

MONTGOMERY COUNTY SPECIFICATIONS FOR UTILITY CONSTRUCTION PERMIT

**DEPARTMENT OF PERMITTING SERVICES
DIVISION OF LAND DEVELOPMENT SERVICES
RIGHT-OF-WAY PERMITTING AND PLAN REVIEW SECTION
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ROCKVILLE, MARYLAND 20850**

240-777-0311

July 2016

<http://montgomerycountymd.gov/permittingservices>



SPECIFICATIONS FOR
UTILITY CONSTRUCTION PERMIT
MONTGOMERY COUNTY, MARYLAND
DEPARTMENT OF PERMITTING SERVICES

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INTRODUCTION

The "**Montgomery County Specifications for Utility Construction Permit**" applies to all utility construction, reconstruction, or maintenance activities performed within the County right of ways (ROW) or easements under jurisdiction of Montgomery County. The actual construction shall be done under the terms of these specifications and shall conform to all legal requirements of the Montgomery County Road Design and Construction Code Chapter 49 (Streets and Roads) and Chapter 50 (Subdivision of Land), Montgomery County Department of Transportation (MCDOT) Road Design Standards, Executive Regulation No. 28-06 AM (Context Sensitive Road Design Standards), the latest edition of the Maryland Department of Transportation/State Highway Administration (MSHA) Standard Specifications for Construction and Materials, and the Public Right-of-Way Accessibility Guidelines (PROWAG) issued by the U.S. Architectural and Transportation Barriers Compliance Board (the Access Board), MCDOT Work Zone Temporary Traffic Control (WZTTC) and US Department of Transportation Manual on Uniform Traffic Control Devices (MUTCD).

Telecommunications companies providing telephone, internet, information and data transmitting services, and all entities that desire to install any facilities in Montgomery County's ROW must first obtain a franchise agreement from Montgomery County in accordance with the Montgomery County Code Chapter 49, Article 2.

Telecommunications companies should contact the Office of the County Attorney for more information at 240-777-0311.

SUBMITTAL STANDARDS

1. No utility construction permit shall be issued until all ROWs have been acquired and properly recorded among the Land Records of the County. It shall be the responsibility of the permittee to verify if the Subdivision Record Plat has been recorded in the Montgomery County Land Records. Without such verification, no permit for utility construction will be issued.

In cases where the County has only an apparent prescriptive right of way, the permittee shall be responsible for obtaining necessary rights of way and/or easements from the appropriate property owner(s).

2. All work performed under utility construction permits shall comply with the following specifications: MCDOT utility patch standards and WZTTC requirements as well as any special condition notes identified on the Utility Construction Permit.

Installation of utility lines and/or house connections in a new subdivision development must be based on the approved grade establishment plan and Record Plat.

In the event the Director (or designated representative) of the Montgomery County Department of Permitting Services (MCDPS) finds that the original plans and/or conditions are inadequate or inappropriate for the proposed utility work, revised plans,

permits and/or approved conditions will be required to remedy the deficiency. Such modification(s) shall thereafter be prepared and become a part and condition of the permit, and shall incur additional permit fees.

Revisions to the plan must be resubmitted with the permit application number along with previous MCDPS comments, and a brief written response explaining how those comments have been addressed.

3. The applicant shall submit the permit application electronically using the [ePermits](#) system and plans must be uploaded using the [ePlans](#) system. The plans must show proposed construction activities for all work. Prior to permit issuance, one (1) set of approved plans will be required for plans larger than 11x17 in size.

These plans must be dimensioned drawings which include the following items within the proposed limits of work:

- (A) Existing topographic and physical details
 - (a) Paving – Edge of Pavement (EOP), curb and gutter, driveways, and sidewalks and PROWAG compliant ramps
 - (b) Storm drain systems - inlets, manholes, pipes, outfalls and drainage swales or ditches
 - (c) Stormwater management facilities – structural and vegetative
 - (d) Other utility company facilities - poles, fire hydrants, conduits, pipes, vaults, transformers, valves, cleanouts, and associated equipment
 - (e) MCDOT Traffic Signal interconnect and fiber optics conduits and associated equipment
 - (f) Trees and shrubs
 - (g) Street lights
- (B) Existing rights of way and easements
 - (a) Clearly depict all public right of way lines
 - (b) Clearly depict all Public Utility Easements (PUE), Public Improvements Easements (PIE), and all other public and private easements and right of ways with the copy of record plat
- (C) Proposed Utility Construction (installation, removal and relocation)
 - (a) Manholes, poles, hand holes, junction boxes, pedestals, street lights, vaults, conduit and pipe
 - (b) New installation and/or relocation of poles shall be outside of sidewalks

and ramps and must comply with PROWAG.

- (c) Above ground meter panels/boxes and underground meter vault for private use shall be installed on private property.
- (d) New installation, replacement or relocation of utility and telecommunication mainline on the moratorium roadways are not allowed. See page 10.

The coordination of the utility construction schedule with the MCDOT Division of Highway Services, 240-777-0311 is essential to prevent conflict with the pavement cut moratorium policy as well as the residential resurfacing program. All utility companies are urged to ensure mainline construction projects to be designed and scheduled to accommodate anticipated future extensions without disturbing existing paving.

The MCDOT Division of Highway Services updates paving project schedules at <http://www.montgomerycountymd.gov/dot-highway>.

- (D) Method of construction and work type must be indicated:
 - (a) Excavation methods: trenching and directional boring, splicing cable through existing underground conduit and visual inspection, etc.
 - (b) Aerial work such as removing/installing of overhead cable and attaching/detaching equipment on existing pole
 - (c) Manhole inspection for the future repairs
- (E) ADC Montgomery County, Maryland map reference (page/grid designation)
- (F) It is the responsibility of the applicant to obtain an approved Temporary Traffic Control Plan (TTCP) or written waiver of the review for all major roadways from MCDOT Division of Traffic Engineering and Operations (TE&O), 240-777-2190 when required by these specifications. If sidewalk closure is required as part of the construction activities, a TTCP will be required and must be approved by MCDOT prior to permit issuance in accordance with Chapter 49, Section 49-11 of the Montgomery County Code. See WZTTC requirements on page 24 for more information.
- (G) If plans are not prepared by utility company engineers, the plans shall have the certificate of review or approval from the utility company's representatives.
- (H) Non-scaled plans may be accepted for single WSSC water and/or sewer house connection, Washington Gas service connection, residential house drop service connection, pavement cut and routine utility maintenance operation including aerial works. However, dimensions must be provided as references to (1) ROW/property line (2) edge of pavement or back of curb and gutter, and (3)

storm drain structures, including the pipe line.

