



Massachusetts Port Authority
One Harborside Drive, Suite 200S
East Boston, MA 02128-2090
Telephone (617) 568-5950
www.massport.com

March 6, 2019

Ms. Amelia Croteau
Executive Secretary
Boston Conservation Commission
Boston City Hall - Room 709
Boston, MA 02201

RE: Notice of Intent for Periodic Sinkhole Repair
Pier Structure
Piers Park, East Boston

Dear Ms. Croteau:

Enclosed please find eight (8) copies of the Notice of Intent (NOI) for the periodic repair of sinkholes that may appear on the pier structure located at Piers Park in East Boston. Sinkholes have previously occurred on the pier structure and were repaired under Emergency Certifications issued by the Conservation Commission. The repair work is conducted within the 100-foot Buffer Zone of a Coastal Bank and within Land Subject to Coastal Storm Flowage. This NOI is being submitted to obtain an Order of Conditions that covers the repair of any future sinkholes. These repairs must be addressed expeditiously to maintain public access to the pier.

As described in the attached Project Description, the sinkhole repairs primarily consist of identifying surface settlement which may indicate a sinkhole, exposing and backfilling the underlying void and restoring the surface of the pier. All work is typically completed within one day.

The NOI was submitted electronically to the Department of Environmental Protection (DEP) via eDEP, and two (2) copies of the NOI and project plans will be sent to the DEP's Northeast Regional Office. A check for \$75.00 is enclosed for the filing fee, as the repair work has a total estimated cost of \$100,000,000 over a 3-year period.

Please feel free to contact me at (617) 568-3552 should you have any questions or need additional information. Thank you

Sincerely,
Massachusetts Port Authority

James W. Stolecki, P.E., LSP
Senior Environmental Project Manager

Attachments

Massachusetts Department of Environmental Protection

Bureau of Resource Protection - Wetlands

WPA Form 3 - Notice of Intent

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
MassDEP File #:
eDEP Transaction #:1084385
City/Town:BOSTON

A.General Information

1. Project Location:

a. Street Address	PIERS PARK, MARGINAL STREET		
b. City/Town	BOSTON	c. Zip Code	02128
d. Latitude	42.36370N	e. Longitude	71.03672W
f. Map/Plat #	NA	g.Parcel/Lot #	0104446000

2. Applicant:

Individual Organization

a. First Name	JAMES	b.Last Name	STOLECKI		
c. Organization	MASSACHUSETTS PORT AUTHORITY				
d. Mailing Address	ONE HARBORSIDE DRIVE				
e. City/Town	EAST BOSTON	f. State	MA	g. Zip Code	02128
h. Phone Number	617-568-3552	i. Fax		j. Email	jstolecki@massport.com

3.Property Owner:

more than one owner

a. First Name	JAMES	b. Last Name	STOLECKI		
c. Organization	MASSACHUSETTS PORT AUTHORITY				
d. Mailing Address	ONE HARBORSIDE DRIVE				
e. City/Town	EAST BOSTON	f.State	MA	g. Zip Code	02128
h. Phone Number	617-568-3552	i. Fax		j.Email	jstolecki@massport.com

4.Representative:

a. First Name		b. Last Name			
c. Organization					
d. Mailing Address					
e. City/Town		f. State		g. Zip Code	
h.Phone Number		i.Fax		j.Email	

5.Total WPA Fee Paid (Automatically inserted from NOI Wetland Fee Transmittal Form):

a.Total Fee Paid	500.00	b.State Fee Paid	237.50	c.City/Town Fee Paid	262.50
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6.General Project Description:

7a.Project Type:

- | | |
|---|--|
| 1. <input type="checkbox"/> Single Family Home | 2. <input type="checkbox"/> Residential Subdivision |
| 3. <input type="checkbox"/> Limited Project Driveway Crossing | 4. <input type="checkbox"/> Commercial/Industrial |
| 5. <input checked="" type="checkbox"/> Dock/Pier | 6. <input type="checkbox"/> Utilities |
| 7. <input type="checkbox"/> Coastal Engineering Structure | 8. <input type="checkbox"/> Agriculture (eg., cranberries, forestry) |
| 9. <input type="checkbox"/> Transportation | 10. <input type="checkbox"/> Other |

7b.Is any portion of the proposed activity eligible to be treated as a limited project subject to 310 CMR 10.24 (coastal) or 310 CMR 10.53 (inland)?

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1. Yes No If yes, describe which limited project applies to this project:
 2. Limited Project

8. Property recorded at the Registry of Deeds for:

a.County:	b.Certificate:	c.Book:	d.Page:
SUFFOLK		29584	218

B. Buffer Zone & Resource Area Impacts (temporary & permanent)

1. Buffer Zone & Resource Area Impacts (temporary & permanent):

This is a Buffer Zone only project - Check if the project is located only in the Buffer Zone of a Bordering Vegetated Wetland, Inland Bank, or Coastal Resource Area.

2. Inland Resource Areas: (See 310 CMR 10.54 - 10.58, if not applicable, go to Section B.3. Coastal Resource Areas)

Resource Area	Size of Proposed Alteration	Proposed Replacement (if any)
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a. <input type="checkbox"/> Bank	1. linear feet	2. linear feet
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b. <input type="checkbox"/> Bordering Vegetated Wetland	1. square feet	2. square feet
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c. <input type="checkbox"/> Land under Waterbodies and Waterways	1. Square feet	2. square feet
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	3. cubic yards dredged	
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d. <input type="checkbox"/> Bordering Land Subject to Flooding	1. square feet	2. square feet
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	3. cubic feet of flood storage lost	4. cubic feet replaced
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e. <input type="checkbox"/> Isolated Land Subject to Flooding	1. square feet	
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	2. cubic feet of flood storage lost	3. cubic feet replaced
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f. <input type="checkbox"/> Riverfront Area	1. Name of Waterway (if any)	
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2. Width of Riverfront Area (check one)	<input type="checkbox"/> 25 ft. - Designated Densely Developed Areas only
	<input type="checkbox"/> 100 ft. - New agricultural projects only
	<input type="checkbox"/> 200 ft. - All other projects

3. Total area of Riverfront Area on the site of the proposed project	square feet
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4. Proposed Alteration of the Riverfront Area:	
a. total square feet	b. square feet within 100 ft.
	c. square feet between 100 ft. and 200 ft.

5. Has an alternatives analysis been done and is it attached to this NOI? Yes No

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6. Was the lot where the activity is proposed created prior to August 1, 1996? Yes No

3.Coastal Resource Areas: (See 310 CMR 10.25 - 10.35)

Resource Area	Size of Proposed Alteration	Proposed Replacement (if any)
a. <input checked="" type="checkbox"/> Designated Port Areas	Indicate size under	Land under the ocean below,
b. <input type="checkbox"/> Land Under the Ocean	1. square feet	
	2. cubic yards dredged	
c. <input type="checkbox"/> Barrier Beaches	Indicate size under Coastal Beaches and/or Coastal Dunes, below	
d. <input type="checkbox"/> Coastal Beaches	1. square feet	2. cubic yards beach nourishment
e. <input type="checkbox"/> Coastal Dunes	1. square feet	2. cubic yards dune nourishment
f. <input type="checkbox"/> Coastal Banks	1. linear feet	
g. <input type="checkbox"/> Rocky Intertidal Shores	1. square feet	
h. <input type="checkbox"/> Salt Marshes	1. square feet	2. sq ft restoration, rehab, crea.
i. <input type="checkbox"/> Land Under Salt Ponds	1. square feet	
	2. cubic yards dredged	
j. <input type="checkbox"/> Land Containing Shellfish	1. square feet	
k. <input type="checkbox"/> Fish Runs	Indicate size under Coastal Banks, Inland Bank, Land Under the Ocean, and/or inland Land Under Waterbodies and Waterways, above	
	1. cubic yards dredged	
l. <input checked="" type="checkbox"/> Land Subject to Coastal Storm Flowage	400	
	1. square feet	

4.Restoration/Enhancement

Restoration/Replacement

If the project is for the purpose of restoring or enhancing a wetland resource area in addition to the square footage that has been entered in Section B.2.b or B.3.h above, please entered the additional amount here.

a. square feet of BVW b. square feet of Salt Marsh

5.Projects Involves Stream Crossings

Project Involves Streams Crossings

If the project involves Stream Crossings, please enter the number of new stream crossings/number of replacement stream crossings.

