



Application for URBAN DESIGN COMMITTEE Review

Department of Planning and Development Review
Planning & Preservation Division
900 E. Broad Street, Room 510
Richmond, Virginia 23219
(804) 646-6335

<http://www.richmondgov.com/CommitteeUrbanDesign>

Application Type

- Addition/Alteration to Existing Structure
 New Construction
 Streetscape
 Site Amenity

- Encroachment
 Master Plan
 Sign
 Other

Review Type

- Conceptual
 Final

Project Name: _____

Project Address: _____

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

Applicant Information

(on all applications other than encroachments, a City agency representative must be the applicant)

Name: _____ Email: _____

City Agency: _____ Phone: _____

Address: _____

Main Contact (if different from Applicant): _____

Company: _____ Phone: _____

Email: _____

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

Applications can be mailed or delivered to the attention of "Urban Design Committee" at the address listed at the top of this page. **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.**

UDC Background

The UDC is a ten member committee created by City Council in 1968 whose purpose is to advise the City Planning Commission 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.

Canal Street and Virginia Street Streetscape Project, Phases 1 and 2 (UPC 102658)

Project Narrative for Richmond UDC Final Review Meeting – Submitted February 12, 2015

Project Purpose

The purpose of this project is to implement streetscape infrastructure improvements along East Canal Street and Virginia Street in the Shockoe Slip area of the City of Richmond. The project is divided into two phases. Phase 1 is East Canal Street from Virginia Street to South 13th Street. Phase 2 is East Canal Street from South 13th Street to South 12th Street, and also on Virginia Street from East Canal Street to East Cary Street. At the present time, only Phase 1 is funded with an estimated construction start date in Spring 2015 and completion date of August 15, 2015. Phase 2 is not funded but funds have been requested in the FY 2016-2020 CIP budget. No project construction is proposed during the Richmond 2015 UCI Road World Championships to be held September 19-27, 2015.

The streetscape improvements along East Canal Street (Phase 1 and Canal portion of Phase 2) include full depth replacement of cobblestone street surface (granite spall), replacement of concrete sidewalks with brick paver sidewalks, replacement of damaged brick sidewalk, a stamped pavement crosswalk to match brick pattern at east side of Canal Street and 12th Street intersection, ornamental pedestrian streetlights (Charleston style poles), ADA-compliant curb ramps at intersections, pavement markings, traffic sign relocations, street trees in sidewalk, and tree wells for proposed and existing trees. The proposed improvements along East Canal Street maintain the existing roadway width, travel lanes, and number of parking and loading zones.

The streetscape improvements on Virginia Street (in Phase 2) include widening of the west sidewalk from approximately 6' to 12' wide. The west sidewalk will be entirely replaced with new brick paver sidewalk, relocated ornamental pedestrian streetlights (Charleston style poles), ADA-compliant curb ramps at intersections, traffic sign relocations, a new tree in the sidewalk and affiliated tree well. New granite curb will be set at the new curb location. The improvements on Virginia Street results in a loss of four (4) on-street parking spaces along the west side of Virginia Street. The proposed street width of Virginia Street is 26' wide, or one 13' wide travel lane in each direction.

For Phases 1 and 2, the type and style of streetscape improvements will match the existing types of streetscaping amenities found in Shockoe Slip. In particular, the segment of East Canal Street between Virginia Street and 14th Street has already been improved and this project will model this segment for consistency of material color, style, and texture.

Preceding Phase 1 of this project, the City of Richmond Department of Public Utilities is performing a water line replacement project along Canal Street. Construction for the water line replacement is estimated to take 3-4 weeks with an estimated completion date in March 2015. This DPU water line replacement project is unrelated to this streetscape project in terms of funding and project management.

Project Background

The project is located in the Shockoe Slip neighborhood of the City of Richmond. Phase 1 project limits are East Canal Street from the west side of Virginia Street to the west side of South 13th Street. Phase 2 project limits are 1) East Canal Street from the west side of South 13th Street to the east side of South 12th Street, and 2) the west side of Virginia Street from the north side of East Canal Street to the south side of East Cary Street.

This is a City of Richmond Department of Public Works project managed by Kevin T. Newcomb, P.E. (City Project Manager – Engineer III). As part of their on-call engineering services contract with the City, RK&K was hired in Fall 2014 to provide engineering design services.

Project Budget / Funding Sources

The design fees for Phases 1 and 2 are \$60,000. The preliminary engineering cost estimates for construction are \$440,000 for Phase 1, and \$600,000 for Phase 2.

Funding sources include:

- Phase 1: \$500,000 (Richmond CIP funding, FY 2015 – Approved)
- Phase 2: \$600,000 (CIP funding requested in FY 2016-2020 – Not funded)

Description of Construction / Proposed Modifications

Proposed construction and modifications for the project include the following (see the corresponding engineering plans for additional details):

- On Canal Street, full depth replacement of cobblestone street surface. Granite spall (cobblestone) pavers will sit on a 2" sand/cement base, 8" reinforced concrete base, and 4" no. 21A stone base. The street section will also include an underdrain to provide for proper drainage and reduce risk of movement during freeze/thaw cycles.
- On Canal Street, replace existing concrete sidewalk and existing damaged brick sidewalk with new brick paver sidewalk. Sidewalk width will be maximized up to right-of-way to

provide widest pedestrian path possible throughout project limits. Brick pavers will sit on a 0.5" mortar setting bed, 4" concrete base, and compacted subgrade. Brick paver sidewalks will be installed in a running bond pattern.

- On Canal Street, Charleston style (Philips 1229 or equivalent) black streetlights will be installed at a 30' +/- interval and placed 24" from face of curb on a 24"x24" concrete pole foundation. Some ornamental lights of this type are already in place along this corridor. For Canal Street Phase 1, two (2) streetlights are proposed on the north side of Canal Street, and seven (7) streetlights are proposed on the south side of Canal Street. For Canal Street Phase 2, nine (9) streetlights are proposed on the south side of Canal Street, and nine (9) streetlights are proposed on the north side of Canal Street.
- On Canal Street, a small concrete retaining wall / planter box is proposed near the southwest corner of Canal Street and Virginia Street to remove a sidewalk drop-off / tripping hazard behind the existing sidewalk.
- On Canal Street, tree wells are proposed for existing and proposed street trees. For Phase 1, four (4) tree wells are proposed for existing trees. For Phase 2, nine (9) tree wells are proposed for eight existing trees and one proposed tree. The proposed tree location is on the north side of Canal Street roughly midblock between 13th Street and 12th Street. The proposed tree type shall be consistent with existing trees in this block segment.
- On Canal Street, ADA-compliant curb ramps will be installed on the northwest and northeast corners of Canal Street at 13th Street, and also along the east side of the intersection of Canal Street at 12th Street. At all curb ramps along the project corridor, truncated domes will be colonial red / maroon color (Federal color no. 20109). Any existing yellow truncated domes at ADA-compliant ramps will also be replaced with colonial red for color consistency.
- Canal Street project limits end at the east side of 12th Street. The pavement section transitions to standard asphalt. The crosswalk from the southeast corner of Canal Street at 12th Street to the triangular splitter island will be a white painted ladder bar crosswalk. The crosswalk from this same island to the northeast corner is proposed as a stamped concrete crosswalk (herringbone brick pattern) to match adjacent brick paver sidewalks and will include a 12" concrete trim bulkhead to provide a construction edge for the cobblestone section. This crosswalk type was selected due to the cobblestone-to-asphalt transition.
- On Virginia Street, the existing west sidewalk will be widened from approximately 6' to 12' into the existing roadway width. The improvements on Virginia Street results in a loss of four (4) on-street parking spaces along the west side of Virginia Street. Post construction, the proposed street width of Virginia Street is 26' wide (one 13' wide travel lane in each direction).
- On Virginia Street, a new granite curb will be set at the proposed west side curb line.

Canal Street and Virginia Street Streetscape Project, Phases 1 and 2 (UPC 102658)

- On Virginia Street, existing brick sidewalk will be removed and new brick paver sidewalk installed for new widened sidewalk width. Brick pavers will sit on a 0.5” mortar setting bed, 4” concrete base, and compacted subgrade. Brick paver sidewalks will be installed in a running bond pattern.
- On Virginia Street, three (3) existing streetlights will be relocated to standard offset from face of curb. One (1) new proposed streetlight will be installed roughly midblock between Canal Street and Cary Street.
- On Virginia Street, one (1) proposed tree and tree well will be installed roughly midblock between Canal Street and Cary Street. The proposed tree type shall be consistent with existing trees in this block segment.
- On Virginia Street, ADA-compliant curb ramps will be installed on the southwest corner of Virginia Street and Cary Street and northwest corner of Virginia Street and Canal Street. At all curb ramps, truncated domes will be colonial red / maroon color (Federal color no. 20109). Any existing yellow truncated domes at ADA-compliant ramps will also be replaced for color consistency within project limits.
- On Virginia Street, sidewalk ground mounted traffic signs will be removed or relocated, as needed.
- On Virginia Street, the parking deck entrance will be modified to accommodate the new sidewalk width to a VDOT standard CG-9D.

Project Schedule

- | | |
|---|-----------------------|
| • Project scoping meeting | December 2, 2014 |
| • RK&K submitted 60% complete plans to City | January 20, 2015 |
| • City 60% plan review meeting | February 2, 2015 |
| • RK&K UDC final review submittal package | February 12, 2015 |
| • City preparing MBE goal and RFQ waiver | February 2015 |
| • UDC final review meeting | March 5, 2015 |
| • Planning Commission final review meeting | March 16, 2015 |
| • RK&K 100% complete plan, quantities & cost estimate | March 31, 2015 |
| • City 100% complete plan final review meeting | April 1-10, 2015 |
| • Final submittal to City Procurement | Mid-April 2015 |

Application Attachments

Canal Street and Virginia Street Streetscape, Phases 1 and 2 – 100% Review Engineering Plans, dated February 2015

FHWA REGION	STATE	FEDERAL PROJECT NUMBER	STATE PROJECT NUMBER
3	VA.		CIP _____

CITY OF RICHMOND, VIRGINIA

DEPARTMENT OF PUBLIC WORKS

TRANSPORTATION ENGINEERING DIVISION



NO.	DATE	COMMENTS

DATE	SURVEYS SUPERINTENDENT
DATE	PROJECT MANAGER
DATE	MAINTENANCE ENGINEER
DATE	CITY TRANSPORTATION ENGINEER
DATE	CAPITAL PROJECTS ADMINISTRATOR
DATE	CITY ENGINEER
DATE	DIRECTOR OF PUBLIC WORKS

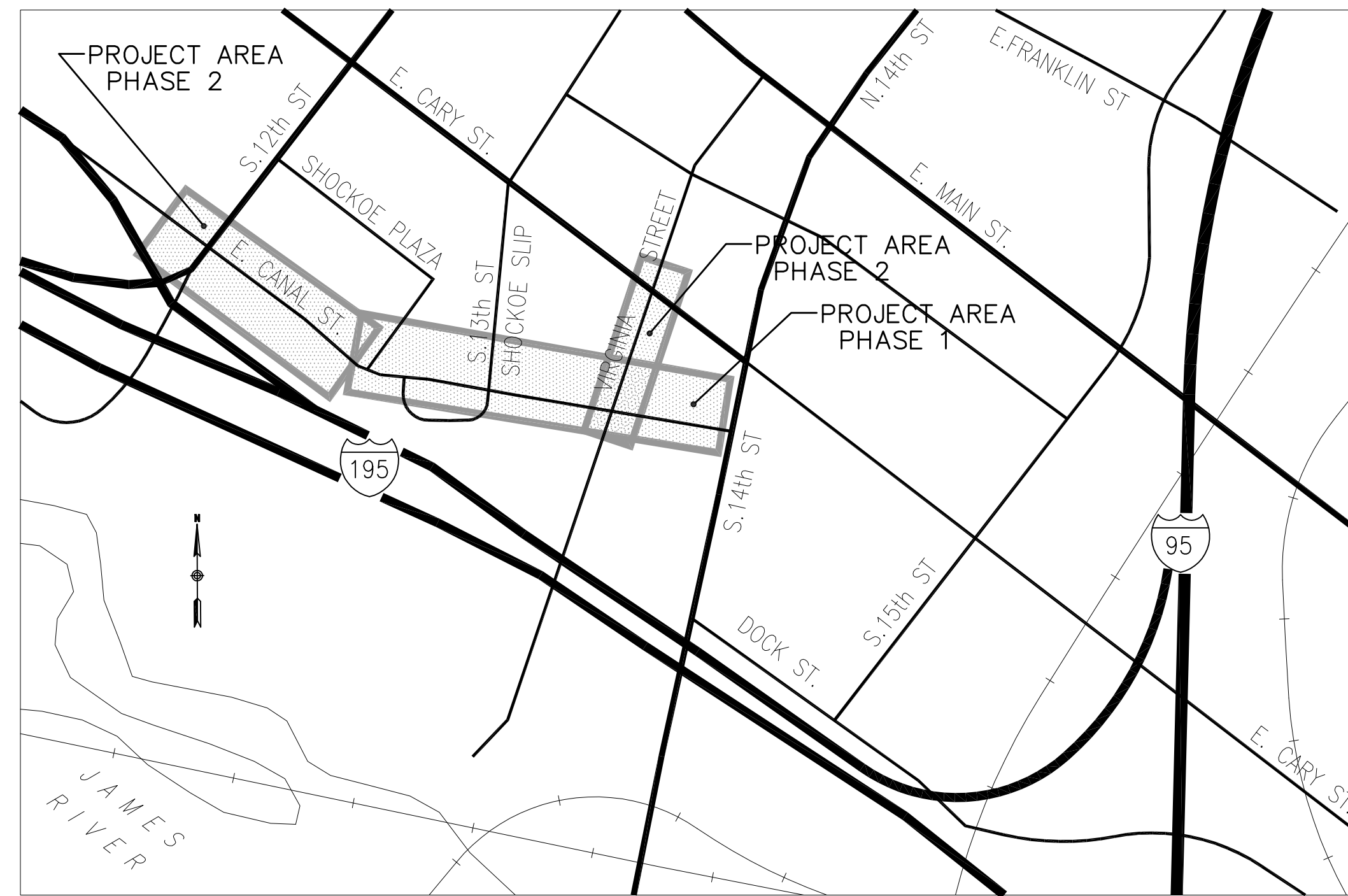
102658 / CANAL STREET / VIRGINIA STREET

STREETSCAPE, PHASES 1 AND 2

INDEX OF SHEETS

SHEET TITLE	SHEET NO.
TITLE SHEET	1
NOTES	2
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TYPICAL SECTIONS AND PAVEMENT DETAILS	4
VDOT DETAILS AND NOTES	5
CONDUIT AND LIGHTING DETAILS	6
EXISTING CONDITIONS	7a AND 7b
DEMOLITION PLAN	8a AND 8b
STREETSCAPE PLAN	9a AND 9b
PROFILES	10
RIGHT-OF-WAY DATA	11
CONDUIT AND LIGHTING PLAN	12 (TO BE ADDED)
PROPOSED SIGNING AND PAVEMENT MARKING PLAN (FINAL PLANS)	13 (TO BE ADDED)
TRAFFIC CONTROL PLAN (FINAL PLANS)	14 (TO BE ADDED)

CIP 102658



LOCATION MAP
1"=200'

SURVEY NOTES

1. THE TOPOGRAPHIC SURVEY WAS PREPARED BY H&B SURVEYING AND MAPPING, LLC, ON NOVEMBER 18, 2014.
2. INLET INVERTS SHOWN HEREON ARE APPROXIMATE AND SHOULD BE VERIFIED PRIOR TO CONSTRUCTION OR DESIGN TIE IN.
3. EXISTING GROUND SURFACE LOCATION PERFORMED BY CONVENTIONAL INSTRUMENT SURVEY.
4. HORIZONTAL (NAD'83) AND VERTICAL (NAVD'88) DATUM ESTABLISHED THROUGH REAL TIME KINEMATIC (RTK) GPS OBSERVATIONS ON AUGUST 19, 2014. DIFFERENTIAL CORRECTIONS WERE DERIVED FROM NATIONAL GEODETIC SURVEY (NGS) CONTINUALLY OPERATING REFERENCE STATION (CORS) "LOY3". COORDINATE VALUES, IF SHOWN HEREON, ARE BASED ON VIRGINIA STATE GRID, SOUTH ZONE.
5. UNDERGROUND UTILITIES WERE DESIGNATED (PAINTED) BY MISS UTILITY. H & B SURVEYING AND MAPPING, LLC SURVEYED THE PAINTED LINE AS PAINTED AND IS NOT RESPONSIBLE FOR THE ACCURACY OF THE PAINT DESIGNATION. UTILITY INFORMATION ON THIS DRAWING WILL NEED TO BE FIELD VERIFIED PRIOR TO CONSTRUCTION.
6. PROPERTY LINES SHOWN HEREON TAKEN FROM COURT HOUSE RECORDS AND EVIDENCE OF MONUMENTATION AND OCCUPATION FOUND IN THE FIELD. THIS SURVEY DOES NOT CONSTITUTE A BOUNDARY SURVEY AND WAS PREPARED WITHOUT THE BENEFIT OF A TITLE COMMITMENT; THEREFORE ALL EASEMENTS MAY OR MAY NOT BE SHOWN ON THIS SURVEY.
7. RIGHT OF WAY LINES SHOWN ARE BASED ON CITY BASELINE SHEETS 2NE AND 2SE MONUMENTATION FOUND IN FIELD.

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 REVISIONS OF THE 2007 VDOT ROAD AND BRIDGE SPECIFICATIONS, 2008 VDOT ROAD AND BRIDGE STANDARDS, 2009 FHWA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), 2011 VIRGINIA SUPPLEMENT TO THE MUTCD, 2011 VIRGINIA WORK AREA PROTECTION MANUAL, APPLICABLE CITY OF RICHMOND STANDARDS AND SPECIFICATIONS, AND AS AMENDED BY CONTRACT PROVISIONS AND THE COMPLETE ELECTRONIC VERSION OF THE PLAN ASSEMBLY.

NO ADDITIONAL RIGHT OF WAY REQUIRED FOR THIS PROJECT.

