

INFRASTRUCTURE COMMITTEE MEETING

Monday, March 26, 2018

6:00 P.M.

HAMPDEN TOWN OFFICE

AGENDA

1. MINUTES
  - a. February 26, 2018 Meeting
  
2. OLD BUSINESS
  - a. Update on engineering for Town Center crosswalks and upcoming RFP for construction services; discussion of whether to include a second flashing pedestrian beacon at Kiwanis driveway (in addition to grant-funded beacon provided by MDOT for the Cottage Street intersection)
  
3. NEW BUSINESS
  - a. Street light petition: Highland Ridge
  - b. Update on public information outreach, including proposed debt service cost share between Sewer and General Fund, for June 2018 sewer borrowing referendum
  
4. STAFF UPDATES
  - a. Update on Hampden Capital Program work underway
  - b. Update on CSO Annual Report filed on 2/28/18 and DEP site visit on 3/20/18
  - c. Review of new sewer data from CCTV inspections added to Town GIS data
  - d. Town of Hampden and City of Bangor March 2018 comment letters to DEP regarding Fourth Preliminary Draft of the 2018 General Permit for the Discharge of Stormwater from Small Municipal Separate Stormwater Systems (MS4s)
  
5. PUBLIC COMMENTS
  
6. COMMITTEE MEMBER COMMENTS
  
7. ADJOURN

## INFRASTRUCTURE COMMITTEE MEETING

Monday, February 26, 2018

### MINUTES – DRAFT

*Attending:*

<p><i>Councilor Mark Cormier, Chairman</i></p> <p><i>Mayor Ivan McPike</i></p> <p><i>Councilor Dennis Marble</i></p> <p><i>Councilor Terry McAvoy</i></p> <p><i>Councilor David Ryder</i></p> <p><i>Councilor Stephen Wilde</i></p> <p><i>Councilor Greg Sirois</i></p>	<p><i>Town Manager Angus Jennings</i></p> <p><i>DPW Director Sean Currier</i></p> <p><i>Town Attorney Ed Bearor</i></p> <p><i>Public Safety Dir. Joe Rogers</i></p> <p><i>Town Clerk Paula Scott</i></p> <p><i>Dudley Patterson, PW Foreman</i></p>
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*Chairman Cormier called the meeting to order at 6 PM.*

#### 1. MINUTES

- a. January 29, 2018 Meeting** – *Motion by Councilor McAvoy seconded by Councilor Sirois to approve the minutes as written. Motion carried seven in favor and none against.*

#### 2. OLD BUSINESS

- a. Update on Hampden Capital Program work underway.**

*Town Manager Jennings had no new information to report.*

- b. Update on CSO Annual Report due to DEP on March 1, 2018**

*Town Manager Jennings stated that the CSO annual report is in process. Director Currier does most of the report, the Town Manager adds the financial information to the report.*

*Director Currier stated that this is a legal document he is signing. On the form it states that we (the town) are abiding by the updated CSO master plan. The Town does not have “updated CSO Master Plan” Councilor Sirois asked Director Currier if he can add a note stating that the Town does not have an Updated CSO Plan. Director Currier stated that there is a section for notes and he will note that we are seeking funding this budget cycle to update the Plan. Manager Jennings stated that this also ties in to a later agenda item which is the Fiscal Sustainability Plan and that this can count as both.*

*Mayor McPike asked what CSO stands for, to which Manager Jennings answered, “Combined Sewer Overflow”*

*Director Currier stated we have one CSO left, the Town did have 6 CSO locations in the past.*

**c. Update regarding implementation of Flow Control Ordinance**

*Town Manager Jennings stated that this is underway. He is working on getting a letter out to the commercial haulers along with an application this week. Town Manager Jennings stated he was looking to get licensing done in March although it won't be a problem if it extends past April 1 since the new Fiberight facility won't be accepting waste, and the Town's MSW will continue to be hauled to PERC until further notice.*

**d. Update on installation of floating dock at Marina**

*Director Currier told the Committee that the docks have been delivered. The docks will be installed when the weather permits, and coordinated with Hamlin's Marina.*

*Councilor Sirois had previously requested that legal counsel be present for the discussion on the next few agenda items .*

**f. Next item was 2 f – taken out of order) Discussion of licensure of Public Works employees – request of Councilor Ryder**

*Councilor Marble stated for the record that he does not think this is an appropriate agenda item for this committee since it as a management issue and there are staff members present.*

*Councilor Sirois agreed with Councilor Marble.*

*Councilor Ryder stated that he just wanted to know where Public Works was at with Class II licensing of employees. Councilor McAvoy stated that he thought there had been a vote by Council regarding this issue. Manager Jennings said that there had been a committee discussion in July. There was no vote, just a goal to get everyone with a Class II. He stated that he has reported twice in the last two months that it is underway, but that he is not getting into specifics about which employees. He stated that he does not want to withhold information if someone is entitled to it, but that is why he has looked to Ed, to help determine if it is within the Council's scope, or the Manager's scope. Councilor Ryder said he just wanted to know where we were at, saying that when it was discussed previously, it was because there were people out and it would make it easier for Sean. He said his understanding was that there was a policy about it.*

*Councilor Ryder stated that if there is a policy he wants it enforced, stating he thought it was 6 months from date of hire. Manager Jennings said there is no policy, that it is in the job description.*

*Director Currier explained that it says in most DPW job descriptions, 90 days or at the discretion of the Public Works Director. Transfer Station job descriptions currently do not have that requirement, but we are working to incorporate that. Manager Jennings stated that there were a couple of operator position descriptions that had similar language that were revised to have a date specified. He offered that he does not believe that timelines for employees to reach certain goals is something to be discussed at committee level.*

*Councilor Sirois stated he does not think discussion of management is the responsibility of anyone on this Committee. Attorney Bearor asked if the question is about a specific employee, or to state a position of the Council, such as 'as a policy, we would like to have everyone in Public Works obtain a Class II license by a certain time'.*

*Town Manager Jennings asked Director Currier if it has affected operations? Director Currier explained that it has not at this time. We will be getting new vehicles that would require CDL license. In regard to the employees in question, only one had an offer letter specifying a timeframe for CDL acquisition. All are currently working on the CDL and the one required to has obtained his permit.*

*Mayor McPike stated that if you want something discussed, bring it to the Chairman.*

*Town Manager Jennings stated he is concerned about providing information on individual employees at a public meeting, and because of the size of the department he cannot give specific information without it being identifiable as related to specific personnel, therefore he has provided general updates.*

*Councilor Ryder stated he thought he was told six (6) months, if it hasn't been a problem, then he is fine with it.*

*Town Manager stated that he and the Director agree it's in the best interest of the Public Works Department to get employees licensed and that the work to do so continues to be underway. Councilor Ryder stated he is trying to get to a point where it doesn't hurt the Public Works department Attorney Bearor clarified that this is not a policy but wording in a job description and Director Currier agreed. Councilor McAvoy wanted to know if an employee goes beyond 90 days, should he presume the Department has no further interest in it? Councilor McAvoy directed several more pointed questions to the Director and Councilor Marble interjected stating that he stands by his original comment.*

*Councilor Sirois said that it is not the job of anyone sitting around the table to get involved in the management of employees in a*

*Department. He said it is the job of the Department Head and the Town Manager to do so. He said it is the Council's job to set policy. He said if we want to set a policy that we want them to all get a license within x number of days, we need to do it and move on. The Town hired Mr. Currier to run a Department and we need to let him do it. Councilor Marble asked if we want to air out problems in public. He said we have undermined a lot of trust in the town and when he asks for information from the Town Manager he gets it. It is the obligation of a Councilor to work with staff as a team.*

**e. Discussion of reorganization of Public Works – request of Councilor McAvoy**

*Councilor McAvoy asked what is the mission of the Public Works Department going to be in the future? The same or more efficient? He said he thinks half of plowing personnel could be let go. "It seems pretty straightforward. Put out a bid for plowing and award the bid." Councilor Marble stated the Town Manager has suggested a process by which Public Works could be evaluated.*

*Town Manager Jennings stated we need a credible process, personnel are affected and a change to a structure that was more reliant on contracted vendors would be a major change and would need to be managed carefully to maintain historical levels of service.*

*Councilor McAvoy stated it can be analyzed but you are just making money for a lot of people. He said it's just like doing the mowing, there is nothing complicated about it. You put out an RFP, award the bid. The mowing was put out to bid four years ago. The Public Works Director at the time said he could do it for less money. Councilor McAvoy stated he did not see where the Town could do it cheaper, he did not see it reflected anywhere. He does not see the need to analyze it any further.*

*Town Manager Jennings stated, this why he put some of the background information in the packet. The previous Town Manager and the Public Works Director put together a comparative analysis based on costs, services, road miles etc. from several "peer" towns. Some updates had been made to it, but he did not assign staff to update the work in its entirety because it would take staff time to do so and based on the responses when staff have done this type of comparative analysis he does not think that the Committee would see any work by staff as credible, even though he said that during his time here he thinks the work that he and staff have done has been nothing but credible. There is not enough time or resources for staff or*

*Management to do time-intensive analysis especially if it won't be received by Councilors as legitimate.*

*Councilor McAvoy stated he has never seen the backup of how the numbers were arrived at. He said he is skeptical of what is produced by staff. He said the Manager is right, he has not seen the backup after a year, year and a half.*

*Councilor Marble stated he reached out to Orono, and Brewer to see if the numbers are competitive. The numbers correspond almost exactly to what was given us in the packet.*

*Town Manager Jennings stated he was looking for a scope of what the Committee was looking for. He stated his feel is the added data is a couple of years old. The Department budget has gone up over the last two years. Manager Jennings stated his recommendation is that the Council should engage a third-party consultant specialized in evaluating organizational structure in order to take a serious look at this issue.*

### **3. NEW BUSINESS**

#### **a. Consideration of referring to Finance Committee a**

**recommendation to amend the FY18 Sewer Budget to:**

- **Increase budgeted expenses by \$73,500 to authorize expenditure of revenues projected in FY18 but not included in expense budget, for the purpose of supporting engineering services for sewer capital projects, support for creating a sewer Fiscal Sustainability Plan and/or Asset Management Plan, and dedication of funds toward a sewer reserve**
- **Increase budgeted revenues in the 60-79 revenue line to reflect anticipated collection of \$53,305 in unbudgeted sewer connection fees**
- **Increase budgeted expenses by \$53,305 to authorize expenditure of revenues projected to be generated in FY18 but not included in approved expense budget, for the purpose of supporting mitigation of anticipated Fiberight/Coastal flow impacts on existing infrastructure, and engineering services for other sewer projects**

*Town Manager Jennings explained the proposal to the Committee.*

*Mayor McPike asked if borrowing through the State Revolving Fund is two (2) points lower on borrowing?*

*Town Manager Jennings stated that yes, at least two.*

*Mayor McPike made a motion to refer to Finance Committee to add \$73,500 to sewer reserve. This motion was seconded by Councilor Ryder. Motion was passed seven in favor and none against.*

*Discussion after the vote:*

*Town Manager Jennings asked about the connection fee to the sewer. Councilor Ryder asked does the force main from the Coldbrook Road area feed directly to the manhole on Route 1A that is referenced in the packet materials? Director Currier stated it is gravity fed but the volume of discharge could cause problems if changes to the manhole configuration are not made in advance.*

*Councilor Ryder made a motion to amend the sewer revenue budget to reflect anticipated receipt of \$53,305 and to amend the sewer expense budget to authorize the transfer to sewer reserve in the amount of \$53,305.00. This motion was seconded by Councilor McAvoy. The vote was seven in favor and none against. Director Currier stated he would come back with a cost of manhole repairs.*

**b. Review of MDOT letters regarding authorization of trucks over weight limit on local roads related to MDOT project 023326.00 (hot mix asphalt overlay, Hampden and Newburgh) and MDOT project 023318.00 (hot mix asphalt overlay, Hampden and Hermon)**

*Councilor Ryder stated they will need gravel. He asked when are they planning to do it? Manager Jennings said that MDOT has not yet provided specific information about construction timing or routes.*

*Councilor Marble made a motion to refer to Council, this was seconded by Councilor Sirois. The vote was seven in favor and none against. (7- 0)*

**c. Discussion of potential costs and benefits of preparing and implementing a Fiscal Sustainability Plan to meet requirements for potential sewer infrastructure financing through the State Revolving Fund**

*Town Manager Jennings explained the need to know what the Committee wants to do.*

*Councilor Ryder stated it would be good to see comparative cost of interest rates.*

*Councilor McAvoy stated it may be wasted money on the plan if we don't pursue the SRF financing. Town Manager Jennings stated it would be a helpful document on its own merits as it will serve as a system-wide Sewer Capital Program, which is greatly needed.*

*Councilor Marble asked if we can seek Environmental Trust money?*

*Town Manager Jennings stated that it may be eligible since this would improve environmental quality in the town; he said it would ultimately be up to the Trust Committee and to the Town Council to approve any funding request but we can ask.*

*Director Currier stated it's a useful document.*

*Councilor Ryder stated to save money on interest we should pursue.*

*Voted seven in favor and none against.*

**d. Discussion of sleeping while on the clock by Public Works – request of Councilor Ryder**

*This item was taken up after 2 e.*

*Councilor Ryder stated he had some complaints from citizens about the Public Works crew coming through after they plowed/cleared their driveway, and Public Works was filling the end of their driveways again with snow. He feels that if it is snowing the plow trucks need to be rolling and if plowing all night there would not be such a build up.*

*Attorney Bearor stated that the reason he is there is to keep this discussion at a certain level. It needs to be one discussing what time and how the Town of Hampden is plowing its roads, not who is sleeping and when.*

*Mayor McPike asked what are we currently doing?*

*Director Currier stated that one person operates the plow truck without redundancy as opposed to DOT which works 15 hours shifts with 8 hours off and another driver takes over that truck. We are considered emergency services and do not have the CDL requirement of time on and time off. But for safety and best practices, if a driver comes in at 4 am to 10 pm will want them to take a break because they are exhausted. We need people there overnight to respond to emergency services. Typically traffic has died down from 10pm-2am and that is when we are recouping.*

*Chairman Cormier asked about the call-in if it is 4 hours.*

*Director Currier stated yes, it is a four-hour call-in if I send them home at 10, they come back at 2, it would be 4 hours call-in. Chairman Cormier clarified that they are not getting paid for not working and Director Currier agreed. Director Currier stated that these guys are not getting paid for sitting at home waiting to be called in. He said they don't get on call time for November to May, even though they must be available., They cannot plan anything with their families in case they may get called in.*

*Councilor McAvoy stated that they don't get paid for waiting to get called in, but they get paid for lying in a cot, waiting to go out and plow?*

*Director Currier stated he did not know how to respond to that referring to the tone of the comment.*

*Councilor McAvoy stated a simply yes or no would be good.*

*Councilor Sirois twice called for a point of order, saying Councilor McAvoy should not be talking like that to anybody, including town staff, and the manager in that tone and the way he is coming across.*

*Town Manager Jennings stated that in some of what he read on whether and when it is appropriate to pay wages for down time spent, key questions include whether an employee has control over their time if they are between shifts, and if they have ability to go home and have time off during a storm event, are they compensated when they do not have practical ability to control their time off.*

*Attorney Bearor stated this is a very complicated topic. The Town needs to pay them whether they are sleeping or changing the oil if required to be there. If they are going to be at the job site, they need to be paid.*

*Councilor Ryder stated he does not understand it.*

*Director Currier pointed out the liability issue if a driver hits someone due to fatigue on his way home.*

*Councilor Ryder a lot of other departments send their people home the next day, if the council is fine then I guess I am fine with it.*

*Councilor McAvoy stated he was not fine with it.*

*Councilor Marble stated he was fine with the Department Head making the call.*

*Councilor Sirois stated he is fine with leaving it to the Department Head. Chairman Cormier stated he was in favor with whatever is the most cost effective for the town.*

*Mayor McPike stated he has concerns, we don't pay people to be on call.*

*Director Currier stated that the crew are expected to be there if they are called in 24/7.*

*The Town Manager stated that it is in the job description, and it is a clear expectation that DPW employees are on call as needed.*

*Mayor McPike asked if someone plows for 12-14 hours, then rest for 4 hours is that overtime?*

*Director Currier stated that yes it would be.*

*Councilor Marble explained about the tough staffing at the Homeless Shelter, and what they did. He stated he made individual calls on whether staff slept overnight. "We beat hell out of town staff".*

**e. Discussion of third-party inspections (Building and Electrical, etc.) – request of Councilor McAvoy**

*Councilor McAvoy stated his proposal would be that the town discontinue doing inspections and instead refer to third party inspectors. Employees are highly trained firefighters and EMTs and they should be available for their primary functions.*

*Town Manager Jennings stated we are in union contract discussions and if the Council is serious about a change such as this it should be introduced in those discussions.*

*Chief Joe Rogers stated he appreciates the interest in freeing up firefighters' time, but we would still have to do plumbing and life safety inspections. Third party inspectors work for the builder, our personnel work for the community. Our inspections ensure Code is properly applied. Life safety comes first. It would free up some time, but we do try to schedule properly. Still the Town's name is on the Certificate of Occupancy, if the homebuyer has problems they will come back on us. Councilor McAvoy asked what happens if the builder has scheduled an inspection and an emergency call comes in?*

*Chief Rogers stated that we are very accommodating. People understand, emergencies comes first.*

*Councilor McAvoy stated that third party inspectors are incentivized to be there on time. The town's inspectors are taking multiple vehicles to these inspections. Would it not be cleaner to have a third party do these inspections? Councilor McAvoy stated that the Town did not inspect his plumbing.*

*Chief Rogers explained that in the past, the Town has had back up contract employees do inspections on plumbing. Chief Rogers stated that the Town is getting a pretty good deal by having fire personnel do these inspections. People are trained in several areas, serving in many capacities, within the town.*

*Councilor Sirois stated point of order after comments by Councilor McAvoy.*

*Councilor McAvoy stated the Town would be better letting the private sector handle the inspections.*

**4. STAFF UPDATES**

*There were none*

**5. PUBLIC COMMENTS**

*There were none*

**6. COMMITTEE MEMBER COMMENTS**

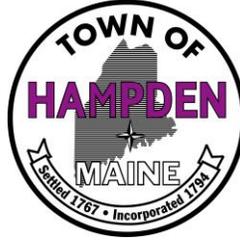
*Councilor Ryder asked if culvert refer to culvers or underdrains.  
Director Currier stated there is a difference between underdrains and  
culverts.*

**7. ADJOURN**

*There being no further business, the meeting was adjourned at 7:42 p.m.*

*Respectfully Submitted,  
Rosemary Bezanson, Public Works*

**Town of Hampden**  
106 Western Avenue  
Hampden, Maine 04444



**Phone:** (207) 862-3034  
**Fax:** (207) 862-5067  
**Email:**  
townmanager@hampdenmaine.gov

**TO:** Infrastructure Committee  
**FROM:** Angus Jennings, Town Manager  
**DATE:** March 21, 2018  
**RE:** Update on Town Center crosswalks

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The Water District issued an Invitation for Bid for their replacement of the water main in Route 1A between Cottage Street and Western Ave., with bids to be opened on March 29 at 1 PM. The bid documents include two crosswalks and pedestrian beacons, and bidder pricing will break out separately the proposed lump sum price for that work.

