

Weekly Field Report  
Week: 03-23-14 through 03-29-14  
New Bedford Harbor Lower Harbor CAD Cell (LHCC)

This Weekly Field Report was prepared to serve as a summary of field activities conducted throughout the week for Phase I dredging of the New Bedford Harbor Lower Harbor CAD Cell (LHCC) in New Bedford, Massachusetts.

**1. Introduction:**

The weekly field report describes the activities carried out by the Contractor (Cashman/Tripp Marine), the Owner's Representative (Apex Companies, LLC), and any subcontractors completing work within the scope of the project requirements.

This Weekly Field Report represents the twenty first Report associated with Phase I dredging of the LHCC in New Bedford Harbor, and the associated handling and disposal of dredged materials at CAD cells within the Harbor, and at designated open-water disposal sites approved for this Project.

This 21<sup>st</sup> Report for the LHCC dredging activities includes:

- Daily Inspection Reports from the dredging oversight performed during the week of March 23<sup>rd</sup> through March 29<sup>th</sup>, 2014. These reports include notes on the equipment used on site, and a summary of contractor activities. (See Attachment 1);
- Water Quality Monitoring Forms completed for the week of March 23<sup>rd</sup> through March 29<sup>th</sup>, 2014, (Attachment 2) summarizing monitoring survey data recorded during active dredging. Included with the attached forms is Figure 1 Lower Harbor CAD Cell Phase I Water Quality Monitoring Plan, which shows the locations of the water quality monitoring events conducted during this reporting period. Per the approved Water Quality Monitoring Plan and associated performance standards for the dredging efforts being conducted during this reporting period, Apex has:
  - Conducted water quality monitoring a minimum of one day per week
  - Performed visual inspections of dredged materials before the disposal of a scow for any visible debris or other items that could potentially become a hazard to navigation prior to the scow's departure for the offshore disposal site.

**Summary:**

The Contractor, Cashman Dredging and Marine Contracting, Co. LLC (Cashman) conducted dredging at the LHCC on March 24<sup>th</sup>, 25<sup>th</sup>, and 28<sup>th</sup>. Dredging operations focused on the removal of Phase I Bottom of CAD Cell sediments. During this reporting period, dredging operations were conducted using a conventional digging bucket, with dredged materials being disposed offshore at the Rhode Island Sound Disposal Site (RISDS). Cashman was observed conducting these activities during the authorized operational window of 7AM until sunset, utilizing a single dredge plant – the Bobby D; two tugs – Ellsea and Lucinda Smith; a 2800 cubic yard split scow – Eddie Carroll; and two small utility boats.

With time of year restrictions now in place (January 15th through June 15th) all dredging activities were conducted within a silt curtained perimeter surrounding the LHCC.

## 2. Operational Notes:

### Dredging:

Dredging of LHCC Phase I Bottom of CAD sediments continued during the week. Apex conducted one day of water quality monitoring on March 25<sup>th</sup> while dredging was being performed to ensure that this activity did not result in an exceedance of any project-specific water quality standards.

### Offshore Disposal:

Offshore disposal for LHCC Phase I Bottom of CAD sediments is scheduled and permitted for the Rhode Island Sound Disposal Site. Two offshore disposal events, using the split scow Eddie Carroll, were recorded during the week and occurred on March 24<sup>th</sup> and 29<sup>th</sup>.

Table 1 – Cumulative Dredging Progress

Period of Activity	Volume (cy)
Approximate Top of CAD Volume Dredged to Date*	24,890
Approximate Bottom of CAD Volume Dredged this Reporting Period	3,500
Approximate Bottom of CAD Volume Dredged to Date*	31,500

\* Dredge volume quantities are estimated based on observed scow draft marks and an assumed density of the materials dredged. Given the uncertainty in the density of a composite mix of sediments being dredged, all volumes are confirmed and adjusted as necessary using bathymetric survey data.

## 3. Monitoring Summary

There were no water quality exceedances observed during this reporting period related to dredging operations. No water quality samples were collected.