CITY OF RICHMOND
DEPARTMENT OF PUBLIC WORKS
RICHMOND, VIRGINIA
CIP: 102658
DRAWING NO: 0-28633

FEBRUARY 2015

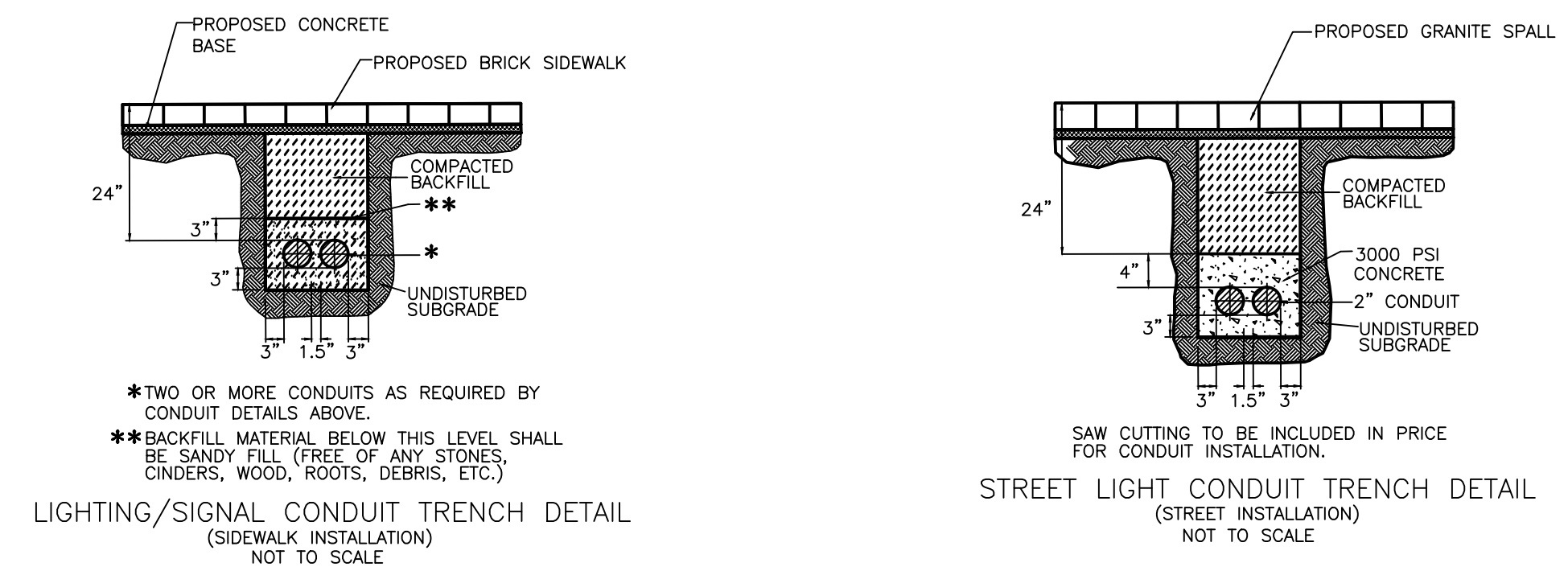
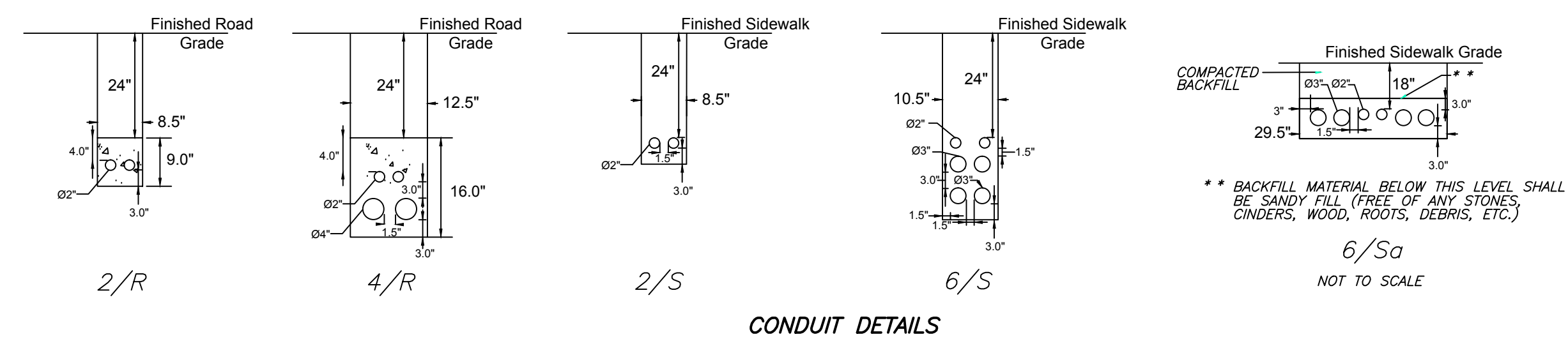
100% SUBMITTAL
FEBRUARY 2015

2100 EAST CARY STREET, SUITE 309
RICHMOND, VIRGINIA 23223
(P) 804 782-1903 (F) 804 782-2142

RUMMEL, KLEPPER & KAHL, LLP

LIGHTING GENERAL NOTES:

- STREET LIGHTS AND CONDUIT SHALL BE INSTALLED AS DESIGNATED ON THE PLANS. ORNAMENTAL POLES, LIGHTS, AND BASES SHALL BE FURNISHED BY NOLAND COMPANY OR APPROVED EQUAL, 2101 STAPLES MILL ROAD, RICHMOND VA, 23230. FOUNDATIONS SHALL BE HANOVER POLE FOUNDATION, PER DETAIL SHEET 6. PEDESTRIAN LUMINAIRES SHALL BE 150 WATT HIGH PRESSURE SODIUM WITH 6-IN. TYPE V OPTICS. LUMINAIRE MODEL SHALL BE PHILIPS LIGHTING CHARLESTON (1229) BLACK FINISH, CLEAR ACRYLIC PANEL/GLOBE, MEDIUM SOCKET, 240 V, OR APPROVED EQUAL. COMBINATION LUMINAIRES INSTALLED ON MAST ARM POLES SHALL BE 250 WATT HIGH PRESSURE SODIUM (HPS)
- PEDESTRIAN LUMINAIRES SHALL BE MOUNTED TO 12' DECORATIVE BLACK POLE. POLE MODEL SHALL BE PHILIPS LIGHTING ANCHOR BASE POST (316-) OR APPROVED EQUAL.
- THE CITY OF RICHMOND DEPARTMENT OF PUBLIC UTILITIES (DPU) SHALL FINISH AND INSTALL ELECTRICAL SERVICE AND ALL WIRING FOR LIGHTING CIRCUITS TO PEDESTRIAN LUMINAIRES. CONTRACTOR SHALL COORDINATE WITH BRIAN CULVER (804-646-8105, OR BRIAN.CULVER@RICHMONDGOV.COM)
- JUNCTION BOXES SHALL BE HIGHLINE PRODUCTS COMPOSITE HANDHOLE ASSEMBLY CHA132412, OR APPROVED EQUAL. JUNCTION BOX COVERS SHALL BE MARKED "ELECTRIC".
- CONDUITS SHOWN ON THESE PLANS ARE DIAGRAMMATIC. ACTUAL CONDUIT RUNS SHALL CONFORM TO FIELD CONDITIONS. CONDUIT SHALL BE INSTALLED ACCORDING TO DETAILS ON SHEET 9. A NYLON PULL-CORD MUST BE PROVIDED IN ALL CONDUIT. CONTRACTOR SHALL BACKFILL TRENCH WITH NO. 21B AGGREGATE AND ASPHALT IN ACCORDANCE WITH TYPICAL PAVEMENT SECTION. CABLES INSIDE OF CONDUIT SHALL BE INSTALLED BY DPU FORCES. CONTRACTOR MUST CONTACT ROBBIE PARHAM (TEL. # 804-363-3437) PRIOR TO INSTALLATION OF STREET LIGHTING ITEMS.
- CONTRACTOR SHALL CONTACT BRIAN CULVER (804-646-8105) OR MR. TRACY WRIGHT (804-363-5601) PRIOR TO INSTALLATION OF LIGHTING EQUIPMENT. CERTAIN UTILITIES WITHIN THE VICINITY OF THIS PROJECT AREA ARE SHOWN ON THE PLANS. THE UTILITIES SHOWN ARE NOT GUARANTEED TO BE COMPLETE OR ACCURATELY LOCATED. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL EXISTING UTILITIES BEFORE PROCEEDING WITH THE WORK.
- ALL LIGHTING CONDUITS SHALL BE INSTALLED WITH A MINIMUM DEPTH OF 36".
- ALL UNDERGROUND CONDUITS SHALL BE SLOPED TO DRAIN TO THE NEAREST JUNCTION BOX. IF THIS CANNOT BE ACCOMPLISHED, DRAINAGE TEES SHALL BE PROVIDED AT THE LOW POINT OF THE CONDUIT RUN. DRAINAGE TEES SHALL BE INCIDENTAL TO CONDUIT.
- AREAS AROUND THE PROPOSED LIGHTING EQUIPMENT SHALL BE GRADED AS APPROVED BY THE ENGINEER.
- CONDUITS SHALL BE INSTALLED WITH LARGE RADIUS OFFSETS (5' MINIMUM RADIUS) TO BYPASS DRAINAGE INLETS, MANHOLES, AND OTHER OBSTRUCTIONS. GROUND RODS SHALL BE INSTALLED AT ALL LIGHT POLE FOUNDATIONS, JUNCTION BOXES, ELECTRICAL SERVICES AND CONTROL CABINETS.
- ALL ELECTRICAL WORK SHALL BE PERFORMED AND ALL MATERIAL PROVIDED SHALL BE IN ACCORDANCE WITH VDOT STANDARDS AND SPECIFICATIONS, UNLESS OTHERWISE NOTED.
- THE ELECTRICAL/LIGHTING CONTRACTOR SHALL COORDINATE HIS WORK WITH ALL THE CONTRACTORS INVOLVED ON THIS PROJECT. THE ELECTRICAL/LIGHTING CONTRACTOR SHALL COORDINATE WITH THE ENGINEER AND GENERAL SUPERINTENDENT THE LOCATIONS OF ALL CONDUIT AND POLE BASES TO ELIMINATE CONSTRUCTION CONFLICTS.
- ALL FIELD CHANGES MUST BE APPROVED BY DPU STREETLIGHT ENGINEER.
- ALL ELECTRICAL WORK SHALL BE PERFORMED AND ALL MATERIAL PROVIDED SHALL BE IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE OF THE NATIONAL FIRE PROTECTION ASSOCIATION, TO ALL LOCAL AND SPECIAL LAWS, AND/OR TO ORDINANCES GOVERNING SUCH MATERIAL. CODE SHALL BE CONSIDERED THE MINIMUM REQUIREMENTS FOR THE ELECTRICAL WORK AND IF THERE IS A CONFLICT BETWEEN THE REQUIREMENTS SPECIFIED IN THE CONTRACT DOCUMENTS AND THE CODE, THE MORE STRINGENT REQUIREMENT WILL APPLY AS DETERMINED AND APPROVED BY THE ENGINEER. WHEN THESE REQUIREMENTS DO NOT GOVERN, AND WHERE NOT OTHERWISE SPECIFIED, ELECTRICAL MATERIALS SHALL CONFORM TO THE STANDARDIZATION RULES OF THE INSTITUTE OF ELECTRICAL ENGINEERS.



100% SUBMITTAL
FEBRUARY 2015

NOTES

- Lot dimensions in parentheses are from deed.
- Property owners correct as of _____, 20__
- Ordinance Number _____
- Adopted _____
- Accepted _____

REFERENCES

REVISIONS

Existing Legend

Storm Sewer	—
Sanitary Sewer (sws)	—
Gas Line	—
Electric Line	—
Overhead Utility	—
Telephone/Telegraph	—
Water Line	—
Property Line	—
Storm Basin	—
Storm or Sanitary Manhole	—
Fire Hydrant / Valve	—

Water Meter

Existing Curb Cut Ramp

Gas Meter / Valve

Fence

Power/Light Pole

Guy Anchor

Tree

Proposed Legend

Sanitary Sewer	—
Storm Sewer	—
Storm (San) Manhole	—
Basin	—
Curb Cut Ramp	—
Decorative Light	—
Conduit	—
Conduit (Encased)	—



Technical	Administrative
Surveys Superintendent	Capital Project Administrator
Project Manager	City Engineer
Maintenance Engineer	Director of Public Works
City Traffic Engineer	

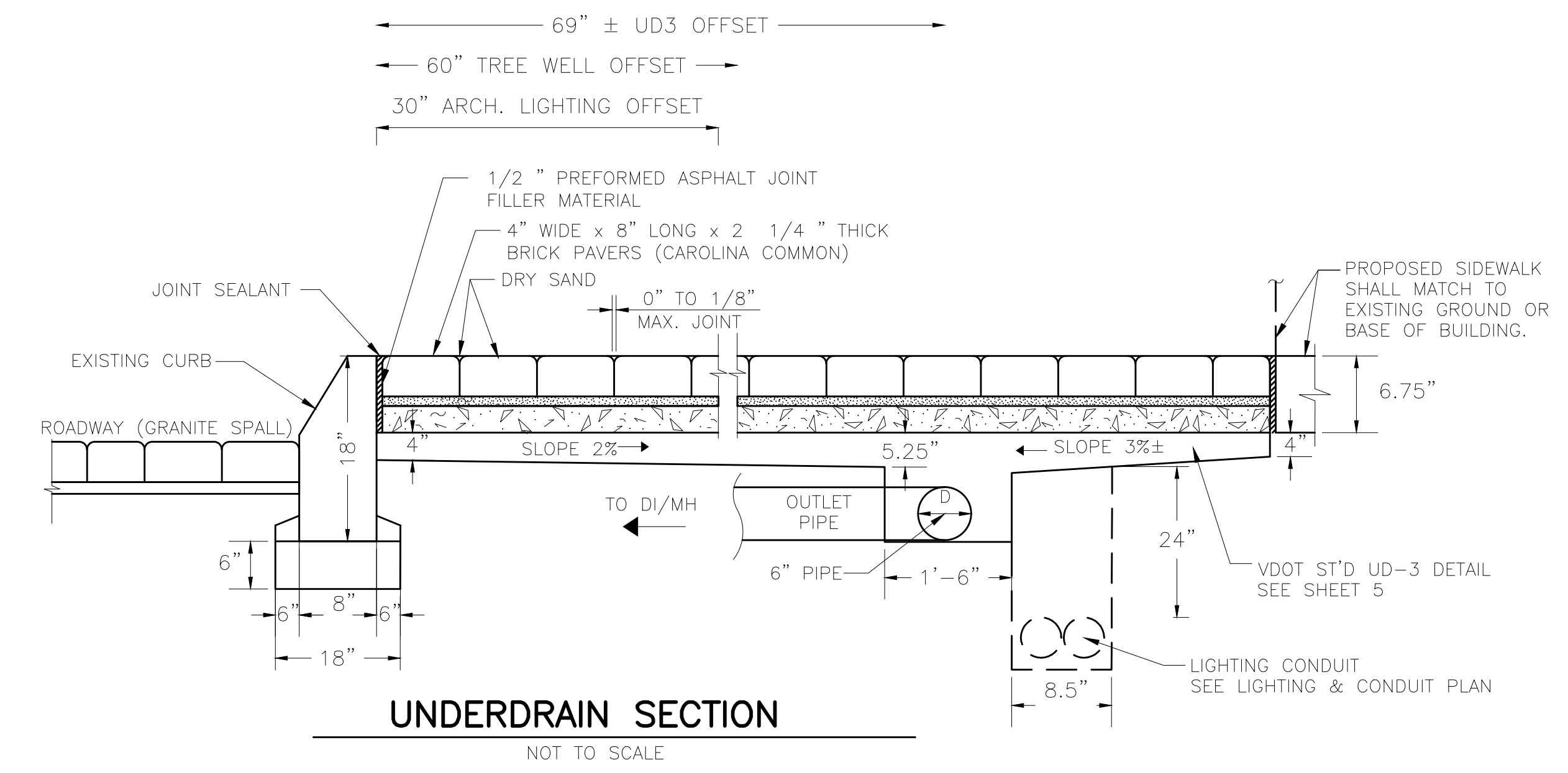
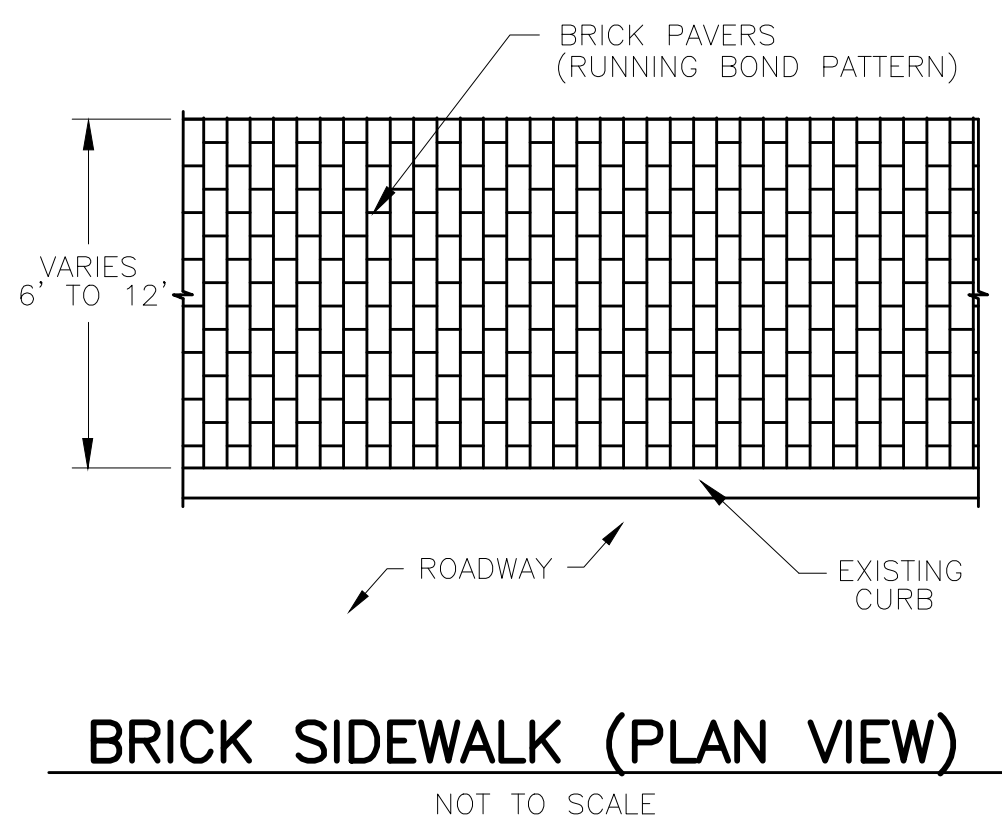
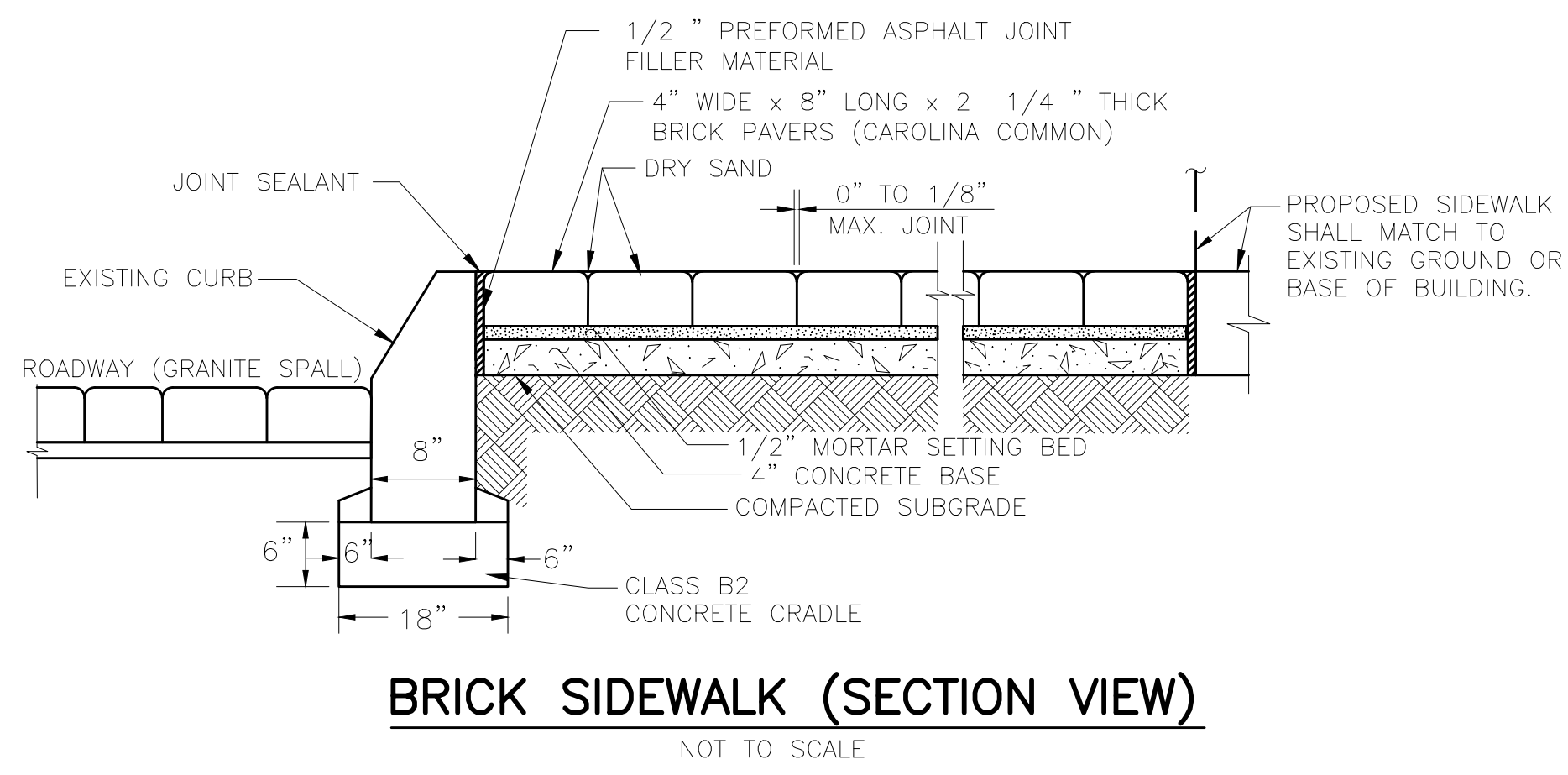
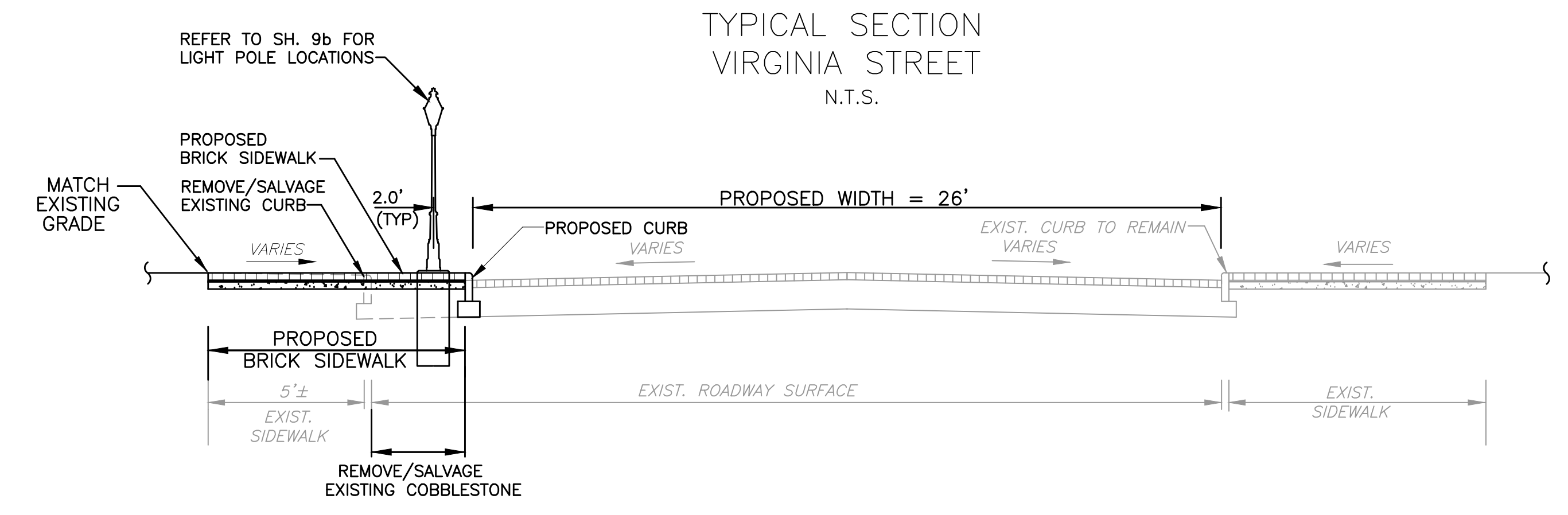
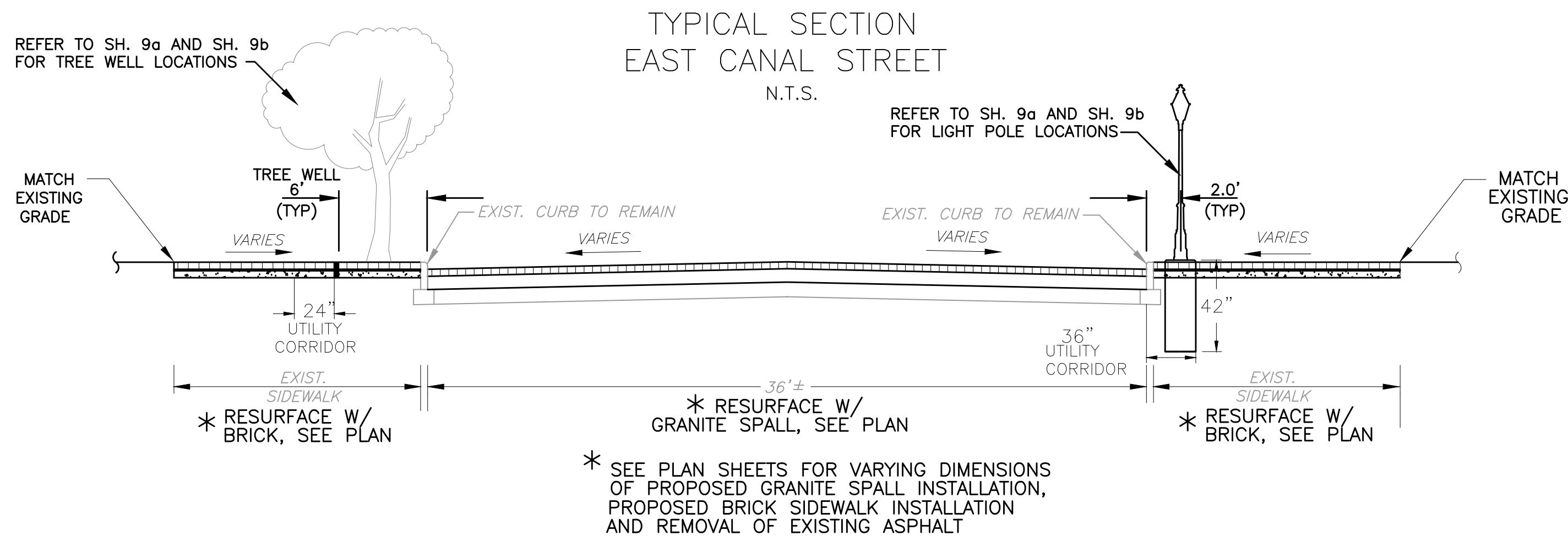
DEPARTMENT OF PUBLIC WORKS
RICHMOND, VIRGINIA

