UTILITY PERMIT GENERAL PROVISIONS
Effective January 1, 2026

01.01 DESCRIPTION. The Maryland Department of Transportation State Highway Administration (MDOT SHA) issues Utility Permits to only those companies, local governments, and municipalities that have been approved by the MDOT SHA as an Authorized Public Utility. The Permittee shall not perform any work within MDOT SHA rights-of-ways without a Complete Authorized Utility Permit for each location as per § 8-646 of the Transportation Articles of the Annotated Code of Maryland. The MDOT SHA issues Utility Permits in two (2) parts which, when combined, comprise a Complete Authorized Utility Permit. (hereinafter referred to as Complete Authorized Utility Permit).

01.01.01 Part 1–Utility Permit General Provisions.

(a) These Utility Permit General Provisions contain the general requirements, conditions, procedures, and contact information required for all communications of activities performed within MDOT SHA right-of-way (ROW).

(b) The Permittee shall download, sign, date, and return (to the appropriate District Office) the Utility Permit General Provisions Acknowledgement Form acknowledging the Permittee's acceptance to abide by the Utility Permit General Provisions' terms and conditions.

01.01.02 Part 2–Individual Work Order Permits.

(a) Utility Construction Permits, Utility Relocation Permits (for MDOT SHA projects), Utility Blanket Permits, and Utility Permit Extensions, hereinafter referred to Individual Work Order Permits, grants the Permittee permission to perform limited work within various MDOT SHA ROW when combined with these Utility Permit General Provisions.

(1) **Utility Construction Permits** are issued for the installation, construction, and relocation; significant removal, replacement, or adjustment; and **major maintenance** of utility infrastructure as needed and requested by the Permittee.

Major Maintenance is any maintenance that is beyond the normal, routine upkeep of the facility; beyond cyclical or planned maintenance; new service installations; any activity requiring excavations except in emergency situations; and the removal or replacement of poles. Major maintenance activities include any scheduled preventative maintenance involving excavations except in emergency situations, including test pitting in non-emergency situations, and require a Utility Construction Permit.

(2) **Utility Relocation Permits** are issued for the installation, construction, removal, relocation, replacement and adjustment of utility infrastructure as required by the MDOT SHA. Utility Relocation Permits are issued specifically in connection with MDOT SHA projects.

(3) **Utility Blanket Permits** are issued for **minor maintenance** of utility infrastructure and utility work required **in emergency situations**. A Utility Blanket Permit is issued biennially from the appropriate districts for emergencies and minor maintenance activities, so the Permittee would not need to submit numerous individual site-specific Utility Permit Application Packages; however, this does not exempt the Permittee from obtaining required Traffic Control Permits in non-emergency situations.

Minor Maintenance is maintenance required to keep an existing utility facility in a good state of repair without adding to its physical makeup or changing its physical capacity. **Minor Maintenance** activities are routine, low in cost, straightforward, and expedient to correct which are normally accomplished as part of the annual operation and maintenance. Such activities covered in the Utility Blanket Permit would include existing customer service work, overhead work and pole attachments, lighting repairs, and splicing cables or other work in existing manholes/structures and vaults. Tree trimming activities required to access and maintain the Permittee's facilities are also covered in the Utility Blanket Permit. The following Minor Maintenance work will require a Utility Permit if any excavations are needed, if the contractor is required to submit a Miss Utility Ticket or any utility pole upgrades, removals and /or changes to existing pole alignments.

Emergency is a situation resulting from a sudden, unexpected event or incident which presents a clear and imminent danger requiring immediate action to prevent or mitigate loss or damage to life, health, property or essential public services (including interruption of utility services). Emergency work is any activity, including roadway excavation, to make necessary temporary and permanent repairs to existing or potential unsafe conditions; and includes any work associated with the Emergency, thereafter, including roadway excavation, to temporarily and permanently repair/restore essential public services and property, including MDOT SHA rights-of-ways. Emergency work is covered in the Utility Blanket Permit.

(4) **Utility Permit Extensions** are issued for the extension of previously issued Utility Construction Permits and/or Utility Relocation Permits when the proposed utility work will not be completed by the expiration date of said permits. Utility Permit Extensions apply to only Utility Construction Permits and Utility Relocation Permits.

Utility Blanket Permits shall require the issuance of a new permit upon their expiration.

(b) Individual Work Order Permits are issued by the appropriate district office under the signature of the District Engineer (or their approved designee).

(c) **Part 1 and Part 2 combined.** The Permittee shall attach both parts of the Utility Permit together in order to constitute a Complete Authorized Utility Permit prior to beginning any work within the MDOT SHA's ROW.

01.01.03 Utility Access. Individual Work Order Permits alone or the Utility Permit General Provisions alone DOES NOT grant permission to the Permittee to work within the MDOT SHA ROW. Only a Complete Authorized Utility Permit grants permission to the

Permittee access to the MDOT SHA ROW to perform the Permittee's work in accordance with and as defined in the Complete Authorized Utility Permit.

01.02 MATERIALS. Not Applicable.

01.03 CONSTRUCTION.

01.03.01 GENERAL CONDITIONS.

(a) **Acceptance of terms and specifications**. It is agreed and understood that the issuance of any Complete Authorized Utility Permit will be construed to indicate complete acceptance of the terms and specifications outlined herein.

(b) **Work**. All work shall be performed in accordance with the provisions of any Complete Authorized Utility Permit.

(c) **Right to modify**. In the event of a safety concern, differing site conditions, design errors or omissions, restoration concerns, changes in laws, regulations or requirements, or any other unforeseen changes or issue which might affect any permit or permit provision, the MDOT SHA reserves the right to modify any permit or permit provision at any time to ensure safety, compliance, and restoration is acceptable to the MDOT SHA Standard Specifications. The Permittee will first be provided the opportunity to demonstrate its compliance with the permit or address the modification before any permit, or permit provision, is modified.

(d) **Unsafe operations**. In the event the MDOT SHA determines that any operation is detrimental to the safe operation of the (State) highway system, the MDOT SHA will notify the Permittee. The Permittee shall suspend its operation(s) and then work with the MDOT SHA in good faith to determine if and/or how the Permittee's operation(s) can be continued or resumed in a manner that is not detrimental to the safe operation of the (State) highway system. If the Permittee's operation(s) cannot be continued or resumed in a manner that is of a safe operation of the (State) highway system, the MDOT SHA reserves the right to halt the Permittee's operation(s).

(e) **Right to revoke**. In the event the Permittee's fails to comply with the terms of a Complete Authorized Utility Permit, the MDOT SHA will notify the Permittee of its non-compliance. The Permittee will then be provided the opportunity to cure its non-compliance before any permit, or permit provision, is modified or revoked. If the Permittee fails to cure its non-compliance, the MDOT SHA reserves the right to revoke the Complete Authorized Utility Permit.

(f) **Permission**. Permission, when granted, to place utility facilities within the limits of MDOT SHA ROW is revocable at any time by the MDOT SHA. Any such revocation will have no bearing on any other facility of the Permittee under a franchise authorized under the Annotated Code of Maryland, Public Utilities Article.

(g) **Complete Authorized Utility Permit-job site**. A copy of the Complete Authorized Utility Permit must be on the job site at all times during the performance of all work identified in the Individual Work Order Permits in order that the Permittee's personnel and/or the Permittee's contractor is in a position to comply with the requirements of the Complete Authorized Utility Permit. The Procurement Officer shall have the option of stopping work on MDOT SHA projects where the Permittee's representative does not

have a copy of the Complete Authorized Utility Permit on the job site and/or is not familiar with the contents of the permit.

(h) **Property interest**. Permits issued by the MDOT SHA do not convey any property interest to the Permittee or to any successor of the Permittee.

(i) **Future road improvements**. In the event future road improvements require the relocation, adjustment, and/or removal of facilities installed under any Complete Authorized Utility Permit, all costs associated with the relocation, adjustment, and/or removal of said facilities shall be borne by the Permittee.

(j) **Non-compliance**. In the event that the Federal Highway Administration (FHWA) or any other federal authority with jurisdiction over the subject matter determines that a specific use of the MDOT SHA ROW (or the terms of such use) noncompliant with applicable federal authority, the MDOT SHA shall have the right to direct the Permittee to take the necessary actions to bring any such use (or the terms of such use) into compliance with the applicable federal authority without assuming the liability of any user/Permittee of such ROW. The Permittee will be provided with information on the authority's determination. The Permittee shall provide maximum cooperation to the MDOT SHA and any such Federal authority to assure prompt compliance is achieved.

(k) **Hold harmless and insurance requirements**. Hold Harmless, Indemnification, and Insurance provisions (as required by Section GP-7.13 of the most current "MDOT SHA Standard Specifications for Construction and Materials, as may be revised from time to time) are hereby required of the Permittee. The Permittee covenants and agrees to require all contractors and subcontractors or other parties that the Permittee uses to perform work within any MDOT SHA rights-of-way, including both MDOT SHA controlled access rights-of-way and MDOT SHA secondary roads (collectively, "ROW") to abide by the same provisions and requirements. The State of Maryland, the Maryland Department of Transportation and the State Highway Administration ("MDOT SHA") must be listed as additional named insureds on all insurance policies. Self-Insured companies may provide a self-insurance letter. Certificates and letters of self-insurance must be mailed to the State Highway Administration, Attn. Statewide Utility Engineer, Office of Construction, 7450 Traffic Drive, Hanover, MD 21076 prior to the commencement of any work within MDOT SHA ROW.

(l) **Liability requirements**. The Permittee shall be responsible for, defend (at the State's option), indemnify, and hold harmless the State of Maryland, MDOT, and MDOT SHA, their respective members, officers, agents, and employees, against and from any and all liability or claim of liability for bodily injury (including death) or property damage (including reasonable attorneys' fees) related to involving or arising, in whole or in part from any act or failure to act or out of the use, occupancy, conduct, or operation, construction, maintenance, or management of or upon any portion of state rights-of-way (as approved and authorized in the Complete Authorized Utility Permit) by the Permittee, its principals, contractors, employees, agents, licensees, lessees, or invitees in accordance with the most current GP-7.13 RESPONSIBILITY FOR DAMAGE CLAIMS, Standard Specifications For Construction And Materials, including, by way of example only: (a) any work or thing whatsoever done or not done on state rights-of-way (as approved and authorized in any Complete Authorized Utility Permit) by or on behalf of the Permittee;

or (b) any breach, default, or Event of Default by the Permittee in performing any of its obligations under the provisions of these Utility Permit General Provisions, Individual Work Order Permits, or applicable law. The Permittee agrees that the indemnification as described in this Section shall include any liability or claim of liability that occurs during the Term (or that occurs after the Term where the Permittee has obligations under any Complete Authorized Utility Permit that remain following the expiration or termination of the Term), even if the injury does not become apparent or does not manifest itself until after expiration of any Complete Authorized Utility Permit. In no event shall the mention of "any portion of state rights-of-ways" within this Section be interpreted to grant the Permittee rights to use portions of state rights-of-ways other than those expressly approved by the State on any Complete Authorized Utility Permit, nor shall any mention of "licensees" or "lessees" in this Section be interpreted to allow the Permittee to assign or otherwise transfer any rights or obligations it has under any Complete Authorized Utility Permit.

(m) **No waiver of immunity**. Nothing in any Complete Authorized Utility Permit shall constitute a waiver of any immunity to which the State of Maryland, MDOT, or MDOT SHA may be entitled under any federal law or under the laws of the State of Maryland, as they may be amended from time to time.

(n) **Compliance with laws and regulations**. The Permittee shall comply with all Federal, State, and local laws, regulations and ordinances applicable to their activities.

(o) **Right to Inspect**. The MDOT SHA reserves the right to inspect any operation, work or material which may impact safety, integrity of the roadway or restoration of the MDOT SHA's ROW. On large projects, weekend work, or night work, requiring significant or extensive inspection which exceeds the staffing resources the MDOT SHA, the MDOT SHA may need to assign inspection forces while work is being accomplished within MDOT SHA ROW at the expense of the Permittee. The MDOT SHA will inform the Permittee if its intent to assign inspection forces prior to commencement of the permit work.

(p) **Permits Not Assignable**. Complete Authorized Utility Permits are not assignable. The use of any Complete Authorized Utility Permit by any party not specifically indicated on the Utility Permit General Provisions AND the Individual Work Order Permit shall constitute the immediate revocation of the permit. Contractors and subcontractors authorized by the Permittee are authorized to carry out the work allowed under a Complete Authorized Utility Permit on behalf of the Permittee.