□ **Massachusetts Department of Environmental Protection**

Bureau of Resource Protection - Wetlands

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Provided by MassDEP:

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Include copy of NHESP "no Take" determination or valid Conservation & Management Permit with approved plan.

* Some projects **not** in Estimated Habitat may be located in Priority Habitat, and require NHESP review...

2. For coastal projects only, is any portion of the proposed project located below the mean high waterline or in a fish run?
a. Not applicable - project is in inland resource area only

b. Yes No

If yes, include proof of mailing or hand delivery of NOI to either:

South Shore - Cohasset to Rhode Island, and the Cape & Islands:

North Shore - Hull to New Hampshire:

Division of Marine Fisheries -
Southeast Marine Fisheries Station
Attn: Environmental Reviewer
836 S. Rodney French Blvd
New Bedford, MA 02744

Division of Marine Fisheries -
North Shore Office
Attn: Environmental Reviewer
30 Emerson Avenue
Gloucester, MA 01930

If yes, it may require a Chapter 91 license. For coastal towns in the Northeast Region, please contact MassDEP's Boston Office. For coastal towns in the Southeast Region, please contact MassDEP's Southeast Regional office.

3. Is any portion of the proposed project within an Area of Critical Environmental Concern (ACEC)?

a. Yes No

If yes, provide name of ACEC (see instructions to WPA Form 3 or DEP Website for ACEC locations). **Note:** electronic filers click on Website.

b. ACEC Name

4. Is any portion of the proposed project within an area designated as an Outstanding Resource Water (ORW) as designated in the Massachusetts Surface Water Quality Standards, 314 CMR 4.00?

a. Yes No

5. Is any portion of the site subject to a Wetlands Restriction Order under the Inland Wetlands Restriction Act (M.G.L.c. 131, § 40A) or the Coastal Wetlands Restriction Act (M.G.L.c. 130, § 105)?

a. Yes No

6. Is this project subject to provisions of the MassDEP Stormwater Management Standards?

a. Yes, Attach a copy of the Stormwater Report as required by the Stormwater Management Standards per 310 CMR 10.05(6)(k)-(q) and check if:

1. Applying for Low Impact Development (LID) site design credits (as described in Stormwater Management Handbook

Vol.2, Chapter 3)

2. A portion of the site constitutes redevelopment

3. Proprietary BMPs are included in the Stormwater Management System

b. No, Explain why the project is exempt:

1. Single Family Home

2. Emergency Road Repair

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Bureau of Resource Protection - Wetlands

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3. Small Residential Subdivision (less than or equal to 4 single-family houses or less than or equal to 4 units in multi-family housing project) with no discharge to Critical Areas.

D. Additional Information

Applicants must include the following with this Notice of Intent (NOI). See instructions for details.

Online Users: Attach the document transaction number (provided on your receipt page) for any of the following information you submit to the Department by regular mail delivery.

1. USGS or other map of the area (along with a narrative description, if necessary) containing sufficient information for the Conservation Commission and the Department to locate the site. (Electronic filers may omit this item.)
2. Plans identifying the location of proposed activities (including activities proposed to serve as a Bordering Vegetated Wetland [BVW] replication area or other mitigating measure) relative to the boundaries of each affected resource area.
3. Identify the method for BVW and other resource area boundary delineations (MassDEP BVW Field Data Form(s). Determination of Applicability, Order of Resource Area Delineation, etc.), and attach documentation of the methodology.
4. List the titles and dates for all plans and other materials submitted with this NOI.

a. Plan Title: b. Plan Prepared By: c. Plan Signed/Stamped By: c. Revised Final Date: e. Scale:

5. If there is more than one property owner, please attach a list of these property owners not listed on this form.
6. Attach proof of mailing for Natural Heritage and Endangered Species Program, if needed.
7. Attach proof of mailing for Massachusetts Division of Marine Fisheries, if needed.
8. Attach NOI Wetland Fee Transmittal Form.
9. Attach Stormwater Report, if needed.

□ **Massachusetts Department of Environmental Protection**
Bureau of Resource Protection - Wetlands
WPA Form 3 - Notice of Intent
Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
MassDEP File #:
eDEP Transaction #:1084385
City/Town:BOSTON

E. Fees

1. Fee Exempt: No filing fee shall be assessed for projects of any city, town, county, or district of the Commonwealth, federally recognized Indian tribe housing authority, municipal housing authority, or the Massachusetts Bay Transportation Authority.

Applicants must submit the following information (in addition to pages 1 and 2 of the NOI Wetland Fee Transmittal Form) to confirm fee payment:

_____	_____
2. Municipal Check Number	3. Check date
_____	_____
4. State Check Number	5. Check date
_____	_____
6. Payer name on check: First Name	7. Payer name on check: Last Name

F. Signatures and Submittal Requirements

I hereby certify under the penalties of perjury that the foregoing Notice of Intent and accompanying plans, documents, and supporting data are true and complete to the best of my knowledge. I understand that the Conservation Commission will place notification of this Notice in a local newspaper at the expense of the applicant in accordance with the wetlands regulations, 310 CMR 10.05(5)(a).

I further certify under penalties of perjury that all abutters were notified of this application, pursuant to the requirements of M.G.L. c. 131, § 40. Notice must be made by Certificate of Mailing or in writing by hand delivery or certified mail (return receipt requested) to all abutters within 100 feet of the property line of the project location.

James Stolecki	3/6/2019
_____	_____
1. Signature of Applicant	2. Date
_____	_____
3. Signature of Property Owner(if different)	4. Date
_____	_____
5. Signature of Representative (if any)	6. Date

For Conservation Commission:

Two copies of the completed Notice of Intent (Form 3), including supporting plans and documents, two copies of the NOI Wetland Fee Transmittal Form, and the city/town fee payment, to the Conservation Commission by certified mail or hand delivery.

For MassDEP:

One copy of the completed Notice of Intent (Form 3), including supporting plans and documents, one copy of the NOI Wetland Fee Transmittal Form, and a **copy** of the state fee payment to the MassDEP Regional Office (see Instructions) by certified mail or hand delivery.

Other:

If the applicant has checked the "yes" box in Section C, Items 1-3, above, refer to that section and the Instructions for additional submittal requirements.

The original and copies must be sent simultaneously. Failure by the applicant to send copies in a timely manner may result in dismissal of the Notice of Intent.

