CITY OF DOVER, NEW HAMPSHIRE
DEPARTMENT OF COMMUNITY SERVICES

Permitting, Licensing, and Construction Guidance and Standards

Recommended by Community Services: 4/7/2025

Approved by City Manager: 4/9/2025

Purpose

This document is intended to provide information related to the permitting, licensing, and established City of Dover Community Services Department's standards of practice. Standards presented herein are applicable for all construction on infrastructure owned or maintained by the City of Dover as well as utility infrastructure connected to utilities owned or maintained by the City of Dover.

Note: This document is intended to be used as a resource for contractors, developers, or any other person/entity intending to conduct infrastructure work within the City of Dover. This document is not intended to be a replacement for the adopted Dover Code or any other applicable codes including but not limited to federal, state DOT, DES/EPA, OSHA/DOL, Plumbing, Electrical, etc. If there are conflicts between this document and an applicable code, the more stringent regulation applies unless specifically excluded by statute. References to specific sections of the Dover Code are subject to change. The reader of this document is responsible for reviewing and becoming familiar with the applicable regulations including those noted above and their requirements as they pertain to their specific project.

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Community Services
Dover, NH

Section 1: Community Services Permitting and Licensing Standards

***Purpose:** This section provides a general overview of licensing, permitting, and construction oversight requirements for all construction projects within the City of Dover including, but not necessarily limited to private and public projects requiring a review by the following:*

- *Planning Department,*
- *Planning Board,*
- *Technical Review Committee,*
- *other City Board/Committee/Commissions/Council,*
- *other City Departments*

Background

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

Getting Started

Before any construction 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 local, state, and federal 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 Applicant can be either a private entity or governmental agency.

Applicability

The permits, rules, and regulations contained herein outline the requirements for working on City roads, sidewalks, and rights-of-way; as well as City-maintained infrastructure including water, sewer, and storm drainage systems; and the private utility infrastructure connected to these systems. City of Dover Capital Improvement Projects may be exempt from permitting requirements outlined herein. It is recommended that each Applicant confirm applicability of permits prior to commencing construction related to, and/or otherwise impacting the aforementioned City infrastructure construction with Community Services staff.

Certificates of Insurance

Applicants shall provide a valid Certificate of Insurance with minimum limits of coverage, as required by the CIty, for all licenses and permits issued by the Community Services Department. A sample Insurance Certificate can be provided by the Community Services Department upon request. The City of Dover must be listed as an additional insured on all Certificates of Insurances.

Licenses

In addition to industry required trade certifications, licenses and registrations, City of Dover issued licenses are required to ensure contractors are properly qualified, suitably insured, and have provided the

City with emergency contact information required to conduct work within Dover. In other words, a license gives the Applicant the general right to do something within the City of Dover throughout a certain time period. Holding a license does not negate the need to obtain a permit or permits required for a specific project. Licenses must be obtained prior to commencing work and no two contracting firms may work under one license.

The Applicant shall secure all applicable City of Dover construction licenses including paving and utility licenses. The cost of such shall be based on the most current City of Dover Adopted Fee and Fine Schedule. A copy of the current fee schedule can be found on the City of Dover website or obtained in person at the Community Services Department facility at Mast Road or at the Finance and Purchasing Office at City Hall.

Paving Contractor and Utility Contractor Licenses may be submitted online through the City's online permitting portal. The site can be reached by going to the following website: https://permits.dover.nh.gov/energov_prod/selfservice#/home. Applicant's may choose to submit paper permits to Community Services for an additional fee in accordance with the most current City of Dover Adopted Fee and Fine Schedule.

Once a License Application has been submitted, the Community Services Department will strive to review and approve the application within three (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 license has been approved. Any violations will be subject to a penalty under the City Code, as well as a revocation of license to work within the City.

The following is not intended to be a comprehensive list of all licenses required for construction within Dover but rather those either administered or reviewed by Community Services Department. It is required that all Applicants review and understand the requirements of the applicable sections of the Dover Code.

Paving Contractor License

A Paving Contractor License application and fee must be submitted to, and approved by, the Community Services Department prior to paving on the City's roads, within the City's rights-of-way, or on a private driveway/drive that requires impacting the City's right of way. Contractor must provide proof of insurance and also provide a 24-hour emergency contact telephone number. Paving Contractor Licenses expire on December 31 each calendar year, regardless of when the license was obtained. The fee for the license is not prorated based on when the license is obtained.

Utility Contractor License

A Utility Contractor License application and fee must be submitted to, and approved by, the Community Services Department prior to working on water, sewer, or storm drainage systems owned or controlled by the City of Dover, including system connections located on private property that connect to the public system. The Contractor must provide proof of insurance and also provide 24-hour emergency contact telephone number. Utility Contractor Licenses expire on December 31 each calendar year, regardless of when the license was obtained. The fee for the license is not prorated based on when the license is obtained.

