

14. UTILITIES ANALYSIS

A Utility Assessment was prepared in August 2015 for the Project Site, which included a review of existing utilities and possible future services, site access, and development considerations. The Assessment considered projects in various stages of planning, permitting, and construction within the vicinity of the Project Site at that time. This Utility Assessment has been attached to this Section for reference. Assessed utilities include water, sanitary sewer, stormwater, natural gas, and communications/power.

The Project Site is currently serviced primarily through utility mains in Fore Street. As part of the Ocean Gateway facility project completed in 2007, new utility infrastructure was installed in Thames Street, an extension of Commercial Street. These utilities terminate approximately 400 feet west of the 58 Fore Street property, and were designed by the City and MaineDOT with consideration for redevelopment of the adjacent public and privately owned properties along the eastern waterfront. The 58 Fore Street redevelopment project proposes to connection to these existing utilities by routing service mains through the project roadway from the City's Thames Street extension. The proposed Utility Plan is included in the drawings attached to Section 3.

The proposed development has been coordinated with the various utilities, as described below. A description of the proposed stormwater management plan is provided in Section 12 of this Report.

14.1 PLAN FOR INFRASTRUCTURE IMPROVEMENTS (TIMING, FUNDING, CITY COORDINATION)

The project team has been conducting ongoing coordination efforts with the various utilities to discuss service connection locations, ability to serve, and estimated costs of the proposed utility work. In addition to ongoing communications, the following meetings were held:

- Meeting with CMP on July 27, 2016 at the Project Site,
- Meeting with Unutil on August 5, 2016 at the Project Site, and
- Meeting with Portland Water District on September 15, 2016 at the PWD office.

Formal letters requesting confirmation of capacity to serve have also been distributed, as summarized below.

14.2 CAPACITY TO SERVE

Letters have been distributed to the local utilities requesting confirmation of capacity to serve the proposed development, including water, sanitary sewer, natural gas, and electricity. Copies of these letters, in addition to the City of Portland Wastewater Capacity Application and sewer demand calculations, are attached to this Section. Responses will be forwarded to the City upon receipt. The documents attached to this Section summarize the existing utilities, the proposed methods of connection, and the proposed uses/estimated demands.

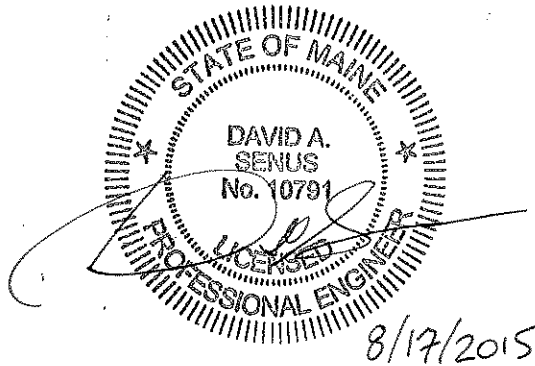
It should be noted that the estimated utility demands may change as the design progresses and that changes will be coordinated as part of future permit submissions.

14.3 ATTACHMENTS

- 58 Fore Street Utility Assessment, dated August, 2015
- Ability to Serve Requests to Utilities
- Portland Wastewater Capacity Application



**58 Fore Street –
Utility
Assessment**



woodardcurran.com
COMMITMENT & INTEGRITY DRIVE RESULTS

227007
CPB2
August 2015

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1. INTRODUCTION

In December 2007, DeLuca Hoffman Associates, Inc. performed a review of the site layout and utilities on the property located at 58 Fore Street in Portland. This Report documents our desktop assessment of site utilities and serves as an update of the information contained within that 2007 document.

1.1 SITE OVERVIEW

The property at 58 Fore Street remains largely unchanged since 2007. The site is split between three parcels identified as Lots 1, 2, and 3 on Map 18 of the City of Portland Tax Maps. Lots 1 and 3 have frontage along Fore Street, while Lot 2 is located along the waterfront, separated from Lots 1 and 3 by a linear parcel containing the railroad owned by the State of Maine. The City of Portland Online Assessor's Database and GIS parcel maps identify Lots 1 and 2 together as approximately 6.92 acres, and Lot 3 as 2.87 acres. A survey completed by Owen Haskell, Inc. in May 2013 identifies the areas of Lots 1 and 2 at 6.04 acres and 1.02 acres respectively, for a total of 7.06 acres, approximately 0.14 acres greater than the City's Assessor's Database. A copy of the survey is attached in Appendix A for reference. Lot 3 is reported at the same size in the City Assessor Database and on the Owen Haskell survey. The property is located in the City's Eastern Waterfront Mixed Zone, referred to as the B6 zone, and Eastern Waterfront Port Zone (EWPZ), and is also partly within the Shoreland Overlay Zone. The following figure was taken from the City's online GIS viewer, and shows parcel boundaries and zone boundaries in the vicinity of the 58 Fore Street property.

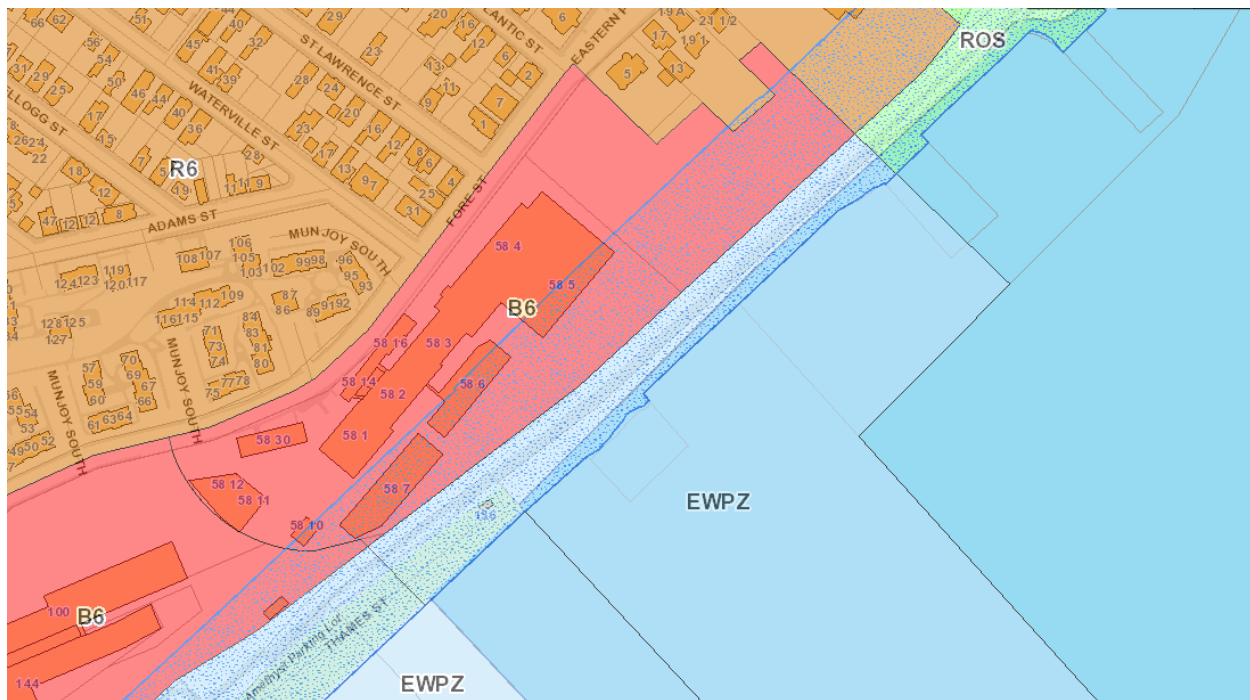


Figure 1-1 City of Portland Zoning Map

The site primarily slopes from west to east towards the waterfront. A steep grade change exists along Fore Street. The northeastern corner of the property is a steep, wooded embankment. Retaining walls and buildings have been constructed along much of the boundary with Fore Street to account for the change in grade. A driveway from Fore Street on the western end of the property provides the primary means of site access. The property is also connected to Hancock Street and Thames Street by gravel parking lots and driveways located on adjacent parcels to the west.

1.2 AREA DEVELOPMENT

Redevelopment in the eastern waterfront area of Portland, near the 58 Fore Street property, has intensified over the last 5 to 10 years. Future projects and redevelopment will require utilization of municipal, quasi-municipal and privately owned utility infrastructure and roadways in the vicinity of the 58 Fore Street property, and therefore appropriate consideration of capacity is necessary.

1.2.1 Completed Projects

The City-owned Ocean Gateway facility construction project with international ferry accommodations on Pier 2 Berth 1 was completed in 2008, and construction of the facility's cruise ship accommodations on Pier 2 Berth 2 was completed in 2011. The Ocean Gateway project included the construction of roadway extensions in the vicinity of the subject property, as well as construction of accompanying utility infrastructure (water, wastewater, storm drains, natural gas, electric and telecommunications). The Ocean Gateway facility is currently used as an event center, and as a berth for large cruise ships. Renewed use of the terminal for regular international ferry service to Nova Scotia is planned to restart in May 2014.

The roughly 750-space privately-owned Ocean Gateway parking garage was constructed in 2008 at the northwest corner of the Fore and Hancock street intersection. In the last several years, a roughly 180-key Marriott Residence Inn was completed on the northeast corner of the Fore and Hancock street intersection and in 2012, a roughly 120-key Hampton Inn with ground-floor restaurant and residential condominiums was completed at northeast corner of the intersection of Fore and Franklin Streets, at the former Jordan's Meats site. Phase one of a two phase project referred to as the "The Bay House" is nearing completion on the east side of the block formed by Hancock, Newbury, Middle and India Street. Phase I of the project includes two buildings containing 84 residential condominium units and street level commercial space.

Although within the City's Old Port District and further from the development with less potential impact, two hotel projects are under construction and nearing completion. The Hyatt Place hotel consists of 123-keys and is located on the corner of Fore Street and Union Street. The Courtyard by Marriott hotel consists of 131-keys and 14 residences and is located on the corner of Commercial Street and Maple Street.

1.2.2 Projects in Planning/Permitting/Construction

There are a number of projects in various stages of planning, permitting, and construction within the vicinity of the 58 Fore Street property. The Watermark at Ocean Gateway, proposed by Intercontinental Real Estate and local developers, obtained all permits to construct a significant mixed-use development on a 1-acre parcel bounded by Fore Street, Hancock Street, and Thames Street, however construction was never started. Permits for the project lapsed and the site has, or is currently under an Option Agreement - Purchase and Sale.

Small open parcels abut the Ocean Gateway parking garage to the north and west. These parcels could be anticipated to see future infill development (office buildings), although no development proposals have recently been submitted to the City Planning office.

