

CITY OF HARTFORD

Rules and Specifications Regulating

CURB AND WALK LAYERS AND STREET EXCAVATION



Department of Public Works
Transportation Services Bureau
Maps and Records Division

50 Jennings Road
Hartford, CT 06103

Revised July 2014

CURB AND WALK LAYERS AND STREET EXCAVATION PERMIT MANUAL

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CURB AND WALK LAYERS AND STREET EXCAVATION PERMIT MANUAL

NOTICE OF NEW MANUAL

This manual replaces the June 1975 (revised to April 1997) manual of the same title. Much of the information contained in the previous manual has been incorporated into this new manual with minor changes. However, there are several sections with new or additional requirements or standards that are worth noting:

- Relevant fees (Page 3)
- Submittal time prior to beginning work (Page 8)
- Cost Reimbursement Protocol (Page 21)
- Contractor responsibility to establish Line and Grade measurements (Page 23)
- Contractor certification for bluestone sidewalk work (Page 36)

In addition to this manual, all Contractors working within the City right-of-way should familiarize themselves with the latest edition of the City of Hartford Technical Specifications (Standard Technical Specifications for Streets and Roads, Traffic, and Streetscape Construction) and Standard Detail Sheets. This information is available on the City of Hartford website (<http://www.hartford.gov/dpw/specifications-and-manuals>).

CURB AND WALK LAYERS AND STREET EXCAVATION PERMIT MANUAL

FEES

The following fees are in effect beginning January 2014 and are valid for the 2014 construction season. In subsequent years, all fees may be increased by multiplying the listed fees with a coefficient greater than 1.00 representing the Consumer Price Index (CPI) according US Department of Labor for the year when the work is executed (see calculator at http://www.bls.gov/data/inflation_calculator.htm).

Curb and Walk Permit	\$50
Curb and Walk License	\$75
Curb and Walk License Yearly Renewal	\$50

Street Excavation Permit	\$75
Street Excavation Permit Contractors working for CNG, CL&P, SNET and TCI	\$50
Additional Charge per Excavation (not applicable to CNG, CL&P, SNET or TCI contractors)	\$25
Additional Charge per 50-feet of Trench (after 1000-feet) (not applicable to CNG, CL&P, SNET or TCI contractors)	\$25
Street Excavation License	\$75
Street Excavation License Yearly Renewal	\$50

Obstruction Permit	\$50
Additional Charge for Temporary Obstruction (per day per square foot)	\$0.03

Bluestone Sidewalk Permit	\$100
Annual Bluestone Certification Fee	\$50

Penalty for Work on New Roads (2-Year or Newer)	10X
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CURB AND WALK LAYERS AND STREET EXCAVATION PERMIT MANUAL

PHONE DIRECTORY

<u>Division</u>	<u>Phone</u>
311	860-757-9311
Call Before You Dig (CBYD)	1-800-922-4455 (or 811)
DPW Dispatch	860-757-4955
Maps & Records/Permits	860-757-9970
Police "P.J. Office"	860-543-8706
Public Works	860-757-9900

CURB AND WALK LAYERS AND STREET EXCAVATION PERMIT MANUAL

DEFINITION OF TERMS

Whenever in these specifications the following terms are used, the intent and meaning shall be as follows:

1. “City” – City of Hartford, Connecticut.
2. “Public Works” – Department of Public Works of the City of Hartford.
3. “Engineering” – Bureau of Engineering Services of the City of Hartford.
4. “Municipal Building” – Executive Office of the City of Hartford, 50 Jennings Road, Hartford, CT.
5. “Director” – Director of Public Works or his/her authorized representative.
6. “Engineer” – City Engineer or his/her authorized representative.
7. “Permittee” – An individual, corporation, Contractor or other entity who secures permits for all work regulated by the Department of Public Works, pursuant to these rules.
8. “Inspector” – A representative of the City assigned to make the following:
 - a) All necessary inspections of condition of all sidewalks and curbs within the City accepted streets and to recommend necessary repair work.
 - b) All necessary inspections of repair work, construction and materials of sidewalk and curbs, and street excavations.
9. “Standard Construction Specifications” – The “Standard Technical Specifications for Streets and Roads, Traffic, and Streetscape Construction” manual of the City of Hartford.
10. “Laboratory” – The testing laboratory of the Bureau of Engineering or a commercial testing laboratory designated by the Engineer.
11. “Contractor” – A licensed curb and walk Contractor, performing work covered by these specifications under a permit issued through the Department of Public Works, acting directly or through his/her agents or employees.
12. “Sub-Contractor” – Any other licensed curb and walk Contractor to whom the Contractor sublets or assigns any part or parts of the work covered by a permit, with the approval of the Director.
13. “P.J. Office” – The Public Jobs office of the City of Hartford Police Department.
14. “Street” – The word “Street” shall be construed to embrace streets, avenues, boulevards, highways, roads, alleys, lanes, viaducts, bridges, and the approaches thereto and all the other public thoroughfares in the City and shall mean all that part thereof from street line to street line of the premises abutting thereon.
15. “Curb” – The vertical edging of the paved portion of a street of granite and installed in conformance with these specifications and accepted by the City for future maintenance.
16. “City Accepted Sidewalk” – Paved Laid Out walkway between curb and street line of five (5) inch thick Portland Cement Concrete sidewalk, eight (8) inch thick reinforced Portland Cement Concrete sidewalk or Bluestone sidewalk and constructed in conformance with these specifications, and accepted by the City for future maintenance.

17. "Non-City Accepted Sidewalk" – Paved walkway between curb and street line at driveways shall not be accepted for City maintenance and will remain the responsibility of abutting Owner.
18. "City-Owned Sidewalk" – Paved walkway between curb and street line adjacent to City-owned property of five (5) inch thick or eight (8) inch thick reinforced Portland Cement Concrete and constructed in conformance with these specifications.
19. "Driveway" – Paved access way for vehicles from curb to front of sidewalk and back of sidewalk to street line of eight (8) inch thick reinforced Portland Cement Concrete and constructed in conformance with these specifications, and to remain the responsibility of the Owner for future maintenance.
20. "Ramps" – Paved access way for vehicles from curb to street edge of existing cement concrete sidewalks of three (3) inch thick bituminous concrete and constructed in conformance with these specifications and to remain the responsibility of the Owner for future maintenance. This type ramp to be used only in residential zones where there is no concrete base pavement and in industrial and commercial zones where there is neither concrete base pavement nor concrete sidewalks.
21. "Eight-Inch Walk" – In such locations as may be determined by the Director, at all driveways and in business and industrial zones and non-conforming areas of residential zones, sidewalks constructed in accordance with City Standards shall be eight (8) inch thick reinforced Portland Cement Concrete, constructed in conformance with these specifications.
22. "Laid Out Walk" – The legally laid out sidewalk as recorded by the Bureau of Engineering Services. The legally laid out walk is the only portion of pavement between curb and street line accepted for City maintenance.
23. "Paving Outside the Laid Out Walk" – Only with the approval of the Director, two (2) inch bituminous concrete or cement concrete paving may be constructed between the curb and laid out walk and/or from the back of the laid out walk to the street line. The cement concrete shall be of the same construction as the laid out walk. All construction shall be in accordance with these specifications. A longitudinal one-half inch expansion joint shall be placed adjacent to the laid out walk.
24. "Keyhole Excavation" – An excavation with separate, parallel trenches.
25. "Non-Accepted Construction" – Construction of curbing of any material other than granite or of laid out sidewalk of any material other than Portland Cement Concrete without written approval of the Director is not allowed.
26. "Areaways" – Any vault, cellarway or areaway or any cover, grating or door above the same within any street lines.
27. "Wheelchair Ramp" – A paved access way from the curb to or through the sidewalk.
28. "Authorized Representative" – An employee of the Contractor responsible to the Contractor for accepting written and oral orders on the job from the Director (or his/her representative) and with the authority to take action on said orders in the Contractor's absence.
29. "Roadway" – The paved portion of the street right-of-way between the curbs and/or the vehicular travel portion of the street right-of-way.
30. "Critical Areas" – Shall be considered as those areas listed and outlined on the map in Appendix C.
31. "Local and Land Service Streets" – All streets not within the Critical Areas.
32. "MUTCD" – The latest edition of the Manual of Uniform Traffic Control Devices.

CURB AND WALK LAYERS AND STREET EXCAVATION PERMIT MANUAL

SECTION A – GENERAL SPECIFICATIONS

A-1 AUTHORITY GRANTED TO THE DIRECTOR OF PUBLIC WORKS, AND ORDINANCES RELATING TO CURB AND SIDEWALK CONSTRUCTION

The Hartford Municipal Code, Effective July 10, 1990.

(a) *Chapter 31, Article II “Sidewalk, Curb and Gutter Construction and Repair”*

Section 31-32 – Regulations, specifications authorized

“The Director of Public Works may adopt from time to time such rules, regulations and specifications for the conduct of the work provided for by this Article as he may deem for the best interest of such rule, regulations or specification.”

(b) *Chapter 31, Article III “Excavations, Openings, and Underground Installations”*

Section 31-86 – Excavation regulations generally

“The Director of Public Works may adopt from time to time such rules, regulations and specifications for the conduct of the work incidental to the excavation of streets and sidewalks as he may deem for the best interest of the City. The violation of any such rule or regulation shall be unlawful.”

(c) *Chapter 1*

Section 1-4 – General penalty; continuing violations

“Whenever in this Code, or in any ordinance of the City, or rule or regulation promulgated by any officer thereof under authority vested in him by law or ordinances, any act is prohibited or is declared to be unlawful or an offense, the doing of any act is required, or the failure to do any act is declared to be unlawful, where no specific penalty is provided therefor, the violation of any such provision of this Code, ordinance, rule or regulation shall be punished by a fine not exceeding ninety dollars (\$90.00) or confinement in jail not exceeding 30 days or both. Each day any such violation shall continue, shall constitute a separate offense.”

A-2 LICENSING OF CURB, WALK AND STREET EXCAVATION WORK

Application for Permit

An Application for Permit must be filed with the Director of Public Works a minimum of 72 hours before an investigation is made or the permit issued. For projects involving work of major scope (affecting fifty (50) linear feet or more along a street's right-of-way), plans and specifications are required as detailed below. Permit application forms are obtained and processed through the Maps and Records Division of the Department of Public Works, located on the second floor of 50 Jennings Road, Hartford, Connecticut.

Each application form must be completely filled, signed, dated and delivered to Maps and Records. An explanation of the application sketches shall be made either in the space provided on the application form or on a separate sheet in duplicate which the applicant shall attach to the application. Diagrams or sketches shall show the location of the work to be done in relationship to the outstanding features of the road, such as, street, property lines, intersections, curbs, walks, trees, drainage and utility structures, utility lines, utility poles by number and the character and extent of work including the depth of excavation and, for repair or maintenance work, include an approximate depth range. The applicant will be required to provide a written location of proposed work (example: Garden Street #31-51) , list the specific work to be completed under this permit, type of temporary pavement repair to be made, and the permanent pavement restoration limits and anticipated date of completion. The applicant may be required to disclose the methods and materials proposed to be used on unusual or complex projects.

In the event that the Permittee discovers that additional work or repairs not designated in the original permit must be done in the same location, the City, after inspection of the excavation site, shall bill the Permittee for the additional excavations but no new permit will be necessary.

Contractors may list multiple trench excavations on one permit provided they provide a sketch of the project limits with dimensions between each lateral trench.

Beginning on July 1st 2014, all Contractors will be responsible for sending out public notifications to all property owners impacted by their proposed street cut prior to the start of work. These notifications shall include a brief description of work, hours of construction, traffic detours or lane closures, duration of project as well as a contact name and number for questions or complaints. All projects scheduled to last longer than 3 days must also have posted onsite the Utility Company responsible for the project and contact information for questions and complaints regarding the construction project. Failure to comply with these requirements may result in suspension of license.

