

PLANNING BOARD

Tuesday, December 12, 2023 at 4:30 PM
Hybrid Meeting, Room 24 (Basement Level of
City Hall) and Zoom



MEMBERS

Brandon Mazer, Chair
Justin Barker, Vice Chair
Marpheen Chann
Sean Murphy
David Silk
Austin Smith
Maggie Stanley

The Planning Board invites the public to attend the meeting in person or Zoom pursuant to the Remote Meeting Policy adopted by the Planning Board. Prior to the meeting, please check the Agenda Center (<https://portlandme.portal.civicclerk.com>) to view memos and reports which will be posted by the end of the day on the Friday before the Planning Board meeting. To submit written public comment on an agenda item, email planningboard@portlandmaine.gov. Submissions must be received by 12:00 pm the day before the Planning Board meeting to guarantee their inclusion in the agenda packet. All submissions must include the commenter's name and legal address. To help ensure your comment is submitted for the correct item, please include the name of the agenda item (see below).

REMOTE PARTICIPATION

Allow your computer to install the free Zoom app to get the best meeting experience. If you are not able to attend either in person or via Zoom, a recording will be available in the [Agenda Center](#) following the meeting.

Please click the link below to join the webinar:

<https://portlandmaine-gov.zoom.us/j/87639990843>

Or One tap mobile : +13126266799,,87639990843# US (Chicago); +16469313860,,87639990843# US;

Or Telephone: Dial(for higher quality, dial a number based on your current location): +1 312 626 6799 US (Chicago); +1 646 931 3860 US; +1 929 205 6099 US (New York); +1 301 715 8592 US (Washington DC); +1 305 224 1968 US; +1 309 205 3325 US; +1 346 248 7799 US (Houston); +1 360 209 5623 US; +1 386 347 5053 US; +1 507 473 4847 US; +1 564 217 2000 US; +1 669 444 9171 US; +1 669 900 6833 US (San Jose); +1 689 278 1000 US; +1 719 359 4580 US; +1 253 205 0468 US; +1 253 215 8782 US (Tacoma)

Webinar ID: 876 3999 0843

International numbers available: <https://portlandmaine-gov.zoom.us/j/kyuF2J77e>

For more information on how to use Zoom, please visit <https://www.portlandmaine.gov/remotepud>

AGENDA:

PUBLIC HEARING - 4:30 PM

1. **ROLL CALL AND DECLARATION OF QUORUM**
2. **COMMUNICATION AND REPORTS**
3. **REPORT OF ATTENDANCE AT THE MEETING HELD ON NOVEMBER 28, 2023**

Workshop

142 Free Street: Barker, Chann, Mazer, Murphy, Silk and Stanley present. Smith recused.

Public Hearing

2 West Commercial Street: Barker, Chann, Mazer, Silk, Smith and Stanley present. Murphy absent.

19 Willis Street: Barker, Chann, Mazer, Murphy, Silk, Smith and Stanley present. Murphy recused.
75 Oak Street: Barker, Chann, Mazer, Murphy, Silk, Smith and Stanley present.

4. REPORTS OF DECISIONS AT THE MEETING HELD ON NOVEMBER 28, 2023

- i. Major Site Plan; 2 West Commercial Street, Maine DOT, Applicant. Mazer motioned and Barker seconded a motion to table the public hearing indefinitely. Vote 6-0, Murphy absent.
- ii. Major Site Plan; 19 Willis Street (Formerly 33 Montreal Street); 37 Montreal Street, LLC, Applicant. Silk motioned, and Stanley seconded a motion to find that the factual basis for the Planning Board's determination that the applicant met the applicable maximum height requirement for the R-6 zone is as set forth on pages three and four of the Planning Board report for this remanded item, dated November 28, 2023, which includes an analysis of the applicable ordinance language and which references the applicant's plans that show how the applicant's project met the height requirement. Vote 5-1, Smith opposed, and Murphy recused. Silk motioned, and Stanley seconded a motion to find that the basis for the Planning Board's factual finding that the applicant's proposed project met the applicable setback requirements of the R-6 zone is set forth on pages four and five of the Planning Board report for this remanded item, dated November 28, 2023, which includes an analysis of the applicable ordinance language and which references the applicant's plans and that is how the Planning Board reached its conclusion that the applicant met the applicable setback standards. Vote 6-0, Murphy recused. Silk motioned, and Stanley seconded a motion to find that the Historic Preservation Program Manager's participation in the design review process, which included having their input incorporated directly into the design review memorandum provided to the Planning Board, met the clear intent of the Site Plan ordinance requirement for advisory review by Historic Preservation staff for development located within 100 feet of an historic district or landmark. Vote 6-0, Murphy recused. Silk motioned and Stanley seconded that the totality of the three motions adopting additional findings of fact are intended to supplement the original approval that was granted by the Planning Board on December 14, 2021. Vote 6-0, Murphy recused.
- iii. Conditional Use; 75 Oak Street; Slab, LLC, Applicant. Barker motioned, and Stanley seconded a motion to approve the conditional use application. Vote 7-0.

5. NEW BUSINESS

- i. Planning Board Officer Elections
- ii. Major Site Plan; 477 Congress Street; GreenMars Real Estate Company, Applicant. The Planning Board will hold a hybrid public hearing to consider a major site plan and conditional use application for inclusionary zoning, intended to facilitate the redevelopment of the Time and Temperature Building located at 477 Congress Street. The project involves the conversion of existing office space into 140 apartment units, and a 136-room hotel, with new retail uses at ground level. The subject property totals 78,680 square feet, is zoned B-3 Downtown Business, is located within the Pedestrian Activities District (PAD), the Downtown Entertainment Overlay Zone (DEOZ), and the Congress Street Historic District. A project and plan summary are available for viewing on the city's CSS Portal (<https://css.portlandmaine.gov/>) by referencing Plan Number PL-002673-2023.
- iii. Major Site Plan; 15 Crescent Street; Developers Collaborative, Applicant. The Planning Board will hold a hybrid public hearing to consider a major site plan application to facilitate the development of a new three-story residential development with five residential units and ground level parking for five vehicles at 15 Crescent Street in the West End Neighborhood. The subject property is 4,278 square feet in area, and is zoned R-6 Residential. A project and plan summary are available for viewing on the city's CSS Portal (<https://css.portlandmaine.gov/>) by referencing Plan Number PL-002466-2023.
- iv. Subdivision; 66 Eighth Street; Laurie Sirois, Applicant. The Planning Board will hold a hybrid public hearing to consider a subdivision application intended to subdivide an existing 29,315 square foot parcel located at 66 Eighth Street on Tax Map 339, Block N, Lots 22-27, into a new three lot subdivision. The project also involves extension of and improvements to Eighth Street, along with utility upgrades. A project and plan summary are available for viewing on the city's CSS Portal (<https://css.portlandmaine.gov/>) by referencing Plan Number PL-002599-2023.

CITY OF PORTLAND, MAINE

PLANNING BOARD

Brandon Mazer, Chair
Justin Barker, Vice Chair
Marpheen Chann
Sean Murphy
Maggie Stanley
David Silk
Austin Smith

December 12, 2023

Tim Wells
Saint John's Valley, LLC.
8 Drew Road
South Portland, ME 04106

Richard Lo
Kaplan Thompson Architects
102 Exchange St. 2nd Floor
Portland, ME 04101

Project Name: Multifamily Building
Address: 19 Willis Street
Applicant: 37 Montreal Street, LLC
Planner: Kevin Kraft

Project ID: PL-000807-2019
CBLs: 015 B015001; 015 B022001

Dear Tim Wells:

Pursuant to the direction from the Maine Supreme Judicial Court outlined in its decision dated August 22, 2023, on November 28, 2023, the Planning Board reviewed and approved additional findings of fact related to its December 14, 2021 approval of a Level III Site Plan, Subdivision, and Inclusionary Zoning Conditional Use application for 19 Willis Street that would facilitate the development of a 12-unit multi-family residential building. This project is in the R-6 Residential Zone and the Munjoy Hill Neighborhood Conservation Overlay District ("MHNCO").

Specifically, the Planning Board reviewed and expanded on the following three findings related to the previously-approved Site Plan:

1. That the Project met the maximum height requirement for the R-6 zone and MHNCO;
2. That the Project met the applicable setback requirements for the R-6 zone and MHNCO; and
3. The Planning Board received adequate written analysis from the City's historic preservation staff as required by City Code Section 14-526 (c)(5)(b).

Based on the Planning Board's review of all of the materials and testimony provided by the City, 37 Montreal Street, LLC and members of the public contained in the record, including the findings and conclusions contained in the Planning Board report dated November 22, 2023, which is attached hereto and incorporated herein by reference, the Planning Board voted to approve additional findings of fact and conclusions on each of the three above-referenced issues as follows:

- 1. Building Height:** Silk Motioned, and Stanley seconded a motion to find that the factual basis for the Planning Board's determining that the applicant met the applicable maximum height requirement for the MHNCO is as set forth on pages three and four of the Planning Board report for this remanded item, dated November 22, 2023, which includes an analysis of the applicable ordinance language and which references the applicant's plans that show how the applicant's project met the height requirement. The Planning Board voted 5-1 (Smith opposed, Murphy recused).
- 2. Building Setback:** Silk motioned, and Stanley seconded a motion to find that the basis for the Planning Board's factual finding that the applicant's proposed project met the applicable setback requirements of the R-6 zone and MHNCO is set forth on pages four and five of the Planning Board report for this remanded item, dated November 22, 2023, which includes analysis of the applicable ordinance language and which references the applicant's plans and that is how the Planning Board reached its conclusion that the applicant met the applicable setback standards. The Planning Board voted 6-0 (Murphy recused).
- 3. Historic Preservation Advisory Review:** Silk motioned, and Stanley seconded a motion to find that the Historic Preservation Program Manager's participation in the design review process, which included having their input incorporated directly into the design review memorandum provided to the Planning Board, met the clear intent of the Site Plan ordinance requirement for advisory review by Historic Preservation staff for development located within 100 feet of an historic district or landmark. The Planning Board voted 6-0 (Murphy recused).

It is the intention of the Planning Board that these additional findings shall serve to supplement and not supplant or otherwise disturb the remaining findings and conclusions of the Planning Board contained in the original December 14, 2021 approval of this project. To that end, the Planning Board voted as follows to supplement and affirm the approval of this project:

Supplement Original Approval: Silk motioned, and Stanley seconded that the totality of the three motions adopting additional findings of fact are intended to supplement the original approval that was granted by the Planning Board on December 14, 2021. The Planning Board voted 6-0 (Murphy recused).

Standard Procedures

Note: The following standard procedures and requirements apply to all approved site plans:

1. Subdivision Recording Plat: A final recording plat, listing all conditions of subdivision approval must be submitted to the Planning and Urban Development Department for review. Once approved, the plat shall be signed by the Planning Board. A performance guarantee must be issued prior to release of the recording plat for recording at the Cumberland County Registry of Deeds. One mylar copy of the recording plat with signatures and the recorded book and page must be returned to the Planning and Urban Development Department.
2. Subdivision Waivers: Pursuant to 30-A MRSA section 4406(B)(1), any waiver must be specified on the subdivision plan or outlined in a notice. The plan or notice must be recorded in the Cumberland County Registry of Deeds within two (2) years of the final subdivision approval.
3. Site Plan Expiration: The site plan approval will be deemed to have expired unless work has commenced within one (1) year of the approval or within a time period up to three (3) years from the approval date

as agreed upon in writing by the City and the applicant. Requests to extend approvals must be received before the one (1) year expiration date.

4. Subdivision Expiration: Subdivision approval is valid for up to three (3) years from the date of Planning Board approval.
5. Separate Building Permits Are Required: This approval does not constitute approval of building plans, which must be reviewed and approved by the City of Portland's Permitting and Inspections Department.
6. Performance Guarantee and Inspection Fees: A performance guarantee covering the site improvements and an inspection fee payment of 2.0% of the guarantee amount and three (3) final sets of plans must be submitted to and approved by the Planning and Urban Development Department and Public Works Department prior to the release of a building permit, street opening permit or certificate of occupancy for site plans.
7. Construction Management Plans: The applicant, contractor and subcontractors are required to conform to the approved Construction Management Plan, and all conditions contained within the project's approval, for the entire duration of the project. Any amendments to the approved Construction Management Plan shall be reviewed and approved by the Department of Public Works prior to the execution. The Planning Authority and the Department of Public Works have the right to seek revisions to an approved Construction Management Plan. The applicant shall coordinate the project's construction schedule with the timing of nearby construction activities to avoid cumulative impacts on a neighborhood and prevent unsafe vehicle and pedestrian movements. Accordingly, nearby construction activities could involve a delay in the commencement of construction.
8. Preconstruction Meeting: Prior to the release of a building permit and scheduling of a preconstruction meeting, a hard copy set of approved plans shall be submitted to the Development Review Coordinator. A pre-construction meeting shall be held at the project site with the contractor, Development Review Coordinator, Public Works representative, and owner to review the construction schedule and critical aspects of the site work. At that time, the Development Review Coordinator will confirm that the contractor is working from the approved site plan and the approved Construction Management Plan. The site/building contractor shall provide one (1) copy of a detailed construction schedule to the attending City representative. It shall be the contractor's responsibility to arrange a mutually agreeable time for the pre-construction meeting.
9. Department of Public Works Permits: If work or obstructions will occur within the public right-of-way, such as utilities, curb, sidewalk, driveway construction, site deliveries and equipment siting, a Street Opening and/or Occupancy Permits are required for your site. Please contact the Department of Public Works Permit Clerk at (207) 874-8300, ext. 8828 (only excavators licensed by the City of Portland are eligible).
10. Develop Site According to Plan: The site shall be developed and maintained as depicted on the site plan and in the written submission of the applicant. Any modifications of an approved site plan or alteration of a parcel, or of any approved exterior elevations, which were the subject of site plan approval after May 20, 1974, shall require the prior approval of an amended site plan by the Planning Board or Planning Authority pursuant to the terms of Chapter 14, Land Use, of the Portland City Code.

11. Stormwater Management: The owner/operator of an approved stormwater management system, and all assigns shall comply with the conditions of Chapter 32, Stormwater including Article III, Post Construction Stormwater Management, which specifies the annual inspections and reporting requirements. A maintenance agreement for the stormwater drainage system, as attached, or in substantially the same form, shall be submitted for review by Corporation Counsel. Once approved, the document shall be signed and recorded at the Cumberland County Registry of Deeds prior to the issuance of a building permit. Final copies shall be submitted to both the Department of Planning and Urban Development and the Department of Public Works.
12. Third Party Inspections: For all sites with one acre or greater of disturbance, the applicant shall retain the services of a third-party inspector for the duration of construction until final site stabilization is in place. The inspection is required in order to ensure that all construction and stabilization activities comply with the approved drawings and specifications; that field decisions regarding erosion control implementation, stormwater system installation, and natural resource protection are based on sound engineering and environmental considerations; and that any changes to the development's erosion control plan, stormwater management plan, or final stabilization plan is communicated to the City of Portland for additional review and approval.
13. Defect Guarantee: A defect guarantee, consisting of 10% of the performance guarantee, must be posted before the performance guarantee will be released.
14. As-Built Final Plans: Final sets of as-built plans shall be submitted digitally to the Planning and Urban Development Department, on a CD or DVD, in AutoCAD format (.dwg), release AutoCAD 2005 or greater.
15. Mylar Copies: Mylar copies of the as-built drawings for the public streets and other public infrastructure in the subdivision must be submitted to Public Works prior to the issuance of a certificate of occupancy
16. Impact Fees: New development or changes of use that result in net new residential dwelling units, non-residential building square footage, or water meters, are subject to the City of Portland's impact fee ordinance (Chapter 14, Article XVII). Impact fees are calculated at the time of building permit and must be paid prior to the certificate of occupancy. For more information, visit <https://www.portlandmaine.gov/2409/Impact-Fees>.

The Development Review Coordinator must be notified five (5) working days prior to the date required for final site inspection. The Development Review Coordinator can be reached at the Planning and Urban Development Department at (207) 874-8901 or via email at drc@portlandmaine.gov. All site plan requirements must be completed and approved by the Development Review Coordinator prior to issuance of a Certificate of Occupancy. Please schedule any property closing with these requirements in mind.

If there are any questions, please contact Kevin Kraft at (207) 874-8430 or via kkraft@portlandmaine.gov.

Sincerely,

Brandon Mazer, Planning Board Chair

Attachments:

1. Planning Board Report dated November 22, 2023 (w. attachments)
2. December 14, 2021 Planning Board Approval Letter (w. attachments)

Planning Board Report

Planning & Urban Development Department



19 Willis Street (formerly 33 Montreal Street)
 Level III Site Plan and Subdivision
 PL-000807-2019 | CBL: 015 B022
 37 Montreal Street LLC, Applicant

Submitted to:	Portland Planning Board	Prepared By:	Kevin Kraft
Public Hearing Date:	November 28, 2023	Date:	November 22, 2023

I. INTRODUCTION

At its December 14, 2021 meeting, the Planning Board unanimously voted 6-o (Smith absent) to approve an application for a new 12-unit multi-family residential building totaling 23,400 square feet in floor area including a basement level containing 13 parking spaces at 19 Willis Street (Attachment 1).

On August 22, 2023, after a series of appeals, the Maine Supreme Judicial Court (“Law Court”) concluded that the Planning Board’s findings were insufficient to enable meaningful appellate review and issued instructions to the Cumberland County Superior Court to remand the matter to the Planning Board to make further findings of fact related to the development’s height and setback requirements and historic preservation design review requirement (Attachment 3). The Superior Court issued an Order remanding this matter to the Planning Board on September 18, 2023. The application is therefore back before the Planning Board on remand for further fact finding on those three separate issues.

A total of 208 notices were sent to property owners within 500 feet of the site and a legal notice ran in the November 4 and November 7 2023 editions of the *Portland Press Herald*. On November 14, 2023, the Planning Board voted to table this item to November 28, 2023.

II. BACKGROUND

At its December 14, 2021 meeting, the Planning Board unanimously voted 6-o (Smith absent) to approve an application for a new 12-unit multi-family residential building including a basement level with 13 parking spaces at 19 Willis Street located in the R-6 zone and Munjoy Hill Neighborhood Conservation Overlay District (MHNCOD). The Planning Board held a workshop open to the public on September 24, 2019 (Attachment 2) and a public hearing was held on December 14, 2021 (Attachment 1).

On January 15, 2022, neighbors (Peter L. Murray, Deborah D. Murray, Carol Connor, Michael Hoover, and Jean McManamy) (“Petitioners”) filed a Rule 80B petition for review of the Planning Board’s decision. In the appeal, Petitioners challenged the Board’s decision to approve 19 Willis Street on three main grounds alleging : (1) The Board erred by improperly calculating the height of the Property from average post development grade; (2) The Board erred when it determined that retaining walls were not “conforming structures” for setback compliance purposes; and (3) The Board erred in deciding not to commission a standalone report from the City’s Historic Preservation Board regarding character and building patterns of the Munjoy Hill neighborhood and in failing to find the project compatible with such character and building patterns. On August 1, 2022, Justice John O’Neil Jr. of the Maine Superior Court issued an order (Attachment 4) denying Petitioners’ Petition for Review of Governmental Action filed pursuant to M.R. Civ. P. 80B.

Subsequently, Petitioners appealed the Superior Court's judgment denying their Rule 80B petition for review of government action to the Law Court. On August 22, 2023, the Law Court issued its decision which vacated the Superior Court's August 1, 2022 judgment and remanded the matter to the Superior Court with instructions to remand to the City of Portland Planning Board for further findings of fact related to the proposed development's height and setbacks, and historic preservation design review requirement. In its decision, the Law Court determined that the Planning Board's findings were insufficient to enable meaningful appellate review of the issue of height calculation, setback and historic preservation design.

As this project was filed and received its initial Planning Board workshop prior to the December 1, 2020 adoption of the current Land Use Code, it is subject to the previous code (Attachment 5), and all code citations within this report have been made accordingly.

III. PROPOSED PROJECT

The development site is located on the northern corner of Montreal and Willis streets in Portland's Munjoy Hill neighborhood and is currently improved with two existing vacant single-family homes. The site is bordered by the MacArthur Gardens Apartment complex to the northeast, with single-family homes to the east, south, and west. Promenade East Condominiums Tower, a 14-story residential building is located approximately 200 feet north of the development site, across Walnut Street, and abuts the Island View Apartment Complex. Eastern Promenade, a 78-acre city-owned park, is less than a quarter mile north of the site. Fort Sumner Park is less than a quarter mile to the south of the site. Two community gardens, Casco Bay Community Garden and the North Street Community Garden are located to the northeast and west of the site, respectively. The site and the immediate area are accessible to public transit. METRO Bus Route 1 stops along North Street and the Eastern Promenade roughly two blocks west and one block north of the development site, respectively.



Figure 1: Development Site (19 Willis Street) outlined in red

The applicant is proposing to develop a new four-story residential building with 12 total dwelling units, including one workforce housing unit. The new building would include a basement-level constructed parking garage with 13 parking spaces. The parking area would be accessed via a new driveway off Montreal Street, located at the rear of the building. The ground floor is proposed to include three two-bedroom

units, one three-bedroom unit, an entrance lobby, and package room. Floor two is proposed to have one one-bedroom unit, one two-bedroom unit, and two three-bedroom units. Floors three and four are each proposed to include two three-bedroom units. A series of retaining walls and terraced planters are proposed to address the grade change on site. A landscape plan illustrates the planting pallet to be incorporated with the terraces.



Figure 2: Proposed Building Renderings - Source: Kaplan Thompson Architects

IV. ISSUES ON REMAND

1. Maximum Height Requirements

The proposed project is located within the R-6 Residential zone and Munjoy Hill Neighborhood Conservation Overlay District (MHN COD). Section 14-139 specifies dimensional standards for buildings in the R-6 zone. Maximum height in the R-6 zone is 45-feet, and in the case of lots where the property line abuts a residential zone, buildings above 35 feet are required to stepback 10 feet from side property lines and 15 feet from the rear property line.

Section 14-140.5(c) of the Land Use Code specifies the dimensional standards for buildings in the MHN COD. The MHN COD contains standards for building form and dimensional requirements for new construction, with specific standards for maximum building height, roof forms, setbacks, parking placement, rooftop appurtenances, and front façade standards that vary from the base R-6 zone requirements. The maximum permitted height in the MHN COD is up to 35-feet, or 45-feet for buildings with three or more units on lots over 2,000 square feet that include at least one workforce housing unit on-site. Workforce housing units shall be no smaller than 50% of the average size of the other units in the development, must meet the definition for such units and only be sold or rented to a household at or below the applicable income levels. These requirements shall be deed restricted for affordability for the longest term possible under state and federal law. Unlike the base R-6 zone requirements, buildings that rise above 35 feet in areas governed by the MHN COD are not required to provide a stepback.

The applicant is proposing to develop a new four-story, approximately 45-foot tall building with 12 total dwelling units, including one workforce housing unit on an approximately 10,800 square foot corner lot. The proposed building would have a flat roof with a continuous parapet/cornice at the outer perimeter edges. In order to qualify for the maximum permitted height of 45 feet within the MHNCD the applicant has elected to provide Unit 14, a two-bedroom unit that is 1,059.27 square feet as their required workforce unit.

Section 14-47 of the Land Use Code defines “height” as the “vertical measurement from grade, or the pre-development grade on the islands, to the highest point of the roof beams on flat roofs.” The term “grade” is not defined in the Land Use Code. There is, however, a distinction made in the definition of height between measurements applicable to the mainland and those applicable to the islands. “Pre-development grade,” which is applicable on the City’s islands, is defined as “average grade, existing on October 1, 2000 at the corners of the foundation of the proposed structure.” Therefore, noting the distinction between measuring from pre-development grade on the islands, the City’s longstanding practice has been to calculate allowable height on the mainland from average finished grade.

Acceptable methods for calculating average finished grade include averaging the elevation of the abutting ground surface at consistent intervals around the perimeter of the building or by averaging the elevation of the proposed abutting ground surface at the building corners. The applicant calculated the average finished grade in this instance by utilizing 23 grade points around the base of the building resulting in an average grade of 138’-.09” (rounded to 138’ -1”) as shown on the applicant’s submitted plan labeled C2.1 Average Grade Calculation (Attachment 6). The method the applicant used to determine the average grade for the building is consistent with the acceptable methods for averaging grade.

Based on the applicant’s submitted plans, the development is in conformance with the applicable zoning regulations for buildings located in the R-6 zone and MHNCD. The applicant’s lot is approximately 10,800 square feet, which is greater than the minimum 2,000 square feet required for lots to be permitted to reach a maximum height of 45 feet. Additionally, the proposed building would contain 12 total dwelling units and would include one workforce unit on-site. As shown on applicant’s Plans C-2, the average grade for the site is 138’-1” and the maximum building height to the top of the roof beams is 182’-6” ¼” resulting in a building height of 44’- 5¼” which is less than 45 feet.

2. Setback Requirements

In addition to the standards that are applicable to properties in the R-6 zone, all properties within the MHNCD have to meet the standards of Section 14-140.5(c) of the Land Use Code. The R-6 zone requires buildings to have a front setback of five feet or the minimum depth of the immediately abutting street-facing yard, whichever is less. Buildings in the MHNCD that are over 35 feet in height are required to have a rear yard setback of 15 feet and 10 feet for all side yards, except that a side yard no less than five feet is permitted when used to continue a documented built pattern of the surrounding streetscape, in which case a proportional increase in another side yard must be provided. Also, buildings in the MHNCD are required to have a side setback on a side street of five feet or the minimum depth of the immediately abutting street-facing yard, whichever is less and no side setback on a side street is required when demonstrated that reduced setbacks are necessary to facilitate the provision of underground parking.

Proposed Building’s Applicable Setback Requirements			
Dimensional Requirements	R-6 Zone	MHNCD	Proposed
Min Front Yard	5 feet	N/A	5 feet

Min Side Yard	5 feet	10 feet (Bldg. over 35' height), except that a side yard no less than 5 feet is permitted when used to continue a documented built pattern of the surrounding streetscape, in which case a proportional increase in another side yard must be provided.	10.3 feet
Min Side Street Setbacks	N/A	5 feet or the minimum depth of the immediately abutting street-facing yard, whichever is less.	5 feet
		None when demonstrated that reduced setbacks are necessary to facilitate the provision of underground parking.	
Min Rear Yard	10 feet	15 feet (Bldg. over 35' height)	31.5 feet

Based on the applicant's submitted plans and documents the proposed development is in conformance with the applicable zoning regulations for buildings located in the R-6 zone and MHNCO. According to the applicant's submitted proposed site plan drawing C1.0 and Zoning Assessment Table the proposed building would have a minimum front setback of five feet, minimum side yard setbacks of approximately 10.3 feet, a minimum side setback on a side street of five feet, and a minimum rear yard setback of approximately 31.5 feet.

In addition to the building, the applicant's proposed development includes a series of landscaped terraces and landscaped planters supported by a retaining wall located within the required setback areas. Section 14-47 defines "setback" as "[t]he required distance and the land resulting therefrom between a street line and the closest possible line of conforming structure." Additionally, Section 14-47 defines "structure" as "[a]nything constructed or erected of more than one (1) member which requires a fixed location on the ground or attached to something having a fixed location on the ground." However, for setback purposes, certain miscellaneous auxiliary structures such as retaining walls that are not part of the foundational support for a building, landscaped terraces, landscaped planters, raised garden beds, fences, flagpoles, and other similar structures are not considered "conforming structures" which need to be setback from the street or lot line and are therefore exempt from setback dimensional requirements. According to the applicant's submitted plans, including drawings C1.0, C2.1, and A-1.1 (Attachment 7), the proposed building and its foundation meet the minimum setback requirements. Plans also show landscaped terraces and planters encircling the building that are supported by a retaining wall which facilitates the provision of underground parking and establishes a level development site on a sloped parcel. Because these features on the plan are all components of the landscaping or site preparation, and not part of the foundational support for the building, they are not conforming structures that are otherwise required to meet applicable setback requirements. Therefore, the applicant's proposed development meets the applicable setback requirements.

3. Design Review Requirements

Because the development site's lot is over 10,000 square feet, the proposed project was reviewed against the *Multiple-Family* Standards of the City of Portland Design Manual.

The proposed development is not located in a historic district. However, the development site is within 100 feet of the Munjoy Hill Historic District. According to Land Use Code Section 14-526(d)(5)(b), when any part of a proposed development is within 100 feet of a designated landmark, historic district, or historic landscape district, such development shall be generally compatible with the major character-defining elements of the portion of the district in the immediate vicinity of the proposed development. For the purposes of this provision, "compatible" design is defined as design which respects the established building patterns and visual characteristics that exist in a given setting and, at the same time, is a distinct product of its own time. To aid the Planning Board in its deliberations, historic preservation staff are required to provide a written analysis of the proposed development's immediate context, identifying the major character-defining elements.

To aid in the Planning Boards review and findings of the proposed project, a design review was performed by Urban Designer, Caitlin Cameron, Planner, Andrew Tufts, and Historic Preservation Program Manager, Deb Andrews (Attachment 8). Included in the design review memo is an analysis of the proposed development's immediate context, major character-defining elements and any established built patterns that characterize the context. Specifically, the design review memo noted the following as it related to the project:

- The proposal is on a transitional site between a more recent context of Promenade Towers and MacArthur Gardens – two large/mid-scale apartment complexes – compared with the predominant, traditional fabric found a block away.
- The predominant, character-defining elements of residential architecture in the neighborhood context include vertical proportion massing, simple roof forms, vertical windows with local symmetry, two or three-bay façade composition, and simple material palettes – predominantly clapboard with masonry foundation.
- The overall massing and form of the building is a simple box with flat roof consistent with the simple forms and massing found in neighborhood multi-family buildings. The building has a clear primary and secondary façade – also a predominant characteristic of corner buildings in this context. These design elements are consistent with and complement the nearest residential neighborhood by referencing common patterns and elements while remaining a contemporary expression.
- The project uses a simple material palette of shingle and panel applied consistently throughout the building creating a simple, cohesive design. This is typical of the context and staff agree this contributes to complementing and enhancing the neighborhood. The fine grain of the material is appropriate for a residential building and is compatible with the materials in this context.
- The façades generally relate to the context through the regular pattern/rhythm of windows; the window types are limited and placed in a regular rhythm consistent with the traditional residential buildings.
- The building placement is consistent with residential structures in the neighborhood – placed near the street with a small setback with planted edge.

Based on the drawings and plans submitted and the staff analysis provided in the final design review memo, including input from the City's Historic Preservation Program Manager, Deb Andrews, the proposed project is consistent with the design review standards for multi-family projects and is compatible with the major character-defining features of the surrounding neighborhood. For all of these reasons, the written memorandum dated December 14, 2021 is a sufficient written analysis from contributing Historical Preservation staff member, Deb Andrews, to satisfy Section 14-526(d)(5)(b).

V. PLANNING BOARD MOTIONS

Site Plan Review

On the basis of the application, plans, reports and other information submitted by the applicant, the Board hereby adopts the findings and conclusions contained in the Planning Board Report for the public hearing on November 28, 2023 for application #PL-000807-2019 as supplemental findings of fact and conclusions to its December 14, 2021 decision approving the plan and finding it is in conformance with the site plan standards of the Land Use Code.

VI. ATTACHMENTS

REPORT ATTACHMENTS

Attachment 1 – Willis St. – 19 App. Ltr. 12-14-2021 & Willis St. – 19 PB Hearing Report 12-14-2021.pdf
 Attachment 2 – 33 Montreal Street PB Workshop Memo.pdf
 Attachment 3 – Order of Remand 2023 09 18.pdf
 Attachment 4 – Order 2022 08 01.pdf
 Attachment 5 – Chapter 14 Land Use Code 2020.pdf
 Attachment 6 – C2.1 Average Finished Grade.pdf
 Attachment 7 – Setback Compliance Drawings.pdf
 Attachment 8 – Final Design Review 12-14-2021.pdf
 Attachment 9 – Response to Design Review.pdf
 Attachment 10 – Housing Program Manager Memorandum
 Attachment 11 – September 24 2019 Workshop – Memo Attachments
 Attachment 12 – 12/14/2021 Willis St. – 19 (Applicants Submittal)
 Attachment 13 – 12/14/2021 Willis St. – 19 (Plans)
 Attachment 14 – 12/14/2021 Willis St. – 19 (Report Attachments)
 Attachment 15 – 12/14/2021 Willis St. – 19 (Report)

APPLICANT'S SUBMITTAL

A_Application Checklist
 B_Project Description
 C_Right, Title and Interest
 D_Financial and Technical Capability
 E_Zoning Assessment
 F_Transportation
 G_Stormwater
 H_Uilities
 I_Solid Waste
 J_Public Infrastructure and Safety
 K_Design Rewiew_Site Design

L_Design Review _R6 Design Principles
M_Ability to Serve Determination
N_Wastewater Capacity Authorization
O_Verification of Posted Public Meeting Notice

PLANS

Plan 1_Boundary Survey
Plan 2_Design Review_Context
Plan 3_Neighborhood Context
Plan 4_Architectural Drawings
Plan 5_Architectural Renderings
Plan 6_Revised Civil Drawings
Plan 7_Landscape Plan
Plan 8_Construction Management Plan

12/14/2021 PUBLIC COMMENT

Pc 1 – pc23

CITY OF PORTLAND, MAINE
PLANNING BOARD

Brandon Mazer, Chair
Maggie Stanley, Vice Chair
Marpheen Chann
Sean Dundon
Bob Dunfey
David Silk
Austin Smith

December 17, 2021

Tim Wells
Saint John's Valley, LLC.
8 Drew Road
South Portland, ME 04106

Richard Lo
Kaplan Thompson Architects
102 Exchange St. 2nd floor
Portland, ME 04101

Project Name: Multifamily Building
Address: 19 Willis Street
Applicant: 37 Montreal Street, LLC.
Planner: Austen Torres Davis

Project ID: PL-000807-2019
CBL: 015 B015001
015 B022001

Dear Mr. Wells:

On December 14, 2021, the Planning Board approved a Level III Site Plan, Subdivision, and Inclusionary Zoning Conditional Use application for 19 Willis Street, 12-unit multi-family residential building totaling 23,400 square feet in floor area. This project is in the R-6 Residential Zone and the Munjoy Hill Neighborhood Conservation Overlay District. The decision is based upon the application, documents and plans as submitted. The Planning Board reviewed the proposal for conformance with the standards of the Site Plan, Subdivision, and Inclusionary Zoning Ordinances. The Planning Board voted unanimously to approve the application with the following conditions as presented below.

Inclusionary Zoning Conditional Use

The Planning Board voted 6-0 (Smith absent) to find the proposed conditional use for workforce housing meets the standards of Land Use Code Sections 14-484 and 14-487 with the following condition(s):

PRIOR TO ISSUANCE OF A BUILDING PERMIT

1. For the Munjoy Hill Neighborhood Conservation Overlay District height density bonus, the Applicant and the City shall enter into an Affordable Housing Agreement for Unit 14 at 19 Willis Street.

PRIOR TO ISSUANCE OF A CERTIFICATE OF OCCUPANCY

2. The Affordable Housing Agreement shall outline the details of the affordability restrictions placed on the workforce unit and shall be filed as a covenant to the 19 Willis Street property deed with the Cumberland County Registry of Deeds; and
3. The applicant will pay a fee-in-lieu of \$132,586.80 into the City's Housing Trust Fund. Should at a later date any change in total unit count be considered, a revised proportional fee-in-lieu payment will also be required.

The Planning Board voted 6-0 (Smith absent) that the plan is in conformance with the subdivision standards of the Land Use Code Section 14-496, subject to the following condition(s) of approval:

PRIOR TO THE SUBMISSION OF THE PLAT FOR PLANNING BOARD SIGNATURE

1. The subdivision plat shall be finalized to the satisfaction of the Planning Authority, Corporation Counsel and Department of Public Works and include clear descriptions of the number, location, type and size of all subdivided units, along with relevant notes and conditions.

PRIOR TO ISSUANCE OF A BUILDING PERMIT

2. The signed subdivision plat shall be recorded at the Cumberland County Registry of Deeds.

Site Plan Review

The Planning Board voted 6-0 (Smith absent) to find that the plan is in conformance with the site plan standards of the Land Use Code Section 14-527, subject to the following condition(s) of approval:

PRIOR TO APPLICATION FOR A BUILDING PERMIT

1. The applicant shall update the plan set to include street tree and tree well details for review and approval by the Planning Authority and City Arborist.

PRIOR TO ISSUANCE OF A BUILDING PERMIT

2. A financial contribution totaling \$3,200, to be paid into the City's street tree fund, shall be provided for the required eight street trees not provided on-site. The applicant may also choose to pursue a street tree alternative as listed in the City's site plan ordinance, Section 14-526.

The approval is based on the submitted plans and findings related to site plan review and subdivision review as contained in the Planning Board report dated December 10, 2021 for application # PL-000807-2019 which is attached.

Standard Procedures

Note: The following standard procedures and requirements apply to all approved site plans:

1. Subdivision Recording Plat A final recording plat, listing all conditions of subdivision approval, must be submitted to the Planning and Urban Development Department for review. Once approved, the plat shall be signed by the Planning Board. A performance guarantee must be issued prior to release of the recording plat for recording at the Cumberland County Registry of Deeds. One mylar copy of the recording plat with signatures and the recorded book and page must be returned to the Planning and Urban Development Department.

2. Subdivision Waivers Pursuant to 30-A MRSA section 4406(B)(1), any waiver must be specified on the subdivision plan or outlined in a notice. The plan or notice must be recorded in the Cumberland County Registry of Deeds within two (2) years of the final subdivision approval.
3. Site Plan Expiration The site plan approval will be deemed to have expired unless work has commenced within one (1) year of the approval or within a time period up to three (3) years from the approval date as agreed upon in writing by the City and the applicant. Requests to extend approvals must be received before the one (1) year expiration date.
4. Subdivision Expiration Subdivision approval is valid for up to three (3) years from the date of Planning Board approval.
5. Separate Building Permits Are Required This approval does not constitute approval of building plans, which must be reviewed and approved by the City of Portland's Permitting and Inspections Department.
6. Performance Guarantee and Inspection Fees A performance guarantee covering the site improvements and an inspection fee payment of 2.0% of the guarantee amount and three (3) final sets of plans must be submitted to and approved by the Planning and Urban Development Department and Public Works Department prior to the release of a building permit, street opening permit or certificate of occupancy for site plans.
7. Construction Management Plans The applicant, contractor and subcontractors are required to conform to the approved Construction Management Plan, and all conditions contained within the project's approval, for the entire duration of the project. Any amendments to the approved Construction Management Plan shall be reviewed and approved by the Department of Public Works prior to the execution. The Planning Authority and the Department of Public Works have the right to seek revisions to an approved Construction Management Plan. The applicant shall coordinate the project's construction schedule with the timing of nearby construction activities to avoid cumulative impacts on a neighborhood and prevent unsafe vehicle and pedestrian movements. Accordingly, nearby construction activities could involve a delay in the commencement of construction.
8. Preconstruction Meeting Prior to the release of a building permit and scheduling of a preconstruction meeting, a hard copy set of approved plans shall be submitted to the Development Review Coordinator. A pre-construction meeting shall be held at the project site with the contractor, Development Review Coordinator, Public Works representative, and owner to review the construction schedule and critical aspects of the site work. At that time, the Development Review Coordinator will confirm that the contractor is working from the approved site plan and the approved Construction Management Plan. The site/building contractor shall provide one (1) copy of a detailed construction schedule to the attending City representative. It shall be the contractor's responsibility to arrange a mutually agreeable time for the pre-construction meeting.

9. Department of Public Works Permits If work or obstructions will occur within the public right-of-way, such as utilities, curb, sidewalk, driveway construction, site deliveries and equipment siting, a Street Opening and/or Occupancy Permits are required for your site. Please contact the Department of Public Works Permit Clerk at (207) 874-8300, ext. 8828. (Only excavators licensed by the City of Portland are eligible.)
10. Develop Site According to Plan The site shall be developed and maintained as depicted on the site plan and in the written submission of the applicant. Any modifications of an approved site plan or alteration of a parcel, or of any approved exterior elevations, which were the subject of site plan approval after May 20, 1974, shall require the prior approval of an amended site plan by the Planning Board or Planning Authority pursuant to the terms of Chapter 14, Land Use, of the Portland City Code.
11. Stormwater Management The owner/operator of an approved stormwater management system, and all assigns shall comply with the conditions of Chapter 32, Stormwater including Article III, Post Construction Stormwater Management, which specifies the annual inspections and reporting requirements.

A maintenance agreement for the stormwater drainage system, as attached, or in substantially the same form, shall be submitted for review by Corporation Counsel. Once approved, the document shall be signed and recorded at the Cumberland County Registry of Deeds prior to the issuance of a building permit. Final copies shall be submitted to both the Department of Planning and Urban Development and the Department of Public Works.
12. Defect Guarantee A defect guarantee, consisting of 10% of the performance guarantee, must be posted before the performance guarantee will be released.
13. As-Built Final Plans Final sets of as-built plans shall be submitted digitally to the Planning and Urban Development Department, on a CD or DVD, in AutoCAD format (.dwg), release AutoCAD 2005 or greater.
14. Mylar Copies Mylar copies of the as-built drawings for the public streets and other public infrastructure in the subdivision must be submitted to Public Works prior to the issuance of a certificate of occupancy.

The Development Review Coordinator must be notified five (5) working days prior to the date required for final site inspection. The Development Review Coordinator can be reached at the Planning and Urban Development Department at (207)874-8901. All site plan requirements must be completed and approved by the Development Review Coordinator prior to issuance of a Certificate of Occupancy. Please schedule any property closing with these requirements in mind.

If there are any questions, please contact Austen Torres Davis at (207) 874-8936 or via austentd@portlandmaine.gov.

Sincerely,

A handwritten signature in black ink that reads "Brandon Mazer". The signature is written in a cursive, flowing style.

Brandon Mazer, Chair

Attachments:

1. 19 Willis Street – Planning Board Hearing Report (12-14-2021)
2. Portland City: Chapter 32
3. Sample Stormwater Maintenance Agreement
4. Performance Guarantee Packet

PLANNING BOARD REPORT PORTLAND, MAINE



19 Willis Street (formerly 33 Montreal Street)
Level III Site Plan and Subdivision
37 Montreal Street LLC, Applicant
PL-000807-2019 CBL: 015 B022

Submitted to: Portland Planning Board
Public Hearing Date: December 14, 2021

Prepared by: Austen Torres Davis, Planner
Date: December 10, 2021



Figure 1: Parcel Outline in Neighborhood Context - Source: CONNECTexplorer

I. INTRODUCTION

37 Montreal Street LLC., has submitted a Level III Site Plan, Subdivision and Inclusionary Zoning application for the development of a four story, twelve-unit residential building of 23,400 square feet in size at 19 Willis Street. The subject property is a 10,804 square foot parcel located at the corner of Montreal Street and Willis Street. Since the application was first submitted the address was updated to 19 Willis Street, as confirmed by the Portland Fire Department.

The subject property is zoned R-6 Residential, is within the Munjoy Hill Neighborhood Conservation Overlay District (MHNCO), and seeks to utilize the provisions within Sec. 14-140.5 of the Legacy Land Use Code to

allow for an additional ten feet of building height via the provision of a workforce housing unit onsite for projects located within the MHNCD.

The Planning Board held a public workshop for this application on September 24, 2019. At that meeting, the project was presented to the Board by the Planner, Urban Designer, and the applicant team, which was followed by Board questions. Public testimony was then provided, primarily focusing on issues of scale, massing, and neighborhood compatibility. Board deliberation concurred with staff's assessment that the neighborhood scale is transitional, which affords greater interpretation in the building's mass and form. The Board appreciated the efforts made to conceal the garage entrance while preserving first floor privacy. One area of concern was the building entrance along Willis Street. The Board requested that the applicant explore ways to humanize the space, which the applicant has since accomplished in their updated plans. Following the workshop, the project experienced a delay and period of dormancy while the applicant explored ways to incorporate the required workforce housing unit into the building in a manner that comports with the City's minimum square footage requirements for workforce units while meeting their development objectives.

As this project was filed and received its initial Planning Board workshop prior to the December 1, 2020 adoption of the current Land Use Code, it is subject to the previous code, and all code citations within this report have been made accordingly.

A total of 208 notices were sent to property owners within 500 feet of the site and a legal notice ran in the December 3rd & December 4th 2021 editions of the *Portland Press Herald*.

Applicant: 37 Montreal Street LLC

Consultants:

- Richard Lo, AIA (Kaplan Thompson Architecture)
- Dustin Roma, P.E. (DM Roma Consulting Engineers)
- John Swan, Surveyor (Owen Haskell Inc.)

II. REQUIRED REVIEWS

<i>Review</i>	<i>Applicable Standards</i>
Site Plan	<i>Section 14-527</i>
Subdivision	<i>Section 14-496</i>
Inclusionary Zoning multi-family >10 units	<i>Section 14-487</i>

III. PROJECT DATA

Existing Zoning	R-6 Residential; Munjoy Hill Neighborhood Conservation Overlay District
Existing Use	Two single-family homes
Proposed Use	12-unit multi-family building
Bedroom Mix	8 three-bedroom units, 2 two-bedroom units, 2 two-bedroom units

Parcel Size	10,804 sf
--------------------	-----------

	<i>Existing</i>	<i>Proposed</i>	<i>Net Change</i>
Building Footprint	2,240 sf	5,800 sf	+ 3,560 sf
Building Floor Area	3,775 sf	29,200 sf	+ 25,425 sf
Impervious Surface Area	4,724 sf	8,000 sf	+ 3,276 sf
Parking Spaces	4	13	+ 9
Bicycle Parking Spaces	0	14	+ 14



Figure 2: Existing Axonometric Perspective - Source: CONNECTexplorer

IV. BACKGROUND & EXISTING CONDITION

The development site is located on the northern corner of Montreal and Willis streets in Portland's Munjoy Hill neighborhood and is developed with two existing single-family homes. All of the existing buildings are currently vacant. The site is bordered by the MacArthur Gardens Apartment complex to the northeast, with single-family homes to the east, south, and west. Additionally, the 14-story Promenade East Condominiums Tower is located approximately 200 feet to the north, across Walnut Street, which neighbors the Island View Apartment complex. Both are large-scale residential developments. The sidewalks along both Montreal and Willis streets are in need of repair. There are four street trees along Montreal and Willis

streets; these include Sweet Gum, Honey Locust, and Sugar Maple varieties. The nearest open space is the Eastern Promenade, an approximately three-minute walk down Montreal Street. Fort Sumner Park is an approximately four-minute walk to the southwest. There are two community gardens: the Casco Bay Community Garden, located to the northeast, and the North Street Community Garden to the west; both are an approximately five-minute walk from the development site. METRO Bus Route 1 has stops along North Street and the Eastern Promenade roughly two blocks west and one block north of the development site, respectively.



Figure 3: Conceptual Renderings - Source: Kaplan Thompson Architects

V. PROPOSED DEVELOPMENT

The proposed development is a four-story, 12-unit residential building approximately 23,400 square feet in size. To facilitate this development, two existing vacant single-family structures would be demolished. The new building would include a basement-level structured parking garage of approximately 5,800 square feet in size, and would contain 13 parking spaces, storage, mechanical rooms, trash room, and bike storage. The garage would be accessed via a new driveway off Montreal Street, located at the rear of the building. The ground floor is proposed to include three two-bedroom units, one three-bedroom unit, an entrance lobby, and package room. Floor two is proposed to have one one-bedroom unit, one two-bedroom unit, and two three-bedroom units. Floors three and four are each proposed to include two three-bedroom units. A series of terraced planters are proposed to address the grade change on site. A landscape plan illustrates the planting pallet to be incorporated with the terraces.

The proposed project seeks to take advantage of a 10-foot height bonus from 35 feet up to 45 feet. This bonus is pursuant to Land Use Code Section 14-140.5(c), *Munjoy Hill Neighborhood Conservation Overlay District*, which includes a provision for eligible projects of three units or more that include at least one “workforce housing unit for rent.” The unit intended to qualify as rental workforce housing is Unit 14, a two-bedroom unit.



Figure 4: Proposed Elevation - Front Façade – Source: Kaplan Thompson Architects

VI. RIGHT, TITLE, & INTEREST AND FINANCIAL & TECHNICAL CAPACITY

The owner of the property is 37 Montreal Street, LLC. The applicant has provided a copy of the warranty deed, recorded at the Cumberland County Registry of Deeds (Book 8708, Page 61), which demonstrates their right, title and interest in the property.

As evidence to demonstrate sufficient financial and technical capacity, the applicant has provided a letter from Camden National Bank indicating that between the applicant’s funds and bank financing, the applicant has sufficient financial capacity to complete the proposed project. Similarly, information has been provided on the development team demonstrating the capacity to design and construct the project.

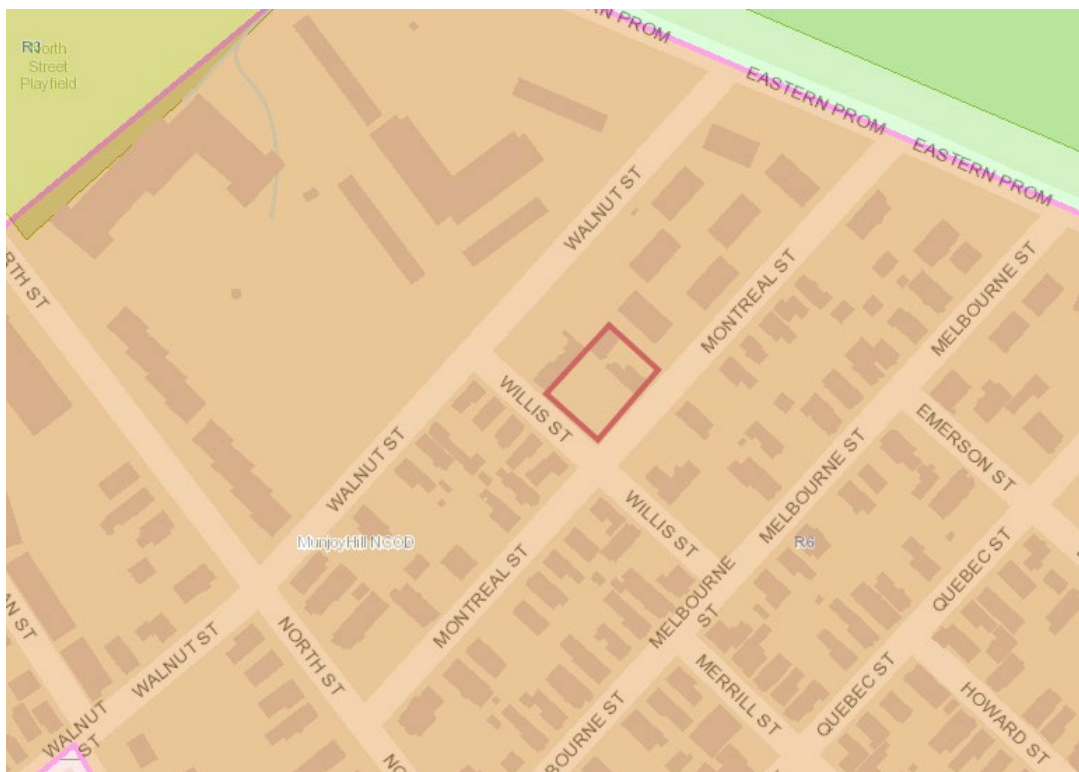


Figure 5: Site in MHNCO and R-6 Zone Context - Source: City's Internal Map Viewer

VII. ZONING ANALYSIS

The property lies within the R-6 Residential zone and within the Munjoy Hill Neighborhood Conservation Overlay District. The following dimensional and parking requirements apply to the R-6 zone:

R-6 Summary of Dimensional and Parking Requirements Applied to 19 Willis St		
	Required	Proposed
Minimum Lot Size	2,000 sf	10,800 sf
Area Per Dwelling Unit	725 sf	900 sf
Minimum Street Frontage	20 ft	90 ft (Willis St)
Front Yard Minimum	5 ft	5 ft
Rear Yard Minimum	15 ft	30 ft
Yard Left Minimum	10 ft	10 ft
Side Street Setback	5 ft (>35 height)	5 ft/ 3 ft
Step Back	15 ft rear/ 10 ft side	>30 ft rear/ 10 ft side
Maximum Lot Coverage	60%	53%
Maximum Height ¹	45 ft above avg. grade	45 ft
Landscape Open Space	20%	26%
Off-Street Parking	1 space per unit	1.1 per unit

¹ Maximum height: 45 feet for developments of 3 units or more on lots over 2,000 sf. that include at least one workforce housing unit. Workforce units shall be no smaller than 50% of the average size of the other units in the development.

VIII. MHNCOD & WORKFORCE HOUSING REQUIREMENTS

The applicant proposes the creation of twelve residential units within the Munjoy Hill Neighborhood Conservation Overlay District. The height of the building will be greater than 35 feet. Subsequently, the project triggers Land Use Code Section 14-140.5 (c), *Maximum Height*, and is required to include one workforce housing unit for rent or sale on-site. The workforce unit shall be no smaller than 50% of the average size of the other units in the development and shall be deed restricted for affordability for the longest term possible under state and federal law. For this project, a minimum workforce unit size of 854 square feet is needed to meet City standards. The applicant proposes to provide a 1,059 sf two-bedroom unit within the building, Unit 14, as their deed-restricted workforce housing unit, meeting the workforce housing requirements. Staff recommend as a condition of approval that the applicant and the city enter into an Affordable Housing Agreement (AHA for unit 14 located at 19 Willis Street) before a building permit may be issued. The Affordable Housing Agreement will outline the details of the affordability restrictions placed on the workforce units and will be filed as a covenant to the 19 Willis Street property deed with the Cumberland County Registry of Deed before certificate of occupancy may be issued. A memorandum from the Housing Program Manager with additional details has been included within the report attachments.

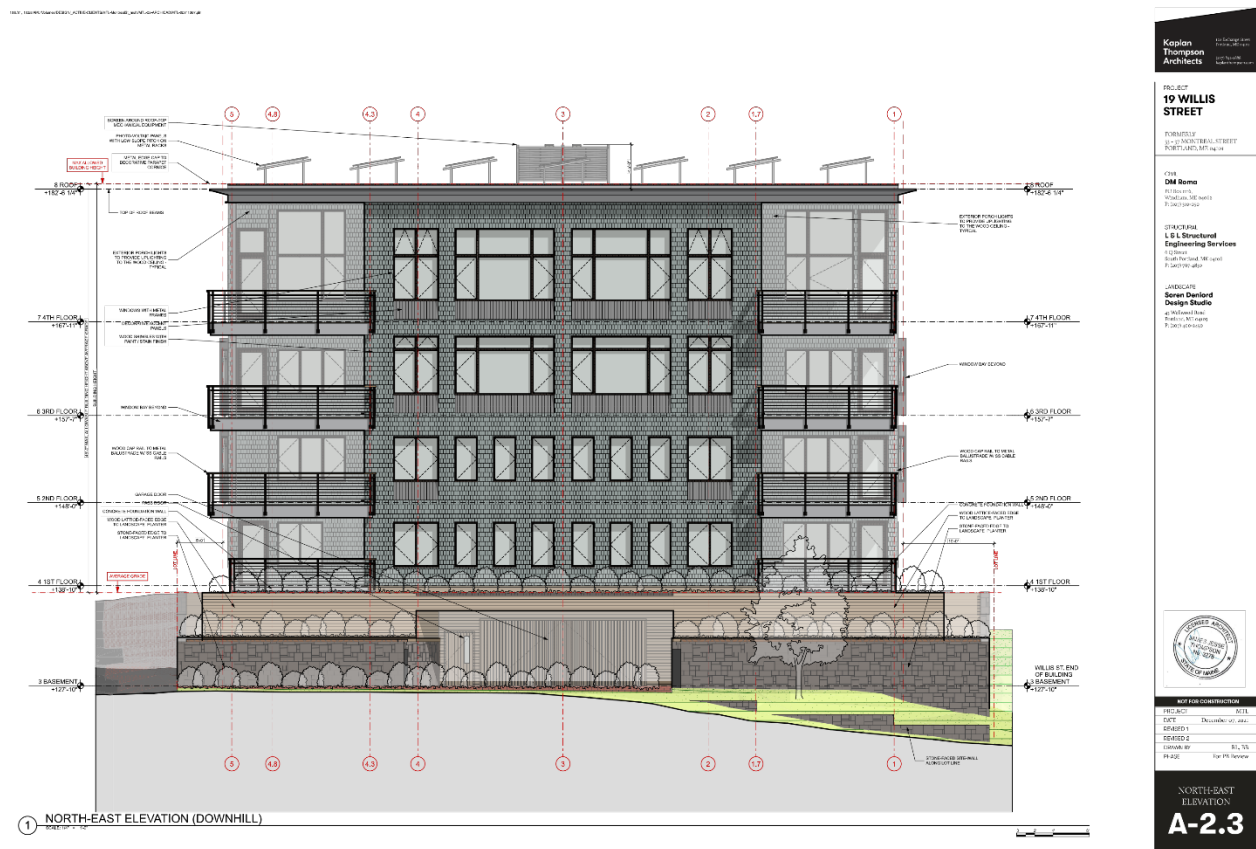


Figure 6: Proposed Elevation - Northeast (Downhill) - Source: Kaplan Thompson Architects

IX. INCLUSIONARY ZONING

Division 30, Section 14-487, Ensuring Workforce Housing, requires at least ten percent (10%) of the dwelling units in the development shall meet the definition of Workforce Housing units for sale or for

rent. The number of units required is rounded down to a whole number whether the Workforce Units are provided on or off-site. A fractional fee-in-lieu would result when the calculation of a project's inclusionary obligation results in a fractional unit. The fractional unit obligation will be provided in the form of a proportional fee-in-lieu. The ordinance under Section 14-487 e 4 also requires the number of bedrooms in the Workforce units shall be at least 10% of the total number of bedrooms made available as part of the development.

As an alternative to providing workforce housing units, developers shall pay a fee-in-lieu of some or all of the units. The fee for affordable units not provided shall be \$100,000 per unit, adjusted annually in the same way as the fee under Division 29 for Housing Replacement.

The project located at 19 Willis Street (formerly 33 Montreal Street) proposes the creation of 12 dwelling units. The applicant has chosen to fulfill the inclusionary zoning requirements by paying a fee-in-lieu. The proposed project would thus be required to pay a total fee of \$132,586.80 (1.2 X \$110,489) into the City's Housing Trust Fund in-lieu of creation of actual housing units for workforce households. As such, the project has met the minimum requirements set forth in Section 14-487.

Staff recommends the agreed upon fee-in-lieu of \$132,586.80 be paid into the City's Housing Trust Fund prior to issuance of the certificate of occupancy for 19 Willis Street. Should at a later date any change in total unit count be considered, a revised proportional fee-in-lieu payment will also be required.

X. DEVELOPMENT REVIEW

A. SITE PLAN SUBMISSION REQUIREMENTS (Section 14-527) and SUBDIVISION PLAT AND RECORDING PLAT REQUIREMENTS (Section 14-496)

The applicant has submitted a recording plat. The final plat will need to be revised to reflect any waivers and conditions of approval that relate to the subdivision plan. Any waivers granted must be recorded at the Registry of Deeds within two years of a Planning Board decision.

B. SUBDIVISION (Section 14-496)

The proposed development has been reviewed by staff for conformance with the relevant review standards of Portland's Subdivision Ordinance and applicable regulations. Staff comments are listed below.

1. Will Not Result in Undue Water and Air Pollution (Section 14-497 (a) 1), and Will Not Result in Undue Soil Erosion (Section 14-497 (a) 4)

The existing site is approximately 44% developed and slopes from the south side of the property (Willis Street) to the north side of the property (MacArthur Gardens Apartments). Stormwater runoff from the project site drains either to the northeast along the curb line in Montreal Street or to the north to the abutting property. The existing site contains approximately 4,724 square feet of impervious surface, with three separate roof lines. Redevelopment of the project site

would result in an increase of approximately 3,276 square feet of impervious area and a total impervious surface of 8,000 square feet.

The stormwater management plan includes the construction of an underground storage and treatment system that consists of a Stormtech Chamber System designed to infiltrate the required water quality volume. The system has been designed to effectively collect, infiltrate and provide treatment of approximately 97% of the total new impervious area and approximately 88% of the total new developed area, exceeding the requirement as indicated in the General Standards of MDEP Chapter 500.

Lauren Swett, P.E. of Woodard and Curran Engineering, Third-Party Reviewer, has reviewed the erosion and sediment control plans and details, as well as the proposed stormwater inspection and maintenance measures, and found the updated plans to be in conformance with the Land Use Code.

2. *Sufficient Water Available (Section 14-497 (a) 2 and 3)*

An ability to serve letter from the Portland Water District has been received and provided.

3. *Will Not Cause Unreasonable Traffic Congestion (Section 14-497 (a) 5)*

The proposed development is not adding significant vehicular traffic to the streets surrounding the development site and a traffic analysis is not required.

4. *Will Provide for Adequate Sanitary Sewer and Stormwater Disposal (Section 14-497 (a) 6), and Will Not Cause an Unreasonable Burden on Municipal Solid Waste and Sewage (Section 14-497 (a) 7)*

The applicant is proposing to utilize the existing combined storm sewer main lines in both Montreal and Willis streets. If the services are to be combined, this should be done within the right of way. This will allow for future separation within the street. The applicant has designed these connections accordingly. The applicant has provided a Wastewater Capacity Authorization Letter.

5. *Will not have an undue adverse effect on the scenic or natural beauty of the area, aesthetics, historic sites, significant wildlife habitat identified by the Department of Inland Fisheries and Wildlife or by the City, rare and irreplaceable natural areas, or any public rights for physical or visual access to the shoreline (Section 14-497(a)(8))*

The site is proximate to the Munjoy Hill historic district. Development on the subject property, which is a previously-developed infill site within an urban neighborhood context located upland from the water's edge, will not adversely affect any significant wildlife habitat, rare or irreplaceable natural areas, or any public access to the shoreline.

6. **Comprehensive Plan (Section 14-497 (a) 9)**

The proposed project supports a number of goals identified in *Portland's Plan 2030*, particularly in the Housing section. Those goals include the Plan's stated desire to increase the overall supply of housing city-wide to meet the needs, preferences and financial capabilities of all Portland residents, to encourage contextually appropriate housing density proximate to neighborhood centers, concentrations of services and transit nodes and corridors, and to enable people who work in Portland to have the option to live in Portland. The Plan also highlights the importance of the City's growth in order to sustain our community, infrastructure, and economy, ensuring growth respects and seeks to preserve of our natural resources, and sensitivity to neighborhood context, which emphasizes the uniqueness of neighborhoods in the Vision Statement (pg. 6). The Comprehensive Plan also outlines goals to ensure an appropriate balance of continuity and change as Portland grows and evolves.



Figure 7. Vision Statement from Portland's Plan 2030

C. **SITE PLAN STANDARDS (Section 14-526)**

The proposed development has been reviewed by staff for conformance with the relevant review standards of Portland's site plan ordinance and applicable regulations. Staff comments are listed below.

1. **Transportation Standards**

a. **Impact on Surrounding Street Systems and Access and Circulation**

ADA compliance is provided at all door locations. The parking will be accessed from Montreal Street by a driveway between the proposed building and the adjacent property. The residential lobby for the proposed building will be located at the ground level on the southern side and would be accessed from the Willis Street sidewalk.

b. **Public Transit Access**

All residential developments consisting of 20 or more dwelling units shall provide a transit shelter adjacent to or within the public right-of-way along its frontage. The proposed project provides twelve dwelling units and therefore this standard is not applicable.

c. **Parking**

Per ordinance requirements in the R-6 zone, the proposed project is required to have a total of 12 parking spaces. The applicant is proposing to include 13 internal parking spaces within the garage, thus meeting the requirement.

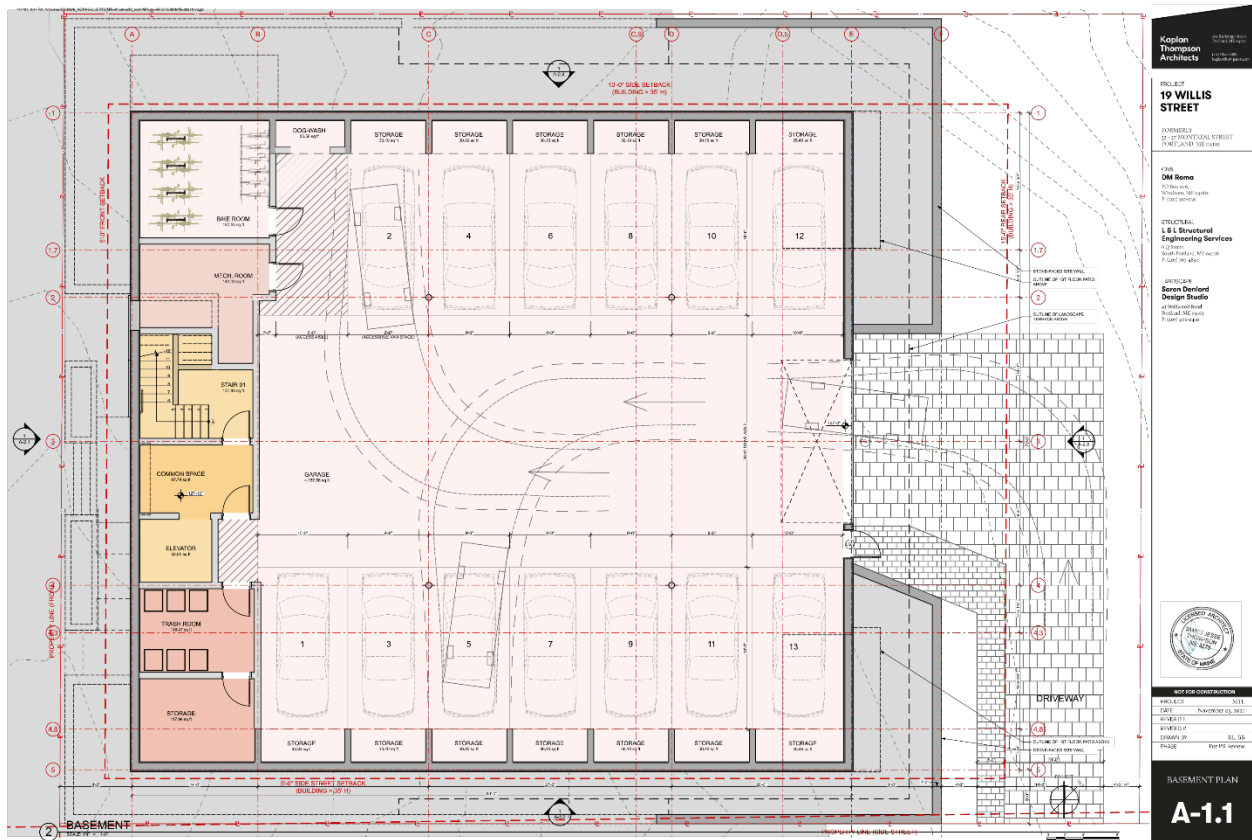


Figure 8: Basement Parking Plan - Source: Kaplan Thompson Architects

d. Bicycle Parking

Basement Plan A-1.1 shows 14 bicycle parking spaces are proposed for the project, meeting the minimum requirement of 4.8 spaces.

e. Snow Storage

The project design and layout provides an area of approximately 300 square feet located adjacent to the proposed driveway near the northwesterly corner of the site. Snow storage will not conflict with pedestrian access or parking requirements. Snow melt runoff will be treated with the subsurface chamber system. Staff finds this standard to have been met.

2. Environmental Quality Standards

a. Preservation of Significant Natural Features

The site was formerly development with residential buildings and there are no known significant natural features on the site. There are no anticipated impacts.

b. Landscaping and Landscape Preservation

A landscaping plan was submitted as part of the application. The plan shows a variety of trees, shrubs, and perennials, all listed in the City of Portland Recommended Tree List.

There are four established street trees along Montreal and Willis Streets. The applicant has not proposed the removal of street trees, though if the need to do so arises the applicant will work



Figure 9. Existing Street Trees – Source: Austen Torres Davis

with the City Arborist to explore ways to mitigate the impact of construction and utility connections and preserve trees where possible.

City Arborist Jeff Tarling has commented that, if removal of trees for site access is necessary, removing the smallest tree near the existing driveway on Willis Street would give the applicant adequate construction access. This option would be preferable as the remaining three trees are mature and in good condition. Staff are in favor of preserving these three mature street trees.

Based upon the City's street tree requirements, a total of eight trees are required. The applicant intends to preserve the existing four street trees and will contribute \$3,200 (\$400/tree x eight trees) to the City's Street Tree Fund to address the eight additional required trees that will not be planted.

c. Water Quality, Storm Water Management and Erosion Control

The stormwater management plan includes the construction of an underground storage and treatment system that consists of a Stormtech Chamber System designed to infiltrate the required water quality volume. The system has been designed to effectively collect, infiltrate and provide treatment of approximately 97% of the total new impervious area and approximately 88% of the total new developed area, exceeding the requirement as indicated in the General Standards of MDEP Chapter 500.

Lauren Swett, P.E., Consulting Peer Reviewer, and staff have reviewed the applicant's plans and project details. Both find that the proposed stormwater management measures meet the applicable standards of the Land Use Code and Technical Manual.

3. Public Infrastructure and Community Safety Standards

a. Public Safety and Fire Prevention

Mike Thompson, former Division Chief of the Fire Prevention and Community Outreach Division, reviewed the submitted plans and found them to be acceptable, noting the following points (Attachment 1):

- *The correct address for this property shall be determined by the City E-911 Addressing Officer. Since this comment was received, the applicant has received the correct address for this property (19 Willis St).*
- *The street address shall be marked at the main building entrance.*

b. Availability and Adequate Capacity of Public Utilities

The project will be served by Central Maine Power, the Portland Water District, and City Department of Public Works. Evidence of utility capacity has been provided by the applicant.

4. Site Design Standards

a. Snow and Ice Loading

The project design and layout provides an area of approximately 300 square feet located adjacent to the proposed driveway near the northwesterly corner of the site. Snow storage will not conflict with pedestrian access. Snow melt runoff will be treated with the subsurface chamber system. Staff finds this standard to have been met.

b. View Corridors

This site is not within a Protected View Corridor as per the “View Corridor Protection Plan” approved by the Portland City Council in 2001. This standard does not apply.

c. Historic Resources

Previous iterations of this application went to the Historic Preservation Board as the applicant sought to demolish a building classified as *preferably preserved*, within the Munjoy Hill Neighborhood Conservation Overlay District. The Historic Preservation Board’s review at that time helped inform the evolution of the building’s design and informed Historic Preservation staff during their advisory review.



Demolition was halted by a temporary stay that applicants attempted to have lifted by the Historic Preservation Board. Upon conclusion by the Historic Preservation Board that the

proposed project conformed to the new construction standards of the historic preservation ordinance the structure was demolished.

The property is within 100 feet of the Munjoy Hill Historic District, and underwent an historic preservation advisory review. Historic Preservation Program Manager, along with the City's Urban Designer, and lead project Planner reviewed the proposal against the *Multiple-Family Standards (City of Portland Design Manual)*.

d. **Exterior Lighting**

The applicant has submitted a lighting and photometric plan which was reviewed by staff and found to be in conformance with the lighting standards.

e. **Noise and Vibration**

The HVAC system will meet the applicable state and federal emissions requirements and will also be screened and directed away from abutters.

f. **Signage and Wayfinding**

All street and wayfinding signage shall meet the requirements of the Manual on Uniform Traffic Devices (MUTCD) and Division 22 of the City Code. Staff has reviewed the proposed signage and finds it to be in conformance with the standards.

g. **Zoning Related Design Standards**

A design review for the proposed new construction of a multi-family project at 19 Willis Street was performed by Planning and Urban Development staff including the City's Urban Designer, Historic Preservation Program Manager, and lead Planner. Because the lot is greater than 10,000 sf in size, the project was reviewed against the *Multiple-Family Standards (City of Portland Design Manual)*. The original design review found that a number of the principles and standards had not been met by the proposed design and that the applicant needed to amend the plans accordingly. A second round of design review comments were provided to the applicant following the submission of updated architectural drawings. The applicant responded to staff comments, and at this time, the project is found to conform to the relevant design guidelines. Potential modifications were suggested by staff for consideration (listed below). These suggested modifications were addressed by the applicant (in Italics).

- **Bays:** Staff request more information about the accent material used on the bays – ideally, this material would have the same character and finish as the shingle but with a different texture, orientation and/or scale.

Applicant Response: The bays are to be clad in material that matches the decorative accent panels below the windows, to provide continuity and a visual connection between the accent elements. At an earlier Planning Board workshop the team presented samples of possible textured metal for the accent panels. Material samples can be presented at the Planning Board hearing.

- **Planters/Terraces:** Staff request more information about the stone proposed for the planters/terraces.

Applicant Response: Exterior landscape materials are to be as follows:

Stone Veneer Retaining Walls: Regionally quarried fieldstone / granite (gray tones)

Wood Clad Exterior Retaining Walls: Weathered cedar (or equal)

Entry Masonry Walkway and Steps: Regionally quarried monolithic saw-cut granite slab steps and dimensional pavers (gray tones)

Drive Aisle Paving: Concrete unit paver (Techo-bloc 80 ml. or equal)

In addition, the project was reviewed for compliance with the additional design standards for buildings located in the Munjoy Hill Conservation Overlay District Section 14-140.5.a(d) and was found to meet the standards.

Section 14-140.5(d)(a): All buildings shall use simple, traditional roof forms as illustrated in Diagrams 14-140.5.c-f., except that flat roofs are permitted in buildings of 3 or more units.

- Staff Comment: The proposed project is a 12 unit apartment building. Flat roofs are permitted in buildings of three or more units. This standard is adequately addressed.

Section 14-140.5(d)(b): The first floor shall contain active living space, such as a living room or bedroom, with windows for at least 50% of the width of the front façade in total.

- Staff Comment: The proposed building's first floor contains active living space for greater than 50% of the building façade, this standard is considered adequately met.

Please see Attachment 3, Design Review, for the full urban design memorandum. Please see attachment 4, Response to Design Review, for the applicant's responses to the suggested modifications above.

h. Construction Management Plan

The applicant has submitted a construction management plan which was reviewed by staff and found to meet the applicable standards.

XI. PUBLIC COMMENT AND NEIGHBORHOOD MEETING

A total of 208 notices were sent to property owners within 500 feet of the site and a legal notice ran in the December 3rd & December 4th 2021 editions of the *Portland Press Herald*.

The required neighborhood meeting was held on Friday, September 13, 2019 from 5:30-6:45 pm at the East End Community School. Thirteen members of the public were in attendance along with Tim Wells, representing the applicant, and Jesse Thompson and Richard Lo from Kaplan Thompson Architects. The majority of comments received were in response to the proposed building's design, scale and neighborhood context.

In advance of this Public Hearing, staff has received 16 written comments from the public, mostly in opposition and expressing concerns about building height and mass.

XII. STAFF RECOMMENDATION

Subject to the proposed motions and conditions of approval listed below, Planning and Urban Development Department staff recommend that the Planning Board approve the proposed development at 19 Willis Street.

XIII. MOTIONS FOR THE BOARD TO CONSIDER

A. INCLUSIONARY ZONING CONDITIONAL USE

On the basis of the application, plans, reports and other information submitted by the applicant, findings and recommendations contained in the Planning Board Report for the public hearing on December 14, 2021 for application #PL-000807-2019 relevant to Portland's Inclusionary Zoning Conditional Use Standards and other regulations, and the testimony presented at the Planning Board hearing, the Planning Board **[finds/does not find]** the proposed conditional use for workforce housing meets the standards of Land Use Code Section 14-487 with the following condition(s):

PRIOR TO ISSUANCE OF A BUILDING PERMIT

1. The Applicant and the City shall enter into an agreed upon Affordable Housing Agreement (AHA) for one workforce unit integrated with the development, or as an alternative to providing the workforce housing unit, the applicant may pay a fee-in-lieu for the required unit.

PRIOR TO ISSUANCE OF A CERTIFICATE OF OCCUPANCY

2. An Affordable Housing Agreement will be filed as a covenant to the property's deed with the Cumberland County Registry of Deeds.

B. SUBDIVISION REVIEW

On the basis of the application, plans, reports and other information submitted by the applicant, findings and recommendations contained in the Planning Board Report for the public hearing on December 14, 2021 for application #PL-000807-2019 relevant to the subdivision regulations, and the testimony presented at the Planning Board hearing, the Planning Board **[finds/does not find]** that the plan is in conformance with the subdivision standards of the Land Use Code subject to the following conditions of approval:

PRIOR TO THE SUBMISSION OF THE PLAT FOR PLANNING BOARD SIGNATURE

1. The subdivision plat shall be finalized to the satisfaction of the Planning Authority, Corporation Counsel and Department of Public Works and include clear descriptions of the number, location, type and size of all subdivided units, along with relevant notes and conditions.

PRIOR TO ISSUANCE OF A BUILDING PERMIT

2. The signed subdivision plat shall be recorded at the Cumberland County Registry of Deeds.

C. SITE PLAN REVIEW

On the basis of the application, plans, reports and other information submitted by the applicant; findings and recommendations contained in the Planning Board Report for the public hearing on December 14, 2021, for application #PL-000807-2019, relevant to the site plan regulations; and the testimony presented at the Planning Board hearing, the Planning Board **[finds/does not find]** that the plan is in conformance with the site plan standards of the Land Use Code, subject to the following condition of approval:

PRIOR TO ISSUANCE OF A BUILDING PERMIT

1. A financial contribution totaling \$3,200, to be paid into the City's street tree fund, shall be provided for the required eight street trees not provided on-site. The applicant may also choose to pursue a street tree alternative as listed in the City's site plan ordinance, Sec. 14-526.

**XIV. ATTACHMENTS
PLANNING BOARD REPORT ATTACHMENTS**

1. Design Review Memo (Final)
2. Applicant Response to Design Review
3. Housing Program Manager Memorandum
4. Grade Calculations
5. September 24, 2019 Workshop – Memo Attachments

APPLICANT'S SUBMITTALS

- A. Application Checklist
- B. Project Description
- C. Right, Title and Interest
- D. Financial and Technical Capability
- E. Zoning Assessment
- F. Transportation
- G. Stormwater
- H. Utilities
- I. Solid Waste
- J. Public Infrastructure and Safety
- K. Design Review - Site Design
- L. Design Review - R-6 Design Principles
- M. Ability to Serve Determination
- N. Wastewater Capacity Authorization
- O. Verification of Posted Public Meeting Notice

PLANS

- Plan 1. Boundary Survey
- Plan 2. Design Review Context
- Plan 3. Neighborhood Context
- Plan 4. Architectural Drawings
- Plan 5. Architectural Renderings
- Plan 6. Revised Civil Drawings
- Plan 7. Landscape Plan
- Plan 8. Construction Management Plan

PUBLIC COMMENT

- PC1. Barbara vestal

PC2. Carol Connor
PC3. Carol Connor
PC4. Carol Connor
PC5. Erna Koch
PC6. Karen Snyder
PC7. Mike Hoover
PC8. Peter Murray
PC9. Wayne Valzania
PC10. Wayne Valzania
PC11. Wayne Valzania
PC12. Barbara Vestal
PC13. Peter Murray
PC14. Jean McManamy and Others
PC15. Carolyn Swartz
PC16. Karen Snyder

CHAPTER 32 STORM WATER

Art. I. Prohibited Discharges, §§ 32-1--32-15

Art. II. Prohibited Discharges, §§ 32-16--32-35

Art. III. Post-Construction Stormwater Management, §§32-36--32-40

ARTICLE I. IN GENERAL

Sec. 32-1. Definitions.

For the purposes of this article, the terms listed below are defined as follows:

Applicant. "Applicant" means a person with requisite right, title or interest or an agent for such person who has filed an application for a development project that requires a post-construction stormwater management plan under this article.

Best management practices ("BMP"). "Best management practices" or "BMPs" means schedules or activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the state. BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

Clean Water Act. "Clean Water Act" means the federal Water Pollution Control Act (33 U.S.C. § 1251 *et seq.*, also known as the "Clean Water Act"), and any subsequent amendments thereto.

Discharge. "Discharge" means any spilling, leaking, pumping, pouring, emptying, dumping, disposing or other addition of pollutants to "waters of the state." "Direct discharge" or "point source" means any discernable, confined and discrete conveyance, including, but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation or vessel or other floating craft, from which pollutants are or may be discharged.

Enforcement authority. "Enforcement authority" means the person(s) or department authorized under section 32-3 of this article to administer and enforce this article.

Exempt person or discharge. "Exempt person or discharge" means any person who is subject to a multi-sector general permit for industrial activities, a general permit for construction activity, a general permit for the discharge of storm water from the Maine department of transportation and the Maine turnpike authority

municipal separate storm sewer systems, or a general permit for the discharge of storm water from state or federally owned authority municipal separate storm sewer system facilities; and any non-storm water discharge permitted under a NPDES permit, waiver, or waste discharge license or order issued to the discharger and administered under the authority of the U.S. environmental protection agency ("EPA") or the Maine department of environmental protection ("DEP"). City of Portland

Municipality. "Municipality" means the city of Portland.

Municipal separate storm sewer system, or MS4. "Municipal separate storm sewer system" or "MS4," means conveyances for storm water, including, but not limited to, roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, human-made channels or storm drains (other than publicly owned treatment works and combined sewers) owned or operated by any municipality, sewer or sewage district, fire district, state agency or federal agency or other public entity that discharges directly to surface waters of the state.

National pollutant discharge elimination system (NPDES) storm water discharge permit. "National pollutant discharge elimination system (NPDES) storm water discharge permit" means a permit issued by the EPA or by the DEP that authorizes the discharge of pollutants to waters of the United States, whether the permit is applicable on an individual, group, or general area-wide basis.

Non-storm water discharge. "Non-storm water discharge" means any discharge to an MS4 that is not composed entirely of storm water.

Person. "Person" means any individual, firm, corporation, municipality, quasi-municipal corporation, state agency or federal agency or other legal entity which creates, initiates, originates or maintains a discharge of storm water or a non-storm water discharge.

Pollutant. "Pollutant" means dredged spoil, solid waste, junk, incinerator residue, sewage, refuse, effluent, garbage, sewage sludge, munitions, chemicals, biological or radiological materials, oil, petroleum products or by-products, heat, wrecked or discarded equipment, rock, sand, dirt and industrial, municipal, domestic, commercial or agricultural wastes of any kind.

Post-construction stormwater management plan. "Post-construction stormwater management plan" means BMPs employed by a development project to meet the stormwater standards of Section V of the department of planning and urban development's Technical and Design Standards and Guidelines.

Premises. "Premises" means any building, lot, parcel of land, or portion of land, whether improved or unimproved, including adjacent sidewalks and parking strips, located within the municipality from which discharges into the storm drainage system are or may be created, initiated, originated or maintained.

Qualified post-construction stormwater inspector. "Qualified post-construction stormwater inspector" means a person who conducts post-construction stormwater best management practice inspections for compensation and who has received the appropriate training for the same from DEP or otherwise meets DEP requirements to perform said inspections.

Regulated small MS4. "Regulated small MS4" means any small MS4 regulated by the State of Maine "general permit for the discharge of storm water from small municipal separate storm sewer systems" dated July 1, 2008 ("general permit") or the general permits for the discharge of storm water from the Maine department of transportation and Maine turnpike authority small MS4s or state or federally owned or operated small MS4s, including all those located partially or entirely within an urbanized area (UA).

Small municipal separate storm sewer system, or small MS4. "Small municipal separate storm sewer system", or "small MS4," means any MS4 that is not already covered by the phase I MS4 storm water program including municipally owned or operated storm sewer systems, state or federally-owned systems, such as colleges, universities, prisons, Maine department of transportation and Maine turnpike authority road systems and facilities, and military bases and facilities.

Storm drainage system. "Storm drainage system" means the City of Portland's regulated small MS4 and other conveyances for storm water located in areas outside the UA that drain into the regulated small MS4.

Storm water. "Storm water" means any storm water runoff, snowmelt runoff, and surface runoff and drainage; "Stormwater" has the same meaning as "storm water".

Urbanized area ("UA"). "Urbanized area" or "UA" means the areas of the State of Maine so defined by the latest decennial (2000) census by the U.S. Bureau of Census.
(Ord. No. 85-08/09, 10-20-08; Ord. No. 35-09/10, 8-17-09)

Sec. 32-2. Reserved.

Sec. 32-3. Reserved.

Sec. 32-4. Reserved.

Sec. 32-5.	Reserved.
Sec. 32-6.	Reserved.
Sec. 32-7.	Reserved.
Sec. 32-8.	Reserved.
Sec. 32-9.	Reserved.
Sec. 32-10.	Reserved.
Sec. 32-11.	Reserved.
Sec. 32-12.	Reserved.
Sec. 32-13.	Reserved.
Sec. 32-14.	Reserved.
Sec. 32-15.	Reserved.

ARICLE II. PROHIBITED DISCHARGES

Sec. 32-16. Applicability.

This Article shall apply to all persons discharging storm water and/or non-storm water discharges from any premises into the storm drainage system.

(Ord. No. 85-08/09, 10-20-08; Ord. No. 35-09/10, 8-17-09)

Sec. 32-17. Responsibility for administration.

The department of public services is the enforcement authority who shall administer, implement, and enforce the provisions of this article.

(Ord. No. 85-08/09, 10-20-08; Ord. No. 35-09/10; 8-17-09)

Sec. 32-18. Prohibition of non-storm water discharges.

(a) *General prohibition.* Except as allowed or exempted herein, no person shall create, initiate, originate or maintain a non-storm water discharge to the storm drainage system. Such non-storm water discharges are prohibited notwithstanding the fact that the city may have approved the connections, drains or conveyances by which a person discharges un-allowed non-storm water discharges to the storm drainage system.

(b) *Allowed non-storm water discharges.* The creation, initiation, origination and maintenance of the following non-storm water discharges to the storm drainage system is allowed:

- (1) Landscape irrigation; diverted stream flows; rising ground waters; uncontaminated flows from foundation drains; air conditioning and compressor condensate; irrigation water; flows from uncontaminated springs; uncontaminated water from crawl space pumps; uncontaminated flows from footing drains; lawn watering runoff; flows from riparian habitats and wetlands; residual street wash water (where spills/leaks of toxic or hazardous materials have not

occurred, unless all spilled material has been removed and detergents are not used); hydrant flushing and fire fighting activity runoff; water line flushing and discharges from potable water sources; individual residential car washing; and de-chlorinated swimming pool discharges.

- (2) Discharges specified in writing by the enforcement authority as being necessary to protect public health and safety.
- (3) Dye testing, with verbal notification to the enforcement authority prior to the time of the test.

(c) *Exempt person or discharge.* This article shall not apply to an exempt person or discharge, except that the enforcement authority may request from exempt persons and persons with exempt discharges copies of permits, notices of intent, licenses and orders from the EPA or DEP that authorize the discharge(s).

(Ord. No. 85-08/09, 10-20-08; Ord. No. 35-09/10, 8-17-09)

Sec. 32-19. Suspension of access to the city's small MS4.

The enforcement authority may, without prior notice, physically suspend discharge access to the storm drainage system to a person when such suspension is necessary to stop an actual or threatened non-storm water discharge to the storm drainage system which presents or may present imminent and substantial danger to the environment, or to the health or welfare of persons, or to the storm drainage system, or which may cause the city to violate the terms of its environmental permits. Such suspension may include, but is not limited to, blocking pipes, constructing dams or taking other measures, on public ways or public property, to physically block the discharge to prevent or minimize a non-storm water discharge to the storm drainage system. If a person fails to comply with a suspension order issued in an emergency, the enforcement authority may take such steps as deemed necessary to prevent or minimize damage to the storm drainage system, or to minimize danger to persons.

(Ord. No. 85-08/09, 10-20-08; Ord. No. 35-09/10, 8-17-09)

Sec. 32-20. Monitoring of discharges.

In order to determine compliance with this article, the enforcement authority may enter upon and inspect premises subject to this article at reasonable hours to inspect the premises and connections thereon to the storm drainage system; and to conduct monitoring, sampling and testing of the discharge to the storm drainage system.

(Ord. No. 85-08/09, 10-20-08; Ord. No. 35-09/10, 8-17-09)

Sec. 32-21. Enforcement.

It shall be unlawful for any person to violate any provision of or to fail to comply with any of the requirements of this article. Whenever the enforcement authority believes that a person has violated this article, the enforcement authority may enforce this article in accordance with 30-A M.R.S.A. § 4452.

- (a) *Notice of violation.* Whenever the enforcement authority believes that a person has violated this article, the enforcement authority may order compliance with this article by written notice of violation to that person indicating the nature of the violation and ordering the action necessary to correct it, including, without limitation:
- (1) The elimination of non-storm water discharges to the storm drainage system, including, but not limited to, disconnection of the premises from the MS4.
 - (2) The cessation of discharges, practices, or operations in violation of this article.
 - (3) At the Person's expense, the abatement or remediation (in accordance with best management practices in DEP rules and regulations) of non-storm water discharges to the storm drainage system and the restoration of any affected property; and/or
 - (4) The payment of fines, of the city's remediation costs and of the city's reasonable administrative costs and attorneys' fees and costs. If abatement of a violation and/or restoration of affected property is required, the notice shall set forth a deadline within which such abatement or restoration must be completed.
- (b) *Penalties/fines/injunctive relief.* In addition to the imposition of any other costs or penalties provided for herein, any person who violates this section shall be subject to fines, penalties and orders for injunctive relief and shall be responsible for the city's attorney's fees and costs, all in accordance with 30-A M.R.S.A. § 4452. Each day such violation continues shall constitute a separate violation. Moreover, any person who violates this section also shall be responsible for any and all fines, penalties, damages and costs, including, but not limited to attorneys' fees and costs, incurred by the city for violation of federal and State environmental laws and

regulations caused by or related to that person's violation of this article; this responsibility shall be in addition to any penalties, fines or injunctive relief imposed under this section.

- (c) *Consent agreement.* The enforcement authority may, with the approval of the city manager, enter into a written consent agreement with the violator to address timely abatement of the violation(s) of this article for the purposes of eliminating violations of this article and of recovering fines, costs and fees without court action.
- (d) *Appeal of notice of violation.* Any person receiving a notice of violation or suspension notice may appeal the determination of the enforcement authority to the city manager or his or her designee. The notice of appeal must be received within 30 days from the date of receipt of the notice of violation. The city manager shall hold a hearing on the appeal within 30 days from the date of receipt of the notice of appeal, except that such hearing may be delayed by agreement of the city manager and the appellant. The city manager may affirm, reverse or modify the decision of the enforcement authority. A suspension under Section 32-5 of this article remains in place unless or until lifted by the city manager or by a reviewing court. A party aggrieved by the decision of the city manager may appeal that decision to the Maine superior court within 45 days of the date of the city manager's decision pursuant to Rule 80B of the Maine Rules of Civil Procedure.
- (e) *Enforcement measures.* If the violation has not been corrected pursuant to the requirements set forth in the notice of violation, or, in the event of an appeal to the city manager, within 45 days of a decision of the city manager affirming the enforcement authority's decision, then the enforcement authority may recommend that the corporation counsel's office file an enforcement action in a Maine court of competent jurisdiction under Rule 80K of the Maine Rules of Civil Procedure.
- (f) *Ultimate responsibility of discharger.* The standards set forth herein are minimum standards; therefore this article does not intend nor imply that compliance by any person will ensure that there will be no contamination, pollution, nor unauthorized discharge of pollutants into waters of the U.S. caused by said person. This article shall not create liability on the part of the city, or any officer agent or employee thereof for any damages that

result from any person's reliance on this article or any administrative decision lawfully made hereunder.
(Ord. No. 85-08/09, 10-20-08; Ord. No. 35-09/10, 8-17-09)

Sec. 32-22. Severability.

The provisions of this article are hereby declared to be severable. If any provision, clause, sentence, or paragraph of this article or the application thereof to any person, establishment, or circumstances shall be held invalid, such invalidity shall not affect the other provisions, clauses, sentences, or paragraphs or application of this article.

(Ord. No. 85-08/09, 10-20-08; Ord. No. 35-09/10, 8-17-09)

Sec. 32-23. Reserved.
Sec. 32-24. Reserved.
Sec. 32-25. Reserved.
Sec. 32-26. Reserved.
Sec. 32-27. Reserved.
Sec. 32-28. Reserved.
Sec. 32-29. Reserved.
Sec. 32-30. Reserved.
Sec. 32-31. Reserved.
Sec. 32-32. Reserved.
Sec. 32-33. Reserved.
Sec. 32-34. Reserved.
Sec. 32-35. Reserved.

ARTICLE III. POST-CONSTRUCTION STORMWATER MANAGEMENT.

Sec. 32-36. Applicability.

This article applies to all development projects that require a stormwater management plan pursuant to section V of the department of planning and urban development's Technical and Design Standards and Guidelines.

(Ord. No. 35-09/10, 8-17-09)

Sec. 32-37. Post-construction stormwater management plan approval.

Notwithstanding any ordinance provision to the contrary, no applicant for a development project to which this article is applicable shall receive approval for that development project unless the applicant also receives approval for its post-construction stormwater management plan and for the best management practices ("BMPs") for that development project.

(Ord. No. 35-09/10, 9-17-09)

Sec. 32-38. Post-construction stormwater management plan compliance.

Any person owning, operating, or otherwise having control over a BMP required by a post construction stormwater management plan shall maintain the BMPs in accordance with the approved plan and shall demonstrate compliance with that plan as follows:

- (a) *Inspections.* The owner or operator of a BMP shall hire a qualified post-construction stormwater inspector to at least annually, inspect the BMPs, including but not limited to any parking areas, catch basins, drainage swales, detention basins and ponds, pipes and related structures, in accordance with all municipal and state inspection, cleaning and maintenance requirements of the approved post-construction stormwater management plan.
- (b) *Maintenance and repair.* If the BMP requires maintenance, repair or replacement to function as intended by the approved post-construction stormwater management plan, the owner or operator of the BMP shall take corrective action(s) to address the deficiency or deficiencies as soon as possible after the deficiency is discovered and shall provide a record of the deficiency and corrective action(s) to the department of public services ("DPS") in the annual report.
- (c) *Annual report.* The owner or operator of a BMP or a qualified post-construction stormwater inspector hired by that person, shall, on or by June 30 of each year, provide a completed and signed certification to DPS in a form provided by DPS, certifying that the person has inspected the BMP(s) and that the year adequately maintained and functioning as intended by the approved post-construction stormwater management plan, or that they require maintenance or repair, including the record of the deficiency and corrective action(s) taken.
- (d) *Filing fee.* Any persons required to file an annual certification under this section shall include with the annual certification a filing fee established by DPS to pay the administrative and technical costs of review of the annual certification.
- (e) *Right of entry.* In order to determine compliance with this article and with the post-construction stormwater management plan, DPS may enter upon property at reasonable hours with the consent of the owner, occupant or agent to inspect the BMPs.

Sec. 32-39. Enforcement.

It shall be unlawful for any person to violate any provision of or to fail to comply with any of the requirements of this article or of the post-construction stormwater management plan. Whenever the enforcement authority believes that a person has violated this article, DPS may enforce this article in accordance with 30-A M.R.S.A. § 4452. Each day on which a violation exists shall constitute a separate violation for purposes of this section.

- (a) *Notice of violation.* Whenever DPS believes that a person has violated this article or the post-construction stormwater management plan, DPS may order compliance by written notice of violation to that person indicating the nature of the violation and ordering the action necessary to correct it, including, without limitation:
 - (1) The abatement of violations, and the cessation of practices or operations in violation of this article or of the post-construction stormwater management plan;
 - (2) At the person's expense, compliance with BMPs required as a condition of approval of the development project, the repair of BMPs and/or the restoration of any affected property; and/or
 - (3) The payment of fines, of the City's remediation costs and of the City's reasonable administrative costs and attorneys' fees and costs.
 - (4) If abatement of a violation, compliance with BMPs, repair of BMPs and/or restoration of affected property is required, the notice shall set forth a deadline within which such abatement, compliance, repair and/or restoration must be completed.
- (b) *Penalties/fines/injunctive relief.* In addition to the imposition of any other costs or penalties provided for herein, any person who violates this section shall be subject to fines, penalties and orders for injunctive relief and shall be responsible for the city's attorney's fees and costs, all in accordance with 30-A M.R.S.A. § 4452. Each day such violation continues shall constitute a separate violation. Moreover, any person who violates this section also shall be responsible for any and all fines, penalties, damages and costs, including, but not limited to

attorneys' fees and costs, incurred by the city for violation of federal and state environmental laws and regulations caused by or related to that person's violation of this article; this responsibility shall be in addition to any penalties, fines or injunctive relief imposed under this section.

- (c) *Consent agreement.* The enforcement authority may, without approval of the city manager, enter into a written consent agreement with the violator to address timely abatement of the violation(s) of this article for the purposes of eliminating violations of this article and of recovering fines, costs and fees without court action.
- (d) *Appeal of notice of violation.* Any person receiving a notice of violation or suspension notice may appeal the determination of the enforcement authority to the city manager or his or her designee. The notice of appeal must be received within 30 days from the date of receipt of the notice of violation. The city manager shall hold a hearing on the appeal within 30 days from the date of receipt of the notice of appeal, except that such hearing may be delayed by agreement of the city manager and the appellant. The city manager may affirm, reverse or modify the decision of the DPS. A party aggrieved by the decision of the city manager may appeal that decision to the Maine superior court within forty-five (45) days of the date of the city manager's decision pursuant to Rule 80B of the Maine Rules of Civil Procedure.
- (e) *Enforcement measures.* If the violation has not been corrected pursuant to the requirements set forth in the notice of violation, or , in the event of an appeal to the city manager, within forty-five (45) days of a decision of the city manager affirming the enforcement authority's decision, then the enforcement authority may recommend that the corporation counsel's office file an enforcement action in a Maine court of competent jurisdiction under Rule 80K of the Maine Rules of Civil Procedure.

(Ord. No. 35-09/10, 8-17-09)

Sec. 32-40. Severability.

The provisions of this article are hereby declared to be severable. If any provision, clause, sentence, or paragraph of this article or the application thereof to any person, establishment, or circumstances shall be held invalid, such invalidity shall not affect the other provisions, clauses, sentences, or paragraphs or application of this article.

(Ord. No. 35-09/10, 8-17-09)

STORMWATER DRAINAGE SYSTEM MAINTENANCE AGREEMENT

For SUBDIVISIONS

IN CONSIDERATION OF the site plan and subdivision approval granted by the Planning Board of the City of Portland to the proposed _____ (name of developments and project number) shown on the Subdivision Plat (Exhibit A) recorded in Cumberland Registry of Deeds in Plan Book ____, Page ____ submitted by _____, and associated Grading, Drainage & Erosion Control Plan (*insert correct name of plan*) (Exhibit B) prepared by _____ (engineer/agent) of _____(address) dated and pursuant to a condition thereof, _____ (name of owner), a Maine limited liability company with a principal place of business in Portland, Maine, and having a mailing address of _____, the owner of the subject premises, does hereby agree, for itself, its successors and assigns (the “Owner”), as follows:

Maintenance Agreement

That it, its successors and assigns, will, at its own cost and expense and at all times in perpetuity, maintain in good repair and in proper working order the _____ (*details of the system such as underdrained subsurface sand filter BMP system, rain gardens, storm drain pipes, underdrain pipes, catch basins*), (hereinafter collectively referred to as the “stormwater system”), as shown on the _____ Plan in Exhibit B and in strict compliance with the approved Stormwater Maintenance and Inspection Agreement (*insert correct name of document*) prepared for the Owner by _____ (copy attached in Exhibit C) and Chapter 32 of the Portland City Code.

Owner of the subject premises further agrees, at its own cost, to keep a Stormwater Maintenance Log. Such log shall be made available for inspection by the City of Portland upon reasonable notice and request.

Said agreement is for the benefit of the said City of Portland and all persons in lawful possession of said premises and abutters thereto; further, that the said City of Portland and said persons in lawful possession may enforce this Agreement by an action at law or in equity in any court of competent jurisdiction; further, that after giving the Owner written notice and a stated time to perform, the said City of Portland, by its authorized agents or representatives, may, but is not obligated to, enter upon said premises to maintain, repair, or replace said stormwater system in the event of any failure or neglect thereof, the cost and expense thereof to be reimbursed in full to the said City of Portland by the Owner upon written demand. Any funds owed to the City under this paragraph shall be secured by a lien on the property.

This Agreement shall also not be construed to allow any change or deviation from the requirements of the subdivision and/or site plan most recently and formally approved by the Planning Board of the City of Portland.

This agreement shall bind the undersigned only so long as it retains any interest in said premises, and shall run with the land and be binding upon the Owner's successors and assigns as their interests may from time to time appear.

The Owner agrees to record a copy of this Agreement in the Cumberland County Registry of Deeds within thirty (30) days of final execution of this Agreement. The Owner further agrees to provide a copy of this Agreement to any successor or assign and to forward to the City an Addendum signed by any successor or assign in which the successor or assign states that the successor or assign has read the Agreement, agrees to all its terms and conditions and the successor or assign will obtain and forward to the City's Department of Public Services and Department of Planning and Urban Development a similar Addendum from any other successor or assign.

For the purpose of this agreement and release "Owner" is any person or entity who is a successor or assign and has a legal interest in part, or all, of the real estate and any building. The real estate shown by chart, block and lot number in the records on file in the City Assessor's office shall constitute "the property" that may be entered by the City and lienied if the City is not paid all of its costs and charges following the mailing of a written demand for payment to the owner pursuant to the process and with the same force and effect as that established by 36 M.R.S.A. §§ 942 and 943 for real estate tax liens.

Any written notices or demands required by the agreement shall be complete on the date the notice is attached to one or more doors providing entry to any buildings and mailed by certified mail, return receipt requested or ordinary mail or both to the owner of record as shown on the tax roles on file in the City Assessor's Office.

If the property has more than one owner on the tax rolls, service shall be complete by mailing it to only the first listed owner. The failure to receive any written notice required by this agreement shall not prevent the City from entering the property and performing maintenance or repairs on the stormwater system, or any component thereof, or lienied it or create a cause of action against the City.

Dated at Portland, Maine this _____ day of _____, 2014.

(*name of company*)

(*representative of owner, name and title*)

STATE OF MAINE
CUMBERLAND, ss.

Date: _____

Personally appeared the above-named _____ (*name and title*), and acknowledged the foregoing instrument to be his free act and deed in his said capacity.

Before me,

Notary Public/Attorney at Law

Print name: _____

Exhibit A: Subdivision Plat as recorded

Exhibit B: Approved Grading and Drainage Plan (*name of the plan showing the Stormwater System in detail*)

Exhibit C: Approved Stormwater Maintenance and Inspection Agreement



CITY OF PORTLAND
Planning & Urban Development

**Performance Guarantee, Inspection Fee, and Infrastructure Financial
Contribution Packet**

A. Site Plan/Subdivision Performance Guarantees Required

Portland's Land Use Code requires all developers with approved site plan and/or subdivision applications to submit a performance guarantee to the City prior to the start of any construction or site improvements. The performance guarantee represents 100% of the total cost of site improvements, as determined by the City.

The code further requires developers to pay an inspection fee of 2% of the performance guarantee amount to the City for the administrative costs associated with inspecting construction activity to ensure that it conforms with plans and specifications.

(Portland's Land Use Code, Sections 14-501 and 14-530)

B. Cost Estimate Form and Inspection Fee

The performance guarantee covers major site improvements related to site plan and subdivision review, such as paving, roadway, utility connections, drainage, landscaping, lighting, etc.

Please submit an itemized cost estimate form to determine the detailed costs of both public and private site improvements to the Planning Division for review and approval. The cost estimate form (excel format) can be downloaded from the city's website here:

<http://portlandmaine.gov/costestimate> The approved amount on the Cost Estimate form is the amount to be covered by the performance guarantee and is the basis for calculating the 2% inspection fee.

C. Acceptable Types of Performance Guarantees

The accepted forms of a performance guarantee, covering the amount approved on the Cost Estimate form, must be one of the following options consistent with the attached templates, with **NO** exceptions. The templates and instructions be located on our website

at: <https://www.portlandmaine.gov/2157/Performance-Guarantee>

1. A letter of credit from a bank/credit union
2. A deposit into a bank-held escrow account
3. A deposit into a City-held escrow account

NOTE: No land use application of any kind shall be processed, reviewed or issued, no signed subdivision plat shall be released or recorded, and no building permit of any kind shall be issued unless all fees have been paid and every aspect of the proposed development is in compliance with City Codes as determined by the Development Review Coordinator in the Planning Division.

The developer is eligible to receive up to three reductions from the performance guarantee in a calendar year equal to the estimated cost of the completed improvements. In no case, however, shall any performance guarantee be reduced 1) in any line item where improvements remain to be completed; or 2) to a value which is less than the estimated cost of completing all remaining required improvements; or 3) to a value less than 10% of the Performance Guarantee. *(The Cost Estimate Form can also be used during the construction phase to submit reductions of fully completed site work items)*

At the conclusion of the project, the City will release 90% of the performance guarantee after the Development Review Coordinator determines that site improvements have been satisfactorily completed at the time of the final inspection. The City will then retain a 10% defect guarantee to cover the workmanship and durability of materials used in construction. The defect guarantee will be released one

(1) year from date of acceptance, subject to the Development Review Coordinator inspecting the site and finding it in compliance with the approved site plan.

D. Housing Replacement Performance Guarantees

For those projects that are subject to Portland's Housing Preservation and Replacement Ordinance (Section 24-483) and have an approved plan, then a performance guarantee is required for housing replacement. An owner or developer must post a performance guarantee in the form of a letter of credit in the amount equivalent to the amount the applicant would have been required to contribute to the City's Housing Fund, if the applicant had chosen that option. The guarantee shall be valid for no more than three years, after which the full amount shall be provided to the City's Housing Trust Fund, if replacement units meeting the code do not have certificates of occupancy. The guarantee can be released upon the issuance of a certificate of occupancy for the replacement units. A suggested template for a Housing Replacement Performance Guarantee is included as Attachment 4.

E. Infrastructure Accounts

Contributions to infrastructure accounts may be required as part of the conditions of site plan approval. The contributions must be submitted prior to the issuance of any permits, unless stated otherwise in the approval. The form for submitted required contributions is included as Attachment 5.

F. Administrative Process for Submitting Performance Guarantee

- **Step 1 – Submit a Cost Estimate for Review**

Submit completed cost estimate form to the Planning Division for review and approval. Once approved, use this total amount as the performance guarantee amount in Step 2.

- **Step 2 – Drafting a Performance Guarantee**

Complete a draft of 1 of the 3 attached performance guarantee templates, inputting project specific information (Reference [Guide for Drafting](#) for help) into blank and bracketed areas, and submit to the Planning Division for final approval. Submit a draft to **planning@portlandmaine.gov** to

ensure fields are correctly entered. Once staff approved the draft, the applicant shall submit the official signed original performance guarantee document, which for option 1) or 2) must be on Bank/Credit Union letterhead with original signatures.

- **Step 3 - Submit Performance Guarantee, Inspection Fee, and Infrastructure Contributions** Submit the final original Performance Guarantee, the required inspection fee, and any infrastructure contributions (Include Attachment 6 form) to the Planning Division. The Planning Division will confirm that the final documents are accurate and acceptable.
- **Step 4 - Release of Recording Plat and Permits**
Only after the performance guarantee is issued, fees paid, and all other conditions of site plan approval and compliance are met, will the recording plat be released for recording at the Cumberland County Registry of Deeds and/or City permits issued.

Contact: Please email the Cost Estimate Form to Jodie Keene at **jkeene@portlandmaine.gov** After the cost estimate is approved, all Performance Guarantees and Infrastructure Contributions can be submitted by mail to: **City of Portland Planning Division, 389 Congress Street, 4th Floor, Portland, ME 04101**. Please call our office with any questions: 207-874-8632

Time & Temperature Building | 477 Congress Street
Major Site Plan + Inclusionary Zoning Conditional Use
PL-002673-2023 + CU-002677-2023
GreenMars Real Estate Company

Submitted to:	Portland Planning Board	Prepared By:	Natasha Kypfer
Public Hearing Date:	December 12, 2023	Date:	December 8, 2023

I. INTRODUCTION

GreenMars Real Estate Company, LLC, seeks approval of a Major Site Plan and Inclusionary Zoning Conditional Use application for the property at 477 - 481 Congress Street and 22 Preble Street, historically known as the Chapman Building, but now known colloquially as the Time & Temperature Building. This application proposes the conversion of currently vacant office space to a hotel and residential use with 136 hotel rooms and 140 long-term residential micro unit apartments. Furthermore, the proposed project includes 4,800 square feet of new retail space and a restaurant with an approximate seating capacity of 140.



Figure 1: 477 Congress Street Parcel

On January 25, 2022, the Planning Board approved a Level III Site Plan and Conditional Use application (PL-001003-2021) for this property, submitted by TT Maine Venture, LLC which proposed to convert the building into a 186-room hotel with retail and restaurant space, a rooftop bar and other associated hotel amenities. Meeting materials for the public hearing associated with application PL-001003-2021 can be viewed using the link below, and the approval letter for the prior application is included herein as Attachment B: <https://portlandme.portal.civicclerk.com/event/2751/files/6673>.

The Planning and Urban Development Department mailed 123 notices advertising this meeting to property owners within 500 feet of the site. A legal advertisement ran in the December 2, 2023 and the December 3, 2023 editions of the *Portland Press Herald*.

Applicant: GreenMars Real Estate Company, represented by: Woodard & Curran
Owners: TT Maine Venture, LLC and Brown Tower, LLC of: Presidium Group
Consultants: Darrin Stairs, PE, Woodard & Curran
Virginie Stanley, Invid Architecture
Marieke Thormann, Fathom Companies

II. REQUIRED REVIEWS

<i>Review</i>	<i>Applicable Standards</i>
Pedestrian Activities District (PAD) Overlay	Section 8.8

Site Plan	Section 14.6
Workforce Housing	Section 18.2.3
Inclusionary Zoning for Hotel Projects	Section 18.2.5

III. PROJECT DATA

Existing Zoning	B-3 Downtown Business zone, DEOZ Downtown Entertainment Overlay zone, and PAD Pedestrian Activities District Overlay zone
Property Size	78,680 sq. ft.
Existing Use	Commercial (Vacant)
Proposed Use	Hotel, Residential, & Commercial Retail

	<i>Existing</i>	<i>Proposed</i>	<i>Net Change</i>
Building Footprint	31,700 sq. ft.	31,700 sq. ft.	0
Building Floor Area	202,000 sq. ft.	202,000 sq. ft.	0
Impervious Surface Area	100%	100%	0
Parking Spaces	0 (vacant building)	0	0
Bicycle Parking Spaces	0	28	+28

IV. EXISTING CONDITIONS AND SURROUNDING AREA

The Time and Temperature Building, a fourteen-story contributing structure within the Congress Street Historic District, is located in the center of Downtown Portland, proximate to many major downtown businesses, including retail, restaurants, and coffee shops. The site is surrounded by three adjacent parcels, which are fully developed: Maine Historical Society at 489 Congress Street, 24 Preble Street, and the parking garage along Brown Street.

The site itself is more appropriately identified as a building complex, as it is composed of four historic structures that were functionally combined and physically connected when the Chapman Building at the corner (the newest of the four structures and the one typically identified as the Time & Temperature building) was constructed in 1924. The four components of the complex include the subject property at 477 Congress Street, the Preble House Building at 481 Congress Street, 10-20 Preble Street, and the former B. F. Keith Theatre at 22 Preble Street.

The building is located in the B-3 Downtown Business zone. The B-3 zone is a high-density commercial, residential, and mixed-use zone mapped throughout the City's downtown. The site is also located within the Pedestrian Activities District (PAD) Overlay and the Congress Street Historic District. The proposed renovations were previously reviewed by the Historic Preservation Board for design, please find the Certificate of Appropriateness Extension Letter dated September 14, 2022 included (Attachment C). The block includes three existing buildings, two of which are contributing structures facing Congress Street. Congress Street is an important historic thoroughfare in the downtown with larger scale, historic buildings and a significant volume of pedestrian traffic.

V. PROPOSED DEVELOPMENT

The proposed development site (Plan 26) comprises 78,680 sq. ft. The corner lot has frontage along both Congress Street and Preble Street. The proposed development will include renovations and a change of use for the properties, from multi-use commercial to residential, hotel, and multi-use commercial. The new

uses will include a 136-room hotel and 140 long-term residential micro unit apartments. Furthermore, the proposed project includes 4,800 sq. ft. of new retail space and a restaurant with a 140-seat capacity. The gross square footage, including the basement, floors 1-14, and the penthouse is approximately 206,290 sq. ft.

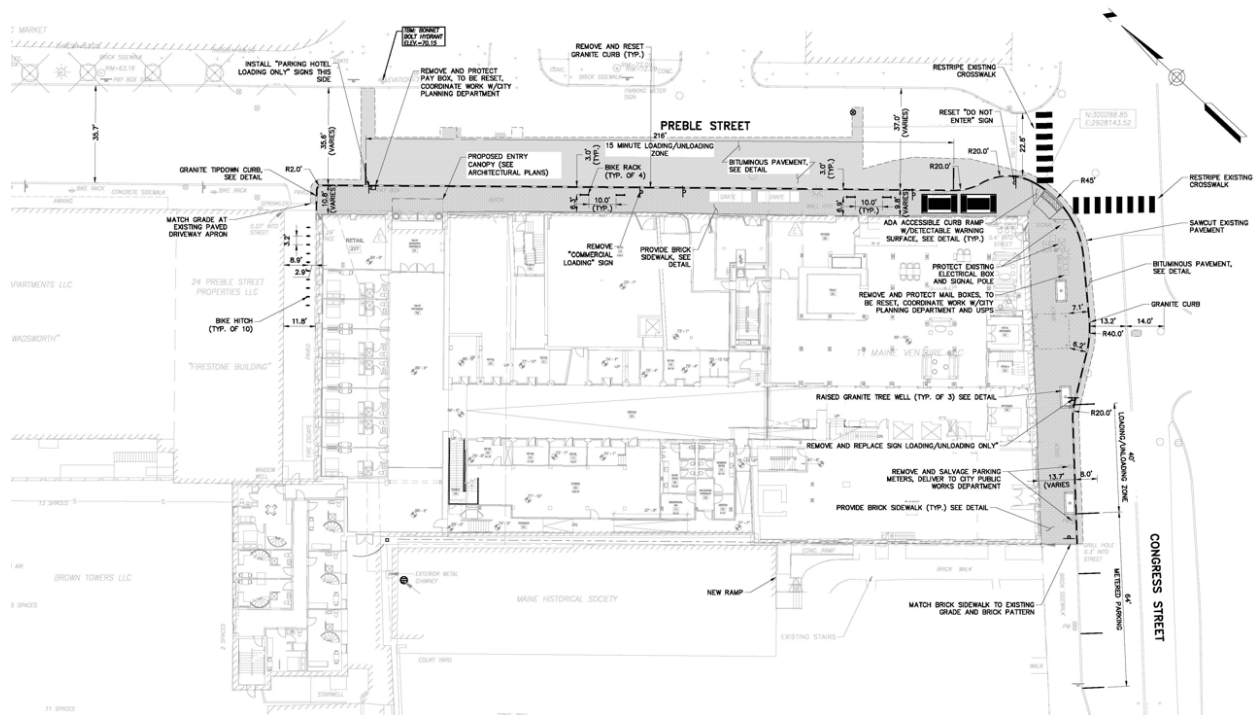


Figure 2: Section from Overall Site Plan (Plan 26) at 477 Congress Street created by Woodard & Curran

VI. RIGHT, TITLE, & INTEREST

The owners of the property are TT Maine Venture, LLC and Brown Tower, LLC, which are both owned by Presidium Group. The applicant, Greenmars Real Estate, Inc. has entered into a Purchase and Sale Agreement with TT Maine Venture, LLC, and Brown Tower, LLC, and a redacted copy of that agreement is provided (Attachment 3). The applicant has provided a quitclaim deed without covenants recorded at the Cumberland County Registry of Deeds (Book 35346 Page 60 and Book 35610 Page 345) as evidence of right, title and interest in the property (Attachment 3).

VII. FINANCIAL & TECHNICAL CAPACITY

The applicant has submitted a letter from Norway Savings Bank, dated September 7, 2023, as demonstration of their financial capacity to complete the proposed development (Attachment 2). Accompanying this, the applicant included the technical capacity documentation which includes: Marieke Thormann of Fathom Companies, Virginie Stanley of Invid Architecture, and staff from Thornton Tomasetti.

VIII. ZONING ANALYSIS

A. DIMENSIONAL AND USE REQUIREMENTS

A zoning review has been conducted on this application and this project meets the requirements of the B-3 Downtown Business zone, see below.

	Required	Proposed
Lot Size	None	78,680 sq. ft.
Street Frontage	15'	121'
Front Setback (Max.)	5'	0'
Building Height	210'	158' – 8"
Lot Coverage* <i>*25% of lot area for portions of structures exceeding 125 ft. in height</i>	Up to 100%	81%, Though the building is existing and, in the event, that the portion above 125 feet exceeds 25% of the lot, this would be considered a legally non-confirming condition.
Undifferentiated Wall	30', except 15' within PAD overlay	Less than 15'
Off-Street Parking	None	0

The proposed use of hotel, residential, and commercial retail are permitted uses within the B-3 Downtown Business zone, the DEOZ Downtown Entertainment Overlay zone, the PAD Pedestrian Activities District Overlay zone, and the Congress Street Historic District.

- DEOZ Downtown Entertainment Overlay zone Standards (Section 8.2)
The proposed uses would not require an entertainment license with the City. Further, entertainment licenses are issued by the Permitting & Inspections Department, and verification of compliance with this zoning standard would occur as part of that license review.
- PAD Pedestrian Activities District Overlay zone Standards (Section 8.8)
The applicant proposed to fully activate the ground level of the building by restoring the interior commercial arcade, and by retaining the existing bank, introducing a restaurant and several retail spaces along both Congress Street and Preble Street, both of which are in the PAD district.

B. CONDITIONAL USE – INCLUSIONARY ZONING

The proposed development has been reviewed by Staff for conformance with the relevant review standards of Article 18 related to the City's Inclusionary Zoning requirements for both residential and hotel projects:

The Inclusionary Zoning Workforce Housing Agreement will require no more than 26 studio units and no less than 9 one-bedroom units, for a total of 35 units, which the applicants are proposing to provide on-site. Per the Inclusionary Zoning guidelines, all non-studio units must have a closet within each bedroom.

As required by the City's Inclusionary Zoning for Ensuring Workforce Housing (18.2.3.C.2) Standards:

At least 25% of the units in the project shall meet the definition of workforce housing unit for sale or for rent as defined in Article 3. The project shall have the option of paying a partial fee-in-lieu as per (6) below or providing an additional unit onsite for any fractional value.

Fee-in-lieu alternative:

As an alternative to providing workforce housing units, projects may pay a fee-in-lieu of some or all of the units. In-lieu fees shall be paid into the Housing Trust Fund. The fee for affordable units not provided shall be \$172,485 per unit, adjusted annually in the same way as the fee under Subsection 18.1.8.

Staff Finding: The proposed development has been reviewed by Staff for conformance with this standard, and consider this standard to be met.

The Hotel Low Income Workforce Agreement will require, of 136 units, 5 hotel low income units in total, which the applicants are proposing to provide on-site. However, one of the standards all Hotel Inclusionary Zoning units must meet is for each unit to be two-bedroom units, totaling no less than 900 sq. ft., which the applicant is not providing. The alternative for the applicant, if they cannot satisfy this requirement, is to revise their floor plans, submit a waiver request (to be reviewed by the Planning Authority), or pay the fee-in-lieu alternative.

As required by the City's Hotel Inclusionary Zoning Ordinance (18.2.5(D) Low-income housing minimum):

All hotel projects shall provide one unit of low-income housing for rent in the City of Portland for every 28 rooms in the hotel project, which shall meet the standards outlined in Subsections 18.2.3(C)(3), (4), and (5) and in the implementing regulations governing low-income units. This amount shall be rounded up to the nearest increment of 28 rooms. These units shall be deed restricted for the longest period permitted by law, shall not be used for short-term rentals of less than 30 days, and must be provided with distinct entrances from the street to delineate them from the hotel itself.

Fee-in-lieu alternative:

As an alternative to providing low-income housing units under Subsection 18.2.5(D) above, a hotel project may pay a fee-in-lieu of \$4,558 per hotel guest room. This amount shall be paid into the City's Housing Trust Fund and used for the purposes set forth in the ordinance and regulations applicable to that trust.

Staff Finding: The proposed development has been reviewed by Staff for conformance with this standard, which is unmet and will require the revision to their floor plans, review of a waiver request by the Planning Authority, or payment of the fee-in-lieu.

IX. SITE PLAN STANDARDS (Section 14.6)

The proposed development has been reviewed by staff for conformance with the relevant review standards of the City of Portland's Site Plan Ordinance, Section 14.6. Staff comments are below.

1. Transportation Standards (Section 14.6.1)

A. Impact on Surrounding Street Systems

The Time and Temperature Building, located at 477 Congress Street, has street frontage on both Congress Street and Preble Street. The proposed redevelopment of the property would involve the conversion of currently vacant office space into 136 hotel units and 140 long-term residential micro unit apartments. Further, the project will feature 4,800 square feet of new retail space, and a 140-seat restaurant. The updated development plan for 477 Congress Street is expected to result in less impact on the surrounding street systems, with respect with what was previously approved, based upon the programmatic changes being proposed. The applicant provided an updated Traffic

Impact Study (Attachment 17), which the City's Traffic Engineer reviewed and provided final comments on (Attachment F).

Staff Finding: The proposed development has been reviewed by Staff for conformance with this standard, and consider this standard to be met.

B. Access and Circulation

The property is situated in the heart of Portland's downtown, in an area of the City that is highly accessible for pedestrians, cyclists, and transit users. The development, as proposed, features no on-site parking, and would reset existing brick sidewalk as currently designed. Sidewalks range from approximately nine feet along Preble Street, 13 feet along Congress Street, and up to 21 feet at the curb extension at the Congress Street and Preble Street intersection.

As proposed, the development would alter existing on-street parking permissions, restricting 216 feet of Preble Street, or space for approximately 11 vehicles, to a 15-minute parking loading and unloading zone. An additional 40 feet of frontage along Congress Street would similarly be converted into a loading/unloading zone.

Staff Finding: The proposed development has been reviewed by Staff for conformance with this standard, and consider this standard to be met.

C. Public Transit Access

The development is located immediately on Congress Street, upon which numerous METRO routes operate. The applicant is not required to make any additional upgrades, given that the nearest transit shelter is located less than a quarter mile away, across the street in front of the property at 480 Congress Street.

Staff Finding: The proposed development has been reviewed by Staff for conformance with this standard, and consider this standard to be met.

D. Parking

The project provides no off-street parking on-site, however, the hotel will operate a valet service off of Preble Street, and the applicant intends to lease parking spaces in nearby parking lots, which are unspecified. Per Table 19-B in the City's Land Use Code, no off-street parking is required for changes of use within the B-3 Downtown Business zone. Further, due to the project site's proximity to fixed route transit service, well within the required $\frac{1}{4}$ mile, no off-street parking is required. Bicycle parking has been accounted for and includes 14 hitches and racks, with each hitch/rack accommodating two bikes, or 28 spaces in total provided. Ten hitches are provided off Preble Street, west of the proposed building entry canopy, and four racks are provided along Preble Street within the pavement proximate to the 15-minutes loading and unloading zone.

Staff Finding: The proposed development has been reviewed by Staff for conformance with this standard, and consider this standard to be met.

E. Transportation Demand Management (TDM)

New commercial or mixed-use development with more than 50,000 square feet of floor area is required to provide a TDM plan in accordance with Section 17 of the Technical Manual. The

applicant has updated the TDM Plan prepared by VHB, that was previously approved for the former hotel project at 477 Congress Street (Attachment 13). This document establishes a framework for reducing single occupancy vehicle trips and encouraging trips by other modes. The City's Transportation Program Manager reviewed the proposed TDM Plan and provided preliminary feedback, which included a request for a table for ease of plan implementation and monitoring, by both the site's TDM Coordinator and the City. Staff recommends the requested updates to the Transportation Demand Management memo be made (see Attachment D), as a Condition of Approval.

Staff Finding: The proposed development has been reviewed by Staff for conformance with this standard, with a single Condition of Approval regarding updates to the TDM Plan suggested.

2. Environmental Quality Standards (Section 14.6.2)

A. Preservation of Significant Natural Features

The site is entirely built out, and the project involves the adaptive reuse of the historic Time & Temperature Building. There are no significant natural features on-site.

Staff Finding: The proposed development has been reviewed by Staff for conformance with this standard, and consider this standard to be met.

B. Landscape Preservation

The site is entirely built out, and the project involves the adaptive reuse of the historic Time & Temperature Building. There is no existing vegetation or site landscaping on the site currently, and so this standard does not apply.

Staff Finding: The proposed development has been reviewed by Staff for conformance with this standard, and consider this standard to be met.

C. Site Landscaping and Buffers

The proposed development has been reviewed by Staff for conformance with the relevant review standards of Portland's Land Use Code, recommending one Condition of Approval. As part of the landscaping, the applicant proposes planting three street trees in raised planters on Congress Street. This project triggers a street tree requirement, as detailed under Sec. 14.6.2.C., equating to one tree per residential unit, or 140 trees in total. Staff is recommending that the applicant pay a fee-in-lieu at a rate of \$400 per tree. As the project is providing three trees, this will total 137 trees, and so a total contribution of \$54,800. Please note this is included as a condition of approval, to be provided prior to issuance of the Certificate of Occupancy. Further, Staff requests the three raised tree wells along the Congress Street frontage, proposed rectangular border be amended to match the required curved granite border detail as noted in the *Technical Manual* Figure IV-4B, as a Condition of Approval.

Staff Finding: The proposed development has been reviewed by Staff for conformance with this standard, with a single Condition of Approval regarding amending the tree well planter's granite border shape.

D. Water Quality, Stormwater Management, and Erosion Control

The project site is entirely built out, and the application proposes no exterior improvements, limited site disturbance, and no new impervious area. As indicated in the applicant's materials, stormwater will continue to be managed as it is currently, and no additional treatment or detention is proposed. During site work, the applicant proposes to install catch basin inlet protection and other best management practices where necessary.

Staff find that the project, as currently proposed, meets the City's water quality, stormwater management and erosion control standard. However, the City is recommending that the applicant consider certain design changes to reduce impact to the City's combined sewer system. The applicant should consider implementing a green or blue roof to help reduce the Property's impact on combined sewer overflows and Bayside flooding. Stormwater from this property is routed to the City's most active combined sewer overflow location and one of the most flood prone areas in the City.

Staff Finding: The proposed development has been reviewed by Staff for conformance with this standard, and consider this standard to be met.

3. **Public Infrastructure and Community Safety Standards (Section 14.6.3)**

A. Consistency with City Master Plans

The proposed development is consistent with Portland's Plan 2030. The conversion of office space to hotel, residences and retail is permitted under zoning for the B-3 Downtown Business zone, and is further consistent with Portland's Plan 2030, which calls for 'reinforcing the center' as a hub for activity within the City, and promoting complete neighborhoods, where residents can easily access amenities and services without driving.

Staff Finding: The proposed development has been reviewed by Staff for conformance with this standard, and consider this standard to be met.

B. Public Safety and Fire Prevention

The project as designed is consistent with the Crime Prevention Through Environmental Design (CPTED) public safety principles, with areas of the site and adjacent public right of way being well lit, highly trafficked, and visible from multiple vantage points. As proposed, the site features adequate emergency vehicle access.

Staff Finding: The proposed development has been reviewed by Staff for conformance with this standard, and consider this standard to be met.

C. Availability and Capacity of Public Utilities

The development will be serviced by existing water, sewer, gas and electric services. Utility upgrades include the installation of a new 6" water service, installation of a new 8" sewer service, installation of a grease interceptor, upgrades to the property's electrical service, and installation of a new 6" gas service line. Solid waste, including recycling, will be collected within the building, and removed from site by a third-party, as is currently the case. Ability to serve letters were provided from Until and DPW and an updated Wastewater Capacity Authorization was provided (Attachments 6 & 15).

Staff Finding: The proposed development has been reviewed by Staff for conformance with this standard, and consider this standard to be met.

4. Site Design Standards (Section 14.6.4)

A. Massing, Ventilation, and Wind Impact

The site is entirely built out, and the project involves the adaptive reuse of the historic Time & Temperature Building, with just a small exterior addition in the form of a new code compliant stair tower.

Staff Finding: The proposed development has been reviewed by Staff for conformance with this standard, and consider this standard to be met.

B. Shadows

The site is entirely built out, and the project involves the adaptive reuse of the historic Time & Temperature Building, with just a small exterior addition in the form of a new code compliant stair tower. Further, development within the B-3 Downtown Business zone is exempt from the City's shadow standards.

Staff Finding: The proposed development has been reviewed by Staff for conformance with this standard, and consider this standard to be met.

C. Snow and Ice Loading

The Time and Temperature Building is an existing building, to which minimal exterior changes are being proposed. As a result, and based on the existing condition, snow and ice loading is not anticipated to occur, or adversely impact adjacent public spaces.

Staff Finding: The proposed development has been reviewed by Staff for conformance with this standard, and consider this standard to be met.

D. View Corridors

The property is not located within an established view corridor.

Staff Finding: The proposed development has been reviewed by Staff for conformance with this standard, and consider this standard to be met.

E. Historic Resources

The project is within the Congress Street Historic District wherein, specifically, the Time & Temperature building is a contributing structure. An extension to the previous Certificate of Appropriateness was approved through April 20, 2024 (Attachment C). The project has a valid extension, and no further action is required by Historic Preservation at this time. The applicant notes that any proposed exterior renovations will be separate application to the Historic Preservation Board, furthermore the applicant plans to apply for Historic Tax Credits, resulting in the project being subject to review by the Maine Historic Preservation Commission and the National Park Service. The applicant has provided a detailed summary of the proposed exterior improvements (Attachment 1).

Staff Finding: The proposed development has been reviewed by Staff for conformance with this standard, and consider this standard to be met.

F. Exterior Lighting

No changes to exterior lighting are being proposed as part of this application.

Staff Finding: The proposed development has been reviewed by Staff for conformance with this standard, and consider this standard to be met.

G. Noise and Vibration

Proposed mechanical equipment is located and screened to mitigate noise impacts. Noise and or vibration resulting from the development are not expected to exceed allowable limits established by the City.

Staff Finding: The proposed development has been reviewed by Staff for conformance with this standard, and consider this standard to be met.

H. Signage and Wayfinding

Signage was not proposed or reviewed as part of this application, and will required to be submitted under separate cover, as a sign permit, with review and approval issued by the Permitting and Inspections Department and review by Historic Preservation Staff. Planning Staff suggests the existing digital sign, set in the sidewalk along Congress Street, removal be explored by the applicant.

Staff Finding: The proposed development has been reviewed by Staff for conformance with this standard, and consider this standard to be met.

I. Zoning-related Design Standards

The Time and Temperature Building is an existing building, to which minimal exterior changes are being proposed. Further, the property is located within the Congress Street Historic District, meaning the Historic Preservation Board must conduct a review of this project. The Certificate of Appropriateness (HPBR-001500-2021) was approved by the Historic Preservation Board on April 20, 2022, for the previous iteration of this project. An extension was granted by Planning and Urban Development Department until April 20, 2024 (Attachment C). Any design review of the project will be performed by either Historic Preservation staff or the Historic Preservation Board.

Staff Finding: The proposed development has been reviewed by Staff for conformance with this standard, and consider this standard to be met.

X. NEIGHBORHOOD MEETING & PUBLIC COMMENT

The applicant held a neighborhood meeting on December 5, 2023, as required as part of this project, wherein six members of the public attended (Attachment 16). Questions and concerns raised at the meeting were pertaining to the existing bicycle commuter route, timing of the project, clarification on hotel entrance, and comments regarding the appreciation of the building architecture.

The Planning and Urban Development Department has received no public comment regarding this application at the time of publication of this memo.

XI. STAFF RECOMMENDATION

Subject to the proposed motions and conditions of approval listed below, Planning Department staff determines that the application PL-002673-2023, a Major Site Plan to redevelop the Time & Temperature Building located at 477 Congress Street into a combined hotel, residential, and commercial retail use meets the applicable standards of Portland's Land Use Code.

XII. PROPOSED MOTIONS

A. INCLUSIONARY ZONING CONDITIONAL USE

On the basis of the application, plans, reports, and other information submitted by the applicant, findings, and recommendations contained in the Planning Board Report for the public hearing on December 12, 2023 for application CU-002677-2023 at 477 Congress Street relevant to Portland's Inclusionary Zoning Conditional Use Standards and other regulations, and the testimony presented at the Planning Board hearing, the Planning Board, [**finds/does not find**] the proposed conditional use for workforce housing meets the standards of Section 18.2.3 with the following condition(s):

PRIOR TO ISSUANCE OF A BUILDING PERMIT

1. The Applicant and the City shall enter into an Affordable Housing Agreement (AHA) for all on-site workforce housing units.

PRIOR TO ISSUANCE OF CERTIFICATE OF OCCUPANCY

2. In the event that the Planning Authority does not waive the minimum size and bedroom count requirement for the hotel inclusionary units as listed within the *Hotel Project Inclusionary Zoning Implementation Guidelines for Developers of Low Income Rental Units*, and the applicant elects to satisfy this requirement through on-site low income rental units as permitted under Ch. 14, Sec. 18.2.5.D of the Land Use Code, the applicant shall provide updated building floor plans demonstrating compliance with Ch. 14, Sec. 18.2.5 of the Land Use Code and the *Hotel Project Inclusionary Zoning Implementation Guidelines for Developers of Low Income Rental Units*.
3. The Affordable Housing Agreement (AHA) be filed as covenant to the 477 Congress Street property's deed with the Cumberland County Registry of Deeds.

B. SITE PLAN REVIEW

On the basis of the application, plans, reports and other information submitted by the applicant; findings and recommendations contained in the Planning Board Report for the public hearing on December 12, 2023 for application PL-002673-2023 at 477 Congress Street relevant to the site plan regulations; and the testimony presented at the Planning Board hearing, the Planning Board [**finds/does not find**] that the plan is in conformance with the Site Plan Standards of the Land Use Code subject to the following conditions of approval:

PRIOR TO ISSUANCE OF A BUILDING PERMIT

1. The applicant shall submit updates to the Planning Authority on the TDM Plan, as requested by Staff.
2. The applicant shall revise the three raised tree wells to match the required curved granite border detail as noted in the *Technical Manual* Figure IV-4B.
3. The applicant shall revise the Overall Site Plan to incorporate feedback from the Department of Public Works, wherein the applicant shall adjust the paving line by centering the trench on the new waterline.

PRIOR TO ISSUANCE OF A CERTIFICATE OF OCCUPANCY

4. The applicant shall contribute to the tree fund in the amount of \$400 per tree for 137 trees, for a total of \$54,800.

C. PLANNING BOARD DECISION

On the basis of the findings, conclusions and recommendations contained in the Planning Board report for the public hearing on December 12, 2023 related to application PL-002673-2023 and application CU-002677-2023 for 477 Congress Street, which is attached to the draft approval letter and incorporated therein, the Planning Board **[adopts/does not adopt]** the approval letter as drafted as the Planning Board's decision for application PL-002673-2023 and application CU-002677-2023, and authorizes the Planning Board Chair to sign the approval letter as drafted.

XIII. ATTACHMENTS**Report Attachments**

- A. Project Review Letter and Worksheets, 11/9/2023
- B. Approval Letter for Level III Site Plan, 2/1/2022
- C. Certificate of Appropriateness Extension Letter, 9/14/2022
- D. TDM Plan - Preliminary Review Comments, 12/5/2023
- E. Draft Approval Letter - PL-002673-2023 & CU-002677-2023
- F. Final Traffic Review Comments, 12/11/2023

Applicant Submittal

- o. Cover and Table of Contents
 1. Project Summary
 2. Permitting and Zoning
 3. Evidence of Right, Title, & Interest
 4. Consistency with Transportation Standards
 5. Consistency with Environmental Quality Standards
 6. Consistency Public Infrastructure & Safety Standards
 7. Consistency with Site Design Standards
 8. Major Site Plan Checklist
 9. Inclusionary Zoning Sub-Application
 10. Zoning Assessment Table
 11. CM Plan Figures
 12. CM Plan Narrative
 13. TDM Plan
 14. Response to City Review, 11-15-2023
 15. Ability to Serve – Wastewater, 11-27-2023
 16. Neighborhood Meeting Certification & Note Memo, 12-6-2023
 17. Traffic Impact Study, 11-13-2023

Plans

1. Plan A1.00 – Basement Floor Plan
2. Plan A1.01 – First Floor Plan

3. Plan A1.02 – Second Floor Plan
4. Plan A1.03 – Third Floor Plan
5. Plan A1.04 – 4th Floor Plan
6. Plan A1.40 – Enlarged – 5th Floor Plan
7. Plan A1.43 – Enlarged – 6th - 14th Floor Plan
8. Plan A4.01 – Existing Congress St. Elevation
9. Plan A4.02 – Existing Preble St. Elevation
10. Plan A4.03 – Existing North Elevations
11. Plan A4.04 – Existing West Elevation
12. Plan A4.05 – Existing Building Elevations Off 2nd Fl. Roof
13. Plan A4.06 – Existing 481 Courtyard Elevations
14. Plan A4.07 – Existing Enlarged Elevations
15. Plan A4.20 – Congress St. Elevations
16. Plan A4.21 – Preble St. Elevation
17. Plan A4.22 – North Elevations
18. Plan A4.23 – West Elevation
19. Plan A4.24 – Building Elevations Off 2nd Fl. Roof
20. Plan A4.25 – 481 Courtyard Elevations
21. Plan A4.26 – Enlarged Elevations
22. Boundary and Topo Survey
23. C-001 Cover Sheet
24. C-100 Notes, Legend Abbreviations
25. C-101 Existing Conditions Plan
26. C-200 Overall Site Plan
27. C-201 Grading and Drainage Plan
28. C-202 Utility Plan
29. C-203 Site Electrical Plan
30. C-300 Civil Site Details 1
31. C-301 Civil Site Details 2
32. C-302 Civil Site Details 3
33. Rendering Congress Street
34. Rendering Preble Street



Dear Nate Green, Marieke Thormann and Darrin Stairs,

We have completed our review of your application (PL-002673-2023) to redevelop the historic Time & Temperature Building, located at 477 Congress Street. The project involves the conversion of existing office space within the 14-story building into 136 hotel units, and 140 micro residential units. The project also includes approximately 4,800 square feet of retail space, and a 140-seat restaurant. Other improvements include utility upgrades for the building, the planting of three new street trees along the property's Congress Street frontage, changes to on-street parking permissions along the property's Congress Street and Preble Street frontages, and minor upgrades to the building's façade.

This development triggers major site plan review and conditional use review for inclusionary zoning, and is subject to the following regulations:

- Site Plan – Article 14.6
- Conditional Use – Article 6.5
- Zoning – Table 6C, and Table 7E
- Inclusionary Zoning – Article 18.2

An overview of the City's review can be viewed in the attached project review worksheets and peer review comments.

Next Steps

Please review all feedback and reach out to the project review manager, Natasha Kypfer, if you have any questions or would like to discuss this feedback in more detail. In order to proceed, the applicant shall prepare a written response to all feedback, and shall update plans, documents and other materials as necessary to address the above listed comments. The applicant shall notify the project review manager by email when a resubmission is uploaded to ProjectDox. Once received, the project review manager will notify the applicant of their scheduled review timeline for this resubmission.

Based upon the City's findings related to your application, the City will advance this application for a public hearing with the Planning Board on **Tuesday, December 12, 2023**. Please let the project review manager know at your earliest convenience if there are any conflicts with proposed date.

Sincerely,

Matthew R. Grooms, AICP
Development Review Services Manager

Attachments

1. Site Plan Worksheet
2. Zoning Worksheet
3. Conditional Use Worksheet

Site Plan Review Standards (Sec. 14.6)		
Transportation Standards (Sec. 14.6.1)		
Standard	Discussion	Finding
Impact on Surrounding Street Systems	Overview: The Time and Temperature Building, located at 477 Congress Street, has street frontage on both Congress Street and Preble Street. The proposed redevelopment of the property would involve the conversion of currently vacant office space into 136 hotel units and 140 long-term residential micro unit apartments. Further, the project will feature 4,800 square feet of new retail space, and a 140-seat restaurant. The updated development plan for 477 Congress Street is expected to result in less impact on the surrounding street systems, with respect with what was previously approved, based upon the programmatic changes being proposed. Staff are requesting supplemental information, listed below, to confirm that the project complies with this standard.	More information needed
	Updates Requested - The applicant shall document trip generation for the project. Trip generation should be based on the current edition of ITE data. - The applicant should document anticipated valet vehicle pick-up/drop-off routings, given a likely vehicle parking location. - The applicant should reduce the number of 15-minute on-street parking spaces to no more than four spaces, and staff are encouraging that these spaces be located close to the project entry canopy on Preble Street.	
Access and Circulation	Overview: The property is situated in the heart of Portland’s downtown, in an area of the City that is highly accessible for pedestrians, cyclists, and transit users. The development, as proposed, features no on-site parking, and would reset existing brick sidewalk as currently designed. Sidewalks range from approximately nine feet along Preble Street, 13 feet along Congress Street, and up to 21 feet at the curb extension at the Congress Street and Preble Street intersection. As proposed, the development would alter existing on-street parking permissions, restricting 216 feet of Preble Street, or space for approximately 11 vehicles, to a 15-minute parking loading and unloading zone. An additional 40 feet of frontage along Congress Street would similarly be converted into a loading/unloading zone. The Access and Circulation standard is generally considered to be met, however City staff are requesting that the applicant update their plans to provide additional details and information. Further, Public Works and the Parking Division are not supportive of the currently proposed 15-minute loading and unloading zone along Preble Street in its current configuration.	Not met Additional information and plan updates are required.
	Updates Requested The applicant should reduce the number of 15-minute on-street parking spaces to no more than four spaces, and staff are encouraging that	

	these spaces be located close to the project entry canopy on Preble Street. - Improvements, and existing conditions in the right of way shall be dimensioned on all applicable plan sheets. This for example should include dimensions and or/widths for the public right of way, streets, sidewalks, esplanades, driveways (and other improvements). Plans should also note where widths vary or change. - The applicant shall label and provide spot grades and slopes at grade breaks for any proposed/existing improvements in the right of way, such as sidewalks, accessible ramps, and driveways. This should extend to the limit of proposed improvements on the property. - The proposed brick sidewalk cross slope shall not exceed 2% at the property line. If the existing sidewalk grades are not compliant at the property line, then the limits of sidewalk replacement shall be extended to include a 5-foot minimum transition zone from the proposed 2% to the existing sidewalk slope. A note should be added to the plans to reflect this requirement. - The applicant has noted that the existing granite curb will be reset. The applicant shall ensure that the existing granite is free of any defects such as, but not limited to chipping and cracking. Please be aware that Public Works may require the use of new granite curb upon inspection of the existing granite curb prior to installation or during construction.	
Public Transit Access	Overview: The development is located immediately on Congress Street, upon which numerous METRO routes operate. The applicant is not required to make any additional upgrades, given that the nearest transit shelter is located less than a quarter mile away, across the street in front of the property at 480 Congress Street. Updates Requested No action is required	Met
Parking	Overview: The project provides no off-street parking on-site, however, the hotel will operate a valet service off of Preble Street, and the applicant intends to lease parking spaces in nearby parking lots, which are unspecified. Per Table 19-B in the City's Land Use Code, no off-street parking is required for changes of use within the B-3 Downtown Business zone. The project further proposes no bicycle parking. While no off-street vehicular parking is required, the project as proposed does not meet the City's bicycle parking requirement, which is described below. Updates Requested: Per Table 19-A, bicycle parking is required at a ratio of one space per every five residential units. Based on there being 140 residential units, the applicant is required to provide a total of 28 bicycle parking spaces. The location of bicycle storage needs to be identified on applicable plan sheets, and rack details also need to be provided.	Not met Plan updates are required.
Transportation Demand Management	Overview: New commercial or mixed-use development with more than 50,000 square feet of floor area is required to provide a TDM plan in accordance with Section 17 of the Technical Manual. The applicant has updated the TDM Plan prepared by VHB, that was previously approved for the former hotel project at 477 Congress Street. This document establishes a	Under Review Review comments

	framework for reducing single occupancy vehicle trips and encouraging trips by other modes.	will be forthcoming
	<u>Updates Requested</u> Review comments will be forthcoming.	
Environmental Quality Standards (Sec. 14.6.2)		
Standard	Discussion	Finding
Preservation of Significant Natural Features	<u>Overview:</u> The site is entirely built out, and the project involves the adaptive reuse of the historic Time & Temperature Building. There are no significant natural features on-site. <u>Updates Requested</u> No action is required.	Met
Landscape Preservation	<u>Overview:</u> The site is entirely built out, and the project involves the adaptive reuse of the historic Time & Temperature Building. There is no existing vegetation or site landscaping on the site currently, and so this standard does not apply. <u>Updates Requested</u> No action is required	Met
Site Landscaping and Buffers	<u>Overview:</u> As the Time & Temperature Building occupies the entire lot, the project is subject to only minimal site landscaping requirements, namely the requirement to provide street trees at a ratio of one tree per residential unit, for a total required contribution of 140 trees. The project proposes three street trees in raised planters along Congress Street. The applicant will be responsible for providing the equivalent of 137 additional trees, as detailed under Sec. 14.6.2.C. <u>Updates Requested</u> - The applicant is strongly encouraged to provide structural soils or other measures to expand soil volume capacity around street tree locations underneath sidewalks. Tree cells or other methods of increasing volume and soil quality would ensure lower long-term maintenance, reduced potential for replacement costs, and enable longer lived, healthier street trees. Volumes should be based upon vendor recommendations for structural soil volume product or by certified arborists with structural soil/tree cell experience. - The site plan should be updated to show the extent of any sub-sidewalk structural soil root zones, with notes indicating the total soil volume per tree planter system. - Applicant should employ root barriers to reduce impacts to adjacent buried utilities and walkways. - Wherever possible, the City would encourage the applicant to elongate tree planting beds so as to expand surface bed capacity for tree roots, if such expansion can occur without conflicting with utilities or ADA requirements. - Please update with the site plan to include proposed tree species information, but take note, that due to over planting, the City is discouraging maple species to promote more biodiversity and resilience	Not Met Additional information and plan updates are required.

	to the City's tree canopy. Section 4, figure IV 1 in the technical manual provides some examples of compliant / recommended cultivars. • Provide tree planting details with soil volume and soil mix specifications for tree plantings in the provided detail sheets. • The Applicant should coordinate directly with the City Arborist to identify which alternative method will be utilized to account for the additional 137 street trees that cannot be provided on-site.	
Water Quality, Stormwater Management and Erosion Control	Overview: The project site is entirely built out, and the application proposes no exterior improvements, limited site disturbance, and no new impervious area. As indicated in the applicant's materials, stormwater will continue to be managed as it is currently, and no additional treatment or detention is proposed. During site work, the applicant proposes to install catch basin inlet protection and other best management practices where necessary. Staff find that the project, as currently proposed, meets the City's water quality, stormwater management and erosion control standard. However, the City is recommending that the applicant consider certain design changes to reduce impact to the City's combined sewer system. Updates Requested • The applicant should consider implementing a green or blue roof to help reduce the Property's impact on combined sewer overflows and Bayside flooding. Stormwater from this property is routed to the City's most active combined sewer overflow location and one of the most flood prone areas in the City.	Met
Public Infrastructure and Community Safety Standards (Sec. 14.6.3)		
Standard	Discussion	Finding
Consistency with City Master Plans	Overview: The conversion of office space to hotel, residences and retail is permitted under zoning for the B-3 Downtown Business zone, and is further consistent with Portland's Plan 2030, which calls for 'reinforcing the center' as a hub for activity within the City, and promoting complete neighborhoods, where residents can easily access amenities and services without driving. Updates Requested • No action is required.	Met
Public Safety and Fire Prevention	Overview: The project as designed is consistent with the Crime Prevention Through Environmental Design (CPTED) public safety principles, with areas of the site and adjacent public right of way being well lit, highly trafficked, and visible from multiple vantage points. As proposed, the site features adequate emergency vehicle access. Updates Requested • No action is required.	Met
Public Utilities	Overview: The development will be serviced by existing water, sewer, gas and electric services. Utility upgrades include the installation of a new 6" water service, installation of a new 8" sewer service, installation of a grease interceptor, upgrades to the property's electrical service, and installation of a new 6" gas service line.	Not met Additional information and plan

	Solid waste, including recycling, will be collected within the building, and removed from site by a third-party, as is currently the case. <u>Updates Requested</u> - The applicant shall update the previously approved wastewater capacity application to match the updated building programming and submit it to DPW for review and approval. - Manholes are required for the proposed 8" sanitary and 10" roof drain connection into the 15" Preble Street combined sewer line per requirements in Sec. 2 of the City's Technical Manual.	updates are required.
Site Design Standards (Sec. 14.6.4)		
Standard	Discussion	Finding
Massing, Ventilation and Wind Impact	<u>Overview:</u> The site is entirely built out, and the project involves the adaptive reuse of the historic Time & Temperature Building, with just a small exterior addition in the form of a new code compliant stair tower. As proposed, the project meets this standard. <u>Updates Requested</u> No action is required.	Met
Shadow	<u>Overview:</u> The site is entirely built out, and the project involves the adaptive reuse of the historic Time & Temperature Building, with just a small exterior addition in the form of a new code compliant stair tower. Further, development within the B-3 Downtown Business zone is exempt from the City's shadow standards. <u>Updates Requested</u> No action is required.	Met
Snow and Ice Loading	<u>Overview:</u> The Time and Temperature Building is an existing building, to which minimal exterior changes are being proposed. As a result, and based on the existing condition, snow and ice loading is not anticipated to occur, or adversely impact adjacent public spaces. <u>Updates Requested</u> No action is required	Met
View Corridors	<u>Overview:</u> The property is not located within an established view corridor, and therefore, this standard is not applicable. <u>Updates Requested</u> No action is required.	Met
Historic Resources	<u>Overview:</u> The property at 477 Congress Street is located within the Congress Street Historic District, and the Time and Temperature Building is considered a contributing structure. The applicant continues to coordinate with Historic Preservation staff to determine whether the Historic Preservation Board's previously issued Certificate of Appropriateness may still cover this revised proposal. <u>Updates Requested</u>	Continue to coordinate with HP Staff

	Coordinate with Historic Preservation staff to confirm whether further HP review is required.	
Exterior Lighting	Overview: No changes to exterior lighting are being proposed as part of this application, and therefore, this standard is considered met.	Met
	Updates Requested No action is required.	
Noise and Vibration	Overview: Proposed mechanical equipment is located and screened to mitigate noise impacts. Noise and or vibration resulting from the development are not expected to exceed allowable limits established by the City, and therefore, this standard is considered met.	Met
	Updates Requested No action is required.	
Signage and Wayfinding	Overview: Any signage associated with the project will be reviewed by the Permitting and Inspections Department as a separate sign permit, and will also be reviewed by Historic Preservation Staff.	Met
	Updates Requested No action is required.	
Design Standards	Overview: The Time and Temperature Building is an existing building, to which minimal exterior changes are being proposed. Further, the property is located within the Congress Street Historic District, and therefore, any design review of the project will be performed by either Historic Preservation staff or the Historic Preservation Board.	Met
	Updates Requested No action is required.	

Zoning Use Review (Article 6)				
Use Permissions (Table 6-A – Table 6-F)				
Proposed Use	Permitted, Conditional or Accessory Use	Zone	Use Std	
Hotel	Permitted	B-3	None	
Multi-family Residential	Permitted	B-3	None	
Retail	Permitted	B-3	Sec. 6.4.15	
Restaurant	Permitted	B-3	None	
Zoning Performance Standards (Sec. 6.8)				
Standard	Discussion	Finding		
Sec. 6.8.1.A – Consistency with Downtown Design Guidelines	Overview: As the project involves interior renovation and change of use within the historic Time & Temperature building, with very minimal exterior modifications, the project is not undergoing a full design review against the City's Downtown Design Guidelines. Further, the project will undergo a separate process with the Historic Preservation Board, given that the Time and Temp building is a contributing building within the Congress Street Historic District. Updates Requested No action is required.	Met		
Sec. 6.8 – General Performance Standards	Overview: The project is subject to the City's general performance standards, which establish limits of impact associated with noise, lighting, odor, vibration, waste disposal and outdoor effects, among others. The application materials discuss each of these elements, and strategies to limit or mitigate impacts associated with these requirements. In reviewing this application, staff find the project to comply with all applicable general performance standards. Updates Requested No action is required.			
Zoning Dimensional Review (Article 7)				
Dimensional Standards (Table 7-A – Table 7-H)				
Standard	Requirement 1	Requirement 2	Proposed	Finding
Street Frontage	15 feet	N/A	121 feet	Met
Front Setback (Max)	5 feet	N/A	0 feet	Met

<i>Building Height</i>	Up to 210 feet, with required setbacks from street wall	N/A	158' 8"	Met
<i>Lot Coverage</i>	None, except 25% of lot area for portions of structures exceeding 125 feet in height	N/A	81%. Though the building is existing and, in the event, that the portion above 125 feet exceeds 25% of the lot, this would be considered a legally non-confirming condition.	Met
<i>Undifferentiated Wall</i>	30 feet, except 15 feet within PAD overlay	N/A	Less than 15 feet.	Met

Space and Bulk Exceptions (Sec. 7.5)

Standard	Requirement	Proposed	Finding
Sec. 7.5.1.A – Height in the B-3 Zone	Outlines a list of exemptions for development in the B-3 zone, and refers to Downtown Height Overlay Map	Project does not increase the proposed height of the building, which currently complies with the Downtown Height requirements	Met
Sec. 7.5.5.F	The Planning Board may require or approve deviation from the required maximum 5-foot front setback, if such a setback is determined to be warranted to comply with the City's Downtown Design Guidelines.	The Time and Temperature building is existing, and no changes to its footprint are contemplated. The building as designed complies with the City's setback requirements for the B-3 zone.	Met

Overlay Zones (Article 8)

Overlay Zone Name (Downtown Entertainment Overlay Zone and Pedestrian Activities District)

Standard	Requirement	Discussion	Finding
Sec. 8.2 – Downtown Entertainment Overlay Zone (DEOZ)	A business with an entertainment license within the DEOZ may not be located within 100 feet of another business with an entertainment license.	The proposed uses would not require an entertainment license with the City. Further, entertainment licenses are issued by the Permitting & Inspections Department, and verification of compliance with this zoning standard would occur as part of that license review.	Met
Sec. 8.8 – Pedestrian Activities District (PAD)	Requires that 75% of the street level frontage of a building on a street located within the PAD must be occupied, and, at a minimum, the floor area to be occupied shall be 75% of the street level frontage divided by a 20-foot depth. The overlay also limits uses permitted within the PAD, which includes retail, restaurants and hotels.	The applicant proposed to fully activate the ground level of the building by restoring the interior commercial arcade, and by retaining the existing bank, introducing a restaurant and several retail spaces along both Congress Street and Preble Street, both	Met

Submission #1:

Planner: Matthew Grooms – mgrooms@portlandmaine.gov – (207) 874-8699

Planner: Natasha Kypfer – nkypfer@portlandmaine.gov – (207) 874-8725



		of which are in the PAD district.	
--	--	-----------------------------------	--

Conditional Use Review (Sec. 6.5)		
General Conditional Use Standards (Sec. 6.5.2)		
Standard	Discussion	Finding
Traffic, hours of operation, expanse of pavement, and off-street parking	Overview: Hotel, residential, and retail uses are all permitted by right within the B-3 Downtown Business zone, and therefore, are expected to have similar levels of impact with respect to this standard, as compared with surrounding uses. Updates Requested No action is required.	Met
Will not cause unsanitary or harmful conditions	Overview: Hotel, residential, and retail uses are all permitted by right within the B-3 Downtown Business zone, and therefore, are expected to have similar levels of impact with respect to this standard, as compared with surrounding uses. Updates Requested No action is required.	Met
Design and operation of the proposed use will not have substantially greater impact than other allowable uses in the zone	Overview: Hotel, residential, and retail uses are all permitted by right within the B-3 Downtown Business zone, and therefore, are expected to have similar levels of impact with respect to this standard, as compared with surrounding uses. Updates Requested No action is required.	Met
Use Specific Conditional Use Standards (Sec. 18.2.3 and Sec. 18.2.5)		
Standard	Discussion	Finding
Inclusionary Zoning	Overview: Per Article 18.2.3 and Article 18.2.5, the project as proposed is subject to the City's inclusionary zoning requirements as applicable to residential and hotel uses. Article 18.2.3.C requires that residential projects totaling 10 or more residential units, provide a minimum of 25% of those units as workforce housing units, being affordable to households earning 80% of the area median income. The applicant may also pay a fee in-lieu of providing the units themselves, at a ratio of \$172,485 per units, based upon the 2023 IZ fee. With 140 residential units being proposed, the applicant is responsible for providing either 35 workforce housing units, or \$6,036,975, or a combination thereof. The applicant indicates in their submitted narrative that they intend to provide 35 units of workforce housing on-site, which would satisfy this requirement. Article 18.2.5 requires that hotel projects totaling 10 or more guest rooms, provide a minimum of one workforce housing unit for every 28 rooms within the hotel project or acceptable fee in-lieu equivalent of \$4,558 per room based upon the 2023 Hotel IZ fee. With 136 hotel rooms being proposed, the applicant is responsible for providing the equivalent of five workforce housing	Met, subject to a condition of approval.



	units, or \$619,888, or a combination thereof. The applicant indicates in their submitted narrative that they intend to provide five units of workforce housing on-site to satisfy this requirement.	
	<u>Updates Requested</u> • At the time of the public hearing, staff will include a draft condition of approval, which would require that the applicant enter into a workforce housing agreement with the City.	

CITY OF PORTLAND, MAINE

PLANNING BOARD

Maggie Stanley, Chair
 Brandon Mazer, Vice Chair
 Marpheen Chann
 Sean Dundon
 Bob Dunfey
 David Silk
 Austin Smith

February 1, 2022

Chris Rhodes
 TT Maine Venture LLC
 3100 McKinnon St. Suite 250
 Dallas, Texas 75201

Marieke Thormann
 Fathom Companies
 80 Exchange Street
 Portland, ME 04101

Project Name: Time & Temperature Building
Address: 477 Congress Street
Applicant: TT Maine Venture LLC

Project ID: PL-001003-2021
CBL: 037 FO22001
Planner: Charles Tetelman

Dear Mr. Rhodes and Ms. Thormann,

On January 25, 2022, the Planning Board approved a Level III Site Plan application for the redevelopment of the existing building at 477 Congress Street into a 186 room hotel with retail space, restaurant, rooftop bar, and associated hotel amenities (78,680 sq. ft.) in the B-3 Downtown Business zone. The decision is based upon the application, documents and plans as submitted. The Planning Board reviewed the proposal for conformance with the standards of the Conditional Use Review for Inclusionary Zoning (Hotels) and Site Plan Ordinance. The Planning Board voted unanimously 5-0 (Stanley recused, Silk absent) to approve the application with the following conditions as presented below.

Inclusionary Zoning Conditional Use Review

The Planning Board voted 5-0 (Stanley recused, Silk absent) to find the proposed conditional use for Inclusionary Zoning for Hotel Projects meets the standards of Section 18.2.5 with the following condition, to be met prior to the issuance of a Certificate of Occupancy:

PRIOR TO ISSUANCE OF CERTIFICATE OF OCCUPANCY

1. The Applicant shall pay the Inclusionary Zoning fee-in-lieu of \$707,916 to the Jill C. Dusen Housing Trust Fund.

Site Plan Review

The Planning Board voted 5-0 (Stanley recused, Silk absent) to find that the plan is in conformance with the site plan standards of the Land Use Code, subject to the following conditions of approval:

PRIOR TO APPLYING FOR A BUILDING PERMIT

1. The applicant shall submit all new easement agreements and amendments to existing easement agreements for review and approval by the Planning Authority and Corporation Counsel.
2. The applicant shall submit a final Transportation Demand Management Plan for review and approval by the Planning Authority and the Department of Public Works.
3. The applicant shall submit a final site plan that includes bicycle parking locations on site and reflects the final loading area location on Preble Street and loading and unloading timing restrictions for review and approval by the Planning Authority.
4. The applicant shall submit revised Building Elevations that adhere to required transparency values for ground floor windows for review and approval by the Planning Authority.

PRIOR TO ISSUANCE OF A BUILDING PERMIT

5. The Applicant shall obtain Certificate of Appropriateness from the Historic Preservation Board.

PRIOR TO ISSUANCE OF A CERTIFICATE OF OCCUPANCY

6. The applicant shall contribute to the tree fund in the amount of \$400 per tree for five (5) trees for a total of \$2,000.

On-Street Parking

The Planning Board voted 5-0 (Stanley recused, Silk absent) to approve the change of traffic schedule to allow for the removal of on-street parking spaces along designated portions of Congress Street and Preble Street to be replaced by a 15-minute loading/unloading zone on Congress Street and a hotel valet area and 15 minute loading/unloading zone on Preble Street.

The approval is based on the submitted plans and findings related to the Site Plan Review as contained in the Planning Board report dated January 21, 2022 for application PL-001003-2021 which is attached.

Standard Procedures

Note: The following standard procedures and requirements apply to all approved site plans:

1. Site Plan Expiration The site plan approval will be deemed to have expired unless work has commenced within one (1) year of the approval or within a time period up to three (3) years from the approval date as agreed upon in writing by the City and the applicant. Requests to extend approvals must be received before the one (1) year expiration date.
2. Separate Building Permits Are Required This approval does not constitute approval of building plans, which must be reviewed and approved by the City of Portland's Permitting and Inspections Department.
3. Performance Guarantee and Inspection Fees A performance guarantee covering the site improvements and an inspection fee payment of 2.0% of the guarantee amount and three (3) final sets of plans must be submitted to and approved by the Planning and Urban Development Department and Public Works Department prior to the release of a building permit, street opening permit or certificate of occupancy for site plans.
4. Construction Management Plans The applicant, contractor and subcontractors are required to conform to the approved Construction Management Plan, and all conditions contained within the

389 Congress Street / www.portlandmaine.gov / tel, 207-874-8719 / tty, 207-874-8936 / fax, 207-756-8258

project's approval, for the entire duration of the project. Any amendments to the approved Construction Management Plan shall be reviewed and approved by the Department of Public Works prior to the execution. The Planning Authority and the Department of Public Works have the right to seek revisions to an approved Construction Management Plan. The applicant shall coordinate the project's construction schedule with the timing of nearby construction activities to avoid cumulative impacts on a neighborhood and prevent unsafe vehicle and pedestrian movements. Accordingly, nearby construction activities could involve a delay in the commencement of construction.

5. Preconstruction Meeting Prior to the release of a building permit and scheduling of a preconstruction meeting, a hard copy set of approved plans shall be submitted to the Development Review Coordinator. A pre-construction meeting shall be held at the project site with the contractor, Development Review Coordinator, Public Works representative, and owner to review the construction schedule and critical aspects of the site work. At that time, the Development Review Coordinator will confirm that the contractor is working from the approved site plan and the approved Construction Management Plan. The site/building contractor shall provide one (1) copy of a detailed construction schedule to the attending City representative. It shall be the contractor's responsibility to arrange a mutually agreeable time for the pre-construction meeting.
6. Department of Public Works Permits If work or obstructions will occur within the public right-of-way, such as utilities, curb, sidewalk, driveway construction, site deliveries and equipment siting, a Street Opening and/or Occupancy Permits are required for your site. Please contact the Department of Public Works Permit Clerk at (207) 874-8300, ext. 8828. (Only excavators licensed by the City of Portland are eligible.)
7. Develop Site According to Plan The site shall be developed and maintained as depicted on the site plan and in the written submission of the applicant. Any modifications of an approved site plan or alteration of a parcel, or of any approved exterior elevations, which were the subject of site plan approval after May 20, 1974, shall require the prior approval of an amended site plan by the Planning Board or Planning Authority pursuant to the terms of Chapter 14, Land Use, of the Portland City Code.
8. Stormwater Management The owner/operator of an approved stormwater management system, and all assigns shall comply with the conditions of Chapter 32, Stormwater including Article III, Post Construction Stormwater Management, which specifies the annual inspections and reporting requirements.

A maintenance agreement for the stormwater drainage system, as attached, or in substantially the same form, shall be submitted for review by Corporation Counsel. Once approved, the document shall be signed and recorded at the Cumberland County Registry of Deeds prior to the issuance of a building permit. Final copies shall be submitted to both the Department of Planning and Urban Development and the Department of Public Works.

10. Defect Guarantee A defect guarantee, consisting of 10% of the performance guarantee, must be posted before the performance guarantee will be released.
11. As-Built Final Plans Final sets of as-built plans shall be submitted digitally to the Planning and Urban Development Department, on a CD or DVD, in AutoCAD format (.dwg), release AutoCAD 2005 or greater.

12. Mylar Copies Mylar copies of the as-built drawings for the public streets and other public infrastructure in the subdivision must be submitted to Public Works prior to the issuance of a certificate of occupancy.
13. Impact Fees New development or changes of use that result in net new residential dwelling units, non- residential building square footage, or water meters, are subject to the City of Portland's impact fee ordinance (Chapter 14, Article XVII). Impact fees are calculated at the time of building permit and must be paid prior to the certificate of occupancy. For more information, visit <https://www.portlandmaine.gov/2409/Impact-Fees>

The Development Review Coordinator must be notified five (5) working days prior to the date required for final site inspection. The Development Review Coordinator can be reached at the Planning and Urban Development Department at (207)874-8901. All site plan requirements must be completed and approved by the Development Review Coordinator prior to issuance of a Certificate of Occupancy. **Please schedule any property closing with these requirements in mind.**

If there are any questions, please contact Charles Tetelman at (207) 874-8724 or ctetelman@portlandmaine.gov.

Sincerely,

Maggie Stanley, Chair

Attachments:

1. 477 Congress St. Planning Board Report (1.25.22)
2. Portland City Code: Chapter 32
3. Sample Stormwater Maintenance Agreement
4. Performance Guarantee Packet

Planning and Urban Development
 Kevin Kraft, AICP
Deputy Director



September 14, 2022

Marieke Thormann
 Fathom Companies
 80 Exchange Street
 Portland, ME 04101

Chris Rhodes
 TT Maine Venture LLC
 3100 McKinnon St. Suite 250
 Dallas, TX 75201

Project Name:	Time & Temperature Building	Project ID:	HPBR-001500-2021
Address:	477 Congress Street	CBL:	037 f022001
Applicant:	TT Maine Venture LLC		
Planner:	Charles Tetelman		

Dear Ms. Thormann:

Thank you for your email dated September 13, 2022 requesting a one-year extension of the Historic Preservation Board Certificate of Appropriateness approval for the redevelopment of the existing building at 477 Congress Street into a hotel, with retail and restaurant space. The Certificate of Appropriateness was approved by the Historic Preservation Board on April 20, 2022. I understand that your request is based on having experienced delays due to a change in Construction Managers and timeline to achieve financing. In my capacity as Deputy Director of the City's Planning and Urban Development Department, and under the provisions of Article 17.7.6 Issuance of Certificate of Appropriateness, I am granting a one year extension of your approval until April 20, 2024.

If there are any questions, please contact Evan Schueckler at (207) 874-8726.

Sincerely,

Kevin Kraft, AICP
 Deputy Director

CC:

Evan Schueckler - Historic Preservation Program Manager

Charles Tetelman – Planner

James Rather – Development Review Manager

Attachments:

1. Approval Letter
2. Extension Request Email – 9/13/2022

April 27, 2022

Marieke Thormann
Fathom Companies
80 Exchange Street
Portland, Maine 04101

Re: HPBR-001500-2021

Dear Marieke,

On April 20, 2022, the City of Portland Historic Preservation Board voted 6-0 (O'Brien absent) to approve your application for a Certificate of Appropriateness, submitted on behalf of Fathom Companies, for exterior alterations at 477 Congress Street. Approval was based on the application materials submitted for the public hearing on 4/20/22, and was made with the following conditions:

- The following final details are to be submitted to HP staff for final review and approval:
 - Final details and selections for exterior lighting, including on the roof
 - Signage plans
- Any changes to the plans approved by the Board on 4/20/22 must be submitted to HP staff for review and approval, prior to implementation.

All improvements shall be carried out as shown on the materials submitted for the 4/20/22 public hearing, except as to comply with the conditions above. Changes to the approved plans or specifications, and any additional work that may be undertaken must be reviewed and approved by this office prior to construction, alteration, or demolition. If, during the course of completing the approved work, conditions are encountered which prevent completing the approved work, or which require additional or alternative work, you must apply for and receive a Certificate of Appropriateness or Non-Applicability PRIOR to undertaking additional or alternative work.

This Certificate is granted upon condition that the work authorized herein is commenced within twelve (12) months after the date of issuance. If the work authorized by this Certificate is not commenced within twelve (12) months after the date of issuance or if such work is suspended in significant part for a period of one year after the time the work is commenced, such Certificate shall expire and be of no further effect; provided that, for cause, one or more extensions of time for periods not exceeding ninety (90) days each may be allowed in writing by the Department.

Sincerely,

A handwritten signature in black ink that reads "Robert Wiener". The signature is fluid and cursive, with the first name "Robert" and last name "Wiener" clearly distinguishable.

Robert Wiener, Preservation Compliance Coordinator

Cc: David Lloyd, Archetype Architects
Ginny Stanley, Archetype Architects
Deb Andrews, Historic Preservation Program Manager



Kevin Kraft <kkraft@portlandmaine.gov>

T&T Hotel - HP Certificate of Appropriateness Extension

1 message

Marieke Thormann <mthormann@fathomcompanies.com>

Tue, Sep 13, 2022 at 2:23 PM

To: Evan Schueckler <evans@portlandmaine.gov>, Robert Wiener <rwiener@portlandmaine.gov>

Cc: Robyn Smith-Payne <rpayne@fathomcompanies.com>, Kevin Kraft <kkraft@portlandmaine.gov>

Evan,

TT Maine Venture LLC is requesting a (1) year extension on the Historic Preservation Board approval for the Time & Temperature Building located at 477 Congress Street, the project ID is HPBR-001500-2021. Please note that an extension for the Site Plan Approval has already been received from the planning department.

The extension is required due to a change in Construction Managers and timeline to achieve financing and confirm feasibility for the project.

Let me know if any additional information is required to provide the extension letter.

Thank you,

Marieke

Marieke Thormann, PE

Vice President of Development



80 Exchange Street, Suite 400
Portland, ME 04101

9/14/22, 3:31 PM

City of Portland Mail - T&T Hotel - HP Certificate of Appropriateness Extension

📠 207.317.2818 ✉ mthormann@fathomcompanies.com

PRELIMINARY COMMENTS

Additional comments may be provided as the Site Plan Review process progresses.



To: City of Portland

Date: September 29, 2023

Memorandum

Project #: 55321.01

From: Jennifer Conley, PE, PTOE
Meghan Houdlette, PE

Re: Time & Temperature Building TDM Plan Memo -Updated

The Transportation Demand Management (TDM) Plan outlined below for the Time and Temperature Building at 477 Congress Street in Portland, Maine follows the specific provisions required by the City of Portland per Section 17.3 of the Technical Manual. The TDM plan includes a number of strategies aimed at reducing single occupancy vehicle trips and encouraging trips to the site by other modes including walking, bicycling, transit and carpooling.

Transportation Narrative

The development program includes a 138 unit boutique hotel with a high-end restaurant space and 138 apartment units. The development site is ideally located in Downtown Portland to encourage the use of alternate modes of transportation to access the site. The dense urban location provides significant pedestrian, bicycle, and transit infrastructure. The centrally located site provides a robust pedestrian network including sidewalks and crosswalks connects to several Metro transit lines. The project is located across from Monument Square where several transit routes stop and provide access along the Peninsula and to South Portland. The Metro Pulse, also known as the Downtown Transportation Center, is located at the Elm Street Garage a block from the Project site. Routes #2, #4, #5, #7, and the Husky Line begin and end their routes at the Pulse. The site location is well suited to result in a high percentage of transit riders.

The City of Portland and Tandem Mobility are partnered to provide bike share in Portland. There is a bike share location across the street from the project in Monument Square at Center Street. In addition, because no on-site parking will be provided for employees or residents, alternative modes will be encouraged through the TDM measures described in the TDM strategies section.

TDM Coordinator

An appointed TDM Coordinator will implement and manage the TDM strategies and will collect survey data to determine the mode shares of employees and residents and determine the barriers to increased public transit, bicycle, and pedestrian transportation use. The TDM Coordinator will complete the standard City of Portland TDM Reporting Form which will be submitted by May 15th of each year.

Transportation Survey

The TDM Coordinator will conduct an annual hotel employee and resident survey to understand the mode shares for the site. Information collected in the survey will inform potential carpooling and ridesharing opportunities. In addition, the survey will determine barriers to using alternative modes.

, review the effectiveness of the TDM strategies offered and make adjustments to the TDM Plan as needed to meet the plan's goals.

Engineers | Scientists | Planners | Designers

500 Southborough Drive, Suite 105B, South Portland, Maine 04106

P 207.889.3150 F 207.253.5596 www.vhb.com

TDM Mode Split Target

The TDM plan establishes short-term 3-5 year mode split targets for employees and residents. The hotel valet operator will have an arrangement to use adjacent parking garages for hotel guest parking and will not be providing any project specific parking on site. Parking for residents will not be provided on-site, however, they will have the option to park in nearby garages at market rates.

Based on 2019 American Community Survey 5 year Census data, approximately half of all work trips made from this area are made by alternate modes. The mode split target for employees and residents is 45 percent which is a reduction of 5 percent of auto trips from baseline conditions. Please place the EXISTING & TARGET mode shares in a small table for ease of tracking it/clarity.

Although employee trips are expected to have high percentages of alternative modes, hotel guests are more likely to arrive by personal vehicle or rideshare. Is the mode split target exclusive to work trips, even for residents?

Mode Split Strategies

It would be very helpful to put the strategies into a table for ease of plan implementation and monitoring by both the site's TDM Coordinator and the City.

To encourage employees and residents to utilize alternative modes, there is no on-site parking provided. Therefore, no parking reduction strategies are included in this TDM plan. The site is disincentivizing the use of vehicles by not providing on-site parking. Additionally, the market rate of parking in the area will further disincentivize vehicular trips. There will not be parking "Cash Out" incentives offered since parking is not provided.

Mode Split strategies are listed below:

what is the level of subsidy? how will it be implemented?

Transit

The project is located in an area with access to several transit options as previously discussed. This location is currently well utilized by transit riders, centrally located adjacent to Monument Square and a block from Metro Pulse. As such, the project is committed to encouraging transit use by providing hotel employees with a transit pass subsidy. Metro schedules and information will be posted in employee and resident areas. In addition, the hotel lobby will provide screens that provide transportation options including real-time transit bus arrival times for stops within walking distance of the project for hotel guests.

Based on understanding of area hotels, shuttles are not currently being used at a high rate. Due to the Covid 19 Pandemic, utilization of these types of hotel shuttles decreased significantly and has not fully rebounded. Based on this market trend, it is unlikely that the project will be providing its guests with a shuttle service.

Other Mobility

The project is also committed to encouraging employees, residents and hotel guests who commute using alternative modes to use ride-hailing services like Uber, Lyft, or taxis, when they need to make an auto trip as these services are already available in the downtown core. It is anticipated that guests will utilize these services when traveling around downtown Portland.

Rideshare

In addition to transit opportunities, there will be information posted to employee and resident areas regarding potential ride sharing or carpooling opportunities. There will not be an opportunity for preferential rideshare parking as no employee or resident parking will be provided.

Information gathered from the annual Transportation Survey will help to inform these shared ride arrangements and methods for communicating them to employees and residents.

A review of carsharing service websites indicates availability of vehicles on the Portland Peninsula. For example, www.turo.com indicates a number of vehicles available for a weekend rental the weekend of September 22nd to 24th. These options support a residents choice to be car-free in Portland.

Walking/Biking

when/how will decision be made?

The project is **considering** supporting the City of Portland BIKESHARE by providing subsidies for rides and/or memberships for employees, hotel guests and residents.

For guests, the hotel staff will be well versed in the local bicycle trail networks and walkability of Portland to encourage guests to use walking and biking modes as well as opportunities for transit to make connections to local destinations.

Telecommuting

There is a large coworking space included in the program that will be providing hotel guests and residents the option to telework. It is expected that a portion of residents will choose to work remotely.

Education

As indicated above the TDM Coordinator will provide transit maps and schedules to employees and residents. In addition, information on bicycle routes and walkable destinations will be available to guests. The hotel's website will include information on car-free travel to Portland. As a part of the survey program, the TDM Coordinator will work with interested parties to create ride share opportunities. Additionally, the TDM Coordinator will provide educational materials highlighting the benefits and cost saving opportunities of using alternative transportation options.

Monitoring

As indicated above the TDM Coordinator will conduct an annual survey to understand employee and resident mode shares and understand progress towards trip reduction targets. In addition, as requested in the guidance, the TDM Coordinator will report on parking needs of the development.

Conclusions

The location of the site is a hub for local transportation options and safe pedestrian and bike routes. This disincentivizes the need for personal vehicles and will allow for employees, residents, and hotel guests to optimize the use of these resources.

The TDM Coordinator will ensure that employees, residents, and hotel guests have the proper information required to maximize the use of local transit systems and bicycle and pedestrian network. Additionally, there will be resources available to walkable locations to encourage the support of local businesses.

The TDM Plan will be facilitated by the TDM Coordinator to ensure that the project has minimal impacts on traffic operations and provides employees, residents, and hotel guests with proper resources to maximize the use of alternative modes of transportation.

CITY OF PORTLAND, MAINE

PLANNING BOARD

Brandon Mazer, Chair
 Justin Barker, Vice Chair
 Maggie Stanley
 Marpheen Chann
 Sean Murphy
 David Silk
 Austin Smith

December 8, 2023

Nate Green
 GreenMars Real Estate Company, LLC
 75 Oak Street
 Portland, ME 04101

Darrin Stairs
 Woodard & Curran
 12 Mountfort Street
 Portland, ME 04101

Project Name: Major Site Plan + Inclusionary Zoning Conditional Use
Project ID: PL-002673-2023 + CU-002672-2023
Address: 477 Congress Street (477-481 Congress St. & 22 Preble St.)
CBL: 037 F022001, 037 F002001
Applicant: GreenMars Real Estate Company, LLC
Planner: Natasha Kypfer

Dear Nate Green and Darrin Stairs:

On December 12, 2023, the Planning Board approved a major site plan and conditional use application for inclusionary zoning to facilitate the conversion of currently vacant office space within the Time and Temperature Building located at 477 Congress Street, to hotel and residential use, with 136 hotel rooms and 140 long-term residential micro unit apartments. The property is located in the B-3 Downtown Business zone, DEOZ Downtown Entertainment Overlay zone, PAD Pedestrian Activities District Overlay Zone, and the Congress Street Historic District. Based on the information provided to the Board in the application, plans, reports, through testimony and other information submitted by the applicant, the Planning Board adopted the findings, conclusions and recommendations contained in the Planning Board Report for the public hearing on December 12, 2023, which is attached hereto and incorporated herein by reference. Based upon those findings, conclusions and recommendations, the Planning Board found that the application met all relevant standards and voted [insert vote] to approve the application with the following conditions as presented below.

A. INCLUSIONARY ZONING CONDITIONAL USE

Based upon the information provided to the Board in the application, plans, reports, through testimony and other information submitted by the applicant, the Planning Board adopted the findings, conclusions and recommendations contained in Section VIII. B of the Planning Board Report for the public hearing on December 12, 2023, which is attached hereto and incorporated herein by reference. The Planning Board voted [insert vote] to find that the plan is in conformance with the conditional use standards of the Land Use Code, subject to the following conditions of approval.

PRIOR TO ISSUANCE OF A BUILDING PERMIT

1. The Applicant and the City shall enter into an Affordable Housing Agreement (AHA) for all on-site workforce housing units, or as an alternative to providing workforce housing units on-site, the project may pay a fee-in-lieu for some or all of the required units.

PRIOR TO ISSUANCE OF CERTIFICATE OF OCCUPANCY

2. The Affordable Housing Agreement (AHA) be filed as covenant to the 477 Congress Street property's deed with the Cumberland County Registry of Deeds.

B. SITE PLAN REVIEW

Based upon the information provided to the Board in the application, plans, reports, through testimony and other information submitted by the applicant, the Planning Board adopted the findings, conclusions and recommendations contained in Section IX of the Planning Board Report for the public hearing on December 12, 2023, which is attached hereto and incorporated herein by reference. The Planning Board voted [*insert vote*] to find that the plan is in conformance with the site plan standards of the Land Use Code, subject to the following conditions of approval:

PRIOR TO ISSUANCE OF A BUILDING PERMIT

1. The applicant shall submit updates to the Planning Authority on the TDM Plan, as requested by Staff.
2. The applicant shall revise the three raised tree wells to match the required curved granite border detail as noted in the *Technical Manual* Figure IV-4B.

PRIOR TO ISSUANCE OF A CERTIFICATE OF OCCUPANCY

3. The applicant shall contribute to the tree fund in the amount of \$400 per tree for 137 trees, for a total of \$54,800.

C. PLANNING BOARD DECISION

On the basis of the findings, conclusions and recommendations contained in the Planning Board report for the public hearing on December 12, 2023 related to application PL-002673-2023 and application CU-002677-2023 for 477 Congress Street, which is attached to the draft approval letter and incorporated therein, the Planning Board [*adopts/does not adopt*] the approval letter as drafted as the Planning Board's decision for application PL-002673-2023 and application CU-002677-2023, and authorizes the Planning Board Chair to sign the approval letter as drafted.

The approval is based on the submitted plans and findings related to site plan review as contained in the Planning Board report dated December 8, 2023 for application PL-002673-2023 which is attached.

Standard Procedures

Note: The following standard procedures and requirements apply to all approved site plans:

1. Site Plan Expiration The site plan approval will be deemed to have expired unless work has commenced within one (1) year of the approval or within a time period up to three (3) years from the approval date as agreed upon in writing by the City and the applicant. Requests to extend approvals must be received before the one (1) year expiration date.
2. Separate Building Permits Are Required This approval does not constitute approval of building plans, which must be reviewed and approved by the City of Portland's Permitting and Inspections Department.
3. Performance Guarantee and Inspection Fees A performance guarantee covering the site improvements and an inspection fee payment of 2.0% of the guarantee amount and three (3) final sets of plans must be submitted to and approved by the Planning and Urban Development Department and Public Works Department prior to the release of a building permit, street opening permit or certificate of occupancy for site plans.
4. Construction Management Plans The applicant, contractor and subcontractors are required to conform to the approved Construction Management Plan, and all conditions contained within the project's approval, for the entire duration of the project. Any amendments to the approved Construction Management Plan shall be reviewed and approved by the Department of Public Works prior to the execution. The Planning Authority and the Department of Public Works have the right to seek revisions to an approved Construction Management Plan. The applicant shall coordinate the project's construction schedule with the timing of nearby construction activities to avoid cumulative impacts on a neighborhood and prevent unsafe vehicle and pedestrian movements. Accordingly, nearby construction activities could involve a delay in the commencement of construction.

5. Preconstruction Meeting Prior to the release of a building permit and scheduling of a preconstruction meeting, a hard copy set of approved plans shall be submitted to the Development Review Coordinator. A pre-construction meeting shall be held at the project site with the contractor, Development Review Coordinator, Public Works representative, and owner to review the construction schedule and critical aspects of the site work. At that time, the Development Review Coordinator will confirm that the contractor is working from the approved site plan and the approved Construction Management Plan. The site/building contractor shall provide one (1) copy of a detailed construction schedule to the attending City representative. It shall be the contractor's responsibility to arrange a mutually agreeable time for the pre-construction meeting.
6. Department of Public Works Permits If work or obstructions will occur within the public right-of-way, such as utilities, curb, sidewalk, driveway construction, site deliveries and equipment siting, a Street Opening and/or Occupancy Permits are required for your site. Please contact the Department of Public Works Permit Clerk at (207) 874-8300, ext. 8828. (Only excavators licensed by the City of Portland are eligible.)
7. Develop Site According to Plan The site shall be developed and maintained as depicted on the site plan and in the written submission of the applicant. Any modifications of an approved site plan or alteration of a parcel, or of any approved exterior elevations, which were the subject of site plan approval after May 20, 1974, shall require the prior approval of an amended site plan by the Planning Board or Planning Authority pursuant to the terms of Chapter 14, Land Use, of the Portland City Code.
8. Stormwater Management The owner/operator of an approved stormwater management system, and all assigns shall comply with the conditions of Chapter 32, Stormwater including Article III, Post Construction Stormwater Management, which specifies the annual inspections and reporting requirements.

A maintenance agreement for the stormwater drainage system, as attached, or in substantially the same form, shall be submitted for review by Corporation Counsel. Once approved, the document shall be signed and recorded at the Cumberland County Registry of Deeds prior to the issuance of a building permit. Final copies shall be submitted to both the Department of Planning and Urban Development and the Department of Public Works.

9. Third Party Inspections For all sites with one acre or greater of disturbance, the applicant shall retain the services of a third-party inspector for the duration of construction until final site stabilization is in place. The inspection is required in order to ensure that all construction and stabilization activities comply with the approved drawings and specifications; that field decisions regarding erosion control implementation, stormwater system installation, and natural resource protection are based on sound engineering and environmental considerations; and that any changes to the development's erosion control plan, stormwater management plan, or final stabilization plan is communicated to the City of Portland for additional review and approval.

The inspector will submit weekly written reports to the Stormwater Coordinator(s) in the Water Resources Division of Public Works. Reports must include: project ID, project address, the date(s) and time(s) of inspection(s), site photographs of areas under construction, and the date(s) and approximate duration(s) of any rainfall events. The report will identify and describe any erosion problems or discharge of pollutants and what actions will be taken to address these issues and repair any damage to other properties or natural resources, actions to eliminate the erosion source, and actions to prevent future sediment discharges from the area.

10. Defect Guarantee A defect guarantee, consisting of 10% of the performance guarantee, must be posted before the performance guarantee will be released.

11. As-Built Final Plans Final sets of as-built plans shall be submitted digitally to the Planning and Urban Development Department, on a CD or DVD, in AutoCAD format (.dwg), release AutoCAD 2005 or greater. Please provide one hard copy of the mylar.
12. Mylar Copies Mylar copies of the as-built drawings for the public streets and other public infrastructure in the subdivision must be submitted to Public Works prior to the issuance of a certificate of occupancy.
13. Impact Fees New development or changes of use that result in net new residential dwelling units, non-residential building square footage, or water meters, are subject to the City of Portland's impact fee ordinance (Chapter 14, Article XVII). Impact fees are calculated at the time of building permit and must be paid prior to the certificate of occupancy. For more information, visit <https://www.portlandmaine.gov/2409/Impact-Fees>

The Development Review Coordinator must be notified five (5) working days prior to the date required for final site inspection. The Development Review Coordinator can be reached at the Planning and Urban Development Department at drc@portlandmaine.gov or (207)874-8901. All site plan requirements must be completed and approved by the Development Review Coordinator prior to issuance of a Certificate of Occupancy. Please schedule any property closing with these requirements in mind.

If there are any questions, please contact Natasha Kypfer at (207) 874-8725 or via email at nkypfer@portlandmaine.gov.

Sincerely,

Brandon Mazer, Planning Board Chair

Attachments:

1. Planning Board Report
2. Portland City Code: Chapter 32
3. Sample Stormwater Maintenance Agreement
4. Performance Guarantee Packet

477 Congress Street - Final Traffic Review Comments

Tom Errico <thomas.errico@tylin.com>

Mon, Dec 11, 2023 at 5:12 PM

To: Natasha Kypfer <nkypfer@portlandmaine.gov>

Cc: Jeremiah Bartlett <JBartlett@portlandmaine.gov>, Janine Ba <janineba@portlandmaine.gov>

Hi Natasha – I have reviewed the application materials and offer the following final traffic review comments.

- The applicant shall document trip generation for the project. I would expect trip generation levels to be reduced from prior uses given analysis performed for the previous application. Trip generation should be based on the current edition of ITE data.

Status: The applicant has provided the requested information. The project will not generate substantially more traffic as compared to prior uses and will not increase traffic such that a Traffic Movement Permit is required. I have no further comment.

- The applicant should document anticipated valet vehicle pick-up/drop off routings given a likely vehicle parking location.

Status: The applicant has noted that the likely vehicle parking location is the garage at the corner of Brown and Cumberland. An assignment of trips has been provided, which seems to create an efficient flow of traffic as in many cases valet vehicles will be making right turns to and from the site. I have no further comment.

- The proposed parking plan on Congress Street is consistent with the previous application. The Preble Street parking regulations appear to have changed and DPW and John Peverada should provide feedback on this change.

Status: Refer to DPW comments.

Please contact me if you have any questions.

Best regards,

Tom Errico, P.E.

NE TRAFFIC ENG. DIRECTOR

T +1 207.347.4354

M +1 207.400.0719

thomas.errico@tylin.com

TYLin

12 Northbrook Drive

Building A, Suite One

Falmouth, ME 04105, United States



TIME & TEMPERATURE BUILDING

Major Site Plan
Application

477 Congress St.
22 Preble St.

41 Hutchins Drive
Portland, ME 04102
800.426.4262

woodardcurran.com

0232868.02

**GreenMars Real
Estate**

September 2023

TABLE OF CONTENTS

SECTION	PAGE NO.
1. PROJECT SUMMARY	1-1
1.1 Project Site and Background	1-1
1.2 Proposed Project	1-1
2. PERMITTING & ZONING	2-1
2.1 Prior Permitting	2-1
2.2 Zoning	2-1
2.3 Use Standards	2-1
2.3.1 Determination of Use	2-1
2.4 Housing	2-1
2.4.1 Workforce Housing	2-1
2.4.2 Inclusionary Zoning for Hotel Projects	2-2
2.5 Waiver Requests	2-2
2.6 Evidence of State and/or Federal Approvals	2-2
2.7 Evidence of Financial Capability	2-2
2.8 Evidence of Technical Capability	2-2
2.9 Attachments	2-3
2.10 Construction Management Plan (Uploaded to Construction Management Plan folder in Eplan)	2-3
2.11 Forms (Uploaded Separately to Document Folder in Eplan)	2-3
2.12 Drawings (Uploaded separately to Drawings folder in Eplan)	2-4
3. EVIDENCE OF RIGHT, TITLE & INTEREST	3-1
3.1 Right, Title & Interest	3-1
3.2 Attachments	3-1
4. CONSISTENCY WITH CITY OF PORTLAND TRANSPORTATION STANDARDS (14.6.1)	4-1
4.1 Impact on Surrounding Street Systems	4-1
4.2 Access and Circulation	4-1
4.3 Public Transit Access	4-1
4.4 Parking	4-1
4.5 Transportation Demand Management	4-1
5. CONSISTENCY WITH CITY OF PORTLAND ENVIRONMENTAL QUALITY STANDARDS (14.6.2) 5-1	
5.1 Preservation of Significant Natural Features	5-1
5.2 Landscape Preservation	5-1
5.3 Site Landscaping & Buffers	5-1
5.4 Water Quality, Stormwater Management, and Erosion Control	5-1
6. CONSISTENCY WITH CITY OF PORTLAND PUBLIC INFRASTRUCTURE AND SAFETY STANDARDS (14.6.3)	6-1

6.1	Public Safety and Fire Prevention.....	6-1
6.2	Portland Fire Department Site Review Checklist.....	6-1
6.3	Availability and Adequate Capacity of Public Utilities.....	6-2
6.4	Water.....	6-2
6.5	Sewer.....	6-2
6.6	Electric.....	6-2
6.7	Gas.....	6-2
6.8	Solid Waste	6-3
6.9	Construction & Demolition Debris	6-3
6.10	Special & Hazardous Waste	6-3
6.11	Attachments.....	6-3
7.	CONSISTENCY WITH CITY OF PORTLAND SITE DESIGN STANDARDS (14.6.4).....	7-1
7.1	Massing, Ventilation, and Wind Impact.....	7-1
7.2	Shadows	7-1
7.3	Snow and Ice Loading.....	7-1
7.4	View Corridors	7-1
7.5	Historic Resources.....	7-1
7.6	Exterior Lighting.....	7-1
7.7	Noise and Vibration.....	7-1
7.8	Signage and Wayfinding.....	7-2
7.9	Design Standards.....	7-2

TABLES

Table 1:	Residential Unit Counts
Table 2:	Hotel Unit Counts

1. PROJECT SUMMARY

On behalf of GreenMars Real Estate Company (Applicant), Woodard & Curran (W&C) is pleased to submit this Major Site Plan Application to renovate the properties at 477 Congress Street and 22 Preble Street. A letter authorizing W&C to act as the agent on behalf of the applicant is attached to this section. This application has been prepared in accordance with the City of Portland's Chapter 14, Land Use Code and the applicable sections of the City of Portland Design and Technical Manuals. Location and tax maps are attached. The proposed work is shown on the drawings included with this application.

1.1 Project Site and Background

The project is located on land identified by the City Tax Assessor as Tax Map 037, Lots F002 and F022.

The project is in the City's B-3 Zone and is included in the Congress Street Historic District. The Time & Temperature Tower and the Preble Street buildings are identified as "Contributing Structures" to the Historic District. In addition, The Longfellow House and Maine Historical Society Library that abut the property have Landmark status.

The building frontage along Congress Street is within the Pedestrian Activities District Overlay Zone (PAD) and Preble Street is a PAD Encouragement Area.

The current land use designations for 477-481 Congress Street are approximately 123,000 square feet of office and 2,600 square feet of bank. The current land use for 22 Preble Street is approximately 50,000 square feet of commercial and retail. The gross square footage of the buildings, including basements and sub basements, is 206,290 square feet.

This property was previously the subject of a Major Site Plan Application (PL-1003-2020) that was submitted to the Portland Planning Department in May of 2021, and subsequently approved by the Planning Board in January of 2022. An extension of that approval was requested and granted for one year, resulting in a new expiration of January 2024.

The proposal that is the subject of *this* application is different in programming from the 2022 Site Plan Approval, and based on input from City staff, warrants a new Site Plan Approval. Due to the project's size and scale this application will be reviewed and approved by the Planning Board as a Major Site Plan.

1.2 Proposed Project

The project includes interior and exterior renovations to the buildings at 477 Congress Street and 22 Preble Street. The planned improvements are described in more detail below.

Interior Building Renovations

The project includes the conversion of the properties into approximately 140 long term residential micro unit apartments and approximately 136 "hotel" units. The project will also include approximately 4,800 square feet of retail and a restaurant with approximately 140 seats. There will be various amenity spaces available to apartment and hotel guests, including a fitness center and co-working spaces. The first-floor historic arcade will be restored for public access from Preble Street and Congress Street and will include retail spaces again targeted towards local businesses that support the residents and guests. The first floor

of the former TD Bank space (481 Congress Street) will be fit out as a restaurant. The second, third, and fourth floors of 481 Congress will be renovated to include apartment micro units. Floors 7 through 14 will be renovated as hotel units. Access will be provided to a roof-top observation deck.

The following table includes the breakdown of the number of long term residential units by bedroom count.

Table 1: Residential Unit Counts

Type	Approximate Size	Number of Units
Studio	220-230 SF	101
1 Bedroom	320 SF	33
2 Bedroom	380-400 SF	6
TOTAL		140

Table 2 below shows the breakdown of the Hotel units:

Table 2: Hotel Unit Counts

Type	Approximate Size	Number of Units
Studio	220-230 SF	88
1 Bedroom	320 SF	48
2 Bedroom	380-400 SF	0
TOTAL		136

A summary of the uses by floor is as follows:

- The basement will be renovated to provide storage units measuring 9'-0" x 4'-0" as well as utility spaces.
- The first floor will include a restaurant with approximately 140 seats; restoration of the historic "arcade" providing access to retail and amenity spaces; and 14 apartment units.
- The second floor will include an event space; co-working spaces; restrooms; 24 apartment units; and a prep kitchen.
- The third floor will include additional event spaces and 24 micro apartment units.
- The 4th through 6 floors will include additional micro apartment units.
- Floors 7 through 14 will include the 136 hotel units.

Proposed Exterior Renovations

Because the buildings are within the Congress Street Historic District, a separate application will be made to the Historical Preservation Board for the proposed exterior renovations. The applicant will apply for Historic Tax Credits, and therefore the project will also be subject to review by the Maine Historic Preservation Commission and the National Park Service.

The proposed exterior improvements are summarized below:

1. 479 Congress ST. Circa 1922, former TD Bank: new storefronts and entry door replacing the existing aluminum storefronts and door.
2. 477 Congress St: existing mahogany arcade entry doors, will be repaired and painted.
3. 475 Congress St. circa 1923, is the tower. The original bank entry abandoned for many years and replaced with the aluminum door will be replaced. Paint will be removed from the existing granite base.
4. The large steel framed windows on the second and third floors of tower façade, along Congress and Preble, will be repaired, and the central ornamental panels will be reconditioned.
5. The existing storefronts on Preble will be rebuilt in wood and painted. The painted brick will be repainted. Above the storefronts on the second floor the large, fixed windows with flanking double-hungs will be repaired and painted. Aluminum double-hungs will be replaced.
6. The entry to 22 Preble St. will receive a new canopy and signage to reflect what was there historically. The windows above on the second floor will be reconditioned.
7. All masonry will be field verified for soundness and repointed or repaired as necessary, Exterior materials include painted brick, unpainted brick, limestone, and granite.
8. The main tower circa 1923 had a two-story addition placed on the building in 1963. It was clad in a painted metal panel, and sometime in the 1980's Dryvit was applied to the metal panels. This entire façade will be removed and replaced with a façade that better harmonizes with the historic structure.
9. On the northern end of the tower a new fire egress stair will be added to bring the building up to code. It will be clad in a brick similar in color to the adjacent brick.

Frontage Improvements

The concrete section of sidewalk in front of the 22 Preble Street property will be replaced with brick, and any required repairs to sidewalks will be constructed to meet the brick sidewalk standard. Raised tree wells will be added to the Congress Street Frontage, as approved by the City Arborist.

Removal and resetting of the granite curb will add approximately forty (40) feet of additional parallel parking area as shown on the attached site plan. A valet drop-off (loading and unloading) area is proposed on Preble Street. The applicant is requesting a "No Parking/Hotel Loading Only" zone in this area as shown.

No curb modifications are proposed on Congress Street. Similar to the Site Plan Approval received in 2022 a 40 foot loading and unloading designated is proposed, as well as 3 metered parking spaces.

Utility Improvements

Water:

The existing 4" domestic water service dates to 1898 on Congress Street and will be abandoned. A new 6" domestic water service is proposed from Preble Street. The two existing 6" fire services on Preble Street were renewed in 2020 and will be maintained. There is an existing 6" fire service on Congress Street serving 481 Congress Street (the former TD Bank building) that will be maintained.

Sewer:

The existing 8" sanitary sewer service for the buildings exits to the rear (north) into the parking area behind 45 Brown Street, and then out to Preble Street. This service will continue to be used, and a second 8" sanitary sewer service will be added from Preble Street. A new grease interceptor is proposed on Preble Street.

Stormwater:

A new 10" storm drain lateral is proposed on Preble Street to accommodate roofdrains from the building.

Gas:

A new 6" gas service is proposed on Preble Street.

Electric:

Following extensive discussions with Central Maine Power, a new primary feed will be installed in Preble Street from Cumberland Ave to two (2) new underground transformer vaults located in the sidewalk near the southeast corner of the Time & Temperature tower.

2. PERMITTING & ZONING

2.1 Prior Permitting

The proposed change in use of the Time & Temperature buildings requires a Major Site Plan approval per Table 14-A of the Land Use Code (Changes of Use greater than 20,000 square feet). As stated previously in this application, a site plan approval for the site was obtained in January of 2022 (PL-1003-2020) for a 186-room hotel with retail space, restaurant, rooftop bar and associated amenities. The proposal brought forth in this application, while similar in some ways, has differences in programming that City staff have reviewed and advised that a new site plan approval before the Planning Board is preferred.

2.2 Zoning

The project is in the City's B-3 Zone and is included in the Congress Street Historic District. The Time & Temperature Tower and the Preble Street buildings are identified as "Contributing Structures" to the Historic District. In addition, The Longfellow House and Maine Historical Society Library that abut the property to the west have Landmark status. The building frontage along Congress Street is within the Pedestrian Activities District Overlay Zone (PAD) and Preble Street is a PAD Encouragement Area.

The current land use designations for 477-481 Congress Street are approximately 123,000 square feet of office and 2,600 square feet of bank. The current land use for 22 Preble Street is approximately 50,000 square feet of office and retail. The gross square footage of the existing buildings, including basements and sub basements, is 206,290 square feet.

The proposed project includes the conversion of 477 Congress Street and 22 Preble Street into a 136-room hotel and 140 apartments, with associated amenity spaces, retail, and a restaurant.

2.3 Use Standards

Compliance with the City of Portland's Land Use Code Section 6 Use Standards is described in the following sections.

2.3.1 Determination of Use

Per Table 6-A of the Land Use Code, the proposed uses – multifamily residential, hotels, and retail are all permitted within the B-3 zone. The attached Zoning Assessment Table demonstrates the project's compliance with dimensional requirements specified in the Land Use Code.

2.4 Housing

2.4.1 Workforce Housing

The City of Portland's Land Use Code Section 18.2.3 Workforce Housing applies to all development that creates ten or more new dwelling units. At least 25% of the units in the project shall meet the definition of workforce housing or shall pay a fee in-lieu as per section 18.2.3 (C) (6). The applicant is proposing 140 apartment units, which equates to 35 units meeting the definition of workforce housing. The applicant proposes to provide the 25% workforce housing on site.

2.4.2 Inclusionary Zoning for Hotel Projects

The City of Portland's Land Use Code (18.2.5(D), Inclusionary Zoning for Hotel Projects , requires that all hotel projects provide one unit of low-income housing for every 28 rooms in the hotel project, which shall meet the standards outlined in Subsections 18.2.3(C)(3), (4), and (5) and in the implementing regulations governing low income units. This amount shall be rounded up to the nearest increment of 28 rooms. The applicant is proposing 136 hotel rooms which equates to five (5) low-income housing units. The applicant intends to provide the required low-incoming housing units as part of the project. These units shall be deed restricted for the longest period permitted by law and shall not be used for short-term rentals of less than 30 days.

2.5 Waiver Requests

There are no waiver requests being requested at this time.

2.6 Evidence of State and/or Federal Approvals

The project will be reviewed by the State Historical Preservation Commission and the National Park Service. Copies of these approvals can be supplied upon receipt and if requested.

2.7 Evidence of Financial Capability

Attached is a copy of a letter verifying the Applicant's financial capability to undertake the project.

2.8 Evidence of Technical Capability

Woodard & Curran has extensive experience with design for site development projects and specifically on the peninsula within the City of Portland. Woodard & Curran, a 1,000-person Portland-based firm, has provided engineering services to the public and private sector for over 40 years, including permitting, civil/site engineering, stormwater, and construction management services.

GreenMars Real Estate provides a series of services including deal shaping, permitting, general contracting and property management for residential and commercial spaces. As Maine natives, GreenMars aims to address the housing supply shortage, bringing quality but affordable housing to Southern Maine and New Hampshire.

Fathom Companies is a multi-faceted, award-winning development, hospitality management, and equity investment company. Their focus is on the people, community, culture, and success of every project. The Fathom team has a wealth of experience providing opportunities for exemplary results in all offered services.

Invid Architecture, a distinguished Portland-based full-service architectural design firm located in Portland, Maine, is wholly dedicated to crafting sophisticated designs and functional spaces. Their primary focus lies in diverse housing projects, spanning from affordable and market-rate rehabilitation and new construction to opulent, multi-million-dollar luxury condominium complexes. Additionally, the firm engages in an assortment of other ventures, including hospitality and commercial development projects.

Envelope Architecture & Consulting is a full-service Architecture and Consulting firm that specializes in Building Envelope Design, investigations, and assessments of contemporary and historic buildings. ENVELOPE is also an accredited Building Enclosure Commissioning Process Provider. While much of their work is focused on investigation, diagnosing, and preparing solutions for existing buildings with problems, they also offer clients support for new construction.

Thornton Tomasetti has expertise in structural engineering, facade engineering, forensic engineering, structural renovations, construction engineering, Resilience (engineering and construction), sustainable design, applied science, protective design and security, civil engineering and bridge design and rehabilitation. The firm's services are supported by its internal research and development CORE teams, which provides technology-focused expertise, computational simulation and software development as well as artificial intelligence and machine learning. The firm provides consulting expertise to clients in a variety of industries, including architecture/engineering/construction, insurance and law firms, real estate developers, building owners/operators, defense, life sciences, manufacturing, natural resources, and space systems.

VHB is a 1,600-person multi-disciplinary firm that is providing traffic engineering services for the project. VHB professionals include scientists, planners, engineers, and designers, and their work includes transportation, real estate, institutional, and energy industries.

Firm Descriptions and Resumes are attached.

2.9 Attachments

- Agent Authorization Letter
- Location Map
- Tax Map
- Financial Capacity Letter
- Firm Descriptions and Resumes
- Civil Design Plans (uploaded separately to Drawings folder in Eplan)
- Architectural Plans and Renderings (uploaded separately to Drawings folder in Eplan)

2.10 Construction Management Plan (Uploaded to Construction Management Plan folder in Eplan)

A draft Construction Management Plan has been prepared for the proposed development. The Contractor will be required to provide adequate safety fencing and signage directing pedestrians safely around the construction area. The Construction Management Plan is attached to this Section for your reference.

2.11 Forms (Uploaded Separately to Document Folder in Eplan)

- Application Checklist
- Zoning Assessment Table
- Waiver Table

2.12 Drawings (Uploaded separately to Drawings folder in Eplan)

- Boundary & Topographic Survey, prepared by Owen Haskell, Inc.
- Civil & Architecture Design Plans

Date: 10/1/23

To Whom It May Concern,

RE: Authorization for Woodard and Curran to Submit Application for Redevelopment

I, Chris Marshall, on behalf of GreenMars Real Estate Services, Inc., hereby authorize Woodard and Curran to represent our company and submit the necessary application(s) for the redevelopment of the property located at 477 Congress Street, Portland, Maine.

This authorization is valid from October 1, 2023, to September 30, 2024. During this period, Woodard and Curran have the full right to liaise with the city of Portland, Maine, regarding all matters pertinent to the said redevelopment project on our behalf.

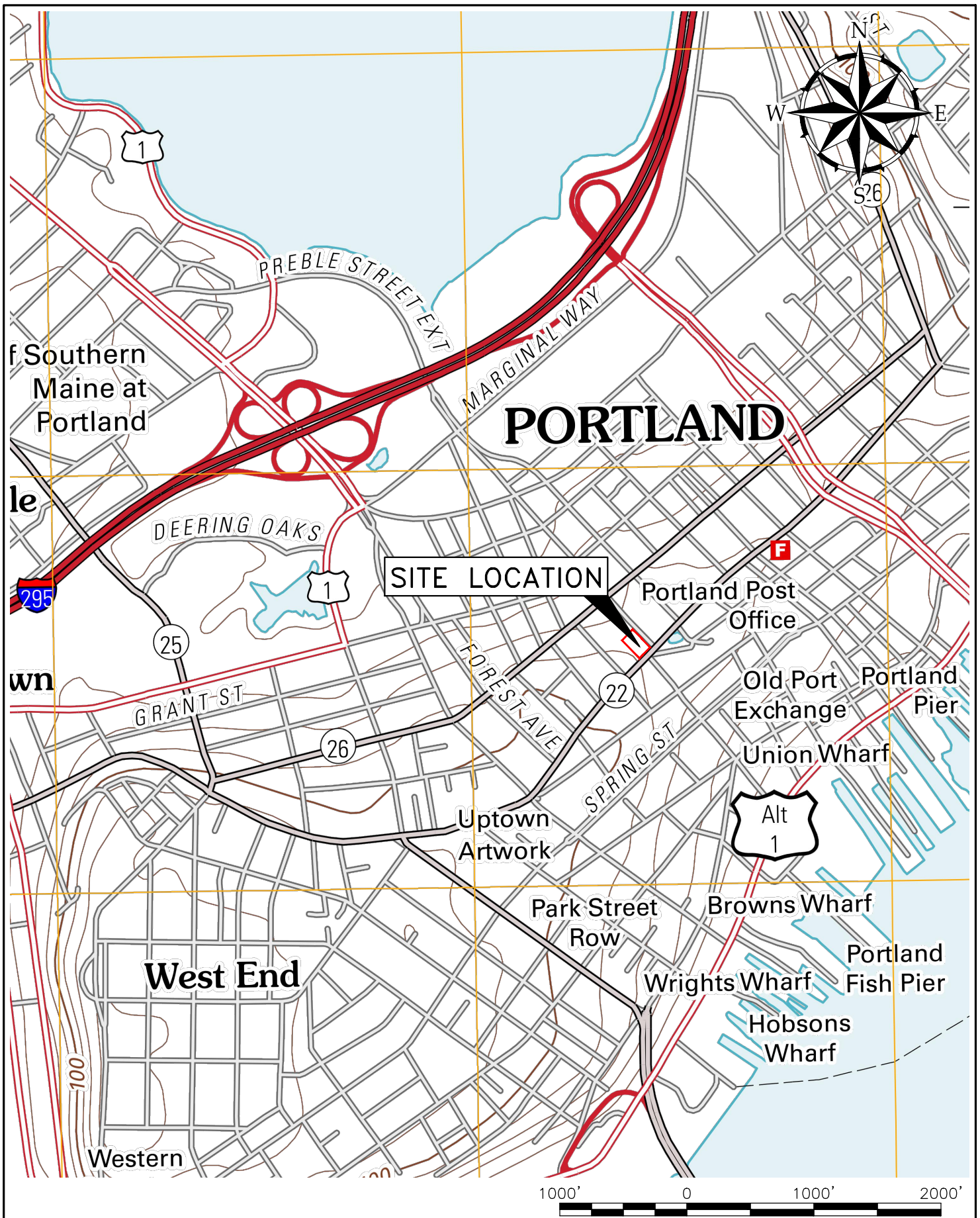
Kindly recognize this letter as evidence of Woodard and Curran's authority to act on our behalf and grant them any access or permissions they may require to facilitate the process smoothly.

We thank you in advance for your cooperation and assistance in this matter. Should you have any questions or require further clarification, please do not hesitate to contact us directly.