Installation of Poles, Wires, and Gas Line License (Dover Code: Sections 125-22)

A Utility License application and fee must be submitted to, and approved by, the City Clerk prior to the any of the following activities:

- Erection, construction, installation or maintenance of any pole, wire, terminal, underground conduits & cables, structures, or other appurtenances for television, telephonic, telegraphic, electric power or electric lighting, or gas lines, along, across, under or over any public road, sidewalk, or City property.

The Contractor must provide proof of insurance and also provide 24-hour emergency contact telephone number. The Community Services Department shall reserve the right to review proposed locations of poles, wires, and gas lines to ensure there are no conflicts with City infrastructure. A License will be denied if the Community Services Department determines a potential conflict could arise.

Permits

The intention of the permitting process is to allow the City to track, monitor, and observe specific work activities. In other words, permits give Applicants permission to do a specific activity or perform a specific service. The Applicant shall secure all applicable construction permits prior to commencing construction. Holding a permit does not negate the need to obtain a license for a specific activity as outlined above.

Once a permit application has been submitted, the Community Services Department will strive to review and approve the application within five (5) 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 Code, as well as a revocation of permit to work within the City.

Wherever possible, Community Services will 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. *For example, a monitoring well or driveway, that may impact a City street or sidewalk, will be required to provide a non-refundable street pavement or sidewalk pavement damage fee, along with a refundable performance surety following successful completion of the project. Such work may also require an obstruction permit. An obstruction permit may also require a performance surety to ensure City property can be suitably restored upon completion. The Community Services Department reserves the right to use its professional discretion to protect the City's infrastructure.)*

The following is not intended to be a comprehensive list of all permits required for construction but rather those administered or reviewed by Community Services. It is required that all Applicants review and understand the requirements of the applicable sections of the Dover Code including but, not limited to, items such as the need for a blasting permit (Dover Code Section 153-10(F)) or pest control measures (Dover Code Section 153-10(G)).

Driveway Permit (Dover Code: Sections 125-11, 157-50)

A driveway permit is required for any new or modified private driveway that is adjacent and connects to a City controlled right-of-way.

Modified driveways include any work that affects the size, elevation or grade of the driveway. The Applicant may be required to provide a refundable deposit to serve as a performance surety depending on impacts to city infrastructure. Deposit shall be in an amount established in the most current Fee and Fine Schedule.

Entrances from highways under the Jurisdiction of the State of New Hampshire shall secure a permit from the New Hampshire Department of Transportation (NHDOT). If an NHDOT permit is required, a copy of the final NHDOT approval shall be submitted to the Community Services Department prior to commencing construction on the driveway.

While private driveways on private drives are not subject to the City of Dover Driveway Permit Application requirements, their layout and configuration may be tied to the Planning Board approval for the private drive serving as a shared common driveway for a development. Therefore, Applicants shall submit a driveway permit to the Planning Department to ensure compliance with all Planning Board conditions of approval for the private driveway or drive prior to modifying the driveway.

Excavation Permit (Dover Code: Section 125-8)

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. The Applicant will be required to provide two (2) types of deposits: a non-refundable street pavement and/or sidewalk pavement damage fee; and a refundable two-year surety to serve as a performance guarantee. Both deposits shall be in an amount established in the most current Fee and Fine Schedule.

Monitoring Well Permit (Dover Code: Section 125-21)

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. 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. A deposit shall be in an amount established in the most current Fee and Fine Schedule.

Move a Building Permit (Dover Code: Section 125-15)

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, through, or over, any public road. A deposit shall be in an amount established in the most current Fee and Fine Schedule.

Obstruct or Encumber a Public Road or Sidewalk Permit (Dover Code: Section 125-9)

A permit is required before anyone may obstruct a public road, City right-of-way, or sidewalk. The Applicant may be required to provide a refundable deposit in an amount established in the most current Fee and Fine Schedule.

Septic System Review (Dover Code: Section 121-3)

Before commencement of construction of a private wastewater disposal system, the owner(s) shall first obtain a plan review approval by the City Engineer and design/construction approval from the New Hampshire Department of Environmental Services (NHDES). The Applicant shall submit a review fee in the amount established in the most current Fee and Fine Schedule along with documents detailing the proposed design. Fees required by the NHDES for their review and approval are the responsibility of the Applicant. Applicant shall submit final NHDES approved plans to Community Services. Note that per RSA 147:8, if a public sewer is located within 100 feet of a building, that building must be connected to the public sewer.

Wastewater Connection Permit Review (Dover Code: Section 121-4)

Before commencement of construction of any wastewater infrastructure that will connect to the City of Dover public sewer system, the owner(s) shall first obtain approval by the City Engineer and pay any required Dover Utilities Commission (DUC) approved and mandated "Investment Fees". In addition, certain sewer system expansions may require NHDES approval. The Applicant shall submit a review fee to Community Services, in the amount established in the most current Fee and Fine Schedule along with documents detailing the proposed connection. Fees required by the NHDES for their review and approval are the responsibility of the Applicant. Applicant shall submit final NHDES approved documents to Community Services.

