

Structural Special Inspections Report

PEARL PLACE BUILDING 1& 2

Portland, Maine
December 5, 2007

Report prepared by:

Structural Engineer of Record
Becker Structural Engineers, Inc.
75 York Street
Portland, Maine 04101

PEARL PLACE – BUILDINGS 1 & 2

Portland, Maine
November 20, 2007

Table of Contents

Exhibit A

- 01000 Special Inspections - General
 - 01000.1 Structural Statement of Special Inspections
 - 01000.2 List of Agents
 - 01000.3 Final Report of Special Inspections
 - 01000.4 Special Inspector/Agent Report
 - 01000.5 Disclaimers and Qualifications

Exhibit B

- 01000 Special Inspections – Qualifications of Inspectors and Technicians

- 02300 Soil and Foundation Construction
 - 02300.1 Testing Agency Reports

- 03300 Cast-in-Place Concrete
 - 03300.1 BSE Observation Reports
 - 03300.2 Mix Designs/Product Data/Material Certifications
 - 03300.3 Testing Agency Reports

- 05120 Structural Steel
 - 05120.1 BSE Observation Reports
 - 05120.2 Testing Agency Reports

- 06100 Wood Construction & 06190 Wood Trusses
 - 06100.1 BSE Observation Reports

Exhibit C

- 01000 Quality Assurance
 - 01001 Seismic Resistance Checklist and Schedule of Special Inspections
 - 01001.1 Structural
 - 01001.2 Architectural
 - 01001.3 Mechanical
 - 01001.4 Electrical

 - 01002 Wind Requirements Checklist

Exhibit D

Statements of Responsibility

EXHIBIT A

01000 Special Inspections - General

Statement of Special Inspections

Pearl Place Building 1 & 2
Portland, Maine
October 11, 2006

Statement Prepared by
Structural Engineer of Record
Becker Structural Engineers, Inc.
75 York Street
Portland, ME 04101
207. 879. 1838

Owner:
Avesta Pearl Street One, L.P.
307 Cumberland Avenue
Portland, ME 04101
207. 553. 7777

Architect of Record:
Winton Scott Architects
5 Milk Street
Portland, ME 04101
207. 774. 4811

Contractor:
Ledgewood Construction
27 Main Street
South Portland, Maine 04106
207. 767. 1866

Project: Pearl Place Building 1 & 2
Date Prepared: October 5, 2006

Statement of Special Inspections - Exhibit A

Project: Pearl Place Building 1 & 2

Location: Portland, Maine

Owner: Avesta Pearl Street One, L.P.

This Statement of Special Inspections encompass the following discipline:

Structural Mechanical/Electrical/Plumbing

Architectural Other: _____
Design Professional in Responsible Charge: James Fortin, P.E.

Firm Name: Becker Structural Engineers, Portland, ME

(Note: Statement of Special Inspections for other disciplines may be included under a separate cover)

This Statement of Special Inspections is submitted as a condition for permit issuance in accordance with the Special Inspection and Structural Testing requirements of the Building Code. It includes a schedule of Special Inspection services applicable to this project as well as the name of the Structural Special Inspection Coordinator (SSIC) and the identity of other approved agencies to be retained for conducting these inspections and tests.

The Structural Special Inspection Coordinator shall keep records of all inspections and shall furnish inspection reports to the Building Code Official (BCO) and the Structural Registered Design Professional in Responsible Charge (SRDP). Discovered discrepancies shall be brought to the immediate attention of the Contractor for correction. If such discrepancies are not corrected, the discrepancies shall be brought to the attention of the Building Official and the Structural Registered Design Professional in Responsible Charge. The Special Inspection program does not relieve the Contractor of his or her responsibilities.

Interim reports shall be submitted to the Building Official and the Structural Registered Design Professional in Responsible Charge at an interval determined by the SSIC and the BCO.

A Final Report of Special Inspections documenting completion of all required Special Inspections, testing and correction of any discrepancies noted in the inspections shall be submitted to the BCO prior to issuance of a Certificate of Use and Occupancy.

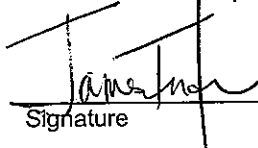
Job site safety and means and methods of construction are solely the responsibility of the Contractor.

Interim Report Frequency: Upon request of Building Official _____ or per attached schedule.

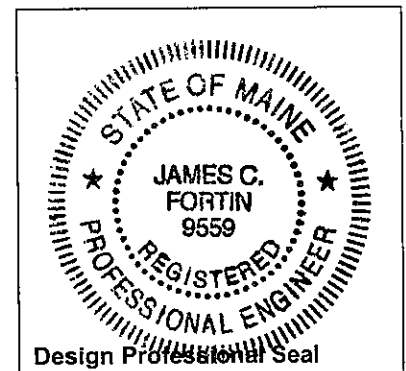
Prepared by:

James Fortin, P.E.

(type or print name of the Structural Registered Design Professional in Responsible Charge)

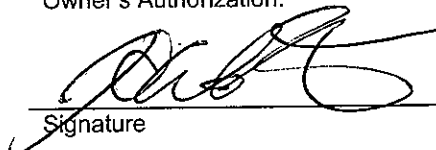

Signature

10/11/06
Date



Owner's Authorization:

Building Code Official's Acceptance:


Signature 10/16/06
Date

Signature Date

Statement of Special Inspections (Continued) - Exhibit A

List of Agents

Project: Pearl Place Building 1 & 2

Location: Portland, Maine

Owner: Avesta Pearl Street One, L.P.

This Statement of Special Inspections encompass the following discipline:

- Structural Mechanical/Electrical/Plumbing
 Architectural Other: _____

(Note: Statement of Special Inspections for other disciplines may be included under a separate cover)

This Statement of Special Inspections / Quality Assurance Plan includes the following building systems:

- | | |
|--|---|
| <input checked="" type="checkbox"/> Soils and Foundations | <input type="checkbox"/> Spray Fire Resistant Material |
| <input checked="" type="checkbox"/> Cast-in-Place Concrete | <input type="checkbox"/> Cold-Formed Steel Framing |
| <input type="checkbox"/> Precast Concrete System | <input type="checkbox"/> Exterior Insulation and Finish |
| <input checked="" type="checkbox"/> Masonry Systems | <input type="checkbox"/> Mechanical & Electrical |
| <input checked="" type="checkbox"/> Structural Steel | <input type="checkbox"/> Architectural Systems |
| <input checked="" type="checkbox"/> Wood Construction | <input type="checkbox"/> Special Cases |

Special Inspection Agencies	Firm	Address, Telephone, e-mail
1. Structural Special Inspection Coordinator (SSIC)	Becker Structural Engineers (BSE) James Fortin, P.E.	75 York Street Portland, ME 04107 phone: (207) 879-1838 fax: (207) 879-182 jim@beckerstructural.com
2. Special Inspector (SI 1)	Becker Structural Engineers (BSE) James Fortin, P.E.	75 York Street Portland, ME 04107 phone: (207) 879-1838 fax: 207-879-1822 jim@beckerstructural.com
3. Special Inspector (SI 2)	S.W.Cole Engineering, Inc. Timothy Boyce, P.E.	286 Portland Road Gray, ME 04039 phone: (207) 657-2866 fax: (207) 657-2840 tboyce@swcole.com
4. Testing Agency (TA 1)	S.W.Cole Engineering, Inc. Timothy Boyce, P.E.	286 Portland Road Gray, ME 04039 phone: (207) 657-2866 fax: (207) 657-2840 tboyce@swcole.com
5. Testing Agency (TA 2)		
6. Other (O1)		

Note: The inspectors and testing agencies shall be engaged by the Owner or the Owner's Agent, and not by the Contractor or Subcontractor whose work is to be inspected or tested. Any conflict of interest must be disclosed to the Building Official, prior to commencing work.

Project: Pearl Place Building 1 & 2
Date Prepared: October 11, 2006

Statement of Special Inspections (Continued) - Exhibit A

Final Report of Special Inspections (SSIC/SI 1)

[To be completed by the Structural Special Inspections Coordinator (SSIC/SI 1). Note that all Agent's Final Reports must be received prior to issuance.]

Project: Pearl Place -
Location: Portland, Maine
Owner: Avesta Pearl Street One, L.P.
Owner's Address:

Architect of Record: Winton Scott, R.A. Winton Scott Architects
(name) (firm)

Structural Registered Design
Professional in Responsible Charge: James Fortin, P.E. Becker Structural Engineers
(name) (firm)

To the best of my information, knowledge and belief, the Special Inspections required for this project, and itemized in the *Statement of Special Inspections* submitted for permit, have been performed and all discovered discrepancies have been reported and resolved other than the following:

Comments:

- *Inspection of the French Balcony attachments to the building has not been completed as the balconies have not been installed. Once the balconies are installed, this inspection must be scheduled and completed. Results will be forwarded as a supplement to the Final Special Inspections Report once completed.*

(Attach continuation sheets if required to complete the description of corrections.)

Interim reports submitted prior to this final report form a basis for and are to be considered an integral part of this final report.

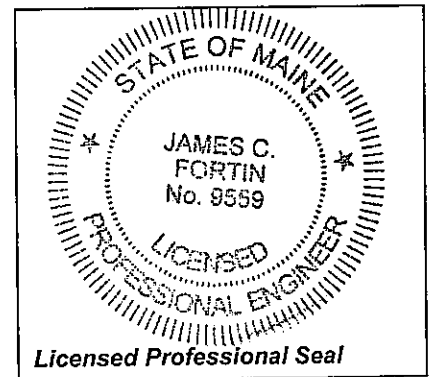
Respectfully submitted,
Structural Special Inspection Coordinator

JAMES FORTIN, P.E.
(Type or print name)

BECKER STRUCTURAL ENGINEERS
(Firm Name)

James Fortin
Signature

12/5/07
Date



Project: Pearl Place Building 1 & 2
Date Prepared: October 11, 2006

SWCOLE - GEOTECHNICAL ENGINEER

Statement of Special Inspections (Continued) - Exhibit A
Special Inspector's/Agent's Final Report

Project: Pearl Place Building 1 & 2
Special Inspector or Agent: Matthew P. Lilley SW Cole Engineering, Inc.
(name) (firm)
Designation:

To the best of my information, knowledge and belief, the Special Inspections or testing required for this project, and designated for this Inspector/Agent in the *Statement of Special Inspections* submitted for permit, have been performed and all discovered discrepancies have been reported and resolved other than the following:

Comments:

(Attach continuation sheets if required to complete the description of corrections.)

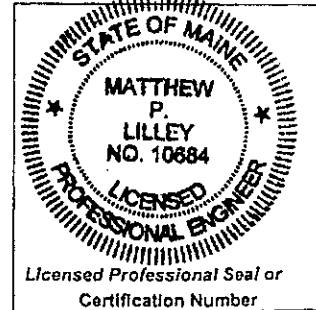
Interim reports submitted prior to this final report form a basis for and are to be considered an integral part of this final report.

Respectfully submitted,
Special Inspector or Agent:

Matthew P. Lilley
(Type or print name)

Matthew P. Lilley
Signature

11/19/07
Date



Building 2 - Exhibit A to follow.

Project: Pearl Place Building 1 & 2
Date Prepared: October 11, 2006

S. W. COLE - TESTING AGENCY

(STAMP NOT REQUIRED)

Statement of Special Inspections (Continued) - Exhibit A
Special Inspector's/Agent's Final Report

Project: Pearl Place Building 1 & 2

Special Inspector or Agent:

Roger Domingo
(name)

SW Cole Engineering, Inc
(firm)

Designation:

To the best of my information, knowledge and belief, the Special inspections or testing required for this project, and designated for this Inspector/Agent in the *Statement of Special Inspections* submitted for permit, have been performed and all discovered discrepancies have been reported and resolved other than the following:

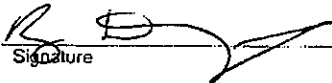
Comments:

(Attach continuation sheets if required to complete the description of corrections.)

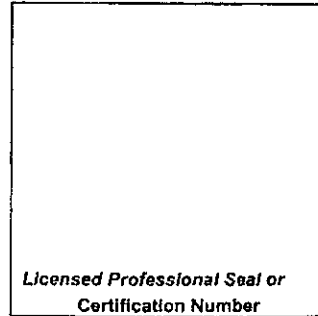
Interim reports submitted prior to this final report form a basis for and are to be considered an integral part of this final report.

Respectfully submitted,
Special Inspector or Agent:

Roger Domingo
(Type or print name)


Signature

11/19/07
Date



01000.5 Disclaimers and Qualifications

The program of Structural/Special Tests and Inspections does not relieve the Contractor or its Subcontractors of their responsibilities and obligations for quality control of the work, for any design work which is included in the scope of services, and for full compliance with the requirements of the Construction Documents. Furthermore, the detection of, or the failure to detect, deficiencies or defects in work during testing and inspection conducted pursuant to the Program does not relieve the Contractor or its subcontractors of their responsibility to correct all deficiencies or defects, whether detected or undetected, in all parts of work, and to otherwise comply with all requirements of the Construction Documents. No warrantee is expressed or implied by the issuance of this document. Additional disclaimers and/or qualifications may be included in the Owner-Special Inspection agreement.

EXHIBIT B

01000 Qualifications of Inspectors and Technicians

Schedule of Special Inspections - Exhibit B

Qualifications of Inspectors and Testing Technicians

The qualifications of all personnel performing Special Inspection and testing activities are subject to the approval of the Building Official. The credentials of all Inspectors and testing technicians shall be provided if requested.

Key for Minimum Qualifications of Inspection Agents:

When the Registered Design Professional in Responsible Charge deems it appropriate that the individual performing a stipulated test or inspection have a specific certification or license as indicated below, such designation shall appear below the *Agency Number* on the Schedule.

PE/SE	Structural Engineer – a licensed SE or PE specializing in the design of building structures
PE/GE	Geotechnical Engineer – a licensed PE specializing in soil mechanics and foundations
EIT	Engineer-In-Training – a graduate engineer who has passed the Fundamentals of Engineering examination

American Concrete Institute (ACI) Certification

ACI-CFTT	Concrete Field Testing Technician – Grade 1
ACI-CCI	Concrete Construction Inspector
ACI-LTT	Laboratory Testing Technician – Grade 1&2
ACI-STT	Strength Testing Technician

American Welding Society (AWS) Certification

AWS-CWI	Certified Welding Inspector
AWS/AISC-SSI	Certified Structural Steel Inspector

American Society of Non-Destructive Testing (ASNT) Certification

ASNT	Non-Destructive Testing Technician – Level II or III.
------	---

International Code Council (ICC) Certification

ICC-SMSI	Structural Masonry Special Inspector
ICC-SWSI	Structural Steel and Welding Special Inspector
ICC-SFSI	Spray-Applied Fireproofing Special Inspector
ICC-PCSI	Prestressed Concrete Special Inspector
ICC-RCSI	Reinforced Concrete Special Inspector

National Institute for Certification in Engineering Technologies (NICET)

NICET-CT	Concrete Technician – Levels I, II, III & IV
NICET-ST	Soils Technician - Levels I, II, III & IV
NICET-GET	Geotechnical Engineering Technician - Levels I, II, III & IV

Exterior Design Institute (EDI) Certification

EDI-EIFS	EIFS Third Party Inspector
----------	----------------------------

Other

EXHIBIT B

02300 Soil and Foundation Construction

SW COLE

Project: Pearl Place Building 1 & 2
 Date Prepared: October 11, 2006

Schedule of Special Inspections – Exhibit B
SOILS & FOUNDATION CONSTRUCTION

VERIFICATION AND INSPECTION	Y/N	EXTENT: CONTINUOUS, PERIODIC, SUBMITTAL, OR NONE	COMMENTS	AGENT QUALIFICATION	DATE	REV
IBC Section 1704.7, 1704.8, 1704.9						
1. Verify existing soil conditions, fill placement and load bearing requirements						
a. Prior to placement of prepared fill, determine that the site has been prepared in accordance with the approved soils report.	Y	P	IBC 1704.7.1	S12		
b. During placement and compaction of fill material, verify material being used and maximum lift thickness comply with the approved soils report.	Y	P	IBC 1704.7.2	S12		
c. Test in-place dry density of compacted fill complies with the approved soils report.	Y	P	IBC 1704.7.2	TAI		
2. Pier foundations:						
a. Observe and record procedures for static load testing of piles.	N/A		IBC 1704.8			
b. Observe and record procedures for dynamic load testing of piles.	N/A					
c. Record installation of each pile and results of load test. Include cutoff and tip elevations of each pile relative to permanent reference.	N/A					
d. Test welded splices of steel piles	N/A		AWS D1.1			
3. Pier foundations: Verify installation of pier foundations for buildings assigned to Seismic Design Category C, D, E or F.	N/A		IBC 1704.9			
a. Verify pier diameter and length	N/A					
b. Verify pier embedment (socket) into bedrock	N/A					
c. Verify suitability of end bearing strata	N/A					

Soils and Foundations construction has been reviewed in accordance with sections 1704.7, 8 & 9 of the IBC Code

Special Inspector: *Matthew P. Kelly* Date: 11/19/07

Building 2 Exhibit B to follow.



• Geotechnical Engineering • Field & Lab Testing • Scientific & Environmental Consulting

MEMORANDUM

To: Mike Myatt / Avesta
From: Matthew Lilley / S. W. COLE ENGINEERING, INC.
Project No.: 04-1212.2
Date: 2/8/2007
Subject: Unsuitable Subgrade Overexcavation and Replacement
Pearl Place

Subgrade in the area on the west side of the interior wall in building #2 (known on site as the "horseshoe area") was first noticed to be pumping on about 12-13-06 and reported in a 12-13-06 Daily Field Report as well as discussed on site. S. W. COLE ENGINEERING, INC. recommended over-excavating the area and placing new geotextile and crushed stone. Colex (excavation contractor) made the repair on 12-15-06 and the footing was placed on 12-21-06. A S. W. COLE ENGINEERING, INC. representative again noticed that the subgrade beside the footing was pumping on 12-28-06 and was reported in a 12-28-06 Daily Field Report. The pumping subgrade was observed by a S. W. COLE ENGINEERING, INC. geotechnical engineer on 1-4-07. We discussed with Ledgewood and Colex on site on 1-4-07 that the subgrade should be overexcavated, including below the foundation and the soils replaced with a lean concrete fill. Repair of this area was brought to the attention of Ledgewood and Colex several times since then including on 1-31-07 when Colex had excavating equipment in the area. To date the subgrade in this area has not been repaired.

On 2-5-07, a meeting was held at the site at the request of Ron Norton. Frozen soil issues were discussed (as summarized by a Becker Structural Engineers memo dated 1-23-07). During the meeting, the group also discussed the "horseshoe area" subgrade. Since the original recommendation of overexcavation and replacement with a concrete fill was not done and since access to the area is more difficult now, an alternative discussed was to reduce the bearing contact pressure of the footing in that area by enlarging the footing. We understand that Becker Structural Engineers is going to assess that option. If this option is chosen, new footing subgrade areas should consist of at least 12 inches of crushed stone overlying geotextile fabric overlying undisturbed native soils. Also, a discussion was held during the meeting that Ron would also ask the project civil engineer if a perforated underdrain could be installed in the horseshoe area with an invert about 12 inches below the footing to help drain groundwater in this area. A S. W. COLE ENGINEERING, INC. representative should be on-site to observe any subgrade repairs.

c: Ron Norton / Avesta
Jim Fortin / Becker Structural Engineers
Rick Nanartowich / Ledgewood
Clint Gendreau / Ledgewood
Pandika Pleqi / Winton Scott Architects
David Schoenherr / Maine Housing



S.W. COLE
ENGINEERING, INC.

