

Motley Street Storm Drain and Sewer Replacement Project

Neighborhood Meeting

August 13, 2019



Neighborhood Meeting Agenda

- Introductions
- City of Portland Sewer System overview
- Motley Street Sewer and Drainage Overview
- Project goals
- Project description
- What to expect during construction
- Sequencing of the project
- Utility coordination
- Project discussion



Question: What is a combined sewer?

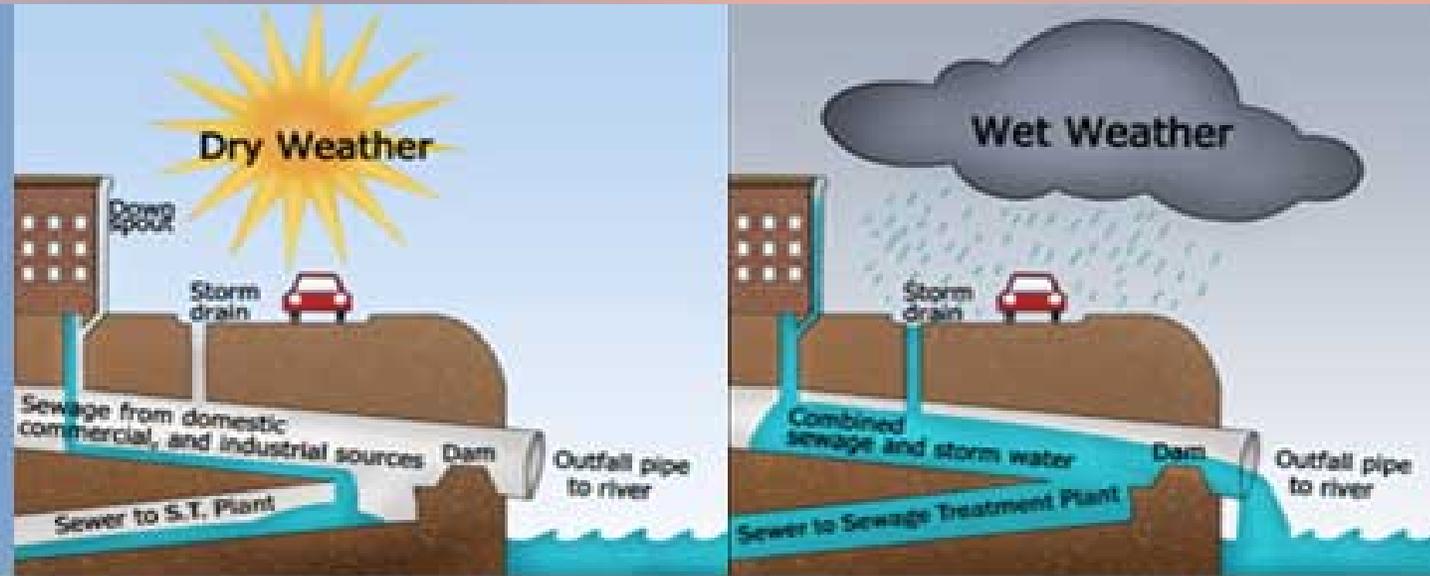
Answer: A combined sewer conveys both sanitary sewer flows along with storm water (rain water) flows.

Question: What is a separated storm drain sewer?