(q) **Cost of repairs**. The Permittee will be responsible for the cost of any repairs to roadway embankments, drainage facilities, or any other facilities owned or maintained by the MDOT SHA should they become necessary or as caused by the construction, existence or failure of this utility or utility facility.

(r) **Restore**. Upon completion of work, MDOT SHA rights-of-ways affected by any Complete Authorized Utility Permit shall be restored to its original condition to the complete satisfaction of the Permit Inspector and the District Utility Engineer.

(s) **Traffic control plan**. A copy of the Work Zone Traffic Control Plan approved by the MDOT SHA shall be attached to the Complete Authorized Utility Permit at all times.

(t) **Prior notifications**. The Permittee shall contact all offices and persons prior to the start of utility work, in accordance with the Complete Authorized Utility Permit - Notifications requirements.

(u) **Additional easements**. The Permittee shall be solely responsible for obtaining any additional easements; right of entry's, etc. from abutting property owners necessary for the Permittee to perform any approved work under said Complete Authorized Utility Permit.

(v) **Open cutting**. Open cutting of any paved surface is strictly prohibited unless specifically authorized in the Individual Work Order Permit.

(w) **Abide by terms and conditions**. The Permittee shall (i) initially when requesting to be approved as an Authorized Public Utility; and (ii) again at each notification that the Utility Permit General Provisions have been revised; sign, date, and return the Utility Permit General Provisions Acknowledgement Form acknowledging the Permittee's acceptance to abide by the Utility Permit General Provisions' terms and conditions.

(x) **Deactivated or taken out-of-service.** When the Permittee's work is to replace, renew, or for the facilities to be deactivated and be taken out-of-service (retired), the Permitee shall remove what was the original main line, service, or appurtenance unless otherwise agreed to, in writing, by the MDOT SHA and the Utility. In the past, what was referred to as abandon, abandoned, and/or abandonment is no longer acceptable. As the connotation of the terms implied that there was no further responsibility for the facility, these terms are no longer used. The Permittee is still responsible for any utility facility that is approved to remain in the MDOT SHA rights-of-way. A Letter of Agreement (LOA) shall be executed and a requirement prior to any permit's approval and issuance.

(1) The Utility shall deliver an electronic file and/or a hard copy with georeferenced coordinates of the deactivated or taken out-of-service facilities' location when it is agreed upon that the deactivated and be taken out-of-service (retired) facility will remain in the State's ROW. The electronic file may be a MicroStation drawing .dgn file, As Constructed As-Built plan set with georeferenced coordinates (latitude and longitude out six decimal places or the most current available version), collection of data by the Utility's staff with State provided ESRI Survey123 ArcGIS Online account (AGOL) and collector application, or other agreed to mechanism.

01.03.02 NOTIFICATIONS.

01.03.02.01 Traffic Controls. Certain State roads require a Traffic Control Permit from the District Office Traffic Section. Contact the District Utility Permit Section, as identified on the Individual Work Order Permit, a minimum of five working days prior to beginning work to obtain the required Traffic Control Permit(s). The Permittee must comply with all Traffic Control Notification Procedures.

01.03.02.02 Roadside Tree Care. The Permittee is responsible for contacting the Maryland Department of Natural Resources - Forest Service (DNR-FS) prior to the start of construction and shall obtain necessary permits, if any, to comply with the Roadside Tree Care Section of the Annotated Code of Maryland. Any work that involves tree felling, or tree branch pruning, or excavation which impacts the roots of roadside trees, requires a DNR-FS Permit.

The Roadside Tree Law Permit Application can be accessed on the MDOT SHA website under the Business Utility Permit General Provisions (12/14/2023) Standards and Specifications / Roadside Tree Law Summary at https://www.roads.maryland.gov/mdotsha/pages/Index.aspx?PageId=221.

The Utility Permit will not be issued to the Permittee until a copy of the DNR-FS Permit is submitted to the District Utility Engineer.

01.03.02.03 Landscaping. The Permittee shall perform landscape construction in conformance with Category 700 – Landscaping of MDOT SHA Standard Specifications for Construction and Materials, and in conformance with the permit documents and any landscape plans approved for the permit. Inspections will be performed by the Office of Environmental Design's Quality Assurance Division and Landscape Programs Division in conformance with MDOT SHA Standard Specifications. Questions regarding approved landscape plans or modifications should be addressed to oedprojectreview@mdot.maryland.gov.

01.03.02.04 MDOT SHA Signal Facilities. Care shall be exercised when working adjacent to traffic signal facilities. The MDOT SHA Office of Traffic and Safety Signal Operation Section having jurisdiction over the traffic signals involved must be notified a minimum of three (3) business days before the start of construction work in order to coordinate any work to be performed near MDOT SHA traffic signal facilities. The Contact number for the MDOT SHA Office of Traffic and Safety Signal Operation Section is 410-787-7650.

01.03.02.05 Signs and Street Lighting Facilities. Care shall be exercised when working adjacent to MDOT SHA signs and street lighting facilities. The District Maintenance Engineer in the appropriate MDOT SHA district must be notified a minimum of three (3) business days before the start of construction work in order to coordinate any work to be performed near MDOT SHA signs and street lighting facilities.

01.03.02.06 MDOT SHA Communication Facilities. Care shall be exercised when working adjacent to MDOT SHA communication facilities (fiber optic, telecom, etc.). The MDOT SHA Office of CHART & ITS Development Communications Division at 410-747-8590 must be notified a minimum of three (3) business days before the start of Utility work in order to coordinate any work to be performed near MDOT SHA communication facilities.

01.03.02.07 MDOT SHA Automated Traffic Counting Station (ATR's). Care shall be exercised when working adjacent to ATR facilities. The Office of Planning & Preliminary Engineering Data Services Engineering Division at 410-545-5523 must be notified a minimum of three (3) business days before the start of utility work in order to coordinate any work to be performed near MDOT SHA ATR facilities.

01.03.02.08 MDOT SHA Construction Projects. If any work under any Complete Authorized Utility Permit is to be performed in any proximity of a MDOT SHA construction project, or will have any effect whatsoever on any work performed on a MDOT SHA construction project, or will affect maintenance of traffic concerning any other roadway network system in conjunction with any MDOT SHA construction project, the Permittee is required to notify the Contractor's Utility Coordinator and/or the State's Project Engineer for that project at least three (3) business days in advance of any commencement of work and is, therefore, required to coordinate all work performed under any Complete Authorized Utility Permit with the Contractor's Utility Coordinator and/or the MDOT SHA Project Engineer.

01.03.02.09 MDOT SHA Maintenance Projects. If any work under any Complete Authorized Utility Permit is to be performed in any proximity of a MDOT SHA maintenance project, or will have any effect whatsoever on any work performed on a MDOT SHA maintenance project, or will affect maintenance of traffic concerning any other roadway network system in conjunction with any MDOT SHA maintenance project, the Permittee is required to notify the Resident Maintenance Engineer and/or the District Maintenance Office for that area at least three (3) full business days in advance of any commencement of work and is, therefore, required to coordinate all work performed under any Complete Authorized Utility Permit with the District Maintenance Office or Resident Maintenance Engineer.

01.03.02.10 Miss Utility. The Permittee must contact "Miss Utility" in compliance with Title 12 - Underground Facilities of the Public Utilities Articles of the Annotated Code of Maryland via the internet at www.missutility.net two (2) business days (call in day does not count) in advance of performing any excavating or similar work. If the Permittee is unable to contact Miss Utility via the internet, the Permittee may call Miss Utility at 1-800-257-7777 or 1-800-441-8355 (for Kent, Queen Anne's, Talbot, & Caroline counties). Ticket life is twelve (12) business days after day on which the ticket is transmitted to the Permittee. The Permittee shall be charged a locate fee of up to Thirty-five ($35.00) dollars by the MDOT SHA for locating MDOT SHA facilities.

01.03.02.11 MDOT SHA District Utility Engineer. The Permittee shall notify the appropriate contact person listed in the Individual Work Order Permit a minimum of three (3) business days before the start of construction, in accordance with the Complete Authorized Utility Permit requirements, with the name of its representative for the job; verification that the Permittee has notified all other offices previously listed; and that the Permittee has coordinated work with said offices. Failure to do so will result in immediate suspension of work until proper notifications are made.

01.03.02.12 Other Utility Companies. The Permittee must contact the appropriate Utility Companies prior to performing any work near their respective facilities in order to determine any clearance requirements; coordinate any construction activities; and/or dig test holes/test pits, if needed, at their own cost.

01.03.02.13 Environmental Permit Requirements. The Permittee shall comply with all Federal, State, and local environmental requirements and must obtain all environmental permits necessary to perform the work under said permit prior to commencement of any work.

01.03.03 DESIGN AND CONSTRUCTION STANDARDS, PROCEDURES, AND POLICIES.

01.03.03.01 Design and Construction. Design and construction associated with this permit shall be performed in complete conformance with standards, procedures, and policies of the following MDOT SHA publications:

(a) Maryland Manual on Uniform Traffic Control Devices (MdMUTCD)
(b) Standard Specifications for Construction and Materials
(c) Book of Standards for Highway & Incidental Construction
(d) Maryland Standard Method of Tests, Materials Manual, Laboratory and Field Procedures

(e) MDOT SHA Utility Policy

(f) Manual for Controlling and Reducing the Frequency of Pavement Utility Cuts

(g) Occupational Safety & Health Administration (OSHA)

(h) Maryland Occupational Safety and Health (MOSH)

(i) Standard Specifications for Subsurface Explorations

(j) Supplemental Specifications and Provisions

Note: Copies of the above-mentioned publications can be obtained from the MDOT SHA website: roads.maryland.gov. Any changes to these Utility Permit General Provisions will be noted in the individual permits.

01.03.03.02 Laws & Regulations. The Permittee is responsible for compliance with all laws and regulations included, but not limited to, those of the Federal Highway Administration, Maryland Public Service Commission, National Electric Safety Code, Maryland Occupational Safety and Health Administration, County or Municipal Planning and Zoning Boards, Army Corps of Engineers, Maryland Department of Natural Resources, Maryland Department of Environment, PHMSA, and USDOT. The Permittee shall comply with the High Voltage Line Act of the Labor and Employment Article of the Annotated Code of Maryland and OSHA's Cranes and Derricks in Construction Directive. This permit DOES NOT release the Permittee from acquiring any additional permits that these or other agencies may require.

01.03.03.03 Railroad. The Permittee is responsible for obtaining the required permits prior to performing any work on or adjacent to railroad facilities or ROW (ROW) thereof.

01.03.03.04 Underground Facilities. All underground utility facilities placed within the ROW of the MDOT SHA MUST maintain a minimum cover of three (3') feet on secondary roadways at all times between the top of any buried duct or cable and finished grade or pavement surface which includes the bottom of any ditch lines as outlined in the MDOT SHA Utility Policy. On expressway/freeways, buried facilities must be placed at least five (5') feet below finished grade or pavement surface which includes the bottom of any ditch lines. The MDOT SHA District Utility Engineer reserves the right to require any facility to be placed at depths greater than three (3') feet at their discretion to facilitate operations of the MDOT SHA. If at a later date, it is discovered the facilities installed under this permit do not meet this requirement, the Permittee will be required to make necessary adjustments solely at their cost, regardless of who is performing the work. Information about MDOT SHA highways can be found here MDOT SHA's Highway Location Reference located on the MDOT SHA website at: roads.maryland.gov.

01.03.03.05 Revised Plans. The MDOT SHA reserves the right to stipulate modifications to the approved construction plans whenever necessary. The MDOT SHA will notify the Permittee of any modifications, required by the MDOT SHA, to the approved construction plans prior to performance of the work. The Permittee shall be entirely responsible for all additional costs and expenses associated with these changes. It is agreed and understood that significant deviation by the Permittee from the plans submitted shall be reported immediately to the MDOT SHA contact person listed in the Individual Work Order Permit and a revised plan showing changes shall be submitted to the MDOT SHA in accordance with TC-4.01 – Working Drawings for approval prior to performance of the work. Relocation and/or adjustment of any public or private utility shall be the responsibility of the Permittee.

