72 Bishop Street

Site Plan and Subdivision Plan
Application

April 10, 2015

APPLICANT:
AVESTA 72 Bishop Street, L.P.
307 Cumberland Avenue
Portland, Maine 04101

AGENT:
MITCHELL & ASSOCIATES
70 Center Street
Portland, Maine 04101

Att. A

Mitchell & Associates
LANDSCAPE ARCHITECTS

The Staples School
70 Center Street
Portland, Maine 04101
P: 207.774.4427
F: 207.874.2460
www.mitchellassociates.biz

April 10, 2015

Mr. Alexander Jaegerman,
Director of the Portland Planning Division
and Planning Board Members
City of Portland
389 Congress Street
Portland, Maine 04101

Re: Bishop Street Apartments
72 Bishop Street
Site Plan and Subdivision Plan Review

Dear Alex:

On behalf of Avesta 72 Bishop Street, LP, we are pleased to submit the following Site Plan and Subdivision Application for the proposed "72 Bishop Street Efficiencies" located at 72-78 Bishop Street in Portland. This submission has been prepared in compliance with requirements of the City of Portland Zoning, Site Plan and Subdivision Ordinance. The project is intended to provide housing options and needed support services for the chronically homeless.

The Site

72 Bishop Street consists of a single family residence and a vacant lot. The combined property is a 52,383 square foot lot with 50 feet of frontage on Bishop Street. The property has an 826 +/- square foot (footprint) residence with a small gravel driveway. The rear of the property is primary woodland growth with 14,203 square feet of forested and shrub scrub wetland. Abutting properties include a single story, 3 unit professional office building, to the east at 68 Bishop Street and a Masonic Hall to the west. To the south is the University of New England athletic field.

Project Description

Avesta Housing proposes to develop the combined lots of 72 & 78 Bishop Street to create 30 efficiency units at 72 Bishop Street in Portland for chronically homeless individuals, using a "housing first" approach. As was the case at Logan

Place and Florence House, Avesta's two prior 'housing first' projects, Avesta anticipates partnering with Preble Street for the provision of 24-hour, on-site support services and Portland Housing Authority for project-based rental assistance. Bishop Street Apartments will provide housing and support services for those chronically homeless individuals who are currently most vulnerable due to their significant medical conditions.

The proposed facility is in close proximity to employment opportunities, public transportation services, retail and amenities, yet beyond the high paced downtown urban environment. Avesta's vision for the property is to create a high quality housing resource for the neediest population within the City of Portland that combines the best features of affordable housing and quality design.

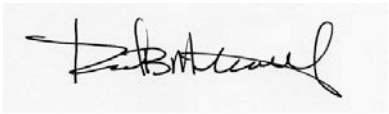
During the zoning amendment process, the applicant and the Planning Board discussed the need to provide a public sidewalk along Bishop Street. We have prepared a sidewalk plan that extends a new bituminous sidewalk, esplanade and granite curb, extending approximately 500 linear feet to meet the existing sidewalk near the intersection with Forest and Stevens Avenues.

This submission includes the following information:

1. Cover letter, dated April 10, 2015
2. Site Plan and Subdivision Application & Checklist
3. Application Fee: $1,500 (Per Sec 14-486 Affordable Housing Reduction)
4. Submission Booklet of required documentation and exhibits
5. One set of plans (24" x 36")
6. One set of plans (11"x17")

We trust that the Planning Board will consider this a complete application for a workshop meeting. If you desire any additional information, please do not hesitate to contact us. We look forward to our meeting with the Board at its earliest convenience.

Sincerely,
Mitchell & Associates



Robert Metcalf, Principal
Maine Licensed Landscape Architect

Enclosure

cc. Brooks More, Avesta
Ben Walter, CWS Architect

TABLE OF CONTENTS

EXHIBIT	1	Development Review Application, Project Data and Checklist
EXHIBIT	2	Right, Title or Interest
EXHIBIT	3	Project Description, Project Data and Maps
EXHIBIT	4	Abutting Property Owners
EXHIBIT	5	Existing Soils Condition
EXHIBIT	6	Public Utilities
EXHIBIT	7	Technical Capability, Financial Capability and Letter of Authorization
EXHIBIT	8	Compliance with Applicable Zoning
EXHIBIT	9	Waiver Request
EXHIBIT	10	Consistency with City's Master Plan and Conformity with Design Standards
EXHIBIT	11	Fire Department Checklist and HVAC Emissions Requirements
EXHIBIT	12	Traffic and Parking Study
EXHIBIT	13	Stormwater Management Plan
EXHIBIT	14	Solid Waste Disposal and Snow Removal
EXHIBIT	15	Light Fixtures
EXHIBIT	16	Construction Management Plan (see Exhibit 9- Temporary Waiver)
EXHIBIT	17	Natural Features

Level III – Preliminary and Final Site Plans
Development Review Application
Portland, Maine

Planning and Urban Development Department
Planning Division

Portland's Planning and Urban Development Department coordinates the development review process for site plan, subdivision and other applications under the City's Land Use Code. Attached is the application form for a Level III: Preliminary or Final Site Plan. Please note that Portland has delegated review from the State of Maine for reviews under the Site Location of Development Act, Chapter 500 Stormwater Permits, and Traffic Movement Permits.

Level III: Site Plan Development includes:

- New structures with a total floor area of 10,000 sq. ft. or more except in Industrial Zones.
- New structures with a total floor area of 20,000 sq. ft. or more in Industrial Zones.
- New temporary or permanent parking area(s) or paving of existing unpaved parking areas for more than 75 vehicles.
- Building addition(s) with a total floor area of 10,000 sq. ft. or more (cumulatively within a 3 year period) except in Industrial Zones.
- Building addition(s) with a total floor area of 20,000 sq. ft. or more in Industrial Zones.
- A change in the use of a total floor area of 20,000 sq. ft. or more in any existing building (cumulatively within a 3 year period).
- Multiple family development (3 or more dwelling units) or the addition of any additional dwelling unit if subject to subdivision review.
- Any new major or minor auto business in the B-2 or B-5 Zone, or the construction of any new major or minor auto business greater than 10,000 sq. ft. of building area in any other permitted zone.
- Correctional prerelease facilities.
- Park improvements: New structures greater than 10,000 sq. ft. and/or facilities encompassing 20,000 sq. ft. or more (excludes rehabilitation or replacement of existing facilities); new nighttime outdoor lighting of sports, athletic or recreation facilities not previously illuminated.
- Land disturbance of 3 acres or more (includes stripping, grading, grubbing, filling or excavation).

Portland's development review process and requirements are outlined in the Land Use Code (Chapter 14) which is available on our website:

Land Use Code: http://me-portland.civicplus.com/DocumentCenter/Home/View/1080
Design Manual: http://me-portland.civicplus.com/DocumentCenter/View/2355
Technical Manual: http://me-portland.civicplus.com/DocumentCenter/View/2356

Planning Division
Fourth Floor, City Hall
389 Congress Street
(207) 874-8719

Office Hours
Monday thru Friday
8:00 a.m. – 4:30 p.m.

Updated: April 23, 2014

PROJECT NAME: 72 Bishop Street

PROPOSED DEVELOPMENT ADDRESS:

72 & 78 Bishop Street, Portland

PROJECT DESCRIPTION:

Plan to develop 30 housing units with. 12 parking spaces

CHART/BLOCK/LOT: 293-C-2 & 3

PRELIMINARY PLAN _____ (date)
FINAL PLAN _____ (date)

CONTACT INFORMATION:

Applicant – must be owner, Lessee or Buyer Name: Avesta 72 Bishop, L.P., Brooks More Business Name, if applicable: Address: 307 Cumberland Ave City/State : Portland, ME Zip Code: 04101	**Applicant Contact Information** Work # 207. 553 7780 Home# Cell # Fax# e-mail: bmore@avestahousing.org
Owner – (if different from Applicant) Name: Address: City/State : Zip Code:	**Owner Contact Information** Work # Home# Cell # Fax# e-mail:
Agent/ Representative Name: Mitchell & Associates, Bob Metcalf Address: 70 Center Street City/State : Portland, ME Zip Code: 04101	**Agent/Representative Contact information** Work # 207.774.4427 Cell # e-mail: rmetcalf@mitchellassociates.biz
Billing Information Name: Avesta 72 Bishop , L.P. Address: 307 Cumberland Ave City/State : Portland, ME Zip Code: 04101	**Billing Information** Work # 207.553.7780 Cell # Fax# e-mail: bmore@avestahousing.org

Engineer Name: Ransom Consulting Engineers, Stephen Bradstreet, PE Address: 400 Commercial Street City/State : Portland, ME Zip Code: 04101	**Engineer Contact Information** Work # 207.772.2891 Cell # Fax# e-mail: stephen.bradstreet@ransomenv.com
Surveyor Name: Owen Haskell Surveyors, Inc. Address: 390 U.S. Rt 1,Unit 10 City/State : Falmouth, ME Zip Code: 04105	**Surveyor Contact Information** Work # 207.774.4424 Cell # Fax# e-mail: www.owenhaskell.com
Architect Name: CWS Architects, Ben Walter Address: 434 Cumberland Avenue City/State : Portland, ME Zip Code: 04101	**Architect Contact Information** Work # 207.774.4441 Cell # Fax# e-mail: bwalter@cwsarch.com
Attorney Name: Cito Selinger, Curtis Thaxter Address: 1 Canal Plaza Suite 1000 City/State : Portland, ME Zip Code: 04101	**Attorney Contact Information** Work # 207.774.9000 Cell # Fax# e-mail: mselinger@curtisthaxter.com

APPLICATION FEES:
Check all reviews that apply. (Payment may be made by Credit Card, Cash or Check payable to the City of Portland.)

Level III Development (check applicable reviews)
_X Less than 50,000 sq. ft. ($500.00)
___ 50,000 - 100,000 sq. ft. ($1,000)
___ 100,000 – 200,000 sq. ft. ($2,000)
___ 200,000 – 300,000 sq. ft. ($3,000)
___ over $300,00 sq. ft. ($5,000)
___ Parking lots over 11 spaces ($1,000)
___ After-the-fact Review ($1,000.00 plus applicable application fee)

Plan Amendments (check applicable reviews)
___ Planning Staff Review ($250)
___ Planning Board Review ($500)

The City invoices separately for the following:
- Notices ($.75 each)
- Legal Ad (% of total Ad)
- Planning Review ($40.00 hour)
- Legal Review ($75.00 hour)

Third party review fees are assessed separately. Any outside reviews or analysis requested from the Applicant as part of the development review, are the responsibility of the Applicant and are separate from any application or invoice fees.

Other Reviews (check applicable reviews)
___ Traffic Movement ($1,000)
_X_ Stormwater Quality ($250)
_X_ Subdivisions ($500 + $25/lot)
# of Lots _30_ x $25/lot = 750
___ Site Location ($3,000, except for residential projects which shall be $200/lot)
# of Lots ___ x $200/lot = _____
___ Other _____
___ Change of Use
___ Flood Plain
___ Shoreland
___ Design Review
___ Housing Replacement
___ Historic Preservation

APPLICATION SUBMISSION:

1. All site plans and written application materials must be submitted electronically on a CD or thumb drive with each plan submitted as separate files, with individual file which can be found on the **Electronic Plan and Document Submittal** page of the City's website at http://me-portland.civicplus.com/764/Electronic-Plan-and-Document-Submittal

2. In addition, one (1) paper set of the plans (full size), one (1) paper set of plans (11 x 17), paper copy of written materials, and the application fee must be submitted to the Building Inspections Office to start the review process.

The application must be complete, including but not limited to the contact information, project data, application checklists, wastewater capacity, plan for fire department review, and applicant signature. The submissions shall include one (1) paper packet with folded plans containing the following materials:

1. **One (1) full size site plans** that must be **folded.**
2. One (1) copy of all written materials or as follows, unless otherwise noted:
   a. Application form that is completed and signed.
   b. Cover letter stating the nature of the project.
   c. All Written Submittals (Sec. 14-525 2. (c), including evidence of right, title and interest.
3. A stamped standard boundary survey prepared by a registered land surveyor at a scale not less than one inch to 50 feet.
4. Plans and maps based upon the boundary survey and containing the information found in the attached sample plan checklist.
5. One (1) set of plans reduced to 11 x 17.

Please refer to the application checklist (attached) for a detailed list of submission requirements.

APPLICANT SIGNATURE:

I hereby certify that I am the Owner of record of the named property, or that the owner of record authorizes the proposed work and that I have been authorized by the owner to make this application as his/her authorized agent. I agree to conform to all applicable laws of this jurisdiction. In addition, if a permit for work described in this application is issued, I certify that the Planning Authority and Code Enforcement's authorized representative shall have the authority to enter all areas covered by this permit at any reasonable hour to enforce the provisions of the codes applicable to this permit.

This application is for a Level II Site Plan review. It is not a permit to begin construction. An approved site plan, a Performance Guarantee, Inspection Fee, Building Permit, and associated fees will be required prior to construction. Other Federal, State or local permits may be required prior to construction, which are the responsibility of the applicant to obtain.

Signature of Applicant: 	**Date:** April 10, 2015

PROJECT DATA

The following information is required where applicable, in order to complete the application.