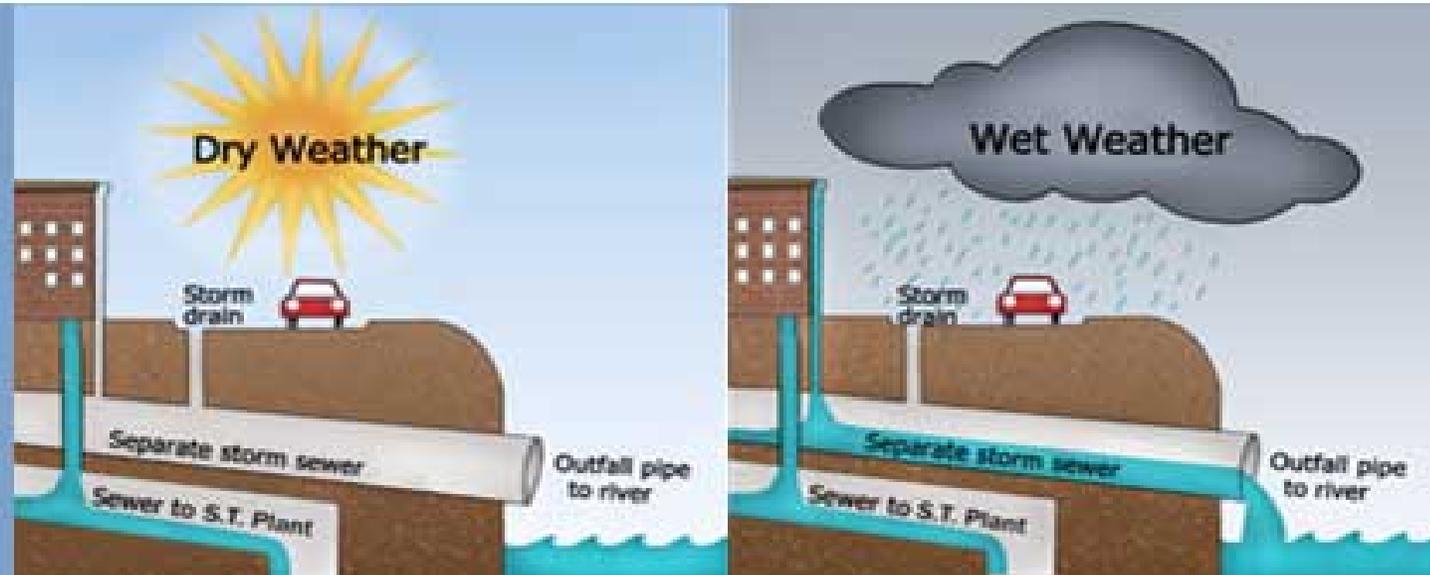
Answer: A separated storm drain sewer only conveys storm water flows.

Combined Sewer Overflows (CSO)

COMBINED
SEWER
SYSTEM



SEPARATED
SEWER
SYSTEM



Motley Street Sewer and Storm Drain Overview

- Existing Vitrified Clay Combined Sewer installed in 1923 (\$1,500.00!)
- Total Stormwater Drainage Area = 8.0 Acres
- 1 Catch Basin on Motley Street connected to Combined Sewer
- Sanitary Sewer ties into existing Combined Sewer within Brighton Avenue
- Shallow Ledge profile in areas will require ledge hammering





CITY OF PORTLAND, MAINE
 DEPT. OF PUBLIC WORKS
 212 CANGO ROAD, PORTLAND, MAINE 04108
 PHONE (207) 874-8846 FAX (207) 874-8852