01.03.03.06 As Constructed Deliverables. MDOT SHA follows the American Society of Civil Engineers (ASCE) 75-22 Standard Guideline for Recording and Exchanging Utility Infrastructure Data. The Permitee shall submit an electronic file and/or a hard copy of As Constructed Plan Sets with georeferenced coordinates.

The Permittee is required to provide Geographic Information System (GIS) coordinates of any of its facilities, infrastructure, and appurtenances installed within the permitted area(s) to MDOT SHA District Office within Sixty (60) calendar days or agreed upon timeline of the completion of the Permittee's installation.

To comply with this requirement, the Utility As-Constructed Plan Sets submitted to the MDOT SHA shall be as follows:

Utility location data of any new construction, to include but not limited to the installation, adjustment, and/or relocation of facilitates, appurtenances, and/or infrastructure asset(s) shall be georeferenced with GPS coordinates.

(a) for aerial construction: the coordinates shall be provided for items to include but not limited to pole installations, adjustments, or relocations.

(b) for underground construction: the coordinates shall be provided for items to include but not limited to manholes, hand holes, pedestals, valve covers, vents, clean-outs, and/or any demarcation point at the beginning, along the path of, and at end of the installation, adjustment, or relocation.

(c) The electronic file may be a MicroStation drawing .dgn file, As Constructed As Built plan set with georeferenced coordinates (latitude and longitude out six decimal places or the most current available version), collection of data by the Utility's staff with State provided ESRI Survey123 ArcGIS Online account (AGOL) and collector application, or other agreed to mechanism.

01.03.04 MAINTENANCE OF TRAFFIC.

01.03.04.01 Work Zone Traffic Control. Work Zone Traffic Control is to be in complete conformance with the current and latest specifications, standards, provisions and policies of these Provisions Section 001.03.03 – DESIGN AND CONSTRUCTION STANDARDS, PROCEDURES, AND POLICIES. In addition to the documents referenced above, design and construction associated with Work Zone Traffic Control shall be performed in complete conformance with, and with particular attention to, the following MDOT SHA publications:

- Work Zone Safety and Mobility Policy
- High Visibility Apparel Policy
- Maryland Manual on Uniform Traffic Control Devices (MdMUTCD)
- Traffic Control Devices Design Manual
- Traffic Control Analysis's Guidelines
- Maryland Standard Sign Book
- Book of Standards for Highway & Incidental Structures
- Standard Specifications for Construction and Materials
- Supplemental Specifications and Provisions
- Accessibility Policy & Guidelines for Pedestrian Facilities along State Highways

- SHA Bicycle and Pedestrian Design Guidelines

Copies of the above-mentioned publications can be obtained from the MDOT SHA's website: roads.maryland.gov.

01.03.04.02 Approved Work Zone Traffic Control Plan. An approved Work Zone Traffic Control Plan (WZTC) is required for all work performed within MDOT SHA right of way. The Permittee is responsible to submit a carefully designed WZTC Plan to the District Utility Engineer (or approved designee) for any relocation or permit work affecting a highway. This plan must be in complete accordance with Temporary Traffic Control Typical Applications detailed in the MDOT SHA's Book of Standards for Highway and Incidental Structures and the MdMUTCD. The WZTC plan shall address vehicular, bicycle, and pedestrian traffic on or along any transportation facility in accordance with MDOT SHA's Work Zone Safety and Mobility Policy; and on any specific directions received from the appropriate District Engineer (or approved designee). The WZTC Plan should indicate the time during which work is to be performed as well as the proposed placement of signs and layout of traffic control devices. When speed of traffic is noted, this means the posted speed or prevailing travel speed; whichever is higher, unless otherwise specified. All changes, modifications, or alterations to the approved WZTC Plan shall be submitted in writing to the District Utility Engineer in advance for review and approval. A copy of the approved Work Zone Traffic Control Plan is always to be attached to the permit. All closures are to be performed in complete accordance with the approved Work Zone Traffic Control Plan. Traffic Control Plan revisions shall be submitted per the 2017 Standard Specifications for Construction and Materials, Section 104.01 – Traffic Control Plan.

01.03.04.03 Work Zone Modifications. All changes, modifications, or alterations to the approved Work Zone Traffic Control Plan must be submitted in writing to the MDOT SHA District Utility Engineer at least ten (10) business days in advance for review and approval. The MDOT SHA reserves the right to modify and/or expand the methods of traffic control specified if in the opinion of the Engineer or Inspector, the Permittee's operations are a detriment to the safe and efficient flow of traffic. In the event that the construction plans are revised, or differing site conditions are encountered, the WZTC Plan shall be reviewed and revised, if necessary, to comply with the MDOT SHA's Book of Standards for Highway and Incidental Structures and the MdMUTCD.

01.03.04.04 Traffic Control by MDOT SHA. In the event that the MDOT SHA is required to provide traffic control, due to the Permittee failing to maintain a safe work zone or if a Permittee requests the MDOT SHA to provide traffic control, all costs and applicable overhead shall be billed directly to the Permittee. In the event that a 3rd party caused a situation or emergency which required the MDOT SHA and/or the Permittee to provide traffic control, all costs and applicable overhead shall be billed directly to the 3rd party that caused the situation or emergency.

01.03.04.05 Traffic Manager's Responsibility. A MDOT SHA certified Traffic Manager must be specifically designated for each permit application. This identification must include a 24-hour contact telephone number for someone that will respond to Work Zone Traffic Control situations. The Traffic Manager will be responsible for ensuring the proper implementation and maintenance of the Work Zone Traffic Control Plan as well as conducting regular day and night inspections of the traffic control devices and overall traffic operations. Permittee Personnel may obtain an approved Traffic Manager certification from the Maryland Transportation Builders and

Materials Association (MTBMA). Information on Traffic Manager certification can be obtained from MTBMA's website at http://www.mtbma.org.

01.03.04.06 Traffic Control Devices. All traffic control devices must comply with performance criteria published in the National Cooperative Highway Research Program (NCHRP) Report 350, "Recommended Procedures for the Safety Performance Evaluation of Highway Features."

(a) Traffic Control signs or devices identified as unsatisfactory by the District Utility Engineer or their representative must be replaced immediately.

(b) High performance wide-angle retro-reflective sheeting for signs, fluorescent orange in color, shall be used on projects along interstate highways and other freeways, unless otherwise specified.

(c) Type VI (vinyl micro-prismatic) retro-reflective sheeting conforming to Federal Highway Administration's Standard Specifications for Construction of Roads and Bridges and AASTM D-4956 is acceptable for use on roll up signs and channelizing devices.

(d) Upon initial installation, temporary traffic control signs shall have at least 70 percent of the reflectivity over 90 percent of the reflectorized surface as specified in Section 950.03-Reflectorization of Signs and Channelizing Devises and in Section 104.08.03 of the Standard Specifications for Construction and Materials, Dated 2017.

(e) When temporary traffic control signs are not indicative of actual conditions (e.g. temporary shutdowns, overnight, or other periods when work is not being performed) the signs shall be removed, turned away from traffic, or completely covered.

(f) At least 90 percent of all reflective barrier markers, warning lights, and raised pavement markers shall be operational at any given time.

(g) Flashing arrow boards as early warning devices shall be used whenever a lane is closed unless considered unnecessary by the District Engineer.

(h) Under certain circumstances, a variable message sign (VMS) may be required. The corresponding job-specific permit will provide details about what message must be displayed; how much advance notice must be given, etc. Messages displayed on the VMS will be coordinated with the District Utility Engineer and have prior approval of the District Traffic Engineer.

(i) The Permittee shall correct any deficiencies within 24 hours after notification.

01.03.04.07 Lane, Ramp, and Shoulder Closures. The Permittee shall apply for and obtain a Traffic Control Permit from the appropriate District Office prior to closing any lanes. The District Utility Engineer (or approved designee) will approve the time schedules and numbers of lanes involved for lane closings. All Traffic Controls will be allowed only during off peak hours. Lane and shoulder closures on wet roadways are strictly prohibited. Travel lanes and shoulders must be restored immediately in the event of precipitation. All Travel lanes shall be restored immediately in the event of accident or emergency within or adjacent to the work area. Delay to motorists traveling through work zone lane, ramp, or shoulder closures shall not exceed the thresholds in accordance with MDOT SHA's Traffic Control Analysis's Guidelines. All lane and shoulder closures will be cleared immediately at the specific direction of any representative

of the MDOT SHA. The Permittee is responsible to coordinate all Traffic Control activities with adjacent contractors. When a lane, ramp, or shoulder closure is in effect, work must begin within one hour after the lane is closed. Once work is completed, travel lanes and shoulders are to be restored immediately.

01.03.04.08 Road Closures. Full or temporary roadway closures for non-emergency situations are not permitted without prior approval of the MDOT SHA District Utility Engineer. The Permittee is responsible for coordinating Maryland State Police Assistance for any temporary roadway closure. No temporary roadway closure can exceed 15 minutes in duration. The Permittee must provide a minimum of two Variable Message Signs (VMS) for any temporary roadway detour or roadway closure. VMS sign messages must be approved by the District Utility Engineer prior to display. The delay to motorists traveling through work zone lane, ramp, or shoulder closures shall not exceed fifteen (15) minutes unless there is an emergency and it is approved by the District Utility Engineer. Prior to reopening, all travel lanes and shoulders must be completely cleared of all materials, equipment, and debris.

01.03.04.09 Travel Lanes. No travel lane shall be reduced to less than ten (10') feet in width at any time.

01.03.04.10 Emergency Crossovers. The use of emergency crossovers is strictly prohibited.

01.03.04.11 Pedestrian & Bicycle Traffic. The Permittee shall provide for safe bicycle and pedestrian access through work zones for all permits and projects where applicable and to the maximum extent feasible. Provisions for bicycle and pedestrian access shall be clearly shown on the WZTC plan. The Permittee shall submit plans for all proposed road closings or detours to MDOT SHA's Bicycle and Pedestrian Coordinator for review and comment. Provisions for bicycle and pedestrian access through the work zone must be Americans with Disabilities Act (ADA) compliant. Information about MDOT SHA's ADA requirements can be found in MDOT SHA's Accessibility Guidelines for Pedestrian Facilities along State Highways located on the MDOT SHA website at: roads.maryland.gov.

01.03.04.12 Flaggers. All flagging operations are to be performed by individuals who have successfully completed MDOT SHA's Approved Flagger training course. Each flagger is always to have in their possession an approved MDOT SHA flagger training card. Flagging is to be conducted utilizing stop/slow paddles in complete accordance with Part VI Section 6F of the current edition of the MdMUTCD. Flaggers are always to be appropriately attired. Flaggers must wear a reflective vest, meeting the requirements of MDOT SHA's High Visibility Apparel Policy, always while flagging. Contractor Personnel may obtain an approved Flagger certification from the American Traffic Safety Services Association (ATSSA). Information on Flagger certification can be obtained from ATSSA's website at http://www.atssa.com/

01.03.04.13 Dry Road. Precautions shall be taken, particularly in freezing temperatures, to keep water off travel lanes.

01.03.04.14 Driveway Access. The Permittee is responsible to insure safe pedestrian and vehicular access to private and public driveways, entrances, and roadways always.

01.03.04.15 Emergency Access. Access to fire hydrants, firehouses, hospitals, and mailboxes is always to be maintained.

01.03.04.16 Working Hours: Work done that will impact on MDOT SHA roadway and shoulder areas is allowed only during certain hours. The following sub-sections describe generally when this work is permitted:

(a) Work is permitted Monday through Friday only. Generally, working hours for MDOT SHA roadway and shoulder closures are restricted to between 9:00 AM and 3:00 PM and 9:00 PM and 5:00 AM. Work not adjacent to travel lanes is permitted between 7:00 AM and 7:00 PM. Exceptions to these hours may be specified in the individual permit. The Permittee shall confirm allowable lane and shoulder closure hours with the District Utility Engineer prior to work. All requests for additional special exceptions must be provided in writing to the Office of the District Utility Engineer.

The District Utility Engineer has the authority to require reimbursement for MDOT SHA inspection if the work is to take place during non-standard hours even if the MDOT SHA requires weekend work, nighttime work, or when the location and/or duration of the work is an undue burden to the State due to safety of the operation or travelling public. An agreement must be in place before the work starts.

(b) Night work and weekend work is prohibited in residential areas unless authorized by the District Utility Engineer.

