HALEY & ALDRICH

WEEKLY FIELD REPORT

Project	OCEAN GATEWAY PARKING GARAGE	**Report No.**	16
Location	PORTLAND, MAINE	**Period From**	3 September 2007
		To	7 September 2007
Client	RIVERWALK, LLC.	**Page**	1 of 4
Contractor	LEDGEWOOD CONSTRUCTION (CM)	**File No.**	30322-030
	SHAW BROTHERS CONSTRUCTION (EARTHWORK)		
	G. DONALDSON CONSTRUCTION (PILE DRIVING)		

Note: Contractor's activities were partially conducted prior to Field Representatives arrival at the site.

I. CONTRACTOR'S ACTIVITIES:

Monday, September 3, 2007

1. No work took place today due to the Labor Day holiday.

Tuesday, September 4, 2007 (70 degrees, sunny at 1230)

1. Shaw Bros. previously (prior to Field Representatives arrival at site) backfilled the area north of column H, between column line 2.3 and column line 3 (see Figure 1 and photographs). The area was backfilled up to approximately El. 15 in order to allow the removal of the concrete jersey barrier deadmen and continuous steel waler installed for the adjacent support of excavation system. The backfill material consisted of granular fill imported to the site from Shaw Bros. Dayton Pit.

Wednesday, September 5, 2007 (70 degrees, sunny at 1015)

1. Shaw Bros. previously (prior to Field Representatives arrival at site) excavated and removed the concrete jersey barrier deadmen north of the support of excavation system in the northeast corner of the garage (see Figure 1 and photographs).

Friday, September 7, 2007 (80 degrees, sunny at 1115)

1. Shaw Bros. installed portions of the underslab drain between column lines C, D, 1 and 1.9/2.1 and A, B, 1 and 1.9/2.1 and a portion of the perimeter foundation drain south of column line A, between column line 1 and column line 1.9/2.1 (see Figure 1). The perimeter/underslab drains consisted of a 4-in. diameter perforated HDPE plastic pipe and was installed with the perforations oriented down. The pipe was embedded in 4-in. of ¾-in. crushed stone and was entirely wrapped in geosynthetic separation fabric (Mirafi 140N). The pipe was installed at the invert elevation shown on the plans. The pipe was backfilled with granular fill imported to the site from Shaw Bros. Dayton Pit.
2. Shaw Bros. excavated naturally deposited marine clay that had become disturbed due to construction vehicle traffic with a CAT 320C excavator outfitted with a smooth bucket attachment. The area was located southeast of the pile cap located at column line C-1 and measured approximately 6 ft x 6 ft in plan dimension (see Figure 1). Approximately 2 ft of marine clay was excavated and replaced with granular fill imported to the site from Shaw Bros. Dayton Pit. The granular fill was placed in two approximately 12-in. thick (loose measure) lifts. Each lift was compacted with 4 to 5 passes of a self-propelled vibratory plate compactor. Fill was placed from approximately El. 14 to El. 16 in this area.
3. Shaw Bros. placed Type D subbase gravel in the area bound by column lines B, D, 1 and 1.9/2.1 (see Figure 1). The Type D subbase gravel was imported to the site from Shaw Bros. H-Pit and was spread in one 12-in. thick (loose measure) lift with a CAT D5C bulldozer. The lift of subbase gravel was compacted with 3 passes of a BOMAG BW 172D-2 smooth drum vibratory roller.
4. Previously (prior to Field Representatives arrival at site) installed waterproofing and drainage board over the "box-outs" in the foundation wall along column line 1 that were provided for the rakers that were part of the support of excavation system.

II. FIELD REPRESENTATIVE'S ACTIVITIES:

General

1. Haley & Aldrich Field Representative performed part-time monitoring of construction activities from Tuesday, September 4 through Friday, September 7 and documented the activities noted above and shown on the attached figures.
2. Discussed activities and construction schedule with contractors (Ledgewood and Shaw Bros.). Field Representative time on site was closely coordinated with Ledgewood and Shaw Bros.
3. Took digital photographs of construction activities. Select photographs are provided in the attachment, additional photographs can be provided upon request.