Adjacent to the recently constructed Hampton Inn, on the remaining undeveloped acreage of the former Jordan's Meats site, there is additional Planning Board approved five-story mixed-use building consisting of retail space, office space, and residential condominium units.

The "Seaport Lofts", otherwise known as "The Bay House Phase II", has received Planning Board approval for a 39 unit residential building located on the east side of the block formed by Hancock, Newbury, Federal and India Street; construction is ongoing.

The "Newbury Lofts" project was approved by the City Planning Board in the fall of 2012, and proposes 24 residential units and commercial space at the block bounded by Hampshire, Federal, and Newbury Streets and Franklin Arterial. Timeframe for construction is unknown at this time.

A recently submitted project currently under review by Planning Staff and the City Planning Board is on Munjoy Hill, a four-story mixed-use building proposed at the corner of Congress Street and St. Lawrence Street. The building is anticipated to include up to 12 residential units and ground floor commercial space.

2. UTILITY REVIEW

The property at 58 Fore Street is currently serviced primarily through utility mains in Fore Street. As part of the construction completed for the Ocean Gateway facility project, new utility infrastructure was installed in Thames Street, an extension of Commercial Street as well as Hancock Street. These utilities terminate approximately 400 feet from the property at 58 Fore Street, and could likely be extended to provide service to the property. Two plans showing existing utility infrastructure in the vicinity of the property are included in Appendix B. Figure 1 in Appendix B shows existing utility infrastructure outside of the subject property, compiled from survey data and information obtained from various utilities. Figure 2 in Appendix B shows existing utility infrastructure within the 58 Fore Street property, as identified by the 2013 survey by Owen Haskell.

2.1 WATER

The property is currently serviced by the Portland Water District (PWD) from an 8-inch cast iron water main located in Fore Street. The PWD Infrastructure Map, included in Appendix C for reference, shows the existing waterline in Fore Street, and identifies that it was installed in 1901 and 1902. The Map also shows the locations of the water services that enter the 58 Fore Street property.

Water service record cards have been provided for the four services that enter the property at two locations, and are included in Appendix C. Service 7462 is an 8-inch cast iron fire water service located on the eastern end of the property. The service card indicates that the service was installed in 1922. Services 90A, 90B, and 90C are all located at the western end of the property, and include two fire services (6-inch and 4-inch cast iron), and a domestic water service (1 ½-inch, material not specified). The age of these services are not identified on the PWD service record cards. Retirement or maintenance of any of the existing services will be the responsibility of the property owner.

The survey completed by Owen Haskell, Inc. in May 2013 indicates that there is a system of “private” buried water lines located throughout the 58 Fore Street property. This network of piping appears to deliver domestic and fire water to buildings and hydrants located throughout the property. There are no known PWD easements on the site, and we can therefore assume that the water infrastructure on the site is a private system that is the responsibility of the owner.

With the Ocean Gateway project completed in 2008, new utility lines, including a 12-inch water main, were installed to the end of Thames Street. The new water main could be extended towards the 58 Fore Street property, providing a service connection alternative to the 100-year old Fore Street water main.

We did not pressure test, leak test or evaluate the integrity of the “private” water services on the site; upon development of the Master Plan, we would recommend completing this work as necessary, to assess the condition of the infrastructure for future use or replacement as part of the redevelopment of the property. As part of that effort, coordination with PWD would be required to determine the best option for providing adequate pressure and capacity to the site, whether that includes reusing existing infrastructure on site, existing or new services from Fore Street, Thames Street, or a combination thereof. The system may require connections to both (looped system) to satisfy pressure and capacity needs.

2.2 SANITARY SEWER

The property’s existing sewer service discharges to the City’s gravity sewer in Fore Street. The existing public sewer in Fore Street increases in size from 18 to 24 to 36 inches, from east to west in front of the 58 Fore Street property. The Portland Sewer System Infiltration-Inflow Analysis maps (I&I maps) for the area show the pipe sizes, as well as information on pipe materials and ages. The 18-inch pipe is identified as brick, with no age; the 24-inch pipe is identified as vitrified clay pipe installed in 1935; and no material or age information is provided for the 36-inch pipe.

A service card obtained from the City of Portland archives located at the Public Services Department indicates that a 4-inch sewer service was installed to one of the buildings located at 58 Fore Street in 1984. A review of the sewer

service card and the 2013 Owen Haskell survey indicates that a 15-inch brick sewer extends into the 58 Fore Street property from the sewer manhole on Fore Street (located at the transition from the 24" sewer to the 36" sewer main). The survey does not identify any sewer piping internal to the property. The survey does identify a pump station located on the property and the 2007 DeLuca Hoffman Site Overview and Utility report identified that this pump station is privately owned, and pumps the property's sanitary sewer back to the Fore Street sewer. Additional confirmation of the sanitary sewer pipes identified on the survey is required to confirm the locations of the internal building sewer connections, and whether they will be impacted under the redevelopment Master Plan. It is recommended that CCTV inspections, test pits, and leak testing be completed to evaluate the condition of the existing sewer pipes internal to the site to determine if any of the internal sewer infrastructure may be reused. We also did not evaluate the condition of the existing "private" pump station, pressure test the "private" pump station forcemain, or leak test or evaluate the integrity of the "private" sanitary sewer services on the site. Upon development of the Master Development Plan, we would recommend completing this work to assess the condition of the infrastructure for future use or replacement as part of the redevelopment of the property.

The Fore Street sewer is a combined sewer system that connects to sewers on India Street to the India Street Pump Station, and through the Combined Sewer Overflow (CSO) 23. This CSO overflows into Portland Harbor during high combined flow events caused by rainfall. Both the India Street CSO and Pump Station are owned and operated by the Portland Water District. The India Street Pump Station conveys combined sewage through a 33-inch forcemain to the East End Wastewater Treatment Facility, which is also owned and operated by the Portland Water District.

The 33-inch sewer pressure forcemain from the India Street Pump Station to the East End Wastewater Treatment Facility runs through the portion of the 58 Fore Street property in close proximity to the Eastern Promenade Trail, identified on the City of Portland Assessor's maps as Lot 2. An easement is not identified on the Owen Haskell Survey, however there are two deeds from 1976 which identify the existence of an easement for the sewer forcemain; one deed specifically identifies a 30' easement (15' on either side of the pipe) for a portion of the length of the forcemain, while the second deed references a plan maintained at the Portland Water District. A copy of a plan obtained from PWD is included in Appendix C. This prestressed concrete cylinder pipe carries up to 40 Million Gallons per Day (MGD) of combined sewage and is identified here for the purpose of understanding how the redevelopment Master Plan may be impacted by the location of the forcemain, and the need to maintain an accessible easement; we recommend coordination with Portland Water District as it relates to potential or perceived impacts to the forcemain, and working through the establishment of an easement, if necessary.

A new 12-inch sanitary sewer line was installed at the eastern end of Thames Street as part of the Ocean Gateway project. This sewer line increases to 15 inches in diameter further to the west on Thames Street, and connects directly into the 51-inch brick sewer that is located in India Street. Prior to construction, the brick sewer was CCTV-inspected in 2006, and was found to be in acceptable condition. The brick sewer connects through the India Street CSO structure to the India Street Pump Station. We completed a preliminary review of site grades and the elevation of the sewer installed in Thames Street, which indicate that a gravity flow connection to that Thames Street sewer may be possible, eliminating the need for a private pump station on the 58 Fore Street property.

2.3 STORMWATER

As identified in the previous section, the 58 Fore Street property is currently connected to a combined sanitary/stormwater system in Fore Street. The City of Portland is working to reduce the number of combined sewer overflows occurring in the City, and any separation of sanitary sewer from stormwater flow will help with this initiative. In early 2013, the City's Combined Sewer Overflow Long Term Control Plan Tier III Update was completed; one of the geographic areas evaluated in this report was the Portland Harbor. The 58 Fore Street area was identified as part of the India Street CSO-shed; however the report did not give any specific recommendations for management of stormwater in this area. A targeted area for green infrastructure and sewer separation was identified within the report, southwest of the proposed development area.

The Ocean Gateway construction project created separate stormwater and sanitary sewer systems installed to the end of Thames Street. The stormwater discharges to an outfall constructed as part of the project. Prior to discharge at this new outfall, stormwater is directed through a stormwater treatment unit designed to meet water quality standards established at that time. A 2006 evaluation of this stormwater system identified the maximum drainage area and acceptable flows that could discharge to the outfall's stormwater treatment system; stormwater flows from 58 Fore Street cannot be handled by the Ocean Gateway outfall's permitted stormwater treatment system.

A review of the 2013 Owen Haskell, Inc. survey indicates that there are currently three stormwater outfall discharges on the site; however, portions of the site's stormwater runoff may discharge to the combined sewer system. A complete separation of the 58 Fore Street property's stormwater runoff from its sanitary sewer discharge, combined with quality treatment of the site's stormwater would help to further the City's plans for reducing combined sewer overflows and improving water quality. Based on our experience, we anticipate separation of storm and sanitary sewer at the subject property will be the minimum acceptable measure to the City during the local permitting process. Any new impervious or developed area on the site will require the design and installation of water quality treatment measures in accordance with the City's Technical Standards. State permits, as applicable, may require water quality treatment measures for all redeveloped area with a change of use.

Additionally, the City of Portland is currently exploring the option of implementing a stormwater utility to provide equity between sewer rate payers and stormwater generators by assessing a fee based on the area of impervious surface on a property, with credits provided for certain stormwater improvements. As the stormwater utility fee structure is implemented, it is anticipated that the current PWD-assessed sewer rates would lower in response to this new source of revenue. A stormwater utility would provide an incentive for including water quality improvement systems and increased pervious surface on new development projects. Site planning and design should take into consideration the potential for a stormwater utility fee and associated credits, incorporating appropriate pervious surfaces into the site development plan and evaluating the capital cost of stormwater management systems against potential future fees and credits, as stormwater utility information becomes more available.

New development at 58 Fore Street will require the reconfiguration of the site's storm drain piping, including new inlets and roof drain connections. Depending on the proposed drainage configuration and level to which green infrastructure (including quantity and quality treatment) is incorporated on the property, the existing outfalls on the property may be adequately sized, or require upgrades.

Alternately, a new outfall into Portland Harbor could be created to discharge stormwater from a new collection and treatment system on the property. The construction of a new outfall, or the modification of an existing one would require a permit from the Maine Department of Environmental Protection.

