

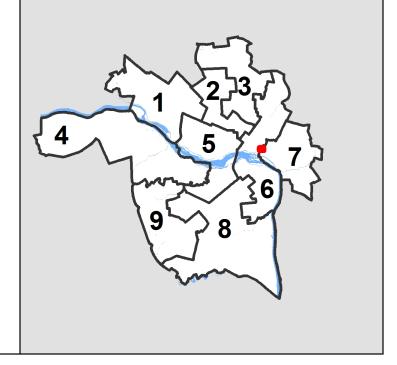
City of Richmond Department of Planning & Development Review

Location, Character, and Extent

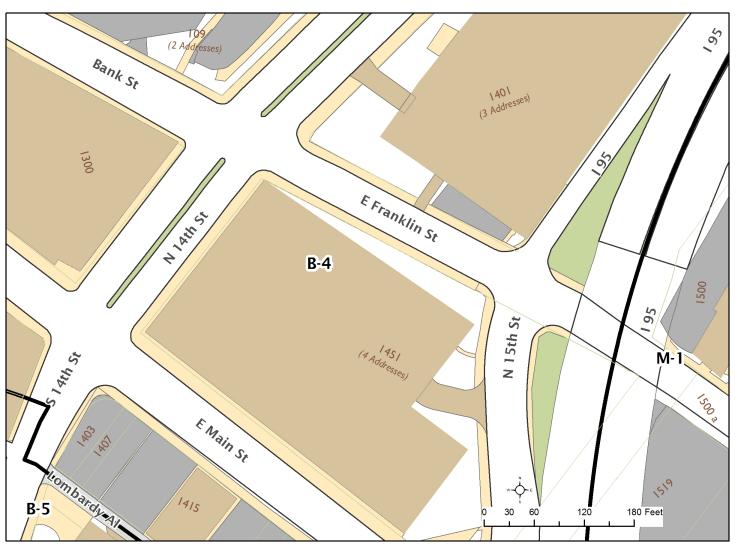
LOCATION: E Franklin St between 15th and 14th St

COUNCIL DISTRICT: 6

PROPOSAL: Streetscape improvements



For questions, please contact Kathleen Onufer at 646-5207 or Kathleen Onufer@richmondgov.com





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:		
Applicant Information (on all applications other than encroachments, a City agence		
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.



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Submission Requirements

- 10 copies of the application cover sheet and all support materials (see below), unless the application is for an encroachment, in which case only 6 copies are required. Plan sheets should be 11" x 17", folded to 8 1/2" x 11". If it is not possible to scale plans to these dimensions, please provide one set of larger, scaled plans.
- An electronic copy (PDF preferred) of all application materials, which can be burned to disc, emailed, or delivered by FTP.

All applications must include the attached cover sheet and the following support materials, as applicable to the project:

For Conceptual Review

- A detailed project narrative which includes the following: purpose of the project, project background, project budget and funding sources, description of construction program and estimated construction start date (description should also provide information on the surrounding area to provide context).
- A site plan for the project indicating site characteristics which include: building footprints, parking areas, pedestrian routes, recreation areas, open areas and areas of future expansion.
- A set of floor plans and elevations, as detailed as possible.
- A landscaping plan which shows the general location and character of plant materials and notes any existing tree to be removed.

For Final Review

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

Review and Processing

Once an application is received, it is reviewed by staff, who compiles a report that is sent to the UDC. A copy of the report and the meeting agenda will be sent to the applicant prior to the meeting. The applicant or a representative should be present at the UDC meeting or the application may be deferred to the next regularly scheduled meeting. It is also strongly suggested that a representative of the City Agency which will have final responsibility for the item be present at the meeting (if the applicant and the representative are not the same). Once the UDC recommends action on the application, it is automatically placed on the agenda for the next City Planning Commission (CPC) meeting. An exception to this is encroachment applications, recommendations for which are forwarded to the Department of Public Works. The applicant or a representative must be present at the CPC meeting or the application may be deferred to the next regularly scheduled meeting.



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

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MEETING SCHEDULE 2015-2016

UDC Meetings	UDC Submission Deadlines	Anticipated Date of Planning Commission Following the UDC Meeting	
December 10, 2015	November 12, 2015*	January 4, 2016	
January 7, 2016	December 10, 2015**	January 19, 2016 ¹	
February 4, 2016	January 14, 2016	February 16, 2016 ²	
March 10, 2016	February 18, 2016	March 21, 2016	
April 7, 2016	March 17, 2016 April 18, 2016		
May 5, 2016	2016 April 14, 2016 May		
June 9, 2016	May 19, 2016	June 20, 2016	
July 7, 2016	June 16, 2016 July 18, 2016		
August 4, 2016	July 14, 2016	September 6, 2016 ³	
September 8, 2016	August 18, 2016 September 19, 2016		
October 6, 2016	6 September 15, 2016 October 17, 201		
November 10, 2016	Der 10, 2016 October 20, 2016 November 21, 20		
December 8, 2016	November 10, 2016* January 3, 2017		

For further information or assistance, please contact the Planning and Preservation Division by phone at (804) 646-6335 or by email at DCDCompPlan@RichmondGov.com.

Information about the UDC along with the application and meeting schedule is available at the City of Richmond website, http://www.richmondgov.com/CommitteeUrbanDesign

Monday, January 18th is a City of Richmond Holiday
 Monday, February 15th is a City of Richmond Holiday
 Monday, September 5th is a City of Richmond Holiday

⁴ Monday, January 2nd, 2017 is a City of Richmond Holiday

^{*} Moved forward to account for Thanksgiving Holiday Schedule

^{**} Moved forward to account for Winter Holiday Schedule

Franklin Street (14th Street to 15th Street) Streetscape Project (UPC 104284)

Project Narrative for Richmond UDC Final Review Meeting – Submitted May 19, 2016

Project Purpose

The purpose of this project is to implement streetscape infrastructure improvements along Franklin Street between 14th and 15th Streets in the City of Richmond.

The streetscape improvements along Franklin Street (14th Street to 15th Street) include: ornamental pedestrian streetlights (Charleston style poles), ADA-compliant curb ramps at intersections, traffic sign relocations, street trees in sidewalk, and tree wells for proposed trees. The proposed improvements along Franklin Street maintain the existing roadway width, travel lanes, and number of parking and loading zones. The concrete loading dock on the north side of street for the Monroe Building will not be modified.

Project Background

The project is located in the City of Richmond near the eastern edge of Richmond's central business district and close to Shockoe Bottom and Shockoe Slip. Project limits generally include the sidewalks on both the north and south side of the Franklin Street and include the areas of ADA ramps at the northeast and southeast corner at 14th Street and the northwest and southwest corners of 15th street. Construction is anticipated to begin in Fall 2016 with an estimated construction period of 90 days.

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 2015 to provide engineering design services.

Project Budget / Funding Sources

The total City project budget is \$300,000.

Funding source is 50% City and 50% VDOT revenue sharing.

<u>Description of Construction / Proposed Modifications</u>

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

• On Franklin Street, Charleston style (Philips 1229 or equivalent) black streetlights will be installed at a 60' +/- interval, depending on lighting design, and placed 30 " from back of curb per City lighting standard on a 24"x24" concrete pole foundation. Some ornamental

lights of this type are already in place along this corridor outside City right of way and will remain in service and will be included in the lighting design. For Franklin Street, three (3) streetlights are proposed on the north side of Franklin Street. No additional streetlights will added on the southside as the existing pedestrian lighting adjacent the parking garage will be sufficient.

- On Franklin Street, tree wells are proposed for existing and proposed street trees. Three proposed trees with tree wells on approximately 65' +/- spacing are planned for the north side of Franklin and five proposed trees and tree wells on approximately 57' +/- spacing are planned on the south side. The proposed tree type will be determined by the City arborist. Tree spacing will be alternated and dependent upon the lighting design for pedestrian level ornamental lighting and shall be consistent with existing trees in adjacent blocks.
- On Franklin Street, ADA-compliant curb ramps will be installed on the northeast corner of Franklin Street at 14th Street, and also along the northwest corner of the intersection of Franklin Street at 15th Street. Truncated dome strips will be installed on the exposed aggregate ramp on the southeast corner for Franklin and 14th Street. Underground conduit work may require the ADA ramp at the southwest corner of Franklin and 15th Street be reset. Work will match existing brick paver arrangement along 15th 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.
- On the north side of Franklin Street, the concrete loading dock entrance to the Monroe Building will NOT be modified.

Project Schedule

•	Project scoping meeting	December 2, 2015
•	RK&K submitted review plans to City	Spring 2016
•	RK&K UDC final review submittal package submitted	May 19, 2016
•	City preparing MBE goal and RFQ waiver	May-June 2016
•	UDC final review meeting	June 9, 2016
•	Planning Commission final review meeting	June 20, 2016
•	RK&K 100% complete plans, quantities & cost estimate	September 2016
•	City 100% complete plan final review meeting	September-October 2016
•	Final submittal to City Procurement	October 2016

Application Attachments

Franklin Street 14th St. to 15th St. Streetscape – 100% Review Engineering Plans, dated May 2016

STATE FEDERAL PROJECT NUMBE STATE PROJECT NUM UPC 104284

CITY OF RICHMOND, VIRGINIA DEPARTMENT OF PUBLIC WORKS

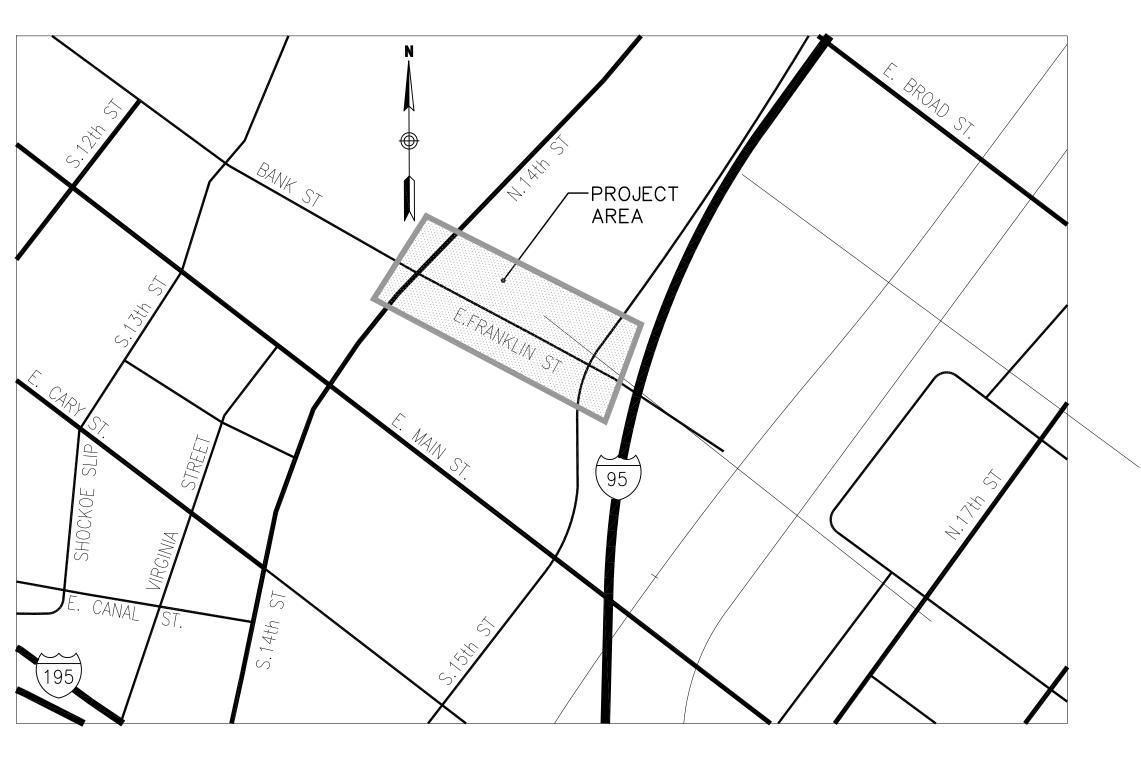


FRANKLIN STREET 14th ST. TO 15th ST. STREETSCAPE

UPC 104284

INDEX OF SHEETS

SHEET TITLE	SHEET N
TITLE SHEET	1
NOTES	2
TYPICAL SECTIONS AND PAVEMENT DETAILS	3
VDOT DETAILS AND NOTES	4
EXISTING CONDITIONS	5a AND 5b
DEMOLITION PLANS	6a AND 6b
STREETSCAPE PLANS	7a AND 7b



