THE METROPOLITAN DISTRICT

GUIDANCE MANUAL

Developer’s Permit-Agreements (DPA)

A basic primer to assist the Developer in the preparation of documents for a DPA, understanding the requirements and roles of the MDC, the Developer and Engineer, and realistic expectations for approval.

August 2014
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EXECUTIVE SUMMARY

The MDC has two methods by which new sanitary sewers or new water mains may be constructed. These methods are determined by who will actually pay for and perform the construction. In the case of property owners with existing development requesting sewers or water, the project is designed and constructed by the MDC under the assessable method. In the case of a Developer seeking permission to construct new sewers or new water mains and connecting to the MDC system ("Developer"), the Developer is granted permission for the connection under a Developer’s Permit–Agreement ("DPA") and then constructs the new facilities under the watch of the MDC.

The authority for the MDC to establish procedures and requirements for connections to its systems, whether water or sewer, is set forth in either the Ordinances of The Metropolitan District Relating to Water or the Ordinances of The Metropolitan District Relating to Sewers. All Ordinances of the MDC may be found on the MDC website at http://www.themdc.com/organization/aboutus.shtml.

In the case of a DPA where the new sewers or new water mains will be turned over to the MDC upon completion of construction, the MDC has established technical and administrative requirements for the design and construction of the new infrastructure that is the same as if the MDC were constructing the project itself. In other words, both the design standards and the quality of construction are monitored to the same standards, whether constructed by the MDC or by a Developer.

The MDC clearly recognizes the many steps that a Developer needs to take to get a project approved and constructed, both at the municipal level and with the MDC. This guidance manual has been prepared to assist Developers in understanding the entire process, to establish realistic time expectations, and to eliminate surprises as the process unfolds. It is the desire of the MDC to make the process as clear and concise as possible, all the while assuring that the system to be turned over to the MDC will be of a quality that protects the ratepayers of the MDC in the future years.

At any time in the process a Developer does not feel that this guidance document is sufficiently prepared, the MDC would be glad to receive comments on how it can be improved. Comments can be submitted to the District Clerk’s office at any time.
INTRODUCTION

The MDC wishes to set forth in detail the steps required for a Developer to secure approval for the construction of a new water line or new sewer, to understand all financial impacts and commitments, and to fulfill all legal requirements necessary for the agreement. In addition, the roles and requirements of the MDC during the construction and the testing of the new facilities prior to acceptance of the new facilities by the MDC will be explained in various sections of this guidance manual.

All of the requirements to be explained in this manual are authorized by the Ordinances of The Metropolitan District. This guidance manual will condense the details in these ordinances into a succinct “how to document” and will provide backup materials in the appendices that can be shared with the Developer’s design engineer and legal counsel. In case of any perceived ambiguity between the information within this guidance manual and any provision of the Ordinances of The Metropolitan District, the Ordinances take precedence. The guidance manual has been developed with typical projects in mind. Over time, there are likely to be nuances of projects that are not covered in this manual. However, the MDC is hopeful that the lines of communication have been clearly established such that the nuances can be quickly dealt with.

All Developers are required to attend a preliminary meeting with MDC staff prior to the formal filing of a DPA application. This meeting presents an opportunity to explain the project to the MDC, discuss the proposed schedule, confirm the need for a capacity analysis and review any of the details within this guidance manual that will assist the Developer and its engineer in understanding the processes. To request such a meeting, the Developer should call the District Clerk at 860-278-7850 x 3207. The District Clerk will then coordinate a meeting with the appropriate MDC staff.

The appendices include all forms, applications, and other directives that will assist the Developer and its engineer during the course of securing a DPA, constructing the project and securing acceptance of the facilities by the MDC. Please review these documents prior to initiating a DPA application as it will facilitate a more complete application and shorten the overall review time. Diligence on behalf of the Developer, its engineer and the staff of the MDC will reduce the amount of time it takes to conclude a DPA. The MDC is committed to achieving this objective with the assistance of the Developer and its engineer.

Point of contact for the MDC prior to the assignment of an MDC Project Manager is the District Clerk. Upon the assignment of an MDC Project Manager (PM) after the filing of a DPA application, the point of contact will shift to the assigned PM. During construction of the project, the point of contact will shift to the Construction Services Inspector. The Inspector will be assigned during the pre-construction job conference.
PROCESS FLOW CHART AND PROCEDURES FOR WATER OR SEWER MAIN INSTALLATION BY THE DEVELOPER’S PERMIT-AGREEMENT METHOD

Included within the appendices of this guidance manual is a detailed outline of the numerous steps required to successfully navigate the DPA process - one for water mains and one for sewers. The steps within the procedures for water mains and for sewers include many internal MDC steps that a Developer and its representatives would not normally see. These have been included in order for the Developer to fully understand the requirements of the MDC and to give the Developer an appreciation of the time that it takes for the staff to conduct its review. During the development of this guidance manual, staff has made an effort to streamline the process as much as possible while still meeting the requirements of the District Ordinances.

The same detailed procedures have been condensed into a flow chart that highlights the key points of the process. At any point in the process, one can identify where a current project is and can then refer to the procedures list to see the detailed steps occurring at that time in the overall process.
DPA FLOW CHART*

**Pre-DPA Application**
- Developer submits information on proposal and water and sewer needs to MDC
- Preliminary meeting with MDC staff (required) - discuss need for availability & capacity analysis
- MDC performs or arranges for availability & capacity analysis at developer’s cost
- If MDC determines a DPA is needed, proceed to DPA process
- If MDC determines a DPA is NOT needed, Developer obtains connection permits from MDC Utility Services at 60 Murphy Rd., Hartford

**DPA Application Process**
- Developer submits complete application to District Clerk with $2,500 deposit per utility
- MDC process initiated:
  - PM is assigned
  - Deposit check is deposited
  - Accounting codes established
  - Plans distributed within MDC
- Technical review of plan is conducted: **
  - Is design adequate?
  - Is design consistent with MDC technical standards?
  - Have approved materials been utilized?
  - Is construction phased?
- Concurrently, administrative review conducted:
  - Calculate outlet charges and reimbursable deposit costs
  - Verify certificate of title
  - Review easement documents, if applicable
- PM submits review comments to Developer
- Developer/engineer reviews and responds to MDC comments with revised plans and other requested documents
- PM notifies Developer that plans are acceptable
- Developer submits estimate of construction costs, final easement documents, co-developer information, if applicable and if outlet charges are to be deferred.
- District Clerk prepares DPA document
- DPA document executed when checks for reimbursable deposit costs, retainage and connection charges are submitted.

**Post-DPA Execution/Pre-Construction**
- Developer submits pre-construction job conference materials
- MDC PM schedules pre-construction job conference
- Pre-construction job conference held
- Developer secures permits for main line construction from MDC Utility Services (sewer only)
- Testing of completed pipe is conducted by Developer and monitored by MDC
- MDC issues Partial Certificate of Completion and establishes dates of one-year maintenance period

**Construction**
- Construction initiated
- MDC inspects during construction
- Pipe construction completed
- Testing of completed pipe is conducted by Developer and monitored by MDC
- MDC issues Partial Certificate of Completion and establishes dates of one-year maintenance period

**Acceptance of Infrastructure**
- Developer conducts final testing (sewer only) and completes punch list items
- MDC inspects and issues Full Certificate of Completion
- Infrastructure accepted by MDC
- Unused deposit funds returned to Developer

PM submits review comments to Developer
- Developer/engineer reviews and responds to MDC comments with revised plans and other requested documents
- PM notifies Developer that plans are acceptable
- Developer submits estimate of construction costs, final easement documents, co-developer information, if applicable and if outlet charges are to be deferred.
- District Clerk prepares DPA document
- DPA document executed when checks for reimbursable deposit costs, retainage and connection charges are submitted.

* Detailed procedures may be found in Appendix A (Sewer) and Appendix B (Water)

** For larger projects, a preliminary design meeting at 60% design stage with MDC may be required
GENERALIZED TIMELINE AND EXPECTATIONS

Conflicts and misunderstandings can be eliminated or greatly reduced if all parties understand the processes required and the timelines normally expected. As presented here, these timelines are considered the norm and should assist all parties in establishing expectations. Some projects can be completed faster than the norm while others may take longer due to many factors, including but not limited, the completeness of the design, compliance with the technical and material standards of the MDC, documentation of easements and establishment of charges and other project deposits. With the Developer and its staff seeing the complete picture, they can simultaneously execute some of the steps by different members of the Developer’s team, prepare materials for the pre-construction conference at an earlier date and select a construction contractor that can meet all of the requirements for bonding, insurance and licensing.

<table>
<thead>
<tr>
<th>Step</th>
<th>Typical timeline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-Application Meeting</td>
<td>1 week</td>
</tr>
<tr>
<td>Availability and Capacity analysis</td>
<td>6-8 weeks</td>
</tr>
<tr>
<td>Application preparation*</td>
<td>4 weeks</td>
</tr>
<tr>
<td>Distribution of application and assignment of Project Manager</td>
<td>1 week</td>
</tr>
<tr>
<td>Technical and fiscal review</td>
<td>8-16 weeks (highly dependent upon adequacy of original submittal and complexity of the project)</td>
</tr>
<tr>
<td>Execution of DPA</td>
<td>2 weeks</td>
</tr>
<tr>
<td>Developer submits job conference materials*</td>
<td>2 weeks</td>
</tr>
<tr>
<td>Job conference scheduled and held</td>
<td>1 to 2 weeks</td>
</tr>
<tr>
<td>Permit for construction secured</td>
<td>1 week</td>
</tr>
<tr>
<td><strong>Overall timeline from initiation of DPA process to the start of construction</strong></td>
<td><strong>27 to 37 weeks</strong></td>
</tr>
<tr>
<td>Construction of project</td>
<td>Job specific</td>
</tr>
<tr>
<td>Final inspection/approval of completed project and issuance of partial Certificate of Completion</td>
<td>3 weeks</td>
</tr>
<tr>
<td>One-year maintenance period</td>
<td>1 year</td>
</tr>
<tr>
<td>Issuance of full Certificate of Completion and acceptance of project by MDC and return unused deposit</td>
<td>3 to 6 weeks after completion of final paving</td>
</tr>
</tbody>
</table>

*Strictly within the control of the Developer.
TECHNICAL AND EASEMENT REVIEW PROCESS

Subsequent to the submittal of a DPA application and the deposit check of $2,500, the District Clerk will forward the application to the Manager of Technical Services for assignment of a Project Manager (PM). The PM conducts an initial technical review and forwards copies of the construction plans to other units within MDC for further review. Other units conducting reviews include Utility Services (the unit that provides the permit for the main line construction and house connections), Construction Services (the unit that provides construction oversight including a construction inspector), Operations (the unit that oversees the accepted water main) and Maintenance (if a pump station is involved in the project as this unit is responsible for the final operation and maintenance of the pump station). The Developer need not coordinate with these other units as this is the responsibility of the PM. The PM will compile all of the comments and submit one review letter and one set of construction plans with comments back to the Developer and the Developer’s engineer for responses.

The technical review will cover the following items:

- Is the design consistent with the MDC technical standards? (more on this to come later)
- Does the design reflect the use of only MDC approved materials? (more on this to come later)
- Has the service area of the infrastructure been adequately identified, including all future upstream service areas, in order to properly size the mainlines? Where MDC will assume ownership at a later date, the facilities must be sized to provide capacity for not only the development under consideration, but also for other areas that logically should be or could be connected in the future. To this end, the Developer’s engineer should submit as part of the application a service area map and flow rate projections that identifies other properties that can potentially be serviced by this project. This service area map will also be utilized by the MDC’s Real Estate technician to determine necessary easements and charges.
- In the case of sewers, has a determination been made that the downstream facilities have adequate capacity to accept the new flows without any surcharging or overflows? It is possible that some downstream improvements may be required in order to serve the new development.
- In the case of water, has the necessary infrastructure been provided that was identified in the availability and capacity analysis?

The PM will also forward the construction plans to the MDC’s Real Estate technician whose responsibilities are to:

- Verify that the certificate of title on the subject property is valid.
- Determine if easements are necessary for both the construction and future maintenance of the infrastructure and if so, that proper documentation of the easements are submitted. The Real Estate technician will forward his or her findings to the PM who will then forward them to the Developer and its attorney for a response if necessary. Upon receipt of satisfactory, signed
documents, the Real Estate Technician will file the easements on the municipal land records soon after the DPA has been executed.

- The Real Estate technician will review the service area and the project and determine what connection charges will be levied on the project. Again, the Real Estate technician will forward his or her findings to the PM and the District Clerk.

- The Real Estate technician and the District Clerk will review the Developers proposed cost sharing agreement if other properties have access to the proposed facilities. The District Clerk will forward any comments on the cost sharing agreement to the developer.

**FISCAL REQUIREMENTS**

At the time of the filing of the DPA application, a $2,500 deposit for each proposed facility (either water or sewer) is required as part of the application. The next step in the process for the submittal of additional deposits is at the time the actual agreement is signed. The submittal of the deposits is a prerequisite for the signature of the authorized MDC representative on the DPA.

The following is a description of the potential charges and an explanation as to how they are calculated. Note that all such charges may not be applicable to each project. The amount of the charges will be calculated and notification sent to the Developer during the review process of the DPA application.

**Reimbursement of MDC staff salaries and expenses:** Utilizing a standard spreadsheet for the calculations, the PM will calculate the expected costs to be incurred by the MDC that are to be recovered from the Developer per Section S30 of the Ordinances of the Metropolitan District Related to Sewers.

**5% retainage:** The costs used to determine a 5% retainage is predicated on the estimate of construction costs provided by the Developer and reviewed/modified per the MDC. At the end of the one-year maintenance period, any remaining funds from the deposit for reimbursement of staff expenses and the 5% retainage (if unused) are returned to the Developer upon acceptance of the infrastructure by the District.

**Deferred Charges:** This assessment may be required if charges from a previous project were deferred because the previous project was increased in size to handle the flows from a proposed development under the DPA. This deferral is permitted under Section S7c of the Ordinances of the Metropolitan District Related to Sewers. It is unlikely that the Developer would know of these potential charges until such time as the DPA application was being reviewed. If applicable, the Developer will be informed of these charges through the Real Estate Technician.
Outlet Charges: Per Section S8f of the Ordinances of the Metropolitan District Related to Sewers, outlet charges are established by the Bureau of Public Works for outlet into the District’s sewerage system. Outlet charges may be paid at the time of execution of the DPA or deferred until the time that the house connection permits are issued. Outlet charges are currently:

- $1,655 per housing unit
- $1,275 per lateral connection to the property line
- $8,270 per acre for industrial or commercial zoned lands

Flat charge for deferral of outlet charges: To cover additional administrative and recording fees when charges are deferred, the MDC is authorized to recover these costs through a flat charge per lot or per parcel of land per Section S8f of the Ordinances of the Metropolitan District Related to Sewers. These charges are currently $125 per lot.

Frontage charge: Per Section W3b of the Ordinances of the Metropolitan District Relating to Water Supply, new water mains are charged on a front foot basis. The current charge is $41.00 per foot.

High service charge: Per Section W9a of the Ordinances of the Metropolitan District Relating to Water Supply, an additional charge of $1.00 per foot is levied if the new mains are within an area designated as a high-pressure area.

TECHNICAL STANDARDS

Technical Standards - Sewer

Under the Connecticut General Statutes and in other New England states as well, the State environmental regulatory agency can demand the review and approval of the design of sewerage systems. In order to properly design, construct, maintain and operate wastewater systems and to establish consistency in the design of sewerage systems whether in Connecticut or any other New England state, the New England Interstate Water Pollution Control Commission, a compact of the six New England states as well as New York, has developed the “Guides for the Design of Wastewater Treatment Works”. Commonly known as TR-16 (Technical Report #16), the guide is utilized by all wastewater design professionals, including consulting engineers, municipal officials, state regulators in all New England states and EPA Region 1 as the standard to which designs are developed. For clarity, TR-16 not only covers wastewater treatment systems, but it also covers sanitary sewer/wastewater collection systems as well as wastewater pump stations.

The MDC has adopted TR-16 as the technical guide for all sewerage systems that are to be a part of or connected to the MDC sewerage system, whether designed directly for the MDC or designed by others. The MDC has also established more specific standards in key areas of concern for the MDC. The more specific technical standards can be found in the appendices under Sanitary and Storm Drain Connection Manual.
Technical Standards – Water

Under the Connecticut General Statutes, public drinking water is regulated by public health codes of the Connecticut Department of Public Health (DPH) and the Environmental Protection Agency (EPA) to assure the quality and adequacy of our State’s public drinking water sources. All design and materials used to construct a water supply and distribution system shall conform to the latest standards of the American Water Works Association (AWWA) and/or National Sanitation Foundation (NSF) / American National Standards Institute (ANSI).

MATERIAL STANDARDS

The overall quality and longevity of any sewerage or water system is a combination of the design, the quality of construction and the quality of the materials utilized. Longevity is a critical issue for any municipality in the development of its wastewater or water infrastructure, which is often the most expensive capital undertaking of any infrastructure that a municipality pursues. Due to its high capital expense and expected design life of over 50 years for sanitary sewers and over 100 years for water mains, the materials utilized in construction are critical to achieving a long design life. To this end, and similar to the technical standards, the MDC has adopted a list of specific materials required to be utilized for all sewerage systems and water systems that are part of the MDC system, whether constructed by the MDC or constructed by others. The material standards can be found in the appendices.

COMMUNITY SEWERAGE AGREEMENT

Not all portions of a sewerage system to be built by a Developer are required to be turned over to the District for ownership and future operation and maintenance. For example, in the case of a large condominium project where there are private interior roads, the ownership of the sewers and any associated pump station(s), if necessary, will most likely remain with the Developer during construction and with the condominium association thereafter. In these cases, state statute (CGS Section 7-246f) requires the signing of a community sewerage agreement between the Developer and the District. Whether all or portions of a proposed sewerage system are to be turned over to the District, the District requires that all sewerage systems be constructed to the same technical and material standards as noted above. If applicable, during the technical review of the DPA application, discussions will occur with the Developer about the need for a community sewerage agreement.
CONSTRUCTION REVIEW PROCESS

Following the signing of the DPA, the Developer shall submit all of the job conference requirements applicable to the specific project to the PM prior to the scheduling of the pre-construction job conference. See the appendices for “Pre-Construction Job Conference Submittal Requirements” for the list of documents needed for the job conference. Upon receipt of the documents from the Developer by the PM, the PM will schedule the job conference. At this point, an Inspector from the MDC’s Construction Services unit will be assigned to the project and attend the job conference. Also invited to the job conference will be the Developer, its construction contractor, the Town Engineer or Director of Public Works, the local fire marshal (if the project is water), other utilities as necessary, and representatives of MDC units, including Utility Services, Construction Services, Maintenance and Operations.

Items included in the agenda for the job conference include, but are not limited to, television inspection standards (sewer), air test standards (sewers), disinfection methods (water), directives for excavation and trench safety, insurance requirements and bonding requirements of the construction contractor, town excavation permits, “Call Before You Dig” assigned number, copies of plumbing licenses of individuals performing the pipe installation, the name and license of the surveyor conducting the stakeout, the identification of the Developer’s OSHA competent person, proposed phasing of construction, if any, and the specific street addresses of future connections to the sewer or water main.

With an early understanding of what is covered at the pre-construction job conference and knowledge of who will be attending, the Developer and its construction contractor can prepare documentation for the conference well in advance of the establishment of the conference date and can submit all of the required documents shortly after the signing of the DPA.
DOCUMENTS TO BE PREPARED BY THE DEVELOPER AND SUBMITTED TO THE MDC

Below is a list of documents to be prepared by the Developer or the Developer’s representatives and supplied to the MDC at various steps in the overall process.

Pre-Application Period:
- Documentation for availability and capacity analysis
- Map of service area

Application Period:
- DPA application
- $2,500 deposit check(s)-one for water and one for sewer
- Four sets of stamped construction plans of the infrastructure; five sets if a pump station is included
- Documentation of Planning and Zoning approval of the development
- Certificate of Title to the subject property(ies)
- Co-Developer cost sharing agreement, if applicable
- Two sets of revised construction plans to show changes per comments from MDC
- Eight sets of final construction plans after MDC accepts the revised construction plans.
- One set of Mylars
- One CD of construction plans
- Initial easement documentation

Permit Agreement Period:
- Estimate of construction costs of the infrastructure
- Determination if outlet charges are to be deferred
- Deposits for MDC incurred costs
- Payment of connection charges
- Copies of final easements and tax conveyance form

(List continues next page)
Pre-Construction Job Conference:
- Evidence of proper insurance from contractor
- Evidence of bonding from contractor, if required by the District
- Copies of municipal and/or state excavation permits
- “Call Before You Dig” assigned numbers
- Contractor’s emergency contact information
- Copies of contractor’s employees P-1 or P-7 licenses
- Name of surveyor and surveyor’s license number
- Identity of contractor’s OSHA competent person
- Addresses of future connections to the infrastructure
- Plans for phasing of the construction, if applicable
- Planned start date for construction

Construction Period:
- Application for main line construction permit, after pre-construction job conference
- Line and grade stake out from surveyor including cut sheets

Acceptance Period:
For sewers:
- CDs of closed circuit television inspection of sewer
- Low-pressure air test documentation
- Additional deposit for MDC incurred costs, if due
- Lateral connection charges, if Developer is making connections and such charges are due

Project Closeout Period Following One Year Maintenance Period:
- CDs of closed circuit television inspection of sewer
DOCUMENTS TO BE PREPARED BY THE MDC AND OTHER ACTIONS REQUIRED BY THE MDC

Below is a list of documents to be prepared by the MDC and supplied to the Developer at various steps in the overall process and actions required by the MDC.

Pre-Application Period:
- District determines if capacity analysis is required

Application Period:
- PM reviews application materials upon submittal and notifies Developer if any are missing

Review Period:
- Compilation of all review comments on the construction plans
- Determination if a public hearing is required
- Notification of connection charges
- Comments on easement documents, if applicable
- Conditional approval letter

Permit Agreement Period:
- Draft of DPA
- Request for deposit of MDC incurred costs and any connection charges
- One copy of original DPA upon execution

Pre-Construction Job Conference Period:
- Date of pre-construction job conference
- Minutes of job conference

Acceptance Period:
- Notice of deficiency of deposit, if any, at beginning of maintenance period
- Notification that connections can be made to infrastructure
- Punch list of items for correction on the project
- Release of any unused funds back to Developer after acceptance of the infrastructure
ROLES AND RESPONSIBILITIES OF VARIOUS MDC UNITS

During the course of seeking approval of a DPA and constructing the facilities to ultimately be turned over to the MDC, a Developer and its consultants will have interactions with numerous units within the MDC. An understanding of who is in charge of the project at MDC and the specific MDC staff that Developer should be interacting with at various steps of the DPA process is essential. To assist with an understanding of the various units within the MDC that Developers will have contact with, a brief description of each unit is provided below along with when in the process the Developer will likely have contact with them.

District Clerk: located at MDC Headquarters at 555 Main Street, Hartford, the District Clerk is involved in administrative steps of the process including acting as the authorized representative to sign the DPA. As specified in the procedures, the District Clerk is the entity to receive all DPA applications and will have numerous contacts with the Developer during the review and signature of the DPA and will assist with the close out of the project with the acceptance of the final infrastructure. During the actual construction stage, the District Clerk has no role. The telephone number for the District Clerk is 860-278-7850 x 3207.

Real Estate Technician: located at MDC Headquarters at 555 Main Street, Hartford, and working under the supervision of the District Clerk, the Real Estate Technician is responsible for determining all connection charges due to the MDC from the Developer, reviewing the adequacy of the easements and filing such documents on the land records once the DPA has been signed. The Real Estate Technician involvement with the project should be finished with the signing of the DPA.

Project Manager: located at MDC Headquarters at 555 Main Street, Hartford, the Manager of Technical Services will assign a Project Manager (PM) upon receipt of the DPA application from the District Clerk. The PM is involved throughout the entire process, however, with a lesser role in construction. The PM is the primary contact person for the Developer. The telephone number for any PM can be found under the agency directory by calling 860-278-7850.