Yours sincerely,

Christopher Marshall

Chris Marshall
GreenMars Real Estate Services, Inc.
30 Exchange Street | Suite 3
Portland, Maine 04103
207.409.0426



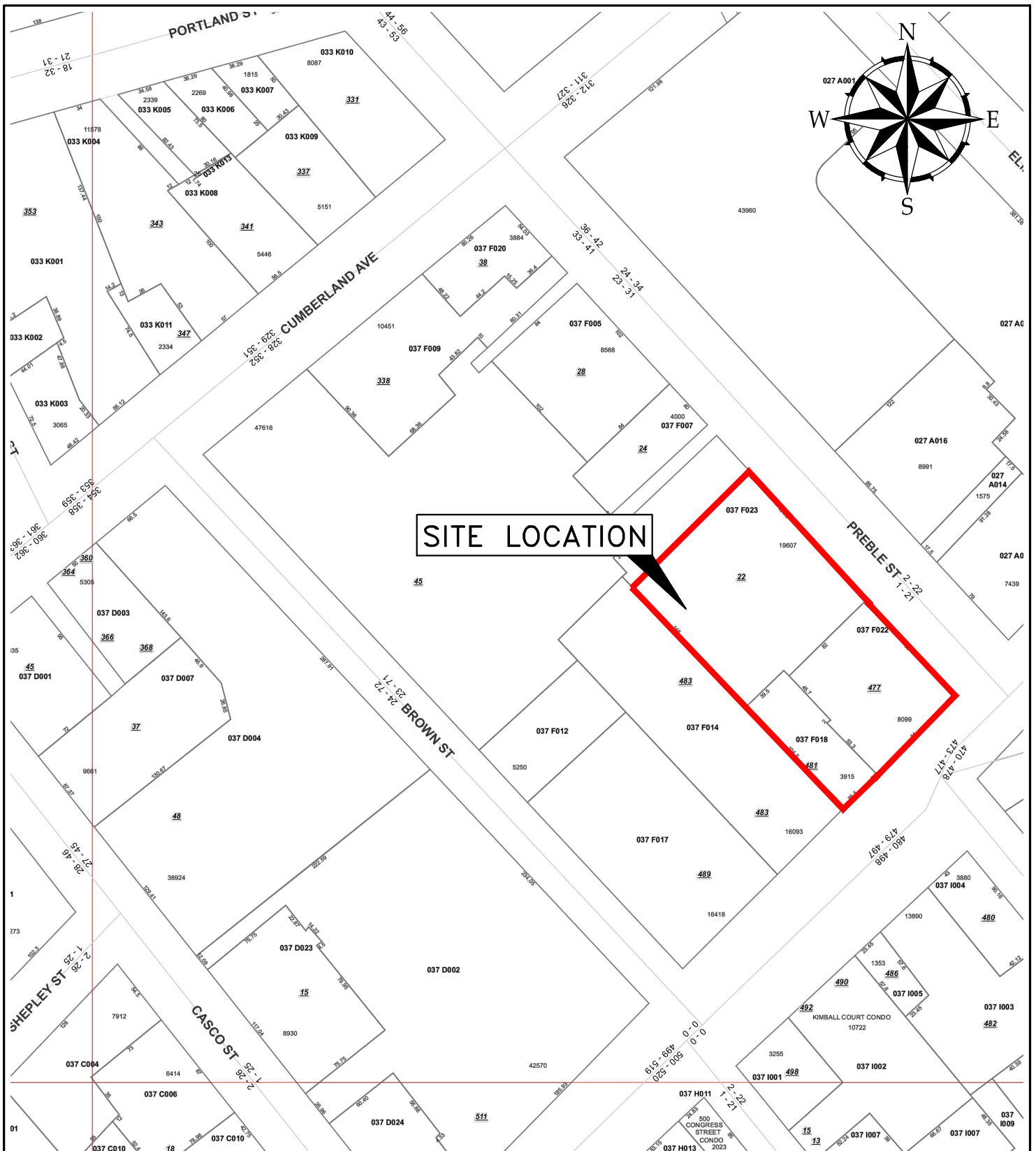

 41 Hutchins Drive
 Portland, Maine 04102
 800.426.4262 | www.woodardcurran.com
 COMMITMENT & INTEGRITY DRIVE RESULTS

LOCATION MAP

DESIGNED BY: DS	CHECKED BY: DS
DRAWN BY: DS	0232868.00 LOCATION MAP*.dwg

TT MAINE VENTURE, LLC
 3100 MCKINNON ST STE 250
 DALLAS, TX 75201
 477 CONGRESS
 HOTEL
 PORTLAND, MAINE

JOB NO: 0232868.00
 DATE: February 2020
 SCALE: 1" = 1000'
 Location Map



April 1 2012 fy 2013

Tax Map Index; <http://www.portlandassessors.com/taxmaps.htm>



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

COMMITMENT & INTEGRITY DRIVE RESULTS

TAX MAP

DESIGNED BY: DS CHECKED BY: DS
DRAWN BY: DS 0232868.00 TAX MAP.dwg

TT MAINE VENTURE, LLC
3100 MCKINNON ST STE 250
DALLAS, TX 75201

477 CONGRESS
HOTEL
PORTLAND, MAINE

JOB NO: 0232868.00
DATE: February 2020
SCALE: 1" = 1000'

Tax Map



September 7, 2023

RE: Nate Green, Chris Marshall and GreenMars, LLC-477 Congress Street, Portland, ME.

To whom it may concern,

I write this letter in support of Nate Green, Chris Marshall and GreenMars, LLC. Nate and Chris have been long time customers of Norway Savings Bank and have done numerous projects with them. I consider them financially capable and very knowledgeable developers.

Should you need further information or clarification, please feel free to contact me at (207) 222-1519.

Sincerely,

A handwritten signature in black ink, appearing to read "Brian C. Desjardins", with a stylized flourish at the end.

Brian C. Desjardins
Regional Vice President
Commercial Lending

BCD/tbm

Technical Ability Submission Exhibit for 477 Congress St. PB Application

GreenMars Technical Qualifications

Co-Owners: Nate Green & Chris Marshall

Expertise Overview:

Renowned as industry leaders in both residential and commercial housing sectors.

Emphasis on integrating innovative design with functional space to cater to modern living and working needs.

Passionate about creating vibrant communities that foster connection and convenience for residents and businesses alike.

Project Experience and Expertise:

Yarmouth, Maine:

Ground-up development of a 22-unit mixed-use property, blending commercial spaces with contemporary residential units.

Bath, Maine:

Transformation of a historic church into residential spaces, preserving its architectural essence while catering to modern lifestyles.

Former Nason College:

Conversion of a dormitory into an 83-unit multi-family residence, showcasing our prowess in adaptive reuse.

Saco, Maine:

Revitalization of a historic 14-suite office building, merging historical charm with modern office amenities.

Additional Projects:

Completion of over 30 1-9 unit multifamily developments, encompassing a mix of renovations, new builds, and commercial adaptations, highlighting our versatility in the property development sphere.

Operational Regions:

Active developments in York, Cumberland, and Sagadahoc counties since 2011.

Regulatory & Bureaucratic Experience:

Secured Tax Increment Financing (TIFs).

Established contract zones.

Navigated DOT rights of way.

Conclusion:

With a unique blend of expertise in both residential and commercial housing sectors, GreenMars is well-poised to deliver exceptional value. Our decade of experience, commitment to quality, and a proven track record showcase our dedication to excellence in every project. We are eager to bring our expertise and passion to the 477 Congress St. project.

Our Team



Jim Brady

PRESIDENT

Portland, ME

Jim is a Former Olympic and America's Cup Sailor turned Real Estate Developer who has focused on hospitality and mixed-use projects with a special emphasis on development services, re-positioning and renovations. He has over 25 years of experience in the United States and Europe.



Marieke Thormann

VICE PRESIDENT OF
DEVELOPMENT

Freeport, ME

Marieke is a Licensed Professional Engineer who brings over a decade of experience in construction and real estate development ranging from boutique hotels and mixed-use urban high-rises to institutional offices and historic adaptive reuse. She is well established in the construction and development industry in the Mid-Atlantic and Northeast and has built a reputation of strong leadership, trusted management, and a deep understanding of complex design and construction.

A boutique platform for real estate development and hospitality management that is innovative, sustainable, and engaging.

We approach each aspect of our work through a combination of innovation, sustainability & beauty.

CONTACT

Marieke Thormann

VICE PRESIDENT OF DEVELOPMENT



207.252.4226



mthormann@fathomcompanies.com

Our Team



Jon Benoit

VICE PRESIDENT OF FINANCE
Saco, ME

Jon is an experienced financial professional (CPA, MSA) providing over 16 years leadership in the private sector. Jon has detailed working knowledge of Regulation D equity subscriptions, tax credit programs, complex proformas, and IT infrastructure and controls. He has a wide network of relationships with regional and national lending institutions and has negotiated numerous lease and purchase and sale agreements for office and hotel acquisitions along with the accounting and finance of new construction projects.



Brandon Hussey

VICE PRESIDENT OF
HOSPITALITY
Gorham, ME

Brandon has nearly two decades of hospitality experience and is apart of the leadership for two of Portland's most award-winning hotels - The Press Hotel and Canopy Portland Waterfront - and is instrumental in the growth of Fathom Companies hospitality division with future projects in the pipeline. He has a wealth of experience in all departments within the hospitality operations - hotel, resort, food & beverage - as well as sales, marketing, and revenue management.



Robyn Smith-Payne

ASSISTANT PROJECT MANAGER
Lisbon Falls, ME

Robyn is an experienced and passionate project manager with experience in program management, construction, and real estate development in California and Maine.

CONTACT

Marieke Thormann
VICE PRESIDENT OF DEVELOPMENT
📞 207.252.4226
✉️ mthormann@fathomcompanies.com

Firm Overview

Invivid Architecture is an esteemed full-service architectural design firm situated in Portland, Maine. Established in 2022 by Architect Virginie Stanley, the company is wholly dedicated to crafting sophisticated designs and functional spaces. Invivid's primary focus lies in diverse housing projects, spanning from affordable and market-rate rehabilitation and new construction to opulent, multi-million-dollar luxury condominium complexes. Additionally, the firm engages in an assortment of other ventures, including hospitality and commercial development projects.

Invivid came to be 20 years into the career of the founder, Virginie Stanley. With unwavering dedication, she honed her skills and ascended the ranks at internationally acclaimed firms, including a notable stint at a prominent Portland-based company to the point of partnership. It was at this juncture that Virginie resolved to establish her own venture, a place where her visionary ideals of collaboration and commitment could flourish.

Invivid comprises a team of exceptional talents united by a shared commitment to pursuing excellence in their work, with a strong focus on delivering superior quality, affordability, and the creation of exceptional spaces that inspire and uplift those who inhabit them.



Firm Founder:

Virginie Stanley is the owner of Invidid Architect, an architect and planner with a career over 20 years in the making. She has worked on a wide range of projects including housing; mixed-use; hospitality; offices and master plans. At a young age Virginie realized how great the impact of architecture and planning is to the well-being of people. With this realization came her desire to create meaningful spaces for human habitation.

Born in the Netherlands, Virginie moved to the US in 1999. In 2004, she graduated from Drury University with degrees in architecture and mathematics. She was named outstanding architecture student three times and was awarded a similar title for her studies in mathematics. Virginie is known to take complex requirements and turn them into simple, elegant design solutions. She works diligently to find optimal solutions to difficult challenges. Virginie has a perspective and passion for architecture that is unmatched by most in her field. After working with world renowned architects Moshe Safdie and Rick Joy, Virginie moved to Maine in 2008.



Virginie has worked on a wide range of projects, including the previous design and construction documents for the Time and Temperature hotel, a 189-room hotel with restaurants, ballroom, meeting spaces, retail spaces and a roof top bar, Hobson's Landing, a 150-unit high end condo development with 9 retail spaces and two levels of parking. Aloft Hotel, Verdante a high-end condo development in Portland Maine. St. Lawrence Arts Theater a 150 theater, Children's Museum at Yad Vashem Holocaust Museum, Jerusalem; Center for the Arts at Brandeis University, Waltham, Massachusetts; Springfield Federal Courthouse, Springfield, Massachusetts; West Edge project, a mixed use development in Kansas City, Missouri; Derby Line Port of Entry, Derby Line, Vermont; the Education Center at the Coastal Maine Botanical Gardens in Boothbay, Maine, Beach Avenue Hotel in Kennebunk as well as many other projects.

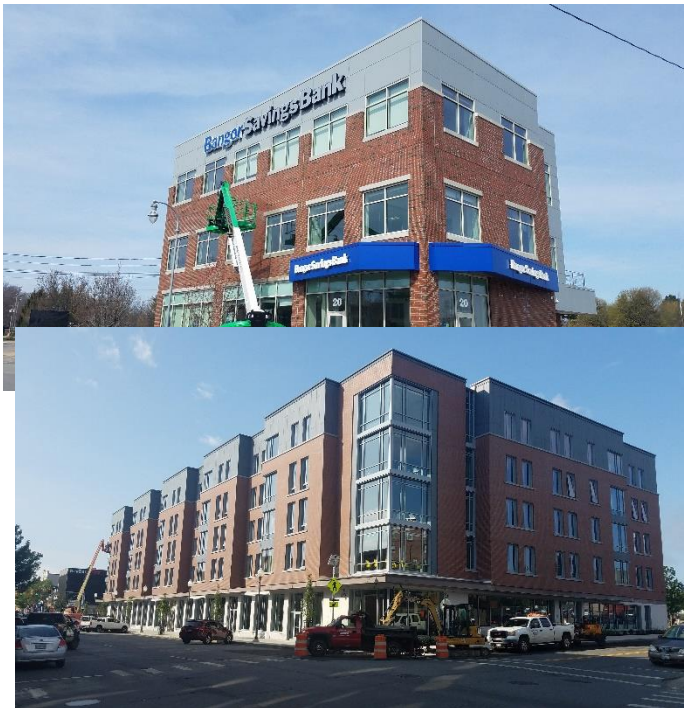
INVIVID ARCHTITECTURE
631 Stevens Avenue, Suite 200
Portland, ME 04103
207.939.7602
invididarchitecture.com

Envelope Architecture & Consulting

Envelope Architecture & Consulting is a full-service Architecture and Consulting firm that specializes in Building Envelope Design, investigations, and assessments of contemporary and historic buildings. ENVELOPE is also an accredited Building Enclosure Commissioning Process Provider. While much of our work is focused on investigation, diagnosing, and preparing solutions for existing buildings with problems, we also offer our clients support for new construction. If you are preparing to design a new project or just trying to maintain your existing building but having trouble, ENVELOPE can help.



ENVELOPE is an Architecture firm with a specialized focus, we provide our clients expertise with renovations and new construction as well as help our clients fix their existing broken buildings. We are also consultants who specialize in the building envelope science. Many buildings suffer from deferred maintenance and chronic problems. ENVELOPE has the experience and expertise to assist you in diagnosing issues and solve them for good. Regardless the size or scope of your project we have the professional services you need. ENVELOPE is a professional services company owned and operated by a Maine, New Hampshire and Massachusetts Licensed Architect with over 25 years of experience. We are fully insured and have the knowledge and experience to service our clients.



Professional Services Include:

- Moisture Infiltration Investigations
- Building Assessment Reports
- Destructive and Non-Destructive Investigations
- Repair Documents and Details
- Window Assessments and Replacement
- Roof Assessments and Replacement
- Failing Masonry and flashing systems
- Construction Document Peer Review
- Building Envelope Commissioning
- Mock-Up Planning and Review
- Owners Representative Services
- Pre and Post Construction Services
- Professional Litigation Support
- Historic Restoration Planning
- Product recommendations
- New construction assembly evaluation

Envelope Architecture & Consulting
140 Salmon Falls Road, Hollis Maine, 04042
207-807-6661 envelope-architect.com

© All rights reserved Envelope Architecture & Consulting, LLC

David Douglass, Architect, BECxP– Owner and Principal
[Envelope Architecture & Consulting](#)

David is the owner and Principal in charge of Envelope Architecture & Consulting. He is a Licensed Architect in the states of Maine, Massachusetts and New Hampshire and a National Council of Architecture Registration Boards Certificate holder. David has over 25 years of experience in new commercial design and construction as well as major renovation and historic restoration.

David is not simply a businessman or someone who has just happened into the role of building envelope specialist. After over 2 decades of designing complex buildings as an Architect he has graduated to this special role in the building industry. He has the benefit of his education, his professional licensure and an entire career that has made him a consummate design professional in the field of Building Enclosure Science.



Originally from Maine, he was raised in New Hampshire and spent 6 years living in Southern California before returning to Maine. He attended school both in California and Massachusetts; he received his Bachelors of Architecture Degree from Wentworth Institute of Technology and has worked for two local architecture firms, in the Portland area, as well as previously working for a Portland area consulting firm from 2012 to 2017. In 2017, after starting his own consulting firm, David was one of the first professionals in Maine to receive accreditation in Building Enclosure Commissioning.

David is an accomplished Architect. He has worked on many new construction projects including Public and Private K-12 educational, healthcare, assisted living, retail, commercial and re-purposed existing historic buildings. As part of his experience, he has a vast knowledge and experience with building systems and their integration. As an accomplished investigator he enjoys the challenge of problem solving and developing solutions that arise during investigation, building and design. He is skilled at developing cost-effective solutions to complex problems. David is an expert in building assemblies, forensic investigation, and resolution-design of chronic building system failures. As a Project Architect and Project Manager David has the experience of coordinating and guiding teams of professionals through the entire design-build process. As a Professional Consultant he now assists Architects, building owners, developers, contractors facilities directors and home owners with solving complex building problems. He has years of experience designing, documenting and detailing projects as well as coordinating other project consultants and team members. During the building process, he has worked with a variety of local and state officials and boards on behalf of project owners as well the National Parks Service and the General Services Commission.

David currently lives in Hollis, Maine with his wife Virginie and their two children.

PAUL B. BECKER, P.E.

Senior Principal



Project role

Structural Engineering Principal in Charge

Summary

Paul Becker brings over forty years of structural engineering expertise in complex building systems using steel, concrete, masonry and timber framing as well as deep foundation support systems and earth retaining structures. He has extensive experience in expansions, concrete restoration, failure investigations, structural evaluations, value engineering and construction monitoring. Paul brings specialized knowledge of historic restoration and stabilization, adaptive reuse and the upgrade of existing structures for current seismic code requirements.

Education

- M.S., Structural Engineering, 1989, University of New Hampshire
- B.S., Civil Engineering, 1980, Pennsylvania State University

Registrations

- Registered Professional Engineer in ME, MA, NH, NY, VT, GA, CT, RI, OH

Professional activities

- Member, Legislative Committee, American Council of Engineering Companies (ACEC)
- Member, American Concrete Institute (ACI)
- Member, American Institute of Steel Construction (AISC)
- Member, American Society of Civil Engineers (ASCE)
- Board Member, Maine Preservation
- Member, Structural Engineering Association of Maine (SEAM)
- Member, Portland Society for Architecture

Select project experience

DHS Office Building, Portland, ME. Structural design of a 54,000-square-foot commercial facility designed for a 150 per-square-foot floor live load to provide flexibility in future uses and to accommodate storage space anywhere throughout the building. A pile supported braced steel frame building was selected to support the size and load requirements. Additional scope included implementation and administration for the Special Inspections program required by the BOCA Building Code. All construction pertaining to the structural system was subject to material testing and on-site reviews resulting in an exceptional quality assurance program.

Patrons Oxford Insurance, Portland, ME. Structural engineering for the design of a 20,000-square-foot office. The architectural development called for many exposed structural framing features and challenged the team to utilize engineered mass timber in order to maximize the aesthetics while providing sufficient strength. Construction of the joinery of the glulams required significant coordination between the designers, contractors and fabricators to meet the architectural and structural intent. Due to the complexity, many of the connections were designed and detailed by our team.

Portland Foreside, Master Planning and Redevelopment, Portland, ME. Structural review, condition assessment, structural design and sustainability consulting services for the master plan of a 10-acre mixed-use waterfront development comprising residential, commercial, retail, hotel and outdoor community spaces. The development seeks to create active open spaces close to the community's work and home. The team is currently providing structural design and sustainability consulting services for Block 4, which includes a new 780-car parking structure, a residential overbuild with new townhouses, and renovations and new construction projects at the historic core of the site.

Hancock Lumber Offices, Casco, ME. Structural engineering services for a 10,000-square-foot office building. The building's primary structural framing used wood construction, including glulam trusses and timber decking in a featured atrium space.

84 Marginal Way, Intermed Medical Offices, Portland, ME. Structural engineering services for a ten-story structure. Six stories of medical office space sit above four levels of parking. The garage pedestal was constructed first, followed by the office building and then the surrounding garage. This approach accelerated the facade construction and fit-out of the building and required the garage pedestal structure to be stable without relying on the surrounding elements. The medical offices provide internal medicine, OB/Gyn, pediatrics, ambulatory surgery, phlebotomy and imaging.

ETHAN A. RHILE, P.E.

Vice President, Portland Office Director



Project role

Structural Engineering Project Manager

Summary

Ethan Rhile joined Thornton Tomasetti in 2001 and serves as the Structural Practice Leader in the Portland office. He has extensive experience in the design of multi-story commercial buildings, schools and industrial facilities as well as specialized knowledge of timber framing systems. Ethan has extensive experience in the evaluation and restoration of historic structures and masonry facades. His background includes specialty field evaluation of existing parking structures, construction shoring and retaining walls.

Education

- B.S. Civil Engineering, 1996, Pennsylvania State University

Registrations

- Licensed Professional Engineer in ME, PA

Professional activities

- Member, American Institute of Steel Construction (AISC)
- Member, Structural Engineers Association of Maine (SEAM)

Select project experience

Patrons Oxford Insurance, Portland, ME. Structural engineering consultant for the design of a new 20,000-square-foot facility. The architectural development called for many exposed structural framing features and challenged the team to utilize engineered mass timber in order to maximize the aesthetics while providing sufficient strength. Construction of the joinery of the glulams required significant coordination between the designers, contractors and fabricators to meet the architectural and structural intent. Due to the complexity, many of the connections were custom designed and detailed by our team of engineers.

CEI Central Office, Brunswick, ME. Sustainability consulting and structural engineering services for a 22,000-square-foot office targeting LEED Platinum certification. The project anticipates a savings of 51% in energy cost over an ASHRAE 90.1-2007 baseline. This was achieved with a high-efficiency HVAC system, advanced lighting design, and a large PV system. Structural design of the new facility consists of a braced steel-framed building with cast-in-place concrete floors over steel floor deck. The roof system includes open web steel joists supporting a steel roof deck for the installation of the large PV system.

Portland Foreside Development, Master Planning and Redevelopment

, Portland, ME. Structural review, condition assessment, structural design and sustainability consulting for the master plan of a 10-acre mixed-use waterfront development comprising residential, commercial, retail, hotel and outdoor community spaces. The development seeks to create active open spaces close to the community's work and home.

Confidential Client, Beverage Plant Expansion and Renovation

, Atlanta, GA. Structural design and construction administration services for a beverage plant multi-phased 180,000 square foot expansion and a 40,000 square foot renovation. The plant design included a framed second floor with spans up to 55 feet designed to support fork lift and heavy industrial loadings. The design also included a twenty-two foot constructed within the existing building, which required complex shoring of the existing building's columns and footings.

Cumberland Cold Storage Building Conversion

, Portland, ME. Structural engineering for the conversion of a 100,000-square-foot five-story, former spice mill constructed in the late 1800s to office space for Pierce Atwood law firm. Interior renovations involved new masonry openings, shoring of the first floor to replace deteriorated timber framing, repair of beam ends, a new mudslab, new stair and elevator shafts and floor leveling. The engineers also designed a new entrance canopy and rooftop mechanical support. Scope included repair of the façade, which entailed rebuilding window arches and end wall reinforcement.

Cold Storage Facility Additions, Chicopee, MA. Structural design of additions to a cold storage warehouse directly adjacent to a warehouse. The additions include a 14,000-square-foot, freezer building, a 7,200-square-foot cooler addition, and an 11,200-square-foot cooled loading dock addition. The new cooled loading dock was designed with nine overhead doors. To make way for it, four existing dock doors were relocated to an adjacent section of the building. The superstructure was framed using conventional structural steel beams and columns with open web joist infill supporting a steel deck.

MATTHEW LEGERE, P.E.

Associate



Project role

Structural Engineer

Summary

Matt Legere joined Thornton Tomasetti in 2017 and has over 10 years of experience in the structural design and engineering industry. He has structural designed for many new and existing multi-story commercial, residential, and institutional facilities spanning a wide range of materials including steel, concrete, masonry and timber. His dynamic range of experience includes historic renovations, conditions assessments, adaptive reuse, and new building design. He excels at working with other building consultants to find creative solutions to complex problems.

Education

- B.S., Civil Engineering, 2012, University of Maine

Registrations

- Licensed Professional Engineer in ME

Professional activities

- Member, American Council of Engineering Companies (ASEC)
- Member, Structural Engineers Association of Maine (SEAM)
- Member, National Council of Structural Engineers Associations (NCSEA)

Select project experience

477 Congress Street Conversion, Portland, ME. Structural engineering services through construction documents to transform the historic Time and Temperature Building into a 186-room luxury hotel. The design included a banquet hall, meeting rooms, a restaurant, a rooftop bar with a canopy roof, and retail stores. The project also included design to support multiple new egress paths and large mechanical equipment on existing roofs.

Northeastern University, The Roux Institute Academic Hub, Portland, ME. Sustainability, resilience and building envelope consulting and structure engineering for a 245,000-square-foot hub with classrooms and laboratory space. The building is a curved-and-arched design supported on two major concrete cores with few intermediate support points within the arched atrium. Waterproofing and building envelope scope includes design of the green roofing system for the parking area and below-grade waterproofing to contend with rising sea levels and increased storm intensity. The team created a sustainability project charter and is providing energy analysis for the building and district energy systems that dramatically reduce or eliminate the need for fossil fuels.

600 Westbrook Street, South Portland, ME. Structural design of a five-story, 49,230-square-foot apartment building with 52 units and mixed-use office, community rooms and at grade parking on the ground floor. The proposed construction consists of double-loaded light wood-framed corridor bearing walls and light wood-framed exterior bearing walls with open web wood floor and roof trusses. The wood-framed upper levels will be supported on a non-combustible second floor framing level comprised of steel beams and columns, steel deck and a site cast concrete slab. This steel-framed level supports the upper level wood framing over the first floor.

Portland Foreside Development, Master Planning and Redevelopment, Portland, ME. Structural review, condition assessment, structural design and sustainability consulting for the master plan of a 10-acre mixed-use waterfront development comprising residential, commercial, retail, hotel and outdoor community spaces. The development seeks to create active open spaces close to the community's work and home.

Cold Storage Facility Additions, Chicopee, MA. Structural design of additions to a warehouse directly adjacent to another warehouse. The additions included a 14,000-square-foot, freezer building, a 7,200-square-foot cooler addition, and an 11,200-square-foot cooled loading dock addition. The new cooled loading dock was designed with nine overhead doors. To make way for it, four existing dock doors were relocated to an adjacent section of the building. The superstructure was framed using conventional structural steel beams and columns with open web joist infill supporting a steel deck.

Bowdoin College, Upperclass Housing Park Row, Brunswick, ME. Passive house consulting, energy analysis and structural engineering services for four new three-story, steel-and-wood-constructed apartment buildings. The 11,000-square-foot project contains 22 beds and is designed to achieve PHIUS+ certification using efficient air-exchange systems for heating, cooling and ventilation, thick insulation and triple-pane windows.



SCOTT M ROBBINS, PE, CEM, LEED AP BD+C

PROJECT EXECUTIVE



YEARS EXPERIENCE

28

EDUCATION

MBA, Syracuse University

BS, Mechanical
Engineering, Rensselaer
Polytechnic Institute

PROFESSIONAL QUALIFICATIONS

Professional Engineer in
MA, NY, CT, RI, NH, CA

Certified Energy Manager

LEED Accredited
Professional; Building
Design + Construction

PROFESSIONAL MEMBERSHIPS

ASHRAE

Association of Energy
Engineers

PROFILE

Scott is a Senior Vice President whose experience covers the project management and mechanical engineering for college and universities, laboratories and cleanrooms as well modeling systems for true informed design. He is responsible for the design of projects from conception, including preparation and coordination of working drawings and specifications. Scott embraces the development of mechanical systems concepts, such as the use of high performance HVAC and energy recovery systems, technical oversight, and guidance of project engineering and design. He has extensive knowledge of sustainable building design and construction practices and encourages implementation where appropriate. He is an accredited professional in the United States Green Building Council's Leadership in Energy and Environmental Design (LEED) Green Building Rating System.

PROFESSIONAL EXPERIENCE

Commercial

- 500 Boylston St, Boston, MA: 25,000 gsf office fit out
- Asphalt Green, New York, NY: Upgrade natatorium with Olympic pool with new ventilation system for improved thermal comfort and modification of HVAC system throughout athletic facility
- Converse, 200 Quannapowitt, Wakefield, MA: Fit out of 40,000 gsf office space
- Decibel, Rooms 561-564 Modifications, Boston, MA
- Digital Realty, 200 Quannapowitt, Wakefield, MA: Renovations to common spaces and shell and core portions of the building for future fit out
- Millennium, Cambridge, MA: 40,000 gsf office renovation over two floors
- Shire HGT Building 200, Lexington, MA: 40,000 gsf expansion to existing building including cafeteria, office and conference rooms
- Shire HGT Building 300, Lexington, MA

Mixed-use

- 41 Linskey Way, Cambridge, MA: Four-story, 28,505-square-foot commercial building that would preserve and expand an existing three-story, 12,654-square-foot historic brick. Will include restaurants on its' first and fourth floors, and a conference/meeting center across the second and third floors
- Artfarm, Somerville, MA: The 2.1 acre site at 10 Poplar St. will serve as a park, a self-sustaining art and urban agriculture laboratory, and arts hub featuring the ArtFarm community center with performance and exhibit spaces
- Exchange South End, Boston, MA: Microgrid study and coare and shell for buildings A&B of the 1.6 million square foot redevelopment of The Flower Exchange site for office, lab, biotech, biomedical uses with a 1.1 acre publicly accessible open space, ground floor retail and other activating uses, and 30,000 square feet of civic/cultural space.

Residential

- Bulfinch Crossing, WPB3 Residential Tower, Boston, MA
- Skyline Condos, Medford, MA: 12-story high end condominium building
- Station Landing, Medford, MA: Multiple six-story buildings with retail on the first floor and apartment/residential on the remaining floors
- Waterstone at Stamford, Stamford, CT: Approximately 230,000 sf new independent and assisted senior living complex
- Waterstone at White Plains, White Plains, NY: 211,000 sf luxury independent senior living complex



GREGORY F. FENNING, PE

SR. ASSOCIATE / PROJECT MANAGER



YEARS EXPERIENCE

15

EDUCATION

MBA, Boston University,
2015

BS, Mechanical
Engineering, Purdue
University, 2008

PROFESSIONAL QUALIFICATIONS

Registered Professional
Mechanical Engineer in
MA, 2014

OSHA 10 Certified, 2016

Six Sigma Green Belt, 2015

PROFILE

Greg is a Sr. Associate and Project Manager with over 15 years of experience in the industry. His primary duties include business development, design, P&L management, and construction administration. He has designed and installed energy retrofit projects for commercial, industrial, and municipal facilities to reduce electric, natural gas, oil, and water consumption. He is passionate about energy optimization with viable cost-effect solutions for building systems.

PROFESSIONAL EXPERIENCE

Hotel/Hospitality

- Aolft Hotel, Providence, RI (2021)
- Time & Temperature Hotel design only, Portland, ME (2022)
- Pressed Café, Chelmsford, MA (2022)
- Pressed Café, Bedford NH (2021)
- Hilton Back Bay, Boston, MA (2010)

Museum/Cultural

- National Parks Service, USS Constitution Center Museum, Charlestown Navy Yard, Boston, MA (2012)
- National Parks Service, Old State House, Boston, MA (2012)

Residential

- Trilogy Fenway Condominiums, 180 Brookline Ave, Boston, MA (2013)
- Samuel & Associates, 1330 Boylston Street, Boston, MA (2013)

Retail

- Assembly Square Ashley Furniture (at the historic Ford Edsel Plant), Somerville MA (2021)
- Brown's Bicycles, Beverly, MA (2013)
- A New Leaf, 261 Cabot Street, Beverly, MA (2013)

Commercial

- 41 Linskey Way, Cambridge MA (2023)
- 17 Farnsworth Lab-Office Core & Shell, Boston MA (2023)
- Kenmore Beacon Lab-Office Core & Shell, 650/660 Commonwealth Ave, Boston MA (2023)
- Kenmore 648 Lab-Office Core & Shell, 648 Commonwealth Ave, Boston MA (2023)
- Google new office complex, New Albany, OH (2022)
- Google 5cc Lobby Renovation, Cambridge MA (2022)
- MassMutual Center, Sports and Exhibition Hall, Springfield, MA (2011)
- Hynes Convention Center, Boston, MA (2011)



ANDY HEBERT, PE, LEED AP

HVAC ENGINEER



PROFILE

Andy is an engineering professional with over 40 years of experience and expertise in all phases of facility design and construction including project management, programming, planning, cost estimating, scheduling, design, engineering, and construction administration. Diverse background provides extensive knowledge of mechanical, plumbing, and electrical system design and commissioning, and the ability to interface with utility companies, contractors, building officials and other consultants. Enthusiastic mentor for junior staff and focused team leader with outstanding record of achievement on numerous successful projects.

YEARS EXPERIENCE

41

EDUCATION

MBA, Bryant College,
Smithfield, RI, 1986

BS, Mechanical
Engineering, College of
Engineering, Cornell
University, 1981

PROFESSIONAL QUALIFICATIONS

Registered Professional
Engineer: RI, AR, CO, GA, IA,
IN, MD, ME, MI, MN, NH, PA,
VA

LEED Accredited
Professional

Building Energy Modeling
Professional (BEMP),
ASHRAE

PROFESSIONAL AFFILIATIONS

American Society of
Heating Refrigeration and
Air Conditioning Engineers

ISPE, International Society
for Pharmaceutical
Engineering

NCEES, National Council
of Examiners for
Engineering and
Surveying

ASPE, American Society of
Plumbing Engineers
(former member)

PROFESSIONAL EXPERIENCE

Hotel/Hospitality

- **20 Sidney Street, Cambridge, MA:** project manager and HVAC engineer for a 200-room, 8-story hotel and retail/parking complex
- **Crosstown Hotel, Boston, MA:** project manager and HVAC engineer for a 174-room, 9-story hotel and retail/parking complex

Museum/Cultural

- **Veterans Memorial Auditorium, Providence, RI:** design engineer for renovation to the HVAC system for the 1900 seat performance venue, which is listed on the National Register of Historic Places.
- **Hoyts Cinemas in CT, MA, MD, NJ, NY, PA, VA:** project manager and design engineer for movie theater complexes housing a total of 196 screens at 16 east coast locations as well as development of corporate prototype standards for use at other facilities.
- **Norton Museum, West Palm Beach, FL:** project manager for the \$11M, 30,000-sf addition and renovation to the museum. Project included the replacement of the existing air-cooled chillers with a new 400-ton central chilled water plant.
- **Smith College Fine Arts Center, Northampton, MA:** project manager for this \$37M, 164,000-sf renovation. Building's studio wing houses painting, lithography, photography and printmaking studios, classrooms, woodshops, and faculty suites. Adjoining wings provide space for a library and museum. All MEP/FP systems were replaced.
- **Federal Hall National Monument, National Park Service, New York, NY:** senior mechanical engineer for design of comprehensive restoration, repair, and stabilization of the 1842 structure starting with the replacement of outdated MEP and life safety systems.



JIMMIE NG, PE, CPD, LEED AP BD+C

PLUMBING / FIRE PROTECTION ENGINEER



YEARS EXPERIENCE

29

EDUCATION

*BS, Civil Engineering,
UMass Lowell*

PROFESSIONAL QUALIFICATIONS

*Professional Engineer in
MA*

*LEED Accredited
Professional; Building
Design + Construction*

PROFILE

Jimmie is Vice President at WSP and an accomplished Professional Engineer with design experience in plumbing and fire protection building systems. Projects encompass various building types including commercial, retail, institutional, educational, healthcare, municipal, public buildings. Jimmie strives to consistently meet project schedules and budgeted hours. He has solid communication skills exhibited by his constant contact with clients and co-workers, as project manager and as a member of the design team.

PROFESSIONAL EXPERIENCE

Hotel/Hospitality

- Tria Hotel, Cambridge, MA
- Westin Hotel & Condominiums, Providence, RI: New 400,000 sf, 33-story fast-track hotel with guestrooms and condominiums, built on top of five-stories of parking

Museums/Cultural

- Boston Public Library, Boston, MA
- Boston Tea Party Ship and Museum, Boston, MA
- Conant Public Library, Sterling, MA
- First Church of Christ Scientist, Sunday School, Boston, MA
- Framingham Public Library, Framingham, MA
- Massachusetts Institute of Technology, Hayden Memorial Library, Cambridge, MA
- National Museum of African American History and Culture, Washington, DC (2015): 425,000 sf museum located between the Washington Monument and National Museum of African History on the National Mall
- Strand Theatre, Boston, MA
- Studio Museum Harlem, Harlem, NY: New 71,000 sf building American Contemporary museum introducing exhibits, an artist-in-residence program and education features
- University of Massachusetts Boston, Edward M Kennedy Institute for the United States Senate, Boston, MA: 70,000 sf facility dedicated to educating the public about the importance of the United States Senate through exhibits and archives
- Yale University, Beinecke Rare Book Library, New Haven, CT: Historic library that houses over one million rare documents, and underwent a complete reconstruction of the MEP systems

Mixed-use

- Patriot Place, Foxborough, MA (2008): 1.2 million sf open area “life style” center” built around entertainment, retail, museum, hotel and restaurants that turns the New England Patriots stadium into a four-season activity space

Commercial

- 101 Seaport Avenue, Parcel L1, Boston, MA
- 105 West First St, Boston, MA
- 399 Congress Street, Boston, MA



MELISSA SIERRA, PE, LEED AP

ELECTRICAL ENGINEER



YEARS EXPERIENCE

22

EDUCATION

MBA, Norwich University
BS Electrical Engineering,
Western New England
College

PROFESSIONAL QUALIFICATIONS

Registered Professional
Engineer: RI, MA, CT, NY
LEED Accredited
Professional

PROFILE

Melissa is a Vice President and electrical engineer at WSP. Melissa is responsible for preparation of design, specifications, and cost estimates. Her technical capabilities include the design of electrical power, lighting and control systems, conventional building support systems, communications, emergency power, fire alarm and smoke detection, short circuit, coordination and arc flash studies, and control and energy management systems. She has experience in health care, laboratory, commercial, higher education, and hospitality facilities.

PROFESSIONAL EXPERIENCE

Hotels/Hospitality

- Ames Hotel, One Court Street, Boston, MA (2007): Renovation of the existing 80,000 sf building from an office tower to a 140-room hotel
- Brookline Hotel, Hilton Garden Inn, Brookline, MA: New 120,000 sf, 11-story hotel with 175 standard hotel rooms and a 70-car parking garage
- Parcel K, Boston, MA: New seaport residential development consisting of a 162,400 sf hotel and 244,600 sf residential building, plus 3-story and below grade garage
- Williams College Inn, Williamstown, MA (2018): New 100,000 sf, 75 key hotel with guestrooms, amenity spaces, bar and restaurant

Museums/Cultural

- Boston College McMullen Museum and Conference Center, Boston, MA
- Colgate University, Center for the Art and Culture, Hamilton, NY (2017): New 17,000 sf exhibit and archive museum
- Ethelbert Cooper Gallery of African and American Art, Cambridge, MA: 5,100 sf of gallery space for various painting and textile pieces
- Linda Pace Foundation Gallery, San Antonio, TX
- Menokin House, Warsaw, VA: Renovation of the 4,800 gsf historic house, dating back to 1769, through stabilization and preservation within a glass building
- Menokin UVA Memoria, Warsaw, VA
- Museum of Fine Arts, Boston, MA (2010): 280,000 sf expansion of the East Wing with new museum space and the "Jewel Box", a 65-foot high, glass enclosed courtyard
- National Museum of African American History and Culture, Washington, DC (2015): 425,000 sf museum located between the Washington Monument and National Museum of African History on the National Mall; seeking LEED Gold
- Studio Museum Harlem, Harlem, NY: New 71,000 sf building American Contemporary museum introducing exhibits, an artist-in-residence program and education features
- University of Massachusetts Boston, Edward M Kennedy Institute for the United States Senate, Boston, MA (2015): 70,000 sf museum facility to educate the general public and students about the role of the US Senate
- Yale University, Beinecke Rare Book Library, New Haven, CT: Historic library that houses over one million rare documents, and underwent a complete reconstruction of the MEP systems
- Yale University, Cultural Properties, New Haven, CT (2010): Security systems assessment for six museums and three storage facilities with the largest painting and artefact collection in the world



THOMAS STELLA, PE, LEED AP

Senior Vice President, Mechanical Engineer



19 YEARS EXPERIENCE

PROFESSIONAL QUALIFICATIONS

Professional Engineer
CT (No. PEN.0030852)
MA (No. 48114)

EDUCATION

M.S. in Mechanical Engineering,
Northeastern University
Boston, MA

B.S. in Mechanical Engineering,
University of Miami
Miami, FL

PROFESSIONAL MEMBERSHIPS

American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE)

CAREER SUMMARY

Thomas is a project manager, mechanical engineer and vice president at WSP. Thomas' responsibilities include engineering preparation, coordination of working drawings and specifications, energy analysis, systems evaluations and construction administration services such as shop drawings review and field construction inspections. He has designed HVAC systems for a variety of building types including academic, research laboratories and commercial facilities.

PROFESSIONAL EXPERIENCE

Hospitality

- Westin Hotel & Condominiums, Providence, RI
- 121 Brookline Avenue, Boston, MA
- Oceanwide Plaza, Los Angeles, CA
- Intercontinental Mark Hopkins Hotel Renovation, San Francisco, CA

Mixed-Use

- 2407 First Avenue - Archetype Belltown, Seattle, WA
- Oceanwide Plaza, Los Angeles, CA
- Park Tower at Transbay, San Francisco, CA

Museum + Cultural

- Peabody Essex Museum, Salem, MA
- Sacred Heart University, Performing Arts Center, Fairfield, CT
- University of Massachusetts Boston, Edward M Kennedy Institute for the United States Senate, Boston, MA

Commercial

- Project Duvall, Confidential Client, Portland, OR
- Olympus Spa, Bellevue, WA
- Schwartz Group Office Building Development, Seattle, WA
- 11th and Idaho Office Building, Boise, ID
- 88 Kearney Knotel, San Francisco, CA
- West Chiller Upgrade Study, Confidential Client, San Francisco, CA
- 1265 Main Street, Waltham, MA
- 2 Wells, Newton, MA
- 490 Arsenal Street, Watertown, MA
- ASPCA, Animal Housing Renovation, New York City, NY
- Blue Cross Blue Shield of Massachusetts, Hingham, MA
- EMC Corporation, 228 South Street Hopkinton, MA
- EMC Corporation, 52 South Street, Hopkinton, MA
- Nuance Communications, 675 Massachusetts Avenue, Boston, MA
- Weiss Asset Management, 222 Berkeley Street, Boston, MA
- World Trade Center, Fidelity, Boston, MA
- Multiple Confidential Clients, Salesforce Tower, San Francisco, CA
- 1554 Market Street, San Francisco, CA
- Park Tower at Transbay, San Francisco, CA
- Oceanwide Plaza, Los Angeles, CA
- 181 Fremont, Confidential Client, San Francisco, CA

*Project experience from previous employer

HILTON GARDEN INN

Brookline Village



PROJECT DESCRIPTION

WSP provided MEP/FP engineering services associated with the Hilton Garden Inn Brookline Village, a 120,000 sf, 11-story, high-rise, select-service hotel including approximately 175 standard hotel rooms and a 70-car parking garage.

The hotel also includes a restaurant, lounge area, meeting spaces, fitness center, pool, 24-hour pavilion pantry and a 24-hour business center. The building has sweeping glass walls and outdoor seating.

LOCATION

Brookline, MA

ARCHITECT

CambridgeSeven

CLIENT

Cambridge Seven Associates

OWNER

Claremont Companies

PROJECT VALUE

\$30 Million

SIZE

120,000 sf

COMPLETION

2020



PROJECT DESCRIPTION

WSP provided mechanical, electrical, plumbing and fire protection design engineering services for the new Inn at Williams College. This three-story hotel consists of 70 guest rooms, a restaurant, and function space for 200 guests at peak season.

WSP also provided the design of low voltage telecommunications and security.

Bearing in mind the Inn will not always be at full capacity, a design challenge was given to our firm to allow 40 plus rooms to go dormant, all while still appearing to be running at peak.

LOCATION

Williamstown, MA

ARCHITECT

CambridgeSeven

CLIENT

CambridgeSeven

OWNER

Williams College

PROJECT VALUE

\$32 Million

SIZE

70,000 sf

COMPLETION

2019

SIGNIFICANT PROJECT FEATURES

- High efficient building design with an estimated EUI of 46
- Coordination of building systems with pre-fabricated beam penetrations to allow for lower floor to floor heights
- USGBC vs. 3 LEED Gold certification
- INCOM lighting / HVAC unit control systems
- Roof modified photovoltaic system providing a renewable energy source



RESIDENCE INN AT MARRIOTT

121 Brookline Avenue



PROJECT DESCRIPTION

WSP provided mechanical, plumbing, fire protection and electrical engineering design services for the new 8 story, 105,000 sf hotel with 180 guestrooms and one level of below grade parking for 45 cars (21,000 sf). The total square footage for the project is 126,000 sf.

The hotel program includes a lobby, health room, meeting room, kitchen, employee break room, lounge, raised pool on roof and laundry room for the hotel guests, along with standard back of house requirements.

Each guestroom has the same components including sink, cook-top, refrigerator with ice maker, dishwasher, garbage disposal, and microwave.

LOCATION

Boston, MA

ARCHITECT

Confidential

CLIENT

Group One Partners

OWNER

Boylston Properties

PROJECT VALUE

\$60 Million

SIZE

126,000 sf

COMPLETION

Completed 2013



AMES HOTEL

One Court Street



LOCATION

Boston, Massachusetts, USA

ARCHITECT

Cambridge Seven Associates

CLIENT

Cambridge Seven Associates

PROJECT VALUE

Confidential

SIZE

80,000 sf

COMPLETION

2007

PROJECT DESCRIPTION

WSP provided mechanical, plumbing, fire protection and electrical engineering design services for the renovation of an existing 80,000 sf building at One Court Street.

The renovation converted the space from an office to a hotel. The existing MEP/FP systems were removed and the building was converted from an office tower to a 140-room hotel.



CORBU SPA

Charles Hotel



PROJECT DESCRIPTION

WSP provided complete MEP/FP engineering and design services for the high-end spa for the Charles Square Hotel in Cambridge, MA.

The 4,000 sf venue houses seven treatment rooms including one “room for two” equipped with a Swiss shower as well as a complete salon. Locker rooms have individual lockers, a sauna, rainforest shower and full array of amenities. The architecture offers natural touches throughout and is inspired by nature.

WSP’s work included new toilet facilities, new treatment rooms and modifications to the reception area. WSP also completed modifications to the existing HVAC, electrical, and fire sprinkler system.

LOCATION

Cambridge, MA

ARCHITECT

CambridgeSeven

CLIENT

Cambridge Seven

PROJECT VALUE

Confidential

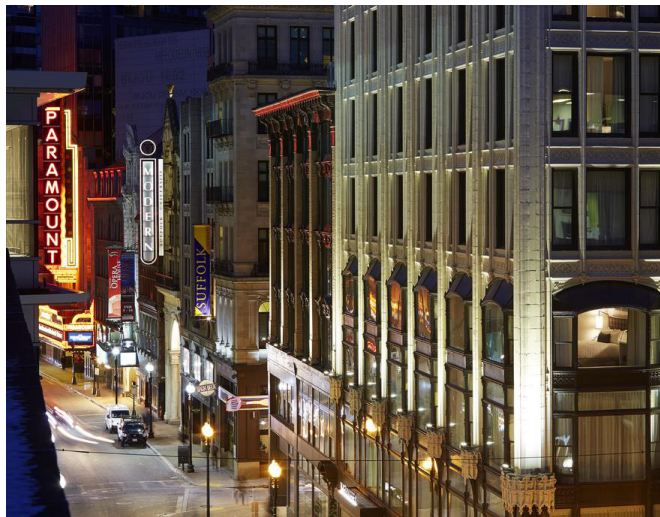
SIZE

4,000 sf

COMPLETION

Completed 2011

THE GODFREY HOTEL



LOCATION

Boston, MA

ARCHITECT

Finegold Alexander Architects

CLIENT

Finegold Alexander Architects

OWNER

The Godfrey Hotel

PROJECT VALUE

\$50 Million

SIZE

135,000 sf

COMPLETION

2016

PROJECT DESCRIPTION

WSP provided MEP/FP engineering services to the to the Godfrey Hotel. The project consisted of the complete gut renovation and conversion of two existing office buildings located at 59 Temple Place and 501-505 Washington Street into a new 135,000 sf, 240 guest room upscale lifestyle hotel.

The conversion included two adjacent land parcels containing the 11-story building as well as the 6-story building located at the corner of Washington Street and West Street.

The HVAC system for the project was an energy efficient variable refrigerant flow system with condensing units on the roof and fan coil units located above the guest room entry foyer.

LIBERTY HOTEL



LOCATION

Boston, MA

ARCHITECT

CambridgeSeven

CLIENT

CambridgeSeven

OWNER

Carpenter & Co.

PROJECT VALUE

\$75 Million

SIZE

240,000 sf

COMPLETION

2007

PROJECT DESCRIPTION

WSP provided complete MEP/FP and telecommunication engineering design services for the transformation of one of the country's oldest and most notorious jails into a four-star luxury hotel. Adjacent to the Massachusetts General Hospital and the banks of the Charles River, the hotel includes the restored gray granite Charles Street Jail building (where the Boston Strangler was once a prisoner) and an adjacent 15-story wing for guest rooms.

The overall project contains 240,000 sf and houses 320 guest rooms plus a conference facility, ballroom, restaurant and bar, kitchen, retail space, health club and locker rooms.

SIGNIFICANT PROJECT FEATURES

- Full service banquet and kitchen facilities
- Historical renovation adaptive reuse
- New 15-story hotel wing
- Conference center and meeting rooms
- Atrium laced through existing building
- High-rise life safety systems
- Vertical four-pipe fan coil solution
- Integrated penthouse boiler/chiller plant
- 1,200 kW life safety/standby power generator
- Enthalpy heat recovery technology



PROJECT DESCRIPTION

WSP provided mechanical, electrical, fire protection and plumbing engineering services for the 190,000 sf Ocean House Hotel redevelopment project in Watch Hill, Rhode Island. The historic structure was rebuilt into a boutique hotel and residences based on the original wooden structure. The hotel consists of 44 hotel rooms, 15 residence units, function rooms, spa and health club, gourmet kitchens and porches overlooking the bay. Two levels of below grade parking and on grade parking comprising of 70,500 sf were also part of the project.

LOCATION

Watch Hill, Rhode Island, USA

ARCHITECT

Centerbrook Architects

CLIENT

Centerbrook Architects

PROJECT VALUE

Confidential

SIZE

190,000 sf

COMPLETION

Completed 2010

SIGNIFICANT PROJECT FEATURES

- 190,000 sf
- Boutique hotel redevelopment
- 44 hotel rooms
- Spa, health club, pool and squash courts



PROJECT DESCRIPTION

WSP provided commissioning services for the 788,500 sf Omni Seaport Hotel development project in Boston, Massachusetts. This brand new 21-story structure will include 1,055 rooms which consist of 746 standard rooms and 278 innovation rooms. The hotel will also include 120,000 sf of meeting space and an 8,500 sf spa and fitness space.

LOCATION

Boston, MA

ARCHITECT

Moody Nolan,
Elkus Manfredi Architects,
and Stull and Lee, Inc.

CLIENT

The Davis Company

PROJECT VALUE

\$550,000,000

SIZE

788,500 SF

COMPLETION

Complete in 2020

MARINE WHARF HOTEL

Parcel A



PROJECT DESCRIPTION

WSP will be providing MEP/FP engineering services associated with the new hotel to be located on Parcel A in Boston's Seaport District. The services will cover the complete MEP/FP design of the hotel including amenity spaces, restaurants, service areas, loading areas and back-of-house spaces.

The concept includes a dual-brand hotel with one wing being larger rooms focused on extended-stay concept and the other a limited-service hotel.

The Marine Wharf hotel will be a 14-story high-rise hotel with 411 keys.

LOCATION

Boston, MA

ARCHITECT

Perkins + Will

CLIENT

Perkins + Will

OWNER

Hampton Inn and Homewood Suites

PROJECT VALUE

\$176 Million

SIZE

320,000 sf

COMPLETION

2019

SIGNIFICANT PROJECT FEATURES

- Lobby and retail on the ground floor (approximately 22,000 sf)
- Parking on level two for 72 cars (approximately 32,000 sf)
- Hotel guestrooms on levels three through thirteen (approximately 266,000 sf)
- Amenity space that will include fitness center with a pool and a shared kitchen on the third floor
- Roof terrace and multipurpose room on 14th floor



THE WHITNEY HOTEL

170 Charles Street



PROJECT DESCRIPTION

WSP provided mechanical, plumbing, fire protection and electrical engineering design services for the 12,000 sf addition to the existing 25,000 sf John Jeffries House, now known as The Whitney Hotel, at 170 Charles Street in Boston.

The current structure was repurposed into a 66-room, high end boutique hotel. The project included an extensive renovation and redesign of the existing building and a 12,000 sf addition on the site of the surface parking lot adjacent to Savenor's Market at Charles and Cambridge streets.

The renovation includes a full refurbishing of finishes within guest rooms and all bathrooms were refreshed and repaired.

LOCATION

Boston, MA

ARCHITECT

Hacin + Associates

CLIENT

Related Beal

PROJECT VALUE

\$25 Million

SIZE

37,000 sf

COMPLETION

2019

SIGNIFICANT PROJECT FEATURES

- LEED Silver Certified
- High end quality finishes, systems, services and amenities
- New full fit-out of fitness room at the garden level
- New elevator
- Lounge area and café for visitors, residents and neighbors to enjoy

WESTIN HOTEL AND CONDOMINIUMS - PROVIDENCE



PROJECT DESCRIPTION

The new 33-story high-rise addition to the landmark Westin Hotel in Capital Center is the latest addition to the Providence skyline. Developed by The Procaccianti Group (TPG Development), the tower includes guestrooms as well as 103 residential condominiums. The 400,000 SF facility includes 200 guestrooms, prime retail space on the lower level and five stories of structured parking.

The hotel addition complements the existing facility by using an architectural vocabulary of materials from the original existing hotel. The new building, while having its own identity, looks as though it was designed and built at the same time as the original facility.

WSP provided all mechanical, electrical and telecommunications design for the hotel/residence. Independent MEP systems are provided within the tower separating the new tower from the existing hotel. Due to an early opening date requested by the client, the hotel project was completed in “fast track” mode.

LOCATION

Providence, Rhode Island, USA

ARCHITECT

TRO Jung|Brannen

CLIENT

TRO Jung/Brannen

OWNER

The Procaccianti Group

PROJECT VALUE

\$80 Million

SIZE

400,000 sf

COMPLETION

2007

SIGNIFICANT PROJECT FEATURES:

- 400,000 SF, 33-story high-rise hotel
- Fast-track project
- Five-story structured parking garage
- 200 guest rooms and 103 residential condominiums

PAUL B. BECKER, P.E.

Senior Principal



Project role

Structural Engineering Principal in Charge

Summary

Paul Becker brings over forty years of structural engineering expertise in complex building systems using steel, concrete, masonry and timber framing as well as deep foundation support systems and earth retaining structures. He has extensive experience in expansions, concrete restoration, failure investigations, structural evaluations, value engineering and construction monitoring. Paul brings specialized knowledge of historic restoration and stabilization, adaptive reuse and the upgrade of existing structures for current seismic code requirements.

Education

- M.S., Structural Engineering, 1989, University of New Hampshire
- B.S., Civil Engineering, 1980, Pennsylvania State University

Registrations

- Registered Professional Engineer in ME, MA, NH, NY, VT, GA, CT, RI, OH

Professional activities

- Member, Legislative Committee, American Council of Engineering Companies (ACEC)
- Member, American Concrete Institute (ACI)
- Member, American Institute of Steel Construction (AISC)
- Member, American Society of Civil Engineers (ASCE)
- Board Member, Maine Preservation
- Member, Structural Engineering Association of Maine (SEAM)
- Member, Portland Society for Architecture

Select project experience

DHS Office Building, Portland, ME. Structural design of a 54,000-square-foot commercial facility designed for a 150 per-square-foot floor live load to provide flexibility in future uses and to accommodate storage space anywhere throughout the building. A pile supported braced steel frame building was selected to support the size and load requirements. Additional scope included implementation and administration for the Special Inspections program required by the BOCA Building Code. All construction pertaining to the structural system was subject to material testing and on-site reviews resulting in an exceptional quality assurance program.

Patrons Oxford Insurance, Portland, ME. Structural engineering for the design of a 20,000-square-foot office. The architectural development called for many exposed structural framing features and challenged the team to utilize engineered mass timber in order to maximize the aesthetics while providing sufficient strength. Construction of the joinery of the glulams required significant coordination between the designers, contractors and fabricators to meet the architectural and structural intent. Due to the complexity, many of the connections were designed and detailed by our team.

Portland Foreside, Master Planning and Redevelopment, Portland, ME. Structural review, condition assessment, structural design and sustainability consulting services for the master plan of a 10-acre mixed-use waterfront development comprising residential, commercial, retail, hotel and outdoor community spaces. The development seeks to create active open spaces close to the community's work and home. The team is currently providing structural design and sustainability consulting services for Block 4, which includes a new 780-car parking structure, a residential overbuild with new townhouses, and renovations and new construction projects at the historic core of the site.

Hancock Lumber Offices, Casco, ME. Structural engineering services for a 10,000-square-foot office building. The building's primary structural framing used wood construction, including glulam trusses and timber decking in a featured atrium space.

84 Marginal Way, Intermed Medical Offices, Portland, ME. Structural engineering services for a ten-story structure. Six stories of medical office space sit above four levels of parking. The garage pedestal was constructed first, followed by the office building and then the surrounding garage. This approach accelerated the facade construction and fit-out of the building and required the garage pedestal structure to be stable without relying on the surrounding elements. The medical offices provide internal medicine, OB/Gyn, pediatrics, ambulatory surgery, phlebotomy and imaging.

ETHAN A. RHILE, P.E.

Vice President, Portland Office Director



Project role

Structural Engineering Project Manager

Summary

Ethan Rhile joined Thornton Tomasetti in 2001 and serves as the Structural Practice Leader in the Portland office. He has extensive experience in the design of multi-story commercial buildings, schools and industrial facilities as well as specialized knowledge of timber framing systems. Ethan has extensive experience in the evaluation and restoration of historic structures and masonry facades. His background includes specialty field evaluation of existing parking structures, construction shoring and retaining walls.

Education

- B.S. Civil Engineering, 1996, Pennsylvania State University

Registrations

- Licensed Professional Engineer in ME, PA

Professional activities

- Member, American Institute of Steel Construction (AISC)
- Member, Structural Engineers Association of Maine (SEAM)

Select project experience

Patrons Oxford Insurance, Portland, ME. Structural engineering consultant for the design of a new 20,000-square-foot facility. The architectural development called for many exposed structural framing features and challenged the team to utilize engineered mass timber in order to maximize the aesthetics while providing sufficient strength. Construction of the joinery of the glulams required significant coordination between the designers, contractors and fabricators to meet the architectural and structural intent. Due to the complexity, many of the connections were custom designed and detailed by our team of engineers.

CEI Central Office, Brunswick, ME. Sustainability consulting and structural engineering services for a 22,000-square-foot office targeting LEED Platinum certification. The project anticipates a savings of 51% in energy cost over an ASHRAE 90.1-2007 baseline. This was achieved with a high-efficiency HVAC system, advanced lighting design, and a large PV system. Structural design of the new facility consists of a braced steel-framed building with cast-in-place concrete floors over steel floor deck. The roof system includes open web steel joists supporting a steel roof deck for the installation of the large PV system.

Portland Foreside Development, Master Planning and Redevelopment

, Portland, ME. Structural review, condition assessment, structural design and sustainability consulting for the master plan of a 10-acre mixed-use waterfront development comprising residential, commercial, retail, hotel and outdoor community spaces. The development seeks to create active open spaces close to the community's work and home.

Confidential Client, Beverage Plant Expansion and Renovation

, Atlanta, GA. Structural design and construction administration services for a beverage plant multi-phased 180,000 square foot expansion and a 40,000 square foot renovation. The plant design included a framed second floor with spans up to 55 feet designed to support fork lift and heavy industrial loadings. The design also included a twenty-two foot constructed within the existing building, which required complex shoring of the existing building's columns and footings.

Cumberland Cold Storage Building Conversion

, Portland, ME. Structural engineering for the conversion of a 100,000-square-foot five-story, former spice mill constructed in the late 1800s to office space for Pierce Atwood law firm. Interior renovations involved new masonry openings, shoring of the first floor to replace deteriorated timber framing, repair of beam ends, a new mudslab, new stair and elevator shafts and floor leveling. The engineers also designed a new entrance canopy and rooftop mechanical support. Scope included repair of the façade, which entailed rebuilding window arches and end wall reinforcement.

Cold Storage Facility Additions, Chicopee, MA. Structural design of additions to a cold storage warehouse directly adjacent to a warehouse. The additions include a 14,000-square-foot, freezer building, a 7,200-square-foot cooler addition, and an 11,200-square-foot cooled loading dock addition. The new cooled loading dock was designed with nine overhead doors. To make way for it, four existing dock doors were relocated to an adjacent section of the building. The superstructure was framed using conventional structural steel beams and columns with open web joist infill supporting a steel deck.

MATTHEW LEGERE, P.E.

Associate



Project role

Structural Engineer

Summary

Matt Legere joined Thornton Tomasetti in 2017 and has over 10 years of experience in the structural design and engineering industry. He has structural designed for many new and existing multi-story commercial, residential, and institutional facilities spanning a wide range of materials including steel, concrete, masonry and timber. His dynamic range of experience includes historic renovations, conditions assessments, adaptive reuse, and new building design. He excels at working with other building consultants to find creative solutions to complex problems.

Education

- B.S., Civil Engineering, 2012, University of Maine

Registrations

- Licensed Professional Engineer in ME

Professional activities

- Member, American Council of Engineering Companies (ASEC)
- Member, Structural Engineers Association of Maine (SEAM)
- Member, National Council of Structural Engineers Associations (NCSEA)

Select project experience

477 Congress Street Conversion, Portland, ME. Structural engineering services through construction documents to transform the historic Time and Temperature Building into a 186-room luxury hotel. The design included a banquet hall, meeting rooms, a restaurant, a rooftop bar with a canopy roof, and retail stores. The project also included design to support multiple new egress paths and large mechanical equipment on existing roofs.

Northeastern University, The Roux Institute Academic Hub, Portland, ME. Sustainability, resilience and building envelope consulting and structure engineering for a 245,000-square-foot hub with classrooms and laboratory space. The building is a curved-and-arched design supported on two major concrete cores with few intermediate support points within the arched atrium. Waterproofing and building envelope scope includes design of the green roofing system for the parking area and below-grade waterproofing to contend with rising sea levels and increased storm intensity. The team created a sustainability project charter and is providing energy analysis for the building and district energy systems that dramatically reduce or eliminate the need for fossil fuels.

600 Westbrook Street, South Portland, ME. Structural design of a five-story, 49,230-square-foot apartment building with 52 units and mixed-use office, community rooms and at grade parking on the ground floor. The proposed construction consists of double-loaded light wood-framed corridor bearing walls and light wood-framed exterior bearing walls with open web wood floor and roof trusses. The wood-framed upper levels will be supported on a non-combustible second floor framing level comprised of steel beams and columns, steel deck and a site cast concrete slab. This steel-framed level supports the upper level wood framing over the first floor.

Portland Foreside Development, Master Planning and Redevelopment, Portland, ME. Structural review, condition assessment, structural design and sustainability consulting for the master plan of a 10-acre mixed-use waterfront development comprising residential, commercial, retail, hotel and outdoor community spaces. The development seeks to create active open spaces close to the community's work and home.

Cold Storage Facility Additions, Chicopee, MA. Structural design of additions to a warehouse directly adjacent to another warehouse. The additions included a 14,000-square-foot, freezer building, a 7,200-square-foot cooler addition, and an 11,200-square-foot cooled loading dock addition. The new cooled loading dock was designed with nine overhead doors. To make way for it, four existing dock doors were relocated to an adjacent section of the building. The superstructure was framed using conventional structural steel beams and columns with open web joist infill supporting a steel deck.

Bowdoin College, Upperclass Housing Park Row, Brunswick, ME. Passive house consulting, energy analysis and structural engineering services for four new three-story, steel-and-wood-constructed apartment buildings. The 11,000-square-foot project contains 22 beds and is designed to achieve PHIUS+ certification using efficient air-exchange systems for heating, cooling and ventilation, thick insulation and triple-pane windows.

3. EVIDENCE OF RIGHT, TITLE & INTEREST

3.1 Right, Title & Interest

The proposed development is located on properties identified as Tax Map 037, Lot F022 and a portion of Lot F002. Attached are copies of the deeds associated with these properties.

The Owner Information from the City of Portland Parcel Map viewer is as follows:

Property Location	477, 481 CONGRESS ST
CBL	037 F022001
Land Use Type	MULTI-USE COMMERICAL
Owner Information	TT MAINE VENTURE LLC
	3100 MCKINNON ST STE 250
	DALLAS TX 75201
Book and Page	35346/060
Legal Description	37-F-22
	CONGRESS ST 473-481
	PREBLE ST 2-20

And a portion of:

Property Location	45 BROWN STREET
CBL	037 F002001
Land Use Type	MULTI-USE COMMERICAL
Owner Information	BROWN TOWER LLC
	3100 MCKINNON ST STE 250
	DALLAS TX 75201
Book and Page	35610/345
Legal Description	37-F-2
	BROWN ST 45-67
	CUMBERLAND AVE 346-352

Greenmars Real Estate, Inc. has entered into a Purchase and Sale Agreement with TT Maine Venture, LLC, and Brown Tower, LLC. A copy of that agreement (redacted) is attached.

3.2 Attachments

- Deeds
- Purchase & Sale Agreement

QUITCLAIM DEED WITH COVENANT

TT MAINE VENTURE, LLC, a Delaware Limited Liability Company with a mailing address of 3100 McKinnon Street, Suite 250, Dallas, TX, 75201, grants to **BROWN TOWER, LLC**, a Maine Limited Liability Company with a mailing address of 3100 McKinnon Street, Suite 250, Dallas, TX, 75201, with **Quitclaim Covenants**, the premises, together with any buildings thereon, situated in the City of Portland, County of Cumberland, and State of Maine, being more particularly described in Exhibit A attached hereto and incorporated herein.

Being a portion of the property conveyed to TT Maine Venture, LLC by deed of 477-481 Congress Street Holdings, LLC, dated December 5, 2018, and recorded in the Cumberland County Registry of Deeds in Book 35346, Page 60.

[Signature appears on the following page.]

In Witness Whereof, TT Maine Venture, LLC has caused this instrument to be executed by **Cross Mocer**i, in his capacity as Manager of TT Presidium, LLC, which is Manager of TT Maine Venture, LLC, hereunto duly authorized, as of the 29th day of April, 2019.

Witness:

[Signature]

TT Maine Venture, LLC
By: TT Presidium, LLC
Its: Manager

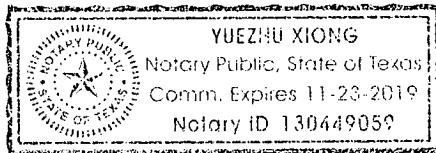
By: [Signature]
Cross Mocer
Its: Manager

STATE OF Texas
COUNTY OF Travis

April 29th, 2019

Then personally appeared the above-named Cross Mocer, Manager of TT Presidium, LLC, which is Manager of TT Maine Venture, LLC, and acknowledged the foregoing instrument to be his free act and deed and the free act and deed of said TT Maine Venture, LLC.

Before me,



[Signature]
Notary Public
Print Name: Yuezhun Xiong
My Commission Expires: 11/23/2019

Exhibit A
Deed to Brown Tower, LLC

Parcel One:

A certain lot or parcel of land with the buildings thereon, situated on the northeasterly side of Brown Street, the southeasterly side of Cumberland Avenue and the southwesterly side of Preble Street, in the City of Portland, County of Cumberland and State of Maine, and being more particularly bounded and described as follows:

Beginning at the intersection of the northeasterly sideline of Brown Street with the southeasterly sideline of Cumberland Avenue;

Thence, North 65° 38' 40" East along the southeasterly sideline of said Cumberland Avenue one hundred and ninety-six hundredths (100.96) feet to the westerly line of land now or formerly of Sweetwater Partners LLC as described in deed Book 34349, Page 251;

Thence, South 28° 10' 20" East along the westerly line of land of said Sweetwater Partners LLC ninety-one and ten hundredths (91.10) feet;

Thence, North 62° 29' 30" East along the southerly line of land of Sweetwater Partners LLC sixty-four and ninety-four hundredths (64.94) feet;

Thence, North 60° 08' 00" East continuing along the southerly line of land of Sweetwater Partners LLC thirty-nine and five hundredths (39.05) feet to the westerly line of land now or formerly of Earl Apartments LLC as described in deed Book 17591, Page 197;

Thence, South 28° 06' 30" East along the westerly line of land of said Earl Apartments LLC one hundred three and one hundredths (103.01) feet to the northerly line of land now or formerly of 24 Preble Street Properties LLC as described in deed Book 33029, Page 19;

Thence, South 62° 35' 40" West along the northerly line of land of said 24 Preble Street Properties LLC sixteen and sixteen hundredths (16.16) feet;

Thence, South 27° 31' 10" East along the westerly line of land of 24 Preble Street Properties LLC thirty-nine and ninety-six hundredths (39.96) feet;

Thence, North 62° 24' 40" East along the southerly line of land of 24 Preble Street Properties LLC one hundred and twenty-nine hundredths (100.29) feet to the southwesterly sideline of Preble Street;

Thence, South 27° 34' 40" East along the southwesterly sideline of said Preble Street one hundred seventy-nine (179.00) feet;

Thence, South 62° 24' 41" West eighty-six (86.00) feet;

Thence, North 27° 34' 39" West ninety-seven (97.00) feet;

Thence, South 62° 24' 41" West thirty-five and ninety-three hundredths (35.93) feet to the easterly line of land now or formerly of Maine Historical Society as described in deed Book 697, Page 343;

Thence, North 27° 52' 30" West along the easterly line of land of said Maine Historical Society forty-three and fifty-four hundredths (43.54) feet;

Thence, South 59° 33' 00" West along the northerly line of land of Maine Historical Society sixty-five and ninety-four hundredths (65.94) feet;

Thence, South 28° 48' 10" East along the westerly line of land of Maine Historical Society twenty-two and seventy-two hundredths (22.72) feet to the northerly line of land now or formerly of MHS, Inc. as described in deed Book 10467, Page 207;

Thence, South 65° 26' 10" West along the northerly line of land of said MHS, Inc. ninety-nine and forty-nine hundredths (99.49) feet to the northeasterly sideline of Brown Street;

Thence, North 28° 19' 30" West along the northeasterly sideline of said Brown Street two hundred ninety-seven and forty-eight hundredths (297.48) feet to the point of beginning.

Containing 64,840 square feet or 1.488 acres, more or less.

Reference is made to a plan titled "Boundary & Topographic Survey Time and Temperature Building Monument Square Parking Garage 477-481 Congress Street, 22 Preble Street, 45 Brown Street, Portland, Maine made for TT Venture, LLC" by Owen Haskell, Inc. dated Jan. 28, 2019 revised through 4/1/19.

Parcel Two:

Also another certain lot or parcel of land situated in said City of Portland, County of Cumberland and State of Maine bounded and described as follows:

Beginning at a 5/8" reinforcing rod located on the southwesterly sideline of Preble Street, said rod being North 27° 34' 40" West, a distance of ten feet (10'), as measured by said southwesterly sideline of Preble Street, from the northerly or northeasterly corner of the building known as "The Wadsworth" as described in a deed from M. Mayo Citrin, et al. to The Arthar Company by deed recorded in the Cumberland County Registry of Deeds in Book 2182, Page 479, and said reinforcing rod being also located South 27° 34' 40" East, a distance of sixty-nine feet (69'), more or less, as measured by said southwesterly sideline of Preble Street, from the intersection of said Preble Street with the southerly side of Cumberland Avenue; thence South 21° 34' 40" East, along the southwesterly sideline of Preble Street ten feet (10') to a point; thence South 62° 32' 20" West eighty and thirty-three hundredths feet (80.33') to a point; thence North 27° 18' 50"

West ten feet (10') to a point; thence North 62° 32' 20" East eighty and twenty-eight hundredths feet (80.28') to a point in the southwesterly sideline of Preble street and the point of beginning.

Parcels One and Two are conveyed subject to and together with the following rights and easements:

Together with and subject to party wall rights in the division wall between Keith's Theater, so-called, and the Allen Storage Warehouse, so-called, as set forth in a certain deed of Portland Savings Bank to Preble Company dated January 31, 1933 and recorded in the Cumberland County Registry of Deeds, in Book 1125, Page 270.

Together with and subject to such party wall rights in the partition wall between the "Firestone" building and Keith's Theater building as more fully set forth in a deed from Portland Savings Bank to Harry Potter dated December 29, 1921, and recorded in the said Registry of Deeds in Book 1091, Page 295.

Subject to any rights of passage and right to maintain electric, gas, water and sewer lines in a certain passageway now existing along the northerly side of "The Wadsworth" extending from Preble Street to the court in rear of "The Wadsworth" and to the stage entrance of Keith's Theater, as set forth in deeds recorded in said Registry of Deeds in Book 1091, Page 438; Book 1125, Page 269; and Book 1125, Page 270.

Together with and subject to all the rights and easements, the burden of which was placed upon, and the benefit of which was given to the premises herein described in two certain deeds of the Portland Savings Bank, one to Harry Potter dated December 29, 1921 and recorded in said Registry of Deeds, Book 1091, Page 295, and other to Jacob Citrin dated January 17, 1922 and recorded in said Registry of Deeds in Book 1091, Page 438.

Together with rights and easements reserved by October Corporation as set forth in a deed to Ladd L. Heldenbrand, et al. dated January 14, 1999 and recorded in said Registry of Deeds in Book 14612, Page 231.

Together with rights and easements to maintain, repair and replace existing parking garage, which overhangs or encroaches land of Ladd L. Heldenbrand et al. as conveyed in a Release Deed to October Corporation dated February 9, 1999 and recorded in said Registry of Deeds in Book 14612, Page 235.

The above-described Premises are benefitted by and subject to certain easements and agreements described in a certain Reciprocal Easement Agreement by and between TT Maine Venture, LLC and Brown Tower, LLC of even date herewith to be recorded in the Cumberland County Registry of Deeds.

MAINE REAL ESTATE TAX-Paid

DLN: 1001840046130

**QUITCLAIM DEED WITHOUT COVENANT
(Release Deed)**

KNOW ALL PERSONS BY THESE PRESENTS, THAT **477-481 CONGRESS STREET HOLDINGS, LLC**, a Maryland limited liability company ("Grantor"), with a mailing address of c/o CWCapital Asset Management LLC, 7501 Wisconsin Avenue, Suite 500 West, Bethesda, Maryland 20814, for consideration paid, RELEASES to **TT MAINE VENTURE, LLC**, a Delaware limited liability company ("Grantee"), with a mailing address of 3100 McKinnon Street, Suite 250, Dallas, TX 75201, certain real property located in the City of Portland, County of Cumberland, State of Maine, which is more particularly described in Exhibit A attached hereto and made a part hereof.

This conveyance is made SUBJECT, HOWEVER, to real estate taxes which are not yet due and payable, which by acceptance hereof, Grantee assumes and agrees to pay.

[REMAINDER OF PAGE LEFT INTENTIONALLY BLANK]

When Recorded Return To: Arthur
 First American Title Insurance Company
 National Commercial Services
 1850 K Street NW Suite 1050
 Washington, DC 20006
 File No: NCS 716737A

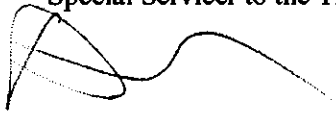
In witness whereof, Grantor has caused this instrument to be executed by the undersigned, its duly authorized representative, this 14th December, 2018.

GRANTOR

477-481 CONGRESS STREET HOLDINGS, LLC,
a Maryland limited liability company

By: U.S. Bank National Association, as Trustee, successor-in-interest to Bank of America, N.A., as Trustee, Successor to Wells Fargo Bank, N.A., as Trustee, for the Registered Holders of Wachovia Bank Commercial Mortgage Trust, Commercial Mortgage Pass-Through Certificates, Series 2007-C30 (the "Trust"), its Sole Member/Manager

By: CWC Capital Asset Management LLC, a Delaware limited liability company, solely in its capacity as Special Servicer to the Trust

By: 

Name: Alex Killick
Title: Senior Vice President

STATE OF MARYLAND

§

§

COUNTY OF MONTGOMERY

§

BEFORE ME, personally appeared, Alex Killick, the Senior Vice President of CWC Capital Asset Management LLC, a Delaware limited liability company, to me to be the person whose name is subscribed on the foregoing instrument and acknowledge to me that same was executed for the purposes and consideration therein expressed and in the capacity therein stated as the act and deed of said entity.

GIVEN UNDER MY HAND AND SEAL OF OFFICE this the 5 day of December, 2018.

Notary Public, State of Maryland

My Commission Expires: _____



Sheremee D. Griffin
Sheremee D. Griffin
NOTARY PUBLIC
Montgomery County
State of Maryland
My Commission Expires
November 30, 2022



Exhibit "A"**Legal Description**

Real property in the City of Portland, County of Cumberland, State of Maine, described as follows: Parcel One:

A certain lot or parcel of land with the buildings thereon, situated at the intersection of the northwesterly side of Congress Street and the southwesterly side of Preble Street, in the City of Portland, County of Cumberland and State of Maine, and being more particularly bounded and described as follows:

Beginning at a point, which point marks the intersection of the northwesterly side of Congress Street with the southwesterly side of Preble Street; thence South 59° 24' 30" West along the northwesterly sideline of Congress Street one hundred twenty-one and seven hundredths (121.07) feet to a point; thence North 27° 52' 30" West two hundred forty and sixty-nine hundredths (240.69) feet to a point; thence South 59° 33' West sixty-five and ninety-four hundredths (65.94) feet to a point; thence South 28° 48' 10" East twenty-two and seventy-two hundredths (22.72) feet to a point; thence South 65° 26' 10" West ninety-nine and forty-nine hundredths (99.49) feet to a point in the northeasterly sideline of Brown Street; thence North 28° 19' 30" West along the northeasterly sideline of said Brown Street two hundred ninety-seven and forty-eight hundredths (297.48) feet to a point, which point marks the intersection of the northeasterly sideline of Brown Street with the southeasterly sideline of Cumberland Avenue, thence North 65° 38' 40" East along the southeasterly sideline of said Cumberland Avenue one hundred and ninety-six hundredths (100.96) feet to a point; thence South 28° 10' 20" East ninety-one and ten hundredths (91.10) feet to a point; thence North 62° 29' 30" East sixty-four and ninety-four hundredths (64.94) feet to a point; thence North 60° 08' 00" East thirty-nine and five hundredths (39.05) feet to a point; thence South 28° 06' 30" East one hundred three and one hundredths (103.01) feet to a point; thence South 62° 35' 40" West sixteen and sixteen hundredths (16.16) feet to a point; thence South 27° 31' 10" East thirty-nine and ninety-six hundredths (39.96) feet to a point; thence North 62° 24' 40" East one hundred and twenty-nine hundredths (100.29) feet to a point in the southwesterly sideline of Preble Street; thence South 27° 34' 40" East along the southwesterly sideline of said Preble Street two hundred seventy-two and eighty hundredths (272.80) feet to the point of beginning.

Parcel Two:

Also another certain lot or parcel of land situated in said City of Portland, County of Cumberland and State of Maine bounded and described as follows:

Beginning at a 5/8" reinforcing rod located on the southwesterly sideline of Preble Street, said rod being North 27° 34' 40" West, a distance of 10', as measured by said southwesterly sideline of Preble Street, from the northerly or northeasterly corner of the building known as "The Wadsworth" as described in a deed from M. Mayo Citrin, et al. to The Arthar Company by deed recorded in the Cumberland County Registry of Deeds in Book 2182, Page 479, and said reinforcing rod being also located South 27° 34' 40" East, a distance of 69', more or less, as measured by said southwesterly sideline of Preble Street, from the intersection of said Preble Street with the southerly side of Cumberland Avenue; thence South 21° 34' 40" East along the southwesterly sideline of Preble Street ten (10) feet to a point; thence South 62° 32' 20" West eighty and thirty-three hundredths (80.33) feet to a point; thence North 27° 18' 50" West ten (10)

feet to a point; thence North 62° 32' 20" East eighty and twenty-eight hundredths (80.28) feet to a point in the southwesterly sideline of Preble Street and the point of beginning.

Parcel 3:

Together with and subject to party wall rights in the division wall between Keith's Theater, so-called, and the Allen Storage Warehouse, so-called, as set forth in a certain deed of Portland Savings Bank to Preble Company dated January 31, 1933 and recorded in the Cumberland County Registry of Deeds, in Book 1125, Page 270.

Together with and subject to such party wall rights in the partition wall between the "Firestone" building and Keith's Theater building as more fully set forth in a deed from Portland Savings Bank to Harry Potter dated December 29, 1921, and recorded in the said Registry of Deeds in Book 1091, Page 295.

Subject to any rights of passage and right to maintain electric, gas, water and sewer lines in a certain passageway now existing along the northerly side of "The Wadsworth" extending from Preble Street to the court in rear of "The Wadsworth" and to the stage entrance of Keith's Theater, as set forth in deeds recorded in said Registry of Deeds in Book 1091, Page 438; Book 1125, Page 269; and Book 1125, Page 270.

Together with and subject to all the rights and easements, the burden of which was placed upon, and the benefit of which was given to the premises herein described in two certain deeds of the Portland Savings Bank, one to Harry Potter dated December 29, 1921 and recorded in said Registry of Deeds, Book 1091, Page 295, and the other to Jacob Citrin dated January 17, 1922 and recorded in said Registry of Deeds in Book 1091, Page 438.

Together with rights and easements reserved by October Corporation as set forth in a deed to Ladd L. Heldenbrand, et al. dated January 14, 1999 and recorded in said Registry of Deeds in Book 14612, Page 231.

Together with rights and easements to maintain, repair and replace existing parking garage, which overhangs or encroaches land of Ladd L. Heldenbrand et al. as conveyed in a Release Deed to October Corporation dated February 9, 1999 and recorded in said Registry of Deeds in Book 14612, Page 235.

PURCHASE AND SALE AGREEMENT AND JOINT ESCROW INSTRUCTIONS

THIS PURCHASE AND SALE AGREEMENT AND JOINT ESCROW INSTRUCTIONS (this “**Agreement**”) is dated effective as of August 28, 2023 (the “**Effective Date**”), and is made by and between TT MAINE VENTURE, LLC, a Delaware limited liability company (“**TT Seller**”) and BROWN TOWER, LLC, a Maine limited liability company (“**Brown Tower Seller**”) (collectively, TT Seller and Brown Tower Seller are hereinafter referred to as “**Seller**”), and GreenMars Real Estate Services, Inc., a Maine corporation (“**Purchaser**”), upon the terms, provisions and conditions set forth herein.

IN CONSIDERATION of the mutual covenants and obligations of the parties set forth in this Agreement, Seller and Purchaser hereby agree as follows:

1. **Purchase and Sale.** Seller agrees to sell and convey to Purchaser and Purchaser agrees to purchase from Seller, for the Purchase Price (as defined below), and on the terms and conditions set forth herein, the following:

(a) **Real Property.** All that certain real property commonly known as 477 and 481 Congress St. and 22 Preble Street, Portland, ME, being described in the deed to TT Seller dated December 6, 2018 and recorded in the Cumberland County Registry of Deeds in Book 35346, Page 60 and described in a deed from the TT Seller to Brown Tower Seller dated April 29, 2019 and recorded in said Registry in Book 35610, Page 345, less that portion of said property to be retained by the Brown Tower Seller, being approximately shown as “Excluded Property” on **Exhibit A** attached hereto (hereinafter referred to as the “**Real Property**” and the portion of the Real Property separately owned by the TT Seller being the “TT Property” and the portion of the Real Property separately owned by the Brown Tower Seller being the “Brown Tower Property”);

(b) **Appurtenances.** All rights, privileges, easements, hereditaments, tenements and rights-of-way appurtenant to, or used in connection with, the beneficial use and enjoyment of the Real Property, including, without limitation, all right, title and interest, if any, of Seller in and to all water rights, mineral rights, open, closed or proposed highways, streets, roads, avenues, alleys, easements, strips, gores or rights-of-way in, on, across, in front of, contiguous to, abutting, adjoining or otherwise benefiting the Real Property (collectively, the “**Appurtenances**”);

(c) **Improvements.** All improvements and fixtures located on the Real Property, including all buildings and structures presently located on the Real Property and all apparatus, equipment and appliances owned by Seller and used in connection with the operation or occupancy of the Real Property, including, without limitation, all appliances located in the common areas, all heating and air conditioning systems, parking and recreational facilities, and refrigeration, ventilation or trash disposal facilities owned by Seller and located on the Real Property (collectively, the “**Improvements**”);

(d) **Personal Property.** All of the right, title and interest of Seller in and to all personal property owned by Seller and used exclusively in connection with, the Real Property and/or Improvements, except for Seller’s computers, computer software, and those items owned by or leased from third parties (if any) (the “**Inventory**”);

(e) **Intangible Property.** All of the right, title and interest of Seller in and to all intangible personal property owned by Seller and used in the ownership, use and operation of the Real Property, Improvements and/or Inventory, including, without limitation, the right to use any trademark and/or trade name used in connection with the Real Property or Improvements (except to the extent such contain any

reference to "Presidium," or "Presidium Group"), all transferable licenses, plans, specifications and studies relating to the Property, including without limitation as-built plans, floor plans, site plans and environmental and engineering reports and studies and architects' and engineers' drawings and designs, permits, approvals, applications and warranties now in effect, or in effect at the Closing, as defined herein, with respect to the Property and all equipment leases, utility contracts, security or maintenance contracts and all other similar agreements which are listed on **Exhibit D** attached hereto, copies of which shall be provided to Purchaser within three (3) business days after the Effective Date, but excluding the Terminated Contracts, as defined herein (collectively, the "**Service Contracts**"), and all other rights relating to the ownership, use and operation of the Property (as defined below) provided, however, Seller shall not transfer any email accounts used in connection with the Property and Seller shall have up to ten (10) days after the Closing Date, as defined herein, to transfer the internet domains; and

All of the items described in **Paragraphs 1 (a), (b), (c), (d), and (e)** above shall hereinafter be collectively referred to as the "**Property**".

2. **Purchase Price.** Purchaser agrees to pay, as the purchase price for the Property, [REDACTED] (the "**Purchase Price**").

(a) No more than fifteen (15) days after the Effective Date, Seller and Purchaser shall use commercially reasonable efforts to agree upon the allocation of the Purchase Price between the Real Property included within each of the TT Property and the Brown Tower Property, on the one hand, and the Personal Property and the Intangible Property included within each of the TT Property and the Brown Tower Property, on the other hand (the "**Allocated Purchase Price**") for purposes of Internal Revenue Service Form 8594, if applicable, and the transfer tax declarations. Purchaser and Seller shall (a) cooperate in the filing of any forms with respect to the Allocated Purchase Price, and (b) file all federal, state and local tax returns and related tax documents consistent with the Allocated Purchase Price, and not take any position (whether in audits, tax returns or otherwise) inconsistent with such allocations unless otherwise required by applicable law. Notwithstanding the foregoing, if Seller and Purchaser are unable to agree upon a mutually satisfactory Allocated Purchase Price prior to the expiration of said 15-day period, either party shall have the right to terminate this Agreement by written notice to the other, in which case the Deposit shall be returned to Purchaser. The obligations of the parties pursuant to this Section 2(a) shall survive the Closing.

(b) **Qualified Rehabilitation Expenditures.** Attached hereto as **Exhibit B** is Seller's estimate of the "qualified rehabilitation expenditures", as such term is defined in Section 47(c)(2) of the Internal Revenue Code of 1986, as amended from time to time (referred to herein as the "**QREs**"), that, as of the Effective Date, Seller has incurred in connection with its contemplated redevelopment of the Real Property, without any representation whatsoever as to whether such amounts or costs would properly be classified as a "qualified rehabilitation expenditure" as such term is defined in Section 47(c)(2) of the Internal Revenue Code of 1986, as amended from time to time. Subject to the qualifications and disclaimers below, the Seller represents that [REDACTED] of the Purchase Price is allocated to reimbursement of the QRE's incurred to date. If Seller incurs additional QREs after the Effective Date, Seller and Purchaser may increase the portion of the Purchase Price allocated to QREs in writing including without limitation on the closing statement for the Closing (as defined herein). Within thirty (30) days after the Effective Date, the Seller agrees to deliver to Purchaser supporting records for the QREs incurred to date, with such materials to be supplemented at Closing to include any additional QREs incurred up to and including the date of Closing, so that, to the extent permitted by applicable law, the Purchaser may seek to claim the QREs as part of its rehabilitation of the Real Property, provided however, Seller makes no representation or warranty as to Purchaser's ability to claim any expenditure as a QRE. The Seller represents and warrants, as of the Effective Date and as of the Closing Date (as defined herein) (i) that Seller has not used or placed in service the building or buildings on the Real Property after the QREs were incurred and prior to the date of Closing and (ii) that neither

Seller or to the Seller's Actual Knowledge any other party has claimed a Federal or Maine tax credit on account of the QREs. The Seller makes no other representations or warranties with respect to the QREs set forth on Exhibit B including whether same will be accepted as QREs in accordance with applicable law.

(c) Withholding. Seller acknowledges that pursuant to 36 M.R.S.A. §5250-A Purchaser must withhold at Closing an amount equal to 2.5% of the gross proceeds to Seller, unless Seller furnishes a certificate of Maine residency or written evidence of approval from Maine Revenue Services of a reduction or waiver of such withholding. Seller agrees to execute and deliver such forms as may be reasonably required to comply with such withholding requirements.

3. Payment of Purchase Price. The Purchase Price shall be paid to Seller by Purchaser as follows:

(a) Deposit. Within three (3) days after the Effective Date, Purchaser shall deliver, by wire transfer or bank or cashier's check, at Purchaser's election, an amount equal to [REDACTED] (the "Deposit") to Maine Real Estate Advisors, (the "Escrow Holder").

(b) Deposit. The Deposit (including any Due Diligence Extension Deposit that may be paid, as defined herein) shall be deposited and held by Escrow Holder as a deposit against the Purchase Price in accordance with the terms and provisions of this Agreement, and shall be credited against the Purchase Price if the transaction closes. All interest accruing on the Deposit shall be held for the account of Purchaser. If the Closing (defined in **Paragraph 11(a)**) does not occur, the Deposit shall be treated as provided in **Paragraph 7** or **13**, as applicable.

(c) Closing Payment. The balance of the Purchase Price, as adjusted by the application of the proceeds of the Deposit and any Due Diligence Extension Deposit paid, plus any accrued interest thereon and by the prorations and credits specified herein, shall be paid by wire transfer of immediately available U.S. funds to the Closing Agent on the Closing Date (as such terms are hereinafter defined) in accordance with this Agreement (the amount to be paid under this subparagraph (c) being herein called the "Closing Payment").

4. Title and Survey Matters.

(a) Real Property Description; Delivery of Survey and Title Documents.

(i) Real Property Boundaries; Survey. Within thirty (30) days after the Effective Date, the Seller and Purchaser shall work in good faith to agree upon (A) the final boundaries for the Real Property (the "Property Boundaries"), which shall have the benefit of all existing infrastructure and utilities, and shall satisfy all applicable laws, rules, ordinances and regulations (notwithstanding the forgoing or the depiction of the Property on Exhibit A, the Property shall not include the stairwell currently serving the parking garage located on the Excluded Property), and (B) the location and form of all easements to be created between the Real Property and the Excluded Property at Closing, which shall include without limitation easements for pedestrian egress, parking and vehicular access, emergency services access, utilities, and such other access required by local or state regulators for the Purchaser's intended use of the Property and the Brown Tower Seller's intended use of the Excluded Property, or as the Seller and Purchaser shall mutually agree (collectively, the "New Easements"). Within thirty (30) days after the Seller and Purchaser have agreed upon the last of (A) and (B) above, Seller shall provide Purchaser, at Seller's sole expense, with a copy of the existing Boundary and Topographic Survey of the Property prepared by Owen Haskell, Inc. dated January 28, 2019, updated to reflect current conditions and to reflect the agreed upon boundaries of the Real Property and the locations of the New Easements, together with the proposed legal description for the Real Property and New Easements, prepared by Owen Haskell, Inc. with such changes as may be reasonably acceptable to Seller and Purchaser (collectively, the "Updated Survey").

Purchaser, may elect to order a new Survey (the “**New Survey**”). If Purchaser obtains the New Survey, Purchaser shall cause a copy of the New Survey to be delivered to Seller. If, despite working in good faith, the parties are unable to agree on the final Property Boundaries and New Easements within such 30-day period, as the same may be extended by mutual agreement of the parties, either Seller or Purchaser may terminate this Agreement by written notice to the other party, in which case the Deposit shall be promptly refunded and the parties shall have no further rights or obligations hereunder except those that survive such termination.

(ii) Title. No later than five (5) business days after the Effective Date, Seller shall deliver to Purchaser a copy of the Seller’s existing commitment for title insurance from Seller’s acquisition of the Real Property (the “**Commitment**”) covering the Real Property, and best available copies of any and all instruments referred to in the Commitment as constituting exceptions or restrictions upon the title of Seller (the “**Exceptions**,”) (to the extent available in public records or otherwise in Seller’s possession and Purchaser shall be responsible for obtaining its own commitment for title insurance at Purchaser’s cost (the “**Purchaser’s Commitment**”).

(b) Title and Survey Review; Approval Period. In addition to any other conditions to closing as may be set forth herein, the obligations of Purchaser under this Agreement are subject to Purchaser having completed its review of title work and the Updated Survey (collectively, the “**Title Documents**”), with the results of such review being satisfactory to Purchaser in its sole discretion, within thirty (30) days after receipt of the Updated Survey from Seller (the “**Title Review Period**”). Prior to the expiration of the Title Review Period, Purchaser may deliver in writing to Seller its disapproval of the Title Documents or portions thereof (the “**Title Objections**”). If Title Objections are delivered to Seller by Purchaser, Seller shall have five (5) business days after receipt of Purchaser’s Title Objections to give Purchaser, with respect to each Title Objection, (i) evidence reasonably satisfactory to Purchaser of the removal of the Title Objection or that the Title Objection will be removed or cured on or before the Closing Date (in which event such cure or removal shall be a condition precedent to Purchaser’s obligation to proceed with the Closing); or (ii) notice that Seller elects not to remove or cure such Title Objection. Seller shall be under no obligation to cure or remove any Title Objections. Purchaser shall not be obligated to provide a Title Objection with respect to any monetary lien or mortgage, and Seller agrees to have any such liens and mortgages removed at or before Closing. Seller’s failure to respond to Purchaser’s Title Objections by delivery of (i) or (ii) above within five (5) business days after receipt of the Title Objections shall be deemed an election by Seller not to remove or cure such Title Objections. If Seller elects not to remove or cure any Title Objection, Purchaser shall, within three (3) business days of Seller’s election, either (i) waive such Title Objection and proceed with the Closing, or (ii) terminate this Agreement by written notice to Seller in which event the entire Deposit will be released to Purchaser in accordance with **Paragraph 7** hereof. Purchaser’s failure to deliver written notice of termination to Seller within the time period set forth above will be deemed to be a waiver of the Title Objections and election to proceed with the Closing.

If any title matter not set forth on the Purchaser’s Commitment or the Updated Survey, if applicable, should appear on any subsequent update to the title insurance commitment or the New Survey, except for those created by or with the approval of Purchaser (a “**New Title Matter**”), Purchaser shall have the right to object to such New Title Matter in accordance with the provisions of the immediately preceding paragraph, except that Purchaser’s time period to review and object to or accept any New Title Matter shall be five (5) business days after Purchaser receives notice of such New Title Matter, and the Closing Date shall be extended to allow Seller a five (5)-business day period to respond to such New Title Matter and Purchaser a three (3) business day period thereafter to either respond to Seller or terminate this Agreement, in accordance with the provisions of the immediately preceding paragraph.

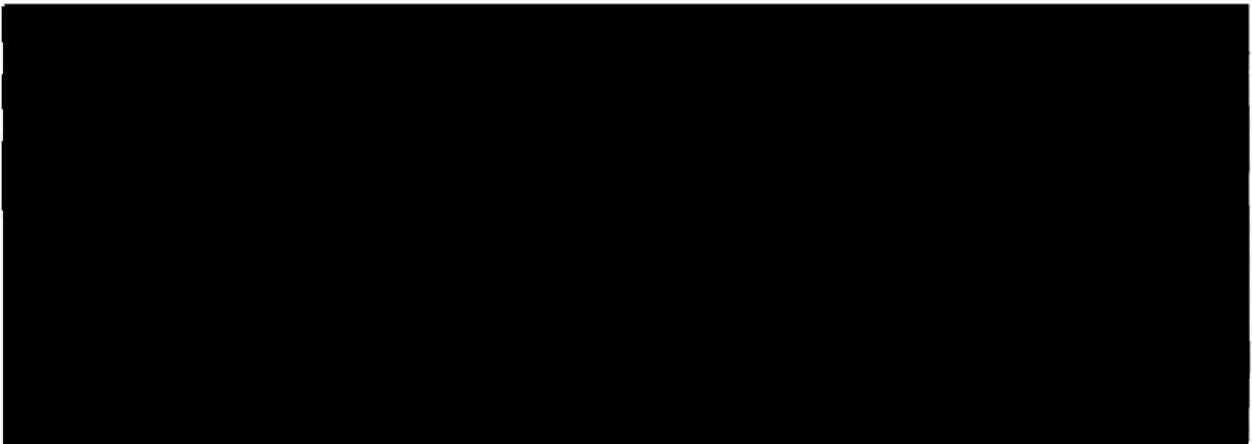
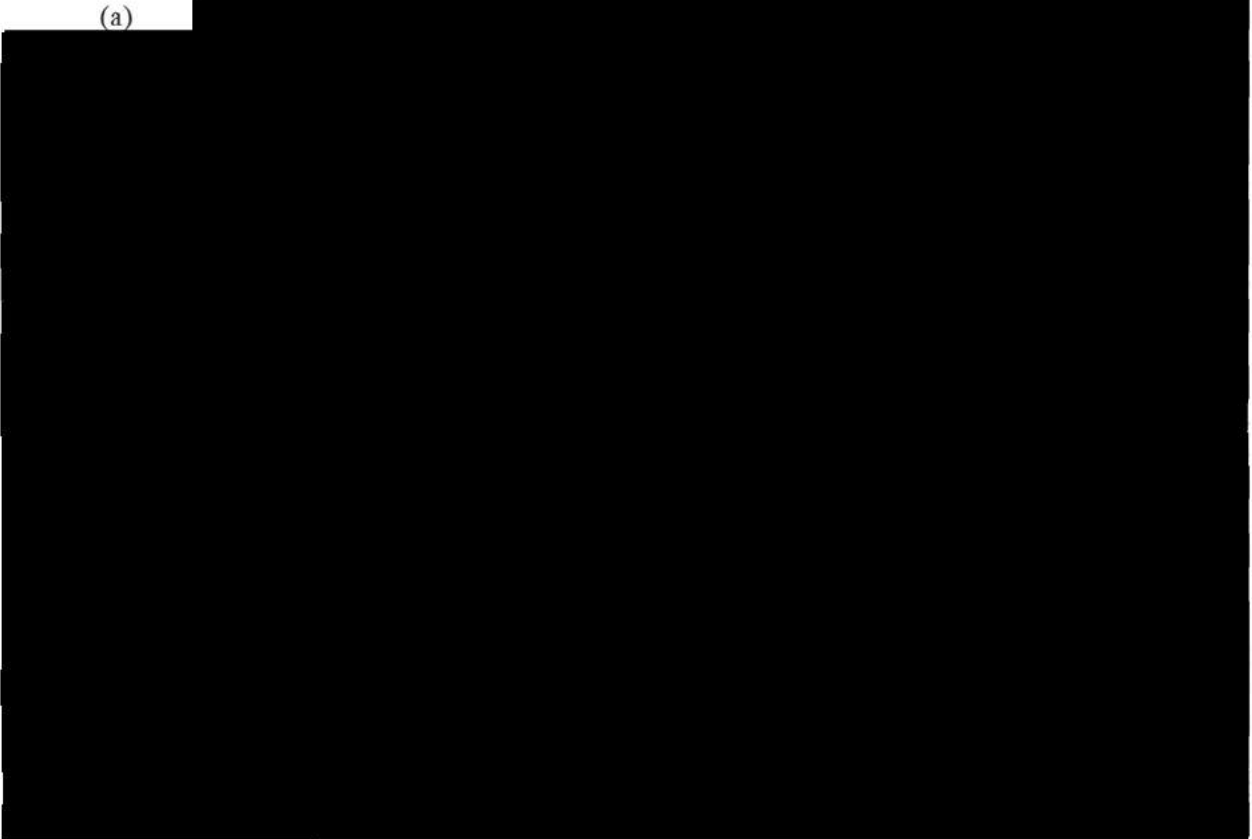
(d) Conditions of Title and Condition of the Property. At the Closing, Seller shall convey to Purchaser good and marketable fee simple title to the Real Property and Improvements by good and

sufficient Deed (as defined in **Paragraph 11(c)(i)**), free and clear of all liens and encumbrances and subject to no exceptions, easements, covenants, or restrictions other than those title exceptions approved or deemed approved by Purchaser (the "**Permitted Exceptions**").

(e) Title Policy. Purchaser's obligation to close shall be conditioned upon the willingness of Purchaser's title company to issue, upon payment of its normal premium, a ALTA Owner's Policy, insuring Purchaser in the amount of the Purchase Price that fee simple title to the Real Property and Improvements is vested in Purchaser, subject only to the Permitted Exceptions (collectively, the "**Title Policy**").

5. Due Diligence; Access Period; Other Conditions Precedent to Agreement.

(a)



[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

(c)

[REDACTED]

[REDACTED]

(e) Other Purchaser Conditions Precedent. In addition to Purchaser's approval of its due diligence reviews as provided in **Paragraph 5(d)** above, and any other conditions or contingencies set forth herein, Seller and Purchaser agree that Purchaser's obligation to proceed with the Closing is subject to the satisfaction or waiver by Purchaser of the following conditions at or prior to the Closing, and if such conditions are not timely satisfied, Purchaser shall have the right to terminate this Agreement by written notice to the Seller, and to receive a refund of the Deposit, including any Due Diligence Extension Deposit paid:

(i) Intentionally Omitted

(ii) Seller shall have delivered those items described in **Paragraph 11(c)** hereof as provided in this Agreement; and

(iii) Each representation and warranty made by Seller in this Agreement shall be true, accurate and complete in all material respects as of the Closing Date.

(f) Seller's Conditions Precedent. In addition to all other conditions to Seller's obligations in this Agreement, Seller and Purchaser agree that Seller's obligation to proceed with the Closing is subject to the satisfaction or waiver by Seller of the following conditions at or prior to the Closing:

(i) Purchaser shall have deposited the Deposit and Closing Payment with the Closing Agent within the applicable time periods pursuant to this Agreement;

(ii) Purchaser shall have delivered those items described in **Paragraphs 5(b)(iii) and 11(d)** hereof as provided in this Agreement; and

(iii) Each representation and warranty made by Purchaser in this Agreement shall be true, accurate and complete in all material respects of as of the Closing Date.

(g) Waiver of Conditions Precedent. The conditions set forth in **Paragraph 5(e)** are primarily for the benefit of Purchaser and the conditions set forth in **Paragraph 5(f)** are primarily for the benefit of Seller. If any of the conditions expressly set forth in this Agreement have not been satisfied or waived within the period expressly provided herein, this Agreement may be terminated by written notice delivered by the party benefiting from such condition to the other party prior to the expiration of the period expressly provided herein, in which event, the Deposit, including any Due Diligence Extension Deposit paid, shall be released to the terminating party in accordance with **Paragraph 7** hereof. The Closing pursuant to this Agreement shall be deemed a waiver by Purchaser of all unfulfilled conditions hereunder benefiting Purchaser and a waiver by Seller of all unfulfilled conditions hereunder benefiting Seller.

6. INTENTIONALLY OMITTED

7. Termination of Agreement. If this Agreement is terminated pursuant to a termination right expressly set forth herein, then (a) Escrow Holder shall immediately release the Deposit (including, where expressly provided herein, the Due Diligence Extension Deposit) in accordance with such termination right; (b) within five (5) business days following Seller's request, Purchaser shall deliver to Seller all of the Due Diligence Items and any third party reports ordered or updated by Purchaser; (c) no Broker's Fee shall be payable to Broker; and (e) neither party shall have any further obligations to the other hereunder, except for those obligations and indemnities which are expressly made to survive the termination. If this Agreement is terminated for a breach hereof by Purchaser, **Paragraph 13(a)** of this Agreement shall apply. If this Agreement is terminated for a breach hereof by Seller, **Paragraph 13(b)** of this Agreement shall apply.

8. Representations and Warranties.

(a) Seller's Representations and Warranties. Seller represents and warrants to Purchaser, as of the Effective Date and as of each date through and including the Closing, as follows:

(i) Seller has been duly organized and is validly existing and in good standing in the jurisdiction of its formation, and is qualified to do business in the state in which the Property is located. Seller has the full right and authority and has obtained any and all consents required to enter into this Agreement and to consummate or cause to be consummated the transactions contemplated hereby. This Agreement has been, and all of the documents to be delivered by Seller at the Closing will be, authorized and properly executed and constitutes, or will constitute, as appropriate, the valid and binding obligation of Seller, enforceable in accordance with their terms.

(ii) There is no agreement to which Seller is a party or to Seller's Actual Knowledge binding on Seller which is in conflict with this Agreement and no consent, approval, order or authorization of any court or other governmental entity is required to be obtained by Seller in connection with the execution and delivery of this Agreement or the performance hereof by Seller.

(iii) To Seller's Actual Knowledge, there is no investigation, action, suit, proceeding, judgment, or claim affecting the Property or any portion thereof, or affecting Seller and relating to the ownership, operation, use or occupancy of the Property, pending or being prosecuted in any court or by or before any federal, state, county or municipal department, commission, board, bureau or agency or other governmental entity and no such investigation, action, suit, proceeding or claim is threatened or asserted.

(iv) Seller is not a foreign person or entity as defined in Section 1445 of the Internal Revenue Code of 1986, as amended.

(v) No attachment, execution, assignment for the benefit of creditors, receivership, conservatorship or voluntary or involuntary proceedings in bankruptcy or pursuant to any other debtor relief laws is contemplated or has been filed by or against Seller or the Property, nor is any such action pending by or against Seller or the Property.

(vi) No condemnation or eminent domain proceedings relating to the Property or its access to or from public streets or utilities are pending, nor to Seller's Actual Knowledge, have been threatened.

(vii) Neither Seller nor the Property is subject to any lawsuit, administrative action, arbitration or other proceeding, or, to Seller's Actual Knowledge, threatened to be brought by any governmental agency or other persons or entity against the Seller or the Property.

(viii) Except for Hazardous Materials used or stored in de-minimis amounts at the Real Property as cleaning or office supplies in accordance with applicable Environmental Laws, or except as disclosed in the Due Diligence Items: to Seller's Actual Knowledge, (1) there are no Hazardous Materials present on the Property; (2) the Property is not now being, and never has been, used for the generation, transportation, treatment, storage or disposal of any Hazardous Materials; (3) there have never been any release of Hazardous Materials from or onto the Property; and (4) there are no violations of any Environmental Laws relating the Property. For purposes of this Agreement, the term "**Hazardous Materials**" shall mean any substance, chemical, waste product, underground storage tank or other material which is listed, defined, or otherwise identified as "hazardous" or "toxic" or as a "hazardous material" or "hazardous substance" or otherwise regulated for health or environment concerns under any federal, state, local or administrative agency law, regulation, rule or ordinance (collectively, "**Environmental Laws**"), including, without limitation, formaldehyde, urea, polychlorinated biphenyls, petroleum, petroleum product or by-product, crude oil, natural gas, natural gas liquids, liquefied natural gas or synthetic gas usable for fuel or mixture thereof, radon, asbestos or underground storage tanks.

(viv) Except as noted herein, no work has been performed or is in progress at, and no materials have been furnished to, the Real Property or any portion thereof which may give rise to mechanic's, materialmen's or other liens against the Real Property or any portion thereof. Seller is in the process of obtaining a scope of work and budget to repair a fire panel and damage related to a plumbing leak within the building on the TT Property and shall commence and complete such work promptly following receipt of an acceptable scope of work and budget but in any event prior to Closing.

(v) To the Seller's Actual Knowledge, there are no existing violations of zoning ordinances or other laws, ordinances, codes or restrictions applicable to the Property, and no boundary line discrepancies with abutters or other third parties.

(vi) To the Seller's Actual Knowledge, there has not been a division of the Real Property, or any parcel of which the Real Property was formerly a part, other than the transfer of certain of the parcels currently owned by Brown Tower Seller from TT Seller to Brown Tower Seller, which parcels are to be reconveyed to TT Seller or which are to be conveyed directly to Purchaser as described herein, within the past five (5) years, and Seller agrees not to take any action prior to the Closing that would require Purchaser to obtain subdivision approval prior to lawfully acquiring the Real Property in accordance with this Agreement. The prior conveyances from TT Seller to Brown Tower Seller were exempt from Subdivision review as a conveyance to an abutter.

(vii) Seller (a) is not a person, group, entity or nation described in Section 1 of Executive Order 13224 - Blocking Property and Prohibiting Transactions with Persons Who Commit, Threaten to Commit, or Support Terrorism - 66 Fed. Reg. 49079 (dated September 23, 2001, effective

September 24, 2001), (b) is not a (and is not acting, directly or indirectly, for or on behalf of any) person, group, entity or nation designated by any Executive Order or the United States Treasury Department as a terrorist, a "Specially Designated National" or "Blocked Person," or other banned or blocked person, group, entity or nation pursuant to any applicable laws that are administered or enforced by the Office of Foreign Assets Control, (c) is not initiating, facilitating or engaging in the transaction contemplated by this Agreement, directly or indirectly, for or on behalf of any such person, group, entity or nation, and (d), to Seller's knowledge, does not engage in any dealings or transactions, and is not otherwise associated, with any such person, group, entity or nation.

(viii) There are no pending or outstanding or, to Seller's Actual Knowledge threatened liens, claims, rights of first refusal, licenses, contracts, leases, agreements, or encumbrances against or affecting the Property, other than those provided to Purchaser in connection herewith, and matters of record.

(ix) All outstanding bills and/or accounts payable concerning the Property are either paid, will be paid prior to or at the Closing.

When used in this **Paragraph 8(a)**, the phrase "to Seller's Actual Knowledge" or any derivations thereof shall be construed to mean the actual knowledge of Andrew Preston and Christopher Rhodes, without any obligation to make any investigation of the files, documents or studies in the possession of other persons, and shall not include any knowledge which may be imputed to Seller or of any other person. Purchaser acknowledges and agrees that the above-named individuals are named solely for the purpose of defining and narrowing the scope of Seller's knowledge and not for the purpose of imposing any liability on or creating any duties running from such individual or to Seller. Purchaser covenants that it will bring no action of any kind against such individuals related to or arising out of these representations and warranties.

(b) Purchaser's Representations and Warranties. Purchaser hereby represents and warrants to Seller, as of the Effective Date and as of the Closing Date, that:

(i) Purchaser has been duly organized and is validly existing and in good standing in the state of its formation, and is qualified to do business in the state in which the Property is located. Purchaser has the full right and authority and has obtained any and all consents required to enter into this Agreement and to consummate or cause to be consummated the transactions contemplated hereby. This Agreement has been, and all of the documents to be delivered by Purchaser at the Closing will be, authorized and properly executed and constitutes, or will constitute, as appropriate, the valid and binding obligation of Purchaser, enforceable in accordance with their terms.

(ii) There is no agreement to which Purchaser is a party or to Purchaser's Actual Knowledge binding on Purchaser which is in conflict with this Agreement. To Purchaser's Actual Knowledge, there is no action or proceeding pending or, to Purchaser's knowledge, threatened against Purchaser which challenges or impairs Purchaser's ability to execute or perform its obligations under this Agreement.

(iii) Purchaser (a) is not a person, group, entity or nation described in Section 1 of Executive Order 13224 - Blocking Property and Prohibiting Transactions with Persons Who Commit, Threaten to Commit, or Support Terrorism - 66 Fed. Reg. 49079 (dated September 23, 2001, effective September 24, 2001), (b) is not a (and is not acting, directly or indirectly, for or on behalf of any) person, group, entity or nation designated by any Executive Order or the United States Treasury Department as a terrorist, a "Specially Designated National" or "Blocked Person," or other banned or blocked person, group,

entity or nation pursuant to any applicable laws that are administered or enforced by the Office of Foreign Assets Control, (c) is not initiating, facilitating or engaging in the transaction contemplated by this Agreement, directly or indirectly, for or on behalf of any such person, group, entity or nation, and (d), to Purchaser's knowledge, does not engage in any dealings or transactions, and is not otherwise associated, with any such person, group, entity or nation.

(iv) There is no legal proceeding pending or, to Purchaser's Actual Knowledge, threatened against Purchaser that seeks to enjoin or obtain damages in respect of the consummation of the transactions contemplated by this Agreement or that questions the validity of this Agreement, the Purchaser's documents or any action taken or to be taken by the Purchaser in connection with the consummation of the transactions contemplated hereby or thereby.

(v) Purchaser has not (i) made a general assignment for the benefit of creditors, (ii) filed any voluntary petition in bankruptcy or suffered the filing of any involuntary petition by Purchaser's creditors (iii) suffered the appointment of a receiver to take possession of all, or substantially all, of Purchaser's assets, which remains pending or (iv) suffered the attachment or other judicial seizure of all, or substantially all of Purchaser's assets, which remains pending.

(vi) Purchaser represents that it is a knowledgeable, experienced and sophisticated purchaser of real estate and that Purchaser is relying solely on its own expertise and that of Purchaser's consultants in purchasing the Property and has made an independent verification of the accuracy of any documents and information provided by Seller, if any. Purchaser has conducted such inspections, testing and investigations of the Property as Purchaser deemed necessary, including, but not limited to, the physical and environmental conditions thereof, and shall rely upon same. Purchaser acknowledges that Seller has afforded Purchaser a full opportunity to conduct such investigations, inspections and testing of the Property as Purchaser deemed necessary to satisfy itself as to the physical and environmental conditions of the Property, and will rely solely upon same and not upon any information provided by or on behalf of Seller or its agents, contractors or employees, if any, with respect thereto.

When used in this **Paragraph 8(b)**, the phrase "to Purchaser's Actual Knowledge" or any derivations thereof shall be construed to mean the actual knowledge of Christopher D. Marshall and Nathaniel A. Green, without any obligation to make any investigation of the files, documents or studies in the possession of other persons, and shall not include any knowledge which may be imputed to Purchaser or of any other person. Seller acknowledges and agrees that the above-named individuals are named solely for the purpose of defining and narrowing the scope of Purchaser's knowledge and not for the purpose of imposing any liability on or creating any duties running from such individuals or to Purchaser. Seller covenants that it will bring no action of any kind against such individual related to or arising out of these representations and warranties.

(c) **Survival Period.** Notwithstanding anything to the contrary set forth in this Agreement, Purchaser and Seller each agree to indemnify, defend and hold harmless the other from and against any liability, costs, damage, loss, claim, expense or cause of action (including, but not limited to, attorney's and paralegals' fees and costs) incurred by or threatened as a result of any breach by Purchaser or Seller, as the case may be, of any of the representations and warranties contained in this Agreement. Any cause of action of a party for a breach of the representations and warranties described in **Paragraphs 8(a) and (b)** above shall survive for a period of nine (9) months from the Closing Date (the "**Survival Period**"). The parties shall have no liability with respect to any claim which a party may have against the other party for a breach of any such representation or warranty, whether such breach is known or unknown, unless such claim is specifically asserted by written notice to the other party within the Survival Period; provided that, if such notice of such claim is timely received, then any lawsuit must be filed no later than the expiration of the

Survival Period. The maximum liability of Seller for a breach of a representation and warranty shall be Five Hundred Thousand and No/100 Dollars (\$500,000.00). Seller shall within three (3) business days update its representations and warranties, in writing, upon learning of any new or changed information; and, in such event, the remaking of Seller's representations and warranties as of the Closing Date shall be as so updated. In the event Seller does so update its representations and warranties, and (i) the same is not caused by any wrongful act or omission of Purchaser (including without limitation, Purchaser's agents, representatives, employees and consultants), and (ii) the same results in the disclosure of a material adverse change, then, within five (5) days of Purchaser's receipt of such update (but, in any event, prior to the Closing Date), Purchaser may, upon written notice to Seller and Escrow Holder, terminate this Agreement and the Deposit, and any Due Diligence Extension Deposit, shall be released to Purchaser in accordance with the provisions of **Paragraph 7** hereof.

9. Seller's Covenants. Between the Effective Date and the Closing Date or earlier termination of this Agreement, Seller covenants and agrees as follows:

(a) Operations; Property Condition. During the pendency of this Agreement, Seller shall maintain the Property and carry on its business and activities relating to the Property, substantially in the same manner as it did before the Effective Date. Seller shall not enter into or allow any new lease, license agreement, lien, encumbrance, or any other agreement or instrument affecting the Property without Purchaser's consent. Full possession of the Property, free and clear of all tenants and occupants, is to be delivered at the Closing, the Property to be then in the same condition as it is now, reasonable wear and tear excepted. Purchaser and its agents may inspect the Property up to forty-eight (48) hours prior to the Closing in order to determine whether the condition thereof complies with the terms and conditions of this Agreement. Seller agrees to provide prompt written notice to Purchaser of any newly arising or newly discovered defects with respect to the Property of which Seller becomes aware.

(b) Continuation/Termination of Service Contracts. Seller shall not modify or amend any Service Contracts or enter into any new service contract for the Property without the prior written consent of Purchaser, unless such contract is terminable without penalty by the then owner of the Property upon not more than thirty (30) days' notice and a copy of such contract is provided to Purchaser upon execution, in which event no prior consent of Purchaser shall be required. Seller shall not enter into any utility or revenue sharing agreements of any kind, including but not limited to laundry contracts, cable and telecom contracts.

10. PROPERTY SOLD AS-IS.

(i) Purchaser hereby agrees that approval or deemed approval of the Property by virtue of Closing, shall constitute an acknowledgment that Purchaser (a) has concluded whatever studies, tests, and investigations Purchaser desired to conduct relating to the Property including, without limitation, economic reviews and analyses, soils tests, engineering analyses, environmental analyses and analysis of any applicable records of the planning, building, public works or any other governmental or quasi-governmental organization having or asserting jurisdiction over the Property; (b) has reviewed and read (or has elected not to do so) and has understood all instruments affecting the Property and/or its value which Purchaser deems relevant, including, without limiting the generality of the foregoing, all documents referred to in the Purchaser's Commitment and all leases, operating statements, demographic studies and market analyses; (c) and its consultants have made all such independent studies, analyses and investigations, as Purchaser has deemed necessary, including, without limitation, those relating to environmental matters and the leasing, occupancy and income of the Property; (d) is relying solely on its own investigations, and the representations and warranties herein or in the documents delivered at Closing, as to the Property and its value and is assuming the risk that adverse physical, economic or other conditions (including, without limitation, adverse environmental conditions and soils and groundwater conditions) and status of compliance with the requirements of the Americans With Disabilities Act of 1990 or the Fair Housing Act

of 1968, as amended) may not have been revealed by such investigation; and (e) that Seller has given Purchaser every opportunity to consider, inspect and review to its satisfaction the physical, environmental, economic and legal condition of the Property and all files and information in Seller's possession and delivered to Purchaser which Purchaser deems material to the purchase of the Property.

(ii) Except as otherwise expressly provided in **Paragraph 8(a)** above or elsewhere in this Agreement, Seller disclaims the making of any representations or warranties, express or implied, regarding the Property or its value or matters affecting the Property, including, without limitation, the physical condition of the Property, title to or the boundaries of the Real Property, pest control matters, soil condition, hazardous waste, toxic substance or other environmental matters, compliance with the Americans with Disabilities Act of 1990, Fair Housing Act of 1968 (as amended) or other building, health, safety, land use and zoning laws, regulations and orders, structural and other engineering characteristics, traffic patterns and all other information pertaining to the Property. Purchaser, moreover, acknowledges (a) that Seller did not develop or construct the Property, (b) that Purchaser has entered into this Agreement with the intention of making and relying upon its own investigation of the physical, environmental, economic and legal condition of the Property and (c) that Purchaser is not relying upon any representations and warranties, other than those specifically set forth in **Paragraph 8(a)** above or elsewhere in this Agreement, made by Seller or anyone acting or claiming to act on Seller's behalf concerning the Property or its value. Purchaser further acknowledges that it has not received from Seller any accounting, tax, legal, architectural, engineering, property management or other advice with respect to this transaction and is relying solely upon the advice of its own accounting, tax, legal, architectural, engineering, property management and other advisors. Notwithstanding any provision of this Agreement to the contrary, except for the express representations and warranties set forth in this Agreement or in any of the documents delivered in connection herewith or at Closing, Purchaser agrees that the Property is to be sold to and accepted by Purchaser IN ITS PRESENT CONDITION, AS IS, WHERE IS, AND WITH ALL FAULTS, WITHOUT ANY REPRESENTATIONS OR WARRANTIES WHATSOEVER, EXPRESS OR IMPLIED, WRITTEN OR ORAL, PAST, PRESENT OR FUTURE, IT BEING THE INTENTION OF SELLER AND PURCHASER TO EXPRESSLY DISCLAIM, NEGATE AND EXCLUDE ALL REPRESENTATIONS AND WARRANTIES; INCLUDING, BUT NOT LIMITED TO: (i) THE CONDITION OF THE PROPERTY OR ANY ELEMENT THEREOF; INCLUDING, WITHOUT LIMITATION, WARRANTIES RELATED TO SUITABILITY FOR HABITATION, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE; (ii) THE SUITABILITY THEREOF FOR ANY AND ALL ACTIVITIES AND USES WHICH PURCHASER MAY ELECT TO CONDUCT THEREON; (iii) THE NATURE OR QUALITY OF CONSTRUCTION, STRUCTURAL DESIGN AND ENGINEERING OF THE IMPROVEMENTS; (iv) THE QUALITY OF THE LABOR AND MATERIALS INCLUDED IN THE IMPROVEMENTS; (v) THE WATER, SOIL, GEOLOGIC AND DRAINAGE CONDITIONS OF THE PROPERTY AND ANY OTHER CONDITIONS EXISTING AT THE PROPERTY WITH RESPECT TO ANY PARTICULAR PURPOSE, DEVELOPMENTAL POTENTIAL OR OTHERWISE; (vi) THE NATURE AND EXTENT OF ANY RIGHT OF WAY, LEASE, POSSESSORY INTEREST, LIEN, ENCUMBRANCE, LICENSE, RESERVATION OR OTHER APPURTENANT, BENEFIT, RIGHT, TITLE OR INTEREST; (vii) THE COMPLIANCE OF THE PROPERTY WITH ANY LAWS, ORDINANCES OR REGULATIONS OF ANY GOVERNMENT OR OTHER BODY; (viii) THE QUANTITY, QUALITY, VALUE, CONDITION, COMPOSITION, AUTHENTICITY OR AMOUNT OF ANY PROPERTY OR MATERIALS DELIVERED OR MADE AVAILABLE TO PURCHASER UNDER THIS AGREEMENT; (ix) ALL WARRANTIES CREATED BY ANY AFFIRMATION OF FACT OR PROMISE OR BY ANY DESCRIPTION OF THE PROPERTY; (x) THE EXISTENCE OF ANY ENVIRONMENTAL HAZARDS OR CONDITIONS, INCLUDING, WITHOUT LIMITATION, THE PRESENCE OF ASBESTOS OR OTHER HAZARDOUS SUBSTANCE; AND (xi) ALL OTHER WARRANTIES AND REPRESENTATIONS WHATSOEVER, EXCEPT THE REPRESENTATIONS AND WARRANTIES SET FORTH IN THIS AGREEMENT and Purchaser assumes the risk that adverse physical, environmental, economic or legal conditions may not have been revealed by its investigation.

Purchaser hereby specifically acknowledges that Purchaser has carefully reviewed this **Paragraph 10** in its entirety and discussed its import with legal counsel and that the provisions of this **Paragraph 10** are a material part of this Agreement.

Purchaser's Initials: CM

11. Closing.

(a) Closing. The closing of the purchase and sale of the Property pursuant to this Agreement (the "**Closing**") shall take place on the date that is Thirty (30) days after the expiration of the Due Diligence Period (or any extension thereof in accordance with **Paragraph 5(a)** of this Agreement) (the "**Closing Date**") at the offices of Drummond Woodsum & MacMahon, 84 Marginal Way, Suite 600, Portland, ME 04101, Purchaser's legal counsel, or at the office of legal counsel for Purchaser's lender, if applicable (such party being referred to herein as the "**Closing Agent**"), provided, however that the parties agree to accommodate an escrow-style closing by mail, with delivery of all original executed and acknowledged closing documents, and funds, to the Closing Agent in accordance with the terms hereof.

(b) Payment of the Purchase Price. The Purchase Price shall be paid, and all documents necessary for the consummation of the purchase and sale transaction contemplated hereby shall be executed and delivered on or before the Closing Date, and Seller shall deliver possession of the Property to Purchaser on the Closing Date.

(c) Seller's Deliveries. On or before the Closing Date (or within such timeframe as may be more specifically provided below), Seller shall cause to be delivered to Closing Agent (except as specifically noted) the following documents:

(i) Two Maine statutory short form Quitclaim Deeds with Covenant, the form of which shall be reasonably acceptable to Seller and Purchaser (collectively, the "**Deed**") duly executed by Seller and acknowledged, conveying to Purchaser the Real Property, Appurtenances and Improvements using the new legal description for the Real Property and the New Easements based upon the Updated Survey, and associated transfer tax declarations;

(ii) A Bill of Sale and Assignment of Contracts duly executed by TT Seller and a Bill of Sale and Assignment of Contracts executed by Brown Tower Seller, an example of the general form of which is attached hereto as **Exhibit C**, in a form reasonable acceptable to Seller and Purchaser including warranties as to Seller's lawful ownership of the property to be conveyed to Purchaser, such property being free and clear of liens and encumbrances of any nature and type, and that Seller has good right to sell such property to Purchaser and will warrant and defend title to said property against the claims and demands of all persons whatsoever to the extent such claims arise from the period of Seller's ownership of such property;

(iii) Originals or copies of all Service Contracts in the possession or control of Seller (to be delivered outside of Closing) to be continued by Purchaser after the Closing, and evidence of proper termination of the Terminated Contracts;

(iv) Such corporate, partnership or other organization or formation documents, resolutions, authorizations, certificates of incumbency, certificates of good standing, and other documentation with respect to Seller as Purchaser's legal counsel may reasonably require or as the Purchaser's title insurance company may require in order to issue the Title Policy; and

(v) Title affidavits provided by Purchaser's title insurance company, non-foreign person affidavit pursuant to § 1445 of the Internal Revenue Code, IRS Form 1099-S, a certificate of Maine residency or a certificate of reduction/waiver of withholding, in compliance with 36 M.R.S. § 5250-A or confirmation that nonresident withholding shall be required and a copy of the completed REW-1 form(s) sufficient to allow Purchaser to comply with all withholding requirements, an oil storage tank certification pursuant to 38 M.R.S. § 563 evidencing that, to the best of Seller's knowledge, the Real Property contains no underground oil storage facility or aboveground oil storage facility with underground piping, a road disclosure pursuant to 33 M.R.S. § 193, fuel gas disclosure, if applicable, and any other documents, instruments, records, correspondence or agreements which are reasonably required by Closing Agent or Purchaser's legal counsel, or otherwise to close and consummate the purchase of the Property in accordance with the terms hereof.

(d) Purchaser Deliveries. On or before the Closing Date (or within such timeframe as may be more specifically provided below), Purchaser shall cause to be delivered to Closing Agent (except as specifically noted) the following documents:

(i) The Closing Payment;

(ii) A Bill of Sale and Assignment of Contracts executed by Purchaser, in a form reasonably acceptable to Seller and Purchaser;

(iii) Such corporate, partnership or other organization or formation documents, resolutions, authorizations, certificates of incumbency, certificates of good standing, and other documentation with respect to Purchaser as Closing Agent may require in order to cause the Closing to occur or as the Purchaser's title company may require in order to issue the Title Policy; and

(iv) Any other documents, instruments, records, correspondence or agreements called for hereunder which are reasonably required by Closing Agent or otherwise to close and consummate the purchase of the Property in accordance with the terms hereof.

(d) Title Charges; Closing Fees and Costs. Seller shall pay (i) fifty percent (50%) of any real estate transfer taxes, in accordance with Maine law, (ii) recording fees for any partial release or other title clearing documents, if any, and (iii) all fees and expenses of its legal counsel and other third party consultants engaged by or on behalf of Seller in connection with this transaction. Purchaser shall pay (i) fifty percent (50%) of any real estate transfer taxes, in accordance with Maine law, and (ii) recording fees for the Deed, (iii) all fees and expenses of its legal counsel and other third party consultants engaged by or on behalf of Purchaser in connection with this transaction, (iv) the costs of the New Survey, if one is obtained, and (v) the cost of any premiums and endorsements to the Purchaser's title insurance policy. Any applicable stormwater or other costs and expenses of closing that are not expressly identified in this subparagraph (e) shall be allocated between the parties in accordance with prevailing custom in the county of which the Property is located in.

(e) Prorations. Payments made under the Service Contracts to be assumed by Purchaser at Closing, and real and personal property taxes, stormwater fees and other municipal assessments, and utilities shall be prorated as of the Closing Date. For proration purposes, the income and expenses for the day of Closing shall belong to the Purchaser. Seller shall receive a credit for prepayments paid by Seller under any assigned Service Contracts allocable to the period after the Closing Date, provided there shall be no adjustment or proration for initial inducement payments made to Seller by providers of telephone, cable television, internet, laundry or similar service providers. Seller shall be credited at Closing with any prepaid

real estate taxes and assessments allocable to the period after the Closing Date, using an estimate of the amount of such taxes allocated to the Real Property and to the Excluded Property. If the Closing occurs before the tax rate is fixed for the then current fiscal year, the apportionment of the taxes shall be based upon the tax rate for the preceding year applied to the previous year's assessed valuation, and the above referenced estimate of the amount allocated to the Real Property and the Excluded Property, but any difference in ad valorem taxes for the year of sale actually paid by Purchaser shall be adjusted between the parties upon receipt of written evidence of the payment thereof. Notwithstanding the foregoing, Seller and Purchaser hereby agree that if any of the aforesaid prorations, other than the tax proration, cannot be calculated accurately on the Closing Date, then the same shall be calculated using the most accurate estimates available on the Closing Date and re-calculated once actual numbers are available, provided, however, that any such re-calculations must be completed and delivered in writing to the party to be charged, within thirty (30) days after receipt of the actual numbers. The terms of this subsection (e) shall survive Closing for a period of 12 months from the Closing Date.

12. Escrow Instructions.

(a) Deposit of Purchase Agreement in Escrow. Within two (2) business days after the Effective Date, the parties shall deposit an executed copy of this Agreement (or a fully executed copy in counterparts) with Escrow Holder. Escrow Holder shall promptly execute this Agreement upon receipt of this Agreement and, thereupon, escrow hereunder (the "Escrow") shall be established. This Agreement shall serve as the instruction to Escrow Holder to hold, administer, and disperse the earnest money to be deposited with Escrow Holder in accordance with this Agreement.

(b) Additional Conditions to Closing. Closing Agent shall close on the Closing Date by (i) causing the Deed to be recorded in the Cumberland County Registry of Deeds, and (ii) delivering the proceeds from Closing to Seller and the other funds and documents as provided in this Agreement, WHEN AND ONLY WHEN each of the following conditions have been satisfied:

- (1) All funds and documents have been delivered to Closing Agent; and
- (2) Purchaser's title insurance company is unconditionally prepared and irrevocably committed to deliver the Title Policy.

(c) Distribution of Funds and Documents. Unless this Agreement terminates as provided herein, all funds received by Escrow Holder shall be, until Closing, kept on deposit and interest accruing to such account prior to the Closing shall be for the account of Purchaser. All disbursements by Closing Agent to Seller from Closing shall be made by federal wire transfer in accordance with wiring instructions to be given by Seller no less than four (4) business days prior to the Closing Date. Upon Closing:

- and
- (i) Closing Agent shall disburse the applicable proceeds from the Closing to Seller;
 - (ii) Closing Agent shall cause the recorded Deed to be delivered to Purchaser.
 - (iii) Closing Agent shall deliver all other items delivered to Closing Agent to the party entitled thereto or benefited thereby.

13. Default.

(a) Default by Purchaser; Limitation on Liability; Liquidated Damages. IF PURCHASER SHALL DEFAULT IN ITS OBLIGATIONS HEREUNDER, THEN SELLER SHALL DELIVER NOTICE TO PURCHASER OF SUCH DEFAULT AND PURCHASER SHALL HAVE THREE (3) BUSINESS DAYS TO CURE ANY DEFAULTS EXCEPT FOR ANY FAILURE OR REFUSAL OF PURCHASER TO CLOSE ON THE CLOSING DATE WHICH SHALL NOT REQUIRE ANY NOTICE OR OPPORTUNITY TO CURE. IN THE EVENT PURCHASER FAILS TO TIMELY CURE ANY DEFAULTS, THEN PURCHASER AGREES THAT SELLER SHALL HAVE THE RIGHT TO TERMINATE THIS AGREEMENT BY DELIVERING WRITTEN NOTICE TO PURCHASER WHEREUPON THE ENTIRE DEPOSIT PLUS ANY ACCRUED INTEREST, SHALL BE FORFEITED TO SELLER AS LIQUIDATED DAMAGES (WHICH SHALL BE SELLER'S SOLE AND EXCLUSIVE REMEDY AGAINST PURCHASER FOR SUCH DEFAULT) TO RECOMPENSE SELLER FOR TIME SPENT, LABOR AND SERVICES PERFORMED AND THE LOSS OF ITS BARGAIN. PURCHASER AND SELLER AGREE THAT (I) SELLER WILL BE MATERIALLY DAMAGED, (II) IT WOULD BE EXTREMELY DIFFICULT AND IMPRACTICABLE AT THIS TIME TO ESTIMATE THE AMOUNT OF SUCH DAMAGE, AND (III) AFTER NEGOTIATION, CONSIDERING ALL OF THE CIRCUMSTANCES EXISTING ON THE DATE OF THIS AGREEMENT, THE AMOUNT OF THE DEPOSIT, TOGETHER WITH THE INTEREST THEREON, REPRESENTS A REASONABLE ESTIMATE OF SELLER'S DAMAGES. THE ESCROW HOLDER IS HEREBY INSTRUCTED BY SELLER AND PURCHASER TO DELIVER THE DEPOSIT TO SELLER IN SUCH EVENT, AND SELLER SHALL RETAIN THE DEPOSIT AS LIQUIDATED DAMAGES AND, AT SUCH TIME, THIS AGREEMENT SHALL BE NULL AND VOID AND NEITHER PARTY SHALL HAVE ANY RIGHTS OR OBLIGATIONS UNDER THIS AGREEMENT EXCEPT THOSE THAT EXPRESSLY SURVIVE SUCH TERMINATION. NOTWITHSTANDING THE FOREGOING, NOTHING IN THIS PARAGRAPH 13(a) SHALL LIMIT ANY INDEMNIFICATION OBLIGATION OF PURCHASER UNDER THIS AGREEMENT.

BY PLACING ITS INITIALS BELOW, EACH PARTY SPECIFICALLY CONFIRMS THE ACCURACY OF THE STATEMENTS MADE ABOVE AND THE FACT THAT EACH PARTY WAS REPRESENTED BY COUNSEL WHO EXPLAINED, AT THE TIME THIS AGREEMENT WAS MADE, THE CONSEQUENCES OF THIS LIQUIDATED DAMAGES PROVISION.

INITIALS: Seller: *CV* Purchaser: *CM*

(b) DEFAULT BY SELLER; OTHER FAILURE TO CONSUMMATE AGREEMENT. IF SELLER SHALL DEFAULT IN ITS OBLIGATIONS HEREUNDER, THEN, PURCHASER SHALL DELIVER NOTICE TO SELLER OF SUCH DEFAULT AND SELLER SHALL HAVE THREE (3) BUSINESS DAYS TO CURE ANY DEFAULTS EXCEPT FOR ANY FAILURE OR REFUSAL OF SELLER TO CLOSE ON THE CLOSING DATE WHICH SHALL NOT REQUIRE ANY NOTICE OR OPPORTUNITY TO CURE. IN THE EVENT SELLER FAILS TO TIMELY CURE ANY DEFAULTS, THEN UPON NOTICE BY PURCHASER TO SELLER AND ESCROW AGENT TO THAT EFFECT, PURCHASER SHALL ELECT, IN PURCHASER'S SOLE DISCRETION, AS PURCHASER'S SOLE REMEDY, TO EITHER (I) TERMINATE THIS AGREEMENT AND RECEIVE THE DEPOSIT, INCLUDING ANY DUE DILIGENCE EXTENSION DEPOSIT PAID, PLUS ACCRUED INTEREST, IN WHICH EVENT (A) NO BROKER'S FEE SHALL BE EARNED, AND (B) THIS AGREEMENT SHALL AUTOMATICALLY TERMINATE AND BE OF NO FURTHER FORCE OR EFFECT AND NEITHER PARTY SHALL HAVE ANY FURTHER RIGHTS OR OBLIGATIONS HEREUNDER, OTHER THAN PURSUANT TO ANY PROVISION HEREOF WHICH EXPRESSLY SURVIVES THE TERMINATION OF THIS AGREEMENT, OR (II) ELECT TO TREAT THIS AGREEMENT AS CONTINUING IN FULL FORCE AND EFFECT, AND HAVE THE RIGHT TO BRING AN ACTION FOR SPECIFIC PERFORMANCE, WITH RECOVERY OF PURCHASER'S REASONABLE

ATTORNEYS' AND PARALEGALS' FEES, COSTS AND EXPENSES FROM SELLER, PROVIDED, HOWEVER, THIS REMEDY SHALL ONLY BE AVAILABLE IF PURCHASER COMMENCES SUCH ACTION WITHIN SIXTY DAYS OF THE EXPIRATION OF SELLER'S CURE PERIOD.

INITIALS: Seller: CV Purchaser: CM

14. Loss by Fire or Other Casualty; Condemnation. Seller shall bear the risk of any and all loss or damage to the Property prior to the Closing and shall, immediately upon learning of any such risk or loss (including notice of condemnation), disclose to Purchaser in writing the nature and extent thereof. Seller represents that it has, and will maintain prior to Closing, a policy of fire and extended coverage insurance in at least the full amount of the replacement cost of all buildings and improvements located on the Property. In the event of any loss, damage, or taking with respect to the Property, or any portion thereof, prior to Closing, Purchaser may, in its sole discretion, terminate this Agreement by written notice delivered to Seller within ten (10) business days after Purchaser received notice from Seller of the nature and extent of such loss, damage or taking, in which case the Deposit, and any Due Diligence Extension Deposit, shall be returned to Purchaser and neither party shall have any further rights or obligations hereunder except those that expressly survive such termination. In the event of a loss, damage or taking that does not result in the termination of this Agreement, Seller shall at Closing, and as a condition precedent thereto, credit Purchaser against the Purchase Price the amount of any insurance or condemnation proceeds, or assign to Purchaser, as of the Closing and in a form acceptable to Purchaser, all rights or claims for relief relating to the same, and credit to Purchaser an amount equal to the deductible, if any, under the insurance policy.

15. Attorneys' Fees. Any party to this Agreement who is the prevailing party in any legal proceeding against any other party brought in connection with this Agreement or transaction shall be additionally entitled to recover court costs and reasonable attorney fees, and all other litigation expenses, including deposition costs, travel and expert witness fees, from the non-prevailing party.

16. Notices. Except as otherwise set forth herein, any notice required or permitted to be given or delivered under this Agreement shall be in writing and (i) personally delivered, (ii) sent by United States registered or certified mail, postage prepaid, return receipt requested, (iii) sent by Federal Express or similar nationally recognized overnight courier service, or (iv) transmitted by electronic mail. Such notice shall be deemed to have been given or delivered upon the date of actual receipt or delivery (or refusal to accept delivery), as evidenced by the notifying party's receipt of written or electronic confirmation of such delivery or refusal, if received by the party to be notified between the hours of 8 a.m. and 5 p.m. Eastern time on any business day, with delivery made after such hours to be deemed received on the following business day. For the purposes of notice, the addresses of the parties shall be as follows:

Seller: c/o Presidium
3100 McKinnon Street, Suite 250
Dallas, TX 75201
Attention: Will Andress
Email: wandress@presidiumre.com

Copies to: Presidium
1601 Rio Grande, Suite 300
Austin, Texas 78701
Attention: Matthew S. Meza, Esq.
Email: mmeza@presidiumre.com

Purchaser: GreenMars Real Estate Services, Inc.
30 Exchange Street, Suite 3
Portland, Maine 04101
Email: chris@greenmars.com

Copies to: Robert M. Liscord, Esq.
Drummond Woodsum
84 Marginal Way, Suite 600
Portland, ME 04101
Email: rliscord@dwmlaw.com

or such other address as either party may from time to time specify in writing delivered to the other in accordance with this **Paragraph 16**.

17. Integration; Headings. This Agreement, including the exhibits referenced herein, contains the complete agreement between the parties and cannot be varied except by the written agreement of Seller and Purchaser. The parties agree that there are no oral agreements, understandings, representations or warranties that are not expressly set forth herein. The article, section, subsection, paragraph and/or other headings of this Agreement are for convenience only and in no way limit or enlarge the scope or meaning of the language hereof.

18. Binding Effect. This Agreement shall be binding upon and inure to the benefit of the parties hereto and their respective heirs, executors, representatives, successors and assigns.

19. Assignment. Purchaser may not assign this Agreement and all rights hereunder without the prior written consent of Seller, which consent shall not be unreasonably withheld or delayed, provided, however, Purchaser may assign this Agreement without Seller's prior written consent to an entity formed by Purchaser for the purpose of acquiring or developing the Property, so long as such assignee assumes all of Purchaser's right and obligations hereunder. Any assignment hereunder shall take place no later than five (5) business days prior to the Closing Date. Purchaser shall immediately deliver to Seller a copy of any permitted assignment of this Agreement.

20. 1031 Exchange. Seller and/or Purchaser may wish to effect an exchange qualifying as a tax-free exchange under Section 1031 of the Internal Revenue Code of 1986 (a "**1031 Exchange**"), and if either party, at its option, shall elect to undertake a 1031 Exchange, the following terms shall apply:

(a) The exchanging party, may assign its rights in, and delegate its duties (in part or in whole) under, this Agreement, as well as the transfer of its interest in the Property, to a qualified intermediary selected by such party ("**Accommodator**") in a manner consistent with the provisions of Treasury Regulations Section 1.1031(k)-1(g)(4), and the exchanging party may add the Accommodator as an additional party to the transaction described herein;

(b) The non-exchanging party agrees to reasonably cooperate with the exchanging party in connection with the 1031 Exchange, including the execution of documents (including, but not limited to, escrow instructions and amendments to escrow instructions) therefor;

(d) The non-exchanging party shall in no way be obligated to pay any escrow costs, brokerage commissions, title charges, survey costs, recording costs or other charges incurred with respect to the other party's relinquished or replacement property, as applicable, in the 1031 Exchange;

(e) The exchanging party's obligation to sell or purchase the Property, as applicable, pursuant to this Agreement shall not be contingent or otherwise subject to the consummation of the 1031 Exchange;

(f) The Closing shall timely occur in accordance with the terms of this Agreement and shall not be altered notwithstanding any failure, for any reason, of the consummation of the 1031 Exchange;

(g) The non-exchanging party shall have no responsibility or liability on account of the 1031 Exchange to any third party involved in the 1031 Exchange;

(h) The non-exchanging party shall not be required to make any representations or warranties, nor assume any obligations, nor spend any funds, in connection with the 1031 Exchange, other than such party's attorneys' fees in connection with the review and approval of customary documentation and settlement statements in connection with the 1031 Exchange as it relates to the Property;

(i) All representations, warranties, covenants and indemnification obligations of the parties to one another, whether set forth in this Agreement or otherwise existing at law or at equity, shall not be affected by the 1031 Exchange; and

(j) The exchanging party shall indemnify, protect, defend and hold the non-exchanging party harmless from and against any and all causes of action, claims, demands, liabilities, costs and expenses, including actual attorneys' fees and costs except as provided in (h) above, incurred by the non-exchanging party in connection with any third party claims which may arise as a result of or in connection with the 1031 Exchange.

21. Venue and Governing Law. This Agreement shall be construed under and in accordance with the laws of the State of Maine and any litigation arising from this Agreement shall be filed in the State of Maine, Cumberland County.

22. Severability. In case any one or more of the provisions contained in this Agreement shall for any reason be held to be invalid, illegal, or unenforceable by a court in any respect, such invalidity, illegality, or unenforceability shall not affect any other provision hereof and this Agreement shall be construed as if such invalid, illegal, or unenforceable provision had never been contained herein.

23. Exhibits. All exhibits attached hereto are incorporated herein by this reference.

24. Time. Time is of the essence.

25. Date of Performance. If the date for performance of any act under this Agreement falls on a Saturday, Sunday or holiday on which banks in the State of Maine are closed ("Holiday"), the date for such performance shall automatically be extended to the first succeeding business day that is not a Saturday, Sunday or Holiday. As used in this Agreement, "business day" means any day except a Saturday, Sunday or Holiday.

26. Limitation of Liability. Any obligation or liability of Purchaser or Seller whatsoever which may arise at any time under this Agreement or any obligation or liability which may be incurred by Purchaser or Seller pursuant to any other instrument, transaction or undertaking contemplated hereby shall be satisfied, if at all, out of Purchaser's or Seller's assets only (including the proceeds of such assets). No obligation or liability shall be personally binding upon, nor shall resort for the enforcement thereof be had to, the property of any of Purchaser's or Seller's limited partners, managers, members, trustees, officers, directors, employees, shareholders, representatives or agents (including, without limitation, Seller's

property manager), regardless of whether such obligation or liability is in the nature of contract, tort or otherwise.

27. **Legally Binding.** Upon execution of this Agreement by Seller and Purchaser, this Agreement shall constitute a legally binding agreement. This Agreement, together with the exhibits referenced herein, constitutes the entire agreement between the parties, there being no oral contracts, representations, conditions, or warranties, express or implied, in addition to this Agreement.

28. **Waiver.** No waiver by Purchaser or Seller of a breach of any of the terms, covenants and conditions of this Agreement by the other party shall be construed or held to be a waiver of any succeeding or preceding breach of the same or any other term, covenant or condition herein contained. No waiver of any default by Purchaser or Seller hereunder shall be implied from any omission by the other party to take any action on account of such default if such default persists or is repeated, and no express waiver shall affect a default other than as specified in such waiver.

29. **Confidentiality.** Seller and Purchaser agree to keep the terms of this Agreement confidential and not make any public announcements or disclosures with respect to the subject matter hereof without the prior written consent of the other party. Notwithstanding the preceding sentence, (A) Seller and Purchaser (and their respective members and their constituent entities) may, without the consent of the other, (i) issue one or more press releases of the transaction and proposed use of the Property, if the parties' names and other non-public or financial information related to the Seller and Purchaser are not disclosed, and (ii) disclose the terms of this Agreement and the transaction to its existing or prospective investors, affiliates and partners and directors, officers, lenders, prospective lenders, attorneys or other professional advisors, consultants and employees of the parties or their respective affiliates; (B) Purchaser may disclose the transaction to, and communicate with, third parties, including without limitation, contractors, consultants, governmental authorities, officials, and public boards in connection with any of Purchaser's due diligence local, state and federal approvals relating to the acquisition, redevelopment, financing, use or operation of the Property; and (C) Purchaser may prepare and submit during the Due Diligence Period such applications for governmental and regulatory approvals required for the Purchaser's intended use of the Property. This **Paragraph 29** shall survive the closing or earlier termination of this Agreement.

30. **Further Instruments.** Each party will, whenever and as often as it shall be requested so to do by the other, cause to be executed, acknowledged or delivered any and all such further instruments and documents as may be necessary or proper, in the reasonable opinion of the requesting party, in order to carry out the intent and purpose of this Agreement.

31. **Counterparts.** This Agreement may be executed in any number of counterparts, or by DocuSign, provided each of the parties hereto executed at least one counterpart; each such counterpart hereof shall be deemed to be an original instrument, but all such counterparts together shall constitute but one agreement.

32. **Brokers.** Other than as set forth in this **Paragraph 32**, Purchaser and Seller acknowledge and agree that no person or entity is entitled to a commission on the transaction contemplated herein other than Maine Real Estate Advisors, which represents the Purchaser in an agency relationship ("**Broker**"). All fees owed to Broker in connection with this Agreement shall be paid by Seller pursuant to a separate written agreement. If any person other than Broker shall assert a claim to a finder's fee, brokerage commission, agent's commission or any other compensation on account of alleged employment as a finder, agent, representative or broker on behalf of either Seller or Purchaser for performance of services in connection with this transaction, such party agrees to indemnify, defend and hold the other party harmless from and against any such claim and all costs, expenses and liabilities incurred in connection with such claim, including, but not limited to, counsel and witness fees and court costs in defending against such claim. The foregoing obligations shall survive the Closing or earlier termination of this Agreement.

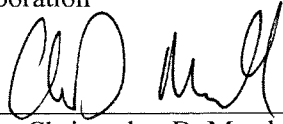
33. Waiver of Trial by Jury. Purchaser and Seller, to the fullest extent permitted under Maine law, hereby expressly waive any and all right to trial by jury of any claim, demand, action, cause of action, or proceeding arising under or with respect to this Agreement, or in any way connected with, or related to, incidental to, the dealing of the parties hereto with respect to this Agreement or the transactions related hereto or thereto, in each case whether now existing or hereafter arising, and irrespective of whether sounding in contract, tort, or otherwise. To the extent permitted under Maine law, Seller and Purchaser hereby agree that any such claim, demand, action, cause of action or proceeding shall be decided by a court trial without a jury and that any party hereto may file an original counterpart or a copy of this paragraph with any court as written evidence of the consent of the other party or parties hereto to waiver of its or their right to trial by jury.

[Signatures on next page]

IN WITNESS WHEREOF, the parties have caused this Agreement to be executed by their respective undersigned representatives, thereunto duly authorized, as of the Effective Date.

PURCHASER:

GreenMars Real Estate Services, Inc.,
A Maine corporation

By 
Name: Christopher D. Marshall
Title: President

[Seller Signature Page to Follow]

SELLER:

TT MAINE VENTURE, LLC
a Delaware limited liability company

By: TT Presidium, LLC
a Texas limited liability company, its Managing Member


By: _____
Name: Cross Mocerì
Its: Manager

BROWN TOWER, LLC
a Maine limited liability company

By: TT Presidium, LLC
a Texas limited liability company, its Managing Member


By: _____
Name: Cross Mocerì
Its: Manager

RECEIPT OF DEPOSIT ACKNOWLEDGMENT

Escrow Holder acknowledges receipt of the earnest money Deposit in the amount of \$100,000.00 and in the form of _____ on August, 2023

Maine Real Estate Advisors

By: _____

Name: _____

Title: _____

SCHEDULE 5(a)
DUE DILIGENCE ITEMS

- (a) copies of all leases, licenses or other occupancy agreements or service contracts and other agreements pertaining to the Property including without limitation any pertaining to the use of the time and temperature rooftop sign, so-called;
- (b) property tax statements since 2022 and any appraisal notices for the Property;
- (c) copies of current utility capacity letters from the Property's utility providers;
- (d) all plans, specifications and studies relating to the Property, including without limitation, surveys, as-built plans, floor plans, site plans, and environmental and engineering reports and studies and architects' and engineers' drawings and designs.

EXHIBIT A
Excluded Property

EXHIBIT B
[reserved]

EXHIBIT C
FORM OF BILL OF SALE AND ASSIGNMENT AGREEMENT

[DRAFT TO BE FINALIZED PRIOR TO CLOSING]

This BILL OF SALE AND ASSIGNMENT AGREEMENT (this "Assignment") is executed and delivered as of the ____ day of _____, 202__ (the "Effective Date") pursuant to that certain Purchase and Sale Agreement and Joint Escrow Instructions dated _____, 202__ (the "Purchase Agreement") by and between [TT MAINE VENTURE, LLC, a Delaware limited liability company, as seller [BROWN TOWER, LLC, a Maine limited liability company, as seller] ("Seller"), and _____, as Purchaser ("Purchaser"), covering the real property located at 477 and 481 Congress St. and 22 Preble St., Portland, ME, and as further described on Schedule A attached hereto ("Real Property"). Capitalized terms used herein shall have the same meaning as in the Purchase Agreement unless defined herein.

1. Sale of Personalty. For good and valuable consideration, effective as of the Effective Date, Seller hereby sells, transfers, sets over and conveys, to Purchaser the following, to have and to hold to Purchaser, its successors and assigns forever (the "Personal Property"):

(a) Tangible Personalty. All of Seller's right, title and interest in and to all the furniture, Inventory, fixtures, equipment and other tangible personal property owned by Seller and located in or on the Real Property as described on Schedule B attached hereto.

(b) Intangible Personalty. All the right, title and interest of Seller in and to all intangible personal property owned by Seller and used in the ownership, use and operation of the Real Property, Improvements and Inventory, including, without limitation, the items described on Schedule C attached hereto.

All Tangible Personalty is being conveyed "AS IS" without warranty as to title, merchantability, condition, or fitness.

Seller warrants that it is the true and lawful owner of the Personal Property and has full power and authority to dispose of the same in the manner aforesaid, and it does, for its successors and assigns, hereby covenant and agree to and with Purchaser to warrant and defend the Personal Property against the lawful claims and demands of all persons whatsoever. Seller warrants and represents that said Personal Property is free from all liens and encumbrances.

2. Assignment. For good and valuable consideration, effective as of the Effective Date, Seller hereby assigns, transfers, sets over and conveys to Purchaser, and Purchaser hereby accepts the following:

(a) Service Contracts. All of Seller's right, title and interest in and to the service contracts attached hereto as Schedule B (the "Contracts"); and

3. Assumption. Purchaser hereby accepts the Personal Property and Contracts and assumes the obligations of Seller under the Contracts arising from and after the Effective Date.

4. INDEMNITIES. SELLER SHALL DEFEND, INDEMNIFY AND HOLD HARMLESS PURCHASER FROM AND AGAINST ANY CLAIMS, COSTS, LIABILITY, DAMAGES, CAUSES OF

Exhibit D

ACTION, EXPENSES AND REASONABLE ATTORNEYS' FEES AND COSTS (COLLECTIVELY, "CLAIMS") INCURRED BY PURCHASER BY REASON OF THE FAILURE OF SELLER TO FULFILL, PERFORM, DISCHARGE AND OBSERVE ITS OBLIGATIONS WITH RESPECT TO THE CONTRACTS ARISING PRIOR TO THE EFFECTIVE DATE. PURCHASER SHALL DEFEND, INDEMNIFY AND HOLD HARMLESS SELLER FROM AND AGAINST ANY CLAIMS INCURRED BY SELLER BY REASON OF THE FAILURE OF PURCHASER TO FULFILL, PERFORM, DISCHARGE AND OBSERVE ITS OBLIGATIONS WITH RESPECT TO THE CONTRACTS ARISING FROM AND AFTER THE EFFECTIVE DATE.

5. Attorneys' Fees. In the event of any litigation between Seller and Purchaser arising out of the obligations of Seller or Purchaser under this Assignment or concerning interpretation of any of its provisions, the losing party shall pay the prevailing party's costs and expenses of the litigation, including reasonable attorneys' fees and costs.

6. Counterparts. This Assignment may be executed in multiple counterparts, including signatures obtained by facsimile or through electronic mail (such as .pdf files), each of which shall be deemed an original and all, taken together, shall constitute one (1) and the same instrument.

7. Governing Law. This Assignment shall be governed and construed in accordance with Maine law. **THE PARTIES EACH WAIVE TRIAL BY JURY IN ANY LEGAL ACTION BETWEEN THE PARTIES ARISING OUT OF THIS AGREEMENT.**

8. Further Assurances. Whenever requested to do so by the other party, each party shall execute, acknowledge, and deliver any further conveyances, assignments, confirmations, satisfactions, releases, powers of attorney, instruments of further assurance, approvals, consents, and any further instruments or documents that are necessary or proper to complete the assignments contemplated by this Assignment, and/or to carry out the intent and purpose of this Assignment in accordance with the Purchase Agreement.

9. No Third-Party Rights. Nothing in this Assignment, express or implied, is intended to confer upon any person, other than the parties hereto and their respective successors and assigns, any rights or remedies.

10. Agreement Applies. Except as expressly set forth herein, the covenants, agreements, disclaimers, representations, warranties, indemnities and limitations provided in the Purchase Agreement with respect to the Personal Property and Contracts (including, without limitation, the limitations of liability provided in the Purchase Agreement), are hereby incorporated herein by this reference as if herein set out in full and shall inure to the benefit of and shall be binding upon Seller and Purchaser and their respective successors and assigns. In the event of a conflict between the terms of the Purchase Agreement and this Assignment, this Assignment shall control.

11. Entire Agreement. This Assignment constitutes the entire agreement among the parties hereto with respect to the subject matter hereof, and supersedes all prior correspondence, conversations, and negotiations, except as set forth in Section 10 hereof.

12. Binding Effect. This Assignment shall be binding upon and shall inure to the benefit of the parties hereto and their respective successors and assigns.

[Signatures on following pages]

IN WITNESS WHEREOF, the Seller and Purchaser have caused this Assignment to be signed and sealed by their respective undersigned representatives, thereunto duly authorized, effective as of the date set forth above.

SELLER:

[_____]

PURCHASER:

By: _____

Name:

Title:

Schedule A to
Bill of Sale and Assignment Agreement

Real property in the City of Portland, County of Cumberland, State of Maine, described as follows:

Schedule B to
Bill of Sale and Assignment Agreement

[To be inserted]

Exhibit D
List of Service Contracts

1. Maintenance Agreement with Kone Care for elevator maintenance with an effective date of January 1, 2019.

4. CONSISTENCY WITH CITY OF PORTLAND TRANSPORTATION STANDARDS (14.6.1)

Compliance with the City of Portland's Land Use Code Section 14.6.1 Transportation Standards is described in the following sections.

4.1 Impact on Surrounding Street Systems

A Traffic Assessment prepared by VHB will be provided under separate cover.

4.2 Access and Circulation

In general. The primary vehicular and pedestrian entrances to the site will largely remain unchanged. New vehicle loading/unloading zones are proposed on Congress and Preble Streets, as shown on the plans.

Loading & Servicing. Loading and trash removal will continue to be serviced from the Preble Street side of the building.

Curb and Sidewalks. Brick sidewalks and granite curb will be provided per the City of Portland "Sidewalks and Driveway Apron Materials Policy" on Congress and Preble Streets. The existing concrete sections of sidewalk located along Preble Street will be removed and replaced with brick. An adjustment to the curb line on Preble Street is proposed to provide approximately 40 feet of additional on-street parking.

4.3 Public Transit Access

No changes to public transit access are proposed as part of this project. A substantial number of metro bus routes are available on Congress Street. The project is located less than 250 feet from the Monument Square Transfer Center.

4.4 Parking

Vehicular Parking. Per **Table 19-B, Categorical Exceptions to Off-Street Parking Minimums**, No off-street parking is required for changes in use in the B-3 zone.

Valet service will be provided for hotel guests from Preble Street and the applicant intends to support the valet operation with leases in adjacent parking lots through the valet provider.

Bicycle Parking. Because off-street vehicular parking is not required for a change in use in the B-3 zone, and the bike parking requirement is based on vehicle parking required, no bike parking is required.

Snow Storage. The Site's snow removal will continue to be managed by a contracted third party to ensure safe pedestrian circulation and to maintain access to the building entrances.

Electric Vehicle (EV) Charging. Because off-street vehicular parking is not required for a change in use in the B-3 zone, and the EV Charging requirement is based on vehicle parking required, no EV Charging is required.

4.5 Transportation Demand Management

- A Transportation Demand Management (TDM) plan prepared by VHB will be provided under separate cover.

5. CONSISTENCY WITH CITY OF PORTLAND ENVIRONMENTAL QUALITY STANDARDS (14.6.2)

Compliance with the City of Portland's Land Use Code Section 14.6.2 Environmental Quality Standards is described in the following sections.

5.1 Preservation of Significant Natural Features

The Site is completely developed and there are no known significant natural features, including unusual natural areas, rare or endangered botanical features, areas of significant wildlife habitats, or wetland areas located within the project limits.

5.2 Landscape Preservation

The Site is completely developed; no existing landscaping or existing trees will be removed.

5.3 Site Landscaping & Buffers

Three (3) street trees in raised planters are proposed on Congress Street, subject to approval by the City Arborist. No buffers are required for this project. All loading and servicing operations will be carried out within the buildings.

5.4 Water Quality, Stormwater Management, and Erosion Control

The existing project site is completely developed; the proposed project is a change in use of existing buildings. Stormwater will continue to be managed as it is currently, and no change to the amount of site impervious area is proposed. This project will not create any changes to the quantity, or quality, of the stormwater runoff from the site.

The project is not located within the watershed of an Urban Impaired Stream and is not anticipated to pose a risk of groundwater contamination during or after construction.

Erosion Control Measures proposed during construction will include catch basin inlet protection and other best management practices where necessary.

6. CONSISTENCY WITH CITY OF PORTLAND PUBLIC INFRASTRUCTURE AND SAFETY STANDARDS (14.6.3)

Compliance with the City of Portland's Land Use Code Section 14.6.3 Public Infrastructure and Safety Standards is described in the following sections.

6.1 Public Safety and Fire Prevention

Provisions for public safety have been incorporated into the design of site visibility, access, and security. Adequate emergency vehicle access is provided via the proposed roadway. We have had multiple conversations with the Fire Department over the years throughout the Master Development Plan and previous site plan phases. Access remains consistent with what has been intended over the years of planning for this site.

6.2 Portland Fire Department Site Review Checklist

The items in the Portland Fire Department Site Review Checklist are addressed as follows:

- Name, address, telephone number of applicant:
 - GreenMars Real Estate Development Company, c/o Nate Green
 - 30 Exchange Street, Portland, ME 04101
 - 207-318-0033
- Name, address, telephone number of architect:
 - Invid Architecture, c/o Virginie Stanley, Principal
 - 631 Stevens Street, Suite 200, Portland, ME 04103
 - (207) 939-7602
- Proposed uses of any structures [NFPA and IBC classification]:
 - The structures are mixed-use.
- Square footage of all structures [total and per story]:
 - The square footage of all structures is provided on the architectural plans.
- Elevations of all structures:
 - The elevations of all structures are provided on the architectural plans.
- Proposed fire protection of all structures:
 - All structures shall be sprinkled.
- Hydrant locations:
 - Hydrant locations are shown on the Utility Plan.
- Water main size and location:
 - Watermain locations and sizes are shown on the Utility Plan.
- Access to all structures [min. 2 sides]:

- Access will be provided to a minimum of two sides of all structures – from Congress Street and Preble Street.
- A code summary shall be included referencing NFPA 1 and all fire department technical standards:
 - The buildings will be compliant with requirements of NFPA 101: Uniform Fire Code. Automatic sprinkler systems and fire alarms will be provided as required by Use and Occupancy types. Code summaries are provided on the architectural plans.

6.3 Availability and Adequate Capacity of Public Utilities

The proposed project will be serviced by existing public water, sewer, gas, and electric utilities. The locations of the utility services are shown on the Utility Plan included in the Design Drawings. The proposed development will also generate waste because of construction and post-construction operations.

6.4 Water

The existing buildings are served by 6" fire protection water services from Preble Street. These were renewed in 2020 and are adequate to serve this project.

A four-inch domestic water service is currently existing from Congress Street. According to the Portland Water District (PWD), this service is cast iron and dates to 1884. Due to the age of this service, the applicant is proposing to abandon this service and will work with PWD for its replacement with a new 6" domestic service from Preble Street. An existing 6" service to the former TD Bank building will remain. The applicant will coordinate with PWD to confirm its ability to serve the project.

6.5 Sewer

The existing buildings are currently served with an 8" sanitary sewer that exits to the rear into the parking area behind the 45-Brown Street parking garage, before continuing down the alley north of #28 Preble Street and connecting to the 15" combined sewer main in Preble Street. The applicant will continue use of the 8" sanitary sewer service and add a second 8" service to Preble Street from the east side of the building.

The proposed development will include restaurants and kitchens; a grease interceptor is proposed to serve the project to the north of the building, as shown on the plans.

A confirmation of ability to serve the proposed development by DPW is attached.

6.6 Electric

Based on discussions with Central Maine Power, a new primary feed from the intersection of Preble Street and Cumberland Avenue will be installed up Preble Street to two new subsurface transformer vaults located in the sidewalk at the SE corner of the T&T tower. A site electrical plan is provided in the plans.

6.7 Gas

A new 6" gas service will be installed on Preble Street to serve the project.

6.8 Solid Waste

Adequate provisions for recycling and solid waste disposal have been made. All solid waste materials and recyclables generated by the proposed project will continue to be transported and disposed of or recycled in accordance with applicable laws and regulations. Solid waste will be managed in full accordance with all applicable laws and regulations.

6.9 Construction & Demolition Debris

The proposed project will generate construction waste and demolition debris (CDD). The Contractor will be responsible for properly disposing of the CDD. The Contractor will be responsible for handling, managing, and disposing of all waste generated by construction in accordance with the Maine Solid Waste Management Regulations and all other applicable local, state, and federal regulations.

6.10 Special & Hazardous Waste

The proposed project is not anticipated to produce any hazardous waste.

A Voluntary Action Response Plan (VRAP) application was submitted for the properties in November of 2018 by Beacon Environmental Consultants to document previous investigations and a No Further Action Assurance Letter was issued in December of 2018 from the Maine DEP. The VRAP application and the response from the Maine DEP can be provided upon request.

6.11 Attachments

- DPW Ability to Serve Letter
- Unitil Ability to Serve Letter



CITY OF PORTLAND
Department of Public Works
Christopher C. Branch, P.E., Director

Date: May 7, 2021

Re: Wastewater Capacity Authorization

Address: 477 Congress Street

Applicant: TT Maine Venture LLC c/o Chris Rhodes

Planner: TBD c/o James Rather

Anticipated Wastewater Flow:

Estimate of Anticipated Design Flows				
Development	Unit Size	Number of Units	Gallons per Day per Unit	Total Gallons per Day
Existing flow to be removed				
Time & Temperature Building- Multi-use Commercial	Estimate provided by WSP			-11,000
Proposed flow				
Multi-use Commercial				
Kitchens x 3				
Ball Room				
Hotel Lobby				
10 Stories of Hotel Rooms				
Rooftop Bar				
Estimated domestic wastewater flow generation is based on the IPC Drainage Fixture Units calculation of 1500 DFU's provided by WSP				18,000
Net Change				+ 7,000

Comments:

The Department of Public Works, which includes the Water Resource Division, have reviewed and determined that the downstream sewers from the project address have the capacity to convey the estimated dry weather wastewater flows which will be generated from this development.

212 Canco Road, Ste B • Portland, ME 04103 • 207-874-8801

cbranch@portlandmaine.gov • www.portlandmaine.gov

You are reminded that the sewers you are proposing to connect into convey both sanitary and stormwater (Combined Sewer) and therefore a backflow preventer is suggested.

It is also suggested that the existing 8" sanitary line proposed to be re-used be CCTV'd to ensure an acceptable condition for continued use.

If the City can be of further assistance, please contact me at all 874-8840 or brad@portlandmaine.gov

Sincerely,

A handwritten signature in dark ink, reading "Bradley A. Roland". The signature is written in a cursive style with a large, stylized 'B' and 'R'.

Bradley A. Roland, P.E.
Senior Project Engineer

From: Deane, James <deanej@unitil.com>
Sent: Friday, April 23, 2021 11:26 AM
To: Darrin Stairs
Subject: RE: [EXTERNAL] RE: [EXTERNAL] Time & Temperature Hotel - 477-481 Congress Street and 22 Preble Street - Ability to Serve request

Hi Darrin,

We do have the capacity to serve this project. I'd be interested to hear more details about the work and how that would impact the existing service and meter.

Please feel free to give me a call at 207-541-2506 anytime to discuss.
Thank you,

James Deane
Business Development Representative



376 Riverside Industrial Parkway
Portland, ME 04103

T & F 207.541.2506

www.unitil.com

From: Darrin Stairs [<mailto:DStairs@woodardcurran.com>]
Sent: Thursday, April 15, 2021 5:57 PM
To: Carpenter, Scott <carpenters@unitil.com>; Deane, James <deanej@unitil.com>
Subject: [EXTERNAL] RE: [EXTERNAL] Time & Temperature Hotel - 477-481 Congress Street and 22 Preble Street - Ability to Serve request

CAUTION: This email originated from outside the organization. Do not click links or open attachments unless you validate the sender and know the content is safe. Please report this email using the Phish Alert Button if you believe this email is suspicious.

Excellent, thank you Scott.

Darrin B. Stairs, PE
Project Manager
Woodard & Curran
Direct: 207.558.3662
Cell: 207.405.4805

From: Carpenter, Scott <carpenters@unitil.com>
Sent: Thursday, April 15, 2021 5:23 PM
To: Darrin Stairs <DStairs@woodardcurran.com>; Deane, James <deanej@unitil.com>
Subject: RE: [EXTERNAL] Time & Temperature Hotel - 477-481 Congress Street and 22 Preble Street - Ability to Serve request

Darrin, James Deane handles all of Portland as of January of this year. I have included him in this email and have forwarded your request to him.

Thank you.
Scott Carpenter
Senior Business Development Representative



ME Gas Operations
376 Riverside Industrial Parkway
Portland, ME 04103
Phone/Fax: (207) 541-2543

From: Darrin Stairs [<mailto:DStairs@woodardcurran.com>]
Sent: Thursday, April 15, 2021 5:21 PM
To: Carpenter, Scott <carpenters@unitil.com>
Subject: [EXTERNAL] Time & Temperature Hotel - 477-481 Congress Street and 22 Preble Street - Ability to Serve request

CAUTION: This email originated from outside the organization. Do not click links or open attachments unless you validate the sender and know the content is safe. Please report this email using the Phish Alert Button if you believe this email is suspicious.

Mimecast Attachment Protection has deemed this file to be safe, but always exercise caution when opening files.

Hi Scott – we are working on a change in use application to the City of Portland for the Time & Temperature Building at 477-481 Congress Street, and the annex at 22 Preble Street to a Hotel and Retail. Please see the attached Ability to Serve letter for your review and response.

Please let me know if you have any questions.

Thank you,
Darrin

Darrin B. Stairs, PE

7. CONSISTENCY WITH CITY OF PORTLAND SITE DESIGN STANDARDS (14.6.4)

Compliance with the City of Portland's Land Use Code Section 14.6.4 Site Design Standards is described in the following sections.

7.1 Massing, Ventilation, and Wind Impact

The proposed project is a change in use to existing buildings. There are no changes to massing, ventilation, or wind impacts. All new primary mechanical equipment will be located or fully screened to minimize impact to abutting properties.

7.2 Shadows

The proposed project is a change in use of existing buildings. Additionally, projects within the B-3 zone are exempt from Shadow standards.

7.3 Snow and Ice Loading

This project is a change in use of existing buildings. Any changes to building facades or elevations will be designed to prevent snow and ice from accumulating and falling onto abutting properties and public ways.

7.4 View Corridors

Congress Street is an established view corridor according to the View Corridor Protection Plan effective April 10, 2001. This project is a change in use of existing buildings and the Congress Street view corridors is not adversely affected.

7.5 Historic Resources

This project is in the Congress Street Historic District, and the buildings are all considered "contributing structures." The proposed renovations take into consideration the preservation standards for the district, under the guidelines of The National Park Service and in accordance with the provisions of article IX (historic preservation) of the Land Use Code.

An application for a Certificate of Appropriateness for the proposed exterior renovations will proceed concurrently through the review process with the Historic Preservation Board.

7.6 Exterior Lighting

No changes to exterior lighting are proposed with the project.

7.7 Noise and Vibration

The noise impact from the proposed project will be minor. The primary source of noise from the proposed project will be the result of construction. Construction activities will be limited to the hours permitted by the City. HVAC and primary mechanical equipment will be located and

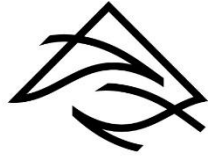
screened to mitigate noise impacts. Noise associated with the proposed project will not exceed regulated levels and is not anticipated to negatively impact surrounding development in its urban setting. Noise and vibration associated with the proposed project will not exceed regulated levels.

7.8 Signage and Wayfinding

Sign permit applications will be submitted under separate cover. The size, scale, proportions, design, materials, placement, quantity and source and intensity of illumination shall be designed to complement and enhance the architectural attributes of the building and comply with the requirements of the Historic District.

7.9 Design Standards

- This project is a change in use of existing buildings. It supports the preservation of a dense, mixed-use development with attractive, safe, and convenient street-level pedestrian environment in the B-3 zone. The project is located within the Congress Street Historic District, and per the Land Use Code, the Historic Preservation Standards supersede Design Standards in the City of Portland Design Manual.



**Woodard
& Curran**

woodardcurran.com

CITY OF PORTLAND
Planning & Urban Development Department

MAJOR SITE PLAN GENERAL DOCUMENT AND DRAWINGS CHECKLIST Please submit each document as a separate PDF file. Please confirm by electronically checking the boxes in the left-hand column. ** PLEASE FILL OUT AND UPLOAD THE ZONING ASSESSMENT TABLE AND WAIVER TABLE SEPARATELY AS NOTED BELOW ** At the time of application submission, please contact the Department of Public Works regarding E-911 addressing for your project.		
GENERAL APPLICATION DOCUMENTS		
Yes	NA	Project Description Cover letter with detailed project description
Yes	NA	Completed Checklist (this document)
Yes	NA	Evidence of Right, Title, and Interest Deeds, leases, or purchase and sales agreements
Yes	NA	Evidence of State or Federal Approvals Permits or letters of non-jurisdiction, if applicable
Yes	NA	Zoning Assessment (see Zoning Assessment Table) Summary of compliance with use and dimensional standards of the land use code
Yes	NA	Site Plan Standards Assessment (see Section 14.6 of the land use code) Summary of project compliance with site plan standards of the land use code
Yes	NA	Summary of Existing and/or Proposed Easements or Covenants, applicable. Evidence of existing easements and any proposed easements, covenants, public or private rights-of-way
Yes	NA	Waiver Requests (see Waiver Table) Written request for waiver describing request and compliance with applicable waiver standards
Yes	NA	Financial Capability Letter or evidence from a financial institution or third party verifying financial capacity to undertake project
Yes	NA	Technical Capability Evidence of technical capability of applicant and consultants – resumes and/or examples of past projects

MAJOR SITE PLAN STANDARDS AND SUBMISSION CHECKLIST

**Provide assessment of compliance with standards and include supplemental documentation, as applicable.
Please submit each document as a separate PDF file.**

TRANSPORTATION		
Yes	NA	Impact on Surrounding Street Systems (14-14.6.1(A)) Describe incremental volume of traffic impacts and mitigation measures. If needed
Yes	NA	Access and Circulation (14-14.6.1(B)) Identify and describe the following: - Site access and internal circulation, including ADA access - Drive-up features, if applicable - Loading and servicing needs, routes, and geometry, providing turning templates for delivery vehicles, if applicable - Sidewalks and condition along street frontages and internal walkways - Engineered details for ADA ramps and public sidewalks, meeting sidewalk material policy and construction requirements (Technical Manual, Section 1)
Yes	NA	Public Transit (14-14.6.1(C)), if applicable Identify and describe the following: Existing available transit service and proposed transit improvements, including design details, such as easement, pad base, and shelter
Yes	NA	Off-Street Parking (14-14.6.1(D)), if applicable Identify and describe the following: - Proposed vehicular and bicycle parking supply (including ADA-compliant parking) in relation to applicable parking requirements in Article 19 of the land use code - Curb cut separation and parking layout (Technical Manual, Section 1) - Construction details for bicycle racks - Management plan for snow storage and removal
Yes	NA	Transportation Demand Management (TDM) (14-14.6.1(E)), if applicable Provide TDM plan drafted in accordance with Technical Manual Section 1 requirements

ENVIRONMENTAL		
Yes	NA	Preservation of Significant Natural Features (14-14.6.2(A)), if applicable Identify and describe the following: • High and moderate value waterfowl and wading habitat • Aquifers (for Casco Bay Islands) • Waterbodies (including wetlands, watercourses, significant vernal pools and floodplains) • Proposed preservation areas and protection measures • Documentation from environmental compliance consultants and determinations from applicable state and federal agencies
Yes	NA	Landscape Preservation (14-14.6.2(B)) Identify and describe the following: • Measures to preserve trees, including within required zoning setbacks (Technical Manual, Section 4) • Measures to protect existing vegetation during construction
Yes	NA	Site Landscaping and Buffers (14-14.6.2(C)) Identify and describe the following: • Overall landscaping approach and consistency with standards • The use of screening and buffering of service areas and between non-residential and residential uses • Existing Heritage or Feature Trees on site and measures to preserve • Compliance with street tree requirements
Yes	NA	Water Quality, Stormwater Management, and Erosion Control (14-14.6.2(D)) Identify and describe the following: • Erosion and sedimentation control plan and measures • Evidence of compliance with Urban Impaired Stream Standards pursuant to DEP Chapter 500 stormwater law, as applicable • Subsurface sanitary sewage disposal and groundwater protection measures

PUBLIC INFRASTRUCTURE AND COMMUNITY SAFETY		
Yes	NA	Consistency with City Master Plans (14-14.6.3(A)) Describe proposed easements, rights and improvements to connect or continue off-premises public infrastructure, as applicable
Yes	NA	Public Safety and Fire Prevention (14-14.6.3(B)) Identify and describe the following: - Compliance with Crime Prevention through Environmental Design (CPTED) requirements (Technical Manual, Section 3) - Emergency vehicle access - Consistency with public safety standards (Technical Manual, Section 3)
Yes	NA	Availability and Adequacy of Public Utilities (14-14.6.3(C)) (Technical Manual, Sections 2 & 9) Identify and describe the following: - Electrical services, including providing underground services - Existing and proposed connections for public utilities and required public utility upgrades - Sewer line connections
SITE DESIGN		
Yes	NA	Massing, Ventilations and Wind Impact (14-14.6.4(A)) Identify and describe the following: - Wind and ventilation impacts on adjoining structures and/or adjacent public spaces, including wind study, if applicable - Bulk, location, or height impacts on adjoining structures
Yes	NA	Shadows (14-14.6.4(B)), if applicable Provide shadow analysis of impacts on publicly accessible open space (Technical Manual, Section 11)
Yes	NA	Snow and Ice Loading (14-14.6.4(C)) Describe building design measures to prevent snow and ice from loading or falling onto adjacent properties or public ways
Yes	NA	View Corridors (14-14.6.4(D)), if applicable Describe any protection of designated view corridors (Portland Design Manual, Appendix. 1)
Yes	NA	Historic Resources (14-14.6.4(E)), if applicable Identify and describe the following: - The site's status as a designated landmark, within a historic district or historic landscape district, or within 100 feet of any designated landmark, historic district, or historic landscape district - Compliance with standards for preservation and documentation of archaeological resources

Yes NA	Exterior Lighting (14-14.6.4(F)) Describe how the proposed site lighting will adhere to photometrics requirements as it relates to light trespass and full cutoff fixture design, pursuant to Technical Manual Section 12
Yes NA	Noise and Vibration (14-14.6.4(G)) Provide data on noise levels for HVAC and other mechanical equipment, such as design specifications, to demonstrate consistency with state and federal noise emissions requirements as well as City code
Yes NA	Signage and Wayfinding (14-14.6.4(H)), if applicable - Provide signage plan showing the location, dimensions, height and setback of all existing and proposed signs - Provide drawings of all commercial and directional signage on site
Yes NA	Zone-Related Design Standards (14-14.6.4(I)) Address any applicable design review standards by zone, including compliance with Design Manual

MAJOR SITE PLAN DRAWINGS CHECKLIST

Please upload the following **DRAWINGS** with the listed details into e-Plan as separate pdfs.

All drawings must be submitted in a 24 x 36 sheet size.

BOUNDARY SURVEY (stamped by a Maine Licensed Surveyor and drawn as per Technical Manual Sec. 13)

SITE PLAN(s) (stamped by a Maine Licensed Professional Engineer) including:

All sheets – Include a title block with project title and the following information:

- Project street address
- Name and address of property owner & applicant
- Licensed design professional, incl firm that produced plans
- North arrow
- Date of preparation and revision history block
- Tax parcel (chart, block, and lot) number

Existing Conditions Plan with the following:

- Existing structures, with distance from primary building façade(s) to the property line
- Approximate location of structures on abutting properties
- All streets and intersections adjacent to the site
- Existing driveways, pedestrian ways, and bicycle infrastructure, including dimensions and materials
- Existing public transit infrastructure
- Existing vehicle & bicycle parking areas
- Existing utilities on site and within adjacent rights-of-way
- Existing grades (two-foot contours preferred)
- Location of water courses, wetlands, and vegetation, or other significant natural features
- Existing soil conditions and location of test pits and borings
- Zoning boundary lines, including overlays
- Location of all existing easements and rights-of-way

Proposed Site Plan with the following:

- Proposed structures, including distance from primary building façade(s) to property lines
- Ground floor area, and finished floor elevations for all buildings
- Any proposed geometric modifications to streets and intersections adjacent to site
- Location, dimensions and materials of all proposed driveways, vehicle, bicycle, & pedestrian access ways with corresponding curb lines
- Engineered specifications/ cross-sections for proposed driveways, sidewalks & paved areas
- Location and dimensions of proposed loading areas, including turning templates
- Proposed transit infrastructure with dimensions/ engineering specifications
- Location of vehicle and bicycle parking with dimensions and engineering specifications
- Location of all snow storage areas
- Exterior lighting (please see Technical Manual Sec. 12 for photometrics requirements)

• Location of fire hydrants • Location of solid waste management receptacles • Location of all proposed HVAC and mechanical equipment, including proposed screening, where applicable • Location of proposed easements and rights-of-way, including dimensions • Please utilize color-coding and/or hatches and shading to delineate changes between the pre and post development condition as needed
UTILITY PLAN including:
• Proposed electrical infrastructure • Location, sizing and directional flows of all proposed sewer and stormwater infrastructure • Location and dimensions of off-premises public or publicly accessible infrastructure adjacent to site • Electric utility infrastructure
GRADING AND DRAINAGE PLAN including:
• Proposed grades • Proposed stormwater management measures meeting Technical Manual (Section 5) standards • Any proposed alteration of a watercourse or wetlands • Any groundwater protection measures • Proposed buffers and preservation measures for wetlands or significant natural features
LANDSCAPE PLAN including:
• Existing vegetation to be preserved and preservation measures • Proposed landscaping, screening, and street trees, including caliper widths for trees • Planting schedule, including street trees
ARCHITECTURAL PLANS AND RENDERINGS including:
• Exterior building elevations, color renderings, illustrations of all sides • Axonometric and street-level views for structures greater than three stories in height • Provide context drawings, if applicable (Design Manual, page 1) • Floor plans
CONSTRUCTION MANAGEMENT PLAN including:
• Specifics on traffic control, sidewalk sheds, and pedestrian rerouting • Include a drawing and written narrative
OTHER
• Details and cross-sections, as necessary

INCLUSIONARY ZONING SUB-APPLICATION



PROJECT: 477 Congress Street – Time & Temperature Building

LOCATION: 477 Congress Street, Portland ME

DATE: 10/03/2023

SUBJECT: Inclusionary Zoning Sub-application

Major Site Plan – 477 Congress Street

Conditional Use – Inclusionary Zoning Sub-Application

The following summary of inclusionary zoning can also be found in the Site Plan narrative report submitted for the subject project in Section 2.4.2.

The City of Portland's Land Use Code (18.2.5(D), Inclusionary Zoning for Hotel Projects, requires that all hotel projects provide one unit of low-income housing for every 28 rooms in the hotel project, which shall meet the standards outlined in Subsections 18.2.3(C)(3), (4), and (5) and in the implementing regulations governing low income units. This amount shall be rounded up to the nearest increment of 28 rooms.

The applicant is proposing 136 hotel rooms which equates to five (5) low-income housing units. The applicant intends to provide the required low-incoming housing units as part of the project. These units shall be deed-restricted for the longest period permitted by law and shall not be used for short-term rentals of less than 30 days.

Update footers, including date.



SIGNED: _____

Portland, Maine



Yes. Life's good here.

Planning & Urban Development Department

ZONING ANALYSIS Relevant Zone(s) B-3; PAD Overlay

All Projects:

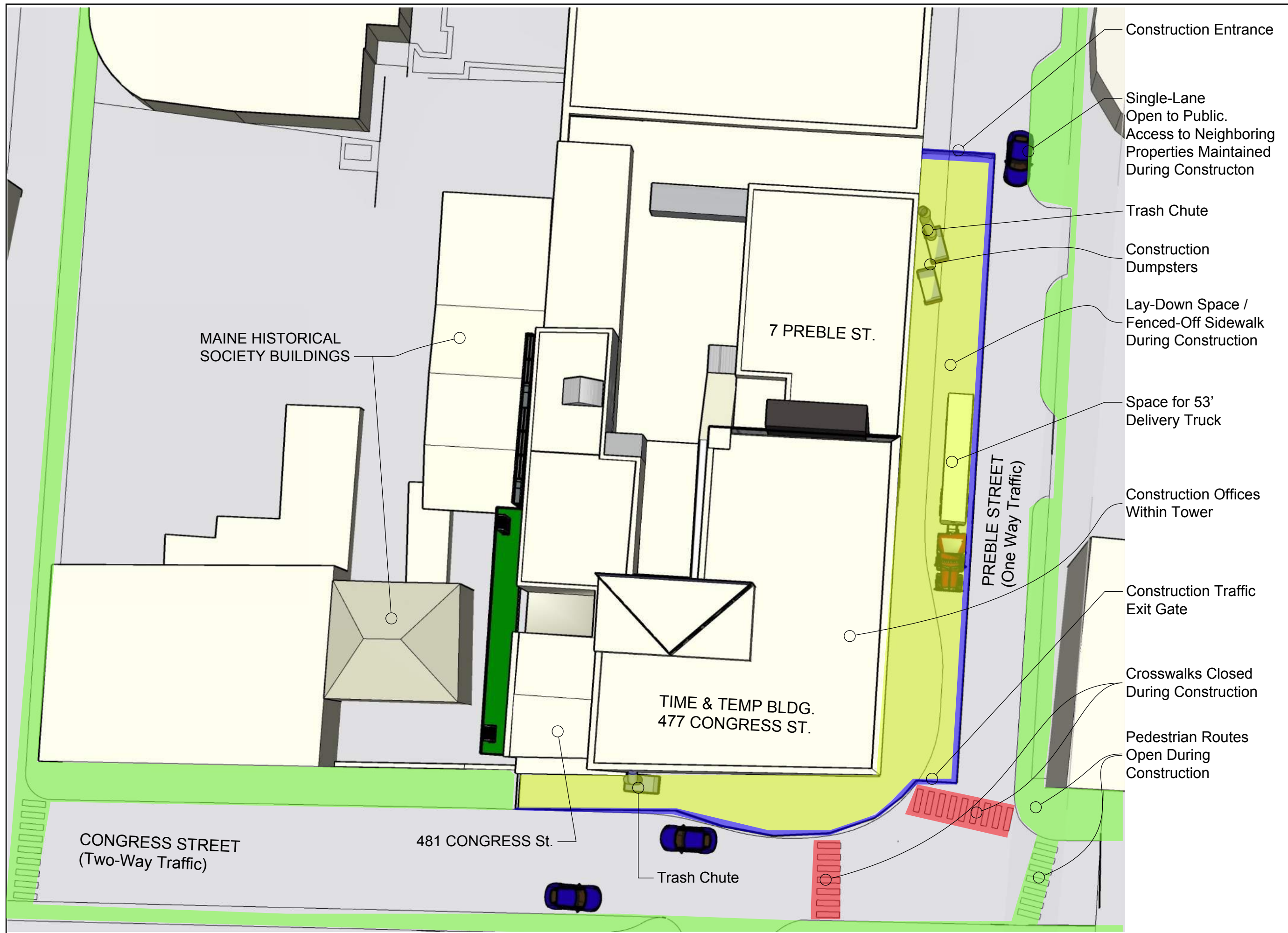
	Required	Proposed
Lot Size	None	78,680 SF
Area Per Dwelling Unit	None	N/A
Minimum Street Frontage	15'	121'
Front Yard Minimum	5'	0'
Front Yard Maximum	None	0'
Rear Yard	None	0'
Yard Right	None	0'
Yard Left	None	0'
Side Street Setback	15'	0' (existing)
Step Back	30'	0' (existing)
Maximum Lot Coverage	100%	81%
Minimum Lot Coverage	None	N/A
Maximum Height	210'	158'-8" (existing)
Open Space	N/A	0
Maximum Impervious Area	100%	100%
Pavement Setback	None	N/A
Floor Area Ratio	N/A	N/A
Off Street Parking Spaces	None	None
Loading Bays	None	None
Other 1		
Other 2		
Other 3		

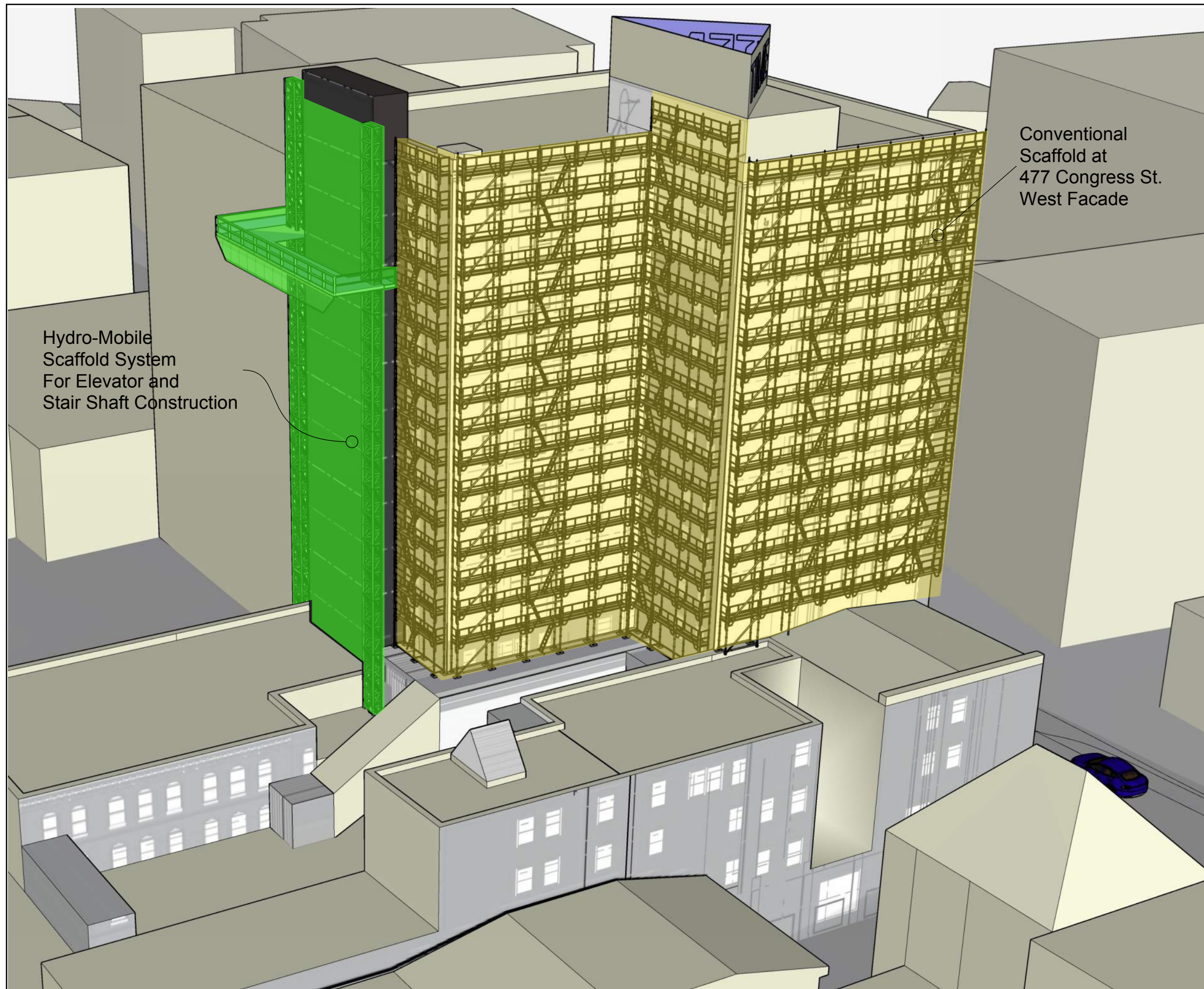
Planned Residential Unit Developments (PRUD) Requirements Not Applicable

	Required	Proposed
Minimum Lot Size		
Minimum Lot Area per Dwelling		
Maximum # Units per Building		
Maximum Building Length		
Maximum Accessory Building Length		
Minimum Setbacks		
Minimum Building Separation		
Minimum Open Space		

Affordable Housing Density Bonuses (if applicable) Not Applicable

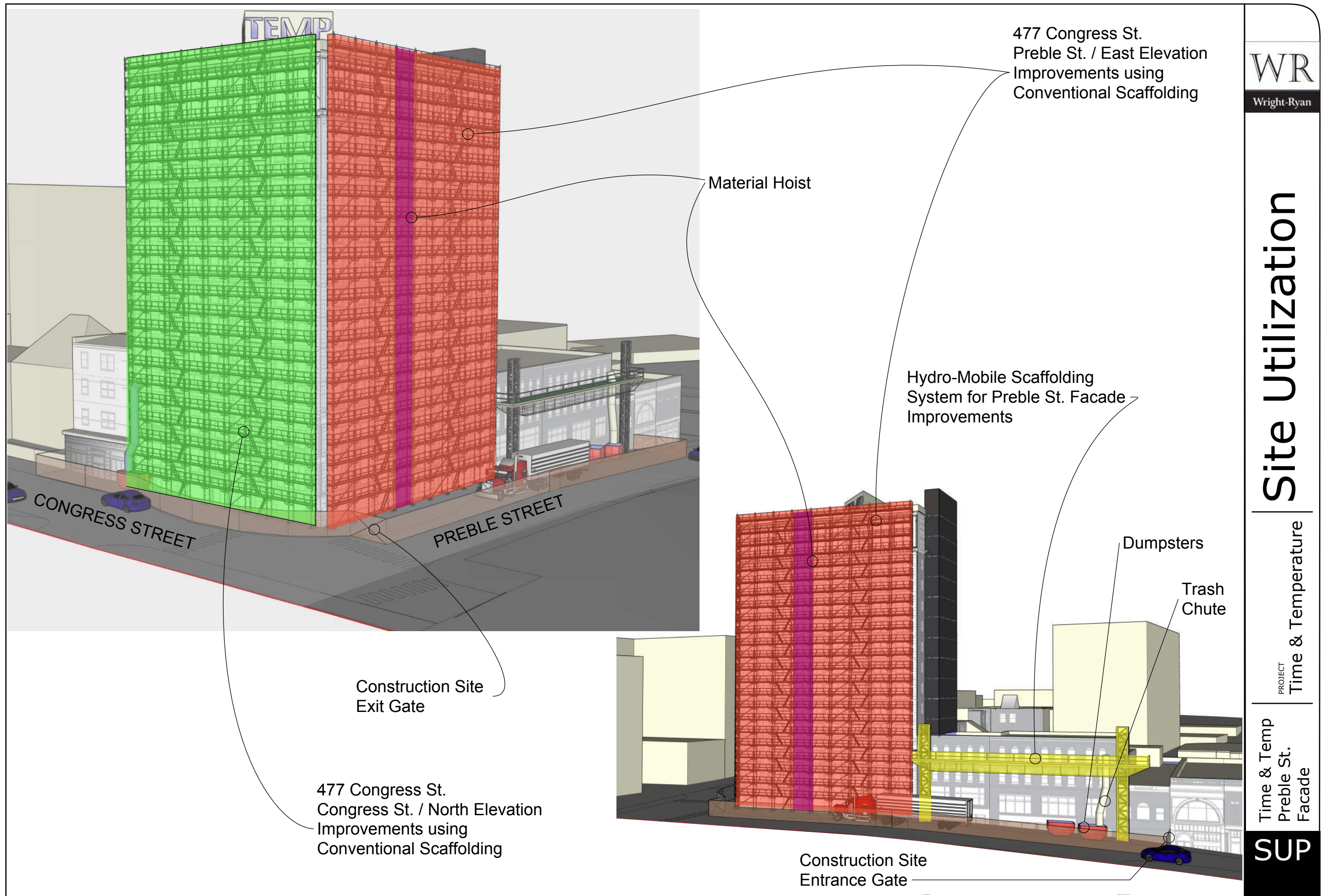
	Bonus Increase or Decrease	Maximum Allowable With Bonus	Proposed
Density			
Height			
Setback Reduction			
Recreation Space			
Maximum Accessory Building Length			
Minimum Setbacks			
Minimum Building Separation			
Minimum Open Space			
Explanatory Text 1 (optional):			
Explanatory Text 2 (optional):			
Explanatory Text 3 (optional):			

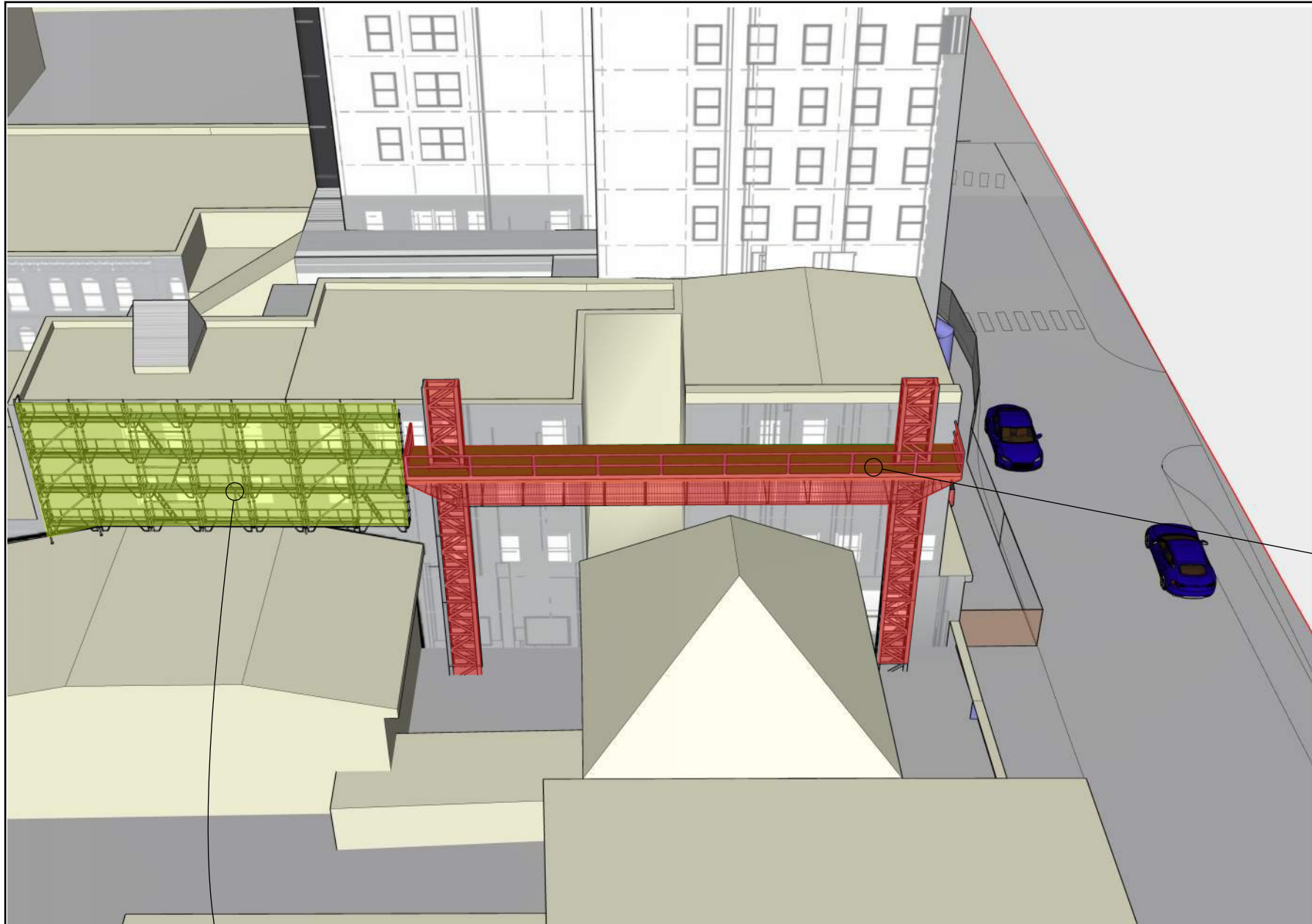




Hydro-Mobile
Scaffold System
For Elevator and
Stair Shaft Construction

Conventional
Scaffold at
477 Congress St.
West Facade



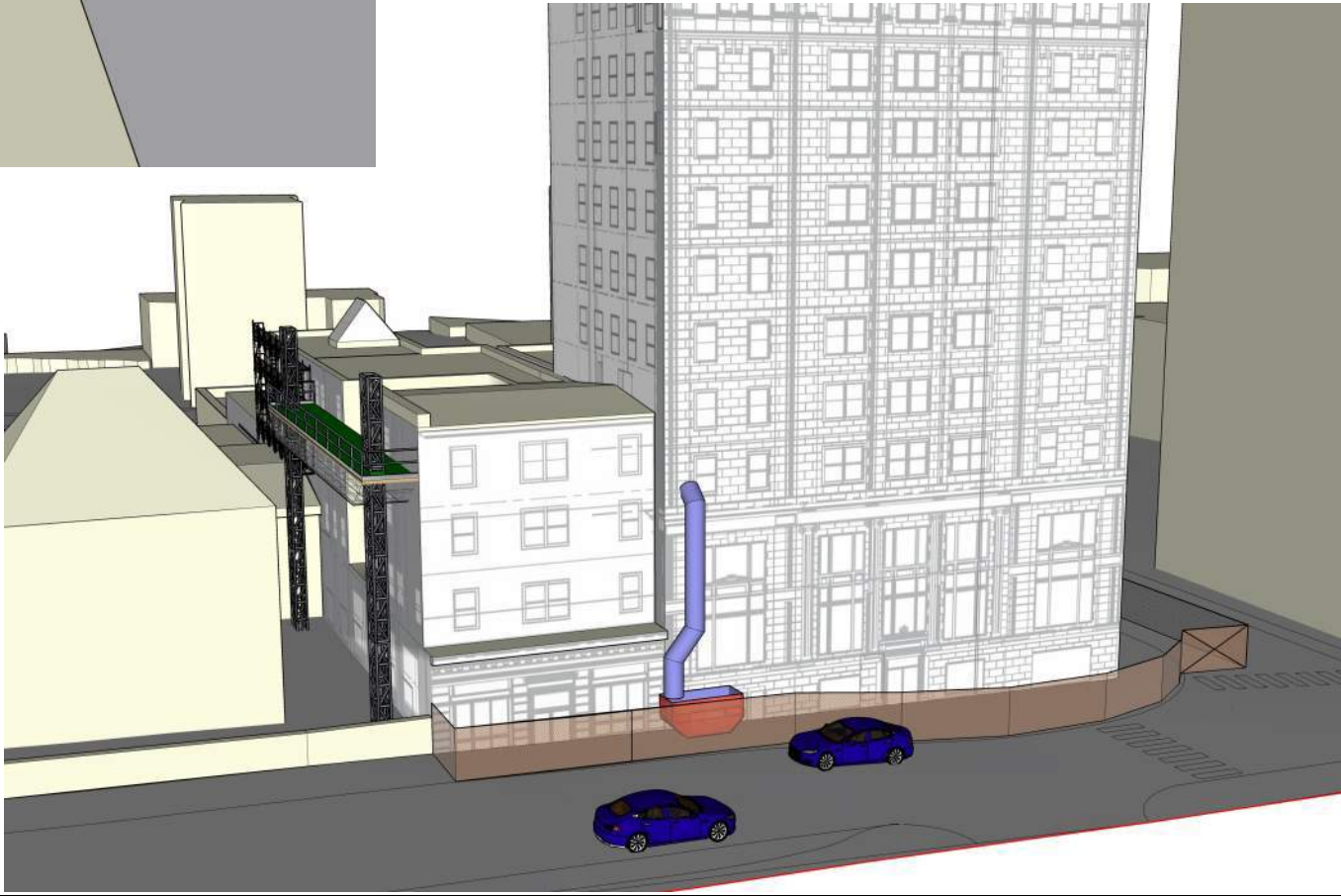


Option A: Hydro-Mobile Scaffolding System

Option B: Mobile Lift

(Coordinate with Maine Historical Society)

Conventional Scaffolding Above
Maine Historical Society Bldg. Roof
(Secured to 481 Congress, West Facade)



Construction Management Plan [Wright-Ryan Construction – Time and Temperature]

The following is the Construction Management Plan for the renovation of the interior and exterior of the Time and Temperature Building, connecting Bank, and Annex Buildings located at the intersection of Preble Street and Congress Street in Portland, Maine. This building includes an adaptive re-use development of a micro-housing building consisting of planned housing units, white box future restaurant/bar spaces, fitness center, co-working space, and white box retail space.

The Site of The Time & Temperature Building is a tight and urban in nature, and very similar to several projects Wright-Ryan has successfully completed on the Portland Peninsula. *(See attached Site Utilization plan for traffic, deliveries, and pedestrian control Plan 01)*

A. Construction Management Principles.

The proposed Construction Management Plan is configured to lessen the impact of the construction activities on Congress Street and Preble Street, abutters, and the surrounding neighborhood. Below is a list of control measures being taken

1. **Site Access:** A temporary construction site fence with gates will be used to control pedestrian and vehicle access to the site, for the safety of pedestrians and workers alike. The temporary fence will remain during all phases of construction management. Signage will be utilized to inform pedestrians to cross the street as the sidewalks will be closed during the construction of this building. *(See attached plan 01)*
2. **Traffic control:** Will be required throughout the entire project and will be crucial to logistics of the project.
 - A. Our initial plan is to close off the Congress Street and Preble Street Sidewalks around the building for laydown, deliveries, and trash removal. We would also work with the City to take at minimum, one lane of Preble Street for the safe offloading of materials and removal of debris away from the public way. We would prefer to close Preble Street for the entire duration since the more staging that can be done on Preble Street will reduce the impact to traffic and the neighbors on Congress Street. We will work out the details of this with the City prior to start of construction. We have developed and implemented similar approaches with the City of Portland engaging a local traffic engineer as necessary to ensure our site logistics meet all DOT requirements. This will require rerouting sidewalks and installing clear road and pedestrian signage to ensure a safe traffic flow.
 - B. Trenching activities for utilities and services in both Preble and Congress Streets will have traffic control on a as needed basis, and none of which is anticipated to extend past a week.
 - C. We will supply and remove materials to and from the building utilizing a material hoist on Preble Street as the most efficient way to

get materials to their destination and allow for debris to be removed. We will use the current elevators for construction personnel to access to their respective work areas. During the period we are constructing the areas within 481 Congress and the Annex areas we will utilize trash chutes to remove materials closer to the work areas on Congress and Preble, as the most efficient for 4 stories and lower. (See plans 02,03, and 04)

- D. We intend to use a combination of hydro-mobile and scaffold systems around the exterior of the building. This will allow for multiple activities to take place at the same time to expedite schedule. We have some initial thoughts of where we would use each system as shown on the site utilization plans. However, this would be further refined as we engage subcontract partners and work through our Construction Management plan with the City. (See plans 02,03, and 04)

B. Development Review of Construction Management Plan.

1. Wright-Ryan will submit this construction management plan which outlines the logistics and safety measures being taken to protect the city and its residents as well as the workers during construction of this building. We will review this plan with the planning authority and Department of Public Works and obtain approval prior to start of construction. Minimizing impacts to areas surrounding the building site will be an important consideration in the development of this plan. (An initial proposed plan is attached P01)

C. Performance Guarantees, Inspection Fees, Preconstruction Meeting, and Permits.

1. **Street Opening Permit:** A street opening permit will be needed for the hook up of domestic water, sprinkler, sanitary, storm water, and gas during the project. These will happen at different areas and times along both Preble and Congress Streets. Our site contractor will be applying for these individually as the work is scheduled.
2. **Street Occupancy, Lane Closure, Parking and Sidewalk Closing Permits:** Sidewalk occupancy permits will be required for Congress Street. Street, parking, and sidewalk permits will be required Preble street. The street opening permits will be for limited duration scheduled with the city for the utility hookups, the sidewalk and parking permits will be occupied for the duration of the project. We will need to close and divert two sidewalks as shown on the utilization plan during the duration of the project. Special coordination with Wright-Ryan and the Department of Public Works will be taken for work on Congress Street to limit traffic impacts to that roadway.
3. **Blasting:** Blasting will not be required for this project.

D. Construction Administration and Communication.

1. Wright-Ryan Construction will work diligently to ensure that communication with all parties involved is paramount. We intend to assist the developer in their

conversations with abutters before and during construction to inform them of the work that is scheduled to occur, to minimize the impact of construction to the surrounding abutters during the renovations. We will also provide construction signage with the contact information of our company, so we can be contacted should any issues arise. We propose the following contact persons at this time:

- A. Project Manager: Ryan Stokes
- B. Project Superintendent: Jeff Giggey

Note: These are subject to change based on Wright-Ryan personnel availability, but the final construction management plan will be up to date with the actual persons of contact. Also, until this project reaches the construction phase, contact should be limited to the Wright-Ryan Preconstruction Department which can be reached at 207-773-3625.

- 2. Construction Signage will be clear and concise and will be removed at the end of the project.