The Water District will award a contract to the bidder it finds most advantageous. At that time, the successful bidder's proposed cost for the pedestrian improvements will be presented to the Council for funding, or not.

As you know, the Town received a MDOT grant for one flashing pedestrian beacon. At public meetings last fall, support was expressed to install beacons in the locations of both of the proposed crosswalks. Director Currier obtained a price quote of \$6,200 to purchase a second flashing beacon.

If the construction work is funded, the contract would proceed under the oversight of the Water District, with construction inspection in coordination with DPW. If construction of the pedestrian improvements is not funded, in whole or in part, a change order would be executed to remove this work from the contract.

**SECTION 00 11 16**

**INVITATION TO BID**

The Hampden Water District (Owner) invites Bidders to submit sealed Bids for the Main Road North Water Main Replacement Phase 3 Project, which includes but is not limited to the installation of approximately 885 LF of 12-inch Ductile Iron water main on Route 1 in the Town of Hampden, Maine, providing temporary water, 3/4-inch copper services, new bituminous sidewalk, crosswalk and beacon, and ledge removal. Also included in the Scope of Work is earthwork, state highway and driveway pavement repair, surface restoration, erosion control, traffic control, and all materials and equipment, services and construction inherent to the Work.

The Work shall be substantially complete within 30 calendar days from the commencement of Contract Time and completed and ready for final payment 45 calendar days from the commencement of Contract Time.

A pre-Bid conference will not be held.

Sealed Bids will be received until 1:00PM local time on March 29, 2018 at Owner's offices: Hampden Water District offices, 140 Main Road North, Hampden, Maine 04444. Bids will then and there be publicly opened and read aloud. Bids received after the time of announced opening will not be accepted.

Bidding documents have been prepared by Woodard & Curran, Inc., One Merchant Plaza, Suite 501, Bangor, Maine 04401. Bidding Documents may be examined at the following locations on or after March 9, 2018, at 10:00AM.

Issuing Office:  
Woodard & Curran, Inc.  
One Merchant Plaza  
Suite 501  
Bangor, ME 04401

Owner's Offices:  
Hampden Water District  
140 Main Road North  
Hampden, ME 04444

Construction Summary  
734 Chestnut Street  
Manchester, NH 03104

Construct Connect (Bid Clerk)  
28 N. Clark Street, Suite 450  
Chicago, IL 60602

Bidding Documents may be obtained on or after March 9, 2018 at 10:00AM:

**in hardcopy from Issuing Office** as follows.

Non-refundable purchase price for each set of Bidding Documents: \$50.00 payable by certified check, treasurer's or cashier's check, or money order to Woodard and Curran, Inc.

Non-refundable charge for delivery of Bidding Documents by mail or delivery service: Additional \$15.00 payable by certified check, treasurer's or cashier's check, or money order to Woodard and Curran, Inc.

Complete sets of Bidding Documents shall be used in preparing Bids; neither Owner nor Engineer assumes any responsibility for errors or misinterpretations resulting from the use of the incomplete sets of Bidding Documents or for modifications to the Bidding Documents including electronic conversion.

Bid security in the amount of 5 percent of the Bid must accompany the Bid in accordance with the Instructions to Bidders.

Owner reserves the right to reject any or all Bids, including without limitation, nonconforming, nonresponsive, unbalanced, or conditional Bids. Owner further reserves the right to reject the Bid of any Bidder whom it finds, after reasonable inquiry and evaluation, to not be eligible or responsible. Owner may also reject the Bid of any Bidder if Owner believes that it would not be in the best interest of the Project or the public to make an award to that Bidder. Owner also reserves the right to waive all informalities not involving price, time, or changes in the Work and to negotiate contract terms with the Successful Bidder.

**END OF SECTION**

213322.06  
 Issue Date: March 2018

Main Road North Water Main Replacement Phase 3  
 Hampden Water District

Item	Description	Unit	Unit Price (In Words & Figures)	Estimated Quantity	Price (In Numbers)
13	Provide 1-inch Curb Stop	EA	_____	3	\$ _____
			\$ _____		
14	Provide 12-inch DI Gate Valve	EA	_____	1	\$ _____
			\$ _____		
15	Provide 6-inch DI Gate Valve	EA	_____	2	\$ _____
			\$ _____		
16	Provide Hydrant and Assembly	EA	_____	1	\$ _____
			\$ _____		
17	2-inch Rigid Insulation	LF	_____	10	\$ _____
			\$ _____		
18	Pavement Repair – State Road	SY	_____	110	\$ _____
			\$ _____		
19	Pavement Repair – Town Road/Driveway	SY	_____	85	\$ _____
			\$ _____		
20	Bituminous Sidewalk Repair	SY	_____	40	\$ _____
			\$ _____		
21	Testing Allowance	ALLOW	_____	1	\$1,000
			\$ _____		
22	Provide New Town of Hampden Bituminous Sidewalk and Lighted Crosswalk	LS	_____	1	\$ _____
			\$ _____		
<b>TOTAL BASE BID</b>					\$ _____

\* Indeterminate quantity listed for comparison of Bids only.

# HAMPDEN WATER DISTRICT HAMPDEN, MAINE

## MAIN ROAD NORTH WATER MAIN REPLACEMENT PHASE 3

PROJECT NO. 213322.06

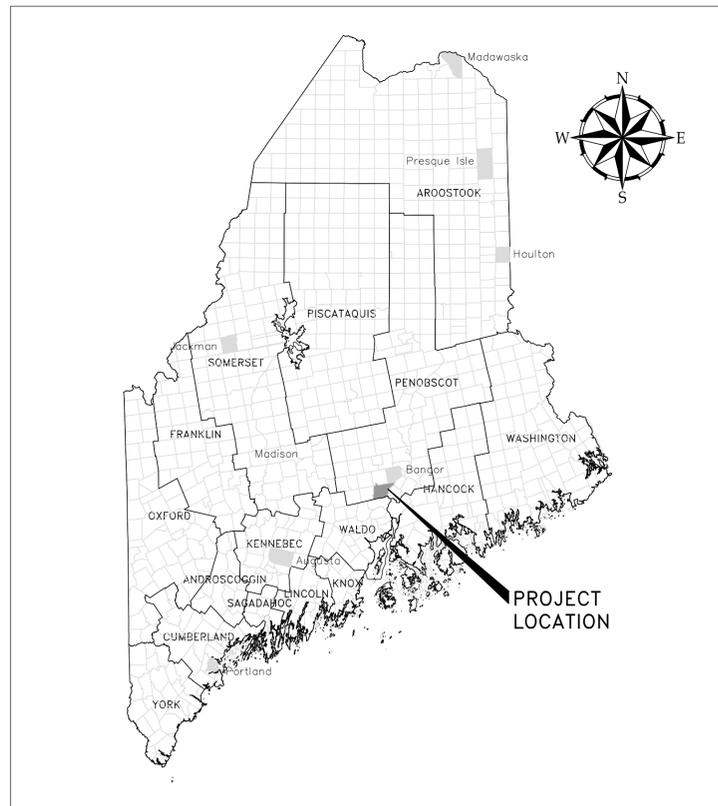
MARCH, 2018

ISSUED FOR BID

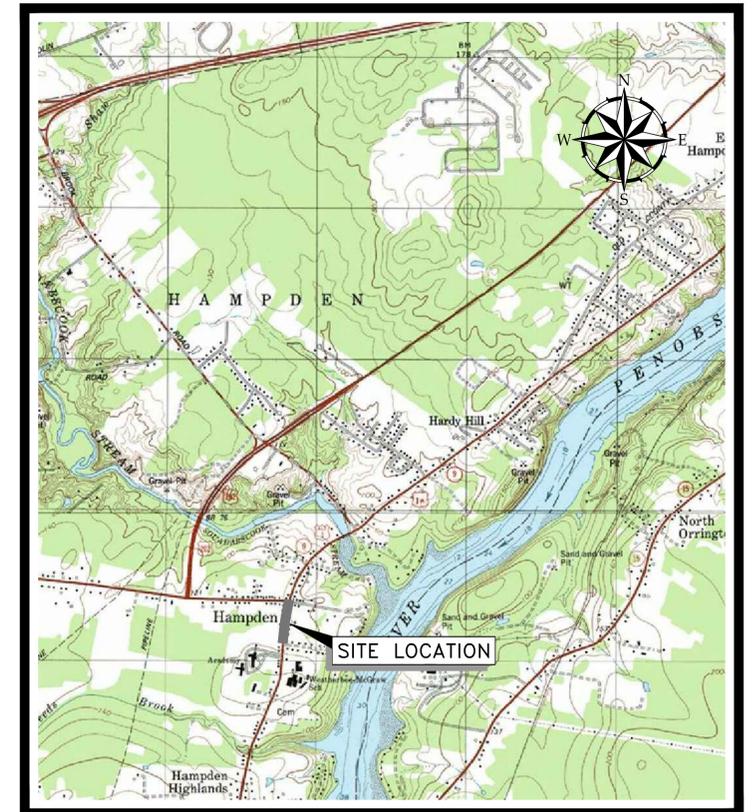
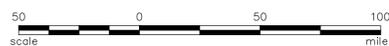


One Merchants Plaza, Suite 501  
Bangor, Maine 04401  
800. 564.2333 | [www.woodardcurran.com](http://www.woodardcurran.com)

COMMITMENT & INTEGRITY DRIVE RESULTS



PROJECT LOCATION MAP



SOURCE: USGS TOPOGRAPHIC MAP  
SITE LOCATION MAP



**LEGEND\*\***

DESCRIPTION	EXISTING	PROPOSED
CONTOUR (1' OR 2' INTERVAL)	----- 122 -----	----- 122 -----
CONTOUR (INDEX)	----- 120 -----	----- 120 -----
SANITARY SEWER	----- S ----- S -----	----- S ----- S -----
FORCE MAIN	----- FM -----	----- FM -----
STORM DRAIN	----- SD -----	----- SD -----
UNDERDRAIN	----- UD -----	----- UD -----
WATER MAIN	----- W ----- W -----	----- W ----- W -----
UNDERGROUND ELECTRIC	----- E ----- E -----	----- E ----- E -----
UNDERGROUND TELEPHONE	----- T ----- T -----	----- T ----- T -----
UNDERGROUND TELEVISION	----- TV -----	----- TV -----
GAS LINE	----- G ----- G -----	----- G ----- G -----
OVERHEAD ELECTRIC	----- OE -----	----- OE -----
ABANDONED SEWER	----- AS -----	
ABANDONED WATER MAIN	----- AW -----	
CULVERT		
HOUSE SERVICE / LATERAL		
PROPERTY LINE	----- P -----	----- P -----
RIGHT OF WAY	----- R/W -----	----- R/W -----
EASEMENT	----- E -----	----- E -----
EDGE OF VEGETATION		
FENCE	----- x ----- x -----	----- x ----- x -----
CENTERLINE	----- C -----	----- C -----
RETAINING WALL		
STONEWALL		
CURB		
EDGE OF PAVEMENT		
EDGE OF GRAVEL		
RAILROAD TRACKS		
DRAINAGE DITCH / SWALE		
SANITARY SEWER MANHOLE	○	●
SANITARY SEWER SERVICE CLEANOUT	○	●
STORM DRAIN MANHOLE	○	●
CATCH BASIN		
TELECOMM MANHOLE	○	●
TELECOMM SERVICE BOX		
ELECTRIC MANHOLE	○	●
TRANSFORMER		
UTILITY POLE W/GUY		
UTILITY POLE		
LIGHTPOST		
GAS METER BOX		
GAS VENT		
GAS GATE		
WATER GATE		
CURB STOP		
HYDRANT		
WATER WELL		
WATER METER BOX		
SIGN		
MAILBOX		
FLAGPOLE		
WETLAND HATCHING		
CONIFEROUS TREE		
DECIDUOUS TREE		
STONE CHECK DAM		
SURVEY STATION		
IRON PIN		
MONUMENTS		
SPOT ELEVATION	+ XXX.XX	+ XXX.XX
TEST PIT & NUMBER	TP-X	TP-X
BORING & NUMBER	B-X	B-P
SURFACE WATER MONITORING LOC.		
MONITORING WELL	MW-X	MW-P
PIEZOMETER	P-X	P-P

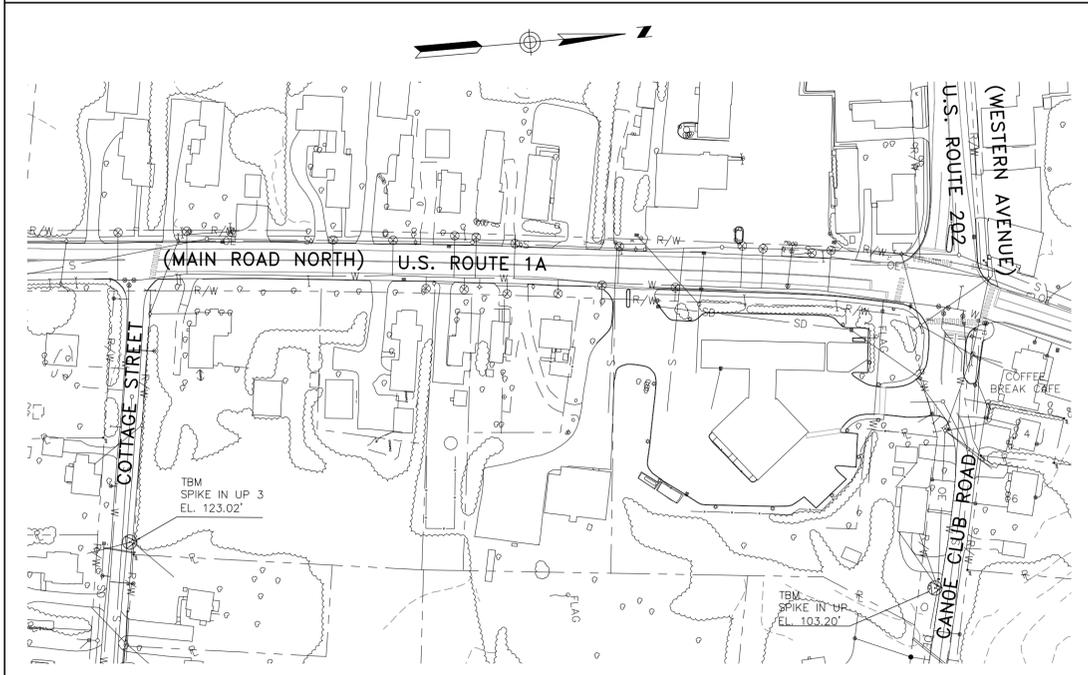
\*\*THIS IS A GENERAL LEGEND. NOT ALL ITEMS APPEAR ON THESE DRAWINGS

**SHEET INDEX**

SHEET NO.	SHEET TITLE
GENERAL	
G-001	COVER SHEET
CIVIL	
C-001	LEGEND, SHEET INDEX, ABBREVIATIONS, GENERAL NOTES AND KEY PLAN
C-101	MAIN ROAD NORTH PLAN & PROFILE STA. 0+00 TO STA. 9+00
C-201	CIVIL DETAILS 1
C-202	CIVIL DETAILS 2
C-203	CIVIL DETAILS 3

**ABBREVIATIONS**

&	AND	IN	INCH	R.O.W.	RIGHT-OF-WAY
A.G.	ABOVE GROUND	INV.	INVERT	R/W	RIGHT-OF-WAY
ADS	ADVANCED DRAINAGE SYSTEM	LF	LINEAR FEET	RCP	REINFORCED CONCRETE PIPE
ALUM.	ALUMINUM	MAX.	MAXIMUM	REINF.	REINFORCED
B	BORING	MDOT	MAINE DEPARTMENT OF TRANSPORTATION	REQ'D	REQUIRED
BIT.	BITUMINOUS	MH	MANHOLE	RET	RETAINING
BK	BOOK	MIN.	MINIMUM	RLS	REGISTERED LAND SURVEYOR
BM	BENCHMARK	MJ	MECHANICAL JOINT	RT	ROUTE
CK.	CHECKED	MON	MONUMENT	RT	ROUTE
CMP	CENTRAL MAINE POWER	MPH	MILES PER HOUR	S	SLOPE
CONC	CONCRETE	NET NO.	NEW ENGLAND TELEPHONE NUMBER	S.S.	STAINLESS STEEL
D.I.	DUCTILE IRON	NR	NO REFUSAL	SCH	SCHEDULE
DES.	DESIGNED	N.T.S.	NOT TO SCALE	SDR	STANDARD DIMENSION RATIO
DIA.	DIAMETER	O.C.E.W.	ON CENTER EACH WAY	STA.	STATION
DR.	DRAWN	OH	OVERHEAD	TYP.	TYPICAL
E	EAST	±	PLUS OR MINUS	UC	UNDERGROUND CABLE
EL.	ELEVATION	PLS	PROFESSIONAL LAND SURVEYOR	W	WEST
ELEC.	ELECTRICAL	PSI	PER SQUARE INCH	W	WEST
EMBED.	EMBEDMENT	PSIG	PER SQUARE INCH GAUGE PRESSURE	WV	WITH WATER VALVE
EX.	EXISTING	PVC	POLYVINYL CHLORIDE		
FF	FINISH FLOOR				
FIN.	FINISH				
FL.	FLOOR				
FT	FOOT/FEET				
GALV. GRND	GALVANIZED GROUND				
H	HEIGHT				
HWY	HIGHWAY				