Total Area of Site	52,383 sq. ft.
Proposed Total Disturbed Area of the Site	28,446 sq. ft.
If the proposed disturbance is greater than one acre, then the applicant shall apply for a Maine Construction General Permit (MCGP) with DEP and a Stormwater Management Permit, Chapter 500, with the City of Portland.	
Impervious Surface Area	
Impervious Area (Total Existing)	1,340 sq. ft.
Impervious Area (Total Proposed)	18,686 sq. ft.
Building Ground Floor Area and Total Floor Area	
Building Footprint (Total Existing)	826 sq. ft.
Building Footprint (Total Proposed)	7,804 sq. ft.
Building Floor Area (Total Existing)	1,600 sq. ft.
Building Floor Area (Total Proposed)	21,374 sq. ft.
Zoning	
Existing	B-2c
Proposed, if applicable	
Land Use	
Existing	Residential
Proposed	Multi-family Low Income Residential
Residential, If applicable	
# of Residential Units (Total Existing)	1 Single family residence
# of Residential Units (Total Proposed)	30 units
# of Lots (Total Proposed)	1
# of Affordable Housing Units (Total Proposed)	30 units
Proposed Bedroom Mix	
# of Efficiency Units (Total Proposed)	30 efficiency units
# of One-Bedroom Units (Total Proposed)	
# of Two-Bedroom Units (Total Proposed)	
# of Three-Bedroom Units (Total Proposed)	
Parking Spaces	
# of Parking Spaces (Total Existing)	2
# of Parking Spaces (Total Proposed)	10
# of Handicapped Spaces (Total Proposed)	2
Bicycle Parking Spaces	
# of Bicycle Spaces (Total Existing)	0
# of Bicycle Spaces (Total Proposed)	12
Estimated Cost of Project	$5,586,058

PRELIMINARY PLAN (Optional) - Level III Site Plan			
Applicant Checklist	Planner Checklist	# of Copies	**GENERAL WRITTEN SUBMISSIONS CHECKLIST**
		1	Completed Application form
		1	Application fees
		1	Written description of project
		1	Evidence of right, title and interest
		1	Evidence of state and/or federal approvals, if applicable
		1	Written assessment of proposed project's compliance with applicable zoning requirements
		1	Summary of existing and/or proposed easement, covenants, public or private rights-of-way, or other burdens on the site
		1	Written requests for waivers from site plan or technical standards, if applicable.
		1	Evidence of financial and technical capacity
		1	Traffic Analysis (may be preliminary, in nature, during the preliminary plan phase)
Applicant Checklist	Planner Checklist	# of Copies	**SITE PLAN SUBMISSIONS CHECKLIST**
X		1	Boundary Survey meeting the requirements of Section 13 of the City of Portland's Technical Manual
X		1	**Preliminary Site Plan including the following: (information provided may be preliminary in nature during preliminary plan phase)**
X		Proposed grading and contours;	
X		Existing structures with distances from property line;	
X		Proposed site layout and dimensions for all proposed structures (including piers, docks or wharves in Shoreland Zone), paved areas, and pedestrian and vehicle access ways;	
X		Preliminary design of proposed stormwater management system in accordance with Section 5 of the Technical Manual (note that Portland has a separate applicability section);	
X		Preliminary infrastructure improvements;	
X		Preliminary Landscape Plan in accordance with Section 4 of the Technical Manual;	
X		Location of significant natural features (including wetlands, ponds, watercourses, floodplains, significant wildlife habitats and fisheries or other important natural features) located on the site as defined in Section 14-526 (b) (1);	
X		Proposed buffers and preservation measures for significant natural features, as defined in Section 14-526 (b) (1);	
X		Location , dimensions and ownership of easements, public or private rights of way, both existing and proposed;	
X		Exterior building elevations.	

FINAL PLAN - Level III Site Plan			
Applicant Checklist	Planner Checklist	# of Copies	**GENERAL WRITTEN SUBMISSIONS CHECKLIST (* If applicant chooses to submit a Preliminary Plan, then the * items were submitted for that phase and only updates are required)**
X		1	* Completed Application form
X		1	* Application fees
X		1	* Written description of project
X		1	* Evidence of right, title and interest
*		1	* Evidence of state and/or federal permits
X		1	* Written assessment of proposed project's specific compliance with applicable Zoning requirements
*		1	* Summary of existing and/or proposed easements, covenants, public or private rights-of-way, or other burdens on the site
X		1	* Evidence of financial and technical capacity
*		1	Construction Management Plan
X		1	A traffic study and other applicable transportation plans in accordance with Section 1 of the technical Manual, where applicable.
X		1	Written summary of significant natural features located on the site (Section 14-526 (b) (a))
X		1	Stormwater management plan and stormwater calculations
X		1	Written summary of project's consistency with related city master plans
**		1	Evidence of utility capacity to serve
X		1	Written summary of solid waste generation and proposed management of solid waste
X		1	A code summary referencing NFPA 1 and all Fire Department technical standards
N/A		1	Where applicable, an assessment of the development's consistency with any applicable design standards contained in Section 14-526 and in City of Portland Design Manual
*		1	Manufacturer's verification that all proposed HVAC and manufacturing equipment meets applicable state and federal emissions requirements.

* Temporary Waiver requested.

** CMP, UNITIL and PWD Ability to Serve letters have been submitted; City of Portland Wastewater Ability to Serve letter has been requested.

Applicant Checklist	Planner Checklist	# of Copies	**SITE PLAN SUBMISSIONS CHECKLIST** **(* If applicant chooses to submit a Preliminary Plan, then the * items were submitted for that phase and only updates are required)**
X		1	* Boundary Survey meeting the requirements of Section 13 of the City of Portland's Technical Manual
X		1	**Final Site Plans including the following:**
X		Existing and proposed structures, as applicable, and distance from property line (including location of proposed piers, docks or wharves if in Shoreland Zone);	
X		Existing and proposed structures on parcels abutting site;	
X		All streets and intersections adjacent to the site and any proposed geometric modifications to those streets or intersections;	
X		Location, dimensions and materials of all existing and proposed driveways, vehicle and pedestrian access ways, and bicycle access ways, with corresponding curb lines;	
X		Engineered construction specifications and cross-sectional drawings for all proposed driveways, paved areas, sidewalks;	
X		Location and dimensions of all proposed loading areas including turning templates for applicable design delivery vehicles;	
N/A		Existing and proposed public transit infrastructure with applicable dimensions and engineering specifications;	
X		Location of existing and proposed vehicle and bicycle parking spaces with applicable dimensional and engineering information;	
X		Location of all snow storage areas and/or a snow removal plan;	
X		A traffic control plan as detailed in Section 1 of the Technical Manual;	
X		Proposed buffers and preservation measures for significant natural features, where applicable, as defined in Section 14-526(b)(1);	
N/A		Location and proposed alteration to any watercourse;	
X		A delineation of wetlands boundaries prepared by a qualified professional as detailed in Section 8 of the Technical Manual;	
X		Proposed buffers and preservation measures for wetlands;	
X		Existing soil conditions and location of test pits and test borings;	
X		Existing vegetation to be preserved, proposed site landscaping, screening and proposed street trees, as applicable;	
X		A stormwater management and drainage plan, in accordance with Section 5 of the Technical Manual;	
X		Grading plan;	
N/A		Ground water protection measures;	
X		Existing and proposed sewer mains and connections;	

- Continued on next page -

X		Location of all existing and proposed fire hydrants and a life safety plan in accordance with Section 3 of the Technical Manual;
X		Location, sizing, and directional flows of all existing and proposed utilities within the project site and on all abutting streets;
X		Location and dimensions of off-premises public or publicly accessible infrastructure immediately adjacent to the site;
X		Location and size of all on site solid waste receptacles, including on site storage containers for recyclable materials for any commercial or industrial property;
X		Plans showing the location, ground floor area, floor plans and grade elevations for all buildings;
N/A		A shadow analysis as described in Section 11 of the Technical Manual, if applicable;
N/A		A note on the plan identifying the Historic Preservation designation and a copy of the Application for Certificate of Appropriateness, if applicable, as specified in Section Article IX, the Historic Preservation Ordinance;
*		Location and dimensions of all existing and proposed HVAC and mechanical equipment and all proposed screening, where applicable;
*		An exterior lighting plan in accordance with Section 12 of the Technical Manual;
*		A signage plan showing the location, dimensions, height and setback of all existing and proposed signs;
*		Location, dimensions and ownership of easements, public or private rights of way, both existing and proposed.

* Temporary Waiver requested.

RIGHT, TITLE OR INTEREST

Please see attached Quitclaim Deed recorded in the Cumberland County Registry of Deeds, Book 31827, Page 271.

SHORT FORM QUITCLAIM DEED WITH COVENANT

KNOW ALL PERSONS BY THESE PRESENTS, THAT WILLIAM F. DIXON, of Cumberland County, Maine, and J. WESLEY WRIGHT, JR., of Cumberland County, Maine, each individually and together doing business as Hed/Way Development, FOR CONSIDERATION PAID, grant to AVESTA BISHOP STREET LP, a Maine limited partnership with a mailing address of 307 Cumberland Avenue, Portland, ME 04101, WITH QUITCLAIM COVENANT, the following described real property located in Portland, Cumberland County, State of Maine:

A certain lot or parcel of land, with the buildings thereon, situated on the southerly side of Bishop Street in the City of Portland, County of Cumberland and State of Maine, bounded and described as follows:

MAINE REAL ESTATE TAX PAID

Beginning on the southerly sideline of Bishop Street at the northwesterly corner of land conveyed by George Wilson to Eri A. Mowatt by deed dated March 12, 1949 and recorded in Cumberland County Registry of Deeds in Book 1952, Page 227; thence North 82° 18' West by Bishop Street fifty (50) feet to the easterly corner of land conveyed by Tilcon-Warren Minerals Inc. to Tilcon Minerals Inc. by deed dated August 17, 1981 and recorded in said Registry of Deeds in Book 4942, Page 143; thence southwesterly by said land of Tilcon-Minerals Inc. four hundred seventy-five (475) feet, more or less, to an angle in the line of land conveyed by the City of Portland to Westbrook College by deed dated November 8, 1973 and recorded in said Registry of Deeds in Book 3481, Page 255; thence South 5° East by said land of Westbrook College forty-two and twenty-four hundredths (42.24) feet to an angle; thence North 76° 24' East by said land of Westbrook College to the southwesterly corner of said Mowatt land; thence North 7° 42' East by said Mowatt land one hundred fifty-five and twenty-two hundredths (155. 22} feet to the point of beginning.

Being the same premises conveyed to William F. Dixon and J. Wesley Wright, Jr. d/b/a Hed/Way Development by deed dated November 30, 1988 and recorded in said Registry of Deeds in Book 8575, Page 272.

The undersigned certify that they are the only partners of a general partnership called Hed/Way Development

IN WITNESS WHEREOF, William F. Dixon and J. Wesley Wright, Jr., individually and together doing business as Hed/Way Development, have hereunto set their hands and seals this 6th day of October, 2014.

WITNESS:

William F. Dixon, individually and as Partner of Hed/Way Development

J. Wesley Wright, Jr. individually and as
Partner of Hed/Way Development

STATE OF MAINE
COUNTY OF CUMBERLAND, SS. October 6, 2014

Personally appeared the above-named William F. Dixon, in his said capacities as aforesaid, and acknowledged the foregoing instrument to be his free act and deed and the free act and deed of said Hed/Way Development.

Before me,

~~Notary Public~~/Attorney-at-Law
Print name: MA SELINGER

STATE OF MAINE
COUNTY OF CUMBERLAND, SS. October 6, 2014

Personally appeared the above-named J. Wesley Wright, in his said capacities as aforesaid, and acknowledged the foregoing instrument to be his free act and deed and the free act and deed of said Hed/Way Development.

Before me,

~~Notary Public~~/Attorney-at-Law
Print name: MA SELINGER

O:\MAS\99475 Avesta\Bishop Street\Transfer documents\Quitclaim Deed With Covenant-Short.docx

Received
Recorded Register of Deeds
Oct 06,2014 11:58:25A
Cumberland County
Pamela E. Lovley

PROJECT DESCRIPTION

Housing Objective of the Project

Avesta Housing proposes to develop the combined lots of 72 & 78 Bishop Street to create 30 efficiency units at 72 Bishop Street in Portland for chronically homeless individuals, using a "housing first" approach. As was the case at Logan Place and Florence House, Avesta's two prior 'housing first' projects, Avesta anticipates partnering with Preble Street for the provision of 24-hour, on-site support services and Portland Housing Authority for project-based rental assistance. In addition to the 30 apartments, the property will include common space for residents as well as office space for Avesta and Preble Street staff. Bishop Street Apartments will provide housing and support services for those chronically homeless individuals who are currently most vulnerable due to their significant medical conditions. The project will likely include a partnership with a health care provider, to both address specific health concerns and ensure that residents have access to the health and/or personal care services that medically compromised individuals typically benefit from in their homes.

The proposed facility is in close proximity to employment opportunities, public transportation services, retail and amenities, yet beyond the high paced downtown urban environment. Avesta's vision for the property is to create a high quality housing resource for the neediest population within the City of Portland that combines the best features of affordable housing and quality design.

The Site

72-78 Bishop Street consists of a single family residence with 50 feet of frontage on Bishop Street. The (combined) lot is 52,383 square feet. Abutting properties include a single story 3 unit professional office building to the east at 68 Bishop Street and a Masonic Hall to the west. The property was recently re-zoned as B2c (Business Community). The lot slopes gently to the southwest and has forested/ scrub-shrub wetlands within the southeast portion of the lot.

Building Program

Avesta proposes to demolish the existing single family residence and construct a 3 story apartment building. The main entrance vestibule and reception will be accessed from the first floor as well as building services including community

rooms and offices. Six efficiency units will be located on the first level along with laundry, staff rooms and mechanical and electrical facilities. The remaining 24 efficiency units will be located on the upper second and third levels. The complex will contain 30 total efficiency units. The gross square footage of the proposed building is 21,374 square feet with a 7,804 square foot building footprint.