Permit Fees

The permit fees for work performed by Connecticut Natural Gas Corporation ("CNG"), Connecticut Light and Power Company ("CL&P"), The Southern New England Telephone Company ("SNET") and United Cable Television Services Corporation d/b/a TCI Cablevision of Central Connecticut ("TCI") (hereinafter referred to collectively as the

“Public Service Companies” and individually as a “Public Service Company”) shall be computed in accordance with the “Memorandum of Settlement Agreement and Release of all Claims” dated February 12, 1999. For all other companies, the permit fees shall be computed in accordance with the Municipal Code.

1. Permit calculations for: Connecticut Natural Gas Corporation (“CNG”), Connecticut Light and Power Company (“CL&P”), The Southern New England Telephone Company (“SNET”) and United Cable Television Services Corporation d/b/a TCI Cablevision of Central Connecticut (“TCI”)

“Excavation Definition for Public Service Companies and Permit Fees for Public Service Companies:”

a) Any opening that is made in a public street of the City, regardless of length of the opening and the number of addresses passed or

b) All openings made by any Public Service Company in a public street of the City, even if non continuous, provided that all such openings are:

1. Part of a single project,
2. Made with respect to one line, pipe, cable or similar facility,
3. Created as part of a continuous operation and
4. Not in excess of one thousand (1,000) feet in length

The fee assessed shall be no more than fifty dollars (\$50.00) and shall be no permit fee or permit charge for the restoration of any excavation.

2. Permit fee for all other companies:

Per Municipal Code Article III Sec 31-87b

separate permit shall be required for each location or address at which the excavator proposes to work except that only (1) permit shall be necessary for main line construction or for adjacent locations at the same property. Such work shall be constructed according to regulations established by the Director of Public Works. The fee for each such permit shall be \$75 plus an additional charge of \$25 per cut. A street opening shall be considered a multiple cut if it extends for a distance in excess of 50’.

EXAMPLE: 1000’ trench – 50’ = 950’

950’ / 50’ = 18 additional cuts

18 * \$25 each = \$450 plus original \$75 = \$525 total fee

A boring is an excavation that falls under the Sec 31-87b. Therefore the charges shall be per location.

BORINGS:

Multiple borings may be listed on one permit on a per street basis. Borings must be listed with an address or other identifier. The cost for these borings shall be \$75 for each boring.

Borings located on other Streets will require an additional permit for tracking/billing purposes. Plans and Specifications

When applications are made for permits involving work of major scope, a full-size hard copy and a PDF of the complete plans and construction specifications must be submitted with the application form, a minimum of thirty (30) days in advance of work. They must be so detailed that the exact location and depth of the various parts of the work, the risk or injury to users and the probability of damage to trees, shrubs, surface and underground structures and public or private property can be ascertained. All plans must be drawn to not less than a 50-scale with a

north arrow indication. All plans must be certified by a Professional Engineer registered in the State of Connecticut. All work shall conform to the Standard Construction Specifications of the City of Hartford. A construction specification shall be written for any project item not included in the Standard Construction Specifications. The submitted plans must also include a detailed Maintenance and Protection of Traffic plan for the proposed work.

Rejection of Application

When it appears that the work called for on an application would not conform to City regulations, or would cause substantial or needless damage to a street, create excessive disturbance to traffic or result in dangerous conditions, the request for a permit will be denied. The applicant will be informed of such rejection by letter which will state the reasons for the denial. The Director of Public Works or his/her designee may refuse to issue a permit to any person, company or utility when work performed under a previously issued permit was not properly executed or when said Permittee has failed to reimburse the City for recoverable charges billed under terms governing the previous permit.

Issuance of Permit

A permit application for using the public right-of-way must be signed by the Director of Public Works or his/her designee before it becomes valid. Permits will be issued by the Department of Public Works upon receipt of an approved permit application and payment of the required fee (if a valid Purchase Order is not on file with the City). The first copy of the permit is retained in the Division files. The second and third copies are for the Inspector and the Permittee. The Permittee is forbidden to commence work until he/she has received his/her copy of the permit and has notified the permit Inspector by no later than 4:30 PM one working day before the work of his/her permit number begins, the Call Before You Dig (CBYD) Number and the approximate date and hour he/she proposes to begin work. The permit provided must be available at the project site.

Removal of Existing Paved Surfaces

The cutting of a bituminous surface ahead of excavation is required to confine pavement damage to the limits of the trench. Excavation shall not commence until the Permittee has marked out the proposed limits of excavation in white paint, the underground facilities marked by the Owners in their respective color (through CBYD), and protection provided for users of the roadway. Any deviation from the above must receive special permission from the Director of Public Works or his/her designee.

Along trenches, the initial cutting of the pavement shall be restricted to the area directly over the proposed trench to be excavated. The pavement surface shall be removed to the limits of excavation with all edges cut to a vertical line and neatly aligned with the center of the trench. Cut-outs outside of the trench line must be normal or parallel to the trench.

Trimming shall be accomplished with either a spaded pavement breaker or cut with a concrete saw. Under no circumstances shall pavement be subjected to blows from a hammer or dropped weight. The use of hydrohammers or heavy duty pavement breakers is prohibited unless written permission is granted by the Director or his/her designee for their use after due consideration of the location, the condition of the street and the depth of saw cutting required ahead of the

hammers.

Sections of sidewalk within the excavation limits shall be saw cut and removed to the nearest scoreline or expansion joint. Tunneling under the sidewalk or drive apron is limited to four (4) inch diameter pipes or smaller. To prevent damage to sidewalk or apron to remain because of cave-ins or sliding of the sides of the trench.

When required, the Permittee shall sheet and brace the trenches in a manner satisfactory to the Inspector. Sheeting and bracing shall conform to the current construction safety code issued by the State Labor Department and the Department of Licenses and Inspections.

In areas where the subsurface is known to be unstable or may become unstable during the Permittee's operation, a diagram of the method of sheeting to be used, prepared by a Professional Engineer registered in the State of Connecticut, shall be submitted by the Permittee for study and approval by the Director or his/her designee. Such sheeting and bracing shall be removed after construction. If left in place, with approval of the Director, sheeting and bracing shall typically be removed to a minimum depth of four (4) feet below the surface. The Permittee may be directed that sheeting and bracing be left in place closer to the surface in order to protect the street and structures from settlement during and after construction.

When the horizontal distance from the edge of an excavation to the face of a building is less than the depth of the footing of the building below the street level, when the depth of excavation is large, and/or the design or reviewing engineer, technicians or Inspector feels that such excavation is critical to an adjacent building or structures, the Permittee shall consult with the Building Official and Building Inspector of the Department of Licenses and Inspections before commencing any excavation.

The design engineer responsible for street excavation, sheet piling and underpinning shall show all pertinent information on engineering drawings for such work, including the information of foundations of any adjacent structures or buildings. All the drawings and specifications for shoring, sheet piling, braces and underpinning shall be signed and sealed by a Professional Structural Engineer registered in the State of Connecticut.

All excavations within the City's right of way must be kept safe at all times and secured at the end of each work day.

Backfilling

Excavated material shall not be used for backfill unless it consists of sand and gravel and the Permittee has received approval for its use by the Inspector. Broken pavement, large stones, clay, roots and other debris shall not be used in backfill.

The backfilling of excavations shall be performed so that the least possible settling will occur. Sand or bank run gravel shall be used from the bottom of the trench to a point eighteen (18) inches below the surface of the pavement. Only large two (2) inch processed traprock is to be used in the top eighteen (18) inches of the excavation (see Figure A-2.1). Backfill material shall

be placed in layers not to exceed twelve (12) inches in depth, and thoroughly tamped to secure maximum compaction of 95% of dry density. Tamping shall be by means of mechanical rams, vibrators, hand tamps or pneumatic tampers. If pneumatic tampers are used, they shall have a tamping area of not less than fifty (50) square inches and each complete assembly shall have a weight tamp of not less than two pounds per square inch. If a hand tamp is used, it shall weigh not less than twelve (12) pounds and have a tamping face area of not more than fifty (50) square inches. The City advises against the use of vibratory rollers for compaction within three (3) feet of a known location of a cast iron gas main facility. In lieu of vibratory rollers, static-type rollers are allowed. Compaction of trenches by HO-PAC is prohibited. The consolidation of backfill by "puddling" must be approved in advance by the Director or his/her designee. If the backfilling operation is in close proximity to a cast iron gas main facility, the Contractor is advised to contact Connecticut Natural Gas (CNG).

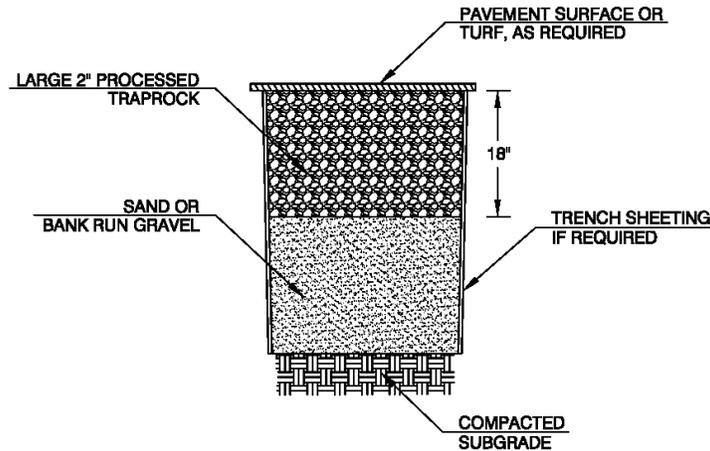


Figure A-2.1: Typical Backfill Section

When sheeting and bracing are to be wholly or partly removed, the removal shall be done as backfill progresses. When backfill has reached the bottom of a brace, the brace and horizontal rangers shall be removed, and this procedure repeated throughout the backfill operation. The sheeting shall be pulled in short increments, with care being taken to avoid significant lateral movements of the sides of the trench. During and after pulling the sheeting, the backfill in the space formerly occupied by the sheeting shall be thoroughly rodded and tamped.

All backfill material shall be compacted to a minimum of 95% of the dry density achieved by the AASHTO T-180-10 (Method D). The City reserves the authority to require that compaction tests certified by an independent laboratory be made at the expense of the Permittee. For further information on the trenching and backfilling in driveway ramps, roadways and sidewalk areas, see Standard Traffic Specification Item Nos. 0222001 and 0222101.

Temporary Repair Procedures

As soon as the excavation has been backfilled and tamped, the pavement and walk areas shall be replaced temporarily by the Permittee. The temporary pavement shall consist of two (2) inches of hot laid bituminous concrete. Cold mix will only be allowed when hot mix is unavailable because of shut down of the asphalt plants. The surface of temporary pavement shall not extend above or below the surface of the surrounding pavement and shall be reasonably smooth.

The Permittee shall be responsible for the temporary pavement and shall keep this pavement in repair until the permanent surface can be placed. Additional material shall be added, as necessary, as the backfill settles. The Permittee shall, upon notification by the Inspector, make repairs to the temporary patch within twenty-four (24) hours. Should the Permittee fail to make the required repairs or should an emergency situation requiring immediate action for public safety occur, the City will make immediate repairs. If City forces are required to make the repairs, the Permittee will be charged on a time and material basis, but not less than \$250.00 for each incident.

The Permittee will not be granted further excavation permits until all billings for temporary repairs made by the City have been paid.

Permanent Repair Procedures

Restoration of paving cuts shall be made only after the temporary paving has been in place for thirty (30) days and within the time period as specified by Code, or as otherwise agreed to by the Director or his/her designee.