Emergency repair is exempt from the above submittal requirements. Emergency repair is a repair necessary to prevent loss of life or property and to restore a pre-existing service when a service interruption occurs

4. It shall be the responsibility of the permittee to utilize the PUE** if one exists. The policing of these easements including the installation/removal of any obstructions within these easements is the shared responsibility of the public utility companies. All appropriate underground utilities and associated above ground facilities such as pedestals, transformers, hand hole boxes, etc., need to be placed within the PUE. Mainline Transmission and Distribution (T&D) facilities, i.e., manholes and conduit, may be exempt due to the limited space available within the PUE. Site specific cases will be evaluated when new utilities are proposed within established neighborhoods. It is not the policy of MCDPS to allow exemptions within new subdivisions unless there are compelling reasons to do so. Exemptions will not be considered within subdivisions where the PUE is not properly graded.

**The terms and provisions of Public Utility Easements (PUE) are detailed in a Declaration filed February 19, 1969 among the Land Records of Montgomery County at Liber 3834 at Folio 457.

Each utility company is responsible for its own representation at the Maryland-National Capital Park and Planning Commission's Development Review Committee Meetings as scheduled for new development plan consideration to protect their interests.

5. Implementation of the Rustic Road Program compels the permittee to design the proposed utility installations to minimize the overall impact on those roadways classified as Rustic or Exceptional Rustic. The following criteria shall be met unless an exemption is granted by MCDPS:
 - (A) No trees are to be removed or impacted within the County ROW without a Roadside Tree Permit from the Maryland Department of Natural Resources Forest Service (MD- DNR), 301-854-6060 and MCDPS under Chapter 49 of the County Code. Contact MCDPS, 240-777-6304 or 240-777-6335 to coordinate with the County DPS Urban Forester for site inspection and approval prior to removal of trees.
 - (B) The standard utility pavement patch should be used, except that the surface material should match as closely as possible with the surface of the existing road.
6. Utility companies must obtain a Roadside Tree Permit from the MD-DNR and MCDPS under Chapter 49 of the County Code prior to trimming, cutting or removing any roadside tree that grows all or in part within the public ROW. For more information on obtaining the appropriate Roadside Tree Permit, contact the MD-DNR Forest Service office for Montgomery County at 301-854-6060. Additionally, contact the County Urban

Forester of MCDPS at 240-777-6304. More information about roadside trees is available at the MD-DNR Forest Service website www.dnr.state.md.us/forests/ and the Montgomery County website at www.montgomerycountymd.gov.

7. Utility construction permits shall expire 18 months from the date of permit issuance unless the MCDPS Director (or designated representative) specifies a shorter or longer term when issuing the permit or later approves an extension, stating reasons for the extension (MC Code - Chapter 49, Section 49-36). The implementation date and continuance of projects under this permit may be altered at the discretion of the MCDPS ROW Inspector in the event of conflict(s) with previously approved permits or emergency activities. Once a permit expires, the permittee shall be responsible for initiating renewal of the permit.
8. **Final Inspection:** Once all work is complete per the approved plans, the applicant is required to contact the right of way inspector noted on the permit to schedule final inspection. When the final inspection is approved by the tight of way inspector, the permit will be closed.

PRE-CONSTRUCTION REQUIREMENTS

1. The MCDPS ROW Inspection Section must be notified at least forty eight (48) hours prior to the start of work by calling or emailing the inspector noted on the permit. Or permittees may also call 301-370-3673 for inspection requests to the Field Supervisor of the MCDPS ROW Inspection Section.

In the event of emergency, the permittee shall notify MCDPS Right of Way Inspection Section, margaret.urban@montgomerycountymd.gov or 301-370-3673 and MCDOT Highway Services, mcdot.highway@montgomerycountymd.gov immediately. The complete site restoration is required per the specifications upon the completion of emergency repairs.

2. The permittee must conduct a pre-construction meeting with the MCDPS ROW Inspector prior to beginning of work. If site conditions reveal previous utility cuts, deteriorated pavement or other unusual conditions that may require mill and overlay, these situations shall be discussed and resolved prior to beginning work.
3. Work on holidays and weekends shall not occur unless an exception is granted in writing by the DPS inspector. The permittee must request the overtime inspection by calling 301-370-3673 a minimum of twenty-four (24) hours in advance or per a mutual agreement with the ROW Inspection Section. Inspections are scheduled on a "first come, first served" basis up to the maximum inspections available based on staffing. Utility companies will be charged a fee in accordance with COMCOR 08.24B.01, Overtime Offset Fees.

CONSTRUCTION SPECIFICATIONS

1. The utility company, applicant or permittee shall be responsible for any damages or injuries which may occur as a result of construction related to the permit. The utility company, applicant or permittee shall also be responsible to maintain the installation in a proper condition and must reimburse the County for any costs related to emergency repairs. The County assumes no responsibility for any suits or actions arising from the performance of work designated in the permit.
2. The permit, plans, WZTTC standards (or MCDOT approved site specific TTCP), and the specifications of construction and materials shall be available at all times for inspection by the MCDPS ROW Inspector.
3. Utility companies and their contractors must display their names and telephone numbers on vehicles working in the public right of way and shall have a copy of the permit, approved construction plans, and traffic control plans on site at all times.
4. Vehicular and pedestrian traffic must be maintained through all phases of construction. Refer to the MCDOT WZTTC requirements on page 24.

5. Whenever utility poles are replaced or relocated, these poles must be placed at the property line or to the maximum distance from the roadway. Minimum preferred distances are six (6) feet behind the curb for closed section roadways and three (3) feet behind the invert of the ditch or twelve (12) feet from the edge of pavement to the face of pole whichever is greater for open section roadways.
6. Sidewalks shall be maintained open in accordance with the PROWAG issued by the U.S. Architectural and Transportation Barriers Compliance Board (the Access Board), MCDOT WZTTC and US Department of Transportation MUTCD. Utility poles shall maintain a two (2) foot clearance from sidewalks or be located behind the sidewalk adjacent to the ROW line.
7. Any attachments to utility poles shall be a minimum of eight (8) feet above grade and shall not be located above sidewalks. Additional utility poles and guys may not be installed within the public right of way in order to accomplish this. No new utility poles will be allowed within a distance of twenty feet (20') from the intersection of truncation of new subdivision entrances.
8. Utility poles must maintain a minimum five (5) foot clearance from the outside edge of driveway entrances and PROWAG compliant ramps. Whenever a new utility pole is installed to replace an existing pole, the old pole or "stub" must be removed upon the completion of project. It is the permittee's responsibility to ensure that the other utility companies "sharing" a utility pole relocate their facilities in a timely manner within the time frame as stated above.
9. Directional boring under pavement shall be at least twenty-four inches (24") beneath base thickness of Bituminous or Portland-Cement pavements to the top of the bore. Washington Gas requires the minimum depth of thirty-six inches (36") beneath the pavement base. Pneumatic punching is acceptable; however, this may be rescinded at any time by the MCDPS ROW inspector if there is evidence of pavement damage as a result of this operation. Directional boring is not allowed on the roadways under moratorium if test pits and initial/final holes on the pavement are required.
10. New installation, replacement or relocation of the underground mainline of utility and telecommunication on the moratorium roadways is not allowed. Although the permit is issued prior to the new paving and once the roadways become under the moratorium periods, the proposed construction of the mainline on the moratorium roadways shall be delayed until the end of the moratorium. Coordinating the utility construction schedules with MCDOT is essential to prevent conflict with pavement cut moratorium policy.

