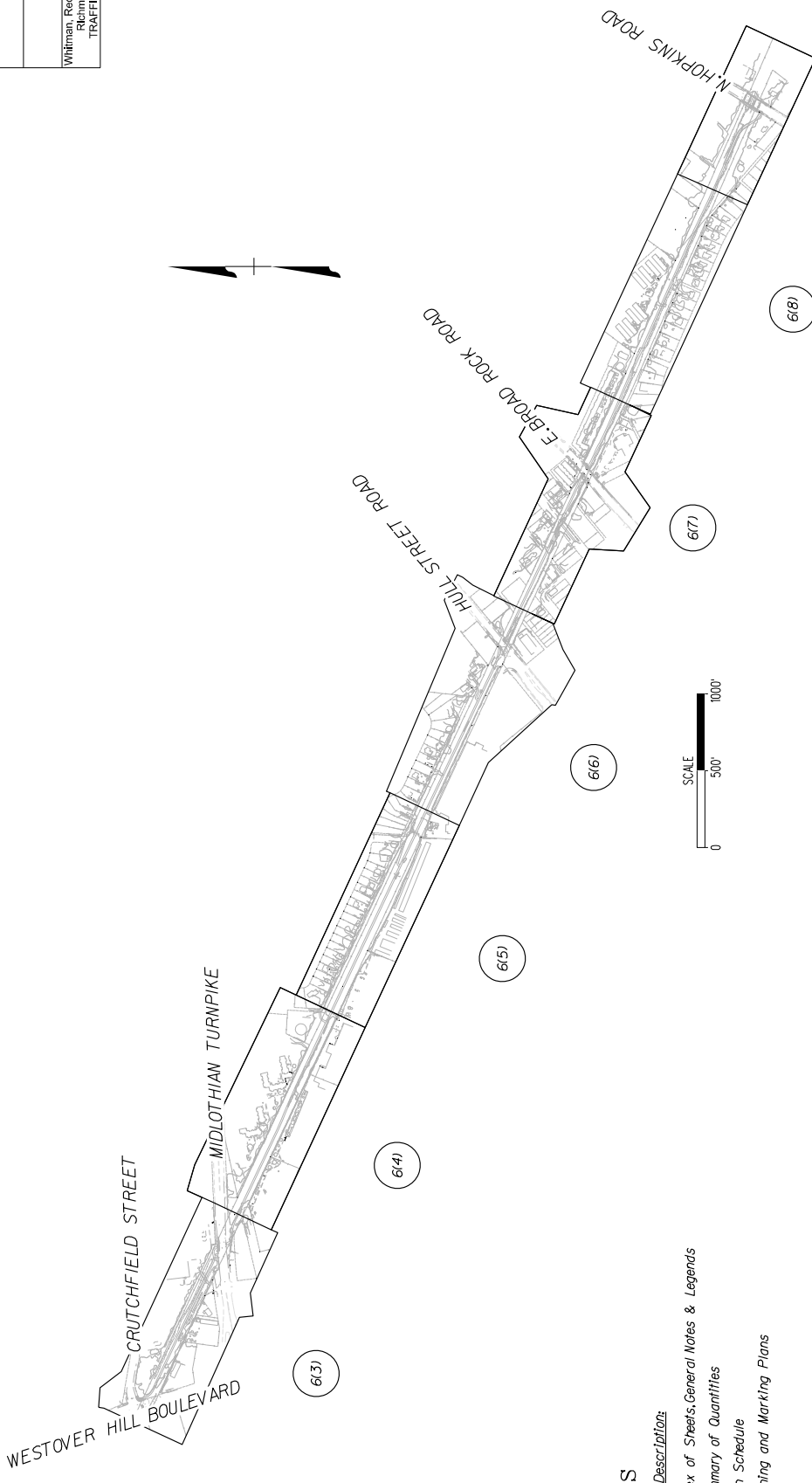


SIGNING AND PAVEMENT MARKING KEY PLAN



INDEX OF SHEETS

Sheet No.	Sheet Description:
16(1)	Index of Sheets, General Notes & Legends
16(2)***	Summary of Quantities
16(2B)**	Sign Schedule
16(3) - 16(9)	Signing and Marking Plans

***Not included in this submission

GENERAL NOTES - SIGNING & PAVEMENT MARKINGS

- ALL PROPOSED SIGNING AND PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE MOST CURRENT EDITION OF EACH OF THE FOLLOWING MANUALS, OR THE MOST RECENT REVISION THEREOF:
 - THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
 - THE VIRGINIA SUPPLEMENT TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
 - THE VIRGINIA DEPARTMENT OF TRANSPORTATION ROAD AND BRIDGE SPECIFICATIONS.
 - THE VIRGINIA DEPARTMENT OF TRANSPORTATION ROAD AND BRIDGE STANDARDS.
- EXISTING SIGNS WITHIN THE LIMITS OF THE CONTRACT WHICH HAVE NOT BEEN ACCOUNTED FOR IN THE PLAN SHALL BE RELOCATED OR REMOVED AS DIRECTED BY THE ENGINEER.
- ALL COMPONENTS OF AN EXISTING SIGN INSTALLATION WHICH ARE REMOVED SHALL BE PROPERLY DISPOSED OF BY THE CONTRACTOR AT AN OFF-SITE LOCATION.
- EXISTING SIGN PANELS SCHEDULED TO BE REUSED/RELOCATED MAY BE REPLACED WITH NEW SIGNS AT THE DISCRETION OF THE PROJECT ENGINEER.
- PROPOSED SIGN LOCATIONS ARE APPROXIMATE AND SHALL BE MODIFIED IN THE FIELD TO AVOID CONFLICT WITH UNDERGROUND UTILITIES OR OTHER CONSTRUCTION, AND TO COMPLY WITH THE STANDARDS REFERENCED IN NOTE 1.
- ANY EXISTING PAVEMENT MARKINGS THAT WILL CONFLICT WITH THE PROPOSED PAVEMENT MARKINGS SHALL BE COMPLETELY ERADICATED.
- LIMITS SHOWN OF PROPOSED MARKINGS ARE APPROXIMATE AND SHALL BE MODIFIED IN THE FIELD TO ENSURE THAT PROPOSED PAVEMENT MARKINGS CONTINUE UNTIL EXISTING PAVEMENT MARKING CAN BE MATCHED.

60% PLANS

THESE PLANS ARE UNFINISHED AND UNAPPROVED FOR ANY TYPE TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

STANDARD SIGN LEGEND

PLAN ITEM	PLAN SYMBOL	
	PROPOSED	EXISTING
Single Post Sign Support		
Double Post Sign Support		
Triple Post Sign Support		
Flashing Beacon		
O/H Cantilever Sign Support		
O/H Span Sign Support		

SIGN CALL-OUTS

Existing Sign to Remain or to be Relocated	
Existing Sign to be Removed	
Proposed Sign Panel	

SIGN LABELS

Proposed Sign Assemblies

- Relocated Sign Assembly No.
- Proposed Sign Assembly No.
- denotes Text No.

Sign Relocation or Payable Sign Disposal/Salvage

- denotes Existing Sign Structure and/or Sign Panel Type
- STRUCTURE & SIGN PANEL
- SP-GM - Ground Mounted Sign Panel
- CM - Overhead Mounted Sign Panel
- CM - Cantilever Mounted
- STRUCTURE ONLY
- ST-GM - Ground Mounted

denotes Action and Measurement & Payment Item

- A - Remove & Dispose
- B - Remove & Salvage
- C - Relocate
- D - Overlay Sign Panel

Signs noted on plans to be removed that do not have an accompanying sign label shall not be measured separately for payment. Removal and disposal for such signs shall be incidental to other contract items.

NOTES	REVISIONS
1. List dimensions in parentheses are from <i>ded.</i>	
2. Property owners correct as of . 20	
3. Ordinance Number	
4. Adopted	
5. Accepted	

EXISTING CURB & GUTTER	PROPOSED CURB & GUTTER
<ul style="list-style-type: none"> Existing Curb & Gutter Blank Sanitary Sewer Sanitary Sewer Electric Line Water Line Tree to Be Removed / Stump Property Line 	<ul style="list-style-type: none"> Proposed Curb & Gutter Proposed Curb Cut Ramp Proposed Curb Cut Ramp Decorative Light Condition Retaining Wall



Administrative	Technical
<ul style="list-style-type: none"> Capital Project Administrator Deputy Director for Transportation / Public Works Director of Public Works 	<ul style="list-style-type: none"> Survey Superintendent Project Engineer Maintenance Engineer City Traffic Engineer

DESIGN BY:	SCALE:	DATE:	FIELD NOTES:	REVIEWED BY:	DATE:	SHEET:	DRAWING NO.
H&B SURVEYING & MAPPING LLC	1"=500'	FEBRUARY 2024				16(1)	0-9904

JAMES RIVER BRANCH - RAIL TO TRAIL GREENWAY PROJECT

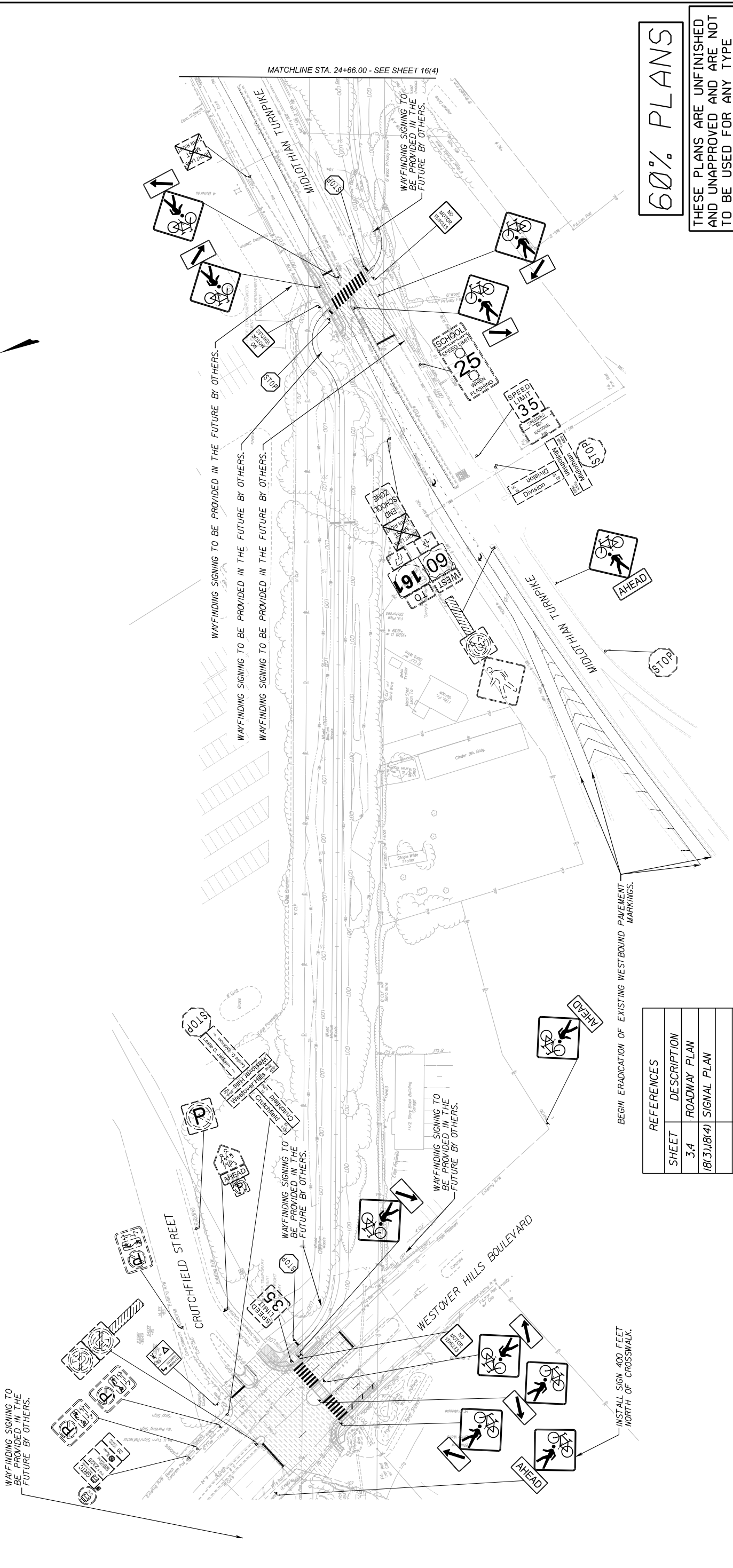
SIGNING AND PAVEMENT MARKINGS PLAN

DEPARTMENT OF PUBLIC WORKS
RICHMOND, VIRGINIA

SURVEYED BY: H&B SURVEYING & MAPPING LLC
SUPERVISED BY: MSV
DESIGNED BY: ADM

SURVEYED BY: H&B SURVEYING & MAPPING LLC
 SUPERVISED BY: MSV
 DESIGNED BY: ADM

Whitman, Requardt & Associates
 Richmond, Virginia
 TRAFFIC ENGINEER



60% PLANS

THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

JAMES RIVER BRANCH - RAIL TO TRAIL GREENWAY PROJECT
SIGNING AND PAVEMENT MARKINGS PLAN

DESIGN BY: [Signature]
 CHECKED BY: [Signature]
 REVIEWED BY: [Signature]
 DATE: FEBRUARY 2024
 SHEET: 16(3)

DEPARTMENT OF PUBLIC WORKS
 RICHMOND, VIRGINIA



Administrative
 Capital Project Administrator
 Deputy Director for Transportation & Public Works
 Director of Public Works

Technical
 Survey Superintendent
 Project Engineer
 Maintenance Engineer
 City Traffic Engineer

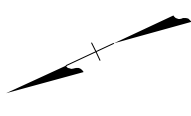
Proposed Conc. Sidewalk
 Brick Sidewalk
 Cast-in-place Concrete
 Edge of Pavement
 Gas Valve
 Electric Manhole
 Proposed Curb Cut Ramp
 Decorative Light
 Condition: (Good, Satisfactory, Poor, Requiring M&M)

Existing Curb & Gutter
 Sidewalk
 Bath
 Sewer
 Sanitary Sewer
 Electric Line
 Gas Line
 Water Line
 Tree to Be Retained / Stump
 Property Line

NOTES
 1. List dimensions in parentheses are from deed.
 2. Property owners correct as of [Date]
 3. Ordinance Number [Number]
 4. Adopted [Date]
 5. Accepted [Date]

REFERENCES
 16(1) thru 16(4)

SHEET	DESCRIPTION
3,4	ROADWAY PLAN
16(3)16(4)	SIGNAL PLAN



MATCHLINE STA. 24+66.00 - SEE SHEET 16(4)

WAYFINDING SIGNING TO BE PROVIDED IN THE FUTURE BY OTHERS.
 WAYFINDING SIGNING TO BE PROVIDED IN THE FUTURE BY OTHERS.
 WAYFINDING SIGNING TO BE PROVIDED IN THE FUTURE BY OTHERS.

WAYFINDING SIGNING TO BE PROVIDED IN THE FUTURE BY OTHERS.

WAYFINDING SIGNING TO BE PROVIDED IN THE FUTURE BY OTHERS.

BEGIN ERADICATION OF EXISTING WESTBOUND PAVEMENT MARKINGS.

INSTALL SIGN 400 FEET NORTH OF CROSSWALK.

SURVEYED BY: H&B SURVEYING & MAPPING LLC
 SUPERVISED BY: MSV
 DESIGNED BY: ADM

Whitman, Requardt & Associates
 Richmond, Virginia
 TRAFFIC ENGINEER



PAVEMENT MARKINGS TO BE COORDINATED WITH
 NEW GEORGE WYTHE HIGH SCHOOL.
 END ERADICATION OF EXISTING WESTBOUND PAVEMENT
 MARKINGS.

BEGIN 385' LANE REDUCTION TAPER
 AHEAD

WAYFINDING SIGNING TO
 BE PROVIDED IN THE
 FUTURE BY OTHERS.

