



The Commonwealth of Massachusetts

Pursuant to G.L. c. 82A §1 and 520 CMR 14.00 et seq.
(as amended)

TOWN OF NORWELL

Permit Issued by Highway/Tree Department

345 Main Street

Norwell, MA 02061

Phone: (781) 659-8042

Fax: (781) 659-0473

TRENCH PERMIT APPLICATION

This Section For Official Use Only

Permit Number: _____

Date Issued: _____

Dig Safe Number : _____

Signature: _____
or [Permitting authority]

SECTION 1 - SITE INFORMATION

1.1 Property Address:

Street Name _____

Zip Code _____

City / Town _____

1.3 Description, location and purpose of proposed trench:

1.4 Anticipated Date to Begin Trench Operation

1.5 Anticipated Date Conclude Trench Operation

1.2 Map Number _____ Lot/Parcel Number _____
Builder's Lot No _____ Block _____

SECTION 2 - PROPERTY OWNERSHIP AND PERMIT HOLDER INFORMATION

2.1 Owner of Record:

Name: (Print) _____ Address : _____

Signature _____ Telephone: _____

2.2 Excavator Permit Holder Information:

Name: (Print) _____ Address _____

Signature: _____ Telephone: _____

2.3 Name and Contact Information of Insurer:

Company Name _____ Telephone _____

Address _____

Insurance Certificate #: _____ Policy Expiration Date _____

BY SIGNING THIS FORM, THE APPLICANT/EXCAVATOR AND OWNER, ACKNOWLEDGE AND CERTIFY THAT THEY ARE FAMILIAR WITH, OR, BEFORE COMMENCEMENT OF THE WORK, WILL BECOME FAMILIAR WITH, ALL LAWS AND REGULATIONS APPLICABLE TO WORK PROPOSED, INCLUDING OSHA REGULATIONS, G.L. c. 82A, 520 CMR 7.00 et seq., AND ANY APPLICABLE MUNICIPAL ORDINANCES, BY-LAWS AND REGULATIONS AND THEY COVENANT AND AGREE THAT ALL WORK DONE UNDER THE PERMIT ISSUED FOR SUCH WORK WILL COMPLY THEREWITH IN ALL RESPECTS AND WITH THE CONDITIONS SET FORTH BELOW.

THE UNDERSIGNED OWNER AUTHORIZES THE APPLICANT/EXCAVATOR TO APPLY FOR THE PERMIT AND THE EXCAVATOR TO UNDERTAKE SUCH WORK ON THE PROPERTY OF THE OWNER, AND ALSO, FOR THE DURATION OF CONSTRUCTION, AUTHORIZES PERSONS DULY APPOINTED BY THE MUNICIPALITY TO ENTER UPON THE PROPERTY TO MONITOR AND INSPECT THE WORK FOR CONFORMITY WITH THE CONDITIONS ATTACHED HERETO AND THE LAWS AND REGULATIONS GOVERNING SUCH WORK.

THE UNDERSIGNED APPLICANT/EXCAVATOR AND OWNER AGREE JOINTLY AND SEVERALLY TO REIMBURSE THE MUNICIPALITY FOR ANY AND ALL COSTS AND EXPENSES INCURRED BY THE MUNICIPALITY IN CONNECTION WITH THIS PERMIT AND THE WORK CONDUCTED THEREUNDER, INCLUDING BUT NOT LIMITED TO ENFORCING THE REQUIREMENTS OF STATE LAW AND CONDITIONS OF THIS PERMIT, INSPECTIONS MADE TO ASSURE COMPLIANCE THEREWITH, AND MEASURES TAKEN BY THE MUNICIPALITY TO PROTECT THE PUBLIC WHERE THE APPLICANT OWNER OR EXCAVATOR HAS FAILED TO COMPLY THEREWITH INCLUDING POLICE DETAILS AND OTHER REMEDIAL MEASURES DEEMED NECESSARY BY THE MUNICIPALITY.

THE UNDERSIGNED APPLICANT/EXCAVATOR AND OWNER AGREE JOINTLY AND SEVERALLY TO DEFEND, INDEMNIFY, AND HOLD HARMLESS THE MUNICIPALITY AND ALL OF ITS AGENTS AND EMPLOYEES FROM ANY AND ALL LIABILITY, CAUSES OR ACTION, COSTS, AND EXPENSES RESULTING FROM OR ARISING OUT OF ANY INJURY, DEATH, LOSS, OR DAMAGE TO ANY PERSON OR PROPERTY DURING THE WORK CONDUCTED UNDER THIS PERMIT. .

EXCAVATOR SIGNATURE

DATE _____

OWNER'S SIGNATURE (IF DIFFERENT)

DATE _____

For City/Town use -- Do not write in this section

PERMIT APPROVED BY _____

PERMITTING AUTHORITY Building Commissioner /Inspector of Buildings
Director of Public Works

Date _____

CONDITIONS AND REQUIREMENTS PURSUANT TO G.L.C.82A AND 520 CMR 14.00 et seq. (as amended)

By signing the application, the applicant/excavator understands and agrees to comply with the following:

- i. No trench may be excavated unless the requirements of sections 40 through 40D of chapter 82, and any accompanying regulations, have been met and this permit is invalid unless and until said requirements have been complied with by the excavator applying for the permit including, but not limited to, the establishment of a valid excavation number with the underground plant damage prevention system as said system is defined in section 76D of chapter 164 (DIG SAFE);
- ii. Trenches may pose a significant health and safety hazard. Pursuant to Section 1 of Chapter 82 of the General Laws, an excavator shall not leave any open trench unattended without first making every reasonable effort to eliminate any recognized safety hazard that may exist as a result of leaving said open trench unattended. Excavators should consult regulations promulgated by the Department of Public Safety in order to familiarize themselves with the recognized safety hazards associated with excavations and open trenches and the procedures required or recommended by said department in order to make every reasonable effort to eliminate said safety hazards which may include covering, barricading or otherwise protecting open trenches from accidental entry.
- iii. Persons engaging in any in any trenching operation shall familiarize themselves with the federal safety standards promulgated by the Occupational Safety and Health Administration on excavations: 29 CFR 1926.650 et.seq., entitled Subpart P "Excavations".
- iv. Excavators engaging in any trenching operation who utilize hoisting or other mechanical equipment subject to chapter 146 shall only employ individuals licensed to operate said equipment by the Department of Public Safety pursuant to said chapter and this permit must be presented to said licensed operator before any excavation is commenced;
- v. By applying for, accepting and signing this permit, the applicant hereby attests to the following: (1) that they have read and understands the regulations promulgated by the Department of Public Safety with regard to construction related excavations and trench safety; (2) that he has read and understands the federal safety standards promulgated by the Occupational Safety and Health Administration on excavations: 29 CFR 1926.650 et.seq., entitled Subpart P "Excavations" as well as any other excavation requirements established by this municipality; and (3) that he is aware of and has, with regard to the proposed trench excavation on private property or proposed excavation of a city or town public way that forms the basis of the permit application, complied with the requirements of sections 40-40D of chapter 82A.

