



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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<http://www.montgomerycountymd.gov/permittingservices>

AUGUST 2009



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UTILITY CONSTRUCTION PERMIT
MONTGOMERY COUNTY, MARYLAND
DEPARTMENT OF PERMITTING SERVICES

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Approved:

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Department of Permitting Services

8/11/09

Date

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08/11/2009

Date

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SUBMITTAL STANDARDS

1. These "**Montgomery County Specifications for Utility Construction Permit**" specifications apply to all utility construction, reconstruction, or maintenance activities performed within public rights of way or easements under the jurisdiction of the Montgomery County Department of Permitting Services (MCDPS). 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) and the latest edition of the Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials.

Telecommunications companies, including companies offering any telephone, internet, information, or data service, and all entities that desire to install any facilities in Montgomery County's rights of way must first obtain a franchise from Montgomery County in accordance with the Montgomery County Code, Chapter 49, Article 2. Telecommunications companies should contact Mr. Clifford L. Royalty in the County's Office of the County Attorney for more information.

2. All work performed under this permit shall comply with the attached Specifications, Patch Standards, and Utility Work Zone Traffic Control Requirements as well as any Special Conditions identified on the Utility Construction Permit. Installation of this utility line and/or house connection must be based on the approved grade establishment and the cross section shown thereon. In the event the Director of MCDPS (or designated representative) finds that the original plans and/or approval conditions are inadequate or inappropriate for the proposed utility work, revised plans, permits and/or approval conditions may be required to remedy the deficiency. Such modifications(s) shall thereafter be prepared and become a part and condition of this permit, and may incur additional permit fees.
3. The permittee shall submit to the County with **3 sets of prints** of its proposed construction plan for all work involving main line installation including new manholes and appurtenances, house connections, street lights or new and relocated utility poles and **the Utility Construction Permit Application in triplicate**. Only 1 set of prints will be required for Washington Suburban Sanitary Commission (WSSC) initial submittal. At times of final plan approval, a total of 3 sets of WSSC approved plans will be required for permit issuance. The application shall be returned to the permittee either approved or accompanied with comments for revision. These plans must be dimensioned drawings which include the following items (within the proposed limits of work):
 - (A) Existing topographic and physical details
 - (1) Paving - roadway, curb and gutter, driveways, and sidewalks
 - (2) Storm drain systems - inlets, manholes, pipes, outfalls and drainage swales or open ditches

- (3) Other utility company facilities - poles, fire hydrants, conduit and pipes
- (4) Trees and shrubs
- (B) Existing right of way and easements (including Public Utility Easements)
 - (1) Clearly depict all public right of way lines
 - (2) Clearly depict all Public Utility Easements and/or Public Improvements Easements
- (C) Proposed Utility Construction
 - (1) Manholes, conduit, and pipelines
 - (2) Street Lights
 - (3) Relocated utility poles
- (D) Method of construction must be indicated
- (E) Alexandria Drafting Company (ADC) Montgomery County, Maryland Map reference (4 digit page/grid designation – i.e.: 5164G7).
- (F) It is the responsibility of the applicant to obtain an approved Traffic Control Plan (TPC) for all major roadways from the Montgomery County Department of Transportation (MCDOT) when required by these specifications. See *UTILITY WORK ZONE TRAFFIC CONTROL REQUIREMENTS* on page 20 for more information.

Whenever non-scaled plans are submitted, dimensions must be provided showing references to (1) right of way/property line (2) edge of pavement or back of curb and gutter, and (3) storm drain structures, including the pipe line. ***Emergency repairs are always exempt from this requirement.** Revisions must be resubmitted with application, the previous MCDPS comments, and a brief written response explaining how those comments have been addressed.

***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.**

- 4. One residential house service connections, on one block 250 feet or less, performed by the WSSC for domestic water supply and sanitary sewer, routine maintenance operations, and utility maintenance involving excavation and/or roadway cuts that do not involve utility pole replacement shall typically be exempt from the requirements set forth in Item 3 above. Since maintenance such as cleaning and lining of water mains causes disruption to the community as well as extensive repairs, this type of maintenance does not qualify for the exemption. Should the proposed utility activity be located within a Central Business District (CBD), or an existing streetscape area, plan submittals and

permit applications will be necessary to establish appropriate vehicular and/or pedestrian control notes. All utility construction activities must conform to the traffic control requirements, methods of construction, and pavement patches in order to satisfy those specifications included in this document.

5. In compliance with the Maryland Department of Transportation, State Highway Administration (MSHA) Policy for Utility Cuts, a moratorium of five (5) years prior to cutting pavement (i.e., sidewalks, bike paths, driveways, roadways) is placed on all newly constructed roadways. A moratorium of three (3) years is placed upon overlay and/or reconstruction projects. The time is measured from the date of street acceptance for the five (5) year moratorium and the date of Highway Maintenance residential and mainline overlay notice for the three (3) year moratorium. **Emergency utility repairs are exempt from this item.** For exemption of this requirement provide three (3) possible alternatives for realignments and cost estimates for each. Our intent for the moratoriums is an attempt to maintain the integrity/Pavement Serviceability Rating (PSR) of these newly constructed or refurbished roadways. Service connections to new dwellings or businesses can be accommodated with the requirements of milling and overlay. However, mainline installations within these roadways are not acceptable.