2.4 NATURAL GAS

Natural gas service in the City of Portland is currently provided by Unitil. The 58 Fore Street property is serviced by a natural gas main in Fore Street. A significant number of new projects and conversions of existing properties to natural gas have occurred over the last several years, primarily due to the competitive pricing of natural gas. We understand from local developers that during the winter of 2012/2013, demand for natural gas was high and natural gas service, specifically pressure, was not consistent on the peninsula; this reportedly resulted in heating system malfunctions and outages throughout the downtown.

The existing gas main in Fore Street adjacent to the 58 Fore Street property is a 6" coated steel pipe that was installed in the late 1960s. Unitil has indicated that this is a medium pressure gas main, and that capacity has not been an issue in this area. The property currently has a regulator that sends low pressure services to various locations within the site. Once a preliminary plan for development has been established, Unitil will help to generate an appropriate layout for services and meters within the site.

Unitil has stated that the ideal connection point for natural gas service for new development on the property will likely be from Fore Street; however, a new 6-inch plastic gas main was installed to the end of Thames Street in 2006 as

part of the Ocean Gateway project. As the plan for development progresses, possible connection to this gas main location can be further evaluated.

2.5 COMMUNICATIONS/POWER

The 58 Fore Street property is currently serviced by Central Maine Power (CMP) for electrical service and Fairpoint Communications and Time Warner Cable for communication services. The power and communication services to the buildings on the property originate from overhead utility lines on Fore Street.

CMP has indicated that the three-phase 470V electrical service that serves the property has the capacity to supply the power needs of a future development project at the site. Fairpoint Communications has also stated that they have the capacity to provide communications services for a future development project at the site. The existing property has copper communication services, but fiber optic lines are located in the vicinity of the property and could be used to provide high speed communications service.

Time Warner Cable also has both coaxial and fiber optic lines on the existing poles on Fore Street in front of the 58 Fore Street property, with two service drops for the existing buildings located along Fore Street. Currently they are not providing services to buildings located further away from Fore Street, towards the southeastern side of the site, and Time Warner Cable indicated that a new conduit system internal to the site would be required to extend service further into the site. This would be the case for all power and communications utilities.

Oxford Networks is a third communications service provider with fiber optic cable installed in the area. They have existing fiber optic lines on Fore Street between the intersections with Mountfort Street and Waterville Street, along approximately half of the property's frontage.

All power and communications providers have stated that additional project program/design information will be required for them to calculate their detailed service requirements and costs, and that they are all willing to work with the developer as the project moves forward.

The City of Portland's Technical Manual includes a detail for standard utility locations in City streets. This detail calls for underground electrical and communications lines. New lines installed for future development would need to be installed underground. The City of Portland has also set a precedent with large development projects in the City, requiring that existing overhead lines along a project's roadway frontage be removed and reinstalled underground. Development on the subject property will likely require relocating the existing Fore Street overhead electric and communications lines below ground, along with providing underground service to the site from Fore Street and/or Thames Street. The construction of Thames Street as part of the Ocean Gateway project included installation of underground conduit to allow for future underground electrical and communication services in the area.

2.6 FUTURE SERVICES

City Planning documents have contemplated the extension of Thames Street and associated utilities. Figure 1 shows this extension of Thames Street, including an extension of gas, sewer, water, electric, and communications infrastructure, to the 58 Fore Street property. While this extension may provide an ideal location for future service connections to the property for some utilities, other utilities may better serve the site from their existing location in Fore Street. The location of services will depend greatly on the layout and phasing of the proposed development and the extent that existing buildings and infrastructure will be maintained. As design development progresses, all utility companies will need to be engaged to determine the best locations for designing service connections.

3. SITE ACCESS

3.1 EXISTING AND PROPOSED ACCESS

Main access to the property is by way of a driveway from Fore Street at the western end of the property. The access route extends through the site with driveways and parking areas in between buildings. Gravel driveways and parking areas on the adjacent property to the west connect to 58 Fore Street and provide a secondary means of access, as do gravel and paved ways along the waterfront that connect back to Thames Street. A State of Maine-owned railroad line and the Eastern Promenade trail run along the property, separating the inland parcels (Map 18 Lots 1 and 3) from the waterfront edge (Map 18 Lot 2).

Fore Street changes to Eastern Promenade just east of the subject property, and based on data from the Maine Department of Transportation's (MDOT) Map Viewer, both streets are classified as major/urban collectors with state aid from the MDOT. India Street and Commercial Street west of India Street are both minor arterials and MDOT state highways. The Thames Street extension of Commercial Street installed as part of the Ocean Gateway project is a local road under City of Portland jurisdiction.

An extension of Thames Street to the east (and the potential connection up to Fore Street between the subject property and the adjacent lot to the west) remains the likely primary means for future site access. Thames Street was constructed to within 400 feet of the property as part of the Ocean Gateway Terminal construction project. The attached figure shows a proposed Thames Street layout, with an extension of approximately 300 linear feet, with a connector street back to Fore Street. The maintenance of access from Fore Street may also be a viable option; however, we have not evaluated this option in detail. A traffic management study will need to be completed to determine the best route for primary access based on traffic and circulation concerns in the area and the proposed scale and type of development.

We anticipate the Master Planning process will inform site access considerations and connectivity beyond what is described here.

3.2 PAVEMENT CONDITIONS

In 2013, the MDOT installed a pavement overlay on Eastern Promenade, starting at the intersection with Atlantic Street, just beyond the 58 Fore Street property. Fore Street in front of the subject property was not repaved. Existing sidewalks on Fore Street are made of concrete. This area of the City is located within the area designated for brick sidewalk. Discussions with the City of Portland Planning Division and Public Services Department will be required to determine the need for sidewalk reconstruction; however, development on the 58 Fore Street property will likely require construction of new brick sidewalks along the street frontage, or contribution to a fund for future sidewalk upgrades.

Thames Street was constructed within the past five years, and would likely not require significant work beyond patching at utility connections. Thames Street currently has brick sidewalk on the southern side of the street, and bituminous sidewalk on the northern side of the street. An extension of Thames Street would also require the extension of both sidewalks. Brick sidewalks may be required to on both sides of the street to comply with the City's standards for sidewalk materials in this location.

Pavement conditions within the 58 Fore Street parcels have not been evaluated as part of this assessment. The assumption has been made that the proposed development will result in extensive disturbance, and repaving of the entire site will be necessary. A geotechnical evaluation at the site will provide information about the existing pavement thickness and underlying soils. With this information, an appropriate new pavement section can be specified for driveways and parking areas on the property.

4. DEVELOPMENT ISSUES

DeLuca Hoffman identified a number of development issues as part of their 2007 analysis. The issues they identified are repeated below in italics, with additional information following each. Each of the issues identified in 2007 generally hold true today.

- *Site access by an extension of Thames Street into the site will need to be reviewed with City officials, particularly with respect to the demolition of existing structures to allow the extended street alignment as well as the development of new buildings for new mixed uses.*

The extension of Thames Street to provide site access will require careful consideration, as well as coordination with the City of Portland and other adjacent land owners. The street extension and associated utility corridor may require land swaps and/or the creation of public access and utility easements. The current City of Portland standards for road construction and layout must be considered in the design. Cost responsibility for these roadway extensions would likely need to be negotiated with the City.

- *Onsite parking will require careful planning and technical guidance as the City will look for assurance that adequate parking is provided. The City will place great importance on the incorporation of Transportation Demand Management (TDM) measures into the site design so that overall traffic impacts from the site may be reduced. The site features will need to include measures for public bus service.*

As the plan for development progresses, the need for parking and public transportation will continue to be an important consideration. Shared use parking may be of particular interest to the City.

- *The design of a retaining structure(s) along the Fore Street boundary will need to be carefully planned and designed for economics and functionality.*

No additional comment.

- *Utility availability for the major services including water, sewer and power appears reasonable; however, new onsite infrastructure for all utilities appears necessary given the age and location of the existing systems.*

No additional comment.

- *Current State and local regulations for stormwater management will require significant measures for stormwater quality treatment prior to release into the harbor. The existing site currently contains no formal measures for water quality treatment of stormwater runoff; therefore an entirely new drainage system will likely be required for any future development program.*

No additional comment.