Utility Services: located at 60 Murphy Road, Hartford, a representative from Utility Services will be reviewing the construction plans and providing comments to the PM. The Developer does not interact directly with Utility Services during the approval of the design. Utility Services is back in the process during the pre-construction conference as well as when the Developer secures permits at the offices of Utility Services for the mainline facility excavation and for connections to the mainline facility. Utility Services is actively involved in the details of the actual connections to the mainline as this unit will respond in the future to any future issues related to connections. The telephone number for Utility Services is 860-278-7850 extension 3600.
**Construction Services**: located at 231 Brainard Road, Hartford, a representative from Construction Services will review construction plans and provide comments to the PM. The Developer does not interact directly with the engineer from Construction Services during the approval of the design. Construction Services is back in the process as the primary contact for the Developer during the pre-construction conference and actual construction. An inspector from Construction Services is assigned to the project at the time of the pre-construction conference and will be responsible for monitoring the construction up until the final pavement is installed. Construction Services is involved with the MDC acceptance of the infrastructure and with the project closeout at the end of the maintenance period. The telephone number for Construction Services is 860-278-7850 x 3708.

**Operations**: located at 125 Maxim Road, Hartford, a supervisor from the Repair Department will schedule mainline taps with District crews upon the Developer’s contractor calling to confirm the dates he/she will be ready for the taps on the water mains. The Developer’s contractor is responsible for excavating the trench around the water main and is reminded that the Repair Department will only enter a safe trench per OSHA standards. It is important to note that the taps can only be arranged through the Developer’s contractor and the Repair Department Supervisor; no other entity can schedule this work. The telephone number for the Repair Department is 860-278-7850, ext. 3627; if no one answers the phone leave a message and someone from Repair will return the call prior to scheduling taps.

**Maintenance**: located at 240 Brainard Road, Hartford, the Maintenance Department reviews water and sewer pump station construction drawings and specifications. The Maintenance Department also reviews and approves submittals for all equipment and components within the pump stations. Subsequent to constructing the pump station, the Maintenance Department will perform a final inspection to ensure the pump station was constructed to District standards. This includes observing the generator load bank test, pump controls and alarm checkout. The Construction Services Inspector will make arrangements with the Maintenance Department Manager when the pump station is ready for final inspection. The telephone number for the Maintenance Department is 860-278-7850, ext. 3660.
HOW A PROJECT IS ACCEPTED AND THE INFRASTRUCTURE TURNED OVER TO THE MDC

Following the completion of construction of the infrastructure, there is a specific process to be followed that will determine the acceptance of the infrastructure by the MDC. The process is summarized here. To see the specific steps in more detail, please refer to either the “Procedure for Sewer Main Installation by Developer’s Permit-Agreement Method” or “Procedure for Water Main Installation by Developer’s Permit-Agreement Method”.

MDC ACCEPTANCE OF SEWER MAIN

Upon completion of construction, the Developer’s contractor has the sewer main inspected by closed circuit TV and performs a low-pressure air test under the supervision of the District’s Inspector. Upon review of the CCTV tape and a review of the low pressure air test results, the Inspector makes a recommendation to conditionally approve the mains. The MDC then issues a partial Certificate of Completion provided the 5% retainage is held by the MDC. The District determines the date of the start of the maintenance period in the partial Certificate of Completion. Once the partial Certificate of Completion is issued, connections can be made to the sewer during the one year maintenance period.

During the one year maintenance period, the Developer is responsible for all maintenance of the infrastructure. At the end of the one year maintenance period, the Developer calls MDC Construction Services for a final inspection.

Following the one year maintenance period, the Developer conducts a second closed circuit TV inspection of the sewer and upon review of the CCTV tape, the District’s Inspector recommends acceptance of the infrastructure. The Director of Engineering then issues a full Certificate of Completion upon which the District staff recommends acceptance of the infrastructure to the Bureau of Public Works.

Upon a positive vote of the Bureau of Public Works, the matter is referred to the District Board of Commissioners (“Board”) for final action and, upon an affirmative vote of the Board, the infrastructure is accepted, ownership retained by the District, and any remaining amounts of deposits and retainage funds are returned to the Developer.
MDC ACCEPTANCE OF WATER MAIN

Upon completion of construction, the water main is filled, flushed and then disinfected by the Developer’s Contractor under the supervision of the District’s Inspector. The MDC Inspector then collects samples for analysis. If the samples pass all standards, the MDC issues a partial Certificate of Completion (provided 5% retainage is held by the MDC) which allows the main to be placed into service and connections made to the main.

One year maintenance period starts upon the issuance of the partial Certificate of Completion where the Developer is responsible for all maintenance of the infrastructure during the one year maintenance period. At the end of the one-year maintenance period, the Developer calls MDC Construction Services for a final inspection. MDC then conducts a second inspection and if the second inspection notes no problems, the Director of Engineering issues a full Certificate of Completion.

Upon issuance of the full Certificate of Completion, the water main may be accepted as MDC infrastructure and any remaining deposits and retainage funds are returned to the Developer.
APPENDICES
Appendix A: Procedure For Sewer Main Installation By Developer’s Permit-Agreement Method

May 24, 2014

Pre-Application Process

1. Developer downloads the MDC’s Guidance Manual on the requirements of a DPA from the MDC website.

2. Developer is required to conduct a preliminary meeting with appropriate District staff to discuss the project, the application process and the necessity of a capacity analysis of downstream facilities (determination of capacity analysis is made by MDC). Developer shall contact Engineering and Planning by phone at 860-278-7850 x 3445 to schedule the preliminary meeting. Developer to supply preliminary site plan/layout, service area, sewer flow calculations, and anticipated construction schedule.

3. At preliminary meeting, PM, in conjunction with the Real Estate Technician, advises Developer of co-Developer potential.

4. If a capacity analysis is required, the Developer shall follow the procedures outlined in the “Availability and Capacity Analysis by the Metropolitan District” in Appendix G. The cost of the analysis will vary depending upon the complexity of the proposed project and the use of the demand model. The Developer is responsible for the costs incurred by the MDC in conducting the analysis. The Developer will be required to deposit the estimated costs with the District prior to the analysis moving forward as specified in the Appendix G of the Guidance Manual for DPAs.

Application Process

5. In cases of large or complex projects, the Developer should consider submitting a preliminary design review at the 60% design stage prior to the submittal of a DPA application.

6. Developer submits a completed DPA Application Package to the District Clerk. Application package includes certified deposit check of $2,500 for each utility, made out to The MDC (if both water and sewer, separate checks are required), Certificate of Title, four sets of Connecticut Professional Engineer stamped construction plan and profile drawings (five sets of construction plan and profile drawings if project includes a pump station), documentation of municipal planning and zoning approval of the project and draft easement documents, if applicable.

7. District Clerk logs application and forwards application package to Manager of Technical Services (District Clerk retains the check until Step 12 below).
8. Manager of Technical Services assigns a Project Manager (PM) and transfers application package to the assigned PM. PM creates administrative checklist for use throughout the process.

9. PM reviews application package for completeness and technical thoroughness and notifies Developer if any documents are missing. If application package is seriously deficient, PM notifies Developer that review will not commence until deficiencies are corrected.

10. PM emails project information (Name of Developer, Developer’s mailing addresses, name of project, town, whether water mains, sewer or both) to MDC General Accounting.

11. General Accounting creates project code and emails project code to PM and District Clerk. PM then emails accounting information for job expenses to Real Estate Technician, GIS, Operations, Utility Services, Construction Services and Maintenance (only if a pump station is included).

12. District Clerk completes cash receipt memo and sends the original memo with a copy of check(s) to General Accounting. District Clerk must provide copy of memo with original check(s) to Treasury for deposit.

13. General Accounting creates fund account (“parks” accounts receivable) and brings cash receipt memo to Treasury upon which Treasury deposits check.

14. PM distributes construction plans to Maintenance (only if a pump station is included), Operations, Utility Services, and Construction Services for peer review and establishes time schedule for submittal of review comments back to PM. PM forwards the Certificate of Title for the subject property to District’s Real Estate Technician. PM also distributes easement documents, if applicable, to Real Estate Technician for review and establishes time schedule for submittal of review comments back to PM.

Review Process

15. PM conducts own technical review of the proposed sewerage system including determination of service area, review of capacity analysis, adequacy of design against MDC adopted technical standards and use of only District approved materials.

16. Developer makes determination if there will be co-Developers. If so, Developer submits cost sharing agreement to District Clerk and PM.

17. If needed, PM makes recommendation if public hearing is to be held to District Clerk. If District Clerk concurs that public hearing is required, District Clerk completes the public hearing process.

18. Comments are sent back to the PM from Operations, Utility Services, Construction Services, and Maintenance (only if a pump station is included) within the specified schedule.

19. PM reviews all comments from peer reviews and forwards a compiled comment letter to Developer’s design engineer with a copy to the Developer for requested revisions to the plans.
as well as copies back to Operations, Utility Services, Construction Services and Maintenance (if applicable).

20. PM requests Technical Services to draft the Project Summary Plan per District standards.

21. Real Estate Technician verifies Certificate of Title, determines if connection charges, outlet charges and/or deferred assessments are due, determines if there are any other affected properties and issues memo to PM, Utility Services and District Clerk on findings. PM relays information from Real Estate Technician to Developer and requests a determination from the Developer as to whether the outlet charges will be paid or deferred.

22. Real Estate Technician reviews easement documentation and easement map, if applicable, and submits comments back to Developer with a copy to the PM of any further documentation required.

23. Developer submits revised easement documentation to Real Estate Technician (one signed and notarized original and one copy of applicable easement documents, one signed and stamped Mylar easement map and completed Tax Conveyance Form).

24. Developer informs PM whether outlet charges will be deferred or not.

25. Developer’s design engineer submits two sets of revised plans to the PM that address all comments as well as including appropriate notations on the plans (“starred” properties) if the outlet charges are to be deferred. Submittal shall include a listing of all of the MDC comments and the changes made to each comment. PM reviews and either determines plans are satisfactory or returns plans to Developer’s design engineer with additional comments. PM confers with peer reviewers as necessary to assure that comments have been adequately addressed.

26. Once plans are satisfactory, PM prepares conditional approval letter for Director of Engineering’s signature. Upon signing of letter, PM sends conditional approval letter to Developer’s design engineer for preparation of final plans, to include appropriate signatures of Town Engineer or other town official and Developer.

27. PM requests from Developer a construction cost breakdown of the project in a manner similar to Appendix O (Sanitary Sewer Deposit Calculation) in order to calculate retainage amount.

28. Developer submits construction cost breakdown to PM and PM reviews and modifies as necessary if construction cost breakdown was unreasonable based upon District experience.

29. Developer’s design engineer creates eight (8) sets of final construction plans and one Mylar set and returns them to the District (PM) with a CD containing the AutoCAD drawing file (.dwg) consistent with MDC CADD standards. Construction plans shall be stamped by a Connecticut Licensed Professional Engineer.

30. PM distributes final construction plans and Project Summary Plan (internal MDC document) to Utility Services, Construction Services and Maintenance (only if a pump station is included).
31. PM meets with MDC Risk Manager and PM/Assistant District Counsel to review levels of insurance required in the DPA. Upon consensus, PM/Assistant District Counsel to include appropriate insurance levels in the draft DPA.

**Permit-Agreement**

32. PM estimates MDC direct and indirect costs associated with the DPA for the purpose of calculating the additional deposit for the reimbursement of staff time expended on the project as well as the 5% construction retainage. PM uses standard spreadsheet for calculations including average hourly rates for MDC personnel classifications as provided by General Accounting.

33. PM forwards second deposit calculations to Manager of Technical Services for approval.

34. Upon concurrence from Manager of Technical Services, PM forwards documentation for second deposit due to District Clerk. PM/Assistant District Counsel drafts the DPA utilizing approved format based upon relevant information from PM and Real Estate Technician.

35. PM/Assistant District Counsel sends letter to Developer informing it that the agreement is ready to be signed and requests second deposit/charges based upon calculations prepared by PM/Real Estate Technician and property addresses of future connections.

36. Developer and PM/Assistant District Counsel agree on either a meeting or mail delivery of documents to secure signatures.

37. Developer delivers second deposit and charges by means of two certified checks (one for deposit and one for charges; if both water and sewer, separate sets of checks are required) along with property addresses of future connections to District Clerk and signs two copies of DPAs (signatures of both the Developer and the Developer’s contractor are required and need to be notarized.) District Clerk signs DPA on behalf of the District. One original fully executed copy is given to the Developer and the District Clerk retains the other original executed copy.

38. District Clerk notifies PM (if PM not present at signing of DPA) that DPA has been fully executed and forwards property addresses of future connections and electronic copy of DPA to PM and Utility Services, while retaining the checks. District Clerk completes cash receipt memo and sends the original memo with copy of check(s) to General Accounting. District Clerk must provide copy of memo with original check(s) to Treasury for deposit.

39. District Clerk directs Real Estate Technician to file final easement documents on the land records. Real Estate Technician then files easements on the land records.
Pre-Construction

40. The Developer’s job conference requirements include documentation of insurance requirements, bonding requirements, town excavation permits, Call Before You Dig assigned number, contractor’s emergency contact information, contractor’s Connecticut P-1 or P-7 licenses, all subcontractors and employees appropriate plumbing licenses (P-2 to P-6) name of surveyor and Connecticut professional license number doing stake outs, identity of Developer’s contractor OSHA competent person, and phasing of construction and utilization of portions of the system prior to completion, if applicable. PM sends copy of submitted documents to Construction Services.

41. Upon receipt of documents for pre-construction job conference by PM from Developer, PM reviews documents for completeness and thoroughness and informs Developer of any deficiencies. Once all documents are received in satisfactory form, PM schedules pre-construction meeting and prepares agenda; invitees include Town Engineer or Director of Public Works as appropriate, Developer, Developer’s contractor, other utilities as necessary and MDC representatives (Utility Services, Construction Services and Maintenance (if a pump station is included).

42. Construction Services assigns a District employee as Inspector who shall also attend pre-construction job conference.

43. PM conducts pre-construction job conference and verifies that all requirements have been complied with.

44. A start date for construction activity will be established at the pre-construction job conference. Developer shall notify Construction Services Inspector at a minimum of 48 hours in advance if date is modified.

45. PM prepares meeting minutes and distributes to all attendees.

46. Developer’s contractor will obtain main line permit from Utility Services located at 60 Murphy Road, Hartford prior to start of construction

Construction

47. Developer’s contractor provides line and grade stakeout and cut sheets per the District’s standard.

48. Developer’s Contractor commences construction with Construction Services Inspector present. Throughout construction, Construction Services Inspector is point of contact with Developer’s contractor.

49. Construction Services converses with PM as necessary during construction.

50. Construction Services Inspector documents the work each day and secures sign off from Developer’s contractor as to the time spent on the job site.
51. Construction Services Inspector ensures sewer pipe elevations are per approved plans and installation of sewer is per District standards. Main line sewer shall include capped and staked laterals to street line or easement line.

52. Construction Services Inspector ensures there is adequate compaction of trench backfill up to and including road base per contract specifications.

MDC Acceptance of Sewer Main

53. Upon complete installation of the sewer main and appurtenances, the Developer’s contractor shall have the sewer main inspected by closed circuit TV for defects and the presence of debris. If debris is found in the pipe then the Developer’s contractor shall be responsible for cleaning the sewer main. Construction Services Inspector can require re-televising line if cleaning was extensive.

54. Upon successful cleaning of the sewer main, the Developer’s Contractor shall perform a low pressure air test per District standards as specified in Appendix U. This work is to be overseen by the Construction Services Inspector.

55. Upon passing the low-pressure air test, Construction Services deems the sewer main acceptable for lateral connections and drafts a partial Certificate of Completion for signature by the Manager of Construction. Partial Certificate of Completion may be for either the full system or a portion of the system and may reflect construction sequencing.

56. Manager of Construction sends partial Certificate of Completion to General Accounting. General Accounting will prepare final computations of costs and compare to deposit amount. If additional funds are due to the District, General Accounting will create bill and mail bill to Developer. A copy of the bill will be provided to the PM and the District Clerk.

57. When General Accounting confirms receipt of payment, General Accounting submits partial Certificate of Completion to PM.

58. PM then secures final signature of Director of Engineering on partial Certificate of Completion and forwards original certificate to the District Clerk with copies to General Accounting, Utility Services, Construction Services, Operations, Technical Services (GIS), Real Estate Technician and Maintenance (only if a pump station is included).

59. MDC Construction Services completes lateral information on construction plans and forwards them to Technical Services (GIS) and Utility Services.

60. Construction Services scans sewer main sketches into Oracle Content Manager Operations Folder/Sketches.

61. MDC Construction Services (survey) performs final measure; disk and field notes forwarded to Technical Services (GIS) to produce record plan and update GIS data base.
62. The District Clerk notifies the Developer that lateral connection permits may now be applied for and that one year maintenance period has begun from the date of final inspection.

**Lateral Connections to Main**

63. When lateral connections are requested, Utility Services collects any outstanding outlet charges, from whomever is seeking permission to make connection (Developer or Property Owner).

64. Utility Services issues permits for house connections to qualified contractor(s)

65. Utility Services inspects and sketches house connection installations; sketches are scanned into Oracle database.

**Project Closeout When Roadway Pavement is Completed within One Year Maintenance Period**

66. The Developer performs non-emergency repairs for defects of the sewer main for the one-year maintenance period.

67. After the end of the one-year maintenance period, the Developer calls 860-278-7850 x3468 or x3632 to schedule a final inspection. The sewer main must be in acceptable condition (as determined by Construction Services) for the main to be recommended for acceptance by the District.

68. Construction Services Inspector develops a “punch list”, if necessary, and sends “punch list” to the Developer with copy to PM.

69. When the Developer’s contractor completes the “punch list” items, Construction Services will verify the work is complete.

70. Developer is then responsible for performing a closed circuit TV inspection in the presence of Construction Services Inspector.

71. Construction Services reviews the CCTV and determines if the sewer is acceptable. Construction Services then notifies District Clerk that sewer is acceptable.

72. District Clerk sends a letter to the Town Engineer or Director of Public Works requesting acceptance of the roadway, verifies that there are no known claims existing against the District or the Contractor and that all easements have been finalized and filed on the land records. District Clerk initials final Certificate of Completion and forwards to Manager of Construction.

73. Manager of Construction signs off on the final Certificate of Completion and sends it to the PM.

74. PM secures signature of Director of Engineering on final Certificate of Completion and forwards original to General Accounting to settle finances, and a copy to Utility Services, Construction
Services, Operations, Technical Services (GIS), Real Estate Technician and Maintenance (only if a pump station is included).

75. General Accounting reconciles all MDC project related costs and notifies District Clerk that either unused funds could be released or that additional funds are due to the MDC. If additional funds are due to the MDC, General Accounting will create a bill and mail bill to Developer. A copy of the bill will be provided to the PM and District Clerk.

76. When General Accounting confirms receipt of payment, General Accounting submits final Certificate of Completion to District Clerk.

77. When the final Certificate of Completion is sent from General Accounting to the District Clerk confirming that all funds due, if any, have been paid, the District Clerk prepares an agenda item to Bureau of Public Works for acceptance of the sewer main into the District’s sewer system (per S8g of the Sewer ordinances). BPW’s vote is referred to the District Board for final approval.

78. Upon District Board vote to accept the sewer, District Clerk informs General Accounting who then releases any unused funds to the Developer.

**Project Closeout When Roadway Pavement is Not Completed within One Year Maintenance Period**

79. All steps above in the Project Closeout section are postponed until such time as the roadway paving has been completed.
Appendix B: Procedures For Water Main Installation by Developer’s Permit-Agreement Method

May 24, 2014

Pre-Application Process

1. Developer downloads the MDC’s Guidance Manual on the requirements of a DPA from the MDC website.

2. Developer is required to conduct a preliminary meeting with appropriate District staff to discuss the project, the application process and the necessity of an availability and capacity analysis of the water supply (determination of capacity analysis is made by MDC). Developer shall contact Engineering and Planning by phone at 860-278-7850 x 3445 to schedule the preliminary meeting. Developer to supply preliminary site plan/layout, service area, demands (domestic and fire) and anticipated construction schedule. At preliminary meeting, PM, in conjunction with Real Estate Technician, advises Developer of co-Developer potential.

3. If an availability and capacity analysis is required, the Developer shall follow the procedures outlined in the “Availability and Capacity Analysis by the Metropolitan District” in Appendix G. The cost of the analysis will vary depending upon the complexity of the proposed project and the use of the demand model. The Developer is responsible for the costs incurred by the MDC in conducting the analysis. The Developer will be required to deposit the consultant’s fee with the District prior to the analysis moving forward as specified in the Appendix G of the Guidance Manual for DPAs.

Application Process

4. In cases of large or complex projects, the Developer should consider submitting a preliminary design review at the 60% design stage prior to the submittal of a DPA application.

5. Developer submits a completed DPA Application Package to the District Clerk. Application package includes certified deposit check of $2,500 for each utility, made out to The MDC (if both water and sewer, separate checks are required), Certificate of Title, four sets of Connecticut Professional Engineer stamped construction plan and profile drawings (five sets of construction plan and profile drawings if the project includes a pump station), documentation of municipal planning and zoning approval of the project and draft easement documents, if applicable.

6. District Clerk logs application and forwards application package to Manager of Technical Services (District Clerk retains the check until Step 11 below).

7. Manager of Technical Services assigns a Project Manager (PM) and transfers application package to assigned PM. PM creates administrative checklist for use throughout the process.
8. PM reviews application package for completeness and technical thoroughness notifies Developer if any documents are missing. If application package is seriously deficient, PM notifies Developer that review will not commence until deficiencies are corrected.

9. PM emails project information (Name of Developer, Developer’s mailing address, name of project, town, whether water mains, sewer or both) to MDC General Accounting.

10. General Accounting creates project code and emails project code to PM and District Clerk. PM then emails accounting information for job expenses to Real Estate Technician, GIS, Operations, Utility Services, Construction Services and Maintenance (only if a pump station is included).

11. District Clerk completes cash receipt memo and sends the original memo with a copy of check(s) to General Accounting. District Clerk must provide copy of memo with original check(s) to Treasury for deposit.

12. General Accounting creates fund account (“parks” accounts receivable) and brings cash receipt memo to Treasury upon which Treasury deposits check.

13. PM distributes construction plans to Maintenance (only if a pump station is included), Utility Services, Construction Services and Operations for peer review and establishes time schedule for submittal of review comments back to PM. PM forwards the Certificate of Title for the subject property to District’s Real Estate Technician. PM also distributes easement documents, if applicable, to Real Estate Technician for review and establishes time schedule for submittal of review comments back to PM.

**Review Process**

14. PM conducts own technical review of the proposed water distribution system including determination of service area, review of capacity analysis and availability of water, adequacy of design against MDC adopted technical standards, use of only District approved materials and need for booster pumps.

15. Developer makes determination if there will be co-Developers. If so, Developer submits cost sharing agreement to District Clerk and PM.

16. Comments are sent back to the PM from Utility Services, Construction Services, Maintenance (only if a pump station is included) and Operations within the specified schedule.

17. PM reviews all comments from peer reviews and forwards a compiled comment letter and plan set to Developer’s design engineer with a copy of the letter to the Developer for requested revisions to the plans as well as Utility Services, Construction Services, Operations, and Maintenance (as applicable).

18. PM requests Technical Services to draft the Project Summary Plan per District standards.

19. Real Estate Technician verifies Certificate of Title, determines if connection charges and/or high service fees are due, and issues memo to PM and District Clerk on findings.
20. Real Estate Technician reviews easement documentation and easement map, if applicable, and comments back to Developer with a copy to the PM of any further documentation required.

21. Developer submits revised easement documentation to Real Estate Technician (one signed and notarized original and one copy of applicable easement documents, one signed and stamped Mylar easement map and completed Tax Conveyance Form).