Furthermore, we urge the utility companies and the WSSC to assure their mainline work is designed in order to accommodate future extension without disturbing existing paving. Only when no alternative is available then utility cuts will be permitted under the conditions of Mill and Overlay specifications on page 12.

6. It shall be the responsibility of the permittee, with the exception of WSSC, to utilize the Public Utility Easement (PUE) whenever it exists*. Placing obstructions within these easements is the responsibility of the public utility companies. All underground utilities (with the exception of water and sewer) and associated above ground facilities such as pedestals, transformers, handhole boxes, etc., need to be placed within the Public Utility Easements (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 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 interest.

7. 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 exemption is granted by the MCDPS:

- (1) No trees are to be removed without Montgomery County approval. Contact the MCDOT Division of Highway Services to coordinate with a County Arborist for site inspection.
 - (2) Tree pruning, if required, shall be kept to a minimum and done under the supervision of a licensed Landscape Architect or Forester who is familiar with the goals and intent of the County's Rustic Roads Program.
 - (3) The standard utility pavement patch should be used, except that the surface material should match as closely as possible, the surface of existing road.
8. The Permit for individual projects 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 Right of Way Inspector in the event of conflict(s) with previously approved permits or emergency activities.
9. Utility companies or individuals must obtain a Roadside Tree Permit from the Maryland Department of Natural Resources Forest Service (MD-DNR) prior to trimming, cutting or removing any roadside tree that grows all or in part within the public right-of-way. 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, for any trees located within Montgomery County public rights of way, contact the MCDOT Division of Highway Services to coordinate with the Tree Maintenance Section for site inspection at 240-777-6000.

More information about roadside trees is available at MD-DNR Forest Service website and the Montgomery County website at:

www.dnr.state.md.us/forests/

www.montgomerycountymd.gov

SPECIFICATIONS

1. No construction shall begin until all rights of way have been acquired and properly recorded among the Land Records of the County. The permittee shall secure necessary easements from the adjacent property owners to allow cut or fill slopes (STD. MC-811.01) outside of dedication. *WORK IN THE PUBLIC RIGHT OF WAY COVERED BY THIS PERMIT SHALL NOT BEGIN UNTIL RECORD PLATS HAVE BEEN RECORDED. IT SHALL BE THE RESPONSIBILITY OF THE PERMITTEE TO MAKE THIS DETERMINATION.* In cases where the County has only a 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. The MCDPS, Right of Way Inspection Section, must be notified at least forty eight (48) hours prior to the start of work by calling the Inspector noted on the permit or 240-777-6300. Permittees may e-mail inspection requests with prior approval of the Manager of the MCDPS Right of Way Inspection Section. *IN THE EVENT OF ANY EMERGENCY, THE PERMITTEE SHALL NOTIFY THE INSPECTION SECTION IMMEDIATELY. ADVISE THE MCDPS RIGHT OF WAY INSPECTION SECTION PRIOR TO STARTING WORK IF THE SITE RESTORATION HAS BEEN LEFT UNDESIRABLE BY A PREVIOUS UTILITY.*

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 240-777-6300 before 12:00 noon on the last working day preceding the requested inspection day or as mutually agreed with the Right of Way Inspection Section. Inspections are scheduled on a "first come, first served" basis up to the maximum inspections available based on staffing limits and charged a fee all accordance Montgomery County Executive Regulation 9-08.

Pre-Construction Meeting with the MCDPS Right of Way Inspector is required.

It is in the best interest of the permittee to conduct a pre-construction meeting with the MCDPS Right-of-Way Inspector prior to beginning work. If site conditions reveal previous utility cuts; deteriorated pavement or other unusual conditions that may require mill and overlay, these situations can be discussed and resolved prior to beginning work. Utility companies and their contractors must display their names and telephone numbers on site while 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.

3. The work, materials, plans and specifications shall be available at all times for inspection by the MCDPS Right of Way Inspector. Approval of the compacted soil backfill will be based on one of two methods. Soil backfill shall be compacted to minimum 95% of maximum dry density based upon AASHTO T-99, Method 'C' or at the Engineer's discretion until all lateral displacement and rutting has ceased when the area is subjected to appropriate construction traffic (equipment, loaded tandem dump truck, etc.). Subgrade material within the top one (1) foot of the roadway shall be compacted to 100% of maximum dry density based upon AASHTO T-99, Method 'C' or, at the Engineer's discretion, until all lateral displacement and rutting has ceased when the

area is subjected to appropriate construction traffic (equipment, loaded tandem dump truck, etc.). In addition, subgrade shall comply with the following: Liquid Limit not to exceed 40 and Plasticity Index not to exceed 12. The maximum dry weight shall not be less than 105 pounds per cubic foot as determined by AASHTO T-99, Method 'C'. Select Borrow shall be crushed stone or Bank Run Gravel meeting the current MSHA Specifications. Material will be compacted to minimum 95% of maximum dry density based on AASHTO T-180, Method 'D'.