E. Construction Schedule.

- 1. The preliminary timeline for this project is as follows:
 - a. Proposed Construction Start: July 2024
 - b. Proposed Final Completion: September 2026
- 2. Hours of construction are currently foreseen as being limited to 7:00am to 5:00pm, Monday-Friday. Occasional weekend work is anticipated at this time, it will be limited to the hours allowed by the City of Portland. We may accept early deliveries to alleviate congestion on Congress Street, but no construction activities until 7AM.
- 3. Extended hours or night work are not foreseen at this time, but the city will be notified if these are required at any point during construction.
- 4. The majority of material deliveries will take place on Preble Street and directed to a laydown area on site or at a future satellite site as required.

F. Security & Public Safety.

- 1. The construction management plan drawings show where temporary construction fences and gates will be located during all phases of construction. These fences and gates will both secure the site as well as protect pedestrians from the construction equipment and work. (please see attached plans)
- 2. This construction project will be operated in accordance with all OSHA & NFPA regulations.
- 3. A Fire Safety Program will be developed and adhered to during construction of this building.

G. Construction Permitting and Traffic Control Plans.

- 1. **Construction Activity in Public Streets:** Construction activity in public streets will have traffic control in place during working hours. This includes for any open excavations or construction equipment/vehicles temporarily parked on the side of the road. If open excavations will be left overnight, these excavations will be covered with steel plates and signage will alert drivers and pedestrians of the work.
- 2. **Sewer, Water, and Gas Services:** The sewer, water, and gas piping will need

to be hooked up to city services for this project. Applicable Street Opening, and Excavation permits will be pulled prior to the start of this work.

3. **Traffic Control Plans:** A preliminary plan is included in page 01 of the attachment. Individual plans will be developed for each street opening once we get closer to the work and a site contractor is engaged.

H. Site Management and Controls.

1. **Waste:** This construction site will have dumpsters stored near the construction entrances and will be changed out on a regular basis.
2. **Noise:** Will be confined to normal work hours. This noise will consist of normal vehicle traffic, construction equipment and normal construction noises such as banging and the sounds of power tools. This should not disturb the surrounding neighborhood.
3. **Snow Removal.** Wright-Ryan will be responsible for snow removal inside of the construction site and any closings of streets. We will rely on the city to plow all accessible public roads.

I. Erosion Control and Preservation of Trees.

1. Erosion control measures and protection of trees is not foreseen for this site as it is an urban site, and there are no existing trees on either Congress or Preble Street.
2. We will use sediment control measures to prevent dirt and dust from our site from flowing into storm drains during inclement weather or melting.

J. Construction Staging Area.

1. Staging for vehicle off loading and material storage will be on site and will occur on Preble Street. Deliveries will be scheduled to minimize queuing in the public streets. We will have a material hoist to bring material into its intended location as the construction site will have a limited footprint for storage.

K. Parking during construction

1. Parking on the construction site will be extremely limited. We will work with our subcontractor partners to establish offsite parking as we have done many times successfully in the past.
2. The building is fully vacated, so no accommodation will be required for existing occupants.
3. **Truck Routes and Volumes:** The expected truck route will be left on to Preble Street for loading and unloading then left onto Congress Street to exit the area.

L. Dewatering Plans

1. Dewatering activities are expected to be limited as this is an existing building. No long-term exposed excavations are expected that would require dewatering. Any required dewatering plans will be developed and presented to the City when final project documents are submitted.



To: City of Portland

Date: September 29, 2023

Memorandum

Project #: 55321.01

From: Jennifer Conley, PE, PTOE
Meghan Houdlette, PE

Re: Time & Temperature Building TDM Plan Memo -Updated

The Transportation Demand Management (TDM) Plan outlined below for the Time and Temperature Building at 477 Congress Street in Portland, Maine follows the specific provisions required by the City of Portland per Section 17.3 of the Technical Manual. The TDM plan includes a number of strategies aimed at reducing single occupancy vehicle trips and encouraging trips to the site by other modes including walking, bicycling, transit and carpooling.

Transportation Narrative

The development program includes a 138 unit boutique hotel with a high-end restaurant space and 138 apartment units. The development site is ideally located in Downtown Portland to encourage the use of alternate modes of transportation to access the site. The dense urban location provides significant pedestrian, bicycle, and transit infrastructure. The centrally located site provides a robust pedestrian network including sidewalks and crosswalks connects to several Metro transit lines. The project is located across from Monument Square where several transit routes stop and provide access along the Peninsula and to South Portland. The Metro Pulse, also known as the Downtown Transportation Center, is located at the Elm Street Garage a block from the Project site. Routes #2, #4, #5, #7, and the Husky Line begin and end their routes at the Pulse. The site location is well suited to result in a high percentage of transit riders.

The City of Portland and Tandem Mobility are partnered to provide bike share in Portland. There is a bike share location across the street from the project in Monument Square at Center Street. In addition, because no on-site parking will be provided for employees or residents, alternative modes will be encouraged through the TDM measures described in the TDM strategies section.

TDM Coordinator

An appointed TDM Coordinator will implement and manage the TDM strategies and will collect survey data to determine the mode shares of employees and residents and determine the barriers to increased public transit, bicycle, and pedestrian transportation use. The TDM Coordinator will complete the standard City of Portland TDM Reporting Form which will be submitted by May 15th of each year.

Transportation Survey

The TDM Coordinator will conduct an annual hotel employee and resident survey to understand the mode shares for the site. Information collected in the survey will inform potential carpooling and ridesharing opportunities. In addition, the survey will determine barriers to using alternative modes.

TDM Mode Split Target

The TDM plan establishes short-term 3-5 year mode split targets for employees and residents. The hotel valet operator will have an arrangement to use adjacent parking garages for hotel guest parking and will not be providing any project specific parking on site. Parking for residents will not be provided on-site, however, they will have the option to park in nearby garages at market rates.

Based on 2019 American Community Survey 5 year Census data, approximately half of all work trips made from this area are made by alternate modes. The mode split target for employees and residents is 45 percent which is a reduction of 5 percent of auto trips from baseline conditions.

Although employee trips are expected to have high percentages of alternative modes, hotel guests are more likely to arrive by personal vehicle or rideshare.

Mode Split Strategies

To encourage employees and residents to utilize alternative modes, there is no on-site parking provided. Therefore, no parking reduction strategies are included in this TDM plan. The site is disincentivizing the use of vehicles by not providing on-site parking. Additionally, the market rate of parking in the area will further disincentivize vehicular trips. There will not be parking "Cash Out" incentives offered since parking is not provided.

Mode Split strategies are listed below:

Transit

The project is located in an area with access to several transit options as previously discussed. This location is currently well utilized by transit riders, centrally located adjacent to Monument Square and a block from Metro Pulse. As such, the project is committed to encouraging transit use by providing hotel employees with a transit pass subsidy. Metro schedules and information will be posted in employee and resident areas. In addition, the hotel lobby will provide screens that provide transportation options including real-time transit bus arrival times for stops within walking distance of the project for hotel guests.

Based on understanding of area hotels, shuttles are not currently being used at a high rate. Due to the Covid 19 Pandemic, utilization of these types of hotel shuttles decreased significantly and has not fully rebounded. Based on this market trend, it is unlikely that the project will be providing its guests with a shuttle service.

Other Mobility

The project is also committed to encouraging employees, residents and hotel guests who commute using alternative modes to use ride-hailing services like Uber, Lyft, or taxis, when they need to make an auto trip as these services are already available in the downtown core. It is anticipated that guests will utilize these services when traveling around downtown Portland.

Rideshare

In addition to transit opportunities, there will be information posted to employee and resident areas regarding potential ride sharing or carpooling opportunities. There will not be an opportunity for preferential rideshare parking as no employee or resident parking will be provided.

Information gathered from the annual Transportation Survey will help to inform these shared ride arrangements and methods for communicating them to employees and residents.

A review of carsharing service websites indicates availability of vehicles on the Portland Peninsula. For example, www.turo.com indicates a number of vehicles available for a weekend rental the weekend of September 22nd to 24th. These options support a residents choice to be car-free in Portland.

Walking/Biking

The project is considering supporting the City of Portland BIKESHARE by providing subsidies for rides and/or memberships for employees, hotel guests and residents.

For guests, the hotel staff will be well versed in the local bicycle trail networks and walkability of Portland to encourage guests to use walking and biking modes as well as opportunities for transit to make connections to local destinations.

Telecommuting

There is a large coworking space included in the program that will be providing hotel guests and residents the option to telework. It is expected that a portion of residents will choose to work remotely.

Education

As indicated above the TDM Coordinator will provide transit maps and schedules to employees and residents. In addition, information on bicycle routes and walkable destinations will be available to guests. The hotel's website will include information on car-free travel to Portland. As a part of the survey program, the TDM Coordinator will work with interested parties to create ride share opportunities. Additionally, the TDM Coordinator will provide educational materials highlighting the benefits and cost saving opportunities of using alternative transportation options.

Monitoring

As indicated above the TDM Coordinator will conduct an annual survey to understand employee and resident mode shares and understand progress towards trip reduction targets. In addition, as requested in the guidance, the TDM Coordinator will report on parking needs of the development.

Conclusions

The location of the site is a hub for local transportation options and safe pedestrian and bike routes. This disincentivizes the need for personal vehicles and will allow for employees, residents, and hotel guests to optimize the use of these resources.

The TDM Coordinator will ensure that employees, residents, and hotel guests have the proper information required to maximize the use of local transit systems and bicycle and pedestrian network. Additionally, there will be resources available to walkable locations to encourage the support of local businesses.

The TDM Plan will be facilitated by the TDM Coordinator to ensure that the project has minimal impacts on traffic operations and provides employees, residents, and hotel guests with proper resources to maximize the use of alternative modes of transportation.

Att. 14

Via Electronic Mail

November 22, 2023



Natasha Kypfer, Planner
City of Portland
389 Congress Street
Portland, ME 04101

Re: Response to City of Portland – Application PL-002673-2023, 477 Congress Street

Dear Ms. Kypfer:

Thank you for coordinating the review of application PL-002673-2023 to redevelop the historic Time & Temperature Building, located at 477 Congress Street. We are responding to The City of Portland's review comments received on November 9, 2023, please see the attached worksheet provided by the City, with a column added for the Applicant responses.

If you have any questions or require additional information, please do not hesitate to contact me at (207) 558-3662 or by email at dstairs@woodardcurran.com

Sincerely,

WOODARD & CURRAN, INC.

A handwritten signature in black ink, appearing to read "D. B. Stairs", written over a light blue horizontal line.

Darrin B. Stairs, PE
Senior Project Manager

DBS/la

Enclosure: Worksheet

PN: 0232868.02

Site Plan Review Standards (Sec. 14.6)			
Transportation Standards (Sec. 14.6.1)			
Standard	Discussion	Finding	Applicant Response
<i>Impact on Surrounding Street Systems</i>	<u>Overview:</u> The Time and Temperature Building, located at 477 Congress Street, has street frontage on both Congress Street and Preble Street. The proposed redevelopment of the property would involve the conversion of currently vacant office space into 136 hotel units and 140 long-term residential micro unit apartments. Further, the project will feature 4,800 square feet of new retail space, and a 140-seat restaurant. The updated development plan for 477 Congress Street is expected to result in less impact on the surrounding street systems, with respect with what was previously approved, based upon the programmatic changes being proposed. Staff are requesting supplemental information, listed below, to confirm that the project complies with this standard. <u>Updates Requested</u> • The applicant shall document trip generation for the project. Trip generation should be based on the current edition of ITE data. • The applicant should document anticipated valet vehicle pick-up/drop-off routings, given a likely vehicle parking location. • The applicant should reduce the number of 15-minute on-street parking spaces to no more than four spaces, and staff are encouraging that these spaces be located close to the project entry canopy on Preble Street.	More information needed	• See attached updated Traffic Impact Study "Time & Temperature Building, 477 Congress Street" by VHB, Inc. dated November 13, 2023. This report documents the trip generation for the project, based on the current edition of the ITE. • The valet pick-up/drop-off routing is described in section 3.2.2.4 of the Traffic Impact Study. • The loading/unloading area designations represented on the submitted plans were approved with the previous land use application (PL-001003-2021), after many months of discussion with City staff and emergency management personnel. The applicant does not wish to alter the previously agreed upon 15-minute loading/unloading areas shown on the submitted site plans.

Site Plan Review Standards (Sec. 14.6)			
Transportation Standards (Sec. 14.6.1)			
Standard	Discussion	Finding	Applicant Response
Access and Circulation	<u>Overview:</u> The property is situated in the heart of Portland's downtown, in an area of the City that is highly accessible for pedestrians, cyclists, and transit users. The development, as proposed, features no on-site parking, and would reset existing brick sidewalk as currently designed. Sidewalks range from approximately nine feet along Preble Street, 13 feet along Congress Street, and up to 21 feet at the curb extension at the Congress Street and Preble Street intersection. As proposed, the development would alter existing on-street parking permissions, restricting 216 feet of Preble Street, or space for approximately 11 vehicles, to a 15-minute parking loading and unloading zone. An additional 40 feet of frontage along Congress Street would similarly be converted into a loading/unloading zone. The Access and Circulation standard is generally considered to be met, however City staff are requesting that the applicant update their plans to provide additional details and information. Further, Public Works and the Parking Division are not supportive of the currently proposed 15-minute loading and unloading zone along Preble Street in its current configuration. <u>Updates Requested</u> - The applicant should reduce the number of 15-minute on-street parking spaces to no more than four spaces, and staff are encouraging that these spaces be located close to the project entry canopy Preble Street. - Improvements, and existing conditions in the right of way shall be dimensioned on all applicable plan sheets. This for example	Not met Additional information and plan updates are required.	<i>The applicant requests that the loading/unloading zones remain as per the previous approval PL-001003-2021, and as represented on the submitted site plans.</i> <i>Additional dimensions have been added to the site plans, which have been uploaded separately to ProjectDox.</i> <i>Additional spot grades and slopes have been added to the grading plan, which has been uploaded separately to ProjectDox.</i> <i>A note has been added to the grading plan indicating the minimum 5-feet of max. 2% grade adjacent to the buildings, as well as grades and slopes indicating such.</i> <i>The applicant understands that DPW may require that portions of the existing curb may need to be replaced if it is determined upon inspection to not be suitable for reuse.</i>

Site Plan Review Standards (Sec. 14.6)			
Transportation Standards (Sec. 14.6.1)			
Standard	Discussion	Finding	Applicant Response
	should include dimensions and or/widths for the public right of way, streets, sidewalks, esplanades, driveways (and other improvements). Plans should also note where widths vary or change. - The applicant shall label and provide spot grades and slopes at grade breaks for any proposed/existing improvements in the right of way, such as sidewalks, accessible ramps, and driveways. This should extend to the limit of proposed improvements on the property. - The proposed brick sidewalk cross slope shall not exceed 2% at the property line. If the existing sidewalk grades are not compliant at the property line, then the limits of sidewalk replacement shall be extended to include a 5-foot minimum transition zone from the proposed 2% to the existing sidewalk slope. A note should be added to the plans to reflect this requirement. - The applicant has noted that the existing granite curb will be reset. The applicant shall ensure that the existing granite is free of any defects such as, but not limited to chipping and cracking. Please be aware that Public Works may require the use of new granite curb upon inspection of the existing granite curb prior to installation or during construction.		
Public Transit Access	<u>Overview:</u> The development is located immediately on Congress Street, upon which numerous METRO routes operate. The applicant is not required to make any additional upgrades, given that the nearest transit shelter is located less than a quarter mile away, across the street in front of the property at 480 Congress Street.	Met	No response required.

Site Plan Review Standards (Sec. 14.6)			
Transportation Standards (Sec. 14.6.1)			
Standard	Discussion	Finding	Applicant Response
	Updates Requested No action is required		
Parking	Overview: The project provides no off-street parking on-site, however, the hotel will operate a valet service off of Preble Street, and the applicant intends to lease parking spaces in nearby parking lots, which are unspecified. Per Table 19-B in the City's Land Use Code, no off-street parking is required for changes of use within the B-3 Downtown Business zone. The project further proposes no bicycle parking. While no off-street vehicular parking is required, the project as proposed does not meet the City's bicycle parking requirement, which is described below. Updates Requested: Per Table 19-A, bicycle parking is required at a ratio of one space per every five residential units. Based on there being 140 residential units, the applicant is required to provide a total of 28 bicycle parking spaces. The location of bicycle storage needs to be identified on applicable plan sheets, and rack details also need to be provided.	Not met Plan updates are required.	<i>Twenty-eight bicycle parking spaces have been added to the site plan. The updated site plan has been uploaded to ProjectDox.</i>
Transportation Demand Management	Overview: New commercial or mixed-use development with more than 50,000 square feet of floor area is required to provide a TDM plan in accordance with Section 17 of the Technical Manual. The applicant has updated the TDM Plan prepared by VHB, that was previously approved for the former hotel project at 477 Congress Street. This document establishes a framework for reducing single occupancy vehicle trips and encouraging trips by other modes. Updates Requested Review comments will be forthcoming.	Under Review Review comments will be forthcoming	<i>No response required.</i>

Environmental Quality Standards (Sec. 14.6.2)			
Standard	Discussion	Finding	Applicant Response
<i>Preservation of Significant Natural Features</i>	<u>Overview:</u> The site is entirely built out, and the project involves the adaptive reuse of the historic Time & Temperature Building. There are no significant natural features on-site. <u>Updates Requested</u> No action is required.	Met	<i>No response required.</i>
<i>Landscape Preservation</i>	<u>Overview:</u> The site is entirely built out, and the project involves the adaptive reuse of the historic Time & Temperature Building. There is no existing vegetation or site landscaping on the site currently, and so this standard does not apply. <u>Updates Requested</u> No action is required	Met	<i>No response required.</i>
<i>Site Landscaping and Buffers</i>	<u>Overview:</u> As the Time & Temperature Building occupies the entire lot, the project is subject to only minimal site landscaping requirements, namely the requirement to provide street trees at a ratio of one tree per residential unit, for a total required contribution of 140 trees. The project proposes three street trees in raised planters along Congress Street. The applicant will be responsible for providing the equivalent of 137 additional trees, as detailed under Sec. 14.6.2.C.	Not Met Additional information and plan updates are required.	

Environmental Quality Standards (Sec. 14.6.2)			
Standard	Discussion	Finding	Applicant Response
	<u>Updates Requested</u> • The applicant is strongly encouraged to provide structural soils or other measures to expand soil volume capacity around street tree locations underneath sidewalks. Tree cells or other methods of increasing volume and soil quality would ensure lower long-term maintenance, reduced potential for replacement costs, and enable longer lived, healthier street trees. Volumes should be based upon vendor recommendations for structural soil volume product or by certified arborists with structural soil/tree cell experience. • The site plan should be updated to show the extent of any sub-sidewalk structural soil root zones, with notes indicating the total soil volume per tree planter system. • Applicant should employ root barriers to reduce impacts to adjacent buried utilities and walkways. • Wherever possible, the City would encourage the applicant to elongate tree planting beds so as to expand surface bed capacity for tree roots, if such expansion can occur without conflicting with utilities or ADA requirements. • Please update with the site plan to include proposed tree species information, but take note, that due to over planting, the City is discouraging maple species to promote more biodiversity and resilience to the City's tree canopy. Section 4, figure IV 1 in the technical manual provides some examples of compliant / recommended cultivars. • Provide tree planting details with soil volume and soil mix specifications for tree plantings in the provided detail sheets. • The Applicant should coordinate directly with the City Arborist to identify which alternative method will be utilized to account for the additional 137 street trees that cannot be provided on-site.		• The species of street trees to be used in the three planters on Congress Street will be at the City Arborist's suggestion. • The sidewalks and streets in this area have a significant number of underground utilities and other underground encumbrances that make large structural tree planting beds challenging. Final tree planting details can be provided on final construction documents and working with the arborist. • A tree planting detail has been added to Sheet C-302. • The applicant will coordinate with the arborist to discuss

Environmental Quality Standards (Sec. 14.6.2)			
Standard	Discussion	Finding	Applicant Response
			alternative methods for accounting for the 137 street trees that cannot be provided on site.
<i>Water Quality, Stormwater Management and Erosion Control</i>	<u>Overview:</u> The project site is entirely built out, and the application proposes no exterior improvements, limited site disturbance, and no new impervious area. As indicated in the applicant's materials, stormwater will continue to be managed as it is currently, and no additional treatment or detention is proposed. During site work, the applicant proposes to install catch basin inlet protection and other best management practices where necessary. Staff find that the project, as currently proposed, meets the City's water quality, stormwater management and erosion control standard. However, the City is recommending that the applicant consider certain design changes to reduce impact to the City's combined sewer system. <u>Updates Requested</u> The applicant should consider implementing a green or blue roof to help reduce the Property's impact on combined sewer overflows and Bayside flooding. Stormwater from this property is routed to the City's most active combined sewer overflow location and one of the most flood prone areas in the City.	Met	<i>The applicant has considered adding a green roof to portions of the project but has found it cost prohibitive at this time due to the age of the existing structure.</i>

Public Infrastructure and Community Safety Standards (Sec. 14.6.3)			
Standard	Discussion	Finding	Applicant Response
Consistency with City Master Plans	<u>Overview:</u> The conversion of office space to hotel, residences and retail is permitted under zoning for the B-3 Downtown Business zone, and is further consistent with Portland's Plan 2030, which calls for 'reinforcing the center' as a hub for activity within the City, and promoting complete neighborhoods, where residents can easily access amenities and services without driving. <u>Updates Requested</u> No action is required.	Met	No Response Required
Public Safety and Fire Prevention	<u>Overview:</u> The project as designed is consistent with the Crime Prevention Through Environmental Design (CPTED) public safety principles, with areas of the site and adjacent public right of way being well lit, highly trafficked, and visible from multiple vantage points. As proposed, the site features adequate emergency vehicle access. <u>Updates Requested</u> No action is required.	Met	No response required.
Public Utilities	<u>Overview:</u> The development will be serviced by existing water, sewer, gas and electric services. Utility upgrades include the installation of a new 6" water service, installation of a new 8" sewer service, installation of a grease interceptor, upgrades to the property's electrical service, and installation of a new 6" gas service line. Solid waste, including recycling, will be collected within the building, and removed from site by a third-party, as is currently the case.	Not met Additional information and plan updates are required.	- An updated capacity application will be provided to DPW. - Manholes have been added to the 8" sanitary and 10" drain line connections to the combined sewer. The updated Utility Plan has been uploaded to ProjectDox.

Public Infrastructure and Community Safety Standards (Sec. 14.6.3)			
Standard	Discussion	Finding	Applicant Response
	<u>Updates Requested</u> - The applicant shall update the previously approved wastewater capacity application to match the updated building programming and submit it to DPW for review and approval. - Manholes are required for the proposed 8" sanitary and 10" roof drain connection into the 15" Preble Street combined sewer line per requirements in Sec. 2 of the City's Technical Manual.		

Site Standards (Sec. 14.6.4)			
Standard	Discussion	Finding	Applicant Response
<i>Massing, Ventilation and Wind Impact</i>	<u>Overview:</u> The site is entirely built out, and the project involves the adaptive reuse of the historic Time & Temperature Building, with just a small exterior addition in the form of a new code compliant stair tower. As proposed, the project meets this standard. <u>Updates Requested</u> No action is required.	Met	No response required.
<i>Shadow</i>	<u>Overview:</u> The site is entirely built out, and the project involves the adaptive reuse of the historic Time & Temperature Building, with just a small exterior addition in the form of a new code compliant stair tower. Further, development within the B-3 Downtown Business zone is exempt from the City's shadow standards. <u>Updates Requested</u> No action is required.	Met	No response required.
<i>Snow and Ice Loading</i>	<u>Overview:</u> The Time and Temperature Building is an existing building, to which minimal exterior changes are being proposed. As a result, and based on the existing condition, snow and ice loading is not anticipated to occur, or adversely impact adjacent public spaces. <u>Updates Requested</u> No action is required	Met	No response required.
<i>View Corridors</i>	<u>Overview:</u> The property is not located within an established view corridor, and therefore, this standard is not applicable. <u>Updates Requested</u> No action is required.	Met	No response required.

Site Standards (Sec. 14.6.4)			
Standard	Discussion	Finding	Applicant Response
<i>Historic Resources</i>	<u>Overview:</u> The property at 477 Congress Street is located within the Congress Street Historic District, and the Time and Temperature Building is considered a contributing structure. The applicant continues to coordinate with Historic Preservation staff to determine whether the Historic Preservation Board's previously issued Certificate of Appropriateness may still cover this revised proposal. <u>Updates Requested</u> Coordinate with Historic Preservation staff to confirm whether further HP review is required.	Continue to coordinate with HP Staff	
<i>Exterior Lighting</i>	<u>Overview:</u> No changes to exterior lighting are being proposed as part of this application, and therefore, this standard is considered met. <u>Updates Requested</u> No action is required.	Met	No response required.
<i>Noise and Vibration</i>	<u>Overview:</u> Proposed mechanical equipment is located and screened to mitigate noise impacts. Noise and or vibration resulting from the development are not expected to exceed allowable limits established by the City, and therefore, this standard is considered met. <u>Updates Requested</u> No action is required.	Met	No response required.
<i>Signage and Wayfinding</i>	<u>Overview:</u> Any signage associated with the project will be reviewed by the Permitting and Inspections Department as a separate sign permit, and will also be reviewed by Historic Preservation Staff. <u>Updates Requested</u> No action is required.	Met	No response required.

Site Standards (Sec. 14.6.4)			
Standard	Discussion	Finding	Applicant Response
<i>Design Standards</i>	<u>Overview:</u> The Time and Temperature Building is an existing building, to which minimal exterior changes are being proposed. Further, the property is located within the Congress Street Historic District, and therefore, any design review of the project will be performed by either Historic Preservation staff or the Historic Preservation Board. <u>Updates Requested</u> No action is required.	Met	No response required.

Zoning Use Review (Article 6)			
Use Permissions (Table 6.A – Table 6-F)			
Proposed Use	Permitted, Conditional or Accessory Use	Zone	Use Std
Hotel	Permitted	B-3	None
Multi-family Residential	Permitted	B-3	None
Retail	Permitted	B-3	Sec. 6.4.15
Restaurant	Permitted	B-3	None
Zoning Performance Standards (Sec. 6.8)			
Standard	Discussion	Finding	Applicant Response
Sec. 6.8.1.A – Consistency with Downtown Design Guidelines	<u>Overview:</u> As the project involves interior renovation and change of use within the historic Time & Temperature building, with very minimal exterior modifications, the project is not undergoing a full design review against the City's Downtown Design Guidelines. Further, the project will undergo a separate process with the Historic Preservation Board, given that the Time and Temp building is a contributing building within the Congress Street Historic District. <u>Updates Requested</u> No action is required.	Met	<i>No Response Required</i>

Zoning Performance Standards (Sec. 6.8)			
Standard	Discussion	Finding	Applicant Response
Sec. 6.8 – General Performance Standards	<u>Overview:</u> The project is subject to the City's general performance standards, which establish limits of impact associated with noise, lighting, odor, vibration, waste disposal and outdoor effects, among others. The application materials discuss each of these elements, and strategies to limit or mitigate impacts associated with these requirements. In reviewing this application, staff find the project to comply with all applicable general performance standards. <u>Updates Requested</u> No action is required.	Met	No response required.

Zoning Dimensional Review (Article 7)					
Dimensional Standards (Table 7-A – Table 7-H)					
Standard	Requirement 1	Requirement 2	Proposed	Finding	Applicant Response
Street Frontage	15 feet	N/A	121 feet	Met	No response required.
Front Setback (Max)	15 feet	N/A	0 feet	Met	No response required.
Building Height	Up to 210 feet, with required setbacks from street wall	N/A	158' 8"	Met	No response required.
Lot Coverage	None, except 25% of lot area for portions of structures exceeding 125 feet in height	N/A	81%. Though the building is existing and, in the event, that the portion above 125 feet exceeds 25% of the lot, this would be considered a legally	Met	No response required.

Zoning Dimensional Review (Article 7)					
Dimensional Standards (Table 7-A – Table 7-H)					
Standard	Requirement 1	Requirement 2	Proposed	Finding	Applicant Response
			non-confirming condition.		
<i>Undifferentiated Wall</i>	30 feet, except 15 feet within PAD overlay	N/A	Less than 15 feet.	Met	<i>No response required.</i>
Space and Bulk Exceptions (Sec. 7.5)					
Standard	Requirement		Proposed	Finding	Applicant Response
Sec. 7.5.1.A – Height in the B-3 Zone	Outlines a list of exemptions for development in the B-3 zone, and refers to Downtown Height Overlay Map		Project does not increase the proposed height of the building, which currently complies with the Downtown Height requirements	Met	<i>No response required.</i>
Sec. 7.5.5.F	The Planning Board may require or approve deviation from the required maximum 5-foot front setback, if such a setback is determined to be warranted to comply with the City's Downtown Design Guidelines.		The Time and Temperature building is existing, and no changes to its footprint are contemplated. The building as designed complies with the City's setback requirements for the B-3 zone.	Met	<i>No response required.</i>

Overlay Zones (Article 8)				
Overlay Zone Name (Downtown Entertainment Overlay Zone and Pedestrian Activities District)				
Standard	Requirement	Discussion	Finding	Applicant Response
Sec. 8.2 – Downtown Entertainment Overlay Zone (DEOZ)	A business with an entertainment license within the DEOZ may not be located within 100 feet of another business with an entertainment license.	The proposed uses would not require an entertainment license with the City. Further, entertainment licenses are issued by the Permitting & Inspections Department, and verification of compliance with this zoning standard would occur as part of that license review.	Met	<i>No response required.</i>
Sec. 8.8 – Pedestrian Activities District (PAD)	Requires that 75% of the street level frontage of a building on a street located within the PAD must be occupied, and, at a minimum, the floor area to be occupied shall be 75% of the street level frontage divided by a 20-foot depth. The overlay also limits uses permitted within the PAD, which includes retail, restaurants and hotels.	The applicant proposed to fully activate the ground level of the building by restoring the interior commercial arcade, and by retaining the existing bank, introducing a restaurant and several retail spaces along both Congress Street and Preble Street, both of which are in the PAD district.	Met	<i>No response required.</i>

Conditional Use Review (Sec. 6.5)			
General Conditional Use Standards (Sec. 6.5.2)			
Standard	Discussion	Finding	Applicant Response
<i>Traffic, hours of operation, expanse of pavement, and off-street parking</i>	<u>Overview:</u> Hotel, residential, and retail uses are all permitted by right within the B-3 Downtown Business zone, and therefore, are expected to have similar levels of impact with respect to this standard, as compared with surrounding uses. <u>Updates Requested</u> No action is required.	Met	<i>No response required.</i>
<i>Will not cause unsanitary or harmful conditions</i>	<u>Overview:</u> Hotel, residential, and retail uses are all permitted by right within the B-3 Downtown Business zone, and therefore, are expected to have similar levels of impact with respect to this standard, as compared with surrounding uses. <u>Updates Requested</u> No action is required.	Met	<i>No response required.</i>
<i>Design and operation of the proposed use will not have substantially greater impact than other allowable uses in the zone</i>	<u>Overview:</u> Hotel, residential, and retail uses are all permitted by right within the B-3 Downtown Business zone, and therefore, are expected to have similar levels of impact with respect to this standard, as compared with surrounding uses. <u>Updates Requested</u> No action is required.	Met	<i>No response required.</i>

Use Specific Conditional Use Standards (Sec. 18.2.3 and Sec. 18.2.5)			
Standard	Discussion	Finding	Applicant Response
<i>Inclusionary Zoning</i>	<u>Overview:</u> Per Article 18.2.3 and Article 18.2.5, the project as proposed is subject to the City's inclusionary zoning requirements as applicable to residential and hotel uses. Article 18.2.3.C requires that residential projects totaling 10 or more residential units, provide a minimum of 25% of those units as workforce housing units, being affordable to households earning 80% of the area median income. The applicant may also pay a fee in-lieu of providing the units themselves, at a ratio of \$172,485 per units, based upon the 2023 IZ fee. With 140 residential units being proposed, the applicant is responsible for providing either 35 workforce housing units, or \$6,036,975, or a combination thereof. The applicant indicates in their submitted narrative that they intend to provide 35 units of workforce housing on-site, which would satisfy this requirement. Article 18.2.5 requires that hotel projects totaling 10 or more guest rooms, provide a minimum of one workforce housing unit for every 28 rooms within the hotel project or acceptable fee in-lieu equivalent of \$4,558 per room based upon the 2023 Hotel IZ fee. With 136 hotel rooms being proposed, the applicant is responsible for providing the equivalent of five workforce housing units, or \$619,888, or a combination thereof. The applicant indicates in their submitted narrative that they intend to provide five units of workforce housing on-site to satisfy this requirement.	Met, subject to a condition of approval.	<i>The applicant is aware of this requirement and understands it will be a Condition of Approval.</i>

Use Specific Conditional Use Standards (Sec. 18.2.3 and Sec. 18.2.5)			
Standard	Discussion	Finding	Applicant Response
	<u>Updates Requested</u> At the time of the public hearing, staff will include a draft condition of approval, which would require that the applicant enter into a workforce housing agreement with the City.		

Att. 15

Via Electronic Mail

November 27, 2023



Bradley Roland, PE
Department of Public Works
212 Canco Road
Portland, ME 04103

Re: Time & Temperature Building Renovation – Request for Ability to Serve

Dear Brad:

On behalf of GreenMars Real Estate Company (Applicant), Woodard & Curran (W&C) is submitting this ability to serve request letter for proposed renovation of the Time & Temperature Building located at 477-481 Congress Street and 22 Preble Street in Portland, Maine.

The project includes interior and exterior renovations to the existing building. The project includes the conversion of the properties into 140 long term residential micro unit apartments and 136 "hotel" units. The project will also include approximately 4,800 square feet of retail and a restaurant with approximately 140 seats. There will be various amenity spaces available to apartment and hotel guests, including a fitness center and co-working spaces. The first-floor historic arcade will be restored for public access from Preble Street and Congress Street and will include retail spaces again targeted towards local businesses that support the residents and guests. The first floor of the former TD Bank space (481 Congress Street) will have be fit out as a restaurant. Access will be provided to a roof-top observation deck.

The following table includes the breakdown of the number of long term residential units by bedroom count.

• **Table 1: Residential Unit Counts**

Type	Approximate Size	Number of Units
Studio	220-230 SF	101
1 Bedroom	320 SF	33
2 Bedroom	380-400 SF	6
TOTAL		140

Table 2 below shows the breakdown of the Hotel units:

• **Table 2: Hotel Unit Counts**

Type	Approximate Size	Number of Units
Studio	220-230 SF	88



1 Bedroom	320 SF	48
2 Bedroom	380-400 SF	0
TOTAL		136

Sanitary sewer improvements include a new 8" sanitary sewer lateral from the sewer main in Preble Street. Grease-laden waste will exit the building through a new 6" kitchen waste sewer and passed through two (2) 1,000-gallon grease interceptors on Preble Street prior to connection to the new 8" SS service line. Upon completion, the proposed project is anticipated to discharge 27,000 gallons of wastewater per day. A Utility Plan is enclosed for your reference.

Roof water from the existing building will be collected and discharged via a new 10" storm lateral connected to the combined sanitary sewer line in Preble Street. Peak storm drainage run-off from the 32,000 square foot site will be based on a 2.5-inch per hour rainfall intensity and 0.95 run-off coefficient. (830 gpm).

We do not anticipate design changes that would result in significant increases but will notify the City if design development results in any major changes. An Application for Major Site Plan Approval has been submitted to the City of Portland Planning. We appreciate documentation regarding the City's ability to collect wastewater and stormwater from the proposed development.

Please let us know if any additional information is required to evaluate the service capacity 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) 558-3662 or dstairs@woodardcurran.com.

Sincerely,

Woodard & Curran, Inc.

A handwritten signature in black ink, appearing to read "David B. Stairs".

Senior Project Manager

Enclosure(s) Utility Plan
 Wastewater Application

CITY OF PORTLAND WASTEWATER CAPACITY APPLICATION

Portland Dept. of Public Works -
Water Resources
55 Portland Street,
Portland, Maine 04101-2991



Bradley Roland, P.E.
Water Resources Division
Department of Public Works
55 Portland Street
Portland, ME 04103

Date: November 27, 2023

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

Site Address: 477-481 Congress Street and 22 Preble Street

Chart Block Lot Number: 037 F002 & F022

Proposed Use: Hotel, Residential, Commercial

Previous Use: Multi-use commercial

Existing Sanitary Flows: 11,000 (est.) GPD

Existing Process Flows: 0 GPD

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

Project will connect a new 8" sewer service on
Preble Street

Site Category	
Commercial (see part 4 below)	☒
Industrial (complete part 5 below)	☐
Governmental	☐
Residential	☐
Other (specify)	☐

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

2. Please, Submit Contact Information.

City Planner's Name: Natasha Kypfer Phone: (207) 874-8719

Owner/Developer Name: Greenmars Real Estate Services, Inc. c/o Chris Marshall

Owner/Developer Address: 30 Exchange Street, Suite 3, Portland, ME 04103

Phone: (207) 409-0426 Fax: N/A E-mail: chris@greenmars.com

Engineering Consultant Name: Woodard & Curran, c/o Darrin Stairs, PE

Engineering Consultant Address: 12 Mountfort Street, Portland, ME 04102

Phone: (207) 558-3662 Fax: N/A E-mail: dstairs@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.

Estimated Domestic Wastewater Flow Generated: 27,000 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)
Handbook of Subsurface Wastewater Disposal in Maine



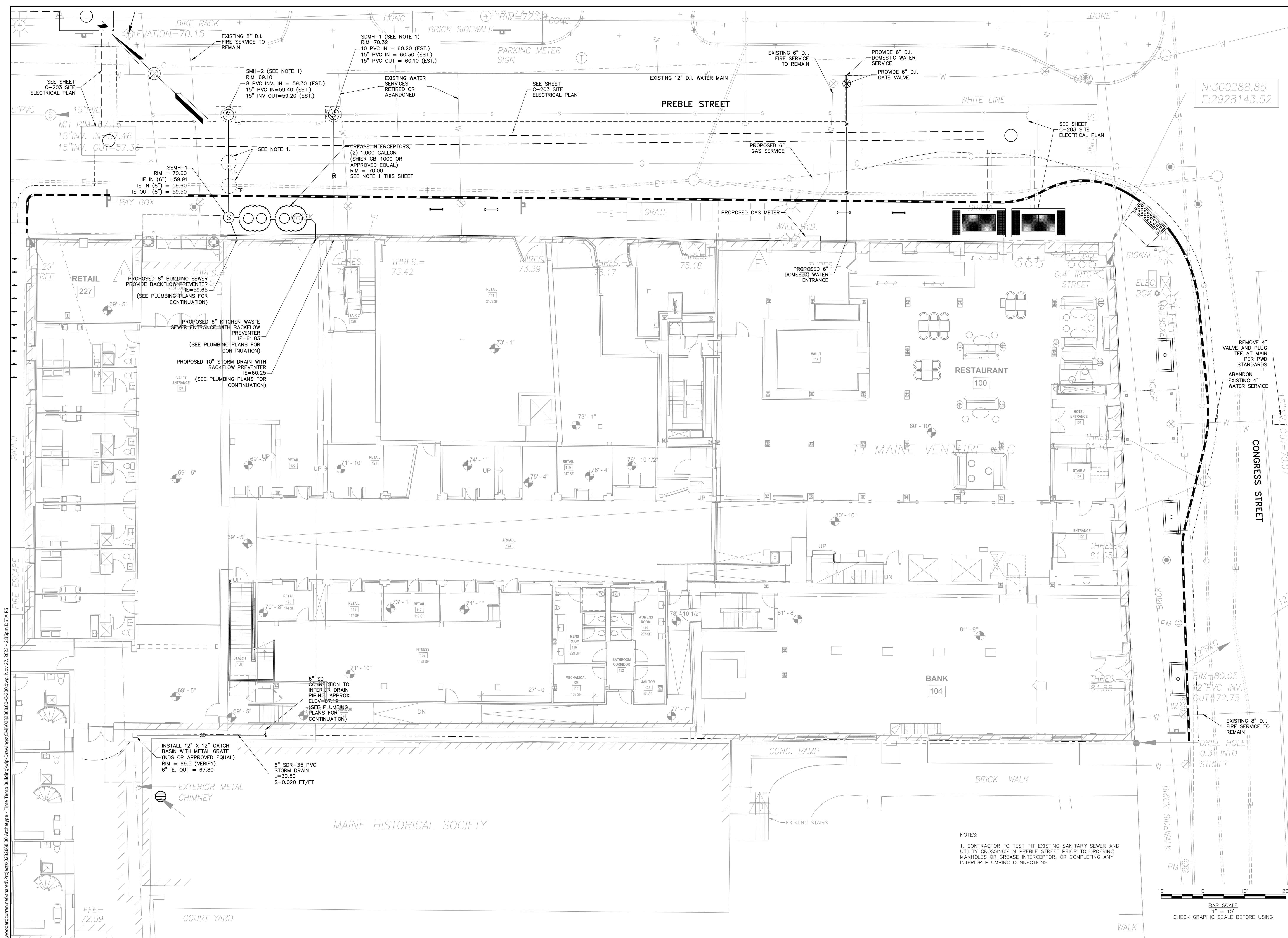
CLIENT Greenmars Real Estate Dev.
 PROJECT Time & Temperature Building
 DESIGNED BY DBS DATE 11/27/23
 CHECKED BY _____ DATE _____
 PROJECT NO. 0232868.02 SHEET NO. _____ OF 1

Wastewater Capacity Calcs:

Facility Type	Design Flow per Unit [gpd] ¹	Unit of Measure	Quantity	Total anticipated Flow	
Hotels/Motel without kitchen	50	per bed (2 person)	136	6,800	
Hotels/Motel without kitchen	12	per employee	8	96	
Multifamily, 1-Bedroom	120	per unit	134	16,080	
Multifamily, 2-bedroom	90	per bedroom ²	12	1,080	
Eating Place, 2 meals/day	20	per seat	140	2,800	
Eating Place, 2 meals/day	12	per employee	24	288	
TOTALS				27,144	gpd
				18.85	gpm
1. From "State of Maine Subsurface Wastewater Rules" 08/03/2015					
2. 6 apts x 2 bedrooms = 12					

GREASE INTERCEPTOR CALCS

(3) 3 POT SINKS = 27 DFU
 (3) DISH WASHERS = 6 DFU
 (3) PREP SINKS = 9 DFU
 (3) PRE-RINSE SINKS = 9 DFU
 (13) FD = 26 DFU
 (6) FS = 48 DFU
TOTAL = 125 DFU
APPROX. 100 GPM = 2000 GAL INTERCEPTOR



**Woodard
& Curran**

12 Mountfort Street
Portland, Maine 04101
800.426.4262 | www.woodardcurran.com

THIS DOCUMENT IS THE PROPERTY OF
WOODARD & CURRAN AND ITS CLIENT.
REPRODUCTION OR MODIFICATION WITHOUT
WRITTEN PERMISSION IS PROHIBITED.

PE SEAL:

SITE PLAN APPROVAL

CLIENT INFO:

GREENMARS REAL ESTATE DEV. CO
PORTLAND, ME 04101

TIME & TEMPERATURE BUILDING

SITE PLAN APPROVAL	
PROJECT INFO:	
EENMARS REAL ESTATE DEV. CO PORTLAND, ME 04101	
ME & TEMPERATURE BUILDING	
11/16/23	RESPONSE TO CITY COMMENTS
MM/DD/YY	DESCRIPTION
NO:	0232868.02
TE:	SEPTEMBER 28, 2023
LE:	1" = 10'
IGNED BY:	ANL
AWN BY:	JBC
HECKED BY:	DBS
NAME:	0232868.00-C-200.dwg
DRAWING TITLE:	
CIVIL	
UTILITY PLAN	

WoodardCurran.net\shines\Projects\0232868.00 Act\Mappe - Time Temp Building\wp\Drawings\Civil\0232868.00 C-200.dwg Nov 27, 2023 - 2:46pm DST\MS

Att. 16

MEMORANDUM



TO: Natasha Kypfer
FROM: Darrin B. Stairs, PE
DATE: December 6, 2023
RE: 477 Congress Street – Time & Temperature - Neighborhood Meeting Certification

GreenMars Real Estate Development Company and Woodard & Curran hosted a Neighborhood Meeting for the proposed Time & Temperature Building development project, at 477 Congress Street. The meeting was held at the Canopy Hotel, Swasey Conference Room at 6:00 PM on December 5, 2023.

Public Notice was sent out greater than ten days prior to the first meeting to the contact list that was provided by the City of Portland's Planning Department. A copy of the notice and the contacted list of people is attached.

A sign in sheet was used for the meeting, and attendees were asked to sign in if they wished. A copy of that sheet is attached.

For the meeting, a presentation was provided with site and permitting background and project information for the current proposed work. A copy is attached to this memo. Following the presentation attendees were given the opportunity to ask questions.

Attachments:

- Public Notice
- Public Notice Contact List
- Meeting Sign In Sheet
- Meeting Notes
- Presentation Copy

November 17, 2023



Dear Neighbor:

On behalf of Greenmars Development Company (Applicant), please join us at a neighborhood meeting to discuss our plans interior and exterior renovations to the buildings at 477 Congress Street and 22 Preble Street in Portland, Maine. In September 2023, a Major Site Plan Application was filed with the City of Portland Planning Division on behalf of the Applicant for the proposed development.

The project includes the conversion of the properties into approximately 140 long term residential micro unit apartments and approximately 136 "hotel" units. The project will also include approximately 4,800 square feet of retail and a restaurant. Various amenity spaces will be available to apartment and hotel guests, including a fitness center and co-working spaces. The first-floor historic arcade will be restored for public access from Preble Street and Congress Street and will include retail spaces targeted towards local businesses that support the residents and guests. The first floor of the former TD Bank space (481 Congress Street) will be fit-out as a restaurant. Access will be provided to a roof-top observation deck.

Neighborhood Meeting

Meeting Location: Swasey Conference Room, Canopy Hotel, 9 Center Street, Portland, ME

Meeting Date: Tuesday, December 5, 2023

Meeting Time: 6:00-7:00 PM

The City of Portland's Land Use Code requires that property owners within 500 feet of the proposed development and residents on the City's "interested parties list" be invited to participate in a neighborhood meeting. Your contact information has been provided to us by the City of Portland as part of these lists. A sign-in sheet will be circulated at the meeting, and minutes of the meetings will be taken. Both the sign-in sheets and minutes will be submitted to the Planning Authority for inclusion in the project's Site Plan documents.

If you have any questions, please contact me at (207)558-3662 or via email at dstairs@woodardcurran.com.

Sincerely,

WOODARD & CURRAN, INC.

A handwritten signature in black ink, appearing to read "D. Stairs", written over a horizontal line.

Darrin B. Stairs, PE
Senior Project Manager
On behalf of Greenmars Real Estate Company



Note:

Under the City of Portland land use code, an applicant for a major site plan, master development plan, subdivision of over five lots, or zoning map amendment is required to hold a neighborhood meeting within 30 days of an application being deemed complete and no less than seven calendar days before a public hearing. Should you wish to offer additional comments on this proposed development, you may forward them by e-mail to planning@portlandmaine.gov or by mail to the Planning and Urban Development Department, Planning Division, 4th Floor, 389 Congress Street Portland, ME 04101.

ABUTTER ADDRESSES

FIRST NAME	LAST NAME	COMPANY	ADDRESS	CITY	STATE	ZIP
		15 MONUMENT SQUARE LLC	PO BOX 8211	LEWISTON	ME	04243
		18 MONUMENT PLACE LLC	PO BOX 8211	LEWISTON	ME	04240
		207 INVESTS I LLC	140 BAY ST # 7S	JERSEY CITY	NJ	07302
		28 MSQ LLC	PO BOX 17536	PORTLAND	ME	04112
		347 CUMBERLAND AVENUE ASSOCIATES LLC	782 FOREST AVE	PORTLAND	ME	04102
		40 FREE LLC	PO BOX 207	PORTLAND	ME	04112
		498 CONGRESS LLC	496 CONGRESS ST STE 3	PORTLAND	ME	04101
		500 CONGRESS STREET CONDO	500 CONGRESS ST	PORTLAND	ME	04101
		536-538 CONGRESS STREET CONDO	536 CONGRESS ST	PORTLAND	ME	04101
		537 LOFTS CONDO	537 CONGRESS ST	PORTLAND	ME	04101
		800 NORTHERN CORP	2 MONUMENT SQ STE 402	PORTLAND	ME	04101
JANICE	ADLER		PO BOX 462 112 DORSER TD	RANGELEY	ME	04970
WILLIAM	AKARD		9 HANOVER ST	PORTLAND	ME	04101
		ALDER AND CUMBERLAND LLC	973 FOREST AVE STE 2	PORTLAND	ME	04103
		AMBASSADOR LLC	82 HANOVER ST STE 5	PORTLAND	ME	04101
		ANDONE PROPERTIES LLC	5 FOWLER FARM RD	SCARBOROUGH	ME	04074
HELEN	ANDREOLI		81 BECKETT ST # 2	PORTLAND	ME	04101
		ASHBY TEAM LLC	415 CONGRESS ST STE 204	PORTLAND	ME	04101
		AVESTA HOUSING DEVELOPMENT CORPORATION	307 CUMBERLAND AVE	PORTLAND	ME	04101
DONNA	BARTHE		367 US ROUTE 1	FALMOUTH	ME	04105
PATRICIA	BAUMAN		15 BROWN ST # 303	PORTLAND	ME	04101
TODD	BERZON		15 BROWN ST # 301	PORTLAND	ME	04101
		BROWN J B & SONS	PO BOX 207	PORTLAND	ME	04112
		BROWN TOWER LLC	3100 MCKINNON ST STE 250	DALLAS	TX	75201
MAILE	BUKER		9 BROWN ST # 2B	PORTLAND	ME	04101
		CADC PORTLAND 340 LLC	33 BROAD ST STE 801	BOSTON	MA	02109
PHILIP	CARUSO		15 BROWN ST # 401	PORTLAND	ME	04101
		CENTER CITY PLAZA ASSOC	120 EXCHANGE ST	PORTLAND	ME	04101
		CENTER CONGRESS LLC	10 SOMERVILLE RD	HEWITT	NJ	07421
		CF OMW LLC	42 MARKET ST	PORTLAND	ME	04101
		CITY OAK LLC	PO BOX 201	PORTLAND	ME	04112
KATHLEEN	COFFIN		15 BROWN ST # 305	PORTLAND	ME	04101
MICHAEL	COYLE		930 ROBIN RD	STATE COLLEGE	PA	16801
		CTR CONGRESS LLC	85 MECHANIC ST STE 140	LEBANON	NH	03766
		CUMBERLAND COUNTY MAINE	142 FEDERAL ST	PORTLAND	ME	04101
		DJ HOLDINGS LLC	492 CONGRESS ST	PORTLAND	ME	04101
MARK	DOCTOROFF		15 BROWN ST # 208	PORTLAND	ME	04101
MARK	DOCTOROFF		15 BROWN ST # 307	PORTLAND	ME	04101
PATRICK	DONNELLY		28 MONUMENT SQ # 1	PORTLAND	ME	04101
		EARL APARTMENTS LLC	82 HANOVER ST STE 5	PORTLAND	ME	04101
		EAST END CORP	PO BOX 10291	PORTLAND	ME	04104
		EASTMAN BLOCK CONDO	11 BROWN ST	PORTLAND	ME	04101
		EQUALITY COMMUNITY CENTER	15 CASCO ST	PORTLAND	ME	04101
MURRAY	FINARD		ONE MONUMENT SQUARE STE 503	PORTLAND	ME	04101
		FORTY FIVE CASCO STREET LLC	45 CASCO ST	PORTLAND	ME	04101
		GRACE LLC	490 CONGRESS ST # 101	PORTLAND	ME	04101

ABUTTER ADDRESSES

RYAN	HUNT	HEGA REALTY LLC	218 EAST RD	HAMPSTEAD	NH	03841
			15 BROWN ST # 306	PORTLAND	ME	04101
		JBG & H ASSOCIATES	PO BOX 4510	PORTLAND	ME	04112
RUSSELL	JONES	JJR 443 CONGRESS LLC	17 SOUTH ST	PORTLAND	ME	04101
			15 BROWN ST # 402	PORTLAND	ME	04101
		KAPLAN 504 LLC	49 OCEAN AVE	PORTLAND	ME	04103
		KIMBALL COURT CONDO	490 CONGRESS ST	PORTLAND	ME	04101
		MAINE CHARITABLE MECHANIC ASSOC	519 CONGRESS ST	PORTLAND	ME	04101
		MAINE COLLEGE OF ART	522 CONGRESS ST	PORTLAND	ME	04101
		MAINE HISTORICAL SOCIETY	485 CONGRESS ST	PORTLAND	ME	04101
PETER	MARCUS		PO BOX 52443	BOSTON	MA	02205
PETER	MARCUS		21 WORMWOOD ST # 403	BOSTON	MA	02210
SHANE	MONTMINY	MATERIAL OBJECTS	500 CONGRESS ST	PORTLAND	ME	04101
		METROPOLITAN APARTMENTS LLC	82 HANOVER ST STE 5	PORTLAND	ME	04101
		MHS INC	485 CONGRESS ST	PORTLAND	ME	04101
			15 BROWN ST # 206	PORTLAND	ME	04101
		MONUMENT SQUARE CONDO	28 MONUMENT SQ	PORTLAND	ME	04101
			15 BROWN ST # 304	PORTLAND	ME	04101
		OCEAN GATE LLC	511 CONGRESS ST	PORTLAND	ME	04101
BRIAN	MOORE	ONE CITY CENTER ASSOCIATES LLC	ONE CITY CENTER	PORTLAND	ME	04101
			409 S HIGHLAND AVE	PITTSBURGH	PA	15206
		PACHIOS BROTHERS II LLC	120 EXCHANGE ST	PORTLAND	ME	04101
MICHAEL	O'SULLIVAN	PARCHEGGIO LLC	79 BOW ST	FREEPORT	ME	04032
		PHELPS CRAIG REAL ESTATE HOLDINGS LLC	150 GARLAND RD	RYE	NH	03870
			537 CONGRESS ST # 510	PORTLAND	ME	04101
		PREBLE STREET	55 PORTLAND ST	PORTLAND	ME	04101
		PREBLE STREET ACQUISITIONS LLC	27 ELIOT ST # 2	JAMAICA PLAIN	MA	02130
		PREBLE STREET RESOURCE CENTER	PO BOX 1459	PORTLAND	ME	04104
		PREBLE STREET RESOURCE CENTER INC	331 CUMBERLAND AVE	PORTLAND	ME	04101
JOHN	PYE		15 BROWN ST # 201	PORTLAND	ME	04101
SYED	QUADRI		20 NICKERSON RD	LEXINGTON	MA	02421
MICHAEL	RICCI		226 ROOT RD	SOMERS	CT	06071
PETER	RODWAY		30 US ROUTE 1	FALMOUTH	ME	04105
MICHAEL	ROKOWSKI		15 SANDY TOES LN	WINDHAM	ME	04062
DAVID	SANTORO	SALVATION ARMY THE	88 PREBLE ST	PORTLAND	ME	04101
			15 BROWN ST # 406	PORTLAND	ME	04101
			15 BROWN ST # 202	PORTLAND	ME	04101
		SHEEPDOG LLC	16 CASCO ST	PORTLAND	ME	04101
		SHEPLEY LLC	82 HANOVER ST STE 5	PORTLAND	ME	04101
			2307 VALLEY RD	HARRISBURG	PA	17104
			15 BROWN ST # 207	PORTLAND	ME	04101
LINDA	SHOREY	SPACE GALLERY	536 CONGRESS ST	PORTLAND	ME	04101
		STARK INDUSTRIES LLC	100 COMMERCIAL ST STE 214	PORTLAND	ME	04101
			28 MONUMENT SQ # 2	PORTLAND	ME	04101
GEORGE	SOULE		145 NEWBURY ST	PORTLAND	ME	04101
		STORREY INDUSTRIES LLC	17 SOUTH ST # 3	PORTLAND	ME	04101
		SWEETWATER PARTNERS LLC	ONE PORTLAND SQ 9TH FLOOR	PORTLAND	ME	04101
		TEDLUM ASSOCIATES LLC		PORTLAND	ME	04101

ABUTTER ADDRESSES

WILLIAM	THORNDIKE	THE DOROTHEA & LEO RABKIN FOUNDATION	50 MARKET ST # 194	SOUTH PORTLAND	ME	04106
		THE LANCASTER GROUP LLC	50 MONUMENT SQ 2ND FLOOR	PORTLAND	ME	04101
			6 ARLINGTON ST # 1M	BOSTON	MA	02116
		TT MAINE VENTURE LLC	3100 MCKINNON ST STE 250	DALLAS	TX	75201
CHRISTOPHER HOYT	WADDELL WALBRIDGE	TWO MONUMENT WAY ASSOCIATES	ONE MONUMENT WAY	PORTLAND	ME	04101
		VERITAS PRIME HOLDINGS LLC	75 MARKET ST STE 203	PORTLAND	ME	04101
			3818 BETTES CIRCLE	JACKSONVILLE	FL	32210
			PO BOX 503	EAST BOOTHBAY	ME	04544
DEBORAH	WILLIAMS	WBP COMMERCIAL LLC	82 HANOVER ST	PORTLAND	ME	04101
			537 CONGRESS ST # 501	PORTLAND	ME	04101
		YOUTH AND FAMILY OUTREACH	331 CUMBERLAND AVE	PORTLAND	ME	04101

INTERESTED PARTIES ADDRESSES

Company Name	First Name	Last Name	Street Number	City	State	Zip
	Anthony	Donovan	27 Riverview Street	Portland	ME	04102
	Barbara	Wood	125 Emery Street	Portland	ME	04102
	David	Nowlin	215 Oxford Street	Portland	ME	04102
	Deb	Keenan	28 Dorothy Street	Portland	ME	04103
	Devon	Platte	26 North Street, 33	Portland	ME	04101
	Edward	Suslovic	46 Kenwood Street	Portland	ME	04103
	Janice	Carpenter	9 W. Commonwealth Drive	Portland	ME	04103
	Jennifer	Munson	389 Congress Street, 4th Floor	Portland	ME	04101
	Kaplan Thompson Architects Jesse	Thompson	100 Exchange Street	Portland	ME	04103
	Lynn	Clarkson	145 Marlborough Road	Portland	ME	04103
	Mary	Griffity	6 E. Prom, Unit 2	Portland	ME	04103
	Nancy	Bartlett	PO Box 7965	Portland	ME	04112
	Pam	Burnside	64 Lester Drive	Portland	ME	04103
	Paul	Dubois	1915 Congress Street	Portland	ME	04102
	Peggy	Morin	66 Farnham Street	Portland	ME	04101
	Philip	Haughey	1660 Soldiers Field Road	Boston	MA	02135
	Priscilla	LaVallee	190 US Route 1, Unit 2	Falmouth	ME	04105
	Waste Management of Mair Rebecca	Halla	2000 Forest Avenue	Portland	ME	04103
	Glenn	Cummings	24 Nevens Street	Portland	ME	04103
	Robert	Hains	250 Holm Avenue	Portland	ME	04102-1208



NEIGHBORHOOD MEETING MINUTES

Time & Temperature Building GreenMars Real Estate Development Company Neighborhood Meeting

PROJECT: Time & Temperature Building
LOCATION: East End School, Portland

MEETING DATE: 12/6/23
ISSUED DATE: 12/7/23

ATTENDEES:

Presenters/Representatives

Nate Green – GreenMars
Darrin Stairs – Woodard & Curran (W&C)

Public

James Irvine
Isabella Santero
David Santoro
Joelle LaFraniere
Steve Bromage
Armando Manalo

In person meeting began at 6:00 p.m.

Project Presentation

- Welcome and Introductions provided by Darrin Stairs, W&C and Nick Green of Greenmars
- Project presentation provided by Darrin and Nick (see attached slide deck)
 - Prior Location and Application
 - Site Plan – Compared to previous (Jan 2022) approval
 - Project Programming
 - Congress Street Elevation
 - Preble Street Elevation
 - Representative Floor Plans
 - Congress Street and Preble Street Architectural Renderings

Record of Feedback

Following the project presentation, there was a question-and-answer period with attendees. The following topics were discussed:

- Comments about appreciation of the building architecture
 - Focus on upper two floors
 - Appreciated alignment of pilasters and renovation of tired stucco finish
 - Would like to see the mechanical space doors centered in the wall, rather than off set – to provide better symmetry.



- Preble Street is a Bike commuter route. Will the loading/unloading area change the available width for bicycles and vehicles?
 - Response - No, the loading and unloading area will be using the existing parking strip. The roadway width will not change.
 - Side note we are providing bike racks along Preble and also in alley at south end of building.
- Stair Tower – can something be done to break up the façade? Perhaps adding windows or adding the scoring at every floor rather than every other?
 - Possible to add Art of mural?
 - Interesting idea, will consider in future
 - Will there be signage on the stair tower?
 - Response – still evaluating signage
- Timing of Project?
 - Response - Assuming 12-18 months for permitting process; Construction 2 years
- Hotel parking?
 - Response - there are 5 existing parking garages in the area, including 45 Brown
- Which Hotel brand?
 - Response – still reviewing proposals. Could be boutique or one of a number of larger brands.
- Discussion about coordinating access adjacent to the Longfellow property to the rear, especially if 45 Brown is redeveloped
- What challenges does the project face
 - Response - mainly economy and financing
- Discussion about possible restaurant (future) in TD Bank space and needing to coordinate that with Longfellow House so minimize and impacts
- Discussion of coordinated historic tours or displays within the Tower with the Historical Society
- Excited to see rebuilding of this area, and revitalization of Monument Square.
 - Would like to see monument square bricks redone.
- Evolution of the Maine Economy
- Where is hotel entrance
 - Response – hotel entrance will be on Preble at old theater entrance.
- Discussion of possible names –
 - Response - “The Chapman at Time & Temp” has been considered.

Meeting Close

- The meeting closed at 7:00.

Time & Temperature Building

Neighborhood Meeting
December 5, 2023



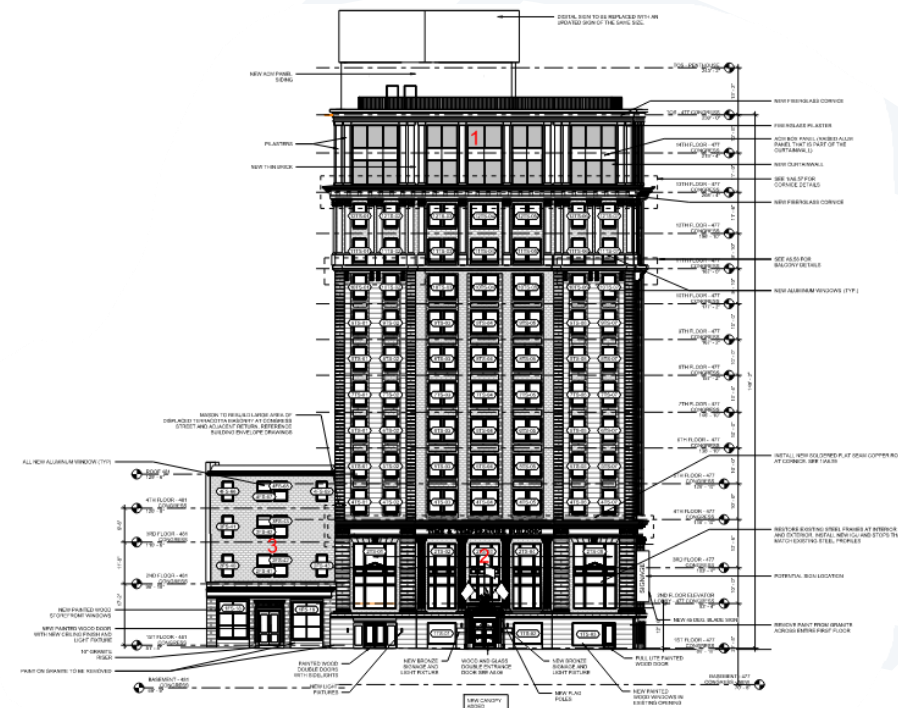
Project Location and Application

- ▶ 477-481 Congress Street
- ▶ 22 Preble Street
- ▶ Tax Map 037 Lots F002 and F022
- ▶ Business, B-3 Zone
- ▶ Congress Street Historic District
- ▶ Major Site Plan Review
 - Change in use
 - December 12th Planning Board Hearing



Project Highlights

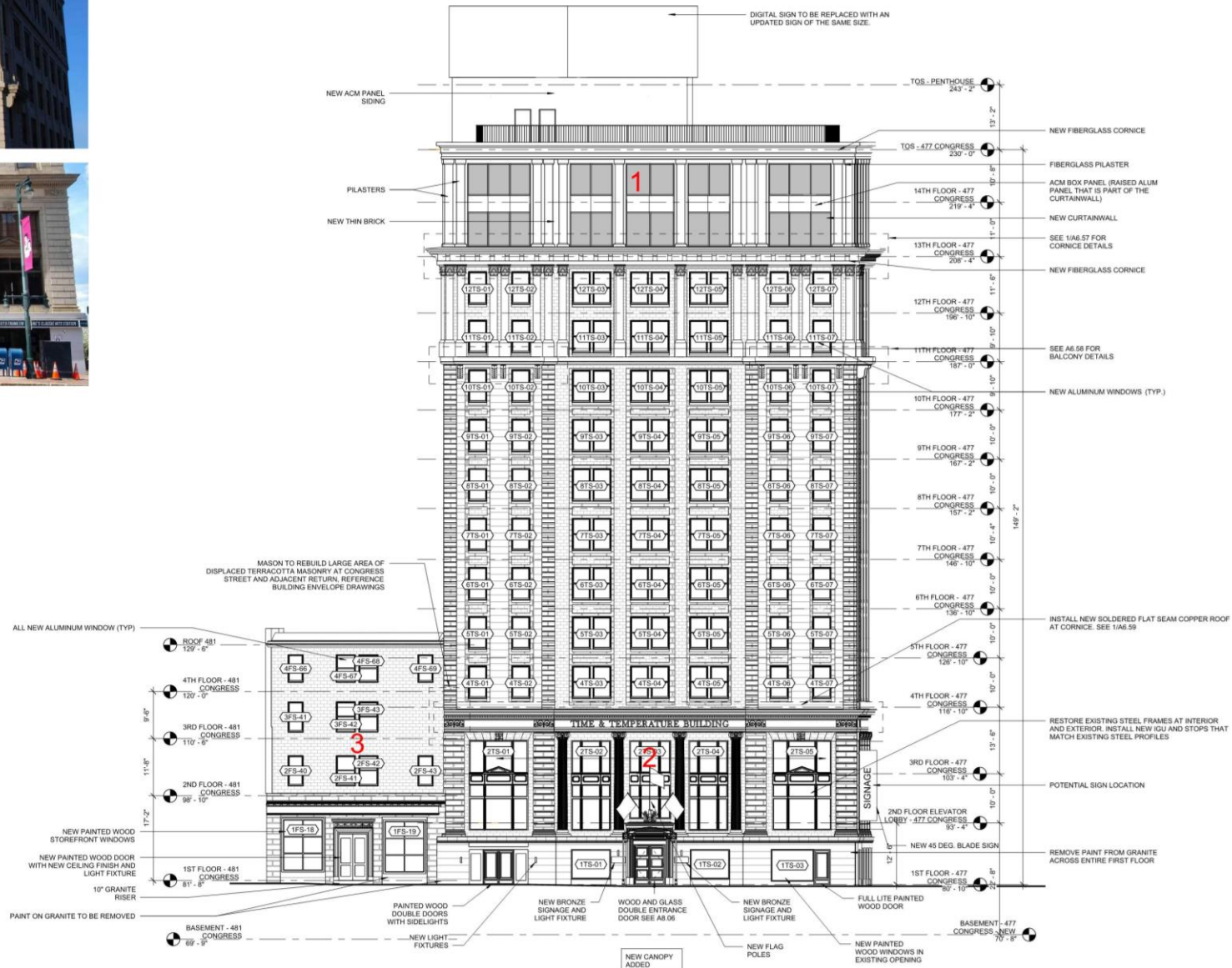
- ▶ Interior and Exterior Renovations
- ▶ 140 Residential Apts
- ▶ 136 Hotel Rooms
- ▶ Retail
- ▶ Restaurant space

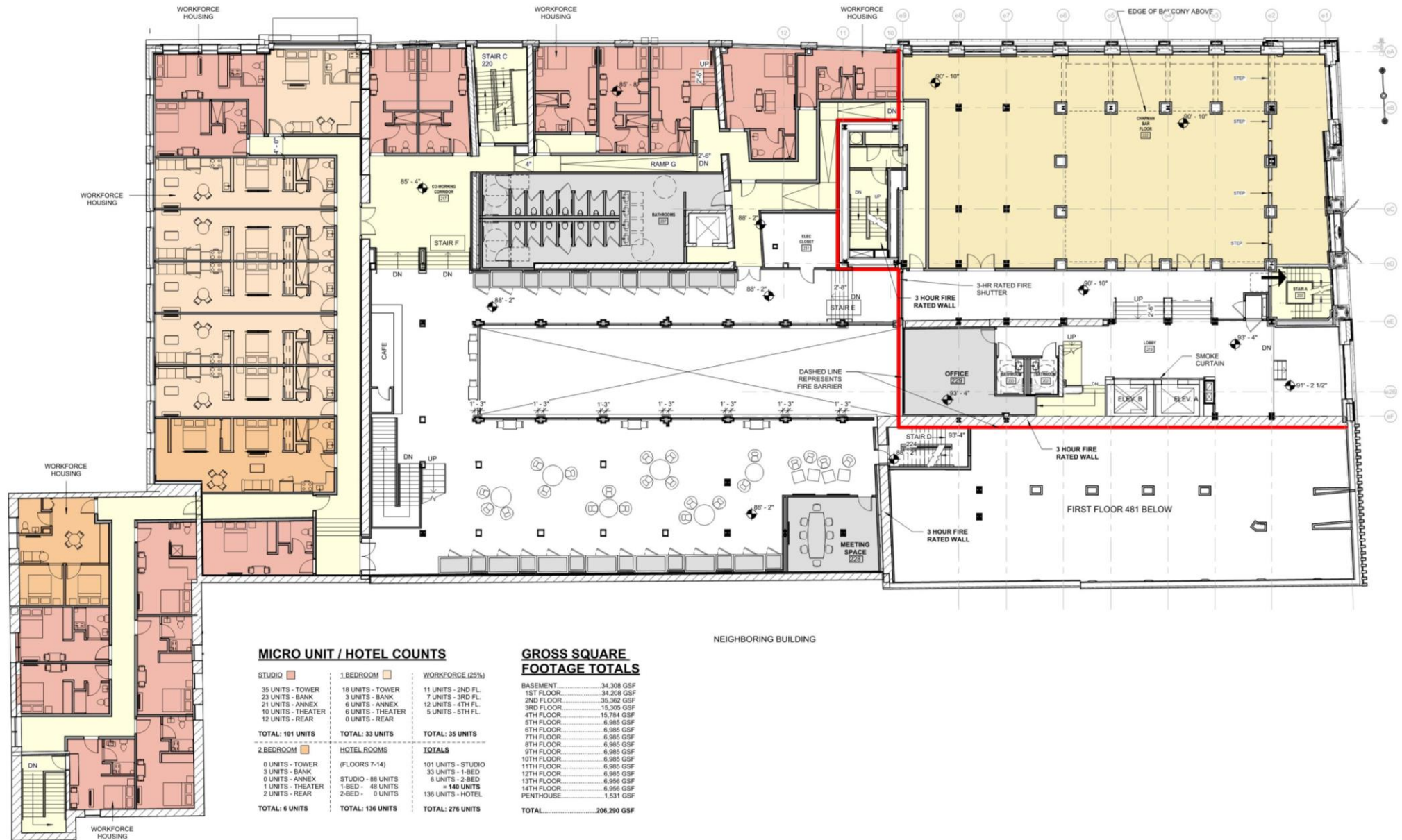
**Table 1: Residential Unit Counts**

Type	Approximate Size	Number of Units
Studio	220-230 SF	101
1 Bedroom	320 SF	33
2 Bedroom	380-400 SF	6
TOTAL		140

Table 2: Hotel Unit Counts

Type	Approximate Size	Number of Units
Studio	220-230 SF	88
1 Bedroom	320 SF	48
2 Bedroom	380-400 SF	0
TOTAL		136





MICRO UNIT / HOTEL COUNTS

STUDIO	1 BEDROOM	WORKFORCE (25%)
35 UNITS - TOWER	18 UNITS - TOWER	11 UNITS - 2ND FL.
23 UNITS - BANK	3 UNITS - BANK	7 UNITS - 3RD FL.
21 UNITS - ANNEX	6 UNITS - ANNEX	12 UNITS - 4TH FL.
10 UNITS - THEATER	6 UNITS - THEATER	5 UNITS - 5TH FL.
12 UNITS - REAR	0 UNITS - REAR	
TOTAL: 101 UNITS	TOTAL: 33 UNITS	TOTAL: 35 UNITS
2 BEDROOM	HOTEL ROOMS	TOTALS
0 UNITS - TOWER	(FLOORS 7-14)	101 UNITS - STUDIO
3 UNITS - BANK		33 UNITS - 1-BED
0 UNITS - ANNEX		6 UNITS - 2-BED
1 UNITS - THEATER		148 UNITS
2 UNITS - REAR		136 UNITS - HOTEL
TOTAL: 6 UNITS	TOTAL: 136 UNITS	TOTAL: 276 UNITS

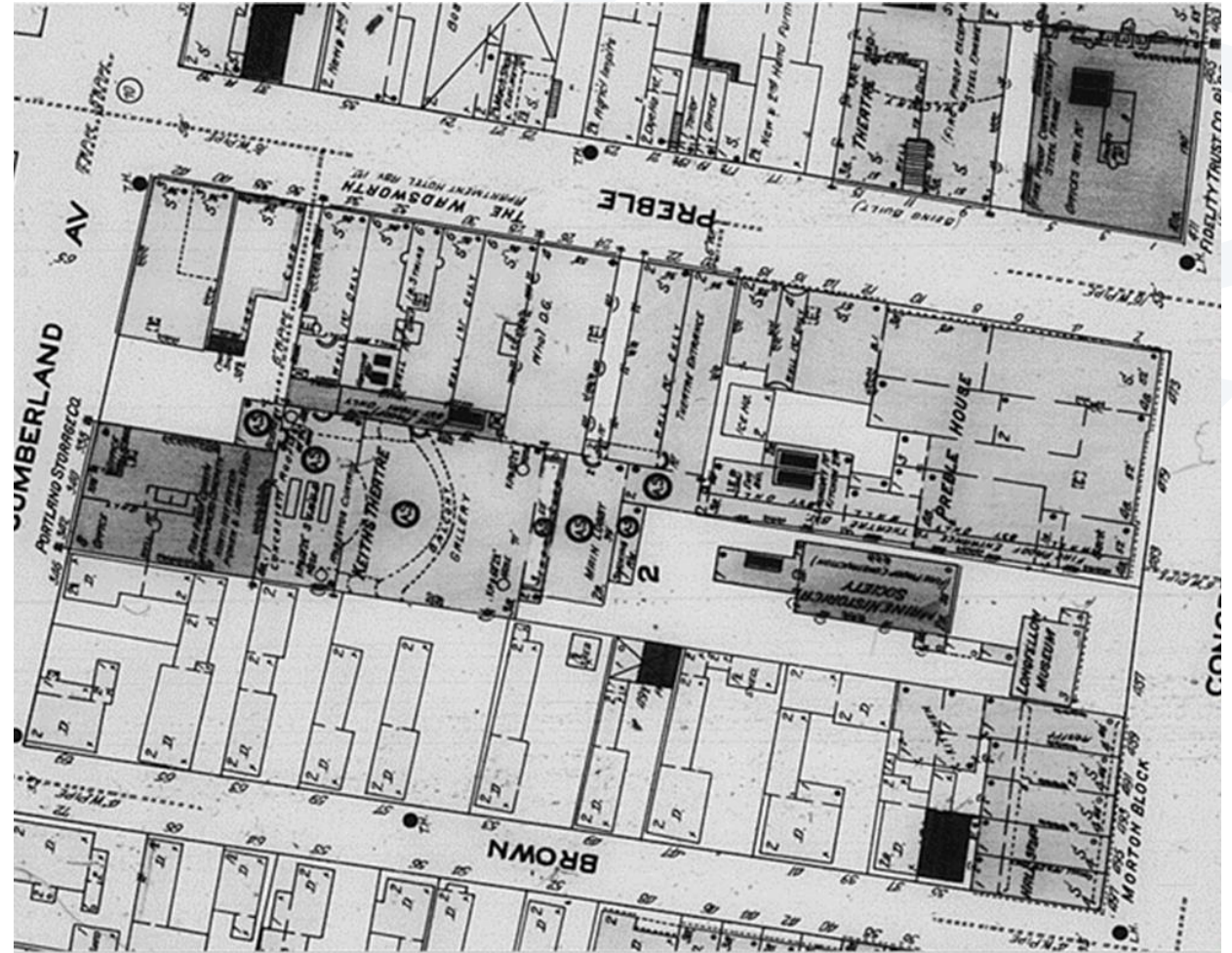
GROSS SQUARE FOOTAGE TOTALS

BASEMENT	34,308 GSF
1ST FLOOR	34,208 GSF
2ND FLOOR	35,362 GSF
3RD FLOOR	15,305 GSF
4TH FLOOR	15,784 GSF
5TH FLOOR	6,985 GSF
6TH FLOOR	6,985 GSF
7TH FLOOR	6,985 GSF
8TH FLOOR	6,985 GSF
9TH FLOOR	6,985 GSF
10TH FLOOR	6,985 GSF
11TH FLOOR	6,985 GSF
12TH FLOOR	6,985 GSF
13TH FLOOR	6,956 GSF
14TH FLOOR	6,956 GSF
PENTHOUSE	1,531 GSF
TOTAL	206,290 GSF





Thank you!



Time and Temperature Building

477 Congress Street

PREPARED FOR

GreenMars Real Estate
c/o Fathom Companies
80 Exchange Street Suite 400
Portland, ME 04106

PREPARED BY



500 Southborough Drive
Suite 105B South Portland, ME 04106-6928

NOVEMBER 13, 2023

Table of Contents

1	Introduction.....	1
2	Existing Conditions	2
2.1	Roadway and Intersection Characteristics	2
2.2	Pedestrian and Bicycle Facilities.....	3
2.3	Public Transportation.....	4
2.4	Crash History	5
3	Traffic Volume Data	6
3.1	Existing Conditions.....	6
3.2	Future Conditions	8
3.2.1	No Build Traffic Volumes	8
3.2.2	Trip Generation.....	10
4	Traffic Operations Analysis	14
4.1	Intersection Capacity Analyses	14
5	Conclusions	17

List of Tables

Table No.	Description	Page
Table 1	Crash Data (2020-2022)	5
Table 2	Trip Generation – Proposed Uses	11
Table 3	Net Trip Generation.....	11
Table 4	Signalized Intersection Operations	15
Table 5	Unsignalized Intersection Operations	16

List of Figures

Figure No.	Description	Page
Figure 1:	Study Area and Nearby Landmarks.....	3
Figure 2:	Greater Portland METRO Map.....	4
Figure 3:	2023 Existing Traffic Volumes.....	7
Figure 4:	2028 No-Build Traffic Volumes.....	9
Figure 5:	2028 Build Traffic Volumes.....	13

1

Introduction

A redevelopment project is contemplated for the property located at 477 Congress Street. A Traffic Impact Study (TIS) was previously prepared and approved in 2021 for the redevelopment of the site into a 190 key hotel, 8,600 sf restaurant space, and 4,700 sf retail space. The overall findings of the 2021 TIS indicated that the project will have minimal impacts to traffic operations as it had a reduction in trips from the previous use of the site.

This updated TIS contemplates a slightly revised program that now includes residential units in addition to hotel, the same amount of retail space, and a reduction of restaurant space. The 477 Congress Street site will now be redeveloped into 138 residential units, 138 hotel keys with approximately 4,700 sf of ground floor retail. The existing bank space is anticipated to be converted into a high-end restaurant or commercial retail off the lobby of the hotel (approximately 3,500 sf).

2

Existing Conditions

The existing conditions in the vicinity of the proposed redevelopment as outlined above were reviewed. As indicated, the proposed redevelopment is to occur at the intersection of Congress Street and Preble Street in the Time and Temperature Building.

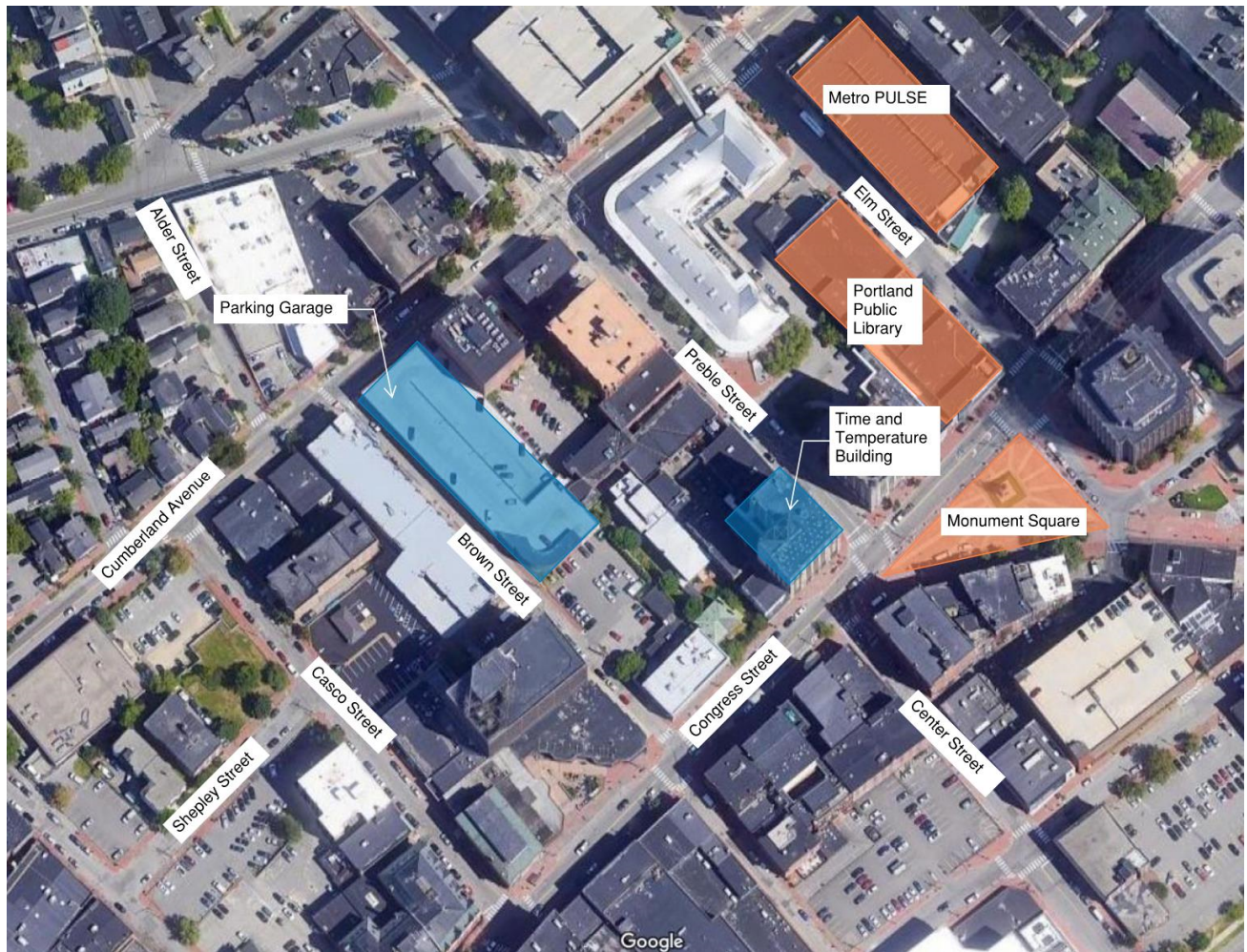
A review of existing conditions focused on the project site and transportation network access to and from the site as depicted in Figure 1.

2.1 Roadway and Intersection Characteristics

The proposed redevelopment will be located on the block between Congress Street, Cumberland Avenue, Preble Street, and Brown Street. Congress Street is a minor arterial running northeast to southwest through Portland. Near the project site, Congress Street consists of a through lane in each direction in addition to on-street parking along parts of the road. Congress Street is the primary route through downtown for the public bus system, and 11 different lines stop in the nearby area on Congress Street. Pedestrian facilities are readily available, and there is a bicycle lane along the entire length of Preble Street connecting through Cumberland Avenue and terminating at Congress Street. The site is adjacent to Monument Square where there are bicycle parking accommodations.

Preble Street ends at the intersection of Congress Street at a three-way signalized intersection. Preble Street is a minor arterial which serves one-way south eastbound traffic with two lanes at the intersections with Cumberland Avenue and Congress Street to accommodate turning vehicles. The roadway provides on-street parking to serve surrounding businesses. The proposed development will be on the northwest corner of the Preble Street and Congress Street intersection. The parking garage potentially anticipated to serve the site is located at the intersection of Cumberland Avenue and Brown Street (on the southeast corner of the intersection). As such, the planned points of vehicular access/egress will be via Cumberland Avenue.

Figure 1: Study Area and Nearby Landmarks



Cumberland Avenue is a major collector which extends northeast to southwest. It intersects with Brown Street at an unsignalized intersection and Preble Street at a signalized intersection. Cumberland Avenue consists of a single travel lane in each direction and parking along the north side of the roadway. The main access and egress to/from the parking garage is located on the south side of Cumberland Avenue.

Brown Street runs one-way in the north westbound direction parallel to Preble Street and intersects with both Congress Street and Cumberland Avenue at unsignalized intersections. Between these intersections, Brown Street consists of a single travel lane that is one-way towards the northwest with parking provided on the left side of the street. There is currently an exit only from the parking garage located on the east side of Brown Street with the main access/egress to the garage located on the south side of Cumberland Avenue.

2.2 Pedestrian and Bicycle Facilities

The Congress Street site has an extended brick sidewalk of 20 feet to the front of the building, and brick and concrete sidewalks along Preble Street. The rest of the streets in the area have

brick or concrete sidewalks. Crosswalks are available for pedestrians at each of the four intersections.

Within the study area, one-way bike lanes are provided along Preble Street, Elm Street and on the north side of Spring Street. A two-way bike lane is provided along Portland Street. The Greater Portland Council of Governments Active Transportation Network Map shows a planned shared bike lane on Congress Street.

2.3 Public Transportation

Portland has a vast public transportation network which is made up of buses, as depicted in Figure 2. The public transportation hub for downtown Portland is the METRO Pulse located at the intersection of Cumberland Avenue and Elm Street, which is a block from the site. There are several other stops in the surrounding area which service 14 different bus lines, and the closest include:

- › Preble Street & Cumberland Street: buses 7, 8
- › Center Street & Congress Street: buses 1, 2, 4, 5, 7, 8, 9B, 21, 24A, 24B & BRZ, HSK
- › Public Library: 1, 5, 8, 9A, 60, BRZ

Figure 2: Greater Portland METRO Map



2.4 Crash History

Crash data was obtained from MaineDOT for the most recent three-year period (2020-2022). There are no high crash locations (HCLs) for the roadways or intersections surrounding the project site. The majority of crashes were property damage only. Table 1 presents the crash data for the intersections surrounding the project site.

Table 1 **Crash Data (2020-2022)**

Intersection	Total Crashes	Critical Rate Factor
Cumberland Avenue and Preble Street	8	0.54
Brown Street and Cumberland Avenue	1	0.00
Congress Street and Preble Street	7	0.47
Center Street and Congress Street	1	0.00
Brown Street and Congress Street	2	0.00

Source: MaineDOT Crash Data

3

Traffic Volume Data

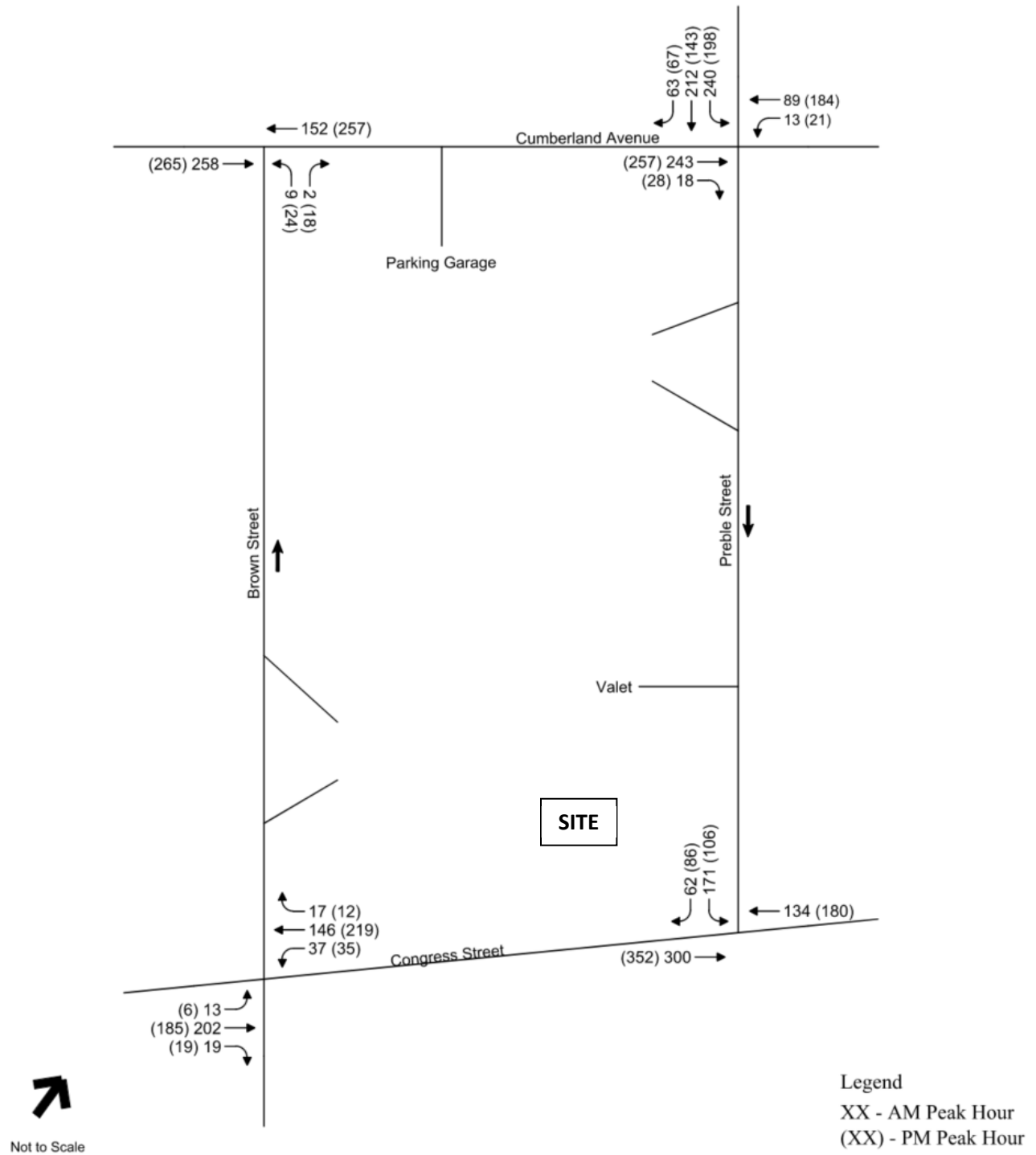
3.1 Existing Conditions

Turning Movement Counts (TMCs) were collected on October 3, 2023 between 7AM – 9AM and 4PM – 6PM at the following study area intersections:

1. Cumberland Avenue and Preble Street
2. Congress Street and Preble Street
3. Cumberland Avenue and Brown Street
4. Congress Street and Brown Street

The network peak occurred from 8AM to 9AM and from 4:30PM to 5:30PM at the four study area intersections. Weekly mean factors provided by MaineDOT were used to adjust existing traffic volumes to represent the 30th highest hour of the year. As a result, the raw volumes collected in October 2023 were adjusted by a factor of 1.035. The existing weekday morning and weekday evening peak hour traffic volume networks are summarized in Figure 3.

Figure 3: 2023 Existing Traffic Volumes



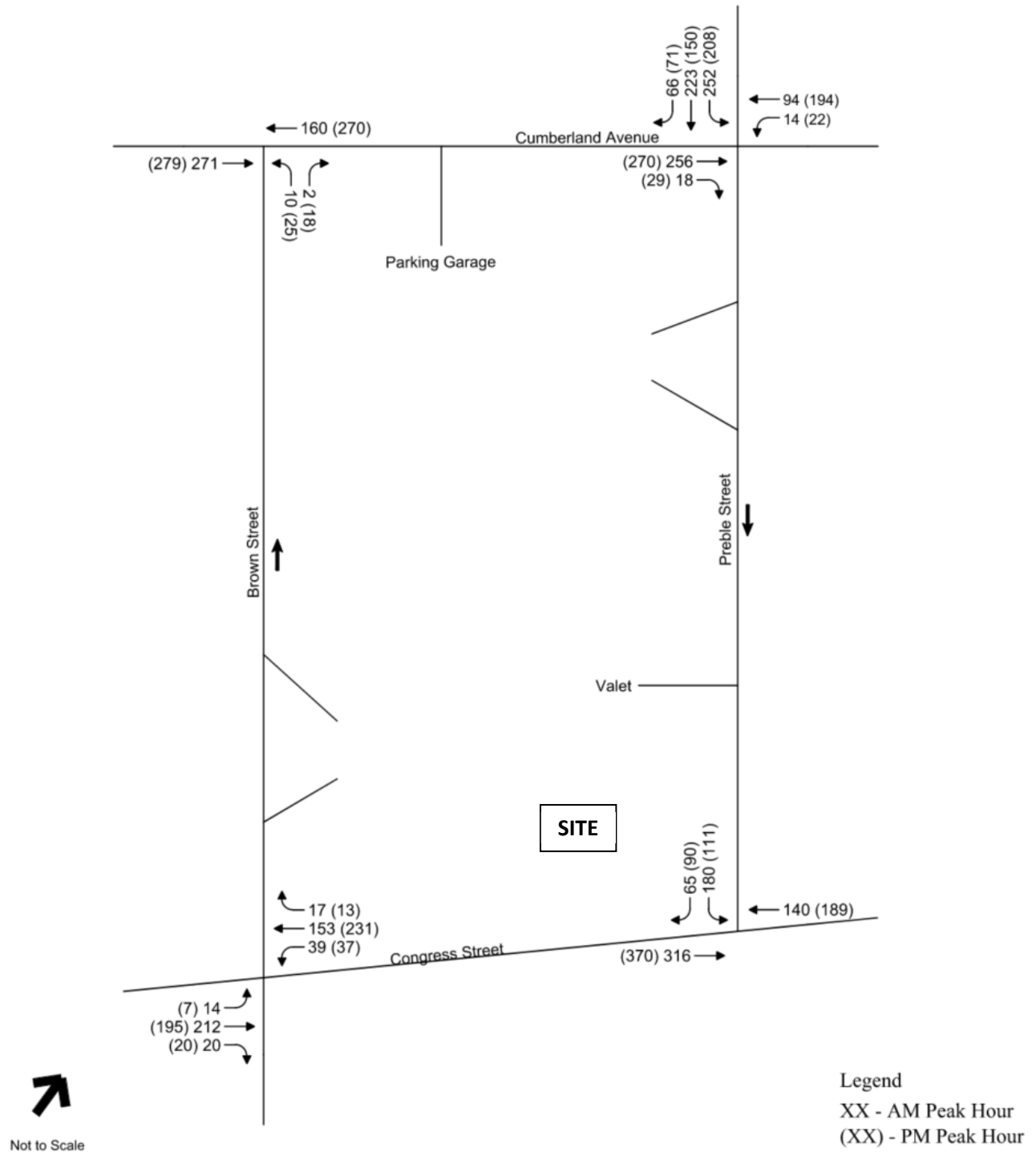
3.2 Future Conditions

Typically, transportation conditions in the study area can be expected to change in the future due to potential development/growth and planned transportation infrastructure improvements in the area. A five-year planning horizon was used to assess the study area intersections with the planned development. The traffic volumes were projected to the year 2028 to reflect growth without ("No-Build") and with ("Build") the development project and analyzed. The 2028 No-Build projected traffic volumes include growth in traffic volumes associated with generalized regional growth. The anticipated site-generated traffic volumes superimposed upon the 2028 No-Build peak hour traffic volume network reflect the 2028 Build peak hour conditions.

3.2.1 No Build Traffic Volumes

2023 Existing traffic volume networks in Figure 3 were increased by a growth rate of one (1) percent per year for five years (5.1% total growth) through 2028. The study area is already densely populated under existing conditions with limited area left to develop further; therefore, this annual growth will more than include any minor developments that may occur in the next five years. The 2028 No-Build traffic volumes for the weekday morning and evening peak hours are shown in Figure 4.

Figure 4: 2028 No-Build Traffic Volumes



3.2.2 Trip Generation

VHB has evaluated the trip generation for the redevelopment of the 477 Congress Street site. VHB calculated the peak hour trip generation of the proposed site using the 11th Edition Institute of Transportation Engineers' (ITE) trip generation rates. It is quite likely that a high percentage of retail and restaurant trips in this neighborhood are made via foot by people who are already working, shopping, or visiting the area. In the future, it is likely that a high percentage of hotel and residential trips will be made on foot to area employers, retail, and tourist destinations.

3.2.2.1 Proposed Site Trip Generation

As indicated above, the proposed development The proposed development will consist of 4,700 sf of retail, 3,500 sf of restaurant space, 138 hotel rooms and 138 apartment units at 477 Congress Street.

The proposed restaurant space was divided into the space that would primarily serve the visitors of the hotel and the space that would likely serve outside guests. The square footage of the restaurant on the first floor was included as square footage that would likely generate trips outside of the hotel. Although it is likely that the restaurant space will be a higher end restaurant, in order to present a worst-case scenario, the trip generation of the restaurant space was based on LUC 932, High Turnover Restaurant. Of the existing retail space at the site, only approximately 4,700 square feet will be maintained.

VHB has estimated the trip generation for these proposed uses. The hotel trip generation was calculated based on LUC 310, Hotel, the residential trip generation was calculated based on LUC 221, Multifamily Housing (Mid-Rise), and the retail trip generation was calculated based on LUC 820, Shopping Center. These assumptions are consistent with what was conducted in the previous TIS for the project in 2021.

The resulting trip generation for the proposed redevelopment site was estimated and is presented in Table 2. As shown, the proposed site is anticipated to generate 151 and 182 trips respectively during the weekday morning and evening peak hours.

Table 2 Trip Generation – Proposed Uses

	Hotel ¹ (138 keys)	Residential ² (138 units)	Restaurant ³ (3,500 SF)	Retail ⁴ (4,700 SF)	Total Trips
Weekday AM Peak Hour					
In	35	12	18	2	67
Out	28	39	15	2	84
Total	63	51	33	4	151
Weekday PM Peak Hour					
In	41	33	19	8	101
Out	40	21	12	8	81
Total	81	54	31	16	182

1 LUC 310 Hotel

2 LUC 221 Multi-family Housing (Mid-Rise)

3 LUC 932 High-Turnover Sit-down Restaurant

4 LUC 820 Shopping Center

3.2.2.2 Net Trip Generation

In order to understand the impacts of the revised redevelopment program, the trip generation estimate from the previously approved 2021 TIS is compared with the current trip generation estimate in Table 3 below.

Table 3 Net Trip Generation

	2021 TIS Analysis	Revised 2023 Program	Net Trips
Weekday AM Peak Hour			
In	73	67	-6
Out	54	84	30
Total	127	151	24
Weekday PM Peak Hour			
In	111	101	-10
Out	86	81	-5
Total	197	182	-15

Based on the net trips determined above, the updated redevelopment program will generate 24 additional trips during the weekday AM peak hour and 15 less trips during the weekday PM peak hour. **As shown, the redevelopment is anticipated to result in a net increase of 24 vehicular trips during the morning peak hour and a net decrease of 15 trips during the evening peak hour and will not require a MaineDOT Traffic Movement Permit.**

3.2.2.3 Adjusted Trip Generation

As outlined above, the proposed site is located so that a number of trips are likely to occur by walking, bicycling and transit. As a result, the site will generate even fewer vehicle trips than was calculated based on ITE trip rates.

3.2.2.4 Trip Distribution and Assignment

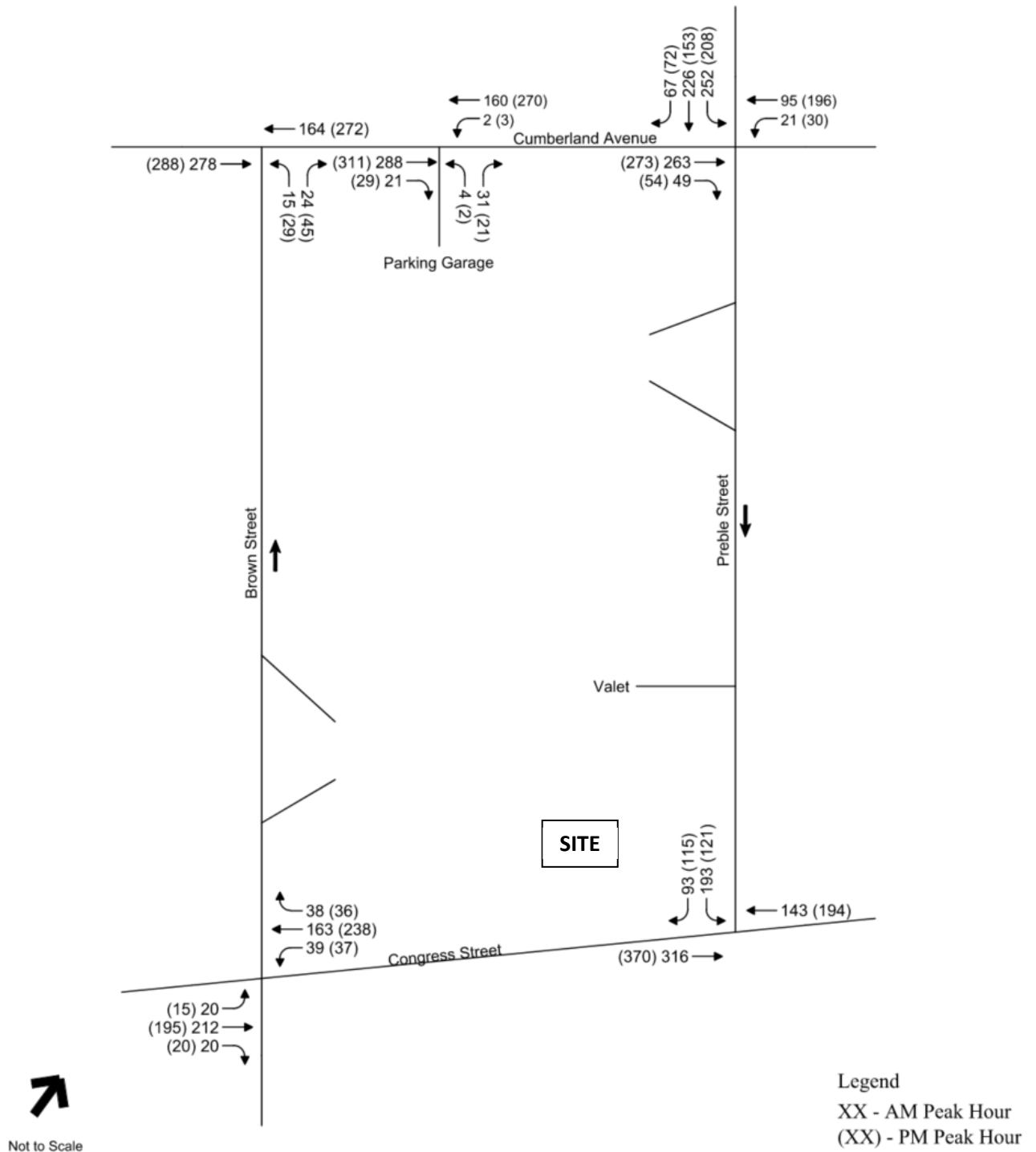
Having estimated project generated vehicle trips, the next step in the study is to determine the trip distribution of project traffic and assign these trips to the roadway network. The parking garage potentially anticipated to serve the site is located at the intersection of Cumberland Avenue and Brown Street (on the southeast corner of the intersection). As such, the planned points of vehicular access/egress will be via Cumberland Avenue.

The trip distribution for this project was based on existing travel patterns. The projected new trips associated with the proposed mixed-use development were distributed on the study area roadways based on the following assumptions:

- › 25% from the northwest on Cumberland Avenue
- › 25% from the west on Congress Street
- › 12.5% from the north on Preble Street
- › 12.5% from the northeast on Cumberland Avenue
- › 25% from the east on Congress Street

When these trips approach the site, the immediate roadway circulation will determine the travel patterns. Since Preble Street is one way southbound and Brown Street is one way northbound, trips may have to circulate around the block to get to and from the site. In addition, because many trips at the hotel will start or end with the valet operation, these trips to and from the ultimate parking location were also added to the traffic network. The 2028 Build traffic volumes for the weekday morning and evening peak hours are shown in Figure 5. Trip assignments by land use figures are provided in the Appendix.

Figure 5: 2028 Build Traffic Volumes



4

Traffic Operations Analysis

The operation of the area intersections was determined for each of the Existing, No Build and Build conditions. In addition, based on a concern raised by the city, the proposed hotel valet operations were also reviewed.

4.1 Intersection Capacity Analyses

The city previously requested that the Project conduct an operational analysis of the four intersections at the corners of the block:

- › Cumberland Avenue and Preble Street
- › Congress Street and Preble Street
- › Cumberland Avenue and Brown Street
- › Congress Street and Brown Street

Intersection capacity analyses were performed for the study area intersections. Levels of service (LOS) were calculated based on the criteria published in the 2000 Highway Capacity Manual. Level of service is the term that defines the conditions that may occur on a given roadway or at an intersection when accommodating various traffic volume loads. Levels of service range from A to F with LOS A representing generally free flowing operating conditions and LOS F representing generally congested conditions. Synchro 11 was used to determine the LOS at signalized and unsignalized intersections. Copies of the LOS calculations are provided in the Appendix.

Table 4 summarizes the operational analysis at the signalized study area intersections during the weekday AM and PM peak hours under 2023 Existing Conditions and 2028 No Build and Build conditions. Since the previously approved project has not been constructed and occupied, that traffic is not included in existing conditions. As a result, the analysis provides a conservatively high estimate of project impact. As shown, the Cumberland Avenue intersection with Preble Street is expected to operate at LOS B during the weekday AM and PM peak hours under 2023 Existing Conditions, 2028 No-Build Conditions, and 2028 Build Conditions. The Congress Street intersection with Preble Street is expected to operate at LOS A during the weekday AM and PM peak hours under 2023 Existing Conditions, 2028 No Build Conditions, and 2028 Build Conditions.

Table 4 **Signalized Intersection Operations**

Intersection	2023 Existing			2028 No-Build			2028 Build		
	v/c	Delay	LOS	v/c	Delay	LOS	v/c	Delay	LOS
Cumberland Avenue at Preble Street									
AM Peak Hour	0.55	11.7	B	0.57	12.1	B	0.59	13.4	B
PM Peak Hour	0.50	10.2	B	0.51	10.5	B	0.53	11.3	B
Congress Street at Preble Street									
AM Peak Hour	0.52	6.9	A	0.53	7.0	A	0.54	7.1	A
PM Peak Hour	0.51	6.3	A	0.53	6.4	A	0.53	6.6	A

v/c – volume to capacity ratio

delay – expressed in seconds per vehicle

LOS – level of service

Table 5 summarizes the operational analysis at the unsignalized study area intersections during the weekday AM and PM peak hours under 2023 Existing Conditions and future 2028 No Build and Build conditions. As shown, the Brown Street intersections with Cumberland Avenue is expected to operate at LOS A during the weekday AM and PM peak hours under 2023 Existing Conditions, 2028 No Build, and 2028 Build Conditions. The projected average delays are only expected to increase by 1 second during the AM and PM peak periods.

The Brown Street intersection with Congress Street does not have any side street approach traffic to assess the operations of the intersection. Since the north and south legs of the intersection are one-way away from the intersection, the only conflicting movements are the Congress Street left turns. These movements are projected to operate efficiently during the weekday AM and PM peak hours under 2023 Existing and 2028 No-Build and Build Conditions with minimal delays.

Table 5 Unsignalized Intersection Operations

Intersection	2023 Existing			2028 No-Build			2028 Build		
	Delay	LOS	Queue*	Delay	LOS	Queue	Delay	LOS	Queue
Cumberland Avenue at Brown Street (northbound)									
AM Peak Hour	11.8	B	2	12.1	B	NB-3	11.7	B	8
PM Peak Hour	12.1	B	9	12.4	B	NB-9	12.5	B	16
Congress Street at Brown Street (westbound)									
AM Peak Hour	1.7	A	3	1.7	A	WB-3	1.6	A	3
PM Peak Hour	0.5	A	1	1.3	A	WB-2	1.2	A	2

v/c – volume to capacity ratio

delay – expressed in seconds per vehicle

LOS – level of service

*Longest approach 95th percentile queue (feet)

5

Conclusions

The modified redevelopment program of the 477 Congress Street site will result in a net increase of 24 morning peak hour trips and a net decrease of 15 evening peak hour trips and as such will not require a MaineDOT traffic access permit. As shown, the study area intersections are projected to operate comparable to 2028 No-Build conditions with a projected increase in average delays of one to two seconds during the weekday AM and PM peak hours.

The proposed redevelopment is anticipated to have minimal impacts to traffic operations and will generate less traffic during the PM peak hour compared to the analysis presented in the recent 2021 TIS.

Site Land Uses and Descriptions				AM PK HR OF ADJACENT STREET TRAFFIC												PM PK HR OF ADJACENT STREET TRAFFIC											
Code	Land Use	Size	Unit	directional dist.		average				regression		# trips				directional dist.		average				regression		# trips			
				% enter	% exit	# studies	Avg Rate	Std Dev.	Total by Avg	r ²	total by Eq'n	Method Chosen	Total Trips			% enter	% exit	# studies	Avg Rate	Std Dev.	Total by Avg	r ²	total by Eq'n	Method Chosen	Total Trips		
Time and Temperature Building																											
310	Hotel	138	Dwelling Units	56%	44%	28	0.46	0.14	63	0.84	62	Average	63	35	28	51%	49%	31	0.59	0.22	81	0.78	74	Average	81	41	40
221	Multifamily Housing (Mid-Rise)	138	Dwelling Units	23%	77%	30	0.37	0.09	51	0.91	49	Average	51	12	39	61%	39%	31	0.39	0.08	54	0.91	54	Average	54	33	21
932	High-Turnover (Sit-Down) Restauran	3.5	KSF	55%	45%	37	9.57	11.61	33	-	-	Average	33	18	15	61%	39%	104	9.05	6.18	32	-	-	Average	32	19	12
820	Shopping Center	4.7	KSF	62%	38%	44	0.84	0.42	4	0.56	137	Average	4	2	2	48%	52%	126	3.40	1.26	16	0.70	62	Average	16	8	8

Time + Temp Building
Trip Generation Summary

Peak Period	2023 Proposed Site Generated Trips					(2021 Proposed) Existing Trip Generation					Net New
	Total	Transit	Bike & Pedestrian	Internal Capture	Net Vehicles	Total	Transit	Bike & Pedestrian	Internal Capture	Net Vehicles	Trips Total
Weekday Morning		4%	43%	8%			4%	43%	8%		
Enter	67	3	29	6	29	73	3	31	6	33	-6
Exit	<u>84</u>	<u>3</u>	<u>36</u>	<u>6</u>	<u>38</u>	<u>54</u>	<u>2</u>	<u>23</u>	4	<u>24</u>	30
Total	151	6	65	12	67	127	5	55	11	57	24
Weekday Evening		4%	43%	19%			4%	43%	6%		
Enter	101	4	43	17	36	111	4	48	7	52	-11
Exit	<u>82</u>	<u>3</u>	<u>35</u>	<u>17</u>	<u>26</u>	<u>86</u>	<u>3</u>	<u>37</u>	5	<u>40</u>	-5
Total	182	7	78	35	62	197	8	85	12	93	-16

NCHRP 8-51 Internal Trip Capture Estimation Tool					
Project Name:	Time + Temp Building			Organization:	VHB
Project Location:	477 Congress St			Performed By:	MC
Scenario Description:				Date:	10/17/2023
Analysis Year:	2023			Checked By:	MH
Analysis Period:	AM Street Peak Hour			Date:	10/17/2023

Table 1-A: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)						
Land Use	Development Data (For Information Only)			Estimated Vehicle-Trips		
	ITE LUCs ¹	Quantity	Units	Total	Entering	Exiting
Office				0		
Retail	820	5	1K sf	4	2	2
Restaurant	932	4	1K sf	33	18	15
Cinema/Entertainment				0		
Residential	221	138	Dwelling Units	51	12	39
Hotel	310	138	Rooms	63	35	28
All Other Land Uses ²				0		
Total				151	67	84

Table 2-A: Mode Split and Vehicle Occupancy Estimates						
Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.	% Transit	% Non-Motorized	Veh. Occ.	% Transit	% Non-Motorized
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses ²						

Table 3-A: Average Land Use Interchange Distances (Feet Walking Distance)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-A: Internal Person-Trip Origin-Destination Matrix*						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	0		0	0	0	0
Restaurant	0	0		0	1	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	0	4	0		0
Hotel	0	0	1	0	0	

Table 5-A: Computations Summary			
	Total	Entering	Exiting
All Person-Trips	151	67	84
Internal Capture Percentage	8%	9%	7%
External Vehicle-Trips ³	139	61	78
External Transit-Trips ⁴	0	0	0
External Non-Motorized Trips ⁴	0	0	0

Table 6-A: Internal Trip Capture Percentages by Land Use		
Land Use	Entering Trips	Exiting Trips
Office	N/A	N/A
Retail	0%	0%
Restaurant	28%	7%
Cinema/Entertainment	N/A	N/A
Residential	8%	10%
Hotel	0%	4%

¹Land Use Codes (LUCs) from *Trip Generation Informational Report*, published by the Institute of Transportation Engineers.

²Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

³Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A

⁴Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas Transportation Institute

Project Name:	Time + Temp Building
Analysis Period:	AM Street Peak Hour

Table 7-A: Conversion of Vehicle-Trip Ends to Person-Trip Ends						
Land Use	Table 7-A (D): Entering Trips			Table 7-A (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	0	0	1.00	0	0
Retail	1.00	2	2	1.00	2	2
Restaurant	1.00	18	18	1.00	15	15
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	12	12	1.00	39	39
Hotel	1.00	35	35	1.00	28	28

Table 8-A (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	1		0	0	0	0
Restaurant	5	2		0	1	0
Cinema/Entertainment	0	0	0		0	0
Residential	1	0	8	0		0
Hotel	21	4	3	0	0	

Table 8-A (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		1	4	0	0	0
Retail	0		9	0	0	0
Restaurant	0	0		0	1	1
Cinema/Entertainment	0	0	0		0	0
Residential	0	0	4	0		0
Hotel	0	0	1	0	0	

Table 9-A (D): Internal and External Trips Summary (Entering Trips)						
Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Office	0	0	0	0	0	0
Retail	0	2	2	2	0	0
Restaurant	5	13	18	13	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	1	11	12	11	0	0
Hotel	0	35	35	35	0	0
All Other Land Uses ³	0	0	0	0	0	0

Table 9-A (O): Internal and External Trips Summary (Exiting Trips)						
Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Office	0	0	0	0	0	0
Retail	0	2	2	2	0	0
Restaurant	1	14	15	14	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	4	35	39	35	0	0
Hotel	1	27	28	27	0	0
All Other Land Uses ³	0	0	0	0	0	0

¹Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A

²Person-Trips

³Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.

NCHRP 8-51 Internal Trip Capture Estimation Tool					
Project Name:	Time + Temp Building			Organization:	VHB
Project Location:	477 Congress St			Performed By:	MC
Scenario Description:				Date:	10/17/2023
Analysis Year:	2023			Checked By:	MH
Analysis Period:	PM Street Peak Hour			Date:	10/17/2023

Table 1-P: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)						
Land Use	Development Data (For Information Only)			Estimated Vehicle-Trips		
	ITE LUCs ¹	Quantity	Units	Total	Entering	Exiting
Office				0		
Retail	820	5	1K sf	16	8	8
Restaurant	932	4	1K sf	31	19	12
Cinema/Entertainment				0		
Residential	221	138	Dwelling Units	54	33	21
Hotel	310	138	Rooms	81	41	40
All Other Land Uses ²				0		
Total				182	101	81

Table 2-P: Mode Split and Vehicle Occupancy Estimates						
Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.	% Transit	% Non-Motorized	Veh. Occ.	% Transit	% Non-Motorized
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses ²						

Table 3-P: Average Land Use Interchange Distances (Feet Walking Distance)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-P: Internal Person-Trip Origin-Destination Matrix*						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	0		2	0	2	0
Restaurant	0	4		0	2	1
Cinema/Entertainment	0	0	0		0	0
Residential	0	1	3	0		1
Hotel	0	0	1	0	0	

Table 5-P: Computations Summary			
	Total	Entering	Exiting
All Person-Trips	182	101	81
Internal Capture Percentage	19%	17%	21%
External Vehicle-Trips ³	148	84	64
External Transit-Trips ⁴	0	0	0
External Non-Motorized Trips ⁴	0	0	0

Table 6-P: Internal Trip Capture Percentages by Land Use		
Land Use	Entering Trips	Exiting Trips
Office	N/A	N/A
Retail	63%	50%
Restaurant	32%	58%
Cinema/Entertainment	N/A	N/A
Residential	12%	24%
Hotel	5%	3%

¹Land Use Codes (LUCs) from *Trip Generation Informational Report*, published by the Institute of Transportation Engineers.

²Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

³Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

⁴Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas Transportation Institute

Project Name:	Time + Temp Building
Analysis Period:	PM Street Peak Hour

Table 7-P: Conversion of Vehicle-Trip Ends to Person-Trip Ends						
Land Use	Table 7-P (D): Entering Trips			Table 7-P (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	0	0	1.00	0	0
Retail	1.00	8	8	1.00	8	8
Restaurant	1.00	19	19	1.00	12	12
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	33	33	1.00	21	21
Hotel	1.00	41	41	1.00	40	40

Table 8-P (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	0		2	0	2	0
Restaurant	0	5		1	2	1
Cinema/Entertainment	0	0	0		0	0
Residential	1	9	4	0		1
Hotel	0	6	27	0	1	

Table 8-P (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		1	0	0	1	0
Retail	0		6	0	15	7
Restaurant	0	4		0	5	29
Cinema/Entertainment	0	0	1		1	0
Residential	0	1	3	0		5
Hotel	0	0	1	0	0	

Table 9-P (D): Internal and External Trips Summary (Entering Trips)						
Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Office	0	0	0	0	0	0
Retail	5	3	8	3	0	0
Restaurant	6	13	19	13	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	4	29	33	29	0	0
Hotel	2	39	41	39	0	0
All Other Land Uses ³	0	0	0	0	0	0

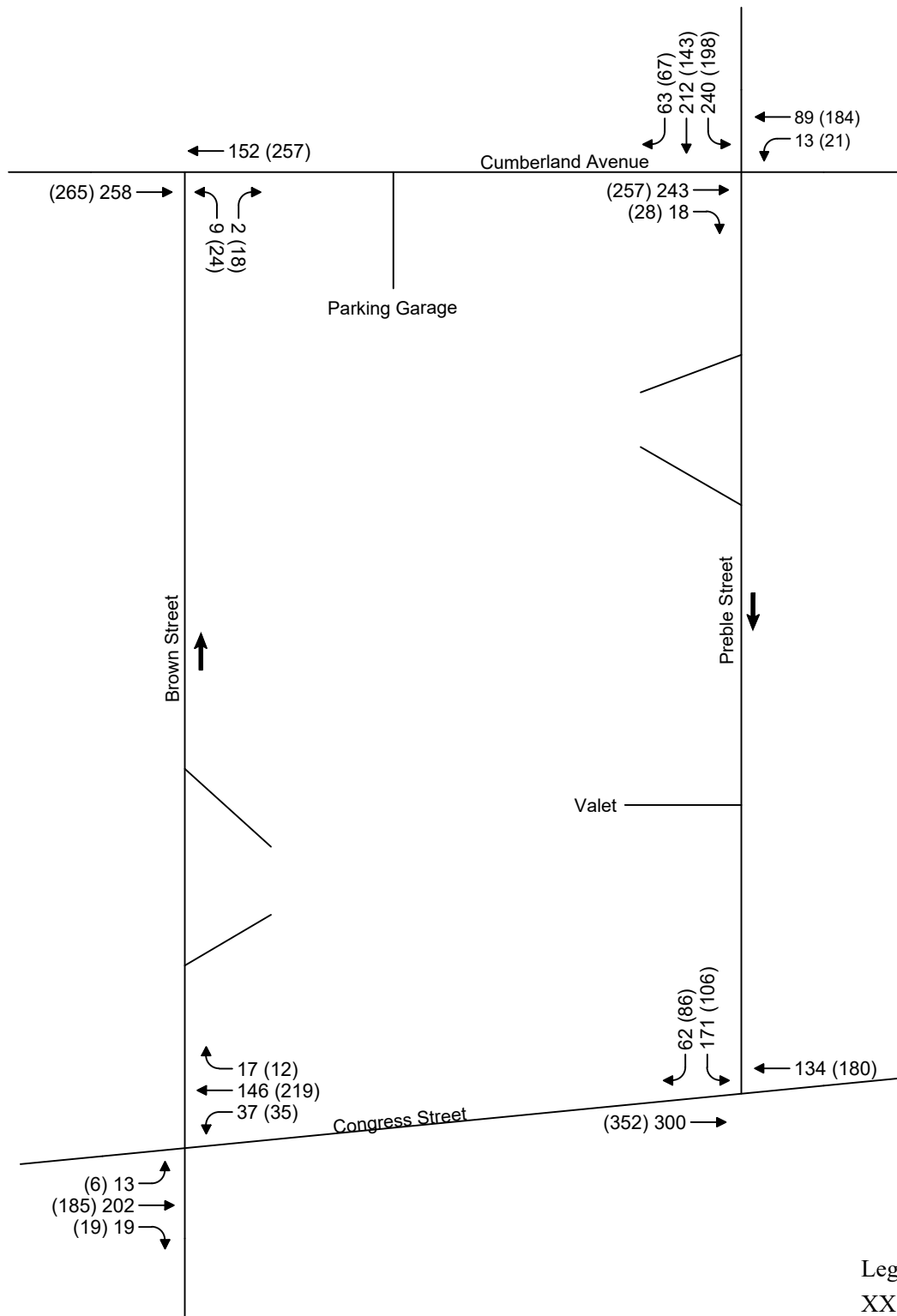
Table 9-P (O): Internal and External Trips Summary (Exiting Trips)						
Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Office	0	0	0	0	0	0
Retail	4	4	8	4	0	0
Restaurant	7	5	12	5	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	5	16	21	16	0	0
Hotel	1	39	40	39	0	0
All Other Land Uses ³	0	0	0	0	0	0

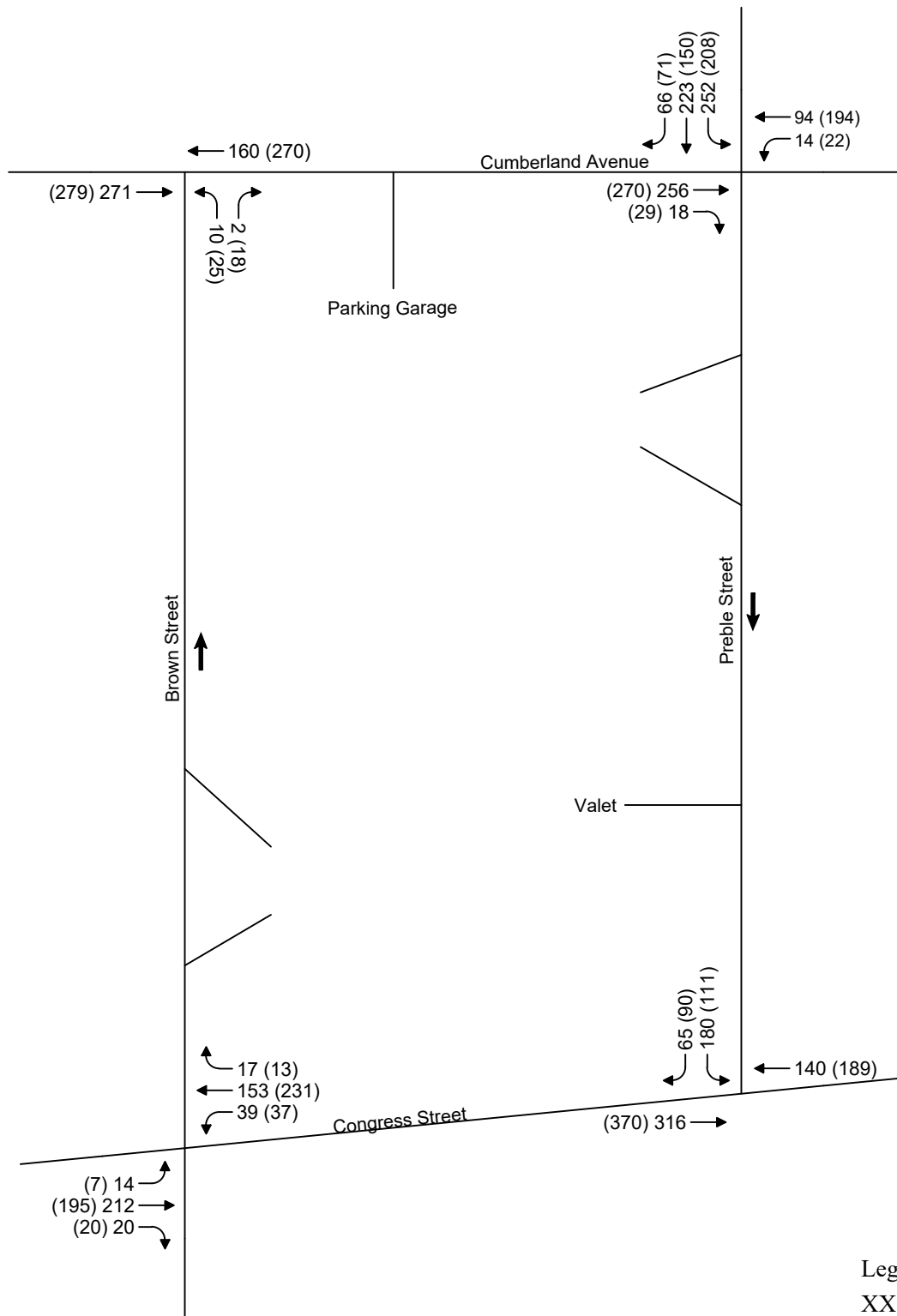
¹Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

²Person-Trips

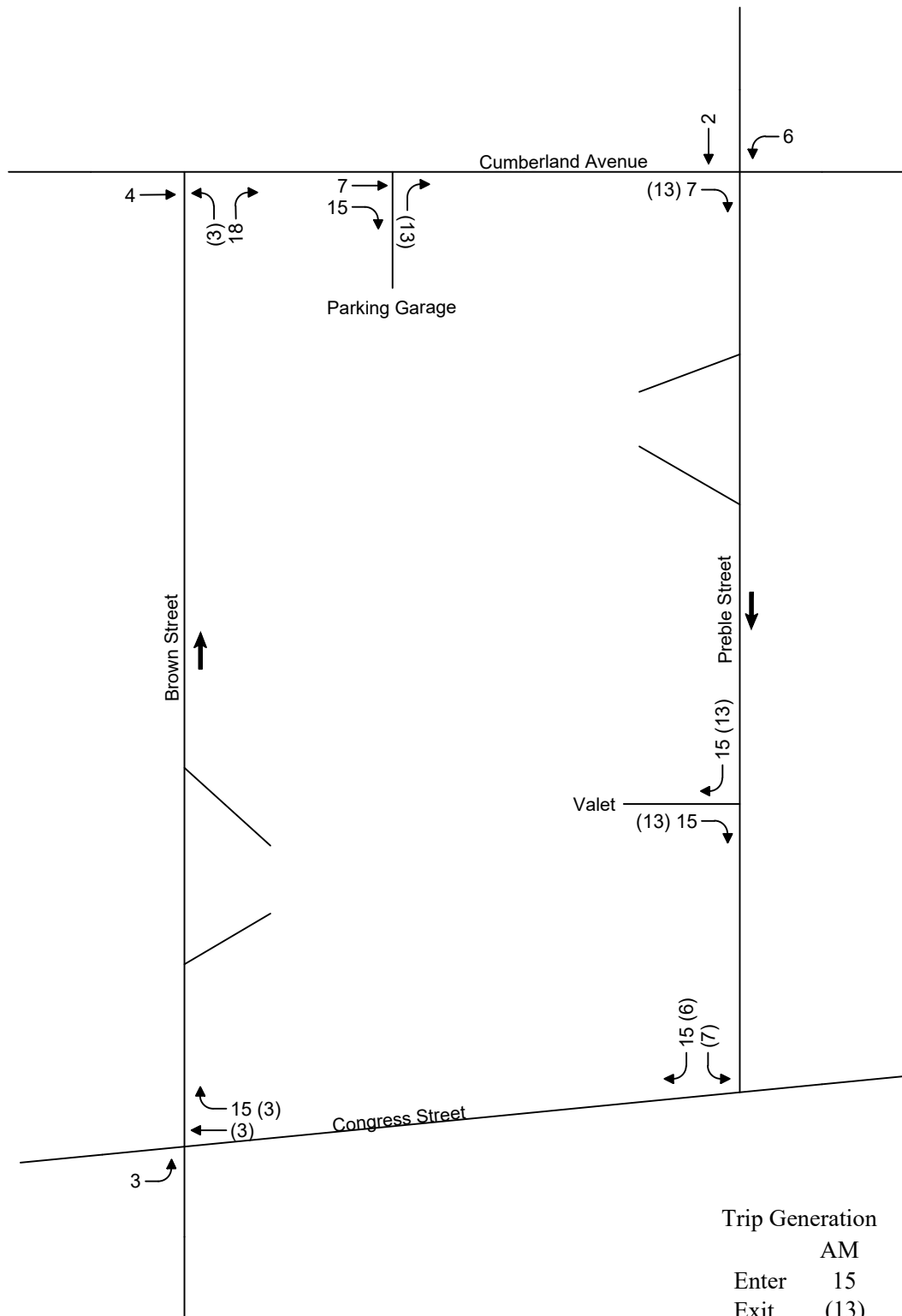
³Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.



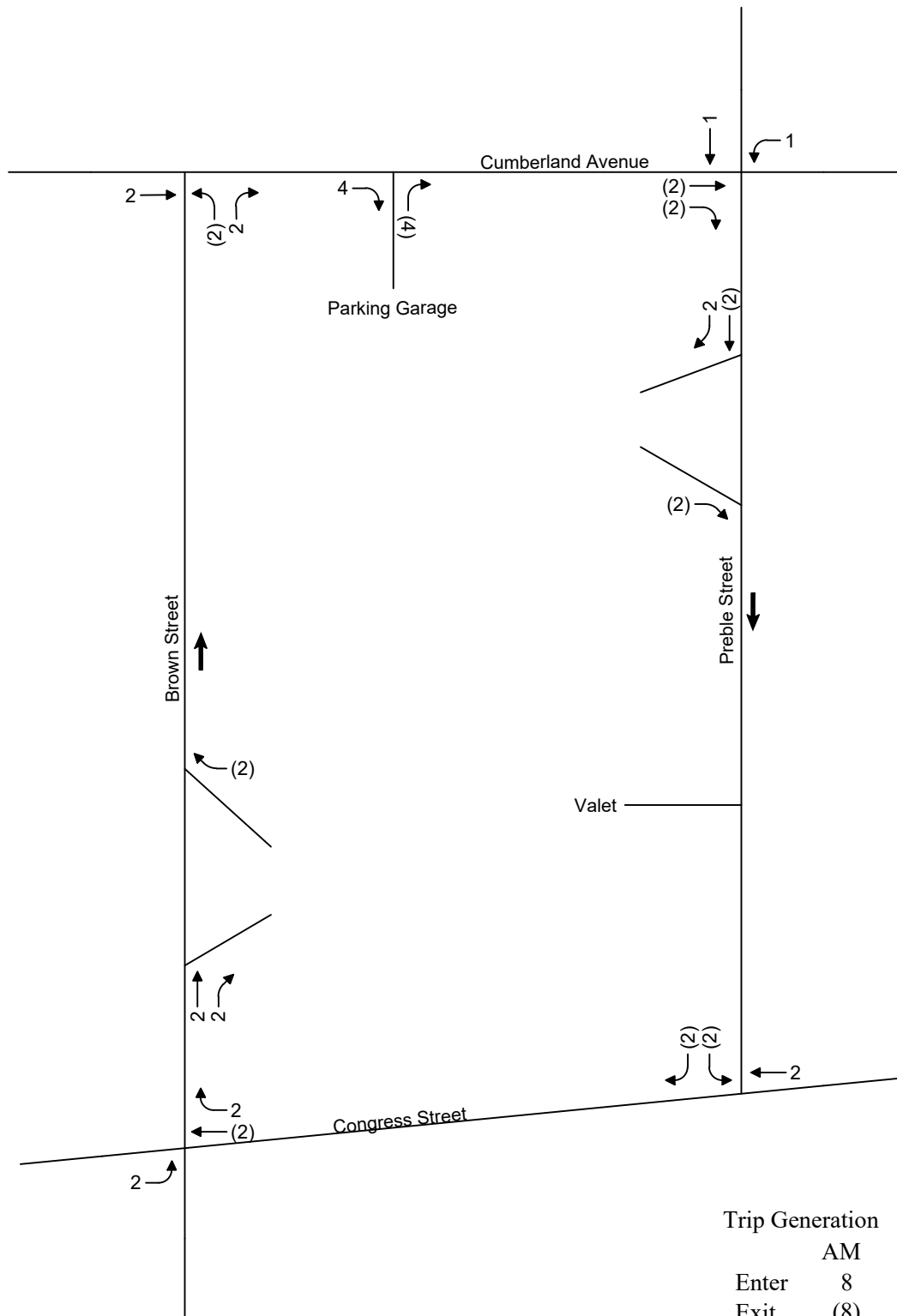


Not to Scale

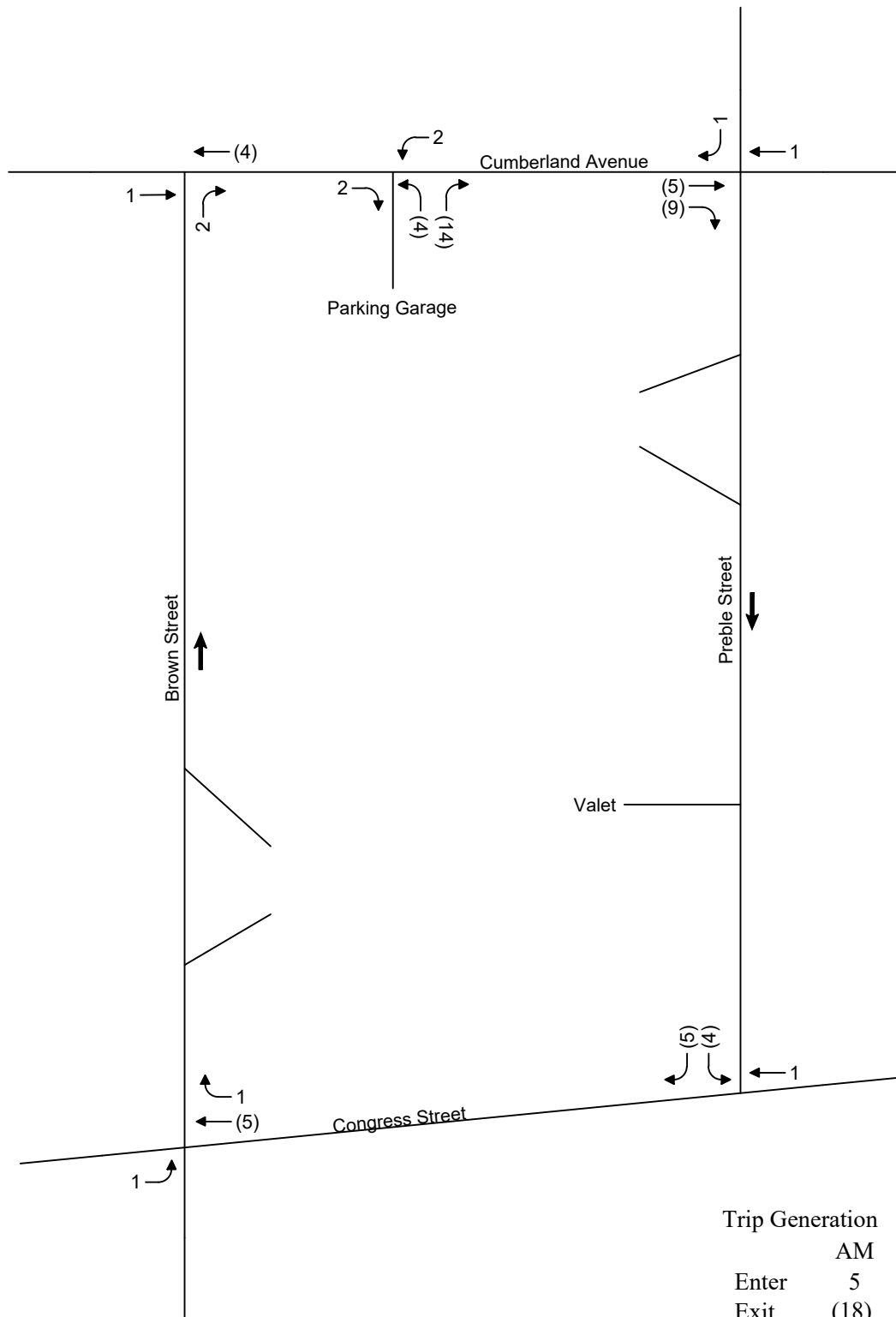


Trip Generation		Legend
	AM	Incoming Trips
Enter	15	(Outgoing Trips)
Exit	(13)	
Total	28	

Not to Scale

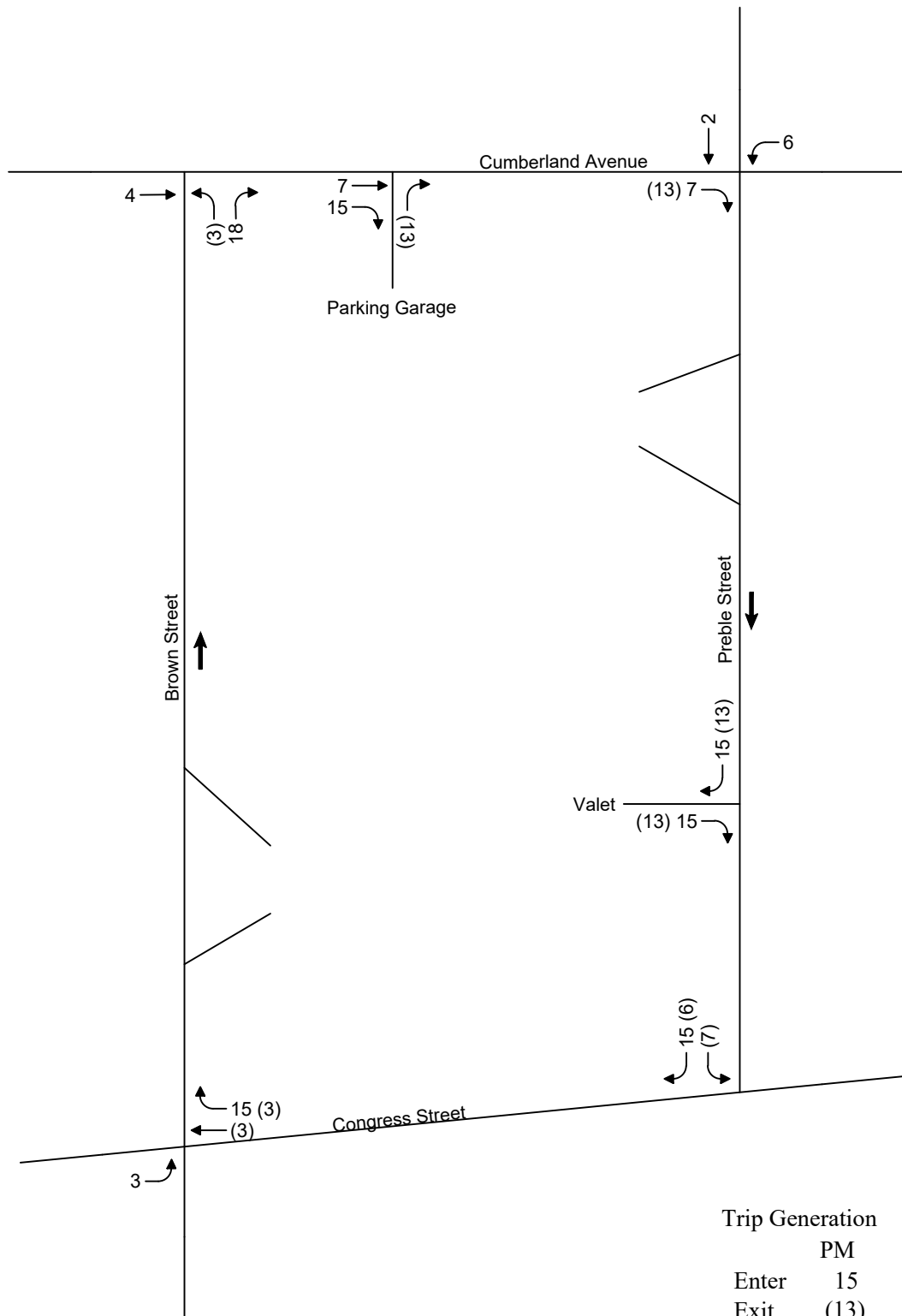


Trip Generation		Legend
	AM	
Enter	8	Incoming Trips
Exit	(8)	(Outgoing Trips)
Total	16	

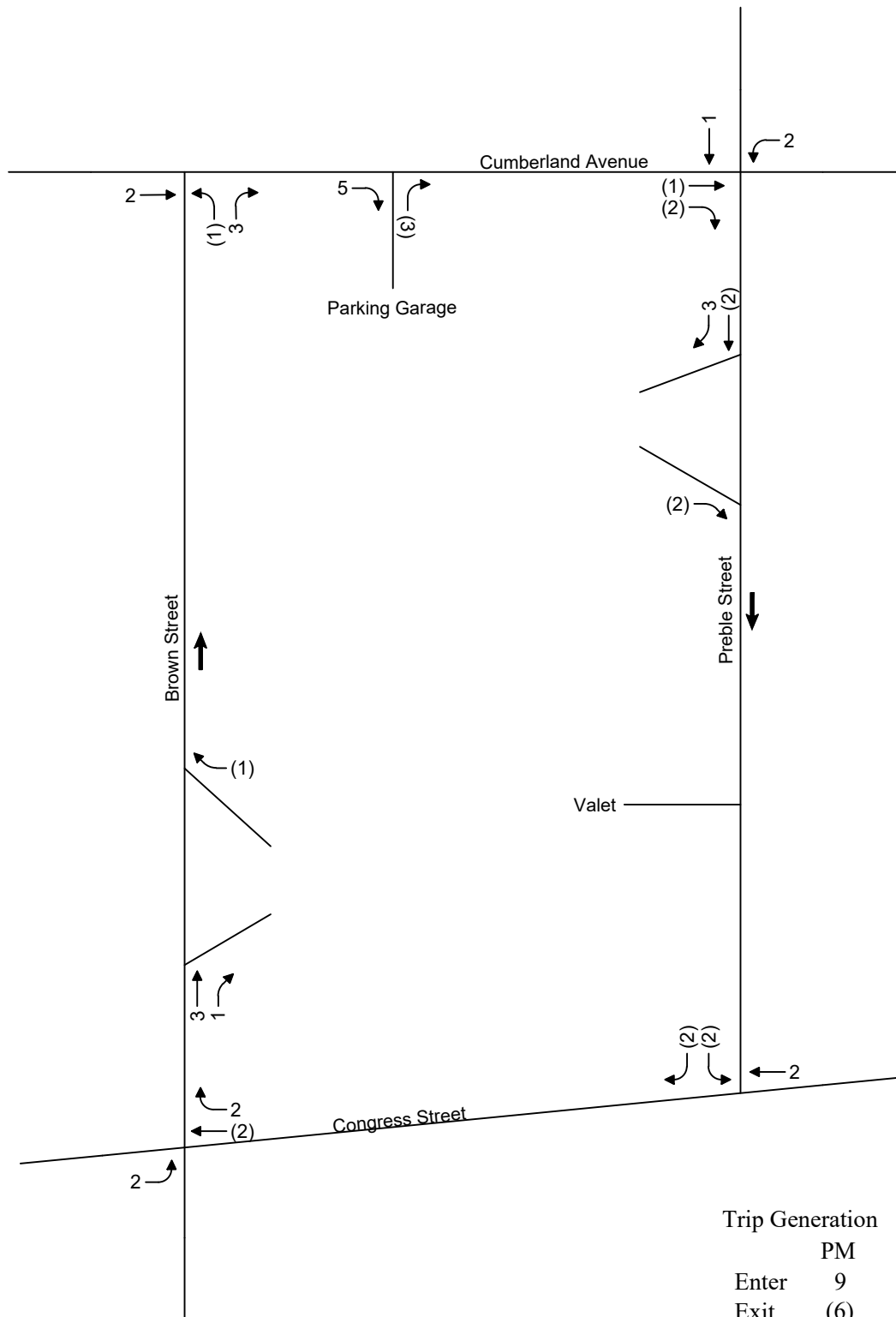


Trip Generation		Legend
	AM	
Enter	5	Incoming Trips
Exit	(18)	(Outgoing Trips)
Total	23	

Not to Scale

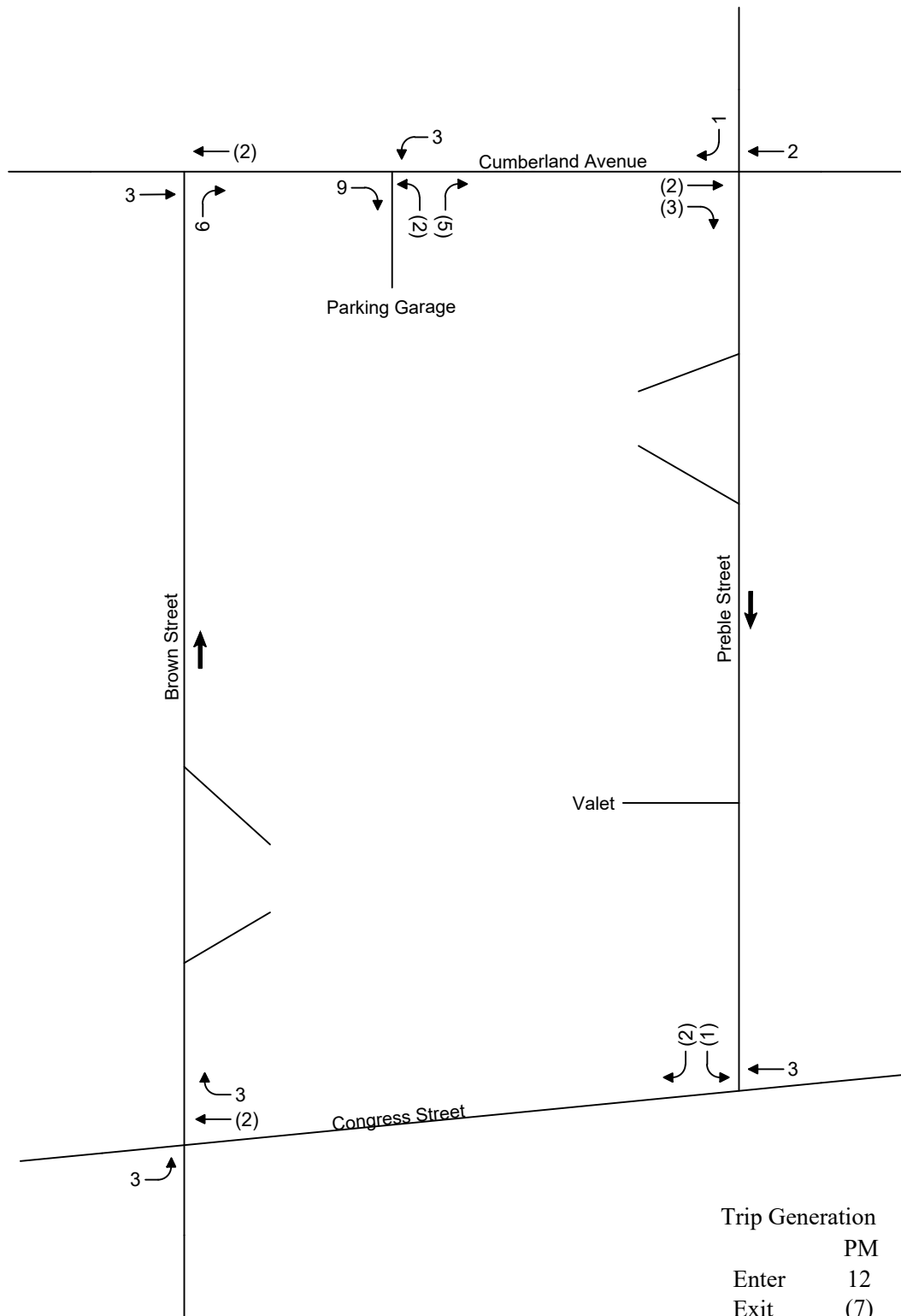


Trip Generation		Legend
	PM	
Enter	15	Incoming Trips
Exit	(13)	(Outgoing Trips)
Total	28	



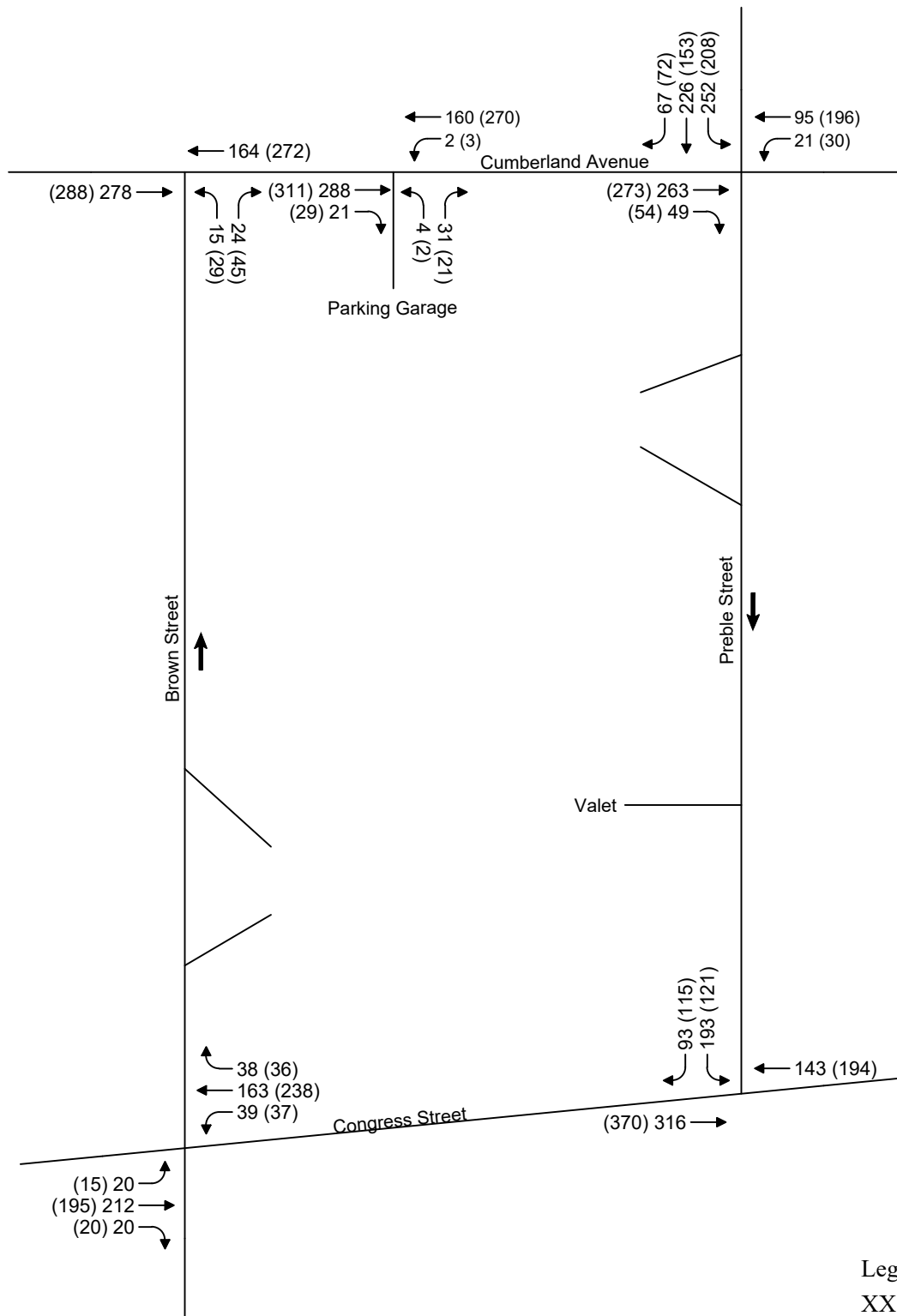
Trip Generation		Legend
	PM	
Enter	9	Incoming Trips
Exit	(6)	(Outgoing Trips)
Total	15	

Not to Scale



Trip Generation		Legend
	PM	Incoming Trips
Enter	12	(Outgoing Trips)
Exit	(7)	
Total	19	

Not to Scale

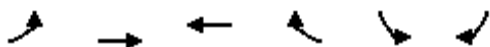


Legend
 XX - AM Peak Hour
 (XX) - PM Peak Hour

HCM Signalized Intersection Capacity Analysis

9: Congress St & Preble St

10/24/2023



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↘	↗
Traffic Volume (vph)	0	300	134	0	171	62
Future Volume (vph)	0	300	134	0	171	62
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5		4.5	4.5
Lane Util. Factor		1.00	1.00		1.00	1.00
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		1759	1759		1770	1538
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		1759	1759		1770	1538
Peak-hour factor, PHF	0.92	0.92	0.91	0.91	0.93	0.93
Adj. Flow (vph)	0	326	147	0	184	67
RTOR Reduction (vph)	0	0	0	0	0	50
Lane Group Flow (vph)	0	326	147	0	184	17
Heavy Vehicles (%)	0%	8%	8%	0%	2%	5%
Turn Type		NA	NA		Perm	Perm
Protected Phases		6	2			
Permitted Phases					4	4
Actuated Green, G (s)		11.1	11.1		7.0	7.0
Effective Green, g (s)		11.1	11.1		7.0	7.0
Actuated g/C Ratio		0.41	0.41		0.26	0.26
Clearance Time (s)		4.5	4.5		4.5	4.5
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		720	720		457	397
v/s Ratio Prot		c0.19	0.08			
v/s Ratio Perm					c0.10	0.01
v/c Ratio		0.45	0.20		0.40	0.04
Uniform Delay, d1		5.8	5.2		8.3	7.5
Progression Factor		1.00	1.00		1.00	1.00
Incremental Delay, d2		0.5	0.1		0.6	0.0
Delay (s)		6.3	5.3		8.9	7.6
Level of Service		A	A		A	A
Approach Delay (s)		6.3	5.3		8.6	
Approach LOS		A	A		A	
Intersection Summary						
HCM 2000 Control Delay			6.9		HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.52			
Actuated Cycle Length (s)			27.1		Sum of lost time (s)	12.0
Intersection Capacity Utilization			32.8%		ICU Level of Service	A
Analysis Period (min)			15			
c Critical Lane Group						

HCM Signalized Intersection Capacity Analysis

10: Preble St & Cumberland Ave

10/24/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↶		↶	↶					↶	↶	
Traffic Volume (vph)	0	243	18	13	89	0	0	0	0	240	212	63
Future Volume (vph)	0	243	18	13	89	0	0	0	0	240	212	63
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5		4.5	4.5					4.5	4.5	
Lane Util. Factor		1.00		1.00	1.00					1.00	1.00	
Frt		0.99		1.00	1.00					1.00	0.97	
Flt Protected		1.00		0.95	1.00					0.95	1.00	
Satd. Flow (prot)		1848		1671	1863					1752	1793	
Flt Permitted		1.00		0.38	1.00					0.95	1.00	
Satd. Flow (perm)		1848		667	1863					1752	1793	
Peak-hour factor, PHF	0.81	0.81	0.81	0.75	0.75	0.75	0.92	0.92	0.92	0.81	0.81	0.81
Adj. Flow (vph)	0	300	22	17	119	0	0	0	0	296	262	78
RTOR Reduction (vph)	0	5	0	0	0	0	0	0	0	0	16	0
Lane Group Flow (vph)	0	317	0	17	119	0	0	0	0	296	324	0
Heavy Vehicles (%)	0%	2%	0%	8%	2%	0%	2%	2%	2%	3%	3%	0%
Turn Type		NA		pm+pt	NA					Perm	NA	
Protected Phases		6		5	2						4	
Permitted Phases				2						4		
Actuated Green, G (s)		13.0		18.4	18.4					12.1	12.1	
Effective Green, g (s)		13.0		18.4	18.4					12.1	12.1	
Actuated g/C Ratio		0.33		0.47	0.47					0.31	0.31	
Clearance Time (s)		4.5		4.5	4.5					4.5	4.5	
Vehicle Extension (s)		3.0		3.0	3.0					3.0	3.0	
Lane Grp Cap (vph)		608		333	867					536	549	
v/s Ratio Prot		c0.17		0.00	c0.06						c0.18	
v/s Ratio Perm				0.02						0.17		
v/c Ratio		0.52		0.05	0.14					0.55	0.59	
Uniform Delay, d1		10.7		6.1	6.0					11.4	11.6	
Progression Factor		1.00		1.00	1.00					1.00	1.00	
Incremental Delay, d2		0.8		0.1	0.1					1.2	1.7	
Delay (s)		11.5		6.2	6.1					12.7	13.3	
Level of Service		B		A	A					B	B	
Approach Delay (s)		11.5			6.1			0.0			13.0	
Approach LOS		B			A			A			B	
Intersection Summary												
HCM 2000 Control Delay			11.7			HCM 2000 Level of Service				B		
HCM 2000 Volume to Capacity ratio			0.55									
Actuated Cycle Length (s)			39.5			Sum of lost time (s)				13.5		
Intersection Capacity Utilization			36.4%			ICU Level of Service				A		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis

5: Brown St & Congress St

10/24/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	202	19	37	146	17	0	0	0	0	0	0
Future Volume (Veh/h)	13	202	19	37	146	17	0	0	0	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.91	0.91	0.91	0.79	0.79	0.79	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	14	222	21	47	185	22	0	0	0	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)					325							
pX, platoon unblocked												
vC, conflicting volume	207			243			550	562	232	550	561	196
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	207			243			550	562	232	550	561	196
tC, single (s)	4.2			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.3			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			96			100	100	100	100	100	100
cM capacity (veh/h)	1329			1335			430	416	807	430	417	845
Direction, Lane #	EB 1	WB 1										
Volume Total	257	254										
Volume Left	14	47										
Volume Right	21	22										
cSH	1329	1335										
Volume to Capacity	0.01	0.04										
Queue Length 95th (ft)	1	3										
Control Delay (s)	0.5	1.7										
Lane LOS	A	A										
Approach Delay (s)	0.5	1.7										
Approach LOS												
Intersection Summary												
Average Delay		1.1										
Intersection Capacity Utilization		25.5%	ICU Level of Service					A				
Analysis Period (min)		15										

HCM Unsignalized Intersection Capacity Analysis

6: Brown St & Cumberland Ave

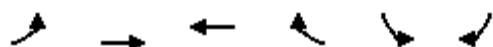
10/24/2023

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑	↘	↗
Traffic Volume (veh/h)	258	0	0	152	9	2
Future Volume (Veh/h)	258	0	0	152	9	2
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.79	0.79	0.88	0.88	0.69	0.69
Hourly flow rate (vph)	327	0	0	173	13	3
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)				341		
pX, platoon unblocked						
vC, conflicting volume			327		500	327
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			327		500	327
tC, single (s)			4.1		6.5	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.6	3.3
p0 queue free %			100		97	100
cM capacity (veh/h)			1244		515	719
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	327	173	16			
Volume Left	0	0	13			
Volume Right	0	0	3			
cSH	1700	1700	544			
Volume to Capacity	0.19	0.10	0.03			
Queue Length 95th (ft)	0	0	2			
Control Delay (s)	0.0	0.0	11.8			
Lane LOS			B			
Approach Delay (s)	0.0	0.0	11.8			
Approach LOS			B			
Intersection Summary						
Average Delay			0.4			
Intersection Capacity Utilization			23.6%	ICU Level of Service		A
Analysis Period (min)			15			

HCM Signalized Intersection Capacity Analysis

9: Congress St & Preble St

10/24/2023



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↘	↘
Traffic Volume (vph)	0	352	180	0	106	86
Future Volume (vph)	0	352	180	0	106	86
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5		4.5	4.5
Lane Util. Factor		1.00	1.00		1.00	1.00
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		1792	1900		1752	1553
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		1792	1900		1752	1553
Peak-hour factor, PHF	0.89	0.89	0.95	0.95	0.91	0.91
Adj. Flow (vph)	0	396	189	0	116	95
RTOR Reduction (vph)	0	0	0	0	0	75
Lane Group Flow (vph)	0	396	189	0	116	20
Heavy Vehicles (%)	0%	6%	0%	4%	3%	4%
Turn Type		NA	NA		Perm	Perm
Protected Phases		6	2			
Permitted Phases					4	4
Actuated Green, G (s)		12.4	12.4		5.8	5.8
Effective Green, g (s)		12.4	12.4		5.8	5.8
Actuated g/C Ratio		0.46	0.46		0.21	0.21
Clearance Time (s)		4.5	4.5		4.5	4.5
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		816	866		373	331
v/s Ratio Prot		c0.22	0.10			
v/s Ratio Perm					c0.07	0.01
v/c Ratio		0.49	0.22		0.31	0.06
Uniform Delay, d1		5.2	4.5		9.0	8.5
Progression Factor		1.00	1.00		1.00	1.00
Incremental Delay, d2		0.5	0.1		0.5	0.1
Delay (s)		5.6	4.6		9.5	8.6
Level of Service		A	A		A	A
Approach Delay (s)		5.6	4.6		9.1	
Approach LOS		A	A		A	
Intersection Summary						
HCM 2000 Control Delay			6.3		HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.51			
Actuated Cycle Length (s)			27.2		Sum of lost time (s)	12.0
Intersection Capacity Utilization			31.9%		ICU Level of Service	A
Analysis Period (min)			15			
c Critical Lane Group						

HCM Signalized Intersection Capacity Analysis

10: Preble St & Cumberland Ave

10/24/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	257	28	21	184	0	0	0	0	198	143	67
Future Volume (vph)	0	257	28	21	184	0	0	0	0	198	143	67
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5		4.5	4.5					4.5	4.5	
Lane Util. Factor		1.00		1.00	1.00					1.00	1.00	
Frt		0.99		1.00	1.00					1.00	0.95	
Flt Protected		1.00		0.95	1.00					0.95	1.00	
Satd. Flow (prot)		1858		1641	1845					1770	1773	
Flt Permitted		1.00		0.38	1.00					0.95	1.00	
Satd. Flow (perm)		1858		651	1845					1770	1773	
Peak-hour factor, PHF	0.85	0.85	0.85	0.92	0.92	0.92	0.92	0.92	0.92	0.87	0.87	0.87
Adj. Flow (vph)	0	302	33	23	200	0	0	0	0	228	164	77
RTOR Reduction (vph)	0	7	0	0	0	0	0	0	0	0	26	0
Lane Group Flow (vph)	0	328	0	23	200	0	0	0	0	228	215	0
Heavy Vehicles (%)	0%	1%	0%	10%	3%	0%	2%	2%	2%	2%	3%	0%
Turn Type		NA		pm+pt	NA					Perm	NA	
Protected Phases		6		5	2						4	
Permitted Phases				2						4		
Actuated Green, G (s)		13.0		18.4	18.4					10.5	10.5	
Effective Green, g (s)		13.0		18.4	18.4					10.5	10.5	
Actuated g/C Ratio		0.34		0.49	0.49					0.28	0.28	
Clearance Time (s)		4.5		4.5	4.5					4.5	4.5	
Vehicle Extension (s)		3.0		3.0	3.0					3.0	3.0	
Lane Grp Cap (vph)		637		339	895					490	491	
v/s Ratio Prot		c0.18		0.00	c0.11						0.12	
v/s Ratio Perm				0.03						c0.13		
v/c Ratio		0.52		0.07	0.22					0.47	0.44	
Uniform Delay, d1		9.9		5.5	5.6					11.4	11.3	
Progression Factor		1.00		1.00	1.00					1.00	1.00	
Incremental Delay, d2		0.7		0.1	0.1					0.7	0.6	
Delay (s)		10.6		5.6	5.8					12.1	11.9	
Level of Service		B		A	A					B	B	
Approach Delay (s)		10.6			5.7			0.0			12.0	
Approach LOS		B			A			A			B	
Intersection Summary												
HCM 2000 Control Delay			10.2			HCM 2000 Level of Service				B		
HCM 2000 Volume to Capacity ratio			0.50									
Actuated Cycle Length (s)			37.9			Sum of lost time (s)				13.5		
Intersection Capacity Utilization			36.6%			ICU Level of Service				A		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis

5: Brown St & Congress St

10/24/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	185	19	12	219	12	0	0	0	0	0	0
Future Volume (Veh/h)	6	185	19	12	219	12	0	0	0	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.88	0.88	0.88	0.91	0.91	0.91	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	7	210	22	13	241	13	0	0	0	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)					325							
pX, platoon unblocked												
vC, conflicting volume	254			232			508	515	221	508	520	248
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	254			232			508	515	221	508	520	248
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			99			100	100	100	100	100	100
cM capacity (veh/h)	1323			1348			470	457	819	470	454	791
Direction, Lane #	EB 1	WB 1										
Volume Total	239	267										
Volume Left	7	13										
Volume Right	22	13										
cSH	1323	1348										
Volume to Capacity	0.01	0.01										
Queue Length 95th (ft)	0	1										
Control Delay (s)	0.3	0.5										
Lane LOS	A	A										
Approach Delay (s)	0.3	0.5										
Approach LOS												
Intersection Summary												
Average Delay		0.4										
Intersection Capacity Utilization		21.0%	ICU Level of Service		A							
Analysis Period (min)		15										

HCM Unsignalized Intersection Capacity Analysis

6: Brown St & Cumberland Ave

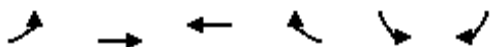
10/24/2023

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑	↘↗	
Traffic Volume (veh/h)	265	0	0	257	24	18
Future Volume (Veh/h)	265	0	0	257	24	18
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.86	0.86	0.95	0.95	0.73	0.73
Hourly flow rate (vph)	308	0	0	271	33	25
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)				341		
pX, platoon unblocked					0.99	
vC, conflicting volume			308		579	308
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			308		571	308
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		93	97
cM capacity (veh/h)			1264		482	737
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	308	271	58			
Volume Left	0	0	33			
Volume Right	0	0	25			
cSH	1700	1700	566			
Volume to Capacity	0.18	0.16	0.10			
Queue Length 95th (ft)	0	0	9			
Control Delay (s)	0.0	0.0	12.1			
Lane LOS			B			
Approach Delay (s)	0.0	0.0	12.1			
Approach LOS			B			
Intersection Summary						
Average Delay			1.1			
Intersection Capacity Utilization			23.9%	ICU Level of Service		A
Analysis Period (min)			15			

HCM Signalized Intersection Capacity Analysis

9: Congress St & Preble St

10/24/2023



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↘	↗
Traffic Volume (vph)	0	316	140	0	180	65
Future Volume (vph)	0	316	140	0	180	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5		4.5	4.5
Lane Util. Factor		1.00	1.00		1.00	1.00
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		1759	1759		1770	1538
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		1759	1759		1770	1538
Peak-hour factor, PHF	0.92	0.92	0.91	0.91	0.93	0.93
Adj. Flow (vph)	0	343	154	0	194	70
RTOR Reduction (vph)	0	0	0	0	0	52
Lane Group Flow (vph)	0	343	154	0	194	18
Heavy Vehicles (%)	0%	8%	8%	0%	2%	5%
Turn Type		NA	NA		Perm	Perm
Protected Phases		6	2			
Permitted Phases					4	4
Actuated Green, G (s)		11.8	11.8		7.1	7.1
Effective Green, g (s)		11.8	11.8		7.1	7.1
Actuated g/C Ratio		0.42	0.42		0.25	0.25
Clearance Time (s)		4.5	4.5		4.5	4.5
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		743	743		450	391
v/s Ratio Prot		c0.19	0.09			
v/s Ratio Perm					c0.11	0.01
v/c Ratio		0.46	0.21		0.43	0.05
Uniform Delay, d1		5.8	5.1		8.7	7.8
Progression Factor		1.00	1.00		1.00	1.00
Incremental Delay, d2		0.5	0.1		0.7	0.0
Delay (s)		6.2	5.2		9.4	7.9
Level of Service		A	A		A	A
Approach Delay (s)		6.2	5.2		9.0	
Approach LOS		A	A		A	
Intersection Summary						
HCM 2000 Control Delay			7.0		HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.53			
Actuated Cycle Length (s)			27.9		Sum of lost time (s)	12.0
Intersection Capacity Utilization			34.1%		ICU Level of Service	A
Analysis Period (min)			15			
c Critical Lane Group						

HCM Signalized Intersection Capacity Analysis

10: Preble St & Cumberland Ave

10/24/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰		↰	↰					↰	↰	
Traffic Volume (vph)	0	256	18	14	94	0	0	0	0	252	223	66
Future Volume (vph)	0	256	18	14	94	0	0	0	0	252	223	66
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5		4.5	4.5					4.5	4.5	
Lane Util. Factor		1.00		1.00	1.00					1.00	1.00	
Frt		0.99		1.00	1.00					1.00	0.97	
Flt Protected		1.00		0.95	1.00					0.95	1.00	
Satd. Flow (prot)		1849		1671	1863					1752	1794	
Flt Permitted		1.00		0.36	1.00					0.95	1.00	
Satd. Flow (perm)		1849		637	1863					1752	1794	
Peak-hour factor, PHF	0.81	0.81	0.81	0.75	0.75	0.75	0.92	0.92	0.92	0.81	0.81	0.81
Adj. Flow (vph)	0	316	22	19	125	0	0	0	0	311	275	81
RTOR Reduction (vph)	0	4	0	0	0	0	0	0	0	0	16	0
Lane Group Flow (vph)	0	334	0	19	125	0	0	0	0	311	340	0
Heavy Vehicles (%)	0%	2%	0%	8%	2%	0%	2%	2%	2%	3%	3%	0%
Turn Type		NA		pm+pt	NA					Perm	NA	
Protected Phases		6		5	2						4	
Permitted Phases				2						4		
Actuated Green, G (s)		13.4		18.8	18.8					12.7	12.7	
Effective Green, g (s)		13.4		18.8	18.8					12.7	12.7	
Actuated g/C Ratio		0.33		0.46	0.46					0.31	0.31	
Clearance Time (s)		4.5		4.5	4.5					4.5	4.5	
Vehicle Extension (s)		3.0		3.0	3.0					3.0	3.0	
Lane Grp Cap (vph)		611		318	864					549	562	
v/s Ratio Prot		c0.18		0.00	c0.07						c0.19	
v/s Ratio Perm				0.03						0.18		
v/c Ratio		0.55		0.06	0.14					0.57	0.61	
Uniform Delay, d1		11.1		6.4	6.2					11.6	11.8	
Progression Factor		1.00		1.00	1.00					1.00	1.00	
Incremental Delay, d2		1.0		0.1	0.1					1.3	1.8	
Delay (s)		12.1		6.5	6.3					12.9	13.6	
Level of Service		B		A	A					B	B	
Approach Delay (s)		12.1			6.3			0.0			13.3	
Approach LOS		B			A			A			B	
Intersection Summary												
HCM 2000 Control Delay			12.1			HCM 2000 Level of Service				B		
HCM 2000 Volume to Capacity ratio			0.57									
Actuated Cycle Length (s)			40.5			Sum of lost time (s)				13.5		
Intersection Capacity Utilization			37.8%			ICU Level of Service				A		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis

5: Brown St & Congress St

10/24/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	212	20	39	153	17	0	0	0	0	0	0
Future Volume (Veh/h)	14	212	20	39	153	17	0	0	0	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.91	0.91	0.91	0.79	0.79	0.79	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	15	233	22	49	194	22	0	0	0	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)					325							
pX, platoon unblocked												
vC, conflicting volume	216			255			577	588	244	577	588	205
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	216			255			577	588	244	577	588	205
tC, single (s)	4.2			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.3			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			96			100	100	100	100	100	100
cM capacity (veh/h)	1319			1322			412	401	795	412	401	836
Direction, Lane #	EB 1	WB 1										
Volume Total	270	265										
Volume Left	15	49										
Volume Right	22	22										
cSH	1319	1322										
Volume to Capacity	0.01	0.04										
Queue Length 95th (ft)	1	3										
Control Delay (s)	0.5	1.7										
Lane LOS	A	A										
Approach Delay (s)	0.5	1.7										
Approach LOS												
Intersection Summary												
Average Delay		1.1										
Intersection Capacity Utilization		26.4%	ICU Level of Service					A				
Analysis Period (min)		15										

HCM Unsignalized Intersection Capacity Analysis

6: Brown St & Cumberland Ave

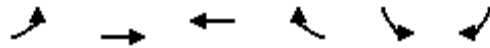
10/24/2023

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑	↘↗	
Traffic Volume (veh/h)	271	0	0	160	10	2
Future Volume (Veh/h)	271	0	0	160	10	2
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.79	0.79	0.88	0.88	0.69	0.69
Hourly flow rate (vph)	343	0	0	182	14	3
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh						
Upstream signal (ft)				341		
pX, platoon unblocked						
vC, conflicting volume			343		525	343
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			343		525	343
tC, single (s)			4.1		6.5	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.6	3.3
p0 queue free %			100		97	100
cM capacity (veh/h)			1227		498	704
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	343	182	17			
Volume Left	0	0	14			
Volume Right	0	0	3			
cSH	1700	1700	525			
Volume to Capacity	0.20	0.11	0.03			
Queue Length 95th (ft)	0	0	3			
Control Delay (s)	0.0	0.0	12.1			
Lane LOS			B			
Approach Delay (s)	0.0	0.0	12.1			
Approach LOS			B			
Intersection Summary						
Average Delay			0.4			
Intersection Capacity Utilization			24.3%	ICU Level of Service		A
Analysis Period (min)			15			

HCM Signalized Intersection Capacity Analysis

9: Congress St & Preble St

10/24/2023



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↘	↗
Traffic Volume (vph)	0	370	189	0	111	90
Future Volume (vph)	0	370	189	0	111	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5		4.5	4.5
Lane Util. Factor		1.00	1.00		1.00	1.00
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		1792	1900		1752	1553
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		1792	1900		1752	1553
Peak-hour factor, PHF	0.89	0.89	0.95	0.95	0.91	0.91
Adj. Flow (vph)	0	416	199	0	122	99
RTOR Reduction (vph)	0	0	0	0	0	78
Lane Group Flow (vph)	0	416	199	0	122	21
Heavy Vehicles (%)	0%	6%	0%	4%	3%	4%
Turn Type		NA	NA		Perm	Perm
Protected Phases		6	2			
Permitted Phases					4	4
Actuated Green, G (s)		13.3	13.3		5.9	5.9
Effective Green, g (s)		13.3	13.3		5.9	5.9
Actuated g/C Ratio		0.47	0.47		0.21	0.21
Clearance Time (s)		4.5	4.5		4.5	4.5
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		845	896		366	324
v/s Ratio Prot		c0.23	0.10			
v/s Ratio Perm					c0.07	0.01
v/c Ratio		0.49	0.22		0.33	0.06
Uniform Delay, d1		5.1	4.4		9.5	8.9
Progression Factor		1.00	1.00		1.00	1.00
Incremental Delay, d2		0.5	0.1		0.5	0.1
Delay (s)		5.6	4.5		10.0	9.0
Level of Service		A	A		B	A
Approach Delay (s)		5.6	4.5		9.6	
Approach LOS		A	A		A	
Intersection Summary						
HCM 2000 Control Delay			6.4		HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.53			
Actuated Cycle Length (s)			28.2		Sum of lost time (s)	12.0
Intersection Capacity Utilization			33.1%		ICU Level of Service	A
Analysis Period (min)			15			
c Critical Lane Group						

HCM Signalized Intersection Capacity Analysis

10: Preble St & Cumberland Ave

10/24/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	270	29	22	194	0	0	0	0	208	150	71
Future Volume (vph)	0	270	29	22	194	0	0	0	0	208	150	71
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5		4.5	4.5					4.5	4.5	
Lane Util. Factor		1.00		1.00	1.00					1.00	1.00	
Frt		0.99		1.00	1.00					1.00	0.95	
Flt Protected		1.00		0.95	1.00					0.95	1.00	
Satd. Flow (prot)		1858		1641	1845					1770	1772	
Flt Permitted		1.00		0.36	1.00					0.95	1.00	
Satd. Flow (perm)		1858		629	1845					1770	1772	
Peak-hour factor, PHF	0.85	0.85	0.85	0.92	0.92	0.92	0.92	0.92	0.92	0.87	0.87	0.87
Adj. Flow (vph)	0	318	34	24	211	0	0	0	0	239	172	82
RTOR Reduction (vph)	0	6	0	0	0	0	0	0	0	0	27	0
Lane Group Flow (vph)	0	346	0	24	211	0	0	0	0	239	227	0
Heavy Vehicles (%)	0%	1%	0%	10%	3%	0%	2%	2%	2%	2%	3%	0%
Turn Type		NA		pm+pt	NA					Perm	NA	
Protected Phases		6		5	2						4	
Permitted Phases				2						4		
Actuated Green, G (s)		13.9		19.3	19.3					11.2	11.2	
Effective Green, g (s)		13.9		19.3	19.3					11.2	11.2	
Actuated g/C Ratio		0.35		0.49	0.49					0.28	0.28	
Clearance Time (s)		4.5		4.5	4.5					4.5	4.5	
Vehicle Extension (s)		3.0		3.0	3.0					3.0	3.0	
Lane Grp Cap (vph)		653		330	901					501	502	
v/s Ratio Prot		c0.19		0.00	c0.11						0.13	
v/s Ratio Perm				0.03						c0.14		
v/c Ratio		0.53		0.07	0.23					0.48	0.45	
Uniform Delay, d1		10.2		5.7	5.8					11.7	11.6	
Progression Factor		1.00		1.00	1.00					1.00	1.00	
Incremental Delay, d2		0.8		0.1	0.1					0.7	0.7	
Delay (s)		11.0		5.8	6.0					12.4	12.3	
Level of Service		B		A	A					B	B	
Approach Delay (s)		11.0			6.0			0.0			12.4	
Approach LOS		B			A			A			B	
Intersection Summary												
HCM 2000 Control Delay			10.5			HCM 2000 Level of Service				B		
HCM 2000 Volume to Capacity ratio			0.51									
Actuated Cycle Length (s)			39.5			Sum of lost time (s)				13.5		
Intersection Capacity Utilization			38.0%			ICU Level of Service				A		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis

5: Brown St & Congress St

10/24/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	195	20	37	231	13	0	0	0	0	0	0
Future Volume (Veh/h)	7	195	20	37	231	13	0	0	0	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.88	0.88	0.88	0.91	0.91	0.91	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	8	222	23	41	254	14	0	0	0	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)					325							
pX, platoon unblocked												
vC, conflicting volume	268			245			592	600	234	592	604	261
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	268			245			592	600	234	592	604	261
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			97			100	100	100	100	100	100
cM capacity (veh/h)	1307			1333			406	400	806	406	397	778
Direction, Lane #	EB 1	WB 1										
Volume Total	253	309										
Volume Left	8	41										
Volume Right	23	14										
cSH	1307	1333										
Volume to Capacity	0.01	0.03										
Queue Length 95th (ft)	0	2										
Control Delay (s)	0.3	1.3										
Lane LOS	A	A										
Approach Delay (s)	0.3	1.3										
Approach LOS												
Intersection Summary												
Average Delay		0.8										
Intersection Capacity Utilization		33.5%	ICU Level of Service						A			
Analysis Period (min)		15										

HCM Unsignalized Intersection Capacity Analysis

6: Brown St & Cumberland Ave

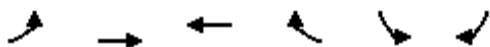
10/24/2023

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations					 	
Traffic Volume (veh/h)	279	0	0	270	25	18
Future Volume (Veh/h)	279	0	0	270	25	18
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.86	0.86	0.95	0.95	0.73	0.73
Hourly flow rate (vph)	324	0	0	284	34	25
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None		None			
Median storage (veh)						
Upstream signal (ft)				341		
pX, platoon unblocked					0.98	
vC, conflicting volume			324		608	324
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			324		591	324
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		93	97
cM capacity (veh/h)			1247		464	722
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	324	284	59			
Volume Left	0	0	34			
Volume Right	0	0	25			
cSH	1700	1700	547			
Volume to Capacity	0.19	0.17	0.11			
Queue Length 95th (ft)	0	0	9			
Control Delay (s)	0.0	0.0	12.4			
Lane LOS						
Approach Delay (s)	0.0	0.0	12.4			
Approach LOS						
Intersection Summary						
Average Delay			1.1			
Intersection Capacity Utilization			24.7%		ICU Level of Service	
Analysis Period (min)			15		A	

HCM Signalized Intersection Capacity Analysis

9: Congress St & Preble St

10/24/2023



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↘	↗
Traffic Volume (vph)	0	316	143	0	193	93
Future Volume (vph)	0	316	143	0	193	93
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5		4.5	4.5
Lane Util. Factor		1.00	1.00		1.00	1.00
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		1759	1759		1770	1538
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		1759	1759		1770	1538
Peak-hour factor, PHF	0.92	0.92	0.91	0.91	0.93	0.93
Adj. Flow (vph)	0	343	157	0	208	100
RTOR Reduction (vph)	0	0	0	0	0	74
Lane Group Flow (vph)	0	343	157	0	208	26
Heavy Vehicles (%)	0%	8%	8%	0%	2%	5%
Turn Type		NA	NA		Perm	Perm
Protected Phases		6	2			
Permitted Phases					4	4
Actuated Green, G (s)		11.9	11.9		7.3	7.3
Effective Green, g (s)		11.9	11.9		7.3	7.3
Actuated g/C Ratio		0.42	0.42		0.26	0.26
Clearance Time (s)		4.5	4.5		4.5	4.5
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		742	742		458	398
v/s Ratio Prot		c0.19	0.09			
v/s Ratio Perm					c0.12	0.02
v/c Ratio		0.46	0.21		0.45	0.07
Uniform Delay, d1		5.9	5.2		8.8	7.9
Progression Factor		1.00	1.00		1.00	1.00
Incremental Delay, d2		0.5	0.1		0.7	0.1
Delay (s)		6.3	5.3		9.5	7.9
Level of Service		A	A		A	A
Approach Delay (s)		6.3	5.3		9.0	
Approach LOS		A	A		A	
Intersection Summary						
HCM 2000 Control Delay			7.1		HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.54			
Actuated Cycle Length (s)			28.2		Sum of lost time (s)	12.0
Intersection Capacity Utilization			34.8%		ICU Level of Service	A
Analysis Period (min)			15			
c Critical Lane Group						

HCM Signalized Intersection Capacity Analysis

10: Preble St & Cumberland Ave

10/24/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↗		↖	↑					↖	↗	
Traffic Volume (vph)	0	263	49	21	95	0	0	0	0	252	226	67
Future Volume (vph)	0	263	49	21	95	0	0	0	0	252	226	67
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5		4.5	4.5					4.5	4.5	
Lane Util. Factor		1.00		1.00	1.00					1.00	1.00	
Frt		0.98		1.00	1.00					1.00	0.97	
Flt Protected		1.00		0.95	1.00					0.95	1.00	
Satd. Flow (prot)		1829		1671	1863					1752	1793	
Flt Permitted		1.00		0.32	1.00					0.95	1.00	
Satd. Flow (perm)		1829		560	1863					1752	1793	
Peak-hour factor, PHF	0.81	0.81	0.81	0.75	0.75	0.75	0.92	0.92	0.92	0.81	0.81	0.81
Adj. Flow (vph)	0	325	60	28	127	0	0	0	0	311	279	83
RTOR Reduction (vph)	0	11	0	0	0	0	0	0	0	0	16	0
Lane Group Flow (vph)	0	374	0	28	127	0	0	0	0	311	346	0
Heavy Vehicles (%)	0%	2%	0%	8%	2%	0%	2%	2%	2%	3%	3%	0%
Turn Type		NA		pm+pt	NA					Perm	NA	
Protected Phases		6		5	2						4	
Permitted Phases				2						4		
Actuated Green, G (s)		15.2		21.7	21.7					13.7	13.7	
Effective Green, g (s)		15.2		21.7	21.7					13.7	13.7	
Actuated g/C Ratio		0.34		0.49	0.49					0.31	0.31	
Clearance Time (s)		4.5		4.5	4.5					4.5	4.5	
Vehicle Extension (s)		3.0		3.0	3.0					3.0	3.0	
Lane Grp Cap (vph)		626		323	910					540	553	
v/s Ratio Prot		c0.20		0.00	c0.07						c0.19	
v/s Ratio Perm				0.04						0.18		
v/c Ratio		0.60		0.09	0.14					0.58	0.63	
Uniform Delay, d1		12.1		6.6	6.2					12.9	13.2	
Progression Factor		1.00		1.00	1.00					1.00	1.00	
Incremental Delay, d2		1.5		0.1	0.1					1.5	2.2	
Delay (s)		13.6		6.8	6.3					14.4	15.4	
Level of Service		B		A	A					B	B	
Approach Delay (s)		13.6			6.4			0.0			14.9	
Approach LOS		B			A			A			B	
Intersection Summary												
HCM 2000 Control Delay			13.4			HCM 2000 Level of Service				B		
HCM 2000 Volume to Capacity ratio			0.59									
Actuated Cycle Length (s)			44.4			Sum of lost time (s)				13.5		
Intersection Capacity Utilization			40.9%			ICU Level of Service				A		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis

5: Brown St & Congress St

10/24/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	212	20	39	163	38	0	0	0	0	0	0
Future Volume (Veh/h)	20	212	20	39	163	38	0	0	0	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.91	0.91	0.91	0.79	0.79	0.79	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	22	233	22	49	206	48	0	0	0	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)					325							
pX, platoon unblocked												
vC, conflicting volume	254			255			616	640	244	616	627	230
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	254			255			616	640	244	616	627	230
tC, single (s)	4.2			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.3			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	98			96			100	100	100	100	100	100
cM capacity (veh/h)	1277			1322			386	372	795	386	379	809
Direction, Lane #	EB 1	WB 1										
Volume Total	277	303										
Volume Left	22	49										
Volume Right	22	48										
cSH	1277	1322										
Volume to Capacity	0.02	0.04										
Queue Length 95th (ft)	1	3										
Control Delay (s)	0.8	1.6										
Lane LOS	A	A										
Approach Delay (s)	0.8	1.6										
Approach LOS												
Intersection Summary												
Average Delay		1.2										
Intersection Capacity Utilization		25.4%	ICU Level of Service					A				
Analysis Period (min)		15										

HCM Unsignalized Intersection Capacity Analysis

6: Brown St & Cumberland Ave

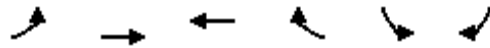
10/24/2023

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑	↘↙	
Traffic Volume (veh/h)	278	0	0	164	15	24
Future Volume (Veh/h)	278	0	0	164	15	24
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.79	0.79	0.88	0.88	0.69	0.69
Hourly flow rate (vph)	352	0	0	186	22	35
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh						
Upstream signal (ft)				341		
pX, platoon unblocked						
vC, conflicting volume			352		538	352
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			352		538	352
tC, single (s)			4.1		6.5	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.6	3.3
p0 queue free %			100		95	95
cM capacity (veh/h)			1218		489	696
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	352	186	57			
Volume Left	0	0	22			
Volume Right	0	0	35			
cSH	1700	1700	598			
Volume to Capacity	0.21	0.11	0.10			
Queue Length 95th (ft)	0	0	8			
Control Delay (s)	0.0	0.0	11.7			
Lane LOS			B			
Approach Delay (s)	0.0	0.0	11.7			
Approach LOS			B			
Intersection Summary						
Average Delay			1.1			
Intersection Capacity Utilization			24.6%	ICU Level of Service	A	
Analysis Period (min)			15			

HCM Signalized Intersection Capacity Analysis

9: Congress St & Preble St

10/24/2023



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↱	↱
Traffic Volume (vph)	0	370	194	0	121	115
Future Volume (vph)	0	370	194	0	121	115
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5		4.5	4.5
Lane Util. Factor		1.00	1.00		1.00	1.00
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		1792	1900		1752	1553
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		1792	1900		1752	1553
Peak-hour factor, PHF	0.89	0.89	0.95	0.95	0.91	0.91
Adj. Flow (vph)	0	416	204	0	133	126
RTOR Reduction (vph)	0	0	0	0	0	99
Lane Group Flow (vph)	0	416	204	0	133	27
Heavy Vehicles (%)	0%	6%	0%	4%	3%	4%
Turn Type		NA	NA		Perm	Perm
Protected Phases		6	2			
Permitted Phases					4	4
Actuated Green, G (s)		13.4	13.4		6.1	6.1
Effective Green, g (s)		13.4	13.4		6.1	6.1
Actuated g/C Ratio		0.47	0.47		0.21	0.21
Clearance Time (s)		4.5	4.5		4.5	4.5
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		842	893		374	332
v/s Ratio Prot		c0.23	0.11			
v/s Ratio Perm					c0.08	0.02
v/c Ratio		0.49	0.23		0.36	0.08
Uniform Delay, d1		5.2	4.5		9.5	9.0
Progression Factor		1.00	1.00		1.00	1.00
Incremental Delay, d2		0.5	0.1		0.6	0.1
Delay (s)		5.7	4.6		10.1	9.1
Level of Service		A	A		B	A
Approach Delay (s)		5.7	4.6		9.6	
Approach LOS		A	A		A	
Intersection Summary						
HCM 2000 Control Delay			6.6		HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.53			
Actuated Cycle Length (s)			28.5		Sum of lost time (s)	12.0
Intersection Capacity Utilization			33.7%		ICU Level of Service	A
Analysis Period (min)			15			
c Critical Lane Group						

HCM Signalized Intersection Capacity Analysis

10: Preble St & Cumberland Ave

10/24/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↻		↻	↻					↻	↻	
Traffic Volume (vph)	0	273	54	30	196	0	0	0	0	208	153	72
Future Volume (vph)	0	273	54	30	196	0	0	0	0	208	153	72
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5		4.5	4.5					4.5	4.5	
Lane Util. Factor		1.00		1.00	1.00					1.00	1.00	
Frt		0.98		1.00	1.00					1.00	0.95	
Flt Protected		1.00		0.95	1.00					0.95	1.00	
Satd. Flow (prot)		1842		1641	1845					1770	1773	
Flt Permitted		1.00		0.33	1.00					0.95	1.00	
Satd. Flow (perm)		1842		571	1845					1770	1773	
Peak-hour factor, PHF	0.85	0.85	0.85	0.92	0.92	0.92	0.92	0.92	0.92	0.87	0.87	0.87
Adj. Flow (vph)	0	321	64	33	213	0	0	0	0	239	176	83
RTOR Reduction (vph)	0	12	0	0	0	0	0	0	0	0	27	0
Lane Group Flow (vph)	0	373	0	33	213	0	0	0	0	239	232	0
Heavy Vehicles (%)	0%	1%	0%	10%	3%	0%	2%	2%	2%	2%	3%	0%
Turn Type		NA		pm+pt	NA					Perm	NA	
Protected Phases		6		5	2						4	
Permitted Phases				2						4		
Actuated Green, G (s)		14.7		21.2	21.2					11.4	11.4	
Effective Green, g (s)		14.7		21.2	21.2					11.4	11.4	
Actuated g/C Ratio		0.35		0.51	0.51					0.27	0.27	
Clearance Time (s)		4.5		4.5	4.5					4.5	4.5	
Vehicle Extension (s)		3.0		3.0	3.0					3.0	3.0	
Lane Grp Cap (vph)		650		342	940					485	485	
v/s Ratio Prot		c0.20		0.00	c0.12						0.13	
v/s Ratio Perm				0.04						c0.14		
v/c Ratio		0.57		0.10	0.23					0.49	0.48	
Uniform Delay, d1		10.9		5.8	5.7					12.7	12.6	
Progression Factor		1.00		1.00	1.00					1.00	1.00	
Incremental Delay, d2		1.2		0.1	0.1					0.8	0.7	
Delay (s)		12.1		5.9	5.8					13.5	13.4	
Level of Service		B		A	A					B	B	
Approach Delay (s)		12.1			5.8			0.0			13.4	
Approach LOS		B			A			A			B	
Intersection Summary												
HCM 2000 Control Delay			11.3			HCM 2000 Level of Service				B		
HCM 2000 Volume to Capacity ratio			0.53									
Actuated Cycle Length (s)			41.6			Sum of lost time (s)				13.5		
Intersection Capacity Utilization			44.9%			ICU Level of Service				A		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis

5: Brown St & Congress St

10/24/2023

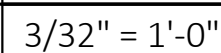
												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	195	20	37	238	36	0	0	0	0	0	0
Future Volume (Veh/h)	15	195	20	37	238	36	0	0	0	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.88	0.88	0.88	0.91	0.91	0.91	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	17	222	23	41	262	40	0	0	0	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)					325							
pX, platoon unblocked												
vC, conflicting volume	302			245			632	652	234	632	643	282
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	302			245			632	652	234	632	643	282
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			97			100	100	100	100	100	100
cM capacity (veh/h)	1270			1333			380	371	806	380	375	757
Direction, Lane #	EB 1	WB 1										
Volume Total	262	343										
Volume Left	17	41										
Volume Right	23	40										
cSH	1270	1333										
Volume to Capacity	0.01	0.03										
Queue Length 95th (ft)	1	2										
Control Delay (s)	0.6	1.2										
Lane LOS	A	A										
Approach Delay (s)	0.6	1.2										
Approach LOS												
Intersection Summary												
Average Delay		0.9										
Intersection Capacity Utilization		29.6%	ICU Level of Service						A			
Analysis Period (min)		15										

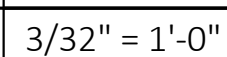
HCM Unsignalized Intersection Capacity Analysis

6: Brown St & Cumberland Ave

10/24/2023

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑	↘↗	
Traffic Volume (veh/h)	288	0	0	272	29	45
Future Volume (Veh/h)	288	0	0	272	29	45
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.86	0.86	0.95	0.95	0.73	0.73
Hourly flow rate (vph)	335	0	0	286	40	62
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh						
Upstream signal (ft)				341		
pX, platoon unblocked					0.98	
vC, conflicting volume			335		621	335
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			335		604	335
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		91	91
cM capacity (veh/h)			1236		456	712
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	335	286	102			
Volume Left	0	0	40			
Volume Right	0	0	62			
cSH	1700	1700	583			
Volume to Capacity	0.20	0.17	0.17			
Queue Length 95th (ft)	0	0	16			
Control Delay (s)	0.0	0.0	12.5			
Lane LOS			B			
Approach Delay (s)	0.0	0.0	12.5			
Approach LOS			B			
Intersection Summary						
Average Delay			1.8			
Intersection Capacity Utilization			26.2%	ICU Level of Service		A
Analysis Period (min)			15			





Project:
TIME & TEMPERATURE BUILDING
477 Congress Street
Portland, Maine
Owner/Client:
GREENMARS
Consultant:

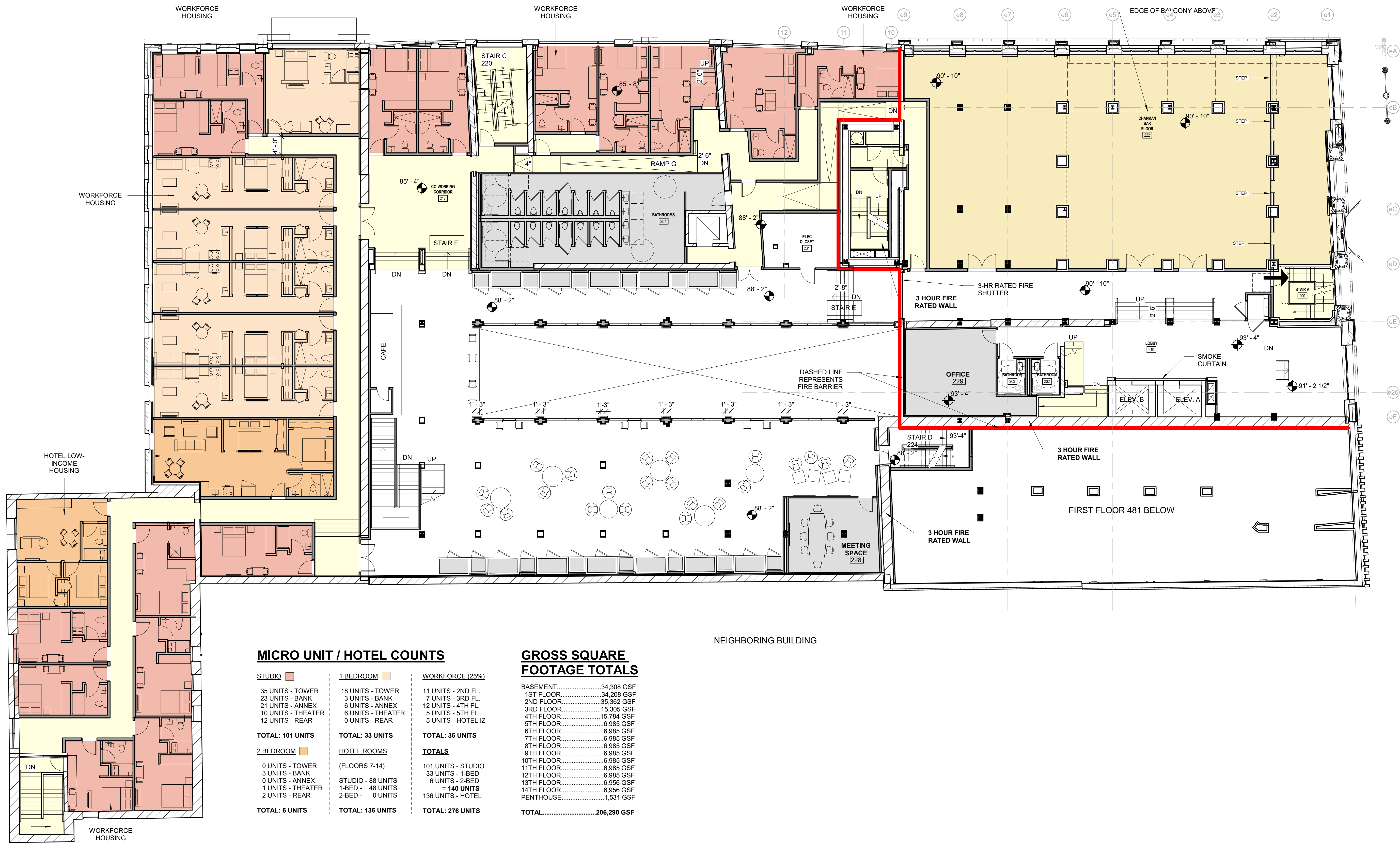
Revisions:

Key Plan:

SECOND FLOOR PLAN

Scale:
As indicated
7 DECEMBER, 2023

A1.02



Project:

TIME & TEMPERATURE
BUILDING

477 Congress Street
Portland, Maine

Owner/Client:

GREENMARS

Consultant:

Revisions:

Key Plan:

THIRD FLOOR PLAN

Scale:

As indicated



7 DECEMBER, 2023

A1.03

1 | 3RD FLOOR - OVERALL FLOOR PLAN - 2ND FLOOR 481

3/32" = 1'-0"

2 | 3RD FLOOR - 481 CONGRESS - NEW

3/32" = 1'-0"

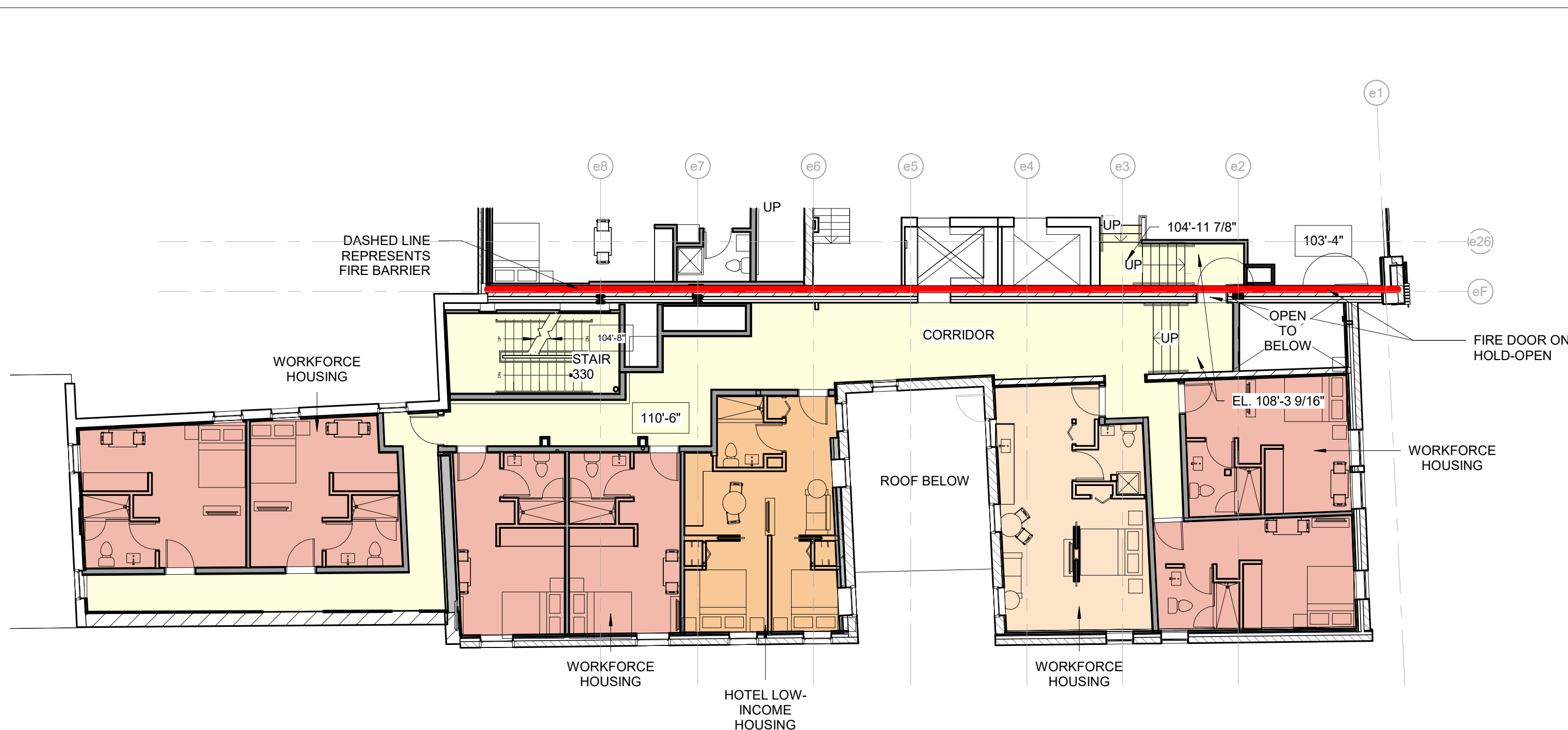


MICRO UNIT / HOTEL COUNTS

STUDIO	1 BEDROOM	WORKFORCE (25%)
35 UNITS - TOWER 23 UNITS - BANK 21 UNITS - ANNEX 10 UNITS - THEATER 12 UNITS - REAR	18 UNITS - TOWER 3 UNITS - BANK 6 UNITS - ANNEX 6 UNITS - THEATER 0 UNITS - REAR	11 UNITS - 2ND FL. 7 UNITS - 3RD FL. 12 UNITS - 4TH FL. 5 UNITS - 5TH FL. 5 UNITS - HOTEL IZ
TOTAL: 101 UNITS	TOTAL: 33 UNITS	TOTAL: 35 UNITS
2 BEDROOM	HOTEL ROOMS	TOTALS
0 UNITS - TOWER 3 UNITS - BANK 0 UNITS - ANNEX 1 UNITS - THEATER 2 UNITS - REAR	(FLOORS 7-14) STUDIO - 88 UNITS 1-BED - 48 UNITS 2-BED - 0 UNITS	101 UNITS - STUDIO 33 UNITS - 1-BED 6 UNITS - 2-BED = 140 UNITS 136 UNITS - HOTEL
TOTAL: 6 UNITS	TOTAL: 136 UNITS	TOTAL: 276 UNITS

**GROSS SQUARE
FOOTAGE TOTALS**

BASEMENT.....	34,308 GSF
1ST FLOOR.....	34,208 GSF
2ND FLOOR.....	35,362 GSF
3RD FLOOR.....	15,305 GSF
4TH FLOOR.....	15,784 GSF
5TH FLOOR.....	6,985 GSF
6TH FLOOR.....	6,985 GSF
7TH FLOOR.....	6,985 GSF
8TH FLOOR.....	6,985 GSF
9TH FLOOR.....	6,985 GSF
10TH FLOOR.....	6,985 GSF
11TH FLOOR.....	6,985 GSF
12TH FLOOR.....	6,985 GSF
13TH FLOOR.....	6,956 GSF
14TH FLOOR.....	6,956 GSF
PENTHOUSE.....	1,531 GSF
TOTAL.....	206,290 GSF

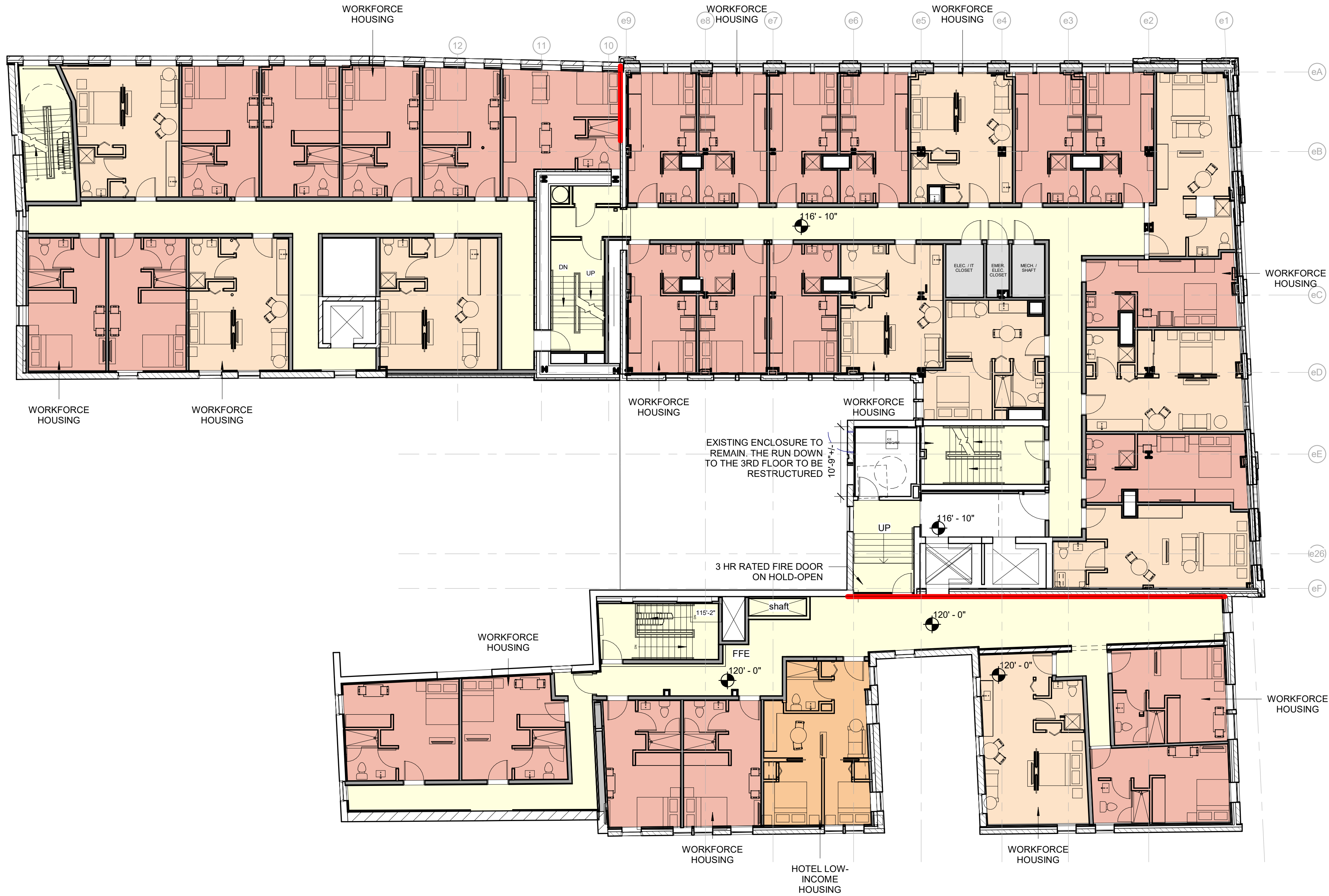


MICRO UNIT / HOTEL COUNTS

STUDIO	1 BEDROOM	WORKFORCE (25%)
35 UNITS - TOWER 23 UNITS - BANK 21 UNITS - ANNEX 10 UNITS - THEATER 12 UNITS - REAR	18 UNITS - TOWER 3 UNITS - BANK 6 UNITS - ANNEX 6 UNITS - THEATER 0 UNITS - REAR	11 UNITS - 2ND FL. 7 UNITS - 3RD FL. 12 UNITS - 4TH FL. 5 UNITS - 5TH FL. 5 UNITS - HOTEL IZ
TOTAL: 101 UNITS	TOTAL: 33 UNITS	TOTAL: 35 UNITS
2 BEDROOM	HOTEL ROOMS	TOTALS
0 UNITS - TOWER 3 UNITS - BANK 0 UNITS - ANNEX 1 UNITS - THEATER 2 UNITS - REAR	(FLOORS 7-14) STUDIO - 88 UNITS 1-BED - 48 UNITS 2-BED - 0 UNITS	101 UNITS - STUDIO 33 UNITS - 1-BED 6 UNITS - 2-BED = 140 UNITS 136 UNITS - HOTEL
TOTAL: 6 UNITS	TOTAL: 136 UNITS	TOTAL: 276 UNITS

