

84-E-10

1999-0020

23 Seashore Ave. - P.I.

Retaining Seawall

John + Mary Cashman

on Spreadsheet

**CITY OF PORTLAND, MAINE
DEVELOPMENT REVIEW APPLICATION
PLANNING DEPARTMENT PROCESSING FORM
Planning Department Copy**

19990020

I. D. Number

Cashman, John & Mary Jo

Applicant

21637 S.E. 8 Mast, Redmond, WA 98053

Applicant's Mailing Address

Edwards, Terry

Consultant/Agent

766-5660 766-2364

Applicant or Agent Daytime Telephone, Fax

02/12/1999

Application Date

Retaining Seawall

Project Name/Description

23 - 23 Seashore Ave, Peaks Island

Address of Proposed Site

084 E010

Assessor's Reference: Chart-Block-Lot

Proposed Development (check all that apply): New Building Building Addition Change Of Use Residential
 Office Retail Manufacturing Warehouse/Distribution Parking Lot Other (specify) **retaining sea wall**

Proposed Building square Feet or # of Units **7200** Acreage of Site _____ Zoning **IR-2**

Check Review Required:

- Site Plan (major/minor) Subdivision # of lots _____ PAD Review 14-403 Streets Review
 Flood Hazard Shoreland HistoricPreservation DEP Local Certification
 Zoning Conditional Use (ZBA/PB) Zoning Variance Other _____

Fees Paid: Site Plan **\$400.00** Subdivisio _____ Engineer Review _____ Date **02/12/1999**

Planning Approval Status:

Reviewer **Kandice Talbot**

- Approved **Approved w/Conditions** See Attached Denied

Approval Date **03/04/1999** Approval Expiration **03/04/2000** Extension to _____ Additional Sheets Attached

OK to Issue Building Permi **Kandice Talbot** **03/04/1999**
signature date

Performance Guarantee Required* Not Required

* No building permit may be issued until a performance guarantee has been submitted as indicated below

- Performance Guarantee Accepted _____
date amount expiration date
- Inspection Fee Paid _____
date amount
- Building Permit Issue _____
date
- Performance Guarantee Reduced _____
date remaining balance signature
- Temporary Certificate of Occupancy _____
date Conditions (See Attached) expiration date
- Final Inspection _____
date signature
- Certificate Of Occupancy _____
date
- Performance Guarantee Released _____
date signature
- Defect Guarantee Submitted _____
submitted date amount expiration date
- Defect Guarantee Released _____
date signature

**CITY OF PORTLAND, MAINE
DEVELOPMENT REVIEW APPLICATION
PLANNING DEPARTMENT PROCESSING FORM
D.R.C. Copy**

19990020
I. D. Number

Cashman, John & Mary Jo
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21637 S.E. 8 Mast, Redmond, WA 98053
Applicant's Mailing Address
Edwards, Terry
Consultant/Agent
766-5660 **766-2364**
Applicant or Agent Daytime Telephone, Fax

02/12/1999
Application Date
Retaining Seawall
Project Name/Description
23 - 23 Seashore Ave, Peaks Island
Address of Proposed Site
084 E010
Assessor's Reference: Chart-Block-Lot

Proposed Development (check all that apply): New Building Building Addition Change Of Use Residential
 Office Retail Manufacturing Warehouse/Distribution Parking Lot Other (specify) **retaining sea wall**

Proposed Building square Feet or # of Units **7200** **IR-2**
Acreage of Site Zoning

Check Review Required:

- Site Plan (major/minor)
- Flood Hazard
- Zoning Conditional Use (ZBA/PB)
- Subdivision # of lots _____
- Shoreland
- Zoning Variance
- PAD Review
- Historic Preservation
- 14-403 Streets Review
- DEP Local Certification
- Other _____

Fees Paid: Site Plan **\$400.00** Subdivision _____ Engineer Reviw _____ Date: **02/12/1999**

DRC Approval Status:

Approved **Approved w/Conditions** Denied
see attache
Approval Date **03/04/1999** Approval Expiration **03/04/2000** Extension to _____ Additional Sheets Attached
 Condition Compliance **Kandi Talbot** **03/04/1999**
signature date

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CITY OF PORTLAND, MAINE
DEVELOPMENT REVIEW APPLICATION
PLANNING DEPARTMENT PROCESSING FORM
ADDENDUM

19990020
I. D. Number

Cashman, John & Mary Jo
Applicant
21637 S.E. 8 Mast, Redmond, WA 98053

02/12/1999
Application Date

Applicant's Mailing Address
Edwards, Terry
Consultant/Agent
766-5660 766-2364

Retaining Seawall
Project Name/Description

Applicant or Agent Daytime Telephone, Fax

23 - 23 Seashore Ave, Peaks Island
Address of Proposed Site
084 E010
Assessor's Reference: Chart-Block-Lot

DRC Conditions of Approval

Planning Conditions of Approval

- that a rock fascia be constructed on the front of the concrete wall
- if at any time during construction of the retaining wall the existing septic system fails, the applicant will need to install a septic system which meets current standards

Inspections Conditions of Approval

Fire Conditions of Approval



CITY OF PORTLAND

March 4, 1999

John and Mary Jo Cashman
21637 S.E. 8 Mast
Redmond, WA 98053

re: 23 Seashore Avenue, Peaks Island

Dear Mr. & Mrs. Cashman:

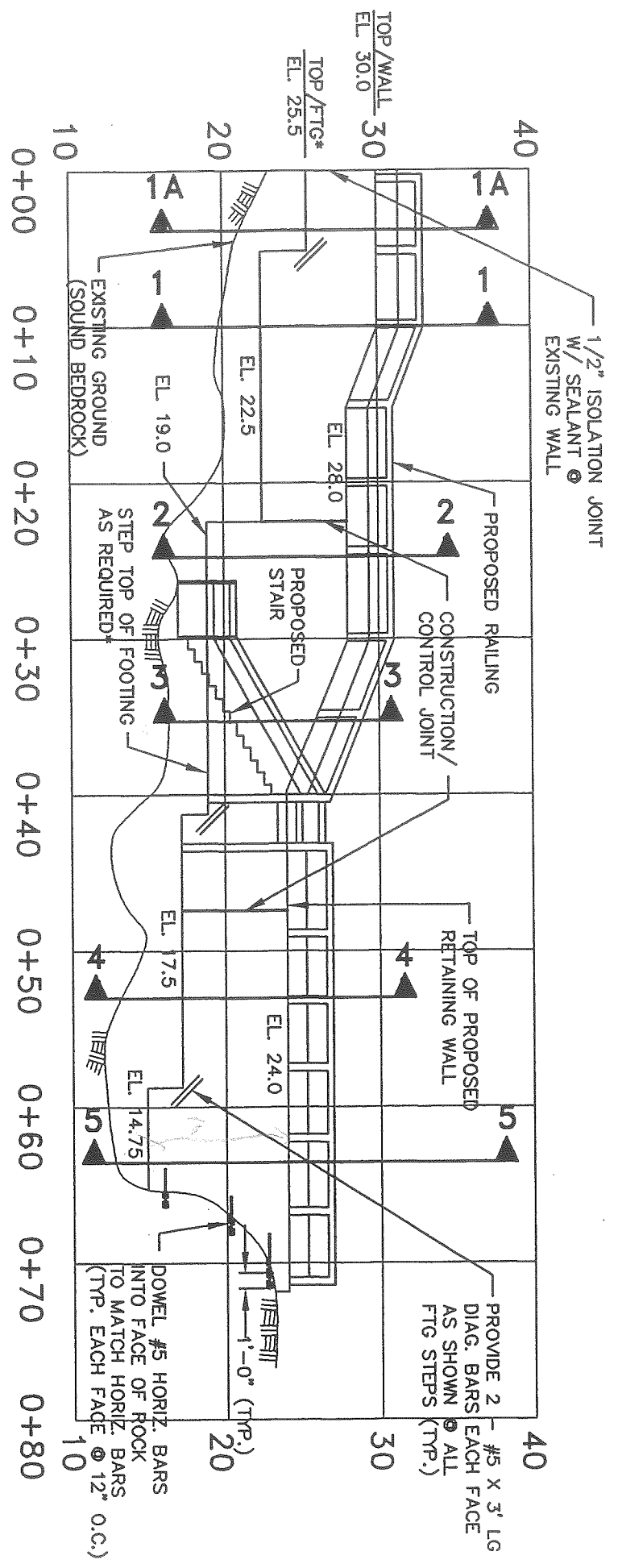
On March 4, 1999 the Portland Planning Authority granted minor site plan approval for a retaining wall located at 23 Seashore Avenue on Peaks Island with the following conditions:

- that a rock fascia be constructed on the front of the concrete wall.
- if at any time during construction the existing septic system fails, the applicant will be need to install a septic system which meets current standards.

The approval is based on the submitted site plan. If you need to make any modifications to the approved site plan, you must submit a revised site plan for staff review and approval.

Please note the following provisions and requirements for all site plan approvals:

1. The site plan approval will be deemed to have expired unless work in the development has commenced within one (1) year of the approval or within a time period agreed upon in writing by the City and the applicant. A one year extension may be granted by this department if requested by the applicant in writing prior to the expiration date of the site plan.
2. A performance guarantee in a form acceptable to the City of Portland and an inspection fee equal to 1.7% of the performance guarantee will have to be posted before beginning any site construction or issuance of a building permit.
3. A defect guarantee, consisting of 10% of the performance guarantee, must be posted before the performance guarantee will be released.
4. Prior to construction, a preconstruction meeting shall be held at the project site with the contractor, development review coordinator, Public Work's representative and owner to review the construction schedule and critical aspects of the site work. At that time, the site/building contractor shall provide three (3) copies of a detailed construction schedule to the attending City representatives. It shall be the contractor's responsibility to arrange a mutually agreeable time for the preconstruction meeting.

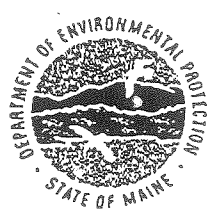


* NOTE: TOP/FOOTING ELEVATIONS AND STEP LOCATIONS INDICATED SHALL BE FIELD VERIFIED/MODIFIED TO FIT EXISTING SOUND BEDROCK PROFILE & MAINTAIN MIN. FOOTING DEPTH PER SHEET 3 DETAIL.