4. **Traffic (both vehicular and pedestrian) must be maintained through all phases of construction.** Refer to the attached Utility Work Zone Traffic Control Requirements on page 20. Site controls (other than those specified within the Utility Work Zone Traffic Control Requirements) must be in accordance with the MCDOT Work Zone Temporary Traffic Control Standards.

If closure of a sidewalk is required as part of the construction activities, a Traffic Control Plan (TCP) 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.

5. Whenever utility poles are replaced or relocated, these poles need to be placed at the property line or to the maximum distance from the roadway. Minimum distances preferred are six feet behind the curb and gutter 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. Utility poles shall maintain a two (2) feet clearance from sidewalks. 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 should 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 from the intersection or truncation of new subdivision entrances. Additionally, utility poles must maintain a five (5) foot clearance from the outside edge of driveway entrances. Whenever a new utility pole is installed to replace an existing pole, the old pole or "stub" must be removed within one month prior to project completion. It is the permittee's responsibility to insure other utility companies "sharing" a utility pole relocate their facilities in a timely manner so that the old pole or "stub" is removed within the time frame as stated above. Exemptions and modifications to the above must be approved by MCDPS prior to construction.
6. **Roadway bores shall be at least 36 inches beneath base thickness of Bituminous or Portland-Cement pavements to the top of the bore.** Pneumatic punching is acceptable; however, this may be rescinded at any time by the MCDPS Right of Way Permitting and Plan Review Section if there is evidence of pavement damage as a result of this operation. Roadway bores are not an alternative to the 5 year/3 year No Pavement Cut moratoriums if test pits in the pavement are required unless permissions granted by MCDPS.
7. All conventional excavations in the paved section of roadway must be backfilled and capped with bituminous concrete cold mix or steel plated at the end of the work day and the roadway re-opened to its full cross-section. Excavations in existing paved roadways

utilizing the "keyhole" excavation method shall be in accordance with Item 15 of these specifications. Whenever steel plates are used to cover an excavation on a primary or arterial right-of-way (right-of-way widths 70 feet or greater), the steel plates must be inlaid or recessed into the pavement adjacent to the trench. When steel plates are inlaid 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. Bituminous concrete cold mix must be tapered from the height of the steel plate to the existing road surface for a minimum distance of one foot (1'). 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 at the end of the work day. Only at the discretion of the MCDPS Right of Way 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.

The permittee must have a Traffic Manager who will supervise the site within the traveled roadway in accordance with the MCDOT Work Zone Temporary Traffic Control Standards and Section 104.18 of the Maryland Department of Transportation State Highway Administration Specifications for Construction and Materials. This employee will need to have authorization to call in repair crews if needed. At the required preconstruction meeting, the Traffic Manager's name and emergency contact number(s) shall be provided to DPS ROW inspector and the information shall be promptly updated throughout the duration of the project to the inspector.

Advance "STEEL PLATE AHEAD" warning signs (MSHA Design W21-9) shall be properly posted and maintained as 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. Also, between November 1 and April 15, the MCDOT, Division of Highway Services, must be notified at **(240) 777-ROAD** forty-eight (48) hours in advance of the placement of steel plates and again when the steel plate(s) is(are) removed. Steel plates shall not remain in the roadway for over seven (7) calendar days without prior permission by the MCDPS Right of Way Inspection Section.

The utility company, applicant or permittee shall be responsible for any damages or injuries which may occur as a result of the plates being placed in the roadway. The utility company, applicant or permittee shall also be responsible to maintain the installation in a proper condition and must reimburse to the County any cost for emergency repairs.

8. 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. Failure to comply with these regulations shall be considered a violation of the County Code and the permittee will be subject to the penalty(ies) as indicated in Chapters 1, 19 and/or 49 of the Montgomery County Code.
9. Property owners must be notified prior to crossing existing entrances. Accessibilities of driveways must be maintained between the hours of 3:00pm and 9:00am and all other times whenever possible. The MCDPS Right of Way Inspector shall be notified of damaged driveways.