GROSS SQUARE
FOOTAGE TOTALS

BASEMENT.....	34,308 GSF
1ST FLOOR.....	34,208 GSF
2ND FLOOR.....	35,362 GSF
3RD FLOOR.....	15,305 GSF
4TH FLOOR.....	15,784 GSF
5TH FLOOR.....	6,985 GSF
6TH FLOOR.....	6,985 GSF
7TH FLOOR.....	6,985 GSF
8TH FLOOR.....	6,985 GSF
9TH FLOOR.....	6,985 GSF
10TH FLOOR.....	6,985 GSF
11TH FLOOR.....	6,985 GSF
12TH FLOOR.....	6,985 GSF
13TH FLOOR.....	6,956 GSF
14TH FLOOR.....	6,956 GSF
PENTHOUSE.....	1,531 GSF
TOTAL.....	206,290 GSF



Project:

TIME & TEMPERATURE
BUILDING

477 Congress Street
Portland, Maine

Owner/Client:

GREENMARS

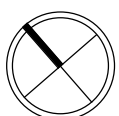
Consultant:

Revisions:

Key Plan:

ENLARGED - 5TH FLOOR
PLAN

Scale:
1/4" = 1'-0"



7 DECEMBER, 2023

A1.40



MICRO UNIT / HOTEL COUNTS

STUDIO	1 BEDROOM	WORKFORCE (25%)
35 UNITS - TOWER	18 UNITS - TOWER	11 UNITS - 2ND FL.
23 UNITS - BANK	3 UNITS - BANK	7 UNITS - 3RD FL.
21 UNITS - ANNEX	6 UNITS - ANNEX	12 UNITS - 4TH FL.
10 UNITS - THEATER	6 UNITS - THEATER	5 UNITS - 5TH FL.
12 UNITS - REAR	0 UNITS - REAR	5 UNITS - HOTEL IZ
TOTAL: 101 UNITS	TOTAL: 33 UNITS	TOTAL: 35 UNITS
2 BEDROOM	HOTEL ROOMS	TOTALS
0 UNITS - TOWER	(FLOORS 7-14)	101 UNITS - STUDIO
3 UNITS - BANK	STUDIO - 88 UNITS	33 UNITS - 1-BED
0 UNITS - ANNEX	1-BED - 48 UNITS	6 UNITS - 2-BED
1 UNITS - THEATER	2-BED - 0 UNITS	= 140 UNITS
2 UNITS - REAR		136 UNITS - HOTEL
TOTAL: 6 UNITS	TOTAL: 136 UNITS	TOTAL: 276 UNITS

GROSS SQUARE FOOTAGE TOTALS

BASEMENT.....	34,308 GSF
1ST FLOOR.....	34,208 GSF
2ND FLOOR.....	35,362 GSF
3RD FLOOR.....	15,305 GSF
4TH FLOOR.....	15,784 GSF
5TH FLOOR.....	6,985 GSF
6TH FLOOR.....	6,985 GSF
7TH FLOOR.....	6,985 GSF
8TH FLOOR.....	6,985 GSF
9TH FLOOR.....	6,985 GSF
10TH FLOOR.....	6,985 GSF
11TH FLOOR.....	6,985 GSF
12TH FLOOR.....	6,985 GSF
13TH FLOOR.....	6,956 GSF
14TH FLOOR.....	6,956 GSF
PENTHOUSE.....	1,531 GSF
TOTAL.....	206,290 GSF

Project:
**TIME &
TEMPERATURE
BUILDING**
477 Congress Street
Portland, Maine
Owner/Client:

GREENMARS

Consultant:

Revisions:

Key Plan:

ENLARGED - 6TH - 14TH
FLOOR PLAN

Scale:
1/4" = 1'-0"
28 SEPTEMBER, 2023

A1.43



MICRO UNIT / HOTEL COUNTS		
STUDIO 	1 BEDROOM 	WORKFORCE (25%)
35 UNITS - TOWER 23 UNITS - BANK 21 UNITS - ANNEX 10 UNITS - THEATER 12 UNITS - REAR	18 UNITS - TOWER 3 UNITS - BANK 6 UNITS - ANNEX 6 UNITS - THEATER 0 UNITS - REAR	11 UNITS - 2ND FL. 7 UNITS - 3RD FL. 12 UNITS - 4TH FL. 5 UNITS - 5TH FL.
TOTAL: 101 UNITS	TOTAL: 33 UNITS	TOTAL: 35 UNITS
2 BEDROOM 	HOTEL ROOMS	TOTALS
0 UNITS - TOWER 3 UNITS - BANK 0 UNITS - ANNEX 1 UNITS - THEATER 2 UNITS - REAR	(FLOORS 7-14) STUDIO - 88 UNITS 1-BED - 48 UNITS 2-BED - 0 UNITS	101 UNITS - STUDIO 33 UNITS - 1-BED 6 UNITS - 2-BED = 140 UNITS 136 UNITS - HOTEL
TOTAL: 6 UNITS	TOTAL: 136 UNITS	TOTAL: 276 UNITS

Project:

**TIME &
TEMPERATURE
BUILDING**
477 Congress Street
Portland, Maine

Owner/Client:

GREENMARS

Consultant:

Revisions:

Key Plan:

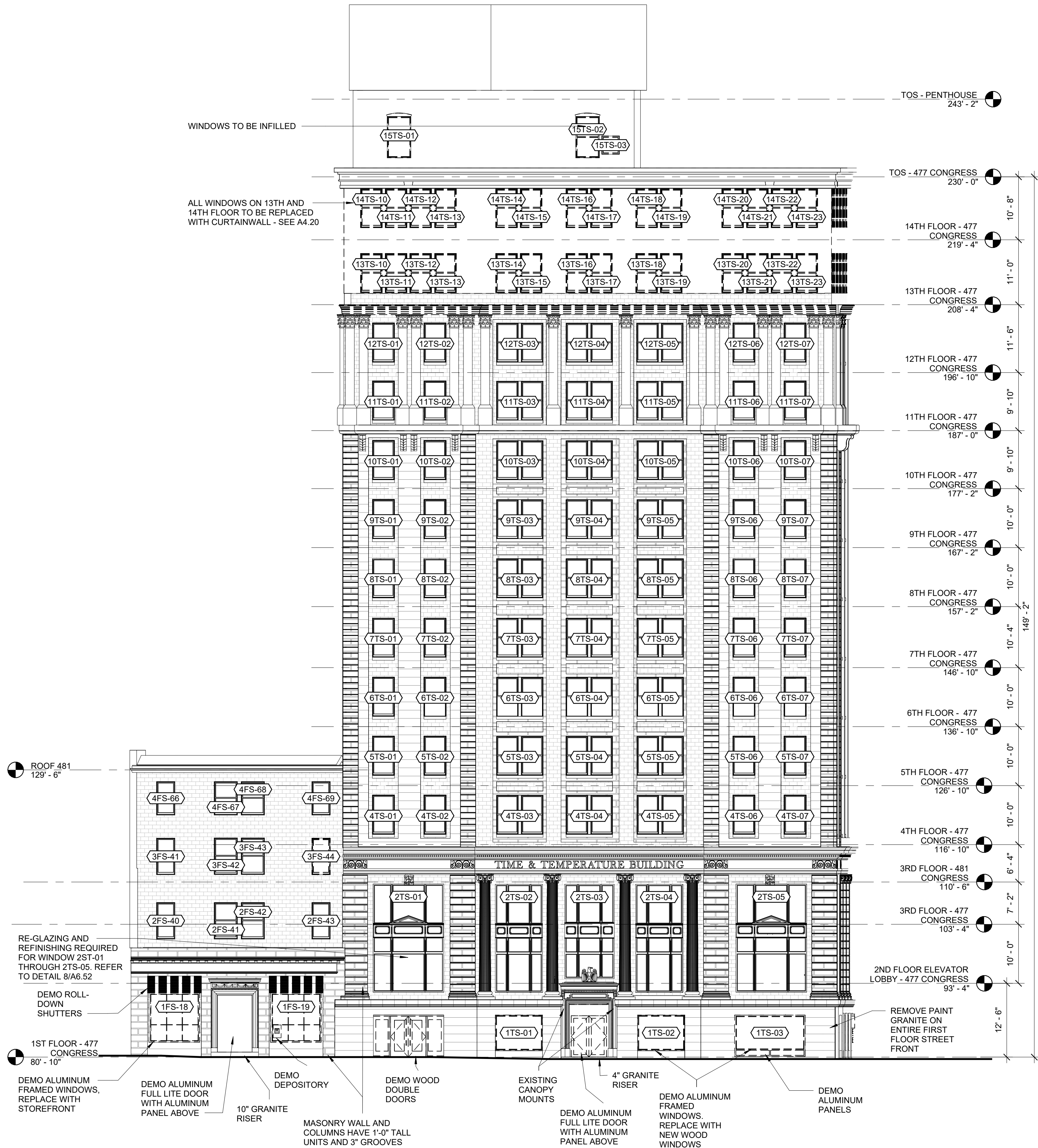
EXISTING CONGRESS ST
ELEVATION

Scale:
3/32" = 1'-0"



11 SEPTEMBER, 2023

A4.01



Project:

**TIME &
TEMPERATURE
BUILDING**

477 Congress Street
Portland, Maine

Owner/Client:

GREENMARS

Consultant:

Revisions:

Key Plan:

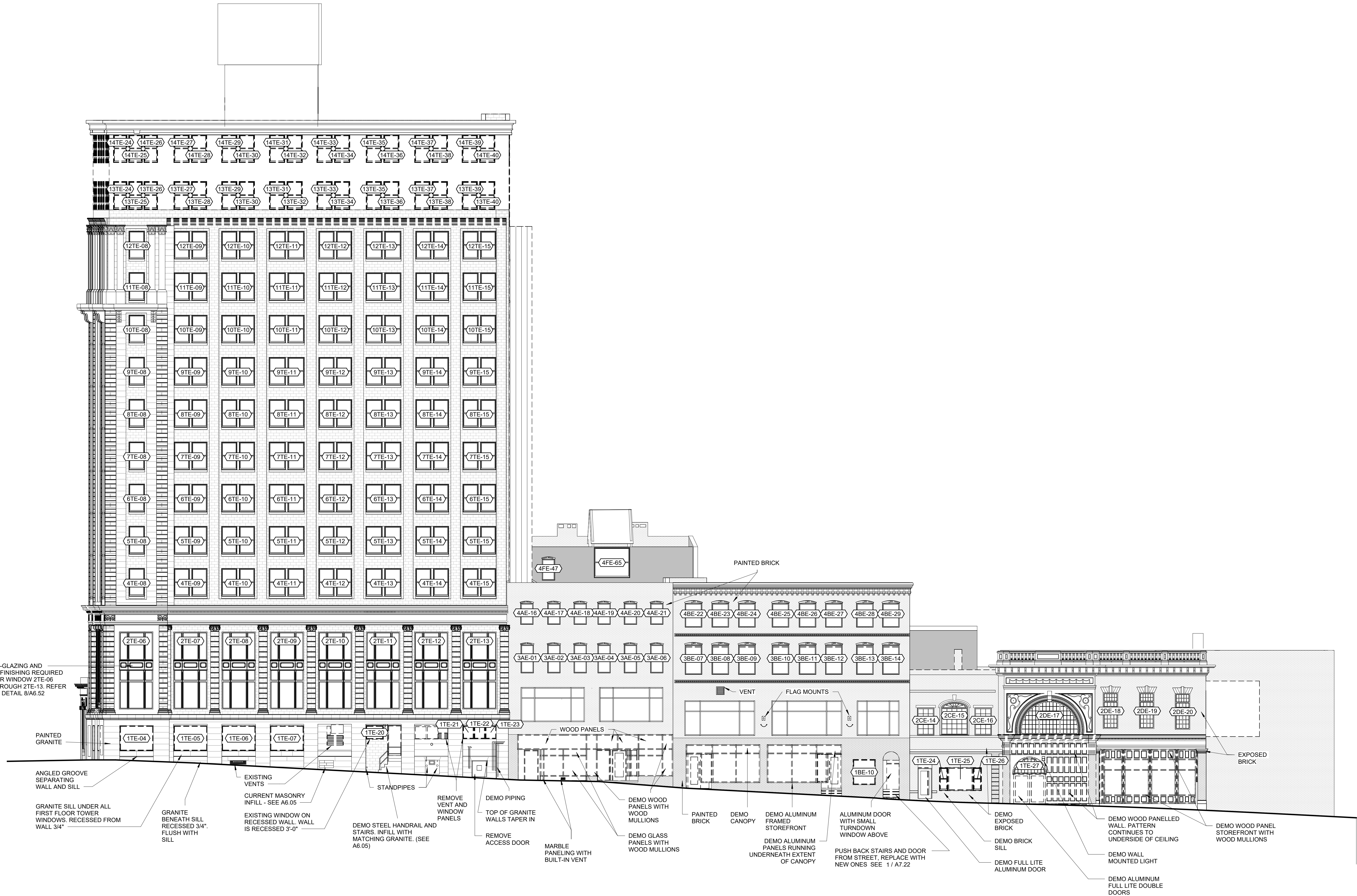
EXISTING PREBLE ST.
ELEVATION

Scale:
3/32" = 1'-0"



11 SEPTEMBER, 2023

A4.02



Project:

**TIME &
TEMPERATURE
BUILDING**
477 Congress Street
Portland, Maine

Owner/Client:

GREENMARS

Consultant:

Revisions:

Key Plan:

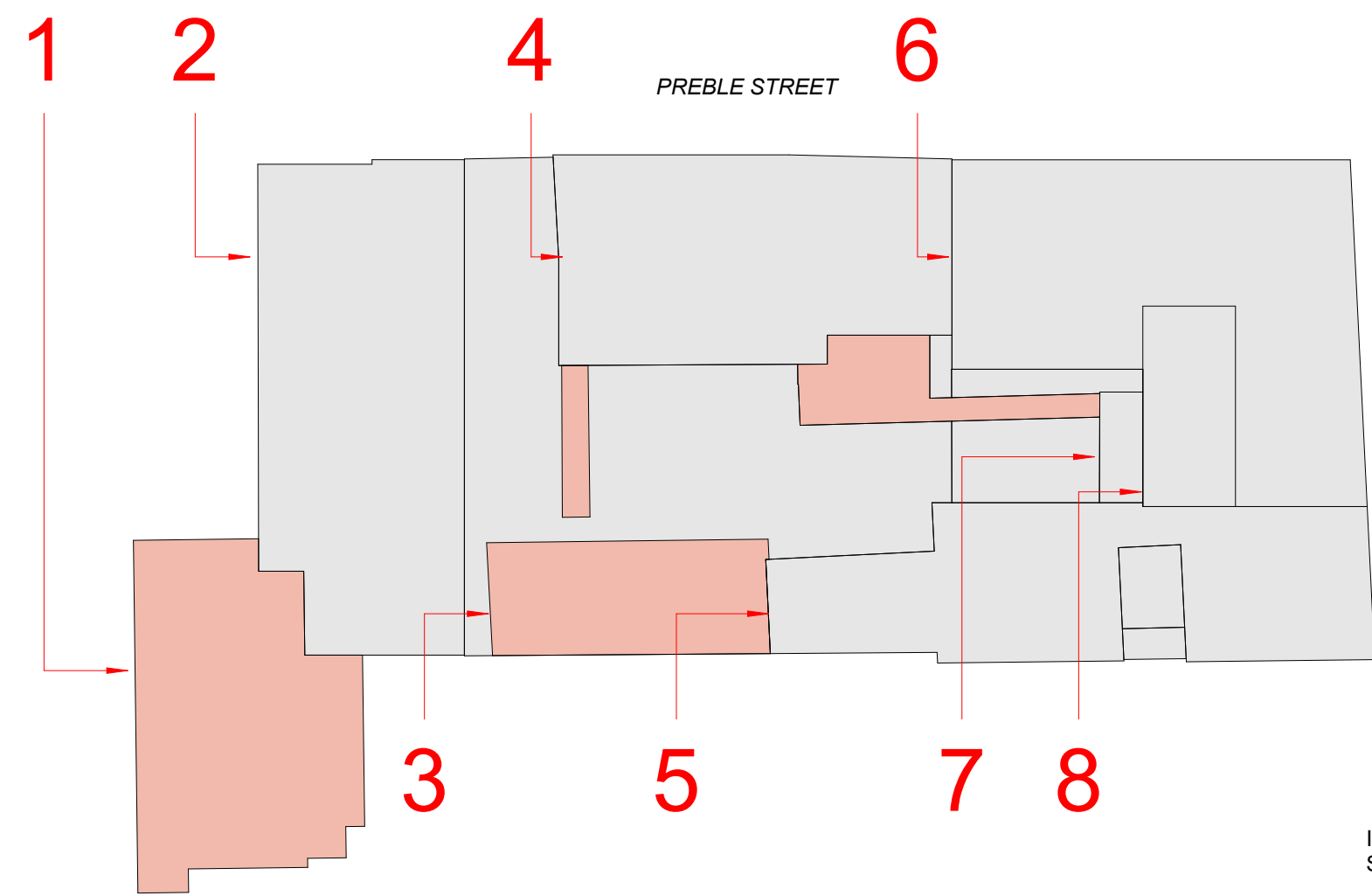
EXISTING NORTH
ELEVATIONS

Scale:
As indicated

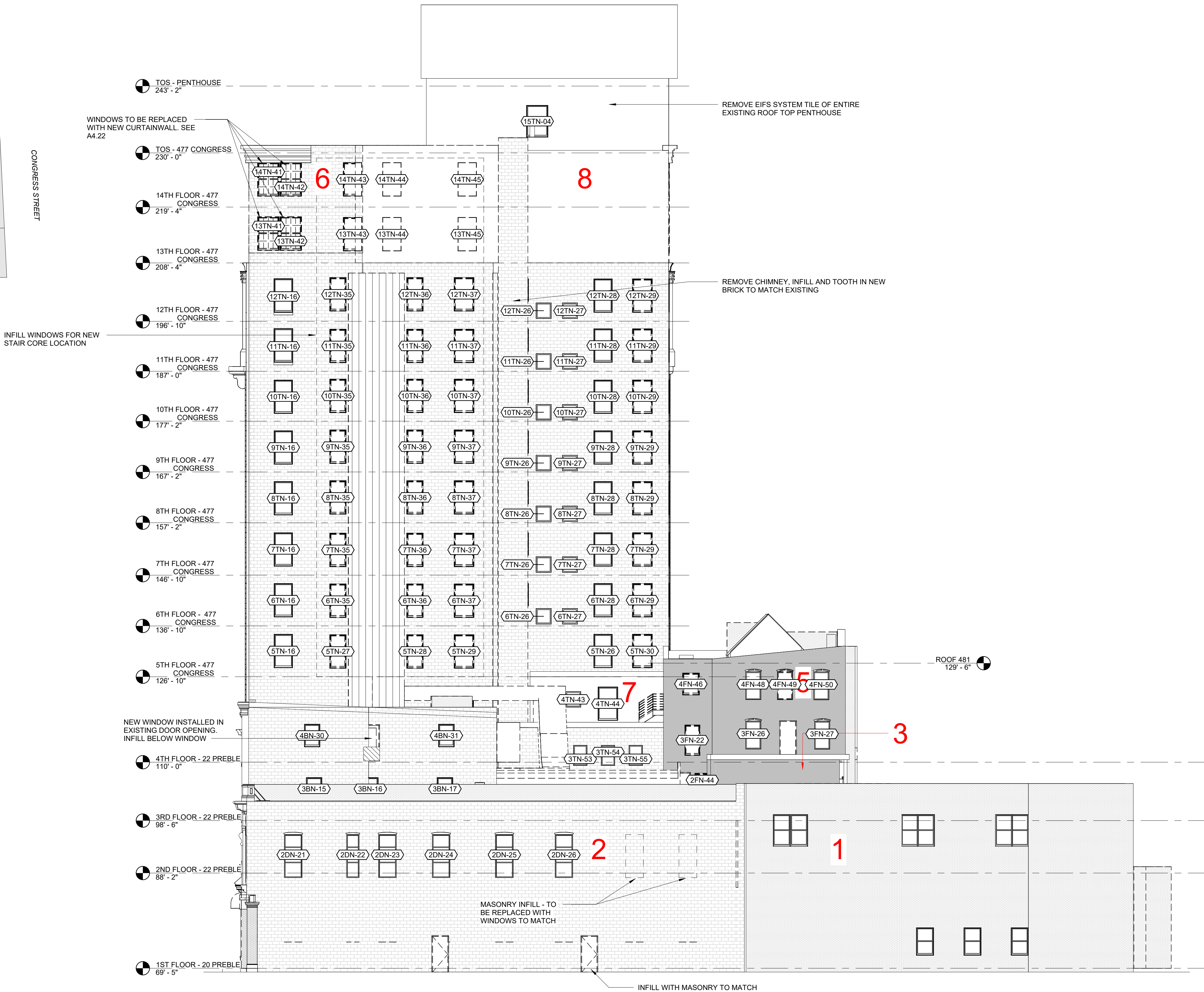


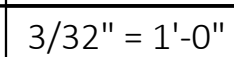
11 SEPTEMBER, 2023

A4.03



KEY PLAN - EXISTING





Project:

**TIME &
TEMPERATURE
BUILDING**
477 Congress Street
Portland, Maine

Owner/Client:

GREENMARS

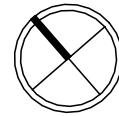
Consultant:

Revisions:

Key Plan:

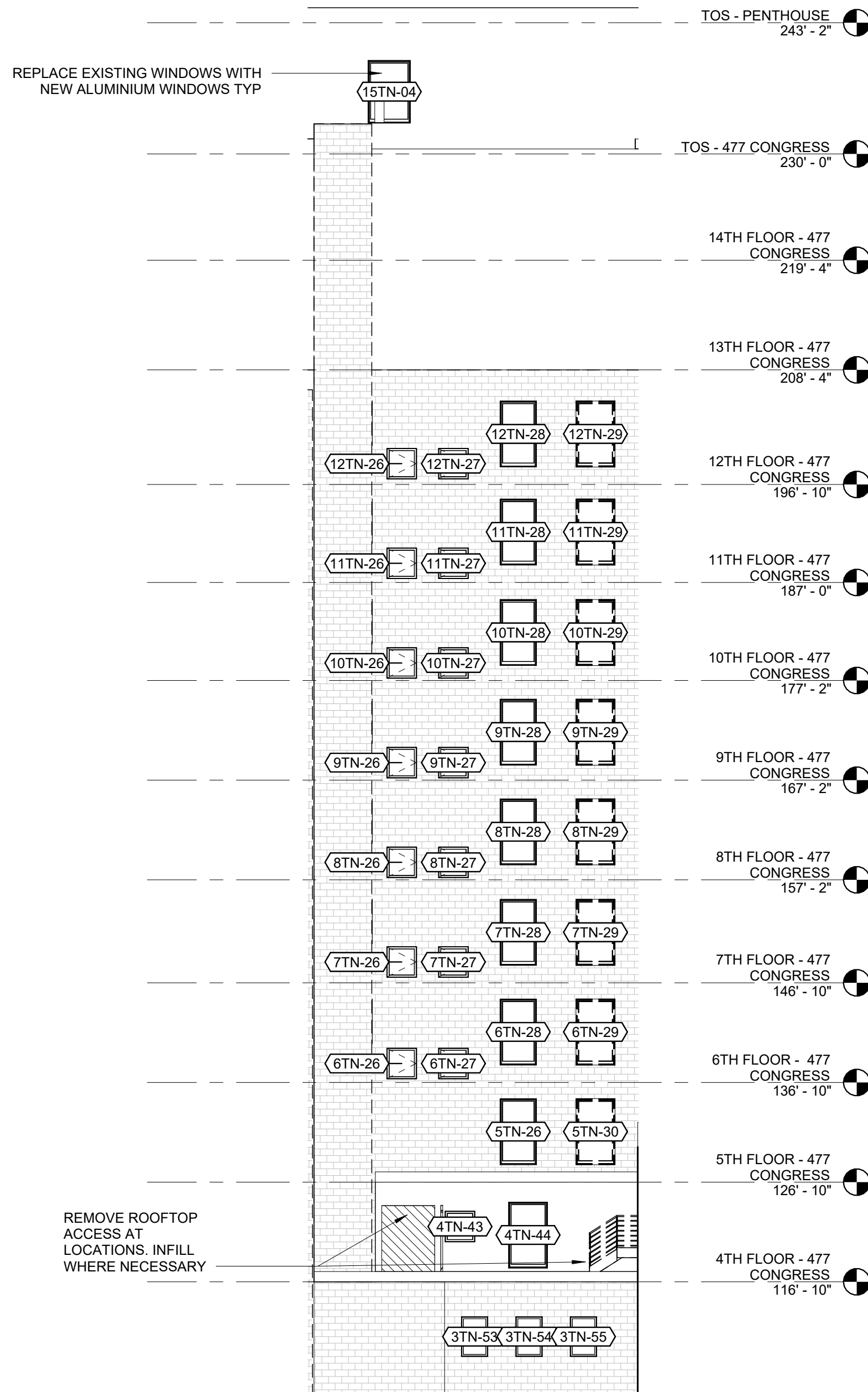
EXISTING BUILDING
ELEVATIONS OFF 2ND FL
ROOF

Scale:
3/32" = 1'-0"



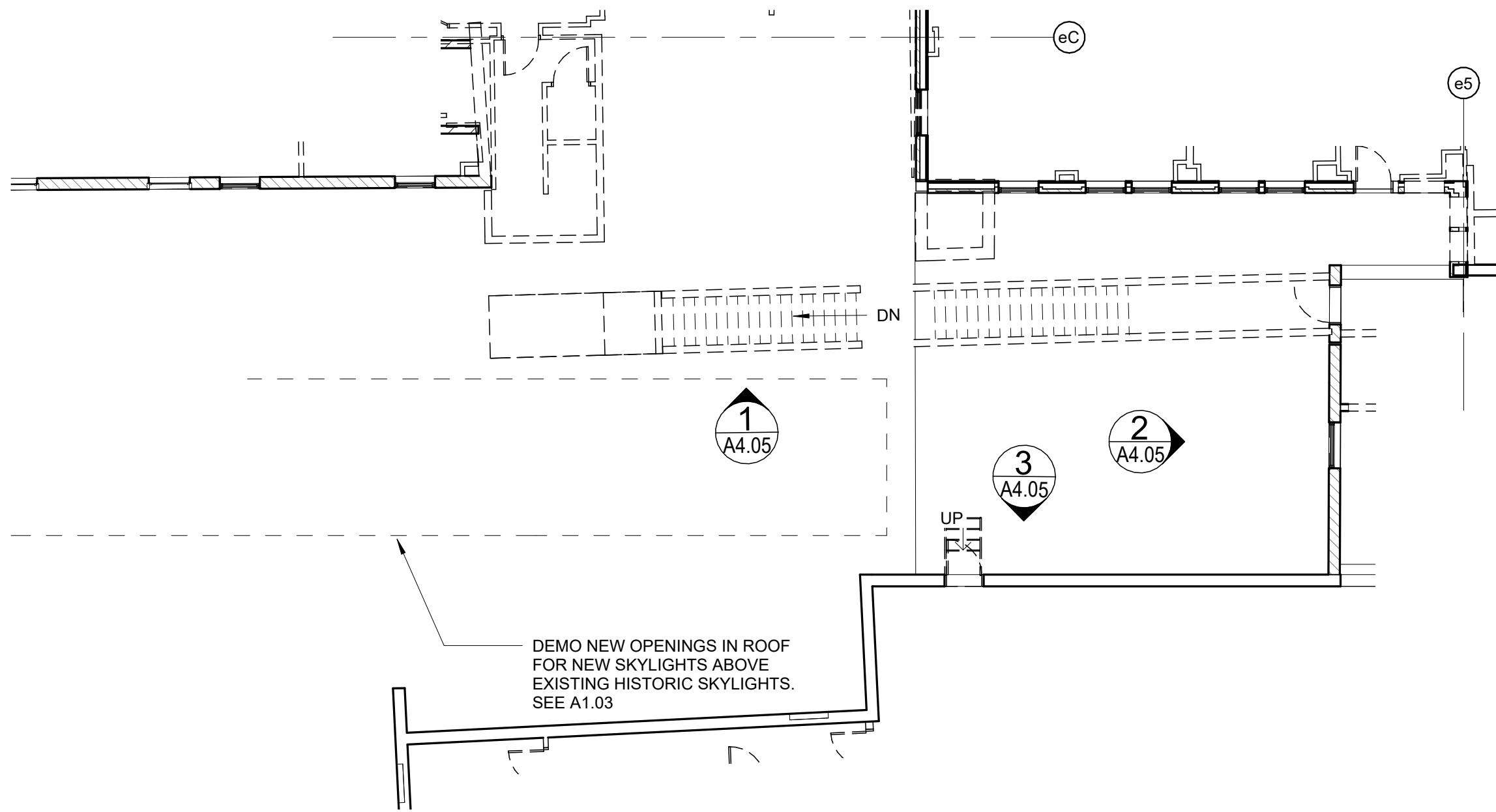
11 SEPTEMBER, 2023

A4.05



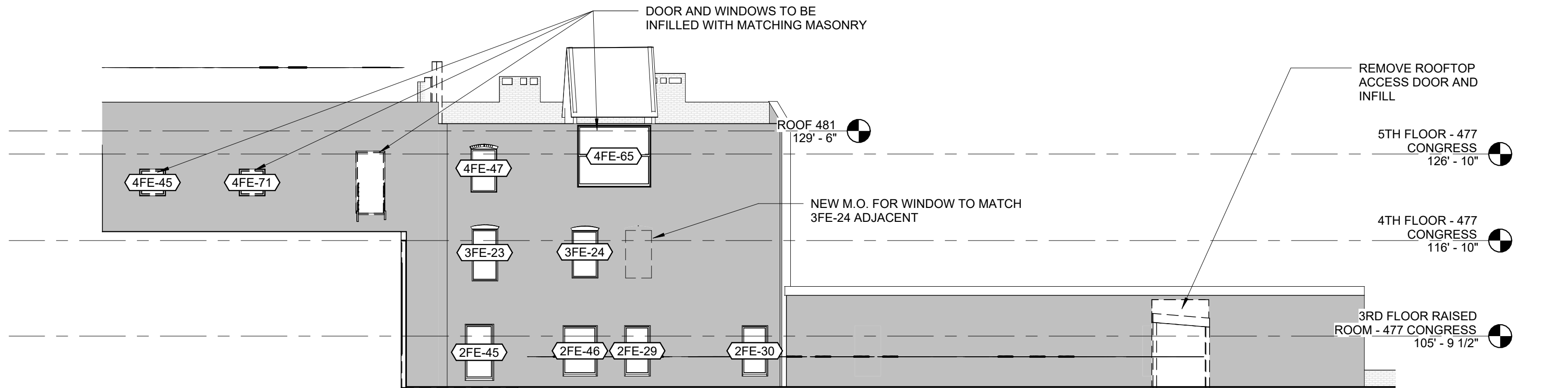
2 | NORTH ELEVATION - INNER COURTYARD

3/32" = 1'-0"



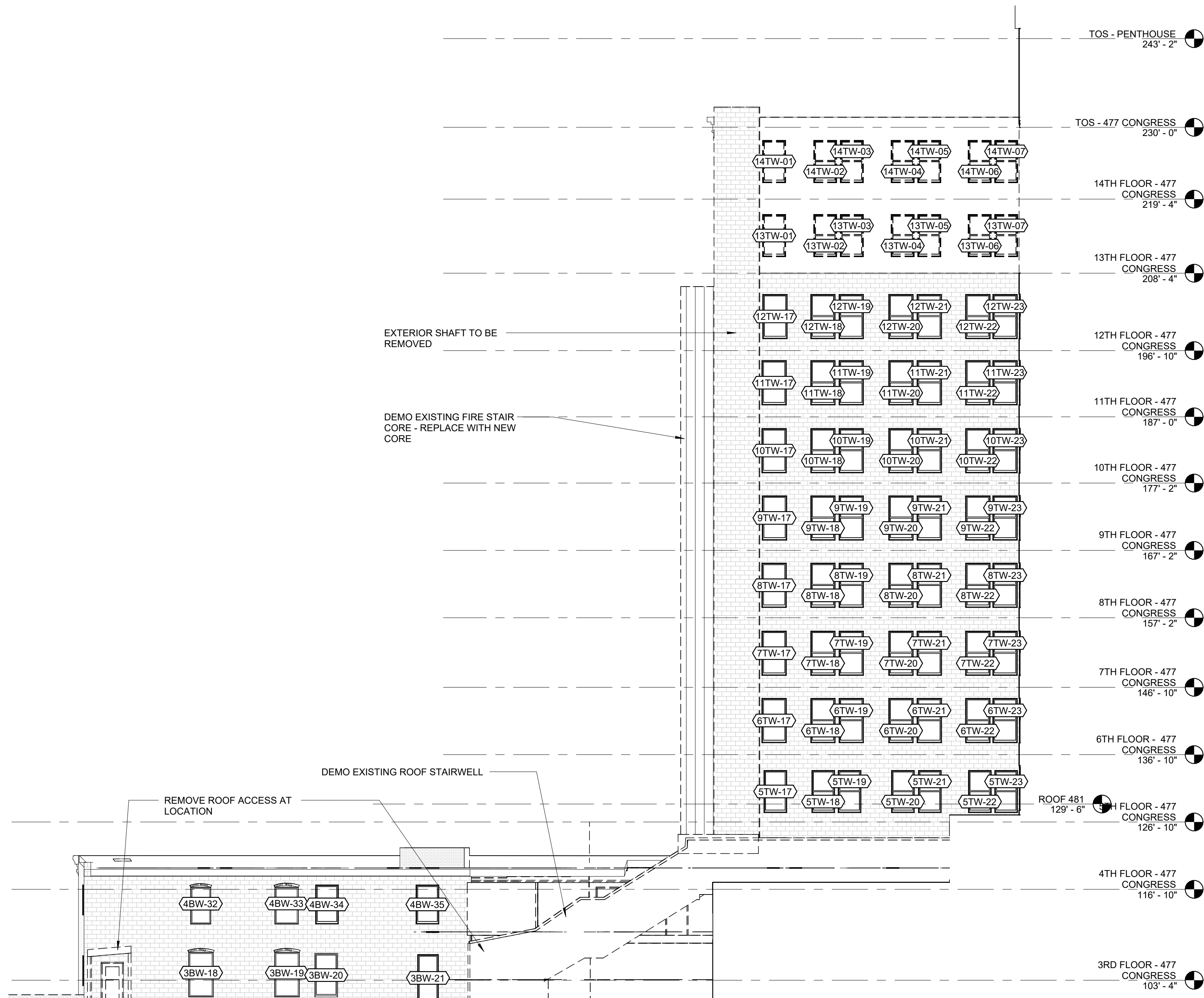
4 | 4TH FLOOR - INNER COURTYARD - _EXG

3/32" = 1'-0"



3 | EAST ELEVATION - INNER COURTYARD

3/32" = 1'-0"



1 | WEST ELEVATION - INNER COURTYARD

3/32" = 1'-0"

Project:

TIME &
TEMPERATURE
BUILDING
477 Congress Street
Portland, Maine

Owner/Client:

GREENMARS

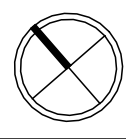
Consultant:

Revisions:

Key Plan:

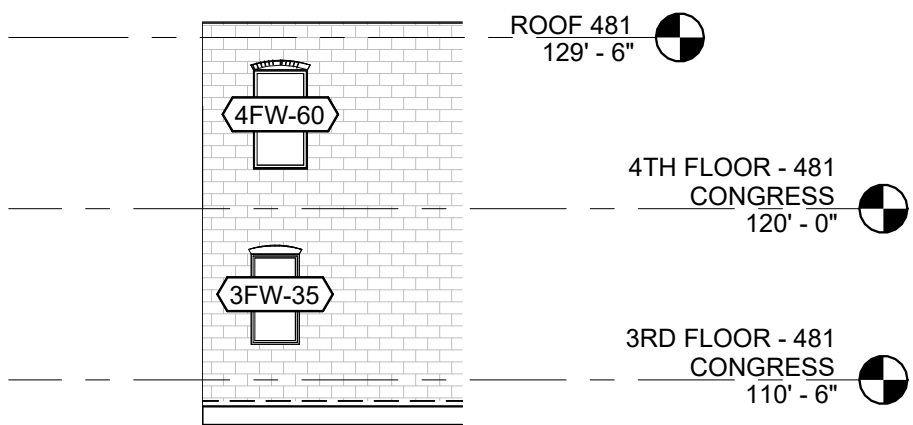
EXISTING 481 COURTYARD
ELEVATIONS

Scale:
3/32" = 1'-0"



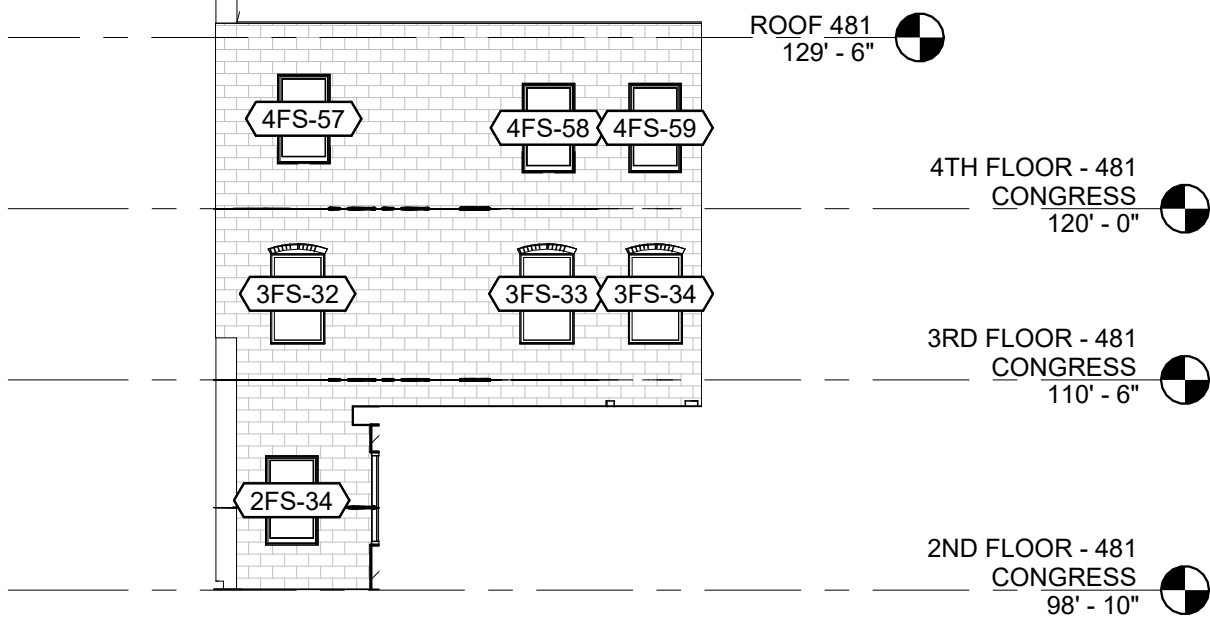
11 SEPTEMBER, 2023

A4.06



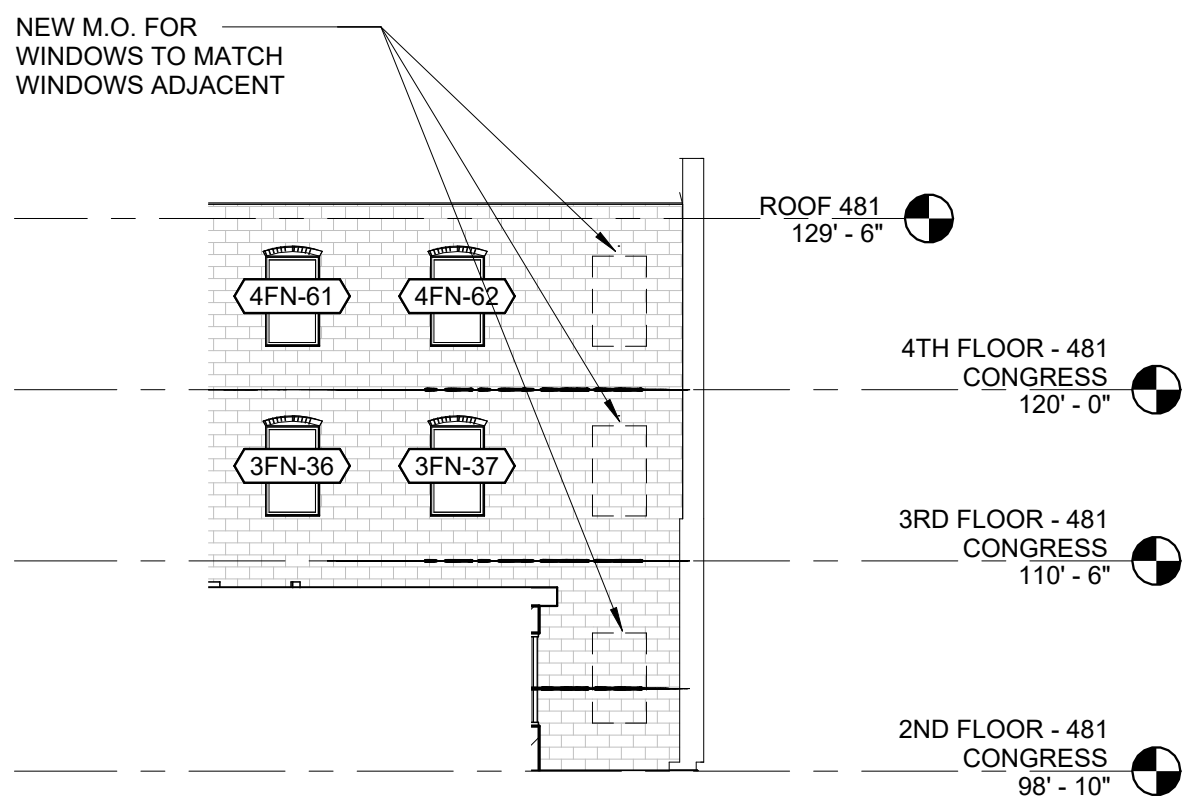
1 | WEST ELEVATION - COURTYARD

3/32" = 1'-0"



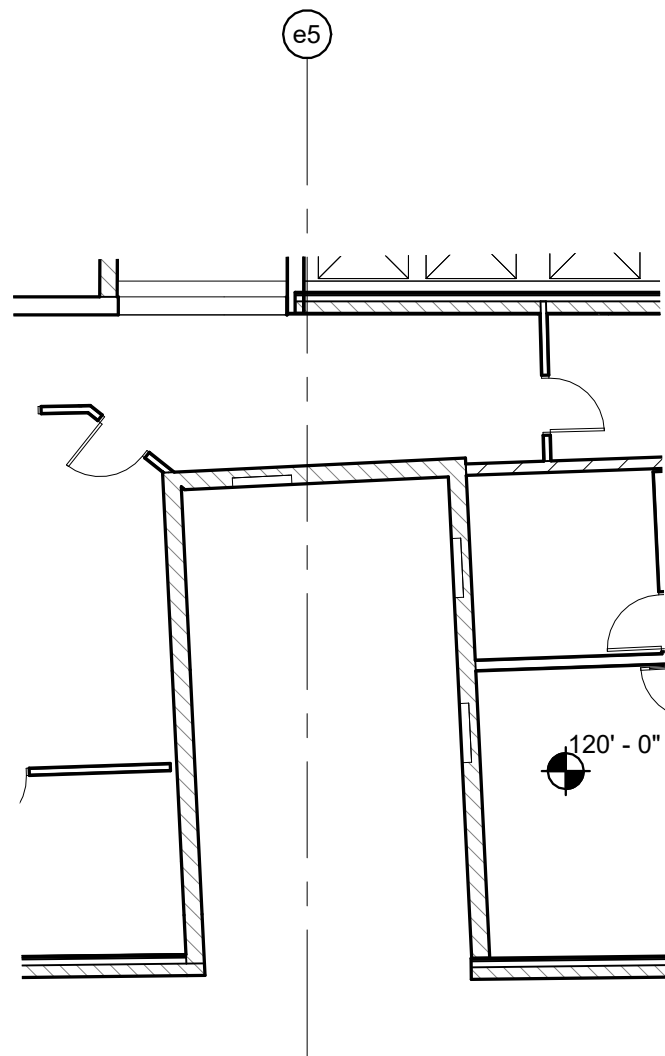
2 | SOUTH ELEVATION - COURTYARD

3/32" = 1'-0"



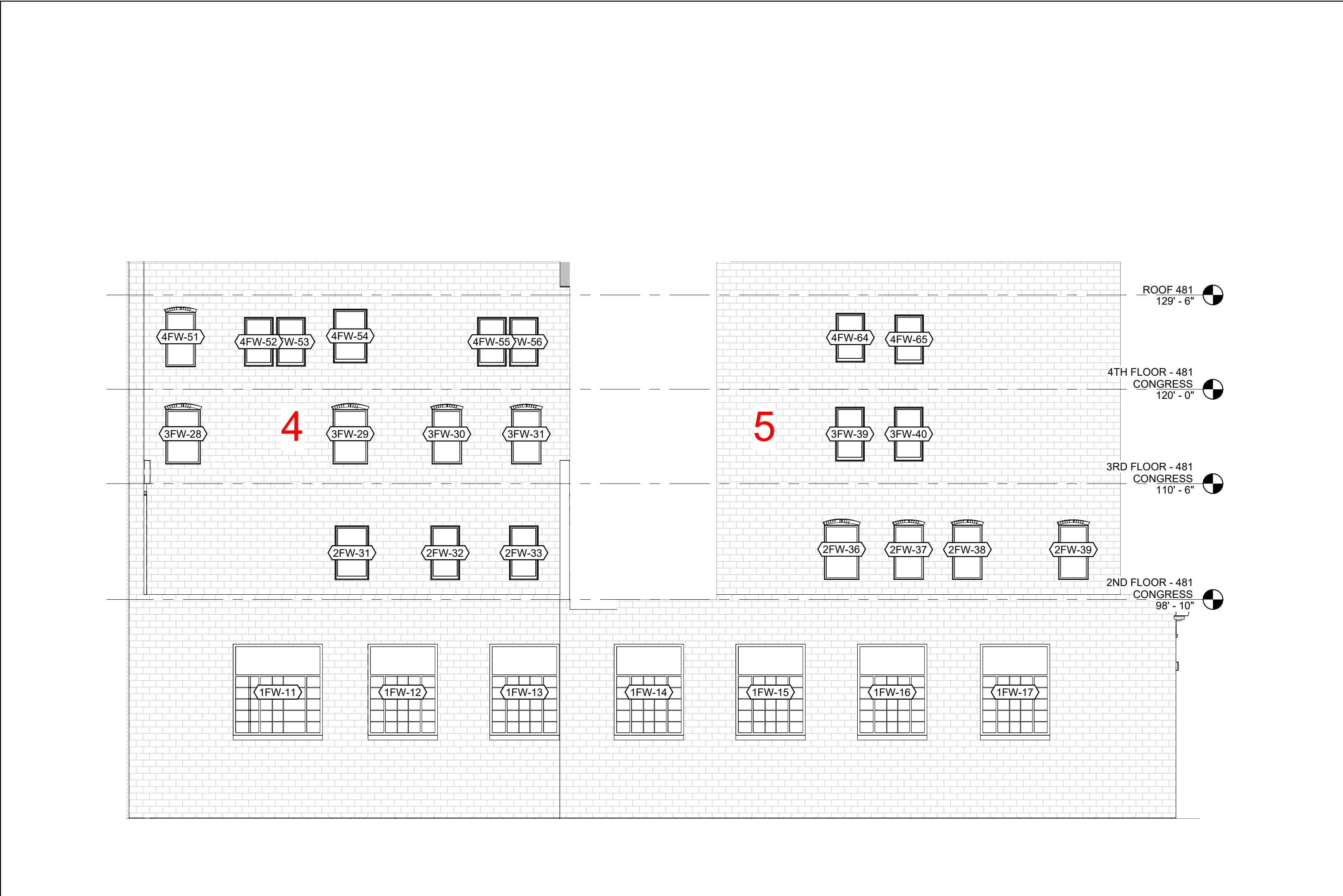
3 | NORTH ELEVATION - COURTYARD

3/32" = 1'-0"



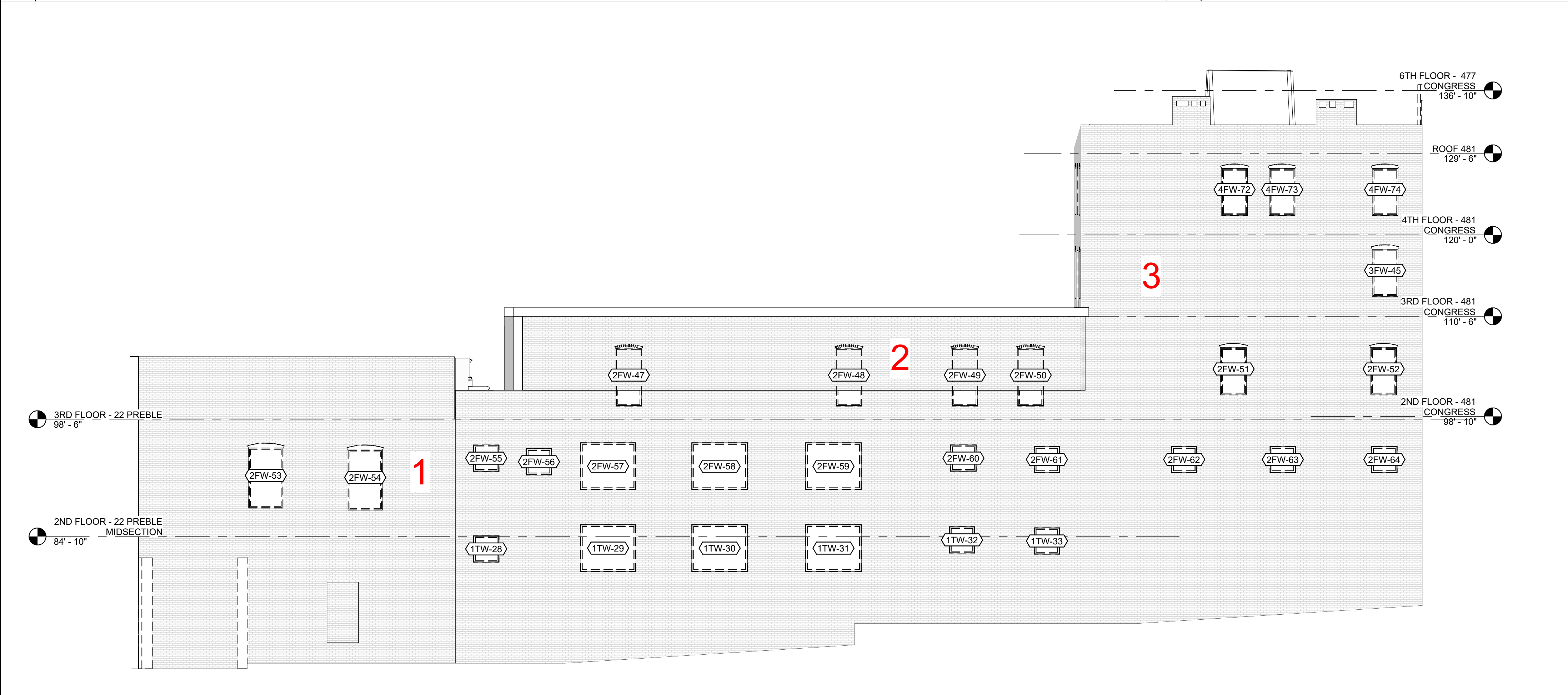
4 | COURTYARD PLAN

3/32" = 1'-0"



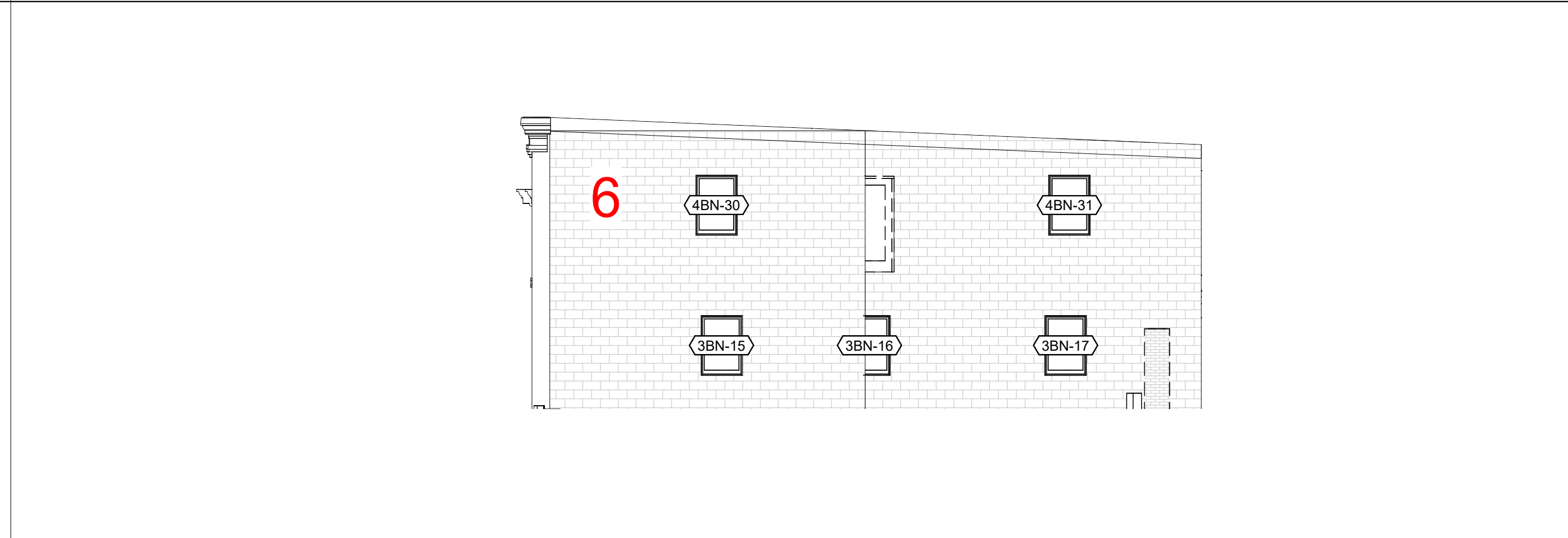
2 | WEST ELEVATION - 481 BUILDING

1/8" = 1'-0"



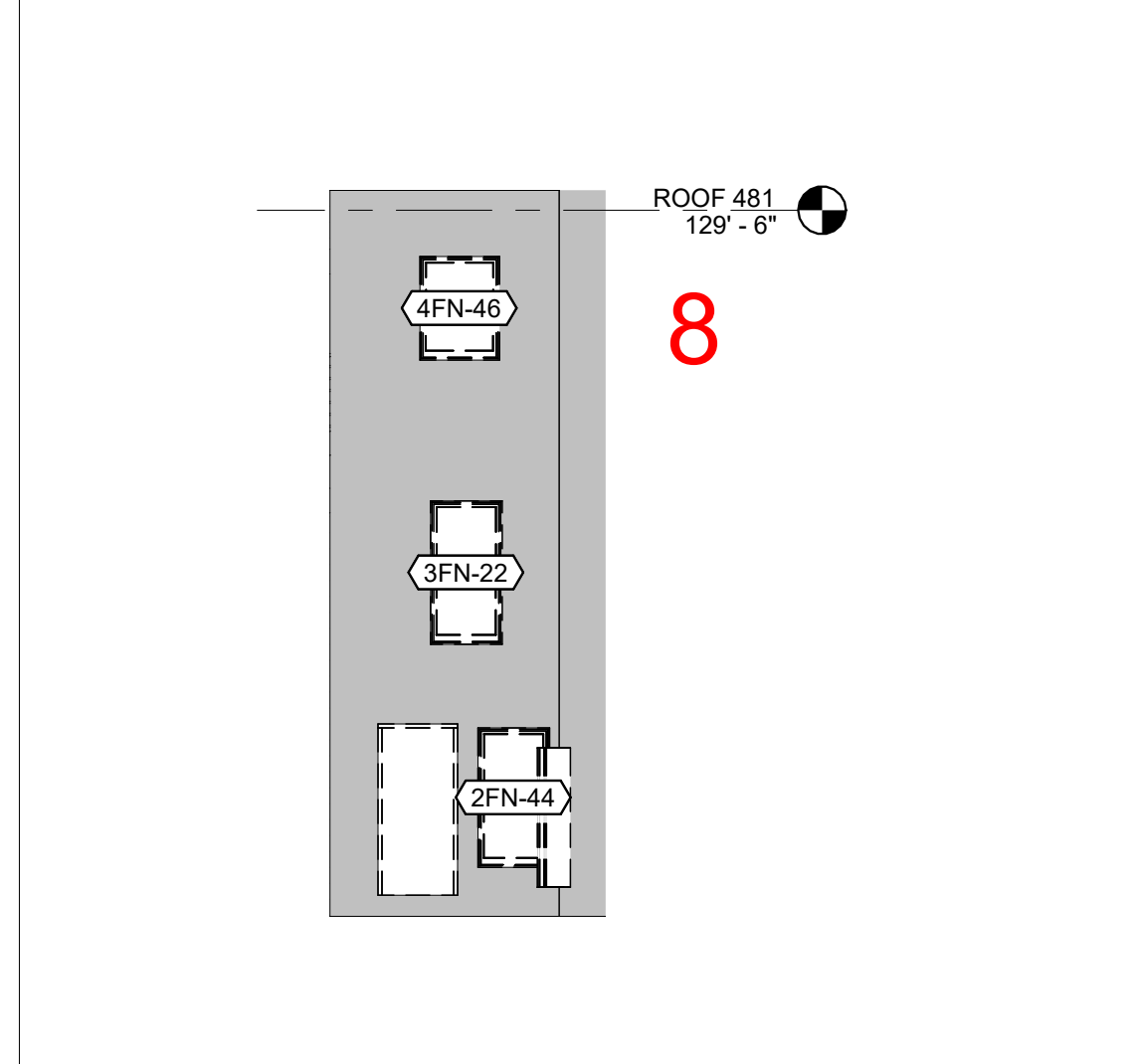
1 | WEST ELEVATION - ALLEY WALL

1/8" = 1'-0"



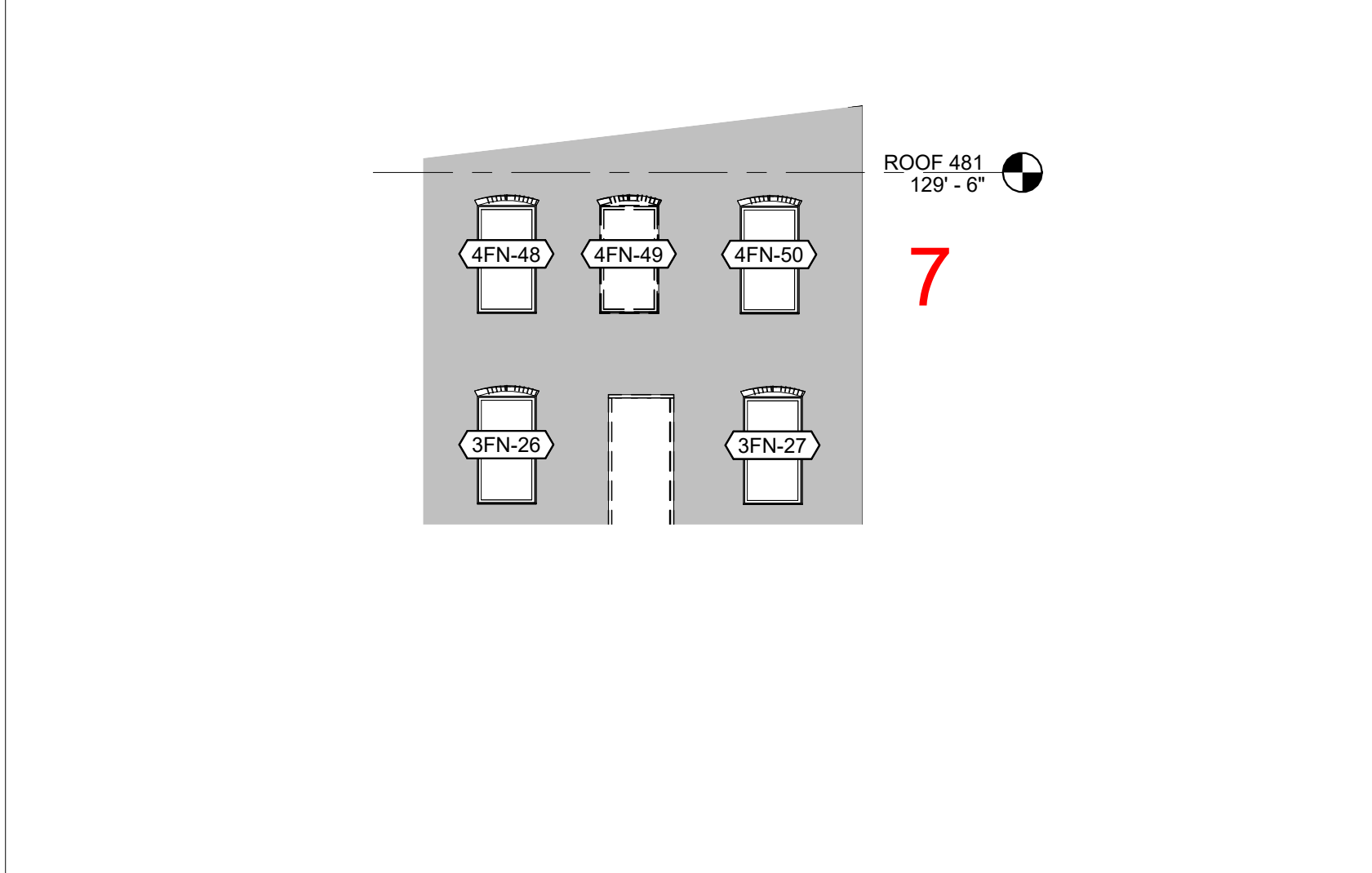
3 | NORTH ELEVATION - ANNEX

1/8" = 1'-0"



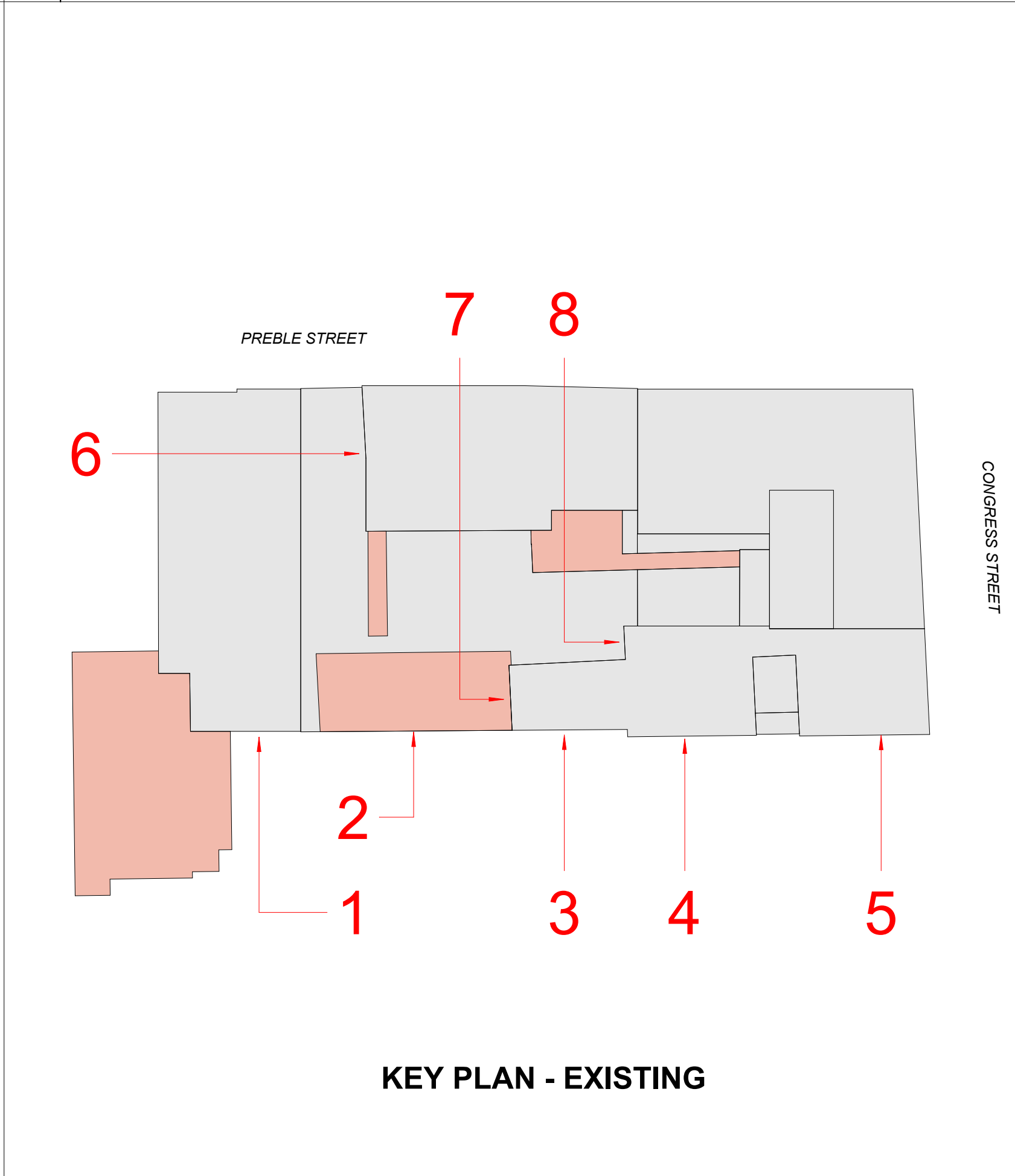
4 | NORTH ELEVATION - 481 BUILDING 2

1/8" = 1'-0"



5 | NORTH ELEVATION - 481 BUILDING

1/8" = 1'-0"



KEY PLAN - EXISTING

Project:

**TIME &
TEMPERATURE
BUILDING**
477 Congress Street
Portland, Maine

Owner/Client:

GREENMARS

Consultant:

Revisions:

Key Plan:

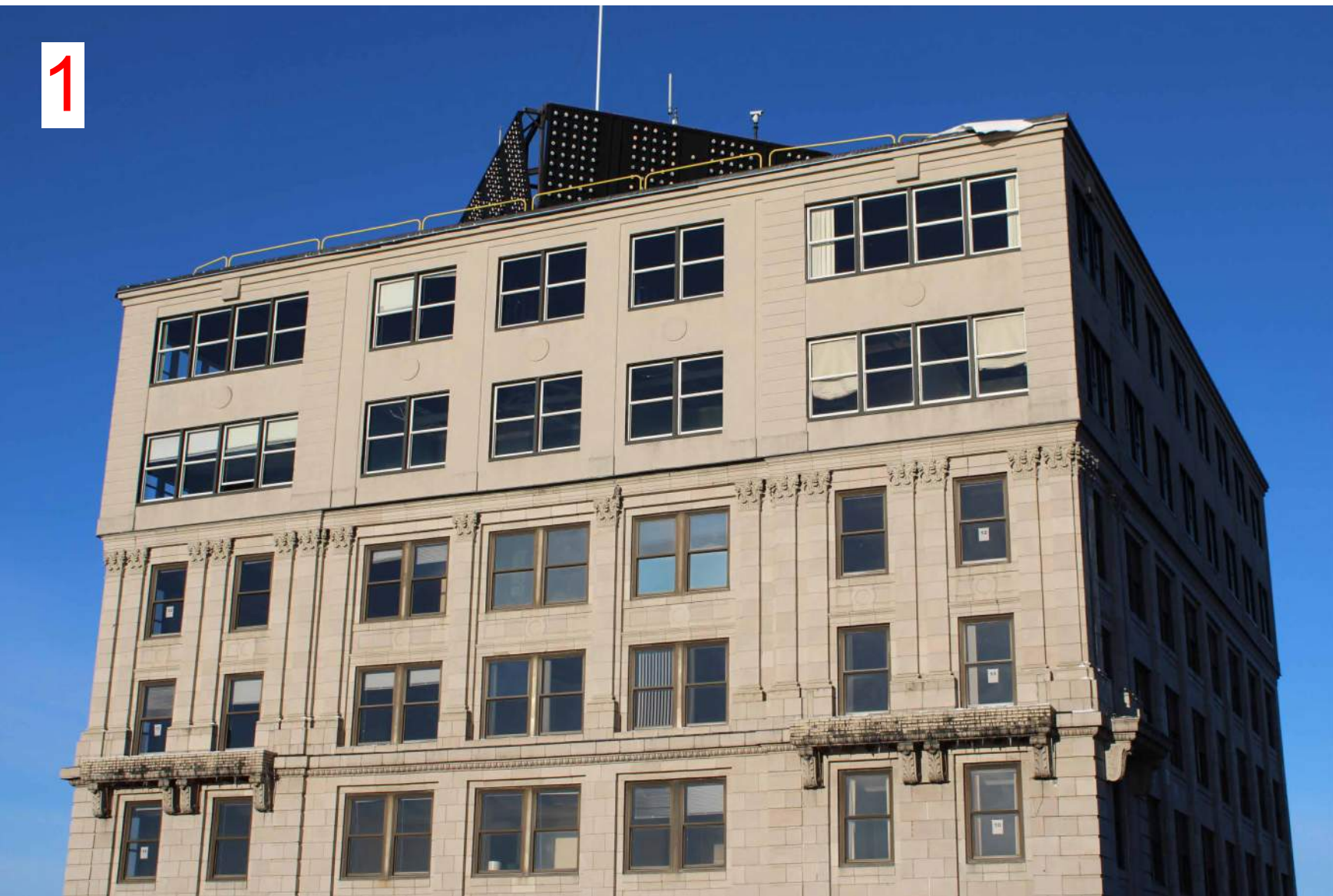
EXISTING ENLARGED
ELEVATIONS

Scale:
As indicated



11 SEPTEMBER, 2023

A4.07



Project:

**TIME &
TEMPERATURE
BUILDING**

477 Congress Street
Portland, Maine

Owner/Client:

GREENMARS

Consultant:

Revisions:

Key Plan:

CONGRESS ST ELEVATION

Scale:
3/32" = 1'-0"

11 SEPTEMBER, 2023

A4.20

Project:

**TIME &
TEMPERATURE
BUILDING**

477 Congress Street
Portland, Maine

Owner/Client:

GREENMARS

Consultant:

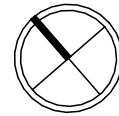
Revisions:

3	08.25.22	ADDENDUM 03
---	----------	-------------

Key Plan:

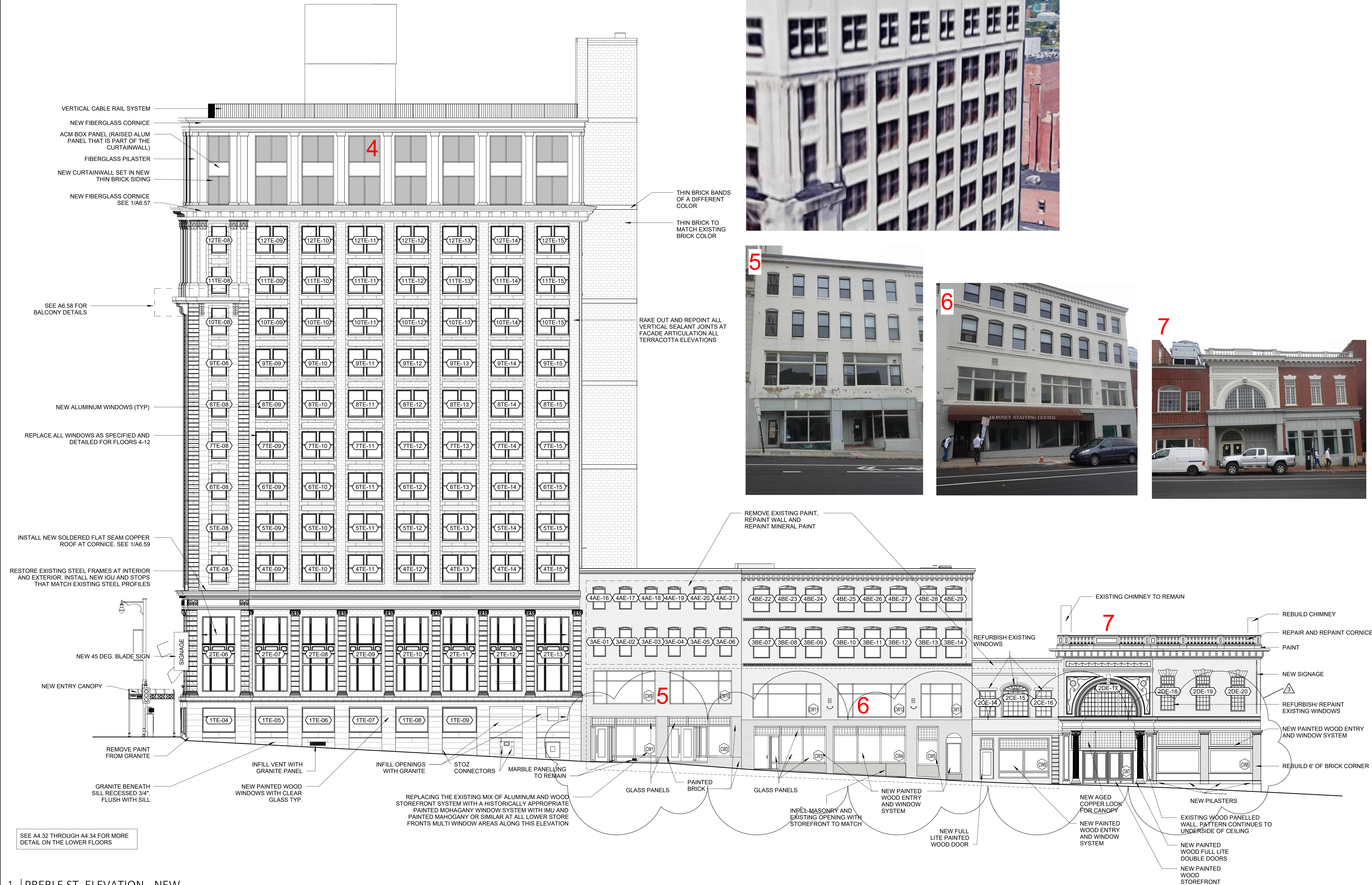
PREBLE ST. ELEVATION

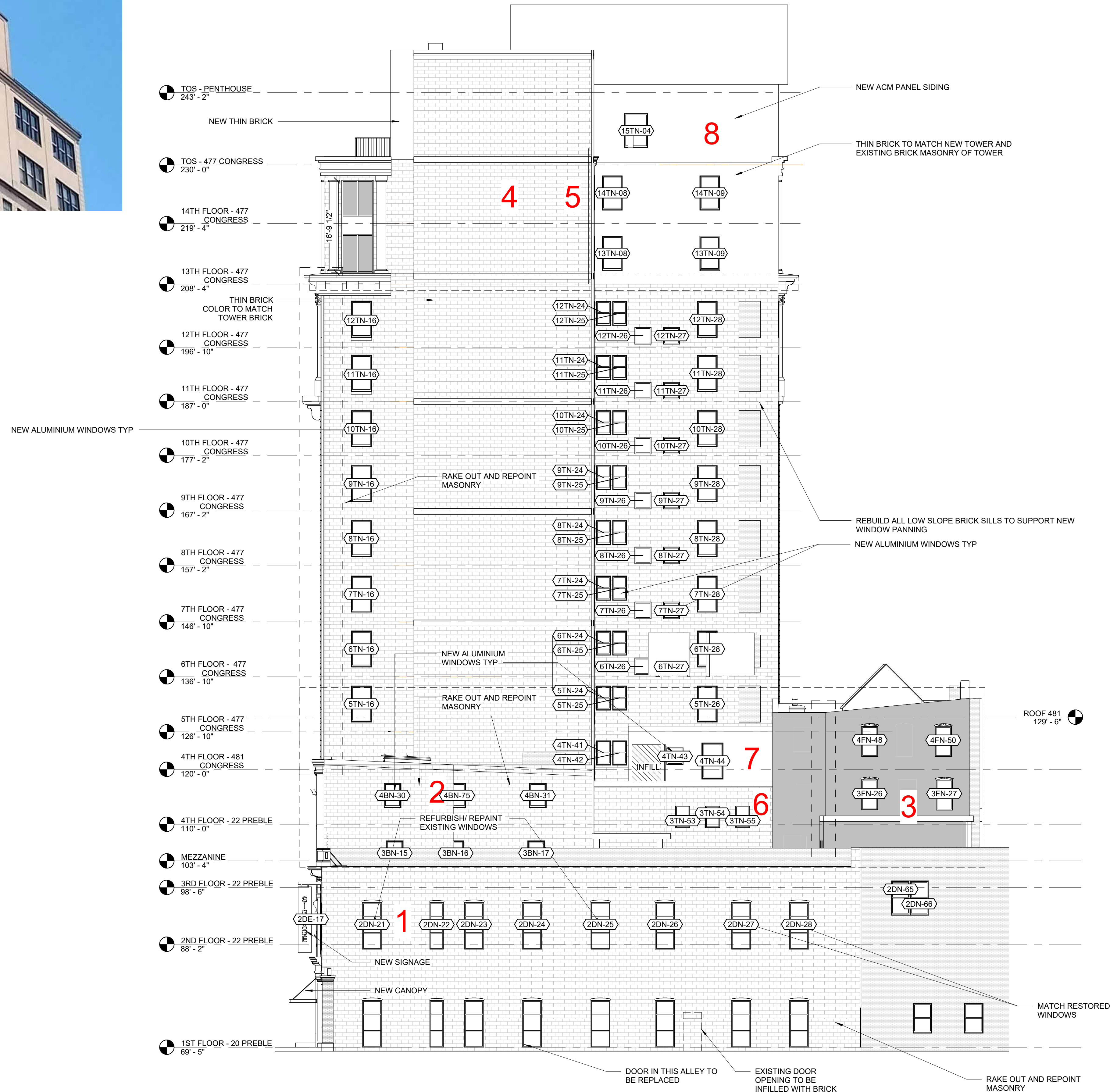
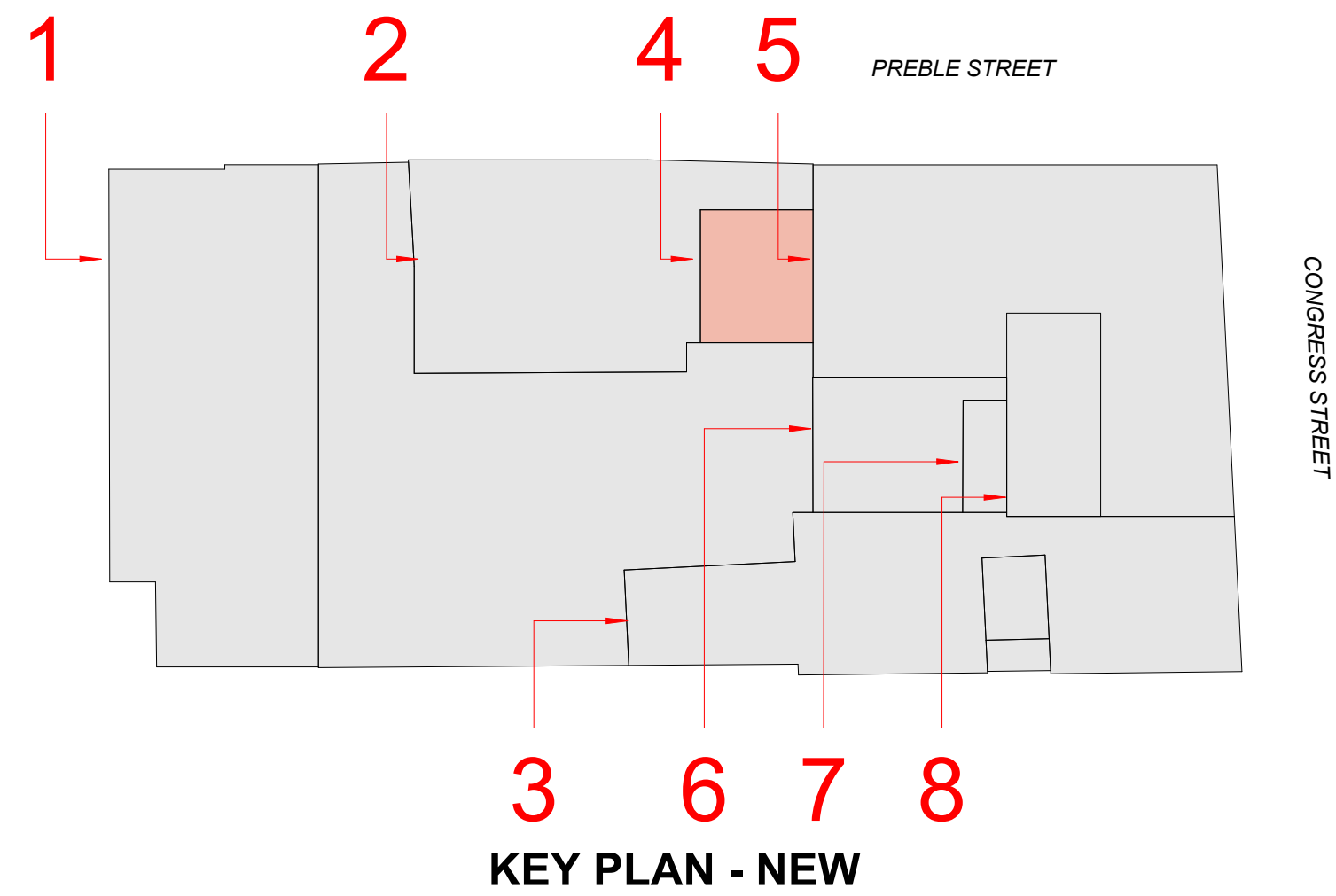
Scale:
3/32" = 1'-0"



11 SEPTEMBER, 2023

A4.21





Project:

**TIME &
TEMPERATURE
BUILDING**
477 Congress Street
Portland, Maine

Owner/Client:

GREENMARS

Consultant:

Revisions:

Key Plan:

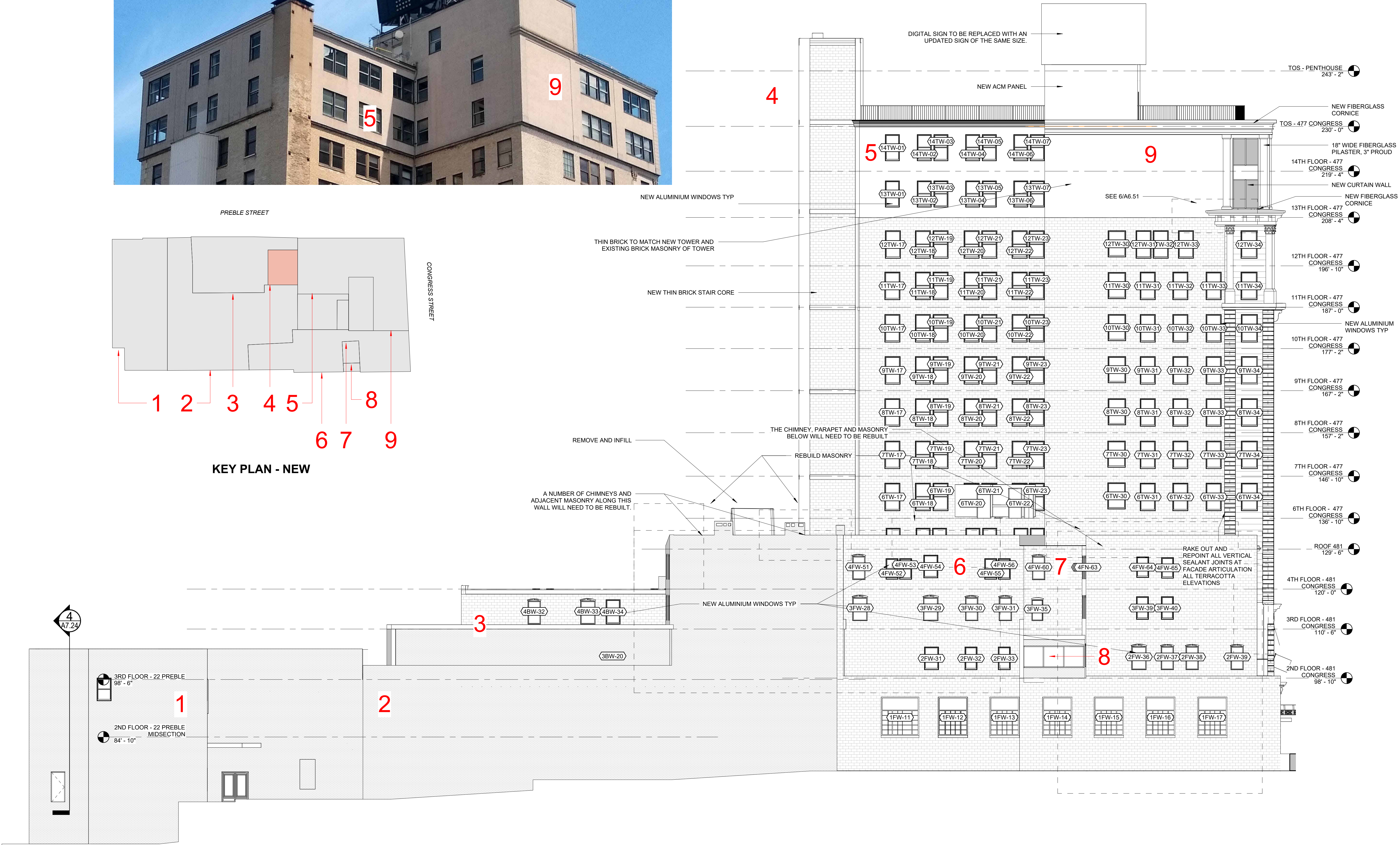
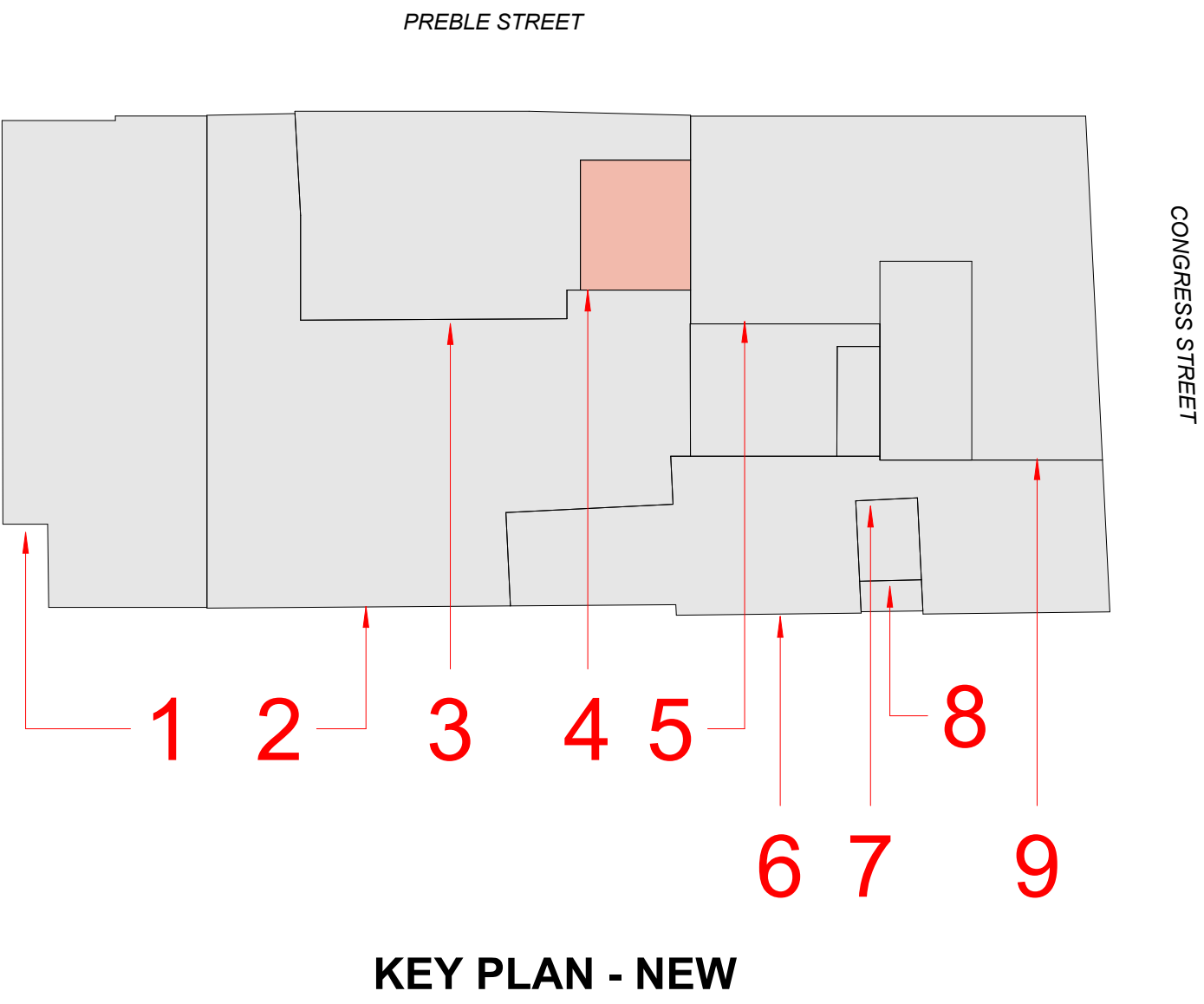
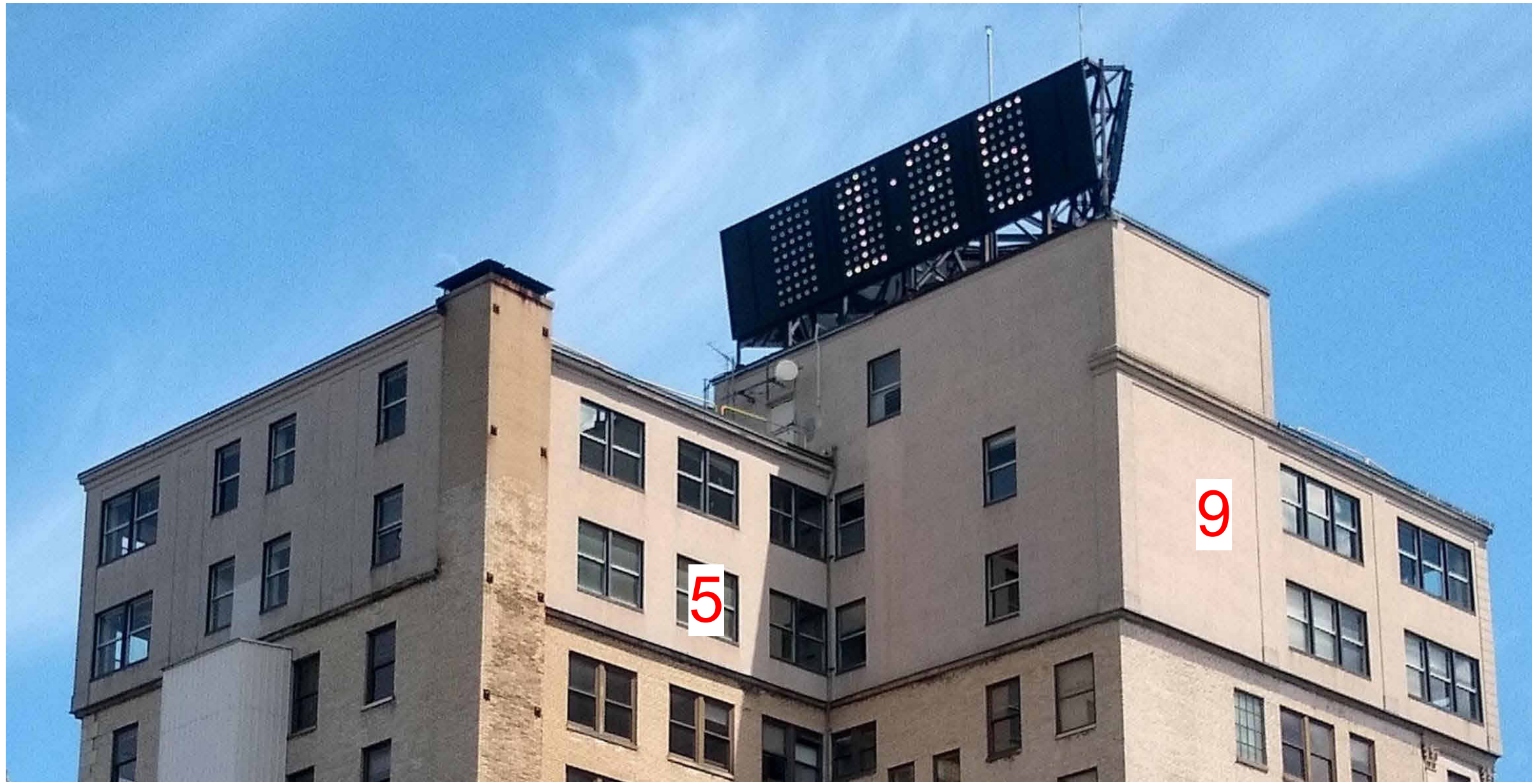
NORTH ELEVATIONS

Scale:
As indicated



11 SEPTEMBER, 2023

A4.22



Project:

**TIME &
TEMPERATURE
BUILDING**
477 Congress Street
Portland, Maine

Owner/Client:

GREENMARS

Consultant:

Revisions:

Key Plan:

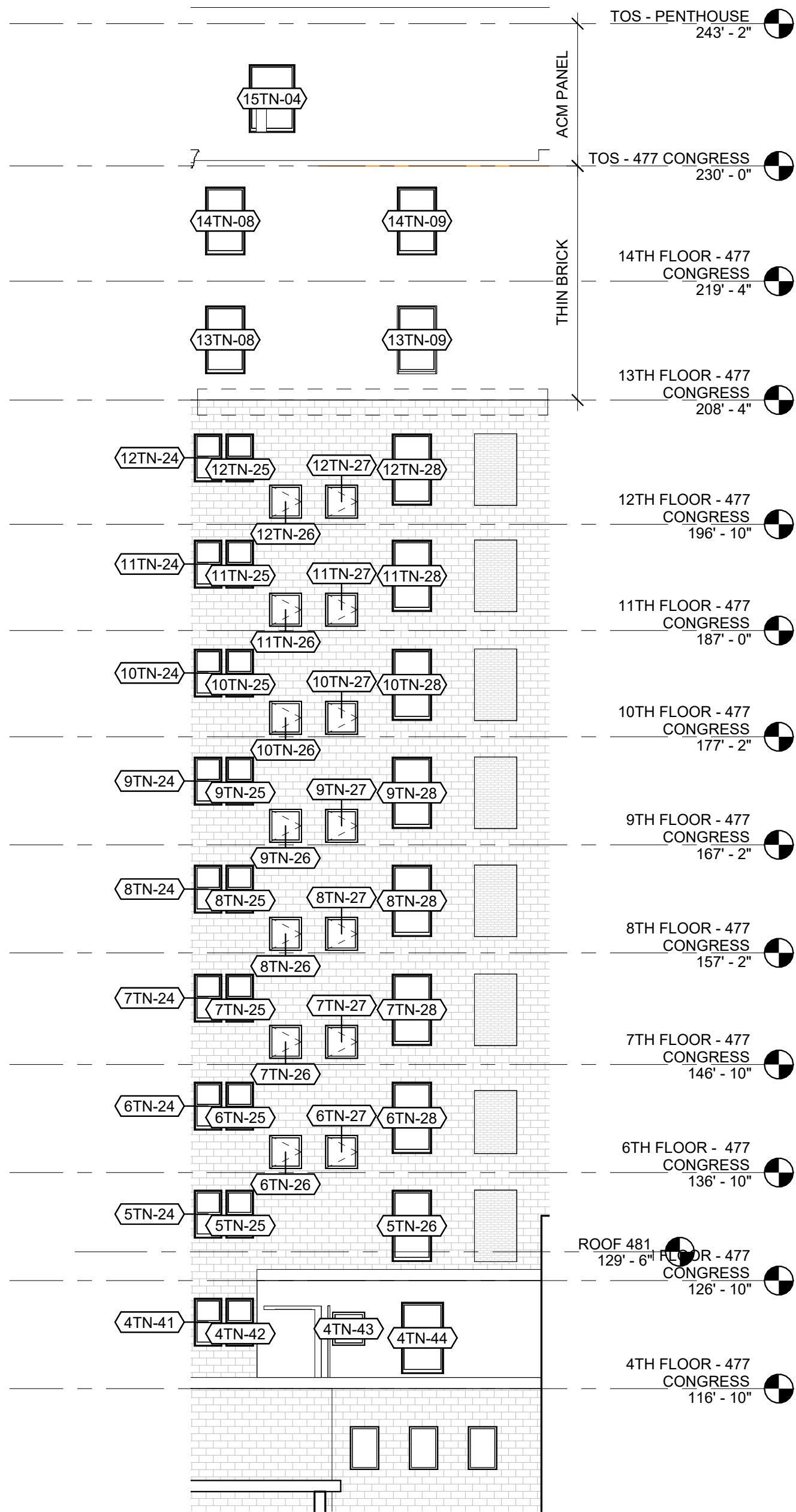
BUILDING ELEVATIONS OFF
2ND FL ROOF

Scale:
3/32" = 1'-0"



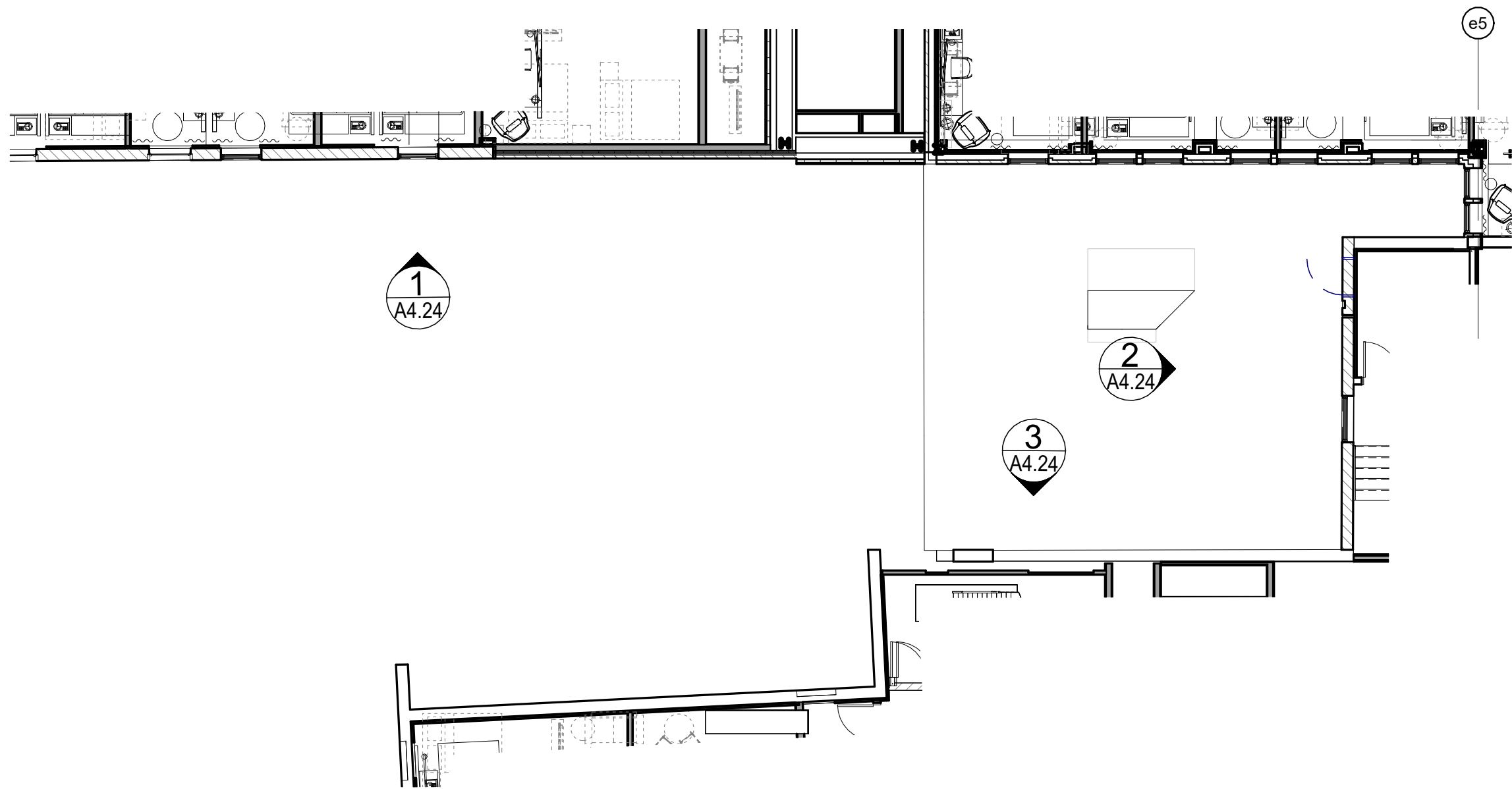
11 SEPTEMBER, 2023

A4.24



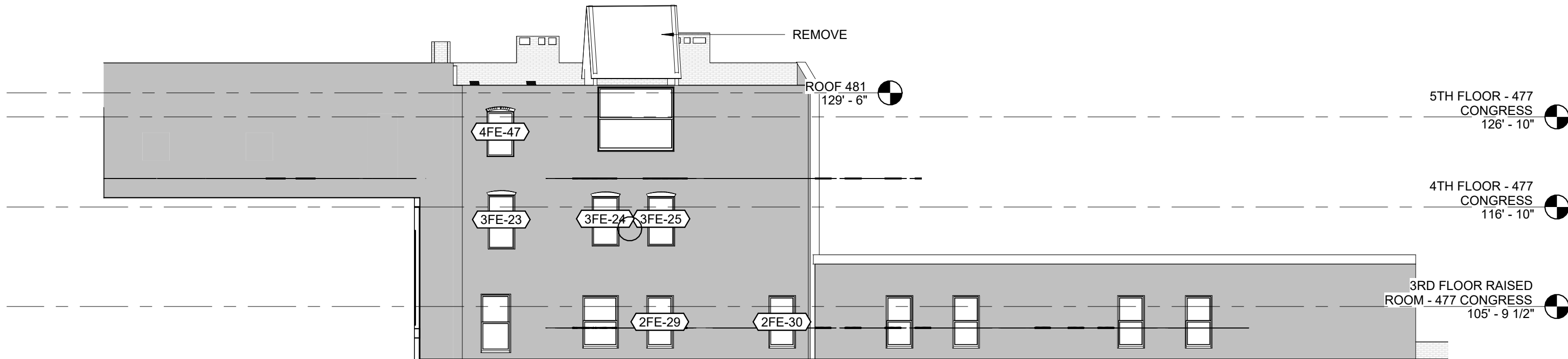
2 | NORTH ELEVATION - NEW INNER COURTYARD

3/32" = 1'-0"



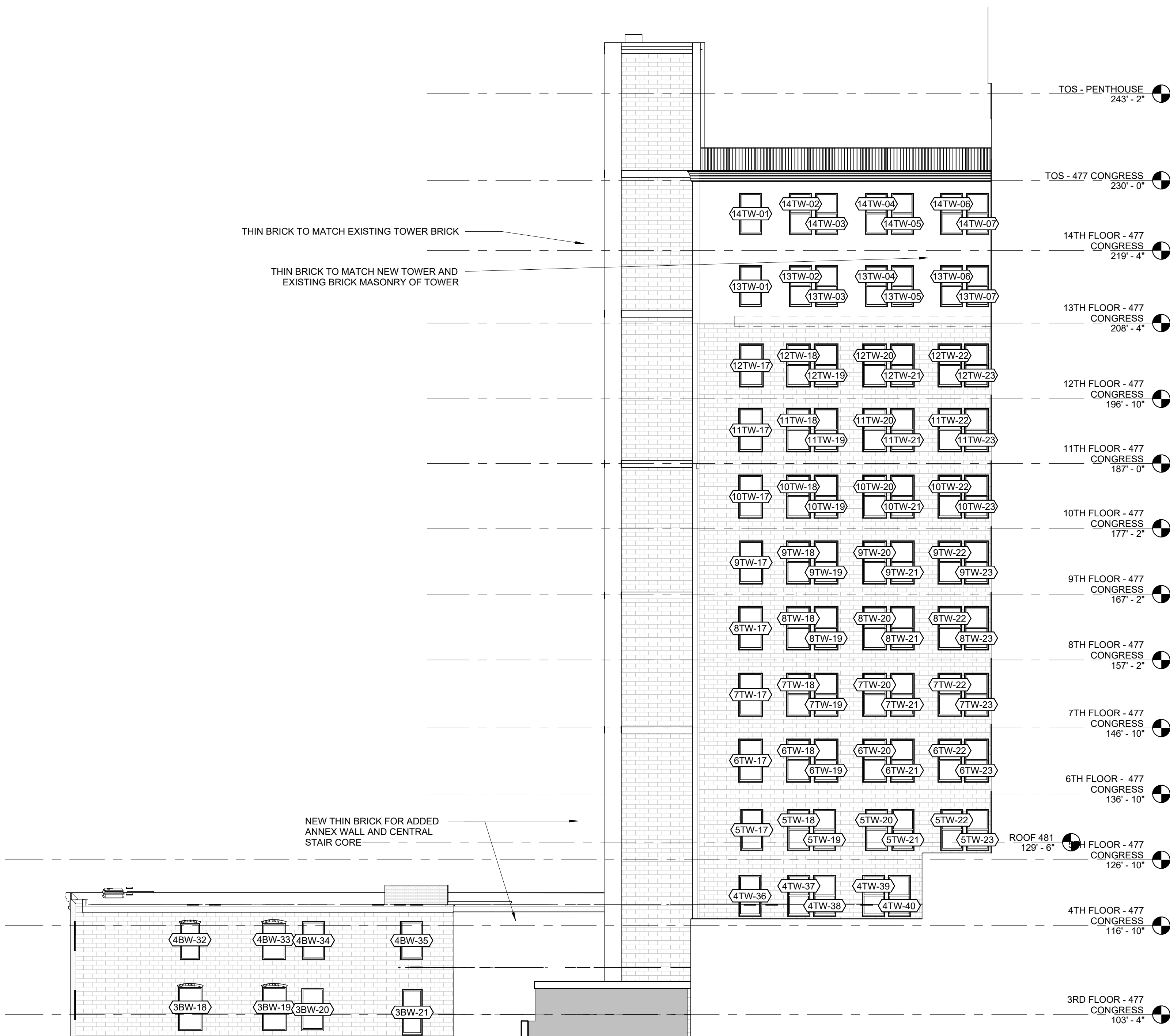
4 | 4TH FLOOR - INNER COURTYARD - NEW

3/32" = 1'-0"



3 | EAST ELEVATION - NEW INNER COURTYARD

3/32" = 1'-0"



1 | WEST ELEVATION - NEW INNER COURTYARD

3/32" = 1'-0"

Project:

TIME &
TEMPERATURE
BUILDING
477 Congress Street
Portland, Maine

Owner/Client:

GREENMARS

Consultant:

Revisions:

Key Plan:

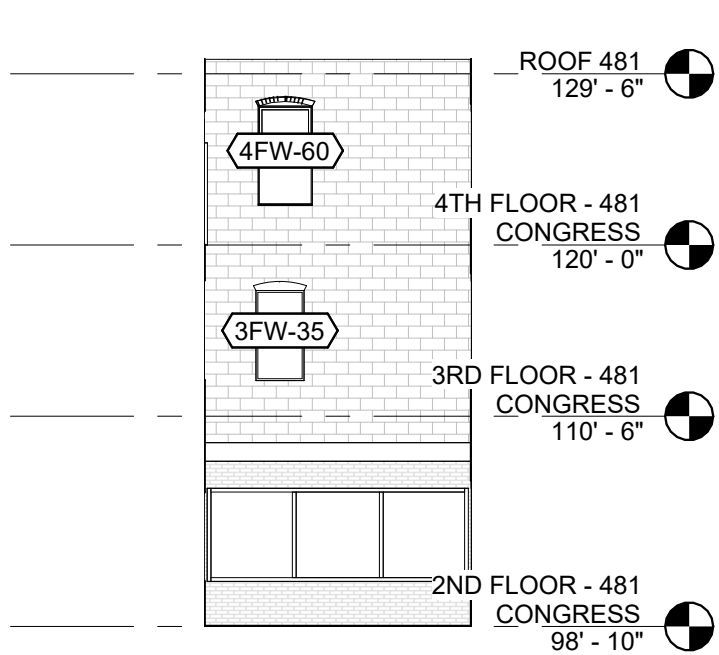
481 COURTYARD
ELEVATIONS

Scale:
3/32" = 1'-0"



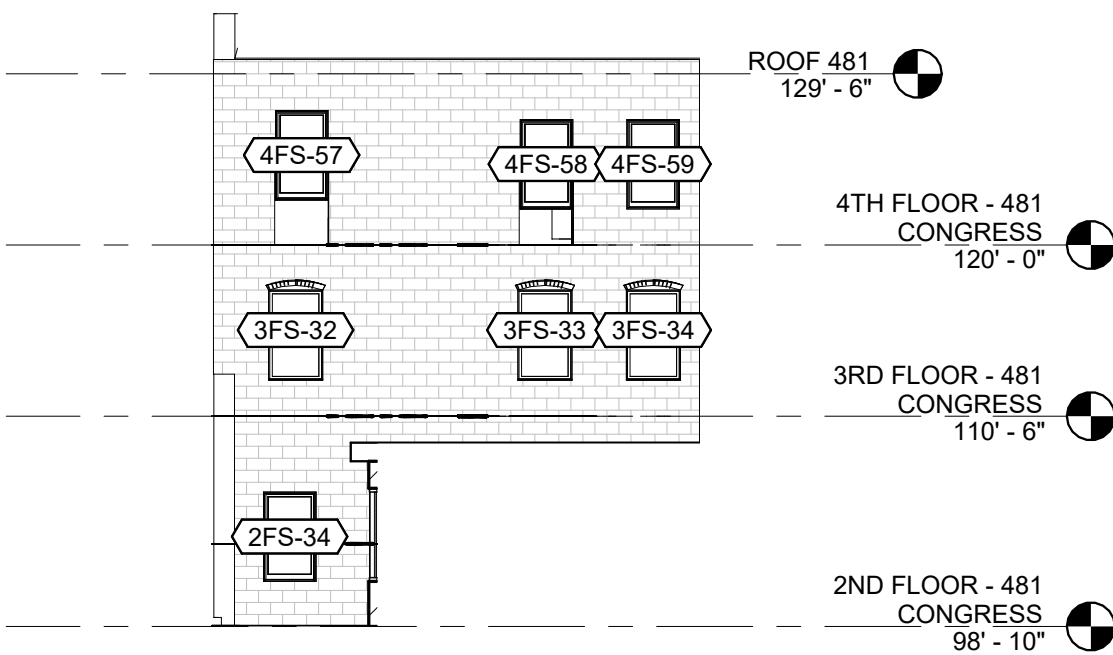
11 SEPTEMBER, 2023

A4.25



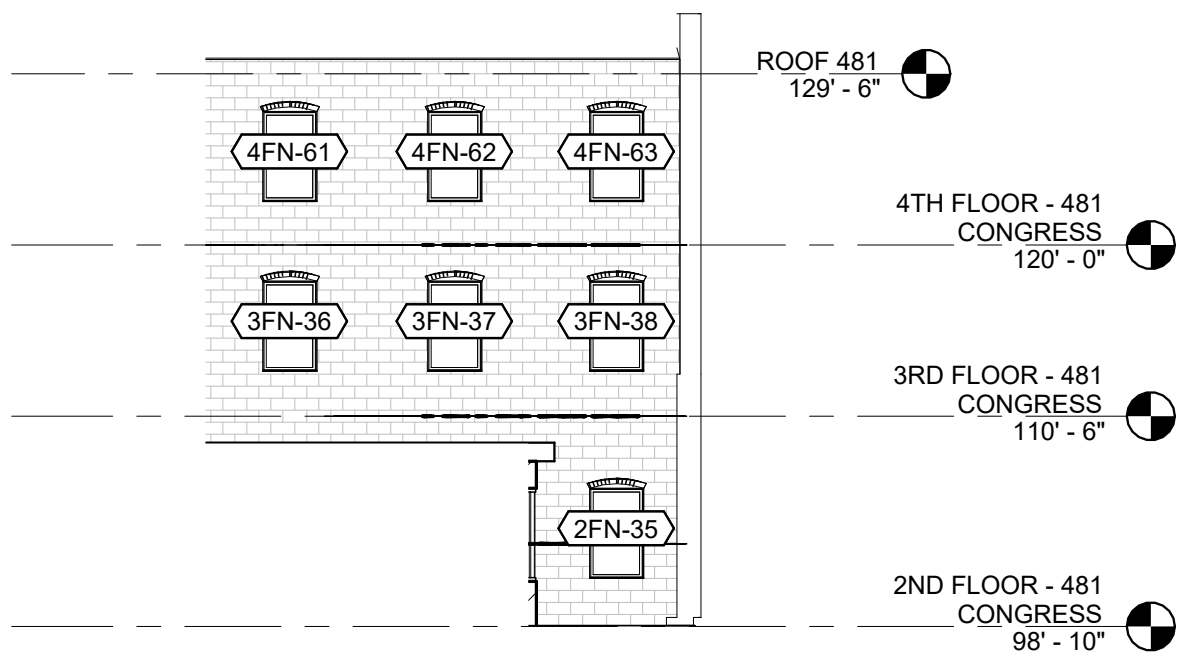
1 | WEST ELEVATION - NEW COURTYARD

3/32" = 1'-0"



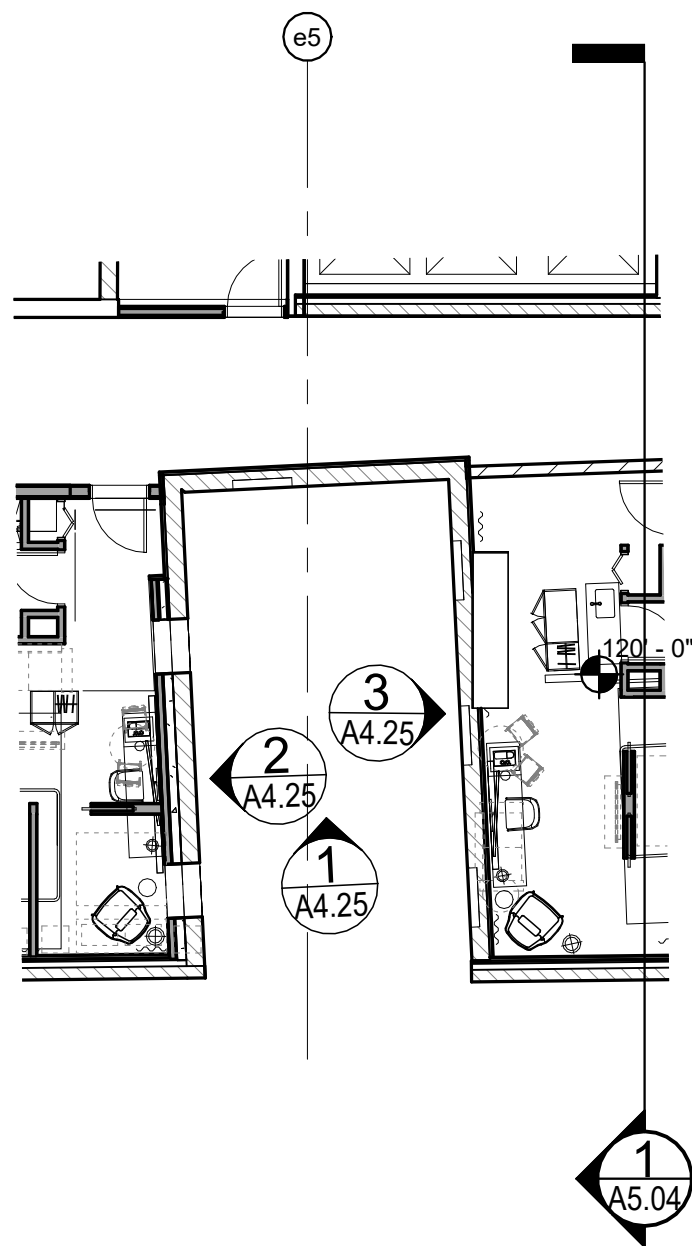
2 | SOUTH ELEVATION - NEW COURTYARD

3/32" = 1'-0"



3 | NORTH ELEVATION - NEW COURTYARD

3/32" = 1'-0"



4 | 4TH FLOOR - COURTYARD - NEW

3/32" = 1'-0"

Project:

**TIME &
TEMPERATURE
BUILDING**
477 Congress Street
Portland, Maine

Owner/Client:

GREENMARS

Consultant:

Revisions:

Key Plan:

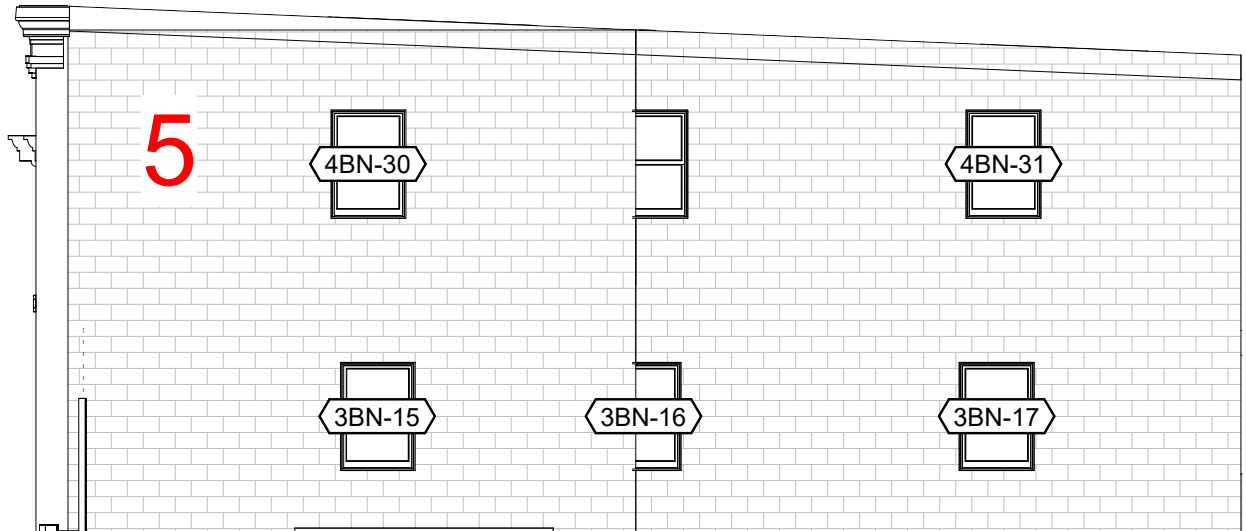
ENLARGED ELEVATIONS

Scale:
As indicated



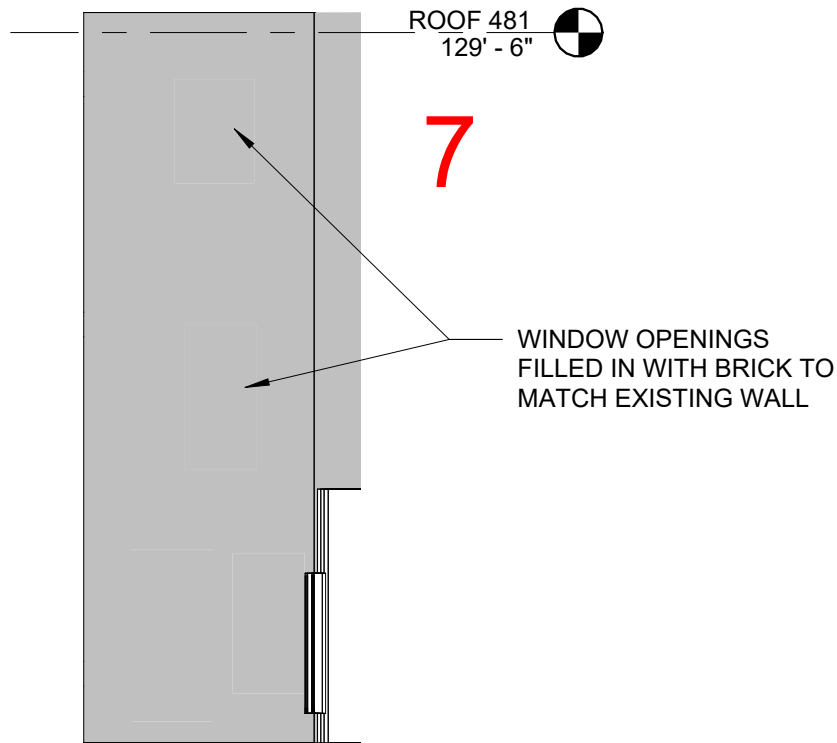
11 SEPTEMBER, 2023

A4.26



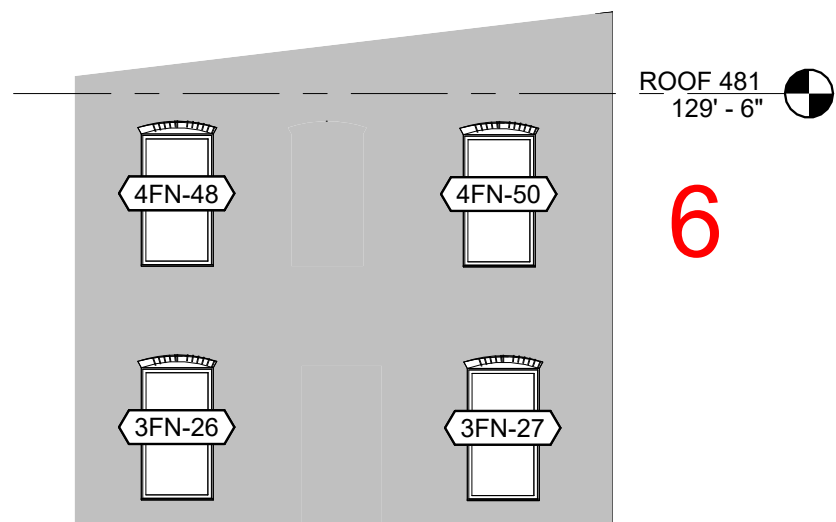
5 | NORTH ELEVATION - ANNEX - NEW

1/8" = 1'-0"



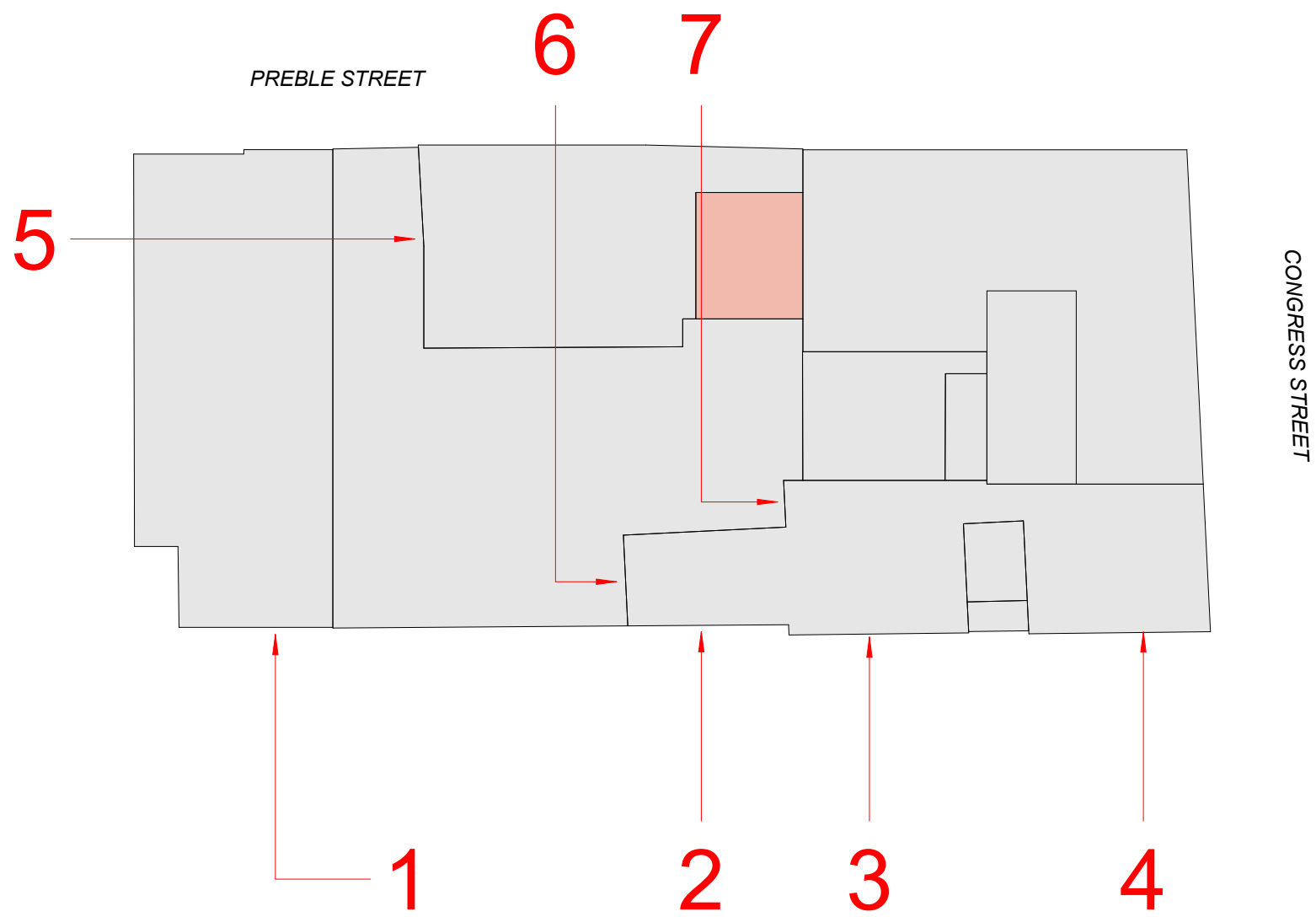
3 | NORTH ELEVATION - 481 BUILDING 2 - NEW

1/8" = 1'-0"

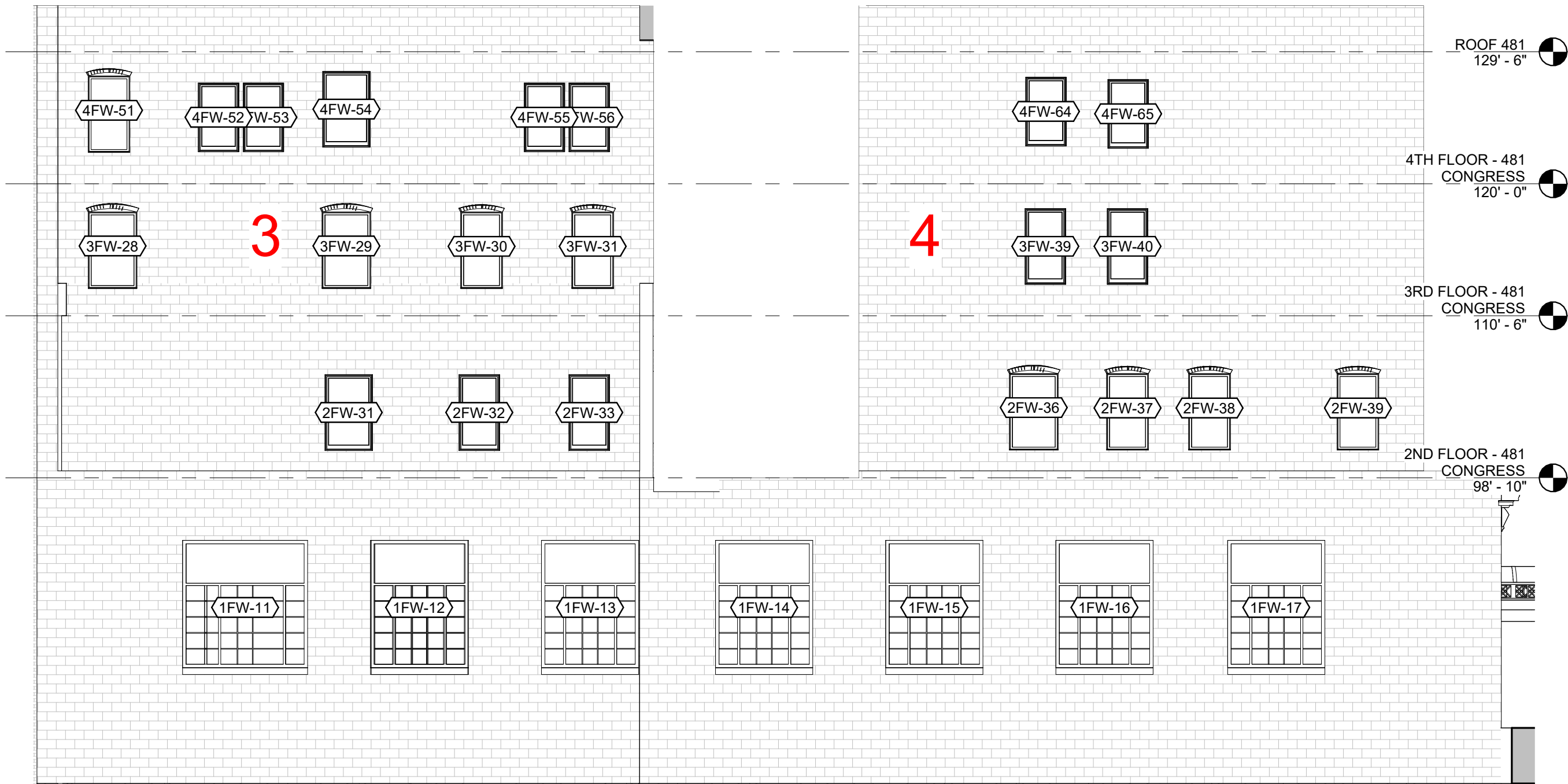


4 | NORTH ELEVATION - 481 BUILDING - NEW

1/8" = 1'-0"

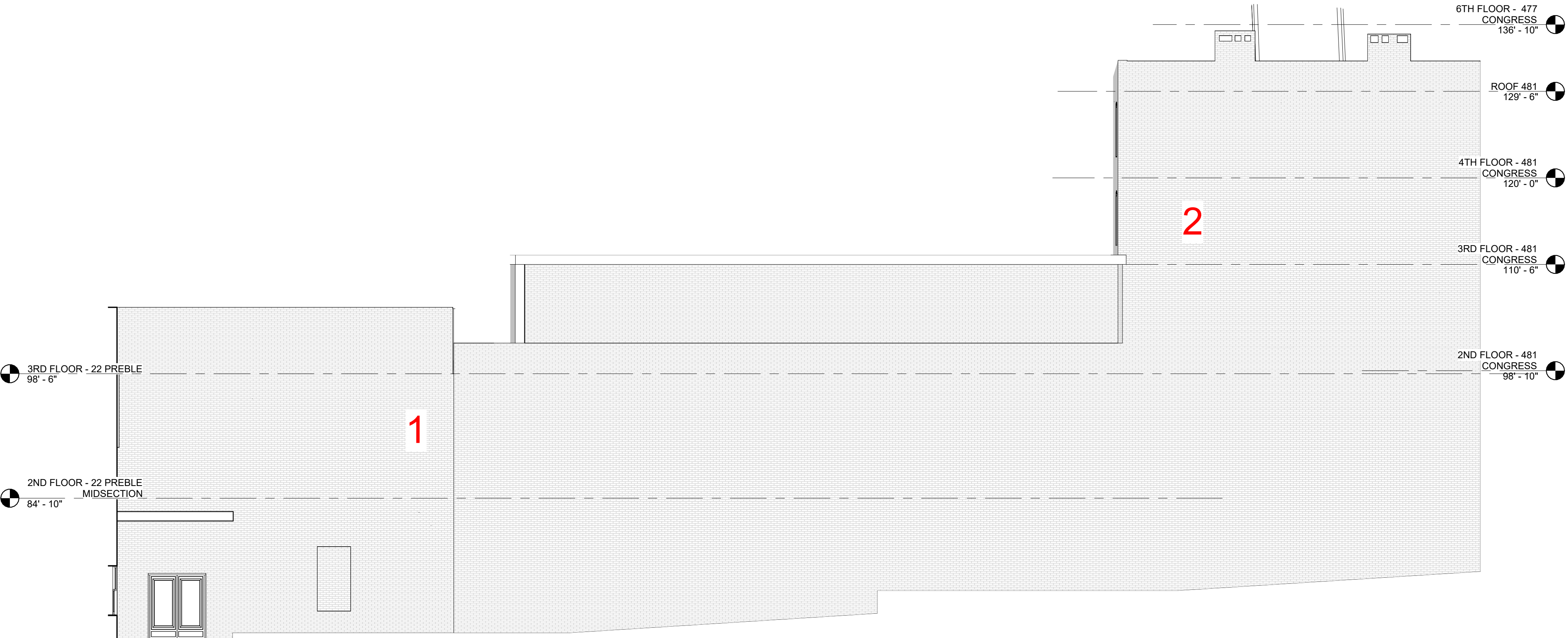


KEY PLAN - NEW



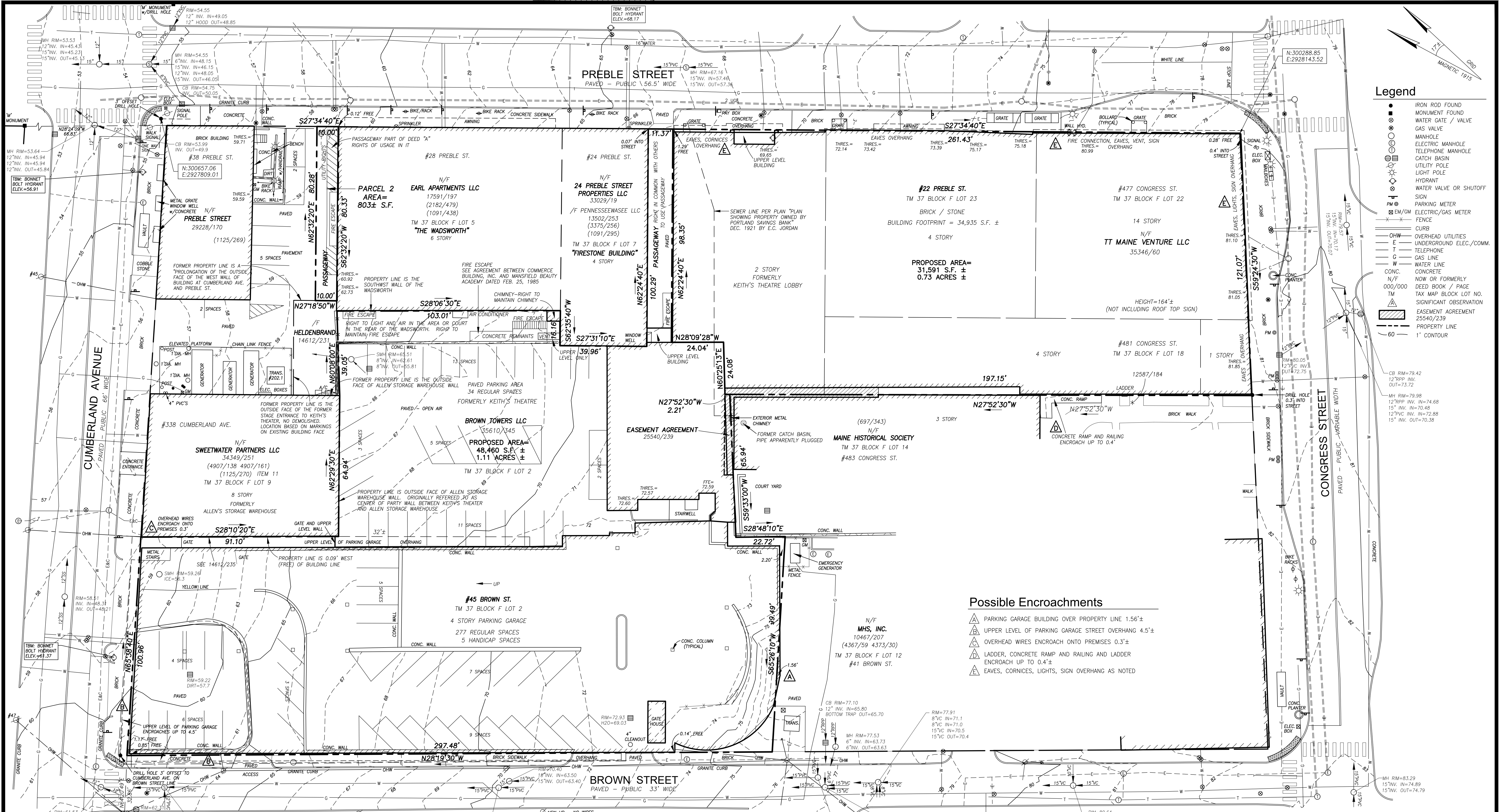
2 | WEST ELEVATION - 481 BUILDING - NEW

1/8" = 1'-0"



1 | WEST ELEVATION - ALLEY WALL - NEW

1/8" = 1'-0"



Legend

- IRON ROD FOUND
- MONUMENT FOUND
- WATER GATE / VALVE
- GAS VALVE
- MANHOLE
- ELECTRIC MANHOLE
- TELEPHONE MANHOLE
- CATCH BASIN
- UTILITY POLE
- LIGHT POLE
- HYDRANT
- WATER VALVE OR SHUTOFF
- SIGN
- PARKING METER
- ELECTRIC/GAS METER
- FENCE
- OHW
- UNDERGROUND ELEC./COMM.
- TELEPHONE
- G
- W
- CONC.
- N/F
- DEED BOOK / PAGE
- TAX MAP BLOCK LOT NO.
- SIGNIFICANT OBSERVATION
- EASEMENT AGREEMENT
- 25540/239
- PROPERTY LINE
- 1' CONTOUR

Possible Encroachments

- PARKING GARAGE BUILDING OVER PROPERTY LINE 1.56'±
- UPPER LEVEL OF PARKING GARAGE STREET OVERHANG 4.5'±
- OVERHEAD WIRES ENCRACH ONTO PREMISES 0.3'±
- LADDER, CONCRETE RAMP AND RAILING AND LADDER ENCRACH UP TO 0.4'±
- EAVES, CORNICES, LIGHTS, SIGN OVERHANG AS NOTED

General Notes

- OWNER OF RECORD: BROWN TOWERS, LLC, RECORDED IN CUMBERLAND COUNTY REGISTRY OF DEEDS IN BOOK 35610, PAGE 345.
- LOCUS IS SHOWN ON PORTLAND PROPERTY MAPS AS MAP 37 BLOCK F LOTS 2, 18, 22 & 23.
- ELEVATIONS ARE BASED ON OFFICIAL CITY OF PORTLAND BENCHMARK: L 757-34-112 "M" MONUMENT AT THE NORTHWESTERLY CORNER OF FOREST AVE. & CUMBERLAND AVE. ELEVATION = 80.66' (REF. CITY L.B. 725 PG. 99-100)
- THE PARKING GARAGE AND THE PAVED PARKING AREA HAVE A COMBINED TOTAL OF 311 REGULAR AND 5 HANDICAPPED DELINEATED PARKING SPACES.
- THE PROPERTY IS SERVED BY VARIOUS UTILITIES THROUGH ADJACENT PUBLIC STREETS.
- PARTY WALL IN 1125/270 IS NOW ONLY WALL OF SWEETWATER PARTNERS LLC AND IS NOT A WALL FOR PREMISES BUILDING.
- STREET LINES ARE BASED ON PLAN REFERENCE 2 WHICH WAS BASED ON ADDITIONAL MONUMENTS ON CUMBERLAND AVENUE AND PREBLE STREET WHICH NO LONGER EXIST.
- SUBJECT PROPERTY HAS DIRECT ACCESS TO CUMBERLAND AVENUE, PREBLE STREET, AND BROWN STREET, PUBLIC RIGHTS OF WAY.
- BEARINGS ARE BASED ON MAGNETIC 1915 PER RECORD DEEDS AND PLANS. COORDINATES ARE BASED ON MAINE STATE PLANE COORDINATE SYSTEM WET ZONE NAD 83 PER CITY CONTROL POINTS:

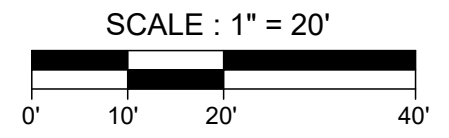
CERTIFICATE

OWEN HASKELL, INC. HEREBY CERTIFIES THAT THIS PLAN IS BASED ON, AND THE RESULT OF, AN ON THE GROUND FIELD SURVEY AND THAT TO THE BEST OF OUR KNOWLEDGE, INFORMATION AND BELIEF, IT CONFORMS TO THE BOARD OF LICENSURE FOR PROFESSIONAL LAND SURVEYORS CURRENT STANDARDS OF PRACTICE.

12/10/2020
DATE
RANDY R. LOUBIER, PLS #2407

Utility Note

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES. CALL 1-888-DIGSAFE AT LEAST THREE BUSINESS DAYS BEFORE PERFORMING ANY CONSTRUCTION. DUE TO OSHA CONFINED SPACE REQUIREMENTS, ALL INVERTS AND PIPE SIZES MUST BE VERIFIED PRIOR TO ANY CONSTRUCTION.



Plan References

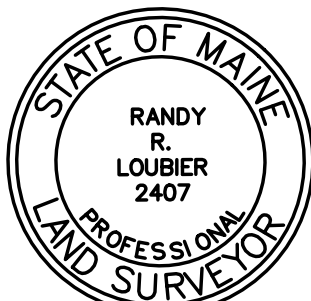
- "ALTA/ACSM LAND TITLE SURVEY ON CUMBERLAND AVE., PREBLE ST., CONGRESS ST., & BROWN ST., PORTLAND, MAINE MADE FOR ISRAEL M. DOLGIN ASSOCIATES LLC" NOV. 13, 2006 BY OWEN HASKELL, INC.
- "PLAN OF PROPERTY IN PORTLAND, MAINE MADE FOR MONUMENT SQUARE ASSOCIATES, INC. 20 APRIL 1983 H.I. & E.C. JORDAN-SURVEYORS"
- "ALTA/ACSM LAND TITLE SURVEY, CWC2016 PROJECT, TIME & TEMPERATURE BUILDING AND MONUMENT SQUARE PARKING GARAGE, 477-481 CONGRESS STREET, 22 PREBLE STREET AND 45 BROWN STREET, PORTLAND, ME 04101" FOR BOCK & LCAK'S NATIONAL SURVEYORS NETWORK DATED MARCH 16, 2016 BY OWEN HASKELL, INC.
- "ALTA/NSPS LAND TITLE SURVEY, TIME AND TEMPERATURE BUILDING, MONUMENT SQUARE PARKING GARAGE, 477-481 CONGRESS STREET, 22 PREBLE STREET, 45 BROWN STREET, PORTLAND, CUMBERLAND COUNTY, MAINE MADE FOR TT MAINE VENTURE, LLC" NOVEMBER 20, 2018 BY OWEN HASKELL, INC.

Boundary & Topographic Survey

Time and Temperature Building
Monument Square Parking Garage
477-481 Congress Street, 22 Preble Street,
45 Brown Street, Portland, Maine
Made For
45 Brown Street, LLC

OWEN HASKELL, INC.

PROFESSIONAL LAND SURVEYORS
390 U.S. ROUTE ONE, UNIT 10, FALMOUTH, MAINE 04105



REV. 2	12/10/2020	THRESHOLD ELEV'S, REV. LOT CONFIGURATIONS	DRAWN BY:	RRL/JLW	DATE:	JAN. 9, 2020	JOB NO.	2019-348P
REV. 1	03/02/2020	ADDED BIKE RACKS ON CONGRESS STREET	CHECKED BY:	RRL	SCALE:	1" = 20'	DRWG. NO.	1

GREENMARS REAL ESTATE DEVELOPMENT

PORTLAND, ME

477 CONGRESS STREET TIME & TEMPERATURE BUILDING

SITE PLAN APPROVAL
SEPTEMBER 28, 2023



PROJECT LOCATION MAP

SHEET INDEX	
C-001	COVER SHEET
C-100	GENERAL NOTES, LEGEND, AND ABBREVIATIONS
C-200	OVERALL SITE PLAN
C-201	GRADING AND DRAINAGE PLAN
C-202	UTILITY PLAN
C-203	SITE ELECTRICAL PLAN
C-300	CIVIL DETAILS
C-301	CIVIL DETAILS – 2
C-302	CIVIL DETAILS – 3



SITE LOCATION MAP

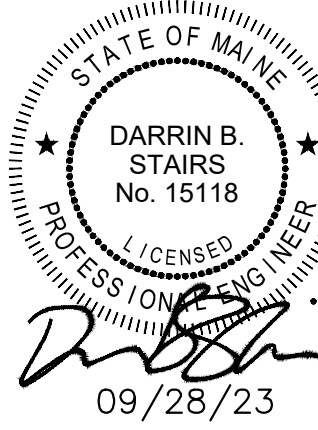
SOURCE: USGS TOPO QUADRANGLE



**Woodard
& Curran**
12 Mountfort Street
Portland, Maine 04101
800.426.4262 | www.woodardcurran.com

THIS DOCUMENT IS THE PROPERTY OF
WOODARD & CURRAN AND ITS CLIENT.
REPRODUCTION OR MODIFICATION WITHOUT
WRITTEN PERMISSION IS PROHIBITED.

PE SEAL:



SITE PLAN APPROVAL

CLIENT INFO:

GREENMARS REAL ESTATE DEV. CO
PORTLAND, ME 04101

TIME & TEMPERATURE BUILDING

REV	MM/DD/YY	DESCRIPTION

JOB NO: 0232868.02
DATE: SEPTEMBER 28, 2023
SCALE: AS NOTED
DESIGNED BY: ANL
DRAWN BY: JBC
CHECKED BY: DBS
FILENAME: 0232868.00-G1.01.dwg

DRAWING TITLE:
**CIVIL
COVER SHEET**

DRAWING NO:
G-000

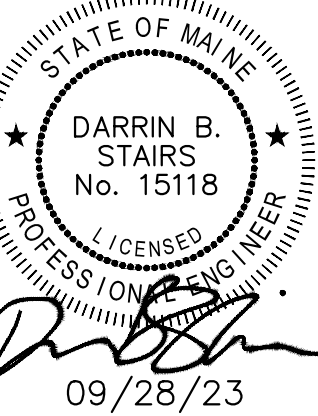
1. SITE AND TOPOGRAPHIC DATA BASED ON A PLAN BY OWEN HASKELL, INC., FALMOUTH, MAINE, DATED JANUARY 9, 2020, TITLED "BOUNDARY & TOPOGRAPHIC SURVEY, TIME AND TEMPERATURE BUILDING, MONUMENT SQUARE PARKING GARAGE, 477-481 CONGRESS STREET, 22 PREBLE STREET, 45 BROWN STREET, PORTLAND, MAINE, MADE FOR 45 BROWN STREET, LLC".
2. VERTICAL DATUM IS BASED ON OFFICIAL CITY OF PORTLAND BENCHMARK: L 757-34-112 "M" MONUMENT AT THE NORTHWESTERLY CORNER OF FOREST AVE. & CUMBERLAND AVE. ELEVATION = 80.66' (REF. CITY L.B. 725 PG. 99-100)
3. HORIZONTAL DATUM IS BASED ON MAINE STATE PLANE COORDINATE SYSTEM WEST ZONE NAD 83 PER CITY CONTROL POINTS: T124-11-1087, N 300446.78, E 2927558.71 AND T124-112-1096, N 299913.92, E 2926805.42
4. THE ENTIRE SITE SHALL BE DEVELOPED AND/OR MAINTAINED AS DEPICTED ON THE SITE PLAN. APPROVAL OF THE PLANNING AUTHORITY OR PLANNING BOARD SHALL BE REQUIRED FOR ANY ALTERATION TO OR DEVIATION FROM THE DEVELOPMENT PLAN, INCLUDING, WITHOUT LIMITATION, TOPOGRAPHY, DRAINAGE, LANDSCAPING, RETENTION OF WOODED OR LAWN AREAS, ACCESS, SIZE, LOCATION, AND SURFACING OF PARKING AREAS, AND LOCATION AND SIZE OF BUILDINGS.
5. THE UTILITY LOCATIONS SHOWN IN PLAN ARE APPROXIMATE AND REQUIRE FIELD VERIFICATION BY THE CONTRACTOR. CONTACT THE CITY IMMEDIATELY UPON DISCOVERING ANY CONFLICTS WITH EXISTING AND PROPOSED UTILITY LOCATIONS. NOT ALL EXISTING UTILITIES ARE SHOWN ON PLANS.
6. CLEAN AND/OR FLUSH ALL MANHOLES, CATCH BASINS, AND ASSOCIATED PIPING AFTER THE WORK HAS BEEN COMPLETED.
7. COORDINATE CONSTRUCTION ACTIVITY WITH UTILITY COMPANIES, EMERGENCY SERVICES AND CITY. CONTACTS ARE LISTED IN SPECIFICATIONS. NOTIFY UTILITY COMPANIES WITHIN 48 HOURS OF WORK ACTIVITY ADJACENT TO THOSE UTILITIES.
8. CONTRACTOR SHALL NOTIFY ALL UTILITIES PRIOR TO COMMENCING WORK, ALLOWING SUFFICIENT TIME TO LOCATE AND MARK THE LOCATION OF BURIED UTILITIES. CONTRACTOR SHALL CONTACT "DIG SAFE", TELEPHONE 888-344-7233, PRIOR TO EXCAVATION.
9. RESTORE ALL AREAS DISTURBED BY CONTRACTOR'S OPERATIONS TO ORIGINAL FINISH (GRAVEL, PAVEMENT, GRASS, ETC.). RESTORATION OF PAVED SURFACES, GRAVEL SURFACES, DRIVEWAYS, AND LAWNS DAMAGED BY CONSTRUCTION ACTIVITIES OUTSIDE OF LIMITS OF WORK INDICATED ON THE PLANS SHALL BE PERFORMED AT THE CONTRACTOR'S OPTION, TO OWNER. CURB SUBJECTED BY CONSTRUCTION ACTIVITIES SHALL BE REPLACED IN KIND AND SHALL CONFORM TO CITY OF PORTLAND AND MAINE DOT SPECIFICATIONS AT NO ADDITIONAL COST TO OWNER.
10. PROPERLY PROTECT AND DO NOT DISTURB PROPERTY IRONS AND MONUMENTS. IF DISTURBED, THE PROPERTY MONUMENT SHALL BE RESET AT THE CONTRACTOR'S EXPENSE BY A LICENSED LAND SURVEYOR ACCEPTABLE TO THE CITY.
11. EXISTING FACILITIES (I.E. TREES, POLES, LIGHT POSTS, CATCH BASINS, ETC.) SHALL BE REMOVED AND PROTECTED DURING CONSTRUCTION. OWNER AND/OR CITY RETAINS RIGHT TO KEEP ANY AND ALL REMOVED FACILITIES FOR WORK WITHIN RIGHT-OF-WAY. CONTRACTOR TO DISPOSE OF ANY REMOVED FACILITIES AT THE REQUEST OF OWNER AT CONTRACTOR'S EXPENSE.
12. ALL TREES NOT NOTED TO BE REMOVED OR RELOCATED SHALL BE PROTECTED BY CONTRACTOR DURING CONSTRUCTION.
13. ALL WORK WITHIN THE RIGHT OF WAY OF CITY STREETS SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THE CITY TRAFFIC ENGINEER. THE CONTRACTOR SHALL SUBMIT A PROPOSED TRAFFIC CONTROL PLAN TO THE TRAFFIC ENGINEER AT LEAST 7 DAYS BEFORE BEGINNING CONSTRUCTION IN ANY STREET. THE PROPOSED TRAFFIC CONTROL PLAN SHALL BE SUBJECT TO APPROVAL BY THE TRAFFIC ENGINEER, WHO MAY ATTACH SPECIAL CONDITIONS TO, OR REQUIRE MODIFICATIONS OF, THE TRAFFIC CONTROL PLAN. WORK SHALL NOT BEGIN UNTIL THE PLAN IS APPROVED BY THE TRAFFIC ENGINEER.
14. DO NOT PARK, IMPEDE ACCESS TO, OR STORE EQUIPMENT ON ADJACENT CITY OR PRIVATELY OWNED LOTS, UNLESS PERMISSION HAS BEEN GRANTED IN WRITING BY CITY AND/OR LAND OWNER.
15. UNLESS DISRUPTION OF PRIVATE UTILITY SERVICES WITH LANDOWNERS AT LEAST TWO DAYS (48 HOURS) PRIOR TO DISRUPTION. ALL UTILITY COORDINATION IS RESPONSIBILITY OF CONTRACTOR.
16. RESTRICT ACCESS TO SITE THROUGH THE USE OF APPROPRIATE SIGNAGE, BARRIERS, FENCES, ETC. SITE SHALL BE LEFT WITH APPROPRIATE SAFETY MEASURES IN PLACE DURING NON-WORKING HOURS. NO TRENCH SHALL BE LEFT OPEN DURING NON-WORKING HOURS. SITE SAFETY IS THE RESPONSIBILITY OF CONTRACTOR, DURING BOTH WORKING AND NON-WORKING HOURS.
17. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY CONSTRUCTION PERMITS. PERMIT APPLICATIONS SHALL BE SUBMITTED WITH ADEQUATE TIME SO AS NOT TO DELAY CONSTRUCTION.
18. THE CONTRACTOR SHALL OBTAIN A CITY STREET OPENING PERMIT BEFORE BEGINNING CONSTRUCTION. THE CONTRACTOR WILL ALSO BE REQUIRED TO HAVE A CURRENT EXCAVATOR'S LICENSE IN THE CITY. THE EXCAVATOR'S LICENSE FEE WILL NOT BE WAIVED BY THE CITY.
19. ALL WORK ASSOCIATED WITH THE PROJECT SHALL BE COMPLETED IN ACCORDANCE WITH ARTICLES VI, VII, AND IX OF CHAPTER 25-STREETS, SIDEWALKS, AND OTHER PUBLIC PLACES OF THE CITY OF PORTLAND CODE OF ORDINANCES.
20. ALL SEWER CONSTRUCTION IN THE PUBLIC WAY SHALL BE COMPLETED IN ACCORDANCE WITH ARTICLE II OF CHAPTER 24-SEWERS OF THE CITY OF PORTLAND CODE OF ORDINANCES.
21. THE CITY OF PORTLAND ENGINEERING DIVISION REQUIRES THAT UPON COMPLETION OF CONSTRUCTION, A COMPLETE SET OF "RECORD" DRAWINGS THAT REFLECT ANY AND ALL MODIFICATIONS TO THE SANITARY SEWER SYSTEM, STORM SEWER SYSTEM AND ANY OTHER UTILITY INSTALLATIONS OR ALTERATIONS WITHIN THE PROJECT LIMITS BE SUBMITTED TO THE DIVISION.
22. WORK IS IN CLOSE PROXIMITY TO EXISTING UTILITIES. PROTECTION OF EXISTING UTILITIES DURING CONSTRUCTION SHALL BE AT NO ADDITIONAL COST TO THE OWNER.
23. FOR TEST PIT LOCATIONS SHOWN ON PLANS, FIELD VERIFY EXISTING UTILITY ELEVATIONS PRIOR TO NEW UTILITY INSTALLATION. NOTIFY ENGINEER OF ANY CONFLICTS.
24. CONTACT CITY OF PORTLAND ARBORIST AND ENGINEER PRIOR TO CUTTING ROOTS, TRIMMING BRANCHES, OR DISTURBING TREES WITHIN THE R.O.W. THAT NOT HAVE BEEN NOTED FOR REMOVAL ON THE PLANS.
25. PROVIDE 6-INCHES OF LOAM AND SEED IN ALL LAWN AREAS DISTURBED BY CONTRACTOR'S OPERATIONS UNLESS NOTED OTHERWISE.
26. IF CONTRACTOR PROPOSES TO TEMPORARILY STOCKPILE ANY SURPLUS SOIL AND ROCK IN THE CITY OF PORTLAND, THE CONTRACTOR SHALL OBTAIN APPROVAL FOR EACH STOCKPILE LOCATION FROM THE ENGINEER. IF CONTRACTOR PROPOSES TO PERMANENTLY STOCKPILE ANY SURPLUS SOIL AND ROCK ON PROPERTY IN THE CITY OF PORTLAND, THE CONTRACTOR MUST OBTAIN ANY SITE PLAN PERMITS REQUIRED FROM THE CITY PLANNING AUTHORITY OR ANY FILL PERMITS REQUIRED FROM MDEP OR U.S. ARMY CORPS OF ENGINEERS. THE CONTRACTOR SHALL PROVIDE THREE (3) COPIES OF A DETAILED CONSTRUCTION SCHEDULE SETBACK REQUIREMENTS IN THE CITY LAND USE CODE AND SHALL RECEIVE PROPER STABILIZATION AND EROSION & SEDIMENT CONTROL MEASURES IN ACCORDANCE WITH APPROVED SOIL EROSION & WATER POLLUTION CONTROL PLAN.
27. CAPPED PIPE STUB LOCATIONS SHALL BE MARKED WITH EMBEDDED STAKE AND A MINIMUM OF THREE TIES SHOULD BE RECORDED. EMBEDDED STAKE SHALL BE 2x4 WITH PK NAIL DRIVEN IN TOP, LENGTH AS REQUIRED TO SPREAD TOP OF PIPE TO 6" BELOW GRADE LOCATION AND ELEVATION OF PIPE STUB SHALL BE PROVIDED TO THE CITY OF PORTLAND ENGINEERING OFFICE. WARNING TAPE AND WIRE SHALL BE INSTALLED OVER PIPE STUBS IN ACCORDANCE WITH SPECIFICATIONS.
28. PRIOR TO CONSTRUCTION, A PRECONSTRUCTION MEETING SHALL BE HELD AT THE PROJECT SITE WITH THE CONTRACTOR, DEVELOPMENT REVIEW COORDINATOR, PUBLIC SERVICES REPRESENTATIVE, AND OWNER TO REVIEW THE CONSTRUCTION SCHEDULE AND CRITICAL ASPECTS OF THE SITE WORK. AT THAT TIME, THE CONTRACTOR SHALL PROVIDE THREE (3) COPIES OF A DETAILED CONSTRUCTION SCHEDULE TO THE ATTENDING CITY REPRESENTATIVE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ARRANGE A MUTUALLY AGREEABLE TIME FOR THE PRECONSTRUCTION MEETING.
29. EXISTING PAVEMENT SHALL BE SAWCUT AND BUTTED TO THE NEW PAVEMENT. NO FEATHERING OF PAVEMENT WILL BE PERMITTED.



12 Mountfort Street
Portland, Maine 04101
800.426.4262 | www.woodardcurran.com

THIS DOCUMENT IS THE PROPERTY OF
WOODARD & CURRAN AND ITS CLIENT.
REPRODUCTION OR MODIFICATION WITHOUT
WRITTEN PERMISSION IS PROHIBITED.

PE SEAL:



SITE PLAN APPROVAL

CLIENT INFO:

GREENMARS REAL ESTATE DEV. CO
PORTLAND, ME 04101

TIME & TEMPERATURE BUILDING

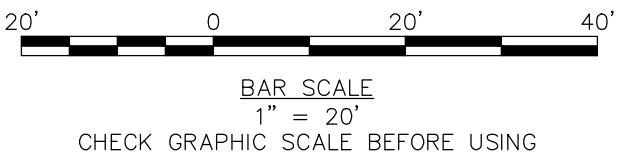
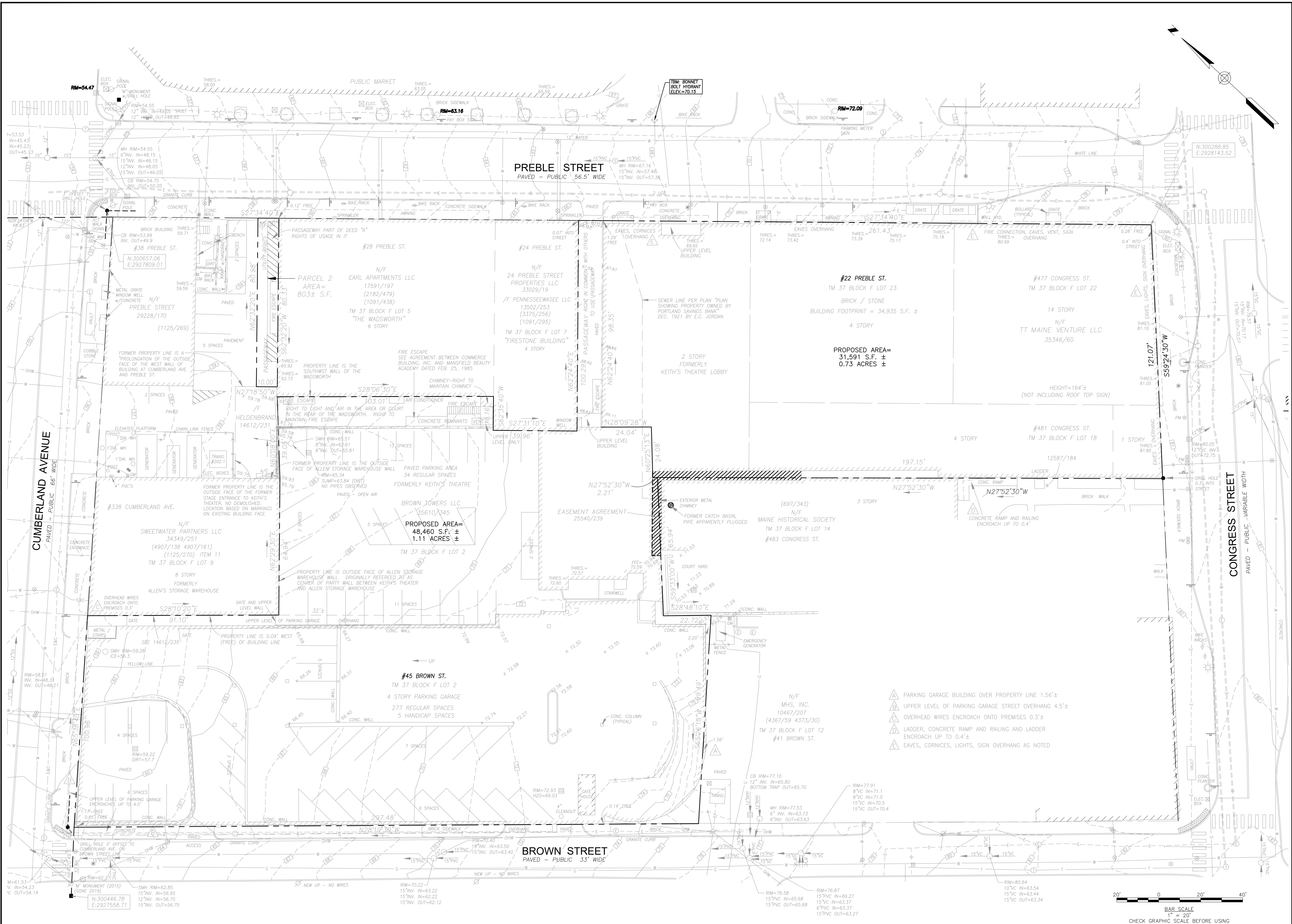
REV. MM/DD/YY DESCRIPTION

JOB NO: 0232868.02
DATE: SEPTEMBER 28, 2023
SCALE: 1" = 20'
DESIGNED BY: ANL
DRAWN BY: JBC
CHECKED BY: DBS
FILENAME: 0232868-00-C-100.dwg

CIVIL
EXISTING CONDITIONS
PLAN

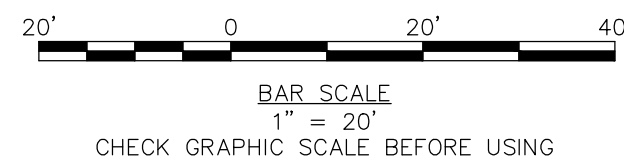
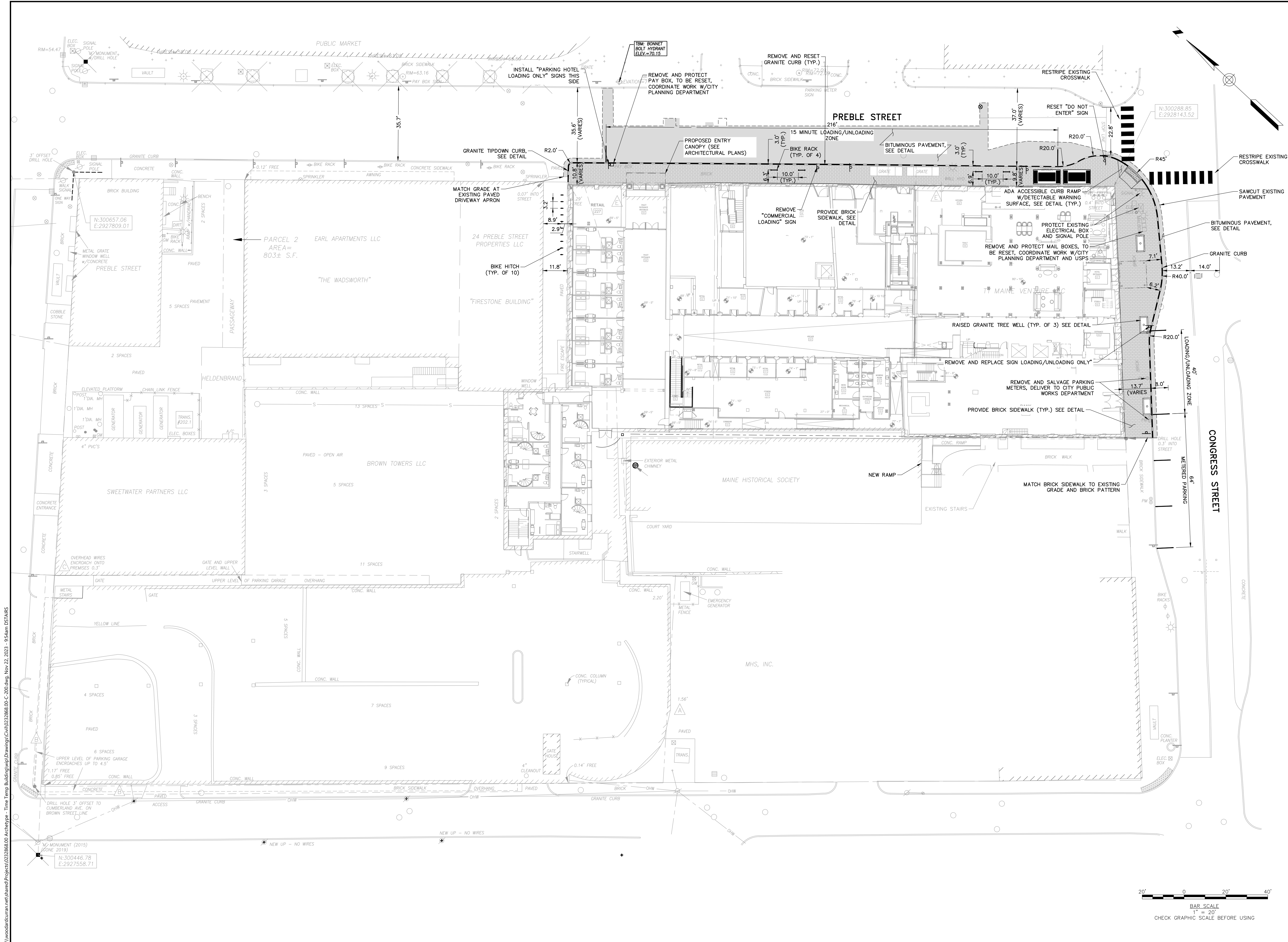
DRAWING NO:

C-101



CHECK GRAPHIC SCALE BEFORE USING

\\woodardcurran.net\shared\Projects\0232868.00 Archtype - Time Temp Building\wp\Drawings\Con\0232868.00-C-200.dwg, Nov 22, 2023 - 9:54am DSTARS

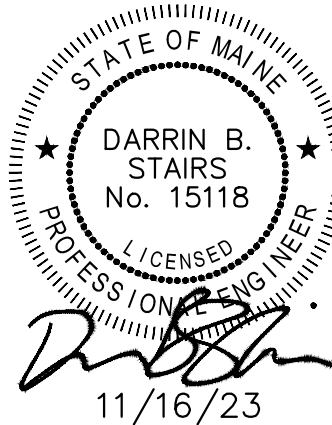


**Woodard
& Curran**

12 Mountfort Street
Portland, Maine 04101
800.426.4262 | www.woodardcurran.com

THIS DOCUMENT IS THE PROPERTY OF
WOODARD & CURRAN AND ITS CLIENT.
REPRODUCTION OR MODIFICATION WITHOUT
WRITTEN PERMISSION IS PROHIBITED.

PE SEAL:



SITE PLAN APPROVAL

CLIENT INFO:

GREENMARS REAL ESTATE
PORTLAND, ME

TIME & TEMPERATURE
BUILDING

REV	MM/DD/YY	DESCRIPTION
-----	----------	-------------

1	11/16/2023	RESPONSE TO CITY COMMENTS
---	------------	---------------------------

JOB NO: 0232868.02

DATE: SEPTEMBER 2023

SCALE: 1" = 20'

DESIGNED BY: ANL

DRAWN BY: JBC

CHECKED BY: DBS

FILENAME: 0232868.00-C-200.dwg

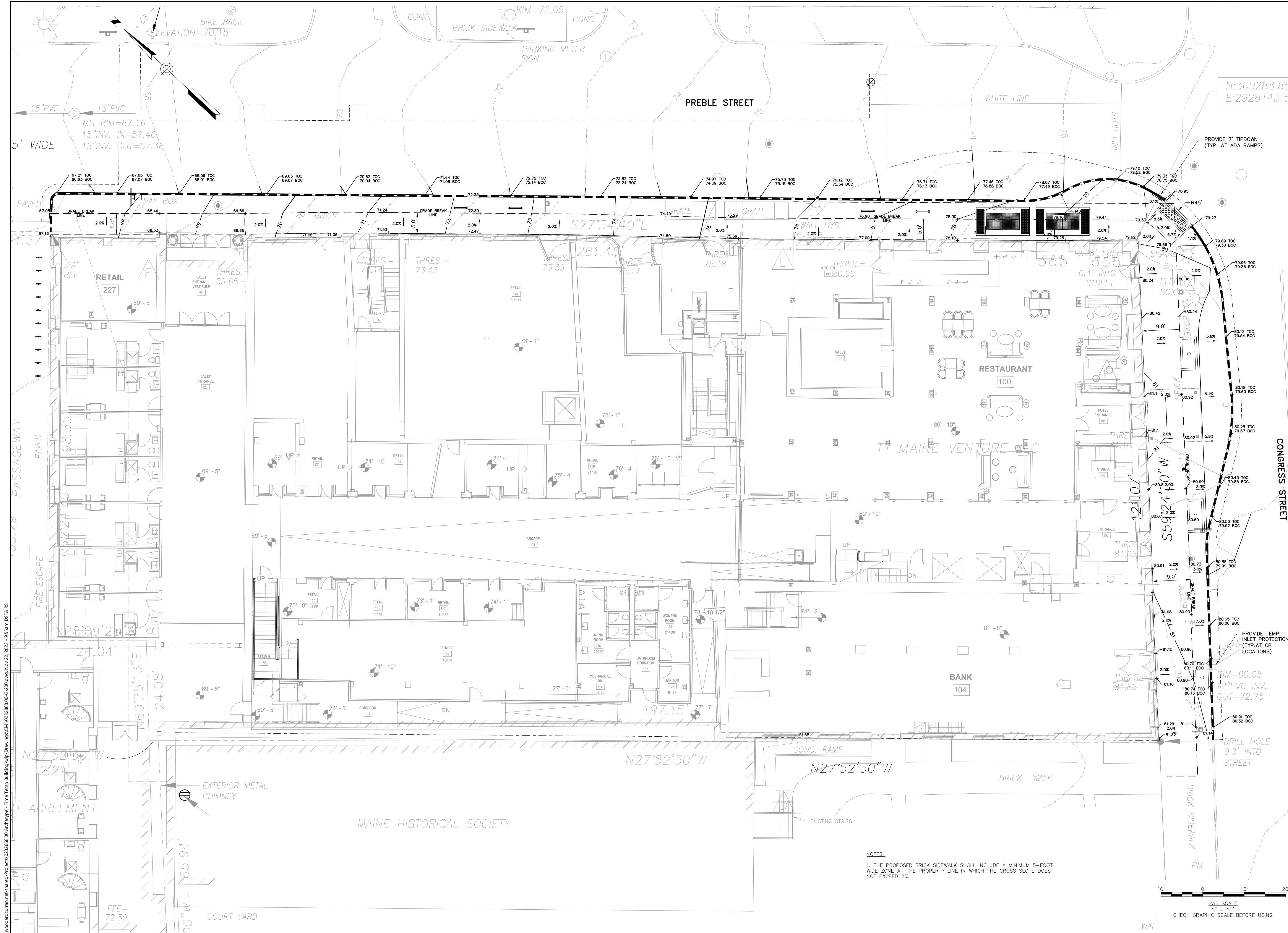
DRAWING TITLE:

CIVIL

OVERALL SITE PLAN

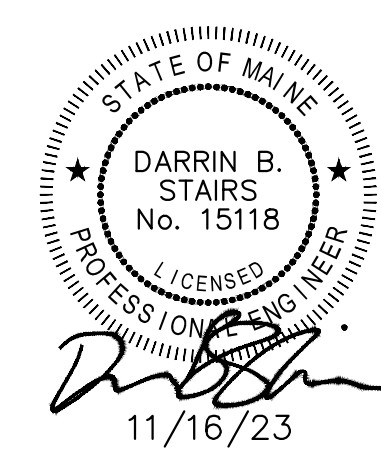
DRAWING NO:

C-200



12 Mountfort Street
Portland, Maine 04101
800.426.4262 | www.woodardcurran.com

THIS DOCUMENT IS THE PROPERTY OF
WOODARD & CURRAN AND ITS CLIENT.
REPRODUCTION OR MODIFICATION WITHOUT
WRITTEN PERMISSION IS PROHIBITED.



SITE PLAN APPROVAL

CLIENT INFO:

GREENMARS REAL ESTATE DEV. CO
PORTLAND, ME 04101

TIME & TEMPERATURE BUILDING

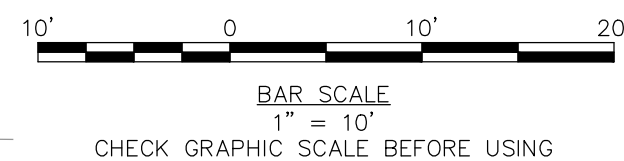
REV	MM/DD/YY	DESCRIPTION
1	11/16/23	RESPONSE TO CITY COMMENTS

JOB NO: 0232868.02
DATE: SEPTEMBER 28, 2023
SCALE: 1" = 10'
DESIGNED BY: ANL
DRAWN BY: JBC
CHECKED BY: DBS
FILENAME: 0232868.00-C-200.dwg

CIVIL
GRADING AND DRAINAGE
PLAN

DRAWING NO:
C-201

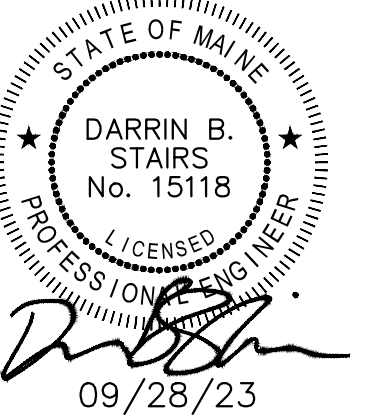
NOTES:
1. THE PROPOSED BRICK SIDEWALK SHALL INCLUDE A MINIMUM 5-FOOT
WIDE ZONE AT THE PROPERTY LINE IN WHICH THE CROSS SLOPE DOES
NOT EXCEED 2%.



WoodardCurran.net\shared\Projects\0232868.00 Arch\pape - Time Temp Building\wp\Drawings\Con\0232868.00-C-200.dwg Nov 22, 2023 - 9:55am DSTARS

12 Mountfort Street
Portland, Maine 04101
00.426.4262 | www.woodardcurran.com

REAL:



CLIENT INFO:

TIME & TEMPERATURE BUILDING

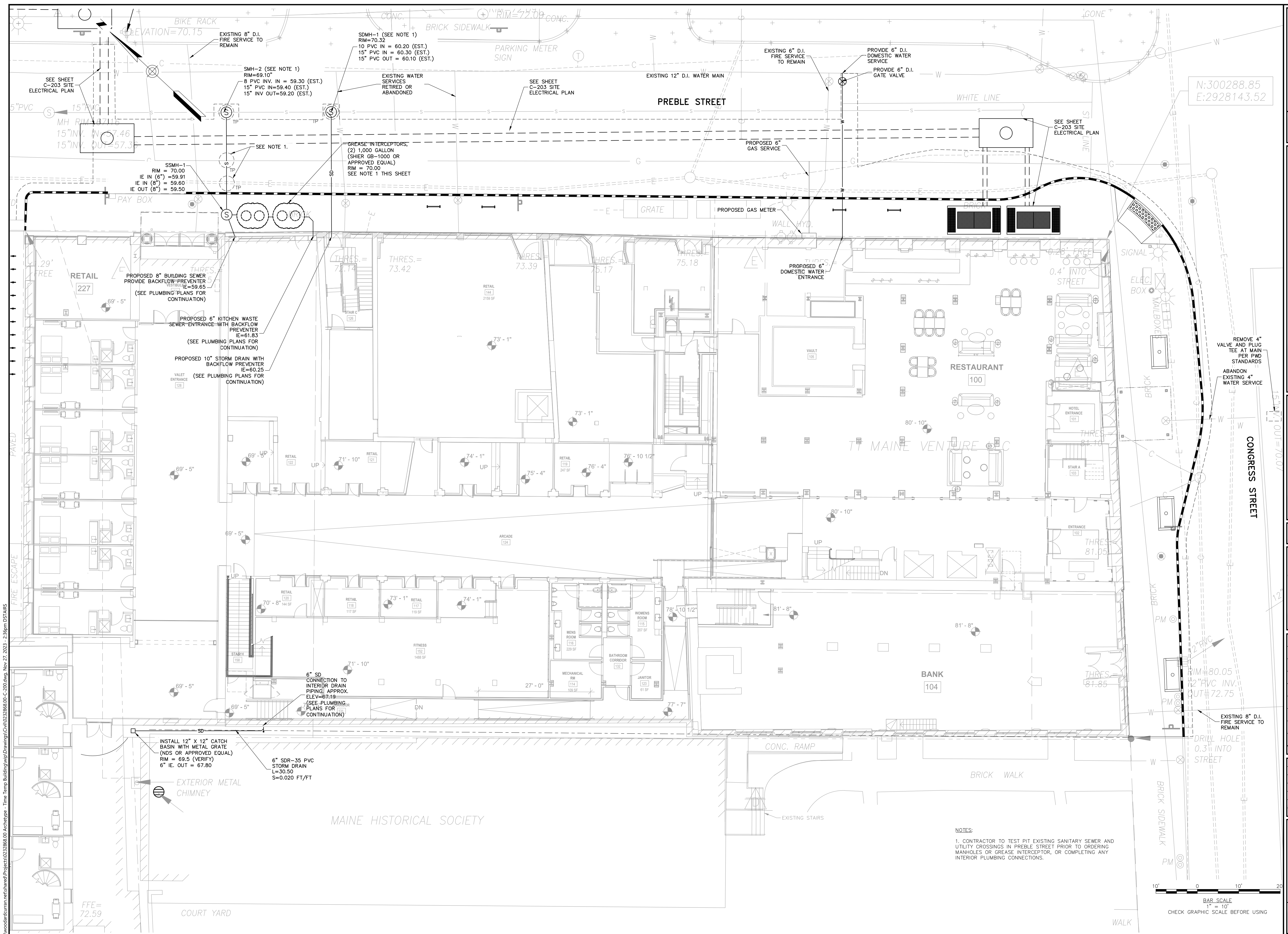
[illegible]

1	11/16/23	RESPONSE TO CITY COMMENTS
REV	MM/DD/YY	DESCRIPTION
JOB NO: 0232868.02		
DATE: SEPTEMBER 28, 2023		
SCALE: 1" = 10'		
DESIGNED BY: ANL		
DRAWN BY: JBC		
CHECKED BY: DBS		
FILENAME: 0232868.00-C-200.dwg		

DRAWING TITLE:

DRAWING NO:

C-202

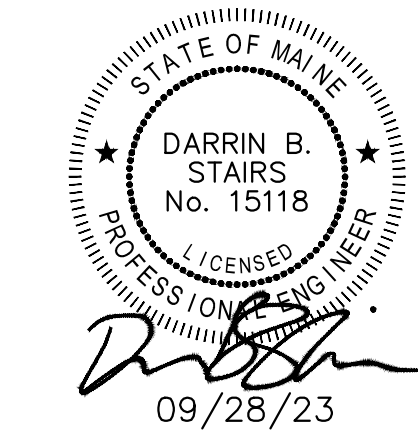




**Woodard
& Curran**
12 Mountfort Street
Portland, Maine 04101
800.426.4262 | www.woodardcurran.com

THIS DOCUMENT IS THE PROPERTY OF
WOODARD & CURRAN AND ITS CLIENT.
REPRODUCTION OR MODIFICATION WITHOUT
WRITTEN PERMISSION IS PROHIBITED.

PE SEAL:



SITE PLAN APPROVAL

CLIENT INFO:

GREENMARS REAL ESTATE DEV. CO
PORTLAND, ME 04101

TIME & TEMPERATURE BUILDING

REV. MM/DD/YY DESCRIPTION

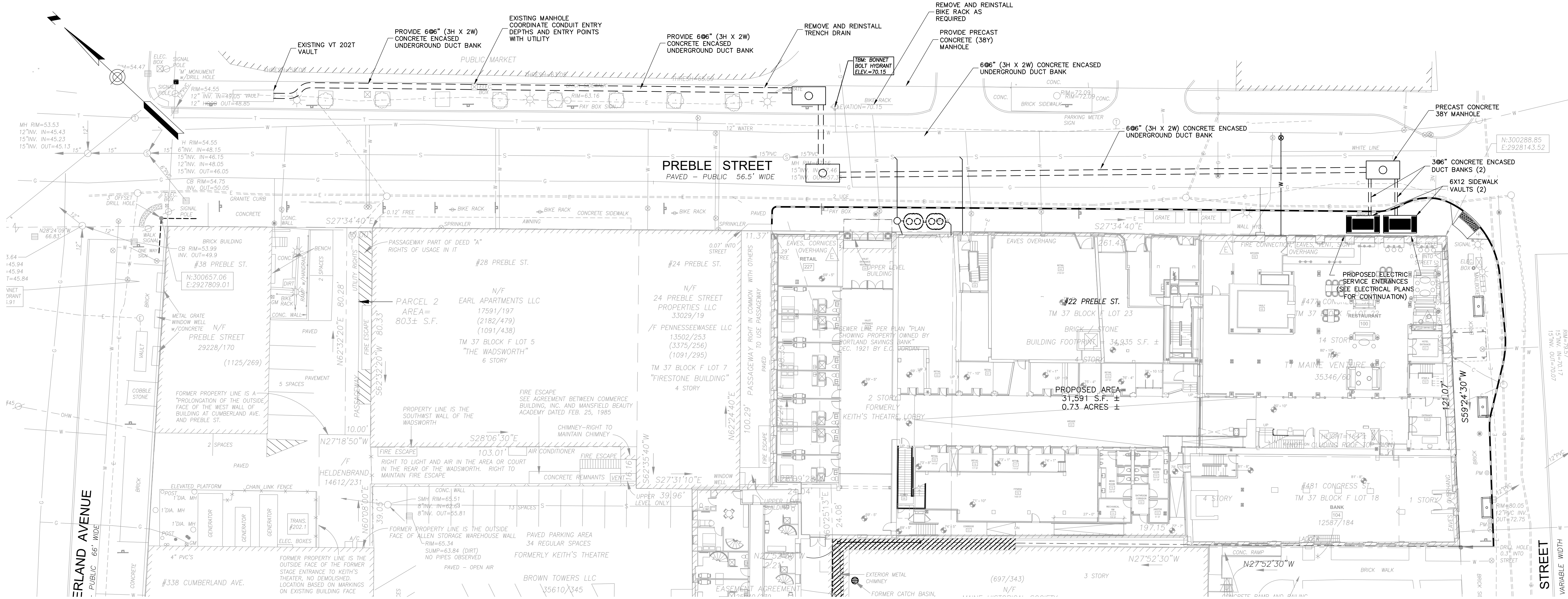
JOB NO: 0232868.02
DATE: SEPTEMBER 28, 2023
SCALE: 1" = 20'
DESIGNED BY: ANL
DRAWN BY: JBC
CHECKED BY: DBS
FILENAME: 0232868-00-C-200.dwg

DRAWING TITLE:

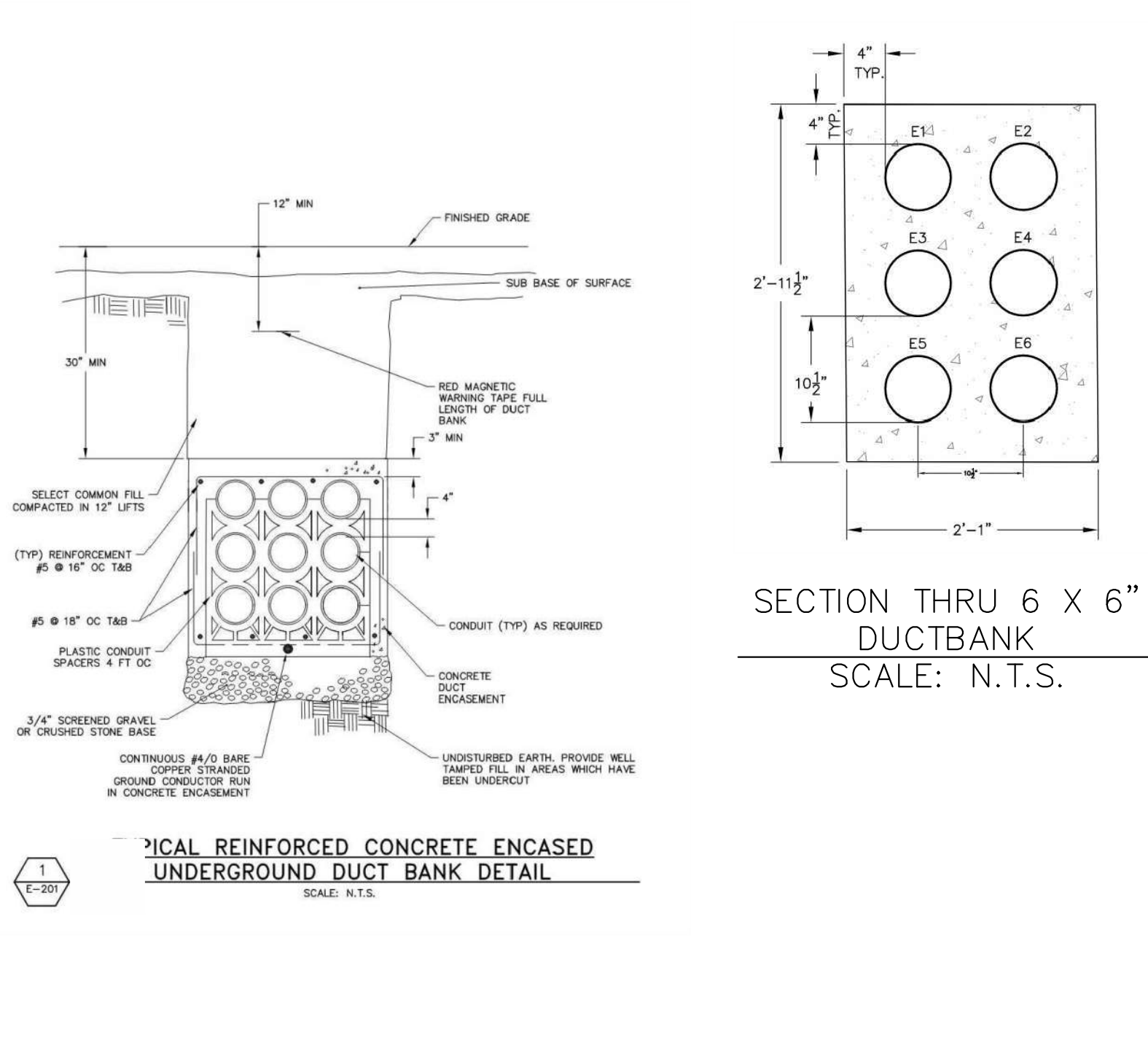
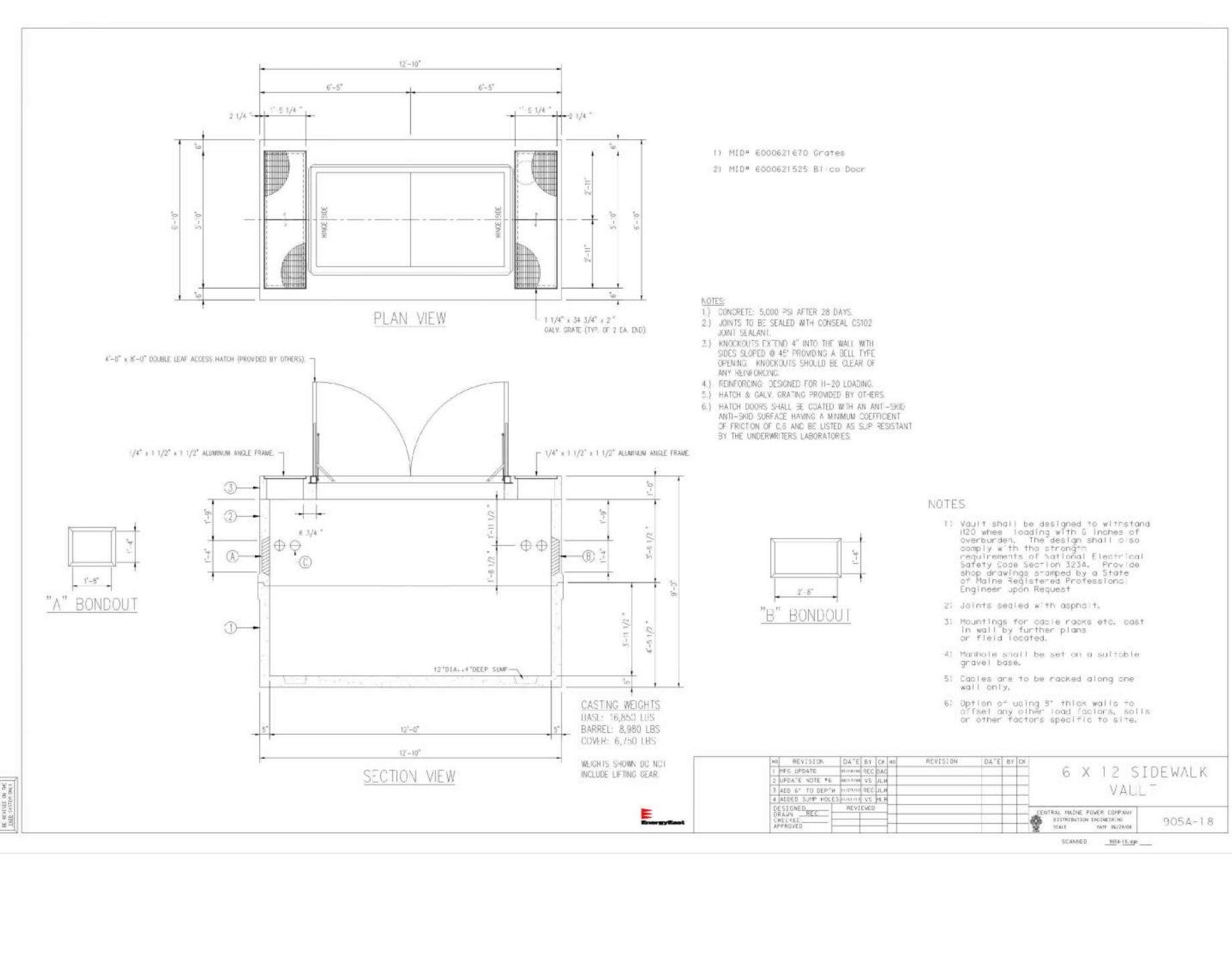
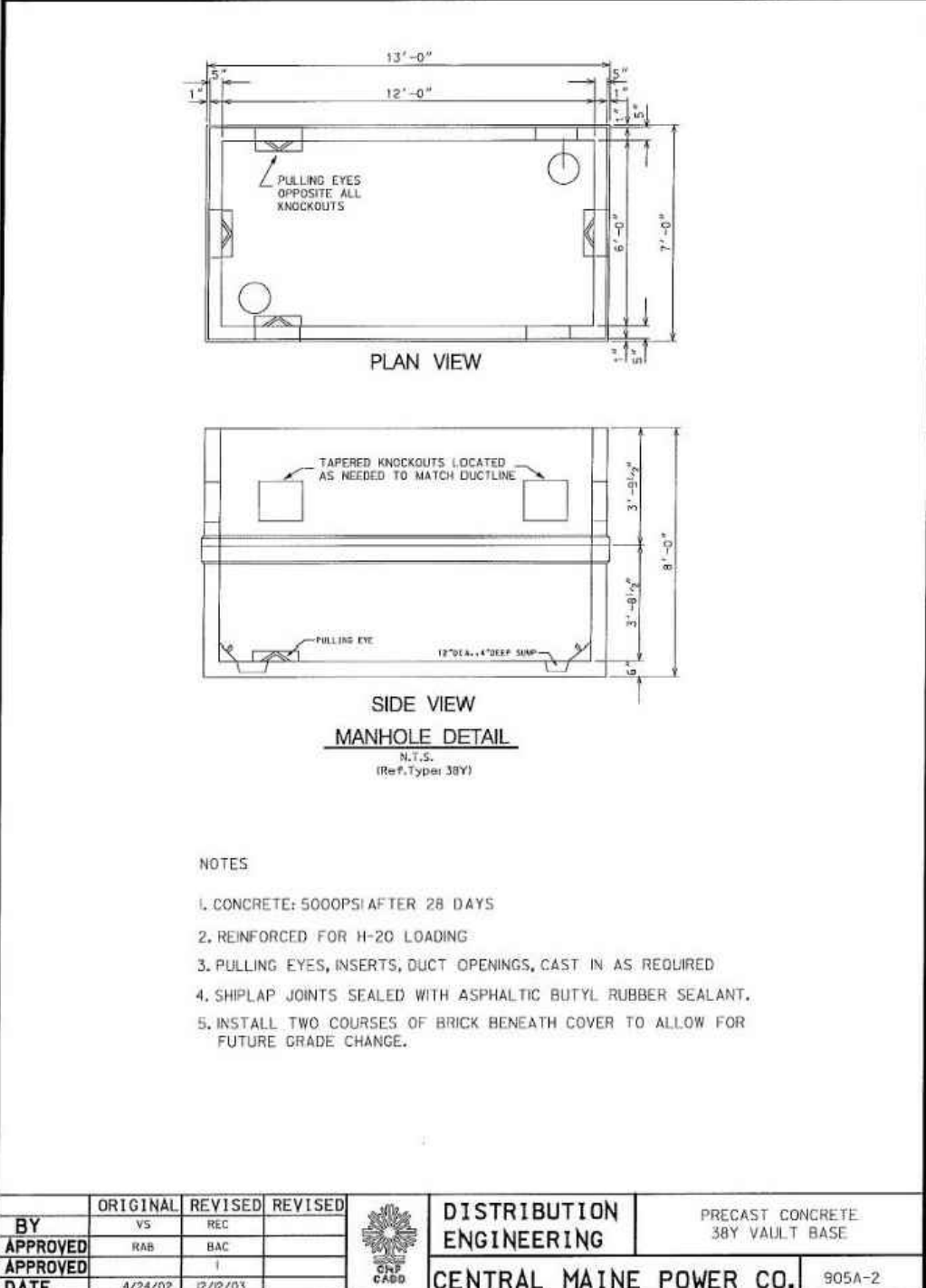
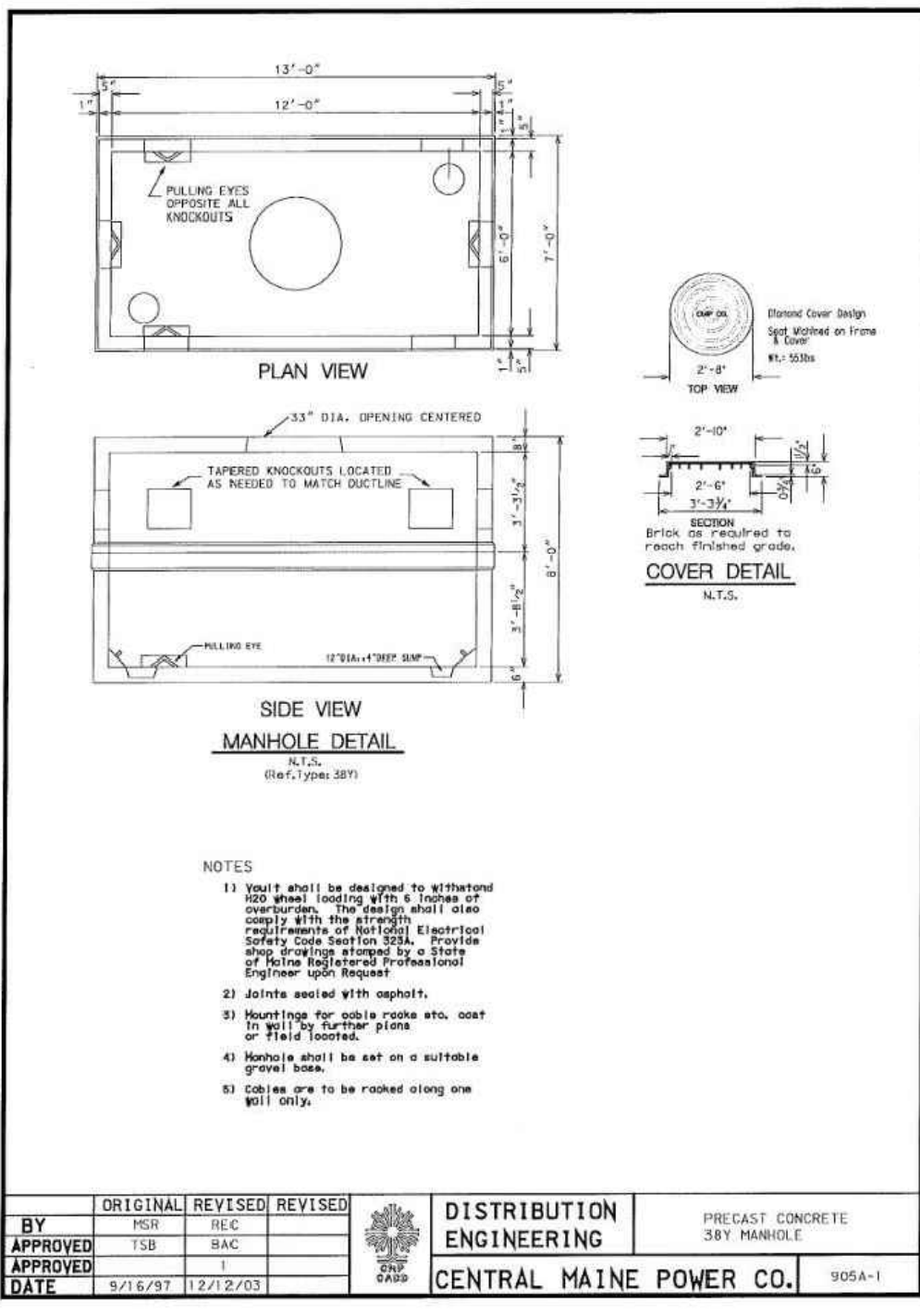
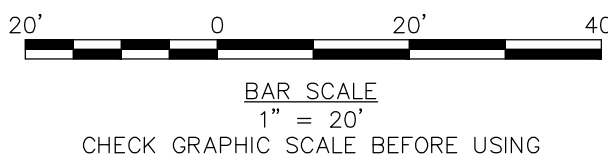
**CIVIL
SITE ELECTRICAL
PLAN**

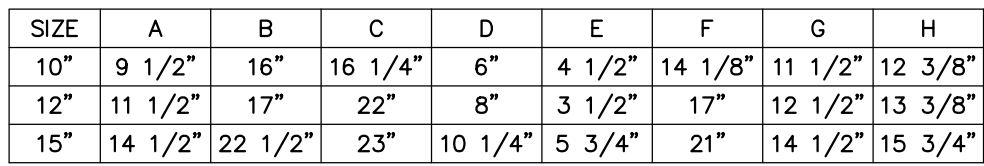
DRAWING NO:

C-203



NOTES:
1. ELECTRICAL DESIGN TO BE APPROVED BY CENTRAL MAINE POWER.





1. CASCO TRAP SHALL BE CAST IRON CASCO TRAP BY ETHERIDGE FOUNDRY OR APPROVED EQUAL.
2. BOLT AND NUT REQUIRED WHERE HOOD WILL NOT OPEN COMPLETELY.
3. CASCO TRAP SHALL BE INSTALLED ON ALL CATCH BASIN OUTLET PIPES, INCIDENTAL TO COST OF CATCH BASIN

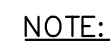
N.T.S.



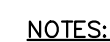
N.T.S.



N.T.S.



N.T.S.



N.T.S.



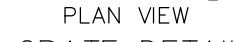
VIEW



N.T.S.

1. ALL CONCRETE SHALL BE CLASS "A" AND HAVE A MINIMUM ULTIMATE COMPRESSIVE STRENGTH OF 4000 LBS. PER SQ. INCH AT THE END OF 28 DAYS, UNLESS OTHERWISE NOTED.

1. ALL CONCRETE SHALL BE CLASS "A" AND HAVE A MINIMUM ULTIMATE COMPRESSIVE STRENGTH OF 4000 LBS. PER SQ. INCH AT THE END OF 28 DAYS, UNLESS OTHERWISE NOTED.
2. PRECAST REINFORCED CONCRETE BARREL MANUFACTURED PER ASTM SPEC. C-478.
3. ALL MANHOLES SHALL HAVE A BITUMINOUS WATERPROOFING APPLIED TO THE EXTERIOR SURFACE. IF CONSTRUCTED OF BRICK MASONRY, SURFACE SHALL BE PLASTERED WITH A SMOOTH MORTAR FINISH 3/8" THICK. AFTER THE MORTAR HAS SET, THE SURFACE SHALL BE WATERPROOFED AS REQUIRED BY SUPPLEMENTAL SPECIFICATIONS SECTION 604.
4. CASTINGS SHALL CONFORM TO ASTM DESIGNATION A48-CLASS 35. ALL PARTS OF CASTINGS, EXCEPT FINISHED SURFACE, SHALL RECEIVE A COAT OF COAL TAR PITCH VARNISH OR ASPHALTUM PUTTY WHICH SHALL BE SMOOTH AND TOUGH BUT NOT BRITTLE.
5. MANHOLES MAY BE CONSTRUCTED OF MASONRY, PRECAST REINFORCED CONCRETE, OR CAST IN PLACE.
6. CONTRACTOR SHALL SUBMIT ANTI-FLOATION CALCULATIONS FOR ALL MANHOLE AND CATCH BASIN STRUCTURES.
7. ALL PRECAST MANHOLES AND CATCH BASINS SHALL BE IDENTIFIED BY SITATION, OFFSET, AND STRUCTURE ID PAINTED ON THE SIDE OF THE STRUCTURE BY THE MANUFACTURER.
8. STORM AND SEWER MANHOLES SHALL HAVE SOLID COVERS WITH ONE DRILLED PILE HOLE.
9. EXISTING MANHOLES, CATCH BASINS, FRAMES, AND COVERS SHALL BE SALVAGED BY THE CONTRACTOR, AND SHALL REMAIN THE PROPERTY OF THE CITY OF PORTLAND.
10. WHEN THE FLOW CHANGES DIRECTION IN A MANHOLE, THE CHANNEL ALIGNMENT SHALL FOLLOW A SMOOTH RADIUS. CHANNELS SHALL BE FORMED TO ACCEPT ALL INLET PIPES.
11. ON STORM AND SEWER MANHOLES, THE SHELF AND CHANNEL SHALL BE FORMED BY BRICK SET IN CEMENT MORTAR OR BY PAVING PRE-CAST CONCRETE. THE SUCH PRE-CAST CONCRETE SHALL BE EPXY COATED. THE SHELF SHALL HAVE A PERMANENT NON-SKID SURFACE.



N.T.S.

C-301





Site Plan Development
15 Crescent Street
Major Site Plan Application (PL-oo2466-2023)
Developers Collaborative, Applicant

Submitted to:	Portland Planning Board	Prepared By:	Sean King, Urban Designer
Public Hearing Date:	December 12, 2023	Date:	December 8, 2023

I. INTRODUCTION

Developers Collaborative and Crescent Heights LLC has submitted a Major Site Plan application to facilitate the construction of a multi-family building containing five residential units, along with covered and surface parking at 15 Crescent Street in the West End neighborhood. This application is being referred to the Planning Board for compliance with the City of Portland's Land Use Code Site Plan Standards, Section 14.1.

The Planning and Urban Development Department mailed 146 notices advertising this meeting to property owners within 500 feet of the site. A legal advertisement ran in the December 2 and 3, 2023 editions of the *Portland Press Herald*.

Applicant: Josh Trombley, Developers Collaborative
Applicant Adrienne Fine, Terradyn Consulting;
Representatives: Ryan Senatore, Ryan Senatore Architecture, LLC;
Randy Loubier, Owen Haskell Inc.



Figure 1: Aerial of development site looking north

II. REQUIRED REVIEWS

<i>Review</i>	<i>Applicable Standards</i>
Site Plan	Section 14.6
Design Review	City of Portland Design Manual (k) Small residential lot development located in the R-6 zone

III. PROJECT DATA

Existing Zoning	R-6
Property Size	4,278 Square feet
Existing Use	Vacant lot
Proposed Use	Residential
Proposed Development Program	Multi-family building totaling 5 residential units

	<i>Existing</i>	<i>Required</i>	<i>Proposed</i>	<i>Net Change</i>
Building Footprint	None	n/a	1,508 square feet	+1,508 square feet
Building Floor Area	None	n/a	3,873 square feet	+3,873 square feet
Impervious Surface Area	None	n/a	3,217 square feet	+3,217 square feet
Residential Units	None	n/a	5	+5
Parking Spaces	None	2	5	+5
Bicycle Parking Spaces	None	2	2	+2
EV Charging Stations	None	1	1	+1

IV. EXISTING CONDITIONS AND SURROUNDING AREA

The subject property is located at 15 Crescent Street (CBL 053 Foo6001) in the West End neighborhood. The subject property is currently vacant at 4,278 square feet in total lot area with steep terrain that slopes down towards the north. The surrounding land uses are primarily residential, including single-family, and multi-family buildings ranging in height between two and four stories. Additionally, the site is adjacent to the Maine Medical Center campus. Commercial uses, including retail and restaurants are located along Congress Street.

The Western Promenade, an 18-acre park with sweeping western views, trails, playground and community garden is located approximately 0.2 miles to the south. METRO provides transit service along Congress Street with METRO Route 1, 9A stop located at the corner of Bramhall Street and Congress Street.

V. PROPOSED DEVELOPMENT

The proposed Major Site Plan application would facilitate the development of a multi-family building, containing five-residential units with frontage on Crescent Street. The applicant proposes providing one parking space per residential unit for a total of five parking spaces, including two surface parking spaces and three covered parking spaces located under the proposed building. All parking would be accessed from an 18-foot wide curb cut along Crescent Street. The development would include one EV charger located at a covered parking space.

The proposed project would include two street trees along Crescent Street. The Applicant proposes to preserve existing trees to the greatest extent possible and reduce negative impacts on adjacent trees located on abutting properties. The development plan proposes a drainage mat to reduce the negative impacts of erosion on the steep terrain.

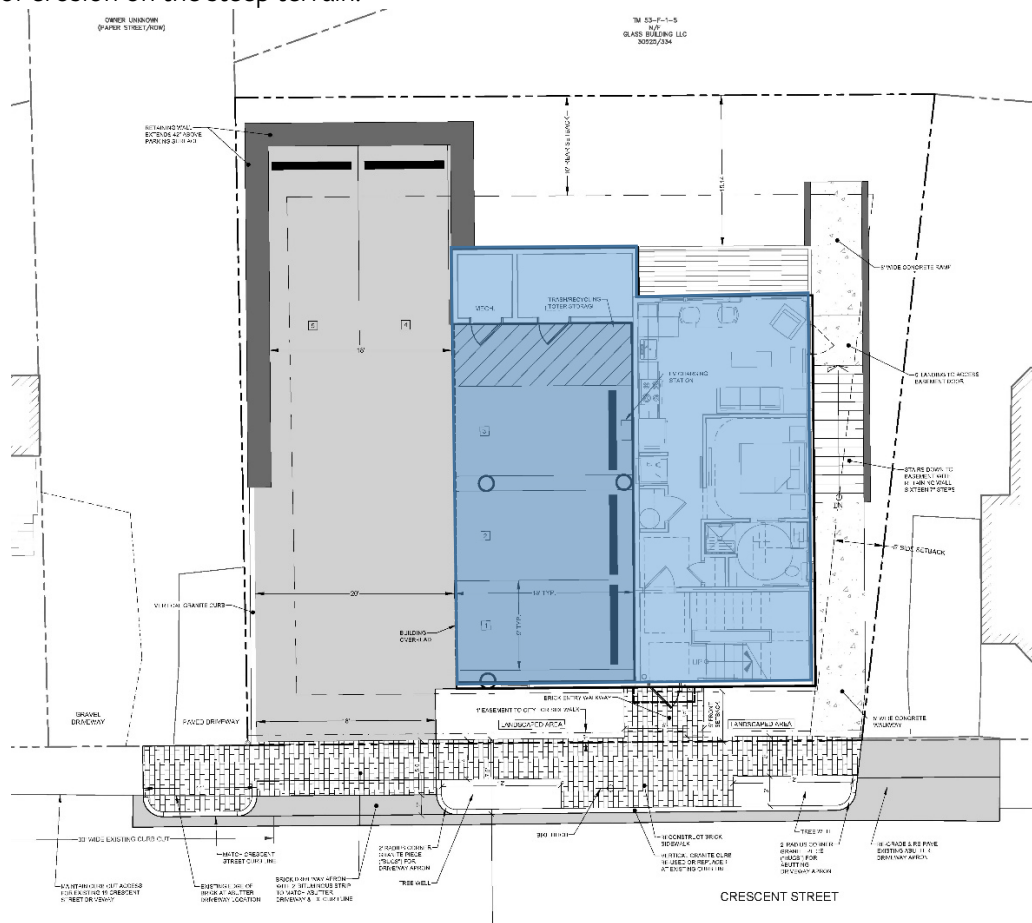


Figure 2: Proposed development site plan (Building area shown in blue)



Figure 3: Proposed Crescent Street renderings (left – view west, right – view east)

VI. RIGHT, TITLE, & INTEREST

The owner of the property is Crescent Heights LLC by deed recorded in the Cumberland County Registry of Deeds in books 26288 page 49 (Applicant Submittal B). The property is being developed in cooperation with Developers Collaborative.