The permit shall be posted in plain view on the site of the trench.

Summary of Excavation and Trench Safety Regulation (520 CMR 14.00 et seq.)

This summary was prepared by the Massachusetts Department of Public Safety pursuant to G.L.c.82A and does not include all requirements of the 520 CMR 14.00. To view the full regulation and G.L.c.82A, go to www.mass.gov/dps

Pursuant to M.G.L. c. 82, § 1, the Department of Public Safety, jointly with the Division of Occupational Safety, drafted regulations relative to trench safety. The regulation is codified in section 14.00 of title 520 of the Code of Massachusetts Regulations. The regulation requires all excavators to obtain a permit prior to the excavation of a trench made for a construction-related purpose on public or private land or rights-of-way. All municipalities must establish a local permitting authority for the purpose of issuing permits for trenches within their municipality. Trenches on land owned or controlled by a public (state) agency requires a permit to be issued by that public agency unless otherwise designated.

In addition to the permitting requirements mandated by statute, the trench safety regulations require that all excavators, whether public or private, take specific precautions to protect the general public and prevent unauthorized access to unattended trenches. Accordingly, unattended trenches must be covered, barricaded or backfilled. Covers must be road plates at least ¾" thick or equivalent; barricades must be fences at least 6' high with no openings greater than 4" between vertical supports or openings greater than 4" may be protected by solid guards or suitable materials, including plywood or wood planks; backfilling must be sufficient to eliminate the trench. Alternatively, excavators may choose to attend trenches at all times, for instance by hiring a police detail, security guard or other attendant who will be present during times when the trench will be unattended by the excavator.

The regulations further provide that local permitting authorities, the Department of Public Safety, or the Division of Occupational Safety may order an immediate shutdown of a trench in the event of a death or serious injury; the failure to obtain a permit; or the failure to implement or effectively use adequate protections for the general public. The trench shall remain shutdown until re-inspected and authorized to re-open provided, however, the excavators shall have the right to appeal an immediate shutdown. Re-inspection must occur within tow (2) business days of written notifications by the excavator to the Permitting Authority that it has complied with all repairs/corrections ordered. Permitting authorities

April '09

are further authorized to suspend or revoke a permit following a hearing. Excavators may also be subject to administrative fines issued by the Department of Public Safety for identified violations.

SUGGESTED CHECKLIST FOR APPLICATION

- Worker's Compensation Certificate
- Insurance Binder from Insurance Company made out to the Town of Grafton
- Photo Identification of Permit Holder
- Photo Identification of Person Performing Excavation
- Dig Safe Number
- All monies due to the town must be paid (Certificate of Good Standing)

Town of Norwell

Rules and Specifications Governing Street Excavation
&
Department of Telecommunication and Energy (DTE)

April 13, 2012

ROAD OPENING PERMIT STREET PRESERVATION REQUIREMENTS

Road Opening Permits must be kept on the job site and must be shown upon request to any authorized Town Official. The Highway Department will be notified before any repairs are made whether it be permitted work or emergency repairs.

No Municipal Street, sidewalk, public right of way, or public easement shall be opened, cut, excavated, bored, tunneled under, drilled, or trenched without a street opening permit issued by the Board of Selectmen. No Municipal Street restored or re-built within the past five (5) years shall be cut, except in an emergency, or as approved by the Highway Surveyor, his designee or the Board of Selectmen. The permit applicant shall be the person, entity, company, utility, or agency assuming responsibility for compliance with the permit requirements, including compliance with all requirements set out or referenced here. Where such work involves a grant of location for telecommunications or electric services, or approval required by the Board of Selectmen for the location of other utility structures or facilities, the permit applicant shall be required also to obtain approvals from the Board of Selectmen before a street opening permit will be effective. Further, the permit applicant shall obtain all necessary permits, including but not limited to those required from the Office of Inspectors, and Water Department before a street opening permit will be effective. Finally, the permit applicant shall obtain a "Dig Safe" number and shall arrange for disconnection of hazardous utilities prior to any work in or under a municipal street, sidewalk, or public right of way. Permits are available through the Board of Selectmen's Office, 345 Main Street, Norwell, MA 02061.

No permit applicant or contractor will be permitted to work in or under municipal streets, sidewalks, public rights of way, or public easements unless the Highway Surveyor determines that the permit applicant or contractor has demonstrated competence and experience to restore municipal streets, sidewalks, public rights of way, and public easements in accordance with the latest edition of the MassDOT Standard Specifications, Manual on Uniform Traffic Control Devices-FHWA and Massachusetts Department of Telecommunications and Energy Standards (to be employed by public utility operators when restoring streets, lanes, and highways), DTE 98-22, as amended and revised from time to time.

At all times during the course of work in or under a municipal street, sidewalk, public rights of way, or public easement, the permit holder shall meet all safety requirements of the Highway Department, Office of Inspections, Water Department, Police Department, and Fire Department.

The Highway Surveyor, Board of Selectmen, or the Highway Surveyors Designee may establish a reasonable time limit for completion of work in or under and restoration of a municipal street, sidewalk, public rights of way, or public easement.

In the event of an emergency requiring work in or under a municipal street, sidewalk, public right of way, or public easement, the permit applicant shall notify the Highway Surveyor/designee immediately by 24-hour emergency telephone (781) 659-8042. As soon as practical but in no event later than the next business day after the emergency work commences, the permit applicant shall file for a street opening permit and all other permits required by the Town of Norwell departments.

Testing Requirements

All permanent patches and final road restoration (excluding temporary patches) test results and certification are to be provided to the Highway Department upon completion of work.

- 1.) Gravel will be defined as processed gravel per the MassDOT Standard Specifications 1995 or newer as amended.
- 2.) Soil compaction will be defined as a minimum of 95% of the Proctor Value. Soils compaction test report to be provided by the applicant.
- 3.) HMA compaction will be defined as 95%-100% of the Marshal Value as determined in the lab from the MassDOT approved plant. HMA compaction test report to be provided by the applicant.
- 4.) HMA analysis shall include an extraction, gradation, asphalt content, temperature at the plant all per MassDOT approved job mix formula. HMA plant test report to be provided by the applicant.