Massachusetts Department of Environmental Protection
 Bureau of Resource Protection - Wetlands
WPA Form 3 - Notice of Wetland Fee Transmittal
Form
 Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
 MassDEP File #:
 eDEP Transaction #:1084385
 City/Town: BOSTON

A. Applicant Information

1. Applicant:

a. First Name	JAMES	b. Last Name	STOLECKI		
c. Organization	MASSACHUSETTS PORT AUTHORITY				
d. Mailing Address	ONE HARBORSIDE DRIVE				
e. City/Town	EAST BOSTON	f. State	MA	g. Zip Code	02128
h. Phone Number	6175683552	i. Fax		j. Email	jstolecki@massport.com

2. Property Owner: (if different)

a. First Name	JAMES	b. Last Name	STOLECKI		
c. Organization	MASSACHUSETTS PORT AUTHORITY				
d. Mailing Address	ONE HARBORSIDE DRIVE				
e. City/Town	EAST BOSTON	f. State	MA	g. Zip Code	02128
h. Phone Number	6175683552	i. Fax		j. Email	jstolecki@massport.com

3. Project Location:

a. Street Address	PIERS PARK, MARGINAL STREET	b. City/Town	BOSTON
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Are you exempted from Fee? (YOU HAVE SELECTED 'NO')

Note: Fee will be exempted if you are one of the following:

- City/Town/County/District
- Municipal Housing Authority
- Indian Tribe Housing Authority
- MBTA

State agencies are only exempt if the fee is less than \$100

B. Fees

Activity Type	Activity Number	Activity Fee	RF Multiplier	Sub Total
J.) ANY OTHER ACTIVITY NOT IN CATEGORY 1,3,4,5 OR 6;	1	500.00		500.00
		City/Town share of filling fee	State share of filing fee	Total Project Fee
		\$262.50	\$237.50	\$500.00

Periodic Sinkhole Repair on Pier Structure
Piers Park
Project Description
(Revised 03/08/19)

The Massachusetts Port Authority (Massport) is submitting this Notice of Intent (NOI) to cover the repair of sinkholes that may occur within the pier structure at Piers Park in East Boston. Piers Park and the associated pier structure are shown on the attached Site Locus Plan. Sinkholes have previously occurred on the pier structure and were repaired under Emergency Certifications issued by the Conservation Commission. The repair work is conducted within the 100-foot Buffer Zone of a Coastal Bank and within Land Subject to Coastal Storm Flowage as delineated on the attached FEMA map. This NOI is being submitted to obtain an Order of Conditions that covers the repair of any future sinkholes that must be addressed expeditiously to maintain public access to the pier.

The photos provided show a sinkhole on the pier structure that was repaired in May 2018 under an Emergency Certification. The attached Plan No. L-2 is an as-built drawing of Piers Park, including the pier structure, which was completed in 1997. The pier portion of the Piers Park was constructed on an older pier structure. The attached Section 7 SIM is a typical section through the pier structure and shows how fill was placed behind a granite block wall to create the new pier. The sinkholes occur due to wave action causing a washout of fill material through the granite block bulkhead wall. The loss of fill material creates a void that causes a depression at the surface of the pier and a hole can eventually form. The perimeter of the pier structure was constructed in several different manners depending on the condition of the older pier. The attached Plan No. G-3 shows the outline of the pier structure with the various sections through the perimeter noted. Plan No. G5 shows the various sections through the edge of the structure.

Because the formation of a sinkhole presents a significant hazard to the public utilizing the pier, it is necessary for Massport to limit access until the sinkhole is repaired. When a sinkhole is observed on the pier, that area is cordoned off with barriers. During the process of repairing a sinkhole, public access is prohibited on the pier. Piers Park is heavily used by the community, particularly during the summer months, so Massport initiates the repair of a sinkhole as soon as possible. The work is coordinated with Massport's contractors to complete the repair within one day. Prior to starting the work to repair a sinkhole, Massport will notify the Conservation Commission.

The process for repairing the sinkholes consists of first removing the brick pavers in the area of the depression. The existing fill material is then removed using a backhoe down to the void. The resulting excavation is typically about 10 feet by 20 feet in length, but can be up to 40 feet long, and the depth of the excavation is approximately 6-8 feet. The removed fill is placed on polyethylene sheeting and temporarily stockpiled adjacent to the excavation. The entire excavation is backfilled with compacted gravel or a 'flowable fill', which is a lightweight cement material that fills the voids and hardens. Prior to backfilling, filter fabric is placed in the excavation to prevent future washout of material. Once the excavation is backfilled, a sand subbase is placed followed by the brick pavers to restore the surface to grade.

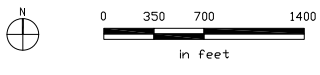
The repair work is conducted in a manner that prevents any migration of material to the water. Excavated soil is stockpiled away from the water and is placed back in the excavation the same day. Should it become necessary for the stockpile to remain in place for a longer period of time it will be contained within fiber rolls. Once the surface is restored to its original condition, any residual material or dust is completely removed.



Logan International Airport
 East Boston, MA

Piers Park Site Locus Plan

 **Massachusetts Port Authority**
 Capital Programs Department
 March 2019



This plan is intended for informational purposes only and no use maybe made of the same without the express written permission of the Massachusetts Port Authority ("Massport"). Massport does not certify the accuracy, information or title to the properties contained in this plan nor make any warranties of any kind, express or implied, in fact or by law, with respect to any boundaries, easements, restrictions, claims, overlaps or other encumbrances affecting such properties.

T:\GIS\FILES\LOGAN DEPARTMENT'S\ENVIRON\USGS_LOCUS_PLAN\USGS_Locus Plan_030819.dwg



PROJECT LOCATION

nearmap

Oct 26 2018

2000 ft

National Flood Hazard Layer FIRMette



Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) Zone A, V, A99
		With BFE or Depth Zone AE, AO, AH, VE, AR
		Regulatory Floodway
OTHER AREAS OF FLOOD HAZARD		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
		Future Conditions 1% Annual Chance Flood Hazard Zone X
		Area with Reduced Flood Risk due to Levee. See Notes. Zone X
		Area with Flood Risk due to Levee Zone D
OTHER AREAS		NO SCREEN Area of Minimal Flood Hazard Zone X
		Effective LOMRs
GENERAL STRUCTURES		Area of Undetermined Flood Hazard Zone D
		Channel, Culvert, or Storm Sewer
OTHER FEATURES		Levee, Dike, or Floodwall
		20.2 Cross Sections with 1% Annual Chance Water Surface Elevation
MAP PANELS		17.5 Coastal Transect
		Base Flood Elevation Line (BFE)
		Limit of Study
		Jurisdiction Boundary
		Coastal Transect Baseline
		Profile Baseline
		Hydrographic Feature
		Digital Data Available
		No Digital Data Available
		Unmapped



The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 2/13/2019 at 1:37:59 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

42°22'8.55"N



71°2'28.69"W

71°1'51.23"W

USGS The National Map: Orthoimagery. Data refreshed October, 2017.