22. Developer’s design engineer submits two sets of revised plans to the PM that address all comments. Submittal shall include a listing of all of the MDC comments and the changes made to each comment. PM reviews and either determines plans are satisfactory or returns plans to Developer’s design engineer with additional comments. PM confers with peer reviewers as necessary to assure that comments have been adequately addressed.

23. Once plans are satisfactory, PM prepares conditional approval letter for Director of Engineering’s signature. Upon signing of letter, PM sends conditional approval letter to Developer’s design engineer for preparation of final plans, to include appropriate signatures of Town Engineer or other town official, Fire Marshal and Developer.

24. PM requests from Developer a construction cost breakdown of the project in a manner similar to Appendix N (Water Main Deposit Calculation) in order to calculate retainage amount.

25. Developer submits construction cost breakdown to PM and PM reviews and modifies as necessary if construction cost breakdown was unreasonable based upon District experience.

26. Developer’s design engineer creates eight (8) sets of final construction plans and one Mylar set and returns them to the District PM with a CD containing the AutoCAD drawing file (.dwg) consistent with MDC CADD standards. Construction plans shall be stamped by a Connecticut Licensed Professional Engineer.

27. PM distributes final construction plans and Project Summary Plan (internal District document) to Utility Services, Construction Services, Maintenance (only if a pump station is included) and Operations.

28. PM meets with MDC Risk Manager and Assistant District Counsel to review levels of insurance required in the DPA. Upon consensus, PM/Assistant District Counsel to include appropriate insurance levels in the draft DPA.

**Permit-Agreement**

29. PM estimates MDC direct and indirect costs associated with the DPA for the purpose of calculating the additional deposit for the reimbursement of staff time expended on the project as well as the 5% construction retainage. PM uses standard spreadsheet for calculations including average hourly rates for MDC personnel classifications as provided by General Accounting.

30. PM forwards second deposit calculations to Manager of Technical Services for approval.
31. Upon concurrence from Manager of Technical Services, PM forwards documentation for second deposit due to District Clerk. Assistant District Counsel drafts the DPA utilizing approved format based upon relevant information from PM and Real Estate Technician.

32. PM/Assistant District Counsel sends letter to Developer informing it that the agreement is ready to be signed and requests second deposit/charges based upon calculations prepared by PM and Real Estate Technician and property addresses of future connections.

33. Developer and PM/Assistant District Counsel agree on either a meeting or mail delivery of documents to secure signatures.

34. Developer delivers second deposit and charges by means of two certified checks to District Clerk along with property addresses of future connections and signs two copies of the DPA. (Signatures of both the Developer and the Developer’s contractor are required and need to be notarized). District Clerk signs DPA on behalf of the District. One original fully executed copy is given to the Developer and the District Clerk retains the other executed copy.

35. District Clerk notifies PM (if PM not present at signing of DPA) that DPA has been fully executed and forwards property addresses of future connections and electronic copy of DPA to PM and Utility Services, while retaining the checks. District Clerk completes cash receipt memo and sends the original memo with a copy of check(s) to General Accounting. District Clerk must provide copy of memo with original check(s) to Treasury for deposit.

36. District Clerk directs Real Estate Technician to file final easements on the land records. Real Estate Technician then files easements on the land records.

37. PM sends notification to Operations of needed inventory to be utilized by District forces on the project and of the pending schedule of the work.

Pre-Construction

38. The Developer’s job conference requirements include documentation of insurance requirements, bonding requirements, town and/or State excavation permits, Call Before You Dig assigned number, contractor’s emergency contact information, contractor’s Connecticut P-1 or P-7 plumbing license, all subcontractor’s and employee’s appropriate plumbing licenses (P-2 to P-6), name of surveyor and Connecticut professional license number doing stake outs, identity of Developer’s contractor OSHA competent person, phasing of construction and utilization of portions of the system, if applicable and any special circumstances of construction requiring a specific qualified contractor.

39. Upon receipt of documents for pre-construction job conference by PM from Developer, PM reviews documents for completeness and thoroughness and informs Developer of any deficiencies. Once all documents are received in satisfactory form, the PM schedules pre-construction meeting and prepares agenda; invitees include Town Engineer or Director of Public Works as appropriate, Fire Marshal, Developer’s contractor, other utilities as necessary and MDC representatives (Utility Services, Construction Services, Maintenance (only if a pump
station is included) and Operations). PM sends copy of submitted documents to Construction Services.

40. Construction Services assigns a District employee as Inspector who shall also attend pre-construction job conference.

41. PM conducts pre-construction job conference and verifies that all requirements have been complied with.

42. PM prepares meeting minutes and distributes to all attendees.

43. A start date for construction activity will be established at the pre-construction job conference. Developer shall notify Construction Services Inspector at a minimum of 48 hours in advance if date is modified.

**Construction**

44. Developer’s contractor provides line and grade stakeout and cut sheets per the District’s standard.

45. Developer’s contractor makes arrangements with Operations Department at 860-278-7850 X 3627 or 3629 for work to be performed by District forces. Adequate lead-time, dependent upon the work to be done by the District forces, is required.

46. Developer’s contractor commences construction with Construction Services Inspector present. Throughout construction, Construction Services Inspector is point of contact with Developer’s contractor.

47. Construction Services Inspector documents the work each day and secures sign off from Developer’s contractor as to the time spent on the job site.

48. Construction Services converses with PM as necessary during construction.

49. Developer’s contractor shall prepare a trench in accordance with District Standards and in conformance with OSHA standards for District Operation forces to tap existing main.

50. Construction Services Inspector ensures water system is installed per approved plans.

51. Construction Services Inspector ensures there is adequate compaction of trench backfill up to and including road base per contract specifications.

**MDC Acceptance of Water Main**

52. Upon complete installation of the water main and appurtenances, the water main shall be filled slowly to remove air, flushed hard to remove any debris, then pressure tested for leaks. This work is done by the Developer’s contractor and overseen by the Construction Services Inspector.
53. The Developer’s contractor shall disinfect and flush the water main for water quality in accordance with District disinfection procedures specified in Appendix AA. This work is to be overseen by the Construction Services Inspector.

54. Construction Services Inspector shall take water samples as specified in Appendix AA and bring them to the District’s State Certified Water Quality Laboratory for testing.

55. Upon the water main passing all tests, Construction Services deems the water main acceptable for water service connections and drafts a partial Certificate of Completion for signature by the Manager of Construction. Partial Certificate of Completion may be for full system or a portion of the system and may reflect construction sequencing.

56. Manager of Construction sends partial Certificate of Completion to General Accounting. General Accounting will prepare final computations of costs and compare to deposit amount. If additional funds are due to the District, General Accounting will create a bill and mail the bill to Developer. A copy of bill will be provided to the PM and the District Clerk. When General Accounting confirms receipt of payment, General Accounting submits partial Certificate of Completion to PM.

57. PM then secures final signature of Director of Engineering on partial Certificate of Completion and forwards original certificate to the District Clerk with copies to General Accounting, Utility Services, Construction Services, Maintenance (only if a pump station is included), Operations, Real Estate Technician and Technical Services (GIS).

58. The District Clerk notifies the Developer that water service connection permits may now be applied for and that one-year maintenance period has begun from the date of final inspection.

59. Construction Services completes water main sketches and scans water main sketches into Oracle Content Manager Operations Folder/Sketches and forwards them to Technical Services (GIS) and Utility Services.

60. Construction Services completes hydrant slips; copies forwarded to Operations, Technical Services (GIS) and Treasury.

61. MDC Construction Services (survey) performs final measure; disk and field notes forwarded to Technical Services (GIS to produce record plan and update GIS data base).

**Water Service Connections to Main**

62. Developer’s contractor completes application and permit for water service connections at Utility Services, 60 Murphy Road, Hartford, CT.

63. Utility Services creates SAP notification of taps and meter installations that shall be performed by District Operations forces. Customer Service establishes a Customer Account No. and Utility Services collects payments from the Developer’s Contractor. Payments are forwarded to Treasury. Upon completion of the aforementioned, Utility Services issues permits for water service connections to qualified contractor(s).
64. Developer is responsible for excavation and backfill/restoration for water service connections.

65. Utility Services inspects and sketches house connection installations; sketches are scanned into Oracle Content Manager database.

66. Property owner requests meter installation through the Command Center (860-513-3388).

Project Closeout When Roadway Pavement is Completed within One Year Maintenance Period

67. The Developer or its contractor performs non-emergency repairs for defects of the water main for one year. In an emergency, District forces shall make necessary repairs to the water main and bill the Developer. The determination as to whether the repair is an emergency is at the sole discretion of the MDC.

68. After the one-year maintenance period, Developer calls 860-278-7850 x3468 or x3632 to schedule final inspection. The water main must be in acceptable condition (as determined by Construction Services) and the final road pavement must be completed for the main to be recommended for acceptance by the District.

69. Construction Services inspector develops a “punch list”, if necessary, and sends “punch list” to the Developer with a copy to PM.

70. When the Developer’s Contractor completes the “punch list” items, Construction Services will verify the work is complete and notifies District Clerk that work is complete.

71. District Clerk sends a letter to the Town Engineer or Director of Public Works requesting acceptance of the roadway, verifies that there are no known claims existing against the District or the Contractor and that all easements have been finalized and filed on the land records. District Clerk initials Certificate of Completion and forwards to Manager of Construction Services.

72. Manager of Construction signs off on the final Certificate of Completion and sends it to the PM.

73. PM secures signature of Director of Engineering on final Certificate of Completion and forwards original to General Accounting to settle finances and a copy to Utility Services, Construction Services, Operations, Technical Services (GIS), Real Estate Technician and Maintenance (only if pump station included).

74. General Accounting reconciles all MDC project related costs and notifies District Clerk that either unused funds could be released or that additional funds are due to the MDC. If additional funds are due to the MDC, General Accounting will create a bill and mail the bill to Developer. A copy of the bill will be provided to the PM and the District Clerk. When General Accounting confirms receipt of payment, General Accounting submits original final Certificate of Completion to District Clerk.
75. Upon concurrence of District Clerk, General Accounting returns any unused funds to the Developer.

Project Closeout When Roadway Pavement is Not Completed within One Year Maintenance Period

76. All steps above in the Project Closeout section are postponed until such time as the roadway paving has been completed after the one-year maintenance period.
Appendix C: DPA Application Form
Developer’s Permit Agreement Application Form

To: The Metropolitan District
P.O. Box 800
555 Main Street
Hartford, CT 06142

Attn: District Clerk

The undersigned property owner of record (hereinafter known as the “Developer”) requests permission to construct a (check applicable items)

☐ Sanitary Sewer  ☐ Storm Sewer (Hartford only)  ☐ Water Main

under a Developer’s Permit-Agreement to serve a subdivision or project entitled ________________ comprised of ________________ lots, ______________ dwelling units and for commercial or industrial development only ___________ acres located at ________________ (address)

Enclosed, please find a deposit to cover preliminary engineering of (check applicable items)

☐ $2,500 for Sanitary Sewer  ☐ $2,500 for Storm Sewer (Hartford only)  ☐ $2,500 for Water Main

$ __________ Total

Note: Where both Water and Sewer services are requested, separate checks of $2,500 each must be provided.

It is understood that in the event the undersigned developer does not execute the agreement(s) within six months of notice of its availability for signature, the applicable deposit shall be forfeited to The Metropolitan District.

<table>
<thead>
<tr>
<th>Owner</th>
<th>Co-Developer’s Information (if applicable)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Owner’s name:</td>
<td>Co-Developer’s name:</td>
</tr>
<tr>
<td>Mailing Address:</td>
<td>Mailing Address:</td>
</tr>
<tr>
<td>Telephone:</td>
<td>Telephone:</td>
</tr>
<tr>
<td>Owner’s written consent to the filing of the application (sign below):</td>
<td></td>
</tr>
</tbody>
</table>

Statement of Accuracy and Permission: I hereby certify that all information submitted with this application is true and accurate to the best of my knowledge. The applicant understands that this application is to be considered complete only when all information and documents required by the District have been submitted.

Date ___________________________ Printed name of Owner ___________________________ Signature of Owner ___________________________
Appendix D: Instructions to Developers for Submittal Requirements under a DPA
Instructions to Developers for Submittal Requirements under a Developer’s Permit-Agreement (DPA)

The Metropolitan District requires the following items for processing a Developer’s Permit Agreement for both new water mains and sanitary (or storm sewers within Hartford only) sewers.

Pre-Application Meeting:
The Metropolitan District requires a pre-application meeting to discuss the overall process, expected timelines, and determination of need for capacity analysis.

Initial Application Submittal:
1. DPA Application form (attached);
2. Check(s) for $2,500 deposit for water and $2,500 deposit for sewer;
3. Four (4) sets of plans depicting all proposed underground utilities; 5 sets if a water or sewer pump station is included;
4. Certificate of Title (sample attached);
5. Disk or CD containing AutoCad.dxf and .dwg files which identify the property corners of the subject parcel(s) or lots appearing on the subdivision plan by the proper coordinates on the Connecticut State Plane Coordinate System for use on our Geographic Information Management System;
6. Draft easement document and plan, if required; and
7. Documentation of Planning & Zoning approval of the project.

If a public hearing is required for a developer’s project, The Metropolitan District will notify the developer and schedule a hearing.

Final Submittal prior to DPA Execution:
Following an engineering review, and upon the MDC’s Conditional Approval of the proposed facilities, the following items are required:

1. Eight (8) sets of revised plans including any phased construction documentation;
2. Disk or CD containing an AutoCad .dwg file showing the latest revisions to the proposed MDC facilities;
3. Final easement document and plan, if required (one signed and notarized original, one copy signed and stamped, and one completed Tax Conveyance form.);
4. Estimate of construction costs of final facilities; and
5. Payment of deposit and any applicable charges to The Metropolitan District and signatures of the developer and contractor on the DPA.

Preconstruction Submittal:
Upon execution of the DPA with the District, a pre-construction conference is required. The Developer must submit the following items PRIOR to the scheduling of a pre-construction conference:

- Contractor’s name & address
- Contractor’s certificate of insurance
- Copies of Town or State excavation permits
- Call Before You dig assigned number
- Contractor’s emergency contact information
- Copies of Contractor’s P-1 or P-7 license
- All subcontractors and employees appropriate plumbing licenses
- List of materials and manufacturers to be installed
- Name of surveyor and license number
- Identity of contractor’s OSHA-competent person
- Phasing plan, if applicable
Appendix E: Sample Standard Agreement for Water
PERMIT-AGREEMENT

Add name of development here

This Permit-Agreement is made and entered into as of this ___ day of ____, 201_, by and between The Metropolitan District, a municipal corporation chartered by the State of Connecticut, acting herein by its Water Bureau, duly authorized under the provisions of Ordinances of The Metropolitan District Relating to Water Supply, Chapter W-4, as amended from time to time, hereinafter designated the DISTRICT, and owner(s) and/or any developer(s) of property to be served in whole or in part by the proposed water mains hereinafter described, and the heirs, executors, administrators, successors and assigns of said owner(s) and/or any developer(s) hereinafter collectively designated the DEVELOPER (the “Permit-Agreement”).

This Permit-Agreement is entered into under authority of the Ordinances of The Metropolitan District and is subject to the following STIPULATIONS:

1. Permission is hereby granted to __________________________________________________, to construct, under this Permit-Agreement, about _____ feet of ________ water mains ______________________________________________________________________________________ ______________________________________________________________________________________ ______________, in accordance with plans approved by the DISTRICT’S Director of Engineering (“Director of Engineering”), which water main is to be incorporated into the public water system when accepted by the DISTRICT, provided that, prior to execution of this Permit-Agreement: satisfactory easements are conveyed to the DISTRICT, together with a Mylar copy of the referenced easement plan in a size acceptable for recording in the ____________ Town Land Records; payment of charges is made as delineated in Stipulation #2 hereof; the DEVELOPER’s certificate of title to the land in question be presented to the DISTRICT, together with a copy of the subdivision map, which map is to be certified by the ______________ Town Clerk as being on file in the __________ Town Land Records; and if multiple DEVELOPERS, then they first enter into a written agreement with each other to jointly build and pay for all costs of the water main and stating the method of sharing those costs with a copy of said agreement filed with the DISTRICT’S District Clerk (“District Clerk”).

The water mains and any appurtenances referred to above and hereinafter designated the WATER MAIN are shown on plans titled and dated________________ which plans are incorporated by reference herein and made a part of hereof as if fully set forth herein in their entirety:

2. The costs to the DEVELOPER to be paid to the DISTRICT include the following:

   a. The DEVELOPER shall reimburse the DISTRICT for all costs including allowances for overhead of staff including but not limited to: (i) the review of the project documents including construction plans, easements, preconstruction job conference materials, and insurance certificates, (ii) performance of inspection, supervisory engineering, measuring, testing, and collection of samples and (iii). all other costs or expenses incurred by the DISTRICT prior to the signing of this Permit-Agreement, and during the preconstruction period, the construction period and the maintenance period. The DEVELOPER shall, at the time of the execution of this Permit-Agreement, deposit with the DISTRICT a sum determined by the Director of Engineering to be sufficient to defray said DISTRICT costs. The DEVELOPER agrees that in case said deposit proves to be insufficient at any time during the progress of the work, further deposit shall be made by the DEVELOPER upon notification and demand by the District Clerk. These reimbursable costs are estimated at ________________________dollars ($0.00).

   b. The DEVELOPER shall pay at the time of execution of this PERMIT-AGREEMENT $_____________ which sum is determined to be the frontage charge for connection into the DISTRICT’s water distribution system and $_____________ which sum is determined to be the charge for high pressure service (insert high pressure service charge only if applicable) for the parcels of land set forth on the above referenced plans, with other land to be subject to monetary charges in effect at the time of development or connection.

   c. The DEVELOPER shall deposit with the DISTRICT at the time of execution of this Permit-Agreement a retainage amount no less than 5% of the estimated construction cost of the project but may be more if deemed necessary by the District Clerk. The retainage may be used during the maintenance period by the DISTRICT.
Solely for the purpose of calculating the 5% retainage, the cost of constructing the WATER MAIN has been estimated by the DEVELOPER, as accepted/modified by the DISTRICT, and determined to be: ____________ dollars ($ 0.00). Accordingly, such 5% retainage is ____________. The DEVELOPER agrees that in case said retainage proves to be insufficient at any time during the progress of work, further retainage shall be made by the DEVELOPER upon notification and demand by the District Clerk.

d. Upon acceptance of the WATER MAIN by the DISTRICT, any unexpended portion of said deposit and retainage shall be returned to the DEVELOPER, subject to the DEVELOPER’S entire indebtedness to DISTRICT being satisfied.

3. The WATER MAIN is to be completed within ___ months of the date hereof. The DEVELOPER shall provide notice to the DISTRICT if the completion date is to be extended along with a revised completion date and approval thereof by the surety if any.

4. The DISTRICT agrees to permit the DEVELOPER, through a licensed drain layer employed by or on behalf of the DEVELOPER, to construct the WATER MAIN at the DEVELOPER’S own expense and, subject to the terms and conditions herein contained, to accept the WATER MAIN and incorporate the same into the DISTRICT’S public water distribution system. DEVELOPER shall require or cause to require all of its contractors, subcontractors and material men to abide by the terms and conditions of this Permit-Agreement, and to include the DISTRICT as a third party beneficiary in the contracts with such contractors, subcontractors and material men with the right (but not the obligation) to enforce such contracts in the event of a default thereunder or by DEVELOPER hereunder.

5. The DEVELOPER shall have the WATER MAIN constructed complete in every detail within the time stipulated above and in a good and workmanlike manner in accordance with construction plans referred to on page one hereof and approved by the Director of Engineering, with the standard specifications and practices as used by the DISTRICT, and the terms of an ordinance entitled “Ordinances of The Metropolitan District Related to Water Supply” revisions through January 1, 2012 and all amendments thereto, all without expense to the DISTRICT.

6. The DEVELOPER shall have the work done by personnel or contractors specifically experienced in laying ductile iron water pipe and appurtenances. Contractors employed by the DEVELOPER as well as any subcontractors or material men employed by such contractors to perform such work must have all applicable licenses and certificates required for such performance, and must be approved by the DISTRICT before any work is begun.

7. Connections to existing mains shall be made by the DISTRICT at the expense of the DEVELOPER.

8. The DEVELOPER agrees that all hydrants on the WATER MAIN vested to the DISTRICT shall be public hydrants.

9. The DEVELOPER agrees that:
   a. where a pipe larger than that required for the current project is provided for future development of the general area (recognizing that the minimum pipe size for any water main is 8 inches), the DISTRICT will reimburse the DEVELOPER in accordance with the vote of the Water Bureau authorizing the installation of such larger pipe.
   b. where a pipe larger than 8” in size is required for the development of an industrial, commercial, or planned development, the DEVELOPER will be required to install the larger pipe, at no cost to the DISTRICT.

10. The DEVELOPER shall furnish line and grade stakes set not more than 50 feet apart, marking the street line or easement and finished grade of the proposed street or easement. No pipe shall be laid until the street or easement has been brought to subgrade and line and grade stakes set. The DEVELOPER shall indicate by stakes the location and finished grade of all hydrants to be installed as part of this project. In the event that the grade or alignment of the street, curbs, width or easement shall be changed after the WATER MAIN and hydrants have been installed, the DEVELOPER shall re-lay the WATER MAIN and services including hydrants to the new grades or lines, at no expense to the DISTRICT.

11. The DEVELOPER shall at all times indemnify, defend and save harmless the DISTRICT, any municipality included therein, the State of Connecticut and their respective officers, officials, employees, agents and servants (collectively, the "Indemnitees"), on account of any and all claims, damages, losses, litigation, expenses, counsel fees and compensation arising out of injuries (including death) sustained by, or alleged to have been sustained by any of the Indemnitees, or the DEVELOPER or any of its officers, directors, members, employees, agents, servants, contractors, subcontractors or material men, or anyone employed directly or indirectly by DEVELOPER or any of them, and from injuries (including death) sustained by or alleged to have been sustained by the public, any or all persons on or near the work, or by any other person or property, real or personal (including property of the DISTRICT), caused or alleged to have been caused in whole or in part by the acts, omissions or negligence of DEVELOPER or any of its officers, directors, members, employees, agents, servants, contractors, subcontractors or material men, or anyone employed directly or indirectly by DEVELOPER or any of them while engaged in the performance of any work covered by this Permit-Agreement and during any maintenance period specified herein or by any other governmental authority. The existence of insurance shall in no way limit the scope of this indemnification provision.
12. The DEVELOPER shall, in part, secure its obligations under this Permit-Agreement with the DISTRICT by maintaining or cause to be maintaining at the DEVELOPER’S own expense at least the following forms of insurance:
   a. Owners’ Protective Liability and Property Damage Insurance for and in the name of The DISTRICT and covering all claims against the DISTRICT arising out of this Permit-Agreement;
   b. Commercial General Liability Insurance, including coverage for acts of sub-contractors, for all liability assumed under this Permit-Agreement and, where applicable, coverage for use of explosives, for collapse of buildings and damage to underground properties, and coverage required by any law or municipal ordinance or regulation;
   c. Automobile Liability and Property Damage Insurance, including coverage for hired or borrowed cars;
   d. Workers’ Compensation and Employers’ Liability Insurance, as required by Connecticut law;
   e. Environmental and Pollution Liability Insurance; and
   f. Umbrella Liability Insurance.

The minimum amounts of all such insurance shall be not less than those shown on the DISTRICT’s Standard Insurance Certificate, namely:

<table>
<thead>
<tr>
<th>Insurance Type</th>
<th>Minimum Amounts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Owners’ Protective Liability</td>
<td>Not less than $1,000,000 per occurrence and $1,000,000 aggregate;</td>
</tr>
<tr>
<td>Commercial General Liability</td>
<td>Not less than $2,000,000 each occurrence and $2,000,000 aggregate;</td>
</tr>
<tr>
<td>Automobile Liability</td>
<td>Not less than $1,000,000 combined single limit;</td>
</tr>
<tr>
<td>Workers’ Compensation</td>
<td>As required by Connecticut law and Employers’ Liability Insurance not less than $100,000 per occurrence, $500,000 disease policy limit, and $100,000 disease each employee;</td>
</tr>
<tr>
<td>Environmental and Pollution Liability</td>
<td>Not less than $1,000,000 each occurrence; and in excess of Commercial General Liability, Automobile Liability and Employers’ Liability Insurance.</td>
</tr>
<tr>
<td>Umbrella Liability</td>
<td>Not less than $5,000,000 each occurrence and $5,000,000 aggregate;</td>
</tr>
</tbody>
</table>

The stipulation of minimum amounts or acceptance by the DISTRICT of certificates indicating the limits of coverage shall in no way limit the liability of the DEVELOPER to any such amounts.