Monday, September 3, 2007

1. Field Representative not on site due to Labor Day holiday.

Tuesday, September 4, 2007

1. Field Representative spoke with representatives from Shaw Bros. regarding the methodology used to backfill the area described under Contractor's Activities, Item No. 1 on Tuesday and shown on Figure 1. Field Representative confirmed that the granular fill was placed and compacted in approximate 12-in. thick (loose measure) lifts and compacted with 4 to 5 passes of a self-propelled vibratory plate compactor. Field Representative used a Humboldt 5001EZ nuclear density gauge to monitor relative compaction of the top 12-in. of material (approximately El. 14 to El. 15). In-situ density tests indicated the fill material met the minimum compaction specifications (see Table 1, test nos. 133 to 135 for results and Figure 1 for density test locations).
2. Field Representative spoke with Bill Plourde (Ledgewood) regarding surveying reference points on top of the support of excavation system west of column line 1. Field Representative recommended that the reference points be surveyed prior to removal of the internal rakers. Mr. Plourde indicated that he would have CCB (concrete contractor) survey the sheeting.
3. Field Representative spoke with John Fairweather (Shaw Bros.) regarding relocating the perimeter foundation and underslab drain located in the southwest corner of the garage. Mr. Fairweather previously (8/31) proposed to terminate the perimeter drain along column line A, between column line 1.9/2.1 and column line 2.7 and run the drain pipe north into the building, tying into the underslab drain running from west to east between column lines A and B. Mr. Fairweather proposed that the new section of pipe would be installed at invert El. 14.1. Mr. Fairweather suggested the reason for the proposed change is that during erection of the concrete forms and reinforcing steel, no "box-out" was provided through the grade beam extending from column line A-2.7 to A-3. In addition, a 3-ft diameter odor vent pipe for Portland Water District was installed between column lines A and A.2. Due to these reasons, Mr. Fairweather suggested that it would be simpler to relocate the drain according to his proposal which would allow the drain to be installed beneath the existing exterior grade beam and prevent interference with the already poured grade beam and PWD odor vent pipe. Mr. Fairweather asked Field Representative if any decision had been made on whether their proposal was acceptable or not. Field Representative informed Mr. Fairweather that the proposal was being reviewed and he would be informed of the decision by Wednesday (9/5).

Wednesday, September 5, 2007

1. Field Representative spoke with Wayne Chadbourne (Haley & Aldrich) regarding the proposed change in plan location of the perimeter and underslab drain in the southeast corner of the garage as described under Field

Representatives Activities, Item No. 3 on Tuesday. Mr. Chadbourne suggested that the proposed change would be acceptable. Mr. Chadbourne instructed Field Representative to inform Ledgewood and Shaw Bros. of the decision.

2. Field Representative spoke with Mr. Fairweather regarding the change in location of the perimeter and underslab drain in the southeast corner of the garage as described under Field Representatives Activities, Item No. 3 on Tuesday. Field Representative informed Mr. Fairweather that the proposed change was acceptable.
3. Field Representative spoke with Steve Pitts (Ledgewood) regarding the change in location of the perimeter and underslab drain in the southeast corner of the garage as described under Field Representatives Activities, Item No. 3 on Tuesday. Field Representative asked Mr. Pitts to send out a request for information (RFI) to document this change and so that Haley & Aldrich can officially respond to the Shaw Bros. proposal.

Friday, September 7, 2007

1. Field Representative observed and inspected the installation of the sections of perimeter and underslab drains described under Contractors Activities, Item No. 1 on Friday and shown on Figure 1. Field Representative judged that the sections of the perimeter and underslab drains were installed as shown on the construction drawings.
2. Field Representative observed the removal of disturbed marine clay from the area described under Contractors Activities, Item No. 2 on Friday and shown on Figure 1. Field Representative verified that all unsuitable material was removed down to firm subgrade soil. Field Representative observed the placement and compaction of granular backfill. Fill material consisted of imported granular soil from Shaw Bros. Dayton Pit. Field Representative used a Humboldt 5001EZ nuclear density gauge to monitor relative compaction during fill placement. The granular fill appeared stable under the compactive effort of a self propelled vibratory plate compactor. In-situ density tests indicated the fill material met the minimum compaction specifications (see Table 1, test no. 136 for results and Figure 1 for density test locations).
3. Field Representative observed placement of Type D subbase gravel in the area described under Contractors Activities, Item No. 2 on Friday and shown on Figure 1. Fill material consisted of imported granular soil from Shaw Bros. H-Pit. Field Representative used a Humboldt 5001EZ nuclear density gauge to monitor relative compaction during fill placement. The granular fill appeared stable under the compactive effort of a BOMAG BW172D-2 smooth drum vibratory roller. In-situ density tests indicated the subbase material did not meet the minimum compaction specifications due to low water content.
4. Field Representative spoke with Mr. Fairweather regarding compaction of the subbase gravel described under Item No. 3, above. Field Representative explained to Mr. Fairweather that the material was several percent under the optimum water content and that water would have to be added to the material and re-compacted in order to meet the minimum compaction specification. Mr. Fairweather suggested that rain forecasted for this weekend would help to aid moisture since no other source of water was available. Mr. Fairweather suggested waiting until Monday (9/10) to re-compact (and re-test) the subbase gravel. Field Representative agreed with Mr. Fairweather.
5. Field Representative spoke with Mr. Plourde regarding the schedule for removal of the steel sheet piles used in the support of excavation system west of column line 1 and in the northeast corner of the garage. Mr. Plourde indicated that G. Donaldson would be on site Monday (9/10) to begin removing the continuous steel waler west of column line 1 and the steel sheet piles. Mr. Plourde indicated that G. Donaldson would be on site for approximately 3 days.
6. Field Representative spoke with Mr. Plourde regarding the monitoring of survey points on the sheet pile support of excavation system west of column line 1. Field Representative asked Mr. Plourde whether the survey was completed prior to removal of the rakers as discussed on Tuesday (9/4). Mr. Plourde indicated that the survey still had not been completed. Field Representative requested that the survey be performed prior to removal of the continuous steel waler by G. Donaldson on Monday (9/10) and that this information be provided to Haley & Aldrich for review.