Street Restoration

- 1.) After opening and completing work in or under a Municipal street, sidewalk, public right of way, or public easement, the permit holder shall be responsible for restoration.
- 2.) Prior to restoration of the surface of a municipal street, sidewalk, public right of way, or public easement, the permit holder shall certify in writing that it has completed the work and the opening to a soil density value of 95% modified Proctor density as specified in the American Association of Highway and Transportation Officials Standard AASHTO T180.

Signage

- 1.) Any signage, barriers, or warning devises necessary for public safety will be in accordance with the Manual on Uniform Traffic Control Devises, and the Police Department. The applicant shall notify the Fire Department of any obstructions that may hinder for apparatus.
- 2.) The applicant shall take appropriate measures to assure that during the performance of the excavation, as far as practicable that normal traffic conditions shall be maintained at all times so as to cause as little inconvenience as possible to the occupants of the abutting property and to the general public. Closing of streets will not be permitted prior to notification of the Highway Surveyor, Police and Fire Departments. If for any reason the contractor has to work on a street and his work interferes with two free travel lanes of traffic, the contractor will provide police protection at his expense.
- 3.) Warning signs shall be placed at sufficient distance from the construction operation to alert all traffic coming from both directions. Cones or other approved devices shall be placed to channel traffic, all in accordance with the requirements of the Police Department. All costs including those of traffic warning signs, barriers, traffic controllers, police officers, etc. shall be fully borne by the Applicant.

Equipment and Construction Materials

- 1.) The amount of space occupied by construction materials and equipment on the site shall be limited so as to not unduly hinder traffic and block the way. Vibration resulting from the work shall be minimized. No contractor shall use jackhammers or excessively large equipment. Pavement shall be sawn with diamond-tipped cutting wheels. Trucks and excavating equipment shall be as small as is practical to properly perform the work, in order to reduce the severe vibrations that are characteristic of larger equipment. Truck speed shall also be kept to a minimum within the affected area, in order to lessen vibrations.

Breaking through Pavement

- 1.) Approved cutting of bituminous pavement surface before excavating is required to confine pavement damage to the limits of the trench.
- 2.) Unstable pavement shall be removed over cave-outs and over breaks and the sub-grade shall be treated as the main trench.
- 3.) Pavement edges shall be trimmed to a vertical face and neatly aligned with the center line of the trench.
- 4.) CDF roadway restoration will be as outlined – When a street excavation is made on streets resurfaced within the past five (5) years, the Applicant must install a MassDOT approved Control Density fill (CDF) (excavatable flowable fill) patch from a MassDOT approved plant. The trench will be filled with the CDF to within 1 ½ -2' of the finished grade (so as not to cause moisture damming under the pavement. The subsequent course to be placed over the CDF will be a MassDOT 'Processed Gravel' as outlined in the MassDOT Standard Specifications. The Processed Gravel will be compacted to 95% of the proctor value. The trench shall receive a Hot Mix Asphalt patch equal to the existing HMA cross section or 1 ½" of compacted State Top over 3" of compacted State binder. Hot Mix Asphalt will be produced by a MassDOT approved plant per the approved Job Mix Formula (JMF). The Highway Surveyor or Designee may modify or relax the specification as deemed necessary to facilitate the work.
- 5.) The Utility companies placing utilities in a shallow trench (up to three and one-half (3 ½') feet) in depth and narrow trenches (up to two (2') feet) in width may in certain instances be exempt from the cement concrete patch. Open excavations may not be allowed in which case jacking or other tunneling methods will be required. Following the completion of the finish patch, the excavated area will be using the grind and inlay method patched.

Catch Basins:

- 1.) Catch basins shall be kept clear and serviceable. The applicant shall make provisions for all surface water, muck, silt; residue or other run-off pumped or removed from excavations and shall be responsible for any damages. De-watering into a catch basin will not be allowed.

Trenches:

- 1.) The trench shall be located as close as possible to the proposed area required to do work. The trench shall be as small as possible to facilitate the work efficiently and safely.
- 2.) Steel plates may only be used for 24 hours at the same location. Steel plates will not be used during any weekends, unless special permission is granted by the Highway Surveyor or his designee.
- 3.) Steel plates used by a Utility to protect an excavation shall be of sufficient thickness to resist bending, vibration, etc., under traffic loads and shall be anchored securely to prevent movement. If these conditions are not met, the Utility will be required to backfill and pave the excavations daily. No open trench shall be left unattended overnight.

Backfilling and Temporary Repairs

- 1.) The trench in the street must be filled and temporarily resurfaced on the same day that it is opened unless otherwise directed by the Highway Surveyor or his designee. The trench shall be backfilled to within twenty four (24) inches of the top with approved excavated material or clean MassDOT processed gravel. Twenty four (24) inches of clean processed gravel shall be placed in the trench and the remaining two (2) inches shall be filled with temporary bituminous. All road surfaces shall be pre-cut and damaged edges re-cut in order to avoid damaging existing surfaces surrounding the trench.
- 2.) The backfilled materials in the trench must be mechanically tamped in six (6) inch layers. If temporary road surface is not placed on the first day, then as soon as it is consistent with the permanency of the work or directed by the Highway Surveyor or his designee. The gravel sub-base shall be excavated to the required grade in order to place temporary two and one half (2 ½) inches of bituminous, placed and raked to a uniform surface, rolled to required thickness, and to a grade matching the existing road surface.
- 3.) The applicant shall maintain the temporary surface and promptly fill any depressions and holes that may occur with the similar material to keep the surface in a condition that is satisfactory and safe for traffic.
- 4.) Temporary resurfacing will be plant mixed hot-asphalt aggregate, all as produced in accordance with MassDOT Standard Specifications and is to be a minimum of two and one half (2 ½) inches compacted thickness.
- 5.) Minimum of three (3) months after temporary resurfacing, unless shorter period of time is approved by the Highway Surveyor or his designee, the temporary sub-base shall be excavated to the required grade in order to place the bituminous concrete surface.

Repair of Permanent Trench

- 1.) All permanent pavement shall be done in accordance with MassDOT specifications and at the expense of the applicant. Applicant shall remove and dispose of all excavated material before proceeding with remainder of work and shall thoroughly compact the surface of the sub-base. Edges of existing pavements (broken or irregular) shall be cut away, in straight lines as directed leaving a sound vertical face at least six (6) inches back from edge of the existing pavement.