Prepared by:  
Apex Companies, LLC



John B. McAllister, P.E.  
Senior Project Engineer

Attachment 1  
Daily Inspection Reports



**City of New Bedford Harbor Development Commission**

**New Bedford Harbor USEPA Lower Harbor CAD Cell**

**CFDA No.: 66.802**

**Inspection Report**

**Inspector:** Kaios Ryan, Adam Hart

**Date:** 03/23/2014

**Contractor:** Cashman/Weeks **Foreman/Supt:** No Captain

**Weather** AM: Cloudy **Temperature** AM: 14  
PM: Clear PM: 42

**Tides** High 0124 AM 1352 PM  
Low 0646 AM 1855 PM

**Manpower Onsite**

Engineer 0 @ 0 Hrs  
Operators 0 @ 0 Hrs  
Mate 0 @ 0 Hrs  
Deckhand 0 @ 0 Hrs  
Captains 0 @ 0 Hrs

Other: \_\_\_\_\_ @ \_\_\_\_\_ Hrs

**Equipment Onsite**

Description: Bobby D. Hrs. 0  
Eddie Carroll Hrs. 0  
Lucinda Smith Hrs. 0  
\_\_\_\_\_ Hrs. \_\_\_\_\_  
\_\_\_\_\_ Hrs. \_\_\_\_\_  
\_\_\_\_\_ Hrs. \_\_\_\_\_

**Contractor Activities: (Attach Additional Sheets as Necessary)**

0547 no activity on site. 0626 Lucinda Smith and the Eddie Carroll head for the off shore disposal site. 0629 no activity on site. 0853 no activity on site. 1248 no activity on site. 1717 Tug boat Lucinda Smith ties the scow Eddie Carroll to the south staging area. 1800 No site activity, all equipment is inactive.

**Problems/Issues or Action Items:**

**Visitors:**

**Signature:** 

**Title:** Environmental Technician

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**Date:** 03/23/2014

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**File:** DIR\_LHCC\_032314



City of New Bedford Harbor Development Commission

New Bedford Harbor USEPA Lower Harbor CAD Cell

CFDA No.: 66.802

Inspection Report

Inspector: Chris Stillman, Adam Hart

Date: 03/24/2014

Contractor: Cashman/Weeks

Foreman/Supt: Junior Huggins

Weather AM: Cloudy Temperature AM: 14  
PM: Clear PM: 42

Tides High 0219 AM 1452 PM  
Low 0806 AM 2011 PM

Manpower Onsite

Engineer 1 @ 9 Hrs  
Operators 1 @ 9 Hrs  
Mate 1 @ 9 Hrs  
Deckhand 1 @ 9 Hrs  
Captains 1 @ 9 Hrs

Other: Engineer Wood 1 @ 1 Hrs

Equipment Onsite

Description: Bobby D. Hrs. 9  
Eddie Carroll Hrs. 9  
Lucinda Smith Hrs. 2  
Ellsea Hrs. 5  
Hrs. \_\_\_\_\_  
Hrs. \_\_\_\_\_

Contractor Activities: (Attach Additional Sheets as Necessary)