LOCATION MAP 1"=200'

FLOOD PLAIN AND CHESAPEAKE BAY PROTECTION AREA DATA -PROJECT AREA IS OUTSIDE THE 100-YEAR FLOOD PLAIN (FIRM PANEL 0041E, RICHMOND, VIRGINIA, MAP REVISED JULY 16, 2014) -EASTERN PORTIONS OF PROJECT ARE WITHIN THE 500-YEAR FLOOD PLAIN, LIMITS SHOWN IN PLAN SHEETS -ENTIRE PROJECT AREA IS WITHIN THE CHESAPEAKE BAY RESOURCE MANAGEMENT AREA

TOTAL CONSTRUCTION AREA FRANKLIN STREET = 5500 S.F.

PERMITS REQUIRED: LAND DISTURBANCE PERMIT NOT REQUIRED: VSMP

UDC SUBMITTAL MAY 2016

REVISIONS

NO.	DATE	COMMENTS

CITY OF RICHMOND

APPROVED FOR CONSTRUCTION				
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			

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.

CITY OF RICHMOND

DEPARTMENT OF PUBLIC WORKS

RICHMOND, VIRGINIA

104240

DRAWING NO: 0-28693



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

RUMMEL, KLEPPER & KAHL, LLP

1. ALL CUTS IN THE STREETS AND SIDEWALKS SHALL BE PERFORMED UNDER A PERMIT AND

MONITORED BY THE PERMIT INSPECTOR. 2. WORK SHALL NOT COMMENCE UNTIL THE PERMIT INSPECTOR HAS BEEN NOTIFIED, A

PRE-CONSTRUCTION CONFERENCE HELD AND MISS UTILITY CLEARS. 3. CUTS SHALL BE AS CLEAN AND STRAIGHT AS POSSIBLE, WITH NO OUTLINE DIMENSIONS LESS THAN 3 FEET WITHOUT SPECIAL APPROVAL OF THE DEPARTMENT'S INSPECTOR.

4. THE DETAILS OF TRENCHING CUTS FOR UTILITY STRIPS MUST BE SHOWN IN A TYPICAL SECTION ON THE DRAWINGS OR PROVIDED IN A SUBMITTAL WITH CONSTRUCTION NOTES SPECIFYING WIDTHS. DEPTHS, METHODS, MATERIALS, COMPACTION REQUIREMENTS AND PAVEMENT RESTORATION OF ABIDING BY THE DPW ATTACHMENT STANDARD.

5. ALL ASPHALT PAVEMENT RESTORATION THICKNESS SHALL BE 1 1/2 TIMES THE EXISTING SECTION OR A MINIMUM OF 8 INCHES WHICHEVER IS GREATER. SEE THE DPW TRENCH RESTORATION ILLUSTRATION FOR THE TYPICAL CONFORMANCE STANDARDS.

6. THE FINAL RESTORATION ON OPEN TRENCH CUTS REQUIRES THE DISTURBED ASPHALT PAVEMENT ZONE TO BE A SQUARE POINTED OFF AND STRAIGHT LINE. THE AREA OF PAVEMENT RESTORATION IS TO BE FULLY ENVELOPED BY THE FINAL SURFACE COURSE REPAIRS. THE ADJOINING SURFACE/TOP COURSE LAYER IS TO BE OVER-MILLED A MINIMUM DEPTH OF 1.25 INCHES OR MORE, A MINIMUM DISTANCE OF ONE FOOT BEYOND EACH SIDE OF THE TRENCH WALL. THIS STEP OUT IS TO OCCUR ALONG THE ENTIRE TRENCH LINE RUN AND/OR SQUARED POINTED AREA. CUTS INVOLVING CONTINUOUS NETWORK RUNS, WHICH EXCEED 350 FEET IN LENGTH OR TYPICALLY OVER ONE FULL CITY BLOCK, WILL BE CONSIDERED MULTIPLE BLOCK CUTS. ON MULTIPLE BLOCK CUT ZONES, THE OVER MILLING OF THE TRENCH LINE AND ADJOINING SURFACE COURSE LAYER MUST BE DONE WITH TYPICAL HIGH PRODUCTION ROADWAY COLD PLANNING EQUIPMENT. IN MULTIPLE BLOCK RESTORATION CASES, WHERE THE HIGH PRODUCTION COLD PLANNER IS REQUIRED, FINAL PAVING SHALL BE DONE

7. CONTRACTOR MUST PROVIDE AND COORDINATE THE NECESSARY GEOTECHNICAL SERVICES FROM A QUALIFIED FIRM TO INSURE COMPACTION APPROVAL. APPROVAL OF IN-PLACE MATERIAL MUST BE FOLLOWED UP WITH A WRITTEN SUMMARY REPORT. COMPACTION REQUIREMENTS WILL BE REVIEWED FOR APPROVAL BY THE PERMITS ENGINEER OR HIS REPRESENTATIVE. 8. ALL DISTURBED SIDEWALK AND CURB SHALL BE REPAIRED AND REPLACED IN ACCORDANCE WITH

CITY STANDARDS. 9. ALL UTILITY CUTS ARE TO BE EXAMINED AND APPROVED BY THE APPROPRIATE UTILITY INSPECTOR/REPRESENTATIVE.

10. ALL ENCROACHMENTS MUST BE SATISFIED BY ORDINANCE.

BY A HIGH PRODUCTION HIGHWAY PAVER.

11. CONTRACTOR TO COORDINATE WITH THE CITY OF RICHMOND DPW 48 HOURS IN ADVANCE OF CLOSING TRAVELWAYS TO GENERAL VEHICULAR TRAFFIC. ALL TRAFFIC CLOSURES SHALL BE IN COMPLIANCE WITH THE VIRGINIA WORK AREA PROTECTION MANUAL (VWAPM), 2011 EDITIONS. 12. PARKING METERS REMOVED DURING WORK ON VIRGINIA STREET WILL BE TURNED INTO THE CITY AT A PLACE DETERMINED DURING PRE-CONSTRUCTION MEETING.

ROAD SUBGRADE

1. INSPECTION AND APPROVAL OF THE SUBGRADE WILL BE REQUIRED PRIOR TO THE PLACEMENT OF THE APPROVED PAVEMENT SECTION MATERIAL.

2. ANY CLAY DEPOSITS IN THE TOP TWO FEET OF THE SUBGRADE MUST BE REMOVED OR ADDRESSED AS RECOMMENDED BY THE GEOTECHNICAL ENGINEER.

3. SUBGRADE APPROVAL SHALL BE ACCOMPANIED BY THE SUPPORTING DOCUMENTATION VERIFYING DENSITY TEST RESULTS OF 92% OR GREATER.

THE ENTIRE SUBGRADE WILL HAVE BEEN PROOFROLLED IN THE PRESENCE OF THE SITE INSPECTOR AND GEOTECHNICAL REPRESENTATIVE. PROOFROLLING SHALL BE A RUBBER TIRE VEHICLE SUCH AS A LOADED TEN (10) TON TRUCK OR APPROVAL COMPACTION EQUIPMENT THE FINAL SUBGRADE SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER AND SITE INSPECTOR BEFORE PLACEMENT OF PAVEMENT SECTION MATERIALS.

SEEDING NOTES

1. ALL STABILIZATION/SEEDING WILL BE ACCOMPLISHED IN ACCORDANCE WITH THE VIRGINIA

EROSION AND SEDIMENTATION CONTROL HANDBOOK. 2. ANY DISTURBED AREA NOT PAVED, SODDED, OR BUILT UPON, WILL HAVE A VEGETATIVE

COVER PRIOR TO FINAL INSPECTION, AND IN THE OPINION OF THE ENVIRONMENTAL ENGINEER, WILL BE MATURE ENOUGH TO CONTROL SOIL EROSION SATISFACTORILY AND SURVIVE SEVERE WEATHER CONDITIONS. STREAM DIVERSION AREAS, WATERWAYS, BANKS AND RELATED AREAS WILL BE SEEDED

AND MULCHED IMMEDIATELY AFTER WORK IN WATERCOURSE IS COMPLETED. IN NO CASE SHALL WETLAND AREAS BE RESEEDED WITH ANY SPECIES OF FESCUE.

4. WINTERIZATION - ANY DISTURBED AREA NOT PAVED, SODDED OR BUILT UPON BY OCTOBER 15 IS TO BE SEEDED AND MULCHED ON THAT DATE UNLESS WAIVED BY THE ENVIRONMENTAL ENGINEER.

5. TEMPORARY SEEDING WILL BE APPLIED WITHIN 7 DAYS TO DENUDED AREAS WHICH MAY NOT BE AT FINAL GRADE BUT WILL REMAIN DORMANT (UNDISTURBED) FOR LONGER THAN 30 DAYS. FOR TEMPORARY SEEDING USE 50% OF THE RECOMMENDED RATES OF FERTILIZER, LIME AND FULL AMOUNT OF SEED AND MULCH REQUIRED FOR REGULAR SEEDING.

6. ELECTRIC POWER, TELEPHONE, AND GAS SUPPLY TRENCHES ARE TO BE COMPACTED, SEEDED AND MULCHED WITHIN 7 DAYS AFTER BACKFILL.

ALL TEMPORARY EARTH BERMS, DIVERSIONS, AND SILT DAMS ARE TO BE MULCHED AND SEEDED FOR VEGETATIVE COVER IMMEDIATELY AFTER GRADING. STRAW OR HAY MULCH IS REQUIRED. THE SAME APPLIES TO ALL STOCKPILES, ON SITE AS WELL AS SOIL (INTENTIONALLY) TRANSPORTED FROM THE PROJECT SITE.