- 2.) Bituminous concrete base and top shall be laid and rolled in two (2) courses. The binder (base coat) shall be three (3) inches in depth and the top course shall be one and one half (1 ½) inches. Minimum total thickness measured after roll shall be four and one half (4 ½) inches. Base coat of permanent pavement shall be placed and carefully raked to a minimum surface and thoroughly rolled to the required thickness. Before placing of base coat of the permanent pavement, edges of the original bituminous surface shall receive an application of approved asphalt emulsion so the new pavement material will bond properly to the old. The top coat of permanent pavement shall be placed to a grade that will match the existing bituminous surface after being rolled. The permanent pavement shall not overlap the existing pavement and will be applied with a mechanical spreader to areas of extensive excavations that are greater than 8' wide and 10' long (measured along the traveled way) or unless otherwise directed.
- 3.) Base shall not be less than existing roadway base coat and not less than three (3) inches.
- 4.) Applicant shall furnish, place, grade and compact MassDOT approved hot mix asphalt which meets the approved job mix formula as submitted. Asphalt shall be compacted to with 95%-100% of the marshal value as determined in the lab.
- 5.) Under certain circumstances where trench repairs are considered extensive, it will be required upon completion of permanent trench repairs to crack-seal, level, and overlay the affected area for the full width of the roadway and at least 30' beyond the affected area with up to two (2) inches of HMA. Mix type to be specified by the Highway Surveyor.
- 6.) On streets to which a curb to curb overlay of asphalt or reconstruction is required, the Highway Surveyor or his designee must approve the paving company to be used by the contractor. Curb to curb resurfacing will be performed under the supervision the Highway Surveyor or his designee.
- 7.) On any project which a curb to curb overlay is required, and work is extensive, the final patch will be done by means of an automatic paving machine. All trench edges will be sealed using a Polyester Fiber Reinforced Crack Sealer.
- 8.) Major structural changes to a roadway will require the restoration of the road profile to its original condition by means of reclamation and/or reconstruction. All costs resulting from the reconstruction of a roadway, including engineering, will be at the expense of the utility company/applicant. All contractors and subcontractors must be pre-approved by the Highway Surveyor or his designee. All lawn surfaces over the trench shall be replaced with sod or loam and reseeded to grade. All sidewalks dug through shall be carefully patched after backfilling. A bituminous concrete sidewalk shall be squared off and patched with the same material and rolled so as to provide a continuous smooth surface. Cement concrete sidewalks shall be repaired by making new concrete block or blocks through which the trench passes. Pre-formed expansion joints, when deemed necessary, will be installed against buildings, walls, steps, foundations or existing concrete blocks or as directed. The new cement concrete square shall be made of MassDOT asphalt approved concrete for concrete sidewalks from a MassDOT approved plant. Applicant shall perform control testing on the concrete (air, slump, strength) and shall be matched in color with the remaining sidewalk. All concrete must be cured per MassDOT specifications. All walks shall be laid

over a minimum of twelve (12) inches of well compacted gravel. Cement concrete shall be treated with silicone or linseed oil sealer for salt damage prevention. The Applicant shall be responsible for repairing any damage to public utilities (water, sewer, gas, electric, telephone, etc.) or to town trees, shrubs, poles or signs which may be disturbed or damaged during the course of maintenance of the street opening excavation trench for 5 years after the date of completing the installation, except where such maintenance is made necessary by the act or neglect of another party. Exceptions to the permanent paving requirement of the Town of Norwell and/or Highway Surveyor may be made.

Pavement Marking Restoration:

- 1.) All permanent pavement markings that are removed or damaged such as traffic center lines, crosswalks, stop bars & stencils, etc. during construction shall be repainted by or under the direction the Highway Surveyor or his designee at the expense of the Applicant.

Dust & Clean-Up:

- 1.) As the excavation work progresses, all ways shall be thoroughly cleaned of all rubbish, excess earth, rock and other debris. The Applicant shall take necessary precautions to prevent and avoid dust and keep the ways clean each day. All cleanup operations shall be accomplished at the expense of the Applicant and shall be carried out to the satisfaction of the Highway Surveyor or his designee. The regulations of the DEP 310 CMR, and in particular 7.09U, relating to dust, odor, construction and demolition, shall be complied with.
- 2.) Area cleanup shall be provided as the work progresses, such that no materials shall be exposed which may generate dust during high winds, or mud and silting during heavy rains. Stockpiles of materials which must remain in the area for more than one day, and which cause dust or mud, shall be suitably protected by plastic covering, filter fabric, or other appropriate means.

Prompt Completion of Work:

- 1.) After excavation is commenced, the Applicant shall proceed with diligence and expedition of all excavation work covered by the excavation permit and shall promptly complete such work and restore the way to its original condition or as near as may be, so as not to obstruct the way or travel thereon more than is reasonably necessary.

DEPARTMENT OF TELECOMMUNICATION AND ENERGY (DTE) REFERENCE

Standard to be employed by Public Utility Operators when restoring any of the Streets, Lanes, Roads, and Highways in Municipalities:

Section

- 1.0 Purpose and Scope
- 2.0 Definitions
- 3.0 Permit Requirements
- 4.0 Work Standards
- 5.0 Safety
- 6.0 Protection of Adjoining Facilities
- 7.0 Excavations
- 8.0 Backfill and Compaction
- 9.0 Pavement Restoration
- 10.0 Sidewalks and Driveways
- 11.0 Compliance with these Standards

1.0 Purpose and Scope

- 1.1 The purpose of these standards is to ensure that a Utility, after excavating in any municipal street, lane, road, and highway (“public ways”), restores such street, lane, road, and highway to the same condition in which they were found before the excavation.
- 1.2 Nothing in these standards may be construed to restrict the Constitutional or statutory authority of cities or towns (“Municipalities”) with respect to public ways. Nothing in these standards is intended to prevent a utility and a municipality from mutually agreeing to exceptions on these standards.
- 1.3 Nothing in these standards is intended to be inconsistent with any ordinance or by-law and the constitution and laws of the Commonwealth.
- 1.4 Nothing in these standards is intended to create a contractor relationship between a Municipality and the Utilities regulated by the DTE.
- 1.5 Nothing in these standards is intended to be inconsistent with the Department’s regulations concerning design, construction, operation, and maintenance of intrastate pipelines. Operating in excess of 200 psig, 220 CMR SS 109 et seq. Inasmuch as the cover and backfill requirements in these standards are more stringent than those included in 220 CMR S 109.09, these standards shall apply. See 220CMR, S 109.05 (2)
- 1.6 The Utility is responsible for insuring compliance, for itself and its contactors, with these standards. However, Utility work may be inspected by the Municipality to assure that proper procedures are being followed. In the event a Utility fails to comply with these standards a Utility shall, at its own expense, correct such failures.
- 1.7 A Utility’s performance in following these standards shall be considered by the Department when a Utility seeks recovery of costs related to these standards in a rate proceeding.