DES. BY: TP/AMP DR. BY: KAP CK. BY: AMP
 MARY JO CASHMAN, 23 SEASHORE AVE.
 PEAKS ISLAND, PORTLAND, MAINE

PROPOSED RETAINING WALL STRUCTURE

PROFILE B
 SCALE: 1"=10'
 DATE: JANUARY 1999 JOB NO.: 97166.02
 SHEET: 2/10 971660A



STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION
STATE HOUSE STATION 17 AUGUSTA, MAINE 04333

DEPARTMENT ORDER

IN THE MATTER OF

MARY JO CASHMAN) NATURAL RESOURCES PROTECTION ACT
PORTLAND, CUMBERLAND COUNTY) COASTAL WETLAND ALTERATION AND
RETAINING WALL) WATER QUALITY CERTIFICATION
L-19438-4D-A-N (Approval)) NEW PERMIT

Pursuant to the provisions of 38 M.R.S.A. Section 480-A, et seq., 06-096 CMR 310, the Wetland Protection Rules (June 30, 1990), and Section 401 of the Federal Water Pollution Control Act, the Department of Environmental Protection has considered the application of MARY JO CASHMAN with its supportive data, agency review comments, and other related materials on file and FINDS THE FOLLOWING FACTS:

1. APPLICATION SUMMARY

A. Application: The applicant proposes to construct a concrete retaining wall in front of her house on Peak's Island.

B. Summary of Proposal:

The applicant proposes to construct a 70 foot long, 12 foot high poured concrete retaining wall in front of her property on Peak's Island. The applicant also proposes to construct a wooden set of stairs in front of the retaining wall to allow access to the shore. The applicant proposes to construct the wall at the base of a near vertical slope. The footing of the wall will be constructed on exposed ledge. The wall will be reinforced with an anchor system and will have two drainage systems, one at the top of the wall and the other at the base. The drainage systems will include crushed stone trenches and perforated pipes outletting approximately every 6 feet along the length of the wall. The proposed wall and stairs will be located from 4 feet, directly in front of the existing house, to 17 feet on the west side, and 10 feet on the east side of the property from the maximum spring tide line, established from the Portland tidal datum from the National Ocean Service. The proposed project is necessary to protect the existing house from being undermined by erosion due to wave action. There is concern that if left unchecked the erosion problem could undermine the foundation of the existing house, which is approximately 8 feet from the top of the existing slope.

2. SITE DESCRIPTION

The applicant owns approximately 7,200 square feet off Seashore Avenue on Peak's Island in Portland. The property contains an existing house and a guest house. The beach area consists of rock and rubble created by the erosion of an existing shale slope. The shoreline is a combination of low ledge, shale and soil material. Ocean waves during storm conditions have battered the shale material allowing pieces of it to crumble off, taking the existing soil material with it onto the beach. The abutting property to the west has an existing retaining wall. The property to the east has a ledge outcrop protecting it from the storm waves. The applicants property is further identified as Lots #E-10 & E-11 on the

City of Portland's Tax Map #84.

3. ALTERNATIVES

The applicant contends that rip rap will not adequately stabilize the property in this particular situation. The existing slope is a sheer slope composed of soft rock and soil. Rip rap would have to extend installed at a 1:1 slope. The toe of the rip rap would then be into the intertidal zone. It is not possible to cut into the slope to place rip rap as the existing house is located at the top of the slope. The applicant also contends that a retaining wall will provide much needed support to existing structures which currently are in danger of suffering foundation failure due to a lack of stability by the eroding slope.

4. SCENIC AND AESTHETIC

The applicant proposes to construct a 70 foot long, 12 foot wide concrete retaining wall located above the high water mark. The applicant contends that this project will not impact existing scenic and aesthetic uses. The property is located in a developed residential area above an exposed bedrock shore. The adjacent property to the west, is currently protected by a concrete retaining wall, and the adjacent property to the east is protected by a sheer bedrock slope. The applicant proposes to maintain as much of the existing bedrock and rubble condition found above the intertidal zone as possible. The Department finds that the applicant's proposal will not unreasonably interfere with existing scenic and aesthetic uses.

5. EROSION AND SEDIMENTATION CONTROL

The Department finds that soil disturbance during this project has the potential to impact the coastal wetland through erosion and sedimentation. The applicant has submitted a narrative detailing erosion control during and after project construction. The Department finds that the applicant's proposal will protect the resource provided the project is constructed according to plans and information in the project file.

6. OTHER CONSIDERATIONS

The Department has identified no issues affecting: existing scenic, aesthetic, recreational, or navigational uses; natural transfer of soil; significant wildlife habitat; threatened or endangered plant habitat; aquatic habitat; travel corridors; freshwater, estuarine, or marine fisheries or other aquatic life; natural flow of surface or subsurface waters; water quality; sand supply; or flooding.

BASED on the above Findings of Fact, and subject to the Conditions listed below, the Department makes the following CONCLUSIONS:

- A. The proposed activity will not unreasonably interfere with existing scenic, aesthetic, recreational or navigational uses.
- B. The proposed activity will not cause unreasonable erosion of soil or sediment provided the project is constructed according to plans and

L-19438-4D-A-N

3 of 3

information in the project file.

- C. The proposed activity will not unreasonably inhibit the natural transfer of soil from the terrestrial to the marine or freshwater environment.
- D. The proposed activity will not unreasonably harm any significant wildlife habitat, freshwater wetland plant habitat, threatened or endangered plant habitat; aquatic habitat, travel corridor, freshwater, estuarine or marine fisheries or other aquatic life.
- E. The proposed activity will not unreasonably interfere with the natural flow of any surface or subsurface waters.
- F. The proposed activity will not violate any state water quality law including those governing the classification of the State's waters.
- G. The proposed activity will not unreasonably cause or increase the flooding of the alteration area or adjacent properties.
- H. The proposed activity is not on or adjacent to a sand dune.
- I. The proposed activity is not on an outstanding river segment as noted in Title 38 M.R.S.A., Section 480-P.

THEREFORE, the Department APPROVES the above noted application of MARY JO CASHMAN SUBJECT TO THE ATTACHED CONDITIONS and all applicable standards and regulations:

1. The Standard Conditions of Approval, a copy attached as Appendix A.
2. The project shall be constructed according to plans and information in the project file.
3. The applicant shall take all necessary measures to ensure that his activities or those of his agents do not result in measurable erosion of soils on the site during construction of the project covered by this approval.

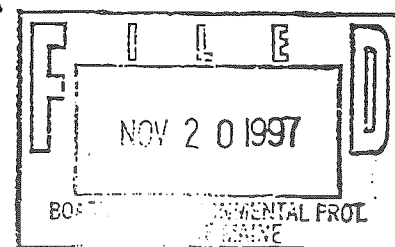
DONE AND DATED AT AUGUSTA, MAINE, THIS 20th DAY OF November, 1997.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: Edward O. Sullivan
EDWARD O. SULLIVAN, COMMISSIONER

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application 7/21/97
Date application accepted for processing 7/24/97
Date filed with Board of Environmental Protection
deh/L19438AN



STANDARD CONDITIONS

THE FOLLOWING STANDARD CONDITIONS SHALL APPLY TO ALL PERMITS GRANTED UNDER THE NATURAL RESOURCE PROTECTION ACT, TITLE 38, M.R.S.A. SECTION 480-A ET.SEQ. UNLESS OTHERWISE SPECIFICALLY STATED IN THE PERMIT.

- A. Approval of Variations From Plans. The granting of this permit is dependent upon and limited to the proposals and plans contained in the application and supporting documents submitted and affirmed to by the applicant. Any variation from these plans, proposals, and supporting documents is subject to review and approval prior to implementation.
- B. Compliance With All Applicable Laws. The applicant shall secure and comply with all applicable federal, state, and local licenses, permits, authorizations, conditions, agreements, and orders prior to or during construction and operation, as appropriate.
- C. Erosion Control. The applicant shall take all necessary measures to ensure that his activities or those of his agents do not result in measurable erosion of soils on the site during the construction and operation of the project covered by this Approval.
- D. Compliance With Conditions. Should the project be found, at any time, not to be in compliance with any of the Conditions of this Approval, or should the applicant construct or operate this development in any way other than specified in the Application or Supporting Documents, as modified by the Conditions of this Approval, then the terms of this Approval shall be considered to have been violated.
- E. Initiation of Activity Within Two Years. If construction or operation of the activity is not begun within two years, this permit shall lapse and the applicant shall reapply to the Board for a new permit. The applicant may not begin construction or operation of the activity until a new permit is granted. Reapplications for permits shall state the reasons why the applicant will be able to begin the activity within two years from the granting of a new permit, if so granted. Reapplications for permits may include information submitted in the initial application by reference.
- F. Reexamination After Five Years. If the approved activity is not completed within five years from the date of the granting of a permit, the Board may reexamine its permit approval and impose additional terms or conditions to respond to significant changes in circumstances which may have occurred during the five-year period.
- G. No Construction Equipment Below High Water. No construction equipment used in the undertaking of an approved activity is allowed below the mean high water line unless otherwise specified by this permit.
- H. Permit Included In Contract Bids. A copy of this permit must be included in or attached to all contract bid specifications for the approved activity.
- I. Permit Shown To Contractor. Work done by a contractor pursuant to this permit shall not begin before the contractor has been shown by the applicant a copy of this permit.

Revised (4/92)

Provide exact directions to the project site. EXAMPLE: "Turn right off Route 202 Southbound; go 1/2 mile down Elm Street and take a left onto Fire Road #32. Take the third dirt road on the right, opposite utility pole #70A."

Right on Island Ave. from ferry landing. Turn right at second paved street on the right (Whitehead Street). This street turns into Seashore Ave. at sharp left turn. It's the third house on right side of Seashore Ave.

NOTE: If there are no identifying features on the lot, put up a temporary sign to help field investigators find the proper site. Avoid using local names for roads that are not clearly marked with signs at all times of the year. Include a sketch map showing the project location.

2. PROJECT HISTORY:

Has any part of this project been started without a permit? YES NO

If yes, please describe and show on plans the area previously altered:

N/A

If you have received a written notice of violation from the department for undertaking the project without a permit, please list the 7 digit enforcement file number (listed on the notice) and provide the name of the enforcement agent:

N/A

Is this project part of a larger project? YES NO X

If yes, describe the larger project:

3. ATTACHMENTS REQUIRED FOR ALL PROJECTS:

- X A. Attach as **Exhibit 1**, a map with project location clearly marked. Acceptable maps are USGS topographical maps or other maps of similar detail such as the Maine Atlas or Gazetteer (clear photocopies are acceptable provided they are labelled with quad name or map number).
- X B. Attach as **Exhibit 2**, photographs of the area to be altered which show vegetation and other landscape features. Photos should be mounted on an 8 1/2" x 11" sheet. The photographs must be labeled with location, photographer, and date taken. Original photographs must be attached to the original copy of the application. Legible photocopies of photographs are acceptable for the other 7 application copies.
- X C. Attach as **Exhibit 3**, site drawings (**overhead and side views, see examples in Appendix I**) of the project site which show the project in detail, including the following:
- X 1) The exact location of the waterbody, watercourse and/or wetland including normal high water and mean low water lines and/or wetland boundary;
 - X 2) Dimensions and exact location of the proposed project on the lot;
 - X 3) Location and dimensions of all existing structures on the lot and all existing structures on abutting lots within 50 feet of any proposed structure;
 - n/a 4) Proposed seasonal structure (a seasonal or temporary structure is a structure in place less than 7 months per year);
 - X 5) Location of all proposed erosion control measures;
 - X 6) Location and dimensions of property lines and names of abutters;
 - X 7) Scale of drawings (where an area of greater than 500 square feet is to be altered, drawings must be at a scale of at least one inch equals 100 feet and must show two foot contour intervals unless otherwise approved by the Department); and

THE DEPARTMENT HAS FOUND THAT A MAJOR CAUSE OF APPLICATIONS BEING RETURNED IS THE LACK OF PROPERLY PREPARED PLANS. ACCURATELY DETAILED PLANS ARE CRUCIAL TO EFFICIENT APPLICATION PROCESSING. IF YOU DO NOT POSSESS STRONG SKILLS IN DRAFTING PLANS, THE DEPARTMENT RECOMMENDS THAT YOU HIRE A CONSULTANT TO DO THE WORK FOR YOU.