TRAFFIC CONTROL AND CONSTRUCTION HOUR NOTES

OPERATIONS MUST BE COMPLETE BY 9 PM.

1. RESIDENT AND EMERGENCY ACCESS SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION REGARDLESS OF WHETHER A STREET CLOSURE IS OR

IS NOT IN EFFECT.

2. FROM 9 AM TO 4 PM. MONDAY THROUGH FRIDAY. NO MORE THAN TWO TRAFFIC LANES CAN BE CLOSED, ON ANY ONE STREET AT A TIME. 3. NIGHT WORK IS NOT PERMITTED ON THIS PROJECT. ALL CONSTRUCTION

4. WORK IS PERMITTED ON THIS PROJECT FROM 8 AM TO 9 PM, SATURDAY AND SUNDAY. NO MORE THAN TWO TRAFFIC LANES CAN BE CLOSED, ON ANY ONE STREET AT A TIME.

5. A MINIMUM OF ONE TRAVEL LANE MUST BE MAINTAINED AT ALL TIMES ALONG FRANKLIN STREET.

6. NO WORK IS PERMITTED ON THE PROJECT BETWEEN THANKSGIVING DAY AND NEW YEARS DAY WITHOUT WRITTEN PERMISSION FROM THE CITY MANAGER.

7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL TRAFFIC CONTROL AND WORK-IN-STREETS PERMITS WITHIN THE CITY.

CITY OF RICHMOND STANDARD EROSION CONTROL NOTES

1. PERMANENT OR TEMPORARY SOIL STABILIZATION SHALL BE APPLIED TO DENUDED AREAS WITHIN SEVEN DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE. TEMPORARY SOIL STABILIZATION SHALL BE APPLIED WITHIN SEVEN DAYS TO DENUDED AREAS THAT MAY NOT BE AT FINAL GRADE BUT WILL REMAIN, DORMANT (UNDISTURBED) FOR LONGER THAN 14 DAYS. PERMANENT STABILIZATION SHALL BE APPLIED TO AREAS

THAT ARE TO BE LEFT DORMANT FOR MORE THAN ONE YEAR. 2. EXCESS EXCAVATION DISPOSED OF OFF THE SITE SHALL BE DISPOSED OF IN ACCORDANCE WITH THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK.

3. EROSION AND SEDIMENT CONTROLS SHALL BE INSTALLED IN ACCORDANCE WITH VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK AND SHALL BE PLACED PRIOR TO OR AS THE FIRST STEP OF THE LAND DISTURBING

4. EROSION AND SEDIMENT CONTROLS SHALL BE MAINTAINED SO THAT THE SEDIMENT CARRYING RUNOFF FROM THE SITE WILL NOT ENTER STORM DRAINAGE FACILITIES.

5. EROSION AND SEDIMENT CONTROLS SHALL BE MAINTAINED UNTIL THE DISTURBED AREA IS STABILIZED.

6. PROPERTIES ADJOINING THE SITE SHALL BE KEPT CLEAN OF MUD OR SILT CARRIED FROM THE SITE BY VEHICULAR TRAFFIC OR RUNOFF. 7. THE DISPOSAL OF WASTE MATERIALS REMOVED FROM EROSION AND SEDIMENT CONTROL FACILITIES AND THE DISPOSAL OF THESE FACILITIES SHALL BE IN ACCORDANCE WITH THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK.

8. STABILIZATION MEASURES SHALL BE APPLIED TO EARTHEN STRUCTURES SUCH AS DAMS, DIKES AND DIVERSIONS IMMEDIATELY AFTER INSTALLATION.

9. DURING CONSTRUCTION OF THE PROJECT, SOIL STOCKPILES SHALL BE STABILIZED OR PROTECTED WITH SEDIMENT TRAPPING MEASURES. THE APPLICANT IS RESPONSIBLE FOR THE TEMPORARY PROTECTION AND PERMANENT STABILIZATION OF ALL SOIL STOCKPILES ON SITE AS WELL AS SOIL INTENTIONALLY TRANSPORTED FROM THE PROJECT SITE.

GENERAL E&S CONTROL NOTES

ES-1. UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CONSTRUCTED AND MAINTAINED ACCORDING TO MINIMUM STANDARDS AND SPECIFICATIONS OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK AND VIRGINIA REGULATIONS 4VAC50-30 EROSION AND SEDIMENT CONTROL REGULATIONS.

ES-2. THE PLAN APPROVING AUTHORITY MUST BE NOTIFIED ONE WEEK PRIOR TO THE PRE-CONSTRUCTION CONFERENCE, ON WEEK PRIOR TO THE COMMENCEMENT OF LAND DISTURBING ACTIVITY, AND ONE WEEK PRIOR TO THE FINAL INSPECTION.

ES-3. ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO OR AS THE FIRST STEP IN CLEARING.

ES-4. A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN SHALL BE MAINTAINED ON SITE AT ALL TIMES.

ES-5. PRIOR TO COMMENCING LAND DISTURBING ACTIVITIES IN AREAS OTHER THAN INDICATED ON THESE PLANS (INCLUDING, BUT NOT LIMITED TO. OFF-SITE BORROW OR WASTE AREAS), THE CONTRACTOR SHALL SUBMIT A SUPPLEMENTARY EROSION CONTROL PLAN TO THE OWNER FOR REVIEW AND APPROVAL BY THE PLAN APPROVING AUTHORITY.

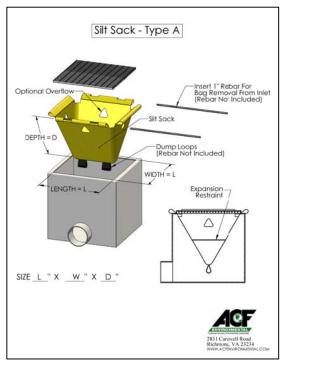
ES-6. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF ANY ADDITIONAL EROSION CONTROL MEASURES NECESSARY TO PREVENT EROSION AND SEDIMENTATION AS DETERMINED BY THE PLAN APPROVING AUTHORITY.

ES-7. ALL DISTURBED AREAS ARE TO DRAIN TO APPROVED SEDIMENT CONTROL MEASURES AT ALL TIMES DURING LAND DISTURBING ACTIVITIES AND DURING SITE DEVELOPMENT UNTIL FINAL STABILIZATION IS ACHIEVED.

ES-8. DURING DEWATERING OPERATIONS, WATER WILL BE PUMPED INTO AN APPROVED FILTERING DEVICE.

ES-9. THE CONTRACTOR SHALL INSPECT ALL EROSION CONTROL MEASURES PERIODICALLY AND AFTER EACH RUNOFF-PRODUCING RAINFALL EVENT. ANY NECESSARY REPAIRS OR CLEANUP TO MAINTAIN THE EFFECTIVENESS OF THE EROSION CONTROL DEVICES SHALL BE MADE IMMEDIATELY.

OR APPROVED EQUAL



APPLICABLE MINIMUM STANDARDS (EROSION AND SEDIMENT CONTROL LAW AND **REGULATIONS**)

MS-1: PERMANENT OR TEMPORARY SOIL STABILIZATION SHALL BE APPLIED TO DENUDED AREAS WITHIN SEVEN DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE. TEMPORARY SOIL STABILIZATION SHALL BE APPLIED WITHIN SEVEN DAYS TO DENUDED AREAS THAT MAY NOT BE AT FINAL GRADE BUT WILL REMAIN DORMANT FOR LONGER THAN 30 DAYS. PERMANENT STABILIZATION SHALL BE APPLIED TO AREAS THAT ARE TO BE LEFT DORMANT FOR MORE THAN ONE YEAR.

MS-2: DURING CONSTRUCTION, SOIL STOCKPILES AND BORROW AREAS SHALL BE STABILIZED OR PROTECTED WITH SEDIMENT TRAPPING MEASURES.TEMPORARY PROTECTION AND PERMANENT STABILIZATION SHALL BE APPLIED TO ALL SOIL STOCKPILES ON SITE AND BORROW AREAS OR SOIL INTENTIONALLY TRANSFERRED OFF SITE.

MS-3: A PERMANENT VEGETATIVE COVER SHALL BE ESTABLISHED ON DENUDED AREAS NOT OTHERWISE PERMANENTLY STABILIZED. PERMANENT VEGETATION SHALL NOT BE CONSIDERED ESTABLISHED UNTIL A GROUND COVER IS ACHIEVED THAT IS UNIFORM, MATURE ENOUGH TO SURVIVE AND WILL INHIBIT EROSION.

MS-4: SEDIMENT BASINS AND TRAPS, PERIMETER DIKES, SEDIMENT BARRIERS AND OTHER MEASURES INTENDED TO TRAP SEDIMENT SHALL BE CONSTRUCTED AS A FIRST STEP IN ANY LAND-DISTURBING ACTIVITY AND SHALL BE MADE FUNCTIONAL BEFORE UP SLOPE LAND DISTURBANCE TAKES PLACE.

MS-5: STABILIZATION MEASURES SHALL BE APPLIED TO EARTHEN STRUCTURES SUCH AS DAMS, DIKES, AND DIVERSIONS IMMEDIATELY AFTER INSTALLATION.

MS-7: CUT AND FILL SLOPES SHALL BE DESIGNED AND CONSTRUCTED IN A MANNER THAT WILL MINIMIZE EROSION. SLOPES THAT ARE FOUND TO BE ERODING EXCESSIVELY WITHIN ONE YEAR OF PERMANENT STABILIZATION SHALL BE PROVIDED WITH ADDITIONAL SLOPE STABILIZING MEASURES UNTIL THE PROBLEM IS CORRECTED

MS-10: ALL STORM SEWER INLETS THAT ARE MADE OPERABLE DURING CONSTRUCTION SHALL BE PROTECTED SO THAT SEDIMENT-LADEN WATER CANNOT ENTER THE CONVEYANCE SYSTEM WITHOUT FIRST BEING FILTERED OR OTHERWISE TREATED TO REMOVE SEDIMENT.

MS-11: BEFORE NEWLY CONSTRUCTED STORMWATER CONVEYANCE CHANNELS OR PIPES ARE MADE OPERATIONAL, ADEQUATE OUTLET PROTECTION AND ANY REQUIRED TEMPORARY OR PERMANENT CHANNEL LINING SHALL BE INSTALLED IN BOTH THE CONVEYANCE CHANNEL AND RECEIVING CHANNEL

MS-16: UNDERGROUND UTILITY LINES SHALL BE INSTALLED IN ACCORDANCE WITH THE MINIMUM STANDARDS AND SPECIFICATIONS OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK AND VIRGINIA REGULATIONS VR625-02-00 EROSION AND SEDIMENT CONTROL REGULATIONS IN ADDITION TO OTHER APPLICABLE CRITERIA.

