

4. UTILITIES

The following information is made in accordance with the City of Portland Code of Ordinances Chapter 14 Land Use, Section 14-527(g)(7).

4.1 OVERVIEW

Electrical, water, sewer, and gas services to the property will be extended from existing or new facilities with the site. These services will be updated to serve the new proposed use. The Development Team has contacted all governing utility agencies and companies and will continue to coordinate the provision of new services, as required throughout the design and construction phases of the project. The following sections outline current conditions and anticipated improvements associated with each system.

4.2 WATER SUPPLY

There is currently a single water service to the site from the 12-inch main that enters the site from across the rail tracks. Improvements to the onsite water supply systems have been incrementally completed as work progressed on the site. For the CMTM development additional water main work including new installation of pipe to create an onsite loop will be completed, as has been previously discussed and approved by the Portland Water District. A new fire service will be required to support sprinkler systems in the building. A 2" domestic service will provide water supply to the building. We have enclosed previous Ability to Serve letters addressing the entire Thompson's Point project as well.

4.2.1 Total Project Water Usage

A preliminary estimate of project water use has been undertaken using commonly accepted daily water demand criteria:

CMTM Building	Design Flow (GPD)
555 Visitors at 6 gpd/Visitor	3,330
15 Employees at 15 gpd/Employee	225
	3,555

4.3 WASTEWATER DISPOSAL

The proposed building will be served by a new 6" domestic sanitary service that will exit the north end of the building and tie into an existing 8" gravity main installed during the renovations to the Brick North building. This system ultimately discharges to the existing PWD pump station. Domestic sanitary flows are expected to be within the previously estimated flow amounts from the development. At this time, a grease trap is not currently part of the plan based on the lack of a full kitchen facility with the CMTM programming.

4.4 NATURAL GAS SUPPLY

There is an existing gas main located west of the proposed building in the pedestrian alleyway. Details as to service sizing for natural gas into the CMTM building remain incomplete, but it is expected that a natural gas service connection will be made for heating the building.

4.5 ELECTRICITY SUPPLY/COMMUNICATIONS

Stantec and Bartlett Design have been involved with various improvements to the site's overall power supply and communications systems. The applicant will continue to coordinate provision of power to the CMTM site with CMP. Similarly, communications and cable service will be coordinated with Oxford Network, Fairpoint, and Time Warner Cable. All facilities for power and communications will be underground, except for one or more pad mount transformers.

4.6 ATTACHMENTS

Attachment D – Correspondence with Utilities

ATTACHMENT D

Correspondence with Utilities

March 27, 2017

Mr. Jamie Cough

Central Maine Power
162 Canco Road
Portland, Maine 04103

**Subject: Proposed Children's Museum & Theatre of Maine
Thompson's Point
Power Supply and Ability to Serve**

Dear Jamie:

Our office is working as a consultant in the site planning and permitting associated with a proposed development of a proposed Children's Museum & Theatre of Maine building at Thompson's Point. The project site is located on all or a portion of Map 201/Block A/Lots 5, 8 & 10 & Map 202/Block A/Lot 1, 4 according to the City of Portland Tax Assessor's Maps. This site is part of the original Thompson's Point Master Plan (Lot 7) which was previously reviewed and an ability to serve confirmation was provided by your office on March 30, 2016.

The project will consist of the development of a 9,682 SF building and ancillary parking for children's museum & theatre.

We trust that the existing power supply system has adequate capacity to serve this project. We are in the process of completing the Preliminary Site Plan Application for a submission to the City Planning Staff and we would appreciate your confirmation of site conditions. The electrical design has not yet been started; however, we would like your initial assessment of project conditions and service capacity.

We look forward to your review of this request and a summary of your findings and any updated cost projections for the project you may be able to provide.

Please include in your assessment any costs that could be associated with the following:

- Upgrades to nearby CMP infrastructure;
- All onsite overhead and underground improvements;
- Impact fees or connection fees; and
- CMP engineering costs.