2.0 Definitions

AASHTO means the American Association of State Highway and Transportation Officials.

Clay means very finely textured soil which, when moist, forms a cast which can be handled freely without crumbling/breaking; that exhibits plasticity; and when dried, breaks into very hard lumps (i.e., high dry strength) and is difficult to pulverize into a soft, flour-like powder.

Cold Patch means a bituminous concrete made with a slow curing asphalt and used primarily as a temporary patching material when hot mix plants are closed.

Compaction means compressing of suitable material and gravel that has been used to backfill and excavation by means of mechanical tamping to within 95% of maximum dry density as determined by the modified Proctor test in accordance with AASHTO 180.

Controlled Density Fill or CDF meeting MassDOT Specifications M4.08.0 Type 2E flowable, excavatable, also called flowable fill means a mixture of Portland cement, fly ash, sand & water.

High air (25% plus) may be used instead of fly ash with an adjustment in sand content. CDF is hand-tool excavatable.

Department means the Department of Telecommunications and Energy.

Emergency Repair Work means street opening work which must be commenced immediately to correct a hazardous condition whose continuation would be unreasonably risk injury, loss of life or property damage.

Gravel means coarse to very coarse-grained soil ranging from approximately 0.1 inch to 3.0 inches. Gravel exhibits no plasticity.

Infrared Process means recycling procedure whereby an infrared heater plasticizes the surface of an asphalt pavement, preparatory to the introduction of additional compatible paving materials uniformly re-worked and compacted to achieve a density and profile consistent and thoroughly integrated with the adjacent pavement.

MassDOT means Massachusetts Department of Transportation

Mass DOT Highway Standards means the "Commonwealth of Massachusetts Department of Transportation Standards Specifications for Highways and Bridges, 1988 edition."

Municipality means any Massachusetts city or town having subordinate and local powers of legislation.

Newly Paved Road means a road whose re-paving is less than five (5) years old.

Organic Soils mean soil high in organic content, usually dark brown or black in color. When considerable fibrous material is the principal constituent, it is generally classified as "peat". Plant remains or a woody structure may be recognized and the soil usually has a distinct odor. Organic soil may exhibit little (or trace of) plasticity.

Permanent Patch means a final repair of street opening work to be performed in accordance with these standards and intended to permanently return the opened portion of the roadway to as good a condition as it was prior to the performance of the street opening work.

Permit means a permit granted by a Municipality to a Utility for permission to do street opening work in a public way.

Plasticity means that property of soil that allows it to be deformed or molded without crumbling (e.g., like dough or soft rubber). This property reflects the capacity of soil to absorb moisture.

Poorly Grade Soil means soil that contains a large percentage of its constituent particles within a relatively narrow range; also referred to as "uniform" soil.

Sand means coarse grained soil in which the individual grains can be visually detected. When moist it forms a cast which will crumble when lightly touched; when dry, it will not form a cast and will fall apart when confining pressure is released. Sand exhibits no plasticity.

Silt means finely-textured soil. When moist, it forms a cast which can be freely handled; when wet; it readily puddles; when dry, it may be cloddy and readily pulverizes into powder with a soft flour-like feel (i.e., low dry strength). Silt exhibits little or no plasticity.

Street Opening Work means any cutting, excavating, compacting, construction, repair or other disturbance in or under a public way together with restoration of the public way in accordance with these standards, municipal ordinances and any other applicable law following such disturbance.

Temporary Patch means the application of either cold patch or Type I bituminous concrete compacted to achieve a density equal to that of the surrounding pavement.

Utility means any corporation, city, town, or other government subdivision, partnership or other organization or any individual engaged within the Commonwealth in any business which is, or the persons engaged in which are, in any respect made subject to the supervision or regulation by the Department of Telecommunications and Energy. For the purpose of these Standards, a Utility shall also mean any person or entity engaged by or on behalf of a Utility to perform Street Opening Work.

Well Graded Soil means soil having its constituent particles within a wide range, also referred to as "non-uniform" soil.

3.0 Permit Requirements

Each Municipality may incorporate in its permit procedures the portions of these standards that shall apply to Utility excavations within its jurisdiction. A permit may be issued with the stipulation that it may be modified or revoked with just cause at any time at the discretion of the Municipality liable in any way. It is recognized that each Municipality shall have the authority to inspect work in progress and the Utility shall correct any deficiencies during said inspections. The following are the requirements that a Municipality may require of a utility when granting Permits.

- 3.1 The work shall be performed in accordance with plans on file with the Municipality.
- 3.2 The Utility shall notify the Municipality two (2) days prior to the start of work. No work shall be authorized or proceed (except Emergency Repair Work) without said notification.
- 3.3 The Utility shall notify Dig Safe, in accordance with G.L. c. 82 S 40, at least 72 hours prior to the start of work for the purpose of identifying the location of underground utilities.
- 3.4 The Utility shall be responsible to contact the Municipality regarding the field location of any underground traffic control devices on this project.
- 3.5 A copy of the Permit must be on the job site at all times for inspection (except for emergency repair work). Failure to have the permit available could result in suspension of the rights granted by the Permit.
- 3.6 Work, day, and time constraints shall be conditions of the permit.

- 3.7 If it becomes necessary to open the roadway surface in a larger area than specified in the Permit, the Utility shall apply for an additional Permit to cover the project.
- 3.8 The Utility shall notify the Municipality within 14 days after completion of the physical work.

4.0 Work Standards

- 4.1 All work shall be in compliance with the MassDOT Standards as it pertains to utility street excavations and repairs unless modified by these standards.
- 4.2 The Utility shall be responsible for any settlement that may occur as a result of the work done in accordance with the Permit.
- 4.3 The Utility shall be responsible for the ponding of water that may develop within the roadway which was caused by this work.
- 4.4 In the event a street opening failure presents a nuisance or a public safety problem, the Utility shall respond to all trench restoration requests by the Municipality within 48 hours. Non-response within the specified time will result in the required restoration work being done by the Municipality, with all expenses to be paid by the Utility. The Utility shall reimburse the Municipality for the invoiced amount within thirty (30) days.
- 4.5 Failure to respond to trench restoration requests may result in denial of future Permit requests.

