



CITY OF DOVER, NEW HAMPSHIRE  
DEPARTMENT OF COMMUNITY SERVICES

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Construction Guidelines, Permits, Rules, and Regulations

Your Project=Our Project

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# Community Services Department Dover, New Hampshire

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*Intended to provide guidance, applicable permits, and established rules and regulations for construction as it relates to infrastructure owned or maintained by the City of Dover.*



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## **Construction Guidelines**

**T**he purpose of this section is to outline the general process for completing construction projects in the City of Dover.

The City instituted permitting and licensing requirements for the use and occupancy of public roads, private roads, sidewalks and city property. The intent is to preserve the integrity, operational safety, and functionality of the City's public roads and sidewalks, while ensuring public safety and convenience, and the operation and protection of public infrastructure and investment.

### **Getting Started**

Before any construction procedures may begin, the applicant must meet all of the conditions of approval as outlined in the Planning Board Notice of Decision, and/or other applicable permits. For the purpose of this document, the "applicant" shall refer to the party responsible for the particular portion of work, whether it is the property owner, developer, or contractor.

The permits, rules, and regulations contained herein outline the requirements for working on City roads, sidewalks, and right-of-ways; as well as city-maintained infrastructure for its water, sewer, and drainage systems.

### **Licenses**

To ensure contractors are properly qualified, suitably insured, and have provided the City with a 24-hour emergency contact, Licenses are required for performing work on city pavement or utilities.

Before commencing any paving work on the City's roads, or within limits of the City's rights-of-way, a contractor shall first obtain a Paving License. Contractor shall be required to provide proof of insurance and also provide a 24-hour emergency contact telephone number.

Before commencing work on any City-owned utility line; or when working on private property and connecting to a city-owned utilities line, a contractor shall first obtain a Utility License. Contractor shall be required to provide proof of insurance and also provide 24-hour emergency contact telephone number.

- **Contractor Paving License**

A paving license shall be issued by the Community Services Department, prior to beginning any paving work within the City of Dover, including areas located on private property. A copy of the Contractor Paving License Application has been included in this handbook; applications are to be filled out in person and filed at the Community Services Department.

- **Utility License**

A Utility License shall be issued by the Community Services Department, prior to beginning any work on water, sewer or drainage systems owned or controlled by the City of Dover, including system connections located on private property that connect to the public system. A copy of the Utilities License Application has been included in this handbook; applications are to be filled out in person and filed at the Community Services Department.

- **Installation of Poles, Wires, Water and Gas Line License**

No person shall erect, construct, put up or maintain any pole, wire, terminal, underground conduits & cables, structures, or other electrical appurtenances for television, telephonic, telegraphic, electric power or electric lighting, or any water or gas lines, along, across, under or over any public road, sidewalk, or City property without first obtaining a City License. The Department of Community Services shall reserve the right to review proposed locations to ensure there are no conflicts with City infrastructure. A License will be denied if the Department of Community Services determines a potential conflict could arise. License applications will be processed and administered by the City Clerk.

## **Permits**

As applicable, the applicant shall secure the following City of Dover construction permits. The cost of such shall be based on the current City of Dover approved Fee Schedule.

Once a permit application has been fully completed and submitted, the Department of Community Services will try to review and approve the application within 3 working business days. However, additional time may be required due to work load demands, staffing availability, etc. The Community Services Department will attempt to alert the applicant when additional time is required. Regardless of the foregoing, no work will be authorized until the appropriate permit has been approved. Any violations will be subject to a penalty under the City Ordinances, as well as a revocation of License to work within the City.

The intention of the permitting process is to monitor and inspect work to be performed on City infrastructure and property. Where possible, the objective will be to administer only one permit that is most appropriate for the work being proposed. However, the City at its discretion, may incorporate requirements or surety provisions from other permits as necessary.

To provide a couple of examples: a monitoring well or driveway, that may impact a City street or sidewalk, will be required to provide a non-refundable street or sidewalk damage fee, along with a

refundable performance surety following successful completion of the project. An obstruction permit might also require a performance surety to ensure City property can be suitably restored upon completion. The Department of Community Services reserves the right to use its professional discretion to protect the City's infrastructure.

- **Driveway Permit**

A driveway permit is required for any new or modified driveway within the limits of the right-of-way of any street or highway in the City of Dover. Modified driveways include any work that affects the size, elevation or grade of the driveway. Entrances from highways under the Jurisdiction of the State of New Hampshire shall secure a permit from the New Hampshire Department of Transportation (NHDOT). A copy of the Driveway Permit Application has been included in this handbook; applications are to be filed at the Community Services Department. At the time of filing, the applicant may be required to provide a refundable deposit to serve as a performance surety depending on impacts to city infrastructure and proposed schedule. Deposit shall be in an amount established in the most current Fee Schedule.

- **Excavation Permit**

A permit is required to grade, fill, disturb, excavate, or open the ground or pavement in any public road, sidewalk, or on City property or City right-of-way. A copy of the Excavation Permit Application has been included in this handbook; applications are to be filled out in person and filed at the Community Services Department. At the time of filing, the applicant will be required to provide two deposits: a non-refundable street or sidewalk damage fee; and a refundable deposit to serve as a performance surety. Both deposits shall be in an amount established in the most current Fee Schedule.

- **Obstruct or Encumber a Public Road or Sidewalk Permit**

A permit is required before anyone may obstruct a public road, City right-of-way, or sidewalk. A copy of the Obstruction Permit Application has been included in this handbook; applications are to be filled out in person and filed at the Community Services Department. At the time of filing, the applicant may be required to provide a refundable deposit in an amount established in the most current Fee Schedule.

**Outdoor Seating on a Sidewalk Permit**

A Sidewalk Seating permit is required for any business that wishes to operate an outdoor seating area on a sidewalk, for service and consumption of food and drink prepared on premises. A copy of the Sidewalk Seating Permit Application has been included in this handbook; applications are to be filed at the Community Services Department. Please note that outdoor seating is only permitted between May 15th and November 15th and shall be valid for the calendar year in which issued. Businesses wishing to serve alcohol in an outdoor seating area shall also comply with the provisions of Chapter 99-12 of the Dover Code.

- **Permit to Move a Building**

A permit is required to move, or assist in moving, any building, not including garden sheds, or modular and manufactured housing as defined under State law, though or over any public road. A copy of the Move Buildings through Public Roads Permit Application has been included in this handbook; applications are to be filled out in person and filed at the Community Services Department.

- **Monitoring Well Permit**

A permit is required before anyone may disturb or excavate within a public road, sidewalk, or City property, for the purpose of installing a groundwater monitoring well. A copy of the Monitoring Well Permit Application has been included in this handbook; applications are to be filled out in person and filed at the Community Services Department. At the time of filling, the applicant may be required to provide a refundable deposit to serve as a performance surety depending on impacts to city infrastructure and proposed schedule. Deposit shall be in an amount established in the most current Fee Schedule.

As applicable, the Contractor, Developer, Owner shall provide the Community Services Department with all necessary state and federal permits including, but not limited to, the following.

- Stormwater permit from the EPA Construction General Permit (CGP) program along with a copy of the Stormwater Pollution Prevention Plan (SWPPP)
- NHDES Alteration of Terrain (AoT) permit
- NHDES wetlands permit from NHDES
- NHDES Sewer Connection Permit
- NHDES Public Water System Permit to Operate
- NHDES Septic Permit
- NHDOT Driveway Permit

## **Revegetation Surety**

For any project disturbing more than 1,000 square feet or is within 100 feet of a water body or wetland, the developer shall provide the city with a reclamation surety based on the total area of disturbance. This is intended to cover the cost of reestablishing a natural condition if an area is disturbed and the project is not completed. The monies may also be used to install proper erosion control practices.

## **Erosion Control Standards During Construction**

For any project disturbing more than 1,000 square feet or is within 100 feet of a water body or wetland, a plan for erosion and sediment control measures shall be provided to the Community Services Department for review and approval. The Department shall have 5 working days to respond in writing with any questions or approval.

Measures shall include, but not be limited to the following:

- Construction Entrance
- Silt fencing or other appropriate perimeter controls
- Catchbasin protection
- Street Sweeping Schedule

Perimeter site controls shall not be placed within wetland areas, stream channels or wetland buffers.

All proposed measures shall meet at a minimum the design standards for Best Management Practices set forth in the NH Stormwater Management Manual Volume 3 (or current revision) a copy of which is available from the NHDES website at <http://des.nh.gov/organization/divisions/water/stormwater/manual.htm>

## **Inspections**

The Community Services Department staff or their designated agent shall have access to the site to complete routine inspections. It is the contractor's responsibility to notify the Community Services Department **48-hours** prior to beginning any work that requires inspections; these inspections shall be completed during normal working hours. A representative from the Community Services Department shall at a minimum inspect or witness the following procedures:

1. Work within public Right-of-Way, or areas intended for future public acceptance.
2. Work on any community service utilities, including water lines, sewer lines and stormwater services. The Community Services Department shall be responsible for inspecting services to a point just within the footings and no more than 5-feet above finished floor elevations; internal inspections shall be the responsibility of the Building Department.
3. Utility Testing.
4. Planning Board Approved projects.

Please note that additional inspections may be required as deemed necessary by the Community Services Department or Planning Board.

The Planning Board or Community Services Department staff may require the design engineer and/or an independent, third-party inspection and oversight of certain aspects of construction as they see fit. Such oversight may be especially important for implementing techniques such as porous pavement or subsurface stormwater infiltration systems, or the installation and compaction of a roadway intended for dedication to the City. The applicant shall be responsible for all fees associated with third-party inspections.

## **Plan Modifications**

The contractor must have a set of the approved and signed site plan drawings on-site at all times. Any modifications from the approved plans shall receive written approval from the Community Services Department prior to beginning work. Additional sketches, letters, etc. may be required for



approval. Administrative approval from the Planning Department or review and approval from the Planning Board may be required depending on the scope of change. The Community Services Department may deny a certificate of occupancy or take other action, if the site deviates substantially from the approved plans.

## **Certificate of Occupancy**

The Community Services Department will review the completed site for adherence to the approved plans, and will require a surety for all unfinished items, provided such items are not essential to the use of the site and for the creation of an As-Built Plan.

## **As Built Plans**

The applicant shall submit an as-built plan to the Community Services Department for review and approval. A draft PDF plan shall be submitted for review, and once approved, a final DWG & PDF plan shall be submitted. The plan shall be tied into the City's GIS coordinate system. As-built Plans shall show all site improvements, including but not limited to the following:

1. water mains with diameter & material
2. sewer mains with diameter & material
3. force mains with diameter & material
4. drainage pipes with diameter & material
5. utility connections to the building with diameter & material
6. water curb stop locations
7. sewer cleanouts with catch basins and manholes (including sewer, water, and drainage) with rim, invert in, invert out, and orifice plate elevations (in City vertical datum)
8. property lines (with metes and bounds)
9. right-of-way lines
10. buildings and structures
11. drainage structures, drainage swales, and detention ponds etc. with spot elevations
12. wetlands (with date of delineation)
13. wetland buffers
14. recorded easements (with beneficiaries)
15. sidewalks
16. sign locations
17. parking spaces with striping
18. spot elevations or contours where appropriate
19. rough overview of landscaping
20. underground electric and cable
21. underground gas lines
22. street lighting
23. utility poles

## **Construction Standards**

### **Excavation in Right-of-Way**

All work on roads, sidewalks and curbing shall be completed in accordance with Chapter 152, Streets and Sidewalks, of the City of Dover, NH Ordinance. Additionally, the contractor shall comply with the following rules and regulations:

1. Per Section 152-8 no work is permitted within the City of Dover right-of-way, including working within manholes, catchbasins, any street, sidewalk or other city-owned property without first obtaining necessary permits and licenses as outlined in Section 1 of this handbook. The applicant shall furnish a deposit to the City of Dover as required.
2. Excavation will **NOT** be allowed in City owned streets or rights-of-way between the dates of November 15 and April 15 without written approval from the Community Services Department.
3. Excavation will **NOT** be allowed in the street or sidewalks on Fridays without written approval from the Community Services Department.
4. Excavation will **NOT** be allowed in City owned streets or rights-of-way on weekends or City designated holidays without written approval from the Community Services Department.
5. City personnel will not enter an unsafe trench.
6. Trenches shall be patched in a timely manner and within 24-hours of completing the associated utility work. Any exceptions require written approval from the Community Services Department.
7. All trench edges in bituminous asphalt (road or sidewalk) shall be saw-cut in a neat line a minimum of one foot (1') larger than the width and length of the proposed excavation.
8. When a trench crosses a concrete sidewalk, the sidewalk shall be replaced, at a minimum, to the nearest expansion joint or abutting panel.

9. Trenching in sidewalks with other materials shall be coordinated with the Community Services Department.
10. The edges of any trench patch shall have a tack coat of bitumen before each pavement course and upon completion of the patch.
11. Trench cross section shall at a minimum meet the roadway design standards (see typical trench detail).
12. Trenches shall be backfilled with suitable material up to the bank run gravel level. New gravels and pavement shall be provided.
13. The City requires all companies that excavate within the City right-of-way to provide a compaction test. Acceptable compaction will be 95% optimum density using the Modified Proctor method. If this is not received within a year of the completion of the work the contractor forfeits the digging deposit and may lose license to work in the city.
14. All disturbed sidewalks shall be replaced to meet minimum design standards, regardless of the condition of the existing sidewalk (see typical details).
15. All curbing shall be replaced to meet minimum design standards, regardless of the condition of the existing curb, with the exception that the reveal shall match existing conditions (see typical details).
16. Driveways or other private property disturbed in the course of the work shall be restored in an approved manner satisfactory to the Community Services Department at the expense of the applicant.
17. All streets shall be swept and debris shall be removed in a timely manner.
18. The Applicant shall be responsible for the excavation for two (2) years from the date of completion. If at any time during the two-year period the excavation requires any additional work (i.e.: repair of settlement, loaming, seeding, etc.), the Applicant will be responsible to complete this work in a timely manner or forfeit the digging deposit and possibly future digging privileges in the City of Dover. The City of Dover reserves the right to repair any trench at the expense of the permit holder if necessity or public safety dictates or due to failure of permit holder to repair. If, however, at the end of the two-year period, the excavation is deemed acceptable, the digging deposit will be refunded to the Applicant.
19. In the event of any damage to existing utilities, the cost of repair to any existing utility shall be the responsibility of the Applicant.

## Traffic Control and Signage

All work within City Rights-of-Way shall be completed in accordance with Chapter 152, Streets and Sidewalks, of the City of Dover, NH Ordinance. The contractor shall comply with the following rules and regulations:

1. All work is to be done in accordance with the provisions of the "Manual of Uniform Traffic Control Devices" current edition, the NHDOT "Standard Specifications for Road and Bridge Construction" current edition, and the "State of New Hampshire Traffic Control Handbook".
2. A traffic control plan, consistent with the requirements of the City of Dover Chapter 166 Ordinance, shall be submitted to the Community Services Department for approval at the time of applying for a permit to open and obstruct a street. The Department shall have 5 working days to respond in writing with any questions or approval.
3. Maintenance of traffic shall be accomplished by the use of certified flagmen or uniformed police officers, wherever construction severely restricts the flow of traffic in frequently traveled roads, or as required directing traffic through or around the work. After consultation with the Dover Police Department Traffic Bureau, the Director of Community Services may require a police officer, or may limit the hours of operation as appropriate.
4. Maintenance of traffic in a signalized intersection shall be accomplished by the use of uniformed police officers.
5. If acceptable traffic control is not maintained, as determined by the Community Services Department or the Police Department Traffic Bureau, the contractor may be required to suspend work that interferes with traffic.

## Roadway Construction

Construction of roadways shall be completed in accordance with Chapter 152 of the City of Dover, NH Ordinance. Municipal roadway construction shall meet the following minimum standards and the enclosed Construction Details:

1. The base courses shall consist of stones, rock fragments, and fine, hard, durable particles resulting from the natural disintegration of rock. Asphalt that is removed or milled on site may be blended into the base courses provided that the material gradations listed below are met. All materials shall be free from injurious amounts of organic material and shall conform to the following:
  - a. Bank Run Gravel - NHDOT 304.2-25% to 70% shall pass the No. 4 sieve and not more than 12% of the material passing the No. 4 sieve shall pass the No. 200 sieve. No stones shall have a dimension greater than 6". The thickness shall be a minimum of 12".

- b. Crushed Gravel - NHDOT 304.3- shall be well graded, 95-100% shall pass the 2.5" sieve, 55-85% shall pass the 1" sieve, 27-52% shall pass the No. 4 sieve. Not more than 12% of the fraction passing the #4 sieve shall pass the #200 sieve. The thickness shall be a minimum of 6".
2. A hot bituminous pavement shall be placed and compacted over the gravel base course in two courses. It shall consist of a base course, binder course, and a finish wear course and shall conform to the following:
  - a. The base and binder courses shall be a Type "B" - 3/4" aggregate mix, the thickness shall be a minimum of 2.5".
  - b. The wearing course shall be Type "E" - 1/2" aggregate wearing course mix, the thickness shall be a minimum of 1.5".
3. The contractor is responsible for delivering to the Community Services Department the following:
  - a. Gradation test of gravel, backfill, crushed gravel and/or bankrun gravel.
  - b. Current lab proctor of gravel performed to AASHTO test.
  - c. Field densities of the top 18 inches of roadway base material after construction of each individual excavation or per 100 linear feet of trench, whichever is greater. Acceptable compaction will be 95% optimum density using the Modified Proctor method.
4. Curbing shall be vertical granite curbing adjacent to sidewalks and sloped granite curbing in all other areas.
5. Underdrain and/or fabric may be added as conditions warrant. Questionable areas should be reviewed by a geotechnical engineer for recommendations.

## **Sidewalk Construction**

Sidewalk construction shall be completed in accordance with Chapter 152 of the City of Dover, NH Ordinance. Municipal sidewalk construction shall meet the following minimum standards:

1. Sidewalks shall be bituminous asphalt, concrete, or brick, as approved by the Community Services Department.
2. Sidewalks shall comply with all aspects of the most recently adopted State of New Hampshire Code for Barrier Free Design and the most recent guidance provided by the US Access Board.
3. Accessible tip-down ramps with detectable warning strips shall be placed at all street intersections.