**TBM LOCATION PLAN**  
SCALE: 1"=100'

**GENERAL NOTES**

- BASE PLAN COMPILED FROM TOPOGRAPHICAL SURVEY BY SHYKA SHEPPARD & GARSTER LAND SURVEYORS DATED MARCH 27, 2012.
- THE LOCATION, TYPE AND SIZE OF EXISTING PIPES, DUCTS, CONDUITS AND OTHER UNDERGROUND STRUCTURES SHOWN ON THE DRAWINGS ARE NOT WARRANTED TO BE EXACT NOR IS IT WARRANTED THAT ALL UNDERGROUND STRUCTURES ARE SHOWN. CONTRACTOR SHALL FIELD VERIFY ALL UTILITY LOCATIONS PRIOR TO COMMENCEMENT OF CONSTRUCTION.
- COORDINATE WATER MAIN CONSTRUCTION ACTIVITY WITH UTILITY COMPANIES, EMERGENCY SERVICES, TOWN OFFICE, AND M.D.O.T. CONTRACTOR SHALL NOTIFY ALL UTILITIES PRIOR TO COMMENCING WORK TO ALLOW SUFFICIENT TIME TO LOCATE AND MARK THE LOCATION OF ALL BURIED UTILITIES. CONTRACTOR SHALL ALSO CONTACT "DIG SAFE", TELEPHONE NO. 800-225-4977, REPAIR OF ANY DAMAGED UTILITY WILL BE INCIDENTAL.
- ROUTE 1A IS A STATE HIGHWAY. MDOT UTILITY AND HIGHWAY OPENING PERMITS HAVE BEEN OBTAINED FOR THE PROJECT. THE CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS OF THE PERMITS.
- CONTRACTOR SHALL PROVIDE ALL LABOR AS REQUIRED TO PERFORM THE WORK AS INDICATED ON THE DRAWINGS AND IN THE SPECIFICATIONS. CONTRACTOR SHALL PROVIDE ALL MATERIALS. ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH THE APPLICABLE FEDERAL, STATE AND LOCAL CODES.
- EXISTING FACILITIES AND IMPROVEMENTS (I.E. GUARDRAILS, TREES, POLES, SIGNS, LIGHT POLES, MAIL BOXES, ETC.) SHALL BE REMOVED AND REPLACED OR PROTECTED AS REQUIRED DURING CONSTRUCTION. THE ASSOCIATED COSTS ARE INCIDENTAL TO THE PROJECT. CONTRACTOR WILL PROTECT ALL TREES WITHIN THE PROJECT AREA. CONTRACTOR WILL COORDINATE WITH OWNER PRIOR TO ANY TREE TRIMMING OR REMOVAL REQUIRED FOR INSTALLATION OF THE WATER MAIN.
- BRACING OF UTILITY POLES, WHERE REQUIRED, SHALL BE INCIDENTAL TO THE INSTALLATION OF THE NEW WATER MAIN AND NO SEPARATE PAYMENT SHALL BE MADE.
- CONTRACTOR SHALL MAINTAIN TRAFFIC IN A SAFE MANNER AT ALL TIMES DURING CONSTRUCTION. MDOT TRAFFIC CONTROL AND SIGNAGE REQUIREMENTS SHALL APPLY ON STATE ROADS.
- RESTORE ALL AREAS DISTURBED BY THE CONTRACTOR'S OPERATIONS TO ORIGINAL FINISH (GRAVEL, PAVEMENT, GRASS, ETC.) UNLESS OTHERWISE NOTED ON PLANS. RESTORATION OF GRAVEL ROAD AND DRIVEWAY SURFACES AND LAWNS DAMAGED BY THE CONTRACTOR SHALL BE INCIDENTAL TO THE PROJECT.
- PROPOSED HYDRANT LOCATIONS MAY VARY AT TIME OF CONSTRUCTION, PER OWNER'S REQUEST.
- PROPERLY PROTECT AND DO NOT DISTURB PROPERTY IRONS AND MONUMENTS. IF DISTURBED, THE PROPERTY MONUMENT SHALL BE RESET AT THE WATER MAIN CONTRACTOR'S EXPENSE, BY A REGISTERED LAND SURVEYOR APPROVED BY THE ENGINEER.
- CONTRACTOR SHALL PROVIDE A SEDIMENT BASIN FOR ALL WATER PUMPED FROM EXCAVATIONS. BASIN SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH THE "MAINE EROSION AND SEDIMENT HANDBOOK FOR CONSTRUCTION: BEST MANAGEMENT PRACTICES". CONTRACTOR SHALL SUBMIT FOR REVIEW/APPROVAL PRIOR TO BEGINNING ANY PROJECT WORK.
- ALL NEW WATER MAIN AND OTHER PIPING WILL HAVE MINIMUM 6 FT. OF COVER UNLESS NOTED OTHERWISE OR APPROVED BY THE ENGINEER. IN ADDITION, IT IS ASSUMED THAT THE EXISTING WATER MAIN IS LOCATED APPROXIMATELY 5.5 FT. BELOW GROUND SURFACE. DESIGN CHANGES TO THE NEW WATER MAIN CAUSED BY THE EXISTING WATER MAIN BEING AT A DEPTH OTHER THAN 6 FT. MUST BE APPROVED BY THE ENGINEER.
- PROVIDE 10 FT. HORIZONTAL SEPARATION BETWEEN WATER AND SEWER MAINS. WHEN THIS HORIZONTAL SEPARATION IS NOT POSSIBLE, INSTALL BOTTOM OF WATER MAIN AT LEAST 18 IN. ABOVE TOP OF SEWER MAIN.
- FOR WATER MAIN CROSSING SEWER MAIN TRENCHES, PROVIDE AT LEAST 18 IN. BETWEEN BOTTOM OF WATER MAIN AND TOP OF SEWER. SEPARATION BETWEEN THE WATER AND SEWER CAN BE REDUCED TO 12" IF APPROVED BY THE OWNER AND ENGINEER.
- INSULATE ALL WATER MAINS AND WATER SERVICES WITH LESS THAN 6 FEET OF COVER, OR WHERE DIRECTED BY THE ENGINEER. RIGID INSULATION REQUIRED: CLOSED-CELL RIGID FOAMED POLYSTYRENE, EQUAL TO "SM" 40, BY DOW CHEMICAL. 2" THICK, BY 4 FT. WIDE, UNLESS OTHERWISE NOTED.
- INSTALL THRUST BLOCKS AT ALL BENDS IN WATER MAIN. REFER TO DETAILS SHEET C-201.
- EXISTING WATER SERVICES ARE ASSUMED TO BE EITHER 1" OR 3/4" COPPER, UNLESS NOTED OTHERWISE. ALL PROPERTIES ARE ASSUMED TO HAVE WATER SERVICES, UNLESS NOTED OTHERWISE. SEE NOTE 1 ON SHEET C-101 FOR ADDITIONAL DETAIL.
- DECLORINATION OF DISINFECTION WATER WILL BE A REQUIREMENT DURING THE PIPE DISINFECTION PROCESS.
- CONTRACTOR TO SPRAY INSIDE OF PIPE WITH SODIUM HYPO-CHLORITE AND BLOCK PIPE OVERNIGHT WITH SANITARY WATERTIGHT PLUG TO PREVENT ANIMALS FROM ENTERING PIPE. FOR INFORMATION ON WATERTIGHT PLUG CONTACT HAMPDEN WATER DISTRICT.
- FIRE HYDRANTS MUST REMAIN ACTIVE AT ALL TIMES.
- CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PREVENT EQUIPMENT FLUIDS FROM REACHING ANY WATER COURSE. ANY INADVERTENT FLUID DISCHARGES SHALL BE IMMEDIATELY CLEANED FROM THE WATERS USING WHATEVER MEANS NECESSARY, AS DETERMINED BY THE ENGINEER.
- CONTRACTOR SHALL PROVIDE MECHANICAL JOINT CAPS ON ALL EXISTING WATER MAINS THAT ARE TO BE ABANDONED FOR THIS PROJECT. THE CAP SHALL BE PLACED ON THE EXISTING WATER MAIN AFTER THE EXISTING MAIN HAS BEEN CUT FOR THE CONNECTION OF THE NEW WATER MAIN AND BEFORE THE TRENCH IS BACKFILLED.
- THE LOCATIONS OF ALL PROPERTY LINES AND RIGHT OF WAYS ARE APPROXIMATE (SHOWN FOR REFERENCE ONLY), UNLESS NOTED OTHERWISE. PROPERTY LINES AND RIGHT OF WAYS SHOWN ARE NOT INTENDED TO REPRESENT LEGAL BOUNDARIES.
- WHEN CONNECTING THE NEW WATER MAIN TO THE EXISTING WATER MAIN, THE CONTRACTOR SHALL PROVIDE A MECHANICAL JOINT SOLID SLEEVE COUPLING.
- THE REPAIR OF ALL EXISTING UTILITIES SHOWN ON THE DRAWINGS ENCOUNTERED DURING CONSTRUCTION, NOT OTHERWISE PROPOSED TO BE REPLACED, SHALL BE CONSIDERED INCIDENTAL TO THE WORK AND SHALL NOT BE ELIGIBLE FOR ADDITIONAL PAYMENT. THE REPAIR TO ANY EXISTING UTILITIES NOT SHOWN ON THE DRAWINGS WILL BE INCIDENTAL TO THE PROJECT.
- CONTRACTOR SHALL MAINTAIN WATER SERVICE TO RESIDENTS WITHIN THE PROJECT AREA AT ALL TIMES. CONTRACTOR SHALL COORDINATE CONNECTION OF SERVICES TO THE NEW WATER MAIN WITH THE HAMPDEN WATER DISTRICT. CONTRACTOR SHALL PRESSURE TEST, FLUSH AND DISINFECT WATER MAIN.
- THE HAMPDEN WATER DISTRICT WILL FURNISH THE SADDLES FOR THE TEMPORARY WATER PIPE AND THE CONTRACTOR SHALL PROVIDE 2" CTS TEMPORARY SERVICE PIPE AND ALL OTHER MATERIALS NECESSARY TO PROVIDE A FULLY FUNCTIONAL TEMPORARY WATER SYSTEM. HAMPDEN WATER DISTRICT WILL MAKE THE FINAL CONNECTIONS BETWEEN TEMPORARY WATER AND INDIVIDUAL PROPERTIES, HOWEVER THE CONTRACTOR SHALL PROVIDE EQUIPMENT AND LABOR TO MOVE PIPE INTO PLACE AND EXCAVATE AS NECESSARY TO MAKE CONNECTIONS. REPLACEMENT OF WATER MAINS CANNOT COMMENCE UNTIL ALL TEMPORARY SERVICE IS FULLY FUNCTIONAL AND APPROVED FOR USE BY HAMPDEN WATER DISTRICT. CONTRACTOR SHALL PROVIDE A TEMPORARY WATER PLAN FOR REVIEW AND APPROVAL BY THE ENGINEER. TEMPORARY WATER PIPING MUST BE PROPERLY TESTED AND DISINFECTED PRIOR TO USE.
- HAMPDEN WATER DISTRICT SHALL OPERATE ALL VALVES AND CURB STOPS. THE CONTRACTOR SHALL NOT BE PERMITTED TO OPEN OR CLOSE VALVES AND CURB STOPS WITHOUT OWNER'S PERMISSION.
- ROUTE 1A IS BELIEVED TO BE CONSTRUCTED WITH A REINFORCED CONCRETE CORE BASE. THE CONCRETE CORE EXTENDS APPROXIMATELY 10' BEYOND THE CENTER LINE OF THE ROAD. SEE CONCRETE ROAD REPAIR DETAIL SHEET C-203 FOR EXISTING REINFORCING, THICKNESS AND PLACEMENT. CONTRACTOR IS REQUIRED TO REPAIR AND MATCH, AND IN ACCORDANCE WITH MDOT HIGHWAY OPENING PERMIT.
- REPAIR OF ANY SEWER SERVICE SHALL BE PERFORMED USING STAINLESS STEEL REINFORCED COUPLINGS, EQUAL TO FENCO STRING BACK RC 1000 SERIES. BEDDING AND COMPACTION WILL BE AS DIRECTED BY THE OWNER AND ENGINEER. REPAIR IS INCIDENTAL TO THE INSTALLATION OF THE WATER MAIN.

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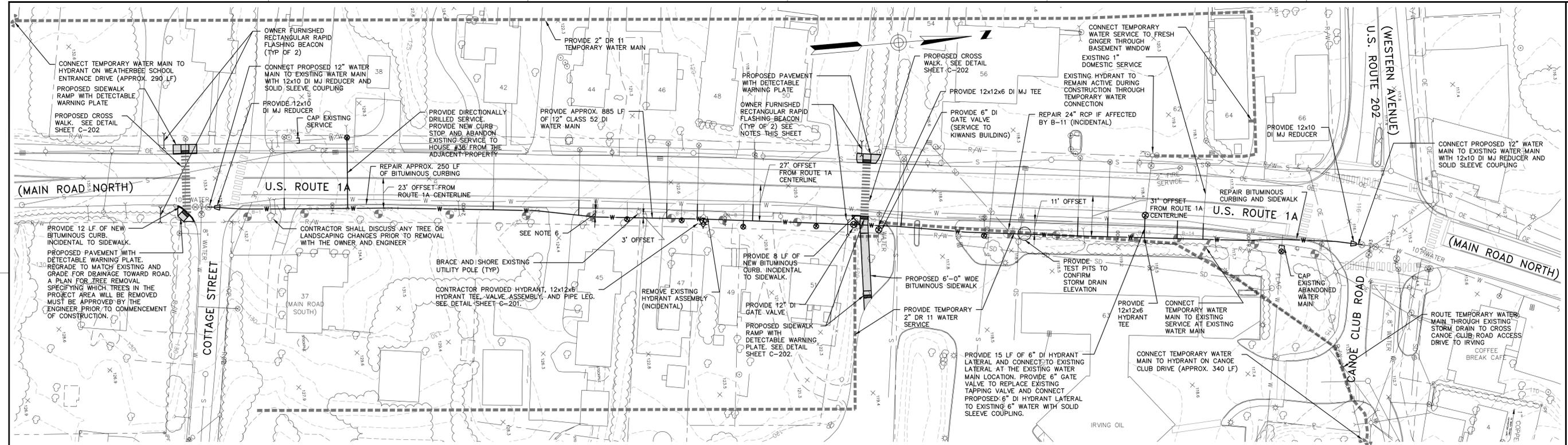
LEGEND, SHEET INDEX,  
ABBREVIATIONS, GENERAL NOTES AND  
KEY PLAN

HAMPDEN WATER DISTRICT  
HAMPDEN, MAINE

MAIN ROAD NORTH  
WATER MAIN REPLACEMENT  
PHASE 3

JOB NO.: 213322.06  
DATE: MARCH, 2018  
SCALE: AS NOTED  
SHEET: 1 OF 5

**C-001**



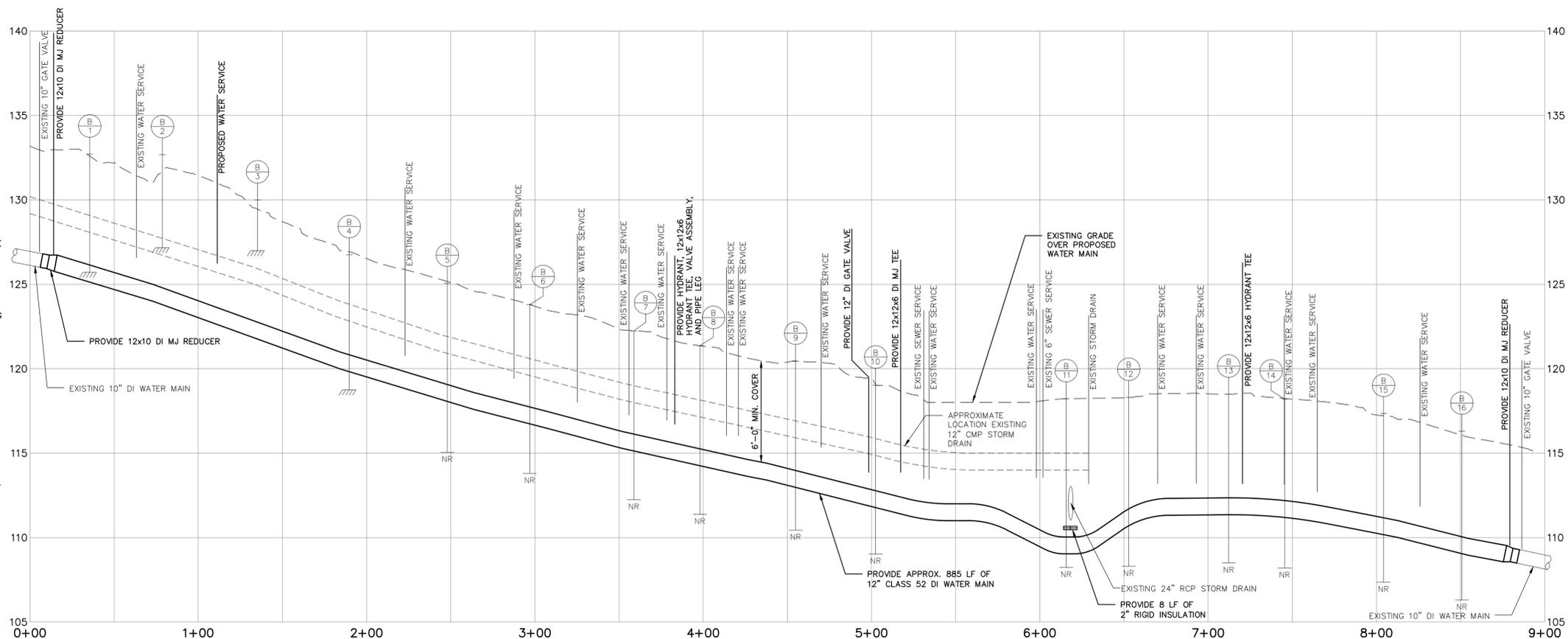
**MAIN ROAD NORTH PLAN**  
SCALE: 1"=40'