RK&K
Responsive People • Creative Solutions

102658 / CANAL STREET / VIRGINIA STREET
STREETSCAPE, PHASES 1 AND 2
LIGHTING NOTES AND DETAILS

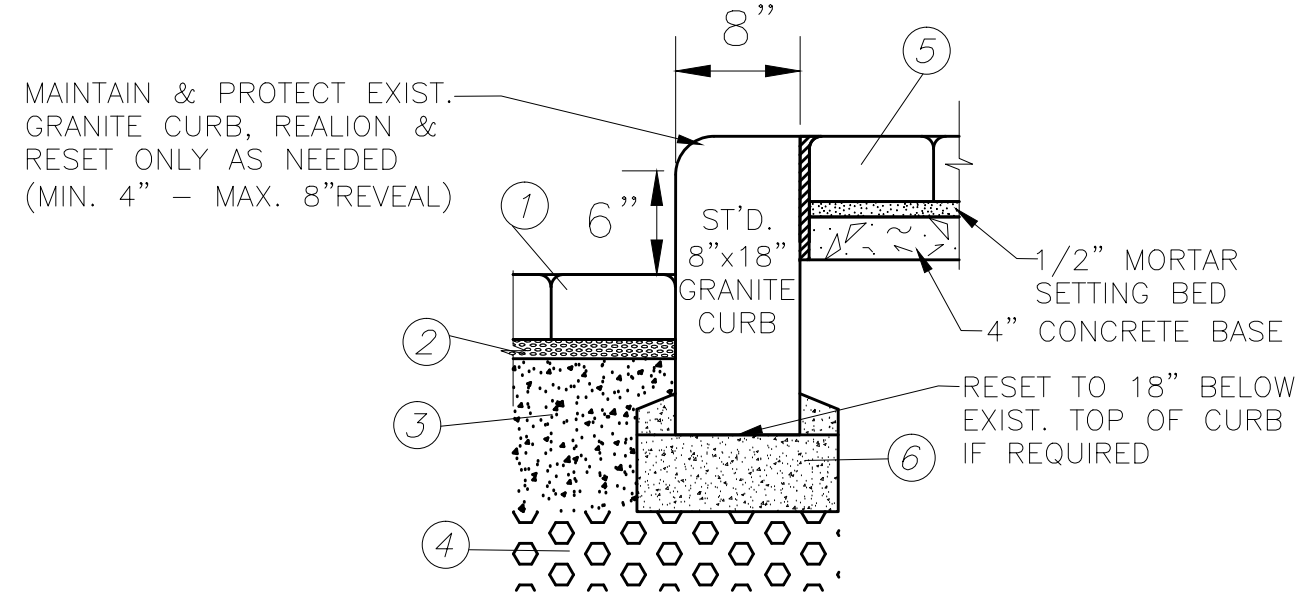
AUTHORITY: CITY OF RICHMOND, DPW, PROJECT NO.: 0-28633

DESIGN BY: KVarberry	REVIEWED BY:	FIELD NOTES	SCALE: N/A	DATE: FEBRUARY, 2015	PROJECT SHEET: 3 OF 14	DRAWING NO.: 0-28633
DRAWN BY: YIreel	CHECKED BY: OPeery					

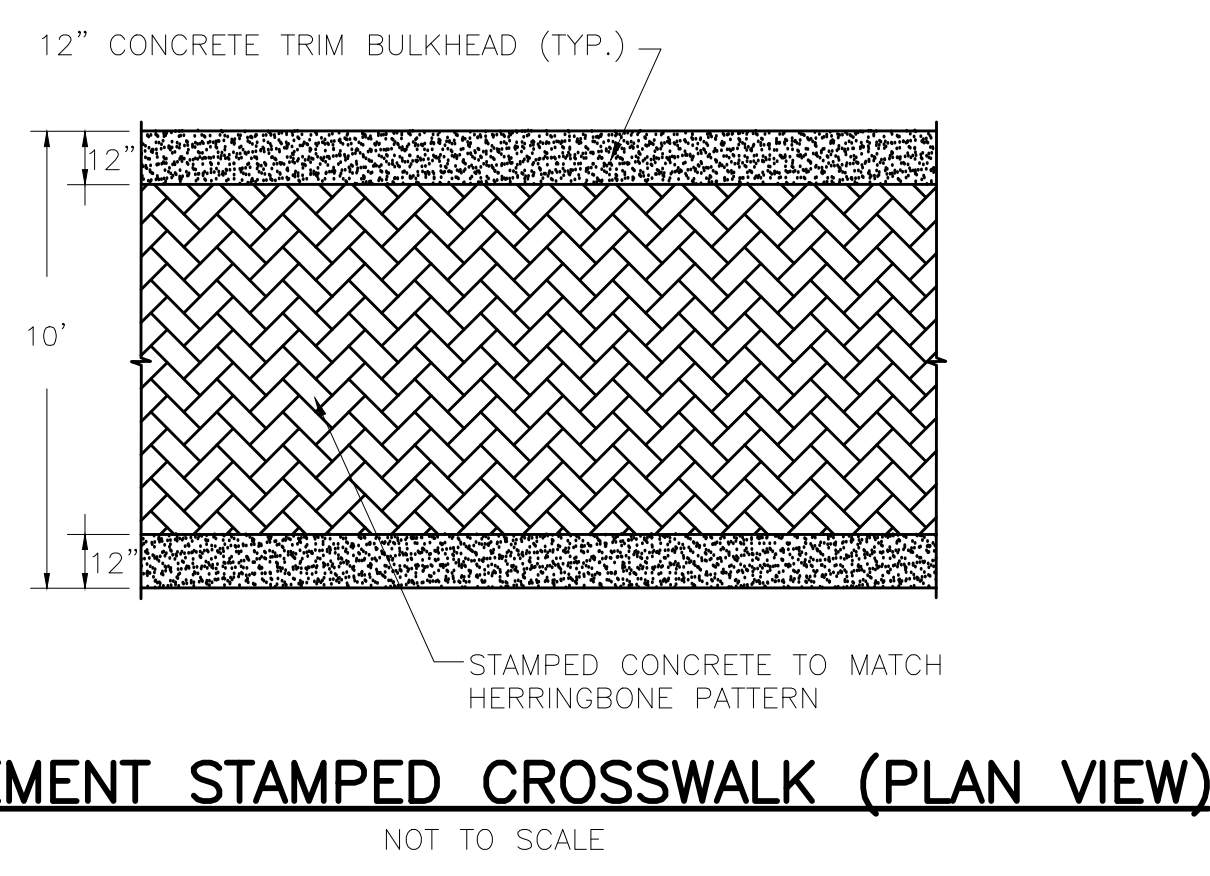


- BRICKS FOR SIDEWALK SHALL BE CAROLINA COMMON.
- DRY SAND SHALL BE SWEEPED INTO THE JOINTS FOUR TIMES. THE BRICK PAVER SIDEWALK SHALL BE COMPACTED AND/OR VIBRATED AFTER EACH SWEEPING.

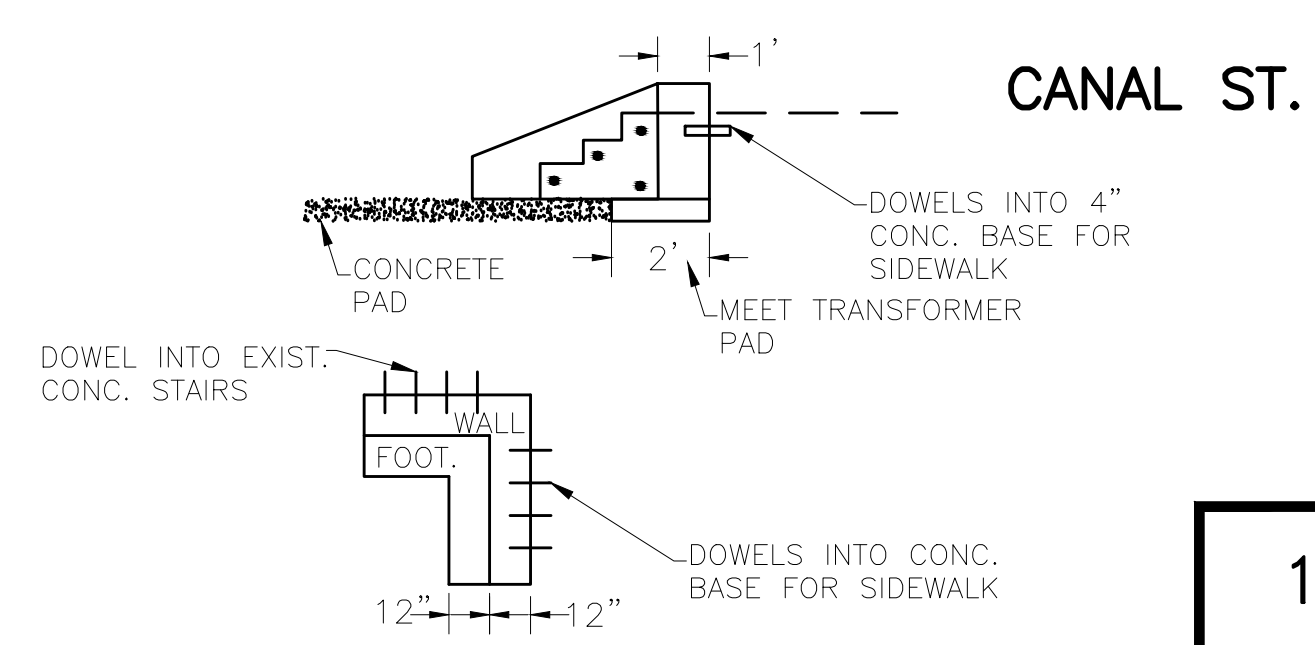
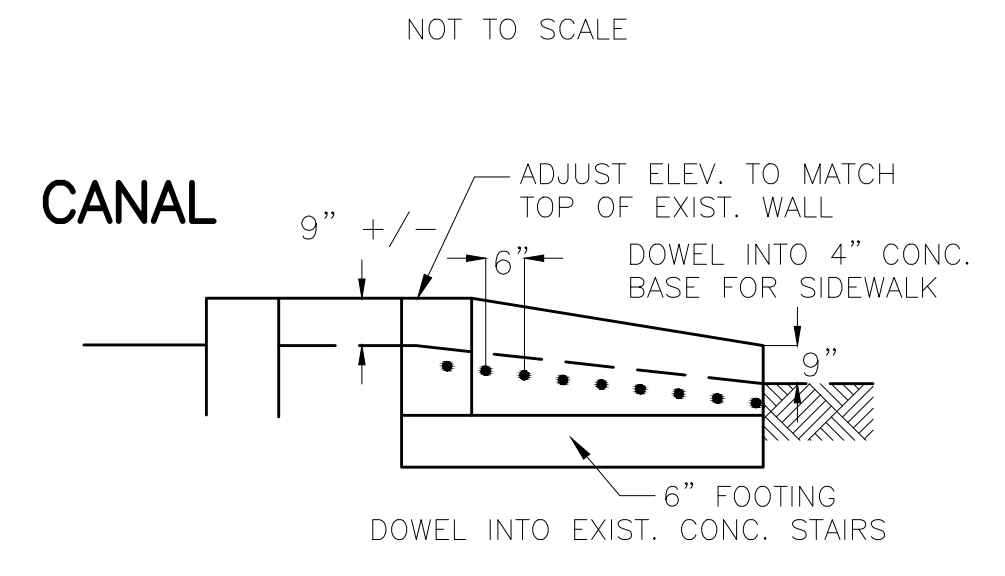
PAVEMENT (GRANITE SPALL)



- GRANITE SPALL PAVERS 7 1/2" MAXIMUM HEIGHT
- 2" MAXIMUM SAND/CEMENT BASE. SETTING BED
- 8" CONV. REINF. P.C.C. PAVEMENT MIX NO. 7 (SEE VDOT ST'D 301.08, FOR TYPICAL WIRE FABRIC SHEET FOR REINFORCEMENT.)
- 4" BASE COURSE TYPE 1 NO. 21A
- BRICK SIDEWALK
- 6" CONCRETE CRADLE TOP ELEV. SET AT 18" BELOW EXIST. TOP OF CURB



CONCRETE WALL/PLANTER BOX DETAIL



100% SUBMITTAL
FEBRUARY 2015

NOTES

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- Ordinance Number _____
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REFERENCES

REVISIONS

Existing Legend

Storm Sewer

Sanitary Sewer (smw)

Gas Line

Electric Line

Overhead Utility

Telephone/Telegraph

Water Line

Property Line

Storm Basin

Storm or Sanitary Manhole

Fire Hydrant / Valve

Proposed Legend

Sanitary Sewer

Storm (San) Manhole

Basin

Curb Out Ramp

Decorative Light

Conduit

Conduit (Encased)