4. Sidewalk construction shall be in accordance with NHDOT Section 608.
5. All concrete sidewalks shall have synthetic fiber reinforcement, and shall be a minimum of 4" thick, with 6" at all tip-downs.
6. Bituminous asphalt sidewalks shall be a minimum of 2.5" thick.

## **Curbing Construction**

All curbing located within the City of Dover shall be constructed in accordance with Chapter 152 of the City of Dover, NH Ordinance. Municipal curbing shall meet the following minimum standards:

1. Curbing shall be new or reset granite curbing.
2. Curbing construction shall be in accordance with NHDOT Section 609.
3. Dimensions for sloped granite curbing shall be 6" x 12" minimum and vertical curbing shall be 5" x 17"
4. Curbing to be salvaged and reset shall be carefully removed to the nearest existing joint. The Community Services Department has the right to reject any curbing that may be excessively chipped or damaged.

## **Driveway Construction**

All driveways shall be constructed in accordance with Chapter 92 of the City of Dover, NH Ordinances. Driveways shall meet the driveway requirements outlined in Chapters 149 and 155 of the City of Dover, NH Ordinances.

## **Work on Municipal Water Lines**

All work on municipal water lines shall be completed in accordance with Chapter 148 of the City of Dover, NH Ordinance and the Dover Utilities Commission Rules and Regulations. The contractor shall comply with the following rules and regulations:

1. Per Chapter 148 of the City of Dover Ordinances; no work on any waterlines is permitted within the City of Dover, including working on private property, without first obtaining necessary permits and licenses as outlined in Section 1 of this handbook. No two contracting firms may work under one license.
2. The Community Services Department shall be present during work within the public Right-of-way and during any water line tap and water line testing. The Contractor shall notify the Community Services Department 48-hours prior to beginning work in order to schedule an inspection. These inspections shall be completed during normal working hours.

3. Planned water shutoffs require 48-hour notification to all properties that will be impacted.
4. Water shutoffs shall not last more than 8 hours. The Community Services Department may require shutoffs to occur at night to minimize impacts.
5. All water fittings shall be North American made.
6. Water pipe 4" or greater shall be ductile iron polywrapped. Services less than 2" shall be of a K type copper from curb stop to water main. Plastic pipe CTS is acceptable from curb stop to building with Cam Lock. Services shall be a continuous line of pipe, no couplings will be permitted. All ductile iron water mains, including tee's and other connections, shall be wrapped in 8 mil thick polyethylene. Polyethylene wrap shall be either sheet or tube, installed tightly around pipe and fittings as per manufacturer's specifications. Contractor may forego wrapping pipe if the Ductile Iron pipe is zinc-coated, tee's and other connections will still need to be wrapped
7. Ductile Iron Pipe shall be cement-lined Class 52 push type joints with rubber O-rings not exceeding 20 feet (20') in section length.
8. Polyethylene Pressure Pipe shall be rated for 160 to 200 psi, and shall meet or exceed AWWA C901 and C906.
9. Polyethylene tubing shall be allowed for services from the curb stop to the property, pipe shall be SDR9 CTS (blue in color) rated for 250 psi and meet or exceed AWWA C901.
10. Ductile iron tees, elbows and fittings - shall be mechanical, bolt-locking cement-lined DI Class 350. All 8"x6" tees and tees for hydrants shall be "anchor tees". All DI caps shall be restrained.
11. Gate Valves shall meet or exceed the requirements of AWWA C500.
  - a. All valves must open counterclockwise.
  - b. All valves shall have stainless steel nuts and bolts on the bonnet.
  - c. All hydrant gate valves and hydrants shall be restrained.
  - d. Valves at tee's shall be restrained using Foster-style adapter.
12. All hydrants shall be Eddy 2641. Hydrants shall be of iron body and shall be the improved type with breakable flanges. All hydrants shall be painted red. All hydrants shall open counterclockwise with the direction of opening cast on the head. All hydrants shall have a valve opening of 5-1/4 inches, hose nozzles conforming to the National Standard of nozzles of (2) 2-1/2 inches and (1) 4-1/4 inch steamer nozzle. Hydrants shall be long enough to accommodate a minimum bury of six feet (6') and be equipped with six inch (6") pipe connections. All hydrant drains shall be factory sealed.
13. Sand cushion 6" below, around and over pipe, to 12" above the top of the pipe shall be clean sand.
14. Tapping sleeve shall be stainless steel. All nuts, bolts and washers must also be stainless steel.
15. Curb box shall be sliding Erie type with rod.

16. MJ adapters shall be used on all mechanical joint fittings when attaching to HDPE pipe.
17. When attaching HDPE pipe to existing pipe (ex: CI, DI, AC) the connection shall be restrained using a rod clamp, threaded rod, and accessories and a mechanical joint restrainer. The connections shall be made with a DI coupling correctly sized for the pipes.
18. The pipe shall be laid to plan line and to grade such that a minimum of five feet (5') of cover is achieved. With approval of the Community Services Department, where five feet (5') of cover cannot be achieved, rigid insulation shall be installed over the pipe.
19. Concrete thrust blocks shall be installed at all DI fittings and other locations as directed by the Community Services Department and as per manufacturer's recommendations. Thrust blocks shall meet the following requirements:
  - a. Select thrust blocks such that the length of the block is approx. twice as long as the depth
  - b. Place crushed stone behind thrust blocks against undisturbed soil
  - c. Place thrust blocks along the full length of the fitting to maximize bearing area.
  - d. Place two (2) layers of polyethylene or roofing paper around fitting as protection against damage from concrete block.
  - e. Place a 12" long steel horseshoe-shaped pickup hook in all plug and cap thrust blocks
  - f. Diameter of hook shall be a minimum of 5/8"
  - g. Coat all threaded rods, nuts, and bolts with bituminous paint
  - h. Place anti-seize lubricant on all bolts
  - i. Concrete compressive strength shall be a minimum 2,000 psi
  - j. Use of thrust blocks does not eliminate the requirement of other restraints. All valve and fittings shall be restrained MJ.
20. Sequencing water main construction shall be such that the use of couplings be minimized.
21. Water boxes shall be left flush with the finished grade.
22. HDPE pipe and fittings shall be installed, joined and handled in accordance with all manufacture's recommendations.
23. All fusion work on HDPE pipe is to be done by a certified technician.
24. On HDPE pipe, a locating 12 AWG copper tracing wire or approved equivalent, shall be placed in the trench over the pipe and run to each hydrant.
25. Service saddles shall be stainless steel double-strap and will be required on 2 inch or larger services on DI pipe.



26. Air release corporations shall be required at all high points to release trapped air before testing.
27. Flushing, testing, and chlorinating of the pipeline shall be in accordance with AWWA C601 and AWWA C651.
28. All new water mains or any valved sections thereof shall be subjected to a hydrostatic pressure of at least 1.5 times the working pressure that will exist at the point of testing or 150 psi whichever is greater.

## **Work on Municipal Sewer Lines**

All work on municipal sewer lines shall be completed in accordance with Chapter 147 of the City of Dover, NH Ordinance and the Dover Utilities Commission Rules and Regulations. Additionally the contractor shall comply with the following rules and regulations:

1. Per Chapter 147 No work on any sewer lines is permitted within the City of Dover, including working on private property, without first obtaining necessary permits and licenses. No two contracting firms may work under one license.
2. The Community Services Department shall be present during work within the public right-of-way. The Contractor shall notify the Community Services Department 48-hours prior to beginning work in order to schedule an inspection. These inspections shall be completed during normal working hours.
3. All sewer lines and structures shall be gastight and water tight and meet the following requirements:
  - a. Gravity sewer PVC pipe shall be SDR 35 type
  - b. Pressure sewer pipes shall be SDR 21 or SDR 26 (push tight pipe, no glued joints)
  - c. DI pipe - shall be class 52, push type joints with rubber O-rings
4. All sewer mains and manholes shall be tested. Leakage testing shall consist of the following:
  - a. All sewer lines shall be subjected to an air pressure test conforming to ASTM standards C-828.
  - b. All sewer lines shall be inspected using closed-circuit television (CCTV). The inspection equipment shall be capable of clearly televising the interior of the pipe as well as all joints and service connections. Provide digitally formatted television inspection video/audio recordings saved onto CD-R/RW or DVD-R media with individual digital files for each recording completed.
  - c. All manholes shall be subjected to an air vacuum conforming to ASTM standards C-1244.

5. Sewer pipes within 10 feet of any building shall meet all applicable plumbing code requirements.
6. Connections between Schedule 40 pipe exiting the building to the SDR 35 pipe shall be made use a solid sleeve gasket connector. No glued joints are permitted outside of the building.
7. Bedding Material shall be clean  $\frac{3}{4}$ " crushed stone under and around pipe to 12" above the line.
8. Bedding in earth shall be a minimum of 6 inches below the outside of the pipe barrel. Bedding in rock shall be a minimum of 6 inches or one-fourth ( $\frac{1}{4}$ ) the outside diameter of the pipe (whichever is greater) below the outside of the pipe barrel. Bedding shall extend up to the spring line. Material around and to a height of one foot above the pipe shall be sand backfill. Bedding and sand cushion shall be compacted by mechanical tamping.
9. Pipe shall be laid accurately to line and grade by use of a laser.
10. Pipe shall be laid with the spigot ends pointing in the direction of flow. Completed pipelines shall be free from offsets or deviations from grade when examined with lights or mirrors. Visible leaks, broken pipes, etc., shall be repaired.
11. All service connections in pipe shall be constructed using manufactured fittings or saddles.
12. Sewer Manholes shall of the types following:
  - a. Barrels and cone sections shall be pre-cast reinforced concrete.
  - b. Base sections shall be monolithic to a point 6" above the crown of the incoming pipe, and shall be pre-cast reinforced concrete, except for special manholes that are cast-in-place.
  - c. Horizontal joints between sections of pre-cast concrete barrels shall be of a type approved by the New Hampshire Water Supply and Pollution Control Commission (NHWS&PCC), which type shall, in general, depend for water-tightness upon an elastomeric or mastic-like sealant.
  - d. Pipe to sewer manhole joints shall be only as approved by the NHWS&PCC and, in general, will depend for water-tightness upon a rubber boot.
  - e. Cone and slab sections shall be eccentric.
  - f. Manhole steps shall be used.
  - g. All pre-cast sections and bases shall have the date of manufacture and the name or trademark of the manufacturer impressed or indelibly marked on the inside wall.
13. Sewer Manholes shall be constructed using the following materials:
  - a. Concrete for poured-in-place bases or complete sewer manholes shall conform to the requirements for Class A concrete in Section 520 of the New Hampshire Department of Public Works and Highways Standard Specifications.

- b. Reinforcing steel for poured-in-place concrete shall conform to the requirements of the New Hampshire Department of Public Works and Highway Standard Specifications for Billet-steel bars or Welded Steel Wire Fabric.
  - c. Pre-cast concrete barrel sections, cones, and bases shall conform to ASTM C478 except as may be otherwise shown on the Standard Details.
  - d. Sewer manhole frame and cover shall be Liftmate R-1743-LM or approved equal, and provide a 30" diameter clear opening. The cover shall have the word "SEWER" in 3" letters cast into the top surface.
  - e. The castings shall be of good quality, strong, tough, even-grained ductile iron; smooth; free from scale, lumps, blisters, sand holes, and defects of every nature, which would render them unfit for the services for which they are intended. Contact surfaces of covers and frame seats shall be machined at the foundry, before shipment to prevent rocking of covers in any orientation.
14. Pre-cast bases shall be placed on a 8" layer of compacted bedding material. The excavation shall be properly dewatered while placing bedding material and setting the base or pouring concrete.
15. All pipe penetrations shall be patched around with non-shrink hydraulic cement on the inside of the manhole.
16. Brick masonry, for the shelf, invert, and grade adjustment shall meet the following specifications:
- a. The brick shall be sound, hard, and uniformly burned brick, regular and uniform in shape and size, of compact texture.
  - b. Brick shall comply with ASTM Standard Specifications for Sewer Brick (made from clay or shale), Designation C32, for Grade SS, hard brick. Rejected brick shall be immediately removed from the work.
  - c. The mortar shall be composed of Portland cement, hydrated lime, and sand, in the proportions of 1 part cement to 1/2 part lime to 4-1/2 parts sand, (by volume). The proportion of cement to lime may vary from 1:1/4 for hard brick to 1:3/4 for softer brick, but in no case shall the volumes of sand exceed three times the sum of the volumes of cement and lime.
  - d. Cement shall be Type II Portland cement conforming to ASTM C150, Standard Specifications for Portland cement.
  - e. Hydrated lime shall be Type 8 conforming to the ASTM Standard Specifications for Hydrated Lime for Masonry Purposes, Designation C207.
  - f. Sand shall consist of inert natural sand conforming to the ASTM Standard Specifications for Concrete (Fine) Aggregates, Designation C33.
  - g. Only clean bricks shall be used in brickwork for manholes. The brick shall be moistened by suitable means, as directed, until they are neither so

dry as to absorb water from the mortar nor so wet as to be slippery when laid. Each brick shall be laid in a full bed and joint of mortar without requiring subsequent grouting, flushing, or filling, and shall be thoroughly bonded as directed.

- h. Brick masonry shall be protected from too rapid drying by the use of burlaps kept moist, or by other approved means, and shall be protected from the weather and frost, all as required.
17. Cleanouts are not typically allowed, however, when a service line exceeds 150 lf, a cleanout may be added at the center point. The cleanout shall have an iron cover.
  18. Manholes set outside of a paved, the concrete cone area shall be 6" above the finished grade to prevent infiltration, unless directed otherwise by the Community Services Department.

## **Sewer Pump Station Construction**

Any Sewer Pump Station, whether public or private, greater than 50 gpm or serving more than one building, shall submit engineered plans and specifications to the Community Services Department for review and approval prior to installing such station. Pump stations warranting review, shall require standby power.

## **Work on Municipal Drainage Lines**

All drainage work within the City of Dover shall be completed in accordance with Chapter 152 of the City of Dover, NH Ordinance. Stormwater designs shall be in accordance with the regulations outlined in Chapters 149 and 155 of the City of Dover, NH ordinance. Construction of the drainage structures shall meet the following minimum standards:

1. Polyvinyl chloride pipe (PVC) shall be SDR 35 type pipe. Oil resistant rubber rings shall be used to seal the joints of the pipe. Manufacturer's details and recommendations for installation shall be furnished.
2. Corrugated high-density polyethylene (HDPE) shall conform to the requirements of AASHTO M 294, type S. The HDPE shall be double walled with a smooth interior wall. All fittings and joints shall be silt tight type joints.
3. Reinforced concrete pipe (RCP) shall be CLASS III minimum. Jointing shall be with rubber O-rings or mortar as approved.
4. RCP or approved equal, shall be required in all locations with less than 18" of cover over the top of pipe.
5. Bedding Material shall be clean ¾" crushed stone under and around pipe to 12" above the line.

6. Pipe shall be laid accurately to line and grade by use of a laser.
7. Bedding in earth shall be a minimum of 6 inches below the outside of the pipe barrel. Bedding in rock shall be a minimum of 6 inches or one-fourth (1/4) the outside diameter of the pipe (whichever is greater) below the outside of the pipe barrel. Bedding shall extend up to the crown. Materials around and to a height of one foot above the pipe shall be sand backfill. Bedding and sand cushion shall be compacted by mechanical tamping.
8. Drain manholes, catch basins and drop inlet structures shall meet the following minimum standards:
  - a. Barrels and cone sections shall be pre-cast reinforced concrete, or poured-in-place reinforced concrete.
  - b. Intermediate concrete sections shall be such that the horizontal joints are above the crown of the incoming pipe and a minimum of 6" below the bottom of the outgoing pipe.
  - c. Base sections shall be monolithic to a point 6 inches above the crown of the incoming pipe, and shall be pre-cast reinforced concrete, except for special structures that are cast-in-place.
  - d. Horizontal joints between sections of pre-cast concrete barrels shall be of a type approved by the NHWS&PCC, and in general shall be an elastomeric or elastic-like sealant, or mortar.
  - e. Pipe to sewer manhole joints shall be only as approved by the NHWS&PCC and, in general, will depend for water-tightness upon a rubber boot.
  - f. Cone sections shall be eccentric.
  - g. All catch basins shall have a minimum 4-foot sump.
  - h. All catch basins shall have oil and debris hood on the outlet pipe.
  - i. Manhole steps shall be used in manholes.
  - j. All pre-cast sections and bases shall have the date of manufacture and the name or trademark of the manufacturer impressed or indelibly marked on the inside wall.
  - k. Drop inlet structures shall be 24"x24" ID and shall be square and be 48" in height.
9. All drainage frames, grates, and covers shall be North American made.
10. Drain manhole frame and cover shall be Liftmate R-1743-LM or approved equal, and provide a 30-inch diameter clear opening. The cover shall have the word "DRAIN" in 3-inch letters cast into the top surface. Covers to be hinged and incorporate a 90 degree blocking system to prevent accidental closure.
11. Catch basin and drop inlet frames and grates shall provide a 24-square-inch grate at the top and shall attach to the manhole opening of 24-inch diameter below. They shall be a Type B cast iron frame and grate.
12. Pre-cast bases shall be placed on a 8 inch layer of compacted 3/4 inch stone bedding material. The excavation shall be properly dewatered while placing bedding material and setting the base or pouring concrete.

13. Barrel sections and cones of the appropriate combination of heights shall then be placed, using the manufacturer's recommended procedure for sealing the horizontal joints.
14. After the drain manhole has been assembled in place all lifting holes and exterior joints shall be filled and pointed with a non-shrinking mortar.
15. All drainlines shall be inspected using closed-circuit television (CCTV) prior to acceptance by the city. The inspection equipment shall be capable of clearly televising the interior of the pipe as well as all joints and service connections. Provide digitally formatted television inspection video/audio recordings saved onto CD-R/RW or DVD-R media with individual digital files for each recording completed.