5.0 Safety

- 5.1 Provisions shall be made for the safety and protection of pedestrian traffic during the construction period.
- 5.2 The Utility shall be responsible to furnish and erect all required signs and traffic safety devices.
- 5.3 Cones and non-reflecting warning devices shall not be left in operating position on the highway when daytime operations have ceased. If it becomes necessary for the Municipality to remove any construction warning devices or the appurtenances from the project due to negligence by the Utility, all cost for this work will be charged to the Utility.
- 5.4 Flashing arrow boards will be used as directed when operations occupy the roadway and shall be available for use at all times.
- 5.5 All signs and devices shall conform to the 1988 edition, Revision 3, or subsequent current edition, of the Manual on Traffic Control Devices (MUTCD).
- 5.6 Efforts shall be made to maintain normal traffic flow, but interruptions or obstructions to traffic shall be defined by conditions of the permit.
- 5.7 When, in the opinion of the Municipality, the work constitutes a hazard to traffic in any area the Utility may be required to suspend operations during certain hours and to remove any equipment from the roadway.

- 5.8 When a snow or ice condition exists during the progress of this work, the Utility shall keep the area affected by the work safe for travel. The Municipality may restrict work during snow, sleet, or ice storms and subsequent snow removal operations.
- 5.9 The highway surface shall be kept clean of debris at all times and shall be thoroughly cleaned at the completion of the work.
- 5.10 At the completion of the work done in accordance with the Permit, all disturbed areas shall be restored to a condition equal in kind to that which existed prior to the work.
- 5.11 Blasting, if necessary, shall be done in accordance with state law and local ordinance.
- 5.12 The Utility shall supply copies of all log data and analyses collected from groundwater monitoring wells as required by state law and local ordinance.
- 5.13 MassDOT Department Standards for Line Clearance will conform to the National Electric Safety Code Standard Clearance for Highway Crossings.

6.0 Protection of Adjoining Facilities

- 6.1 If directed by the Municipality, photographs shall be taken prior to the start of work to insure restoration of designated areas to their former conditions within the limits of the work area. Copies of the photographs shall be delivered to a place designated by the Municipality.
- 6.2 Care must be taken to not interfere with underground structures that exist in the area.
- 6.3 Care shall be exercised not to disturb any traffic duct systems. Any such system, if disturbed, shall be restored immediately to its original condition.
- 6.4 The Utility shall be responsible to replace all pavement markings in kind which have been disturbed as a result of work done in accordance with the permit. These pavement markings shall be restored within ten (10) days after this work is performed or as deemed necessary by the Municipality.
- 6.5 Existing guardrail that may be removed or damaged shall be reset or replaced to MassDOT Standards.
- 6.6 The Utility will be responsible for any damage caused by its operation to curbing, structures, roadway, etc.
- 6.7 No trees shall be cut or removed under this Permit.
- 6.8 Hand digging shall be required around roots of trees.
- 6.9 Tree Removal
 - 6.9.1 The Utility shall obtain written permission from the Tree Warden of the Municipality if it becomes necessary to remove any tree. Replacement trees must be obtained from an established nursery in accordance with "USA

Standard for Nursery Stock". The trees will be replaced in size and species as directed by said Tree Warden.

6.9.2 The tree stump shall be removed a minimum of six inches below the surrounding surface and all debris shall be disposed of outside the right-of-way line.

6.9.3 The tree shall be removed under the supervision of a qualified tree surgeon.

6.10 Every effort shall be made to protect bound markers. However, if it becomes necessary to remove and reset any bound marker, the Utility shall hire a registered professional land surveyor to perform this work. It shall be the responsibility of this land surveyor to submit to the Municipality a statement in writing and a plan containing his stamp and signature showing that said work has been performed.

6.11 These standards do not cover the installation of any utility poles.

7.0 Excavations

7.1 The surface of a roadway to be excavated for utility work shall be cut in reasonably straight and parallel lines using a saw or other accepted method to insure the least amount of damage to the roadway surface. The pavement, including reinforcing steel on concrete roadways, shall be cut the full depth of surfacing. The excavation shall only be between these lines. The cutting operation shall not be done with a backhoe, grad-all or any type of ripping equipment.

7.2 Steel plates, used by a Utility to protect an excavation shall be of sufficient thickness to resist bending, vibrations, etc., under traffic loads and shall be anchored securely to prevent movement. If these conditions are not met, the Utility will be required to backfill and pave the excavations daily. No open trench shall be left unattended overnight.

7.3 Steel sheeting, shoring or bracing shall be driven or placed for all depths over five (5) feet. At the discretion of the Municipality, said sheeting shall be left in place and cut off two (2) feet below the surface.

7.4 When a Utility installs a service lateral to a customer an opening may be made over the common supply line to make the proper connection, but the service should be bored or driven the remainder of the way wherever possible.

7.5 Water jetting of the trench area is prohibited.

8.0 Backfill and Compaction

In restoring municipal streets, lanes and highways, Utilities may utilize approved backfill material compacted to achieve soil density values of 95% modified Proctor density (as described in AASHTO T180), which may include, as the conditions warrant, the use of Controlled Density Fill ("CDF").

- 8.1 If CDF is the selected option of the Utility, when backfilling excavations made for the installation or maintenance of a natural gas line, the Utility may backfill with sand and compact to a level six inches over the gas line before adding CDF to the trench.
- 8.2 If CDF is the selected option of the Utility, excluding the exception granted in 8.1, CDF shall flow under and around the pipe, conduit, or bedding material providing uniform support without leaving voids. CDF shall be discharged from the mixer by a reasonable means into the trench area to be filled. Filling operations shall proceed simultaneously on both sides of the pipe or conduit so that the two fills are kept at approximately the same elevation at all times. An external load shall be applied to the pipe or conduit, sufficient to hold it in place before filling.
- 8.3 The trench in all cases shall be filled to the bottom of the existing pavement to provide room for the pavement restoration.
- 8.4 CDF shall be utilized for those excavations where compaction cannot be readily accomplished with normal compaction methods (i.e. vacuum holes, utility clusters).
- 8.5 The following subsections provide general guidelines and criteria to determine whether a soil is suitable as backfill for Utility excavations in roadways. The prescribed proper procedures for backfilling and compaction to achieve soil density values of 95% modified Proctor density. The ultimate objective is to obtain a finished road surface repair which will undergo settlements only within acceptable performance limits as defined within these standards for the functional life of the existing road. The guidelines are based on good engineering practice and testing of both materials and equipment.
- 8.6 Compliance with these standards will insure satisfactory compaction. These standards are to be used in the field when there is an absence of sieve analysis of materials, Proctor values of the soils and the corresponding inability to utilize a nuclear density gauge or sand cone field density test. The Utility shall not be required to use other accepted testing methods. However, the Municipality reserves the right, at its own expense, to utilize other accepted testing methods to verify compaction. In the event of test failure the Utility shall be responsible for re-compacting the excavation to meet the required standards.
- 8.7 Suitability of Backfill Material.
- 8.7.1 This section addresses suitability of materials to obtain an adequate level of compaction.
- 8.7.2 Suitable backfill material is free of stones larger than half the size of the compacted lift as provided for in MassDOT Standards, construction debris, trash, frozen soil and other foreign material. It consists of the following:
- a.) Well graded gravel and sand;
 - b.) Poorly graded gravel and sand;
 - c.) Gravel-sand mixtures with a small amount of silt
 - d.) Gravel-sand mixtures with a small amount of silt and trace amounts of clay.