A driveway with access off of Bishop Street will accommodate a 12 space surface parking lot. A small outdoor recreation space will be located on the south side of the building and a landscaped seating area will be located on the northeast side of the building near the main entrance.

Stormwater Management

The current site is a single family residence with 2 percent of the lot impervious. The proposed building cover and site improvements will cover approximately 40 percent of the property. The project is within the Capisic Brook Watershed and shall adhere to the Urban Impaired Stream Standard for development. Stormwater runoff generated by the site will be treated in an underground treatment system below the parking lot. The majority of runoff will be from the paved driveway and will be designed to flow into the treatment system prior to being discharged. More detail on the stormwater system can be found in the included stormwater management plan.

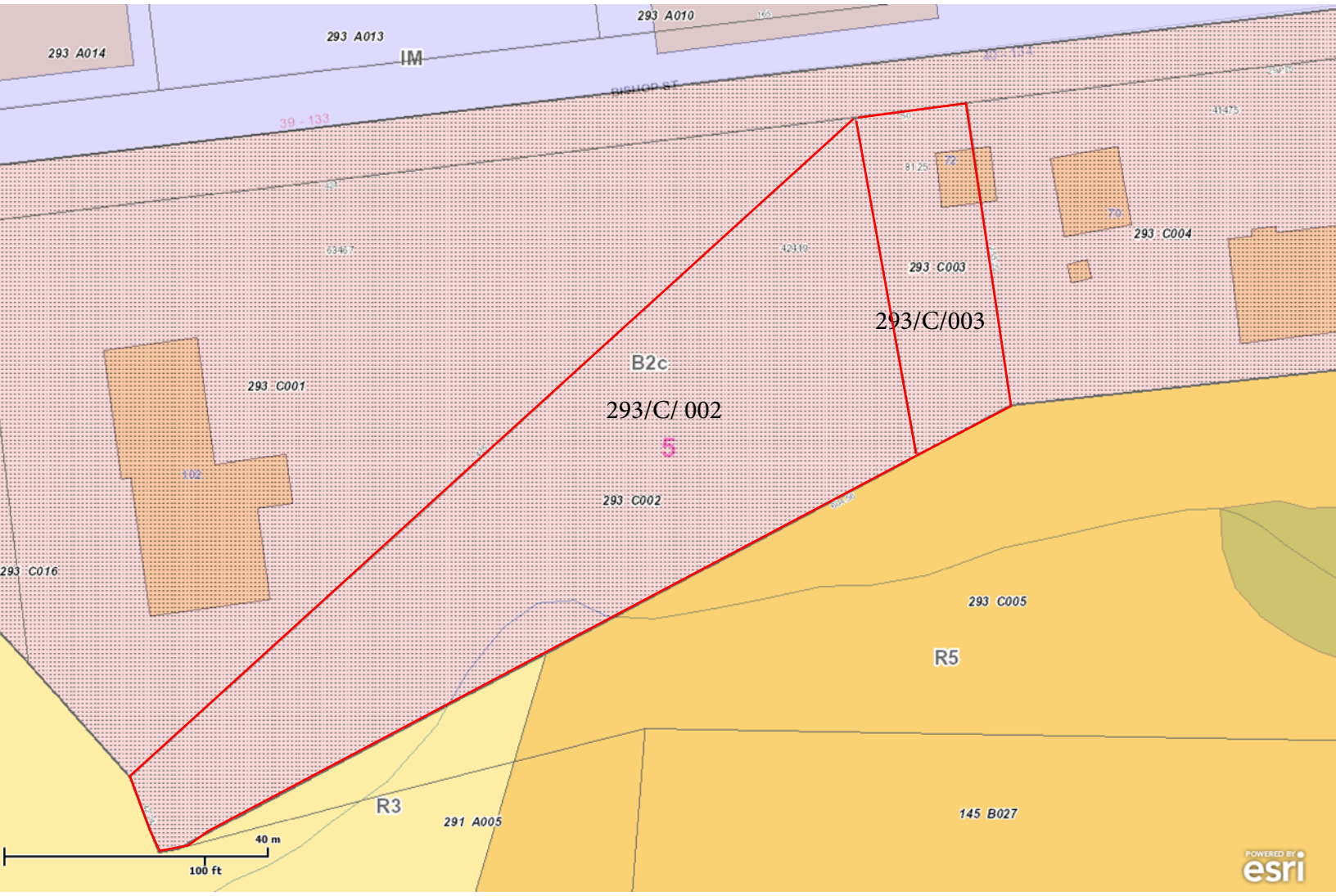
PROJECT DATA

Applicant	Avesta 72 Bishop Street, LP c/o AVESTA Housing 307 Cumberland Avenue Portland, Maine 04101
Owner	Avesta 72 Bishop Street, LP c/o AVESTA Housing 307 Cumberland Avenue Portland, Maine 04101
Existing Zone	B2c –Business Community Zone
Tax Map & Lot Number	Map 293, Block C, Lots 2 & 3
Land Area	52,383 SF, or 1.20 Acres
Existing Land Use	Single Family Residence & Undeveloped Area
Proposed Land Use	30 unit SRO Housing for Homeless
Water	12 inch main in Bishop Street
Sanitary Sewer	8 inch main in Bishop Street
Storm Drainage	18 in storm drain in Bishop Street

Natural Gas	8 inch line in Bishop Street
Electric	Overhead Service on Bishop Street.
Telephone & Cable TV	Overhead services on Bishop Street. To be extended underground

72 Bishop St

Tax & Zoning Map



ABUTTING PROPERTY OWNERS

Map 293, Block C, Lot 1
Deering Lodge Building Corp.
651 Forest Avenue
Portland, ME 04101

Map 293, Block C, Lot 5
University of New England
11 Beach Road
Biddeford, ME 04005

Map 293, Block C, Lot 4
Bishop Street L.L.C.
70 Bishop Street
Portland, ME 04103

EXISTING SOIL CONDITIONS

Soils on the site are representative of the urban environment.

The following tests results are included in our submission:

- Test borings by S.W.Cole performed on site in February 2015 revealed fill material, relic topsoil and glaciomarine deposits including silty clay. Refer to the attached geotechnical report prepared March 11, 2015.

REPORT

March 11, 2015
14-0696 S

Geotechnical Engineering Services

Proposed Apartment Building
72 Bishop Street
Portland, Maine

PREPARED FOR:
Avesta Housing
Attn: Gregory Payne
Director of Real Estate Development
307 Cumberland Avenue
Portland, ME 04101

PREPARED BY:
S. W. Cole Engineering, Inc.
286 Portland Road
Gray, ME 04039
T: (207) 657-2866

S.W.COLE ENGINEERING, INC.

- *Geotechnical Engineering*
- *Construction Materials Testing*
- *GeoEnvironmental Services*
- *Ecological Services*

www.swcole.com

TABLE OF CONTENTS

1.0 INTRODUCTION 1
1.1 Scope and Purpose 1
1.2 Site and Proposed Construction 1
2.0 EXPLORATION AND TESTING 2
2.1 Explorations 2
2.2 Testing 2
3.0 SITE AND SUBSURFACE CONDITIONS 3
3.1 Surficial 3
3.2 Soil and Bedrock 3
3.3 Groundwater 3
3.4 Frost and Seismic 4
4.0 EVALUATION AND RECOMMENDATIONS 4
4.1 General Findings 4
4.2 Site and Subgrade Preparation 5
4.3 Excavation, Blasting and Dewatering 6
4.4 Foundations 7
4.5 Foundation Drainage 8
4.6 Slab-On-Grade 8
4.7 Entrance Slabs and Sidewalks 9
4.8 Segmental Retaining Wall 9
4.9 Backfill and Compaction 10
4.10 Paved Areas 11
4.11 Weather Considerations 12
4.12 Design Review and Construction Testing 12
5.0 CLOSURE 12

Attachment A	Limitations
Sheet 1	Exploration Location Plan
Sheets 2 - 6	Exploration Logs
Sheet 7	Key to the Notes and Symbols
Sheet 8	Gradation Test Results
Sheet 9	Foundation Underdrain

14-0696 S

March 11, 2015

Avesta Housing
Attn: Gregory Payne
Director of Real Estate Development
307 Cumberland Avenue
Portland, ME 04101

Subject: Explorations and Geotechnical Engineering Services
Proposed Apartment Building
72 Bishop Street
Portland, Maine

Dear Greg:

In accordance with our Agreement, dated January 21, 2015, we have completed subsurface explorations for the subject project. This report summarizes our findings and geotechnical recommendations and its contents are subject to the limitations set forth in Attachment A.

1.0 INTRODUCTION

1.1 Scope and Purpose

The purpose of our services was to obtain subsurface information in order to develop geotechnical recommendations relative to foundations, earthwork and pavement associated with the proposed construction. Our scope of services included five test boring explorations, a geotechnical analysis of the subsurface findings and preparation of this report.

1.2 Site and Proposed Construction

The site is located at 72 Bishop Street in Portland, Maine. We understand development plans call for construction of a three-story, 30-unit apartment building with a footprint of 7,097 square-feet. Based on the "Concept Site Plan" prepared by Mitchell & Associates (landscape architects), we understand the proposed site generally slopes to the south

with about 3 feet of surface relief ranging from about elevation 96 to 99 feet within the proposed building footprint.

We anticipate the building will be wood framed with spread footing foundations and on-grade floor slabs. We understand preliminary column loads of 20 to 60 kips and wall loads of 2.5 to 3.5 kips/foot are anticipated for the proposed three-story structure. A new access road off Bishop Street and paved parking is planned on the south side of the proposed building. Detailed site grading information is not available at this time.

Proposed and existing site features are shown on the "Exploration Location Plan" attached as Sheet 1.

2.0 EXPLORATION AND TESTING

2.1 Explorations

Five test borings (B-1 through B-5) were made at the site on February 23, 2015 by S. W. Cole Explorations, LLC. The exploration locations were selected and established in the field by S. W. Cole Engineering, Inc. (S.W.COLE) using a mapping grade GPS receiver and taped measurements from existing site features. The approximate exploration locations are shown on the "Exploration Location Plan" attached as Sheet 1. Logs of the test borings are attached as Sheets 2 through 6. A key to the notes and symbols used on the logs is attached as Sheet 7.

2.2 Testing

The test borings were drilled using hollow-stem auger drilling techniques. The soils were sampled at 2 to 5 foot intervals using a split spoon sampler and Standard Penetration Testing (SPT) techniques. Pocket Penetrometer Testing (PPT) was performed where stiffer silty clay soils were encountered. SPT blow counts and PPT results are shown on the logs.

Soil samples obtained from the explorations were returned to our laboratory for further classification and testing. The results of one grain-size test on a combined sample of the existing fill soils from borings B-2, B-3 and B-5 is attached as Sheet 8.

3.0 SITE AND SUBSURFACE CONDITIONS

3.1 Surficial

The site is an irregular shaped lot at 72 Bishop Street in Portland, Maine with an existing residential structure in the northeast corner of the site. The northern and central portions of the site are generally flat and slope gently downward from northwest to southeast. The southern and western edges of the site drop about 6 feet to a wetland area. The site is generally open lawn area with lightly wooded areas on the western and southern edges.

3.2 Soil and Bedrock

Underlying a surficial layer of topsoil, test borings B-1 through B-5 encountered a soils profile generally consisting of loose to medium dense granular fill overlying a relic topsoil layer overlying glaciomarine deposits of silt, clay and sand overlying refusal surfaces (probable bedrock) at depths of 6.6 to 24.2 feet.

In borings B-1, B-2, B-3 and B-5 (proposed building footprint), the glaciomarine deposits generally consisted of stiff to very stiff silty clay with sandy silt seams becoming silty sand with silty clay layers. At boring B-4 (proposed pavement area), the stiffer silty clay was followed by a relatively thin layer of softer, compressible silty clay between a depth interval of approximately 13 to 19 feet overlying glacial outwash sands and gravel.

Not all the strata were encountered at each exploration; refer to the attached logs for more detailed subsurface information.

3.3 Groundwater

The soils encountered at the test borings generally were moist to wet from the ground surface. Saturated soils were encountered at depths varying from 4 to 8 feet. Groundwater was encountered at borings B-2 and B-5 at depths of about 6 and 4.5 feet. Groundwater likely becomes perched on the relatively impervious silty clay and bedrock encountered at the test borings. Long term groundwater information is not available. It should be anticipated that seasonal groundwater levels will fluctuate, particularly following during periods of snowmelt and precipitation.

3.4 Frost and Seismic

The 100-year Air Freezing Index for the Portland, Maine area is about 1,410-Fahrenheit degree-days, which corresponds to a frost penetration depth on the order of 4.5 feet. Based on the subsurface findings, we interpret the site soils to correspond to Seismic Soil Site Class D according to 2009 IBC.

4.0 EVALUATION AND RECOMMENDATIONS

4.1 General Findings

Based on the subsurface findings, the proposed construction appears feasible from a geotechnical standpoint. The principle geotechnical considerations are as follows:

- The proposed building footprint is underlain by uncontrolled fills and relic topsoil. We recommend complete removal of the uncontrolled fills and relic topsoil to exposed undisturbed non-organic native soils and then backfilling the building pad with compacted Granular Borrow up to the bottom of slab base gravel.

- Portions of the proposed site are also occupied by existing structures. We recommend complete removal of existing foundations and utilities and backfilling with compacted Granular Borrow.

- Spread footing foundations and on-grade floor slabs bearing on properly prepared subgrades, as recommended herein, appear suitable for the proposed building. Perimeter footings should be underlain with at least 6 inches of Crushed Stone wrapped in geotextile fabric with a perimeter foundation drain on the outside edge of crushed stone mat. Interior footings are anticipated to be founded on compacted Granular Borrow. On-grade floor slabs should bear on at least 12-inches of compacted Structural Fill underlain by properly prepared subgrades.