The following procedure shall apply:

- (A) Damaged asphalt driveways shall be sawcut a minimum one 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") MSHA Mix #2 concrete upon properly compacted subgrade.
 - (C) The MCDPS Inspector shall be notified prior to commencement and upon completion of driveway repairs.
10. If permanent patch is scheduled within a week, cold patch may be used. Otherwise proper temporary patching of conventional excavations, using hot mix asphalt, a minimum of six (6) inches thick, shall be made immediately upon the completion of backfilling. ***Irregardless to the type of temporary patching use, 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 shut down 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 needs to be completed at this time also. Bituminous surface course shall be placed between 48 and 72 hours after the base paving has been placed. All work shall comply with the approved Traffic Control Plan (TCP).
 11. When repairing trench cuts, all work will be in conformance with MCDOT Standard No. MC-801.01, MC-801.02 and MC-801.03. All trench and "keyhole" cuts must include a permanent cast iron marker approximately 3" x 4" embedded in the surface course of the trench patch. This cast iron marker shall bear the initials of the utility company performing said pavement cut and be secured in the pavement by two prongs approximately 1-3/4" x 1/4" in diameter. Temporary patches shall be marked with a paint

stencil using letters four inches (4") high and identified with the appropriate Miss Utility color.

12. Manholes, inlets, valves and temporary water lines in a roadway that extend more than $\frac{1}{4}$ 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 Right of Way Inspector.

13. **PATCH IN RIGID PAVEMENTS 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") 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.
 - (1) 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) No. 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.
 - (2) 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). No. 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.
 - (3) 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). No. 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.

- (4) Where the existing concrete is broken, the MCDPS Right of Way Inspector may require the removal of the concrete to the nearest joint.
 - (5) 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.

**14. 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) 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.
- (C) 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.
- (D) MCDPS will allow the use of "infrared heat treatment" for utility patches when approved in advance by the MCDPS Right-of-Way Inspector.
- (E) Less than three 3 feet (3') patching in any direction of trench cuts shall be approved in advance. Approval will be based on the width of the compaction equipment. Patches, less than three (3) foot square, shall consist of a patch using an approved Polymized High Performance Asphalt.
- (F) Asphalt driveway restoration shall include removal and restoration of the surface asphalt pavement from the edge of trench cut to the edge of the mainline roadway.

15. "KEYHOLE" EXCAVATION AND RESTORATION

“Keyhole” excavation and pavement restoration consists of coring the existing pavement to excavate and perform the required utility operation and then restoring the pavement. The “keyhole” technique minimizes pavement excavation by coring small excavation openings of 12 to 18 inches in diameter through existing pavement. Typically, the operation consists of two vehicles; a truck mounted coring machine and a vacuum truck. The need for other conventional equipment such as backhoes and dump trucks is eliminated. Once the pavement has been cored, high-pressure air tools are used to cut the soil in the excavation below the pavement allowing the vacuum truck to remove the soil. Once the excavation and the work is complete and backfill placed, the removed pavement core is grouted back in place with an approved bonding agent (grout).

- (A) “Keyhole” pavement coring shall be performed with equipment designed for this purpose.
- (B) Once the pavement has been cored, and prior to excavation, a metal template shall be placed over the cored hole to minimize damage to the pavement edge of the cored hole.
- (C) “Keyhole” soil excavation shall be performed using vacuum excavator tools and equipment through the cored pavement opening.
- (D) Backfill material shall be select borrow meeting the requirements of in paragraph 3 of these specifications. Compaction of the backfill material shall be in accordance with paragraphs 3 and 14, as applicable, of these specifications.
- (E) 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.
- (F) 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 on page 21 of these Specifications.
 - The cored pavement section shall be set centered in hole, plumb and flush with the adjacent the road surface. The grout used in core replacement shall be placed under the core to insure proper leveling of the core. During core installation, the grout should flow upward to the road surface through the core side (saw kerf) and pilot hole to insure proper grouting around the core. Bonding agent should flow uniformly around the core. Excess grout shall be removed and the street surface cleaned after grouting in accordance with the requirements of Specification 8.

The grout shall be allowed to set per manufacturer’s instructions prior to

opening the street to traffic. Traffic control will be maintained per Specification 4.

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

17. **MILL AND OVERLAY**

A 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 two inch (2") mill and surface overlay is required for all major repairs, arterial or higher classified roadways, and lower classified roadways if so specified.

Mill and overlay shall also be required in the following circumstances:

- (A) Whenever two transverse patches are located within two hundred (200) feet of one another.

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.

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 (200) feet on the same lane.

- (B) Longitudinal cuts on primary or higher classified roadways and closed section roadways.

Lower classified roadways will be determined on a case by case basis.

When a pavement is in poor condition, a written request to MCDPS for the waiver of this requirement is required. MCDPS shall make the final the decision as to whether a waiver of this requirement will be granted.

Diagonal cuts shall be considered as longitudinal cuts and comply with the requirements for longitudinal cuts.

- (C) Whenever a patch's geometry is non-standard, mill and overlay requirements will be determined on an individual basis by MCDPS.

If pavement cuts are necessary on newly constructed or refurbished roadways within the moratorium period as specified under Submittal Standard 5, page 3, and no alternative is available, such cuts will be permitted and require mill and overlay in

accordance with the requirements (A), (B) and (C) above.

All mill and overlay operations shall comply with the following.