**CROSSWALK NOTES:**

- CROSSWALKS AT STA -0+25 AND STA 5+00 TO BE CONSTRUCTED IN ACCORDANCE WITH MDOT STANDARD HANDICAP ACCESSIBLE STANDARDS AND DETAILS AS PROVIDED. ALL WORK ASSOCIATED WITH CROSSWALKS INCLUDING SELECTIVE DEMOLITION OF EXISTING SIDEWALKS AND CURBS, NEW CONSTRUCTION OF SLOPED SIDEWALK RAMP, PAINTING, INSTALLATION OF OWNER PROVIDED RECTANGULAR FLASHING BEACON SIGN AND ALL MISCELLANEOUS PAVING, CURB REPAIR, SITE RESTORATION AND TRAFFIC CONTROL IS INCLUDED IN BID ITEM #22.
- EXISTING BITUMINOUS CURB AND SIDEWALK ON THE WESTERLY SIDE OF MAIN ROAD NORTH (US ROUTE 1A) IS MODERATELY HIGHER THAN ROAD GRADE. AS SUCH, GRADES AND LENGTHS OF RAMP ON NEW ADA SIDEWALK RAMP WILL BE FIELD FIT TO INSURE MAXIMUM ALLOWABLE GRADE 1:12 IS ACHIEVED. THE INTENT IS TO FIT THE NEW RAMP INTO THE EXISTING SIDEWALK AND MAINTAIN POSITIVE DRAINAGE AWAY FROM THE CURB CUT.
- THE EAST SIDE OF MAIN ROAD NORTH DOES NOT HAVE EXISTING SIDEWALK NOR IS IT THE INTENT TO PROVIDE A COMPLETE NEW SIDEWALK IN THE LOCATION. THE CONTRACTOR SHALL PROVIDE MDOT ADA COMPLIANT LANDING AREAS AS SHOWN COMPLETE WITH EXCAVATION OF EXISTING SOIL, PLACEMENT AND COMPACTION OF AGGREGATE BASE, NEW BITUMINOUS ASPHALT CURB, DETECTABLE WARNING STRIPS AND BITUMINOUS ASPHALT SURFACE. ALSO INCLUDES GRADING AND REPAIR OF SURROUNDING LAWNS WITH LOAM AND SEED. COST IS INCIDENTAL TO THE BID ITEM.
- THE TOWN OF HAMPDEN HAS BEEN AWARDED A TAPCO LED RECTANGULAR RAPID FLASHING BEACON SIGN (RRFB) BY THE MDOT. THE PACKAGE IS COMPLETE WITH LED ARRAYS, 45-WATT SOLAR PANEL, NEMA 4X ALUMINUM POLE MOUNT CABINET AND 35 AHR BATTERY. OWNER PROVIDED EQUIPMENT INCLUDES THE RRFB PACKAGE COMPLETE WITH 20-FOOT STEEL POLE. COORDINATE EXACT LOCATION WITH THE ENGINEER AND THE TOWN. CONTRACTOR SHALL INSTALL OWNER PROVIDED EQUIPMENT TO PROVIDE A TWO-WAY TRAFFIC CROSSING SIGNAL INCLUDING APPURTENANCES AND INCIDENTALS TO COMPLETE THE FUNCTIONING SIGN SYSTEM, ONE EACH SIDE OF CROSSWALK.
- THE TOWN OF HAMPDEN INTENDS TO PURCHASE A SECOND MATCHING RRFB ASSEMBLY TO PROVIDE TO THE CONTRACTOR FOR INSTALLATION AT THE SECOND LOCATION. CONTRACTOR TO COORDINATE WITH THE TOWN OF HAMPDEN DEPARTMENT OF PUBLIC WORKS FOR THE DELIVERY, STORAGE AND INSTALLATION OF THE RRFB ASSEMBLIES AND CROWLWAYS.

**NOTES:**

- ALL PROPERTIES ARE ASSUMED TO HAVE A WATER SERVICE AND ARE ASSUMED TO BE 3/4" OR 1" IN DIAMETER. EVERY SERVICE WILL INVOLVE A NEW CORPORATION AT THE PROPOSED WATER MAIN AND CONNECT TO THE EXISTING SERVICE AS DETAILED BELOW.
  - LONG SIDE SERVICE: COPPER SERVICES ARE TO BE TIED TO THE EXISTING WATER SERVICE AT THE LOCATION OF THE EXISTING WATER MAIN. EXISTING CURB STOP TO REMAIN.
  - SHORT SIDE SERVICE: PROVIDE NEW 3/4" COPPER, A NEW CURB STOP, ROD AND BOX AT THE LOCATION OF THE EXISTING CURB STOP AND CONNECT TO THE EXISTING SERVICE DIRECTLY TO THE NEW CURB STOP OR WITH A COMPRESSION COUPLING.
- EXISTING HYDRANTS, VALVES, FITTINGS, ETC., REMOVED DURING CONSTRUCTION SHALL BE DELIVERED TO THE OWNER.
- TEMPORARY WATER SERVICES AT EACH PROPERTY WILL BE CONNECTED TO EXISTING CURB STOP (THE REQUIRED CONNECTION IS 2' BEHIND CURB STOP ON THE PROPERTY SIDE OF THE SERVICES, UNLESS OTHERWISE NOTED). IF OUTSIDE WATER SPIGOT IS EXISTING AND SUITABLE FOR CONNECTION, IT MAY BE USED AT THE DISCRETION OF THE OWNER. EXCEPTIONS ARE FOR THE FRESH GINGER AND KIWANIS SERVICE, WHICH WILL BE CONNECTED THROUGH WINDOW, AND BUSINESSES IN THE HANNIBAL HAMLIN PLAZA WHICH WILL BE CONNECTED ON THE BACK SIDES OF BUILDINGS.
- MAINTAIN 1' MIN SEPARATION WHEN WATER MAIN CROSSES STORM DRAIN.
- MAINTAIN 4' MINIMUM CLEARANCE BETWEEN CATCH BASIN/STORM DRAIN AND PROPOSED WATER MAIN (TYP).



**MAIN ROAD NORTH PROFILE**  
SCALE: 1"=40' HORIZONTAL  
1"=4' VERTICAL

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**MAIN ROAD NORTH PLAN & PROFILE**  
STA. 0+00 TO STA. 9+00

HAMPDEN WATER DISTRICT  
HAMPDEN, MAINE

MAIN ROAD NORTH  
WATER MAIN REPLACEMENT  
PHASE 3

JOB NO.: 213322.06  
DATE: MARCH, 2018  
SCALE: 1"=40'  
SHEET: 2 OF 5

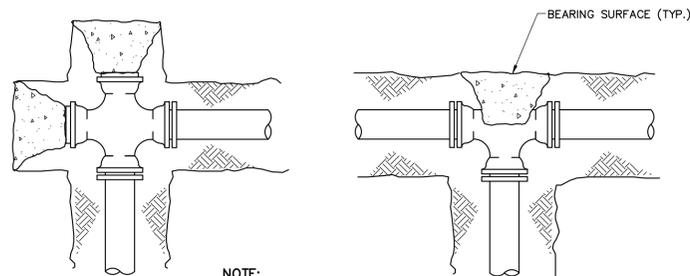
**C-101**

WATERMAIN THRUST BLOCK BEARING AREAS			
TABLE AND BEARING AREAS IN SQ. FT. AGAINST UNDISTURBED MATERIAL FOR WATER MAIN FITTINGS *			
SIZE OF MAIN, (IN.)	90° BEND	TEES AND PLUGS THICKNESS	45° BEND
6	4	3	2.5
8	7.5	5.5	4
12	16	12	9
16	27	21	16

\* TYPE OF SOIL IS MEDIUM CLAY 6 OR MORE BLOWS/FOOT, OR LOOSE GRANULAR, 9 OR MORE BLOWS/FOOT. SOIL CONDITIONS OTHER THAN THOSE GIVEN WILL REQUIRE LARGER BEARING AREAS, AS DIRECTED IN FIELD BY ENGINEER.

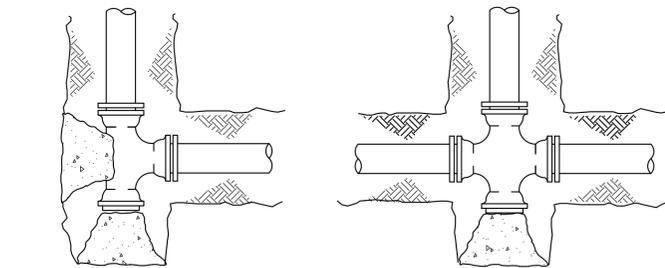
**NOTES:**

- FOR FITTINGS WITH LESS THAN 45° DEFLECTION USE BEARING AREAS FOR 45° BEND.
- BEARING AREAS BASED ON HORIZONTAL PASSIVE SOIL PRESSURE OF 2000 P.S.F. AND INTERNAL WATER PRESSURE OF 200 PSIG JOINTS SHALL NOT BE ENCASED IN CONCRETE. BEARING AREAS MAY BE DISREGARDED FOR TRENCHES IN ROCK WHERE TOP OF THE ROCK FACE IS AT OR ABOVE THE CROWN OF THE PIPE. HOWEVER, CONCRETE BACKING SHALL BE PLACED BETWEEN PIPE AND THE ROCK FACE.
- THE CONTRACTOR SHALL SUBMIT 2 WEEKS IN ADVANCE OF PLACEMENT, WORKING DRAWINGS FOR EACH THRUST BLOCK TO THE ENGINEER FOR APPROVAL PRIOR TO INSTALLATION.
- AS AN ALTERNATIVE METHOD OF PROVIDING THRUST RESTRAINT, THE CONTRACTOR MAY SUBMIT A RESTRAINED JOINT THRUST RESTRAINT SYSTEM PROPOSAL FOR APPROVAL BY THE ENGINEER. CONTRACTOR SHALL FOLLOW THE DUCTILE IRON PIPE RESEARCH ASSOCIATION THRUST RESTRAINT DESIGN PROCEDURE.



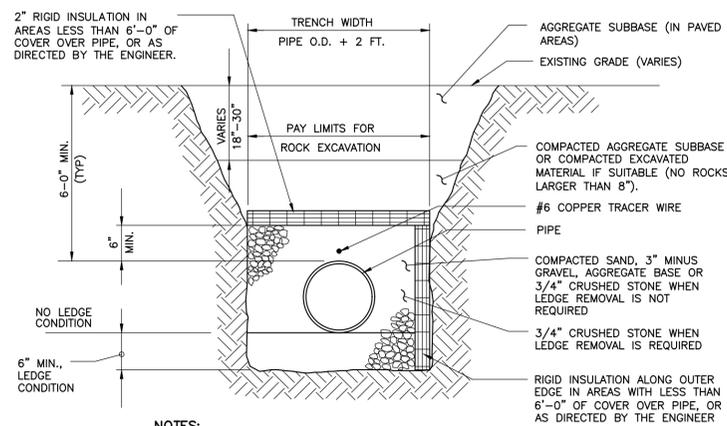
**NOTE:**

ALL BLOCKING SHALL BE WITH POURED 3000 PSI CONCRETE AGAINST UNDISTURBED EARTH.



**TYPICAL WATER MAIN THRUST BLOCK INSTALLATIONS**

N.T.S.

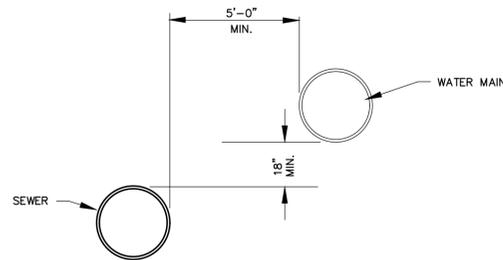


**NOTES:**

- SEE BITUMINOUS PAVEMENT REPAIR DETAILS FOR TRENCH IN PAVED AREA.
- 4" LOAM AND SEED FOR TRENCH IN NON-PAVED AREAS.
- IF SUITABLE, EXCAVATED MATERIAL MAY BE USED AS PIPE BEDDING. NO ROCKS LARGER THAN 3" SHALL BE PLACED AROUND PIPE.

**TYPICAL WATER MAIN PIPE TRENCH DETAIL**

N.T.S.



**UNUSUAL CONDITION PARALLEL INSTALLATION**

**NOTES:**

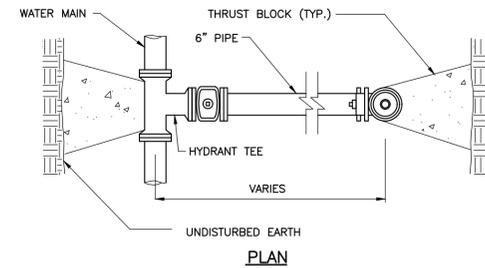
THE SEPARATION OF WATER MAINS AND SEWERS SHALL COMPLY WITH THE MAINE DEPARTMENT OF HUMAN SERVICES DIVISION OF HEALTH ENGINEERING REQUIREMENTS WHICH ARE GENERALLY AS FOLLOWS:

**A. PARALLEL INSTALLATION:**

- NORMAL CONDITIONS:** THE INSIDE EDGE OF A WATER MAIN SHALL BE LAID AT LEAST 10 FEET HORIZONTALLY FROM THE INSIDE EDGE OF ANY SANITARY SEWER, STORM SEWER OR SEWER MANHOLE.
- UNUSUAL CONDITIONS:** WHEN LOCAL CONDITIONS PREVENT A HORIZONTAL SEPARATION OF 10 FEET, THE INSIDE EDGE OF A WATER MAIN MAY BE LAID A MINIMUM OF 5 FEET FROM THE INSIDE EDGE OF A SEWER PROVIDED THAT THE BOTTOM OF THE WATER MAIN IS AT LEAST 18 INCHES HIGHER THAN THE TOP OF THE SEWER (SEE DETAIL).
- CROSSINGS:**
  - NORMAL CONDITIONS:** WHENEVER POSSIBLE, THE BOTTOM OF THE WATER MAIN SHALL BE AT LEAST 18 INCHES HIGHER THAN THE TOP OF THE SEWER.
  - UNUSUAL CONDITIONS:** IF A WATER MAIN MUST CROSS UNDER A SEWER, THE TOP OF THE WATER MAIN SHALL BE AT LEAST 18 INCHES LOWER THAN THE BOTTOM OF THE SEWER, A FULL LENGTH OF WATER MAIN PIPE SHALL BE CENTERED AT THE CROSSING SO THAT THE JOINTS ARE EQUIDISTANT AND AS FAR AS POSSIBLE FROM THE SEWER, AND ADEQUATE STRUCTURAL SUPPORT SHALL BE PROVIDED FOR THE SEWER TO PREVENT EXCESSIVE DEFLECTION OF THE SEWER AT THE CROSSING.
- SEPARATION BETWEEN THE WATER AND SEWER CAN BE REDUCED TO 12" IF APPROVED BY THE OWNER AND ENGINEER.

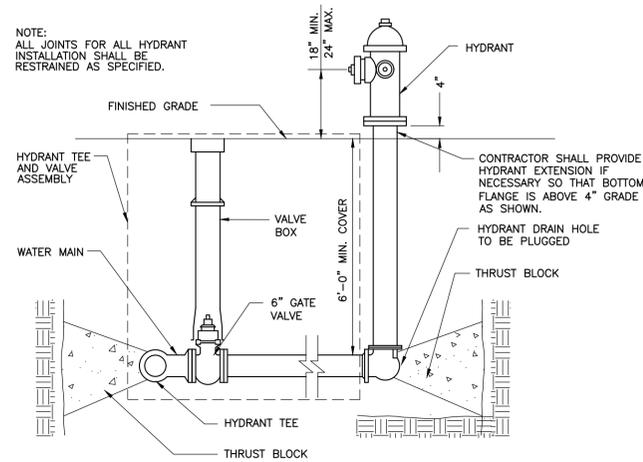
**MINIMUM WATER AND SEWER PIPE SEPARATION DETAIL**

N.T.S.



**PLAN**

NOTE: ALL JOINTS FOR ALL HYDRANT INSTALLATION SHALL BE RESTRAINED AS SPECIFIED.



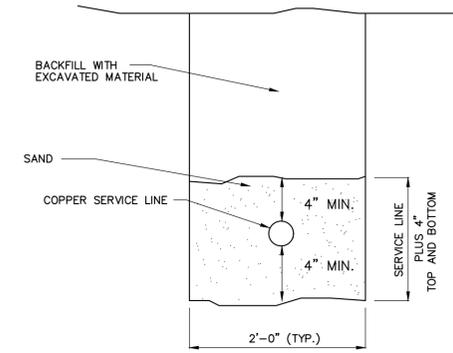
**ELEVATION**

**TYPICAL HYDRANT ASSEMBLY DETAIL**

N.T.S.