The Indemnities shall be named as additional insureds on all insurance required above except Owners’ Protective Liability Insurance and Workers’ Compensation Insurance. Acceptable certificates of insurance on the DISTRICT’S standard form or similar standard industry form shall be submitted in duplicate by DEVELOPER to DISTRICT prior to the pre-construction job conference with DISTRICT staff. Work shall not be continued after expiration of any of the above forms of insurance until the same has been renewed. If the DISTRICT so requires, original policies or certified copies thereof shall be submitted in lieu of certificates.

13. If required by the DISTRICT, the DEVELOPER shall furnish to the DISTRICT prior to commencing any work hereunder a performance bond in favor of and acceptable to the DISTRICT, to insure completion and maintenance of the WATER MAIN, said bond being in amount not less than the estimated cost of the WATER MAIN as set forth in Stipulation #2 hereof.

14. Wherever the work will cross the DEVELOPER’S own land not in a duly-accepted public highway or private lands of others, the DEVELOPER shall prepare or obtain, and convey to the DISTRICT at the time of the execution of this Permit-Agreement satisfactory easements over such land and/or lands for any part of the WATER MAIN, as set forth in Stipulation #1 hereof, the terms and form of any such easements being subject to approval of the DISTRICT’S District Counsel.

15. The DEVELOPER shall fill and flush the WATER MAIN after completion of construction and shall disinfect the WATER MAIN in accordance with DISTRICT disinfection procedures.

16. The DEVELOPER shall make no connections to the WATER MAIN until such time as the WATER MAIN has passed all required tests, and water service connection permits have been applied for and received by the DEVELOPER.

17. The DEVELOPER shall maintain the WATER MAIN at its own expense for a period of one (1) year following completion of its construction, as determined by the DISTRICT, and shall repair any defect in the WATER MAIN noted during that period, and any damage to any public street, highway, grounds or structure known to have been caused during construction and during the one (1) year maintenance period, directly or indirectly by the construction, repair, maintenance or by any defect or failure of said WATER MAIN or the work therefor. The dates for the one (1) year maintenance period shall be as determined by the DISTRICT. The DEVELOPER shall maintain the roadways, curbs, walks, and other surfaces and appurtenances within the highway limits which have been disturbed or damaged by the construction or maintenance of the WATER MAIN for any additional period which may be required by other governmental authority having jurisdiction. If the DEVELOPER fails in any way to carry out its maintenance obligations, and if the DISTRICT incurs any expense as a result, the DISTRICT shall be reimbursed for said expense from the DEVELOPER’S retainage with the DISTRICT, or if the balance remaining in said retainage is insufficient, by additional direct payment from the DEVELOPER upon demand by the DISTRICT.

18. It is mutually agreed that the DISTRICT may at any time permit others other than the DEVELOPER to connect to and regularly use the WATER MAIN.

19. The DEVELOPER agrees that the obligations and privileges herein assumed by DEVELOPER and granted to DEVELOPER shall be obligations and privileges running with the land concerned with or served by the proposed WATER MAIN, and thereby imposed on or granted to the succeeding owners of said land as well.
20. It is understood and agreed that upon the completion of the work to the satisfaction of the DISTRICT as indicated through the DISTRICT’S issuance of a final Certificate of Completion, all rights and title to, interests in, and ownership of the WATER MAIN shall automatically vest with the DISTRICT, at no expense to the DISTRICT. The WATER MAIN, once vested to the DISTRICT, shall thereafter be maintained by the DISTRICT; and upon such vesting, the DEVELOPER shall be relieved of the liabilities and obligations in Stipulation #17 hereof with respect to the WATER MAIN except that final acceptance of the roadways, curbs, walks, and other surfaces and appurtenances within the highway limits will be by, and as determined by, the governmental authority having jurisdiction and not by the DISTRICT.

21. DEVELOPER hereby assigns, and the undersigned contractor, hereinafter designated the CONTRACTOR, hereby undertakes and assumes, all of the obligations of the DEVELOPER contained in Stipulations 3, 5, 6, 10, 12, 13, 15, 16 and 17 of this Permit-Agreement, and the DISTRICT hereby consents to such assignment, undertaking and assumption. Notwithstanding such assignment, undertaking and assumption, the DEVELOPER and CONTRACTOR shall remain jointly and severally liable for all the obligations of DEVELOPER under such Stipulations.

22. Neither DEVELOPER nor CONTRACTOR shall assign this Permit-Agreement in whole or in part without the express prior written consent of the DISTRICT, which consent the DISTRICT may withhold in its sole and absolute discretion.

ADDITIONAL OR SPECIAL CLAUSES:

(Optional language for inclusion in agreements with DEVELOPERS where the water mains are constructed with added capacity beyond that necessary to serve the DEVELOPER’S project.)

The DEVELOPER agrees that upon the completion of the construction of the WATER MAIN it will submit an affidavit stating the total costs thereof including engineering, and an affidavit stating the amounts of money or any consideration paid the DEVELOPER by any other owner who may be served by the WATER MAIN.

(Optional language for inclusion in agreements with Developers where no easements are required because the Water Main will be installed in area to be accepted as a public street)

Add following to the end of Stipulation #17: If at the end of such maintenance period, the Town of ________ has not accepted as public streets the areas of land in which the WATER MAIN is constructed and situated, such maintenance period and DEVELOPER’S obligation to maintain the WATER MAIN shall continue until the Town of ________ accepts such areas as public streets.

Add following after the word “Completion” in second line of Stipulation #20: “and provided the Town of ________ has accepted as public streets those areas of the land in which the WATER MAIN is constructed and situated”

Signed in the Presence of: CONTRACTOR

Company: ________________

By: ________________

Title: ________________

STATE OF CONNECTICUT

COUNTY OF HARTFORD

On this ___day of ___, 2014, before me, ______________, the undersigned officer, personally appeared ______________, who acknowledged himself/herself to be the ______________ of ______________, a ______________ corporation, and he/she, as such ______________, being authorized so to do, executed the foregoing instrument for the purposes therein contained, by signing the name of such corporation by himself/herself as such officer.

Signed and Sealed in the Presence of: DEVELOPER

Company: ________________

By: ________________

Title: ________________
On this ___day of ____, 2014, before me, ________________, the undersigned officer, personally appeared __________, who acknowledged himself/herself to be the ________________ of ________________, a _____ _____ corporation and he/she, being authorized so to do, executed the foregoing instrument for the purposes therein contained by signing the name of such corporation by himself/herself as such officer.

Notary Public
My Commission Expires _____________________
Commissioner of the Superior Court

Signed and Sealed in the Presence of:

THE DISTRICT
By its BUREAU OF PUBLIC WORKS

By: ____________, District Clerk

On this the _____day of _______, 2013, before me, ________________, the undersigned officer, personally appeared John S. Mirtle, who acknowledged himself to be the District Clerk of The DISTRICT, a specially chartered Connecticut municipal corporation, and that he, as such District Clerk, being authorized so to do, executed the foregoing instrument for the purposes therein contained, by signing the name of such corporation by himself as such officer.

Notary Public
My Commission Expires _____________________
Commissioner of the Superior Court
Appendix F: Sample Standard Agreement for Sewer
PERMIT-AGREEMENT
Add name of development here

This Permit-Agreement is made and entered into as of this ______ day of _______, 201___, by and between The Metropolitan District, a municipal corporation chartered by the State of Connecticut, acting herein by its Bureau of Public Works, duly authorized under the provisions of Ordinances of The Metropolitan District Relating to Sewers, Chapter S-8, as amended from time to time, hereinafter designated the DISTRICT, and owner(s) and/or any developer(s) of property to be served in whole or in part by the proposed sewers hereinafter described, and the heirs, executors, administrators, successors and assigns of said owner(s) and/or developer(s), hereinafter collectively designated the DEVELOPER (the “Permit-Agreement”).

This Permit-Agreement is entered into under authority of the Ordinances of The Metropolitan District and is subject to the following STIPULATIONS:

1. Permission is hereby granted to ________________________________, to construct, under this Permit-Agreement, about _____ feet of ________ sanitary sewer ____________________________________________________________________________________________ in accordance with plans approved by the DISTRICT’S Director of Engineering (“Director of Engineering”), which sewer is to be incorporated into the public sewer system when accepted by the DISTRICT, provided that, prior to execution of this PERMIT-AGREEMENT: satisfactory easements are conveyed to the DISTRICT, together with a Mylar copy of the referenced easement plan in a size acceptable for recording in the _____________ Town Land Records; payment of charges be made as delineated in Stipulation #2 hereof; the DEVELOPER’s certificate of title to the land in question be presented to the DISTRICT, together with a copy of the subdivision map, which map is to be certified by the _____________ Town Clerk as being on file in the _____________ Town Land Records; with the understanding that the amount of the deferred outlet charges payable when the house connection permits are issued shall be in accordance with the established schedule of charges in effect at that time; and if multiple DEVELOPERS, then they first enter into a written agreement with each other to jointly build and pay for all costs of the sewer stating the method of sharing those costs with a copy of said agreement filed with the DISTRICT’S District Clerk (“District Clerk”);

The sewers or drains and any appurtenances referred to above and hereinafter designated the SEWER are shown on plans titled and dated________________________ which plans are incorporated by reference herein and made a part hereof as if fully set forth herein in their entirety:

The SEWER shall be used to convey only sanitary sewage; all storm water, cooling water, subsoil drainage and objectionable industrial waste are excluded; all as described in the compilation of “Ordinances of The Metropolitan District in Hartford County, Connecticut, Revised through January 1, 2012,” together with all subsequent revisions.

2. The costs to the DEVELOPER to be paid to the DISTRICT include the following:
   a. The DEVELOPER shall reimburse the DISTRICT for all costs, including allowances for overhead of staff, including but not limited to: (i) review of the project documents including but not limited to construction plans, easements, preconstruction job conference materials, insurance certificates, CCTV pipe inspection videos; (ii) the performance of inspection, supervisory engineering, measuring, and testing of the SEWER; and (iii) all other costs and expenses incurred by the DISTRICT prior to the signing of this Permit-Agreement, or during the preconstruction period, the construction period, and the maintenance period. The DEVELOPER shall, at the time of the execution of this Permit-Agreement, deposit with the DISTRICT a sum determined by the Director of Engineering to be sufficient to defray said DISTRICT costs. The DEVELOPER agrees that in case said deposit proves to be insufficient at any time during the progress of the work, further deposit shall be made by the DEVELOPER upon notification and demand by the District Clerk. These reimbursable costs are estimated at _________________________ dollars ($0.00).
   b. The DEVELOPER shall pay, at the time of execution of this Permit-Agreement, $_              _____________ which sum is determined to be the charge for outlet into the DISTRICT's sewerage system for the parcels of
land set forth on the above referenced plans, with other land to be subject to monetary charges in effect at the time of development or connection; or, in lieu of full payment of outlet charges, the DEVELOPER may defer said charges until such time as house connection permits are issued, provided that, upon execution of this Permit-Agreement, a payment of $_________ shall be made computed on the basis of a flat charge of $125.00 per lot or parcel of land to cover administrative and recording fees as provided for and with the understanding that the amount of the deferred outlet charges payable when the house connection permits are issued shall be in accordance with the deferred outlet charges in effect at the time of said issuance.

c. The DEVELOPER shall deposit with the DISTRICT at the time of execution of this Permit-Agreement a retainage amount no less than 5% of the estimated construction cost of the project but may be more if deemed necessary by such District Clerk. The retainage may be used during the maintenance period by the DISTRICT. Solely for the purpose of calculating the 5% retainage, the cost of constructing the SEWER has been estimated by the DEVELOPER, as accepted/modified by the DISTRICT, and determined to be: _________________. Accordingly, such 5% retainage is _________________. The DEVELOPER further agrees that in case said retainage proves to be insufficient at any time during the progress of the work, further retainage shall be made by the DEVELOPER upon notification and demand by the District Clerk.

d. Upon acceptance of the SEWER by the DISTRICT, any unexpended portion of said deposit and retainage shall be returned to the DEVELOPER, subject to the DEVELOPER'S entire indebtedness to the DISTRICT being satisfied.

3. The SEWER is to be completed within ___ months of the date hereof. The DEVELOPER agrees that it shall provide notice to the DISTRICT if the completion date is to be extended along with the revised completion date and approval thereof by the surety, if any.

4. The DISTRICT agrees to permit the DEVELOPER, through a licensed drain layer employed by or on behalf of the DEVELOPER, to construct the SEWER at the DEVELOPER’S own expense and, subject to the terms and conditions herein contained, to accept the SEWER and incorporate the same into the DISTRICT’S public sewer system. DEVELOPER shall require or cause to require all of its contractors, subcontractors and material men to abide by the terms and conditions of this Permit-Agreement, and to include the DISTRICT as a third party beneficiary in the contracts with such contractors, subcontractors and materialmen with the right (but not the obligation) to enforce such contracts in the event of a default thereunder or by DEVELOPER hereunder.

5. The DEVELOPER shall have the SEWER constructed complete in every detail within the time stipulated above and in a good and workmanlike manner in accordance with construction plans referred to on page one hereof and approved by the Director of Engineering, with the standard specifications and practices as used by the DISTRICT, and the terms of the Ordinances of The Metropolitan District Relating to Sewers and all amendments thereto, all without expense to the DISTRICT.

6. The DEVELOPER shall have the work done by personnel or contractors specifically experienced in laying sanitary sewers and appurtenances. Contractors employed by the DEVELOPER as well as any subcontractors or materialmen employed by such contractors to perform such work must have all applicable licenses and certificates required for such performance, and must be approved by the DISTRICT before any work is begun.

7. The DEVELOPER shall at all times indemnify, defend and save harmless the DISTRICT, any municipality included therein, the State of Connecticut and their respective officers, officials, employees, agents and servants (collectively, the “Indemnitees”), on account of any and all claims, damages, losses, litigation, expenses, counsel fees and compensation arising out of injuries (including death) sustained by, or alleged to have been sustained by any of the Indemnitees, or the DEVELOPER or any of its officers, directors, members, employees, agents, servants, subcontractors, subcontracts or material men, or anyone employed directly or indirectly by DEVELOPER or any of them, and from injuries (including death) sustained by or alleged to have been sustained by the public, any or all persons on or near the work, or by any other person or property, real or personal (including property of the DEVELOPER), caused or alleged to have been caused in whole or in part by the acts, omissions or negligence of DEVELOPER or any of its officers, directors, members, employees, agents, servants, contractors, subcontractors or material men, or anyone employed directly or indirectly by DEVELOPER or any of them while engaged in the performance of any work covered by this Permit-Agreement and during any maintenance period specified herein or by any other governmental authority. The existence of insurance shall in no way limit the scope of this indemnification provision.

8. The DEVELOPER shall, in part, secure its obligations under this Permit-Agreement with the DISTRICT by maintaining or causing to be maintained at Developer’s own expense at least the following forms of insurance:

(a) Owners’ Protective Liability and Property Damage Insurance for and in the name of The Metropolitan District and covering all claims against the DISTRICT arising out of this Permit-Agreement;
(b) Commercial General Liability Insurance, including coverage for acts of sub-contractors, for all liability assumed under this PERMIT-AGREEMENT and, where applicable, coverage for use of explosives, for collapse of buildings and damage to underground properties, and coverage required by any law or municipal ordinance or regulation;
(c) Automobile Liability and Property Damage Insurance, including coverage for hired or borrowed cars;
(d) Workers’ Compensation and Employers’ Liability Insurance, as required by Connecticut law;
(e) Environmental and Pollution Liability Insurance; and
(f) Umbrella Liability Insurance.
The minimum amounts of all such insurance shall be not less than those shown on the DISTRICT’s Standard Insurance Certificate, namely:

- **Owners’ Protective Liability**: For and in the name of the District $1,000,000 per occurrence and $1,000,000 aggregate;
- **Commercial General Liability**: Not less than $2,000,000 each occurrence and $2,000,000 aggregate;
- **Automobile Liability**: Not less than $1,000,000 combined single limit;
- **Workers’ Compensation**: As required by Connecticut law and Employers’ Liability Insurance not less than $100,000 per occurrence, $500,000 disease policy limit, and $100,000 disease each employee;
- **Environmental and Pollution Liability**: Not less than $1,000,000 each occurrence; and
- **Umbrella Liability**: Not less than $5,000,000 each occurrence and $5,000,000 aggregate in excess of Commercial General Liability, Automobile Liability and Employers’ Liability Insurance.

The stipulation of minimum amounts or acceptance by the DISTRICT of certificates indicating the limits of coverage shall in no way limit the liability of the DEVELOPER to any such amounts.

The Indemnitees shall be named as additional insureds on all insurance required above except Owners’ Protective Liability and Property Damage Insurance and Workers’ Compensation Insurance. Acceptable certificates of insurance on the DISTRICT’S standard form or similar standard industry form shall be submitted in duplicate by DEVELOPER to DISTRICT prior to the pre-construction job conference with the DISTRICT staff. Work shall not be continued after expiration of any of the above forms of insurance until the same has been renewed. If the DISTRICT so requires, original policies or certified copies thereof shall be submitted in lieu of certificates.

9. If required by the DISTRICT, DEVELOPER shall furnish prior to commencing any work hereunder a performance bond in favor of and acceptable to the DISTRICT, to insure completion and maintenance of the SEWER, said bond being in amount not less than the estimated cost of the SEWER as set forth in STIPULATION #2 hereof.

10. Wherever the work will cross the DEVELOPER’s own land not in a duly-accepted public highway or private land of others, DEVELOPER shall prepare or obtain, and convey to the DISTRICT at the time of the execution of this Permit-Agreement satisfactory easements over such land and/or lands for any part of the SEWER, as set forth in STIPULATION #1 hereof, the terms and form of any such easements being subject to approval of the DISTRICT’S District Counsel.

11. The DEVELOPER shall furnish line and grade stakes set not more than 50 feet apart, marking the street line or easement and finished grade of the proposed street or easement. No SEWER shall be laid until the street or easement has been brought to subgrade and line and grade stakes set. In the event that the grade or alignment of the street, curbs, width or easement shall be changed after the SEWER has been installed, the DEVELOPER agrees to relay the SEWER to the new grades or lines, at no expense to the DISTRICT.

12. The DEVELOPER shall conduct a CC TV inspection and a low-pressure test of the SEWER after completion of construction in accordance with DISTRICT procedures.

13. The DEVELOPER shall not make connections to the SEWER until such time as the SEWER has passed all required tests and SEWER connection permits have been applied for and received by the DEVELOPER.

14. The DEVELOPER shall maintain the SEWER at its own expense for a period of one (1) year following completion of its construction, as determined by the DISTRICT, and will repair any defect in the SEWER noted during that period, and any damage to any public street, highway, grounds or structure known to have been caused during construction and during the one(1) year maintenance period, directly or indirectly by the construction, repair, maintenance or by any defect or failure of said SEWER or the work therefor. The dates for the one (1) year maintenance period shall be as determined by the DISTRICT. The DEVELOPER shall maintain the roadways, curbs, walks, and other surfaces and appurtenances within the highway limits which have been disturbed or damaged by the construction or maintenance of the SEWER for any additional period which may be required by other governmental authority having jurisdiction. If the DEVELOPER fails in any way to carry out its maintenance obligations, and if the DISTRICT incurs any expense as a result, the DISTRICT shall be reimbursed for said expense from the DEVELOPER’S retainage with the DISTRICT, or if the balance remaining in said retainage is insufficient, by additional direct payment from the DEVELOPER upon demand by the DISTRICT.

15. Following the one (1) year maintenance period, the DEVELOPER shall again conduct a CC TV inspection of the SEWER in accordance with DISTRICT procedures.

16. The DEVELOPER shall maintain and operate forever any portion of the sewers, house connections, sewage pumping stations, force mains or other sewer appurtenances which he is permitted to build in connection with the SEWER and which is not incorporated into the public sewer system when accepted by the DISTRICT.

17. It is mutually agreed that the DISTRICT may at any time permit others other than the DEVELOPER to connect to and regularly use the SEWER.

18. The DEVELOPER agrees that the obligations and privileges of the DEVELOPER hereunder shall be obligations and privileges running with the land concerned with or served by the proposed SEWER, and thereby imposed on or granted to the succeeding owners of said land as well.

19. Subject to the terms of this Permit-Agreement, the DISTRICT agrees that, by appropriate resolution of the DISTRICT, it will accept, acquire all rights and title to, interest in and ownership of, and incorporate into the public sewer system of the DISTRICT such part or parts of the SEWER built hereunder as are designated in the vote of
the Bureau of Public Works set forth in STIPULATION #1 hereof, said acceptance, acquisition and incorporation to become effective as specified in said resolution. Such DISTRICT acceptance resolution may be voted upon recommendation of the Bureau of Public Works after certification by the Director of Engineering that the DEVELOPER has fulfilled all the terms of this Permit-Agreement and that the SEWER, or designated part thereof, has been completed in accordance with the plans and standards of the DISTRICT, and that the SEWER is in acceptable condition at the expiration of the one (1) year maintenance period, and that all roadways, curbs, walks and other surfaces and appurtenances disturbed or damaged by the work have been acceptably restored or that adequate security by bond or otherwise has been furnished to assure such restoration, and that all necessary easements have been conveyed to the DISTRICT. The SEWER, or designated parts thereof, acquired by DISTRICT resolution shall thereafter be maintained by the DISTRICT; and upon such acquisition, the DEVELOPER shall be relieved of the liabilities and obligations in STIPULATION #14 hereof with respect to the SEWER or parts thereof actually acquired by the DISTRICT, except that final acceptance of the roadways, curbs, walks, and other surfaces and appurtenances within the highway limits will be by, and as determined by, the governmental authority having jurisdiction and not by the DISTRICT.

20. DEVELOPER hereby assigns, and the undersigned contractor, hereinafter designated the CONTRACTOR, hereby undertakes and assumes, all of the obligations of the DEVELOPER contained in Stipulations 3, 5, 6, 8, 9, 11, 12, 13, 14 and 15 of this Permit-Agreement, and the DISTRICT hereby consents to such assignment, undertaking and assumption. Notwithstanding such assignment, undertaking and assumption, the DEVELOPER and CONTRACTOR shall remain jointly and severally liable for all the obligations of DEVELOPER under such Stipulations.

21. Neither DEVELOPER nor CONTRACTOR shall assign this Permit-Agreement in whole or in part without the prior written consent of the DISTRICT, which consent the DISTRICT may withhold in its sole and absolute discretion.

ADDITIONAL OR SPECIAL CLAUSES:

(Optional language for inclusion in agreements with DEVELOPERS where the sewers are constructed with added capacity beyond that necessary to serve the DEVELOPER’S project.)

The DEVELOPER agrees that upon the completion of the construction of the SEWER it will submit an affidavit stating the total costs thereof including engineering, and an affidavit stating the amounts of money or any consideration paid the DEVELOPER by any other owner who may be served by the SEWER.

(Optional language for inclusion in agreements with Developers where no easements are required because the SEWER will be installed in area to be accepted as a public street)

Add following to the end of Stipulation #14: If at the end of such maintenance period, the Town of _______ has not accepted as public streets the areas of land in which the SEWER is constructed and situated, such maintenance period and DEVELOPER’S obligation to maintain the SEWER shall continue until the Town of _______ accepts such areas as public streets.

