
Street and Sidewalk Permit Manual

City of
Charlottesville



FOREWORD

The City of Charlottesville Department of Public Works is responsible for maintaining the City's streets, sidewalks, curbing, and drainage structures in a manner necessary to preserve the integrity, operational safety, and service functions of each.

The City may allow utility companies, contractors, and others to utilize City streets, sidewalks, curbing, and drainage structures when essential to the general public. However, to prevent recurring, dangerous, and annoying interruptions to traffic and pedestrians, it is necessary that consistent and uniform regulations be followed when excavations are made.

This manual is for use by City personnel, utility companies, contractors, and the general public in interpretation and implementation of policies to provide for uniform processing of all excavation permits.



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PERMIT REQUIRED

Under Article 2 of Chapter 28 of the Code of the City of Charlottesville, a permit is required whenever a street, sidewalk, curbing, or drainage structure will be dug up, broken, excavated, tunneled, or undermined.

APPLICATION FOR PERMIT

An application for permit must be filed with the City of Charlottesville before preliminary investigation will be made for permit issue. Standard application forms for this permit may be obtained from the Department of Public Works, Public Service Division. A sketch must be included in the space provided or attached to the application. Such drawings or plans must show the location of the work to be done in relation to nearby outstanding features such as property lines, intersections, drainage structures, and utility poles by number. The character and extent of the work must also be included.

The Applicant must disclose the methods and materials proposed to be used on unusual or complex projects. In the event the Applicant discovers that additional work or repairs must be done in the same location, the Applicant must take another application to the City for a permit to authorize the additional work in the same manner as the first permit.

REJECTION OF THE APPLICATION

The request will be denied if it appears that the work may:

- Not conform to City regulations,
- Cause substantial or needless damage to a street,
- Create excessive disturbances to traffic, or
- Lead to exceptionally dangerous conditions not commensurate with the benefits to the Applicant.

The Applicant will be informed of such rejection and the reason for the rejection. City staff may refuse to issue a permit to any person, company, or utility when in their opinion, work performed under a permit has not been properly executed, or when the Applicant has failed to reimburse the City for recoverable charges billed under terms governing a previous permit.

BOND REQUIREMENTS

Prior to issuance of a permit, the Applicant must submit a performance bond with an acceptable surety, an irrevocable letter of credit, or other type of financial guaranty. Bonds will be released **1 year** after completion of work, upon approval of the Street Cut Permit Administrator.

REQUIRED BOND AMOUNTS

Street Excavations	
< 50 square feet	\$500
50-100 square feet	\$1,000
101-500 square feet	\$2,500
Over 500 square feet	\$5,000

Sidewalk / Curb / Gutter	
< 25 linear feet	\$500
26-50 linear feet	\$1,000
51-75 linear feet	\$1,500
76-100 linear feet	\$2,000
101-125 linear feet	\$2,500
126-150 linear feet	\$3,000
151-175 linear feet	\$3,500
176-200 linear feet	\$4,000
201-225 linear feet	\$4,500
226-250 linear feet	\$5,000

If the Applicant plans on doing future work in multiple locations within City limits, the guaranty may be continuing in nature, and shall be in the minimum amount of \$5,000.

PERMIT FEE INFORMATION

When applying for a permit, the Applicant must submit a fee. The basic excavation permit fee is \$60. This fee covers one excavation of up to 100 square feet, or one ditchline of up to 100 linear feet.

Fees of \$10 will be assessed for each additional excavation or each additional 100 linear feet or fraction thereof, of ditchline.

Fees	
Initial fee (covers 1 excavation or 100 linear feet)	\$60
Each additional 100 linear feet	\$10
Each additional excavation	\$10

ISSUANCE OF PERMIT

A permit shall be issued:

- a. After completion of all aspects of the application for permit,
- b. Upon receipt of a Surety Bond in the correct amount, and
- c. All fees are paid as required by the City.

A permit form must be signed by the Permit Administrator, before it becomes valid. Approved permits will be issued by the Public Service Division as soon as possible after application for permit has been received in good order. The Applicant is forbidden to commence work until the above mentioned items have been complied with and the Applicant has notified the Public Service Division at least 24 hours in advance of the exact date and hour they proposes to begin work.

EMERGENCY PERMIT

If an excavation is required in order to make emergency repairs, and the existing emergency requires that excavation operations commence within 72 hours from the discovery of the emergency, a permit shall not be required to commence the excavation. Any person commencing an emergency excavation without a permit must file an application, permit fee, and bond on the first working day after such work is commenced.

REVOCAION OF PERMITS

Any permit issued by the City of Charlottesville is revocable immediately upon written notification to the Permittee.

EXTENSION OF TIME

All required work shall be completed in a manner satisfactory to the City before the expiration on the permit. Otherwise, the permit holder shall request the City to allow them an extension of time. Extension of time may be granted upon written request by the Permittee stating the reason(s) for the request.

INDEMNIFICATION

The Permittee shall agree to indemnify and save harmless the City, its citizens, residents, and property owners against any and all loss arising from the failure to comply with the conditions of the permit and with the requirements of applicable ordinance and regulations, and from any neglect of carelessness

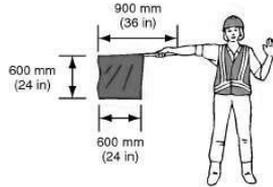
arising from the exercise of the privileges granted by the permit.