WAYFINDING SIGNING TO
 BE PROVIDED IN THE
 FUTURE BY OTHERS.

MATCHLINE STA. 39+16.00 - SEE SHEET 16(5)

MATCHLINE STA. 24+66.00 - SEE SHEET 16(3)

REFERENCES	
SHEET	DESCRIPTION
5.6	ROADWAY PLAN

NOTES
1. Lot dimensions in parentheses are from deed.
2. Property owners correct as of 20
3. Ordinance Number
4. Adopted
5. Accepted

REVISIONS



DEPARTMENT OF PUBLIC WORKS
 RICHMOND, VIRGINIA

DESIGN BY: [Blank]
 CHECKED BY: [Blank]

REVIEWED BY: [Blank]
 DATE: FEBRUARY 2024

SCALE: 1"=50'
 SHEET: 16(4)

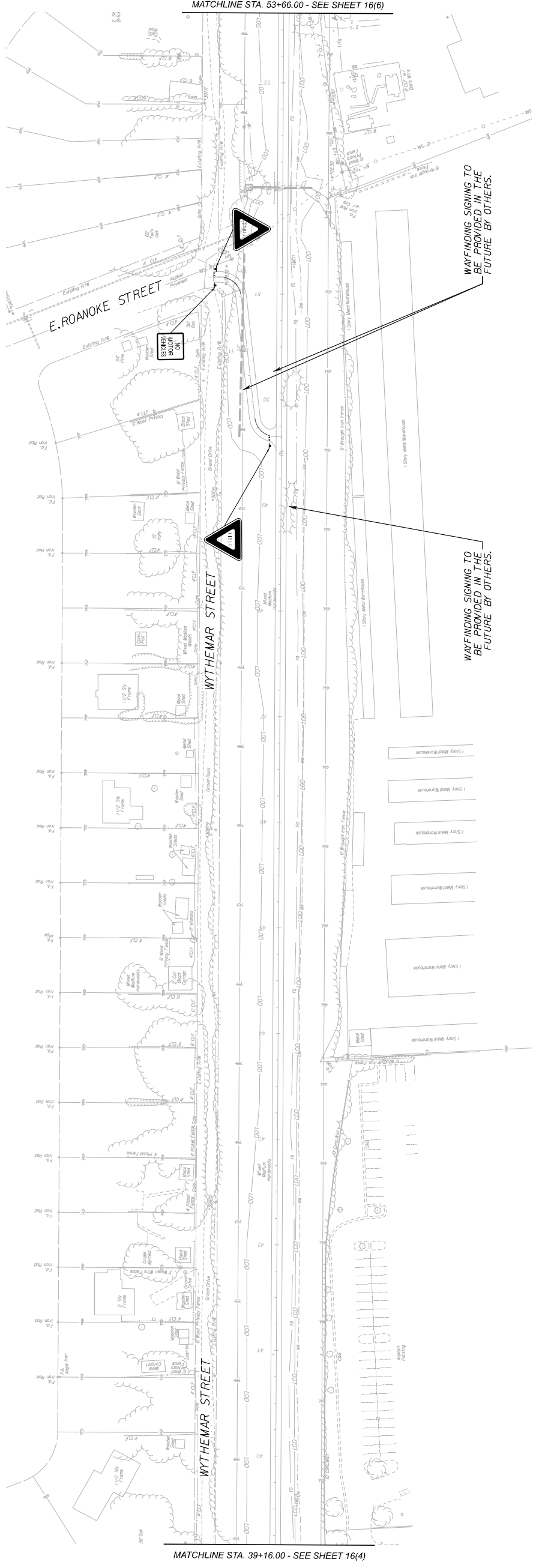
DRAWING NO. 0-9904

60% PLANS
 THESE PLANS ARE UNFINISHED
 AND UNAPPROVED AND ARE NOT
 TO BE USED FOR ANY TYPE
 OF CONSTRUCTION OR THE
 ACQUISITION OF RIGHT OF WAY.

JAMES RIVER BRANCH - RAIL TO TRAIL GREENWAY PROJECT
**SIGNING AND PAVEMENT MARKINGS
 PLAN**

SURVEYED BY: H&B SURVEYING & MAPPING LLC
 DESIGNED BY: MSV
 SUPPLIED BY: ADW

Whitman, Requardt & Associates
 Richmond, Virginia
 TRAFFIC ENGINEER



SHEET	DESCRIPTION
7.8	ROADWAY PLAN

60% PLANS

THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.



SYMBOL	DESCRIPTION
[Symbol]	Existing Curb & Gutter
[Symbol]	Sidewalk
[Symbol]	Manhole
[Symbol]	Sanitary Sewer Manhole
[Symbol]	Sanitary Sewer
[Symbol]	Electric Line
[Symbol]	Water Line
[Symbol]	Tree to Be Retained / Stump
[Symbol]	Property Line
[Symbol]	Proposed Curb Cut Ramp
[Symbol]	Proposed Concrete Sidewalk
[Symbol]	Proposed Brick Sidewalk
[Symbol]	Proposed Water Valve
[Symbol]	Proposed Gas Valve
[Symbol]	Proposed Gas Valve Manhole
[Symbol]	Proposed Electric Manhole
[Symbol]	Proposed Electric Manhole
[Symbol]	Proposed Curb Cut Ramp
[Symbol]	Decorative Light
[Symbol]	Condition (See Schedule)
[Symbol]	Retaining Wall

NOTES
1. List dimensions in parentheses are from <i>ded.</i>
2. Property owners correct as of . 20
3. Ordinance Number
4. Adopted
5. Accepted



DEPARTMENT OF PUBLIC WORKS
 RICHMOND, VIRGINIA

DESIGN BY: [Name]
 CHECKED BY: [Name]

REVIEWED BY: [Name]
 DATE: FEBRUARY 2024

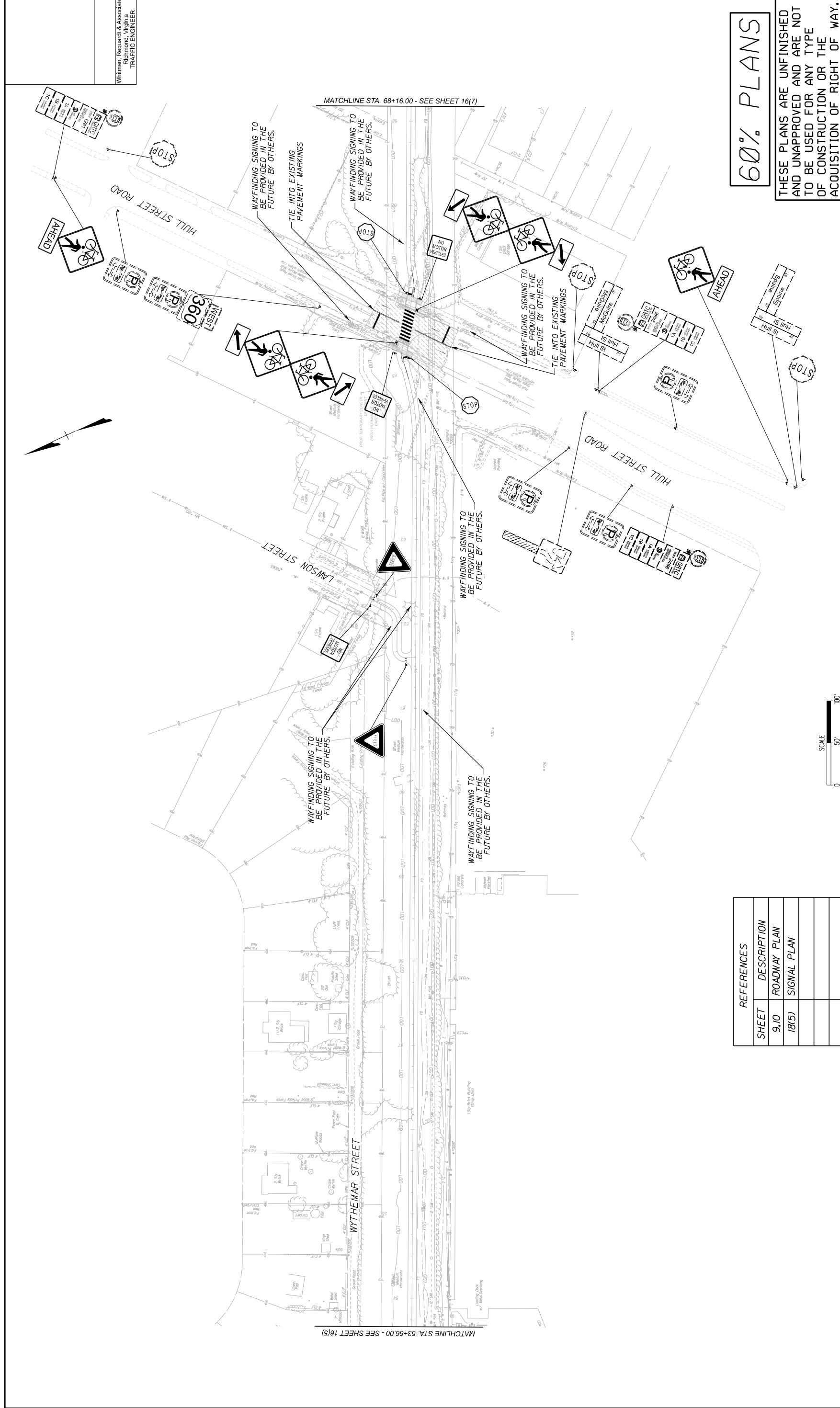
SCALE: 1"=50'
 SHEET: 16(5)
 DRAWING NO.: 0-9904

JAMES RIVER BRANCH - RAIL TO TRAIL GREENWAY PROJECT
 SIGNING AND PAVEMENT MARKINGS
 PLAN

MATCHLINE STA. 53+66.00 - SEE SHEET 16(6)

MATCHLINE STA. 39+16.00 - SEE SHEET 16(4)

SURVEYED BY: H&B SURVEYING & MAPPING LLC
 DESIGNED BY: MSV
 SUPPLIED BY: ADM



SHEET	DESCRIPTION
9.10	ROADWAY PLAN
18(5)	SIGNAL PLAN

<ul style="list-style-type: none"> Existing Curb & Gutter Sidewalk Blank Sanitary Sewer Electric Line Water Line Property Line 	<ul style="list-style-type: none"> Proposed Curb & Gutter Proposed Sidewalk Proposed Sanitary Sewer Proposed Electric Line Proposed Water Line Proposed Property Line
---	---

<ul style="list-style-type: none"> Proposed Concrete Sidewalk Cast-in-place Concrete Proposed Sanitary Sewer Proposed Electric Line Proposed Water Line Proposed Property Line 	<ul style="list-style-type: none"> Decorative Light Condition Retaining Wall
--	---



DEPARTMENT OF PUBLIC WORKS
 RICHMOND, VIRGINIA

City Traffic Engineer
 City Director of Public Works

Project Engineer
 Maintenance Engineer
 Deputy Director / Public Works

Survey Superintendent
 Capital Project Administrator

Administrative
 Director of Public Works

DESIGN BY: H&B SURVEYING & MAPPING LLC
 CHECKED BY: MSV

REVIEWED BY: ADM
 DATE: FEBRUARY 2024

SCALE: 1"=50'
 SHEET: 16(6)

DRAWING NO.: 0-9904

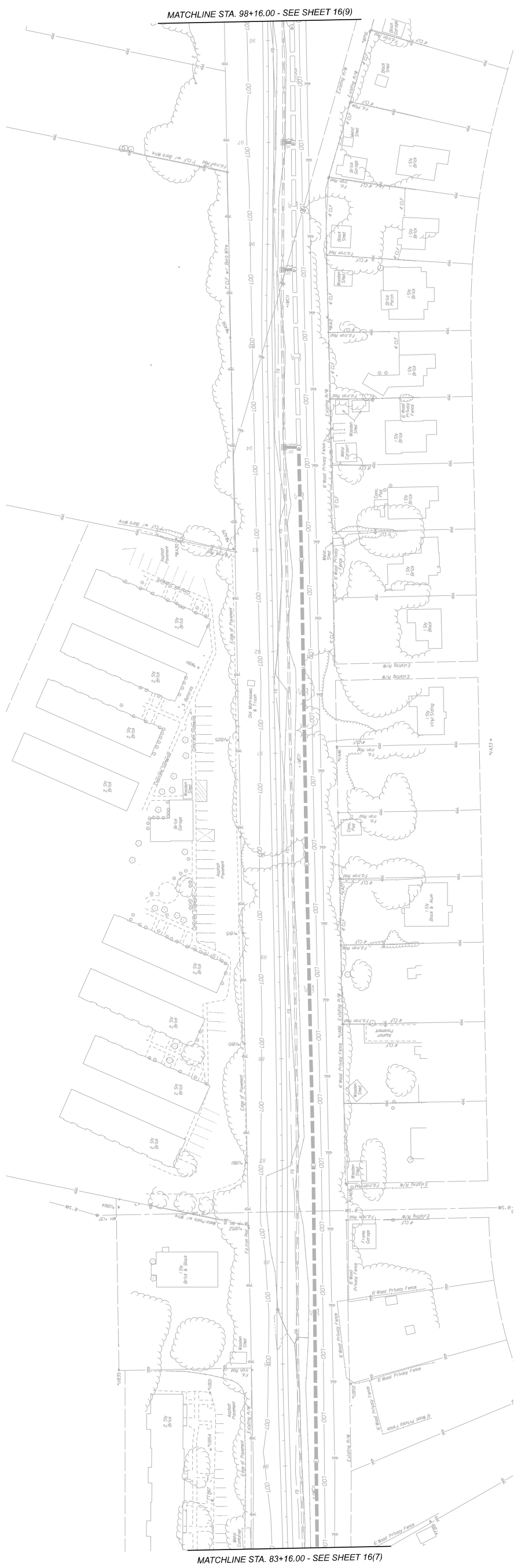
JAMES RIVER BRANCH - RAIL TO TRAIL GREENWAY PROJECT
SIGNING AND PAVEMENT MARKINGS PLAN

60% PLANS
 THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

Whitman, Requardt & Associates
 Richmond, Virginia
 TRAFFIC ENGINEER

SURVEYED BY: H&B SURVEYING & MAPPING LLC
 DESIGNED BY: ADW
 SUPERVISED BY: MSV
 CHECKED BY: [Blank]

Whitman, Requardt & Associates
 Richmond, Virginia
 TRAFFIC ENGINEER



MATCHLINE STA. 98+16.00 - SEE SHEET 16(9)

MATCHLINE STA. 83+16.00 - SEE SHEET 16(7)

SHEET	DESCRIPTION
13.14	ROADWAY PLAN

60% PLANS

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NOTES	REVISIONS
1. Lot dimensions in parentheses are from deed.	
2. Property owners correct as of	
3. Ordinance Number	
4. Adopted	
5. Accepted	



DEPARTMENT OF PUBLIC WORKS
 RICHMOND, VIRGINIA

DESIGN BY: [Blank]
 CHECKED BY: [Blank]

REVIEWED BY: [Blank]
 DATE: FEBRUARY 2024

FIELD NOTES: [Blank]
 SCALE: 1"=50'

SHEET: 16(8)
 DRAWING NO.: 0-9904

JAMES RIVER BRANCH - RAIL TO TRAIL GREENWAY PROJECT
 SIGNING AND PAVEMENT MARKINGS
 PLAN

Administrative
 Capital Project Administrator
 Deputy Director for Transportation / Public Works
 Director of Public Works

Technical
 Survey Superintendent
 Project Engineer
 Maintenance Engineer
 City Traffic Engineer

SURVEYED BY: H&B SURVEYING & MAPPING LLC
 SUPERVISED BY: MSV
 DESIGNED BY: ADM

NOTES
 1. Lot dimensions in parentheses are from deed.
 2. Property owners correct as of . 20
 3. Ordinance Number
 4. Adopted
 5. Accepted

REVISED BY: [Blank]
 DATE: [Blank]
 SCALE: [Blank]