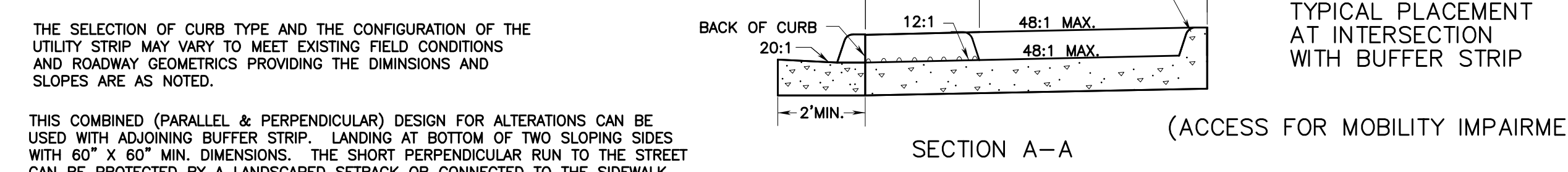
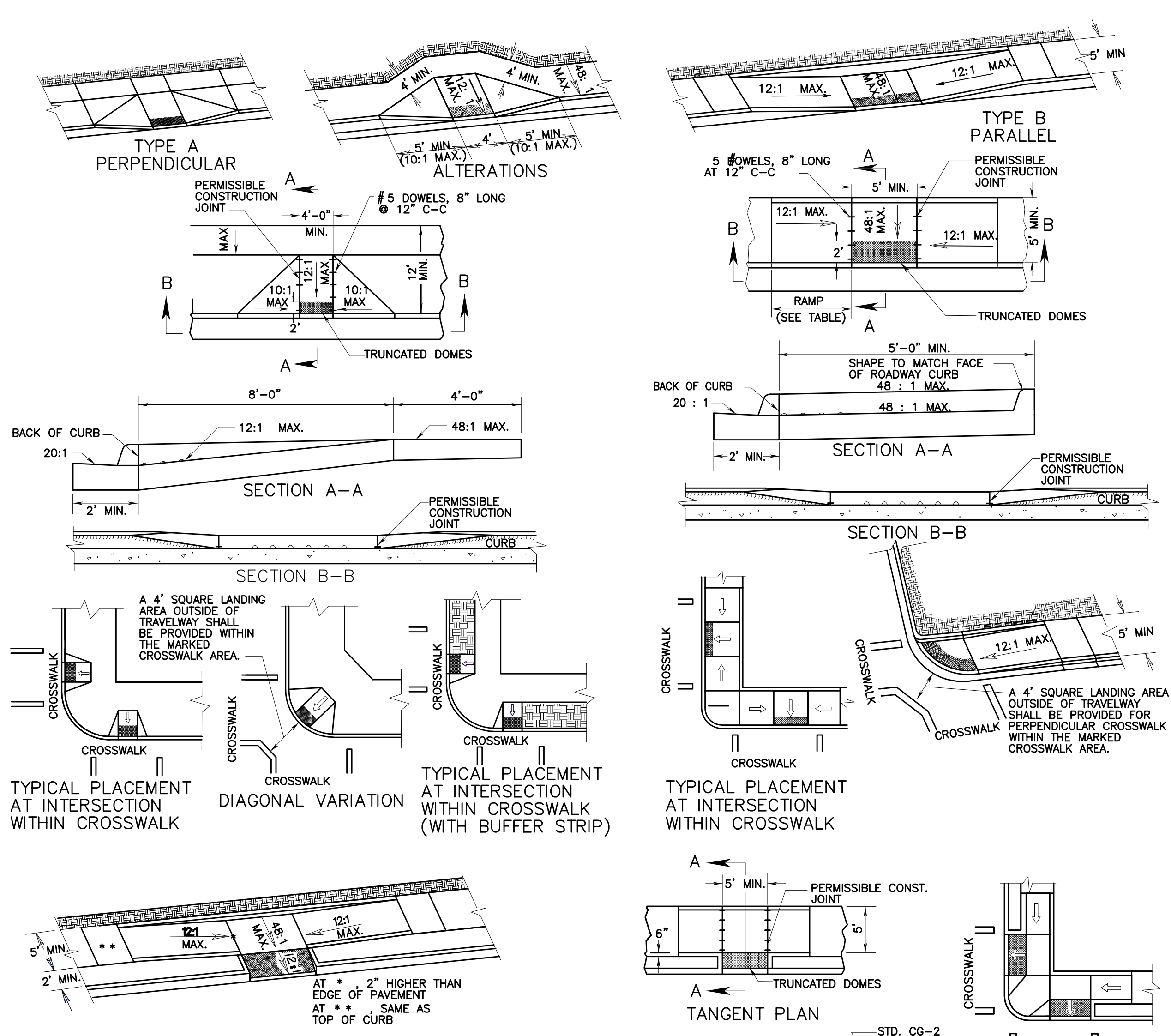
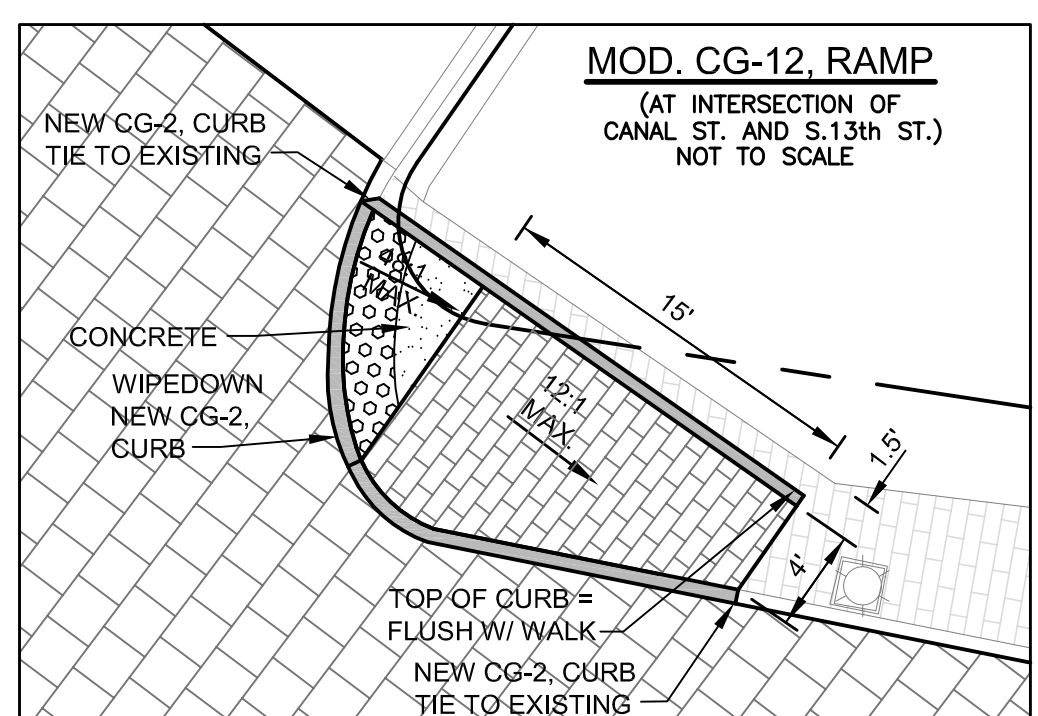
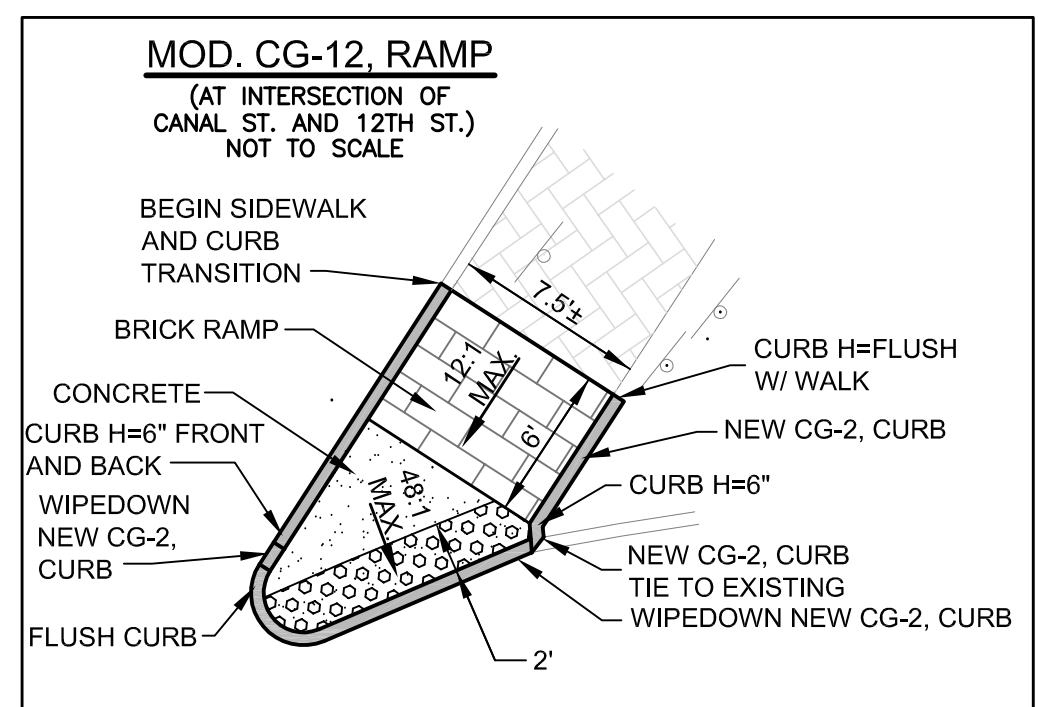
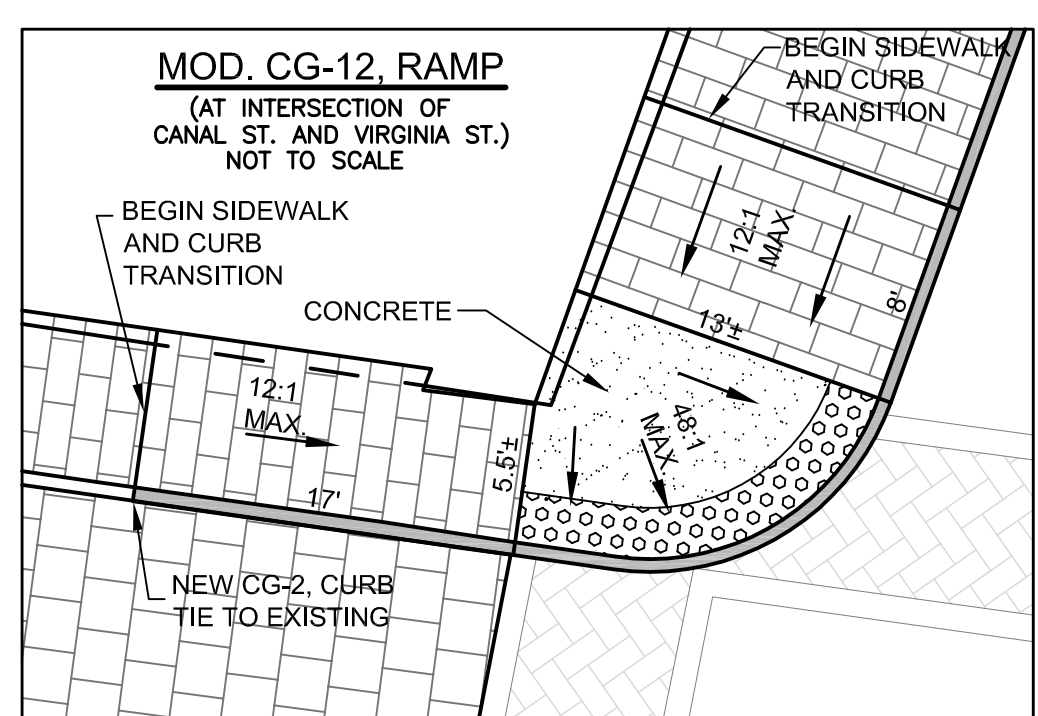
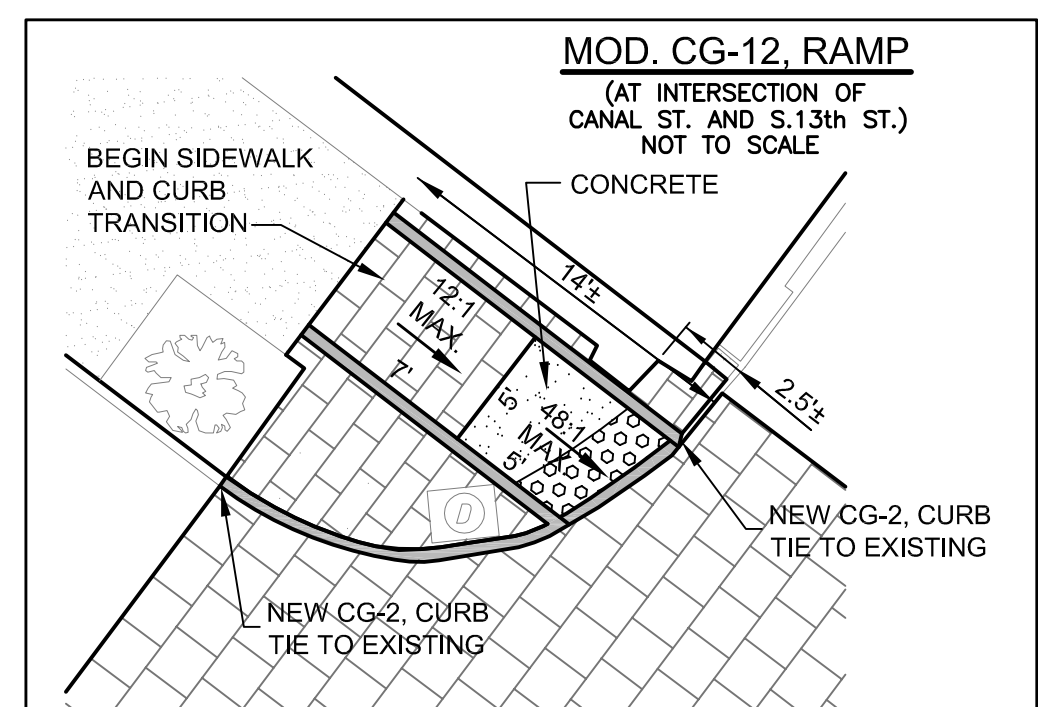
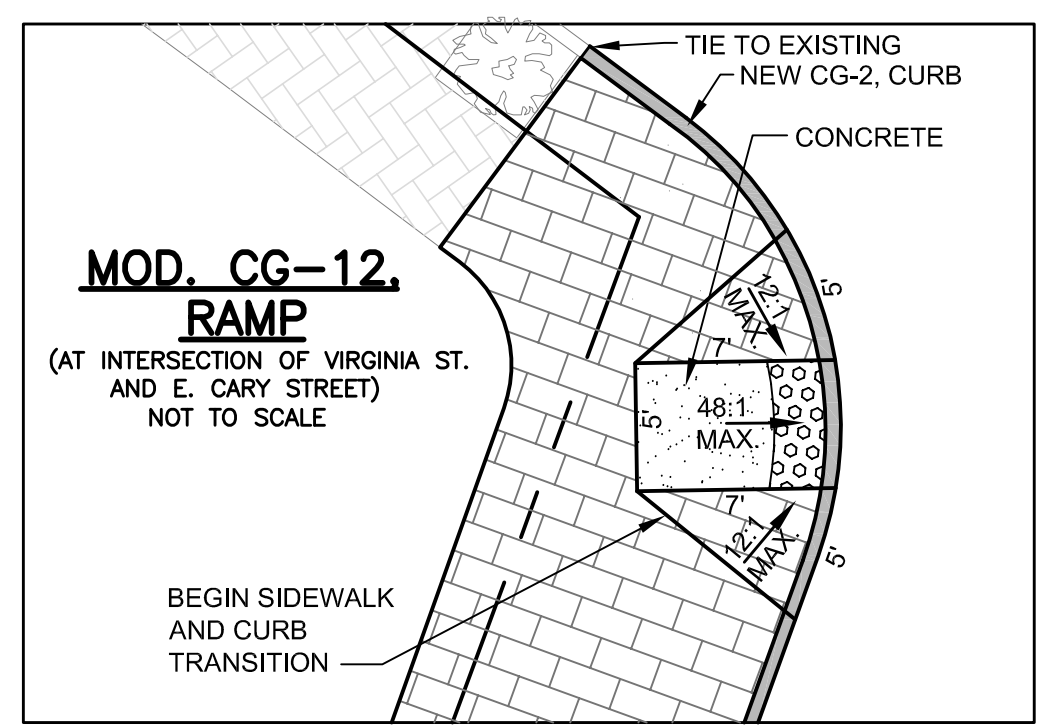
Technical	Administrative
Surveys Superintendent	Capital Project Administrator
Project Manager	City Engineer
Maintenance Engineer	Director of Public Works
City Traffic Engineer	
DEPARTMENT OF PUBLIC WORKS RICHMOND, VIRGINIA	

102658 / CANAL STREET / VIRGINIA STREET
STREETSCAPE, PHASES 1 AND 2
TYPICAL SECTIONS AND PAVEMENT DETAILS

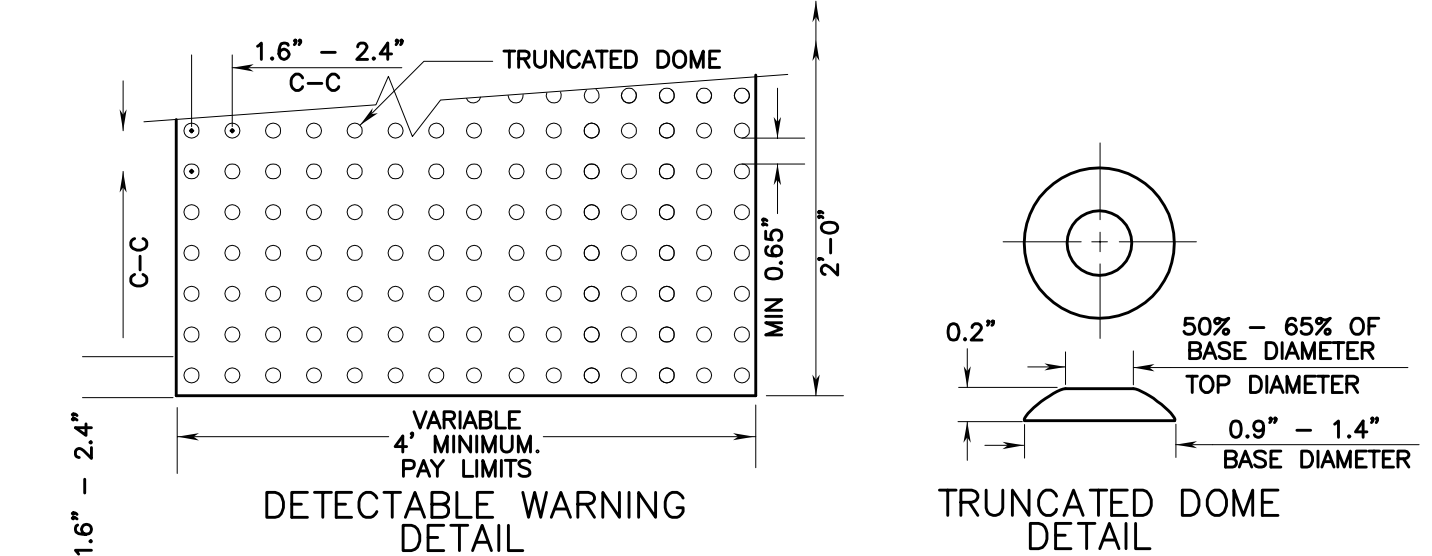
RK&K
Responsive People • Creative Solutions

AUTHORITY: CITY OF RICHMOND, DPW, PROJECT NO.: 0-28633

DESIGN BY: KVarberry	REVIEWED BY:	FIELD NOTES	SCALE	DATE	PROJECT	DRAWING NO.
DRAWN BY: YIvelli			N/A	FEBRUARY, 2015	SHEET 4 OF 14	0-28633
CHECKED BY: OPeery						