MS-17: WHERE CONSTRUCTION VEHICLE ACCESS ROUTES INTERSECT PAVED OR PUBLIC ROADS, PROVISIONS SHALL BE MADE TO MINIMIZE THE TRANSPORT OF SEDIMENT BY VEHICULAR TRACKING ONTO THE PAVED SURFACE. WHERE SEDIMENT IS TRANSPORTED ONTO A PAVED OR PUBLIC ROAD SURFACE, THE ROAD SURFACE SHALL BE CLEANED THOROUGHLY AT THE END OF EACH DAY. SEDIMENT SHALL BE REMOVED FROM THE ROADS BY SHOVELING OR SWEEPING AND TRANSPORTED TO A SEDIMENT CONTROL DISPOSAL AREA. STREET WASHING SHALL BE ALLOWED ONLY AFTER SEDIMENT IS REMOVED IN THIS MANNER.

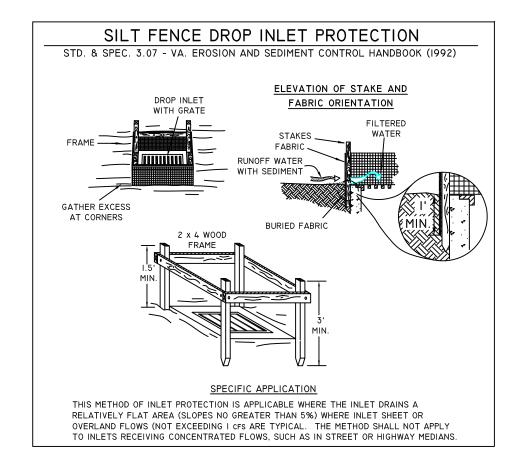
MS-18: ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION OR AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED, UNLESS OTHERWISE AUTHORIZED BY THE LOCAL PROGRAM AUTHORITY. TRAPPED SEDIMENT AND THE DISTURBED SOIL AREAS RESULTING FROM THE DISPOSITION OF TEMPORARY MEASURES SHALL BE PERMANENTLY STABILIZED TO PREVENT FURTHER EROSION AND SEDIMENTATION.

MS-19: PROPERTIES AND WATERWAYS DOWNSTREAM FROM DEVELOPMENT SITES SHALL BE PROTECTED FROM SEDIMENT DEPOSITION, EROSION AND DAMAGE DUE TO INCREASES IN VOLUME, VELOCITY AND PEAK FLOW RATE OF STORMWATER RUN-OFF FOR THE STATED FREQUENCY STORM OF 24-HOUR DURATION IN ACCORDANCE WITH THE FOLLOWING STANDARDS AND CRITERIA. (REFER TO SITE PLAN FOR FULL STORMWATER MANAGEMENT PLAN AS IT APPLIES TO MS-19.)

DUE TO THE NATURE OF THIS SPECIFIC PROJECT, THE FOLLOWING MINIMUM STANDARDS ARE NOT APPLICABLE: MS-4, MS-5, MS-11

BLOCK AND GRAVEL CURB INLET SEDIMENT FILTER STD. & SPEC. 3.07 - VA. EROSION AND SEDIMENT CONTROL HANDBOOK (1992) * GRAVEL SHALL BE VDOT #3, #357 #5 COARSE AGGREGATE SPECIFIC APPLICATION THIS METHOD OF INLET PROTECTION IS APPLICABLE AT CURB INLETS WHERE AN OVERFLOW CAPABILITY IS NECESSARY TO

PREVENT EXCESSIVE PONDING IN FRONT OF THE STRUCTURE



9VAC25-840-40. MINIMUM STANDARDS:

A VESCP MUST BE CONSISTENT WITH THE FOLLOWING CRITERIA, TECHNIQUES AND

1. PERMANENT OR TEMPORARY SOIL STABILIZATION SHALL BE APPLIED TO DENUDED AREAS WITHIN SEVEN DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE. TEMPORARY SOIL STABILIZATION SHALL BE APPLIED WITHIN SEVEN DAYS TO DENUDED AREAS THAT MAY NOT BE AT FINAL GRADE BUT WILL REMAIN DORMANT FOR LONGER THAN 14 DAYS. PERMANENT STABILIZATION SHALL BE APPLIED TO AREAS THAT ARE TO BE LEFT DORMANT FOR MORE THAN ONE YEAR.

2. DURING CONSTRUCTION OF THE PROJECT, SOIL STOCK PILES AND BORROW AREAS SHALL BE STABILIZED OR PROTECTED WITH SEDIMENT TRAPPING MEASURES. THE APPLICANT IS RESPONSIBLE FOR THE TEMPORARY PROTECTION AND PERMANENT STABILIZATION OF ALL SOIL STOCKPILES ON SITE AS WELL AS BORROW AREAS AND SOIL INTENTIONALLY TRANSPORTED FROM THE PROJECT SITE.

3. A PERMANENT VEGETATIVE COVER SHALL BE ESTABLISHED ON DENUDED AREAS NOT OTHERWISE PERMANENTLY STABILIZED. PERMANENT VEGETATION SHALL NOT BE CONSIDERED ESTABLISHED UNTIL A GROUND COVER IS ACHIEVED THAT IS UNIFORM, MATURE ENOUGH TO SURVIVE AND WILL INHIBIT EROSION.

4. SEDIMENT BASINS AND TRAPS, PERIMETER DIKES, SEDIMENT BARRIERS AND OTHER MEASURES INTENDED TO TRAP SEDIMENT SHALL BE CONSTRUCTED AS A FIRST STEP IN ANY LAND-DISTURBING ACTIVITY AND SHALL BE MADE FUNCTIONAL BEFORE UPSLOPE LAND DISTURBANCE TAKES PLACE.

5. STABILIZATION MEASURES SHALL BE APPLIED TO EARTHEN STRUCTURES SUCH AS DAMS, DIKES AND DIVERSIONS IMMEDIATELY AFTER INSTALLATION.

6. SEDIMENT TRAPS AND SEDIMENT BASINS SHALL BE DESIGNED AND CONSTRUCTED BASED UPON THE TOTAL DRAINAGE AREA TO BE SERVED BY THE TRAP OR BASIN. A. THE MINIMUM STORAGE CAPACITY OF A SEDIMENT TRAP SHALL BE 134 CUBIC YARDS PER ACRE OF DRAINAGE AREA AND THE TRAP SHALL ONLY CONTROL DRAINAGE AREAS LESS THAN THREE ACRES.

B. SURFACE RUNOFF FROM DISTURBED AREAS THAT IS COMPRISED OF FLOW FROM DRAINAGE AREAS GREATER THAN OR EQUAL TO THREE ACRES SHALL BE CONTROLLED BY A SEDIMENT BASIN. THE MINIMUM STORAGE CAPACITY OF A SEDIMENT BASIN SHALL BE 134 CUBIC YARDS PER ACRE OF DRAINAGE AREA. THE OUTFALL SYSTEM SHALL, AT A MINIMUM, MAINTAIN THE STRUCTURAL INTEGRITY OF THE BASIN DURING A 25-YEAR STORM OF 24-HOUR DURATION. RUNOFF COEFFICIENTS USED IN RUNOFF CALCULATIONS SHALL CORRESPOND TO A BARE EARTH CONDITION OR THOSE CONDITIONS EXPECTED TO EXIST WHILE THE SEDIMENT BASIN IS UTILIZED

7. CUT AND FILL SLOPES SHALL BE DESIGNED AND CONSTRUCTED IN A MANNER THAT WILL MINIMIZE EROSION. SLOPES THAT ARE FOUND TO BE ERODING EXCESSIVELY WITHIN ONE YEAR OF PERMANENT STABILIZATION SHALL BE PROVIDED WITH ADDITIONAL SLOPE STABILIZING MEASURES UNTIL THE PROBLEM IS CORRECTED.

8. CONCENTRATED RUNOFF SHALL NOT FLOW DOWN CUT OR FILL SLOPES UNLESS CONTAINED WITHIN AN ADEQUATE TEMPORARY OR PERMANENT CHANNEL, FLUME OR

9. WHENEVER WATER SEEPS FROM A SLOPE FACE, ADEQUATE DRAINAGE OR OTHER PROTECTION SHALL BE PROVIDED.

10. ALL STORM SEWER INLETS THAT ARE MADE OPERABLE DURING CONSTRUCTION SHALL BE PROTECTED SO THAT SEDIMENT-LADEN WATER CANNOT ENTER THE CONVEYANCE SYSTEM WITHOUT FIRST BEING FILTERED OR OTHERWISE TREATED TO REMOVE SEDIMENT.

11. BEFORE NEWLY CONSTRUCTED STORMWATER CONVEYANCE CHANNELS OR PIPES ARE MADE OPERATIONAL, ADEQUATE OUTLET PROTECTION AND ANY REQUIRED TEMPORARY OR PERMANENT CHANNEL LINING SHALL BE INSTALLED IN BOTH THE CONVEYANCE CHANNEL AND RECEIVING CHANNEL. 12. WHEN WORK IN A LIVE WATERCOURSE IS PERFORMED, PRECAUTIONS SHALL

BE TAKEN TO MINIMIZE ENCROACHMENT, CONTROL SEDIMENT TRANSPORT AND STABILIZE THE WORK AREA TO THE GREATEST EXTENT POSSIBLE DURING CONSTRUCTION. NON-ERODIBLE MATERIAL SHALL BE USED FOR THE CONSTRUCTION OF CAUSEWAYS AND COFFERDAMS. EARTHEN FILL MAY BE USED FOR THESE STRUCTURES IF ARMORED BY NON-ERODIBLE COVER MATERIALS.

13. WHEN A LIVE WATERCOURSE MUST BE CROSSED BY CONSTRUCTION VEHICLES MORE THAN TWICE IN ANY SIX-MONTH PERIOD, A TEMPORARY VEHICULAR STREAM CROSSING CONSTRUCTED OF NON-ERODIBLE MATERIAL SHALL BE PROVIDED.

14. ALL APPLICABLE FEDERAL, STATE AND LOCAL REQUIREMENTS PERTAINING TO WORKING IN OR CROSSING LIVE WATERCOURSES SHALL BE MET. 15. THE BED AND BANKS OF A WATERCOURSE SHALL BE STABILIZED

IMMEDIATELY AFTER WORK IN THE WATERCOURSE IS COMPLETED. 16. UNDERGROUND UTILITY LINES SHALL BE INSTALLED IN ACCORDANCE WITH THE FOLLOWING STANDARDS IN ADDITION TO OTHER APPLICABLE CRITERIA:

A. NO MORE THAN 500 LINEAR FEET OF TRENCH MAY BE OPENED AT ONE

B. EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF TRENCHES. C. EFFLUENT FROM DEWATERING OPERATIONS SHALL BE FILTERED OR PASSED THROUGH AN APPROVED SEDIMENT TRAPPING DEVICE, OR BOTH, AND DISCHARGED IN A MANNER THAT DOES NOT ADVERSELY AFFECT FLOWING STREAMS OR OFF-SITE PROPERTY.