Mr. Jamie Cough
March 27, 2017
Page 2

If you have any questions regarding this request, please do not hesitate to our office.

Sincerely,

STANTEC CONSULTING SERVICES INC.

Stephen Bushey, PE
Associate, Senior Project Manager
Phone: (207) 887-3478
Fax: 207-883-3376
Stephen.Bushey@stantec.com

Attachment

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Stantec Consulting Services Inc.
482 Payne Road Scarborough Court, Scarborough ME 04074-8929

March 27, 2017

Mr. Mike Ellingwood
Oxford Networks
491 Lisbon Street
Lewiston, ME 04240-7418

**Subject: Proposed Children's Museum & Theatre of Maine
Thompson's Point**

Dear Mike:

Our office is working as a consultant in the site planning and permitting associated with a proposed development of a proposed Children's Museum & Theatre of Maine building at Thompson's Point. The project site is located on all or a portion of Map 201/Block A/Lots 5, 8 & 10 & Map 202/Block A/Lot 1, 4 according to the City of Portland Tax Assessor's Maps. This site is part of the original Thompson's Point Master Plan (Lot 7) which was previously reviewed and an ability to serve confirmation was provided by your office.

The project will consist of the development of a 9,682 SF building and ancillary parking for children's museum & theatre.

We are in the process of completing the Site Plan Application for a submission to the City Planning Staff and we are seeking to provide documentation indicating your confirmation of natural gas service availability to the project. At this time, we are still interested in what upgrades and measures you may anticipate necessary to extend your service into the site.

If you have any questions regarding this request, please do not hesitate to our office.

Sincerely,

STANTEC CONSULTING SERVICES INC.

A handwritten signature in blue ink that reads "Stephen Bushey". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Stephen Bushey, PE
Associate, Senior Project Manager
Phone: (207) 887-3478
Fax: 207-883-3376
Stephen.Bushey@stantec.com

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March 27, 2017

Mr. Brad Roland, PE
City of Portland Public Works
55 Portland Street
Portland, Maine 04104-3553

**Subject: Proposed Children's Museum & Theatre of Maine
Thompson's Point
Wastewater Capacity Ability to Serve**

Dear Brad:

Our office is working as a consultant in the site planning and permitting associated with a proposed development of a proposed Children's Museum & Theatre of Maine building at Thompson's Point. The project site is located on all or a portion of Map 201/Block A/Lots 5, 8 & 10 & Map 202/Block A/Lot 1, 4 according to the City of Portland Tax Assessor's Maps. This site is part of the original Thompson's Point Master Plan (Lot 7) which was previously reviewed by your office. On behalf of the owner, we would like to verify the City's wastewater division has ability to provide wastewater capacity for the project and to determine any impact fees.

The project will consist of the development of a 9,682 SF building and ancillary parking for children's museum & theatre.

The projected water use using the Maine State Plumbing Code and typical City of Portland flows information is as follows:

CMTM Building	Design Flow (GPD)
555 Visitors at 6 gpd/Visitor	3,330
15 Employees at 15 gpd/Employee	225
	3,555

Based on this amount of flow, we trust that the existing sanitary sewer system has adequate capacity to serve this project. We understand there is an existing sewer service(s) into the site; however, the exact conditions, flows, and service conditions are unknown. We would like the review the City's records for the existing services so we may determine any necessary improvements. We are in the process of completing preliminary submission materials and responses to City staff comments and we are seeking to provide documentation indicating the city's continued ability to provide sanitary sewer service to this project.



Brad Roland
March 29, 2017
Page 2

If you have any questions regarding this request, please do not hesitate to our office.

Sincerely,

STANTEC CONSULTING SERVICES INC.