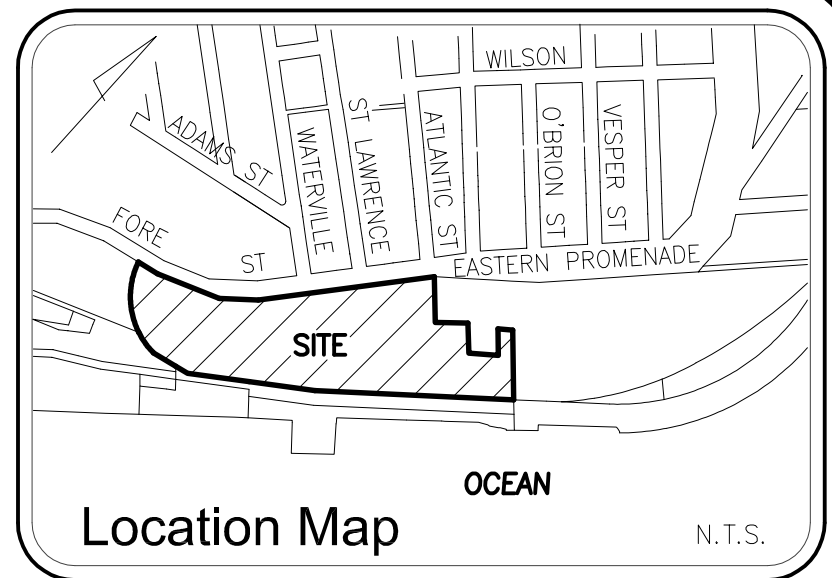
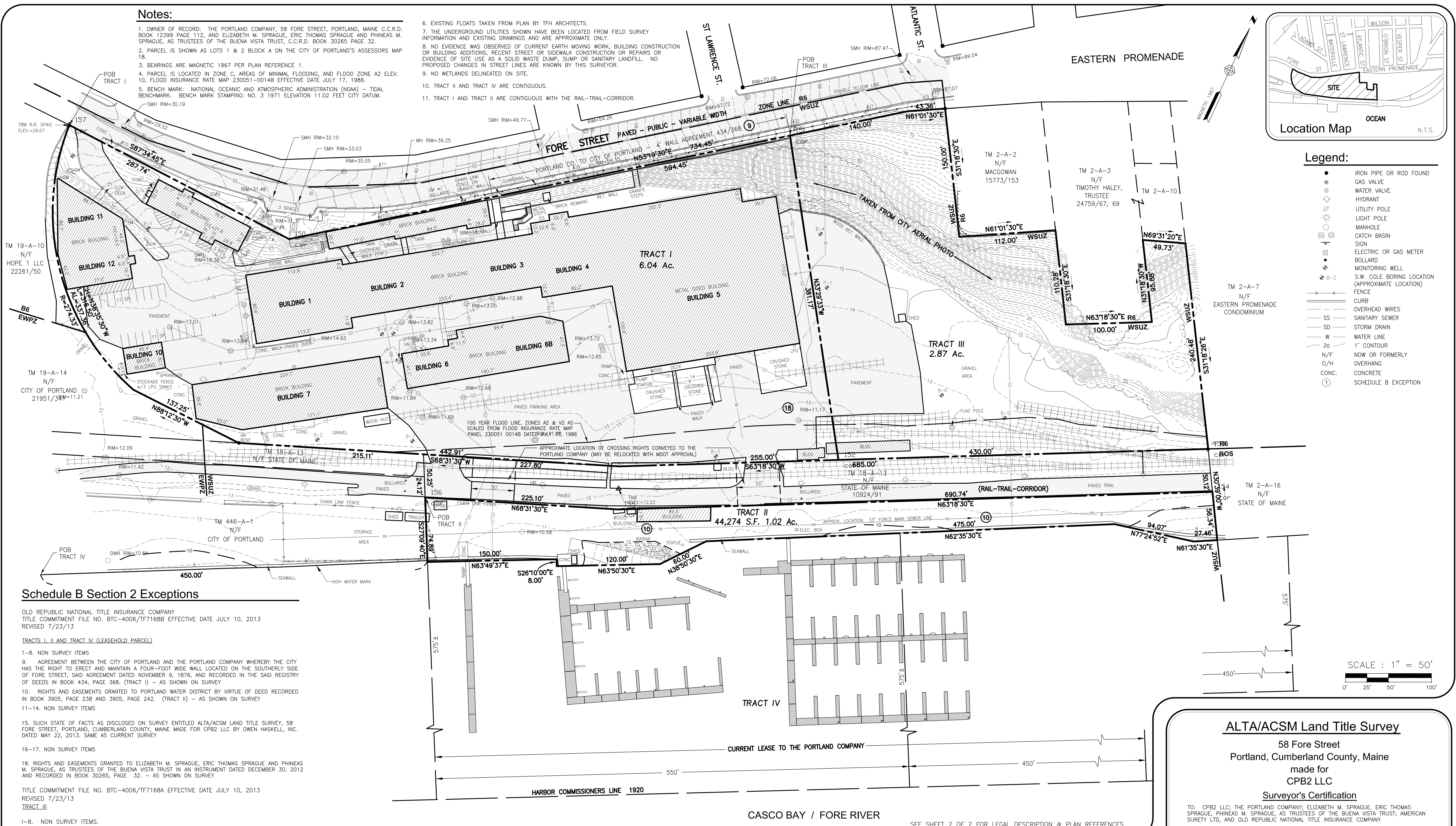
- *Pedestrian access through the site and connections to the Portland waterfront trail system will be emphasized by the City during their review process.*

The City will be interested in status of negotiations with and the future of the MaineDOT (Narrow Gauge Railway) and Portland Trails Eastern Promenade Trail (public access).

APPENDIX A: 2013 SURVEY

Notes:

- OWNER OF RECORD: THE PORTLAND COMPANY, 58 FORE STREET, PORTLAND, MAINE C.C.R.D. BOOK 12399 PAGE 112, AND ELIZABETH M. SPRAGUE, ERIC THOMAS SPRAGUE AND PHINEAS M. SPRAGUE, AS TRUSTEES OF THE BUENA VISTA TRUST, C.C.R.D. BOOK 30265 PAGE 32.
- PARCEL IS SHOWN AS LOTS 1 & 2 BLOCK A ON THE CITY OF PORTLAND'S ASSESSORS MAP 18.
- BEARINGS ARE MAGNETIC 1967 PER PLAN REFERENCE 1.
- PARCEL IS LOCATED IN ZONE C, AREAS OF MINIMAL FLOODING, AND FLOOD ZONE A2 ELEV. 10. FLOOD INSURANCE RATE MAP 230051-0014B EFFECTIVE DATE JULY 17, 1986.
- BENCH MARK: NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION (NOAA) - TIDAL BENCHMARK. BENCH MARK STAMPING: NO. 3 1971 ELEVATION 11.02 FEET CITY DATUM. SMH RIM=30.19
- EXISTING FLOATS TAKEN FROM PLAN BY TFH ARCHITECTS.
- THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS AND ARE APPROXIMATE ONLY.
- NO EVIDENCE WAS OBSERVED OF CURRENT EARTH MOVING WORK, BUILDING CONSTRUCTION OR BUILDING ADDITIONS, RECENT STREET OR SIDEWALK CONSTRUCTION OR REPAIRS OR EVIDENCE OF SITE USE AS A SOLID WASTE DUMP, SUMP OR SANITARY LANDFILL. NO PROPOSED CHANGES IN STREET LINES ARE KNOWN BY THIS SURVEYOR.
- NO WETLANDS DELINEATED ON SITE.
- TRACT II AND TRACT IV ARE CONTIGUOUS.
- TRACT I AND TRACT II ARE CONTIGUOUS WITH THE RAIL-TRAIL-CORRIDOR.



- Legend:**
- IRON PIPE OR ROD FOUND
 - GAS VALVE
 - WATER VALVE
 - HYDRANT
 - UTILITY POLE
 - LIGHT POLE
 - MANHOLE
 - CATCH BASIN
 - SIGN
 - ELECTRIC OR GAS METER
 - BOLLARD
 - MONITORING WELL
 - S.W. COLE BORING LOCATION (APPROXIMATE LOCATION)
 - FENCE
 - CURB
 - OVERHEAD WIRES
 - SS SANITARY SEWER
 - SD STORM DRAIN
 - W WATER LINE
 - 20' 1" CONTOUR
 - N/F NOW OR FORMERLY
 - O/H OVERHANG
 - CONC. CONCRETE
 - SCHEDULE B EXCEPTION

Schedule B Section 2 Exceptions

- OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY
TITLE COMMITMENT FILE NO. BTC-4006/TF7168B EFFECTIVE DATE JULY 10, 2013
REVISED 7/23/13
- TRACTS I, II AND TRACT IV (LEASEHOLD PARCEL)**
- NON SURVEY ITEMS
 - AGREEMENT BETWEEN THE CITY OF PORTLAND AND THE PORTLAND COMPANY WHEREBY THE CITY HAS THE RIGHT TO ERECT AND MAINTAIN A FOUR-FOOT WIDE WALL LOCATED ON THE SOUTHERLY SIDE OF FORE STREET, SAID AGREEMENT DATED NOVEMBER 9, 1876, AND RECORDED IN THE SAID REGISTRY OF DEEDS IN BOOK 434, PAGE 368. (TRACT I) - AS SHOWN ON SURVEY
 - RIGHTS AND EASEMENTS GRANTED TO PORTLAND WATER DISTRICT BY VIRTUE OF DEED RECORDED IN BOOK 3905, PAGE 238 AND 3905, PAGE 242. (TRACT II) - AS SHOWN ON SURVEY
 - NON SURVEY ITEMS
 - SUCH STATE OF FACTS AS DISCLOSED ON SURVEY ENTITLED ALTA/ACSM LAND TITLE SURVEY, 58 FORE STREET, PORTLAND, CUMBERLAND COUNTY, MAINE, MADE FOR CPB2 LLC BY OWEN HASKELL, INC. DATED MAY 22, 2013. SAME AS CURRENT SURVEY
 - NON SURVEY ITEMS
 - RIGHTS AND EASEMENTS GRANTED TO ELIZABETH M. SPRAGUE, ERIC THOMAS SPRAGUE AND PHINEAS M. SPRAGUE, AS TRUSTEES OF THE BUENA VISTA TRUST IN AN INSTRUMENT DATED DECEMBER 30, 2012 AND RECORDED IN BOOK 30265, PAGE 32. - AS SHOWN ON SURVEY
- TITLE COMMITMENT FILE NO. BTC-4006/TF7168A EFFECTIVE DATE JULY 10, 2013
REVISED 7/23/13
- TRACT III**
- NON SURVEY ITEMS
 - AGREEMENT BETWEEN THE CITY OF PORTLAND AND THE PORTLAND COMPANY WHEREBY THE CITY HAS THE RIGHT TO ERECT AND MAINTAIN A FOUR-FOOT WIDE WALL LOCATED ON THE SOUTHERLY SIDE OF FORE STREET, SAID AGREEMENT DATED NOVEMBER 9, 1876, AND RECORDED IN THE SAID REGISTRY OF DEEDS IN BOOK 434, PAGE 368, INsofar AS SAME MAY AFFECT THE INSURED PREMISES. - AS SHOWN.
 - NON SURVEY ITEMS
 - SUCH STATE OF FACTS AS DISCLOSED ON SURVEY ENTITLED ALTA/ACSM LAND TITLE SURVEY, 58 FORE STREET, PORTLAND, CUMBERLAND COUNTY, MAINE, MADE FOR CPB2 LLC BY OWEN HASKELL, INC. DATED MAY 22, 2013, INCLUDING BUT NOT LIMITED TO:
 - BUILDING ENCROACHES ON LAND OF THE PORTLAND COMPANY;
 - LOCATION OF SD LINES CROSSING THE SOUTHERLY PORTION OF THE PREMISES;
 - PORTION OF WOODEN RETAINING WALL ON LAND OF THE PORTLAND COMPANY.
 SAME AS CURRENT SURVEY

Zoning:

NONE PROVIDED BY TITLE INSURER.

ALTA/ACSM Land Title Survey

58 Fore Street
Portland, Cumberland County, Maine
made for
CPB2 LLC
Surveyor's Certification

TO: CPB2 LLC; THE PORTLAND COMPANY; ELIZABETH M. SPRAGUE, ERIC THOMAS SPRAGUE, PHINEAS M. SPRAGUE, AS TRUSTEES OF THE BUENA VISTA TRUST; AMERICAN SURETY LTD, AND OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY

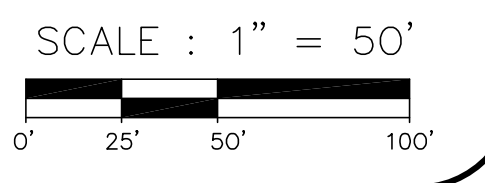
THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2011 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/ACSM LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 1, 2, 3, 4, 5, 7(c), 8, 11(c), 13, 14, 16, 17, 18, 19, 20(c), AND 22 OF TABLE A THEREOF. THE FIELD WORK WAS COMPLETED ON MAY 2013.