HALEY & ALDRICH

WEEKLY FIELD REPORT

Project	OCEAN GATEWAY PARKING GARAGE	**Report No.**	16
Location	PORTLAND, MAINE	**Period From**	3 September 2007
		To	7 September 2007
Client	RIVERWALK, LLC.	**Page**	4 of 4
Contractor	LEDGEWOOD CONSTRUCTION (CM) SHAW BROTHERS CONSTRUCTION (EARTHWORK) G. DONALDSON CONSTRUCTION (PILE DRIVING)	**File No.**	30322-030

ATTACHMENTS:

1. Foundation Plan (Figure 1)
2. Weekly Summary of Field Unit Weight Test (1 page)
3. Photograph Summary (2 pages)

Field Representative(s)	**Total Weekly Time**
B. Steinert	29.50

Distribution: Drew Swenson, Riverwalk, LLC. (email)
Rich Libardoni, Intercontinental Real Estate Co. (email and hardcopy)
Stephen Fraser, Scott Simons Architects (email)
Steve Pitts & Bob Parsons, Ledgewood Construction (email)
Alan Simon, Simon Design Engineering, LLC. (email)

Haley & Aldrich, Inc.

G:\PROJECTS\30322\030 - Ocean Gateway Parking Garage\Weekly Field Reports\WFR16 2007 0908 - Complete\2007 0908 bcs WFR16.doc

PORTION OF PERIMETER FOUNDATION DRAIN INSTALLED ON 8/7/07

APPROXIMATE LOCATION OF GLACIOMARINE OVEREXCAVATED AND REPLACED WITH GRANULAR FILL ON 9/7/07

PORTION OF UNDERSLAB DRAIN INSTALLED ON 9/7/07.

1'-0" DIA x 4'-6" DEEP SONO TUBE W/ (3) #9 VERT BARS AND #4@12" OC TIES (TYP)

APPROXIMATE LOCATION OF STEEL SHEET PILING

TO BE TIED INTO COMBINED SEWER MANHOLE (SEE CIVIL DWGS)

TO BE TIED INTO COMBINED SEWER MANHOLE (SEE CIVIL DWGS)

APPROXIMATE EXTENT OF AREA BACKFILLED ON 9/4/07

APPROXIMATE EXTENT OF CONCRETE JERSEY BARRIER REMOVAL AND BACKFILL ON 9/4 & 9/5/07

APPROXIMATE EXTENT OF AREA WHERE TYPE D SUBBASE GRAVEL WAS PLACED ON 9/7/07

● 136 DESIGNATION AND APPROXIMATE LOCATION OF IN-SITU DENSITY TEST

FOUNDATION PLAN
3/32"=1'-0"

PLAN NORTH →

HALEY & ALDRICH

OCEAN GATEWAY PARKING GARAGE
MIDDLE STREET
PORTLAND, MAINE

FOUNDATION PLAN (SHEET NO. S1.00)
WEEKLY FIELD REPORT NO.: 16

SCALE: AS SHOWN
~~APRIL 2007~~ 9/8/2007

FIGURE 1

S:\303222\2007_0124 - CURRENT RES. FIG 2\2007_0322_BCS_COMMONPLANS.DWG

HALEY & ALDRICH

WEEKLY SUMMARY
FIELD UNIT WEIGHT TEST

PROJECT	OCEAN GATEWAY PARKING GARAGE	**H&A FILE NO.**	30322-030
LOCATION	PORTLAND, MAINE	**PROJECT MGR.**	W. CHADBOURNE
CLIENT	RIVERWALK, LLC.	**FIELD REP**	B. STEINERT
GEN. CONTRACTOR	LEDGEWOOD CONSTRUCTION	**DATE**	09/08/07
SUBCONTRACTOR	SHAW BROTHERS CONSTRUCTION	**WFR NUMBER**	16