- Uncontrolled fills and relic topsoil are problematic for support of pavements and utilities. We recommend removal and replacement of uncontrolled fills to at least 1 foot below pavement subbase gravels. We recommend the complete removal of fills and relic topsoil below gravity utilities.

- The site soils are sensitive to moisture and frost. Earthwork and grading activities should occur during drier Spring, Summer and Fall seasons. Rubber tired construction equipment should not operate directly on the native silt and clays.

- Imported Granular Borrow, Structural Fill, and Crushed Stone are recommended for fill and backfill. The existing fills and native non-organic soils are unsuitable for reuse below building areas, but may be suitable for reuse as fills to raise paved and landscape areas.

4.2 Site and Subgrade Preparation

We recommend site preparation begin with the construction of an erosion control system to protect adjacent drainage ways and areas outside the construction limits. Surficial organics, uncontrolled fills, relic topsoil, and foundations should be completely removed from areas of proposed fill and construction. As much vegetation as possible should remain outside the construction areas to lessen the potential for erosion.

Building Pad and Footings: As discussed, the site has been previously developed with uncontrolled fills overlying relic topsoil encountered to depths of about 4 to 7 feet. The uncontrolled fills and relic topsoil must be completely removed from beneath the proposed buildings. The extent of removal should extend 1 foot laterally outward from outside edge of perimeter footings for every 1-foot of excavation depth (1H:1V bearing splay). The overexcavated area should be backfilled with compacted Granular Borrow up to the bottom of slab base gravel. General details of uncontrolled fill removal and Granular Borrow backfill are attached as Sheet 9.

In general, native subgrades for the proposed building will consist of stiff to very stiff silty clay with areas of shallow bedrock. We recommend that excavation to subgrades be completed with a smooth-edged bucket to lessen disturbance of subgrade soils. If bedrock is encountered, we recommend removal to 6 inches below footing subgrade.

We recommend that perimeter foundations be underlain with 6 inches of Crushed Stone wrapped in geotextile fabric, such as Mirafi 180N or approved equivalent, overlying compacted Granular Borrow, stable native non-organic soils or bedrock. We anticipate that interior footings will be founded on compacted Granular Borrow.

Paved Areas and Utilities: Uncontrolled fills encountered beneath proposed paved areas should be removed to a depth of at least 1 foot below pavement gravels and then proof-rolled and densified with a 10-ton vibratory roller compactor. Areas that become soft or continue to yield after densification should be removed and replaced with compacted Structural Fill.

The uncontrolled fills and relic topsoil must be completely removed from beneath gravity utilities. The overexcavated area should be backfilled with compacted Granular Borrow up to the bottom of customary bedding materials.

Segmental Retaining Wall: Uncontrolled fills and relic topsoil must be completely removed from beneath the wall facing blocks. The extent of removal should extend 1 foot laterally outward from inner and outside edge of the facing block for every 1-foot of excavation depth (1H:1V bearing splay). The overexcavated area should be backfilled with compacted Granular Borrow to within 1 foot of the bottom of wall.

4.3 Excavation, Blasting and Dewatering

Excavation work will generally encounter uncontrolled fill, relic topsoil, native silty clay and bedrock. Care must be exercised during construction to limit disturbance of the native bearing soils. Earthwork and grading activities should occur during drier Spring, Summer and Fall seasons. Rubber tired construction equipment should not operate directly on the native silt and clays. Low ground pressure tracked equipment will be needed and temporary haul roads overlying geotextile fabric may be necessary. Final cuts to subgrade should be performed with a smooth-edged bucket to help minimize soil disturbance.

Based on the subsurface findings, we anticipate bedrock removal may be necessary, particularly in the vicinity of boring B-1 where bedrock was encountered at depths of 4 to 7 feet below the ground surface. Bedrock may be removed by hoe-ramming or blasting. If blasting is necessary, we recommend that a licensed drilling and blasting contractor be engaged to provide rock removal and pre-blast surveys should be completed on surrounding structures and infrastructure prior to commencing blasting activities. Vibrations due to blasting should be monitored during construction.

Sumping and pumping dewatering techniques should be adequate to control groundwater in excavations. Controlling the water levels to at least one foot below planned excavation

depths will help stabilize subgrades during construction. Excavations must be properly shored or sloped in accordance with OSHA regulations to prevent sloughing and caving of the sidewalls during construction. The design and planning of excavations, excavation support and dewatering is the responsibility of the contractor.

4.4 Foundations

We recommend the proposed building be supported on spread footings. Perimeter spread footings should be founded on at least 6 inches of Crushed Stone wrapped in non-woven geotextile fabric, such as Mirafi 180N, bearing on compacted Granular Borrow, stiff silty clay or bedrock. Blasted bedrock surfaces should be cleaned of loose blast rock and backfilled with compacted crushed stone. Interior spread footings are anticipated to be founded on compacted Granular Borrow underlain by stable native soils.

For foundations bearing on properly prepared subgrades, we recommend the following geotechnical parameters for design consideration:

Geotechnical Parameters for Spread Footings and Foundation Walls	
Design Frost Depth	4.5 feet
Net Allowable Soil Bearing Pressure	3.0 ksf or less
Base Friction Factor	0.35
Total Unit Weight of Backfill (compacted Structural Fill)	130 pcf
Internal Friction Angle of Backfill (compacted Structural Fill)	30°
At-Rest Lateral Earth Pressure Coefficient	0.5
Active Lateral Earth Pressure Coefficient	0.3
Total Post-Construction Settlement	1 inch or less
Differential Post-Construction Settlement	½ inch or less

Based on the subsurface findings, we interpret the site soils to correspond to Seismic Soil Site Class D according to IBC 2009/ASCE 7. We recommend the following seismic design parameters for the 2,500-year design earthquake:

RECOMMENDED SEISMIC DESIGN PARAMETERS (2,500-year Design Earthquake)		
Peak Ground Acceleration (PGA)	0.2-second Spectral Acceleration (S_s)	1-second Spectral Acceleration (S_1)
0.173 g	0.319 g	0.078 g

NOTE: Seismic design parameters from USGS accessed March 10, 2015 (http://geohazards.usgs.gov/deaggint/2002).

Liquefiable soils typically consist of loose, fine sands and non-plastic silts below the groundwater table. Based on the subsurface findings, it is our opinion the soils at the site are not susceptible to liquefaction during a seismic event and therefore the risk of lateral spread and seismic induced settlement are negligible.

4.5 Foundation Drainage

We recommend a foundation underdrain pipe be installed within the 6-inch layer of Crushed Stone wrapped in geotextile filter fabric recommended below perimeter footings. The underdrain pipe should consist of a 4-inch diameter, perforated SDR-35 foundation drain pipe bedded in Crushed Stone surrounded with non-woven geotextile fabric. The underdrain pipe must be connected to a positive gravity outlet protected from freezing, clogging and backflow. Surface grades should be sloped away from the building for positive surface water drainage. General underdrain details are shown on Sheet 9.

4.6 Slab-On-Grade

On-grade floor slabs in heated areas may be designed using a subgrade reaction modulus of 100 pci (pounds per cubic inch) provided the slab is underlain by at least 12-inches of compacted Structural Fill overlying properly prepared subgrades. The structural engineer or concrete consultant must design steel reinforcing and joint spacing appropriate to slab thickness and function.

We recommend a sub-slab vapor retarder particularly in areas of the building where the concrete slab will be covered with an impermeable surface treatment or floor covering that may be sensitive to moisture vapors. The vapor retarder must have a permeance that is less than the floor cover or surface treatment that is applied to the slab. The vapor retarder must have sufficient durability to withstand direct contact with the sub-slab base material and construction activity. The vapor retarder material should be placed according to the manufacturer's recommended method, including the taping and lapping of all joints and wall connections. The architect and/or flooring consultant should select the vapor retarder products compatible with flooring and adhesive materials.

The floor slab should be appropriately cured using moisture retention methods after casting. Typical floor slab curing methods should be used for at least 7 days. The architect or flooring consultant should assign curing methods consistent with current

applicable American Concrete Institute (ACI) procedures with consideration of curing method compatibility to proposed surface treatments, flooring and adhesive materials.

4.7 Entrance Slabs and Sidewalks

Entrance slabs and sidewalks adjacent to the building must be designed to reduce the effects of differential frost action between adjacent pavement, doorways, and entrances. We recommend that non-frost susceptible Structural Fill be provided to a depth of at least 4.5 feet (2.5 feet over bedrock) below the top of entrance slabs. This thickness of Structural Fill should extend the full width of the entrance slab and outward at least 4.5 feet, thereafter transitioning up to the bottom of the adjacent sidewalk or pavement gravels at a 3H:1V or flatter slope. General details of this frost transition zone are attached as Sheet 9.

4.8 Segmental Retaining Wall

We anticipate an exterior segmental retaining wall (SRW), such as Redi-Scape, will be needed on the southerly edge of the proposed paved area to retain up to 8 feet of soil. We recommend the facing blocks be founded on a minimum 12-inch thick leveling course of compacted Crushed Stone overlying undisturbed stiff silty clay or compacted Granular Borrow overlying native undisturbed stiff silty clay. We anticipate it will be necessary remove and replace uncontrolled fills and relic topsoil below the wall.

Based on the site soils and our understanding of the proposed construction, we provide the following soil parameters for use by a wall design engineer in their design of the segmental retaining wall:

Geotechnical Parameters of Segmental Block Retaining Wall			
Wall Segment	**Friction Angle**	**Cohesion**	**Unit Weight**
Retained Backfill (Granular Borrow)	30 degrees	0 psf	125 pcf
Retained Backfill (Crushed Stone)	34 degrees	0 psf	100 pcf
Foundation (Brown Silty Clay)	0 degrees	1,500 psf	120 pcf
Foundation (Granular Borrow)	30 degrees	0 psf	125 pcf
Net Allowable Bearing Capacity	2 ksf (properly prepared subgrade)		
Anticipated Settlement	up to 1 inch (during construction) up to 1 inch (post-construction)		
Seismic Soil Site Class	D (IBC 2009)		

Design of the retaining wall and evaluation of base sliding, overturning and internal stability of the wall are the responsibility of the wall design engineer. The wall designer must account for construction surcharge loads and future live load conditions. S.W.COLE is available to provide SRW design.

S.W.COLE should be retained to perform a global stability analysis of the SRW and to review the SRW submittal if designed by others.

4.9 Backfill and Compaction

The native soils and existing fills are unsuitable for reuse in building areas, but may be suitable as Common Borrow for compacted fill in paved and landscape areas. We recommend the following fill and backfill materials:

Common Borrow: Fill to raise grades in paved and landscape areas should be non-organic, mineral soils meeting the requirements of MaineDOT 703.18 Common Borrow.

Granular Borrow: Fill to raise grades in building areas and backfill of excavations from removal of existing foundations and utilities should be sand or silty sand meeting the requirements for MaineDOT 703.19 Granular Borrow. A 1-foot lift of Granular Borrow is also recommended below pavement subbase gravel.

Structural Fill: Fill to repair soft areas, backfill for foundations, slab base material and material below exterior entrances and sidewalks should be clean, non-frost susceptible sand and gravel meeting the gradation requirements for Structural Fill as given below:

Structural Fill	
Sieve Size	**Percent Finer by Weight**
4 inch	100
3 inch	90 to 100
¼ inch	25 to 90
#40	0 to 30
#200	0 to 5

Crushed Stone: Crushed Stone, used beneath perimeter foundations and for underdrain aggregate, should meet the gradation requirements of ASTM No. 57 Stone. A nominally sized ¾-inch washed crushed stone usually meets this requirement.

Placement and Compaction: Fill should be placed in horizontal lifts and compacted such that the desired density is achieved throughout the lift thickness with 3 to 5 passes of the compaction equipment. Loose lift thicknesses for grading, fill and backfill activities should not exceed 12 inches. We recommend that fill and backfill in building and paved areas be compacted to at least 95 percent of its maximum dry density as determined by ASTM D-1557. Crushed Stone should be compacted with 3 to 5 passes of a vibratory plate compactor having a static weight of at least 500 pounds.

4.10 Paved Areas

We anticipate paved areas will be subjected primarily to passenger and light delivery truck traffic. Considering the site soils and proposed usage, we offer the following pavement section for consideration. Materials are based on Maine Department of Transportation Standard Specifications.

Asphalt Pavement Section	
Material	**Thickness (inches)**
9.5 mm Hot Mix Asphalt (50 Gyration Design)	1 ¼
19.0 mm Hot Mix Asphalt (50 Gyration Design)	2 ¼
MaineDOT 703.06 Type A, Crushed Aggregate Base	3
MaineDOT 703.06 Type D, Crushed Aggregate Subbase	15
MaineDOT 703.19 Granular Borrow, Granular Subbase	12

Pavement subgrades should be densified with 3 to 5 passes of a vibratory roller. The base and subbase materials should be compacted to at least 95 percent of their maximum dry density as determined by ASTM D-1557. Hot mix asphalt pavement should be compacted to 92 to 97 percent of its theoretical maximum density as determined by ASTM D-2041. A tack coat should be used between successive lifts of bituminous pavement.

It should be understood that frost penetration can be on the order of 4.5 feet in the project area. In the absence of full depth excavation of frost susceptible soils and subsequent replacement with non-frost susceptible compacted fill, frost penetration into the subgrade will occur and some heaving and distress of pavement must be anticipated.

4.11 Weather Considerations

Earthwork and foundation construction should be completed during non-freezing Spring, Summer and Fall weather. The site soils may require drying before construction activities may occur and the contractor should anticipate the need for water to temper fills in order to facilitate compaction during dry weather.