(c) No work is allowed on the day(s) of major holidays or holiday weekends, or days preceding and following said holiday(s) or holiday weekends. Holiday restrictions may vary by location. Information regarding specific holiday restrictions can be obtained from the Office of the District Utility Engineer prior to each holiday. The National holidays mentioned are listed as follows: (These may or may not be the same as the State holiday).

NATIONAL HOLIDAYS:
New Year's Day, January 1
Martin Luther King's Birthday, the third Monday in January
Washington's Birthday, the third Monday in February
Memorial Day, the last Monday in May
Juneteenth National Independence Day, typically June 19th
Independence Day, July 4
Labor Day, the first Monday in September
Columbus Day, the second Monday in October
Veteran's Day, November 11
Thanksgiving Day, the fourth Thursday in November
Christmas Day, December 25

(d) Work may also be restricted for special events occurring along specific routes. Information regarding specific special event restrictions can be obtained from the Office of the District Utility Engineer prior to any special event. Additional work restrictions, if any, will be noted in the Individual Work Order Permit. Reimbursement for MDOT SHA inspection may be required.

(e) Any deviation from the approved traffic control standard for the Individual Work Order Permit, such as when construction plans are revised, or differing site conditions encountered, must be approved by the MDOT SHA Permit Inspector prior to the

commencement of work. The MDOT SHA reserves the right to modify and/or restrict working hours or deny permission to work within MDOT SHA rights-of-way at any time if, in the opinion of the Engineer or Inspector, the Permittee's operations are a detriment to the safe and efficient flow of traffic.

01.03.04.17 Specific Signing Instructions. Signing shall be placed in accordance with the MdMUTCD, the MDOT SHA's Standard Highway Sign Book, and the Complete Authorized Utility Permit. All work area warning signs shall be 48 in. x 48 in. unless otherwise specified. MDOT SHA's Standard Highway Sign Book may be obtained from the Office of Traffic and Safety, Traffic Engineering Design Division. Refer to Section 104.08 TEMPORARY TRAFFIC SIGNS (TTS) for a detailed description of the requirements to furnish, install, and maintain TTS on or along all MDOT SHA transportation facilities. The following are additional requirements for TTS:

(a) Sign details are available from the Office of Traffic & Safety, Traffic Engineering Design Division.

(b) Construction Identification signs (Hat and Shovel) G2-1(1), G2-1(2), or G2-1(3) shall be installed at each approach and end of all projects greater than two (2) months in duration unless otherwise noted or directed by the Engineer.

  (1) The initial sign will be installed between the one mile and one-half mile advance warning signs unless otherwise specified. See MDOT SHA Standard No. MD 104.01-04 (≥ 40 mph) and MDOT SHA Standard No. MD 104.01-04 (≤ 40 mph) for placement.

(c) The ROADWORK (W20-1) sign and END ROAD WORK (G20-2) sign shall be installed at each approach and end of all projects greater than two months in duration, unless otherwise noted or directed by the Engineer.

  (1) The Hat and Shovel sign installed near the end of the project will not replace the End Road Work sign. See MDOT SHA Standard No. MD 104.01-04 (≥ 40 mph) and MDOT SHA Standard No. MD 104.01-04 (≤ 40 mph) for placement.

(d) When highway alignment changes occur throughout the work area due to phase changes, install a supplemental panel beneath the Construction Length sign stating, "NEW TRAFFIC PATTERNS." The supplemental panel shall remain up for a maximum of 30 days unless otherwise specified.

(e) Where parts of a mile are designated on a sign, fraction to the nearest ½-mile shall be used instead of decimals.

(f) In areas where longitudinal paving joints are left exposed to traffic, warning signs shall be erected indicating UNEVEN PAVEMENT. For sign placement, see MDOT SHA Standard No. MD 104.06-15 thru MD 104.06-20.

  (1) They shall be placed in advance of the uneven joints and spaced at appropriate 1500' intervals throughout the area of the uneven joint.

  (2) In areas of exposed lateral paving joints, the warning sign message shall be BUMP (W8-1).

(3) When milling a pavement, (removing the top layer to smooth the roadway) a ROUGH ROAD (W8-8) sign or a GROOVED PAVEMENT W8-8(1) sign shall be the warning message.

(g) Along two and three-lane, two-way roadways where a standard centerline is not provided and passing is not permitted (due to resurfacing, etc.), DO NOT PASS (R4-1) signs shall be erected at the beginning of such zones along the right side and at appropriate intervals throughout the project. For sign placement, see MDOT SHA's Standard No. MD 104.06-14.

(1) A NO PASSING ZONE pennant (W14-3) shall be erected at the beginning of such zones on the left-hand side of the roadway across from the first DO NOT PASS sign.

(2) The NO PASSING ZONE pennants shall be used only at the beginning of such zones and shall not be placed at intermediate points throughout the zone.

(3) Standard no passing centerlines may be installed at the direction of the Engineer or Inspector if site conditions (at a particular location) or past accident history indicates that this would be a prudent thing to do.

(h) When complete pavement markings are not in place, and passing may be permitted, sign(s) shall be erected indicating WARNING: PASSING ZONES UNMARKED W14-3(1) with supplemental plate "NEXT X MILES".

(1) These signs shall be placed in advance of the unmarked zone and at appropriate intervals throughout the unmarked zone where passing is permitted.

001.03.04.18 Pavement Drop-off. During construction and maintenance activities involving pavement surfacing and resurfacing work, including shoulders, it often becomes necessary to maintain traffic along side or near lanes and shoulders having different elevations (drop-offs). Special traffic control devices are needed to safely protect and guide traffic through such areas. The following are the traffic control requirements for pavement drop-off situations:

(a) Uneven Joints for Traffic Crossings:

Uneven joints where traffic can be anticipated to cross (i.e. intersections) are to be tapered with a minimum of two (2) feet of a bituminous concrete product for the entire width of the travel lane crossing.

(b) Pavement Drop-offs of 2 ½ Inches or Less (between Traffic Lanes):

(1) Adjacent pavement elevation differences, drop-offs, of 2 ½ inches or less may be freely crossed by traffic.

(2) Drop-offs of 2 ½ inches or less shall be indicated to traffic through the use of the UNEVEN PAVEMENT warning signs placed in advance of and repeated throughout the limits of the drop-off in accordance with the Book of Standards for Highway & Incidental Structures, Standard No. MD 104.06-15. When needed, the GROOVED warning supplemental sign plate shall be mounted below each sign. The sign size and spacing, and how it complements other traffic control devices is covered in the Standard Specifications for Construction and Materials and the MdMUTCD.

(3) The UNEVEN PAVEMENT warning sign is to be placed supplemental to other work zone traffic control. The sign size and spacing, and how it complements other traffic control devices is covered in the Standard Specifications for Construction and Materials and the MdMUTCD.

(4) Temporary transverse tie-in transitions during the paving operation shall be in accordance with Standard Specifications for Construction and Materials Section 504.03.10 (2017 Spec book). The transverse tie-in shall be completed prior to traffic being allowed on the pavement.

(c) Pavement Edge Drop-offs of 2 ½ Inches or Less (between Traffic Lanes and Shoulder):

(1) Pavement edge drop-offs of 2 ½ inches or less shall be in compliance with the Book of Standards for Highway & Incidental Structures, Standard No. MD 104.06-16.

(2) UNEVEN PAVEMENT warning signs shall be placed in advance of and repeated throughout the limits of the drop-off in accordance with Standard No. MD 104.06-16. The UNEVEN PAVEMENT warning sign is to be placed supplemental to other work zone traffic control. The sign size and spacing, and how it complements other traffic control devices is covered in the Standard Specifications for Construction and Materials and the MdMUTCD.

(3) Temporary transverse tie-in transitions during the paving operation shall be in accordance with Standard Specifications for Construction and Materials Section 504.03.10 - Tie-in. The transverse tie-in shall be completed prior to traffic being allowed on the pavement.

(d) Pavement Drop-offs of Greater Than 2 ½ inches (between Traffic Lanes):

(1) Adjacent pavement elevation differences, drop-offs exceeding 2½ inches shall be paved to match with the abutting lanes or shoulders on the same working day in accordance with Standard Specifications for Construction and Materials Section 504.03.09 (2017 Spec Book). As a result of this, the complete pavement section including shoulders shall be at the same elevation at the end of each working day.

(2) Drop-offs of 2½ inches or less shall be indicated to traffic through the use of the UNEVEN PAVEMENT warning signs placed in advance of and repeated throughout the limits of the drop-off in accordance with Standard No. MD 104.06-15. When needed, the GROOVED warning supplemental sign plate shall be mounted below each sign.

(3) The UNEVEN PAVEMENT warning sign is to be placed supplemental to other work zone traffic control. The sign size and spacing, and how it complements other traffic control devices is covered in the Standard Specifications for Construction and Materials and the MdMUTCD.

(4) While it is intended that traffic traveling in the same direction drive to one side of the drop-off or the other, such traffic may be permitted to drive along both sides under properly controlled conditions, but such traffic may not be permitted to freely cross.

(5) Temporary transverse tie-in transitions during the paving operation shall be accordance with Standard Specifications for Construction and Materials Section 504.03.10. The traverse tie-in shall be completed prior to traffic being allowed on the pavement.

(e) Pavement Edge Drop-offs Greater Than 2 ½ Inches, But Equal to or Less Than 5 Inches (between Traffic Lanes and Shoulder):

(1) Drop-offs between lane and shoulder or shoulder and earth grading, exceeding 2 ½ inches, but equal to or less than 5 inches shall be provided with an abutting wedge with a slope of 4:1 or flatter at all times while no work is being performed as referenced in the Book of Standards for Highway & Incidental Structures, Standard No. MD 104.06-17.

(2) Drums or other suitable channelizing devices are used to mark the area even when a traversable wedge is in place.

(3) Drop-offs exceeding 2 ½ inches, but equal to or less than 5 inches shall be indicated to traffic through the use of the UNEVEN PAVEMENT warning sign placed in advance of and repeated throughout the limits of the drop-off in accordance with Standard No. MD 104.06-17.

(4) The UNEVEN PAVEMENT warning sign is to be placed supplemental to other work zone traffic control. The sign size and spacing, and how it complements other traffic control devices is covered in the Standard Specifications for Construction and Materials and the MdMUTCD.

(f) Pavement Edge Drop-offs Greater Than 5 inches WITHOUT an Adjacent Lane Closure:

(1) Continuous drop-offs exceeding 5 inches if next to or within 12 feet of a lane of traffic, shall be provided with a temporary concrete barrier or other suitable barrier as may be approved by the District Utility Engineer or Inspector, to preclude crossing the drop-off throughout its entire length. See the Book of Standards for Highway & Incidental Structures, Standard No. MD 104.06-18.

(2) The sign size and spacing, and how it complements other traffic control devices is covered in the Standard Specifications for Construction and Materials and the MdMUTCD.

(g) Pavement Edge Drop-offs Greater Than 5 Inches WITH an Adjacent Traffic Control:

(1) Continuous drop-offs exceeding five (5”) inches, but greater than twelve (12’) feet away from traffic (and not protected with an approved barrier) shall be provided with an abutting wedge with a slope of 4:1 or flatter at all times while no work is being performed. See the Book of Standards for Highway & Incidental Structures, Standard No. MD 104.06-19.

(2) Drums or other suitable channelizing devices are required to mark the area. When traffic is permitted to occupy the adjacent lane(s) to this work, drums or other suitable channelizing devices shall be placed in front of and completely across the

excavated area, in addition to the traffic control requirements for the lane or shoulder work.

(3) For a series of drop-offs within a lane or shoulder, typically as a result of concrete joint or pavement repair, all areas where the pavement material has been removed shall be repaired the same working day.

(4) The decision to use a positive barrier to separate the workspace from traffic will be determined by the Utility Permit Inspector. The Inspector should consider such things as traffic volumes, vehicle speeds and weaving, trucks, highway geometrics, length of workspace, duration of work, etc.

(5) The sign size and spacing, and how it complements other traffic control devices is covered in the MDOT SHA Standards and Specifications and the MdMUTCD.

001.03.04.19 Traffic Markings, Signing, Lighting, and Signalization:

(a) Traffic signs are not to be removed or relocated without permission of the District Utility Engineer.