NOTES: A) See sample drawings in Appendix I

B) Larger drawings are permissible, however, if drawings exceed 8 1/2" x 11" in size, seven (7) copies folded to 8 1/2" x 11" are required.

- 3) Describe the dredging operation and what measures will be taken to prevent sedimentation of surrounding waters: _____

NOTE: Upland Disposal of dredge spoils is subject to the Solid Waste Rules, Chapters 400-405. Spoils to be disposed of in an upland location must undergo physical and chemical testing as outlined in the Solid Waste Rules, 06-096 CMR 405.5. Spoils to be disposed of at an ocean disposal site must be tested in accordance with the U.S. Environmental Protection Agency and U.S. Army Corps of Engineers' document "Guidance For Performing Tests on Dredged Material To Be Disposed of in Open Waters". The Department strongly recommends that applicants schedule a pre-application meeting with Department staff prior to submitting an application for dredging.

- 4) If dredged material is to be disposed of at an ocean disposal site:
- a. Attach as **Exhibit 5**, a map of the proposed transportation route to the disposal site.
 - b. Submit a copy of the application to all municipalities adjacent to the proposed transportation route.
 - c. Publish notice of the proposed transportation route in a newspaper of general circulation in the area adjacent to the proposed route.

NOTE: Notice of the proposed route must include compass bearings or Loran coordinates.

- 5) Attach as Exhibit 5A, a copy of the test results required for the proposed method of disposal.

7. INFORMATION CONCERNING THE FILING OF PUBLIC NOTICE

The Department of Environmental Protection requires that an applicant provide public notice in which he/she describes the project activity and where it is located. Three notices all using the same form (see Notice of Intent to File, page 15) are required. The notice requirements are as follows:

- 1. Newspaper - You must publish the Notice of Intent to File in a newspaper circulated in the area where the project is located. The notice must appear in the newspaper within 30 days prior to your filing the application with this Department.
- 2. Abutting Property Owners - You must send a copy of the Notice of Intent to File by certified mail to the

owners of property abutting the project.
Their names and addresses can be obtained
from town tax maps or local officials.
They must receive notice within 30 days
prior to your filing the application with
this Department.

List below the names and addresses of the owners of abutting property
(use additional sheet if necessary).

<u>NAME</u>	<u>ADDRESS</u>
William J. Desmond	P.O. Box 634 Gayhead, MA 02535
Barbara Knox	RFD 3, Cross Road Weare, N.H. 03281

3. Municipal Office - You must send a copy of the Notice of Intent to File
and a DUPLICATE OF THE ENTIRE APPLICATION to the
Municipal Office.

NOTE: The applicant shall use the Notice of Intent to File form on the next page
or one containing identical information to notify abutters, municipal
officials, and local newspapers.

8. Signature:

By signing below, the applicant (or authorized agent) certifies that he or she has:

1. Sent by certified mail a completed copy of the Notice of Intent to File to the owners of the property abutting the land upon which the project site is located within thirty days prior to the filing of the application;
2. Sent by certified mail a completed copy of the Notice of Intent to File and filed a duplicate of this application with the town clerk or city clerk of the municipality(ies) where the project is located.
3. Published a Notice of Intent to File once in a newspaper circulated in the area where the project site is located within thirty days prior to the filing of the application;
4. If the project involves filling or dewatering greater than 20,000 square feet of Class I or Class II wetland, or 1 acre or more of Class III wetland; construction of expansions or new buildings on frontal dunes; new crossings of Outstanding River Segments as defined by 38 M.R.S.A. section 480-P; or federal consistency determinations pursuant to the Coastal Zone Management Act, has provided notice of and held a public informational meeting in accordance with Chapter 2, Rules Concerning the Processing of Applications, Section 8, prior to filing the application.
5. Authorized the Department and any reviewing agency personnel the Department has requested to enter the property to review the application.

"I certify under penalty of law that I have personally examined the information submitted in this document and all attachments thereto and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the information is true, accurate, and complete. I authorize the Department to enter the property that is the subject of this application, at reasonable hours, including buildings, structures or conveyances on the property, to determine the accuracy of any information provided herein. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment."

DATE: 15 July 1997


SIGNATURE OF APPLICANT

IF SIGNATURE IS OTHER THAN APPLICANT
ATTACH LETTER OF AGENT AUTHORIZATION

PRINT NAME AND TITLE

NOTE: ANY CHANGES IN PROJECT PLANS MUST BE SUBMITTED TO THE DEPARTMENT OF ENVIRONMENTAL PROTECTION IN WRITING AND MUST BE APPROVED BY THE DEPARTMENT PRIOR TO IMPLEMENTATION. FAILURE TO DO SO MAY RESULT IN ENFORCEMENT ACTION AND/OR THE REMOVAL OF THE PROJECT CHANGES.

ADDITIONAL INFORMATION

5. PROJECT INFORMATION

5.A. This project is needed to prevent further erosion of soil and loss of land that is being caused primarily by the action of ocean waves during storm conditions. Although the shore conditions are mostly bedrock, some of the rock is a shale material that being slowly broken up, which allows the overlying soil to fall down onto the rock beach and disperse. If unchecked, the erosion could eventually undermine the foundation of existing structures.

The project will consist of a reinforced concrete retaining wall about 70 feet long. On the west side, the wall will terminate at an existing stone and mortar retaining wall on the abutter's property. On the east side, the wall will terminate at a steep bedrock slope that comes up to an existing lawn surface. The elevation of the top of the wall will generally follow the elevation of the existing ground surface that is 10 to 12 feet north of the proposed wall. After the wall is constructed, fill will be placed in the space behind the wall to create a finished lawn with appropriate drainage provisions.

The bottom of the wall will be built on a concrete footing constructed on the exposed bedrock slope that exists between the lot's ground level and the tidal zone. Near the east side of the wall, the bottom of the wall will have its lowest elevation, where there is a rubble surface created by the erosion of the bedrock slope above this area. At this location, there may be a need to excavate the rubble to expose a bedrock surface that is suitable for the wall's foundation. The height of the wall will not exceed 12 feet. The location, wall profile, and section are shown on the attached drawings, with dimensions.

The existing ground surface at this lowest point is 12.0, based on the survey performed for the project, using City of Portland datum, which is about the same as NGVD. Based on information from the National Ocean Survey office, the NGVD "zero" elevation is 4.57 feet less than Mean Lower Low Water (MLLW) for tide data for the Portland station. Normal high tides are about 9.0 feet above MLLW, or an elevation of 4.43 NGVD; this is almost exactly the same as the observed elevation of the high tide line shown on the survey. The typical Spring high water elevation is about 10.4 feet above MLLW, or 5.83 NGVD elevation. The highest observed tide level for the Portland station is 14.17, or 9.6 NGVD elevation. Therefore, the elevation of 12.0 (NGVD) for the bottom of the proposed retaining wall is considerably higher than the "maximum Spring tide level" that determines the boundary of a coastal wetland. There will be no alteration of any regulated natural resource within the tidal zone.

6. PROJECT CONSTRUCTION

6.A. The project will be constructed in a manner that is typical for a reinforced concrete retaining wall. It will actually be somewhat simpler than some projects because the retaining wall will be constructed without needing to clear or excavate and move soil in order to provide space for construction. The major steps are summarized as follows:

- (1) Access the site and set up a staging area in the lawn at the top of the slope; install measures to control erosion (see description in 6.D.)
- (2) Build forms, install anchors in the bedrock, place reinforcing steel and concrete for footings.
- (3) Build forms, place reinforcing steel and concrete for the retaining wall; this work will be performed in phases as determined by the Contractor.
- (4) Backfill the wall, installing drainage stone and pipes as shown; this work may be performed in phases as determined by the Contractor.
- (5) Install the railing at the top of the wall, and the stairs.
- (6) Install topsoil, seed and mulch.
- (7) Clean-up the staging areas, installing seed and mulch on disturbed areas.

6.B. The project area will be reached by equipment and construction vehicles by traveling across the existing lawn from Seashore Avenue. The areas that are disturbed to the point of exposing the soil will be repaired by installing grass seed and mulch to restore the lawn.

6.D. The existing soil will only be disturbed as required for construction of the retaining wall; during construction, disturbed soil will be covered with wood chips, brush, or crushed stone to control erosion. After the retaining wall is constructed, fill soil will be placed behind it. Erosion will be controlled by the retaining wall and the drainage system behind the wall. The fill will also be immediately covered with topsoil, seed and mulch.

MAINE 841 8150
 PORTLAND, CASCO BAY

Tidal datums at PORTLAND, CASCO BAY are based on the following:

LENGTH OF SERIES = 19 YEARS
 TIME PERIOD = 1960-1978
 TIDAL EPOCH = 1960-1978
 CONTROL TIDE STATION =

Elevations of tidal datums referred to mean lower low water (MLLW) are as follows:

HIGHEST OBSERVED WATER LEVEL (02/07/1978) = 14.17 FEET
 MEAN HIGHER HIGH WATER (MHHW) = 9.91 FEET
 MEAN HIGH WATER (MHW) = 9.45 FEET
 MEAN TIDE LEVEL (MTL) = 4.90 FEET
 *NATIONAL GEODETIC VERTICAL DATUM-1929 (NGVD) = 4.57 FEET
 MEAN LOW WATER (MLW) = 0.34 FEET
 MEAN LOWER LOW WATER (MLLW) = 0.00 FEET
 LOWEST OBSERVED WATER LEVEL (11/30/1955) = -3.41 FEET

*NGVD reference based on adjustment of 1967 and NOS levels of 1983.