• Geotechnical Engineering • Field & Lab Testing • Scientific & Environmental Consulting

MEMORANDUM

To: Mike Myatt / Avesta
From: Matthew Lilley / S. W. COLE ENGINEERING, INC.
Project No.: 04-1212.2
Date: 4/5/2007
Subject: Proposed Building 2 patio at Unit 2-105
Pearl Place

We have reviewed the detail (SSK-43) provided by Becker Structural Engineers, Inc. for the proposed patio foundation at unit 2-105. The detail appears acceptable. We offer the following comments:

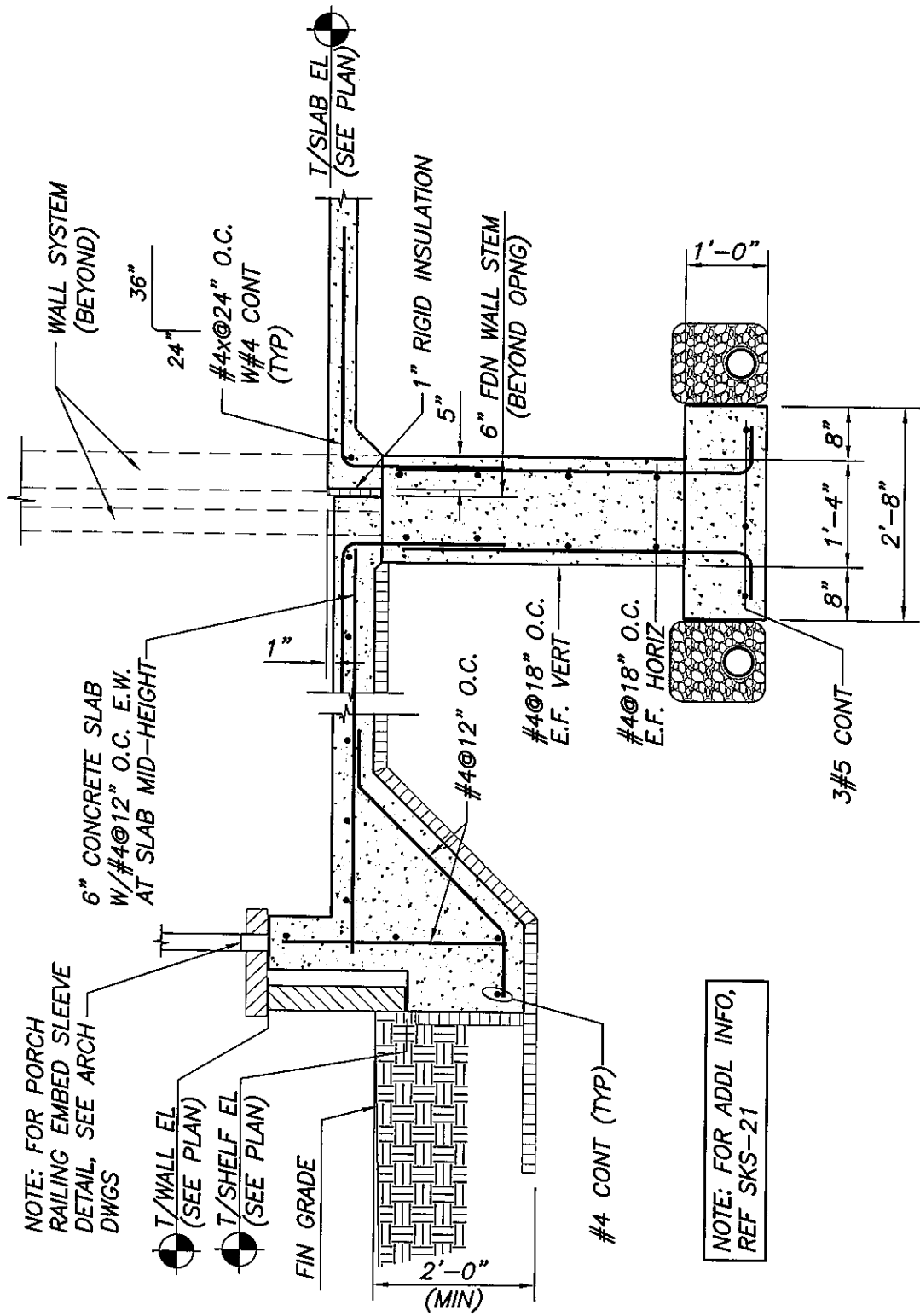
- Compacted structural fill would also be acceptable as fill below the patio slab.
- The 2 inches of rigid insulation should consist of two 1 inch thick pieces with the joints between pieces offset.

c: Ron Norton / Avesta
Jim Fortin / Becker Structural Engineers
Rick Nanartowich / LedgeWood
Clint Gendreau / LedgeWood
Pandika Pleqi / Winton Scott Architects
David Schoenherr / Maine Housing

GRAY, ME OFFICE

286 Portland Road, Gray, ME 04039 • Tel (207) 657-2866 • Fax (207) 657-2840 • E-Mail infogray@swcole.com • www.swcole.com

Other offices in Augusta, Bangor and Caribou, Maine & in Somersworth, New Hampshire



NOTE: FOR PORCH RAILING EMBED SLEEVE DETAIL, SEE ARCH DWGS

T/WALL EL (SEE PLAN)
T/SHELF EL (SEE PLAN)

FIN GRADE

2'-0" (MIN)

#4 CONT (TYP)

NOTE: FOR ADDL INFO, REF SKS-21

DETAIL AT BLDG 2, UNIT
2-105 PATIO ONLY

BECKER
structural engineers, inc.

75 York Street
Portland, ME 04101-4701
info@beckerstructural.com

Tel 207-879-1838
Fax 207-879-1822
www.beckerstructural.com

Designed	JCF
Drawn	APP
Checked	PBB
Scale	NOTED
Date	3/26/07

Pearl Place
Building 1&2
Portland, Maine

Becker Job Number
1481

SSK-43



• Geotechnical Engineering • Field & Lab Testing • Scientific & Environmental Consulting

MEMORANDUM

To: Mike Myatt / Avesta
From: Roger Domingo / S. W. COLE ENGINEERING, INC.
Project No.: 04-1212.2
Date: May 1, 2007
Subject: In-place concrete strength gain
Building #1 & Building #2
Pearl Place

As requested, on February 6, 2007 we performed in-place concrete strength tests in Building #1 and Building #2 at the Pearl Place project site. The purpose of the testing was to determine the in-place concrete strength gain relative to curing methods used during cold weather conditions. The concrete in question was placed in the elevator pit and east perimeter walls of Building #2 on January 24th and west perimeter wall of Building #1 on January 25th. The curing methods observed by SWCE immediately following the placements included the use of heater hoses and insulation blankets partially draped over the forms. The specified concrete strength requirement based on laboratory cured compressive strength tests is 3000 psi.

The results of the in-place concrete strength tests versus the laboratory cured concrete strength tests are shown in the table below:

Location	Date Placed	In-place Strength (psi)	7 Day Laboratory Strength (psi)	28 Day Laboratory Strength (psi)
Building #2	1-24-2007	1700	2390	3460
Building #1	1-25-2007	2200	3770	4540

The in-place concrete strength determination was performed in general accordance with ASTM C-803 "Standard Test Method for Penetration Resistance of Hardened Concrete". While reviewing the data in the table, it should be noted that the method used to determine the in-place concrete strength is an estimate of the actual concrete compressive strength.

Based on the results of all the strength tests, it appears the in-place strength lags behind the laboratory strength. However, it also appears the curing methods used allowed the concrete to gain initial strength (500 psi) and more than half of the required strength before cold weather could adversely effect the concrete.

Based on conversations with Jim Fortin, we recommend additional in-place strength tests.



MEMORANDUM

To: Mike Myatt / Avesta
From: Roger Domingo / S. W. COLE ENGINEERING, INC.
Project No.: 04-1212.2
Date: May 15, 2007
Subject: Retests
In-place concrete strength gain
Building #1 & Building #2
Pearl Place

As requested, on May 5, 2007 we performed additional in-place concrete strength tests in Building #1 and Building #2 at the Pearl Place project site.

The results of the in-place concrete strength tests performed on February 7, 2007 and May 7, 2007 are shown in the table below:

Location	Date Placed	In-place Strength 2-7-2007 (psi)	In-place Strength 5-7-2007 (psi)
Building #2	1-24-2007	1700	2900
Building #1	1-25-2007	2200	2900

The in-place concrete strength determination was performed in general accordance with ASTM C-803 "Standard Test Method for Penetration Resistance of Hardened Concrete". While reviewing the data in the table, it should be noted that the method used to determine the in-place concrete strength is an estimate of the actual concrete compressive strength.



• Geotechnical Engineering • Field & Lab Testing • Scientific & Environmental Consulting

Report of Concrete Core Compressive Strength Test ASTM C42

Project No.: 04-1212.2 Project Name: Pearl Place

Client: Avesta Housing Description: _____

Date Tested: June 4, 2007 Design Strength: 3000 Supplier: Dragon Products

Core No.	6812G	6813G	6814G	6815G	6816G	6817G
Diameter (inches)	3.75	3.75	3.75	3.75	3.75	3.75
Area (sq in)	11.04	11.04	11.04	11.04	11.04	11.04
Length (inches)	4.38	4.81	5.0	4.75	4.94	4.81
Capped Length (inches)						
Load (kips)	59.82	53.87	59.01	51.53	52.16	48.02
Initial Strength (psi)	5418	4879	5345	4668	4725	4350
Length/Diameter	1.17	1.28	1.33	1.27	1.24	1.28
Adj. For L/D = 2	.91	.94	.94	.94	.93	.94
Strength (psi)	4930	4590	5020	4390	4390	4090
Moisture Condition	Dry	Dry	Dry	Dry	Dry	Dry
Size Aggregate (inches)	¾	¾	¾	¾	¾	¾
Fracture and Reinforcement Location						

Remarks: Cores 6812G - 6814G Building 1
Cores 6815G - 6817G Building 2

By: _____
 Michael F. Bisson

SOILS OBSERVATION REPORT

 Project Name: Pearl Place Housing
 Client: Avesta Housing
 Client's Rep.: Mike Myatt
 Contractor: Hedgewood

 Project No: 04-1212.2
 Date: 12/13/06
 Page: 1 of 1
 Technician:

Weather			Site Conditions		Materials Used	
<input type="checkbox"/> Clear	<input type="checkbox"/> Snow	<input type="checkbox"/> Warm	<input type="checkbox"/> Clear	<input type="checkbox"/> Dusty	<input type="checkbox"/> Site Fill	<input type="checkbox"/> Non Frost Susceptible
<input checked="" type="checkbox"/> Overcast	<input type="checkbox"/> Fog	<input type="checkbox"/> Hot	<input checked="" type="checkbox"/> Muddy	<input type="checkbox"/> _____	<input type="checkbox"/> Utility Bedding	<input type="checkbox"/> Subbase
<input type="checkbox"/> Rain	<input type="checkbox"/> Cold	<input type="checkbox"/> Windy	<input type="checkbox"/> Frozen	Temperatures: _____	<input checked="" type="checkbox"/> Base	<input type="checkbox"/> _____

Soils Worked Performed:

<input type="checkbox"/> Site Prep (Sect. 2230)	<input checked="" type="checkbox"/> Building Earthwork (Sect. 2315)	<input type="checkbox"/> Earthwork (Sect. 2300)	<input type="checkbox"/> Utilities Earthwork (Sect. 2316)	<input type="checkbox"/> Planting Soils (Sect. 2310)	<input type="checkbox"/> _____
--	--	--	--	---	--------------------------------

Compaction Equipment Used:

<input type="checkbox"/> Large Roller	<input type="checkbox"/> Small Roller	<input type="checkbox"/> Trench Roller	<input type="checkbox"/> Large Plate Tamp
<input type="checkbox"/> Small Tamp	<input type="checkbox"/> Jumping Jack	<input type="checkbox"/> _____	<input type="checkbox"/> _____

SOILS OBSERVATIONS	Observed		Comments
Site Preparation	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Fill Placement:	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A
Material Type (Proper material used for construction)	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
Lift Size	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
Compaction	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
In-place Densities	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
In-place Density Frequency	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
NON-CONFORMANCE ITEMS OBSERVED			
Non-conformance item description:	Spongy material beneath building footing		
Action taken by SWCE:	Notified hedgewood & Colex		
Person(s) Notified:	Rick and Jason		

Notes:

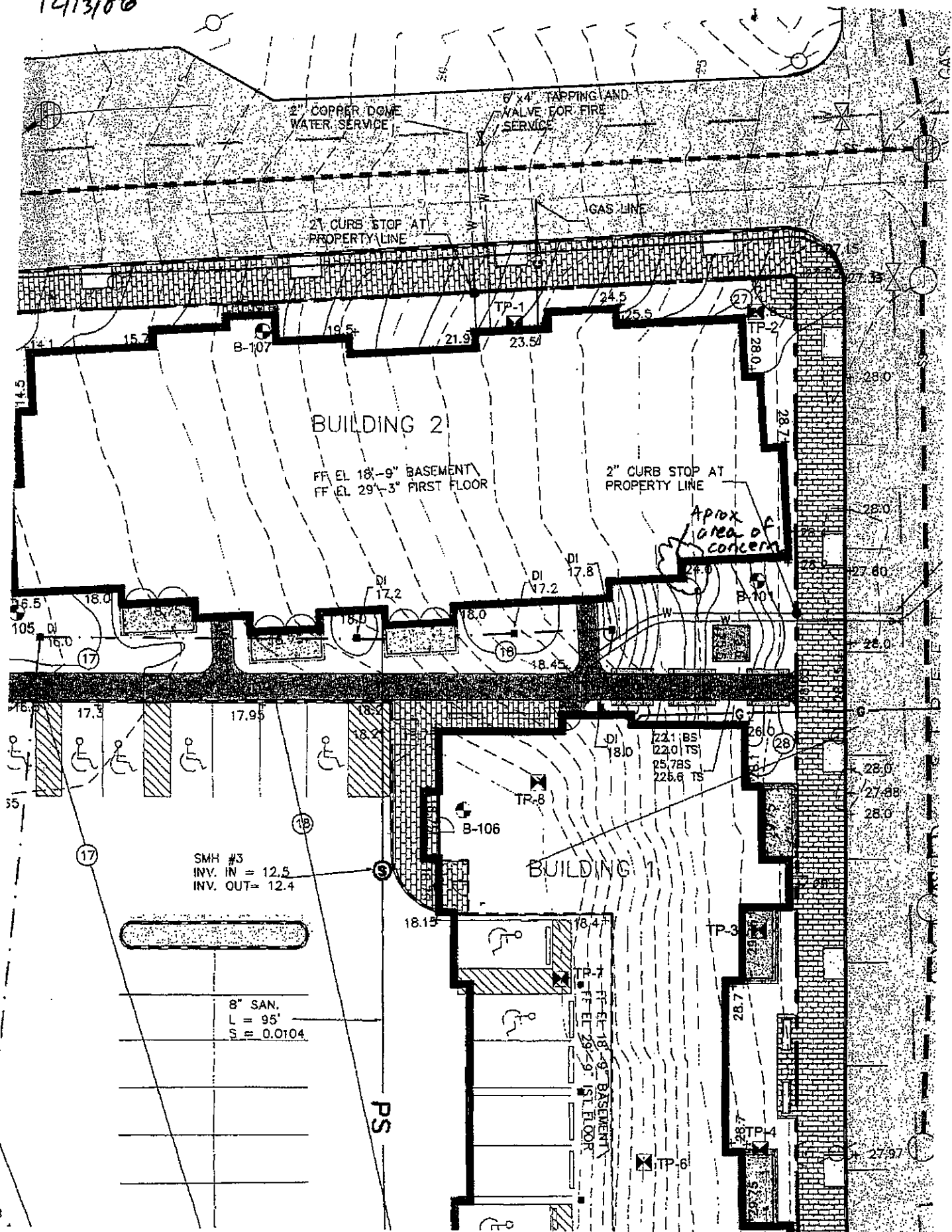
Observed vastable "spongy" soils beneath the south footing of building #2. Approximate 30' from corner of building on Oxford St. Colex was asked to over excavate and fill void with crushed stone. As of 12/13/06 this had not been done.

 ATTACHMENTS Y N

pictures in file

 SWCE REPRESENTATIVE: PSO
RSJ

12/13/00



2" COPPER DOME WATER SERVICE

6" x 4" TAPPING AND VALVE FOR FIRE SERVICE

2" CURB STOP AT PROPERTY LINE

GAS LINE

BUILDING 2

FF EL 18'-9" BASEMENT
FF EL 29'-3" FIRST FLOOR

2" CURB STOP AT PROPERTY LINE

Aprox Area of concern

SMH #3
INV. IN = 12.5
INV. OUT = 12.4

8" SAN.
L = 95'
S = 0.0104

BUILDING 1

FF EL 18'-9" BASEMENT
FF EL 29'-9" 1ST FLOOR

PS

GAS

GAS

GAS

GAS

GAS

GAS

GAS

GAS

GAS

GAS

GAS

GAS

GAS

GAS

GAS

GAS



SOILS OBSERVATION REPORT

Project Name: Pearl Place Housing
 Client: Avesta
 Client's Rep.: _____
 Contractor: LedgeWood

Project No: 04-1212.2
 Date: 12/14/06
 Page: 1 of 1
 Technician: PJD

Weather			Site Conditions		Materials Used	
<input checked="" type="checkbox"/> Clear	<input type="checkbox"/> Snow	<input checked="" type="checkbox"/> Warm	<input type="checkbox"/> Clear	<input type="checkbox"/> Dusty	<input checked="" type="checkbox"/> Site Fill	<input type="checkbox"/> Non-Frost Susceptible
<input type="checkbox"/> Overcast	<input type="checkbox"/> Fog	<input type="checkbox"/> Hot	<input checked="" type="checkbox"/> Muddy	<input type="checkbox"/> _____	<input type="checkbox"/> Utility Bedding	<input checked="" type="checkbox"/> Subbase
<input type="checkbox"/> Rain	<input type="checkbox"/> Cold	<input type="checkbox"/> Windy	<input type="checkbox"/> Frozen	Temperatures: _____	<input type="checkbox"/> Base	<input type="checkbox"/> _____

Soils Worked Performed:

<input type="checkbox"/> Site Prep (Sect. 2230)	<input type="checkbox"/> Earthwork (Sect. 2300)	<input type="checkbox"/> Planting Soils (Sect. 2310)
<input checked="" type="checkbox"/> Building Earthwork (Sect. 2315)	<input type="checkbox"/> Utilities Earthwork (Sect. 2316)	<input type="checkbox"/> _____

Compaction Equipment Used:

<input checked="" type="checkbox"/> Large Roller	<input type="checkbox"/> Small Roller	<input type="checkbox"/> Trench Roller	<input checked="" type="checkbox"/> Large Plate Tamp
<input type="checkbox"/> Small Tamp	<input type="checkbox"/> Jumping Jack	<input type="checkbox"/> _____	<input type="checkbox"/> _____

SOILS OBSERVATIONS	Observed		Comments
Site Preparation	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	FOOTING EXCAVATION
Fill Placement:	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Material Type (Proper material used for construction)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Gravel Borrow
Lift Size	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	2'
Compaction	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	LARGE ROLLER
In-place Densities	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
In-place Density Frequency	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
NON-CONFORMANCE ITEMS OBSERVED			
Non-conformance item description:			
Action taken by SWCE:			
Person(s) Notified:			

Notes:
 Colex began excavating the footing trench for building #1. Excavation began at the south west corner adjacent to Oxford St. Historic rubble was found just below current ground elevation to approximate elevation 17.5'. Unsuitable soils were removed and excavation continued until native materials were encountered. Subgrade fill (Gravel Borrow) was placed in 2 lifts until desired subgrade elevation was met.