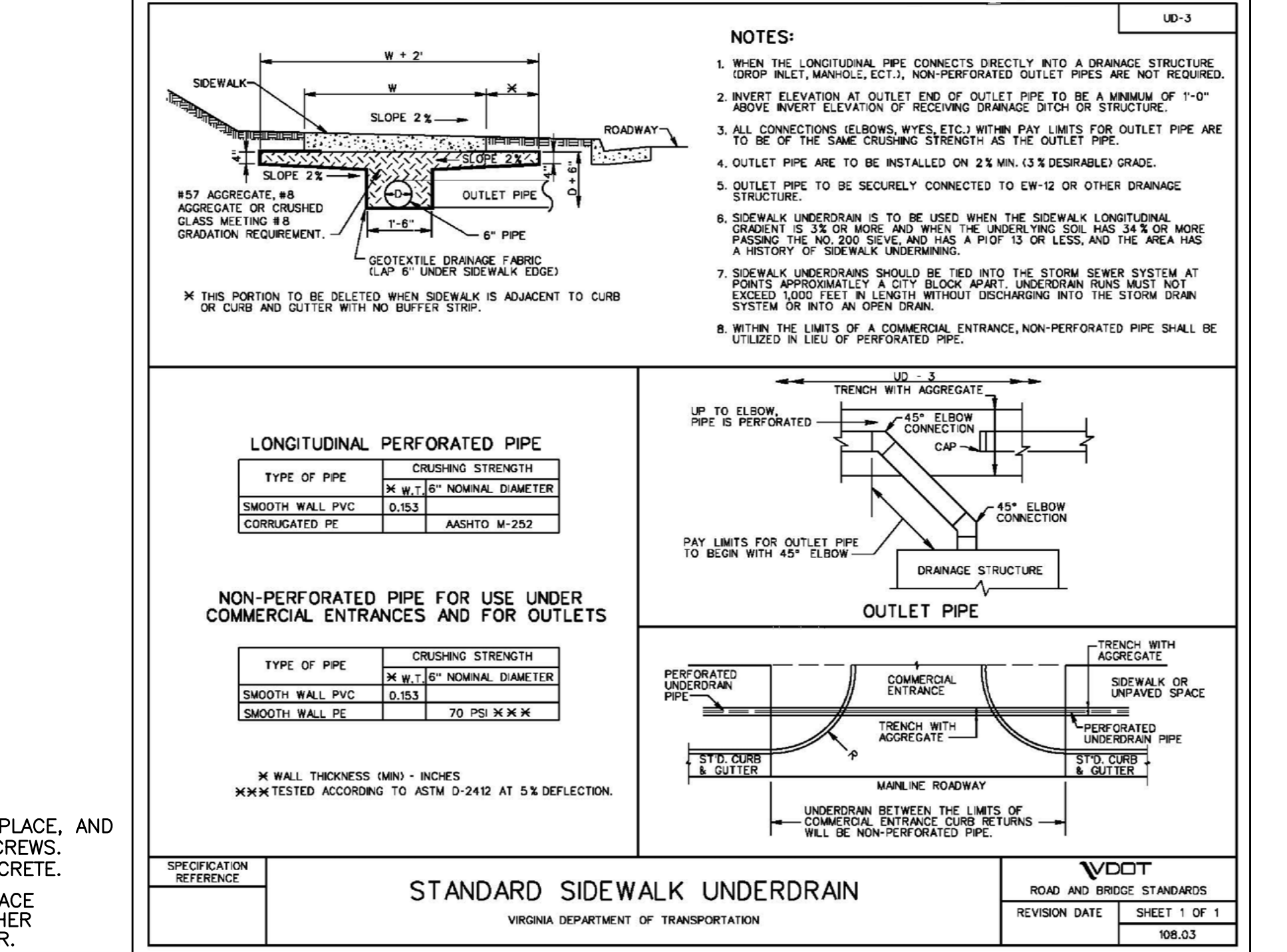
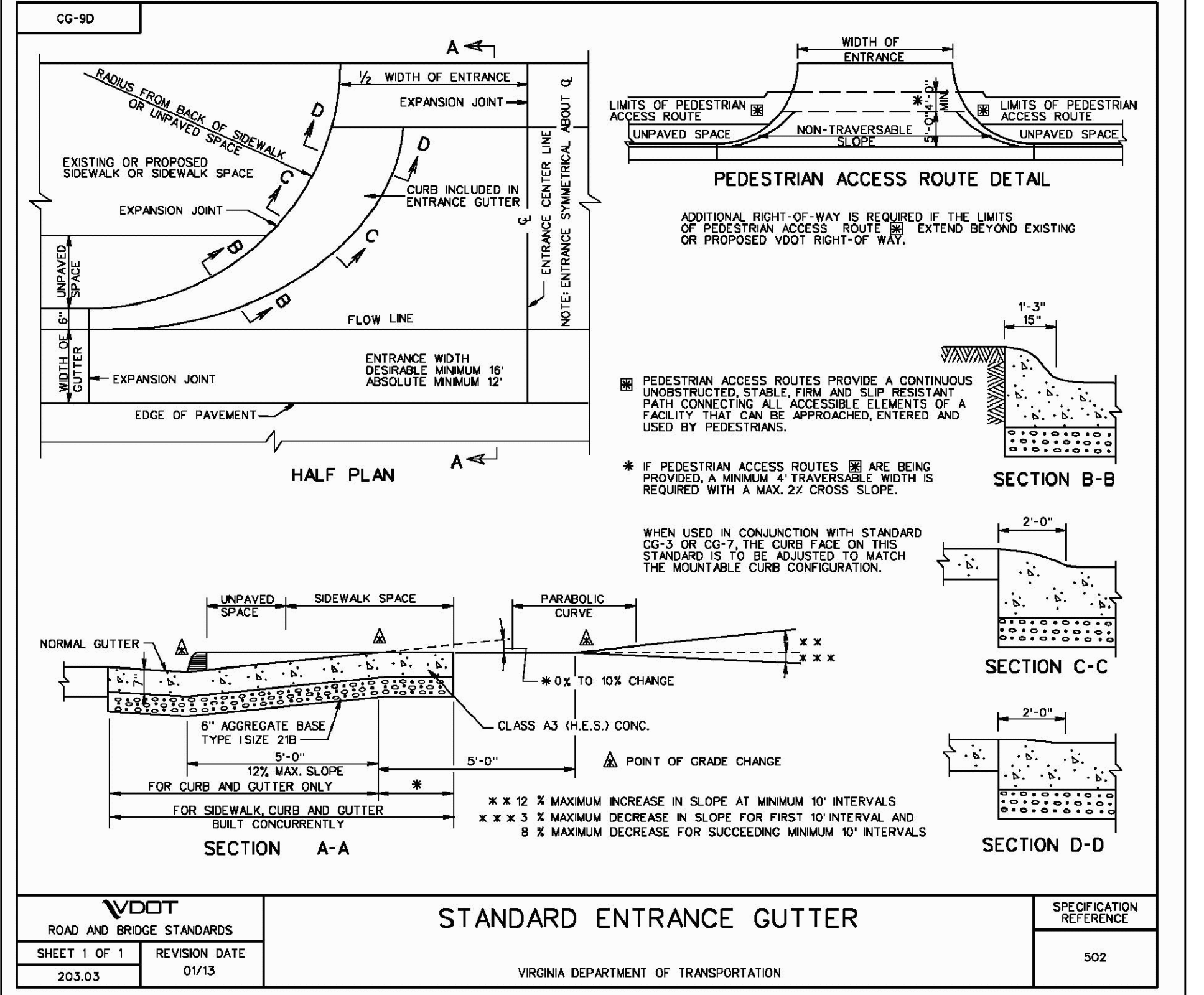
VDOT CG-12, HANDICAP RAMP
NOT TO SCALE



TYPE B PARALLEL APPLICATION		
ROADWAY GRADE IN PERCENT	MINIMUM RAMP LENGTH IN FEET	
	4" CURB	6" CURB
0	4	6
1	5	7
2	5	8
3	6	9
4	8	12
5	10	15
6	14	15

NOTE: THE REQUIRED LENGTH OF A PARALLEL RAMP IS LIMITED TO 15 FEET, REGARDLESS OF THE SLOPE.

TYPE C PARALLEL & PERPENDICULAR APPLICATION		
ROADWAY GRADE IN PERCENT	MINIMUM RAMP LENGTH IN FEET	
	4" CURB	6" CURB
0	2	4
1	2	5
2	3	5
3	3	6
4	4	8
5	5	10
6	7	14
7	13	15
8	15	15



- NOTES:**
- THE DETECTABLE WARNING SHALL BE PROVIDED BY TRUNCATED DOMES. COLOR SHALL BE COLONIAL RED, CAST-IN-PLACE, AND REPLACEABLE INCLUDING A BASE PLATE SET INTO CONCRETE AND THE PAVER PLAT SECURED TO THE BASE WITH SCREWS. THE TRUNCATED DOME ASSEMBLY SHALL HAVE BOTTOM DOCKING ANCHORS THAT WILL BE EMBEDDED INTO WET CONCRETE.
 - DETECTABLE WARNING TO BE CLASS A-3 CONCRETE (CLASS A-4 IF PRECAST) WITH SLIP RESISTANT INTEGRAL SURFACE COVERING THE FULL WIDTH OF THE RAMP FLOOR BY 2" IN LENGTH IN THE DIRECTION OF PEDESTRIAN TRAVEL. OTHER TYPES OF MATERIAL WITH TRUNCATED DOMES DETECTABLE WARNING MAY BE USED WITH THE APPROVAL OF ENGINEER.
 - SLOPING SIDES OF CURB RAMP MAY BE POURED MONOLITHICALLY WITH RAMP FLOOR OR BY USING PERMISSIBLE CONSTRUCTION JOINT WITH REQUIRED BARS.
 - IF RAMP FLOOR IS PRECAST, HOLES MUST BE PROVIDED FOR DOWEL BARS SO THAT ADJOINING FLARED SIDES CAN BE CAST IN PLACE AFTER PLACEMENT OF PRECAST RAMP FLOOR. PRECAST CONCRETE SHALL BE CLASS A-4.
 - REQUIRED BARS ARE TO BE NO. 5 X 8" PLACED 1' CENTER TO CENTER ALONG BOTH SIDES OF THE RAMP FLOOR, MID-DEPTH OF RAMP FLOOR. MINIMUM CONCRETE COVER 1/2".
 - CURB / CURB AND GUTTER SLOPE TRANSITIONS ADJACENT TO CURB RAMPS ARE INCLUDED IN PAYMENT FOR CURB / CURB AND GUTTER.
 - CURB RAMPS ARE TO BE LOCATED AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER. THEY ARE TO BE PROVIDED AT INTERSECTIONS WHEREVER AN ACCESSIBLE ROUTE WITHIN THE RIGHT OF WAY OF A HIGHWAY FACILITY CROSSES A CURB REGARDLESS OF WHETHER SIDEWALK IS EXISTING, PROPOSED, OR NONEXISTENT. THEY MUST BE LOCATED WITHIN PEDESTRIAN CROSSWALKS AS SHOWN ON PLANS OR AS DIRECTED BY THE ENGINEER, AND SHOULD NOT BE LOCATED BEHIND VEHICLE STOP LINES, EXISTING LIGHT POLES, FIRE HYDRANTS, DROP INLETS, ETC. ACCESSIBLE ROUTES PROVIDE A CONTINUOUS UNOBSTRUCTED, STABLE, FIRM AND SLIP RESISTANT PATH CONNECTING ALL ACCESSIBLE ELEMENTS OF A FACILITY THAT CAN BE APPROACHED, ENTERED AND USED BY PEDESTRIANS.
 - RAMPS MAY BE PLACED ON RADIAL OR TANGENTIAL SECTIONS PROVIDED THAT THE CURB OPENING IS PLACED WITHIN THE LIMITS OF THE CROSSWALK AND THAT THE SLOPE AT THE CONNECTION OF THE CURB OPENING IS PERPENDICULAR TO THE CURB.
 - TYPICAL CONCRETE SIDEWALK IS 4" THICK. WHEN THE ENTRANCE RADII CANNOT ACCOMMODATE THE TURNING REQUIREMENTS OF ANTICIPATED HEAVY TRUCK TRAFFIC THE CONCRETE SIDEWALK DEPTH SHOULD BE INCREASED TO 7".
 - WHEN CURB RAMPS ARE USED IN CONJUNCTION WITH A SHARED USE PATH, THE MINIMUM WIDTH SHALL BE THE WIDTH OF THE SHARED USE PATH.

100% SUBMITTAL
FEBRUARY 2015

NOTES

- Lot dimensions in parentheses are from deed.
- Property owners correct as of _____, 20__
- Ordinance Number _____
- Adopted _____
- Accepted _____

REFERENCES

REVISIONS	DATE	DESCRIPTION

Existing Legend

- Storm Sewer
- Sanitary Sewer (Sewer)
- Gas Line
- Electric Line
- Overhead Utility
- Telephone/Telegraph
- Water Line
- Property Line
- Storm Basin
- Storm or Sanitary Manhole
- Fire Hydrant / Valve

Water Meter
Existing Curb Cut Ramp
Gas Meter / Valve
Fence
Power/Light Pole
Guy Anchor
Tree

Proposed Legend

- Sanitary Sewer
- Storm Sewer
- Storm (San) Manhole
- Basin
- Curb Cut Ramp
- Decorative Light
- Conduit
- Conduit (Encased)

Technical

- Surveys Superintendent
- Project Manager
- Maintenance Engineer
- City Traffic Engineer

Administrative

- Capital Project Administrator
- City Engineer
- Director of Public Works

DEPARTMENT OF PUBLIC WORKS
RICHMOND, VIRGINIA

RK&K
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102658 / CANAL STREET / VIRGINIA STREET
STREETSCAPE, PHASES 1 AND 2
VDOT DETAILS AND NOTES

AUTHORITY: CITY OF RICHMOND, DPW, PROJECT NO.: 0-28633

DESIGN BY:	REVIEWED BY:	FIELD NOTES	SCALE	DATE	PROJECT	DRAWING NO.
Kyarberry			N/A	FEBRUARY, 2015	SHEET 5 OF 14	0-28633

CHECKED BY: OPeery



Anchor Base Post (316)- Specification Sheet

Project Name:	Location:	MFG: Philips Lighting
Fixture Type:	Catalog No.:	Qty:

Product Code	316- Anchor Base Post
Height	8 (8 ft) 10 (10 ft) 12 (12 ft) 14 (14 ft)
Finish	ABS Antique Brass ACP Antique Copper AND Antique Red ANL Antique Silver BK Black BRN Bronze BRZ Bronze FGN Forest Green GSA Green IRN Inert RSC Rustic Bronze SRT Shadow Rust VBR Verde Bronze VCP Verde Copper VWC Weathered WHT White
Photoeye (Optional)	B 120V C 240V/277V
Outlet Location (Optional)	B 4" from Top of Base T 12" from Top of Post D Standard Output
Outlet Options (Optional)	D GFI Duplex D GFI Duplex

Specifications

OUTLET:
GFI Duplex Outlet has dual-function indicator light, universal meter weatherproof cover. Weatherproof white in use. Heavy-duty all-metal construction. Lockable security cover. Meets NEC 408.5 (B) Weather resistant. Standard Duplex Outlet has universal meter weatherproof cover. Weatherproof white in use. Heavy-duty all-metal construction. Lockable security cover. Meets NEC 408.5 (B) Weather resistant.

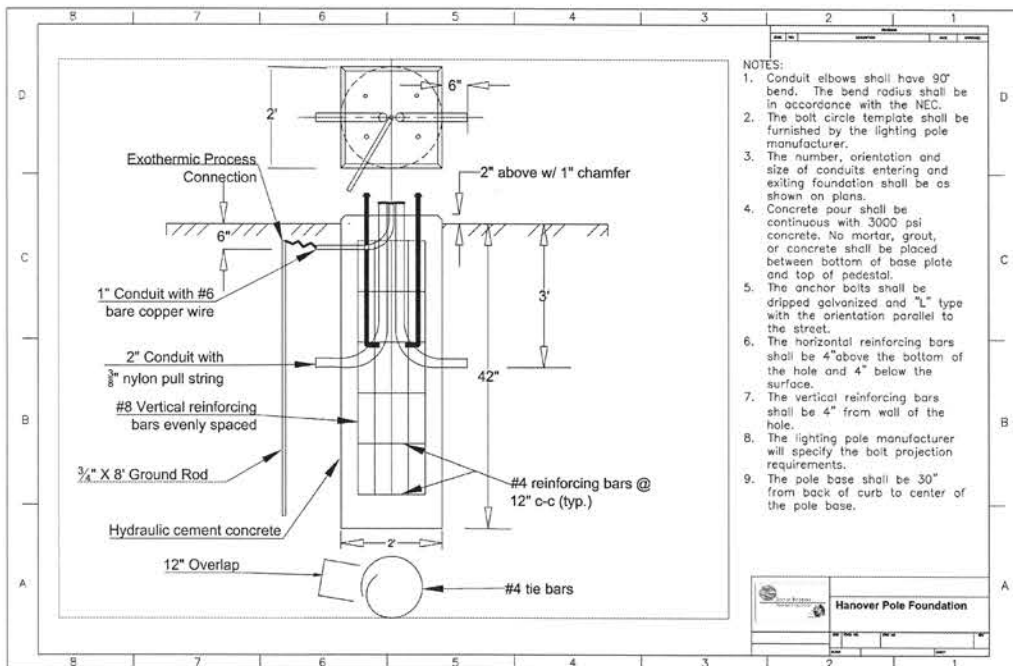
CONSTRUCTION:
Cast aluminum anodized anchor base. Cast aluminum removable access door. Cast aluminum upper base welded to base and post. Tapered post welded to base. Cast aluminum square cover installed with post.

FINISH:
Resistant TDC chemical polymer powdercoat paint is electrostatically applied to every feature. Specially formulated for Philips Outdoor Lighting, it provides UV protection, and

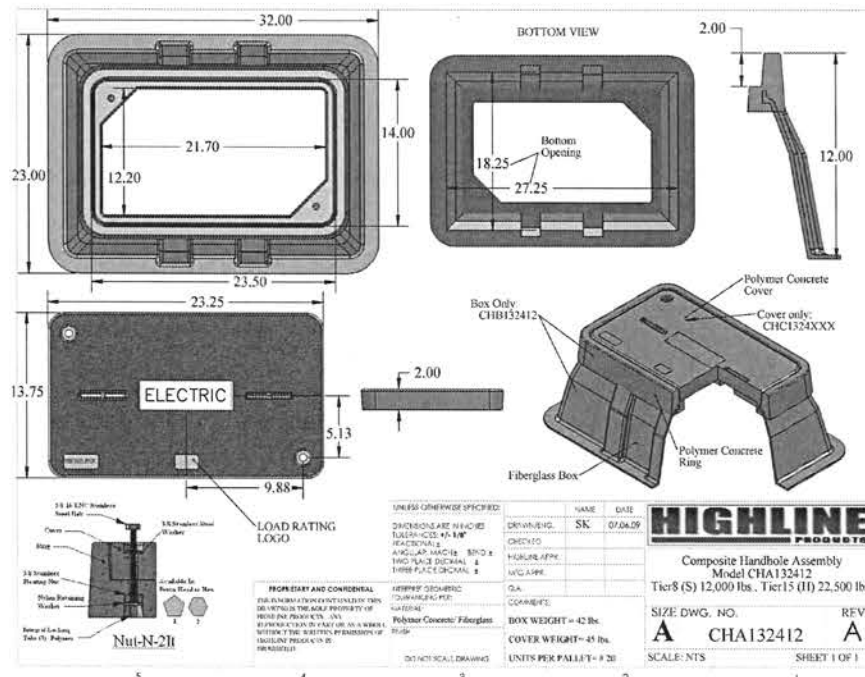
Charleston (1229) Specification Sheet

Project Name:	Location:	MFG: Philips Lighting
Fixture Type:	Catalog No.:	Qty:

Product Code	1229- Charleston
Finish	ABS Antique Brass ACP Antique Copper AND Antique Red ANL Antique Silver BK Black BRN Bronze BRZ Bronze FGN Forest Green GSA Green IRN Inert RSC Rustic Bronze SRT Shadow Rust VBR Verde Bronze VCP Verde Copper VWC Weathered WHT White
Photoeye	A Clear Acrylic B Clear Acrylic C Clear Acrylic D Acrylic E Clear Textured Acrylic M Clear P Polycarbonate Q Polycarbonate R Polycarbonate
Socket	D Medium G LED H Induction
Wattage/Source	H 150W HPS I High Pressure Sodium J Induction K LED
Voltage	E 120V G 240V H 277V
Distribution	C 0° Type V D 0° Type III E 0° Type V F 0° Type I G 0° Type II H 0° Type III I 0° Type I J 0° Type II K 0° Type III L 0° Type I M 0° Type II N 0° Type III O 0° Type I P 0° Type II Q 0° Type III
Photoeye	B Button Eye



- NOTES:**
1. Conduit elbows shall have 90° bend. The bend radius shall be in accordance with the NEC. The bolt circle template shall be furnished by the lighting pole manufacturer.
 2. The number, orientation and size of conduits entering and exiting foundation shall be as shown on plans.
 3. The anchor bolts shall be dipped galvanized and "L" type with the orientation parallel to the street.
 4. Concrete pour shall be continuous with 3000 psi concrete. No mortar, grout, or concrete shall be placed between bottom of base plate and top of pedestal.
 5. The anchor bolts shall be dipped galvanized and "L" type with the orientation parallel to the street.
 6. The horizontal reinforcing bars shall be 4" above the bottom of the hole and 4" below the surface.
 7. The vertical reinforcing bars shall be 4" from wall of the hole.
 8. The lighting pole manufacturer will specify the bolt projection requirements.
 9. The pole base shall be 30" from back of curb to center of the pole base.



HIGHLINE PRODUCTS

Composite Handhole Assembly
Model CHA132412
Tier 8 (S) 12,000 lbs., Tier 15 (H) 22,500 lbs.