**MOTLEY STREET
 STORM DRAIN AND
 SEWER REPLACEMENT PROJECT**

PROJECT LOCATION MAP



FIGURE 1
 JULY 2019

DESIGN BY: JFP DRAWN BY: JRP CHECKED BY: JRP



WEST SIDE
INTERCEPTOR
SEWER

FORE RIVER
SEWAGE
PUMPING
STATION

MOTLEY
STREET
GRAVITY
SEWER

FORCE MAIN

FORE
RIVER

COMMERCIAL
STREET
INTERCEPTOR
SEWER

DOWNTOWN
PORTLAND

BACK COVE

INDIA
STREET
PUMP
STATION

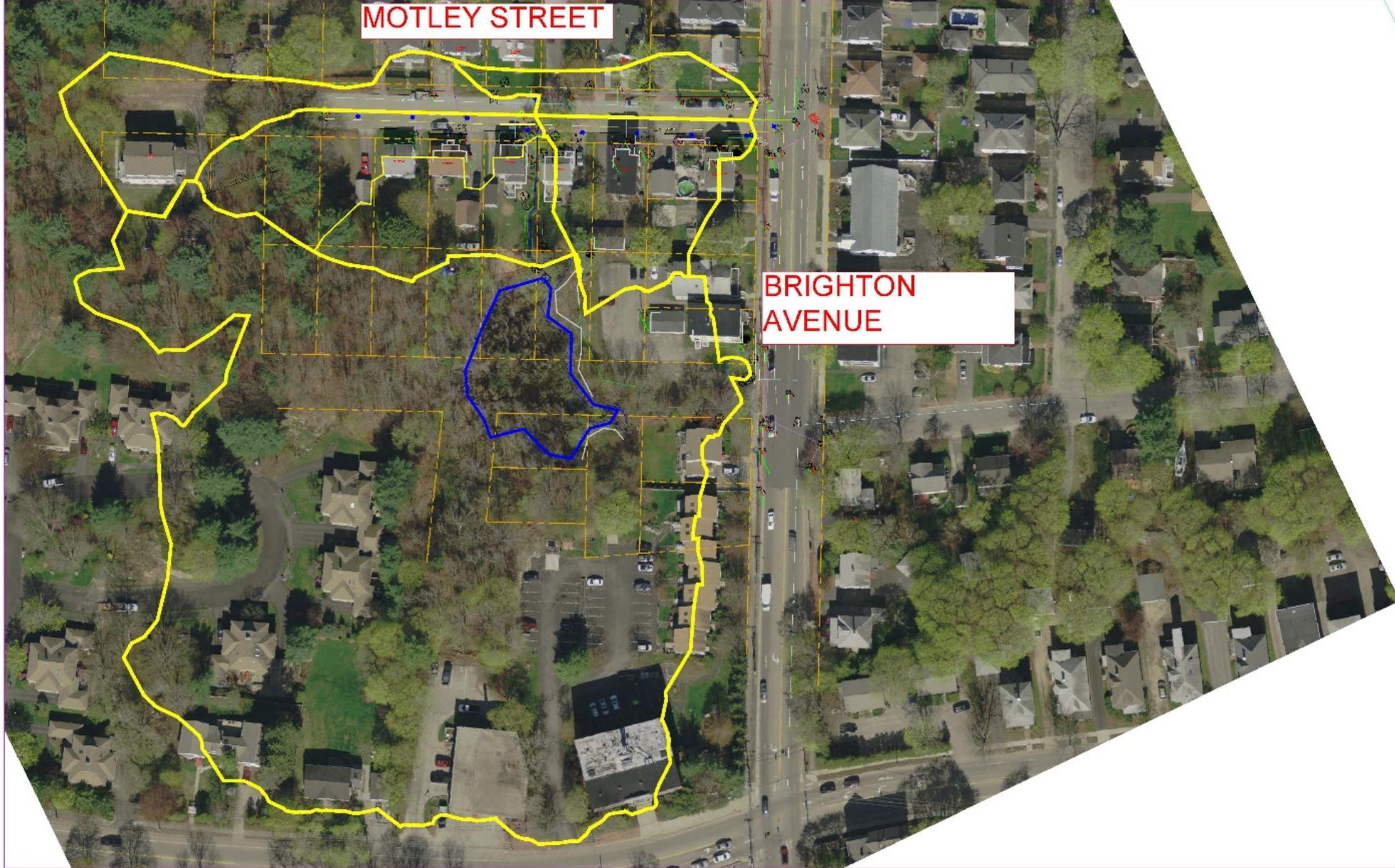
FORCE MAIN

EAST END
WASTE WATER TREATMENT
PLANT

WHERE DO YOUR SEWER FLOWS GO?

MOTLEY STREET

BRIGHTON AVENUE



PLANNING DEPARTMENT
300 WATER STREET, PORTLAND, ME 04101
WWW.PORTLAND.ME

PROJECT	2000
REVISION	2000
DATE	2000
BY	
DATE	
BY	
DATE	
BY	
DATE	



CITY OF PORTLAND, MAINE
DEPARTMENT OF PUBLIC WORKS
PLANNING DIVISION
PROJECT NO. 2000
DATE 2000
BY
DATE

MOTLEY STREET
WATERSHED
MAP

Project Goals

- Replace Existing Failing Sanitary Sewer with New PVC Sewer pipe
- Reduce street flooding from wetland onto Motley Street.
- Provide separated storm drain within Motley Street to provide better drainage for the street.
- Reduce amount of groundwater under Motley Street to protect new pavement.
- Reduce I&I into the existing combined sewer system.
- Improve pavement condition.
- Improve ADA ramps at Brighton Avenue street crossing.