PROTECTIVE MEASURES AND TRAFFIC CONTROL

It shall be the duty of the Permittee to keep and maintain the streets near the work area in a safe travelable condition at all times. When portions of the traveled way are made dangerous for the movement of vehicles or pedestrians, a sufficient number of uniformed police officers or flagmen shall be employed by the Permittee to direct the traffic safely through the areas. The work shall, if possible, be planned to avoid such conditions. The portions of the street which are excavated or which are used for storing materials, or are otherwise unsafe for public travel, shall be adequately protected at all times to avoid the possibility of accidents. Such areas shall be marked at night by flashing lights or other warning devices approved by the City of Charlottesville. The Permittee should also be in accordance with VDOT standards.

PREFERRED METHOD
STOP/SLOW Paddle

EMERGENCY SITUATIONS ONLY
Red Flag



TO STOP TRAFFIC



TO LET TRAFFIC PROCEED



TO ALERT AND SLOW TRAFFIC

ROUTING OF TRAFFIC AND PEDESTRIANS

Contact Neighborhood Development Services, Traffic Engineering to coordinate lane closures and sidewalk closures. The Permittee shall maintain safe crossing for two lanes of vehicular traffic at all street intersections where possible, as well as safe crossings

for pedestrians. Adequate crossings shall be maintained for vehicles and pedestrians when an excavation is made across any public street, alley, or sidewalk. Cones or other approved devices shall be placed to channel traffic in accordance with City policies.

STREET CLOSING

When traffic conditions permit, the Traffic Engineer in Neighborhood Development Services or a designated representative, with the approval of the Police and Fire Departments of the City, may with written approval (or by verbal approval in cases of emergency), permit the closing of streets and alleys to all traffic for a period of time, if in their opinion it is necessary. The written approval of the Director of Public Works may require that the Permittee give notification to various public agencies and to the general public. In cases of an emergency during week nights, weekends, or holidays, the facility owner having such emergency shall contact the Police and Fire Departments by phone before closing a street to traffic.

SIGNING

Warning signs shall be placed far enough in advance of the construction operation to alert traffic within a public street. Signs shall be in accordance with the specifications of the Virginia Manual on Uniform Traffic Control Devices (MUTCD), and located as directed by the City of Charlottesville.

For more information: <http://mutcd.fhwa.dot.gov/>

PEDESTRIAN ACCESSIBILITY IN THE PUBLIC WAY DURING CONSTRUCTION

CONSTRUCTION WITHIN THE CITY OF CHARLOTTESVILLE

BACKGROUND

A permit to work in the public way is required whenever construction activities occur in the public rights-of-way in the City of Charlottesville. This guide has been developed to summarize steps that need to be taken to ensure appropriate pedestrian access while construction is underway.

Construction sites can be particularly hazardous to pedestrians with mobility or visual impairments if proper precautions are not maintained. The following guidelines included in City policy are based on requirements of the Manual on Uniform Traffic Control Devices (MUTCD). The MUTCD is published by the Federal Highway Administration.

Any construction that impacts a public street or sidewalk should consider the following:

- Advanced warning and guidance signs
- Adequate illumination and reflectors
- Use of temporary walkways
- Channeling and barricading to separate pedestrians from traffic

- Adequate barricading to prevent visually impaired pedestrians from entering work zones
- Wheelchair accessible alternate pedestrian circulation routes with appropriate signage

ALTERNATIVE CIRCULATION PATH FOR PEDESTRIANS

The alternate circulation path shall have a minimum width of 48 inches¹ and parallel the disrupted pedestrian access route when practicable. Barricades and channelizing devices shall be continuous, stable, non-flexible, and shall consist of a wall, fence, or enclosure specified in section 6F of the MUTCD. A solid toe rail should be attached such that the bottom edge is 2 inches minimum and 6 inches maximum above the walkway surface. The top rail shall be parallel to the toe rail and shall be located 32 inches minimum and 42 inches maximum above the walkway surface. If drums, cones, or tubular markers are used to channelize pedestrians, they shall be located such that there are no gaps between the bases of the devices in order to create a continuous bottom, and the height of each individual device shall be no less than 36 inches.

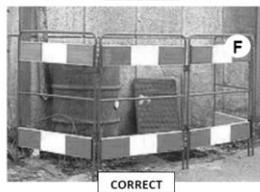
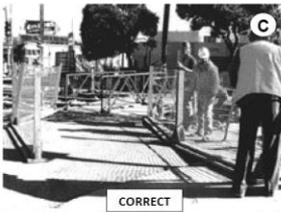
BARRICADE LOCATIONS

Barricades shall be installed at the following locations:

¹ R202.3.1 Existing Physical Constraints. Where existing physical constraints make it impracticable for altered elements, spaces, or facilities to fully comply with the requirements for new construction, compliance is required to the extent practicable within the scope of the project. Existing physical constraints include, but are not limited to, underlying terrain, right-of-way availability, underground structures, adjacent developed facilities, drainage, or the presence of a notable natural or historic feature.

- Between the pedestrian access route and any adjacent construction site (example D, next page)
- Between the alternate circulation path and any adjacent construction site (example C, next page)
- Between the alternate circulation path and the vehicular way, if the alternate circulation path is diverted into the street (example D, next page)
- Between the alternate circulation path and any protruding objects, drop-offs, or other hazards to pedestrians (example F, next page)
- At the down curb ramp of an intersection, if the opposite up curb ramp is temporarily and completely blocked, and no adjacent alternate circulation path is provided. (Both curb cuts at opposite sides of the intersection should have barriers, even if only one side is under construction, to avoiding stranding a person in the intersection.)