Gage:
Make: Humboldt Scientific, Inc. Model 5001 EZ122 Serial Number: 3289 Calibration Date: 04/05/06

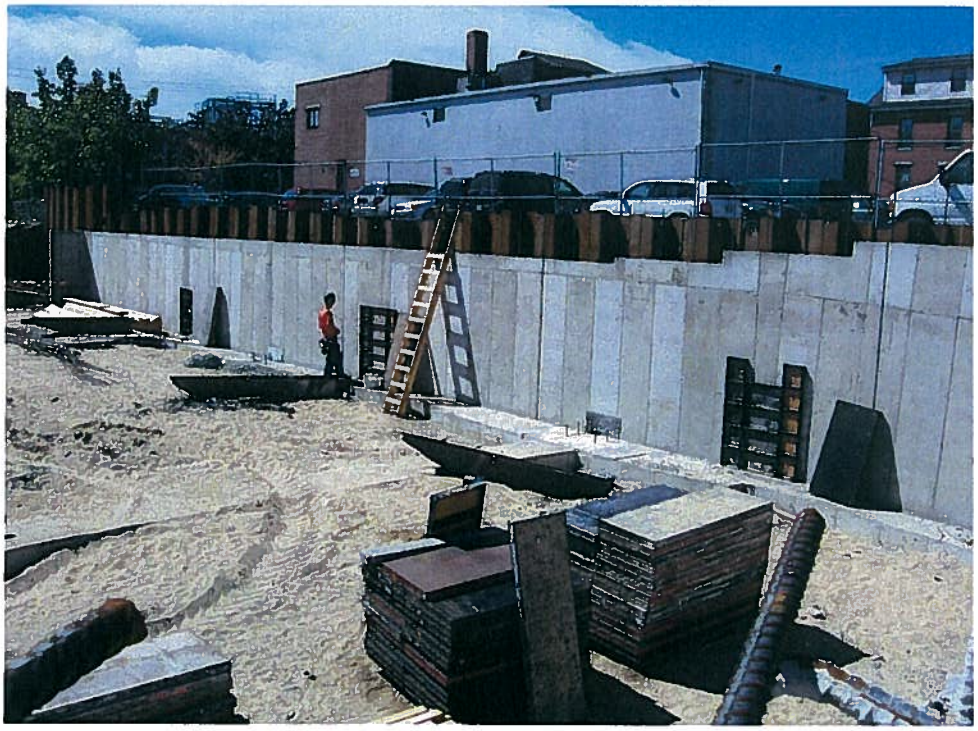
Test No.	Location	Elevation (ft)	Depth Of Test (in)	Maximum Dry Unit Weight[(a)] (pcf)	Optimum Moisture Content (%)	In-place Dry Unit Weight (pcf)	In-place Moisture Content (%)	Compaction		Remarks
								Actual (%)	Required (%)	
133	see Figure 1	15.4	12	116.5	12.0	113.6	1.8	98%	95%	9/4/2007
134	see Figure 1	15.0	12	116.5	12.0	114.6	1.5	98%	95%	9/4/2007
135	see Figure 1	15.0	12	116.5	12.0	113.3	2.0	97%	95%	9/4/2007
136	see Figure 1	16.0	12	114.3	11.7	110.1	1.5	96%	95%	9/7/2007

Additional Remarks:
(a) Maximum dry unit weight represents the laboratory test value corrected for +3/4 material (ASTM ☑ D1557 ☐ D698)

Haley & Aldrich, Inc.

Form 4005

Photograph 1. Removal of rakers for the support of excavation system along column line 1, looking south (9/4/07).



Photograph 2. Forming of cutouts in the foundation wall after removal of the rakers for the support of excavation system along column line 1, looking southwest (9/4/07).

Haley & Aldrich, Inc.

Photograph 3. Removal of the continuous steel waler from the support of excavation system north of the elevator pit in the northeast building corner, looking west (9/4/07).

Photograph 4. Area north of the support of excavation system in the northeast building corner after removal of the concrete jersey barrier deadmen, looking east (9/5/07).