For openings made from the first day of April through the last day of August, the permanent repair shall be completed by the following November 15.

For openings made from the first day of September through the last day of the following March, the permanent repair shall be completed by the following June 15.

All restorations shall be made under a separate permit by a paving Contractor familiar and experienced with paving practices in the City. The restoration permit shall note the original excavation permit number. The Contractor shall have sufficient and proper equipment and be approved by the Director or his/her designee. There shall be no charge for restoration permits.

The cost of completing unrestored cuts encountered by the City during repaving shall be billed against and paid for by the Permittee who made the cut which was not restored.

Street excavation permits will not be issued to Contractors who have not completed restoration requirements under previous permits or who have unpaid billings due to the City.

Permanent Surface Restoration

In pavement restoration, pavement shall be replaced with like pavement. On concrete base streets, a minimum of eight (8) inch thick reinforced concrete base is required beneath the bituminous concrete. A minimum of five (5) inches of bituminous concrete is required on all other streets.

All bituminous concrete patches shall be laid in at least two courses. The surface course shall be one and one half (1½) inches thick when compacted. The remaining course shall be binder. No course shall be more than two (2) inches thick when compacted (see Standard Drawing No. SR-2 and Standard Roadway Specification Item No. 010240).

When there is three (3) feet or less between a curb and the edge of the trench or excavation nearest the curb, the restoration of trench or excavation pavement shall extend to the curb (see Figure A-2.2).

Any excavation made within a City street within 5 years of that street being reconstructed or milled & overlaid will require pavement restoration using infrared technology to make sure that the new pavement is blend with the existing paving. No joints will be acceptable between the old and new pavement.

All Contractors including their clients (Entities that hired them to perform excavation, asset installation, temporary paving and permanent pavement restoration) must acknowledge and agree to comply with the intention of the City of Hartford Rules and Specifications Regulating Curb and Walk Layers and Street Excavation. The City of Hartford reserves its right to suspend the license of any Contractor that would violate the City of Hartford Rules and Specifications Regulating Curb and Walk Layers and Street Excavation.

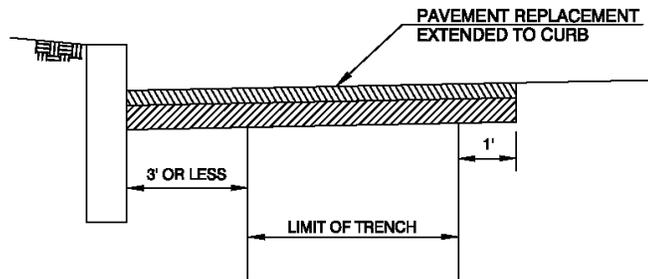


Figure A-2.2: Pavement Restoration along Curb

Permanent paving replacement for keyhole excavations in bituminous pavement where three or more cuts are less than fifteen (15) feet edge to edge shall be installed in such manner that the pavement shall be continuous throughout the entire work area. The existing pavement shall be cut to neat lines one (1) foot from the edge of excavation at the start of the work area, and shall extend parallel and unbroken to include all subsequent excavations. The pavement between the neat lines, including the pavement between consecutive keyhole excavations, shall be removed and permanent pavement installed as required. All abutting surfaces shall be coated with an approved joint sealer and the permanent pavement shall be rolled and compacted to conform to the existing cross-slope, or as directed.

In pavements without concrete base, the pavement shall be cut to neat straight lines not less than twelve (12) inches on each side from the edges of the original trench or as marked out by the Inspector.

In pavement with concrete base, the original cut shall be cut back at least one (1) foot onto undisturbed sub-grade on each side prior to replacing concrete. If the pavement has steel reinforcement, the reinforcement shall be carried through the cut with at least twelve (12) inches of overlap and shall be securely wired. If no welded wire fabric exists or it can't be spliced, the trench repair shall be doweled on all sides with five-eighths ($\frac{5}{8}$) inch dowels twenty-four (24) inches long at twenty-four (24) inches on center. The top surface shall be cut straight and square for at least six (6) inches beyond the new concrete base. The top of the concrete patch shall be set at the same level as the adjoining concrete. Concrete shall be in place forty-eight (48) hours prior to the placing of the bituminous material thereon, unless permitted or requested to do otherwise by the Director or his/her designee.

See Appendix B for a list of roads with reinforced concrete base.

The edges of the pavement shall be cleaned and coated with hot asphalt cement, viscosity grade AC-20, before each course of the hot mix bituminous concrete is placed. The bottom layer shall be thoroughly compacted using a motor driven vibratory compactor and the top layer shall be thoroughly compacted to a smooth surface matching the existing paving with a tandem five (5) ton roller.

Paving Operations for Utility Work

When pavement work is performed by a public or private utility company in conjunction with a facility installation/upgrade, it shall be the responsibility of that utility to bear the costs of said work. Performance of this work should be included in the utility Contractor's scope and shall be paid by the utility.

In certain cases, the utility will be required to provide for additional milling and overlay. Those cases would include, but are not limited to:

- If three (3) or more service connections installed perpendicular to the main cross into another travel lane, at a rate less than every seventy-five (75) feet, the utility will mill and overlay the affected portions of that additional travel lane.
- If the City street in which the utility is installing/upgrading their facilities has been milled and overlaid by others within the last three (3) years, the utility will re-mill and re-pave, curb to curb, all disturbed areas unless otherwise approved by the City Engineer.
- If the City street in which the utility is installing/upgrading their facilities has been reconstructed by others within the last five (5) years, the utility may be required to mill and pave, curb to curb, all disturbed areas or perform a seamless restoration at the City Engineer's discretion.
- When a utility/municipality company is planning to perform or subcontract the permanent pavement restoration at a later date (under a separate permit) in accordance with the Municipal Code, a signed letter from the utility company stating the restoration limits and anticipated date must be attached prior to the issuance of a permit

Milling

For all trenches of a length of fifty (50) feet or greater, a milling operation will be required. The pavement surrounding and including the excavation shall be milled to a depth of two (2) inches for the width of the traffic lane in which the excavation was made or for a width of ten (10) feet, whichever is greater. The milled area shall extend a minimum of ten (10) feet beyond the beginning and end of the excavation. The milled edges shall be vertically faced and not tapered. The entire milled area, including the edges, shall be swept and tack coated with approved material at the appropriate rate. For further information on milling, see Standard Traffic Specification Item Nos. 0222001 and 0222101.

Overlay

Milled areas shall be overlaid with Class 1 bituminous concrete, compacted to a thickness of two (2) inches with a steel-drum roller of at least ten (10) tons. The surface of the new

overlay shall be flush with the adjacent existing pavement. Pavement joints shall be sealed with an approved asphaltic material.

Quality of Construction and Repair Work

Construction, repair and maintenance done by a Permittee shall be of the highest grade and the materials used shall conform to the specifications of the Department of Public Works. The repair and restoration work shall be done under the direction of the Permittee and observed by the Inspector assigned to the project. The purpose of such inspection is to determine whether the work has been constructed in accordance with the terms of the permit and specifications and in a manner satisfactory to the City.

The work will not be accepted until final restoration places the improvement in as good as, or better than, the condition that existed before the work started.

Test Holes

Test holes with surface dimensions of less than two (2) feet by two (2) feet or a radius of twelve (12) inches or less shall be restored immediately after the excavating activities are complete. Said restoration process shall consist of:

1. Backfilling the cavity with flowable fill or any other material approved by the Director of Public Works or his/her representative. Said backfill shall be brought to no less than three (3) inches from the surface.
2. The remaining three (3) inches shall be filled with Class 1 bituminous concrete compacted to a density consistent with the current specifications.

Larger test holes shall be exposed and backfilled under the supervision of the Inspector.

State Highways

Any work to be undertaken on state highways within the City limits must receive not only the approval outlined in these procedures, but also the approval of the Connecticut Department of Transportation (CTDOT). An excavation permit will not be issued unless the applicant provides a state highway permit number. There shall be no City charge for a permit for excavations within the roadway on a state highway, however a permit fee will be charged for areas of work within the City's jurisdiction. It is the Contractor's responsibility to obtain an Encroachment Permit from the CTDOT prior to starting any work. For projects with work areas within both the State's and City's jurisdiction, work within the City's jurisdiction will not be allowed until the Contractor has obtained an Encroachment Permit.

State Highways are as follows:

- Bloomfield Avenue from 75 feet North of Albany Avenue to West Hartford Town Line
- Blue Hills Avenue from Albany Avenue to Bloomfield Town Line
- Whitehead Highway from Conland Highway (I-91) to Pulaski Circle
- Albany Avenue from Main Street to West Hartford Town Line
- Main Street from Albany Avenue to Morgan Street
- Morgan Street from Main Street to Veterans Highway (I-91)
- New Britain Avenue from West Street line of Stone Street to Hollywood Avenue

- Airport Road from Wethersfield Avenue to Brainard Road

Emergency Permits

In those cases where utility or private utility connections must be repaired under emergency conditions, the company or Contractor concerned must contact the Permit Section and receive verbal approval prior to performing any emergency work. Notification is given either in person or by calling the City's Emergency Permit phone recording. During after-hour situations, the company or Contractor concerned is advised to leave a message with Permits, Dispatch and the police "P.J. Office." Within twenty-four (24) hours after verbal permission has been granted, a written application for a permit must be submitted to the permit section in the manner prescribed for non-emergency work. An appropriate bond and insurance certificate must be on file prior to beginning emergency work.

Refusal to Do Acceptable Work

If, at any time, a Permittee refuses or neglects to conduct the work or furnish material as directed, the Inspector shall stop work immediately. If the Permittee thereafter refuses to comply with the instructions of the Inspector, the Director or his/her designee may revoke the permit and/or license and restore the right-of-way and charge the Permittee for all the costs of the work.

Depth of Substructures

No person or utility shall, without written permission from the Director or his/her designee, install any substructure, except manholes, valve casings or catch basins at a vertical distance less than thirty-six (36) inches below the established roadway grade when said substructure parallels the roadway, or a minimum depth of thirty-six (36) inches below the established gutter grade or sidewalk grade when said substructure is at right angles to the roadway or parallel to the sidewalk.

Liability of the City

These specifications shall not be construed as imposing upon the City, or upon any official or employee thereof, any liability or responsibility for damages to any person or property injured or damaged by the performance of excavation work for which an excavation permit is issued. Nor shall the City or any official or employee thereof be deemed to have assumed any such liability or responsibility by reason of inspection of the project, the review or issuance of any permit, or license, or the approval of any excavation work.

Preservation of Monuments

Any monument set for the purpose of locating or preserving the lines of any street or public property, or a precise survey reference point, or a permanent survey bench mark within the City, shall not be removed or disturbed or caused to be removed or disturbed without first obtaining permission in writing from the Director or his/her designee to do so. Permission to remove or disturb such monument, reference points, or benchmarks shall be granted only when no alternate route is available. If the Director or his/her designee is satisfied that no alternate route is available, permission will be granted only on condition, by agreement in writing that the person or utility applying for such permission shall pay all expenses incidental to the proper replacement of said monument, including hiring a licensed surveyor.

A-3 CONTRACTOR LICENSING

1. The Director of Public Works shall issue the license to a curb and walk Contractor and street excavation Contractor.

A license renewal as a curb and walk Contractor and/or street excavation Contractor shall be issued for a fee of no less than \$50 to an individual, partnership or corporation regularly engaged in the construction of curbs, walks and/or roadways, who has held a license within the last five (5) years, made proper application, filed satisfactory performance bond and insurance as hereinafter required and agreed to construct curb and walks and/or permanent repairs to street excavations in accordance with these specifications. New licenses or licenses which have not been renewed in five (5) years shall have a fee of no less than \$75. The fees may be adjusted based on the Consumer Price Index. After five (5) years without a new license or licenses, the contractor must be retested.