JOHN W. SWAN
PROFESSIONAL LAND SURVEYOR NO. 1038
IN THE STATE OF MAINE
DATE OF PLAN: MAY 22, 2013
REVISION DATE:
OHI JOB NO. 2013-078P

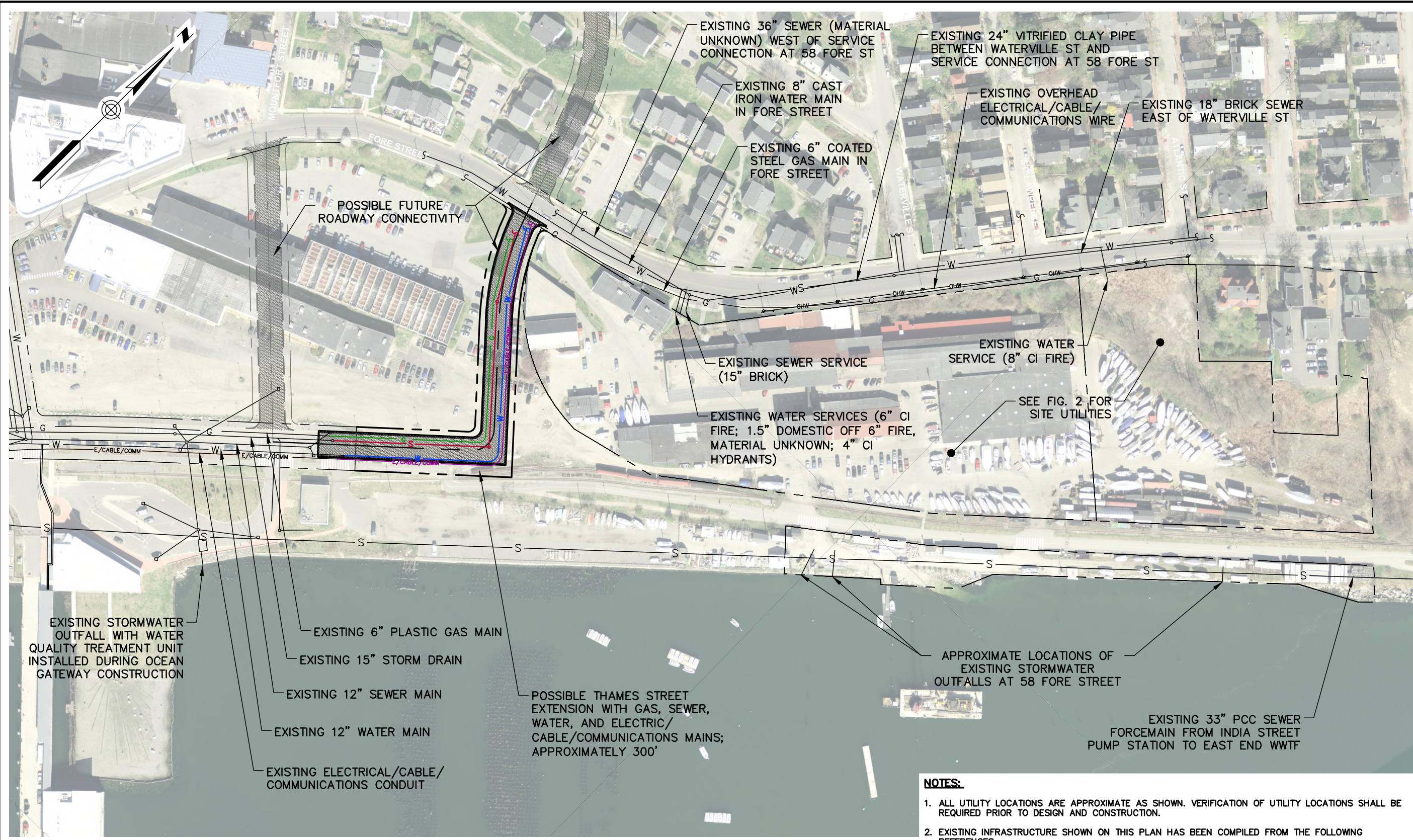
OWEN HASKELL, INC.
PROFESSIONAL LAND SURVEYORS
390 U.S. Route One, Unit #10
Falmouth, Maine 04105
Tel. (207)774-0424 Fax (207)774-0511
www.owenhaskell.com

CASCO BAY / FORE RIVER

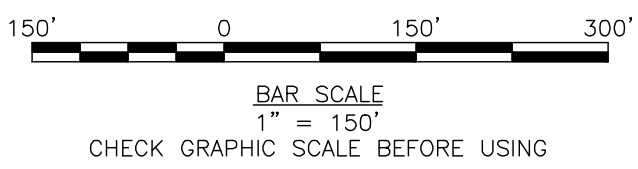
SEE SHEET 2 OF 2 FOR LEGAL DESCRIPTION & PLAN REFERENCES

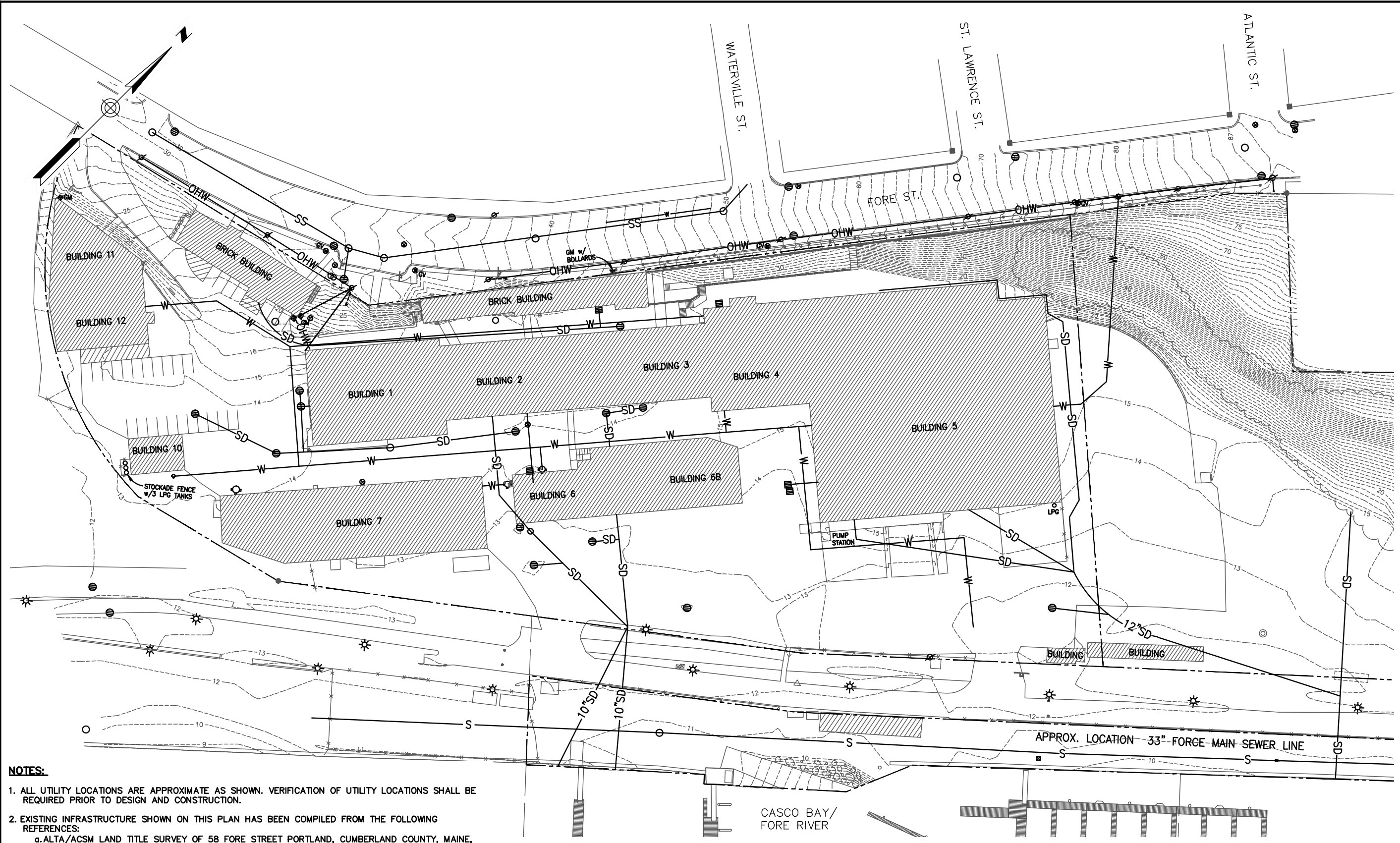


APPENDIX B: UTILITY FIGURES



- NOTES:**
1. ALL UTILITY LOCATIONS ARE APPROXIMATE AS SHOWN. VERIFICATION OF UTILITY LOCATIONS SHALL BE REQUIRED PRIOR TO DESIGN AND CONSTRUCTION.
 2. EXISTING INFRASTRUCTURE SHOWN ON THIS PLAN HAS BEEN COMPILED FROM THE FOLLOWING REFERENCES:
 - a. ALTA/ACSM LAND TITLE SURVEY OF 58 FORE STREET PORTLAND, CUMBERLAND COUNTY, MAINE, PERFORMED BY OWEN HASKELL, INC., DATED MAY 22, 2013.
 - b. COMMERCIAL STREET PLAN & PROFILE DRAWING C214, PREPARED BY WOODARD & CURRAN, DATED 1, 14, 2005.
 - c. PORTLAND SEWER SYSTEM INFILTRATION-INFLOW ANALYSIS SYSTEM BASE MAPPING PLAN, PREPARED BY HUNTER-BALLEW ASSOCIATES, DATED 1981.
 - d. GIS MAP OF 58 FORE STREET, PREPARED BY PORTLAND WATER DISTRICT, DATED NOVEMBER 26, 2013.
 - e. MAPS OF GAS INFRASTRUCTURE IN FORE STREET AREA OF PORTLAND, PREPARED BY UNITIL, PROVIDED IN JANUARY, 2013.
 - f. AERIAL IMAGE, FROM MAINE OFFICE OF GIS, GEOLIBRARY 3IN 2012 CIR.





- NOTES:**
1. ALL UTILITY LOCATIONS ARE APPROXIMATE AS SHOWN. VERIFICATION OF UTILITY LOCATIONS SHALL BE REQUIRED PRIOR TO DESIGN AND CONSTRUCTION.
 2. EXISTING INFRASTRUCTURE SHOWN ON THIS PLAN HAS BEEN COMPILED FROM THE FOLLOWING REFERENCES:
 - a. ALTA/ACSM LAND TITLE SURVEY OF 58 FORE STREET PORTLAND, CUMBERLAND COUNTY, MAINE, PERFORMED BY OWEN HASKELL, INC., DATED MAY 22, 2013.
 3. UTILITY SIZES PROVIDED ONLY WHEN VERIFIED BY SURVEY.