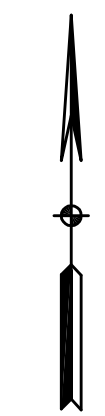
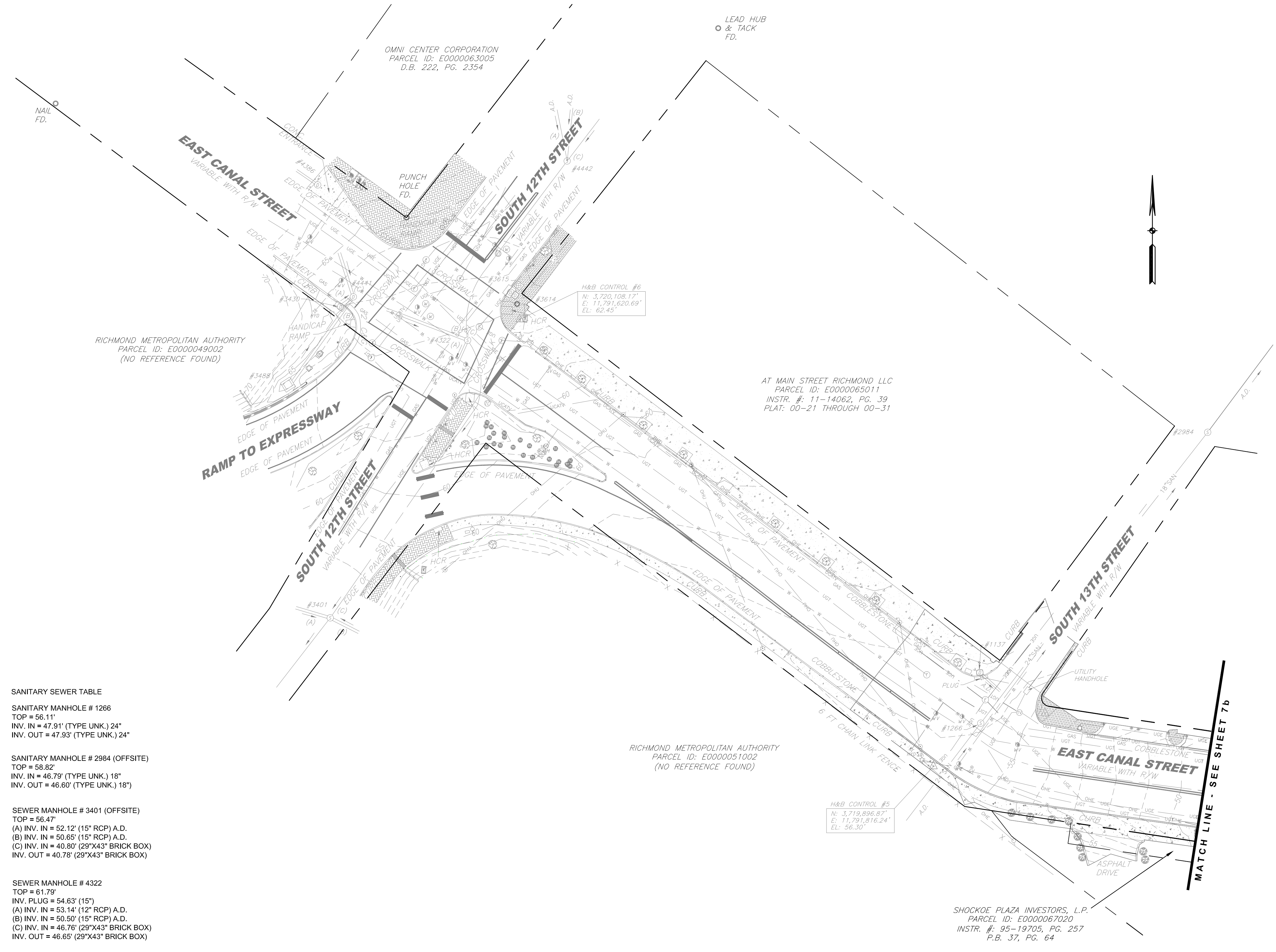
SIZE DWG. NO. REV
A CHA132412 A

SCALE: NTS SHEET 1 OF 1

- LIGHTING FOUNDATION NOTES:**
1. CONDUIT ELBOWS SHALL HAVE 90 DEGREE BEND. THE BEND RADIUS SHALL BE IN ACCORDANCE WITH THE 2011 NATIONAL ELECTRICAL CODE.
 2. THE BOLT CIRCLE TEMPLATE SHALL BE FURNISHED BY THE LIGHTING POLE MANUFACTURER.
 3. THE NUMBER, ORIENTATION AND SIZE OF CONDUITS ENTERING AND EXITING FOUNDATION SHALL BE SHOWN ON PLANS.
 4. CONCRETE POUR SHALL BE CONTINUOUS WITH 3000 PSI CONCRETE. NO MORTAR, GROUT, OR CONCRETE SHALL BE PLACED BETWEEN BOTTOM OF BASE PLATE AND TOP OF PEDESTAL.
 5. THE ANCHOR BOLTS SHALL BE DIPPED GALVANIZED AND "L" TYPE WITH THE ORIENTATION PARALLEL TO THE STREET.
 6. THE HORIZONTAL REINFORCING BARS SHALL BE 4" ABOVE THE BOTTOM OF THE HOLE AND 4" BELOW THE SURFACE.
 7. THE VERTICAL REINFORCING BARS SHALL BE 1" FROM WALL OF THE HOLE.
 8. THE LIGHTING POLE MANUFACTURER WILL SPECIFY THE BOLT PROJECTION REQUIREMENTS.

100% SUBMITTAL
FEBRUARY 2015

<p>NOTES</p> <ol style="list-style-type: none"> 1. Lot dimensions in parentheses are from deed. 2. Property owners correct as of _____, 20__. 3. Ordinance Number _____ 4. Adopted _____ 5. Accepted _____ 	<p>Existing Legend</p> <p>Storm Sewer Sanitary Sewer (w/ve) Gas Line Electric Line Overhead Utility Telephone/Telegraph Water Line Property Line Storm Basin Storm or Sanitary Manhole Fire Hydrant / Valve</p>	<p>Water Meter Existing Curb Cut Ramp Gas Meter / Valve Basis Power/Light Pole Guy Anchor Tree</p>	<p>Proposed Legend</p> <p>Sanitary Sewer Storm Sewer Storm/Sea) Manhole Basis Curb Cut Ramp Decorative Light Conduit (Recessed)</p>	<p>Technical</p> <p>Surveys Superintendent Project Manager Maintenance Engineer City Traffic Engineer</p>	<p>Administrative</p> <p>Capital Project Administrator City Engineer Director of Public Works</p>	<p>RK K Responsive People - Creative Solutions</p> <p>102658 / CANAL STREET / VIRGINIA STREET STREETSCAPE, PHASES 1 AND 2 CONDUIT AND LIGHTING DETAILS</p> <p>AUTHORITY: CITY OF RICHMOND, DPW, PROJECT NO.: 0-28633</p>
<p>REFERENCES</p>	<p>EDITIONS</p>	<p>DEPARTMENT OF PUBLIC WORKS RICHMOND, VIRGINIA</p>	<p>DESIGN BY: Kytterberry DRAWN BY: Tiswell CHECKED BY: Overy</p>	<p>REVIEWED BY: _____ FIELD NOTES: _____ SCALE: N/A DATE: FEBRUARY, 2015 PROJECT: SHEET 6 OF 14 DRAWING NO.: 0-28633</p>		



STORM STRUCTURE TABLE

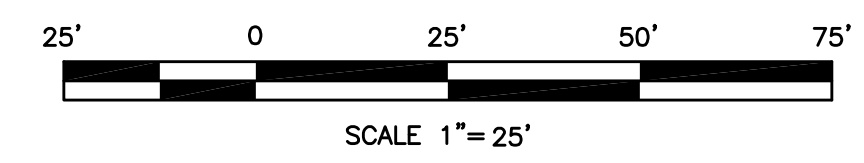
- D.I. STRUCTURE # 1137
TOP = 56.89'
INV. IN = 52.49' (12" RCP) PLUG
INV. OUT = 50.61' (12" RCP) A.D.
- STORM MANHOLE # 3430
TOP = 64.06'
INV. OUT = 58.00' (15" RCP)
- "V" DI GRATE # 3488
TOP = 63.63'
INV. OUT = 57.03' (15" RCP)
- DI STRUCTURE # 3614
TOP = 63.34'
INV. PLUG = 55.39'
(BOTTOM SURCHARGED)
- DI STRUCTURE # 3615
TOP = 63.31'
INV. OUT = 61.34' (THROAT OPENING ± 3')
- STORM MANHOLE # 4386
TOP = 66.92'
INV. IN = 64.92' (12" RCP RECESSED) A.D.
TOP OF DEBRIS = 58.87'
CHAMBER=58.22'
(SURCHARGED)
- STORM MANHOLE # 4441
TOP = 63.49'
(A) INV. IN = 57.37' (15" RCP)
(B) INV. IN = 55.50' (15" RCP)
(C) INV. IN = 52.64' (15" RCP)
INV. PLUG = 51.78'
INV. PLUG = 51.60'
(POSSIBLE TRAP INLET)

SANITARY SEWER TABLE

- SANITARY MANHOLE # 1266
TOP = 56.11'
INV. IN = 47.91' (TYPE UNK.) 24"
INV. OUT = 47.93' (TYPE UNK.) 24"
- SANITARY MANHOLE # 2984 (OFFSITE)
TOP = 58.82'
INV. IN = 46.79' (TYPE UNK.) 18"
INV. OUT = 46.60' (TYPE UNK.) 18"
- SEWER MANHOLE # 3401 (OFFSITE)
TOP = 56.47'
(A) INV. IN = 52.12' (15" RCP) A.D.
(B) INV. IN = 50.65' (15" RCP) A.D.
(C) INV. IN = 40.80' (29"X43" BRICK BOX)
INV. OUT = 40.78' (29"X43" BRICK BOX)
- SEWER MANHOLE # 4322
TOP = 61.79'
INV. PLUG = 54.63' (15")
(A) INV. IN = 53.14' (12" RCP) A.D.
(B) INV. IN = 50.50' (15" RCP) A.D.
(C) INV. IN = 46.76' (29"X43" BRICK BOX)
INV. OUT = 46.65' (29"X43" BRICK BOX)
- SEWER MANHOLE # 4442
TOP = 66.98'
(A) INV. IN = 56.84' (8" IRON) A.D.
(B) INV. IN = 56.80' (12" IRON) A.D.
(C) INV. IN = 51.52' (29"X43" BRICK BOX)
INV. OUT = 51.22' (29"X43" BRICK BOX)

NOTE:
DRAINAGE STRUCTURES HAD DEBRIS IN PIPE INVERTS SUCH AS SPILLED ASPHALT AND CONCRETE.

100% SUBMITTAL
FEBRUARY 2015



NOTES

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

REFERENCES	REVISIONS

<p>Existing Legend</p> <ul style="list-style-type: none"> Storm Sewer Sanitary Sewer (SWM) Gas Line Electric Line Overhead Utility Telephone/Telegraph Water Line Property Line Storm Basin Storm or Sanitary Manhole Fire Hydrant / Valve 	<p>Water Meter</p> <ul style="list-style-type: none"> Existing Curb Cut Ramp Gas Meter / Valve Fence Power/Light Pole Guy Anchor Tree 	<p>Proposed Legend</p> <ul style="list-style-type: none"> Sanitary Sewer Storm Sewer Storm (San) Manhole Basin Curb Cut Ramp Decorative Light Conduit (Encased)
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Technical	Administrative
Surveys Superintendent	Capital Project Administrator
Project Manager	City Engineer
Maintenance Engineer	Director of Public Works
City Traffic Engineer	

DEPARTMENT OF PUBLIC WORKS
RICHMOND, VIRGINIA

102658 / CANAL STREET / VIRGINIA STREET
STREETSCAPE, PHASES 1 AND 2
EXISTING CONDITIONS

AUTHORITY: CITY OF RICHMOND, DPW, PROJECT NO.: 0-28633	DESIGN BY: KVarberry	REVIEWED BY: TPreell	FIELD NOTES	SCALE: 1" = 25'	DATE: FEBRUARY, 2015	PRODUCT: SHEET 7a OF 14	DRAWING NO.: 0-28633
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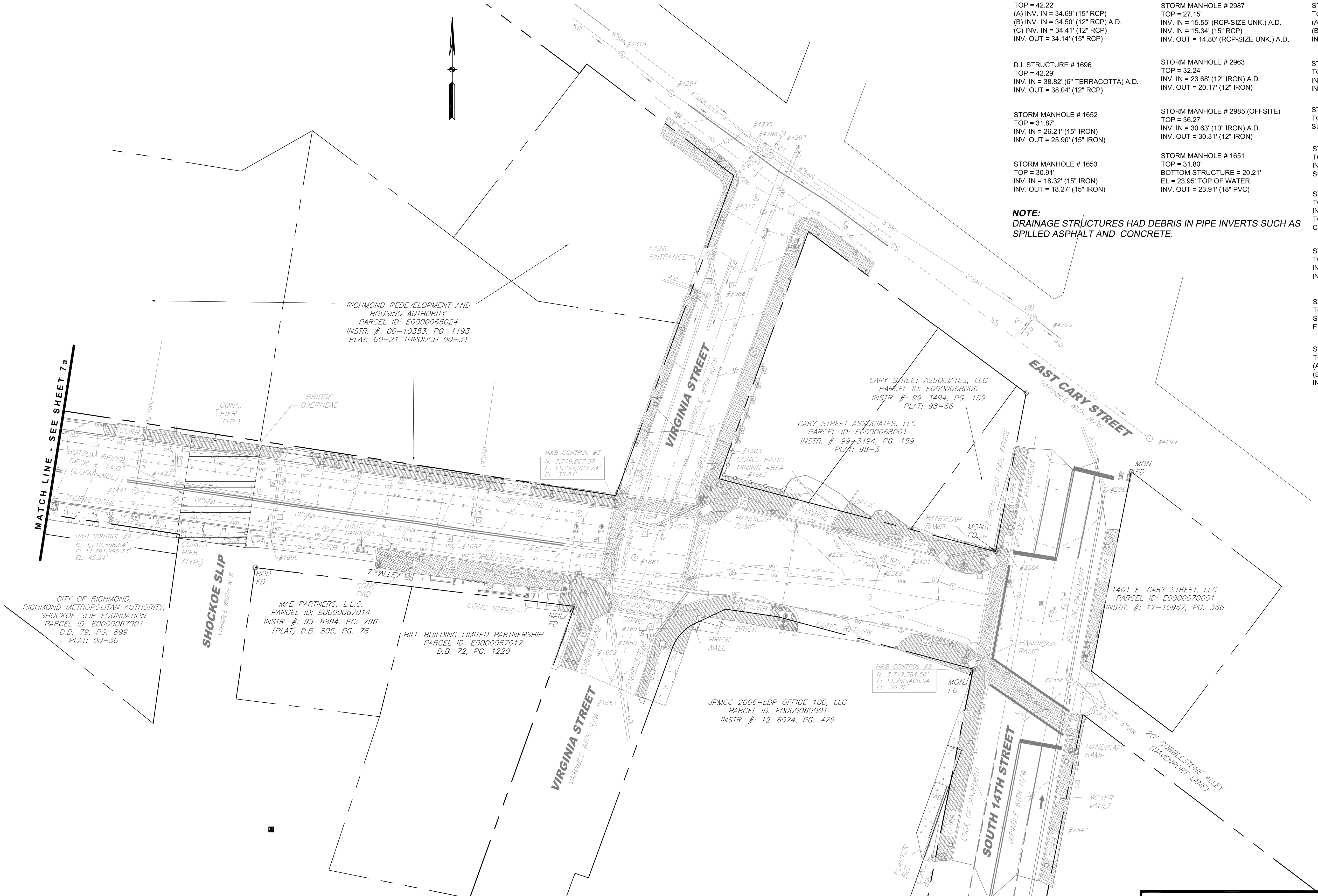
STORM STRUCTURE TABLE

STORM MANHOLE # 1422 TOP = 45.04' INV. IN = 37.40' (12" IRON) A.D. INV. OUT = 37.04' (15" RCP)	STORM MANHOLE # 1650 TOP = 31.47' (A) INV. IN = 25.82' (12" RCP) (B) INV. IN = 23.62' (18" PVC) INV. OUT = 23.62' (18" PVC) A.D.	STORM MANHOLE # 1658 TOP = 32.71' INV. IN = 24.16' (8" IRON) INV. IN = 27.81' (15" RCP) INV. OUT = 20.83' (15" IRON)
STORM MANHOLE # 1423 TOP = 42.22' (A) INV. IN = 34.69' (15" RCP) (B) INV. IN = 34.50' (12" RCP) A.D. (C) INV. IN = 34.41' (12" RCP) INV. OUT = 34.14' (15" RCP)	STORM MANHOLE # 2987 TOP = 27.15' INV. IN = 15.55' (RCP-SIZE UNK.) A.D. INV. IN = 15.34' (15" RCP) INV. OUT = 14.80' (RCP-SIZE UNK.) A.D.	STORM MANHOLE # 1659 TOP = 32.68' (A) INV. IN = 27.09' (12" IRON) (B) INV. IN = 26.16' (12" IRON) INV. OUT = 24.40' (15" IRON)
D.I. STRUCTURE # 1696 TOP = 42.29' INV. IN = 38.82' (6" TERRACOTTA) A.D. INV. OUT = 38.04' (12" RCP)	STORM MANHOLE # 2963 TOP = 32.24' INV. IN = 23.68' (12" IRON) A.D. INV. OUT = 20.17' (12" IRON)	STORM MANHOLE # 1660 TOP = 32.55' INV. IN = 27.40' (12" IRON) A.D. INV. OUT = 26.54' (12" IRON)
STORM MANHOLE # 1652 TOP = 31.87' INV. IN = 26.21' (15" IRON) INV. OUT = 25.90' (15" IRON)	STORM MANHOLE # 2985 (OFFSITE) TOP = 36.27' INV. IN = 30.63' (10" IRON) A.D. INV. OUT = 30.31' (12" IRON)	STORM MANHOLE # 1663 TOP = 31.74' SURCHARGED ±0.5' TO TOP TRASH
STORM MANHOLE # 1653 TOP = 30.91' INV. IN = 18.32' (15" IRON) INV. OUT = 18.27' (15" IRON)	STORM MANHOLE # 1651 TOP = 31.80' BOTTOM STRUCTURE = 20.21' EL = 23.95' TOP OF WATER INV. OUT = 23.91' (18" PVC)	STORM MANHOLE # 2491 TOP = 31.60' INV. OUT = 29.35' (12" IRON) SURCHARGED

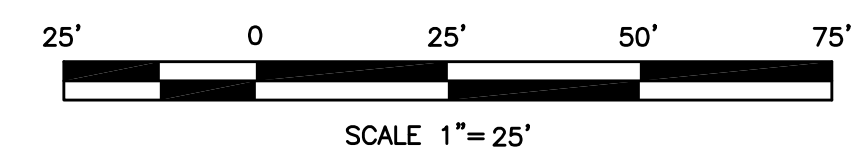
NOTE:
DRAINAGE STRUCTURES HAD DEBRIS IN PIPE INVERTS SUCH AS SPILLED ASPHALT AND CONCRETE.