ATTACHMENTS YES NO
 pictures in file

SWCE REPRESENTATIVE: PJD

1207

SOILS OBSERVATION REPORT

 Project Name: Pearl Place Housing
 Client: Avesta
 Client's Rep.: Mike Myatt
 Contractor: LedgeWood

 Project No: 04-1212.2
 Date: 12/15/06
 Page: 1 of 1
 Technician: PJO

Weather			Site Conditions		Materials Used	
<input type="checkbox"/> Clear	<input type="checkbox"/> Snow	<input type="checkbox"/> Warm	<input type="checkbox"/> Clear	<input type="checkbox"/> Dusty	<input checked="" type="checkbox"/> Site Fill	<input type="checkbox"/> Non Frost Susceptible
<input checked="" type="checkbox"/> Overcast	<input type="checkbox"/> Fog	<input type="checkbox"/> Hot	<input checked="" type="checkbox"/> Muddy	<input type="checkbox"/>	<input type="checkbox"/> Utility Bedding	<input type="checkbox"/> Subbase
<input type="checkbox"/> Rain	<input type="checkbox"/> Cold	<input type="checkbox"/> Windy	<input type="checkbox"/> Frozen	Temperatures: <u>43°</u>	<input type="checkbox"/> Base	<input type="checkbox"/>

Soils Worked Performed:

<input type="checkbox"/> Site Prep (Sect. 2230)	<input type="checkbox"/> Earthwork (Sect. 2300)	<input type="checkbox"/> Planting Soils (Sect. 2310)
<input type="checkbox"/> Building Earthwork (Sect. 2315)	<input type="checkbox"/> Utilities Earthwork (Sect. 2316)	<input type="checkbox"/>

Compaction Equipment Used:

<input checked="" type="checkbox"/> Large Roller	<input type="checkbox"/> Small Roller	<input type="checkbox"/> Trench Roller	<input type="checkbox"/> Large Plate Tamp
<input type="checkbox"/> Small Tamp	<input type="checkbox"/> Jumping Jack	<input type="checkbox"/>	<input type="checkbox"/>

SOILS OBSERVATIONS	Observed		Comments
Site Preparation	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Fill Placement:	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Material Type (Proper material used for construction)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Gravel Borrow
Lift Size	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	2'
Compaction	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
In-place Densities	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
In-place Density Frequency	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
NON-CONFORMANCE ITEMS OBSERVED			
Non-conformance item description:	Sump, plastic subgrade		
Action taken by SWCE:	Asked Colex to remove and re-grade		
Person(s) Notified:	Jason Cole - Colex		

Notes:
 Colex continued to excavate along the SW footing trench. Suitable material was encountered at shallow depths as Colex worked towards building #1. Excavation also took place on the interior of SW corner. Colex removed historic rubble and ash until a stiff gray clay was found. An old brick septic tank was found at elevation 17'. Approx 20 gallons of "sludge" was removed and consolidated with the ash. Footing trench in building #2 was re-graded, stoned and pumped clean of standing water in hopes of stabilizing subgrade.

 ATTACHMENTS Y N
 Pictures in file

 SWCE REPRESENTATIVE: PJO
REX



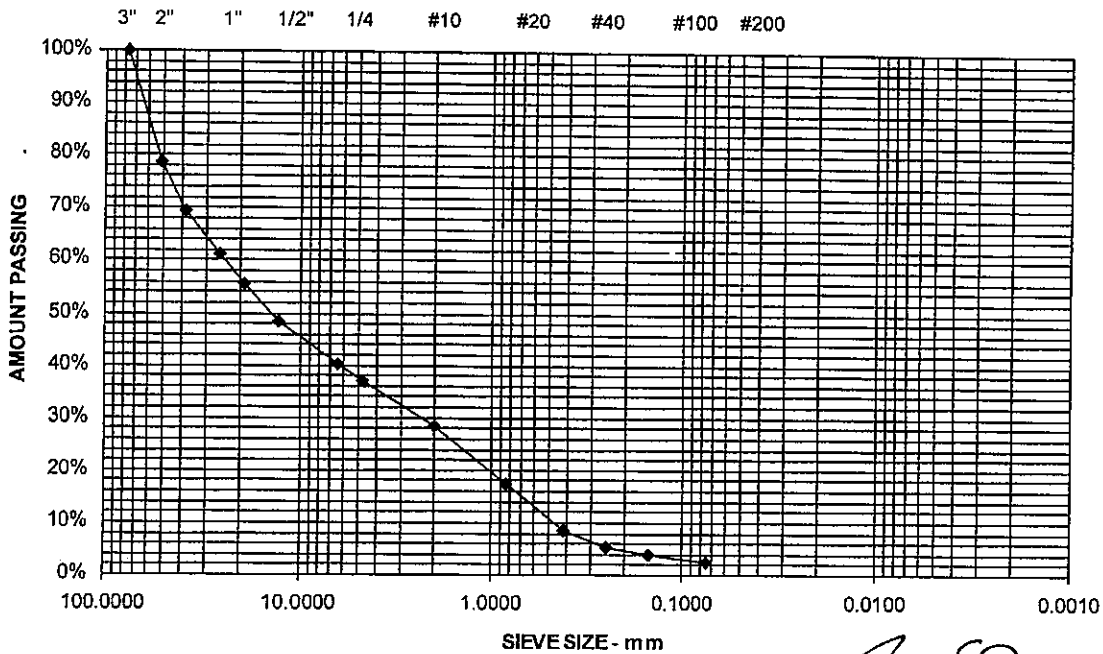
Report of Gradation

ASTM C-117 & C-136

Project Name PORTLAND - PEARL PLACE PHASE I DEVELOPMENT - MATERIALS TESTING
 Client AVESTA HOUSING
 Material Type STRUCTURAL FILL
 Material Source ON SITE

Project Number 04-1212.2
 Lab ID 6264G
 Date Received 12/15/2006
 Date Complete 12/15/2006
 Tested By JUSTIN BISSON

<u>STANDARD</u> <u>DESIGNATION (mm/μm)</u>	<u>SIEVE SIZE</u>	<u>AMOUNT PASSING (%)</u>	<u>STRUCTURAL FILL</u> <u>SPECIFICATIONS (%)</u>
150 mm	6"	100	
125 mm	5"	100	
100 mm	4"	100	100
75 mm	3"	100	90 - 100
50 mm	2"	79	
38.1 mm	1-1/2"	69	
25.0 mm	1"	61	
19.0 mm	3/4"	55	
12.5 mm	1/2"	48	
6.3 mm	1/4"	40	25 - 90
4.75 mm	No. 4	37	
2.00 mm	No. 10	28	
850 μm	No. 20	18	
425 μm	No. 40	9	0 - 30
250 μm	No. 60	5	
150 μm	No. 100	4	
75 μm	No. 200	2.6	0.0 - 5.0



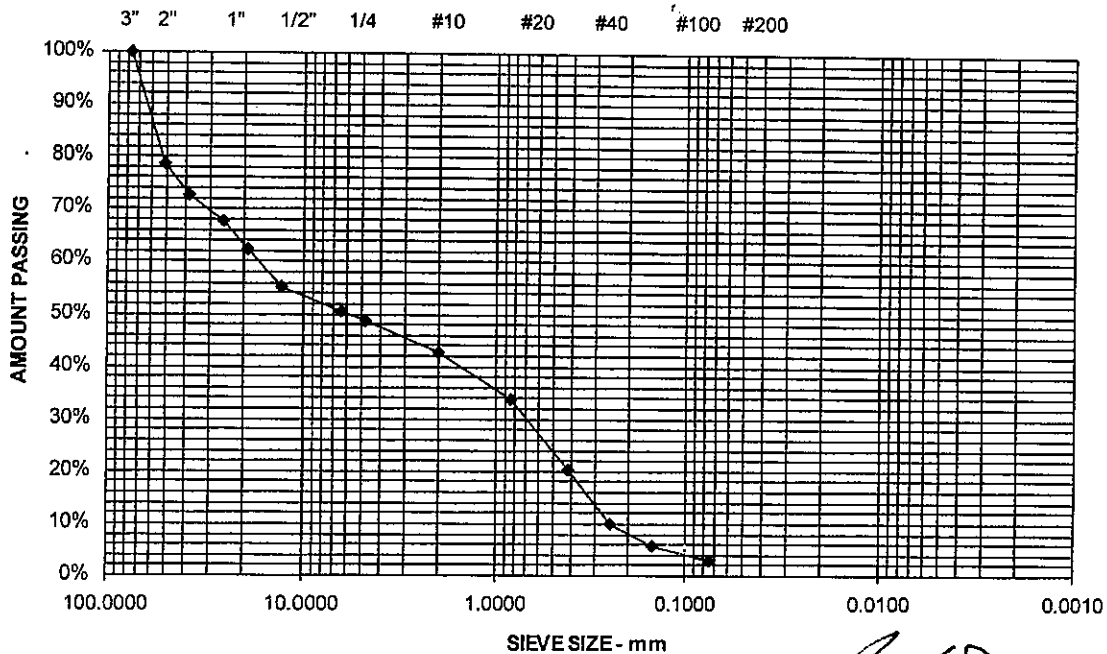
Comments

R. E. Domingo
 Roger E. Domingo

Project Name PORTLAND - PEARL PLACE PHASE I DEVELOPMENT - MATERIALS TESTING
 Client AVESTA HOUSING
 Material Type GRAVEL BORROW
 Material Source ON-SITE STOCKPILE

Project Number 04-1212.2
 Lab ID 6263G
 Date Received 12/15/2006
 Date Complete 12/15/2006
 Tested By JUSTIN BISSON

<u>STANDARD</u> <u>DESIGNATION (mm/um)</u>	<u>SIEVE SIZE</u>	<u>AMOUNT PASSING (%)</u>	<u>MDOT 703.20</u> <u>SPECIFICATIONS (%)</u>
150 mm	6"	100	100
125 mm	5"	100	
100 mm	4"	100	
75 mm	3"	100	
50 mm	2"	79	
38.1 mm	1-1/2"	73	
25.0 mm	1"	68	
19.0 mm	3/4"	62	
12.5 mm	1/2"	55	
6.3 mm	1/4"	51	0 - 70
4.75 mm	No. 4	49	
2.00 mm	No. 10	43	
850 um	No. 20	34	
425 um	No. 40	20	
250 um	No. 60	10	
150 um	No. 100	6	
75 um	No. 200	2.9	0.0 - 10.0



Comments


 Roger E. Domingo



SOILS OBSERVATION REPORT

Project Name: Pearl Place Housing
 Client: Avesta
 Client's Rep.: Mike Myatt
 Contractor: Ledgewood Inc.

Project No: 04-12-12-2
 Date: 12/18/04
 Page: 1 of 1
 Technician: PJD

Weather			Site Conditions		Materials Used	
<input checked="" type="checkbox"/> Clear	<input type="checkbox"/> Snow	<input checked="" type="checkbox"/> Warm	<input checked="" type="checkbox"/> Clear	<input type="checkbox"/> Dusty	<input type="checkbox"/> Site Fill	<input type="checkbox"/> Non Frost Susceptible
<input type="checkbox"/> Overcast	<input type="checkbox"/> Fog	<input type="checkbox"/> Hot	<input type="checkbox"/> Muddy	<input type="checkbox"/> _____	<input type="checkbox"/> Utility Bedding	<input checked="" type="checkbox"/> Subbase
<input type="checkbox"/> Rain	<input type="checkbox"/> Cold	<input type="checkbox"/> Windy	<input type="checkbox"/> Frozen	Temperatures: <u>50</u>	<input type="checkbox"/> Base	<input type="checkbox"/> _____

Soils Worked Performed:

<input type="checkbox"/> Site Prep (Sect. 2230)	<input type="checkbox"/> Earthwork (Sect. 2300)	<input type="checkbox"/> Planting Soils (Sect. 2310)
<input checked="" type="checkbox"/> Building Earthwork (Sect. 2315)	<input type="checkbox"/> Utilities Earthwork (Sect. 2316)	<input type="checkbox"/> _____

Compaction Equipment Used:

<input checked="" type="checkbox"/> Large Roller	<input type="checkbox"/> Small Roller	<input type="checkbox"/> Trench Roller	<input checked="" type="checkbox"/> Large Plate Tamp
<input type="checkbox"/> Small Tamp	<input type="checkbox"/> Jumping Jack	<input type="checkbox"/> _____	<input type="checkbox"/> _____

SOILS OBSERVATIONS	Observed		Comments
Site Preparation	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Fill Placement:	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Material Type (Proper material used for construction)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Gravel borrow
Lift Size	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	1-2'
Compaction	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
In-place Densities	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	1-6
In-place Density Frequency	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	per l. & c
NON-CONFORMANCE ITEMS OBSERVED			
Non-conformance item description:	Low Densities		
Action taken by SWCE:	Further Compaction, Resample		
Person(s) Notified:	Colex		

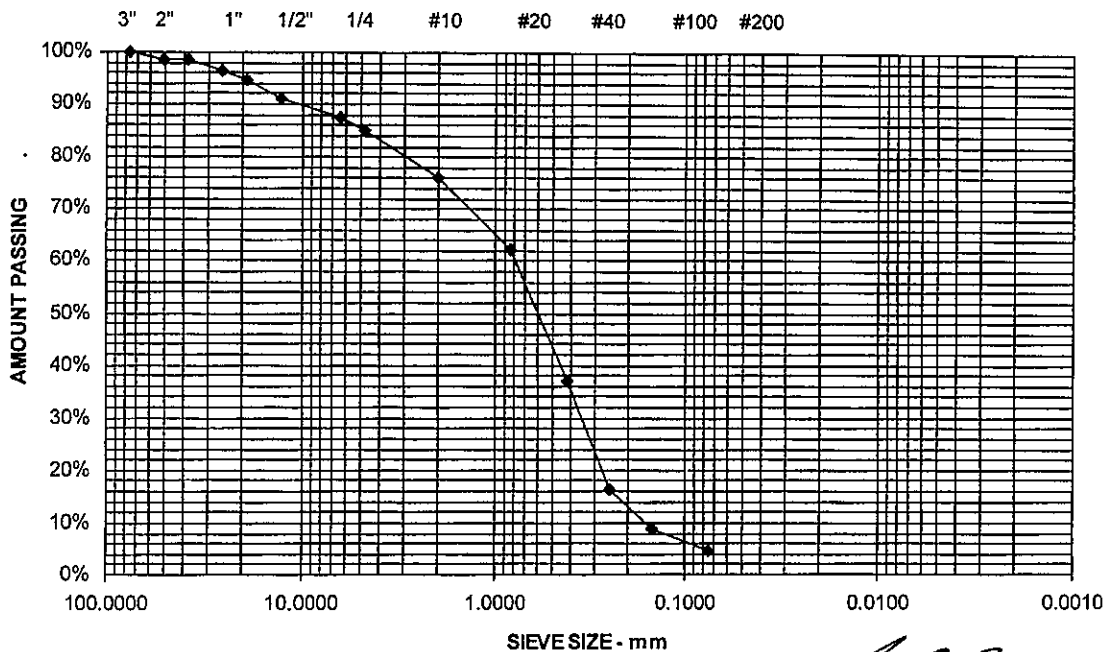
Notes:
 Colex continued to excavate the footings adjacent to Oxford St. Working towards the SE corner of building #1 approximately 5' of historic subal was removed until a stiff gray clay was found. Gravel Borrow was placed in 1-2' lifts and compacted using a vibratory roller and plate compactor. Density results ranged from 96-93% pcf. Areas tested that failed to exceed 95% were compacted further and re-tested. Areas that remained low exceed 93% but not 95%. This may be attributed to a slight change in the Gravel Borrow material. No ash was encountered during today's excavation. Subgrade in building #2 addressed on 12/15 stabilized matching the surrounding ATTACHMENTS Y N Material. A sample of the material representing the low density tests was obtained for proctor test. pictures in file

SWCE REPRESENTATIVE: PJD

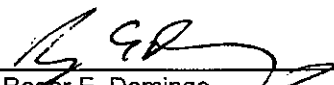
Project Name PORTLAND - PEARL PLACE PHASE I DEVELOPMENT - MATERIALS TESTING
 Client AVESTA HOUSING
 Material Type ON SITE MATERIAL
 Material Source ON SITE

Project Number 04-1212.2
 Lab ID 6265G
 Date Received 12/15/2006
 Date Complete 12/18/2006
 Tested By JUSTIN BISSON

<u>STANDARD</u> <u>DESIGNATION (mm/μm)</u>	<u>SIEVE SIZE</u>	<u>AMOUNT PASSING (%)</u>	<u>SPECIFICATIONS (%)</u>
150 mm	6"	100	
125 mm	5"	100	
100 mm	4"	100	
75 mm	3"	100	
50 mm	2"	99	
38.1 mm	1-1/2"	99	
25.0 mm	1"	97	
19.0 mm	3/4"	95	
12.5 mm	1/2"	91	
6.3 mm	1/4"	88	
4.75 mm	No. 4	85	
2.00 mm	No. 10	76	
850 μm	No. 20	62	
425 μm	No. 40	37	
250 μm	No. 60	16	
150 μm	No. 100	9	
75 μm	No. 200	4.6	



Comments Data for use for material


 Roger E. Domingo



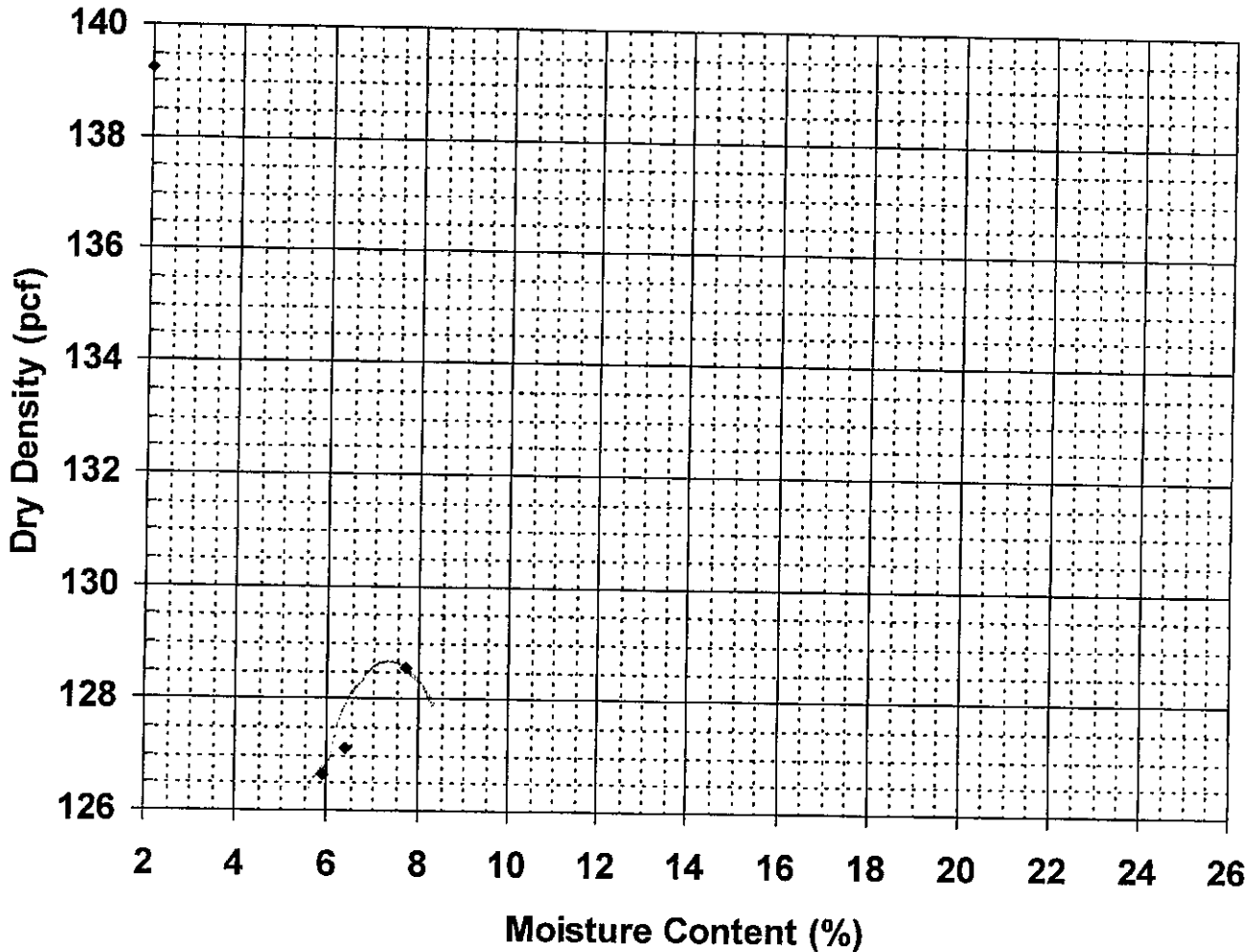
Report of Moisture-Density

Method ASTM D-1557 MODIFIED Procedure C

Project Name PORTLAND - PEARL PLACE PHASE I DEVELOPMENT - MATERIALS TESTING
 Client AVESTA HOUSING
 Material Type STRUCTURAL FILL
 Material Source ON SITE