## **Private Utilities**

All underground utilities are to be placed immediately after preparation of the roadway to subgrade, yet prior to placement of select roadway materials in streets under construction. ALL underground utilities shall have warning tape installed in the trench twelve (12) inches above the utility. Tracer wires shall be placed, as a minimum, along all non-traceable utilities within the right-of-way.

When underground utilities are encountered, the Contractor shall notify the appropriate agency to assure proper construction procedure in that area. Any damage to utility is to be reported to and repaired by that utility prior to backfilling.

Any poles, structures, conduits, cables or wires, the location of which have already been approved by the local land use board as part of a subdivision, site plan, or other development approval, shall if such location becomes a public highway, still require a City License consistent with RSA 231:159-189, or successor statute. The City will not grant easements on its property. Licenses, with work plans, or other data showing locations of such structures or poles must be submitted to the City Clerk for recording purposes.

Any poles, structures, conduits, cables or wires, the location of which have not been approved consistent with RSA 231:159-189, or successor statute, shall be deemed in violation of City Ordinances and shall be removed or relocated.

No person shall erect, construct, put up or maintain any pole, wire, terminal, underground conduits & cables, structures, or other electrical appurtenances for television, telephonic, telegraphic, electric power or electric lighting, or any water or gas lines, along, across, under or over any public road, sidewalk, or City property without first obtaining a City License. The Department of Community Services shall reserve the right to review proposed locations to ensure there are no conflicts with City infrastructure. A License will be denied if the Department of Community Services determines a potential conflict could arise.

Abandoned or unused utilities that are required to be discontinued, sealed, or removed within the scope of a project shall be completed prior to placement of selects or finished materials such as gravel, pavement and landscaping.

### **Electric**

The Department of Community Services requires all underground electric conductors to be contained within rigid conduits at all road crossings. Crossings shall be perpendicular to the roadway whenever possible.

**Conduit Required:** These requirements apply to all primary and secondary electric service installations within the paved area of the street and extending to a point at least 3-feet, measured perpendicular to the traveled way, beyond the edge of pavement.

1. 5-inch (min) diameter Scheduled 80 PVC or 5-inch (min) diameter rigid steel conduit (Contractor's option)
2. Encasement with low strength concrete (Flowable Fill, NHDOT Class F, Item 520.421) may be allowed for thin walled communication conduit installations.
3. Electric Site Work must be performed by Licensed Electrical Contractors only – *not General Contractors.*

### **Municipal Cables**

Municipal fire alarm cable and traffic signal installations are under the jurisdiction of the Fire Department (516-6150) and Community Services Department (516-6450), respectively. These divisions to be notified prior to any street alternations especially at signal controlled intersections.

### **Gas, Telephone, and Cable TV**

These underground utility service installations shall cross streets perpendicular to the traveled way in a straight trench, and at a uniform depth at least 12 inches below subgrade. These utilities will be protected under paved areas in conduit and in the manner prescribed by that utility.

### **Fiber Optic Cable**

Fiber optic cables shall be installed according to the approved design plans. Where the utility crosses City streets, steel, PVC or HDPE casing pipes shall be used. Tracer wires shall be placed above the conduit in the trench for all fiber optic cable installations. Additional conduit for expansion, replacement, or use by other utilities should be included in the installation.

### Utility Conflicts

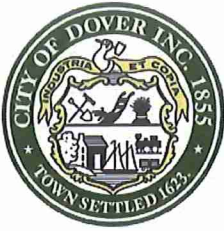
Utility service lines (municipal and private) are to be laid out and installed to avoid crossings whenever possible. Overhead utilities and landscaping should be considered obstructions when proposing a new service location.



**Appendix**

**A**

## **Permit and License Applications**



COMMUNITY SERVICES DEPARTMENT  
 271 MAST ROAD  
 DOVER, NH 03820  
 (603) 516-6450

### CONTRACTOR PAVING LICENSE APPLICATION

In an effort to protect the City's investment in its infrastructure, anyone proposing to perform paving work within the City of Dover including areas on private property must first obtain a License.

All paving operations will be conducted in such a manner as will promote the safety of the traveling public and will not adversely affect drainage along City streets. It shall be the responsibility of the contractor to provide all necessary cones, barricades, signs, flaggers or traffic officers as necessary or required to promote smooth and safe traffic and or pedestrian flow, in any City right-of-way.

If any paving job fails to satisfy the requirements of the Director of Community Services, the contractor will either make the necessary modifications, or be liable for such costs as may be necessary to make such modifications, or to remove such paving.

It shall be the responsibility of the contractor to ensure that permits for paving or driveway construction are in place prior to starting any construction and that all fees have been paid.

Have you been licensed by the City of Dover?  
 Yes  No If so, when? \_\_\_\_\_

Have you ever been denied a license or had a license revoked by the City of Dover?  
 Yes  No If so, when? \_\_\_\_\_

If your company has not held a license previously, or has not held a license at any time during the previous three years, please provide three references who are familiar with your company's work. The Community Services Department will check references prior to issuing a license.

**All contractors must provide a valid Certificate of Insurance before any work may commence.**

PROVIDE THREE PROFESSIONAL REFERENCES TO BE CHECKED PRIOR TO THE ISSUANCE OF THE PAVING LICENSE.

NAME	ADDRESS	PHONE NUMBER

Having complied with these requirements and City of Dover, NH Ordinances, Chapters 152 and 92.

\_\_\_\_\_ Company Name  
 \_\_\_\_\_ Address  
 \_\_\_\_\_ Email/Telephone

**Permit to be issued via email unless otherwise instructed**

is hereby licensed to conduct paving operations within the City limits of Dover, NH, from this date until and including **April 1, 201**\_\_\_\_\_, at which time this license must be renewed.

\_\_\_\_\_  
 CONTRACTOR SIGNATURE

\_\_\_\_\_  
 FOR COMMUNITY SERVICES

\_\_\_\_\_  
 CONTACT PERSON (PRINTED)

\_\_\_\_\_  
 FEE: \$20.00 Paid: check #: \_\_\_\_\_  
 Paid: cash:

ALL NECESSARY PERMITS MUST BE PRESENT ON THE CONSTRUCTION SITE **Permit #:** \_\_\_\_\_



COMMUNITY SERVICES DEPARTMENT  
 271 MAST ROAD  
 DOVER, NH 03820  
 (603) 516-6450

## UTILITY LICENSE APPLICATION

Which utility are you applying to work on?     Water     Sewer     Storm Drain

In an effort to protect the City's investment in its infrastructure, anyone proposing to work on water, sewer, or drainage systems owned or controlled by the City of Dover, including systems located on private property that connect to the public system must first obtain a license.

Have you been licensed by the City of Dover to work on municipally owned water, sewer or drainage utilities previously?  
 Yes  No    If so, when? \_\_\_\_\_

Have you ever been denied a license or had a license revoked by the City of Dover to work on municipally owned water, sewer or drainage lines previously?  
 Yes  No    If so, when? \_\_\_\_\_

If your company has not held a license previously, or has not held a license at any time during the previous three years, please provide three references who are familiar with your company's work. The Community Services Department will check reference prior to issuing a license.

All contractors must provide a valid Certificate of Insurance before any work may commence. Subcontractors must obtain their own license and cannot operate off another's license.

PROVIDE THREE PROFESSIONAL REFERENCES, FOR EACH UTILITY CHECKED OFF, TO BE CHECKED PRIOR TO THE ISSUANCE OF THE UTILITY LICENSE. ADDITIONAL REFERENCE SPACE ON BACK.

NAME	ADDRESS	PHONE NUMBER

I agree to work on the municipally owned water, sewer or drainage utilities in a workmanlike manner as required by the City of Dover ordinances, including but not limited to Chapters 147 and 152, along with any Rules & Regulations established by the Dover Utilities Commission and/or Director of Community Services. Such work shall conform to the requirements of ordinances and any other city standards, as applicable. I also agree to comply with the requirements of Chapter 152-8, for any excavation that will occur in any City right-of-way under the jurisdiction of the City of Dover and will abide by the terms and conditions of that permit. I understand that the Director of Community Services reserves the right to revoke the license for just cause in the event that any water, sewer or drainage work performed by your company does not meet the standards for satisfactory work.

Having complied with these requirements and City of Dover Ordinances, Chapters 147 and 152.

\_\_\_\_\_ Company Name  
 \_\_\_\_\_ Address  
 \_\_\_\_\_ Email/Telephone

**Permit to be issued via email unless otherwise instructed**

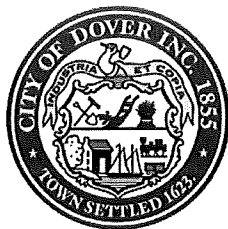
is hereby licensed to perform utility work on City owned water, sewer or storm drainage infrastructure, from this date until and including April 1, 201, at which time this license must be renewed.

\_\_\_\_\_  
 CONTRACTOR SIGNATURE

\_\_\_\_\_  
 FOR COMMUNITY SERVICES

\_\_\_\_\_  
 CONTACT PERSON (PRINTED)

\_\_\_\_\_  
 FEE: \$20.00      Paid: check #: \_\_\_\_\_  
    Paid: cash:



COMMUNITY SERVICES DEPARTMENT  
 271 MAST ROAD  
 DOVER, NH 03820  
 (603) 516-6450

## EXCAVATION PERMIT APPLICATION

APPLICANT

CITY

Date: \_\_\_\_\_  
 Applicant Name: \_\_\_\_\_  
 Company: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 City/State/Zip: \_\_\_\_\_  
 24 HR EMERGENCY TELEPHONE: \_\_\_\_\_  
 E-mail: \_\_\_\_\_

**Permit to be issued via email unless otherwise instructed**

DIGSAFE #: \_\_\_\_\_  
 Effective Date: \_\_\_\_\_  
 Insurance Certification #: \_\_\_\_\_  
 Insurance Agency: \_\_\_\_\_

**Copy of insurance certificate required**

Excavation Location: \_\_\_\_\_  
 Scheduled Start Date: \_\_\_\_\_  
 Temp. Patch Date: \_\_\_\_\_  
 Excavation Type:  
 Open Cut    Other: \_\_\_\_\_  
 Excavation Size:  
 \_\_\_\_\_ Width \_\_\_\_\_ Length \_\_\_\_\_ Sq. Ft. \_\_\_\_\_ Depth  
 Total Sq. Ft. Pavement Effected: \_\_\_\_\_  
 Total Sq. Ft. Infrastructure Effected: \_\_\_\_\_  
 Purpose of Excavation:  
 Water    Sewer    Drainage    Gas  
 Electric    Telephone    Other: \_\_\_\_\_  
 Type of Work:  
 New Construction    Alteration    Repair/Replace

Permit #: \_\_\_\_\_  
 Approved By: \_\_\_\_\_  
 Approval Date: \_\_\_\_\_  
 Expiration Date: \_\_\_\_\_  
 Project Name: \_\_\_\_\_  
 Conditions: \_\_\_\_\_  
 Extended on: \_\_\_\_\_  
 Extension Expiration: \_\_\_\_\_

**Fees:**  
 New Permit                       Renewal  
 Administration and Inspection Fee:      \$200.00  
 (non-refundable)

Two Year Surety (\$7/sq ft)  
 \_\_\_\_\_ sq ft x &7.00 (refundable)      \$ \_\_\_\_\_

Street Damage Fee (\$7/sq ft)  
 \_\_\_\_\_ sq ft x \$7.00 (nonrefundable)      \$ \_\_\_\_\_

Infrastructure Damage Fee (\$3.50/sq ft)  
 \_\_\_\_\_ sq ft x \$3.50 (nonrefundable)      \$ \_\_\_\_\_

Pavement Life Reduction Factor      \$ \_\_\_\_\_  
 (nonrefundable)  
 < 2 yrs. old - 3 x street damage fee  
 2-5 yrs. old - 2 x street damage fee  
 > 5 yrs. old - no pavement life reduction factor  
 Pavement Age: \_\_\_\_\_

Sub-total      \$ \_\_\_\_\_  
 Previous Payments      \$ \_\_\_\_\_

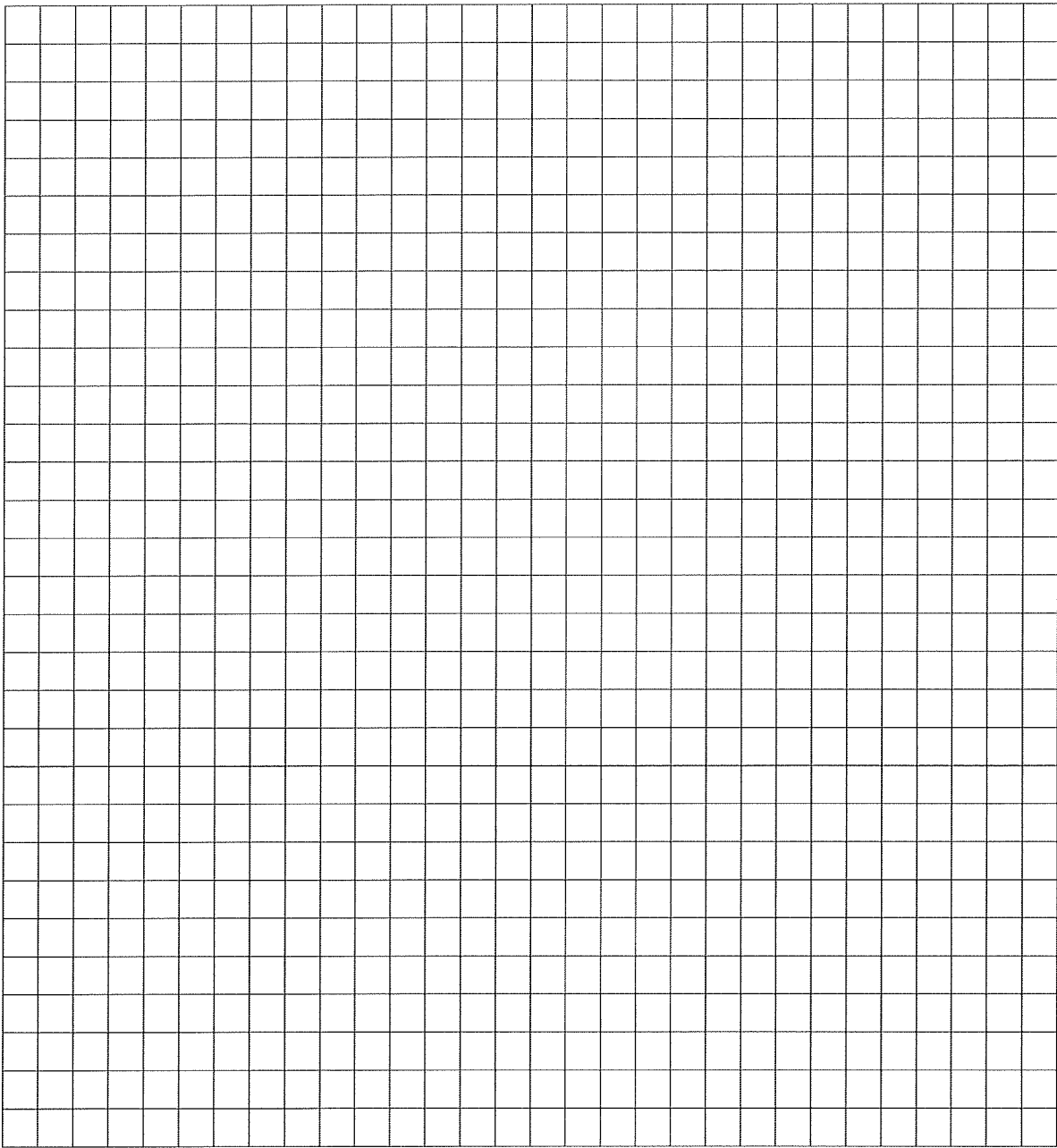
**Total Due:      \$ \_\_\_\_\_**

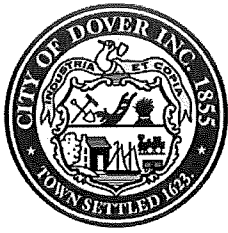
Paid: check #: \_\_\_\_\_  
 Paid: cash:                       Admin Initials: \_\_\_\_\_

By undersigning this application, the Applicant acknowledges that he/she has read and hereby agrees to abide by the City of Dover's Sidewalks and Highways Ordinance Chapter 152; Section 8 Permit Required to Work in Public Roads, Sidewalks, and City rights-of-way and to any other ordinances, special conditions, restrictions, and regulations may be imposed by the Director of Community Services.