(Dredging start time: 0645 w/ beginning draft of 6', Dredging End time: 1546, draft of 10.5' - 9.5') 550 Tug boat Lucinda Smith brings the scow Eddie Carroll through the 0600 bridge north bound. 615 Tug Boat Ellsea assists the tug boat Lucinda Smith in maneuvering the dredge plant Bobby D. 630 Tug boat Lucinda Smith leaves the CAD cell area. 645 Dredge plant Bobby D. begins dredging. Survey 4 on site. Tug boat Lucinda Smith tied to Richie Barber. 842 Dredge plant Bobby D. repositions with the help of tug boat Ellsea. 901 Dredge plant Bobby D. resumes dredging. New matrix uploaded. 920 Dredging stopped, curtain open and Survey 4 offsite. 932 Silt curtain closed, dredge plant Bobby D. resumes dredging into scow Eddie Carroll. 1051 Tug boat Lucinda Smith unties from the Richie Barber. 1054 Tug boat Lucinda Smith pushes the scow Winslow closer to the Richie Barber to tighten lines. 1057 Tug boat Lucinda Smith heads south toward the bridge. 1105 Crew is working on pumping out the scow Winslow. 1122 Tug boat Lucinda Smith pass southbound through the bridge. 1127 The red skiff brings tools to the crew on the scow Winslow. 1230 Engineer from the dredge plant Wood 1 is on site and is brought to the scow Winslow. 1241 Red skiff brings the Engineer back south to the dredge plant Wood 1. 1323 Dredge plant Bobby D. repositions with the help of tug boat Ellsea. 1324 Tug boat Lucinda Smith heads north toward the Richie Barber and ties to it. 1335 Dredge plant Bobby D. resumes dredging. 1406 Dredge plant Bobby D. stops dredging to tighten lines on the scow Eddie Carroll. 1417 Dredging resumes. 1420 Tug boat Lucinda Smith heads south bound through the bridge. 1546 Dredge plant Bobby D. begins washing off the scow Eddie Carroll. Eddie Carroll is loaded. 1600-Scow Eddie Carroll is inspected and cleared for offshore disposal. 1610- Dredge Plant Bobby D. repositions with the scow Eddie Carroll into deeper water so tug boat Lucinda Smith can tie to it. 1623 Red skiff opens silt curtain. 1820 Tug boat Lucinda Smith heads north through the bridge. 1840 Tug boat Lucinda Smith and scow Eddie Carroll are waiting for the bridge opening. 1850 Tug boat Lucinda Smith and scow Eddie Carroll head south bound through the bridge. 1858 Tug boat Lucinda Smith and scow Eddie Carroll head south bound through the hurricane barrier heading for an offshore disposal.

Visitors:

Signature: 

Title: Environmental Technician

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Date: 03/24/2014

Page: 1 of 1

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**City of New Bedford Harbor Development Commission  
New Bedford Harbor USEPA Lower Harbor CAD Cell  
CFDA No.: 66.802  
Inspection Report**

**Inspector:** Chris Stillman, Brett Young **Date:** 3/25/2014

**Contractor:** Cashman **Foreman/Supt:** Junior Huggins

<b>Weather</b>	AM:	<u>Clear</u>	<b>Temperature</b>	AM:	<u>30</u>
	PM:	<u>Clear</u>		PM:	<u>32</u>
<b>Tides</b>	High	<u>0323</u>	AM	<u>1557</u>	PM
	Low	<u>0946</u>	AM	<u>2141</u>	PM

**Manpower Onsite**

Foreman	<u>1</u>	@	<u>12</u>	Hrs
Operators	<u>1</u>	@	<u>12</u>	Hrs
Laborers	<u>2</u>	@	<u>12</u>	Hrs
Drivers	<u>1</u>	@	<u>12</u>	Hrs
Other:	<u>      </u>	@	<u>      </u>	Hrs

**Equipment Onsite**

Description:	<u>Bobby D</u>	Hrs.	<u>12</u>
	<u>Eddie Carroll</u>	Hrs.	<u>12</u>
	<u>Elsea</u>	Hrs.	<u>12</u>
	<u>Lucinda Smith</u>	Hrs.	<u>2</u>
	<u>Red Skiff</u>	Hrs.	<u>12</u>
		Hrs.	<u>      </u>