Permit Input Fee

Permits may be submitted online through the City's online permitting portal located at https://permits.dover.nh.gov/energov_prod/selfservice#/home. Applicant's may choose to submit paper permits to Community Services for an additional fee in accordance with the most current City of Dover Adopted Fee and Fine Schedule.

State and Federal Permits

As applicable, the Applicant, Contractor, Developer, or Owner shall provide the Community Services Department with all State and Federal permits necessary for the project including, but not limited to, the following prior to construction commencing and/or issuance of Dover permits:

- Stormwater permit from the Environmental Protection Agency (EPA) Construction General Permit (CGP) program including a copy of the Stormwater Pollution Prevention Plan (SWPPP)
- NHDES Alteration of Terrain (AoT) Permit
- NHDOT Driveway Permit
- NHDES Public Water System Permit to Operate
- NHDES Sewer Connection Permit
- NHDES Septic Permit
- NHDES Wetlands Permits

Construction Permit

Once a project has secured the required permits and approvals at the City, State, and Federal level, the Community Services Department will, if applicable, issue a Construction Permit through the city's online permitting portal. The intent of this permit is to manage the City's construction observations, construction sureties, and project closeout. The following are brief descriptions of some items managed through this permit. While there is no application fee associated with the Construction Permit, there are fees for inspections that the Applicant is responsible for throughout the construction process.

Revegetation Maintenance Surety

All projects, within the City, that disturb more than 1,000 square feet, require a revegetation maintenance surety, based on the total area of disturbance as part of the project, to be submitted to the Community Services Department prior to the start of construction. The surety shall be a refundable deposit in an amount established in the most current Fee and Fine Schedule. 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. Once the project is complete and the disturbed areas are stabilized, the remaining balance of the surety will be refunded.

Observations (Dover Code: Section 153-12)

The Community Services Department staff, or their designated agent, shall have access to the site to complete routine observations. It is the Applicant, or their designee's responsibility to notify the Community Services Department **48-hours** prior to beginning any work that requires observations. These observations shall be completed during normal working hours Monday through Friday, 8 am to 4 pm. Work is prohibited on City Holidays unless written approval from Community Services is obtained. Observations may be requested outside of normal business hours for an additional fee.

A representative from the Community Services Department, or their designated agent, shall, at a minimum, inspect, or witness, the following procedures:

- Work within public Right-of-Way, prior to placing of pavement, or areas intended for future public acceptance,
- Work on any City utilities, including water lines, sewer lines, and stormwater services,
    - The Community Services Department shall be responsible for inspecting services, prior to backfilling any portion of the line, 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 Inspection Services Division of Planning and Community Development.
- Utility Testing,
- Planning Board Approved projects.

City observations do not absolve the owner from responsibility to ensure compliance with the approved plans. Additional observations 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, to conduct inspection and oversight of certain aspects of construction as they see fit, and provide a letter certifying conformance with the approved plans. Such oversight may be especially important for implementing techniques such as subsurface stormwater infiltration systems, porous pavement, or the installation, and compaction, of a roadway intended for dedication to, and public acceptance by, the City. The Applicant shall be responsible for all fees associated with third-party inspections.

The Applicant shall be responsible for all fees associated with observations performed by the Community Services Department or their designated agent. The fee levied shall be the actual cost per hour of the individual(s) making the observation of improvements as required in accordance with the current Fee and Fine Schedule. The City shall be remunerated for equipment usage necessary for conducting the inspections. Where the owner fails to comply with the payment of fees, inspections shall not be conducted nor certificate of occupancy awarded until full payment has been received. If there is a continued failure to pay inspection fees, the City may pull the Applicant's permit and deduct fees owed from refundable sureties.

Surety for Private Drives and Public Roadway Construction

A surety for the construction of a private drive or public roadway must be submitted to Community Services prior to issuance of building permit per NH RSA 674:36 IV which says: *"The planning board limitations under this section shall not require letter of credit, cash, or passbook as the only method securing the completion of the work.* ***A planning board shall allow road and utility construction to start without a bond, however, a bond for the infrastructure, roads, and utilities must be in place prior to the sale of any parcel of land within the subdivision or a request for a building permit for structures for human occupation****. The planning board shall not require that forfeiture or automatic call bonds be provided by the developer.*

Plan Modifications

The contractor must have a set of the Planning Board approved, and Planning Board Chair signed, site plan drawings on-site at all times during construction. Any modifications from the approved plans shall receive written approval from the Community Services and/or Planning Departments prior to beginning work.

Sketches, letters, etc. may be required for approval. Approval from the Technical Review Committee 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 from the approved plans.

Certificate of Occupancy/ Performance Guarantees (Dover Code: Section 153-11)

Prior to the issuance of a certificate of occupancy, the Community Services Department will conduct a site walk with the Design Engineer, Applicant, Contractor, and other City staff, as necessary, to review the completed site for conformance with the approved plans and to document outstanding items not yet completed.