42°21'41.97"N



Photo 1: Area of Sinkhole



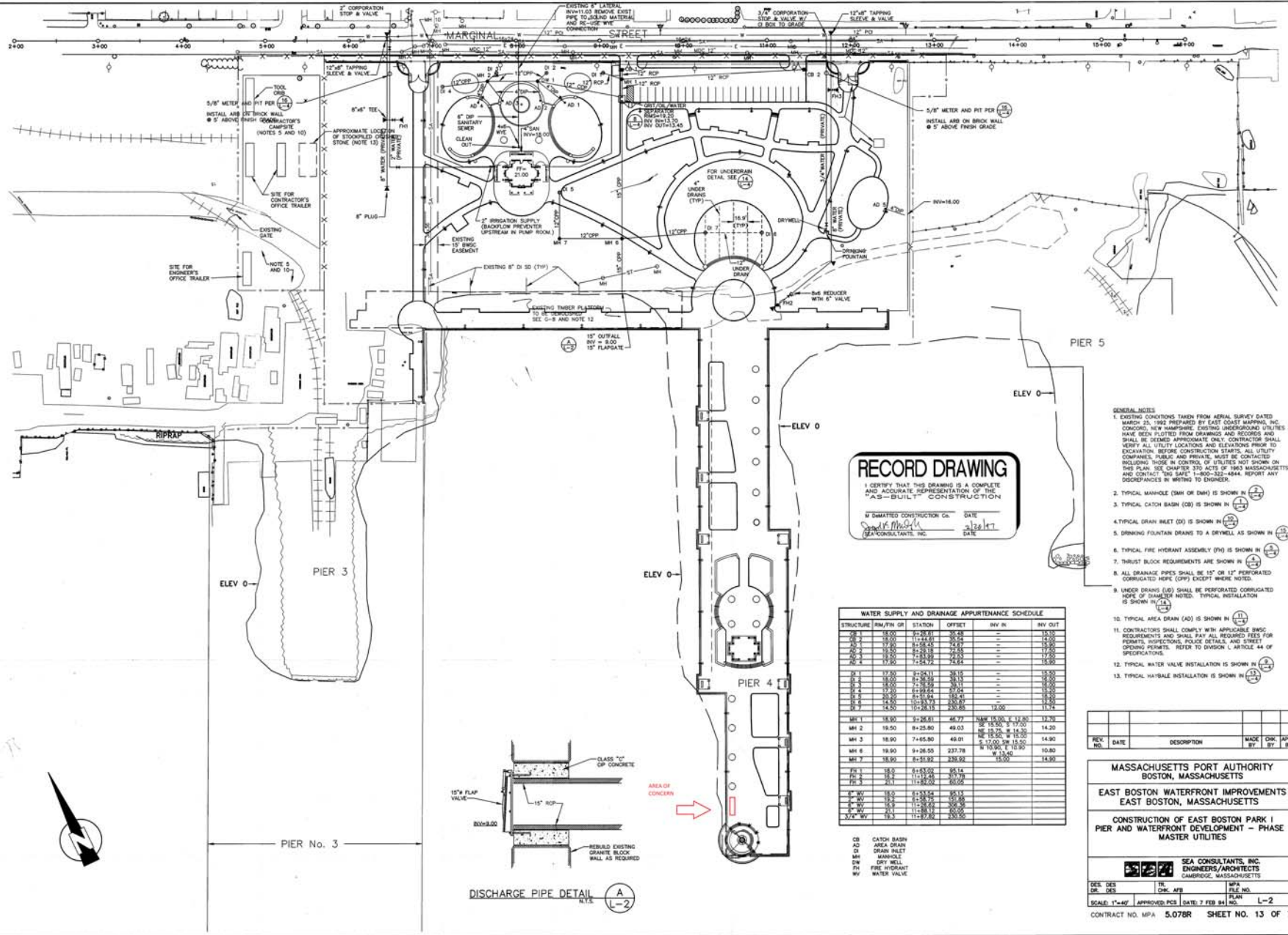
Photo 2: Location of Sinkhole.



Photo 3: Area of Sinkhole



Photo 4: Sinkhole is several feet deep and currently undermines a section of walkway.



RECORD DRAWING

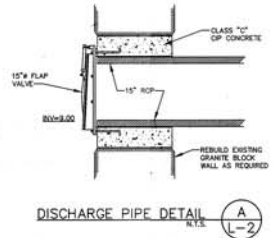
I CERTIFY THAT THIS DRAWING IS A COMPLETE AND ACCURATE REPRESENTATION OF THE "AS-BUILT" CONSTRUCTION.

SEA CONSULTANTS, INC. DATE: 2/26/17

WATER SUPPLY AND DRAINAGE APPURTENANCE SCHEDULE

STRUCTURE	RM/IN GR	STATION	OFFSET	INV IN	INV OUT
CB 1	18.00	81+25.81	00.00	18.00	18.00
AD 1	17.80	81+25.81	00.00	17.80	17.80
DI 1	17.80	81+25.81	00.00	17.80	17.80
DI 2	17.80	81+25.81	00.00	17.80	17.80
DI 3	17.80	81+25.81	00.00	17.80	17.80
DI 4	17.80	81+25.81	00.00	17.80	17.80
DI 5	17.80	81+25.81	00.00	17.80	17.80
DI 6	17.80	81+25.81	00.00	17.80	17.80
DI 7	17.80	81+25.81	00.00	17.80	17.80
DI 8	17.80	81+25.81	00.00	17.80	17.80
DI 9	17.80	81+25.81	00.00	17.80	17.80
DI 10	17.80	81+25.81	00.00	17.80	17.80
DI 11	17.80	81+25.81	00.00	17.80	17.80
DI 12	17.80	81+25.81	00.00	17.80	17.80
DI 13	17.80	81+25.81	00.00	17.80	17.80
DI 14	17.80	81+25.81	00.00	17.80	17.80
DI 15	17.80	81+25.81	00.00	17.80	17.80
DI 16	17.80	81+25.81	00.00	17.80	17.80
DI 17	17.80	81+25.81	00.00	17.80	17.80
DI 18	17.80	81+25.81	00.00	17.80	17.80
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DI 20	17.80	81+25.81	00.00	17.80	17.80
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DI 27	17.80	81+25.81	00.00	17.80	17.80
DI 28	17.80	81+25.81	00.00	17.80	17.80
DI 29	17.80	81+25.81	00.00	17.80	17.80
DI 30	17.80	81+25.81	00.00	17.80	17.80
DI 31	17.80	81+25.81	00.00	17.80	17.80
DI 32	17.80	81+25.81	00.00	17.80	17.80
DI 33	17.80	81+25.81	00.00	17.80	17.80
DI 34	17.80	81+25.81	00.00	17.80	17.80
DI 35	17.80	81+25.81	00.00	17.80	17.80
DI 36	17.80	81+25.81	00.00	17.80	17.80
DI 37	17.80	81+25.81	00.00	17.80	17.80
DI 38	17.80	81+25.81	00.00	17.80	17.80
DI 39	17.80	81+25.81	00.00	17.80	17.80
DI 40	17.80	81+25.81	00.00	17.80	17.80
DI 41	17.80	81+25.81	00.00	17.80	17.80
DI 42	17.80	81+25.81	00.00	17.80	17.80
DI 43	17.80	81+25.81	00.00	17.80	17.80
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DI 75	17.80	81+25.81	00.00	17.80	17.80
DI 76	17.80	81+25.81	00.00	17.80	17.80
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DI 98	17.80	81+25.81	00.00	17.80	17.80
DI 99	17.80	81+25.81	00.00	17.80	17.80
DI 100	17.80	81+25.81	00.00	17.80	17.80