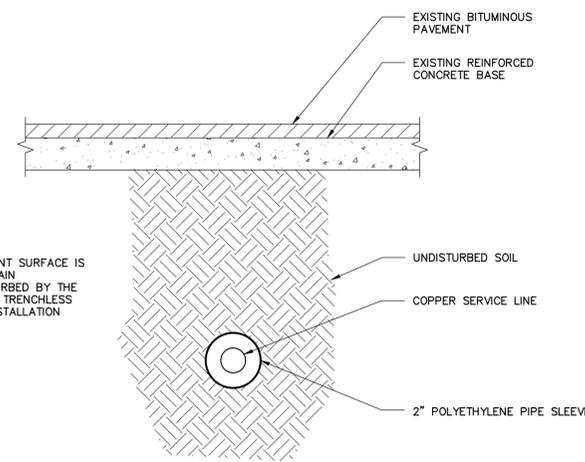
**NOTES:**

- SEE BITUMINOUS PAVEMENT REPAIR DETAILS (SHEET C-202) FOR TRENCH IN PAVED AREA.
- 4" LOAM AND SEED FOR TRENCH IN NON-PAVED AREAS.
- SEE TYPICAL ROUTE 1A WATER SERVICE CROSSING DETAIL THIS SHEET FOR ALL SERVICES CROSSING ROUTE 1A



**TYPICAL WATER SERVICE TRENCH DETAIL**

N.T.S.

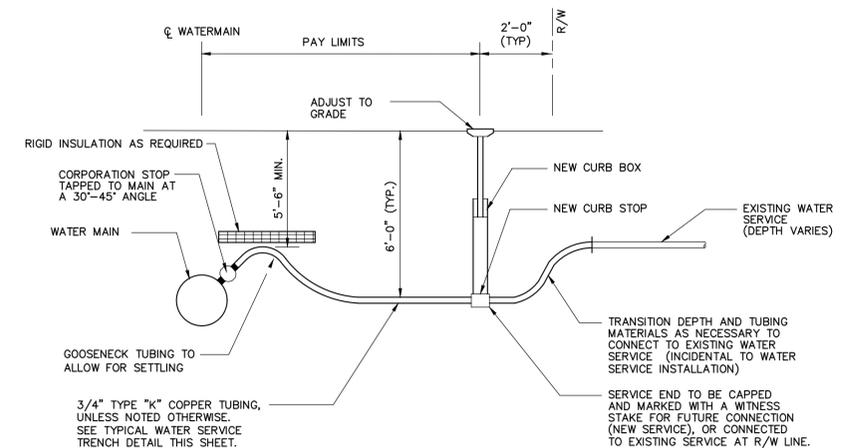


**NOTE:**

PAVEMENT SURFACE IS TO REMAIN UNDISTURBED BY THE USE OF TRENCHLESS PIPE INSTALLATION

**TYPICAL ROUTE 1A WATER SERVICE CROSSING DETAIL**

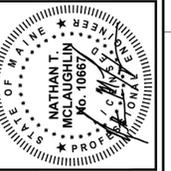
N.T.S.



**TYPICAL WATER SERVICE DETAIL**

N.T.S.

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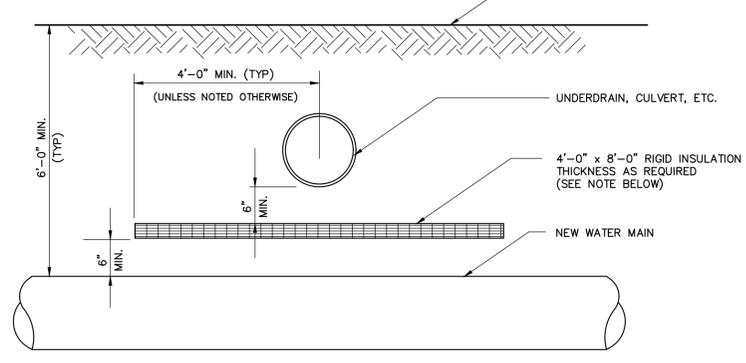
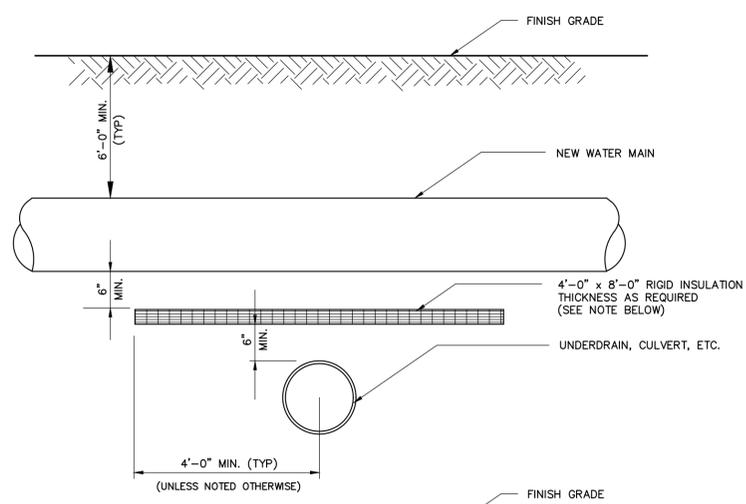
CIVIL DETAILS 1

HAMPDEN WATER DISTRICT  
HAMPDEN, MAINE

MAIN ROAD NORTH  
WATER MAIN REPLACEMENT  
PHASE 3

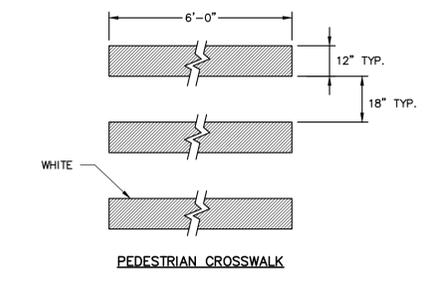
JOB NO.: 213322.06  
DATE: MARCH, 2018  
SCALE: AS NOTED  
SHEET: 3 OF 5

**C-201**

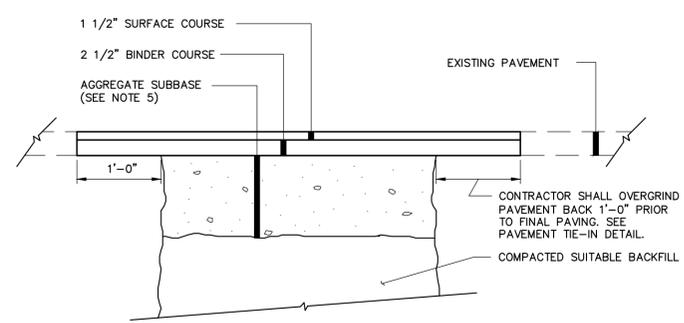


NOTE:  
THE THICKNESS OF THE RIGID INSULATION SHALL BE SUFFICIENT TO PROVIDE AN EQUIVALENT OF SIX FEET OF SOIL BETWEEN THE WATER MAIN AND THE UNDERDRAIN, CULVERT, ETC. ONE INCH OF RIGID INSULATION SHALL BE EQUIVALENT TO ONE FOOT OF SOIL.

**TYPICAL PIPE INSULATION DETAILS**  
N.T.S.

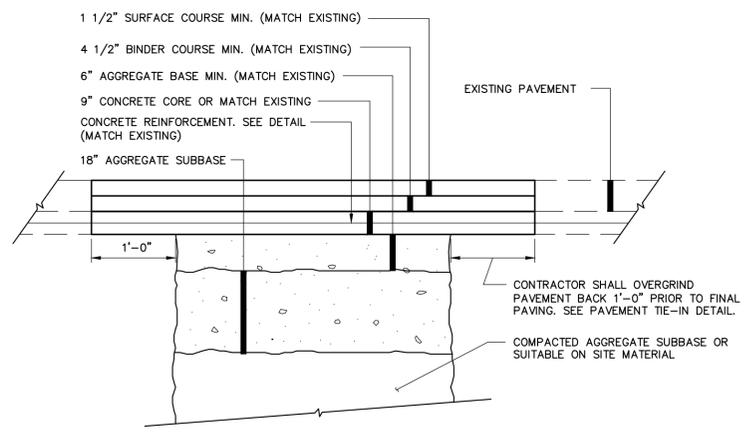


**CROSSWALK STRIPING DETAILS**  
N.T.S.



- NOTES:**
- TEMPORARY PAVEMENT IS 2" BINDER COURSE, AND MAY BE REQUIRED AT THE WATER DISTRICT'S DISCRETION.
  - CUT EXISTING PAVEMENT TO STRAIGHT EVEN EDGE, AND APPLY TACK COAT ON ALL EDGES BY SPRAY APPLICATION BEFORE PAVING.
  - RESTORE ALL PAVEMENT MARKINGS.
  - GRAVEL ROADS OR SHOULDERS: PROVIDE 4" AGGREGATE BASE IN LIEU OF BITUMINOUS ASPHALT.
  - PAY LIMITS FOR PAVING SHALL BE A WIDTH OF 8'-0" MEASURED 4'-0" FROM THE CENTERLINE OF THE PIPE ON EACH SIDE. THIS INCLUDES THE 1'-0" OVERGRIND REQUIRED PER THE PAVEMENT TIE-IN DETAIL.
  - MATCH EXISTING THICKNESS OF AGGREGATE SUBBASE. USE NATIVE MATERIAL WHERE POSSIBLE. APPROXIMATE THICKNESS IS ASSUMED TO BE 18".
  - FOR TOWN ROADS, PAVEMENT SHALL BE REPLACED IN THICKNESS SHOWN ABOVE.

**TYPICAL BITUMINOUS PAVEMENT REPAIR  
TOWN ROADS AND DRIVEWAYS**  
N.T.S.

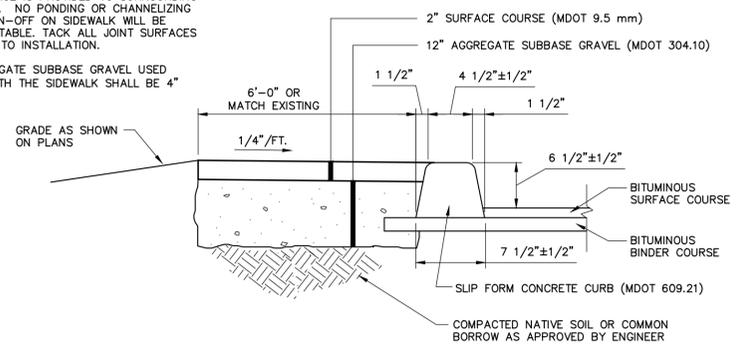


- NOTES:**
- TEMPORARY PAVEMENT IS 2" BINDER COURSE, AND MAY BE REQUIRED AT THE WATER DISTRICT'S DISCRETION.
  - CUT EXISTING PAVEMENT TO STRAIGHT EVEN EDGE, AND APPLY TACK COAT BY SPRAY APPLICATION BEFORE PAVING.
  - RESTORE EXISTING PAVEMENT MARKINGS.
  - PAY LIMITS FOR PAVING SHALL BE A WIDTH OF 8'-0" MEASURED 4'-0" FROM THE CENTERLINE OF THE PIPE ON EACH SIDE. THIS INCLUDES THE 1'-0" OVERGRIND REQUIRED PER THE PAVEMENT TIE-IN DETAIL.
  - MATCH EXISTING THICKNESS OF AGGREGATE SUBBASE. USE NATIVE MATERIAL WHERE POSSIBLE. APPROXIMATE THICKNESS IS ASSUMED TO BE 24". IF THE CONCRETE CORE IS IMPACTED, IT SHALL BE REPLACED PER THE MDOT HIGHWAY OPENING PERMIT. COST OF WORK TO REPAIR THE CONCRETE CORE DUE TO THE CONTRACTORS WORK SHALL BE INCIDENTAL TO THE PROJECT.
  - PAVEMENT SHALL BE REPLACED TO EXISTING THICKNESS, OR A MAXIMUM OF 6" AS SHOWN.
  - THE FINAL SAW CUTTING OF PAVEMENT SHALL BE PERFORMED AFTER BACKFILLING AND COMPACTION TO THE TOP OF THE EXISTING GRAVEL BASE IS COMPLETED. AFTER SAW CUTTING AND REMOVING THIS ADDITIONAL ONE FOOT (1') OF PAVEMENT, THE ENTIRE EXPOSED GRAVEL LAYER SHALL BE ONCE AGAIN COMPACTIONED, INCLUDING THE UNDISTURBED GRAVEL PORTION, PRIOR TO PAVING.
  - DURING EXCAVATION, SEPARATE THE EXISTING GRAVEL LAYER FROM THE COMMON EXCAVATION BELOW. REUSE ORIGINAL EXCAVATED MATERIALS DURING BACKFILLING IF COMPATIBLE, IN ORDER THAT THEY WERE REMOVED.

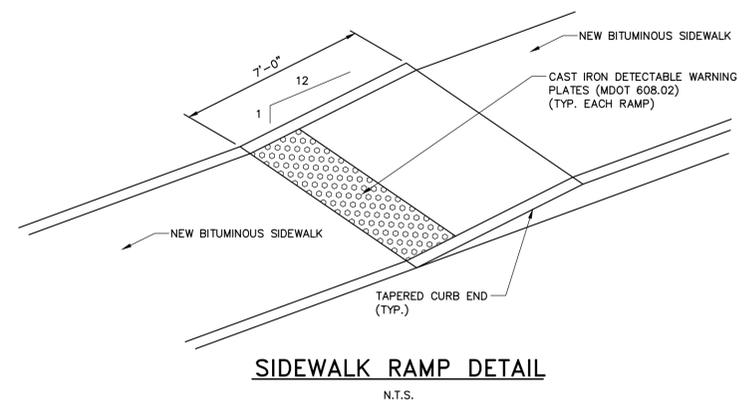
**TYPICAL BITUMINOUS PAVEMENT REPAIR  
STATE ROADS**  
N.T.S.

**NOTE:**

- CONTRACTOR TO ENSURE THAT POSITIVE DRAINAGE IS PROVIDED TO SURROUNDING AREAS. NO PONDING OR CHANNELIZING OF RUN-OFF ON SIDEWALK WILL BE ACCEPTABLE. TACK ALL JOINT SURFACES PRIOR TO INSTALLATION.
- AGGREGATE SUBBASE GRAVEL USED BENEATH THE SIDEWALK SHALL BE 4" MINUS



**TYPICAL BITUMINOUS SIDEWALK DETAIL**  
N.T.S.



**SIDEWALK RAMP DETAIL**  
N.T.S.

One Merchants Plaza, Suite 501  
Bangor, Maine 04401  
800.564.2333 | www.woodardcurran.com

**WOODARD & CURRAN**

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2016.03.25  
NATHAN T. MC LAUGHLIN  
No. 10867  
REGISTERED PROFESSIONAL ENGINEER  
MAINE

REV	ISSUED FOR	DESCRIPTION	DATE	CHECKED BY	DATE
0	ISSUED FOR BID		03/09/18	INTM	
	DESIGNED BY	JCM			
	DRAWN BY	JDE			

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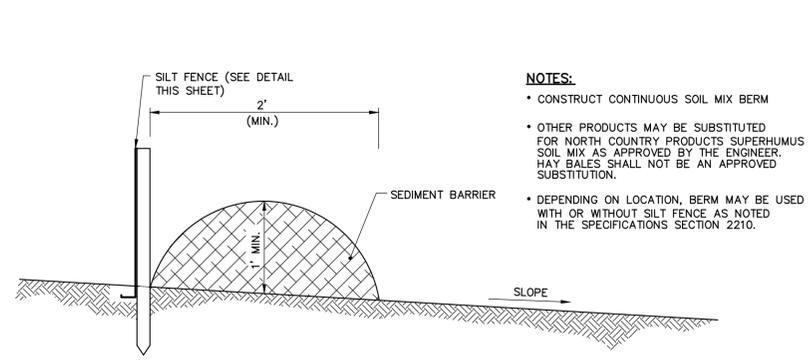
**CIVIL DETAILS 2**

HAMPDEN WATER DISTRICT  
HAMPDEN, MAINE

MAIN ROAD NORTH  
WATER MAIN REPLACEMENT  
PHASE 3

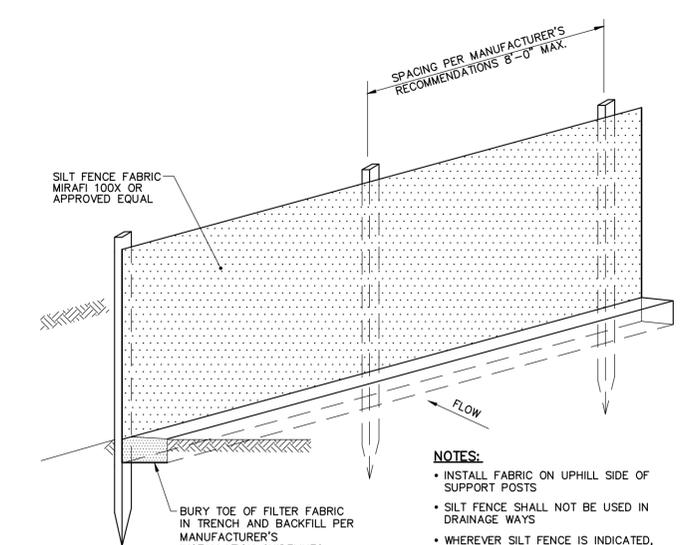
JOB NO.:	213322.06
DATE:	MARCH, 2018
SCALE:	AS NOTED
SHEET:	4 OF 5

**C-202**



**SILTATION FENCE WITH SEDIMENT BARRIER**  
N.T.S.

- NOTES:**
- CONSTRUCT CONTINUOUS SOIL MIX BERM
  - OTHER PRODUCTS MAY BE SUBSTITUTED FOR NORTH COUNTRY PRODUCTS SUPERHUMUS SOIL MIX AS APPROVED BY THE ENGINEER. HAY BALES SHALL NOT BE AN APPROVED SUBSTITUTION.
  - DEPENDING ON LOCATION, BERM MAY BE USED WITH OR WITHOUT SILT FENCE AS NOTED IN THE SPECIFICATIONS SECTION 2210.