(b) The Permittee is to exercise extreme caution when in the vicinity of signalized intersections so as to protect and maintain in good work order, all traffic signal poles, wires, conduits, and equipment associated with traffic signalization.

(c) All pavement markings and symbols shall be completely replaced immediately upon the completion of milling or resurfacing, prior to the reopening to traffic.

(d) The Permittee shall inventory existing pavement markings in the work area prior to disturbance and application.

(e) Pavement marking material shall be submitted to the MDOT SHA for approval prior to application.

(f) The Permittee shall submit a pavement marking plan and the name of the pavement marking sub-contractor to the District Utility Engineer for approval prior to the start of pavement work.

01.03.05 SAFETY.

01.03.05.01 Excavation.

(a) Cuts or excavations will not normally be permitted to remain open overnight and at any time when work is not in progress at the cut or excavation area. The Permittee should excavate only as far as can be backfilled in the same working day.

(b) If a trench must remain open during non-working hours, it must be steel plated or protected by a positive barrier. Existing guardrail, permanent concrete barrier, or temporary concrete barrier wall will be required to meet OSHA, MOSH, and MDOT SHA regulations. Suitable protective measures approved by the MDOT SHA, will be required at any excavation.

(c) No excavated or construction material shall be stored within thirty feet (30’) of the edge of the existing traveled pavement. Material shall be stored in a way, which does not reduce driver sight distances nor interfere with roadway drainage.

(d) All equipment and material shall be removed from the MDOT SHA ROW or located a minimum of thirty feet (30') from the edge of the existing traveled pavement of MDOT SHA roadway during non-working hours and when not being used in daily construction operations unless it is stored behind a positive protective barrier. In no case will construction material or equipment be allowed to remain in the median or a divided highway when the materials or equipment is not in use.

(e) All mud and debris tracked or spilled on the state highway shall be removed promptly to eliminate potential hazards.

(f) Precautions shall be taken, particularly in freezing temperatures, to keep water off the traveled lane.

(g) No access is permitted from interstate roadways or from any connecting ramp for purposes of construction, maintenance, or expansion to another facility.

(h) Private automobiles and non-essential construction vehicles are not allowed to be parked on the MDOT SHA ROW. The Permittee must transport workers to the job site from a safe parking site procured by the Permittee.

(i) All work areas are to be continuously maintained in a neat and clean condition.

(j) Guy wires within six (6') feet of the ground will be sheathed in heavy high visibility plastic tubing.

(k) Appropriate protective measures, approved by the MDOT SHA, including warning signs, safety fence, and barricades, shall be placed at all excavations.

(l) The Permittee shall take all necessary precautions to protect the traveling public, pedestrians, and workers, including ADA compliance, as necessary. Information about MDOT SHA's ADA requirements can be found in MDOT SHA's Accessibility Guidelines for Pedestrian Facilities along State Highways located on the MDOT SHA website at: http://www.roads.maryland.gov/Index.aspx?PageId=26.

(m) The MDOT SHA may halt any operation it considers to be in any manner detrimental to the safe operation of MDOT SHA's highway system.

(n) The Permittee shall maintain vertical and horizontal clearances from all existing utility facilities as required by the respective utility agencies.

01.03.06 PROTECTIONS OF HIGHWAYS.

01.03.06.01 Materials and Equipment. No metallic tread equipment shall be driven or towed on any MDOT SHA road surface or surfaced shoulder. Material or equipment not provided with wheels will not be dragged or skidded across paved surfaces. No excavated or backfill materials are to be placed or stockpiled on any improved surface within the jurisdiction of the MDOT SHA (or within MDOT SHA rights-of-ways). The excavation of any MDOT SHA roadway, which has been recently resurfaced, shall be strictly prohibited for a period of two (2) years from the date the resurfacing has been accepted for maintenance unless approved in writing by the appropriate District Utility Engineer.

01.03.07 QUALITY CONTROL.

MDOT SHA inspectors shall be authorized to inspect all work performed and all material furnished under this permit which may impact safety, integrity of the roadway or restoration of the MDOT SHA's ROW to the complete satisfaction of the MDOT SHA. Such inspection may extend to all or any part of the work and to the preparation, fabrication, or manufacture of the materials to be used as per MDOT SHA's Standard Specifications for Construction and Materials, Sections GP-5.01 AUTHORITY OF THE PROCUREMENT OFFICER and GP-5.07 AUTHORITY AND DUTIES OF INSPECTORS.

(a) At MDOT SHA's discretion, the MDOT SHA may assign inspection forces to the Permittee's work being performed within MDOT SHA's ROW at the expense of the Permittee as per Section 001.03.01 (o) Right to Inspect. The Permittee shall provide the MDOT SHA inspector with an intended work schedule and shall inform the MDOT SHA inspector of any subsequent changes to the schedule. The MDOT SHA reserves full control over said roads, highways, and rights-of-ways and the subject matter of this permit.

(b) The Permittee, or the Permittee's contractor or subcontractor, if authorized by the Permittee to carry out the work allowed under a Complete Authorized Utility Permit on behalf of the Permittee, shall be responsible for providing effective on-site supervision at all times to ensure compliance with all plans and permit specifications, regulations, and conditions. All work areas are to be continuously maintained in a neat and clean condition. The Permittee will be responsible for maintaining its facilities installed within MDOT SHA ROW in a safe working condition.

(c) The Permittee shall be responsible to respond to and correct citizen complaints regarding work performed adjacent to private properties immediately upon notification.

01.03.07.01 Testing.

(a) The Permittee shall perform all testing required for all work performed under the Individual Work Order Permit in accordance with all appropriate regulations and current applicable industry codes. The Permittee shall make available all test data and results to the MDOT SHA upon request of the MDOT SHA inspector. Depending on the type of work and site conditions, the MDOT SHA may require any additional tests or testing, at the MDOT SHA's discretion, at the Permittee's expense.

(b) The additional applicable testing required, if applicable, may include, but not limited to, compaction or pavement surface profile testing or geophysical surveys to detect subsurface voids for work performed under the Individual Work Order Permit.

(c) The MDOT SHA may require, if applicable, the collection of video imagery of any drainage or open pipe systems running within MDOT SHA rights-of-ways and to provide that video imagery to the MDOT SHA for review.

(d) All piping installed within the MDOT SHA ROW shall be tested as required by USDOT – Pipeline and Hazardous Materials Safety Administration.

(e) Carrier pipes of all pressurized utilities shall be pressure tested before start-up in accordance with all appropriate regulations and current applicable industry codes.

01.03.08 CONSTRUCTION. All work must be performed in complete conformity with the approved construction plans.

(a) All changes, modifications, or alterations to the approved construction plans must be submitted in writing to the District Utility Engineer for review and approval. Attachments to bridges and other structures are prohibited unless specifically authorized in individual permit applications. Open cutting of any paved surface is strictly prohibited except when authorized by individual permit applications. The adjustment and/or relocation of any public, private, or MDOT SHA owned facility or utility required by work performed in accordance with this permit will be the complete responsibility of the Permittee.

(b) The Permittee is responsible to verify the location of all existing buried facilities within or adjacent to the work area to prevent damage to existing utilities. The Permittee is responsible for maintaining vertical and horizontal clearances from all existing utility facilities as required by the respective utility agencies.

(c) The Permittee shall take all necessary measures to protect any facilities owned or maintained by the MDOT SHA while performing any work within MDOT SHA rights-of-ways.

01.03.09 EXCAVATION.

01.03.09.01 Trenching. All excavations and trenching shall be performed in complete accordance with all requirements set forth by OSHA, MOSH, and MDOT SHA regulations.

(a) When the MDOT SHA allows excavations within MDOT SHA rights-of-ways, the Permittee shall minimize excavations performed within pavement areas. All excavations, open cuts, or trenching to be performed across pavement areas shall be saw cut to the full depth of the pavement prior to removal.

(b) Sheeting, shoring, and/or bracing shall be required for any excavations or trenches within the Roadbed Area of Influence per the MDOT SHA's Utility Policy- Chapter 4- Section 4.07.02; as required by MOSH and/or OSHA; and/or as determined by the MDOT SHA to prevent failure of the embankments and to maintain safe access.

(c) Cuts or excavations will not be permitted to remain open at the end of a work shift, or when work is not actively in progress. For excavations that cannot be closed the same day as opened, the MDOT SHA may require the following: steel plates; installation of concrete barriers and impact attenuators; and/or any other measures deemed appropriate by MDOT SHA to maintain the safety of the excavation. In addition, the perimeter of all open excavations such as access, working or receiving pits shall be secured using chain link fencing or other approved pedestrian protection along with orange safety fencing suitably installed.

(d) All spoil material is to be completely removed from MDOT SHA ROW. The Permittee will be responsible for repairing any damage due to settlement of backfill.

01.03.09.02 Sheeting. In order to prevent failure of the embankments and to maintain safe access sheeting, shoring, and/or bracing shall be required for any excavations within the Roadbed Area of Influence as per MDOT SHA's Utility Policy- Chapter 4, Section 4.07.02;

within the Zone of Influence of any structure as per MDOT SHA's Utility Policy - Chapter 9 - Figure 9.04-1 – Zone of Influence; as required by MOSH and/or OSHA; and/or as determined by the MDOT SHA.

(a) Tight sheeting will be required where the distance off the roadside edge of any excavation is less than the depth of the excavation. The roadside face must be tightly sheeted and braced securely against skeleton sheeting on the opposite or far side of the excavation. The Permittee shall install all tight sheeting in accordance with all OSHA, MOSH, and MDOT SHA regulations. Sheeting shall be furnished and installed as per MDOT SHA's Standard Specifications for Construction and Materials, Sections 402.03, 402.04.02, & 405.03. All sheeting must be completely removed upon the completion of excavation and backfill activities.

(b) Metal sheeting systems may be used with prior approval of the MDOT SHA and pulled only as tamped fill progresses. If the excavation is to be left open, it shall be tight sheeted, and the Permittee must notify the MDOT SHA Permit Inspector.

(c) A trench box support may be used with the prior approval of the MDOT SHA.

01.03.09.03 Steel Plates. Whenever steel plates are required, the following provisions will apply:

(a) For non-emergency situations the Permit Inspector must be notified at least 48 hours in advance of any steel plates being placed in the roadway.

(b) Steel plates are to be monitored and maintained by the Permittee as agreed to by the MDOT SHA, which may be at least twice daily, seven (7) days a week including, but not limited to nights, weekends, holidays, and snow events until they are removed. Steel plates will not be left in the roadway longer than seven (7) calendar days without prior written permission of the MDOT SHA.

(c) Steel plates shall be installed as per MDOT SHA's Book of Standards for Highway & Incidental Structures, Standard No. MD 104.01-85, Steel Plate – Method 1, Greater Than 40 mph; or Standard No. MD 104.01-86, Steel Plate – Method 2, Equal To or Less Than 40 mph as appropriate.

(d) Steel shall conform to the current ASTM A36 standard. All steel plates must be at least one (1") inch thick and sized to effectively carry traffic with a maximum one (1") inch deflection. Steel plates must be large enough to allow a minimum of one (1') foot of bearing on all four sides of the pavement surrounding the excavation and securely held in place with six (6") inch pins installed on all corners.

(e) In the event that more than one plate is required, the steel plate shall be large enough to allow a minimum of two (2') feet of bearing on three (3) sides of the plate and securely held in place with pins installed on all corners of each plate. For trench widths equal to or greater than five (5') feet, the steel plate support system shall be designed and stamped by a Professional Engineer licensed in the State of Maryland and approved by the MDOT SHA. Steel plate bridging is prohibited on expressways and freeways.

01.03.09.04 Multiple Steel Plates. When placing multiple plates, the MDOT SHA shall determine which of the following methods may be used by the Permittee:

(a) Two plates or more shall be welded together. This consists of placing three welds Twelve (12") inches in length on each abutting plate. One weld placed one foot from each edge and one weld placed in the center of the plate [six (6") inches from center in each direction]. All welds shall be performed by an American Welding Society certified welder, certified by the State of Maryland. Approach plates and ending plates shall be attached to the roadway by a minimum of one anchor pre-drilled into the corners of the plate and drilled a minimum two (2") inches into the pavement.

(b) Two plates or more shall be held together. This consists of placing three six (6") inch by twelve (12") inch by one (1") inch blocks to one side of the plate. One block to be placed one (1') foot from each edge and one block placed in the center of the plate. The two end blocks on the underside of the plate, the middle block to be placed on the topside of the plate.