If construction takes place during cold weather, subgrades, foundations and floor slabs must be protected during freezing conditions. Concrete and fill must not be placed on frozen soil; and once placed, the concrete and soil beneath the structure must be protected from freezing.

4.12 Design Review and Construction Testing

S.W.COLE should be retained to review the construction documents to determine that our foundation, earthwork and pavement recommendations have been properly interpreted and implemented.

A soils and concrete testing program should be implemented during construction to observe compliance with the design concepts, plans, and specifications. S.W.COLE is available to provide geotechnical observations during earthwork, provide subgrade observations for foundations and pavements as well as provide and testing and special inspection services for soils, concrete, asphalt, steel and spray-applied fireproofing construction materials.

5.0 CLOSURE

It has been a pleasure to be of assistance to you with this phase of your project. We look forward to working with you during the construction phase of the project.

Sincerely,

S. W. Cole Engineering, Inc.

Timothy J. Boyce, P.E.
Senior Geotechnical Engineer

MAS:tjb

Attachment A
Limitations

This report has been prepared for the exclusive use of Avesta Housing for specific application to the Proposed Apartment Building at 72 Bishop Street in Portland, Maine. S. W. Cole Engineering, Inc. (S.W.COLE) has endeavored to conduct our services in accordance with generally accepted soil and foundation engineering practices. No warranty, expressed or implied, is made.

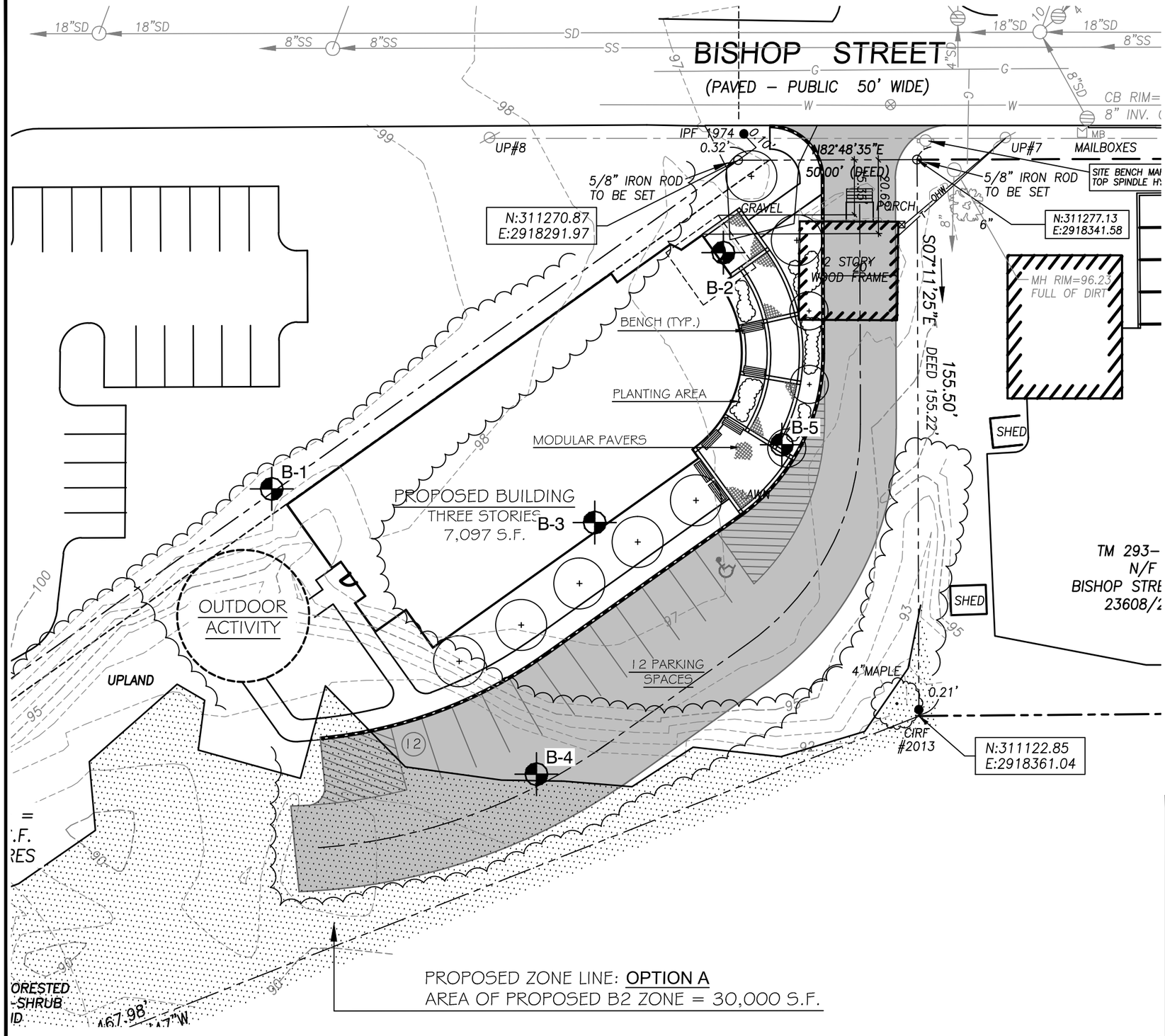
The soil profiles described in the report are intended to convey general trends in subsurface conditions. The boundaries between strata are approximate and are based upon interpretation of exploration data and samples.

The analyses performed during this investigation and recommendations presented in this report are based in part upon the data obtained from subsurface explorations made at the site. Variations in subsurface conditions may occur between explorations and may not become evident until construction. If variations in subsurface conditions become evident after submission of this report, it will be necessary to evaluate their nature and to review the recommendations of this report.

Observations have been made during exploration work to assess site groundwater levels. Fluctuations in water levels will occur due to variations in rainfall, temperature, and other factors.

S.W.COLE's scope of services has not included the investigation, detection, or prevention of any Biological Pollutants at the project site or in any existing or proposed structure at the site. The term "Biological Pollutants" includes, but is not limited to, molds, fungi, spores, bacteria, and viruses, and the byproducts of any such biological organisms.

Recommendations contained in this report are based substantially upon information provided by others regarding the proposed project. In the event that any changes are made in the design, nature, or location of the proposed project, S.W.COLE should review such changes as they relate to analyses associated with this report. Recommendations contained in this report shall not be considered valid unless the changes are reviewed by S.W.COLE.



LEGEND:

APPROXIMATE BORING LOCATION

NOTES:

1. EXPLORATION LOCATION PLAN WAS PREPARED FROM A 1"=20' SCALE PLAN OF THE SITE ENTITLED "CONCEPT SITE PLAN," PREPARED BY MITCHELL & ASSOCIATES, DATED JUNE 17, 2014, REVISED AUGUST 1, 2014.
2. THE BORINGS WERE LOCATED IN THE FIELD BY GPS SURVEY BY S. W. COLE ENGINEERING, INC. USING A MAPPING GRADE GPS RECEIVER.
3. THIS PLAN SHOULD BE USED IN CONJUNCTION WITH THE ASSOCIATED S. W. COLE ENGINEERING, INC. GEOTECHNICAL REPORT.
4. THE PURPOSE OF THIS PLAN IS ONLY TO DEPICT THE LOCATION OF THE EXPLORATIONS IN RELATION TO THE EXISTING CONDITIONS AND PROPOSED CONSTRUCTION AND IS NOT TO BE USED FOR CONSTRUCTION.

0 30 60 Feet

S.W.COLE ENGINEERING, INC.

AVESTA HOUSING

EXPLORATION LOCATION PLAN

PROPOSED 3-STORY APARTMENT BUILDING
72 BISHOP STREET
PORTLAND, MAINE

Job No.:	14-0696	Scale:	1" = 30'
Date :	03/11/2015	Sheet:	1

S.W.COLE ENGINEERING, INC.

BORING LOG

BORING NO.: **B-1**
SHEET: 1 OF 1
PROJECT NO.: 14-0696

PROJECT: PROPOSED APARTMENT BUILDING
CLIENT: AVESTA HOUSING-MAINE AFFORDABLE HOUSING COLLABORATION
LOCATION: 72 & 78 BISHOP STREET, PORTLAND, MAINE
DRILLING CO. : S.W.COLE EXPLORATIONS, LLC. DRILLER: BOB MARCOUX

DATE START: 2/23/2015
DATE FINISH: 2/23/2015
ELEVATION: 98' +/-
S.W.COLE REP: M. ST. PIERRE

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING:	HSA	2 1/4"		
SAMPLER:	SS	1 3/8"	140 LBS	30"
CORE BARREL:				

WATER LEVEL INFORMATION
NO FREE WATER OBSERVED

CASING BLOWS PER FOOT	SAMPLE NO.	SAMPLE PEN.	SAMPLE REC.	SAMPLE DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
									0.6'	TOPSOIL OVER BROWN FINE SANDY SILT WITH ROOTLETS
	1D	24"	12"	2.0'	4	7	13	15		BROWN GRAVELLY SAND, SOME SILT (FILL)
	2D	2"	0"	4.2'	50/2"					<<REFUSAL AT 4.2'; BORING OFFSET 5' WEST>>
									6.6'	
										REFUSAL AT 6.6'
										PROBABLE BEDROCK
										±6"OF FROST

SAMPLES:
D = SPLIT SPOON
C = 2" SHELBY TUBE
S = 3" SHELBY TUBE
U = 3.5" SHELBY TUBE

SOIL CLASSIFIED BY:

	DRILLER - VISUALLY
X	SOIL TECH. - VISUALLY
	LABORATORY TEST

REMARKS:

STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

BORING NO.: **B-1**

S.W.COLE ENGINEERING, INC.

BORING LOG

BORING NO.: **B-2**
SHEET: 1 OF 1
PROJECT NO.: 14-0696

PROJECT: PROPOSED APARTMENT BUILDING
CLIENT: AVESTA HOUSING-MAINE AFFORDABLE HOUSING COLLABORATION
LOCATION: 72 & 78 BISHOP STREET, PORTLAND, MAINE
DRILLING CO. : S.W.COLE EXPLORATIONS, LLC. DRILLER: BOB MARCOUX

DATE START: 2/23/2015
DATE FINISH: 2/23/2015
ELEVATION: 97' +/-
S.W.COLE REP: M. ST. PIERRE

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING:	HSA	4 1/4"		
SAMPLER:	SS	1 3/8"	140 LBS	30"
CORE BARREL:				

WATER LEVEL INFORMATION
WATER AT ±6'
SOILS WET BELOW 4'

CASING BLOWS PER FOOT	SAMPLE NO.	PEN.	REC.	DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
										BROWN SAND AND GRAVEL, SOME SILT OCCASIONAL COBBLES (FILL)
	1D	14"	14"	1.2'	36	72	50/2"			<<BLOW COUNT OVERSTATED DUE TO FROST>>
									3.5'	
									4.0'	DARK BROWN ORGANIC FINE SANDY SILT (RELIC TOPSOIL)
										BROWN SILTY CLAY WITH FREQUENT FINE SANDY SILT SEAMS
	2D	24"	10"	6.0'	3	4	5	6		~STIFF~ q_p = 3.5 - 4 ksf
										…BECOMING
										BROWN SILTY FINE TO MEDIUM SAND WITH OCCASIONAL SILTY CLAY LAYERS
	3D	22"	13"	10.8'	3	2	1	30/4"	10.8'	~LOOSE~
										REFUSAL AT 10.8'
										PROBABLE BEDROCK
										±3' OF FROST

SAMPLES:
D = SPLIT SPOON
C = 2" SHELBY TUBE
S = 3" SHELBY TUBE
U = 3.5" SHELBY TUBE

SOIL CLASSIFIED BY:

	DRILLER - VISUALLY
X	SOIL TECH. - VISUALLY
	LABORATORY TEST

REMARKS:

STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

BORING NO.: **B-2**

S.W.COLE ENGINEERING, INC.

BORING LOG

BORING NO.: **B-3**
SHEET: 1 OF 1
PROJECT NO.: 14-0696

PROJECT: PROPOSED APARTMENT BUILDING
CLIENT: AVESTA HOUSING-MAINE AFFORDABLE HOUSING COLLABORATION
LOCATION: 72 & 78 BISHOP STREET, PORTLAND, MAINE
DRILLING CO. : S.W.COLE EXPLORATIONS, LLC. DRILLER: BOB MARCOUX

DATE START: 2/23/2015
DATE FINISH: 2/23/2015
ELEVATION: 97.5' +/-
S.W.COLE REP: M. ST. PIERRE

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING:	HSA	2 1/4"		
SAMPLER:	SS	1 3/8"	140 LBS	30"
CORE BARREL:				

WATER LEVEL INFORMATION
SOILS WET BELOW ±6'
SOILS SATURATED BELOW ±7.5'

CASING BLOWS PER FOOT	SAMPLE NO.	PEN.	REC.	DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
									0.5'	TOPSOIL OVER BROWN FINE SANDY SILT WITH ROOTLETS
	1D	24"	22"	2.0'	4	6	7	9	2.0'	BROWN AND GRAY SAND, SOME SILT WITH FINE ASPHALT FRAGMENTS (FILL)
										BROWN SILTY SAND, SOME GRAVEL (FILL)
									4.5'	~LOOSE TO MEDIUM DENSE~
										DARK BROWN ORGANIC SILT, SOME FINE SAND (RELIC TOPSOIL)
	2D	24"	12"	6.0'	1	1	1	1	5.5'	~VERY LOOSE~
										MOTTLED SILTY CLAY WITH OCCASIONAL SILTY FINE SAND SEAMS
	3D	24"	24"	8.0'	4	4	6	8		~VERY STIFF~ q_p = 6.5 - 7 ksf
										...BECOMES
										BROWN SILTY CLAY WITH FREQUENT SILTY FINE SAND LAYERS
	4D	24"	24"	11.0'	3	4	5	5		~STIFF~ q_p = 3.5 - 5 ksf
									11.9'	
										REFUSAL AT 11.9'
										PROBABLE BEDROCK
										±6" OF FROST

SAMPLES:
D = SPLIT SPOON
C = 2" SHELBY TUBE
S = 3" SHELBY TUBE
U = 3.5" SHELBY TUBE

SOIL CLASSIFIED BY:

	DRILLER - VISUALLY
X	SOIL TECH. - VISUALLY
	LABORATORY TEST

REMARKS:

STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

BORING NO.: **B-3**

S.W.COLE ENGINEERING, INC.