Following the site walk, the Design Engineer shall submit a detailed cost estimate on a form provided by Community Services. The purpose of this cost estimate is to determine a performance bond or escrow agreement value for all unfinished site work related items and as-built drawings (provided that the outstanding items are not essential to the safe use of the site). The bond shall be provided by the Applicant. In order to receive final approval from the Community Services Department for the certificate of occupancy, either the performance bond must be provided, or completion of unfinished items must be confirmed.

As-builts

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 (NAD83 NH State Plane in US Survey feet).

As-built plans shall show all site improvements, including but not limited to the following:

1. Buildings and other permanent structures,
2. Catch basins with rim, invert in, invert out, and orifice plate elevations (NAVD88),
3. Force mains with diameter & material, including air release valve locations,
4. Irrigation system (above grade infrastructure only),
5. Landscaping including all individual tree locations, planting beds (individual groundcover and shrubs are not required), and tree line,
6. Lighting including parking lot lighting, street lighting, traffic/pedestrian controls (mast arms and control boxes), and landscape lighting,
7. Pavement markings including parking spaces, centerlines, and medians,
8. Property lines (with metes and bounds),
9. Recorded easements (with beneficiaries),
10. Right-of-way lines,
11. Sewer mains with diameter & material, including all fittings,
12. Sidewalks,
13. Sign locations, sizes, and types,
14. Stormwater management system including all storm drainage structures, pipes (size & material), swales, and treatment systems,
15. Topography including spot elevations or contours where appropriate (top of stormwater basins, structure rims, swales, etc.),
16. Underground electric and communications conduit,
17. Underground gas lines,
18. Utility connections to the building with diameter & material,
19. Utility poles,
20. Utility structures (including sewer, water, storm drainage and other) with rim, invert in, invert out, and orifice plate elevations (NAVD88),
21. Utility transformer and pull box locations,
22. Water mains with diameter & material, including all fittings,
23. Water curb stop, gate valves, and hydrant locations,
24. Wetland flags (with date of delineation),
25. Wetland buffers.

Section 2: Dover Standards

All work on City of Dover owned or maintained infrastructure including roads, sidewalks and curbing shall be completed in accordance with Chapter 125, Streets and Sidewalks, of the City of Dover, NH Code. Additionally, the contractor shall comply with the following rules and regulations:

Excavation in Right of Way

1. 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 Director.

2. Excavation will **NOT** be allowed in the street or sidewalks on Fridays, or the day before a City designated holiday without written approval from the Community Services Department Director and the Dover Police Department, Traffic Bureau.

3. 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.

4. Excavations shall not occur without the contractor, who is performing the work, contacting "Dig Safe" (The Underground Facility Damage Prevention System as required by RSA 374:48).

5. Applicant shall submit copies of submittals for all materials to be installed within City of Dover controlled right of ways for informational review prior to installation. Submittals shall indicate conformance with City of Dover requirements. Material specifications or cut sheets required to be submitted include but are not limited to those for piping, structures, aggregates, pavement, or other materials that could be accepted by the City upon completion. Submittals shall be submitted to the City Engineer, or their designee.

6. Site safety is the responsibility of the Contractor. Work in a trench deemed to be unsafe by City personnel will not be inspected nor approved.

7. 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.

8. All trench edges in bituminous asphalt (road or sidewalk) shall be saw-cut in a neat line a minimum of two (2) feet larger than the width and length of the proposed excavation (See standard City details D-3 and D-4). If the saw cut edge is exposed to passing traffic, at any time, a paved taper between the trench and the existing pavement shall be installed and maintained until the final pavement course can be installed.

9. All edges of any trench that abut existing bituminous pavement shall have a tack coat of bitumen before installation of each of a minimum two (2) pavement courses and upon completion of the patch.

10. Trench pavement cross section shall at a minimum meet the City's roadway design standards (See standard City details D-3 and D-4) or the existing roadway cross section, whichever is greater.

11. All materials for the pavement cross section shall meet the requirements of the NHDOT standard specifications, latest edition.

12. Trenches shall be backfilled with suitable native material from the pipe excavation, or approved material.

13. Backfill material shall be managed so that it is free from hard lumps, clods, or rocks larger than 3" diameter and free of stumps and organic material. Uniformly fine material shall be placed next to any pipe susceptible to damage.

14. All backfill material shall be compacted at near optimum moisture content, in layers not exceeding 12" in compacted thickness, by pneumatic tampers, vibratory compactors, or other approved means.

15. Care shall be exercised to compact the backfill thoroughly under the haunches of the pipe and to ensure that the compacted backfill material is in direct contact with the sides of the pipe. Bedding shall be installed along the full length of pipe prior to installation of the pipe. The manufacturer's installation instructions shall be submitted to the Community Services Department for approval prior to installation.

16. Fill at the sides of the pipe may be compacted by rolling or operating heavy equipment parallel with the pipe provided care is taken to avoid displacement of or damage to the pipe.

17. All backfill material shall be compacted to not less than 95 percent of AASHTO T 99, Method A.

18. If proof of proper compaction (compaction test) is not received by the City Engineer within six (6) months of the completion of the work, the contractor shall forfeit the two-year surety (required as part of the excavation permit) and may lose their utility license to perform work in the City.