In compliance with MCDOT policy for utility cuts, a moratorium of five (5) years for cutting pavement (i.e., sidewalks, bike paths, driveways, roadways) is placed on all newly constructed roadways. Five (5) year moratorium from the date of street acceptance by MCDOT Division of Highway Services is required for brand new roadways. Three (3) year moratorium from the notice date from the Division of Highway Services is applied to the reconstruction or Hot Mix Asphalt (HMA) overlay on existing roadways. The intent of the moratoriums is to maintain Pavement Serviceability Rating (PSR) of these newly constructed or refurbished roadways.

Emergency utility repair work is exempt from the pavement cut moratorium policy. Emergency repair is necessary to restore existing services when a service interruption occurs or to prevent the loss of life or property.

Service connection to a new dwelling or a business can be accommodated. This work will require a full width and length mill and overlay on the pavement.

11. All conventional excavations in the paved section of the roadway must be backfilled and capped with cold mix asphalt or protected with securely placed steel plate at the end of each work day and re-opened fully to vehicular traffic.

When steel plates are used to cover an excavation on pavement, **the steel plates must be inlayed or recessed into the pavement** adjacent to the trench. When steel plates are inlayed or recessed, the surface of the steel plate shall be flush with the adjacent pavement surface. All steel plates shall be a nominal one inch (1") thickness. Steel plates must be large enough to allow a minimum of one foot (1') of bearing on all sides of the trench.

The MCDPS Right of Way Inspector may allow alternative bearing requirements for steel plates when bearing on all sides of the trench is impractical. Any alternative desired must include a standard drawing depicting desired alternative and methodology noted to be utilized. Steel plates abutted edge to edge can be welded together and anchored with pins on the four (4) outermost corners. Additional pins shall be spaced as necessary to assure the steel plates are secured. No corner of any steel plate shall overhang the excavated trench. Cold mix asphalt must be tapered from the height of the steel plate to the existing road surface for a minimum distance of one foot (1') ramping at 18:1 slope.

Advance "STEEL PLATE AHEAD" warning signs (MSHA Design W21-9) shall be properly posted and maintained per the approved plan and Terms of Conditions of the permit as applicable. An orange or red post, with a minimum height of 48 inches above grade, must be installed at the edge of pavement beside any steel plate between November 1 and April 15 to serve as an identification marker for snow removal operations. During this time frame, the MCDOT, Division of Highway Services, must be notified at (240) 777-0311 and email to mcdot.highway@montgomerycountymd.gov forty-eight (48) hours in advance of the placement of steel plates and again when the steel plates are removed. Steel plates shall not remain in the roadway for over seven (7) calendar days without prior permission by the MCDPS ROW Inspection Section.

The permittee shall be responsible for any damages and injuries which may occur as a result of the placement of steel plate on the roadway.

12. Excavations in unpaved sections of the public space shall be either backfilled to grade or completely covered with lumber of a nominal thickness of two inches (2") and completely surrounded with approved construction fencing such as blazing orange warning fence at the end of the work day. Other protection methods shall be approved by MC DPS ROW inspector. Only at the discretion of the inspector may an excavation

be left open after work hours and must be protected with traffic drums in accordance with the Traffic Control provisions of this permit.

13. The permittee must have a designated on-site Traffic Manager who is in charge of the site within the traveled roadway in accordance with the MCDOT WZTTC Standards and Section 104.18 of the MSHA Specifications for Construction and Materials. This assigned on-site traffic manager must have authorization to call in repair crews if needed any time. At the required preconstruction meeting, the Traffic Manager's name and emergency contact number(s) shall be provided to MCDPS ROW Inspector and the information shall be promptly updated throughout the duration of the project to the ROW inspector.
14. MCDPS and MCDOT may require work activities occurring within MCDOT right-of-way to stop immediately, if it is determined that there is non-compliance with the MUTCD, latest edition and addendums as issued thereto, the MSHA Book of Standards, latest edition and addendums as issued thereto, MCDOT WZTTC standards, latest edition and addendums as issued thereto or the permittee's failure to comply with these requirements and specifications.
15. It shall be the responsibility of the permittee to keep the adjacent and adjoining streets clean and free of soil, dirt and other debris at all times during the construction periods. The permittee and its subcontractors shall not drive/park vehicles over curbs, sidewalks or grassy areas or within the critical roots of roadside trees. Failure to comply with these regulations shall be considered a violation of the County Code and the permittee will be subject to the penalties as indicated in Chapters 1, 19 and/or 49 of the Montgomery County Code.
16. Property owners must be notified prior to crossing existing entrances to their properties. Accessibilities of driveways must be maintained at all times. The MCDPS ROW Inspector shall be notified of damaged driveways. The following procedure shall apply for repair:
 - (A) Damaged asphalt driveways shall be saw cut a minimum of one (1) foot beyond the damaged area and replaced with six inches (6") of hot mix asphalt upon properly compacted subgrade. Driveway restoration shall include removal and restoration of the surface asphalt pavement from the edge of trench cut to the edge of pavement.
 - (B) Damaged concrete driveways shall be removed to the closest existing joint and replaced with seven inches (7") of MSHA Mix #3 concrete upon properly compacted subgrade.
 - (C) The MCDPS ROW Inspector shall be notified prior to commencement of construction and upon completion of driveway restoration and ROW repairs.
17. If a permanent patch is scheduled within one (1) week, cold patch may be used, otherwise proper temporary patching of conventional excavations, using HMA, a minimum of six (6) inches thick, shall be made immediately upon the completion of

backfilling. Permanent patches shall be completed within sixty (60) days of the completion of the repair or new installation. Should approved suppliers for Montgomery County be unavailable due to wintertime shut down, the allotted time period will be extended to include the shutdown period as well. Documentation and a request for waiver must be submitted 30 days in advance to the MCDPS Right of Way Inspection Section for those site specific instances where an extension of time can be justified. Restoration also shall be completed at this time.

Wherever the edge of a patch encroaches within three feet (3') of the edge of the flexible pavement or the centerline of roadway, the patch shall be extended to the edge of pavement and the centerline of roadway. The minimum width of a patch is three feet (3') wide.