**Contractor Activities: (Attach Additional Sheets as Necessary)**

0650- Tug Lucinda Smith brings the split hull scow Eddie Carroll to the Dredge Plant Bobby D. 0700- Dredge Plant Bobby D takes first bucket of the day at stations 6+58 in cut 8. 0747- Dredging stopped, silt curtain opened for Survey 4- Survey 4 inside the cad cell surveying. 0755- Survey 4 completes work and exits CAD area, red skiff closes silt curtain, dredging resumes. 0955- Move to new station- 7+11 cut 9 digging to a depth of 12'. 1013- Dredge stopped for refuel, curtain open, Seafuels onsite. 1049- Curtain closed, dredging resumes station 7+21 cut 9 digging at 14'. 1105- New location- between stations 7+11 and 7+15 cut 5 at 9.86'- Eddie Carroll draft marks at 6.5' on the stern and 7.5 on the bow. 1136- Draft marks on the Eddie Carroll are 7.5' even at the AB marks. Cashman in discussion with the Tug Captain assessing whether he wants to chance an early transit to Rhode Island Disposal Area- High winds and snow due in at midnight. 1150- Weather window closed for disposal transit, next window sometime on Thursday. 1315- The Bobby D is dredging into the Eddie Carroll at cut 6 station 5+59, depth 5'. 1339- The Bobby D stops dredging to reposition scow. 1342- The Bobby D resumes dredging. 1352- The red skiff and 3 crew go to the Winslow. 1422- The Bobby D stops dredging to reposition. 1427- The Bobby D resumes dredging at cut 6 station 5+48, depth 12'. The Eddie Carroll is drafting; bow-9', stern-10'. 1445- The red skiff and crew return to the Bobby D. 1452- The Bobby D stops dredging to reposition. 1504- The Bobby D resumes dredging into the Eddie Carroll at cuts 4 & 5 station 6+12, depth 8'. 1518- The Bobby D stops dredging to reposition. 1525- The Bobby D resumes dredging at cuts 4 & 5 station 5+77, depth 11'. 1542- The Bobby D stops dredging to reposition. 1550- The Bobby D resumes dredging at cut 5 station 5+69, depth 12'. 1608- The Bobby D stops dredging to reposition the scow. 1612- The Bobby D resumes dredging. 1632- The Bobby D is dredging cut 4 station 5+45, depth 12'. 1700- The Bobby D stops dredging. 1706- The Bobby D resumes dredging at cut 4 station 5+35, depth 13'. 1713- The Bobby D stops dredging to reposition Eddie Carroll. 1721- The Bobby D resumes dredging. 1738- The Bobby D stops dredging, the scow is full. Eddie Carroll final drafts; bow-10.5', stern-12'. The Eddie Carroll will not be taken for offshore disposal tonight due to poor weather conditions. Next window for offshore disposal may not be until Thursday 3/27/14. 1802- Bobby D bucket on deck. 1812- Silt curtain is opened.

**Problems/Issues or Action Items:**

Visitors:

Signature:   
Title: Environmental Scientist  
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Date: 3/25/14  
Page: 1 of 1  
File: DIR\_LHCC\_032514



**City of New Bedford Harbor Development Commission**  
**New Bedford Harbor USEPA Lower Harbor CAD Cell**  
**CFDA No.: 66.802**  
**Inspection Report**

**Inspector:** Chris Stillman, Brett Young

**Date:** 3/26/2014

**Contractor:** Cashman

**Foreman/Supt:** Junior Huggins

<b>Weather</b>	AM:	<u>Snow</u>	<b>Temperature</b>	AM:	<u>36</u>
	PM:	<u>Overcast</u>		PM:	<u>16</u>
<b>Tides</b>	High	<u>0431</u>	AM	<u>1704</u>	PM
	Low	<u>1057</u>	AM	<u>2304</u>	PM

**Manpower Onsite**

Foreman	<u>0</u>	@	<u>0</u>	Hrs
Operators	<u>0</u>	@	<u>0</u>	Hrs
Laborers	<u>0</u>	@	<u>0</u>	Hrs
Drivers	<u>0</u>	@	<u>0</u>	Hrs
Other:	<u>    </u>	@	<u>    </u>	Hrs

**Equipment Onsite**

Description:	<u>Bobby D</u>	Hrs.	<u>0</u>
	<u>Eddie Carroll</u>	Hrs.	<u>0</u>
	<u>Ellsea</u>	Hrs.	<u>0</u>
	<u>Lucinda Smith</u>	Hrs.	<u>0</u>
	<u>Red Skiff</u>	Hrs.	<u>0</u>
		Hrs.	<u>    </u>

Contractor Activities: (Attach Additional Sheets as Necessary)

0800- Due to inclement weather conditions offshore, tug Lucinda Smith was unable to dispose the material from the Eddie Carroll. Spoke with Junior Huggins who was on call but not onsite- due to the scow being full and no other scows available the Bobby D crew was given the day off. No further activity occurred for the day.