19. Backfill material shall be brought to the bottom of the sub-base level. New roadway gravels and pavement shall be provided (See standard City details D-3 and D-4).

20. When a trench crosses a concrete sidewalk, the sidewalk shall be replaced, at a minimum, to the nearest abutting panel.

21. Trenching in sidewalks constructed with materials besides concrete shall be coordinated with the Community Services Department prior to the start of the work.

22. All disturbed sidewalks shall be replaced to meet minimum design standards, regardless of the condition of the existing sidewalk (See standard City details D-6, D-7, and D-9).

23. All curbing disturbed as part of an excavation shall be replaced to meet minimum design standards

outlined herein, regardless of the condition of the existing curb (See standard City details D-8). The curb reveal of the replacement curb shall match existing conditions.

24. Driveways or other private property disturbed in the course of the work shall be restored to a condition equal to or greater than the condition prior to disturbance at the expense of the Applicant.

25. All streets shall be swept and debris shall be removed in a timely manner regardless of notification from Community Services Department. If Community Services Department staff provides notification of the need for street sweeping, it must be completed within 24 hours of receiving the notice. All debris shall be disposed of in accordance with all applicable local, state and federal laws and regulations.

26. 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 two-year surety (required as part of the excavation permit). The City reserves the right to revoke future Excavation permitting privileges in the City of Dover for failure to complete additional work.

27. The City of Dover reserves the right to repair any trench at the expense of the permit holder if necessity or public safety dictates, due to failure of permit holder to repair, or due to permit holder failure to repair in timely fashion following notice. If, however, at the end of the two-year period, the excavation is deemed acceptable, the two-year surety (required as part of the excavation permit) will be refunded to the Applicant.

28. The Applicant shall bear the responsibility of repairing any existing utilities (City and non-City owned) damaged during the course of their work.

Traffic Control and Signage

1. All traffic control and signage shall 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 NHDOT “Flagger and Uniformed Officer Use in Work Zones policy”, current edition.

2. A traffic control plan detailing proposed detours, signage, and work zones, shall be submitted to the Community Services Department for approval at the time of applying for a permit to open and/or obstruct a street. The Community Services Department will try to review and approve the application within 5 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.

3. Maintenance of traffic shall be accomplished by the use of certified flaggers or uniformed police officers, wherever construction severely restricts the flow of traffic in frequently traveled roads, or as required for directing traffic through or around the work zone. 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

1. The aggregate courses shall be in accordance with NHDOT Section 304 and meet the minimum thicknesses in the City of Dover Standard Detail D-5.

2. Hot bituminous pavement shall be in accordance with NHDOT Sections 401 and 403 and shall be placed and compacted over the appropriate aggregate base courses in a minimum of two (2) courses (base/binder course, and a finish/wearing course).

3. The applicant, contractor, developer/owner, or their representative is responsible for designing the required pavement thickness, and shall meet the following standards:

    a. If the existing pavement thickness adjacent to a new pavement is greater than four (4) inches thick, a base pavement course may be required by the Community Services Department. The base course shall be 1" (25 mm) aggregate mix conforming to NHDOT 403.11013, the thickness shall be a minimum of 2.5”.

    b. The binder course shall be 3/4" (19 mm) aggregate mix conforming to NHDOT 403.11023, the thickness shall be a minimum of 2.5”.

    c. The wearing course shall be 1/2" (12.5 mm) aggregate wearing course mix, the thickness shall be a minimum of 1.5” conforming to NHDOT 403.11043.

4. The contractor is responsible for delivering to the Community Services Department the following:

    a. Gradation test of gravel, backfill, crushed gravel base and/or bank run gravel sub-base.

    b. Current lab proctor of gravel performed in accordance with ASTM AASHTO T99.

    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.

    d. NHDOT material approval of each course of pavement to be installed for the year in which the installation is to occur.

5. Underdrain and/or fabric may be added as conditions warrant. The City may request a review of questionable areas by a licensed geotechnical engineer at any time. Recommendations from the licensed geotechnical engineer shall be submitted to the Community Services Department for review.

Sidewalk Construction

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 Code for Barrier-Free Design for the State of New Hampshire Abfd 300 and the Public Right-of-Way Accessibility Guidelines (PROWAG) provided by the US Access Board.

3. ADA Accessible curb ramps shall be placed at all public and private street intersections and include cast iron detectable warning surface.

4. ADA Accessible curb ramp design shall be in accordance with the NHDOT standard details entitled "Sidewalk Curb Ramp Details" latest revision.

5. Sidewalk construction shall be in accordance with NHDOT Section 608 unless otherwise noted herein.

6. Concrete sidewalks shall be constructed of a minimum 3000 psi concrete, have synthetic fiber reinforcement, and shall be a minimum of 4" thick, with 6" at all tip-downs (See City standard detail D-6).

7. Bituminous asphalt sidewalks shall have a minimum of 2.5" total pavement thickness constructed in two (2) lifts (See City standard detail D-6).