01.03.09.05 Steel Plate Safety Measures. To minimize the hazard to the traveling public, the use of a bituminous concrete product is required on all exposed edges of the plates to ensure a smooth transition from the pavement to the surface of the steel plate. The material must be tapered from the height of the steel plate to the existing road surface and extend a minimum distance of one (1') foot to provide a suitable taper.

(a) At the sole discretion of the MDOT SHA, the Permittee may be required to recess the steel plate such that the top of the steel plate is flush with the surrounding pavement and pinned in place. For roadways with travel speeds greater than 40 mph, the steel plates shall be required to be recessed.

(b) Plates must be removed from the MDOT SHA ROW within twenty-four (24) hours once they are removed from the roadway. Plates may never be left within the roadway, shoulders, or any other area within the ROW, which could jeopardize motorist safety.

(c) Should an emergency condition occur that MDOT SHA forces must correct, the Permittee shall be charged for any and all costs, including but not limited to; labor, equipment, overtime, overhead, inspection, etc., associated with restoring the condition to a safe and acceptable level. The Permittee shall be responsible for any additional costs incurred by the MDOT SHA for emergency repairs performed during snow emergencies.

01.03.09.06 Sign Requirements. Sign requirements for steel plates are as follows:

(a) "STEEL PLATE:" warning signs, W8-8(4), shall be 48" x 48" and shall conform to the MdMUTCD and Maryland's Sign Standard Book.

(b) When steel plates are used to bridge open cut excavations within MDOT SHA pavement areas, signs shall be placed approximately 500 feet in advance of the steel plates.

(c) Location and spacing of these signs will depend on field conditions and is subject to approval by the MDOT SHA's Permit Inspector.

(d) The identification of the Permittee, contact individual, and 24-hour telephone number shall be clearly marked on the rear face of the "STEEL PLATES" warning sign.

(e) From October through April, steel plates shall be additionally identified by the placement of a grade stake located at the pavement edge immediately adjacent to the steel plates for

identification during snow events. The stake is to be at least three (3') feet high, painted international orange and must be visible to the traveling public.

(f) The identification of the Permittee must be clearly marked in orange paint on the surface of the steel plate or adjacent roadway.

(g) Permittee Identification Signs. The Permittee is required to install signs identifying their organization and telephone number. Signs shall be at least 14" in height by 22" in width. Signs shall have white letters and numerals on a dark blue background and must provide all of the following information:

(1) The name of the owner of the Permittee.

(2) The name of the contractor that is performing the work.

(3) A 24-hour telephone number for the contractor.

(4) Overall dimensions may be modified to fit the name of the Permittee with approval of the appropriate District Utility Engineer (or approved designee).

(5) The number and spacing of these identifying signs shall be subject to the approval of the MDOT SHA District Utility Engineer.

(6) MDOT SHA facilities will not be used to provide or install the signs or their supports.

(7) Identifying signs shall be erected immediately before the start of the Permittee's work operations and must be removed immediately upon completion of permanent construction and restoration.

01.03.10 BLASTING. All blasting operations, including the storage and handling of explosives and blasting agents, shall be performed in conformance with the applicable provisions of Section TC-6.07 and Section 201.03.04(b)(c) of the Maryland Standard Specifications for Construction and Materials, Dated July 2017.

01.03.10.01 Requirements.

(a) Blasting within MDOT SHA ROW is strictly prohibited without prior approval. To obtain authorization, a blasting plan (of type, charge, pattern, and method) must be submitted for approval a minimum of forty-five (45) days in advance of the anticipated commencement of work. Blasting cannot begin until the blasting plan is approved and authorized by the MDOT SHA and all other appropriate agencies.

(b) A (Maryland) licensed blaster is required to perform all blasting work associated with the work to be accomplished under the terms of this permit. The Permittee is required to furnish proof of a Maryland Blaster's License before beginning any blasting operations.

(c) The Permittee may be required to provide proof of additional insurance in an amount to be specified by the MDOT SHA prior to commencing any blasting activity.

(d) The District Utility Engineer must be notified three (3) business days prior to beginning any blasting work.

(e) All blasting is to be performed in complete compliance with the approved blasting plan.

(f) Blasting is not to be performed within one hundred (100') feet of any residence or structure.

(g) A thorough site inspection, including representatives of the MDOT SHA, the Permittee, and other affected parties shall be conducted prior to the commencement of blasting. The existing conditions of all culverts, inlets, retaining walls, and other structures is to be fully documented using photographs and/or videotape supplied at the expense of the Permittee. A copy of a complete set of this documentation is to be provided to the MDOT SHA District Utility Engineer prior to the commencement of blasting. A follow up inspection is to be performed upon the completion of blasting to identify any new damage to existing facilities. All damage to existing facilities shall be repaired to the complete satisfaction of the MDOT SHA at the sole expense of the Permittee. All necessary repair or replacement work is to begin immediately and be completed as soon as practicable.

(h) The Permittee is solely responsible to resolve to the complete satisfaction of the MDOT SHA all damage claims resulting from any activity associated with blasting performed under this permit. The Permittee shall be required to repair or replace all facilities damaged by blasting operations at no cost to the MDOT SHA.

(i) All shots shall be matted to control flying rock and debris so as to prevent damage to persons or structures.

(j) Equipment used for drilling blast holes shall use a positive means of dust control.

(k) Seismic readings may be required to monitor blasting operations. When required, a copy of readings indicating peak particle velocities shall be made available to a representative of the MDOT SHA after each shot.

(l) Blasting shall not be performed closer than fifty feet (50') from any water, gas, sewer, cable, or conduit unless said facilities have been completely exposed, definitively located and suitably backfilled prior to blasting in strict accordance with the specific requirements of the representative utility agencies. In no case will blasting be permitted closer than two (2') feet from any utility facility ten (10") inches or smaller in diameter, and no closer than five (5') feet from any utility facility larger than ten inches in diameter.

(m) All possible caution is to be exercised to ensure that drilling and blasting operations minimize overbreak and blast damage to adjacent unexcavated ground.

(n) All blasting is to be carefully balanced and controlled to provide a uniform distribution of charge that will fracture the rock so that it may be excavated to the required contours without fracturing rock beyond the excavation limits. Modify the blasting round as necessary to achieve the best obtainable results and to keep the air blast over pressure, vibrations and noise within the limits herein specified. It shall be the Permittee's responsibility to produce a satisfactory excavated surface by determining the proper relationships of the factors of burden, spacing, depth of charge, amount and type of explosive, hole size, and delay pattern, and other necessary considerations to achieve the required results.

(o) Controlled blasting is a method used to remove rock in which the various elements of the blast, hole, size, depth, spacing, burden, charge size, explosive charge weight per delay, distribution, and delay sequence, are carefully balanced and controlled to provide a distribution of the charge that will fracture the rock so it may be excavated to the required contours and minimize overbreak and fracturing of the rock beyond the contour line. Smooth wall blasting, pre-splitting, cushion blasting, and line drills are examples of operations included in the term "controlled blasting".

(p) The Permittee shall be responsible for providing material to replace broken rock that is unsuitable for trench backfill use.

(q) In the event that air blast pressure, vibration, noise, flying debris, or over breakage exceed specified limits, all blasting operations are to be immediately suspended until a modified blasting plan is submitted and approved.

(r) All blasting shall comply with MDOT SHA's Standard Specifications for Construction and Materials, Section TC-6.07- Use of Explosives.

01.03.11 TEST HOLES & TEST PITS. All test holes and/or test pit excavations performed within the MDOT SHA ROW shall be in accordance with Standard Specifications for Construction and Materials, Section 205 - Test Pit Excavation, Section 210 – Tamped Fill, and Standard Specifications for Subsurface Explorations.

(a) All test holes performed in pavement areas shall be by saw cut an area not to exceed Twelve (12") by twelve (12") square and then shall be excavated by the vacuum method. Test holes shall be of the size, depth, and location in accordance with Title 12 (Miss Utility) location requirements as approved by the MDOT SHA and restored by tamped six (6") lifts and sealed with approved cold mix asphalt.

(b) All test pits should generally be 3-feet to 4-feet square or rectangle dimensions depending upon the depths of the excavation needed. However, all test pit excavations shall be kept to the minimum required for satisfactory completion of the work. Test pits shall be of the size, depth, and location as approved by the MDOT SHA.

(c) All damaged paving shall be repaired with flowable fill or other MDOT SHA approved material and replaced in kind as soon as practicable and to the satisfaction of the MDOT SHA.

(d) At the discretion of the District Utility Engineer, the Permittee shall completely backfill test holes to match existing grade with non-shrink grout. Repairs are to be completed within forty-eight (48) hours.

(e) When a Permittee open cuts or excavates for test holes and/or test pits in the pavement of a state roadway, the cut shall be marked with the appropriate color code as designated by Miss Utility (see section 001.03.19 – MARKING ROAD REPAIRS). The initials of the Permittee are required to be painted within the cut area.

(f) The MDOT SHA reserves the right to require the Permittee to mill and overlay the roadway due to the amount and location of the said test pits.

01.03.12 TRENCHLESS INSTALLATIONS.

01.03.12.01 Trenchless installation activities are to be performed in complete accordance with submitted plans and specifications approved by the MDOT SHA. The Permittee assumes responsibility in the event of any roadway failure to replace any or all pavement as required in the opinion of the District Utility Engineer and/or Resident Maintenance Engineer's Office. The Permittee shall submit, with the Utility Permit Application of any proposed trenchless installation within MDOT SHA rights-of-ways. Plans should* be signed by a Professional Engineer licensed in the State of Maryland. Prior approval from the MDOT SHA shall be obtained prior to any construction using any method of trenchless installation. All materials used shall be adequate for the intended purpose and method of installation; and shall be approved by the MDOT SHA. * Refer to the MDOT SHA Utility Manual Section 1.01.02 Terms and Definitions.

01.03.12.02 Tunneling. All plans for tunneling operations must be approved/signed by a Professional Engineer licensed in the State of Maryland. For any proposed tunneling within MDOT SHA rights-of-ways, the Permittee shall submit a request for review and approval from both the MDOT SHA Office of Structures and the appropriate District Utility Engineer (or approved designee).

(a) The Permittee shall have approved plans, and approval of a method to support the face and periphery of the excavation, before doing any work.

(b) A heavy timber shaft at either end of the tunnel must be provided in order to prevent failure of the embankments and to maintain access to the tunnel. The tunnel liner plates shall be installed by tunnel methods using an approved method to support the face and periphery of the excavation, of which, all supports shall be adequately strong, braced, and shored. This support shall be maintained during non-working hours in order to prevent cave-ins. Access shafts are required at both ends of the tunnel.

(c) Tunnel excavation shall be advanced in increments not to exceed two (2') feet. Tunnel liner plates shall be installed immediately upon the completion of each excavation increment. Excavation is to be conducted so that the voids behind the tunnel liner plates are kept to a minimum.

(d) Voids behind tunnel liner plates are to be filled with grout placed under pressure. At least two (2) grout plugs are to be provided per ring to appropriately fill all voids. Grouting is to begin as soon as a sufficient length of tunnel liner plate has been installed to insure a proper seal. Grouting is to proceed progressively with each adjacent set of holes provided in liner plates. All voids shall be completely filled prior to the end of each shift.

(e) Bulkheads must be sufficiently secured to ensure proper seal and prevent the leakage of grout under pressure. Grouting equipment shall have a minimum capacity of one-half (½) cubic yard to assure that adequate grouting material is available within a reasonable period of time to avoid the setting up of grout from the previous batch. Upon the completion of grouting, all holes are to be plugged with an appropriate fitting provided.

(f) Access to the shaft is to be protected at all times to deny unauthorized pedestrian entry. Since the definition of tunneling compared to other trenchless technologies is that workers are present inside the tunnel, the safety of the operators is most important. The

Permittee shall operate and maintain an installed ventilation system to meet all OSHA, MOSH, and other pertinent safety requirements for the duration of the tunnel project.

(g) Approval for any proposed tunneling shall be from the appropriate District Utility Engineer (or approved designee) via the Complete Authorized Utility Permit unless work is 3rd Party Utility Work incorporated into the MDOT SHA's construction project.

01.03.12.03 Jacking & Boring. All plans for jacking and boring operations must be reviewed and stamped by a Professional Engineer licensed in the State of Maryland.