BORING LOG

BORING NO.: **B-4**
SHEET: 1 OF 1
PROJECT NO.: 14-0696

PROJECT: PROPOSED APARTMENT BUILDING
CLIENT: AVESTA HOUSING-MAINE AFFORDABLE HOUSING COLLABORATION
LOCATION: 72 & 78 BISHOP STREET, PORTLAND, MAINE
DRILLING CO. : S.W.COLE EXPLORATIONS, LLC. DRILLER: BOB MARCOUX

DATE START: 2/23/2015
DATE FINISH: 2/23/2015
ELEVATION: 92' +/-
S.W.COLE REP: M. ST. PIERRE

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING:	HSA	2 1/4"		
SAMPLER:	SS	1 3/8"	140 LBS	30"
CORE BARREL:				

WATER LEVEL INFORMATION
SOILS SATURATED BELOW ±8'

CASING BLOWS PER FOOT	SAMPLE NO.	PEN.	REC.	DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
									0.7'	2" OF TOPSOIL OVER BROWN SILTY FINE SAND WITH ROOTLETS
	1D	24"	20"	2.0'	3	1	2	4		BROWN FINE SANDY SILT, SOME FINE GRAVEL (FILL) ~MEDIUM DENSE~
									4.0'	
	2D	24"	10"	6.0'	2	2	2	2	6.5'	BROWN SILTY SAND, SOME GRAVEL, TRACE BRICK FRAGMENTS (FILL) ~LOOSE~
									7.2'	DARK BROWN ORGANIC FINE SANDY SILT (RELIC TOPSOIL)
	3D	24"	24"	8.0'	3	2	5	5		MOTTLED SILTY CLAY WITH FREQUENT FINE SANDY SILT SEAMS ~VERY STIFF~
	4D	24"	24"	11.0'	2	4	6	8		…BECOMES OLIVE-GRAY q_p = 6 - 8 ksf
	5D	24"	24"	16.0'	2	2	2	2		…BECOMES GRAY ~MEDIUM~
									19.0'	
	6D	18"	18"	20.5'	5	13	15			BROWN FINE TO MEDIUM SAND, SOME SILT WITH FREQUENT SILTY CLAY LAYERS ~MEDIUM DENSE~
	7D	2"	2"	24.2'	50/2"				24.2'	…BECOMES BROWN SAND, SOME SILT AND FINE GRAVEL
										REFUSAL AT 24.2' PROBABLE BEDROCK
										±6" OF FROST

SAMPLES:
D = SPLIT SPOON
C = 2" SHELBY TUBE
S = 3" SHELBY TUBE
U = 3.5" SHELBY TUBE

SOIL CLASSIFIED BY:
[ ] DRILLER - VISUALLY
[X] SOIL TECH. - VISUALLY
[ ] LABORATORY TEST

REMARKS:
STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

BORING NO.: **B-4**

S.W.COLE ENGINEERING, INC.

BORING LOG

BORING NO.: **B-5**
SHEET: 1 OF 1
PROJECT NO.: 14-0696

PROJECT: PROPOSED APARTMENT BUILDING
CLIENT: AVESTA HOUSING-MAINE AFFORDABLE HOUSING COLLABORATION
LOCATION: 72 & 78 BISHOP STREET, PORTLAND, MAINE
DRILLING CO. : S.W.COLE EXPLORATIONS, LLC. DRILLER: BOB MARCOUX

DATE START: 2/23/2015
DATE FINISH: 2/23/2015
ELEVATION: 96' +/-
S.W.COLE REP: M. ST. PIERRE

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING:	HSA	4 1/4"		
SAMPLER:	SS	1 3/8"	140 LBS	30"
CORE BARREL:				

WATER LEVEL INFORMATION
WATER AT ±4.5'

CASING BLOWS PER FOOT	SAMPLE NO.	PEN.	REC.	DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
									0.5'	1" OF TOPSOIL OVER BROWN SILTY FINE TO MEDIUM SAND WITH ROOTLETS
	1D	24"	15"	2.0'	5	3	3	2		BROWN GRAVELLY SAND, SOME SILT (FILL)
										~LOOSE~
									4.2'	
									4.5'	DARK BROWN ORGANIC SILT, SOME FINE SAND (RELIC TOPSOIL)
	2D	24"	10"	6.0'	3	1	1	2		BROWN SILTY CLAY WITH FREQUENT FINE SANDY SILT SEAMS
										~MEDIUM TO STIFF~ q_p = 2.5 ksf
										…BECOMING
										BROWN SILTY FINE TO MEDIUM SAND WITH OCCASIONAL SILTY CLAY LAYERS
	3D	20"	18"	10.7'	3	3	13	50/2"	10.7'	~MEDIUM DENSE~
										REFUSAL AT 10.7'
										PROBABLE BEDROCK
										±8" OF FROST

SAMPLES:
D = SPLIT SPOON
C = 2" SHELBY TUBE
S = 3" SHELBY TUBE
U = 3.5" SHELBY TUBE

SOIL CLASSIFIED BY:

	DRILLER - VISUALLY
X	SOIL TECH. - VISUALLY
	LABORATORY TEST

REMARKS:

STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

BORING NO.: **B-5**

KEY TO THE NOTES & SYMBOLS
Test Boring and Test Pit Explorations

All stratification lines represent the approximate boundary between soil types and the transition may be gradual.

Key to Symbols Used:

w	-	water content, percent (dry weight basis)
q_u	-	unconfined compressive strength, kips/sq. ft. - laboratory test
S_v	-	field vane shear strength, kips/sq. ft.
L_v	-	lab vane shear strength, kips/sq. ft.
q_p	-	unconfined compressive strength, kips/sq. ft. – pocket penetrometer test
O	-	organic content, percent (dry weight basis)
W_L	-	liquid limit - Atterberg test
W_P	-	plastic limit - Atterberg test
WOH	-	advance by weight of hammer
WOM	-	advance by weight of man
WOR	-	advance by weight of rods
HYD	-	advance by force of hydraulic piston on drill
RQD	-	Rock Quality Designator - an index of the quality of a rock mass.
γ_T	-	total soil weight
γ_B	-	buoyant soil weight

Description of Proportions:

Trace:	0 to 5%
Some:	5 to 12%
"Y"	12 to 35%
And	35+%
With	Undifferentiated

Description of Stratified Soils

Parting:	0 to 1/16" thickness
Seam:	1/16" to 1/2" thickness
Layer:	½" to 12" thickness
Varved:	Alternating seams or layers
Occasional:	one or less per foot of thickness
Frequent:	more than one per foot of thickness

REFUSAL: **Test Boring Explorations** - Refusal depth indicates that depth at which, in the drill foreman's opinion, sufficient resistance to the advance of the casing, auger, probe rod or sampler was encountered to render further advance impossible or impracticable by the procedures and equipment being used.

REFUSAL: **Test Pit Explorations** - Refusal depth indicates that depth at which sufficient resistance to the advance of the backhoe bucket was encountered to render further advance impossible or impracticable by the procedures and equipment being used.

Although refusal may indicate the encountering of the bedrock surface, it may indicate the striking of large cobbles, boulders, very dense or cemented soil, or other buried natural or man-made objects or it may indicate the encountering of a harder zone after penetrating a considerable depth through a weathered or disintegrated zone of the bedrock.

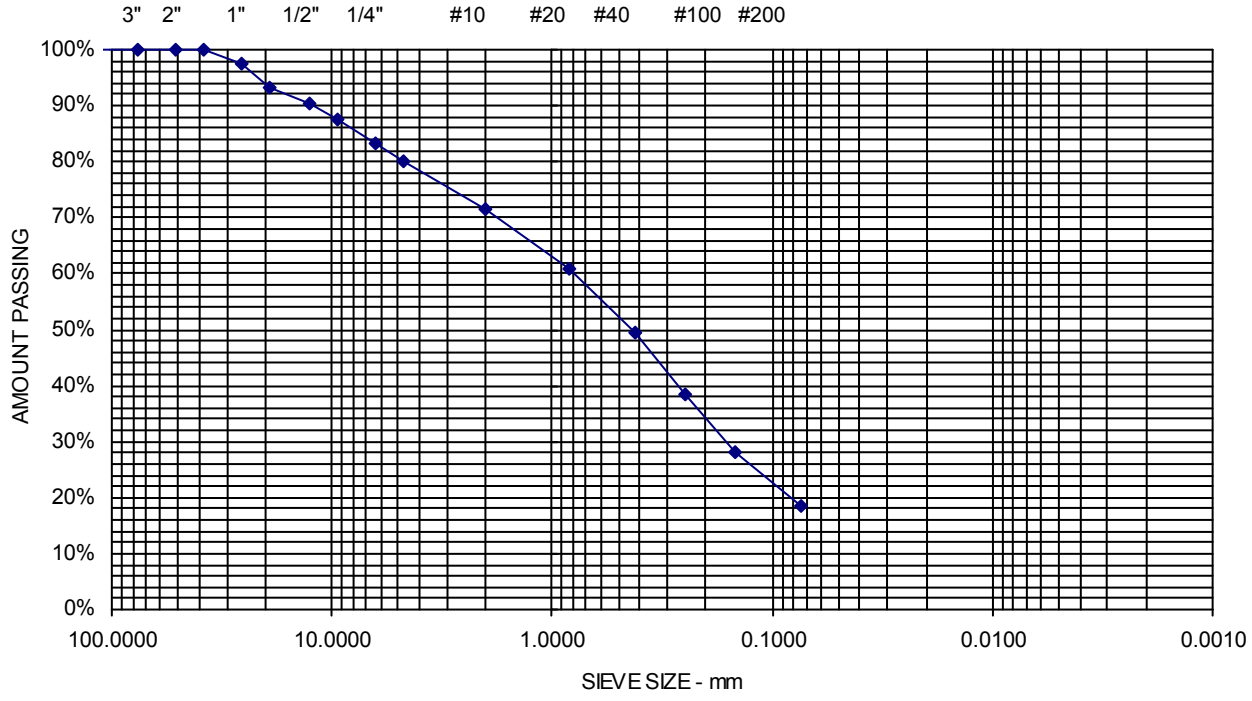
S.W.COLE ENGINEERING, INC.

Report of Gradation

ASTM C-117 & C-136

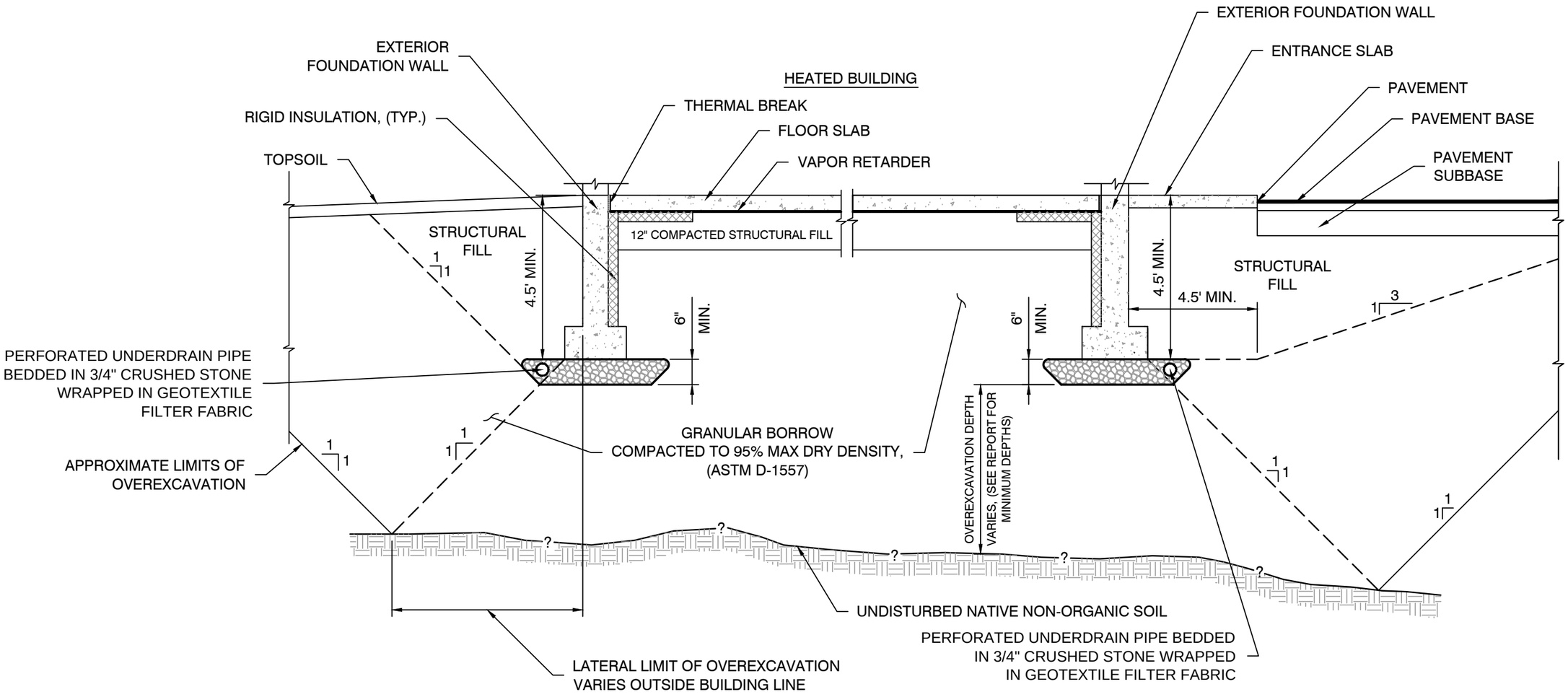
Project Name	PORTLAND ME - PROPOSED BISHOP STREET APARTMENT BUILDING - GEOTECHNICAL ENGINEERING SERVICES	Project Number	14-0696
Client	AVESTA HOUSING	Lab ID	8784A
Exploration	**B-2, B-3 & B-5**	Date Received	3/2/2015
Material Source	**BLENDED SAMPLE 0-2'**	Date Completed	3/2/2015
		Tested By	NEIL DAVIS