Project Number 04-1212.2
 Lab ID 6264G
 Date Received 12/15/2006
 Date Completed 12/18/2006
 Tested By JUSTIN BISSON

Moisture-Density Relationship Curve



Maximum Dry Density (pcf)	128.8	<u>Corrected Dry Density (pcf)</u>	<u>136.2</u>
Optimum Moisture Content (%)	7.2	<u>Corrected Moisture Content (%)</u>	<u>5.6</u>
Percent Oversized	30.0%		

Comments

R. E. Domingo
 Roger E. Domingo



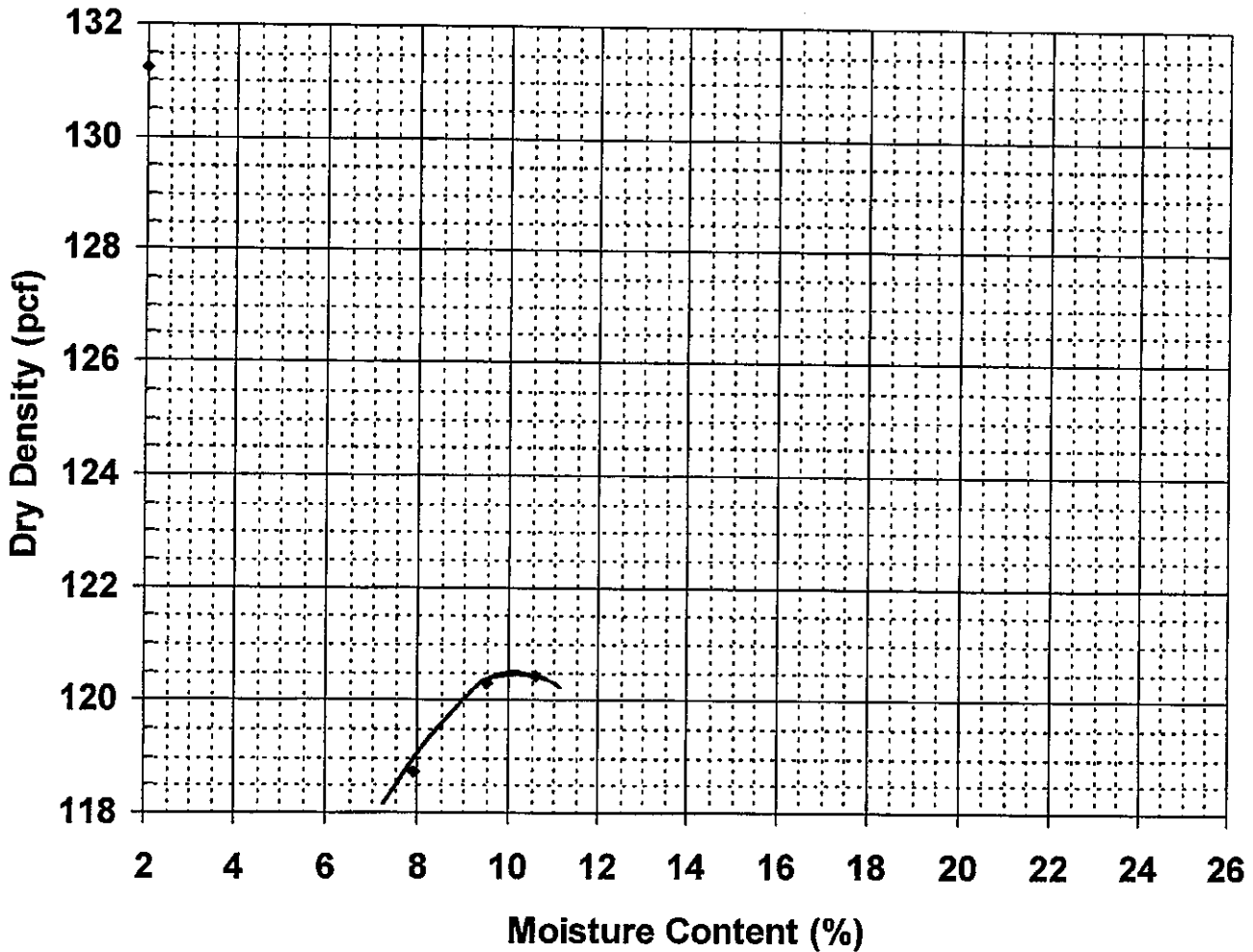
Report of Moisture-Density

Method ASTM D-1557 MODIFIED Procedure C

Project Name PORTLAND - PEARL PLACE PHASE I DEVELOPMENT - MATERIALS TESTING
 Client AVESTA HOUSING
 Material Type GRAVEL BORROW
 Material Source ON-SITE STOCKPILE

Project Number 04-1212.2
 Lab ID 6263G
 Date Received 12/15/2006
 Date Completed 12/18/2006
 Tested By JUSTIN BISSON

Moisture-Density Relationship Curve



Maximum Dry Density (pcf) 120.5
 Optimum Moisture Content (%) 10
 Percent Oversized 25.0%

Corrected Dry Density (pcf) **128**
Corrected Moisture Content (%) **7.6**

Comments Hold

R. E. Domingo
 Roger E. Domingo



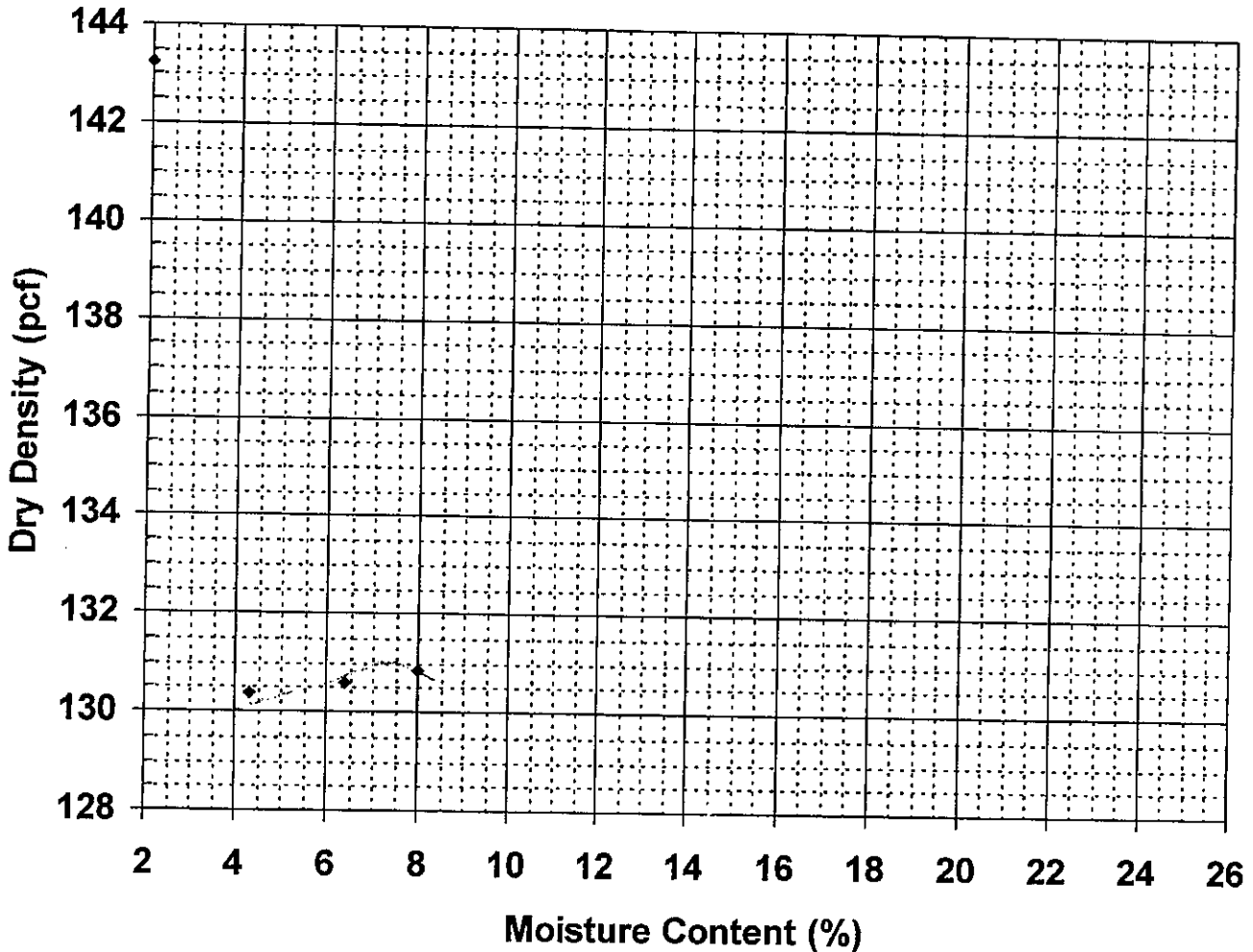
Report of Moisture-Density

Method ASTM D-1557 MODIFIED Procedure C

Project Name PORTLAND - PEARL PLACE PHASE I DEVELOPMENT - MATERIALS TESTING
 Client AVESTA HOUSING
 Material Type 1 1/2" MINUS
 Material Source COLEX MATERIAL

Project Number 04-1212.2
 Lab ID 6260G
 Date Received 12/14/2006
 Date Completed 12/18/2006
 Tested By JUSTIN BISSON

Moisture-Density Relationship Curve



Maximum Dry Density (pcf) 131.1
 Optimum Moisture Content (%) 7.4
 Percent Oversized 30.0%

Corrected Dry Density (pcf) **138**
Corrected Moisture Content (%) **5.8**

Comments


 Roger E. Domingo



Report of Field Density ASTM D2922

Project: PORTLAND - PEARL PLACE PHASE I DEVELOPMENT - MATERIALS TESTING

Project Number: 04-1212.2

Client: AVESTA HOUSING

Field Density Test Results

Test #	Test Date	Tech	Test Location	Elev Feet	Test Depth	Lab ID	Dry Density	Moisture Content Percent	Compaction Percent	Required Compaction
1	12/18/2006	PJO	BUILDING #1 + 30' SW CORNER CENTERLINE	GBS	12	6263G	126.2	5.1	98.6	95
2	12/18/2006	PJO	BUILDING #1 + 15' SW CORNER CENTERLINE	GBS	12	6263G	123.0	4.8	96.1	95
3	12/18/2006	PJO	BUILDING #1 + 40' OFF SW CORNER 2' LEFT OF CENTERLINE	GBS	12	6263G	123.1	4.9	96.2	95
4	12/18/2006	PJO	BUILDING #1 + 5' OFF SE CORNER 3' LEFT OF CENTERLINE	GBS	8	6281G	121.9	4.3	101.2	95
5	12/18/2006	PJO	BUILDING #1 + 10' OFF SE CORNER CENTERLINE	GBS	12	6281G	122.4	4.4	101.6	95
6	12/18/2006	PJO	BUILDING #1 + 15' OFF SE CORNER CENTERLINE	GBS	12	6281G	122.1	4.6	101.3	95

Laboratory Compaction Test Reference

Lab ID	Date Received	Material Source	Material Type	Method	Max Dry Density PCF	Optimum Moisture Content (%)	Comments
6263G	12/15/2006	On-site Stockpile	Gravel Borrow	ASTM D-1557 Modified C	128.0	7.6	
6281G	12/20/2006	On-site Stockpile	Common Borrow	ASTM D-1557 Modified C	120.5	6.8	

Elevation Notes:

GBS = GRAVEL BORROW SUBBASE

Comments:


 Reviewed By



S.W. COLE
ENGINEERING, INC.

SOILS OBSERVATION REPORT

Project Name: Pearl Place Housing
 Client: Avesta
 Client's Rep.: Mike Myatt
 Contractor: LedgeWood Inc.

Project No: 04-1212.2
 Date: 12/19/06
 Page: 1 of 1
 Technician: PJD

Weather			Site Conditions		Materials Used	
<input checked="" type="checkbox"/> Clear	<input type="checkbox"/> Snow	<input type="checkbox"/> Warm	<input type="checkbox"/> Clear	<input type="checkbox"/> Dusty	<input type="checkbox"/> Site Fill	<input type="checkbox"/> Non Frost Susceptible
<input type="checkbox"/> Overcast	<input type="checkbox"/> Fog	<input type="checkbox"/> Hot	<input type="checkbox"/> Muddy	<input type="checkbox"/> _____	<input type="checkbox"/> Utility Bedding	<input checked="" type="checkbox"/> Subbase Gravel Borrow
<input type="checkbox"/> Rain	<input checked="" type="checkbox"/> Cold	<input type="checkbox"/> Windy	<input type="checkbox"/> Frozen	Temperatures: <u>40°</u>	<input type="checkbox"/> Base	<input checked="" type="checkbox"/> Crushed Stone

Soils Worked Performed:

<input type="checkbox"/> Site Prep (Sect. 2230)	<input type="checkbox"/> Earthwork (Sect. 2300)	<input type="checkbox"/> Planting Soils (Sect. 2310)
<input checked="" type="checkbox"/> Building Earthwork (Sect. 2315)	<input type="checkbox"/> Utilities Earthwork (Sect. 2316)	<input type="checkbox"/> _____

Compaction Equipment Used:

<input checked="" type="checkbox"/> Large Roller	<input type="checkbox"/> Small Roller	<input type="checkbox"/> Trench Roller	<input checked="" type="checkbox"/> Large Plate Tamp
<input type="checkbox"/> Small Tamp	<input type="checkbox"/> Jumping Jack	<input type="checkbox"/> _____	<input type="checkbox"/> _____

SOILS OBSERVATIONS		Observed	Comments
Site Preparation	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Fill Placement:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Material Type (Proper material used for construction)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Gravel Borrow/Crushed Stone
Lift Size	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		1 1/2'
Compaction	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
In-place Densities	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		7.9
In-place Density Frequency	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Per lift
NON-CONFORMANCE ITEMS OBSERVED			
Non-conformance item description:		Native subgrade not pumped clean of water	
Action taken by SWCE:		Notified LedgeWood, Colex	
Person(s) Notified:			

Notes:
 Asked Colex to pump standing water before application of stone and fabric. Concerned about over saturation of clay/fill materials because of the situation that arose last week in a similar spot of building #2 footing. Colex did not take appropriate measures to protect subgrade from moisture and freeze/thaw cycles. Compaction results were above 95% compaction.

Note: recalculation of compaction results for test #4-6 exceed 95% compaction

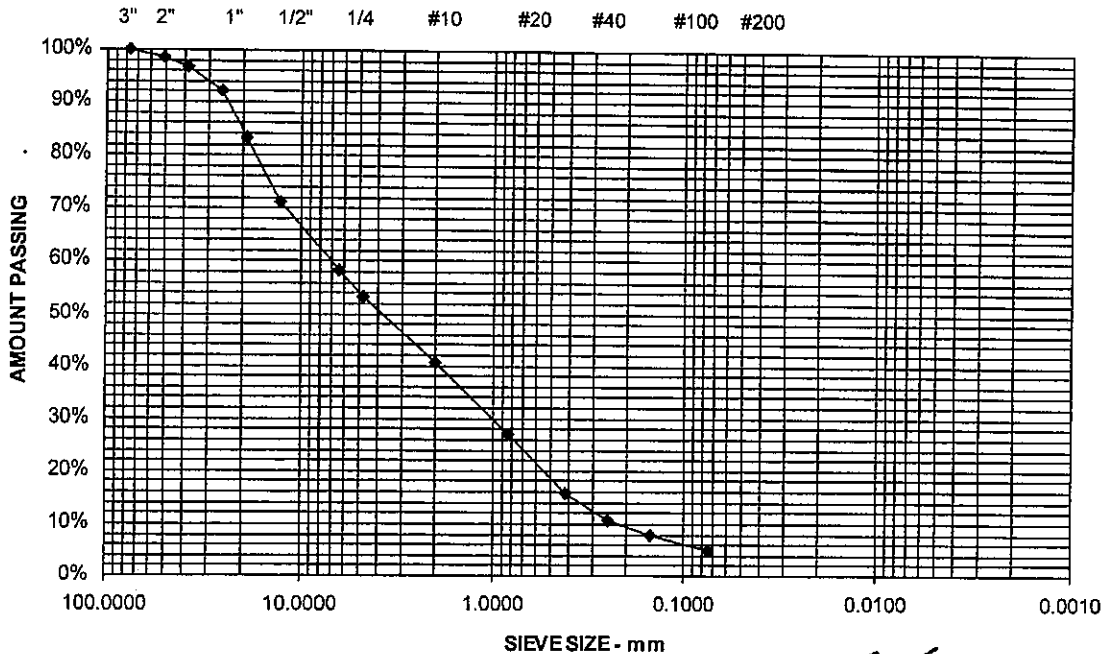
ATTACHMENTS Y N

SWCE REPRESENTATIVE: PJD

Project Name PORTLAND - PEARL PLACE PHASE I DEVELOPMENT - MATERIALS TESTING
 Client AVESTA HOUSING
 Material Type 1 1/2" MINUS
 Material Source COLEX MATERIAL

Project Number 04-1212.2
 Lab ID 6260G
 Date Received 12/14/2006
 Date Complete 12/19/2006
 Tested By JOSEPH MCERLAIN

<u>STANDARD</u> <u>DESIGNATION (mm/um)</u>	<u>SIEVE SIZE</u>	<u>AMOUNT PASSING (%)</u>	<u>MDOT 703.20</u> <u>SPECIFICATIONS (%)</u>
150 mm	6"	100	100
125 mm	5"	100	
100 mm	4"	100	
75 mm	3"	100	
50 mm	2"	99	
38.1 mm	1-1/2"	97	
25.0 mm	1"	92	
19.0 mm	3/4"	83	
12.5 mm	1/2"	71	
6.3 mm	1/4"	58	0 - 70
4.75 mm	No. 4	53	
2.00 mm	No. 10	41	
850 um	No. 20	27	
425 um	No. 40	16	
250 um	No. 60	11	
150 um	No. 100	8	
75 um	No. 200	5.1	0.0 - 10.0



Comments


 Roger E. Domingo



Report of Field Density ASTM D2922

Project: PORTLAND - PEARL PLACE PHASE I DEVELOPMENT - MATERIALS TESTING
Client: AVESTA HOUSING

Project Number: 04-1212.2

Field Density Test Results

Test #	Test Date	Tech	Test Location	Elev Feet	Test Depth	Lab ID	Dry Density	Moisture Content Percent	Compaction Percent	Required Compaction
7	12/19/2006	PJO	BUILDING #1 - 5' FROM SE CORNER	GBS	12	6281G	120.2	4.8	99.8	95
8	12/19/2006	PJO	BUILDING #1 - 12' FROM SE CORNER	GBS	12	6281G	119.6	5.1	99.3	95
9	12/19/2006	PJO	BUILDING #1 - 25' FROM SE CORNER	GBS	10	6281G	119.9	5.5	99.5	95