D. MATERIAL USED FOR BACKFILLING TRENCHES SHALL BE PROPERLY COMPACTED IN ORDER TO MINIMIZE EROSION AND PROMOTE STABILIZATION. E. RESTABILIZATION SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THIS

F. APPLICABLE SAFETY REQUIREMENTS SHALL BE COMPLIED WITH. 17. WHERE CONSTRUCTION VEHICLE ACCESS ROUTES INTERSECT PAVED OR PUBLIC ROADS, PROVISIONS SHALL BE MADE TO MINIMIZE THE TRANSPORT OF SEDIMENT BY VEHICULAR TRACKING ONTO THE PAVED SURFACE. WHERE SEDIMENT IS TRANSPORTED ONTO A PAVED OR PUBLIC ROAD SURFACE, THE ROAD SURFACE SHALL BE CLEANED THOROUGHLY AT THE END OF EACH DAY SEDIMENT SHALL BE REMOVED FROM THE ROADS BY SHOVELING OR SWEEPING AND TRANSPORTED TO A SEDIMENT CONTROL DISPOSAL AREA. STREET WASHING SHALL BE ALLOWED ONLY AFTER SEDIMENT IS REMOVED IN THIS MANNER. THIS PROVISION SHALL APPLY TO INDIVIDUAL DEVELOPMENT LOTS AS WELL AS TO LARGER LAND-DISTURBING ACTIVITIES.

18. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION OR AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED. UNLESS OTHERWISE AUTHORIZED BY THE VESCP AUTHORITY. TRAPPED SEDIMENT AND THE DISTURBED SOIL AREAS RESULTING FROM THE DISPOSITION OF TEMPORARY MEASURES SHALL BE PERMANENTLY STABILIZED TO PREVENT FURTHER EROSION 19. PROPERTIES AND WATERWAYS DOWNSTREAM FROM DEVELOPMENT SITES SHALL BE PROTECTED FROM SEDIMENT DEPOSITION, EROSION AND DAMAGE DUE TO INCREASES IN VOLUME, VELOCITY AND PEAK FLOW RATE OF STORMWATER RUNOFF FOR THE STATED FREQUENCY STORM OF 24-HOUR DURATION IN ACCORDANCE WITH THE FOLLOWING STANDARDS AND CRITERIA. STREAM RESTORATION AND RELOCATION PROJECTS THAT INCORPORATE NATURAL CHANNEL DESIGN CONCEPTS ARE NOT MAN-MADE CHANNELS AND SHALL BE EXEMPT FROM ANY FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS FOR

DISCHARGED DIRECTLY INTO AN ADEQUATE NATURAL OR MAN—MADE RECEIVING CHANNEL,

PIPE OR STORM SEWER SYSTEM. FOR THOSE SITES WHERE RUNOFF IS DISCHARGED INTO A

NATURAL OR MAN-MADE CHANNELS: A. CONCENTRATED STORMWATER RUNOFF LEAVING A DEVELOPMENT SITE SHALL BE

PIPE OR PIPE SYSTEM, DOWNSTREAM STABILITY ANALYSES AT THE OUTFALL OF THE PIPE OR PIPE SYSTEM SHALL BE PERFORMED. B. ADEQUACY OF ALL CHANNELS AND PIPES SHALL BE VERIFIED IN THE FOLLOWING

(1) THE APPLICANT SHALL DEMONSTRATE THAT THE TOTAL DRAINAGE AREA TO THE POINT OF ANALYSIS WITHIN THE CHANNEL IS ONE HUNDRED TIMES GREATER THAN THE CONTRIBUTING DRAINAGE AREA OF THE PROJECT IN QUESTION; OR (2) (A) NATURAL CHANNELS SHALL BE ANALYZED BY THE USE OF A TWO-YEAR STORM TO

VERIFY THAT STORMWATER WILL NOT OVERTOP CHANNEL BANKS NOR CAUSE EROSION OF CHANNEL BED OR BANKS. (B) ALL PREVIOUSLY CONSTRUCTED MAN-MADE CHANNELS SHALL BE ANALYZED BY THE USE OF A TEN-YEAR STORM TO VERIFY THAT STORMWATER WILL NOT OVERTOP ITS BANKS

AND BY THE USE OF A TWO-YEAR STORM TO DEMONSTRATE THAT STORMWATER WILL NOT CAUSE EROSION OF CHANNEL BED OR BANKS; AND (C) PIPES AND STORM SEWER SYSTEMS SHALL BE ANALYZED BY THE USE OF A TEN—YEAR

STORM TO VERIFY THAT STORMWATER WILL BE CONTAINED WITHIN THE PIPE OR SYSTEM. C. IF EXISTING NATURAL RECEIVING CHANNELS OR PREVIOUSLY CONSTRUCTED MAN-MADE CHANNELS OR PIPES ARE NOT ADEQUATE, THE APPLICANT SHALL (1) IMPROVE THE CHANNELS TO A CONDITION WHERE A TEN-YEAR STORM WILL NOT

OVERTOP THE BANKS AND A TWO-YEAR STORM WILL NOT CAUSE EROSION TO THE CHANNEL. THE BED. OR THE BANKS: OR (2) IMPROVE THE PIPE OR PIPE SYSTEM TO A CONDITION WHERE THE TEN-YEAR STORM IS

CONTAINED WITHIN THE APPURTENANCES; (3) DEVELOP A SITE DESIGN THAT WILL NOT CAUSE THE PRE-DEVELOPMENT PEAK RUNOFF RATE FROM A TWO-YEAR STORM TO INCREASE WHEN RUNOFF OUTFALLS INTO A NATURAL CHANNEL OR WILL NOT CAUSE THE PRE-DEVELOPMENT PEAK RUNOFF RATE FROM A TEN-YEAR STORM TO INCREASE WHEN RUNOFF OUTFALLS INTO A MAN-MADE CHANNEL; OR (4) PROVIDE A COMBINATION OF CHANNEL IMPROVEMENT, STORMWATER DETENTION OR OTHER MEASURES WHICH IS SATISFACTORY TO THE VESCP AUTHORITY TO PREVENT

DOWNSTREAM EROSION.). THE APPLICANT SHALL PROVIDE EVIDENCE OF PERMISSION TO MAKE THE IMPROVEMENTS. E. ALL HYDROLOGIC ANALYSES SHALL BE BASED ON THE EXISTING WATERSHED CHARACTERISTICS AND THE ULTIMATE DEVELOPMENT CONDITION OF THE SUBJECT PROJECT. F. IF THE APPLICANT CHOOSES AN OPTION THAT INCLUDES STORMWATER DETENTION, HE SHALL OBTAIN APPROVAL FROM THE VESCP OF A PLAN FOR MAINTENANCE OF THE DETENTION FACILITIES. THE PLAN SHALL SET FORTH THE MAINTENANCE REQUIREMENTS OF THE FACILITY AND THE PERSON RESPONSIBLE FOR PERFORMING THE MAINTENANCE. G. OUTFALL FROM A DETENTION FACILITY SHALL BE DISCHARGED TO A RECEIVING CHANNEL AND ENERGY DISSIPATERS SHALL BE PLACED AT THE OUTFALL OF ALL DETENTION FACILITIES

AS NECESSARY TO PROVIDE A STABILIZED TRANSITION FROM THE FACILITY TO THE RECEIVING CHANNEL H. ALL ON-SITE CHANNELS MUST BE VERIFIED TO BE ADEQUATE.

I. INCREASED VOLUMES OF SHEET FLOWS THAT MAY CAUSE EROSION OR SEDIMENTATION ON ADJACENT PROPERTY SHALL BE DIVERTED TO A STABLE OUTLET, ADEQUATE CHANNEL, PIPE OR PIPE SYSTEM, OR TO A DETENTION FACILITY. J. IN APPLYING THESE STORMWATER MANAGEMENT CRITERIA, INDIVIDUAL LOTS OR PARCELS

IN A RESIDENTIAL, COMMERCIAL OR INDUSTRIAL DEVELOPMENT SHALL NOT BE CONSIDERED TO BE SEPARATE DEVELOPMENT PROJECTS. INSTEAD, THE DEVELOPMENT, AS A WHOLE, SHALL BE CONSIDERED TO BE A SINGLE DEVELOPMENT PROJECT. HYDROLOGIC PARAMETERS THAT REFLECT THE ULTIMATE DEVELOPMENT CONDITION SHALL BE USED IN ALL ENGINEERING CALCULATIONS. K. ALL MEASURES USED TO PROTECT PROPERTIES AND WATERWAYS SHALL BE EMPLOYED IN

A MANNER WHICH MINIMIZES IMPACTS ON THE PHYSICAL, CHEMICAL AND BIOLOGICAL INTEGRITY OF RIVERS, STREAMS AND OTHER WATERS OF THE STATE. L. ANY PLAN APPROVED PRIOR TO JULY 1, 2014, THAT PROVIDES FOR STORMWATER MANAGEMENT THAT ADDRESSES ANY FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS FOR NATURAL OR MAN-MADE CHANNELS SHALL SATISFY THE FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS FOR NATURAL OR MAN-MADE CHANNELS IF THE PRACTICES ARE DESIGNED TO (I) DETAIN THE WATER QUALITY VOLUME AND TO RELEASE IT OVER 48 HOURS; (II) DETAIN AND RELEASE OVER A 24-HOUR PERIOD THE EXPECTED RAINFALL RESULTING FROM THE ONE YEAR, 24-HOUR STORM; AND (III) REDUCE THE ALLOWABLE PEAK FLOW RATE RESULTING FROM THE 1.5, 2, AND 10-YEAR, 24-HOUR STORMS TO A LEVEL THAT IS LESS THAN OR EQUAL TO THE PEAK FLOW RATE FROM THE SITE ASSUMING IT WAS IN A GOOD FORESTED CONDITION, ACHIEVED THROUGH MULTIPLICATION OF THE FORESTED PEAK FLOW RATE BY A REDUCTION FACTOR THAT IS EQUAL TO THE RUNOFF VOLUME FROM THE SITE WHEN IT WAS IN A GOOD FORESTED CONDITION DIVIDED BY THE RUNOFF VOLUME FROM THE SITE IN ITS PROPOSED CONDITION, AND SHALL BE EXEMPT FROM ANY FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS FOR NATURAL OR MAN-MADE CHANNELS AS DEFINED IN ANY REGULATIONS PROMULGATED PURSUANT TO

§ <u>62.1-44.15:54</u> OR <u>62.1-44.15:65</u> OF THE ACT. M. FOR PLANS APPROVED ON AND AFTER JULY 1, 2014, THE FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS OF § 62.1-44.15:52 A OF THE ACT AND THIS SUBSECTION SHALL BE SATISFIED BY COMPLIANCE WITH WATER QUANTITY REQUIREMENTS IN THE STORMWATER MANAGEMENT ACT (§ 62.1-44.15:24 ET SEQ. OF THE CODE OF VIRGINIA) AND ATTENDANT REGULATIONS, UNLÈSS SUCH LAND-DISTURBING ACTIVITIES ARE IN ACCORDANCE WITH 9VAC25-870-48 OF THE VIRGINIA STORMWATER MANAGEMENT PROGRAM (VSMP)

N. COMPLIANCE WITH THE WATER QUANTITY MINIMUM STANDARDS SET OUT IN 9VAC25-870-66 OF THE VIRGINIA STORMWATER MANAGEMENT PROGRAM (VSMP) REGULATIONS SHALL BE DEEMED TO SATISFY THE REQUIREMENTS OF SUBDIVISION 19 OF THIS SUBSECTION. STATUTORY AUTHORITY

§ 62.1-44.15:52 OF THE CODE OF VIRGINIA. HISTORICAL NOTES

FORMER 4VAC50-30-40, DERIVED FROM VR625-02-00 § 4; EFF SEPTEMBER 13, 1990; AMENDED, VIRGINIA REGISTER VOLUME 11, ISSUE 11, EFF. MARCH 22, 1995; VOLUME 29, ISSUE 4, EFF. NOVEMBER 21, 2012; AMENDED AND RENUMBERED, VIRGINIA REGISTER VOLUME 30, ISSUE 2, EFF. OCTOBER 23, 2013.