8. Brick sidewalks shall be constructed in accordance with the City standard detail D-7 and include a 1.5" bituminous concrete base and 1" leveling course between the brick and 9" compacted crushed gravel (NHDOT 304.3) base course.

Curbing Construction

1. Curbing shall be new or reset granite curbing.

2. 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.

3. Curbing construction shall be in accordance with NHDOT Section 609 unless otherwise noted herein.

4. Curbing adjacent to sidewalks shall be vertical granite curbing (See City standard detail D-8).

5. Dimensions for vertical curbing shall be a minimum 5" x 17"

6. Sloped granite curbing may be used in areas without sidewalks adjacent to the curb (See City standard detail D-8).

7. Dimensions for sloped granite curbing shall be a minimum 5” x 12"

8. Granite curbing shall be set in concrete as shown on the City standard detail D-8 with a minimum of 6 inches of 3000 psi concrete in front, below, and behind the curb.

Driveway Construction

All driveways shall be constructed in accordance with, and meet all requirements of Chapter 157-50 of the City of Dover, NH Code.

Work on Municipal Utilities: Water

All work on municipal water lines shall be completed in accordance with Chapter 121 of the City of Dover, NH Code and the Dover Utilities Commission Rules and Regulations, latest revision. The contractor shall comply with the following rules and regulations:

1. No work on any water mains or water service line up to and including the water meter is permitted within the City of Dover, including working on private property, without first obtaining necessary permits, licenses, and paying any required DUC approved and mandated “Investment Fees” 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. Community Service Department inspections shall be completed during normal working hours (Monday through Friday, 8 am to 4 pm, excluding City recognized Holidays) at the cost of the Applicant.

3. Only City of Dover employees are authorized to operate valves, curb stops, and hydrants on both private and public water mains. Any contractor found to be operating any valves, curb stops, and/or hydrants on the Dover municipal water system may have their utility license revoked.

4. Planned water shutoffs require a minimum of 48-hour notification to all properties that will be impacted. Contractor shall coordinate with Community Services Department to determine if additional advanced notification would be required based on the types of properties impacted.

5. Water shutoffs shall not last more than 8 hours. The Community Services Department may require shutoffs to occur at night to minimize impacts.

6. All water fittings shall be North American made.

7. Water pipe 4" or greater shall be zinc coated poly wrapped ductile iron pipe.

8. Services less than 2” shall be type K copper pipe from curb stop to water main.

9. Services 2” in diameter shall be HDPE or plastic CTS pipe from curb stop to water main.

10. HDPE or Plastic pipe (CTS) must run continuously from curb stop to building with Cam Lock or compression fittings. Coordinate all water services with Community Services Department. Couplings will not be permitted.

11. All ductile iron water mains, including tees, gate valves, 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.

12. Ductile Iron Pipe shall be cement-lined Class 52 push type joints with rubber O-rings not exceeding 20 feet (20') in section length.

13. Polyethylene Pressure Pipe shall be rated for 160 to 200 psi, and shall meet or exceed AWWA C901 and C906.

14. 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.

15. Ductile iron tees, elbows and fittings - shall be mechanical, bolt-locking cement- lined class 350. All tees shall be "anchor tees". All ductile iron (DI) caps shall be restrained.

16. Gate Valves shall meet or exceed the requirements of AWWA C500.
    a. All valves must open counterclockwise (to the left).
    b. All valves shall have stainless steel nuts and bolts on the bonnet.
    c. All hydrant gate valves and hydrants shall be restrained.

17. All hydrants shall be Eddy 2641 and open left.

18. All water main shall receive a sand bedding and blanket from 6" below (12” in rock/refusal) to 12” around and above the top of pipe.

19. Tapping sleeve shall be stainless steel. All nuts, bolts and washers must also be stainless steel.

20. Curb box shall be sliding Erie type with rod.

21. Curb box shall not be placed in pavement or concrete unless written permission from the Community Services Department is provided and a roadway box is provided.

22. Mechanical Joint (MJ) adapters shall be used on all mechanical joint fittings when attaching to HDPE pipe.
23. When attaching HDPE pipe to existing pipe (ex: cast iron (CI), DI, asbestos cement (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.

24. 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, 2-inch rigid insulation shall be installed over the pipe.

25. Anti-seep collars or barriers shall be installed where a pipe greater than 6 inches in diameter passes through saturated/potentially saturated soils, or on slopes greater than 12 %.

26. Anti-seep collars or barriers should extend a minimum of 2 feet on all sides of the pipe.

27. Anti-seep collars or barriers maximum collar spacing should be 14 times the minimum projection above the pipe. The minimum collar spacing should be five times the minimum projection above the pipe.

28. All anti-seep collars or barriers and their connections to the conduit should be watertight and made of material compatible with the conduit.