Add following after the term "Permit-Agreement" in the first line of Stipulation #19: "and provided the Town of _______ has accepted as public streets the areas of the land in which the SEWER is constructed and situated,"

Signed in the Presence of:  

COMPANY  

By: ____________________________  

Title: ____________________________  

STATE OF CONNECTICUT  

) ss. ____________________________  

COUNTY OF HARTFORD  

Page 4 of 5
On this___day of ___, 2014, before me, ________________, the undersigned officer, personally appeared ________, who acknowledged himself/herself to be the ___________ of ____________, a ______________ corporation, and he/she, as such ________, being authorized so to do, executed the foregoing instrument for the purposes therein contained, by signing the name of such corporation by himself/herself as such officer.

Signed and Sealed in the Presence of:

Company:  DEVELOPER

______________________________
By: ________________________

______________________________
Title: ________________________

STATE OF CONNECTICUT )
COUNTY OF HARTFORD ) ss. 

On this___day of ___, 2014, before me, ________________, the undersigned officer, personally appeared ________, who acknowledged himself/herself to be the _______ of ____________, a ______________ corporation, and he/she, as such______ being authorized so to do, executed the same for the purposes therein contained, by signing the name of such corporation by himself/herself as such officer.

______________________________
Notary Public
My Commission Expires _____________________
Commissioner of the Superior Court

Signed and Sealed in the Presence of:

THE METROPOLITAN DISTRICT
By its BUREAU OF PUBLIC WORKS

______________________________
By: ________________________

______________________________
District Clerk

On this the _____day of _______, 2014 , before me, ________________, the undersigned officer, personally appeared ____________, who acknowledged himself to be the District Clerk of The Metropolitan District, a specially chartered Connecticut municipal corporation, and that she, as such District Clerk, being authorized so to do, executed the foregoing instrument for the purposes therein contained, by signing the name of such corporation by himself as such officer.

______________________________
Notary Public
My Commission Expires _____________________
Commissioner of the Superior Court
Appendix G: Availability and Capacity Analysis Process

Availability & Capacity Analysis by

The Metropolitan District

An owner and/or Developer may be required by their lender or other entity to obtain a letter from The Metropolitan District stating whether there is, or is not, water service and/or wastewater collection available (adjacent) to the proposed development site, and if such services are of sufficient capacity for the planned development. The intent of the availability and capacity analysis process is to research the capability of the existing District water distribution system and/or wastewater collection and treatment system (including any pumping stations) to meet the estimated needs for the planned additional residential dwellings or commercial/industrial buildings. Please allow a minimum of four weeks to complete the availability and capacity analysis process.

The availability and capacity analysis process is as follows:

1. A formal request for an availability and capacity analysis is made to James M. Eschert, P.E., Principal Engineer, Technical Services, 555 Main Street, P.O. Box 800, Hartford, Connecticut 06142-0800. This request must include:
   - The location of the proposed development, including a street address and a location map.
   - A $75.00 check payable to The Metropolitan District for administrative fees. The fee will be waived if the analysis is conducted as part of a (future) DPA submission.
   - A detailed listing of the water uses and wastewater flow rates within the proposed development, including, but not limited to the following:

   Residential

   - The type of dwelling units planned for the development (single-family, townhome, multi-unit, etc.), including lot size and proposed lawn coverage.
   - The number of one-bedroom, two-bedroom, three-bedroom, etc. units planned for the development so that the population may be calculated per Department of Public Health guidelines.
   - The emergency (fire) service flow rate for sprinklers (if applicable). Please note if the flow rate is per unit, per building, etc.
   - The number of fire hydrants proposed within the project limits, and the flow rate required by the local fire marshal.
   - Other water uses and sources of wastewater within the planned development, such as irrigation, community buildings (kitchen facilities, rest rooms and/or locker rooms, etc.), swimming pool or other facilities.
   - An overall site layout drawing (24” x 36”) with contours.
   - The maximum elevation and mean elevation of the subject parcel.
Commercial/Industrial

- The type of commercial or industrial facility (office, retail, restaurant, hotel, manufacturing, etc.), including lot size and proposed lawn coverage.
- The size of the proposed commercial or industrial facility; specifically the number of restrooms planned (office and retail), the number of customers (restaurant), the number of rooms (hotel), the number of employees, etc.
- Estimated water usage and wastewater discharges for industrial processes, including peak water usage and peak wastewater flow rates.
- The emergency (fire) service flow rate for sprinklers (if applicable). Please note if the flow rate is per unit, per building, etc.
- The number of fire hydrants proposed within the project limits, and the flow rate required by the local fire marshal.
- An overall site layout drawing (24” x 36”) with contours.
- The maximum elevation and mean elevation of the subject parcel.

2. District staff will review the submitted information to determine if the District’s current infrastructure can accommodate the planned water usage and wastewater flow rates. District staff may request additional information as applicable to the particular development and design.

3. The District will provide a written response if there is, or is not, sufficient availability and capacity to provide the planned development with water service and to convey and treat wastewater from the referenced project, as detailed by the owner and/or Developer.

Please note that the pressure and quantity of water service available may vary across a development due to the elevation of specific dwelling units and/or buildings, as well as concurrent water consumption within the development and the surrounding area.

Department of Public Health regulations require that The Metropolitan District provide a minimum water pressure of 25 psi (with 35 psi recommended), and a maximum water pressure of 125 psi (as measured at the water main). The owner and/or Developer may request a hydrant flow test(s) in the vicinity of the subject site to measure the pressure and corresponding flow rate for design purposes.

Additionally, our analysis does not focus on the technical adequacy of the design; such a review is conducted during the DPA process, as applicable.
Appendix H: DPA Project Manager’s Administrative Progress Checklist
**DPA Project Manager’s Administrative Progress Progress Checklist**

<table>
<thead>
<tr>
<th><strong>NAME OF PROJECT:</strong></th>
<th></th>
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<tbody>
<tr>
<td>Town:</td>
<td>Project Manager:</td>
</tr>
<tr>
<td>Job Code:</td>
<td>WBS Element:</td>
</tr>
<tr>
<td>Developer:</td>
<td>Developer Contact:</td>
</tr>
<tr>
<td>Address:</td>
<td>Email:</td>
</tr>
<tr>
<td>Telephone:</td>
<td>Telephone:</td>
</tr>
</tbody>
</table>

- Preliminary meeting held ........................................................................................................ Date: 
- Capacity analysis required? ...................................................................................................... Yes: ☐ No: ☐
- Funding for capacity analysis received ................................................................................... Date: or NA: ☐
- PM forwards capacity analysis to Developer ............................................................................. Date: 
- Application submitted by Developer .......................................................................................... Date: 
- Application deemed complete by PM ........................................................................................... Date: 
- PM distributes construction plans to others ................................................................................ Date: 
- Easements deemed required by Real Estate .................................................................................. Yes: ☐ No: ☐ or NA: ☐
- Easement documents submitted by Developer ............................................................................... Date: or NA: ☐
- Public Hearing required? (determined by District Clerk) ............................................................ Yes: ☐ No: ☐ or NA: ☐
- Public hearing held, if required .................................................................................................. Date: 
- Cost sharing agreement required? ............................................................................................... Yes: ☐ No: ☐ or NA: ☐
- Cost sharing agreement submitted by Developer ......................................................................... Date: or NA: ☐
- Design comments from PM sent to Developer ................................................................................ Date: 
- Reimbursement agreement applicable ............................................................................................ Yes: ☐ No: ☐
- High pressure service applicable .................................................................................................. Yes: ☐ No: ☐
- Acceptable revised plans submitted by Developer ......................................................................... Date: 
- Conditional approval letter issued ................................................................................................. Date: 
- Final construction plans submitted ............................................................................................... Date: 
- Real Estate determines charges due ............................................................................................. Date: 
- District Clerk informs developer of deposit/charges due ............................................................... Date: 
- DPA executed and deposits/charges submitted ............................................................................. Date: 
- Project Summary Plan and final construction plans distributed by PM ........................................ Date: 
- Easements filed on land records by Real Estate .......................................................................... Date: or NA: ☐
- Outlet charges deferred? (sewer only) .......................................................................................... Yes: ☐ No: ☐ or NA: ☐
- Caveats requested from Real Estate (if charges are deferred) ........................................................ Date: 
- Preconstruction job conference requirements sent to Developer by PM ...................................... Date: 
- Job conference requirements complete (determined by PM) ..................................................... Date: 
- Job conference held? ..................................................................................................................... Date: 
- Start of construction ....................................................................................................................... Date: 
- Partial Certificate of Compliance prior to one year maintenance period issued ......................... Date: 
- Start of one year maintenance period ......................................................................................... Date: 
- 5% retainage confirmed by Accounting ....................................................................................... Date: 
- Final inspection following one year maintenance period ............................................................. Date: 
- Final Certificate of Completion issued .......................................................................................... Date: 
- Project is accepted by Board, if sewer ....................................................................................... Date: 

---

**The Metropolitan District • Hartford, Connecticut 06142-0800**

Revised: 06/10/2014
Appendix I: Certificate of Title
Certificate of Title

______________________, Connecticut

______________________, 20__

To: THE METROPOLITAN DISTRICT

This is to certify that as of the date set forth and as disclosed by the land records of the Town of _______________________, Connecticut, Volume _____, Page _____, title to the premises situated on the ______ side of ______ in the Town of _______________________, which are more particularly shown on a certain map entitled:

______________________________________________________________________________

, a copy of which is attached hereto and made a part hereof is vested in:

______________________________________________________________________________

free and clear of all encumbrances except:

1) Any and all provisions of any ordinance, municipal regulation or public private law.
2) Any taxes, liens, choate or inchoate, that may exist in favor of any taxing authority.
3) __________________________________________________________________________

______________________________________________________________________________

The firm of: ________________________________

Attorney-at-Law
State of Connecticut
Appendix J: Example Cost Sharing/Indemnity Agreement
Between Multiple Developers

INSTALLATION FOR WATER MAIN EXTENSION

00 MAIN STREET, HARTFORD CT 06103

JANUARY 1, 2013

RECITALS:

WHEREAS, ABC DEVELOPMENT, LLC, a Connecticut limited liability company with an office located, 00 Main Street, Hartford, CT 06103 (herein, the "Developer") has obtained permission from the Hartford Planning and Zoning and Inland Wetlands Commission for the development of property on the East side of Main Street and located at 00 Main Street, Hartford, Connecticut 06103 (herein, the "Property"); and

WHEREAS, Developer plans to service the Property with water mains and or service lines from The Metropolitan District Commission (hereinafter, the "MDC"); and

WHEREAS, 123 DEVELOPMENT, INC. (herein, "123") owns certain property located on the southerly side of Main Street generally opposite to the Property (the "Abutting Property") and will benefit from the development of the Property and the installation of said water mains and/or service lines; and

WHEREAS, Developer and 123 will execute a Co-Developer's Permit -Agreement to assist in the extension and installation of said water mains and/or service lines;

NOW THEREFORE, for the consideration of one or more dollars and the provisions herein contained, Developer and 123 hereby agree and acknowledge that the execution of the Co-Developer's Permit -Agreement by each is subject to the provisions of this Agreement as set forth below, to wit:

The execution of this Agreement shall not obligate any party hereto, other than the Developer, to perform any work or incur any expense concerning the access to, the installation of or the extension of any such water mains and/or service lines. Developer acknowledges that it shall be solely responsible for any expenses (excluding connection charges) or labor involved in accessing and/or extending such mains and/or service lines. Prior to allowing any surveying, engineering or other work or materials on the Abutting Property, Developer shall obtain and present executed lien waivers releasing 123 and the Abutting Property, as applicable, from any claims for payment. Developer shall hold 123 harmless for any claim made as a result of this Agreement, including, but not limited to mechanics' liens which may be filed as a result of the work contemplated herein.
Developer shall assume all responsibility of hiring contractors, communicating with the MDC, performing the above work and restoring any disturbed areas to their original condition as is commercially reasonable.

If Developer shall sell all or any portion of the Property prior to the completion of all construction of the above work and the payment in full of all costs and charges related to the same, it shall obtain an agreement in the nature of an assumption of these obligations from the purchaser or assignee, but nothing contained herein shall relieve Developer from the performance and/or payment of these obligations if such purchaser and/or assignee defaults thereunder.

IN WITNESS WHEREOF, Developer and 123 have executed this Agreement as of the day and year first above written.

ABC DEVELOPMENT, LLC

By: ABC DEVELOPMENT, LLC,

By: 

By:

Its

123 DEVELOPMENT, INC.

By:

Its
Appendix K: Water Main Easement – Example Format

WATER MAIN EASEMENT

KNOW ALL MEN BY THESE PRESENTS That [name of the Town of], County of Hartford and State of Connecticut, for the consideration of One Dollar ($1.00) and other valuable considerations received to its full satisfaction of THE METROPOLITAN DISTRICT, a municipal corporation specially chartered by the General Assembly of the State of Connecticut and having its territorial limits within said State, does give, grant, bargain, sell and confirm unto said The Metropolitan District, its successors and assigns forever a permanent easement to lay, maintain, operate, construct, use, alter, repair and replace one or more water mains and appurtenances thereto, in, through, on and over a certain strip of land of the Grantor twenty (20) feet in width situated in the Town of [name of the Town of], County of Hartford and State of Connecticut, as shown on a map entitled: “[name of map],” which map is on file in The Town Clerk’s Office in said Town of Windsor. Said easement is more particularly bounded and described on Schedule A attached hereto and made a part hereof.

Within said parcel above described, the Grantee shall have the right to construct, maintain, inspect, use, operate, repair and replace one or more water mains and its appurtenances and to enter in and upon said parcel and to pass over the same and excavate therein for said purposes. Said Grantee shall have the right within said parcel to cut trees and bushes and to alter any existing watercourse or perform other work necessary or convenient for the construction, maintenance, inspection, use, operation, repair, replacement or protection of said water main or mains and the right to keep the surface of the easement clear of bushes and growing trees.

The Grantor herein agrees not to make any changes in grade in said easement greater than twelve inches (12”) up or down from the present surface, unless the Grantor reimburses the Grantee for the entire cost of adjusting the grade of the said water main.

The Grantor agrees, that within the limits of the easement, the Grantor will not construct any building or other structure or use or carry on any operations on the surface or subsurface of said easement, which might endanger the safety of said water main or mains or interfere with operation and maintenance of said water main or mains and appurtenances.

The Grantor herein reserves the right to itself, its heirs and assigns, to continue to use the land within which the aforesaid easement has been granted for any uses and purposes which shall not in any way interfere with the use thereof by the Grantee, its successors and assigns, in fulfilling the purposes for which this easement is granted.

TO HAVE AND TO HOLD the above-granted right, privilege and authority unto the said Grantee and its successors and assigns forever, to it and their own proper use and behoof.
IN WITNESS WHEREOF, I have hereunto set my hand and seal this ________________
day of, ______________________________2013.

Signed, sealed and delivered in the presence of:

__________________________________

By: __________________________________

STATE OF CONNECTICUT   )
  ) ss: , CT, Date
COUNTY OF HARTFORD   )

Personally appeared , hereunto duly authorized signer and sealer of the
foregoing easement, and acknowledged the same to be his free act and deed before me, and the free
act and deed of said limited liability company, before me.

__________________________________

Notary Public
Appendix L: Sewer Easement – Example Format

SEWER EASEMENT

KNOW ALL MEN BY THESE PRESENT That we at the of the Town of , County of HARTFORD and State of CONNECTICUT, for the consideration of One Dollar ($1.00) and other valuable considerations received to its full satisfaction of , do give, grant, bargain, sell and confirm unto said The Metropolitan District, its successors and assigns forever a permanent easement to lay, maintain, operate, construct, use, alter, repair and replace a sewer line and appurtenances thereto, in, through, on and over a certain piece or parcel of land situated in the Town of , County of HARTFORD and State of CONNECTICUT, as shown on map entitled “ ” which map is on file in the Town Clerk’s Office in said Town of . Said easement is more particularly bounded and described on Schedule A attached hereto and made a part hereof.

Within said parcel above described, the Grantee shall have the right to construct, maintain, inspect, use, operate, repair and replace a sewer and its appurtenances, including manholes, embankments and sewage tanks or valves, and to enter in and upon said parcel and to pass over the same and excavate therein for said purposes. Said Grantee shall have the right within said parcel to cut trees and bushes and to alter any existing watercourse or perform other work necessary or convenient for the construction, maintenance, inspection, use, operation, repair, replacement or protection of said sewer.

The Grantor shall not erect or allow to be erected any structures on said right-of-way, and shall not plant or allow to be planted or grown any large trees thereon nor perform any work thereon, within ten (10) feet of either side of said sewer as it may hereafter be built within said strip which may endanger or interfere with said sewer.

The Grantor herein reserves the right to themselves, their heirs and assigns to continue to use the land within which the aforesaid easement has been granted for any use and purposes which shall not in any way interfere with the use thereof by the Grantee, its successors and assigns, in fulfilling the purposes for which this easement is granted.

TO HAVE AND TO HOLD the above-granted right, privilege and authority unto the said Grantee and its successors and assigns forever, to it and their own proper use and behoof.
IN WITNESS WHEREOF, I have hereunto set my hand and seal this ________________ day of, ______
__________________________________________ 2013.

Signed, sealed and delivered in the presence of:

__________________________________________  By: ________________________________

STATE OF CONNECTICUT )
 ) ss: , CT, Date
COUNTY OF HARTFORD )

Personally appeared , hereunto duly authorized signer and sealer of the
foregoing easement, and acknowledged the same to be his free act and deed before me, and the free act
and deed of said limited liability company, before me.

__________________________________________
Notary Public
Appendix M: Real Estate Conveyance Tax Return – Form OP-236 from State Department of Revenue Services

The Developer shall secure the latest version of Form OP-236 from the Department of Revenue Services.
Appendix N: Water Main Deposit Calculation
WATER MAIN DEPOSIT CALCULATIONS - DEVELOPER'S PERMIT-AGREEMENT

DPA#:
Project Name:
Developer:
Town:

STAFF REVIEW EXPENSES
Reimbursable Expenses of the District

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<tr>
<th>Units, in Hours</th>
<th>Unit Cost</th>
<th>Unit Subtotal</th>
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<tbody>
<tr>
<td>1.0 Engineer</td>
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<tr>
<td>2.0 Real Estate</td>
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<td>3.0 GIS/Drafting</td>
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<td>4.0 Construction Inspection</td>
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<td>6.0 Systems Maintenance</td>
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<tr>
<td>7.0 Finance</td>
<td>$0.00</td>
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</table>

Subtotal: $0.00 $0.00

*To be filled out by PM just prior to execution of DPA. Should include all time previously expended plus estimated time for preconstruction conference, inspections and survey.

DISTRICT STAFF INSTALLATION EXPENSES

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<th>Quantity</th>
<th>Unit Cost</th>
<th>Unit Subtotal</th>
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<tr>
<td>2</td>
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Subtotal: $0.00 $0.00

RETAI NAGE CALCULATION
Construction Costs (labor and all materials)

<table>
<thead>
<tr>
<th>Quantity</th>
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<tr>
<td>1</td>
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<td>4-inch Ductile Iron Pipe &amp; Fitting</td>
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<td>4</td>
<td>8-inch Ductile Iron Pipe &amp; Fitting</td>
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</tr>
<tr>
<td>5</td>
<td>Fire Hydrant(s)</td>
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<tr>
<td>6</td>
<td>6-inch Tapping Gate &amp; Assembly</td>
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<td>7</td>
<td>8-inch Tapping Gate &amp; Assembly</td>
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<td>8</td>
<td>4-inch Gate Valve &amp; Assembly</td>
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<td>12</td>
<td>Sterilization Sampling Fittings</td>
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<tr>
<td>14</td>
<td>Road base</td>
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Construction Total: $0.00

5% Retainage Due: $0.00

Total Deposit Required: $0.00
Less Initial Deposit Received: $0.00
Remaining Deposit Due: $0.00
Appendix O: Sanitary Sewer Deposit Calculation
SANITARY SEWER DEPOSIT CALCULATION - DEVELOPER'S PERMIT-AGREEMENT

DPA#:  
Project Name:  
Developer:  
Town:  

STAFF REVIEW EXPENSES  
Reimbursable Expenses of the District*  

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<thead>
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<th>Units, in Hours</th>
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<tr>
<td>2.0 Real Estate</td>
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<tr>
<td>3.0 GIS/Drafting</td>
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<tr>
<td>4.0 Construction Inspection</td>
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<td>5.0 Survey</td>
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<td>7.0 Finance</td>
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Subtotal: $0.00 $0.00

*To be filled out by PM just prior to execution of DPA. Should include all time previously expended plus estimated time for preconstruction conference, inspections and survey.

RETAINAGE CALCULATION  
Construction Costs (labor and all materials)

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<tr>
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<th>Unit Subtotal</th>
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<tbody>
<tr>
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<td>2.0 8-inch Main Line Pipe</td>
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<td>3.0 12-inch Main Line Pipe</td>
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<td>4.0 Manhole (Type II)</td>
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<td>5.0 Drop Manhole (Type IV)</td>
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<td>6.0 Low-Pressure Air Test</td>
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<td>7.0 CCTV Inspection</td>
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<td>8.0 Road base</td>
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<td>9.0 Paving</td>
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<td>10.0 Miscellaneous</td>
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Construction Total: $0.00

5% Retainage Due: $0.00

Total Deposit Required: $0.00
Less Initial Deposit Received: 
Remaining Deposit Due: $0.00
Appendix P: Requirements for Digital Data Submission for Developer’s Permit-Agreement

Requirements for Digital Data Submissions for Developer’s Permit-Agreements

All digital data shall be submitted in .DWG format on computer media (CD or DVD) to:

The Metropolitan District
Engineering & Planning
555 Main Street, Post Office Box 800
Hartford, CT 06142-0800
(860) 278-7850
ATTN (name of Project Manager):

Data must be able to be read, accessed and edited in Windows XP and AutoCad 2013.

All data must be submitted in Connecticut State Plane Coordinate System, North American Datum NAVD 88 Vertical Datum.

All data must include only the following information using the indicated layer naming convention, as specified below. Additional layers not specified herein shall not be included with the electronic data submission.

Failure to provide the digital data as stated may delay the progress of the project.

<table>
<thead>
<tr>
<th>FEATURES</th>
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<tr>
<td>Existing street lines</td>
<td>X-SL</td>
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<tr>
<td>Proposed street lines</td>
<td>P-SL</td>
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<tr>
<td>Proposed edge of pavement for private streets</td>
<td>P-EOP-PVT</td>
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<tr>
<td>Street names</td>
<td>STREET-TXT</td>
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<tr>
<td>Proposed houses and buildings</td>
<td>P-BLDG</td>
</tr>
<tr>
<td>Proposed address numbers and/or unit numbers</td>
<td>P-ADDNUM</td>
</tr>
<tr>
<td>Proposed lot numbers</td>
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<tr>
<td>Existing assessor’s parcel numbers, if applicable</td>
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<tr>
<td>Existing property lines</td>
<td>X-PL</td>
</tr>
<tr>
<td>Proposed property lines</td>
<td>P-PL</td>
</tr>
<tr>
<td>Proposed MDC water utilities</td>
<td>P-WTR</td>
</tr>
<tr>
<td>Proposed MDC sanitary sewer utilities</td>
<td>P-SAN</td>
</tr>
<tr>
<td>Proposed storm utilities in the City of Hartford</td>
<td>P-STM</td>
</tr>
<tr>
<td>Existing easements and encroachments</td>
<td>X-EAS</td>
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<tr>
<td>Easement text</td>
<td>EAS-TXT</td>
</tr>
<tr>
<td>Proposed MDC water easements and encroachments</td>
<td>P-WTR-EAS</td>
</tr>
<tr>
<td>Proposed MDC sanitary sewer easements and encroachments</td>
<td>P-SAN-EAS</td>
</tr>
<tr>
<td>Proposed MDC storm easements in the City of Hartford</td>
<td>P-STM-EAS</td>
</tr>
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</tr>
<tr>
<td>Proposed watercourses (ponds, brooks, rivers etc.) and detention areas</td>
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</tr>
<tr>
<td>Watercourses and detention areas text</td>
<td>HYDRO-TXT</td>
</tr>
<tr>
<td>Wetlands</td>
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<td>Existing open space</td>
<td>X-OS</td>
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<tr>
<td>Proposed open space</td>
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<td>Proposed development phase lines</td>
<td>P-PHASE</td>
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<tr>
<td>Existing railroad lines</td>
<td>X-RR</td>
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</tbody>
</table>
Appendix Q: Developer’s Checklist for DPA Application Completeness

- DPA application: is application complete and properly executed?
- $2,500 deposit check(s) – one for water and one for sewer: is there a $2,500 check for water and a $2,500 check for sewer, depending upon the application?
- Are four sets of stamped construction plans of the infrastructure included? (five sets if pump stations are part of the project)
- Is documentation of Planning and Zoning approval of the development included?
- Is a Certificate of Title to the subject property included?
- If applicable, is a co-Developer cost sharing agreement included?
- If applicable, are easement documents included?
Appendix R: Pre-Application Meeting Topics

Pre-Application Meeting

- Exchange of addresses, emails and phone numbers of participants
- Description of proposed project by Developer including:
  - Location
  - Size of development
  - Status of local approvals
  - Estimate of water and or sewer demand needs
  - Fire service needs
  - Schedule for design and construction
- Will an MDC availability and capacity analysis be required?
  - Is enough information on water usage available to make a determination of de minimis amount such that capacity analysis is not required?
  - If capacity analysis is required, MDC will:
    - explain needed documentation from Developer
    - review the availability and capacity analysis process
    - explain costs associated with the analysis
- Determination if DPA is required or just utility service connection permits
- Review of checklist for DPA application completeness
- Discussion on MDC standards and materials
- Determination if easements will be required
- General discussion on outlet charges and reimbursable expenses
- Determination if a public hearing or co-Developer agreement is necessary
- Discussion of what infrastructure will be turned over to the MDC
- Discussion on estimated timeline for execution of DPA
- Discussion on phasing of construction
Appendix S: Information Required from Developer Prior to Scheduling
Pre-Construction Job Conference
Information Required from Developer Prior to Scheduling Job Conference

The Contractor or Developer shall submit the following documents and/or information prior to the scheduling of the Pre-Construction Job Conference. Failure to provide any of the requested documents will delay scheduling of this conference.