> MAY 2016 NOT FOR

> > CONSTRUCTION

erty owners correct as of _____

Existing Legend Storm Sewer Sanitary Sewer (Gravity) Gas Line Electric Line Overhead Utility Telephone/Telegraph Water Line Property Line Storm Basin

Fire Hydrant / Valve FH + • WV

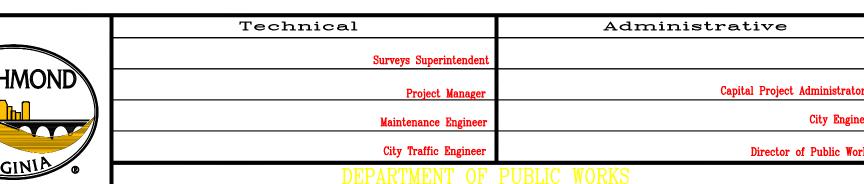
_____ 4"G _____ 4"G ____ ____ F ____ F ____ _____ OHU _____ ——— T-Duct ——— _____ 4"W _____ 4"W ____

Water Meter Existing Curb Cut Ramp \Diamond HCR Gas Meter / Valve GM ⊕ ⊕ GV PP\ \ \ \ \ LP Power/Light Pole

Guy Anchor

Proposed Legend Sanitary Sewer Storm Sewer Storm/(San) Manhole Curb Cut Ramp Decorative Light ____ Conduit (Encased)





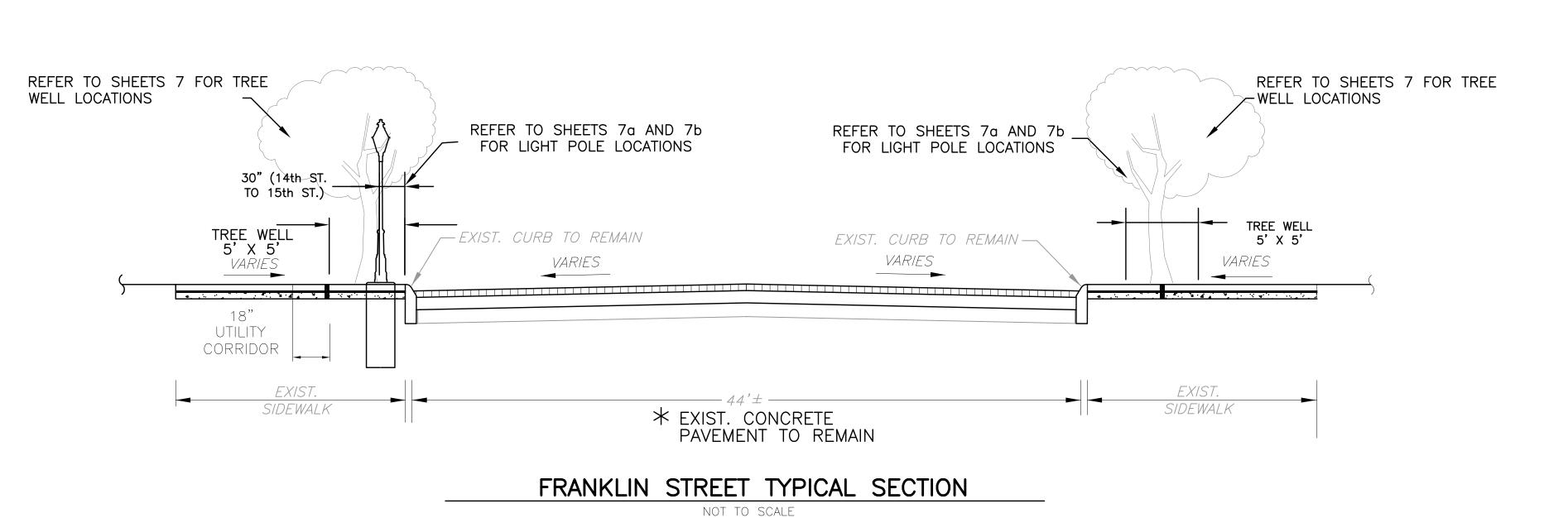




N/A

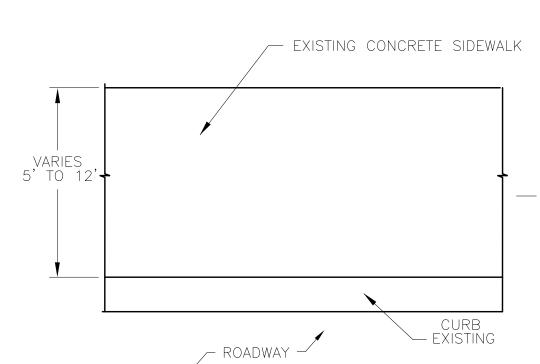
MAY 2016

0-28693



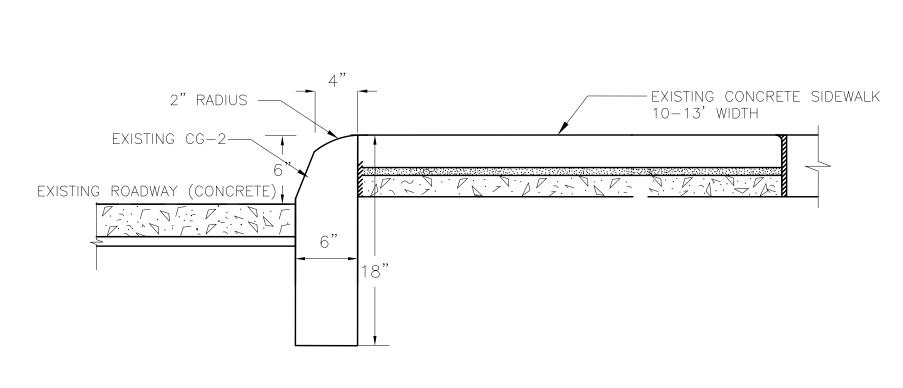
UTILITY CORRIDOR

_EXISTING CG-2

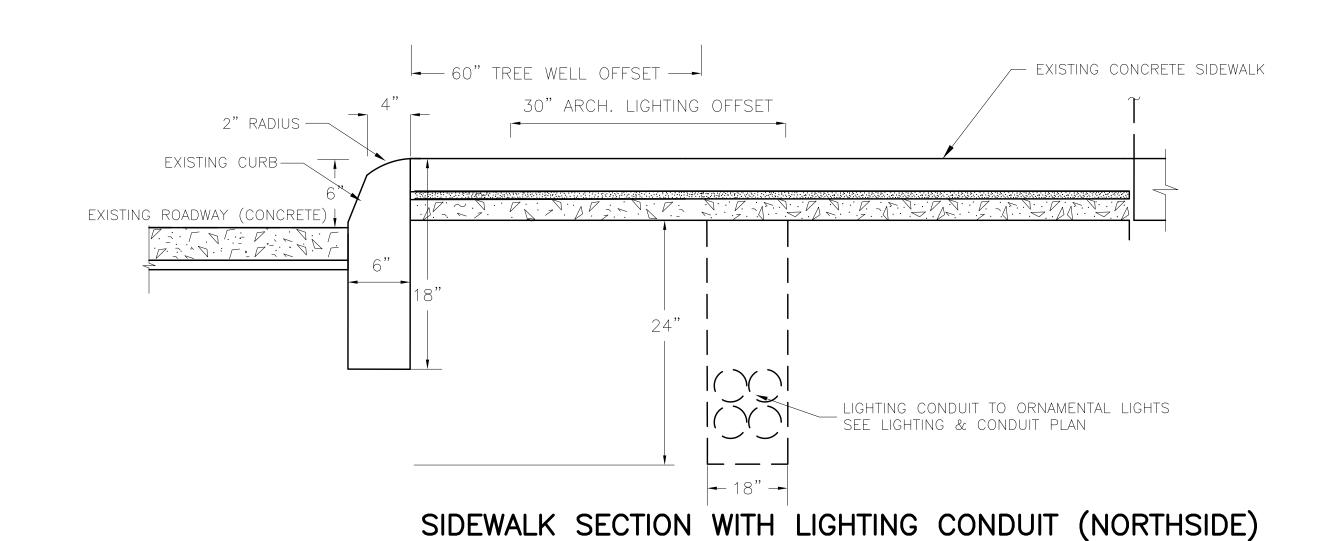


ROADWAY -CONCRETE SIDEWALK (PLAN VIEW)

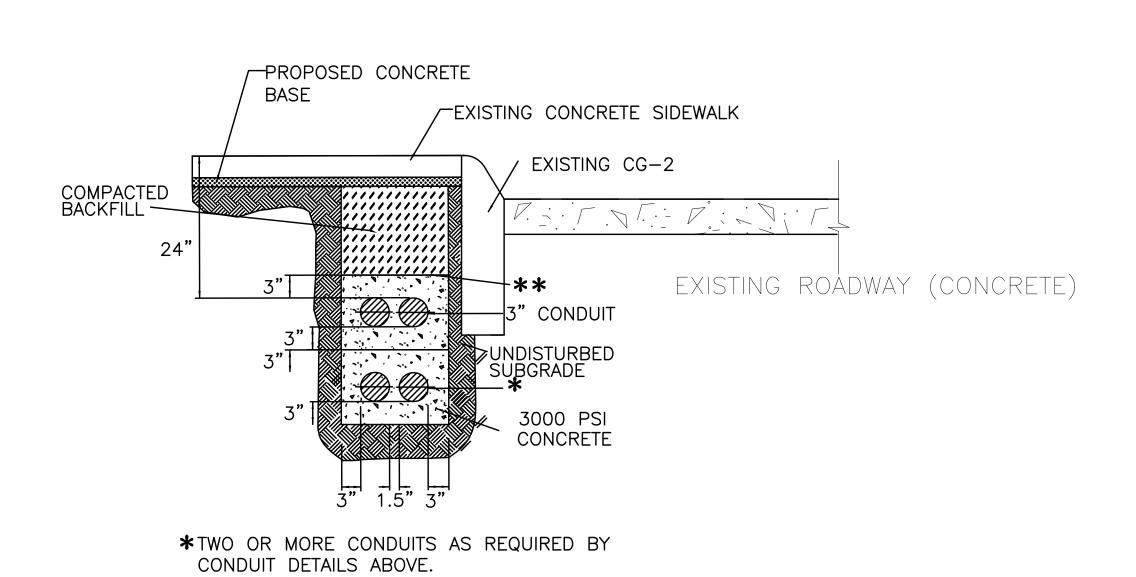
NOT TO SCALE







NOT TO SCALE



**BACKFILL MATERIAL BELOW THIS LEVEL SHALL BE SANDY FILL (FREE OF ANY STONES, CINDERS, WOOD, ROOTS, DEBRIS, ETC.) LIGHTING/SIGNAL CONDUIT TRENCH DETAIL (SIDEWALK INSTALLATION)
NOT TO SCALE