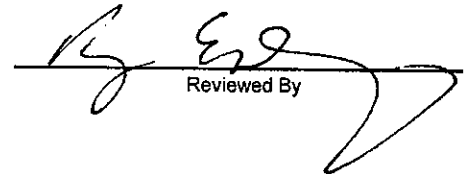
Laboratory Compaction Test Reference

Lab ID	Date Received	Material Source	Material Type	Method	Max Dry Density PCF	Optimum Moisture Content (%)	Comments
6281G	12/20/2006	On-site Stockpile	Common Borrow	ASTM D-1557 Modified C	120.5	6.8	

Elevation Notes:

GBS = GRAVEL BORROW SUBBASE

Comments:


 Reviewed By



SOILS OBSERVATION REPORT

Project Name: Pearl Place Housing
 Client: Avesta
 Client's Rep.: Mike Myatt
 Contractor: Hedgewood Inc

Project No: 04-1212.2
 Date: 12/20/06
 Page: 1 of 1
 Technician: PSB

Weather			Site Conditions			Materials Used	
<input checked="" type="checkbox"/> Clear	<input type="checkbox"/> Snow	<input type="checkbox"/> Warm	<input type="checkbox"/> Clear	<input type="checkbox"/> Dusty	<input type="checkbox"/> Site Fill	<input type="checkbox"/> Non Frost Susceptible	
<input type="checkbox"/> Overcast	<input type="checkbox"/> Fog	<input type="checkbox"/> Hot	<input type="checkbox"/> Muddy	<input type="checkbox"/> _____	<input type="checkbox"/> Utility Bedding	<input checked="" type="checkbox"/> Subbase	
<input type="checkbox"/> Rain	<input checked="" type="checkbox"/> Cold	<input type="checkbox"/> Windy	<input type="checkbox"/> Frozen	Temperatures: <u>36°</u>	<input type="checkbox"/> Base	<input type="checkbox"/> _____	

Soils Worked Performed:

<input type="checkbox"/> Site Prep (Sect. 2230)	<input type="checkbox"/> Earthwork (Sect. 2300)	<input type="checkbox"/> Planting Soils (Sect. 2310)
<input checked="" type="checkbox"/> Building Earthwork (Sect. 2315)	<input type="checkbox"/> Utilities Earthwork (Sect. 2316)	<input type="checkbox"/> _____

Compaction Equipment Used:

<input type="checkbox"/> Large Roller	<input type="checkbox"/> Small Roller	<input type="checkbox"/> Trench Roller	<input type="checkbox"/> Large Plate Tamp
<input type="checkbox"/> Small Tamp	<input type="checkbox"/> Jumping Jack	<input type="checkbox"/> _____	<input type="checkbox"/> _____

SOILS OBSERVATIONS	Observed		Comments
	Yes	No	
Site Preparation	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Fill Placement:	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Material Type (Proper material used for construction)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Gravel Borrow
Lift Size	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Compaction	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
In-place Densities	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
In-place Density Frequency	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
NON-CONFORMANCE ITEMS OBSERVED			
Non-conformance item description:	Low Density results		
Action taken by SWCE:	Asked Colox to submit RFI for Material		
Person(s) Notified:	Jason Cole Rick Nanartowich		

Notes:
 In situ density tests were performed on gravel borrow placed in within #1 and #2 footings. Tests yielded results ranging from 97-92% R.F. Material was placed in 2' lifts and compacted using a large vibratory roller. It appears that the material separates as it is compacted, the fines and sand rise to the surface as the large aggregate settles. On review of laboratory proctor values, a rock correction (large aggregate) was applied yielding compaction results ranging from 92% to 99% with an average of 95% to 96%.

ATTACHMENTS Y N
 pictures in file

SWCE REPRESENTATIVE: PSB

TJB



SOILS OBSERVATION REPORT

Project Name: Pearl Place Housing
 Client: Avesta
 Client's Rep.: Mike Myatt
 Contractor: Ledgewood

Project No: 04-12/12.2
 Date: 12/20/06
 Page: 1 of 1
 Technician: PJD

Weather			Site Conditions		Materials Used	
<input type="checkbox"/> Clear	<input type="checkbox"/> Snow	<input type="checkbox"/> Warm	<input type="checkbox"/> Clear	<input type="checkbox"/> Dusty	<input type="checkbox"/> Site Fill	<input type="checkbox"/> Non Frost Susceptible
<input type="checkbox"/> Overcast	<input type="checkbox"/> Fog	<input type="checkbox"/> Hot	<input type="checkbox"/> Muddy	<input type="checkbox"/> _____	<input type="checkbox"/> Utility Bedding	<input type="checkbox"/> Subbase
<input type="checkbox"/> Rain	<input checked="" type="checkbox"/> Cold	<input type="checkbox"/> Windy	<input checked="" type="checkbox"/> Frozen	Temperatures: _____	<input type="checkbox"/> Base	<input type="checkbox"/> _____

Soils Worked Performed:

<input type="checkbox"/> Site Prep (Sect. 2230)	<input type="checkbox"/> Earthwork (Sect. 2300)	<input type="checkbox"/> Planting Soils (Sect. 2310)
<input type="checkbox"/> Building Earthwork (Sect. 2315)	<input type="checkbox"/> Utilities Earthwork (Sect. 2316)	<input type="checkbox"/> <u>Foundation drains</u>

Compaction Equipment Used:

<input type="checkbox"/> Large Roller	<input type="checkbox"/> Small Roller	<input type="checkbox"/> Trench Roller	<input type="checkbox"/> Large Plate Tamp
<input type="checkbox"/> Small Tamp	<input type="checkbox"/> Jumping Jack	<input type="checkbox"/> _____	<input type="checkbox"/> _____

SOILS OBSERVATIONS	Observed		Comments
	Yes	No	
Site Preparation	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Fill Placement:	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Material Type (Proper material used for construction)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<u>Crushed Stone</u>
Lift Size	Yes <input type="checkbox"/>	No <input type="checkbox"/>	<u>NA</u>
Compaction	Yes <input type="checkbox"/>	No <input type="checkbox"/>	<u>NA</u>
In-place Densities	Yes <input type="checkbox"/>	No <input type="checkbox"/>	<u>NA</u>
In-place Density Frequency	Yes <input type="checkbox"/>	No <input type="checkbox"/>	<u>NA</u>
NON-CONFORMANCE ITEMS OBSERVED			
Non-conformance item description:	<u>Foundation drains</u>		
Action taken by SWCE:	<u>Notified Colex & Ledgewood</u>		
Person(s) Notified:	<u>Jason Cole Rick Nanartowich</u>		

Notes:
 Colex began installation of foundation drains against the south wall of building #2. They were notified installation was not per plan shown on A5.1 #14 in typical foundation detail. Colex did not provide a continuous wrap of geotextile fabric around the 6" PVC and crushed stone. SW Cole recommended that Ledgewood contact civil engineer to discuss change.

ATTACHMENTS Y N

SWCE REPRESENTATIVE: PJD

(20)



Report of Field Density ASTM D2922

Project: PORTLAND - PEARL PLACE PHASE I DEVELOPMENT - MATERIALS TESTING

Project Number: 04-1212.2

Client: AVESTA HOUSING

Field Density Test Results

Test #	Test Date	Tech	Test Location	Elev Feet	Test Depth	Lab ID	Dry Density	Moisture Content Percent	Compaction Percent	Required Compaction
10	12/20/2006	PJO	BUILDING #1 - 10' FROM SW CORNER (WEST FOOTING)	GBS	10	6281G	118.6	5.4	98.4	95
11	12/20/2006	PJO	BUILDING #1 - 15' FROM SW CORNER (WEST FOOTING)	GBS	10	6281G	119.8	5.0	99.4	95
12	12/20/2006	PJO	BUILDING #2 - 25' FROM NE CORNER (NORTH FOOTING)	GBS	10	6281G	118.8	5.0	98.6	95
13	12/20/2006	PJO	BUILDING #2 - 15' FROM NE CORNER (NORTH FOOTING)	GBS	12	6281G	117.9	4.9	97.8	95

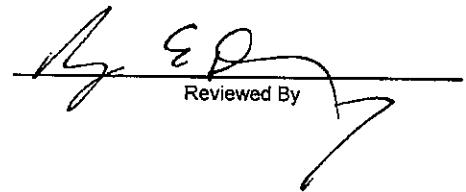
Laboratory Compaction Test Reference

Lab ID	Date Received	Material Source	Material Type	Method	Max Dry Density PCF	Optimum Moisture Content (%)	Comments
6281G	12/20/2006	On-site Stockpile	Common Borrow	ASTM D-1557 Modified C	120.5	6.8	

Elevation Notes:

GBS = GRAVEL BORROW SUBBASE

Comments:


 Reviewed By



SOILS OBSERVATION REPORT

Project Name: Pearl Place Housing
 Client: Avesta
 Client's Rep.: Mike Myatt
 Contractor: Ledgewood Inc

Project No: 04-1212.2
 Date: 12/21/06
 Page: 1 of 1
 Technician: PJO

Weather			Site Conditions		Materials Used	
<input checked="" type="checkbox"/> Clear	<input type="checkbox"/> Snow	<input checked="" type="checkbox"/> Warm	<input checked="" type="checkbox"/> Clear	<input type="checkbox"/> Dusty	<input type="checkbox"/> Site Fill	<input type="checkbox"/> Non Frost Susceptible
<input type="checkbox"/> Overcast	<input type="checkbox"/> Fog	<input type="checkbox"/> Hot	<input type="checkbox"/> Muddy	<input type="checkbox"/> _____	<input type="checkbox"/> Utility Bedding	<input type="checkbox"/> Subbase
<input type="checkbox"/> Rain	<input type="checkbox"/> Cold	<input type="checkbox"/> Windy	<input type="checkbox"/> Frozen	Temperatures: _____	<input type="checkbox"/> Base	<input type="checkbox"/> _____

Soils Worked Performed:

<input type="checkbox"/> Site Prep (Sect. 2230)	<input type="checkbox"/> Earthwork (Sect. 2300)	<input type="checkbox"/> Planting Soils (Sect. 2310)
<input type="checkbox"/> Building Earthwork (Sect. 2315)	<input type="checkbox"/> Utilities Earthwork (Sect. 2316)	<input checked="" type="checkbox"/> <u>ASL</u>

Compaction Equipment Used:

<input type="checkbox"/> Large Roller	<input type="checkbox"/> Small Roller	<input type="checkbox"/> Trench Roller	<input type="checkbox"/> Large Plate Tamp
<input type="checkbox"/> Small Tamp	<input type="checkbox"/> Jumping Jack	<input type="checkbox"/> _____	<input type="checkbox"/> _____

SOILS OBSERVATIONS		Observed		Comments
Site Preparation	Yes <input type="checkbox"/>	No <input type="checkbox"/>		NA ↓
Fill Placement:	Yes <input type="checkbox"/>	No <input type="checkbox"/>		
Material Type (Proper material used for construction)	Yes <input type="checkbox"/>	No <input type="checkbox"/>		
Lift Size	Yes <input type="checkbox"/>	No <input type="checkbox"/>		
Compaction	Yes <input type="checkbox"/>	No <input type="checkbox"/>		
In-place Densities	Yes <input type="checkbox"/>	No <input type="checkbox"/>		
In-place Density Frequency	Yes <input type="checkbox"/>	No <input type="checkbox"/>		
NON-CONFORMANCE ITEMS OBSERVED				
Non-conformance item description:		Ash pile containment		
Action taken by SWCE:		Notified Colex and Ledgewood		
Person(s) Notified:				

Notes:
 Currently the consolidated Ash pile is not being contained by a silt fence or Mutch berm. Colex was asked to construct this to prevent material from migrating off site. No Ash was consolidated during today's excavation. Foundation drains installed 12/20/06 will be corrected and installed per plan from this point forward.

ATTACHMENTS

SWCE REPRESENTATIVE: PJO

ROD



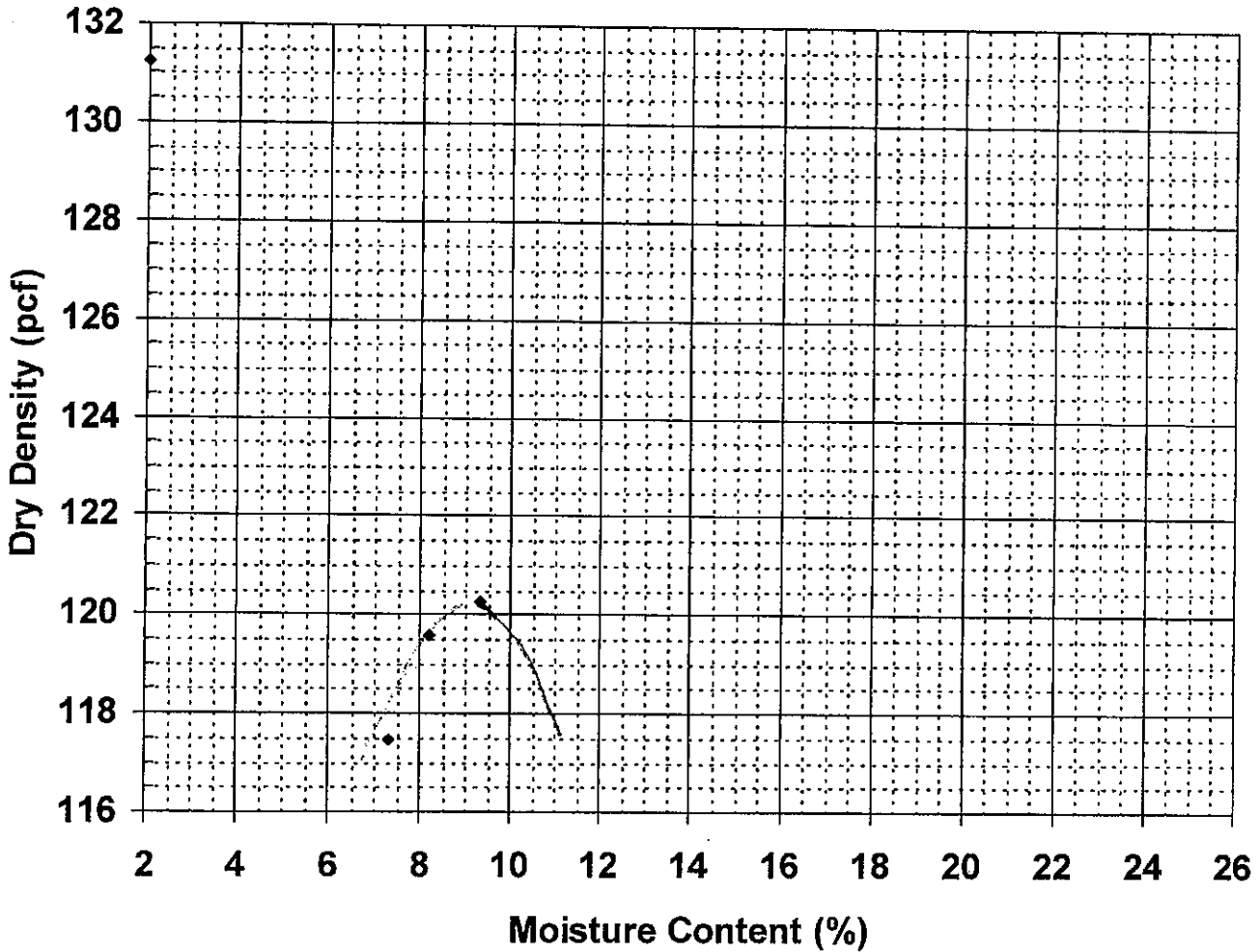
Report of Moisture-Density

Method ASTM D-1557 MODIFIED Procedure C

Project Name PORTLAND - PEARL PLACE PHASE I DEVELOPMENT - MATERIALS TESTING
 Client AVESTA HOUSING
 Material Type COMMON BORROW
 Material Source ON-SITE STOCKPILE

Project Number 04-1212.2
 Lab ID 6281G
 Date Received 12/20/2006
 Date Completed 12/20/2006
 Tested By JUSTIN BISSON

Moisture-Density Relationship Curve



Maximum Dry Density (pcf) 120.5
 Optimum Moisture Content (%) 8.8
 Percent Oversized 30.0%

Corrected Dry Density (pcf) **129.6**
Corrected Moisture Content (%) **6.8**

Comments

R. Domingo
 Roger B. Domingo



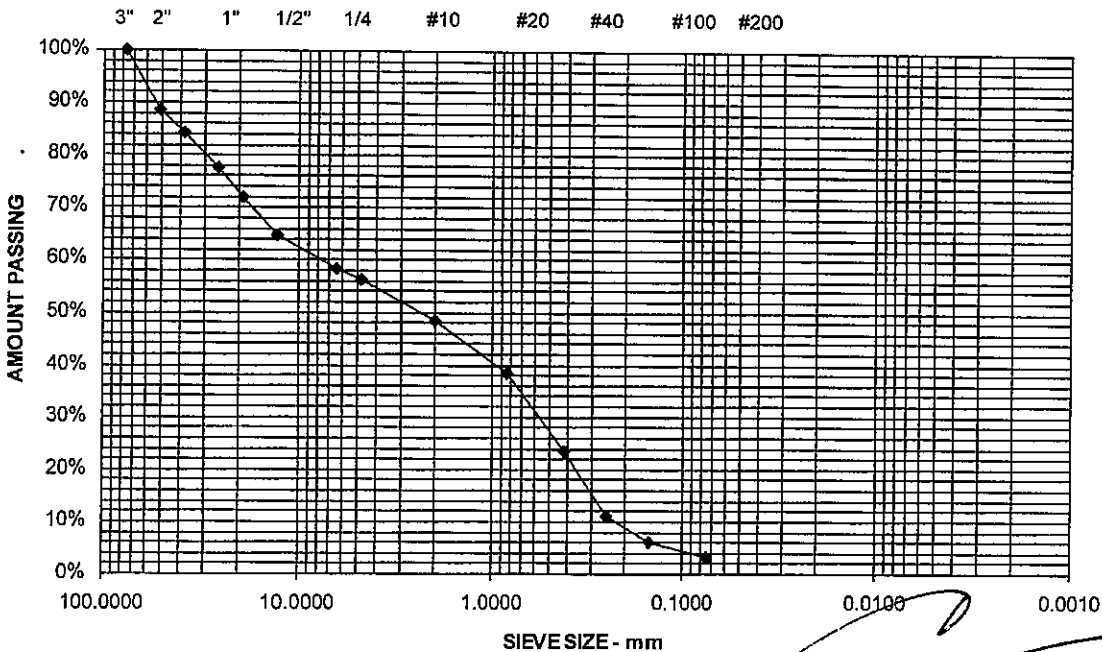
Report of Gradation

ASTM C-117 & C-136

Project Name PORTLAND - PEARL PLACE PHASE I DEVELOPMENT - MATERIALS TESTING
 Client AVESTA HOUSING
 Material Type COMMON BORROW
 Material Source ON-SITE STOCKPILE

Project Number 04-1212.2
 Lab ID 6281G
 Date Received 12/20/2006
 Date Complete 12/21/2006
 Tested By JUSTIN BISSON

STANDARD DESIGNATION (mm/μm)	SIEVE SIZE	AMOUNT PASSING (%)	SPECIFICATIONS (%)
150 mm	6"	100	
125 mm	5"	100	
100 mm	4"	100	
75 mm	3"	100	
50 mm	2"	89	
38.1 mm	1-1/2"	84	
25.0 mm	1"	78	
19.0 mm	3/4"	72	
12.5 mm	1/2"	65	
6.3 mm	1/4"	58	
4.75 mm	No. 4	56	
2.00 mm	No. 10	48	
850 μm	No. 20	39	
425 μm	No. 40	23	
250 μm	No. 60	11	
150 μm	No. 100	6	
75 μm	No. 200	3.1	