SHEET	DESCRIPTION
15	ROADWAY PLAN
18(7)	SIGNAL PLAN

- | | |
|----------------------------|--|
| Existing Curb & Gutter | Proposed Curb Cut Ramp |
| Sidewalk | Copying |
| Sanitary Sewer | Utility Pole |
| Sanitary Sewer Manhole | Proposed Manhole |
| Sanitary Sewer Manhole | Proposed Curb Cut Ramp |
| Gas Line | Decorative Light |
| Electric Line | Condition: (Good, Success, Retaining Wall) |
| Water Line | Retaining Wall |
| Tree To Be Removed / Stump | |
| Property Line | |

- | | |
|--|------------------------|
| Proposed Conc. Sidewalk | Cast-in-place Concrete |
| Brick Sidewalk | Cast-in-place Concrete |
| Cast-in-place Concrete | Cast-in-place Concrete |
| Gas Valve | Cast-in-place Concrete |
| Gas Valve Manhole | Cast-in-place Concrete |
| Electric Manhole | Cast-in-place Concrete |
| Proposed Curb Cut Ramp | Cast-in-place Concrete |
| Decorative Light | Cast-in-place Concrete |
| Condition: (Good, Success, Retaining Wall) | Cast-in-place Concrete |
| Retaining Wall | Cast-in-place Concrete |



TECHNICAL
 Survey Superintendent
 Project Engineer
 Maintenance Engineer
 City Traffic Engineer

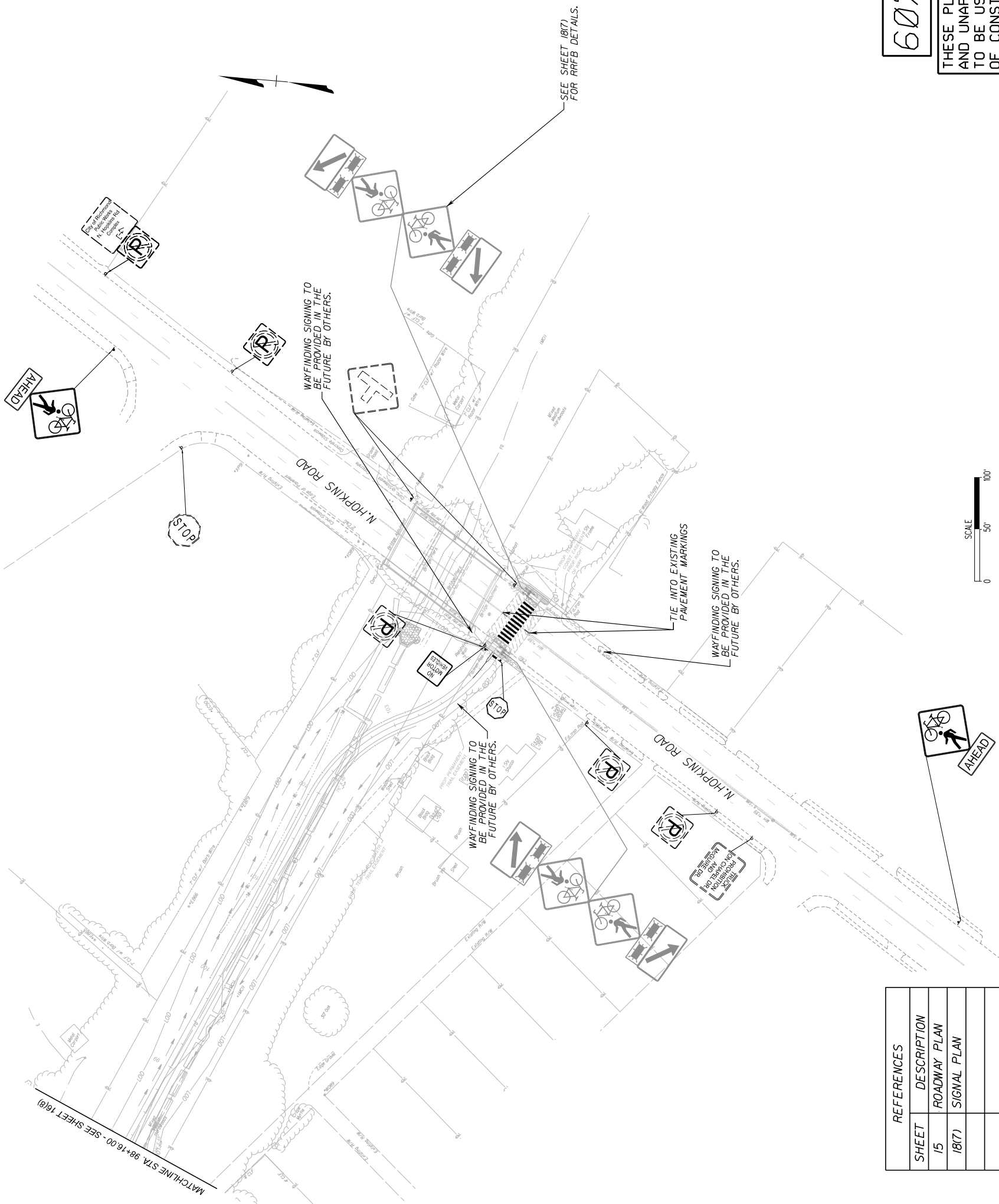
ADMINISTRATIVE
 Capital Project Administrator
 Deputy Director for Transportation & Public Works
 Director of Public Works

DEPARTMENT OF PUBLIC WORKS
 RICHMOND, VIRGINIA

DESIGN BY: [Blank]
 CHECKED BY: [Blank]
 REVIEWED BY: [Blank]
 SCALE: 1"=50'
 DATE: FEBRUARY 2024
 SHEET: 16(9)
 DRAWING NO.: 0-9804

60% PLANS

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 Richmond, Virginia
 TRAFFIC ENGINEER

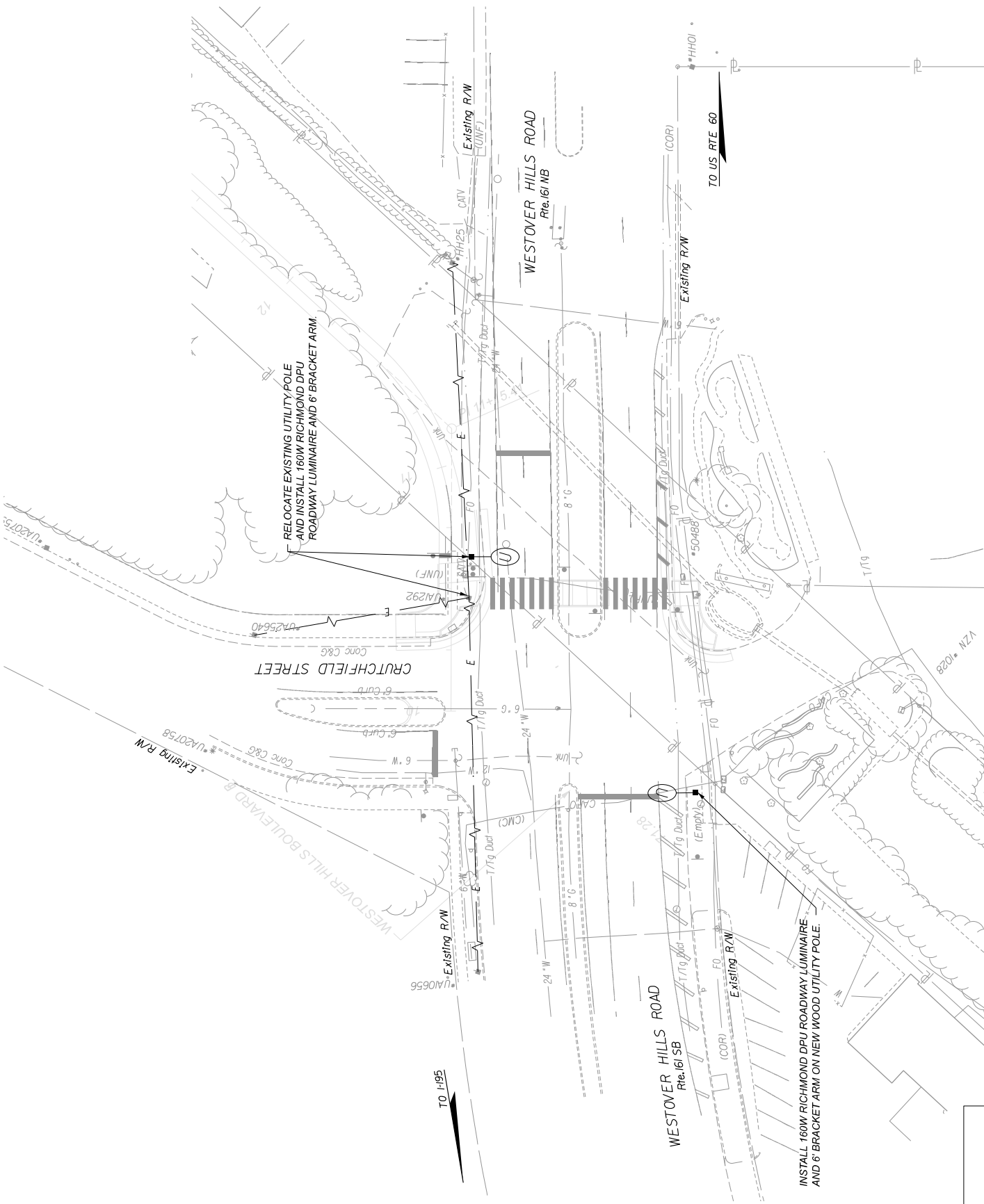


SURVEYED BY: H&B SURVEYING & MAPPING LLC
 SUPERVISED BY: MSV
 DESIGNED BY: ADM

- INDICATES EXISTING STREET LIGHT TO BE REMOVED
- INDICATES EXISTING STREET LIGHT TO REMAIN
- INDICATES EXISTING STREET LIGHT TO BE UPGRADED

ROADWAY LIGHTING LEGEND

EXISTING	PROPOSED	DESCRIPTION
		CONVENTIONAL ROADWAY LUMINAIRE AND BRACKET ARM ON NEW OR EXISTING WOOD UTILITY POLE
		CONVENTIONAL ROADWAY LUMINAIRE AND BRACKET ARM ON EXISTING WOOD UTILITY POLE
		CONVENTIONAL ROADWAY LUMINAIRE WITH 15' BRACKET ARM MOUNTED ON TRAFFIC SIGNAL POLE
		OVERHEAD ELECTRIC LINE

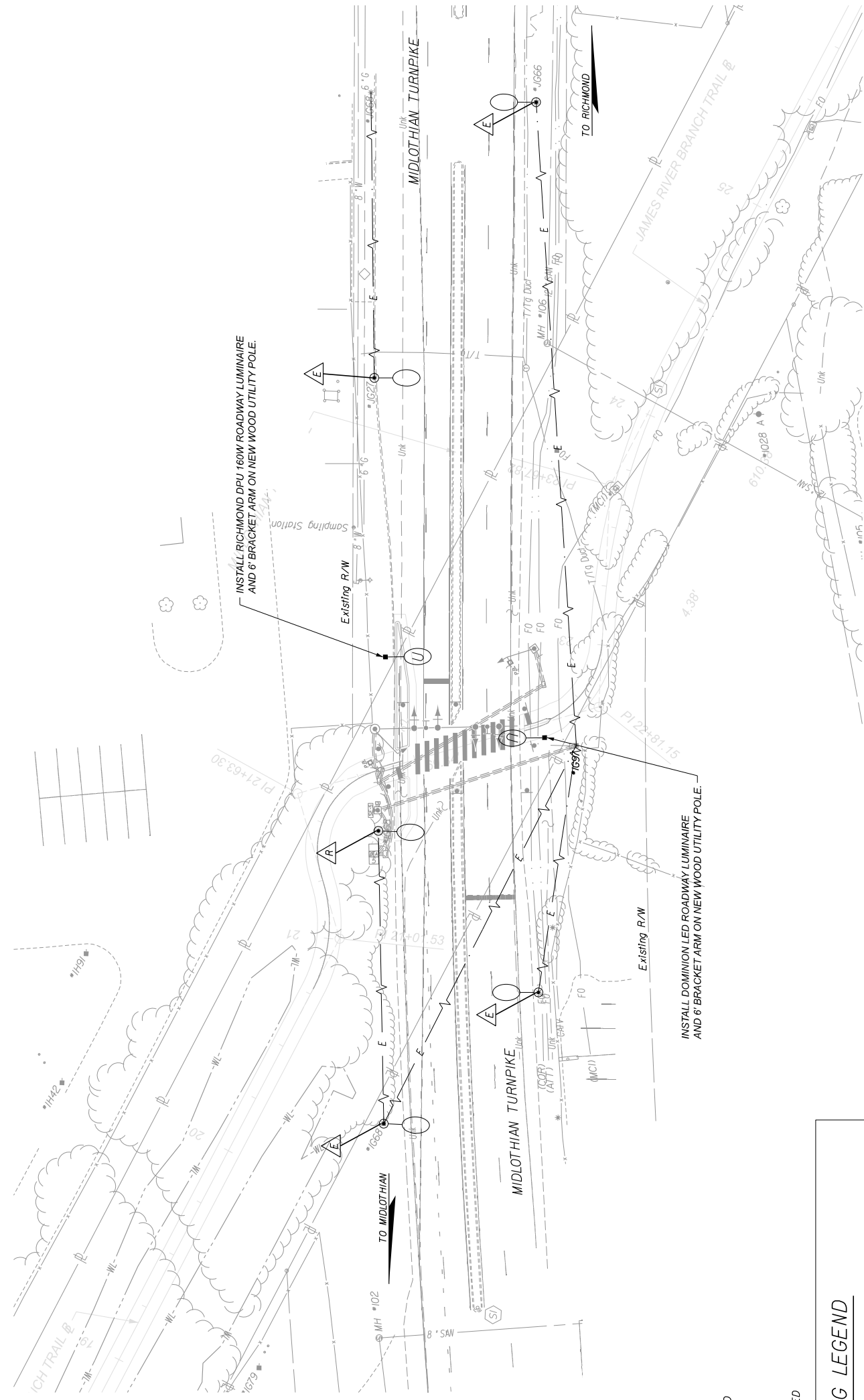
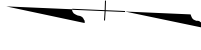


60% PLANS

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<p>JAMES RIVER BRANCH - RAIL TO TRAIL GREENWAY PROJECT</p> <p>LIGHTING PLAN</p>		<p>DATE: FEBRUARY 2024</p> <p>SCALE: 1"=30'</p> <p>SHEET: 17(3)</p> <p>DRAWING NO.: 0-9904</p>				
<p>DESIGNED BY: H&B SURVEYING & MAPPING LLC SUPERVISED BY: MSV DESIGNED BY: ADM</p>						
<p>NOTES</p> <p>1. Lot dimensions in parentheses are from deed.</p> <p>2. Property owners correct as of 1/30/24</p> <p>3. Ordinance Number: 175</p> <p>4. Adopted: 1/30/24</p> <p>5. Accepted: 1/30/24</p>	<p>REVISIONS</p> <table border="1"> <thead> <tr> <th>NO.</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> </tr> </tbody> </table>	NO.	DESCRIPTION			<p>Administrative</p> <p>Survey Superintendent: [Blank]</p> <p>Project Engineer: [Blank]</p> <p>Maintenance Engineer: [Blank]</p> <p>City Traffic Engineer: [Blank]</p> <p>Director of Public Works: [Blank]</p> <p>DEPARTMENT OF PUBLIC WORKS RICHMOND, VIRGINIA</p>
NO.	DESCRIPTION					
<p>SCALE: 0 25 50'</p>						

Whitman, Requardt & Associates
 Richmond, Virginia
 TRAFFIC ENGINEER



SURVEYED BY: H&B SURVEYING & MAPPING LLC
 SUPERVISED BY: MSV
 DESIGNED BY: ADM

- INDICATES EXISTING STREET LIGHT TO BE REMOVED
- INDICATES EXISTING STREET LIGHT TO REMAIN
- INDICATES EXISTING STREET LIGHT TO BE UPGRADED

ROADWAY LIGHTING LEGEND

EXISTING	PROPOSED	DESCRIPTION
		CONVENTIONAL ROADWAY LUMINAIRE AND BRACKET ARM ON NEW OR EXISTING WOOD UTILITY POLE
		CONVENTIONAL ROADWAY LUMINAIRE AND BRACKET ARM ON EXISTING WOOD UTILITY POLE
		CONVENTIONAL ROADWAY LUMINAIRE WITH 15' BRACKET ARM MOUNTED ON TRAFFIC SIGNAL POLE
		OVERHEAD ELECTRIC LINE

NOTES
 1. Lot dimensions in parentheses are from deed.
 2. Property owners correct as of 1/30/24.
 3. Ordinance Number 19.2-10-10.
 4. Adopted 1/30/24.
 5. Accepted 1/30/24.