Problems/Issues or Action Items:

Visitors:

Signature: 

Title: Environmental Scientist

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Date: 3/26/14

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**City of New Bedford Harbor Development Commission**  
**New Bedford Harbor USEPA Lower Harbor CAD Cell**  
**CFDA No.: 66.802**  
**Inspection Report**

**Inspector:** Kaios Ryan **Date:** 03/27/2014

**Contractor:** Cashman **Foreman/Supt:** Junior Huggins

<b>Weather</b>	AM:	<u>Clear</u>	<b>Temperature</b>	AM:	<u>41</u>
	PM:	<u>Clear</u>		PM:	<u>32</u>

<b>Tides</b>	High	<u>0539</u>	AM	<u>1805</u>	PM
	Low	<u>1142</u>	AM	<u>2358</u>	PM

**Manpower Onsite**

Engineer 0 @ 0 Hrs  
Operators 0 @ 0 Hrs  
Mate 0 @ 0 Hrs  
Deckhand 0 @ 0 Hrs  
Captains 0 @ 0 Hrs

Other: \_\_\_\_\_ @ \_\_\_\_\_ Hrs

**Equipment Onsite**

Description: Bobby D. Hrs. 0  
Eddie Carroll Hrs. 0  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Contractor Activities: (Attach Additional Sheets as Necessary)**

0612 Spoke with Captain Huggins, he said they will not be working because the Lucinda Smith was not able to go to the off shore disposal site with the Eddie Carroll. He also added that the Eddie Carroll is still on site loaded due to high winds and did not know when the Lucinda Smith will be going to the off shore disposal site. 0618 the no activity on site; the Bobby D. and Eddie Carroll are inside the dredge area.

**Problems/Issues or Action Items:**

Visitors: \_\_\_\_\_

Signature: *Kaios Ryan*  
Title: Environmental Technician  
Copy to: File

Date: 03/27/2014  
Page: 1 of 1  
File: DIR\_LHCC\_032714





**City of New Bedford Harbor Development Commission**

**New Bedford Harbor USEPA Lower Harbor CAD Cell**

**CFDA No.: 66.802**

**Inspection Report**

**Inspector:** Christopher Stillman

**Date:** 3/28/2014

**Contractor:** Cashman

**Foreman/Supt:** Junior Huggins

<b>Weather</b>	AM:	<u>Overcast</u>	<b>Temperature</b>	AM:	<u>54</u>
	PM:	<u>Overcast</u>		PM:	<u>44</u>

<b>Tides</b>	High	<u>0636</u>	AM	<u>1901</u>	PM
	Low	<u>0006</u>	AM	<u>1229</u>	PM

**Manpower Onsite**

Engineer 1 @ 12 Hrs  
 Operators 1 @ 12 Hrs  
 Mate 1 @ 12 Hrs  
 Deckhand 1 @ 12 Hrs  
 Captains 1 @ 12 Hrs  
 Other: Ellsea Driver 1 @ 5 Hrs  
 Other: Lucinda Driver 1 @ 11 Hrs

**Equipment Onsite**


Description: Bobby D Hrs. 12  
Ellsea Hrs. 5  
Lucinda Smith Hrs. 11  
Eddie Carroll Hrs. 18  
 \_\_\_\_\_ Hrs. \_\_\_\_\_  
 \_\_\_\_\_ Hrs. \_\_\_\_\_  
 \_\_\_\_\_ Hrs. \_\_\_\_\_