2. All licenses shall expire on the 31st of December of each year. Prior to renewal of the license, the Director shall review the performance of the licensee, if this performance is found to be unsatisfactory, renewal shall be denied until the licensee shall guarantee future satisfactory performance as the Director may require. For renewal, the licensee shall personally (except a corporation may be represented by an authorized agent) appear at the Public Works Office to sign the application and pay the fee hereinbefore stated.
3. Every Contractor making application for a license shall file with the City, a satisfactory performance bond, of a surety company authorized to do business in the City in the amount of ten thousand dollars (\$10,000) and on the form provided by the City. (*Hartford Municipal Code, Section 31-65*)
4. The performance bond shall be in force for a period of five (5) years after the expiration date of the curb and walk license and five (5) years after the expiration date of the street excavation license. The cancellation of the bond automatically suspends the license.
5. Every Contractor making application for a license shall file with the City a Certificate of Liability Insurance in the amount specified on the insurance form. The cancellation of insurance automatically suspends the license.
6. The applicant for a license shall file his/her business address, the name under which business is done, and his/her telephone number with the Director. The licensee shall notify the Director promptly of any change in the above information. Any orders or notices which the Director or his/her authorized representative may mail to the licensee at his/her address on file, shall be considered as due notice delivered to the licensee personally and shall relieve the City of further obligation.
7. No licensed Contractor shall take out a permit in his/her name for another person nor allow another person to use his/her name in obtaining a permit. No licensed Contractor shall

employ another Contractor to do work for him under a permit unless that Contractor has a Contractor's license and has been approved by the Director as a subcontractor.

8. A licensed Contractor who fails to conform to all provisions of these specifications shall be subject to disciplinary action as determined by the Director. Disciplinary action may include suspension or revocation of license. Cancellation of insurance or bond automatically suspends a license until such insurance and/or bond has been satisfactorily reinstated. Any license that has been revoked, or suspended for more than thirty days, may be restored only after all requirements for a new license hereinbefore stipulated have been complied with. *(Hartford Municipal Code, Section 31-61)*
9. Any construction covered by these specifications within the street lines of any street performed by an unlicensed Contractor will be rejected. The Director will order the abutting property Owner or the unlicensed Contractor to engage a licensed Contractor to remove the rejected work and to replace it in conformance with these specifications, at no cost to the City. Should this fail to be done, the Director will order the City maintenance Contractor to remove and replace the rejected work in conformance with these specifications and the City will then bill the abutting property Owner or the unlicensed Contractor for all costs involved. An unlicensed Contractor shall be a Contractor who does not hold a valid license or one whose license is under suspension.
10. An abutting property Owner or his/her agent may at any time make minor repairs, (the Director shall determine what shall constitute minor repairs) to the curb, sidewalk or other areas between curb and street line without engaging a licensed curb and walk Contractor to make the repairs. *(Hartford Municipal Code, Section 31-56)*

A-4 PERMITS

1. A licensed Contractor who proposes to do any curb construction or repair, sidewalk or driveway construction or repair, and/or street reconstruction or other miscellaneous work within the street shall first obtain a permit. Application shall be made in writing, on a form provided at the Department of Public Works located at 50 Jennings Road, Hartford, CT, Maps and Records Division. This application shall be made in accordance with Section A-2. A permit shall be taken out for each location or address at which the Contractor proposes to work, except one permit may cover adjacent locations that belong to the same Owner on one street.
2. No work shall commence until the completed permit is on the job site in the hands of the Contractor or their authorized representative. The permit shall be on the job site at all times work is being performed and shall be presented for inspection to the Director or the Engineer, their authorized representatives, or Inspectors assigned to the work, if so requested. *(Hartford Municipal Code, Sections 31-62 and 31-64)*
3. On all permits for construction or repair of sidewalks, street excavations and other work except curb and City contracts, the Contractor shall enter the address of the abutting

property Owner on all copies of the permit.

4. A Contractor who proposes to repair a sidewalk, construct or repair a driveway ramp and other miscellaneous work within the street, shall present the permit at the Maps and Records Office. The Contractor shall be responsible for seeing that the curb and walk layout is entered on the permit.
5. For each permit issued, except for City contracts, the Contractor shall be allowed thirty (30) calendar days for construction, unless otherwise noted on the permit.
6. The Contractor shall begin work on a permit, except for City contracts, within five (5) calendar days; after this time, the permit will become void and the Contractor must apply for a new permit. If, due to circumstances beyond the control of the Contractor, the work is started but not completed within the thirty (30) days, the permit may be extended by the City Engineer..
7. If a licensed Contractor does any work within the street line of any street without a permit, he/she shall be subject to suspension or revocation of his/her license. This decision is determined by the Director. The Director may also reject the work and order its removal and replacement by a City maintenance Contractor to conform to these specifications. This work would be done at the expense of the defaulting Contractor.
8. In general, no permits will be issued between December first and April first. After November first or should the weather turn cold, air temperature below 32°F for more than twelve (12) hours per day for five (5) consecutive days, issuance of permits will be suspended before December first. After March 1st, should the weather turn warm, air temperature above 32° F for more than 18 hours per day for five (5) consecutive days, issuance of permits will be resumed prior to April 1. In case of an extenuating circumstance, only the Director may order a permit issued after the closing date for the season (see Section A-4). All construction on all regularly issued permits shall cease on December 15th. At this time, all uncompleted work shall be made safe and passable, as ordered by the Director, and shall be maintained so by the Contractor until completion in the spring. Temporary construction and maintenance will be provided by the Contractor.
9. The ability to perform work during the winter shut down period is a privilege granted solely at the discretion of the Director of Public Works. If granted, the Contractor shall comply with additional requirements regarding snow removal, steel plating and inspection costs. A Winter Work Restrictions form is available at the Department of Public Works. The Contractor is required to keep the initialed form with the Application for Permit at the project site.

A-5 CONTRACTOR RESPONSIBILITY

1. The Contractor shall guarantee the work done for sidewalk and curb work under each permit issued him for a period of five (5) years after completion and final acceptance against any failure caused by defective materials or defective workmanship. The Contractor shall guarantee the street repair work for all excavations under each permit issued him for a period of five (5) years after completion of the permanent patch against any failure caused by defective materials or defective workmanship. The Contractor will at any time during this period, upon notification in writing from the Director and without expense to the City, immediately execute all repairs which may be necessary, as determined by the Director. Also see Appendix E. (*Hartford Municipal Code, Section 31-65*)
2. The Contractor shall cooperate with the various departments of the City having jurisdiction or interests in certain features of the work. He/She shall schedule and conduct his/her work so as to comply with the regulations of these departments and shall have authorized representatives on the job whenever work is being done. Twenty-four (24) hours before commencing work in a "Critical Area" (see Section A-21.9), the Contractor shall be responsible for notifying the Traffic Division of the Hartford Police Department as to the location and nature of the proposed work. The Contractor shall also be responsible for complying with any and all directives they may issue at that time.
3. The Contractor shall give the work his/her constant attention to facilitate the progress thereof and shall cooperate and promptly comply with all orders or directions of the Director. The Contractor shall have an authorized representative on the project to accept all orders and directions from the Director. He/she shall have full authority to promptly carry out such orders and directions within the terms of the specifications and to supply such tools, labor, equipment, materials and incidentals as may be required.
4. The Contractor shall be responsible for notifying the Owner of any utility appurtenance(s) he/she may encounter, above or below ground, that he/she may have damaged or that may require adjustment or relocation. The Contractor shall cooperate with the Owner of said utility and shall schedule and conduct his/her work so as not to interfere with, or hinder the completion of, their work.
5. The Contractor shall conduct the work at all times in such a manner as to insure the safety and least possible obstruction to traffic. The convenience and safety of the general public and of the residents along and adjacent to the street shall be provided for in an adequate and satisfactory manner. During working hours, materials stored within the street shall be placed so as to cause as little obstruction to the public as possible under the conditions. No materials shall be left overnight. No street or section of a street shall be closed without written permission of the Director. The safety provisions of applicable laws, building and construction codes and safety codes approved by the State Labor Commissioner shall be observed. The Contractor shall provide sufficient suitable barricades to exclude and prevent injury to pedestrians, vehicles and animals; he/she shall also provide a sufficient number of warning lights on or near the work from twilight in the evening until sunrise. If required by the Director, the Contractor shall provide, and maintain temporary signs for the control of traffic and uniformed policemen to supplement traffic control.

A-6 INSPECTION OF THE WORK

The Director of Public Works and/or his/her duly-authorized representatives shall be the judge of the character, nature and fitness of all the work done and all the material furnished. The Director or his/her representative shall decide as to the meaning, intent and performance of these specifications. The entire work shall be done to his/her satisfaction and his/her decisions upon all questions relating to said work shall be binding upon the Contractor.

A-7 LINE AND GRADE

1. The Contractor will furnish all lines, grades and measurements necessary to lay out the work. Any stakes or marks the Engineer or Inspector may set for his/her own or the Contractor's guidance shall be preserved by the Contractor. If such stakes or marks are carelessly destroyed by the Contractor, the cost of replacing such stakes may be charged against the Contractor.
2. The Contractor shall not commence work until such line and grade has been established, he/she shall carefully work to the lines and grades using all stakes and marks furnished. Should any stakes or marks be moved or lost or if any doubt exists in the Contractor's mind about the correctness of any stake or mark he/she shall not proceed with the work until the replacement or verification has been made.
3. The Contractor shall exercise extreme care not to damage, disturb or bury any City merestones which have been set at street corners or at angles in the street lines. A cover will be provided for such openings to be set flush with the sidewalk. If any merestone is disturbed, damaged or covered over, it shall be the duty of the Contractor at his/her expense to correct these conditions, as directed by the Engineer or Inspector.

A-8 WORK HOUR RESTRICTIONS

In general, the allowable work hours on City streets and sidewalks are between 7:00 AM through 5:00 PM, Monday through Friday, non-holiday. For "Critical Areas," the allowable work hours within the roadway are typically limited to 9:00 AM to 3:00 PM, Monday through Friday, non-holiday. Lane closures in Critical Areas are discussed in Section A-21.9. Waivers for work hour restrictions must be submitted in writing to the Director at the time of permit submittal. Any Permittee violating the work hour restrictions will be fined \$50 per hour, or any part thereof.

If, prior to construction, the Contractor anticipates a lane closure beyond the allowable work hours will be necessary, the Contractor can request a work hour extension. The charge for the extension will vary according to the time of day, the area of impact and duration. The Contractor must apply for a work hour extension at the Department of Public Works.

A-9 URGENT WORK

If, in his/her judgment, traffic conditions, the safety or convenience of the traveling public or public interest require that any work be performed as emergency work, the Director of Public Works shall have full power to order that a working crew and adequate facilities be employed by the Permittee up to 24 hours a day so that work may be completed as soon as possible.

A-10 EMERGENCY ACTION

Nothing in these rules shall be construed to prevent the making of such excavations as may be necessary for the preservation of life or property or for the location of trouble in a conduit or pipe, or for making necessary repairs, provided that the person making such excavation shall apply to the Director for such a permit on the first working day after such work is commenced.

The person engaged in emergency action shall notify the Department of Public Works, the Police Department, and the Fire Department at the start of the emergency work.

A-11 RELOCATION AND PROTECTION OF UTILITIES

The Permittee shall call "Call Before You Dig" (CBYD) prior to starting his/her excavation and shall place the CBYD number on the permit.