18. Trench excavation shall be as confined as practical. Fill and backfill material must be at optimum moisture content; $\pm 2\%$. Compaction shall be minimum 95% of the maximum dry density based upon AASHTO T-99, Method 'C' except for the top one foot (1') of roadway which shall be 100% of the maximum dry density based upon AASHTO T-99 Method 'C'. All frozen material and/or organic material must be removed. When repairing trench cuts, all work will be in conformance with MCDOT Standard No. MC-801.01, MC-801.02 and MC-801.03. See pages at 21, 22 and 23.
19. Manholes, inlets, valves and temporary water lines in a roadway that extend more than one fourth ($\frac{1}{4}$) inch above bituminous concrete base shall be tapered with minimum slope of 18:1 using bituminous as concrete material. The permittee must protect existing roadways from scratching and scarring of pavement. Should scratching, gouging and/or scarring of the pavement occur, milling and overlay or other approved repair method shall be performed by the permittee to the damaged area as directed by the MCDPS ROW Inspector.
20. **Patch in Rigid Pavement for Conventional Road and Trench Cuts**
 - (A) The patch shall conform to the existing material removed other than soil, including joint pattern for pavement, sidewalk, curb and gutter, reinforcing and thickness of concrete and bituminous concrete overlay where applicable. Forming, finishing and all other construction methods shall comply with the current edition of the MSHA Standards and Specifications for Construction and Materials.
 - (B) The patch shall be extended nine inches (9") on each side beyond the limit of disturbed soil where the excavation is located. The existing concrete shall be sawed full depth prior to any excavation to provide a uniform line and shall conform to the following requirements. Emergency repairs will not require saw cutting prior to excavation. If the following requirements cannot be met, the pavement shall be removed to the nearest joint.
 - (a) Where a cut is made entirely within the limits of the slab, there shall be a minimum of two feet (2') to the nearest joint or edge of pavement. (See MCDOT Standard MC-801.01, **Case I**) Number 10 load transfer tie bars

shall be spaced on four foot (4') centers longitudinally and one foot (1') centers transversely along all sides of the patch including adjacent curb and gutter. Dowels shall be 20 inches long and located at the center depth of the roadway slab.

- (b) Where a transverse cut is made across the slab, the slab shall be removed from the cut to the nearest transverse edge in one direction only. All existing tie devices shall be utilized or replaced. (See MCDOT Standard MC-801.01, **Case II**). Number 10 load transfer tie bars shall be spaced on one foot (1') centers along all four (4) sides of the patch. Dowels shall be 20 inches long and located at the center depth of the roadway slab.
 - (c) Where a longitudinal trench is cut the length of the slab, there shall be a minimum distance of four feet (4') to the nearest longitudinal joint or edge of pavement. All existing tie devices shall be utilized or replaced. (See MCDOT Standard MC-801.01, **Case III**). Number 10 load transfer tie bars shall be spaced on four foot (4') centers longitudinally and one foot (1') centers transversely along all sides of the patch including the adjacent curb and gutter. Dowels shall be 20 inches long and located at the center depth of the roadway slab.
 - (d) Where the existing concrete is broken, the MCDPS Right of Way Inspector may require the removal of the concrete to the nearest joint.
 - (e) Only when no alternative is available will cuts be permitted on both sides of a longitudinal joint. In this case a detailed plan must be submitted showing the method of patching the area disturbed by the trench.
- (C) When a concrete pavement has been overlaid with bituminous concrete, the finished grade of the concrete patch shall match the finished grade of the existing concrete roadway and the thickness of the bituminous concrete patch shall match the thickness of the existing bituminous concrete overlay.

21. **Patch in Flexible Pavement for Conventional Road and Trench Cuts**

- (A) The patch shall be made in accordance with MCDOT Standard No. 801.02, Patch in Flexible Pavement.
- (B) Flowable Fill for trench cut repairs and backfill may be used on a case by case basis. Flowable Fill shall meet the current MSHA Specifications for Construction and Materials, Section 314 - Flowable Backfill for Utility Cuts. The MCDPS Inspector shall make the final decision regarding the use of Flowable Fill.

22. **“Keyhole” Excavation and Restoration**

- (A) Twelve inches (12”) to eighteen inches (18”) keyhole pavement coring shall be performed with equipment designed for this purpose and a vacuum truck. No backhoe or other excavation machine is allowed.
- (B) A metal template shall be placed over the cored hole to minimize damage to the pavement edge of the cored hole.
- (C) Backfill material shall be Select Borrow, meeting requirement 18 of these specifications. See definition on page 26. Compaction of the backfill material shall be in accordance with requirement 18 as applicable of these specifications.
- (D) Pneumatic compaction equipment (pneumatic rammers or equivalent) shall be used for compaction of the backfill material. The size of the compactor shall not exceed half the diameter of the cored keyhole.
- (E) Once backfill and compaction of the excavation has been completed, the intact cored pavement section (plug) shall be reset and grouted in the keyhole from which it came and the surface of the reset pavement section shall be restored to the grade of the adjacent road surface. The keyhole section may be marked before coring in order to restore the core to its original position.
 - Grout used to secure the pavement core shall comply with the definition for grout as listed in definitions on page 26 of these specifications.
 - Excess grout shall be removed and the street surface cleaned after grouting in accordance with requirement 15 on page 12 of these specifications.

The grout shall be allowed to set per manufacturer’s instructions prior to opening the street to traffic.

- (F) If multiple keyholes are applied within the area of approximately 25 square feet (5’X 5’) on the pavement, mill and overlay is required to restore the above area.

Emergency utility repair work by keyhole technology is also exempt from the pavement cut moratorium policy. Emergency repair is necessary to restore existing services when a service interruption occurs or to prevent the loss of life or property.

Service connection to a new dwelling or a business can be accommodated by keyhole method. This work requires a full width and length mill and overlay on the pavement.

23. All trench and “keyhole” cuts must include a permanent marker embedded in the surface course of the trench patch. This marker shall bear the identifications of the utility company performing said pavement cut and be secured in the pavement. Temporary patches shall be marked with a paint stencil using letters four inches (4") high and identified with the appropriate Miss Utility color.

24. **Mill and Overlay:**

A two inch (2”) mill and overlay shall be required should the patch not meet the specifications as set forth by the current MSHA Standards and Specifications for Construction and Materials. Mill and overlay shall be in accordance with Section 505 – HMA Patching within the current MSHA Standards and Specifications for Construction and Materials.

- (A) A Full Width mill and overlay shall also be required in the following circumstances:
 - (a) Whenever two transverse patches are located within two hundred feet (200’) of one another.
 - (b) Once a section of roadway has been milled and overlaid and a third pavement cut (within two hundred feet of either of the previous patches) is made, this area will not be required to be milled and overlaid until a fourth cut within 200 feet of the third cut is made.
 - (c) If pavement cuts are necessary on newly constructed, reconstructed and resurfaced roadways within the moratorium period as specified under Construction Specifications item 10 page 10, and no alternative is available, such cuts will be permitted and will require a full width mill and overlay.
- (B) A Full Lane Width or One Side Direction Width mill and overlay shall be required in the following circumstances:
 - (a) Pavement cuts on opposing traffic lanes are considered separate and will not require mill and overlay until a second cut is made within two hundred feet (200’) on the same lane.
 - (b) Pavement cuts are longitudinal or diagonal on roadways.
 - (c) Keyholes that have a longitudinal spacing one thousand feet (1,000’) or less will require a minimum two inch (2”) nominal depth pavement surface full width mill and overlay on the roadways under the pavement cut moratorium.
- (C) Whenever a patch's geometry is non-standard, full width mill and overlay requirements will be determined on an individual basis by MCDPS.