The Applicant's existing conditions survey (Plan 3) indicates an adjacent "owner unknown" parcel west of the property that the City's Department of Public Works acknowledges is not aware of any City right, title, or interest at present. Furthermore, the Applicant has not provided the appropriate right, title, or interest to use the parcel for the construction of the proposed retaining wall.

As the City is not aware of any right, title or interest at present, no license agreement can be granted to the Applicant for the adjacent "owner unknown" parcel. The Applicant has resubmitted plans for the location of the retaining wall to not encroach on the adjacent parcel during construction (Plan 7, 8, 26).

VII. FINANCIAL & TECHNICAL CAPACITY

The Applicant has submitted a letter of financial capacity (Applicant Submittal T) and supporting information related to the technical capacity (Applicant Submittal O) for the Applicant team.

VIII. ZONING ANALYSIS

The site is located within the R-6 (Residential) zone. Relevant sections of the R-6 purpose statements include:

- ***R-6:*** *To set aside areas on the peninsula for housing characterized primarily by multi-family dwellings at a high density providing a wide range of housing for differing types of households; to conserve the existing housing stock and residential character of neighborhoods by controlling the scale and external impacts of professional offices and other nonresidential uses; and to encourage new housing development consistent with the compact lot development pattern typically found on the peninsula.*

As submitted, the Major Site Plan is found to be consistent with the R-6 zoning requirements. Multi-family residential is a permitted use in the R-6 zone (Table 6-A Permitted Uses in Residential Zones) and is permitted at a lot area per dwelling unit of 725 square feet. Additionally, the proposed project is consistent with the R-6 dimensional standards per §7.3 Dimensional Standards, (Table 7-A Residential Zone Dimensional Standards). A zoning analysis of the proposed project is provided in the table below:

<i>R-6 Residential Zone</i>	<i>Permitted</i>	<i>Proposed</i>	<i>Conformance</i>
Lot Area (min.)	2,000 Square feet	4,278 Square feet	Met
Lot area per dwelling unit (min.)	725 Square feet	855 Square feet	Met
Lot coverage (max.)	60%	37.3%	Met
Street Frontage (min.)	20 feet	61 feet	Met
Lot Width (min.)	20 feet	65 feet	Met
Front Setback (min.)	5 feet	5.5 feet	Met
Rear Setback (min.)	10 feet	15.3 feet	Met
Side setback (min.)	5 feet	5 feet	Met
Stepbacks (above 35 feet when property line abuts a residential zone) (min.)	10 feet from side property line and 15 feet from rear property line	10 feet side, 15 feet rear	Met

Structure Height (max.)	45 feet	40.65 feet	Met
Landscaped open space ratio (min.)	20%	24.8%	Met

The Applicant submitted a weighted average calculation (Applicant Submittal Q) as 119.75' which is shown in the proposed architectural elevations (Plan 22) that the City's Zoning Administrator finds acceptable.

IX. SITE PLAN REVIEW STANDARDS (Section 14.6)

The proposed development has been reviewed by Staff for conformance with the relevant review standards of the City of Portland's Site Plan Ordinance, Section 14.6. Staff comments are below.

1. Transportation Standards (Section 14.6.1)

A. Impact on surrounding street systems

The applicant has proposed public right-of-way improvements including reconstructing granite curbing, brick sidewalk, and driveway apron in place. The applicant has revised plans to include City details per City's technical manual section 1, dimensions and spot elevations for the reconstruction within the public right of way.

B. Access and circulation

The proposed development would access parking on the site by a new driveway with a width of 18 feet at Crescent Street that meets the City's technical manual section 1.5.1.B for minor driveways (serving less than 10 residential units). The Applicant has indicated that pedestrians will access the building entrance from Crescent Street by a walkway directly from the public sidewalk.

The City's Consulting Traffic Engineer has reviewed the Applicant's submitted turning templates and finds them to be acceptable based on the low turnover of parked vehicles for residents and low residential one-way traffic on Crescent St.

C. Public transit access

Not applicable. There is an existing Greater Portland METRO local service Route 1, 9A transit stop on Congress Street, and the proposed development does not exceed 20 dwelling units. Therefore, the project is not required to provide a transit shelter.

D. Parking

In general, a residential development is required to provide one parking space per dwelling unit unless a project is eligible for parking exceptions as listed in Table 19-B of the Land Use Code. No exceptions are being sought for this application. The proposed project meets the minimum parking with the first three units exempt for a total requirement of two parking spaces, the applicant seeks to provide five parking spaces on site.

The project is meeting the minimum bicycle parking requirement, which requires that two spaces be provided for every five units. As there are a total of five residential units being proposed, a minimum of two bicycle parking spaces is required, with one bike hitch proposed along Crescent Street.

The applicant has indicated that one parking space in the garage would include a new electrical vehicle (EV) charger to meet the minimum EV charger requirements of one EV charger (5 parking spaces times .2 = 1) per Section 1.14 of the City of Portland Technical Manual.

- E. Transportation demand management (TDM)
Not applicable. A TDM plan is not required as the proposed development is a residential use.

2. Environmental Quality Standards (Section 14.6.2)

- A. Preservation of significant natural features
The site is currently vacant and does not consist of significant natural features including wetlands, vernal pools or other protected wildlife habitats.

- B. Landscape preservation
The existing conditions and demolition plan (Plan 5) indicates existing trees with a diameter at breast height (dbh) that vary from 2" – 36" that would require preservation under City's technical manual section 4 Landscaping and Landscape Preservation standards.

The Applicant has provided tree species information that indicates areas of vegetation being preserved in accordance with section 4.3.1 of the technical manual.

- C. Site landscaping and buffers
The creation of five residential units requires either the planting of five street trees or an acceptable alternative under Technical Manual section 4.6.4. The Applicant has proposed to provide two native deciduous trees in tree wells within the public right of way, in addition to three native evergreen trees located at the rear of the property with the City Arborist's discretion as an acceptable street tree alternative per Section 14.6.2 of the Land Use Code.

- D. Water quality/storm water management/erosion control
The project is required to provide for stormwater management in accordance with Maine DEP Chapter 500 and City of Portland Technical Manual Section 5 standards for stormwater management.

The Applicant has submitted a stormwater management report, a grading and drainage plan to indicate erosion and sedimentation control measures and stormwater treatment for the proposed development. The Applicant is proposing an r-tank infiltration system under the proposed driveway on private property that the City's Consulting Stormwater Reviewer finds is appropriately designed to meet stormwater management requirements.

3. Public Infrastructure and Community Safety Standards (Section 14.6.3)

- A. Consistency with City Master Plans
One Climate Future identifies strategies relevant to the proposed development including encouraging transit-oriented infill development to support travel by walking, biking, and public transportation as well as increasing the housing stock in areas proximate to jobs and public transit. Furthermore, One Climate Future prioritizes infill development through redevelopment over greenfield development to ensure the protection of the state's forest, wetlands, and healthy soils.
- B. Public safety and fire prevention
The City's Fire Marshall has reviewed the application materials and finds that the proposed plan to allow firetruck access at Crescent Street is acceptable.
- C. Availability and capacity of public utilities

The Department of Public Works has provided a wastewater capacity authorization letter to serve the anticipated wastewater flows (Report Attachment R). The Applicant has provided the ability to serve letter from the CMP as the electrical utility provider (Report Attachment S).

4. Site Design Standards (Section 14.6.4)

A. Massing, ventilation, and wind impact

The proposed three-story multi-family building with five dwelling units meets the R-6 setback requirements and therefore will not adversely impact abutting structures or properties.

B. Shadows

No shadow study is required as the proposed development plan and building height is consistent with adjacent properties and the proposed project will not impact any publicly accessible open spaces.

C. Snow and ice loading

The Applicant's Site Layout Plan (Plan 7) indicates that the Applicant will be responsible for removing snow from the site.

D. View corridors

There are no designated view corridors within the project vicinity. This standard is not applicable.

E. Historic resources

The proposed development is not within a locally designated historic district or within 100 feet to require an advisory Staff review by the Historic Preservation program.

F. Exterior lighting

The applicant has submitted a photometric lighting plan and proposed lighting fixture cut sheets that meet section 12.5 in the City of Portland's Technical Manual. The Applicant's photometric lighting schedule does not exceed the 3000K Correlated Color Temperature (CCT) per Section 12.5 in the City of Portland's Technical Manual.

G. Noise and vibration

The Applicant has proposed that HVAC and/or other equipment for noise and vibration are located at the roof level. The Applicant has resubmitted a roof plan, elevations and renderings that indicate the location of the proposed HVAC toward the center of the roof that Staff finds is not a visual nuisance as perceived from public streets.

H. Signage and wayfinding

Not applicable, there is no signage beyond property addressing.

I. Zoning-related design standards

The proposed development plan is subject to the site design standards, Land Use Code section 14.6.4.I Design standards per the City of Portland Design Manual under section (k.) Small residential lot development located in the R-6 zone.

The Applicant has resubmitted architectural plans and elevations that indicate adjustments to the exterior material selection, façade and fenestration arrangement that Staff finds appropriate.

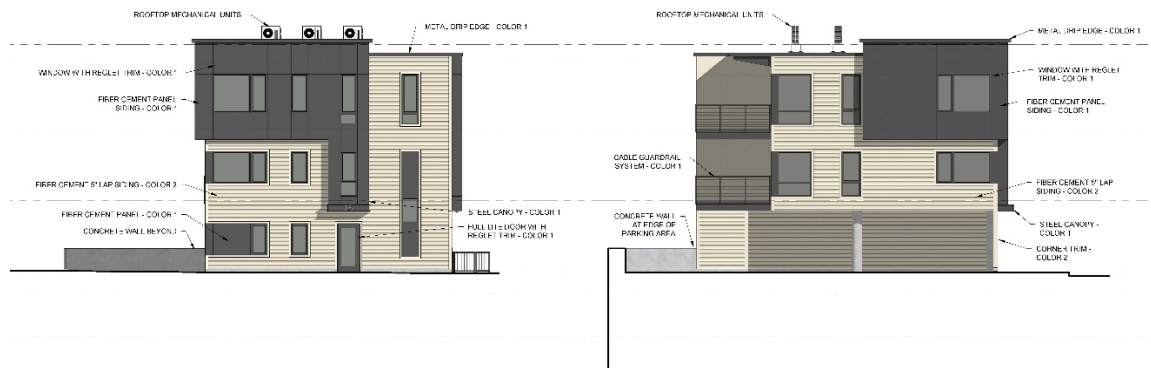


Figure 4: South elevation (Crescent Street frontage) & West elevation (facing abutting property)

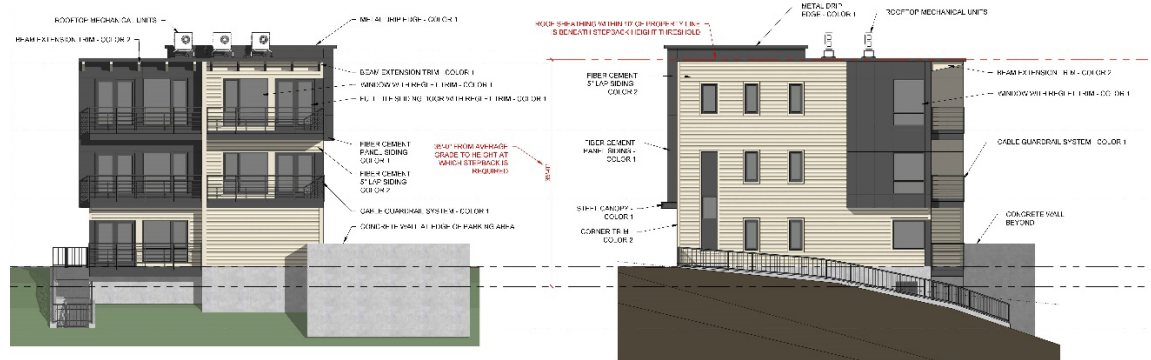


Figure 5: North elevation (facing rear of property) & East elevation (facing abutting property)

X. NEIGHBORHOOD MEETING & PUBLIC COMMENT

The Applicant held a neighborhood meeting on May 16, 2023 (Applicant Submittal U). Invitations for the in-person meeting were sent to properties within 500 feet of the proposed development. There were no attendees. Written public comments (PC 1) are included for the Planning Board.

XI. PROPOSED MOTIONS

A. SITE PLAN REVIEW

On the basis of the application, plans, reports and other information submitted by the Applicant; findings and recommendations contained in the Planning Board Report for the public hearing on December 12, 2023 for application # PL-002466-2023 relevant to the site plan regulations; and the testimony presented at the Planning Board hearing, the Planning Board [**finds/does not find**] that the plan is in conformance with the site plan standards of the Land Use Code.

B. PLANNING BOARD DECISION

On the basis of the findings, conclusions and recommendations contained in the Planning Board report for the public hearing on December 12, 2023 related to application PL-002466-2023 for 15 Crescent Street, which is attached to the draft approval letter and incorporated therein, the Planning Board [**adopts/does not adopt**] the approval letter as drafted as the Planning Board's

decision for application PL-002466, and authorizes the Planning Board Chair to sign the approval letter as drafted.

XII. ATTACHMENTS

PUBLIC COMMENTS

- PC 1 Sarah Erwin – 05-17-2023
- PC 2 George Rheault – 12-08-2023

REPORT ATTACHMENTS

- Att. 1 City review comment letter – 06-21-2023
- Att. 2 City review comment letter – 09-28-2023
- Att. 3 City review comment letter – 11-09-2023
- Att. 4 Design review memo – 05-24-2023
- Att. 5 Design review memo – 09-29-2023
- Att. 6 City's DPW - Transportation review comments
- Att. 7 City's DPW – RTI review comments
- Att. 8 City's Consulting Traffic Engineer
- Att. 9 Draft Approval Letter

APPLICANT SUBMITTAL

- A. Development description
- B. Right, Title & Interest
- C. State and Federal permits
- D. Land ordinance review
- E. Easements or other burdens
- F. Natural features
- G. Stormwater Management
- H. Consistency with City Master Plans
- I. Utilities
- J. Fire Safety
- K. Conformity with applicable design standards
- L. Verification of proposed HVAC equipment
- M. Zoning analysis table
- N. Comment response letter – 09-12-2023
- O. Comment response letter – 10-31-2023
- P. Comment response letter – 11-17-2023
- Q. Average grade calculations
- R. Wastewater capacity authorization
- S. Ability to serve letter CMP
- T. Financial capacity letter
- U. Neighborhood meeting certification package
- V. Notice of public meeting certificate

PLANS AND DRAWINGS

- Plan 1. Cover

Plan 2. General Notes
Plan 3. Survey
Plan 4. Recording Plat
Plan 5. Existing Conditions & Demolition Plan
Plan 6. Construction Management Plan
Plan 7. Site Plan
Plan 8. Grading and Drainage Plan
Plan 9. Erosion Sedimentation Control Notes and Details
Plan 10. Slope Stabilization
Plan 11. Utility Plan
Plan 12. Photometric Plans
Plan 13. Photometric Plan
Plan 14. Site Details
Plan 15. Utility and drainage details
Plan 15. Turning template
Plan 16. Landscape Plan
Plan 17. Architect Basement Foundation plan
Plan 18. First floor plan
Plan 19. Second floor plan
Plan 20. Third floor plan
Plan 21. Roof plan
Plan 22. Elevations
Plan 23. Renderings
Plan 24. Sections
Plan 25. North Retaining Wall
Plan 26. West Retaining Wall

Dear Adrienne Fine,

The proposed multi-family residential building and associated site improvements, located at 15 Crescent Street (PL-002466-2023) was reviewed against Chapter 14 of the City of Portland Land Use Code, as well as the City of Portland Technical Manual.

Please find below, comments from Planning & Urban Development Department staff and site plan peer-reviewers. Additionally, please see the attached Design Review comments.

PLANNING

- Site plans include two street tree wells. Please ensure site plans meet Technical Manual section 4.6.1 Street Trees; Residential Development, and review tree-well details in Technical Manual section 4.
 - *“Multi-family residential developments shall provide a minimum of one tree per unit, planted in the City right of way and/or along private roadways unless otherwise approved and spaced twenty-five (25) to thirty-five (35) feet on center.”*
 - For a five-unit residential building, five street trees are required, with at least two preferably located on site. Where site constraints prevent the planting of required street trees in the city right-of-way, alternatives are located in Land Use Code section 14.6.2 (C.4.)
- Five existing trees on site are proposed to be removed. Please provide DBH measurements of these trees in order to determine the applicability of landscape preservation and tree replacement requirements.
- Per Land Use Code Table 19-A, two bicycle parking spaces are required per five units. The proposed bike hitch appears to meet this standard. Please orient the hitch parallel to the street so as to maintain proper sidewalk width.
- Snow storage is shown north of the parking area, downhill from the retaining wall, though the retaining wall is proposed to extend 42” above the parking surface. This would require lifting the snow and dropping it over the retaining wall edge. Please confirm this snow storage arrangement as snow and ice should not fall on the adjacent downhill property.
- Please provide bollards or wheel-stops to prevent automobiles from colliding with the retaining wall. Similarly, please provide bollards or wheel-stops to prevent vehicles from colliding with the residential structure wall.
- Please parking area meets Technical Manual sections 1.47 *Electric Vehicle Infrastructure*.
 - *“New structured and surface parking lots of five or more spaces shall include energized electrical outlets or installed chargers capable of providing Level 2 EV charging or higher to 20% of parking spaces (rounded down to the nearest whole number). An additional 50% of spaces must be made EV-ready, meaning that they are served by sufficient conduit and electrical service to allow for future installation of electric vehicle supply equipment at every space.”*
- Please ensure the retaining wall and slope meet Technical Manual sections 4.5.7 *Walls and Fences* and 4.5.8 *Slope Stabilization*.

ZONING

- Please provide an accurate measurement of the site's grade, calculated from all 4 corners of the parcel.
- The North and East elevations appear to be showing different proposals in the rear of the site. The North elevation appears to have a stairway leading to the ground floor deck and the east elevation appears to be more in line with what is described on the C-4.0 Site plan with a stairway leading to the basement and a ramp leading to the back yard. Please clarify what is proposed

DPW WATER RESOURCES

- A formal wastewater capacity application for this project shall be submitted to DPW's water resources division for review and approval.
- DPW is concerned that infiltrated stormwater runoff from the proposed development will either weep out at the bottom of the proposed retaining wall or be collected in the proposed wall underdrain system and be directed towards abutting property as concentrated flow. The applicant would need a drainage easement and permission from the abutting property owner to increase flow rates onto neighboring property.
- Further justification will need to be provided on the need/size of the proposed storm drain overflow connection into the Crescent Street combined sewer line. The project's storm drain modeling indicated that no outflow will be directed into the City's combined sewer line in Crescent Street through the 25 year storm event. DPW is concerned that stormwater overflow flow generated in more significant storms, or in the event that the proposed infiltration system is not working correctly, could exceed the City's combined sewer's capacity and result in possible sewer backups along the sewer line.
- If approved, a manhole will be required for the proposed 12" private storm drain connection into the Crescent Street combined sewer per standards set forth in section 2 of the technical manual.
- The applicant shall install a backflow preventer on the proposed private sewer lateral line before connecting into the City's combined sewer line per requirements listed in section 2 of the technical manual.
- If the storm drain connection into the Crescent Street combined sewer line is approved, a backflow preventer will also be required on the private storm drain line upstream of the connection into the City's system to prevent combined sewer lines from surcharging and contaminating the private stormwater management system.

DPW TRANSPORTATION

- Curb extensions are not suitable at this location. Reconfigure or eliminate the tree wells and coordinate with the Planning and Forestry staff to determine an alternate location for trees in order to meet the street tree requirements. Revise the plans to reflect these changes.
- The applicant shall update the plans to label and or provide spot grades and slopes for the proposed sidewalks and driveway improvements at grade breaks.

- The proposed brick sidewalk cross slope shall not exceed 2% at the property line. If the existing sidewalk grades are not compliant at the property line, then the limits of sidewalk replacement shall be extended to include a 5 foot minimum transition zone from the proposed 2% to the existing sidewalk slope.
- The sidewalk and driveway shall be constructed in accordance with the City's Sidewalk and Driveway Apron Material Policy and the granite curb installed per the current City standards. The applicant shall update the plans and provide spot grades and slopes for the proposed sidewalk. The sidewalk material shall be continued through the driveway aprons at grade with the proposed sidewalk and not in excess of 2% cross-slope per the current City standards.
- Improvements in the ROW shall be dimensions on the plan view sheets. For example ROW, street, lanes sidewalk, esplanade driveways (and other improvements) widths as well as when a width changes.
- Details that need to be included or referenced on the site plans are:
 - Vertical Granite Curb
 - Brick Sidewalk with Bituminous Base
 - Brick Driveway Apron with Bituminous Base
 - Driveway Apron
 - CAD files can be obtained upon request.
- Consolidate proposed service trenches to have one final trench repair (where possible). All pavement cuts in the City ROW shall be repaired per the Minor Excavation Pavement Repair Details (prior to paving the finished surface) found in the *Rules and Regulations for Excavation Activity* (attached).

City Staff and Third-Party Peer Reviewers have completed the latest review of this application based off of the most recent submissions. Comments below have been provided to the Planning & Urban Development Department from the Department of Public Works, Water Resources, Zoning, Parks Department and Third-Party Consulting Engineers (Stormwater + Traffic).

Please submit a written response to the comments below and upload the response, revised submissions, and new material to Project Dox (make sure all submissions maintain the same file naming format to allow for versioning). Once uploaded, please send an email to sking@portlandmaine.gov notifying the planner of the resubmission.

Be advised that additional comments may be forthcoming and other changes may still be required if the comments are not addressed adequately. If you have any questions, please do not hesitate to ask.

General Review Comments		
Review	Discussion	Status
RTI	Overview: The owner of the property is Crescent Heights LLC dated August 18, 2008 and recorded in the Cumberland County Registry of Deeds in Book 26288, Page 50.	Met
	Comments: The Applicant has submitted RTI document	
Financial & Technical Capacity	Overview: The applicant has not submitted a letter of financial and technical capacity.	Not Met
	Comments: Applicant to provide a letter of financial and technical capacity to observe Major Site Plan application requirements	
Zoning	Overview: Multi-family uses are permitted use in the R-6 zone (Table 6-A Permitted Uses in Residential Zones) and are permitted at a lot area per dwelling unit of 725 square feet. The proposed development plan includes a total of five dwelling units that meet the R-6 dimensional standards per §7.3 Dimensional Standards, (Table 7-A Residential Zone Dimensional Standards).	Not Met
	Comments: - Previous Staff comment requested the Applicant provide an accurate measurement of the site's grade, calculated from all 4 corners of the parcel. Upon further zoning compliance review, the proposed grade of each of the four corners of the building needs to be provided and shown on the site plan. Once this is determined, the average grade height needs to be included on the elevation plans. - Based on the Applicant's calculation of average grade from four corners of the proposed building, the Applicant shall observe R-6 dimensional standard, LUC 14.7.3 to require a building setback of 10 feet from side property line for structures of 35 feet.	

	The applicant needs to show the landscaped open space areas on a plan to demonstrate how the number of 24.8% open space is being met.	
Additional Submissions Requested: Average grade calculated at proposed building corners		

14.6.1: Transportation Standards		
Standard	Discussion	Status
Impact on Surrounding Street Systems	Overview: The applicant has proposed public right-of-way improvements including reconstructing granite curbing, brick sidewalk, and driveway apron in place.	Met
	Comments: Applicant has revised plans to include City details per City's technical manual section 1, dimensions and spot elevations per previous DPW comments	
Access and Circulation	Overview: The proposed development would access parking on the site by a new driveway at Crescent Street.	Not met
	The Applicant has indicated that pedestrians will access building entrances from Crescent Street. Comments: The City's Consulting Traffic Engineer is requesting turning templates to evaluate the vehicle maneuvering at the garage and uncovered parking spaces.	
Public Transit Access	Overview: While there is a Greater Portland METRO local service Route 1, 9A transit stop at the corner of Congress Street and Bramhall Street the proposed development does not exceed 20 dwelling units and therefore is not required to provide a transit shelter.	Not applicable
	Comments:	
Parking	Overview: In general, a residential development is required to provide one parking space per dwelling unit unless a project is eligible for parking exceptions as listed in Table 19-B of the Land Use Code. No exceptions are being sought for this application. The proposed development plan meets the minimum parking with the first three units exempt for a total requirement of 11 parking spaces, the applicant seeks to provide 5 parking spaces on site. The project is meeting the minimum bicycle parking requirement, which requires that two spaces be provided for every five units. As there are a total of five residential units being proposed, a minimum of two bicycle parking spaces is required, with one bike hitch proposed along Crescent Street	Met

	The applicant has indicated 1 parking spaces in the garage would include new electrical vehicle (EV) chargers to meet the minimum EV charger requirements of 5 EV chargers (5 parking spaces times .2 = 1) per Section 1.14 of the City of Portland Technical Manual.	
	<u>Comments:</u>	
Transportation Demand Management	<u>Overview:</u> Not applicable	Not applicable
	<u>Comments:</u>	
	•	
<u>Additional Submissions Requested:</u>		
•		

14.6.2: Environmental Quality Standards		
Standard	Discussion	Status
Preservation of Significant Natural Features	<u>Overview:</u> The site is currently developed with a multi-family building and surface parking lot with no significant natural features including wetlands, vernal pools or other protected wildlife habitats. <u>Comments:</u> •	Not applicable
Landscape Preservation	<u>Overview:</u> The survey indicates existing trees with a diameter at breast height (dbh) that vary from 12" – 36" that would require preservation under City's technical manual section 4 Landscaping and Landscape Preservation standards. <u>Comments:</u> • The Applicant is to provide tree species information and indicate any areas of vegetation being preserved in accordance with section 4.3.1 of the technical manual. For specific tree and significant vegetation preservation areas, please show protection measures in keeping with sections 4.3.2-4.3.7	Not Met
Site Landscaping and Buffers	<u>Overview:</u> The creation of 5 residential units requires either the planting of 5 street trees or an acceptable alternative under Technical Manual section 4.6.4. <u>Comments:</u> • The Applicant shows two street tree wells in site plan without specific species information. Please update with proposed tree species, but take note that due to over planting the city is discouraging maple species to promote more biodiversity and resilience to the tree canopy. Section 4, figure IV 1 in technical manual provides some examples of compliant / recommended cultivars (with the exception of listed maple species, due to over planting mentioned previously.)	Not met

	- No existing overhead powerlines are present to impair a mature street tree canopy establishment in front of the property, the applicant is strongly encouraged to provide increased soil volume to street tree locations shown on plan with expanded rooting area under sidewalk. This may include directing roots toward adjacent planting beds where appropriate, if not in conflict with utilities of structural needs of the building. Soil cells, structural soil, or other techniques would prove very beneficial to ensuring healthy street tree establishment, resulting in lowering maintenance and safety concerns from poor tree health that may arise from insufficient soil quality and volumes in a small tree well area. At a minimum, if a larger, more elongated open bed or esplanade can be established for street trees with proper soils, that should be pursued to ensure more soil is available than currently provided. - Current proposal shows an overly tall amount of exposed concrete surface area on Congress Street side of property. Section 4.5.2 and 4.5.7 of the technical manual encourages parking areas and walls being screened or accompanied with landscaping. Applicant is encouraged to consider terracing to create potential planting beds for more effective plant material screening and reduce the scale and visual impact of a tall blank concrete wall from adjacent properties and viewshed from Congress street ROW.	
Water Quality, Stormwater Management and Erosion Control	Overview: The project is required to provide for stormwater management in accordance with Maine DEP Chapter 500 and City of Portland Technical Manual Section 5 standards for stormwater management. The project is increasing the amount of new impervious area.	Not met
	Comments: - The Applicant has proposed the installation of new stormwater infrastructure in the ROW, and this should be coordinated with the Department of Public Works. - The project is proposing an r-tank infiltration system under the proposed driveway on private property to be appropriately designed.	
	Comments: Can pyramat product be compatible with larger vegetation growth, like trees or shrubs within the matrix. If not, please explain level of on going maintenance that will be required / followed to ensure that non compatible vegetation will not “volunteer” or become established in matting areas that will compromise the system. If such plants ARE compatible with the product, provide a more detailed planting plan that gives consideration to more substantial woody stem species in keeping with sections 4.5.9, 4.5.10 and 4.7 of the technical manual.	

	- Proposed slopes are greater than 50% gradient, and should incorporate further maintenance and management plan for effective establishment of pyramat 75 product and associated vegetation. Please confirm if irrigation will be utilized in establishment of seed mix. Erosion control is proposed on north side of slope, beneath a tall structure, and may require shade or heavy shade tolerant planting mixes for effective establishment. - Provide additional information on retaining wall design, including structural information on wall performance, materials , drainage, design and other information.	
Additional Submissions Requested:		

14.6.3: Public Infrastructure + Community Safety Standards		
Standard	Discussion	Status
Consistency with City Master Plans	Overview: Portland's Plan 2030 Comprehensive Plan goals and policies (state and local) relevant to the proposed development align with these vision statements and goals, by creating a new well-connected housing development accessible to public transit supporting the Plans goal of <i>increasing, preserving, and modifying the overall supply of housing city-wide.</i> One Climate Future identifies strategies relevant to the proposed development including encouraging transit-oriented infill development to support travel by walking, biking, and public transportation as well as increasing the housing stock in areas proximate to jobs and public transit. Furthermore, One Climate Future prioritizes infill development through redevelopment over greenfield development to ensure the protection of the state's forest, wetlands, and healthy soils.	
	Comments:	
Public Safety and Fire Prevention	Overview: The City's Fire Marshall has reviewed the application materials and finds that the proposed plan to allow firetruck access at Crescent Street is acceptable.	Met
	Comments:	
Public Utilities	Overview: Wastewater capacity letter submitted, Applicant should verify information is accurate.	Not met
	Comments: - The wastewater capacity letter will need to include correct address – 15 Crescent Street. - The Applicant is to provide ability to serve letter from electrical utility provider.	

Additional Submissions Requested:

-

14.6.4: Site Design Standards		
Standard	Discussion	Status
Massing, Ventilation and Wind Impact	Overview: The proposed three-story multi-family building with 5 dwelling units.	Not Met
	Comments: Abutting properties may be affected by retaining wall and grading, especially existing trees on abutting properties, Applicant should indicate proposed grade tie into existing grades at property boundaries. Any grading encroachments will need to be documented with a drainage and maintenance easement prepared.	
Shadow	Overview: No shadow study is required as the proposed development plan and building height is consistent with adjacent properties.	Not applicable
	Comments: •	
Snow and Ice Loading	Overview: Snow storage shown on Site Plan	Met
	Comments: •	
View Corridors	Overview: There are no designated view corridors within the project vicinity.	Not applicable
	Comments: •	
Historic Resources	Overview: The proposed development not within a historic district.	Not applicable
	Comments: •	
Exterior Lighting	Overview: The applicant has submitted a photometric lighting plan and proposed lighting fixture cut sheets that appear to meet section 12.5 in the City of Portland's Technical Manual.	Not Met
	Comments: Applicant should specific 3000K color temperature to meet section 12.5	
Noise and Vibration	Overview: The proposed HVAC and/or other equipment for noise and vibration would be located at the roof level.	Not Met
	Comments: The Applicant is to provide a roof plan that indicates location of proposed HVAC and screening (if required) to buffer abutters from noise and visual impact	
Signage and Wayfinding	Overview: There is no signage beyond property addressing.	Not applicable

	<u>Comments:</u>	
Design Standards	<u>Overview:</u> The proposed development plan is subject to the site design standards, Land Use Code section 14.6.4.I Design standards per the City of Portland Design Manual under section (i.) multi-family.	Met
	<u>Comments:</u> See Design review memo 9-29-2023	
<u>Additional Submissions Requested:</u>		

City Staff and Third-Party Peer Reviewers have completed the latest review of this application based off of the most recent submissions. Comments below have been provided to the Planning & Urban Development Department from the Department of Public Works, Water Resources, Zoning, Parks Department and Third-Party Consulting Engineers (Stormwater + Traffic).

Att. 3

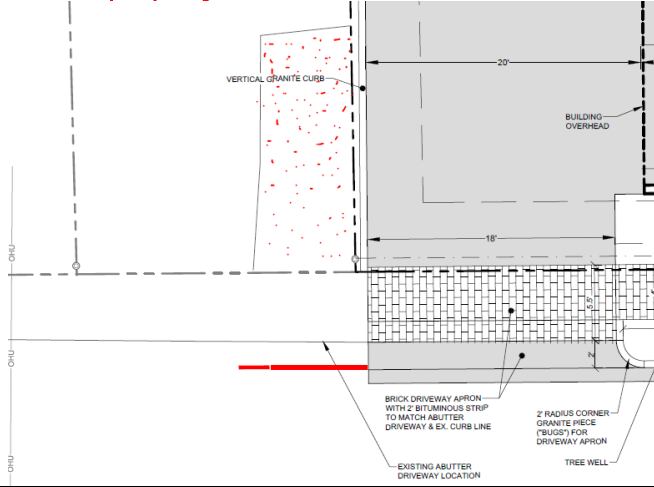
Please submit a written response to the comments below and upload the response, revised submissions, and new material to Project Dox (make sure all submissions maintain the same file naming format to allow for versioning). Once uploaded, please send an email to sking@portlandmaine.gov notifying the planner of the resubmission.

Be advised that additional comments may be forthcoming and other changes may still be required if the comments are not addressed adequately. If you have any questions, please do not hesitate to ask.

General Review Comments		
Review	Discussion	Status
RTI	Overview: The owner of the property is Crescent Heights LLC dated August 18, 2008 and recorded in the Cumberland County Registry of Deeds in Book 26288, Page 50.	Met
	Comments: The Applicant has submitted RTI document	
Financial & Technical Capacity	Overview: The applicant has not submitted a letter of financial and technical capacity.	Met
	Comments: Applicant has provided a letter of financial and technical capacity to observe Major Site Plan application requirements	
Zoning	Overview: Multi-family uses are permitted use in the R-6 zone (Table 6-A Permitted Uses in Residential Zones) and are permitted at a lot area per dwelling unit of 725 square feet. The proposed development plan includes a total of five dwelling units that meet the R-6 dimensional standards per §7.3 Dimensional Standards, (Table 7-A Residential Zone Dimensional Standards).	Not Met
	Comments: - Previous Staff comment requested the Applicant provide an accurate measurement of the site's grade, calculated from all 4 corners of the parcel. Upon further zoning compliance review, the proposed grade of each of the four corners of the building needs to be provided and shown on the site plan. The following comments are a response to the resubmission plan set on October 31, 2023: - The following four points were provided for the proposed grade at the four building corners - 122.37, 122.825, 122.68 and 112.6. The first point 122.37 is not accurate. This appears to be the grade where the top of the retaining wall for the parking spaces meets the rear left corner of the proposed building. The	

	elevation at grade for the rear left corner of the building is shown as 112.50 on plan c-5.o. If you add up the four points using this elevation the average grade is 117.66' (470.63/4). ○ With an average grade of 117.66', the average elevation needs to be revised on the architectural sections A3-o* and A2-o*. Is the elevation given for the Low Roof T.O. Deck the same as the elevation to the top of the roof beam? If the average grade elevation is 117.66. then the height of the building from average grade to the roof beam is 36.58' (154.24'-117.66, based on elevation given for low roof T. O. deck). Any part of the building within 10' of the right side property line must be 35' or lower. Currently the front right side of the building is above 35'. ● Based on the Applicant's calculation of average grade from four corners of the proposed building, the Applicant shall observe R-6 dimensional standard, LUC 14.7.3 to require a building setback of 10 feet from side property line for structures of 35 feet. ● The applicant needs to show the landscaped open space areas on a plan to demonstrate how the number of 24.8% open space is being met. ○ Regarding the landscaped open space requirement, I looked at L-1.o. I need them to provide the square footage of each area in green to confirm the calculation.	
Additional Submissions Requested: ● Average grade calculated at proposed building corners consistent with Zoning Staff comments		

14.6.1: Transportation Standards		
Standard	Discussion	Status
Impact on Surrounding Street Systems	Overview: The applicant has proposed public right-of-way improvements including reconstructing granite curbing, brick sidewalk, and driveway apron in place.	Not Met
	Comments: ● Applicant has revised plans to include City details per City's technical manual section 1, dimensions and spot elevations per previous DPW comments ● The City's Consulting Traffic Engineer has reviewed the Applicant's submitted site plan in reference to driveway space indicated within the City's technical manual, section 1.5 Driveway Design. The Applicant's proposed 18' driveway width abuts an	

	adjacent driveway apron located on a City right-of-way, the Applicant is required to construct curbing / tipdown along the public sidewalk to separate the proposed driveway (see sketch below for approximate location to align with the existing curb). The existing paved area on the City right of way shall be removed and seeded to allow for the Applicant's proposed driveway along the side property.  The sketch shows a plan view of a property corner. A vertical granite curb separates a brick driveway apron from a public sidewalk. The apron is 20 feet wide and 18 feet deep. A building is shown overhead. A tree well is located near the curb. Labels include: VERTICAL GRANITE CURB, BUILDING OVERHEAD, BRICK DRIVEWAY APRON WITH 2" BITUMINOUS STRIP TO MATCH ABUTTER DRIVEWAY & EX. CURB LINE, 2" RADIUS CORNER GRANITE PIECE ("BUGS") FOR DRIVEWAY APRON, EXISTING ABUTTER DRIVEWAY LOCATION, and TREE WELL.	
Access and Circulation	Overview: The proposed development would access parking on the site by a new driveway at Crescent Street. The Applicant has indicated that pedestrians will access building entrances from Crescent Street. Comments: The City's Consulting Traffic Engineer has reviewed the Applicant's submitted turning templates is acceptable based on low turnover of parked vehicles for residents and low residential one-way traffic on Crescent St.	Met
Public Transit Access	Overview: While there is a Greater Portland METRO local service Route 1, 9A transit stop at the corner of Congress Street and Bramhall Street the proposed development does not exceed 20 dwelling units and therefore is not required to provide a transit shelter. Comments:	Not applicable
Parking	Overview: In general, a residential development is required to provide one parking space per dwelling unit unless a project is eligible for parking exceptions as listed in Table 19-B of the Land Use Code. No exceptions are being sought for this application. The proposed development plan meets the minimum parking with the first three units exempt for a total requirement of 11 parking spaces, the applicant seeks to provide 5 parking spaces on site. The project is meeting the minimum bicycle parking requirement, which requires that two spaces be provided for every five units. As there are a	Met

	total of five residential units being proposed, a minimum of two bicycle parking spaces is required, with one bike hitch proposed along Crescent Street The applicant has indicated 1 parking spaces in the garage would include new electrical vehicle (EV) chargers to meet the minimum EV charger requirements of 5 EV chargers (5 parking spaces times .2 = 1) per Section 1.14 of the City of Portland Technical Manual. <u>Comments:</u>	
Transportation Demand Management	<u>Overview:</u> Not applicable <u>Comments:</u>	Not applicable
<u>Additional Submissions Requested:</u> • Revised site plan with additional public right of way improvements		

14.6.2: Environmental Quality Standards		
Standard	Discussion	Status
Preservation of Significant Natural Features	<u>Overview:</u> The site is currently developed with a multi-family building and surface parking lot with no significant natural features including wetlands, vernal pools or other protected wildlife habitats. <u>Comments:</u>	Not applicable
Landscape Preservation	<u>Overview:</u> The survey indicates existing trees with a diameter at breast height (dbh) that vary from 12" – 36" that would require preservation under City's technical manual section 4 Landscaping and Landscape Preservation standards. <u>Comments:</u> • The Applicant has provided tree species information that indicates areas of vegetation being preserved in accordance with section 4.3.1 of the technical manual.	Met
Site Landscaping and Buffers	<u>Overview:</u> The creation of 5 residential units requires either the planting of 5 street trees or an acceptable alternative under Technical Manual section 4.6.4. <u>Comments:</u> • The Applicant has indicated on the resubmitted plans two European Hornbeam as street trees within the City right of way to meet Technical Manual section 4.6 Street Trees, the City's Arborist recommends a substitute tree species for <i>Carpinus caroliniana</i> (American hornbeam) or <i>Ostrya virginiana</i> (Eastern hophornbeam). • The Applicant has resubmitted a landscape plan, the City Arborist suggests the substitution of three native evergreen	Not met

	trees at the rear of the property as a street tree alternative to meet the requirement for five total street trees. These evergreen trees would replace the proposed Viburnum and Cherry shrubs.	
Water Quality, Stormwater Management and Erosion Control	<u>Overview:</u> The project is required to provide for stormwater management in accordance with Maine DEP Chapter 500 and City of Portland Technical Manual Section 5 standards for stormwater management. The project is increasing the amount of new impervious area.	Met
	<u>Comments:</u> • The Applicant has proposed the installation of new stormwater infrastructure in the ROW, and this should be coordinated with the Department of Public Works. • The project is proposing an r-tank infiltration system under the proposed driveway on private property to be appropriately designed.	
	<u>Comments:</u> • The Applicant would be required to submit a retaining wall design for a building permit. • Has the Applicant considered an internal stairwell to the basement for resident storage, to eliminate the external stairwell along the east property to increase the landscape buffer and open space of the property?	
<u>Additional Submissions Requested:</u> •		

14.6.3: Public Infrastructure + Community Safety Standards		
Standard	Discussion	Status
Consistency with City Master Plans	Overview: Portland's Plan 2030 Comprehensive Plan goals and policies (state and local) relevant to the proposed development align with these vision statements and goals, by creating a new well-connected housing development accessible to public transit supporting the Plans goal of <i>increasing, preserving, and modifying the overall supply of housing city-wide.</i> One Climate Future identifies strategies relevant to the proposed development including encouraging transit-oriented infill development to support travel by walking, biking, and public transportation as well as increasing the housing stock in areas proximate to jobs and public transit. Furthermore, One Climate Future prioritizes infill development through redevelopment over greenfield development to ensure the protection of the state's forest, wetlands, and healthy soils.	
	Comments:	

Public Safety and Fire Prevention	Overview: The City’s Fire Marshall has reviewed the application materials and finds that the proposed plan to allow firetruck access at Crescent Street is acceptable.	Met
	Comments:	
Public Utilities	Overview: Wastewater capacity letter submitted, Applicant should verify information is accurate.	Met
	Comments: - The wastewater capacity letter was submitted by the Applicant. - An ability to serve letter from electrical utility provider CMP was submitted by the Applicant.	
Additional Submissions Requested:		

14.6.4: Site Design Standards		
Standard	Discussion	Status
Massing, Ventilation and Wind Impact	Overview: The proposed three-story multi-family building with 5 dwelling units.	Not Met
	Comments: - Abutting properties may be affected by retaining wall and grading, especially existing trees on abutting properties. Has the Applicant considered locating the proposed driveway at the existing curb cut located at the east property boundary along Crescent Street. This may allow the residential units to be located more internal to the site and closer to the south property boundary, which would address Zoning comments regarding stepback dimensional requirements in the R-6 zone. - The Applicant is required to document a grading easement during construction with abutting properties, City of Portland and 9 Crescent Street, as a condition of approval.	
Shadow	Overview: No shadow study is required as the proposed development plan and building height is consistent with adjacent properties.	Not applicable
	Comments:	
Snow and Ice Loading	Overview: Snow storage shown on Site Plan	Not Met
	Comments: The Applicant has resubmitted plans that indicate snow storage at the bottom of the proposed retaining wall beyond two uncovered parking stalls, Staff does not support this and requires the Applicant to remove snow from the property as a condition of approval.	
View Corridors	Overview: There are no designated view corridors within the project vicinity.	Not applicable

	<u>Comments:</u>	
Historic Resources	<u>Overview:</u> The proposed development not within a historic district. <u>Comments:</u>	Not applicable
Exterior Lighting	<u>Overview:</u> The applicant has submitted a photometric lighting plan and proposed lighting fixture cut sheets that appear to meet section 12.5 in the City of Portland's Technical Manual. <u>Comments:</u> The Applicant has resubmitted plans that specific 3000K color temperature to meet section 12.5	Met
Noise and Vibration	<u>Overview:</u> The proposed HVAC and/or other equipment for noise and vibration would be located at the roof level. <u>Comments:</u> The Applicant has resubmitted a roof plan, elevations and renderings that indicate the location of the proposed HVAC toward the center of the roof that Staff finds is not a visual nuisance as perceived from public streets.	Met
Signage and Wayfinding	<u>Overview:</u> There is no signage beyond property addressing. <u>Comments:</u>	Not applicable
Design Standards	<u>Overview:</u> The proposed development plan is subject to the site design standards, Land Use Code section 14.6.4.I Design standards per the City of Portland Design Manual under section (i.) multi-family. <u>Comments:</u> See Design review memo 9-29-2023	Met
<u>Additional Submissions Requested:</u>		

Construction management plan comments:

The Applicant's resubmitted construction management to indicate a construction entrance to allow for construction staging and adequate public safety measures to separate pedestrian and vehicle circulation from the construction site.

Subject: 15 Crescent Street
Zone: R-6
Date of May 24, 2022
Review: Design Review
Reviewer(s): Sean King (Urban Designer), Austen Davis (Planner), Zach Powell (Senior Planner)
Project ID: PL-002466-2023

I. INTRODUCTION

The project was reviewed against the R-6 Residential Zone Standards (Appendix 7 of the Design Manual).

SMALL RESIDENTIAL LOT DEVELOPMENT LOCATED IN THE R-6 ZONE

(1) STANDARDS. Small residential lot development located in the R-6 zone on lots of ten thousand (10,000) square feet or less shall provide a high degree of architectural quality and compatibility with the surrounding neighborhood as demonstrated by compliance with the principles and standards of the R-6 Infill Development Principles and Standards, promulgated by the Planning Board and contained in Appendix 7 of this manual. Any proposal required to obtain a certificate of appropriateness under Portland's historic preservation ordinance is exempt from the R-6 design review standard.

II. DESIGN REVIEW COMMENTS: **bold** text denotes recent updates met, **red** text denotes standards not met to require resubmission.

PRINCIPLE A - Overall Context - A building design shall contribute to and be compatible with the predominant character-defining architectural features of the neighborhood.

STANDARD A-1 - Scale and Form

The proposed building is compatible with the predominant residential scale of the neighborhood that includes two- and three-story single-family and multi-family buildings with orientation toward the street.

STANDARD A-2 - Composition of Principal Facades

Staff finds the composition of principal facades visible from the public way does not reinforce the residential character of the neighborhood, in particular the lack of fenestration at the ground level and arrangement of windows at the common staircase at the front elevation. Staff recommends additional window fenestrations that align horizontally and vertically with the proposed pattern of dwelling units that face Crescent Street.

STANDARD A-3 - Relationship to Street

The building placement is consistent with the spacing and rhythm of the residential fabric that include driveways at property side setbacks and main entrances oriented toward the street.

PRINCIPLE B - Massing – The massing of the building reflects and reinforces the traditional building character of the neighborhood through a well composed form, shape and volume.

STANDARD B-1 - Massing -

The building design includes a projection of windows at upper floors that staff finds is appropriate to emphasize the dwelling units that face Crescent Street.

STANDARD B-2 - Roof Forms -

The predominant roof form is gabled to reinforce a smaller scale residential character found in the surrounding neighborhood. **There are exemptions for multi-family and boarding homes that include flat roofs with pronounced cornices and cladded soffits that staff finds are more appropriate as compared to the proposed monopitch roof.**

STANDARD B-3 - Main Roofs and Subsidiary Roofs -

Staff finds the building's main roof form as a monopitch is not compatible with the surrounding context and recommends a flat roof to relate closely to the subsidiary flat roof proposed at the right side of the front elevation.

STANDARD B-4 - Roof Pitch -

The proposed roof pitch does not meet this design standard. The applicant should revise to be more compatible with the surrounding context.

STANDARD B-5 - Façade Articulation -

The proposed building façade is articulated with material changes that staff finds appropriate to highlight dwelling units on the upper floors.

STANDARD B-6 - Garages

A garage is not proposed at the street-facing façade and staff observes that parked vehicles under the upper floors would be visible from the public way.

PRINCIPLE C - Orientation to the Street – The building façade shall reinforce a sense of the public realm of the sidewalk while providing a sense of transition into the private realm of the home.

STANDARD C-1 – Entrances –

The main entrance is oriented toward the street and articulated with a canopy.

STANDARD C-2 - Visual Privacy –

No dwelling units are proposed along the street at the ground floor.

STANDARD C-3 - Transition Spaces –

A five (5) foot front setback is proposed as a buffer with landscaping to delineate the sidewalk from the building.

PRINCIPLE D - Proportion and Scale – Building proportions must be harmonious and individual building elements shall be human scaled.

STANDARD D-1 – Windows -

The proposed building design includes windows that indicate dwelling units. However, staff finds the lack of windows at the ground level does not provide activation at the street level.

STANDARD D-2 – Fenestration –

Windows and doorways meet at least 12% area of the fenestration of the total façade area.

STANDARD D-3 - Porches

The porch standard does not apply.

PRINCIPLE E – Balance – The building façade elements must create a sense of balance by employing local or overall symmetry and by appropriate alignment of building forms, features and elements.

STANDARD E-1 - Window and Door Height -

Staff recommends a stronger alignment of window and door head heights to create a common horizontal datum, in particular at the ground floor and staircase facing Crescent Street.

STANDARD E-2 - Window and Door Alignment -

The majority of windows stack to express a vertical alignment.

STANDARD E-3 – Symmetricality -

The primary window composition is unique to the floor plan organization with bedrooms and living spaces above the parking area and staircase facing the street. Staff recommends a stronger alignment of windows throughout the Crescent Street façade.

PRINCIPLE F – Articulation – The design of the building is articulated to create a visually interesting and well composed residential façade.

STANDARD F-1 – Articulation -

Surface articulation in the building should include detailed consistency on the façade visible from the public right of way through dimensional trim (minimum width of 4”), window reveals, or similar elements appropriate to the style of the building. Staff recommends a pronounced cornice and cladded soffit at the main flat roof form, per staff recommendation, and similar cornice articulation for the subsidiary flat roof at the staircase facing Crescent Street.

STANDARD F-2 - Window Types -

The proposed building design includes many window types of various sizes and shapes that exceed the maximum of two window types. Staff recommends the applicant:

- Select a consistent dimension for the square picture window type,
- Divide the corner window to articulate a corner board, and
- Organize windows at the staircase facing Crescent Street to align with upper-floor dwelling units.

STANDARD F-3- Visual Cohesion –

Proposed horizontal orientation of composite siding is consistent of clapboard material prevalent within the surrounding neighborhood.

STANDARD F-4- Delineation Between Floors -

Staff finds the proposed fenestration pattern is not balanced at the street-facing façade and recommends the applicant align and increase the number of windows at the proposed staircase with the dwelling units to create a clear delineation between floors.

STANDARD F-5 - Porches, etc. -

The entryway is articulated by a canopy and integrated into the overall design of the building that staff finds is appropriate.

STANDARD F-6 - Main Entries -

The main pedestrian entry is facing the street. Staff recommends the applicant consider additional articulation to include a continuation of upper-floor paneling to the ground plane.

STANDARD F-8 - Articulation -

The proposed building design includes articulation on all facades facing and adjacent to the street:

- Staff observes eaves and rakes shall have a minimum projection of 6 inches.
- Staff observes exterior façade elements include trim such as that used for windows and doors. Staff recommends corner boards at horizontal siding to observe the residential character of the surrounding neighborhood.
- Staff observes offsets in building faces or roof forms with a minimum of 12 inches.
- Staff observes that pronounced and decorative cornices are appropriate.

Principle G - Materials – Building facades shall utilize appropriate building materials that are harmonious with the character defining materials and architectural features of the neighborhood.

STANDARD G-1 – Materials -

The proposed building façade includes two distinct materials that staff finds appropriate to reduce the scale of the multi-family building.

STANDARD G-2 - Material and Façade Design -

Upper floors are differentiated with a change in material.

STANDARD G-3 – Chimneys -

No chimneys are visible, standard not applicable.

STANDARD G-4 - Window Types -

The window types vary significantly from the predominant character in this context. Staff recommends a reduction in window types in size and shape.

STANDARD G-5 - Patios and Plazas -

Not applicable.

Subject: 15 Crescent Street
Zone: R-6
Date of September 29, 2023
Review: Design Review
Reviewer(s): Sean King (Urban Designer), Austen Davis (Planner), Zach Powell (Senior Planner)
Project ID: PL-002466-2023

I. INTRODUCTION

The project was reviewed against the R-6 Residential Zone Standards (Appendix 7 of the Design Manual).

SMALL RESIDENTIAL LOT DEVELOPMENT LOCATED IN THE R-6 ZONE

(1) STANDARDS. Small residential lot development located in the R-6 zone on lots of ten thousand (10,000) square feet or less shall provide a high degree of architectural quality and compatibility with the surrounding neighborhood as demonstrated by compliance with the principles and standards of the R-6 Infill Development Principles and Standards, promulgated by the Planning Board and contained in Appendix 7 of this manual. Any proposal required to obtain a certificate of appropriateness under Portland's historic preservation ordinance is exempt from the R-6 design review standard.

II. DESIGN REVIEW COMMENTS: **bold** text denotes recent updates met, **red** text denotes standards not met to require resubmission.

PRINCIPLE A - Overall Context - A building design shall contribute to and be compatible with the predominant character-defining architectural features of the neighborhood.

STANDARD A-1 - Scale and Form - Met

The proposed building is compatible with the predominant residential scale of the neighborhood that includes two- and three-story single-family and multi-family buildings with orientation toward the street.

STANDARD A-2 - Composition of Principal Facades - Met

The Applicant has resubmitted plans to increase the amount and arrangement of fenestrations at the front elevation to reinforce the residential character of the neighborhood that Staff finds appropriate.

STANDARD A-3 - Relationship to Street - Met

The building placement is consistent with the spacing and rhythm of the residential fabric that includes driveways at property side setbacks and main entrances oriented toward the street.

PRINCIPLE B - Massing – The massing of the building reflects and reinforces the traditional building character of the neighborhood through a well composed form, shape and volume.

STANDARD B-1 - Massing - Met

The building design includes a projection of windows at upper floors that staff finds is appropriate to emphasize the dwelling units that face Crescent Street.

STANDARD B-2 - Roof Forms – Met

The predominant roof form for smaller-scale residential buildings is gabled and multi-family structures with variations of traditional roof types in the surrounding neighborhood. The Applicant has resubmitted plans for a flat roof form with pronounced cornices that Staff finds appropriate.

STANDARD B-3 - Main Roofs and Subsidiary Roofs – Met

The Applicant has resubmitted plans for a flat main and subsidiary flat roof that is more compatible with the surrounding context that Staff finds appropriate. Staff finds the roof line reduces the overall height and scale of the building.

STANDARD B-4 - Roof Pitch – Not Applicable

The Applicant has resubmitted plans for a flat roof form with no pitch to not require this design standard.

STANDARD B-5 - Façade Articulation – Met

The proposed building façade is articulated with material changes that staff finds appropriate to highlight dwelling units on the upper floors.

STANDARD B-6 - Garages – Not Applicable

A garage is not proposed at the street-facing façade and staff observes that parked vehicles under the upper floors would be visible from the public way.

PRINCIPLE C - Orientation to the Street – The building façade shall reinforce a sense of the public realm of the sidewalk while providing a sense of transition into the private realm of the home.

STANDARD C-1 – Entrances – Met

The main entrance is oriented toward the street and articulated with an overhead canopy above the stoop.

STANDARD C-2 - Visual Privacy – Not Applicable

No dwelling units are proposed along the street at the ground floor.

STANDARD C-3 - Transition Spaces – Met

A five (5) foot front setback is proposed as a buffer with landscaping to delineate the sidewalk from the building.

PRINCIPLE D - Proportion and Scale – Building proportions must be harmonious and individual building elements shall be human scaled.

STANDARD D-1 – Windows - Met

The Applicant has resubmitted plans that indicate dwelling units at the upper floors and includes additional fenestrations at the ground level to activate the front elevations along Crescent Street that Staff finds appropriate.

STANDARD D-2 – Fenestration – Met

Windows and doorways meet at least 12% area of the fenestration of the total façade area.

STANDARD D-3 – Porches – Not Applicable

The porch standard does not apply.

PRINCIPLE E – Balance – The building façade elements must create a sense of balance by employing local or overall symmetry and by appropriate alignment of building forms, features and elements.

STANDARD E-1 - Window and Door Height - Met

The Applicant has resubmitted plans to align window and door head heights that Staff finds appropriate to create a common horizontal datum throughout floor levels at the front elevation.

STANDARD E-2 - Window and Door Alignment - Met

Staff finds the majority of windows stack to express a vertical alignment.

STANDARD E-3 – Symmetricality - Met

The primary window composition is unique to the floor plan organization with bedrooms and living spaces above the parking area and staircase facing the street. The Applicant has resubmitted plans to include additional fenestrations at the ground level, alignment of windows and trim that Staff finds creates strong symmetry at the front elevation.

PRINCIPLE F – Articulation – The design of the building is articulated to create a visually interesting and well composed residential façade.

STANDARD F-1 – Articulation - Met

Surface articulation visible from the public right of way includes dimensional trim (minimum width of 4”), window reveals, and a pronounced cornice that Staff finds appropriate to meet this design standard.

STANDARD F-2 - Window Types - Met

The Applicant has resubmitted plans to include a limited variety of window types, characterized by a large display window at living spaces facing the street, linear vertical windows with and without casements that assist in balancing the façade challenged by the internal stairway facing the street.

STANDARD F-3- Visual Cohesion – Met

Proposed horizontal orientation of composite siding is consistent of clapboard material prevalent within the surrounding neighborhood.

STANDARD F-4- Delineation Between Floors - Met

The Applicant has resubmitted plans to delineate between floors through the alignment of windows, projection of material type and decorative trim to articulate a unique fenestration pattern the Staff finds appropriate.

STANDARD F-5 - Porches, etc. - Met

The entryway stoop is articulated by a canopy and integrated into the overall building design that Staff finds appropriate.

STANDARD F-6 - Main Entries –Met

The main pedestrian entry is facing the street with a projecting canopy integrated into the building design.

STANDARD F-8 - Articulation - Met

The proposed building design includes articulation on all facades facing and adjacent to the street:

- Staff observes eaves and rakes shall have a minimum projection of 6 inches.
- Staff observes exterior façade trim at windows, door and corner board at a minimum of 4 inches.
- Staff observes offsets in building faces or roof forms with a minimum of 12 inches.
- Staff observes that pronounced and decorative cornices are appropriate.

Principle G - Materials – Building facades shall utilize appropriate building materials that are harmonious with the character defining materials and architectural features of the neighborhood.

STANDARD G-1 – Materials - Met

The proposed building façade includes two distinct materials that Staff finds appropriate to reduce the scale of the multi-family building.

STANDARD G-2 - Material and Façade Design - Met

Upper floors are differentiated with a change in material that Staff finds appropriate to meet this design standard.

STANDARD G-3 – Chimneys – Not Applicable

No chimneys are proposed, design standard is not applicable.

STANDARD G-4 - Window Types - Met

The Applicant has resubmitted plans to include a limited variety of window types, characterized by a large display window at living spaces, linear vertical windows with and without casements with a consistent trim detail.

STANDARD G-5 - Patios and Plazas – Not Applicable

No patio or plaza is proposed, design standard is not applicable.

PL-002466-2023 15 Crescent Street DPW Comments**Att. 6****Janine Ba** <janineba@portlandmaine.gov>

Thu, Nov 16, 2023 at 6:16 PM

To: Sean King <sking@portlandmaine.gov>

Cc: Keith Gray <kgray@portlandmaine.gov>, Justin Pellerin <jrp@portlandmaine.gov>, Benjamin Pearson <bnp@portlandmaine.gov>, Lauren Swett <lswett@woodardcurran.com>, Tom Errico <thomas.errico@tylin.com>

Sean,

Below are DPW's comments for PL-002466-2023 15 Crescent Street. Let me know if you have any questions.

PL-002466-2023**15 Crescent Street****DPW Development Review Comments****11/16/2023**

- DPW Transportation
 - The sidewalk portion of the abutters driveway shall be reconstructed in brick per the current city standards. Update the plans to reflect this change.
- DPW Water Resources
 - Comments to follow.

--
Janine Ba
Project Engineer
City of Portland Department of Public Works
[212 Canco Rd. Suite B](#)
[Portland, ME 04103](#)
janineba@portlandmaine.gov
Desk: 207-874-8463
Cell: 207-245-2074

Encroachment Agreement for PL-002466-2023 15 Crescent Street

Att. 7

Jon Giles <jgiles@portlandmaine.gov>

Thu, Nov 16, 2023 at 4:53 PM

To: Keith Gray <kgray@portlandmaine.gov>

Cc: Sean King <sking@portlandmaine.gov>, Kevin Kraft <kkraft@portlandmaine.gov>, Janine Ba <janineba@portlandmaine.gov>, George Carhart <gcarhart@portlandmaine.gov>, Matt Grooms <mgrooms@portlandmaine.gov>, Justin Pellerin <jrp@portlandmaine.gov>

Folks,

Currently the unnamed lane or right of way along the westerly side of the proposed project is a situation where we are not aware of any City right, title, or interest at present. So I am not sure if we are in a position to grant a license on ground we aren't sure we have any rights or ownership in. I believe the material in the applicant's submitted plans indicates the lane as currently "Owners Unknown".

Whether the City can grant a license to use part of the lane where we have not yet identified any City right, title, or interest is a legal question for Corporation Counsel. Alternatively, the applicant hasn't seemed to have shown they have the right, title, or interest to use the ground either in the lane for the proposed purposes, though that is part of the submission process isn't it? Perhaps their legal counsel has not been asked to weigh in on that question either. Have they? Maybe their legal counsel would have a legal opinion on the matter to share with the City staff.

Back on October 11th Sean King contacted George Carhart and myself about this lane as the applicant wanted to use it for a lay down area for material. The current status of the land remains the same and is unknown with any certainty. At the time George responded to Sean with:

As noted on the phone, regarding the 20' right of way "Lane" on the westerly side of the lot at 15 Crescent St, Jon and I feel that you can allow them to use the flat/level portion of the right of way "Lane" to the right/east side of the stand of trees that are in the middle of the right of way. They should protect those trees from damage. We are continuing to look into the status of the 20' right of way.

This was offered as an attempt at a common sense approach to the situation and not as a legal opinion or endorsement. With the understanding that

- as the owners are unknown
- what was being proposed was of a temporary nature
- and the use/occupation of the land was of limited time

then maybe the applicant would not offend anyone in using the land as a laydown area. In the same spirit here, perhaps as the lane will not be occupied by a permanent, physically obvious structure once the wall is built, no one would come forward to object to the proposed wall building in the first place? And the risk would be placed back on the applicant if someone did come forward.

Currently we are not continuing to research the status of the 20 foot wide land as it will require a large bit of effort that is not currently available given current workloads and priorities.

What are everyone's thoughts?

Jon

[Quoted text hidden]

15 Crescent Street - Status Traffic Comment

Att. 8

Tom Errico <thomas.errico@tylin.com>

Mon, Nov 20, 2023 at 10:29 AM

To: Sean King <sking@portlandmaine.gov>

Cc: Jeremiah Bartlett <JBartlett@portlandmaine.gov>, Janine Ba <janineba@portlandmaine.gov>

Hi Sean – I have reviewed the application materials and have the following traffic comments.

- The parking aisle width does not meet city standards and accordingly a formal waiver request shall be provided by applicant. In support of the waiver review, the applicant shall provide vehicle turning template graphics documenting parking space accessibility.

Status: The applicant has provided the requested information and I support a waiver for the proposed parking layout.

- It appears that backing maneuvers onto Crescent Street will be required. Given that Crescent Street is low volume, low speed and is a one-way street, I find backing maneuvers to be acceptable.

Status: I have no further comment.

- The proposed driveway is located next to an area where a vehicle parks and thus driveway separation is a concern. It is my suggestion that the parking space in the city paper street boundary be eliminated via physical means (e.g., extending the wood barrier or installing landscaping).

Status: The plan has been revised and I have no further comment.

Please contact me if you have any questions.

Best regards,

Tom Errico, P.E.

NE TRAFFIC ENG. DIRECTOR

T +1 207.347.4354

M +1 207.400.0719

thomas.errico@tylin.com

TYLin

12 Northbrook Drive

Building A, Suite One

Falmouth, ME 04105, United States

TYLin.com



CITY OF PORTLAND, MAINE

PLANNING BOARD

Brandon Mazer, Chair
 Justin Barker, Vice Chair
 Marpheen Chann
 Sean Murphy
 David Silk
 Austin Smith
 Maggie Stanley

December 12, 2023

Josh Trombley
 Developers Collaborative
 631 Stevens Ave
 Portland, Maine 04103

Adrienne Fine
 Terradyn Consultants, LLC
 565 Congress Street, Suite 310
 Portland, Maine 04101

Project Name:	Major Site Plan	Project ID:	PL-002466-2023
Address:	15 Crescent Street	CBL:	053 Foo6001
Applicant:	Adrienne Fine		
Planner:	Sean King, Urban Designer		

Dear Adrienne Fine:

On December 12, 2023, the Planning Board **approved / declined** a major site plan application for a 1,508 square foot multi-family residential building in the R-6 Residential zone. The decision is based upon the application, documents and plans as submitted. The Planning Board reviewed the proposal for conformance with the standards of the Site Plan Ordinance, Ch. 14, Article 14, Section 14.6. based on the information provided to the Board in the application, plans, and reports. Through testimony and other information submitted by the applicant, the Planning Board adopted the findings, conclusions and recommendations contained in the Planning Board Report for the public hearing on December 12, 2023, which is attached hereto and incorporated herein by reference. Based upon those findings, conclusions and recommendations, the Planning Board found that the application met all relevant standards and voted **o-o** for **(Planning Board members absent)** to **approve / decline** the application with the following conditions as presented below.

Site Plan Review

On the basis of the application, plans, reports and other information submitted by the Applicant; findings and recommendations contained in the Planning Board Report for the public hearing on December 12, 2023 for application # PL-002466-2023 relevant to the site plan regulations; and the testimony presented at the Planning Board hearing, the Planning Board [**finds/does not find**] that the plan is in conformance with the site plan standards of the Land Use Code subject to the following conditions of approval:

Standard Procedures

Note: The following standard procedures and requirements apply to all approved site plans:

1. Site Plan Expiration The site plan approval will be deemed to have expired unless work has commenced within one (1) year of the approval or within a time period up to three (3) years from the approval date as agreed upon in writing by the City and the applicant. Requests to extend approvals must be received before the one (1) year expiration date.
2. Separate Building Permits Are Required This approval does not constitute approval of building plans, which must be reviewed and approved by the City of Portland's Permitting and Inspections Department.
3. Performance Guarantee and Inspection Fees A performance guarantee covering the site improvements and an inspection fee payment of 2.0% of the guarantee amount and three (3) final sets of plans must be submitted to and approved by the Planning and Urban Development Department and Public Works Department prior to the release of a building permit, street opening permit or certificate of occupancy for site plans.
4. Construction Management Plans The applicant, contractor and subcontractors are required to conform to the approved Construction Management Plan, and all conditions contained within the project's approval, for the entire duration of the project. Any amendments to the approved Construction Management Plan shall be reviewed and approved by the Department of Public Works prior to the execution. The Planning Authority and the Department of Public Works have the right to seek revisions to an approved Construction Management Plan. The applicant shall coordinate the project's construction schedule with the timing of nearby construction activities to avoid cumulative impacts on a neighborhood and prevent unsafe vehicle and pedestrian movements. Accordingly, nearby construction activities could involve a delay in the commencement of construction.
5. Preconstruction Meeting Prior to the release of a building permit and scheduling of a preconstruction meeting, a hard copy set of approved plans shall be submitted to the Development Review Coordinator. A pre-construction meeting shall be held at the project site with the contractor, Development Review Coordinator, Public Works representative, and owner to review the construction schedule and critical aspects of the site work. At that time, the Development Review Coordinator will confirm that the contractor is working from the approved site plan and the approved Construction Management Plan. The site/building contractor shall provide one (1) copy of a detailed construction schedule to the attending City representative. It shall be the contractor's responsibility to arrange a mutually agreeable time for the pre-construction meeting.
6. Department of Public Works Permits If work or obstructions will occur within the public right-of-way, such as utilities, curb, sidewalk, driveway construction, site deliveries and equipment siting, a Street Opening and/or Occupancy Permits are required for your site. Please contact the Department of Public Works Permit Clerk at (207) 874-8300, ext. 8828. (Only excavators licensed by the City of Portland are eligible.)
7. Develop Site According to Plan The site shall be developed and maintained as depicted on the

site plan and in the written submission of the applicant. Any modifications of an approved site plan or alteration of a parcel, or of any approved exterior elevations, which were the subject of site plan approval after May 20, 1974, shall require the prior approval of an amended site plan by the Planning Board or Planning Authority pursuant to the terms of Chapter 14, Land Use, of the Portland City Code.

8. Stormwater Management The owner/operator of an approved stormwater management system, and all assigns shall comply with the conditions of Chapter 32, Stormwater including Article III, Post Construction Stormwater Management, which specifies the annual inspections and reporting requirements.

A maintenance agreement for the stormwater drainage system, as attached, or in substantially the same form, shall be submitted for review by Corporation Counsel. Once approved, the document shall be signed and recorded at the Cumberland County Registry of Deeds prior to the issuance of a building permit. Final copies shall be submitted to both the Department of Planning and Urban Development and the Department of Public Works.

9. Defect Guarantee A defect guarantee, consisting of 10% of the performance guarantee, must be posted before the performance guarantee will be released.
10. As-Built Final Plans Final sets of as-built plans shall be submitted digitally to the Planning and Urban Development Department, on a CD or DVD, in AutoCAD format (.dwg), release AutoCAD 2005 or greater. Please provide one hard copy of the mylar.
11. Mylar Copies Mylar copies of the as-built drawings for the public streets and other public infrastructure in the subdivision must be submitted to Public Works prior to the issuance of a certificate of occupancy.
12. Impact Fees New development or changes of use that result in net new residential dwelling units, non- residential building square footage, or water meters, are subject to the City of Portland's impact fee ordinance (Chapter 14, Article XVII). Impact fees are calculated at the time of building permit and must be paid prior to the certificate of occupancy. For more information, visit <https://www.portlandmaine.gov/2409/Impact-Fees>

The Development Review Coordinator must be notified five (5) working days prior to the date required for final site inspection. The Development Review Coordinator can be reached at the Planning and Urban Development Department at drc@portlandmaine.gov or (207)874-8984. All site plan requirements must be completed and approved by the Development Review Coordinator prior to issuance of a Certificate of Occupancy. Please schedule any property closing with these requirements in mind.

If there are any questions, please contact Sean King at (207)874-8901 or via email at sking@portlandmaine.gov.

Sincerely,

Brandon Mazer, Planning Board Chair

Attachments:

1. Planning Board Report
2. Portland City Code: Chapter 32
3. Sample Stormwater Maintenance Agreement
4. Performance Guarantee Packet

**Pineland**

Cumberland Hall
41 Campus Drive, Suite 101
New Gloucester, ME 04260

Portland

565 Congress Street, Suite 201
Portland, ME 04101

April 12, 2023

Project #19-48

City of Portland
Planning & Urban Development
389 Congress Street
Portland, ME 04101

Major Site Plan Application
15 Crescent Street, Portland, Maine

1 DEVELOPMENT DESCRIPTION

1.1 OVERVIEW

Developers Collaborative and Crescent Heights LLC intend to construct a 3-story multi-family residence on a 4,278 square foot parcel located at 15 Crescent Street in Portland's R-6 Zone. The project site is depicted on the City of Portland's Parcel map as 53-F-6. The site is currently vacant with a mixture of raised garden beds, grass, brush and trees toward the rear of the site. The site was formerly occupied by a residential building.

1.2 EXISTING CONDITIONS

The existing site is located on Crescent Street abutting other residential buildings in Portland's R-6 zone and is vacant with the site surface primarily of grass, brush, and trees toward the rear of the site. Underground utilities in Crescent Street include water, gas, and sewer. Overhead power and telecom services are on poles located on Crescent Street.

Street Name	Description	On-street Parking	Sidewalk	Notes
Crescent Street	Approximately 27' wide paved public way. One-way traffic in one lane.	One side	Brick both sides, granite curb	

Single or multi-family residences abut the site to the west and east. A parking lot accessed from Congress Street is located to the north, and Crescent Street is located to the south. Maine Medical Center is located nearby across Wescott Street. The site has frontage on Crescent Street and former development had a driveway onto the street.

The site has an elevation change of approximately 20' from Crescent Street down to the Congress Street parking lot parcel behind. It generally slopes from south to north. The properties to the west and east have similar elevations and sloping conditions to the project site.

1.3 PROPOSED DEVELOPMENT

The development program includes the following components:

1.3.1 ON-SITE

A new three-story building with a footprint of 1,508 square feet will be constructed on the site. The first floor of the building includes 857 square feet of heated space, a mechanical and electrical room, and three covered parking spaces below the second floor. Two additional parking spaces are located on the site for a total of five parking spaces. Access to the parking lot will be from a driveway created on Crescent Street.

The multi-unit building will have one street facing entrance from the Crescent Street sidewalk, as well as a lower entrance to the basement and individual entrances from the parking area to the mechanical and electrical rooms. Each unit will have a privately accessed deck off the back of the building. A walkway and exterior stair will provide access to the basement level and the rear yard area.

1.4.2 OFF-SITE IMPROVEMENTS

The Crescent Street sidewalk along the parcel frontage will be reconstructed, including a driveway apron and two street trees. Pavement repair in Crescent Street will also be necessary to install new utilities.

1.5 TRAFFIC

The minimal amount of traffic that will be generated by the project is not expected to have a significant effect on the surrounding street network.

1.6 PARKING

1 Space/dwelling unit is required for the R-6 Zone, with the first 3 units exempt. The project includes 5 parking spaces (1 space/dwelling unit). Accessed by the proposed driveway from Crescent Street.

1.7 UTILITIES AND STORMWATER

The proposed project will include the installation of new utility services to the proposed building. All new utility services will be provided from the existing utilities available within Crescent Street. The proposed locations of the new utility services are shown on the Utility Plan (Sheet C-6.0).

Post-development stormwater runoff will closely follow existing runoff patterns. Runoff from the paved parking and the proposed building roof will be treated and directed to an underground stormwater storage system that will infiltrate into the ground with an overflow connected to the City's combined storm drain/sewer in Crescent Street.

1.8 ATTACHMENTS

Attachment 1-A – Building Elevation Views & Renderings

ATTACHMENT 1-A

Building Elevation Views & Perspective Renderings

RESIDENCES

15 CRESCENT STREET
PORTLAND, MAINE

PROGRESS DRAWINGS

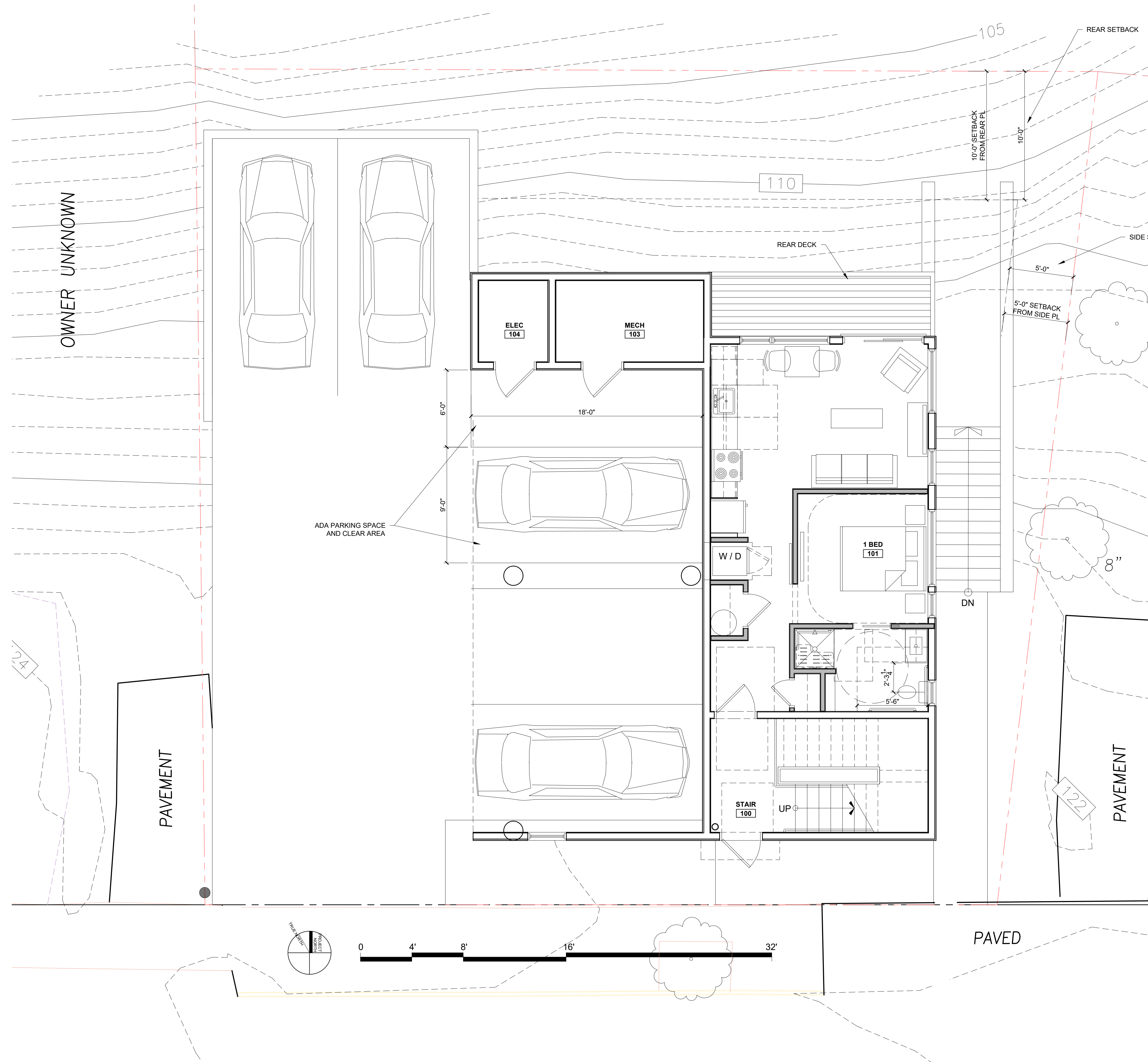
04/12/23

DRAWING LIST	
SHEET NUMBER	
G0-0	TITLE SHEET
<u>ARCHITECTURAL</u>	
A1-1	FIRST FLOOR PLAN
A1-2	SECOND FLOOR PLAN
A1-3	THIRD FLOOR PLAN
A2-0	ELEVATIONS
A2-1	PERSPECTIVE VIEWS
A3-0	BUILDING SECTION

ARCHITECT

RYAN SENATORE **ARCHITECTURE**

565 CONGRESS STREET, SUITE 304, PORTLAND, MAINE 04101
207-650-6414



1 FIRST FLOOR PLAN
1/4" = 1'-0"

© 2020 RYAN SENATORE
ARCHITECTURE

RESIDENCES
15 CRESCENT STREET
PORTLAND, MAINE

RSA
RYAN SENATORE
ARCHITECTURE
500 CONGRESS STREET
PORTLAND, MAINE 04101
207-650-6414
senatorearchitecture.com

CONSULTANTS:

REVISIONS:
PROGRESS PRINT ONLY
Not for Construction
04/12/23

DATE:

PROJECT No. 1973

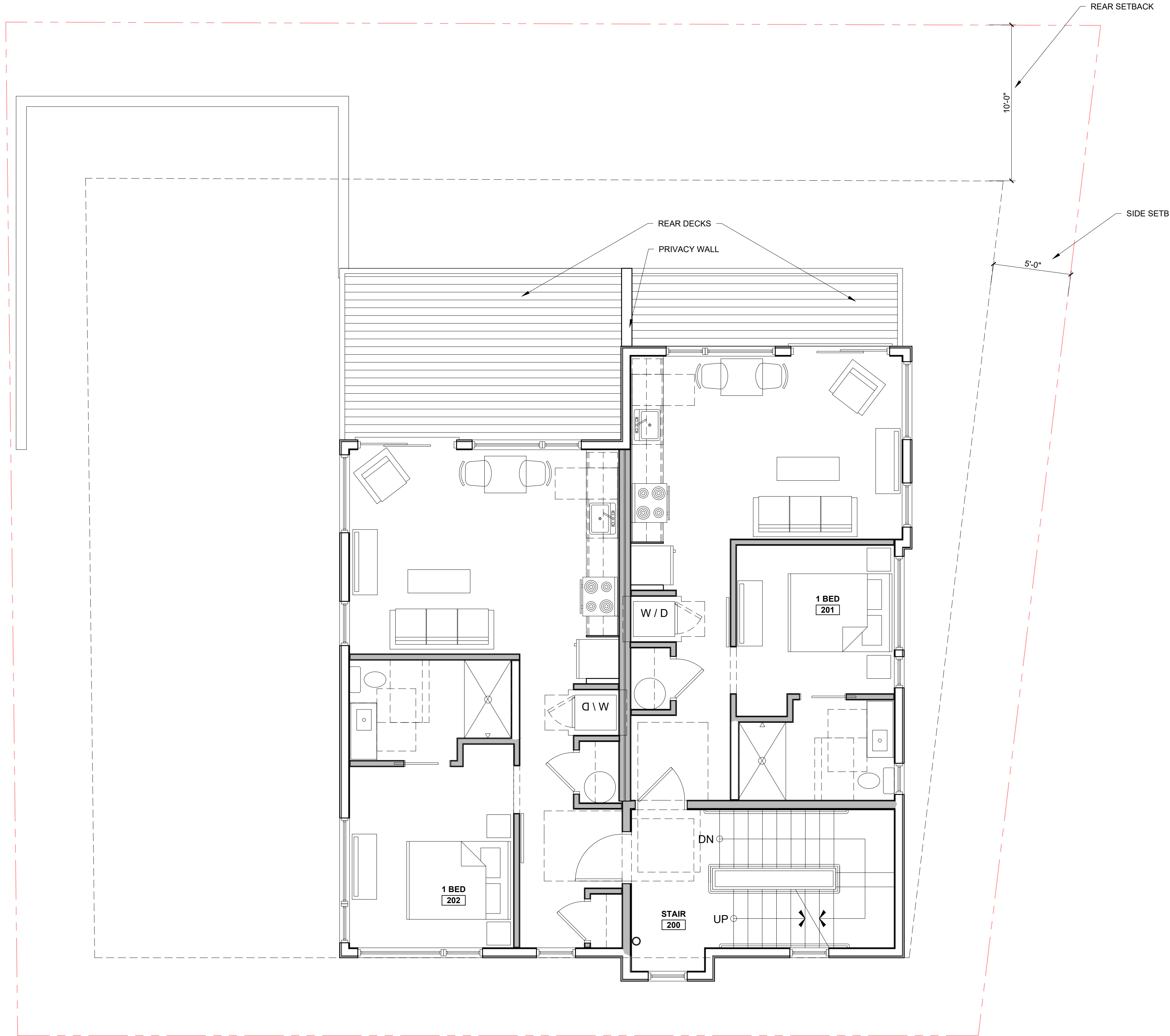
DRAWN BY: RJS, ES

CHECKED BY: RJS

SCALE: AS NOTED

SHEET TITLE:
FIRST FLOOR
PLAN

A1-1



1 SECOND FLOOR PLAN
1/4" = 1'-0"

© 2020 RYAN SENATORE
ARCHITECTURE

RESIDENCES
15 CRESCENT STREET
PORTLAND, MAINE

RSA
RYAN SENATORE
ARCHITECTURE
500 CONGRESS STREET
PORTLAND, MAINE 04101
207-650-6414
senatorearchitecture.com

CONSULTANTS:

REVISIONS:
PROGRESS PRINT ONLY
Not for Construction
04/12/23

DATE:

PROJECT No. 1973

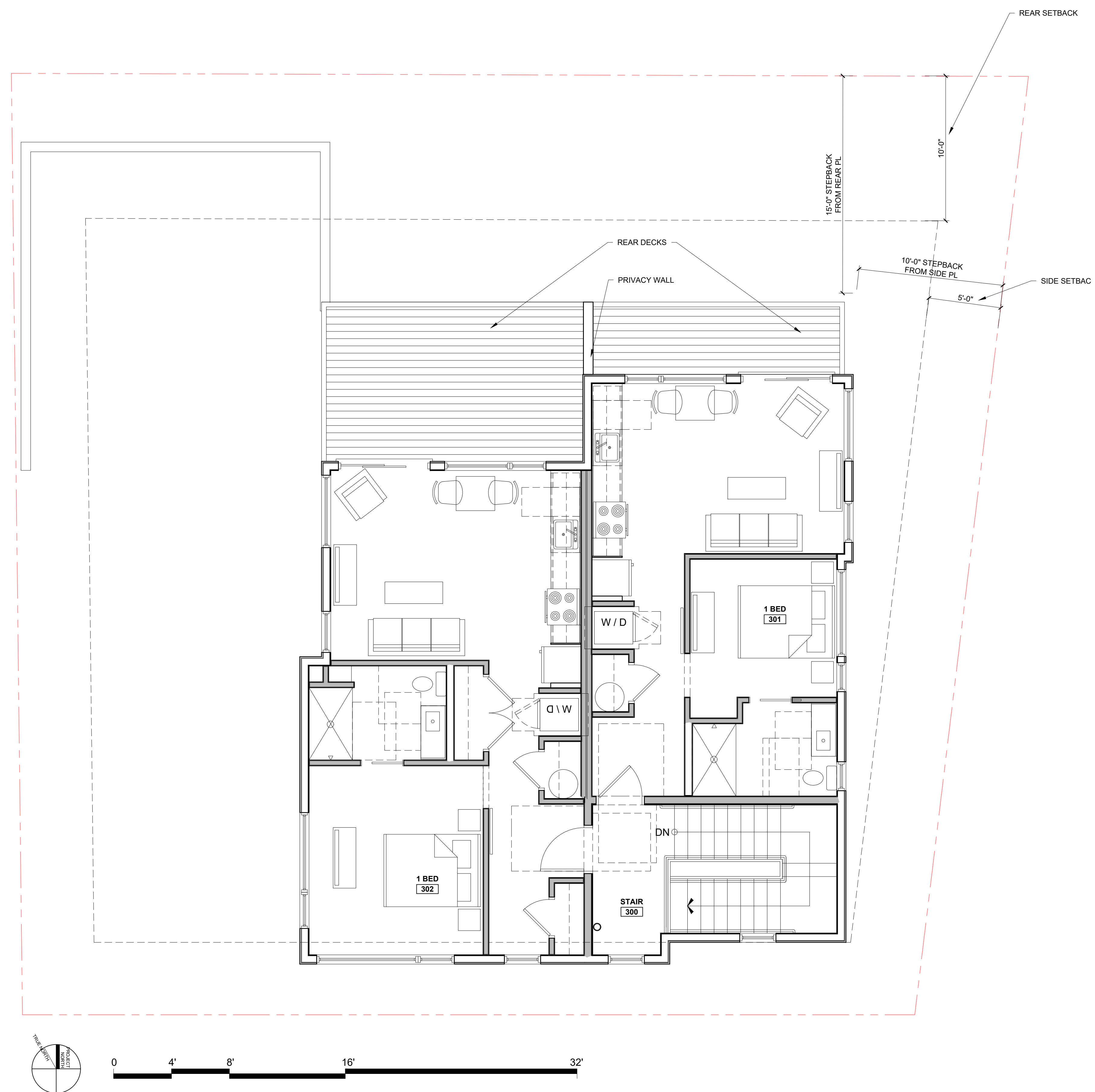
DRAWN BY: RJS, ES

CHECKED BY: RJS

SCALE: AS NOTED

SHEET TITLE:
SECOND FLOOR
PLAN

A1-2



1 THIRD FLOOR PLAN
1/8" = 1'-0"

© 2020 RYAN SENATORE
ARCHITECTURE

RESIDENCES
15 CRESCENT STREET
PORTLAND, MAINE

RSA
RYAN SENATORE
ARCHITECTURE
500 CONGRESS STREET
PORTLAND, MAINE 04101
207-650-6414
senatorearchitecture.com

CONSULTANTS:

REVISIONS:
PROGRESS PRINT ONLY
Not for Construction
04/12/23

DATE:

PROJECT No. 1973

DRAWN BY: RJS, ES

CHECKED BY: RJS

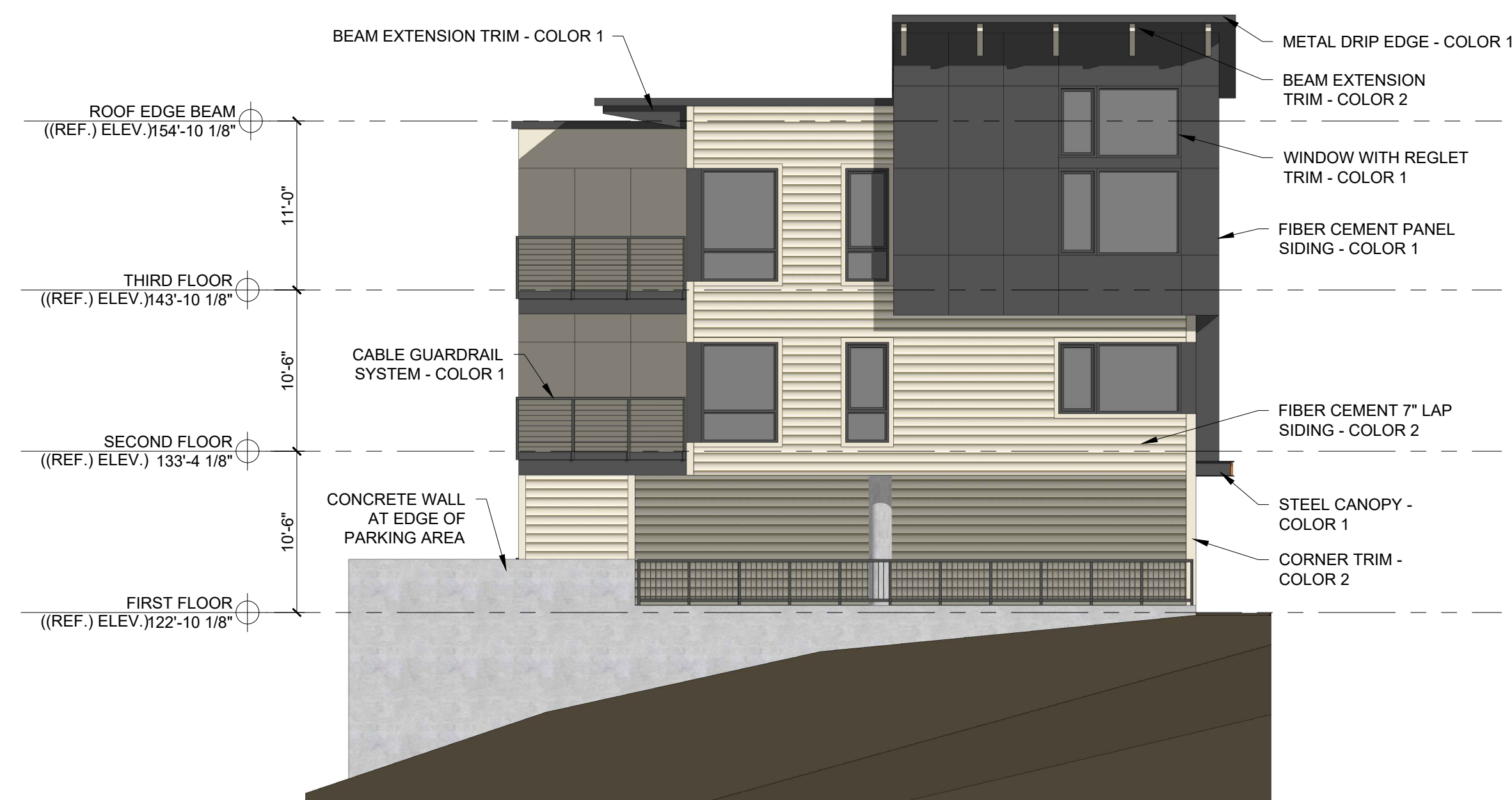
SCALE: AS NOTED

SHEET TITLE:
THIRD FLOOR
PLAN

A1-3



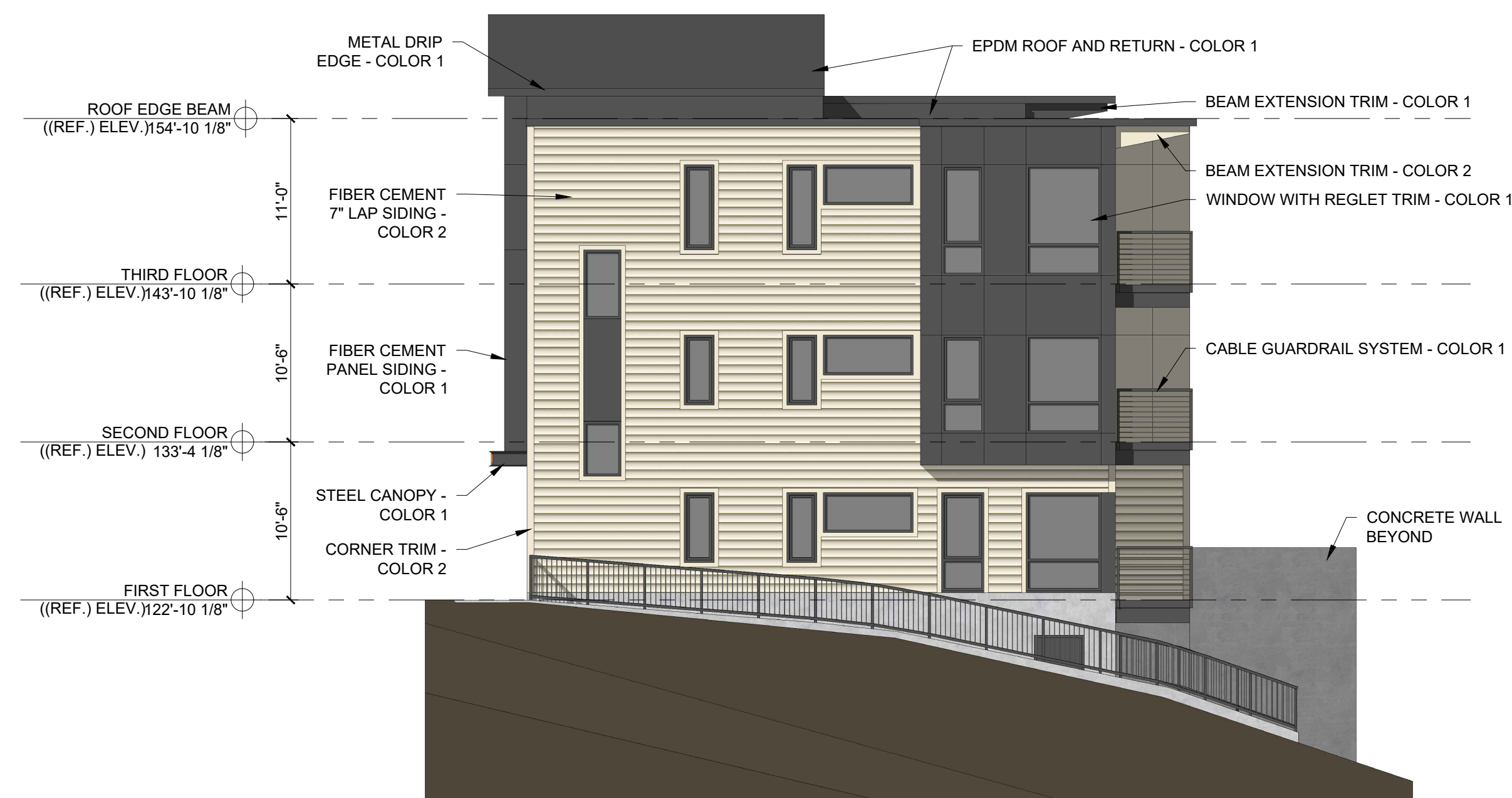
1 SOUTH ELEVATION (CRESCENT STREET FRONTAGE)
1/8" = 1'-0"



1 WEST ELEVATION
1/8" = 1'-0"



1 NORTH ELEVATION (CRESCENT STREET FRONTAGE)
1/8" = 1'-0"



1 EAST ELEVATION
1/8" = 1'-0"



1 SOUTHEAST QUARTER VIEW



2 SOUTHWEST QUARTER VIEW

© 2020 RYAN SENATORE
ARCHITECTURE

RESIDENCES
15 CRESCENT STREET
PORTLAND, MAINE

RSA
RYAN SENATORE
ARCHITECTURE
500 CONGRESS STREET
PORTLAND, MAINE 04101
207-650-6414
senatorearchitecture.com

CONSULTANTS:

REVISIONS:
PROGRESS PRINT ONLY
Not for Construction
04/12/23

DATE:

PROJECT No. 1973

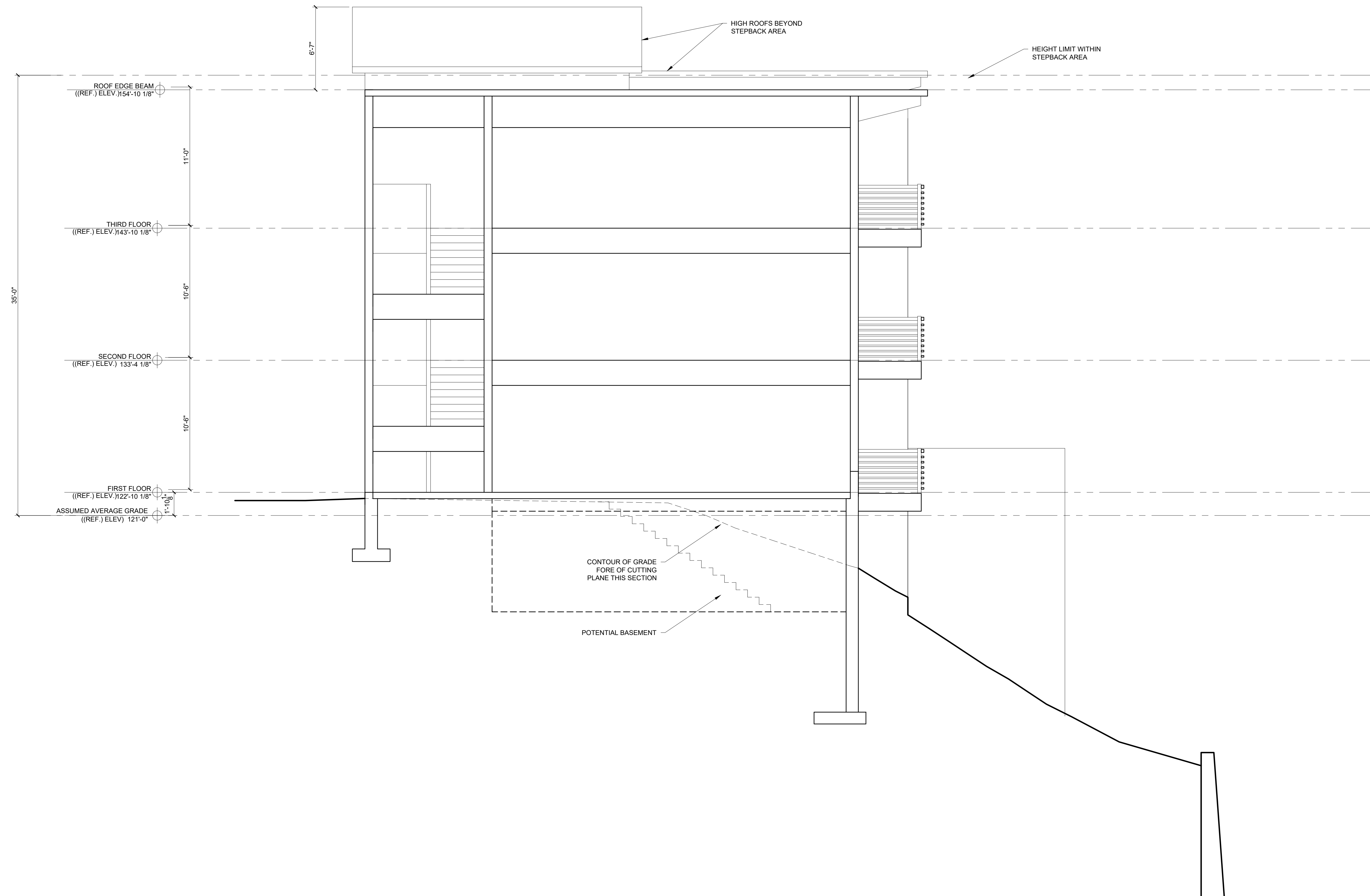
DRAWN BY: RJS, ES

CHECKED BY: RJS

SCALE: AS NOTED

SHEET TITLE:
PERSPECTIVE
VIEWS

A2-1



1 BUILDING SECTION
1/4" = 1'-0"

© 2020 RYAN SENATORE
ARCHITECTURE

RESIDENCES
15 CRESCENT STREET
PORTLAND, MAINE

RSA
RYAN SENATORE
ARCHITECTURE
500 CONGRESS STREET
PORTLAND, MAINE 04101
207-650-6414
senatorearchitecture.com

CONSULTANTS:

REVISIONS:
PROGRESS PRINT ONLY
Not for Construction
04/12/23

DATE:

PROJECT No. 1973

DRAWN BY: RJS, ES

CHECKED BY: RJS

SCALE: AS NOTED

SHEET TITLE:
BUILDING
SECTION

A3-0

2 RIGHT, TITLE and INTEREST

2.1 OVERVIEW

The applicant and owner is Crescent Heights LLC by deed recorded in the Cumberland County Registry of Deeds in book 26288 page 49. A copy of the property deed is attached in attachment 2-A.

2.2 ATTACHMENTS

Attachment 2-A – Property Deed

ATTACHMENT 2-A

Title, Right, or Interest Documentation

QUITCLAIM DEED
(Statutory Short Form)

KNOW ALL BY THESE PRESENTS, MAINE MEDICAL CENTER, a Maine nonprofit corporation with a place of business in Portland, Maine, having a mailing address of 22 Bramhall Street, Portland, Maine 04102, for full value and consideration paid, hereby grants to CRESCENT HEIGHTS LLC, a Maine limited liability company with a place of business in Portland, Maine, and mailing address of c/o Developers Collaborative, 17 Chestnut Street, Portland, Maine 04101, with QUITCLAIM COVENANTS, certain lots or parcels of land with any buildings or improvements thereon situated at 15 Crescent Street, 25 Crescent Street, 29 Crescent Street, 856 Congress Street, 862 Congress Street and 866 Congress Street (part) all in the City of Portland, County of Cumberland, Maine, as more particularly bounded and described in Exhibit A attached hereto.

IN WITNESS WHEREOF, JOHN E. HEYLE, in his/her capacity as TREASURER of MAINE MEDICAL CENTER, has hereunto set his/her hand this 18th day of August, 2008.

WITNESS:

MAINE MEDICAL CENTER

Joy Hauman

By John E. Heyle
Name: John E. Heyle
Title: Treasurer

STATE OF MAINE
COUNTY OF CUMBERLAND

August 18, 2008

Then personally appeared before me the above-named John E. Heyle in his said capacity and acknowledged the foregoing instrument to be his free act and deed and the free act and deed of MAINE MEDICAL CENTER.

Ronna Joyce McGrew
Notary Public/Attorney-at-Law
Print Name: RONNA JOYCE MCGREW
My Commission Expires: SEPTEMBER 13, 2012

SEAL

Exhibit A

A certain lot or parcel of land with the buildings thereon situated on the northerly side of Crescent Street ("Crescent" in original) in the City of Portland, County of Cumberland and State of Maine, and being described as follows:

Beginning on the northerly side of Crescent Street, formerly "O" Street, at the westerly corner of land conveyed by Edward E. Proctor to J.L. Spear by deed dated May 4, 1888 and recorded in the Cumberland County Registry of Deeds in Book 547, Page 6; thence by said northerly side of Crescent Street, westerly sixty one and sixteen hundredths (61.16) feet to a point; thence northerly along the westerly boundary line of the lot of land conveyed to Edwin G. Foster by Charles P. Garland by warranty deed dated July 18, 1889 and recorded in said Registry of Deeds in Book 561, Page 224, sixty five (65) feet, more or less, to the northwesterly corner of said lot conveyed to said Foster by said Garland; thence easterly seventy and four tenths (70.4) feet along the northerly boundary line of said lot conveyed to said Foster by said Garland and along the southerly boundary line of the lot of land conveyed by said Foster to Charles P. Garland by warranty deed dated July 18, 1889 and recorded in said Registry of Deeds in Book 561, Page 185, to the southeasterly corner of said lot conveyed by said Foster to said Garland; thence southerly sixty five and forty eight hundredths (65.48) feet, more or less, along the westerly boundary line of said lot conveyed by Edward E. Proctor to J.L. Spear to the point of beginning.

Also, another certain lot or parcel of land with the buildings thereon situated on the northerly side of Crescent Street in the City of Portland, County of Cumberland and State of Maine, bounded and described as follows:

Beginning at a point on the northerly sideline of Crescent Street, said point being distant 111.6 feet westerly from the angle in the sideline of said Crescent Street, said point also being the southeasterly corner of other land of Maine Medical Center identified and described as 33 Crescent Street in deed from Gordon D. Simonds, Trustee of the R.G. Simonds Trust dated September 4, 2002 and recorded in the Cumberland County Registry of Deeds in Book 18032, Page 68; thence N 25° 52' 17" W along other land of Maine Medical Center 59.85 feet; thence N 64° 13' 19" E along other land of Maine Medical Center 45.27 feet; thence N 28° 22' 57" W across other land of Maine Medical Center a distance of 47.22 feet to the southerly sideline of Congress Street; thence N 63° 05' 28" E along the southerly sideline of said Congress Street 81.61 feet to an angle point in said Congress Street; thence N 85° 30' 24" E along the southerly sideline of said Congress Street 60.86 feet to land now or formerly of MH Realty, LLC described in Cumberland County Registry of Deeds Book 21636, Page 84; thence S 00° 35' 22" E along said land of MH Realty, LLC 57.00 feet to land now or formerly of J. Freeman Porter described in Cumberland County Registry of Deeds Book 9730, Page 198; thence N 88° 20' 33" W along said land of J. Freeman Porter 42.42 feet to the northwesterly corner thereof; thence S 19° 19' 28" E along said land of J. Freeman Porter 54.87 feet to the northerly sideline of Crescent Street; thence S 64° 27' 00" W along the northerly sideline of Crescent Street 42.70 feet; thence S 64° 10' 31" W along the northerly sideline of Crescent Street 70.37 feet to the point of beginning, containing 13,534 square feet.

Being all of the same premises conveyed to Maine Medical Center by Robert J. Munson et al by deed dated June 13, 2005 and recorded in said Registry of Deeds in Book 22762, Page 45, a portion of the premises conveyed to Maine Medical Center by Gordon D. Simonds, Trustee by deed dated September 4, 2002 and recorded in said Registry of deeds in Book 18032, Page 68, and a portion of the premises conveyed to Maine Medical Center by Hay Block LLC by deed dated July 7, 2003 and recorded in said Registry of Deeds in Book 19986, Page 204.

Excepting and reserving to Maine Medical Center, its successors and assigns, an easement within and under the above described premises in order to maintain an underground anchor system that supports a retaining wall constructed upon other land of Maine Medical Center abutting the northerly side of the above described premises. Maine Medical Center, for itself and its successors and assigns, understands and agrees that Grantee, its successors and assigns, may construct, maintain, repair and replace a building over the easement area. The reserved easement shall include the right in Maine Medical Center, its successors and assigns, to enter upon the above described premises from time to time in order to repair and/or replace all or any portion of the underground anchor system, provided that Maine Medical Center, its successors and assigns, immediately after each such entry shall restore the surface of the land to the condition prevailing just prior to such entry and shall repair any damage caused by such entry to any buildings and improvements constructed upon the above described premises.

O:\MAS\05180 Berman\Maine Med\Transfer documents\QC Deed (MMC to Crescent Heights)_FINAL.DOC

Received
Recorded Register of Deeds
Aug 21, 2008 09:22:22A
Cumberland County
Pamela E. Lovley

3 STATE AND FEDERAL PERMITS

The development is subject to Major Site Plan approval by the City of Portland and Building Permit(s) are also required. The project is also subject to a City Reviewed DEP Stormwater Permit. No additional State or Federal Permits are required.

4 LAND ORDINANCE REVIEW

4.1 OVERVIEW

The property currently lies within the City of Portland R-6 Zone. The following Space and Bulk requirements apply to the R-6 Zone:

R-6 Zone Summary Dimensional and Parking Requirements Applied to 15 Crescent Street		
Zoning Requirements	R-6	Provided
Minimum Lot Size	2,000 sf	4,278 sf
Minimum Street Frontage	20 ft	61.6 ft
Front Yard	5 ft, or avg.	5.5 ft
Minimum Side Yard	5 ft	5 ft
Minimum Rear Yard	10 ft	15 ft
Maximum Lot Coverage	60%	37.3%
Maximum Structure Height	45 ft	40.65 ft
Step Back	15 ft rear, 10 ft side	15 ft rear, 10 ft side
Parking	2 spaces	5 spaces

4.2 SHORELAND ZONING

The site is not located within the Shoreland Zoning District.

5 EASEMENTS OR OTHER BURDENS

5.1 OVERVIEW

Owen Haskell, Inc. completed a boundary and topographic survey of the site in June of 2008. No easements are identified on the survey.

6 NATURAL FEATURES

6.1 OVERVIEW

The development site is currently vacant and does not contain any significant natural features including wetlands, vernal pools or other protected resources or wildlife habitats.

7 STORMWATER MANAGEMENT

The following information is provided in accordance with the City of Portland Code of Ordinances Chapter 14 Land Use, Section 14.6.2.D.

7.1 OVERVIEW

The existing project site is vacant, and has a surface primarily of lawn and meadow with trees toward the rear of the site. The site slopes from a high point along Crescent Street to the northern property line. Stormwater runoff from the project site primarily drains overland across the northern property boundary onto abutting property to the north that contains a parking lot. Stormwater runoff also drains overland across the southern property boundary into Crescent Street and towards the City's storm drain network.

Post development stormwater runoff will generally follow existing patterns. Stormwater runoff from the proposed building and parking area will be captured, treated, and stored in an underground stormwater storage system. Stormwater will infiltrate from the stormwater storage chambers into fill material beneath the constructed parking area, but the system will also have an overflow connecting to the City's combined storm drain system in Crescent Street. No stormwater is expected to enter the City's storm drain system in the 2-yr, 10-yr, or 25-yr storm.

Development of the project site will result in approximately 3,217 square feet of new impervious area and is considered a Major site plan. Section 5-2-C.2. requires Major site plans to provide a Stormwater Management Plan that meets the requirements of Maine DEP Chapter 500 Stormwater Management Rules including the general and flooding standards in addition to the basic erosion and sedimentation control standards required for all development.

A Stormwater Management Plan is included in attachment 7-A. An erosion and sedimentation control plan is included directly on the plan set, along with Housekeeping documentation.

The project is not expected to cause ponding, flooding, or erosion problems on or downstream of the site. The relatively small amount of runoff entering the city's storm drain network is not expected to overburden the system.

7.2 ATTACHMENTS

Attachment 7-A – Stormwater Management Plan

ATTACHMENT 7-A

Stormwater Management Plan



Pineland

Cumberland Hall
41 Campus Drive, Suite 301
New Gloucester, ME 04260

Portland

565 Congress Street, Suite 201
Portland, ME 04101

CRESCENT STREET RESIDENCES
15 CRESCENT STREET, PORTLAND, MAINE

STORMWATER MANAGEMENT REPORT

PREPARED FOR:

DEVELOPERS COLLABORATIVE
631 STEVENS AVE
PORTLAND, MAINE 04103

PREPARED BY:

TERRADYN CONSULTANTS LLC
565 CONGRESS STREET, SUITE 201
PORTLAND, MAINE 04101

APRIL 2023

Introduction

The following Stormwater Management Plan has been prepared for the Crescent Street Residences development located at 15 Crescent Street in Portland's West End to evaluate stormwater runoff and erosion control for the proposed 3-story apartment building.

Site Calculations

Below is a summary of existing and proposed impervious and developed areas on the project site.

Total Property Area	4,278 SF (0.10 Ac)
Existing Impervious Area	0 SF
Existing Developed Area	0 SF
Proposed Impervious Area	3,217 SF
Proposed Developed Area	3,338 SF

Existing Conditions

The project site is 4,278 SF in size and is depicted on the City of Portland Tax Map 53 Block F Lot 6 and is located in the R6 zoning district. The property currently contains lawn area, raised garden beds, fence, and trees. It previously contained a house and driveway but the City of Portland is considering the "pre-development existing condition" as the current vegetated state. Water, gas and sewer services for the site are located in Crescent Street. Overhead power and telecommunication utilities are located on Crescent Street.

The site slopes to the north towards Congress Street from Crescent Street. A relatively flat area is located along the Crescent Street ROW. The slope from the flat area down towards Congress Street is steep at approximately 50% slope.

Soils on the project site are mapped as Hinckley loamy sand (HSG A) by the NRCS web soil survey in March 2023. Test pits were completed by Summit Geoengineering Services in September 2022 and found that the site generally consists of sandy fill in the top approximately 8' of the soils on site, and glacial till below that. Groundwater was encountered at 15'-20' below grade. We worked with Summit Geoengineering to ensure the existing conditions could support our stormwater management design.

The following existing conditions figures are provided in Appendix 1:

Figure 1	USGS Topographic Map
Figure 2	Aerial Photograph
Figure 3	Federal Insurance Rate Map
Figure 4	Soils Map

Proposed Project

The proposed project includes construction of a 3-story building and paved parking. The building includes 5 residential units and a basement storage area. The first floor includes one residential unit, mechanical and electrical rooms, the entry and stairwell, and covered parking for three vehicles. A driveway and two additional parking spaces are located on site west of the building. The second and third floors each contain two residential units.

The building will be served by water and sewer services from Crescent Street. An overflow storm drain will also connect to the Crescent Street combined sewer, however, the on-site stormwater systems are designed for infiltration so minimal stormwater is expected to enter the system.

Applicable Design Standards

The City of Portland Technical Manual Section 5 requires a Stormwater Management Plan for all major site plan applications. This project is required to meet the Basic, General and Flooding Standards of the MDEP Chapter 500 Rules for Stormwater Management.

Stormwater Quantity Control

Stormwater Quantity control is required as part of City and MDEP requirements for this project; the proposed development has been designed to minimize stormwater runoff from the site in excess of the natural pre-development conditions. A hydrologic analysis of pre-development and post-development conditions was conducted based upon the methodology contained in the USDA Soil Conservation Service's Technical Releases No. 20 and 55 (SCS TR-20 and TR-55). For Cumberland County, Maine a 24-hour SCS Type III Storm distribution was used for the analysis using the following storm frequencies and rainfall amounts, per Maine DEP Chapter 500:

Storm Event	24-Hour Rainfall
2-Year Storm	3.1 inches
10-Year Storm	4.6 inches
25-Year Storm	5.8 inches

Runoff curve numbers, time of concentration, and travel time data were established based on methods outlined in the USDA TR-55 manual.

A minimum time of concentration of 5 minutes and a maximum sheet flow distance of 150 linear feet was used in the models.

Pre-Development Conditions

The pre-development HydroCAD model includes two (2) subcatchments and three (3) study points. Stormwater runoff from the site flows primarily away from Crescent Street downhill towards Congress Street with a small portion of stormwater runoff flowing towards Crescent Street. Below is a summary of the study points:

Study Point SP1 – Located at the northern border of site where runoff crosses the property line and flows onto abutting property to the north.

Study Point SP2 – located at the southern border of the site where runoff enters the Crescent Street ROW.

Study Point SP3 – within the City's combined SD/sewer in Crescent Street – no existing stormwater flows are piped directly into this City pipe.

A Pre-Development Watershed Map, showing sub-watershed boundaries, time of concentration flow paths, and Study Points is provided in Appendix 2. The Pre-development HydroCAD model is attached in Appendix 4.

Existing condition peak rates of runoff at the Study Points are as follows:

Pre-Development Peak Rates of Runoff (cfs)			
	2-Year	10-Year	25-Year
SP1	0	0	0
SP2	0	0	0
SP3	0	0	0

The pre-development peak rates of runoff are a baseline used for comparison to the post-development condition.

Post-Development Conditions

The proposed post-development HydroCAD model includes four (4) subcatchments and three (3) study points. The study points remain the same from the pre-development model. A Post-development Watershed Map showing sub-watershed boundaries, time of concentration flow paths, and Study Points is provided in Appendix 2. The Post-development HydroCAD model is attached in Appendix 5.

Post-development peak rates of runoff at the Study Points are as follows:

Post-Development Peak Rates of Runoff (cfs)			
	2-Year	10-Year	25-Year
SP1	0	0	0
SP2	0	0	0
SP3	0	0	0

Peak Flow Analysis

The results of the pre-development and post-development models were analyzed at the defined Study Points described above. The direct comparison of the pre-development and post-development conditions at the Study Points are as follows:

Peak Runoff Flow Rates Comparison		
Storm Event	Pre-Development (cfs)	Post-Development (cfs)
Study Point SP1		
2-Year	0	0
10-Year	0	0
25-Year	0	0
Study Point SP2		
2-Year	0	0
10-Year	0	0
25-Year	0	0
Study Point SP3		
2-Year	0	0
10-Year	0	0
25-Year	0	0

The peak rates of runoff at study points 1, 2 & 3 are expected to remain the same in the 2, 10 & 25-year storm events due to the infiltration of stormwater runoff from the roof and parking area through the stormwater management system.

Stormwater Quality Control

Stormwater treatment is provided for the roof and parking surface runoff through the r-tank infiltration system. An R-tank stormwater management system is proposed to be located beneath the parking area to provide both quality and quantity control. The R-tank system is designed with a treatment row and the system will infiltrate stormwater from the 2-, 10-, and 25-year storm events into 5' of granular borrow fill then into the native subgrade so stormwater treatment is provided with this system. The roof drain will connect directly to the R-tank system so all treatment for the roof runoff is through infiltration. The parking area will drain to a catch basin with trash guard to provide pre-treatment.

Sizing for the R-tank system was completed in HydroCAD and specific details will be provided by Ferguson to be attached to the project plan set. The model report including R-Tank sizing calculations is include in Attachment 7.

Treatment Calculations			
	Treated Area (SF)	Total Area (SF)	%
Parking	1,242	1,242	
Roof	1,592	1,592	
Walkway	0	264	
Exterior Stair	0	119	
Landscaped	0	121	
Total Developed	2,834	3,338	85%
Total Impervious	2,834	3,217	88%

Although we are providing stormwater treatment for the entire roof and paved driveway, there are some developed areas that are not practical to capture stormwater from. The proposed 5.5' long brick entrance walkway and landscaping on either side in front of the building drain directly to the Crescent Street ROW with no opportunity for capturing and treating stormwater. The concrete walkway and exterior stairs on the eastern side of the building drain north overland into the meadow and wooded area of the site. It is not practical to capture stormwater runoff from this surface and the adjacent landscaped area because the elevation is lower than the stormwater system. The pollutants from these uncaptured walkway and landscaped areas are expected to be less impactful than those from the paved parking and roof that we are capturing, so we are requesting that the proposed treatment percentage of 88% of the impervious area (less than the 95% required per MDEP) be allowed for this site.

Summary

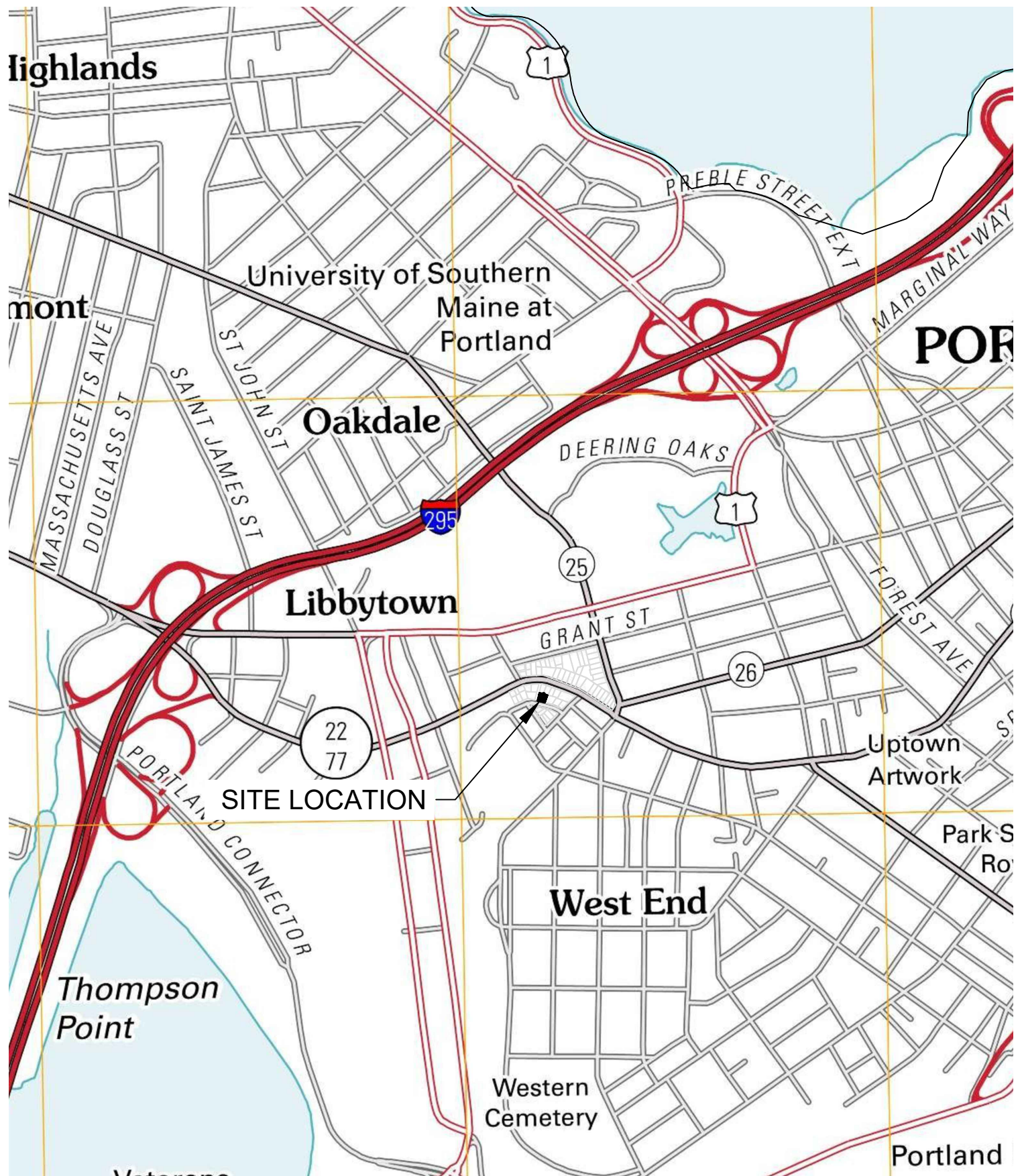
Based upon the results of this evaluation, the proposed project is not expected to cause flooding, erosion, or other significant adverse effects downstream of the site.

Appendices

- 1 – Existing Conditions Figures
- 2 – Watershed Maps
- 3 – Inspection & Maintenance Manual
- 4 – Pre-Development HydroCAD Model
- 5 – Post-Development HydroCAD Model

APPENDIX 1

EXISTING CONDITIONS FIGURES



USGS QUADRANGLE MAP

PROJECT:
CRESCENT STREET RESIDENCES
15 CRESCENT STREET, PORTLAND, MAINE

PREPARED FOR:
DEVELOPERS COLLABORATIVE.
100 COMMERCIAL STREET, SUITE 414
PORTLAND, MAINE 04101



207.926.5111 • info@terradyndynconsultants.com • www.terradyndynconsultants.com

PINELAND
41 CAMPUS DRIVE, SUITE 301
NEW GLOUCESTER, ME 04260

PORTLAND
565 CONGRESS STREET, SUITE 201
PORTLAND, ME 04101

PROJECT NO.

1948

DATE

04/04/2023

SCALE

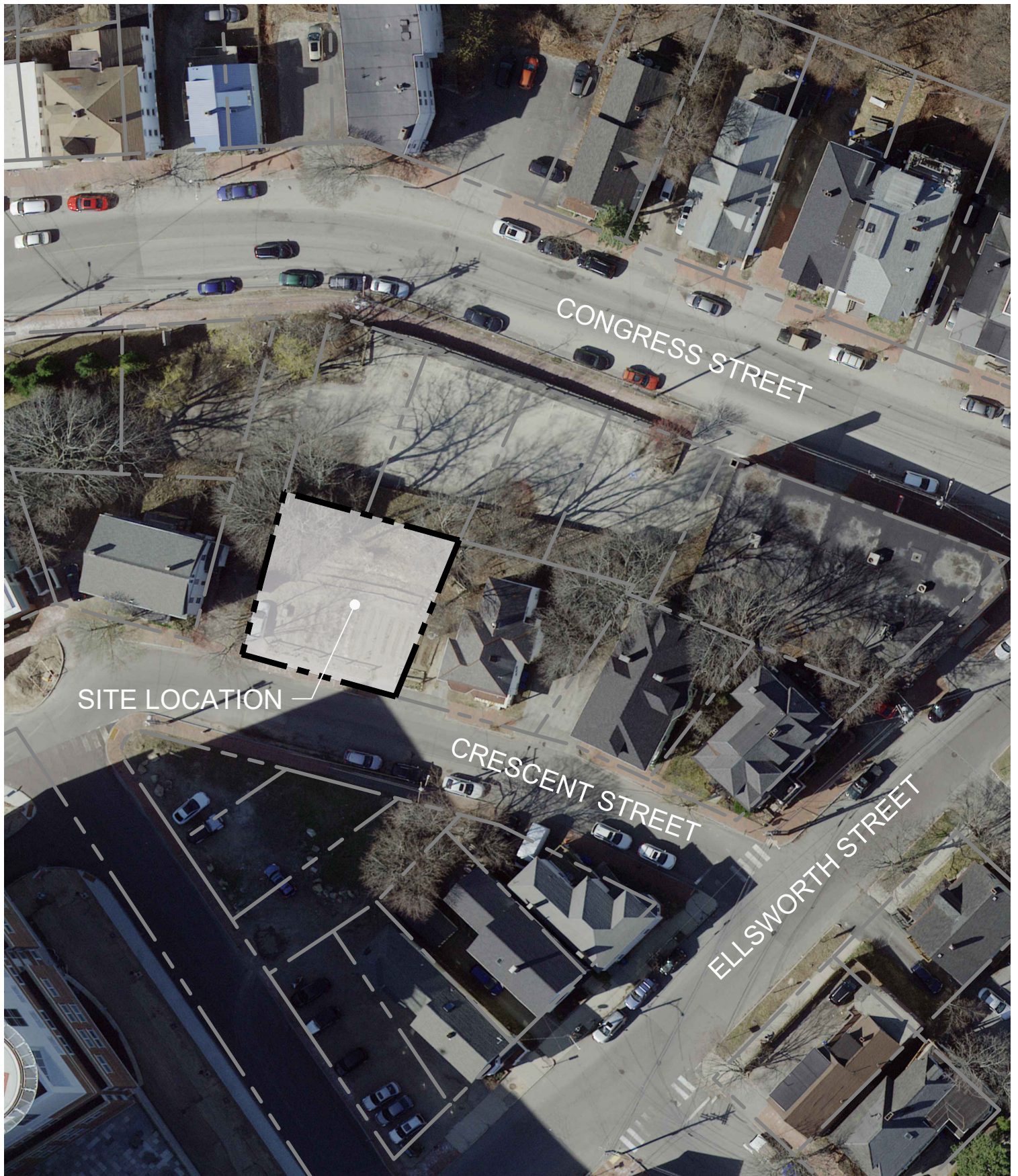
1"=1,000'

SHEET

1

OF

1



AERIAL PHOTOGRAPH

PROJECT:
 CRESCENT STREET RESIDENCES
 15 CRESCENT STREET, PORTLAND, MAINE
 PREPARED FOR:
 DEVELOPERS COLLABORATIVE.
 100 COMMERCIAL STREET, SUITE 414
 PORTLAND, MAINE 04101



207.926.5111 • info@terradynconsultants.com • www.terradynconsultants.com

PINELAND
 41 CAMPUS DRIVE, SUITE 301
 NEW GLOUCESTER, ME 04260

PORTLAND
 565 CONGRESS STREET, SUITE 201
 PORTLAND, ME 04101

PROJECT NO.

1948

DATE

04/04/2023

SCALE

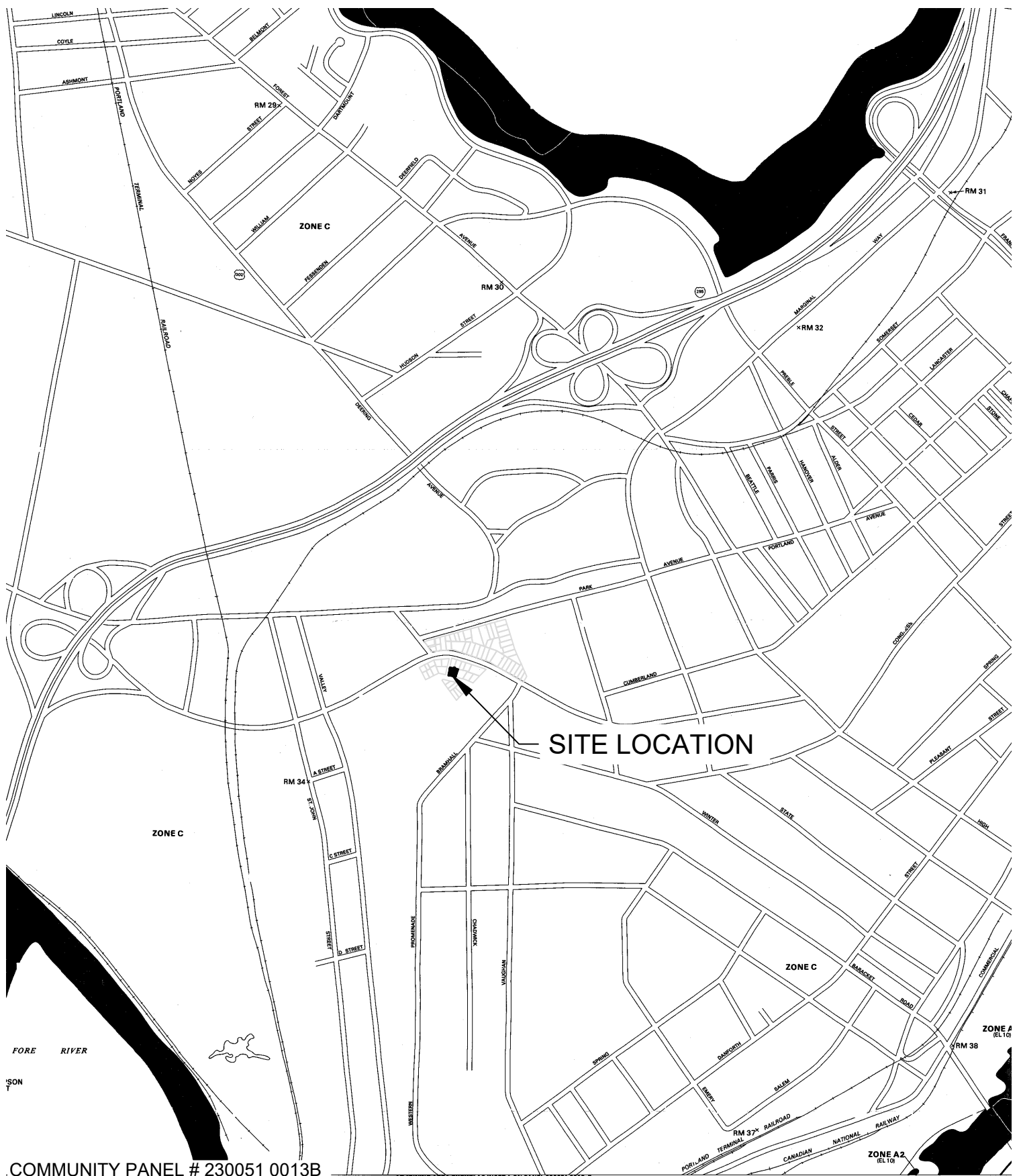
1"=50'

SHEET

1

OF

1



COMMUNITY PANEL # 230051 0013B

ADJOINING AREA SHOWN AS INSET A ON PANEL 230051 0016 B

FEDERAL INSURANCE RATE MAP

PROJECT:
CRESCENT STREET RESIDENCES
15 CRESCENT STREET, PORTLAND, MAINE
PREPARED FOR:
DEVELOPERS COLLABORATIVE
100 COMMERCIAL STREET, SUITE 414
PORTLAND, MAINE 04101



207.926.5111 • info@terradyconsultants.com • www.terradyconsultants.com

PINELAND
41 CAMPUS DRIVE, SUITE 301
NEW GLOUCESTER, ME 04260

PORTLAND
565 CONGRESS STREET, SUITE 201
PORTLAND, ME 04101

PROJECT NO.

1948

DATE

04/04/2023

SCALE

1"=1,000'

SHEET

1

OF

1



SOILS MAP

PROJECT:
CRESCENT STREET RESIDENCES
15 CRESCENT STREET, PORTLAND, MAINE

PREPARED FOR:
DEVELOPERS COLLABORATIVE.
100 COMMERCIAL STREET, SUITE 414
PORTLAND, MAINE 04101



207.926.5111 • info@terradyconsultants.com • www.terradyconsultants.com

PINELAND

41 CAMPUS DRIVE, SUITE 301
NEW GLOUCESTER, ME 04260

PORTLAND

565 CONGRESS STREET, SUITE 201
PORTLAND, ME 04101

PROJECT NO.

1948

DATE

04/04/2023

SCALE

1"=50'

SHEET

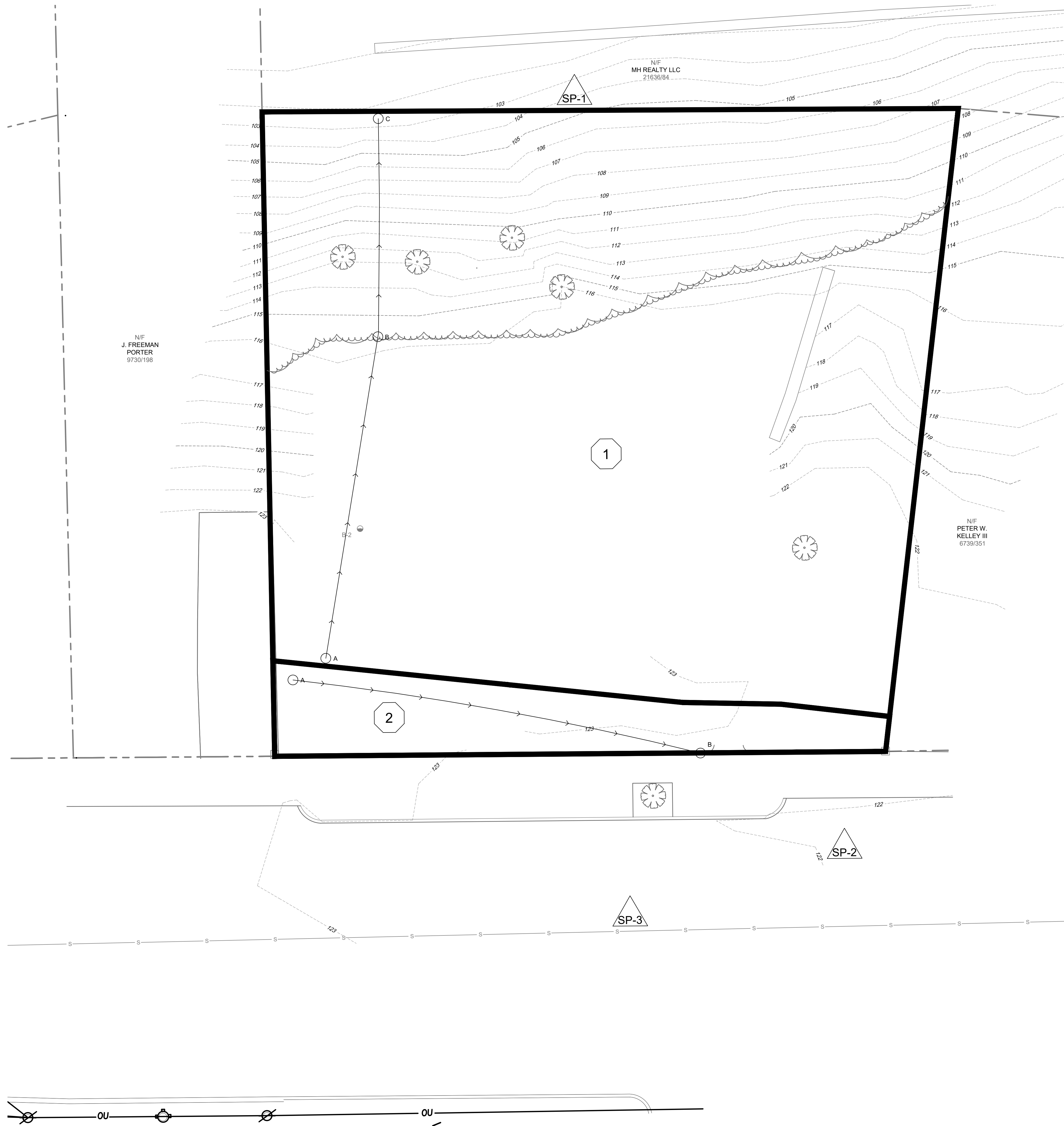
1

OF

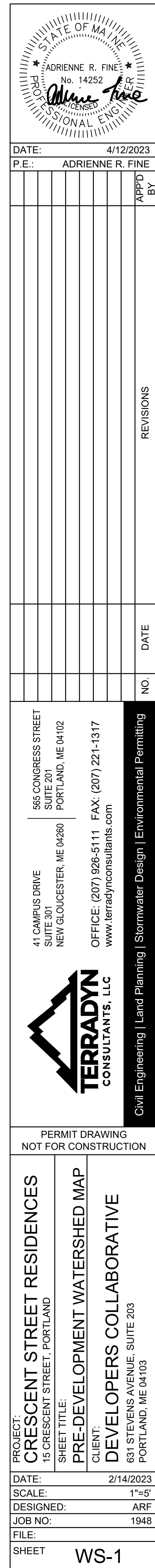
1

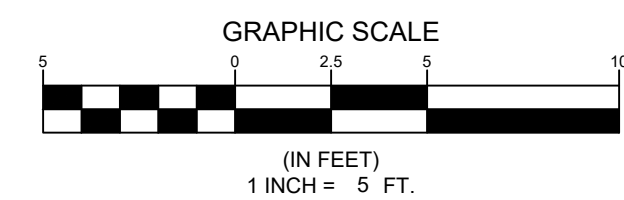
APPENDIX 2

WATERSHED MAPS



PREDEVELOPMENT	
	WATERSHED BOUNDARY
	Tc FLOWPATH
	SOILS BOUNDARY
	SUBCATCHMENT
	POND
	REACH
	STUDY POINT
	Tc LABEL





	POST DEVELOPMENT
WATERSHED BOUNDARY	
Tc FLOWPATH	
SOILS BOUNDARY	
SUBCATCHMENT	
POND	
REACH	
STUDY POINT	
Tc LABEL	

C:\ODI\Terradyn Consultants\Project Folders - Documents\2019 Jobs\1948 15 Crescent Street\CAD\Permitting\1948-WS.dwg

APPENDIX 3

Inspection & Maintenance Manual

INSPECTION & MAINTENANCE PLAN OF STORMWATER MANAGEMENT FACILITIES

FOR:

CRESCENT STREET RESIDENCES 15 CRESCENT STREET PORTLAND, MAINE

Owner/Responsible Party: Crescent Heights LLC
15 Crescent Street
Portland, ME 04102
(207) 772-7673

Prepared By: Terradyn Consultants, LLC
565 Congress Street, Suite 201
Portland, ME 04101
(207) 926-5111

List of Stormwater Measures:
Roadways & Parking Surfaces
R-Tank
Catch Basin with Trash Guard

Introduction:

Regular inspection and maintenance of the entire stormwater management system is crucial to the long-term effectiveness of the system. The owner is responsible for regular inspection and maintenance of all stormwater management structures, the establishment of any contract services required to implement the program, and keeping records and a maintenance log book of inspection and maintenance activities. At a minimum, the inspection and maintenance activities outlined herein should be performed at the recommended intervals. All inspection and maintenance documentation shall be maintained for at least 5 years.

All measures must be maintained in effective operating condition. A person with knowledge of erosion and sedimentation practices, stormwater management, and the standards and conditions of all local, state and federal permits for the project shall conduct the inspections. The following areas, facilities, and measures must be inspected and identified deficiencies must be corrected.

Inspection & Maintenance Tasks:

Inspections should be performed by qualified erosion control professional. NOTE: The following are excerpts from the Maine Department of Environmental Protection's *Stormwater Management for Maine, Volume III BMPs Technical Design Manual*, dated January 2006.

ROADWAYS & PARKING SURFACES:

- Inspect roadways and parking areas annually in the spring or as needed.
- Clear and remove accumulated winter sand from paved surfaces.
- Sweep or vacuum paved surfaces at least once annually in the spring to remove all winter sand and periodically during the year on an as-needed basis to minimize the transport of sediment during rainfall events.
- Clean out the sediment within culverts.
- Ensure that stormwater runoff is not impeded by sediment accumulation.

R-TANK

See attached R-tank Operation, Inspection & Maintenance documents from ACF Environmental.

General Maintenance Requirements for Subsurface Sand Filters include:

- A legal agreement between the owner and an approved maintenance operator should identify the responsible inspector, all inspection and maintenance tasks, and all financial obligations.
- A legal contract with a 5 year time period should establish maintenance responsibilities and the cost to cover long-term inspection and maintenance needs.
- Pre-treatment Device: Cleaning of the pretreatment device should be performed at least twice per year, in the fall and spring, or if clogging or excessive sediment is observed.
- Drainage: The filter should be draining within 48 hours following a one-inch storm or greater.

CATCH BASIN WITH TRASH GUARD

- Catch basins shall be inspected annually in the spring.
- All sediment and debris shall be removed from the bottom of the basin and inlet gates, including from the trash guard.
- Remove floating debris and oils (using oil absorptive pads) from any trap.

**Stormwater Management Facilities
Post Construction Inspection & Maintenance Log
15 Crescent Street, Portland, Maine**

General Information:

Inspected by:	Date:	Weather:
---------------	-------	----------

Reason for Inspection: (Regular Inspection) (Major Rain Event, 1c" in 24 hours)

BMP	Conditions Observed	Repairs Needed ?
1. Roadways & Parking Surfaces		
2. R-tank system		
3. Catch Basin with Trash Guard		

Detailed Repair Notes:

BMP Type	Date	Description of Repairs & Sediment Disposal

Notes:

If a maintenance task requires the clean-out of any sediments or debris, indicate where the sediment and debris was disposed after removal. A copy of this log shall be retained for a period of at least five years from the completion of permanent stabilization. The log must be made accessible to Department of Environmental Protection staff and a copy provided to the Department upon request.



R-TANK OPERATION, INSPECTION & MAINTENANCE

Operation

Your ACF R-Tank System has been designed to function in conjunction with the engineered drainage system on your site, the existing municipal infrastructure, and/or the existing soils and geography of the receiving watershed. Unless your site included certain unique and rare features, the operation of your R-Tank System will be driven by naturally occurring systems and will function autonomously. However, upholding a proper schedule of Inspection & Maintenance is critical to ensuring continued functionality and optimum performance of the system.

Inspection

Both the R-Tank and all stormwater pre-treatment features incorporated into your site must be inspected regularly. Inspection frequency for your system must be determined based on the contributing drainage area, but should never exceed one year between inspections (six months during the first year of operation).

Inspections may be required more frequently for pre-treatment systems. You should refer to the manufacturer requirements for the proper inspection schedule.

With the right equipment your inspection and measurements can be accomplished from the surface without physically entering any confined spaces. If your inspection does require confined space entry, you **MUST** follow all local/regional requirements as well as OSHA standards.

R-Tank Systems may incorporate Inspection Ports, Maintenance Ports, and/or adjoining manholes. Each of these features are easily accessed by removing the lid at the surface. With the cover removed, a visual inspection can be performed to identify sediment deposits within the structure. Using a flashlight, ALL access points should be examined to complete a thorough inspection.

Inspection Ports

Usually located centrally in the R-Tank System, these perforated columns are designed to give the user a base-line sediment depth across the system floor.

Maintenance Ports

Usually located near the inlet and outlet connections, you'll likely find deeper deposits of heavier sediments when compared to the Inspection Ports.

Manholes

Most systems will include at least two manholes - one at the inlet and another at the outlet. There may be more than one location where stormwater enters the system, which would result in additional manholes to inspect.

Bear in mind that these manholes often include a sump below the invert of the pipe connecting to the R-Tank. These sumps are designed to capture sediment before it reaches the R-Tank, and they should be kept clean to ensure they function properly. However, existence of sediment in the sump does **NOT** necessarily mean sediment has accumulated in the R-Tank.

After inspecting the bottom of the structure, use a mirror on a pole (or some other device) to check for sediment or debris in the pipe connecting to the R-Tank.

R-TANK OPERATION INSPECTION & MAINTENANCE

If sediment or debris is observed in any of these structures, you should determine the depth of the material. This is typically accomplished with a stadia rod, but you should determine the best way to obtain the measurement.

All observations and measurements should be recorded on an Inspection Log kept on file. We've included a form you can use at the end of this guideline.

Maintenance

The R-Tank System should be back-flushed once sediment accumulation has reached 6" or 15% of the total system height. Use the chart below as a guideline to determine the point at which maintenance is required on your system.

R-Tank Unit	Height	Max Sediment Dept
Mini	9.5"	1.5"
Single	17"	3"
Double	34"	5"
Triple	50"	6"
Quad	67"	6"
Pent	84"	6"

Before any maintenance is performed on your system, be sure to plug the outlet pipe to prevent contamination of the adjacent systems.

To back-flush the R-Tank, water is pumped into the system through the Maintenance Ports as rapidly as possible. Water should be pumped into ALL Maintenance Ports. The turbulent action of the water moving through the R-Tank will suspend sediments which may then be pumped out.

If your system includes an Outlet Structure, this will be the ideal location to pump contaminated water out of the system. However, removal of back-flush water may be accomplished through the Maintenance Ports, as well.

For systems with large footprints that would require extensive volumes of water to properly flush the system, you should consider performing your maintenance within 24 hours of a rain event. Stormwater entering the system will aid in the suspension of sediments and reduce the volume of water required to properly flush the system.

Once removed, sediment-laden water may be captured for disposal or pumped through a Dirtbag™ (if permitted by the locality).



2831 Cardwell Road
Richmond, Virginia, 23234
800.448.3636
FAX 804.743.7779
acfenvironmental.com

Step-By-Step Inspection & Maintenance Routine

1) Inspection

- a. Inspection Port
 - i. Remove Cap
 - ii. Use flashlight to detect sediment deposits
 - iii. If present, measure sediment depth with stadia rod
 - iv. Record results on Maintenance Log
 - v. Replace Cap
- b. Maintenance Port/s
 - i. Remove Cap
 - ii. Use flashlight to detect sediment deposits
 - iii. If present, measure sediment depth with stadia rod
 - iv. Record results on Maintenance Log
 - v. Replace Cap
 - vi. Repeat for ALL Maintenance Ports
- c. Adjacent Manholes
 - i. Remove Cover
 - ii. Use flashlight to detect sediment deposits
 - iii. If present, measure sediment depth with stadia rod, accounting for depth of sump (if present)
 - iv. Inspect pipes connecting to R-Tank
 - v. Record results on Maintenance Log
 - vi. Replace Cover
 - vii. Repeat for ALL Manholes that connect to the R-Tank

2) Maintenance

- a. Plug system outlet to prevent discharge of back-flush water
- b. Determine best location to pump out back-flush water
- c. Remove Cap from Maintenance Port
- d. Pump water as rapidly as possible (without over-topping port) into system until at least 1" of water covers system bottom
- e. Replace Cap
- f. Repeat at ALL Maintenance Ports
- g. Pump out back-flush water to complete back-flushing
- h. Vacuum all adjacent structures and any other structures or stormwater pre-treatment systems that require attention
- i. Sediment-laden water may be captured for disposal or pumped through a Dirtbag™.
- j. Replace any remaining Caps or Covers
- k. Record the back-flushing event in your Maintenance Log with any relevant specifics



**Company Responsible:
for Maintenance:**

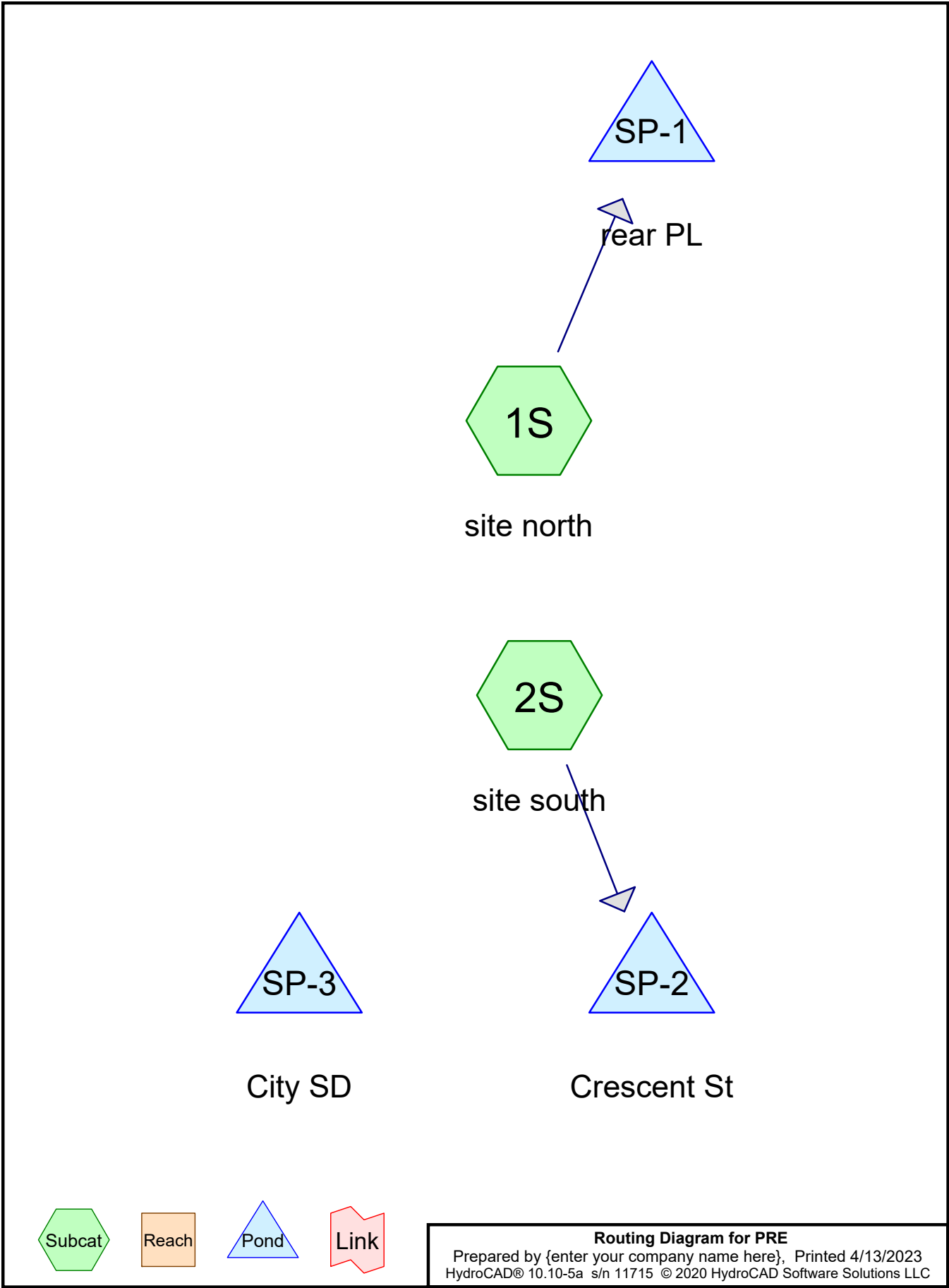
Contact: _____

Phone Number: _____

[illegible]

APPENDIX 4

PRE-DEVELOPMENT HYDROCAD MODEL



PRE

Prepared by {enter your company name here}

Printed 4/13/2023

HydroCAD® 10.10-5a s/n 11715 © 2020 HydroCAD Software Solutions LLC

Page 2

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.009	39	>75% Grass cover, Good, HSG A (2S)
0.059	30	Meadow, non-grazed, HSG A (1S)
0.030	30	Woods, Good, HSG A (1S)
0.098	31	TOTAL AREA

PRE*Type III 24-hr 2-YR Rainfall=3.10"*

Prepared by {enter your company name here}

Printed 4/13/2023

HydroCAD® 10.10-5a s/n 11715 © 2020 HydroCAD Software Solutions LLC

Page 3

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: site northRunoff Area=3,880 sf 0.00% Impervious Runoff Depth=0.00"
Flow Length=55' Tc=5.0 min CN=30 Runoff=0.00 cfs 0.000 af**Subcatchment2S: site south**Runoff Area=398 sf 0.00% Impervious Runoff Depth=0.00"
Flow Length=42' Slope=0.0143 '/' Tc=8.3 min CN=39 Runoff=0.00 cfs 0.000 af**Pond SP-1: rear PL**Inflow=0.00 cfs 0.000 af
Primary=0.00 cfs 0.000 af**Pond SP-2: Crescent St**Inflow=0.00 cfs 0.000 af
Primary=0.00 cfs 0.000 af**Pond SP-3: City SD****Total Runoff Area = 0.098 ac Runoff Volume = 0.000 af Average Runoff Depth = 0.00"**
100.00% Pervious = 0.098 ac 0.00% Impervious = 0.000 ac

PRE

Type III 24-hr 10-YR Rainfall=4.60"

Prepared by {enter your company name here}

Printed 4/13/2023

HydroCAD® 10.10-5a s/n 11715 © 2020 HydroCAD Software Solutions LLC

Page 4

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: site north

Runoff Area=3,880 sf 0.00% Impervious Runoff Depth=0.00"
Flow Length=55' Tc=5.0 min CN=30 Runoff=0.00 cfs 0.000 af

Subcatchment 2S: site south

Runoff Area=398 sf 0.00% Impervious Runoff Depth>0.10"
Flow Length=42' Slope=0.0143 '/' Tc=8.3 min CN=39 Runoff=0.00 cfs 0.000 af

Pond SP-1: rear PL

Inflow=0.00 cfs 0.000 af
Primary=0.00 cfs 0.000 af

Pond SP-2: Crescent St

Inflow=0.00 cfs 0.000 af
Primary=0.00 cfs 0.000 af

Pond SP-3: City SD

Total Runoff Area = 0.098 ac Runoff Volume = 0.000 af Average Runoff Depth = 0.01"
100.00% Pervious = 0.098 ac 0.00% Impervious = 0.000 ac

PRE

Type III 24-hr 25-YR Rainfall=5.80"

Prepared by {enter your company name here}

Printed 4/13/2023

HydroCAD® 10.10-5a s/n 11715 © 2020 HydroCAD Software Solutions LLC

Page 5

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: site north

Runoff Area=3,880 sf 0.00% Impervious Runoff Depth>0.03"
Flow Length=55' Tc=5.0 min CN=30 Runoff=0.00 cfs 0.000 af

Subcatchment2S: site south

Runoff Area=398 sf 0.00% Impervious Runoff Depth>0.32"
Flow Length=42' Slope=0.0143 '/' Tc=8.3 min CN=39 Runoff=0.00 cfs 0.000 af

Pond SP-1: rear PL

Inflow=0.00 cfs 0.000 af
Primary=0.00 cfs 0.000 af

Pond SP-2: Crescent St

Inflow=0.00 cfs 0.000 af
Primary=0.00 cfs 0.000 af

Pond SP-3: City SD

Total Runoff Area = 0.098 ac Runoff Volume = 0.000 af Average Runoff Depth = 0.06"
100.00% Pervious = 0.098 ac 0.00% Impervious = 0.000 ac

PRE

Prepared by {enter your company name here}

HydroCAD® 10.10-5a s/n 11715 © 2020 HydroCAD Software Solutions LLC

Type III 24-hr 25-YR Rainfall=5.80"

Printed 4/13/2023

Page 1

Summary for Subcatchment 1S: site north

[49] Hint: Tc<2dt may require smaller dt

Runoff = 0.00 cfs @ 16.76 hrs, Volume= 0.000 af, Depth> 0.03"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-YR Rainfall=5.80"

Area (sf)	CN	Description
1,314	30	Woods, Good, HSG A
2,566	30	Meadow, non-grazed, HSG A
3,880	30	Weighted Average
3,880		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.2	33	0.2330	0.25		Sheet Flow, Grass: Dense n= 0.240 P2= 3.10"
0.1	22	0.5900	3.84		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
2.7					Direct Entry, min 5
5.0	55	Total			

Summary for Subcatchment 2S: site south

Runoff = 0.00 cfs @ 12.40 hrs, Volume= 0.000 af, Depth> 0.32"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-YR Rainfall=5.80"

Area (sf)	CN	Description
398	39	>75% Grass cover, Good, HSG A
398		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.3	42	0.0143	0.08		Sheet Flow, Grass: Dense n= 0.240 P2= 3.10"

Summary for Pond SP-1: rear PL

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 0.089 ac, 0.00% Impervious, Inflow Depth > 0.03" for 25-YR event
 Inflow = 0.00 cfs @ 16.76 hrs, Volume= 0.000 af
 Primary = 0.00 cfs @ 16.76 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

PRE

Type III 24-hr 25-YR Rainfall=5.80"

Prepared by {enter your company name here}

Printed 4/13/2023

HydroCAD® 10.10-5a s/n 11715 © 2020 HydroCAD Software Solutions LLC

Page 2

Summary for Pond SP-2: Crescent St

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 0.009 ac, 0.00% Impervious, Inflow Depth > 0.32" for 25-YR event

Inflow = 0.00 cfs @ 12.40 hrs, Volume= 0.000 af

Primary = 0.00 cfs @ 12.40 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

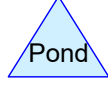
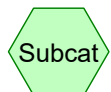
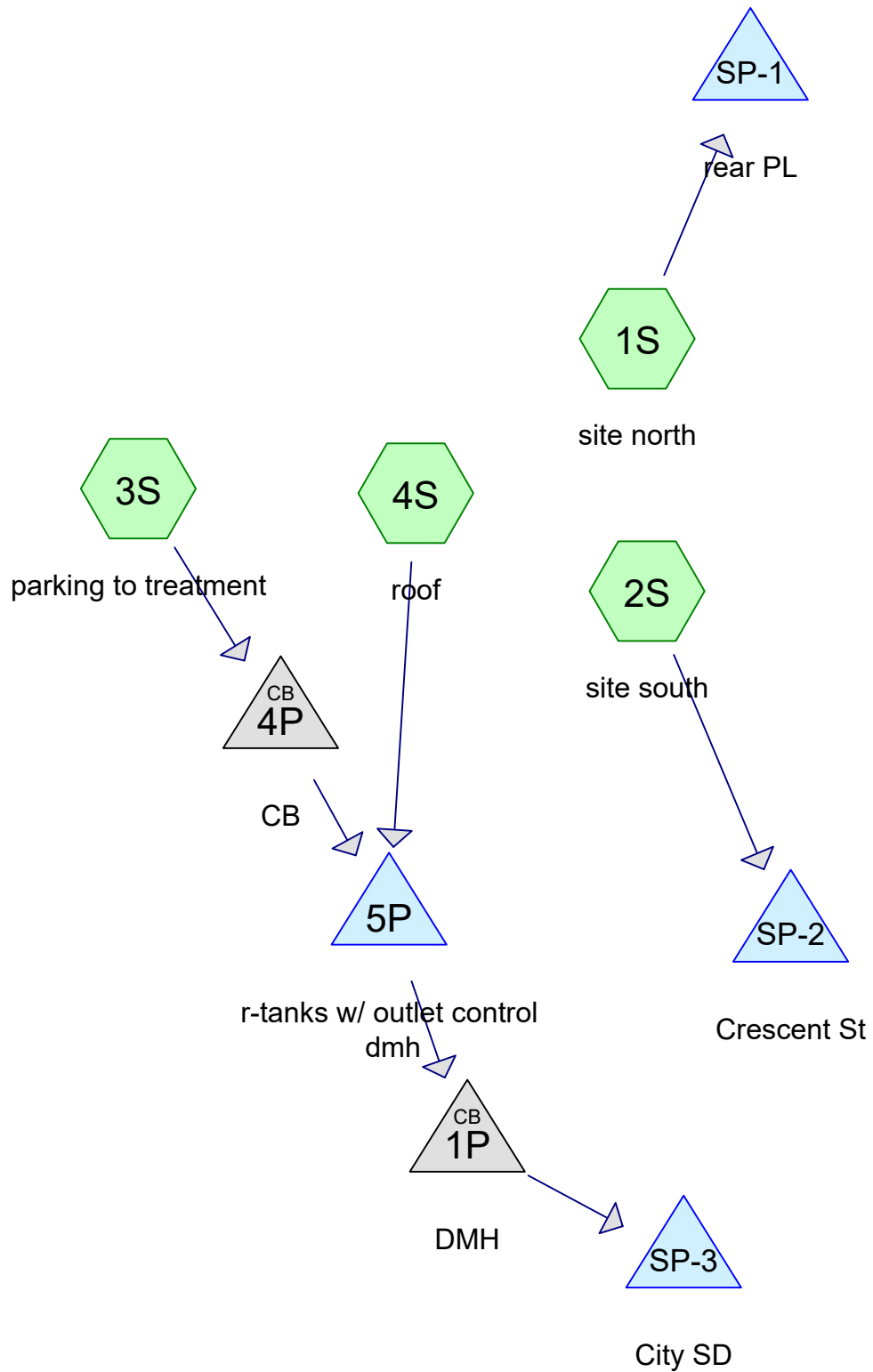
Summary for Pond SP-3: City SD

[40] Hint: Not Described (Outflow=Inflow)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=0.00' TW=0.00' (Free Discharge)

APPENDIX 5

POST-DEVELOPMENT HYDROCAD MODEL



Routing Diagram for POST
 Prepared by {enter your company name here}, Printed 4/13/2023
 HydroCAD® 10.10-5a s/n 11715 © 2020 HydroCAD Software Solutions LLC

POST

Prepared by {enter your company name here}

Printed 4/13/2023

HydroCAD® 10.10-5a s/n 11715 © 2020 HydroCAD Software Solutions LLC

Page 2

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.003	39	>75% Grass cover, Good, HSG A (2S)
0.014	30	Meadow, non-grazed, HSG A (1S)
0.008	30	Woods, Good, HSG A (1S)
0.029	98	paved parking (3S)
0.007	98	porches (4S)
0.030	98	roof (4S)
0.005	98	stairs & walkway (1S)
0.001	98	walkway (2S)
0.095	81	TOTAL AREA

POST*Type III 24-hr 2-YR Rainfall=3.10"*

Prepared by {enter your company name here}

Printed 4/13/2023

HydroCAD® 10.10-5a s/n 11715 © 2020 HydroCAD Software Solutions LLC

Page 3

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: site north	Runoff Area=1,156 sf 18.69% Impervious Runoff Depth>0.01" Tc=5.0 min CN=43 Runoff=0.00 cfs 0.000 af
Subcatchment2S: site south	Runoff Area=149 sf 18.79% Impervious Runoff Depth>0.08" Tc=5.0 min CN=50 Runoff=0.00 cfs 0.000 af
Subcatchment3S: parking to treatment	Runoff Area=1,242 sf 100.00% Impervious Runoff Depth>2.68" Tc=5.0 min CN=98 Runoff=0.09 cfs 0.006 af
Subcatchment4S: roof	Runoff Area=1,592 sf 100.00% Impervious Runoff Depth>2.68" Tc=5.0 min CN=98 Runoff=0.11 cfs 0.008 af
Pond 1P: DMH	Peak Elev=117.50' Inflow=0.00 cfs 0.000 af 12.0" Round Culvert n=0.012 L=49.0' S=0.0588 '/' Outflow=0.00 cfs 0.000 af
Pond 4P: CB	Peak Elev=118.35' Inflow=0.09 cfs 0.006 af 12.0" Round Culvert n=0.012 L=3.0' S=0.0200 '/' Outflow=0.09 cfs 0.006 af
Pond 5P: r-tanks w/ outlet control dmh	Peak Elev=117.25' Storage=0.005 af Inflow=0.20 cfs 0.015 af Discarded=0.02 cfs 0.015 af Primary=0.00 cfs 0.000 af Outflow=0.02 cfs 0.015 af
Pond SP-1: rear PL	Inflow=0.00 cfs 0.000 af Primary=0.00 cfs 0.000 af
Pond SP-2: Crescent St	Inflow=0.00 cfs 0.000 af Primary=0.00 cfs 0.000 af
Pond SP-3: City SD	Inflow=0.00 cfs 0.000 af Primary=0.00 cfs 0.000 af

Total Runoff Area = 0.095 ac Runoff Volume = 0.015 af Average Runoff Depth = 1.84"
25.63% Pervious = 0.024 ac 74.37% Impervious = 0.071 ac

POST*Type III 24-hr 10-YR Rainfall=4.60"*

Prepared by {enter your company name here}

Printed 4/13/2023

HydroCAD® 10.10-5a s/n 11715 © 2020 HydroCAD Software Solutions LLC

Page 4

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: site north Runoff Area=1,156 sf 18.69% Impervious Runoff Depth>0.20"
Tc=5.0 min CN=43 Runoff=0.00 cfs 0.000 af

Subcatchment2S: site south Runoff Area=149 sf 18.79% Impervious Runoff Depth>0.46"
Tc=5.0 min CN=50 Runoff=0.00 cfs 0.000 af

Subcatchment3S: parking to treatment Runoff Area=1,242 sf 100.00% Impervious Runoff Depth>4.05"
Tc=5.0 min CN=98 Runoff=0.13 cfs 0.010 af

Subcatchment4S: roof Runoff Area=1,592 sf 100.00% Impervious Runoff Depth>4.05"
Tc=5.0 min CN=98 Runoff=0.17 cfs 0.012 af

Pond 1P: DMH Peak Elev=117.50' Inflow=0.00 cfs 0.000 af
12.0" Round Culvert n=0.012 L=49.0' S=0.0588 '/' Outflow=0.00 cfs 0.000 af

Pond 4P: CB Peak Elev=118.39' Inflow=0.13 cfs 0.010 af
12.0" Round Culvert n=0.012 L=3.0' S=0.0200 '/' Outflow=0.13 cfs 0.010 af

Pond 5P: r-tanks w/ outlet control dmh Peak Elev=118.34' Storage=0.008 af Inflow=0.29 cfs 0.022 af
Discarded=0.02 cfs 0.022 af Primary=0.00 cfs 0.000 af Outflow=0.02 cfs 0.022 af

Pond SP-1: rear PL Inflow=0.00 cfs 0.000 af
Primary=0.00 cfs 0.000 af

Pond SP-2: Crescent St Inflow=0.00 cfs 0.000 af
Primary=0.00 cfs 0.000 af

Pond SP-3: City SD Inflow=0.00 cfs 0.000 af
Primary=0.00 cfs 0.000 af

Total Runoff Area = 0.095 ac Runoff Volume = 0.023 af Average Runoff Depth = 2.85"
25.63% Pervious = 0.024 ac 74.37% Impervious = 0.071 ac

POST*Type III 24-hr 25-YR Rainfall=5.80"*

Prepared by {enter your company name here}

Printed 4/13/2023

HydroCAD® 10.10-5a s/n 11715 © 2020 HydroCAD Software Solutions LLC

Page 5

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: site north	Runoff Area=1,156 sf 18.69% Impervious Runoff Depth>0.52" Tc=5.0 min CN=43 Runoff=0.01 cfs 0.001 af
Subcatchment2S: site south	Runoff Area=149 sf 18.79% Impervious Runoff Depth>0.93" Tc=5.0 min CN=50 Runoff=0.00 cfs 0.000 af
Subcatchment3S: parking to treatment	Runoff Area=1,242 sf 100.00% Impervious Runoff Depth>5.15" Tc=5.0 min CN=98 Runoff=0.16 cfs 0.012 af
Subcatchment4S: roof	Runoff Area=1,592 sf 100.00% Impervious Runoff Depth>5.15" Tc=5.0 min CN=98 Runoff=0.21 cfs 0.016 af
Pond 1P: DMH	Peak Elev=117.50' Inflow=0.00 cfs 0.000 af 12.0" Round Culvert n=0.012 L=49.0' S=0.0588 '/' Outflow=0.00 cfs 0.000 af
Pond 4P: CB	Peak Elev=118.41' Inflow=0.16 cfs 0.012 af 12.0" Round Culvert n=0.012 L=3.0' S=0.0200 '/' Outflow=0.16 cfs 0.012 af
Pond 5P: r-tanks w/ outlet control dmh	Peak Elev=119.32' Storage=0.012 af Inflow=0.37 cfs 0.028 af Discarded=0.02 cfs 0.024 af Primary=0.00 cfs 0.000 af Outflow=0.02 cfs 0.024 af
Pond SP-1: rear PL	Inflow=0.01 cfs 0.001 af Primary=0.01 cfs 0.001 af
Pond SP-2: Crescent St	Inflow=0.00 cfs 0.000 af Primary=0.00 cfs 0.000 af
Pond SP-3: City SD	Inflow=0.00 cfs 0.000 af Primary=0.00 cfs 0.000 af

Total Runoff Area = 0.095 ac Runoff Volume = 0.029 af Average Runoff Depth = 3.70"
25.63% Pervious = 0.024 ac 74.37% Impervious = 0.071 ac

POST

Type III 24-hr 25-YR Rainfall=5.80"

Prepared by {enter your company name here}

Printed 4/13/2023

HydroCAD® 10.10-5a s/n 11715 © 2020 HydroCAD Software Solutions LLC

Page 1

Summary for Subcatchment 1S: site north[49] Hint: $T_c < 2dt$ may require smaller dt

Runoff = 0.01 cfs @ 12.15 hrs, Volume= 0.001 af, Depth> 0.52"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, $dt=0.05$ hrs
Type III 24-hr 25-YR Rainfall=5.80"

Area (sf)	CN	Description
598	30	Meadow, non-grazed, HSG A
* 216	98	stairs & walkway
342	30	Woods, Good, HSG A
1,156	43	Weighted Average
940		81.31% Pervious Area
216		18.69% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, min 5

Summary for Subcatchment 2S: site south[49] Hint: $T_c < 2dt$ may require smaller dt

Runoff = 0.00 cfs @ 12.10 hrs, Volume= 0.000 af, Depth> 0.93"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, $dt=0.05$ hrs
Type III 24-hr 25-YR Rainfall=5.80"

Area (sf)	CN	Description
* 28	98	walkway
121	39	>75% Grass cover, Good, HSG A
149	50	Weighted Average
121		81.21% Pervious Area
28		18.79% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment 3S: parking to treatment[49] Hint: $T_c < 2dt$ may require smaller dt

Runoff = 0.16 cfs @ 12.07 hrs, Volume= 0.012 af, Depth> 5.15"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, $dt=0.05$ hrs
Type III 24-hr 25-YR Rainfall=5.80"

POST

Type III 24-hr 25-YR Rainfall=5.80"

Prepared by {enter your company name here}

Printed 4/13/2023

HydroCAD® 10.10-5a s/n 11715 © 2020 HydroCAD Software Solutions LLC

Page 2

	Area (sf)	CN	Description
*	1,242	98	paved parking
	1,242		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment 4S: roof

[49] Hint: Tc<2dt may require smaller dt

Runoff = 0.21 cfs @ 12.07 hrs, Volume= 0.016 af, Depth> 5.15"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Type III 24-hr 25-YR Rainfall=5.80"

	Area (sf)	CN	Description
*	296	98	porches
*	1,296	98	roof
	1,592	98	Weighted Average
	1,592		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, min 5

Summary for Pond 1P: DMH

Inflow Area = 0.065 ac, 100.00% Impervious, Inflow Depth = 0.00" for 25-YR event
 Inflow = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af
 Outflow = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min
 Primary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Peak Elev= 117.50' @ 5.00 hrs

Flood Elev= 122.20'

Device	Routing	Invert	Outlet Devices
#1	Primary	117.50'	12.0" Round Culvert L= 49.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 117.50' / 114.62' S= 0.0588 ' S Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.00 cfs @ 5.00 hrs HW=117.50' (Free Discharge)

↑1=Culvert (Controls 0.00 cfs)

POST

Type III 24-hr 25-YR Rainfall=5.80"

Prepared by {enter your company name here}

Printed 4/13/2023

HydroCAD® 10.10-5a s/n 11715 © 2020 HydroCAD Software Solutions LLC

Page 3

Summary for Pond 4P: CB

[82] Warning: Early inflow requires earlier time span

Inflow Area = 0.029 ac, 100.00% Impervious, Inflow Depth > 5.15" for 25-YR event
 Inflow = 0.16 cfs @ 12.07 hrs, Volume= 0.012 af
 Outflow = 0.16 cfs @ 12.07 hrs, Volume= 0.012 af, Atten= 0%, Lag= 0.0 min
 Primary = 0.16 cfs @ 12.07 hrs, Volume= 0.012 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Peak Elev= 118.41' @ 12.07 hrs

Flood Elev= 122.20'

Device	Routing	Invert	Outlet Devices
#1	Primary	118.20'	12.0" Round Culvert L= 3.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 118.20' / 118.14' S= 0.0200 ' S= 0.0200 ' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.16 cfs @ 12.07 hrs HW=118.41' (Free Discharge)

1=Culvert (Barrel Controls 0.16 cfs @ 2.01 fps)

Summary for Pond 5P: r-tanks w/ outlet control dmh

[82] Warning: Early inflow requires earlier time span

[81] Warning: Exceeded Pond 4P by 1.08' @ 13.45 hrs

Inflow Area = 0.065 ac, 100.00% Impervious, Inflow Depth > 5.15" for 25-YR event
 Inflow = 0.37 cfs @ 12.07 hrs, Volume= 0.028 af
 Outflow = 0.02 cfs @ 10.90 hrs, Volume= 0.024 af, Atten= 93%, Lag= 0.0 min
 Discarded = 0.02 cfs @ 10.90 hrs, Volume= 0.024 af
 Primary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Peak Elev= 119.32' @ 13.39 hrs Surf.Area= 0.005 ac Storage= 0.012 af

Plug-Flow detention time= 149.7 min calculated for 0.024 af (86% of inflow)

Center-of-Mass det. time= 106.1 min (839.7 - 733.6)

Volume	Invert	Avail.Storage	Storage Description
#1A	115.75'	0.006 af	11.87'W x 18.07'L x 5.45'H Field A 0.027 af Overall - 0.011 af Embedded = 0.016 af x 40.0% Voids
#2A	116.00'	0.010 af	ACF R-Tank HD 3 x 36 Inside #1 Inside= 15.7"W x 50.4"H => 5.24 sf x 2.35'L = 12.3 cf Outside= 15.7"W x 50.4"H => 5.51 sf x 2.35'L = 12.9 cf 36 Chambers in 6 Rows
		0.017 af	Total Available Storage

Storage Group A created with Chamber Wizard

POST

Type III 24-hr 25-YR Rainfall=5.80"

Prepared by {enter your company name here}

Printed 4/13/2023

HydroCAD® 10.10-5a s/n 11715 © 2020 HydroCAD Software Solutions LLC

Page 4

Device	Routing	Invert	Outlet Devices
#1	Primary	119.40'	12.0" Round Culvert L= 4.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 119.40' / 119.32' S= 0.0200 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 0.79 sf
#2	Discarded	115.75'	5.000 in/hr Exfiltration over Surface area

Discarded OutFlow Max=0.02 cfs @ 10.90 hrs HW=115.81' (Free Discharge)

↳ **2=Exfiltration** (Exfiltration Controls 0.02 cfs)

Primary OutFlow Max=0.00 cfs @ 5.00 hrs HW=115.75' (Free Discharge)

↳ **1=Culvert** (Controls 0.00 cfs)

Summary for Pond SP-1: rear PL

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 0.027 ac, 18.69% Impervious, Inflow Depth > 0.52" for 25-YR event
Inflow = 0.01 cfs @ 12.15 hrs, Volume= 0.001 af
Primary = 0.01 cfs @ 12.15 hrs, Volume= 0.001 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Pond SP-2: Crescent St

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 0.003 ac, 18.79% Impervious, Inflow Depth > 0.93" for 25-YR event
Inflow = 0.00 cfs @ 12.10 hrs, Volume= 0.000 af
Primary = 0.00 cfs @ 12.10 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Pond SP-3: City SD

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 0.065 ac, 100.00% Impervious, Inflow Depth = 0.00" for 25-YR event
Inflow = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af
Primary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

8 CONSISTENCY WITH CITY MASTER PLANS

8.1 OVERVIEW

Our office is not aware of any applicable Master Plans created for the project site.

9 UTILITIES

9.1 OVERVIEW

The proposed project will involve installation of new utility services to the proposed building. All new utility services will be provided from the franchise utilities available within Crescent Street. The proposed locations of the new utility services are shown on the Utility Plan (Sheet C-6.0).

9.2 WATER SUPPLY

The proposed project will receive its water supply from the Portland Water District's (PWD) public water supply system. Separate fire and domestic services will be installed to the building from PWD's existing main in Crescent Street.

9.3 WASTEWATER DISPOSAL

The proposed project will be connected to the Portland Water District's and City of Portland's wastewater collection and conveyance systems.

9.5 STORMWATER MANAGEMENT

The proposed project will have a stormwater management system requiring an overflow pipe connection to the Crescent Street combined sewer network. Minimal stormwater is expected to leave the site through this storm drain connection.

9.4 ELECTRICITY SUPPLY

CMP currently maintains overhead utilities in the area. Electric utilities for the proposed building are expected to be installed underground from Pole #2 on the southern side of Crescent Street.

9.5 NATURAL GAS SUPPLY

Crescent Street contains a natural gas line and there was a service for this property previously that we intend to re-connect for the proposed building.

10 FIRE SAFETY

10.1 OVERVIEW

The applicant and project team will provide the Portland Fire Department with the information required in the PFD Site Review Checklist, as well as a basic review of NFPA 1 and City of Portland Technical Standards related to public safety.

The project site will be accessed from Crescent Street, which is improved with a 27' paved surface. There is one nearby fire hydrant; located directly across Crescent Street from the site.

The front side of the proposed building will be fully accessible from Crescent Street and the western side of the building will be accessible from the project driveway. The proposed building will be fully sprinkled in compliance with all applicable codes.

11 CONFORMITY WITH APPLICABLE DESIGN STANDARDS

11.1 OVERVIEW

This project conforms to all applicable Site Plan Review Standards of Section 14.6 of the city's Land Use Ordinance as described in the following narrative.

14.6.1 Transportation Standards

A. Impact on Surrounding Street Systems:

The project will not have a significant impact on the surrounding street system. Vehicles will access the site and parking area from Crescent Street and the estimated number of new vehicle trips generated by the project is insignificant compared to existing trips on surrounding streets.

B. Access and Circulation:

1. In General

- a. Vehicular access will be at the proposed driveway from Crescent Street and vehicles will circulate in the 18' wide driveway accessing the parking spaces. Pedestrian access is directly from the Crescent Street sidewalk at an entry brick walkway and a concrete walkway along the eastern side of the building.
- b. A walkway connects the front door to the Crescent Street sidewalk.
- c. Points of access and egress have been designed to avoid conflicts with turning movements and traffic flows.
- d. The only vehicular access to the site is for the 5 residential parking spaces so stacking is not applicable.

2. Loading and Servicing

The development is not expected to be served by delivery or other service vehicles. It is a residential use.

3. Curb and Sidewalks.

- a. The existing Crescent Street sidewalk along the site frontage will be reconstructed with brick and granite curb as part of this project.
- b. The reconstructed sidewalk will meet the design standards of the Technical Manual.
- c. NA
- d. NA

C. Public Transit Access:

Metro Bus Route 8 runs along Congress and Bramhall Streets in the vicinity of Maine Medical Center with a stop in front of the hospital. The project does not meet the minimum threshold to require a new transit facility.

D. Parking:

1. Vehicular Parking:

- a. The project requires 2 parking space per R-6 Zone requirements. 5 parking spaces are proposed.
- b. A parking study is not required for this project.
- c. The project includes 1 parking space per residential unit. Street parking is limited due to the one-way street and the surrounding hospital infrastructure.
- d. The proposed parking space meets the dimensional standard as detailed in the street design standard of the technical manual. The proposed on-site parking will be constructed of bituminous pavement.

2. Bicycle Parking Spaces:

- a. 2 bicycle parking spaces are located on a bike rack in the sidewalk in front of the building.

3. Snow Storage:

- a. Snow will be removed from the parking area and stored beyond the retaining wall on the project site.
- b. Snow storage does not encroach on parking or pedestrian area, nor does it adversely impact the functionality of stormwater management systems.

4. Electric Vehicle (EV) Charging:

- a. No EV charging will be installed unless a future unit resident requests the addition of EV charging.

E. Transportation Demand Management (TDM):

A TDM plan is not required for this project.

14.6.2 Environmental Quality Standards

A. Preservation of Significant Natural Features:

1. Preserve and protect significant natural features
 - a. No endangered or threatened plants have been identified on the project site.
 - b. No habitat for endangered or species have been identified on the project site.
 - c. No waterfowl and wading bird habitat is located on the project site.
 - d. NA
 - e. No wetlands, watercourses, SVPs or floodplains are located on the project site.
2. NA
3. NA

B. Landscape Preservation:

1. Existing trees on the northern side of the site will be preserved along the property line to the greatest extent practicable.
2. The majority of the site was previously developed and contains lawn areas.
3. Trees will be preserved along the northern property line to the greatest extent practicable.
4. Waiver: Some of the existing trees on site will be impacted by building and site construction and preservation would compromise the development of the site. We anticipate that four trees over 10" DBH will be removed on the northern portion of the site away from Crescent Street.
5. Two street trees are proposed.

C. Site Landscaping

1. Two street trees are proposed along the Crescent Street frontage. Landscaping will be located in the 5' setback area between the ROW and the building. The steep slope behind the building will be seeded with an appropriate mix and allowed to grow with limited mowing. Existing trees and vegetation behind the building will be preserved to the greatest extent practicable during construction.
2. Buffers
 - a. NA
 - b. NA
 - c. NA
3. Parking and vehicle display lot landscaping
 - a. Three of the parking spaces are located under the building and screened by the building. Two parking spaces are surface parking. No landscaped islands are proposed.
 - b. NA
 - c. NA
4. Street Trees
 - a. There is one existing small street tree that will be removed and replaced with two new street trees along the Crescent Street sidewalk.
 - b. NA

D. Water Quality, Stormwater Management and Erosion Control:

1. Stormwater:

The existing project site is vacant containing a surface primarily grass, brush, and trees toward the rear of the site. Development of the project site will result in the creation of approximately 3,217 square feet of impervious area. The project is a Major Site Plan so it is required to meet the Basic, General and Flooding Standards of the MDEP Chapter 500 Rules for Stormwater Management

Post development stormwater runoff will generally follow existing patterns. Stormwater runoff from the proposed building and parking area will be captured and direct to an underground stormwater storage system designed for treatment and infiltration with an overflow connecting to the City combined storm drain system in Crescent Street. Due to the infiltration system, limited stormwater is expected to enter the City's system. A stormwater management report is included in section 7.

- a. The project will not result in flooding of adjacent lots. Runoff volumes and rates will not increase significantly onto adjacent lots.
 - b. Volumes and rates of stormwater runoff into the Crescent Street right of ways are expected be similar to existing conditions. The project will not create ponding, flooding, or other drainage problems within Crescent Street or the abutting parcels.
 - c. Volumes and rates of stormwater runoff into the city's storm drain network are expected to be similar to existing volumes and rates. The project will not create problems downstream or exceed the capacity of the system.
2. The stormwater management system was designed to meet the requirements of the Technical Manual.
 3. The development is not expected to pose a risk to groundwater contamination during or post-construction. Housekeeping notes are included on the project grading plan.

14.6.3 Public Infrastructure and Community Safety Standards.

A. Consistency with City Master Plans:

1. The project has been designed to be consistent with the City of Portland Land Use Ordinance and off-premises infrastructure.
2. Not applicable.

B. Public Safety and Fire Prevention:

1. The site has been designed to promote safety and security for the residents. Site lighting will provide added security. Access to the building will be through the front entrance with appropriate access controls for a multi-family residential building.
2. Emergency vehicle access will be via Crescent Street.

C. Public Utilities:

1. The project will be served by new water and sewer utilities.
2. Overhead electrical and telecommunications utilities exist along Crescent Street. The proposed building will be served by an underground connection to pole #2 on Crescent Street.
3. All new utility infrastructure will meet the provisions of the Technical Manual.
4. The proposed building will be connected to the public sewer system within Crescent Street.
5. NA

14.6.4 Site Design Standards

A. Massing, Ventilation and Wind Impact:

1. The bulk, location and height of the proposed building will not result in adverse impacts to abutting properties.
2. The bulk, location and height of the proposed building will not substantially reduce the value or utility of adjacent structures.
3. The HVAC equipment will be located on the high roof and exhaust away from adjacent residential properties.

B. Shadows:

The project is not expected to cause shadows on publicly available open space, or have an adverse effect on vegetation as a result of shadows cast from the proposed building.

C. Snow and Ice Loading:

Accumulated snow and ice will not fall onto adjacent properties or public ways.

D. View Corridors:

The project site is located outside of any protected view corridors.

E. Historic Resources:

1. The development is not located within a historic district.
2. Not applicable.
3. There are no known archaeological resources on the site.

F. Exterior Lighting:

1. Site Lighting

- a. Exterior site lighting will be provided by building mounted lights along the exterior. The light fixtures are full cutoff.
- b. The photometric plan in the project plan set shows how the exterior site lighting meets the standards of the Technical Manual.

2. Architectural and Specialty Lighting: NA – there is no architectural or specialty lighting or up-lighting proposed.

3. Street Lighting: an existing cobra head style street light is located on the utility pole directly across from the project site. No street lighting is proposed.

G. Noise and Vibration:

Noise levels are expected to meet the permitted levels for the R-6 Zone.

HVAC and Mechanical Equipment: All heating, ventilation and air conditioning equipment (HVAC), air handling units (AHU), and similar equipment shall meet applicable state and federal emissions requirements and shall be located on the high roof, away from abutting residential properties. No emergency generator is proposed for this project.

H. Signage and Wayfinding:

Not Applicable.

I. Design Standards:

1. Developments of certain types and/or proposed in certain zones, as specified below, are subject to the design standards of the City of Portland Design Manual:

- a. NA
- b. NA
- c. NA
- d. NA
- e. Residential developments shall integrate with and respect the character of the surrounding residential developments – the proposed 15 Crescent Street building integrates with the surrounding buildings in terms of architectural form, landscaping and open space, façade materials, roof pitch, massing, and height.

12 VERIFICATION OF PROPOSED HVAC EQUIPMENT

12.1 OVERVIEW

All heating, ventilation and air conditioning equipment (HVAC), air handling units (AHU), emergency generators, and similar equipment shall meet applicable state and federal emissions requirements and shall be located on the high roof, away from abutting residential properties.

Portland, Maine



Yes. Life's good here.

Planning & Urban Development Department

ZONING ANALYSIS Relevant Zone(s) R-6

All Projects:

	Required	Proposed
Lot Size	2,000 sf	4,278 sf
Area Per Dwelling Unit	725 sf	855 sf
Minimum Street Frontage	20 ft	61 ft
Front Yard Minimum	5 ft or avg	5.5 ft
Front Yard Maximum	-	
Rear Yard	10 ft	15.3 ft
Yard Right	5 ft	5 ft
Yard Left	5 ft	21 ft
Side Street Setback	none	n/a
Step Back	15' rear, 10' side	15' rear, 10' side
Maximum Lot Coverage	60%	37.3%
Minimum Lot Coverage	-	-
Maximum Height	45 ft	40.65 ft
Open Space	20%	24.8%
Maximum Impervious Area	-	-
Pavement Setback	-	-
Floor Area Ratio	-	-
Off Street Parking Spaces	2	5
Loading Bays	-	0
Other 1		
Other 2		
Other 3		

Planned Residential Unit Developments (PRUD) Requirements

	Required	Proposed
Minimum Lot Size		
Minimum Lot Area per Dwelling		
Maximum # Units per Building		
Maximum Building Length		
Maximum Accessory Building Length		
Minimum Setbacks		
Minimum Building Separation		
Minimum Open Space		

Affordable Housing Density Bonuses (if applicable)

	Bonus Increase or Decrease	Maximum Allowable With Bonus	Proposed
Density			
Height			
Setback Reduction			
Recreation Space			
Maximum Accessory Building Length			
Minimum Setbacks			
Minimum Building Separation			
Minimum Open Space			
Explanatory Text 1 (optional):			
Explanatory Text 2 (optional):			
Explanatory Text 3 (optional):			



207.926.5111
 info@terradyconsultants.com
 www.terradyconsultants.com

September 12, 2023

Project #1948

Planning Division, City of Portland
 389 Congress Street, 4th Floor
 Portland, ME 04101

Response to Comments 15 Crescent Street

Dear: City of Portland Planning Division

Terradyn Consultants, LLC is pleased to submit this response to comments letter for the Major Site Plan Application for the proposed development of 15 Crescent Street. The owner and applicant is Developers Collaborative. We received Site Plan Review comments from City Staff dated 6/21/23 and Design Review comments dated 5/24/23 and have prepared responses. Comments are re-iterated in italics with responses below for clarity.

Site Plan Review Comments

Planning:

1. *Site plans include two street tree wells. Please ensure site plans meet Technical Manual section 4.6.1 Street Trees; Residential Development, and review tree-well details in Technical Manual section 4.*
 - a. *“Multi-family residential developments shall provide a minimum of one tree per unit, planted in the City right of way and/or along private roadways unless otherwise approved and spaced twenty-five (25) to thirty-five (35) feet on center.”*

Response: The project includes 2 street trees along the site frontage that are spaced 34' on center to frame the sidewalk in front of the property and to assist with tip down grading for the driveways on either side.

The technical manual requires a 36" x 60" tree grate. DPW staff recommended a public easement along the frontage to accommodate both the passage and tree well, so we are proposing a 1' easement onto the property frontage to allow for a 4' sidewalk clear distance next to the tree grate. The sidewalk overall will be 7' wide where the tree grates don't exist.

Pineland
 41 Campus Drive, Suite 301
 New Gloucester, ME 04260

Portland
 565 Congress Street, Suite 201
 Portland, ME 04101

Auburn
 95 Main Street, 2nd Floor
 Auburn, ME 04210

- b. For a five-unit residential building, five street trees are required, with at least two preferably located on site. Where site constraints prevent the planting of required street trees in the city right-of-way, alternatives are located in Land Use Code section 14.6.2 (C.4.)*

Response: The proposed 5-unit building requires 5 street trees. Two (2) street trees are proposed at the site's frontage. Three (3) additional trees that we cannot fit along the site's frontage are required. The applicant would like to satisfy these additional street trees by utilizing section 14.6.2.C.4.b.iv. "The planting of new street trees on public land or public facilities in the neighborhood where a reasonable chance of good health and longevity is documented. Can the City provide guidance on appropriate locations in the neighborhood? There is a vacant triangular lot at the corner of Crescent and Wescott St that may be appropriate. Developers Collaborative also owns property containing a gravel parking lot at the corner of Ellsworth and Brackett Streets that may be an appropriate planting area. If appropriate areas in the neighborhood cannot be located, then the applicant will contribute funds to the City's tree fund.

- 2. Five existing trees on site are proposed to be removed. Please provide DBH measurements of these trees in order to determine the applicability of landscape preservation and tree replacement requirements.*

Response: The five existing trees to be removed from the site are 30", 15", 15", 36" and 12". The tree size labels have been added to sheet C-3.0. Additional trees exist in a stand of trees along the property line that will be preserved.

- 3. Per Land Use Code Table 19-A, two bicycle parking spaces are required per five units. The proposed bike hitch appears to meet this standard. Please orient the hitch parallel to the street so as to maintain proper sidewalk width.*

Response: The bike hitch is now shown parallel to the street.

- 4. Snow storage is shown north of the parking area, downhill from the retaining wall, though the retaining wall is proposed to extend 42" above the parking surface. This would require lifting the snow and dropping it over the retaining wall edge. Please confirm this snow storage arrangement as snow and ice should not fall on the adjacent downhill property.*

Response: The site will likely be served by a snowblower or bobcat type machine that can move snow over the retaining wall. These types of proposed snow

removal allow for the more precise movement of snow without disturbing the abutting properties. The area behind the wall is sufficient for snow storage and the existing trees along the property line will further protect snow from crossing the property line. If snow storage capacity of the site is exceeded, then snow will be removed from the site.

5. *Please provide bollards or wheel-stops to prevent automobiles from colliding with the retaining wall. Similarly, please provide bollards or wheel-stops to prevent vehicles from colliding with the residential structure wall.*

Response: Wheel stops have been added to the plan.

6. *Please parking area meets Technical Manual sections 1.47 Electric Vehicle Infrastructure. • “New structured and surface parking lots of five or more spaces shall include energized electrical outlets or installed chargers capable of providing Level 2 EV charging or higher to 20% of parking spaces (rounded down to the nearest whole number). An additional 50% of spaces must be made EV-ready, meaning that they are served by sufficient conduit and electrical service to allow for future installation of electric vehicle supply equipment at every space.”*

Response: The calculations result in the need for 1 EV space and 3 EV-ready spaces. These locations have been added to the plan set with conduit shown for the 3 EV-ready spaces and a charger shown for the 1 required EV space. The future condo owners will have the option to install chargers during presales.

7. *Please ensure the retaining wall and slope meet Technical Manual sections 4.5.7 Walls and Fences and 4.5.8 Slope Stabilization.*

Response: 4.5.7: Terradyn has been working with the geotechnical engineering consultant, Summit Geoengineering, on the retaining wall design and due to the site conditions and height of the proposed wall, it is proposed to be a modular block wall with geogrid reinforcing. This type of wall is typically either Redi Rock or Stone Strong, which both have many different patterns available. The proposed wall will be a gray concrete color with the selected block pattern visible on both sides of the wall where exposed.

4.5.8: The slope behind the building and retaining wall will be stabilized using Pyramat75 reinforcing to ensure vegetation establishment and prevent erosion. A detail has been added to the plans showing a ‘soil filled’ design with Pyramat as recommended by Ferguson. The slope will be seeded with a meadow type erosion control seed mix and allowed to grow into a meadow that is only mowed twice a year.

Zoning:

1. *Please provide an accurate measurement of the site's grade, calculated from all 4 corners of the parcel.*

Response: The site's average grade is 114.67 based on the four property corner spot elevations (123.07, 122.60, 108, 103). The building FFE is 122.84 and the roof edge beam elevation is 154.83. This results in a building height measurement from the site's average grade to the roof of 40.67'.

2. *The North and East elevations appear to be showing different proposals in the rear of the site. The North elevation appears to have a stairway leading to the ground floor deck and the east elevation appears to be more in line with what is described on the C-4.0 Site plan with a stairway leading to the basement and a ramp leading to the back yard. Please clarify what is proposed.*

Response: The proposed construction is a stairway on the eastern side of the building leading to the basement then a ramp leading to the back yard. This is now reflected on the site and architectural plans consistently.

DPW Water Resources:

1. *A formal wastewater capacity application for this project shall be submitted to DPW's water resources division for review and approval.*

Response: A formal wastewater capacity application has been submitted directly to DPW and uploaded to ePlan.

2. *DPW is concerned that infiltrated stormwater runoff from the proposed development will either weep out at the bottom of the proposed retaining wall or be collected in the proposed wall underdrain system and be directed towards abutting property as concentrated flow. The applicant would need a drainage easement and permission from the abutting property owner to increase flow rates onto neighboring property.*

Response: Terradyn has worked with Summit Geoengineering to appropriately design the retaining wall, place the r-tank infiltration system, and design the underdrain. We have moved the r-tank system away from the wall and underdrain. The r-tank infiltrating surface is now 23' away from the wall and will infiltrate into at least 5' of fill before infiltrating into the native soils. Summit Geoengineering expressed that limited infiltrated stormwater is expected to make its way to the wall underdrain with this revision. Additionally, we have added a level lip spreader at the underdrain outlet as a secondary measure.

3. *Further justification will need to be provided on the need/size of the proposed storm drain overflow connection into the Crescent Street combined sewer line. The project's storm drain modeling indicated that no outflow will be directed into the City's combined sewer line in Crescent Street through the 25 year storm event. DPW is concerned that stormwater overflow flow generated in more significant storms, or in the event that the proposed infiltration system is not working correctly, could exceed the City's combined sewer's capacity and result in possible sewer backups along the sewer line.*

Response: The overflow connection to the City's combined sewer line in Crescent Street is proposed as a safety measure and is expected to be triggered in the 100-year storm. We made some adjustments to the r-tank system to reduce the peak flows triggering the overflow pipe in the 100-year storm to 0.13 cfs. We still expect 0 flow to this overflow pipe in the 2, 10, and 25 year storms. This pipe also acts as a safety measure in the event that the system temporarily clogs or has an issue. We are proposing a trash guard in the upstream catch basin and a treatment row in the r-tank system for pre-treatment, which should reduce the potential for clogging or system issues.

We also reduced the overflow pipe size to 6", which will not require a manhole connection to the City's system. We are specifying a backflow preventer for this pipe connection.

4. *If approved, a manhole will be required for the proposed 12" private storm drain connection into the Crescent Street combined sewer per standards set forth in section 2 of the technical manual.*

Response: The private storm drain connection into the Crescent Street combined sewer has been reduced to a 6" pipe, so no manhole has been added.

5. *The applicant shall install a backflow preventer on the proposed private sewer lateral line before connecting into the City's combined sewer line per requirements listed in section 2 of the technical manual.*

Response: A note has been added indicating the required backflow preventer.

6. *If the storm drain connection into the Crescent Street combined sewer line is approved, a backflow preventer will also be required on the private storm drain line upstream of the connection into the City's system to prevent combined sewer lines from surcharging and contaminating the private stormwater management system.*

Response: A note has been added indicating the required backflow preventer.

DPW Transportation:

1. *Curb extensions are not suitable at this location. Reconfigure or eliminate the tree wells and coordinate with the Planning and Forestry staff to determine an alternate location for trees in order to meet the street tree requirements. Revise the plans to reflect these changes.*

Response: No curb extensions are proposed. The proposed curb line is in the same location as the existing curb line. The existing Crescent Street pavement width curb to curb is 27.6', and the proposed width remains 27.6'. The existing curb ends with radius corners into driveways along the eastern and western property lines. This configuration is maintained, but adjusted to line up with the new site driveway curb cut. The proposed curb utilizes 2' radius corner granite pieces ("bugs") for the site driveway and for the abutting driveway to the east. This is per the technical manual driveway apron detail. The curb and sidewalk may look like it is bumping out in plan view due to the existing abutting driveway locations we are matching into on either side of the site, but the curb line location remains in the same location as existing. Dimensions have been added to the plans.

2. *The applicant shall update the plans to label and or provide spot grades and slopes for the proposed sidewalks and driveway improvements at grade breaks.*

Response: Additional spot grades for the sidewalk have been added to the plan. The proposed sidewalk cross slope is 1.5%.

3. *The proposed brick sidewalk cross slope shall not exceed 2% at the property line. If the existing sidewalk grades are not compliant at the property line, then the limits of sidewalk replacement shall be extended to include a 5 foot minimum transition zone from the proposed 2% to the existing sidewalk slope.*

Response: The proposed sidewalk cross slope is 1.5% as labeled on the plans.

4. *The sidewalk and driveway shall be constructed in accordance with the City's Sidewalk and Driveway Apron Material Policy and the granite curb installed per the current City standards. The applicant shall update the plans and provide spot grades and slopes for the proposed sidewalk. The sidewalk material shall be continued through the driveway aprons at grade with the proposed sidewalk and not in excess of 2% cross-slope per the current City standards.*

Response: The sidewalk and driveway have been designed in accordance with the City's Sidewalk and Driveway Apron Material Policy. Additional notes and slope labels have been added to the plans for clarity.

5. *Improvements in the ROW shall be dimensions on the plan view sheets. For example ROW, street, lanes sidewalk, esplanade driveways (and other improvements) widths as well as when a width changes.*

Response: Additional notes and dimensions for ROW improvements have been added to the plans.

6. *Details that need to be included or referenced on the site plans are:*

- *Vertical Granite Curb*
- *Brick Sidewalk with Bituminous Base*
- *Brick Driveway Apron with Bituminous Base*

Response: These City details have been added to the plans.

7. *Consolidate proposed service trenches to have one final trench repair (where possible). All pavement cuts in the City ROW shall be repaired per the Minor Excavation Pavement Repair Details (prior to paving the finished surface) found in the Rules and Regulations for Excavation Activity (attached).*

Response: The service trenches have been consolidated. Details for pavement repair per the City's Technical Manual are included on our detail sheets. The pavement repair will encompass a larger squared off area surrounding all of the utility trenches.

Conclusion:

We believe that this response to comments and the revised civil plans satisfy the questions and comments raised by City staff. We look forward to continuing to work with the Planning Staff and Planning Board on this project. Please contact me at (207) 322-1223 or adrienne@terradyconsultants.com if you have questions or require additional information.

Sincerely,

TERRADYN CONSULTANTS, LLC



Adrienne Fine, P.E.
Senior Project Engineer



207.926.5111
 info@terradyndynconsultants.com
 www.terradyndynconsultants.com

October 31, 2023

Project #1948

Planning Division, City of Portland
 389 Congress Street, 4th Floor
 Portland, ME 04101

Response to Comments #2
15 Crescent Street

Dear: City of Portland Planning Division

Terradyn Consultants, LLC is pleased to submit this second response to comments letter for the Major Site Plan Application for the proposed development of 15 Crescent Street. The owner and applicant is Developers Collaborative. We received a second round of Site Plan Review comments from City Staff dated 9/28/23 and Design Review comments dated 9/29/23 and have prepared responses. We also received emailed comments from the City Arborist on 10/10/23. Comments are re-iterated in italics with responses below for clarity.

General Review Comments

Financial & Technical Capacity:

- 1. Applicant to provide a letter of financial and technical capacity to observe Major Site Plan application requirements.*

Response: A letter of financial capacity is attached to this response and has been separately uploaded to ePlan. Technical capacity is provided by the design team including Terradyn Consultants as the civil engineer, Ryan Senator Architecture as the architect, and Summit Geoengineering as the geotechnical engineer. The design team has also consulted with Ferguson Waterworks on the stormwater management and slope stabilization design.

Zoning:

- 1. Previous staff comment requested the applicant provide an accurate measurement of the site's grade, calculated from all 4 corners of the parcel. Upon further zoning compliance review, the proposed grade of each of the four corners of the building*

Pineland
 41 Campus Drive, Suite 301
 New Gloucester, ME 04260

Portland
 565 Congress Street, Suite 201
 Portland, ME 04101

Auburn
 95 Main Street, 2nd Floor
 Auburn, ME 04210

needs to be provided and shown on the site plan. Once this is determined, the average grade height needs to be included on the elevation plans.

Response: The proposed grade of each of the four building corners is now shown on the site plan. The grades are 122.37, 122.85, 122.68, and 112.60. Average grade is 120.13. This means that the height to roof edge beam at elevation 154.24 is 34.11'.

The average grade was previously calculated with a weighted average along the exterior perimeter of the proposed building, which resulted in an average grade of 121', which was shown on the architectural elevations in the initial submission.

2. *Based on the Applicant's calculation of average grade from four corners of the proposed building, the Applicant shall observe R-6 dimensional standard, LUC 14.7.3 to require a building setback of 10 feet from side property line for structures of 35 feet.*

Response: The building height from average grade to roof edge beam is 34.11'. The higher roof extending another 2' above this is beyond the setback area. A revised architectural section A3-0 with these elevations shown has been uploaded to ePlan.

3. *The applicant needs to show the landscaped open space areas on a plan to demonstrate how the number of 24.8% open space is being met.*

Response: Landscaped open space makes up approximately 1,004 SF of the 4,278 SF site, resulting in 23.5% landscaped open space. This was modified when the retaining wall design was updated to be wider, and the sidewalk was expanded into the landscaped areas in front of the building. The landscaped open space area is shown on the new landscape plan, L-1.0, that has been uploaded to ePlan.

Transportation Standards

Access and Circulation:

1. *The City's consulting Traffic Engineer is requesting turning templates to evaluate the vehicle maneuvering at the garage and uncovered parking spaces.*

Response: Turning templates were completed as requested and are included on a new sheet, C-8.2, that has been uploaded to ePlan.

Environmental Quality Standards

Landscape Preservation:

- 1. The Applicant is to provide tree species information and indicate any areas of vegetation being preserved in accordance with section 4.3.1 of the technical manual. For specific tree and significant vegetation preservation areas, please show protection measures in keeping with sections 4.3.2-4.3.7.*

Response: Tony Muench has been consulted as the project landscape architect. During a site visit he indicated that the existing trees on site, include the substantial and minor trees, are Norway Maples. The tree line shown on the existing conditions plan results from the largest on-site Norway Maples that are to be removed as part of this project. We have revised our plans to remove the proposed tree line and have added labels to the existing trees.

Due to the existing vegetation conditions, steep slope, and proposed development it is not possible to preserve all of the trees on site. A tree survey was completed in October 2023 and all of the existing trees both on and adjacent to the site are now shown on the existing conditions plan. The landscape architect has prepared a landscaping plan, L-1.0, indicating how to best revegetate the site and screen the northern property line.

Site Landscaping and Buffers:

- 1. The Applicant shows two street tree wells in site plan without specific species information. Please update with proposed tree species, but take note that due to over planting the city is discouraging maple species to promote more biodiversity and resilience to the tree canopy. Section 4, figure IV 1 in technical manual provides some examples of compliant / recommended cultivars (with the exception of listed maple species, due to over planting mentioned previously.)*

Response: The landscape architect has selected European hornbeam as the street trees, which are shown on the new landscape plan L-1.0 for the project.

- 2. No existing overhead powerlines are present to impair a mature street tree canopy establishment in front of the property, the applicant is strongly encouraged to provide increased soil volume to street tree locations shown on plan with expanded rooting area under sidewalk. This may include directing roots toward adjacent planting beds where appropriate, if not in conflict with utilities or structural needs of the building. Soil cells, structural soil, or other techniques would prove very beneficial to ensuring healthy street tree establishment, resulting in lowering maintenance and safety concerns from poor tree health that may arise from insufficient soil quality and volumes in a small tree well area. At a minimum, if a larger, more elongated open bed or*

esplanade can be established for street trees with proper soils, that should be pursued to ensure more soil is available than currently provided.

Response: We have elongated the tree wells to each be 12' long. Appropriate soils for the trees and plantings will be utilized in this area.

3. *Current proposal shows an overly tall amount of exposed concrete surface area on Congress Street side of property. Section 4.5.2 and 4.5.7 of the technical manual encourages parking areas and walls being screened or accompanied with landscaping. Applicant is encouraged to consider terracing to create potential planting beds for more effective plant material screening and reduce the scale and visual impact of a tall blank concrete wall from adjacent properties and viewshed from Congress street ROW.*

Response: It is not possible to terrace the retaining wall due to the height and proximity to the property lines. The wall will be concrete redi-rock type blocks in a vertical wall construction. We are proposing plantings on the wall with use of green screen due to the limited space at the base of the wall for planting trees & shrubs. We are also protecting as many trees as possible and proposing additional plantings behind the building and the wall. See the landscape plan L-1.0.

Water quality, Stormwater Management and Erosion Control:

1. *Can pyramat product be compatible with larger vegetation growth, like trees or shrubs within the matrix. If not, please explain level of on going maintenance that will be required / followed to ensure that non compatible vegetation will not "volunteer" or become established in matting areas that will compromise the system. If such plants ARE compatible with the product, provide a more detailed planting plan that gives consideration to more substantial woody stem species in keeping with sections 4.5.9, 4.5.10 and 4.7 of the technical manual.*

Response: Pyramat can be compatible with larger vegetation growth such as trees or shrubs. Trees and shrubs can be planted either before the pyramat, which would be cut around them, or they can be planted after the pyramat installation by cutting an x into the pyramat and pinning around the opening. The landscape architect has specified shrub type plantings to be installed in the area of pyramat. Please see L-1.0.

2. *Proposed slopes are greater than 50% gradient, and should incorporate further maintenance and management plan for effective establishment of pyramat 75 product and associated vegetation. Please confirm if irrigation will be utilized in establishment of seed mix. Erosion control is proposed on north side of slope, beneath a tall*

structure, and may require shade or heavy shade tolerant planting mixes for effective establishment.

Response: Shade tolerant seed mix and shade tolerant plantings are proposed on the northern side of the building and retaining wall, as selected by the landscape architect. Irrigation is recommended until 75% of vegetation has established and reached a height of at least 2". Attached is an installation guide for pyramat and the corresponding vegetation that will be included with the maintenance and management plan and the project specifications.

3. *Provide additional information on retaining wall design, including structural information on wall performance, materials, drainage, design and other information.*

Response: Summit Geoengineering Services has been contracted to complete retaining wall design. Full design details are typically not completed until a project receives site plan approval due to the costs associated with a full wall design. However, Bill Peterlein and Summit have provided a retaining wall cross section for the proposed type of wall, attached. The wall is a vertical concrete block retaining wall with geogrid reinforcing. The bottom of the wall is embedded 12" with an additional 12" deep crushed stone footing that will extend approximately 6" outside the wall footprint. This requires excavation approximately 2.5' outside of the face of the wall, which remains on the property to the north but is approximately 2' over the western property line into the abutting ROW. However, the bottom of the wall will only be 2.5' from the northern property line so it is not practical to plant trees along the northerly face of the wall. As mentioned in a previous response, we are proposing green screen on the wall to allow selected vining plants to grow up the face. This is shown on the proposed landscape plan prepared by Tony Muench. The need for easements is discussed elsewhere in this response letter.