BARRIER EXAMPLES



WARNINGS AND SIGNAGE

Warnings shall be located at both the near side and the far side of the intersection and preceding signage shall be located at the intersection preceding the blocked way. Where directional signage or warnings are provided, they should be located to minimize backtracking, especially if there is no safe refuge at a corner under construction. In some cases, this could mean locating a warning or sign at the beginning of a route, not just at the inaccessible site.

CITY DEPARTMENT RESPONSIBILITIES

When contractors are used to perform construction projects for the City, it will be the responsibility of the Department who enlists the contractor to assure all areas of the construction site comply with the applicable local, state, and federal accessibility standards. Any contractor who performs work within the City must ensure that temporary construction areas are designed and constructed to meet all accessibility standards such that individuals with disabilities can approach, enter, and exit the areas safely and unimpeded. Temporary construction sites should be designed in a manner that is sensitive to the special needs of pedestrians with disabilities. All City contracts that require temporary construction measures must include language requiring all accessibility measures be met and that barriers used for the sites meet current accessibility requirements.

ADDITIONAL BARRICADING GUIDELINES

The contractor shall require that no construction materials be stored or placed on the path of travel. The contractor shall maintain the construction barriers in a sound, neat and clean condition. The contractor shall clean public walkways adjoining the construction site of accumulated trash and debris. The contractor's construction operations shall not occupy public sidewalks except where pedestrian protection is provided. The contractor shall not obstruct free and convenient approach to any fire hydrant. The continuous clear width of pedestrian access routes (exclusive of the width of the curb) must be four feet minimum. The contractor shall remove barriers and enclosures upon completion of the work in accordance with applicable regulatory

requirements and to the satisfaction of Neighborhood Development Services of the City of Charlottesville.

RELOCATION AND PROTECTION OF UTILITIES

The Permittee shall not interfere with any existing facility without the written consent of the City and the owner of the facility. If it becomes necessary to relocate an existing facility, it shall be done by its owner. No facility owned by the City shall be moved to accommodate the Permittee unless the cost of such work is borne entirely by the Permittee. The cost of moving privately owned facilities shall be similarly borne by the Permittee unless they make other arrangements with the person owning the facility. The Permittee shall protect all pipes, conduits, poles, wires, or other apparatus which may in any way be affected by the excavation work and do everything necessary to support, sustain, and protect them. The Permittee shall secure approval of the method of protection from the owner of the facility. If pipes, conduits, poles, wires, or apparatus are damaged, the Permittee shall promptly notify the owner. All damaged facilities shall be repaired by the agency or person owning them and the expense of such repairs shall be charged to the Permittee. The Permittee shall inform themselves as to the existence and location of all underground facilities.

PROTECTION OF PUBLIC PROPERTY

The Permittee shall not remove, even temporarily, any trees or shrubs which exist in the street area without first obtaining the consent of the appropriate City Department.

BREAKING THROUGH PAVEMENT

BREAKING THROUGH PAVEMENT IN THE STREET

- a. All excavations in paved street surfaces shall be precut in a neat straight line with a pneumatic hammer or saw.
- b. Pavement edges shall be trimmed to a vertical face and neatly aligned with the centerline of the trench.
- c. Unstable pavement shall be removed over cave-ins and over breaks, and the subgrade shall be treated as the main trench.

BREAKING THROUGH PAVEMENT IN SIDEWALK

- a. All parts of the above section shall apply to sidewalk excavations.
- b. Excavations shall be cut along the nearest concrete joint and shall be a minimum of one "block" in size.

- c. If the curbing is homogenous with the sidewalk, the curbing shall also be removed. Adjoining bituminous pavement which is damaged or cut into shall be squared off and patched with bituminous plant mix.
- d. New concrete sidewalks shall be connected to existing sidewalks with 3 steel dowels on each side.



CARE OF EXCAVATION MATERIAL

All material excavated from trenches shall be piled and maintained in such a manner as not to endanger those working in the trench, pedestrians, or users of the street, and so that little inconvenience as possible is caused to those using the street or adjoining properties.



BACKFILLING AND COMPACTION

Backfill materials shall comply with City standards (see pages 22-23). Material shall be placed in 6 inch lifts and compacted to a minimum of 95% theoretical density at optimum moisture content. Compaction shall be by vibratory tampers or by other approved methods. City staff may require soil tests to be furnished by a certified soil testing laboratory or registered professional engineer, when in their opinion, backfill for any excavation is not being adequately compacted. In order for the resurfacing to be permitted, such tests must show what the backfill materials meet the minimum requirements as prescribed by the City. All expenses for such tests shall be borne entirely by the Permittee.

TRENCH REPAIR

Long open trenches will not be permitted. The maximum length trench at any time, including backfilled portions not suitable for traffic shall not exceed 500 feet, and no greater length shall be

opened for pavement removal, excavation, construction, backfilling, patching, or any other operation without the written permission of the City. Trenches are not to be left open overnight.



DRIVEWAY OPENING

The approval of a permit application for driveway construction shall be contingent on the following conditions:

- a. The driveway shall be constructed in accordance with standard specifications for driveway opening on file in the Neighborhood Development Services office (see pages 33-34).

- b. Drainage ditches or gutters shall not be altered in any way. Where a driveway shall cross an open ditch, the Permittee shall provide suitable drainage structures as determined by designated City staff.
- c. When existing sidewalk or curbing has to be removed to construct a driveway, such sidewalk or curbing shall be removed for its full depth and to the nearest formed joints.
- d. Under unusual circumstances, as decided by the designated City staff, the above regulations may be varied.