Requested Documents/Information:

1. Contractor Name, Address, Contact Information, Certificate of Insurance
2. Name and Contact Information of the Contractor’s emergency Contact Person
3. List of Materials and Manufacturer to be Installed as selected from the District’s Approved Material Lists [current edition]. The List of Project Specific Materials Shall Be Typed on the Contractor’s Letterhead.
4. Submittals for all non-standard materials (i.e., materials not on the MDC Approved Materials Lists).
5. Call-Before-You-Dig Assigned Number(s)
6. Copies of Contractor’s P-1 or P-7 license as well as appropriate plumbing licenses of subcontractors and employees.
7. Name and Title of OSHA-Competent Person
8. Copies of State and/or Town Excavation Permit(s) – As Applicable
9. Name, Contact Information and License Number of Surveyors
10. Proposed Starting Date
11. Estimated Time to Complete Installation of the Water Main and/or Sanitary Sewer
12. Planned Starting Location
13. Proposed Standard Work Hours
14. Any Questions Concerning Metropolitan District Standards and Procedures
15. Description and Plan of any Phasing of this Project

The Contractor shall bring one copy of the approved drawing set (plans, profiles and details) to the Job Conference for their use.

Please feel free to contact James Eschert, Principal Engineer at 860-278-7850 Ext. 3742 should you have any questions or require additional information.
Appendix T: Draft Pre-Construction Job Conference Agenda
# Pre-Construction Job Conference – Sewer or Water

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<thead>
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<th>Project:</th>
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<tbody>
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<tr>
<td>Town:</td>
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<td>Date:</td>
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</table>

<table>
<thead>
<tr>
<th>Job code:</th>
<th>Inspection WO#</th>
<th>Survey WO#</th>
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</thead>
<tbody>
<tr>
<td>Job code:</td>
<td>Inspection WO#</td>
<td>Survey WO#</td>
</tr>
</tbody>
</table>

**Contractor:**
- **Address:** 
- **License #: (P1 or P7):**

**Developer:**
- **Address:**

## OTHER CT LICENSES (P1 – P7) OF SUBCONTRACTORS AND EMPLOYEES

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<thead>
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</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Lic No:</td>
</tr>
<tr>
<td>Name</td>
<td>Lic No:</td>
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## PERMITS

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## ATTENDANCE & CONTACT INFORMATION:

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</tbody>
</table>
Items for Review/Discussion at Pre-Construction Job Conference

CONSTRUCTION SCHEDULE:

| Planned start date: | Work hours: | Planned Completion Date: |

SITE SAFETY:

Contractor’s OSHA Competent Person:  
Contact phone #:

☐ Site Safety is Contractor’s responsibility; includes but not limited to trench & confined space
☐ District Excavation & Trenching Safety Policy (5/17/13) transmitted to Contractor

MATERIALS:

All Shop Drawings/Product Submittals must be reviewed and approved prior to construction. The latest approved material lists are available at www.themdc.com/construction_manuals.shtml.

☐ All materials approved; if NOT, missing or unacceptable materials:

Missing/unsatisfactory materials:

TRAFFIC:

Traffic control is the contractor’s responsibility and subject to local authority or state authority if in a state highway.

SURVEY:

Offset line, final road or surface grade, benches, cut sheets and all water appurtenances shall be performed by:

Surveyor: ___________________________ License #: ___________________________

☐ MDC Survey & Layout Standards given to Contractor

GENERAL:

☐ Pavement to be installed per MDC Contract/Town/State DOT requirements
☐ Trench compaction must be completed prior to testing of all lines
☐ HO-PAC NOT PERMITTED on water mains

MAINTENANCE PERIOD:

At the end of the one-year maintenance period for all surface restorations, water appurtenances, and sewer appurtenances will be inspected. Any installed sewer or storm lines shall be CCTV’d at the end of the one year period, witnessed by a representative of the MDC, and approved prior to final release of retainage. Any deficiencies shall be corrected at no expense to the District.

The Contractor should contact Construction Services at 860-278-7850, ext. 3468, to schedule final inspection at end of one-year maintenance period.
CONNECTION PERMITS:
☐ Connection permits require 5 working days from the date of final inspection

DISINFECTION:
☐ MDC Disinfection procedures reviewed with the Contractor

PHASING OF CONSTRUCTION:
☐ Any proposed phasing of construction for the purposes of opening portions of the water or sewerage system prior to full completion of the project were reviewed with the Contractor.

SPECIALTY REQUIREMENTS:
☐ Are there any special circumstances requiring a specific qualified subcontractor?

LESSONS LEARNED:
☐ MDC staff will discuss common issues that arise on DPA projects.

Comments:
Appendix U: Sewer Testing and Cleaning Specifications

SECTION 02610

SEWER TESTING AND CLEANING

PART 1 – GENERAL

1.01 SCOPE OF WORK

The Work specified in this Section includes the Contractor using his own equipment, or by a Subcontractor approved by the Engineer. All equipment proposed for conducting the tests shall be subject to the approval of the Engineer. Drawings must be in sufficient detail to show the setup and proposed operation, and no testing will be permitted without prior approval of the Engineer.

A. Furnish all labor, materials, equipment and incidentals required to clean and test all new pipe installed under this Contract as specified herein.
B. The term “sewer”, as used in this Section, shall apply to both stormwater pipelines, overflow pipelines and sewer pipelines.
C. All new sewer pipes shall be cleaned and televised at the completion of Work and at the completion of the 1 year warranty period.
D. All new sewers and shall be air tested. All new laterals shall be air tested to the property line.
E. All new mainline sewers connecting to existing sewers shall be joint tested at each joint of the new sewer pipe installed.
F. All sewers shall be tested for leakage by an infiltration test if the ground water level is a minimum of 2-ft above the crown of the pipe for the full length of the section tested.
G. When sewers cannot be tested by an infiltration test as specified above, they shall be tested by an exfiltration test using water or air.

1.02 RELATED WORK

A. Section 02612, Reinforced Concrete Pipe
B. Section 02615, Ductile Iron Pipe for Sanitary Sewer
C. Section 02622, Polyvinyl Chloride Sewer and Drain Pipe
D. Section 02764, Television Inspection
1.03 REFERENCES

The following standards based on the latest edition form a part of this specification as referenced:

A. American Society for Testing and Materials (ASTM)
   1. ASTM C828 - Standard Test Method for Low-Pressure Air Test of Vitrified Clay Pipe Lines

B. Where reference is made to one of the above standards, the revision in effect at the time of bid opening shall apply.

PART 2 – PRODUCTS – NOT USED

PART 3 – EXECUTION

3.01 CLEANING

A. At the conclusion of the Work, thoroughly clean all pipelines by flushing with water or other means to remove all dirt, stones, pieces of wood, or other material which may have entered the pipes during the construction period. Debris cleaned from the lines shall be removed from the low end of the pipeline. If after this cleaning, obstructions remain, they shall be removed. After the pipelines are cleaned and if the groundwater level is above the pipe or following a heavy rain, the Engineer will examine the pipes for leaks. If any defective pipes or joints are discovered, they shall be repaired or replaced by the Contractor.

3.02 TELEVISION INSPECTION

A. All new sewer pipelines shall be television inspected by the Contractor prior to acceptance to assure proper jointing and flow characteristics. Television inspections shall not be scheduled until construction of other utilities in the same area is completed and pipeline under consideration has been backfilled and compacted to sub-grade elevation. Television inspection will be performed after the pipelines have been cleaned and also for a second time at end of the 1-year maintenance period. Contractor will be required to repair any defects noted at this time at no additional cost to the Owner.
3.03 TESTING

A. General

1. The Contractor shall test the first section of new mainline pipe and new service pipe as soon as it is installed to demonstrate that the work conforms to these Specifications. The initial test section shall not be more than 500-ft of pipeline.

2. Testing of pipe shall closely follow pipe laying. The Contractor shall have no more than 1000-ft of untested sewer or drain constructed at any time.

B. Infiltration Test

1. Pipe shall be tested for infiltration if groundwater level is a minimum of 2 feet above the crown of the pipe for the full length of section to be tested, after the backfill has been placed and the ground water allowed to return to normal elevation. Infiltration tests shall be made under the supervision of the Engineer and the length of line to be tested shall be the length between adjacent manholes. The allowable infiltration shall be 100 gals per inch of diameter per day per mile of pipe in PVC, DI and RCP pipe for each section tested. There shall be no gushing or spurting leaks.

2. If an inspection of the completed sewer or any part thereof shows pipes or joints which allow noticeable infiltration of water, the defective work or material shall be replaced or repaired as directed, at no additional cost to the Owner.

3. Rates of infiltration shall be determined by means of V-Notch weirs, pipe spigots, or by plugs in the end of the pipe to be furnished and installed in an approved manner and at such times and locations as may be directed by the Engineer.

C. Exfiltration Test

1. Leakage tests by exfiltration shall be made before or after backfilling at the discretion of the Engineer. The length of pipe to be tested shall be such that the head over the crown at the upstream crown is not less than 2-ft and the head over the downstream crown is not more than 4-ft. The pipe shall be plugged by pneumatic bags or mechanical plugs in such a manner that the air can be released from the pipe while it is being filled with water. Before any measurements are made, the pipe shall be kept full of water long enough to allow absorption and the escape of any trapped air to take place. Following this, a test period of at least one hour shall begin. Provisions shall be made for measuring the amount of water required to maintain the water at a constant level during the test period.

2. If any joint shows an appreciable amount of leakage, the jointing material shall be removed and the joint repaired. If any pipe is defective, it shall be removed and replaced. If the quantity of water required to maintain a constant level in the pipe does not exceed 100 gals per inch of diameter per day per mile of pipe and if all the leakage is not confined to a few joints, workmanship shall be considered satisfactory. If the amount of leakage indicates defective joints or broken pipes, they shall be corrected or replaced.
D. Air Testing

1. When the Engineer specifies or directs that leakage tests shall be made using the low-pressure air test method, the Contractor will be required to provide all equipment, test plugs in the required sizes, appurtenances, connecting hose or pipe, labor and materials necessary to conduct and control the test as herein specified. All testing shall be performed in accordance with the procedures described in ASTM C828.

2. All tests shall be conducted on the completed sewer pipeline between manholes. Testing of shorter sections of pipeline will only be permitted with the approval of the Engineer.

3. The Contractor is cautioned regarding the importance of properly installing the end caps used to plug hubs, wyes, bends, ends of laterals, and other inlets, and securing them against movement during installation of sewer. Failure to take this precaution can cause a properly installed sewer pipeline to fail a low-pressure air test.

4. The Contractor is further cautioned regarding the safety of personnel during the test. Low-pressure air can exert a substantial force on a pipe plug, even on all diameter pipe plugs. The Contractor will be responsible to insure that all plugs utilized are in good condition and that they will not be pressurized beyond the limits recommended by their manufacturer.

5. No one will be permitted in a manhole containing a plug while air is under pressure in the pipeline being subjected to low-pressure air testing.

6. All gages, controls, and appurtenances for equipment used to conduct the test will be located outside of manholes. Connections to the line under test, test plugs, and other equipment will be made with hose or pipe extensions which will safely contain the pressures necessary to conduct and control the test.

7. Immediately prior to testing, all lines will be cleaned and flushed with water. Pipe manufactured in accordance with ASTM Specification C-76, where applicable, shall be soaked for a period of 12 hours to saturate the pipe wall prior to testing with low-pressure air.

8. The equipment used to introduce the low-pressure air into the sewer line shall include a safety valve, or release device, located in the equipment at a point which will insure that, during the build-up of test pressure, the pipeline being tested will not be subjected to an internal pressure that could damage a properly installed pipeline.

9. The gage used to measure the drop in pressure shall have a 4-inch diameter face with a scale of 0 to 15 PSI (pounds per square inch) in 0.1 PSI increments, or as approved by the Engineer.

10. The Contractor shall determine the elevation of the ground water table in the area of the pipeline being subjected to the low-pressure air test in a manner approved by the Engineer.

11. After cleaning and flushing the line, plugs will be installed in the pipeline being subjected to the low-pressure air test and braced as necessary to secure the plugs in place.

12. Utilizing the approved equipment, air at low pressure will be slowly introduced into the pipeline until the pressure within the pipeline being tested increases to 4 PSIG greater than the back pressure exerted by the ground water table over the pipe being tested, but not
greater than 9 PSIG, (back pressure = 1 PSIG per 2.31 feet of water) as determined above (if the water table is not at a level above the pipe, the test pressure should be brought up to 4 PSIG). Allow at least 2 minutes to elapse prior to starting the test. If necessary, allow a small amount of air to slowly enter the pipeline in order to maintain a pressure of 4 PSIG above the back pressure due to the water table, or 4 PSIG if there is no back pressure to compensate for.

13. Disconnect the supply air hose from the source of air and allow the air pressure within the pipe being tested to drop to 3.5 PSIG above the backpressure due to the existing ground water table (or to 3.5 PSIG if there is no water table). At this point, start measuring the time for the pressure in the pipeline to drop 1 PSIG (or to drop to 2.5 PSIG if there is no back pressure due to a water table).

14. The time required to drop 1 PSIG shall not be less than that indicated in Table 1 for the size and length of pipeline being tested. If the time is less than that indicated in Table 1, the pipeline will be considered to have failed the test (See Table 1).

15. Any section of the sewer line which fails to meet this test will be repaired or replaced as necessary by the Contractor, and retested at no additional expense to the Owner.

16. The Contractor will be responsible for all costs and delays incurred due to efforts to locate and repair any leaks in any sewer line which fails the low-pressure air test, regardless of whether the failure is due to workmanship, material failure, the result of an improperly installed or braced end cap; or any sewer line damaged due to failure to provide a properly sized and operable safety valve or pressure relief device, on the testing equipment for protection of the pipeline being tested. No sewer line will be considered acceptable until it successfully passes the requirements of this test unless the requirement is waived by the Engineer.

17. All testing will be conducted by the Contractor or his approved Subcontractor in the presence of the Engineer. The Contractor or his Subcontractor shall keep a written record which will show the results of the tests conducted. These records should include sufficient data on length of line, pressure levels, time for pressure drop and related features noted during the testing of each segment of the line. A copy of these records shall be given to the Owner.

E. Allowable Deflection Test

1. Pipe deflection measured not less than 90 days after the backfill has been completed as specified shall not exceed 5 percent. Deflection shall be computed by multiplying the amount of deflection (nominal diameter less minimum diameter when measured) by 100 and dividing by the nominal diameter of the pipe.

2. Deflection shall be measured with a rigid mandrel (Go/No Go) device cylindrical in shape and constructed with a minimum of 9 evenly spaced arms or prongs. Drawings of the mandrel with complete dimensions shall be submitted to the Engineer for each diameter of pipe to be tested. The mandrel shall be hand pulled through all sewer lines.
3. Any section of sewer not passing the mandrel shall be uncovered at no additional cost to the Owner and the bedding and backfill replaced to prevent excessive deflection. Repaired pipe shall be retested at no additional cost to the Owner. Retested pipe shall not deflect more than 4 percent.

F. Sewer Pipe Joint Testing

1. Existing hydrostatic head shall be established by inserting a pipe probe into the backfill material at the crown of the pipe at the downstream manhole and applying pressure until equilibrium is attained. This is the back pressure that all test pressures for that section of line shall be increased by.

2. A precise pressure of 4 psi above the existing hydrostatic head shall be applied to each joint. Once the pressure of 4 psi above hydrostatic head at the joint has been recorded on the gauge above ground, the water flow shall be stopped and the pressure gauge observed for 30 seconds. Should the pressure on the joint drop 0.5 psi or more within 30 seconds, the joint will have failed the test. Joints that fail the test shall be repaired as directed by the Engineer and re-tested by the same procedure until the joints pass the pressure test.

3. During the joint testing program, complete records shall be kept, recording the location of the manhole section in which the testing is done, location of each joint tested, test pressures used, and the test results.

4. Pipe joints that fail the joint test shall be repaired to the satisfaction of the Engineer and shall be subject another joint test at the direction of the Engineer.

5. Place attest packer inside pipe and test every joint.
TABLE 1

MINIMUM TIME REQUIRED FOR A PRESSURE DROP OF 1 PSIG AS REQUIRED IN LOW PRESSURE AIR TEST SPECIFICATION - MINUTES: SECONDS

(BASED ON 0.0015 CFM/SQ. FT.)

<table>
<thead>
<tr>
<th>Pipe Diameter (in.)</th>
<th>Specification Time for Length (L) Shown (min:sec)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>100 ft.</td>
</tr>
<tr>
<td>6</td>
<td>5:40</td>
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<td>8</td>
<td>7:34</td>
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<tr>
<td>18</td>
<td>17:00</td>
</tr>
<tr>
<td>21</td>
<td>19:50</td>
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</table>

Note:  If lateral sewers are included in the test, their lengths may generally be ignored in computing required test times.  In the event a test section, having a total internal surface area less than 625 square feet, fails to pass the air test when lateral sewers have been ignored, the Engineer shall recompute the test time including all lateral sewers.

END OF SECTION
Appendix V: Television Inspection Requirements

SECTION 02764 of the MDC Standard Specifications

TELEVISION INSPECTION

PART 1 - GENERAL

1.01 SCOPE OF WORK

A. The Work specified in this Section includes furnishing all necessary labor, materials, equipment, services and incidentals required and visually inspect by means of color closed circuit television all new and existing sewer and drain sections, including, but not limited to, all recording and playback equipment, materials and supplies such as tape or disk. All new sewer pipes shall be television inspected.

B. The term “sewer”, as used in this Section, shall apply to both stormwater mainlines and sewer mainlines (not laterals).

C. The inspection shall be done one sewer line section (i.e., manhole to manhole) at a time.

D. All inspections shall be witnessed by the Engineer.

E. Video recordings shall be made of the television inspections and copies of both the recordings and printed inspection logs shall be supplied to the Owner.

F. The Work specified in this Section shall be performed upon completion of the construction of the sanitary sewer, storm drains and appurtenances and then again at the end of the maintenance period, subsequent to trench consolidation and testing operations.

G. For post-construction television inspection, the Contractor is responsible for adhering to NASSCO’s Pipeline Assessment and Certification Program (PACP) guidelines. Verification of NASSCO PACP certification is required.

1.02 RELATED WORK

A. Section 02610, Sewer Testing and Cleaning.

PART 2 - PRODUCTS

2.01 EQUIPMENT

A. The television camera used for the inspection shall be one specifically designed and constructed for such inspection. Lighting for the camera shall be suitable to allow a clear picture for the entire periphery of the pipe. The camera shall be operative in 100 percent humidity conditions. The camera, television monitor and other components of the video system shall be capable of producing a minimum 500 line resolution video picture. Picture quality and definition shall be to the satisfaction of the Engineer and if unsatisfactory, equipment shall be removed and no payment made for an unsatisfactory inspection.
PART 3 - EXECUTION

3.01 PROCEDURE

A. The camera shall be moved through the line in either direction at a uniform rate, stopping when necessary to ensure proper documentation of the sewer’s condition but in no case will the television camera be pulled at a speed greater than 30 fpm. Manual winches, power winches, TV cable and powered rewinds or other devices that do not obstruct the camera view or interfere with proper documentation of the sewer conditions shall be used to move the camera through the sewer line. If, during the inspection operation, the television camera will not pass through the entire sewer line section, the equipment shall be removed and repositioned in a manner so that the inspection can be performed from the opposite manhole.

B. Whenever non remote powered and controlled winches are used to pull the television camera through the line, telephones, radios, or other suitable means of communication shall be set up between the two manholes of the sewer line being inspected to ensure that good communications exist between members of the crew.

C. The accuracy of the measurements cannot be stressed too strongly. Measurement for location of defects shall be above ground by means of a meter device. Marking on cable, or the like, which would require interpolation for depth of manhole, shall not be allowed. Measurement meters shall be accurate to two tenths of a foot over the length of the sewer line section being inspected. Accuracy of the measurement meters shall be checked daily by use of a walking meter, roll a tape, or other suitable device.

D. For post-construction television inspection, the Contractor is responsible for adhering to NASSCO’s PACP guidelines.

3.02 RECORDING OF FIELD OBSERVATIONS

A. General

1. The Contractor shall submit to the Engineer, two copies of digital recordings (images and video) of the pipeline television inspections and summary data in CDR (Write-Once CD) or DVDR format. The CDR shall be written in accordance with the ISO-9660 Level 2 Specification. Each CDR shall be labeled with the appropriate identification of its contents. The label shall correspond to a schedule of every sewer reach contained on the CDR.

2. The digital recordings shall be linked to software capable of performing multiple summaries, queries, and analysis. The software shall also have the capability of recording, digitizing and storing single frames of video images and full time live video, as well as collecting, storing and printing pipeline inspection data for display and report generation.

3. The included software package shall be a 32 bit Windows 98/NT application and shall be fully Object Oriented. It shall be capable of printing pipeline inspection reports with captured images of defects or other related significant visual information on a standard
inkjet color printer. The software shall also have the capability of being linked with graphical software such as those used for Geographical Information Systems.

B. Field Data Recordings

1. Image Capture
a. Create still shots of video recordings. Selected digitized picture images shall be stored and the picture files shall be exportable to Industry Standard Formats to include JPEG, BMP, TIFF, formats and are transferable by disk to an external personal computer that utilizes standard viewers and printers. Picture files will be stored and exported with inspection data.