**SILTATION FENCE**  
N.T.S.

- NOTES:**
- INSTALL FABRIC ON UPHILL SIDE OF SUPPORT POSTS
  - SILT FENCE SHALL NOT BE USED IN DRAINAGE WAYS
  - WHEREVER SILT FENCE IS INDICATED, CONTRACTOR MAY SUBSTITUTE EROSION CONTROL MIX SEDIMENT BARRIER.

**TEMPORARY EROSION CONTROL:**

MEASURE	DATES FOR USE	TIMING, ACTIVITY, AND LOCATION
SILT FENCE	All	Before site clearing and soil disturbance, install downhill of disturbed areas.
SILT FENCE W/ FILTER BERM	All	Before site clearing and soil disturbance, nearby protected natural resources, install downhill of disturbed areas.
STONE CHECK DAMS	All	Immediately following construction of drainage channel install in drainage channel.
HAY BALES	All	Short term protection of catch basin inlets, and to add support to silt fences or check dams.
DUST CONTROL	All	During dry weather, apply water and calcium chloride to control dust.
TEMPORARY SEEDING	April 1 to Oct. 1	Soil stockpiles and disturbed land soils which will not be disturbed again within 21 days, apply 70 to 90 lbs. mulch (2 bales) per 1,000 sq. ft. within the 21 day period.
MULCH	April 15 to Sept. 15	On all areas of exposed soil which will not be disturbed again within 7 days, apply 150 to 170 lbs. mulch (4 bales) per 1,000 sq. ft. within the 7 day period. Erosion control blanket may be used as a substitute for winter mulch.
WINTER MULCH	Sept. 16 to Oct. 31 Nov. 1 to April 14	On all areas of exposed soil which will not be disturbed again within 7 days, apply 150 to 170 lbs. mulch (4 bales) per 1,000 sq. ft. and anchor with netting, at the end of each working day. Erosion control blanket may be used as a substitute for winter mulch.
EROSION CONTROL BLANKET	All	Install immediately following seeding, within drainage channels and on all exposed soil slopes which are 25% or steeper grade, and locations shown on plan. ECB may also be substituted for winter mulch.
INSPECTIONS	Until site is permanently stabilized	Inspect the erosion and sedimentation control measures at least once a week and after significant storm events.

**PERMANENT EROSION CONTROL:**

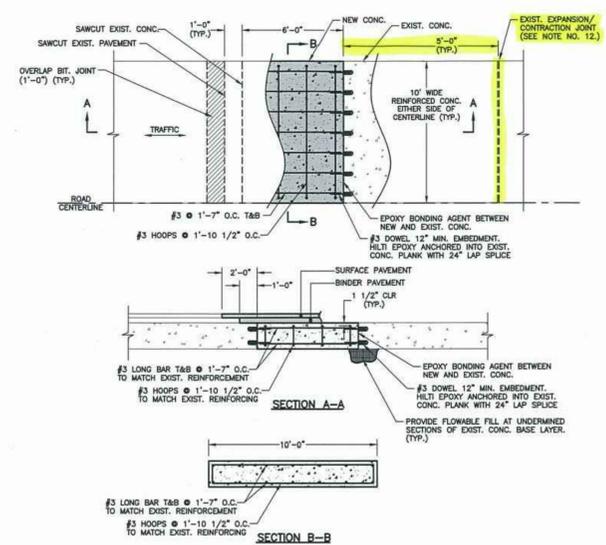
MEASURE	DATES FOR USE	TIMING, ACTIVITY, AND LOCATION
RIPRAP PROTECTION	All	Install riprap immediately following culvert installation or final channel grading at locations shown on plans.
PAVEMENT - BASE COURSE - FINAL COURSE	When no frost is in ground	Install only in areas shown on the plan, shortly after pavement base is brought to final grade. Install near completion of project.
PERMANENT SEEDING	April 15 to Sept. 15	On final grade areas, within 7 days of grade preparation, prepare topsoil, followed with seeding and mulch application.
DORMANT SEEDING	Sept. 16 to April 15	On final grade areas, with prepared topsoil. Apply seed at double the specified rate on bare soil, and follow with an application of winter mulch.
GROUND COVER, TREES, SHRUBS	April 15 to Nov. 1	Install with final landscaping.
PERMANENT MULCH	All	Install with final landscaping.

**EROSION AND SEDIMENT CONTROL NOTES**

EROSION AND SEDIMENT CONTROL DURING THE CONSTRUCTION OF THIS PROJECT WILL BE CARRIED OUT UTILIZING THE FOLLOWING MEASURES AND IN ACCORDANCE WITH THE ENVIRONMENTAL QUALITY HANDBOOK.

1. CONSTRUCTION OPERATIONS WILL BE SCHEDULED IN SUCH A MANNER THAT THE LEAST PRACTICAL AMOUNT OF SOIL IS DISTURBED THAT CANNOT HAVE PERMANENT EROSION CONTROL MEASURES APPLIED IMMEDIATELY.
2. ALL DISTURBED SURFACES WHICH ARE NOT BEING PAVED WILL BE LOAMED AND SEEDED IMMEDIATELY AFTER FINAL GRADING IS ACHIEVED.
3. ALL DISTURBED SURFACES NOT BEING FINAL GRADED WILL BE TREATED WITH TEMPORARY EROSION CONTROL MEASURES:  
MULCH WITH HAY OR STRAW AT 46 LBS. PER 1000 SQ. FT. (2 TONS PER ACRE) OR PROVIDE EROSION CONTROL MESH.
4. HAY BALES AND/OR SILT FENCE WILL BE UTILIZED TO PREVENT EROSION OF ANY STOCKPILES OF EXCAVATED MATERIALS.
5. ANY DEWATERING OF THE SITE, PARTICULARLY WHEN ADJACENT TO SHAW BROOK, WILL BE DONE IN SUCH A MANNER TO AVOID A VISIBLE SEDIMENT DISCHARGE TO THE BROOK. ALL DISCHARGE HOSES WILL BE DIRECTED TO A SEDIMENT CONTROL STRUCTURE OR A NATURAL FEATURE WHICH WILL PREVENT NOTICEABLE SEDIMENTATION DISCHARGE.
6. A REPRESENTATIVE OF THE OWNER WILL INSPECT ALL EROSION CONTROL MEASURES AFTER EVERY RAINFALL OR A MINIMUM OF ONCE A WEEK AND DIRECT ANY NECESSARY MAINTENANCE OF THESE MEASURES. MAINTENANCE PROCEDURES FOR EROSION CONTROL MEASURES INCLUDE:
  - A. REPAIRING ANY BARRIERS WHICH HAVE BECOME INEFFECTIVE OR DISLOGGED.
  - B. REPLACING ANY BARRIER WHICH HAS DETERIORATED OR BECOME TOTALLY INEFFECTIVE.
  - C. REMOVING SEDIMENT DEPOSITS FROM THE BARRIERS WHEN THE DEPOSITS REACH APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER.

\*LATEST EDITION OF "ENVIRONMENTAL QUALITY HANDBOOK" EROSION AND SEDIMENT CONTROL FOR DEVELOPING AREAS OF MAINE SOIL AND WATER CONSERVATION COMMISSION



**CONCRETE ROAD REPAIR DETAIL**

- NOTES:**
- 1) DESIGN INTENT IS TO REPLACE EXISTING CONCRETE ROAD BASE IN KIND AND MATCH EXISTING DIMENSIONS, THICKNESS, AND REINFORCEMENT.
  - 2) THE EXISTING CONCRETE ROAD BASE REPAIR WORK SHALL BE PERFORMED ONE LANE AT A TIME TO MAINTAIN TRAFFIC.
  - 3) CONTRACTOR SHALL SUBMIT AND HAVE MOOT APPROVED TRAFFIC CONTROL PLAN PRIOR TO BEGINNING THE WORK.
  - 4) THE EXISTING PAVEMENT AND CONCRETE ROAD BASE MATERIALS SHALL BE SAW CUT TO FULL DEPTH AND REMOVED AS REQUIRED TO COMPLETE NEW UTILITY INSTALLATION. A DIAMOND BLADE SAW SHALL BE REQUIRED TO INDUCE A CLEAN AND NEAT CUT OF THE EXISTING CONCRETE.
  - 5) EXISTING ROAD AGGREGATES AND NATIVE SUB SOILS SHALL BE REMOVED AS REQUIRED FOR NEW UTILITY INSTALLATION AND KEPT SEGREGATED FOR REPLACEMENT IN-PLACE AND COMPACTED TO REQUIRED FIELD DENSITIES.
  - 6) REINFORCEMENT SHALL BE #3, ASTM A 615, GRADE 60, DEFORMED BARS PLACED AS SHOWN ON DETAIL INCLUDING DRILLING AND DOWELING EPOXY ANCHORED DOWELS AS SHOWN, LONGITUDINAL BARS AS SHOWN, AND REINFORCEMENT HOOPS AS SHOWN. ALL REINFORCEMENT SHALL BE WIRED TIED TOGETHER PER APPLICABLE AMERICAN CONCRETE INSTITUTE (ACI) AND CONCRETE REINFORCING STEEL INSTITUTE (CRSI) STANDARDS.
  - 7) PROVIDE EPOXY BONDING AGENT BETWEEN NEW AND EXISTING CONCRETE SURFACES.
  - 8) CONCRETE SHALL BE 3000 PSI, CLASS LP APPROVED MDOT MIX DESIGN WITH ACCELERATOR ADMIXTURE TO PROVIDE A MINIMUM 3000 PSI CONCRETE STRENGTH FOR SUCCEEDING PAVING AND TRAFFIC.
  - 9) CONCRETE SHALL BE CURED A MINIMUM OF 24 HOURS BY EITHER MOISTURE CURED WITH WATER AND POLY/BURLAP COVER OR APPLICABLE DISPENSING CURING COMPOUND MEETING ASTM C 309, ASHTO M 148, EQUAL TO HARRIS EMULSION KURSEAL 300.
  - 10) TEST SPECIMENS SHALL BE COORDINATED TO VERIFY MINIMUM 3000 PSI CONCRETE STRENGTH FOR APPLICATION OF BITUMINOUS PAVEMENT AND TRAFFIC LOADS.
  - 11) PAVEMENT BE SHALL COMPLETED IN ACCORDANCE WITH MOOT STANDARDS AND AS SHOWN ON DETAILS.
  - 12) THIS DETAIL IS APPLICABLE FOR CONCRETE ROAD BASE REPAIR SECTIONS WITH NO EXPANSION/CONTRACTION JOINTS. PROVIDE MINIMUM 5'-0" OFFSET BETWEEN SAW CUT JOINTS FOR PIPE CROSSINGS AND EXISTING EXPANSION/CONTRACTION JOINTS.

One Merchants Plaza, Suite 501  
Bangor, Maine 04401  
800.564.2333 | www.woodardcurran.com

**WOODARD & CURRAN**

COMMITMENT & INTEGRITY DRIVE RESULTS

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2016 PROFESSIONAL SEAL

NATHAN T. MC LAUGHLIN  
No. 10867  
REGISTERED PROFESSIONAL ENGINEER  
MAINE

REV.	ISSUED FOR	DESCRIPTION	DATE
0	ISSUED FOR BID		03/09/18

CHECKED BY: NTM  
DESIGNED BY: JCM  
DRAWN BY: JDE

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**CIVIL DETAILS 3**

HAMPDEN WATER DISTRICT  
HAMPDEN, MAINE

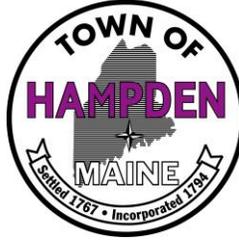
MAIN ROAD NORTH  
WATER MAIN REPLACEMENT  
PHASE 3

JOB NO.: 213322.06  
DATE: MARCH, 2018  
SCALE: AS NOTED  
SHEET: 5 OF 5

**C-203**

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 E:\Users\jcm\OneDrive\Projects\21332206\Civil\21332206-C-201\_C-203.dwg, Mar 09, 2018

**Town of Hampden**  
106 Western Avenue  
Hampden, Maine 04444



**Phone:** (207) 862-3034  
**Fax:** (207) 862-5067  
**Email:**  
townmanager@hampdenmaine.gov

**TO:** Infrastructure Committee  
**FROM:** Angus Jennings, Town Manager  
**DATE:** March 21, 2018  
**RE:** Highland Ridge street light petition

---

Petition attached, along with Chief Rogers' report pursuant to the Street Light Policy.

Chief Rogers included with his report the enclosed photos, as well as a related 2008 memo regarding a previous neighborhood request for street lights. I spoke with neighborhood representative Neil Adams and he advised that the prior request was for lighting internal to the neighborhood, whereas the present request relates to the intersection with Route 1A.

At my request, Director Currier contacted Emera to verify that the utility pole adjacent to the Stop Sign is of adequate height to allow installation of a new street light.

If the Council favors installing a new street light in this location, I recommend deferring installation until the PUC approves rates for LED lights to allow installation of an LED street light.

I have advised the neighborhood that their petition will be considered at Monday's meeting.

We the undersigned as residents of the Highland Ridge Community, petition the Town of Hampden, Maine for a streetlight at the entrance of Highland Ridge Drive off Route 1-A. The street entrance is very difficult to see at night and presents a safety hazard. Thank you for considering our request.

Town of Hampden  
RECEIVED  
JAN 04 2018

DATE	PRINT NAME	ADDRESS	SIGNATURE Office
12/13/17	Judith Collier	25 Highland Rd	Judith Collier
12/13/17	ARTHUR COLLIER	25 Highland Ridge Dr	Arthur C. Collier
12/15/2017	Gerald Hillman	27 Highland Ridge Dr	Gerald Hillman
12/20/17	James Folsom	43 Highland Ridge	James Folsom
12/20/17	Mary Folsom	43 Highland Ridge	Mary C Folsom
12/20/17	JUDITH A COLLINS	47 Highland Ridge Dr	Judith Collins
12/21/17	PENNY MALYHOUS - Mrs	35 Highland Ridge Dr	Penny Malyhous
12/21/17	Cathy Smith	37 Highland Rd Dr	Cathy Smith
12/22/17	SUSAN J FIELD	46 Highland Ridge Dr	Susan Field
12/22/17	KATHRYN SMALA	54 Highland Ridge Dr	Kathryn Smala
12/22/17	Betty Goss	56 Highland Ridge Dr	Betty Goss
12/22/17	Jean Bacon	44 Highland Ridge	Jean F Bacon
12/26/17	<del>NEALE ALBANS</del> Neale Albans	40 Highland Ridge Dr	Neale Albans

We the undersigned as residents of the Highland Ridge Community, petition the Town of Hampden, Maine for a streetlight at the entrance of Highland Ridge Drive off Route 1-A. The street entrance is very difficult to see at night and presents a safety hazard. Thank you for considering our request.

JAN 04 2018

Code Enforcement

DATE	PRINT NAME	ADDRESS	SIGN NAME
12/26/17	Deborah Adams	40 Highland Ridge	Deborah C. Adams
12/27/2017	SOURBHA S DANZ	38 HIGHLAND RIDGE	<u>SAN</u>
12/27/17	ANUPRITA NAVALE	38 HIGHLAND RIDGE	Anupr. tz
12/28/17	Stephen Rideout	64 Highland Ridge	Step Rideout
12/28/17	CAROL RIDEOUT	64 Highland Ridge	Carol Rideout
12-29/17	Dan & Pansy S	62 Highland Ridge	Dan & Pansy S
12-29-17	CHARLENE BJORN	58 Highland Ridge	Charlene Bjorn
12/29/17	JOHN BJORN	"	John Bjorn
1/3/18	Barbara Wardwell	60 Highland Ridge	Barbara Wardwell



## TOWN OF HAMPDEN POLICY ON NEW STREET LIGHTS

In order to establish a policy that is fair, consistent and economically practical, the Hampden Town Council will address the installation of new street lights to insure safe movement of vehicles and public safety in the following manner:

1. By Petition or Individual Request – Any resident may bring forth a petition by January 15<sup>th</sup> of each year which must include signatures from their neighborhood requesting one or more street lights. The petition must be submitted to the Town Manager. The Town Manager will forward the request to the Public Safety Director for evaluation and recommendation.
2. Action by Public Safety – The Public Safety Director shall provide an evaluation and recommendation for all street light requests by March 1<sup>st</sup>. This will allow for appropriate time to include the request in the next fiscal year budget. The Public Safety Director will use the following criteria when considering a request:
  - a. Are there a large number of vehicles using this road, especially during darkness?
  - b. Intersections
  - c. Line of sight
  - d. Dead End Streets
  - e. Past occurrences of accidents at night
  - f. Past occurrences of crimes in immediate area
  - g. Is this a high pedestrian area (i.e. walkers, joggers, etc.)?
  - h. Do sidewalks exist in the area
  - i. Number of people to benefit
  - j. Number of residents to benefit
  - k. Number of businesses to benefit

Once the Public Safety Director has evaluated all the requests based on the cited criteria, he will make a recommendation on each request to the Town Council Infrastructure Committee. The positive recommendations will be listed in an order of priority that assigns the #1 priority to the request that Public Safety determines has the highest rating in terms of public safety concerns. Those not recommended for installation will have a brief statement explaining the reason for denial. The Infrastructure Committee shall review the list of recommendations and prepare a recommendation to the Town Council in regard to the requests by April 1<sup>st</sup> of each year.