Applicant's Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Sketch location of excavation and dimensions of trench in box provided below





COMMUNITY SERVICES DEPARTMENT  
 271 MAST ROAD  
 DOVER, NH 03820  
 (603) 516-6450

### DRIVEWAY PERMIT APPLICATION

#### APPLICANT

#### CITY

Date: \_\_\_\_\_  
 Owner's Name: \_\_\_\_\_  
 Owner's Address: \_\_\_\_\_  
 City/State/Zip: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Contractor: \_\_\_\_\_ Phone: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 City/State/Zip: \_\_\_\_\_  
 Email: \_\_\_\_\_

**Permit to be issued via email unless otherwise instructed**

Permit #: \_\_\_\_\_  
 Approved       Denied  
 Approved By: \_\_\_\_\_  
 Approval Date: \_\_\_\_\_  
 Check below if required:  
 Traffic Control Plan  
 Other Conditions: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**Application Fee: \$75**  
 Paid: check #: \_\_\_\_\_  
 Paid: cash:  Admin Initials: \_\_\_\_\_

Scheduled Start Date: \_\_\_\_\_  
 (check all that apply)  
 Residential       Commercial  
 New Driveway/Parking area  
 Existing Driveway/Parking area  
      Overlay  
      Remove and Replace  
      Expansion or Alteration  
 Driveway Culvert: Install or Replace  
 Size: \_\_\_\_\_ Type: \_\_\_\_\_

Location of Driveway: \_\_\_\_\_  
 Provide a brief description of any alterations on private property: \_\_\_\_\_  
 \_\_\_\_\_  
 Provide a brief description of any alterations to City right-of-way: \_\_\_\_\_  
 \_\_\_\_\_

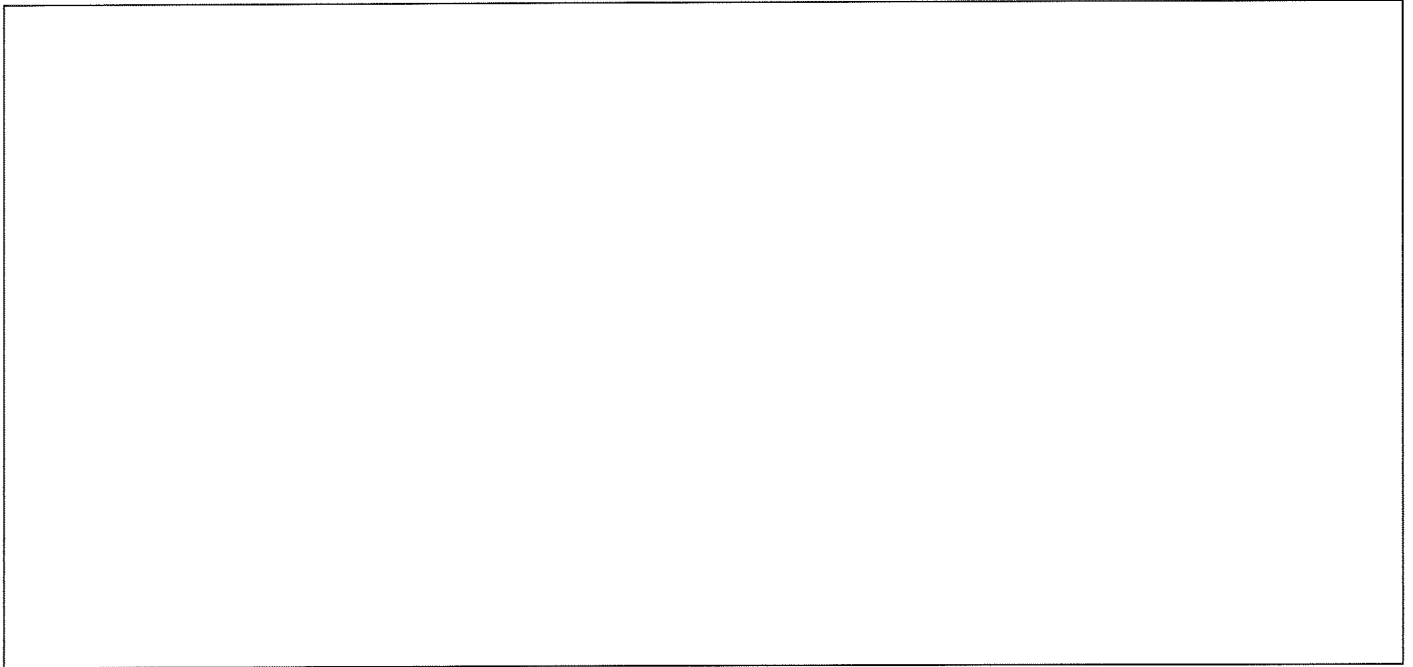
**SKETCH OF DRIVEWAY REQUIRED-SEE PAGE 2**

By undersigning this application, the Applicant agrees to construct the driveway entrance(s) at the permitted location(s) in accordance with City Ordinance Chapter 92-6 and all provisions of the driveway permit.

Signature of Applicant: \_\_\_\_\_

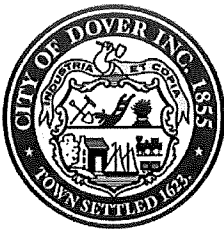
**SKETCH REQUIREMENTS:**

1. Include a sketch or plan showing existing and proposed driveway locations with dimensions clearly marked.
2. Dimensions must be clearly marked and include:
  - a. Distances from side and rear property lines
  - b. Width of driveway at entrance
  - c. Frontage along the street
3. Show the direction of the runoff and/or drainage patterns.



**DRIVEWAY APPLICATION REGULATIONS:**

1. There shall be no excavation within the City right-of-way on holidays, weekends, or between the period of November 15<sup>th</sup> and April 15<sup>th</sup>.
2. A 24-hour notice must be given to the Engineering Division prior to construction in the right-of-way.
3. One (1) driveway entrance is permissible, not to exceed twenty-two (22) feet in width for residential, or thirty-two (32) feet for commercial.
4. To hold harmless the Dover Community Services Department and its duly appointed agents and employees against any action for personal injury and/or property damage sustained by reason of the exercise of this permit.
5. Establish grades that adequately protect and promote street drainage and permit a safe and controlled approach to the street in all seasons of the year per City Ordinance Chapter 92-6.G.
6. If required, the owner shall install an approved culvert to handle surface water flows with a twelve (12) inch minimum size pipe. Acceptable culvert materials are Reinforced Concrete and High Density Polyethylene. However, if the cover over the culvert is a foot or less, then Reinforced Concrete is required. The owner is responsible for maintaining the culvert.



COMMUNITY SERVICES DEPARTMENT  
 271 MAST ROAD  
 DOVER, NH 03820  
 (603) 516-6450

## OBSTRUCT OR ENCUMBER PUBLIC ROAD OR SIDEWALK PERMIT APPLICATION

### APPLICANT

### CITY USE

Date: \_\_\_\_\_  
 Applicant Name: \_\_\_\_\_  
 Company: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 City/State/Zip: \_\_\_\_\_  
 24 HR EMERGENCY TEL.: \_\_\_\_\_  
 Email: \_\_\_\_\_

**Permit to be issued via email unless otherwise instructed**

Insurance Certificate #: \_\_\_\_\_  
 Insurance Agency: \_\_\_\_\_

Permit #: \_\_\_\_\_  
 Approved By: \_\_\_\_\_  
 Approval Date: \_\_\_\_\_  
 Expiration Date: \_\_\_\_\_  
 Extended on: \_\_\_\_\_  
 Extension Expiration: \_\_\_\_\_

**Check Below If Required:**

Traffic Control Plan  
 Insurance and Bond

Other Conditions: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Obstruction Location: \_\_\_\_\_  
 Scheduled Start Date: \_\_\_\_\_ Complete: \_\_\_\_\_

**Purpose of Obstruction:**

Construction  Roofing  Brickwork  Moving  
 Utility Work  Window Repair  Other: \_\_\_\_\_

**Type of Encumbrance:**

Dumpster  Motorized Lifts  Staging  
 Moving Container  Crane  Manhole  
 Other: \_\_\_\_\_

YES	NO
<input type="checkbox"/>	<input type="checkbox"/> Submitted a traffic control plan with application?
<input type="checkbox"/>	<input type="checkbox"/> Will sidewalk be closed to pedestrian traffic?
<input type="checkbox"/>	<input type="checkbox"/> Is there an alternative sidewalk available for pedestrians?
<input type="checkbox"/>	<input type="checkbox"/> Will any part of travel lane and/or parking be obstructed?
<input type="checkbox"/>	<input type="checkbox"/> Will heavy equipment be driven on Curb/Sidewalks?
<input type="checkbox"/>	<input type="checkbox"/> Will materials be hoisted over public way?
<input type="checkbox"/>	<input type="checkbox"/> Will work cause materials to wash into storm drains?
<input type="checkbox"/>	<input type="checkbox"/> Will there be any impact to parking meters?

**Fees:**

New Permit  Renewal  
 Administration and Application Fee: **\$100.00**

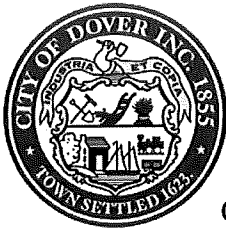
**Total Due:** \$ \_\_\_\_\_

Paid: check #: \_\_\_\_\_  
 Paid: cash:  Admin Initials: \_\_\_\_\_

By undersigning this application, the Applicant acknowledges that he/she has read and hereby agrees to abide by the City of Dover's Sidewalks and Highways Ordinance Chapter 152-9. Permit Required to Obstruct or Encumber a Public Road or Sidewalk, and to any other ordinances, special conditions, restrictions, and regulations may be imposed by the Director of Community Services.

Applicant's Signature: \_\_\_\_\_ Date: \_\_\_\_\_





COMMUNITY SERVICES DEPARTMENT  
271 MAST ROAD  
DOVER, NH 03820  
(603) 516-6450

## OUTDOOR SEATING ON A SIDEWALK PERMIT APPLICATION

### APPLICANT

### CITY USE

Date: \_\_\_\_\_  
 Applicant Name: \_\_\_\_\_  
 Company: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 City/State/Zip: \_\_\_\_\_  
 24 HR EMERGENCY TEL.: \_\_\_\_\_  
 Email: \_\_\_\_\_

**Permit to be issued via email unless otherwise instructed**

Insurance Certificate #: \_\_\_\_\_  
 Insurance Agency: \_\_\_\_\_

Permit #: \_\_\_\_\_  
 Approved By: \_\_\_\_\_  
 Approval Date: \_\_\_\_\_  
 Expiration Date: \_\_\_\_\_

**Note:** Permits for outdoor seating will only be allowed between May 15 and November 15.

**Check Below If Required:**

Traffic Control Plan  
 Insurance and Bond  
 Other Conditions: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Encumbrance Location: \_\_\_\_\_  
 Scheduled Start Date: \_\_\_\_\_ Complete: \_\_\_\_\_  
 Purpose of Encumbrance: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**Fees:**

New Permit  Renewal  
 Administration and Application Fee: \$ 50.00

Sub-total \$ \_\_\_\_\_  
 Previous Payments \$ \_\_\_\_\_

**Total Due: \$ \_\_\_\_\_**

YES NO

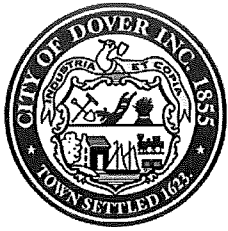
Submit detailed site plan with application?  
  Will there be any impact on parking meters?

Date Paid: \_\_\_\_\_  
 Paid: Check #: \_\_\_\_\_  
 Paid: Cash:  Admin Initials: \_\_\_\_\_

By undersigning this application, the Applicant acknowledges that he/she has read and hereby agrees to abide by the City of Dover's Sidewalks and Highways Ordinance Chapter 152-20 Sidewalk Seating, and to any other ordinances, special conditions, restrictions, and regulations may be imposed by the Director of Community Services.

Businesses wishing to serve alcohol shall abide by the City of Dover's Eating and Drinking Establishment Ordinance Chapter 99-12 Service of Alcoholic Liquor Beverage.

Applicant's Signature: \_\_\_\_\_ Date: \_\_\_\_\_



COMMUNITY SERVICES DEPARTMENT  
271 MAST ROAD  
DOVER, NH 03820  
(603) 516-6450

## PERMIT TO MOVE A BUILDING

Date: \_\_\_\_\_

The following requirements and information shall be submitted before a permit will be issued:

1. The route to be used for moving a building, and legal description: \_\_\_\_\_  
\_\_\_\_\_
2. The time and date of the proposed moving of building: \_\_\_\_\_  
\_\_\_\_\_
3. Will the building remain stationary on any street at any time while being moved from site to site?  
 Yes    No If so, at what location? \_\_\_\_\_
4. What is the estimated axle load? \_\_\_\_\_
5. What is the estimated height and length? \_\_\_\_\_
6. The applicant shall submit verification that utilities have been notified of the designated route.
7. Mover shall submit liability and property damage insurance coverage of a minimum:
  - a. \$1,000,000.00 injury per person
  - b. \$1,000,000.00 one accident
  - c. \$1,000,000.00 property damage
8. The mover shall report daily to the Community Services Director the location of the building on the street.
9. Red warning lights shall be placed at both ends of the building during the evening hours.
10. No building shall exceed load capacity of any bridges in the city.
11. The Community Services Director may appoint an inspector to be present during the moving operations to supervise such moving. Said appointment does not relieve the mover/or owner from liability during moving operations. Any cost associated with this permit is to be covered by the mover.
12. The Community Services Director may also request the Facilities and Grounds Department to trim trees along the route at which the cost will be charged to the mover.

\_\_\_\_\_  
Community Services Director

\_\_\_\_\_  
Fire Chief

\_\_\_\_\_  
Police Chief

\_\_\_\_\_  
Mover's Signature

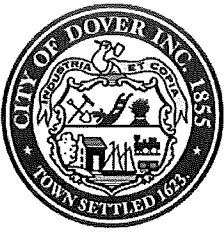
\_\_\_\_\_  
Building Owner

**FEE:** \$250.00   Paid: check #:

Paid: cash:

Admin Initials: \_\_\_\_\_

Permit #: \_\_\_\_\_



COMMUNITY SERVICES DEPARTMENT  
 271 MAST ROAD  
 DOVER, NH 03820  
 (603) 516-6450

MONITORING WELL PERMIT APPLICATION

APPLICANT

CITY

Date Submitted: \_\_\_\_\_  
 Applicant Name: \_\_\_\_\_  
 Company: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 City/State/Zip: \_\_\_\_\_  
 Email: \_\_\_\_\_

**Permit to be issued via email unless otherwise instructed**

Contractor: \_\_\_\_\_ Phone: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 City/State/Zip: \_\_\_\_\_  
 24 HR EMERGENCY TELEPHONE: \_\_\_\_\_

Permit #: \_\_\_\_\_  
 Approved By: \_\_\_\_\_  
 Approval Date: \_\_\_\_\_  
 Expiration Date: \_\_\_\_\_  
 Project Name: \_\_\_\_\_  
 Conditions: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

DIGSAFE #: \_\_\_\_\_  
 Effective Date: \_\_\_\_\_  
 Insurance Certificate #: \_\_\_\_\_  
 Insurance Agency: \_\_\_\_\_

Monitoring Well Location: \_\_\_\_\_  
 Scheduled Start Date: \_\_\_\_\_  
 Number of Monitoring Wells to Be Installed: \_\_\_\_\_  
 Expected Duration of Operation: \_\_\_\_\_  
 Depth of well(s): \_\_\_\_\_  
 Diameter of borehole(s): \_\_\_\_\_  
 Purpose of Monitoring Well: \_\_\_\_\_  
 Type of Work:  
 New Construction  Alteration  Repair/Replace  
 NHDES File #: \_\_\_\_\_  
 City Council License Approval Date: \_\_\_\_\_  
 Responsible Party for Annual Billing for License: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**Fees:**  
 New Permit  Renewal

Administration and Inspection Fee: \$100.00  
 (non-refundable)

**Total Due:** \$ \_\_\_\_\_

Date Paid: \_\_\_\_\_  
 Paid: check #: \_\_\_\_\_  
 Paid: cash:  Admin Initials: \_\_\_\_\_

By undersigning this application, the Applicant acknowledges that he/she has read and hereby agrees to abide by the City of Dover's Sidewalks and Highways Ordinance Chapter 152-21. Installation of Monitoring Wells on City Property or in a Public Road, and to any other ordinances, special conditions, restrictions, and regulations may be imposed by the Director of Community Services.

Applicant's Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**Appendix**

**B**

## **Construction Details**

←————— 3' —————→

NAME OF PROJECT

PER PLANNING BOARD APPROVAL  
WORKING HOURS ARE:

MONDAY - FRIDAY \_\_\_\_\_

SATURDAY \_\_\_\_\_

NO SUNDAY OR HOLIDAY HOURS

NAME OF DEVELOPER/SITE CONTRACTOR

24HR REACHABLE PHONE NUMBER

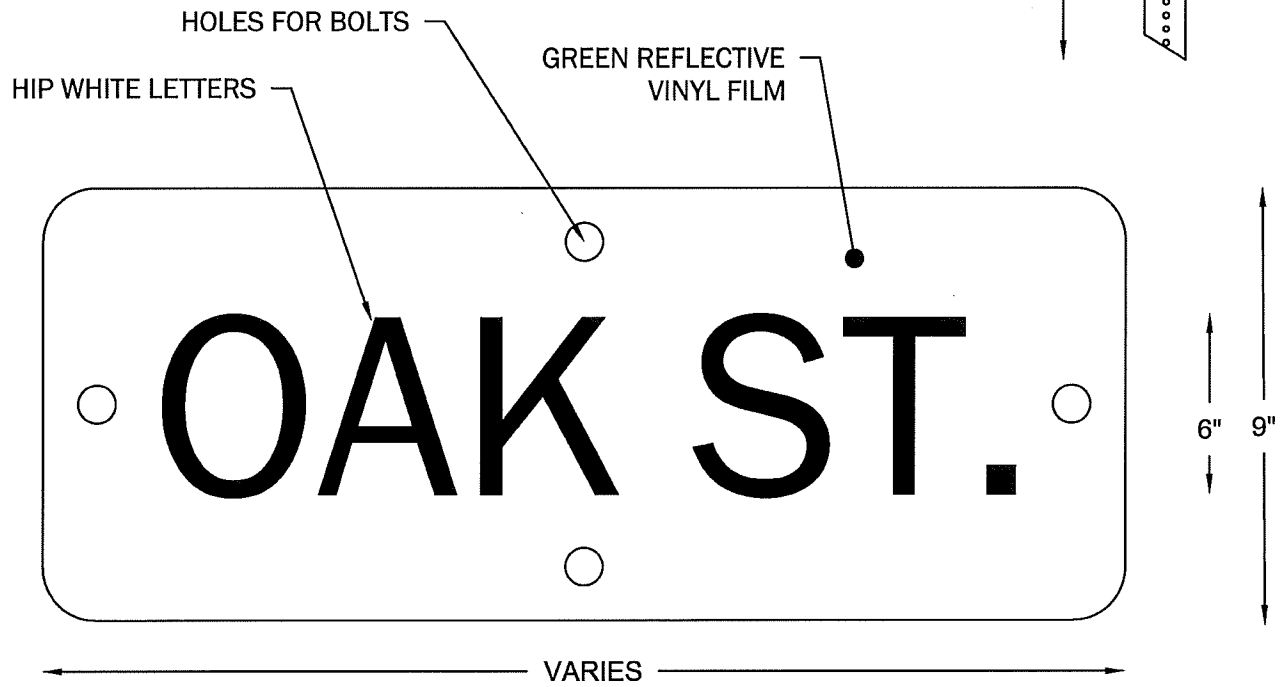
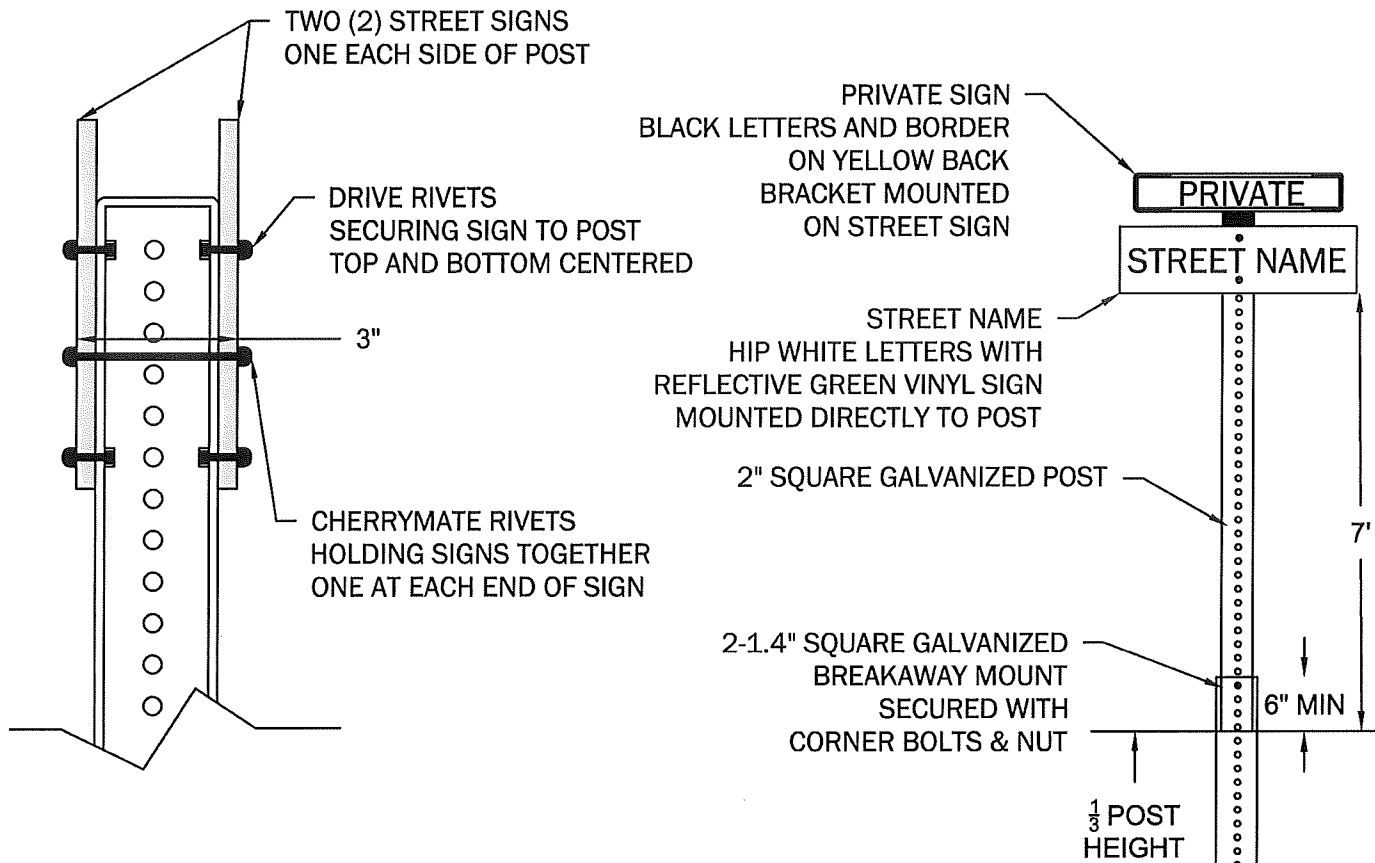
↑————— 2' —————↓

NOTES:

- 1. SIGN SHALL HAVE BLACK LETTERS ON A WHITE BACKGROUND

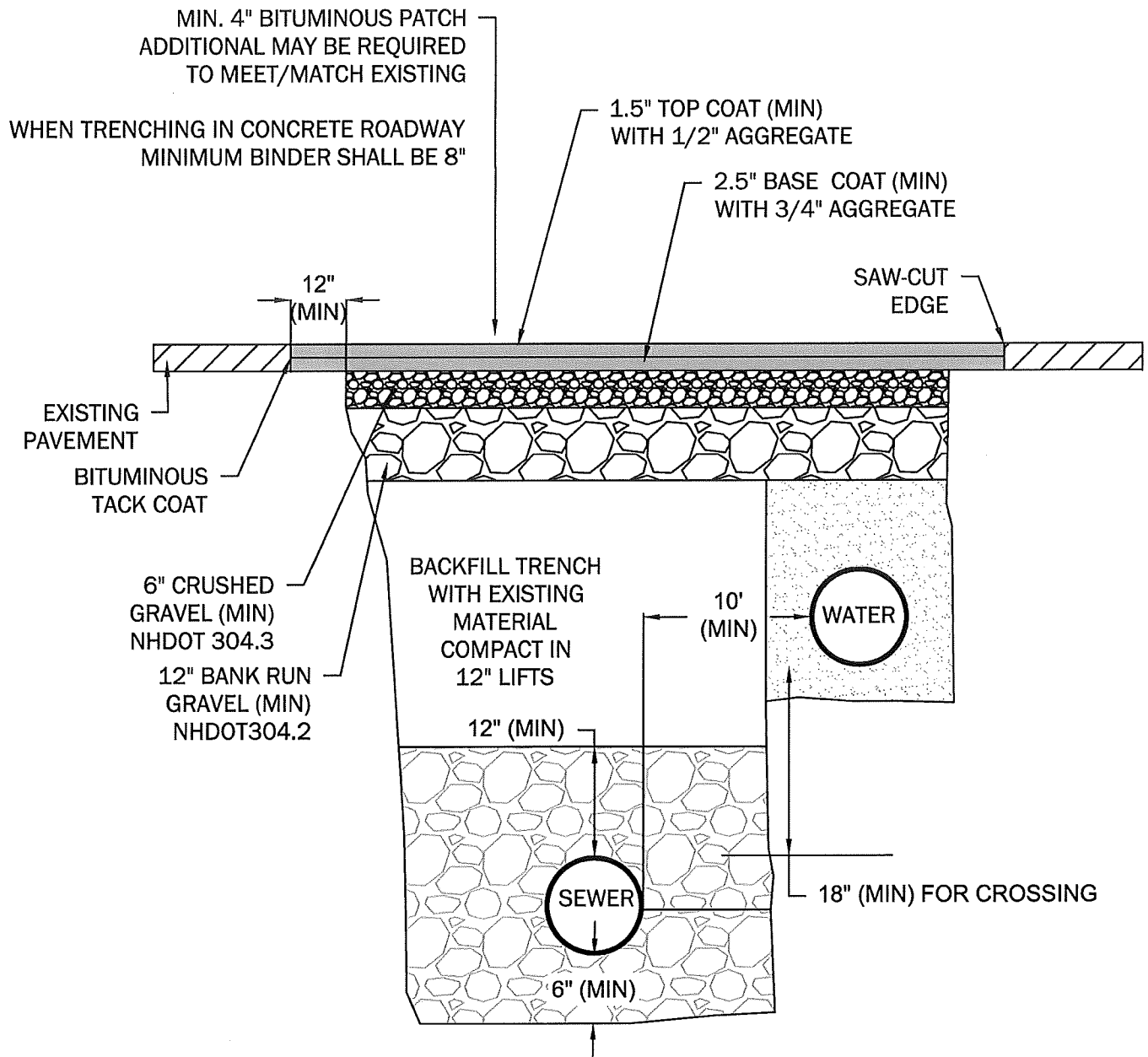
CITY OF DOVER - CONSTRUCTION SIGN

NOT TO SCALE



CITY OF DOVER - STREET SIGN

NOT TO SCALE

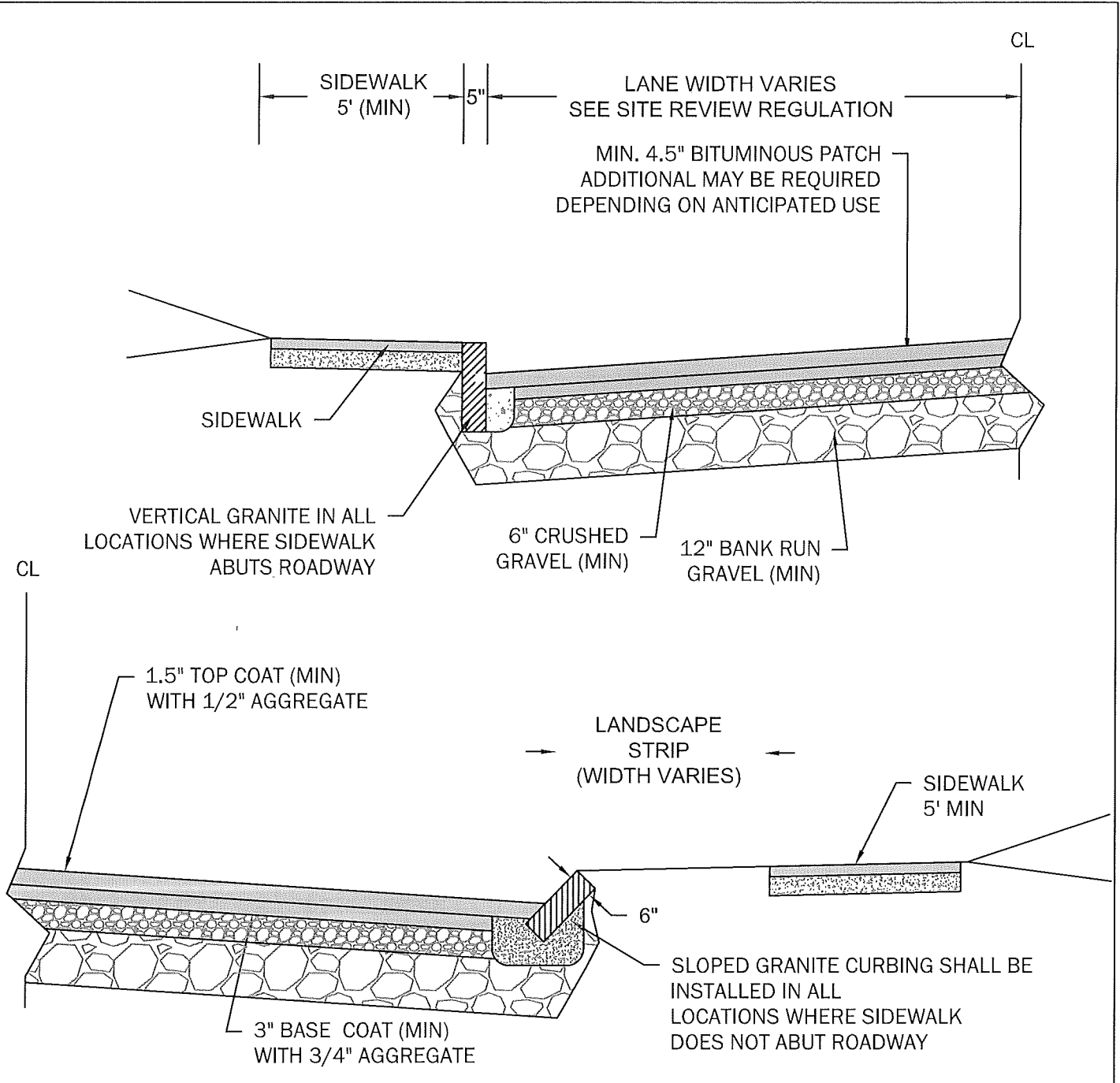


**NOTES:**

1. TRENCH SHALL BE COMPACTED TO 95% OPTIMUM DENSITY.
2. ALL WORK SHALL COMPLY WITH THE CITY OF DOVER CONSTRUCTION GUIDELINES AND PROCEDURES

**CITY OF DOVER - TYPICAL TRENCH DETAIL**

NOT TO SCALE



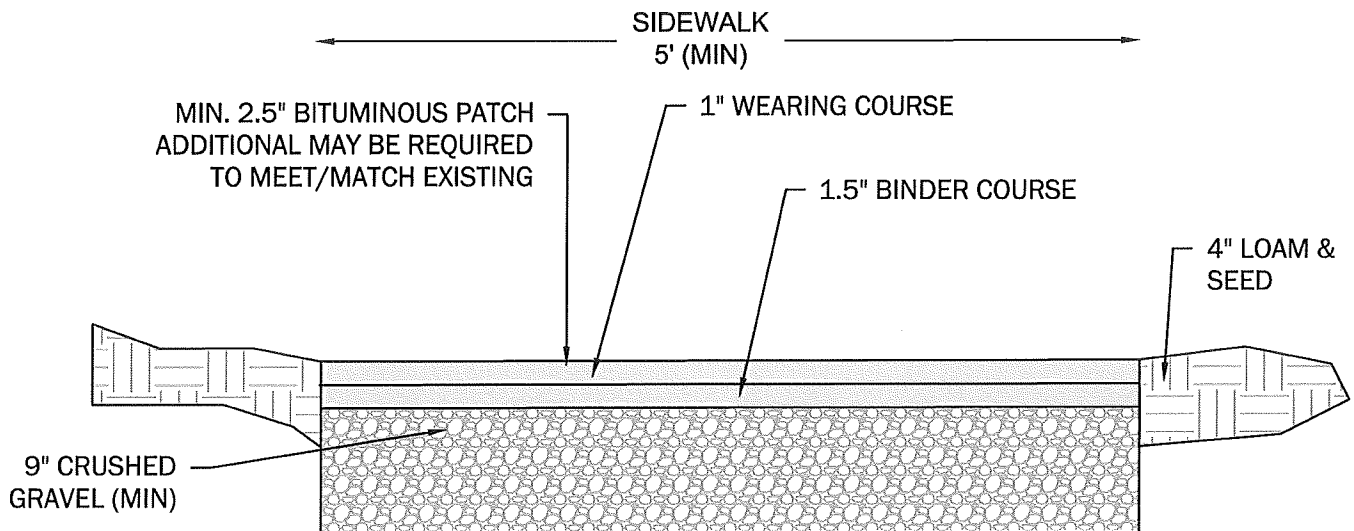
**NOTES:**

1. THIS DETAIL IS FOR GENERAL REVIEW PURPOSES ONLY, FINAL DESIGN SHALL BE BASED ON SPECIFIC SITE CONDITIONS.
2. SIDEWALK LOCATION SHALL BE AS APPROVED BY THE CITY OF DOVER.

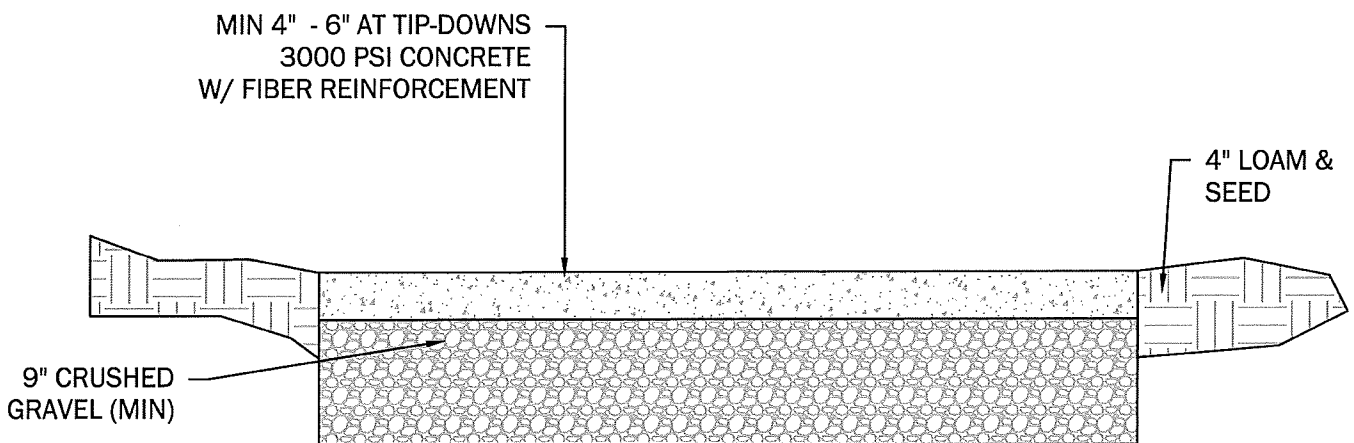
**CITY OF DOVER - PUBLIC ROADWAY CROSS SECTION**