(a) A heavy timber shaft at either end of the jacking pit is required to prevent embankment failure and maintain access to the pit. This support shall be continuously maintained to prevent cave-ins. Pipes and sleeves shall have sufficient length to extend beyond the ditch line or shoulder edges as directed by the MDOT SHA. Excavation in shoulder areas to push or install pipes or sleeves is prohibited. For jacked and bored pipe crossings under MDOT SHA roadways, the bore hole diameter is not to exceed the outside diameter of the pipe or sleeve.

(b) The jetting of pipes or sleeves is not permitted.

(c) The allowable jacking strength capacity of the casing pipe shall be capable of withstanding the maximum jacking forces imposed by the operation. Steel casing pipe shall have minimum yield strength of 35,000 psi. To prevent cave-ins, pipes and sleeves shall be installed simultaneously with augering. In the event of a false start, the void will be backfilled by grouting or other method approved by the MDOT SHA.

(d) The Permittee is responsible to repair or replace any pavement area or areas damaged as a result of jacking and boring operations. The extent of repairs or replacement shall be determined at the sole discretion of the MDOT SHA. Repairs or replacement shall be performed immediately.

(e) Jack and bore pits shall be protected at all times to prohibit unauthorized vehicular and pedestrian access.

(f) The minimum allowable depth of a Jack and Bore installed casing pipe under the road and shoulder surface is five (5') feet. Any deviation shall require prior approval from the appropriate District Utility Engineer (or their approved designee). In locations where the road surface is super elevated, the minimum depth of the bore shall be measured from the lowest side of the pavement surface. In addition, a minimum three (3') foot depth shall be maintained in all other features including ditch bottoms unless otherwise directed by the appropriate District Utility Engineer (or their approved designee).

(g) Upon completion of the work, the Permittee shall remove and properly dispose of all excess materials and equipment from the work site.

01.03.12.04 Directional Boring. All plans for directional-boring operations should* be approved and stamped by a Professional Engineer licensed in the State of Maryland. * Refer to the MDOT SHA Utility Manual Section 1.01.02 Terms and Definitions.

(a) As per the standard for horizontal directional drilling, a minimum of three (3') foot cover within non-controlled access ROW and five (5') foot cover within controlled access ROW is required from existing grade to the top of all buried cables and ducts and must be

maintained under paved sections. The top of all cables and ducts must be buried a minimum of five feet below streambeds when crossing waters or wetlands.

(b) The discharge of all effluent resulting from directional boring operations is to be directed into a tank or truck and suitably disposed of at an authorized waste site.

(c) Drilling sites shall be protected at all times to prohibit unauthorized vehicular and pedestrian access. Exposed cables and ducts at splicing locations are to be protected utilizing orange safety fence installed a minimum height of four (4') feet and as prescribed in Section 104.20.03 of the 2017 Standard Specifications for Construction and Materials. Perimeter safety fencing around ducts and cables is to be securely maintained at all times.

(d) Support for exposed cables or ducts at splicing locations must be installed by the Permittee. The temporary attachment of cables or ducts to existing poles, signs, trees, or other existing fixed objects is strictly prohibited. Splicing and handhole installation is to proceed with cable or duct installation.

(e) Unless otherwise agreed to by the Permittee and the MDOT SHA, and responded to with a written letter, restoration activities must be commenced within seven (7) days of the placement of cable or duct between each handhole location. Upon completion of the work, the contractor shall remove and properly dispose of all excess materials and equipment from the work site.

01.03.12.05 Other Methods. Prior approval from MDOT SHA must be obtained prior to any construction using any other methods of trenchless installation. The Permittee must request, in writing, permission from the MDOT SHA to use any other methods of trenchless installation, attaching plans and specifications for MDOT SHA's review.

01.03.13 EROSION & SEDIMENT CONTROL.

001.03.13.01

01.03.13.01 All erosion and sediment control measures and devices shall be constructed in conformance with the 2011 Maryland Standards and Specifications for Soil Erosion and Sediment Control published by the Maryland Department of the Environment, Water Management Administration, and all revisions thereof.

01.03.13.02 The Permittee is required to install and maintain all sediment control devices specified in assigned job-specific permit or other permits which have or should have been obtained by the Permittee. The Permittee is solely responsible for securing all permits necessary to accomplish the work outlined in the assignment permit.

01.03.13.03 The Permittee is responsible for compliance with all state and local sediment control regulations.

01.03.13.04 All disturbed areas are to be temporary stabilized within 48 hours following completion of excavation activities.

01.03.13.05 Restoration and permanent stabilization of all areas is to be completed within seven (7) days of the completion of excavation activities.

01.03.13.06 The discharge of any material or liquid, other than clean water, into any drainage facility is strictly prohibited.

01.03.13.07 The discharge of any material or liquid into Waters of the United States is strictly prohibited.

01.03.13.08 Stabilized construction entrances are required for access to work areas adjacent to roadways. Construction entrances shall be shown on permit plans and are to meet the sight distance standards.

01.03.13.09 Any work or activity within twenty-five feet (25') of any wetland area is strictly prohibited.

01.03.13.10 All dewatering is to be performed utilizing an approved dewatering device, approved by a Maryland Professional Engineer, to ensure the removal of sediment from effluent.

01.03.13.11 All surface drains, swales, and ditches are to be maintained free of debris at all times.

01.03.13.12 The Permittee shall take all steps necessary to keep erosion and siltation into the MDOT SHA's right of way to a minimum during construction.

01.03.13.13 The Permittee shall avoid and minimize construction impacts to wetlands and waterways and shall restore affected areas to their preconstruction condition.

01.03.13.14 A MDOT SHA certified Erosion and Sediment Control Manager must be specifically designated for each permit application. The Erosion and Sediment Control Manager shall supervise implementation of the sediment and erosion plan for all work that involves soil disturbance or excavation. The Erosion and Sediment Control Manager shall possess current MDOT SHA certifications.

01.03.13.15 The MDOT SHA Quality Assurance Division provides quality assurance of erosion and sediment control devices in conformance with Section 308 of the 'Standard Specifications'.

01.03.14 DRAINAGE. All drainage structures must function while work is in progress, as well as upon completion of work. If damaged, storm drain facilities, including but not limited to pipe, inlets, headwalls, underdrain, and ditches etc., shall be replaced "in kind" by the Permittee in accordance with MDOT SHA publications heretofore referenced (Section 001.03.03.01 - DESIGN and CONSTRUCTION). Should any disturbances be made to the existing surface drain ditches, it will be necessary to restore the drainage ditches to their original condition by re-sodding or seeding and mulching, leaving them in a neat and orderly condition as determined by the MDOT SHA. Unpaved drainage ditches shall be restored in accordance with MDOT SHA's Standard Specifications for Construction and Materials, Category 300 - Drainage and MDOT SHA's Book of Standards for Highway & Incidental Structures, Category 300 - Drainage. All streambeds must be left free of debris so as to provide for a free flow of water at all times. Concrete ditch reconstruction shall be in accordance with the standards.

01.03.15 VALVES AND MANHOLES. The MDOT SHA shall not be responsible for repair of any damage to valves, manholes, or other structures, improperly installed and/or maintained by the Permittee, within the roadway or shoulder areas; or damage caused by others. The Permittee will assume the full responsibility for any injury or damage to MDOT SHA personnel

and equipment as a result of MDOT SHA equipment striking valves, manholes, or other structures, improperly installed and/or maintained by the Permittee such as during snow removal operations.

01.03.16 BACKFILL AND TEMPORARY PATCHING.

001.03.16.01

01.03.16.01 Backfill. The Permittee shall backfill all excavated areas as per the approved permit drawings or as directed by the District Utility Engineer.

01.03.16.02 Saw cuts. All excavation across pavement areas is to be full depth saw cut prior to removal.

01.03.16.03 Backfill placement. For areas approved to be backfilled with excavated material or selected backfill material, all backfill is to be placed in horizontal layers not to exceed six (6") inches in depth. Each layer is to be uniformly tamped and compacted by means of a mechanical or vibratory compacting device in accordance with Standard Specifications for Construction and Materials Sections 210 Tamped Fill and 916 Soil and Soil Aggregate Borrow.

(a) **Excavating in pavement areas.** When the excavation is located within pavement areas, the backfill will be placed to within one foot of the bottom of the specified permanent patch depth; the remaining depth of the trench shall be temporarily backfilled with dense graded aggregate and compacted and approved by the MDOT SHA before permanently repairing the road.

01.03.16.04 Flowable fill. For areas approved to be backfilled with flowable fill, the Permittee shall place and cure the Controlled Low Strength Material as directed by the MDOT SHA and in accordance with MDOT SHA's Standard Specifications for Construction and Materials, Section 314 - Flowable Backfill. The Permittee will be required to mill and overlay after this process at the direction of the District Utility Engineer.

01.03.16.05 Repairing disturbed areas. The Permittee shall upon completion of backfilling the excavation, immediately repair all disturbed areas. The Permittee may temporarily patch the disturbed areas with the approval of the District Utility Engineer, otherwise all repairs will be permanent.

01.03.16.06 Temporary repairs outside roadway. Temporary repair of areas outside the paved section shall be restored to their original condition, and shall include replacing topsoil, seeding and other work in general conformance with the MDOT SHA Environmental Guide for District, Access and Utility Permits Applicants, and as specified in the landscape plan developed for the project, or as directed by the District Utility Engineer. All reconstruction shall be in accordance with MDOT SHA's Standard Specifications for Construction and Materials, Category 700 – Landscaping. Inspections will be performed by the Office of Environmental Design's Quality Assurance Division and Landscape Programs Division in conformance with MDOT SHA Standard Specifications.

01.03.16.07 Temporary shoulder repair. Temporary repair of shoulder areas after backfilling shall consist of a minimum of three (3") inches of cold patch placed into the excavated shoulder area and mechanically compacted as directed by the District Utility Engineer.

01.03.16.08 Temporary roadway patching. The MDOT SHA may, at its discretion, allow a temporary patch of roadway area for a short period of time, not to exceed thirty (30) days unless agreed to and responded to in writing between the Permittee and the MDOT SHA as long as the patching remains acceptable for driving conditions. The period of time is subject to weather conditions allowing for the work to be completed. Temporary repair of bituminous concrete areas after backfilling shall consist of a minimum of three (3") inches HMA placed into the excavated roadway area and mechanically compacted or as directed by District Utility Engineer.

01.03.17 ROADWAY AND SHOULDER REPAIR AND RESTORATION. Installation of underground utilities under paved roadways and shoulders may require repairing hot mix asphalt pavement or Portland cement concrete pavement. Repairs shall be completed meeting the requirements of sections 504 Asphalt Pavement, 505 Asphalt Patches, and 522 Portland Cement Concrete Pavement Repairs of the Maryland Standard Specifications for Construction and Materials dated 2017; and Standard No. 578.01 – Repairing Pavement Openings for Utility Trenches; Standard No. MD 578.03 – Permanent Patching for Flexible Pavement Using Approved Asphalt Mix; Standard No. 578.03-01 – Permanent Patching for Composite Pavement in the Book of Standards for Highway and Incidental Construction as follows:

001.03.17.01

01.03.17.01 Permanent pavement repairs. The Permittee shall permanently repair all roadway and shoulder areas (including intersecting roads and streets) in accordance with MDOT SHA's Book of Standards for Highway & Incidental Construction and MDOT SHA's Standard Specifications for Construction and Materials. MDOT SHA's Book of Standards for Highway & Incidental Construction, Standard 578.01 Repairing Pavement Openings for Utility Trenches is a minimum guideline only. The MDOT SHA reserves the right to change permit repair specifications to suit any changes that may occur on site.

01.03.17.02 Pavement restoration. Final pavement restoration is to occur within thirty (30) days of the completion of the work unless agreed to in writing between the Permittee and the MDOT SHA.

01.03.17.03 Permanent roadway and shoulder repairs. Permanent repair of shoulder and roadway areas excavated by the Permittee shall consist of the removal of any temporary repairs placed and must extend a minimum of two (2') feet beyond the limits of the excavation on all sides. The MDOT SHA may require resurfacing of the roadway up to a maximum of two hundred (200') feet on each side of a trench crossing a highway. This distance is a maximum and the appropriate District Engineer (or approved designee) may approve resurfacing down to a minimum of two (2') feet on each side of the excavation when road, traffic, and excavation conditions permit. All pavement repairs shall be as determined by the District Utility Engineer.