- The mill and overlay will commence a minimum of two feet (2') beyond the outer limits of each utility patch in pavement.
- Each utility company installing a patch must install their company medallion within the patch (see Specification 11). 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. However, MCDPS will keep a record of the patches and inform the utility companies of being the first or the second (requiring mill & overlay) utility company to cut the pavement.
- 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 18 inches is required on all pavement overlays.

18. **MAJOR REPAIR**

- (A) Representatives from the utility agency and the 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 Right of Way 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.

19. **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 Right of Way 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 must be used to backfill the excavation around the appurtenance to the limit of subgrade.
 - (D) Where the existing roadway has a bituminous concrete surface, a six inch (6") concrete patch shall be placed two inches (2") below the surface and topped with a bituminous concrete surface course.
 - (F) Where the existing surface is concrete, the patch shall be the same thickness as the existing pavement and shall be made with MSHA - Mix #6 meeting the requirements of Sections 522.02 and 902.10.03 of the current MSHA Standards and Specifications for Construction and Materials.
 - (F) Any patches which require utility box adjustment shall be patched according to MCDOT Standard. 801.03.
20. Upon notification from the 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.*
21. Complete repair and restoration of the right of way must be made to any and all damages 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 respectively 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 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 with sod or matting for a minimum one foot (1') 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.

22. **PERMIT ACCEPTANCE AND RELEASE**

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

The permittee's failure to contact the MCDPS Right of Way Inspector upon completion of any utility work will result in the RIGHT-OF-WAY CONSTRUCTION PERMIT remaining in an active status and may subject the permittee to additional right of way restoration requirements.

Telecommunications companies (including companies providing telephone, internet, information, or data service) and cable TV (CATV) must furnish to the County as-built drawings as specified in their franchise agreement. These as-built drawings shall be submitted to MCDPS in both hard copy (one copy) and in an acceptable electronic format (see below). As-built drawings must contain a full set of drawings showing, in detail, the exact location of their facilities installed within the public right of way.

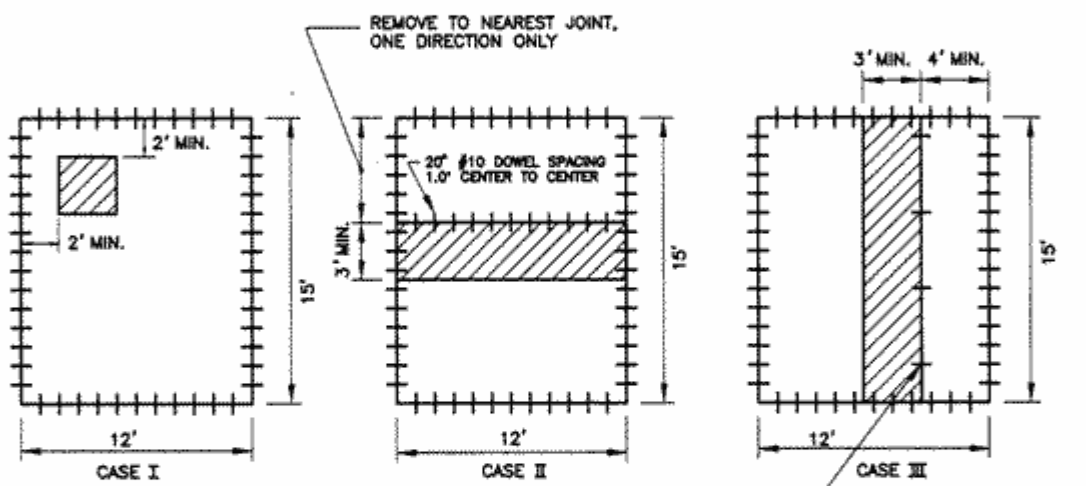
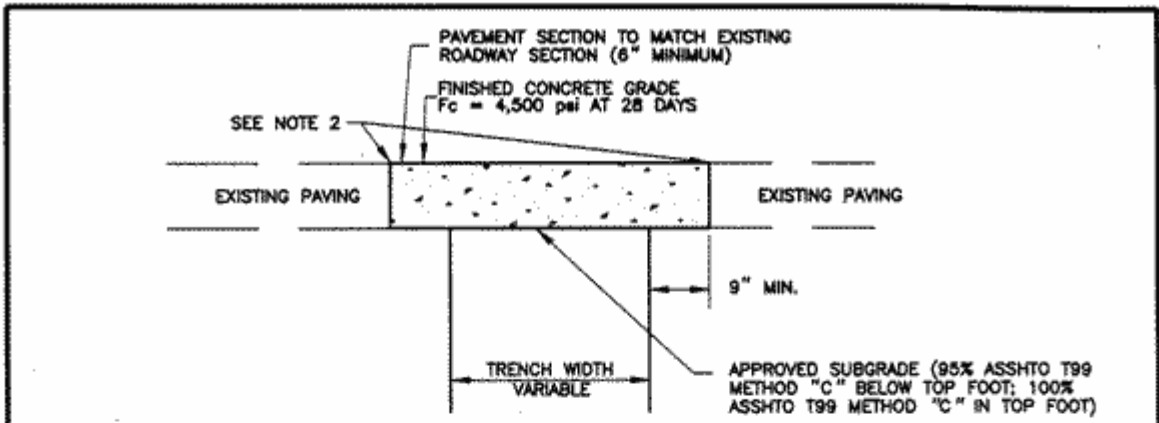
Note: *Acceptable electronic formats are, in order of preference, are: (1) GIS shapefile; (2) AutoCAD DWG; and, (3) AutoCAD DXF.*