The Permittee shall not interfere with any existing utility without the written consent of the Director and the Owner of the utility. If it becomes necessary to relocate an existing utility, this shall be done by its Owner and the cost of such work borne by the Permittee. The Permittee shall support and protect all pipes, conduits, poles, wires, or other apparatus which may be affected by the excavation work, and do everything necessary to support, sustain and protect the utilities under, over, along or across such work. The Permittee shall secure approval of the method of support and protection from the Owner of the utility. In case any said pipes, conduits, poles, wires or apparatus should be damaged, and for this purpose pipe coating or other encasement or devices are to be considered as part of a substructure, they shall be repaired by the agency or person owning them and the expense of such repairs borne by the Permittee. The Permittee shall be responsible for any damage done to any public or private property by reason of the breaking of any water pipes, sewers, gas pipe, electric conduit or other utility. The Permittee shall inform itself as to the existence and location of all underground utilities prior to the commencement of excavation and protect the same against damage.

Any non-metallic underground pipe or cable exposed shall have a metallic tracer wire, metallic tape or metallic marker disc placed approximately twelve (12) inches above the utility during the backfill operation. The utility warning device shall be durable and designed to withstand extended underground exposure. The device shall be color coded following the Call Before You Dig color code for utility locations and be imprinted with an appropriate warning or

message.

A-12 PROTECTION OF ADJOINING PROPERTY

The Permittee shall at all times, at his/her own expense, preserve and protect adjoining property by providing proper foundations and taking other measures suitable for protection. The Permittee shall also, at his/her own expense, shore up and protect all buildings, walls, fences and other property likely to be damaged during the progress of excavation work and shall be responsible for all damage to public or private property. The Permittee shall not remove any trees or shrubs without first obtaining consent of the Director of Public Works, or the Owner.

Before starting work, the Permittee shall give at least one week notice in writing to the Owner of each neighboring building or structure. The Permittee is also responsible for receiving consent to enter private property. Having received consent to enter a building, structure or premises, the Permittee shall make the necessary provisions to protect it structurally and to insure it against damage which may ensue from the proposed work. If license to enter is not afforded, then the adjoining Owner shall have the entire responsibility of providing both temporary and permanent support of his/her premises at his/her own expense. The Permittee shall inform the Director if consent to enter a building is not received.

A-13 CONSTRUCTION MATERIALS

Construction materials on the site shall be limited in quantity and space and occupying an area so as to not unduly hinder and block the use of the street. Construction materials must be removed at the end of each day unless written permission is given to the Contractor to store the materials with the right-of-way.

A-14 CLEARANCE OF VITAL STRUCTURES

Excavation work shall be performed and conducted so as not to interfere with access to fire hydrants, fire stations, fire escapes, water gates, underground vaults, catch basins and all other vital equipment as designated by the Director of Public Works.

The Permittee shall maintain all gutters free and unobstructed for the full depth of the adjacent curb and for at least one (1) foot in width from the face of such curb at the gutter line. Catch basins shall be kept clear and serviceable.

The Permittee shall make provisions to take care of all surplus water, muck, silt, slicking, or other run-off pumped from excavations and shall be responsible for any damage resulting from his/her failure to so provide.

A-15 NOISE

Each Permittee shall conduct and carry out excavation work in such manner as to avoid unnecessary inconvenience and annoyance to the general public and occupants of neighboring property. During the hours of 6:00 PM and 7:00 AM Monday - Friday he/she shall not use, except with the express written permission of the Director or in case of an emergency as herein otherwise provided, any tool, appliance or equipment producing noise of sufficient volume to disturb the sleep or repose of occupants of the neighboring property. (*Hartford Municipal Code, Chapter 23*)

A-16 TRENCHES

The maximum length of open trench permissible at any time shall be in accordance with existing ordinances or regulations, or as specified by the Director, and no greater length shall be open for pavement removal, excavation, construction, backfilling, patching or other operations without written permission of the Director.

A-17 EXCAVATED MATERIAL

All material excavated from trenches or excavations shall be removed from the site of the work except in rare cases where material is suitable for part of the backfill. However, permission must be granted by the Director prior to placement of any such material. Where the confines of the work area are too small to permit the piling of excavated material, the City shall have the authority to require that the Permittee haul the excavated material to a storage site and then rehaul it to the work area at the time of backfilling. It shall be the Permittee's responsibility to secure the necessary permission and to make all necessary arrangements for all required storage and disposal sites.

A-18 DUST CONTROL AND CLEAN UP

As the excavation work progresses, all streets shall be thoroughly cleaned of all rubbish, excess earth, rock and other debris. The Permittee shall take necessary precautions to prevent and avoid dust and to keep the streets clean each day. All cleanup operations shall be accomplished at the expense of the Permittee and shall be carried out to the satisfaction of the Director of Public Works.

A-19 PROMPT COMPLETION OF WORK

After an excavation is commenced, the Permittee shall prosecute with diligence and expedition all excavation work covered by the excavation permit and shall promptly complete such work and restore the street to its original condition or as near as may be, so as not to obstruct the street or travel thereon more than is reasonably necessary.

A-20 MAINTENANCE & PROTECTION OF VEHICULAR & PEDESTRIAN TRAFFIC

1. Purpose: The purpose of this section is to establish uniform methods of traffic control and protection to be required at all construction areas for maintenance and protection for pedestrians, motorists and workers, enabling both vehicular and pedestrian traffic to pass through the work area as quickly and as safely as possible. Adherence will promote traffic conveyance and public good-will, minimize economic loss and increase job efficiency. It is issued in the interests of the health, safety and welfare of the people of Hartford.
2. Scope: This section prescribes minimum standards. If conditions warrant, such action, controls or measures in excess of the minimum standards prescribed herein may be necessary. If additional or supplemental controls are described by the Contractor, they shall not conflict with standards shown in this section and shall be submitted for approval prior to their use.

Field conditions may arise which are not covered in this manual. In such instances, special consultation and planning between the Contractor and the concerned City Agencies must occur prior to the undertaking of work. All plans for traffic protection shall be approved before the work begins.

Final responsibility for the installation of adequate safety devices for the protection of the traveling public, pedestrians and workmen, as well as for the safeguard of the work in general, remains at all times with the Contractor.

3. Application: The provisions set forth in this section shall apply to all Contractors, utility firms, and public agencies whenever such agencies or firms are engaged in work involving public right-of-way in streets or sidewalks of the City.
4. Authority to Alter, Waive or Modify Standards: Nothing in this section shall be so construed as to limit the authority of the City to alter, waive, or modify any standard set forth in this section or the Special Condition section of the Permit Application, when, in the opinion of the concerned City Agencies, such alteration, waiver, or modification is justified.
5. Work Permits: Certain emergency conditions require the immediate undertaking of work prior to fulfillment of normal work permit procedures. In such cases the Contractor is in no way exempt from provisions of traffic safety control as prescribed in this section, nor is his/her liability for the protection of the traveling public, pedestrians or workmen abrogated under such circumstances.

In the event that standards described herein are not adhered to, or traffic safety provisions specified in the Special Conditions section of the permit application form not followed by the Contractor, the Director and/or Engineer may issue a "Stop Work" order in the interest of public safety.

In order to reduce the possibility of delay in obtaining work permits, the Contractor should become thoroughly familiar with the standards in these rules and specifications. Job superintendents and foremen should also be instructed to become familiar with the standards and guides set forth in these rules and regulations.

6. General Traffic Maintenance: The Contractor shall, at all times, maintain traffic as specified in this section, or the Special Conditions of the Permit Application. In addition, nothing in this manual is to be construed as limiting the separate or joint authority of the Director of Public Works and/or Engineer and/or Chief of Police to require cessation of any work and resumption of normal traffic operations when such action is deemed necessary in the public interest.
7. General Land Service Maintenance: Except in the most extreme circumstances, unobstructed access to dwellings and places of business or work must be provided to emergency vehicles and the public at all times. Access and egress provisions for land service maintenance are most acute under roadway closure or detour circumstance, and therefore will be closely examined by the concerned City Agencies prior to approval.
8. Schedule of Operations: All construction and maintenance operations shall be scheduled to keep traffic delay to a minimum. Included in the operational category are such things as equipment, material, deliveries, vehicles, loose tools and any other conditions which affect the traveled portion of roadway or sidewalk. They shall be brought to and from the site and parked or stored in a planned manner calculated to minimize interference with traffic. When interference from such operations has become excessive, the Engineer or the Director of Public Works may issue a "Stop Work" order until the situation is satisfactorily remedied.

It is essential that all applications for work permits include sufficient information to indicate the scope of the entire job. A sketch of the plan of operation, adequate to show all traffic factors is required. In the event that a question arises as to the physical requirements of a job and their significance with respect to the standards of this section, approval of the proposed construction methods by the City Engineer may be requested.

9. Critical Areas: No street excavations, street closures, obstructions or single or multiple traffic lane closures are permitted during weekday business hours in the Critical Areas without the review and approval of the Engineer. The typical work hours within Critical Areas is 9:00 AM to 3:00 PM. The list and map of critical streets comprising the Critical Areas are provided in Appendix C.

A full street closure in the Critical Areas will be permitted only when, in the opinion of the Engineer, no other reasonable course of action is possible, and such closure must be approved by the Director of Public Works and the Engineer. A full street closure in the Critical Areas requires a Detour Plan. The Contractor shall prepare the Detour Plan for the review and approval of the Engineer.

With the exception of an emergency situation, the Detour Plan must be submitted a minimum of one (1) week in advance of the proposed work. During this time, the Engineer

will review the Detour Plan and its impact on motorists and the transit system, and prepare the adjustment of existing traffic control devices as required. The Contractor is responsible for notifying all concerned public and private organizations.

Within the Critical Areas, and in concrete base pavement during restoration of permanent pavement, all cuts or trenches with a surface width of five (5) feet or less shall be covered with suitable steel plates, securely placed, and opened to traffic at all times except during actual work operations from April 1st through November 30th.

Steel plates used in covering cuts and trenches shall be identified by distinctive coloring, be skid resistant and be properly posted with warning signs.

10. Local and Land Service Streets: Local and Land Service Streets include all streets not within the Critical Areas. In general, work is permitted without time stipulations, except by ordinances. Full closures are also generally permitted, if need is evidenced, but must be requested at least one (1) week in advance to allow for detour planning. Such closures must be approved by the Director of Public Works and/or Engineer and maintain a fire emergency lane at all times. On these streets, access to residences and businesses usually is the greatest need as opposed to the necessity of maintaining through vehicular movement.
11. Detours: Nothing in the foregoing paragraphs shall be construed as permitting the Contractor to close or detour traffic on any public right-of-way without receiving specific permission from the Director of Public Works and/or the Engineer.

If, on any project, a detour is necessary, traffic will be maintained on the detour route according to prior agreement with the Engineer and Police Department and using the signing and traffic control standards set forth herein.

The Contractor shall notify the Police and Fire Departments of the layout and expected time of detour. The Contractor shall supply and maintain all signs at his/her expense as may be necessary to clearly outline the detour. Prior to detouring traffic, the Contractor and the Director of Public Works and/or the Engineer shall inspect the adequacy of the signs and the structural condition of the detour route. A second inspection shall be made when the detour is terminated so that there will be an agreement as to the extent of repairs, if any, to be made by the Contractor to restore the conditions of the detour route to equal to or better than before the detour was made.

12. Posting of Side Streets: The Contractor shall erect and maintain all necessary signs, barricades, and other protective devices described herein, at intersecting side streets, when such signing and protective devices are prescribed by standards set forth in this section, or by the Special Conditions section of the Permit Application.
13. Parking Controls: Special parking controls, where necessary, will be specified in the Special Conditions section of the Permit Application form.
14. Utility Manholes: In the case of utility manholes, whenever the work to be undertaken

involves only the opening of manholes with no excavation, for which no permit is required, the utility firm involved will contact the Department of Public Works and the Field Services Division of the Police Department for the necessary approval.