01.03.17.04 Milling. Milling and overlay of pavement surfaces may be required at the direction of the District Utility Engineer.

01.03.17.05 Surface structure protection. Exposed utility surface structures in milled areas are to be protected around their entire circumference with a minimum taper of two (2') feet of a bituminous concrete product.

01.03.17.06 Overlay milled pavement. Milled surfaces are to be resurfaced within seven (7) days.

01.03.17.07 Restriping. Traffic markings and symbols are to be replaced in milled and resurfaced areas prior to the reopening of pavement to traffic. Restriping of these areas with in-kind material will be completed immediately upon resurfacing entirely at the Permittee's expense.

01.03.17.08 Settlement in roadway repair. The Permittee will be responsible for a period of one (1) year for any settlement of any repair, even if the Permittee met the required compaction requirements during the backfilling and installation. At the discretion of the District Utility Engineer, the area of settlement must be cut out and replaced to match the existing profile.

01.03.17.09 Concrete Roadway and/or Shoulders. All concrete pavement disturbed is to be replaced with at least a ten (10') foot length of reinforced concrete patch or to the length required by MDOT SHA's Book of Standards for Highway & Incidental Construction, Standard MD 578.01 and placed in accordance with standard requirements of the MDOT SHA Specifications for Construction and Materials, Section 522 Portland Cement Concrete Pavement Repairs. Concrete Mix No. 9 per Standard Specifications for Construction and Materials Section 902.10 shall be used. Curing of the concrete patch shall be in compliance with the MDOT SHA's Specifications.

(a) **Extending the patch.** In the event the edge of the trench is within six (6') feet of a construction joint, the reinforced concrete patch must be extended to the construction joint. All trenches must be sawed full depth with a concrete saw. The roadway openings must be compacted as specified under "Backfill" Section of this permit.

(b) **Accelerator for Concrete Pavements**. When in the opinion of the MDOT SHA a concrete accelerator is required, the accelerator shall be approved by the MDOT SHA and used in accordance with manufacturer's specifications to obtain 350 psi split tensile strength within 12-16 hours.

01.03.17.10 Bituminous Concrete Roadway and Shoulders. All bituminous concrete pavement disturbed is to be replaced as indicated under Concrete Roadway, as shall be applicable, except that the length of concrete patch will be a minimum of six (6') feet and a minimum depth of ten (10") inches. The concrete patch shall be overlaid with HMA, placed and thoroughly compacted, in accordance with MDOT SHA's Standard Specifications for Construction and Materials Sections 504 – Asphalt Pavement and 505 – Asphalt Patches, MDOT SHA's Book of Standards for Highway and Incidental Structures Standard No. MD 578.01 and as directed by the District Utility Engineer.

(a) **Full Depth Bituminous Concrete Shoulders**. At the sole discretion of the MDOT SHA, pavement repairs to full depth bituminous concrete shoulders may be composed of a variable depth HMA base covered with two (2") inches of HMA surface SC. The total thickness of HMA used for shoulder repairs must be equal to or greater than the thickness of the existing shoulder pavement.

01.03.17.11 Chip Seal Surface Treated Shoulders. All Chip Seal Surface Treated Shoulders disturbed shall be replaced with twelve (12") inches of dense graded aggregate base, placed and compacted in two (2) horizontal lifts of thickness not exceeding six (6") inches and graded to match the existing shoulder slope. The Chip Seal Surface Treatment

shall be performed in accordance with MDOT SHA's Standard Specifications for Construction and Materials, Section 503 – Chip Seal Surface Treatment and as directed by the MDOT SHA. The Permittee shall maintain the disturbed shoulder area for a minimum of six (6) months after completion of all work.

01.03.17.12 Dense Graded Aggregate Shoulders. All unpaved stone shoulders disturbed by the Permittee's operations shall be repaired by the Permittee with twelve (12") inches of dense graded aggregate base in accordance with Standard Specifications for Construction and Materials Section 501, placed and compacted meeting the requirements of Standard Specifications for Construction and Materials, Section 501.03.10 - Compaction in two (2) horizontal lifts of thickness not exceeding six (6") inches and graded to match the existing shoulder slope. The material must have a dual treatment of calcium chloride consisting of one pound per square yard each treatment, with treatments 14-90 days apart as required in the opinion of the Permit Inspector. The Permittee shall maintain the disturbed shoulder area for a minimum of six (6) months after completion of all work.

01.03.17.13 Driveway Entrances. Private entrance aprons shall be replaced in accordance with MDOT SHA's Guidelines for Residential Entrances to State Highways and the Residential Permit Application Package. Commercial entrances damaged by the Permittee's activities shall be replaced in accordance with the Complete Authorized Utility Permit or as directed by the MDOT SHA. Pavement repair to existing driveway entrances are to be composed of material in type and thickness identical to that which existed prior to excavation. Existing concrete entrance aprons, if damaged, will be replaced in their entirety, using MDOT SHA Mix No. 6 concrete.

01.03.18 ROAD-SIDE RESTORATION.

01.03.18.01 General.

(a) **Replace, repair, or restore damaged property.** The Permittee will be responsible for replacing, repairing, or restoring anything removed or damaged as a result of any activity performed under this permit including but not limited to all curbs, medians, gutters, drains, fences, sidewalks, steps, rails, walls, signs, structures, crosswalks, mailboxes, etc. to their original condition to the complete satisfaction of the MDOT SHA and adjacent property owners.

(b) **Remove, adjust, or relocate property.** Any removal, adjustment, or relocations of traffic barrier, guardrails, posts, or end treatments is strictly prohibited except when authorized by individual permit applications. Traffic barriers shall be replaced in accordance with MDOT SHA's Book of Standards for Highway & Incidental Structures, Category 6 – Shoulders; Standard Specifications for Construction and Materials, Section 604 - Concrete Traffic Barriers, Section 605 – Metal Traffic Barriers, and Section 605 - Traffic Barrier End Treatments; and Guidelines for Traffic Barrier Placement and End Treatment Design.

(c) **Restore or replace fencing.** (Chain link) Fencing removed for construction is to be restored to its original condition. All fence openings shall be completely restored prior to the end of each working shift. Fences shall be replaced in accordance with MDOT SHA's Standard Specifications for Construction and Materials- Category 600 Shoulders,

and MDOT SHA's Book of Standards for Highway & Incidental Structures- Standards Nos. MD 690.01 thru MD 692.01 as applicable.

(d) **Remove, adjust, or relocate traffic control devices.** The removal, adjustment, or relocation of signs, delineators, markers, crosswalks, and other traffic control facilities or devices is strictly prohibited except as specifically authorized by the Complete Authorized Utility Permit. MDOT SHA traffic control facilities or devices shall not be removed until immediately prior to the permit activity requiring removal and shall be replaced in their original locations immediately upon completion of said permit activity. MDOT SHA traffic control facilities or devices disturbed or damaged by the Permittee's activities shall be repaired, replaced, or otherwise restored to the satisfaction of the MDOT SHA in accordance with MDOT SHA's Book of Standards for Highway & Incidental Structures; Standard Specifications for Construction and Materials; and the Maryland Manual on Uniform Traffic Control Devices. Delineators removed for construction shall be replaced to their original height and position upon the immediate completion of activities in accordance with MDOT SHA's Book of Standards for Highway & Incidental Structures, Standard Nos. MD 665.01 thru MD 665.06; and the Maryland Manual on Uniform Traffic Control Devices.

01.03.18.02 Curbs.

(a) **Limits of replacing curbs.** Any existing curbs disturbed shall be replaced to the limits as indicated for concrete roadway repair with the exception that in the event the edge of the trench is within four feet (4') of a construction joint, the new concrete curb must be continued to said construction joint and must conform with the existing curbs, and to be constructed in accordance with MDOT SHA's Book of Standards for Highway & Incidental Structures and Standard Specifications for Construction and Materials.

(b) **Concrete curb specifications.** Existing concrete curb or combination curb and gutter is to be replaced using MDOT SHA Mix No. 3 concrete to its original condition in accordance with the current version of the MDOT SHA Book of Standards for Highway & Incidental Construction, Standard Number MD 620.02, MD 620.02-1, and MD 620.03 as appropriate.

(c) **Bituminous curb.** Existing bituminous curb is to be replaced to its original condition in accordance with the MDOT SHA Book of Standards for Highway & Incidental Construction, Standard Number MD 615.01.

(d) **ADA.** Any existing curbs and/or combination curb & gutters disturbed shall be replaced in compliance with MDOT SHA's ADA policy.

01.03.18.03 Sidewalks.

(a) **Permanent sidewalk repairs.** Permanent repairs to concrete sidewalk shall consist of removal of the entire blocks of concrete sidewalk affected and the entire area replaced with MDOT SHA Mix No. 3 concrete (if applicable, type will be specified in job-specific permit), five (5") inches thick and finished to a true grade and alignment of the existing sidewalk – finished as now exists.

(b) **Curb specifications.** All work and materials shall be in accordance with the requirements of the MDOT SHA's Standard Specifications for Construction and

Materials, Section 603- Sidewalks and MDOT SHA's Book of Standards for Highway & Incidental Structures, Standard Nos. MD 655.01 thru MD 655.22. It will be the Permittee's responsibility to contact the Permit Section of the Department of Public Works of the County affected to obtain any necessary permits for all work involving the disturbance of sidewalks.

(c) **Accessibility requirements (ADA Compliance).** Both Maryland and Federal law require that new construction and reconstruction of any public facilities be done in a manner that ensures the facility is accessible by all users, including those with disabilities. Therefore, it is mandatory that work completed under this permit which includes construction or reconstruction of curbs, curb ramps, sidewalk/pedestrian walkways, crosswalks, or installation or modification of any type of obstructions contained within a sidewalk or pedestrian walkway be built in accordance with the MDOT SHA's Accessibility Policy and Guidelines for Pedestrian Facilities Along State Highways, available on MDOT SHA's Internet Site at roads.maryland.gov. These requirements include providing a minimum sixty (60") inch width path of travel, clear of obstructions within or protruding into the sidewalk/pedestrian walkway. If an object within the limits of the construction already exists within the sidewalk/pedestrian walkway, every reasonable effort should be made to relocate the object as part of the work performed under this permit. If an object cannot be placed or relocated entirely outside of the sidewalk/pedestrian walkway, then the object should be placed or relocated in a manner that provides the maximum possible clear width, which in no case shall be less than thirty-six (36") inches. The work done under this permit shall in no way reduce or negatively impact the accessibility of the curb ramps, sidewalk/pedestrian walkway, crosswalks, etc. from what existed prior to construction under this permit. If the sidewalk to be installed is less than five (5') feet in width, a wavier must be approved by the MDOT SHA ADA department.

01.03.18.04 Landscape Restoration. Landscape restoration shall begin immediately upon completion of excavation activities, and shall include replacing topsoil, seeding, sodding, tree installation, and other work in general conformance with the MDOT SHA Environmental Guide for District, Access and Utility Permit Applicants, and as specified in the landscape plan developed for the project, or as directed by the District Utility Engineer. All reconstruction shall be in accordance with MDOT SHA's Standard Specifications for Construction and Materials, Category 700 – Landscaping. Inspections will be performed by the Office of Environmental Design's Quality Assurance Division and Landscape Programs Division in conformance with MDOT SHA Standard Specifications.

01.03.19 MARKING ROAD REPAIRS.

When a Permittee open cuts within MDOT SHA ROW, the cut shall be marked with the appropriate color code as designated by Miss Utility (see below). The initials of the utility company are required to be painted within the cut area.

When the Permittee open cuts pavement of a State roadway, they shall mark the repaired road or shoulder area with the appropriate color as designated by Miss Utility. The initials of the utility company are also required to be painted within the repaired area.

Utility Color Codes as designated by Miss Utility:

Color	**Utility**
Red…	Electric Power Lines, Cables, Conduit, and Lighting Cables
Yellow	Gas, Oil, Steam, Petroleum or Gaseous Materials
Orange	Communication, Alarm or Signal Lines, Cables or Conduit incl. CATV
Blue	Potable Water
Purple	Reclaimed Water, Irrigation and Slurry
Green	Storm Drain Lines/Sewer
Pink…	Survey Markings
White	Proposed Excavation