29. Anti-seep collars should be placed a minimum of 2 feet from pipe joints unless flanged joints are used.

30. 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 around fitting as protection against damage from concrete block,
    e. Precast thrust block shall be a minimum of 2'x2' and include a lifting hook,
    f. Place a 12" long steel horseshoe-shaped pickup hook in all plug and cap thrust blocks,
    g. Diameter of hook shall be a minimum of 5/8",
    h. Concrete compressive strength shall be a minimum 2,000 psi,
    i. Use of thrust blocks does not eliminate the requirement of other restraints. **All valve and fittings shall be restrained mechanical joints.**

31. Sequencing water main construction shall be such that the use of couplings be minimized.

32. Water boxes shall be left flush with the finished grade.

33. HDPE pipe and fittings shall be installed, joined and handled in accordance with all manufacturer's recommendations.

34. All fusion work on HDPE pipe is to be done by a certified technician.

35. 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.

36. Service saddles shall be stainless steel double-strap and will be required on 2 inch or larger services on DI pipe.

37. Each building or unit (if not sub-metered) shall have a separate domestic and fire service entering the building. Each separate service shall have a gate or isolation valve located adjacent to the water main.

38. Air release corporations shall be required at all high points to release trapped air before testing.

39. Thirds party flushing, testing, and chlorinating of the pipeline shall be in accordance with AWWA C601 and AWWA C651 with results presented to Community Services.

40. 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.

41. Detectable Metallic Underground Tape shall be placed 18-inches below grade and above the water main.

Work on Municipal Utilities: Sanitary Sewer

All work on municipal sewer lines shall be completed in accordance with Chapter 121 of the Cityof Dover, NH Code, the Dover Utilities Commission Rules and Regulations, and the NHDES Standards of Design and Construction for Sewerage and Wastewater Treatment Facilities (Env-Wq 700). Additionally, the contractor shall comply with the following rules and regulations (any discrepancies between the regulations shall be brought to the attention of the Community Services Department prior to construction).:

1. If a property is served by public sewer but not public water, a water meter purchased from, and installed according to the specifications of, the City will be required to determine the amount of sewer usage.
2. Any expansion (addition of at least one manhole) of the City of Dover municipal sewer system will require approval from the Director of Community Services, or their designee and the NHDES.
3. No work on any sewer lines, up to the exterior of the building, is permitted within the City of Dover, including working on private property, without first obtaining necessary permits, licenses, and paying any required DUC approved and mandated “Investment Fees” as outlined in Section 1 of this handbook. Interior plumbing work may be subjected to plumbing inspections by the Office of Inspection Services.
4. 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 (Monday through Friday, 8 am to 4 pm) at the cost of the Applicant.
5. 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)
    - Polyethylene tubing for force main services from the sewer main to a private pump station shall be SDR9 CTS (black in color) rated for 250 psi and meet or exceed AWWA C901.
c. DI pipe - shall be class 52, push type joints with rubber O-rings

6. 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 either ASTM F1417 "Standard Test Method for Installation Acceptance of Plastic Gravity Sewer Lines Using Low-Pressure Air" or Uni-Bell PVC Pipe Association Uni-B-6, "Low-Pressure Air Testing of Installed Sewer Pipe"
    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 a CD-R/RW, DVD-R, External Hard Drive, or USB Flash Drive with individual digital files for each recording completed. Standing water within the pipes will be considered a failed inspection.
    c. All manholes shall be subjected to an air vacuum conforming to ASTM standards C-1244.
    d. All sewer mains are subject to mandrel testing for pipe deflection not less than 45 days after the backfill has been completed. Deflection shall not exceed 5 percent.

7. Sewer pipes within 10 feet of any building shall meet all applicable plumbing code requirements.

8. Connections between Schedule 40 pipe exiting the building to the SDR 35 pipe shall be made using a solid sleeve gasket connector. No glued joints are permitted outside of the building.

9. Sewer bedding and blanket material shall be clean ¾" crushed stone from 6" below (12" in rock/refusal) to 12" around and above the top of pipe.

10. Pipe shall be laid accurately to line and grade by use of a laser.

11. Anti-seep collars or barriers shall be installed where a pipe greater than 6 inches in diameter passes through saturated/potentially saturated soils, or on slopes greater than 12 %.

12. Anti-seep collars or barriers should extend a minimum of 2 feet on all sides of the pipe.

13. Anti-seep collars or barriers maximum collar spacing should be 14 times the minimum projection above the pipe. The minimum collar spacing should be five times the minimum projection above the pipe.

14. All anti-seep collars or barriers and their connections to the conduit should be watertight and made of material compatible with the conduit.

15. Anti-seep collars should be placed a minimum of 2 feet from pipe joints unless flanged joints are used.

16. 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.

17. All service connections in pipe shall be constructed using new manufactured fittings or saddles.

18. Any Asbestos Cement Pipe to be removed must be disposed of in accordance with all applicable local, state, and federal laws.