15. Minimum Standards: The following minimum requirements will be adhered to unless otherwise specified.

Travel Lane	10 ft. minimum width
Two-Way Traffic	22 ft. minimum width
Walkway	4 ft. minimum width
Parking Lane	8 ft. minimum width
Peak Hours	7:00 AM – 9:00 AM and 3:00 PM – 6:00 PM
Letter Series	Conforms to the Manual on Uniform Traffic Control Devices (MUTCD)

16. Police Protection

- a. All direct or indirect work impacting vehicular traffic may require the presence of at least one uniformed police officer. A sufficient number of uniformed police officers shall be employed by the Permittee to direct traffic safely through the work area. All work on critical streets will require police presence. The list of critical streets is provided in Appendix C.
- b. Police protection can be obtained only by consultation with the police “P.J. Office” or his/her representatives. Traffic Control methods shall adhere to the details contained in Appendix A. The phone number of the police “P.J. Office” is 860-543-8706.

17. Pedestrians

- a. General Pedestrian Protection: Persons on foot must be given full protection in the vicinity of construction projects. This is especially true when the nature of the job requires that a normal walkway be closed or obstructed and that pedestrians walk in any portion of the roadway. Care should also be taken, inasmuch as is possible, to discourage children from playing in the work area or near construction equipment.
- b. On large jobs the problems of "sidewalk superintendents" must also be recognized and provisions made to insure against walkway blockage and the danger of standing close to the work area.
- c. Pedestrian Control: In residential areas where pedestrian activity is low, it is desirable to crossover pedestrians to the opposite side of the roadway in advance of the work area. Special "Pedestrian Crossover" signs may be utilized in conjunction with barricades for this purpose. In general, crossovers will be made at intersections.
- d. In downtown or commercial areas where volumes of pedestrians and vehicles are high, such control is not feasible. Where a crossover is not applicable and the normal walk area becomes a protected wooden walkway, the walkway shall be subject to approval by the City.

18. General Requirements for Control Devices: All traffic control, warning and protective devices described herein shall be furnished, erected and maintained by the Contractor according to the standards set forth in this section and the Special Conditions section of the Permit Application. Under certain rare conditions, the Engineer may furnish devices for private Contractors, but such service will be provided only when the following three conditions are met:

- Provision of sign service is deemed in the public interest by the Engineer;

- The Contractor or his/her representative signs a proper receipt for the material to be used; and
- The Contractor has no outstanding invoices for past sign service, or other municipal requirements such as bonding or license fees.

In all cases, the Contractor shall adhere to the following:

- a. **Conformity of Devices:** Contractors and other organizations shall use signs, flashing lights and/or other traffic control devices which are in conformance with the standards herein provided, or as approved in the Special Conditions section of the permit application form. All such devices shall be in place before work begins, be correctly maintained while in use, and be removed as soon as they are no longer necessary. If, for an intermediate period, they do not apply to the existing condition, they shall be removed or covered. All the aforementioned devices shall be moved as often as necessary to conform to the limits of the work, in order that they may convey their intended message clearly and correctly.
- b. **Additional Protective Devices:** Additional protective devices not mentioned or described in this section, but specified in the Permit Application, shall also be furnished, maintained, and erected by the Contractor.
- c. **Channelizing Devices:** Channelizing devices are used to align flow of traffic. All channelizing devices used during hours of darkness must be reflectorized. Examples of channelizing devices for typical projects are shown in Appendix A.

For further requirements for traffic control devices, see Standard Drawing No. SR-7.

19. Signs

- a. **Changing or Adding Signs:** If conditions warrant, signs other than, or in addition to, the signs shown in this section may be erected and used as traffic control devices. Such signs may be used only after having received approval from the Engineer. There is a large variety of signs, but the selected group described in this section should meet most needs. Motorists generally are appreciative of information that explains why an inconvenience is being experienced and will react more to traffic controls with such knowledge.
- b. **Signs Specifications:** All signs not detailed herein shall comply in legend, size and color with the latest issue of the “Manual on Uniform Traffic Control Devices”; copies are available from the U.S. Government Printing Office. A reference copy is available to the Contractor at the Transportation Services Bureau.
- c. **Construction and Maintenance:** All signs shall be constructed in a workmanlike manner and shall be kept clean and legible. Care shall be exercised at all times by the Contractor to insure that no sign is permitted to be blocked by other signs, construction equipment, construction materials, weeds or snow.
- d. **Approach Sign:** All signs shall be placed as specified. An exception will be made at any location where the sign distance at the approach to the first sign of a series is limited, or when other limiting factors exist which preclude use of the specified placement distance. In such cases, the sign shall be placed farther in advance of the project than the distance indicated in the section or the Special Conditions

section of the Permit Application.

- e. When to Place or Remove Signs: Unless otherwise specified, all signs shall be erected and in place before work operations begin. They shall be removed or covered as soon as they no longer apply to the existing conditions.
- f. Unforeseen Conditions: The Engineer and Police Department, as a matter of routine, may inspect project areas to determine adequacy, condition and effectiveness of signs. However, nothing in this section is to be construed as removing responsibility from the Contractor to report any undesirable traffic conditions in the vicinity of the work area, or to report any apparent deficiencies in the traffic control system specified for the project area. Such information shall be transmitted as quickly as possible.
- g. Sign Blank Material: Unless otherwise specified, sign blanks shall be either one-half (½) or five-eighths (⅝) inches thick, AA Exterior Fir Plywood or better. Aluminum, minimum 0.100 inch thickness, is highly suitable. Sign construction must equal or better current commercial sign standards with reference to durability, strength, appearance, workmanship, and any chemical treatments generally employed before application of sign background.
- h. Reflectorized Signs: Unless otherwise specified, all signs indicated as "reflectorized" shall utilize materials which are generally recognized for their special reflective qualities. Upon request, the Engineer will provide information relative to available materials.
- i. Portable Sign Supports: Since the sign support does not convey a traffic message, any device which adequately supports the size and weight of the sign to be used is acceptable. Contractors not familiar with sign support techniques may wish to take note of the fact that a single 10-M stanchion with a four-foot by four-foot (4'x4') or larger sign will topple under gusty wind conditions. Steel sign posts driven into the ground provide excellent sign support. Good judgment in the use of sign supports can significantly reduce sign maintenance.

For further requirements, see Standard Roadway Specification Item No. 0107201.

- 20. Traffic Details: Traffic control for roadway and/or sidewalk construction shall adhere to the details contained in Appendix A or the latest edition of the MUTCD.
- 21. Traffic Control: Travel lane closures, sign spacing and cone and delineator spacing shall adhere to the following design lengths or the latest edition of the MUTCD:

TAPER LENGTHS

Approach Speed (mph)	Lengths for Closure Based on Lane Widths (ft)			Stopping Distance on Level Dry Pavement (ft)
	10	11	12	
15	150	165	180	70
20	200	220	240	100
25	250	275	300	130
30	300	330	360	160
35	350	385	420	200
40	400	440	480	240

MINIMUM SIGN SPACING

Speed (mph)	Distance From Taper to First Sign (ft)	Separation of Signs in Series
<25	250	300
30-35	300	300
40-45	400	500

CONE AND DELINEATOR SPACING

Speed (mph)	Spacing (ft)
15	15
20	20
25	25
30	30
35	35
40	40

A-21 PAVEMENT AROUND UTILITY STRUCTURES

After City acceptance of a completed surfacing project, the bituminous pavement within two (2) feet of a utility structure or cover will become the responsibility of the utility owner and adjustments required to the facility and/or pavement will be the responsibility of the utility owner to reset and/or restore. The Department will notify the utility company when substandard areas exist, where they exist and the deficient situation. The Department will meet with the utility owner, if requested, at the site.

The Department will notify the utility owner only if, in the opinion of the Department, the utility structure or cover is causing the substandard condition. The City has found deficiencies typically meet one of three conditions:

1. A utility cover is set improperly after a mill and overlay operation.
2. A utility cover/structure is set improperly after full depth roadway reconstruction.
3. A utility cover/structure is set even with the pavement surface, but cracking occurs in the pavement around the utility.

After notification, the utility has thirty (30) days to properly set the utility cover/structure and/or reconstruct the pavement around the utility. If, after thirty (30) days, the restoration has not occurred, the City has the right to fix the deficient problem and bill the utility for the work.

A-22 RESTORATION OF PAVEMENT MARKINGS

The Permittee shall replace all traffic lane markings, crosswalk stripes, parking stall markings and curb paintings that may have been obliterated during construction operations.

The Permittee shall perform this work under the following options:

1. Perform the work themselves following the City traffic design manual and details.
2. At the discretion of the Engineer, have the City forces do the striping and painting work at the Permittee's expense. The Director or his/her designee will provide the Contractor with an estimate of the work to be performed with an additional 20% to cover indirect costs. Any additional expense will be required prior to the release of the performance bond.

A-23 GENERAL CURB, WALK, DRIVEWAY AND AREAWAY REQUIREMENTS

1. General Curb Requirements: Unless specifically ordered by the Director, no concrete curb or combined curb and gutter shall be constructed within the city right-of-way. Any defective sections shall be removed and replaced with new or used granite curb as herein specified.
2. General Sidewalk Requirements: The sidewalk and any other paved area between the curb and street line shall rise from the outer edge (curb side) to inner edge at a minimum rate of 1/8-inches to the foot (1%) and at a maximum rate of 1/4-inches to the foot (2%). This requirement may be varied to meet special conditions only on order of the Director. All new sidewalks shall be monolithic concrete walk on approved foundation and shall be inspected by the City prior to acceptance.
3. General Driveway Requirements: The minimum width of driveways shall be thirteen and a half (13½) feet between curb openings measured at gutter level, the maximum width shall be thirty (30) feet without written permission of the Director. The island between two (2) adjacent driveways shall be no less than six (6) feet measured on the curb line without

written permission of the Director. Granite headers or dropped curb sections will not be permitted. No driveway will be constructed in any portion of the arc of a curb corner except with written permission of the Director. Bituminous concrete driveway ramps shall be constructed only in conforming residential zones, and then only with the written permission of the Director. All existing granite or concrete curb or combined curb and gutter shall be removed in the construction or reconstruction of bituminous concrete ramps. Curb cut for bituminous ramp shall be cut square, the opening shall be ten (10) inches wider than the proposed ramp on each side at the gutter line, a shoulder of bituminous concrete shall be constructed with the ramp ten (10) inches wide rolling down from the top of curb to the finished ramp grade at the gutter line. No flagstone walks will be allowed across a driveway being constructed or rebuilt and shall be replaced with eight (8) inch thick reinforced cement concrete. New eight (8) inch cement concrete drive aprons may be installed against existing eight (8) inch thick reinforced cement concrete walk provided the walk is in good condition and true to line and grade and with the permission of the Director. City accepted sidewalks converted to use as driveway ramps shall no longer be accepted for City maintenance. The existing walk and the new driveway ramp shall be doweled. Bituminous concrete ramps may be constructed against existing five (5) inch cement concrete walks provided the walks are in good condition and to correct line and grade and with the permission of the Director. The standard detail for driveways is located on Standard Drawing No. SR-1.

4. Areaway: Prior to repair of a sidewalk which is over, or covering, an areaway, complete plans signed by a Professional Engineer licensed in the State of Connecticut shall be submitted to the Director for his/her review and approval. No work may be started until the Director has given written approval and a permit has been obtained.
5. Wheelchair Ramps: Wheelchair ramps, when ordered constructed or repaired, shall be the type specified and constructed per the standard specifications.