**Contractor Activities: (Attach Additional Sheets as Necessary)**

0625 The crew arrives on the Bobby D. Lucinda Smith brings the Eddie Carroll to the Bobby D. 0708 The Bobby D begins dredging. Draft marks 4' bow, 4' stern. 0800 Dredging stops because the silt curtain opens. 0815 The curtain closes and dredging resumes at cut 10 center area. 0855 Dredging stops and the curtain opens. 0910 LS leaves the CAD area and the Ellsea arrives. 1000 LS travels south through the bridge. 1008 The Bobby D is preparing to move south about 20' north of the southern curtain. 1024 The Bobby D spudded down in a shallow cut 15' from the center south curtain. 1041 The current location is very close to design depth so the captain moves to a new location 50' west for more efficient dredging. 1053 Dredging resumes at the new location 25' from the SSW curtain. 1130 The Bobby D stops dredging because the area is dug to design grade. 1140 The Bobby D moves to a new location and dredging resumes. Draft marks- 5' bow, 6' stern. 1220 Dredging stops. 1300 Eddie Carroll is drafting at 8' bow, 7' stern. 1326 The Ellsea brings the Bobby D back toward the curtain entrance. 1355 The Bobby D resumes dredging. 1400 The Bobby D prepares to be moved by the Ellsea. 1405 The Bobby D spuds down at cut 6, 4+30 and dredging resumes. 1438 The Eddie Carroll is drafting at 5' bow, 10' stern. 1556 The Eddie Carroll is drafting at 8' bow, 10' stern. The dredge captain informs Apex that the weather is too disagreeable to dispose offshore and will have to wait to do so until the next fair weather window. 1610 The Bobby D stops dredging. 1619 The Bobby D moves south to cut 5 and resumes dredging. 1640 Dredging stops while the silt curtain is open. The Eddie Carroll is drafting at 10' bow, 11' stern. The Bobby D moves to shallower water due to predicted high winds. 1700 The Bobby D resumes dredging. 1809 Dredging stops. The Eddie Carroll will wait until at least the morning of 3/30 to go off shore.

**Problems/Issues or Action Items:**

**Visitors:** None

**Signature:**   
**Title:** Environmental Scientist

**Date:** 3/28/2014  
**Page:** 1 of 1

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**File:** DIR\_LHCC\_032814

Attachment 2  
Water Quality Monitoring Forms

PROJECT: New Bedford Harbor Lower Harbor CAD Cell  
 JOB NUMBER: 6724  
 DATE: 3/25/2014  
 MONITORS: Mark Martinho  
 WEATHER CONDITIONS: High: 37 Low: 14  
 WIND: 4-15 mph East  
 PRIOR STORM EVENTS:  
 DREDGE UPDATE:  
 TYPE OF WATER QUALITY MONITORING EVENT: TOP CAD Dredging / BTM CAD Dredging / Disposal  
 TIDE High: 0323/1557 Low: 0946/2141



Please Note: In some instances, the down-current monitoring event occurred prior to the up-current monitoring event. This is the result of the initial analysis of our field crew indicating one direction of flow, however our checks from our Quality Control program provided a more accurate depiction of the pattern, which is how the information is now presented below. Also GPS locations for the last three downstream monitoring events were lost due to a transcription error.