All mill and overlay operations shall comply with the following conditions:

- The mill and overlay will commence a minimum of two feet (2') beyond the outer limits of each utility patch in the pavement.
- Each utility company installing a patch must install their company medallion within the patch. The utility company making the second pavement cut (necessitating the mill and overlay) within 12 months of the first pavement cut will be responsible for performing the mill and overlay and obtaining remuneration from the first utility company for its pro rata share of those construction costs. MCDPS will not participate in the money collection efforts.
- The width of mill and overlay will be a minimum of one lane width or paving machine joint (12'). If the patch extends into a second lane, the mill and overlay must be extended to cover the second lane entirely.
- Perimeter milling of a minimum width of twenty-four inches (24") is required on all pavement overlays.

25. Major Repair

- (A) Representatives from the utility agency and MCDPS will meet at the site to delineate and agree upon the limits of any major repair(s). The utility agency or its contractor must notify the MCDPS Right of Way Inspection Section 48 hours in advance of the repair to insure a MCDPS ROW Inspector is available to observe the excavation/cut and or make adjustments to the agreed upon limits if necessary.
- (B) All pavement must be replaced in kind or in accordance with the pavement cross-section for the classification of the affected roadway. Refer to the current Montgomery County Design Standards to determine the appropriate pavement cross-section for the applicable roadway classification.
- (C) The edges of the pavement shall be uniform and true to grade.

26. Adjustment to Appurtenances

- (A) Where vertical adjustments to utility appurtenances are made, the excavation shall be as confined as practical as determined by the MCDPS ROW Inspector.
- (B) The pavement shall be removed twelve inches (12") beyond the limits of disturbed soil on all sides of the resultant excavation.
- (C) Select borrow or Graded Aggregate Stabilized Base (GASB) must be used to backfill the excavation around the appurtenance to the limit of subgrade.

- (D) The patch shall conform to the existing material removed other than soil, including joint pattern for pavement, sidewalk, curb and gutter, reinforcing and thickness of concrete and bituminous concrete overlay where applicable. Forming, finishing and all other construction methods shall comply with the current edition MCDOT design Standard and the MSHA Standards and Specifications for Construction and Materials.
- (E) Follow requirement 20 (Patch in Rigid Pavements) on page 13.
- (F) Any patches which require utility box adjustment shall be patched according to MCDOT Standard. 801.03 on page 23 and requirement 19 on page 13.

27. Upon notification from MCDPS, the permittee must promptly correct any unsatisfactory condition resulting from the failure to perform in accordance with these specifications and any special notes specified on the *RIGHT-OF-WAY CONSTRUCTION PERMIT*. Any required corrective action(s) must be implemented immediately upon notification by the MCDPS Right of Way Inspection Section.

Failure to promptly implement required corrective actions shall be considered a violation of the County Code, Chapter 49 Section 49-13 and will subject the permittee to enforcement actions and penalties as allowed by the County Code.

28. Complete repair and restoration of the right of way must be made to any and all damage to existing improvements within the public right of way and/or easements caused by utility installations or operations. All disturbed and graded areas adjacent to occupied residences shall be sodded in accordance with Sections 704, 705 and 708 of the current MSHA Standards and Specifications for Construction and Materials. All other areas may be seeded and straw mulched in accordance with current MSHA Specifications with MCDPS approval. Temporary seeding and straw mulching may be applied to those areas which require sod during periods outside the growing season in accordance with the following three conditions:
- (A) Seeded and straw mulched areas with insufficient germination or vegetative growth must be promptly re-seeded and re-mulched as directed by the MCDPS Right of Way Inspector; and
 - (B) Sod shall be placed during the next growing season in those areas where the MCDPS Right of Way Inspector determines that insufficient germination or vegetative growth exists; and
 - (C) Soil stabilization matting meeting the requirements of Section 709 of the current MSHA Standards and Specifications for Construction and Materials may be used in lieu of sod in ditch inverts with MCDPS approval. Ditch inverts shall be lined and pinned with sod or matting for a minimum one foot (1') above flow depth.

The permittee has the option of fine grading and seeding and straw mulching any disturbed areas having a width of less than 12 inches.

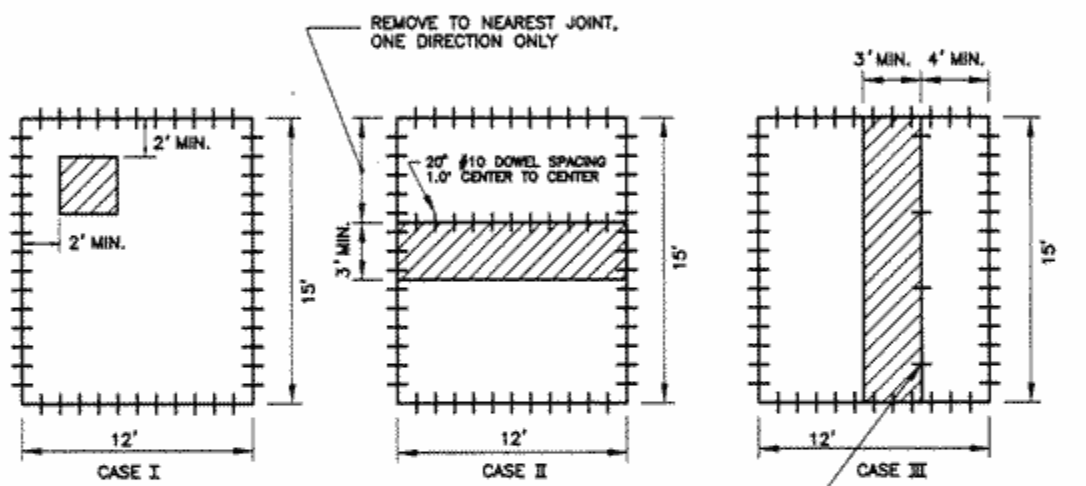
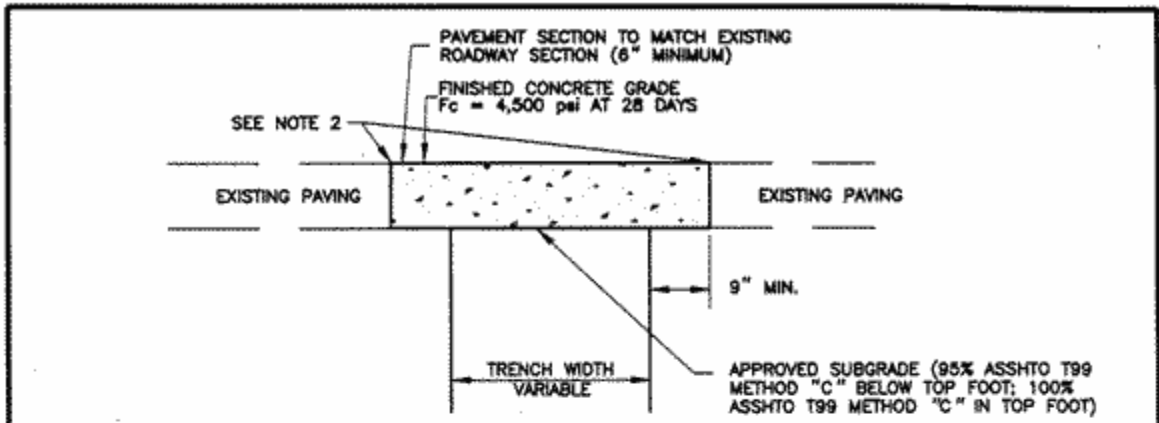
29. Permit Acceptance and Release

The utility company representative must contact the MCDPS ROW Inspector upon completion of any utility work that involves any disturbance to the County right of way. The MCDPS ROW Inspector will accept and release the permit upon acceptable restoration of the right of way.