REPAIR OF STREET EXCAVATIONS

PERMANENT REPAIRS

Upon completion of the backfilling of an excavation, the Permittee will be required to permanently resurface that portion of the street surface damaged by the excavation. The permanent resurfacing shall be done in a manner and under specifications prescribed by the City (see pages 22-23), and subject to inspection by the City, and shall be completed within a period of 10 working days from the date of completion of backfilling.

Any variance from the above must be in writing on or attached to the permit. A tack coat shall be applied to the vertical faces of existing pavement and to the top surface of the backfill materials.

TEMPORARY REPAIRS

During the winter months when hot bituminous plant mix is not available, a temporary patch shall be made using an approved cold patch mix. All temporary patches shall be removed and replaced with a hot bituminous plant mix under specifications and methods prescribed by the City before the expiration date of the permit.

NOISE, DUST, DEBRIS

Each Permittee shall conduct and carry out excavation work in such a manner as to avoid unnecessary inconvenience and annoyance to the general public and occupants of the neighboring property. The Permittee shall take appropriate measures to reduce, to the fullest extent practicable, noise, dust, and unsightly debris between the hours of 7:00 pm and 7:00 am.

POLES AND GUYS

Whenever existing poles, lines, guys, braces, or anchors are to be relocated or new poles, guys, braces, or anchors set, a permit application must be filed. Sidewalks, curbs, or drainage structures damaged by such relocation or setting of new poles shall be reconstructed according to the specifications set by the City.

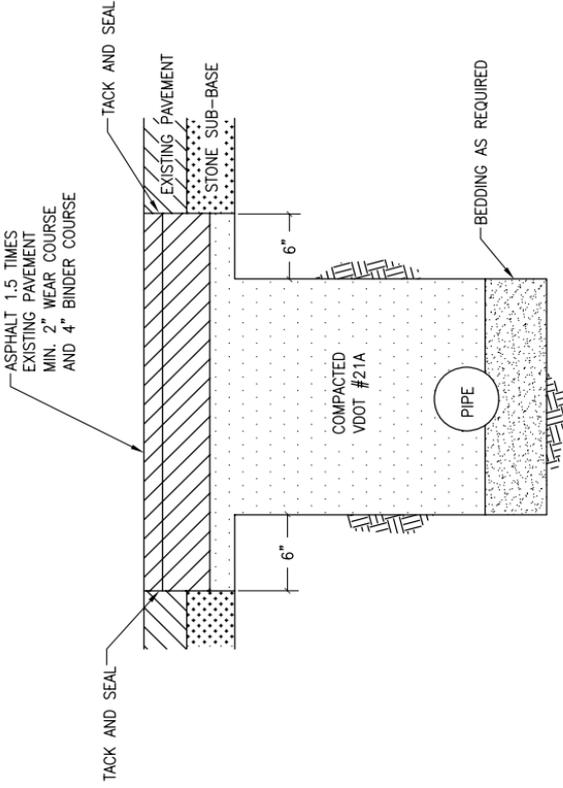
GRANITE CURB

No person or utility shall remove, damage, haul away, or cause misalignment of any granite curbing

without first receiving written permission from the City.

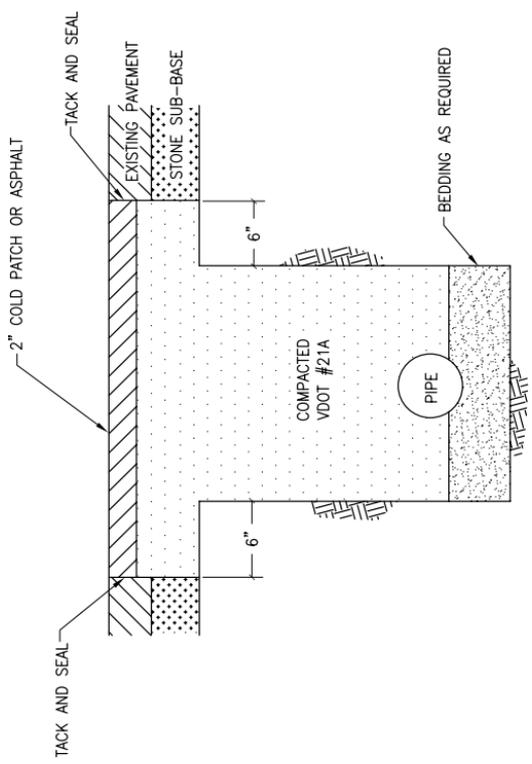
JACKING OR BORING

Wherever possible, pipelines and conduits must be jacked, bored, driven, or otherwise pushed under the roadway, sidewalk, or curbing, especially when the surface course of pavement is less than 5 years old, in order to eliminate as far as possible the cutting of the pavement. No jetting or other use of water shall be allowed in connection with hacking or boring. The Permittee shall be responsible for determination of the location of all existing utility, municipal and privately owned pipe or conduit lines. The Permittee may be required to submit a plan and profile showing all such lines and detailed plan showing method of operation.