Comments

[Signature]
 Roger E. Domingo



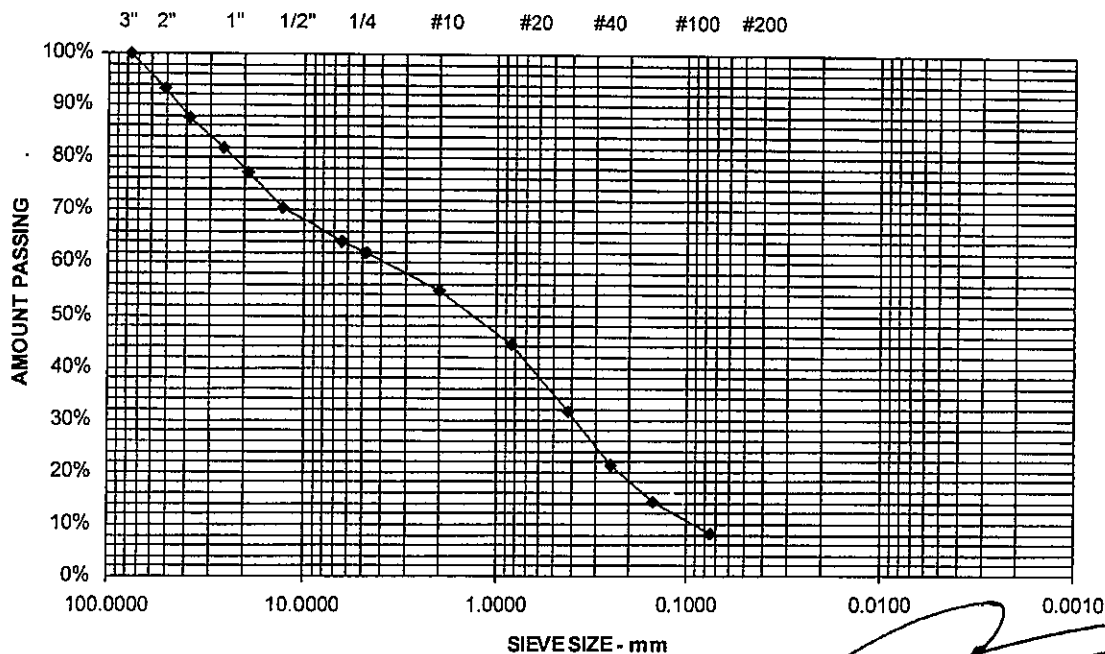
Report of Gradation

ASTM C-117 & C-136

Project Name PORTLAND - PEARL PLACE PHASE I DEVELOPMENT - MATERIALS TESTING
 Client AVESTA HOUSING
 Material Type GRANULAR BORROW
 Material Source ON SITE

Project Number 04-1212.2
 Lab ID 6283G
 Date Received 12/21/2006
 Date Complete 12/22/2006
 Tested By JUSTIN BISSON

STANDARD DESIGNATION (mm/μm)	SIEVE SIZE	AMOUNT PASSING (%)	MDOT 703.20 SPECIFICATIONS (%)
150 mm	6"	100	100
125 mm	5"	100	
100 mm	4"	100	
75 mm	3"	100	
50 mm	2"	93	
38.1 mm	1-1/2"	87	
25.0 mm	1"	82	
19.0 mm	3/4"	77	
12.5 mm	1/2"	71	
6.3 mm	1/4"	64	0 - 70
4.75 mm	No. 4	62	
2.00 mm	No. 10	55	
850 μm	No. 20	44	
425 μm	No. 40	32	
250 μm	No. 60	22	
150 μm	No. 100	14	
75 μm	No. 200	8.3	0.0 - 10.0



Comments

[Signature]
 Roger E. Domingo



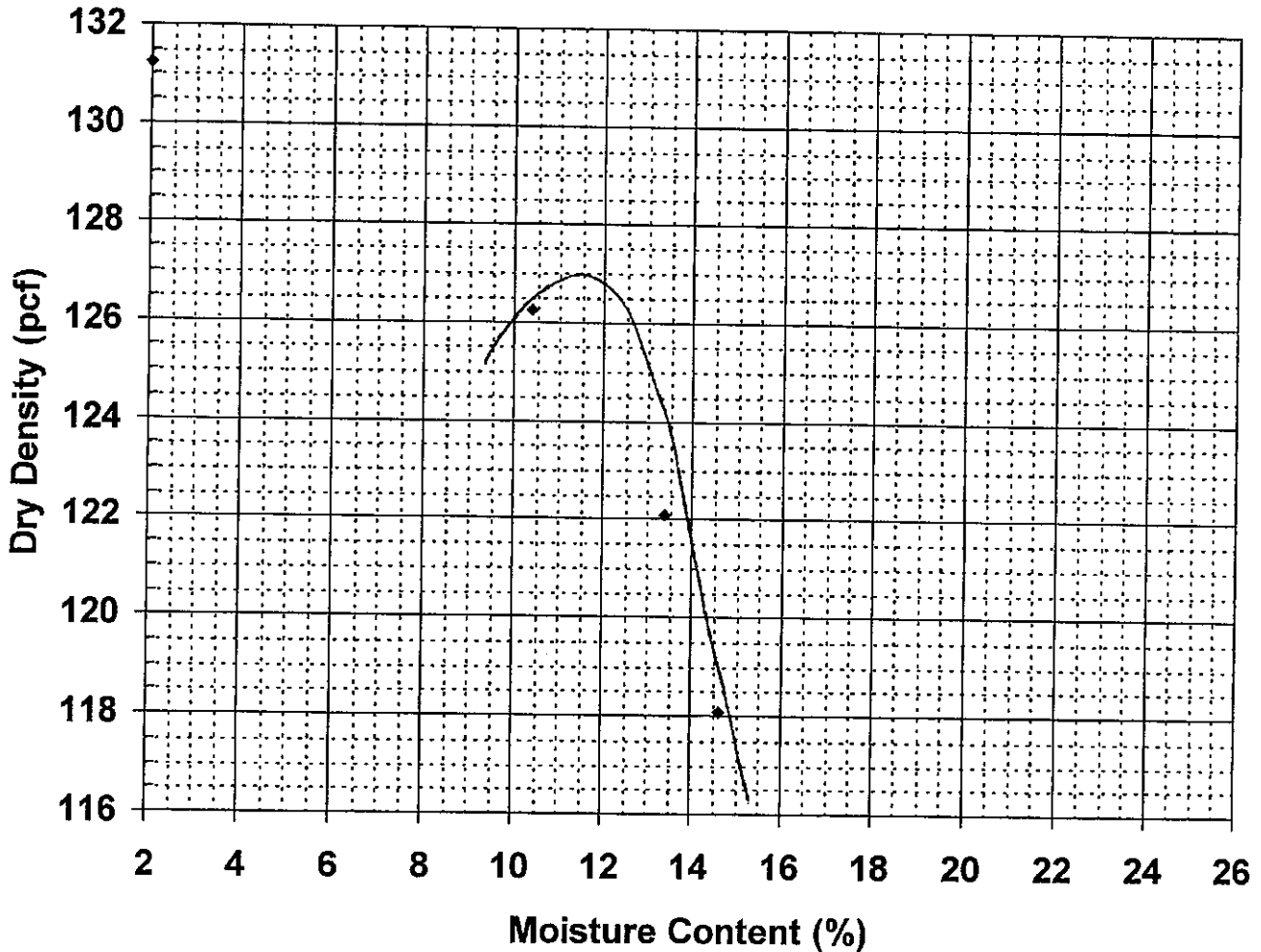
Report of Moisture-Density

Method ASTM D-1557 MODIFIED Procedure C

Project Name PORTLAND - PEARL PLACE PHASE I DEVELOPMENT - MATERIALS TESTING
 Client AVESTA HOUSING
 Material Type GRANULAR BORROW
 Material Source ON SITE

Project Number 04-1212.2
 Lab ID 6283G
 Date Received 12/21/2006
 Date Completed 12/26/2006
 Tested By JUSTIN BISSON

Moisture-Density Relationship Curve



Maximum Dry Density (pcf) 127
 Optimum Moisture Content (%) 11.5
 Percent Oversized 22.7%

Corrected Dry Density (pcf) **132.8**
Corrected Moisture Content (%) **9.3**

Comments

Roger E. Domingo



SOILS OBSERVATION REPORT

Project Name: Pearl Place Housing
Client: Avesta
Client's Rep.: Mike Myatt
Contractor: Ledgewood Inc.

Project No: 04-1212.2
Date: 12/27/06
Page: 1 of 1
Technician: PJO

Weather			Site Conditions		Materials Used	
<input type="checkbox"/> Clear	<input type="checkbox"/> Snow	<input checked="" type="checkbox"/> Warm	<input type="checkbox"/> Clear	<input type="checkbox"/> Dusty	<input type="checkbox"/> Site Fill	<input type="checkbox"/> Non Frost Susceptible
<input checked="" type="checkbox"/> Overcast	<input type="checkbox"/> Fog	<input type="checkbox"/> Hot	<input checked="" type="checkbox"/> Muddy	<input type="checkbox"/> _____	<input type="checkbox"/> Utility Bedding	<input type="checkbox"/> Subbase
<input type="checkbox"/> Rain	<input type="checkbox"/> Cold	<input type="checkbox"/> Windy	<input type="checkbox"/> Frozen	Temperatures: 35-40	<input type="checkbox"/> Base	<input checked="" type="checkbox"/> Crushed Stone

Soils Worked Performed:
 Site Prep (Sect. 2230)
 Earthwork (Sect. 2300)
 Planting Soils (Sect. 2310)

Building Earthwork (Sect. 2315)
 Utilities Earthwork (Sect. 2316)

Compaction Equipment Used:
 Large Roller
 Small Roller
 Trench Roller
 Large Plate Tamp

Small Tamp
 Jumping Jack

SOILS OBSERVATIONS	Observed		Comments
Site Preparation	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Fill Placement:	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Material Type (Proper material used for construction)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Lift Size	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Compaction	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA
In-place Densities	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA
In-place Density Frequency	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA
NON-CONFORMANCE ITEMS OBSERVED			
Non-conformance item description:			
Action taken by SWCE:			
Person(s) Notified:			

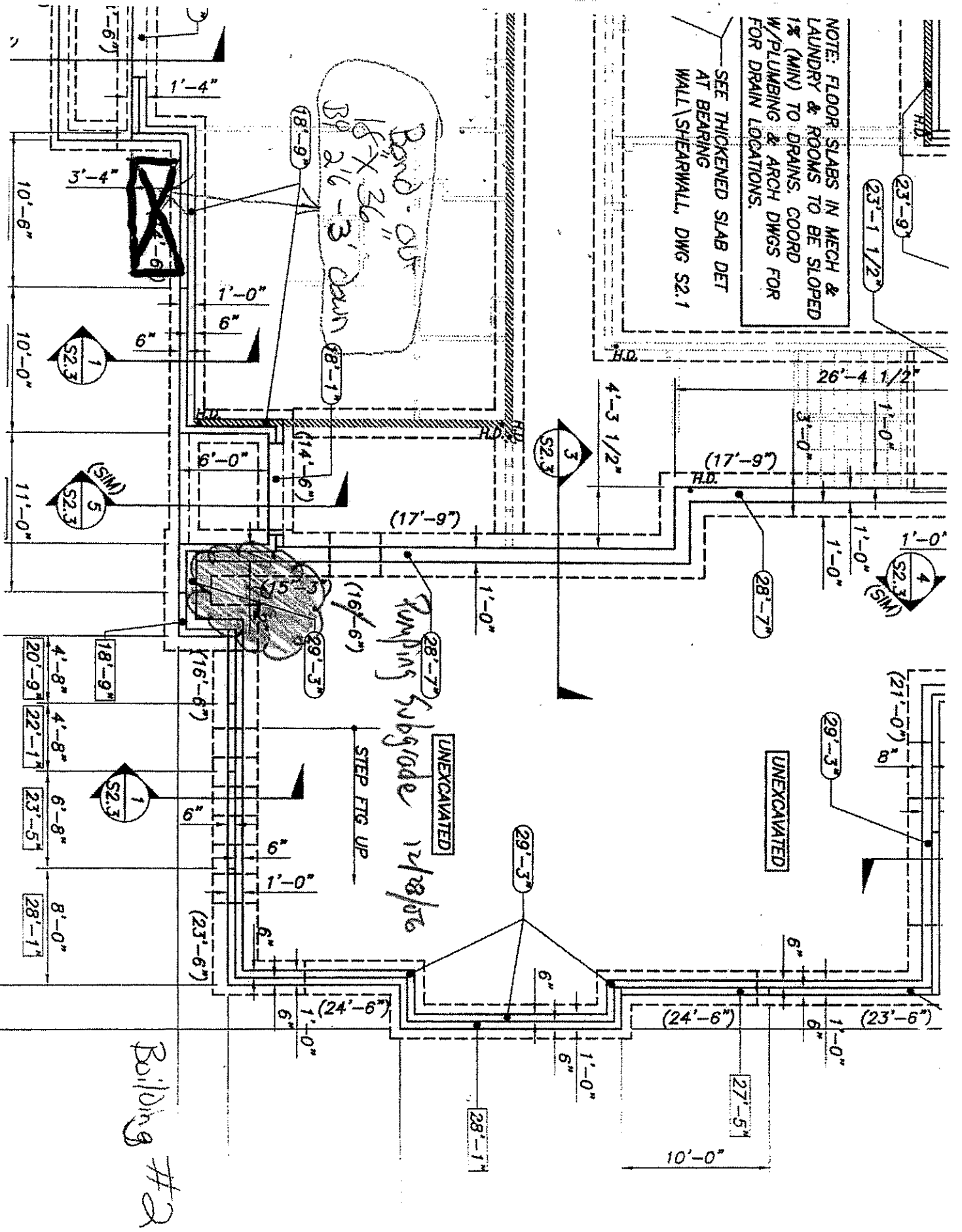
Notes: Colex completed excavation of interior footing for the retaining wall running parallel to Oxford St. in building #1. Native glacial till was encountered transitioning to stiff brown clay with sand seams as excavation moved from east to west. Geotextile fabric and 6" of crushed stone was placed over subgrade soils. No ash was found during today's excavation. Prior to Tuesday's rainstorm Colex covered the consolidated ash pile with plastic. Site conditions were muddy after Tuesday's heavy rain Colex dewatered the west footing of building #2 throughout the morning.

ATTACHMENTS Y N

SWCE REPRESENTATIVE: Patrick Otto
 Reviewed by: RED

NOTE: FLOOR SLABS IN MECH & LAUNDRY & ROOMS TO BE SLOPED 1% (MIN) TO DRAINS. COORD W/PLUMBING & ARCH DWGS FOR DRAIN LOCATIONS.

SEE THICKENED SLAB DET AT BEARING WALL / SHEARWALL, DWG S2.1



Building #2



SOILS OBSERVATION REPORT

Project Name: Pearl Place Housing
Client: Avesta
Client's Rep.: Mike Myatt
Contractor: Ledgewood Inc.

Project No: 04-1212.2
Date: Jan. 4, 2007
Page: 1 of 1
Technician: TJB

Weather			Site Conditions		Materials Used	
<input checked="" type="checkbox"/> Clear	<input type="checkbox"/> Snow	<input type="checkbox"/> Warm	<input type="checkbox"/> Clear	<input type="checkbox"/> Dusty	<input type="checkbox"/> Site Fill	<input type="checkbox"/> Non Frost Susceptible
<input type="checkbox"/> Overcast	<input type="checkbox"/> Fog	<input type="checkbox"/> Hot	<input type="checkbox"/> Muddy	<input type="checkbox"/> _____	<input type="checkbox"/> Utility Bedding	<input type="checkbox"/> Subbase
<input type="checkbox"/> Rain	<input type="checkbox"/> Cold	<input type="checkbox"/> Windy	<input checked="" type="checkbox"/> Frozen	Temperatures: _____	<input type="checkbox"/> Base	<input type="checkbox"/> _____

Soils Worked Performed:
 Site Prep (Sect. 2230)
 Earthwork (Sect. 2300)
 Planting Soils (Sect. 2310)

Building Earthwork (Sect. 2315)
 Utilities Earthwork (Sect. 2316)
 VRAP

Compaction Equipment Used:
 Large Roller
 Small Roller
 Trench Roller
 Large Plate Tamp

Small Tamp
 Jumping Jack

SOILS OBSERVATIONS	Observed		Comments
	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
Site Preparation	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Fill Placement:	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	VRAP
Material Type (Proper material used for construction)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Lift Size	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Compaction	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	N/A
In-place Densities	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	N/A
In-place Density Frequency	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	N/A
NON-CONFORMANCE ITEMS OBSERVED			
Non-conformance item description:			
Action taken by SWCE:			
Person(s) Notified:			

Notes:

Colex (earthwork subcontractor) excavated burial area of ash soils according to VRAP plan. Burial area was approximately 15 feet by 30 feet in plan area and 7 feet deep (approximately 116 CY). Ash removed from on-site excavations was placed in burial area in approximate 2-foot lifts and compacted with 1/2-ton vibratory plate compactor. The burial area was covered with a non-woven geotextile filter fabric to serve as "marker horizon" in accordance with the VRAP plan. Pavement gravels and asphalt are to be placed over the marker horizon (approximately 24 inches below finished grades) at a future date.

Observed Colex overexcavate unsuitable fill soils beneath northwest corner of Building #2. Overexcavation was approximately 12 feet wide and stepped from 5 to 9 feet deep along approximate 25 foot length of wall footing (see attached plan sheet). Bottom of excavation consisted of native, undisturbed, medium dense gray silty sand (glacial till). Colex was to use reclaimed crushed concrete from on-site source to backfill the overexcavation.

ATTACHMENTS Y N

Reviewed By: RED



Report of Field Density

ASTM D2922

Project: PORTLAND - PEARL PLACE PHASE I DEVELOPMENT - MATERIALS TESTING

Project Number: 04-1212.2

Client: AVESTA HOUSING

Field Density Test Results

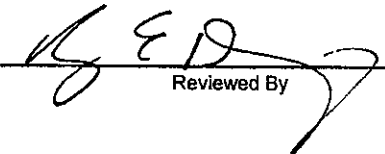
Test #	Test Date	Tech	Test Location	Elev Feet	Test Depth	Lab ID	Dry Density	Moisture Content Percent	Compaction Percent	Required Compaction
14	1/4/2007	VLT	9TH LIFT PEARL ST. LOWER CORNER BUILDING 2-SW	13'	12	6263G	125.4	6.9	98.0	0
15	1/4/2007	VLT	9TH LIFT PEARL ST. LWOER CORNER BUILDING 2 SW	13'	10	6263G	127.7	6.4	99.8	0
16	1/4/2007	VLT	10TH LIFT PEARL ST LOWER CORNER BUILDING 2 SW	13'	8	6263G	127.2	6.1	99.4	0
17	1/4/2007	VLT	10TH LIFT PEARL ST LOWER CORNER BUILDING 2 SW	13'	12	6263G	127.6	5.5	99.7	0

Laboratory Compaction Test Reference

Lab ID	Date Received	Material Source	Material Type	Method	Max Dry Density PCF	Optimum Moisture Content (%)	Comments
6263G	12/15/2006	On-site Stockpile	Gravel Borrow	ASTM D-1557 Modified C	128.0	7.6	

Elevation Notes:

Comments:



 Reviewed By



SOILS OBSERVATION REPORT

Project Name: Pearl Place Housing
Client: Avesta
Client's Rep.: Mike Myatt
Contractor: Ledgewood Inc.