- GENERAL NOTES**
- EXISTING CONDITIONS TAKEN FROM AERIAL SURVEY DATED MARCH 25, 1992 PREPARED BY EAST COAST MAPPING, INC. CONSTRUCTION OF NEW MANHOLES, DRAINAGE UTILITIES HAVE BEEN PLOTTED FROM DRAWINGS AND RECORDS AND SHALL BE CHECKED APPROPRIATE ONLY. CONTRACTOR SHALL VERIFY ALL UTILITY LOCATIONS AND ELEVATIONS PRIOR TO EXCAVATION. BEFORE CONSTRUCTION STARTS, ALL UTILITY COMPANIES, PUBLIC AND PRIVATE, MUST BE CONTACTED INCLUDING THOSE IN CONTROL OF UTILITIES NOT SHOWN ON THIS PLAN. SEE CHAPTER 370 ACTS OF 1963 MASSACHUSETTS AND CONTACT THE SAFE 1-800-323-4344. REPORT ANY DISCREPANCIES IN WRITING TO ENGINEER.
 - TYPICAL MANHOLE (MH) OR DRAIN (D) IS SHOWN IN (1/4) (1/4)
 - TYPICAL CATCH BASIN (CB) IS SHOWN IN (1/4) (1/4)
 - TYPICAL DRAIN INLET (DI) IS SHOWN IN (1/4) (1/4)
 - DRAINING FOUNTAIN DRAINS TO A DRYWELL AS SHOWN IN (1/4) (1/4)
 - TYPICAL FIRE HYDRANT ASSEMBLY (FH) IS SHOWN IN (1/4) (1/4)
 - THRUST BLOCK REQUIREMENTS ARE SHOWN IN (1/4) (1/4)
 - ALL DRAINAGE PIPES SHALL BE 12" OR 18" PERFORATED CORRUGATED HOPE (COP) EXCEPT WHERE NOTED.
 - UNDER DRAINS (UD) SHALL BE PERFORATED CORRUGATED HOPE OF DIAMETER NOTED. TYPICAL INSTALLATION IS SHOWN IN (1/4) (1/4)
 - TYPICAL AREA DRAIN (AD) IS SHOWN IN (1/4) (1/4)
 - CONTRACTORS SHALL COMPLY WITH APPLICABLE BIDDING REQUIREMENTS AND SHALL PAY ALL REQUIRED FEES FOR PERMITS, INSPECTIONS, POLICE DETAILS, AND STREET CLOSING PERMITS. REFER TO DIVISION L ARTICLE 44 OF SPECIFICATIONS.
 - TYPICAL WATER VALVE INSTALLATION IS SHOWN IN (1/4) (1/4)
 - TYPICAL HAIRBALE INSTALLATION IS SHOWN IN (1/4) (1/4)



REV	DATE	DESCRIPTION	MADE BY	CHK. BY	APP. BY

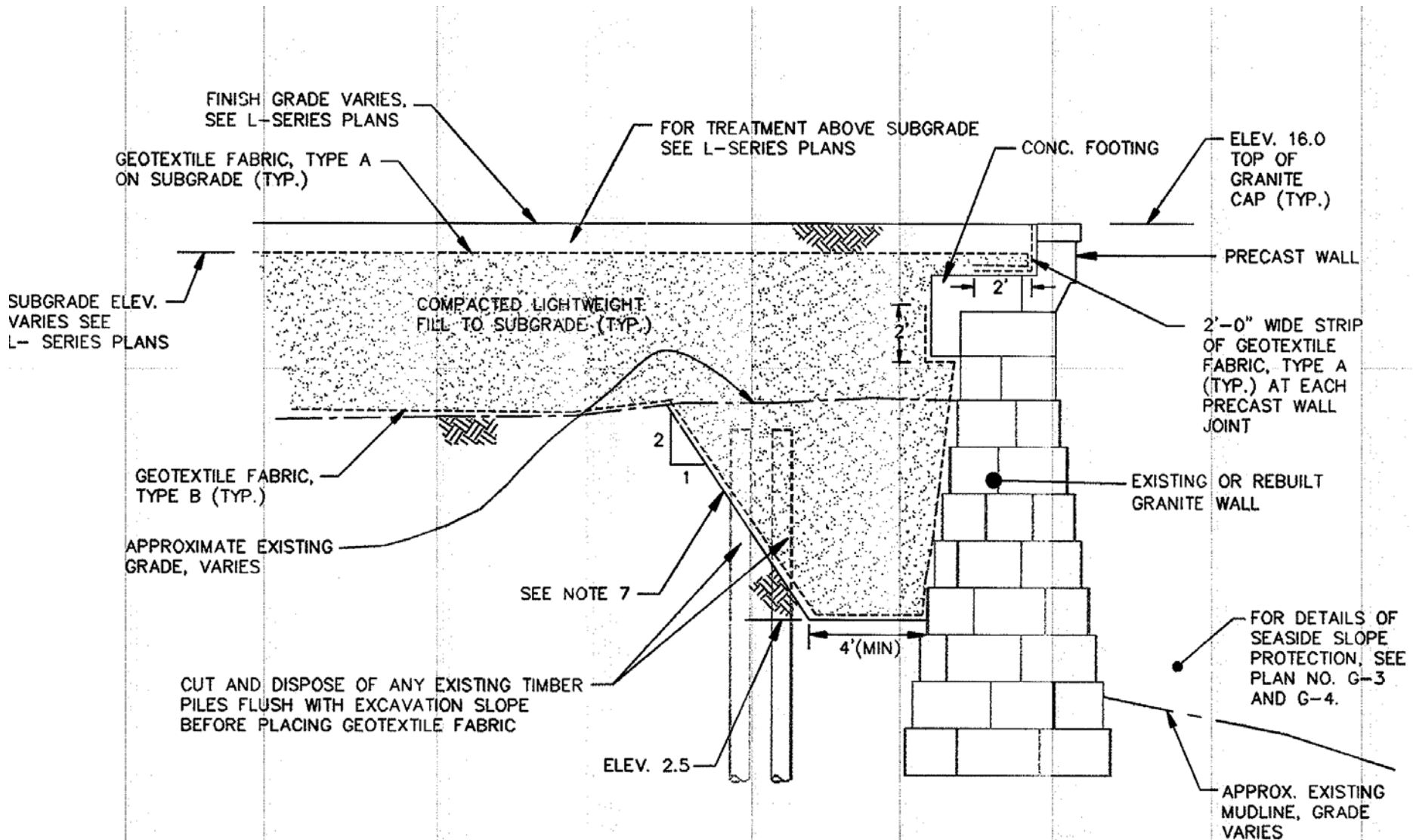
**MASSACHUSETTS PORT AUTHORITY
BOSTON, MASSACHUSETTS**