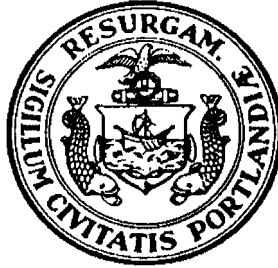
Stephen Bushey, PE
Associate, Senior Project Manager
Phone: (207) 887-3478
Fax: 207-883-3376
Stephen.Bushey@stantec.com

Attachment: Wastewater Application

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CITY OF PORTLAND WASTEWATER CAPACITY APPLICATION

Department of Public Services,
55 Portland Street,
Portland, Maine 04101-2991



Bradley Roland, P.E.
Water Resources Division

Date: March 14, 2017

1. Please, Submit Utility, Site, and Locus Plans.

Site Address: Thompson's Point Chart Block Lot Number: 201/A/5, 8, 10
202/A/1, 4

Proposed Use: Children's Museum & Theatre

Previous Use: Mixed Use-Industrial

Existing Sanitary Flows: _____ GPD

Existing Process Flows: _____ GPD

Description and location of City sewer that is to receive the proposed building sewer lateral.

Site Category	Commercial (<i>see part 4 below</i>)	<input checked="" type="checkbox"/>
	Industrial (<i>complete part 5 below</i>)	<input type="checkbox"/>
	Governmental	<input type="checkbox"/>
	Residential	<input type="checkbox"/>
	Other (<i>specify</i>)	<input type="checkbox"/>

Flows collected from development connect to existing
sanitary Thompson's Point Pump Station

Clearly, indicate the proposed connections, on the submitted plans.

2. Please, Submit Contact Information.

City Planner's Name: Barbara Barhydt Phone: _____

Owner/Developer Name: Chris Thompson - Forefront Partners I, LP & Children's Museum & Theatre of Maine

Owner/Developer Address: 501 Danforth Street - Portland, ME 04102 & PO Box 4041 - Portland, ME 04101

Phone: 207-747-5288 & 207-828-1234 Fax: _____ E-mail: _____

Engineering Consultant Name: Steve Bushey - Stantec

Engineering Consultant Address: 482 Payne Road - Scarborough, ME 04074

Phone: 207-887-3478 Fax: 207-883-3355 E-mail: stephen.bushey@stantec.com

Note: Consultants and Developers should allow +/- 15 days, for capacity status, prior to Planning Board Review.

3. Please, Submit Domestic Wastewater Design Flow Calculations.

Estimated Domestic Wastewater Flow Generated: _____ N/A _____ GPD

Peaking Factor/ Peak Times: _____

Specify the source of design guidelines: (*i.e.* "Handbook of Subsurface Wastewater Disposal in Maine," "Plumbers and Pipe Fitters Calculation Manual," Portland Water District Records, Other (*specify*) _____)

Note: Please submit calculations showing the derivation of your design flows, either on the following page, in the space provided, or attached, as a separate sheet.

4. Please, Submit External Grease Interceptor Calculations.

Total Drainage Fixture Unit (DFU) Values: _____
Size of External Grease Interceptor: _____ N/A _____
Retention Time: _____
Peaking Factor/ Peak Times: _____

Note: In determining your restaurant process water flows, and the size of your external grease interceptor, please use The Uniform Plumbing Code. Note: In determining the retention time, sixty (60) minutes is the minimum retention time. Note: Please submit detailed calculations showing the derivation of your restaurant process water design flows, and please submit detailed calculations showing the derivation of the size of your external grease interceptor, either in the space provided below, or attached, as a separate sheet.

5. Please, Submit Industrial Process Wastewater Flow Calculations

Estimated Industrial Process Wastewater Flows Generated: _____ N/A _____ GPD
Do you currently hold Federal or State discharge permits? Yes _____ No _____
Is the process wastewater termed categorical under CFR 40? Yes _____ No _____
OSHA Standard Industrial Code (SIC): _____ (<http://www.osha.gov/oshstats/sicser.html>)
Peaking Factor/Peak Process Times: _____ N/A _____

Note: On the submitted plans, please show where the building's domestic sanitary sewer laterals, as well as the building's industrial-commercial process wastewater sewer laterals exits the facility. Also, show where these building sewer laterals enter the city's sewer. Finally, show the location of the wet wells, control manholes, or other access points; and, the locations of filters, strainers, or grease traps.