- 8.7.3 Unsuitable backfill materials consist of the following:
- a.) Inorganic silts and clays;
 - b.) Organic silts;
 - c.) Organic soils including peat, humus, topsoil, swamp soils, mulch, and soils containing leaves, grass, branches, and other fibrous vegetable matter.

8.8 Evaluation of Excavated Soil

- 8.8.1 The soil excavated from a trench shall be evaluated by trained personnel to determine whether or not it is suitable as a backfill in accordance with Subsection 8.7.
- 8.8.2 An excavated soil that has been evaluated as suitable for backfill shall be reused provided its moisture content has been determined to be "suitable" in accordance with Subsection 8.9.
- 8.8.3 An excavated soil that has been evaluated as unsuitable for backfill shall be removed from the site and disposed of properly.
- 8.8.4 New material, which meets the requirements of Subsection 8.7, shall be brought in to replace excavated soil found to be unsuitable.

8.9 Proper Moisture Content for Backfill Material Proper moisture content (i.e., ratio of moisture solid by weight in a soil) in a backfill is essential for effective compaction. Soils with too much moisture (wet) or too little moisture (dry) would not yield an adequate level of compaction. All material used as backfill shall be examined by testing a sample prior to backfilling. This requirement applies to excavated soil to be reused as backfill and to new replacement material.

8.10 Field Determination of Moisture Content.

- 8.10.1 Trained personnel will conduct the following field test of moisture content, also referred to as a "soil ball" test.
- 8.10.2 The personnel conducting the soil ball test must do the following:
- a.) first take a handful of the particular soil from beneath the surface of a stockpile (i.e., excavated from a trench or obtained from a borrow area) and then;
 - b.) squeeze the sample firmly making a closed fist;
 - c.) open the hand and observe the condition of the soil ball;
 - d.) if the soil ball is loose and crumbly, the soil is too dry for compaction;
 - e.) if the soil ball drips water, the soil is too wet for compaction;
 - f.) if the soil ball holds together firmly or breaks into large chunks, the soil has suitable moisture content for compaction.

8.11 Corrective Treatment when Moisture Content is Not Suitable:

- a.) If the soil is too dry, small amounts of water may be added by sprinkling;

- b.) If the soil is too wet, the soil may be dried out by spreading it out and exposing it to the atmosphere;
- c.) After the remedial treatment, the soil shall be tested again (Subsection 8.10.2);
- d.) If the corrective treatment is not effective, the soil shall be removed from the site and disposed of properly.

8.12 Backfill and Compaction of Excavations

- 8.12.1 Backfill and compaction shall be performed in accordance with Subsections 8.12.2 Through 8.12.6, or Subsections 8.12.7 and 8.12.8. All utility lines shall be properly bedded with materials and in depths as specified by the appropriate utility prior to backfilling to obtain compaction values of 95% modified Proctor density.

TABLE A

Tool Thickness of Lifts
Pneumatic Air Tamper 6"
Percussive Wacker Rammer 6"-12"
Vibratory Compactor 6"-12" (7000lbs)
Pavement Breaker Tamping Foot 6"

- 8.12.3 Compaction equipment which may be used is specified in Table A. Compactors shall be operated in approximately the vertical position.
- 8.12.4 Care should be exercised when compacting near a buried facility to avoid damage to the facility.
- 8.12.5 The bottom of the excavation shall be level, free of stones and compacted in accordance with Subsection prior to commencement of backfilling.
- 8.12.6 Compaction shall be performed by making a minimum of four (4) passes per lift with the compactor. The passes shall start around the perimeter of the excavation and move toward the center in an inward spiral.
- 8.12.7 Backfill material shall be placed in lifts with the loose thickness (i.e., prior to compaction) as specified in Table A.
- 8.12.8 The effectiveness of any compaction method used other than that specified in this Section, including Table A, shall be determined by testing to establish the pre-compacted or loose thickness of lifts, the number of passes with the compactor required to obtain the desired results, the type of compacting tool used and the soil type.
- 8.12.9 All maintenance work shall be compacted in 6" lifts. Construction work shall, based on the specific compaction equipment used, utilize Table A to determine appropriate lifts. Construction work shall be defined as the installation of new or replacement facilities.

8.12.10 Well graded gravel that may exist immediately under the paved surface shall be replaced in like compacted depth.

8.12.11 All leak detection holes (i.e., bar holes) shall be filled in lifts with an appropriate mineral filler and compacted to the bottom of the pavement.

8.13 Compaction Verification

8.13.1 Compaction verification shall be performed in accordance with the following to assure 95% modified Proctor density has been achieved:

- a.) The compaction of each lift shall be verified using a Dynamic Cone Penetrometer (DCP), or equivalent as approved by the Municipality. For standard maintenance excavations, each lift shall be verified at one location. For longer excavations (e.g., trenches), a DCP test shall be made approximately every 25 feet for each lift.
- b.) A DCP test shall be considered acceptable if, after 15 drops, the pass/fail reference line on the DCP is above the soil surface.
- c.) An unacceptable DCP test shall require that corrective measures be taken until an acceptable DCP test is achieved. This may include making additional passes with the compactor or, in some cases, removing the backfill material and starting over.

8.13 Training Field personnel performing backfill and compaction operations shall be trained in the implementation of this procedure. Personnel shall receive retraining every two years. The Utility shall certify with the submission of a Permit applications that all personnel are properly trained.

9.0 Pavement Restoration

9.1 The Utility shall be responsible to replace all pavement disturbed by work under the Permit with homogeneous and in-kind pavement, unless otherwise stipulated, to the original strength and condition.

9.2 Single gradation (Type I, surface course) bituminous concrete patches may be used when the existing pavement depth is less than 3 inches, provided that the new patch is installed to a depth 1 inch greater than the surrounding pavement.