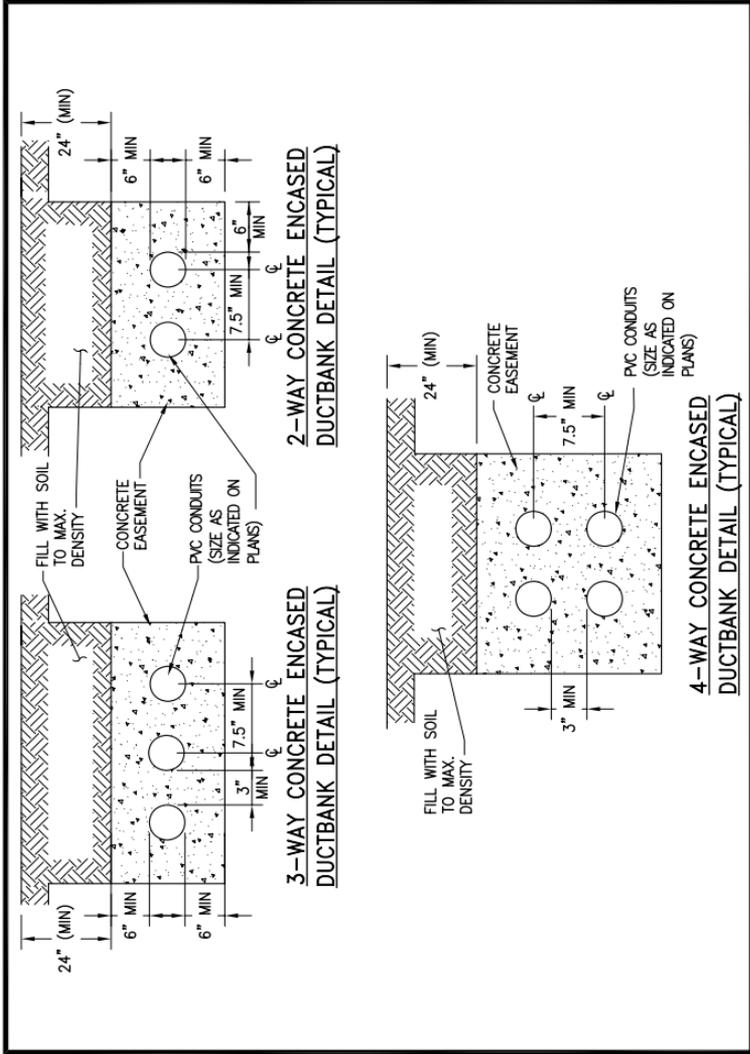
- NOTES:
1. PAVEMENT CUTS SHALL BE STRAIGHT AND VERTICAL.
 2. REMOVE TEMPORARY PATCH IF PRESENT. EXCAVATE COMPACTED BACKFILL AS REQUIRED TO INSTALL NEW BITUMINOUS ASPHALT. RE-COMPACT SURFACE OF BACKFILL PRIOR TO INSTALLATION OF PATCH.

	CITY OF CHARLOTTESVILLE	CITY STANDARDS PERMANENT PAVEMENT REPAIR
		SCALE: N.T.S. STANDARD NUMBER: P 1.0
		REVISION DATE

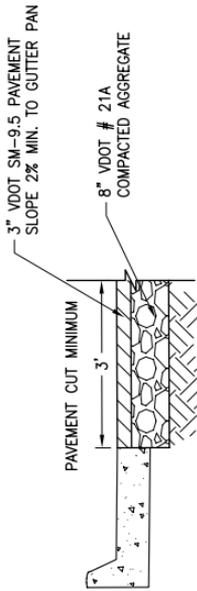


- NOTES:
1. TEMPORARY PAVEMENT REPAIR WILL BE REQUIRED IF PERMANENT PAVEMENT REPAIR CAN NOT BE PERFORMED WITHIN 24 HOURS OF TRENCH BACKFILLING.
 2. PAVEMENT CUTS SHALL BE STRAIGHT AND VERTICAL.
 3. CONTRACTOR SHALL MAINTAIN THE TEMPORARY REPAIR UNTIL PERMANENT PAVEMENT REPAIR IS MADE.

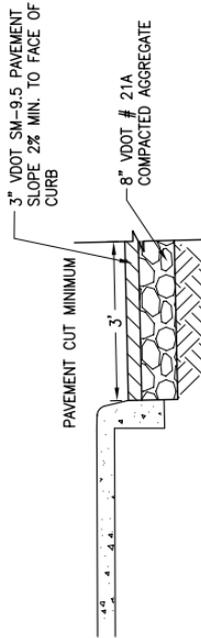
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REVISION	DATE											