A-24 BLUESTONE SIDEWALKS

1. Contractor Qualification: Sidewalk Contractors who wish to take permits for bluestone work shall have a bluestone certification in addition to their City curb and sidewalk license. To achieve this certification, the Contractor shall provide contact information for the supplier of bluestone slabs and stone specifications from the quarry. Contractors shall also provide evidence of prior bluestone work experience to the satisfaction of the Director of Public Works. Contractors will be subject to an annual bluestone certification fee listed on Page 3.
2. Use of Bluestone Sidewalks: A property Owner may use bluestone sidewalks abutting residential properties or non-residential properties within a primarily residential area. Bluestone sidewalks may be installed where sidewalks do not exceed five (5) feet in width.
3. Existing Sidewalk Condition Assessment: An existing bluestone sidewalk slab shall be

considered to be in satisfactory condition if it is:

- a. Free from structural defect (cracks, delamination).
- b. Has surface imperfections that are no more than one-fourth (1/4) inch vertical.
- c. Has a vertical alignment of no more than one-fourth (1/4) inch difference at joint of adjoining slab.
- d. Has a horizontal center alignment of no more than one (1) inch offset from centerline of sidewalk (except where sidewalk must pass obstruction such as a tree).

4. Repair/Replacement Thresholds:

- a. Repair: If less than 25% of the length of a City sidewalk (measured as total length of City sidewalk abutting property) does not meet City specifications, the defective section of sidewalk may be repaired without disturbance to the remaining sidewalk. The installation method (processed traprock or concrete setting method) shall be determined based upon adjacent undisturbed bluestone panels. The installation method shall match the structural section of the adjacent undisturbed bluestone panels.
- b. Replacement: If 25% or more of the length of a City sidewalk (measured as total length of City sidewalk abutting property) does not meet City specifications, all bluestone slabs abutting the property shall be removed. The property Owner may choose which installation method (processed traprock or concrete setting method) is used. If a contractor intends to reuse existing subbase material, it shall be inspected for conformity to standards. If the existing subbase is found to be inadequate, it shall be removed in its entirety and replaced with new subbase as specified. Used slabs shall be inspected for conformity to standards. Slabs found to be inadequate and unsalvageable shall be removed from the site.

5. Work Done by Others: If it becomes necessary for a contractor, utility company, etc., not working directly at the request of a property Owner, to disturb a sidewalk that is partially or fully constructed of bluestone the repair procedure shall be as follows: If 60% or more of the length of the City sidewalk (measured as total length of City sidewalk abutting the property) is constructed of bluestone, the disturbed sidewalk panel must be replaced with bluestone regardless of what type of material from which the disturbed panel was originally constructed from. The Director of Public Works may waive this requirement at the request of the property Owner. The entity disturbing the sidewalk shall verify the replacement material with the property Owner prior to repairing the disturbed slab(s). If less than 60% of the length of the City sidewalk (measured as total length of City sidewalk abutting property) is constructed of bluestone, the disturbed panel may be replaced in kind. If the entity disturbs more than one slab along the frontage of the same property separated by ten (10) feet or less or along the frontage of the adjoining properties separated by (15) feet or less, all intervening slabs shall be repaired/replaced as well.

6. Material Specification:

- a. New Bluestone Slab: New bluestone slabs shall be free from structural defect (cracks, delamination). Bluestone slabs shall be no less than two (2) inches thick

at any point. Surface imperfections shall be no more than one-fourth ($\frac{1}{4}$) inch vertical. Bluestone slabs shall be New York or Pennsylvania in origin. Minimum slab size shall be 47.5" x 47.5" for a four (4) foot wide sidewalk, 47.5" x 59.5" for a five (5) foot wide sidewalk.

- b. Reuse of Existing Bluestone Slab: Reuse of existing slabs is permitted if the slabs are free from structural defect (cracks, delamination). Reused slabs shall be minimum two (2) inches thick. Slabs shall have maximum surface imperfections of one-fourth ($\frac{1}{4}$) inch vertical. Slabs shall be trimmed square if corners are broken. Minimum size of reused slab shall be 36" x 47" for a four (4) foot wide walk, 36" x 59" for a five (5) foot wide walk.
- c. Slab Length: Bluestone slabs shall be a minimum forty-seven and a half (47.5) inches long (as measured along the curb). Re-used slabs must be minimum thirty-six (36) inches long (as measured along curb). Smaller slabs (minimum twenty-four (24) inches long) may be used sparingly as required when abutting a concrete sidewalk, apron or sidewalk ramp.

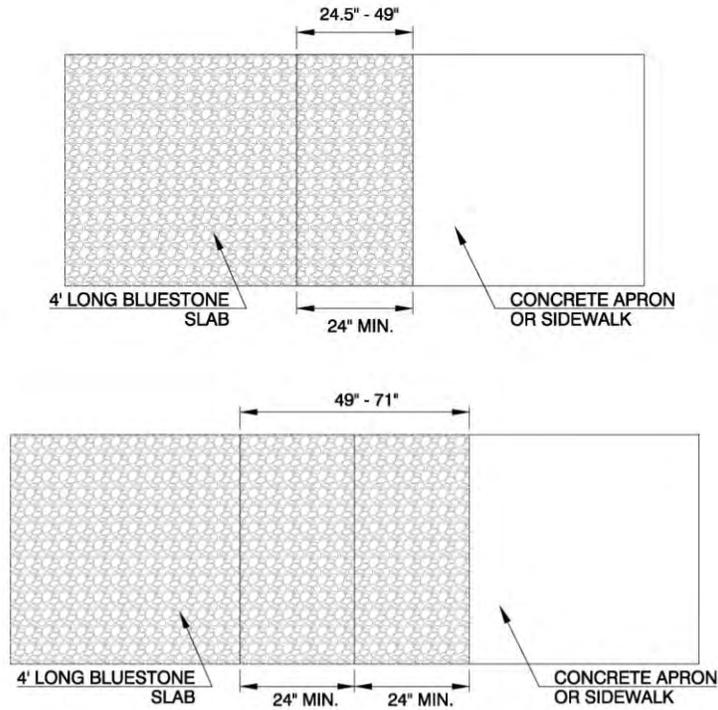


Figure A-26.1: Slab Length Abutting Concrete Pavement

- d. Bluestone Sidewalk Alignment: Bluestone sidewalk slabs shall abut adjoining sidewalk slabs (bluestone or concrete) in such a manner that the vertical difference at the joint does not exceed one-fourth ($\frac{1}{4}$) inch. The horizontal centerline alignment of bluestone sidewalks shall not deviate more than one (1) inch from the centerline of the sidewalk. Maximum joint width shall be one-fourth ($\frac{1}{4}$) inch. Sidewalks shall maintain a positive cross-pitch of 2% max (towards curb) across the width of the sidewalk.

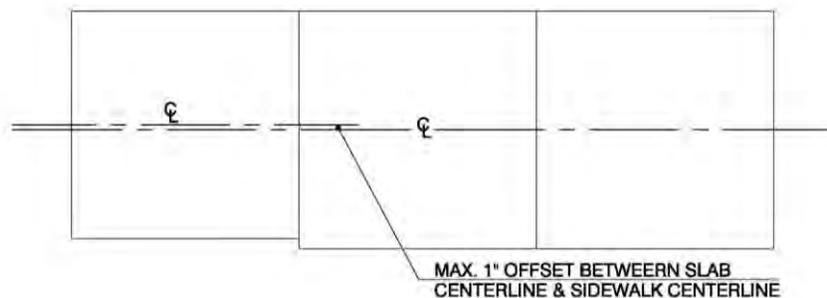


Figure A-26.2: Horizontal Alignment of Bluestone Sidewalk

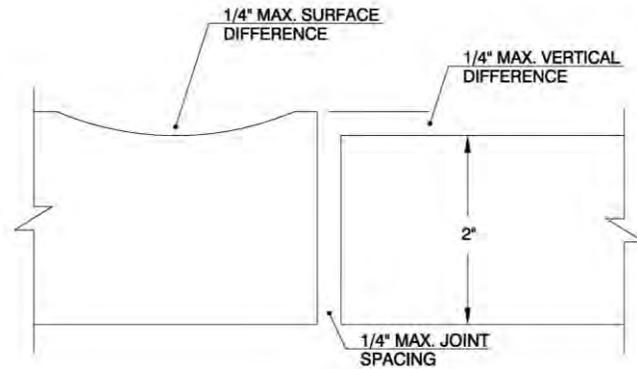


Figure A-26.3: Bluestone Spacing and Vertical Tolerances (Section View)

- e. Driveways, Aprons and Sidewalk Ramps: Driveways, aprons and sidewalk ramps shall be eight (8) inch reinforced concrete construction only. Stamped concrete is permitted in these locations.
7. Installation Methods: The following options are available for repair or replacement of sidewalks:
- a. Processed Traprock: Slabs to be set on twelve (12) inches thick, two (2) inch process trap rock base with maximum two (2) inch thick stone dust setting bed. Process trap rock to be compacted in six (6) inch lifts (95% compaction). Joints to be stone dust swept.

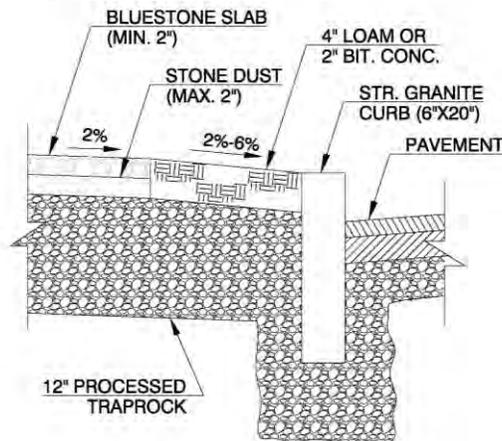


Figure A-26.4: Gravel Setting Method

- b. Concrete Setting: All slabs to be set in maximum two (2) inch thick Portland cement mortar setting bed (one (1) part Portland type II cement to three (3) parts mason sand) with four (4) inches thick 4000 psi reinforced concrete base. Steel reinforcement shall be 6x6 #10 welded wire fabric. Concrete base to be minimum one (1) inch wider than bluestone sidewalk. Installation of concrete to conform to City of Hartford concrete construction specifications. Sub-base to be eight (8) inches thick two (2) inch process trap rock as per City of Hartford specifications. Slab joints to be mortared.

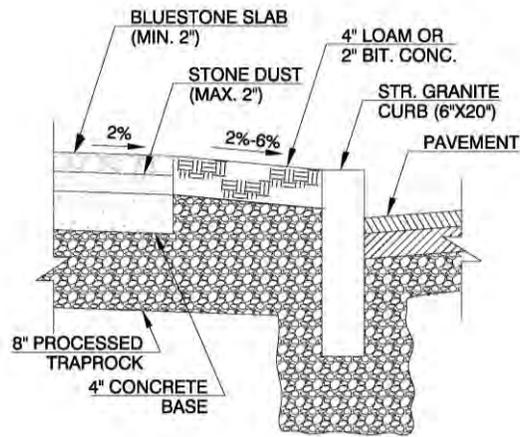


Figure A-26.5: Concrete Setting Method

- c. Stamped Concrete: Stamped concrete to have 4'x4' bluestone pattern (5'x5' for a five (5) foot wide walk) and bluestone coloring. Maximum surface imperfection of one-fourth ($\frac{1}{4}$) vertical. Stamped concrete installation to be regulated under City of Hartford concrete sidewalk specifications.

CURB AND WALK LAYERS AND STREET EXCAVATION PERMIT MANUAL

SECTION B – PERMIT FORMS AND DOCUMENTS

The following list of forms is to be completed and submitted to the City of Hartford Department of Public Works prior to the onset of any project work. A copy of all forms shall be kept at the job site and provided to City representatives for review, if requested. Not all forms will be required for every project. Copies of the forms are provided at the Department of Public Works or available on the City of Hartford website.