EXISTING SEWER PIPE INSEPTION



Ted Berry Company
521 Federal Rd
Livemore Maine 04253
207-897-3348

Defect Listing Plot Left

Pipe Segment Refer...	City	Street	Pipe Material	Location C...	Pipe Use
SSGM-02912	Portland ME	Motley St	Vitrified Clay Pipe		Combined
Upstream MH SSMH-2931	Total Length 240	Year Laid	Shape Circular	Location Details	
Downstream MH SSMH-4620	Length surveyed 211.7	Year Renewed	Height 8	Width 8	Pipe Joint
SPR 43	MPR 6	PO Number		Customer	
SPRI 3.3	MPRI 0.5	Work Order		City of Portland ME	
GSR 5441	GMR 2300	Purpose		Routine Assessment	
OPR 49	Surveyed By Jon Latham	Direction Downstream	Date 20190522	Media label	
OPRI 2	Certificate Number U-1116-07006130	Pre-Cleaning No Pre-Cleaning	Time 13.32	Weather Dry	
	Date Cleaned		End Time 13.52	Additional Info	



SSMH-2931

Code:	Continuous:	Pos:	Val 1 / 2 :	% :	Gallons:
0.0 ft. Access Point Manhole SSMH-2931		0 - 0			
0.0 ft. Water Level		0 - 0		5	
2.0 ft. Tap Saddle Intruding Clear water running		2 - 0	4 / 2		
2.5 ft. Broken Pipe Void Visible		1 - 3			
2.5 ft. Tap Break-In Intruding		2 - 0	4 / 1		
7.0 ft. Broken Pipe		2 - 10			
8.5 ft. Tap Factory Made Capped		3 - 0	4		
10.4 ft. Tap Factory Made		9 - 0	4		
20.2 ft. Tap Break-In Active		2 - 0	4		
21.6 ft. Broken Pipe		12 - 12			
23.7 ft. Water Level		0 - 0		20	
51.5 ft. Fracture Multiple		3 - 7			
54.2 ft. Tap Factory Made Capped		9 - 0	4		
56.0 ft. Tap Factory Made		2 - 0	4		



Ted Berry Company
521 Federal Rd
Livemore Maine 04253
207-897-3348

Defect Listing Plot Left

Pipe Segment Refer...	City	Street	Pipe Material	Location C...	Pipe Use
SSGM-02912	Portland ME	Motley St	Vitrified Clay Pipe		Combined
Upstream MH SSMH-2931	Total Length 240	Year Laid	Shape Circular	Location Details	
Downstream MH SSMH-4620	Length surveyed 211.7	Year Renewed	Height 8	Width 8	Pipe Joint

Code:	Continuous:	Pos:	Val 1 / 2 :	% :	Gallons:
59.5 ft. Fracture Spiral		6 - 9			
69.6 ft. Crack Spiral		2 - 5			
85.3 ft. Broken Pipe Soil Visible		6 - 10			
86.2 ft. Tap Factory Made		9 - 0	4		
108.0 ft. Tap Factory Made Capped		3 - 0	4		
144.2 ft. Fracture Longitudinal		3 - 0			
146.6 ft. Fracture Spiral		7 - 5			
156.6 ft. Joint Separated Medium		0 - 0			
160.3 ft. Joint Separated Medium		0 - 0			
164.2 ft. Infiltration Stain		4 - 8			
166.7 ft. Crack Multiple		11 - 2			
167.9 ft. Fracture Spiral		7 - 10			
170.2 ft. Infiltration Stain		6 - 9			
172.3 ft. Infiltration Stain	Start S01	1 - 11			
193.0 ft. Tap Break-In Intruding		2 - 0	4 / 1		
211.7 ft. Shape or Size Change		0 - 0	12		
211.7 ft. Infiltration Stain	End F01	1 - 11			
211.7 ft. Survey Abandoned Unable to navigate over size change		0 - 0			

Image Report 4/Page

Pipe Segment Name	City	Street	Pipe Material	Location C...	Pipe Use
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Upstream MH SSMH-2931	Total Length 240	Year La d	Shape Circular	Location Details	
Downstream MH SSMH-4620	Length surveyed 211.7	Year Renewed	Height 8	Width 8	Pipe Joint...