Bench mark elevation information:

BENCH MARK STAMPING	ELEVATION IN FEET ABOVE:	
	MLLW	MHW
38 1919	74.24	64.79
8150 A 1978	16.20	6.75
8150 D 1982	18.52	9.07
841-8150 B 1979	16.97	7.52
841-8150 C 1979	40.47	31.02
ELEV 14.501 FT. TIDAL 31	19.07	9.62
NO 3 1971	15.61	6.16
NO 43 1975	58.19	48.74
NO STAMPING 1	18.62	9.17
NO STAMPING 2	19.03	9.58
NO STAMPING 3	17.46	8.01

Data from NOAA.

EXHIBIT 1

Location Maps



From Maine Atlas and Gazetteer,
Map 3

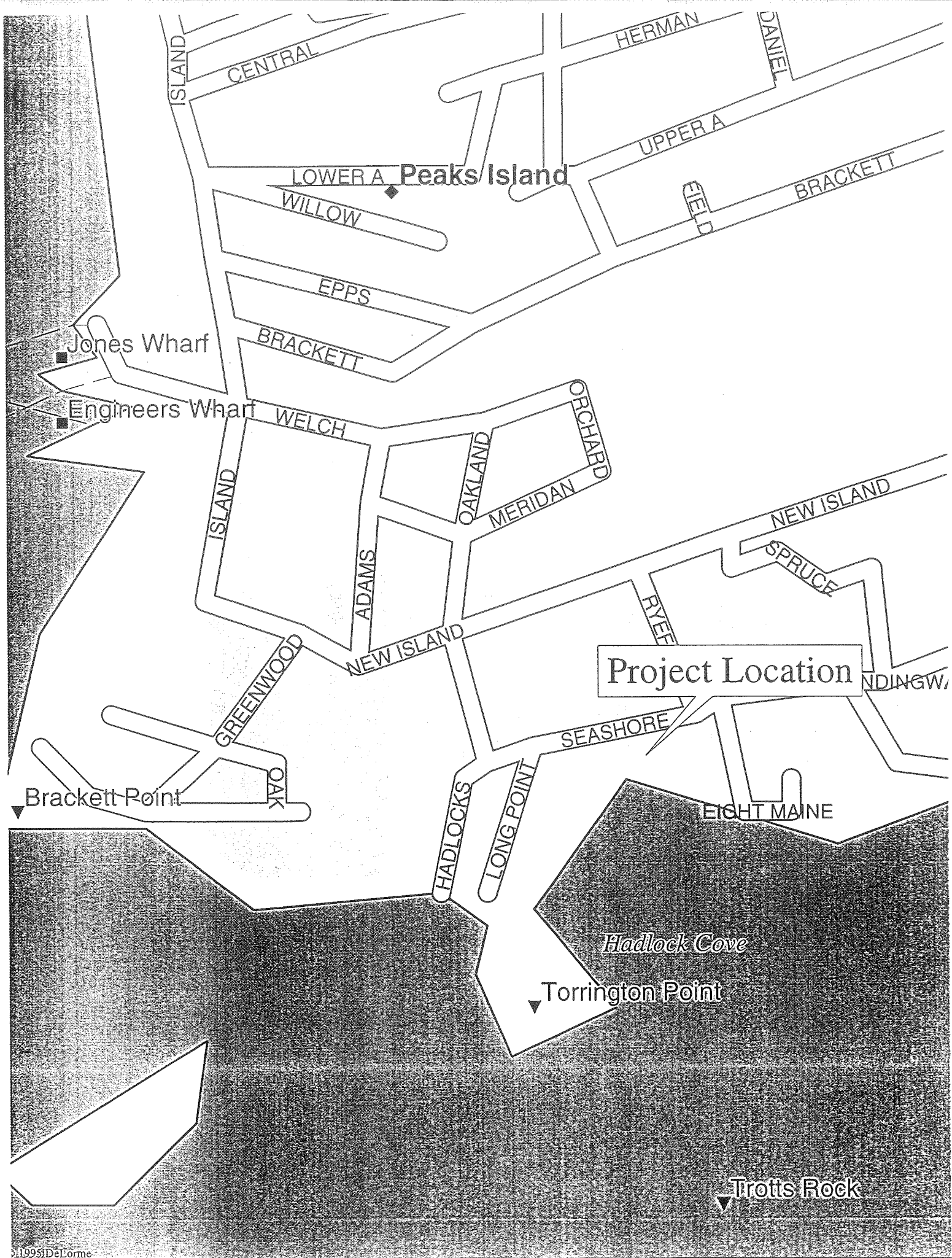
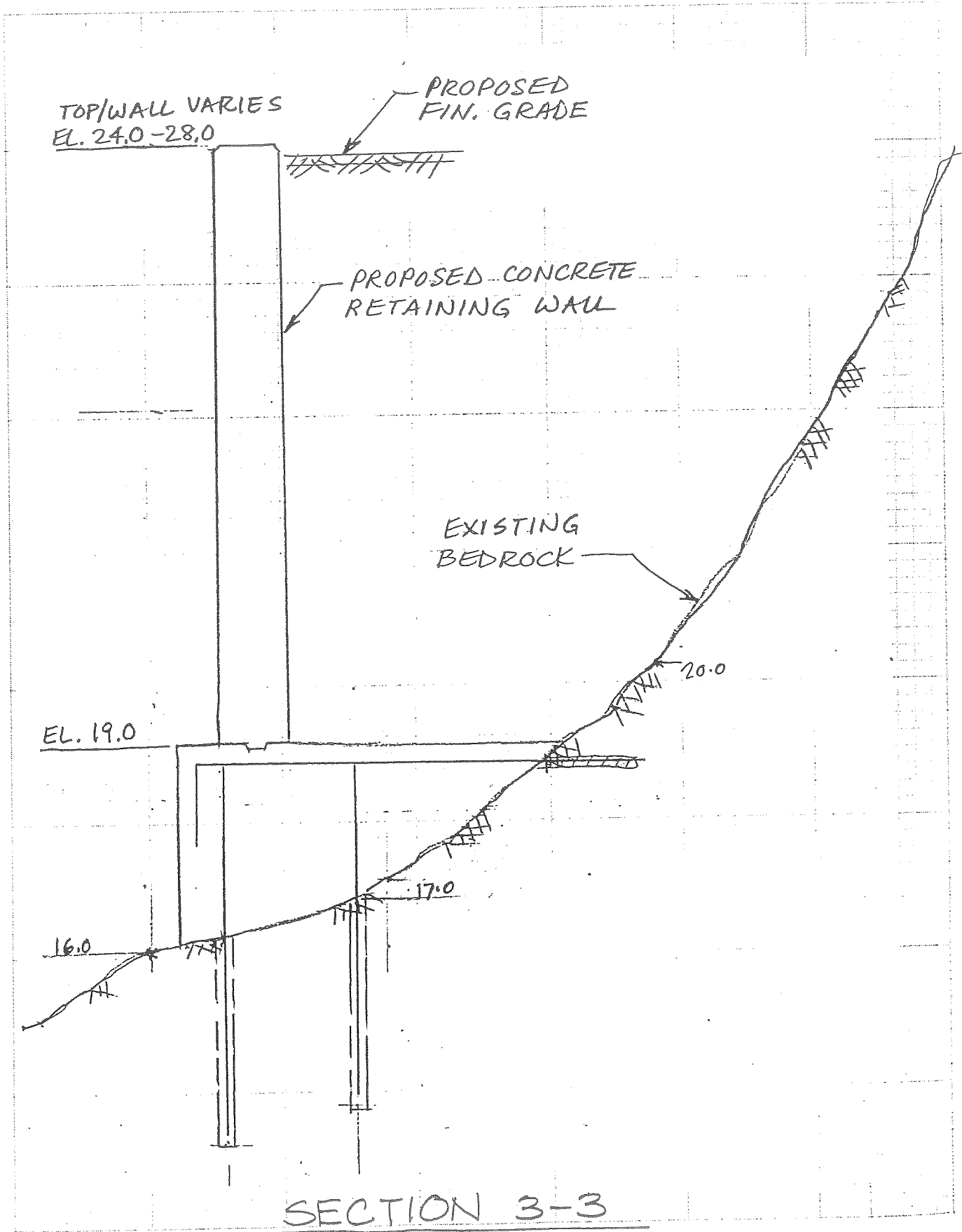
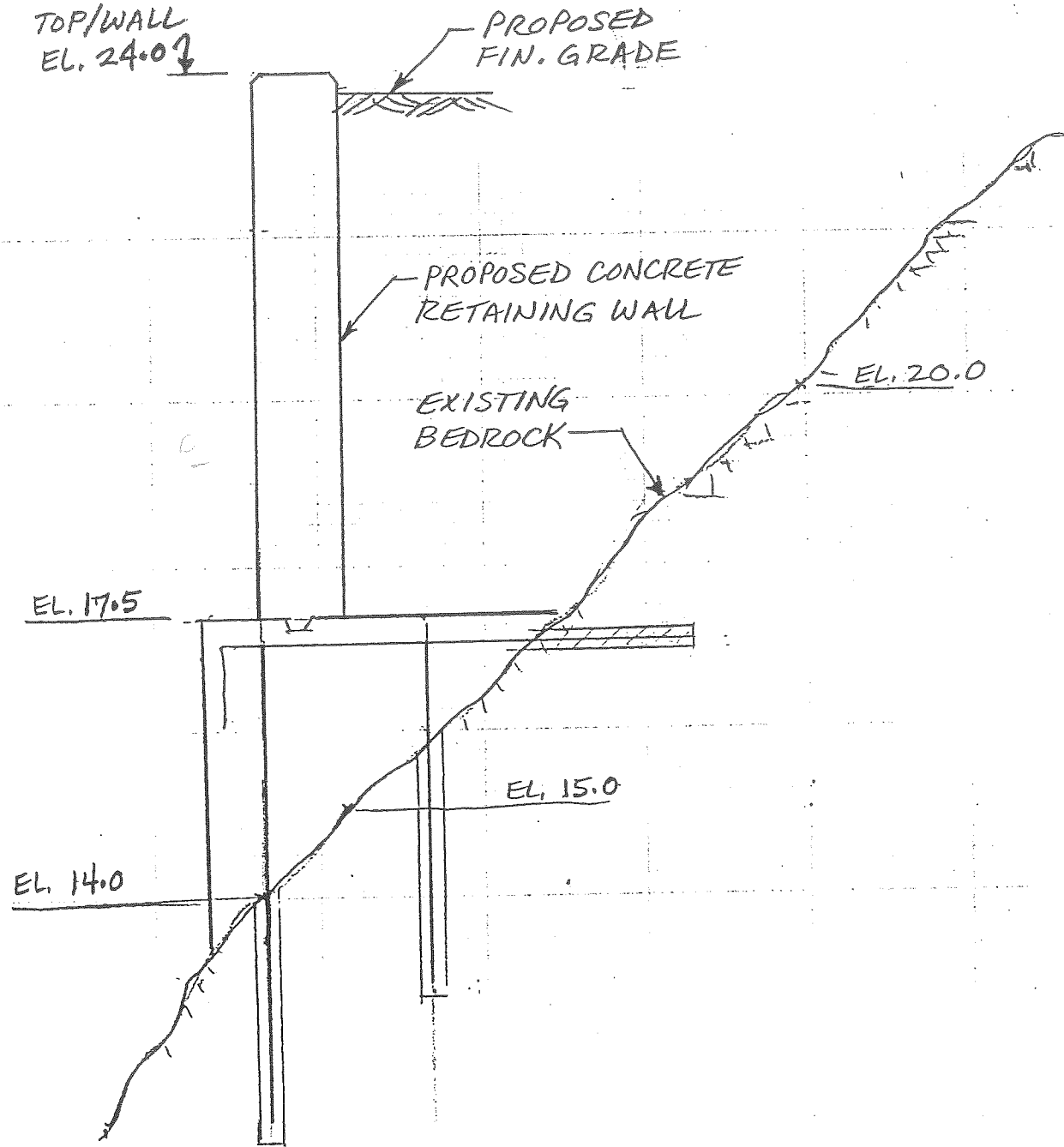