The permittee's failure to contact the MCDPS ROW Inspector upon completion of any utility work will result in the permit remaining in an active status and may subject the permittee to additional right of way restoration requirements.

30. The minimum depth of cover over buried cable TV conduit, telecommunication cables, and electrical cables is 18 inches within the right of way. WSSC requires minimum cover over pipeline 36 inches to 42 inches. Other utility companies may require more stringent depth cover requirements.
31. In accordance with Federal Regulations (49CFR, Section 192.327) a minimum of 36 inches of cover is required over all gas mains.
32. A minimum vertical clearance of twelve inches (12") and a minimum horizontal clearance of five feet (5'), wall to wall shall be provided between storm drain pipes/structures and other utilities.
33. No patches will be allowed to remain with base asphalt/concrete only, unless adequately protected with barrels, warning signs, ramping at 18:1 and/or steel plates.
34. No parking of utility vehicles will be allowed on sidewalks or areas outside of the pavement except when specifically shown on an approved TCP or with prior approval from the MCDPS ROW Inspector.
35. No parking of utility vehicles, storing of equipment or materials shall be allowed under any roadside tree.
36. No materials or equipment shall be stored in the County ROW, without prior written approval by MCDPS Right of Way Plan Review Section Manager.
37. It is responsibility of all permittee to call Miss Utility, 800-257-7777 or 811 prior to any excavation.
38. When speed humps are affected by any pavement cuts, the entire hump shall be removed and replaced in accordance with the current MCDPS guidelines unless directed otherwise by the MCDPS ROW Inspector.
39. It is the responsibility of each permittee and/or utility company to obtain all necessary permits, including those required by WSSC and/or MSHA prior to the start of work.

40. Failure to comply with these specifications and the requirements herein may result in the immediate revocation of the permit. Any work performed following revocations, and before reinstatement, shall be deemed a violation of the Road Code and subject to the penalties contained therein. Following correction of a violation, MCDPS will issue verification that the permit has been reinstated.



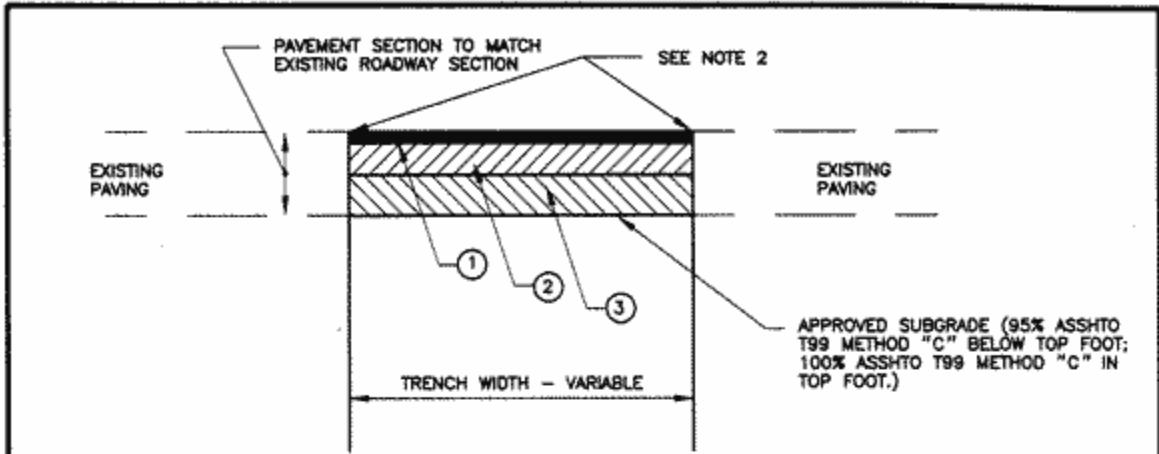
NOTE:
ALL EXISTING TIE DEVICES ARE TO BE UTILIZED,
OR REPLACED IF DAMAGED.

GENERAL NOTES

- REFER TO M.C.D.O.T. UTILITY PATCH SPECIFICATIONS FOR MATERIALS AND METHODS OF CONSTRUCTION.
- EXISTING PAVEMENT MUST BE SAW CUT FULL DEPTH PRIOR TO EXCAVATION.
- IF THE CONCRETE ROADWAY IS OVERLAYED WITH BITUMINOUS CONCRETE, A BITUMINOUS CONCRETE SURFACE COURSE SHALL BE PLACED EQUAL IN THICKNESS TO THE EXISTING BITUMINOUS CONCRETE OVERLAY.
- SEE CASES 1, 2, AND 3 FOR JOINT PATTERN.

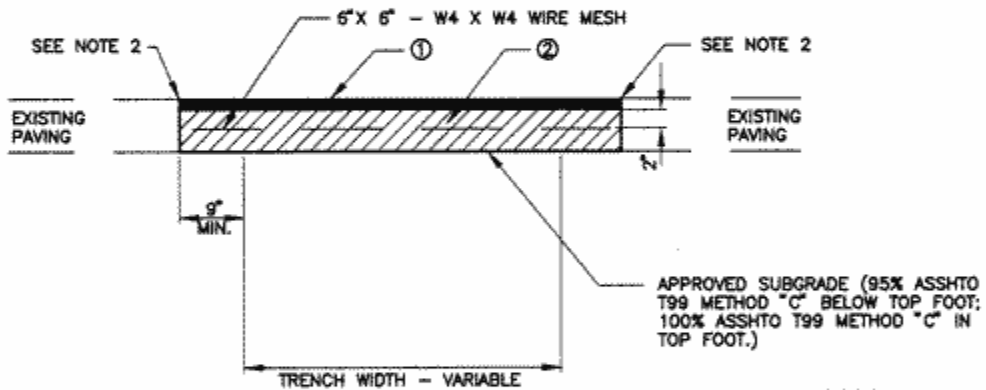
P:\DOT\STANDARD\6-24-94 10-4833 48 EST

APPROVED <u>JAN 5/96</u> DATE	REVISED	MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION
<i>Leslie M. Cook</i> DIRECTOR, DEPT. OF TRANS.		UTILITY PATCH IN RIGID PAVEMENT
<i>Edwin...</i> CHIEF DIV. OF ENG. SERVICES		STANDARD NO. MC-801.01