Distance: 85.3 ft. Grade: 5
Condition: Broken Pipe Soil Visible
Remarks: N/A



Distance: 86.2 ft. Grade: 0
Condition: Tap Factory Made
Remarks: N/A



Distance: 108.0 ft. Grade: 0
Condition: Tap Factory Made Capped
Remarks: N/A



Distance: 144.2 ft. Grade: 3
Condition: Fracture Longitudinal
Remarks: N/A



PROJECT DESCRIPTION

- 400 LF of new Storm Drain/Underdrain Pipe
- 430 LF of new Sanitary Sewer Pipe
- 4 New Catch Basins
- 250 Cubic Yards of Ledge Removal
- New house sewer laterals from the new main to the City right of way line
- Street to be repaved to City standards with 3.5” of Asphalt at the conclusion of project
- Project Estimated Cost: \$300,000.00



PROPOSED STORM DRAIN PIPE TABLE					
PIPE NAME	SIZE	LENGTH	SLOPE	FROM	TO
PROP-SD-1	15	24.387	3.87%	PROP-CB-1	PROP-CB-1
PROP-SD-2	15	186.023	3.65%	PROP-CB-2	PROP-CB-1
PROP-SD-4	15	3.258	3.74%	PROP-F1-1	PROP-CB-2
PROP-SD-3	12	182.681	3.64%	PROP-CB-3	EX-SWM-0182

PROPOSED SANITARY PIPE TABLE					
PIPE NAME	SIZE	LENGTH	SLOPE	FROM	TO
PROP-SS-1	8	176.194	3.23%	PROP-SSM1-1	PROP-SSM1-2
PROP-SS-2	8	246.034	3.05%	PROP-SSM1-2	EX-SSM1-4202

PROPOSED STRUCTURE TABLE STORM DRAIN					
STRUCTURE NAME	ALIGNMENT REF	STA.	OFFSET	DETAILS:	
PROP-F1-1	MOTLEY	2467.30	21.70	48" Ø	RM = 70.90
				INV OUT = 66.00 15" PROP-SD-4 TO PROP-CB-2	
PROP-CB-3	MOTLEY	2469.00	15.22	48" Ø	RM = 70.52
				INV OUT = 66.40 12" PROP-SD-3 TO EX-SWM-3160	
PROP-CB-2	MOTLEY	2469.17	14.77	48" Ø	RM = 70.52
				INV IN = 65.90 12" PROP-SD-1 FROM PROP-F1-1	
				INV OUT = 65.80 15" PROP-SD-2 TO PROP-CB-1	
PROP-CB-1	MOTLEY	3472.15	14.47	48" Ø	RM = 68.81
				INV IN = 64.74 15" PROP-SD-2 FROM PROP-CB-2	
				INV IN = 65.01 15" EX-SD-1 FROM EX-SWM-3162	
				INV OUT = 64.68 15" PROP-SD-1 TO	

PROPOSED SANITARY SEWER STRUCTURE TABLE					
STRUCTURE NAME	ALIGNMENT REF	STA.	OFFSET	DETAILS:	
PROP-SSM1-1	MOTLEY	4403.30	0.78	48" Ø	RM = 75.21
				INV OUT = 67.82 8" PROP-SS-1 TO PROP-SSM1-2	
PROP-SSM1-2	MOTLEY	2-6311	1.43	48" Ø	RM = 73.55
				INV IN = 62.48 8" PROP-SS-1 FROM PROP-SSM1-1	
				INV OUT = 63.36 8" PROP-SS-2 TO EX-SSM1-408	