REVISIONS
 No. Description
 1. Initial Design

EXISTING	PROPOSED	DESCRIPTION
		Existing Curb & Gutter
		Existing Sidewalk
		Existing Sanitary Sewer Manhole
		Existing Water Manhole
		Existing Gas Manhole
		Existing Electric Line
		Existing Telephone Manhole
		Existing Tree To Be Retained / Stump
		Existing Property Line
		Proposed Riding Curb Cut Ramp
		Proposed Coping
		Proposed Alluvial Channel / Driveway
		Proposed Edge of Pavement
		Proposed Fence
		Proposed Property Line
		Proposed Utility Pole
		Proposed Manhole
		Proposed Electric Light
		Proposed Concrete
		Proposed Retaining Wall



DEPARTMENT OF PUBLIC WORKS
 RICHMOND, VIRGINIA

Administrative
 Survey Superintendent
 Project Engineer
 Maintenance Engineer
 City Traffic Engineer
 Director of Public Works

DESIGNED BY: BS
 CHECKED BY: PC
 REVIEWED BY: BS, BS, PC
 FIELD NOTES: [Blank]
 SCALE: 1"=25'
 DATE: FEBRUARY 2024
 SHEET: 17(4)

JAMES RIVER BRANCH - RAIL TO TRAIL GREENWAY PROJECT
LIGHTING PLAN

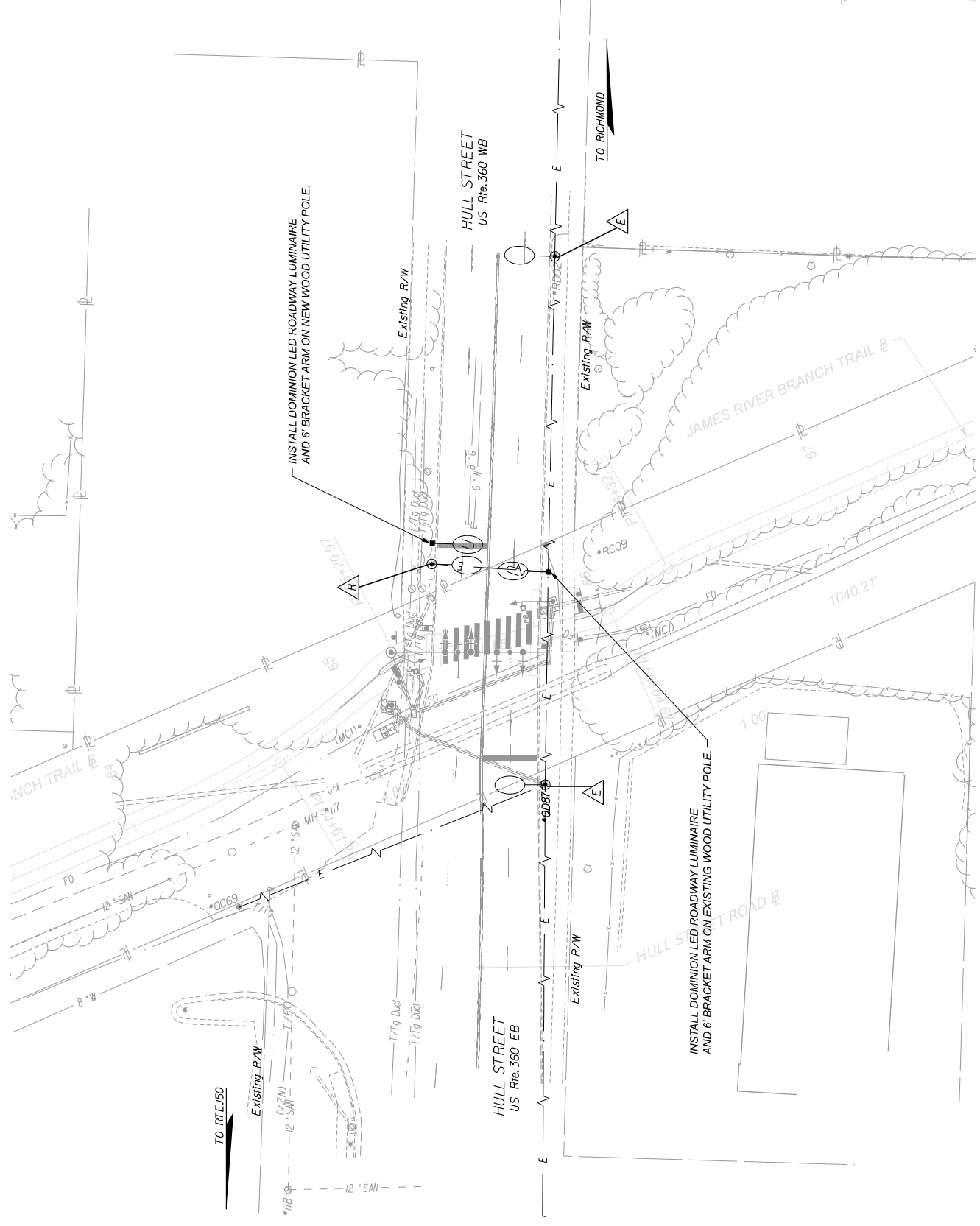
60% PLANS

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 AND UNAPPROVED AND ARE NOT
 TO BE USED FOR ANY TYPE
 OF CONSTRUCTION OR THE
 ACQUISITION OF RIGHT OF WAY.

Whitman, Requardt & Associates
 Richmond, Virginia
 TRAFFIC ENGINEER

SURVEYED BY: H&B SURVEYING & MAPPING LLC
 SUPERVISED BY: MSV
 DESIGNED BY: ADM

Whitman, Requardt & Associates
 Richmond, Virginia
 TRAFFIC ENGINEER



- △ INDICATES EXISTING STREET LIGHT TO BE REMOVED
- △ INDICATES EXISTING STREET LIGHT TO REMAIN
- △ INDICATES EXISTING STREET LIGHT TO BE UPGRADED

ROADWAY LIGHTING LEGEND

EXISTING	PROPOSED	DESCRIPTION
		CONVENTIONAL ROADWAY LUMINAIRE AND BRACKET ARM ON NEW OR EXISTING WOOD UTILITY POLE
		CONVENTIONAL ROADWAY LUMINAIRE AND BRACKET ARM ON EXISTING WOOD UTILITY POLE
		CONVENTIONAL ROADWAY LUMINAIRE WITH 15' BRACKET ARM MOUNTED ON TRAFFIC SIGNAL POLE
		OVERHEAD ELECTRIC LINE

NOTES

1. Lot dimensions in parentheses are from deed.
2. Property owners correct as of 1/30/2024.
3. Ordinance Number 17(5).
4. Adopted 2/1/2024.
5. Accepted 2/1/2024.

REVISIONS

NO.	DESCRIPTION	DATE
1	ISSUED FOR PERMITTING	02/01/2024

Legend Item	Description
	Existing Curb & Gutter
	Sidewalk
	Bench
	Sewer Manhole
	Sanitary Sewer Manhole
	Gas Manhole
	Electric Line
	Water Line
	Tree To Be Removed / Stump
	Property Line
	Riding Curb Cut Ramp
	Coping
	Alley Crossing/Driveway
	Edge of Pavement
	Fence
	Utility Pole
	Proposed Curb Cut Ramp
	Decorative Light
	Condition to be Corrected
	Retaining Wall



Technical	Administrative
Survey Superintendent	
Project Engineer	Capital Project Administrator
Maintenance Engineer	Deputy Director for Transportation / Public Works
City Traffic Engineer	Director of Public Works

DEPARTMENT OF PUBLIC WORKS
 RICHMOND, VIRGINIA

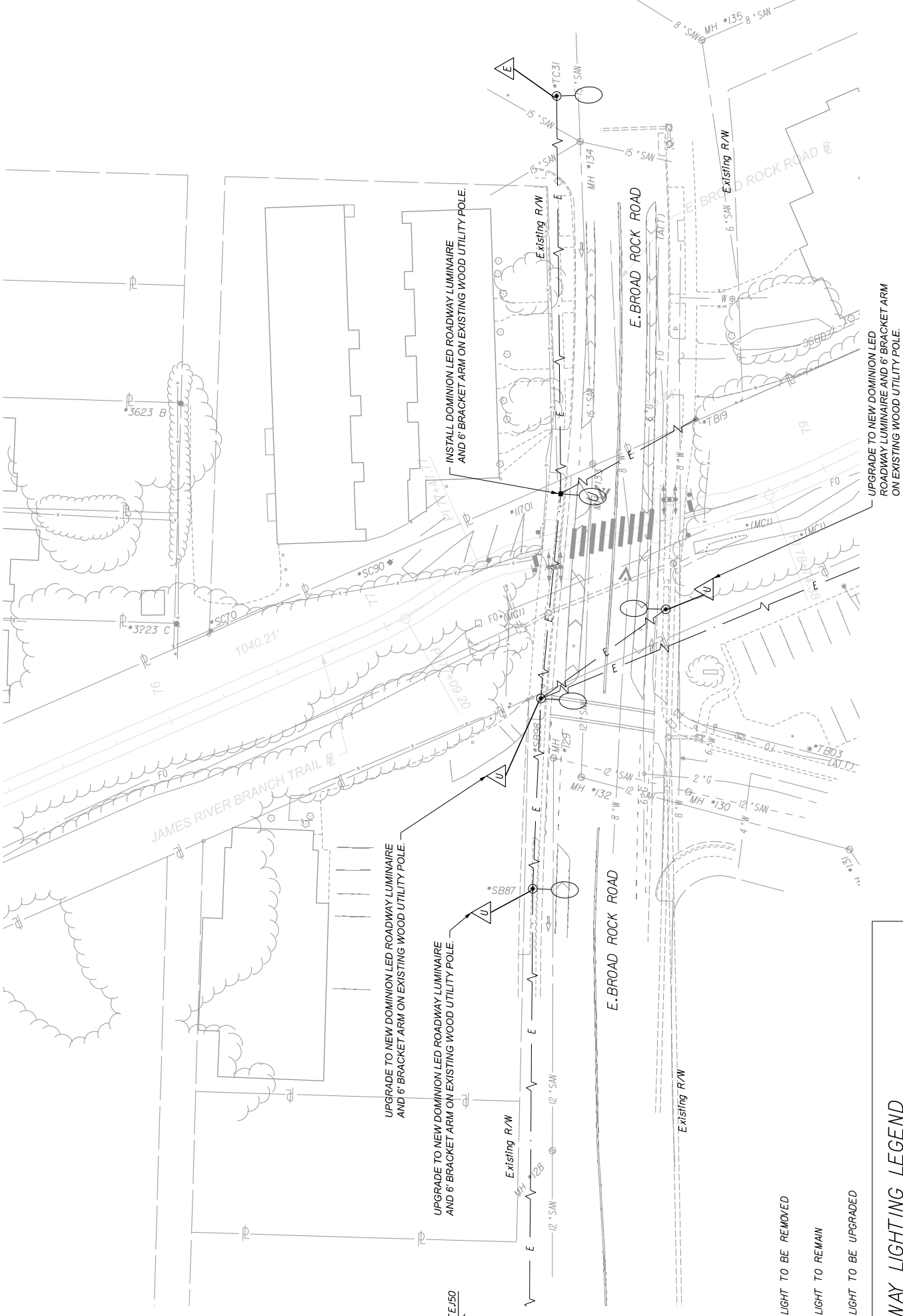
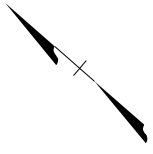
DESIGN BY: BS	REVIEWED BY: BS	SCALE: 1"=25'	DATE: FEBRUARY 2024	SHEET: 17(5)	DRAWING NO.: 0-9904
CHECKED BY: JC					

JAMES RIVER BRANCH - RAIL TO TRAIL GREENWAY PROJECT
LIGHTING PLAN

60% PLANS

THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

Whitman, Requardt & Associates
Richmond, Virginia
TRAFFIC ENGINEER



TO RICHMOND

TO RTE 150

- INDICATES EXISTING STREET LIGHT TO BE REMOVED
- INDICATES EXISTING STREET LIGHT TO REMAIN
- INDICATES EXISTING STREET LIGHT TO BE UPGRADED

ROADWAY LIGHTING LEGEND

EXISTING	PROPOSED	DESCRIPTION
		CONVENTIONAL ROADWAY LUMINAIRE AND BRACKET ARM ON NEW OR EXISTING WOOD UTILITY POLE
		CONVENTIONAL ROADWAY LUMINAIRE AND BRACKET ARM ON EXISTING WOOD UTILITY POLE
		CONVENTIONAL ROADWAY LUMINAIRE WITH 15' BRACKET ARM MOUNTED ON TRAFFIC SIGNAL POLE
		OVERHEAD ELECTRIC LINE

60% PLANS

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JAMES RIVER BRANCH - RAIL TO TRAIL GREENWAY PROJECT
LIGHTING PLAN

DESIGN BY:	REVIEWED BY:	SCALE:	DATE:	FIELD NOTES:	REVISIONS:
BS RS PC	BS RS PC	1"=25'	FEBRUARY 2024		



Technical	Administrative
Survey Superintendent	
Project Engineer	Capital Project Administrator
Maintenance Engineer	Deputy Director for Transportation / Public Works
City Traffic Engineer	Director of Public Works

NOTES	REVISIONS
1. Lot dimensions in parentheses are from deed.	
2. Property owners correct as of 1/30/24	
3. Ordinance Number	
4. Adopted	
5. Accepted	

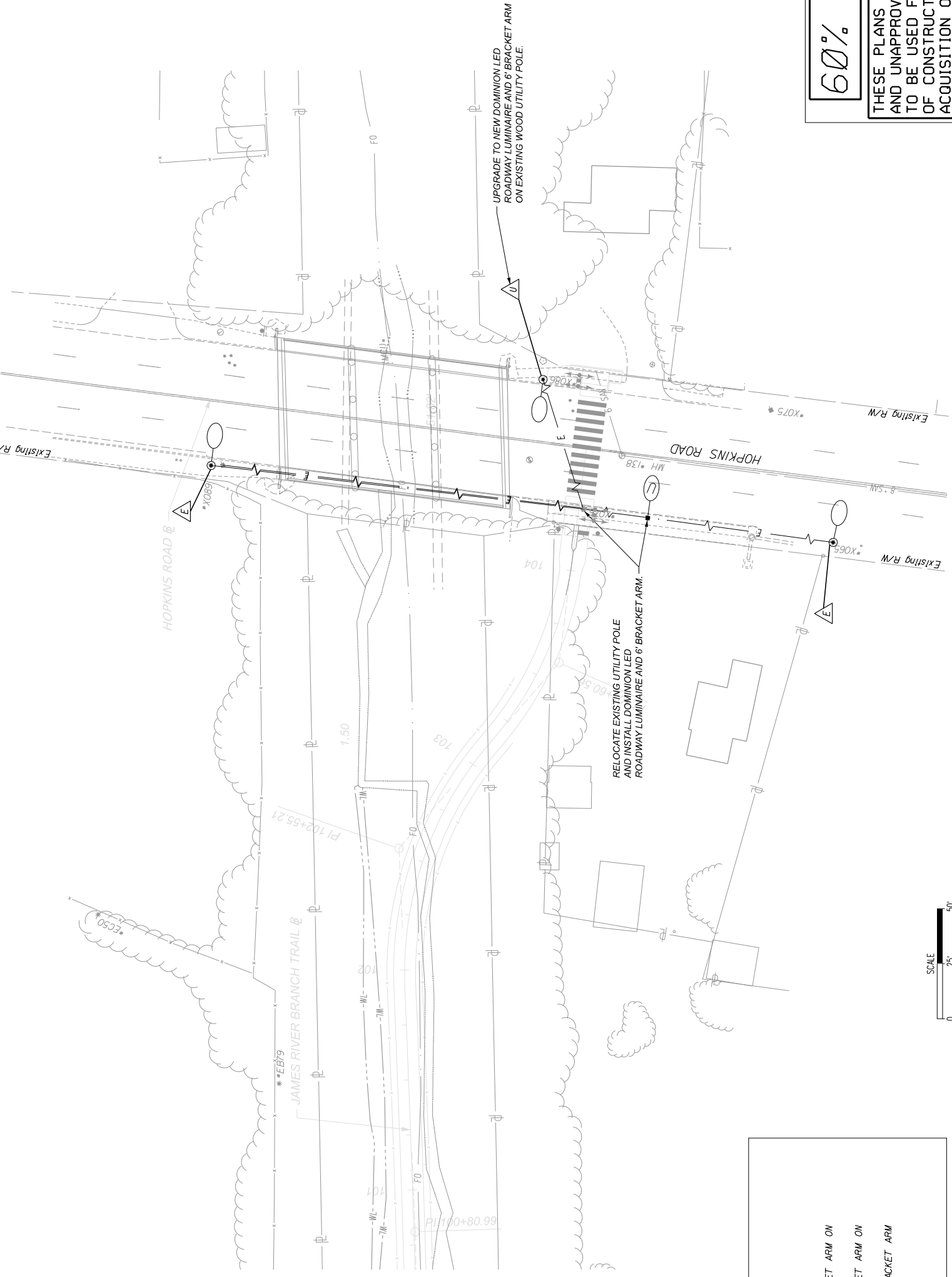
SHEET 17(6)

DRAWING NO. 0-9904

SURVEYED BY: H&B SURVEYING & MAPPING LLC...
SUPERVISED BY: MSV...
DESIGNED BY: ADM...