**EAST BOSTON WATERFRONT IMPROVEMENTS
EAST BOSTON, MASSACHUSETTS**

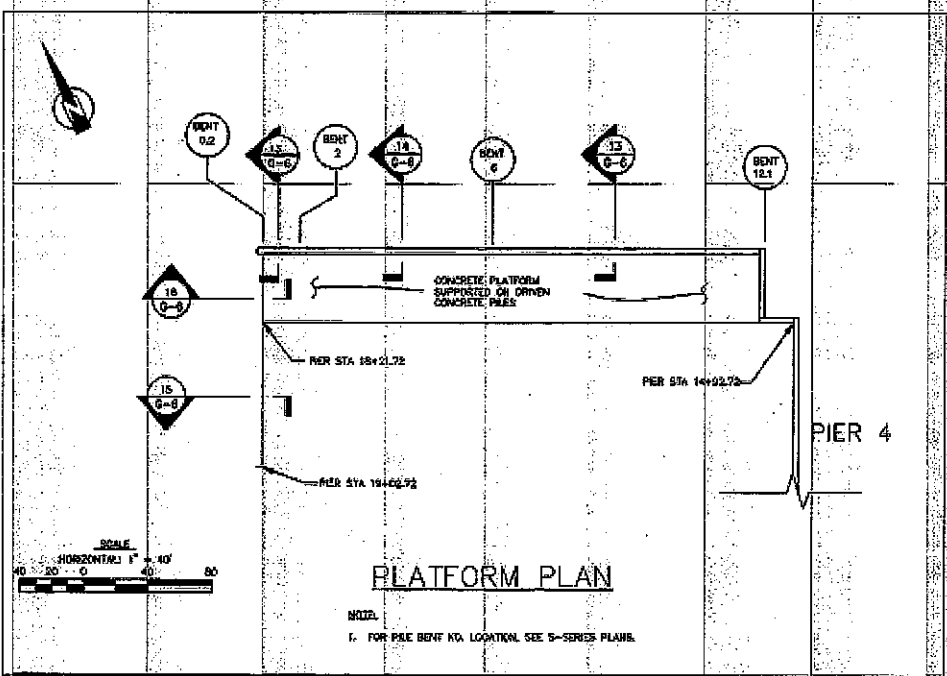
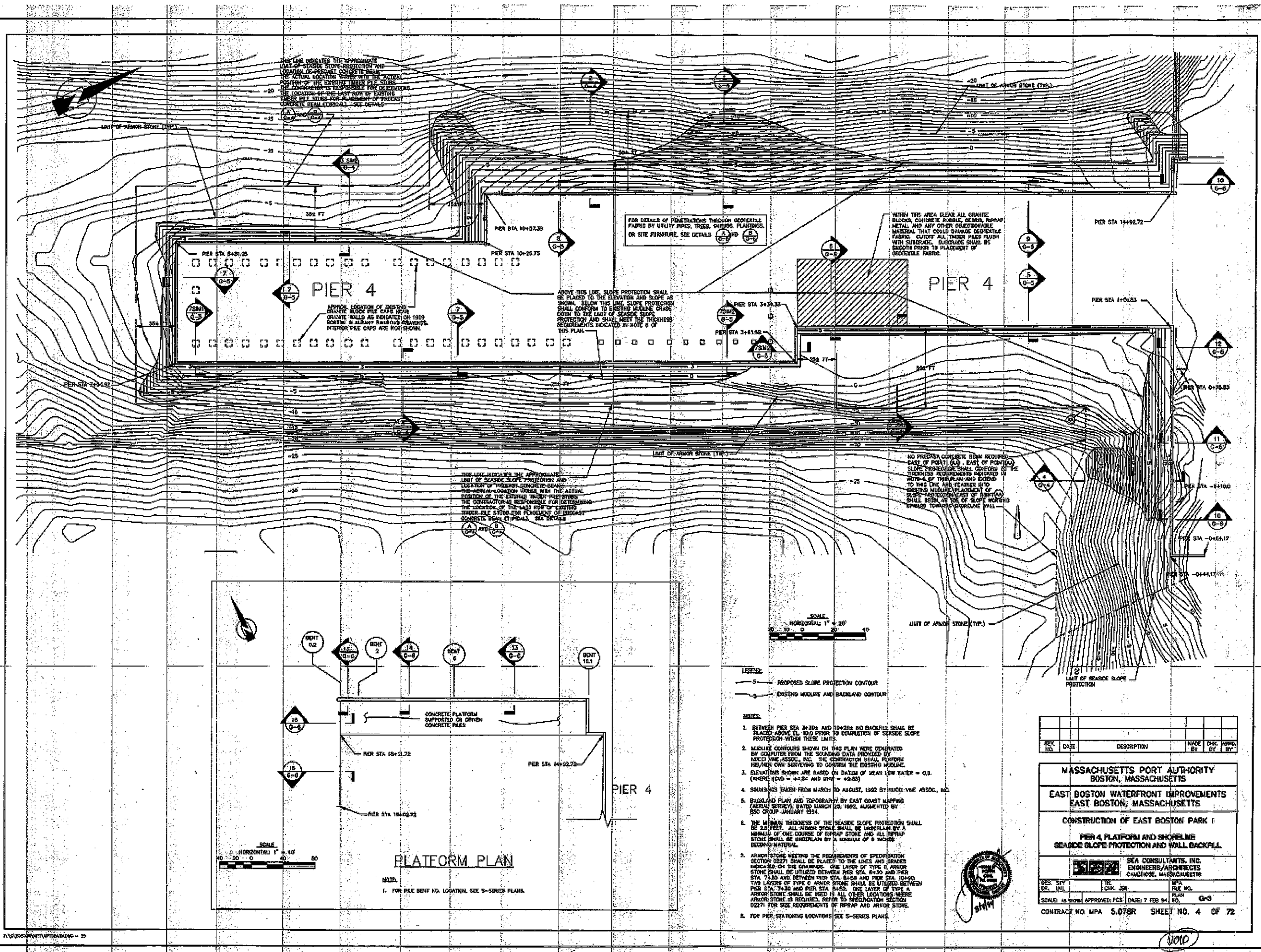
**CONSTRUCTION OF EAST BOSTON PARK I
PIER AND WATERFRONT DEVELOPMENT - PHASE I
MASTER UTILITIES**

SEA CONSULTANTS, INC.
ENGINEERS/ARCHITECTS
CAMBRIDGE, MASSACHUSETTS

DES. DES.	TITLE	SCALE
CHK. DES.	CHK. APP.	FILE NO.
SCALE: 1"=40'	APPROVED: PCS	DATE: 7 FEB 84
CONTRACT NO. MPA 5.078R	SHEET NO. 13	OF 72



SECTION 7 SIM



LEGEND:

- S- PROPOSED SLOPE PROTECTION CONTOUR
- E- EXISTING MOUND AND BACKFILL CONTOUR

- NOTES:**
- BETWEEN PER STA 34+30 AND 10+00 AND BACKFILL SHALL BE PLACED ABOVE EL. 10.0 PRIOR TO COMPLETION OF SEASIDE SLOPE PROTECTION WITHIN THESE LIMITS.
 - MOUND CONTOURS SHOWN ON THIS PLAN WERE GENERATED BY COMPUTER FROM THE SOUNDING DATA PROVIDED BY NEDCO INC. ASSOC., INC. THE CONTRACTOR SHALL VERIFY HIS/HER OWN SURVEYS TO CORRECT THE EXISTING MOUND.
 - ELEVATIONS SHOWN ARE BASED ON DATUM OF MEAN LOW WATER = 0.0. (WHERE HIGH = +2.24 AND LOW = -2.24)
 - SOUNDINGS TAKEN FROM MARCH TO AUGUST, 1992 BY NEDCO INC. ASSOC., INC.
 - BACKFILL PLAN AND TOPOGRAPHY BY EAST COAST MAPPING (AERIAL SURVEY), DATED MARCH 29, 1992, AUGMENTED BY BSO GROUP, JANUARY 1994.
 - THE MINIMUM THICKNESS OF THE SEASIDE SLOPE PROTECTION SHALL BE 2.0 FEET. ALL ARMOR STONE SHALL BE UNDERLAIN BY A MINIMUM OF ONE COURSE OF CORAL STONE AND ALL RIPPAP STONE SHALL BE UNDERLAIN BY A MINIMUM OF 6 INCHES BEDROCK MATERIAL.
 - ARMOR STONE MEETING THE REQUIREMENTS OF SPECIFICATION SECTION 02271 SHALL BE PLACED TO THE LINES AND GRADES INDICATED ON THE DRAWING. ONE LAYER OF TYPE B ARMOR STONE SHALL BE UTILIZED BETWEEN PER STA. 5+30 AND PER STA. 7+30 AND BETWEEN PER STA. 8+00 AND PER STA. 10+00. TWO LAYERS OF TYPE C ARMOR STONE SHALL BE UTILIZED BETWEEN PER STA. 7+30 AND PER STA. 8+00. ONE LAYER OF TYPE A ARMOR STONE SHALL BE USED IN ALL OTHER LOCATIONS WHERE ARMOR STONE IS REQUIRED. REFER TO SPECIFICATION SECTION 02271 FOR SIZE REQUIREMENTS OF RIPPAP AND ARMOR STONE.
 - FOR PILE BENTING LOCATIONS SEE S-SERIES PLANS.