Application for Permit

Cost Reimbursement Protocol and Agreement Related to Review and Inspection of Various Work Executed within the City Rights-of-Way

Application for Curb Cut

Traffic Control Related Requirements for Obstruction and Excavation Permits

Winter Work Restrictions

Sidewalk and Curb Performance and Payment Bond

Certificate of Liability Insurance

CURB AND WALK LAYERS AND STREET EXCAVATION PERMIT MANUAL

APPENDIX A – TRAFFIC CONTROL DETAILS

Figure 1	Left Lane Closure at Intersection
Figure 2	Right Lane Closure at Intersection
Figure 3	Lane Closed in Center of Intersection
Figure 4	Lane Closures at an Intersection
Figure 5	Left Lane Closure, Mid-Block (Low Volume)
Figure 6	Right Lane Closure, Mid-Block
Figure 7	Left Lane Closure, Mid-Block (High Volume)
Figure 8	Mid-Block 2-Lane Closure
Figure 9	Local Road Center Lane Closure
Figure 10	Closure, Center of Two-Lane Road
Figure 11	Lane Closure for Utility Trench With Plating
Figure 12	Sidewalk and Curb Lane Closures
Figure 13	Canopied Construction Sidewalk
Figure 14	Flagger Control for Intersection Lane Closure
Figure 15	Short Length Detour for One Direction of Traffic Only
Figure 16	Barricades and Devices

Note: For traffic patterns not covered by the City details, follow the MUTCD.

CURB AND WALK LAYERS AND STREET EXCAVATION PERMIT MANUAL

APPENDIX B – CITY STREETS WITH REINFORCED CONCRETE BASE

Streets	Length (Miles)
1. Albany Avenue	2.22
2. Allyn Street	0.17
3. Ann Street	0.54
4. Arch Street	0.20
5. Ashley Street	0.62
6. Asylum Avenue (Garden Street to Scarborough)	1.50
7. Asylum Street	0.61
8. Atheneum Square North	0.07
9. Belden Street	0.15
10. Bloomfield Avenue	0.40
11. Blue Hills Avenue (Greenfield Street to Thomaston Street)	1.75
12. Broad Street	2.01
13. Buckingham Street	0.34
14. Campfield Avenue (Maple Avenue to South Street)	0.64
15. Capen Street	0.66
16. Capitol Avenue	2.17
17. Central Row	0.05
18. Chapel Street North	0.22
19. Chapel Street South	0.10
20. Charter Oak Avenue	0.50
21. Church Street	0.47
22. Cogswell Street	0.14
23. Collins Street	0.66
24. Columbus Boulevard	0.77
25. Commerce Street	0.39
26. Cornwall Street (Granby Street to Holcomb Street)	0.50
27. Edward Street	0.37
28. Elizabeth Street (Whitney Avenue to Asylum Avenue)	0.36
29. Elm Street	0.31
30. Ely Street	0.09
31. Fairfield Avenue	1.04
32. Farmington Avenue	1.62
33. Footguard Place	0.05
34. Franklin Avenue	1.70
35. Garden Street (Cogswell Street to Westland Street)	1.50
36. Gold Street	0.08
37. Granby Street (Westbourne Parkway to Cornwall Street)	0.17

38.	Greenfield street (Blue Hills Avenue to Woodland Street)	0.77
39.	Grove Street	0.22
40.	Haynes Street	0.05
41.	Hicks Street	0.04
42.	High Street	0.42
43.	Hillside Avenue	1.85
44.	Hoadley Place	0.07
45.	Homestead Avenue	1.10
46.	Hudson Street (Elm Street to Park Street)	0.41
47.	Huyshope Avenue	0.60
48.	Jefferson Street (Washington Street to Main Street)	0.65
49.	Jewell Street	0.21
50.	Keney Terrace	0.11
51.	Kinsley Street	0.22
52.	Laurel Street	0.80
53.	Lewis Street	0.10
54.	Locust Street (Wawarme Avenue to Meadow Street)	0.40
55.	Main Street	3.31
56.	Maple Avenue	2.21
57.	Market Street	0.70
58.	Meadow Street (800-ft from Locust Street westward)	0.15
59.	Myrtle Street	0.25
60.	New Britain Avenue	2.11
61.	New Park Avenue	0.94
62.	Newington Avenue (New Britain Avenue to Waterford Street)	0.17
63.	North Front Street	0.05
64.	Park Street	2.06
65.	Pearl Street	0.32
66.	Pequot Street	0.05
67.	Pleasant Street	0.13
68.	Pope Park Drive	0.32
69.	Pratt Street	0.11
70.	Preston Street	0.68
71.	Prospect Street	0.24
72.	Pulaski Circle	0.18
73.	Retreat Avenue.	0.43
74.	Ridgefield Street (Greenfield Street to Thomaston Street)	0.60
75.	Sargent Street	0.62
76.	Scarborough Street	0.58
77.	Sequassen Street (Huyshope Avenue to Van Dyke Avenue)	0.07
78.	Sheldon Street	0.53
79.	Sigourney Street	1.26
80.	Sisson Avenue	0.66
81.	South Street	0.90
82.	Spruce Street	0.18
83.	State Street	0.19

84.	Talcott Street	0.23
85.	Taylor Street	0.20
86.	Temple Street	0.10
87.	Trinity Street	0.74
88.	Trumbull Street	0.71
89.	Union Place	0.12
90.	Vine Street	2.04
91.	Vrendendale Avenue	0.10
92.	Walnut Street	0.48
93.	Washington Street	1.15
94.	Wawarme Avenue (Wethersfield Avenue to Locust Street)	0.79
95.	Westbourne Parkway	0.51
96.	West Preston Street	0.40
97.	Wethersfield Avenue	1.91
98.	White Street	0.82
99.	Whitney Street	0.69
100.	Windsor Street (Trumbull Street to Canton Street)	1.48
101.	Winthrop Street	0.22
102.	Woodland Street	1.25
103.	Wyllys Street	0.49
104.	Van Dyke Avenue (Charter Oak Avenue to Masseek Street)	0.27
105.	Zion Street	<u>1.15</u>
	TOTAL	70.01

CURB AND WALK LAYERS AND STREET EXCAVATION PERMIT MANUAL

APPENDIX C – CRITICAL AREAS

Allyn Street	Hillside Avenue	Reserve Road
American Row	Holcomb Street	Retreat Avenue
Ann Street	(Cornwall St to Vine St)	Russ Street
Arch Street	Homestead Avenue	Scarborough Street
Asylum Street	Hudson Street	Seymour Street
Asylum Avenue	(Jefferson St to Elm Street)	(Retreat Ave to Jefferson St)
Atheneum Square North	Jefferson Street	Sigourney Street
Brainard Road	(Main St to Broad Street)	Sisson Avenue
Broad Street	Jennings Road	South Street
Brown Street	Jewell Street	South Whitney Street
Buckingham Street	Kinsley Street	Spruce Street
Campfield Avenue	Laurel Street	State Street
Capital Avenue	Lewis Street	Summit Street
Central Row	Linnmoore Street	(Zion St to Park Terrace)
Chapel Street North	(Hillside Ave to Maple Ave)	Talcott Street
Chapel Street South	Locust Street	Trinity Street
Charter Oak Avenue	Main Street	Trumbull Street
Church Street	Maple Avenue	Union Place
Cogswell Street	Market Street	Van Dyke Avenue
Collins Street	Maxim Road	Walnut Street
Columbus Boulevard	(Brainard Rd to Reserve Rd)	Washington Street
Elizabeth Street	Morgan Street	Webster Street
Elm Street	New Britain Avenue	Wells Street
Fairfield Avenue	Newfield Avenue	West Boulevard
Farmington Avenue	Newington Avenue	Weston Street
Fern Street	New Park Avenue	West Preston Street
Flatbush Avenue	Park Street	Wethersfield Avenue
Ford Street	Park Terrace	White Street
Franklin Avenue	Pearl Street	Whitney Street
Garden Street	Pleasant Street	Windsor Street
(Asylum Ave to Westland St)	Pratt Street	Woodland Street
Gold Street	Preston Street	Wyllys Street
Grove Street	Prospect Avenue	Zion Street
High Street	Prospect Street	

CURB AND WALK LAYERS AND STREET EXCAVATION PERMIT MANUAL

APPENDIX D – PERTINENT SECTIONS OF THE CITY OF HARTFORD MUNICIPAL CODE

Section 23-1 thru 23-8	Noise
Section 31-1 thru 31-22	Streets and Sidewalks, In General
Section 31-56 thru 31-68	Streets and Sidewalks, Curb and Walk Layers
Section 31-86 thru 31-98	Streets and Sidewalks, Excavations and Underground Installation

**CURB AND WALK LAYERS AND
STREET EXCAVATION PERMIT MANUAL**

APPENDIX D – CONTRACTOR GUARANTEE



CITY OF HARTFORD

DEPARTMENT OF PUBLIC WORKS
OFFICE OF THE DIRECTOR
50 Jennings Road
Telephone (860) 757-9900 / Fax (860) 722-6251
www.hartford.gov



Hon. Pedro E. Segarra, Mayor
Keith Chapman, Interim Director of Public Works

Contractor Guarantee

This is to certify that _____ of _____

_____ here by agrees to guarantee all work done under each permit issued to him during the calendar year ending _____ of 20__ against failure caused by defective material or defective workmanship for a period of five (5) years after the completion of the permanent pavement repair or sidewalk construction. The contractor shall upon notification in writing from the Director of Public Works, and without expense to the City, immediately execute all repairs which may be necessary as determined by the Director.

Failure to comply with said guarantee within thirty (30) days of written notification shall cause immediate suspension of contractor's license for a period of five (5) years or until such time as the repair has been satisfactorily completed by the contractor and accepted by the City.

In the event that the contractor shall fail to comply with said guarantee within sixty (60) days of written notice, the City may cause the required repairs to be made and bill the contractor therefore. If such repairs are undertaken by or on behalf of the City as hereinbefore provided the contractor license shall remain suspended until the contractor has reimbursed the City for the expense thereof.

Signed in the presence of:

City _____ Date _____

Contractor _____ Date _____

CONTRACTOR GUARANTEE

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1. The Contractor/Applicant for this permit understands, acknowledges, and agrees that during the time in which the work is being done under this permit, another contractor/applicant or other contractor/applicants may be conducting work at the same time within the same area that is the subject of this permit.
2. Although it shall not be the responsibility of the City to coordinate the work that is being done by more than one contractor/applicant in the same area at the same time, and the City and its agents, servants, officers, officials, and employees shall have absolutely no liability whatsoever in the event of any lack of coordination between contractor/applicants, the City reserves the right, in the exercise of its judgment and discretion, to provide direction in the event of any lack of communication and/or dispute between contractor/applicants so that the best interests of both the City and its infrastructure will be protected.
3. The Contractor/Applicant hereunder shall make its best efforts to peacefully co-exist with any other contractor/applicant(s) working in the same area at the same time and shall reasonably cooperate with any other contractor/applicant(s) so as to avoid any unnecessary delays and/or other issues.
4. If any contractor/applicant (the "Initial Operator") executes a final restoration of any surface within the public right-of-way, including but not limited to a street or sidewalk, and another contractor/applicant (the "Subsequent Operator") subsequently cuts into or in any way disturbs that final restoration, the Subsequent Operator shall be solely responsible, at its own cost and expense, for executing, in a timely manner, a seamless restoration, by paving or other appropriate work, as to the subject surface.
5. In any event, the final contractor/applicant that conducts work on the subject surface shall be solely responsible, at its own cost and expense, for executing, in a timely manner, a seamless restoration, by paving or other appropriate work, as to the subject surface.

Signature

date