STANDARD DESIGNATION (mm/µm)	SIEVE SIZE	AMOUNT PASSING (%)	
150 mm	**6"**	**100**	
125 mm	**5"**	**100**	
100 mm	**4"**	**100**	
75 mm	**3"**	**100**	
50 mm	**2"**	**100**	
38.1 mm	**1-1/2"**	**100**	
25.0 mm	**1"**	**97**	
19.0 mm	**3/4"**	**93**	
12.5 mm	**1/2"**	**91**	
9.5 mm	**3/8"**	**88**	
6.3 mm	**1/4"**	**83**	
4.75 mm	**No. 4**	**80**	20% Gravel
2.00 mm	**No. 10**	**71**	
850 um	**No. 20**	**61**	
425 um	**No. 40**	**49**	61.7% Sand
250 um	**No. 60**	**38**	
150 um	**No. 100**	**28**	
75 um	**No. 200**	**18.3**	18.3% Fines



Comments:

Sheet



NOTE:

1. UNDERDRAIN INSTALLATION AND MATERIAL GRADATION RECOMMENDATIONS ARE CONTAINED WITHIN THIS REPORT.

2. DETAIL IS PROVIDED FOR ILLUSTRATIVE PURPOSES ONLY, NOT FOR CONSTRUCTION.

S.W.COLE ENGINEERING, INC.

AVESTA HOUSING

UNDERDRAIN DETAIL

PROPOSED 3-STORY APARTMENT BUILDING
72 BISHOP STREET
PORTLAND, MAINE

Job No.:	14-0696	Scale:	Not to Scale
Date :	03/11/2015	Sheet:	9

PUBLIC UTILITIES

72 Bishop Street will be served by existing utility services located in Bishop Street. There is no moratorium for excavation on this street. The following public utilities are available:

Water

Water for both fire suppression and domestic service will be supplied from an existing 12 inch water main located in Bishop Street. Proposed service connections include 6 inch fire service and 2 inch domestic service. Refer to the attached letter from Portland Water District stating their ability to service this project.

Sanitary Sewer

Sanitary sewer will be supplied from an existing 8 inch public sewer main located in Bishop Street. Proposed service connection will be a 6 inch line. A Wastewater Capacity Application has been filed with this Site Plan Application.

Natural Gas

Natural gas will be supplied from an existing 8 inch HDPE gas main located in Bishop Street. A 2 inch service will connect to the building. Refer to the attached letter from Unitil.

Electric

Electric service will be connected from an existing pole along Bishop Street. Service will be routed underground to the project site. Refer to the attached letter from Central Maine Power

Telephone and Cable TV

Telephone and cable TV will be connected from the existing utility pole along Bishop Street. Service will be routed underground to the project site.

Unitil
ME GAS OPERATIONS

February 17, 2015

Ms. Sashie Misner
Mitchell & Associates
The Staples School
70 Center Street
Portland, ME 04106

Re: 72 Bishop Street Efficiencies

Dear Ms. Misner:

Thank you for your interest in using natural gas for the above referenced project.

Unitil has natural gas in the vicinity of this project to provide service. The main in this vicinity is 8" HDPE plastic intermediate pressure. The evaluation to complete the design, costs and determining what the customer contribution is can be completed once Unitil receives the completed design and load information. Unitil welcomes the opportunity for further discussions regarding this project.

If you have any further questions or require additional information, please contact me directly at (207) 541-2536 or at Harmon@unitil.com.

Sincerely,

Bridget L. Harmon
Business Development Representative
Unitil Corporation
(o) 207-541-2536 (f) 207-541-2586

Portland Water District
FROM SEBAGO LAKE TO CASCO BAY

March 30, 2015

Mitchell & Associates
The Staples School
70 Center Street
Portland, ME 04101

Attn: Sashie Misner
Re: 72 Bishop Street Efficiencies, Portland
Ability to Serve with PWD Water

Dear Ms. Misner:

The Portland Water District has received your request for an Ability to Serve determination for the noted site submitted on February 16, 2015. Based on the information provided, we can confirm that the District will be able to serve the proposed project as further described in this letter.

Conditions of Service

The following conditions of service apply:

- Our records show that the site is currently served with a ¾-inch domestic water service; please note that the size of this service is below our minimum service size of 1-inch. This existing ¾-inch water service must be terminated by shutting the corporation valve and cutting the pipe from the water main.

- New service(s) may be installed from the water main in Bishop Street. The services(s) should enter through the properties frontage at least 10-feet from side property lines. Please note that only one meter and one bill will be associated to each domestic service line. This one master meter would be located in a common space that all tenants could gain access to if necessary.

- Approval of plans will be required for the project prior to construction. As your project progresses, we advise that you submit any preliminary design plans to MEANS for review of the water service line configuration. We will work with you to ensure that the design meets our current standards.

Existing Site Service

According to District records, the project site does currently have existing water service. A 3/4-inch diameter copper water service line, located as shown on the attached water service card, provides water service to this site. Please refer to the "Conditions of Service" section of this letter for requirements related to the use of this service.

225 DOUGLASS STREET P.O. BOX 3553 PORTLAND, MAINE 04104-3553
PHONE: 207.774.5961 FAX: 207.761.8307 WEB: WWW.PWD.ORG

Water System Characteristics

According to District records, there is a 12-inch diameter cast iron, cement lined water main on the south side of Bishop Street and a public fire hydrant located adjacent to the site.

The current data from the nearest hydrant with flow test information is as follows:

Hydrant Location:	Bishop Street 550' west of Mayfield Street	
Hydrant Number:	POD-HYD01616	
Last Tested:	2/14/2013	7/19/2006
Static Pressure:	74 psi	70 psi
Residual Pressure:	Not Measured	Not Measured
Flow:	Not Measured	1,255 GPM

Public Fire Protection

It is not anticipated that this project will include the installation of new public hydrants to be accepted into the District water system. The decision to require new hydrants and to determine their locations is solely that of the local fire department. It is your responsibility to contact the Portland Fire Department to ensure that this project is adequately served by existing and/or proposed hydrants.

Domestic Water Needs

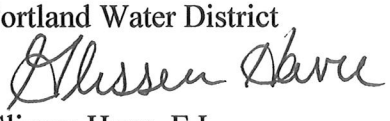
The data noted above indicates there should be adequate pressure and volume of water to serve the domestic water needs of your proposed project.

Private Fire Protection Water Needs

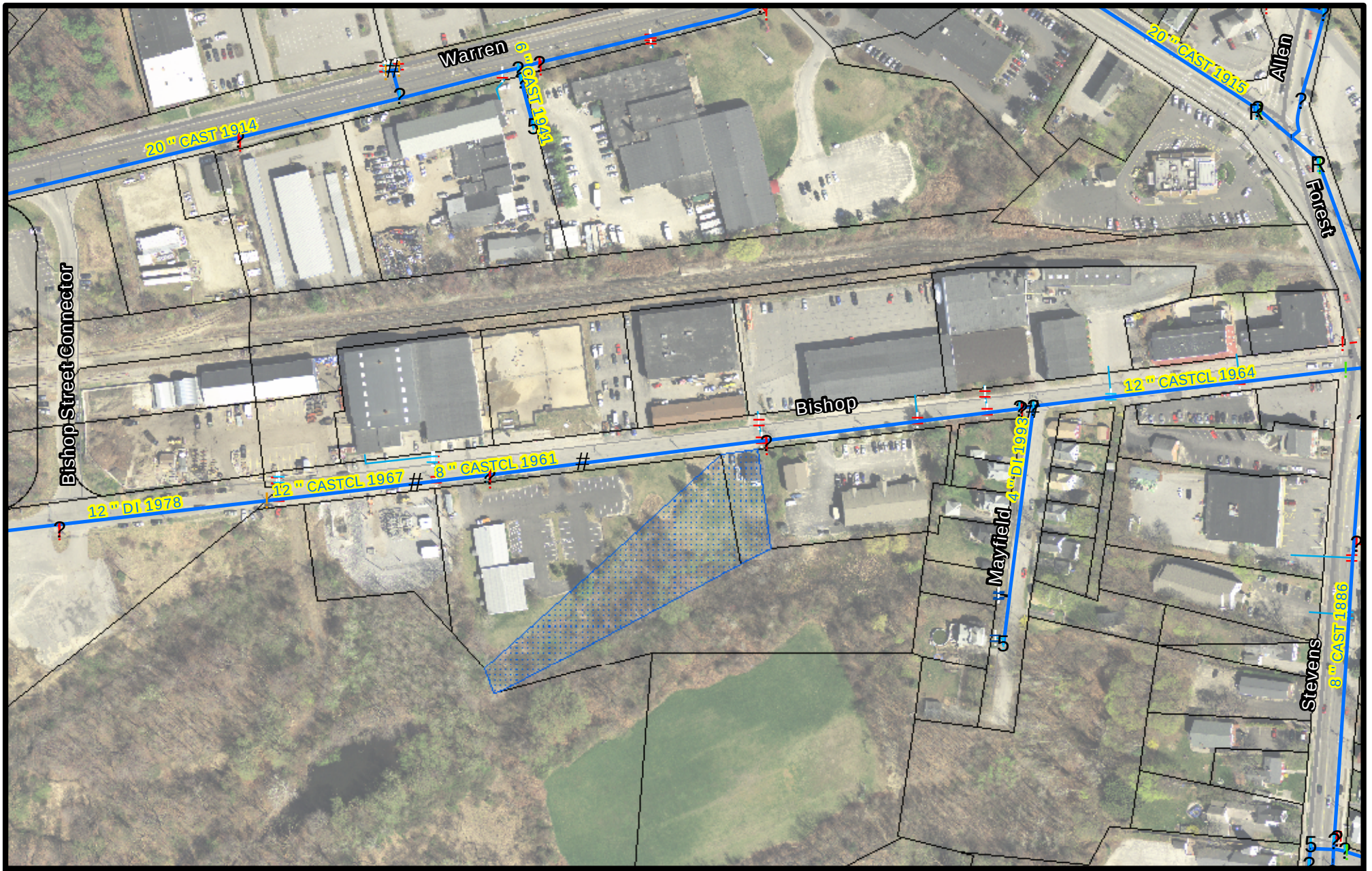
It is anticipated that this project will require water service to provide private fire protection to the site. Please note that the District does not guarantee any quantity of water or pressure through a fire protection service. Please share these results with your sprinkler system designer so that they can design the fire protection system to best fit the noted conditions. If the data is out of date or insufficient for their needs, please contact the MEANS Division to request a hydrant flow test and we will work with you to get more complete data.

As your project progresses, please remain in contact with the District to ensure that the design meets our current standards. If the District can be of further assistance in this matter, please let us know.

Sincerely,
Portland Water District



Glissen Havu, E.I.
Design Engineer



72 Bishop Street

Portland

PORTLAND WATER DISTRICT
225 Douglass Street
Portland, ME 04104

Scale 0 50 100 200 300 400 Feet — 1 inch = 200 feet

Legend

!	Air Valve	●	Connection	=	Combined Service	!	Manhole
5	Blow Off	!	Attribute Change	=	Domestic Service	(	CSO
R	By Pass	#	Reducer	=	Fire Service	→	Gravity
?	Distribution	!	Hydrant	(	Private Hydrants	→	Force
?	Transmission	?	Hydrant Control	(	Meter Pits		

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

Drawn By: GJH	Prepared For: Mitchell & Associates
Scale: As Noted	Date: March 30, 2015

2/17/2015

Sashie Misner
Mitchell and Associates
70 Center Street
Portland, ME 04101
Sent via email to: SMisner@MitchellAssociates.biz

RE: Ability to Serve Letter for Avesta Housing 72 Bishop Street, Portland, ME.

Dear Ms. Misner:

CMP has the ability to serve the proposed project located at 72 Bishop in Portland, Maine, 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 Standards Handbook. If you have any questions on the process, or need help in completion of the documents, please feel free to contact me. Should the process be single phase, you will work directly with our Portland Service Center.

New Service Milestones

- Call 1-800-565-3181 to establish a new account and an SAP work order.
- Submit any electronic drawings (PDF (preferred) or DWG files) of the site layout and proposed electrical connections if you have them.
- Submit Load information. Please complete this CMP spreadsheet using load information
- Submit the easement information worksheet. Please complete this CMP form and either email or fax back to us.
- Preliminary meetings with CMP to determine the details of job
- Field planner design appointment to cost out job and develop CMP Invoice.
- Submit invoice for payment.
- Easements signed and payment received.
- Job scheduled for completion after the electrical inspection has been received.