SURVEYED BY: H&B SURVEYING & MAPPING LLC
 DESIGNED BY: ADW
 SUPERVISED BY: MSV
 CHECKED BY:



ROADWAY LIGHTING LEGEND

EXISTING	PROPOSED	DESCRIPTION
		CONVENTIONAL ROADWAY LUMINAIRE AND BRACKET ARM ON NEW OR EXISTING WOOD UTILITY POLE
		CONVENTIONAL ROADWAY LUMINAIRE AND BRACKET ARM ON EXISTING WOOD UTILITY POLE
		CONVENTIONAL ROADWAY LUMINAIRE WITH 15' BRACKET ARM MOUNTED ON TRAFFIC SIGNAL POLE
		OVERHEAD ELECTRIC LINE

- INDICATES EXISTING STREET LIGHT TO BE REMOVED
- INDICATES EXISTING STREET LIGHT TO REMAIN
- INDICATES EXISTING STREET LIGHT TO BE UPGRADED

NOTES

- Lot dimensions in parentheses are from deed.
- Property owners correct as of 1/20.
- Ordinance Number: 19.2-100-100-200
- Adopted: 1/20
- Accepted: 1/20

REVISIONS

NO.	DESCRIPTION	DATE
1	17(7)	17(7)

EXISTING CURB & GUTTER	PROPOSED CURB & GUTTER
<ul style="list-style-type: none"> Asphalt Concrete Grass Gravel Paint Sever Manhole Sanitary Sewer Manhole Water Manhole Electric Line Gas Line Property Line Tree To Be Removed / Stump Property Line 	<ul style="list-style-type: none"> Asphalt Concrete Grass Gravel Paint Sever Manhole Sanitary Sewer Manhole Water Manhole Electric Line Gas Line Property Line Tree To Be Removed / Stump Property Line

EXISTING	PROPOSED
<ul style="list-style-type: none"> Asphalt Concrete Grass Gravel Paint Sever Manhole Sanitary Sewer Manhole Water Manhole Electric Line Gas Line Property Line Tree To Be Removed / Stump Property Line 	<ul style="list-style-type: none"> Asphalt Concrete Grass Gravel Paint Sever Manhole Sanitary Sewer Manhole Water Manhole Electric Line Gas Line Property Line Tree To Be Removed / Stump Property Line



Technical	Administrative
Survey Superintendent Project Engineer Maintenance Engineer City Traffic Engineer	Capital Project Administrator Deputy Director for Transportation / Public Works Director of Public Works

DESIGN BY: BS
 REVIEWED BY: BS
 CHECKED BY: JC

JAMES RIVER BRANCH - RAIL TO TRAIL GREENWAY PROJECT
LIGHTING PLAN
 SCALE: 1"=25'
 DATE: FEBRUARY 2024
 SHEET: 17(7)

60% PLANS

THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

Whitman, Requardt & Associates
 Richmond, Virginia
 TRAFFIC ENGINEER

GENERAL NOTES

- 1. ALL CONSTRUCTION AND MATERIALS SHALL CONFORM WITH THE LATEST CITY STANDARDS... THE LATEST CITY STANDARDS, THE LATEST STANDARDS AND SPECIFICATIONS OF THE VIRGINIA DEPARTMENT OF TRANSPORTATION (VDOT), AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD)... AS NOTED ON THE PLANS.
2. ALL CATALOG CUTS/SHOP DRAWINGS FOR EQUIPMENT AND MATERIAL SHALL BE SUBMITTED TO THE CITY OF RICHMOND... TRAFFIC ENGINEERING FOR REVIEW PROCESS.
3. ALL UTILITY CLEARANCES ARE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE OBTAINED PRIOR TO CONSTRUCTION.
4. IN NO CASE SHALL THE CONTRACTOR REMOVE, DAMAGE, OR DESTROY ANY CITY STREET LIGHTS, UNLESS SPECIFIED ON THE PLANS AND APPROVED BY THE CITY OF RICHMOND DEPARTMENT OF PUBLIC UTILITIES.
5. ONCE THE SIGNAL WORK IS COMPLETED, FINAL INSPECTION OF WORK PERFORMED AND THE 130 DAY TEST PERIOD HAS BEEN SATISFIED FOR EACH INTERSECTION, THE CITY WILL ASSUME MAINTENANCE.
6. INSTALLATION DIMENSIONS SHOWN WITHIN THE PLANS ARE TYPICAL. MODIFICATION SHALL BE MADE AS REQUIRED UNDER APPROVAL FROM THE ENGINEER.
7. SEE TYPICAL UTILITIES AND CONDUIT DEPTH LOCATION FIGURE FOR TYPICAL DEPTHS OF DRU UTILITIES AND TRAFFIC CONDUIT. THIS FIGURE IS FOR GRAPHICAL PURPOSES ONLY. THE CONTRACTOR SHALL VERIFY THE DEPTH OF ALL UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION.

MOT NOTES

- 1. NEW TRAFFIC SIGNAL HEADS AND OVERHEAD TRAFFIC SIGNAL SIGNAGE SHALL BE COVERED WITH A DURABLE, NON-TRANSPARENT COVER UPON INSTALLATION. THE CONTRACTOR SHALL MAINTAIN THE COVERS UNTIL THE NEW TRAFFIC SIGNAL SYSTEM IS OPERATIONAL.
2. MAINTENANCE AND REPAIR OF THE TEMPORARY TRAFFIC SIGNAL ONCE MODIFICATIONS ARE STARTED, SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
3. ALL TEMPORARY TRAFFIC CONTROL DEVICES SHALL BE INSTALLED PRIOR TO THE START OF CONSTRUCTION AND SHALL BE REMOVED OR RELOCATED AS THE WORK IS COMPLETED OR WORK CONDITIONS CHANGE. THE CONTRACTOR SHALL ENSURE THAT ALL TEMPORARY TRAFFIC CONTROL DEVICES ARE IN PLACE AND OPERATING AT ALL TIMES.
4. SIGNAL OUTAGES REQUIRED DURING TRANSITIONS BETWEEN STAGES OF CONSTRUCTION OR DURING OTHER SIGNAL WORK SHALL OCCUR DURING NON-PEAK HOURS. DURING THESE PERIODS, THE CONTRACTOR SHALL PROVIDE AN ALTERNATIVE MEANS TO CONTROL TRAFFIC AS DIRECTED AND APPROVED BY THE ENGINEER.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING DETECTION ON ALL APPROACHES OF THE INTERSECTION AT ALL TIMES, AND THROUGHOUT ALL PHASES OF CONSTRUCTION UNLESS OTHERWISE NOTED ON THE PLANS.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING, ADJUSTING AND ALIGNING EQUIPMENT, INCLUDING SIGNAL HEADS, DURING EACH STAGE OF CONSTRUCTION UNTIL THE PERMANENT TRAFFIC SIGNAL IS CONSTRUCTED AND PLACED IN PERMANENT OPERATION.
7. 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.

SIGNAL NOTES

- 1. THE CONTRACTOR SHALL STAKE THE SIGNAL POLE LOCATIONS AND VERIFY WITH THE CITY OF RICHMOND TRAFFIC ENGINEERING OFFICE THE LOCATION OF ALL FIELD EQUIPMENT INCLUDING JUNCTION BOXES AND POLES PRIOR TO DRILLING. CONTACT THE CITY OF RICHMOND SIGNAL SHOP AT (804) 646-4666 FOR SIGNAL POLE STAKING VERIFICATION.
2. MAST ARM POLE FOUNDATIONS SHALL BE IN ACCORDANCE WITH VDOT STD. PE-8 MODIFIED WITH A 6-BOLT FOUNDATION PER CITY STANDARDS. SIGNAL POLE FOUNDATION DESIGNS SHALL BE FURNISHED BY THE CONTRACTOR. THE CONTRACTOR SHALL FURNISH AT LEAST ONE TEST BORE AT EACH FOUNDATION LOCATION TO DETERMINE THE SUBSURFACE CONDITIONS PRIOR TO DESIGNING THE FOUNDATION.
3. THE CONTRACTOR SHALL REFER TO VDOT ROAD & BRIDGE SPECIFICATIONS, LATEST EDITION FOR PLACEMENT OF SIGNAL POLE FOUNDATIONS.
4. MAST ARM POLES SHALL BE IN ACCORDANCE WITH VDOT STD. MP-3. ALL MAST ARM POLES TO INCLUDE NUT COVERS.
5. ALL SIGNAL POLES, MAST ARMS, PEDESTAL POLES AND CONTROLLER CABINETS INCLUDING THE UPS CABINET SHALL BE FEDERAL GREEN (COLOR #1077) IN ACCORDANCE WITH VDOT STANDARDS AND SPECIFICATIONS.
6. ALL MP-3 COMBINATION LUMINAIRE MAST ARM POLES SHALL NOT EXCEED 26 FEET.
7. CONDUIT LOCATIONS SHALL BE MARKED ON ALL FOUNDATIONS PER THE SPECIFICATION FOR THE CONDUIT INSTALLED.
8. ALL MEASUREMENTS FOR THE PLACEMENT OF SIGNAL HEADS AND SIGNS ON MAST ARMS SHALL BE TAKEN FROM THE CENTER OF POLE TO THE CENTER OF THE SIGNAL HEAD AND SIGNS.
9. THE MATERIALS AND CONSTRUCTION FOR THE CONTROLLER CABINET SHALL BE IN ACCORDANCE WITH SECTION 703 OF THE VDOT ROAD AND BRIDGE SPECIFICATIONS.
10. THE PROPOSED TRAFFIC SIGNAL CONTROLLER(S) SHALL BE AN ECONOMITE COBALT NEMA CONTROLLER WITH THEIR LATEST FIRMWARE VERSION (AT LEAST VERSION 2.63) OR APPROVED EQUAL AS APPROVED BY THE CITY OF RICHMOND TRAFFIC ENGINEER. THE CONTROLLER SHALL BE 100% COMPATIBLE WITH THE CITY OF RICHMOND'S SIGNAL SYSTEM SOFTWARE (CENTRACS).
11. THE TRAFFIC SIGNAL CABINET SHALL BE CITY STANDARD NEMA TS-2 SIGNAL CABINET (GROUND-MOUNT) OR APPROVED EQUAL AS APPROVED BY THE CITY OF RICHMOND TRAFFIC ENGINEER.
12. ALL JUNCTION BOXES SHALL BE VDOT STD. JB-S2 UNLESS OTHERWISE NOTED. SPLICES IN ALL JUNCTION BOXES SHALL BE PLACED ON THE J-HOOKS. ALL JUNCTION BOXES SHALL BE INSTALLED AT FINAL GRADE.
13. ALL TRAFFIC SIGNAL HEAD SECTIONS SHALL BE 12" PAINTED YELLOW AND SHALL BE LIGHT EMITTING DIODE (LED).
14. ALL SIGNAL HEADS SHALL BE MOUNTED IN ACCORDANCE WITH VDOT STD. SM-3. AND SHALL BE EQUIPPED WITH CAP VISORS AND HIGH VISIBILITY BACKPLATES.
15. CAP VISORS SHALL BE PAINTED YELLOW AND BACKPLATES SHALL BE ALUMINUM BLACK POWDER COATED WITH HIGH VISIBILITY 3-FLUORESCENT YELLOW RETROREFLECTIVE BORDER.
16. ALL UNDERGROUND CONDUIT SHALL BE INSTALLED IN ACCORDANCE WITH VDOT STD. ECH-1-ECI-2 OR DIRECTIONALLY BORED. ALL CONDUIT SHALL BE INSTALLED PRIOR TO ROADWAY AND SIDEWALK FINAL COURSE.
17. ALL PROPOSED CONDUITS SHALL BE INSTALLED IN A COMMON TRENCH, WHERE FEASIBLE. STANDARD MANUFACTURER'S CONDUIT SPACERS SHALL BE USED TO PROVIDE ADEQUATE SEPARATION.
18. (S) DENOTES CABLE TO BE SHIELDED.
19. A *8 BARE SYSTEM BOND WIRE IS REQUIRED IN ALL NON-METALLIC CONDUIT.
20. PEDESTRIAN SIGNAL HEADS SHALL BE IN ACCORDANCE WITH VDOT STD. SP-8 (COUNTDOWN) WITH L.E.D. LAMPS. PEDESTRIAN SIGNAL HEADS SHALL BE MOUNTED IN ACCORDANCE WITH VDOT STD. SMB-1 AND PAINTED FLAT BLACK.
21. FORWARD LOOKING INFRARED PASSIVE THERMAL DETECTION SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH SPECIAL PROVISIONS AND MANUFACTURER'S RECOMMENDATIONS.
22. 5.8 GHZ WIRELESS BROADBAND RADIO SHALL BE INSTALLED IN ACCORDANCE WITH VDOT SPECIFICATIONS AND THE CONTRACT SPECIAL PROVISIONS.
23. ALL CONDUIT RISERS FOR ELECTRICAL SERVICE SHALL BE 3" DIA. MINIMUM.
24. MAST ARM SIGNS SHALL BE INSTALLED IN ACCORDANCE WITH VDOT STD. SMD-2.
25. THE CONTRACTOR SHALL REPAIR ANY DAMAGE TO EXISTING SIDEWALKS CAUSED BY THE INSTALLATION OF THE SIGNAL EQUIPMENT.
26. THE CONTRACTOR SHALL VERIFY PROPOSED GEOMETRICS PRIOR TO INSTALLING SIGNAL EQUIPMENT.
27. CONTRACTOR SHALL INSTALL CONDUIT AT SUFFICIENT DEPTH TO AVOID DISTURBANCE DURING ROADWAY CONSTRUCTION.
28. MAINTENANCE OF PERMANENT SIGNALIZATION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR UNTIL FINAL ACCEPTANCE BY THE CITY.
29. FOR ELECTRICAL SERVICE, THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING VIRGINIA POWER 4 WEEKS IN ADVANCE. THE CONTRACTOR IS RESPONSIBLE FOR CONNECTING THE POWER FROM ITS SOURCE TO THE CONTROLLER CABINET AS SHOWN ON THE PLAN.
30. THE CONTRACTOR SHALL COORDINATE ALL TRAFFIC SIGNAL TIMINGS WITH THE CITY OF RICHMOND FOR BOTH THE TEMPORARY AND PERMANENT SIGNALS AND ADJUST TIMINGS AS DIRECTED BY THE CITY OF RICHMOND TRAFFIC ENGINEER.