23. The County assumes no responsibility for any suits or actions arising from the performance of work designated in the permit.
24. The minimum depth of cover over buried Cable TV conduit, telecommunication cables, and electrical cables is 18 inches within the right of way. Other utility companies, such as WSSC which requires 3.5 to 4 feet minimum depth, may require more stringent depth cover requirement.
25. In accordance with Federal Regulations (49CFR, Section 192.327) a minimum of 36 inches of cover is required over all gas mains.
26. 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.
27. 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 Right of Way Inspector.
28. No materials or equipment shall be stored in the roadway, without prior approval and authorization by MCDPS Right of Way Inspector.
29. Utility companies and their contractors must display their names and telephone numbers on site while working in the public right of way and shall have a copy of the permit and approved construction and traffic control plans on site at all times.

30. When Speed humps are affected by any pavement cuts, the entire hump shall be removed and replaced in accordance with the current *MCDPS Guideline* unless directed otherwise by the MCDPS Right of Way Inspector.
31. It is the responsibility of each permittee and/or utility company to obtain all necessary permits, including those required by the WSSC and/or MSHA prior to the start of work.
32. Failure to comply with these specifications and the requirements herein may result in the immediate revocation of the *RIGHT-OF-WAY CONSTRUCTION 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, the MCDPS will issue verification that the permit has been reinstated.

33. 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 *Manual on Uniform Traffic Control Devices* (MUTCD), latest edition and addendums as issued thereto, the MSHA Book of Standards, latest edition and addendums as issued thereto, MCDOT's Work Zone Temporary Traffic Control Standards, latest edition and addendums as issued thereto or the permittee's failure to comply with these requirements and specifications.



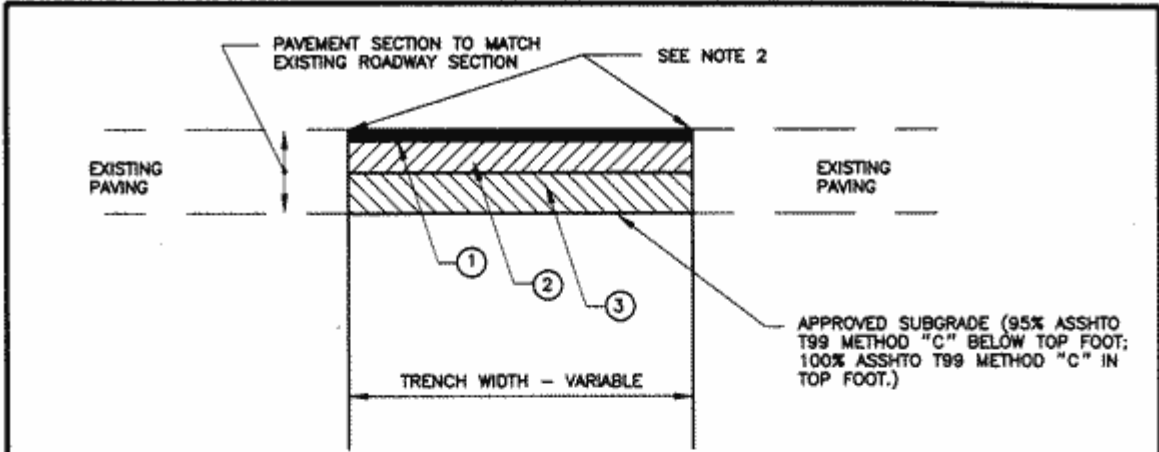
NOTE:
ALL EXISTING TIE DEVICES ARE TO BE UTILIZED,
OR REPLACED IF DAMAGED.

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.