NOT TO SCALE





### BITUMINOUS SIDEWALK



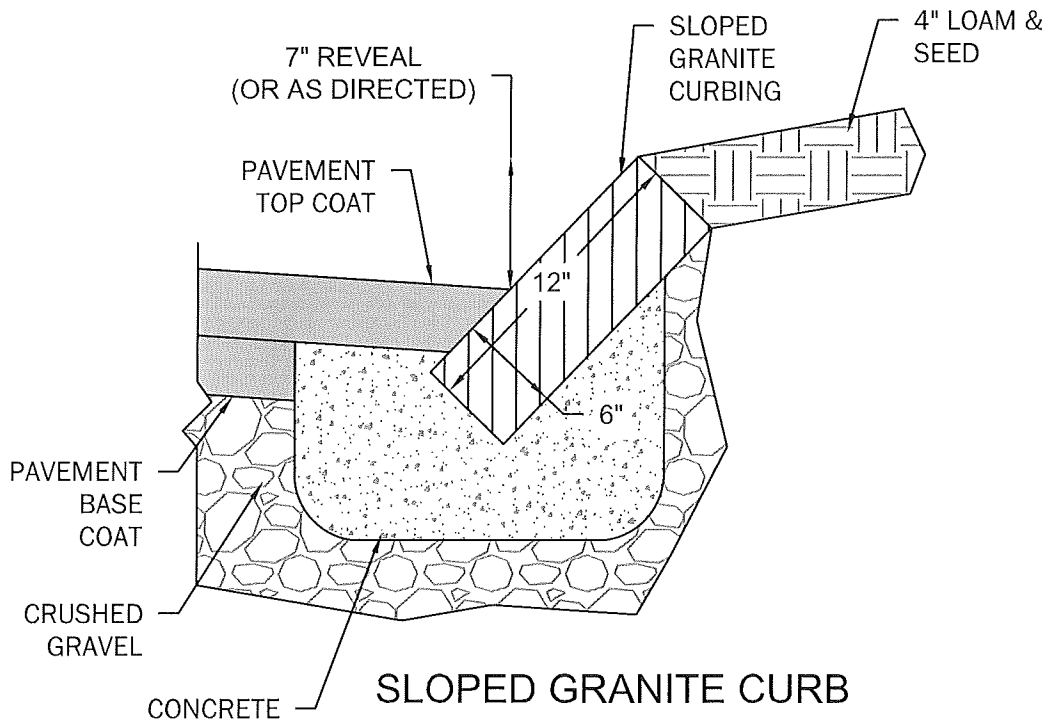
### CONCRETE SIDEWALK

**NOTES:**

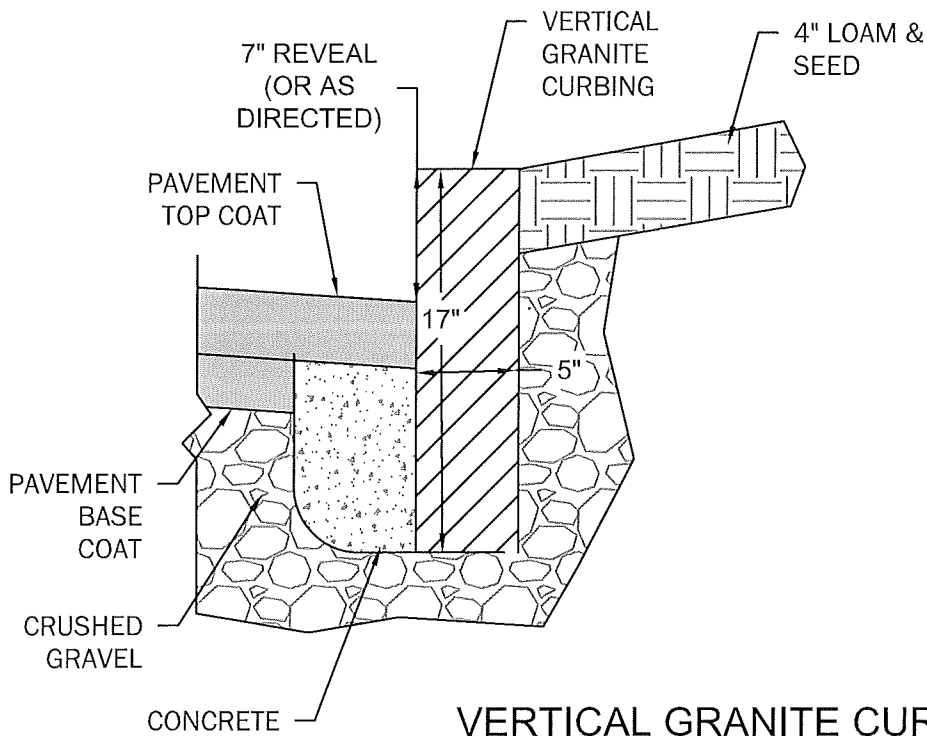
1. MATERIALS SHALL BE IN ACCORDANCE WITH THE CITY OF DOVER STANDARDS SPECIFICATIONS.
2. SIDEWALK AND DRIVEWAY WIDTHS SHALL BE EQUAL TO EXISTING WIDTHS OR AS APPROVED AND SHALL SLOPE TO MATCH EXISTING ELEVATIONS.
3. BASE FOR THE SIDEWALKS AND DRIVEWAYS SHALL BE 9-INCHES OF CRUSHED GRAVEL.
4. DETECTABLE WARNING STRIPS SHALL BE CAST IRON.

## CITY OF DOVER - STANDARD SIDEWALK DETAILS

NOT TO SCALE



**SLOPED GRANITE CURB**

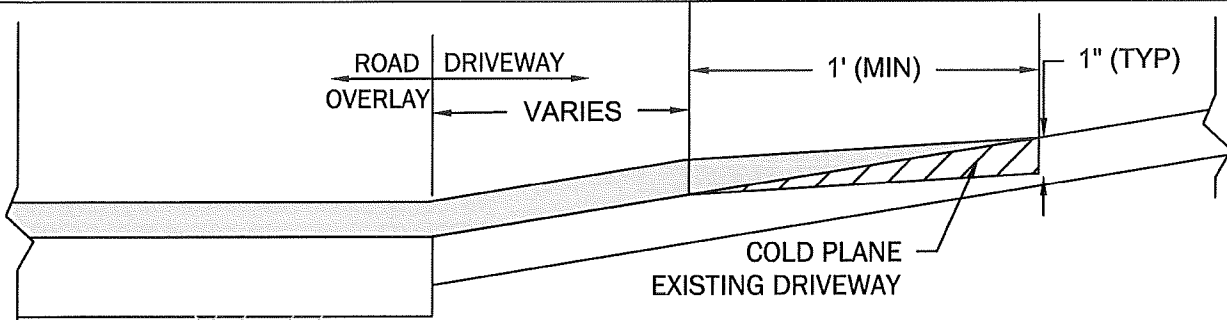


**VERTICAL GRANITE CURB**

RADIUS	MAX LENGTH
< 21'	USE CURVED CURB
12'	3'
22' - 28'	4'
29' - 35'	5'
36' - 42'	6'
43' - 49'	7'
50' - 56'	8'
57' - 60'	9'
OVER 60'	10'

**CITY OF DOVER - STANDARD CURBING DETAILS**

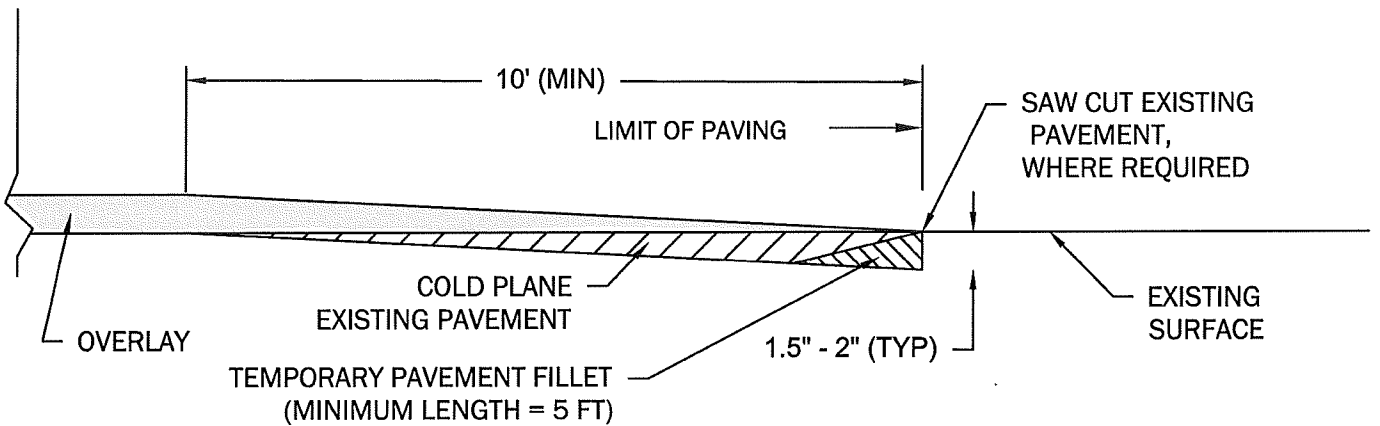
NOT TO SCALE



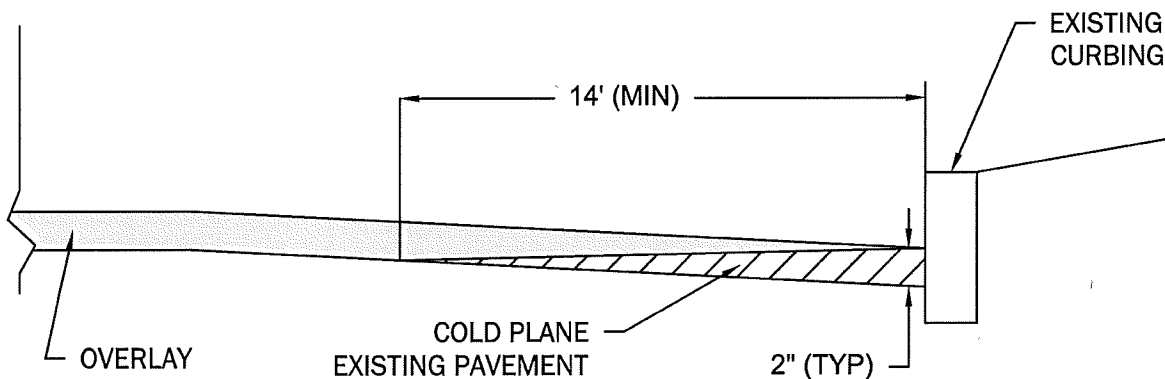
**NOTE:**

CONTRACTOR MAY SAWCUT DRIVEWAY TRANSITION AT HIS OPTION. PAVEMENT SHALL BE REMOVED AND REPLACED TO MATCH EXISTING.

**ADJACENT TO EXISTING DRIVEWAY**



**ADJACENT TO EXISTING PAVEMENT**



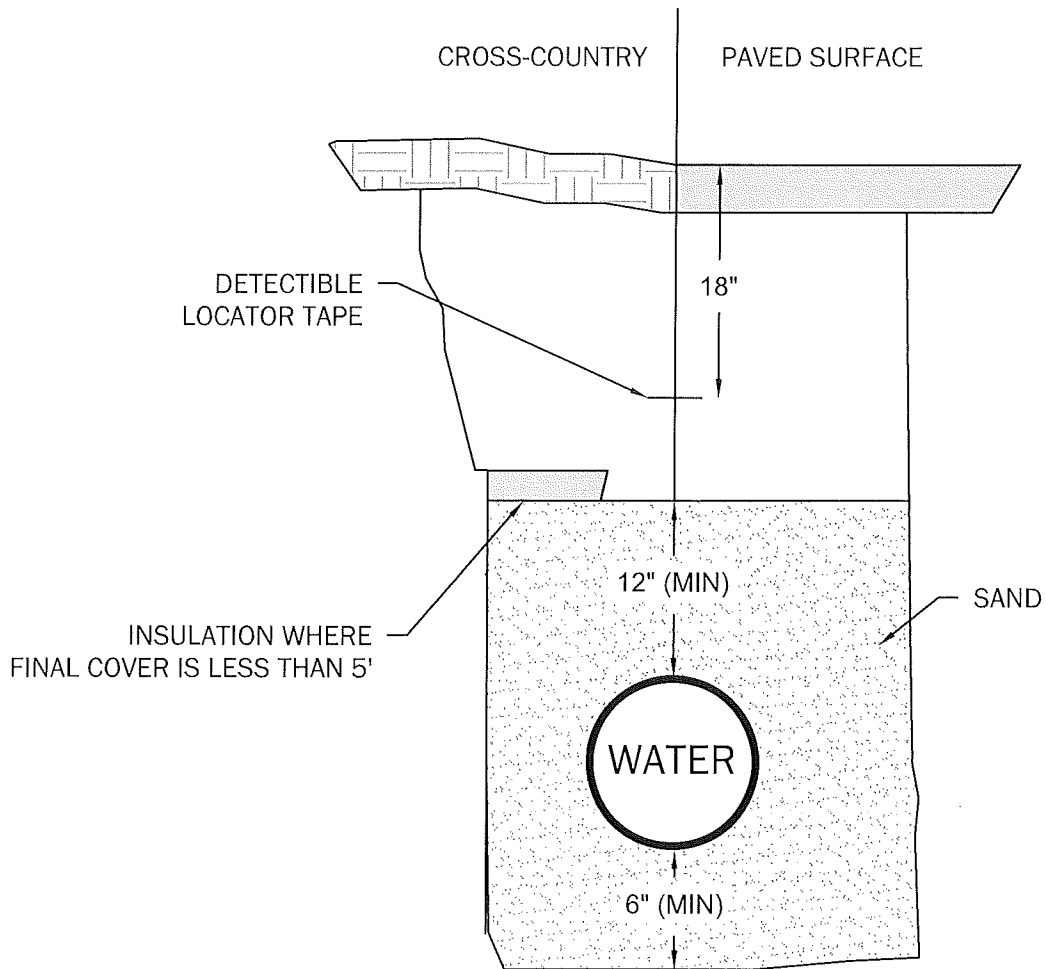
**ADJACENT TO EXISTING CURB**

**NOTE:**

THE LENGTH OF THE TAPER MAY BE ADJUSTED AS ORDERED TO PROVIDE FOR VARYING FIELD CONDITIONS OR CHANGES IN SINGLE COURSE DEPTH.

**CITY OF DOVER - STANDARD PAVEMENT OVERLAY DETAILS**

NOT TO SCALE

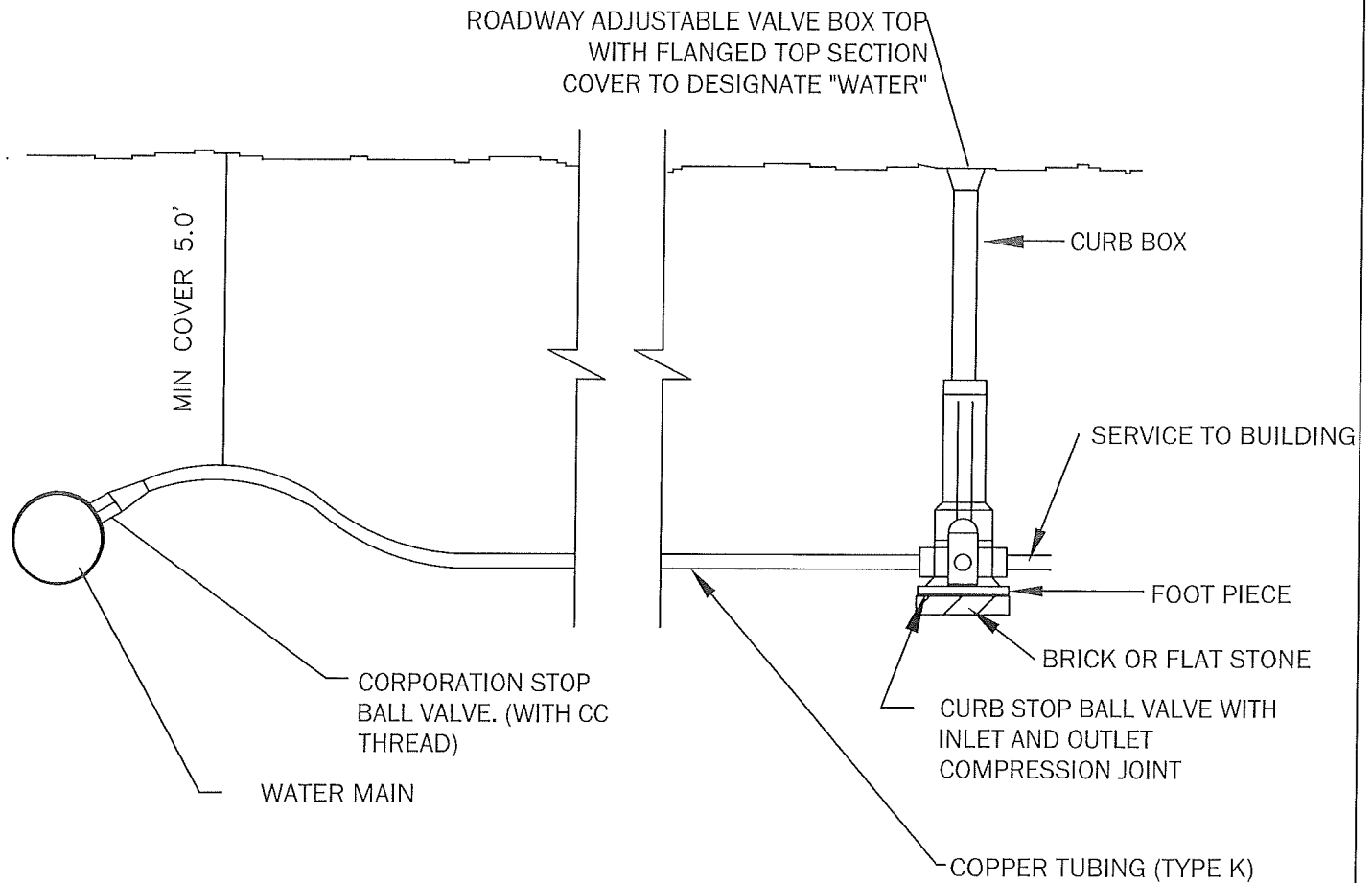


NOTE:

1. ALL WATER LINES 4" OR GREATER SHALL BE DUCTILE IRON WITH AN 8 MIL POLYETHYLENE WRAP. CONTRACTOR MAY FORGO WRAPPING PIPE IF THE DUCTILE IRON PIPE IS ZINC-COATED, TEES AND OTHER CONNECTIONS WILL STILL NEED TO BE WRAPPED.