LEGEND:

— W —	WATER
— SD —	STORM DRAIN
— SS —	SANITARY SEWER
— OHW —	OVERHEAD ELECTRICAL/ CABLE/ COMMUNICATIONS
— S —	SEWER FORCE MAIN



BAR SCALE
1" = 80'
CHECK GRAPHIC SCALE BEFORE USING

41 Hutchins Drive
Portland, Maine 04102
800.426.4262 | www.woodardcurran.com

WOODARD & CURRAN

COMMITMENT & INTEGRITY DRIVE RESULTS

EXISTING SITE UTILITY PLAN

DESIGNED BY: AEA
CHECKED BY: LJS
DRAWN BY: BCM
22700700-U002.dwg

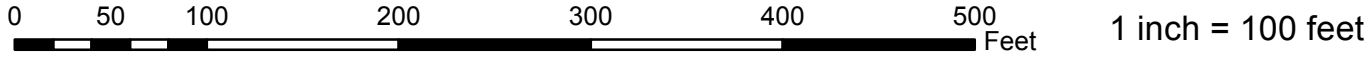
CPB2 MANAGEMENT LLC

PORTLAND COMPANY COMPLEX
REDEVELOPMENT

JOB NO: 227007.00
DATE: JAN. 2014
SCALE: 1"=80'

FIGURE 2

APPENDIX C: UTILITY BACKGROUND INFORMATION



PORTLAND WATER DISTRICT
225 Douglass Street
Portland, ME 04104

Legend			
● Air Valve	● Connection	⊕ Combined Service	● Manhole
⊕ Blow Off	● Attribute Change	⊕ Domestic Service	● CSO
⊕ By Pass	▲ Reducer	⊕ Fire Service	→ Gravity
⊕ Distribution	● Hydrant	● Private Hydrants	→ Force
⊕ Transmission	● Hydrant Control	⊕ Meter Pits	

58 Fore Street
Portland



Disclaimer: This map is suitable for preliminary study and analysis and is based on PWD record information. PWD is not liable for any damages whatsoever resulting from inaccurate data or from errors made in the location and marking of its infrastructure.

Drawn By: GJH

Prepared For: Woodard & Curran

Scale: As Noted

Date: November 26, 2013

58 Fore Street Water Services – Service Record Cards

SERVICE DATA		MEASURES	
NO. <u>58 Fore st</u>		ST. DIVISION <u>27</u>	
REG. NO. <u>7462</u>		Code No. _____	
Name _____		Name _____	
Name _____		Name _____	
Name _____		Name _____	
Size of Pipe <u>8"</u> Kind of Pipe <u>CI</u> Main to Stop <u>36'</u> Stop to St. Line <u>11'</u> Date <u>8-19-22</u> Mat. on Private _____ Depth/Main _____ Depth/Private _____ Shut at Corp. _____		<div style="text-align: center;"> </div>	

SERVICE DATA		MEASURES	
NO. <u>58 Fore st</u>		ST. DIVISION _____	
REG. NO. <u>90A</u>		Code No. _____	
Name _____		Name _____	
Name _____		Name _____	
Name _____		Name _____	
Size of Pipe 8" <u>6"</u> Kind of Pipe <u>CI</u> Main to Stop <u>31'</u> Stop to St. Line <u>0N</u> Date _____ Mat. on Private _____ Depth/Main _____ Depth/Private _____ Shut at Corp. _____		<div style="text-align: center;"> </div>	

SERVICE RECORD	
NO. <u>58 Fore St</u>	ST. DIVISION _____
REG. NO. <u>90B</u>	Code No. _____
Name _____	Name _____
Name _____	Name _____
Name _____	Name _____
SERVICE DATA	MEASURES
Size of Pipe <u>1 1/2"</u>	<i>Connected with 90A Meters only as Domestic From Fire Service</i>
Kind of Pipe _____	
Main to Stop _____	
Stop to St. Line _____	
Date _____	
Mat. on Private _____	
Depth/Main _____	
Depth/Private _____	
Shut at Corp. _____	<i>meter Box - Left of Building</i>

SERVICE RECORD	
NO. <u>58 Fore</u>	ST. DIVISION <u>27 Port</u>
REG. NO. <u>90C</u>	Code No. _____
Name _____	Name _____
Name _____	Name _____
Name _____	Name _____
SERVICE DATA	MEASURES
Size of Pipe <u>4"</u>	<i>2 Private Hydrants</i>
Kind of Pipe <u>CI</u>	
Main to Stop <u>24'</u>	
Stop to St. Line <u>6'</u>	
Date _____	
Mat. on Private _____	
Depth/Main _____	
Depth/Private _____	
Shut at Corp. _____	

58 Fore Street Sewer Service – Service Record Card

Card Front:

58 Fore st

DEPARTMENT OF PUBLIC WORKS

Portland, Me., July 30, 1984

Permit No. P-1138 has been granted to H. H. Grover to open Fore Street at No. 58 owned by Phinnic Sprague Peabody for the purpose of New Sewer

The connection with the sewer must be inspected, sketched on back of this card with size and kind of pipe used, date of inspection, name of inspector and any further information which may be of value to the department.

GEORGE A. FLAHERTY
Director of Public Works

CS61

Card Back:

Date of Entrance 8-14-84

Connected by Danben

Size and kind of pipe 4" PVC

Inspected by J. Lowery

Sewer Connection Book Vol. Fore

Connected To 18" Brick P.

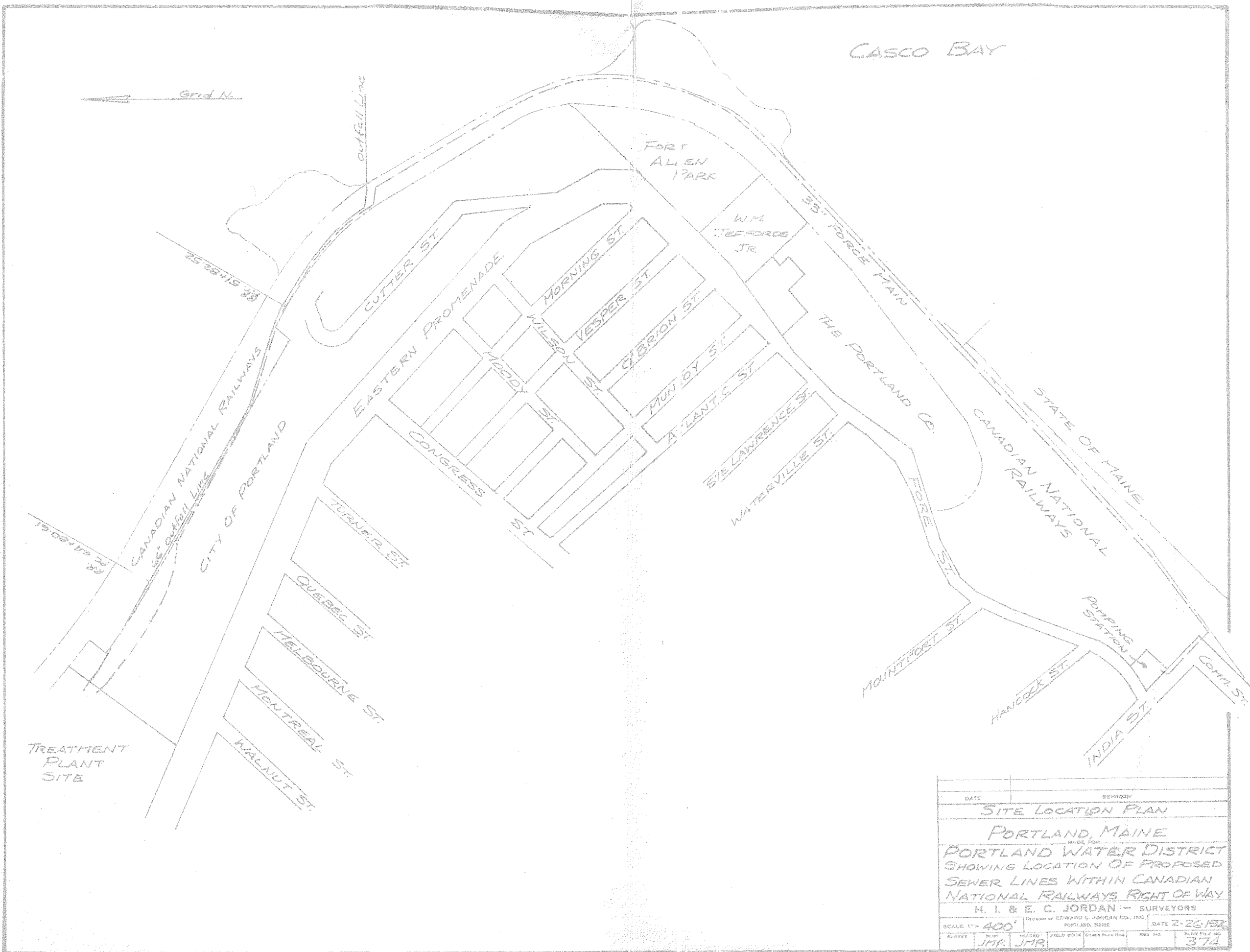
13'

10'