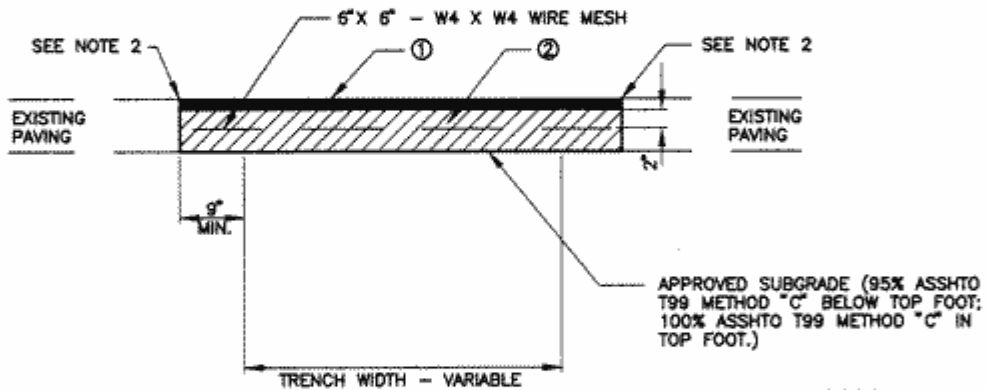
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APPROVED <u>JAN 5/96</u> DATE	REVISED	MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION
<i>[Signature]</i> DIRECTOR, DEPT. OF TRANS.		UTILITY PATCH IN RIGID PAVEMENT
<i>[Signature]</i> CHIEF, DIV. OF ENG. SERVICES		STANDARD NO. MC-801.01



- 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.

11/28/00 08:51 EST
 6-24-94
 P:\BETSTV\MC80102

APPROVED JAN 5/96
DATE

Edy Motes
DIRECTOR, DEPT. OF TRANS.

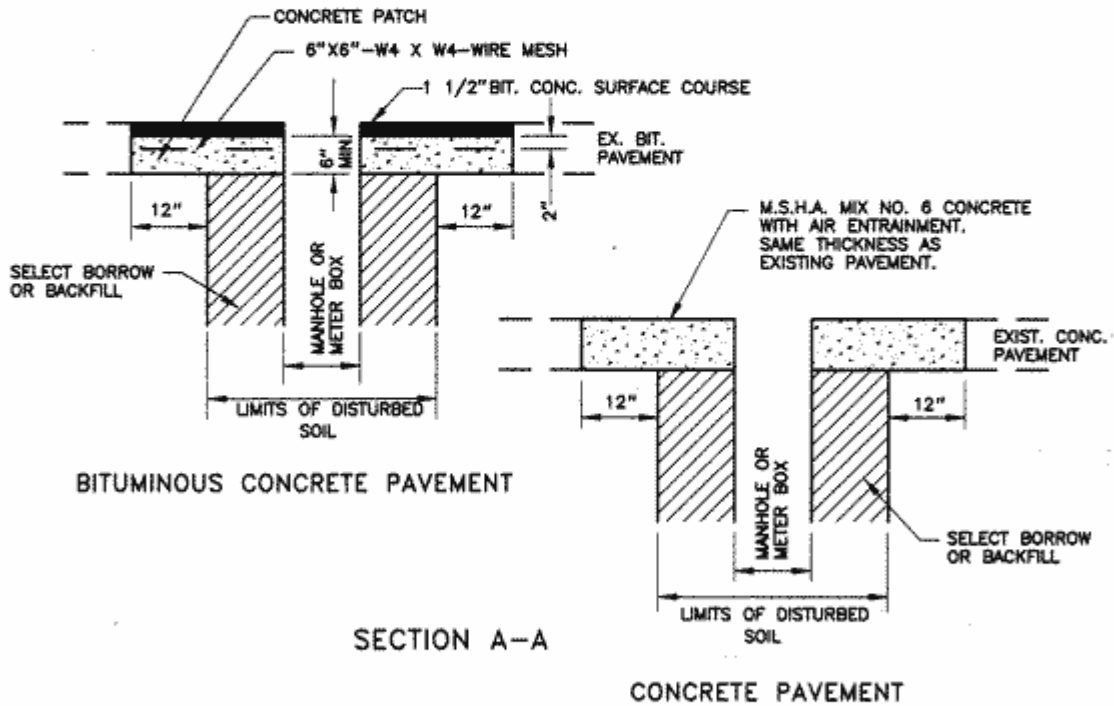
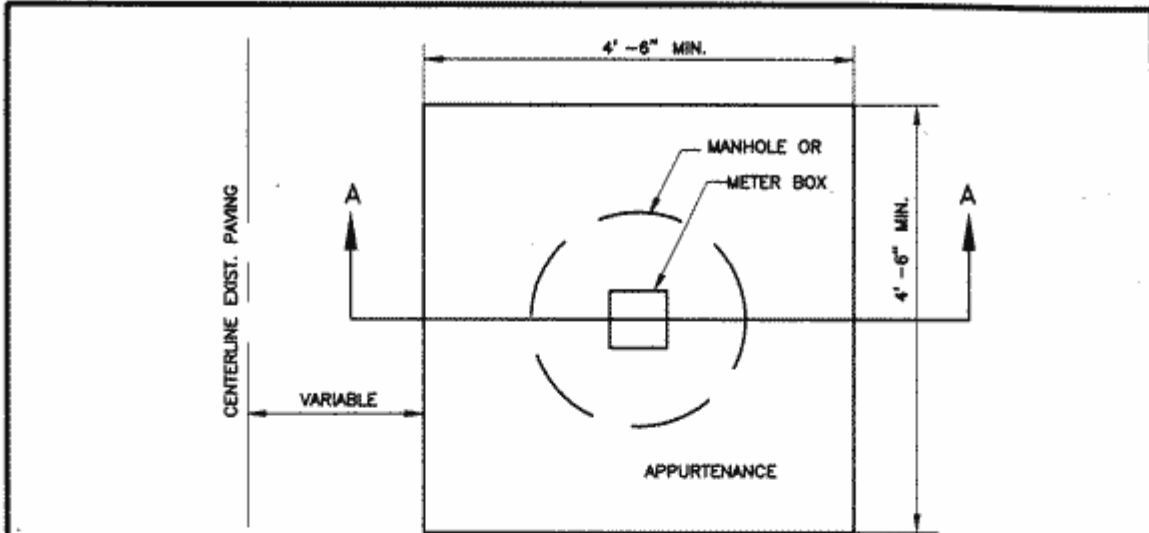
Edy Motes
CHIEF, DIV. OF ENG. SERVICES