Note: Please submit detailed calculations showing the derivation of your design flows, either in the space provided, or attached, as a separate sheet.



March 29, 2017

MEANS Group
Portland Water District
225 Douglass Street
P.O. Box 3553
Portland, Maine 04104-3553

**Subject: Proposed Children's Museum & Theatre of Maine
Thompson's Point
Water Supply and Ability to Serve**

Dear Coordinator:

Our office is working as a consultant in the site planning and permitting associated with a proposed development of a proposed Children's Museum & Theatre of Maine building at Thompson's Point. The project site is located on all or a portion of Map 201/Block A/Lots 5, 8 & 10 & Map 202/Block A/Lot 1, 4 according to the City of Portland Tax Assessor's Maps. This site is part of the original Thompson's Point Master Plan (Lot 7) which was previously reviewed and an ability to serve confirmation was provided by your office on March 14, 2014.

On behalf of the owner, we would like to verify the Portland Water District's ability to provide domestic and fire supply water for the project and determine any impact fees.

The project will consist of the development of a 9,682 SF building and will include domestic and fire supply services.

The projected water use using the Maine State Plumbing Code and typical City of Portland flows information is as follows:

CMTM Building	Design Flow (GPD)
555 Visitors at 6 gpd/Visitor	3,330
15 Employees at 15 gpd/Employee	225
	3,555

Based on this amount of flow, we trust that the existing water supply system has adequate capacity to serve this project. For the CMTM development, additional water main work including new installation of pipe to create an onsite loop will be completed, as has been previously discussed and approved by the Portland Water District. We are in the process of completing the Site Plan Application for a submission to the City Planning Staff and we are seeking to provide documentation indicating the District's continued ability to provide water supply service to this project.



MEANS Group
March 27, 2017
Page 2

The proposed building will have fire protection sprinkler systems; however, at this time, the size and flow requirements of the sprinkler system have not yet been determined. As the building and site design effort progresses, our office will meet with you to provide detailed information for the new water services and connections proposed for this project. A fixture count spreadsheet accompanies this letter for your use in estimating peak water demand.

If you have any questions regarding this request, please do not hesitate to our office.

Sincerely,

STANTEC CONSULTING SERVICES INC.

Stephen Bushey, PE
Associate, Senior Project Manager
Phone: (207) 887-3478
Fax: 207-883-3376
Stephen.Bushey@stantec.com

Attachment

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Peak Flow Based on Fixture Count

Adapted from 2009 Maine State Internal Plumbing Code

Customer
Street Address
City

Children's Museum and Theatre of Maine
Thompson's Point
Portland

Fixture	Fixture Value 60 psi	x	No. of Fixtures	=	Fixture Value
Bathtub	4	x	0	=	0
Bidet	1	x	0	=	0
Dental Unit	1	x	0	=	0
Drinking Fountain - Public	0.5	x	4	=	2
Kitchen Sink	1.5	x	3	=	4.5
Bathroom Sink	1	x	13	=	13
Showerhead (Shower Only)	2	x	1	=	2
Service Sink	3	x	4	=	12
Toilet -Flushometer(high pressure)	5	x	0	=	0
-Tank Type	2.5	x	17	=	42.5
Urinal -Flushometer Valve	5	x	5	=	25
-Tank Type	2	x	0	=	0
Wash Sink (Each Set of Faucets)	2	x	0	=	0
Dishwasher	1.5	x	0	=	0
Washing Machine	4	x	0	=	0
Hose (outdoor spigot) <3/4 in.	2.5	x	4	=	10