Public Infrastructure & Community Safety Standards

Public Utilities:

1. *The wastewater capacity letter will need to include correct address – 15 Crescent Street.*

Response: We received the wastewater capacity authorization from the City dated 10/4/23 and have uploaded it to ePlan.

2. *The applicant to provide ability to serve letter from electrical utility provider.*

Response: The applicant has obtained an ability to serve letter from CMP, which is attached and has been uploaded to ePlan.

Site Design Standards

Massing, Ventilation and Wind Impact:

- 1. Abutting properties may be affected by retaining wall and grading, especially existing trees on abutting properties. Applicant should indicate proposed grade tie into existing grades at property boundaries. Any grading encroachments will need to be documented with a drainage and maintenance easement prepared.*

Response: A note has been added to the plans indicating that proposed grade tie into existing grades at the property boundaries. We have also added a note to stabilize the steep slopes across the property lines as necessary after construction.

The project landscape architect, Tony Muench, visited the site with Terradyn Consultants and we determined that all of the trees resulting in the tree canopy shown on the plans are on the property and to be removed as part of the project. There are no existing trees north of the property line on the abutting site. There are a few small trees west of the property line on the abutting site that may need to have a few small branches trimmed, but are not expected to be impacted by construction. We have added the nearby off site trees to the plans, and have labeled size and type of all of the trees. Tony Muench prepared diagrams and responses regarding the abutting trees to show that they will not be impacted by construction of the retaining walls.

The proposed retaining wall and the area proposed for construction/excavation does not cross the northerly property line onto the property owned by MH Realty LLC. No easements are necessary for construction. All stormwater is managed on the property with the level lip spreader, slope stabilization, and plantings.

The property directly west of the 15 Crescent Street site is a City ROW that connects from Crescent St to Congress St between 19 and 15 Crescent Street. The ROW is approximately 20' wide and contains a paved parking space accessed from Crescent Street adjacent to our site. Any impacts to the ground or vegetation that occur along the western property line would be within this ROW, and not on the abutting 19 Crescent Street property. The proposed retaining wall will require excavation approximately 2' into the ROW, but no construction access or activity will occur on 19 Crescent St.

Exterior Lighting:

1. *Applicant should specify 3000K color temperature to meet section 12.5.*

Response: The light color has been updated on the photometrics plan.

Noise and Vibration:

1. *The applicant is to provide a roof plan that indicates location of proposed HVAC and screening (if required) to buffer abutters from noise and visual impact.*

Response: A roof plan (A1-4) with locations of proposed HVAC has been added to the architectural plan set and uploaded to ePlan.

Cit Arborist Comments, 10/10/23:

The Applicant to identify the existing tree species throughout the property. The critical root zone (CRZ) is generally assumed to extend 1.5 ft for every inch of DBH, excavation and grade changes within the critical root zone should be minimal. The structural root zone (SRZ) is generally assumed to extend ½ ft for every inch of DBH and no excavation or grade changes should take place within the structural root zone.

Response: Terradyn Consultants has survey located all existing trees on and adjacent to the property and identified species and diameter. Tony Muench, LA, assisted the survey to ensure appropriate tree identification. Tony Muench prepared the Figures A & B (included with the LA responses) showing the critical root zone and structural root zone for the existing trees. He also indicated on these figures which trees are to be removed. The existing trees are shown on sheet C-3.0 with protection or demolition notes. Only trees to remain are shown on the other plan sheets. The CRZ is also shown on the grading plan and landscape plan.

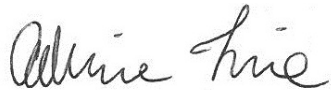
Questions 1 through 5 from the City Arborist's 10/10/23 email are answered by Tony Muench in the attached written response.

Conclusion:

We believe that this response to comments and the revised civil plans satisfy the questions and comments raised by City staff. We look forward to continuing to work with the Planning Staff and Planning Board on this project. Please contact me at (207) 322-1223 or adrienne@terradyconsultants.com if you have questions or require additional information.

Sincerely,

TERRADYN CONSULTANTS, LLC

A handwritten signature in cursive script, appearing to read "Adrienne Fine".

Adrienne Fine, P.E.
Senior Project Engineer

Enc.

1. Financial Capacity Letter
2. Steep Slope Maintenance & Management Plan w/ Pyramax Installation Guide
3. Geotechnical Wall Section
4. CMP Ability to Serve Letter
5. Landscape Architect Response & Figures

1 FINANCIAL CAPACITY LETTER



October 5, 2023

City of Portland
389 Congress Street
Portland, ME 04101

RE: Condo Project at 15 Crescent Street, Portland, Maine

To Whom It May Concern:

We have been working with Developers Collaborative and Kevin Bunker on their proposal to construct a 5-unit Condominium at 15 Crescent Street, Portland, Maine. Developers Collaborative is an established and valued customer of the Bank and has the financial capacity to complete this project. We are excited about their plans for 15 Crescent Street, Portland, Maine, and look forward to working with them in further support of the project.

Please feel free to contact me with any questions.

Sincerely,

A handwritten signature in blue ink, appearing to read "Matthew W. Early", with a stylized flourish at the end.

Matthew W. Early
Senior Vice President

MWE/JRS

2 STEEP SLOPE MAINTENANCE & MANAGEMENT PLAN

MAINTENANCE & MANAGEMENT PLAN OF STEEP SLOPES & VEGETATION
FOR:
CRESCENT STREET RESIDENCES
15 CRESCENT STREET
PORTLAND, MAINE

OWNER/RESPONSIBLE PARTY: Crescent Heights LLC
15 Crescent Street
Portland, ME 04102
(207) 772-7673

PREPARED BY: Terradyn Consultants, LLC
565 Congress Street, Suite 201
Portland, ME 04101
(207) 926-5111

INTRODUCTION:

The project site includes a ground slope greater than 50%. Regular inspection and maintenance of the slope, stabilization measures, and vegetation on the slope is crucial to the long-term stability of the site. The owner is responsible for regular inspection and maintenance of the steep slope and vegetation.

MAINTENANCE & MANAGEMENT TASKS:

The steep slope shall be stabilized by Pyramat 75 and planted with larger plants and erosion control shade tolerant seed mix. Below is a summary of each item that makes up the site's slope stabilization system and required tasks.

PYRAMAT 75 SLOPE REINFORCEMENT:

- Install Pyramat 75 per the attached installation & maintenance guidelines
- Install Pyramat 75 per detail on sheet C-5.2 in a "sandwich" configuration with loam both below and above the pyramat-75 fabric.
- Prepare seedbed by loosening 2-3" of soil above final grade. Apply seed per attached installation guide and detail on C-5.2. Seed shall be a shade tolerant erosion control seed mix.
- Irrigate to establish and maintain vegetation until 75% of vegetation has established and has reached a height of 2". Additional information about irrigation is included in the attached guide from the manufacturer.
- Install other shade tolerant plantings (trees & shrubs) per sheet L-1.0 either before the Pyramat is installed, or after by cutting an "X" into the Pyramat then pinning around the opening.
- To prevent volunteer tree/weed growth, routine mowing one to two times per year is recommended across the area reinforced with Pyramat.
- Additional maintenance information is included in the attached guide from the manufacturer.

GROUND COVER: SEED MIX

- Seed the reinforced ground surface with shade tolerant erosion control seed mix.
- Irrigate to establish and maintain vegetation until 75% of vegetation has established and reached a height of 2”.
- Mow grassed areas one to two times per year to prevent volunteer tree growth.

PLANTINGS ON STEEP SLOPE

- Install tree & shrub plantings on steep slope and around the retaining wall per L-1.0.
- Installation guidance for plantings in Pyramat 75 is include in the attached guide from the manufacturer.
- Install trees & shrubs either before the Pyramat 75 soil reinforcing, or after by cutting an “X” into the Pyramat then pinning around the opening.
- Maintain trees & shrubs as necessary to ensure healthy and well-established plants. Maintenance may include irrigation and pruning as recommended by a landscape professional.

Enc.

Armormax Slope Installation & Maintenance Guidelines



Thank you for purchasing ARMORMAX[®] for Erosion Control or Slope Stability by Propex Operating Company, LLC (Propex). This document provides installation and maintenance guidelines for ARMORMAX used as slope armoring to improve earthen slope resiliency and slope stability. ARMORMAX provides permanent erosion protection of an earthen slope, promotes vegetation, and improves slope stability, consists of two components:

- PYRAMAT[®] - High Performance Turf Reinforcement Mat (HPTRM)
- Engineered Earth Anchor (Anchor)

Temporary securing pins (pins) are used during installation to hold ARMORMAX in place while installing anchors. Pins also promote vegetation establishment keeping ARMORMAX in intimate contact with the soil.

ARMORMAX is an Engineered Earth Armoring Solution [™] with a unique design for each specific project. While Propex has made every effort to ensure general validity, this information should not be used for a specific application without independent professional examination and verification of its suitability, applicability, and accuracy. The information provided herein is for general information only, and is intended to present installation guidance. Project specific contract documents take precedence when pin and anchor placements are different than what is represented in this document. Depending upon the critical nature of the structure to be armored, work restrictions may be in place such as limiting work based on growing seasons, weather patterns, etc. Work should be performed under the provisions set forth for the specific project. Propex Engineering Services is available for support during installation to consult for solving constructability issues encountered in specific applications. Please feel free to contact our Engineering Services team at GeoEngineering@propexglobal.com.

BEFORE INSTALLATION BEGINS

- *Coordinate with a Propex Representative:* A pre-construction meeting is suggested with the construction team and a representative from Propex. This meeting should be scheduled by the contractor with at least a two week notice.
- *Gather the Tools Needed:* Tools that you will need to install ARMORMAX include a pair of industrial shears, tape measure, percussion hammer (sized appropriately for the anchors), ground rod driver compatible with the percussion hammer, drive steel compatible with the anchor, setting tool to set and load-lock the anchor, and wire/bolt cutters to cut the cable tendon of the anchor. If anchors will be load tested during construction, additional testing equipment may be necessary. Consult the "Anchor Load Test Manual" from Propex for further guidance. Available for purchase from Propex are drive steel, JackJaw[®] Setting Tools, wire cutters, and a gas powered anchor driver.
- *Determine how to Establish Vegetation:* The method of vegetation establishment should be determined prior to the start of installation.
- Different vegetation establishment methods require different orders of installation. Refer to *VEGETATION ESTABLISHMENT* for further guidance.

INSTALLATION OF ARMORMAX ON SLOPES

PREPARE THE SITE

It is recommended during all stages of site preparation that disturbed soils remain unprotected for not more than a single day. Depending on project size this may require progressive site preparation during installation.

1. Grade and compact the area on the slope where ARMORMAX will be installed. The slope surface should be uniform and smooth, having all rocks, clods, vegetation or other objects removed so that during ARMORMAX LAYDOWN, ARMORMAX comes in direct, intimate contact with the slope surface.
2. Whether placing new fill or addressing a sloughed slope, appropriate placement and compaction is critical for the long term performance of the slope. In order to promote continuity of the slope and improve overall stability, any loose soil placed should be keyed into the existing slope and compacted in horizontal lifts per the engineer of record. To ensure compaction at the face of the slope, it is common practice to over-build the slope face, compact in lifts, and then regrade or trim the slope to the final grade.



3. Prepare the area to be armored with ARMORMAX by loosening the topsoil to promote better vegetation establishment. This may be accomplished with a rotary tiller on slopes 3:1 or flatter. For slopes greater than 3:1, prepare topsoil in a safe manner.

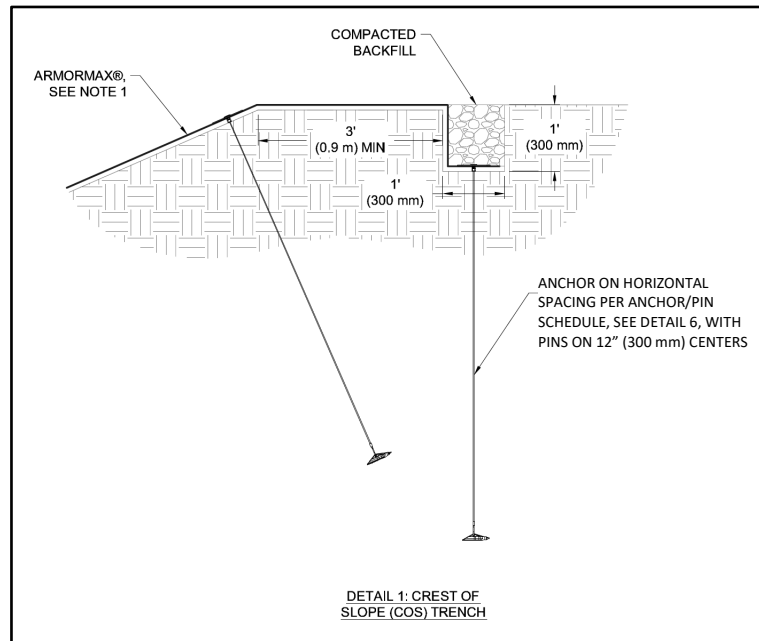


Figure 1: Crest of Slope (COS) Trench

4. Excavate a Crest of Slope (COS) trench 12 in x 12 in (300 mm x 300 mm) minimum at a distance of 3 ft (900 mm) from the crest of the slope. (Figure 1).
5. Excavate a Toe of Slope (TOS) trench 12 in x 12 in (300 mm x 300 mm) minimum at a minimum distance of 5 ft (1.5 m) from the toe of the slope. (Figure 2)
6. If seeding, refer to *VEGETATION ESTABLISHMENT* for additional considerations during site preparation.

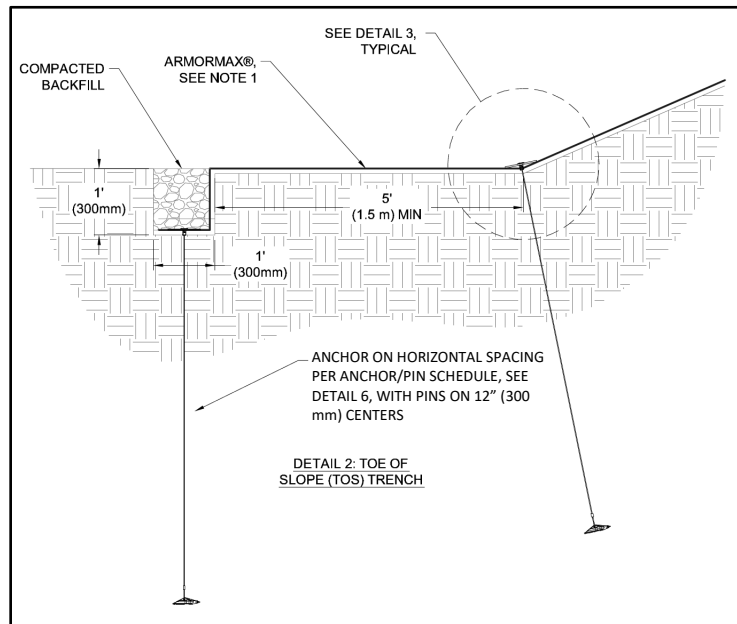


Figure 2: Toe of Slope (TOS) Trench

ARMORMAX LAYDOWN

1. Begin the **ARMORMAX LAYDOWN** process by starting with the downstream / downwind end of the site. To ensure proper anchoring of the overlapped areas the proceeding roll width must be laid out before the current roll width can be anchored with exception to the final roll width. For straight sections of a slope, ARMORMAX panel lengths should be long enough to construct COS and TOS trenches while also covering the surface of the slope being armored (Figure 12). Panel edges should rest approximately perpendicular to the slope center line. For best results, panels of ARMORMAX should be continuous and free from seams or roll end overlaps that are parallel to the centerline of the slope. Panel edge overlapping should follow a pattern of placing each proceeding panel's edge overtop the previous panel edge, shingling the panels in the direction of the water flow or prevailing wind.
2. Starting at the COS trench, lay ARMORMAX roll so that the roll ends points towards the crest of the slope (Figure 3), with a 3 inch (75 mm) overlap created at adjacent panel edge locations. Ensure that adjacent panel edges maintain a minimum 3 inch overlap during **ARMORMAX LAYDOWN** (Figure 8).

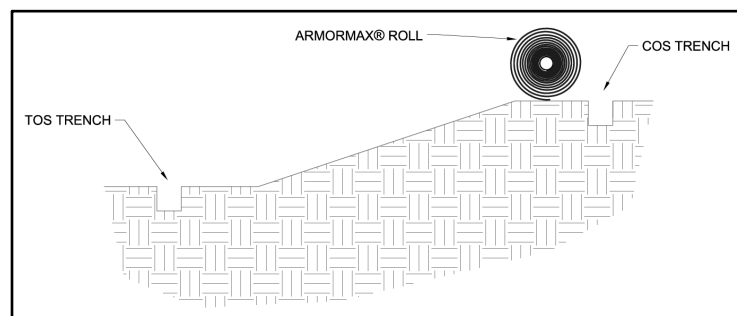


Figure 3: Crest of Slope (COS) Trench Alignment

3. Secure ARMORMAX with pins and Secondary anchors in the COS trench. Pins should be made of steel with a 0.20 in (5 mm) minimum diameter, having a 1.5 in (38mm) diameter washer at the head, and a length between 12 and 24 in (300-600 mm) with sufficient ground penetration to resist pullout (Figure 4). Longer pins may be required for looser soils. Heavier metal stakes may be required in rocky soils. Suggested placement of pins and Secondary anchors for the COS trench is

along the bottom of the trench with pins on 12 in (300 mm) centers in between Secondary anchors on 4 ft (1.2 m) centers. Secondary anchors should also be installed on panel edge overlaps in the COS trench.

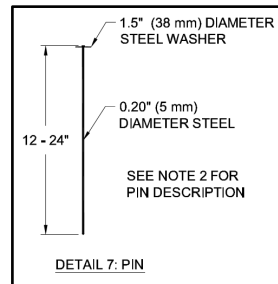


Figure 4: Securing Pin

4. Backfill and compact the COS trench in the location of the first ARMORMAX panel only (Figure 5).

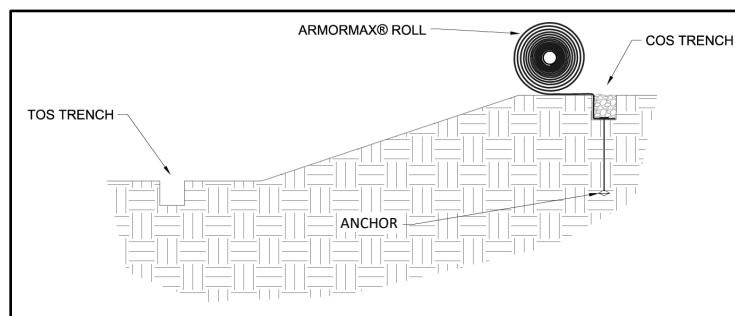


Figure 5: Crest of Slope (COS) Trench Placement

5. Unroll the ARMORMAX roll on the slope surface in the area to be armored (Figure 6). Ensure that ARMORMAX has intimate contact with the ground and all irregular surfaces beneath ARMORMAX are removed.

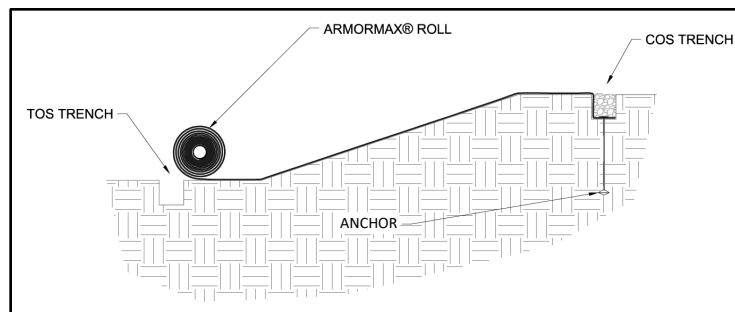


Figure 6: Placement of ARMORMAX across Slope

6. Secure ARMORMAX panels in place using pins, Primary anchors, and anchors across the slope surface according to the project's engineered design. Pin and anchor placement should reflect a staggered checkerboard pattern across the slope surface for best results (Figure 7 and Figure 8).
 - The leading edge of the first ARMORMAX panel should be secured on the Slope Armoring Edge (SAE) with pins on 12 in (300 mm) centers in between anchors on intervals based on the slope stability analysis.



- Roll edges shall be overlapped a minimum of 3 in (75 mm) with pins placed on 12 in (300 mm) centers in between anchors on intervals based on the slope stability analysis (Figure 8).
- Roll ends shall be overlapped a minimum of 6 in (150 mm) with upstream / upwind panel on top. Secure roll end overlaps with two rows of pins staggered 6 in (150 mm) apart on 12 in (300 mm) centers and with one row of anchors on intervals based on the slope stability analysis (Figure 9)
- For slope lengths greater than 45 ft (13.7 m), install simulated check slots. This method includes placing two rows of pins 12 in (300 mm) apart on 12 in (300 mm) centers and one row of anchors between the rows of pins on 4 ft (1.2 m) centers at 45 ft (13.7 m) maximum intervals or across the midpoint of the slope for slope lengths less than 60 ft (18.2 m) (Figure 10).
- At the break in slope interface towards the TOS, it is suggested that anchors be installed on intervals based on the slope stability analysis (Figure 11).

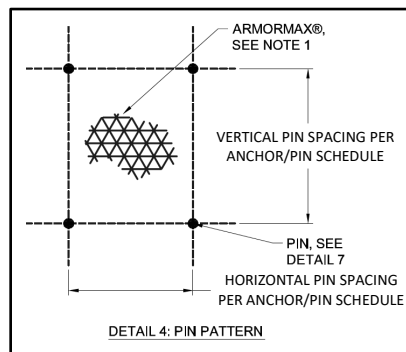


Figure 7: Example Pin Pattern

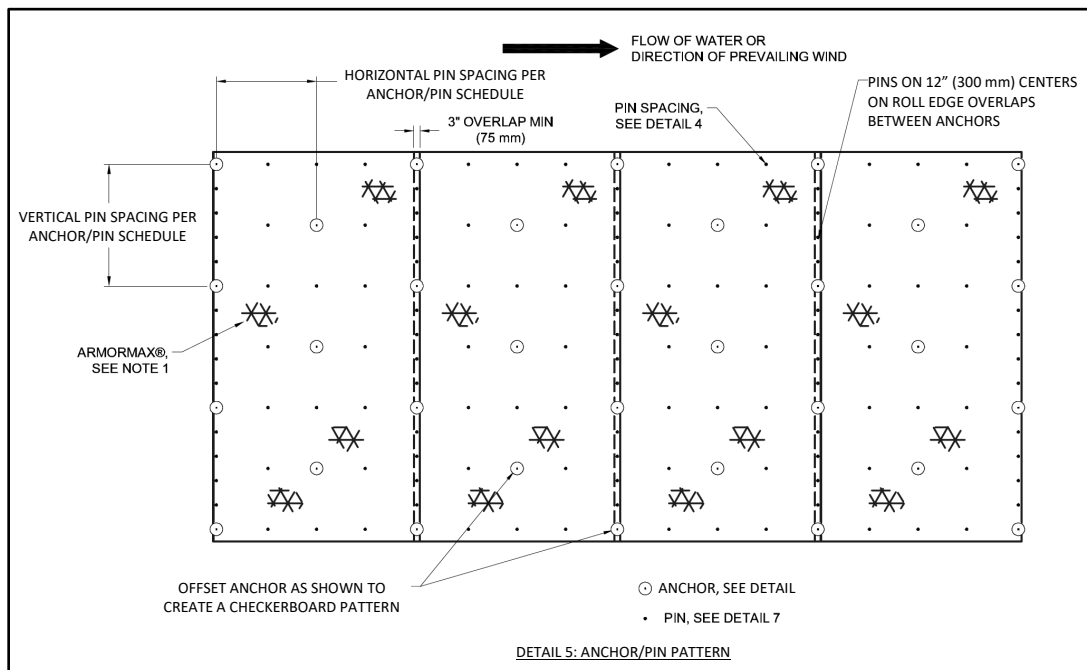


Figure 8: Example of Anchor Pattern - 0.5 Anchors/yd²

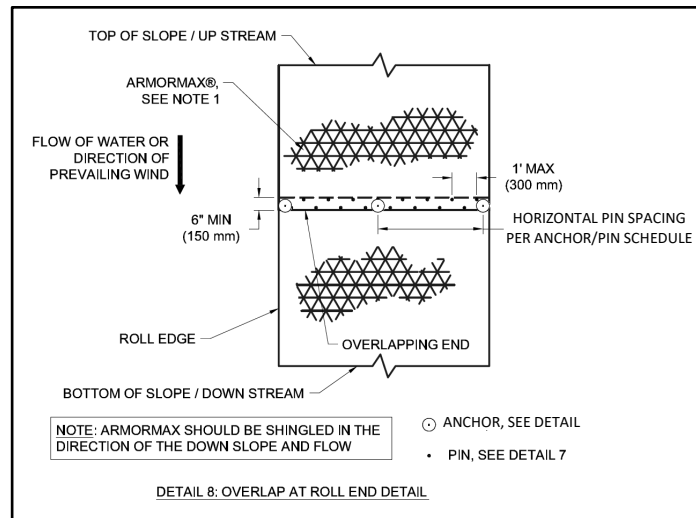


Figure 9: Roll End Overlap

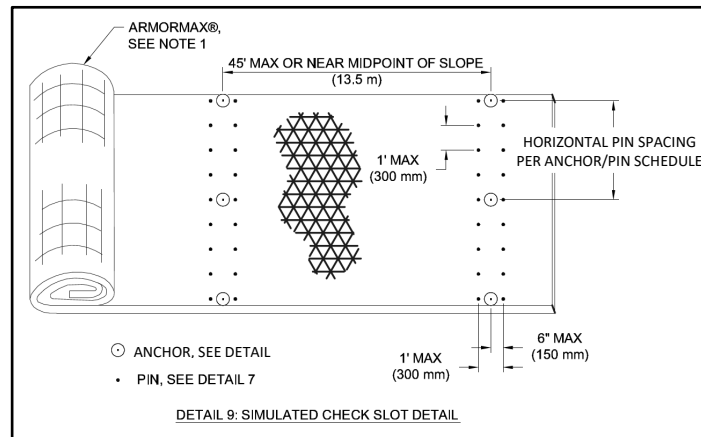


Figure 10: Simulated Check Slot

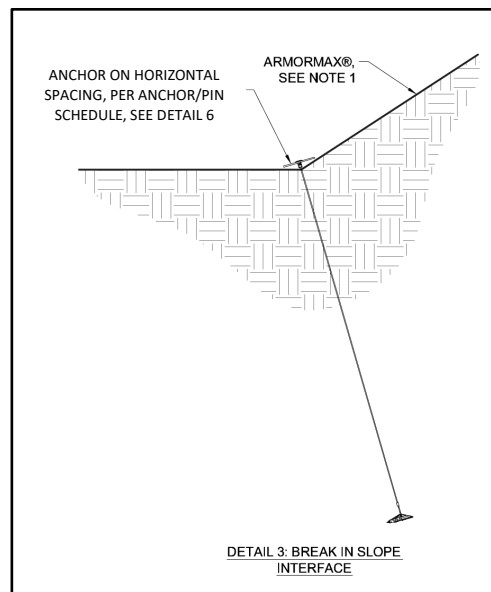


Figure 11: Break in Slope Interface

7. Secure ARMORMAX with pins and anchors in the TOS trench. Suggested placement of pins and anchors for the TOS trench is along the bottom of the trench with pins on 12 in (300 mm) centers in between anchors on 4 ft (1.2 m) centers (Figure 12).

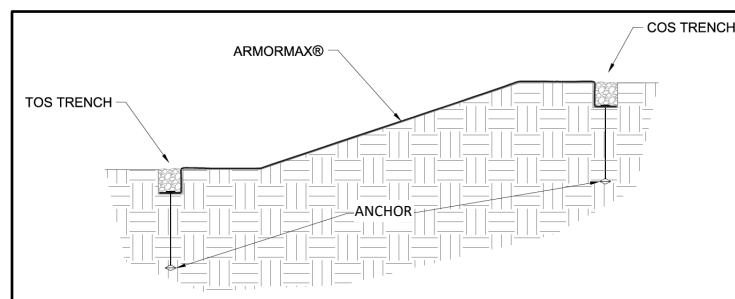


Figure 12: Crest of Slope (COS) Trench and Toe of Slope (TOS) Trench Complete

8. Backfill and compact the TOS trench. (Figure 12)
9. Continue to work down the length of the slope by repeating steps 1 through 8 overlapping each adjacent ARMORMAX panel by 3 inches (75 mm) (Figure 8). The last ARMORMAX panel should terminate on the Slope Armoring Edge (SAE) with pins on 12 in (300 mm) centers in between anchors on intervals based on the slope stability analysis. At a minimum, ARMORMAX panels should be pinned entirely across the slope surface, pins and anchors should be installed in the trenches, and the trenches should be backfilled and compacted at the end of each day to minimize rework in the case of a major rain event. Specific project conditions may warrant further evaluation of installation order for ease. An example elevation view (Figure 13) of a slope armored with ARMORMAX can be seen below for overall reference. Consult Propex Engineering Services at (800) 621-1273 with any questions that you may have.

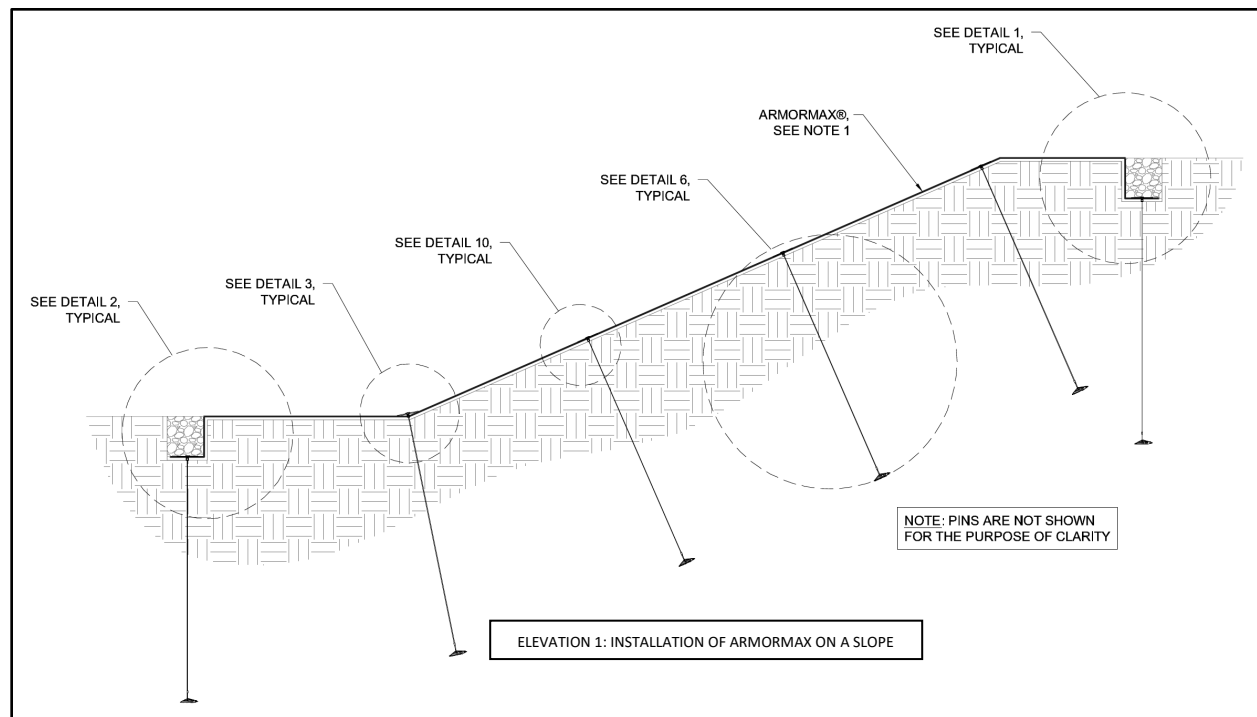


Figure 13: Completed Slope Isometric View

INSTALL ANCHORS

The ARMORMAX anchor typically consists of an anchor head, a flexible cable tendon, and a load bearing plate. For quality control purposes and warranty claims, anchors should be delivered to the jobsite fully assembled and ready for installation.

Anchors are to be installed in locations specified for the project, and are typically installed in conjunction with ARMORMAX LAYDOWN. There are several options available from Propex for different types of anchors. For optimal performance with the greatest risk reduction, it is important to select the proper anchor and perform the installation in accordance with the pattern designed for required resiliency and long term durability of the slope. Understanding the mechanics behind installing the anchor component of ARMORMAX will result in a quality ARMORMAX installation.

TYPE B1 & B2 ANCHOR

The installation of either Type B1 or Type B2 Anchor (Figure 14) is described below. The tools that you will need are a percussion hammer, a ground rod driver and drive steel compatible with the anchor and percussion hammer, a JackJaw setting tool, and wire cutters.

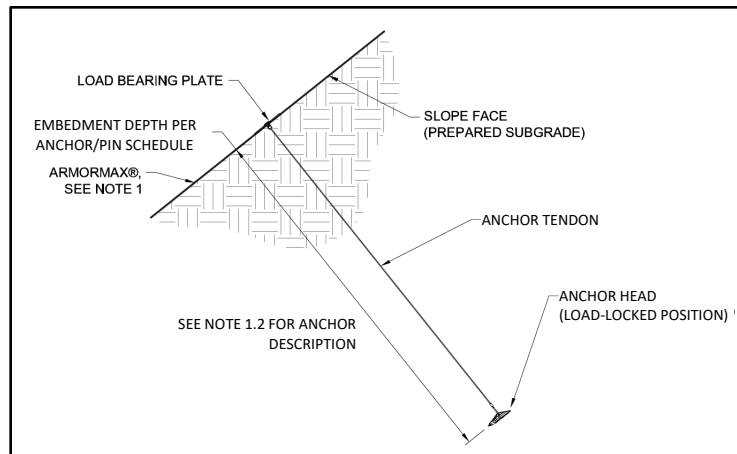


Figure 14: Anchor Detail

1. Use one piece drive steel or assemble segmental drive steel to the appropriate length in order to drive the anchor to the specified embedment depth.
2. Insert the tapered end of the drive steel into the hollow cavity of the anchor head. Position the anchor head/ drive steel tip above the ground at the drive location (Figure 15 and Figure 16).

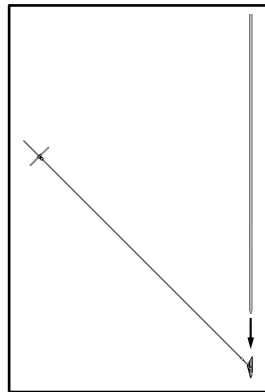


Figure 15: Insert Drive Steel into Anchor

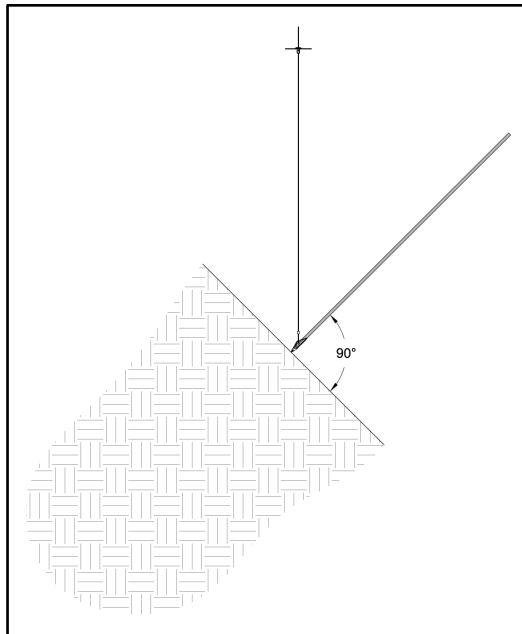


Figure 16: Position Anchor Head / Drive Steel Tip

3. Using a percussion hammer, guide the drive steel into the ground perpendicular to the slope surface at a smooth pace. Continue driving until the desired embedment depth is reached (Figure 17).

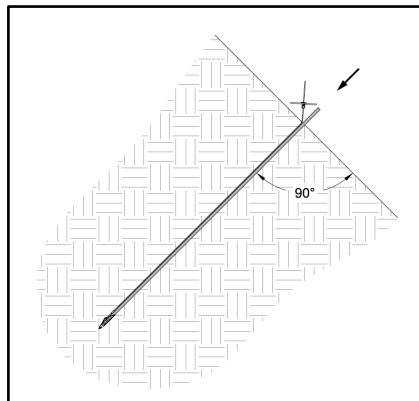


Figure 17: Drive Steel to Drive the Anchor into the Ground

4. Remove the drive steel from the ground. (Figure 18) Depending on soil conditions, this may require the use of a setting tool or leverage device.

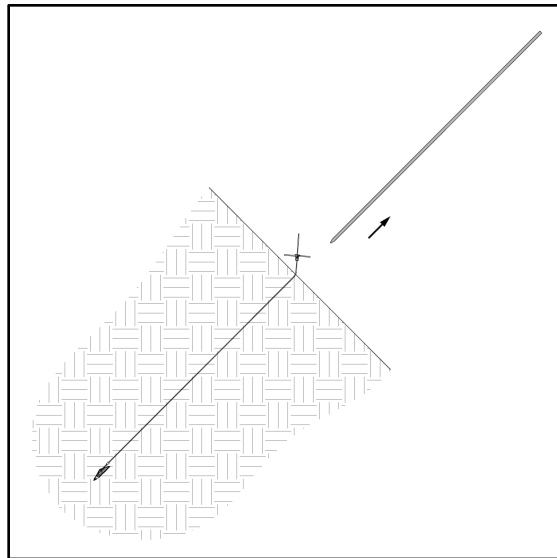


Figure 18: Remove Drive Steel from Ground

5. Slide the load bearing plate down the anchor tendon towards the slope surface using your hands (Figure 19).

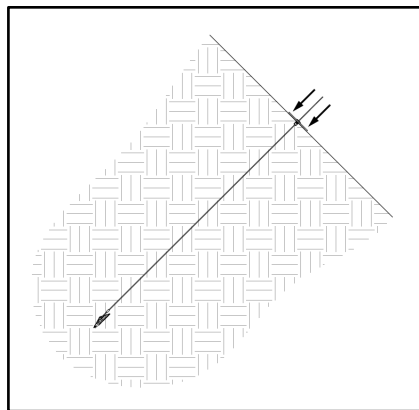


Figure 19: Slide Plate

6. Once the plate is close to the slope surface, place the JackJaw Setting Tool on the anchor plate and place the top of the anchor tendon into the grips, keeping the anchor tendon perpendicular to the slope surface (Figure 20). With gentle force, slowly start to press down on the JackJaw lever – towards the slope surface - causing the anchor tendon to start to move out of the ground (displace). During this step, the anchor head will turn in the ground – a process known as “anchor setting”. The change in embedment depth to set a Type B1 Anchor can be up to 6 inches and up to 8 inches for Type B2 depending on soil conditions. When the anchor is set, there will be a noticeable change in the amount of force needed to displace the anchor any further. This is a good indication that the anchor head is now perpendicular to the anchor tendon and the anchor is ready to be load-locked.

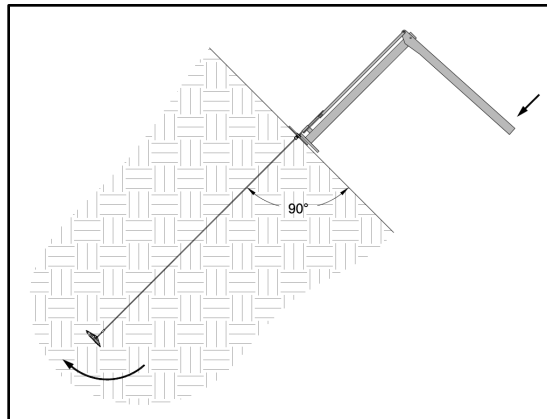


Figure 20: Use JackJaw Setting Tool to Set Anchor

7. To load-lock an anchor, continue to apply tension to the anchor tendon using the JackJaw Setting Tool creating a slight depression on the slope surface. Visually, anchors across ARMORMAX will look similar to buttons across a mattress top when anchors have been properly load-locked.
8. Conduct anchor load tests when required for quality assurance during installation. Refer to the document entitled “Anchor Load Test Manual” by Propex for further details.
9. Once anchors have been load-locked, cut off the excess anchor tendon flush to the plate at the slope surface using wire cutters (Figure 21 and Figure 22).

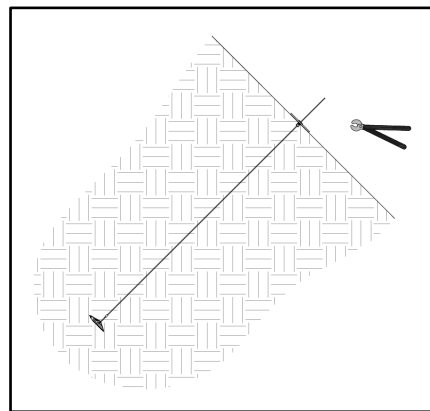


Figure 21: Trim Extra Cable Flush to Plate

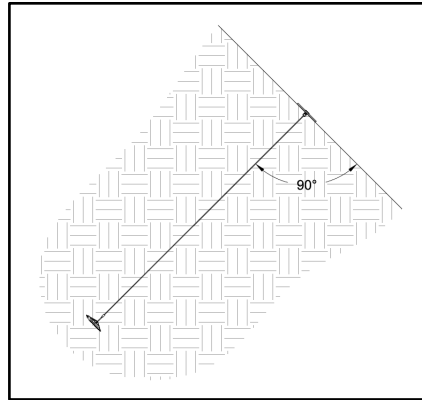


Figure 22: Complete Anchor Installation

VEGETATION ESTABLISHMENT

Vegetation can be established with ARMORMAX by broadcast seeding, hydraulic seed application (hydroseeding), or sodding. Seed application rate, seed type, sod type, and irrigation rate should be selected based on local or site specific knowledge and time of year. For best results, consider having a site specific soil test performed to help determine what soil amendments, such as lime and fertilizer, need to be incorporated into the soil to promote healthy vegetation.

Irrigate as necessary to establish and maintain vegetation until 75% of vegetation has established and has reached a height of 2 inches. Frequent, light irrigation will need to be applied to seeded areas if natural rain events have not occurred within two weeks of seeding. While watering seeded areas use a fine spray to prevent erosion of seeds or soil. Do not over irrigate. Proper irrigation guidance is provided under the Maintenance portion of this document.

PROJECT SPECIFIC CONSIDERATIONS

1. For applications that require special transitions (i.e. connections to riprap, concrete, T-walls, etc.), refer to the project specific drawings or consult with Propex Engineering Services at (800) 621-1273.
2. A deeper terminal trench and/or hard armoring may be required when slopes have severe scour potential at the toe location.
3. For installing ARMORMAX panels around curved sections of a slope, trim panels at an angle so that no more than two layers of ARMORMAX overlap at any point in time. Additional pins and anchors may be needed to secure panel edges towards the toe of the slope depending upon the radius of the curved slope. Install pins or anchors as necessary to securely fasten ARMORMAX to the ground.
4. Allowable Vehicle Traffic:
 - A. If using equipment on ARMORMAX, it should be of the rubber-tired type and should avoid sharp turns. Tracked equipment is not permitted to drive over the ARMORMAX without vegetation at any time.
 - B. Avoid any traffic over ARMORMAX if loose or wet soil conditions exist.
5. Disturbed areas should be reseeded. If ruts or depressions develop for any reason, rework soil until smooth and reseed such areas.



SHORT-TERM AND LONG-TERM MAINTENANCE OF ARMORMAX

The purpose of this section is to provide some general guidelines for performing short-term and long-term maintenance of ARMORMAX with respect to maintaining vegetation reinforced with ARMORMAX, and patching of ARMORMAX (in the event it needs to be removed or replaced). These procedures are to be considered minimum guidelines for proper maintenance, and further maintenance techniques may be appropriate considering local practices and procedures.

ARMORMAX PROTECTED SLOPES

For ARMORMAX to be most effective, it is important to ensure that it is properly maintained both during construction and after construction. Identifying trouble areas is easy with ARMORMAX, and it can make identifying potential threats much simpler and manageable. Look for areas with sparse, dying, or no vegetation as these are obvious signs that ARMORMAX is losing intimate contact with the slope surface. If loss of ground surface occurs, ARMORMAX will need to be removed and reinstalled as described in *PATCHING AND REPAIRS* section after the eroded area is backfilled with compacted soil that is similar to material of the slope. After ARMORMAX is reinstalled, re-establish vegetation on the newly installed ARMORMAX and disturbed areas. Monitor the sites to determine if frequent watering may be required to establish vegetation.

To minimize exposure to unwanted maintenance and repair, ARMORMAX armored slopes should be free of unauthorized vehicular traffic. Routine maintenance and slope inspections should be performed with rubber tired vehicles. Tracked equipment such as skid steers, excavators, or dozers should only be allowed to traffic over ARMORMAX in times of emergency after vegetation establishment is complete. Failure to control unauthorized traffic can result in ARMORMAX being damaged resulting in erosion below ARMORMAX during storm events. In addition, routine mowing maintenance should be used to keep the protected area free of unwanted brush, saplings, and trees. Selective herbicides that target only the unwanted plants can be used as long as the vegetation established with ARMORMAX is not impaired. Failure to control the sapling and tree growth can result in the trees being uprooted during a flood.

MAINTAINING VEGETATION

Good vegetative cover will ensure maximum performance of ARMORMAX. Vegetative cover care starts before a project is complete and is ongoing until all ARMORMAX is installed. Vegetative cover should be given every opportunity to grow and establish well. This will require that a contractor periodically fertilize, water, and mow the grasses as needed until a project is complete in the short-term, with the owner of the slope fulfilling the maintenance of the slope in a similar fashion for the long-term. For the entire lifecycle of ARMORMAX, every effort must be made to prevent unauthorized encroachments, grazing, vehicle traffic, the misuse of chemicals, or burning during inappropriate seasons.

1. After the installation of vegetation is complete, immediately water and soak the entire area using a fine spray to prevent erosion and loss of seeds. A suggested amount of water is identified below. Prior to installation if using sod, the sod pads in storage should be kept moist at all times and not stored for more than 24 hours from site arrival to installation. Warmer weather will necessitate more frequent applications than listed below.
 - A. For each reach/segment of installed vegetation, watering shall be conducted immediately after each installation or the day's work.
 - B. For initial vegetation establishment, water vegetation in a manner consistent with best practices for vegetation type and location.
 - C. Establish a watering schedule and follow until vegetation is well established and will thrive in the absence of manual watering.
 - D. Avoid excessive application of water, so that surface runoff does not occur. Runoff should be prohibited. However, additional watering may be required for repaired or damaged areas.
2. Fertilizer should be applied as needed to address any nutrient deficiencies revealed in soil testing.



3. Implement best practices for mowing over ARMORMAX. While ARMORMAX is designed to withstand non-hydraulic stresses such as mowing, there are procedures to minimize exposure to unwanted damage.
 - A. Immediately after installation, signage and post shall be installed stating that "Vehicles and Pedestrians are Prohibited from Access" on the slopes and the newly installed vegetation. Signage shall be posted every 1,500 lineal feet.
 - B. Vegetated areas should be mowed to a height no less than 6 inches and no greater than 12 inches from natural ground after a period of 60 days of growth. The excessive grass clippings created from mowing shall be evenly spread on the slope section outside of the armored area. Periodic and final grass mowing should be performed until final inspection and acceptance of slope work. Monitor the vegetated areas throughout winter months and generate reports as needed, noting any issues that should be addressed. Minimum mowing heights will depend on the vegetation density and should be as follows:
 - i. 6" with 0 – 30% vegetation establishment
 - ii. 4" with 30 – 70% vegetation establishment
 - iii. 3" with 70 – 100% vegetation establishment
 - C. To prevent damage to the newly established vegetation, the mowing tractor should be fitted with 3-rib agriculture tires. Note that tractors with 8-foot flail mowers provide best results. Tractors with 15-foot brush hogs should avoid sharp turns up the slope to prevent damage to vegetation.
 - D. Mowing should not take place for a minimum of 48 hours after a rainfall event of 2 inches or more to minimize the potential for rutting and/or damage to the slope surface. Maintenance mowing of the slope should be done on a consistent basis to prevent vegetation growing to more than 3 feet in height. This will minimize thatch thickness and potential damage to ARMORMAX. If turn-around pads are present, operate mowing equipment utilizing the turn-around pads to the fullest extent. The mowing blade height over ARMORMAX should be a minimum of 8 inches. However, should vegetation grow to more than 3 feet in height, the mowing blade height for the condition should be a minimum of 12 inches.
4. Some special circumstances may exist. When mowing the crown of a slope with a crown or crest equal to or exceeding 20%, it should be mowed with an articulating arm mower to minimize the potential for the mower blades to catch ARMORMAX at the slope surface. The articulating arm mower should be level on the surface with the articulating arm extending over the crown. **Pay close attention to areas where the slope changes.** The mower blades should be set at a minimum height of 8 inches. If ARMORMAX is damaged by the mowing blades at any time, mowing should stop immediately and further direction should be obtained to continue activity. Repair the damaged area as described in the *PATCHING AND REPAIRS* section below.
5. ARMORMAX protected slopes are not as susceptible to animal burrowing due the tenacity of the ARMORMAX; however, inspections to detect the presence of burrowing animal activity are generally most effective immediately after the slope has been mowed. Animal burrows that are identified should be thoroughly excavated and inspected, backfilled with compacted soil that is similar to material of the slope, and vegetation re-established. This will avoid the possibility of water piping through unfilled portions of the burrows. Should ARMORMAX be damaged, it is to be repaired as described *PATCHING AND REPAIRS* section below.

PATCHING AND REPAIRS

ARMORMAX may require localized repair at times. For emergency repairs, an adequate supply of ARMORMAX should be maintained in inventory with the necessary tools to install. This will allow for a timely, initial repair of the system.

1. In order to identify areas in need of repair, the site should be patrolled immediately after mowing and after rain events of 2 inches or more. When patrolling look for areas of sparse vegetation, exposed edges of ARMORMAX, and areas where direct contact between ARMORMAX and the slope surface is compromised. ARMORMAX should be rated as *Acceptable*, *Minimally Acceptable*, or *Unacceptable* during inspection.



- A. *Acceptable (A)* - The rated area is in satisfactory, acceptable condition, and will function as designed and intended during the rain event. ARMORMAX has no exposed edges, is installed tightly by maintaining direct contact to the slope surface with no rilling beneath, and has over 90% vegetation cover. There is no noticeable damage present.
 - B. *Minimally Acceptable (M)* - The rated area has a minor deficiency that needs to be corrected. The minor deficiency will not seriously impair the functioning of the area during the next rain event; however, the overall reliability of the project will be lowered because of the minor deficiency. ARMORMAX has 75% vegetation cover with un-vegetated patches as large as one square yard. Edges of ARMORMAX are exposed with noticeable damage. Minimal erosion has occurred underneath ARMORMAX.
 - C. *Unacceptable (U)* - The rated area is unsatisfactory. The deficiency is so serious that the area will not adequately function in the next rain event. ARMORMAX has been physically torn, ripped, or lifted from the slope surface. Less than 75% vegetation cover is present with un-vegetated patches being greater than 1 square yard, and there is evidence that erosion is occurring beneath ARMORMAX.
2. Repair any raised or exposed edges of ARMORMAX by driving existing and additional pins or anchors along the edges as necessary to securely fasten to the ground. Inspect areas where the vegetation is not growing on top of ARMORMAX. Many times this is an indicator that ARMORMAX has lost contact with the ground beneath. Check for voids beneath ARMORMAX and fill any holes, gullies, etc. with compacted fill material if possible. Replace ARMORMAX as described below.
 3. To repair ARMORMAX, cut out and remove damaged areas in a square configuration a minimum size of 2 ft by 2 ft. Remove all vegetation and debris atop of ARMORMAX. Loosen the top 1 to 2 in of soil in the patch area then seed. The subgrade of area to be patched shall be prepared to be smooth and uniform and transition smoothly into the in-situ area. Cut a square ARMORMAX patch a minimum of 12 in greater than the damaged area for all four sides of the patch. Overlap the patch area in all directions a minimum of 12 in. The patch overlaps shall be tucked under the existing damaged ARMORMAX material (Figure 23 and Figure 24).

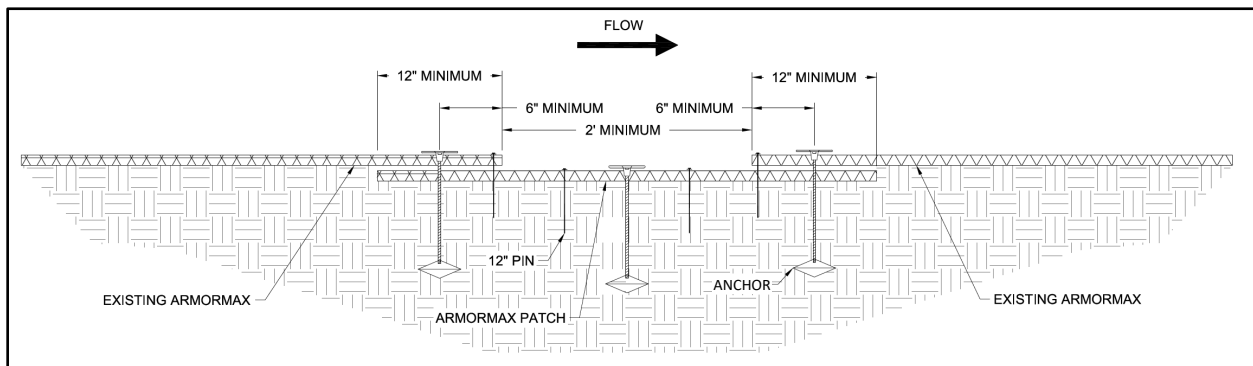


Figure 23: ARMORMAX Patch Cross Section

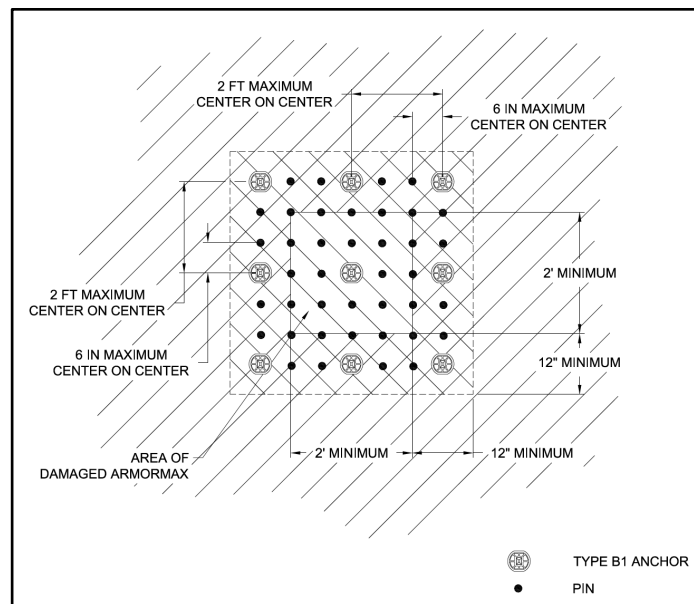


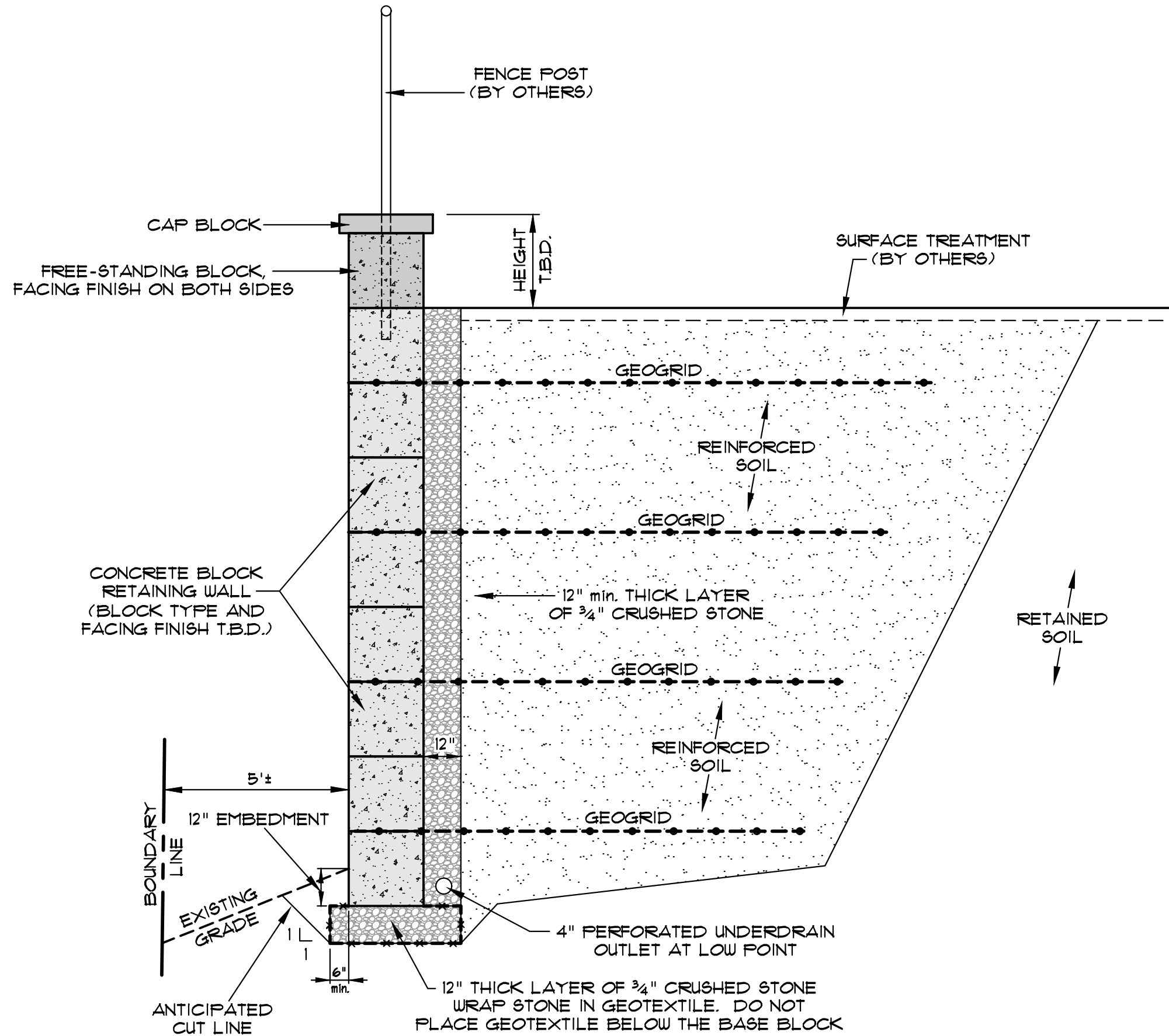
Figure 24: ARMORMAX Patch Plan View

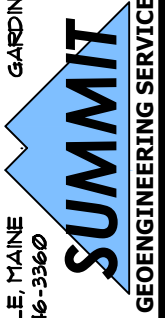
4. Install anchors on 2 ft (600 mm) (max) centers, and pins on 6 in (150 mm) (max) centers. For larger areas of damage, anchors should be installed to match existing anchor pattern and type. Once ARMORMAX is in place, vegetate per project specifications.

SUMMARY

Maintenance should consist of watering and weeding, repair of all erosion, and any re-seeding as necessary to establish a uniform stand of vegetation during construction and beyond. A minimum of 70% of the armored area should be covered with no bare or dead spots greater than 10 ft² (1 m²). Establishing vegetation should not be mowed prior to 70% vegetative density and a minimum grass growth of 4 in (100 mm). Throughout the duration of the project, the contractor should be responsible for mowing to facilitate growth and should not let the vegetation in the armored areas exceed 18 in (450 mm). In addition, the Contractor should water all grassed areas as often as necessary to establish satisfactory growth and to maintain its growth throughout the duration of the project. After the project is complete, it is the responsibility of the Owner to maintain and upkeep all ARMORMAX installed areas for long term performance and best results as described herein for superior slope armoring.

3 GEOTECHNICAL WALL SECTION



PROJECT: CRESCENT STREET RESIDENCES PORTLAND, MAINE		CLIENT: DC MANAGEMENT	
TITLE: GENERIC RETAINING WALL CROSS SECTION	NOT TO SCALE		DATE: OCTOBER 13, 2023
	DRAIN BY: KRF		APPR BY: WMP
OFFICE: 210 MAINE AVENUE FARMINGDALE, MAINE TEL: (207) 446-3360			
MAIL: P.O. BOX 515 GARDNER, ME 04345		PROJ. #: 20159.1	
FIGURE: 1			

4 CMP ABILITY TO SERVE LETTER



Josh Trombley

josh@dcmaine.com

RE: 15 Crescent St

Portland, ME.

Letter of Ability to Serve Request

SAP **TBD**

Project Description:

Good morning Josh,

CMP has the ability to serve the proposed project in accordance with our CMP Handbook (web link below). We can provide you the desired pad or pole mounted transformers per your request and city approval, in accordance with our CMP Handbook of Standard Requirements. If you have any questions on the process, or need help in completion of the documents, please contact CMP at 800-565-3181.

Here is our typical process for getting your three phase or CT rated single phase service installed. If you have any questions, please let us know. The underlined links will redirect you to the appropriate site for additional information.

Service Milestones for Three Phase Services and CT Rated Single Phase Services. There are additional requirements for primary metered Solar Service Installations listed in the Chapter 324 Interconnections section below. Please refer to [CMP Installation Checklists](#) for other installations.

- Call 800-750-4000 option 4 to establish a new account (if needed) and an SAP work order. Please provide both of these to me.
- Submit Load information. Please complete the attached EDET (excel file) using load information. Please complete this and email back to me. If the loads are over 500 kw, more in depth load studies may be required with our Distribution Planning and Transmission Planning Departments. Be advised that these will involve more detailed load information, a load study

agreement (signed contract), as well as other items. This additional study process may add up to two additional months to completion of the job.

- Submit the easement information worksheet, including where any CMP structures may be on ANY private property (Poles, Wires, Anchors). You are responsible for obtaining all information for all required easements. Please complete this form and either email or fax back to me.
- Submit any electronic drawings (PDF (preferred) or DWG files) of the site layout and proposed electrical connections.
- For Primary Metered installations (including PV), please have the access road in for pole staking.
- Preliminary meetings with CMP Advisor and Engineer to determine details of job (I will need to schedule with your electrician/contractor-please let me know who this is)
- Field planner design appointment scheduled once the preliminary information is complete. This will allow us to cost out the job and develop a CMP Invoice. The invoice is typically generated 5-6 weeks after the design appointment. This expires after 90 days from the invoice date.
- Submit completed W9 so that your bill can be properly processed. This is a new CMP process.
- CMP submits invoice to the customer for payment (typically via email). Payment received from customer.
- Easements (based on easement information worksheet) sent out, signed and originals returned to CMP.
- Job scheduled for completion after the electrical inspection has been received.

This process can take several months, depending upon several factors including transformer or materials delivery, return of completed paperwork, and other jobs in the system that may be ahead of yours. In addition, contact with the other utilities, including telephone and cable, should be commenced as soon as practical. They may have additional work or charges in addition to the CMP work required to bring your project on line.

As you may be aware, there are global supply chain issues impacting the utility industry. CMP is closely monitoring and managing their inventory in order to serve our customers. Larger padmount transformers may not be readily available for the date that you will need to be energized. Please consider this as part of your construction plan. The energy service advisor will continue to work closely with you and let you know as soon as the transformer becomes available. Should you have any questions or concerns throughout this process, please do not hesitate to contact your ESA directly at the number or email provided.

Please complete the attached forms (the specific instructions are on each form) and email them back to me at your earliest convenience.

For your convenience, here is a link to the CMP Website which contains our Handbook with details on most service requirements: [CMP Handbook of Standard Requirements](#) An additional resource is our Distribution Construction Standards: CMP Distribution Construction Standards [CMP Distribution Construction Standards](#).

You will be responsible for installing the customer connections, conduits, and metering in accordance with the [CMP Handbook of Standard Requirements](#) The transformer will be sized based on your submitted load sheets.

Your deposit amount will be typically based on an estimated two month bill, calculated from your completed load sheet unless otherwise determined by CMP.

In addition, we have recently added on an online map that shows single phase and three phase power locations within CMP. Here is that link: [CMP ArcGIS Information](#)

Metering:

All metering (including locations) must be preapproved by CMP. If you have any questions, please consult the [CMP Handbook of Standard Requirements](#)

Chapter 324 Interconnections:

Please be advised that if you plan to install solar/wind/hydro generation, you must complete an application under the MPUC mandated Chapter 324 Interconnection Standards. If you go to [Chapter 324 Interconnection Standards](#) and follow the instructions for the Small Generator Interconnection Procedures, CMP can do this work in parallel to your service request that will be handled by me. If your project is under 660 KW you will be able to have a Customer Net Energy Billing contract. Information concerning Customer Net Energy Billing can be accessed thru the Chapter 324 website or by clicking here: [Net Energy Billing](#)

Reallocation/Line Extensions:

Recently, changes were made to the three-phase construction policy, which require CMP to reallocate construction costs paid by customers. If applicable, those projects identified as “developments” do not qualify for reallocation of funds. Please see this document at our website for details about the reallocation conditions. Any reallocation charges will be specifically denoted on your invoice. The website address for this is: [PolyphaseLineExtension](#).

This line extension will be part of Central Maine Power’s distribution system. In the event the property served under this Agreement is sold or otherwise conveyed, all rights and obligations of the Agreement shall stay with the property. Please note that if you rent or lease this property to another and you want to receive the reimbursement payments, you must make special arrangements with the Central Maine Power Company. Otherwise, any reimbursement payments will be sent to the “Customer” taking service at the service location.

Electricity Supplier Information:

Central Maine Power Company (CMP) will provide your facility with electric delivery service. If you don’t already have a provider, you will need to make arrangements with a competitive electricity provider in order to receive electricity supply for your facility. In the event you fail to choose a competitive electricity provider, you will receive Standard Offer service arranged by the Maine Public Utilities Commission. If you wish to be served by a competitive electricity provider immediately upon establishment of delivery service, you must arrange for this service directly through your chosen competitive electricity provider, who must enroll your account no later than 5 PM on the business day prior initiation of delivery service by CMP. An up-to-date list of competitive suppliers can be found at the:

1. Maine Public Utilities Commission (MPUC) web site- [Maine PUC](#)
2. By calling the MPUC at (207) 287-3831

Attachments:

Excel Load Sheet (EDET)
Easement Worksheet and Sample Standard Easement
W9

Please do not hesitate to reach out with any questions.

Kind Regards,
Kathy

Katherine Dumont

Energy Service Specialist

162 Canco Rd

Portland, ME 04103

207-242-5744

katherine.dumont@cmpco.com

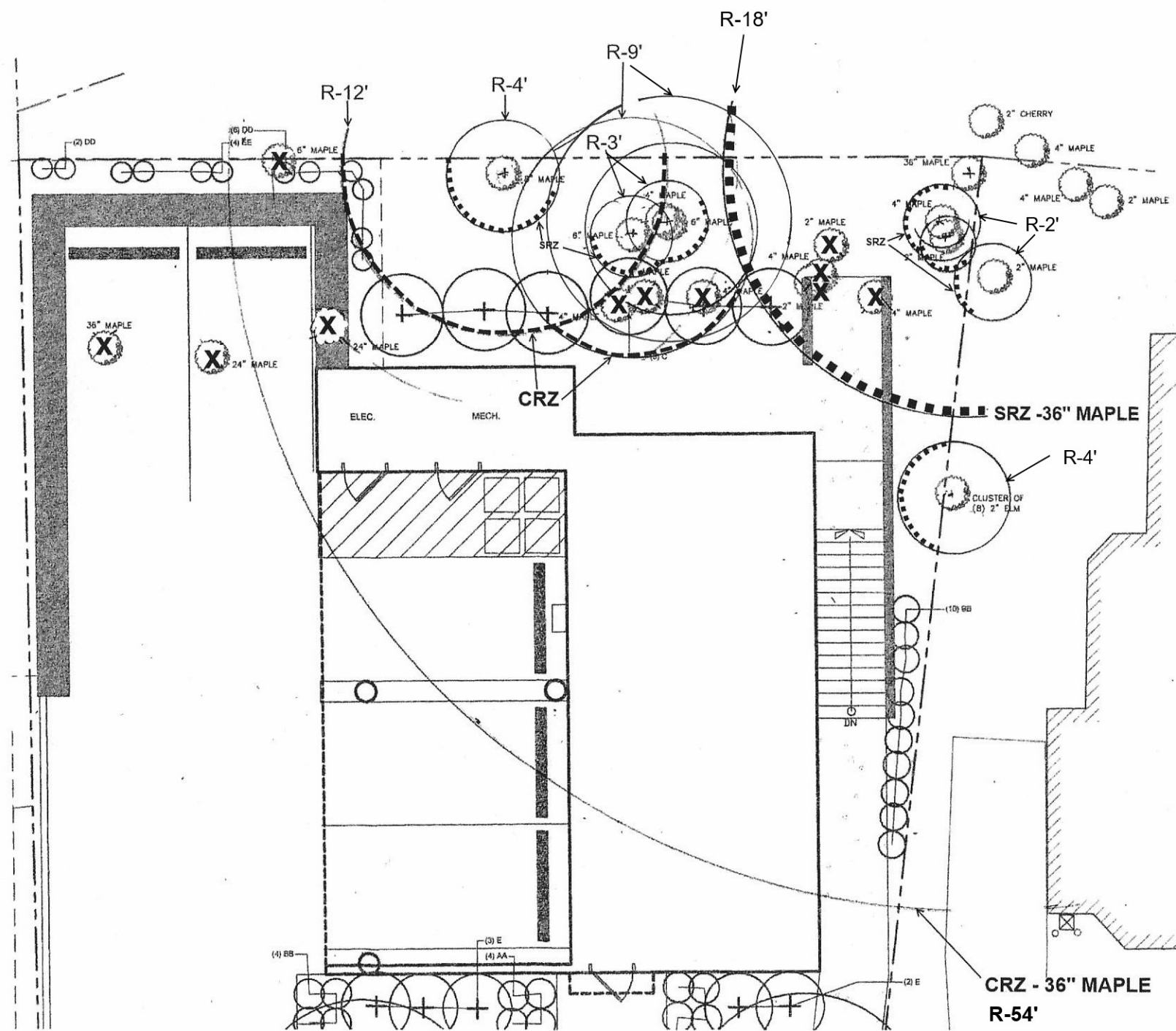


5 LANDSCAPE ARCHITECT RESPONSES & FIGURES

15 CRESCENT STREET PLANNING REVIEW

Comment responses to October 10 email

1. The two norway maple trees [24"] and a 36" norway maple tree are located at the core of the site and would have to be removed to allow the site to be suitable for development. It would make sense to pay the city the required fee to be used for tree planting elsewhere on city land.
2. The 8" dia. Tree is a multi-trunked elm. It's a cluster of eight 2" caliper branches. We have shown the SRZ as if it was an 8" tree. I'm not sure if calling this an 8" tree is correct. The walkway wall construction would be close to the shown SRZ.
3. The 15" tree mentioned is a 36"dia. norway maple. We have shown the SRZ on a site sketch along with the larger CRZ. It appears the SRZ zone shows a wall and ramp within that zone.
4. There are two 6 "dia. And one 8"dia. Norway maples at the northern property edge. One of them shown is 2' from the foundation wall and would have to be removed. The other two (8" & 6" dia) trees show the SRZ lines on the site plan.
5. The trees on the Northwest corner of the site are located approximately 10'-15' off the property. The CRZ is shown for each of these trees. Three of these trees are diseased or dead.



SCALE: 1" = 10'

- X** TREES TO BE REMOVED
-** SRZ (STRUCTURAL ROOT ZONE)

SHT. A

SHT. B



207.926.5111
 info@terradyconsultants.com
 www.terradyconsultants.com

November 17, 2023

Project #1948

Planning Division, City of Portland
 389 Congress Street, 4th Floor
 Portland, ME 04101

Response to Comments #3 15 Crescent Street

Dear: City of Portland Planning Division

Terradyn Consultants, LLC is pleased to submit this third response to comments letter for the Major Site Plan Application for the proposed development of 15 Crescent Street. The owner and applicant is Developers Collaborative. We received a third round of Site Plan Review comments from City Staff dated 11/9/23 & 11/14/23 and have prepared responses. Comments are re-iterated in italics with responses below for clarity.

November 9, 2023 Comments

- 1. The following four points were provided for the proposed grade at the four building corners - 122.37, 122.825, 122.68 and 112.6. The first point 122.37 os not accurate. This appears to be the grade where the top of the retaining wall for the parking spaces meets the rear left corner of the proposed building. The elevation at grade for the rear left corner of the building is shown as 112.50 on plan c-5.0. If you add up the four points using this elevation the average grade is 117.66' (470.63/4).*

Response: We corresponded and met with City staff on this comment and provided an average grade calculation to the City on 11/14/23. The average grade was calculated to be 119.75' and has been accepted by the City via email from Sean King on 11/16/23. The average grade calculations have been uploaded to ProjectDox.

- 2. With an average grade of 117.66', the average elevation needs to be revised on the architectural sections A3-0* and A2-0*. Is the elevation given for the Low Roof T.O. Deck the same as the elevation to the top of the roof beam? If the average grade elevation is 117.66. then the height of the building from average grade to the roof beam is 36.58' (154.24'-117.66, based on elevation given for low roof T. O. deck). Any*

part of the building within 10' of the right side property line must be 35' or lower. Currently, the front right side of the building is above 35'.

Response: The average grade has been updated to 119.75' per the calculations uploaded to ProjectDox and was accepted by the City on 11/16/23 via an email from Sean King. The building within 10' of the right-side property line is under 35' as shown on the revised elevations uploaded to ProjectDox.

3. *Regarding the landscaped open space requirement, Zoning looked at L-1.0. I need them to provide the square footage of each area in green to confirm the calculation.*

Response: We have added the square footage of each green space area to sheet L-1.0 and uploaded the revised plan.

4. *The City's Consulting Traffic Engineer has reviewed the Applicant's submitted site plan in reference to driveway space indicated within the City's technical manual, section 1.5 Driveway Design. The Applicant's proposed 18' driveway width abuts an adjacent driveway apron located on a City right-of-way, the Applicant is required to construct curbing / tipdown along the public sidewalk to separate the proposed driveway (see sketch below for approximate location to align with the existing curb). The existing paved area on the City right of way shall be removed and seeded to allow for the Applicant's proposed driveway along the side property.*

Response: The existing paved parking space is not on the 15 Crescent Street site; it is in the abutting City ROW. Someone currently parks there not affiliated with our parcel. We are now showing it as removed and seeded on our plans. This will result in a curb and sidewalk extension approximately 11' long in a westerly direction before tipping back down to the next driveway adjacent to the 19 Crescent Street building. These revisions are reflected on the revised plans.

5. *The Applicant has indicated on the resubmitted plans two European Hornbeam as street trees within the City right of way to meet Technical Manual section 4.6 Street Trees, the City's Arborist recommends a substitute tree species for Carpinus caroliniana (American hornbeam) or Ostrya virginiana (Eastern hophornbeam).*

Response: The European Hornbeam street trees have been changed to American Hornbeam per the arborist's recommendation. The revised landscape plan has been uploaded.

6. *The Applicant has resubmitted a landscape plan, the City Arborist suggests the substitution of three native evergreen trees at the rear of the property as a street tree alternative to meet the requirement for five total street trees. These evergreen trees would replace the proposed Viburnum and Cherry shrubs.*

Response: Three native evergreen trees have been substituted at the rear of the property per the arborist's recommendation to meet the street tree requirement.

7. *Abutting properties may be affected by retaining wall and grading, especially existing trees on abutting properties. Has the Applicant considered locating the proposed driveway at the existing curb cut located at the east property boundary along Crescent Street?*

Response: If the proposed driveway and retaining wall were constructed on the easterly side of the site where the existing curb cut is located, then more off-site trees would be impacted. We have shown the root protection areas on our plans and on the figures & response letter previously prepared by the Landscape Architect. Trees located westerly of the site will not be impacted by retaining wall construction. Trees located easterly of the site will also not be impacted by retaining wall construction, however if we flipped the site to park on the easterly side then the easterly trees would likely be impacted. The current configuration protects the most trees.

8. *The Applicant is required to document a grading easement during construction with abutting properties, City of Portland and 9 Crescent Street.*

Response: We have no grading or construction on the 9 Crescent Street property. The only work proposed on that side is within the City ROW to tie into the existing street/sidewalk/driveway grades appropriately.

We have begun conversations with the City to obtain the easement necessary in the westerly City ROW. We are showing the construction encroachment on our plans and have added a note referencing the easement

9. *Has the Applicant considered an internal stairwell to the basement for resident storage, to eliminate the external stairwell along the east property to increase the landscape buffer and open space of the property?*

Response: It is not possible to have an internal stairwell to the basement and maintain the number of units proposed.

November 14, 2023 Comments

Construction management notes:

1. *Please show location of construction management entrance.*

Response: The stabilized construction entrance and construction management gate locations are now shown on sheet C-3.1. We are proposing two locations over the course of the project; one during retaining wall/parking construction and one during building construction.

2. Specify location and type of ESC methodology proposed

Response: Silt fence location is now shown on sheet C-3.1.

3. Proposed pedestrian rerouting needs to be ADA compliant, and approved by DPW as they mention

Response: The proposed pedestrian re-routing is 5' wide and connects back to the sidewalk at existing sidewalk ramp locations.

4. Plan should be shown with in-construction features like security fence, job trailer staging, etc. not an interior floor plan.

Response: A perimeter construction fence is shown surrounding the site and work area. Staging & storage areas have been added to the plan for both during retaining wall construction and during building construction. A job trailer is not anticipated at this time due to the limited size of the project site.

5. Show the grading of the site, i.e. CM plan be overlaid a base sheet that is reflective of the grades either shown on the survey or immediately following the earthworking phase

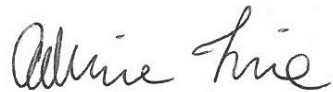
Response: Existing and proposed contours are shown on the CM plan.

Conclusion:

We believe that this response to comments and the revised civil & architectural plans satisfy the questions and comments raised by City staff. We look forward to continuing to work with the Planning Staff and Planning Board on this project. Please contact me at (207) 322-1223 or adrienne@terradyconsultants.com if you have questions or require additional information.

Sincerely,

TERRADYN CONSULTANTS, LLC



Adrienne Fine, P.E.
Senior Project Engineer



Average Grade Calculations 15 Crescent Street

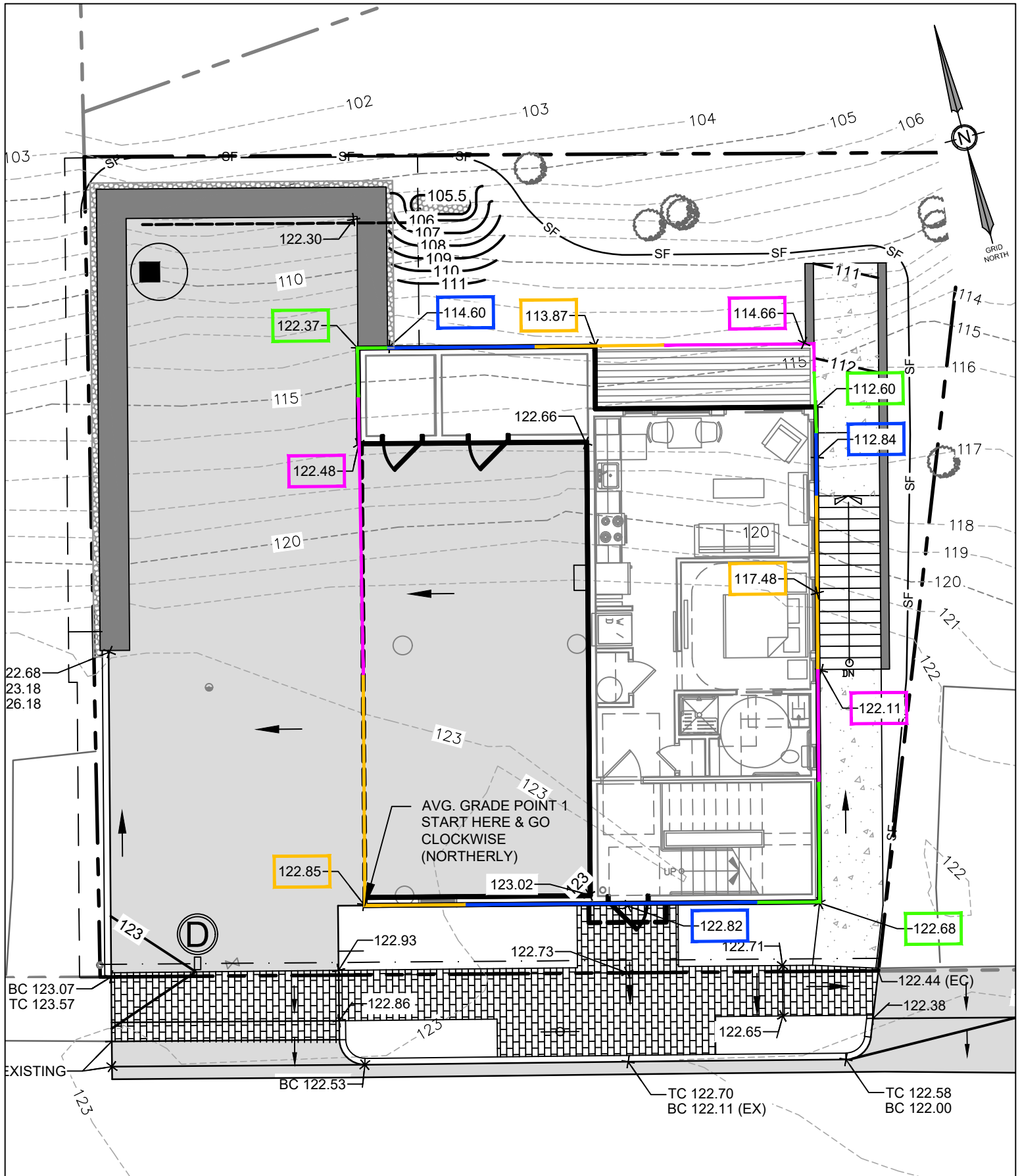
We received multiple comments on the average grade calculations for 15 Crescent Street during the project review in June through November 2023. The original average grade provided on the architectural plans submitted in April 2023 of 121' was calculated using a weighted average around the proposed building. In September 2023 it was requested by zoning that we provide the four building corner proposed grades and calculate the average grade from those four corners. This average grade was calculated at 120.13' based on the spot grades shown at the building corners. After receiving emailed comments on 11/9/23 and having a follow up meeting on 11/13/23 we have updated our average weighted grade calculation and summarized it below. Enclosed is a figure showing the average weighted grade calculation.

Weighted Average Grade

The proposed weighted average grade was calculated using three to four points along each of the four exterior building faces. The elevations used are the proposed ground elevations at the building wall. Each point was representative of an approximately 5' to 25' length of the building. The grades used in this calculation are slightly different than those used in April to obtain 121' due to updated survey information and changes to the design plans. The weighted average calculation is provided below with colors corresponding to the figure:

Point	Length	Grade	
1	26.00	122.85	3194.10
2	22.00	122.48	2694.56
3	6.25	122.37	764.81
4	11.68	114.60	1338.53
5	10.25	113.87	1167.17
6	14.00	114.66	1605.24
7	4.84	112.60	544.98
8	5.00	112.84	564.20
9	13.75	117.48	1615.35
10	9.00	122.11	1098.99
11	14.50	122.68	1778.86
12	23.00	122.82	2824.86
SUM	160.27		19191.65
Weighted Average		119.75	

The proposed weighted average grade was calculated to be **119.75'**. This allows for a 35' building height reaching elevation 154.75' before requiring a stepback. The proposed building height is at 154.18' to top of roof beam, resulting in a building height of 34.43'.



AVERAGE GRADE CALCULATION

PROJECT:
CRESCENT STREET RESIDENCES
15 CRESCENT STREET, PORTLAND, MAINE

PREPARED FOR:
DEVELOPERS COLLABORATIVE
631 STEVENS AVENUE, SUITE 203
PORTLAND, MAINE 04103



207.926.5111 • info@terradyndynconsultants.com • www.terradyndynconsultants.com

PINELAND
41 CAMPUS DRIVE, SUITE 301
NEW GLOUCESTER, ME 04260

PORTLAND
565 CONGRESS STREET, SUITE 201
PORTLAND, ME 04101

PROJECT NO.

1948

DATE

11/13/2023

SCALE

1"=10'

SHEET

1

OF

1

Department of Public Works

Mike Murray

Director



Date: October 04, 2023

Re: Wastewater Capacity Authorization

Address: 15 Crescent Street

Applicant: Developers Collaborative

Planner: Sean King

Estimate of Anticipated Wastewater Flows				
Development	Unit Size	Number of Units	Gallons per Day per Unit	Total Gallons per Day
Existing Flow to be Removed				
Vacant				
Proposed Flow				
Multiple Family Dwelling Units	1-Bedroom	5	120	600
Net Change				+ 600
*Values based on STATE OF MAINE: SUBSURFACE WASTEWATER DISPOSAL RULES, most recent edition				

Comments:

The Department of Public Works, which includes the Water Resource Division, have reviewed and determined that the downstream sewers from the project address have the capacity to convey the estimated dry weather wastewater flows which will be generated from this development.

You are also reminded that new connections into the combined sewer system shall be equipped with backflow prevention in accordance with Section 2.6.10 of the City's Technical Manual.

If the City can be of further assistance, please contact me at 207-874-8840 or brad@portlandmaine.gov

Sincerely,

A handwritten signature in dark ink that reads "Bradley A. Roland".

Bradley A. Roland, P.E.,
Senior Project Engineer



Josh Trombley

josh@dcmaine.com

RE: 15 Crescent St

Portland, ME.

Letter of Ability to Serve Request

SAP **TBD**

Project Description:

Good morning Josh,

CMP has the ability to serve the proposed project in accordance with our CMP Handbook (web link below). We can provide you the desired pad or pole mounted transformers per your request and city approval, in accordance with our CMP Handbook of Standard Requirements. If you have any questions on the process, or need help in completion of the documents, please contact CMP at 800-565-3181.

Here is our typical process for getting your three phase or CT rated single phase service installed. If you have any questions, please let us know. The underlined links will redirect you to the appropriate site for additional information.

Service Milestones for Three Phase Services and CT Rated Single Phase Services. There are additional requirements for primary metered Solar Service Installations listed in the Chapter 324 Interconnections section below. Please refer to [CMP Installation Checklists](#) for other installations.

- Call 800-750-4000 option 4 to establish a new account (if needed) and an SAP work order. Please provide both of these to me.
- Submit Load information. Please complete the attached EDET (excel file) using load information. Please complete this and email back to me. If the loads are over 500 kw, more in depth load studies may be required with our Distribution Planning and Transmission Planning Departments. Be advised that these will involve more detailed load information, a load study

agreement (signed contract), as well as other items. This additional study process may add up to two additional months to completion of the job.

- Submit the easement information worksheet, including where any CMP structures may be on ANY private property (Poles, Wires, Anchors). You are responsible for obtaining all information for all required easements. Please complete this form and either email or fax back to me.
- Submit any electronic drawings (PDF (preferred) or DWG files) of the site layout and proposed electrical connections.
- For Primary Metered installations (including PV), please have the access road in for pole staking.
- Preliminary meetings with CMP Advisor and Engineer to determine details of job (I will need to schedule with your electrician/contractor-please let me know who this is)
- Field planner design appointment scheduled once the preliminary information is complete. This will allow us to cost out the job and develop a CMP Invoice. The invoice is typically generated 5-6 weeks after the design appointment. This expires after 90 days from the invoice date.
- Submit completed W9 so that your bill can be properly processed. This is a new CMP process.
- CMP submits invoice to the customer for payment (typically via email). Payment received from customer.
- Easements (based on easement information worksheet) sent out, signed and originals returned to CMP.
- Job scheduled for completion after the electrical inspection has been received.

This process can take several months, depending upon several factors including transformer or materials delivery, return of completed paperwork, and other jobs in the system that may be ahead of yours. In addition, contact with the other utilities, including telephone and cable, should be commenced as soon as practical. They may have additional work or charges in addition to the CMP work required to bring your project on line.

As you may be aware, there are global supply chain issues impacting the utility industry. CMP is closely monitoring and managing their inventory in order to serve our customers. Larger padmount transformers may not be readily available for the date that you will need to be energized. Please consider this as part of your construction plan. The energy service advisor will continue to work closely with you and let you know as soon as the transformer becomes available. Should you have any questions or concerns throughout this process, please do not hesitate to contact your ESA directly at the number or email provided.

Please complete the attached forms (the specific instructions are on each form) and email them back to me at your earliest convenience.

For your convenience, here is a link to the CMP Website which contains our Handbook with details on most service requirements: [CMP Handbook of Standard Requirements](#) An additional resource is our Distribution Construction Standards: CMP Distribution Construction Standards [CMP Distribution Construction Standards](#).

You will be responsible for installing the customer connections, conduits, and metering in accordance with the [CMP Handbook of Standard Requirements](#) The transformer will be sized based on your submitted load sheets.

Your deposit amount will be typically based on an estimated two month bill, calculated from your completed load sheet unless otherwise determined by CMP.

In addition, we have recently added on an online map that shows single phase and three phase power locations within CMP. Here is that link: [CMP ArcGIS Information](#)

Metering:

All metering (including locations) must be preapproved by CMP. If you have any questions, please consult the [CMP Handbook of Standard Requirements](#)

Chapter 324 Interconnections:

Please be advised that if you plan to install solar/wind/hydro generation, you must complete an application under the MPUC mandated Chapter 324 Interconnection Standards. If you go to [Chapter 324 Interconnection Standards](#) and follow the instructions for the Small Generator Interconnection Procedures, CMP can do this work in parallel to your service request that will be handled by me. If your project is under 660 KW you will be able to have a Customer Net Energy Billing contract. Information concerning Customer Net Energy Billing can be accessed thru the Chapter 324 website or by clicking here: [Net Energy Billing](#)

Reallocation/Line Extensions:

Recently, changes were made to the three-phase construction policy, which require CMP to reallocate construction costs paid by customers. If applicable, those projects identified as “developments” do not qualify for reallocation of funds. Please see this document at our website for details about the reallocation conditions. Any reallocation charges will be specifically denoted on your invoice. The website address for this is: [PolyphaseLineExtension](#).

This line extension will be part of Central Maine Power’s distribution system. In the event the property served under this Agreement is sold or otherwise conveyed, all rights and obligations of the Agreement shall stay with the property. Please note that if you rent or lease this property to another and you want to receive the reimbursement payments, you must make special arrangements with the Central Maine Power Company. Otherwise, any reimbursement payments will be sent to the “Customer” taking service at the service location.

Electricity Supplier Information:

Central Maine Power Company (CMP) will provide your facility with electric delivery service. If you don’t already have a provider, you will need to make arrangements with a competitive electricity provider in order to receive electricity supply for your facility. In the event you fail to choose a competitive electricity provider, you will receive Standard Offer service arranged by the Maine Public Utilities Commission. If you wish to be served by a competitive electricity provider immediately upon establishment of delivery service, you must arrange for this service directly through your chosen competitive electricity provider, who must enroll your account no later than 5 PM on the business day prior initiation of delivery service by CMP. An up-to-date list of competitive suppliers can be found at the:

1. Maine Public Utilities Commission (MPUC) web site- [Maine PUC](#)
2. By calling the MPUC at (207) 287-3831

Attachments:

Excel Load Sheet (EDET)
Easement Worksheet and Sample Standard Easement
W9

Please do not hesitate to reach out with any questions.

Kind Regards,
Kathy

Katherine Dumont

Energy Service Specialist

162 Canco Rd

Portland, ME 04103

207-242-5744

katherine.dumont@cmpco.com





October 5, 2023

City of Portland
389 Congress Street
Portland, ME 04101

RE: Condo Project at 15 Crescent Street, Portland, Maine

To Whom It May Concern:

We have been working with Developers Collaborative and Kevin Bunker on their proposal to construct a 5-unit Condominium at 15 Crescent Street, Portland, Maine. Developers Collaborative is an established and valued customer of the Bank and has the financial capacity to complete this project. We are excited about their plans for 15 Crescent Street, Portland, Maine, and look forward to working with them in further support of the project.

Please feel free to contact me with any questions.

Sincerely,

A handwritten signature in blue ink, appearing to read 'MWE', with a stylized flourish at the end.

Matthew W. Early
Senior Vice President

MWE/JRS

Neighborhood Meeting Certification

I, Josh Trombley hereby certify that a neighborhood meeting was held on May 31, 2023 at the Reiche Community Center at 5:30pm for the proposed project located at 15 Crescent Street.

I also certify that on May 16, 2023, notices were mailed to the following:

1. All addresses on the mailing list provided by the Planning Division which includes property owners within 500 feet of the proposed development (1,000 feet for subdivisions within an industrial zone or industrial zone changes).
2. Residents on the "interested parties" list.

Signed


Josh Trombley
6/2/2023

Attachments

1. Copy of the notice sent
2. Sign-in sheet
3. Record of feedback



May 16, 2023

Dear Neighbor:

Please join us for a neighborhood meeting to discuss our plans for a five-unit condominium building located at 15 Crescent Street.

Meeting Location:

Reiche Community Center
166 Brackett Street
Portland, ME 04102
(Enter on Clark St and go upstairs)

Meeting Date: May 31, 2023

Meeting Time: 5:30pm

The Land Use Code requires that neighboring property owners and residents on an "interested parties list" be invited to participate in this neighborhood meeting. A sign-in sheet will be circulated and a record of the meeting will be taken. Both the sign-in sheet and record will be submitted to the Planning Board.

If you have any questions, please call 207-772-3225

Sincerely,



Josh Trombley

Note:

Under the City of Portland land use code, an applicant for a major site plan, master development plan, subdivision of over five lots, or zoning map amendment is required to hold a neighborhood meeting within 30 days of an application being deemed complete and no less than seven calendar days before a public hearing. Should you wish to offer additional comments on this proposed development, you may forward them by e-mail to planning@portlandmaine.gov or by mail to the Planning and Urban Development Department, Planning Division, 4th Floor, 389 Congress Street Portland, ME 04101.

15 Crescent Street
Neighborhood Meeting Sign-In Sheet

Date: May 31, 2023

Location:

Reiche Community Center
166 Brackett Street
Portland, ME 04102

Proposed Project: 15 Crescent Street Condos

Developers and Consultant Team in Attendance:

Name	Email
Josh Tronbley	Josh@DCmainc.com

Members of the Public in Attendance:

[illegible]

15 Crescent Street
Record of Feedback

Notice of Public Meeting Certification

I, Josh Trombley hereby certify that a notice of neighborhood meeting sign was posted from December 1, 2023 to December 12, 2023 prior to the public hearing held on December 12, 2023 for the proposed project (PL-0024696-2023) located at 15 Crescent Street.

Photo documentation of sign:



Josh Trombley

December 7, 2023

Sarah Erwin <sarah.erwin112@gmail.com>
to planningboard, austentd@portlandmaine.gov

Tue, May 16, 5:49 P

Hi there,

I live on Ellsworth St and received a notice about residential development plans for our community garden space. This was disappointing to learn, as the community garden is a really valued green space in an area increasingly filled with cars, helicopters, ambulances, parking lots, and other hospital development projects. Having the garden space is essential for this area and our neighborhood would be very different without it -- not to mention that we are already surrounded with regular noise pollution, and adding a large construction project to that would be extremely frustrating.

I would like to voice my firm opposition to this development plan and would also appreciate any other information the city can share about this plan application. I understand that Maine Medical Center is supposed to be vacating various residential buildings in the area as its expansion allows for their offices in former houses nearby to move into the hospital building. Updating those existing residences to turn them back into housing stock and leaving our community garden alone would be a much better focus for our neighborhood.

Thank you,
Sarah Erwin
19 Ellsworth St, Portland ME

George Rheault

to Planning, me, Christine

The applicant claims that this infill project (demolition of the once existing house was circa 2007 - here is how it once looked: [13-17 Crescent Street, Portland, 1924 - Maine Memory Network](#)) is well within the R-6 lot coverage requirement of no more than 60%.

This seems like it should be carefully reviewed and a VERY detailed calculation should be provided to the Planning Board showing how it was arrived at.

It appears that portions of the structure that SHOULD have qualified as footprint were excluded. See below for pertinent definitions from the Land Use Code.

Knowing how scurrilous the Planning Board (and planning staff) have been at harassing other projects over lot coverage (e.g., now scuttled condo project at 24 St. Lawrence Street in 2018 was severely hobbled due to staff interpretations of lot coverage calculations), the Planning Board must make extra effort at convincing the public they are fairly enforcing lot coverage rules for ALL APPLICANTS not just their best buddies.

Lot coverage. The proportion of lot area covered by building footprint and the footprint of accessory detached structures.

7.2 RULES OF MEASUREMENT

Building footprint. The lot area contained within the outermost perimeter of the building envelope including cantilevered portions of the building, projections, and porches, decks, and similar attached structures integral to the building and contributing to its mass, but excluding roof overhangs.

APPLICANT:
DEVELOPERS COLLABORATIVE
631 STEVENS AVE, SUITE 203
PORTLAND, MAINE 04103

PROJECT PARCELS

CITY OF PORTLAND TAX ASSESSOR'S MAP, BLOCK, & LOT NUMBERS

<u>MAP</u>	<u>BLOCK</u>	<u>LOT</u>	<u>CURRENT OWNER</u>
53	F	6	CRESCENT HEIGHTS LLC

SHEET INDEX	
C-1.0	COVER SHEET
C-1.1	GENERAL NOTES & LEGEND
1	BOUNDARY & TOPOGRAPHIC SURVEY - BY OTHERS
C-2.0	RECORDING PLAT - IN PROGRESS
C-3.0	EXISTING CONDITIONS & DEMOLITION PLAN
C-3.1	CONSTRUCTION MANAGEMENT PLAN
C-4.0	SITE LAYOUT PLAN
C-5.0	GRADING & DRAINAGE PLAN
C-5.1	EROSION & SEDIMENT CONTROL NOTES & DETAILS
C-5.2	SLOPE STABILIZATION DETAIL
C-6.0	SITE UTILITY PLAN
C-7.0	PHOTOMETRIC LIGHTING PLAN
C-8.0	SITE DETAILS
C-8.1	UTILITY & DRAINAGE DETAILS
L-1.0	LANDSCAPE PLAN

SITE DEVELOPMENT PLANS

FOR

CRESCENT STREET RESIDENCES

15 CRESCENT STREET - PORTLAND, MAINE

PERMIT DRAWINGS



LOCATION MAP

SCALE: 1"=500

PERMITS		
TYPE OF PERMIT	GOVERNING BODY	STATUS
MAJOR SITE PLAN	CITY OF PORTLAND PLANNING AUTHORITY CITY HALL, 389 CONGRESS STREET PORTLAND, ME 04101 TEL. 207.874.8722	SUBMITTED 4/12/2023
BUILDING PERMIT	CITY OF PORTLAND CODE ENFORCEMENT OFFICE CITY HALL, 389 CONGRESS STREET PORTLAND, ME 04101 TEL. 207.874.8900	TO BE SUBMITTED BY BUILDING CONTRACTOR
UTILITY / STREET OPENING	CITY OF PORTLAND PUBLIC SERVICES DIVISION 55 PORTLAND STREET PORTLAND, ME 04101 TEL. 207.874.8801	TO BE FILED BY SITE CONTRACTOR

<u>UTILITIES</u> SEWER/STORM CITY OF PORTLAND DEPARTMENT OF PUBLIC WORKS 212 CANCO ROAD PORTLAND, MAINE 04103 207.874.8801 <u>WATER</u> PORTLAND WATER DISTRICT 225 DOUGLASS STREET P.O. BOX 3553 PORTLAND, MAINE 04104 207.774.5961 <u>ELECTRIC</u> CENTRAL MAINE POWER COMPANY 162 CANCO ROAD PORTLAND, ME 04103 (207) 842-2367	<u>PREPARED BY:</u> CIVIL ENGINEER: TERRADYN CONSULTANTS, LLC 565 CONGRESS STREET, SUITE 201 PORTLAND, MAINE 04101 207.926.5111 CONTACT: ADRIENNE FINE, P.E. <u>ARCHITECT:</u> RYAN SENATORE ARCHITECTURE 500 CONGRESS ST, #2 PORTLAND, ME 04101 207.747.5159 CONTACT: RYAN SENATORE <u>SURVEYOR:</u> OWEN HASKELL, INC. 309 U.S. ROUTE ONE, UNIT 10 FALMOUTH, MAINE 04105 207.774.0424 RANDY LOUBIER, PLS	565 CONGRESS STREET, SUITE 201 PORTLAND, ME 04101 41 CAMPUS DRIVE STANFORD, ME 04083 NEW GLOUCESTER, ME 04260 OFFICE: (207) 926-5111 FAX: (207) 221-1111 www.terradync consultants.com
--	---	---

SEWER/STORM
CITY OF PORTLAND
DEPARTMENT OF PUBLIC WORKS
212 CANCO ROAD
PORTLAND, MAINE 04103
207.874.8801

WATER
PORTLAND WATER DISTRICT
225 DOUGLASS STREET
P.O. BOX 3553
PORTLAND, MAINE 04104
207.774.5961

ELECTRIC
CENTRAL MAINE POWER COMPANY
162 CANCO ROAD
PORTLAND, ME 04103
(207) 842-2367

TELEPHONE
CONSOLIDATED COMMUNICATIONS
58 WESTMINSTER STREET
LEWISTON, MAINE 04240
(207) 782-2249

NATURAL GAS
UNITIL
376 RIVERSIDE INDUSTRIAL PARKWAY
PORTLAND, MAINE 04103
888.301.7700

DIG SAFE SYSTEM, INC.
TEL. 1-888-DIG-SAFE (344-7233)
WWW.DIGSAFE.COM

PREPARED BY:

CIVIL ENGINEER:
TERRADYN CONSULTANTS, LLC
565 CONGRESS STREET, SUITE 201
PORTLAND, MAINE 04101
207.926.5111
CONTACT: ADRIENNE FINE, P.E.

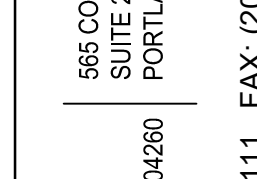
ARCHITECT:
RYAN SENATORE ARCHITECTURE
500 CONGRESS ST, #2
PORTLAND, ME 04101
207.747.5159
CONTACT: RYAN SENATORE

SURVEYOR:
OWEN HASKELL, INC.
309 U.S. ROUTE ONE, UNIT 103
FALMOUTH, MAINE 04105
207.774.0424
RANDY LOUBIER, PLS

565 CONGRESS STREET
SUITE 201
PORTLAND, ME 04101

41 CAMPUS DRIVE
SUITE 301
NEW GLOUCESTER, ME 04260

OFFICE: (207) 926-5111 FAX: (207) 221-1151
www.terradynconsultants.com



Civil Engineering | Land Planning | Stormwater Design | Environmental Permitting

CIVIL ENGINEER:
TERRADYN CONSULTANTS, LLC
565 CONGRESS STREET, SUITE 201
PORTLAND, MAINE 04101
207.926.5111
CONTACT: ADRIENNE FINE, P.E.

ARCHITECT:
RYAN SENATORE ARCHITECTURE
 500 CONGRESS ST, #2
 PORTLAND, ME 04101
 207.747.5159
 CONTACT: RYAN SENATORE

SURVEYOR:
OWEN HASKELL, INC.
309 U.S. ROUTE ONE, UNIT 10
FALMOUTH, MAINE 04105
207.774.0424
RANDY LOUBIER, PLS

DATE:	10/25/2023
P.E.:	ADRIENNE R. FINE

[illegible]

2	10.25.2023
1	09.12.2023
NO.	DATE


TERRADYN
 CONSULTANTS, LLC

401 CAMPUS DRIVE
 SUITE 300
 NEW GLOUCESTER, MA 02660

585 CONGRESS STREET
 SUITE 200
 PORTLAND, ME 04102

OFFICE: (207) 926-5111 FAX: (207) 221-1317
www.terradyconsultants.com

Civil Engineering | Land Planning | Stormwater Design | Environmental Permitting

PERMIT DRAWING
NOT FOR CONSTRUCTION

PROJECT:	CRESCENT STREET RESIDENCES
15 CRESCENT STREET, PORTLAND	
SHEET TITLE:	COVER SHEET
CLIENT:	DEVELOPERS COLLABORATIVE
631 STEVENS AVENUE, SUITE 203 PORTLAND, ME 04103	

DATE:	2/14/2023
SCALE:	AS NOTED
DESIGNED:	ARF
JOB NO:	1948
FILE:	1948-C.DWG
SHEET	C-10

C-1.0

1. THIS PROJECT IS SUBJECT TO THE TERMS AND CONDITIONS OF ALL REGULATIONS ADMINISTERED BY THE LOCAL UTILITY COMPANIES AND THE CITY OF PORTLAND.
2. THE CONTRACTOR SHALL REFER TO THE ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF THE ENTRANCES, EXITS, PRECISE BUILDING DIMENSIONS, AND EXACT BUILDING UTILITY ENTRANCE POINTS.
3. ALL REQUIRED AND NECESSARY INSPECTIONS AND/OR CERTIFICATIONS REQUIRED BY CODES AND/OR UTILITY SERVICE COMPANIES SHALL BE PERFORMED PRIOR TO ANNOUNCED BUILDING POSSESSION AND THE FINAL SERVICE CONNECTIONS.
4. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR THE ELEVATION OF THE EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THIS INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AND DIG SAFE (1-888-DIGSAFE). IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS, AT NO EXTRA EXPENSE TO THE OWNER.
5. MAINTENANCE OF EROSION CONTROL MEASURES IS OF PARAMOUNT IMPORTANCE TO THE OWNER AND THE CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH ALL EROSION CONTROL MEASURES SHOWN ON THE PLANS. ADDITIONAL EROSION CONTROL MEASURES SHALL BE INSTALLED IF DEEMED NECESSARY BY ONSITE INSPECTIONS OF THE OWNER OR THEIR REPRESENTATIVES AT NO ADDITIONAL COST TO THE OWNER.
6. ALL MATERIAL SCHEDULES SHOWN ON THE PLANS ARE FOR GENERAL INFORMATION ONLY. THE CONTRACTOR SHALL PREPARE HIS OWN MATERIAL SCHEDULES BASED UPON HIS PLAN REVIEW. ALL SCHEDULES SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO ORDERING MATERIALS OR PERFORMING WORK.
7. ALL MATERIALS AND CONSTRUCTION METHODS SHALL CONFORM TO PROJECT CONTRACT SPECIFICATIONS, AND THE CITY OF PORTLAND TECHNICAL MANUAL STANDARDS, WHICHEVER IS MORE STRINGENT.
8. TOPOGRAPHIC AND BOUNDARY SURVEY INFORMATION WAS PROVIDED BY OWEN HASKELL, INC. ELEVATIONS ARE BASED ON "M" MONUMENT AT THE NORTHEAST CORNER OF HILL AND BRAMHALL ST. ELEVATION=133.54' CITY DATUM.
9. FEMA MAP COMMUNITY PANEL NUMBER 230051 0013 B. THE SITE IS LOCATED IN A C ZONE.
10. THE PROPERTY SHOWN ON THIS PLAN MAY BE DEVELOPED AND USED ONLY AS DEPICTED IN THIS APPROVED PLAN. ALL ELEMENTS AND FEATURES OF THE PLAN AND ALL THE PROPERTY WHICH APPEARS IN THE RECORD OF THE PLANNING BOARD PROCEEDINGS ARE CONDITIONS OF THE APPROVAL. NO CHANGE FROM THE CONDITIONS OF APPROVALS IS PERMITTED UNLESS AN AMENDED PLAN IS FIRST SUBMITTED TO AND APPROVED BY THE PLANNING AUTHORITY.
11. ALL SIGNAGE SHALL CONFORM TO THE STANDARDS FOR SIZE, HEIGHT, LOCATION AND REFLECTIVITY SET FORTH IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
12. ALL CURB SHALL CONFORM TO THE FOLLOWING SPECIFICATIONS AS NOTED ON THE PLANS: GRANITE CURB SHALL MEET THE REQUIREMENTS OF MaineDOT SPECIFICATIONS 609.03 AND CITY OF PORTLAND TECHNICAL STANDARDS.
13. ALL DIMENSIONING UNLESS OTHERWISE NOTED IS TO THE FACE OF CURB OR FACE OF BUILDING.
14. THE FACILITY IS SERVICED BY PUBLIC WATER, SEWER, AND UNDERGROUND POWER. THE PROJECT INCLUDES UPDATES TO THE POWER SERVICE INCLUDING THE INSTALLATION OF NEW UNDERGROUND SYSTEM. SEE SITE ELECTRICAL PLANS FOR DETAILS.
15. THE CONTRACTOR IS REQUIRED TO NOTIFY THE CITY OF PORTLAND PUBLIC WORKS INSPECTION SERVICES DIVISION (874-8300 EXT. 8838), CODE ENFORCEMENT OFFICE AND DEVELOPMENT REVIEW COORDINATOR IN WRITING THREE (3) DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION. A PRE-CONSTRUCTION MEETING MAY BE REQUIRED TO INCLUDE THE PUBLIC WORKS AUTHORITY OR DEVELOPMENT REVIEW COORDINATOR.
16. AN APPROVED SET OF PLANS AND ALL APPLICABLE PERMITS MUST BE AVAILABLE AT THE CONSTRUCTION SITE.
17. WARNING SIGNS, MARKERS, BARRICADES OR FLAGMEN MUST BE EMPLOYED ON ADJACENT STREETS AS NECESSARY. THE CONTRACTOR SHALL COORDINATE AND SEEK APPROVAL FROM THE PUBLIC SERVICE DIVISION FOR THE PLACEMENT/PARKING OF EQUIPMENT WITHIN THE PUBLIC RIGHT OF WAY.
18. CONSTRUCTION DEBRIS SHALL BE CONTAINERIZED AND DISPOSED OF IN ACCORDANCE WITH THE CITY OF PORTLAND'S SOLID WASTE ORDINANCE CHAPTER 12. ALL DEMOLITION MATERIAL FROM THE PROJECT SITES SHALL BE TAKEN TO THE RIVERSIDE RECYCLING FACILITY OR AS OTHERWISE DIRECTED PENDING THE RESULTS OF A HAZARDOUS BUILDING MATERIALS SURVEY AS AUTHORIZED AND COORDINATED BY THE OWNER. ALL SALVAGED MATERIAL WITHIN THE PUBLIC R.O.W. (SIDEWALKS, BRICKS, GRANITE CURB) NOT REUSED SHALL BE DISPOSED OF AS DIRECTED BY THE PORTLAND PUBLIC SERVICES DEPARTMENT AT NO EXTRA COST TO THE OWNER.
19. ANY DAMAGE TO PUBLIC OR PRIVATE PROPERTY RESULTING FROM CONSTRUCTION ACTIVITIES SHALL BE REPAIRED BY THE CONTRACTOR AT THEIR EXPENSE.
20. PROPERTY MARKERS AND STREET LINE MONUMENTS SHALL BE PROPERLY PROTECTED AT ALL TIMES DURING CONSTRUCTION TO INSURE INTEGRITY. IF DISTURBED THEY SHALL BE REPLACED BY A SURVEYOR REGISTERED IN THE STATE OF MAINE AT THE CONTRACTOR'S EXPENSE.
21. THE OWNER SHALL BE RESPONSIBLE TO COORDINATE THE PERFORMANCE OF A HAZARDOUS MATERIALS INSPECTION OF THE PROPERTY.
22. A STREET OPENING PERMIT MUST BE OBTAINED FROM THE CITY OF PORTLAND PUBLIC WORKS DEPARTMENT PRIOR TO BEGINNING ANY WORK WITHIN THE CITY RIGHT-OF-WAY. ALL WORK WITHIN THE PUBLIC RIGHT OF WAY SHALL BE COMPLETED IN CONFORMANCE TO THE CITY'S RULES AND REGULATIONS FOR EXCAVATION ACTIVITIES IN PUBLIC RIGHT OF WAYS.
23. CONTRACTOR MUST MAINTAIN THROUGH TRAFFIC ON ADJACENT STREETS AT ALL TIMES.
24. ALL METHODS AND MATERIALS USED IN THE CONSTRUCTION OF THE IMPROVEMENTS IDENTIFIED HEREIN SHALL CONFORM TO THE CITY OF PORTLAND CONSTRUCTION AND TECHNICAL STANDARDS AND SPECIFICATIONS AND/OR CURRENT MaineDOT STANDARDS AND SPECIFICATIONS, WHICHEVER IS MORE STRINGENT.
25. SITE WORK FOR BUILDING SHALL INCLUDE GRADING THE BUILDING PAD AREA (DEFINED AS THE BUILDING FOOTPRINT PLUS 5'-0" BEYOND THE EXTERIOR WALL) TO A GRADE 18" BELOW THE GROUND FLOOR FINISH ELEVATION. ALL WORK SHALL INCLUDE EXCAVATION (INCLUDING ROCK REMOVAL AND EXISTING FOUNDATION DEMOLITION) AND BACKFILL OF ALL FOOTINGS AND FOUNDATIONS. INSTALLATION OF PERIMETER FOUNDATION DRAINS, EXCAVATION AND BACKFILL OF ALL UNDERSLAB UTILITIES AND PLACEMENT OF ALL AGGREGATES BELOW THE FLOOR SLAB AND ADJACENT FOUNDATION WALLS IN ACCORDANCE WITH THE CONTRACT PLANS AND SPECIFICATIONS. (SEE ARCHITECTURAL AND STRUCTURAL PLANS FOR ADDITIONAL DETAILS PERTAINING TO ANY BUILDING RELATED FOUNDATION WORK).

24. RECORD DRAWINGS MUST INCLUDE ALL BURIED UTILITIES INCLUDING, BUT NOT LIMITED TO, BENDS, APPURTENANCES, AND OTHER FEATURES. TO BE LOCATED IN THE FIELD BY GIS AND RECORDED AS AN AS-BUILT PLAN BY THE CONTRACTOR AT THE END OF THE PROJECT. THIS PLAN SHALL ALSO BE PROVIDED TO THE OWNER.
 25. THE CONTRACTOR SHALL REFER TO THE ARCHITECTURAL DRAWINGS PREPARED BY RYAN SENATORE ARCHITECTURE FOR EXACT LOCATIONS AND DIMENSIONS OF THE ENTRANCES, EXIT PORCHES, PRECISE BUILDING DIMENSIONS AND EXACT BUILDING UTILITY ENTRANCE POINTS.
 26. ALL REQUIRED AND NECESSARY INSPECTIONS AND/OR CERTIFICATIONS REQUIRED BY CODES AND/OR UTILITY SERVICE COMPANIES SHALL BE PERFORMED PRIOR TO ANNOUNCED BUILDING POSSESSION AND THE FINAL SERVICE CONNECTIONS.
 27. CONTRACTORS SHALL NOTIFY OPERATORS WHO MAINTAIN UNDERGROUND UTILITIES IN THE AREA OF PROPOSED EXCAVATION OR BLASTING AT LEAST THREE (3) BUT NOT MORE THAN (30) DAYS PRIOR TO COMMENCEMENT OF EXCAVATION OR DEMOLITION. CONTRACTORS SHALL BE RESPONSIBLE FOR COMPLIANCE WITH THE REQUIREMENTS OF 23 MRSA 3360-A.
- ## GRADING AND DRAINAGE NOTES:
1. ALL STORM DRAIN PIPE SHALL BE SMOOTH BORE INTERIOR PROVIDING A MANNINGS ROUGHNESS COEFFICIENT OF $n = 0.013$ OR LESS, UNLESS A SPECIFIC PIPE MATERIAL IS CALLED FOR ON THE CONTRACT DRAWINGS. PVC PIPING SHALL NOT BE USED IN AREAS OF EXPOSED SUNLIGHT.
 2. SLOPE PROTECTION IS TO BE PROVIDED PER THE DESIGN PLANS AND MAY INCLUDE RIPRAP, SOD OR MULCH.
 3. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION DURING EARTHWORK OPERATIONS TO INSURE THAT DISTURBANCE TO ANY STEEP SLOPE AREAS ARE MINIMIZED TO THE EXTENT PRACTICABLE.
 4. THE CONTRACTOR IS HEREBY CAUTIONED THAT ALL SITE FEATURES SHOWN ARE BASED ON FIELD OBSERVATIONS BY THE SURVEYOR AND BY INFORMATION PROVIDED BY OTHERS. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR SHALL CONTACT DIG SAFE (1-888-DIGSAFE) AT LEAST THREE (3) BUT NOT MORE THAN THIRTY (30) DAYS PRIOR TO COMMENCEMENT OF EXCAVATION OR DEMOLITION TO VERIFY HORIZONTAL AND VERTICAL LOCATION OF ALL UTILITIES.
 5. ALL PAVING WITHIN THE PUBLIC R.O.W. SHALL BE PERFORMED IN ACCORDANCE WITH THE CITY OF PORTLAND RULES AND REGULATIONS FOR EXCAVATION ACTIVITIES IN THE PUBLIC R.O.W.
 6. NO HOLES, TRENCHES OR STRUCTURES SHALL BE LEFT OPEN OVERNIGHT IN ANY EXCAVATION ACCESSIBLE TO THE PUBLIC OR IN PUBLIC RIGHTS-OF-WAY.
 7. THE CONTRACTOR SHALL TAKE FULL RESPONSIBILITY FOR ANY CHANGES AND DEVIATION OF APPROVED PLANS NOT AUTHORIZED BY THE ARCHITECT/ENGINEER AND/OR CLIENT/OWNER.
 8. CONTRACTOR SHALL INCORPORATE PROVISIONS AS NECESSARY IN CONSTRUCTION TO PROTECT EXISTING STRUCTURES AND PHYSICAL FEATURES THAT ARE OUTSIDE THE SCOPE OF WORK. THE CONTRACTOR SHALL MAINTAIN SITE STABILITY DURING CONSTRUCTION TO AVOID EROSION AND SEDIMENT TRANSPORT. CONTRACTOR SHALL RESTORE ALL AREAS TO A FINAL STABILIZED CONDITION AS DIRECTED BY DESIGN DRAWINGS.
 9. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD PRIOR TO FABRICATION AND ERECTION OF ANY MATERIAL. ANY UNUSUAL CONDITIONS SHALL BE REPORTED TO THE ENGINEER.
 10. EXTERIOR GRADES AROUND PROPOSED STRUCTURE SHALL BE COORDINATED WITH FINAL BUILDING PLANS AND PROVIDE FOR ALL ACCESS OPENINGS.

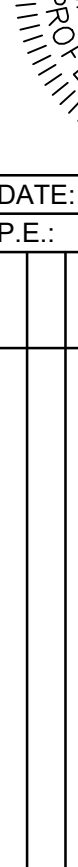
1. ALL STORM DRAIN PIPE SHALL BE SMOOTH BORE INTERIOR PROVIDING A MANNINGS ROUGHNESS COEFFICIENT OF $n = 0.013$ OR LESS. UNLESS A SPECIFIC PIPE MATERIAL IS CALLED FOR ON THE CONTRACT DRAWINGS. PVC PIPING SHALL NOT BE USED IN AREAS OF EXPOSED SUNLIGHT.
2. SLOPE PROTECTION IS TO BE PROVIDED PER THE DESIGN PLANS AND MAY INCLUDE RIPRAP, SOD OR MULCH.
3. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION DURING EARTHWORK OPERATIONS TO INSURE THAT DISTURBANCE TO ANY STEEP SLOPE AREAS ARE MINIMIZED TO THE EXTENT PRACTICABLE.
4. THE CONTRACTOR IS HEREBY CAUTIONED THAT ALL SITE FEATURES SHOWN ARE BASED ON FIELD OBSERVATIONS BY THE SURVEYOR AND BY INFORMATION PROVIDED BY OTHERS. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR SHALL CONTACT DIG SAFE (1-888-DIGSAFE) AT LEAST THREE (3) BUT NOT MORE THAN THIRTY (30) DAYS PRIOR TO COMMENCEMENT OF EXCAVATION OR DEMOLITION TO VERIFY HORIZONTAL AND VERTICAL LOCATION OF ALL UTILITIES.
5. ALL PAVING WITHIN THE PUBLIC R.O.W. SHALL BE PERFORMED IN ACCORDANCE WITH THE CITY OF PORTLAND RULES AND REGULATIONS FOR EXCAVATION ACTIVITIES IN THE PUBLIC R.O.W.
6. NO HOLES, TRENCHES OR STRUCTURES SHALL BE LEFT OPEN OVERNIGHT IN ANY EXCAVATION ACCESSIBLE TO THE PUBLIC OR IN PUBLIC RIGHTS-OF-WAY.
7. THE CONTRACTOR SHALL TAKE FULL RESPONSIBILITY FOR ANY CHANGES AND DEVIATION OF APPROVED PLANS NOT AUTHORIZED BY THE ARCHITECT/ENGINEER AND/OR CLIENT/OWNER.
8. CONTRACTOR SHALL INCORPORATE PROVISIONS AS NECESSARY IN CONSTRUCTION TO PROTECT EXISTING STRUCTURES AND PHYSICAL FEATURES THAT ARE OUTSIDE THE SCOPE OF WORK. THE CONTRACTOR SHALL MAINTAIN SITE STABILITY DURING CONSTRUCTION TO AVOID EROSION AND SEDIMENT TRANSPORT. CONTRACTOR SHALL RESTORE ALL AREAS TO A FINAL STABILIZED CONDITION AS DIRECTED BY DESIGN DRAWINGS.
9. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD PRIOR TO FABRICATION AND ERECTION OF ANY MATERIAL. ANY UNUSUAL CONDITIONS SHALL BE REPORTED TO THE ENGINEER.
10. EXTERIOR GRADES AROUND PROPOSED STRUCTURE SHALL BE COORDINATED WITH FINAL BUILDING PLANS AND PROVIDE FOR ALL ACCESS OPENINGS.

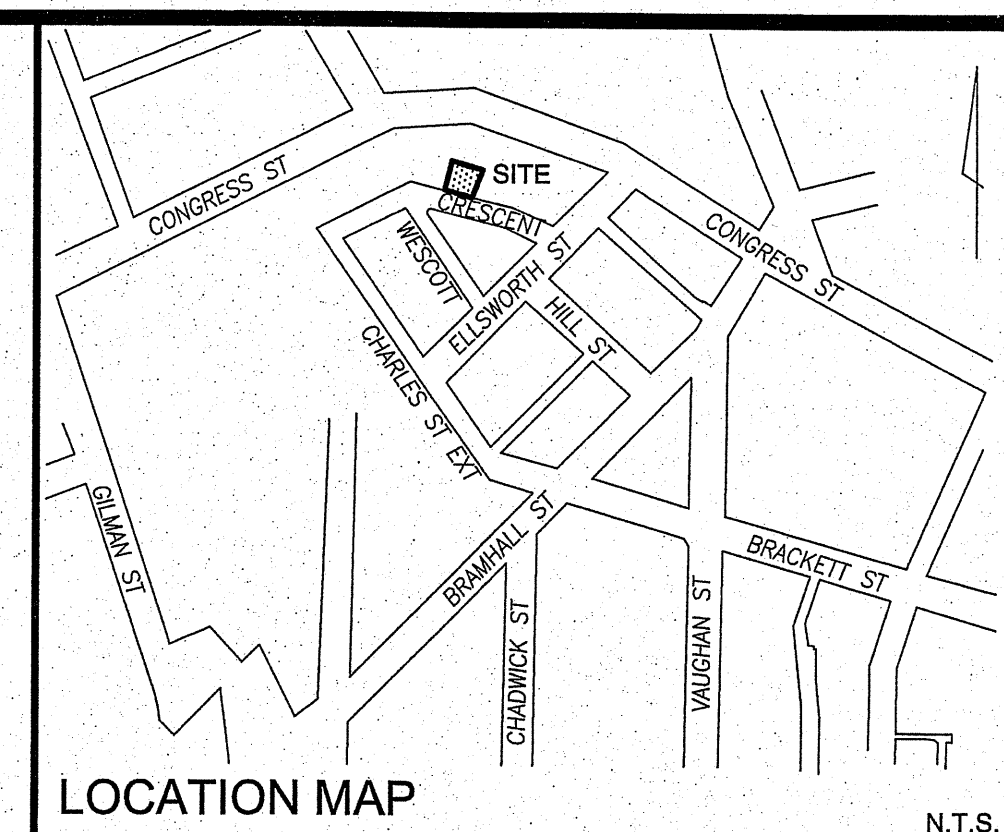
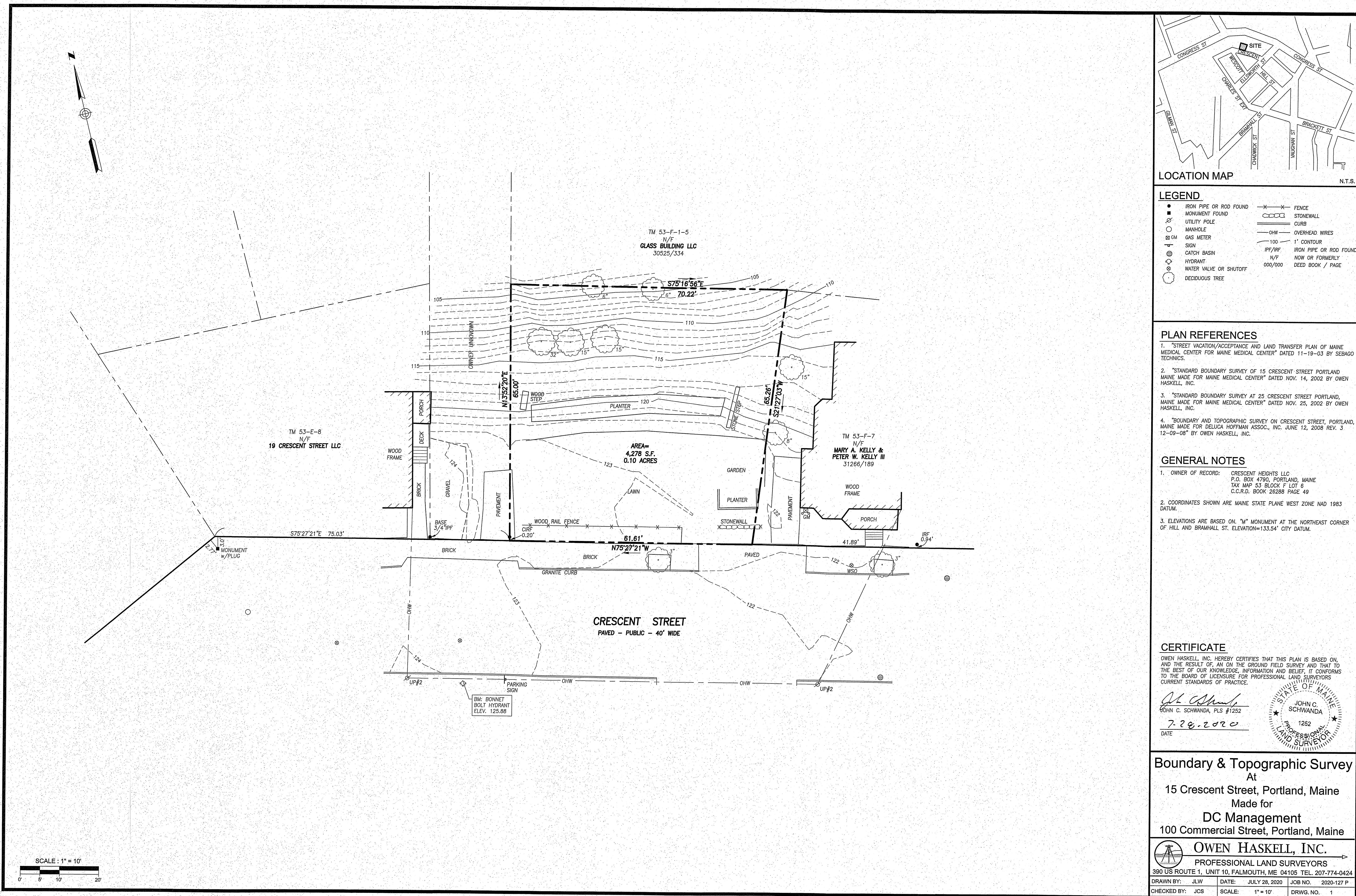
1. ALL REQUIRED UTILITIES SERVING THE PROJECT SHALL BE COORDINATED BETWEEN THE SITE WORK CONTRACTOR AND DIVISION 22/26 CONTRACTOR(S). THE SITE WORK CONTRACTOR SHALL BE RESPONSIBLE TO EXTEND ALL PROPOSED UTILITIES TO WITHIN FIVE (5) FEET OF THE BUILDING TO A LOCATION COORDINATED WITH THE MECHANICAL AND ELECTRICAL SUBCONTRACTORS. THE BUILDING CONTRACTOR SHALL BE RESPONSIBLE FOR ALL UTILITIES WITHIN FIVE (5) FEET AND INSIDE THE BUILDING OR UNDER SLAB.
2. THE CONTRACTOR SHALL COORDINATE THE INSTALLATION OF AND/OR RELOCATION OF OVERHEAD AND UNDERGROUND TELEPHONE WITH FAIRPOINT COMMUNICATIONS. CONTRACTOR SHALL BE RESPONSIBLE FOR CONDUITS, PULL WIRES, TRENCHING AND BACKFILLING NECESSARY TO COMPLETE THE WORK.
3. THE CONTRACTOR SHALL COORDINATE THE INSTALLATION OF ELECTRIC SERVICE WITH CENTRAL MAINE POWER, THE TELECOMMUNICATIONS SERVICE WITH FAIRPOINT COMMUNICATIONS, AND THE CABLE SERVICE WITH SPECTRUM. ALL WORK SHALL CONFORM TO THE PROJECT SPECIFICATIONS OR UTILITY COMPANY STANDARDS, WHICHEVER IS MORE STRINGENT.
4. ADJUST ALL MANHOLES, CATCH BASINS, CURB BOXES, ETC. WITHIN LIMITS OF WORK TO FINISH GRADE AT NO ADDITIONAL EXPENSE TO THE OWNER.
5. ALL UNDERGROUND CONDUITS SHALL HAVE NYLON PULL ROPES TO FACILITATE PULLING CABLES.
6. THE CONTRACTOR SHALL OBTAIN, PAY FOR, AND COMPLY WITH ALL REQUIRED PERMITS, ARRANGE FOR ALL INSPECTIONS, AND SUBMIT COPIES OF ACCEPTANCE CERTIFICATES TO THE OWNER PRIOR TO COMPLETION OF THE PROJECT.
7. THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL BOXES, FITTINGS, CONNECTORS, COVER PLATES AND OTHER MISCELLANEOUS ITEMS NOT NECESSARILY DETAILED ON THE DRAWINGS TO RENDER INSTALLATION OF UTILITIES COMPLETE AND OPERATIONAL, AT NO EXTRA EXPENSE TO THE OWNER.
8. A 10 FOOT MINIMUM EDGE TO EDGE HORIZONTAL SEPARATION SHALL BE PROVIDED BETWEEN ALL WATER AND SANITARY SEWER LINES. A 12 INCH OUTSIDE TO OUTSIDE VERTICAL SEPARATION SHALL BE PROVIDED AT ALL WATER AND SANITARY SEWER CROSSINGS.
9. THE CONTRACTOR SHALL PROVIDE TEMPORARY SERVICES AS REQUIRED TO PROVIDE CONTINUOUS SERVICE TO THE JOBSITE. TEMPORARY SERVICES SHALL COMPLY WITH ALL FEDERAL, STATE, LOCAL AND UTILITY COMPANY STANDARDS. COORDINATE ALL TEMPORARY SERVICES WITH UTILITY COMPANY, OWNER, AND AFFECTED BUSINESSES.
10. CONTRACTOR SHALL PROVIDE AND INSTALL ALL NECESSARY ELECTRICAL SERVICES IN CONDUIT TO SITE LIGHTING, COMPLYING WITH APPLICABLE CODES. COORDINATE WITH OWNER, SITE ELECTRICAL, ARCHITECTURAL AND CMP PLANS.
11. ALL SANITARY SERVICES AND APPURTENANCES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT STANDARDS AND SPECIFICATIONS OF THE CITY OF PORTLAND PUBLIC WORKS DEPARTMENT. ALL SANITARY SERVICES AND APPURTENANCES TO BE ABANDONED SHALL BE PROPERLY RECORDED WITH PORTLAND PUBLIC WORKS ENGINEERING DEPARTMENT. A DIGITAL VIDEOTAPE SHALL BE MADE OF SANITARY SEWER SYSTEMS TO BE UTILIZED PRIOR TO CONSTRUCTION. UPSTREAM PIPES INTENDED FOR ABANDONMENT SHALL BE INSPECTED TO VERIFY THAT THEY NO LONGER SERVE OTHER FACILITIES.

1. THIS PROJECT IS SUBJECT TO THE TERMS AND CONDITIONS OF THE SITE PLAN REVIEW PERMIT FROM THE CITY OF PORTLAND WHICH WILL BE MADE A PART OF THE CONTRACT BID DOCUMENTS. THE CONSTRUCTION WILL BE GOVERNED BY THE ZONING ORDINANCES WHICH ARE AVAILABLE FOR VIEWING AT THE OFFICE OF THE ENGINEER OR THE MUNICIPAL OFFICE.

DIMENSIONAL REQUIREMENTS (R-6 ZONE)		
STANDARD	R-6 ZONE REQUIRED	PROVIDED
MIN. LOT SIZE	2,000 SF	4,278 SF
MIN. LOT AREA PER DWELLING UNIT	725 SF	855 SF
MAX. LOT COVERAGE	60%	37.30%
STREET FRONTAGE	20 FT	61.60 Ft
FRONT YARD	5 FT, OR AVG.	5.50 Ft
MIN. SIDE YARD	5 FT	5 Ft
MIN. REAR YARD	10 FT	15.30 Ft
MAX. BUILDING HEIGHT	45 FT	40.65 Ft
STEP BACK	15 FT REAR, 10 FT SIDE	15 FT REAR, 10 FT SIDE
OPEN SPACE	20%	24.80%
PARKING	1 SPACE PER UNIT, FIRST 3 UNITS EXEMPT (2 SPACES)	5 SPACES
BICYCLE PARKING	2 SPACES FOR EVERY 5 UNITS (2 SPACES)	2 SPACES

	EXISTING PROPERTY LINE
	PROJECT SITE BOUNDARY
	SETBACK LINE
	PROPOSED EASEMENT
	EXISTING MINOR CONTOUR
	EXISTING MAJOR CONTOUR
	PROPOSED CONTOUR
	EXISTING STORMDRAIN
	PROPOSED STORMDRAIN
	EXISTING SANITARY SEWER
	PROPOSED SANITARY SEWER
	EXISTING WATER LINE
	PROPOSED WATER LINE
	EXISTING GAS
	PROPOSED GAS
	EXISTING OVERHEAD ELECTRIC & TELEPHONE
	EXISTING UNDERGROUND ELECTRIC
	PROPOSED UNDERGROUND ELECTRIC
	EXISTING UNDERGROUND TELEPHONE
	PROPOSED UNDERGROUND TELEPHONE & CABLE TV
	EXISTING EDGE OF PAVEMENT
	PROPOSED EDGE OF PAVEMENT
	EXISTING EDGE OF GRAVEL
	PROPOSED EDGE OF GRAVEL
	EXISTING CURB
	PROPOSED CURB
	PROPOSED DECORATIVE METAL FENCE
	PROPOSED PRIVACY FENCE
	SILT FENCE
	TEST PIT
	EXISTING VALVE
	PROPOSED VALVE
	EXISTING HYDRANT
	EXISTING LIGHT POLE
	PROPOSED BUILDING LIGHT
	EXISTING UTILITY POLE
	EXISTING CATCH BASIN
	PROPOSED CATCH BASIN
	EXISTING DRAIN MANHOLE
	PROPOSED DRAIN MANHOLE
	EXISTING SEWER MANHOLE
	EXISTING SPOT GRADE
	PROPOSED SPOT GRADE
	SURVEY CONTROL POINT
	EXISTING MONUMENT
	EXISTING IRON PIPE
	EXISTING SIGN
	PROPOSED SIGN
	EXISTING BUILDING
	PROPOSED BUILDING
	PROPOSED CONCRETE
	PROPOSED PAVEMENT
	PROPOSED BRICK

PROJECT: CRESCENT STREET RESIDENCES 15 CRESCENT STREET, PORTLAND SHEET TITLE: GENERAL NOTES & LEGEND						DATE: 2/14/2023 SCALE: AS NOTED DESIGNED: ARF JOB NO: 1948 FILE: 1948-C.DWG					
CLIENT: DEVELOPERS COLLABORATIVE 631 STEVENS AVENUE, SUITE 203 PORTLAND, ME 04103											
 TERRADYN CONSULTANTS, LLC						PERMIT DRAWING NOT FOR CONSTRUCTION					
						Civil Engineering Land Planning Stormwater Design Environmental Permitting					
41 CAMPUS DRIVE SUITE 301 NEW GLOUCESTER, ME 04280						565 CONGRESS STREET SUITE 201 PORTLAND, ME 04102					
OFFICE: (207) 926-5111 FAX: (207) 221-1317 www.terradyntconsultants.com											
						DATE: 10/25/2023					
						P.E.: ADRIENNE R. FINE					
						BY					
						REVISED PER STAFF COMMENTS					
2						10/25/2023					
1						09/12/2023					
NO.						DATE					
REVISONS						APPROD COMMENTS					



LEGEND

●	IRON PIPE OR ROD FOUND	—X—X—	FENCE
■	MONUMENT FOUND	—C—C—C—	STONEWALL
○	UTILITY POLE	—	CURB
○	MANHOLE	—OHW—	OVERHEAD WIRES
⊗	GAS METER	—100—	1' CONTOUR
+	SIGN	—IPF/IRF—	IRON PIPE OR ROD FOUND
⊕	CATCH BASIN	—N/F—	NOW OR FORMERLY
⊕	HYDRANT	—000/000—	DEED BOOK / PAGE
⊕	WATER VALVE OR SHUTOFF		
⊕	DECIDUOUS TREE		

- PLAN REFERENCES**
- "STREET VACATION/ACCEPTANCE AND LAND TRANSFER PLAN OF MAINE MEDICAL CENTER FOR MAINE MEDICAL CENTER" DATED 11-19-03 BY SEBAGO TECHNICS.
 - "STANDARD BOUNDARY SURVEY OF 15 CRESCENT STREET PORTLAND MAINE MADE FOR MAINE MEDICAL CENTER" DATED NOV. 14, 2002 BY OWEN HASKELL, INC.
 - "STANDARD BOUNDARY SURVEY AT 25 CRESCENT STREET PORTLAND, MAINE MADE FOR MAINE MEDICAL CENTER" DATED NOV. 25, 2002 BY OWEN HASKELL, INC.
 - "BOUNDARY AND TOPOGRAPHIC SURVEY ON CRESCENT STREET, PORTLAND, MAINE MADE FOR DELUCA HOFFMAN ASSOC., INC. JUNE 12, 2008 REV. 3 12-09-08" BY OWEN HASKELL, INC.

- GENERAL NOTES**
- OWNER OF RECORD: CRESCENT HEIGHTS LLC
P.O. BOX 4790, PORTLAND, MAINE
TAX MAP 53 BLOCK F LOT 6
C.C.R.D. BOOK 26288 PAGE 49
 - COORDINATES SHOWN ARE MAINE STATE PLANE WEST ZONE NAD 1983 DATUM.
 - ELEVATIONS ARE BASED ON "M" MONUMENT AT THE NORTHEAST CORNER OF HILL AND BRAMHALL ST. ELEVATION=133.54' CITY DATUM.

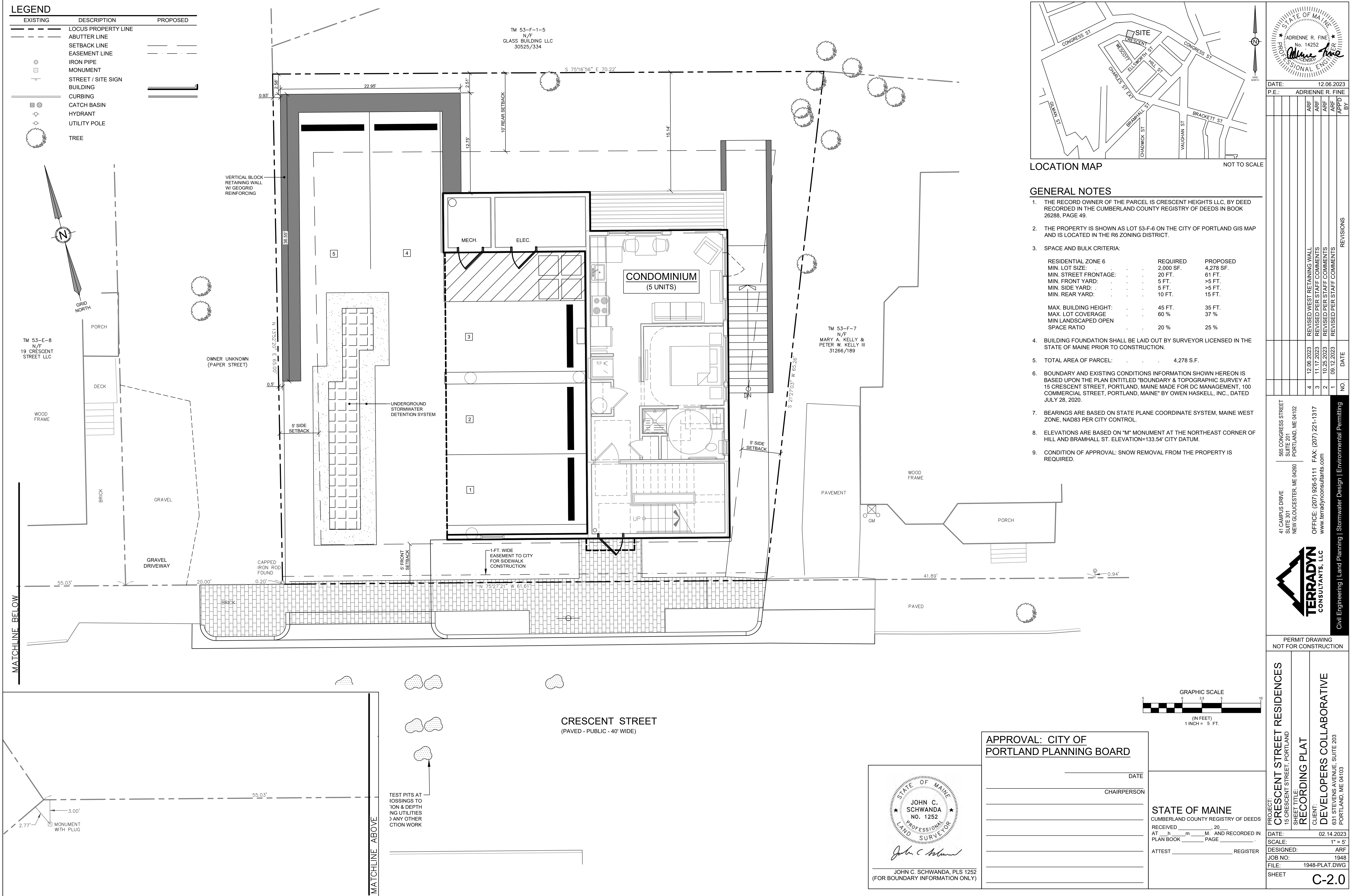
CERTIFICATE
OWEN HASKELL, INC. HEREBY CERTIFIES THAT THIS PLAN IS BASED ON, AND THE RESULT OF, AN ON THE GROUND FIELD SURVEY AND THAT TO THE BEST OF OUR KNOWLEDGE, INFORMATION AND BELIEF, IT CONFORMS TO THE BOARD OF LICENSURE FOR PROFESSIONAL LAND SURVEYORS CURRENT STANDARDS OF PRACTICE.

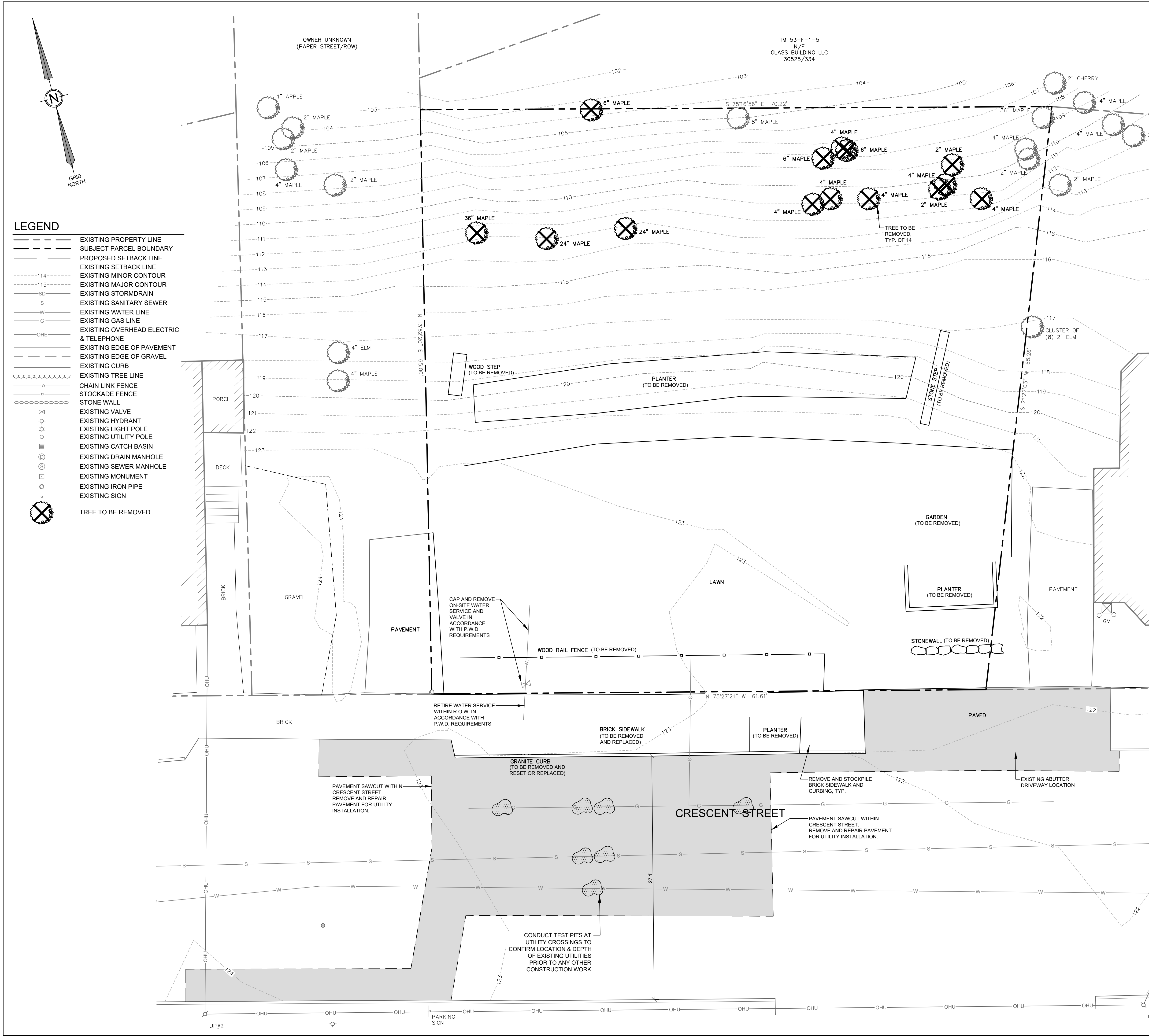
John C. Schwanda
JOHN C. SCHWANDA, PLS #1252
DATE 7.28.2020
1252
PROFESSIONAL LAND SURVEYOR
STATE OF MAINE

Boundary & Topographic Survey
At
15 Crescent Street, Portland, Maine
Made for
DC Management
100 Commercial Street, Portland, Maine

OWEN HASKELL, INC.
PROFESSIONAL LAND SURVEYORS
390 US ROUTE 1, UNIT 10, FALMOUTH, ME 04105 TEL. 207-774-0424

DRAWN BY: J.L.W.	DATE: JULY 28, 2020	JOB NO. 2020-127 P
CHECKED BY: JCS	SCALE: 1" = 10'	DRWG. NO. 1





GENERAL NOTES

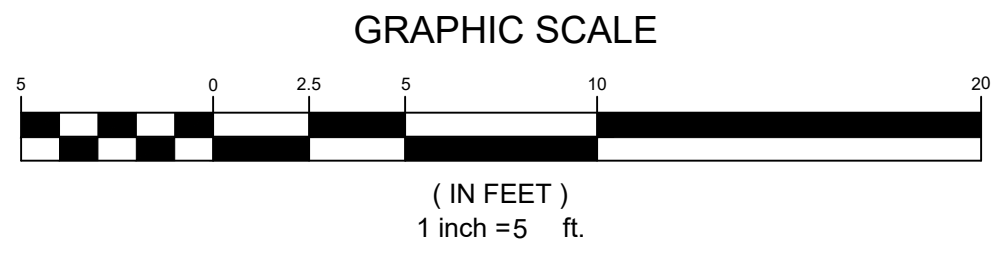
1. THE RECORD OWNER OF THE PARCEL IS CRESCENT HEIGHTS LLC BY THE FOLLOWING DEED RECORDED IN THE CUMBERLAND COUNTY REGISTRY OF DEEDS: BK 26288 / PG 49
2. TAX ASSESSOR'S MAP/BLOCK/LOT: 53/F/6
3. ZONING DISTRICT: R-6
4. TOTAL AREA OF PARCEL: 0.10 Ac.
5. BOUNDARY AND EXISTING CONDITIONS INFORMATION SHOWN HEREON IS BASED UPON THE PLAN ENTITLED "BOUNDARY & TOPOGRAPHIC SURVEY AT 15 CRESCENT STREET, PORTLAND, MAINE MADE FOR DC MANAGEMENT, 100 COMMERCIAL STREET, PORTLAND, MAINE" BY OWEN HASKELL, INC., DATED JULY 28, 2020.

DEMOLITION NOTES

1. CONTRACTOR SHALL VISIT THE SITE AND FAMILIARIZE HIM OR HERSELF WITH ALL CONDITIONS AFFECTING THE PROPOSED WORK AND SHALL MAKE PROVISIONS AS TO THE COST THEREOF. CONTRACTOR SHALL BE RESPONSIBLE FOR FAMILIARIZING HIM OR HERSELF WITH ALL CONTRACT DOCUMENTS, FIELD CONDITIONS AND DIMENSIONS AND CONFIRMING THAT THE WORK MAY BE ACCOMPLISHED AS SHOWN PRIOR TO PROCEEDING WITH CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO THE COMMENCEMENT OF WORK.
2. ALL EXISTING PAVEMENT, UTILITIES AND BUILDINGS TO BE DEMOLISHED AS DELINEATED AND REMOVED FROM SITE IN ACCORDANCE WITH ALL APPLICABLE CITY OF PORTLAND AND STATE OF MAINE REGULATIONS.
3. ALL DEMOLITION AND WRECKAGE FROM PROJECT SITE TO BE DISPOSED OF AT AN APPROPRIATE LICENSED DISPOSAL SITE.
4. THE CONTRACTOR IS HEREBY CAUTIONED THAT ALL SITE FEATURES SHOWN HEREON ARE BASED ON FIELD OBSERVATIONS BY THE SURVEYOR AND BY INFORMATION PROVIDED BY UTILITY COMPANIES. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR SHALL CONTACT DIG SAFE (1-888-DIGSAFE) AT LEAST THREE (3) BUT NOT MORE THAN THIRTY (30) DAYS PRIOR TO COMMENCEMENT OF EXCAVATION OR DEMOLITION TO VERIFY HORIZONTAL AND VERTICAL LOCATION OF ALL UTILITIES.
5. CONTRACTOR SHALL BE AWARE THAT DIG SAFE ONLY NOTIFIES ITS "MEMBER" UTILITIES ABOUT THE DIG. WHEN NOTIFIED, DIG SAFE WILL ADVISE CONTRACTOR OF MEMBER UTILITIES IN THE AREA. CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING AND CONTACTING NON-MEMBER UTILITIES DIRECTLY. NON-MEMBER UTILITIES MAY INCLUDE TOWN OR CITY WATER AND SEWER DISTRICTS AND SMALL LOCAL UTILITIES, AS WELL AS USG PUBLIC WORKS SYSTEMS.
6. CONTRACTOR SHALL NOTIFY ENGINEER OF ALL PRODUCTS OR ITEMS NOTED AS "EXISTING" WHICH ARE NOT FOUND IN THE FIELD.
7. CONTRACTOR SHALL INCORPORATE PROVISIONS AS NECESSARY DURING DEMOLITION PHASE TO PROTECT EXISTING STRUCTURES, PHYSICAL FEATURES, AND MAINTAIN SITE STABILITY.
8. REQUIRED EROSION CONTROL MEASURES MUST REMAIN INTACT THROUGHOUT DEMOLITION AND CONSTRUCTION. FAILURE TO INSTALL OR PROPERLY MAINTAIN THESE BARRICADES WILL RESULT IN ENFORCEMENT ACTION. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH "MAINE EROSION AND SEDIMENTATION CONTROL HANDBOOK FOR CONSTRUCTION: BEST MANAGEMENT PRACTICES" PUBLISHED BY THE CUMBERLAND COUNTY SOIL AND WATER CONSERVATION DISTRICT AND MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION, MARCH 2004 OR LATEST EDITION. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO POSSESS A COPY OF THE EROSION CONTROL PLAN AT ALL TIMES.
9. NO HOLES, TRENCHES OR STRUCTURES SHALL BE LEFT OPEN OVERNIGHT IN ANY EXCAVATION ACCESSIBLE TO THE PUBLIC OR IN PUBLIC RIGHTS-OF-WAY.

TREE NOTES

1. TREE SURVEY WAS COMPLETED BY TERRADYN CONSULTANTS IN OCTOBER 2023 WITH ASSISTANCE FROM THE LANDSCAPE ARCHITECT TONY MUENCH.
2. ALL TREES LABELED AS MAPLE ON THIS PLAN ARE NORWAY MAPLES, WHICH ARE AN INVASIVE SPECIES.
3. FOURTEEN (14) NORWAY MAPLES TO BE REMOVED FROM THE PROJECT SITE. TREE SIZES TO BE REMOVED ARE:
 - ONE 36"
 - TWO 24"
 - THREE 6"
 - SIX 4"
 - TWO 2"
4. SEE SHEET L-1.0 FOR REPLACEMENT PLANTINGS.
5. NO OFF-SITE TREES ARE EXPECTED TO BE IMPACTED BY CONSTRUCTION ACTIVITIES. SEE ROOT ZONE FIGURES PREPARED BY THE LANDSCAPE ARCHITECT.



STATE OF MAINE
ADRIENNE R. FINE
No. 14252
LICENSED PROFESSIONAL ENGINEER

DATE: 12.06.2023
P.E.: ADRIENNE R. FINE

REVISED PER STAFF COMMENTS	REVISED PER STAFF COMMENTS	REVISED PER STAFF COMMENTS	REVISED PER STAFF COMMENTS	DATE
4	3	2	1	No.

566 CONGRESS STREET
SUITE 300
NEW GLoucester, ME 04260
OFFICE: (207) 926-5111 FAX: (207) 221-1317
www.terradyndesign.com

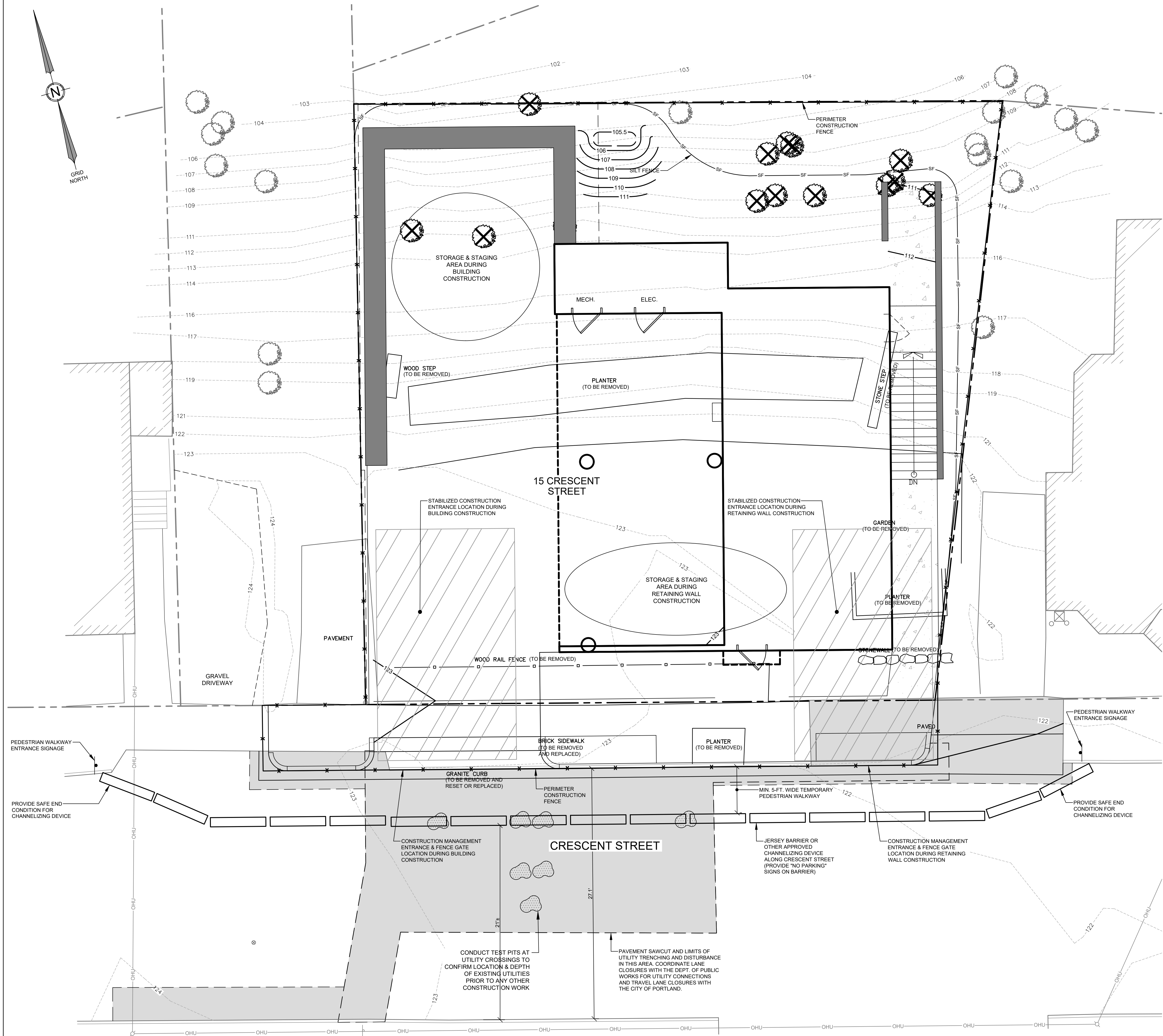
TERRADYN
CONSULTANTS, LLC

Civil Engineering | Land Planning | Stormwater Design | Environmental Permitting

PERMIT DRAWING
NOT FOR CONSTRUCTION

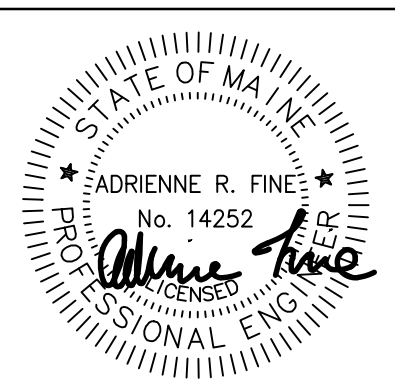
PROJECT:
CRESCENT STREET RESIDENCES
15 CRESCENT STREET, PORTLAND
SHEET TITLE:
EXISTING CONDITION & DEMOLITION PLAN
CLIENT:
DEVELOPERS COLLABORATIVE
631 STEVENS AVENUE, SUITE 203
PORTLAND, ME 04103

DATE: 02.14.2023
SCALE: 1" = 5'
DESIGNED: ARF
JOB NO: 1948
FILE: 1948-EC.DWG
SHEET C-3.0



CONSTRUCTION MANAGEMENT NOTES:

1. THE CONSTRUCTION GATE SHALL SWING INTO THE PROJECT SITE
2. FENCING AROUND THE PERIMETER OF THE CONSTRUCTION WORK ZONE WILL BE MAINTAINED THROUGHOUT BUILDING CONSTRUCTION, UNLESS OTHERWISE APPROVED BY THE DEPARTMENT OF PUBLIC WORKS.
3. CLOSURE OF THE CRESCENT STREET SIDEWALK DIRECTLY IN FRONT OF THE SITE WILL BE REQUIRED FOR THE DURATION OF BUILDING CONSTRUCTION. SIGNAGE SHALL BE PROVIDED TO DIRECT PEDESTRIANS INTO THE PEDESTRIAN WALKWAY OR ACROSS THE STREET AT EXISTING CROSSWALK LOCATIONS DURING SIDEWALK CLOSURES, AS SHOWN. ADA ACCESSIBILITY SHALL BE MAINTAINED AT ALL TIMES.
4. PARTIAL TRAVEL LANE CLOSURE OF CRESCENT STREET WILL BE NECESSARY DURING UNDERGROUND UTILITY INSTALLATION. THIS WORK SHALL BE SCHEDULED AND SEQUENCED TO MINIMIZE THE DURATION OF ANY STREET OCCUPANCY. AT NO TIME CAN CONSTRUCTION ACTIVITY INCLUDING DELIVERY VEHICLES CLOSE OR BLOCK STREETS OR AFFECT PUBLIC SAFETY ACCESS WITHOUT PRIOR NOTICE AND APPROVAL OF THE DEPARTMENT OF PUBLIC WORKS.
5. TEMPORARY PEDESTRIAN WALKWAYS SHALL BE PROVIDED WITH A FUNCTIONAL WIDTH OF 5-FT. NO PORTION OF THE 5-FT. WIDTH MAY BE BLOCKED BY SIGNAGE OR BARRIERS.
6. ALL CONSTRUCTION WORKERS SHALL PARK IN OFF-STREET PARKING LOCATIONS. ON-STREET PARKING SHALL NOT BE PERMITTED.



DATE: 12.06.2023
P.E.: ADRIENNE R. FINE

NO.	DATE	REVISIONS
4	12.06.2023	REVISED WEST RETAINING WALL
3	11.17.2023	REVISED PER STAFF COMMENTS
2	10.25.2023	REVISED PER STAFF COMMENTS
1	09.12.2023	REVISED PER STAFF COMMENTS

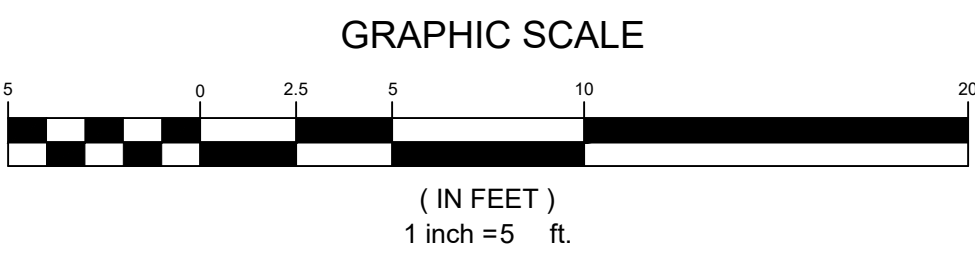
PROJECT: 555 CONGRESS STREET
SUITE 303
PORTLAND, ME 04102
41 CAMPUS DRIVE
SUITE 303
NEW GLoucester, ME 04260
OFFICE: (207) 926-5111 FAX: (207) 221-1317
www.terradyndesign.com

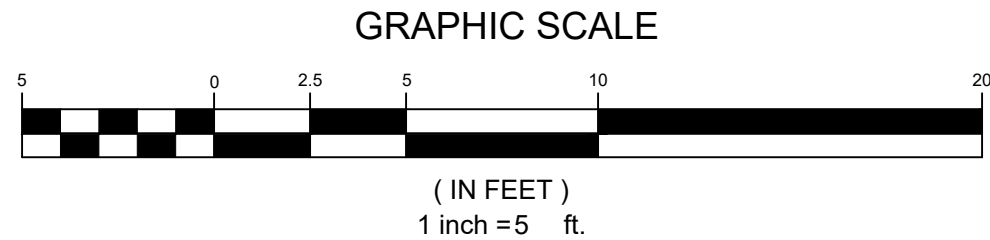


PERMIT DRAWING
NOT FOR CONSTRUCTION

PROJECT: CRESCENT STREET RESIDENCES
SHEET TITLE: EXISTING CONDITION & DEMOLITION PLAN
CLIENT: DEVELOPERS COLLABORATIVE
631 STEVENS AVENUE, SUITE 303
PORTLAND, ME 04103

DATE: 02.14.2023
SCALE: 1" = 5'
DESIGNED: ARF
JOB NO: 1948
FILE: 1948-CM.DWG
SHEET C-3.1

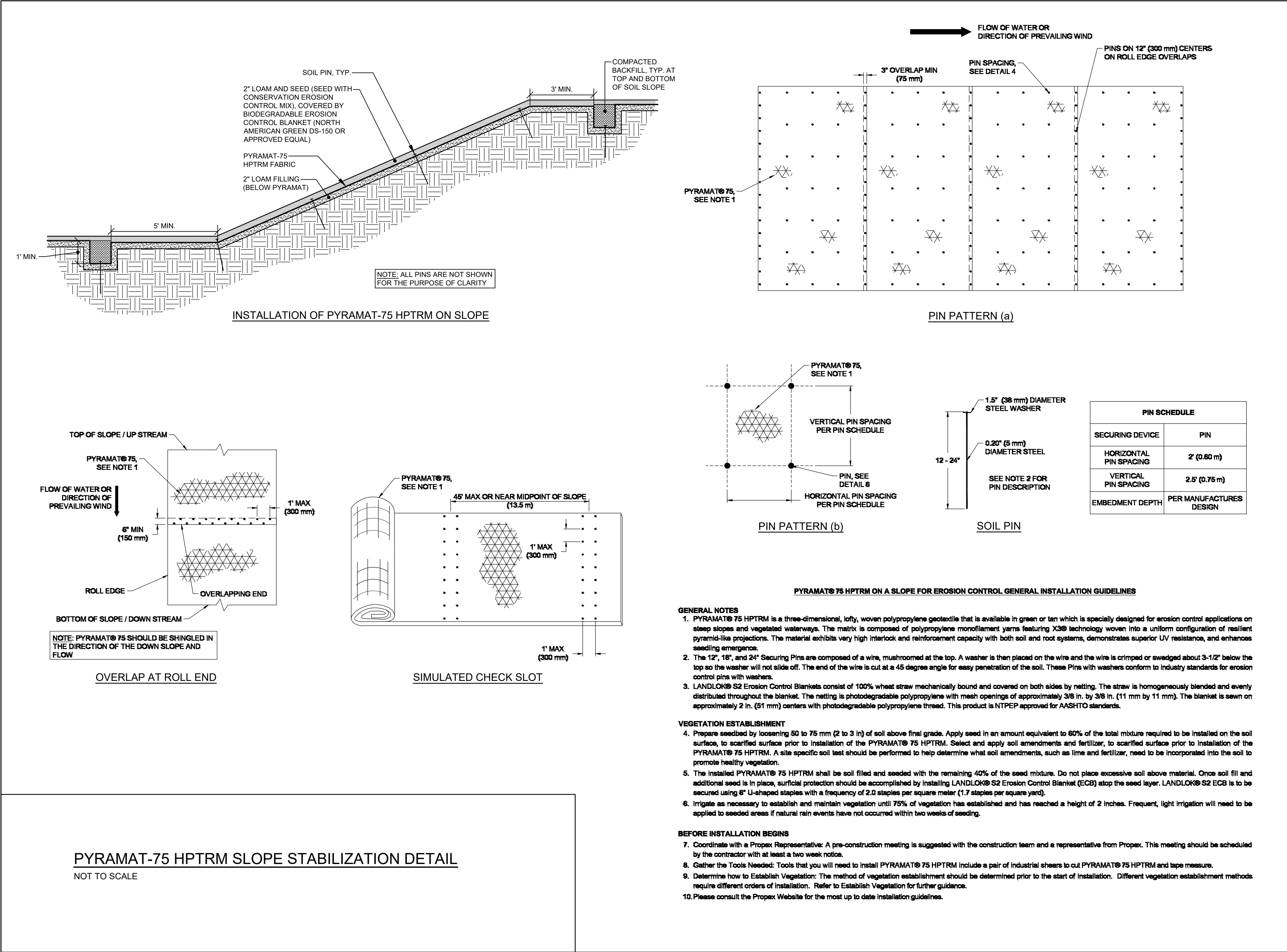




1. THE RECORD OWNER OF THE PARCEL IS CRESCENT HEIGHTS LLC, BY DEED RECORDED IN THE CUMBERLAND COUNTY REGISTRY OF DEEDS IN BOOK 26288, PAGE 49.
2. THE PROPERTY IS SHOWN AS LOT 53-F-6 ON THE CITY OF PORTLAND GIS MAP AND IS LOCATED IN THE R6 ZONING DISTRICT.
3. SPACE AND BULK CRITERIA:

RESIDENTIAL ZONE 6	REQUIRED	PROPOSED
MIN. LOT SIZE:	2,000 SF.	4,278 SF.
MIN. STREET FRONTAGE:	20 FT.	61 FT.
MIN. FRONT YARD:	5 FT.	>5 FT.
MIN. SIDE YARD:	5 FT.	>5 FT.
MIN. REAR YARD:	10 FT.	15 FT.
MAX. BUILDING HEIGHT:	45 FT.	35 FT.
MAX. LOT COVERAGE	60 %	37 %
MIN LANDSCAPED OPEN SPACE RATIO	20 %	25 %
4. BUILDING FOUNDATION SHALL BE LAID OUT BY SURVEYOR LICENSED IN THE STATE OF MAINE PRIOR TO CONSTRUCTION.
5. TOTAL AREA OF PARCEL: 0.098 Ac.
6. BOUNDARY AND EXISTING CONDITIONS INFORMATION SHOWN HEREON IS BASED UPON THE PLAN ENTITLED "BOUNDARY & TOPOGRAPHIC SURVEY AT 15 CRESCENT STREET, PORTLAND, MAINE MADE FOR CD MANAGEMENT, 100 COMMERCIAL STREET, PORTLAND, MAINE" BY OWEN HASKELL, INC., DATED JULY 28, 2020.
7. BEARINGS ARE BASED ON STATE PLANE COORDINATE SYSTEM, MAINE WEST ZONE, NAD83 PER CITY CONTROL.
8. ELEVATIONS ARE BASED ON "M" MONUMENT AT THE NORTHEAST CORNER OF HILL AND BRAMHALL ST. ELEVATION=133.54' CITY DATUM.
9. CONDITION OF APPROVAL: SNOW REMOVAL FROM THE PROPERTY IS REQUIRED.

Page 554



DATE: 10/25/2023
P.E.: ADRIENNE R. FINE

NO.	DATE	REVISIONS
1	09.12.2023	REVISED PER STAFF COMMENTS
2	10.25.2023	REVISED PER STAFF COMMENTS

41 CAMPUS DRIVE
SUITE 301
NEW GLOUCESTER, ME 04260

565 CONGRESS STREET
SUITE 201
PORTLAND, ME 04102

OFFICE: (207) 926-5111
www.terradync consultants.com

FAX: (207) 221-1317

Civil Engineering | Land Planning | Stormwater Design | Environmental Permitting

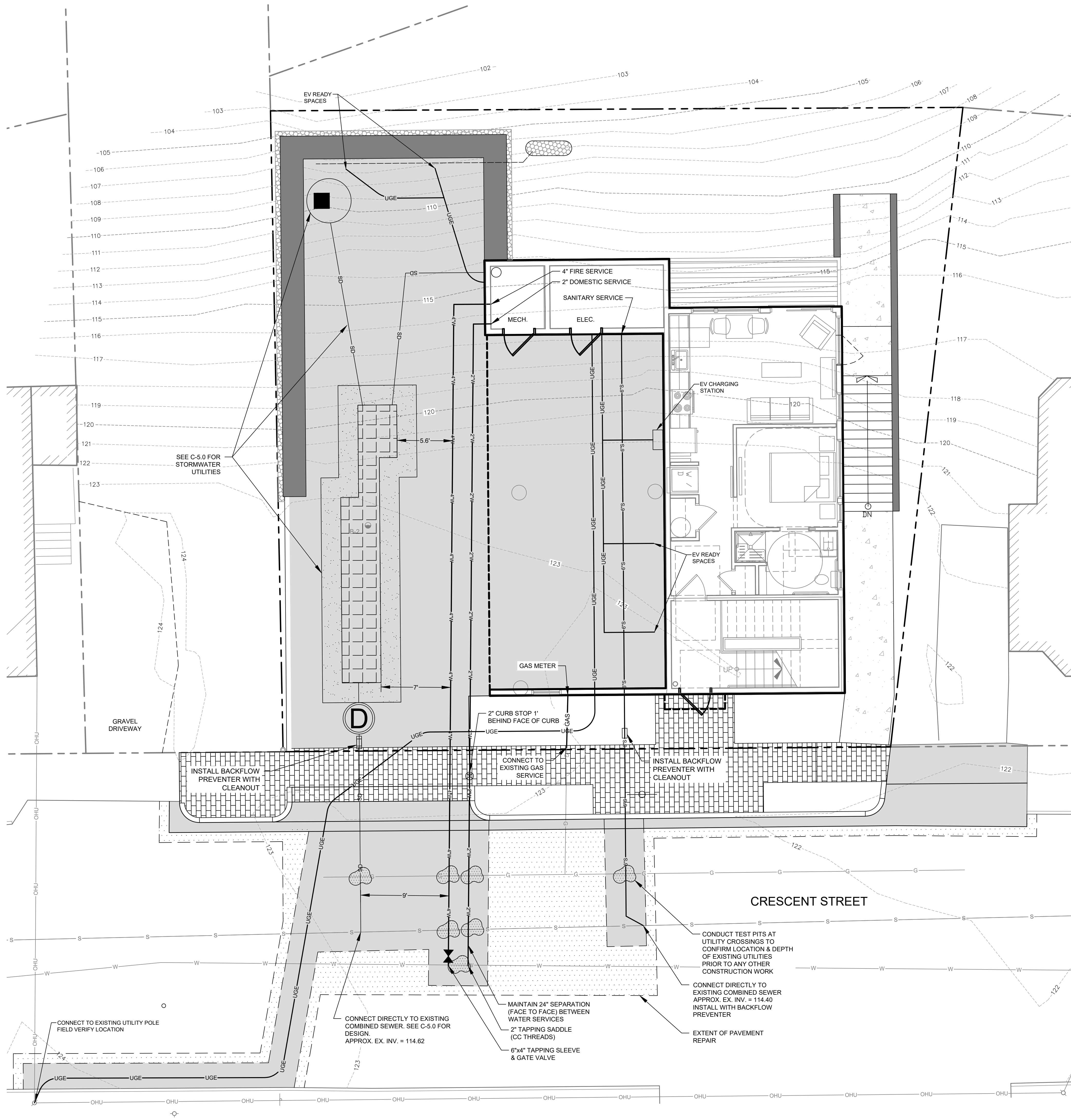
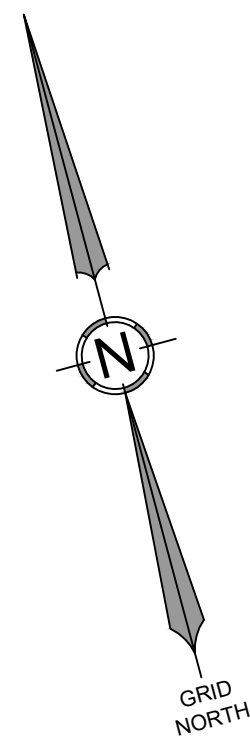
PERMIT DRAWING
NOT FOR CONSTRUCTION

PROJECT:
CRESCENT STREET RESIDENCES
15 CRESCENT STREET, PORTLAND

SHEET TITLE:
SLOPE STABILIZATION DETAIL

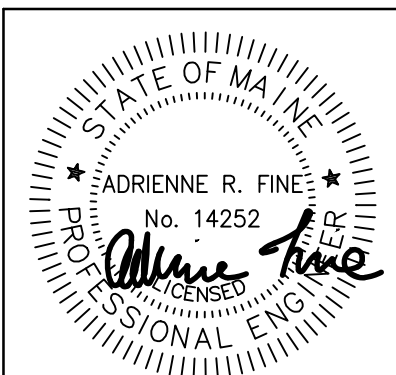
CLIENT:
DEVELOPERS COLLABORATIVE
631 STEVENS AVENUE, SUITE 203
PORTLAND, ME 04103

DATE: 2/14/2023
SCALE: N.T.S.
DESIGNED: ARF
JOB NO: 1948
FILE: 1948 DETAILS.DWG
SHEET C-5.2



UTILITY NOTES:

1. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR THE ELEVATION OF THE EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THIS INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AND DIG SAFE (DIAL 811) AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
2. WATER SERVICE SHALL BE INSTALLED IN ACCORDANCE WITH ALL REQUIREMENTS OF PORTLAND WATER DISTRICT.
3. SEWER SERVICE SHALL BE INSTALLED IN ACCORDANCE WITH ALL REQUIREMENTS OF THE CITY OF PORTLAND.
4. ELECTRICAL SERVICE SHALL BE COORDINATED WITH CENTRAL MAINE POWER CO.



DATE: 11.17.2023
P.E.: ADRIENNE R. FINE

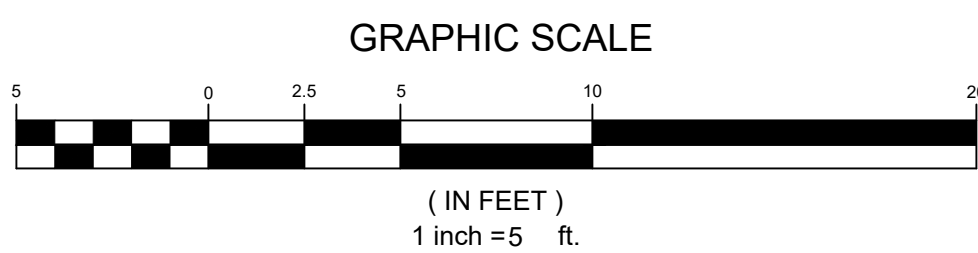
NO.	DATE	REVISIONS
3	11.17.2023	REVISED PER STAFF COMMENTS
2	10.25.2023	REVISED PER STAFF COMMENTS
1	09.12.2023	REVISED PER STAFF COMMENTS

PROJECT: CRESCENT STREET RESIDENCES
15 CRESCENT STREET, PORTLAND
SHEET TITLE: SITE UTILITY PLAN
CLIENT: DEVELOPERS COLLABORATIVE
631 STEVENS AVENUE, SUITE 203
PORTLAND, ME 04103

41 CAMPUS DRIVE
SUITE 200
NEW GLOUCESTER, ME 04260
OFFICE: (207) 926-5111 FAX: (207) 221-1317
www.terradyndesign.com

PERMIT DRAWING
NOT FOR CONSTRUCTION

DATE: 02.14.2023
SCALE: 1" = 5'
DESIGNED: ARF
JOB NO: 1948
FILE: 1948-B.DWG
SHEET C-6.0



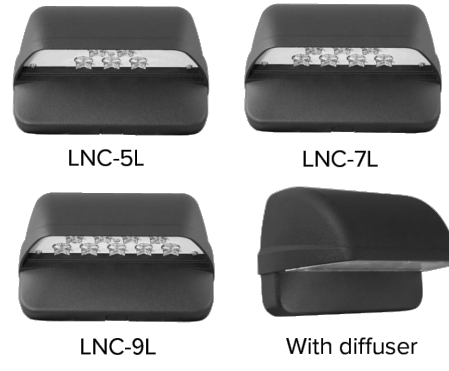


LNC

COMPACT LED LITEPAK

FEATURES

- Compact LNC LED is designed for perimeter illumination and available in 3 lumen packages for safety, security and identity
- 3000K, 4000K, 5000K and Amber color temperatures
- Up to 41 spacing to mounting height ratio means fewer fixtures to install
- Acrylic diffuser included! Use for applications near entrances or locations where reduced brightness is desired. (Maximum spacing with diffuser 30ft)
- Die-cast aluminum housing with decorative Laredo styling
- Full cut-off neighbor friendly
- Listed to UL1598 for use in wet locations



SPECIFICATIONS

CONSTRUCTION

- Decorative die-cast aluminum housing and door
- Rugged design protects internal components and provides excellent thermal management for long life
- Powder paint finishes provide lasting appearance in outdoor environments

- Full cut-off distribution: Ambient diffuser included, use for applications near entrances or locations where reduced brightness is desired

OPTICS

- Drivers are 120-277V, 50/60Hz Type II, III and Type IV lenses provide wide lateral spread
- 3000K - 80 CRI, 4000K - 70 CRI, and 5000K - 70 CRI, CCT nominal
- Drivers have greater than .90 power factor and less than 20% Total Harmonic Distortion

INSTALLATION

- Quick mount adapter provides quick installation, designed for recessed box 4" square junction box

ELECTRICAL

- 60,000 hours minimum LED life at L96 rating per IESNA TM-211
- Minimum operating temperature is -40°C/-40°F
- 0-10V dimming 120-277V only
- LNC5L - 5 LEDs, Types II, III or IV available, see page 2 for electrical details
- LNC7L - 7 LEDs, Type II, III or IV available, see page 2 for electrical details
- LNC9L - 9 LEDs, Types II, III or IV available, see page 2 for electrical details

CONTROLS

- Photocontrol option is available to provide dusk-to-dawn control for additional energy savings

CERTIFICATIONS

- Listed and labeled to UL 1598 for wet locations, 25°C ambient environments

WARRANTY

- 5 year warranty

KEY DATA	
Lumen Range	800-2100
Wattage Range	13-22
Efficacy Range (LPW)	64-95
Fixture Projected Life (Hours)	1,96-60K
Weights lbs. (kg)	9.6 (24.5)



currentlighting.com/exo

© 2022 HJ Solutions, Inc. All rights reserved. Information and specifications subject to change without notice. All values are design or typical values when measured under laboratory conditions.

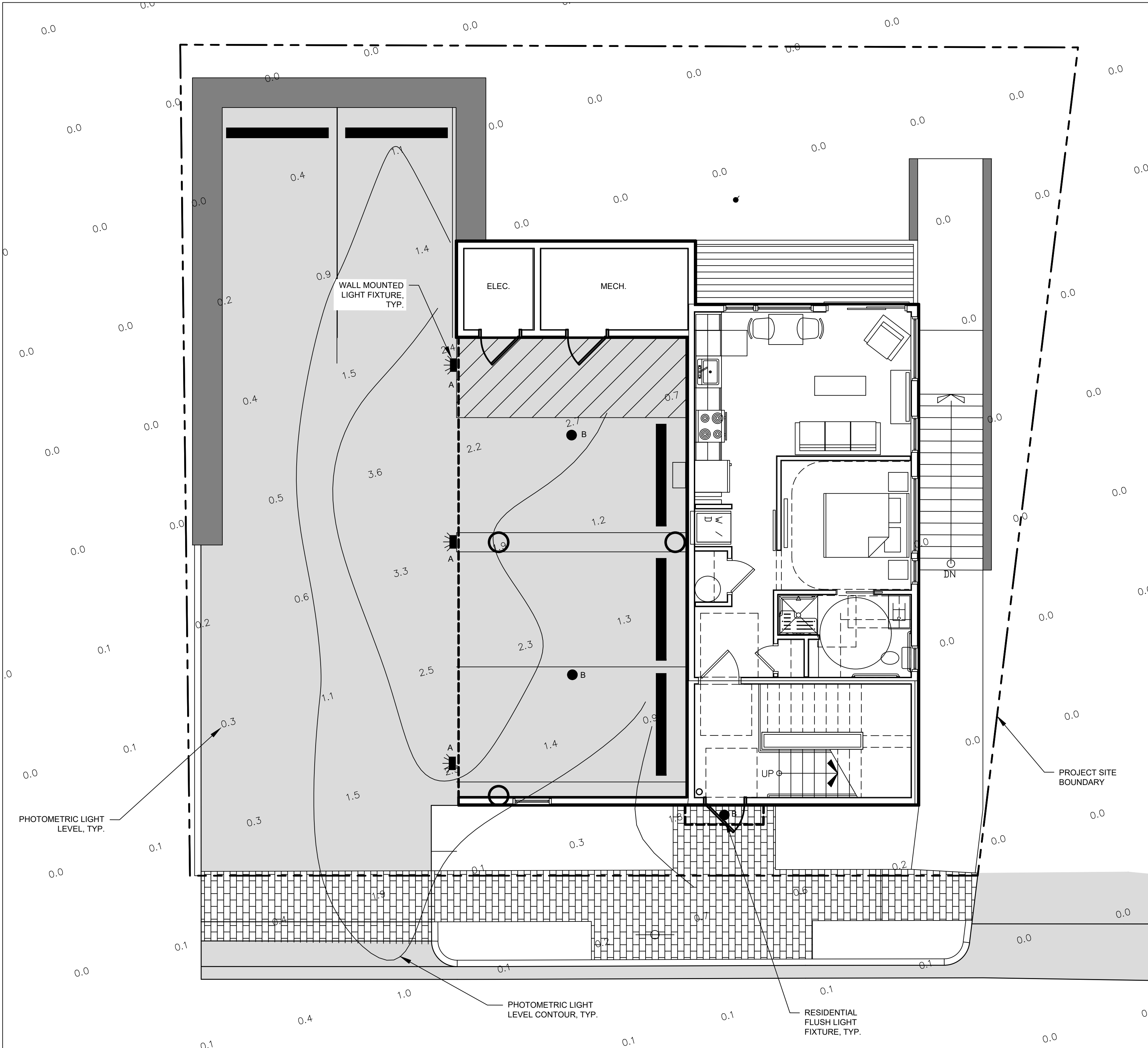
Page 1 of 3
Rev 01/1/23
LNC LED Redesign_R01

PORTLAND LIGHTING STANDARDS

STANDARD	REQUIRED VALUE	PROVIDED VALUE
UNIFORMITY RATIO (MAXIMUM TO MIN)	20 FC	16.5 FC
MAX ILLUMINATION	5.0 FC	3.3 FC
MINIMUM ILLUMINATION	0.2 FC	0.2 FC
AVERAGE ILLUMINATION	1.25 FC	1.4 FC
MAX CORRELATED COLOR TEMPERATURE (CCT)	3000K	3000K

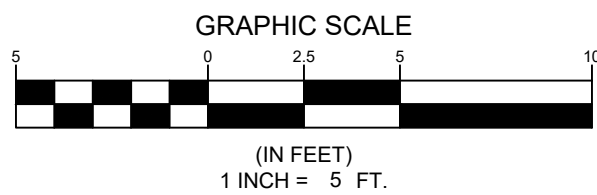
NOTES:

1. LIGHTING PLAN PREPARED USING DESIGN MASTER PHOTOMETRICS SOFTWARE
2. ONLY PROPOSED LIGHTING FIXTURES ARE MODELED
3. DEPRECIATION FACTOR FOR LED IS 0.90
4. LIGHT LEVELS CROSSING INTO THE CRESCENT STREET ROW AT THE ENTRANCE DRIVE ARE AS HIGH AS 1.9 FC. LIGHT LEVELS CROSSING ALL OTHER PROPERTY LINES ARE LESS THAN 0.1 FC.



LIGHT FIXTURE TABLE

LABEL	LIGHT FIXTURE	MANUFACTURER	MANUFACTURERS ID	NUMBER OF LIGHTS	MOUNTING HEIGHT	MOUNTING LOCATION
A	LNC COMPACT LED LITEPAK	EXO LIGHTING	LNC-5LU-3K-2	3	11'	WALL
B	RESIDENTIAL LIGHT FIXTURE	PHILIPS	LEDBULB_60W_E27_A19_830_FR	3	8'	CANOPY



DATE: 10/25/2023

P.E.: ADRIENNE R. FINE

REVISIONS

REVISED PER STAFF COMMENTS

REVISED PER STAFF COMMENTS

DATE

NO.

DATE

NO.

DATE

NO.

DATE

NO.

DATE

NO.

DATE

NO.

DATE

NO.

DATE

NO.

DATE

NO.

DATE

NO.

DATE

NO.

DATE

NO.

DATE

NO.

DATE

NO.

DATE

NO.

DATE

NO.

DATE

NO.

DATE

NO.

DATE

NO.

DATE

NO.

DATE

NO.

DATE

NO.

DATE

NO.

DATE

NO.

DATE

NO.

DATE

NO.

DATE

NO.

DATE

NO.

DATE

NO.

DATE

NO.

DATE

NO.

DATE

NO.

DATE

NO.

DATE

NO.

DATE

NO.

DATE

NO.

DATE

NO.

DATE

NO.

DATE

NO.

DATE

NO.

DATE

NO.

DATE

NO.

DATE

NO.

DATE

NO.

DATE

NO.

DATE

NO.

DATE

NO.

DATE

NO.

DATE

NO.

DATE

NO.

DATE

NO.

DATE

NO.

DATE

NO.

DATE

NO.

DATE

NO.

DATE

NO.

DATE

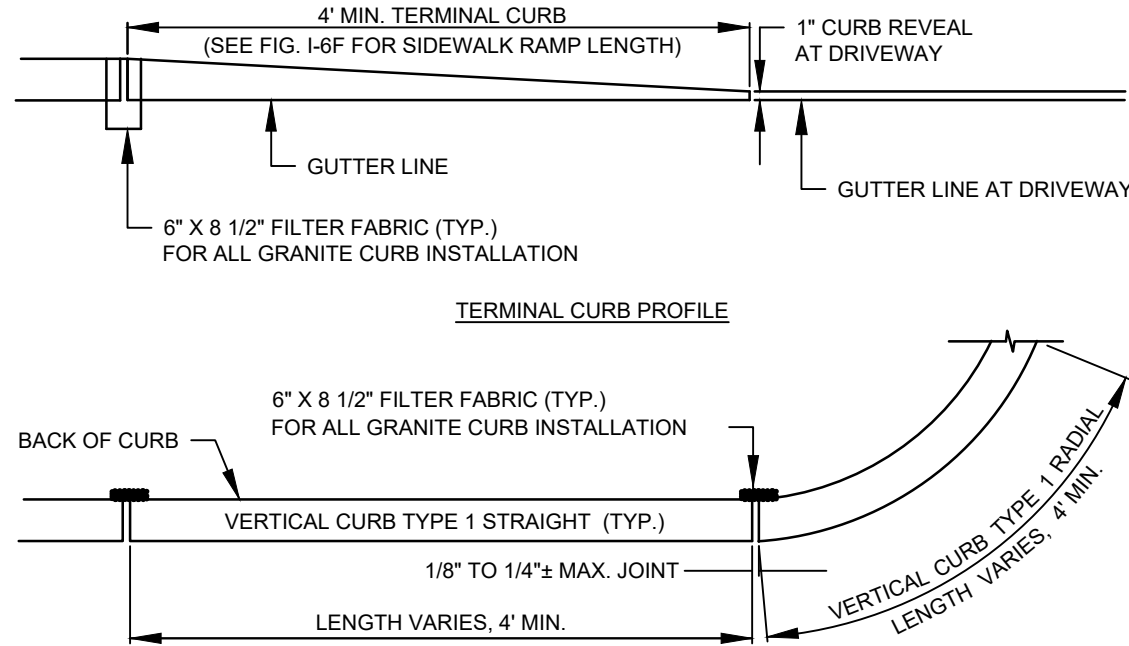
NO.

DATE

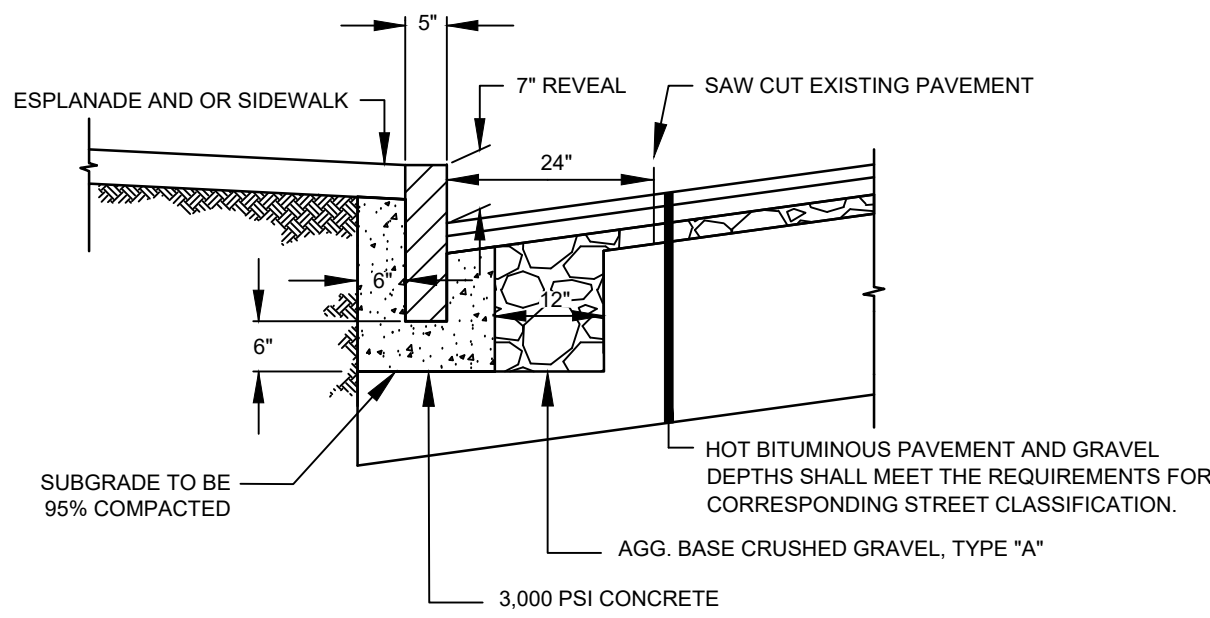
NO.

DATE

NO.



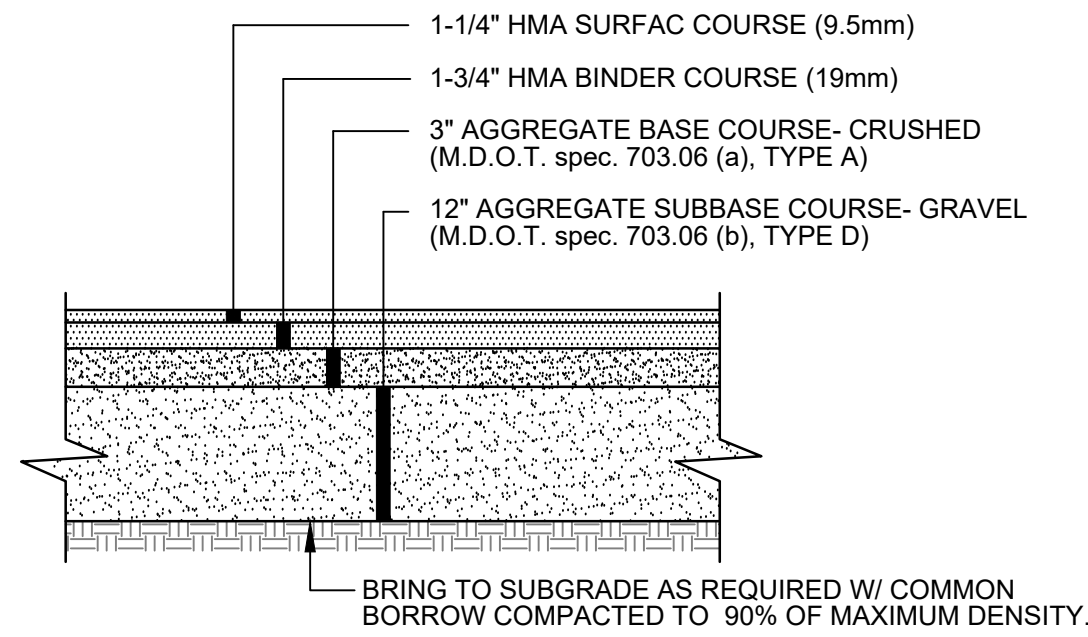
VERTICAL GRANITE CURB PLAN VIEW



VERTICAL GRANITE CURB CROSS SECTION

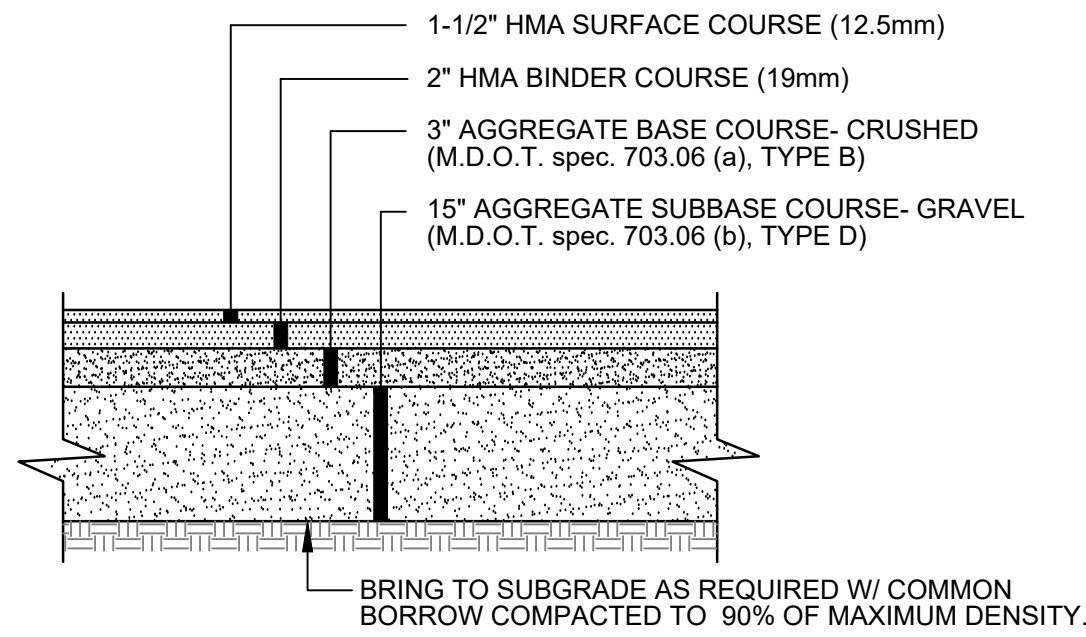
- NOTES:**
- INDIVIDUAL PIECES OF CURB SHORTER THAN 4 L.F. ARE NOT ALLOWED, WITH THE EXCEPTION OF RADIAL CURB.
 - THE MINIMUM HEIGHT OF THE CONCRETE BACKING SHALL BE 10-INCHES OR TO THE BOTTOM OF THE HOT MIX ASPHALT PAVEMENT, WHICHEVER IS GREATER, MEASURED FROM THE BOTTOM OF CURB.
 - CURBING SHALL BE SET IN A 6-INCH BED OF POURED IN PLACE 3,000 PSI CONCRETE MIX.
 - WOODEN SHIMS MAY BE USED TO SET CURB.

VERTICAL GRANITE CURB
NOT TO SCALE



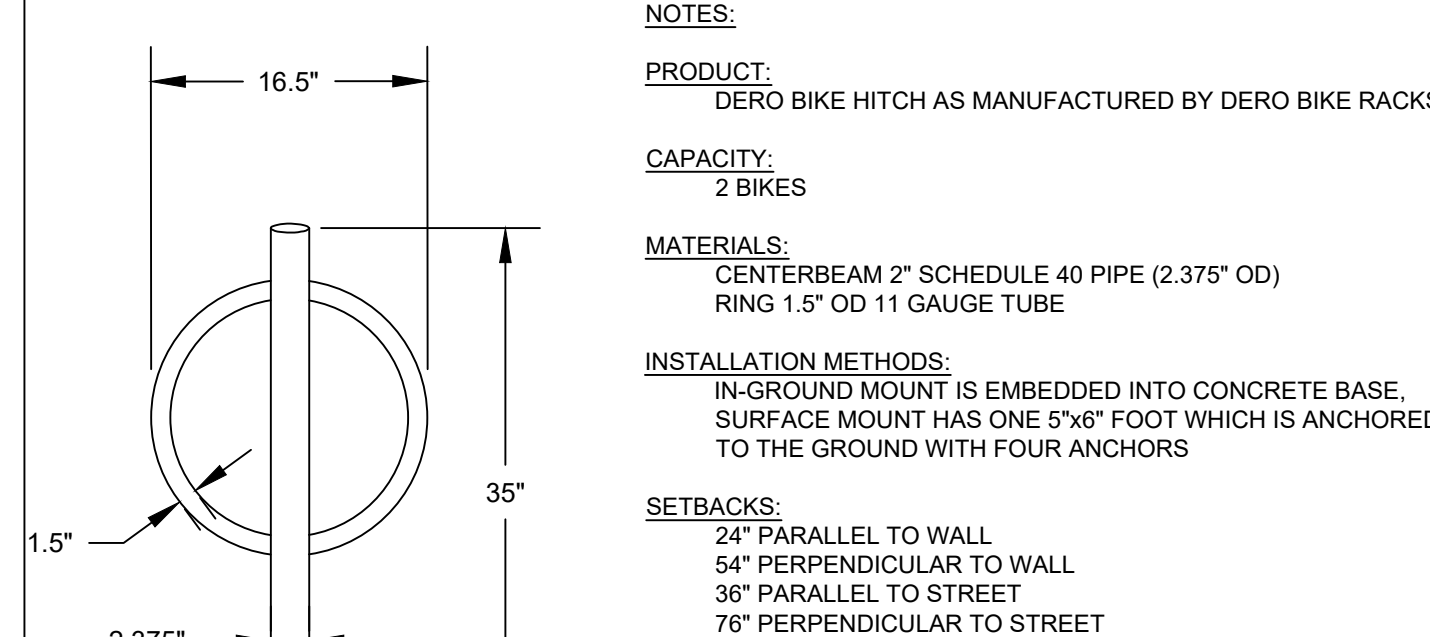
- NOTES:**
- MDOT TYPE D AGGREGATE GRADATION SHALL BE MODIFIED FOR A MAXIMUM 4" STONE AND LIMIT #200 SIEVE TO 5% PASSING.