		CITY STANDARDS	
		UTILITY DUCTBANK DETAIL	
REVISION	DATE	SCALE: N.T.S.	STANDARD NUMBER: DB-1



COMPACTED SUBGRADE WITH
CURB AND GUTTER



COMPACTED SUBGRADE WITH
STANDARD SIDEWALK WITH CURB



CITY OF CHARLOTTEVILLE

CITY STANDARDS

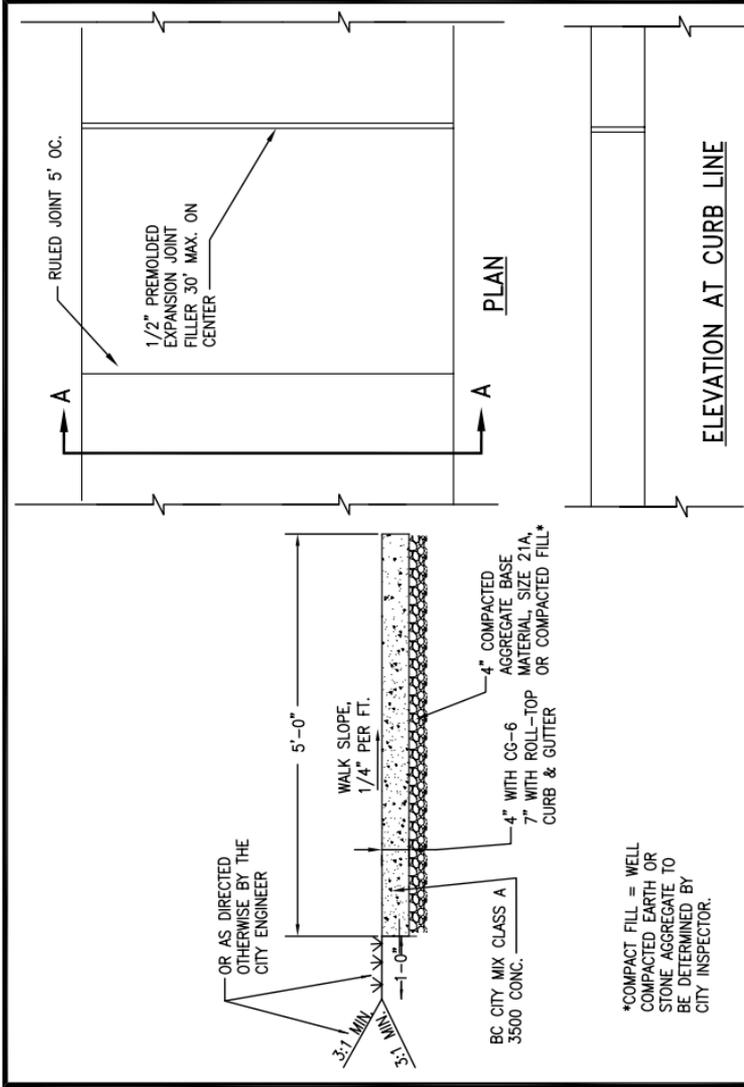
MINIMUM PAVEMENT PATCH

REVISION | DATE

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STANDARD NUMBER:

PP-1



*COMPACT FILL = WELL COMPACTED EARTH OR STONE AGGREGATE TO BE DETERMINED BY CITY INSPECTOR.

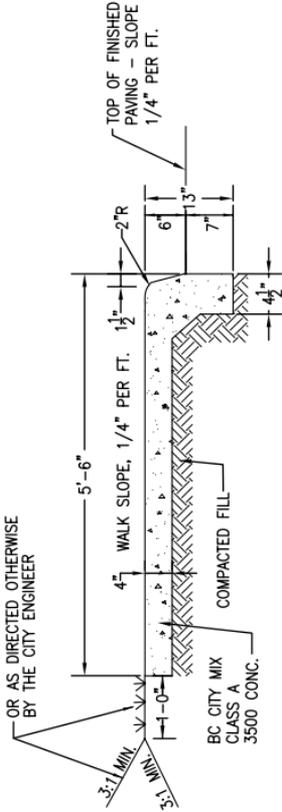


CITY OF CHARLOTTESVILLE

CITY STANDARDS

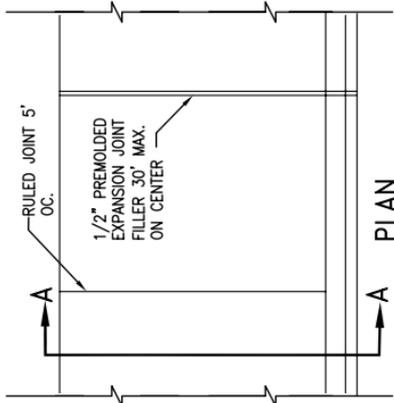
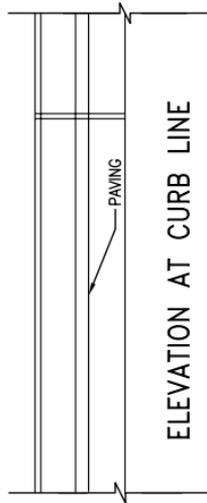
STANDARD SIDEWALK WITHOUT CURB

REVISION	DATE	SCALE: N.T.S.	STANDARD NUMBER: SW-1



SECTION A-A

*COMPACTED FILL = WELL COMPACTED EARTH OR STONE AGGREGATE. TO BE DETERMINED IN THE FIELD BY CITY INSPECTOR



CITY OF CHARLOTTESVILLE

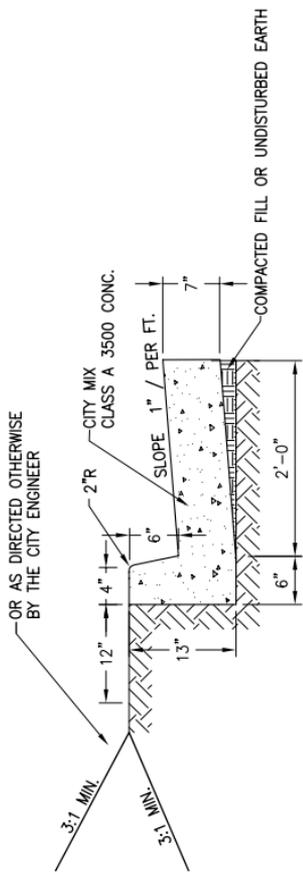
CITY STANDARDS

**STANDARD SIDEWALK
MONOLITHIC WITH CURB**

REVISION DATE

SCALE: N.T.S.