9.3 Single gradation (Type I, binder course) bituminous concrete may be used where post grind and inlay method is a condition of the Permit. Minimum allowable depth of pavement shall be four inches when utilizing the grind and inlay method. When the

grind and inlay method is performed, the surface of the pavement shall be uniformly ground and removed to a minimum depth of 1.5 inches for subsequent pavement replacement. The grinding procedure shall provide a cutback into existing undisturbed pavement and shall encompass all disturbed pavement areas of the excavation. Grinding shall be done in reasonably straight lines.

- 9.4 All non-emergency pavement excavations shall be repaired with same day permanent patches unless specifically exempted in the permit.
- 9.5 Same day patches installed in conformance with these standards will not require re-excavation and may utilize the infrared method or the grind and inlay method to correct subsequent settlements. However, the restoration of single patches up to five feet by seven feet in area shall be by the infrared method, unless another method is agreed to by the Municipality.
- 9.6 Immediately following the procedures outlined in the section for Backfill and Compaction, the adjacent pavement shall be cut back, full depth, to encompass all disturbed pavement areas and underlying cavities associated with the excavation. All cutbacks shall be done in reasonably straight and parallel lines.
- 9.7 All existing pavement surfaces shall be swept clean of dirt, dust, and debris prior to patching. The existing vertical pavement shall be tack coated with an appropriate asphalt tacking material prior to patching and subsequent to cleaning.
- 9.8 Pavement repair depths shall equal or exceed adjoining pavement depths. When existing pavement depths are greater than 2 inches, pavement repairs shall be made utilizing Type I, binder course in the underlying patch courses. The wearing surface shall be a minimum 1.5 inches of Type I, surface course. Pavement courses shall not exceed two inches. All pavement courses shall be thoroughly compacted prior to placement of subsequent courses.
- 9.9 When the pavement remaining between an excavation and the edge of the roadway is less than two feet, the remaining area shall be removed and replaced in conjunction with permanent pavement repair.
- 9.10 All leak detection holes (i.e. bar holes) shall be filled to refusal with an appropriate asphalt filler to a depth equal to the surrounding pavement depth.
- 9.11 Temporary pavement repairs shall be permitted under the following conditions:
- a.) Emergency Repair Work completed outside normal Monday through Friday working hours.
 - b.) Work performance between December 1 and March 30 when bituminous concrete is not available on a daily basis.
 - c.) Excavations which shall be reopened within five (5) working days.
- 9.12 The Utility shall make every effort to limit excavations conducted under the aforementioned conditions.
- 9.13 All excavation, backfill, and compaction work associated with temporary patches shall be performed in accordance with these standards.
- 9.14 Temporary patches shall be made with high-performance cold patch or Type I, bituminous concrete to a minimum depth of 4 inches. Temporary patches made between December 1 and March 30 shall be removed and replaced with a permanent

patch as outlined above within five (5) working days. Temporary patches made between April 1 and November 30 shall be removed and replaced with a permanent patch as outlined above within two (2) working days.

- 9.15 The Utility shall be responsible to maintain temporary patches in a safe condition for all types of travel until a permanent pavement repair has been made.
- 9.16 The Municipality shall have jurisdiction to determine the pavement repair method to be utilized on all pavements which have been installed for less than five years.
- 9.17 Completed pavement repairs shall not deviate more than 0.25 inches from the existing street surface.
- 9.18 No less than thirty (30) days and no more than sixty (60) days from the completion of the permanent pavement repair, the Utility shall inspect the excavation for settlements, cracking and other pavement defects. Any such excavation which has required repair shall then be re-inspected no less than thirty (30) days and no more than sixty (60) days from the completion of the subsequent repair. The Utility shall further inspect all excavations after a one-year time period. Pavements that deviate more than 0.25 inches from the existing street surface, shall be repaired by the infrared or grind and inlay methods. Surface or joint cracking 0.25 inches wide or greater shall be repaired utilizing a modified asphalt pavement sealant.
- 9.19 The Utility shall prepare documents and maintain records of these inspections and make them available to the Municipality and the Department upon request.
- 9.20 All excavations made within concrete roadways shall be repaired with concrete in depths equal to the existing concrete.
- 9.21 Concrete used for repairs shall conform to the requirements of MassDOT Highway Standards for concrete roadway construction.

10.0 Sidewalks and Driveways

- 10.1 All work shall be performed in accordance with 521 CMR Rules and Regulations of the Architectural Access Board (AAB) and Americans with Disabilities Act (ADA).
- 10.2 A sidewalk area that is disturbed shall be restored, full width, in kind a minimum of one foot beyond the disturbed area for bituminous concrete and to the next joint line for concrete.
- 10.3 After the subgrade has been prepared, a foundation of gravel shall be placed upon it. After thorough mechanical compaction, the foundation shall be at least 8 inches thick and parallel to the proposed surface of the walk.
- 10.4 If applicable, the bituminous concrete sidewalk surface shall be laid in 2 courses to a depth after rolling of 3 inches. The bottom course shall be 1 ½ inches thick and its surface after rolling shall be 1 ½ inches below the parallel to the proposed grade of the finished surface. The top course shall be 1 ½ inches thick after rolling.

- 10.5 If applicable, the concrete sidewalk shall be placed in alternate slabs 30 feet in length. The slabs shall be separated by traverse preformed expansion joint filler ½ inch thick (shall conform to AASHTO-M153). Performed expansions joint fill shall also be placed adjacent to or around existing structures.
- 10.6 On the foundation as specified above, the concrete (Air-Entrained 4000 psi, ¾" 610) shall be placed in such quantity that after being thoroughly consolidated in place it shall be 4 inches in depth. At driveways, the sidewalk shall be 6 inches in depth.
- 10.7 Driveways shall be surfaced with Bituminous Concrete, Type I and shall be laid in two courses to a depth of three inches, after rolling, with a foundation of at least six inches of compacted gravel. The finished surface shall butt into and not overlap the existing highway grade at the road edge.
- 10.8 Driveways shall be so graded that no water shall enter the layout, pond or collect thereon, including the roadway.

11.0 Compliance with these Standards

- 11.1 Utilities shall file with the Department, by May 1st of each year, written statements or policies designed to insure that managers, supervisors and other distribution personnel are aware of, and held accountable to, these Standards.
- 11.2 Utilities shall track the success and failures of their programs to include the restorations and the inspections of such restorations made during the preceding calendar year, the number of failures reported by a party other than a utility inspector and the age of the failed restoration.
- 11.3 Utilities shall record the number of failed restorations encountered during the inspections required in Section 9.19 They shall also document the cause of the failure and their policy changes to prevent the recurrence of a similar failure.
- 11.4 Utilities shall record the number of failed restorations and cost incurred when Municipalities perform the corrective action in accordance with Section 4.4