60% PLANS

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Whitman, Requardt & Associates Richmond, Virginia TRAFFIC ENGINEER

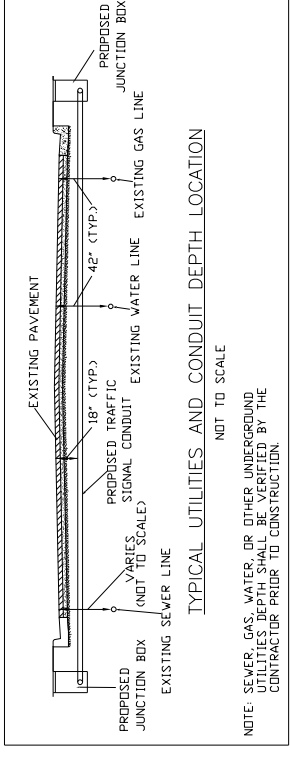
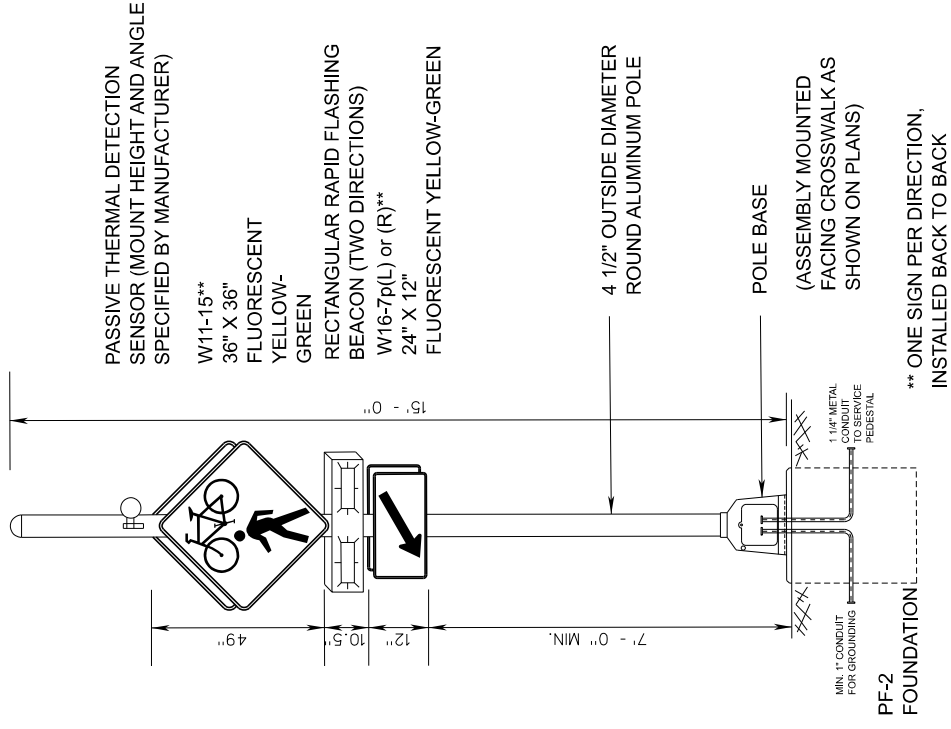
SURVEYED BY: H&B SURVEYING & MAPPING LLC... DESIGNED BY: PDM... SUPERVISED BY: MSV...

INDEX OF SHEETS

Table with 4 columns: Sheet No., Sheet Description, Scale, Date. Includes sheets 18(1) through 18(7) with descriptions like 'Index of Sheets, General Notes & Legend' and 'James River Branch Trail at Westover Hills Road'.

Project information block including: NOTES (1. List dimensions in parentheses are from sheet, 2. Property owners correct as of 1/30/20, 3. Ordinance Number, 4. Adopted, 5. Accepted), REVISIONS, DEPARTMENT OF PUBLIC WORKS RICHMOND, VIRGINIA, CITY OF RICHMOND logo, and administrative details like 'JAMES RIVER BRANCH - RAIL TO TRAIL GREENWAY PROJECT' and 'PEDESTRIAN HYBRID BEACON / RECTANGULAR RAPID FLASHING BEACON NOTES, INDEX & LEGEND'.

RECTANGULAR RAPID FLASHING BEACON (RRFB) DETAIL



STANDARD TRAFFIC SIGNAL LEGEND

PLAN ITEM	PLAN SYMBOL	
	PROPOSED	EXISTING
Metal Signal Pole & Foundation and Mast Arm (As noted in Signal Pole Legend)		
Pedestal Pole and Foundation (Std. PF-2)		
Pedestal Pole and Foundation (Std. PA-3)		
Traffic Signal Head w/ Backplate w/o Backplate		
Pedestrian Signal Head		
Pedestrian Pushbutton & Sign		
Traffic Signal Sign Mast Arm or Span Wire Mtd. Pole Mounted		
Passive Thermal Detection Sensor		
Wireless Broadband Radio		
Controller Cabinet & Foundation (Std. CF-3)		
Junction Box (Std. as noted on plans)		
Rectangular Rapid Flashing Beacon		
Signal Luminaire (250 W) and Arm		
Signal Luminaire (400 W) and Arm		
Pedestrian Video Detection Zone		
Conduit		

LABELS	
Proposed Signal Head	②
Existing Signal Head	②'
Proposed Pedestrian Signal Head	Ⓜ
Existing Pedestrian Signal Head	Ⓜ'
Signal Pole or Controller	Ⓐ
Cable and Conduit	Ⓓ
Construction Notes	Ⓐ
Signal Phasing	∅2
Sign	S-1

60% PLANS

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SURVEYED BY: H&B SURVEYING & MAPPING LLC
 SUPERVISED BY: MSV
 DESIGNED BY: ADM

Whitman, Requardt & Associates
 Richmond, Virginia
 TRAFFIC ENGINEER

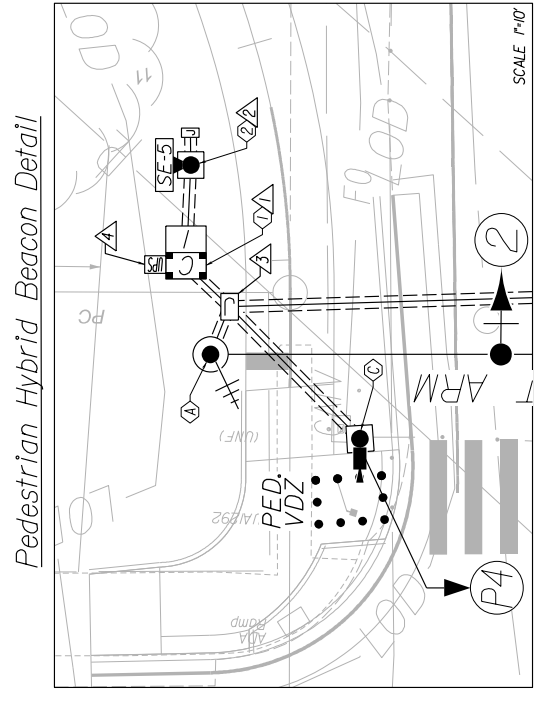
<p>NOTES</p> <ol style="list-style-type: none"> List dimensions in parentheses are from ded. Property owners correct as of . 20 Ordinance Number Adopted Accepted <p>REVISIONS</p>	<p>Existing Curb & Gutter</p> <ul style="list-style-type: none"> Sidewalk Bench Sever Manhole Sanitary Sewer Manhole Sanitary Sewer Manhole Electric Line Water Line Tree to be Retained / Removed Property Line <p>RRFB</p> <ul style="list-style-type: none"> Riding Cut & Ramp Ally Crossing/Driveway Edge of Pavement Pole Utility Pole Proposed Manhole Bench Asphalt <p>Proposed Con: Sidewalk</p> <ul style="list-style-type: none"> Brick Sidewalk Castling Water Valve Gas Valve Gas Valve Manhole Electric Manhole Proposed Curb Cut Ramp Decorative Light Conduit (Cable, Bussel) Retaining Wall 	<p>Technical</p> <ul style="list-style-type: none"> Survey Superintendent Project Engineer Maintenance Engineer City Traffic Engineer <p>Administrative</p> <ul style="list-style-type: none"> Capital Project Administrator Deputy Director for Transportation / Public Works Director of Public Works 	<p>DEPARTMENT OF PUBLIC WORKS RICHMOND, VIRGINIA</p>	<p>DESIGN BY: SBB CHECKED BY: DRT</p>	<p>REVIEWED BY: SBB DATE: FEBRUARY 2024</p>	<p>SCALE: 1" = 10'-0"</p>	<p>SHEET: 18(1)2</p>	<p>DRAWING NO. 0-9904</p>
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JAMES RIVER BRANCH - RAIL TO TRAIL GREENWAY PROJECT
 PEDESTRIAN HYBRID BEACON/
 RECTANGULAR RAPID FLASHING BEACON
 NOTES, INDEX & LEGEND

SURVEYED BY: H&B SURVEYING & MAPPING LLC
 DESIGNED BY: ADW
 SUPPLIED BY: MSV
 REVIEWED BY: [Signature]

- SIGNAL NOTES**
- 1. INSTALL VDOT STD CF-1 CONTROLLER FOUNDATION.
 - 2. INSTALL VDOT STD SE-5 ELECTRICAL SERVICE (METERED).
 - 3. INSTALL VDOT STD JB-S3 JUNCTION BOX.
 - 4. INSTALL AN APPROVED BATTERY BACKUP SYSTEM (UNINTERRUPTIBLE POWER SUPPLY (UPS)). THE UPS ASSEMBLY SHALL MOUNT DIRECTLY TO THE CONTROLLER CABINET.
- Signal Pole & Controller Legend**
- (ALL DIMENSIONS ARE TO CENTER OF POLE)
- 1. CONTROLLER CABINET & FOUNDATION (CF-1) Cabinet door hinge located on right side of pad.
 - 2. 120' LT. of James River Branch Trail Constr. @ Sta. 0+74.5 ELECTRICAL SERVICE (SE-5)
 - 3. 100' LT. of James River Branch Trail Constr. @ Sta. 0+87.5 MAST ARM POLE, TYPE A (MP-3)
 - 4. 90' LT. of James River Branch Trail Constr. @ Sta. 0+64 49' Arm 90' Angle to James River Branch Trail Constr. @ Signal Placement: 33.0', 45.0'
 - 5. Sign Placement: 35.0'
 - 6. Wireless Broadband Radio Placement: POLE
 - 7. MAST ARM POLE, TYPE A (MP-3)
 - 8. 51.4' RT. of Westover Hills Blvd Constr. B Sta. 0+149 40' Arm 270° Angle to Westover Hills Blvd Constr. @ Signal Placement: 18.0', 29.0'
 - 9. Sign Placement: 23.5'
 - 10. PEDESTAL POLE (PF-2) 1/2
 - 11. 7.9' RT. of James River Branch Trail Constr. @ Sta. 0+55 Passive Thermal Detection Sensor Placement: POLE (Mounted Per Manufacturer's Recommendations)
 - 12. PEDESTAL POLE (PF-2) 1/2
 - 13. 46.9' RT. of Westover Hills Blvd Constr. B Sta. 0+137.0 Passive Thermal Detection Sensor Placement: POLE (Mounted Per Manufacturer's Recommendations)



REFERENCES

SHEET	DESCRIPTION
3	ROADWAY PLAN
1613	SIGNING AND MARK. PLAN

NOTES

1. List dimensions in parentheses are from deed.
2. Property owners correct as of 20
3. Ordinance Number
4. Adopted
5. Accepted

REVISIONS

NO.	DESCRIPTION

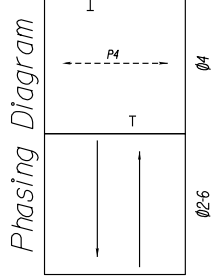
LEGEND

Existing Curb Cut Ramp	Proposed Conc. Sidewalk
Existing Sidewalk	Brick Sidewalk
Existing Water Valve	Cast Iron Water Valve
Existing Sewer Manhole	Cast Iron Manhole
Existing Gas Manhole	Cast Iron Manhole
Existing Electric Pole	Wood Pole
Existing Telephone Pole	Wood Pole
Existing Water Line	Water Line
Existing Sewer Line	Sewer Line
Existing Gas Line	Gas Line
Existing Electric Line	Electric Line
Existing Telephone Line	Telephone Line
Existing Property Line	Property Line



DEPARTMENT OF PUBLIC WORKS
 RICHMOND, VIRGINIA

Technical	Administrative
Survey Superintendent	
Project Engineer	Capital Project Administrator
Maintenance Engineer	Deputy Director / Public Works Transportation
City Traffic Engineer	Director of Public Works



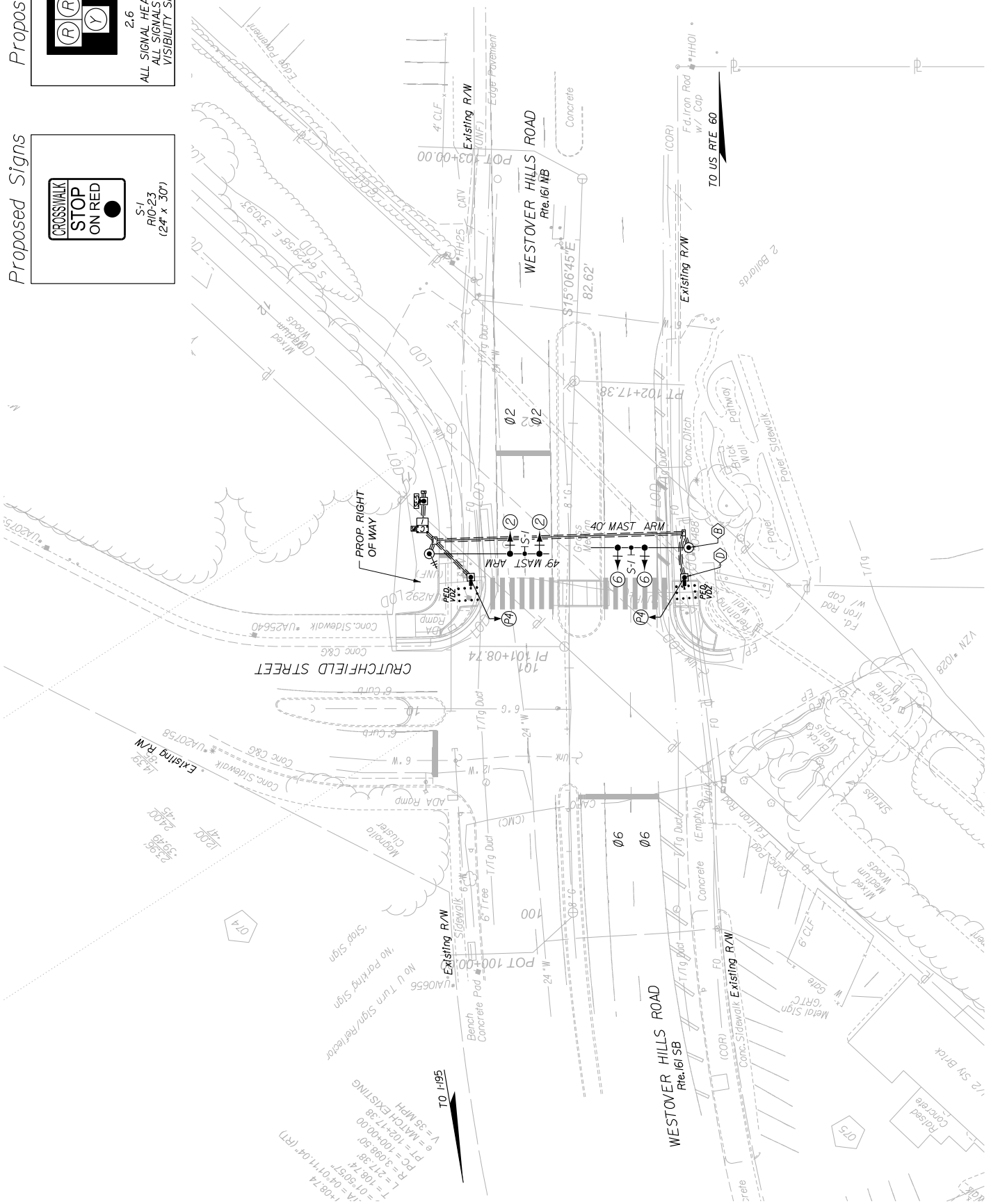
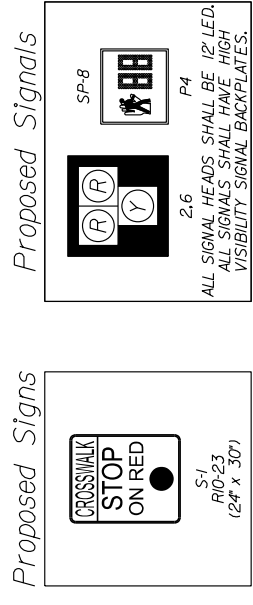
Color Sequence Chart

PHASES	COMBINATIONS		
2	4	6	2-6
2	BLANK	BLANK	BLANK
6	BLANK	BLANK	BLANK
P4	DW	W	DW
P4	DW	DW	BLANK

Signal is dark until pedestrian calls for signal.
 Empty box denotes RED indication.