Combined Fixture Value Total

111

Customer Peak Demand From Fig. 4-2 or 4-3

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Pressure Factor From Table 4-1

No. of Irrigation Sections (Areas of 100 sq. ft.)	0
Irrigation Factor (1.16-Spray Systems, 0.40-Rotary Systems)	
Hose Bibs for Irrigation:	
Size	Fixture Value No. of Fixtures
1/2"	0
5/8"	0
3/4"	0

Total Fixed Demand (Peak Flow)

#VALUE! gpm



Stantec Consulting Services Inc.
482 Payne Road Scarborough Court, Scarborough ME 04074-8929

March 27, 2019

Mr. Mark Pelletier

Time Warner Cable
118 Johnson Road
Portland, Maine 04102

**Subject: Proposed Children's Museum & Theatre of Maine
Thompson's Point
Request for Ability to Serve Letter**

Dear Mr. Pelletier:

Our office is working as a consultant in the site planning and permitting associated with a proposed development of a proposed Children's Museum & Theatre of Maine building at Thompson's Point. The project site is located on all or a portion of Map 201/Block A/Lots 5, 8 & 10 & Map 202/Block A/Lot 1, 4; Proposed Lot 7, according to the City of Portland Tax Assessor's Maps. This site is part of the original Thompson's Point Master Plan (Lot 7) which was previously reviewed and an ability to serve confirmation was provided by your office on February 13, 2014.

The project will consist of the development of a 9,682 SF building and ancillary parking for children's museum & theatre.

We are in the process of completing the Preliminary Site Plan Application for a submission to the City Planning Staff and we would appreciate your confirmation of site conditions.

We look forward to your review of this request and a summary of your findings and any updated cost projections for the project you may be able to provide.

Please include in your assessment any costs that could be associated with the following:

- Upgrades to nearby Time Warner Cable infrastructure;
- All onsite overhead and underground improvements;
- Impact fees or connection fees; and
- Time Warner Cable engineering costs.



Mr. Mark Pelletier
March 27, 2017
Page 2

If you have any questions regarding this request, please do not hesitate to our office.

Sincerely,

STANTEC CONSULTING SERVICES INC.

Stephen Bushey, PE
Associate, Senior Project Manager
Phone: (207) 887-3478
Fax: 207-883-3376
Stephen.Bushey@stantec.com

Attachment

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Stantec Consulting Services Inc.
482 Payne Road Scarborough Court, Scarborough ME 04074-8929

March 29, 2017

Mr. Scott Carpenter
Unitil
1075 Forest Avenue
Portland, Maine 04103

**Subject: Proposed Children's Museum & Theatre of Maine
Thompson's Point
Ability to Serve Project with Natural Gas**

Dear Ms. Fowler:

Our office is working as a consultant in the site planning and permitting associated with a proposed development of a proposed Children's Museum & Theatre of Maine at Thompson's Point. The project site is located on all or a portion of Map 201/Block A/Lots 5, 8 & 10 & Map 202/Block A/Lot 1, 4 according to the City of Portland Tax Assessor's Maps. This site is part of the original Thompson's Point Master Plan (Lot 7) which was previously reviewed and an ability to serve confirmation was provided by your office on February 13, 2014.

The project will consist of the development of a 9,682 SF building and ancillary parking for children's museum & theatre.

We are in the process of completing the Site Plan Application for a submission to the City Planning Staff and we are seeking to provide documentation indicating your confirmation of natural gas service availability to the project. At this time, gas loads have not yet been fully estimated.

If you have any questions regarding this request, please do not hesitate to our office.

Sincerely,

STANTEC CONSULTING SERVICES INC.

A handwritten signature in blue ink that reads "Stephen Bushey". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Stephen Bushey, PE
Associate, Senior Project Manager
Phone: (207) 887-3478
Fax: 207-883-3376
Stephen.Bushey@stantec.com

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