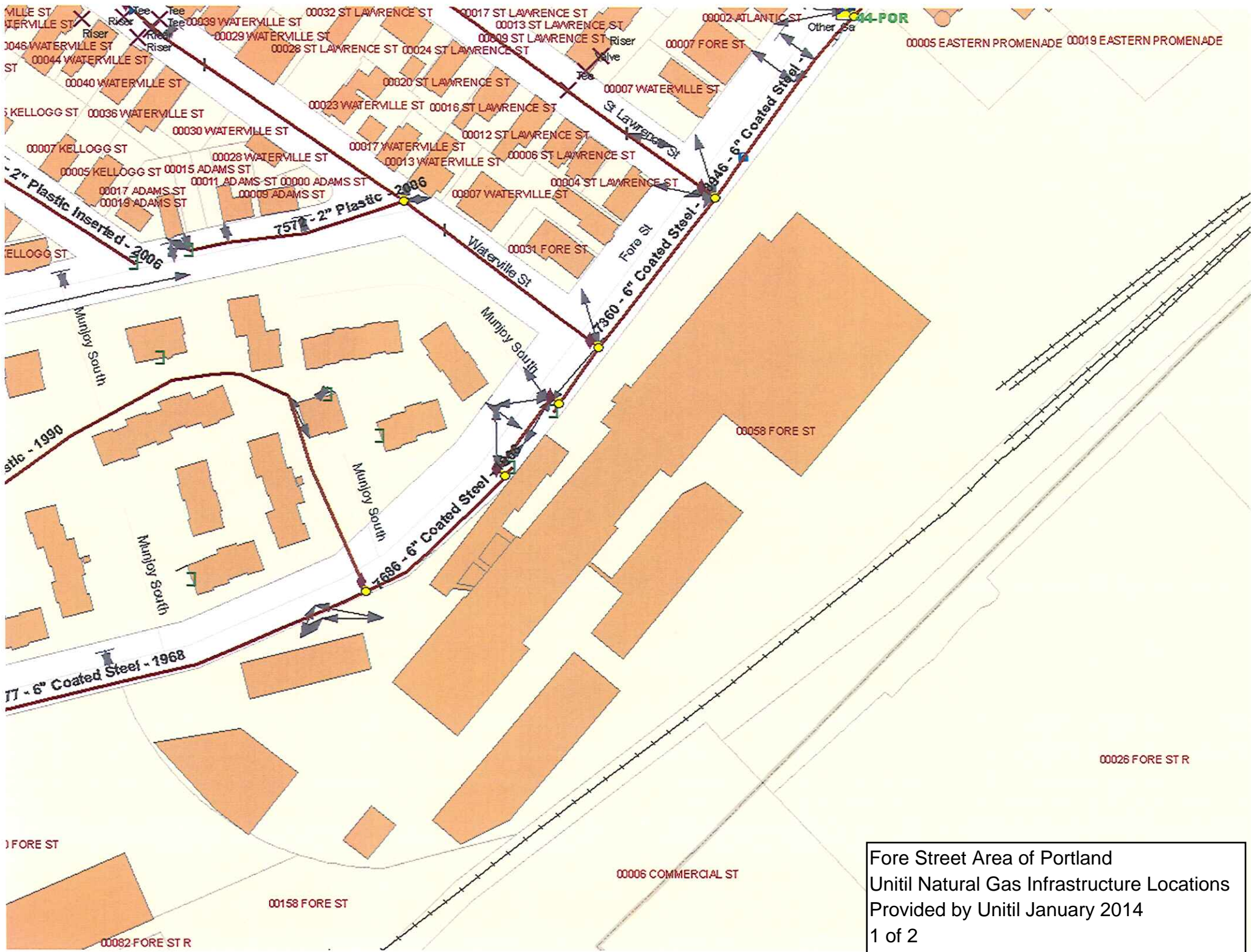
4'

Indin st

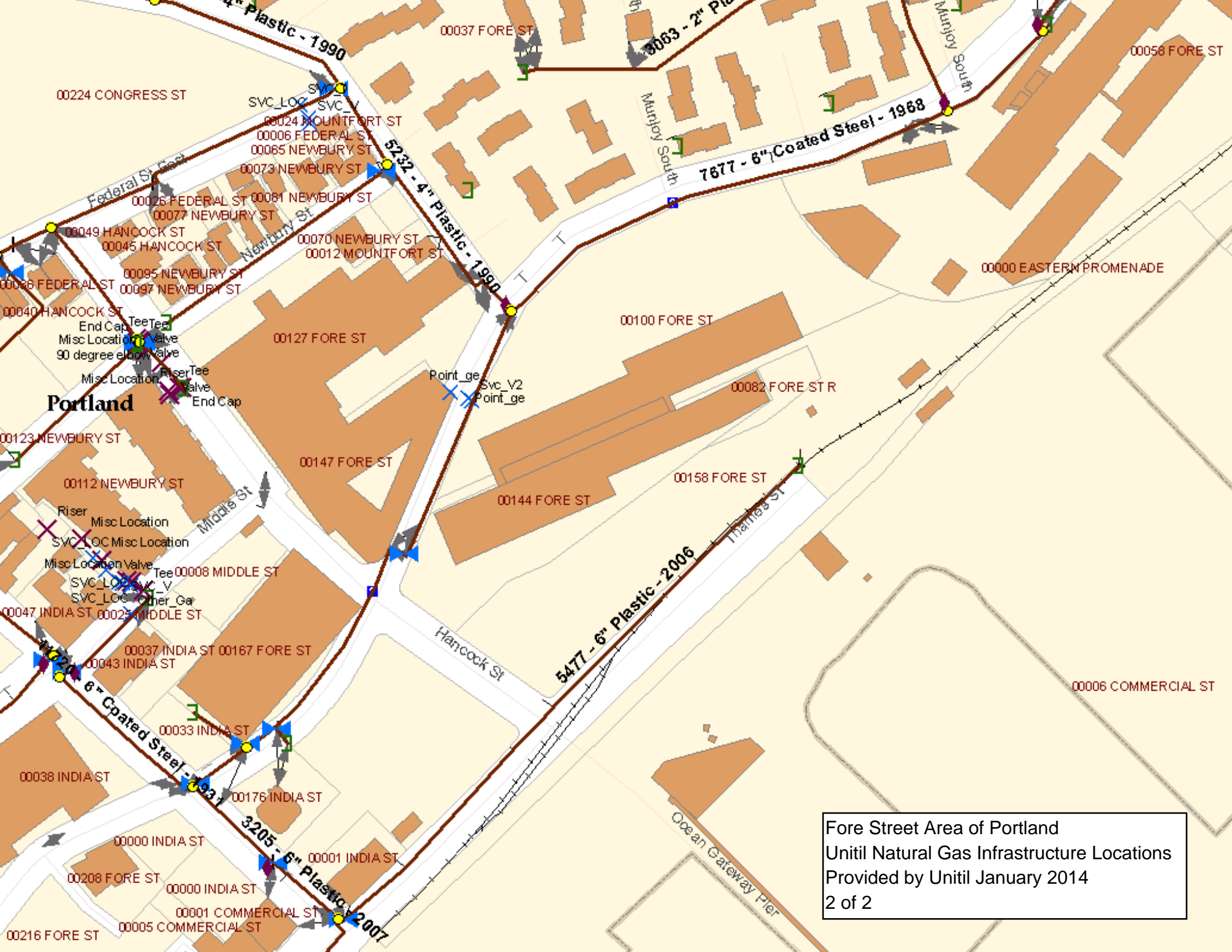
ST



DATE	REVISION
SITE LOCATION PLAN	
PORTLAND, MAINE	
MADE FOR PORTLAND WATER DISTRICT	
SHOWING LOCATION OF PROPOSED SEWER LINES WITHIN CANADIAN NATIONAL RAILWAYS RIGHT OF WAY	
H. I. & E. C. JORDAN - SURVEYORS	
SCALE 1" = 400'	DATE 2-26-1926
SURVEY	PLANNED
JMR	JMR
FIELD BOOK	OTHER PLAN NOS.
RES. NO.	PLAN FILE NO.
	374



Fore Street Area of Portland
 Unutil Natural Gas Infrastructure Locations
 Provided by Unutil January 2014
 1 of 2



Fore Street Area of Portland
 Unifil Natural Gas Infrastructure Locations
 Provided by Unifil January 2014
 2 of 2



September 16, 2016

Scott Carpenter
Unitil ME Gas Operations
376 Riverside Industrial Parkway
Portland, ME 04103

Re: Natural Gas Service Request – 58 Fore Street Re-development, Portland, Maine

Dear Scott:

On behalf of CPB2, LLC, this letter serves as written request for confirmation of availability to serve natural gas for the above-referenced project. CPB2 is submitting a Master Development Plan Application for the proposed re-development of the former Portland Company Complex located at 58 Fore Street in Portland, Maine, and is required to demonstrate to the City of Portland that there is adequate capacity to serve the proposed development.

As previously discussed, the proposed development will be a multi-phased, mixed-use development with commercial, residential, office, retail, restaurant, marina and public open space uses. A new six-inch plastic gas main was installed to the end of Thames Street in 2007 as part of the Ocean Gateway project; the proposed development will connect to this gas main via an extension of Thames Street and the associated gas main. The natural gas service entrance location will be off of the Thames Street extension, as shown on the attached plans. We anticipate individual metering will be required for approximately 638 residential units. The proposed development is depicted on the attached plans.

The proposed development will have a total gross floor area of approximately 941,129 square feet (SF) and will consist of the following uses:

- Residential Mix of Condominiums and Apartments (656,739 SF);
- Retail (50,273 SF);
- Office (123,917 SF);
- Hotel (98,000 SF/132 Rooms);
- Restaurant (3,800 SF);
- Function (5,800 SF); and
- Marina Facilities (2,600 SF).

Please note that these uses may be subject to change during future design phases and that anticipated service demands will be coordinated as the design progresses during future permit submissions.

Please provide our office with a letter of confirmation that Unitil has the capacity to service this development, an estimate of the costs for service installation, and any additional information or requirements concerning natural gas service for the Site. We appreciate your assistance. If you have any questions or require any additional information, please do not hesitate to contact me at 207-558-3704.



Sincerely,

WOODARD & CURRAN

A handwritten signature in blue ink, appearing to read 'D. Senus'.

David Senus, PE
Project Manager

Enclosure: Master Site Plan

cc: Christine Grimando, City of Portland Senior Planner
Jim Brady, CPB2, LLC



September 16, 2016

Paul Duperre
Central Maine Power
162 Canco Road
Portland, ME 04103

Re: Electric Service Request – 58 Fore Street Re-development, Portland, Maine

Dear Paul:

On behalf of CPB2, LLC, this letter serves as written request for confirmation of availability to serve electric power for the above-referenced project. CPB2 is submitting a Master Development Plan Application for the proposed re-development of the former Portland Company Complex located at 58 Fore Street in Portland, Maine, and is required to demonstrate to the City of Portland that there is adequate capacity to serve the proposed development. The proposed development is depicted on the attached Master Site Plan and will be a multi-phased, mixed-use development with a total gross floor area of approximately 941,129 square feet (SF) consisting of the following uses:

- Residential Mix of Condominiums and Apartments (656,739 SF);
- Retail (50,273 SF);
- Office (123,917 SF);
- Hotel (98,000 SF/132 Rooms);
- Restaurant (3,800 SF);
- Function (5,800 SF); and
- Marina Facilities (2,600 SF).

We have not estimated power load demands for the upland uses on the site; however, the estimated daily Marina power demand is 3,010 (kVA). Please note that proposed uses and estimated demands may be subject to change during future design phases and that anticipated service demands will be coordinated as the design progresses during future permit submissions.

The construction of Thames Street as part of the Ocean Gateway project included installation of underground conduit to allow for future underground electrical services in the area. As discussed at our meeting on July 27, 2016, it is our understanding that the Site would be best serviced from an extension of below ground electrical from the extension of Thames Street and associated utilities into the Site. As described via email to you on September 14, 2016, the City of Portland has confirmed that the duct banks in Thames Street are a public amenity to allow CMP and other telecomm utilities to pull their wires and services to adjacent sites, including the 58 Fore Street property.