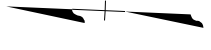
60% PLANS

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Whitman, Reaquer & Associates
 Richmond, Virginia
 TRAFFIC ENGINEER

SURVEYED BY: H&B SURVEYING & MAPPING LLC
 DESIGNED BY: MSV
 APPROVED BY: ADM

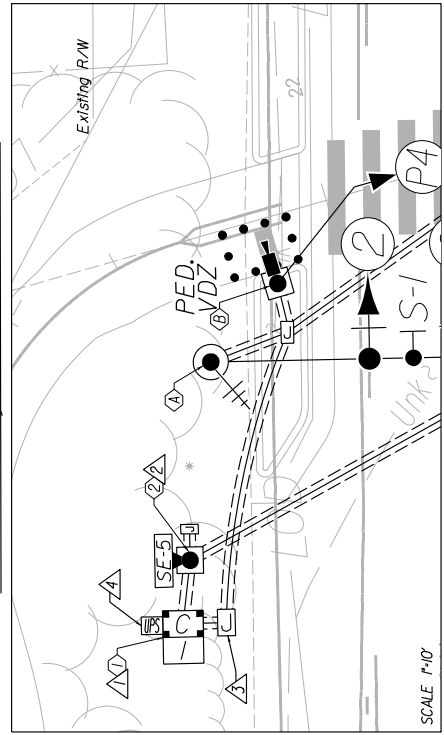


- SIGNAL NOTES**
- ▲ INSTALL VDOT ST'D CF-I CONTROLLER FOUNDATION.
 - ▲ INSTALL VDOT ST'D SE-5 ELECTRICAL SERVICE (METERED).
 - ▲ INSTALL VDOT ST'D JB-S3 JUNCTION BOX.
 - ▲ INSTALL AN APPROVED BATTERY BACK-UP SYSTEM (UNINTERRUPTIBLE POWER SUPPLY/UPS). THE UPS ASSEMBLY SHALL MOUNT DIRECTLY TO THE CONTROLLER CABINET.

Signal Pole & Controller Legend

- ① ALL DIMENSIONS ARE TO CENTER OF POLE
- ② CONTROLLER CABINET & FOUNDATION (CF-I) Cabinet door hinge located on left side of pad.
- ③ 347' RT. of Midlothian Turnpike Constr. @ Sta.100+60
- ④ ELECTRICAL SERVICE (SE-5)
- ⑤ 337' RT. of Midlothian Turnpike Constr. @ Sta.100+67
- ⑥ MAST ARM POLE, TYPE BI(MP-3)
- ⑦ 310' LT. of Midlothian Turnpike Constr. @ Sta.100+90
- ⑧ 60' Arm 90° Angle to Midlothian Turnpike Constr. @ Signal Placement: 180', 280', 390', 500'
- ⑨ Sign Placement: 230', 445'
- ⑩ Wireless Broadband Radio Placement: POLE
- ⑪ PEDESTAL POLE (PF-2), 1/2
- ⑫ 7.5' RT. of James River Branch Trail Constr. @ Sta.21+92
- ⑬ Passive Thermal Detection Sensor Placement: Pole Mounted Per Manufacturer's Recommendations
- ⑭ PEDESTAL POLE (PF-2), 1/2
- ⑮ 80' LT. of James River Branch Trail Constr. @ Sta.22+60
- ⑯ Passive Thermal Detection Sensor Placement: Pole Mounted Per Manufacturer's Recommendations

Pedestrian Hybrid Beacon Detail



NOTES
 1. Lot dimensions in parentheses are from deed.
 2. Property owners correct as of 1/30
 3. Ordinance Number
 4. Adopted
 5. Accepted

REFERENCES
 1. City of Richmond, VA
 2. Virginia Department of Transportation (VDOT) Manual of Practice
 3. American Road & Builders Builders Association (ARBA) Manual of Practice
 4. American National Standards Institute (ANSI) Manual of Practice
 5. International Standards Organization (ISO) Manual of Practice

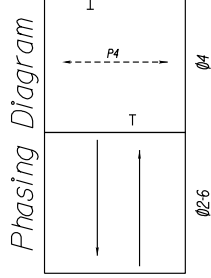
SHEET	DESCRIPTION
4	ROADWAY PLAN
16(3)	SIGNING AND MARK-PLAN

SYMBOL	DESCRIPTION
	Existing Curb & Gutter
	Sidewalk
	Bath
	Sewer Manhole
	Sanitary Sewer Manhole
	Edge of Pavement
	Gas Valve
	Gas Valve Manhole
	Electric Line
	Telephone Manhole
	Water Line
	Tree to be Retained
	Property Line
	Proposed Conc. Sidewalk
	Brick Sidewalk
	Cast-in-place Concrete
	Edge of Pavement
	Gas Valve Manhole
	Electric Manhole
	Proposed Curb Cut Ramp
	Decorative Light
	Conditionally Retained Tree
	Retaining Wall



TECHNICAL	ADMINISTRATIVE
Survey Superintendent	Capital Project Administrator
Project Engineer	Deputy Director for Public Works
Maintenance Engineer	Director of Public Works
City Traffic Engineer	

DEPARTMENT OF PUBLIC WORKS
 RICHMOND, VIRGINIA



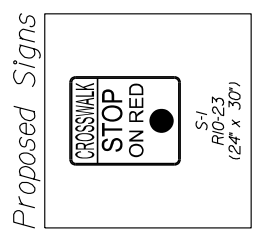
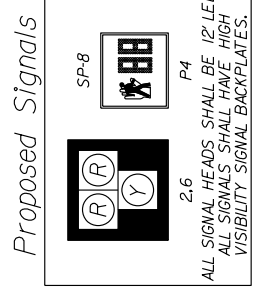
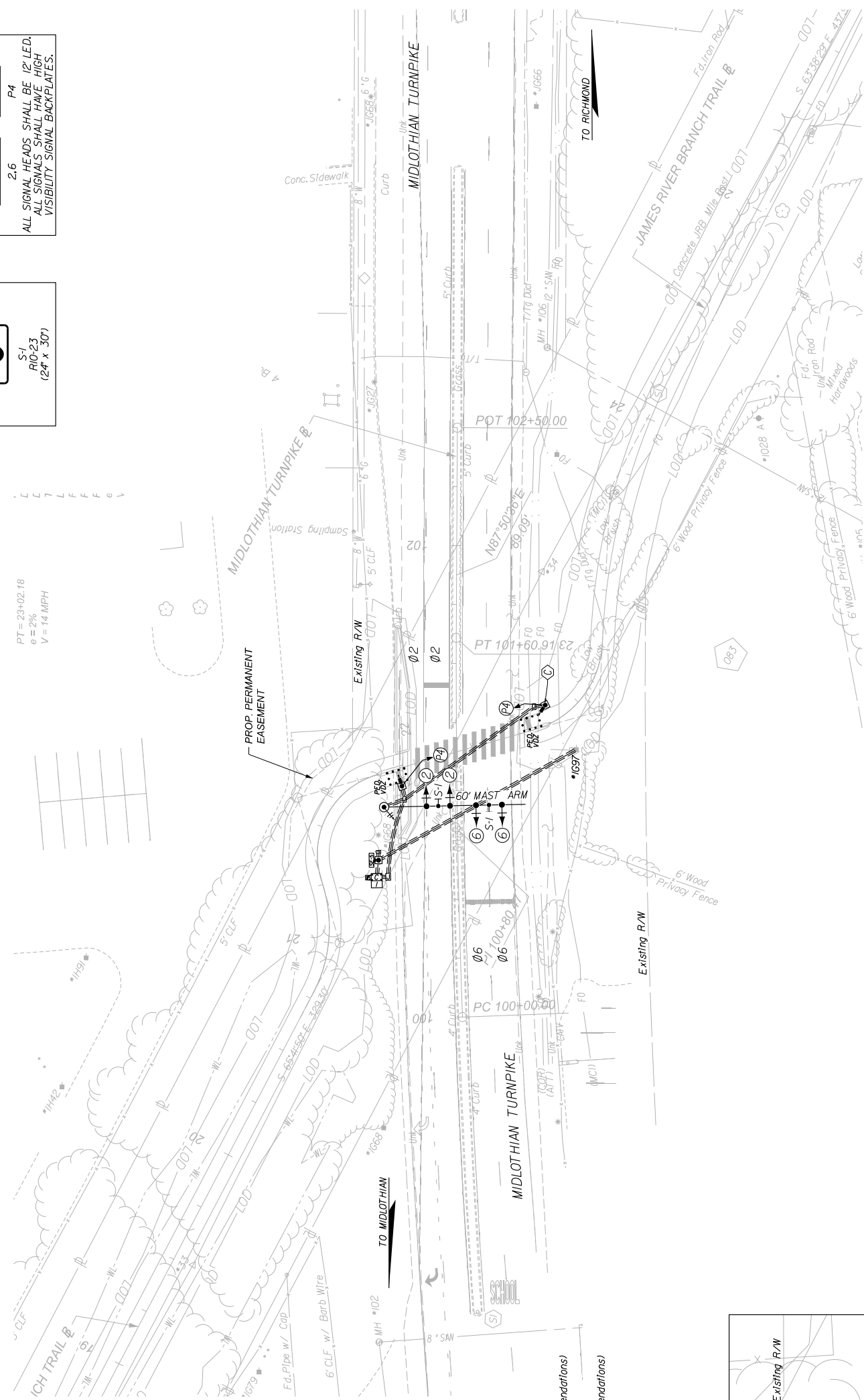
Color Sequence Chart

SIGNAL	PHASES	COMBINATIONS	FLASH
2	4	6	2-6
2	BLANK	BLANK	BLANK
6	BLANK	BLANK	BLANK
P4	DW	W	DW
P4	DW	DW	BLANK

Signal is dark until pedestrian calls for signal.
 Empty box denotes RED indication.

60% PLANS

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PT=23+02.18
 G=2%
 V=14 MPH

PT=101+60.91
 G=2%
 V=14 MPH

PT=102+50.00
 G=2%
 V=14 MPH

PT=103+40.00
 G=2%
 V=14 MPH

PT=104+30.00
 G=2%
 V=14 MPH

PT=105+20.00
 G=2%
 V=14 MPH

PT=106+10.00
 G=2%
 V=14 MPH

JAMES RIVER BRANCH - RAIL TO TRAIL GREENWAY PROJECT
 PEDESTRIAN HYBRID BEACON PLAN
 MIDLOTHIAN TURNPIKE

REVIEWED BY: [Signature]
 DATE: FEBRUARY 2024
 SCALE: 1"=20'

FIELD NOTES: [Blank]
 SHEET: 18(4)

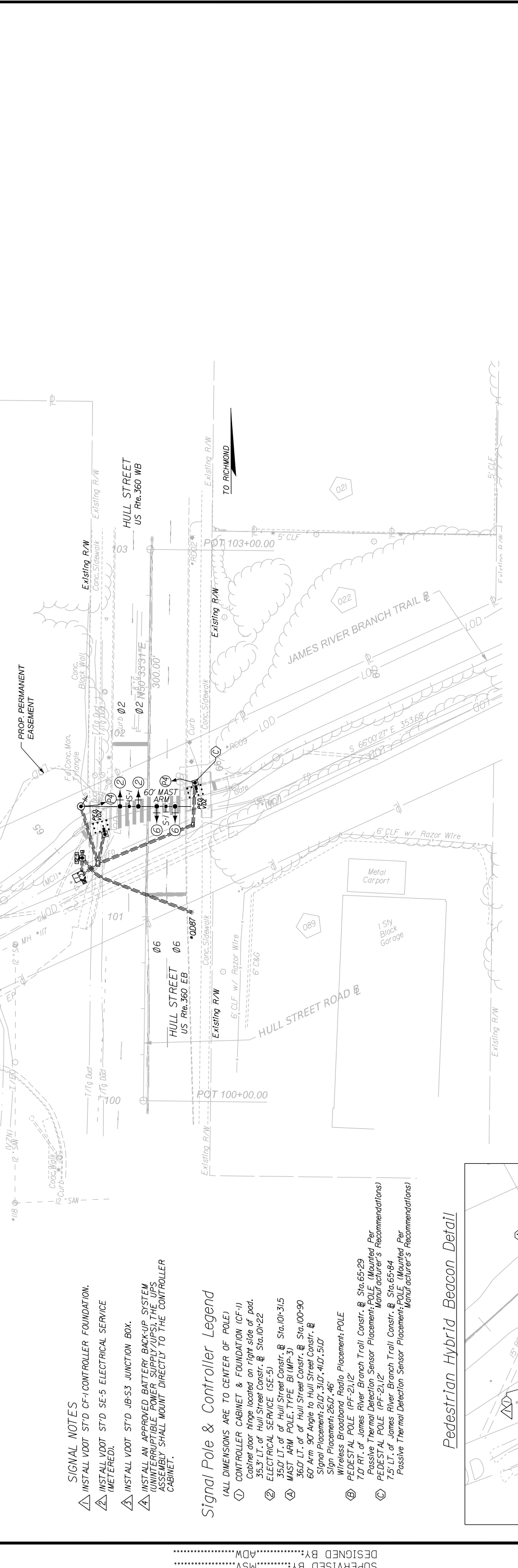
DESIGN BY: [Signature]
 CHECKED BY: [Signature]

DRIVING NO. 0-9904

SURVEYED BY: H&B SURVEYING & MAPPING LLC
 DESIGNED BY: ADV.
 DESIGNED BY: MSV.
 DESIGNED BY: MSV.
 DESIGNED BY: MSV.

SIGNAL NOTES
 △ INSTALL VDOT STD CF-1 CONTROLLER FOUNDATION.
 △ INSTALL VDOT STD SE-5 ELECTRICAL SERVICE (METERED).
 △ INSTALL VDOT STD JB-S3 JUNCTION BOX.
 △ INSTALL AN APPROVED BATTERY BACK-UP SYSTEM (UNINTERRUPTIBLE POWER SUPPLY/UPS). THE UPS ASSEMBLY SHALL MOUNT DIRECTLY TO THE CONTROLLER CABINET.