- ① TWO - 1 1/2" BITUMINOUS CONCRETE SURFACE COURSE
- ② BITUMINOUS CONCRETE BASE COURSE SEE NOTE 3.
- ③ SUBBASE MATERIAL SEE NOTE 3

ARTERIAL ROADWAY
(OR HIGHER CLASSIFICATION)



- CONCRETE OPTION
- ① 1 1/2" BITUMINOUS CONCRETE SURFACE COURSE
 - ② 6" MINIMUM CONCRETE PATCH

PRIMARY ROADWAY
(OR LOWER CLASSIFICATION)

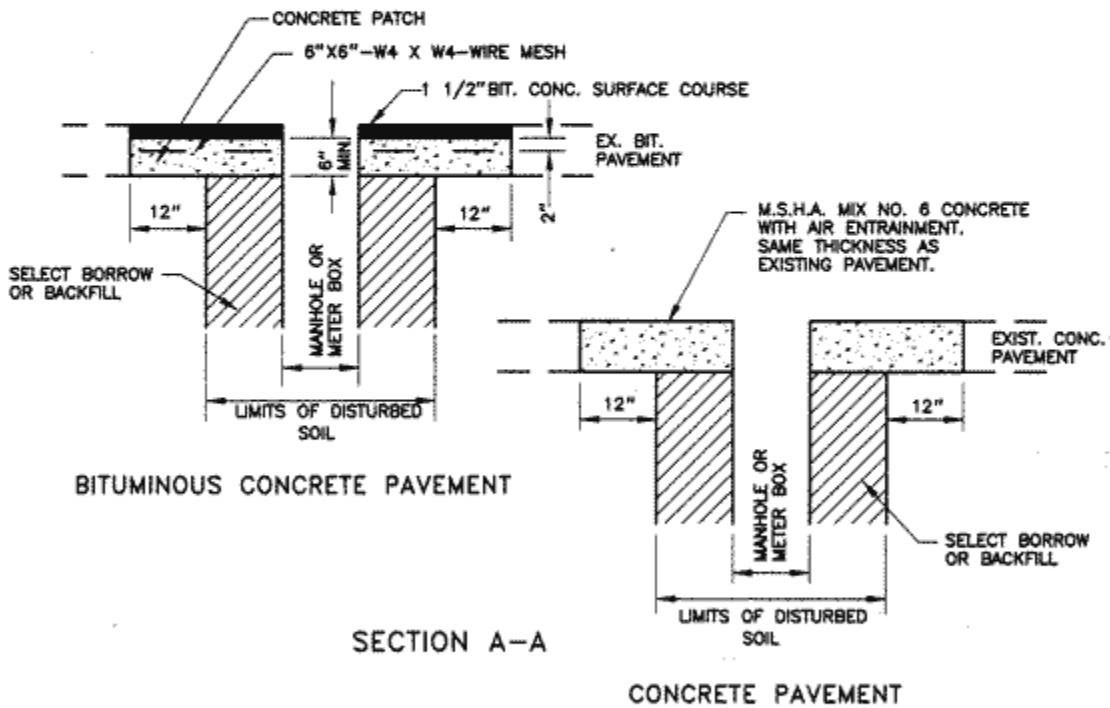
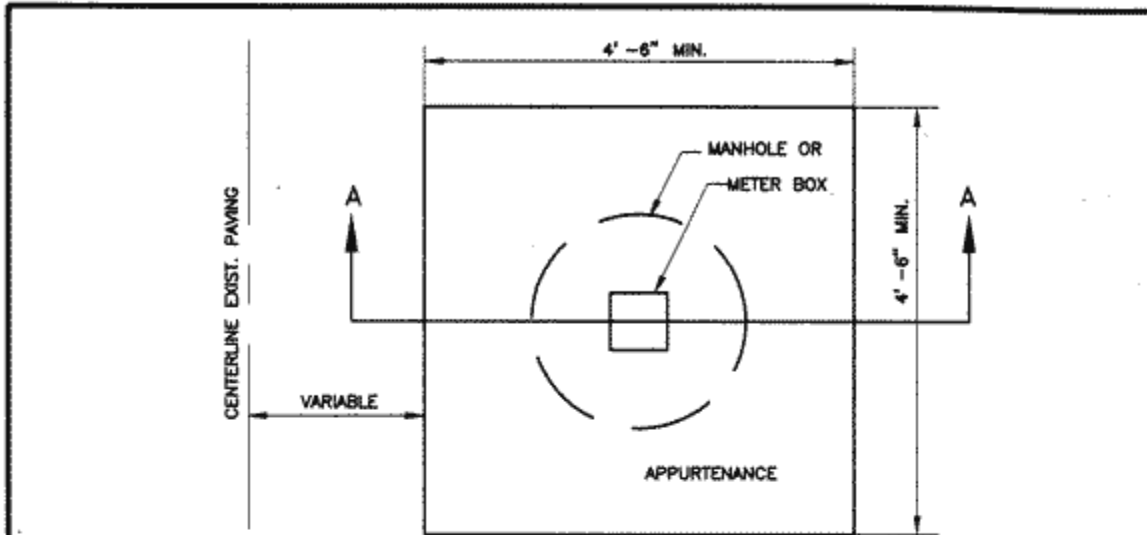
- BITUMINOUS OPTION
- ① 1 1/2" BITUMINOUS CONCRETE SURFACE COURSE
 - ② BITUMINOUS CONCRETE BASE COURSE SEE NOTE 3

GENERAL NOTES


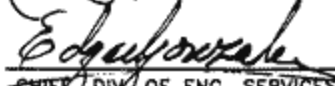
1. REFER TO M.C.D.O.T. UTILITY PATCH SPECIFICATIONS FOR MATERIALS AND METHODS OF CONSTRUCTION.
2. EXISTING PAVEMENT MUST BE SAW CUT FULL DEPTH PRIOR TO EXCAVATION.
3. BASE COURSE AND SUBBASE MATERIAL SHALL CONFORM TO APPROPRIATE ROADWAY CLASSIFICATION DESIGN STANDARD OR MATCH EXISTING CONDITION, WHICHEVER IS GREATER.

PALMISTON/MC801.02 6-24-94 11:23:10 am EST

APPROVED <u>JAN 5/95</u> DATE	REVISED	MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION
<i>Edy Motes</i> DIRECTOR, DEPT. OF TRANS.		UTILITY PATCH IN FLEXIBLE PAVEMENT
<i>Edy Motes</i> CHIEF, DIV. OF ENG. SERVICES		STANDARD NO. MC-801.02



PA 801.03 MC 801.03 6-24-94 11/23/45 on EST

APPROVED <u>JAN 5 / 96</u> DATE  DIRECTOR, DEPT. OF TRANS.  CHIEF, DIV. OF ENG. SERVICES	REVISED <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>	MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION UTILITY PATCH FOR APPURTENANCE ADJUSTMENT STANDARD NO. MC-801.03
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UTILITY WORK ZONE TRAFFIC CONTROL REQUIREMENTS

All work activities within the public space require appropriate work zone traffic control to protect the motorists, pedestrians, and workers. The degree of controls required will be proportionate to the characteristics of the roadway, its traffic demands and the type and extent of work to be performed. All required signs shall be installed prior to the start of construction or placing any equipment or materials on site.