Adopted by Town Council 9/7/2010

Sgt. T.D. Stewart  
Sgt. Chris Bailey  
Ofc. J.D. Burke  
Ofc. Shawn Devine  
Ofc. Wm. Miller

Sgt. Scott Webber  
Inv. Joel Small  
Ofc. Ben Eyles  
Ofc. Marc Egan  
Ofc. David Mushrall



Lt. Dan Pugsley, Jr.  
Lt. Jason Lundstrom  
FF Jared LeBarnes  
FF Shaun McNally  
FF Matt Roope  
FF Gavin Webb

Lt. Matt St.Pierre  
CH. Joe Dunton  
FF Matt Thomas  
CEO Myles Block  
FF Chris Liepold

Chief Joseph L. Rogers, Director of Public Safety

Kandy McCullough, Office Manager

POLICE

FIRE

EMS

CODE ENFORCEMENT

LOCAL HEALTH OFFICE

Town of Hampden  
RECEIVED

MAR 15 2018

Office of the  
Town Manager

TO: Angus Jennings, Town Manager  
FROM: Joseph L. Rogers, Public Safety Director  
RE: Streetlights on Highland Ridge  
DATE: March 13, 2018

A petition for a streetlight at the entrance of Highland Ridge and Route 1A was forwarded to Hampden Public Safety in January of 2018. A streetlight presently exists on the pole nearest the intersection of Highland Ridge and 1A, although it is offset from the intersection. This is not the only intersection where the light is offset from the intersection based on the location of the existing poles.

The light does provide some illumination for the intersection. Perhaps a light with more intensity would provide adequate illumination for the intersection, or a second light could be installed on the pole.

Emera Maine will not install LED lights until the PUC determines the utility rates. My recommendation would be to replace the present light fixture with an LED light when the PUC sets the rates.



## HAMPDEN PUBLIC SAFETY

**Police - Fire - EMS**

**106 Western Avenue**

**Hampden, Maine 04444**

**Phone 207-862-4000**

**Fax: 207-862-4588**



To: PSD Rogers  
From: Sgt Scott Webber  
RE: Street lighting Highland Ridge  
Date: 09/04/08

Pursuant to your request, I have observed area on Highland Ridge for street lighting needs.

I feel that additional lighting in this location is necessary. Currently, there are no street lights on the entire road. With the construction of new duplex residences at and near the cul-de-sac there appears to be lighting needs.

A light in or near the cul-de-sac would provide ample illumination for the area for the residences and to properly illuminate the roadway.





STOP



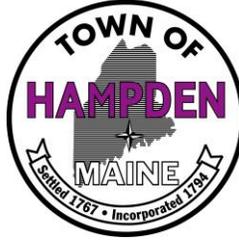
STOP



STOP

SMITH STREET

**Town of Hampden**  
106 Western Avenue  
Hampden, Maine 04444



**Phone:** (207) 862-3034  
**Fax:** (207) 862-5067  
**Email:**  
townmanager@hampdenmaine.gov

TO: Infrastructure Committee  
FROM: Angus Jennings, Town Manager  
DATE: March 21, 2018  
RE: Public outreach regarding June 12 ballot on sewer borrowing authorization

In its approval of the sewer borrowing authorization ordinance, the Council directed that debt service to pay for the Rte. 1A and the Western Ave projects come from the Sewer Fund, with funding to pay the Grist Mill Bridge debt service from the General Fund.

Our public outreach plan is to get this information to voters through one or more town newsletters, a postcard mailing, and an envelope stuffer in the upcoming sewer bill.

I have also corresponded with Bond Counsel about whether this could/should be conveyed in any way in the Treasurer's Statement. Atty. Pittman advised that, as long as the Treasurer's Statement includes required information, it can also include other information; however, he acknowledged that his suggested format (below) – while legally satisfactory – won't necessarily come through clearly to voters:

## 2. Costs

Principal and interest relating to the Route 1A and Western Avenue projects will be payable from the Sewer Fund, and principal and interest relating to the Grist Mill Bridge project will be payable from the General Fund. At an estimated interest rate of \_\_\_% for a term of \_\_\_ years, the estimated costs of this bond issue will be:

<u>Total Principal</u>	\$2,113,400
(comprised of)	
Route 1A/Western Ave.:	\$X
Grist Mill Bridge:	\$XX
<u>Total Interest</u>	\$
(comprised of)	
Route 1A/Western Ave.:	\$Y
Grist Mill Bridge:	\$YY
<u>Total Debt Service</u>	\$
(comprised of)	
From Sewer Fund:	\$Z
From General Fund:	\$ZZ

I am confident that our public communications can get the point across that, in the initial years, the proposed debt authorization can be absorbed in the current sewer rate structure. However I am hesitant to use wording along the lines Atty. Pittman suggests in the Treasurer's Statement for the simple reason that, while the current Council's intent is to split the debt service between Sewer and General Funds, a future Treasurer/Council may regret boxing themselves into that payment structure, based on future capital planning including potential for unplanned capital expenses. A lot can happen over a 20 year borrowing term.

At Monday's meeting we can review both the public outreach methods and strategy, and I'll invite input about how best to present the Treasurer's Statement.

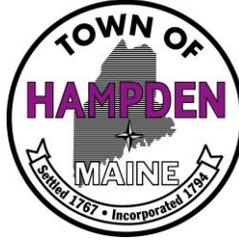
TOWN OF HAMPDEN  
PUBLIC NOTICE OF ORDINANCE ADOPTION

Notice is hereby given that after a public hearing duly noticed and held on March 5, 2018, by vote taken on March 19, 2018 the Town Council of the Town of Hampden adopted an ordinance entitled:

AN ORDINANCE TO AUTHORIZE THE APPROPRIATION AND BORROWING OF FUNDS TO FINANCE THE REPAIR AND REPLACEMENT OF PORTIONS OF HAMPDEN'S SEWER COLLECTION SYSTEM.

A copy of the Ordinance as adopted is available for public inspection at the office of the Town Clerk at 106 Western Avenue in Hampden weekdays from 7:30 a.m. to 6:00 p.m. This Notice constitutes the notice of ordinance adoption under Section 213(b) of the Charter of the Town of Hampden.

**Town of Hampden**  
106 Western Avenue  
Hampden, Maine 04444



**Phone:** (207) 862-3034  
**Fax:** (207) 862-5067  
**Email:**  
townmanager@hampdenmaine.gov

**TO:** Infrastructure Committee  
**FROM:** Angus Jennings, Town Manager  
**DATE:** March 21, 2018  
**RE:** Update on Capital Program

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There has been progress on the Capital Program since last month's meeting. I'll present an update at Monday's meeting, and continue to work with staff to fully build out the Capital Program.

Prior to or concurrent with the Council's adoption of an updated Capital Program later this spring, I recommend Council adoption of a policy statement – either a Resolution or an Order – to objectively define what constitutes a capital expense. This very fundamental question has come up several times, and I think it will be helpful to clear this up. I have included below sample language, as a starting point for discussion:

Sample Capital Program Policy Language

As used in the Town of Hampden Capital Program, a capital project is defined as a major, nonrecurring expenditure that includes one or more of the following:

1. Any construction of a new facility (i.e. public building, sewer main, storm sewer, roadway, recreational facility), an addition to, or extension of such a facility, provided that the cost is \$10,000 or more and that the improvement will have a useful life of three years or more.
2. Any nonrecurring rehabilitation of all or a part of a building, its grounds, a facility, or equipment, provided that the cost is \$10,000 or more and the improvement will have a useful life of three years or more.
3. Any purchase or replacement of major equipment to support community programs provided that the cost is \$10,000 or more and will be funded through a capital reserve account.
4. Any acquisition of land for a public purpose that is not part of an individual capital improvements project or a program that is implemented through individual capital improvements projects provided that the cost is \$25,000 or more.

This language is essentially a first draft, included as a starting point for discussion.

# MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION



## ANNUAL CSO PROGRESS REPORT FOR 2017

Doc Num: DEPLW0059-Q2017 Rev Date: 12/13/2017

*Please use the Annual Progress Report Instructions when filling out this report.*

Permittee:	<b>Town of Hampden</b>	Contact Person:	<b>Sean Currier</b>
Address:	<b>106 Western Avenue</b>	Telephone No.:	<b>207-862-3337</b>
	<b>Hampden, Me. 04444</b>	MEPDES Permit No.:	<b>ME0102512</b>
		Maine License No.:	<b>W007967</b>

**Indicates Cell Value Calculated By Spreadsheet**

**Indicates Cell With A Dropdown List**

### 1. Information on Combined Sewer System

A. Current sewered population		1,559
B. Current number of residential users (connections to sewer)		1,430
C. Current number of commercial/industrial users (connections to sewer)		129
D. Current average residential user charge for 8000 cubic feet per year, (\$/year)	\$	928.00
E. Median Household Income (MHI), (\$/year)	\$	88,032
F. Current residential user charge expressed as percent of MHI, (%)	%	1.05
G. Original number of CSO locations at beginning of abatement program		6
H. Current number of CSO locations		1
I. Percent reduction of CSOs to date, (%)	%	83
J. List any CSOs removed in reporting year, (list individually)		

	<u>CSO #</u>	<u>Name</u>
1.		
2.		
3.		
4.		

K. Total sewer footage, (feet)		147,600
L. Original percentage of combined sewer to total sewer, (%)	%	
M. Current percentage of combined sewer to total sewer, (%)	%	
N. Percent reduction of combined sewer, (%)	%	

## ANNUAL CSO PROGRESS REPORT FOR 2017

### 2. CSO Progress

- A. Are you on schedule with your approved CSO Abatement Plan? (Please see attached instructions) (Yes, No) Yes
- B. If existing schedule is behind the approved schedule, list the reasons why and how the permittee proposes to catch up in order to comply with the approved schedule.

**We are currently seeking funds in the upcoming budget process to start the update of our CSO master plan and asset management plan for the entire sewer collection system.**

C. List major accomplishments last year to reduce or abate CSOs, (list individually)

	<u>Project</u>	<u>Estimate of flow reductions</u>
1.		
2.		
3.		

D. Costs:

1) Total original cost estimate for complete program from initial CSO Master Plan	\$	<b>1,176,000</b>
2) Revised total cost estimate for complete program from Updated CSO Master Plan (includes all prior costs and update costs)	\$	<b>4,000,000</b>
3) Total cost of CSO abatement to date	\$	<b>4,671,415</b>
4) Percent complete by cost, (%)	%	<b>117</b>
5) Cumulative SRF loans for CSO abatement (see instructions for more detail)	\$	<b>3,350,000</b>
6) Total cost of CSO projects in reporting year (see instructions for more detail)	\$	<b>67,053</b>
7) Anticipated budget for CSO projects next year	\$	<b>1,449,000</b>
8) Sewer O&M budget in reporting year	\$	<b>503,257</b>
9) Anticipated sewer O&M budget for next year	\$	<b>500,642</b>
10) Estimated CSO needs for next five years (include cost in no.7)	\$	<b>1,629,000</b>

E. Private inflow sources:

- |   |  |  |
|---|--|--|
| 1) Has a house to house survey been done on a sewershed or system-wide basis? |  | (Yes, No) <span style="border: 1px solid red; padding: 2px;">No</span> |
| 2) If yes, when?  |  |  |
| 3) If no, is one planned?   |  | (Yes, No) <span style="border: 1px solid red; padding: 2px;">No</span> |
| 4) If no, when? (For additional space, use the text box in section 2-K)       |  | <b>not planned</b>   |
| 5) Number of roof leaders removed to date                                     |  |  |
| 6) Number of roof leaders removed in reporting year                           |  |  |
| 7) Number of known roof leaders remaining in system                           |  |  |
| 8) Number of basement sump pumps removed to date                              |  |  |
| 9) Number of basement sump pumps removed in reporting year                    |  |  |
| 10) Number of known sump pumps remaining in system                            |  |  |
| 11) Number of known foundation drains to system                               |  |  |
| 12) Do you charge a surcharge for private sources?                            |  | (Yes, No) <span style="border: 1px solid red; padding: 2px;">No</span> |
| 13) If yes, how much and what unit?   | \$ <span style="border: 1px solid black; display: inline-block; width: 150px; height: 20px;"></span> |  |
- (Each, Per 100 c.f.)

## ANNUAL CSO PROGRESS REPORT FOR 2017

F. Other inflow sources

- |  |   |
|--|---|
| 1) Number of catch basins removed this year                  |   |
| 2) Number of catch basins remaining in system                |   |
| 3) Are you aware of any wetlands/bogs draining to sewer?     | (Yes, No) <span style="border: 2px solid red; padding: 2px;"><b>No</b></span> |
| 4) Are you aware of any streams intercepted by sewer?        | (Yes, No) <span style="border: 2px solid red; padding: 2px;"><b>No</b></span> |
| 5) If yes to 3 or 4, what plans are there to deal with them? |   |

G. Results of any specific flow monitoring to determine effectiveness of previous CSO abatement projects. Compare actual CSO abatement with projections made during the CSO Master Plan.

H. Yearly precipitation, CSO events, volumes, or block test data.  
(Enter data on Excel spreadsheet: CSO Activity & Volumes.xlsx)

I. Work done on the Nine Minimum Controls during the year.

- 1) Results of operation and maintenance (O&M) program for the sewer system and combined sewer system overflows during the year.

a. Who is responsible for combined sewer system O&M?

Name	<b>Sean Currier</b>	Tel. No.	<b>207-862-3337</b>
Title	<b>Director of Public Works</b>		
Dept.	<b>Public Works</b>		
Size Staff	<b>14</b>		

b. Inspection schedules

Number of CSO regulators	<b>0</b>	Inspection interval	
Number of tide gates	<b>0</b>	Inspection interval	
Number of pump stations	<b>8</b>	Inspection interval	<b>3/week</b>
Number of CSO outfalls	<b>1</b>	Inspection interval	<b>As Needed</b>

# ANNUAL CSO PROGRESS REPORT FOR 2017

c.

Document the following activities that were performed and include the tons or cubic yards of debris removed last year from catch basins and sewers.

Catch Basin Cleaning

Total # of Basins Last Year	# of Basins Cleaned Last Year	Debris Removed
<input style="width: 100%;" type="text" value="417"/>	<input style="width: 100%;" type="text" value="42"/>	<input style="width: 100%;" type="text" value="4"/> <b>Cu. Yds.</b>
(Please attach cleaning schedule if available)		(Tons, Cu. Yds.)

Sewer Cleaning

Total Combined Sewer	Footage Cleaned Last Year	Debris Removed
<input style="width: 100%;" type="text" value="0"/> lin. ft.	<input style="width: 100%;" type="text" value="25,131"/> lin. ft.	<input style="width: 100%;" type="text" value="0"/> <input style="width: 100%;" type="text"/>
(Please attach cleaning schedule if available)		(Tons, Cu. Yds.)

Pump Station Cleaning

Cleaning Frequency	Inspection Frequency
<input style="width: 100%;" type="text" value="As Needed"/>	<input style="width: 100%;" type="text" value="3/week"/>

TV Work

Sewer & Storm Footage Televised	TV Frequency
<input style="width: 100%;" type="text" value="16,000"/> lin. ft.	<input style="width: 100%;" type="text" value="As Needed"/>

Smoke Testing

Sewer & Storm Footage Tested	Dates of Smoke Testing
<input style="width: 100%;" type="text"/> lin. ft.	<input style="width: 100%;" type="text"/> (mm/dd/yy)

Infiltration/Inflow Study

I/I Study Was Performed On  
 Linear Feet Of Sewer

## ANNUAL CSO PROGRESS REPORT FOR 2017

### 2) Maximum Use of the Collection System for Storage

*Maximum use of the collection system for storage means making relatively simple modifications to the combined sewer system to enable the system itself to store wet weather flows until downstream sewers and treatment facilities can handle them. The municipality should evaluate more complex modifications as part of the long-term control plan.*

- a. List any regulators or weirs that were adjusted last year to optimize settings for maximum storage. (list individually)

1.	
2.	
3.	
4.	

- b. Document attempts last year to retard inflows to the system by use of special gratings or flow control type devices.

Number of Special Storm Drain Gratings Installed   
 Comments:

Number of Flow Control Type Devices Installed   
 Comments:

- c. Describe any tide gate maintenance and repair to eliminate tidal intrusions. (list individually)

	<u>Tide Gate</u>	<u>Maintenance/Repair</u>
1.		
2.		
3.		

Attach a schedule for implementation of any minor construction associated with maximizing the collection system for storage.

## ANNUAL CSO PROGRESS REPORT FOR 2017

3) Review any Modification of the Industrial Pretreatment Program to Assure that CSO Impacts Are Minimized

*The municipality should determine whether nondomestic sources are contributing to CSO impact and, if so, investigate ways to control them. The objective of this control is to minimize the impacts of discharges into combined sewer systems from significant nondomestic sources (i.e., industrial and commercial sources during wet weather events, and to minimize CSO occurrences by modifying inspection, reporting, and oversight procedures within the approved pretreatment program.*

**Fill in this section only if you have nondomestic source of wastewater.**

Do you have an industry that significantly impacts a CSO? (Yes, No) No

What measures or modifications were taken last year to insure that nondomestic sources are not contributing to CSO impacts. (Examples of measures: Inventory of nondomestic discharges to the combined sewer, assessment of nondomestic discharges on CSOs, evaluation of feasible modifications)

4) Maximization of Flow to the POTW for Treatment

*Maximizing flow to the POTW entails simple modifications to the combined sewer system and treatment plant to enable as much wet weather flow as possible to reach the treatment plant. The objective of this minimum control is to reduce the magnitude, frequency, and duration of CSOs that flow untreated into receiving waters.*

a. List any change completed or planned last year to maximize flow to the POTW. (list individually)

PLANNED PHYSICAL CHANGE	ESTIMATED COST (\$)	ESTIMATED COMPLETION DATE (MM/DD/YY)	ESTIMATED YEARLY DECREASE IN EVENTS	ESTIMATED YEARLY DECREASE IN VOLUME (MG)

# ANNUAL CSO PROGRESS REPORT FOR 2017

## 5) Prohibition of CSO Discharges During Dry Weather

*This control includes all measures taken to ensure that the combined sewer system does not overflow during dry weather flow conditions. Dry weather overflow control measures include improved O&M as well as physical changes to regulator and overflow devices.*

- a. Did you have a dry weather CSO discharge during the last year? (Yes, No)  No  
If yes, explain (list individually). Do not report Sanitary Sewer Overflows (SSOs) below.