EXHIBIT 2

Photographs





SECTION 4-4

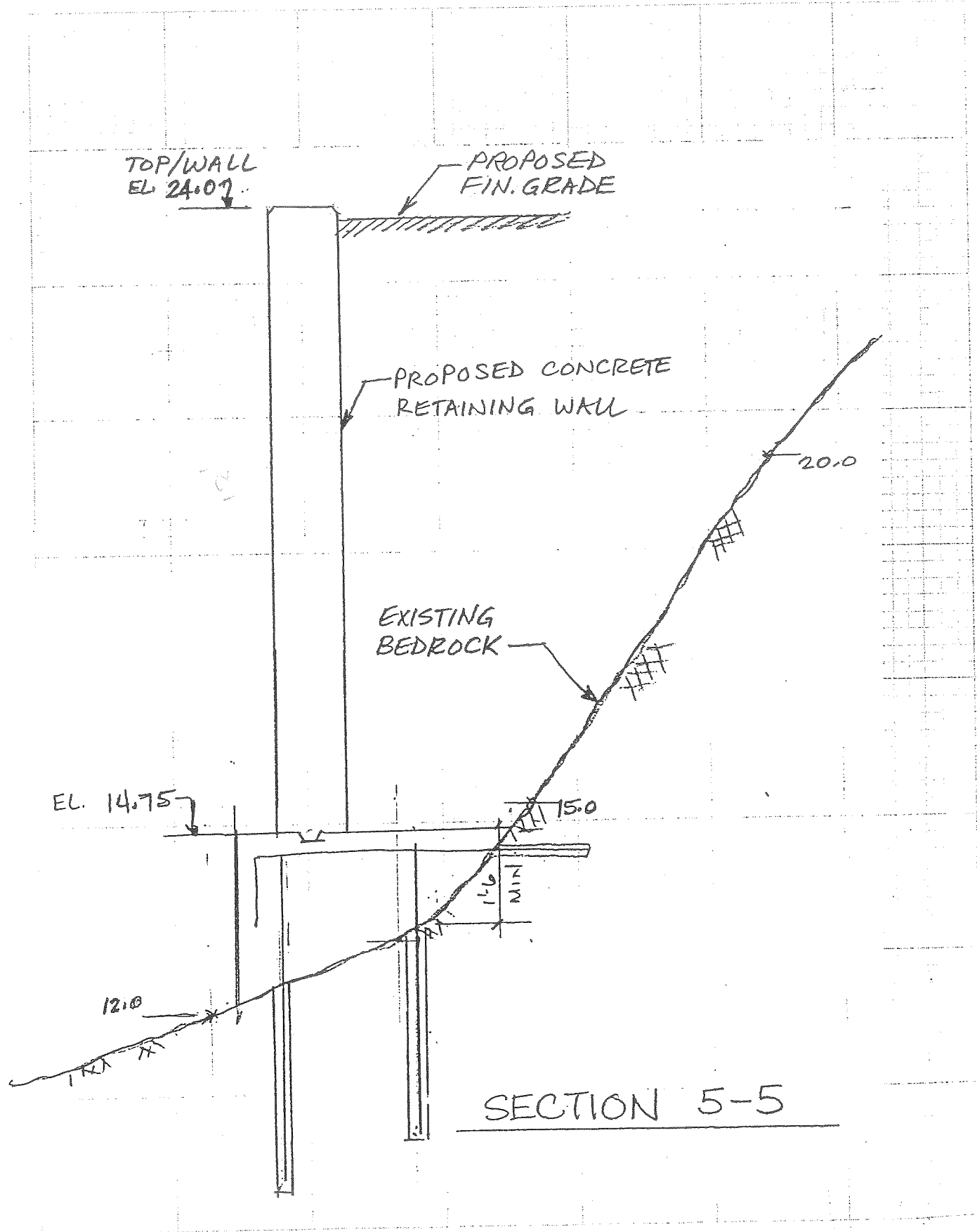


EXHIBIT 4

Property Deed

MAINE REAL ESTATE TAX PAID

68709 BK11711PG269

STATUTORY SHORT FORM
WARRANTY DEED

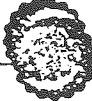
We, MALCOLM STEELE and ANN STEELE, both of Webster, County of Worcester and Commonwealth of Massachusetts, for consideration paid, grant to JOHN E. CASHMAN and MARY JO CASHMAN, as joint tenants and not as tenants in common, both of Redmond, Washington, whose mailing address is 21637 S. E. Eighth Street, Redmond, Washington 98053, with warranty covenants, the land in Portland, County of Cumberland and State of Maine, described in Exhibit "A" attached hereto.

See Exhibit "A"

Witness our hands and seals this 15th day of November, 1994.

Signed, Sealed and Delivered
in presence of

Michael E. Switzer
to him

Malcolm Steele 
Malcolm Steele
Ann Steele

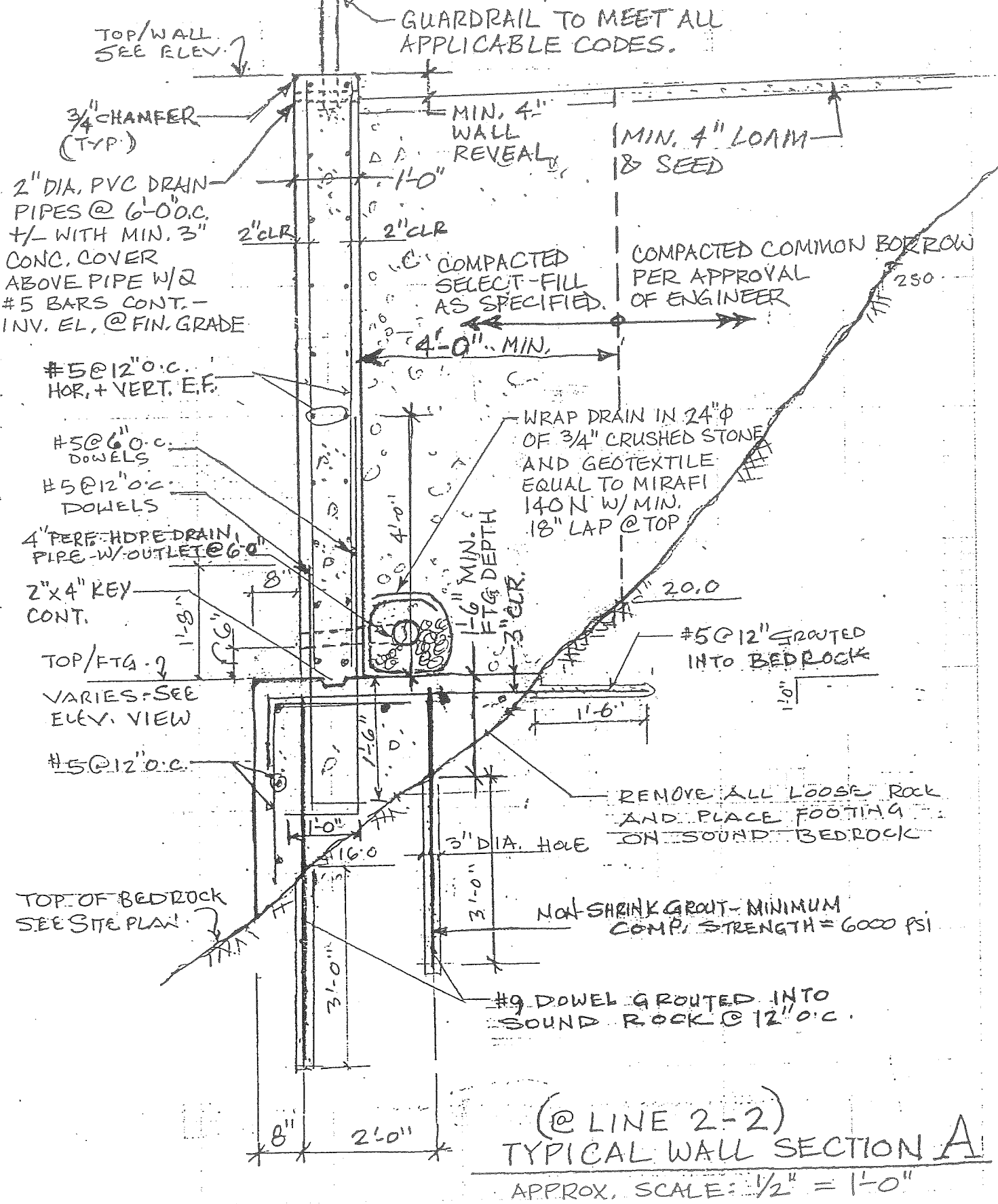
STATE OF MAINE
Cumberland, ss.