SANITARY SEWER TABLE

SANITARY MANHOLE # 1421 TOP = 46.41' INV. IN = 36.00' (12" PVC) A.D. INV. OUT = 36.09' (12" PVC)	SANITARY MANHOLE # 1667 TOP = 35.63' (A) INV. IN = 28.35' (12" PVC) (B) INV. IN = 28.23' (12" PVC) A.D. INV. OUT = 28.21' (12" PVC) A.D.	SANITARY MANHOLE # 1661 TOP = 32.59' SURCHARGED EL = 27.99' TO TOP OF TRASH	SANITARY MANHOLE # 2367 TOP = 31.74' INV. IN = 28.35' (8" IRON) INV. OUT = 28.29' (8" PVC) A.D.	SANITARY MANHOLE # 2368 TOP = 31.59' INV. IN = 28.95' (4" IRON) A.D. INV. OUT = 28.94' (6" IRON)	SANITARY MANHOLE # 2867 TOP = 29.89' INV. IN = 22.58' (6" PVC) A.D. INV. OUT = 22.45' (8" PVC) A.D.	SANITARY MANHOLE # 2847 TOP = 28.75' SURCHARGED EL = 23.05' TO TOP OF TRASH	SANITARY MANHOLE # 4318 TOP = 43.80' INV. IN = 35.38' (24"X36" BRICK CHAMBER) A.D. INV. OUT = 35.30' (24"X36" BRICK CHAMBER)	SANITARY MANHOLE # 4299 (OFFSITE) TOP = 32.90' INV. IN = 18.34' (36"X48" BRICK CHANNEL) INV. OUT = 18.32' (36"X48" BRICK CHANNEL)	SANITARY MANHOLE # 4300 (OFFSITE) TOP = 34.79' (A) INV. IN = 22.38' (8" IRON) (B) INV. IN = 21.43' (8" PVC) INV. OUT = 21.25' (12" PVC)	SANITARY MANHOLE # 4297 TOP = 36.36' (A) INV. IN = 33.28' (24"X24" BRICK CHANNEL) (B) INV. IN = 23.49' (36"X48" BRICK CHANNEL) INV. OUT = 23.39' (36"X48" BRICK CHANNEL)	SANITARY MANHOLE # 4296 TOP = 39.39' (A) INV. IN = 29.33' (12" TERRACOTTA) (B) INV. IN = 28.54' (24"X36" BRICK CHANNEL) INV. OUT = 23.76' (36"X48" BRICK CHANNEL)	SANITARY MANHOLE # 4295 TOP = 39.72' INV. IN = 30.31' (8" PVC) INV. OUT = 30.06' (8" PVC)	SANITARY MANHOLE # 4317 TOP = 38.26' BOTTOM STRUCTURE = 34.00'	SANITARY MANHOLE # 4294 TOP = 42.33' (BOLTED SHUT)
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100% SUBMITTAL
FEBRUARY 2015



NOTES

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- Property owners correct as of _____, 20__
- Ordinance Number _____
- Adopted _____
- Accepted _____

REFERENCES

REVISIONS

Existing Legend

- Storm Sewer
- Sanitary Sewer (8" min)
- Gas Line
- Electric Line
- Overhead Utility
- Telephone/Telegraph
- Water Line
- Property Line
- Storm Basin
- Storm or Sanitary Manhole
- Fire Hydrant / Valve

Water Meter

- Existing Curb Cut Ramp
- Gas Meter / Valve
- Fence
- Power/Light Pole
- Guy Anchor
- Tree

Proposed Legend

- Sanitary Sewer
- Storm Sewer
- Storm (San) Manhole
- Basin
- Curb Cut Ramp
- Decorative Light
- Conduit (Encased)

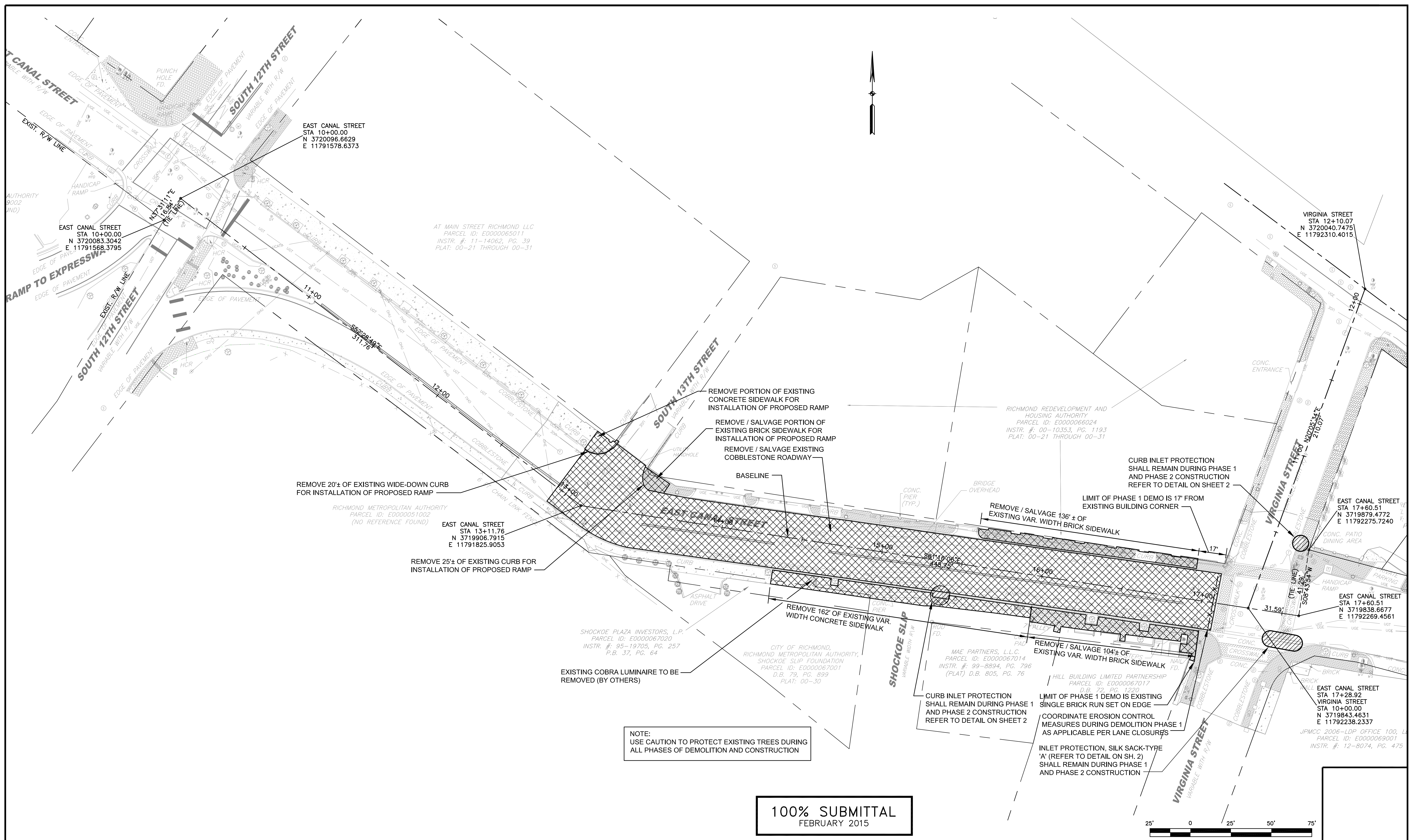


Technical	Administrative
Surveys Superintendent	Capital Project Administrator
Project Manager	City Engineer
Maintenance Engineer	Director of Public Works
City Traffic Engineer	
DEPARTMENT OF PUBLIC WORKS RICHMOND, VIRGINIA	



102658 / CANAL STREET / VIRGINIA STREET
STREETSCAPE, PHASES 1 AND 2
EXISTING CONDITIONS

DESIGN BY: KVarberry	REVIEWED BY:	FIELD NOTES:	SCALE: 1" = 25'	DATE: FEBRUARY, 2015	PROJECT: SHEET 7b OF 14	DRAWING NO.: 0-28633
DRAWN BY: TTrivell	CHECKED BY: OPeery					



100% SUBMITTAL
FEBRUARY 2015

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1. Lot dimensions in parentheses are from deed.
2. Property owners correct as of _____, 20__
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5. Accepted _____

REFERENCES

REVISIONS	DATE	DESCRIPTION

Existing Legend

Storm Sewer	—
Sanitary Sewer (swm)	—
Gas Line	—
Electric Line	—
Overhead Utility	—
Telephone/Telegraph	—
Water Line	—
Property Line	—
Storm Basin	—
Storm or Sanitary Manhole	—
Fire Hydrant / Valve	—

Water Meter

Existing Curb Cut Ramp

Gas Meter / Valve

Fence

Power/Light Pole

Guy Anchor

Tree

Proposed Legend

Sanitary Sewer	—
Storm Sewer	—
Storm/(San) Manhole	—
Basin	—
Curb Cut Ramp	—
Decorative Light	—
Conduit (Encased)	—



Technical	Administrative
Surveys Superintendent	Capital Project Administrator
Project Manager	City Engineer
Maintenance Engineer	Director of Public Works
City Traffic Engineer	

DEPARTMENT OF PUBLIC WORKS
RICHMOND, VIRGINIA

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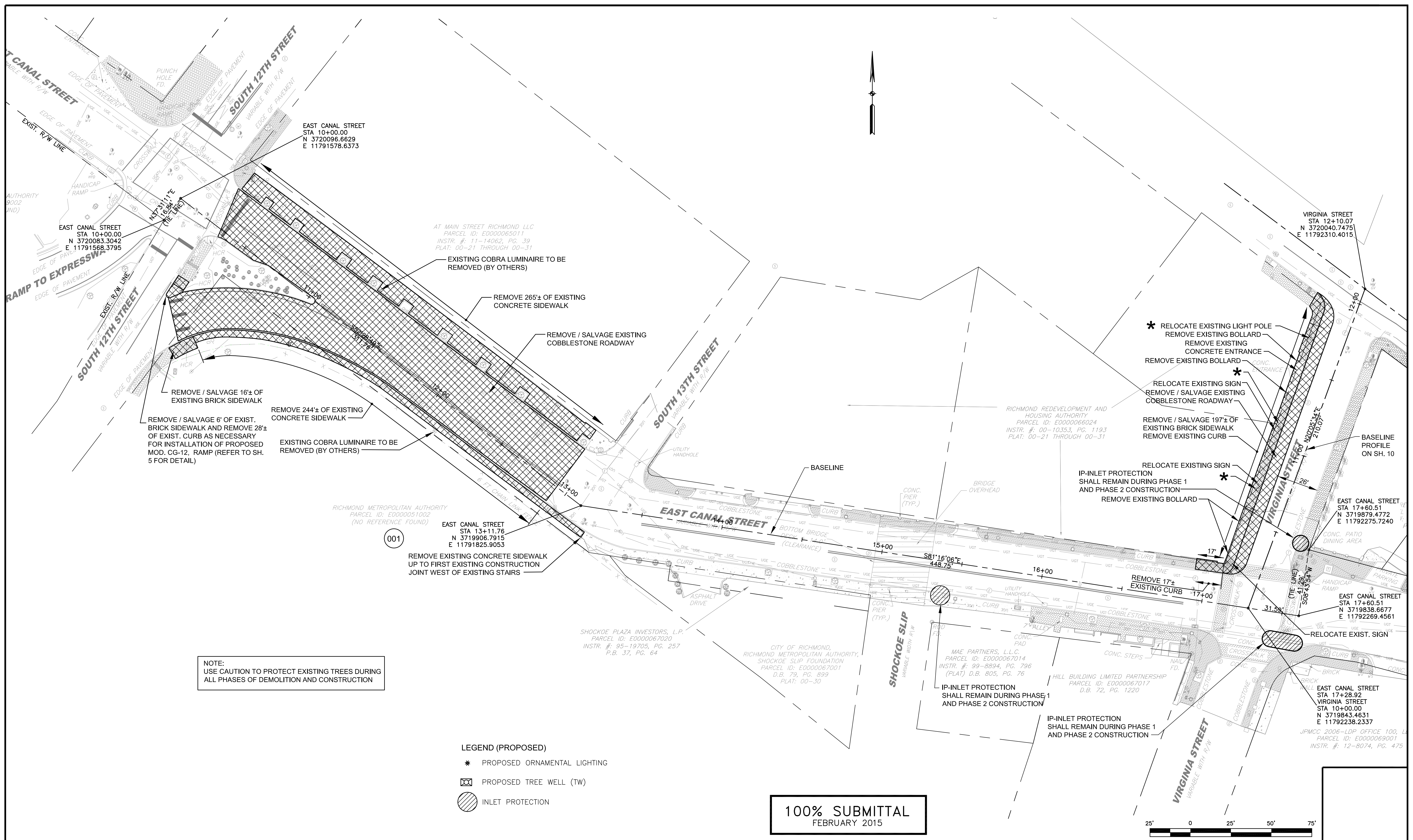
102658 / CANAL STREET / VIRGINIA STREET

STREETSCAPE, PHASES 1 AND 2

PHASE 1 DEMOLITION PLAN

DESIGN BY: KVarberry	REVIEWED BY:	FIELD NOTES	SCALE: 1" = 25'	DATE: FEBRUARY, 2015	PROJECT: SHEET 8a OF 14	DRAWING NO.: 0-28633
DRAWN BY: TTrivell	CHECKED BY: OPeery					

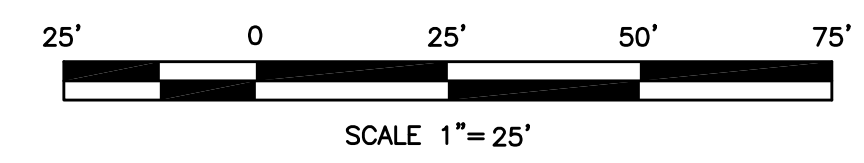
AUTHORITY: CITY OF RICHMOND, DPW, PROJECT NO.: 0-28633



NOTE:
USE CAUTION TO PROTECT EXISTING TREES DURING ALL PHASES OF DEMOLITION AND CONSTRUCTION

- LEGEND (PROPOSED)**
- * PROPOSED ORNAMENTAL LIGHTING
 - ☒ PROPOSED TREE WELL (TW)
 - ◐ INLET PROTECTION

100% SUBMITTAL
FEBRUARY 2015



NOTES

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

REFERENCES

REVISIONS	DATE	DESCRIPTION

Existing Legend

Storm Sewer	—
Sanitary Sewer (SWS)	—
Gas Line	—
Electric Line	—
Overhead Utility	—
Telephone/Telegraph	—
Water Line	—
Property Line	—
Storm Basin	—
Storm or Sanitary Manhole	—
Fire Hydrant / Valve	—

Proposed Legend

Water Meter	—
Existing Curb Cut Ramp	—
Gas Meter / Valve	—
Fence	—
Power/Light Pole	—
Guy Anchor	—
Tree	—
Sanitary Sewer	—
Storm (San) Manhole	—
Basin	—
Curb Cut Ramp	—
Decorative Light	—
Conduit (Encased)	—



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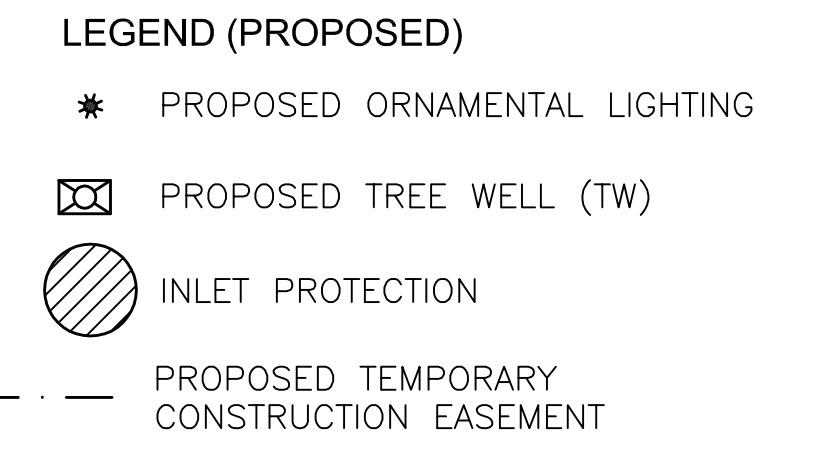
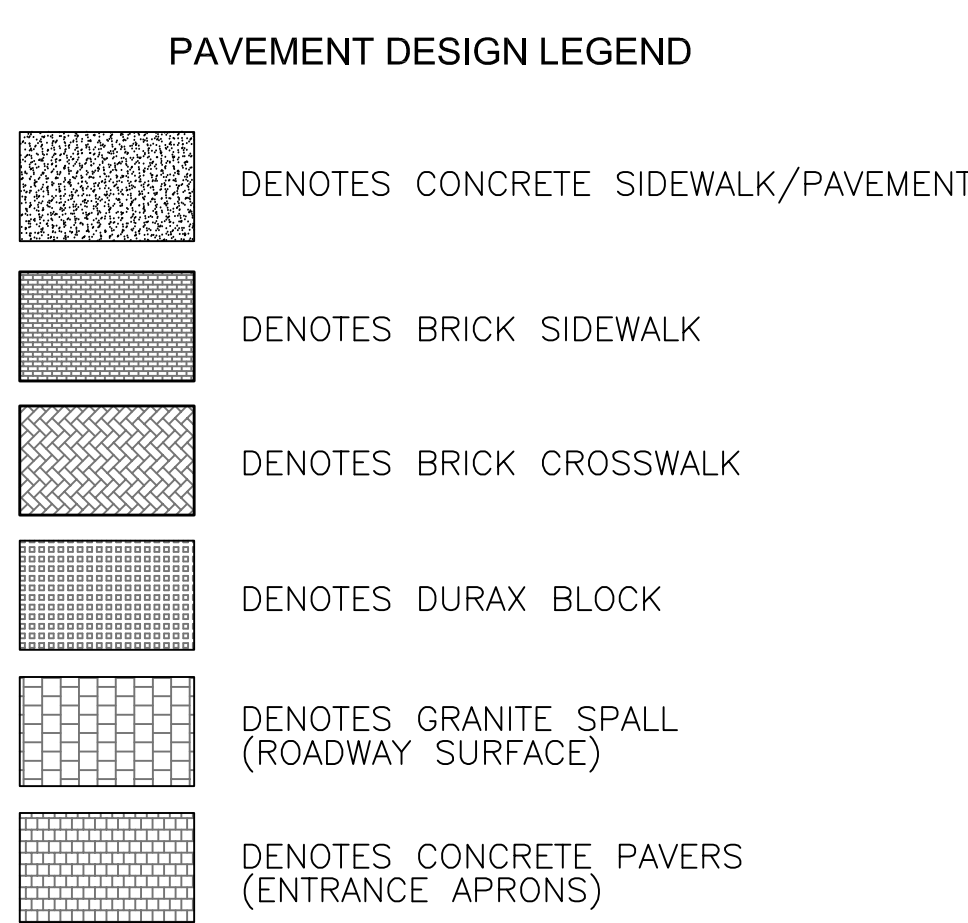
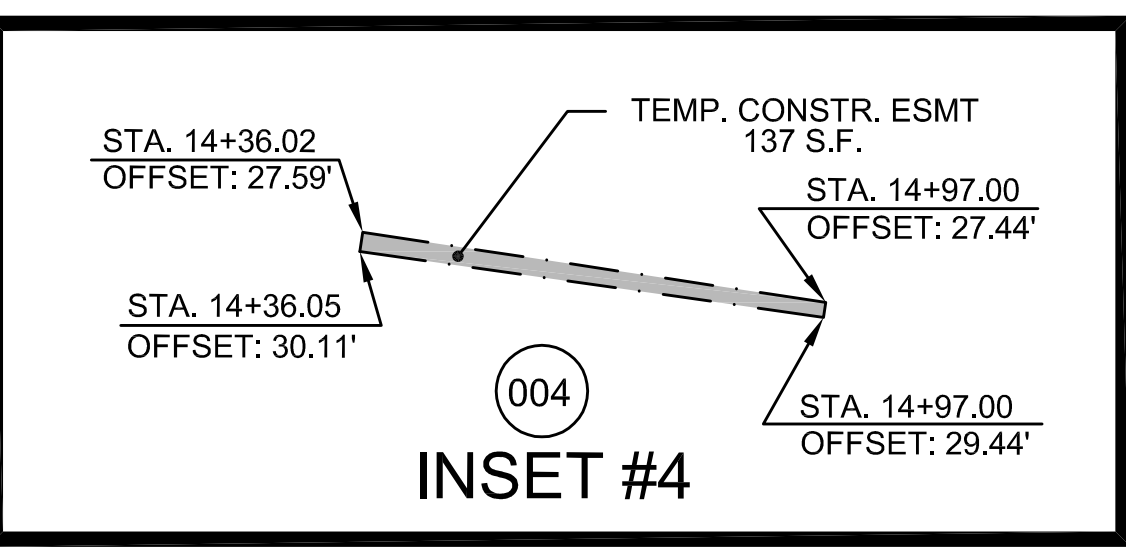
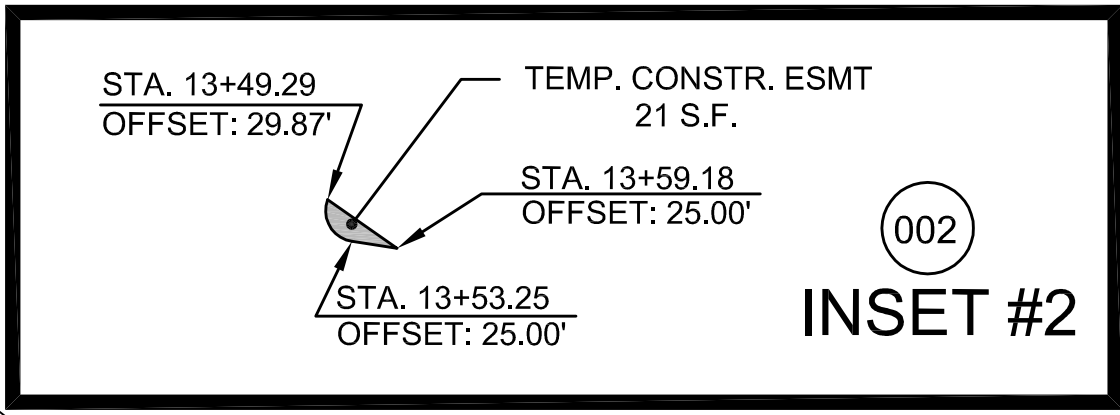
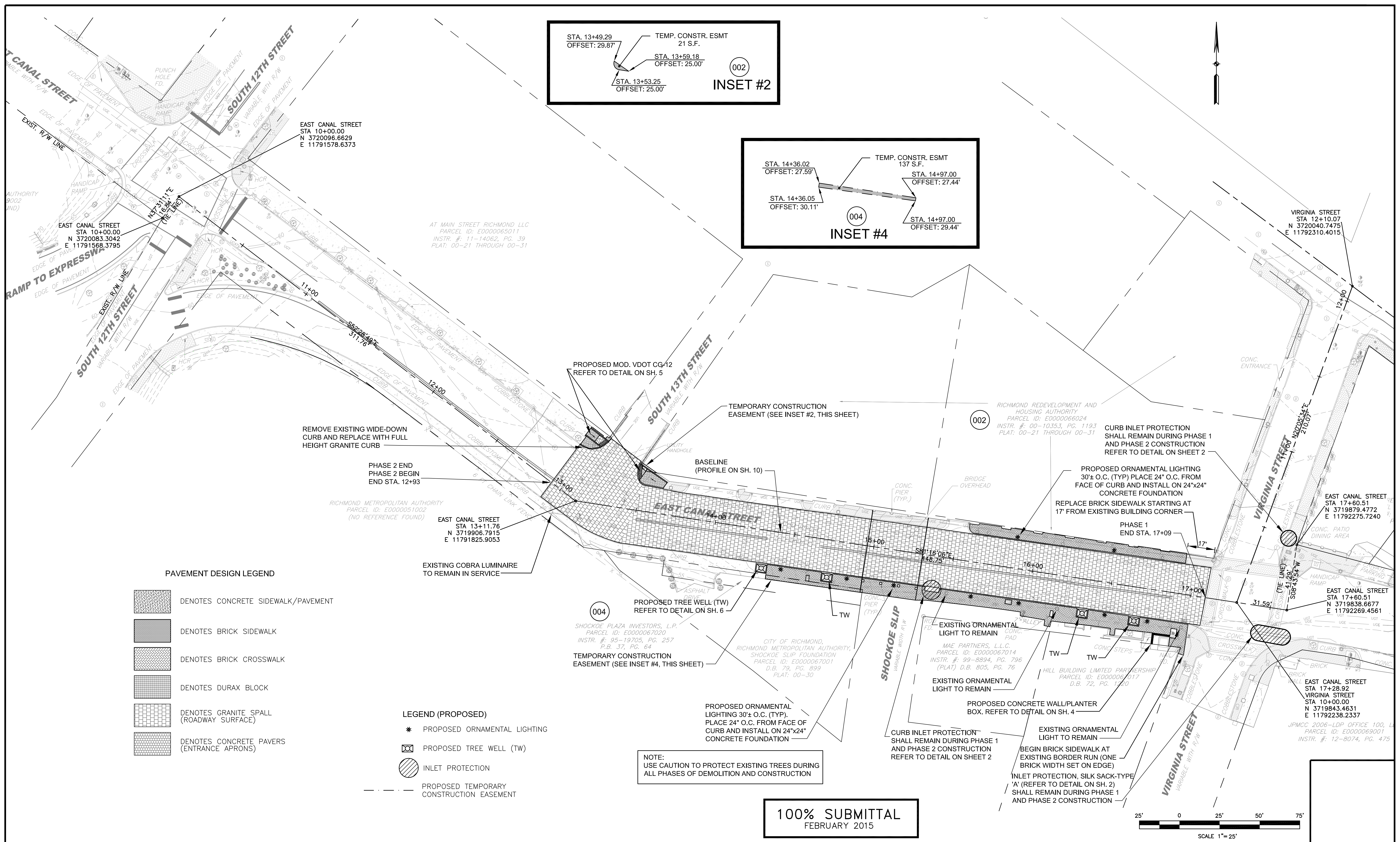
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RICHMOND, VIRGINIA