1.	
2.	
3.	
4.	
5.	

## 6) Control of Solid and Floatable Material in CSO Discharges

*The intent of this control is to document that low cost control measures have been implemented which reduce solids and floatables discharged from CSOs to the maximum extent practicable.*

- a. List any of the following control measures that were implemented last year to reduce solids and floatables discharged from CSOs. If control measures were implemented, list their Success.

Baffles in Regulators or Overflow Structures:

Number of Baffles Installed:

Success:   
(Good, Fair, Poor)

Trash Racks in CSO Discharge Structures:

Number of Trash Racks Installed:

Success:   
(Good, Fair, Poor)

Catch Basin Modifications:

Number of Modifications:

Success:   
(Good, Fair, Poor)

# ANNUAL CSO PROGRESS REPORT FOR 2017

End of Pipe Nets:

Number of Nets Installed:

Success:

(Good, Fair, Poor)

Litter Controls:

Litter Control:

(Yes, No)

(Good, Fair, Poor)

Other Controls:

Type of Control

Success:

(Good, Fair, Poor)

- b. The estimated amount of solids and floatables removed last year by implementing the above control measures.

(Tons, Cu. Yds.)

(Attach any schedules and associated costs for implementation of this control.)

## 7) Pollution Prevention Programs That Focus on Contaminant Reduction Activities

*The seventh minimum control, pollution prevention, is intended to keep contaminants from entering the combined sewer system and thus receiving water via CSOs.*

- a. Document any of the following efforts last year to implement this control.

Public education or increased awareness programs that encourage water conservation and could decrease dry weather sanitary flow to the POTW and increase the volume of wet weather flows that can be treated at the POTW.

**MS4 permit compliance and BASWG (Bangor Area Stormwater Group) membership - minimum control measures 1 (Public Education and Outreach), 2 (Public Involvement), and 6 (Pollution Prevention / Good Housekeeping) include annual community activities such as street/stream cleanups and catch basin stenciling. More detail on these efforts can be found in Town of Hamden MS4 annual report (available on request) and on the BASWG website**

Strategic placement of garbage receptacles, more efficient garbage collection.

**The Town maintains garbage receptacles at all cemeteries, the Marina and all Parks.**

## ANNUAL CSO PROGRESS REPORT FOR 2017

Street sweeping efforts with estimate of material removed (tons/yr, cy/yr).

**The public works department swept all roads this year. Typically we hire a contractor to sweep in Town but weather worked in our favor and we were able to get the sweeping accomplished in-house. We collected approximately 20 cu yds of material which was beneficially reused in culvert replacement projects.**

Anti-litter campaigns; campaigns through public outreach and public service announcements employed to educate the public about effects of littering, over fertilizing, pouring used motor oil down catch basins, etc.

**Hampden is a member of the Bangor Area Stormwater Group. Outreach is part of our MS4 program requirement and is accomplished by multiple avenues including facebook, Town Newsletters, Town Website, etc.**

Efforts to eliminate illegal dumping. Programs such as law enforcement and public education aimed at controlling illegal dumping of litter, tires, and other materials into water bodies or onto the ground.

**Hampden has a Solid Waste Flow Control Ordinance which governs municipal solid waste. Also, as previously mentioned, we are members of BASWG and public outreach and education are required for these items.**

b. Does the community have a hazardous waste collection program?

(Yes, No)

**No**

If yes, how often is it collected?

If yes, how much hazardous waste is collected?

## ANNUAL CSO PROGRESS REPORT FOR 2017

- c. List the individual(s) responsible for your community's stormwater management program, their title and contact information.

**Stormwater Coordinator: Karen Cullen-Town Planner @ 862-4500. Stormwater Team: Sean Currier, Public Works Director @ 862-3337. Kyle Severence, GIS/IT @ 862-4500. Angus Jennings, Town Manager @ 862-3034. Myles Block, Code Enforcement @ 862-4500.**

- d. List and describe stormwater pollution prevention measures and BMPs (e.g., biofilters, bioswales, rain gardens) completed or planned for implementation. Attach any schedules and cost estimates associated with this control.

**To reduce pollutants in any stormwater runoff to the MS4 from construction activities that result in a land disturbance of greater than or equal to one acre within its urbanized area, the Town relies on the Maine General permit and Chapter 500. Also, the Town's post construction ordinance and non-stormwater discharge ordinance are used by the Hampden**

- 8) Public Notification to Ensure That the Public Receives Adequate Notification of CSO Occurrences and CSO Impacts

*The objective of this control is to ensure that the public receives adequate notification of CSO impacts on pertinent water use areas. Of particular concern are beach and recreational areas that are affected by pollutants discharged in CSOs.*

- a. Locations where signs are posted.

Are all CSO outfalls locations marked with a sign in accordance with your permit?

(Yes, No)  Yes

List any other locations where CSO signs are posted (public beach, information center, town office, etc.).

**There is a sign at the Main Road (at the CSO facility) which is visible to pedestrians and vehic**

- b. List dates of CSO informational public hearings or meetings last year. (list individually)

1.

3.

2.

4.

## ANNUAL CSO PROGRESS REPORT FOR 2017

- c. List any other measures to inform the public that occurred last year (e.g. radio announcements, flyers, social media, dedicated webpage).

**Facebook and the Town website along with a BASWG Facebook page are used to inform the public of events occurring in Hampden.**

9) Monitoring to Effectively Characterize CSO Impacts and the Effectiveness of CSO Controls

*The ninth minimum control involves visual inspection and other simple methods to determine the occurrence and apparent impacts of CSOs. This minimum control is an initial characterization of the combined sewer system to collect and document information on overflow occurrences and known water quality problems and incidents, such as beach or shellfish bed closures, that reflect use impairments caused by CSOs. Changes in the occurrences of such incidents can provide a preliminary indication of the effectiveness of the Nine Minimum Controls.*

- a. Check off and fill in information on the following monitoring methods used in overflow structures: (list individually)

Flow Meters

Locations

Frequency Data Collected

1.	<b>CSO#1 Outfall</b>
2.	
3.	
4.	

<b>Daily</b>

Blocks

Locations

Inspection Frequency

<b>CSO Outlet Structure</b>

<b>After Rain Event</b>

Chalklines

Locations

Inspection Frequency



Other monitoring methods?

**BLOCK DATA IS USED AT THE ONE CSO DISCHARGE POINT AS WELL AS SCADA**

## ANNUAL CSO PROGRESS REPORT FOR 2017

- b. Has a hydraulic/hydrologic model been developed? (Yes, No)
- Is the model used to report CSO discharge occurrences? (Yes, No)
- Has it been updated to reflect collection system asset changes: (Yes, No)
- If yes, when was the model last updated? (mm/dd/yy)

- c. CSO impacts to swimming beaches and shellfishing areas.

List any swimming beaches that may be impacted by your CSOs. (list individually)

1.
2.

Does your community or other entity test the water quality at beaches or near your CSOs?

(Yes, No)

Frequency?

If yes, list dates of test and results

Dates	Results
( mm/dd/yy)	
( mm/dd/yy)	
( mm/dd/yy)	

- Any beach closing last year? (Yes, No)
- Were they caused, in whole or in part by CSOs? (Yes, No)

What are the procedures for notifying the public of beach closures?

List any shellfishing areas that may be impacted by your CSOs. (list individually)

	<u>Open</u>	<u>Conditionally Opened</u>	<u>Closed</u>
1.			
2.			
3.			
4.			

## ANNUAL CSO PROGRESS REPORT FOR 2017

Any shellfish areas closed last year?

(Yes, No)

If yes, list dates individually:

(mm/dd/yy)	

If yes, were the closures caused, in whole or in part by CSOs?

(Yes, No)

Please provide a map showing any swimming beaches or shellfish area that may be impacted by your CSOs.

Please provide results of any receiving water quality tests or CSO sampling tests done last year.

- J. List any sewer extensions and new commercial or industrial flows added during the year, along with any mitigating measures implemented to prevent these flows from contributing to CSO flows.

**The sewer ordinance in Hampden has been revised to better control installation procedures and monitoring during construction which help reduce inflow and infiltration as well as giving the Town the ability to monitor any commercial or industrial flow with our sewer ordinance and pretreatment program.**

- K. Please add any other information on CSOs that you feel is important, but the form did not allow for.

**We are currently requesting funds from the Town Council to start the process of updating our CSO master plan including our Asset Management, Capital Improvement plan and abatement plan. We have replaced a significant amount of sewer mains within our collection system and are planning on additional replacements to help with I/I reduction. We are also now currently funding cctv of the collection system over a 5-7 year period per our Capital Improvement plan provided future Council's vote in favor of continuing our current progress.**



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**Fwd: Main Rd North Sewer Map**

1 message

---

**Kyle Severance** <gisit@hampdenmaine.gov>  
To: Angus Jennings <townmanager@hampdenmaine.gov>

Thu, Mar 15, 2018 at 4:15 PM

FYI

**Kyle Severance**  
*GIS/IT Specialist*  
*E911 Addressing Officer*  
*Town of Hampden, Maine*  
O: (207)862-4500 ext 142 | M: (207)852-7207 | F: (207)862-5067

----- Forwarded message -----

From: **Kyle Severance** <gisit@hampdenmaine.gov>  
Date: Thu, Mar 15, 2018 at 4:13 PM  
Subject: Main Rd North Sewer Map  
To: Sean Currier <publicworks@hampdenmaine.gov>, Kyle Corbeil <kcorbeil@woodardcurran.com>, Danielle Simons <danielle@hampdenmaine.gov>

Good Afternoon,

The first round of sewer data collected by Ted Berry Co. has now been put into GIS. To make the data readily available to others I pushed it out into a webmap located [here](#). When you zoom in and click on a manhole or pipe a pop-up will display with attribute data as well a document link to the inspection reports.

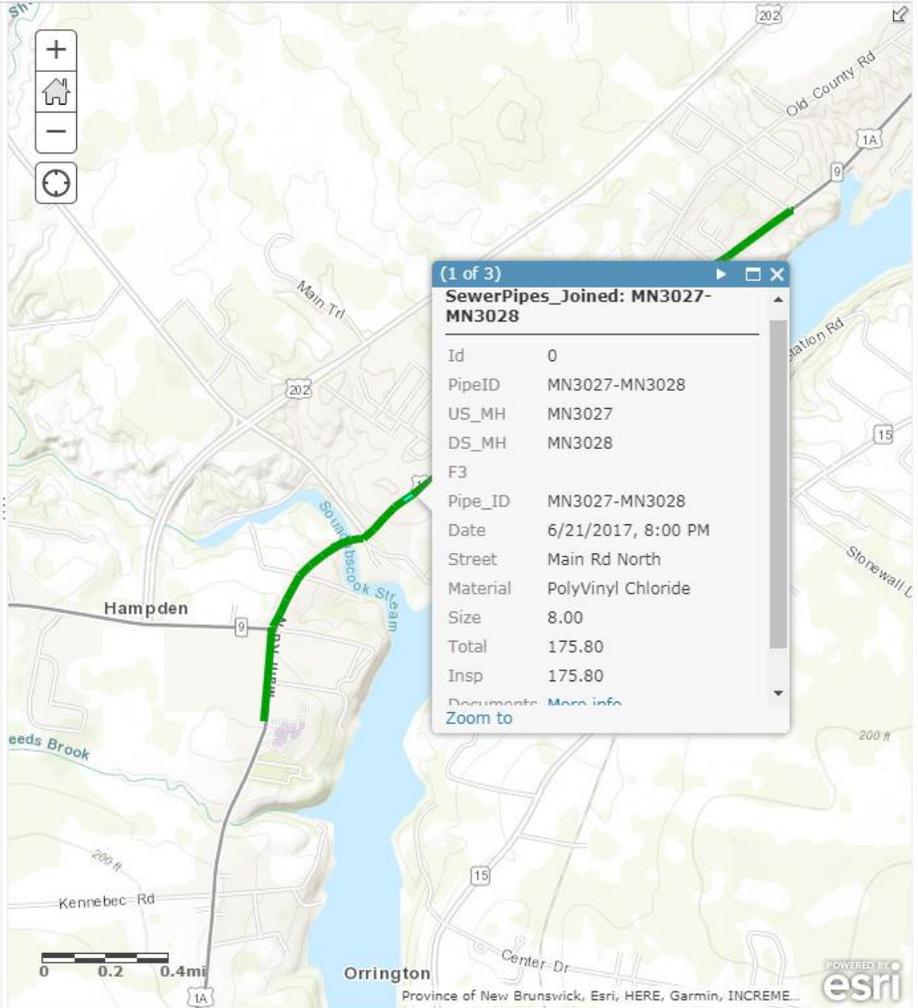
As additional data comes in, I will update this map. Please let me know if you see any errors.

ps: please be aware that some pipe lengths are not showing up correctly due to reversals - I should have this fixed shortly.

**Kyle Severance**  
*GIS/IT Specialist*  
*E911 Addressing Officer*  
*Town of Hampden, Maine*  
O: (207)862-4500 ext 142 | M: (207)852-7207 | F: (207)862-5067

Details Basemap Share Print Measure Find address or place

Legend  
Sewer\_Mapping -  
SewerPipes\_Joined





# WATER QUALITY MANAGEMENT

**Andrew F. Rudzinski**

Director

[andy.rudzinski@bangormaine.gov](mailto:andy.rudzinski@bangormaine.gov)

Brian Kavanah, Director  
Division of Water Quality Management  
Bureau of Water Quality  
Maine Department of Environmental Protection  
17 State House Station  
Augusta, ME 04333-0017

March 16, 2018

Dear Mr. Kavanah,

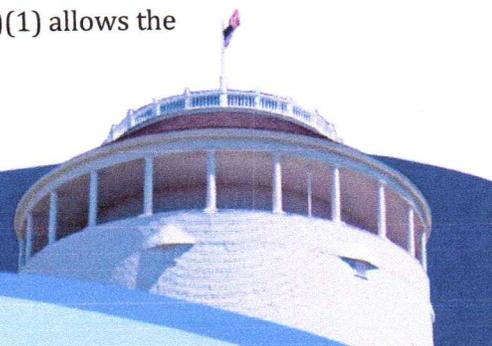
The City of Bangor has reviewed the fourth preliminary draft of the 2018 General Permit for the Discharge of Stormwater from Small Municipal Separate Stormwater Systems (MS4 permit), dated February 23, 2018. Our comments on the draft are provided in this letter.

The City was surprised and dismayed to see the introduction of significant new permit obligations in Part IV.D.3 and Part IV.D.4 at this late stage in the permit-writing process. These requirements represent an unreasonable and unwarranted expansion of the MS4 permit and would fall particularly hard on communities such as Bangor, which has six impaired streams within the Urbanized Area. The City asks that the language in Part IV.D.3 and Part IV.D.4 be eliminated entirely from the permit.

Part IV.D.3 requires MS4 permittees to undertake studies to define stressors and contributions to impaired water bodies, identify actions to reduce contributions, and develop a plan for execution of these actions – all within the first year of the permit! We are convinced that conducting such studies is DEP's job; requiring municipal permittees, who are ill-equipped to perform this role, constitutes an unfair and heavy burden on municipal resources.

With regard to Part IV.D.4, to date, Bangor has developed watershed management plans for four of its urban impaired streams (Penjajawoc, Arctic, Birch, and Capehart). Writing and updating watershed management plans is a long and arduous process. Implementation of watershed management plans is costly and takes significant staff time to manage. The City is already devoting significant resources to implementing its existing plans, including through its stormwater utility, and believes that the best use of resources lies in implementing the City's existing watershed management plans.

We question whether the Department has the authority to include either of these new provisions as proposed in the current draft MS4 permit. We note that 40 CFR 122.34(c)(1) allows the



Department to include more stringent terms or terms beyond the minimum control measures in the MS4 permit, but only if these are based on approved TMDLs (or equivalents), or after the state director makes a *determination* they are needed to protect water quality. We are not aware that such a determination (based on data) has been made by the Department. In any case, for the reasons stated above, we do not believe the requirements in proposed in Part IV.D.3 and Part IV.D.4 should be included in the MS4 permit.

Thank you for providing this opportunity to comment on the 2018 MS4 permit as it develops. It is important to the City of Bangor to improve water quality, including within its urban impaired stream watersheds. If you have any questions, please do not hesitate to contact me directly at (207) 992-4477 or [andy.rudzinski@bangormaine.gov](mailto:andy.rudzinski@bangormaine.gov).

Sincerely,

A handwritten signature in blue ink, appearing to read 'A. Rudzinski', is written over the typed name.

Andrew Rudzinski  
Director of Water Quality  
City of Bangor

cc: Gregg Wood



Town of Hampden  
Land & Building Services

106 Western Ave.  
Hampden, Maine 04444  
207-862-4500  
planner@hampdenmaine.gov

Brian Kavanah, Director  
Division of Water Quality Management  
Bureau of Water Quality  
Maine Department of Environmental Protection  
17 State House Station  
Augusta, ME 04333-0017

March 20, 2018

RE: MS4 General Permit, Fourth Preliminary Draft

Dear Mr. Kavanah,

The Town of Hampden has reviewed the fourth preliminary draft of the 2018 General Permit for the discharge of stormwater from MS4s. We have also been in contact with the City of Bangor in regards to the ramifications of this draft, particularly as pertains to the Sucker Brook and Shaw Brook watersheds. After reviewing Andrew Rudzinski's letter to you dated March 16, 2018, we are in complete agreement with the points he has raised. We were equally dismayed at seeing the new language in Part IV.D.3, and can assure you that Hampden does not have the financial or staff resources to comply with this new requirement.

Thank you for the opportunity to comment on this fourth draft of the MS4 general permit. While Hampden is committed to improving the water quality of the waterways both within and downstream of our town, we must balance these efforts with many other demands on our resources. If you have any questions, please feel free to contact either myself or Sean Currier at the phone number above.

Sincerely,

Karen M. Cullen, AICP  
Town Planner  
Stormwater Coordinator

Sean Currier  
Public Works Director