**UP-CURRENT**

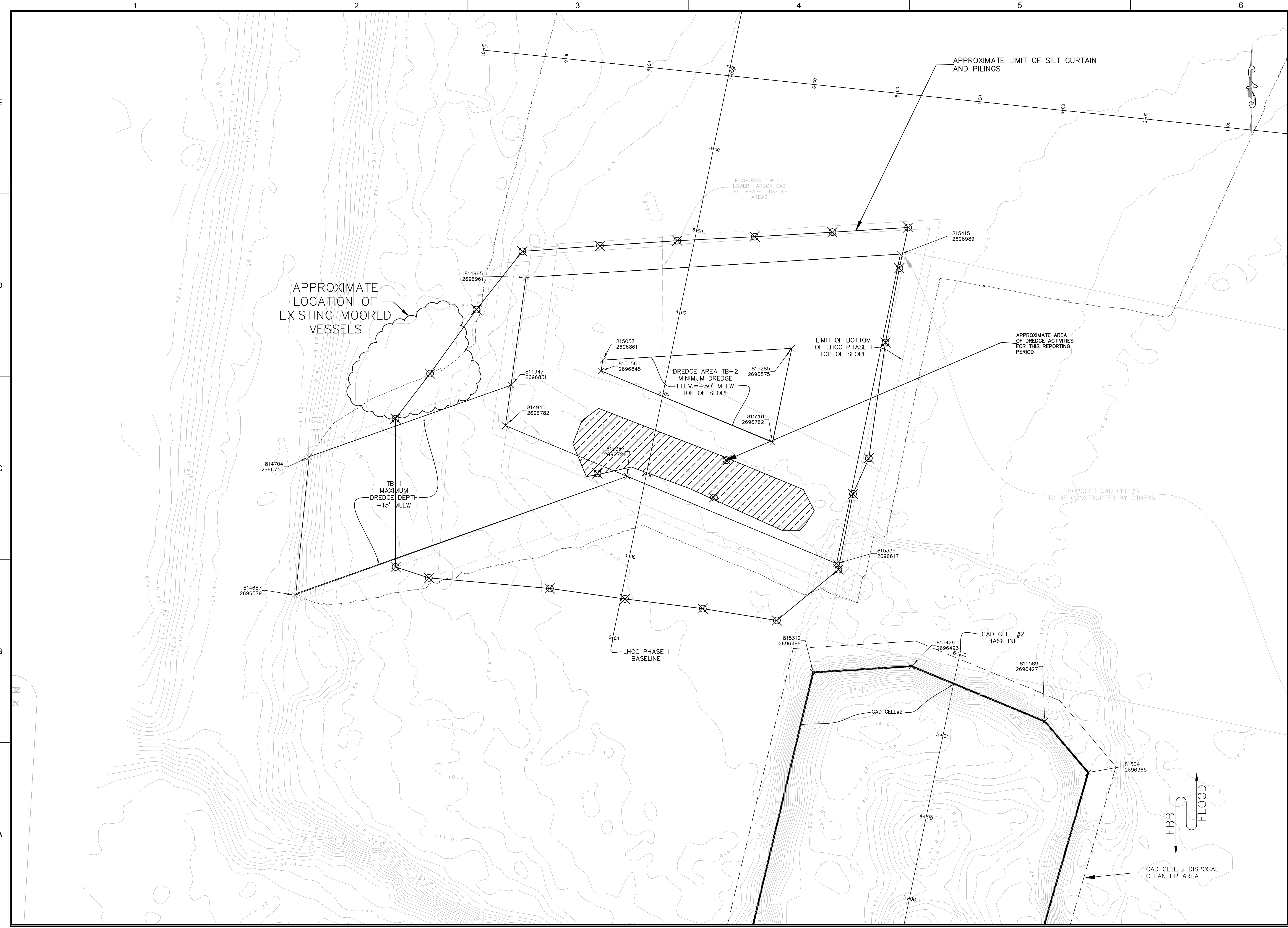
Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	TYPE OF WQM & DISTANCE FROM LOCATION	NUMBER OF HOURS DREDGING
032514-00-1-1		730		1	2.8				
032514-00-1-5		732	11.6	5	2.84				
032514-00-1-10	814791, 2696817	734		10	3.13		Ebbing	200' N of Dredging	00
					AVERAGE TURBIDITY:	2.92			
032514-02-1-1		940		1	2.48				
032514-02-1-4		942	10	4	3.08				
032514-02-1-9	814885, 2696940	944		9	3.74		Flooding	200' N of Dredging	02
					AVERAGE TURBIDITY:	3.1			
032514-04-1-1		1130		1	3.82				
032514-04-1-3		1132	7	3	3.96				
032514-04-1-6	814873, 2696921	1134		6	3.33		Flooding	200' S of Dredging	04
					AVERAGE TURBIDITY:	3.70			
032514-06-1-1		1330		1	5.4				
032514-06-1-3		1332	7.5	3	4.24				
032514-06-1-6	814866, 2696938	1334		6	4.39		Flooding	200' S of Dredging	06
					AVERAGE TURBIDITY:	4.68			
032514-08-1-1		1530		1	5.33				
032514-08-1-4		1532	8	4	5.18				
032514-08-1-7	814861, 2692644	1534		7	4.74		Flooding	200' S of Dredging	08
					AVERAGE TURBIDITY:	5.08			