This process can take several months, depending upon several factors including transformer delivery, potential substation upgrades, 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.

162 Canco Road Portland, ME 04103
Tel (800) 750-4000
207-842-2367 office
207-458-0382 cell
207-626-4082 fax

www.cmpco.com

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
(http://www.cmpco.com/MediaLibrary/3/6/Content%20Management/YourAccount/PDFs%20and%20Docs/handbook.pdf)

If you have any questions, please contact me.

Regards,

Jamie Cough
Energy Services Advisor
Central Maine Power Company
162 Canco Road
Portland, ME 04103
207-842-2367 office
207-458-0382 cell
207-626-4082 fax

Portland, Maine Yes. Life's good here.

Michael J. Bobinsky
Director of Public Services

18 June 2015

Mr. Robert Metcalf, Principal,
Mitchell & Associates,
Landscape Architects,
70 Center Street,
Portland, Maine 04101

RE: The Capacity to Handle Wastewater Flows, from a Proposed Three Story, "Housing First," Apartment Building, for the Chronically Homeless, at 72 Bishop Street.

Dear Mr. Metcalf:

The existing, eight-inch diameter polyvinyl chloride sanitary sewer pipe, located in Bishop Street, has adequate capacity to **transport,** while The Portland Water District sewage treatment facility, located off Marginal Way, has adequate capacity to **treat,** the anticipated wastewater flows of **3,551 GPD**, from this proposed project.

In order to offset any increase in sanitary flows, the City combined sewer overflow (C.S.O.) abatement consent agreement (with the U.S.E.P.A., and with the Maine D.E.P.) requires C.S.O. abatement, as well as storm water mitigation, from all projects.

If the City can be of further assistance, please call 874-8832.

Sincerely,
CITY OF PORTLAND

Frank J Brancely, B.A., M.A.
Senior Engineering Technician

C:\Frank's\Capacity Letters\Bishop Street 72

Anticipated Wastewater Flows from the Proposed Project:

30 Proposed One Bedroom Efficiency Units @ 120 gpd per Unit	=	3,600 GPD
2 Proposed Staff @ 12 gpd per Staff	=	24 GPD
Less Wastewater Flows from Most Recent Tenant	=	(73 GPD)
Total Net Increase in Proposed Wastewater Flows for this Project	=	**3,551 GPD**

FJB

CC: Jeffrey Levine, Director, Department of Planning and Urban Development, City of Portland.
Barbara Barhydt, Development Review Services Mgr., Dep't. of Planning and Urban Development, City of Portland.
Helen Donaldson, Planner, Department of Planning and Urban Development, City of Portland.
David Margolis-Pineo, Deputy City Engineer, City of Portland.
Nancy Gallinaro, Water Resources Manager.
Michael Farmer, P.E., Project Engineer, City of Portland.
Bradley A. Roland, P.E., Environmental Project Engineer, City of Portland.
Benjamin N. Pearson, E.I., Industrial Pretreatment Coordinator, City of Portland.
John Emerson, Wastewater Coordinator, City of Portland.
Rhonda Zazzara, Field Inspection Coordinator, City of Portland.
Jane B. Ward, Administrative Assistant, Engineering Services, Department of Public Services.

AVESTA HOUSING

Att. H

Quality Affordable Living

To: Interested Parties

From: Greg Payne, Development Officer

Re: Statement of Technical Capability

Avesta Housing is Maine's largest and most sophisticated non-profit housing developer and manager. Incorporated in 1972, Avesta is driven by the vision that decent, affordable housing should be available to all Mainers, without exception. Avesta owns and manages 56 properties containing over 1,500 affordable apartments. These apartments serve low-income seniors and families, as well as persons with special needs, primarily in York and Cumberland Counties.

Avesta Housing is chartered as a nonprofit corporation in the state of Maine and is tax exempt under Section 501(c)3 of the federal Internal Revenue Code. Avesta is governed by a 15-member board of directors representing a variety of banking, business, public, community, social service and housing organizations. Its administrative headquarters is in Portland, Maine. It has a staff of 90 full-time and part-time employees.

307 Cumberland Avenue Portland, Maine 04101
207-553-7777 1-800-339-6516 Voice/TTY 207-553-7778 Fax | www.avestahousing.org

NeighborWorks® CHARTERED MEMBER

Gorham
SAVINGS BANK

February 17, 2015

City of Portland
389 Congress Street
Portland, ME 04101

RE: Avesta Housing, Bishop Street Apartments, Portland, Maine

Dear Sir or Madam,

It is a pleasure to confirm for you that Avesta Housing is a valued customer of Gorham Savings Bank in good standing. We believe, based on our relationship with them, that they have the financial and managerial capability to successfully complete the above project.

While this is not a commitment to lend, we welcome the opportunity to assist Avesta Housing with their financing needs for this project.

Sincerely,

Matthew W. Early
Senior Vice President

MWE/ckb

10 Wentworth Drive, Gorham, ME 04038 • Tel. (207) 839-3342
Customer Service Center (207) 839-4796 • www.gorhamsavingsbank.com

AVESTA HOUSING

LETTER OF AUTHORIZATION

June 17, 2014

To: City of Portland Planning Department

This letter authorizes Robert Metcalf, Michael King and/or Sashie Misner of Mitchell & Associates and Ben Walter of CWS Architects to act as agents on behalf of Avesta Housing Development Corporation in public meetings and the submission of any and all application materials that relate to our proposed development of Bishop Street Apartments on Bishop Street in Portland.

Sincerely,

Greg Payne
Development Officer

307 Cumberland Avenue • Portland, Maine 04101
207-553-7777 • 1-800-339-6516 Voice/TTY
207-553-7778 Fax • www.avestahousing.org

COMPLIANCE WITH APPLICABLE ZONING REQUIREMENTS

The proposed development will be located within the Community Business District (B-2-C zone). A mix of business, industry and single family residences exists within this Bishop Street neighborhood. The proposed 30 efficiency units at 72 Bishop Street will provide housing for chronically homeless individuals, using a “housing first” approach. The project is close to Forest Avenue and will provide much needed housing in urban neighborhoods along arterials. The proposed development intends to meld with the neighborhood and be a positive addition to the surrounding services provided.

The B-2-C zone supports moderate to high density residential uses located in close proximity to business uses. 72 Bishop Street will replace the single family residence with 30 efficiency units and providing residential development similar in scale to the surrounding structures. The height of the proposed 3-level building is 39 feet. While B-2-C zone encourages active street frontages, the irregular shape of the lot and program do not allow for the building to be located 10 feet from the front property line. The building will be angled and located as close as possible to the front property line (18’). No parking is proposed within the front of the building. Onsite parking consists of ten parking spaces and two handicap parking spaces.

The proposed development is in compliance with the applicable zoning requirements set-forth the Portland Land Use Ordinance conforming to provisions of the Site Plan and Subdivision Regulations and the zoning provisions of the B-2-C designated district with the following exceptions.

The applicant is requesting a waiver from Section 14-188 Active Street Frontages and 14-185 Dimensional Requirements (Front Yard Maximum). The request is based on the limitations the irregular shaped lot offers in regards to building location. The property is 50 feet wide at the property line and does not offer the ability to locate a 24 foot driveway and the primary building façade towards the street. Because of the low traffic volume entering the site and to allow the building to be as close to the road as possible, the driveway was designed as 20’ wide. The building is located as close as possible to the front property line (18’) to achieve the appearance of an Active Street Front.

The applicant is requesting a waiver from Section 14-332 (4) (a) multi-family residential parking requirement of one parking space per dwelling unit. The applicant is proposing to provide 12 parking spaces (10 spaces and 2 handicap spaces). The proposed reduced amount of parking is based on prior experience serving the target homeless population whom do not typically own vehicles as well as an understanding of future employee parking needs.

WAIVER REQUEST

1. Waiver request from Section 14-185 Dimensional Requirements (Front Yard Maximum). The request is based on the limitations the irregular shaped lot offers in regards to building location. The property is 50 feet wide at the property line and does not offer the ability to locate a 24 foot driveway and the primary building façade within the ten (10) foot setback at the street. To locate the structure as close as possible to the street, we have reduced the width of the access drive from 24 feet to 20 feet allowing the closest point of the building to be 18 feet from the property line. The driveway width for the parking meets the required 24 foot width.

2. Waiver request from Section 14-332 (4) (a) multi-family residential parking requirement of one parking space per dwelling unit. The applicant is proposing to provide 12 parking spaces (10 spaces and two handicap spaces). The proposed reduced amount of parking is based on prior experience serving the target homeless population whom do not typically own vehicles, as well as, an understanding of future employee parking needs.

3. Waiver request from Section 14-526 2.b.iii. a. & Technical Design Manual 4.6.1, Multi-family residential street tree requirement of one street tree per unit spaced 30'-45' within the right of way. The facility proposes 30 units although has only 50 feet of road frontage. Due to the irregular shape of the site and driveway and sidewalk requirements the applicant is not proposing any street trees within the right of way. The applicant would like planning staff to consider the three trees located along the front of the building to apply towards the 30 required trees. The applicant is requesting a waiver for the remaining 27 trees and will provide the fee in lieu.

Temporary Waiver Request

The applicant requests the following temporary waivers:

1. Construction Management Plan. At this stage in development we are unable to provide a detailed construction management plan. We request the ability to provide this at a later time.

2. Lighting Photometric Plan. We have selected the attached fixtures for site lighting. We are requesting a temporary waiver for the submission of the

photometric plan, a plan will be provided before a scheduled public hearing.

3. Manufacturers' Verification of Mechanical Systems, HVAC equipment will be mounted on the roof. Sizing and selection of equipment is currently being developed. Appropriate documentation will be submitted for staff review. We request the ability to provide at a later date.

4. Sign Plan. The Sign Plan will be in conformance with city zoning. We have shown the intended signage location and request the ability to provide the detailed sign information at a later time for staff review.

5. Easements. The location of electric and communication services has not been finalized. Option one shown on plan sheet L3 will require an easement from the abutting masonic lodge. The applicant is pursuing this and will provide any easements as may be required.

CONSISTENCY WITH CITY'S COMPREHENSIVE PLAN

The Project is consistent with the City's Comprehensive Plan and, more specifically, the housing component of that plan, *Housing: Sustaining Portland's Future*.

Housing: Sustaining Portland's Future lays out six major policy objectives to achieve the City's housing goals and address Portland's housing shortage. Each of these primary policies outlines a number of secondary policy goals. The proposed Project is consistent with many of the housing policy goals detailed in the city comprehensive housing plan;

Policy #1: Ensure an Adequate and Diverse Supply of Housing for All

i. *Ensure the construction of a diverse mix of housing types that offers a continuum of options across all income levels, which are both renter and owner-occupied.*

Homelessness is an issue that plagues many urban communities. This project will provide housing for the chronically homeless contributing long term solutions to this greater community issue. The project is located within a business district along an arterial.

ii. *A variety of housing choices should be available such that no one should have to spend more than 30% of their income for housing.*

This 'housing first' project will provide 30 efficiency apartment units. Avesta will partner with Preble Street for the provision of 24-hour, on-site support services and Portland Housing Authority for project-based rental assistance. This housing project will provide quality services and living space for Portland's neediest population.

iii. Encourage higher density housing located near services, such as schools, businesses, institutions, employers, and public transportation.

The Project is a moderate density development near Forest Avenue the services and facilities listed above.

iv. Increase Portland's rental housing stock to maintain a reasonable balance between supply and demand yielding consumer choice, affordable rents, and reasonable return to landlords.

The Project will bring 30 efficiency apartments to the neediest of Portland. In addition to providing housing, the project includes counselling services for homeless individuals with mental disorders. This step is aimed at providing not just a living space but support to establish stability and a hopeful future.

v. Identify vacant land and redevelopment opportunities throughout the City to facilitate the construction of new housing.

The Project involves replacing a single family residence located on the edge of an industrial zone and within a business zone. This redevelopment opportunity will create higher density housing similar in scale to the surrounding neighborhood.

Policy #3: Neighborhood Stability and Integrity

i. *Encourage innovative new housing development, which is designed to be compatible with the scale, character, and traditional development patterns of the City's residential neighborhoods.*

The Project involves replacing a single family residence located on the edge of an industrial zone and within a business zone. This project will create building architecture similar in scale to the surrounding neighborhood.

ii. Encourage new housing development in proximity to neighborhood assets such as open space, schools, community services and public transportation.

The Project is located in close proximity to the neighborhood assets listed above.

Policy #5: Sustainable Development

i. Encourage growth in Portland that strives for a dynamic balance of the essential elements of the city, such as excellent schools, diverse housing choices, proximity to services and employment, increased public transit usage, expanded economic base, high quality services and an affordable tax rate.

The Project will provide diverse housing choices that are close in proximity to services and employment.

ii. *Maximize development where public infrastructure and amenities, such as schools, parks, public/alternative transportation, sewer lines and roads, exist of may be expanded at minimal costs.*

As documented previously, the Project is located in an urban setting that is serviced by the public infrastructure and amenities listed above.

iii. Locate and design housing to reduce impacts on environmentally sensitive areas.

As an urban infill development with a goal to contribute positively on surrounding neighborhood, the Project is designed to reduce environmental impacts associated with new development.

iv. Design housing to use new technologies and materials that reduce costs and increase energy efficiency.

The Project is being designed to achieve maximum energy efficiency.

Policy #6: Freedom of Choice

a. Increase and ensure equal access to housing opportunities for minorities, low-income people and persons with disabilities and special needs.

As documented, the Project will increase access to high quality housing for the chronically homeless.

i. *Ensure that an adequate supply of new and existing housing is accessible to persons with physical disabilities.*

The project provides fully-ADA compliant units as required under state and federal building codes.