2. Video Capture
a. Full time live video and audio files shall be captured for each pipe inspected. The files shall be stored in industry standard MPEG (Moving Pictures Expert Group) format and can be transferable by CDR media or DVDR to an external personal computer that utilizes standard MPEG viewers. The MPEG video shall be defined as ISO-MPEG Level 1 (MPEG-1) coding with a resolution of 352-pixel (x) by 240-pixel (y) and an encoded frame rate of 29.97 frames per second.
b. System shall perform an automatic disk image/file naming structure to allow saved video/data sections to be “Burned” to CDR or DVDR format. It shall have the capability of “burning” a minimum of 45 minutes of video to the CDR media with full “Linked” pipeline data information.
c. The video recording shall be free of electrical interference and shall produce a clear and stable image. The audio recording shall be sufficiently free of background and electrical noise as to produce an oral report that is clear and discernable.
d. The recordings shall identify the location both within the pipe segment (physical location) and within the digital recording (video frame location) for each defect or observation. The digital recordings and inspection data shall be cross-referenced to allow instant access to any point of interest within the digital recording. A user defined, pipeline search mechanism shall be provided.
e. The video inspection shall include segment information (start and ending manholes, station footage, date, time, client, address, etc.). A pointer shall be provided from each observation to the digital recording and any accompanying digital still images.
3. Data Base

a. Develop a summary log of each sewer reach inspected. The system software shall be an MS Windows 98/NT based data acquisition system incorporating an ODBC windows standard data base format. Inspection files shall be able to be exported into other databases and other computers. Information on software file headers format shall be provided to allow the inspection database to be customized with the correct headers into the users unique application or software. The defect codes shall include standard defect codes and user defined codes. Defect severity codes shall include standard codes and user defined codes. There shall be graphical and tabular reports showing all observation points and pertinent data. All graphic and tabular reports shall be in color to match the defect severity codes. Inspection information shall be stored in a rational database management system that employs relationships to increase data integrity and reduce storage space.

b. System shall have the capability of being customized to meet local area requirements and regulations as necessary. These available changes shall encompass variations of the operation layout, functions and printed reports. The program shall be capable of sorting all data stored using generic sort key and user defined sort fields.

c. For post-construction television inspection, the Contractor is responsible for adhering to NASSCO’s PACP guidelines. The Contractor shall submit to the Engineer all digital inspection videos and PACP exchange database on a portable hard drive provided by the Contractor. The hard drive shall be delivered to the Engineer and shall be labeled with the project name and date. The data on the hard drive shall consist of separate individual video files for each pipe segment taped. Each individual video file shall be named with the upstream to downstream manhole associated with the data presented.

END OF SECTION
Appendix W: Excavation and Trenching Safety Policy

ENVIRONMENT, HEALTH & SAFETY DEPARTMENT

EXCAVATION AND TRENCHING SAFETY POLICY

PURPOSE
The purpose of this policy is to assure a uniform and consistent understanding of the District’s position regarding imminent danger situations associated with working in excavations and trenches and to establish the procedure to be followed in the event that such a situation occurs.

Imminent danger, as defined by OSHA means: “Any conditions or practices in any place of employment which are such that a danger exists which could reasonably be expected to cause death or serious physical harm immediately or before the imminence of such danger can be eliminated through the enforcement procedures otherwise provided by this Act.”

POLICY STATEMENT
The prevention of injury to any person working in an excavation or trench is of prime concern. Therefore, the following procedure shall be implemented in every instance where District employees or employees of contractors performing work for the District are engaged in activities covered by 29 CFR 1926, Subpart P.

PROCEDURE

IMMINENT DANGER IN EXCAVATIONS

1. ACTION BY MDC EMPLOYEE (OTHER THAN A SUPERVISOR, INSPECTOR OR MANAGER)
   If an employee observes what he/she feels is an imminently dangerous condition, they are to notify their supervisor or designated Competent Person immediately of the specific dangers involved.

2. ACTION BY INSPECTOR
   If an imminent danger condition is observed by an MDC Inspector or any MDC management person he/she shall:
   a) Request that the individual responsible for safety on the job site (defined by OSHA as the Competent Person) order workers out of the excavation and cause the performance of such work, as required, to eliminate the imminent danger condition.
   b) Document the request indicating actions taken and notify their supervisor immediately.
   c) If the Competent Person fails to comply with the request above, the MDC inspector shall order workers out of the excavation, order a halt to the job and call his/her supervisor.

3. ACTION BY SUPERVISOR
   When notified by an inspector or other MDC representative of an imminent danger condition the supervisor shall:
   a) Review the circumstances surrounding the order to halt the job.
   b) Immediately proceed to the job site to evaluate the conditions.
   c) Call EH&S and request an immediate inspection.

4. ACTION BY EH&S
When notified by a supervisor, manager, inspector or other MDC representative of an imminent danger condition the EH&S representative will:

a) Verify that the appropriate supervisor has been notified.
b) Proceed to the job site to make an evaluation of the conditions.
c) Review all aspects of the condition to determine if all applicable OSHA regulations are being followed.
d) Call OSHA if further clarification is needed.
Appendix X: Cut Sheet and Stationing for Manholes
Guidance Manual for Developer’s Permit-Agreements (DPA)

Cut Sheet

<table>
<thead>
<tr>
<th>Sewer</th>
<th>Water</th>
</tr>
</thead>
</table>

Location: ____________________________________________

Town: ___________________________ DPA#/Contract: ____________________________

Staked: ___________________________ of CL at___________________________

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<tr>
<th>Elevation</th>
<th>Flowline</th>
<th>Cut</th>
<th>Station</th>
<th>Remarks</th>
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</table>

By: ___________________________ Date: ___________________________

Notebook: ___________________________ Datum: ___________________________

See attached “Stationing of Manholes for DPA Project”
Stationing of Manholes
for Development Permit-Agreement Projects

1. Start station 0+00' at existing manhole or first new manhole (if MH is to be constructed over existing sewer).

2. Station consecutively along main portion of sewer to an end manhole.

3. At intersection(s) where the sewer branches off in another direction, a different station shall be used other than one that has already been used. The new stationing shall begin with the next even thousand station. Thus, it is possible to have more than one station per manhole. Example Attached: SMH 1+22 NW and SMH 10+00 NE are the same manhole.

4. All offset stakes are to be stationed at even fifty foot (50') intervals. Offset stakes shall be at twenty-five foot (25') intervals when a laser will not to be utilized. Please see grade sheets stationing column for an example.

5. The first stake out of proposed manholes shall be utilized to adjust the stationing to next even 50' interval when the manhole station is not evenly divisible by 50'. Example Attached: The first stake from SMH 11+31 N shall be at Sta. 11+50.

6. Street stationing of sewer will NOT be allowed.
## Appendix Y: Insurance Requirements – Sewer Installation

### DEVELOPER’S PERMIT-AGREEMENT

**INSURANCE REQUIREMENTS (as of 09/01/2013)**

(Public Sewer Installation)

**FOR LICENSE AS A PIPE LAYER, EXCAVATOR OR**

**ELIGIBILITY FOR METROPOLITAN DISTRICT PERMITS**

<table>
<thead>
<tr>
<th>Insurance Requirement</th>
<th>Details</th>
</tr>
</thead>
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<tr>
<td>Commercial General Liability</td>
<td>Limit of liability not less than $2,000,000 each occurrence and $2,000,000 aggregate. The Metropolitan District, each member municipality thereof, the State of Connecticut and their respective officers, officials, employees, agents and servants must be added as additional insureds.</td>
</tr>
<tr>
<td>Environmental &amp; Pollution Liability</td>
<td>Limit of liability not less than $1,000,000 each occurrence.</td>
</tr>
<tr>
<td>Automobile Liability</td>
<td>Limit of liability not less than $1,000,000 combined single limit.</td>
</tr>
<tr>
<td>Protective Liability (Owners &amp; Contractors Protective Liability) (OCP)</td>
<td>For and in the name of the District with a per project minimum limit of liability not less than $1,000,000 each occurrence and $1,000,000 aggregate.</td>
</tr>
<tr>
<td>Umbrella Liability</td>
<td>Limit of liability not less than $5,000,000 each occurrence and $5,000,000 aggregate in excess of Employer’s, Commercial General Liability and Automobile Liability.</td>
</tr>
<tr>
<td>Workers’ Compensation</td>
<td>As required by Connecticut law and Employer’s Liability with a limit of not less than $100,000 each occurrence; $500,000 disease policy limit and $100,000 disease each employee.</td>
</tr>
<tr>
<td>Owner/Operator Note</td>
<td>A letter from your Insurance Agent attesting to the fact that W/C insurance is not mandatory and that you elect not to carry it, will satisfy this requirement.</td>
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</table>

All of the above requirements must be met prior to issuance of a permit.
# Appendix Z: Insurance Requirements – Water Main Installation

## Developer’s Permit-Agreement

### Insurance Requirements (as of 09/01/2013)

(Public Water Main Installation)

**FOR LICENSE AS A PIPE LAYER, EXCAVATOR OR ELIGIBILITY FOR METROPOLITAN DISTRICT PERMITS**

<table>
<thead>
<tr>
<th><strong>Insurance Type</strong></th>
<th><strong>Requirements</strong></th>
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<tr>
<td><strong>Commercial General Liability</strong></td>
<td>Limit of liability not less than $2,000,000 each occurrence and $2,000,000 aggregate. The Metropolitan District, each member municipality thereof, the State of Connecticut and their respective officers, officials, employees, agents and servants must be added as additional insureds.</td>
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<tr>
<td><strong>Environmental &amp; Pollution Liability</strong></td>
<td>Limit of liability not less than $1,000,000 each occurrence.</td>
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<td><strong>Automobile Liability</strong></td>
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<td><strong>Protective Liability (Owners &amp; Contractors Protective Liability) (OCP)</strong></td>
<td>For and in the name of the District with a per project minimum limit of liability not less than $1,000,000 each occurrence and $1,000,000 aggregate.</td>
</tr>
<tr>
<td><strong>Umbrella Liability</strong></td>
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</tr>
<tr>
<td><strong>Workers’ Compensation</strong></td>
<td>As required by Connecticut Law and Employer’s Liability with a limit of not less than $100,000 each occurrence; $500,000 disease policy limit and $100,000 disease each employee.</td>
</tr>
<tr>
<td><strong>Owner/Operator Note</strong></td>
<td>A letter from your Insurance Agent attesting to the fact that W/C insurance is not mandatory and that you elect not to carry it, will satisfy this requirement.</td>
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All of the above requirements must be met prior to issuance of a permit.
Appendix AA: Water Main Disinfection Specifications
Procedure for Filling and Testing New Water Mains

Last Updated: December 12, 2011

Overview of Steps

1. Steps During Construction
2. Fill and Remove Air from New Water Main
3. Scour Pipe with Full Diameter Flush
4. Hydrostatic Pressure Test
5. Scour Pipe with Full Diameter Flush (Day of Chlorination)
6. Continuous Feed Chlorination
7. Allow Chlorine to Sit in Pipe for a Minimum of 24 Hours
8. Slow Flush and Dechlorination
9. Take Sample #1
10. Wait Minimum 24 Hours and Take Sample #2
Step 1. Water Main Construction

1. Maintain Clean Pipes and Appurtenances (Storage & Construction) Throughout construction the pipe must be kept clean, while stored on site as well as while being set in place in the trench. Prevent rainwater, groundwater, dirt, gravel or any foreign matter from entering the pipe. Each end of the pipe should be capped or bagged and taped shut while being stored. The pipe and appurtenances shall not be stored directly on the ground. Larger diameter pipes (24” and larger) shall be kept clean during installation. Any debris which enters the ends of the pipes during the process of moving and placing the pipe in the trench shall be swept/removed from the pipe from the ends (without entering the pipe to prevent further contamination). During construction, keep the groundwater level in the trench below the level of the pipe invert and cap pipe end section at the end of each day to protect the pipe overnight. Cap the pipe end (s) during any times when the pipe or trench will be unattended, including lunch breaks.

2. Utilize Approved Materials. The Contractor shall provide submittals for materials used in the project. All pipe, gaskets, fittings, appurtenances and pipe lubricant/soap shall be certified NSF/ANSI-61. All chemicals used with potable water shall be certified NSF/ANSI-60.

3. Continuous Feed Method. Place a chlorine injection point on the new water main within 2-4 feet of the valve being operated to fill the new water main. Also, place a chlorination blow-off within 2-4 feet of the end of the new water main; this corporation can double as a sterilization sampling point. For 12-inch and smaller water mains, the chlorination inlet and blow-off corporations shall be a ¾”x1” taps on the top of the water main. For 16-inch and larger water mains the chlorination inlet and blow-off corporations shall be a 2” tap on the water main.

4. Sterilization Sampling Points. A sterilization sampling point assembly is required a minimum every 1,200 feet and on each branch/side street connection off of the new water main. Branch connections which are 18 feet long or less do not require a sterilization sampling point; instead, the pipe can be swabbed with a 1% - 5% chlorine solution and placed into service. Each sterilization sampling point requires a unique name consisting of the street/road name and a sequential number, i.e., North Main Street sampling point #1 is NM-1, for sample tracking and chain of custody purposes. The design engineer will assign the sterilization sampling point identification numbers.

5. Pre-Flushing Existing Distribution System. The Resident Engineer shall coordinate a pre-flushing plan and a new water main flushing plan with Contractor and MDC personnel. Contractors are required to issue shop drawings outlining a pre-flushing plan in which the source water for flushing will be coming from (larger water mains in area). MDC Operations Department, Hydrant Maintenance Group shall pre-flush the feeder water mains no more than one week prior to filling the main. Resident Engineer will provide work order to the hydrant maintenance department. An outreach flyer shall be distributed to residents along the length of the water mains to be flushed prior to flushing. Hydrants shall be flushed at a high flow until water coming out appears clear (free of silt/debris).

6. Flushing of New Water Main. Contractors are required to issues a shop drawing outlining the new water main flushing plan. An end of main blow-off assembly shall be utilized whenever
possible at the end of the new water main to provide a scouring flush of the main. A branch blow-off assembly can also be utilized, depending on the site specific requirements of the project. Hydrants shall not be used to provide a scouring flush of a new water main. A minimum water velocity of 2.5 ft/s shall be obtained during the scouring flush to remove debris from the new water main.
Step 2. Filling an Empty Water Main

Objective:
Fill an empty water main with water and remove all air from the pipe

1. Verify the opening direction of all valves (open-right or open-left) prior to filling the water main
2. Open all air valves and hydrants along the new water main. Additional personnel may be needed, depending on the new main configuration.
3. Slowly open the valve which connects the new water main to the existing distribution system. Slowly turn the valve wrench and listen on the wrench until you hear running water. Once you hear water running, turn the wrench 2 more full turns and leave the valve at this setting to fill the water main.
   **Note:** When filling or flushing any water main, the water shall be provided by opening one valve; never open two feeds/connections to the existing water distribution system at the same time.
4. At each air valve listen for the sound of air moving out of the corporation. The sound will become choppy when water begins to mix with the air. Close the air valve once the choppy sound stops and a constant stream of water is discharging from the air valve. Close the air valve at the highest point last. At hydrants, listen for the sound of the water or place your hand over the open connection to feel if air is moving out of the 2 ½” hose connection. Once a steady flow of water is discharging from the hydrant, slowly close the hydrant and replace the cap.
5. Lastly, close valve between the new water main and the existing water distribution system
Steps 3. & 5. Scouring Full Pipe Diameter Flush Procedure

Objective:
Scour the pipe by flowing water through the pipe at a speed of at least 2.5 ft/s

1. The Contractor shall issue a shop drawing outlining the flushing plan, all parties shall be fully aware of the requirements prior to commencing the scouring flush. The Contractor is responsible for handling the volume of water from the flushing process and preventing flooding in the area.
2. Inspector notifies Dispatcher at MDC Command Center of planned flushing and if water main to be flushed is fed by a pump station and/or a storage tank.
3. Fully open the valve on the blow-off assembly. At this point all other valves should be closed; once the initial pressure is relieved no water should be coming out of the blow-off until the flushing operation begins.
4. Slowly open the valve which connects the new water main to the existing distribution system. Slowly turn the valve wrench and listen on the wrench until you hear running water. Once you hear water running, turn the wrench 2 more full turns and wait a minimum of 2 minutes for the system to equalize.
5. Regulate the flow through the blow-off assembly by using the same gate valve connected to the existing water distribution system. Slowly open the gate valve more to adjust the flow until the water shoots the appropriate distance above the pavement surface. See Table I for the minimum and maximum distances for the water to extend above the pavement.

   • Example: For an 8-inch water main with a 4-inch blow-off, a fountain of water should extend 3.1 ft to 6.2 ft above the road to ensure 2.5 ft/s to 5 ft/s of velocity through the pipe.

6. If you are flushing a pipe with multiple diameters, such as 10-inch and 8-inch pipe, the height of the water fountain should be based upon the largest diameter in the pipeline being flushed.
7. The new water main shall be flushed for a minimum of five pipe volumes. The minimum pipe scouring flushing time shall be calculated by the following equation:

   • Time (Minutes) = Pipe Length (Feet) X 0.03333

      o This equals 3.33 minutes of flushing for every 100 feet or 33.3 minutes of flushing for every 1,000 feet of water main

8. After the minimum flushing time has passed, the valve on the blow-off assembly shall be slowly closed. Next, any hydrants on the new water main shall have the 2.5” hose connection opened and each hydrant shall be flushed for a minimum of 5 minutes fully open.
9. After flushing and slowly closing the last hydrant, the gate valve on the connection to the existing distribution system shall be closed.
Table I - Scouring Full Diameter Flushing of Pipe - Using Blow-Off Assembly

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Note: Recommended Maximum Velocity Limit for Cement Lined Ductile Iron Pipe is 14 ft/s

Diameters 24" and larger shall be swept during construction, full diameter flushing is not practical. Large diameter water mains still require flushing prior to chlorination to remove stagnant water.

Preferred Diameter Blow-off For Water Main Design/Construction
Step 4. Hydrostatic Testing Procedure

Objective:
Pressure test the new water main with high pressure water to check for leaks, and if present, to establish the leakage rate.

Test shall be conducted per latest version of AWWA C600

1. Fill and scour the new water main per the procedures in this document (see Step 2. Filling an Empty Water Main).
2. Verify all hydrant branches and air valves are filled with water and all air has been removed.
3. Verify all valve connections to existing water distribution system are closed to isolate the new water main from the system.
4. The hydrostatic test duration shall be 2 hours minimum.
5. The test pressure should be specified on the water main design plans. If no test pressure is specified on the plans, the Resident Engineer shall consult the Project Manager. The test pressure shall be either 150 psi or 1.5 times the operating pressure, whichever is less at the lowest point in the pipeline.
6. The inspector shall verify the Contractor’s pressure gauge is functional (starts at 0 psi and moves)
7. The pressure shall be maintained within +/- 5 psi of the test pressure for the 2 hour period. Additional water shall be pumped into the main to maintain the test pressure. The volume of water pumped into the water main during the test shall be measured by both the Contractor and the District’s Inspector.
8. A bucket shall be used to provide water for the pump to maintain pressure in the water main. The bucket shall be clean and sprayed with a minimum of 1% chlorine solution. The bucket shall be filled using water from an MDC hydrant provided at the work site. The beginning and ending level of water shall be marked on the bucket. The volume of water used shall be computed based on the change in the water level in the bucket.
9. The allowable leakage rate per AWWA C600 is 11.65 gallons per day per mile of pipe per inch of diameter or 11.65 gpd/mi/in.
10. See the AWWA equation below to calculate the acceptable rate of leakage. Reference Table II below lists the allowable leakage rates for 100 and 1,000 linear feet of various diameter water mains at a test pressure of 150 psi. The calculation for allowable leakage should include hydrant laterals and all other lengths of pipe pressurized in the pressure test.
11. Any visible signs of leakage shall be repaired, despite the results of the hydrostatic pressure test.
AWWA Calculation for Acceptable Rate of Leakage

\[
L = \frac{(S \times D \times \sqrt{P})}{133,200}
\]

\( L \) = Testing Allowance Leakage Rate (Gallons/ Hour)  
\( S \) = Length of Pipe Tested, (feet)  
\( D \) = Water Main Pipe Diameter (inches)  
\( P \) = Average Test Pressure During Test (psi)

<table>
<thead>
<tr>
<th>Water Main Diameter (in.)</th>
<th>Allowable Leakage Rates (Per 100 feet)</th>
<th>Allowable Leakage Rates (Per 1,000 feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Rate per 1 hour (Gallons/Hour)</td>
<td>Total for 2-Hour Test (Gallons)</td>
</tr>
<tr>
<td>---------------------------</td>
<td>---------------------------------------</td>
<td>----------------------------------------</td>
</tr>
<tr>
<td>6</td>
<td>0.06</td>
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<td>48</td>
<td>0.44</td>
<td>0.88</td>
</tr>
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</table>
Steps 6 – 8. Disinfection Procedure – Continuous Feed Chlorine Injection Method

1. Perform a scouring full pipe diameter flush of the new water main immediately prior to performing disinfection. This is critical to remove the stagnant high pH water that has been in contact with the pipe and to bring in fresh water from the distribution system. See the “Scouring Full Pipe Diameter Flush” section of this document for more information.

2. A 5% - 15% sodium hypochlorite solution shall be injected into the new water main to disinfect it. Prior to injecting the sodium hypochlorite, the Contractor performing the chlorination must provide NSF/ANSI 60 forms (shop drawings) verifying the certification of the chlorine to be used for disinfection. The Contractor must also provide a Material Safety Data Sheet (MSDS) for the hypochlorite solution to be used. The Contractor shall supply new, unopened containers of sodium hypochlorite solution, opened in the presence of the field inspector.

3. Inject chlorine solution at a chlorine injection point, within 2 to 5 feet of the location you are filling from. Open sterilization sampling points at the opposite end of the water main and any branches along the way. Sample at all hydrants and sterilization sampling points along the water main to verify that a minimum of 25mg/L chlorine residual is fed to all areas of the new water main. Three consecutive samples of 25mg/L or higher concentration must be taken from each location to verify that the chlorine has reached the location, and then the sterilization sampling points can be closed. Once a minimum of 25 mg/L is detected at the sterilization sampling point at the end of the main for 3 consecutive tests, the chlorine injection should be stopped and the injection point closed. See Table III for volumes of various strengths of chlorine solution needed to provide 25 mg/L throughout 1,000 feet of various diameter water mains. The minimum chlorine concentration in the pipe shall be 25mg/L, a higher level of 50 mg/L is preferred throughout the pipe to ensure all areas receive the minimum level of chlorione.

4. Let the chlorinated water sit in the water main for a minimum of 24 hours after the chlorine injection has stopped.

5. Sample water from each sampling point for chlorine residual prior to de-chlorinating pipe; verify that a minimum concentration of 10 mg/L chlorine is still present in the water main (AWWA C651-05 Requirement, Section 4.4.3.3.3). If a minimum of 10 mg/L is not present at all test points, the water main shall be de-chlorinated, scoured with a full diameter pipe flush and re-chlorinated via this process.

6. Following the 24-hour chlorination period and after verifying a minimum concentration of 10 mg/L chlorine is still present in the pipe, the water main shall be flushed/de-chlorinated within 24 hours (no more than 48 hours after the chlorine injection is conducted) because prolonged exposure to high concentrations of chlorine may damage the asphaltic seal coating of the pipe (AWWA C-600). Slowly flush super-chlorinated water through a de-chlorination device, ensuring that all appurtenances are flushed and de-chlorinated, including hydrants. See Table IV for pounds of ascorbic acid needed to neutralize various concentrations of chlorine in 1,000 feet of various diameter water mains. If the chlorine concentration at the beginning of the de-chlorination process is between two values, use the quantity of ascorbic acid for the high
chlorine concentration. Stop de-chlorination once the new water main has been fully flushed and the chlorine residual stabilizes to the normal level for the area. Chlorine residual levels in the system vary from 0.1 – 0.8 mg/L. Following de-chlorination, take water Sample #1 (Follow required protocols when sampling)

7. Following de-chlorination, wait a minimum of 2 hours before taking water Sample #1 (Follow required protocols when sampling as listed below.)