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102658 / CANAL STREET / VIRGINIA STREET
STREETSCAPE, PHASES 1 AND 2
PHASE 2 DEMOLITION PLAN

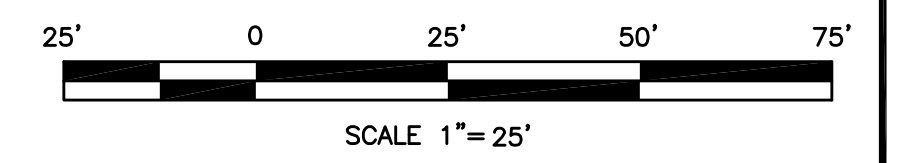
DESIGN BY: KVarberry	REVIEWED BY:	FIELD NOTES	SCALE	DATE	PROJECT	DRAWING NO.
DRAWN BY: TTrivell			1" = 25'	FEBRUARY, 2015	SHEET 8b OF 14	0-28633
CHECKED BY: OPeery						

AUTHORITY: CITY OF RICHMOND, DPW, PROJECT NO.: 0-28633



NOTE:
USE CAUTION TO PROTECT EXISTING TREES DURING ALL PHASES OF DEMOLITION AND CONSTRUCTION

100% SUBMITTAL
FEBRUARY 2015



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- Adopted _____
- Accepted _____

REFERENCES

REVISIONS	REVISIONS

Existing Legend

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Sanitary Sewer (SWS)	—
Gas Line	—
Electric Line	—
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Telephone/Telegraph	—
Water Line	—
Property Line	—
Storm Basin	—
Storm or Sanitary Manhole	—
Fire Hydrant / Valve	—

Proposed Legend

Water Meter	—
Existing Curb Cut Ramp	—
Gas Meter / Valve	—
Fence	—
Power/Light Pole	—
Guy Anchor	—
Tree	—
Sanitary Sewer	—
Storm Sewer	—
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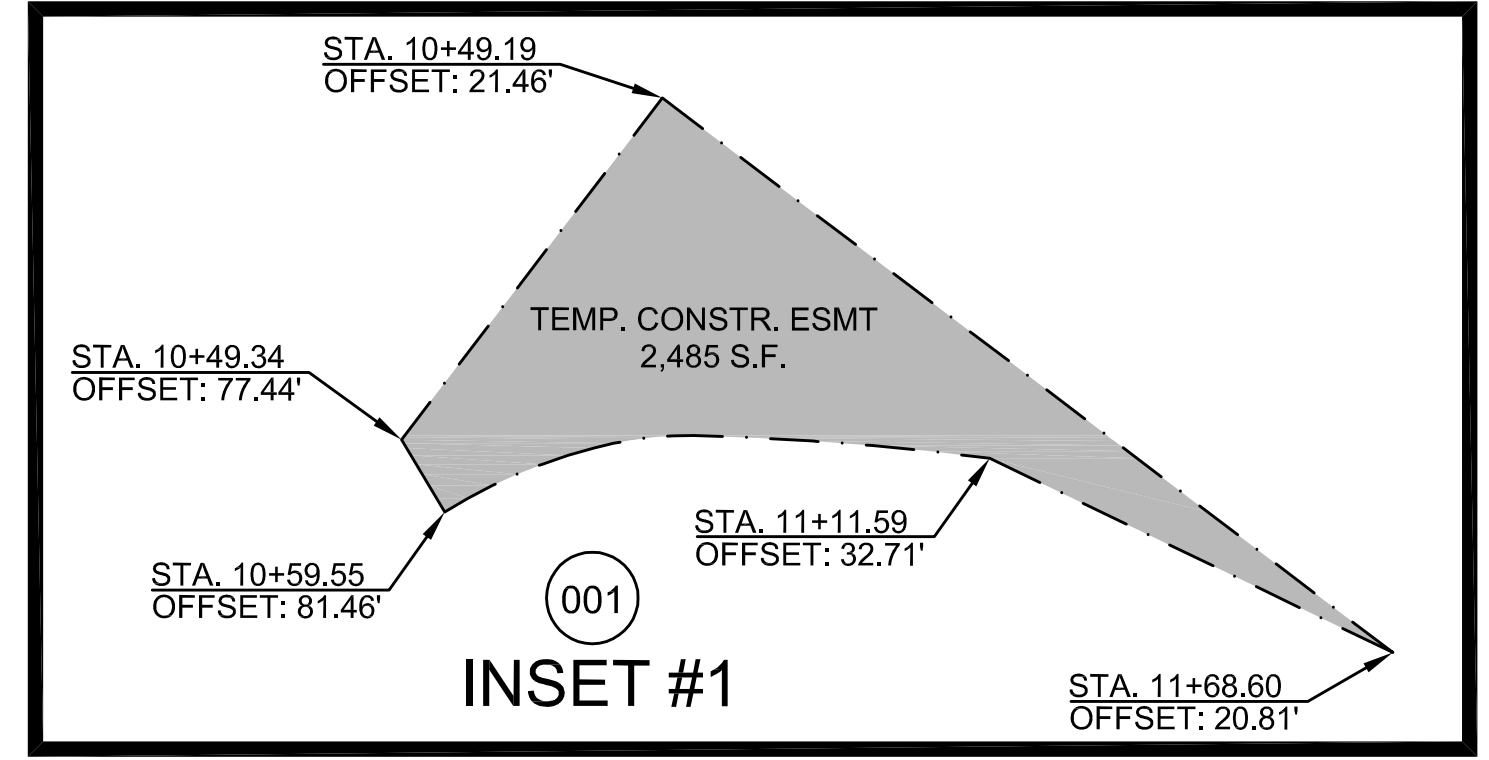
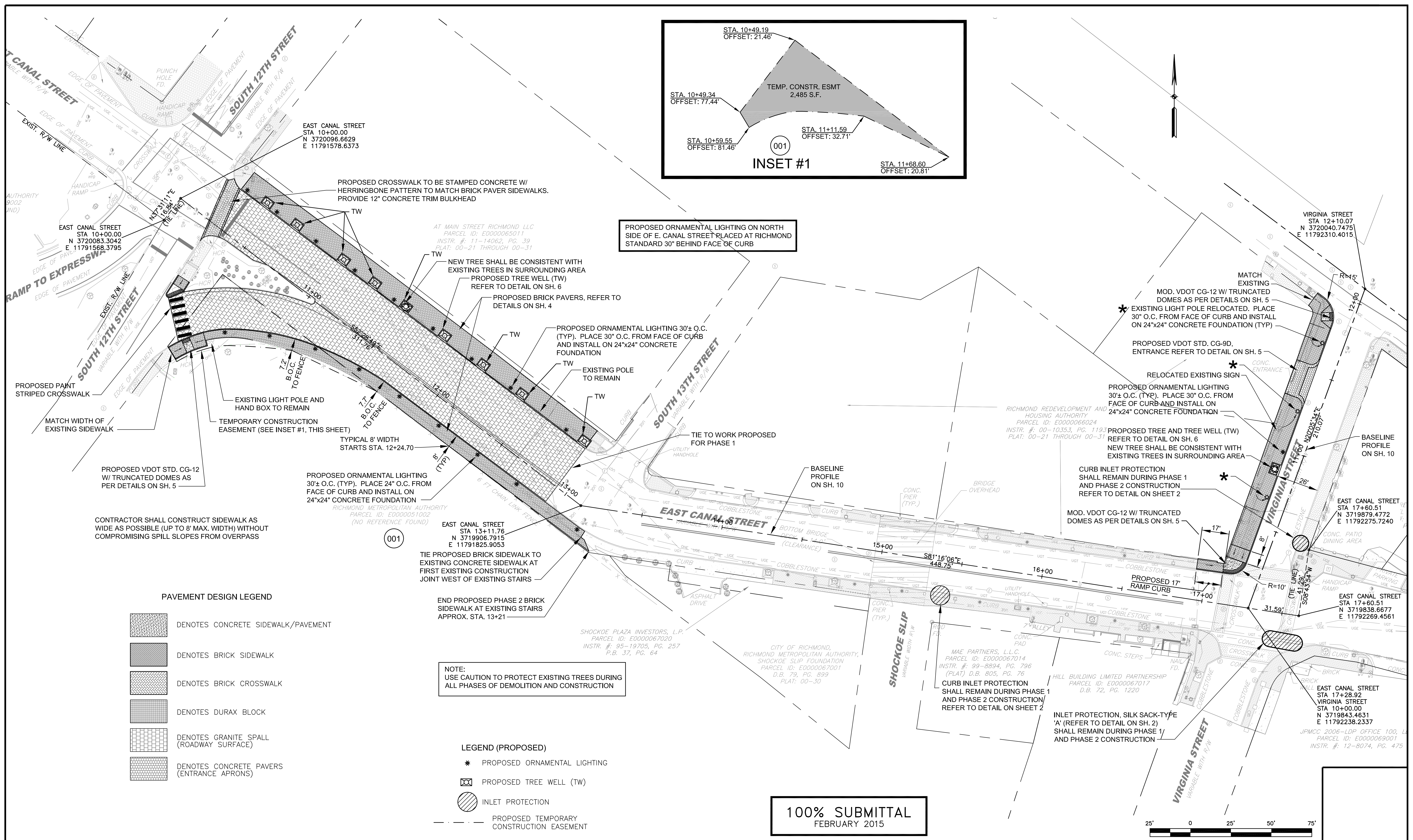
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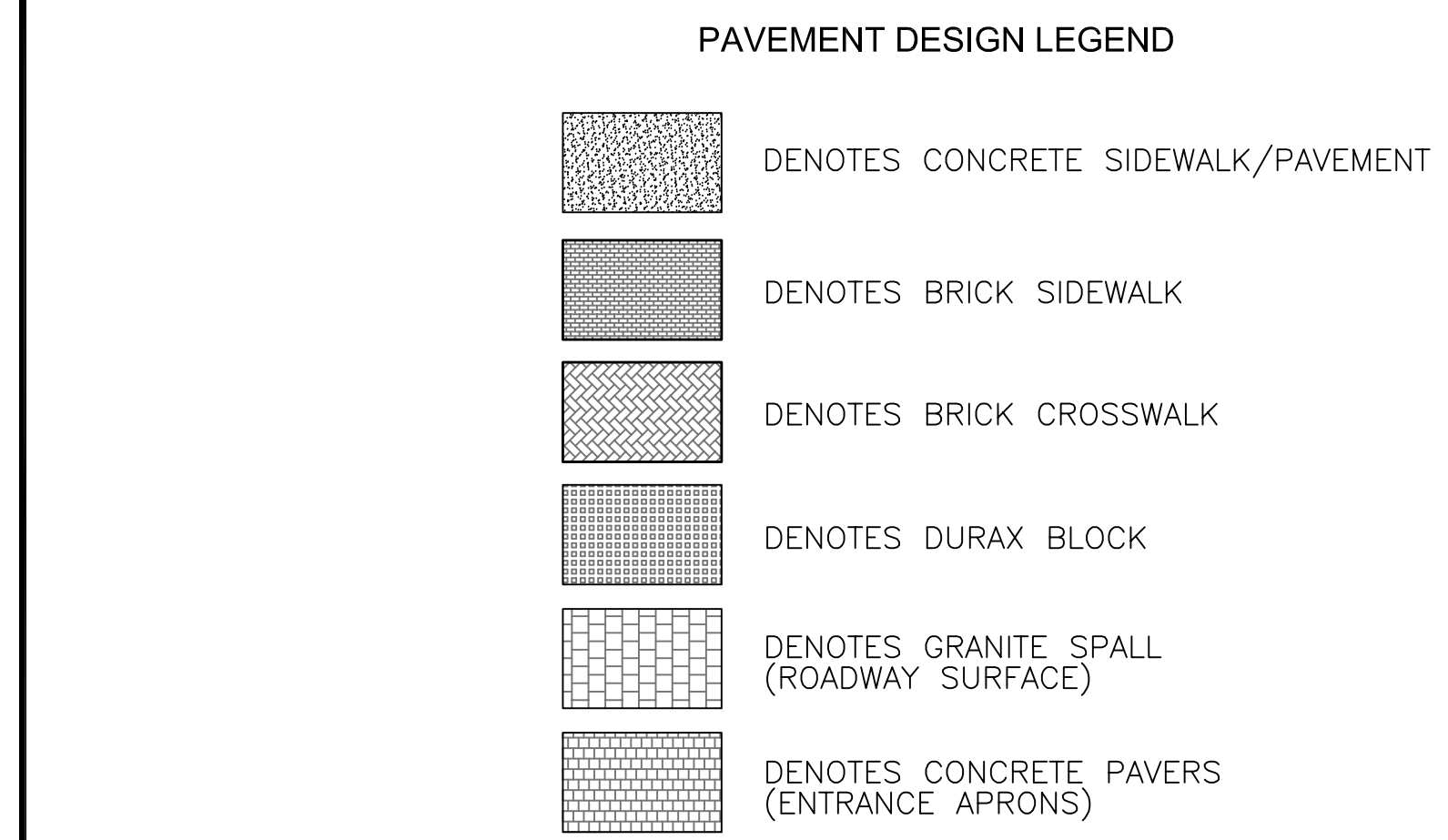
102658 / CANAL STREET / VIRGINIA STREET
STREETSCAPE, PHASES 1 AND 2
PHASE 1 STREETSCAPE PLAN

AUTHORITY: CITY OF RICHMOND, DPW, PROJECT NO.: 0-28633

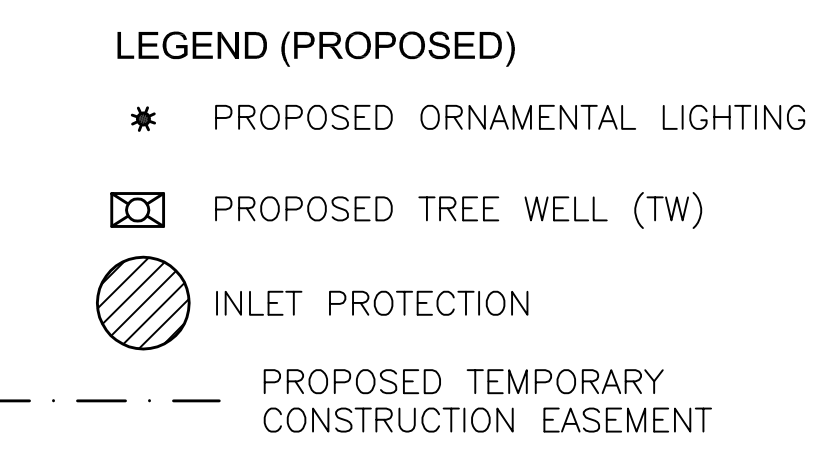
DESIGN BY: Kharberry	REVIEWED BY:	FIELD NOTES	SCALE	DATE	PROJECT	DRAWING NO.
DRAWN BY: Threlwell			1" = 25'	FEBRUARY, 2015	SHEET 9a OF 14	0-28633
CHECKED BY: O'Peery						



PROPOSED ORNAMENTAL LIGHTING ON NORTH SIDE OF E. CANAL STREET PLACED AT RICHMOND STANDARD 30" BEHIND FACE OF CURB



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USE CAUTION TO PROTECT EXISTING TREES DURING ALL PHASES OF DEMOLITION AND CONSTRUCTION



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102658 / CANAL STREET / VIRGINIA STREET
STREETSCAPE, PHASES 1 AND 2
PHASE 2 STREETSCAPE PLAN

AUTHORITY: CITY OF RICHMOND, DPW, PROJECT NO.: 0-28633

DESIGN BY: KVarberry	REVIEWED BY: TThrell	FIELD NOTES	SCALE: 1" = 25'	DATE: FEBRUARY, 2015	PROJECT SHEET: 9b OF 14	DRAWING NO.: 0-28633
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