REVISED

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION

UTILITY PATCH
IN FLEXIBLE PAVEMENT

STANDARD NO. MC-801.02



PA 1001575D\MC801.03 6-24-94 11:39:45 am EST

APPROVED <u>JAN 5 / 96</u> DATE <i>[Signature]</i> DIRECTOR, DEPT. OF TRANS. <i>[Signature]</i> 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 controls to protect the motorist, 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 placed prior to construction or placing any equipment or materials on site

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

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

The Division of Traffic Engineering and Operations may consider waiving the requirements if it is determined the roadway is under utilized or if the work activity would not seriously affect traffic. This waiver can be secured by verbal or written request to Division of Traffic Engineering and Operations, 240-777-2190, 101 Orchard Ridge Dr., 2nd floor, Gaithersburg, Md., 20878.

The site specific TCP 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 TCP shall identify the proposed work zone and staging areas. The TCP 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 TCP must conform with the provisions set forth in the most recent editions of the 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 TCP 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 3:30 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 (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 EXCAVATION An excavation made through existing pavement utilizing conventional equipment such as jackhammers, pavement saws, and 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 Street 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% if 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 pound per cubic foot as determined by AASHTO T-99, Method C and shall be compacted to 100% of maximum dry density.

TCP Traffic Control Plan.

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

APPENDIX

- **MISS UTILITY INFORMATION**
- **UTILITY CONSTRUCTION PERMIT APPLICATION**
- **ACKNOWLEDGEMENT FORM**

NOTIFY 'MISS UTILITY'

AT

1-800-257-7777

48 HOURS PRIOR TO BEGINNING SITE WORK

More information is available at

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



Montgomery County Maryland
Department of Permitting Services

255 Rockville Pike, 2nd Floor
Rockville, Maryland 20850-4153
(240) 777-6300 Fax (240) 777-6339
<http://montgomerycountymd.gov/permittingservices>



Application for Utility Construction Permit

UTILITY AP# _____

UTILITY COMPANY NAME: _____ MCDPS Contact I.D.# _____

UTILITY COMPANY PLAN/I.D. No. _____

STREET NAME(S): _____

SUBDIVISION NAME: _____

DESCRIPTION OF WORK: _____

No Pavement Cuts Pavement Cut (Trenching/Test Pits) Directional Boring Aerial

Calendar

DURATION OF WORK: _____ Days ANTICIPATED STARTING DATE: _____

UTILITY CO. FIELD REPRESENTATIVE: _____ PHONE: _____

PURPOSE OF REQUEST:

- New Utility Construction
- Utility Relocation
- Utility Maintenance/Abandonment
- House Connection(s)

TRAFFIC NOTES/TRAFFIC CONTROL PLAN STATUS:

- Standard TCP (Rights of Way less than 80 feet wide)
- Approved TCP (Attach MCDOT approved TCP)
- Site Specific TCP: Submitted to MCDOT; Date - _____
 Please submit to MCDOT for Review & Approval
- Sidewalk Closure: 15 Days or Less Greater Than 15 Days

Other (Specify): _____

RUSTIC ROAD

Implementation of the Rustic Road Program compels the applicant/permittee to install the proposed utility in a manner to minimize the impact upon those characteristics which make the roadway classified as Rustic.

REPLACEMENT AND/OR RESTORATION OF BRICK PAVERS INVOLVED

▶▶ Contact the Mont. Co. Dept. of Transportation, Division of Traffic Engineering and Operations @ 240-777-2190 to coordinate work.

The proposed work shall be performed in accordance with the conditions of this permit, subject to the provisions of the Montgomery County Road Construction Code, Standards, Specifications, Inspection and Control of the Director of the Montgomery County Department of Permitting Services. I declare and affirm, under penalty of perjury, that to the best of my knowledge, information and belief all matters and facts in this application are correct.

**APPLICANT'S NAME/
UTILITY
REPRESENTATIVE:**

Printed Name

Phone and Fax No.

Signature

Date