8. Wait a minimum of 24 hours following Sample #1 and take Sample #2 (Follow required protocols when sampling.)
### Table III - Gallons Sodium Hypochlorite Needed to Disinfect 1,000 Feet of Water Main

<table>
<thead>
<tr>
<th>Water Main Diameter (in.)</th>
<th>% Sodium Hypochlorite Solution Used for Water Main Disinfection</th>
<th>1%</th>
<th>3%</th>
<th>5%</th>
<th>7%</th>
<th>10%</th>
<th>12%</th>
<th>15%</th>
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### Table IV - Pounds of Ascorbic Acid Needed to Neutralize Chlorine in 1,000 feet of New Water Main

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<th>Water Main Diameter (in.)</th>
<th>Chlorine Concentration in Water Main (mg/L)</th>
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<td>196.5</td>
<td>245.6</td>
<td>294.7</td>
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</table>
Steps 9. & 10. Sampling Procedure for Inspectors

Materials needed:
Hach Pocket Colorimeter, Cooler, Ice Packs, Sharpee/Permanent Marker, Grease Pencil, Hype Wipes, Latex Gloves, Sample Bottles & Vials (including Sterile Sample Bottle, Physical Sample Bottle, 2 VOC Vials and a Blank Vial), Gooseneck Sampling Point, Sampling Point Pipe Extensions as necessary

Sampling Procedure

1. Call the MDC water testing laboratory if samples will be dropped off after 2:00 PM, (860) 242-7706 ext. 3920
2. Label all sample bottles & vials. Write Project number, Sample ID number, Street name, date collected on the bottles & vials with sharpee/_marker or grease pencil. Add the information to the Blank vial with the 2 VOC sample vials (mark the vial as Blank).
3. Clean around the sterilization sampling port connection and remove the cap on sampling port.
4. Put on latex gloves
5. Sterilize sampling apparatus and sterilization sampling port with hype wipe or sodium hypochlorite solution
6. Connect sampling apparatus gooseneck to sampling port
7. Slightly open valve connecting new water main to the existing distribution system to provide water for sampling.
8. Open the valve on the sampling apparatus and flush for a minimum of five minutes to remove chlorine left on/in the sampling assembly from the hype wipe
9. Fill out the chain of custody form and add additional information as the steps below are completed
10. Measure the chlorine residual first using the Hach Pocket Colorimeter. Chlorine residual should be 0.1 – 0.8 mg/L. If chlorine residual is greater than 0.8 mg/L, then flush the sampling port for another 5 minutes and sample the chlorine residual again.
11. **Take Physical Sample** - Once the water has passed the residual test, take the physical sample, using the bottle without foil on the lid. Rinse the bottle 2-3 times with water from the sampling tap, fill the bottle and return the lid.
12. **Take Bacteriological Sample** – Use the bottle with foil on the lid. Carefully remove the lid from the bottle, only touching the foil on the outside of the bottle to avoid contaminating the sample bottle. Sodium Thiosulfate crystals have already been added to the bottle; do not rinse the bottle. Take the water sample from the sampling tap without rising the bottle and place the lid on the bottle, only touching the foil placed over the lid. Do not overfill the sample bottle. Keep the lid and bottle clean while collecting the sample. Never touch the inside of the bacteriological sample bottle or lid, since it has been sterilized.
13. **Take VOC Samples** – Open sample vial and slightly overfill vial with water. Gently place cap on vial and turn vial upside, confirm no air bubbles are present in vial. Repeat process with second sample vial. Do not rinse the vials, only fill them once. Do nothing to the blank vial provided by the lab, leave the existing water in the vial and do not open it.
14. Close the valve on the sample port, remove the sampling gooseneck and place cap on the sampling port
15. Place all samples in a cooler with ice packs; keep the samples cold.
16. Repeat steps 2 – 14 at any other sampling points along the new water main.
17. Close the valve connecting new water main to the existing distribution system to isolate the new main from the system.
18. Deliver samples to laboratory and relinquish with chain of custody form. Have the chain of custody form signed, dated and reaccepted prior to leaving the laboratory
Physical, Chemical and Bacteriological Limits for Samples

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<tr>
<th>Parameter</th>
<th>Max Allowable limit</th>
</tr>
</thead>
<tbody>
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<td>6.4 to 10</td>
</tr>
<tr>
<td>Color</td>
<td>15 units</td>
</tr>
<tr>
<td>Turbidity</td>
<td>1.0 NTU</td>
</tr>
<tr>
<td>Odor @ water temp.</td>
<td>2</td>
</tr>
<tr>
<td>Odor @ 60 °C</td>
<td>2</td>
</tr>
<tr>
<td>Hardness</td>
<td>60 ppm</td>
</tr>
<tr>
<td>Specific Conductance</td>
<td>150 μΩ at 25 °C</td>
</tr>
<tr>
<td>Coliform Bacteria</td>
<td>0 per 100 ml at 35 °C</td>
</tr>
<tr>
<td>HPC</td>
<td>&lt; 500 colony forming units per ml at 35 °C</td>
</tr>
<tr>
<td>Chlorine Residual</td>
<td>&lt; 0.1 - 0.8 ppm</td>
</tr>
<tr>
<td>VOC</td>
<td>*</td>
</tr>
</tbody>
</table>

* **Note:** For VOC concentrations less than 100 ppb the water main is approved to be placed in service. For VOC concentrations of 100 to 200 ppb, the full volume of the water main will be flushed to remove the VOCs and the water main will be approved to be placed in service. For VOC concentrations over 200 ppb, the water main shall be re-sampled for VOC’s, but not HPC’s if the bacteriological samples passed the test.

Two VOC samples are taken at each sampling point for each of the sampling events. One VOC sample shall be analyzed for the VOC content, and the other sample shall be a spare sample, should a vial be broken in transit.
Failed Samples, Flushing & Re-Disinfection

1. Water mains that fail the first round of sampling should have a new scouring full diameter flush performed. The water main sections which fail should undergo a new set of sampling, starting 2-hours after the scouring flush is completed.

2. A principal inspector shall be present during the sampling process to verify that sampling procedures are being performed properly.

3. If the new water main fails two rounds of sampling, then the Manager of Inspection Services shall determine if re-disinfection of the new water main is needed, or if the water main should only be flushed.
Appendix BB: Permit Application-Mainline Sewer and Sewer Lateral Connections
Permit Application: Mainline Sewer and Sewer Lateral Connections

Permit # __________________

Work at: ___________________________________________________________________________ Lot # ______________
on the ___________________________________________________________________________ side, in the town of ___________________________________________________________________________ Connecticut,

between ____________________________________________________________________________
at premises owned by ____________________________________________________________________________ whose address is ____________________________________________________________________________

Nature of work: □ House Conn □ Lot Drain, Catch Basin □ Main Sewer □ Backwater Valve
□ New □ Repair □ Bulkhead □ Utility Drain □ Other

Occupancy or use: □ Residential with _______ family units
□ Commercial □ Industrial □ Other:

Public Sewer or Drain is: □ Sanitary □ Storm □ Combined

Only the following SEWAGE or DRAINAGE is allowed to this connection:
□ Sanitary Sewage □ Other:
□ Storm drainage including surface and sub-soil water

Connection will be made with (type of pipe and how connection is to be made): __________________________________________
________________________________________________________________________________________________________
________________________________________________________________________________________________________

Located: ____________________________________________________________________________
________________________________________________________________________________________________________
________________________________________________________________________________________________________

Special conditions: ________________________________________________________________________________
________________________________________________________________________________________________________
________________________________________________________________________________________________________

Data from __________________________ Plan #: ______________ Required plans, submitted and approved □

Job Code: __________________________ Contractor’s State License #: __________________

Contract #: __________________________ Contractor’s Insurance expires: __________________

Main Sewer Approved for Connection: □ Street excavation permit #: __________________

Sewer tributary to ______________________ W.P.C.F. Call Before You Dig (CBYD) #: __________________

□ Property Assessed for Sewer □ Outlet charge paid on: __________________

Deferred Assessment to become Due and Payable as Requested by Owner on: __________________
Sewer Connection Charge Agreement signed by Owner on: __________________
Voluntary Sewer Lien Signed by Owner and initial Installment Paid on: __________________
Connection charge Paid in Full on: __________________

Permit to be issued to: ____________________________________________________________________________

Signed by: ______________________________________________________________________________________

Permit issued by: __________________________ Date: __________________________

First inspection: __________________________ Final inspection: __________________________

Called: __________________________ Called: __________________________

To inspect: __________________________ To inspect: __________________________

Final inspection approved on: __________________________ By: __________________________

The undersigned agrees to perform under District ordinances the work indicated.
Appendix CC: Application for Eligibility Form for Construction of Sewer Laterals and Water Service Connections
Application for Eligibility Form
for Construction of Sewer Laterals and Water Main Service Connections

The undersigned, having read and understood the terms of the Water Service Standard Details Manual and Sanitary Sewer and Storm Drain Connection Manual and Ordinances of The Metropolitan District pertaining to the issuance of permits to drain layers, hereby requests eligibility for sewer connection and/or water service permits in the name indicated herein below and hereby agrees, for himself and partners, or for any corporation in whose name the license or permits are to be issued, to fulfill and be bound by all of the provisions of said manuals and Ordinances, and also to any amendments or additions thereto which may hereafter be made.

(Name under which permits will be issued)

(Business Address – Street & Town)  (Business Telephone)

If business is a Partnership or Corporation, list below the owners, partners, principal officers and/or State Licensee:

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Home Address</th>
<th>Home Telephone</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Said applicant agrees to notify The Metropolitan District with 24 hours of any change in the employment status of the (partner, officer, associate, employee) listed herein, including persons empowered to sign applications and receive permits as listed on page 2 of this form.

Application is made for:

ELIGIBILITY FOR SEWER CONNECTION AND WATER SERVICE PERMITS
(for work on private sewers and drains & water services under State of Connecticut)

<table>
<thead>
<tr>
<th>License No.:</th>
<th>Signed:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(Name of Corporation of firm (Seal))</td>
</tr>
</tbody>
</table>

Issued to:  By:

Witness:  Its  Duly Authorized (Title)

Witness:
To be Completed by Contractor

Persons empowered to sign applications and receive permits for the aforementioned company (print or type only):


Metropolitan District Action

It has been determined that satisfactory Insurance Certification and Bond covering the aforementioned applicant has been filed in this office and the named application has been found in order and accepted on:

_________________________________________  ________________________________
Date                                               Signed (for the MDC – Utility Services)
Application for Eligibility Form – Bond Documentation

Contractor’s Bond No.: ____________________________

Know all Men by these Presents, that ____________________________ and/or ______________

(Name of Firm, Partnership or Corporation)

(Name of Responsible Individual State Licensee and Title)

are held and firmly bound unto THE METROPOLITAN DISTRICT, within its service area in the State of Connecticut, in the sum of Ten Thousand dollars ($10,000), lawful money of the United States of America to be paid to the said METROPOLITAN DISTRICT, its respective successors or assigns, for which payment, well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

Signed and sealed and dated: _________________ Connecticut, this _______ day of _____________, 20____

The condition of this Obligation is such that, whereas, the above bound principal has by The Metropolitan District and/or by the State of Connecticut been duly licensed as a Contractor in said District Service Area, said obligation shall be continuous subject to cancellation by said Surety by giving ninety (90) days notice in writing of its intention to do so.

Now, therefore, if the said ____________________________ shall well and truly keep and perform, during said term, all the terms and conditions of the ordinances, resolution, rules and regulations of the Metropolitan District, regulating the laying of sewers, drains, and appurtenances, sewer house connections, private drains, water mains, water services and appurtenances, and shall forever indemnify and save harmless THE METROPOLITAN DISTRICT and all its respective agents for or on account of any damages to property or persons or any damage to the sewer or water system of THE METROPOLITAN DISTRICT in consequences of or resulting from any work performed by:

said principal: ____________________________ servants of agents, or of, or from any negligence in guarding said work, or of, or from any act or omission of said principal ____________________________ servants or agents until the expiration of the one year maintenance period after, work, under any permit issued, is complete; shall faithfully perform said work in all respects with the rules and regulations established by THE METROPOLITAN DISTRICT, and the terms of the permits that may be issued to him, and shall also pay all fines or penalties imposed upon him for violation of any such rules or regulation, then this obligation shall be of no effect; otherwise, it shall remain in full force and virtue.

<table>
<thead>
<tr>
<th>Signed (individual State Licensee):</th>
<th>(Corporate Seal of Surety)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Signed (Corporation or Firm):</td>
<td>Signed (Surety Corporation):</td>
</tr>
<tr>
<td>By:</td>
<td>By:</td>
</tr>
<tr>
<td>Its: Duly Authorized</td>
<td>Its Duly Authorized Agent:</td>
</tr>
<tr>
<td>Witnessed by:</td>
<td>Witnessed by:</td>
</tr>
<tr>
<td>On (date):</td>
<td>On (date):</td>
</tr>
</tbody>
</table>
Insurance Requirements

<table>
<thead>
<tr>
<th>Insurance Type</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commercial General Liability</td>
<td>Limit of Liability not less than $1,000,000 each occurrence, $1,000,000 aggregate. MDC and the State of Connecticut must be added as additional insured.</td>
</tr>
<tr>
<td>Automobile Liability</td>
<td>Limit of Liability not less than $1,000,000 combined single limit</td>
</tr>
<tr>
<td>Workers’ Compensation</td>
<td>As required by Connecticut Law and Employer’s Liability with a limit of not less than $100,000/occurrence, $500,000 disease policy limit and $100,000 disease each employee. Owner/Operator Note: A letter from your insurance agent attesting to the fact that W/C insurance is not mandatory and you elect not to carry it, will satisfy this requirement.</td>
</tr>
<tr>
<td>Protective Liability</td>
<td>For and in the name of the District with a minimum limit of liability not less than $1,000,000/occurrence and $1,000,000/aggregate.</td>
</tr>
</tbody>
</table>

All of the above requirements must be met prior to issuance of a permit.
**Certificate of Liability Insurance**

**Issued to:**

**Policy Number:**

**Policy Effective Date:**

**Policy Expiration Date:**

**General Liability Limits:**

<table>
<thead>
<tr>
<th>Coverage</th>
<th>Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Each Occurrence</td>
<td>$</td>
</tr>
<tr>
<td>Damage to Rented Premises</td>
<td>$</td>
</tr>
<tr>
<td>Property Damage</td>
<td>$</td>
</tr>
<tr>
<td>Personal &amp; Adv Injury</td>
<td>$</td>
</tr>
<tr>
<td>General Aggregate</td>
<td>$</td>
</tr>
</tbody>
</table>

**Automobile Liability Limits:**

<table>
<thead>
<tr>
<th>Coverage</th>
<th>Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Combined Single Limit</td>
<td>$</td>
</tr>
<tr>
<td>Bodily Injury (Per person)</td>
<td>$</td>
</tr>
<tr>
<td>Bodily Injury (Per accident)</td>
<td>$</td>
</tr>
<tr>
<td>Property Damage</td>
<td>$</td>
</tr>
</tbody>
</table>

**Workers Compensation and Employers' Liability Limits:**

<table>
<thead>
<tr>
<th>Coverage</th>
<th>Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>WC Statutory</td>
<td>$</td>
</tr>
<tr>
<td>E.L. Each Accident</td>
<td>$</td>
</tr>
<tr>
<td>E.L. Disease - EA Employee</td>
<td>$</td>
</tr>
<tr>
<td>E.L. Disease - Policy Limit</td>
<td>$</td>
</tr>
</tbody>
</table>

**Description of Operations / Locations / Vehicles:**

**Certificate Holder:**

**Cancellation:**

Should any of the above described policies be cancelled before the expiration date thereof, notice will be delivered in accordance with the policy provisions.

**Authorized Representative:**

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Insurance Requirements
For License as Pipe Layer, Excavator or Eligibility for Metropolitan District Permits

Commercial General Liability: Limit of Liability not less than $1,000,000 each occurrence, $1,000,000 aggregate. MDC and the State of Connecticut must be added as additional insured.

Automobile Liability: Limit of Liability not less than $1,000,000 combined single limit.

Workers’ Compensation: As required by Connecticut Law and Employer’s Liability with a limit of not less than $100,000/occurrence, $500,000 disease policy limit and $100,000 disease each employee.

Owner/Operator Note: A letter from your insurance agent attesting to the fact that W/C insurance is not mandatory and you elect not to carry it, will satisfy this requirement.

Protective Liability: For and in the name of the District with a minimum limit of liability not less than $1,000,000/occurrence and $1,000,000/aggregate.

All of the above requirements must be met prior to issuance of a permit.
Appendix DD: Sample Certificate of Completion for Water
Certificate of Completion - Water

of the following facilities which were built under:

DPA/Contract No.: ______________________

Water Main:
(List diameters, linear footage and material types)

Project Name: __________________________________________________________________________________
Location: _______________________________________________Town: _______________________________________
Developer: _______________________________________________Contractor: _______________________________
Start Date: _______________________________________________Completion date: ____________________________
Main filled (date): ____________________________________Main flushed (date): _______________________________
Passed pressure test (date): _______________________________Samples taken (date): _____________________________
Testing results approved (date): ___________________________Hydrant collars complete: _______________________
Project Manager: ______________________________________Inspector: _________________________________

Water sample results attached: ☐ Sketches attached: ☐ Hydrant slips attached: ☐

Authorization for Connections and/or Use

5% retainage confirmed (date): __________________________Controller: _________________________________
Recommended for use (date): __________________________Construction Services Manager: __________________
Approved for use: __________________________Date: __________________________ Director of Engineering: __________________

Accounting confirms retainage and forwards original certificate to Project Manager, and copies District Clerk, Real Estate, Utility Services, Operations, Technical Services and Maintenance (only if pump station is included).

End of Maintenance Period

Date of End of Maintenance Period: __________________________
Inspection OK by Survey: __________Date: _________________Inspector: _________________________________
Punch list items completed: __________________________________________Date: ____________________________
Construction Services Manager: __________________________Date: ____________________________

<table>
<thead>
<tr>
<th>TOWN ACCEPTANCE OF ROADWAY</th>
<th>DATE</th>
<th>DISTRICT CLERK</th>
</tr>
</thead>
<tbody>
<tr>
<td>NO KNOWN CLAIMS AGAINST CONTRACTOR OR DISTRICT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EASEMENTS FILED ON LAND RECORDS</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Recommend Acceptance

Director of Engineering: __________________________Date: __________________________

Project Manager forwards original of Certificate to Accounting, and copies to District Clerk, Real Estate, Utility Services, Operations, Technical Services and Maintenance (only if pump station is included).

Financial Closeout

Controller: __________________________Date: __________________________

After all Project costs due to the MDC have been paid and settled, Accounting forwards original Certificate of Completion to District Clerk.
Appendix EE: Sample Certificate of Completion for Sewer
Certificate of Completion - Sewer & Storm
of the following facilities which were built under:

<table>
<thead>
<tr>
<th>Mainline Permit No.:</th>
<th>DPA/Contract No.:</th>
</tr>
</thead>
<tbody>
<tr>
<td>____________________</td>
<td>__________________</td>
</tr>
</tbody>
</table>

Sanitary Sewer:
(List diameters, linear footage and material types)

Project Name: ____________________________________________________________

Partial opening ( ) - Attach sketch
Location: ____________________________ Town: ____________________________
Developer: __________________________ Contractor: _______________________
Start Date: ________________________
Contract Completion Date: __________ Extended Contract Completion Date: __________
Inspector: __________________________ Final Inspection Date: ______________
Low pressure air test (date): __________ Closed Circuit TV Inspection (date): __________
Project Manager: ____________________ Inspector: __________________________

Progress Plan attached: ☐

Authorization for Connections and/or Use

5% retainage confirmed (date): ____________________ Controller: ___________________
Recommended for use (date): ____________________ Construction Services Manager: ___________________
Approved for use: ____________________ Date: ____________________ Director of Engineering: ___________________

Accounting confirms retainage and forwards original certificate to Project Manager, and copies District Clerk, Real Estate, Utility Services, Operations, Technical Services and Maintenance (only if pump station is included).

End of Maintenance Period

Date of End of Maintenance Period: ____________________ Controller: ___________________
Inspection OK by Survey: ______________ Date: ______________ Plants (date): ______________
Punch list items completed: ____________________________ Date: ____________________
Construction Services Manager: ____________________ Date: ____________________

<table>
<thead>
<tr>
<th>TOWN ACCEPTANCE OF ROADWAY</th>
<th>DATE</th>
<th>DISTRICT CLERK</th>
</tr>
</thead>
<tbody>
<tr>
<td>NO KNOWN CLAIMS AGAINST CONTRACTOR OR DISTRICT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EASEMENTS FILED ON LAND RECORDS</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Recommend Acceptance

Director of Engineering: ____________________ Date: ____________________

Project Manager forwards original of Certificate to Accounting, and copies to District Clerk, Utility Services, Operations, Technical Services and Maintenance (only if pump station is included).

Financial Closeout

Controller: ____________________ Date: ____________________

After all Project costs due to the MDC have been paid and settled, Accounting forwards original Certificate of Completion to District Clerk.
Appendix FF: Sample Partial Opening Form for Water
Partial Opening Form Authorizing Water Service Connections

doctor of the following facilities which were built under:

DPA/Contract No.: ______________________

<table>
<thead>
<tr>
<th>Water Main:</th>
</tr>
</thead>
<tbody>
<tr>
<td>(List diameters,</td>
</tr>
<tr>
<td>linear footage and</td>
</tr>
<tr>
<td>material types)</td>
</tr>
</tbody>
</table>

Project Name: ________________________________________________
Location: ____________________________________ Town: ____________________________
Developer: ____________________________ Contractor: ____________________________
Substantial Completion date: _______________________________________
Main filled (date): ____________________________ Main flushed (date): ________________
Passed pressure test (date): ____________________________ Samples taken (date): ________________
Testing results approved (date): ____________________________ Hydrant collars complete: ________________
Inspector: ____________________________________________

Water sample results attached: ☐   Sketches attached: ☐   Hydrant slips attached: ☐

Authorization for Connections and/or Use

5% retainage confirmed (date): ____________________________
Recommended for use (date): ____________________________ Construction Services Manager: ____________________________
Approved for use: ____________________________ Date: ____________________________ Director of Engineering: ____________________________

Project Manager forwards original of Partial Opening Form to District Clerk, and copies to Real Estate, Accounting, Utility Services, Operations, Technical Services and Maintenance (only if pump station is included).

Attach plans indicating which portions of the construction has been completed and ready for connections, including which addresses can be connected shown on the plans.
Appendix GG: Sample Partial Opening Form for Sewer
Partial Opening Form Authorizing Connections to Sanitary Sewers

of the following facilities which were built under:

<table>
<thead>
<tr>
<th>Mainline Permit No.:</th>
<th>DPA/Contract No.:</th>
</tr>
</thead>
<tbody>
<tr>
<td>____________________</td>
<td>__________________</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sanitary Sewer: (List diameters, linear footage and material types)</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Project Name:</th>
<th>Location:</th>
<th>Town:</th>
</tr>
</thead>
<tbody>
<tr>
<td>____________________________________________</td>
<td>____________________________________________</td>
<td>____________________________________________</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Developer:</th>
<th>Contractor:</th>
</tr>
</thead>
<tbody>
<tr>
<td>____________________________________________</td>
<td>____________________________________________</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Start Date:</th>
<th>Substantial Completion Date:</th>
</tr>
</thead>
<tbody>
<tr>
<td>____________________</td>
<td>____________________</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Low pressure air test (date):</th>
<th>Closed Circuit TV Inspection (date):</th>
</tr>
</thead>
<tbody>
<tr>
<td>___________________________</td>
<td>___________________________</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Final Inspection OK of completed portion (date):</th>
<th>Inspector:</th>
</tr>
</thead>
<tbody>
<tr>
<td>___________________________</td>
<td>____________________________________________</td>
</tr>
</tbody>
</table>

Authorization for Connections and/or Use

<table>
<thead>
<tr>
<th>5% retainage confirmed (date):</th>
<th>Construction Services Manager:</th>
</tr>
</thead>
<tbody>
<tr>
<td>___________________________</td>
<td>___________________________</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Approved for use:</th>
<th>Date:</th>
<th>Director of Engineering:</th>
</tr>
</thead>
<tbody>
<tr>
<td>____________________</td>
<td>____________________</td>
<td>____________________________</td>
</tr>
</tbody>
</table>

Project Manager forwards original of Partial Opening Form to District Clerk, and copies to Real Estate, Accounting, Utility Services, Operations, Technical Services and Maintenance (only if pump station is included).

Attach plans indicating which portions of the construction has been completed and ready for connections, including which addresses can be connected shown on the plans.