**Down-Current**

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
032514-00-9-1		740		1	2.84				
032514-00-9-3		742	7.9	3	3.92				
032514-00-9-6	814912, 2696561	744		6	3.22		Ebbing	200' S of Dredging	00
					AVERAGE TURBIDITY:	3.33			
					TURBIDITY INCREASE:	0.40			
032514-02-9-1		930		1	3.27				
032514-02-9-2		932	5	2	3.8				
032514-02-9-4	815200, 2696522	934		4	3.4		Flooding	200' S of Dredging	02
					AVERAGE TURBIDITY:	3.49			
					TURBIDITY INCREASE:	0.39			
032514-04-9-1		1140		1	5.95				
032514-04-9-3		1142	6.4	3	3.18				
032514-04-9-6	Transcription Error	1144		6	2.7		Flooding	200' N of Dredging	04
					AVERAGE TURBIDITY:	3.94			
					TURBIDITY INCREASE:	0.24			
032514-06-9-1		1340		1	8.4				
032514-06-9-3		1342	6.5	3	6.33				
032514-06-9-6	Transcription Error	1344		6	6.67		Flooding	200' N of Dredging	06
					AVERAGE TURBIDITY:	7.13			
					TURBIDITY INCREASE:	2.46			
032514-08-9-1		1535		1	7.11				
032514-08-9-3		1537	7	3	6.26				
032514-08-9-6	Transcription Error	1539		6	6.19		Flooding	200' N of Dredging	08
					AVERAGE TURBIDITY:	6.52			
					TURBIDITY INCREASE:	1.44			

\* Turbidity Increase = Down-Current Average Turbidity - Up-Current Average Turbidity

Figure 1  
Lower Harbor CAD Cell Phase I – Water Quality Monitoring



ROCKVILLE, MD  
SOUTH WINDSOR, CT - BOSTON, MA -  
NEW BEDFORD, MA - HOLYOKE, MA

125 BROAD STREET, 5TH FLOOR  
BOSTON, MA 02210

58H CONNECTICUT AVENUE  
SOUTH WINDSOR, CT

The drawings prepared by Apex for this project are instruments of Apex's services for use solely with respect to the project and general use of the drawings is not permitted. Apex shall retain all copyright, patent, trademark, and other reserved rights with respect to these drawings, including the copyright. The drawings shall not be used on other projects, in addition to this project or for completion of this project by others, except by agreement in writing and with appropriate compensation to Apex.

PROJECT	NEW BEDFORD HARBOR DEVELOPMENT COMMISSION LOWER HARBOR CAD CELL	
	OWNER	NEW BEDFORD HARBOR DEVELOPMENT COMMISSION 52 FISHERMAN'S WHARF, NEW BEDFORD, MA 02740

1	9/25/2012	EPA COMMENTS	GCD
2	2/21/2013	DRAFT SUITABILITY	MCK

DATE	DESCRIPTION	BY
9/25/2012	EPA COMMENTS	GCD
2/21/2013	DRAFT SUITABILITY	MCK

PROJECT NO.	6724
CADD FILE	
DESIGNED BY	CHM
DRAWN BY	GCD
CHECKED BY	GCD
DATE	MAY 2013
DRAWING SCALE	AS NOTED

GRAPHIC SCALE  
SCALE: 1"=50'  
0 25 50 100

SHEET TITLE  
**BOTTOM OF LOWER HARBOR CAD CELL PHASE 1 WATER QUALITY**  
3/24/14- 3/29/14

DRAWING NO.  
**WQM-1**

6 OF 15