> UDC SUBMITTAL MAY 2016 NOT FOR

> > CONSTRUCTION

EXISTING CONCRETE SIDEWA	10-13' V/W	PROPOSED 5' BY 5' TREE WELL
PR	OPOSED TREE WELL NOT TO SCALE	(PLAN VIEW)

SAWCUT EXISTING CONCRETE
SIDEWALK AS NECESSARY —

<u>−</u> 5' MIN <u>−</u>

	NOTES	Existing Legend	Water Meter
1. Lot dimensions in parentheses are	e from deed.	Storm Sewer	Existing Curb Cut Ramp
2. Property owners correct as of	, 20	Sanitary Sewer (Gravity) SS 4°G 4°G	Gas Meter / Valve GM Fence
3. Ordinance Number		Electric Line	Power/Light Pole Guy Anchor
4. Adopted		Telephone/Telegraph T-Duct-	Tree
5. Accepted		Water Line —— 4°W——————————————————————————————————	1100
REFERENCES	REVISIONS	Storm Basin Storm or Sanitary Manhole o or s	

Fire Hydrant / Valve FH + • WV

⊗ WM GM · GV PP & & LP Proposed Legend

RÎCHMOND MÎMM VIRGINIA •

	Administrative	Technical	
		Surveys Superintendent	*
	Capital Project Administrator	Project Manager	RÎCHMOND NO.
	City Engineer	Maintenance Engineer	
ΑUΊ	Director of Public Works	City Traffic Engineer	VIRGINIA .
DESI	PUBLIC WORKS	DEPARTMENT OF	KGINID

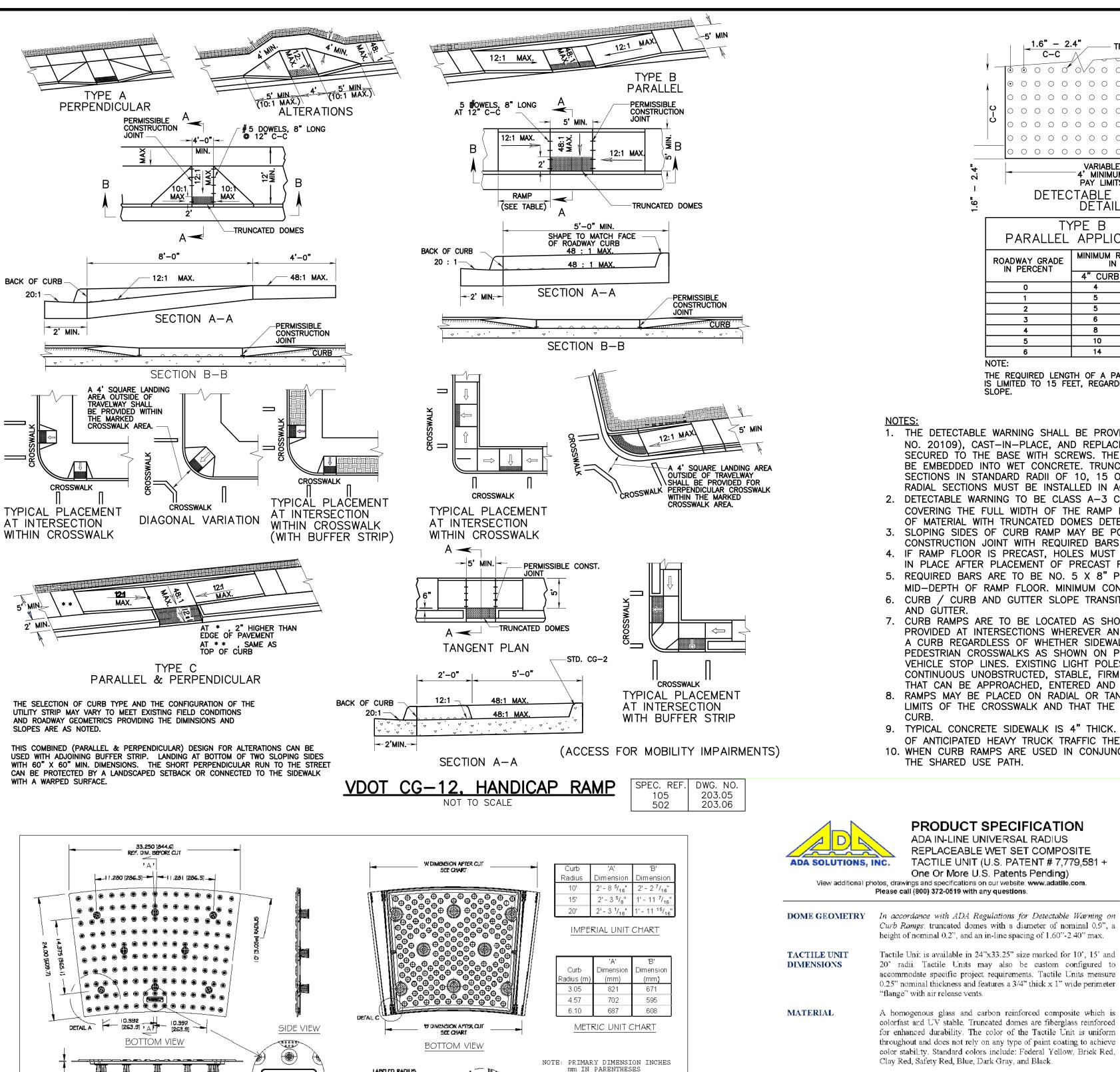
RICHMOND, VIRGINIA

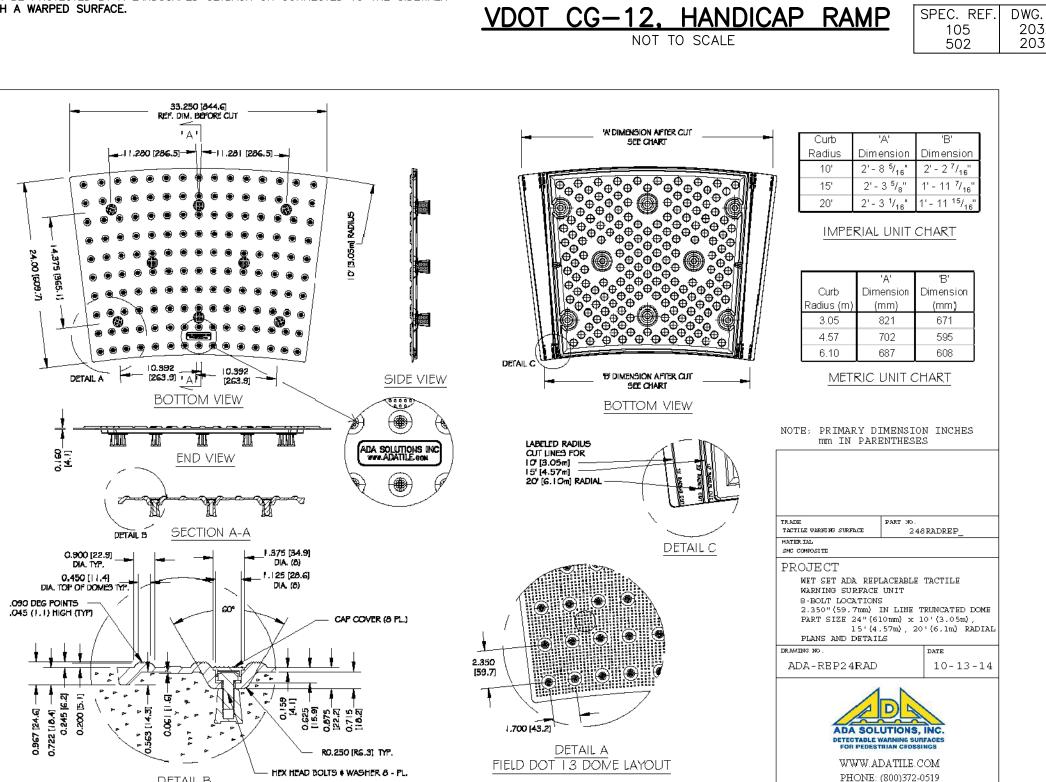
Responsive People • Creative Solutions

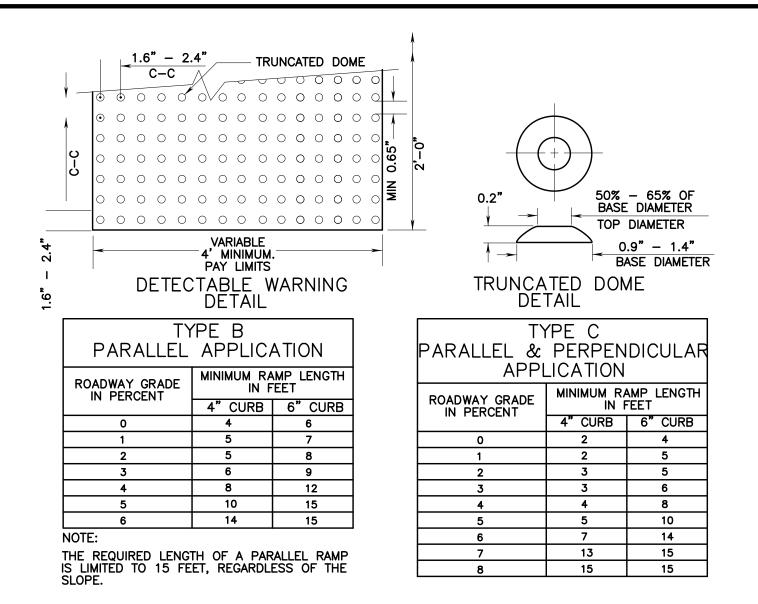
FRANKLIN STREET 14th TO 15th STREETSCAPE TYPICAL SECTIONS AND PAVEMENT DETAILS

UTHORITY: CITY OF RICHMOND, DPW, PROJECT NO.: 104240 DESIGN BY: KYarberry
DRAWN BY: TRevell/KBrown
CHECKED BY: OPeery MAY 2016 SHEET 3