Please provide our office with a letter of confirmation that CMP has the capacity to service this development via Thames Street, an estimate of the costs for work associated with servicing the Site



from Thames Street, and any additional information or requirements concerning the proposed work (i.e. components needed for electrical service to the Site, such as number of conduits). We appreciate your assistance. If you have any questions or require any additional information, please do not hesitate to contact me at 207-558-3704.

Sincerely,

WOODARD & CURRAN

A handwritten signature in blue ink, appearing to read 'D. Senus'.

David Senus, PE
Project Manager

Enclosure: Master Site Plan

cc: Christine Grimando, City of Portland Senior Planner
Jim Brady, CPB2, LLC



September 16, 2016

Portland Water District MEANS Group
225 Douglass Street
PO Box 3553
Portland, ME 04104-3553

Re: Service Request – 58 Fore Street Redevelopment, Portland, Maine

To Whom It May Concern:

On behalf of CPB2, LLC, this letter serves as written request for availability to serve water and treat sanitary sewer for the above-referenced project. CPB2 is submitting a Master Development Plan Application for the proposed re-development of the former Portland Company Complex located at 58 Fore Street in Portland, Maine, and is required to demonstrate to the City of Portland that PWD has sufficient capacity to supply water service and treat wastewater to serve the proposed development. The proposed development is depicted on the attached Master Site Plan and will be a multi-phased, mixed-use development with commercial, residential, office, retail, restaurant, marina and public open space uses.

With the Ocean Gateway project completed in 2007, new utility lines, including a 12-inch water main, were installed to the end of Thames Street; the proposed development will be serviced by utilities via an extension of Thames Street and associated utilities into the Site. Total estimated water demand for the landside portion of the development is approximately 186,700 gallons per day (GPD) and the total estimated sanitary demand is approximately 169,700 GPD (calculations are attached). Additionally, Applied Technology & Management has calculated the water and sanitary demands for the marina facility, which are 28,800 GPD and 14,410 GPD, respectively. Please note that the estimated demands are based on planning-level uses that may be subject to change during future design phases and that changes in anticipated service demands will be coordinated as the design progresses during future permit submissions.

Site phasing and lot ownership configuration are still being determined at this time, and information will be provided when available. The proposed development block characteristics are indicated in the table below:



Table 1: Development Block Proposed Characteristics

Development Block	Allowable Height by Zoning	Proposed Use	Current GFA (as of September 2016)	Proposed Parking Areas
B1	35 feet	retail, residential, office	169,278	Structured parking beneath B1
B2	35 – 45 feet	retail, residential, office	72,941	Structured parking beneath B4/B5/B6
B3	35 feet	retail, office	30,800	Structured parking beneath B4/B5/B6
B4	45 - 65 feet	residential, retail	247,860	Structured parking beneath B4/B5/B6
B5	45 – 55 feet	residential, hotel, restaurant, function	247,650	Structured parking beneath B4/B5/B6
B6	45 – 55 feet	residential, B4-B6 connector	187,550	Structured parking beneath B4/B5/B6
B7 – Marina		marina	2,600	Structured parking beneath B4/B5/B6
Subtotal*			958,679	
Parking			435,200	
Total Project			1,393,879	
*Subtotal Breakdown by Use				
Total Residential GSF			656,739	
Total Retail GSF			50,273	
Total Office GSF			123,917	
Total Hotel GSF			98,000	
Total Restaurant GSF			3,800	
Total Function GSF			5,800	
Total B4-B6 Connector GSF			17,550	
Total Marina Facilities GSF			2,600	

Please provide our office with a letter of confirmation that the Portland Water District has the capacity to supply water service and treat wastewater for this development, and any additional information or requirements concerning service for the Site. We appreciate your assistance. If you have any questions or require any additional information, please do not hesitate to contact me at 207-558-3704.

Sincerely,

WOODARD & CURRAN

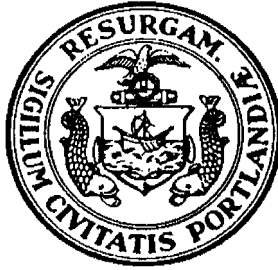
David Senus, PE
Project Manager

Enclosure: Master Site Plan & Demand Calculations

cc: Jay Arnold, PWD
Christine Grimando, City of Portland Senior Planner
Jim Brady, CPB2, LLC

CITY OF PORTLAND WASTEWATER CAPACITY APPLICATION

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



Mr. Frank J. Brancelly,
Senior Engineering Technician,
Phone #: (207) 874-8832,
Fax #: (207) 874-8852,
E-mail: fjb@portlandmaine.gov

Date: September 16, 2016

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

Site Address: 58 Fore Street, Portland ME

Chart Block Lot Number: Tax Map 18A,
Lots 1, 2, & 3

Proposed Use: Mixed-Use

Previous Use: Warehouse & Parking

Existing Sanitary Flows: Unknown GPD

Existing Process Flows: Unknown GPD

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

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

A new 12-inch sanitary sewer line was installed in the eastern end of Thames Street as part of the Ocean Gateway Project. The road and associated sewer line will be extended and a sewer service will be brought into the Site. **(Clearly, indicate the proposed connections, on the submitted plans)**

2. Please, Submit Contact Information.

City Planner's Name: Barbara Barhydt Phone: 207-874-8699

Owner/Developer Name: CPB2 LLC, c/o Jim Brady

Owner/Developer Address: PO Box 7987, Portland ME

Phone: 207-558-3704 Fax: _____ E-mail: jameshbrady@gmail.com

Engineering Consultant Name: Woodard & Curran, c/o David Senus, PE

Engineering Consultant Address: 41 Hutchins Drive, Portland ME

Phone: 207-558-3704 Fax: _____ E-mail: dsenus@woodardcurran.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.* Refer to attached calculations

Estimated Domestic Wastewater Flow Generated: 169,700 (Landside) & 14,410 (Marina) GPD

Peaking Factor/ Peak Times: 5 (Landside) & 5.6 (Marina) *Per TR-16 Guides for the Design of Wastewater Treatment Works

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, X Other (specify)
As noted above

(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.

Updated: April 23, 2014

External Grease Interceptor Calculations will be prepared and submitted as part of future Site Plan Applications; the estimated Domestic Wastewater Design Flows are being submitted as part of a Master Development Plan Submission.

Total Drainage Fixture Unit (DFU) Values: _____
Size of External Grease Interceptor: _____
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: _____ 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: _____

(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 below, or attached, as a separate sheet)

Notes, Comments or Calculation _____



41 HUTCHINS DRIVE
PORTLAND, MAINE 04102
TEL. (207) 774-2112
FAX (207) 774-6635

CLIENT CPB2
PROJECT 58 Fore St. Re-development
DESIGNED BY AEA DATE 9-12-16
CHECKED BY _____ DATE _____
PROJECT NO. 227007.03 SHEET NO. 1 OF 2

Sewer Demand Calculations

* Note: Design Flows based on Table 4A + Table 4C of Ch. 241
(2015 Maine Subsurface Wastewater Disposal Rules)

Dwelling Units:

638 Residential Units

$$\begin{aligned} 90\% &= 2 \text{ bedrooms or less @ } 180 \text{ GPD} & \Rightarrow & \underline{103,400 \text{ GPD}} \\ 10\% &= 3 \text{ bedrooms @ } 270 \text{ GPD} & \Rightarrow & \underline{17,230 \text{ GPD}} \end{aligned}$$

Office Space:

$$123,917 \text{ SF} \times \frac{1 \text{ Employee}}{221 \text{ SF}} \times \frac{12 \text{ GPD}}{\text{Employee}} \Rightarrow \underline{6,730 \text{ GPD}}$$

Function Space (Assembly Area):

$$5,800 \text{ SF} \times \frac{1 \text{ person}}{15 \text{ SF}} \times \frac{2 \text{ GPD}}{\text{person}} \Rightarrow \underline{773 \text{ GPD}}$$

Restaurant (3 meals/day):

$$50\% (3,800 \text{ SF}) \times \frac{1 \text{ Seat}}{15 \text{ SF}} \times \frac{30 \text{ GPD}}{\text{Seat}} \Rightarrow \underline{3,800 \text{ GPD}}$$

$$50\% (3,800 \text{ SF}) \times \frac{1 \text{ seat}}{15 \text{ SF}} \times \frac{1 \text{ Employee}}{15 \text{ seats}} \times \frac{12 \text{ GPD}}{\text{Employee}} \Rightarrow \underline{101 \text{ GPD}}$$

Hotel:

$$132 \text{ Keys} \times \frac{100 \text{ GPD}}{\text{Key}} \Rightarrow \underline{13,200 \text{ GPD}}$$

$$132 \text{ Keys} \times \frac{0.75 \text{ Employee}}{\text{Key}} \times \frac{12 \text{ GPD}}{\text{Employee}} \Rightarrow \underline{1,188 \text{ GPD}}$$

Calculations Cont'd NEXT PAGE \rightarrow



41 HUTCHINS DRIVE
PORTLAND, MAINE 04102
TEL. (207) 774-2112
FAX (207) 774-6635

CLIENT CPBZ
PROJECT 58 Fore St. Re-development
DESIGNED BY AEA DATE 9-12-16
CHECKED BY _____ DATE _____
PROJECT NO. 227007.03 SHEET NO. 2 OF 2

Sewer Demand Calculations Cont'd...

Marina w/Bathrooms:

$$147 \text{ Slips} \times \frac{140 \text{ GPD}}{\text{Slip}} \Rightarrow \underline{20,600 \text{ GPD}}$$

Retail (Shopping Centers)

$$50,273 \text{ SF} \times \frac{1 \text{ employee}}{383 \text{ SF}} \times \frac{12 \text{ GPD}}{\text{Employee}} \Rightarrow \underline{1,575 \text{ GPD}}$$

$$50,273 \text{ SF} \times \frac{1 \text{ employee}}{383 \text{ SF}} \times \frac{1 \text{ toilet}}{40 \text{ Employees}} \times \frac{325 \text{ GPD}}{\text{toilet}} \Rightarrow \underline{1,066 \text{ GPD}}$$

$$\underline{\text{Total Sewer Demand}} = \underline{169,700 \text{ GPD}}$$

$$\underline{\text{Water Demand}} = 1.1 (\text{Sewer Demand}) \Rightarrow \underline{186,700 \text{ GPD}}$$

Marina Sewer Demand = 14,410 GPD
(from Applied Technology + Management)
Marina Water Demand = 28,800 GPD
(from Applied Technology + Management)