STANDARD NUMBER: SW-2



NOTES:

1. THE BOTTOM OF THE CURB AND GUTTER MAY BE CONSTRUCTED PARALLEL TO THE SLOPE OF SUB-SURFACE COURSES PROVIDED A MINIMUM DEPTH OF 7" IS MAINTAINED.
2. COMBINATION CURB & GUTTER HAVING A RADIUS OF 300' OR LESS (ALONG FACE OF CURB) SHALL BE CONSIDERED RADIAL COMBINATION CURB & GUTTER.
3. RULED JOINTS SHALL BE PLACED AT 10' O.C.
4. PLACE 1/2" PREMOULDED EXPANSION JOINT FILLER AT 30' MAX. O.C.



CITY OF CHARLOTTEVILLE

CITY STANDARDS

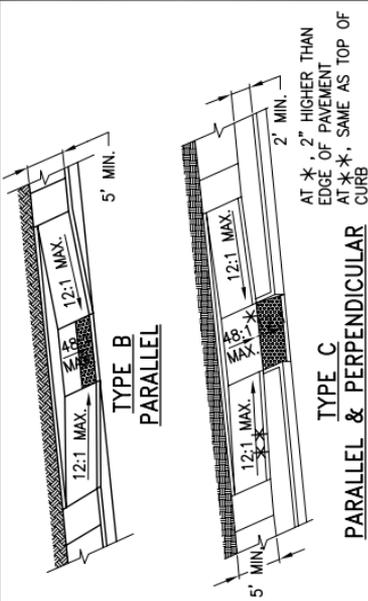
COMBINATION CURB & GUTTER

REVISION	DATE

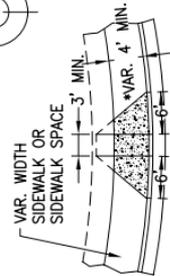
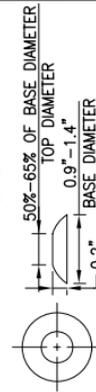
SCALE: N.T.S. STANDARD NUMBER: CG-6

GENERAL NOTES:

1. DETECTABLE WARNING TO BE PRE-FORMED PLASTIC INSERT WITH SLIP RESISTANT SURFACE COVERING THE FULL WIDTH OF THE RAMP FLOOR BY 2 FOOT IN LENGTH IN THE DIRECTION OF TRAVEL.
2. THE DETECTABLE WARNING SHALL BE PROVIDED BY TRUNCATED DOMES. TRUNCATED DOMES TO BE STAMPED IN TOP SURFACE. THE COLOR OF THE DETECTABLE WARNING SECTION SHALL BE YELLOW.
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. 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.
7. TYPICAL CONCRETE SIDEWALK IS 4" THICK. WHEN THE RAMP IS PLACED IN THE CURB RETURN RADIUS IT SHALL BE 7" THICK.
8. WHEN CURB RAMPS ARE USED IN CONJUNCTION WITH A SHARED USE PATH, THE MINIMUM WIDTH SHALL BE THE WIDTH OF THE SHARED USE PATH.



AT * * 2" HIGHER THAN
EDGE OF PAVEMENT
AT * * * SAME AS TOP OF
CURB



* TREATMENT WHERE
WIDTH OF SIDEWALK
OR SIDEWALK SPACE
IS LESS THAN 7'-4"



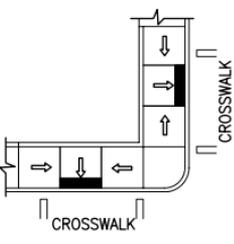
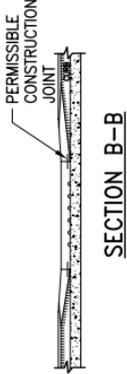
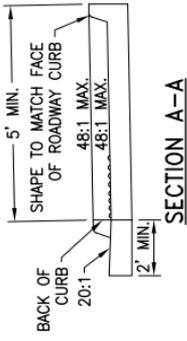
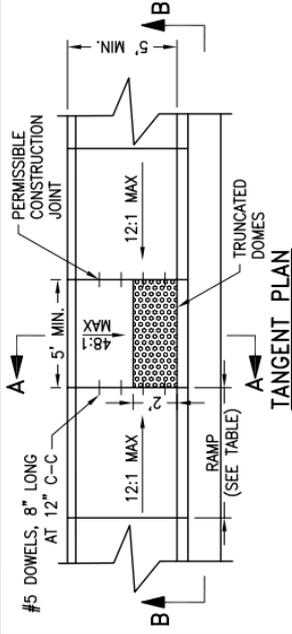


CITY OF CHARLOTTESVILLE

CITY STANDARDS

**CG-12 DETECTABLE WARNING
SURFACE GENERAL NOTES**
(SHEET 1 OF 3)

REVISION	DATE	STANDARD NUMBER: CG-12



**TYPICAL PLACEMENT
AT INTERSECTION
WITHIN CROSSWALK**

TYPE B PARALLEL APPLICATION		
ROADWAY GRADE (%)	MIN. RAMP LENGTH (FT)	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.

A 4' SQUARE LANDING AREA OUTSIDE OF TRAVELWAY SHALL BE PROVIDED FOR PERPENDICULAR CROSSWALK WITHIN THE MARKED CROSSWALK AREA.



