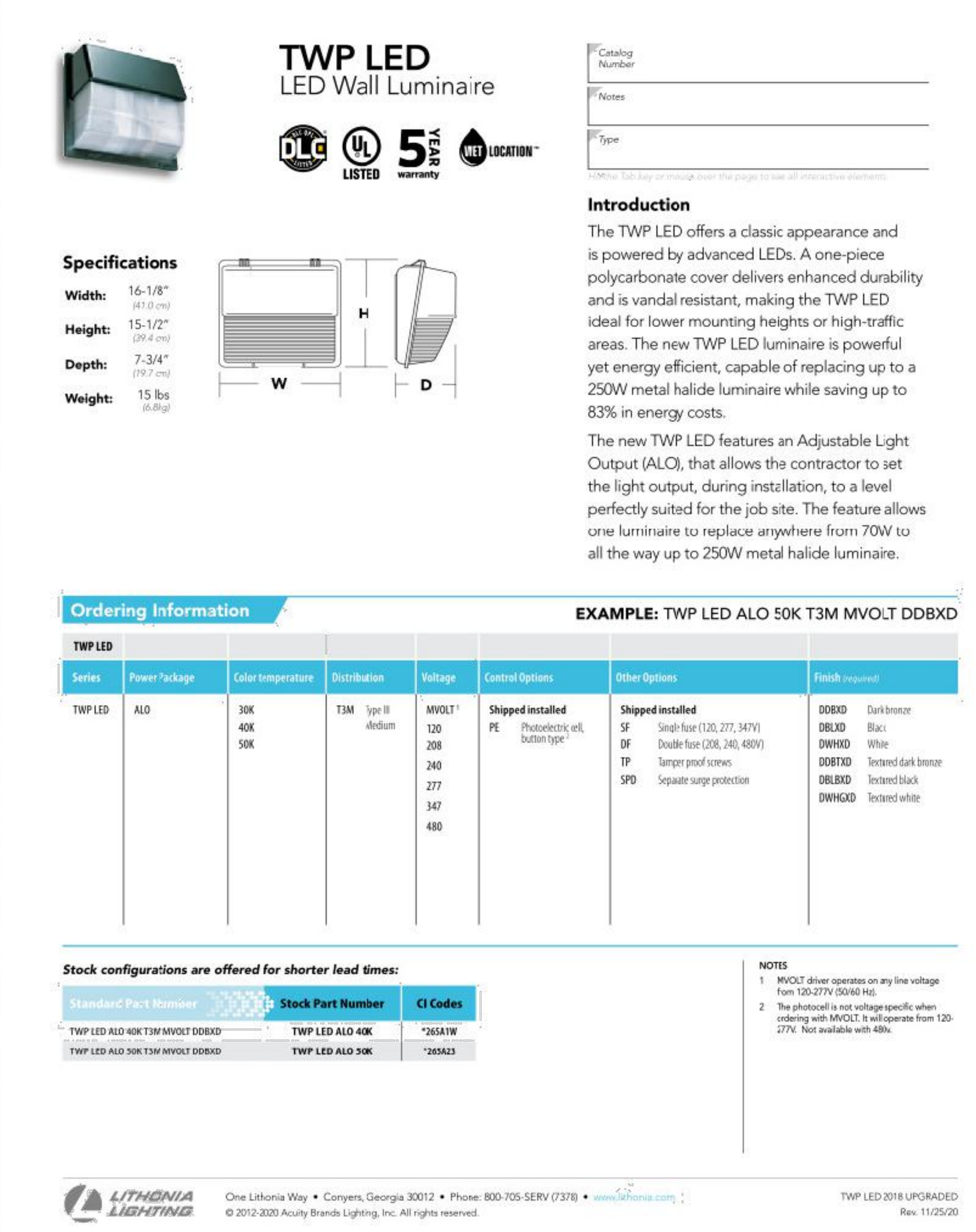
Symbol	Label	Image	QTY	Manufacturer	Catalog	Description	Number Lamps	Lamp Output	LLF	Input Power	Polar Plot
	A		8	Lithonia Lighting	TWP LED 10C 700 40K T3M MVOLT	TWP LED WITH 10 LEDs, @700mA, 4000K AND TYPE 3 MEDIUM OPTICS	1	2183	0.95	26	Max: 1298cd



View #2



View #3



SURVEYED BY: TIMMONS GROUP
SUPERVISED BY: CMK
DESIGNED BY: KJH

\\timmons.com\gfs\200\203\39962-Richmond\088-203-E_Broad_Tunnel\DWG\Sheet\CD\39962-088-203C-LUMEN-CUTS.dwg | Plotted on 8/13/2024 1:43 PM | by Harrison Figan

NOTES

1. Lot dimensions in parentheses are from deed.
2. Property owners correct as of December, 2018
3. Ordinance Number N/A
4. Adopted N/A
5. Accepted N/A

REFERENCES

REVISIONS

–:LEGEND:–

Existing Curb
" Curb & Gutter
" Sidewalk
" Basin
" Storm Sewer
" Sewer Manhole
" Sanitary Sewer (Gravity) SAN
" Sanitary Sewer (Force Main) FM
" Gas Line G
" Electric Line UGP
" Telephone/Telegraph UGT
" TV Cable UCATV
" Water Line W
" Tree / Exist. Tree To Be Removed
" Property Line PL

Existing Curb Cut Ramp
" Coping
" Alley Crossing/Driveway
" Fire Hydrant
" Edge of Pavement
" Fence
" Cornerstone
" Property Pin
" Utility Pole
Proposed Sewer
" Manhole
" Basin
" Curb & Gutter
" Asphalt

Proposed Conc. Sidewalk
" Brick Sidewalk
Castings: Water Valve
" Water Meter
" Gas Drip
" Gas Valve
" Telephone Manhole
" Electric Manhole
Proposed Curb Cut Ramp
" Decorative Light
" Conduit
" Conduit (Conc. Encased)
" Retaining Wall

RICHMOND VIRGINIA

DEPARTMENT OF PUBLIC WORKS
RICHMOND, VIRGINIA

TIMMONS GROUP
ENGINEERING | DESIGN | TECHNOLOGY

E. BROAD STREET TUNNEL
PROPOSED PHOTOMETRIC PLAN CUT SHEETS

DESIGN BY: LVC DRAWN BY: LVC CHECKED BY: LVC	REVIEWED BY	FIELD NOTES FB-XX, pp XX-XX	SCALE 1" = 10'	DATE 08/16/2024	SHEET 30	DRAWING NO.