REV. NO.	DATE	DESCRIPTION	MADE BY	CHEK. BY	APPD. BY

MASSACHUSETTS PORT AUTHORITY
BOSTON, MASSACHUSETTS

EAST BOSTON WATERFRONT IMPROVEMENTS
EAST BOSTON, MASSACHUSETTS

CONSTRUCTION OF EAST BOSTON PARK I
PIER 4, PLATFORM AND SHOULDER
SEASIDE SLOPE PROTECTION AND WALL BACKFILL

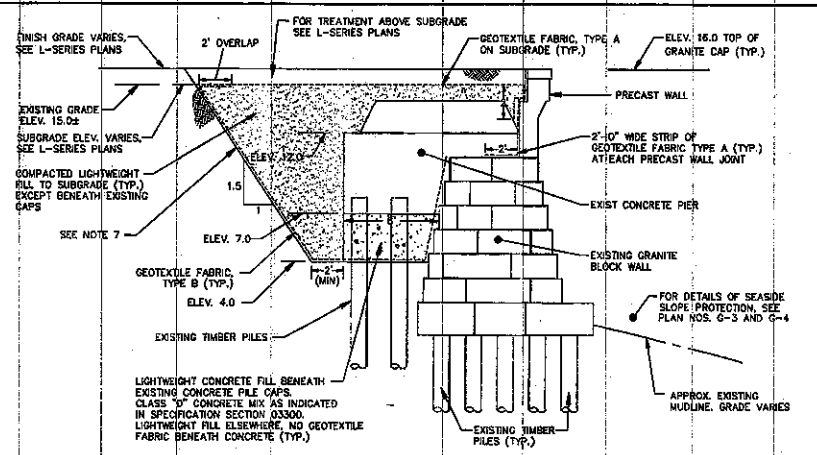
SEA CONSULTANTS, INC.
ENGINEERS/ARCHITECTS
CAMBRIDGE, MASSACHUSETTS

DES. BY: [Signature] INC. CHK. BY: [Signature] MPA FILE NO. [Blank]
DR. LML PER STA. 74+30 DATE: 7 FEB 94 PLAN NO. G-3

SCALE AS SHOWN APPROVED: P.E.S. DATE: 7 FEB 94

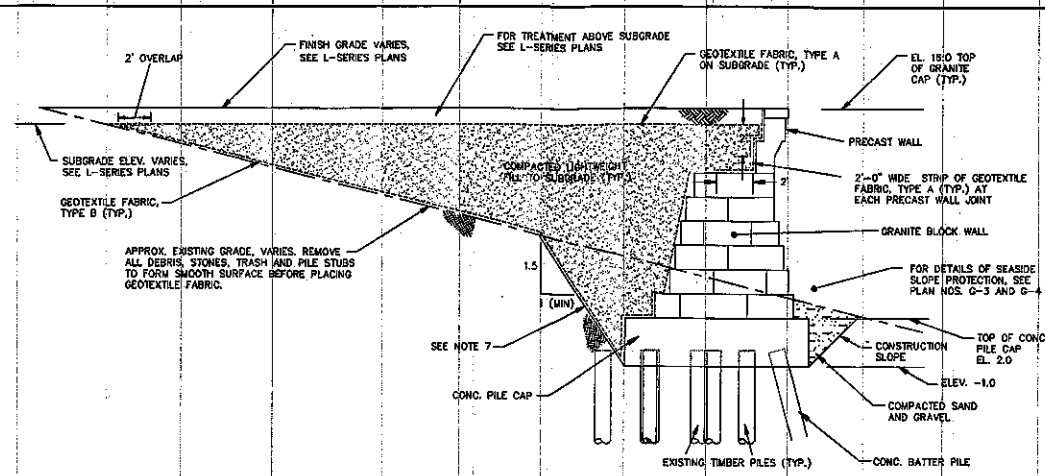
CONTRACT NO. MPA 5-078R SHEET NO. 4 OF 72

0010



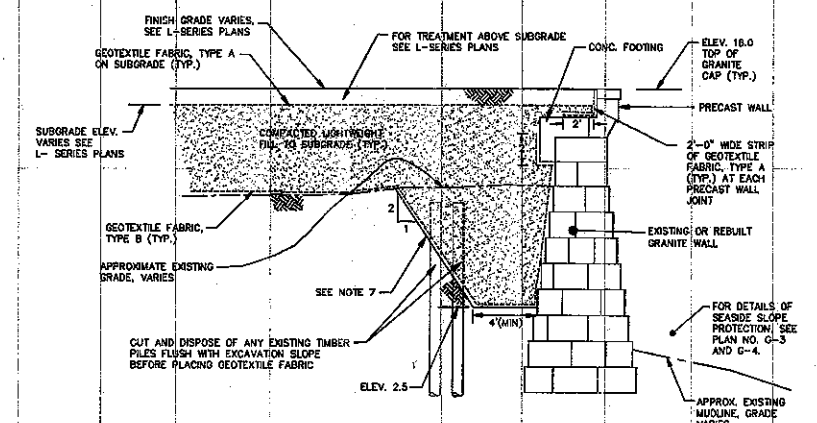
BACKFILL SECTION @ STA. 0+100± TO STA. 2+70±

SECTION 5
SCALE 1/4"=1'-0"



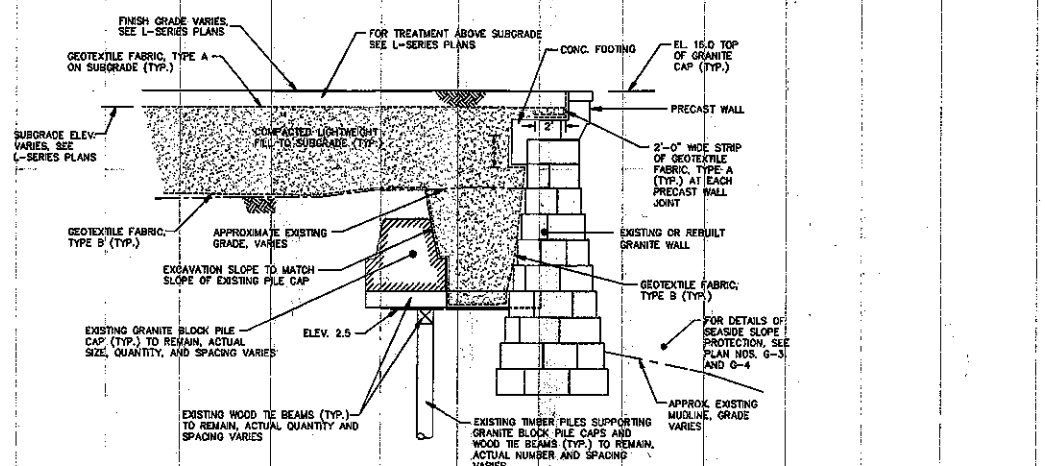
BACKFILL SECTION @ STA. 2+70± TO STA. 3+39±

SECTION 6
SCALE 1/4"=1'-0"



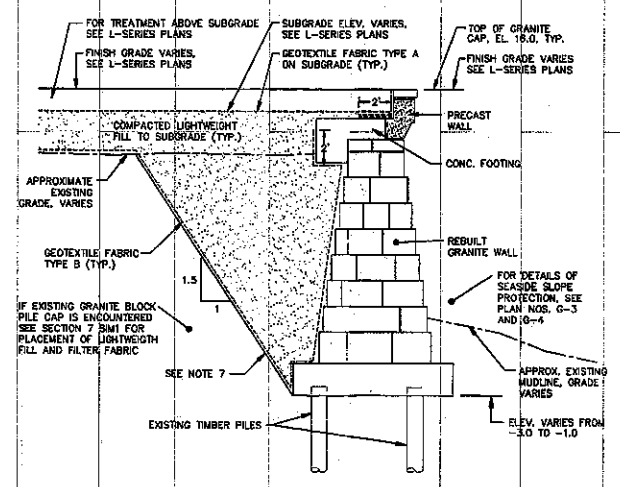
SECTION 7 SIM
BACKFILL SECTION @ STA. 4+30± TO STA. 10+26±