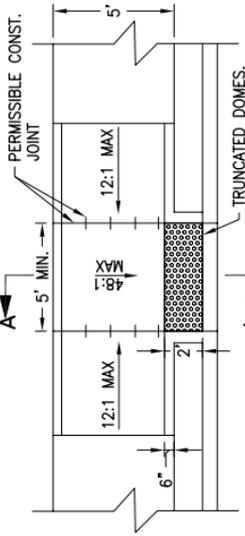
CITY OF CHARLOTTESVILLE

CITY STANDARDS

CG-12 DETECTABLE WARNING SURFACE TYPE B (SHEET 2 OF 3)

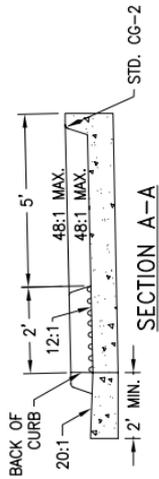
SCALE: N.T.S. STANDARD NUMBER: CG-12

REVISION | DATE

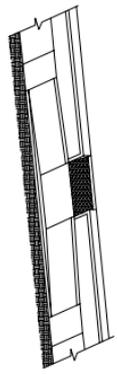


TANGENT PLAN

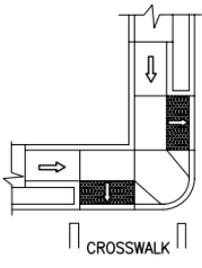
NOTE: FOR GENERAL NOTES ON THE DETECTABLE WARNING SURFACE, SEE SHEET 1 OF 3.



SECTION A-A



THIS COMBINED (PARALLEL & PERPENDICULAR) DESIGN FOR ALTERATIONS CAN BE USED WITH ADJOINING BUFFER STRIP. LANDING AT BOTTOM OF TWO SLOPING SIDES WITH 60"x60" MIN. DIMENSIONS. THE SHORT PERPENDICULAR RUN TO THE STREET CAN BE PROTECTED BY A LANDSCAPED SETBACK OR CONNECTED TO THE SIDEWALK WITH A WARPED SURFACE.



CROSSWALK

TYPICAL PLACEMENT AT

INTERSECTION WITH PLANTING STRIP
THE SELECTION OF CURB TYPE AND THE CONFIGURATION OF THE UTILITY TRIP MAY VARY TO MEET EXISTING FIELD CONDITIONS AND ROADWAY GEOMETRICS PROVIDING THE DIMENSIONS AND SLOPES ARE AS NOTED.

**TYPE C
PARALLEL & PERPENDICULAR
APPLICATION**

ROADWAY GRADE (%)	MIN. RAMP LENGTH (FT)	4" CURB	6" CURB
0	2	2	4
1	2	2	5
2	3	3	5
3	3	3	6
4	4	4	8
5	5	5	10
6	7	7	14
7	13	13	15
8	15	15	15

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

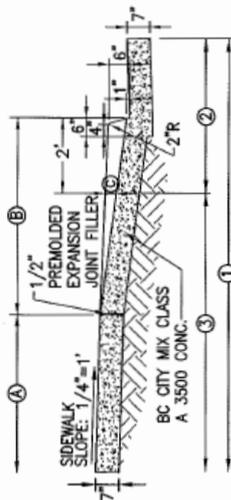


CITY OF CHARLOTTESVILLE

CITY STANDARDS

CG-12 DETECTABLE WARNING SURFACE TYPE C (SHEET 3 OF 3)

REVISION	DATE	SCALE: N.T.S.	STANDARD NUMBER: CG-12



- ① FOR SIDEWALK, CURB & GUTTER—BUILT CONCURRENTLY
- ② FOR INITIAL CURB & GUTTER ONLY (SEE RE-2, SHEET 2 OF 2)
- ③ FOR SIDEWALK ONLY—AFTER INITIAL CURB & GUTTER

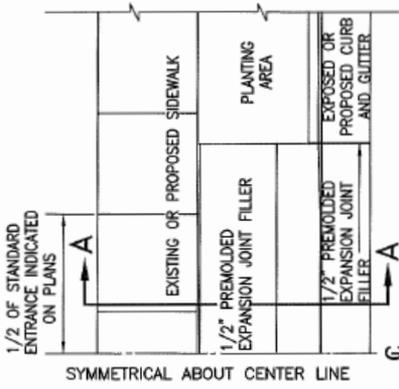
LOCAL STREETS	5'-0"	5'-0"	2'
ALL OTHER STREETS	15'-0"	16'-0"	2'

SECTION A-A

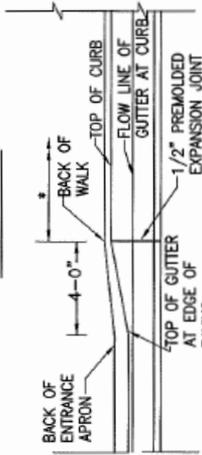


ISOMETRIC VIEW

- NOTES: STANDARD RESIDENTIAL ENTRANCES SHALL BE:
 SINGLE ENTRANCE: 10' WITH CURB
 DOUBLE ENTRANCE: 20' WITH SHOULDER & DITCH



HALF PLAN



ELEVATION AT CURB LINE

* 3' MIN. TO ADJACENT PROPERTY



CITY OF CHARLOTTESVILLE

CITY STANDARDS

STANDARD ENTRANCE ACROSS SIDEWALK CURB & GUTTER
(SHEET 1 OF 2)

REVISION	DATE	SCALE: N.T.S.	STANDARD NUMBER: RE-2

IMPORTANT PHONE NUMBERS

CITY OF CHARLOTTESVILLE

Public Service Division
(Street and Sidewalk Permits, Construction,
Maintenance)

970-3361

streetcuts@charlottesville.org

Traffic Signs / Signals

970-3362

Public Utilities Division
(Water, Wastewater, Gas)

970-3800

Neighborhood Development Services
(Traffic Engineering)

970-3182

Building Inspections
(Electrical, Plumbing, Mechanical)

970-3310

Virginia 811

8-1-1