19. Sewer Manholes shall meet the following minimum standards:
    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 and made of plastic.
    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.
    h. 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 Transportation Standard Specifications Road and Bridge Construction.
    i. Reinforcing steel for poured-in-place concrete shall conform to the requirements of the New Hampshire Department of Transportation Standard Specifications Road and Bridge Construction for Billet-steel bars or Welded Steel Wire Fabric.
    j. Pre-cast concrete barrel sections, cones, and bases shall conform to ASTM C478 except as may be otherwise shown on the City standard details.
    k. 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. The hinge should be installed such that the hinge side is pointed to the direction of travel.
    l. 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.
    m. Concrete Manholes shall be coated in a bituminous coating as shown on the City standard details.

20. Precast bases shall be placed on an 8" layer of compacted ¾" crushed stone bedding material. The excavation shall be properly dewatered while placing bedding material and setting the base or

pouring concrete.

21. All pipe penetrations shall have flexible connectors with a wedge-type or toggle-type expander to secure the pipe in the structure opening. All manhole penetrations shall be patched around with non-shrink hydraulic cement on the inside of the manhole.

22. 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.

23. The concrete cone, for manholes set outside of paved surfaces, shall be set 6” above the finished grade to prevent infiltration, unless directed otherwise by the Community Services Department.

24. Detectable Metallic Underground Tape shall be placed 18-inches below grade and above the sewer main.

25. Sewer Pump Stations:
    a. Engineered plans and specifications, that meet the requirements of Env-Wq 705 shall be submitted for any Sewer Pump Station, whether public or private, to the Community Services Department and NHDES, as required, for review and approval prior to installing such station.
    b. All pump stations shall require either standby power, unless the pump station capacity is less than 100 gpm, in which case wet well storage over and above normal operating system storage may be provided. If wet well storage is provided, the additional wet well

storage volume, below all entering and exiting piping, shall provide at least 6 hours of flow detention at average daily flow. In addition, when wet well storage is provided, a suitable receptacle shall be included in the electrical supply panel for connection to a portable generator with manual transfer.

c. Larger pump stations (>100 gpm) and those to be accepted by the City of Dover must meet requirements of the City of Dover Community Services Department and may vary based on the demand and location. Prior to initiating design of this type of a pump station, coordinate with the Community Services Department.

26. All bedding material shall be placed on undisturbed native soil or suitably compacted fill.

Work on Municipal Utilities: Storm Drainage

All storm drainage work requiring approval from and located within the City of Dover shall be completed in accordance with Chapter 157-40 (B) of the City of Dover, NH Code. Stormwater designs shall be in accordance with the regulations outlined in Chapters 153 and 157 of the City of Dover, NH Code. Construction of the storm drainage structures shall meet the following minimum standards:

1. Minimum cover over drainage pipe shall be 3 feet unless approved.
2. 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.
3. 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.
4. Reinforced concrete pipe (RCP) shall be CLASS III minimum. Jointing shall be with rubber O-rings.
5. RCP or approved equal, shall be required in all locations with less than 18” of cover over the top of pipe.
6. Bedding material shall be clean, or washed, ¾” crushed stone 6" below (12” in rock/refusal), 12” around and over pipe, to 12" above the top of the pipe.
7. Pipe shall be laid accurately to line and grade by use of a laser.
8. Anti-seep collars or barriers shall be installed where a pipe greater than 6 inches in diameter passes through saturated/potentially saturated soils, or on slopes greater than 12 %.
9. Anti-seep collars or barriers should extend a minimum of 2 feet on all sides of the pipe.
10. Anti-seep collars or barriers maximum collar spacing should be 14 times the minimum projection above the pipe. The minimum collar spacing should be five times the minimum projection above the pipe.
11. All anti-seep collars or barriers and their connections to the conduit should be watertight and made of material compatible with the conduit.
12. Anti-seep collars should be placed a minimum of 2 feet from pipe joints unless flanged joints are used.
13. All drainage 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 a CD- R/RW, DVD-R, External Hard Drive, or USB Flash Drive with individual digital files for each recording completed. Standing water within the pipes will be considered a failed inspection.

14. All storm drainage mains are subject to mandrel testing for pipe deflection, at the contractor's cost, not less than 45 days after the backfill has been completed. Deflection shall not exceed 5 percent.

15. 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 maintenance hole 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 (measured from the invert of the outlet pipe to the bottom of the manhole).
    h. All catch basins shall have oil and debris separator hood on the outlet pipe.
    i. Manhole steps shall be used in manholes.
    j. Manhole steps shall be plastic.
    k. 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.
    l. Drop inlet structures shall be 24"x24" ID and shall be square and be 48" in height.

16. All storm drainage frames, grates, and covers shall be North American made.

17. 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. The hinge shall be pointed in the direction of oncoming traffic.

18. 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 NHDOT Type B cast iron frame and grate.

19. Precast bases shall be placed on an 8-inch layer of compacted ¾ inch stone bedding material. The excavation shall be properly dewatered while placing bedding material and setting the base or pouring concrete.

20. 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.
21. 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.
22. All drain lines 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, DVD-R, external hard drive, or USB flash drive with individual digital files for each recording completed.
23. Detectable Metallic Underground Tape shall be placed 18-inches below grade and above the storm drainage main.
24. All bedding material shall be placed on undisturbed native soil or suitably compacted fill.