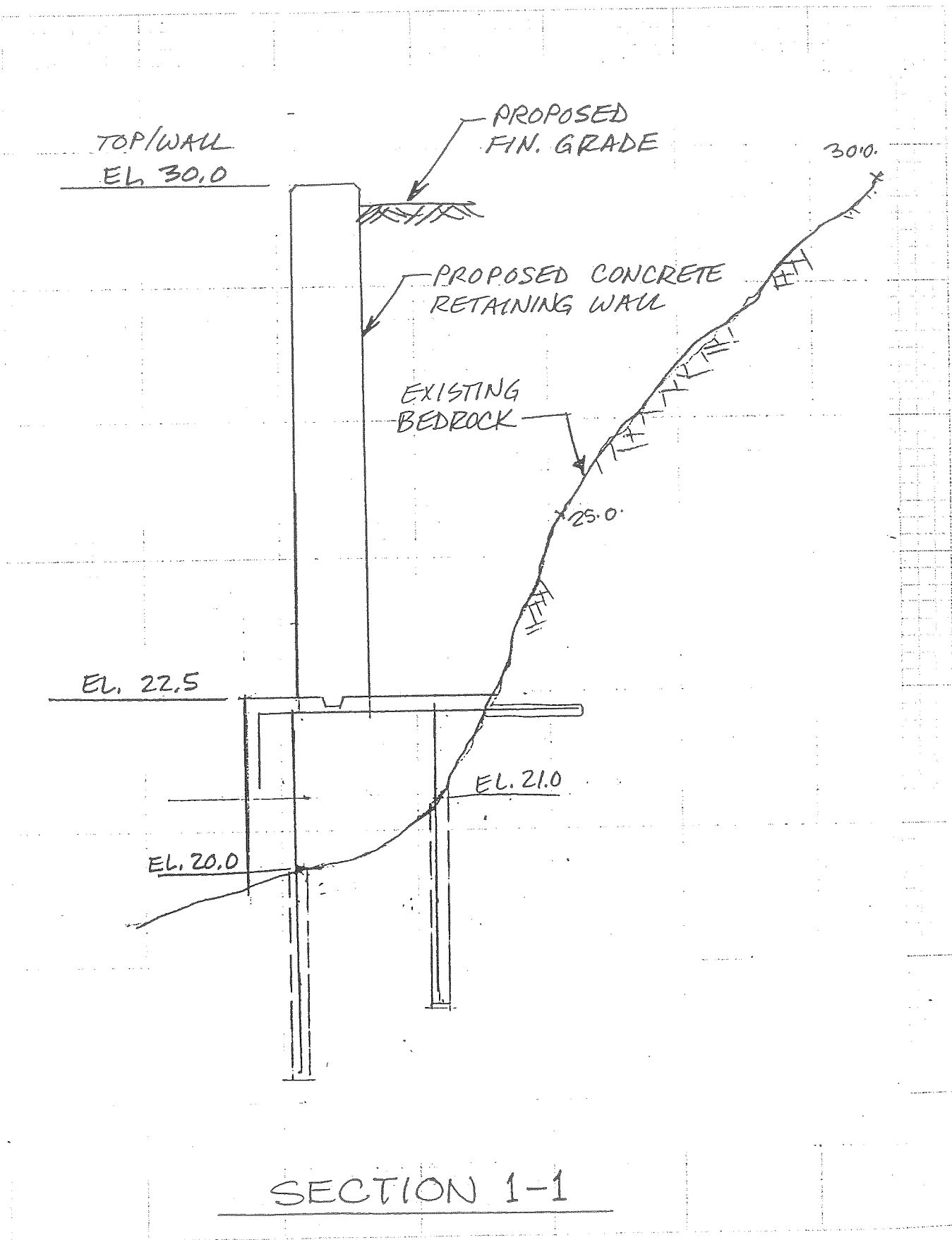
November 15 1994

Then personally appeared the above-named Malcolm Steele and acknowledged the foregoing instrument to be his free act and deed.

Before me,
Michael E. Switzer
Notary Public

Printed name *Kenneth E. Switzer, Atty*





GENERAL NOTES:

1. ALL CONCRETE SHALL HAVE MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI @ 28 DAYS.
WATER CEMENT RATIO = 0.46 MAX.
AIR ENTRAINED 6% ± 1%
SLUMP = 4" MAXIMUM
2. REINFORCING STEEL — ASTM A 615 - 60 GRADE DEFORMED BARS
EPOXY COATED PER ASTM A 775
3. CONCRETE MIX DESIGN, PLACEMENT, FINISHING AND CURING AS PER ACI STANDARDS.
4. DISCONTINUE ALTERNATE HORIZ. REBARS AT CONTROL JOINTS. (2 CONTROL JOINTS). SEE DETAIL
5. MAKE 2-SETS OF 4 CYLINDERS FOR EACH DIFFERENT PLACEMENT OF CONCRETE FOR COMPRESSIVE STRENGTH. BREAK CYLINDERS AT 7 DAYS, 14 DAYS AND 28 DAYS (2).
6. DO NOT BACKFILL WALL UNTIL CONCRETE HAS ACHIEVED 28-DAY DESIGN STRENGTH AS CONFIRMED BY CYLINDER BREAK RESULTS. AND AS APPROVED BY ENGINEER.
7. SELECT BACKFILL SHALL BE CLEAN, NON-FROST SUSCEPTIBLE MATERIAL MEETING THE FOLLOWING GRADATION:

SIEVE SIZE	4"	3"	1/2"	# 40	# 200
% FINER BY WEIGHT	100	90-100	25-90	0-30	0-5

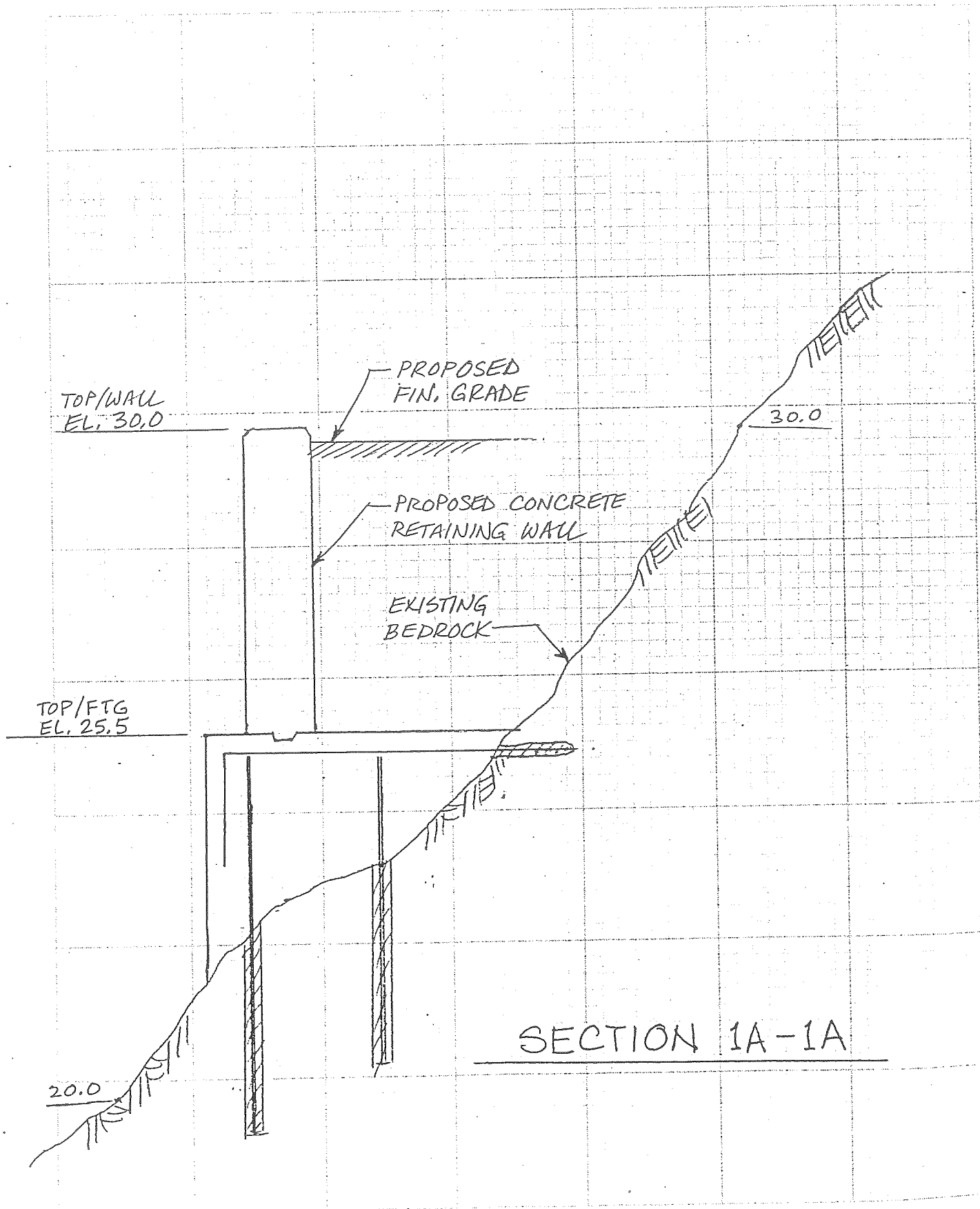
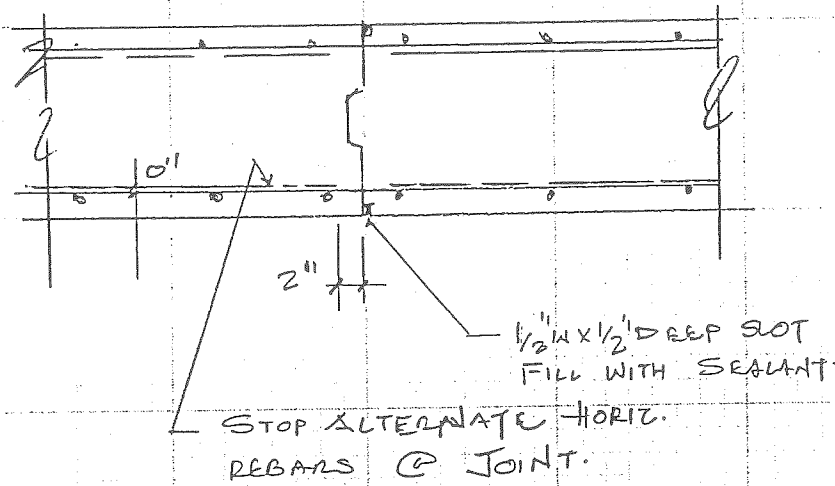
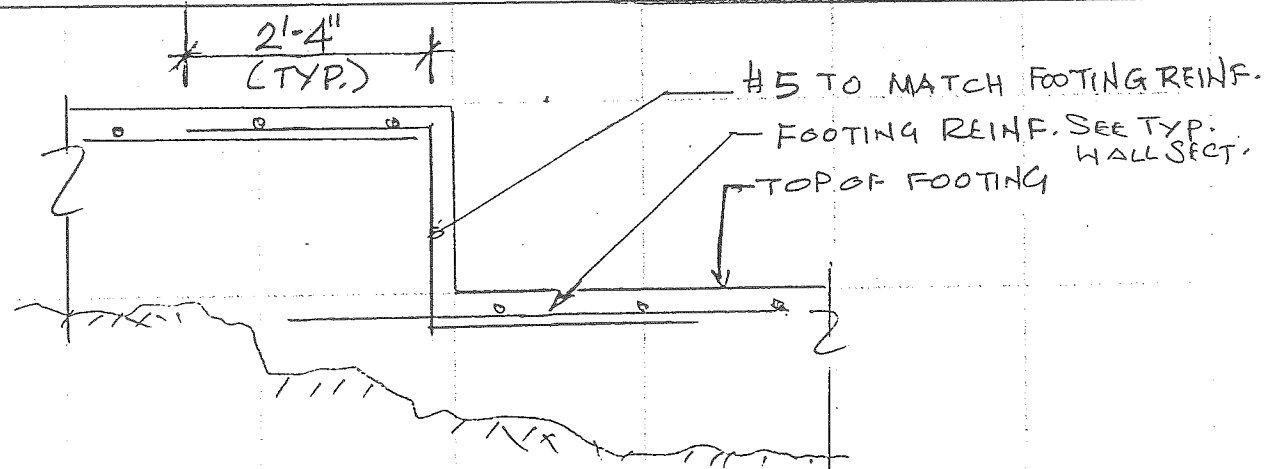


EXHIBIT 3

Drawings



TYPICAL CONSTRUCTION/CONTROL
JOINT. DETAIL



TYPICAL STEP FOOTING
DETAIL

EXHIBIT "A" BK11711PG270

Two certain lots or parcels of land with the buildings thereon situated on the southeast side of Peaks Island and being lots numbered sixty-four (64) and sixty-five (65) as shown on Plan of the Henry M. Brackett Estate recorded in Cumberland County Registry of Deeds in Plan Book 9, page 57.