DRAWING NO. # 0-28693

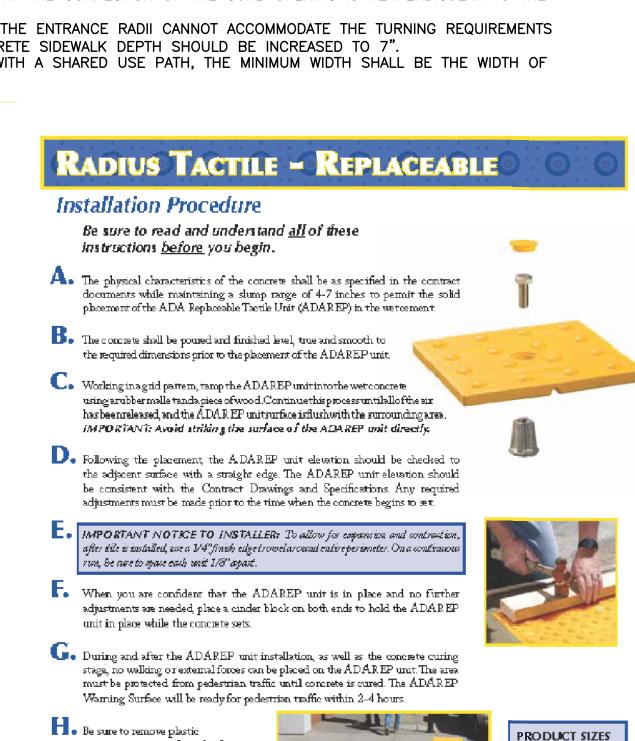






1. THE DETECTABLE WARNING SHALL BE PROVIDED BY TRUNCATED DOMES. COLOR SHALL BE COLONIAL RED, (FEDERAL COLOR NO. 20109), CAST-IN-PLACE, AND REPLACEABLE INCLUDING A BASE PLATE SET INTO CONCRETE AND THE PAVER PLAT SECURED TO THE BASE WITH SCREWS. THE TRUNCATED DOME ASSEMBLY SHALL HAVE BOTTOM DOCKING ANCHORS THAT WILL BE EMBEDDED INTO WET CONCRETE, TRUNCATED DOMES ON RADIAL LOCATIONS WILL USE RADIAL SET TRUNCATED DOME SECTIONS IN STANDARD RADII OF 10, 15 OR 20-FEET PER ADA SOLUTIONS MODEL NO. 248RADREP OR APPROVED EQUAL. RADIAL SECTIONS MUST BE INSTALLED IN ACCORDANCE TO MANUFACTURERS INSTRUCTIONS.

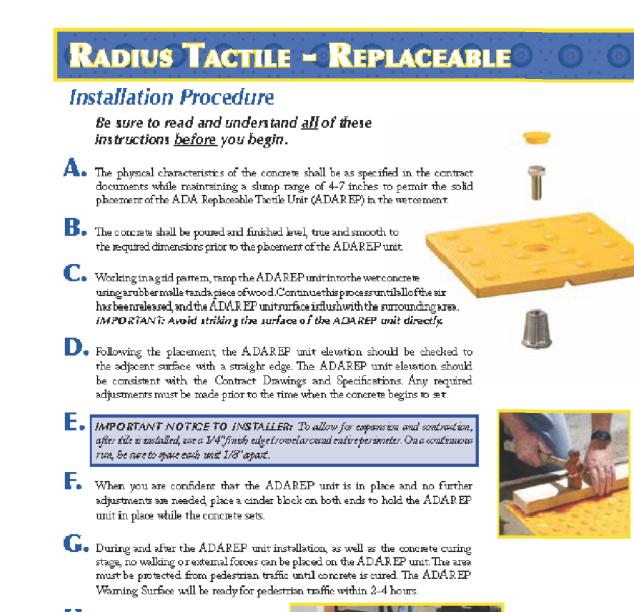
- 2. DETECTABLE WARNING TO BE CLASS A-3 CONCRETE (CLASS A-4 IF PRECAST) WITH SLIP RESISTANT INTEGRAL SURFACE COVERING THE FULL WIDTH OF THE RAMP FLOOR BY 2' IN LENGTH IN THE DIRECTION OF PEDESTRIAN TRAVEL. OTHER TYPES OF MATERIAL WITH TRUNCATED DOMES DETECTABLE WARNING MAY BE USED WITH THE APPROVAL OF ENGINEER. 3. SLOPING SIDES OF CURB RAMP MAY BE POURED MONOLITHICALLY WITH RAMP FLOOR OR BY USING PERMISSIBLE
- CONSTRUCTION JOINT WITH REQUIRED BARS. 4. 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.
- 5. 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 1/2".
- 6. CURB / CURB AND GUTTER SLOPE TRANSITIONS ADJACENT TO CURB RAMPS ARE INCLUDED IN PAYMENT FOR CURB / CURB
- 7. 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.
- 8. 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
- 9. 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".
- 10. WHEN CURB RAMPS ARE USED IN CONJUNCTION WITH A SHARED USE PATH, THE MINIMUM WIDTH SHALL BE THE WIDTH OF THE SHARED USE PATH.



View additional photos, drawings and specifications on our website: www.adatile.com.

Call (800) 372-0.519 with any questions.

WWW.ADATILE.COM • 800-372-0519



UDC SUBMITTAL MAY 2016 NOT FOR CONSTRUCTION

OR APPROVED EQUAL Technical Administrative Surveys Superinten Capital Project Administrato Maintenance Engine Director of Public Wor

protective covering from the face

of the ADAREP Unit once the

*Not recommended or warrantied for

concrete is cured.

asphalt installation.

FRANKLIN STREET 14th TO 15th

lorks	AUTHORITY: <i>CITY OF</i>	RICHMOND, DPI	N, PROJECT NO.:	104240			
	DESIGN BY: KYarberry DRAWN BY: TRevell/KBrown CHECKED BY: OPeery	REVIEWED BY	FIELD NOTES	SCALE N/A	DATE <i>MAY 2016</i>	PROJECT SHEET 4	DRAWING NO. # 0-28693
	,			,			"

INSTALLATION Tactile Units are to be used on new curb ramp locations. With ½" diameter bolts and inserts attached, the Tactile Unit is firmly pressed into place in the freshly poured concrete. The Tactile Units may be replaced by removing the bolts and inserting a new interchangeable Tactile Unit in the existing recess. The original inserts remain in place. The Tactile Unit may be replaced in minutes. PHYSICAL CHARACTERISTICS: ASTM D 695 Compressive Strength 28,900 psi

Clay Red, Safety Red, Blue, Dark Gray, and Black

"flange" with air release vents.

PRODUCT SPECIFICATION ADA IN-LINE UNIVERSAL RADIUS

REPLACEABLE WET SET COMPOSITE TACTILE UNIT (U.S. PATENT # 7,779,581 +

Curb Ramps: truncated domes with a diameter of nominal 0.9", a

Tactile Unit is available in 24"x33.25" size marked for 10', 15' and

20' radii. Tactile Units may also be custom configured to

accommodate specific project requirements. Tactile Units measure

0.25" nominal thickness and features a 3/4" thick x 1" wide perimeter

A homogenous glass and carbon reinforced composite which is

colorfast and UV stable. Truncated domes are fiberglass reinforced

for enhanced durability. The color of the Tactile Unit is uniform

throughout and does not rely on any type of paint coating to achieve

color stability. Standard colors include: Federal Yellow, Brick Red,

height of nominal 0.2", and an in-line spacing of 1.60"-2.40" max.

One Or More U.S. Patents Pending)

Please call (800) 372-0519 with any questions.

Flexural Strength 29,300 psi ASTM D 790 1.18 Dry, 1.05 Wet ASTM C 1028 Slip Resistance ASTM D 543 Chemical Stain Testing No Deterioration ASTM C 501 Abrasion Resistance Accelerated Weathering Delta E<5.0 (2,000 hours) ASTM G 155 ASTM D 638 Tensile Strength 11.600 psi Load Bearing at 16,000 lbs. No Damage AASHTO-H20

No Disintegration

ADA SOLUTIONS, INC P.O. Box 3, North Billerica MA 01862 Tel: 800.372.0519 Fax: 978.262.9125 www.adatile.com

OR APPROVED EQUAL

NOTES . Lot dimensions in parentheses are from deed 2. Property owners correct as of ______, 20_ 3. Ordinance Number_

REFERENCES

Existing Legend Storm Sewer Sanitary Sewer (Gravity) Gas Line Electric Line Overhead Utility Water Line Property Line Storm Basin

FH-6- 0 WV

Storm or Sanitary Manhole

Fire Hydrant / Valve

Water Meter Existing Curb Cut Ramp \Diamond HCR Gas Meter / Valve GM · GV

EMAIL: INFO@ADATILE.COM

OR APPROVED EQUAL

Proposed Legend Sanitary Sewer Curb Cut Ramp

Freeze/Thaw/Heat

ASTM C 1026

City Traffic Engine DEPARTMENT OF PUBLIC WORKS RICHMOND, VIRGINIA

City Enginee

2′ x 33¼″

APPLICATION

Fresh Pour

Concrete Ramps

& Replacement

CG-9D

EXISTING OR PROPOSED SIDEWALK OR SIDEWALK SPACE

EXPANSION JOIN

- EXPANSION JOINT

NORMAL GUTTER

VDOT

ROAD AND BRIDGE STANDARDS

SHEET 1 OF 1 REVISION DATE

203.03

EDGE OF PAVEMENT-

b. b. b. b. b. b.

3" AGGREGATE BASE

SECTION A-A

TYPE I SIZE 21B ---

FOR CURB AND GUTTER ONLY

1/2 WIDTH OF ENTRANCE EXPANSION JOINT -

DESIRABLE MINIMUM 16 ABSOLUTE MINIMUM 12'

HALF PLAN

CURB INCLUDED IN ENTRANCE GUTTER

- * 0% TO 10% CHANGE

* * 12 % MAXIMUM INCREASE IN SLOPE AT MINIMUM 10' INTERVALS

STANDARD ENTRANCE GUTTER

VIRGINIA DEPARTMENT OF TRANSPORTATION

* * * 3 % MAXIMUM DECREASE IN SLOPE FOR FIRST 10' INTERVAL AND

8 % MAXIMUM DECREASE FOR SUCCEEDING MINIMUM 10' INTERVALS

CLASS A3 (H.E.S.) CONC.

PEDESTRIAN ACCESS ROUTE DETAIL

ADDITIONAL RIGHT-OF-WAY IS REQUIRED IF THE LIMITS OF PEDESTRIAN ACCESS ROUTE ME EXTEND BEYOND EXISTING OR PROPOSED VDOT RIGHT-OF WAY.

SECTION B-B

0.0.0.0.0.0

0.0.0.0.0.0

0.0.0.0.0.0

SPECIFICATION REFERENCE

502

SECTION D-D

SECTION C-C

= 2'-0"=

PEDESTRIAN ACCESS ROUTES PROVIDE A CONTINUOUS UNOBSTRUCTED, STABLE, FIRM AND SLIP RESISTANT PATH CONNECTING ALL ACCESSIBLE ELEMENTS OF A FACILITY THAT CAN BE APPROACHED, ENTERED AND

VDOT DETAILS AND NOTES