- CONSTRUCTION NOTES:**
- CONTRACTOR TO RENEW EACH SANITARY SEWER LATERAL FROM THE NEW MAIN TO THE CITY'S RIGHT OF WAY LINE. EXISTING LATERAL INFORMATION IS LIMITED. NEW SERVICES ARE TO BE PVC AND MATCH THE EXISTING DIAMETER, LINE AND GRADE OF THE EXISTING LATERAL. EXISTING LATERAL LOCATION INFORMATION BASED ON CITY OF PORTLAND SEWER LATERAL CARDS AND VERIFIED BY TED BERRY CCTV INSPECTION COMPLETED IN MAY 2019. THE CCTV INSPECTION REPORTS OF THE EXISTING MOTLEY STREET SEWER CAN BE FOUND IN THE PROJECT SPECIFICATION APPENDICES.
 - ANY EXISTING WATER OR GAS SERVICE THAT REQUIRES RELOCATION TO FACILITATE THE INSTALLATION OF THE NEW STORM DRAIN SHALL BE COORDINATED WITH THE PROPER UTILITY. THE COST FOR ANY RELOCATION SHALL BE INCIDENTAL TO THE PROJECT.
 - CONTRACTOR TO RESTORE DISTURBED LAWN AREAS WITH 4 INCHES OF LOAM AND PROJECT SPECIFIED SEED MIX TO THE SATISFACTION OF THE PROJECT ENGINEER.
 - STORM DRAINS INSTALLED IN MOTLEY STREET GUTTER LINE SHALL BE PERFORMED PVC UNDER-DRAIN PIPE INSTALLED PER THE PROJECT DETAIL.
 - PROJECT BORINGS WERE COMPLETED BY NORTHERN TEST BORING IN JUNE OF 2019. BORING LOCATIONS SHOWN ON THE PLANS ARE APPROXIMATE. THE LEDGE PROFILE ON THIS PLAN IS TO BE CONSIDERED AN APPROXIMATION TO INDICATE THE PRESENCE OF LEDGE WITHIN PROJECT LIMITS. CONTRACTOR CAN REFER TO BORING LOGS LOCATED WITHIN THE PROJECT SPECIFICATION APPENDICES.