TYP. ONSITE PAVEMENT SECTION
NOT TO SCALE

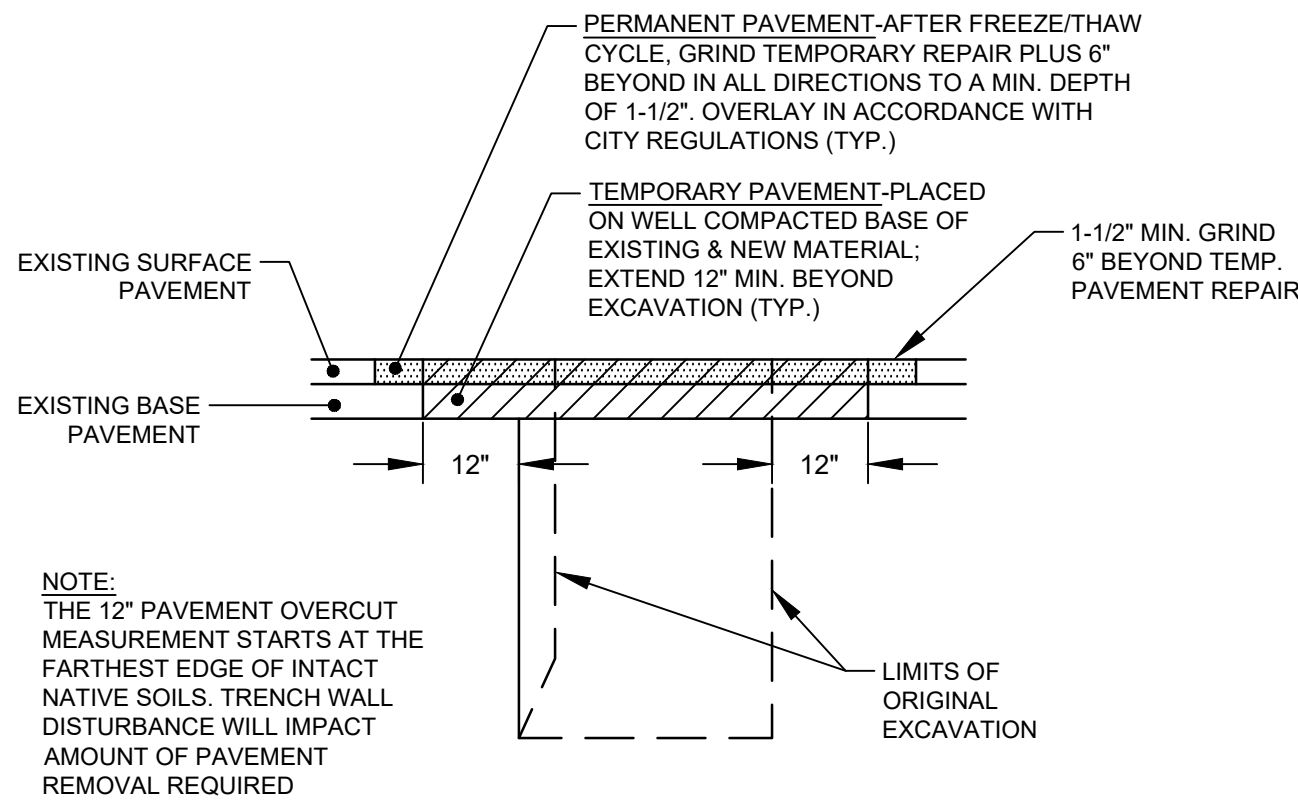


- NOTES:**
- FOR USE ON LOCAL STREETS WITHIN THE CITY OF PORTLAND

TYP. SECTION - PAVEMENT REPAIR IN CITY RIGHT OF WAY
NOT TO SCALE

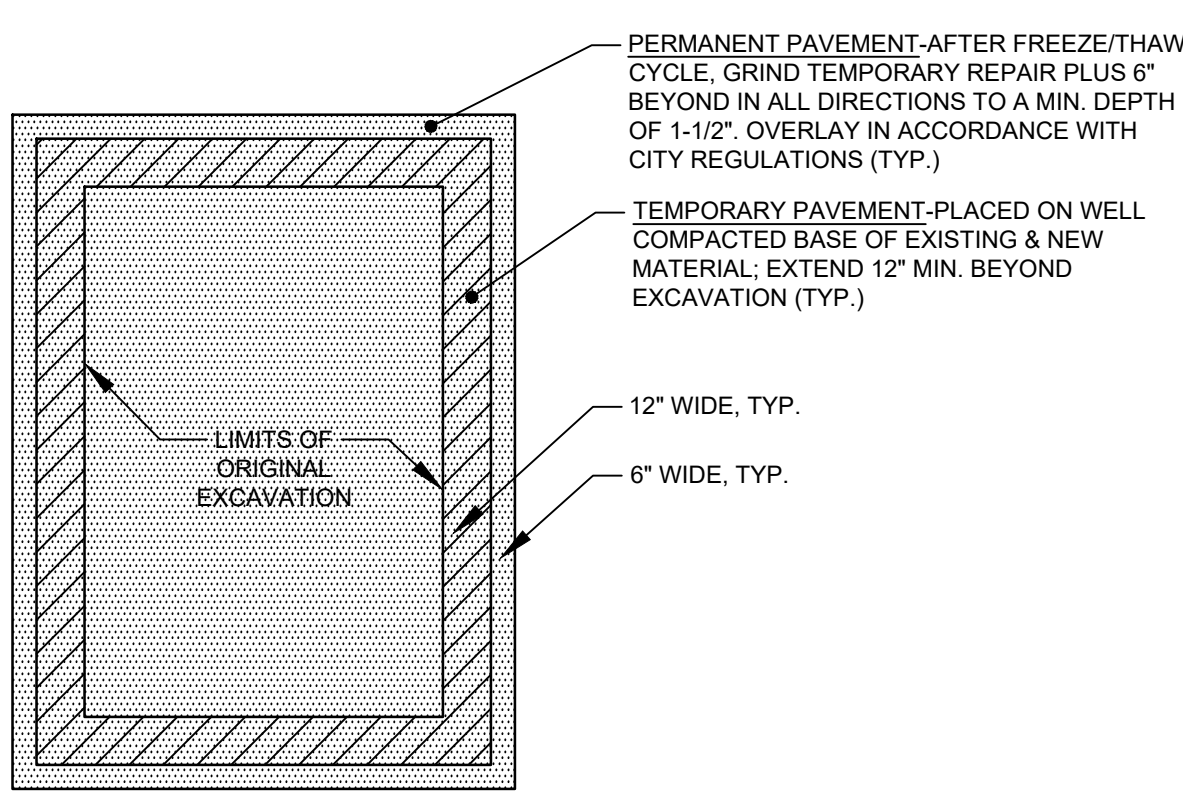


BIKE HITCH
NOT TO SCALE

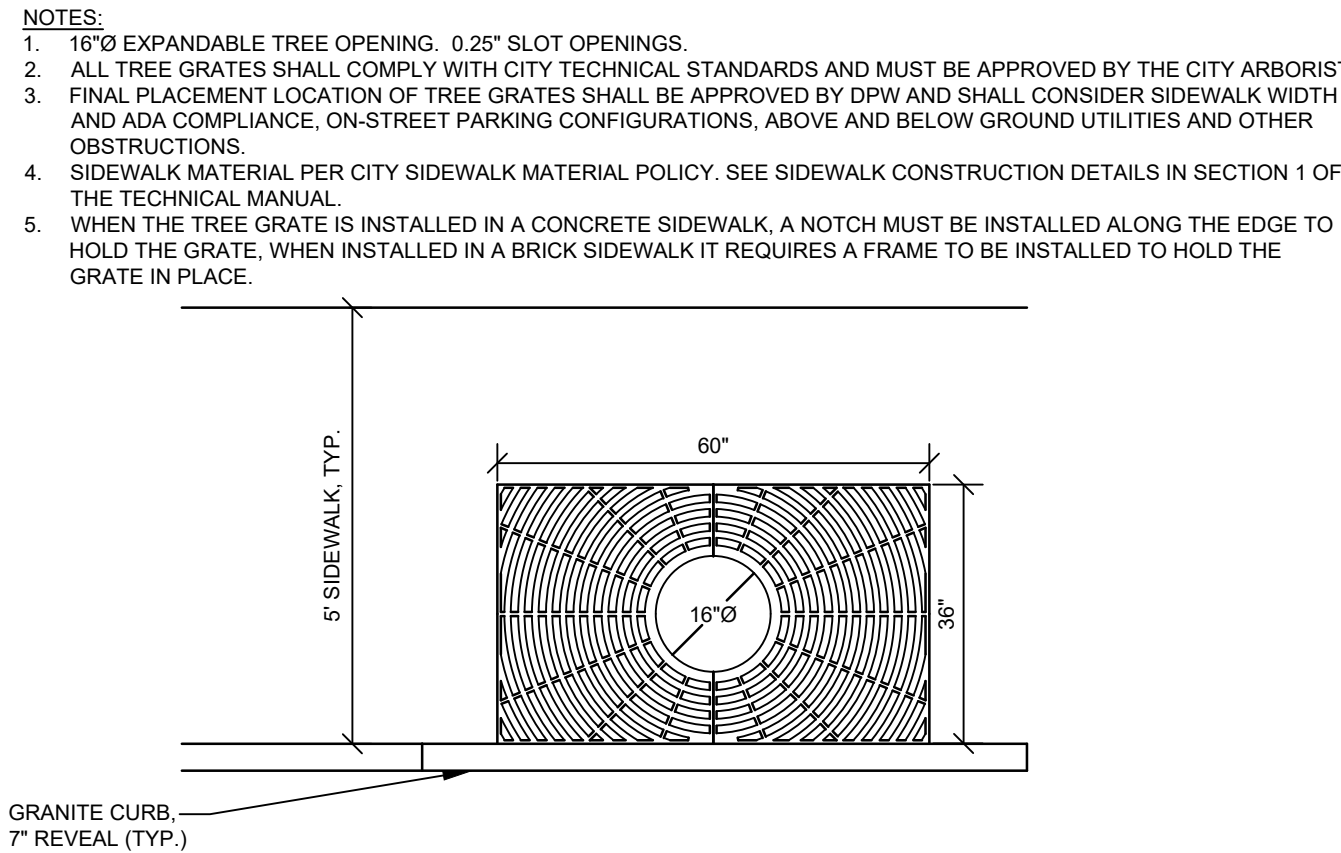


- NOTE:**
THE 12" PAVEMENT OVERCUT MEASUREMENT STARTS AT THE FARTHEST EDGE OF INTACT NATIVE SOILS. TRENCH WALL DISTURBANCE WILL IMPACT AMOUNT OF PAVEMENT REMOVAL REQUIRED

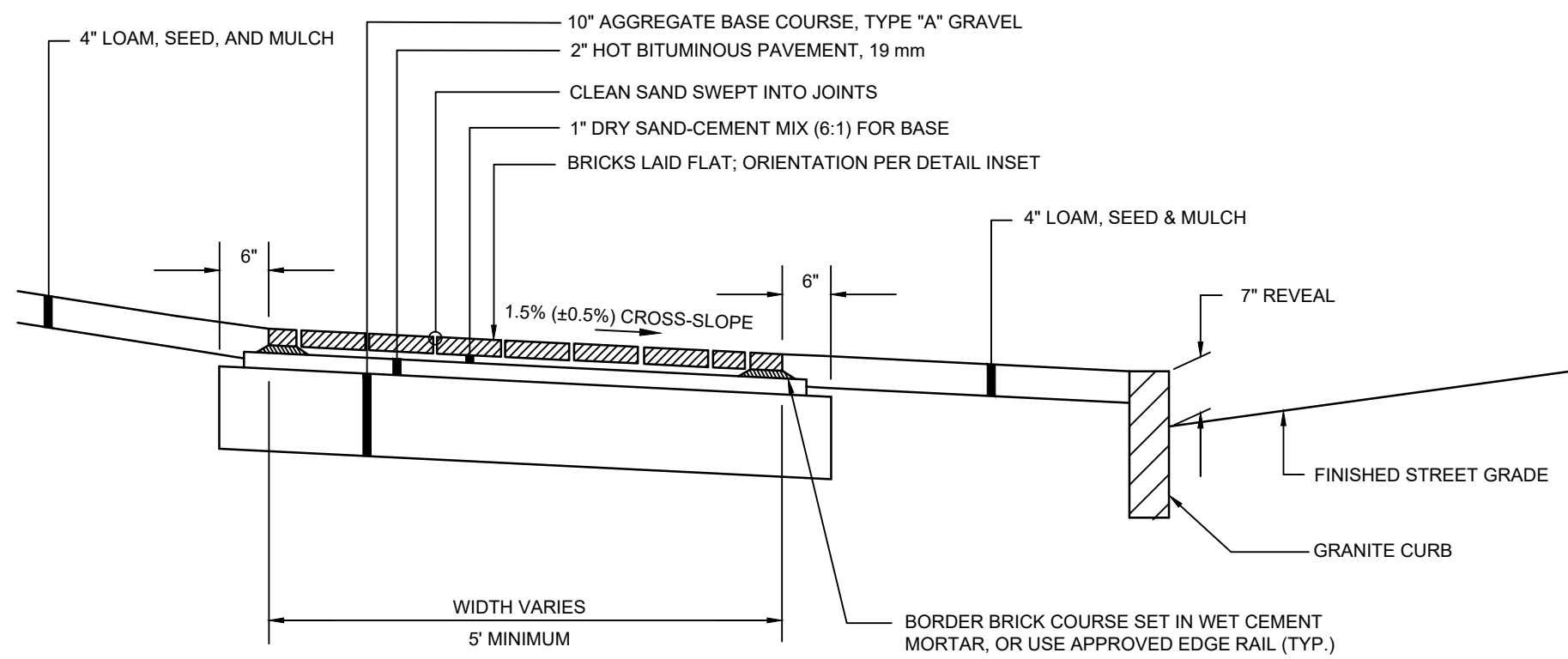
TYP. EXCAVATION IN CITY RIGHT OF WAY
NOT TO SCALE



PLAN VIEW OF MINOR EXCAVATION PAVEMENT REPAIR
NOT TO SCALE

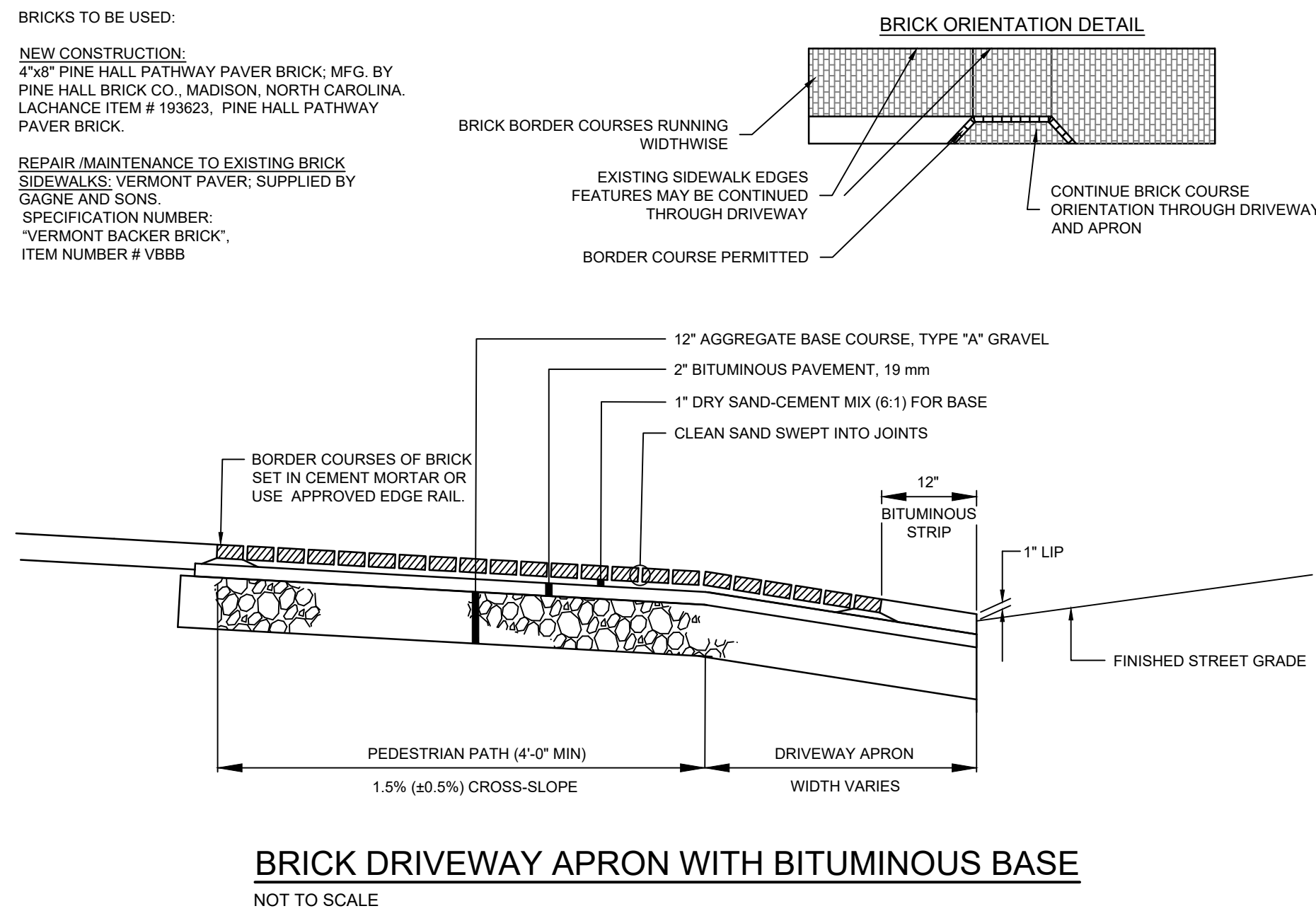


EXPANDABLE TREE GRATE WITH FRAME,
NEENAH MODEL R-8810
NOT TO SCALE

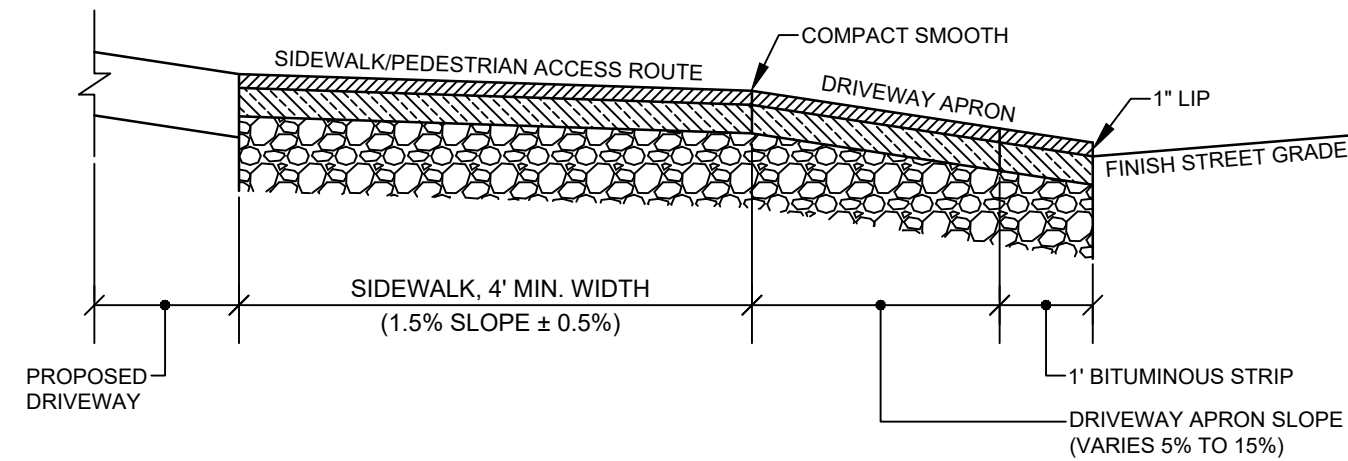
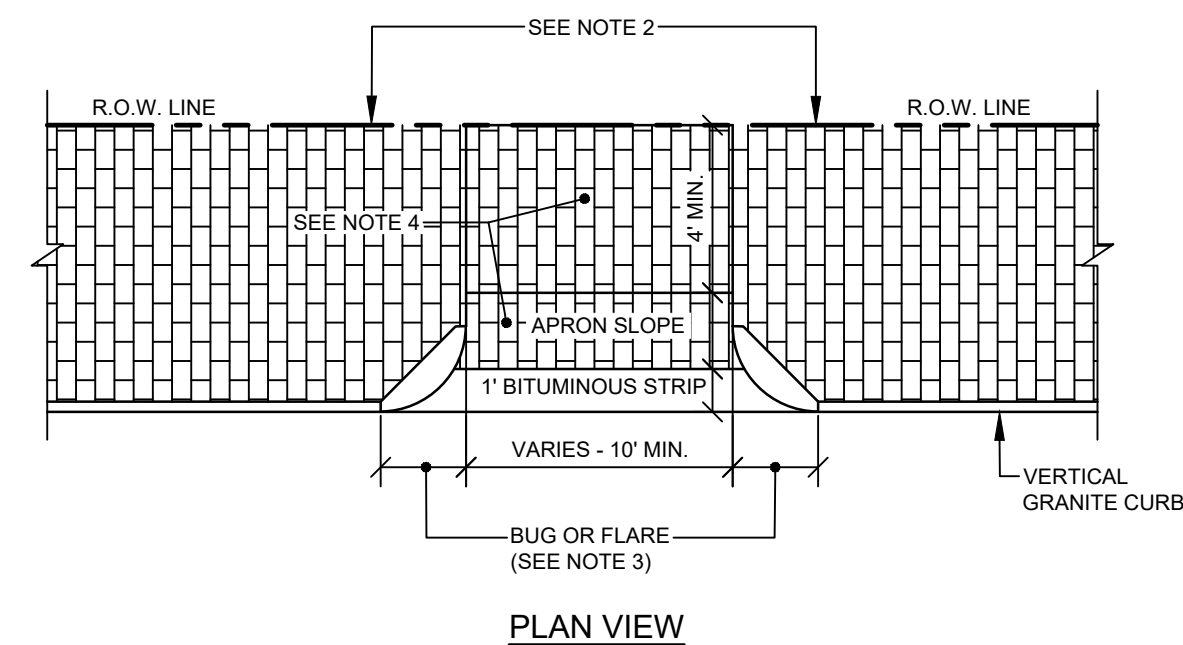


- BRICKS TO BE USED:**
- NEW CONSTRUCTION:**
4"x8" PINE HALL PATHWAY PAVER BRICK; MFG. BY PINE HALL BRICK CO., MADISON, NORTH CAROLINA, OR APPROVED EQUAL LACHANCE ITEM # 193623, PINE HALL PATHWAY PAVER BRICK, OR APPROVED EQUAL
- REPAIR/MAINTENANCE TO EXISTING BRICK SIDEWALKS:**
VERMONT PAVER; SUPPLIED BY GAGNE AND SONS.
SPECIFICATION NUMBER:
"VERMONT BACKER BRICK",
ITEM NUMBER # VBBB,
OR APPROVED EQUAL

BRICK SIDEWALK WITH BITUMINOUS BASE
NOT TO SCALE



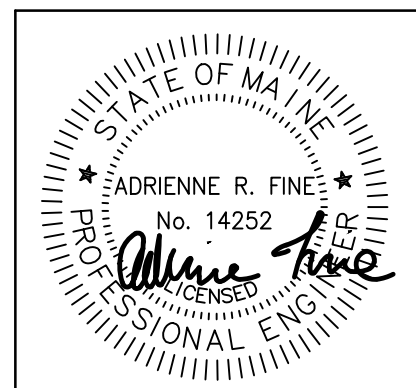
BRICK DRIVEWAY APRON WITH BITUMINOUS BASE
NOT TO SCALE



SECTION

- NOTES:**
- MATCH EXISTING GRADE AT R.O.W. LINE WHERE REQUIRED TO MEET A.D.A. AND DRIVEWAY APRON SLOPE REQUIREMENTS. A CONSTRUCTION EASEMENT MAY BE REQUIRED.
 - IF MATCHING THE EXISTING GRADE AT R.O.W. CAUSES APRON SLOPE TO EXCEED RECOMMENDED %, SIDEWALK TRANSITION AREAS MAY BE ADDED, BUT SHALL NOT EXCEED 8.33%
 - 24" RADIUS CORNER GRANITE PIECES ("BUGS") ARE REQUIRED AT LOW-VOLUME DRIVEWAYS, UNLESS OTHERWISE DIRECTED BY D.P.W. AT OTHER DRIVEWAYS, STANDARD FLARE / TIPDOWN TREATMENTS SHALL BE USED
 - ALL MATERIALS IN R.O.W. TO COMPLY WITH CITY'S SIDEWALK AND DRIVEWAY MATERIAL POLICY. BRICK IN DRIVEWAY APRONS, WHERE APPLICABLE, SHALL BE ORIENTED IN THE SAME WAY AS THE ADJACENT BRICK SIDEWALK.
 - THIS LAYOUT MAY BE REQUIRED AT MINOR DRIVEWAYS SERVING COMMERCIAL OR INDUSTRIAL USES.

RESIDENTIAL DRIVEWAY APRON
NOT TO SCALE



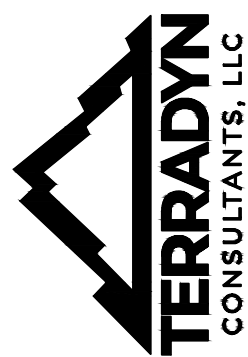
DATE: 10/25/2023
P.E.: ADRIENNE R. FINE

NO.	DATE	REVISED PER STAFF COMMENTS	APPD	BY
1	09.12.2023	REVISED PER STAFF COMMENTS	ARF	ARF
2	10.25.2023	REVISED PER STAFF COMMENTS	ARF	ARF

565 CONGRESS STREET
SUITE 201
PORTLAND, ME 04102

41 CAMPUS DRIVE
SUITE 301
NEW GLOUCESTER, ME 04260

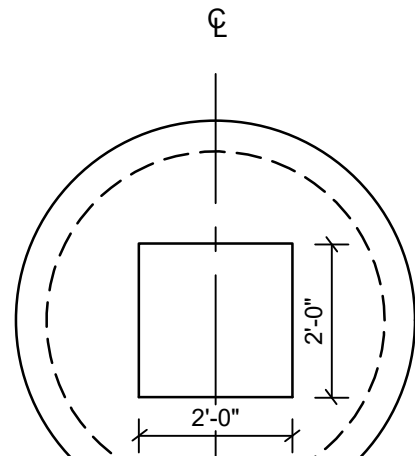
OFFICE: (207) 926-5111 FAX: (207) 221-1317
www.terradynconsultants.com



Civil Engineering | Land Planning | Stormwater Design | Environmental Permitting

PERMIT DRAWING
NOT FOR CONSTRUCTION

PROJECT: CRESCENT STREET RESIDENCES 15 CRESCENT STREET, PORTLAND	SHEET TITLE: SITE DETAILS	CLIENT: DEVELOPERS COLLABORATIVE 631 STEVENS AVENUE, SUITE 203 PORTLAND, ME 04103
DATE: 2/14/2023	SCALE: N.T.S.	DESIGNED: ARF
JOB NO: 1948	FILE: 1948 DETAILS.DWG	SHEET C-8.0



PLAN VIEW

WHERE DEPTH OF COVER IS NOT SUFFICIENT TO USE CONCENTRIC OR TRUNCATED CONE, A FLAT TOP MAY BE USED.

NOTE: WHERE THE CATCH BASIN IS INSTALLED ADJACENT TO BITUMINOUS CONCRETE OF TYPE V SLOPED CURB, SET CENTERLINE OF CATCH BASIN FRAME 1'-6" OFF FACE OF CURB.

EXTERIOR OF STRUCTURE SHALL BE TREATED WITH 2 COATS OF APPROVED DAMP PROOF MATERIAL.

DESIGN NOTES:

- ALL CONCRETE TO HAVE A MIN. OF 4,000 PSI COMPRESSIVE STRENGTH AT 28 DAYS.
- DESIGN LOAD FOR H-20 WHEEL LOAD.
- CATCH BASIN TO CONFORM TO ASTM-C478 SPECIFICATIONS.
- REINFORCE TO 0.12 IN SQ./LF..

TYPICAL CATCH BASIN

NOT TO SCALE

SECTION VIEW

NOTE:

CASCADE GRATES SHALL BE INSTALLED ON GRADIENT OF GUTTER IF PROFILE GRADE EXCEEDS 5% GRATES SHALL BE DEPRESSED 2" BELOW NORMAL GUTTER GRADE UNLESS THIS DEPRESSION INTERFERES WITH TRAFFIC. PARALLEL BAR GRATES SHALL BE INSTALLED ON A LEVEL GRADIENT.

CEMENT MORTAR (TYPE II CEMENT) BRING TO GRADE WITH BRICK WITH A MIN. OF 1 COURSE AND A MAX. OF 3 COURSES.

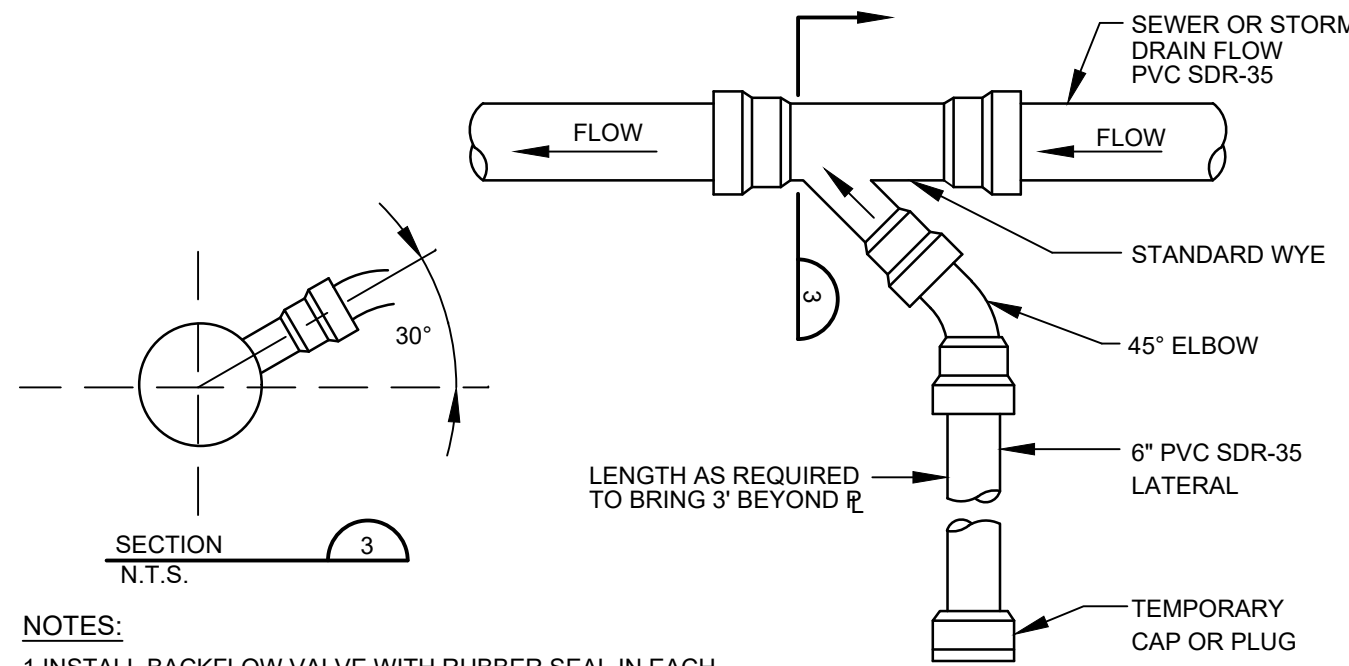
SIDEWALL OF CATCH BASIN TO BE BACKFILLED WITH SELECT BACKFILL, AASHTO M145-49 AS REVISED, CLASS A-3 OR BETTER.

FOR JOINTS OF WATERTIGHT CATCH BASIN, KENT SEAL, RAM NEK, OR O-RING MUST MEET AASHTO M1988.

ALL PIPES TO HAVE A WATERTIGHT SEAL. FLEXIBLE SLEEVE CAST IN PRECAST STRUCTURE TO BE INTERFACE LOCK JOINT OR EQUAL.

PRECAST CONCRETE BASE SECTION WITH PIPE OPENINGS AS APPROVED BY THE ENGINEER.

12" THICK 3/4" CRUSHED STONE BASE

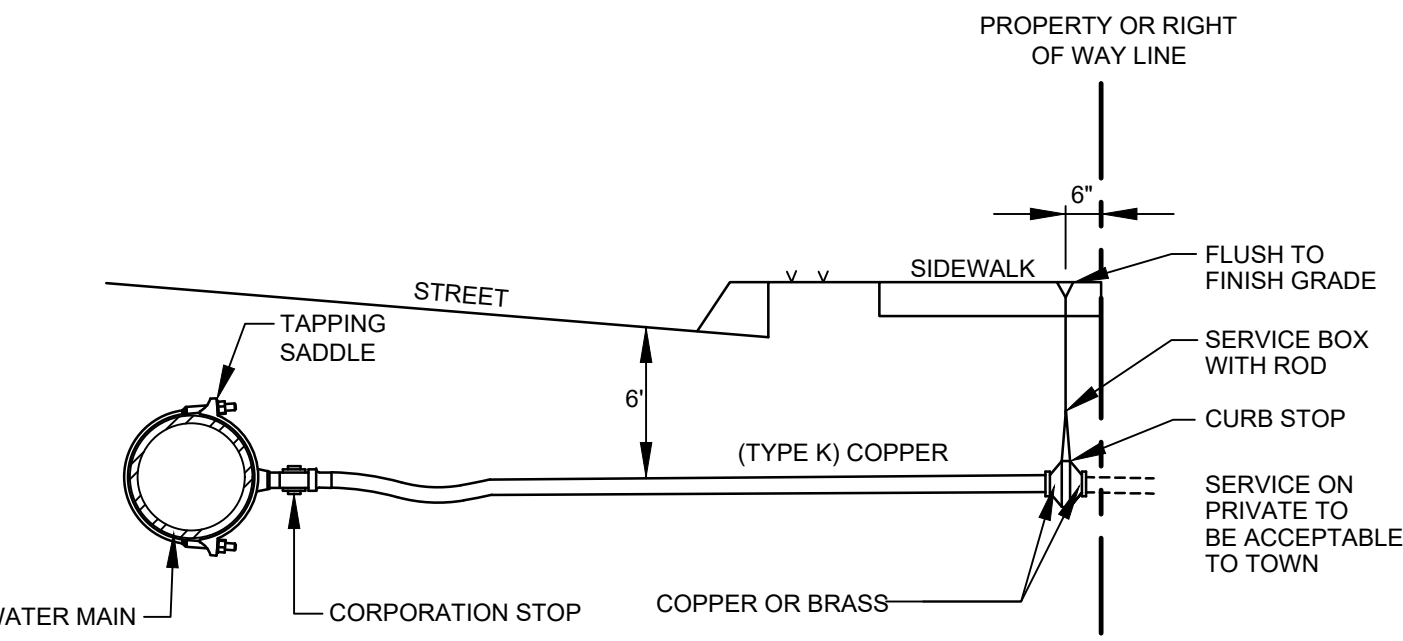


SEWER / FOUNDATION DRAIN SERVICE CONNECTION

NOT TO SCALE

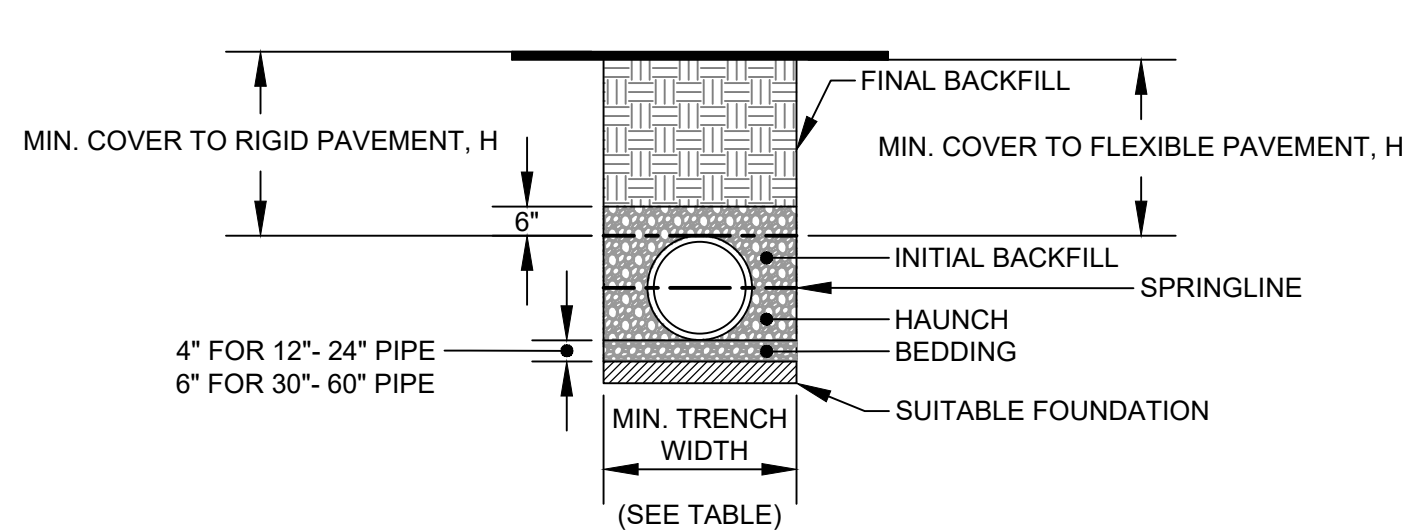
NOTES:

- INSTALL BACKFLOW VALVE WITH RUBBER SEAL IN EACH FOUNDATION DRAIN SERVICE.
- IF SUMP PUMP IS UTILIZED INSTALL CHECK VALVE AT SUMP PUMP.



TYPICAL WATER SERVICE CONNECTION

NOT TO SCALE



NOTES:

- ALL PIPE SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321, "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS", LATEST EDITION.
- MEASURES SHOULD BE TAKEN TO PREVENT MIGRATION OF NATIVE FINES INTO BACKFILL MATERIAL, WHEN REQUIRED.
- FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH SUITABLE MATERIAL AS SPECIFIED BY THE ENGINEER. AS AN ALTERNATIVE AND AT THE DISCRETION OF THE DESIGN ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A GEOTEXTILE MATERIAL.

- INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE CLASS I, II OR III. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER, UNLESS OTHERWISE NOTED BY THE ENGINEER. MINIMUM BEDDING THICKNESS SHALL BE 4" (100mm) FOR 4"-24" (100mm-600mm); 6" (150mm) FOR 30"-60" (750mm-900mm).

- INSULATION: RIGID INSULATION SHALL BE PROVIDED FOR PIPES WITH LESS THAN 4" OF COVER IN ACCORDANCE WITH THE FOLLOWING TABLE:

RECOMMENDED MINIMUM TRENCH WIDTHS	
PIPE DIAM.	MIN. TRENCH WIDTH
4"	21"
6"	23"
8"	25"
10"	28"
12"	30"
15"	34"
18"	39"
24"	48"
30"	56"
36"	64"
42"	72"
48"	80"
54"	88"
60"	96"

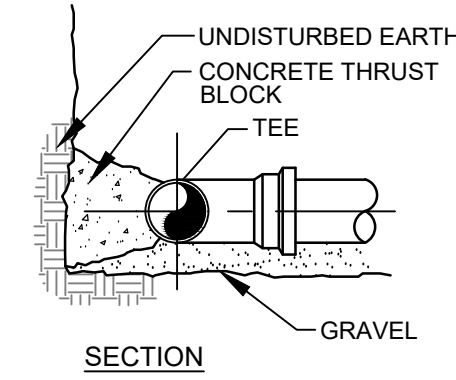
MINIMUM RECOMMENDED COVER BASED ON VEHICLE LOADING CONDITIONS		
PIPE DIAM.	SURFACE LIVE LOADING CONDITION	
	H-25	HEAVY CONSTRUCTION (75T AXLE LOAD) *
12" - 48"	12"	48"
54" - 60"	24"	60"

* VEHICLES IN EXCESS OF 75T MAY REQUIRE ADDITIONAL COVER

COVER OVER PIPE	INSULATION THICKNESS
12" - 24"	3"
24" - 36"	2"
36" - 48"	1"
48" +	NONE

TYPICAL TRENCH DETAIL

NOT TO SCALE



SECTION

PLAN

UNDISTURBED EARTH

CONCRETE THRUST BLOCK

TEE

GRAVEL

UNDISTURBED EARTH

CONCRETE THRUST BLOCK

TEE

GRAVEL

UNDISTURBED EARTH

CONCRETE THRUST BLOCK

TEE

GRAVEL

UNDISTURBED EARTH

CONCRETE THRUST BLOCK

TEE

GRAVEL

UNDISTURBED EARTH

CONCRETE THRUST BLOCK

TEE

GRAVEL

UNDISTURBED EARTH

CONCRETE THRUST BLOCK

TEE

GRAVEL

UNDISTURBED EARTH

CONCRETE THRUST BLOCK

TEE

GRAVEL

UNDISTURBED EARTH

CONCRETE THRUST BLOCK

TEE

GRAVEL

UNDISTURBED EARTH

CONCRETE THRUST BLOCK

TEE

GRAVEL

UNDISTURBED EARTH

CONCRETE THRUST BLOCK

TEE

GRAVEL

UNDISTURBED EARTH

CONCRETE THRUST BLOCK

TEE

GRAVEL

UNDISTURBED EARTH

CONCRETE THRUST BLOCK

TEE

GRAVEL

UNDISTURBED EARTH

CONCRETE THRUST BLOCK

TEE

GRAVEL

UNDISTURBED EARTH

CONCRETE THRUST BLOCK

TEE

GRAVEL

UNDISTURBED EARTH

CONCRETE THRUST BLOCK

TEE

GRAVEL

UNDISTURBED EARTH

CONCRETE THRUST BLOCK

TEE

GRAVEL

UNDISTURBED EARTH

CONCRETE THRUST BLOCK

TEE

GRAVEL

UNDISTURBED EARTH

CONCRETE THRUST BLOCK

TEE

GRAVEL

UNDISTURBED EARTH

CONCRETE THRUST BLOCK

TEE

GRAVEL

UNDISTURBED EARTH

CONCRETE THRUST BLOCK

TEE

GRAVEL

UNDISTURBED EARTH

CONCRETE THRUST BLOCK

TEE

GRAVEL

UNDISTURBED EARTH

CONCRETE THRUST BLOCK

TEE

GRAVEL

UNDISTURBED EARTH

CONCRETE THRUST BLOCK

TEE

GRAVEL

UNDISTURBED EARTH

CONCRETE THRUST BLOCK

TEE

GRAVEL

UNDISTURBED EARTH

CONCRETE THRUST BLOCK

TEE

GRAVEL

UNDISTURBED EARTH

CONCRETE THRUST BLOCK

TEE

GRAVEL

UNDISTURBED EARTH

CONCRETE THRUST BLOCK

TEE

GRAVEL

UNDISTURBED EARTH

CONCRETE THRUST BLOCK

TEE

GRAVEL

UNDISTURBED EARTH

CONCRETE THRUST BLOCK

TEE

GRAVEL

UNDISTURBED EARTH

CONCRETE THRUST BLOCK

TEE

GRAVEL

UNDISTURBED EARTH

CONCRETE THRUST BLOCK

TEE

GRAVEL

UNDISTURBED EARTH

CONCRETE THRUST BLOCK

TEE

GRAVEL

UNDISTURBED EARTH

CONCRETE THRUST BLOCK

TEE

GRAVEL

UNDISTURBED EARTH

CONCRETE THRUST BLOCK

TEE

GRAVEL

UNDISTURBED EARTH

CONCRETE THRUST BLOCK

TEE

GRAVEL

UNDISTURBED EARTH

CONCRETE THRUST BLOCK

TEE

GRAVEL

UNDISTURBED EARTH

CONCRETE THRUST BLOCK

TEE

GRAVEL

UNDISTURBED EARTH

CONCRETE THRUST BLOCK

TEE

GRAVEL

UNDISTURBED EARTH

CONCRETE THRUST BLOCK

TEE

GRAVEL

UNDISTURBED EARTH

CONCRETE THRUST BLOCK

TEE

GRAVEL

UNDISTURBED EARTH

CONCRETE THRUST BLOCK

TEE

GRAVEL

UNDISTURBED EARTH

CONCRETE THRUST BLOCK

TEE

GRAVEL

UNDISTURBED EARTH

CONCRETE THRUST BLOCK

TEE

GRAVEL

UNDISTURBED EARTH

CONCRETE THRUST BLOCK

TEE

GRAVEL

UNDISTURBED EARTH

CONCRETE THRUST BLOCK

TEE

GRAVEL

UNDISTURBED EARTH

CONCRETE THRUST BLOCK

TEE

GRAVEL

UNDISTURBED EARTH

CONCRETE THRUST BLOCK

TEE

GRAVEL

UNDISTURBED EARTH

CONCRETE THRUST BLOCK

TEE

GRAVEL

UNDISTURBED EARTH

CONCRETE THRUST BLOCK

TEE

GRAVEL

UNDISTURBED EARTH

CONCRETE THRUST BLOCK

TEE

GRAVEL

UNDISTURBED EARTH

CONCRETE THRUST BLOCK

TEE

GRAVEL

UNDISTURBED EARTH

CONCRETE THRUST BLOCK

TEE

GRAVEL

UNDISTURBED EARTH

CONCRETE THRUST BLOCK

TEE

GRAVEL

UNDISTURBED EARTH

CONCRETE THRUST BLOCK

TEE

GRAVEL

UNDISTURBED EARTH

CONCRETE THRUST BLOCK

TEE

GRAVEL

UNDISTURBED EARTH

CONCRETE THRUST BLOCK

TEE

GRAVEL

UNDISTURBED EARTH

CONCRETE THRUST BLOCK

TEE

GRAVEL

UNDISTURBED EARTH

CONCRETE THRUST BLOCK

TEE

GRAVEL

UNDISTURBED EARTH

CONCRETE THRUST BLOCK

TEE

GRAVEL

UNDISTURBED EARTH

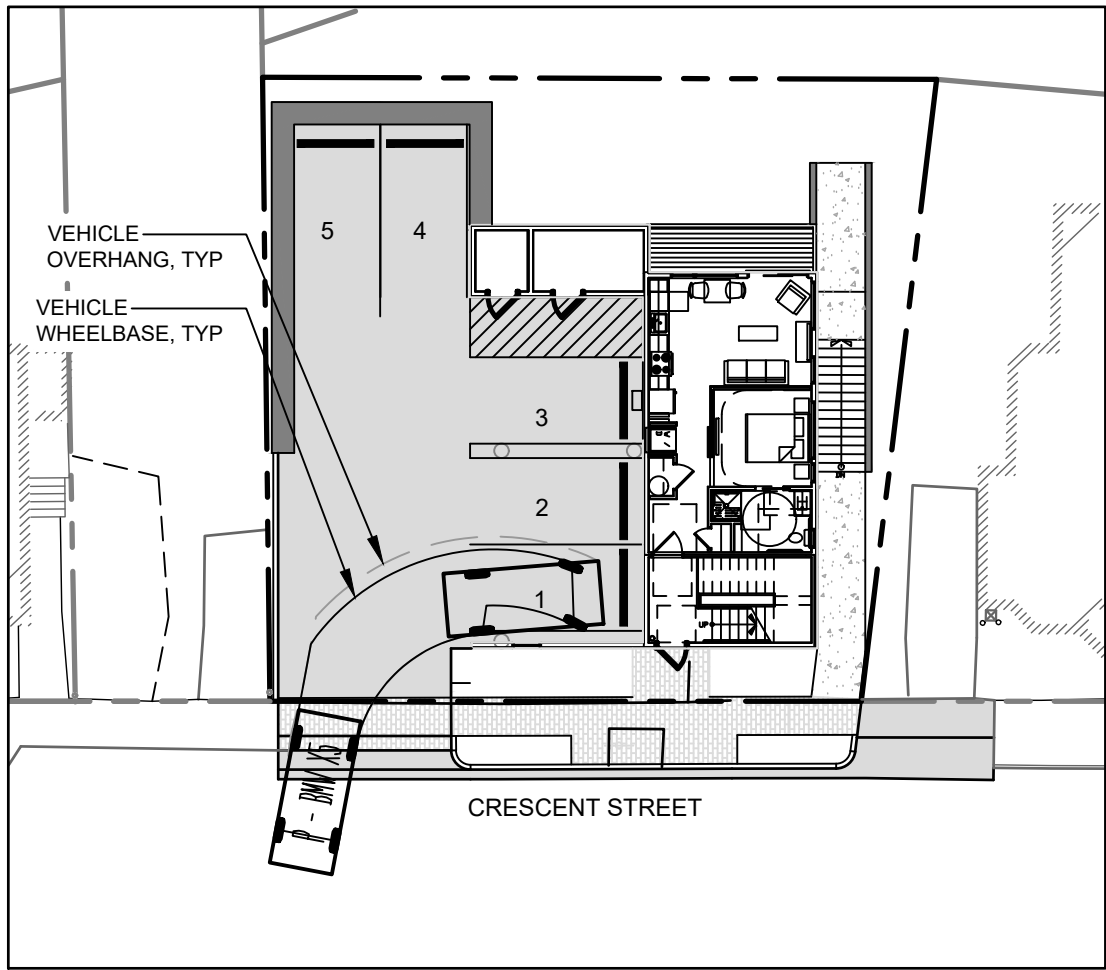
CONCRETE THRUST BLOCK

TEE

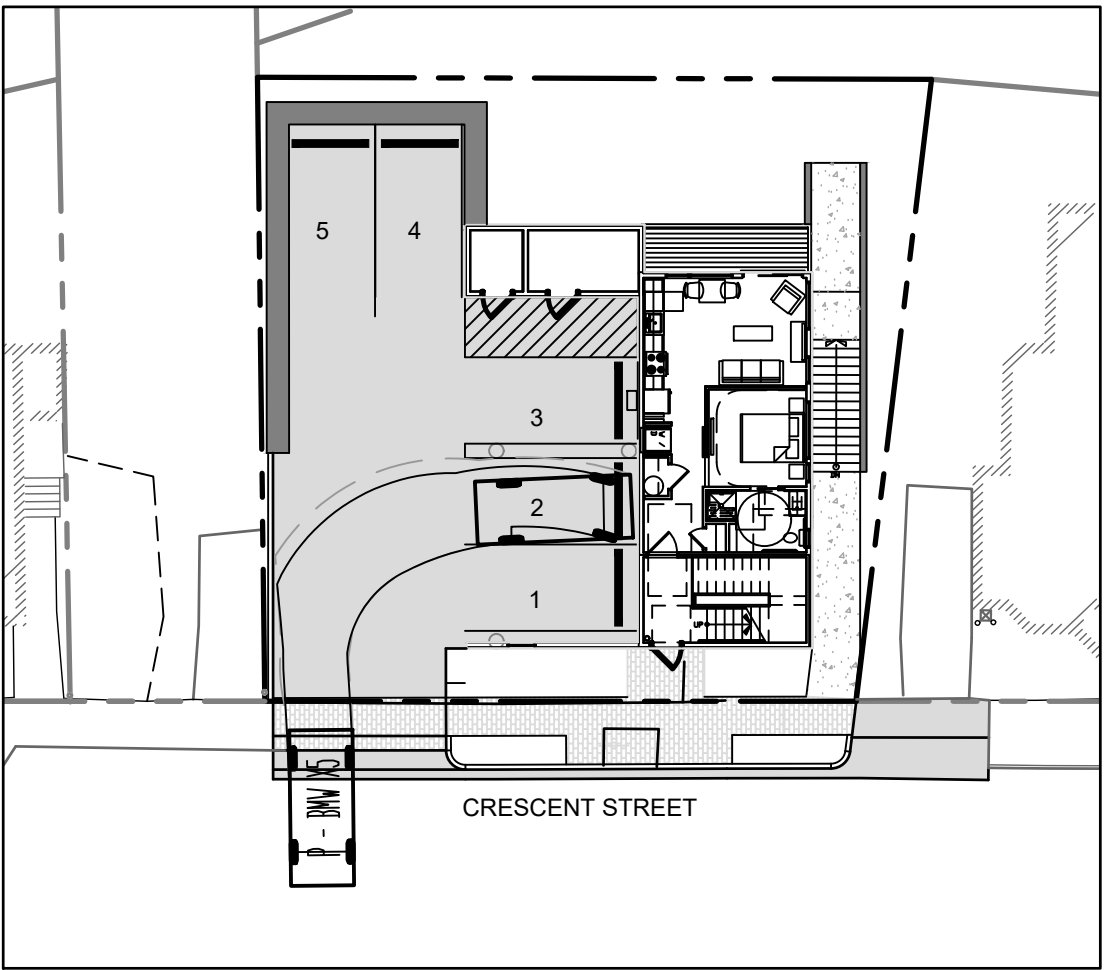
GRAVEL

UNDISTURBED EARTH

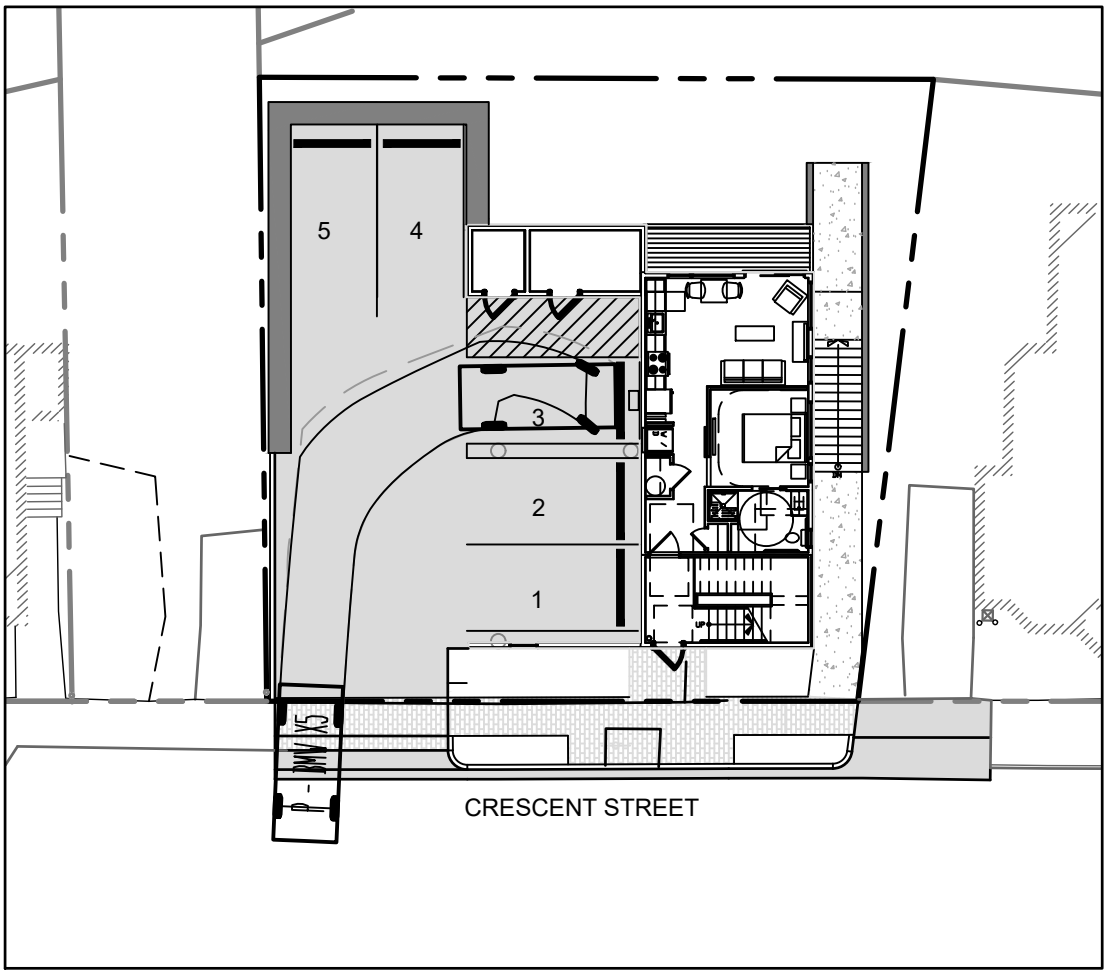
CONCRETE THRUST BLOCK



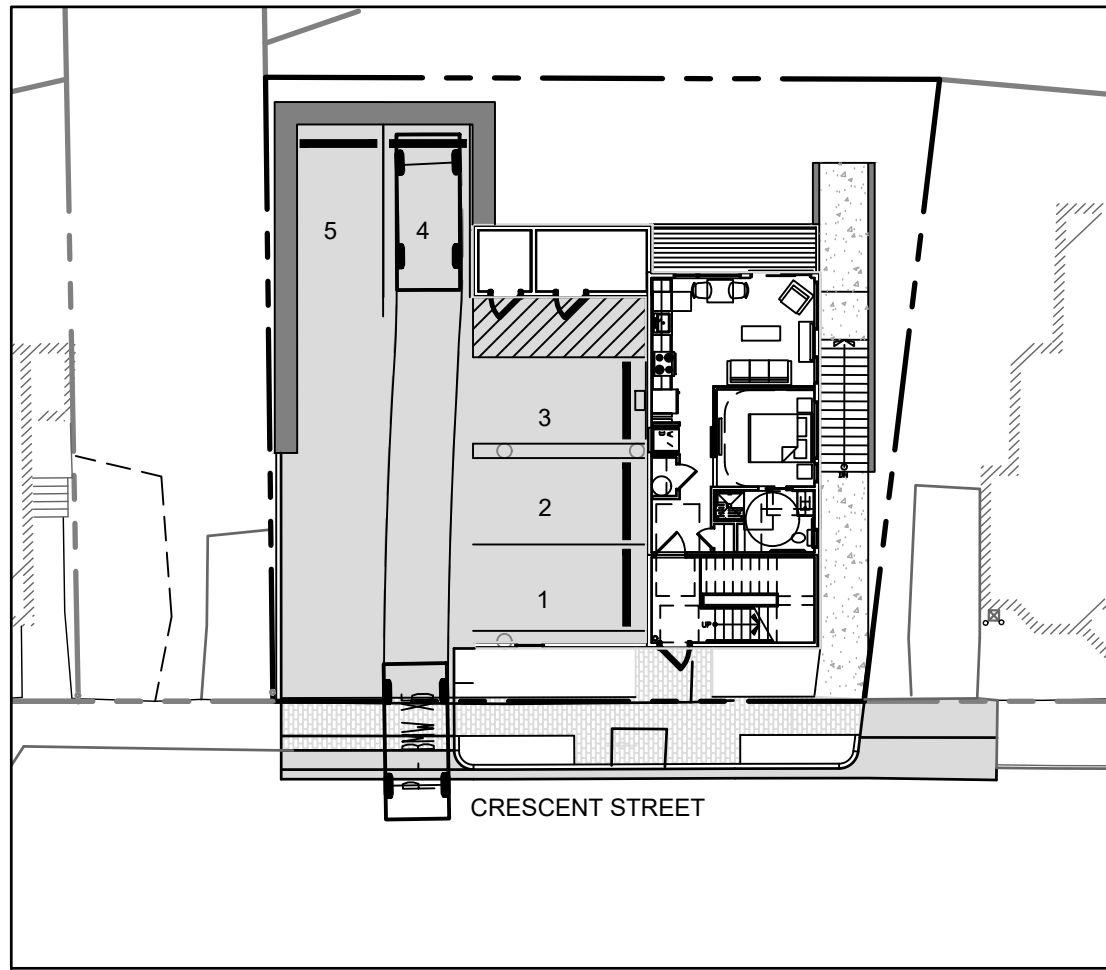
VEHICLE ENTERING SPOT 1



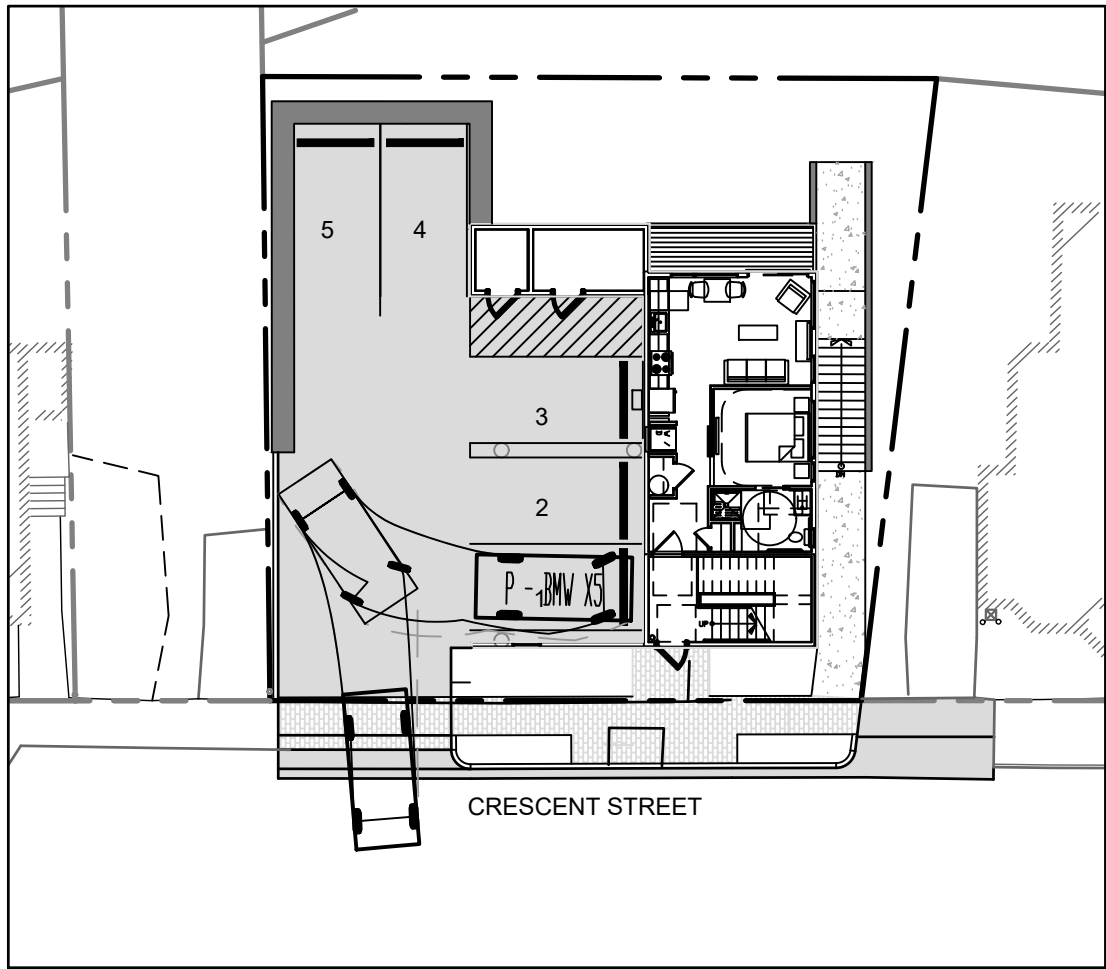
VEHICLE ENTERING SPOT 2



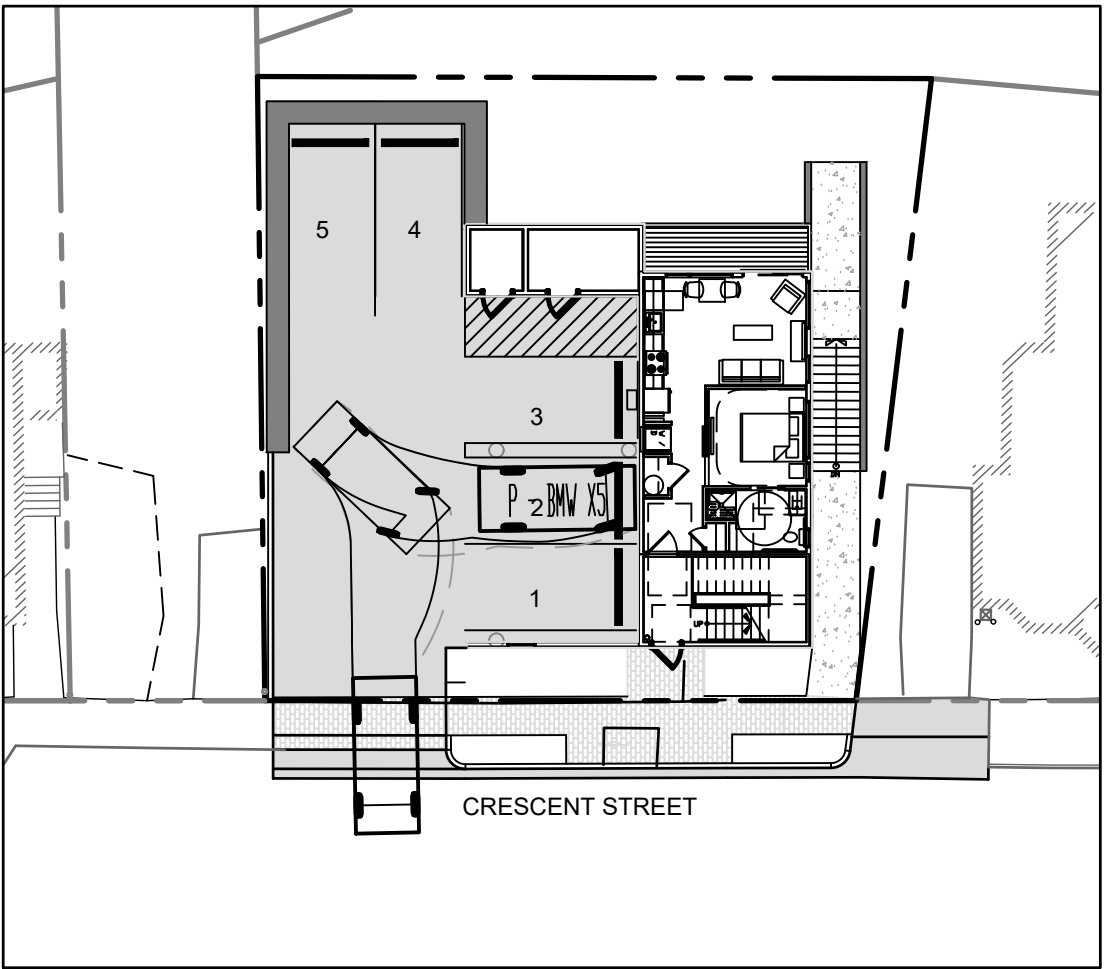
VEHICLE ENTERING SPOT 3



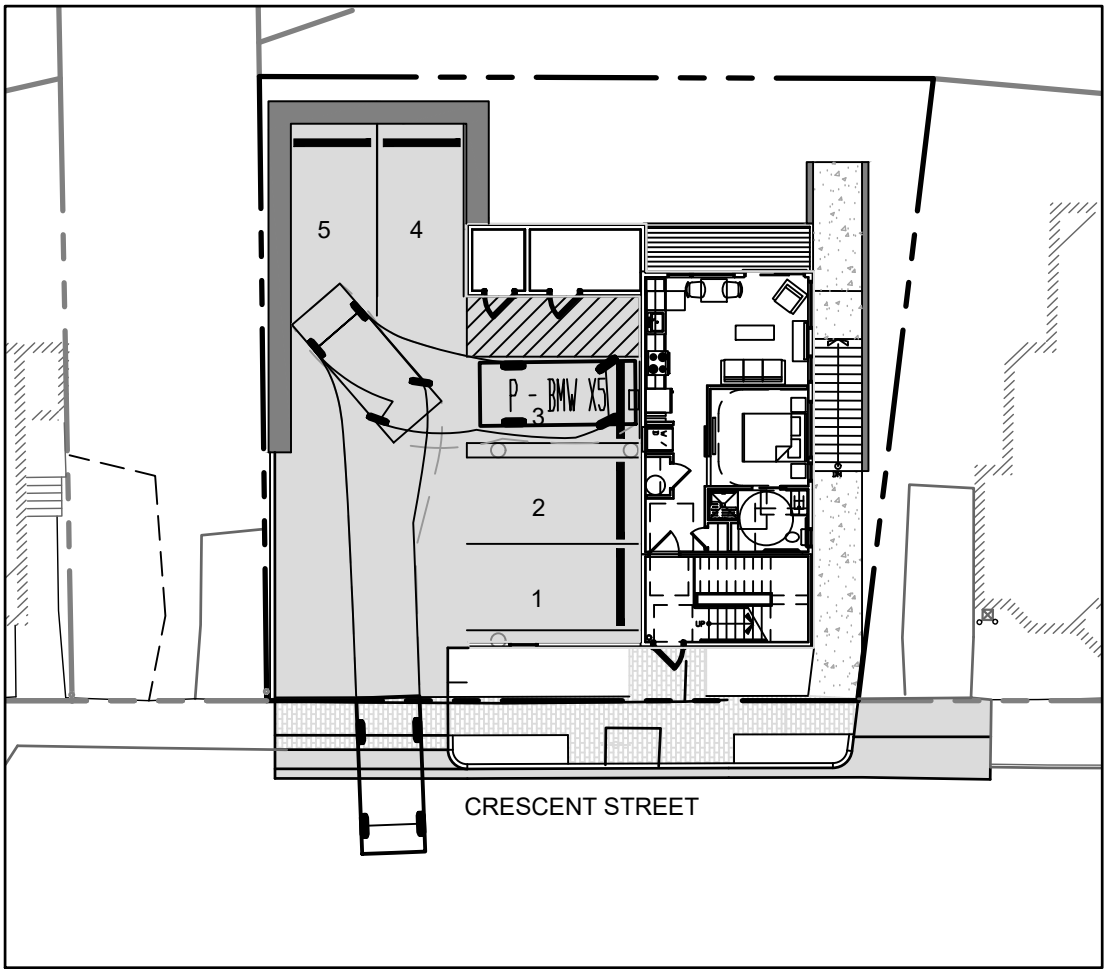
VEHICLE ENTERING SPOT 4



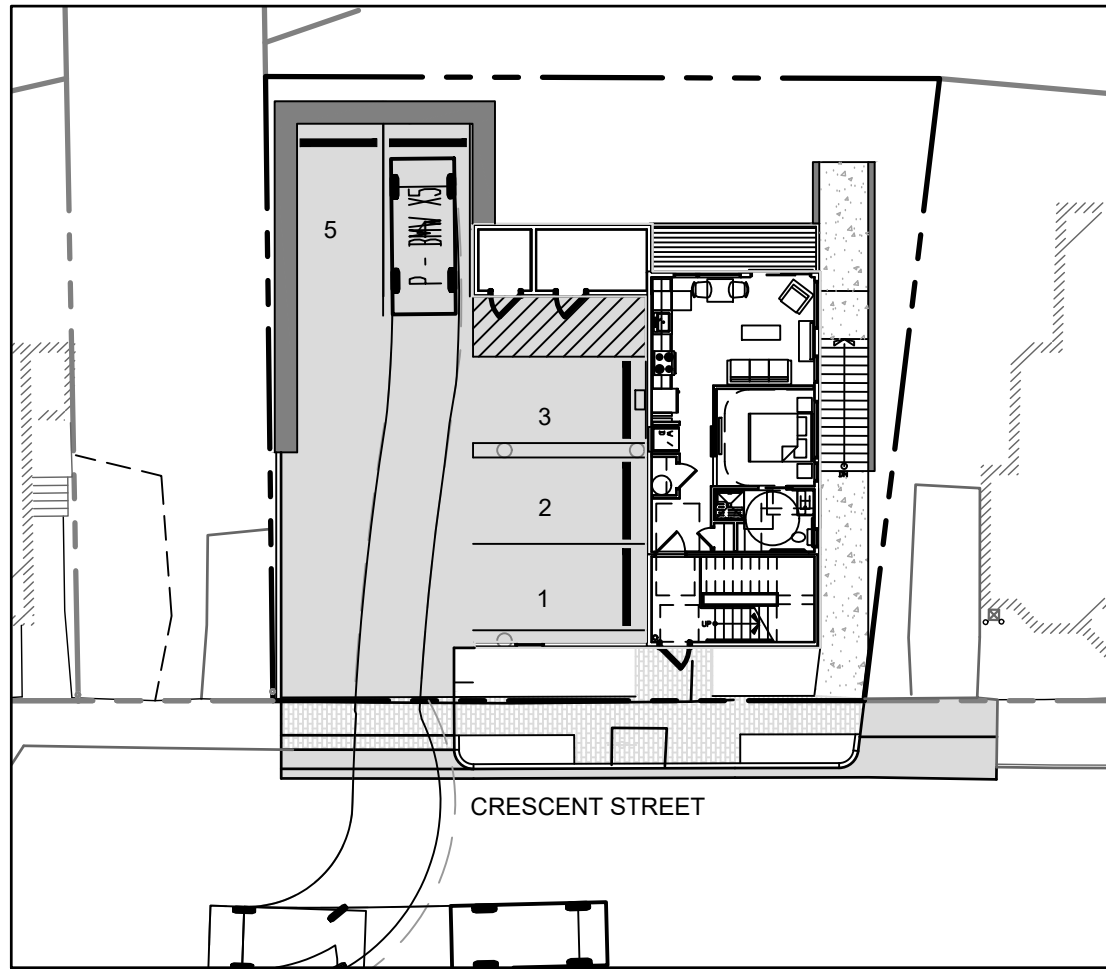
VEHICLE EXITING SPOT 1



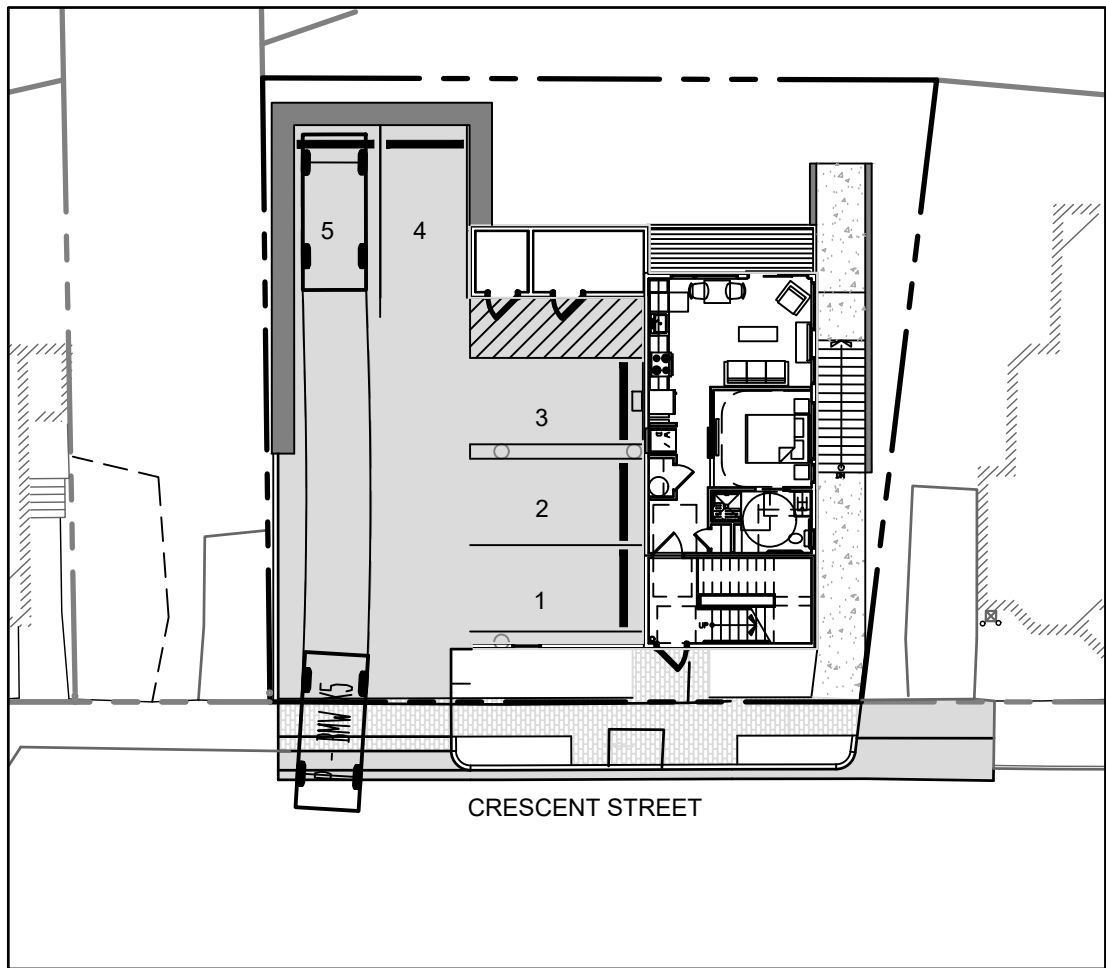
VEHICLE EXITING SPOT 2



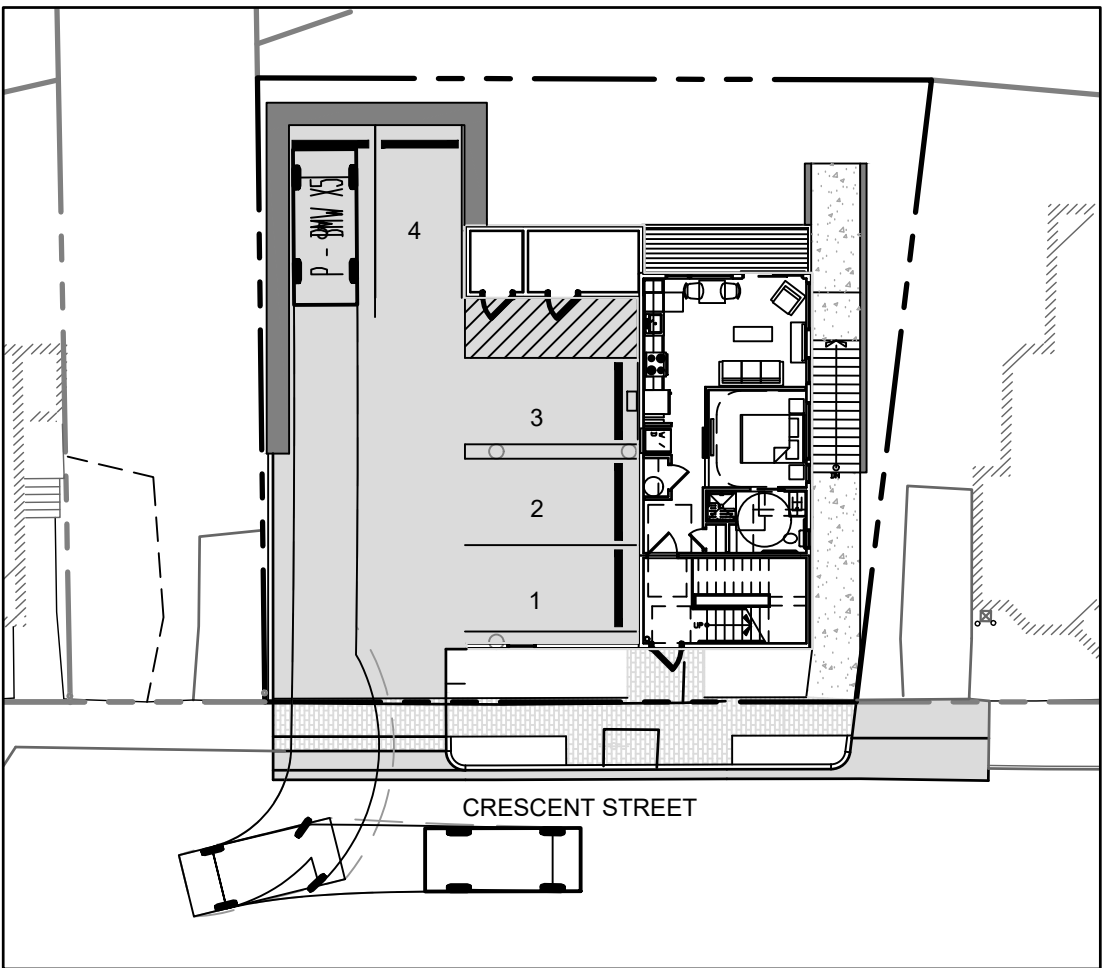
VEHICLE EXITING SPOT 3



VEHICLE EXITING SPOT 4

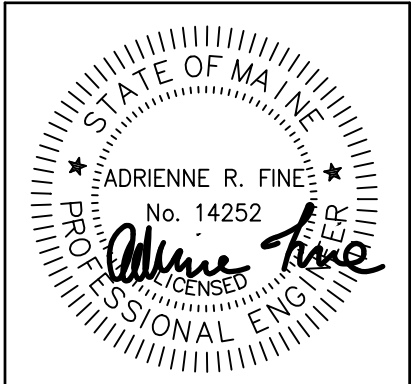
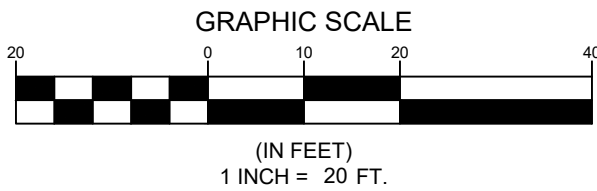
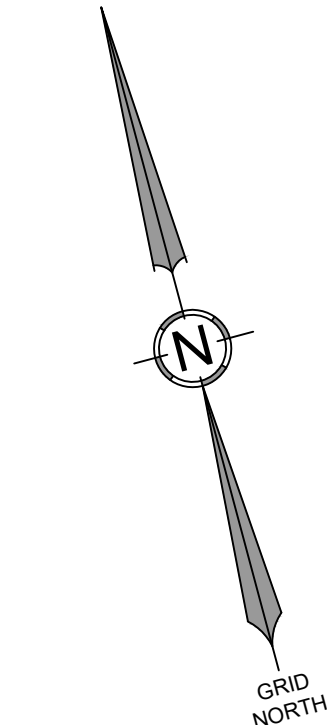


VEHICLE ENTERING SPOT 5



VEHICLE EXITING SPOT 5

- VEHICLE MOVEMENT NOTES:
1. VEHICLE MOVEMENTS SHOW HOW A VEHICLE MAY ENTER OR EXIT PARKING SPACES.
 2. VEHICLE PATHS DEVELOPED USING AUTOTURN VEHICLE SWEEP PATH ANALYSIS SOFTWARE BY TRANSOFT SOLUTIONS.
 3. VEHICLE PARAMETERS:
TOTAL LENGTH: 15.3'
TOTAL WIDTH: 6.21'
WHEEL BASE: 9.25'
TRACK: 5.3'
FRONT OVERHANG: 2.94'
REAR OVERHANG: 3.11'
STEERING LOCK ANGLE: 34.5°



DATE: 10/25/2023
P.E.: ADRIENNE R. FINE

REV	NO.	DATE	REVISIONS
2	10/25/2023	REVISED PER STAFF COMMENTS	
1	09/12/2023	REVISED PER STAFF COMMENTS	

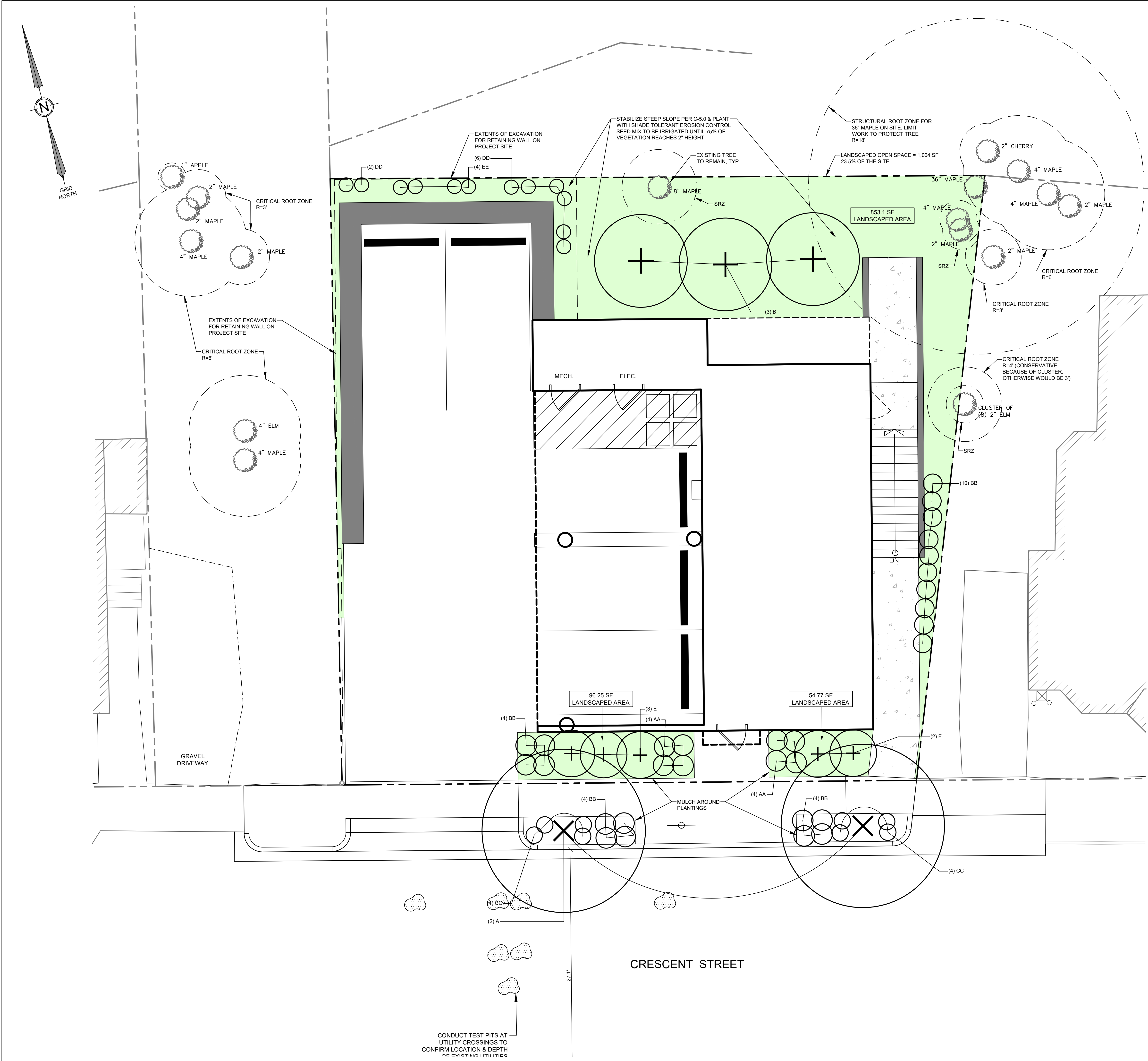
565 CONGRESS STREET
SUITE 201
PORTLAND, ME 04102
OFFICE: (207) 936-5111 FAX: (207) 221-1317
www.terradynconsultants.com



Civil Engineering | Land Planning | Stormwater Design | Environmental Permitting

PERMIT DRAWING
NOT FOR CONSTRUCTION

PROJECT: CRESCENT STREET RESIDENCES 15 CRESCENT STREET, PORTLAND	DATE: 2/14/2023
SHEET TITLE: VEHICLE MOVEMENT DIAGRAM	SCALE: 1" = 20'
CLIENT: DEVELOPERS COLLABORATIVE 631 STEVENS AVENUE, SUITE 203 PORTLAND, ME 04103	DESIGNED: ARF
	JOB NO: 1948
	FILE: C-8.2
	SHEET



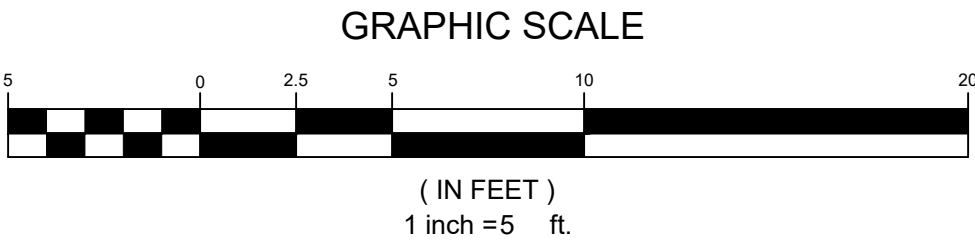
PLANT LIST 15 CRESCENT STREET

KEY	COMMON & BOTANICAL NAME	SIZE	ROOT	QTY	NOTES
A	AMERICAN HORNBEAM CARPINUS CAROLINIANA	2 1/2" Cal.	B&B	2	Trim for 8' clear under branches
B	CANAAN BALSAM FIR ABIES BALSAMEA VAR. 'Phanerolepis'	5'-6' Ht.	B&B	3	
C					
D					
E	NORTHERN BAYBERRY M. PENNSYLVANICA	3'-4' HT.	CONT	5	

KEY	COMMON & BOTANICAL NAME	SIZE	ROOT	QTY	NOTES
AA	SWITCH GRASS PANICUM VIRGATUM 'Heavy Metal'	-----		8	@18" O.C.
BB	SWITCH GRASS PANICUM VIRGATUM 'Shenandoah'	-----		15	"
CC	DAYLILY VAR. HEMEROCALLIS	PTD		8	
DD	CLIMBING HYDRANGEA ANOMALA PETIOLARIS	CONT.		8	
EE	VIRGINIA CREEPER [WOODBINE] PARTHENOCISSUS QUINQUEFOLIA			4	
FF		-----			

- PLANTING NOTES
- THE CONTRACTOR SHALL SUPPLY ALL PLANTS IN QUANTITIES SUFFICIENT TO COMPLETE THE WORK SHOWN ON THE PLAN. ANY DISCREPANCIES BETWEEN QUANTITIES SHOWN ON PLANT LIST AND THOSE REQUIRED BY THIS DRAWING SHALL NOT ENTITLE CONTRACTOR TO ADDITIONAL REMUNERATION.
 - ANY PLAN SUBSTITUTIONS MUST BE APPROVED BY THE OWNER.
 - ANY TREE OR SHRUB WHICH COMES OVER OR UNDER ANY UTILITY SHALL BE RELOCATED ON THE SITE BY THE LANDSCAPE ARCHITECT.
 - ALL LAWN AREAS TO HAVE 6" OF TOPSOIL UNLESS NOTED OTHERWISE.
 - ALL TREES AND SHRUBS SHALL BE PLACED IN THE DESIGNATED AREAS AS SHOWN ON THE PLAN AND BEFORE PLANTING SHALL BE APPROVED BY THE LANDSCAPE ARCHITECT.
 - THE CONTRACTOR SHALL RELOCATE ANY TREE OR SHRUB AS DIRECTED BY THE LANDSCAPE ARCHITECT.
 - ALL PLANT MATERIALS INSTALLED SHALL MEET THE SPECIFICATIONS OF THE AMERICAN STANDARD FOR NURSERY STOCK (LATEST EDITION) AS SET FORTH BY THE AMERICAN ASSOCIATION OF NURSERYMEN.
 - THE LANDSCAPE CONTRACTOR SHALL REPLACE OR REPAIR TO ORIGINAL CONDITION ANY AND ALL UTILITIES, PAVING, CURBING, ETC., DAMAGED AS A RESULT OF THEIR OPERATIONS AT NO ADDITIONAL COST TO THE OWNER.
 - THE CONTRACTOR SHALL VERIFY LOCATION OF ALL UTILITIES PRIOR TO PLANTING AND WILL NOTIFY OWNER'S REPRESENTATIVE IN THE EVENT OF CONFLICTS.

- TREE NOTES
- TREE SURVEY WAS COMPLETED BY TERRADYN CONSULTANTS IN OCTOBER 2023 WITH ASSISTANCE FROM THE LANDSCAPE ARCHITECT TONY MUENCH.
 - ALL TREES LABELED AS MAPLE ON THIS PLAN ARE NORWAY MAPLES, WHICH ARE AN INVASIVE SPECIES.
 - FOURTEEN (14) NORWAY MAPLES TO BE REMOVED FROM THE PROJECT SITE. TREE SIZES TO BE REMOVED ARE:
 - ONE 36"
 - TWO 24"
 - THREE 6"
 - SIX 4"
 - TWO 2"
 - SEE SHEET C-3.0 FOR THE LOCATION OF TREES TO BE REMOVED.
 - NO OFF-SITE TREES ARE EXPECTED TO BE IMPACTED BY CONSTRUCTION ACTIVITIES. SEE ROOT ZONE FIGURES PREPARED BY THE LANDSCAPE ARCHITECT.



DATE: 11/17/2023
R.L.A: ANTHONY MUENCH

DATE: 12.06.2023
P.E.: ADRIENNE R. FINE

PROJECT: CRESCENT STREET RESIDENCES
15 CRESCENT STREET, PORTLAND

SHEET TITLE: LANDSCAPE PLAN

CLIENT: DEVELOPERS COLLABORATIVE
631 STEVENS AVENUE, SUITE 203
PORTLAND, ME 04103

41 CAMPUS DRIVE
SUITE 203
NEW GLoucester, ME 04260

566 CONGRESS STREET
SUITE 203
PORTLAND, ME 04102

OFFICE: (207) 926-5111 FAX: (207) 221-1317
www.terradynconsultants.com

Civil Engineering | Land Planning | Stormwater Design | Environmental Permitting

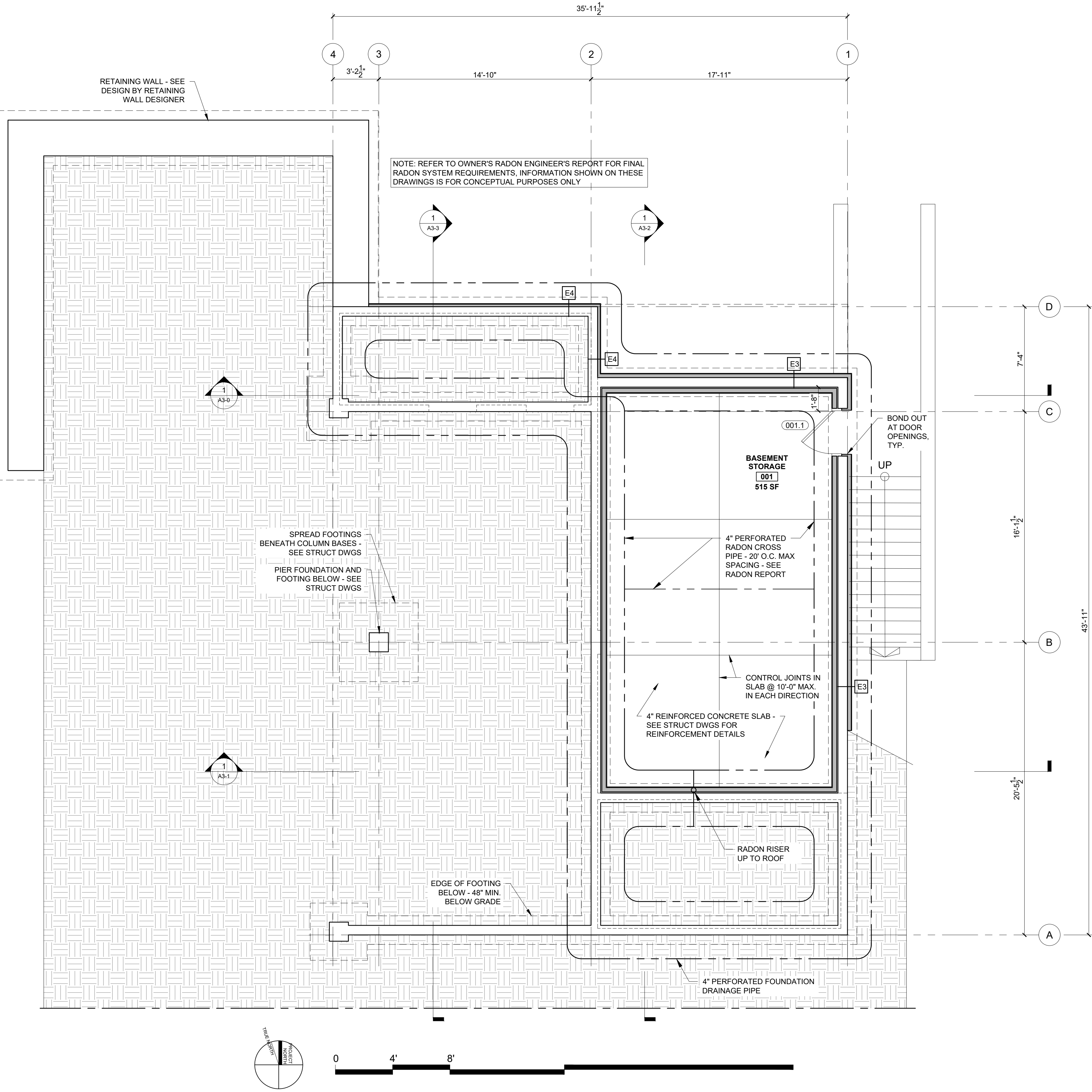
PERMIT DRAWING
NOT FOR CONSTRUCTION

DATE: 02.14.2023
SCALE: 1" = 5'
DESIGNED: AM
JOB NO: 1948
FILE: 1948-L.DWG
SHEET L-1.0

RESIDENCES AT 15 CRESCENT STREET

PORTLAND, MAINE

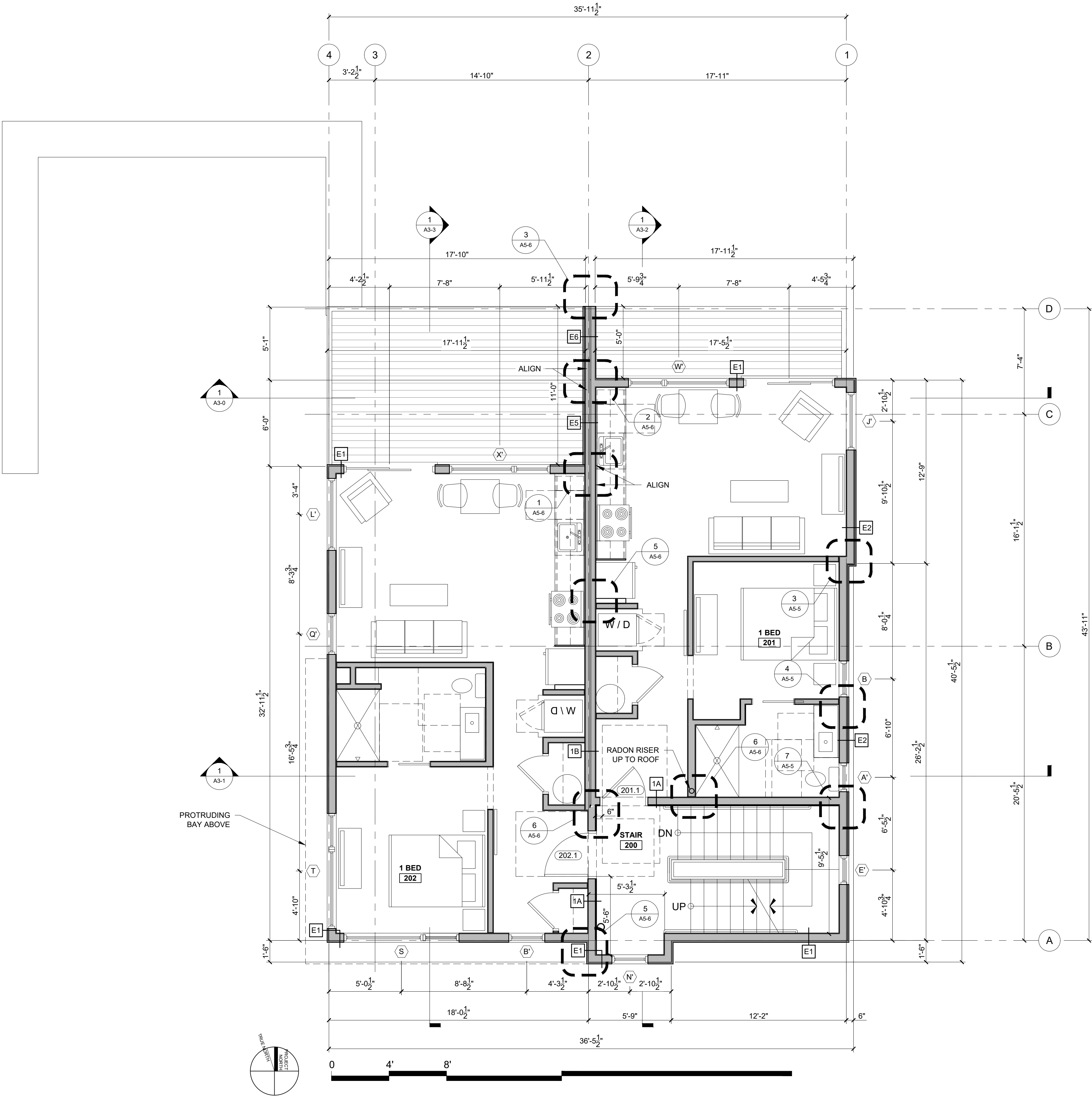
NOVEMBER 17, 2023



RESIDENCES AT 15 CRESCENT STREET

PORTLAND, MAINE

NOVEMBER 17, 2023



1 SECOND FLOOR PLAN
1/4" = 1'-0"

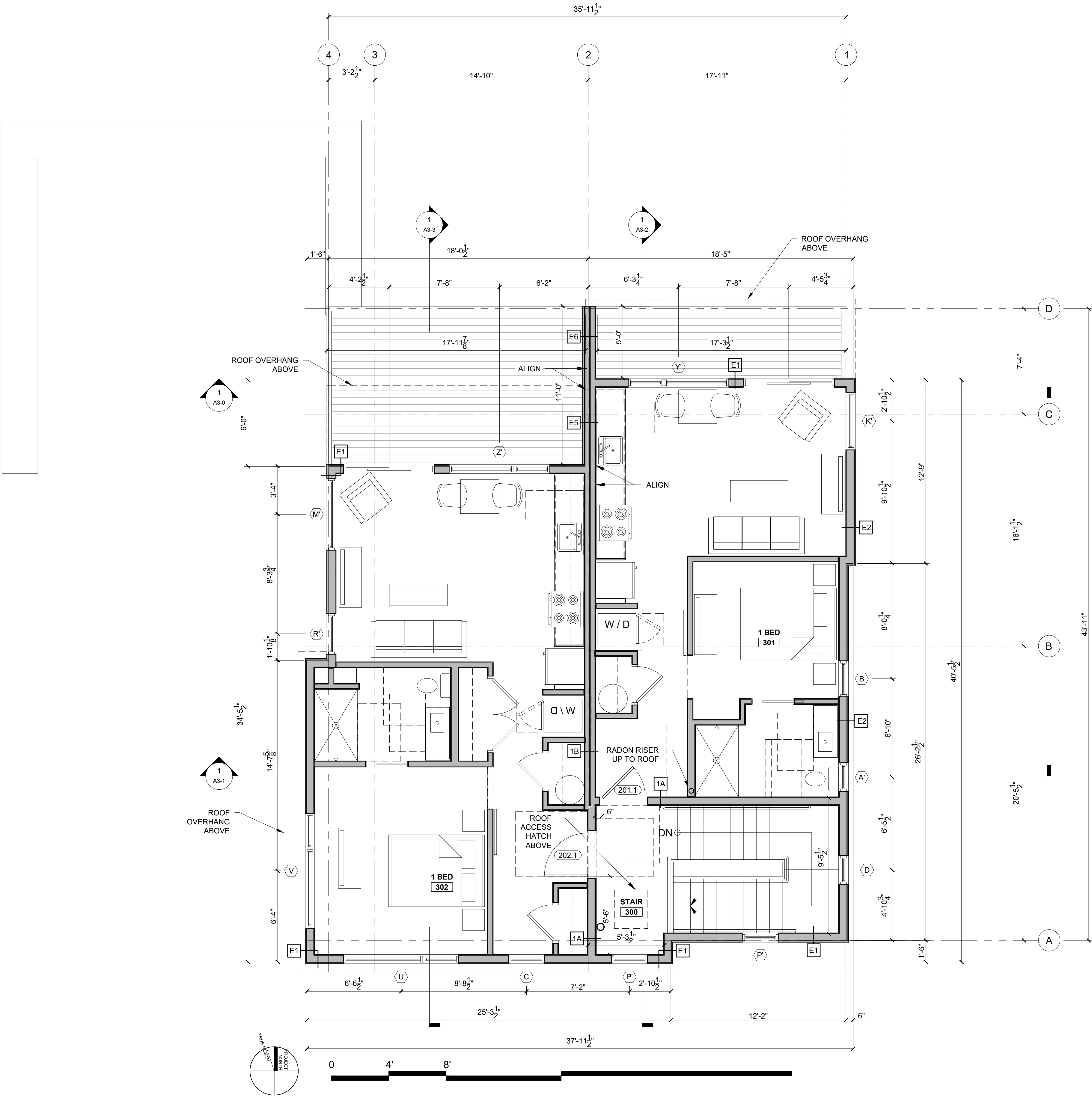
PROGRESS PRINT ONLY
Not for Construction

RYAN SENATORE ARCHITECTURE

RESIDENCES AT 15 CRESCENT STREET

PORTLAND, MAINE

NOVEMBER 17, 2023



1 THIRD FLOOR PLAN
1/8" = 1'-0"

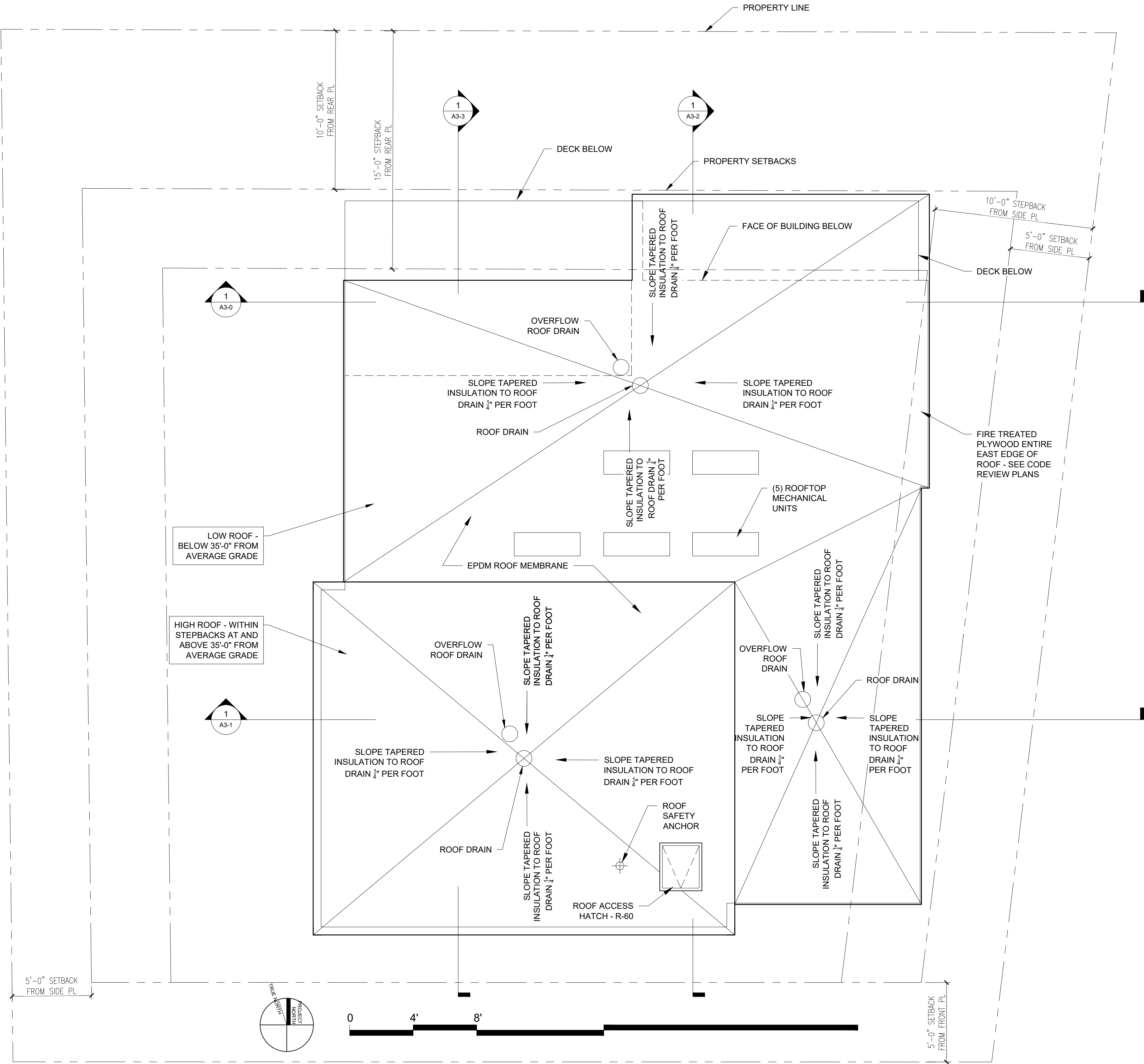
PROGRESS PRINT ONLY
Not for Construction

RYAN SENATORE ARCHITECTURE

RESIDENCES AT 15 CRESCENT STREET

PORTLAND, MAINE

NOVEMBER 17, 2023



1 THIRD FLOOR PLAN
1/8" = 1'-0"

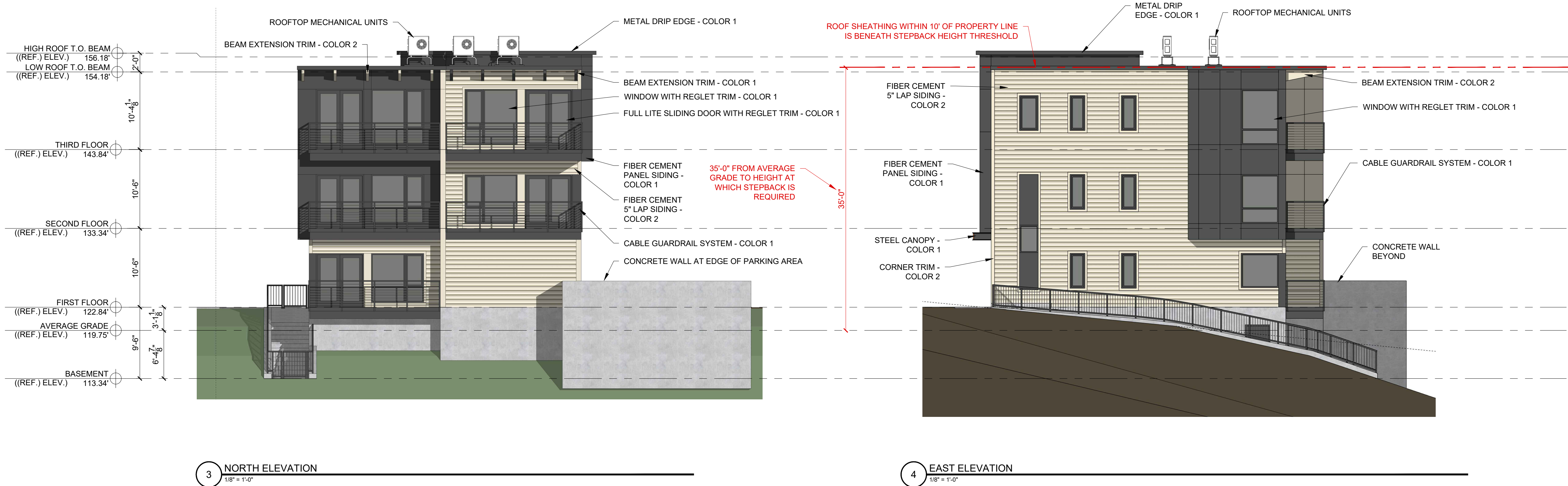
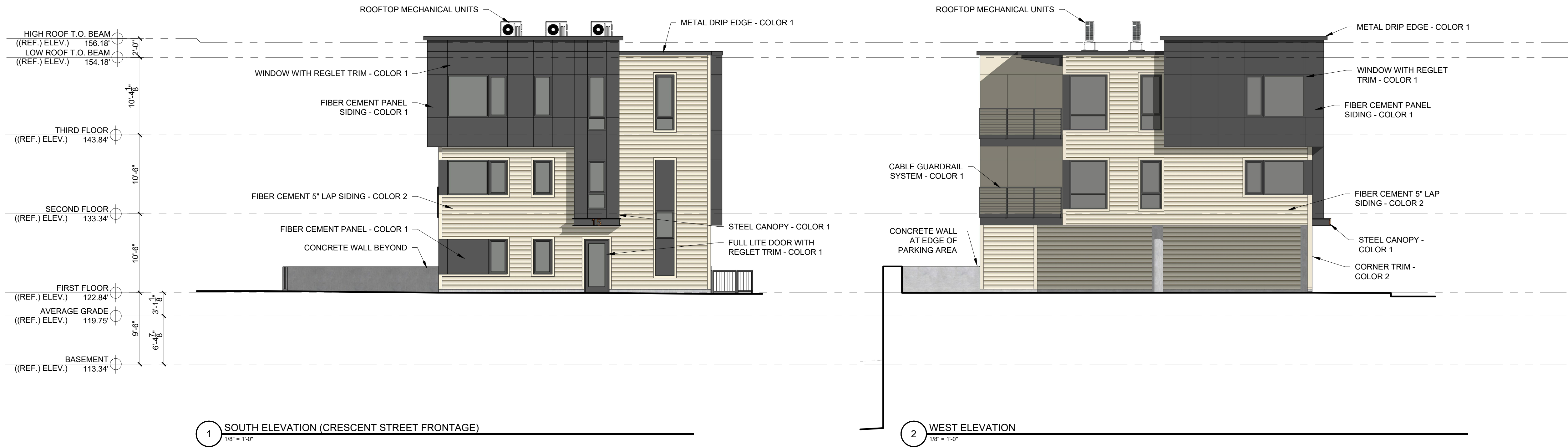
PROGRESS PRINT ONLY
Not for Construction

RYAN SENATORE ARCHITECTURE

RESIDENCES AT 15 CRESCENT STREET

PORTLAND, MAINE

NOVEMBER 17, 2023



PROGRESS PRINT ONLY
Not for Construction

RYAN SENATORE ARCHITECTURE

RESIDENCES AT 15 CRESCENT STREET

PORTLAND, MAINE

NOVEMBER 17, 2023



1 SOUTHEAST QUARTER VIEW



2 SOUTHWEST QUARTER VIEW

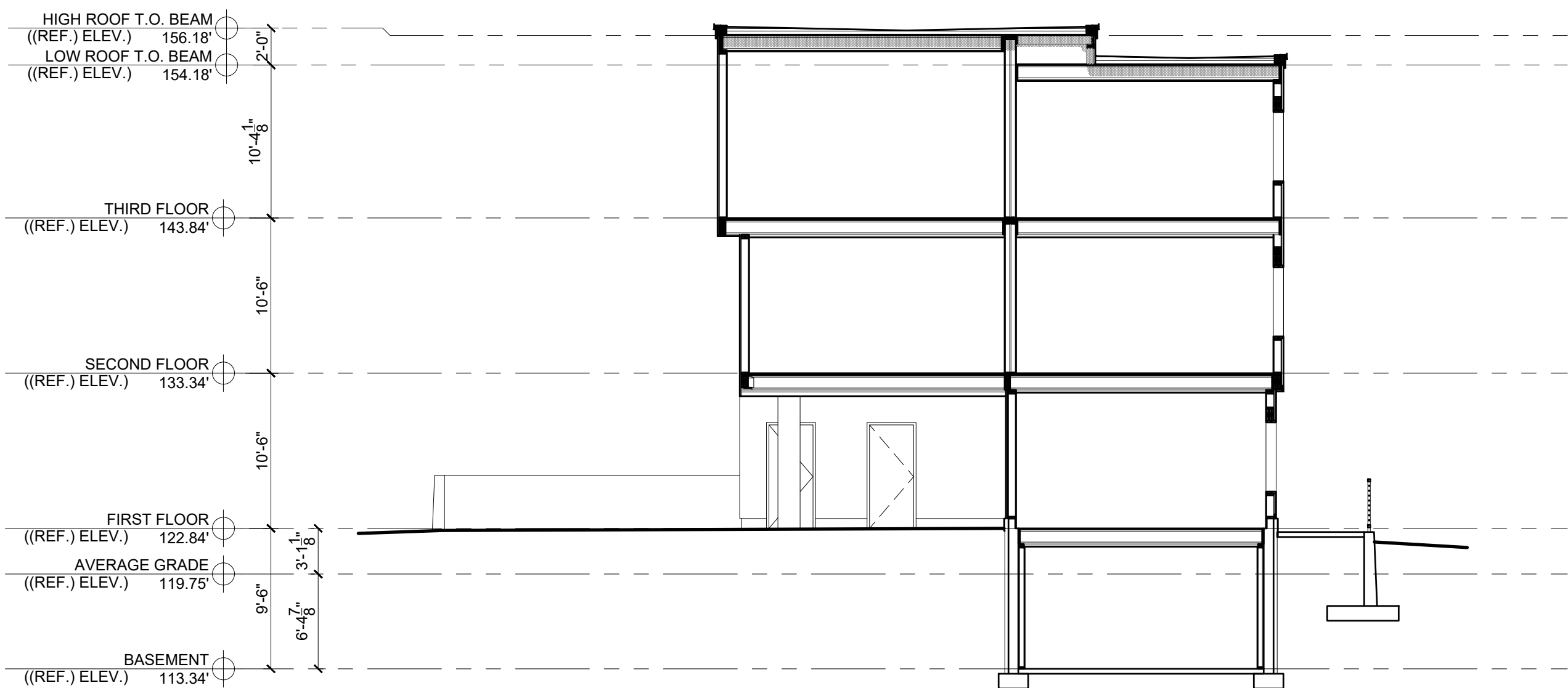
PROGRESS PRINT ONLY
Not for Construction

RYAN SENATORE **ARCHITECTURE**

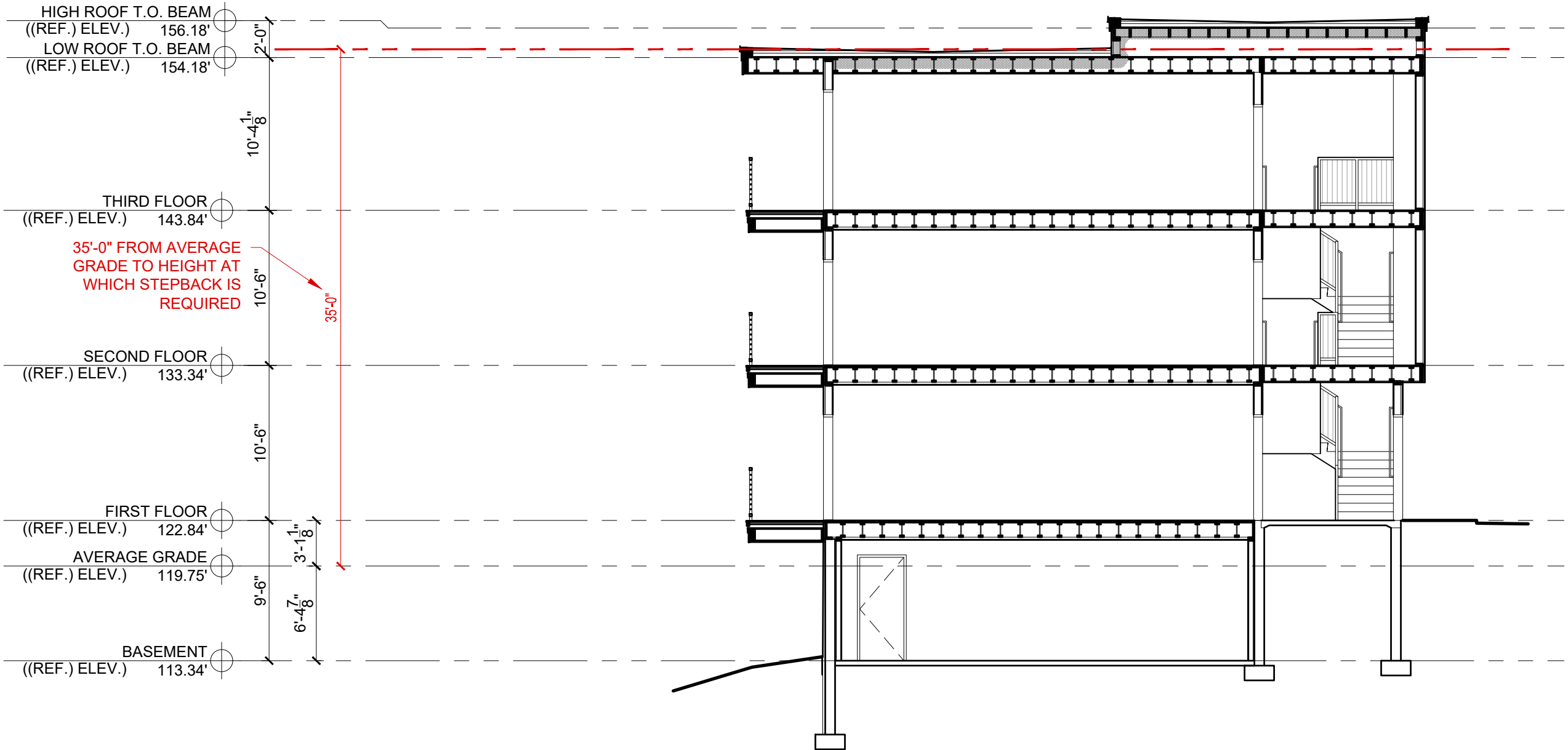
RESIDENCES AT 15 CRESCENT STREET

PORTLAND, MAINE

NOVEMBER 17, 2023



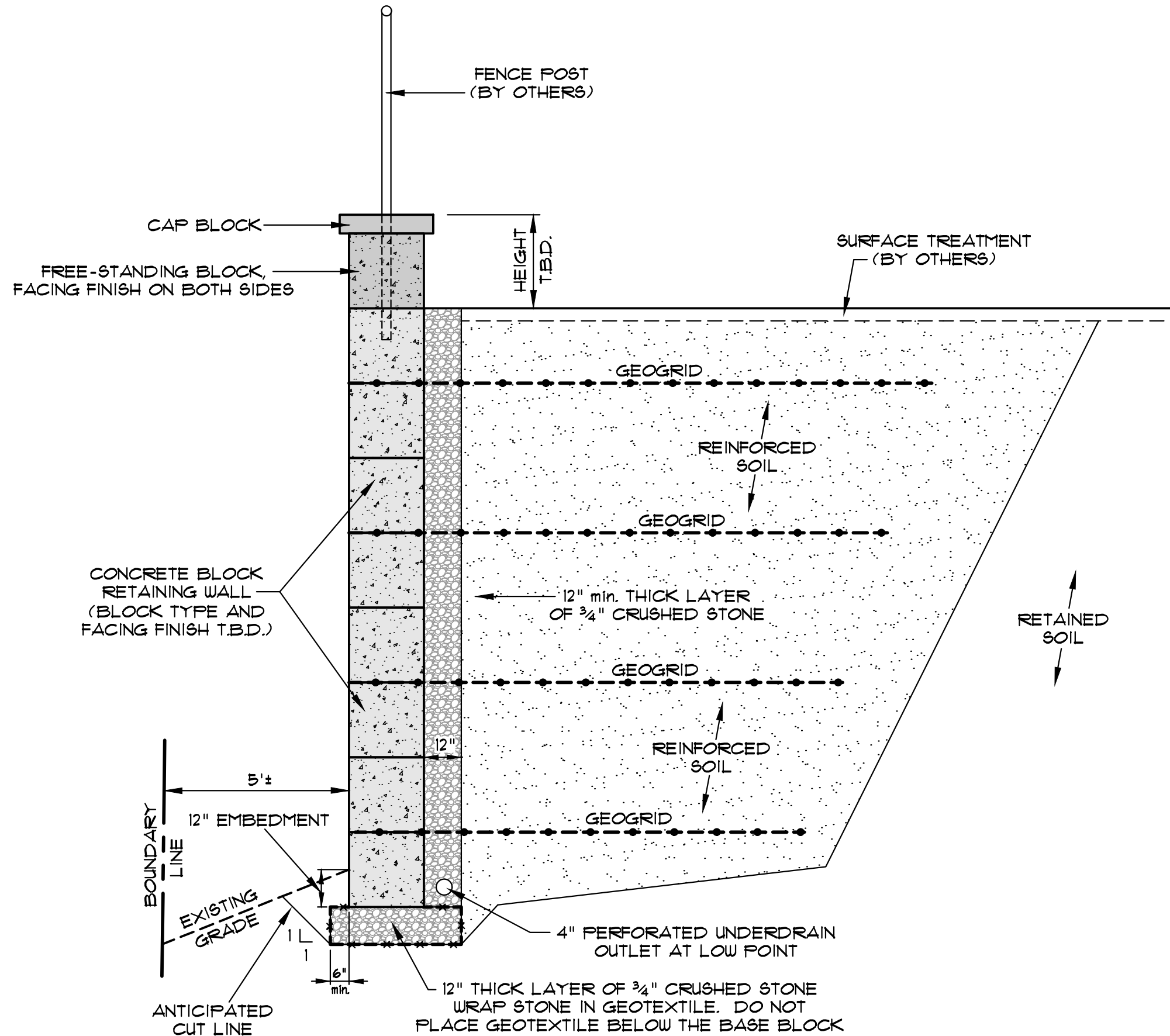
2 BUILDING SECTION - THROUGH GARAGE
1/8" = 1'-0"



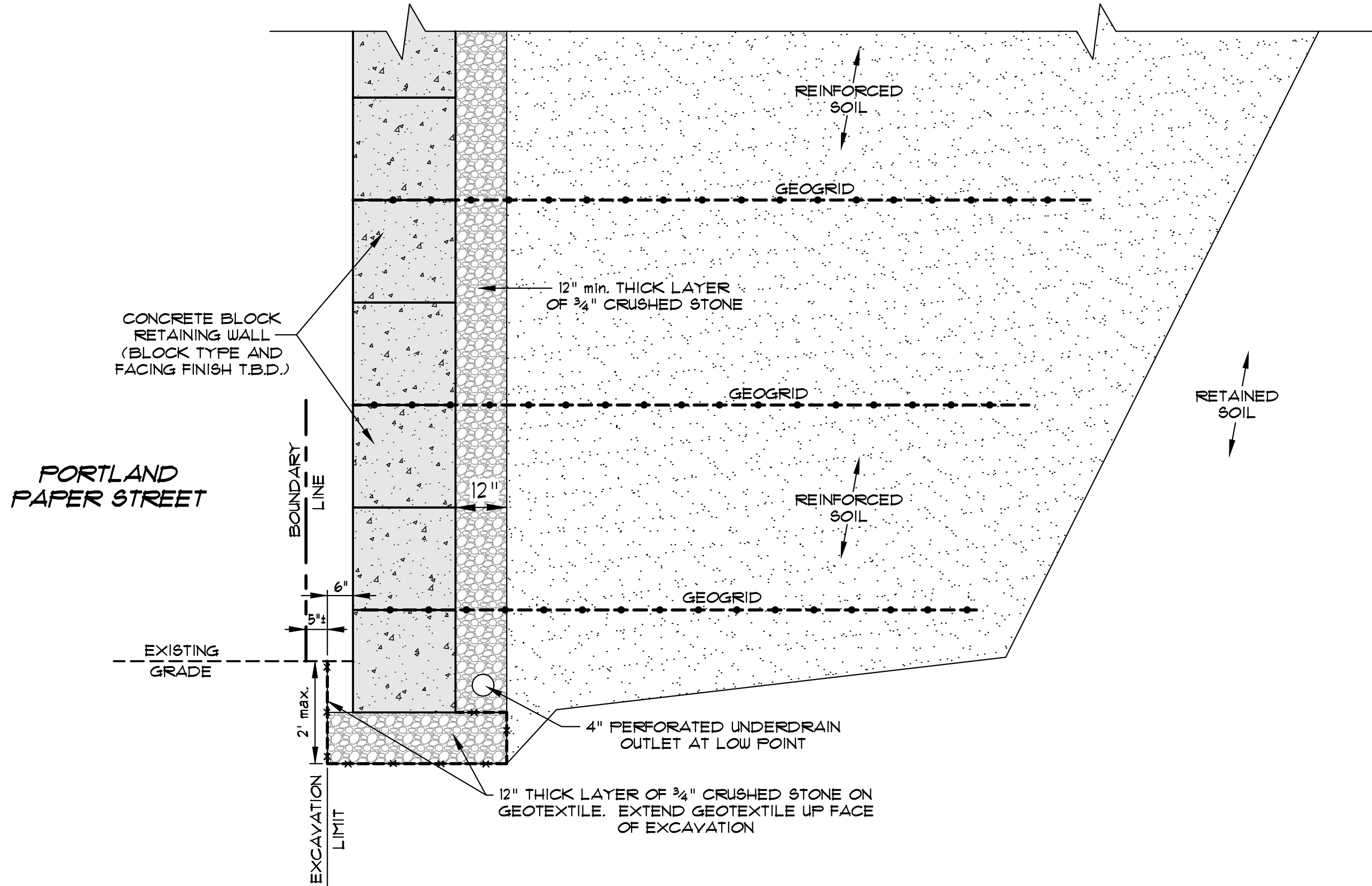
1 BUILDING SECTION - THROUGH STAIR SHAFT
1/8" = 1'-0"

PROGRESS PRINT ONLY
Not for Construction

RYAN SENATORE **ARCHITECTURE**



PROJECT: CRESCENT STREET RESIDENCES PORTLAND, MAINE		CLIENT: DC MANAGEMENT	
TITLE: GENERIC RETAINING WALL CROSS SECTION		NOT TO SCALE	
MAIL: P.O. BOX 515 FARMINGDALE, MAINE TEL: (207) 446-3360		DRAWN BY: KRF	APPR BY: WMP
OFFICE: 210 MAINE AVENUE FARMINGDALE, MAINE TEL: (207) 446-3360		DATE: OCTOBER 13, 2023	
SUMMIT GEOENGINEERING SERVICES			
PROJ. #: 20159.1		FIGURE: 1	



SECTION THROUGH WEST SIDE WALL LOOKING NORTH

OFFICE: 210 MAINE AVENUE FARMINGDALE, MAINE TEL: (207) 446-3360				MAIL: P.O. BOX 515 GARDNER, ME 04345	
PROJECT: CRESCENT STREET RESIDENCES PORTLAND, MAINE					
CLIENT: DC MANAGEMENT					
TITLE: GENERIC CROSS SECTION AND EXCAVATION LIMITS, RETAINING WALL FACE		NOT TO SCALE		DRAWN BY: KRF	
		DATE: DEC. 6, 2023		APPR BY: WMP	
PROJ. #: 20159.1					
FIGURE: 1					

66 Eighth Street
Subdivision
PL-002599-2023
Laurie Sirois, Applicant

Submitted to:	Portland Planning Board	Prepared By:	Maya Balassa
Public Hearing Date:	December 12, 2023	Date:	December 8, 2023

I. INTRODUCTION

Laurie Sirois has submitted a Subdivision application to facilitate the subdivision of an existing parcel into three separate buildable lots, and the extension of Eighth Street, a City accepted right-of-way. The subdivision, along with the unimproved portions of Eighth Street are located within the R-3 Residential zone. This application is being referred to the Planning Board for compliance with the City of Portland Subdivision Standards.

The Planning and Urban Development Department mailed 72 notices advertising this meeting to property owners within 500 feet of the site. A legal advertisement ran in the December 2 and 3, 2023 editions of the *Portland Press Herald*.

Applicant: Laurie Sirois
Applicant Chris MacDonald
Representatives:

II. REQUIRED REVIEWS

<i>Review</i>	<i>Applicable Standards</i>
Subdivision	Section 15.4

<i>Waiver Requests</i>	<i>Applicable Standards</i>
Sidewalks along the street extension are not proposed as there are no sidewalks within 1,000 feet of construction and there are no sidewalks in the neighborhood.	Land Use Chapter 15 Section 15.5.4-J requires sidewalk along streets with frontage. <i>Staff support the waiver.</i>
Curbing is not proposed, instead a vegetated gravel buffer is proposed (suggested by DPW) and two focal point stormwater systems.	Land Use Chapter 15 Section 15.5.4-K requires curbing to be constructed on either side of the street. <i>Staff support the waiver.</i>
The utilities are not proposed to be moved underground along the 200-foot dead end street extension due to the cost burden.	Land Use Chapter 15 Section 15.7.11.H requires subdivisions to underground utilities. <i>Staff support the waiver.</i>

III. PROJECT DATA

Existing Zoning	R-3 Residential Zone
Property Size	28,264 square feet
Existing Use	Single-family residential
Proposed Use	Single-family residential

IV. BACKGROUND AND EXISTING CONDITIONS

The project site is located east of Forest Avenue in North Deering, at the end of Eighth Street, within the R-3 Residential zone. The lot currently contains one single-family residential home and is largely vegetated. Eighth Street and the surrounding roads contain mostly single-family homes. The lot currently contains parcels 339 No22, 339 No23, 339 No24, 339 No25, 339 No26, and 339 No27. The Riverton Rail Trail runs perpendicular to Eighth Street in the wooded area past the end of the road.



Figure 1 Google Earth photo - neighborhood of 66 Eighth Street

V. PROPOSED DEVELOPMENT AND SUBDIVISION

The applicant is proposing to split the existing lot into three lots, one containing the existing single-family home, with two additional lots being established further down Eighth Street, on the north side of the street. In order to meet R-3 street frontage, and the requirements of Sec. 6.4.1.A related to street extensions, the applicant is proposing to extend Eighth Street 200 feet. The street is designed to meet the City's local street specifications, being 24 feet wide as measured from the edge of pavement across to the opposite edge of pavement, with a two-foot-wide vegetated gravel shoulder. The proposed subdivision and road extension would facilitate the opportunity to develop two single-family homes, which would require separate site plan reviews in the future. A twenty-foot wide turnaround for emergency vehicle access is proposed between Lot A and Lot B.

The project is also proposing a four-foot gap in the wooden guardrail at the end of the road extension for access to the Riverton Rail Trail that runs perpendicular to the road.

The project is proposing to remove several mature trees as part of the proposed street extension. The subdivision plan also proposes to remove mature trees within Lot A and Lot B. City staff are proposing a condition of approval to limit site disturbance and vegetation removal to what is expressly required to facilitate the proposed street extension. The lots will need to be reviewed against site plan landscaping standards when the minor residential site plan applications are submitted.

The applicant is proposing to install two FocalPoint stormwater treatments systems. The systems are vegetated 20 square foot filter beds with domed overflow control structures. The project is treating 51% of the developed area. The applicant will be responsible for maintenance of these systems until such time that the City accepts the street and maintenance of the stormwater infrastructure, and therefore, a stormwater maintenance agreement will be required from the applicant to account for this interim maintenance responsibility.

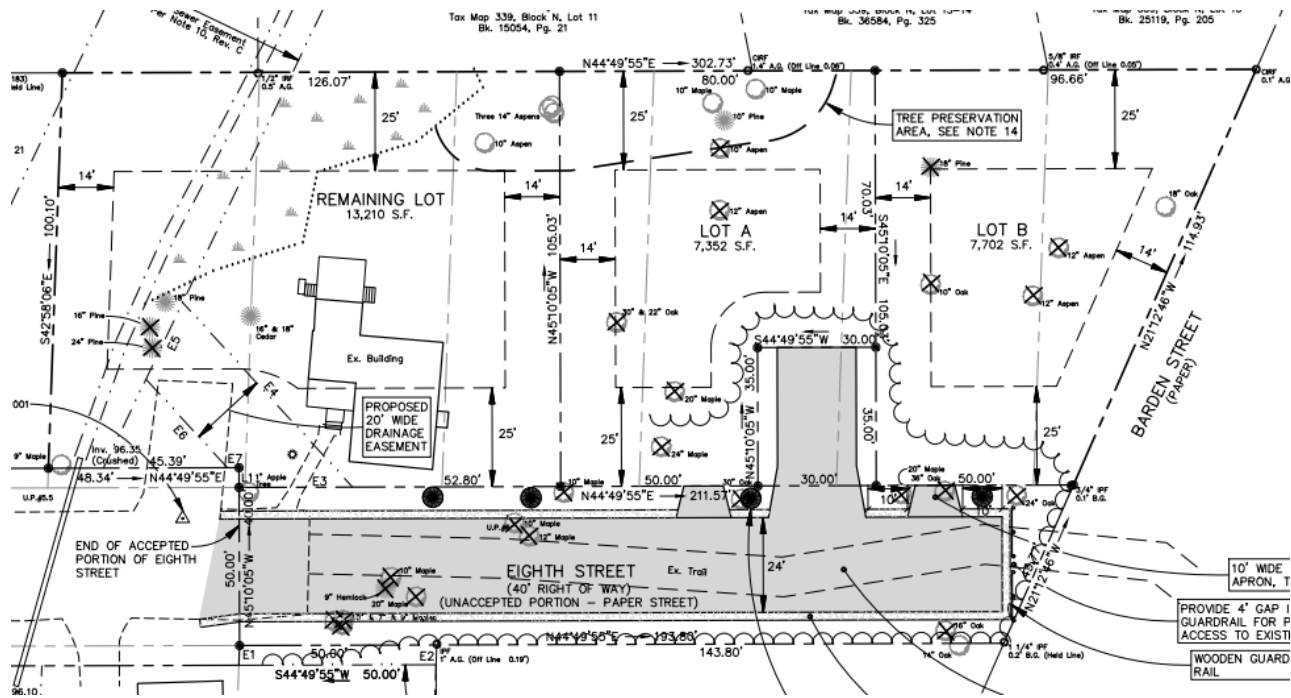


Figure 2 Subdivision and Site Plan

VI. RIGHT, TITLE, & INTEREST

The applicant has submitted a property deed, demonstrating right, title and interest (Applicant Submittal 3). The applicant will be required to provide a 5-foot-wide grading easement, and an easement for the outlet pipe for the development of the proposed FocalPoint systems. The turnaround is proposed to be part of Lot A, with a public access easement. A condition of approval has been added for the three easements to be submitted to the Planning Authority, Public Works Authority and Corporation Counsel to be reviewed and approved.

VII. FINANCIAL & TECHNICAL CAPACITY

The applicant has shown financial capacity, addressed in a letter from Acadia Federal Credit Union (Applicant submittal 3), and has provided information on their consulting team demonstrating adequate technical capacity to complete the project

VIII. ZONING ANALYSIS

The parcels are located in the R-3 Residential zone. Single family is a permitted use in the R-3 zone.

R-3 Requirements		Proposed Remainder Lot	Proposed Lot A	Proposed Lot B
Lot Size	6,500 square feet	13,210 square feet	7,352 square feet	7,702 square feet
Area Per Dwelling Unit	6,500 square feet per dwelling unit	13,210 sq/du	(Reviewed during site plan review of individual lot)	(Reviewed during site plan review of individual lot)
Minimum Street Frontage	50 feet	173.01 feet	50 feet	50 feet
Front Yard Minimum	25 feet	4.4 feet (existing condition)	(Reviewed during site plan review of individual lot)	(Reviewed during site plan review of individual lot)
Maximum Lot Coverage	35%	12.7%	(Reviewed during site plan review of individual lot)	(Reviewed during site plan review of individual lot)



Figure 3 Zoning Map

IX. SUBDIVISION REVIEW STANDARDS (Section 15.4)

The proposed development has been reviewed by staff for conformance with the relevant review standards of Portland's Subdivision Ordinance and applicable regulations. Staff comments are listed below.

1. Will Not Result in Undue Water and Air Pollution (Section 15.4.1.A), and will not result in undue soil erosion (Section 15.4.1.D)

The addition of two lots in the R-3 zone is not anticipated to result in undue soil erosion. The project will need to comply with stormwater standards to avoid any sediment erosion during construction of the road extension. Development of the two newly created lots will require separate minor residential site plan applications, at which time, those development applications will also be reviewed for compliance with the City's stormwater and erosion and sedimentation control requirements.

Staff Finding: Meets the standard.

2. Has sufficient water available and will not cause unreasonable burden on existing water supply (Section 15.4.1.B and C)

The Portland Water District has certified that the district will be able to serve the proposed project.

Staff Finding: Meets the standard.

3. Will not cause unreasonable highway or public road congestion or unsafe conditions with respect to use of the highway or public roads existing or proposed (Section 15.4.1.E)

The subdivision and road extension are not anticipated to cause any highway or road congestion or unsafe conditions with respect to use of the highway or public roads. The project is located in a developed neighborhood with a well-established street network.

The subdivision is located at the end of Eighth Street, and is expected to result in minimal additional traffic on existing streets. The project does involve the extension of Eighth Street, to provide vehicular access to the newly developed lots. This extension will match the existing condition of Eighth Street, with 24-foot pavement width and gravel shoulder.

Waiver Requests:

The applicant has requested a waiver for the sidewalk and curbing standard for the street extension. City staff and third-party reviewers are in support of the waiver to allow the two-foot vegetated gravel buffer on either side of the road. The project originally proposed curbing along the street extension and DPW requested a vegetated gravel buffer.

Sidewalk Waiver:

Curbing Waiver:

Staff Finding: Meets the standard.

4. Will provide for adequate sanitary sewer and stormwater disposal (Section 15.4.1.F) and will not cause an unreasonable burden on municipal solid waste and sewage (Section 15.4.1.G)

The Department of Public Works has reviewed and approved the wastewater capacity of city infrastructure for the proposed subdivision (Applicant Submittal 12).

Staff Finding: Meets the standard.

5. Will not have an undue adverse effect on the scenic or natural beauty of the area, aesthetics, historic sites, significant wildlife habitat (Section 15.4.1.H)

The proposed project is not anticipated to have an undue adverse effect on the scenic or natural beauty of the area, aesthetics, historic sites, significant wildlife habitat identified by the Department of Inland Fisheries. The proposed project is not within local historic districts or significant wildlife habitat.

Staff Finding: Meets the standard.

6. Is in conformance with the Comprehensive Plan (Section 15.4.1.I)

The creation of three lots, intended for single family residential, in the R-3 zone is in line with the Comprehensive Plan.

Staff Finding: Meets the standard.

7. Adequate financial and technical capacity (Section 15.4.1.J)

The applicant has provided evidence of adequate financial and technical capacity (Applicant Submittal 3).

Staff Finding: Meets the standard.

8. Whenever situated, in whole or in part, within the watershed of any pond or lake or within 250 feet of any wetland, great pond, or river, will not adversely affect the quality of such body of water or unreasonably affect the shoreline of such body of water (Section 15.4.1.K)

Wetlands have been identified in the project area, but only in the lot with the existing home. No wetlands have been identified in the two lots created for future development. No wetlands will be impacted for the proposed street extension.

Staff Finding: Meets the standard.

9. Will not, adversely affect the quality and quantity of groundwater (Section 15.4.1.L)

The applicant is proposing two stormwater treatment systems. The project proposes to be connected to city water and sewer systems located beneath Eighth Street.

Staff Finding: Meets the standard.

10. Is or is not in a flood-prone area (Section 15.4.1.M)

The site is not located within a flood prone area as confirmed on the currently adopted FEMA Flood maps.

Staff Finding: Meets the standard.

11. Will provide for adequate stormwater management (Section 15.4.1.N)

The applicant is proposing two FocalPoint stormwater treatment systems on either side of Eighth Street in front of the existing house.

Staff Finding: Meets the standard.

12. Will not have lots with a lot depth-to-shore frontage ratio greater than 5 to 1 if any lots in the proposed subdivision have shore frontage on a river, stream brook, great pond, or coastal wetland (Section 15.4.1.O)

The subdivision does not include shore frontage on any body of water, and therefore this standard is not applicable.

Staff Finding: Not applicable.

13. For any proposed subdivision that crosses municipal boundaries, will not cause unreasonable traffic congestion or unsafe conditions with respect to the use of existing public ways in an adjoining municipality in which part of the subdivision is located (Section 15.4.1.P)

The project does not cross municipal boundaries.

Staff Finding: Meets the standard.

X. WAIVER REQUESTS

As noted above, the applicant has requested three separate waivers; for sidewalks, curbing, and the undergrounding of overhead utility lines along the property frontage. City staff are supportive of the Planning Board waiving these three requirements, based upon the findings provided below.

A. Sidewalk Waiver

The applicant has requested a waiver for the sidewalk standard. Where the Planning Board finds that “two or more of the conditions exist with respect to compliance with the requirements set forth Subsection 15.5.4 pertaining to the provision and construction of curbs and/or sidewalks, it may waive, in whole or in part, the regulations so that substantial justice may be done and the public interest secured.”

1. *There is no reasonable expectation for pedestrian usage coming from, going to and traversing the site.*
2. *There is no sidewalk in existence or expected within 1000 feet and the construction of sidewalks does not contribute to the development of a pedestrian oriented infrastructure.*
3. *A safe alternative-walking route is reasonably and safely available, for example, by way of a sidewalk on the other side of the street that is lightly traveled.*
4. *The reconstruction of the street is specifically identified and approved in the first or second year of the current Capital Improvement Program or has been funded through an earlier CIP or through other sources.*
5. *The street has been constructed or reconstructed without sidewalks within the last 24 months.*
6. *Strict adherence to the sidewalk requirement would result in the loss of significant site features related to landscaping or topography that are deemed to be of a greater public value.*

Discussion: There is no sidewalk within 1,000 feet of the street extension. Sidewalk constructed at the end of Eighth Street is not anticipated to improve the existing pedestrian infrastructure network in the vicinity of the project. contribute to a pedestrian oriented infrastructure. As the road is a dead-end street, 200 feet of sidewalk at the end would not create a significantly safer route for users.

Staff Recommendation: The Public Works Authority is supportive of granting this waiver based upon criteria one and two as listed above.

B. Curbing Waiver

The applicant has requested a waiver for the curbing standard. Where the Planning Board finds that “two or more of the conditions exist with respect to compliance with the requirements set forth Subsection 15.5.4 pertaining to the provision and construction of curbs and/or sidewalks, it may waive, in whole or in part, the regulations so that substantial justice may be done and the public interest secured.”

1. *The cost to construct the curbing, including any applicable street opening fees, is in excess of 5% of the overall project cost.*
2. *The reconstruction of the street is specifically identified and approved in the first or second year of the current Capital Improvement Program or has been funded through an earlier CIP or through other sources.*
3. *The street has been rehabilitated without curbing in the last 60 months.*
4. *Strict adherence to the curb requirement would result in the loss of significant site features related to landscaping or topography that are deemed to be of a greater public value.*
5. *Runoff from the development site or within the street does not require curbing for stormwater management.*

Discussion: DPW has approved the street design and stormwater approach of the vegetated gravel buffer with two FocalPoint stormwater systems along the street to address the new impervious area. Further, the cost of this improvement, along with sidewalk would constitute more than 5% of the total project cost.

Staff Recommendation: The Public Works Authority is supportive of granting this waiver based upon criteria one and five as listed above.

C. Overhead Utility Waiver

The applicant has requested a waiver of Sec. 15.7.11.H, which requires that an applicant for a subdivision place all utility lines underground unless approved by the Planning Board. The applicant notes that utility lines and service connections within the surrounding neighborhood are exclusively above ground, and that the cost of undergrounding the line along Eighth Street would be significant with respect to the overall project cost.

Discussion: The project is creating two additional lots at the end of a dead-end street, in a neighborhood that features both overhead utility lines and electrical service connections to existing homes. Further, the City acknowledges that the cost to underground the utility lines would be comparatively high compared with the overall project cost. Further, new utility poles provide a mounting platform for newly required street lights.

Staff Recommendation: The Planning Authority recommends that the Planning Board waive requirement Sec. 15.7.11.H based upon the information listed above.

XI. NEIGHBORHOOD MEETING & PUBLIC COMMENT

Per section 15.3.3 of Chapter 14, a subdivision under 5 lots is not required to hold a neighborhood meeting. No public comments have been submitted to the city for this project.

XII. STAFF RECOMMENDATION

Subject to the proposed motions and conditions of approval listed below, Planning Department staff finds that the subdivision and street extension at 66 Eighth Street (PL-002599-2023) meets the applicable standards of Portland's Land Use Code and recommend to the Planning Board approval of this application.

XIII. PROPOSED MOTIONS

A. WAIVERS

On the basis of the application, plans, reports and other information submitted by the applicant, findings and recommendations contained in the Planning Board Report for the public hearing December 12, 2023 for application #PL-0025992023 at 66 Eighth Street relevant to the Subdivision Standards of the Land Use Code and Portland's Technical and Design Standards, and other regulations, and testimony presented at the Planning Board public hearing:

1. Sidewalk

The Planning Board [**finds/does not find**] based upon the City's Review, that extraordinary conditions exist or undue hardship may result from strict compliance with the Land Use Chapter 15 Section 15.5.4.J which requires sidewalk along streets with frontage, that substantial justice and the public interest are secured with the proposed variation in this standard, and that variation is consistent with the intent of the ordinance. The Planning Board [**waives/does not waive**] the Technical Manual standard Section 15.5.4.J to allow no sidewalks be constructed along the street extension.

2. Curbing

The Planning Board [**finds/does not find**] based upon the City's Review, that extraordinary conditions exist or undue hardship may result from strict compliance with the Land Use Chapter 15 Section 15.5.4-K which requires curbing along either side of the street, that substantial justice and the public interest are secured with the proposed variation in this standard, and that variation is consistent with the intent of the ordinance. The Planning Board [**waives/does not waive**] the Technical Manual standard Section 15.5.4.K to allow a vegetated gravel buffer on either side of the street extension.

3. Underground Utilities

The Planning Board [**finds/does not find**] based upon the City's Review, that extraordinary conditions exist or undue hardship may result from strict compliance with the Land Use Chapter 15 Section 15.7.11.H which requires utilities to be placed underground, that substantial justice and the public interest are secured with the proposed variation in this standard, and that variation is

consistent with the intent of the ordinance. The Planning Board [~~waives~~/does not waive] the Technical Manual standard Section 15.7.11.H to allow the continuation of overhead utilities along Eighth Street.

B. SUBDIVISION REVIEW

On the basis of the application, plans, reports and other information submitted by the applicant, findings and recommendations contained in the Planning Board Report for the public hearing on December 12, 2023 for application #PL-002599-2023 at 66 Eighth Street relevant to the subdivision regulations, and the testimony presented at the Planning Board hearing, the Planning Board [~~finds~~/does not find] that the plan is in conformance with the subdivision standards of the land use code subject to the following conditions of approval:

PRIOR TO THE SUBMISSION OF THE PLAT FOR PLANNING BOARD SIGNATURE

1. The subdivision plat shall be finalized to the satisfaction of the Planning Authority, Corporation Counsel and Department of Public Works and include clear descriptions of the number, location, type and size of all subdivided units, along with relevant notes and conditions.

PRIOR TO THE RELEASE OF THE RECORDING PLAT

2. The applicant shall update the plans to reduce tree/vegetation removal to the disturbed area required for the site work attached to the road extension, turnaround, and stormwater systems and submit them to the Planning Authority for review and approval.
3. The applicant shall update the plans to provide an associated detail to note that the gravel road buffer will be vegetated. The plan update and associated detail shall be reviewed and approved by the Planning Authority and Public Works Authority.
4. The applicant shall update the plan set to provide further detail on how stormwater will be conveyed from the street gutter line to the proposed focal point units to be reviewed and approved by the Planning Authority.
5. The applicant should update the plans to match all sewer and storm drain details in the Technical Manual, to be reviewed and approved by the Public Works Authority.
6. The plan shall be updated to show erosion and sediment control measures, including outlet protection measures, to be reviewed and approved by the Planning Authority.
7. The applicant shall submit two draft easements as specified by Public Works for grading and installation of the outlet pipe associated with the proposed FocalPoint stormwater systems, for review and approval by the Public Works Authority and Corporation Counsel.
8. The applicant shall submit a draft easement to enable City access on private property within the proposed emergency vehicle turnaround, to be reviewed and approved by the Public Works Authority and Corporation Counsel.
9. The applicant shall submit a stormwater maintenance agreement to the city for the interim maintenance of the FocalPoint systems, to be maintained by the applicant until such time that the City accepts the portion of Eighth Street being extended. The stormwater maintenance agreement shall be reviewed and approved by the Public Works Authority and Corporation Counsel.

PRIOR TO THE START OF SITE WORK OR CONSTRUCTION ACTIVITY

10. The signed subdivision plat shall be recorded at the Cumberland County Registry of Deeds.

C. PLANNING BOARD DECISION

On the basis of the findings, conclusions and recommendations contained in the Planning Board report for the public hearing on December 12, 2023 related to application PL-002599-2023 for 66 Eighth Street, which is attached to the draft approval letter and incorporated therein, the Planning Board **[adopts/does not adopt]** the approval letter as drafted as the Planning Board's decision for application PL-00599-2023, and authorizes the Planning Board Chair to sign the approval letter as drafted.

XIV. ATTACHMENTS

APPLICANT SUBMITTAL

1. Cover Letter
2. Subdivision Checklist
3. RT&I
4. Zoning Analysis Table
5. Subdivision Standards Assessment
6. Waiver Table
7. Financial and Technical
8. Figures
9. Stormwater Management Report
10. Ability to Serve Portland Water District
11. Comment Response 10.17.23
12. Wastewater Capacity Verification

PLANS

- A. Cover
- B. Subdivision Plan
- C. Existing Conditions
- D. Site Utilities Plan
- E. Grading Plan
- F. Plan and Profile
- G. Focalpoint Details
- H. Details
- I. Erosion Control Details
- J. Pre-Development Stormwater
- K. Post-Development Stormwater

Report Attachments

1. City Staff Comments

City Staff and Third-Party Peer Reviewers have completed the latest review of this application based off of the most recent submissions. Comments below have been provided to the Planning & Urban Development Department from the Department of Public Works, Water Resources, Zoning, and Third-Party Consulting Engineers (Stormwater + Traffic).

Please submit a written response to the comments below and upload the response, revised submissions, and new material to Project Dox (Project Dox has automatic versioning so long as the files has the same name as the original submission). Once uploaded, please send an email to ctetelman@portlandmaine.gov notifying the planner of the resubmission.

Be advised that additional comments may be forthcoming and other changes may still be required if the comments are not addressed adequately. If you have any questions, please do not hesitate to ask.

Subdivision Transportation Comments		
Standard	Discussion	Status
Impact on Surrounding Street Systems	<u>Comments:</u> - DPW feels comfortable with the construction of a 24 ft wide paved street with 2ft of vegetated gravel shoulder on both sides of the pavement. The installation of granite curb shall not be required. - The applicant shall provide a typical cross section for the layout described above.	Not Met

Landscaping + Stormwater Subdivision Comments		
Standard	Discussion	Status
Site Landscaping and Buffers	<u>Comments:</u> - City Staff suggest a minimum 4 ft. gap in the wooden guardrail shown at the end of the proposed road extension to allow for pedestrian access to the Riverton Rail Trail. - Existing conditions plan - please indicate areas of trees to be preserved, with attention given to locating, recording significant trees or groups of trees on lots in accordance with chapter 4, section 4.3 of the technical manual. - Subdivision plan - please include tree preservation areas on plans in relationship to footprints, and locate / identify preservation trees in accordance with chapter 4, section 4.3 of the technical manual. Applicant is also directed to locate any "feature mature trees" as defined by section 4.1 of technical manual, and for larger significant trees in broader / denser existing vegetation stands as described in section 4.3.1, trees 16" dbh or larger. - Lot A in particular may have a significant site impact with site grading and drainage and drainage easement impacts. For future site plan needs, please be pried to provide revegetation planting plans for site restoration following grading activities.	Not Met
Water Quality, Stormwater Management and Erosion Control	<u>Comments:</u> - Stormwater from this street extension should be connected into the cross culvert located at approximate station -0+50 on the plans within the City right of way. This connection should be made with a precast manhole meeting City Standards. - Any storm drain located within the City right of way must be a minimum of 10" in diameter per the City's technical manual. P1 should be revised to match this requirement.	Not Met

	• The City would request a copy of the Post development hydrocad model for our records. Please send to JRP@portlandmaine.gov once it's been determined that the analysis has been completed. • The Location of FP-2 should consider a future driveway being constructed to service the adjacent lot. Could a residential driveway meeting technical manual standards be constructed without impacting the stormwater treatment system as currently designed? • Details for proposed City infrastructure (sewer/storm manholes, lateral connections, roadway, etc) should be updated to reflect the most recent version of the technical manual which was adopted in November of 2022.	
--	---	--



Civil Engineering | Surveying

Planning and Urban Development Department
389 Congress Street 4th Floor
Portland, Maine 04101

July 21, 2023

Re: 66 Eighth Street, Portland
Subdivision Application

Laurie Sirois (Applicant) has engaged with BH2M to provide design and permitting assistance for a proposed subdivision in Portland. The property is located at 66 Eighth Street in Portland on Tax Map 339, Block N, Lots 22-27. The property is currently partially developed with an existing single family home, 66 Eighth Street, along the southwestern extents and undeveloped wooded areas to the northeast. The project proposes to divide the lot into 2 new building lots to the northeast with the existing home on the remaining property, for a total of 3 lots. The section of Eighth Street that is proposed to provide frontage for these new lots is currently unaccepted and undeveloped. Per City of Portland code, in order for the proposed lots to be considered buildable, Eighth Street will need to be improved to meet Local City Street requirements, including a 28' wide paved finished surface, extensions of water and sewer mains for new services, and construction of stormwater management facilities.

Following up on our November 16, 2022 pre-application meeting, we are providing an application for the Planning Department's review. During the pre-application meeting we discussed City requirements for development of the existing ROW. The current ROW is approximately 40' in width for the undeveloped section of Eighth Street. We understand that typical City Standards require a 50' ROW, but following up on discussions at the pre-application meeting, a narrower ROW is approvable under Subdivision review.

The submission has been organized into lettered attachments for use in uploading to eplan. We have noted on the application checklist which attachment can be referenced for responses to a specific checklist item to help better track and organize the responses to City requirements.

We trust that this application and supporting documents will facilitate review of the project and allow for presentation before the Planning Board. We look forward to working with the Planning Department on resolution of technical details and answering any questions staff may have. Please feel free to contact me directly with any comments, questions, or concerns.

Sincerely,

Christopher MacDonald, P.E.
Civil Engineer

CITY OF PORTLAND
Planning & Urban Development Department

SUBDIVISION GENERAL DOCUMENT AND DRAWINGS CHECKLIST Please submit each document as a separate PDF file. Please confirm by electronically checking the boxes in the left-hand column. ** PLEASE FILL OUT AND UPLOAD THE ZONING ASSESSMENT TABLE AND WAIVER TABLE SEPARATELY AS NOTED BELOW ** At the time of application submission, please contact the Department of Public Works regarding E-911 addressing of your project.		
GENERAL APPLICATION DOCUMENTS		
Yes	NA	Project Description Attachment A Cover letter with detailed project description
Yes	NA	Completed Checklist (this document) Attachment B
Yes	NA	Evidence of Right, Title, and Interest Attachment C Deeds, leases, or purchase and sales agreements
Yes	NA	Evidence of State or Federal Approvals Permits or letters of non-jurisdiction, if applicable
Yes	NA	Zoning Assessment (see Zoning Assessment Table) Attachment D Summary of compliance with use and dimensional standards of the land use code
Yes	NA	Subdivision Standards Assessment (see Article 15.4 of the land use code) Summary of compliance with subdivision review standards of the land use code Attachment E
Yes	NA	Existing and/or Proposed Easements or Covenants, applicable. Attachment C Evidence of existing easements and any proposed easements
Yes	NA	Waiver Requests (see Waiver Table) Attachment F Written request for waiver describing request and compliance with applicable waiver standards
Yes	NA	Financial Capability Attachment G Letter or evidence from a financial institution or third party verifying financial capacity to undertake project
Yes	NA	Technical Capability Attachment G Evidence of technical capability of applicant and consultants – resumes and/or examples of past projects

SUBDIVISION SUPPLEMENTAL SUBMISSIONS CHECKLIST

**Provide assessment of compliance with standards and include supplemental documentation, as applicable.
Please submit each document as a separate PDF file.**

Yes	☒ NA	When private sewage systems are used, the results and supporting data of a soil test of each lot in the subdivision conducted by a soil evaluator licensed in the state.
Yes	☒ NA	When the adequacy of the subdivision's load bearing capacity is in question, a geotechnical report with supporting data that includes the result of test borings shall be prepared by a professional engineer registered in the state and submitted.
Yes	☒ NA	Price range of houses that will be built in the subdivision.
Yes	☒ NA	Traffic impact analysis.
Yes	☒ NA	High intensity soil survey, if required by the Planning Authority.
Yes	☒ NA	Types and estimated quantities of solid waste to be generated by the development.
Yes	☒ NA	A narrative describing all proposed buffer strips, their dimensions, and maintenance plans and responsibilities.
☒ Yes	NA	A description of any wetlands, wildlife and fisheries habitats, archaeological sites or unusual natural areas located on or near the project site and a description of the methods that will be used to protect such area.
Yes	☒ NA	Construction plan outlining the anticipated sequence of construction of the major features of the project including without limitation roads, retention basins, sewer lines, seeding and other erosion and sedimentation control measures, and pollution abatement measures and also setting forth the approximate dates for commencement and completion of the project.
Yes	☒ NA	When conditions warrant, a program to control dust, erosion and sedimentation and/or vehicular traffic during construction.
Yes	☒ NA	At the option of the subdivider, any other information that may be necessary for the full and proper consideration of the subdivision shall be submitted in writing.

SUBDIVISION DRAWINGS CHECKLIST

Please submit each document as a separate PDF file.

All drawings must be submitted in a 24 x 36 sheet size.

SUBDIVISION PLAT (at a scale not more than 1"=60', unless lots are more than one acre in size)

1. Date, north point, title and graphic scale.
2. Names, addresses and stamp or certification, if applicable, of registered professional engineer, subdivider, and owner
3. Vicinity sketch (may be shown on separate plan);
4. Names of adjacent property owners with parcels over 25,000 square feet or names of adjacent subdivision;
5. Location and designation of any zoning district boundaries affecting the subdivision;
6. Total site data, including total area of the subdivision, total area in streets, total area in recreation or open space and number of house lots;
7. Based on a recent survey by the subdivider, existing contours at two foot intervals or as otherwise required by the Public Works Authority. Existing structures which are to remain will shall be delineated;
8. Tract boundary lines and property lines of lots, with accurate dimensions and either bearings or deflection angles. All lots shall be numbered;
9. Names of proposed streets, width of rights of way, typical cross section reservation, and depth of construction materials;
10. Locations, widths and purposes of other rights of way or easements to be recorded;
11. All appropriate street geometry information, including point of curvature, point of tangency, tangent distance, radii and interior angle, in standard engineering format;
12. Location of those utilities existing on or adjacent to the tract to be subdivided, including size and elevation of buried or underground utilities (may be shown on separate plan);
13. Designation of flood hazard areas, as defined by the National Flood Insurance Program and shown on the city flood hazard boundary map, as well as any other areas in the subdivision subject to inundation by stormwater or storm sewer overflow;
14. All potential wetlands within the proposed subdivision, regardless of the size of those wetlands;
15. Any river, stream or brook within or abutting the proposed subdivision. For purposes of

this section, "river, stream or brook" has the same meaning as in 38 M.R.S. § 480 B, Subsection 9.

16. Existing historic sites and structures which either appear on the National Register or are nominated to the National Register by the state historic preservation officer;
17. Proposed private and public utility system including water, gas, telephone, fire hydrants, and any other services which shall supply the area (may be shown on separate plan);
18. Sanitary sewer and storm drain plans and profiles showing size, kind and slope of pipe, proposed manhole rim and invert elevations and catch basin locations and drains (may be shown on separate plan);
19. Lighting plan showing the location, design, height and spacing from each other of the support poles, in accordance with standards and specifications established by the Public Works Authority (may be shown on separate plan);
20. Tree plan showing groups of existing, sizeable trees which the subdivider intends to preserve (may be shown on separate plan);
21. A detailed plan of the entire subdivision and the immediate vicinity showing all existing and proposed drainage both on- and off-site including drainage swales, ditches, etc., with directional flow arrows and approximate slope grades, and showing proposed finished "spot elevations" around the perimeter of the subdivision. Proposed drainage shall be shown as it may affect or restrict development on individual lots and with reference to improvements for which a performance guarantee is required under this article. Where deemed feasible by the Public Works Authority, proposed finished contours at intervals of two feet shall be provided on the drainage plan upon request (may be shown on separate plan);
22. All future phases and sections of the subdivision proposed by the subdivider (may be shown on separate plan);
23. Proposed parks and school sites, or other public open space that the developer proposes to convey to the city;
24. Streets and right of way monuments and property line markers;
25. Profiles of each street or way in the subdivision shall be shown on the subdivision plat. They shall be drawn to a longitudinal scale of 40 feet to one foot and a vertical scale of four feet to one inch. Such profiles shall include separate profiles of each side line and center line of the street or way. Any buildings abutting on the street shall be shown in standard engineering format as requested by the Public Works Authority.
26. Where submission drawings are available in electronic form, the applicant shall submit any available electronic CAD files with final plans.

Attachment C. Right Title and Interest

See attached warranty deed, confirming that the current property owner is Laurie Sirois.

As a note on RTI for the project, a 5' wide grading easement will be required for development of Focalpoint 2. A verbal agreement has been reached with the property owner on this easement, and a draft easement will be provided to the Planning Department as it is available.

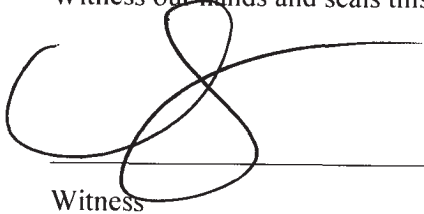
WARRANTY DEED
(with Warranty Covenants)

Scott A. Huska and Amy L. Huska, both of Portland, County of Cumberland and State of Maine, for consideration paid, GRANT to **Laurie Sirois**, with a mailing address of 400 Congress Street, Portland, Maine 04101, with Warranty Covenants, a certain lot or parcel of land, together with the buildings and improvements thereon, situated in Portland, County of Aroostook, and State of Maine, more particularly bounded and described as follows, to wit:

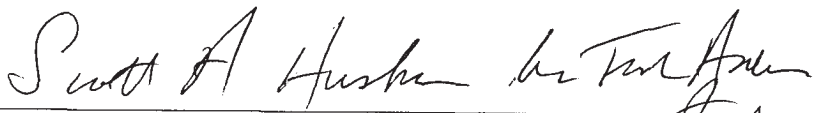
Certain lots or parcels of land, with the buildings and improvements thereon, situated in the City of Portland, County of Cumberland and State of Maine, and being lots numbered 65, 66, 67, 68, 69 and 70 as shown on Plan of Halfacre Homes made by E.C. Jordan & Co., C.E., dated April 1915, and recorded in the Cumberland County Registry of Deeds in Plan Book 13, Page 2.

Being the same premises conveyed to Amy L. Huska and Scott A. Huska by SH Remodeling, LLC. dated February 5, 2016 and recorded at the Cumberland County Registry of Deeds in Book 32912, Page 201.

Witness our hands and seals this 9th day of January, 2020.

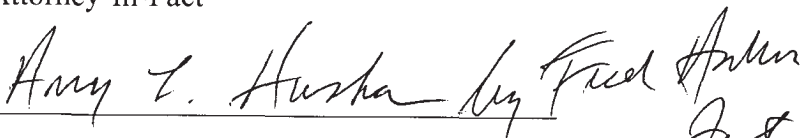


Witness



Scott A. Huska, by Fred Andrews as Attorney-In-Fact

Witness



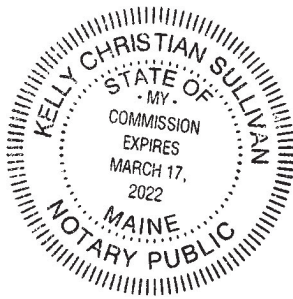
Amy L. Huska, by Fred Andrews as Attorney-In-Fact

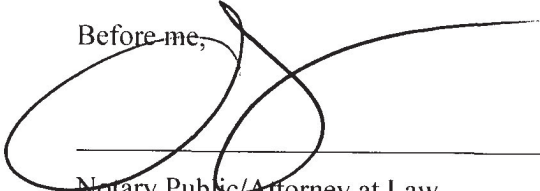
State of Maine

County of Cumberland

January 9, 2020

Personally appeared Fred Andrews and he acknowledged the foregoing instrument to be his free act and deed in his said capacity.



Before me, 

Notary Public/Attorney at Law

Received
Recorded Register of Deeds
Jan 13, 2020 09:02:19A
Cumberland County
Nancy A. Lane

Attachment D. Zoning Analysis Tables

Please see attached Zoning Analysis Tables for each proposed lot.

**REMAINING LOT**

ZONING ANALYSIS Relevant Zone(s) R-3

All Projects:

	Required	Proposed
Lot Size	6,500 sf.	13,210 sf.
Area Per Dwelling Unit	6,500 sf.	13,210 sf.
Minimum Street Frontage	50'	173.01'
Front Yard Minimum	25'	4.4' [*]
Front Yard Maximum	N/A	20.5' [*]
Rear Yard	25'	46.7'
Yard Right	14'	29.7'
Yard Left	14'	64.9'
Side Street Setback	20'	N/A
Step Back	N/A	N/A
Maximum Lot Coverage	35%	12.7%
Minimum Lot Coverage	N/A	N/A
Maximum Height	35'	+/- 20'
Open Space	N/A	N/A
Maximum Impervious Area	N/A	N/A
Pavement Setback	N/A	N/A
Floor Area Ratio	N/A	N/A
Off Street Parking Spaces	N/A	N/A
Loading Bays	N/A	N/A
Other 1		
Other 2		
Other 3		

^{*} The existing building on the Remaining Lot exists inside the front building setback for this zone. No changes to the building or lot are proposed that would make this condition less conforming.

**LOT A**

ZONING ANALYSIS Relevant Zone(s) R-3

All Projects:

	Required	Proposed
Lot Size	6,500 sf.	7,352 sf.
Area Per Dwelling Unit	6,500 sf.	7,352 sf.
Minimum Street Frontage	50'	50'
Front Yard Minimum	25'	25'
Front Yard Maximum	N/A	N/A
Rear Yard	25'	25'
Yard Right	14'	14'
Yard Left	14'	14'
Side Street Setback	20'	N/A
Step Back	N/A	N/A
Maximum Lot Coverage *	35%	15%
Minimum Lot Coverage	N/A	N/A
Maximum Height **	35'	TBD
Open Space	N/A	N/A
Maximum Impervious Area	N/A	N/A
Pavement Setback	N/A	N/A
Floor Area Ratio	N/A	N/A
Off Street Parking Spaces	N/A	N/A
Loading Bays	N/A	N/A
Other 1		
Other 2		
Other 3		

* 1,000 sf. has been allotted for potential house and driveway.

** Lots to be sold without buildings; proposed building height to be determined.

**LOT B**

ZONING ANALYSIS Relevant Zone(s) R-3

All Projects:

	Required	Proposed
Lot Size	6,500 sf.	7,702 sf.
Area Per Dwelling Unit	6,500 sf.	7,702 sf.
Minimum Street Frontage	50'	50'
Front Yard Minimum	25'	25'
Front Yard Maximum	N/A	N/A
Rear Yard	25'	25'
Yard Right	14'	14'
Yard Left	14'	14'
Side Street Setback	20'	N/A
Step Back	N/A	N/A
Maximum Lot Coverage *	35%	14%
Minimum Lot Coverage	N/A	N/A
Maximum Height **	35'	TBD
Open Space	N/A	N/A
Maximum Impervious Area	N/A	N/A
Pavement Setback	N/A	N/A
Floor Area Ratio	N/A	N/A
Off Street Parking Spaces	N/A	N/A
Loading Bays	N/A	N/A
Other 1		
Other 2		
Other 3		

* 1,000 sf. has been allotted for potential house and driveway.

** Lots to be sold without buildings; proposed building height to be determined.

Attachment E. Subdivision Standards Assessment

The project proposes to meet the requirements of the Subdivision Review Standards, Section 15.4 of the Land Use Code, detailed below. As detailed in the checklist, Attachment B, additional attachments have been included to address specific requirements of Section 15.4.

Section 15.4-1

- A) The proposed project will not result in undue water or air pollution.
- B) The proposed project will connect to public water.
- C) The proposed project should not cause unreasonable burden on the existing water supply. We have requested an ability to serve letter from the Portland Water District be provided to confirm capacity for the project, and this will be submitted to the Planning Department when available.
- D) The proposed project will not cause unreasonable soil erosion or reduction in the capacity of the land to hold water so that a dangerous or unhealthy condition may result. A minimal amount of disturbance will be necessary to construct the street and homes, with less than an acre of total disturbance.
- E) The proposed project will not cause unreasonable highway or public road congestion. The project is located in a long developed residential area with hundreds of homes and well-established street networks. The addition of 2 house lots will have a negligible impact and will not cause congestion of existing public roads.
- F) The proposed project will provide adequate sanitary waste and stormwater disposal. The proposed project will connect to public sewer for sanitary waste. Stormwater is proposed to be treated via two Focalpoint Stormwater treatment systems along the proposed extension of Eighth Street.
- G) The proposed project will not cause an unreasonable burden on the ability of the City to dispose of solid waste and sewage. Given that his project is proposed in a well-established residential neighborhood, access to municipal services for solid waste and sewer are available and will not cause undue burden on established collection routes. We have requested an ability to serve letter from the City of Portland Public Works Water Resources Department be provided to confirm capacity for the project, and this will be submitted to the Planning Department when available.
- H) The proposed project will not have an undue adverse effect on the scenic or natural beauty of the area, aesthetics, historic sites, significant wildlife habitat identified by the Department of Inland Fisheries. The project is located in an established residential neighborhood abutting existing development, and will complement the surrounding areas. The proposed project is not within local historic districts or significant wildlife habitat.
- I) The proposed project is in conformance with the Comprehensive Plan. This project is located in an established residential neighborhood and proposes use and development compatible with the surrounding areas.
- J) Please refer to Attachment G for financial and technical capacity.
- K) The proposed project will not adversely affect the quality of the wetlands. Wetlands have been identified in the project area, but the proposed parcels for development are located

outside of the wetlands. Wetlands for the site are fully within the remaining lot, and the project does not propose any direct impacts.

- L) The proposed project will not adversely affect the quality or quantity of groundwater. The project proposes to be connected to municipal water and sewer systems, and will not extract groundwater or propose subsurface disposal of water.
- M) The proposed project is not in a flood prone area. Refer to FEMA Map in Attachment H.
- N) The project has been designed to both treat areas of proposed development and mitigate increases in run off to offsite areas. Refer to Attachment I for Stormwater Management Report.
- O) The proposed project does not have any shore frontage and is not located in a shoreland zone.
- P) The proposed project does not cross municipal boundaries.

Attachment F - Waiver Table

Standard to be Waived: Cite Ordinance or Technical Manual Standard	Cite Standard Language: Cite specific language of applicable Ordinance or Technical Manual Standard	Waiver Being Sought: Describe waiver being sought. Ex. – We are requesting a two-way parking lot drive aisle width of 20' feet.	Justification for Waiver: Address specific waiver criteria, if applicable, and document reasons for the waiver request.
Land Use Chapter 14 section 15.5.4-J	Sidewalks shall be constructed on each side of each street in accordance with Chapter 25 of the City of Portland Code of Ordinances. Sidewalks to be used by pedestrians are to be so located as to minimize contacts with normal	Waiver from Sidewalks, section 15.5.4-J	i: There is no sidewalk in existence or expected within 1000 feet of construction. ii: There are no sidewalks in the surrounding neighborhood.
	automotive traffic, with preference given to interior walks away from streets in common open space in block interiors.		Further, the ROW in this area is less than typical, at only 40' wide, and addition of sidewalks would likely have impacts outside the ROW.
Land Use Chapter 14 section 15.5.4-K	Curbs shall be constructed on each side of each street. The curbing shall be constructed as provided in Chapter 25 of the City of Portland Code of Ordinances.	Waiver from Curb, section 15.5.4-K	It has been suggested by the City Public Works department that curbing is not required for this project. We would request a waiver citing section d. and section e. of Chapter 14 section 15.6.2-B-2.

Attachment F - Waiver Table

Standard to be Waived: Cite Ordinance or Technical Manual Standard	Cite Standard Language: Cite specific language of applicable Ordinance or Technical Manual Standard	Waiver Being Sought: Describe waiver being sought. Ex. – We are requesting a two-way parking lot drive aisle width of 20' feet.	Justification for Waiver: Address specific waiver criteria, if applicable, and document reasons for the waiver request.
Land Use Chapter 14 Section 14.6.3-C-2	Electrical service shall be underground unless otherwise specified for industrial uses, or if it is determined to be unfeasible due to extreme cost, the need to retrofit properties not owned by the applicant or complexity of revising existing overhead facilities	Waiver from underground utility requirement	The existing utilities along Eighth Street are from above ground poles. For consistency of development of Eighth Street and associated cost burdens, the project requests a waiver from underground utilities.

Attachment G. Financial and Technical

Please see the attached Engineer's cost estimate and corresponding letter of credit for construction of the project. We have also included resumes and company profile for BH2M detailing relative experience for development of projects of this nature.

BH2M
380B Main Street
Gorham, Maine 04038

CONSTRUCTION COST WORKSHEET EIGHTH STREET

Construction of Eighth Street Extension				
Items	Quantity	Unit	Unit Cost	Total Cost
Site Preparation \ Mobilization	1	LS	\$ 10,000.00	\$ 10,000.00
Erosion and Sedimentation Control	1	LS	\$ 2,500.00	\$ 2,500.00
12" Storm Drain	63	LF	\$ 75.00	\$ 4,725.00
8" Storm Drain	31	LF	\$ 65.00	\$ 2,015.00
Focalpoint Biofiltration System	2	EA	\$ 6,000.00	\$ 12,000.00
4' Dia Sewer Manhole	1	EA	\$ 5,000.00	\$ 5,000.00
8" Sewer	248	LF	\$ 70.00	\$ 17,360.00
Sewer Services	2	EA	\$ 750.00	\$ 1,500.00
4" Water Main	265	LF	\$ 60.00	\$ 15,900.00
Water Services	4	EA	\$ 500.00	\$ 2,000.00
Water Blow Off Valve	1	EA	\$ 1,000.00	\$ 1,000.00
Utility Pole	2	EA	\$ 8,000.00	\$ 16,000.00
Pavement	144	TON	\$ 112.00	\$ 16,114.14
Base	63	CY	\$ 37.00	\$ 2,331.00
Subbase	315	CY	\$ 31.00	\$ 9,765.00
Granite Curb	285	LF	\$ 35.00	\$ 9,975.00
Loam and Seed	1210	SY	\$ 11.00	\$ 13,310.00
Bonds/Insurance (5%)	1	LS	\$ 7,074.76	\$ 7,074.76
Subtotal				\$ 148,569.90
15% Contingency				\$ 22,285.48
Total				\$ 170,855.38

July 10, 2023

Re: 66 Eighth Street, Portland, ME 04103

To Whom It May Concern:

Please be advised that Laurie Sirois is a member in good standing with Acadia Federal Credit Union, have received conditional pre-qualification for a real estate loan with a purchase price of up to \$170,855.38. This pre-qualification is conditional on the following items:

1. The perfection of real property as collateral for the loan, and all that it entails, but not limited to:
 - a. A satisfactory appraisal
 - b. A legal first position lien able to be placed on the property being purchased

This conditional pre-qualification is valid for a period of Ninety (90) days from the date of this letter, with the terms provided by Acadia Federal Credit Union and agreed to by the members. Should any of the conditions not be met before the validity period expires, this conditional pre-qualification will be null and void. At such time, the member may have charges from third party providers which will be the sole responsibility of the members to pay.

We are happy to provide this written, conditional pre-qualification for Laurie Sirois to finance this piece of real estate. Should you require anything further, please do not hesitate to contact me.

Sincerely,



Justin Dubois
Business Development Officer
9 East Main Street
Fort Kent, ME 04743
Cell: (207) 316-2203





1.855.MY.ACADIA (692-2234)

'Like' us on Facebook
acadiafcu.org

Phn: (207) 834-9516
email: JDubois@AcadiaFCU.org



INTRODUCTION TO BH2M

Berry Huff McDonald Milligan Inc. (BH2M) is a locally owned civil engineering, planning and surveying firm, founded in 1978. BH2M is headquartered in Gorham, Maine. Our multifaceted staff of 16 includes engineers, planners, project managers, construction managers, and land surveyors. Over the past 44 years BH2M has provided a broad spectrum of services including:



Surveying

- Boundary Surveys
- Topographic Surveys
- Existing Condition Surveys
- Utility Surveys
- As-Built Surveys
- Construction Stakeout
- Elevation Certificates and Letters of Map Amendment
- ALTA/NSPS Surveys
- Mortgage Loan Inspections

Engineering and Planning

- Municipal Engineering
- Roadway Design
- Pedestrian and Bicycle Enhancement
- Shared Use Paths
- Athletic Facilities
- Vehicular Access and Parking
- Site Planning
- Comprehensive Land Planning
- Construction Cost Estimating
- Environmental and Local Permitting
- Stormwater Management
- Erosion Control
- Wastewater Collection and Pumping Systems
- ADA Accessibility



BH2M is a small firm mostly comprised of staff members that have been with the firm for 20 years or more. Our size, ability to offer a variety of services in-house, and experience working with one another enables us to provide efficient and cost-effective solutions to municipal infrastructure projects.

CAPABILITIES

Surveying

BH2M has the benefit of offering a full-service survey department. Our survey department provides the foundation for each project we undertake. Having the ability to self-perform survey services provides us with a cohesive transition from field reconnaissance to design and then to construction. Typically, our Project Managers will accompany the survey crew early in the process. We've found this to be an effective approach that reduces the time needed for field survey and guarantees that designers will have the critical information needed for an accurate design. Our survey staff is highly trained in property line, existing conditions, utility and topographic surveys as well as construction layout.



Civil Engineering

BH2M has provided developers, contractors, and municipalities with civil engineering services since our inception in 1978. Our Staff includes four Maine licensed professional engineers. We have provided civil engineering services for residential, commercial, municipal, institutional, and utility projects. Our Staff is highly skilled in roadway design, utility design, stormwater management design, and erosion & sedimentation control design.



BH2M routinely supports developers, contractors, institutions, and municipalities by providing construction documents, contract documents, technical specifications, bidding support, assistance with bid selection, RFI responses, shop drawing reviews, value engineering, construction inspections, and stormwater compliance inspections. Our ability to lead a project from conceptual planning through construction is highly valued by our clients.

Planning and Permitting

Most of our projects require some level of environmental permitting. **BH2M** has a long history of managing regulatory constraints for municipal projects. Our Staff has a constant dialogue with regulators at the State and Federal Levels. Our environmental and municipal permitting expertise includes:

- ✦ Stormwater Management Law
- ✦ Site Location of Development (Site Law)
- ✦ Maine Construction General Permits
- ✦ Natural Resource Protection Act (NRPA)
- ✦ Municipal Site Plan, Subdivision, and Conditional Use
- ✦ Traffic Movement, Driveway/Entrance, and Utility Location Permits

Civil Engineer and Project Manager with over 22 years of experience in land development, infrastructure design, municipal systems, solid waste, transportation, renewable energy, stormwater management, and Municipal/State/Federal permitting. Project experience includes numerous types of land development and conservation projects including, commercial, residential, municipal, transportation, and grid scale utility.

Relevant Experience

Massachusetts Department of Transportation, I-93/I-95 (Rt.128) Add-a-Lane Widening Project, Wellesley, Needham and Newton, MA. Project Engineer tasked with design of a highway expansion project. I-95 (Rt. 128) is a main arterial highway on the west side of Boston. The project consists of the addition of a north and southbound lane for an approximate 4-mile section of highway and complete reconfiguration of two heavily utilized exit ramps. The project also sought to improve traffic flow for the exits and intersecting roads to comply with the latest AASHTO guidelines.

Massachusetts Port Authority, Conley Terminal Dedicated Freight Corridor and Buffer Open Space, Boston, MA. Project Engineer tasked with design of a new access road to the terminal. This project was critical to facilitating the expansion of New England's largest full-service container port while mitigating impacts of the terminal operations on the adjacent neighborhoods of South Boston. The project consisted of three distinct, but interrelated, elements: Dedicated freight corridor; buffer open space; and Conley Terminal Expansion.

Worumbo Timber Crib Rehabilitation, Lisbon Falls, ME. Project Manager tasked with design, permitting, bid document preparation, and construction observation of a dam restoration project at the Worumbo Hydroelectric facility. The project consists of a two-unit hydroelectric powerhouse and an approximately 800-foot long timber crib and concrete spillway. The project involved designing a concrete spillway replacement for the majority of the dam, analyzing hydraulics and impacts to flood staging, and providing for fish passage.

Number 9 Wind Farm, Bridgewater, ME. Project Engineer tasked with development of preliminary road layout, tower layout, and grading for a wind farm in Northern Maine. The Number 9 Wind Farm, located west of Bridgewater, Maine, proposed to develop portions of a 65,000-acre parcel with wind turbines for power production. The development has been designed to create approximately 200 MW of power.

Saxon Partners Barra Road Apartments, Biddeford, ME: Project engineer tasked with development of design plans and permit applications for a 250 unit apartment building. This project involved a 5 acre development of an existing site with ledge outcroppings, wetland areas to create access, parking, and stormwater mitigation for the apartment building. The project required meeting Maine DEP SLODA requirements, and was successfully permitted for construction by Local, State and Federal agencies.

Ridgewood Estates, RTG, Inc., Falmouth, ME. Project Engineer responsible for the design of site layout, roadway, drainage, utility design, and preparation of environmental permit applications for MDEP. The property spans 93 acres with areas of wetlands and vernal pools. A conservation-based approach was used to site 75 units on 22 acres, leaving 71 acres of natural open space. The high density of the developed area required that special attention be placed on the functional details of the site design.

Maine Solar Development (Multiple Locations): Project engineer tasked with siting, design, permitting, survey coordination, and construction level support for a number of solar projects across Maine. These projects have ranged in the 1 mw to 20 mw range in various terrains and conditions. The projects are located throughout the state, presenting an opportunity to work with various local municipalities, state, and federal agencies in successful permitting and construction of dozens of projects.

Education

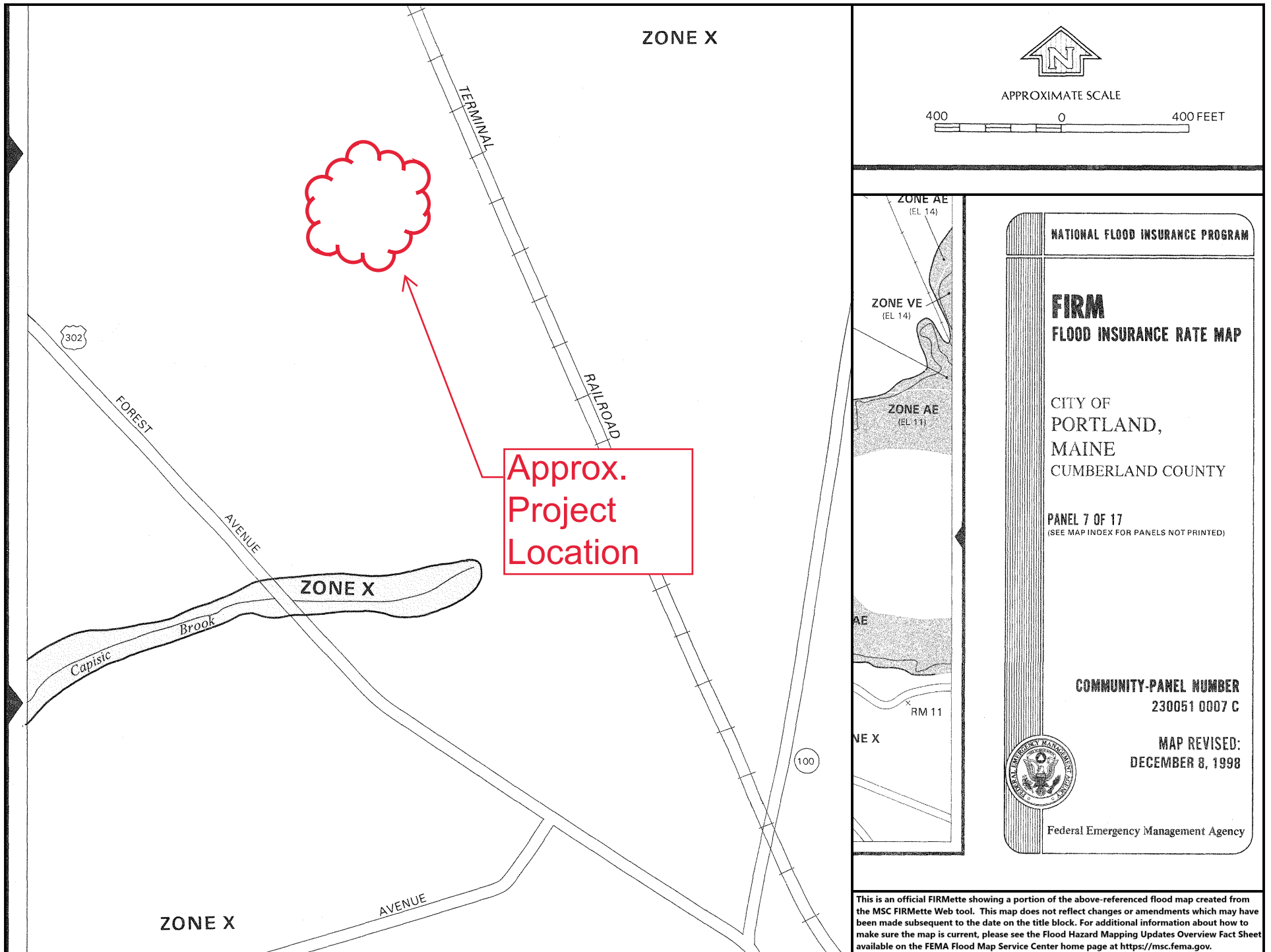
B.S. Civil Engineering, 2001, University of New Hampshire – Durham, NH

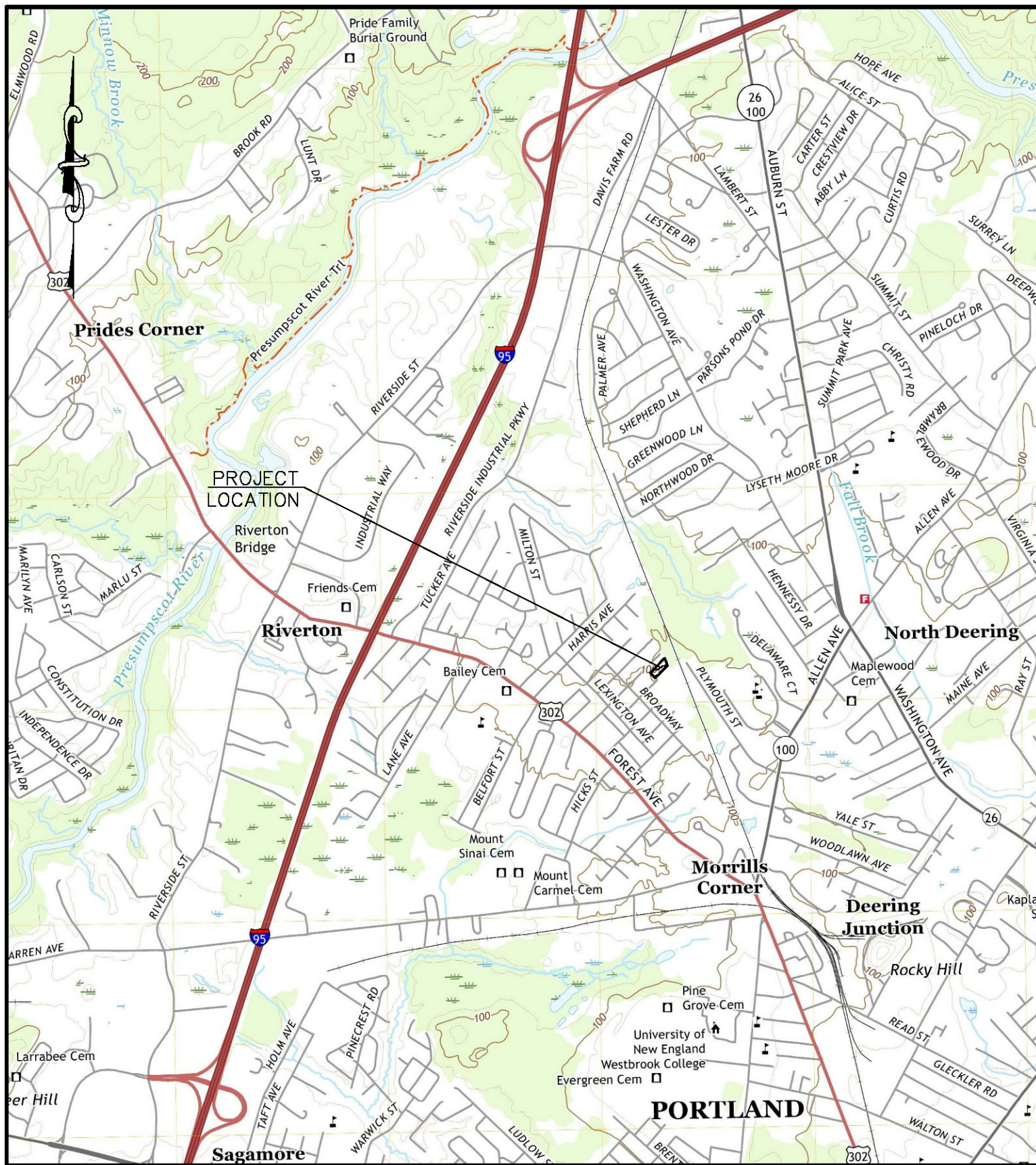
Professional Licenses and Affiliations

Licensed Professional Engineer, Maine, P.E. #11985

Attachment H. Figures

Please see the attached maps (FEMA, USGS, and Zoning) for site location.





REFERENCES:

1. USGS QUADRANGLE WEST PORTLAND, ME 2021

Scale: 1" = 2000'



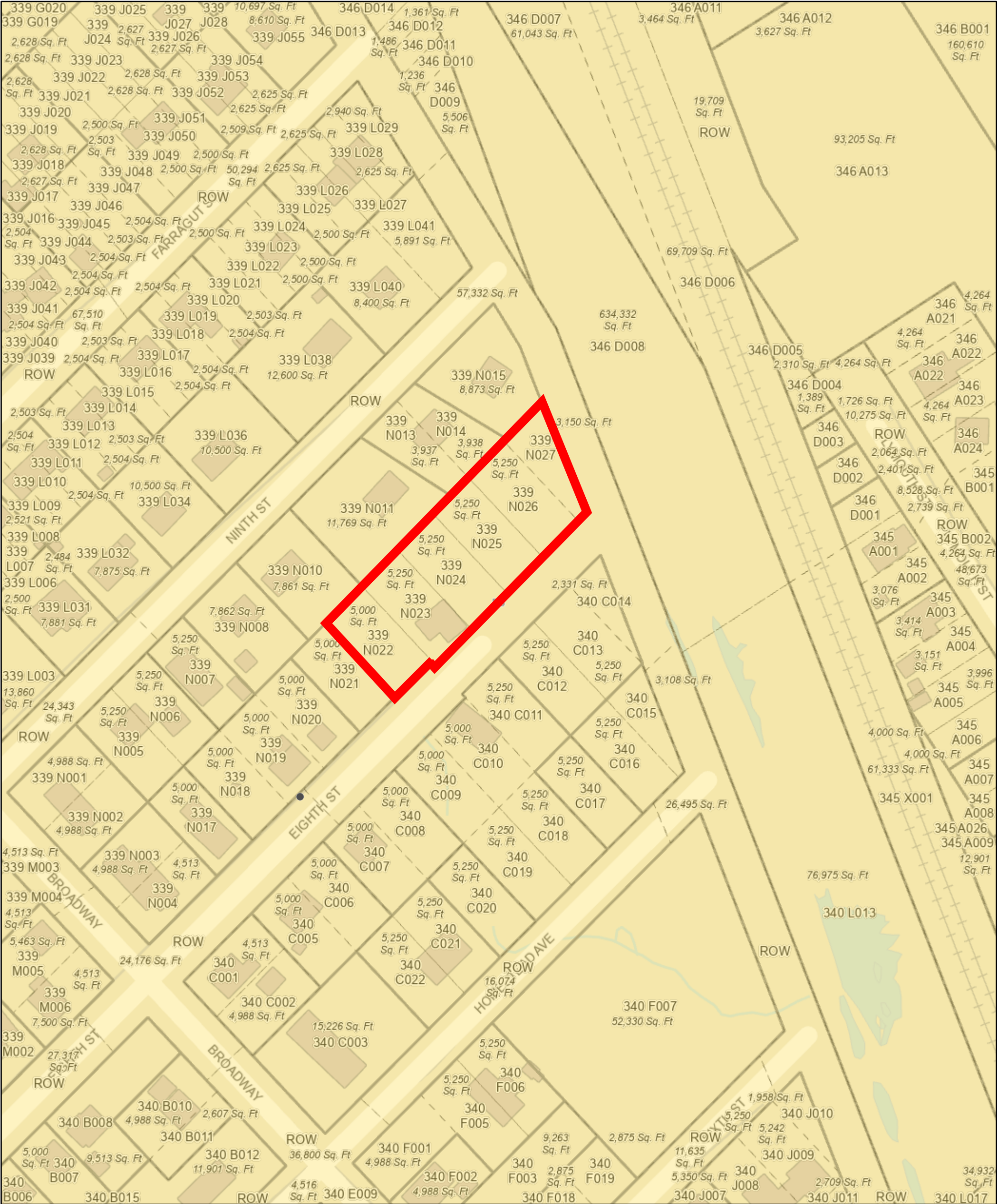
BH2M

Berry, Huff, McDonald, Milligan Inc.
Engineers, Surveyors

380B Main Street
Gorham, Maine 04038

Tel. (207) 839-2771
Fax (207) 839-8250

Zoning Map - 66 Eighth St.



5/2/2023, 12:00:46 PM

Zoning

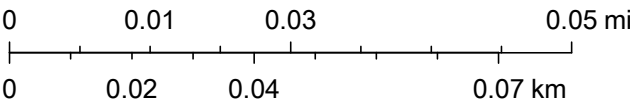
R3 Residential

parcels

Tax

Conveyance

1:1,082



City of Portland, DPS

STORMWATER MANAGEMENT REPORT

EIGHTH STREET SUBDIVISION

66 Eighth Street
Portland, Maine

Submitted by:

LAURIE SIROIS

Prepared by:



Date:
July 2023

TABLE OF CONTENTS

1.0	INTRODUCTION	1
1.1	OVERVIEW OF MODELING METHODOGY AND SOURCE INFORMATION....	1
1.2	DESCRIPTION OF POINTS OF ANALYSIS.....	2
1.3	PRE DEVELOPMENT CONDITIONS	2
1.4	POST DEVELOPMENT CONDITIONS.....	3
1.5	BASIC STANDARDS.....	4
1.6	GENERAL STANDARDS.....	4
1.7	FLOODING STANDARD	5
1.8	URBAN IMPAIRED STREAM STANDARD	6
1.9	CLOSURE	7

LIST OF APPENDICES

APPENDIX A	SOILS REPORT
APPENDIX B	PRE DEVELOPMENT CALCULATIONS
APPENDIX C	POST DEVELOPMENT CALCULATIONS
APPENDIX D	TREATMENT CALCULATIONS
APPENDIX E	EROSION AND SEDIMENTATION CONTROL INSPECTION AND MAINTENANCE PLAN

1.0 **INTRODUCTION**

Laurie Sirois is proposing the development of an existing single family home lot into a three lot subdivision for construction of 2 new single family homes in Portland, Maine. The project is proposed to be developed to provide buildable lots for sale and development by others. The project will require construction of an approximate 193 foot long road, utilities, and stormwater treatment. The project is partially located along an undeveloped section of the Eighth Street ROW in Portland.

The scope of work includes but is not limited to:

- Construction of a segment Eighth Street, meeting city of Portland Local Road standards.
- Installation of underground utilities for water and sewer, and proposed above ground electrical and communications.
- Construction of stormwater treatment systems
- Stubbing of driveways and utility services for future development of the proposed single family home lots.

In general, the project proposes to improve Eighth Street to meet City standards, and provide single family home lots for future development by others. The proposed infrastructure improvements directly related to improvements within the ROW will create approximately 0.14 acres of new impervious area. Stormwater systems have been designed to provide capacity for stormwater run off for the fully developed lots, assuming 1,000 sf each lot for footprints of the future single family homes, an additional 1,000 sf. per lot for the future driveways and impervious areas on the proposed lots.

The Stormwater Management Plan has been prepared to satisfy the requirements of the City of Portland by applying Maine Department of Environmental Protections “Stormwater Management Rules” Chapters 500, 501 and 502 as well as the most recent version of the “Maine Stormwater Best Management Practices Manual”. Per the City of Portland land use regulations, the project will be required to meet the Basic, General, and Flooding Standards.

1.1 **OVERVIEW OF MODELING METHODOGY AND SOURCE INFORMATION**

Hydrologic Analysis: The pre and post development conditions have been modeled using modeling software (Hydrocad Version 10) which is based upon the methodology contained within the USDA Soil Conservation Service Technical Release 55. Type III 24-hour storm distributions for south east Cumberland County

were used for the analysis. The following frequencies and 24-hour rainfall depths were used for the analysis:

Return Period	24-Hour Rainfall Depth
2-Year Storm	3.10 inches
10-Year Storm	4.60 inches
25-Year Storm	5.80 inches

Soils: The soils used for the stormwater analysis were digitized from the Natural Resource Conservation Service (NRCS), web soil survey website. The source of the data is the Cumberland County Soil Survey (Class D). Refer to the following for additional documentation regarding the soils used for modelling:

- Appendix A of this Report
- Pre and Post Development Watershed Plans (Sheets A and B)

The soils include:

Soil Map Unit	Unit Description	Hydrologic Soil Group
BgB	Nicholville very fine sandy loam, 0-8% slopes	C
BgC2	Nicholville very fine sandy loam, 8-15% slopes	C
HrB	Lyman-Tunbridge complex, 0-8% slopes, rocky	D

Topography: Field survey by BH2M

Natural Resources: Wetland delineations by Mark Hampton Associates, Inc.

1.2 **DESCRIPTION OF POINTS OF ANALYSIS**

The watershed model analyzes the discharge of runoff at one Analysis Points as described below:

Analysis Point #1

Description: Concentrated discharge at the limit of property along existing swale

Pre Development Tributary Drainage Areas: 9.27 acres

Post Development Tributary Drainage Areas: 9.27 acres

1.3 **PRE DEVELOPMENT CONDITIONS**

The Pre Development Conditions are shown on Sheet 2 - Standard Boundary Survey & Existing Conditions by BH2M as well as Sheet A – Stormwater Pre Development Conditions of the accompanying plans. The site is currently partially developed with a single family home, 66 Eighth Street, as the last house along the improved section

of Eighth Street, with the “back” of the lot undeveloped and predominately wooded with areas of exposed ledge. The project area to be disturbed for street, utility, and drainage improvements encompasses an area of approximately 0.25 acres.

The watershed that was analyzed for this project is approximately 9.27 acres. The analysis points are described in Section 1.2 of this report. The watershed generally runs east to west from a ridge along a paper street known as Barden Street on the easterly side towards a swale and wetland area on the westerly side.

The Pre Development Watershed Map is included as Sheet A – Stormwater Pre Development Conditions of the accompanying plans and the Calculations are attached as Appendix B.

The Pre Development Watershed Model predicts the following peak flow rates:

Pre Development Peak Flows (cu. ft./sec)			
Analysis Point	2-Year	10-Year	25-Year
AP-1	5.02	10.66	15.57

1.4 **POST DEVELOPMENT CONDITIONS**

The proposed project includes development of Eighth Street to feature a paved street meeting the City of Portland city standards for a local street. The proposed impervious area is approximately 0.14 acres, this will include construction of a 28’ wide paved roadway, hammerhead turn around area, sewer, water, stormwater treatment, and above ground electric and communications.

The post-development stormwater run off for flooding has been assessed as the final condition: with roads and utilities constructed and homes fully developed. For each of the lots to be developed, the stormwater run off model assumes a 1,000 sf single family home footprint, 1,000 sf of pavement for driveway and walkways, and 2,000 sf for grassed areas of lawn. As the properties are proposed for development by others, these assumptions will provide a basis to ensure proposed stormwater systems are sized appropriately for the ultimate development condition.

The project proposes two Focalpoint biofiltration treatment systems for quality treatment and stormwater retention. Stormwater run off from the proposed construction on Eighth Street will be collected along the curb lines, then flow into the Focalpoint systems along each shoulder. These are proposed to be located in the vicinity of the current end of Eighth Street. Refer to Section 1.6 for detailed design calculations of the soil filter. As the lots are proposed for sale and development by others, the project treatment criteria only focuses on the development of the extension of Eighth Street for the purposes of in order to meet Maine DEP general treatment standards in conformance with the City of Portland guidelines.

The Stormwater Post Development Conditions plan is included as Sheet B of the accompanying plan set and the Calculations are attached as Appendix C.

The Post Development Watershed Model predicts the following peak flow rates:

Post Development Peak Flows (cu. ft./sec)			
Analysis Point	2-Year	10-Year	25-Year
AP-1	5.04	10.62	15.46

1.5 **BASIC STANDARDS**

The proposed project is required to meet the Basic Standards. To meet the Basic Standards the project design must demonstrate that the erosion and sedimentation control, inspection and maintenance, and housekeeping standards specified in Appendices A, B, and C of 06-096 Chapter 500 are met, and that the grading or other construction activity will not impede or otherwise alter drainageways so as to have an unreasonable adverse impact on a wetland or waterbody, or an adjacent downslope parcel.

The proposed project will provide temporary (during construction) BMP's and post-construction BMP's. Refer to Sheet 8 of the Project Plans for erosion and sedimentation control narratives and details. The project requirements for inspection and maintenance during construction and post-construction are described in the Erosion and Sedimentation Control - Inspection and Maintenance Plan found in Appendix E. The housekeeping standards can also be found in the Inspection and Maintenance Plan.

1.6 **GENERAL STANDARDS**

The proposed project is required to meet the General Standards. To meet the general standards, the project design must demonstrate that the stormwater management system includes treatment measures that will provide pollutant removal or treatment, and mitigate for the increased frequency and duration of channel erosive flows due to runoff from smaller storms and potential temperature impacts. This must be achieved by providing treatment of no less than 95% of the impervious area and no less than 80% of the developed area.

Proposed improvements associated with development of the project that are considered impervious (i.e. stripped, graded, and not revegetated) will include the proposed development of Eighth Street, a paved 28' wide road. The total disturbed areas associated with the project will be approximately 0.39 acres.

Stormwater Treatment Method

The proposed project will utilize Focalpoint biofiltration treatment systems to provide stormwater treatment for the project. The proposed BMP has been designed in accordance with the design requirements outlined in the Maine Stormwater Best Management Practices Manual and consistent with Maine DEP guidance for these proprietary systems. Below is a summary of the treatment areas for the project. Refer to Appendix D for detailed calculations for each BMP.

As this project is proposing to construct the access road, the project would qualify for Maine DEP linear project exemption under Chapter 500 section 4.C(5)(c). As such, the project must treat 75% of impervious areas and 50% of developed area.

The following Tables summarize the treatment calculations for non-linear and linear project development.

Treatment Summary	
Total Proposed Impervious Area	0.14 acres
Total Proposed Developed Area	0.39 acres
Total Treated Impervious Area	0.14 acres
Total Treated Developed Area	0.20 acres
Impervious Area Treatment %	100.0% (75% required)
Developed Area Treatment %	51.2% (50% required)

As shown in the Table above, the stormwater management system has been designed to meet the General Standards requirements. Detailed treatment calculations can be found in Appendix D.

1.7 FLOODING STANDARD

The proposed project is required to meet the Flooding Standards. To meet the Flooding Standard, the project design must demonstrate that the stormwater management systems will accomplish the following:

- a) The system must detain, retain, or result in the infiltration of stormwater from 24-hour storms of the 2-year, 10-year, and 25-year frequencies such that the peak flows of stormwater from the project site do not exceed the peak flows of stormwater prior to undertaking the project.
- b) The design of piped or open channel systems must be based on a 10-year, 24-hour storm without overloading or flooding beyond channel limits.
- c) The areas expected to be flooded by runoff from a 10-year or 25-year, 24-hour storm must be defined, and no buildings or other similar facilities may be planned within such areas.
- d) Runoff from the project may not flood the primary access road to the project and any public roads bordering the project as a result of a 25-year, 24-hour storm.

The following Table compares the Pre and Post Development peak flow rates for the 2-year, 10-year, and 25-year return periods. Refer to Appendix B for the Pre-Development model and Appendix C for Post Development model.

Peak Flow Comparison (cu. ft./sec)						
Analysis Point	2-Year		10-Year		25-Year	
	Pre	Post	Pre	Post	Pre	Post
AP-1	5.02	5.04	10.66	10.62	15.57	15.46

As illustrated in the table above, development of the proposed project will reduce the overall peak run off from the project site in post development conditions, with the exception of the 2-year event. The 2-year event shows a very minor increase in run off, which should be viewed as a negligible increase. Given that the project drains to an existing swale, there will be no flooding of neighboring properties, and with such a minor increase (0.02 cfs), there will be no noticeable change in run off.

1.8 URBAN IMPAIRED STREAM STANDARD

The project is located within the Dole Brook Watershed. Dole Brook is listed as an Urban Impaired Stream (06-096 CMR 502 Appendix B). Per section 5-II-A of the City of Portland Design Manual, projects that will result in 1,000 s.f. of proposed impervious area are subject to the requirements of Maine DEP Urban Impaired Stream Standard. To meet the Urban Impaired Stream Standard, the Applicant must either mitigate project impacts by reducing or eliminating an off-site or on-site pre-development impervious stormwater source or pay a compensation fee. Compensation fees may only be used in watersheds where a Compensation Fee Utilization Plan (CFUP) has been developed by a Municipality or other entity and approved by the Department. The City of Portland administers a CFUP for Dole Brook. The Project intends to pay a compensation fee to the CFUP to meet the Urban Impaired Stream Standard for development of the Eighth Street extension. The compensation fee for the project is based on Table 1 found in 06-096 CMR 501 3.A.(1). The calculated compensation fee for the project is shown in the following Table.

Type of Surface	Compensation Fee (per acre)	Proposed Area (acres)	Compensation Fee
Non-roof Impervious Area	\$12,500	0.14	\$1750.00
Roof	\$5,000	0*	\$0
Landscape Area	\$2,500	0.39	\$975.00
Total			\$2725.00

*No new roof area is proposed for development of the road; lots to be sold and houses to be developed by others.

1.9 CLOSURE

The proposed stormwater management facilities have been designed to mitigate stormwater impacts associated with development of the proposed project. The proposed stormwater management facilities have been designed to meet the Basic, General and Flooding Standards required by Chapter 500 and the City of Portland.