Signal Pole & Controller Legend
 (ALL DIMENSIONS ARE TO CENTER OF POLE)
 ① CONTROLLER CABINET & FOUNDATION (CF-1)
 Cabinet door hinge located on right side of pod.
 35.5" LT. of Hull Street Constr. @ Sta. 101+22
 ② ELECTRICAL SERVICE (SE-5)
 35.0" LT. of Hull Street Constr. @ Sta. 101+31.5
 ③ MAST ARM POLE, TYPE BI (MP-3)
 36.0" LT. of Hull Street Constr. @ Sta. 100+90
 60° Arm 90° Angle to Hull Street Constr. @
 Signal Placement: 21.0'-31.0'-41.0'-51.0'
 Sign Placement: 26.0', 46'
 ④ WIRELESS BROADBAND RADIO PLACEMENT: POLE
 WIRELESS BROADBAND (PF-2), 12'
 7.0' RT. of James River Branch Trail Constr. @ Sta. 65+29
 ⑤ PASSIVE THERMAL DETECTION SENSOR PLACEMENT: POLE (Mounted Per Manufacturer's Recommendations)
 ⑥ PEDESTAL POLE (PF-2), 12'
 7.5' LT. of James River Branch Trail Constr. @ Sta. 65+84
 ⑦ PASSIVE THERMAL DETECTION SENSOR PLACEMENT: POLE (Mounted Per Manufacturer's Recommendations)



REFERENCES

SHEET	DESCRIPTION
10	ROADWAY PLAN
16(7)	SIGNING AND MARK. PLAN

NOTES

- Lot dimensions in parentheses are from deed.
- Property owners correct as of 1/20.
- Ordinance Number
- Adopted
- Accepted

REVISIONS

NO.	DATE	DESCRIPTION

LEGEND

Symbol	Description
Existing Curb & Gutter	Existing Curb & Gutter
Sidewalk	Sidewalk
Bench	Bench
Sanitary Sewer	Sanitary Sewer
Sanitary Sewer Manhole	Sanitary Sewer Manhole
Electric Line	Electric Line
Water Line	Water Line
Tree to be Retained	Tree to be Retained
Property Line	Property Line

ADMINISTRATIVE

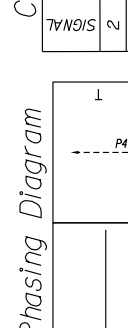
Position	Name
Survey Superintendent	[Name]
Project Engineer	[Name]
Maintenance Engineer	[Name]
City Traffic Engineer	[Name]
Director of Public Works	[Name]

DEPARTMENT OF PUBLIC WORKS
RICHMOND, VIRGINIA

Color Sequence Chart

PHASES	COMBINATIONS
2	2-6
4	BLANK
6	BLANK
2	BLANK
4	BLANK
6	BLANK
P4	DW
P4	BLANK
DW	BLANK
FLASH	BLANK

Signal is dark until pedestrian calls for signal.
Empty box denotes RED indication.



60% PLANS

THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

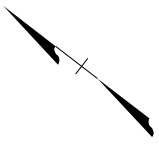
JAMES RIVER BRANCH - RAIL TO TRAIL GREENWAY PROJECT
PEDESTRIAN HYBRID BEACON PLAN
HULL STREET

SCALE: 1" = 20'
 DATE: FEBRUARY 2024
 SHEET: 18(5)

REVIEWED BY: [Name]
 CHECKED BY: [Name]

DESIGN BY: [Name]
 DRAWING NO.: 0-9904

SURVEYED BY: H&B SURVEYING & MAPPING LLC
 SUPERVISED BY: MSV
 DESIGNED BY: ADM



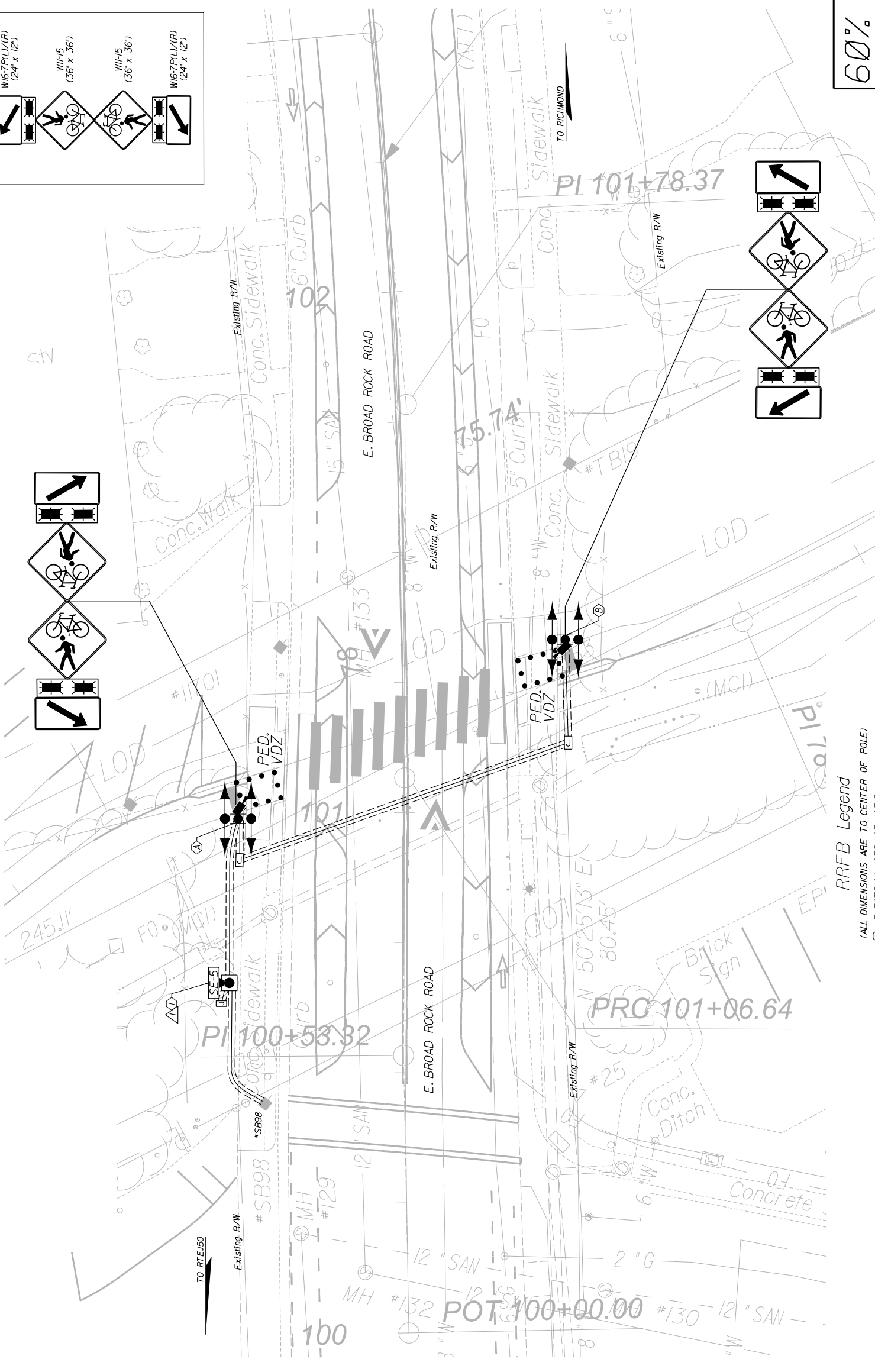
Proposed Signs

W16.7RLU(R)
(24" x 12")

W11H5
(36" x 36")

W11H5
(36" x 36")

W16.7RLU(R)
(24" x 12")



60% PLANS

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RRFB Legend
 (ALL DIMENSIONS ARE TO CENTER OF POLE)

- ① ELECTRICAL SERVICE (SE-5)
- ② 337' LT. of E Broad Rock Road Constr. @ Sta. 100+67
- ③ PEDESTAL POLE (PF-2), 15'
- ④ 7.0' RT. of James River Branch Trail Constr. @ Sta. 77+71
- ⑤ See sheet 16(2) for Rectangular Rapid Flashing Beacon Detail
- ⑥ PEDESTAL POLE (PF-2), 15'
- ⑦ 7.0' LT. of James River Branch Trail Constr. @ Sta. 78+41
- ⑧ See sheet 16(2) for Rectangular Rapid Flashing Beacon Detail

RRFB NOTES
 △ INSTALL VDOT STD SE-5 ELECTRICAL SERVICE (METERED).



REFERENCES	DESCRIPTION
SHEET 12	ROADWAY PLAN
16(7)	SIGNING AND MARK. PLAN

NOTES
 1. Lot dimensions in parentheses are from deed.
 2. Property owners correct as of 1/20
 3. Ordinance Number
 4. Adopted
 5. Accepted



Administrative	Technical
Capital Project Administrator	Survey Superintendent
Deputy Director for Transportation / Public Works	Project Engineer
Director of Public Works	Maintenance Engineer
	City Traffic Engineer

DEPARTMENT OF PUBLIC WORKS
 RICHMOND, VIRGINIA

DESIGN BY:	REVIEWED BY:	SCALE:	DATE:	SHEET:	DRAWING NO.
SBH	SBH	1"=10'	FEBRUARY 2024	18(6)	0-9904

REVISIONS

SURVEYED BY: H&B SURVEYING & MAPPING LLC
 SUPERVISED BY: MSV
 DESIGNED BY: ADM

REFERENCES	DESCRIPTION
SHEET 15	ROADWAY PLAN
16(9)	SIGNING AND MARK PLAN

NOTES
1. Lot dimensions in parentheses are from deed.
2. Property owners correct as of 1/20
3. Ordinance Number
4. Adopted
5. Accepted

REVISIONS

EXISTING	PROPOSED
Existing Curb & Gutter	Proposed Conc. Sidewalk
Sidewalk	Brick Sidewalk
Asphalt	Proposed Conc. Sidewalk
Grass	Grass
Concrete	Concrete
Electric Line	Electric Line
Water Line	Water Line
Gas Line	Gas Line
Sanitary Sewer	Sanitary Sewer
Storm Sewer	Storm Sewer
Property Line	Property Line
Utility Pole	Utility Pole
Manhole	Manhole
Sign	Sign
Light	Light
Tree	Tree
Shrub	Shrub
Retaining Wall	Retaining Wall

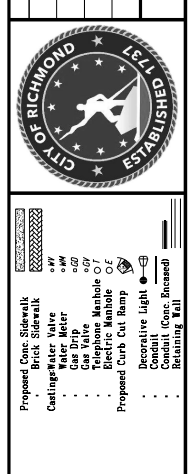
RRFB NOTES
INSTALL VDOT STD SE-5 ELECTRICAL SERVICE (METERED).

RRFB Legend
(ALL DIMENSIONS ARE TO CENTER OF POLE)
⊕ ELECTRICAL SERVICE (SE-5)
⊙ 42.3' LT. of Hopkins Road Constr. @ Sta. 100+4.15
⊙ PEDESTAL POLE (PF-2), 15'
⊙ 7.0' RT. of James River Branch Trail Constr. @ Sta. 104+26
⊙ See sheet 16(2) for Rectangular Rapid Flashing Beacon Detail
⊙ PEDESTAL POLE (PF-2), 15'
⊙ 30.0' RT. of Hopkins Road Constr. @ Sta. 100+6.0
⊙ See sheet 16(2) for Rectangular Rapid Flashing Beacon Detail

Technical	Administrative
Survey Superintendent	Capital Project Administrator
Project Engineer	Deputy Director for Transportation / Public Works
Maintenance Engineer	Director of Public Works
City Traffic Engineer	

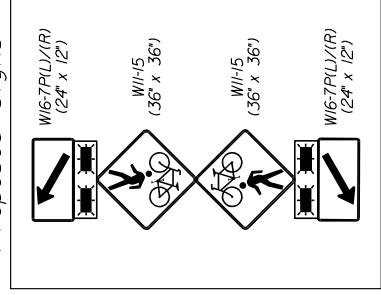
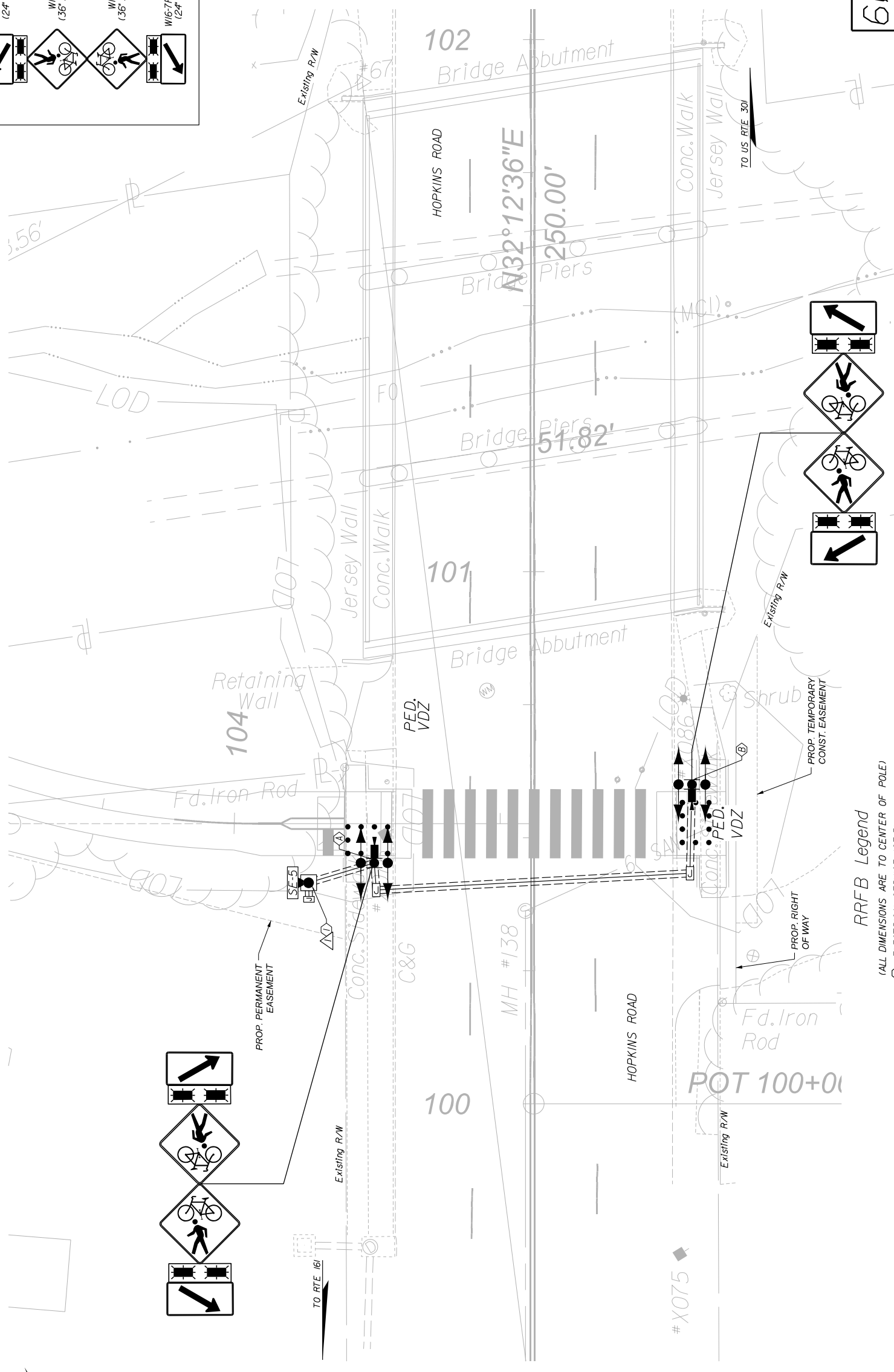
DESIGN BY:	SCALE:	DATE:	REVIEWED BY:	FIELD NOTES:	DATE:	SHEET:	DRAWING NO.
	1"=10'	FEBRUARY 2024				18(7)	0-9904

DEPARTMENT OF PUBLIC WORKS
RICHMOND, VIRGINIA



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60% PLANS



Whitman, Requardt & Associates
 Richmond, Virginia
 TRAFFIC ENGINEER