Project No: 04-1212.2
Date: Jan. 5, 2007
Page: 1 of 1
Technician: MPL

Weather			Site Conditions		Materials Used	
<input type="checkbox"/> Clear	<input type="checkbox"/> Snow	<input type="checkbox"/> Warm	<input checked="" type="checkbox"/> Clear	<input type="checkbox"/> Dusty	<input type="checkbox"/> Site Fill	<input type="checkbox"/> Non Frost Susceptible
<input checked="" type="checkbox"/> Overcast	<input type="checkbox"/> Fog	<input type="checkbox"/> Hot	<input type="checkbox"/> Muddy	<input type="checkbox"/> _____	<input type="checkbox"/> Utility Bedding	<input type="checkbox"/> Subbase
<input type="checkbox"/> Rain	<input type="checkbox"/> Cold	<input type="checkbox"/> Windy	<input type="checkbox"/> Frozen	Temperatures: _____	<input type="checkbox"/> Base	<input type="checkbox"/> _____

Soils Worked Performed:
 Site Prep (Sect. 2230)
 Earthwork (Sect. 2300)
 Planting Soils (Sect. 2310)

Building Earthwork (Sect. 2315)
 Utilities Earthwork (Sect. 2316)

Compaction Equipment Used:
 Large Roller
 Small Roller
 Trench Roller
 Large Plate Tamp

Small Tamp
 Jumping Jack

SOILS OBSERVATIONS	Observed		Comments
	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Site Preparation	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Fill Placement	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Material Type (Proper material used for construction)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Lift Size	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Compaction	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	N/A
In-place Densities	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	N/A
In-place Density Frequency	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	N/A
NON-CONFORMANCE ITEMS OBSERVED			
Non-conformance item description:			
Action taken by SWCE:			
Person(s) Notified:			

Notes: Colex was placing fill in the landscaped area north of the parking area on the north side of building #1.
 The material being placed was silty sand excavated from the building foundations.
 Colex was also stockpiling and spreading subbase gravel in the parking area to the north of building #1.

ATTACHMENTS Y N

Reviewed By: RED



SOILS OBSERVATION REPORT

Project Name: Pearl Place Housing
Client: Avesta
Client's Rep.: Mike Myatt
Contractor: Ledgewood Inc.

Project No: 04-1212.2
Date: Jan. 10, 2007
Page: 1 of 1
Technician: PJO

Weather			Site Conditions		Materials Used	
<input type="checkbox"/> Clear	<input type="checkbox"/> Snow	<input type="checkbox"/> Warm	<input type="checkbox"/> Clear	<input type="checkbox"/> Dusty	<input type="checkbox"/> Site Fill	<input type="checkbox"/> Non Frost Susceptible
<input checked="" type="checkbox"/> Overcast	<input type="checkbox"/> Fog	<input type="checkbox"/> Hot	<input type="checkbox"/> Muddy	<input type="checkbox"/> _____	<input type="checkbox"/> Utility Bedding	<input type="checkbox"/> Subbase
<input type="checkbox"/> Rain	<input type="checkbox"/> Cold	<input type="checkbox"/> Windy	<input checked="" type="checkbox"/> Frozen	Temperatures: 30's	<input type="checkbox"/> Base	<input type="checkbox"/> Structural Fill

Soils Worked Performed:
 Site Prep (Sect. 2230)
 Earthwork (Sect. 2300)
 Planting Soils (Sect. 2310)

Building Earthwork (Sect. 2315)
 Utilities Earthwork (Sect. 2316)
 VRAP

Compaction Equipment Used:
 Large Roller
 Small Roller
 Trench Roller
 Large Plate Tamp

Small Tamp
 Jumping Jack

SOILS OBSERVATIONS	Observed		Comments
Site Preparation	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Bldg. #1 - Footing
Fill Placement:	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Material Type (Proper material used for construction)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Gravel Borrow
Lift Size	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	2'
Compaction	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
In-place Densities	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	95% and above
In-place Density Frequency	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
NON-CONFORMANCE ITEMS OBSERVED			
Non-conformance item description:			
Action taken by SWCE:			
Person(s) Notified:			

Notes:

Colex began excavation for the north wall footing for Bldg. #1. Working from the NE corner, glacial till was encountered approximately 3' below the current grade. South of SMH #1, an existing foundation was encountered and found along with loose fill. The area was over excavated (approximately 10 cy) and filled with gravel borrow in 1' compacted lifts. In-situ density tests met or exceeded 95%. SWCE, Ledgewood and Colex discussed that material placed beneath the exterior parking slab in Bldg. #1 needs to be a minimum of 3 1/2' of structural fill. Currently 2' of gravel borrow and 3' of an existing sandy gravel fill exists beneath the proposed exterior and interior parking slab areas. No ash was encountered during today's excavation work.

ATTACHMENTS

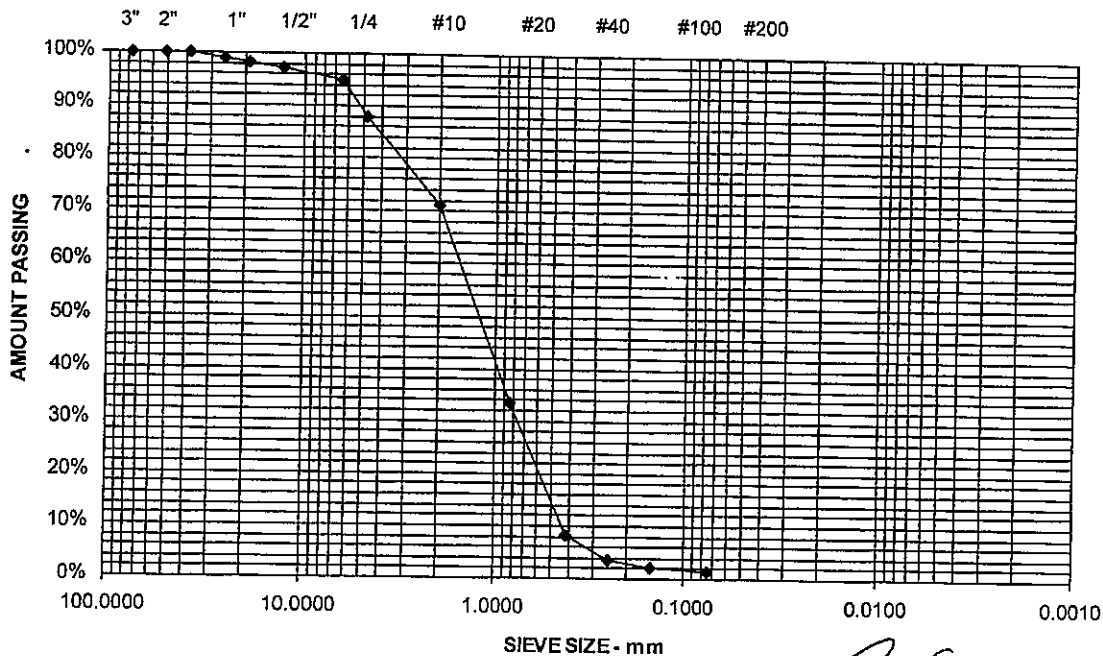
Y N

Reviewed By: RED

Project Name PORTLAND - PEARL PLACE PHASE I DEVELOPMENT - MATERIALS TESTING
 Client AVESTA HOUSING
 Material Type STRUCTURAL FILL
 Material Source COLEX ON SITE STOCK

Project Number 04-1212:2
 Lab ID 6308G
 Date Received 1/9/2007
 Date Complete 1/10/2007
 Tested By JUSTIN BISSON

<u>STANDARD DESIGNATION (mm/μm)</u>	<u>SIEVE SIZE</u>	<u>AMOUNT PASSING (%)</u>	<u>STRUCTURAL FILL SPECIFICATIONS (%)</u>
150 mm	6"	100	
125 mm	5"	100	
100 mm	4"	100	100
75 mm	3"	100	90 - 100
50 mm	2"	100	
38.1 mm	1-1/2"	100	
25.0 mm	1"	99	
19.0 mm	3/4"	98	
12.5 mm	1/2"	97	
6.3 mm	1/4"	95	25 - 90
4.75 mm	No. 4	88	
2.00 mm	No. 10	71	
850 μm	No. 20	34	
425 μm	No. 40	8	0 - 30
250 μm	No. 60	3	
150 μm	No. 100	2	
75 μm	No. 200	1.4	0.0 - 5.0



Comments

Roger E. Domingo
 Roger E. Domingo



Report of Field Density

ASTM D2922

Project: PORTLAND - PEARL PLACE PHASE I DEVELOPMENT - MATERIALS TESTING

Project Number: 04-1212.2

Client: AVESTA HOUSING

Field Density Test Results

Test #	Test Date	Tech	Test Location	Elev Feet	Test Depth	Lab ID	Dry Density	Moisture Content Percent	Compaction Percent	Required Compaction
18	1/10/2007	PJO	BUILDING #1 3'S OF SMH#1	GBFS	12	6263G	121.9	6.5	95.2	95
19	1/10/2007	PJO	BUILDING #1 10'S OF SMH#1	GBFS	12	6263G	121.6	6.6	95.0	95
20	1/10/2007	PJO	BUILDING #1 25'SW OF SMH#1	GBFS	12	6281G	118.4	7.2	98.3	95
21	1/10/2007	PJO	BUILDING #1 15'W OF SMH#1	GBFS	12	6281G	119.3	7.6	99.0	95
22	1/11/2007	PJO	BUILDING #1 NW CORNER & 8'S OF SMH#2	10.5	12	6263G	121.9	6.9	95.2	95
23	1/11/2007	PJO	BUILDING #1 NW CORNER & 1'S OF SMH#2	10.5	12	6263G	124.6	7.4	97.3	95
24	1/11/2007	PJO	BUILDING #1 NW CORNER & 10'S OF SMH#2	11.5	12	6263G	127.6	7.3	99.7	95
25	1/11/2007	PJO	BUILDING #1 NW CORNER & 5'S OF SMH#2	11.5	12	6263G	124.7	7.2	97.4	95
26	1/11/2007	PJO	BUILDING #1 NW CORNER & 6'SE OF SMH#2	12.5	12	6263G	127.1	7.0	99.3	95

Laboratory Compaction Test Reference


Lab ID	Date Received	Material Source	Material Type	Method	Max Dry Density PCF	Optimum Moisture Content (%)	Comments
6263G	12/15/2006	On-site Stockpile	Gravel Borrow	ASTM D-1557 Modified C	128.0	7.6	
6281G	12/20/2006	On-site Stockpile	Common Borrow	ASTM D-1557 Modified C	120.5	6.8	

Elevation Notes:

GBFS-GRAVEL BORROW FOOTING SUBBASE

Comments:

SMH-SEWER MANHOLE


 Reviewed By



SOILS OBSERVATION REPORT

Project Name: Pearl Place Housing
Client: Avesta
Client's Rep.: Mike Myatt
Contractor: Ledgewood Inc.

Project No: 04-1212.2
Date: Jan. 11, 2007
Page: 1 of 1
Technician: PJO

Weather			Site Conditions		Materials Used	
<input type="checkbox"/> Clear	<input type="checkbox"/> Snow	<input type="checkbox"/> Warm	<input type="checkbox"/> Clear	<input type="checkbox"/> Dusty	<input type="checkbox"/> Site Fill	<input type="checkbox"/> Non Frost Susceptible
<input checked="" type="checkbox"/> Overcast	<input type="checkbox"/> Fog	<input type="checkbox"/> Hot	<input type="checkbox"/> Muddy	<input type="checkbox"/> _____	<input type="checkbox"/> Utility Bedding	<input checked="" type="checkbox"/> Subbase
<input type="checkbox"/> Rain	<input checked="" type="checkbox"/> Cold	<input type="checkbox"/> Windy	<input type="checkbox"/> Frozen	Temperatures: 30's	<input type="checkbox"/> Base	<input type="checkbox"/> Structural Fill

Soils Worked Performed:
 Site Prep (Sect. 2230)
 Earthwork (Sect. 2300)
 Planting Soils (Sect. 2310)

Building Earthwork (Sect. 2315)
 Utilities Earthwork (Sect. 2316)
 VRAP

Compaction Equipment Used:
 Large Roller
 Small Roller
 Trench Roller
 Large Plate Tamp

Small Tamp
 Jumping Jack

SOILS OBSERVATIONS	Observed		Comments
	Yes	No	
Site Preparation	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Building #1
Fill Placement:	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Material Type (Proper material used for construction)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Gravel Borrow
Lift Size	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	2'
Compaction	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
In-place Densities	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
In-place Density Frequency	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
NON-CONFORMANCE ITEMS OBSERVED			
Non-conformance item description:			
Action taken by SWCE:			
Person(s) Notified:			

Notes:

Colex encountered a wooden pile while excavating in the NW corner of Bldg. #1. The area (adjacent to SMH #2) was over excavated (approximately 10 cy) to remove the pile. Native soils transitioned from gray clay to stiff brown clay working from west to east. In-situ density tests met or exceeded 95%. No ash was encountered during today's excavation work.

ATTACHMENTS Y N

Reviewed By: RED

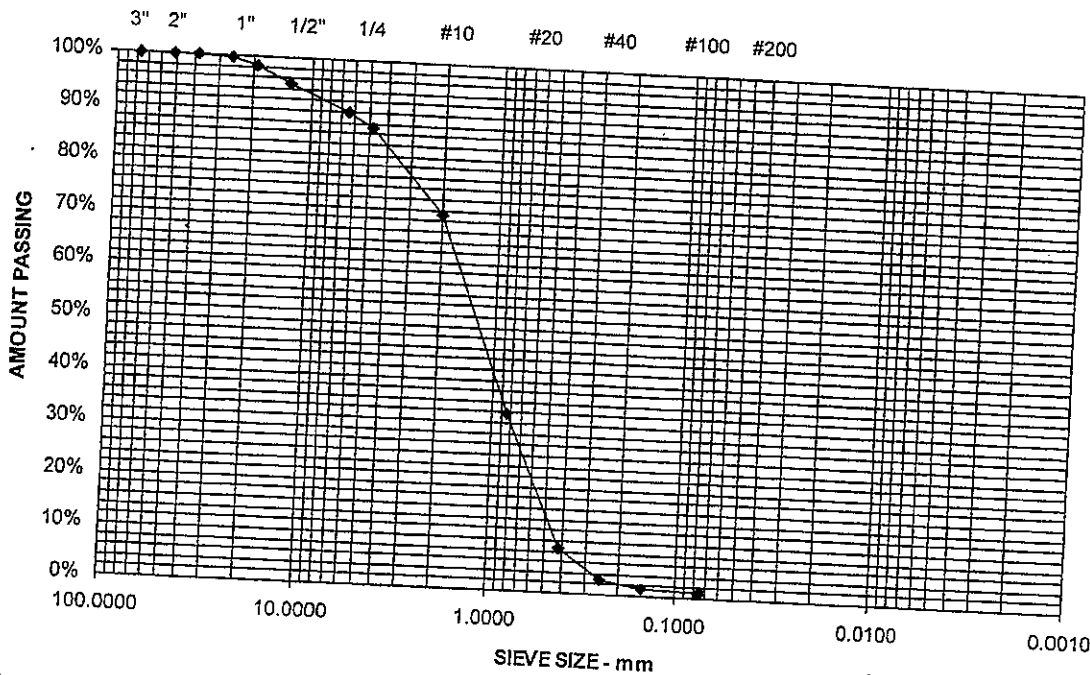
Report of Gradation

ASTM C-117 & C-136

Project Name PORTLAND - PEARL PLACE PHASE I DEVELOPMENT - MATERIALS TESTING
 Client AVESTA HOUSING
 Material Type STRUCTURAL FILL
 Material Source ON SITE

Project Number 04-1212.2
 Lab ID 6311G
 Date Received 1/10/2007
 Date Complete 1/11/2007
 Tested By JUSTIN BISSON

STANDARD DESIGNATION (mm/um)	SIEVE SIZE	AMOUNT PASSING (%)	STRUCTURAL FILL SPECIFICATIONS (%)
150 mm	6"	100	
125 mm	5"	100	
100 mm	4"	100	
75 mm	3"	100	100
50 mm	2"	100	90 - 100
38.1 mm	1-1/2"	100	
25.0 mm	1"	100	
19.0 mm	3/4"	98	
12.5 mm	1/2"	95	
6.3 mm	1/4"	90	25 - 90
4.75 mm	No. 4	87	
2.00 mm	No. 10	71	
850 um	No. 20	34	
425 um	No. 40	9	0 - 30
250 um	No. 60	3	
150 um	No. 100	2	
75 um	No. 200	1.0	0.0 - 5.0



Comments

R. E. Domingo
 Roger E. Domingo



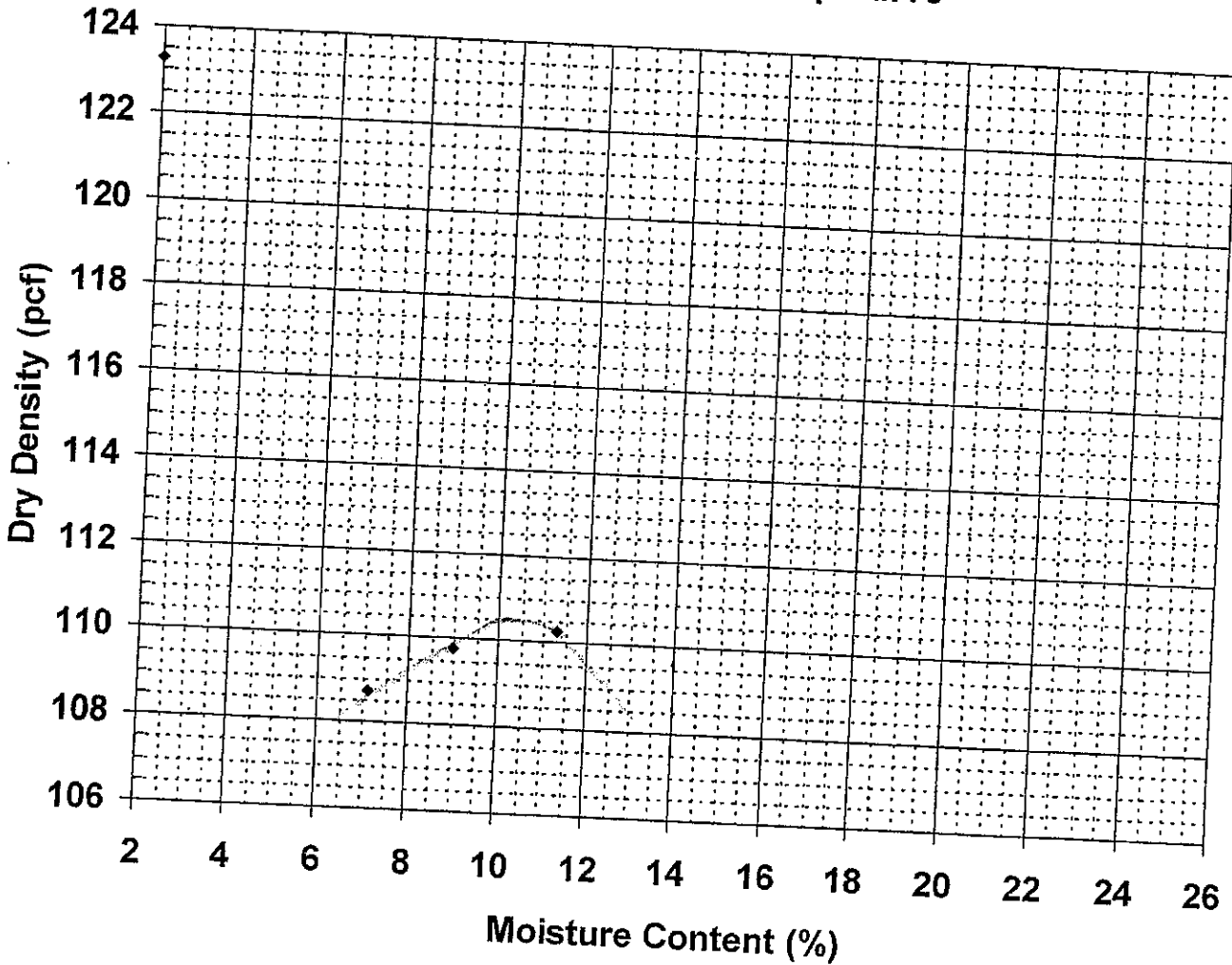
Report of Moisture-Density

Method ASTM D-1557 MODIFIED Procedure A

Project Name PORTLAND - PEARL PLACE PHASE I DEVELOPMENT -
 MATERIALS TESTING
 Client AVESTA HOUSING
 Material Type STRUCTURAL FILL
 Material Source ON SITE

Project Number 04-1212.2
 Lab ID 6311G
 Date Received 1/10/2007
 Date Completed 1/12/2007
 Tested By JUSTIN BISSON

Moisture-Density Relationship Curve



Maximum Dry Density (pcf) 110.5
 Optimum Moisture Content (%) 10
 Percent Oversized 12.8%

Corrected Dry Density (pcf) 114.9
Corrected Moisture Content (%) 9.0

Comments

R. Domingo
 Roger Z. Domingo



SOILS OBSERVATION REPORT

Project Name: Pearl Place Housing
Client: Avesta
Client's Rep.: Mike Myatt
Contractor: Ledgewood Inc.