CITY OF DOVER - WATERLINE TRENCH

NOT TO SCALE

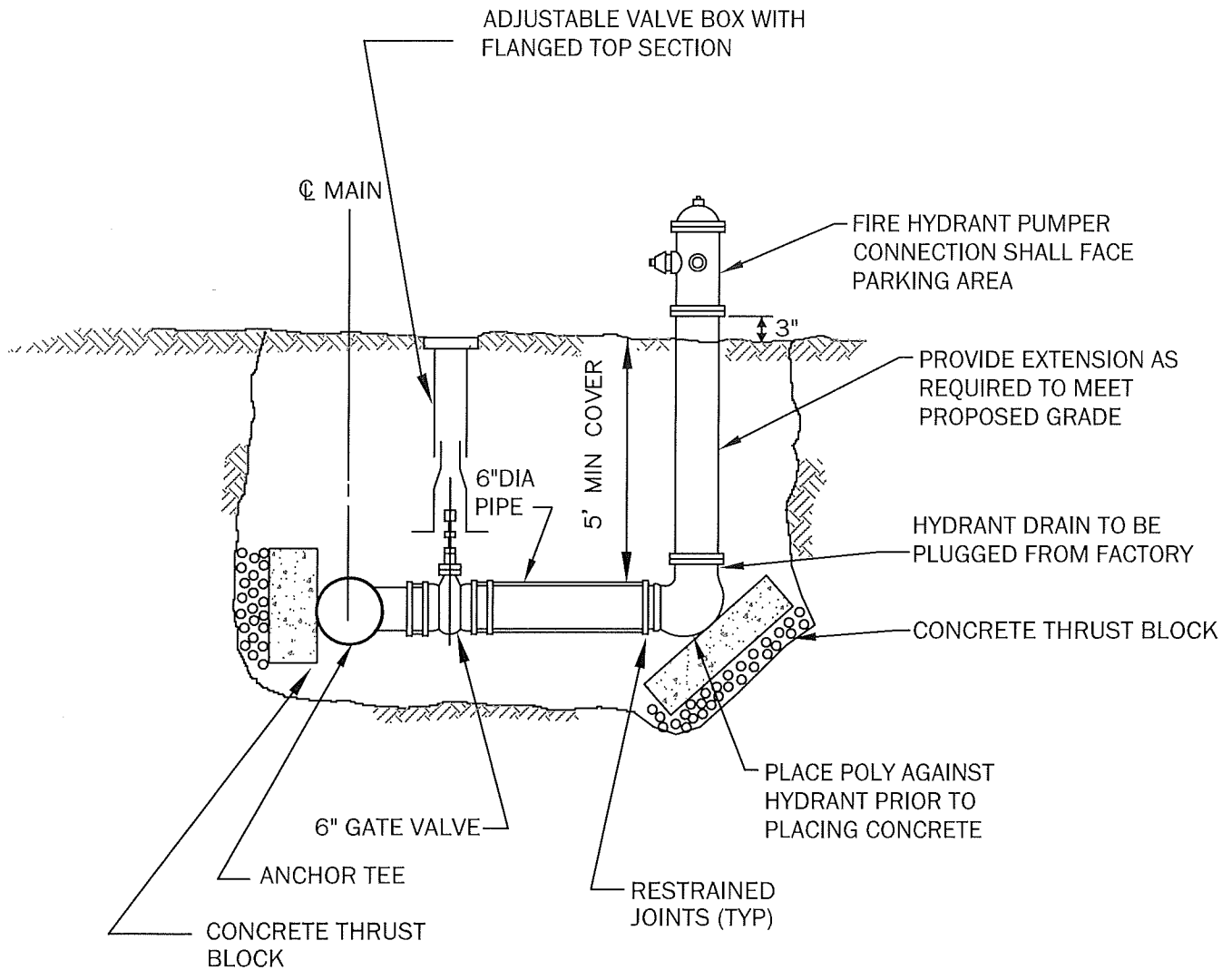


**NOTE:**

1. ALL WATER LINES 4" OR GREATER SHALL BE DUCTILE IRON WITH AN 8 MIL POLYETHYLENE WRAP. CONTRACTOR MAY FORGO WRAPPING PIPE IF THE DUCTILE IRON PIPE IS ZINC-COATED, TEES AND OTHER CONNECTIONS WILL STILL NEED TO BE WRAPPED.
2. WATER SERVICE LINES SHALL BE COPPER TUBING (TYPE K) BETWEEN MAIN AND CURB STOP.
3. SERVICE BETWEEN CURB STOP AND BUILDING MAY BE SDR 9 CTS (BLUE) PLASTIC POLYETHYLENE RATED FOR 250 psi.

**CITY OF DOVER - WATER SERVICE CONNECTION**

NOT TO SCALE

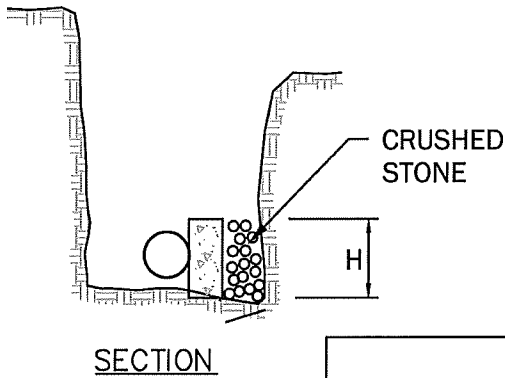
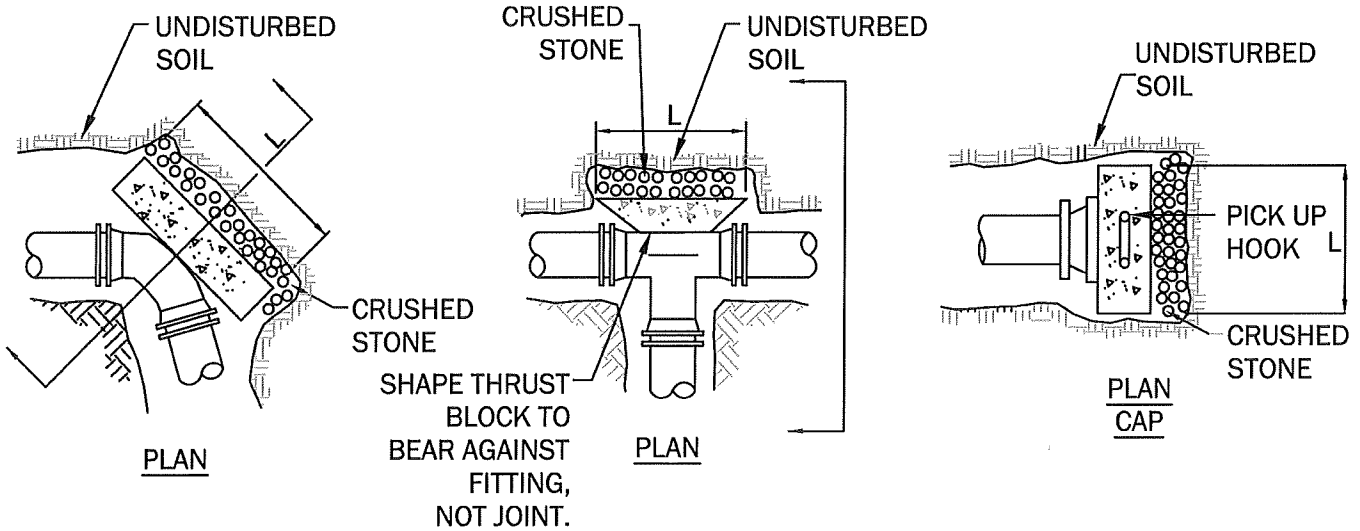


**NOTES:**

1. FIRE HYDRANT TO BE EDDY 2641.
2. HYDRANT TO BE PAINTED RED.
3. HYDRANT SHALL OPEN LEFT.

**CITY OF DOVER - HYDRANT**

NOT TO SCALE



**THRUST BLOCK SCHEDULE**  
**MINIMUM BEARING AREA**  
**(SQUARE FEET)**

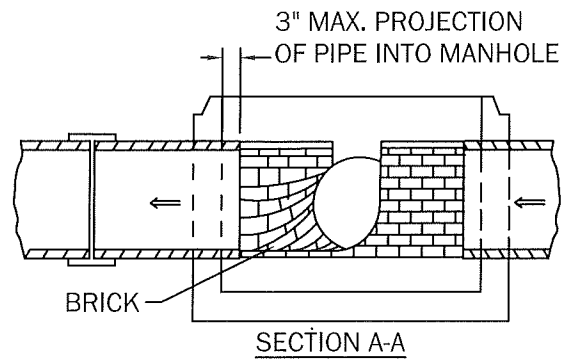
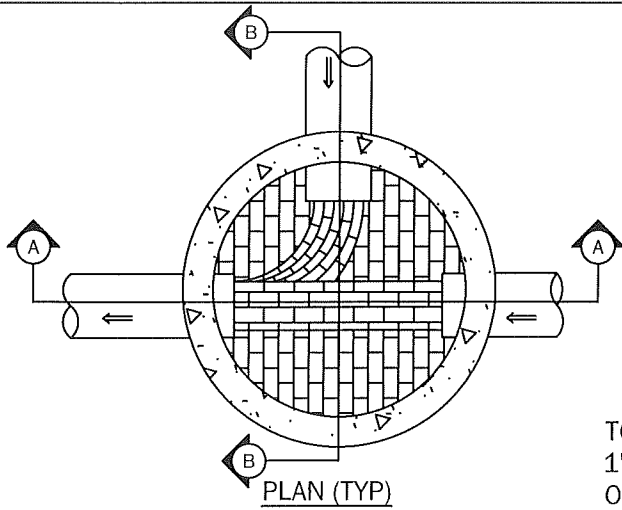
Nominal Dia. (in)	PIPE SIZE					
	4	6	8	10	12	16
Tees, Caps, Plugs, & Tapping Sleeves	1.05	2.32	4.15	6.37	9.15	16.23
90 Degree Bends	1.48	3.29	5.86	9.01	12.93	22.96
45 Degree Bends	0.80	1.78	3.17	4.88	7.00	12.42
22-1/2 Degree Bends	0.41	0.91	1.62	2.49	3.57	6.33
11-1/4 Degree Bends	0.21	0.46	0.81	1.25	1.79	3.18

System Pressure: 100 psi  
 Safety Factor: 1.5  
 Soil Bearing Capacity: 2,000 psf

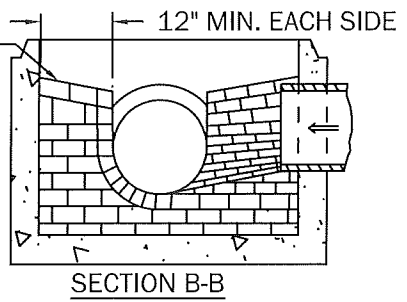
THE MINIMUM BEARING AREAS SHOWN IN THE THRUST BLOCK SCHEDULE ARE BASED ON A SYSTEM PRESSURE OF 100 PSI. IF THE SYSTEM PRESSURE IS ABOVE 100 PSI, INCREASE THE NOTED AREAS PROPORTIONAL TO THE ACTUAL SYSTEM PRESSURE. FOR EXAMPLE, IF THE ACTUAL SYSTEM PRESSURE IS 160 PSI, MULTIPLY THE ABOVE VALUES BY 160%.

**CITY OF DOVER - PRECAST CONCRETE THRUST BLOCK & ANCHOR**

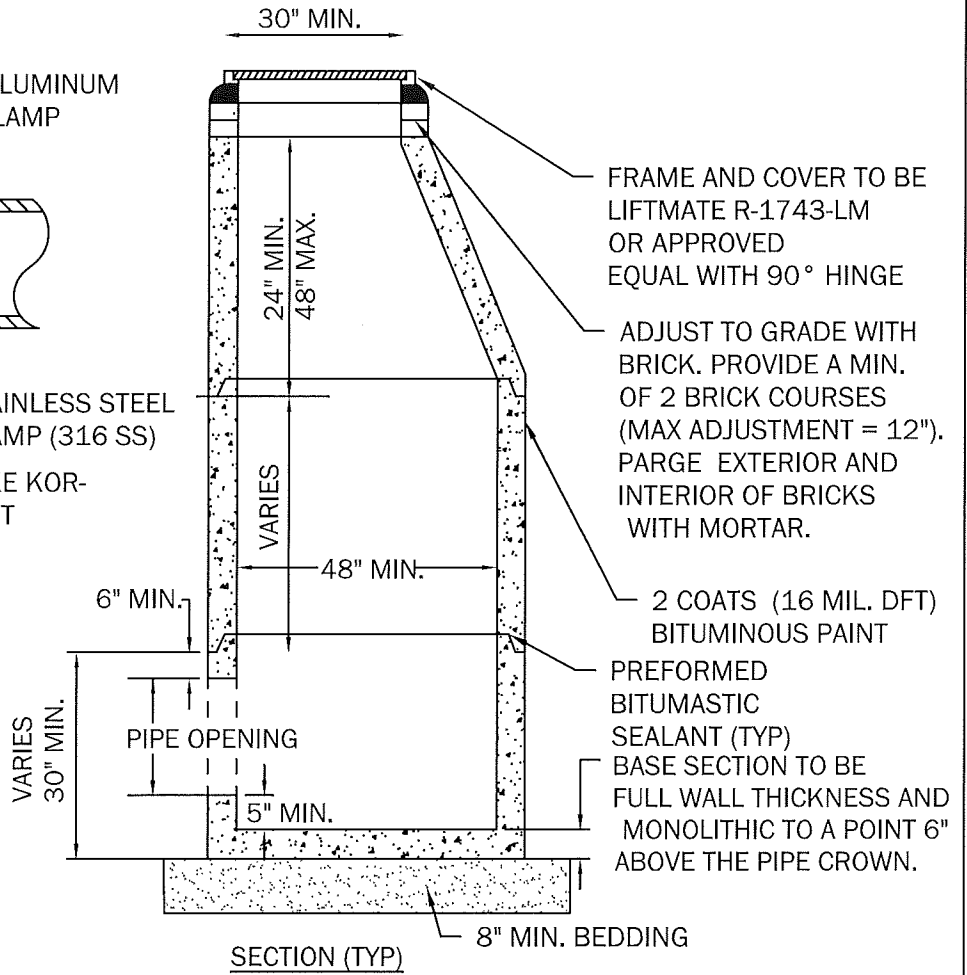
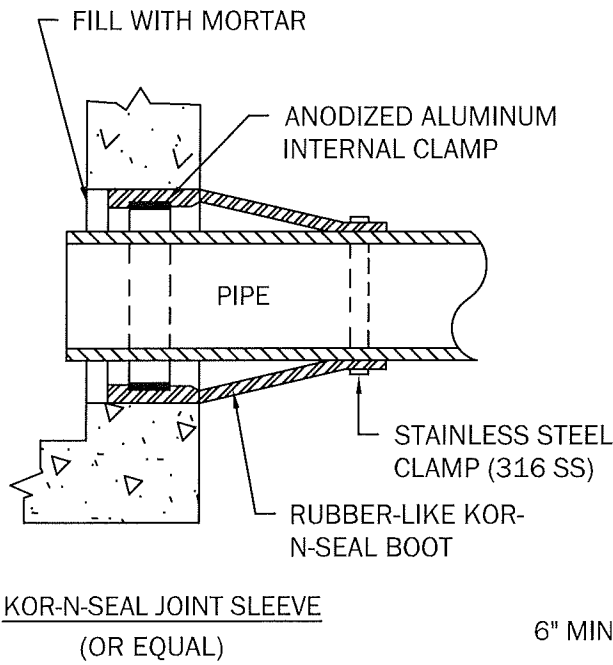
NOT TO SCALE



TOP OF SHELF SHALL BE 1" ABOVE CROWN OF HIGHEST PIPE



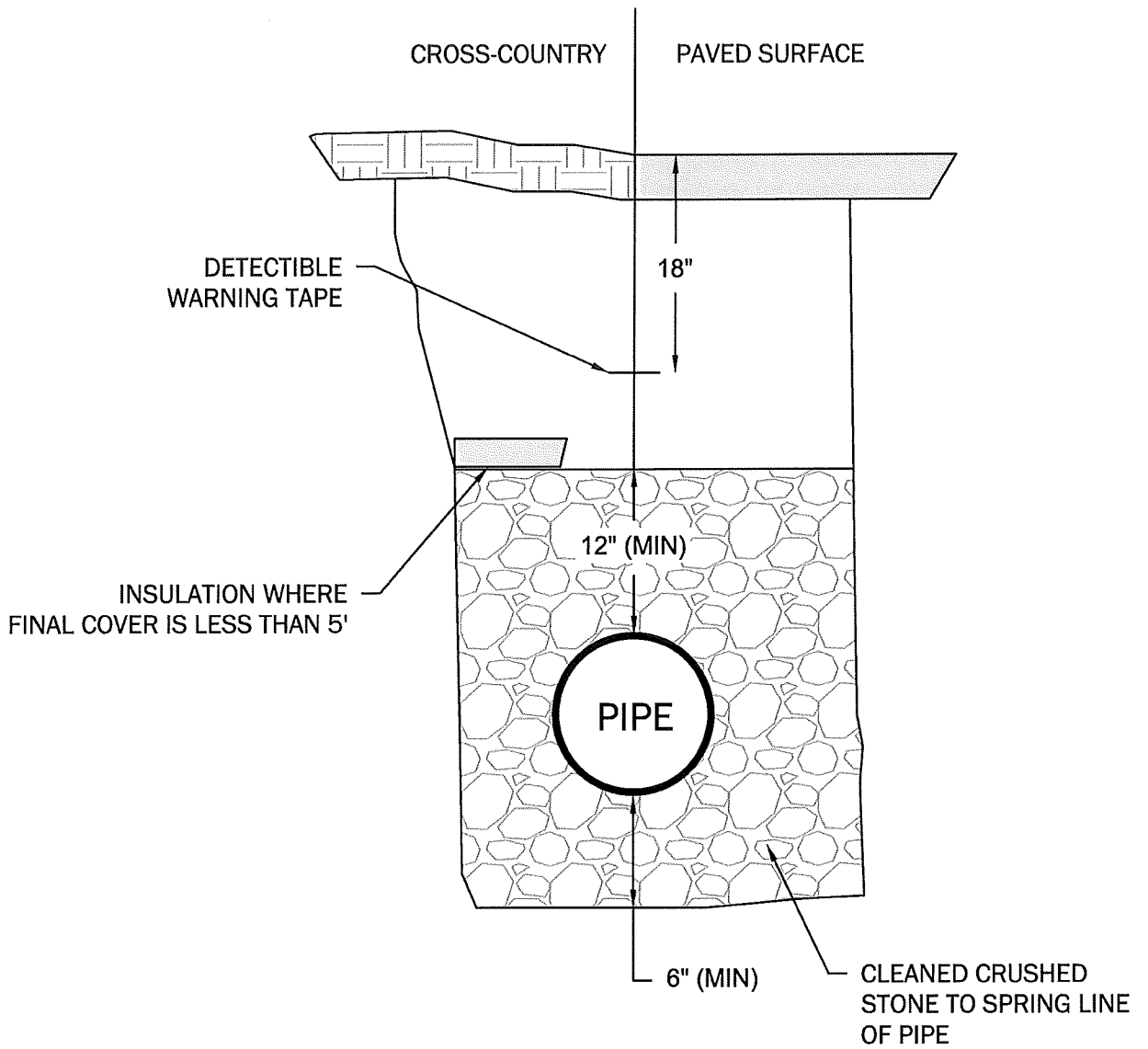
NOTE:  
CORINGS TO BE SEPARATED BY 6" (MIN) OF MONOLITHIC SECTION.