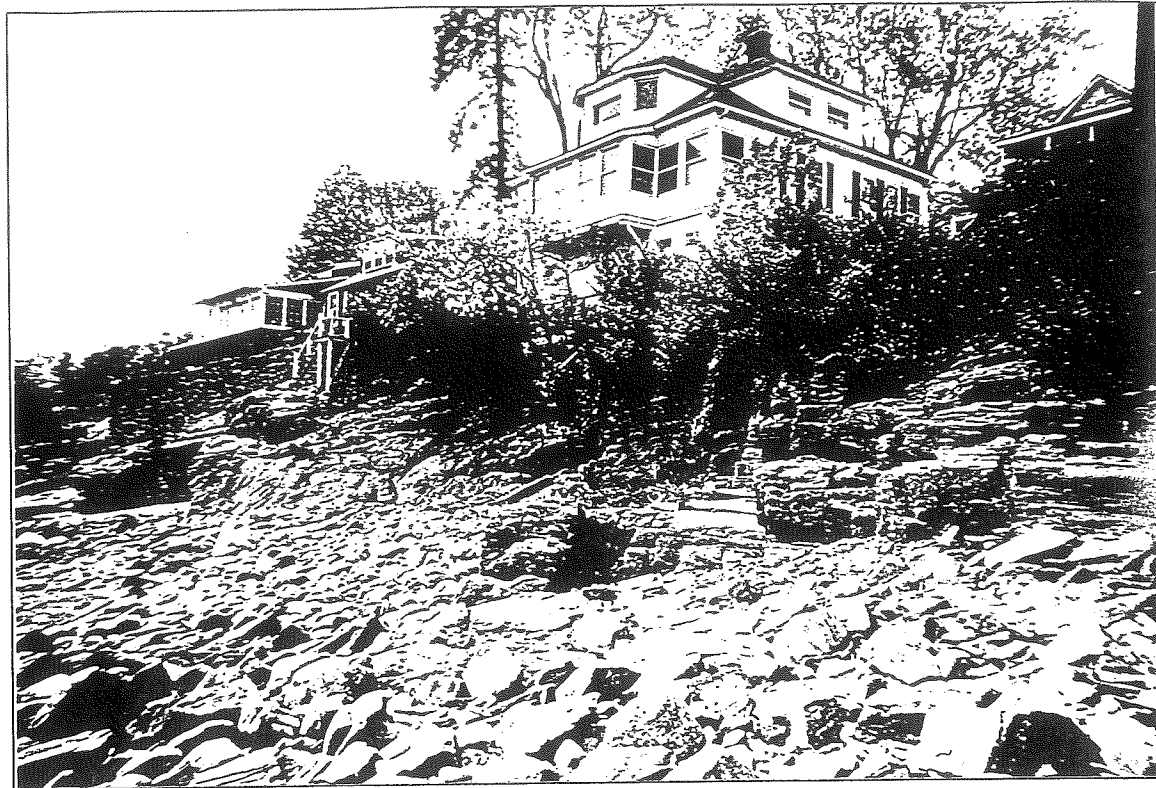
Being the same premises conveyed to the grantees by deed dated May 28, 1991 and recorded in said registry in Book 9572, page 248.