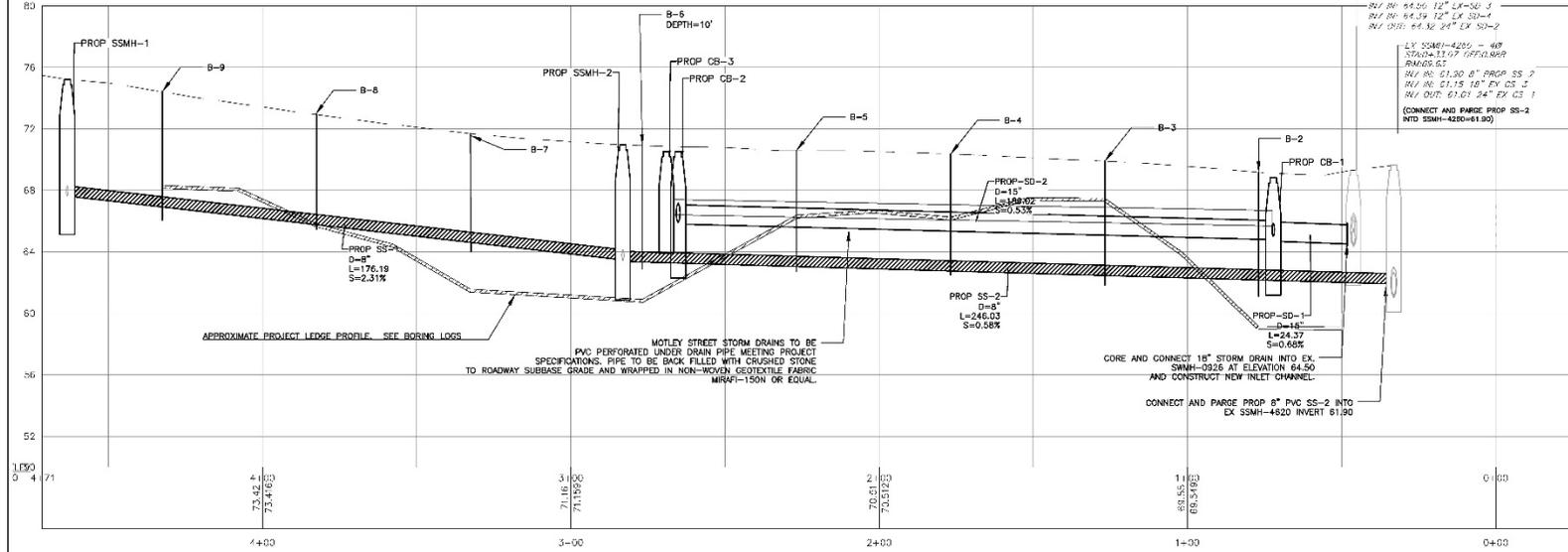
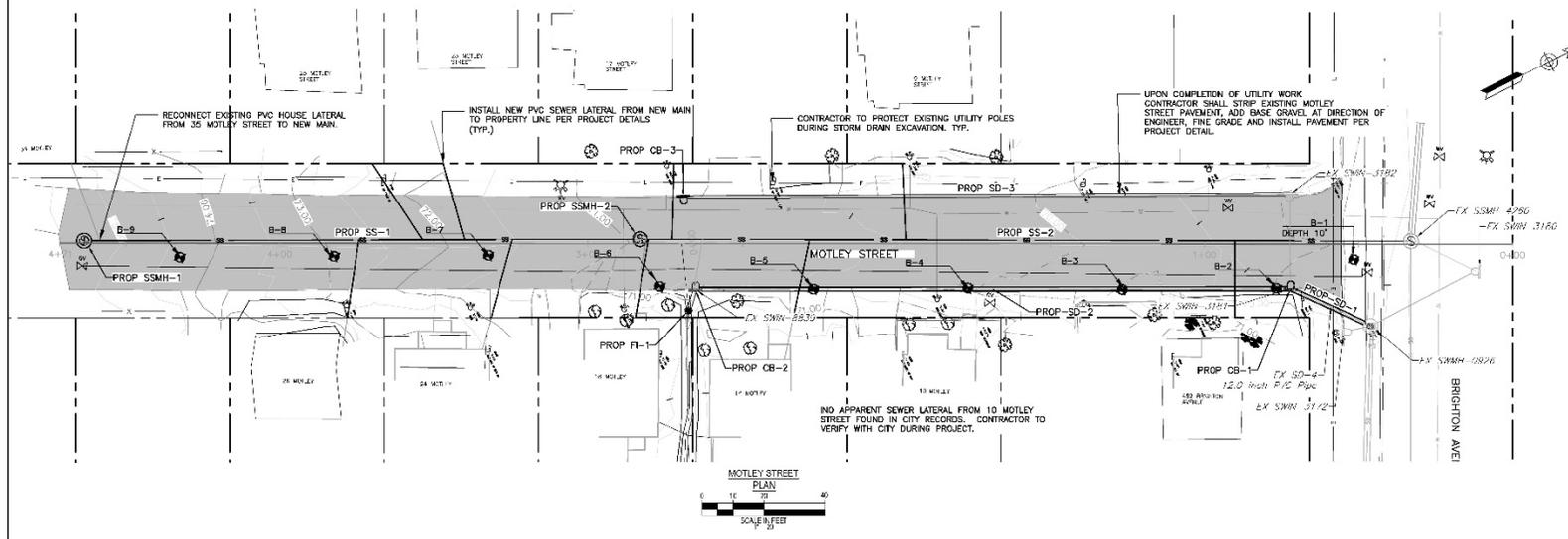
PROJECT NAME: MOTLEY STREET STORM DRAIN AND SEWER REPLACEMENT PROJECT