SECTION 7
SCALE 1/4"=1'-0"



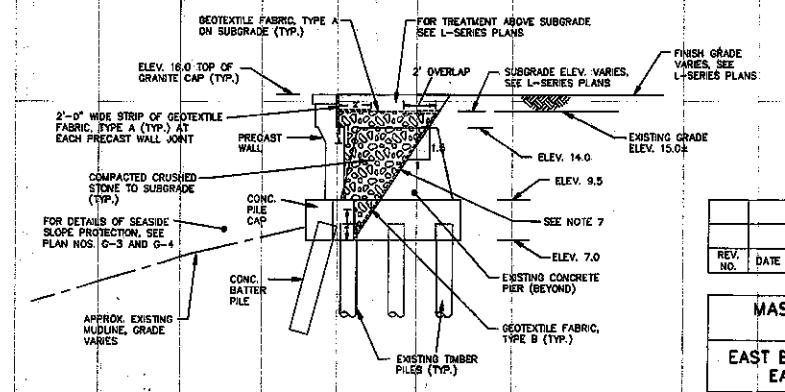
SECTION 7 SIM
BACKFILL SECTION @ STA. 10+27± TO 13+15±

SECTION 8
SCALE 1/4"=1'-0"



BACKFILL SECTION @ STA. 3+39± TO 4+30±

SECTION 7 SIM 2
SCALE 1/4"=1'-0"



BACKFILL SECTION @ STA. 13+15± TO 14+93±

SECTION 9
SCALE 1/4"=1'-0"

- NOTES:
1. THE WORK INDICATED ON THIS PLAN WILL REQUIRE OPERATIONS IN TIDAL CONDITIONS BELOW MEAN HIGH WATER. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING OPERATIONS WITH TIDAL CONDITIONS SO THAT CONSTRUCTION IS PERFORMED ABOVE WATER LEVEL. BACKFILL MATERIAL SHALL NOT BE PLACED OR COMPACTED WHERE WATER IS PRESENT IN THE EXCAVATION. WHERE NECESSARY THE CONTRACTOR AT HIS/HER OPTION MAY ELECT TO UTILIZE A STEEL SHEET PILE COFFERDAM, OR GROUNDWATER/TIDAL WATER CONTROL OPERATIONS SUCH AS PUMPING TO PROVIDE A SUITABLY DRY EXCAVATION. ALL WATER PUMPED FROM EXCAVATIONS SHALL PASS THROUGH A SEDIMENTATION BASIN BEFORE DISCHARGING BACK INTO BOSTON HARBOR.
 2. GEOTEXTILE FABRIC, TYPES A AND B, SHALL BE PLACED TO THE LINES AND GRADES AND AS INDICATED IN THE DRAWINGS AND SPECIFICATIONS. ALL SEAMS SHALL OVERLAP A MINIMUM OF 2.0 FEET. GEOTEXTILE FABRIC SHALL BE PLACED ONLY WHEN THE EXPOSED SUBGRADE HAS BEEN SMOOTHED AND CLEARED OF DEBRIS, PROTRUSIONS, AND ANY SHARP OBJECTS WHICH COULD DAMAGE THE FABRIC. REMOVAL OF OBSTRUCTIONS INCLUDES ROCKS, BouldERS, METALS, OR ANY OTHER DEBRIS WHICH COULD DAMAGE THE FABRIC. PORTIONS OF TIMBER PILES THAT PROTRUDE ABOVE THE SUBGRADE, AND DO NOT SUPPORT GRANITE BLOCK PILE CAPS WHICH ARE TO REMAIN, SHALL ALSO BE REMOVED PRIOR TO FABRIC PLACEMENT.
 3. DURING EXCAVATIONS TO REMOVE THE EXISTING BACKFILL SOILS TO ALLOW PLACEMENT OF BACKFILL MATERIAL, THE CONTRACTOR SHALL TAKE SPECIAL CARE NOT TO DAMAGE EXISTING WOOD TIE BEAMS, GRANITE BLOCK PILE CAPS, OR TIMBER PILES SUPPORTING THESE PILE CAPS. WHERE WOOD TIE BEAMS, GRANITE BLOCK PILE CAPS, OR TIMBER PILES SUPPORTING THESE CAPS ARE DAMAGED OR REMOVED, THE CONTRACTOR IS RESPONSIBLE FOR REPLACING THESE ELEMENTS IN KIND.
 4. DURING FINAL EXCAVATION, UNSTABLE SUBGRADE COULD BE ENCOUNTERED. IN ORDER TO MINIMIZE SUBGRADE DISTURBANCE THE CONTRACTOR SHALL UTILIZE A SMOOTH BLADED BUCKET (NO TEETH), AS SOON AS PRACTICAL AFTER FINAL SUBGRADE IS REACHED THE CONTRACTOR SHALL PLACE A LAYER OF FILTER FABRIC AND AN 18 TO 24 INCH THICK LAYER OF LIGHTWEIGHT FILL TO PROVIDE A STABLE WORKING MAT. THIS BOTTOM LAYER OF LIGHTWEIGHT FILL SHOULD BE LIGHTLY COMPACTED WITH 2 TO 3 PASSES OF A WALK BEHIND VIBRATORY PLATE COMPACTOR. ALL OTHER LIGHTWEIGHT FILL SHALL BE PLACED AND COMPACTED IN ACCORDANCE WITH THE SPECIFICATIONS. TO REDUCE DISTURBANCE OF THE SUBGRADE SOILS, THE CONTRACTOR SHALL MINIMIZE THE AMOUNT OF EQUIPMENT AND CONTRACTOR'S PERSONNEL WORKING DIRECTLY ON THE EXCAVATION BOTTOM.
 5. FOR DETAILS OF SEASIDE SLOPE PROTECTION SEE PLAN NOS. G-3 AND G-4.
 6. FOR DETAILS OF STRUCTURAL ELEMENTS INCLUDING PRECAST WALLS, FOOTINGS, CONC. PILES, PILE CAPS, ETC., SEE S-SERIES PLANS.
 7. THE LIMIT OF LIGHTWEIGHT FILL AND CRUSHED STONE SHOWN ON THE SECTIONS REPRESENTS ONLY THE REQUIRED MINIMUM EXTENT OF LIGHTWEIGHT FILL AND CRUSHED STONE PLACEMENT. ANY WORK ASSOCIATED WITH EXCAVATION AND BACKFILL BEYOND THIS LIMIT SHALL BE PERFORMED AT NO ADDITIONAL COST TO THE AUTHORITY.

REV. NO.	DATE	DESCRIPTION	MADE BY	CHK. BY	APPD. BY

MASSACHUSETTS PORT AUTHORITY
BOSTON, MASSACHUSETTS

EAST BOSTON WATERFRONT IMPROVEMENTS
EAST BOSTON, MASSACHUSETTS

CONSTRUCTION OF EAST BOSTON PARK I

PIER 4
SECTIONS AND DETAILS

SEA CONSULTANTS, INC.
ENGINEERS/ARCHITECTS
CAMBRIDGE, MASSACHUSETTS

DES. STY	DR. LAL	TR. CHK. JSN	MPA FILE NO.
SCALE: AS SHOWN	APPROVED: PCS	DATE: 7 FEB 94	PLAN NO. G-5

CONTRACT NO. MPA 5.07BR SHEET NO. 6 OF 72



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