RECEIVED
REGISTERED REGISTRY OF DEEDS

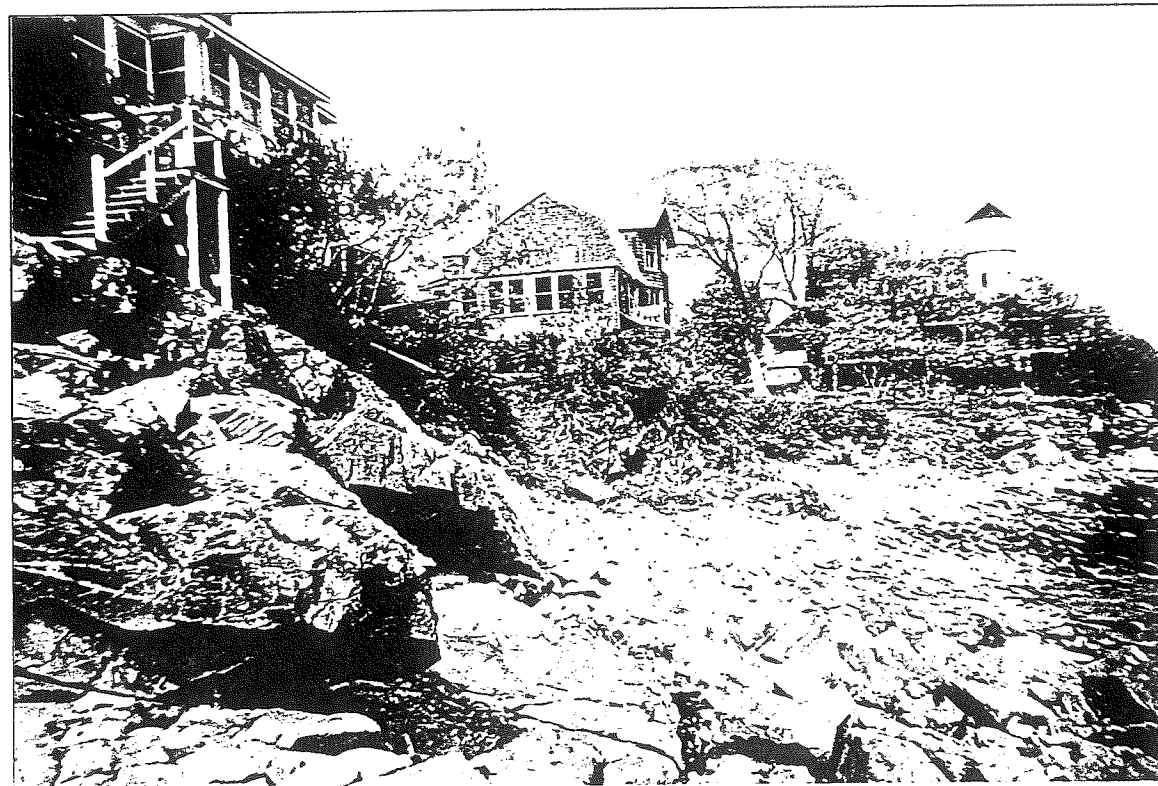
54 NOV 16 AM 11:04

CUMBERLAND COUNTY

John B. O'Brien

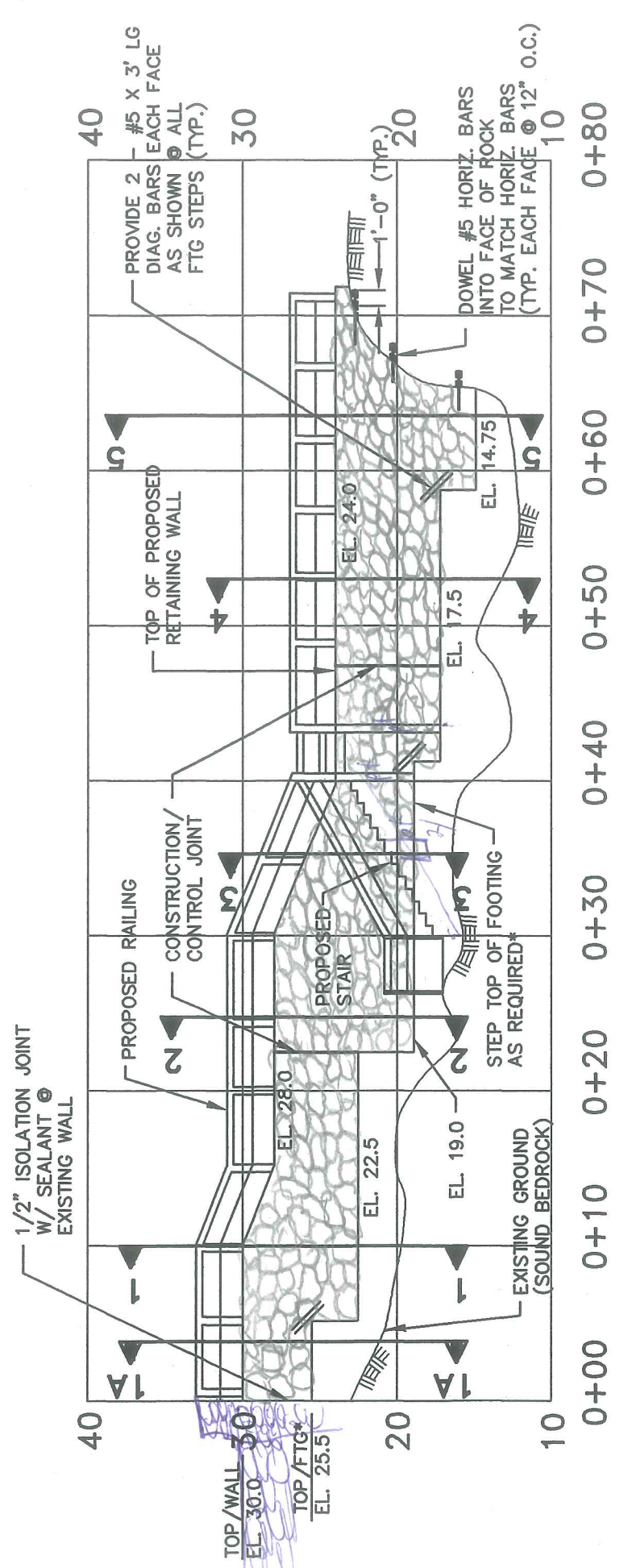


From east side of shore looking northwest




From west side of shore looking east

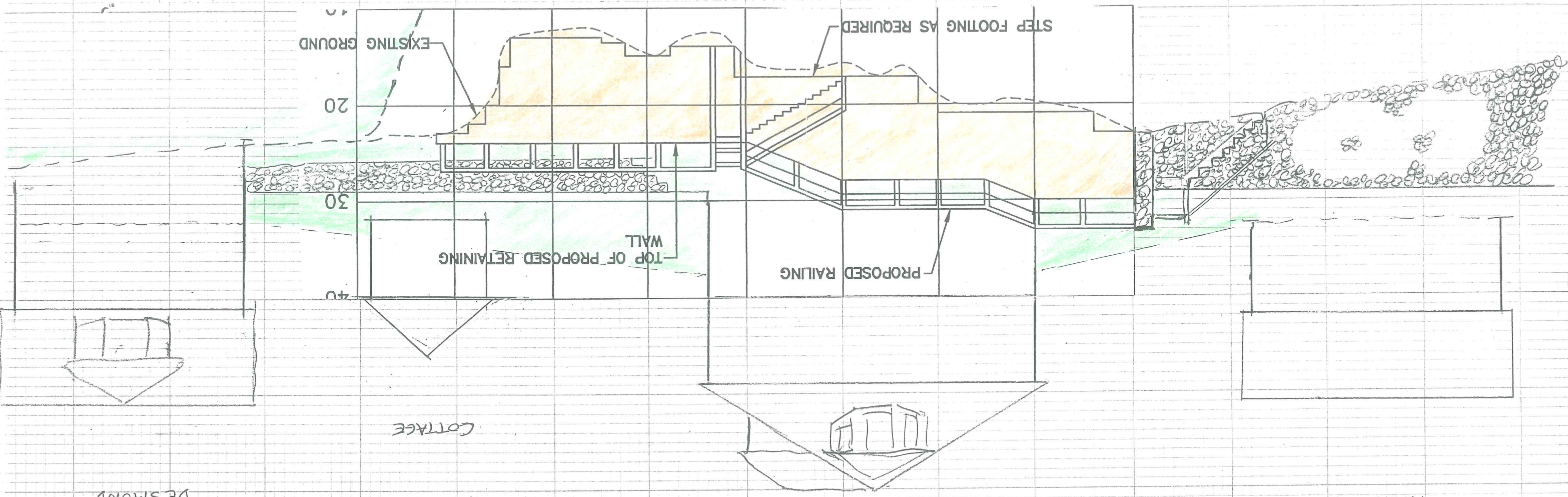
Photographs taken on May 28, 1997 by Albert Presgraves, Woodard & Curran



* NOTE: TOP/FOOTING ELEVATIONS AND STEP LOCATIONS INDICATED SHALL BE FIELD VERIFIED/MODIFIED TO FIT EXISTING SOUND BEDROCK PROFILE & MAINTAIN MIN. FOOTING DEPTH PER SHEET 3 DETAIL.

DES.BY: TP/AMP	DR.BY: KAP	CK.BY: AMP
MARY JO CASHMAN, 23 SEASHORE AVE. PEAKS ISLAND, PORTLAND, MAINE		
PROPOSED RETAINING WALL STRUCTURE		
PROFILE B		
SCALE: 1"=10'	JOB NO.: 97166.02	
DATE: JANUARY 1999	SHEET: 2/10	971660A
 WOODARD & CURRAN Engineering • Science • Operations		

NORMAL HIGH TIDE ↑



EXISTING GROUND

STEP FOOTING AS REQUIRED

20

30

40

TOP OF PROPOSED RETAINING WALL

PROPOSED RAILING

COTTAGE

CASH MAN

DESMOND

KNEX

WOODARD & CURRAN
 Engineering • Science • Operations

DESIGN: TP/AMP | DR: BY: KAP | CK: BY: AMP
 MARY JO CASHMAN, 23 SEASHORE AVE.
 PEAKS ISLAND, PORTLAND, MAINE

SITE PLAN

JOB NO.: 97166.02
 SCALE: 1"=10'
 DATE: JANUARY 1999
 SHEET: 1/10 9716600A

PROPOSED RETAINING WALL STRUCTURE

NOTES

- SURVEY BY ROYAL RIVER SURVEY CO., YARMOUTH, MAINE ON MARCH 28, 1997.
- CITY OF PORTLAND ELEV. DATUM

EXISTING BUILDING

APPROX. PROPERTY BOUNDARY

APPROXIMATE NORMAL HIGH WATER MARK

EXISTING CONTOUR (1' INTERVAL)

EXISTING CONTOUR (5' INTERVAL)

EXPOSED GRANITE OUTCROP

DECIDUOUS TREE

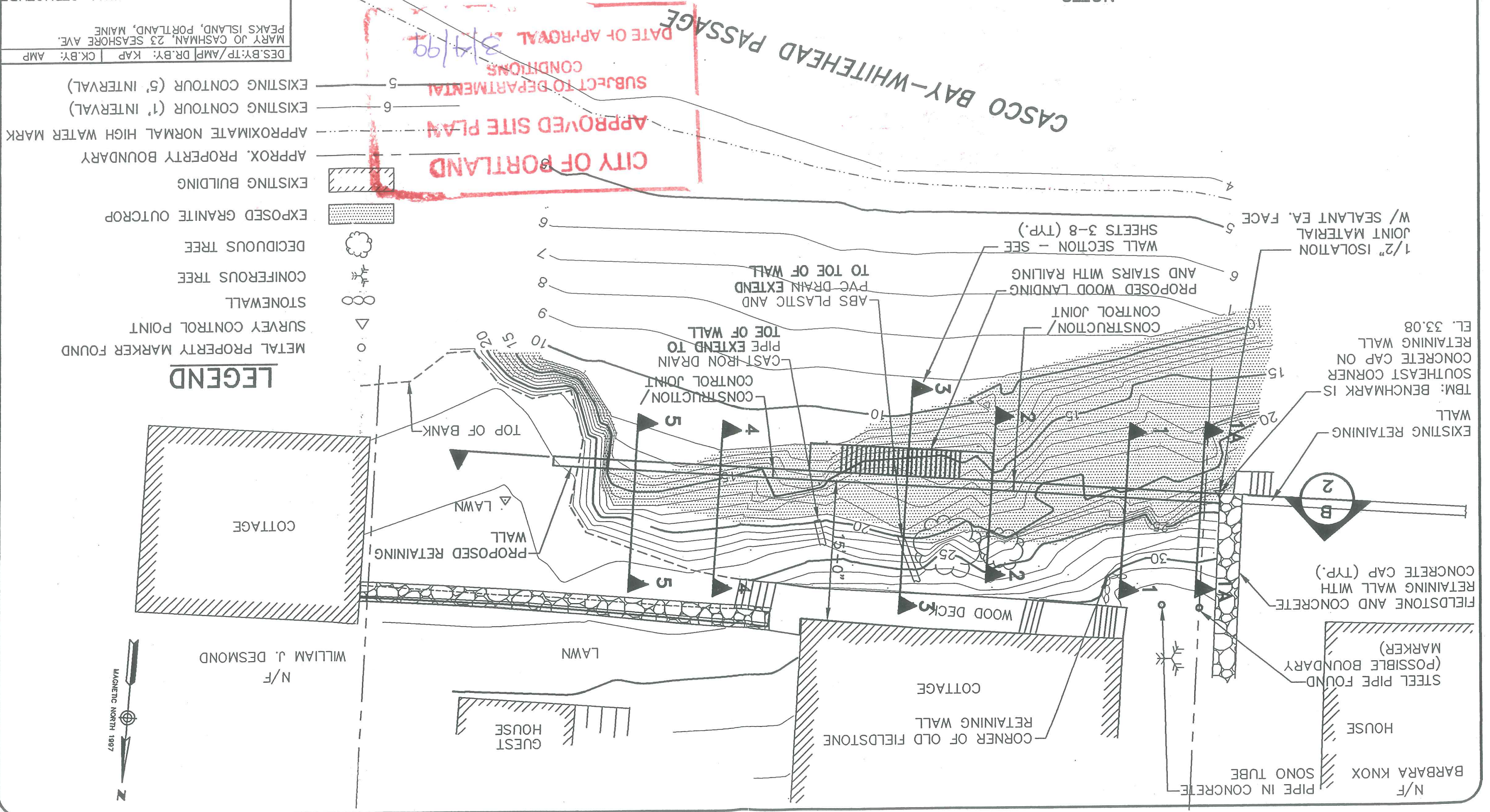
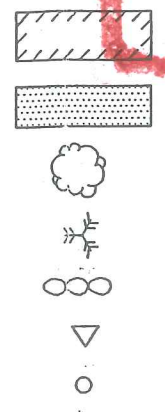
CONIFEROUS TREE

STONEWALL

SURVEY CONTROL POINT

METAL PROPERTY MARKER FOUND

LEGEND



CITY OF PORTLAND

APPROVED SITE PLAN

SUBJECT TO DEPARTMENTAL CONDITIONS

DATE OF APPROVAL 3/4/99

CASCO BAY-WHITEHEAD PASSAGE

N/F BARBARA KNOX

HOUSE

STEEL PIPE FOUND (POSSIBLE BOUNDARY MARKER)

PIPE IN CONCRETE

SONO TUBE

FIELDSTONE AND CONCRETE RETAINING WALL WITH CONCRETE CAP (TYP.)

EXISTING RETAINING WALL

TBM: BENCHMARK IS SOUTHEAST CORNER CONCRETE CAP ON RETAINING WALL EL. 33.08

SECTION B-B

WILLIAM J. DESMOND

N/F

COTTAGE

PROPOSED RETAINING WALL

LAWN

TOP OF BANK

GUEST HOUSE

RETAINING WALL

COTTAGE

WOOD DECK

CORNER OF OLD FIELDSTONE

HOUSE

CONSTRUCTION CONTROL JOINT

PROPOSED WOOD LANDING AND STAIRS WITH RAILING

WALL SECTION - SEE SHEETS 3-8 (TYP.)

CONSTRUCTION CONTROL JOINT

CAST IRON DRAIN PIPE EXTEND TO TOE OF WALL

ABS PLASTIC AND PVC DRAIN EXTEND TO TOE OF WALL

PROPOSED RETAINING WALL

LAWN

TOP OF BANK

WILLIAM J. DESMOND

N/F

COTTAGE

PROPOSED RETAINING WALL

LAWN

TOP OF BANK