The permittee shall submit a site specific Temporary Traffic Control Plan (TTCP) for approval by the Department of Transportation, Division of Traffic Engineering & Operations (DTEO) when either of the following conditions exist:

- Roadways classified as Arterial and Higher (Typically, 80' right-of-way or greater)
- Roadways within the business district (Bethesda, Wheaton, and Silver Spring)

The DTEO may consider waiving the requirements if it is determined the roadway is underutilized or if the work activity would not seriously affect traffic. The waiver may be secured by verbal or written request to DTEO by phone at 240-777-2190 or at mcdot.TrafficOps@montgomerycountymd.gov

The site specific TTCP shall correctly depict the name of the affected roadways, physical characteristics including the correct number of lanes, turn lanes, pavement markings, parking lanes, medians, traffic islands, posted speed limits as well as all intersecting streets and affected sidewalks within the proposed traffic control plan. The TTCP shall identify the proposed work zone and staging areas. The TTCP shall identify and provide specific locations for all traffic control devices (i.e. signs, drums, taper lengths, cones, arrow panel, flaggers, etc.), to protect the work zone. The TTCP must conform to the provisions set forth in the most recent editions of the Maryland Manual on Uniform Traffic Control Devices for Streets and Highways (MUTCD) Part 6 and the Montgomery County Work Zone Traffic Control Standards Book.

For all work activities meeting any of the following conditions, a site specific TTCP is not required. However, the permittee shall comply with the most recent edition of the Montgomery County Work Zone Traffic Control Standards Book:

- Any emergency work activity (i.e. storm damage restoration, defective equipment replacement, malfunction repairs, etc.)
- Maintenance work activities of less than four (4) hours TOTAL duration (i.e.: cable relocations and splicing, streetlight repairs, installing equipment on existing poles, short term manhole work, etc.) which does not involve roadway excavation and does not occupy more than one travel lane in one direction. Work activities within the traveled portion of roadways shall be restricted to the hours of 9:00 AM to 3:00 PM, Monday through Friday, and not on holidays unless written exception is granted in writing by the County Inspector.
- Roadways classified as Primary, Secondary or Tertiary (Typically, 79' right-of-way or less).

DEFINITIONS

ASTM American Society for Testing and Materials.

AASHTO..... American Association of State Highway & Transportation Officials.

BITUMINOUS CONCRETE..... Bituminous Concrete shall comply with the current Maryland State Highway Administration Specifications.

Superpave mixes shall be used as follows:

Arterial and Primary Roads

(Right-of-Way Widths 80 feet or greater)

Base Course (≥3"): 25 millimeter (mm) aggregate with
PG Binder 64°Celsius (C) ± 22°C

Surface Course (≥2"): 12.5 mm aggregate with
PG Binder 64°Celsius (C) ± 22°C

Residential and Roads of Lesser Classification;

(Right-of-Way Widths 69 feet or less)

Base Course (≥3"): 19 millimeter (mm) aggregate with
PG Binder 64°Celsius (C) ± 22°C

Surface Course (≥2"): 9.5 mm aggregate with
PG Binder 64°Celsius (C) ± 22°C

All roadways using surface course equal to or less than 1":
9.5 mm aggregate with PG Binder 64°Celsius (C) ± 22°C

CONVENTIONAL EXCAVATIONAn excavation made through existing pavement utilizing conventional equipment such as jackhammers, pavement saws, backhoes, track hoes, etc.

EMERGENCY REPAIR:... a repair necessary to restore a pre-existing service when a service interruption occurs or a repair necessary to prevent the loss of life or property.

GASB Graded Aggregate for subbase courses is crushed stone aggregate, fine aggregate and water, all mechanically mixed. The gradation of the final composite mixture shall conform to the current MSHA Specifications.

GROUT..... Grout utilized in keyhole excavation techniques shall be "UTILIBOND" manufactured by Utilicor Technologies, Inc. or an approved equal.

KEYHOLE EXCAVATION An excavation made through existing pavement utilizing specialized drilling and coring equipment.

MCDPS..... Montgomery County Department of Permitting Services.

MCDOT Montgomery County Department of Transportation.

MUTCD..... Manual on Uniform Traffic Control Devices for Streets and Highways.

MAJOR REPAIR Repair beyond the necessary excavation resulting from the destruction of the pavement due to a utility rupture.

MSHA Maryland State Highway Administration.

PIE..... Public Improvement Easement.

PORTLAND CEMENT CONCRETE PAVEMENT

Concrete pavement shall comply with the current MSHA Standards and Specifications for Construction and Materials. MSHA - Mix #6 concrete shall be used for all concrete work.

For concrete roadways, a commercially available accelerator of a type approved by the Engineer, capable of production of 500 PSI modulus of rupture strength in 24 hours or less shall be used.

PUE .. Public Utility Easement.

SELECT BORROW Select Borrow shall be crushed stone or bank run gravel and shall comply with the following:

- Liquid Limit not to exceed 40.
- Plasticity Index not to exceed 6.
- The maximum dry density shall not be less than 115 pounds per cubic foot as determined by AASHTO, T-180 Method 'D'.
Select Borrow shall be compacted to minimum 95% of maximum dry density per AASHTO, T-180, method 'D' where such test is practical with the material being used or until all lateral displacement and rutting has ceased.

SUBGRADE The top one foot of excavation subgrade material shall comply with the following:

- Liquid Limit not to exceed 40.
- Plasticity Index not to exceed 12.
- The maximum dry density shall not be less than 105 pounds per cubic foot as determined by AASHTO T-99, Method C and shall be compacted to 100% of maximum dry density.

WZTTC STANDARDS..... Work Zone Temporary Traffic Control Standards.

UTILITY PATCH..... A patch which is required as the result of excavation in the subgrade to repair or place a utility line or appurtenance.

CALL 811

OR

1-800-257-7777

TWO FULL BUSINESS DAYS PRIOR TO WORK

www.missutility.net

Color Codes for Marking Underground Lines:

RED	ELECTRIC	Electric power lines, cables, conduit and lighting cables
YELLOW	GAS/OIL	Gas, oil and petroleum products distribution and transmission, dangerous materials, product lines and stream lines
ORANGE	COMMUNICATIONS	Telecommunications systems, police and fire communications, cable television
BLUE	WATER	Water systems
GREEN	SEWER	Sewer systems and drain lines
PURPLE	RECLAIMED WATER	Irrigation and Slurry Lines
PINK	SURVEY	Temporary Survey Markings
WHITE	EXCAVATION	Proposed Excavation