CITY OF PORTLAND, MAINE
DEPARTMENT OF PUBLIC WORKS
WATER RESOURCES DIVISION
1000 MARKET STREET, PORTLAND, ME 04102



DESIGN BY: JP
DESIGN BY: JP
CHECKED BY: BR
DATE: AUGUST 2019
PAGE 4 OF 5

DATE: AUGUST 2019
PAGE 4 OF 5
SHEET NO: C-1



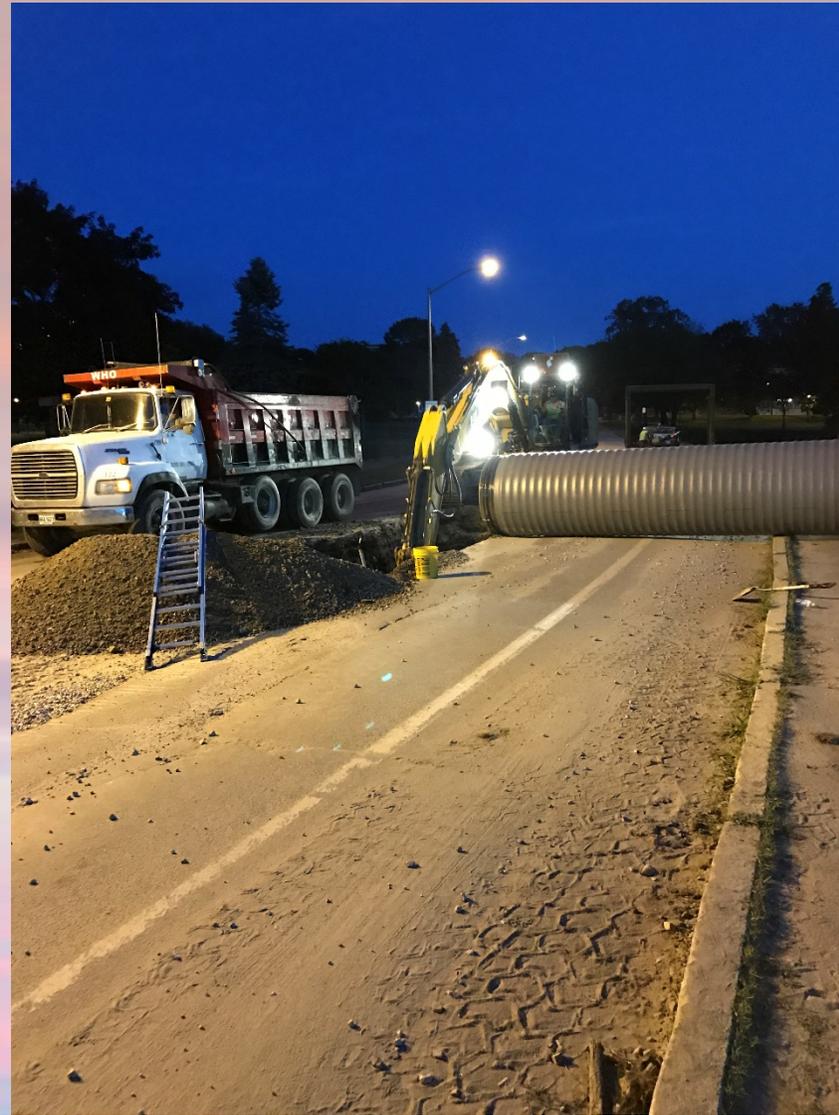
PROFILE
1" = 20' HORIZONTAL
1" = 4' VERTICAL
SCALE: 1" = 20' HORIZONTAL
1" = 4' VERTICAL

WATER RESOURCES DIVISION
 1000 MARKET STREET, PORTLAND, ME 04102
 TEL: 207.781.3333
 FAX: 207.781.3334
 WWW.CITYOFPORTLAND.ME

What to expect during the Project

- Utility Construction Sequencing: Typically Deepest to Shallowest.
- Noise (especially during ledge removal)
- Large equipment and machines around
- Traffic disruptions
- Night Work- Forest Avenue and Baxter Blvd.
- Temporary disruptions to driveways, water and sewer lines (contractor must provide notification)
- Dust- Contractor required to control dust but it can still get dusty at times





Sequencing of project

- Advertised for Bid: September 2019
- Start of Construction Late Fall 2019 or Early Spring 2020.
- Project completion through the first course of Pavement: July 31, 2020.
- Final Paving and Misc. restoration to occur in the fall of 2020.



Utility Coordination

- Working with Portland Water District throughout project.
- Working with Unitil Natural Gas to re-locate in a few areas.
- Project plans shared with other utilities.



Questions and House Keeping Items

- Project fact sheets available to take home
 - Project questionnaire-fill out and return to me if interested
 - Please sign the sign in sheet!
-
- Any questions??