Appendix A
Soils Report



United States
Department of
Agriculture

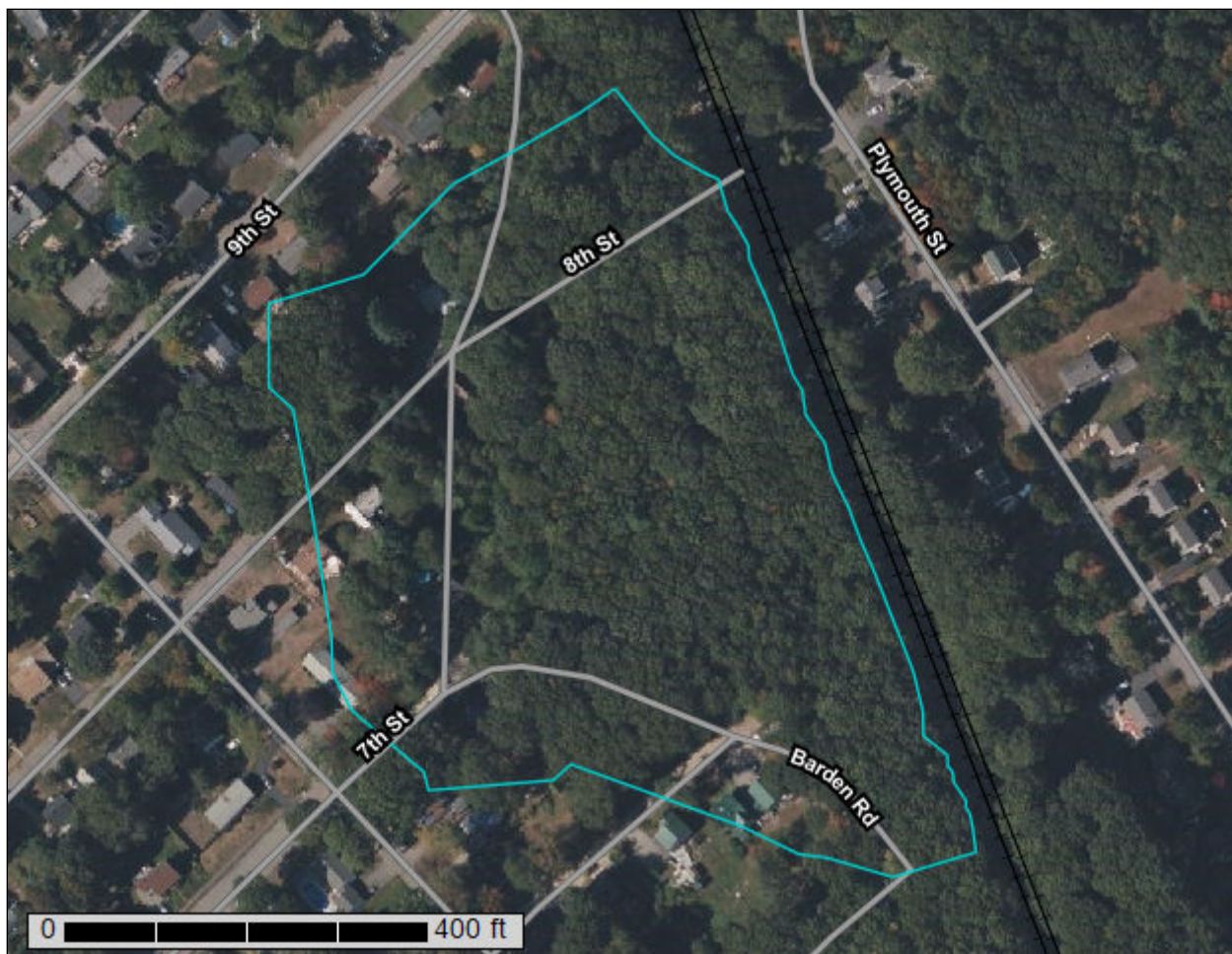
NRCS

Natural
Resources
Conservation
Service

A product of the National
Cooperative Soil Survey,
a joint effort of the United
States Department of
Agriculture and other
Federal agencies, State
agencies including the
Agricultural Experiment
Stations, and local
participants

Custom Soil Resource Report for Cumberland County and Part of Oxford County, Maine

Eighth Street



April 17, 2023

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require

alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

Contents

Preface	2
How Soil Surveys Are Made	5
Soil Map	8
Soil Map.....	9
Legend.....	10
Map Unit Legend.....	12
Map Unit Descriptions.....	12
Cumberland County and Part of Oxford County, Maine.....	14
BgB—Nicholville very fine sandy loam, 0 to 8 percent slopes.....	14
BgC2—Nicholville very fine sandy loam, 8 to 15 percent slopes.....	15
HrB—Lyman-Tunbridge complex, 0 to 8 percent slopes, rocky.....	16
References	18

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

Custom Soil Resource Report

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report Soil Map



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features

 Blowout

 Borrow Pit

 Clay Spot

 Closed Depression

 Gravel Pit

 Gravelly Spot

 Landfill

 Lava Flow

 Marsh or swamp

 Mine or Quarry

 Miscellaneous Water

 Perennial Water

 Rock Outcrop

 Saline Spot

 Sandy Spot

 Severely Eroded Spot

 Sinkhole

 Slide or Slip

 Sodic Spot

 Spoil Area

 Stony Spot

 Very Stony Spot

 Wet Spot

 Other

 Special Line Features

Water Features

 Streams and Canals

Transportation

 Rails

 Interstate Highways

 US Routes

 Major Roads

 Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Cumberland County and Part of Oxford County, Maine
Survey Area Data: Version 19, Aug 30, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 19, 2020—Sep 20, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background

MAP LEGEND

MAP INFORMATION

imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
BgB	Nicholville very fine sandy loam, 0 to 8 percent slopes	2.3	24.5%
BgC2	Nicholville very fine sandy loam, 8 to 15 percent slopes	1.9	20.8%
HrB	Lyman-Tunbridge complex, 0 to 8 percent slopes, rocky	5.1	54.8%
Totals for Area of Interest		9.3	100.0%

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or

landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Cumberland County and Part of Oxford County, Maine

BgB—Nicholville very fine sandy loam, 0 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2yJg5

Elevation: 20 to 2,300 feet

Mean annual precipitation: 34 to 50 inches

Mean annual air temperature: 37 to 45 degrees F

Frost-free period: 90 to 160 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Nicholville and similar soils: 85 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Nicholville

Setting

Landform: Lakebeds (relict)

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Side slope

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Coarse-silty glaciomarine deposits

Typical profile

Ap - 0 to 7 inches: very fine sandy loam

Bs - 7 to 19 inches: very fine sandy loam

BC - 19 to 30 inches: very fine sandy loam

C - 30 to 65 inches: loamy very fine sand

Properties and qualities

Slope: 0 to 8 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Moderately well drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.14 to 1.42 in/hr)

Depth to water table: About 18 to 30 inches

Frequency of flooding: None

Frequency of ponding: None

Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)

Available water supply, 0 to 60 inches: High (about 10.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 2e

Hydrologic Soil Group: C

Ecological site: F144BY501ME - Loamy Slope (Northern Hardwoods)

Hydric soil rating: No

BgC2—Nicholville very fine sandy loam, 8 to 15 percent slopes

Map Unit Setting

National map unit symbol: 2yig6
Elevation: 20 to 2,300 feet
Mean annual precipitation: 34 to 50 inches
Mean annual air temperature: 37 to 45 degrees F
Frost-free period: 90 to 160 days
Farmland classification: Not prime farmland

Map Unit Composition

Nicholville and similar soils: 85 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Nicholville

Setting

Landform: Lakebeds (relict), eskers
Landform position (two-dimensional): Backslope, footslope
Landform position (three-dimensional): Side slope, base slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Coarse-silty glaciomarine deposits

Typical profile

Ap - 0 to 7 inches: very fine sandy loam
Bs - 7 to 19 inches: very fine sandy loam
BC - 19 to 30 inches: very fine sandy loam
C - 30 to 65 inches: loamy very fine sand

Properties and qualities

Slope: 8 to 15 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.14 to 1.42 in/hr)
Depth to water table: About 18 to 30 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: High (about 10.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: C
Ecological site: F144BY501ME - Loamy Slope (Northern Hardwoods)
Hydric soil rating: No

HrB—Lyman-Tunbridge complex, 0 to 8 percent slopes, rocky

Map Unit Setting

National map unit symbol: 2x1cx

Elevation: 0 to 520 feet

Mean annual precipitation: 36 to 65 inches

Mean annual air temperature: 36 to 52 degrees F

Frost-free period: 90 to 160 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Lyman and similar soils: 50 percent

Tunbridge and similar soils: 30 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Lyman

Setting

Landform: Hills, ridges

Landform position (two-dimensional): Summit, shoulder, backslope

Landform position (three-dimensional): Nose slope, crest

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Loamy supraglacial till derived from granite and gneiss and/or loamy supraglacial till derived from phyllite and/or loamy supraglacial till derived from mica schist

Typical profile

Oe - 0 to 1 inches: moderately decomposed plant material

A - 1 to 3 inches: loam

E - 3 to 5 inches: fine sandy loam

Bhs - 5 to 7 inches: loam

Bs1 - 7 to 11 inches: loam

Bs2 - 11 to 18 inches: channery loam

R - 18 to 79 inches: bedrock

Properties and qualities

Slope: 0 to 8 percent

Surface area covered with cobbles, stones or boulders: 1.5 percent

Depth to restrictive feature: 11 to 24 inches to lithic bedrock

Drainage class: Somewhat excessively drained

Capacity of the most limiting layer to transmit water (Ksat): Very low to high (0.00 to 14.03 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Available water supply, 0 to 60 inches: Low (about 3.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 6s

Custom Soil Resource Report

Hydrologic Soil Group: D

Ecological site: F144BY702ME - Shallow and Moderately-deep Till

Hydric soil rating: No

Description of Tunbridge

Setting

Landform: Hills, ridges

Landform position (two-dimensional): Summit, shoulder, backslope

Landform position (three-dimensional): Crest, side slope

Down-slope shape: Linear

Across-slope shape: Convex

Parent material: Loamy supraglacial till derived from granite and gneiss and/or loamy supraglacial till derived from phyllite and/or loamy supraglacial till derived from mica schist

Typical profile

Oe - 0 to 3 inches: moderately decomposed plant material

Oa - 3 to 5 inches: highly decomposed plant material

E - 5 to 8 inches: fine sandy loam

Bhs - 8 to 11 inches: fine sandy loam

Bs - 11 to 26 inches: fine sandy loam

BC - 26 to 28 inches: fine sandy loam

R - 28 to 79 inches: bedrock

Properties and qualities

Slope: 3 to 8 percent

Surface area covered with cobbles, stones or boulders: 1.5 percent

Depth to restrictive feature: 21 to 41 inches to lithic bedrock

Drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Very low to high (0.00 to 14.03 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Available water supply, 0 to 60 inches: Low (about 5.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 6s

Hydrologic Soil Group: C

Ecological site: F144BY702ME - Shallow and Moderately-deep Till

Hydric soil rating: No

References

- American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.
- American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.
- Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.
- Federal Register. July 13, 1994. Changes in hydric soils of the United States.
- Federal Register. September 18, 2002. Hydric soils of the United States.
- Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.
- National Research Council. 1995. Wetlands: Characteristics and boundaries.
- Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_054262
- Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service, U.S. Department of Agriculture Handbook 436. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053577
- Soil Survey Staff. 2010. Keys to soil taxonomy. 11th edition. U.S. Department of Agriculture, Natural Resources Conservation Service. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053580
- Tiner, R.W., Jr. 1985. Wetlands of Delaware. U.S. Fish and Wildlife Service and Delaware Department of Natural Resources and Environmental Control, Wetlands Section.
- United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y-87-1.
- United States Department of Agriculture, Natural Resources Conservation Service. National forestry manual. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/home/?cid=nrcs142p2_053374
- United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. <http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelprdb1043084>

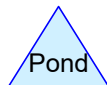
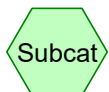
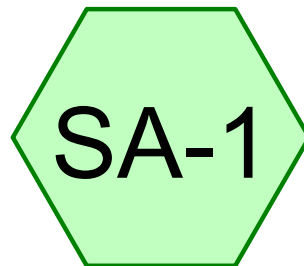
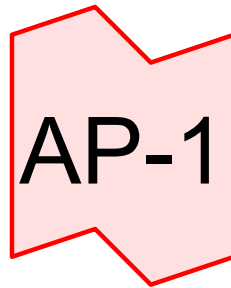
Custom Soil Resource Report

United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2_054242

United States Department of Agriculture, Natural Resources Conservation Service. 2006. Land resource regions and major land resource areas of the United States, the Caribbean, and the Pacific Basin. U.S. Department of Agriculture Handbook 296. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053624

United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210. http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_052290.pdf

Appendix B
Pre-Development Calculations



Routing Diagram for Pre-Development

Prepared by BH2M, Printed 7/24/2023

HydroCAD® 10.00-22 s/n 00619 © 2018 HydroCAD Software Solutions LLC

Pre-Development

Prepared by BH2M

HydroCAD® 10.00-22 s/n 00619 © 2018 HydroCAD Software Solutions LLC

Type III 24-hr 25-YR Rainfall=5.80"

Printed 7/24/2023

Page 2

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment SA-1:Runoff Area=403,738 sf 6.29% Impervious Runoff Depth>2.95"
Flow Length=877' Tc=48.1 min CN=76 Runoff=15.57 cfs 2.277 af**Link AP-1:**Inflow=15.57 cfs 2.277 af
Primary=15.57 cfs 2.277 af**Total Runoff Area = 9.269 ac Runoff Volume = 2.277 af Average Runoff Depth = 2.95"**
93.71% Pervious = 8.685 ac 6.29% Impervious = 0.583 ac

Pre-Development

Prepared by BH2M

HydroCAD® 10.00-22 s/n 00619 © 2018 HydroCAD Software Solutions LLC

Type III 24-hr 25-YR Rainfall=5.80"

Printed 7/24/2023

Page 3

Summary for Subcatchment SA-1:

Runoff = 15.57 cfs @ 12.66 hrs, Volume= 2.277 af, Depth> 2.95"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-YR Rainfall=5.80"

Area (sf)	CN	Description
11,738	74	>75% Grass cover, Good, HSG C
11,359	80	>75% Grass cover, Good, HSG D
150,361	70	Woods, Good, HSG C
204,874	77	Woods, Good, HSG D
25,406	98	Paved parking, HSG D
403,738	76	Weighted Average
378,332		93.71% Pervious Area
25,406		6.29% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
35.5	150	0.0133	0.07		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 3.10"
11.9	561	0.0248	0.79		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
0.2	60	0.0050	4.03	4.95	Pipe Channel, 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
0.5	106	0.0112	3.42	68.44	Parabolic Channel, W=30.00' D=1.00' Area=20.0 sf Perim=30.1' n= 0.035
48.1	877	Total			

Summary for Link AP-1:

Inflow Area = 9.269 ac, 6.29% Impervious, Inflow Depth > 2.95" for 25-YR event

Inflow = 15.57 cfs @ 12.66 hrs, Volume= 2.277 af

Primary = 15.57 cfs @ 12.66 hrs, Volume= 2.277 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Pre-Development

Prepared by BH2M

HydroCAD® 10.00-22 s/n 00619 © 2018 HydroCAD Software Solutions LLC

Type III 24-hr 2-YR Rainfall=3.10"

Printed 7/24/2023

Page 1

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment SA-1:Runoff Area=403,738 sf 6.29% Impervious Runoff Depth>0.97"
Flow Length=877' Tc=48.1 min CN=76 Runoff=5.02 cfs 0.751 af**Link AP-1:**Inflow=5.02 cfs 0.751 af
Primary=5.02 cfs 0.751 af**Total Runoff Area = 9.269 ac Runoff Volume = 0.751 af Average Runoff Depth = 0.97"**
93.71% Pervious = 8.685 ac 6.29% Impervious = 0.583 ac

Pre-Development

Prepared by BH2M

HydroCAD® 10.00-22 s/n 00619 © 2018 HydroCAD Software Solutions LLC

Type III 24-hr 10-YR Rainfall=4.60"

Printed 7/24/2023

Page 2

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment SA-1:

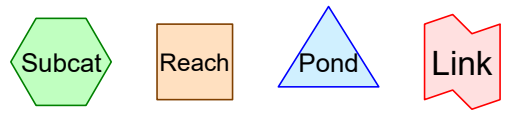
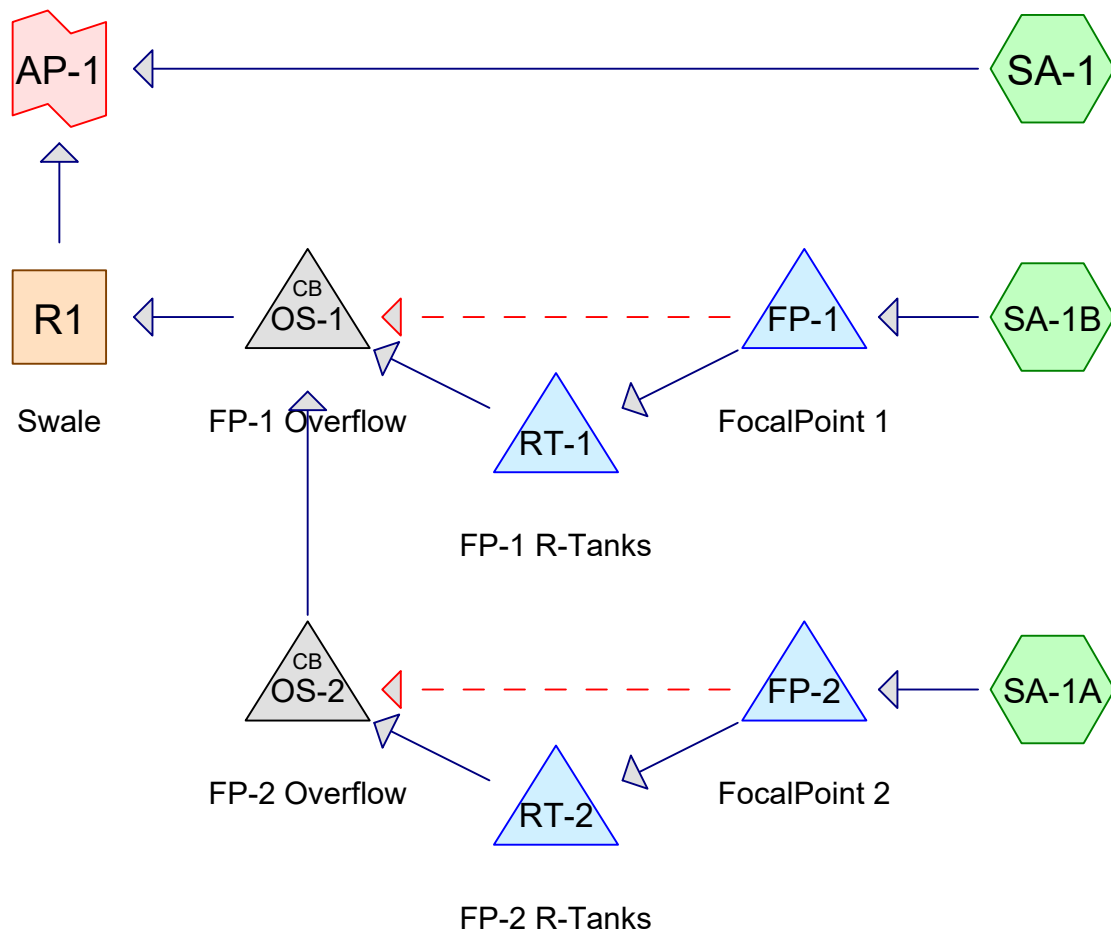
Runoff Area=403,738 sf 6.29% Impervious Runoff Depth>2.02"
Flow Length=877' Tc=48.1 min CN=76 Runoff=10.66 cfs 1.557 af

Link AP-1:

Inflow=10.66 cfs 1.557 af
Primary=10.66 cfs 1.557 af

Total Runoff Area = 9.269 ac Runoff Volume = 1.557 af Average Runoff Depth = 2.02"
93.71% Pervious = 8.685 ac 6.29% Impervious = 0.583 ac

Appendix C
Post Development Calculations



Routing Diagram for Post-Development
 Prepared by BH2M, Printed 7/24/2023
 HydroCAD® 10.00-22 s/n 00619 © 2018 HydroCAD Software Solutions LLC

Post-Development

Prepared by BH2M

HydroCAD® 10.00-22 s/n 00619 © 2018 HydroCAD Software Solutions LLC

Type III 24-hr 25-YR Rainfall=5.80"

Printed 7/24/2023

Page 2

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment SA-1: Runoff Area=377,705 sf 7.74% Impervious Runoff Depth>2.95"
Flow Length=877' Tc=48.1 min CN=76 Runoff=14.57 cfs 2.130 af

Subcatchment SA-1A: Runoff Area=19,326 sf 13.94% Impervious Runoff Depth>3.36"
Flow Length=318' Tc=22.2 min CN=80 Runoff=1.20 cfs 0.124 af

Subcatchment SA-1B: Runoff Area=6,653 sf 53.36% Impervious Runoff Depth>4.28"
Flow Length=320' Tc=16.8 min CN=89 Runoff=0.57 cfs 0.054 af

Reach R1: Swale Avg. Flow Depth=0.18' Max Vel=1.10 fps Inflow=1.74 cfs 0.173 af
n=0.035 L=68.0' S=0.0112 '/' Capacity=68.37 cfs Outflow=1.72 cfs 0.173 af

Pond FP-1: FocalPoint 1 Peak Elev=101.39' Storage=25 cf Inflow=0.57 cfs 0.054 af
Primary=0.05 cfs 0.030 af Secondary=0.52 cfs 0.025 af Outflow=0.57 cfs 0.054 af

Pond FP-2: FocalPoint 2 Peak Elev=101.48' Storage=29 cf Inflow=1.20 cfs 0.124 af
Primary=0.05 cfs 0.040 af Secondary=1.16 cfs 0.084 af Outflow=1.20 cfs 0.124 af

Pond OS-1: FP-1 Overflow Peak Elev=97.66' Inflow=1.74 cfs 0.173 af
12.0" Round Culvert n=0.013 L=63.0' S=0.0049 '/' Outflow=1.74 cfs 0.173 af

Pond OS-2: FP-2 Overflow Peak Elev=98.16' Inflow=1.21 cfs 0.121 af
8.0" Round Culvert n=0.013 L=31.0' S=0.0052 '/' Outflow=1.21 cfs 0.121 af

Pond RT-1: FP-1 R-Tanks Peak Elev=3,591.01' Storage=101 cf Inflow=0.05 cfs 0.030 af
Outflow=0.06 cfs 0.027 af

Pond RT-2: FP-2 R-Tanks Peak Elev=5,266.96' Storage=121 cf Inflow=0.05 cfs 0.040 af
Outflow=0.08 cfs 0.037 af

Link AP-1: Inflow=15.46 cfs 2.303 af
Primary=15.46 cfs 2.303 af

Total Runoff Area = 9.267 ac Runoff Volume = 2.308 af Average Runoff Depth = 2.99"
91.21% Pervious = 8.453 ac 8.79% Impervious = 0.815 ac

Post-Development

Prepared by BH2M

HydroCAD® 10.00-22 s/n 00619 © 2018 HydroCAD Software Solutions LLC

Type III 24-hr 25-YR Rainfall=5.80"

Printed 7/24/2023

Page 3

Summary for Subcatchment SA-1:

Runoff = 14.57 cfs @ 12.66 hrs, Volume= 2.130 af, Depth> 2.95"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-YR Rainfall=5.80"

Area (sf)	CN	Description
10,300	74	>75% Grass cover, Good, HSG C
12,829	80	>75% Grass cover, Good, HSG D
148,388	70	Woods, Good, HSG C
172,948	77	Woods, Good, HSG D
25,240	98	Paved parking, HSG D
* 4,000	98	Allocated for future house & driveway
* 4,000	80	Allocated for future lots>75% Grass cover, Good, HSG D
377,705	76	Weighted Average
348,465		92.26% Pervious Area
29,240		7.74% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
35.5	150	0.0133	0.07		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 3.10"
11.9	561	0.0248	0.79		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
0.2	60	0.0050	4.03	4.95	Pipe Channel, 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
0.5	106	0.0112	3.42	68.44	Parabolic Channel, W=30.00' D=1.00' Area=20.0 sf Perim=30.1' n= 0.035
48.1	877	Total			

Summary for Subcatchment SA-1A:

Runoff = 1.20 cfs @ 12.31 hrs, Volume= 0.124 af, Depth> 3.36"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-YR Rainfall=5.80"

Area (sf)	CN	Description
1,720	80	>75% Grass cover, Good, HSG D
14,911	77	Woods, Good, HSG D
2,695	98	Paved parking, HSG D
19,326	80	Weighted Average
16,631		86.06% Pervious Area
2,695		13.94% Impervious Area

Post-Development

Prepared by BH2M

HydroCAD® 10.00-22 s/n 00619 © 2018 HydroCAD Software Solutions LLC

Type III 24-hr 25-YR Rainfall=5.80"

Printed 7/24/2023

Page 4

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.6	150	0.0667	0.13		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 3.10"
3.6	168	0.0238	0.77		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
22.2	318	Total			

Summary for Subcatchment SA-1B:

Runoff = 0.57 cfs @ 12.22 hrs, Volume= 0.054 af, Depth> 4.28"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-YR Rainfall=5.80"

Area (sf)	CN	Description
840	80	>75% Grass cover, Good, HSG D
2,263	77	Woods, Good, HSG D
3,550	98	Paved parking, HSG D
6,653	89	Weighted Average
3,103		46.64% Pervious Area
3,550		53.36% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.7	130	0.0769	0.14		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 3.10"
1.1	190	0.0211	2.95		Shallow Concentrated Flow, Paved Kv= 20.3 fps
16.8	320	Total			

Summary for Reach R1: Swale

Inflow Area = 0.596 ac, 24.04% Impervious, Inflow Depth > 3.49" for 25-YR event
Inflow = 1.74 cfs @ 12.27 hrs, Volume= 0.173 af
Outflow = 1.72 cfs @ 12.31 hrs, Volume= 0.173 af, Atten= 1%, Lag= 2.4 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 1.10 fps, Min. Travel Time= 1.0 min
Avg. Velocity= 0.43 fps, Avg. Travel Time= 2.7 min

Peak Storage= 107 cf @ 12.29 hrs
Average Depth at Peak Storage= 0.18'
Bank-Full Depth= 1.00' Flow Area= 20.0 sf, Capacity= 68.37 cfs

30.00' x 1.00' deep Parabolic Channel, n= 0.035
Length= 68.0' Slope= 0.0112 '/'
Inlet Invert= 96.26', Outlet Invert= 95.50'

Post-Development

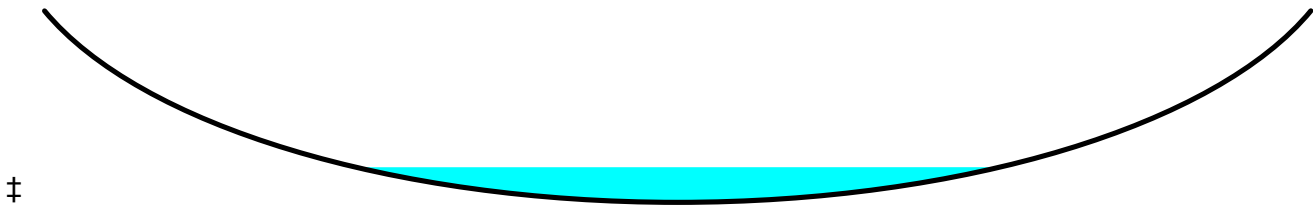
Prepared by BH2M

HydroCAD® 10.00-22 s/n 00619 © 2018 HydroCAD Software Solutions LLC

Type III 24-hr 25-YR Rainfall=5.80"

Printed 7/24/2023

Page 5



Summary for Pond FP-1: FocalPoint 1

Inflow Area = 0.153 ac, 53.36% Impervious, Inflow Depth > 4.28" for 25-YR event
Inflow = 0.57 cfs @ 12.22 hrs, Volume= 0.054 af
Outflow = 0.57 cfs @ 12.22 hrs, Volume= 0.054 af, Atten= 0%, Lag= 0.0 min
Primary = 0.05 cfs @ 11.20 hrs, Volume= 0.030 af
Secondary = 0.52 cfs @ 12.22 hrs, Volume= 0.025 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 101.39' @ 12.22 hrs Surf.Area= 20 sf Storage= 25 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 1.8 min (770.0 - 768.3)

Volume	Invert	Avail.Storage	Storage Description
#1	98.50'	9 cf	3.00'W x 6.75'L x 2.25'H FocalPoint 46 cf Overall x 20.0% Voids
#2	100.75'	40 cf	Custom Stage Data (Prismatic) Listed below (Recalc) -Impervious
		49 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
100.75	19	0	0
101.00	24	5	5
101.75	40	24	29
102.00	47	11	40

Device	Routing	Invert	Outlet Devices
#1	Primary	98.50'	100.000 in/hr Exfiltration over Surface area Phase-In= 0.10'
#2	Secondary	101.25'	12.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.05 cfs @ 11.20 hrs HW=98.63' (Free Discharge)

↑ **1=Exfiltration** (Exfiltration Controls 0.05 cfs)

Secondary OutFlow Max=0.51 cfs @ 12.22 hrs HW=101.39' (Free Discharge)

↑ **2=Orifice/Grate** (Weir Controls 0.51 cfs @ 1.20 fps)

Post-Development

Prepared by BH2M

HydroCAD® 10.00-22 s/n 00619 © 2018 HydroCAD Software Solutions LLC

Type III 24-hr 25-YR Rainfall=5.80"

Printed 7/24/2023

Page 6

Summary for Pond FP-2: FocalPoint 2

Inflow Area = 0.444 ac, 13.94% Impervious, Inflow Depth > 3.36" for 25-YR event
 Inflow = 1.20 cfs @ 12.31 hrs, Volume= 0.124 af
 Outflow = 1.20 cfs @ 12.31 hrs, Volume= 0.124 af, Atten= 0%, Lag= 0.1 min
 Primary = 0.05 cfs @ 10.40 hrs, Volume= 0.040 af
 Secondary = 1.16 cfs @ 12.31 hrs, Volume= 0.084 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Peak Elev= 101.48' @ 12.31 hrs Surf.Area= 20 sf Storage= 29 cf

Plug-Flow detention time= 1.8 min calculated for 0.124 af (100% of inflow)

Center-of-Mass det. time= 1.8 min (796.6 - 794.7)

Volume	Invert	Avail.Storage	Storage Description
#1	98.50'	9 cf	3.00'W x 6.75'L x 2.25'H FocalPoint 46 cf Overall x 20.0% Voids
#2	100.75'	40 cf	Custom Stage Data (Prismatic) Listed below (Recalc) -Impervious
		49 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
100.75	19	0	0
101.00	24	5	5
101.75	40	24	29
102.00	47	11	40

Device	Routing	Invert	Outlet Devices
#1	Primary	98.50'	100.000 in/hr Exfiltration over Surface area Phase-In= 0.10'
#2	Secondary	101.25'	12.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.05 cfs @ 10.40 hrs HW=98.61' (Free Discharge)↑ **1=Exfiltration** (Exfiltration Controls 0.05 cfs)**Secondary OutFlow** Max=1.15 cfs @ 12.31 hrs HW=101.48' (Free Discharge)↑ **2=Orifice/Grate** (Weir Controls 1.15 cfs @ 1.58 fps)**Summary for Pond OS-1: FP-1 Overflow**

Inflow Area = 0.596 ac, 24.04% Impervious, Inflow Depth > 3.49" for 25-YR event
 Inflow = 1.74 cfs @ 12.27 hrs, Volume= 0.173 af
 Outflow = 1.74 cfs @ 12.27 hrs, Volume= 0.173 af, Atten= 0%, Lag= 0.0 min
 Primary = 1.74 cfs @ 12.27 hrs, Volume= 0.173 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Peak Elev= 97.66' @ 12.27 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	96.80'	12.0" Round Culvert L= 63.0' CPP, square edge headwall, Ke= 0.500

Post-Development

Prepared by BH2M

HydroCAD® 10.00-22 s/n 00619 © 2018 HydroCAD Software Solutions LLC

Type III 24-hr 25-YR Rainfall=5.80"

Printed 7/24/2023

Page 7

Inlet / Outlet Invert= 96.80' / 96.49' S= 0.0049 ' / n= 0.013, Flow Area= 0.79 sf

Primary OutFlow Max=1.72 cfs @ 12.27 hrs HW=97.65' (Free Discharge)

↑**1=Culvert** (Barrel Controls 1.72 cfs @ 3.27 fps)

Summary for Pond OS-2: FP-2 Overflow

Inflow Area = 0.444 ac, 13.94% Impervious, Inflow Depth > 3.28" for 25-YR event
 Inflow = 1.21 cfs @ 12.33 hrs, Volume= 0.121 af
 Outflow = 1.21 cfs @ 12.33 hrs, Volume= 0.121 af, Atten= 0%, Lag= 0.0 min
 Primary = 1.21 cfs @ 12.33 hrs, Volume= 0.121 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 98.16' @ 12.33 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	97.06'	8.0" Round Culvert L= 31.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 97.06' / 96.90' S= 0.0052 ' / n= 0.013, Flow Area= 0.35 sf

Primary OutFlow Max=1.20 cfs @ 12.33 hrs HW=98.15' (Free Discharge)

↑**1=Culvert** (Barrel Controls 1.20 cfs @ 3.43 fps)

Summary for Pond RT-1: FP-1 R-Tanks

Inflow Area = 0.153 ac, 53.36% Impervious, Inflow Depth > 2.33" for 25-YR event
 Inflow = 0.05 cfs @ 11.20 hrs, Volume= 0.030 af
 Outflow = 0.06 cfs @ 14.80 hrs, Volume= 0.027 af, Atten= 0%, Lag= 216.0 min
 Primary = 0.06 cfs @ 14.80 hrs, Volume= 0.027 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 3,591.01' @ 14.80 hrs Surf.Area= 106 sf Storage= 101 cf

Plug-Flow detention time= 56.1 min calculated for 0.027 af (92% of inflow)
 Center-of-Mass det. time= 27.6 min (823.0 - 795.4)

Volume	Invert	Avail.Storage	Storage Description
#1A	96.81'	51 cf	7.94'W x 13.38'L x 1.69'H Field A 180 cf Overall - 53 cf Embedded = 127 cf x 40.0% Voids
#2A	97.06'	51 cf	ACF R-Tank HD 1 x 12 Inside #1 Inside= 15.7"W x 17.3"H => 1.80 sf x 2.35'L = 4.2 cf Outside= 15.7"W x 17.3"H => 1.89 sf x 2.35'L = 4.4 cf 3 Rows of 4 Chambers
		101 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	97.06'	0.2" Vert. Orifice/Grate C= 0.600

Post-Development

Prepared by BH2M

HydroCAD® 10.00-22 s/n 00619 © 2018 HydroCAD Software Solutions LLC

Type III 24-hr 25-YR Rainfall=5.80"

Printed 7/24/2023

Page 8

Primary OutFlow Max=0.06 cfs @ 14.80 hrs HW=3,591.01' (Free Discharge)

↑**1=Orifice/Grate** (Orifice Controls 0.06 cfs @ 284.61 fps)

Summary for Pond RT-2: FP-2 R-Tanks

Inflow Area = 0.444 ac, 13.94% Impervious, Inflow Depth > 1.08" for 25-YR event
Inflow = 0.05 cfs @ 10.40 hrs, Volume= 0.040 af
Outflow = 0.08 cfs @ 10.45 hrs, Volume= 0.037 af, Atten= 0%, Lag= 3.0 min
Primary = 0.08 cfs @ 10.45 hrs, Volume= 0.037 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 5,266.96' @ 10.45 hrs Surf.Area= 125 sf Storage= 121 cf

Plug-Flow detention time= 46.2 min calculated for 0.037 af (93% of inflow)
Center-of-Mass det. time= 23.2 min (887.3 - 864.1)

Volume	Invert	Avail.Storage	Storage Description
#1A	96.81'	58 cf	7.94'W x 15.73'L x 1.69'H Field A 211 cf Overall - 67 cf Embedded = 145 cf x 40.0% Voids
#2A	97.06'	63 cf	ACF R-Tank HD 1 x 15 Inside #1 Inside= 15.7"W x 17.3"H => 1.80 sf x 2.35'L = 4.2 cf Outside= 15.7"W x 17.3"H => 1.89 sf x 2.35'L = 4.4 cf 3 Rows of 5 Chambers
		121 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	97.06'	0.2" Vert. Orifice/Grate C= 0.600

Primary OutFlow Max=0.08 cfs @ 10.45 hrs HW=5,266.96' (Free Discharge)

↑**1=Orifice/Grate** (Orifice Controls 0.08 cfs @ 346.21 fps)

Summary for Link AP-1:

Inflow Area = 9.267 ac, 8.79% Impervious, Inflow Depth > 2.98" for 25-YR event
Inflow = 15.46 cfs @ 12.64 hrs, Volume= 2.303 af
Primary = 15.46 cfs @ 12.64 hrs, Volume= 2.303 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Post-Development

Prepared by BH2M

HydroCAD® 10.00-22 s/n 00619 © 2018 HydroCAD Software Solutions LLC

Type III 24-hr 2-YR Rainfall=3.10"

Printed 7/24/2023

Page 1

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment SA-1: Runoff Area=377,705 sf 7.74% Impervious Runoff Depth>0.97"
Flow Length=877' Tc=48.1 min CN=76 Runoff=4.70 cfs 0.703 af

Subcatchment SA-1A: Runoff Area=19,326 sf 13.94% Impervious Runoff Depth>1.22"
Flow Length=318' Tc=22.2 min CN=80 Runoff=0.44 cfs 0.045 af

Subcatchment SA-1B: Runoff Area=6,653 sf 53.36% Impervious Runoff Depth>1.86"
Flow Length=320' Tc=16.8 min CN=89 Runoff=0.26 cfs 0.024 af

Reach R1: Swale Avg. Flow Depth=0.12' Max Vel=0.83 fps Inflow=0.69 cfs 0.064 af
n=0.035 L=68.0' S=0.0112 ' S=0.0112 ' Capacity=68.37 cfs Outflow=0.67 cfs 0.063 af

Pond FP-1: FocalPoint 1 Peak Elev=101.33' Storage=23 cf Inflow=0.26 cfs 0.024 af
Primary=0.05 cfs 0.016 af Secondary=0.22 cfs 0.007 af Outflow=0.27 cfs 0.024 af

Pond FP-2: FocalPoint 2 Peak Elev=101.36' Storage=25 cf Inflow=0.44 cfs 0.045 af
Primary=0.05 cfs 0.024 af Secondary=0.40 cfs 0.021 af Outflow=0.44 cfs 0.045 af

Pond OS-1: FP-1 Overflow Peak Elev=97.29' Inflow=0.69 cfs 0.064 af
12.0" Round Culvert n=0.013 L=63.0' S=0.0049 ' S=0.0049 ' Outflow=0.69 cfs 0.064 af

Pond OS-2: FP-2 Overflow Peak Elev=97.55' Inflow=0.48 cfs 0.042 af
8.0" Round Culvert n=0.013 L=31.0' S=0.0052 ' S=0.0052 ' Outflow=0.48 cfs 0.042 af

Pond RT-1: FP-1 R-Tanks Peak Elev=3,437.24' Storage=101 cf Inflow=0.05 cfs 0.016 af
Outflow=0.06 cfs 0.014 af

Pond RT-2: FP-2 R-Tanks Peak Elev=6,224.01' Storage=121 cf Inflow=0.05 cfs 0.024 af
Outflow=0.08 cfs 0.022 af

Link AP-1: Inflow=5.04 cfs 0.766 af
Primary=5.04 cfs 0.766 af

Total Runoff Area = 9.267 ac Runoff Volume = 0.771 af Average Runoff Depth = 1.00"
91.21% Pervious = 8.453 ac 8.79% Impervious = 0.815 ac

Post-Development

Type III 24-hr 10-YR Rainfall=4.60"

Prepared by BH2M

Printed 7/24/2023

HydroCAD® 10.00-22 s/n 00619 © 2018 HydroCAD Software Solutions LLC

Page 2

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment SA-1: Runoff Area=377,705 sf 7.74% Impervious Runoff Depth>2.02"
Flow Length=877' Tc=48.1 min CN=76 Runoff=9.97 cfs 1.457 af

Subcatchment SA-1A: Runoff Area=19,326 sf 13.94% Impervious Runoff Depth>2.36"
Flow Length=318' Tc=22.2 min CN=80 Runoff=0.85 cfs 0.087 af

Subcatchment SA-1B: Runoff Area=6,653 sf 53.36% Impervious Runoff Depth>3.19"
Flow Length=320' Tc=16.8 min CN=89 Runoff=0.43 cfs 0.041 af

Reach R1: Swale Avg. Flow Depth=0.16' Max Vel=1.00 fps Inflow=1.25 cfs 0.123 af
n=0.035 L=68.0' S=0.0112 ' ' Capacity=68.37 cfs Outflow=1.24 cfs 0.123 af

Pond FP-1: FocalPoint 1 Peak Elev=101.36' Storage=25 cf Inflow=0.43 cfs 0.041 af
Primary=0.05 cfs 0.024 af Secondary=0.38 cfs 0.016 af Outflow=0.43 cfs 0.041 af

Pond FP-2: FocalPoint 2 Peak Elev=101.43' Storage=27 cf Inflow=0.85 cfs 0.087 af
Primary=0.05 cfs 0.034 af Secondary=0.81 cfs 0.053 af Outflow=0.85 cfs 0.087 af

Pond OS-1: FP-1 Overflow Peak Elev=97.49' Inflow=1.25 cfs 0.123 af
12.0" Round Culvert n=0.013 L=63.0' S=0.0049 ' ' Outflow=1.25 cfs 0.123 af

Pond OS-2: FP-2 Overflow Peak Elev=97.79' Inflow=0.86 cfs 0.085 af
8.0" Round Culvert n=0.013 L=31.0' S=0.0052 ' ' Outflow=0.86 cfs 0.085 af

Pond RT-1: FP-1 R-Tanks Peak Elev=2,385.44' Storage=101 cf Inflow=0.05 cfs 0.024 af
Outflow=0.05 cfs 0.022 af

Pond RT-2: FP-2 R-Tanks Peak Elev=2,254.55' Storage=121 cf Inflow=0.05 cfs 0.034 af
Outflow=0.05 cfs 0.032 af

Link AP-1: Inflow=10.62 cfs 1.580 af
Primary=10.62 cfs 1.580 af

Total Runoff Area = 9.267 ac Runoff Volume = 1.585 af Average Runoff Depth = 2.05"
91.21% Pervious = 8.453 ac 8.79% Impervious = 0.815 ac

Appendix D
Treatment Calculations



FOCALPOINT DESIGN SHEET

HIGH PERFORMANCE MODULAR BIOFILTRATION SYSTEM

MAINE CHAPTER 500 PROJECTS

1. Determine FocalPoint bed area (minimum 174 sf/acre of impervious area - ex: 0.2 acres = 35 sf)

See step 2 to determine if minimum size is appropriate.

- Tributary impervious area: = _____ 0.082 ac (A)
- Tributary pervious area: = _____ 0.004 ac (B)
- Minimum FocalPoint bed area required: $= ((A \times 1.0) + (B \times 0.4)) \times 174$ = _____ 14.5 sf
- FocalPoint bed area provided*: = _____ 20 sf
- Dimensions of proposed FocalPoint: = _____ 3 ft x _____ 6.5 ft

2. A 0.95 in Type III 24-hr rainfall event shall be modelled to demonstrate the entire storm volume is treated prior to activation of the overflow (typically set at 6 - 12 in above the mulch)

- Temporary storage depth provided: = _____ 6 in
(typically 6 - 12 in)
- Temporary storage volume provided at above depth: = _____ 21 ft³
- Peak ponding depth from 0.95" 24 hr storm event: = _____ 0.72 in

3. Ratio of the surface area of the filter media (sf) to the temporary ponding volume (cf) shall be no less than 1:5

- Ratio of FocalPoint bed area: = _____ 1 : _____ 6.7

4. Subsurface R-Tank or chamber treatment row must be sized to treat the peak flow from a 1 yr - 24-hr storm event.

- 1 yr 24-hr peak flowrate: = _____ 0.20 cfs
- Chamber/module selected:
 - Cultec 330 XLHD (1 chamber per 0.227 cfs) ☐
 - Cultec 150 XLHD (1 chamber per 0.185 cfs) ☐
 - R-Tank modules (WHAT TYPE)(1 module per 0.02 cfs) ☒
- Number of chamber/modules required: = _____ 10

5. Controlled release of the channel protection over 24 - 48 hrs

- Controlled release of the channel protection volume is being achieved by:
 - Expanded subsurface storage basin with outlet control structure (OCS) ☒
 - Surface detention basin with OCS ☐

6. A landscape plan for the FocalPoint bed area has been prepared

☐

7. Design review and installation oversight by manufacturer's representative

- The design has been reviewed by Ferguson ☐
- Engineer will coordinate installation inspection with Ferguson ☐



FOCALPOINT DESIGN SHEET

HIGH PERFORMANCE MODULAR BIOFILTRATION SYSTEM

MAINE CHAPTER 500 PROJECTS

1. Determine FocalPoint bed area (minimum 174 sf/acre of impervious area - ex: 0.2 acres = 35 sf)

See step 2 to determine if minimum size is appropriate.

- Tributary impervious area: = _____ 0.062 ac (A)
- Tributary pervious area: = _____ 0.023 ac (B)
- Minimum FocalPoint bed area required: $= ((A \times 1.0) + (B \times 0.4)) \times 174$ = _____ 12.4 sf
- FocalPoint bed area provided*: = _____ 20 sf
- Dimensions of proposed FocalPoint: = _____ 3 ft x _____ 6.5 ft

2. A 0.95 in Type III 24-hr rainfall event shall be modelled to demonstrate the entire storm volume is treated prior to activation of the overflow (typically set at 6 - 12 in above the mulch)

- Temporary storage depth provided: = _____ 6 in
(typically 6 - 12 in)
- Temporary storage volume provided at above depth: = _____ 21 ft³
- Peak ponding depth from 0.95" 24 hr storm event: = _____ 0.72 in

3. Ratio of the surface area of the filter media (sf) to the temporary ponding volume (cf) shall be no less than 1:5

- Ratio of FocalPoint bed area: = _____ 1 : _____ 5.7

4. Subsurface R-Tank or chamber treatment row must be sized to treat the peak flow from a 1 yr - 24-hr storm event.

- 1 yr 24-hr peak flowrate: = _____ 0.31 cfs
- Chamber/module selected:
 - Cultec 330 XLHD (1 chamber per 0.227 cfs) ☐
 - Cultec 150 XLHD (1 chamber per 0.185 cfs) ☐
 - R-Tank modules (WHAT TYPE)(1 module per 0.02 cfs) ☒
- Number of chamber/modules required: = _____ 15

5. Controlled release of the channel protection over 24 - 48 hrs

- Controlled release of the channel protection volume is being achieved by:
 - Expanded subsurface storage basin with outlet control structure (OCS) ☒
 - Surface detention basin with OCS ☐

6. A landscape plan for the FocalPoint bed area has been prepared

☐

7. Design review and installation oversight by manufacturer's representative

- The design has been reviewed by Ferguson ☐
- Engineer will coordinate installation inspection with Ferguson ☐

DESIGNING WITH FOCALPOINT IN MAINE

The Maine Department of Environmental Protection has approved the FocalPoint (High Performance Modular Biofiltration System) for use on Chapter 500 site development projects in the State of Maine.

SIZING CRITERIA SUMMARY

- The surface area of the media within the FocalPoint must be sized using a ratio of 174 sf to 1 are of impervious area (ex. 26 sf to 0.15 acres).
- The system must be modelled in HydroCAD (or similar TR-55 modeling software) to demonstrate that the entire volume of a 0.95-in Type II or III 24-hr storm is treated prior to activation of the bypass/overflow (typically set at 6 - 12 in above the mulch surface).
- The system must be placed in-line with a subsurface chamber based treatment row that is approved by the department. The treatment row will be sized to treat the peak flow from a 1-year, 24-hour storm event.
- Additional storage downstream of the FocalPoint and treatment row will be required to store at least the sum of 1.0 in of runoff from the impervious areas and 0.4 in of runoff from the landscaped areas that drain to the system (unless attenuation of the channel protection volume is not required) and control to release to drain between 24 - 48 hrs.

FOCALPOINT SYSTEMS:



FOCALPOINT ACCESSORIES:



Pretreatment - Rain Guardian Turret



Pretreatment - Rain Guardian Foxhole



Pretreatment - PreTx



Bypass protection - Domed overflow with filter insert

For additional information please visit: acfenvironmental.com

Post-Development

Type III 24-hr .95" Event Rainfall=0.95"

Prepared by BH2M

Printed 7/24/2023

HydroCAD® 10.00-22 s/n 00619 © 2018 HydroCAD Software Solutions LLC

Page 1

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment SA-1: Runoff Area=377,705 sf 7.74% Impervious Runoff Depth>0.02"
Flow Length=877' Tc=48.1 min CN=76 Runoff=0.03 cfs 0.015 af

Subcatchment SA-1A: Runoff Area=19,326 sf 13.94% Impervious Runoff Depth>0.06"
Flow Length=318' Tc=22.2 min CN=80 Runoff=0.01 cfs 0.002 af

Subcatchment SA-1B: Runoff Area=6,653 sf 53.36% Impervious Runoff Depth>0.23"
Flow Length=320' Tc=16.8 min CN=89 Runoff=0.03 cfs 0.003 af

Reach R1: Swale Avg. Flow Depth=0.01' Max Vel=0.16 fps Inflow=0.00 cfs 0.001 af
n=0.035 L=68.0' S=0.0112 '/' Capacity=68.37 cfs Outflow=0.00 cfs 0.001 af

Pond FP-1: FocalPoint 1 Peak Elev=98.56' Storage=0 cf Inflow=0.03 cfs 0.003 af
Primary=0.03 cfs 0.003 af Secondary=0.00 cfs 0.000 af Outflow=0.03 cfs 0.003 af

Pond FP-2: FocalPoint 2 Peak Elev=98.52' Storage=0 cf Inflow=0.01 cfs 0.002 af
Primary=0.01 cfs 0.002 af Secondary=0.00 cfs 0.000 af Outflow=0.01 cfs 0.002 af

Pond OS-1: FP-1 Overflow Peak Elev=96.83' Inflow=0.00 cfs 0.001 af
12.0" Round Culvert n=0.013 L=63.0' S=0.0049 '/' Outflow=0.00 cfs 0.001 af

Pond OS-2: FP-2 Overflow Peak Elev=97.08' Inflow=0.00 cfs 0.000 af
8.0" Round Culvert n=0.013 L=31.0' S=0.0052 '/' Outflow=0.00 cfs 0.000 af

Pond RT-1: FP-1 R-Tanks Peak Elev=98.41' Storage=96 cf Inflow=0.03 cfs 0.003 af
Outflow=0.00 cfs 0.001 af

Pond RT-2: FP-2 R-Tanks Peak Elev=97.84' Storage=71 cf Inflow=0.01 cfs 0.002 af
Outflow=0.00 cfs 0.000 af

Link AP-1: Inflow=0.04 cfs 0.016 af
Primary=0.04 cfs 0.016 af

Total Runoff Area = 9.267 ac Runoff Volume = 0.020 af Average Runoff Depth = 0.03"
91.21% Pervious = 8.453 ac 8.79% Impervious = 0.815 ac

Post-Development

Prepared by BH2M

HydroCAD® 10.00-22 s/n 00619 © 2018 HydroCAD Software Solutions LLC

Type III 24-hr 1-YR Rainfall=2.60"

Printed 7/24/2023

Page 2

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment SA-1: Runoff Area=377,705 sf 7.74% Impervious Runoff Depth>0.67"
Flow Length=877' Tc=48.1 min CN=76 Runoff=3.15 cfs 0.486 af

Subcatchment SA-1A: Runoff Area=19,326 sf 13.94% Impervious Runoff Depth>0.87"
Flow Length=318' Tc=22.2 min CN=80 Runoff=0.31 cfs 0.032 af

Subcatchment SA-1B: Runoff Area=6,653 sf 53.36% Impervious Runoff Depth>1.44"
Flow Length=320' Tc=16.8 min CN=89 Runoff=0.20 cfs 0.018 af

Reach R1: Swale Avg. Flow Depth=0.10' Max Vel=0.75 fps Inflow=0.51 cfs 0.045 af
n=0.035 L=68.0' S=0.0112 ' ' Capacity=68.37 cfs Outflow=0.48 cfs 0.045 af

Pond FP-1: FocalPoint 1 Peak Elev=101.31' Storage=23 cf Inflow=0.20 cfs 0.018 af
Primary=0.05 cfs 0.014 af Secondary=0.15 cfs 0.005 af Outflow=0.20 cfs 0.018 af

Pond FP-2: FocalPoint 2 Peak Elev=101.34' Storage=24 cf Inflow=0.31 cfs 0.032 af
Primary=0.05 cfs 0.020 af Secondary=0.27 cfs 0.012 af Outflow=0.31 cfs 0.032 af

Pond OS-1: FP-1 Overflow Peak Elev=97.22' Inflow=0.51 cfs 0.045 af
12.0" Round Culvert n=0.013 L=63.0' S=0.0049 ' ' Outflow=0.51 cfs 0.045 af

Pond OS-2: FP-2 Overflow Peak Elev=97.44' Inflow=0.32 cfs 0.029 af
8.0" Round Culvert n=0.013 L=31.0' S=0.0052 ' ' Outflow=0.32 cfs 0.029 af

Pond RT-1: FP-1 R-Tanks Peak Elev=4,332.04' Storage=101 cf Inflow=0.05 cfs 0.014 af
Outflow=0.07 cfs 0.011 af

Pond RT-2: FP-2 R-Tanks Peak Elev=3,551.42' Storage=121 cf Inflow=0.05 cfs 0.020 af
Outflow=0.06 cfs 0.017 af

Link AP-1: Inflow=3.40 cfs 0.531 af
Primary=3.40 cfs 0.531 af

Total Runoff Area = 9.267 ac Runoff Volume = 0.536 af Average Runoff Depth = 0.69"
91.21% Pervious = 8.453 ac 8.79% Impervious = 0.815 ac



TECH SHEET

Planting Instructions

Standard Operating Procedure for Planting Vegetation Within the FocalPoint System

Placing the Plant:

1. Dig planting holes the depth of the root ball and two to three times as wide as the root ball. Wide holes encourage horizontal root growth that plants naturally produce.
2. With trees, you must ensure you are not planting too deep. Don't dig holes deeper than root balls. The media should be placed at the root collar, not above the root collar. Otherwise the stem will be vulnerable to disease.

Planting:

1. Remove plastic containers from container-grown plants. For plants in fiber pots, break away the top or remove the pot entirely.
2. If roots are circling around the root ball exterior, cut through the roots in a few places and remove the first inch of roots and planting material around the root ball. Cutting helps prevent circling roots from eventually girdling the trunk. If roots are not circling, the root ball should still be rubbed to loosen roots and promote growth into the media.
3. Remove tags and labels from plants.
4. Prune broken branches or suckers.
5. Only stake trees with large crowns, or those situated on windy sites or where people may push them over. Stake for a maximum of one year. Allow trees a slight amount of flex rather than holding them rigidly in place. Use guying or attach material that won't damage the bark. To prevent trunk girdling, remove all guying material after one year.
6. Plants should be watered at planting, especially during drought periods.

Spacing:

	Shrubs	Clump Grasses	Small Trees
Rootball Size	< 1 gallon 5 gallons 15 gallon	Plant clump grasses 24 inches on center	Plan small trees 12 feet on center
Spacing On Center	24 inches 42 inches 60 inches		

Mulching:

1. Cover the exposed root ball top with mulch. No mulch volcanoes! Mulch should not touch the plant base because it can hold too much moisture and invite disease and insects. Evenly place 3 inches of double-shredded hardwood mulch on the surface of the media.

Erosion Control

1. Where water is entering a focal point in one location, be sure to place erosion control stones to prevent scouring (like we did at English Assoc.)

Let me know if you have questions!

THINGS NOT TO DO:

Mulch in excess of 3 inches

Compacting media around the root ball

Do not use annuals

Keep in mind that some perennials (i.e. daylilies, hostas, etc...) die back in fall and re-emerge in spring. If you want greenery year round, be mindful of the perennials used.



Plant Selection

General Information

It's important to understand that the FocalPoint High Performance Modular Biofiltration System (HPMBS) uses a very high flow, coarse sand media with about 10% organic by volume. The media is designed to drain very quickly but through various physical, chemical and biological processes to capture nutrients and other pollutants very efficiently. It is an open system, thus, it receives nutrients and organic material from the contaminated runoff every time it rains.

As a filter it treats a very large impervious surface and is exposed to much more water compared to a typical landscape plant. For example, a typical landscape shrub (on the east coast) would only receive an annual rainfall volume of about 40 inches per square foot or 3.3 ft. of run off per year. A HPMBS treating 1/4 acre of impervious surface would receive over 1,200 inches per square ft. or 100 ft. of runoff per year.

As a result of this unique circumstance, the FocalPoint HPMBS creates a completely different environment when compared with typical growing media or soil, and therefore many common rules and traditional landscape industry concerns about soils and plant productivity are not applicable. Although possibly counter intuitive, the science of high flow rate biofiltration media is well understood. FocalPoint's implementations began in 2009 in Texas, and now reach across the U.S and all are working well with the plants thriving.

General Rules

1. Native Plants are best suited as they adjust well to periodic droughts and temperature extremes. Plants should be watered at planting, especially during drought periods. Use USDA Hardiness zones as the first guide for plants. Keep in mind that some perennials (i.e. daylilies, hortas etc. die back in fall and re-emerge in spring. If you want green year round be mindful of the perennials used)
2. Root morphology is important. Shallow fibrous root systems are best, generally only grow to depths of 3 ft. Dig planting holes the depth of the root ball and two to three times as wide as the root ball. Wide holes encourage horizontal root growth that plants naturally produce. If roots are circling around the root ball exterior, cut through the roots in a few places and remove the first inch of roots and plant in material around the root ball. Cutting helps prevent circling roots from eventually girdling the trunk. If roots are not circling, the root ball should still be rubbed to loosen roots and promote growth into the media.

Spacing	Shrubs			Clump Grasses	Small Trees
	Rootball Size	< 1 gallon	5 gallons	15 gallon	
Spacing On Center		24 inches	42 inches	60 inches	Plant clump grasses 24 inches on center Plan small trees 12 feet on center

3. Small trees, woody shrubs or herbaceous plants are all suitable for the system. With trees, you must ensure you are not planting too deep. Don't dig holes deeper than root balls. The media should be placed at the root collar. Otherwise the stem will be vulnerable to disease.
4. Where water is entering a HPMBS in one location be sure to place erosion control stones to prevent scouring.

5. Generally facultative plants that like well drained soils should be used. Despite the volume of water treated, the soil drains very well so facultative-wet or obligate plants will not do well in these systems. If runoff could be contaminated with road salts, salt tolerant plants should be used.
6. Soil moisture is maintained through the use of 10% peat moss in the original media mix and the use of 3 inch layer of mulch on the media surface. Over the years, due to routine replacement of the mulch and ongoing input of organic material from the runoff (leaf litter, organics and detritus materials), this level of organic content is maintained. Through experience this has been adequate to help the plants survive extended droughts.
7. Plant selection can sometimes be a function of the soil depth used for the HPMBs. For example, if large canopy trees are required, a soil depth of 5 ft. or more may be needed to prevent wind throw. If there is only 1ft. of media then flowers or grasses should be used. Only stake trees with large crowns or those situated on windy sites or where people may push them over for a maximum of one year. Allow trees a slight amount of flex rather than holding them rigidly in place. Use guying or attach material that won't damage the bark. To prevent trunk girdling, remove all guying material after one year.
8. The palette used is often dictated by the list of acceptable materials in local regulations. Most of the time, it is possible to find

Q & A with a Registered Landscape Architect

Q. Are plants suitable for use with FocalPoint HPMBs limited to a specific palette?

A. There is no need to create a special palette of plants. You can select plants from the general list attached or you can select from a list of approved required landscape materials. All of the plants on the attached list will work in the filter media. This list can be modified based on the USDA hardiness zones.

Q. What specific organic matter exists in the soil?

A. The media contains 10% by volume peat moss. Over the years the decaying mulch, roots, fungi, bacteria and organic inputs from stormwater runoff add to the organic mix as it evolves a more natural soil strata.

Q. Are there specific aged organic substrates used in the mix? If so, what?

A. As indicated above, peat and other external organic inputs.

Q. Are any fertilizers incorporated into this mix? If so, are they organic or synthetic?

A. No fertilizers are required as the system receives all the nutrient inputs necessary from stormwater runoff.

Q. What is the pH of the soil?

A. Soil pH ranges from 6.5 to 6.8, the peat moss and mulch have a tendency to buffer the sand pH.

Q. What is the EC level in this soil?

A. Due to the unique nature of the sandy media and how it receives and captures nutrients from the high volumes of contaminated runoff the EC level of the soil is not a very useful indication of the amount of nutrients available.

Q. FocalPoint HPMBs is designed to infiltrate water, but does it have any moisture holding capacity?

A. Yes it has soil moisture holding capacity through the use of peat moss and mulch. Additionally this system receives more water, more often, than a typical landscape plant due to its larger impervious drainage area.

Species/Common Name	Exposure	Mature Size	Time of Bloom	Comments
Aster novae angliae/ New England Aster	Full sun to partial	1-6'	September- October	<i>Violet flowers attract butterflies, good food source for birds and mammals; saturated to dry soils</i>
Helianthus angustifolius/ Swam Sunflower	Sun	6-8'	August- October	<i>Yellow flowers with maroon centers; butterfly nectar plant; birds eat seeds</i>
Hibiscus militaris/ Halberd Rose Mallow	Full sun	4-6'	July- September	<i>Large plant that assumes shrub-like proportions. Large pink or white blooms; hummingbird nectar plant</i>
Hibiscus moscheutos/ Rose Mallow	Full sun	3-8'	July- September	<i>Shrub-like plant; very large pink or white flowers; hummingbird nectar plant; can grow with roots in water</i>
Panicum virgatum/ Switch Grass	Sun	3-6'	July- October	<i>Tolerates wet to well-drained soil; flowers appear to float; high wildlife value; yellow Fall color; buff in Winter; excellent wildlife habitat and erosion control</i>
Vernonia noveboracensis/ New York Ironweed	Sun	4-8'	August- October	<i>The red-purple flowers of this wet meadow plant attract butterflies; will tolerate seasonal inundation</i>
Aster laevis/ Smooth or Blue Bird Aster	Sun	2-5'	August- October	<i>Pale blue flowers attract butterflies, good food source for birds and mammals; moist to dry soils; mildew free</i>
Boltonia asteroides/ Boltonia	Full sun to partial	4-6'	Late Summer to Late Autumn	<i>Easy to grow native with aster-like white or pink flowers. Attractive grey-green foliage. Prefers well drained moist soil</i>
Cimicifuga racemosa/ Black Snakeroot	Full sun to partial	3-8'	Mid Summer to early Autumn	<i>Bold woodland edge plant with white, wand-like blooms. Handsome foliage</i>
Elymus virginicus/ Virginia Wild Rye	Partial shade to shade	1.5-5.5	June- October	<i>Found in wooded stream sides, floodplains, and the woodland edge, this grass tolerates from 15-30 days of flooding as well as drought. Spreads easily, good for erosion control</i>
Eupatorium fistulosum/ Joe Pye Weed	Sun	1.5-6'	July- September	<i>Huge, dusty-pink flowers attract butterflies; good food source for birds and mammals; saturated to dry soils; good Fall color</i>
Eupatorium perfoliatum/ Boneset	Full sun to partial shade	3-4'	July- October	<i>Large, flat, pearl-white flower heads attract butterflies; mallards and grouse eat seeds</i>
Eupatorium rugosum/ White Snakeroot	Full sun to partial shade	3-4'	June- September	<i>Flowers so white they glow in twilight; cultivar with purple foliage is available</i>
Filipendula rubra/ Queen of the Prairie	Full sun to light shade	4-6'	Early to Mid Summer	<i>Prefers well drained evenly moist soils but will tolerate wet soils. Foamy clusters of tiny pink blooms. Prairie native</i>
Helianthus angustifolius/ Swamp Sunflower (P)	Sun	6-8'	August- October	<i>Yellow flowers with maroon centers; butterfly nectar plant; birds eat seeds</i>
Myosotis laxa/ Smaller Forget-me-not	Partial shade	3-6"	Early Spring to Mid Summer	<i>Will die back during dry summer and reappear in winter; will not tolerate consistently dry conditions; clusters of clear blue blooms with a yellow eye; found near springs and on muddy shores</i>

Species/Common Name	Exposure	Mature Size	Time of Bloom	Comments
Chasmanthium latifolium/ River Oaks (M)	Sun to partial shade	2-3'	July- September	<i>Broad-bladed grass resembles bamboo; bright green in spring, turns copper in Fall and tan in Winter; dangling "oats"; tolerates dry shade</i>
Aronia arbutifolia/ Red Chokeberry (P)	Full sun to partial shade	4-10'	May-June	<i>White flowers with red stamens; bright red, edible berries persist in Winter; salmon to scarlet Fall color; wildlife; bank stabilizer; dry to wet soils</i>
Aronia melanocarpa/ Black Chokeberry	Full sun to partial shade	3-5'	May	<i>White flowers with red stamens; black berries persist in Winter; dark purple-red Fall color; wildlife; bank stabilizer; dry to wet soils</i>
Aronia prunifolia/ Purple Chokeberry	Full sun to partial shade	5-12'	April- May	<i>White flowers with red stamens; dark purple berries persist in Winter; dark purple-red Fall color; wildlife; bank stabilizer; moist to wet soils</i>
Baccharis halimifolia/ Groundsel Tree (M)	Sun	6-12'	August- September	<i>White flowers become silver-white seed-heads lasting through November; green twigs and striped bark add winter interest; moist to wet soils</i>
Callicarpa americana/ Beautyberry (M)	Full sun to partial shade	4-8'	June- August	<i>Lavender-pink flowers on new wood; yellow Fall color; purple berries ring branch through winter; dry to wet soils</i>
Cephalanthus occidentalis/ Buttonbush (P)	Sun	3-10'	July -August	<i>White flower buttons turn tan and persist; yellow Fall color; moist to flooded soil; high wildlife value including butterflies and hummingbirds</i>
Clethra alnifolia / Sweet Pepperbush (P)	Full sun to partial shade	6-10'	July- September	<i>Very fragrant white or pink flowers; yellow Fall color; butterfly nectar plant</i>
Cornus sericea / Red Twig	Full sun to partial shade	7-9'	Late Spring- Summer	<i>White flowers; blue or white berries; high wildlife value; red/maroon Fall color; scarlet twigs in winter; good bank stabilizing shrub; Northeastern native</i>
Euonymous americanus/ Hearts-a-bustin (P)	Partial shade	1.5-6'	May- June	<i>Small brown flowers; fuchsia hearts with scarlet seeds; yellow to orange Fall color; green stems add winter interest; moist to wet soils</i>
Hamamelis virginiana/ Witch Hazel (P)	Full sun to partial shade	4-15'	September- December	<i>Tolerates irregular flooding or dry sites; yellow fragrant strap-like flowers; yellow Fall color; green stems add winter interest; moist to wet soils</i>
Hydrangea arborescens/ Wild Hydrangea (P)	Partial Shade	3-8'	June-July	<i>Creamy white flowers on new wood dry tan and persist; dry to moist soil</i>
Hypericum densiflorum/ St John's Wort (P)	Full sun to partial shade	3-6'	Summer	<i>Yellow flowers; tolerates variety of moisture regimes; medium wildlife value</i>
Ilex glabra / Inkberry (P)	Full sun to partial shade	3-10'	May-July	<i>Slow-growing evergreen; can be formally pruned; creamy-white flowers; tolerates wet soils; need male female for berries; high wildlife value</i>
Ilex verticillata/ Winterberry (P)	Full sun to partial shade	6-12'	June-July	<i>Can also be trained as small tree; white flowers; yellow Fall color; need male and female for scarlet berries; high wildlife value; tolerates wet soil</i>
Juniperus communis 'Compressa'/ Juniper	Sun	3-6'		<i>Mounded shrub; deep taproot; high wildlife value, evergreen</i>

Species/Common Name	Exposure	Mature Size	Time of Bloom	Comments
Juniperus horizontalis/ Creeping Juniper	Sun	<1-3'		Matted shrub; deep taproot; high wildlife value; 'Bar Harbor' variety has plum foliage in winter; center dies back as plant ages
Leucothoe recemosa/ Fetterbush (M)	Partial shade to shade	3-8'	May-June	White drooping flowers; evergreen leaves turn red/purple after frost; moist soil
Lindera benzoin/ Spicebush (P)	Sun to shade	6-12'	March-May	Chartreuse flowers; scarlet berries taken by birds; leaves fragrant when crushed; yellow Fall color; butterfly host plant; tolerates wet or dry sites
Myrica cerifera/ Wax Myrtle (P)	Sun to shade	6-10'	March-April	Chartreuse or white flowers; fragrant evergreen leaves; fragrant berries taken by birds and used for candles; can prune as hedge; dry to wet soils
Myrica pennsylvanica/ Bayberry (P)	Full sun to partial	6-8'	April-May	Chartreuse or white flowers; semi-evergreen fragrant leaves; fragrant berries taken by birds and used for candles; need male and female plants
Physocarpus opulifolius/ Ninebark (P)	Full sun to partial	6-12"	May-June	Peeling bark; pink or white flower clusters; moist or wet soil; medium wildlife value
Rhododendron canescens/ Sweet Azalea (P)	Full sun to partial shade	3-10'	May-June	White or pink, fragrant flowers; moist, acid, well-drained soil; red or yellow Fall color
R. periclymenoides/ Pinxterbloom Azalea (P)	Full sun to partial	3-10'	April-May	Pink flowers open before leaves are out; moist, acid, well-drained soil; red/wine/orange brilliant Fall Color
Rhododendron viscosum/ Swamp Azalea (P)	Full sun to partial shade	6-8'	June-August	Intensely fragrant white flowers; bronze Fall color; moist to wet soils
Rhus aromatica/ Fragrant Sumac (M)	Full sun to partial shade	6'	March-May	Spicy smelling leaves turn orange and scarlet in Fall; high wildlife value; variety 'gro-low' makes good groundcover for slopes
Rhus copallina/ Shining Sumac (P)	Sun	20'	June-July	Chartreuse flowers; scarlet fruit; bright red Fall color; wildlife value; tolerates dry, sandy soils; spreads
Rhus glabra/ Smooth Sumac (P)	Sun	9-15'	June-July	Chartreuse flowers; scarlet fruit; bright red Fall color; wildlife value; tolerates dry, sandy soils; forms colonies with interesting growth habit
Rhus typhina/ Staghorn Sumac (P)	Sun	10-25'	June-July	Chartreuse flowers; scarlet fruit; bright orange Fall color; wildlife value; tolerates dry, sand soils; forms groves with interesting growth habit
Rosa carolina/ Pasture Rose (P)	Full sun to partial	.5-3'	May-June	Pink, fragrant flowers; red hips; high wildlife value; good Fall color; forms thickets; dry to moist soil
Rosa palustris/ Swamp Rose (P)	Full sun to partial shade	8'	July-August	Dark pink flowers; red hips; high wildlife value; good Fall color; moist to wet soil
Sambucus canadensis/ Elderberry (P)	Sun to shade	6-12'	April-May	Large white flower clusters; ornamental, edible purple berries; wildlife value; moist to wet soils; forms thickets; bank stabilizer; fast-growing

Species/Common Name	Exposure	Mature Size	Time of Bloom	Comments
Vaccinium stamineum/ Deerberry (P)	Full sun to partial shade	5-10'	April-June	White flowers; edible fruit; scarlet Fall color; wildlife value; dry to moist soil
Viburnum acerifolium/ Maple-leaved Vib. (P)	Full sun to partial shade	3-6.5'	April-May	Creamy white flowers; blue berries; pink/ crimson/ purple Fall color; can tolerate dry to moist soil; wildlife value; best in groups
Viburnum cassinoides/ Northern Wild Raisin (M)	Full sun to partial shade	6-8'	June	Fragrant white flowers; pink, red and blue berries turn black; wine-red Fall color; high wildlife value including butterflies
Viburnum dentatum/ Arrow Wood (P)	Full sun to partial shade	8-10'	May- June	Creamy white flowers; blue berries; crimson Fall color can tolerate wet to dry soil; high wildlife value; wood was used for arrows
Viburnum lentago/ Nannyberry (M)	Full sun to partial shade	8-15'	May	White flowers; sweet, edible black berries; purple-red Fall color; very adaptable; high wildlife value
Viburnum prunifolium/ Black Haw (P)	Full sun to partial shade	20'	April-May	White flowers; black berries; purple-red Fall color; very adaptable; high wildlife value; dry to wet soils; slow grower
Viburnum trilobum/ American Cranberry	Full sun to partial shade	8-12'	May	White flowers; edible red berries; yellow-purple-red Fall color; moist to boggy soil; high wildlife value; Northern native

Representative Plant List



Boltonia Asteroides / Boltonia



Aster Novae Angliae / New England Aster



Helianthus Angustifolius / Swamp Sunflower



Panicum Virgatum / Switchgrass



Vernonia Novaeboracensis / New York Ironweed



Cimicifuga Racemosa / Black Snakeroot

Ferguson Waterworks
94 Pleasant Ave
South Portland, ME 04106



Chris MacDonald, PE
BH2M
380B Main Street
Gorham, ME 04038

July 10th, 2023

SUBJECT: 66 8th Street – Portland, ME
FocalPoint Biofilter Design Review and Construction Oversight

Dear Chris,

Thank you for forwarding the plans for the proposed road extension in Portland, Maine to Ferguson Waterworks for review. Our team has reviewed FocalPoint Plan Sheet 6, dated June 2023, as well as Hydrocad modeling, which shows the following FocalPoint systems:

- FocalPoint 1 – 20 SF with domed overflow control structure
 - 12 ea. R-Tank^{HD} Single Treatment row underdrain
- FocalPoint 2 – 20 SF with domed overflow control structure
 - 15 ea. R-Tank^{HD} Single Treatment row underdrain

Ferguson provides the following review comments:

- The FocalPoint systems are set in a recessed vegetated ‘bowl’ area providing a temporary ponding volume.
- FocalPoint filter bed areas are computed correctly according to the sizing criteria approved by MEDEP.
- Runoff flows into both systems from the surrounding pavement through curb openings and a Rain Guardian Turret pretreatment structure.
- Additional storage (expanded R-Tanks) and capped outlet pipes are provided for attenuation of channel protection volume and controlled release to the drain basin outlet.
- The details show the typical FocalPoint section consisting of 3” mulch, 18” media, 6” bridging stone and modular underdrain. For this project, the underdrains

consist of R-Tank^{HD} Single Treatment rows sized to treat the peak flow from the 1yr-24hr storm event according to MEDEP FocalPoint design guidelines.

- 12" dia. domed overflow structures are provided to convey larger storm events – essentially as a bypass. A domed grate inlet for the overflow structure with a filter insert to is specified to prevent larger debris from entering the system when the bypass is activated during larger storms.
- Please ensure a landscape plan is prepared including required plantings for the FocalPoint bed areas.

Overall, Ferguson takes no exceptions to the location and application of the FocalPoint system for this project to provide WQ treatment only.

With regard to the installation, Ferguson Waterworks will host a preconstruction meeting with the site contractor and will be on-site during the entire installation to ensure that the installation is being conducted in accordance with our standard installation procedures.

Please review and contact me with any questions from your office. We look forward to working with you on this project.

Sincerely,

Brett Keszczyk

Green Stormwater Infrastructure Designer – Ferguson Waterworks

Cc: Robert J Woodman,
National Urban Green Infrastructure Manager

Appendix E
Erosion and Sedimentation Control Inspection and Maintenance Plan

**EROSION AND SEDIMENTATION CONTROL
INSPECTION AND MAINTENANCE PLAN**

**EIGHTH STREET SUBDIVISION
66 Eighth Street
Portland, Maine**

Submitted by:

LAURIE SIROIS

Prepared by:



Date:
July 2023

TABLE OF CONTENTS

1.0	INTRODUCTION	1
1.1	PROJECT DESCRIPTION.....	1
1.2	REQUIRED PERMITS	2
1.3	REFERENCES	2
1.4	RESPONSIBLE PARTIES.....	3
1.5	INSPECTION AND MAINTENANCE – DURING CONSTRUCTION.....	4
1.6	INSPECTION AND MAINTENANCE – POST-CONSTRUCTION	6
1.7	HOUSEKEEPING	8

LIST OF APPENDICES

APPENDIX A	Plans
APPENDIX B	Construction Inspection Forms
APPENDIX C	Post-Construction Inspection Forms
APPENDIX D	Focalpoint Operation and Maintenance

1.0 INTRODUCTION

The intent of this plan is to establish inspection and maintenance procedures to be implemented for erosion and sedimentation control best management practices (BMP's) during construction, as well as for post-construction stormwater BMP's, for the 1035 Ocean Avenue Project. This plan has been prepared in conformance with the requirements set forth in Chapter 32 of the City of Portland code of Ordinances and 06-096 Chapter 500 – Stormwater Management and the General Permit – Construction Activity – Maine Pollutant Discharge Elimination System (Maine Construction General Permit).

1.1 PROJECT DESCRIPTION

Laurie Sirois is proposing the development of an existing single family home lot into a three lot subdivision for construction of 2 new single family homes in Portland, Maine. The project is proposed to be developed to provide buildable lots for sale and development by others. The project will require construction of an approximate 193 foot long road, utilities, and stormwater treatment. The project is partially located along an undeveloped section of the Eighth Street ROW in Portland.

The scope of work includes but is not limited to:

- Construction of a segment Eighth Street, meeting city of Portland Local Road standards.
- Installation of underground utilities for water and sewer, and proposed above ground electrical and communications.
- Construction of stormwater treatment systems
- Subbing of driveways and utility services for future development of the proposed single family home lots.

The Project will employ temporary erosion and sedimentation control BMP's during construction and permanent stormwater management BMP's for post-construction operations. Refer to the Appendix A for supporting plans, details and narratives for erosion and sedimentation control and post-construction stormwater management BMP's.

1.2 **REQUIRED PERMITS**

The following is a list of Municipal, State, and Federal permits that are required for the Project:

Municipal

City of Portland Subdivision Application

State of Maine

None

Federal

None

1.3 **REFERENCES**

This plan has been developed in accordance with the following:

- City of Portland Chapter 32 Stormwater
<https://www.portlandmaine.gov/DocumentCenter/View/1098/Chapter-32-Stormwater---Revised-11162015>
- Stormwater Management Law 38 M.R.S. §420-C and §420-D
<http://legislature.maine.gov/statutes/38/title38sec420-C.html>
<http://legislature.maine.gov/statutes/38/title38sec420-D.html>
- 06-096 Chapter 500 – Stormwater Management
<http://www.maine.gov/sos/cec/rules/06/096/096c500.docx>
- General Permit – Construction Activity
Maine Pollutant Discharge Elimination System (MPDES)
<https://www.maine.gov/dep/land/stormwater/construction.html>
- Maine Erosion and Sediment Control Best Management Practices (BMPs)
Manual for Designers and Engineers
https://www.maine.gov/dep/land/erosion/escbmps/esc_bmp_engineers.pdf
- Maine Erosion and Sediment Control Practices Field Guide for Contractors
https://www.maine.gov/dep/land/erosion/escbmps/esc_bmp_field.pdf
- MaineDOT Best Management Practices for Erosion and Sedimentation Control
<https://www.maine.gov/mdot/env/documents/bmp/BMP2008full.pdf>

1.4 **RESPONSIBLE PARTIES**

Preparer/Design Engineer: BH2M
380B Main Street
Gorham, Maine 04038
(207) 839-2771
Attn: Christopher MacDonald, P.E. #11985

Owner: Laurie Sirois
56 High Street
Yarmouth, ME 04096

General Contractor: _____

Qualified Erosion Control Inspector: _____

Post Construction Stormwater Inspector: _____

During construction the General Contractor will be responsible for implementing the erosion and sediment control BMP's as well routine inspections and maintenance of the BMP's. The Owner will retain a qualified inspector to perform weekly inspections of the erosion and sediment control BMP's during construction.

Post-construction stormwater BMP inspection, maintenance, reporting, and required recertifications will be the responsibility of the Owner or their representatives.

1.5 INSPECTION AND MAINTENANCE – DURING CONSTRUCTION

Anyone who conducts or directs an activity that involves exposing, filling or displacing soil or other earthen materials should take appropriate measures to prevent erosion and the loss of sediment beyond the project site or into a sensitive resource. Erosion and sediment control measures should be in place before the activity begins and should remain functional until the site is permanently stabilized. All measures should remain effective until all areas are permanently stabilized. Any disturbed area should be regularly inspected until the site is fully stabilized with either 90% grass cover or a permanent impervious surface such as pavement. A person who has the knowledge of erosion and sediment control measures and of stormwater management practices should inspect the site at a minimum once a week, and before and after a storm event. Any failing measure should be repaired or modified to adequately stabilize the site prior to the next storm event or no later than 7 calendar days. The inspection form found in Appendix B shall be used to record the inspection, its outcome, and the required maintenance.

Refer to the Plans found in Appendix A for additional erosion and sediment control details and narratives.

General Inspection, Maintenance, and Documentation Requirements

1. Inspection and corrective action: Inspect disturbed and impervious areas, erosion control measures, and material storage areas that are exposed to precipitation, and locations where vehicles enter or exit the site. Inspect these areas at least once a week as well as before and within 24 hours after a storm event, and prior to completing permanent stabilization measures. A person with knowledge of erosion and stormwater control, including the standards and conditions in the permit, shall conduct the inspections.
2. Maintenance: If BMP's need to be repaired, the repair work should be initiated upon discovery of the problem but no later than the end of the next workday. If additional BMPs or significant repair of BMPs are necessary, implementation must be completed within 7 calendar days and prior to any storm event. All measures must be maintained in effective operating condition until areas are permanently stabilized.
3. Documentation: Maintain a binder with construction inspection forms summarizing the inspections and any corrective action taken. The forms must include the name and qualifications of the person making the inspections, the date of the inspections, and major observations about the operation and maintenance of erosion and sedimentation controls, materials storage areas, and vehicle access points to the parcel. Refer to Appendix B for the construction inspection form. Major observations must include BMP's that need maintenance, BMP's that failed to operate as designed or proved inadequate for a particular location, and locations where additional BMPs are needed. For each BMP requiring maintenance, BMP needing replacement, and location needing additional BMPs, note in the inspection

form what corrective action taken and when it was taken. The Owner shall retain a copy of the inspection forms for a period of at least five years from the completion of permanent stabilization.

Site-Specific BMP's

Refer to the Plans found in Appendix A for narratives and details of the site-specific BMP's. The following is a list of the site-specific BMP's that may be required for the project:

- Sedimentation Barriers (Silt Fence or Erosions Control Mix Berm)
- Stabilized Construction Entrance
- Slope Stabilization
- Stone Check Dam
- Focalpoint Stormwater Treatment System
- Pumped Discharge Sediment Control Device "Dirt Bag"
- Temporary Sediment Traps and basin
- Pipe Outlet Protection

Winter Construction

Winter construction is construction activity performed during the period from November 1 through April 15. If disturbed areas are not stabilized with permanent measures by November 1 or new soil disturbance occurs after November 1, but before April 15, then these areas must be protected and runoff from them must be controlled by additional measures and restrictions.

1. Site Stabilization: For winter stabilization, hay mulch is applied at twice the standard temporary stabilization rate. At the end of each construction day, areas that have been brought to final grade must be stabilized. Mulch may not be spread on top of snow.
2. Sediment Barriers: All areas within 75 feet of a protected natural resource must be protected with a double row of sediment barriers.
3. Ditches: All vegetated ditch lines that have not been stabilized by November 1, or will be worked during the winter construction period, must be stabilized with an appropriate stone lining backed by an appropriate gravel bed or geotextile unless specifically released from this standard by Maine DEP.
4. Slopes: Mulch netting must be used to anchor mulch on all slopes greater than 8% unless erosion control blankets or erosion control mix is being used on these slopes.

Refer to the Plans contained in Appendix A for additional winter construction erosion and sediment control requirements.

1.6 INSPECTION AND MAINTENANCE – POST-CONSTRUCTION

The long-term operation and maintenance of a stormwater management system is as critical to its performance as its design and construction. Proper operation and maintenance practices ensure that stormwater BMP's continue to improve water quality by removing pollutants effectively over the long-term and decreasing the risk of re-suspending sediment. Without proper maintenance, BMPs are likely to fail and will no longer provide treatment of stormwater. The following includes a summary of the inspection, maintenance, and documentation requirements for post-construction stormwater BMP's.

Refer to the Plans contained in Appendix A for details and locations of site-specific post-construction BMP's.

General Inspection, Maintenance, and Documentation Requirements

1. Inspection and maintenance: All measures must be maintained in effective operating condition. A person with knowledge of erosion and stormwater control, including the standards and conditions in the permit, shall conduct the inspections. The following areas, facilities, and measures must be inspected and identified deficiencies must be corrected. Areas, facilities, and measures other than those listed below may also require inspection on a specific site.
 - a) Inspect vegetated areas, particularly slopes and embankments, early in the growing season or after significant rainfall events (1.0 inches in 24-hour period) to identify active or potential erosion problems. Replant bare areas or areas with sparse growth. Where rill erosion is evident, armor the area with an appropriate lining or divert the erosive flows to on-site areas able to withstand the concentrated flows.
 - b) Inspect ditches, swales and other open stormwater channels in the spring, in late fall, and after significant rainfall events (0.5 inches in 24-hour period) to remove any obstructions to flow, remove accumulated sediments and debris, to control vegetated growth that could obstruct flow, and to repair any erosion of the ditch lining. Vegetated ditches must be mowed at least annually or otherwise maintained to control the growth of woody vegetation and maintain flow capacity. Any woody vegetation growing through riprap linings must also be removed. Repair any slumping side slopes as soon as practicable. If the ditch has a riprap lining, replace riprap on areas where any underlying filter fabric or underdrain gravel is showing through the stone or where stones have dislodged. The channel must receive adequate routine maintenance to maintain capacity and prevent or correct any erosion of the channel's bottom or side slopes.

-
- c) On-site inspection of the Focalpoint stormwater system shall occur shall occur 24 hours after each significant rainfall (0.5" of precipitation over a 24-hour period) for the first year after construction to ensure the Focalpoint media processes stormwater without clogging, creating sinkholes or uneven settlement. Check water levels in underground storage through observation port to ensure water drains between the first 24 to 48 hours. Thereafter, the Focalpoint shall inspected be twice per year (May 1 and October 1). See Appendix D for Operation and Maintenance Guide. The following shall be accomplished:
- Record date of inspection
 - Identify person making the inspection
 - Remove debris.
 - Ensure an even 3" distribution of mulch on surface
 - Mow grassed slopes and/or repair slopes if eroded.
 - Contract with approved maintenance provider to perform a full system inspection and maintenance annually
- d) Inspect culverts in the spring, in late fall, and after heavy rains to remove any obstructions to flow; remove accumulated sediments and debris at the inlet, at the outlet, and within the conduit; and to repair any erosion damage at the culvert's inlet and outlet.
2. Regular maintenance: Clear accumulations of winter sand in parking lots and along roadways at least once a year, preferably in the spring. Accumulations on pavement may be removed by pavement sweeping. Accumulations of sand along road shoulders may be removed by grading excess sand to the pavement edge and removing it manually or by a front-end loader. Grading of gravel roads, or grading of the gravel shoulders of gravel or paved roads, must be routinely performed to ensure that stormwater drains immediately off the road surface to adjacent buffer areas or stable ditches, and is not impeded by accumulations of graded material on the road shoulder or by excavation of false ditches in the shoulder. If water bars or open-top culverts are used to divert runoff from road surfaces, clean-out any sediments within or at the outlet of these structures to restore their function.
3. Documentation: Maintain a binder of inspection forms summarizing inspection, maintenance, and any corrective actions taken. The inspection forms must include the date on which each inspection or maintenance task was performed, a description of the inspection findings or maintenance completed, and the name of the inspector or maintenance personnel performing the task. Refer to Appendix C for inspection forms. If a maintenance task requires the clean-out of any sediments or debris, indicate where the sediment and debris was disposed of after removal. The log must be provided to the city of Portland DPW on or by June 30 of each year. The Owner shall retain a copy of the logs for a period of at least five years from the completion of permanent stabilization.
-

-
4. The site-specific post-construction BMP's for the 1035 Ocean Avenue include the following:
 - Focalpoint stormwater treatment system
 - Storm Drain System (including culverts, storm drains, catch basins, drain manholes, and vegetated and reinforced ditches/swales)

1.7 **HOUSEKEEPING**

The following performance standards shall apply:

1. Spill prevention: Controls must be used to prevent pollutants from construction and waste materials stored on site to enter stormwater, which includes storage practices to minimize exposure of the materials to stormwater. The site contractor or operator must develop and implement as necessary appropriate spill prevention, containment, and response planning measures.

NOTE: Any spill or release of toxic or hazardous substances must be reported to the Department. For oil spills, call 1-800-482-0777 which is available 24 hours a day. For spills of toxic or hazardous material, call 1-800-452-4664 which is available 24 hours a day. For more information, visit the Department's website at :

<http://www.maine.gov/dep/spills/emergspillresp/>

2. Groundwater protection: During construction, liquid petroleum products and other hazardous materials with the potential to contaminate groundwater may not be stored or handled in areas of the site draining to an infiltration area. An "infiltration area" is any area of the site that by design or as a result of soils, topography and other relevant factors accumulates runoff that infiltrates into the soil. Dikes, berms, sumps, and other forms of secondary containment that prevent discharge to groundwater may be used to isolate portions of the site for the purposes of storage and handling of these materials. Any project proposing infiltration of stormwater must provide adequate pre-treatment of stormwater prior to discharge of stormwater to the infiltration area, or provide for treatment within the infiltration area in order to prevent the accumulation of fines, reduction in infiltration rate, and consequent flooding and destabilization.

See 06-096 Chapter 500 - Appendix D for license by rule standards for infiltration of stormwater.

NOTE: Lack of appropriate pollutant removal best management practices (BMPs) may result in violations of the groundwater quality standard established by 38 M.R.S.A. §465-C(1).

-
3. Fugitive sediment and dust: Actions must be taken to ensure that activities do not result in noticeable erosion of soils or fugitive dust emissions during or after construction. Oil may not be used for dust control, but other water additives may be considered as needed. A stabilized construction entrance (SCE) should be included to minimize tracking of mud and sediment. If off-site tracking occurs, public roads should be swept immediately, no less than once a week, and prior to significant storm events. Operations during dry months that experience fugitive dust problems, should wet down unpaved access roads once a week or more frequently as needed with a water additive to suppress fugitive sediment and dust.

NOTE: Take care in sourcing water. Dewatering a stream without a permit from the Department may violate state water quality standards and the *Natural Resources Protection Act*.

4. Debris and other materials: Minimize the exposure of construction debris, building and landscaping materials, trash, fertilizers, pesticides, herbicides, detergents, sanitary waste, and other materials to precipitation and stormwater runoff. These materials must be prevented from becoming a pollutant source.

NOTE: To prevent these materials from becoming a source of pollutants, construction and post- construction activities related to a project may be required to comply with applicable provision of rules related to solid, universal, and hazardous waste, including, but not limited to, the Maine solid waste and hazardous waste management rules; Maine hazardous waste management rules; Maine oil conveyance and storage rules; and Maine pesticide requirements.

5. Excavation de-watering: Excavation de-watering is the removal of water from trenches, foundations, coffer dams, ponds, and other areas within the construction area that retain water after excavation. In most cases the collected water is heavily silted and hinders correct and safe construction practices. The collected water removed from the ponded area, either through gravity or pumping, must be spread through natural wooded buffers or removed to areas that are specifically designed to collect the maximum amount of sediment possible, like a cofferdam sedimentation basin. Avoid allowing the water to flow over disturbed areas of the site. Equivalent measures may be taken if approved by the Department.

NOTE: Dewatering controls are discussed in the “Maine Erosion and Sediment Control BMPs, Maine Department of Environmental Protection.”

6. Authorized Non-stormwater discharges: Identify and prevent contamination by non-stormwater discharges. Where allowed non-stormwater discharges exist, they must be identified and steps should be taken to ensure the implementation of appropriate pollution prevention measures for the non- stormwater component(s) of the discharge. Authorized non-stormwater discharges are:

- a) Discharges from firefighting activity;

-
- b) Fire hydrant flushings;
 - c) Vehicle washwater if detergents are not used and washing is limited to the exterior of vehicles (engine, undercarriage and transmission washing is prohibited);
 - d) Dust control runoff in accordance with permit conditions;
 - e) Routine external building washdown, not including surface paint removal, that does not involve detergents;
 - f) Pavement washwater (where spills/leaks of toxic or hazardous materials have not occurred, unless all spilled material had been removed) if detergents are not used;
 - g) Uncontaminated air conditioning or compressor condensate;
 - h) Uncontaminated groundwater or spring water;
 - i) Foundation or footer drain-water where flows are not contaminated;
 - j) Uncontaminated excavation dewatering;
 - k) Potable water sources including waterline flushings; and
 - l) Landscape irrigation.
7. Unauthorized non-stormwater discharges: The Department's approval under this Chapter does not authorize a discharge that is mixed with a source of non-stormwater, other than those discharges in compliance with 06-096 Chapter 500 - Appendix C (6). Specifically, the Department's approval does not authorize discharges of the following:
- a) Wastewater from the washout or cleanout of concrete, stucco, paint, form release oils, curing compounds or other construction materials;
 - b) Fuels, oils or other pollutants used in vehicle and equipment operation and maintenance;
 - c) Soaps, solvents, or detergents used in vehicle and equipment washing; and
 - d) Toxic or hazardous substances from a spill or other release.
8. Additional requirements: Additional requirements may be applied on a site-specific basis.

Appendix A
Plans

Appendix B
Construction Inspection Forms

CONSTRUCTION INSPECTION FORM FOR EROSION AND SEDIMENT CONTROL						
General Information:						
Site Name:		Date:		Inspected by:		
Owner:						
Retained 3PI:		Last Rain Date:		Amount:		
Reason for Inspection:		Weekly	Winter	Final	Rain Event	Complaint
Description of disturbed area:						
Photos:						
	YES/NO/NA	COMMENTS				
1. Is an Erosion and Sediment Control Plan available?						
ESC plan on-site and followed						
Other:						
2. Are all erosion control practices installed properly, maintained and functioning?						
Disturbed areas stable						
Concentrated flow inlet/outlet protection						
All areas at final grade						
Disturbed dormant areas stabilized						
Access roads and parking						
Hillsides and stockpiles						
Other:						
3. Are all sedimentation control practices installed properly, maintained and functioning?						
Construction entrance						
Sedimentation basins/traps/diversions						
Perimeter controls						
Check dams						
Other:						
4. Is maintenance of ESC measures, construction activities and housekeeping kept-up?						
Sedimentation/erosion in ditches						
Tracked Sediment or dust at exits						
Hazardous material storage and spill control practices						
Waste management (concrete, hazardous material, etc.)						
Other:						
5. Violation, Corrective Actions, Recommendations						
Sediment discharged from site?						
Corrective action required?						
Site compliant with all permits?						
Notice of violation or stop work order issued?						
Comments/Corrective Actions (complete corrective actions before the next rain event and within 7 day)						

Appendix C
Post-Construction Inspection Forms

Eighth Street Subdivision Post-Construction Inspection Form (Ditches, Swales and Open Stormwater Channels)					
Project name:		Date:		Inspected by:	
Owner name:					
Last rain date:		Amount:			
Reason for inspection:		Rain Event	Monthly	Annually	Maint. Performed
					Other (Specify)
General description of BMP condition/recent maintenance performed:					
Photos: (Attach)					
Inspection Details		Comments		Maintenance Required	
Obstructions, sediment or debris noticeable in ditch line?					
Mowing required?					
Woody vegetation apparent in ditches?					
Side slopes stable? Signs of slumping?					
Rip rap stable? Underlying filter fabric visible?					
Additional Comments:					

Eighth Street Subdivision Post-Construction Inspection Form (Focalpoint; refer to Appendix D for additional Information)					
Project name:		Date:		Inspected by:	
Owner name:					
Last rain date:		Amount:		Depth of Water in Filter:	
Reason for inspection:		Rain Event	Monthly	Annually	Maint. Performed Other (Specify)
General description of BMP condition/recent maintenance performed:					
Photos: (Attach)					
Inspection Details		Comments		Maintenance Required	
Inlets, culverts, and surface of Focalpoint free of debris and siltation?					
Signs of settlement or sinkholes in surface of Focalpoint media? Evenly distributed 3" mulch layer?					
Heathy well established plants on surface of Focalpoint media?					
Inspect subsurface storage system via observation / maintenance port for signs of siltation. Drained within 24 to 48 hours?					
Grassed slopes intact with well established grass, showing no erosion, and appropriately mowed?					
Outlet control structure free of debris, clogging and sediment accumulation?					
Date of last maintenance call by contracted approved stormwater maintenance provider?					
Additional Comments:					

Eighth Street Subdivision Post-Construction Inspection Form (Roadway and Parking Areas)						
Project name:		Date:		Inspected by:		
Owner name:						
Last rain date:		Amount:				
Reason for inspection:		Rain Event	Monthly	Annually	Maint. Performed	Other (Specify)
General description of BMP condition/recent maintenance performed:						
Photos: (Attach)						
Inspection Details		Comments		Maintenance Required		
Winter sand accumulation apparent?						
Pavement Sweeping required?						
Gravel shoulders graded appropriately?						
Gravel road grading required?						
Low spots causing puddling?						
Additional Comments:						

Eighth Street Subdivision Post-Construction Inspection Form (Storm Drain System including culverts)						
Project name:		Date:		Inspected by:		
Owner name:						
Last rain date:		Amount:				
Reason for inspection:		Rain Event	Monthly	Annually	Maint. Performed	Other (Specify)
General description of BMP condition/recent maintenance performed:						
Photos: (Attach)						
Inspection Details		Comments		Maintenance Required		
Accumulated debris or sediment at inlet, outlet, or within culvert/storm drain?						
Flow obstructions present?						
Erosion apparent at culvert inlet/outlet?						
Additional Comments:						

Appendix D
Focalpoint Operation and Maintenance



FocalPoint

BIOFILTRATION SYSTEMS

HIGH PERFORMANCE MODULAR BIOFILTRATION SYSTEM (HPMBS)

Operations & Maintenance



GENERAL DESCRIPTION

The following general specifications describe the general operations and maintenance requirements for the FocalPoint® High Performance Modular Biofiltration System (HPMBS). The system utilizes physical, chemical and biological mechanisms of a soil, plant and microbe complex to remove pollutants typically found in urban stormwater runoff. The treatment system is a fully equipped, modular, constructed in place system designed to treat contaminated runoff.

Stormwater enters the FocalPoint® HPMBS, is filtered by the High Flow Biofiltration Media and passes through to the underdrain/storage system where the treated water is detained, retained or infiltrated to sub-soils, prior to discharge to the storm sewer system of any remaining flow.

Higher flows bypass the FocalPoint® HPMBS via a downstream inlet or other overflow conveyance. Maintenance is a simple, inexpensive and safe operation that does not require confined space entry, pumping or vacuum equipment, or specialized tools. Properly trained landscape personnel can effectively maintain FocalPoint® HPMBS by following instructions in this manual.



BASIC OPERATIONS

FocalPoint® is a modular, high performance biofiltration system that often works in tandem with other integrated management practices (IMP). Contaminated stormwater runoff enters the biofiltration bed through a conveyance swale, planter box, or directly through a curb cut or false inlet. Energy is dissipated by a rock or vegetative dissipation device and is absorbed by a 3-inch layer of aged, double shredded hardwood mulch, with fines removed, (when specified) on the surface of the biofiltration media.

As the water passes through the mulch layer, most of the larger sediment particles and heavy metals are removed through sedimentation and chemical reactions with the organic material in the mulch. Water passes through the biofiltration media where the finer particles are removed and numerous chemical reactions take place to immobilize and capture pollutants in the soil media.

The cleansed water passes into the underdrain/storage system and remaining flows are directed to a storm sewer system or other appropriate discharge point. Once the pollutants are in the soil, bacteria begin to break down and metabolize the materials and the plants begin to uptake and metabolize the pollutants. Some pollutants such as heavy metals, which are chemically bound to organic particles in the mulch, are released over time as the organic matter decomposes to release the metals to the feeder roots of the plants and the cells of the bacteria in the soil where they remain and are recycled. Other pollutants such as phosphorus are chemically bound to the soil particles and released slowly back to the plants and bacteria and used in their metabolic processes. Nitrogen goes through a variety of very complex biochemical processes where it can ultimately end up in the plant/bacteria biomass, turned to nitrogen gas or dissolves back into the water column as nitrates depending on soil temperature, pH and the availability of oxygen. The pollutants ultimately are retained in the mulch, soil and biomass with some passing out of the system into the air or back into the water.

DESIGN AND INSTALLATION

Each project presents different scopes for the use of FocalPoint® HPMBS. To ensure the safe and specified function of this stormwater BMP, Convergent Water Technologies and/or its Value Added Resellers (VAR) review each application before supply. Information and design assistance is available to the design engineer during the planning process. Correct FocalPoint® sizing is essential to optimum performance. The engineer shall submit calculations for approval by the local jurisdiction when required. The contractor and/or VAR is responsible for the correct installation of FocalPoint® HPMBS units as described in approved plans. A comprehensive installation manual is available at www.convergentwater.com.





MAINTENANCE

Why Maintain?

All stormwater treatment systems require maintenance for effective operation. This necessity is often incorporated in your property's permitting process as a legally binding BMP maintenance agreement. Other reasons for maintenance include:

- Avoid legal challenges from your jurisdiction's maintenance enforcement program.
- Prolong the lifespan of your FocalPoint® HPMBS.
- Avoid costly repairs.
- Help reduce pollutant loads leaving your property.

Simple maintenance of the FocalPoint® HPMBS is required to continue effective pollutant removal from stormwater runoff before any discharge into downstream waters. This procedure will also extend the longevity of the living biofiltration system. The unit will recycle and accumulate pollutants within the biomass, but may also be subjected to other materials entering the surface of the system. This may include trash, silt and leaves etc. which will be contained above the mulch and/or biofiltration media layer. Too much silt may inhibit the FocalPoint's® HPMBS flow rate, which is a primary reason for system maintenance. Removal of accumulated silt/sediment and/or replacement of the mulch layer (when specified), is an important activity that prevents over accumulation of such silt/sediment.

When to Maintain?

Convergent Water Technologies and/or its VAR includes a 1-year maintenance plan with each system purchased. Annual included maintenance consists of two (2) scheduled maintenance visits. Additional maintenance may be necessary depending on sediment and trash loading (by Owner or at additional cost). The start of the maintenance plan begins when the system is activated for full operation. Full operation is defined as when the site is appropriately stabilized, the unit is installed and activated (by VAR), i.e., when mulch (if specified) and plantings are added.

Activation should be avoided until the site is fully stabilized (full landscaping, grass cover, final paving and street sweeping completed). Maintenance visits are scheduled seasonally; the spring visit aims to clean up after winter loads including salts and sands. The fall visit helps the system by removing excessive leaf litter.

A first inspection to determine if maintenance is necessary should be performed at least twice annually after storm events of greater than (1) one inch total depth (subject to regional climate). Please refer to the maintenance checklist for specific conditions that indicate if maintenance is necessary.

It has been found that in regions which receive between 30-50 inches of annual rainfall, (2) two visits are generally required. Regions with less rainfall often only require (1) one visit per annum. Varying land uses can affect maintenance frequency.



Some sites may be subjected to extreme sediment or trash loads, requiring more frequent maintenance visits. This is the reason for detailed notes of maintenance actions per unit, helping the VAR/Maintenance contractor and Owner predict future maintenance frequencies, reflecting individual site conditions.

Owners must promptly notify the VAR/Maintenance contractor of any damage to the plant(s), which constitute(s) an integral part of the biofiltration technology. Owners should also advise other landscape or maintenance contractors to leave all maintenance of the FocalPoint® HPMBs to the VAR/Maintenance contractor (i.e. no pruning or fertilizing).

EXCLUSION OF SERVICES

It is the responsibility of the owner to provide adequate irrigation when necessary to the plant(s) in the FocalPoint® HPMBs.

Clean up due to major contamination such as oils, chemicals, toxic spills, etc. will result in additional costs and are not covered under the VAR/Maintenance contractor maintenance contract. Should a major contamination event occur, the Owner must block off the outlet pipe of the FocalPoint® (where the cleaned runoff drains to, such as drop-inlet) and block off the point where water enters of the FocalPoint® HPMBs. The VAR/Maintenance contractor should be informed immediately.

MAINTENANCE VISIT SUMMARY

Each maintenance visit consists of the following simple tasks (detailed instructions below).

1. Inspection of FocalPoint® HPMBs and surrounding area
2. Removal of debris, trash and mulch
3. Mulch replacement
4. Plant health evaluation (including measurements) and pruning or replacement as necessary
5. Clean area around FocalPoint® HPMBs
6. Complete paperwork, including date stamped photos of the tasks listed above.

MAINTENANCE TOOLS, SAFETY EQUIPMENT AND SUPPLIES

Ideal tools include: camera, bucket, shovel, broom, pruners, hoe/rake, and tape measure. Appropriate Personal Protective Equipment (PPE) should be used in accordance with local or company procedures. This may include impervious gloves where the type of trash is unknown, high visibility clothing and barricades when working in close proximity to traffic and also safety hats and shoes.



Inspection of FocalPoint® HPMBS and surrounding area

Record individual unit before maintenance with photograph (numbered). Record on Maintenance Report (see example in this document) the following:

☐ Standing Water	yes no	☐ Damage to HPMBS System	yes no
☐ Is Bypass Inlet Clear?	yes no	☐ to Overflow conveyance	yes no

Removal of Silt / Sediment / Clay

Dig out silt (if any) and mulch and remove trash & foreign items.

☐ Silt / Clay Found?	yes no	☐ Leaves?	yes no
☐ Cups / Bags Found?	yes no	☐ Volume of material removed _____	(volume or weight)

Removal of debris, trash and mulch

After removal of mulch and debris, measure distance from the top of the FocalPoint® HPMBS engineered media soil to the flow line elevation of the adjacent overflow conveyance. If this distance is greater than that specified on the plans (typ. 6" - 12"), add media (not top soil or other) to recharge to the distance specified.

☐ Distance to media surface to flow line of overflow conveyance (inches) _____
☐ # of Buckets of Media Added _____

Mulch Replacement

Most maintenance visits require only replacement mulch (if utilized) which must be, aged, double shredded hardwood mulch with fines removed. For smaller projects, one cubic foot of mulch will cover four square feet of biofiltration bed, and for larger projects, one cubic yard of mulch will cover 108 square feet of biofiltration bed. Some visits may require additional FocalPoint® HPMBS engineered soil media available from the VAR/Contractor.

☐ Add double shredded, aged hardwood mulch which has been screened to remove fines, evenly across the entire biofiltration media bed to a depth of 3".
☐ Clean accumulated sediment from energy dissipation system at the inlet to the FocalPoint® HPMBS to allow for entry of trash during a storm event.

Plant health evaluation and pruning or replacement as necessary

Examine the plant's health and replace if dead or dying.
Prune as necessary to encourage growth in the correct directions

☐ Height above Grate (feet) _____	☐ Health	alive dead
☐ Width at Widest point (feet) _____	☐ Damage to Plant	yes no

Clean area around FocalPoint® HPMBS

☐ Clean area around unit and remove all refuse to be disposed of appropriately.
--

Complete paperwork

☐ Deliver Maintenance Report and photographs as appropriate.
☐ Some jurisdictions may require submission of maintenance reports in accordance with approvals.
☐ It is the responsibility of the Owner to comply with local regulations.



FocalPoint Warranty

Seller warrants goods sold hereunder against defects in materials and workmanship only, for a period of (1) year from date the Seller activates the system into service. Seller makes no other warranties, express or implied.

Seller's liability hereunder shall be conditioned upon the Buyer's installation, maintenance, and service of the goods in strict compliance with the written instructions and specifications provided by the Seller. Any deviation from Seller's instructions and specifications or any abuse or neglect shall void warranties.

In the event of any claim upon Seller's warranty, the burden shall be upon the Buyer to prove strict compliance with all instructions and specifications provided by the Seller.

Seller's liability hereunder shall be limited only to the cost or replacement of the goods. Buyer agrees that Seller shall not be liable for any consequential losses arising from the purchase, installation, and/or use of the goods.



Maintenance Checklist

<i>Element</i>	<i>Problem</i>	<i>What To Check</i>	<i>Should Exist</i>	<i>Action</i>
Inlet	Excessive sediment or trash accumulation	Accumulation of sediment or trash impair free flow of water into FocalPoint	Inlet free of obstructions allowing free flow into FocalPoint System	Sediments or trash should be removed
Mulch Cover	Trash and floatable debris accumulation	Excessive trash or debris accumulation.	Minimal trash or other debris on mulch cover	Trash and debris should be removed and mulch cover raked level. Ensure that bark nugget
Mulch Cover	Ponding of water on mulch cover	Ponding in unit could be indicative of clogging due to excessive fine sediment accumulation or spill of petroleum oils	Stormwater should drain freely and evenly over mulch cover.	Contact VAR for advice.
Plants	Plants not growing, or in poor condition	Soil/mulch too wet, evidence of spill. Pest infestation. Vandalism to plants.	Plants should be healthy and pest free.	Contact VAR for advice.
Plants	Plant growth excessive	Plants should be appropriate to the species and location of FocalPoint		Trim/prune plants in accordance with typical landscaping and



August 25, 2023

Christopher MacDonald, P.E.
BH2M
380B Main Street
Gorham, Maine 04038

Re: 66 Eighth Street, PO
Ability to Serve with PWD Water

Dear Mr. MacDonald:

The Portland Water District has received your request for an Ability to Serve Determination for the noted site submitted on May 16, 2022. Based on the information provided per plans dated August 25, 2023, we can confirm that the District will be able to serve the proposed project as further described in this letter. **Please note that this letter constitutes approval of the water system as currently designed and is valid for eighteen (18) months after the date of issue. Any changes affecting the approved water system will require further review and approval by PWD.**

Conditions of Service

The following conditions of service apply:

- A new 4-inch ductile iron water main will need to be extended in Eighth Street, from the end of the existing 8-inch water main to a point approximately equal to the center of the last lot to be served within the proposed development. The existing 1-inch HDPE water main in Eighth Street will be abandoned in place as part of the new main extension.
- New 1-inch services may be installed from the 4-inch water main extension to serve each lot within the proposed development. New services connections shall be made to tie-in existing customers at 63 and 66 Eighth Street to the new water main. Services shall enter through the properties frontage no closer than 10-feet to any side property line.
- The Portland Water District does not have record of any other existing infrastructure in public roads and recommends a survey and test pitting be performed by the development team prior to construction. Any conflicts that arise during construction are at the risk of the developer and may result in job shutdown until new plans are submitted by the developer and reviewed and approved by PWD.
- It is the District's understanding that single-family homes with NFPA 13D life safety sprinkler systems are proposed at this location. A single service line may be used to serve both domestic and fire protection needs. The split for the sprinkler service must be located after the water meter and must include a non-testable backflow prevention device. The sprinkler system designer must provide documentation indicating the peak flow in gallons per minute required to operate the life safety system in order for the meter to be appropriately sized.
- The Portland Water District does not manage sewer collection in this area.

Prior to construction, the owner or contractor will need to complete a Main Extension Initiation form and pay all necessary fees for each proposed service.

Existing Site Service

According to District records, the project site does not currently have existing water service.

Water System Characteristics

According to District records, there is an 8-inch diameter ductile iron water main in Eighth Street and a public fire hydrant located approximately 500 feet from the site. The estimated static pressure in the area is 72 psi.

Public Fire Protection

The installation of new public hydrants to be accepted into the District water system will most likely not be required. It is your responsibility to contact the City of Portland Fire Department to ensure that this project is adequately served by existing and/or proposed hydrants.

Domestic Water Needs

The data noted above indicates there should be adequate pressure and volume of water to serve the domestic water needs of your proposed project.

Private Fire Protection Water Needs

You have indicated that this project will not require dedicated water service to provide private fire protection to the site.

Should you disagree with this determination, you may request a review by the District's Internal Review Team. Your request for review must be in writing and state the reason for your disagreement with the determination. The request must be sent to MEANS@PWD.org or mailed to 225 Douglass Street, Portland Maine, 04104 c/o MEANS. The Internal Review Team will undertake review as requested within 2 weeks of receipt of a request for review.

If the District can be of further assistance in this matter, please let us know.

Sincerely,
Portland Water District

A handwritten signature in black ink, appearing to read 'Robert A. Bartels', written in a cursive style.

Robert A. Bartels, P.E.
Senior Project Engineer



Civil Engineering | Surveying

October 17, 2023

Charles Tetelman
City of Portland Planning & Urban Development
Planner: Charles Tetelman
ctetelman@portlandmaine.gov

Re: PL-002599-2023 - 66 Eighth Street
Review Comment Responses

Dear Charles;

We have reviewed the comments from the Planning Department, emailed to us on September 19, 2023 and offer the following responses:

SUBDIVISION TRANSPORTATION COMMENTS

Impact on Surrounding Street Systems

- DPW feels comfortable with the construction of a 24 ft wide paved street with 2 ft of vegetated gravel shoulder on both sides of the pavement. The installation of granite curb shall not be required.

Response: The plans have been updated to show these recommended changes.

- The applicant shall provide a typical cross section for the layout described above.

Response: See sheet 7 for updated typical section

LANDSCAPING & STORMWATER SUBDIVISION COMMENTS

Site Landscaping and Buffers

- City Staff suggest a minimum 4 ft gap in the wooden guardrail shown at the end of the proposed road extension to allow for pedestrian access to the Riverton Rail Trail.
- Existing conditions plan – please indicate areas of trees to be preserved, with attention given to locating, recording significant trees or groups of trees on lots in accordance with chapter 4, section 43 of the technical manual.

Response: The plans have been updated to show this requested gap.
Response: We have located existing trees in conformance with the above noted section of the technical manual. See Sheet 2 of the plans for these locations. See sheets 1, 4 and 5 for tree removal and preservation areas.

- Subdivision plan – please include tree preservation areas on plans in relationship to footprints, and locate / identify preservation trees in accordance with chapter 4, section 43 of the technical manual. Applicant is also directed to locate any “feature mature trees” as defined by section 4.1 of technical manual, and for larger significant trees in broader / denser existing vegetation stands as described in section 4.3.1, trees 16” dbh or larger.
Response: Given the extent of trees within the ROW, proposed drainage and utility crossings, for proposed lots in building envelopes, utility crossings, and driveway entrances, many of the large diameter trees must be removed to facilitate the project. However, a stand of trees to the north of Lot A and the remaining lot can be preserved with development of the subdivision, as well as a larger maple along the east of Lot B. We have updated the plans to show tree preservation areas. We have also provided locations of street trees in accordance with the requirements of the technical manual.
- Lot A in particular may have a significant site impact with site grading and drainage and drainage easement impacts. For future site plan needs, please be pried (*sic*) to provide revegetation planting plans for site restoration following grading activities.
Response: As this project proposes to provide lots for sale, the ultimate development and revegetation of this project will be done by others through a building permit approval process.

Water Quality, Stormwater Management and Erosion Control

- Stormwater from this street extension should be connected into the cross culvert located at approximate station -0+50 on the plans within the City right of way. This connection should be made with precast manhole meeting City Standards.
Response: After discussions with Justin Pellerin at Public Works, they have decided that this structure would not be required. Given the condition of the existing culvert, this would require replacement of the culvert and grading along the existing swale to allow for positive drainage. This would lead to otherwise unnecessary wetland impacts that would be required for installing the catch basin. DPW has agreed that an access easement for the outlet pipe for the stormwater features is acceptable. The plans have been updated to show this proposed easement.
- Any storm drain located within the City right of way must be a minimum of 10” in diameter per the City’s technical manual. P1 should be revised to match this requirement.
Response: Pipe P1 sizing has been revised to be in conformance with this requirement.
- They City would request a copy of the Post Development hydrocad model for our records. Please send to jrp@portlandmaine.gov once it’s been determined that the analysis has been completed.
Response: Upon final approval by the City Planning Board, a copy of the hydrocad model file (in .HCP format) can be provided.

- The location of FP-2 should consider a future driveway being constructed to service the adjacent lot. Could a residential driveway meeting technical manual standards be constructed without impacting the stormwater treatment system as currently designed?
Response: There is an approximate 20' width of frontage between the edge of the focal point and northern property corner of Tax Map 340 Block C Lot 11. There should be adequate area for a driveway along this corner, however, the developability of this parcel should be considered as well.

Further consideration of this property, Lot 11 is under the ownership of William Reid in combination with Lots 9,10, 18 and 19. Their existing home at 63 Eighth Street is located on Lot 10 and very close (approximately 2') to the property line of Lot 11, so much so that division and development of Lot 11 may render Lot 10 non-conforming. Additionally, we have discussed being granted a 5' wide easement from Mr. Reid for installation of FP-2 along this same frontage in question. Given their verbal acceptance of this easement, this should signal that they do not have interest in development of the parcel.

- Details for proposed City infrastructure (sewer / storm manholes, lateral connections, roadway, etc.) should be updated to reflect the most recent version of the technical manual which was adopted in November 2022.
Response: Details found on Sheet 7 have been updated to reflect the latest revision of the technical manual.

Thank you very much for the opportunity to address these comments. We trust that these responses and the accompanying revised plans will address the City's concerns for this project. We look forward to the Planning Department's preliminary approval of the project, and an opportunity to present this to the Planning Board for final approval.

Sincerely,



Christopher R. MacDonald, P.E.

Cc Laurie Sirois

Department of Public Works
Mike Murray
Director



Date: September 12, 2023
Re: Wastewater Capacity Authorization
Address: 66 Eighth Street
Applicant: Laurie Sirois
Planner: Charles Tetelman

Estimate of Anticipated Wastewater Flows				
Development	Unit Size	Number of Units	Gallons per Day per Unit	Total Gallons per Day
Existing Flow to be Removed				
Vacant				
Proposed Flow				
Multiple Family Dwelling Units	3-Bedroom	2	270	540
Net Change				+ 540
*Values based on STATE OF MAINE: SUBSURFACE WASTEWATER DISPOSAL RULES, most recent edition				

Comments:

The Department of Public Works, which includes the Water Resource Division, have reviewed and determined that the downstream sewers from the project address have the capacity to convey the estimated dry weather wastewater flows which will be generated from this development.

If the City can be of further assistance, please contact me at all 874-8840 or brad@portlandmaine.gov

Sincerely,

A handwritten signature in dark ink that reads "Bradley A. Roland".

Bradley A. Roland, P.E.,
Senior Project Engineer

EIGHTH STREET

66 EIGHTH STREET PORTLAND, MAINE 04103

For
LAURIE SIROIS
56 HIGH STREET
YARMOUTH, MAINE 04096

PLAN INDEX

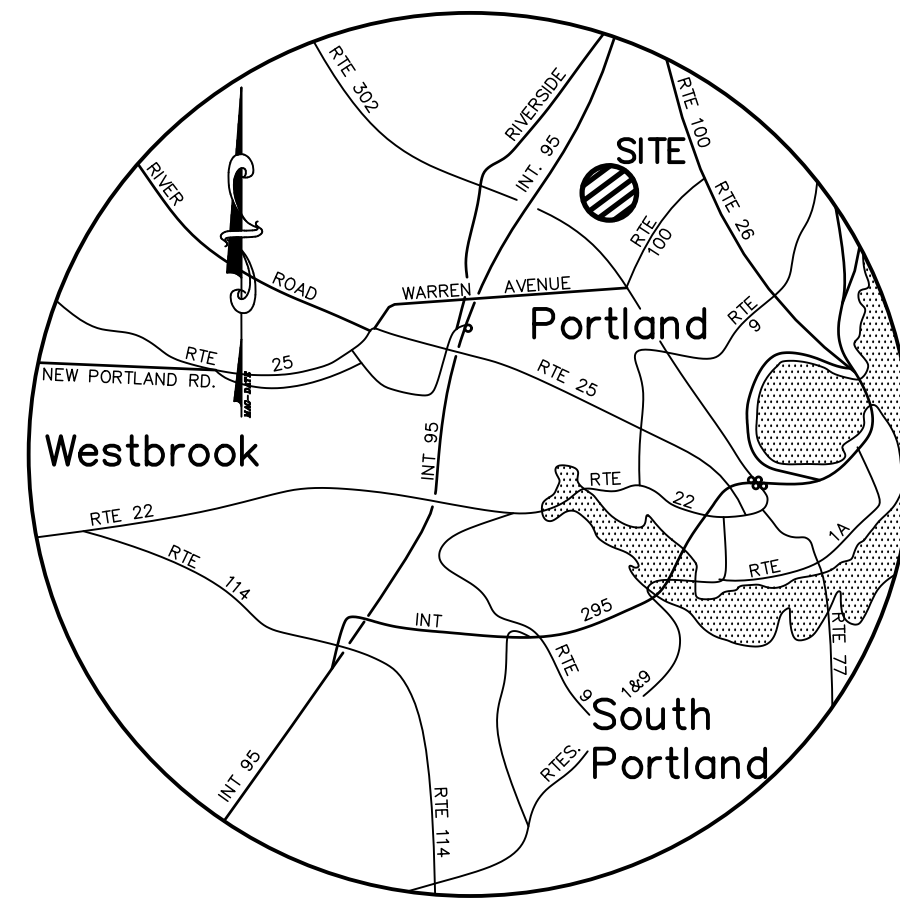
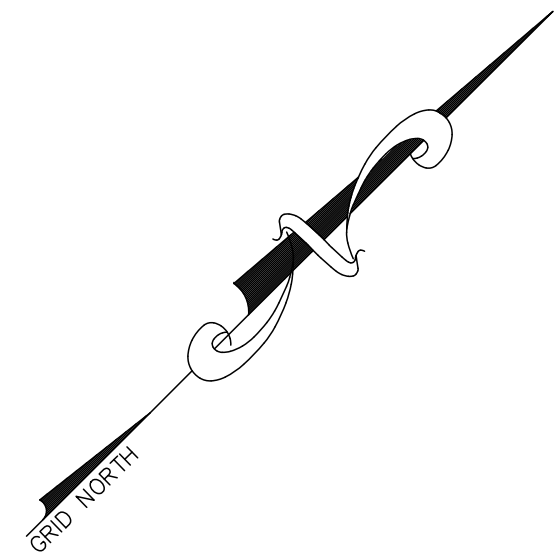
- 1 SUBDIVISION PLAN
- 2 STANDARD BOUNDARY SURVEY & EXISTING CONDITIONS
- 3 SITE UTILITIES PLAN
- 4 SITE GRADING PLAN
- 5 ROADWAY PLAN & PROFILE
- 6 FOCALPOINT DETAILS
- 7 DETAILS A
- 8 EROSION CONTROL DETAILS
- A PRE DEVELOPMENT WATERSHED
- B POST DEVELOPMENT WATERSHED



Berry, Huff, McDonald, Milligan Inc.
Engineers, Surveyors

380B Main Street
Gorham, Maine 04038

Tel. (207) 839-2771
www.bh2m.com



LOCATION MAP
SCALE: 1" = 2 MILES

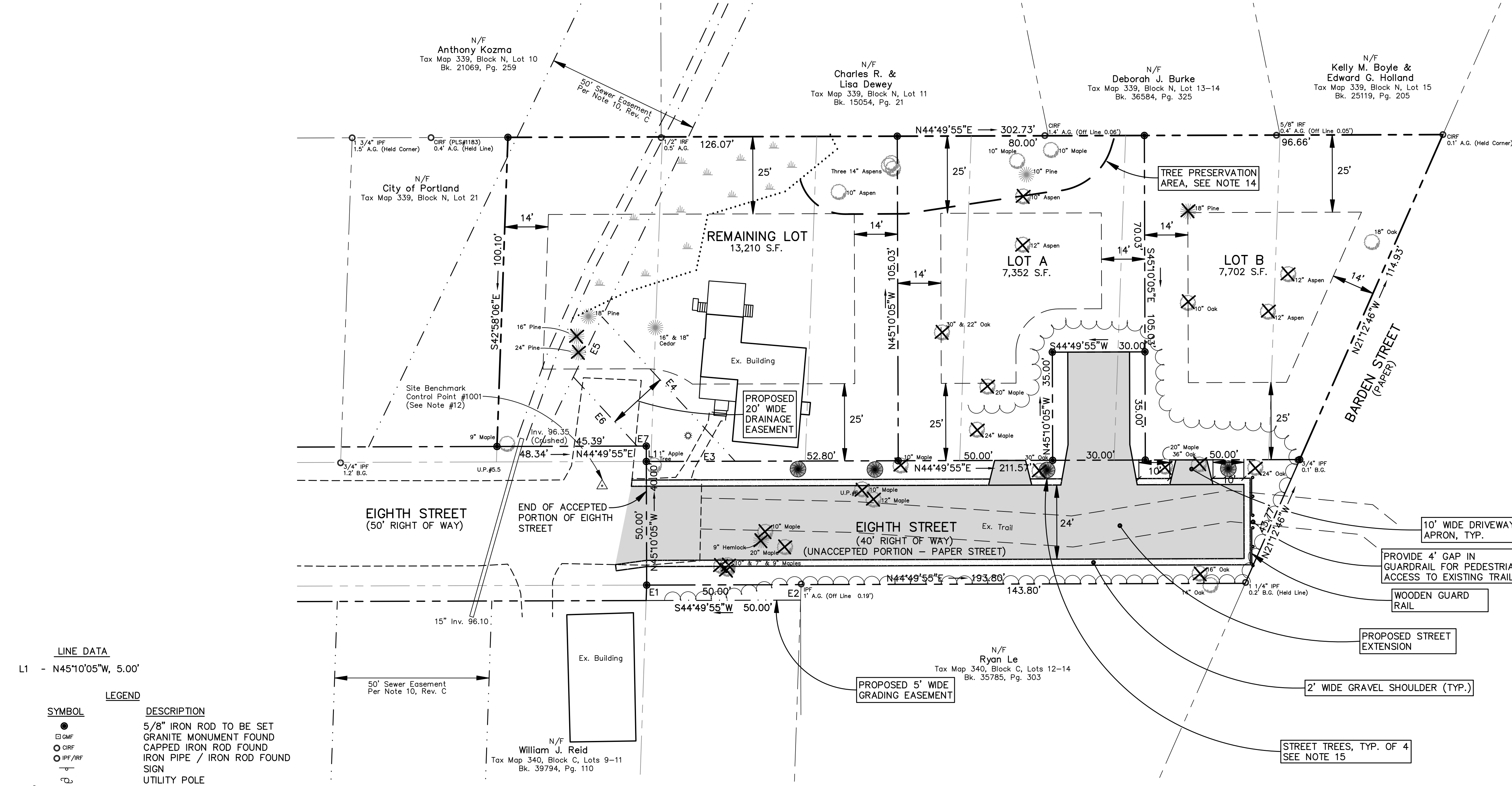
- NOTES:
- OWNER/APPLICANT: LAURIE SIROIS
56 HIGH STREET
YARMOUTH, MAINE
 - ENGINEER: CHRISTOPHER R. MacDONALD, PE #11985
BH2M
380B MAIN STREET
GORHAM, MAINE
 - SURVEYOR: ROBERT C. LIBBY JR., PLS #2190
BH2M
380B MAIN STREET
GORHAM, MAINE
 - WETLAND DELINEATION: HOPE HAMPTON
MARK HAMPTON ASSOCIATES
PORTLAND, MAINE
 - DEED REFERENCE: BK. 36336, PG. 311
 - TAX MAP REFERENCE: MAP 339, BLOCK N, LOTS 22-27
 - ZONING: R-3
 - MINIMUM STANDARDS: LOT SIZE - 6,500 S.F.
ROAD FRONTAGE - 50 FEET
SETBACKS - 25' FRONT AND REAR
14' SIDE
 - PROJECT AREA: 29,315 S.F. (LOTS)
8,107 S.F. (R.O.W.)
 - PLAN REFERENCES:
 - PLAN OF HALF ACRE HOMES SURVEYED FOR ALMON F. HALL - ELMER E. PARMENTER - NORMAN TRUE, DATED APRIL 1915, BY E.C. JORDAN & CO. AND RECORDED IN THE CUMBERLAND COUNTY REGISTRY OF DEEDS IN PLAN BOOK 13, PAGE 2.
 - STANDARD BOUNDARY SURVEY PLAN OF LAND ON NINTH AND FARRAGUT STREET IN PORTLAND, MAINE, FOR ONE NINTH ST. ASSOCIATES, DATED 5/8/1986, BY DANIEL LAPOINT AND RECORDED IN THE CUMBERLAND COUNTY REGISTRY OF DEEDS IN PLAN BOOK 191, PAGE 75.
 - RIGHT-OF-WAY PLAN NEWTON STREET BRANCH PRESUMPCOT NORTH INTERCEPTOR SEWER FROM NEAR BEVERLY ST. TO SEVENTH STREET; DATED JANUARY 1975; BY CITY OF PORTLAND, MAINE DEPARTMENT OF PUBLIC WORKS
 - BEARINGS REFER TO GRID NORTH, MAINE STATE PLANE COORDINATE (ME W-1802) OBTAINED USING A CARSON BRX7.
 - BENCHMARK: PK NAIL SET IN PAVEMENT
(SURVEY CONTROL POINT 1001)
ELEVATION 100.76 (NAVD 1988 DATUM)
 - TOPOGRAPHY: CREATED FROM IN FIELD SURVEY (NAVD 1988)
 - AREAS OF TREES TO BE PRESERVED BASED ON THE CITY OF PORTLAND TECHNICAL MANUAL, SECTION 4.3. SEE TECHNICAL MANUAL FOR REPLACEMENT AND COMPENSATION REQUIREMENTS FOR TREES DAMAGED DURING CONSTRUCTION.
 - PER REQUIREMENTS OF THE CITY OF PORTLAND TECHNICAL MANUAL SECTION 4, SINGLE FAMILY RESIDENTIAL SUBDIVISIONS SHALL REQUIRE 2 STREET TREES BE PLANTED ALONG FRONTAGE OF PROPOSED LOTS ALONG ROW. THIS PROJECT REQUIRES THAT 4 TREES BE PLANTED. SEE TECHNICAL MANUAL SECTION 4 TABLE IV-1 FOR RECOMMENDED TREE LIST, OR SECTION 4.6 FOR COMPENSATION REQUIREMENTS. SELECTED PLANTINGS SHALL BE APPROVED BY THE CITY ARBORIST PRIOR TO INSTALLATION.

I CERTIFY THAT THIS SURVEY CONFORMS TO THE MAINE BOARD OF LICENSURE FOR PROFESSIONAL LAND SURVEYORS TECHNICAL STANDARDS OF PRACTICE FOR A STANDARD BOUNDARY SURVEY WITH THE FOLLOWING EXCEPTIONS:

1. NO SURVEYORS REPORT



ROBERT C. LIBBY JR. PLS #2190

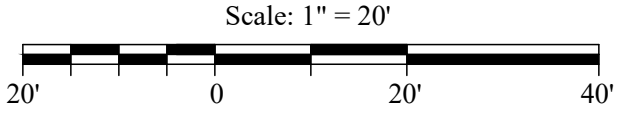


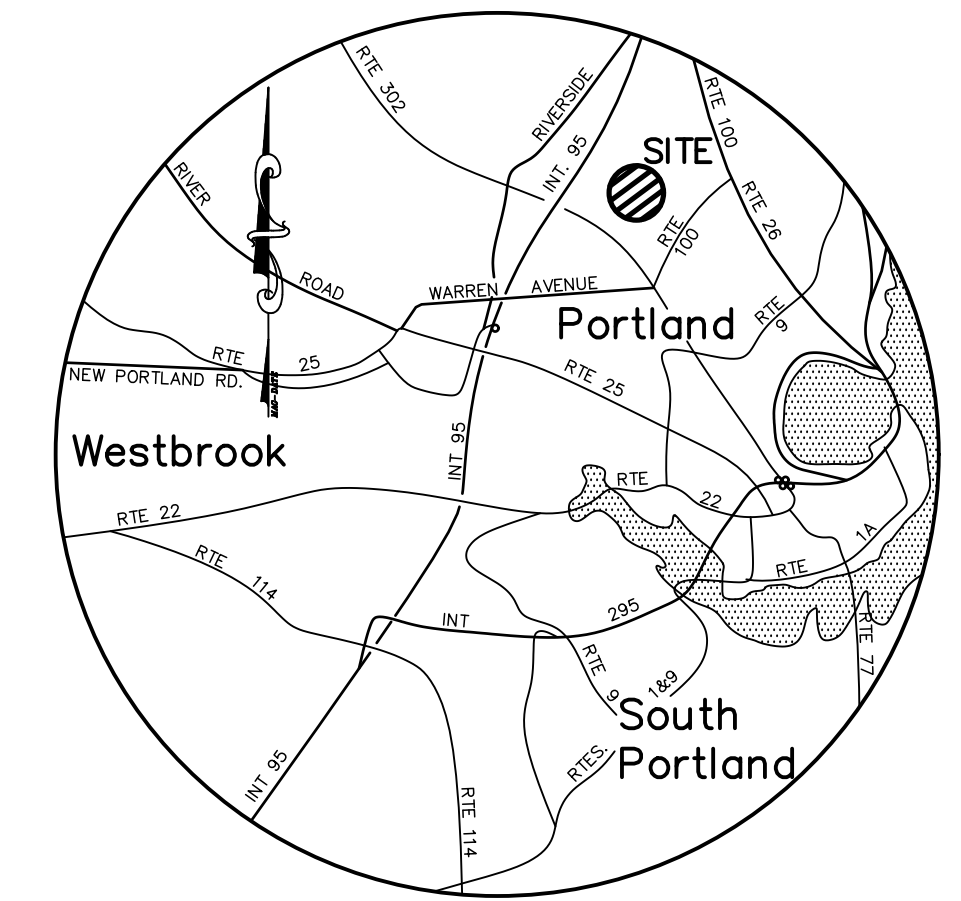
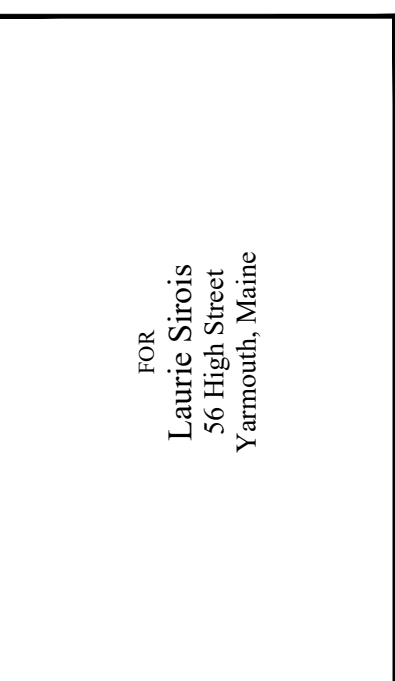
LINE DATA
L1 - N45°10'05\"W, 5.00'

SYMBOL	DESCRIPTION
5/8\" IRON ROD TO BE SET	GRANITE MONUMENT FOUND
CAPPED IRON ROD FOUND	IRON PIPE / IRON ROD FOUND
SIGN	UTILITY POLE
EXISTING TREES LOCATED ON SITE	
TREES TO BE REMOVED DURING CONSTRUCTION	
PROPOSED STREET TREES	
TREE PRESERVATION BOUNDARY	
PROPERTY LINE	
PROPOSED LOT LINE	
PROPOSED BUILDING SETBACK	
ABUTTER'S PROPERTY LINE	
WETLANDS	
EXISTING CONTOUR	
WATER	
SEWER	
STORM DRAIN	
EDGE OF PAVEMENT	
SWALE	
TREE LINE	
ABOVE GROUND/BELOW GROUND	
NOW OR FORMERLY	

EASEMENT LINE DATA

- E1 - N43°03'40\"W, 5.00'
E2 - S43°03'40\"E, 5.00'
E3 - S44°49'55\"E, 28.77'
E4 - N87°41'21\"W, 63.53'
E5 - S19°23'05\"E, 21.52'
E6 - S87°41'21\"E, 30.45'
E7 - S44°49'55\"E, 2.95'

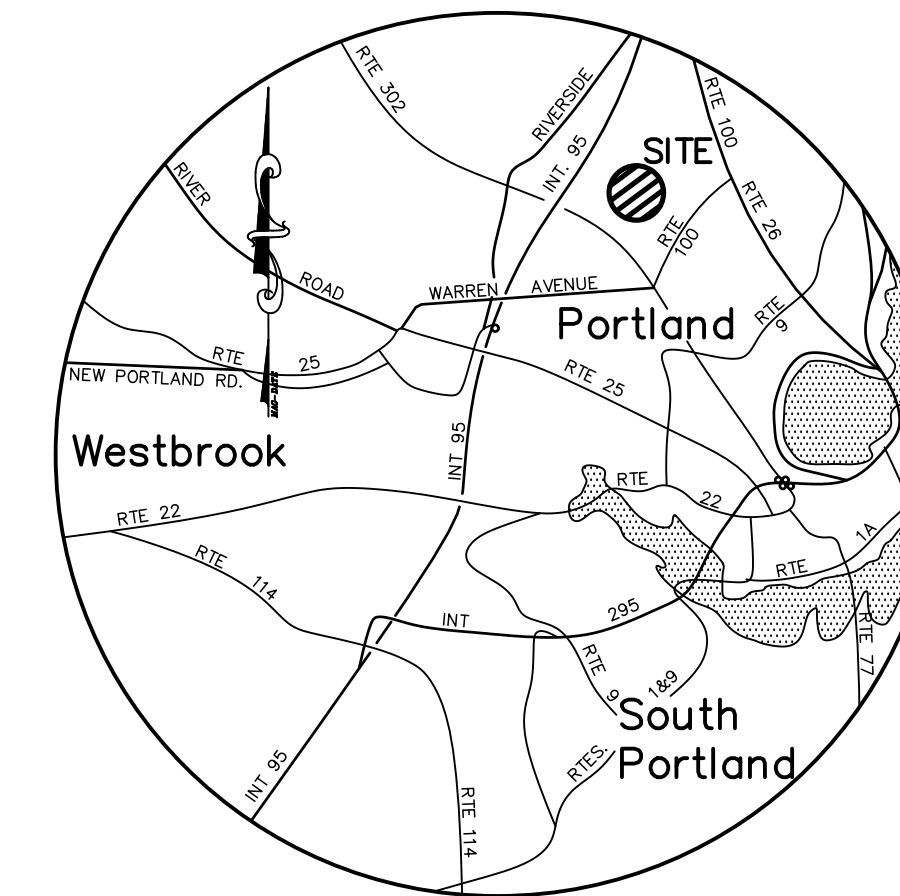


[illegible]

DESIGNED C. MacDonald	DATE July 2023
DRAWN B. Monsen	SCALE 1" = 20'
CHECKED R. Libby, Jr.	JOB. NO. 22045

2

Page 715



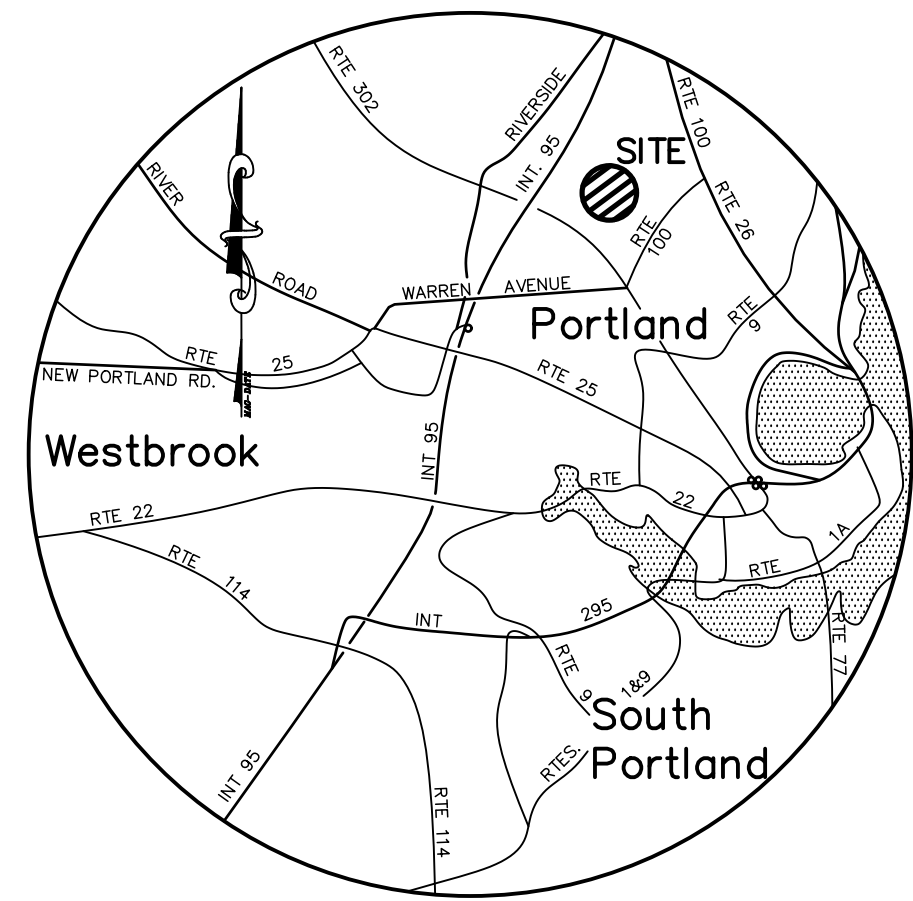
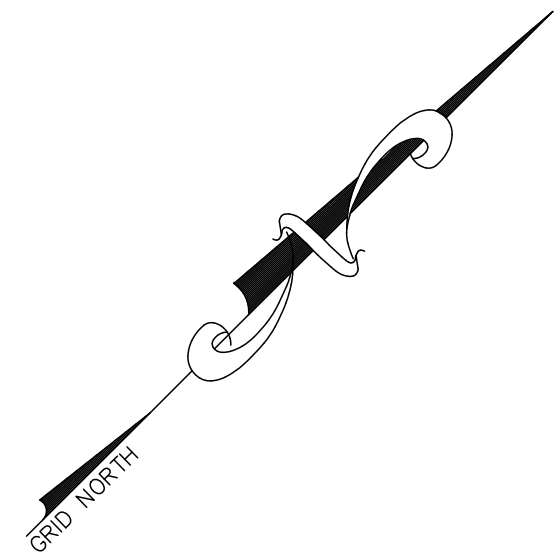
SEWER STRUCTURES

MH#1 — RIM 105.1
8" INV. OUT 100.43

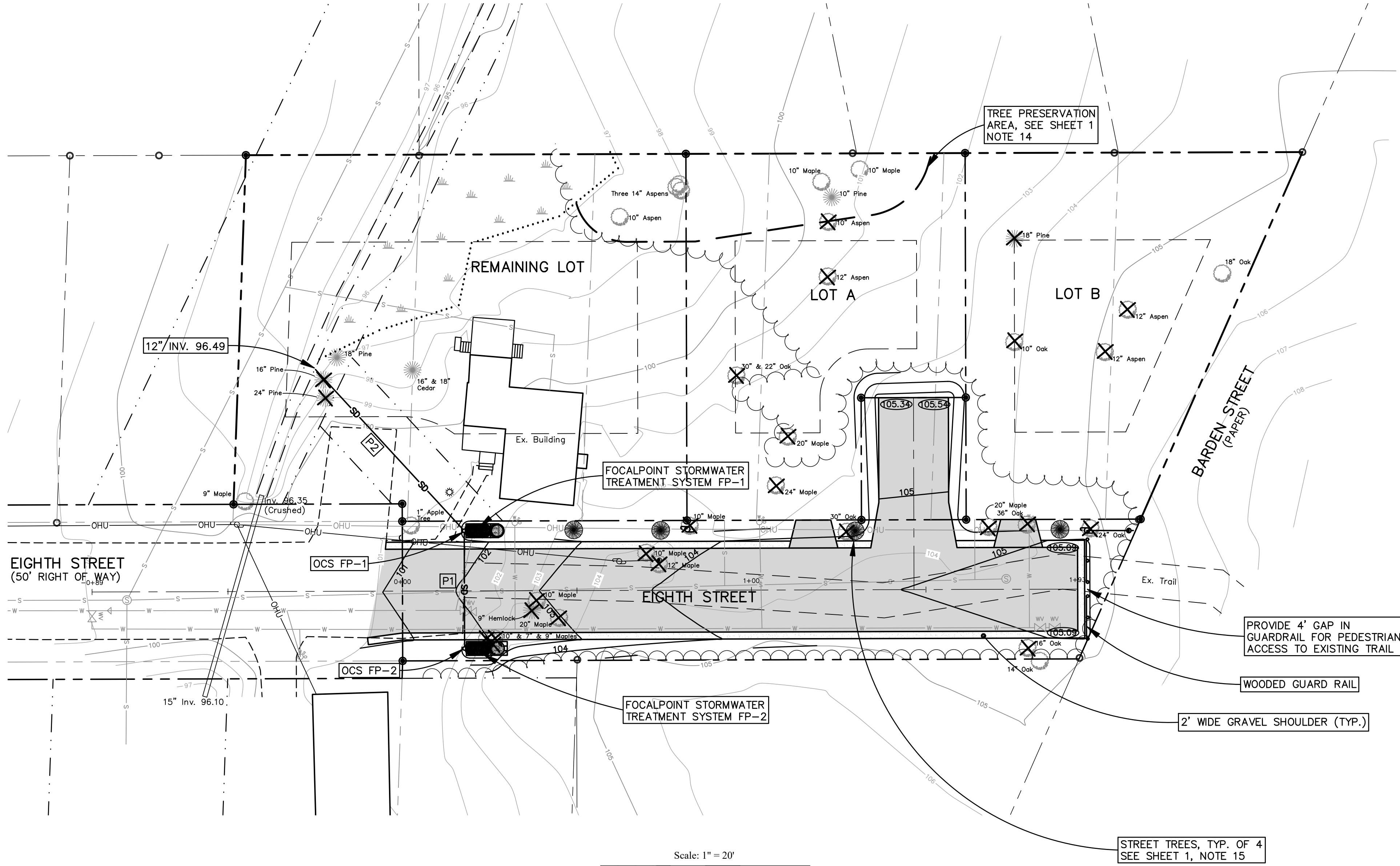
1. INSTALL ALL PROPOSED WATER INFRASTRUCTURE AND PERFORM ALL TESTING (PRESSURE, LEAK, AND BAC-T)
2. UPON SUCCESSFUL BAC-T RESULTS, TIE IN EXISTING CUSTOMER SERVICES.
3. NOTIFY EFFECTED AREA FOR A 48 HOUR SHUTDOWN.
4. CUT EXISTING 8" WATERMAIN AT TAPPING SLEEVE.

Scale: 1" = 20'

A horizontal scale bar with alternating black and white segments. It is marked with '20'' at the left end, '0' in the middle, '20'' at the right end, and '40'' at the far right end.



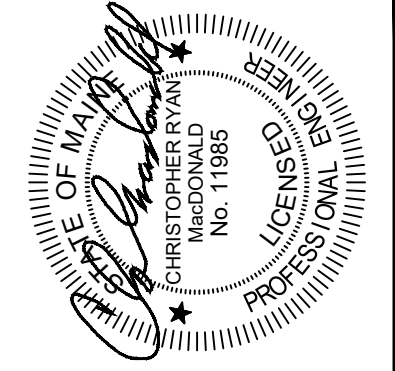
LOCATION MAP
SCALE: 1" = 2 MILES



- STORMDRAIN PIPES**
P1 - 10" S.D., L=31', S=0.005'/FT.
P2 - 12" S.D., L=63', S=0.005'/FT.
- STORMDRAIN STRUCTURES**
OCS FP-1 - RIM 101.25
8" INV. IN 97.06 (CAPPED W/ 1/4" DRILL HOLE)
10" INV. IN 96.90
12" INV. OUT 96.80
OCS FP-2 - RIM 101.25
8" INV. IN 97.06 (CAPPED W/ 1/4" DRILL HOLE)
10" INV. OUT 97.06

SYMBOL	DESCRIPTION
●	5/8" IRON ROD TO BE SET
○	GRANITE MONUMENT FOUND
○	CAPPED IRON ROD FOUND
—	SIGN
○	UTILITY POLE
○	EXISTING TREES LOCATED ON SITE
✕	TREES TO BE REMOVED DURING CONSTRUCTION
●	PROPOSED STREET TREES
—	TREE PRESERVATION BOUNDARY
—	PROPERTY LINE
—	PROPOSED LOT LINE
—	PROPOSED BUILDING SETBACK
—	ABUTTER'S PROPERTY LINE
—	WETLANDS
—	EXISTING CONTOUR
—	WATER
—	SEWER
—	STORM DRAIN
—	EDGE OF PAVEMENT
—	SWALE
—	TREE LINE
—	ABOVE GROUND/BELOW GROUND
—	NOW OR FORMERLY

NO.	DATE	REVISION DESCRIPTION
1	7/24/23	Issued for Permitting
2	8/24/23	Updated Based on Portland Water District Comments
3	8/25/23	Updated Based on Final Portland Water District Comments
4	10/17/23	Revisions Based on City Comment Responses



BH2M
Barry, Huff, MacDonald, Milfigan Inc.
Engineers, Surveyors
380B Main Street
Gorham, Maine 04038
Tel. (207) 839-2771
www.bh2m.com

FOR
Laurie Sirois
56 High Street
Yarmouth, Maine

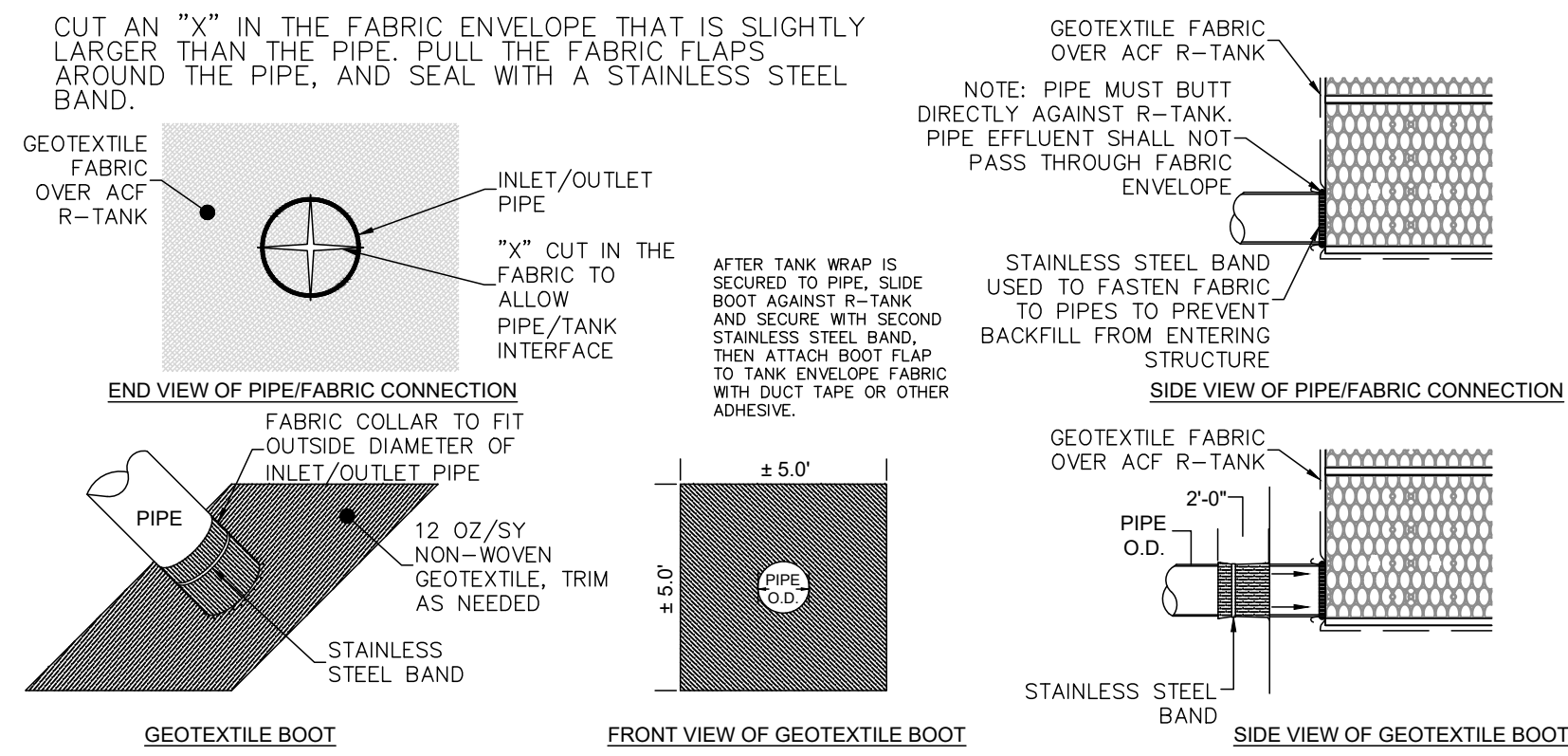
GRADING PLAN
LAND OF
LAURIE SIROIS
66 EIGHTH STREET
PORTLAND, MAINE

DESIGNED C. MacDonald	DATE July 2023
DRAWN Dept.	SCALE 1" = 20'
CHECKED C. MacDonald	JOB. NO. 22045

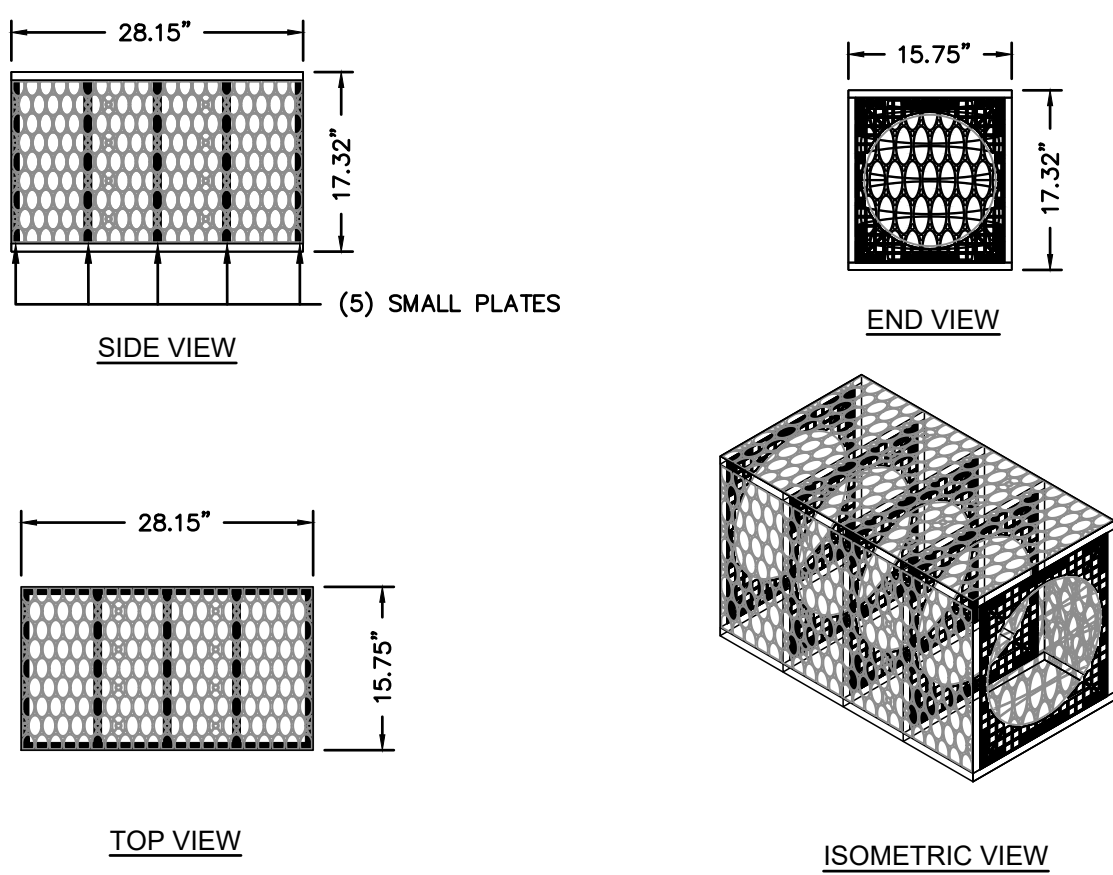
SHEET
4

REPRODUCTION OR REUSE OF THIS DOCUMENT WITHOUT THE EXPRESSED WRITTEN CONSENT OF BH2M INC. IS PROHIBITED

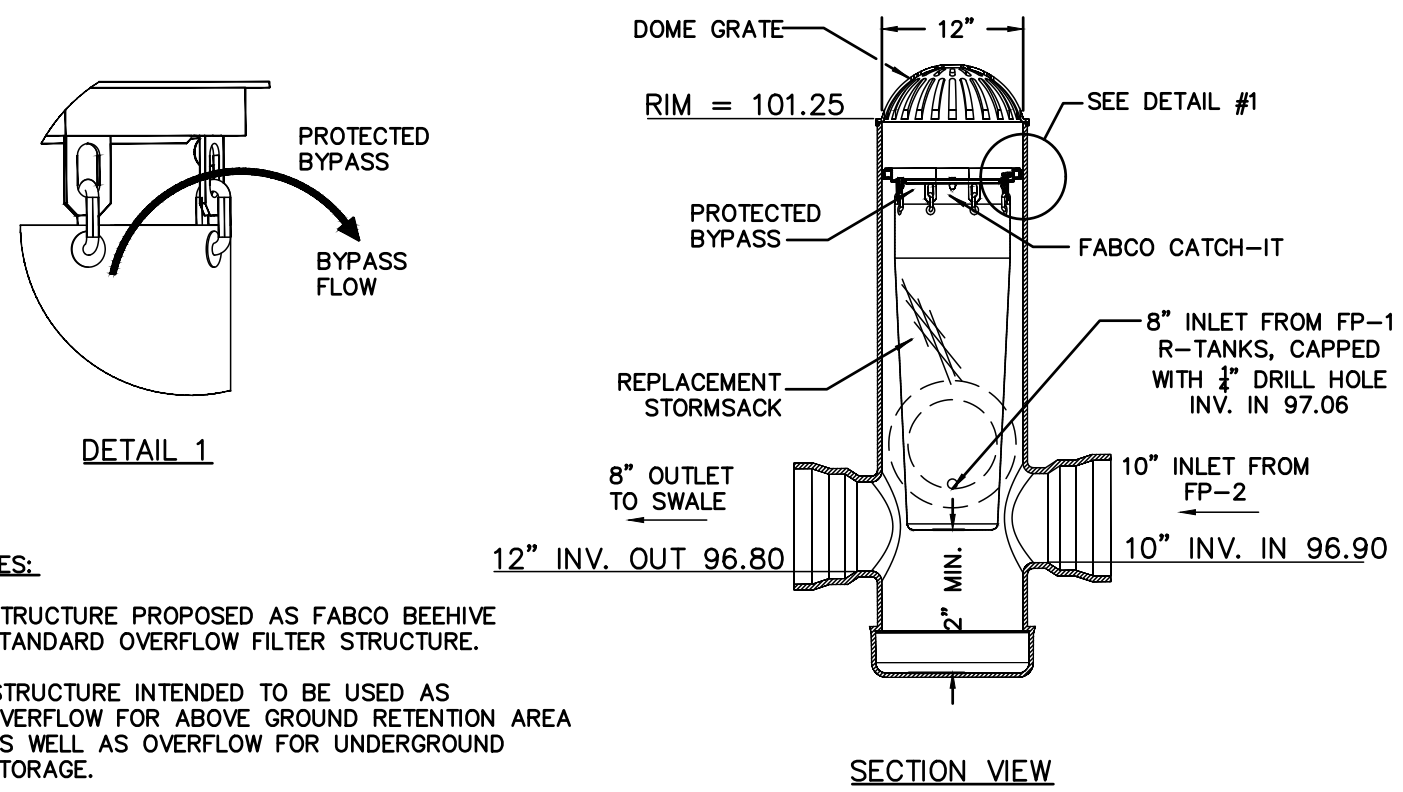
REPRODUCTION OR REUSE OF THIS
DOCUMENT WITHOUT THE
EXPRESSED WRITTEN CONSENT
OF BH2M INC. IS PROHIBITED



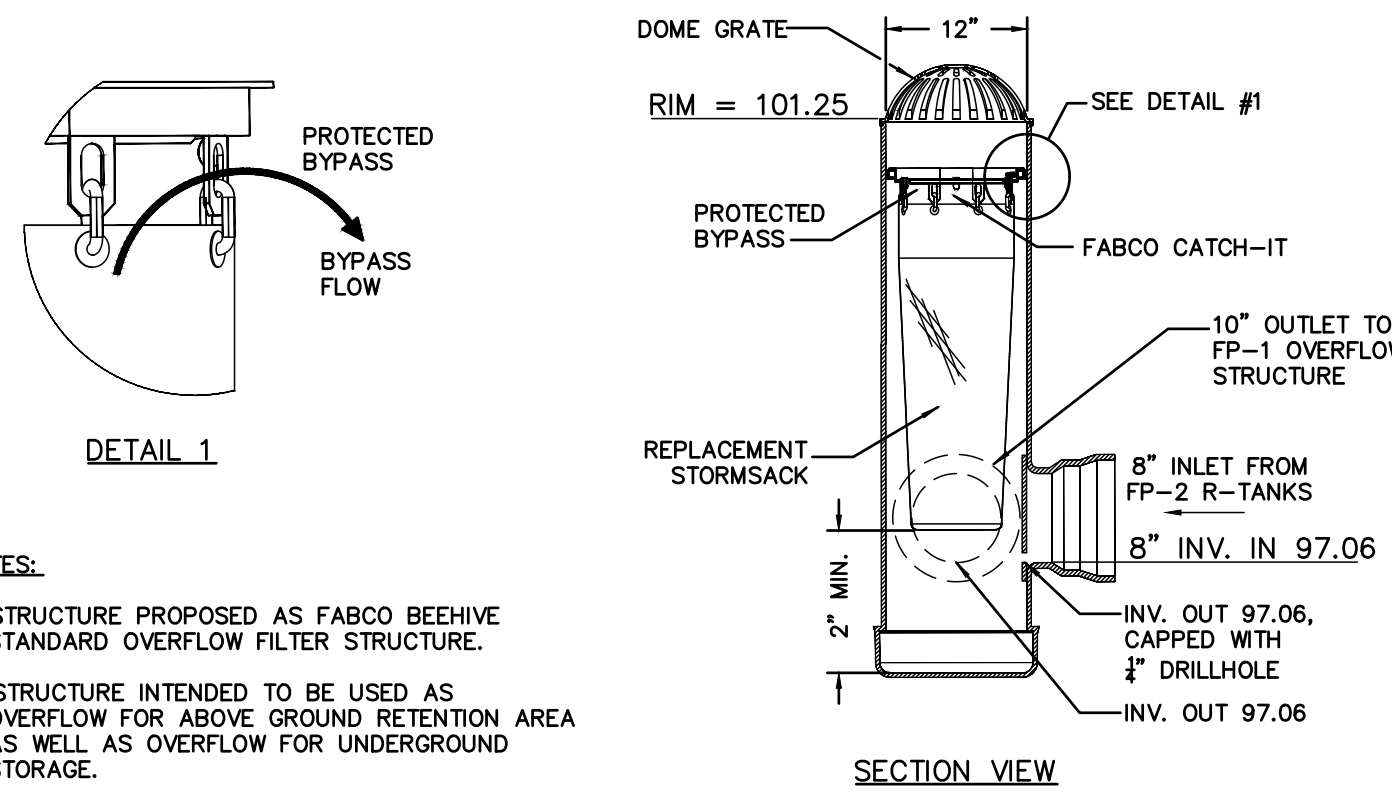
PIPE BOOT DETAIL
NTS



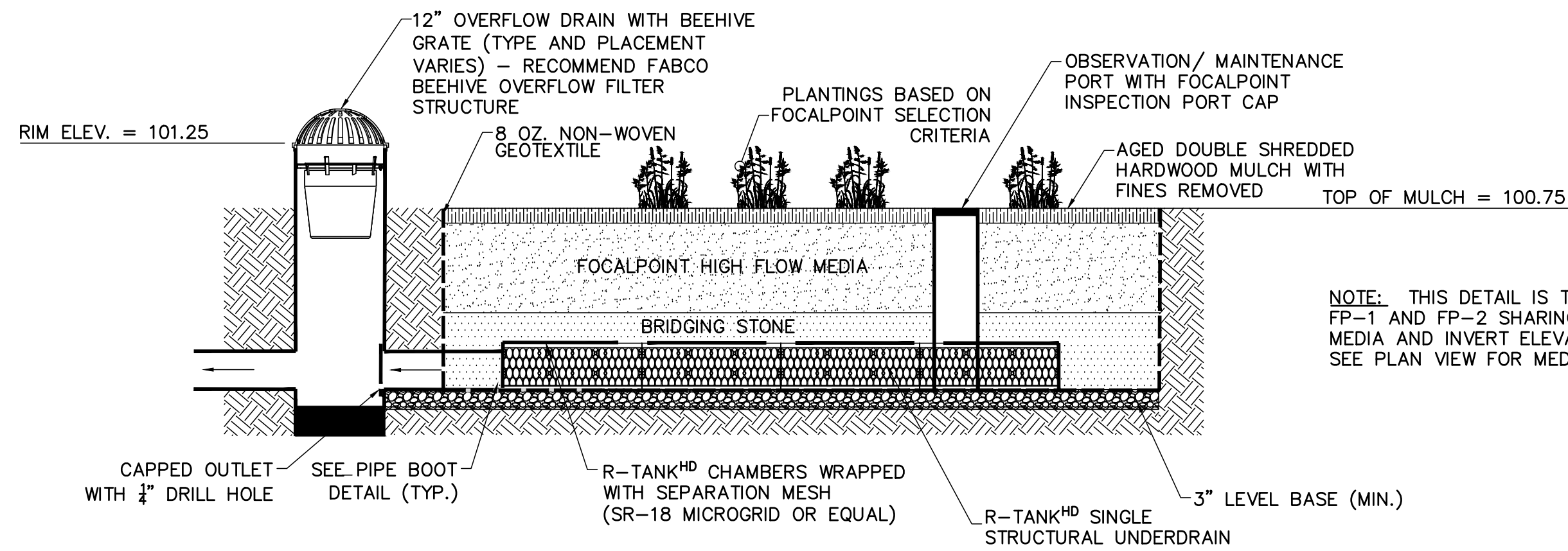
R-TANK^{HD} SINGLE CHAMBER
NTS



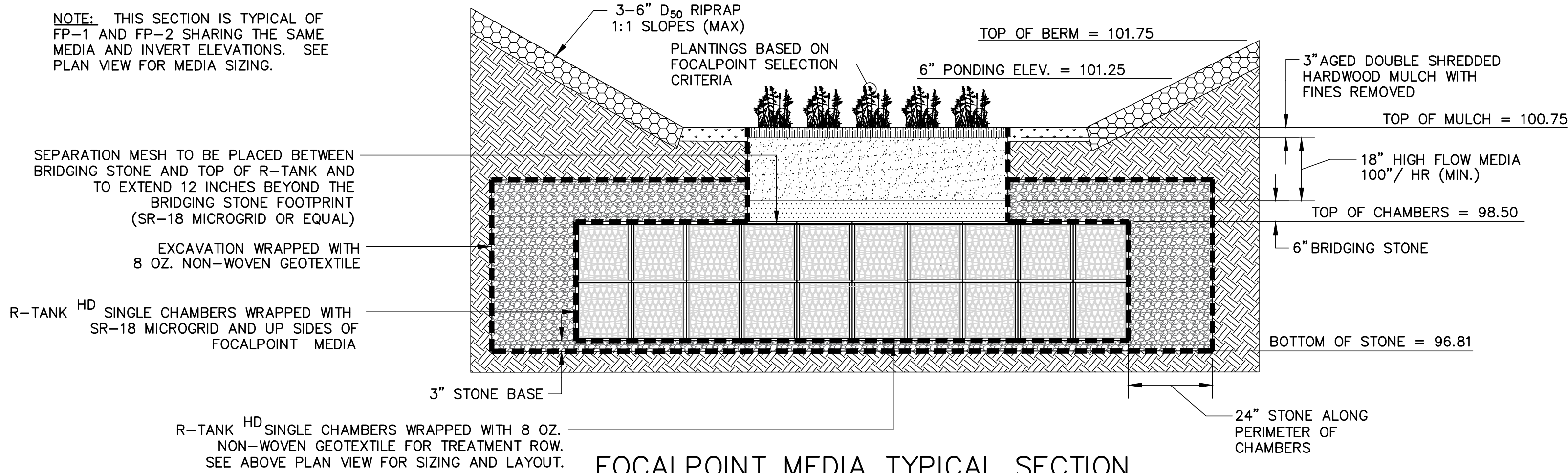
OVERFLOW STRUCTURE FP-1
NTS



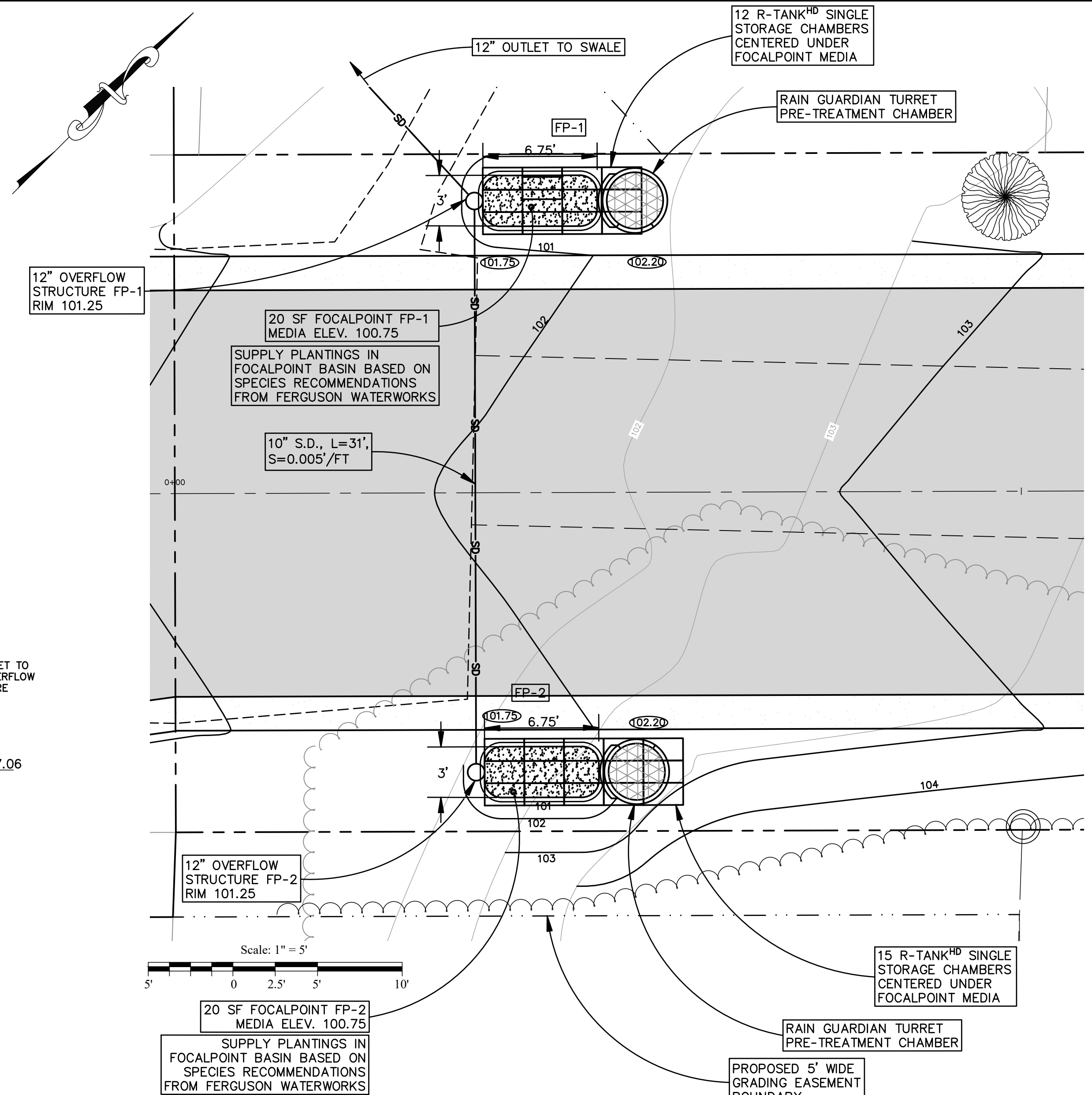
OVERFLOW STRUCTURE FP-2
NTS



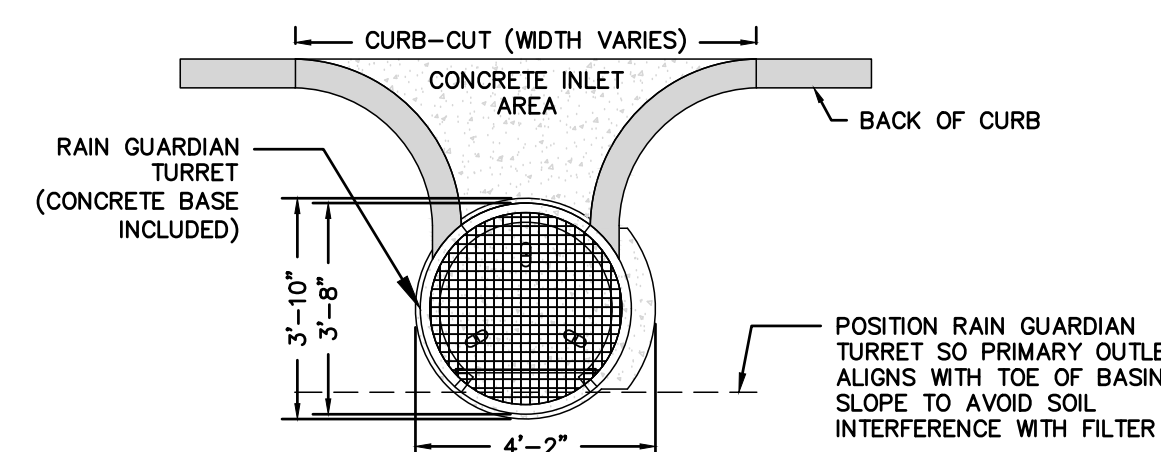
FOCALPOINT TYPICAL OVERFLOW SECTION
NTS



FOCALPOINT MEDIA TYPICAL SECTION
NTS



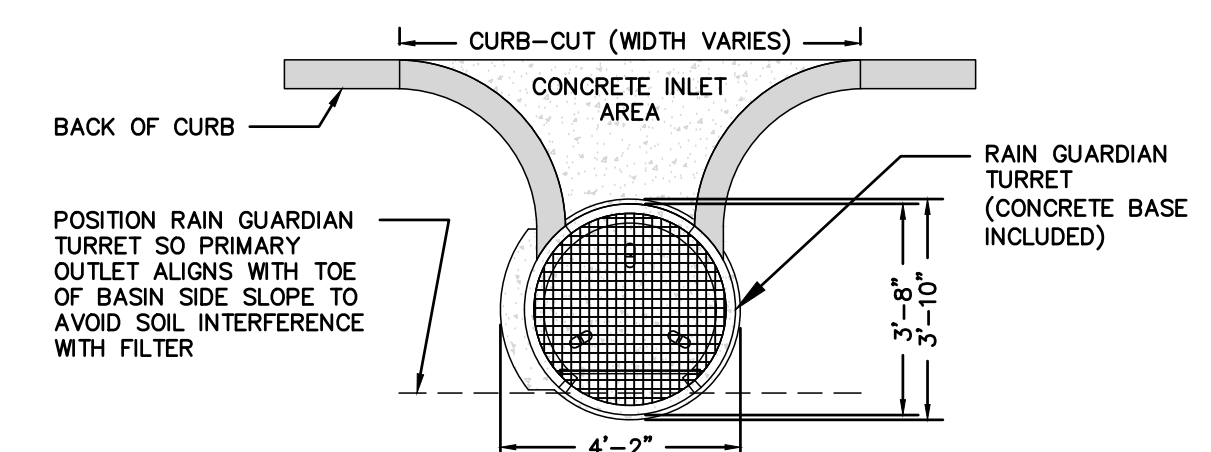
FOCALPOINT STORMWATER SYSTEM PLAN
SCALE: 1" = 5'



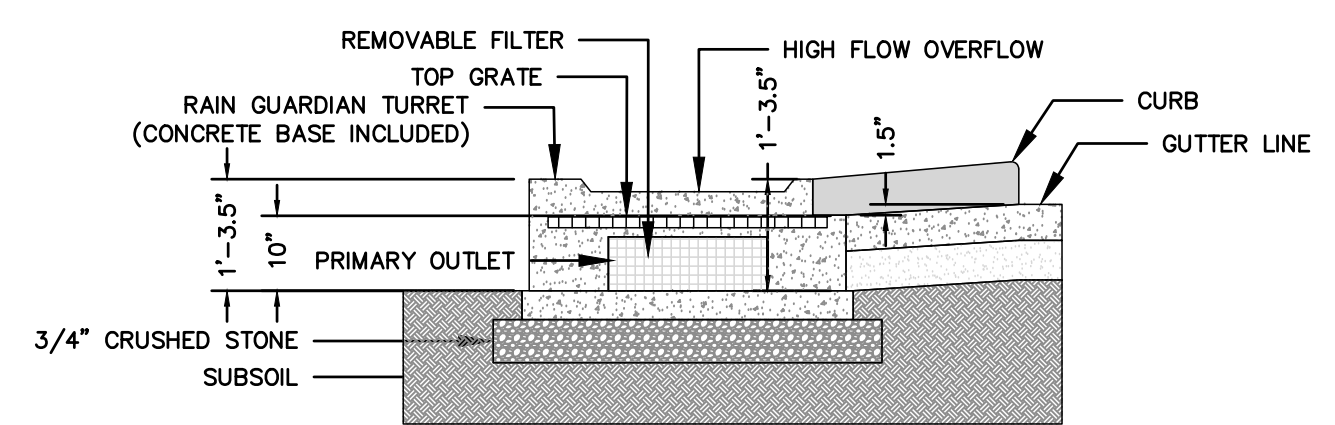
RAIN GUARDIAN LEFT DISCHARGE - PLAN VIEW

INSTALLATION NOTES

1. INSTALL THE 3/4" CRUSHED STONE BASE. THE DISTANCE FROM THE BACK OF THE CURB MAY VARY BASED ON SITE CONDITIONS, BUT CONSIDERATIONS SHOULD INCLUDE SLOPE OF THE INLET AND BASIN SIDE SLOPES ADJACENT TO THE RAIN GUARDIAN TURRET. POSITION RAIN GUARDIAN TURRET SO PRIMARY OUTLET ALIGNS WITH TOE OF BASIN SIDE SLOPE TO AVOID SOIL INTERFERENCE WITH REMOVABLE FILTER WALL. EXCAVATE 1'10" BELOW THE GUTTERLINE ELEVATION (I.E. THE BIORETENTION OVERFLOW ELEVATION) TO ACCOMMODATE THE 1' PONDING DEPTH. 6" OF 3/4" CRUSHED STONE, AND 4" RAIN GUARDIAN TURRET BASE. THEREFORE, THE TOP OF THE CLASS 5 COMPACTED BASE IS PRECISELY 1'4" BELOW THE GUTTERLINE ELEVATION. THE INLET TO THE RAIN GUARDIAN TURRET WILL BE 10-1/2" ABOVE THE TOP OF THE CONCRETE BASE AND 1-1/2" BELOW THE GUTTERLINE ELEVATION TO ACCOMMODATE A SLOPED INLET FROM THE GUTTER TO THE RAIN GUARDIAN TURRET.
2. SET RAIN GUARDIAN TURRET ON THE PREPARED 3/4" CRUSHED STONE BASE.
3. INSTALL FRAMING FOR INLET BETWEEN RAIN GUARDIAN TURRET AND BACK OF CURB. TOP ELEVATIONS OF THE FRAMING SHOULD MATCH THE TOP OF THE CURB ON THE STREET SIDE AND THE TOP OF THE RAIN GUARDIAN TURRET ON THE BIORETENTION SIDE.
4. INSTALL EXPANSION/CONTRACTION JOINT MATERIAL OR A SHEET OF POLY TO SERVE AS A BOND BREAK BETWEEN RAIN GUARDIAN TURRET AND CONCRETE INLET BEFORE POURING INLET.
5. SIDE CURBS OF THE POURED INLET MUST HAVE AN INSURMOUNTABLE PROFILE TO PREVENT WATER FLOW FROM OVERTOPPING THE DOWNSTREAM SIDE OF THE INLET.
6. REMOVABLE FILTER WALL SHOULD BE INSTALLED WITH FILTER FABRIC ON THE INTERIOR SIDE OF THE RAIN GUARDIAN TURRET.



RAIN GUARDIAN RIGHT DISCHARGE - PLAN VIEW

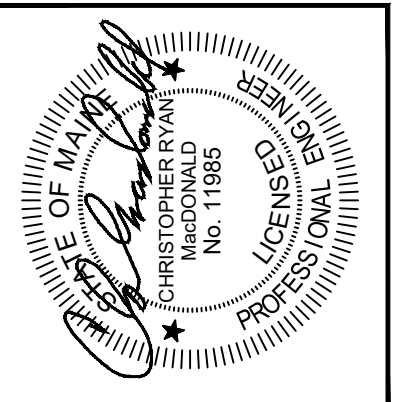


- NOTES:
1. THE TOP OF THE 3/4" CRUSHED STONE (COMPACTED TO 95% STANDARD PROCTOR) IS PRECISELY 1'4" BELOW THE GUTTERLINE ELEVATION.

RAIN GUARDIAN - SECTION VIEW

PRE-TREATMENT CHAMBER
NTS

NO.	DATE	REVISION	DESCRIPTION
1	7/24/23		Issued for Permitting
2	10/17/23		Revisions Based on City Comment Responses



BH2M
Berry, Huff, MacDonald, Milfigan Inc.
Engineers, Surveyors
380B Main Street
Gorham, Maine 04038
Tel. (207) 839-2771
www.bh2m.com

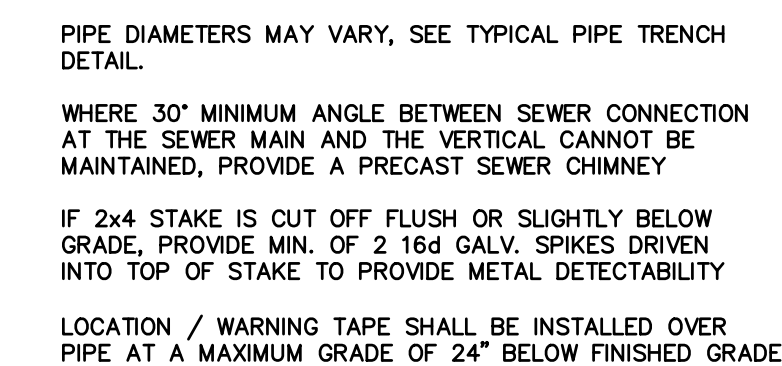
FOR
Laurie Sirois
56 High Street
Yarmouth, Maine

FOCALPOINT DETAILS
LAND OF
LAURIE SIROIS
66 EIGHTH STREET
PORTLAND, MAINE

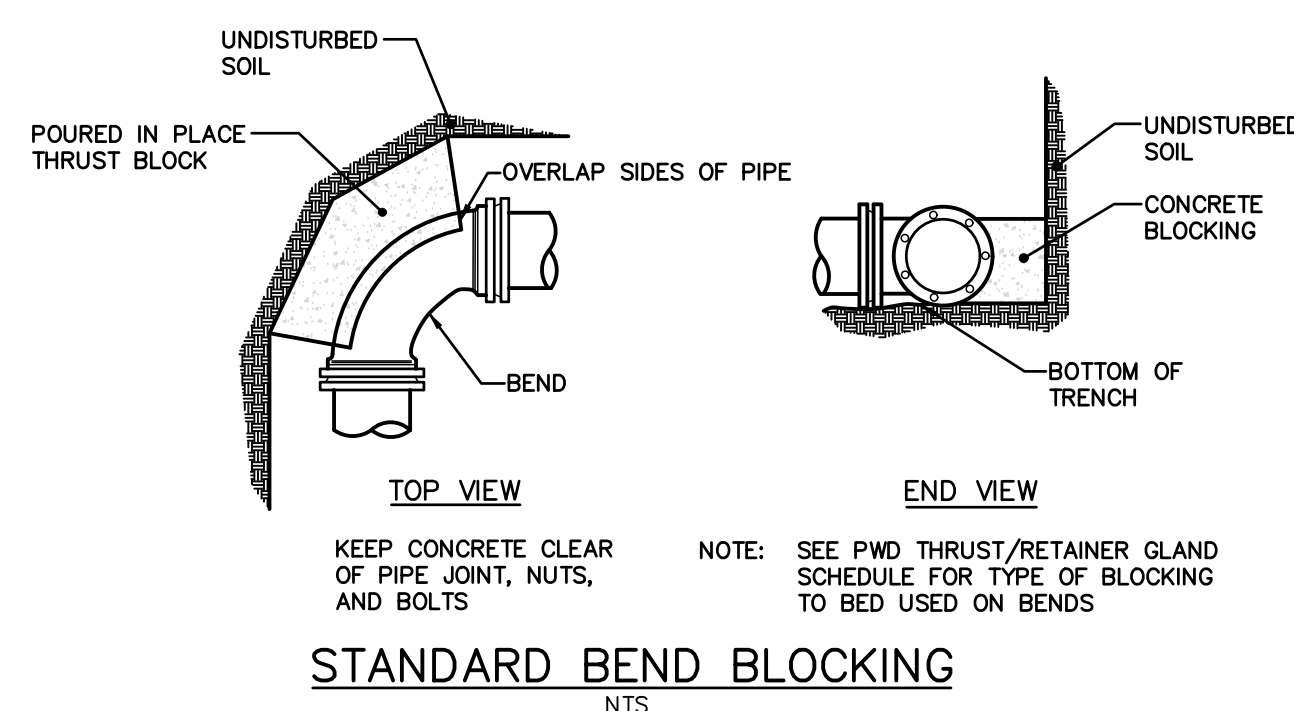
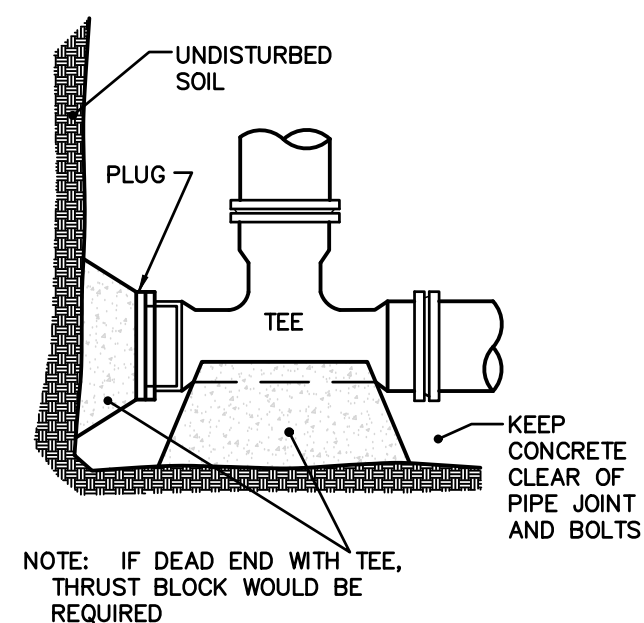
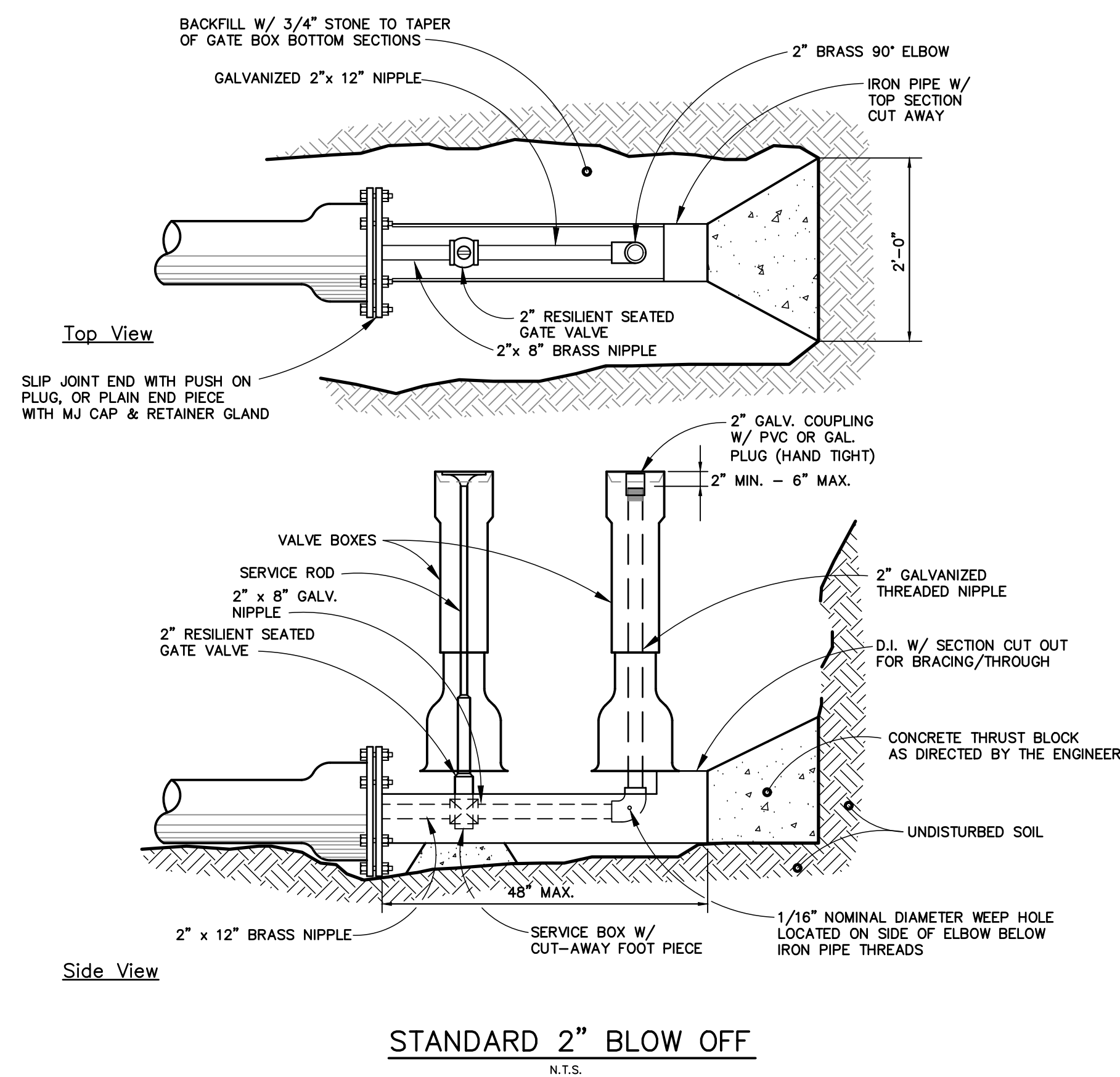
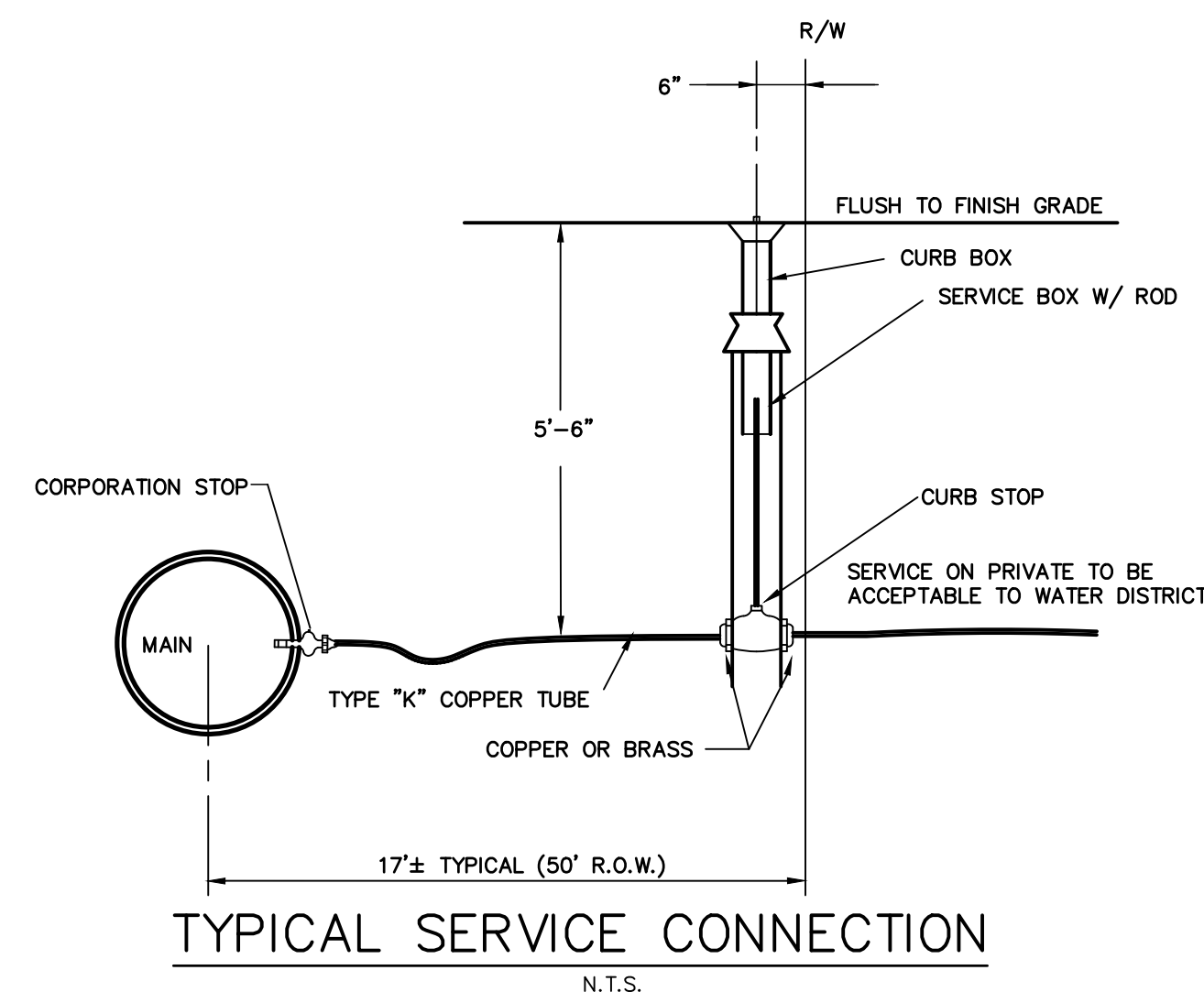
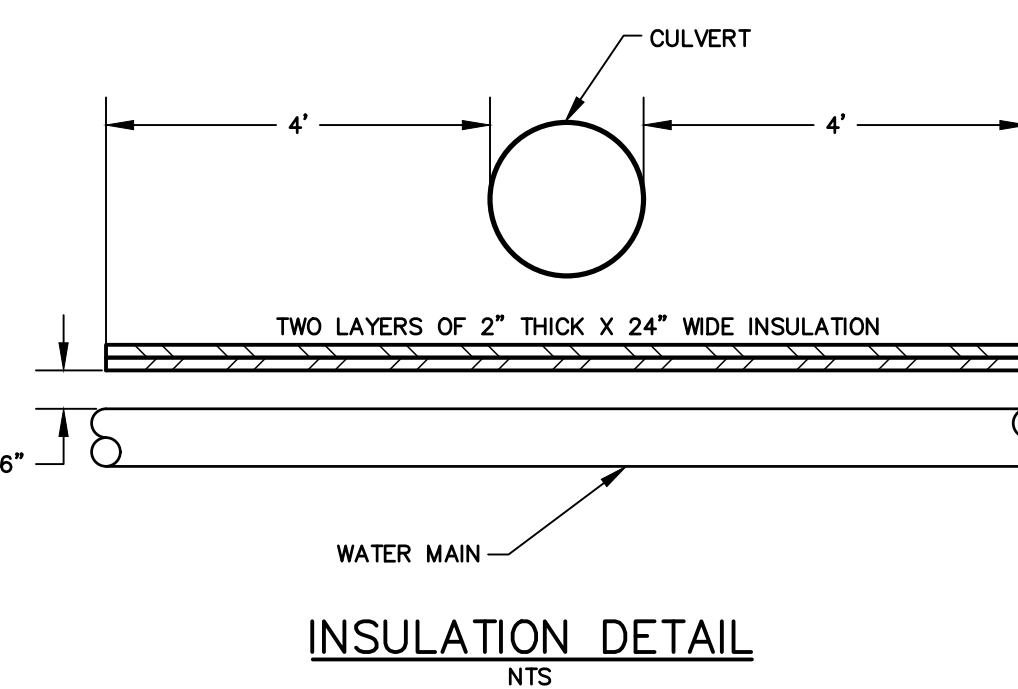
DESIGNED C. MacDonald	DATE July 2023
DRAWN B. Monsen	SCALE As Noted
CHECKED C. MacDonald	JOB. NO. 22045

SHEET
6

REPRODUCTION OR REUSE OF THIS DOCUMENT WITHOUT THE EXPRESSED WRITTEN CONSENT OF BH2M INC. IS PROHIBITED.



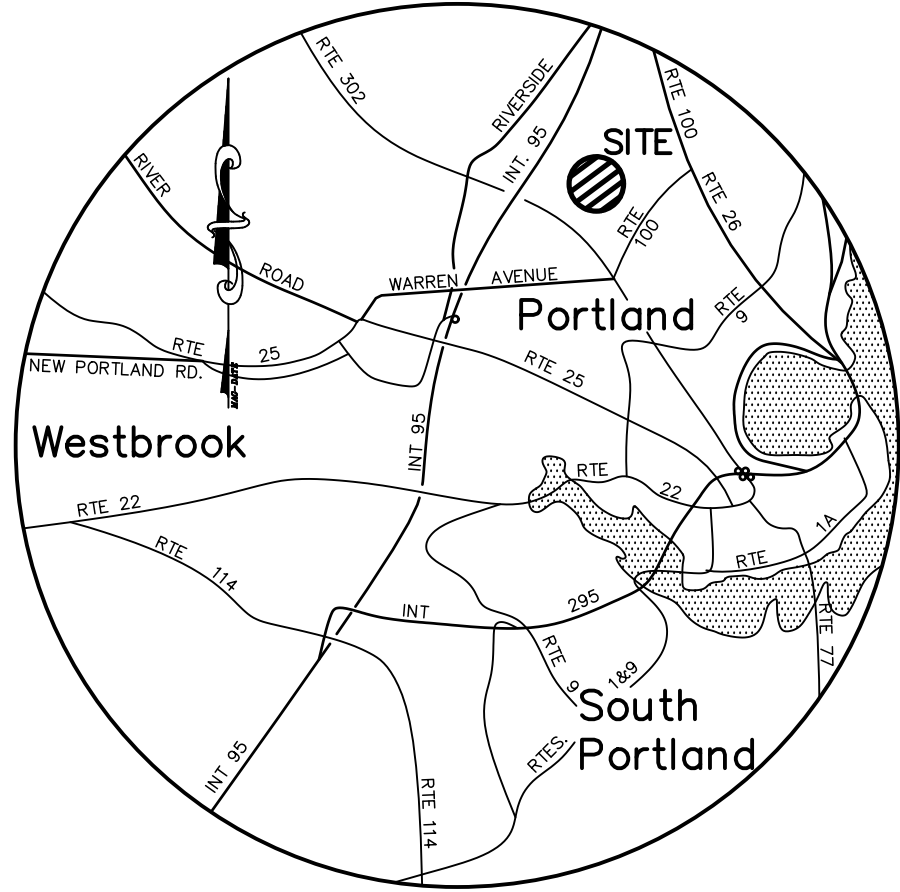
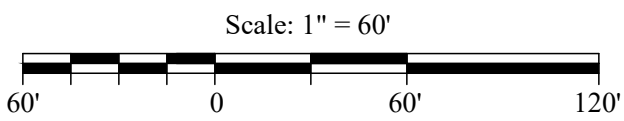
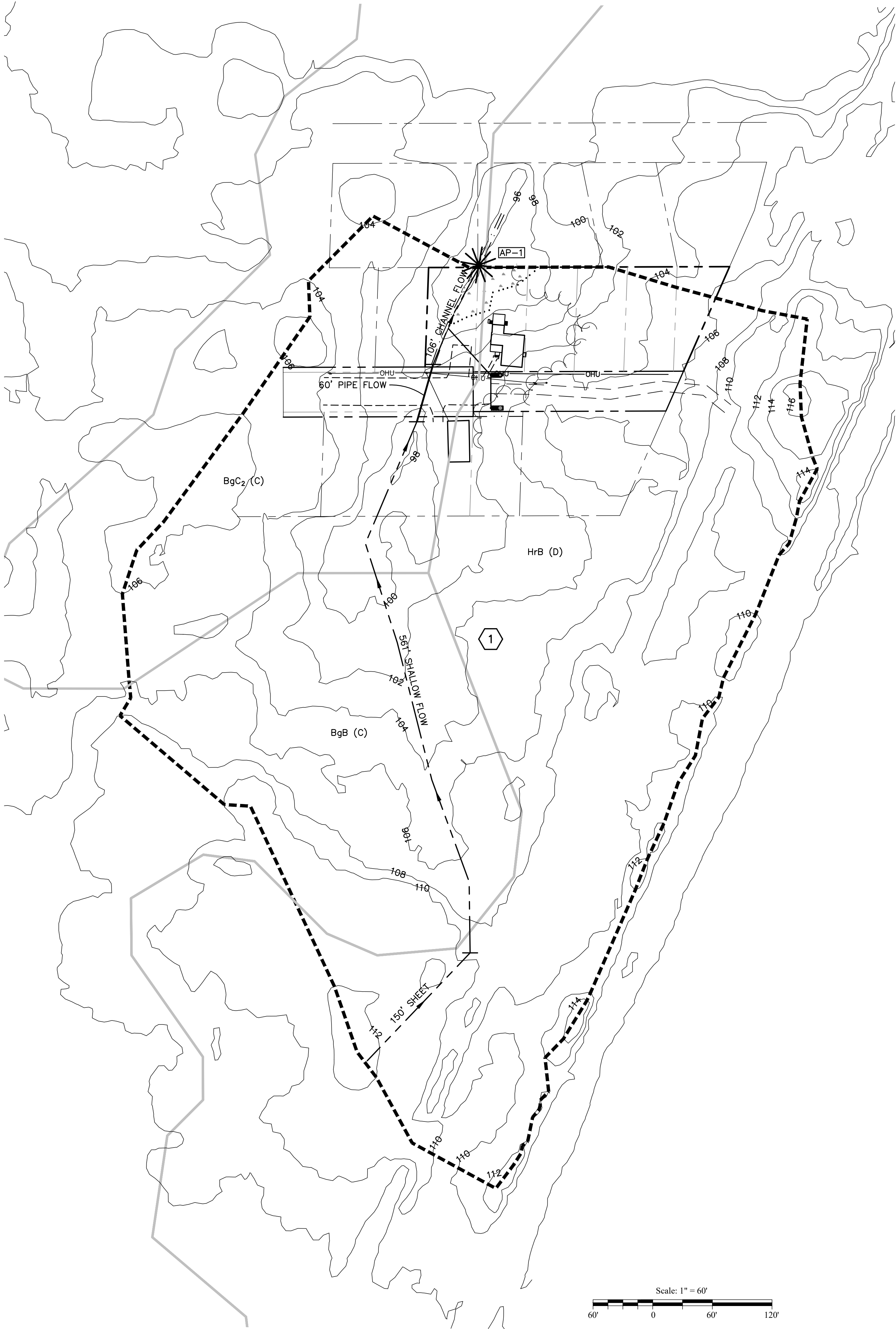
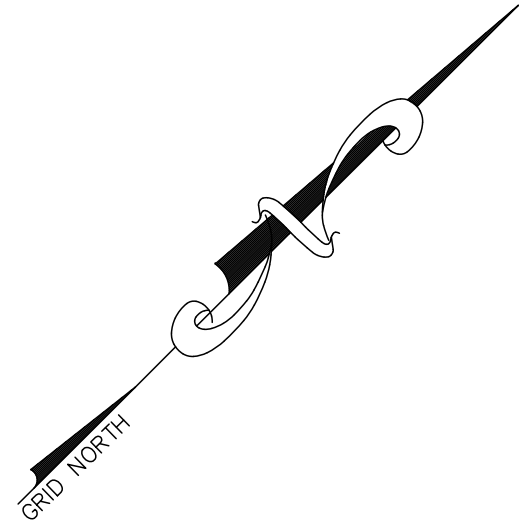
NOTE: SERVICE CONNECTIONS (DIRECT TAPS AND SERVICE CLAMPS) WILL BE INSTALLED SO THAT THE OUTLET IS AT AN ANGLE OF NOT MORE THAN 45° ABOVE THE HORIZONTAL. ALWAYS PUT A BEND OR "GOOSENECK" IN THE SERVICE LINE PRIOR TO CONNECTING TO PROVIDE FLEXIBILITY AND "GIVE" TO COUNTERACT THE EFFECTS OF A LOAD DUE TO SETTLEMENT OR EXPANSION AND/OR CONTRACTION (SEE DETAILS).



FOR
Laurie Stirois
56 High Street
Yarmouth, Maine

SHEET
7

REPRODUCTION OR REUSE OF THIS
DOCUMENT WITHOUT THE
EXPRESSED WRITTEN CONSENT
OF BH2M INC. IS PROHIBITED



LOCATION MAP
SCALE: 1" = 2 MILES

- NOTES:
1. BOUNDARY/TOPOGRAPHY: BH2M
ROBERT C. LIBBY JR. PLS#2190
380B MAIN STREET
GORHAM, MAINE
 2. SOILS MAPPING: CUMBERLAND COUNTY MEDIUM INTENSITY
SOILS MAPS
 3. WETLANDS: MARK HAMPTON ASSOCIATES
PORTLAND, MAINE
 4. SEE STORMWATER MANAGEMENT REPORT FOR ADDITIONAL INFORMATION.

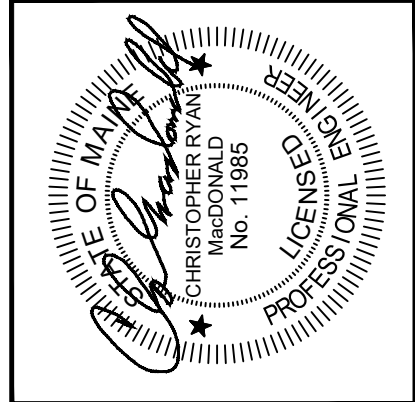
PRE DEVELOPMENT FLOWS			
ANALYSIS POINT	2 YR. STORM	10 YR. STORM	25 YR. STORM
AP-1	5.02 CFS	10.66 CFS	15.57 CFS

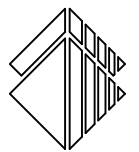
SOILS LEGEND	
SYMBOL	DESCRIPTION
	SOIL BOUNDARY LINES
	LIMIT OF WETLANDS
SLOPE DESIGNATION	
A = 0 - 3%	
B = 3- 8%	
C = 8 - 20%	
D = 20%+	
HYDROLOGIC SOIL GROUP	
SOIL	GROUP
NICHOLVILLE (BgB, BgC2)	C
LYMAN-TUNBRIDGE (HrB)	D

SOIL DESIGNATION	
SLOPE DESIGNATION	
AdB(A)	
HYDROLOGIC SOIL GROUP	
HYDROLOGIC SOIL	

SYMBOL	LEGEND	DESCRIPTION
	POND	
	DRAINAGE SUB AREA	
	REACH	
	DRAINAGE AREA BOUNDARY	
	TIME OF CONCENTRATION ROUTE	
	LIMIT OF WETLANDS	
	EXISTING CONTOUR	
	PROPOSED CONTOUR	

REVISION		DESCRIPTION
NO.	DATE	
1	7/24/23	Issued for Permitting





BH2M
Barry, Huff, McDonald, Milfigan Inc.
Engineers, Surveyors
380B Main Street
Gorham, Maine 04038
Tel. (207) 839-2771
www.bh2m.com

FOR
Laurie Sirois
56 High Street
Yarmouth, Maine

PRE DEVELOPMENT
WATERSHED

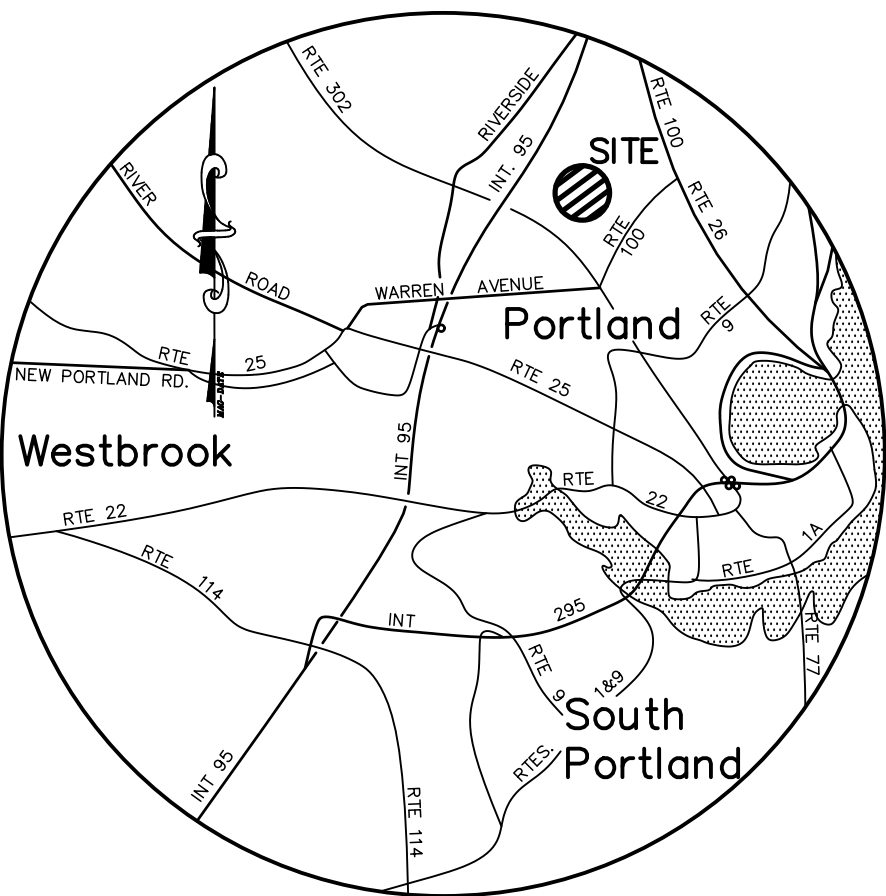
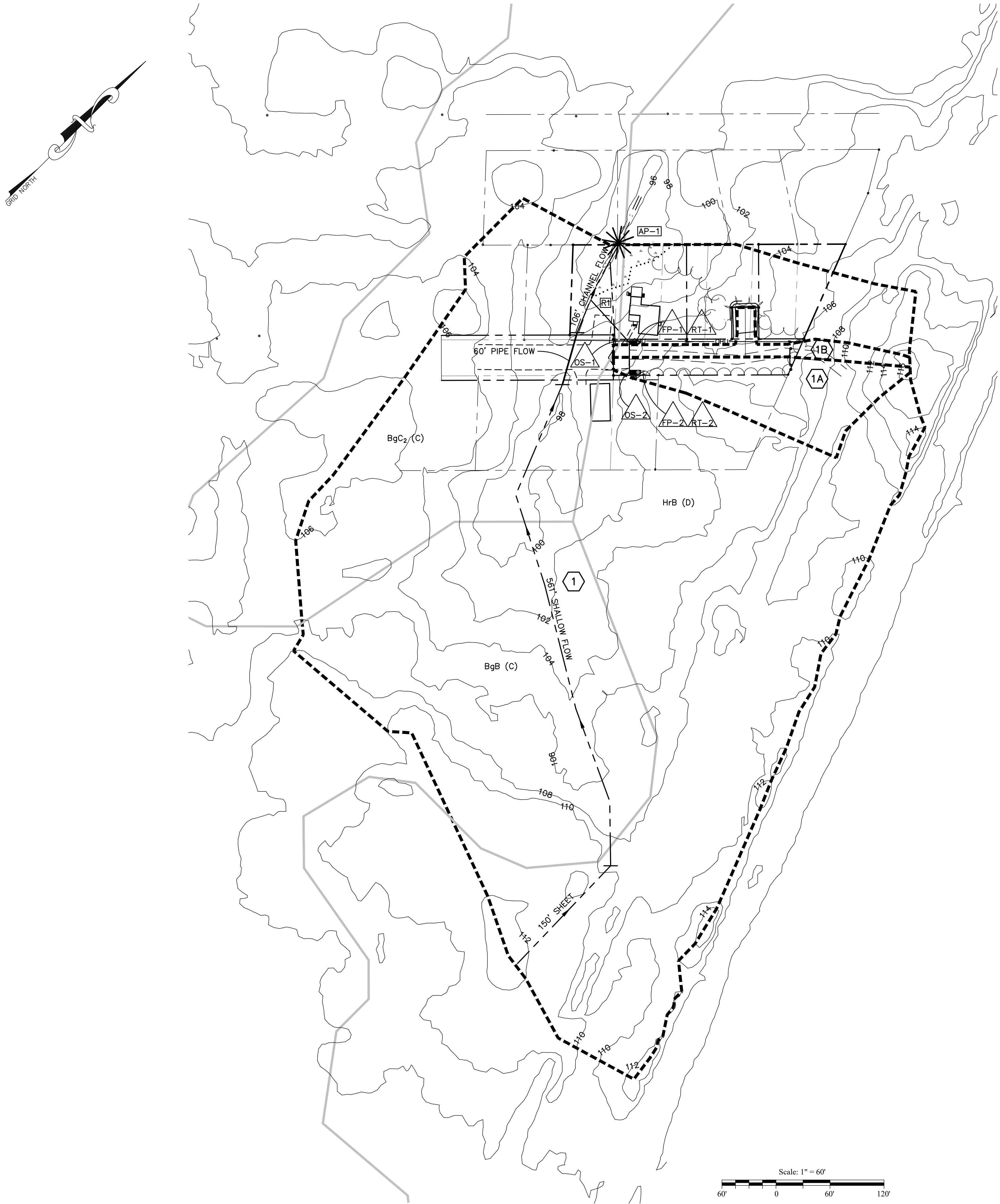
LAND OF
LAURIE SIROIS
66 EIGHTH STREET
PORTLAND, MAINE

DESIGNED B. Monsen	DATE July 2023
DRAWN Dept.	SCALE 1" = 60'
CHECKED C. MacDonald	JOB. NO. 22045

SHEET

A

REPRODUCTION OR REUSE OF THIS
DOCUMENT WITHOUT THE
EXPRESSED WRITTEN CONSENT
OF BH2M INC. IS PROHIBITED



LOCATION MAP
SCALE: 1" = 2 MILES

- NOTES:
1. BOUNDARY/TOPOGRAPHY: BH2M
ROBERT C. LIBBY JR. PLS#2190
380B MAIN STREET
GORHAM, MAINE
 2. SOILS MAPPING: CUMBERLAND COUNTY MEDIUM INTENSITY
SOILS MAPS
 3. WETLANDS: MARK HAMPTON ASSOCIATES
PORTLAND, MAINE
 4. SEE STORMWATER MANAGEMENT REPORT FOR ADDITIONAL INFORMATION.

POST DEVELOPMENT FLOWS			
FLOW RATE = POST (PRE)			
ANALYSIS POINT	2 YR. STORM	10 YR. STORM	25 YR. STORM
AP-1	5.04 (5.02) CFS	10.62 (10.66) CFS	15.46 (15.57) CFS

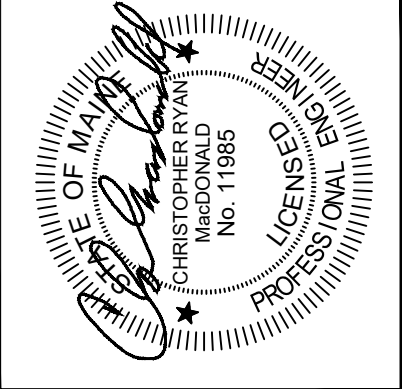
To SUMMARY	
(FOR THOSE NOT LABELED ON THE PLAN)	
SUBCATCHMENT	To ROUTE
SA-1A	150' SHEET, 168' SHALLOW FLOW
SA-1B	130' SHEET, 190' SHALLOW FLOW

SOILS LEGEND	
SYMBOL	DESCRIPTION
---	SOIL BOUNDARY LINES
----	LIMIT OF WETLANDS
SLOPE DESIGNATION	
A	= 0 - 3%
B	= 3 - 8%
C	= 8 - 20%
D	= 20%+
HYDROLOGIC SOIL GROUP	
SOIL	GROUP
NICHOLVILLE (BgB, BgC2)	C
LYMAN-TUNBRIDGE (HrB)	D

SOIL DESIGNATION	
AdB(A)	SLOPE DESIGNATION
AdB(A)	HYDROLOGIC SOIL GROUP
AdB(A)	HYDROLOGIC SOIL

SYMBOL	LEGEND	DESCRIPTION
12	POND	
12	DRAINAGE SUB AREA	
R12	REACH	
---	DRAINAGE AREA BOUNDARY	
---	TIME OF CONCENTRATION ROUTE	
---	LIMIT OF WETLANDS	
---	EXISTING CONTOUR	
---	PROPOSED CONTOUR	

REVISION		DESCRIPTION
NO.	DATE	7/24/23
1	Issued for Permitting	



BH2M
Barry, Huff, McDonald, Milfigan Inc.
Engineers, Surveyors
380B Main Street
Gorham, Maine 04038
Tel. (207) 839-2771
www.bh2m.com

FOR
Laurie Sirois
56 High Street
Yarmouth, Maine

POST DEVELOPMENT
WATERSHED
LAND OF
LAURIE SIROIS
66 EIGHTH STREET
PORTLAND, MAINE

DESIGNED B. Monsen	DATE July 2023
DRAWN Dept.	SCALE 1" = 60'
CHECKED C. MacDonald	JOB. NO. 22045

SHEET
B
REPRODUCTION OR REUSE OF THIS
DOCUMENT WITHOUT THE
EXPRESSED WRITTEN CONSENT
OF BH2M INC. IS PROHIBITED