## CITY OF DOVER - SEWER MANHOLE

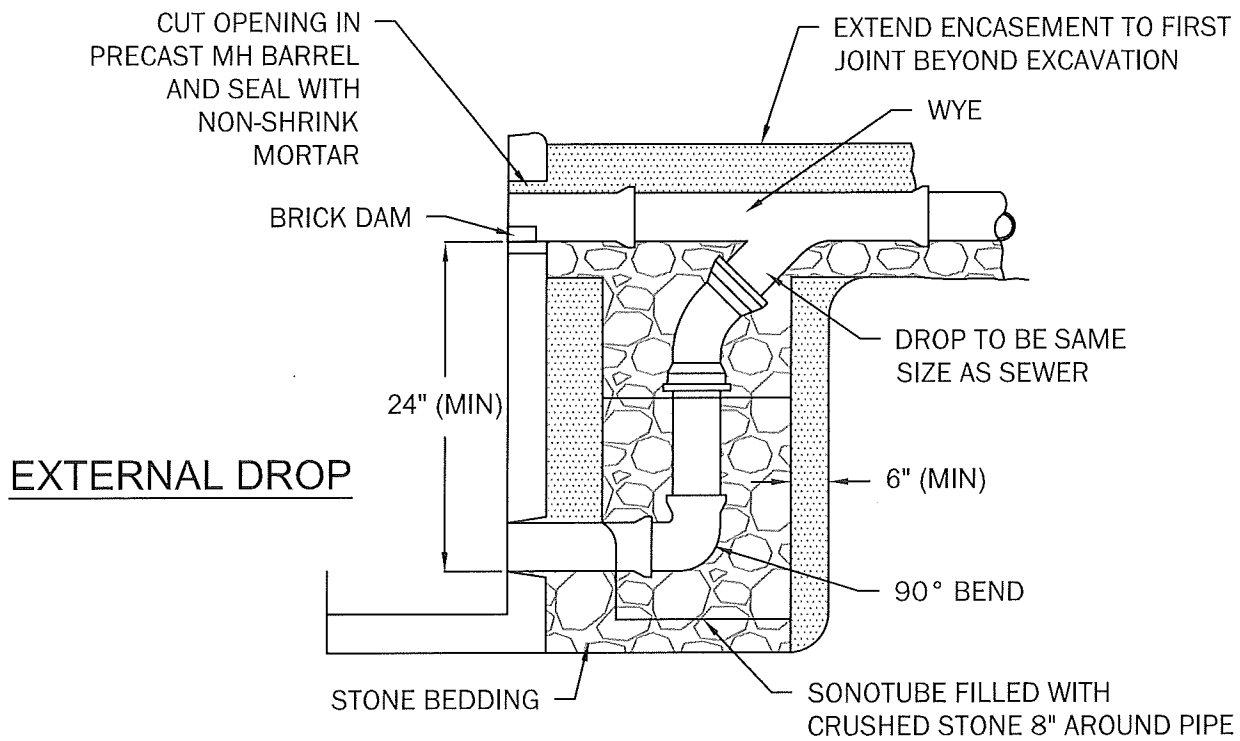
NOT TO SCALE



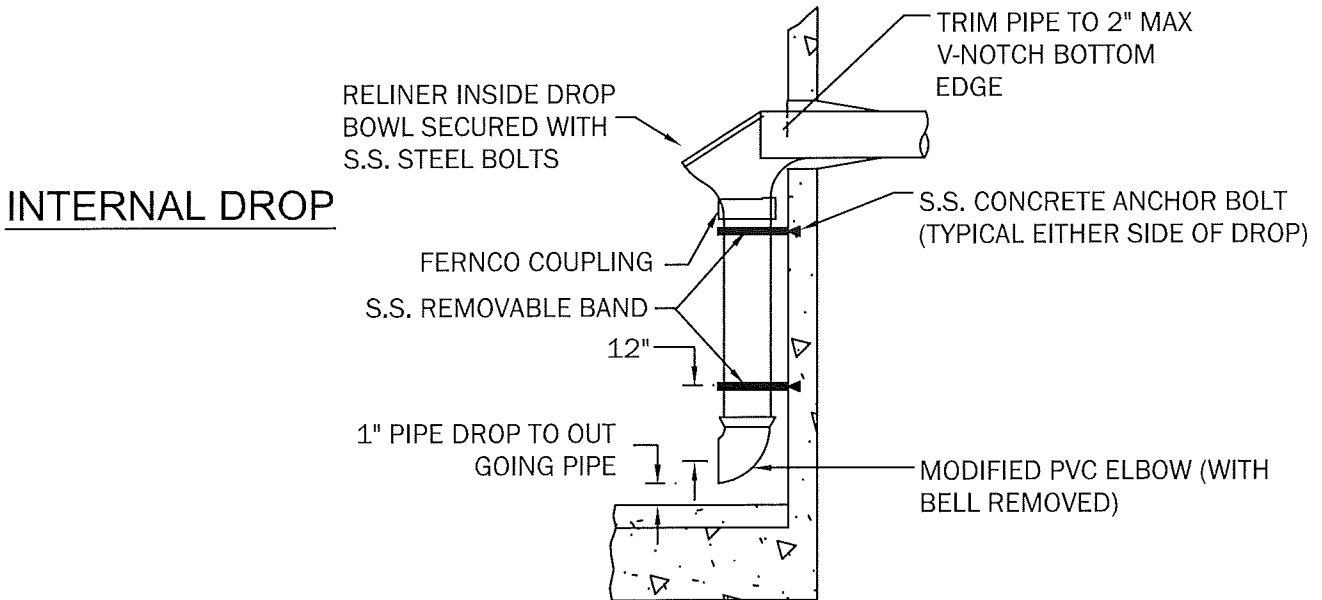


**CITY OF DOVER- TYPICAL SEWER/DRAINLINE TRENCH**

NOT TO SCALE



EXTERNAL DROP



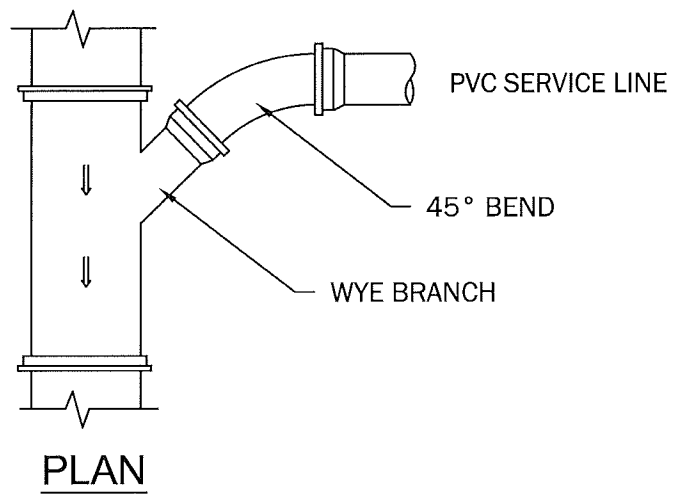
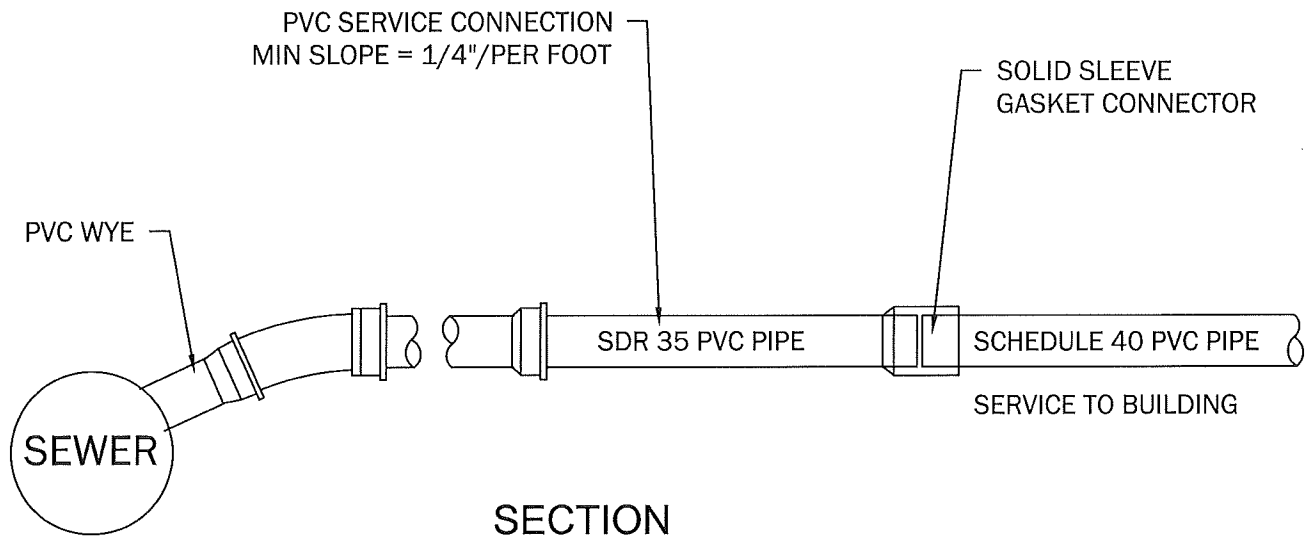
INTERNAL DROP

NOTES:

1. INTERNAL DROPS ARE PROHIBITED IN MOST CASES.
2. REWORK SHELF TO FORM NEW CHANNEL FOR NEW DROP CONNECTIONS.

CITY OF DOVER - SEWER DROP INLET  
MANHOLE CONNECTION

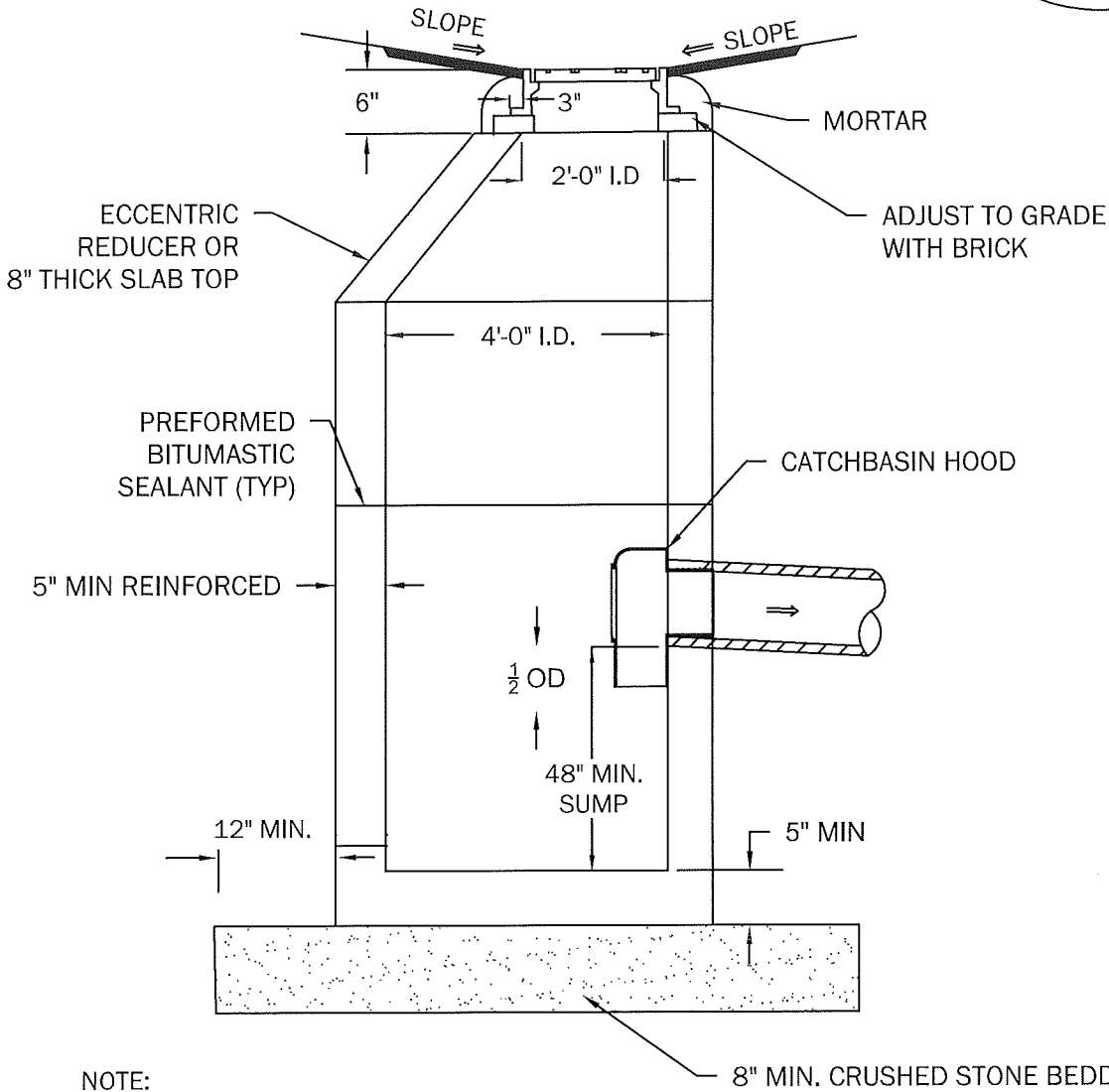
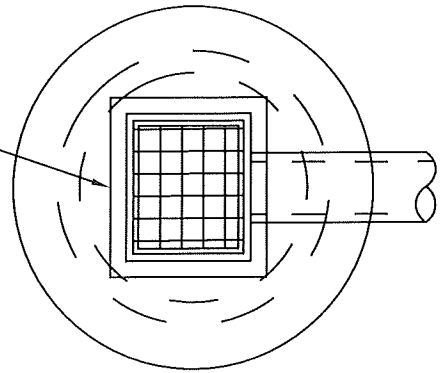
NOT TO SCALE



**CITY OF DOVER - SEWER SERVICE**

NOT TO SCALE

PROVIDE NH STANDARD B  
CAST IRON FRAME AND GRATE.  
HEIGHT OF FRAME TO BE 8 INCHES.

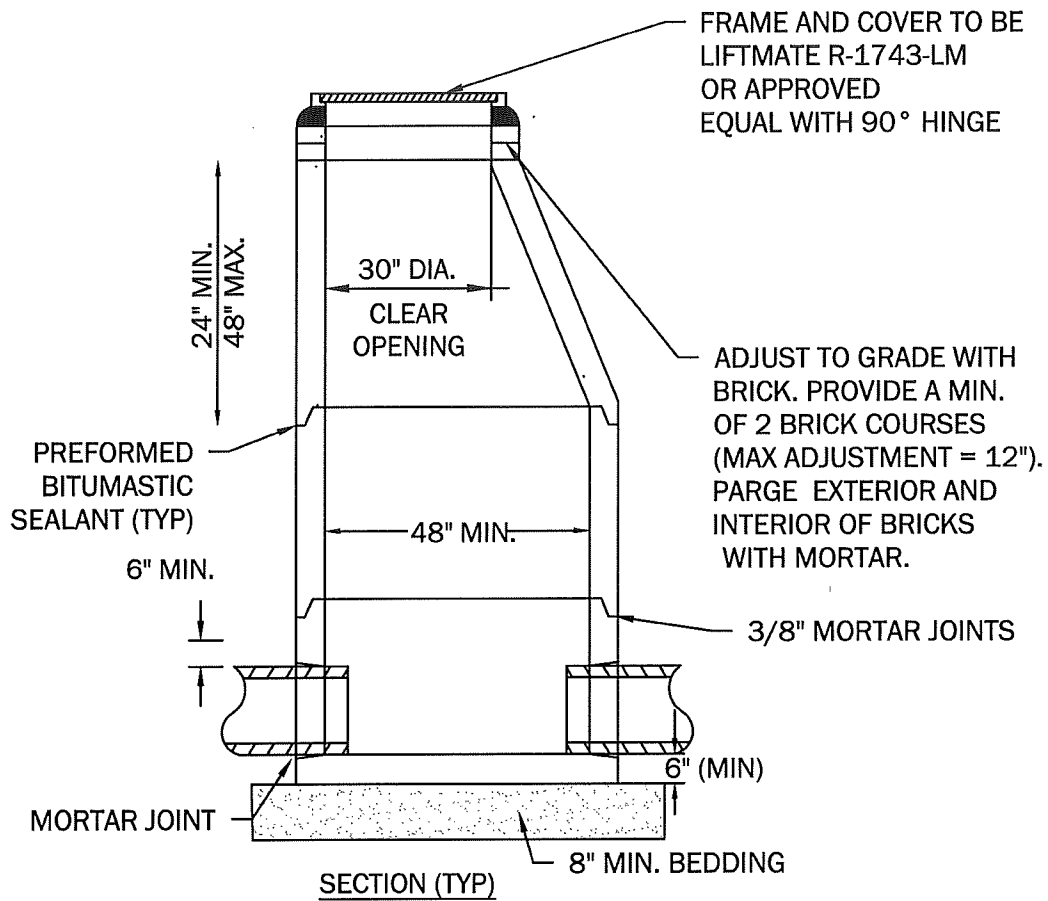


**NOTE:**

ENTIRE STRUCTURE SHALL BE CAPABLE  
OF WITHSTANDING AN H - 20 LOAD  
DETAILS OF REINFORCEMENT TO BE  
FURNISHED BY MANUFACTURER

**CITY OF DOVER - CATCHBASIN**

NOT TO SCALE



**CITY OF DOVER - DRAIN MANHOLE**

NOT TO SCALE