Project No: 04-1212.2
Date: Jan. 15, 2007
Page: 1 of 1
Technician: PJO

Weather			Site Conditions		Materials Used	
<input type="checkbox"/> Clear	<input checked="" type="checkbox"/> Snow	<input type="checkbox"/> Warm	<input type="checkbox"/> Clear	<input type="checkbox"/> Dusty	<input type="checkbox"/> Site Fill	<input type="checkbox"/> Non Frost Susceptible
<input type="checkbox"/> Overcast	<input type="checkbox"/> Fog	<input type="checkbox"/> Hot	<input type="checkbox"/> Muddy	<input type="checkbox"/> _____	<input type="checkbox"/> Utility Bedding	<input type="checkbox"/> Subbase
<input type="checkbox"/> Rain	<input type="checkbox"/> Cold	<input type="checkbox"/> Windy	<input checked="" type="checkbox"/> Frozen	Temperatures:	<input type="checkbox"/> Base	<input type="checkbox"/> Structural Fill_x_____

Soils Worked Performed:
 Site Prep (Sect. 2230)
 Building Earthwork (Sect. 2315)
 Earthwork (Sect. 2300)
 Utilities Earthwork (Sect. 2316)
 Planting Soils (Sect. 2310)
 VRAP

Compaction Equipment Used:
 Large Roller
 Small Roller
 Trench Roller
 Large Plate Tamp
 Small Tamp
 Jumping Jack

SOILS OBSERVATIONS	Observed		Comments
	Yes	No	
Site Preparation	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Fill Placement:	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Material Type (Proper material used for construction)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Lift Size	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Compaction	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
In-place Densities	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
In-place Density Frequency	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
NON-CONFORMANCE ITEMS OBSERVED			
Non-conformance item description:			
Action taken by SWCE:			
Person(s) Notified:			

Notes:

Colex installed foundation drains along the interior of the south wall and retaining wall in building #1. Colex placed approximately 6 to 12-inches of crushed stone followed by 18-inches of structural fill to top of footing. Ledgewood plans to set up a portable heater this week to drive out shallow frost before any further backfill takes place. Currently insulation blankets are covering most of the poured footing sections and all the open footing trenches awaiting concrete.

ATTACHMENTS Y N

Reviewed By: RED



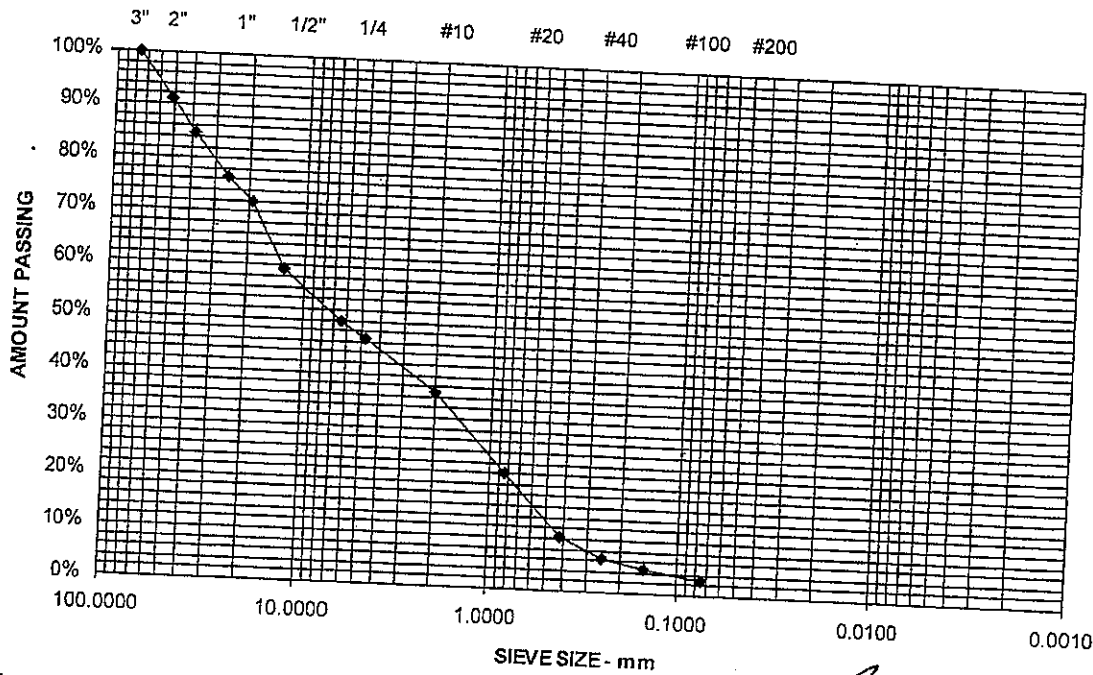
Report of Gradation

ASTM C-117 & C-136

Project Name: PORTLAND - PEARL PLACE PHASE I DEVELOPMENT - MATERIALS TESTING
 Client: AVESTA HOUSING
 Material Type: AGGREGATE SUBBASE
 Material Source: ON SITE

Project Number: 04-1212.2
 Lab ID: 6324G
 Date Received: 1/15/2007
 Date Complete: 1/16/2007
 Tested By: JUSTIN BISSON

STANDARD DESIGNATION (mm/um)	SIEVE SIZE	AMOUNT PASSING (%)	STRUCTURAL FILL SPECIFICATIONS (%)
150 mm	6"	100	
125 mm	5"	100	
100 mm	4"	100	
75 mm	3"	100	100
50 mm	2"	100	90 - 100
38.1 mm	1-1/2"	91	
25.0 mm	1"	85	
19.0 mm	3/4"	77	
12.5 mm	1/2"	72	
6.3 mm	1/4"	59	
4.75 mm	No. 4	50	25 - 90
2.00 mm	No. 10	47	
850 um	No. 20	37	
425 um	No. 40	22	
250 um	No. 60	10	0 - 30
150 um	No. 100	6	
75 um	No. 200	5	
		3.0	0.0 - 5.0



Comments

R E D
 Roger E. Domingo



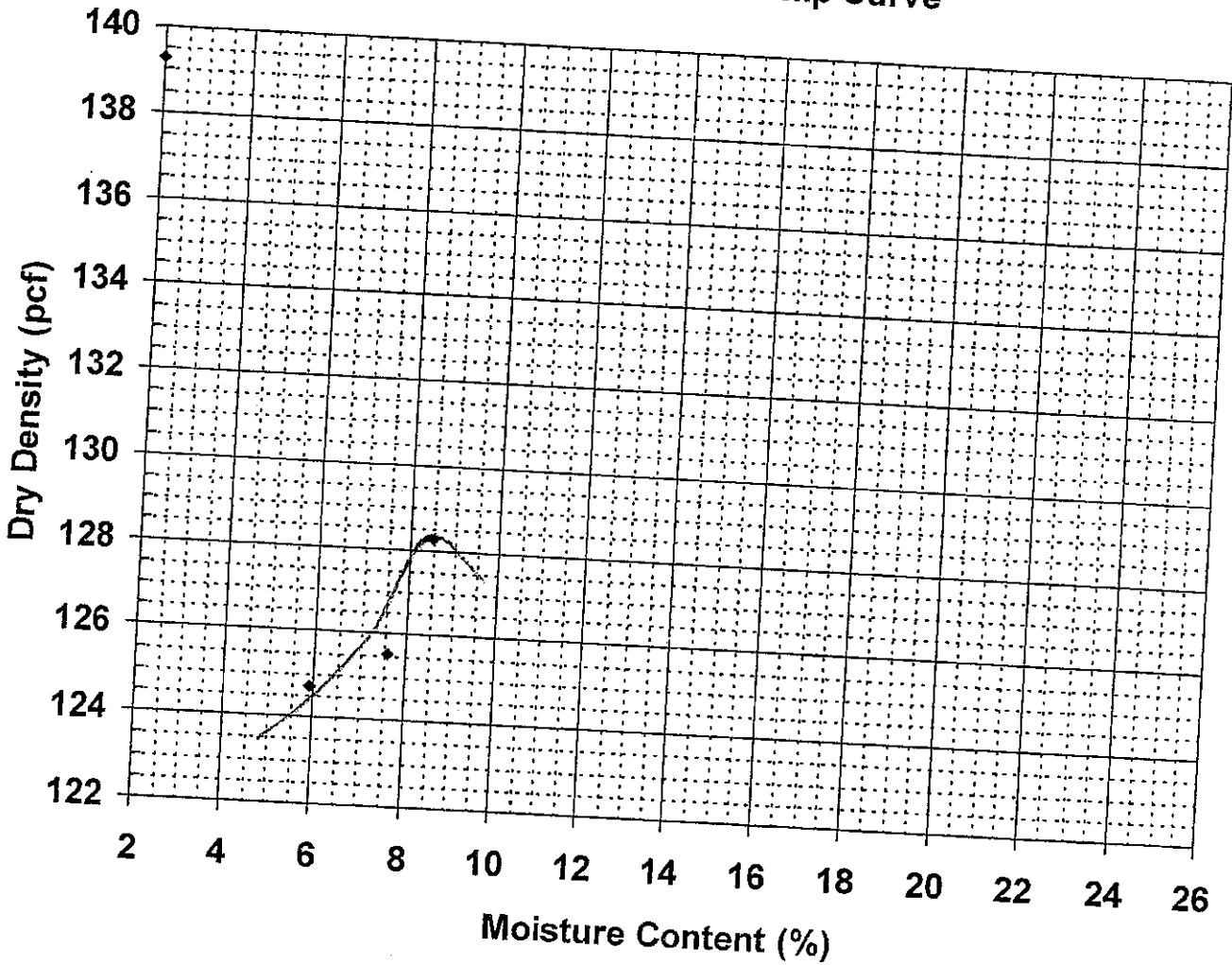
Report of Moisture-Density

Method ASTM D-1557 MODIFIED Procedure C

Project Name PORTLAND - PEARL PLACE PHASE I DEVELOPMENT - MATERIALS TESTING
 Client AVESTA HOUSING
 Material Type AGGREGATE SUBBASE
 Material Source ON SITE

Project Number 04-1212.2
 Lab ID 6324G
 Date Received 1/15/2007
 Date Completed 1/16/2007
 Tested By JUSTIN BISSON

Moisture-Density Relationship Curve



Maximum Dry Density (pcf) 128.5
 Optimum Moisture Content (%) 8
 Percent Oversized 28.0%

Corrected Dry Density (pcf) 135.4
Corrected Moisture Content (%) 6.3

Comments

R. E. Domingo
 Roger E. Domingo



SOILS OBSERVATION REPORT

Project Name: Pearl Place – Phase 1
Client: Avesta
Client's Rep.: Mike Myatt
Contractor: Ledgewood

Project No: 04-1212.2
Date: Jan. 22, 2007
Page: 1 of 1
Technician: MPL

Weather			Site Conditions		Materials Used	
<input checked="" type="checkbox"/> Clear	<input type="checkbox"/> Snow	<input type="checkbox"/> Warm	<input type="checkbox"/> Clear	<input type="checkbox"/> Dusty	<input type="checkbox"/> Site Fill	<input type="checkbox"/> Non Frost Susceptible
<input type="checkbox"/> Overcast	<input type="checkbox"/> Fog	<input type="checkbox"/> Hot	<input type="checkbox"/> Muddy	<input type="checkbox"/> _____	<input type="checkbox"/> Utility Bedding	<input type="checkbox"/> Subbase
<input type="checkbox"/> Rain	<input type="checkbox"/> Cold	<input type="checkbox"/> Windy	<input checked="" type="checkbox"/> Frozen	Temperatures:	<input type="checkbox"/> Base	<input type="checkbox"/> _____

Soils Worked Performed:
 Site Prep
 Earthwork
 Planting Soils
 Building Earthwork
 Utilities Earthwork

Compaction Equipment Used:
 Large Roller
 Small Roller
 Trench Roller
 Large Plate Tamp
 Small Tamp
 Jumping Jack

SOILS OBSERVATIONS	Observed		Comments
	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
Site Preparation	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A
Fill Placement:	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A
Material Type (Proper material used for construction)	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A
Lift Size	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A
Compaction	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A
In-place Densities	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A
In-place Density Frequency	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A
NON-CONFORMANCE ITEMS OBSERVED			
Non-conformance item description:			
Action taken by SWCE:			
Person(s) Notified:			

Notes: Colex (earthwork contractor) was not on-site today. Ledgewood indicated they had placed ground heater and blankets over area between Buildings #1 and #2 over the weekend.

ATTACHMENTS Y N

Reviewed By: RED



SOILS OBSERVATION REPORT

Project Name: Pearl Place – Phase 1
Client: Avesta
Client's Rep.: Mike Myatt
Contractor: Ledgewood

Project No: 04-1212.2
Date: Jan. 23, 2007
Page: 1 of 1
Technician: VLT

Weather			Site Conditions		Materials Used	
<input type="checkbox"/> Clear	<input type="checkbox"/> Snow	<input type="checkbox"/> Warm	<input type="checkbox"/> Clear	<input type="checkbox"/> Dusty	<input type="checkbox"/> Site Fill	<input checked="" type="checkbox"/> Non Frost
<input checked="" type="checkbox"/> Overcast	<input type="checkbox"/> Fog	<input type="checkbox"/> Hot	<input type="checkbox"/> Muddy	<input type="checkbox"/> _____	<input type="checkbox"/> Utility Bedding	<input type="checkbox"/> Susceptible
<input type="checkbox"/> Rain	<input type="checkbox"/> Cold	<input type="checkbox"/> Windy	<input checked="" type="checkbox"/> Frozen	Temperatures: _____	<input type="checkbox"/> Base	<input type="checkbox"/> Subbase

Soils Worked Performed:
 Site Prep
 Earthwork
 Planting Soils
 Building Earthwork
 Utilities Earthwork

Compaction Equipment Used:
 Large Roller
 Small Roller
 Trench Roller
 Large Plate Tamp
 Small Tamp
 Jumping Jack

SOILS OBSERVATIONS	Observed		Comments
Site Preparation	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A
Fill Placement:	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A
Material Type (Proper material used for construction)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A
Lift Size	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A
Compaction	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A
In-place Densities	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A
In-place Density Frequency	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A
NON-CONFORMANCE ITEMS OBSERVED			
Non-conformance item description:			
Action taken by SWCE:			
Person(s) Notified:			

Notes: Bldg#1-Retaining Wall Parking Lot Side - Ground Heater E3000 and blankets used to heat ground the night before and into the next morning prior to placement of fill on subgrade. Probed subgrade for frost by pounding a rod 12" to 18" into subgrade-no frost was encountered at the probe locations. East half of wall was backfilled by Colex using structural fill placing the material in 6" to 12" lifts and compacting with a small tamp. Colex only placed 1 lift along the west half of wall before end of day. Field density tests performed with results 95% compaction or above. Foundation drains were installed per typical detail.

ATTACHMENTS Y N

Reviewed By: RED



Report of Field Density

ASTM D2922

Project: PORTLAND - PEARL PLACE PHASE I DEVELOPMENT - MATERIALS TESTING
 Client: AVESTA HOUSING

Project Number: 04-1212.2

Field Density Test Results

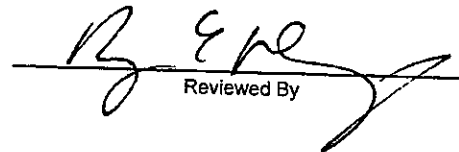
Test #	Test Date	Tech	Test Location	Elev Feet	Test Depth	Lab ID	Dry Density	Moisture Content Percent	Compaction Percent	Required Compaction
27	1/23/2007	VLT	1ST LIFT INSIDE BUILDING #1 EAST HALF-TOP OF FOOTING	14' 6"	12	6311G	113.1	4.4	98.4	95
28	1/23/2007	VLT	1ST LIFT INSIDE BUILDING #1 EAST HALF-TOP OF FOOTING	14' 6"	12	6311G	111.1	5.0	96.7	96
29	1/23/2007	VLT	2ND LIFT INSIDE BUILDING #1 EAST 1/2 TOP OF FOOTING + 12"	15' 6"	10	6311G	112.9	4.1	98.3	96
30	1/23/2007	VLT	2ND LIFT INSIDE BUILDING #1 EAST 1/2 TOP OF FOOTING + 12"	15' 6"	12	6311G	112.2	3.4	97.7	96
31	1/23/2007	VLT	3RD LIFT INSIDE BUILDING #1 EAST 1/2 TOP OF FOOTING + 24"	16' 6"	12	6311G	112.4	3.1	97.8	96
32	1/23/2007	VLT	3RD LIFT INSIDE BUILDING #1 EAST 1/2 TOP OF FOOTING + 24"	16' 6"	12	6311G	109.9	4.5	95.6	96
33	1/23/2007	VLT	1ST LIFT INSIDE BUILDING #1 WEST HALF TOP OF FOOTING	14' 6"	12	6311G	113.8	3.9	99.0	96
34	1/23/2007	VLT	1ST LIFT INSIDE BUILDING #1 WEST HALF TOP OF FOOTING	14' 6"	12	6311G	113.5	4.4	98.8	96

Laboratory Compaction Test Reference

Lab ID	Date Received	Material Source	Material Type	Method	Max Dry Density PCF	Optimum Moisture Content (%)	Comments
6311G	1/10/2007	On Site	Structural Fill	ASTM D-1557 Modified A	114.9	9.0	

Elevation Notes:

Comments:


 Reviewed By



SOILS OBSERVATION REPORT

Project Name: Pearl Place – Phase 1
Client: Avesta
Client's Rep.: Mike Myatt
Contractor: Ledgewood

Project No: 04-1212.2
Date: Jan. 24, 2007
Page: 1 of 1
Technician: VLT

Weather	Site Conditions	Materials Used
<input checked="" type="checkbox"/> Clear <input type="checkbox"/> Snow <input type="checkbox"/> Warm <input type="checkbox"/> Overcast <input type="checkbox"/> Fog <input type="checkbox"/> Hot <input type="checkbox"/> Rain <input type="checkbox"/> Cold <input type="checkbox"/> Windy	<input type="checkbox"/> Clear <input type="checkbox"/> Dusty <input type="checkbox"/> Muddy <input type="checkbox"/> _____ <input checked="" type="checkbox"/> Frozen Temperatures: _____	<input type="checkbox"/> Site Fill <input checked="" type="checkbox"/> Non Frost Susceptible <input type="checkbox"/> Utility Bedding <input type="checkbox"/> Subbase <input type="checkbox"/> Base _____

Soils Worked Performed: Site Prep Earthwork Planting Soils
 Building Earthwork Utilities Earthwork _____

Compaction Equipment Used: Large Roller Small Roller Trench Roller Large Plate Tamp
 Small Tamp Jumping Jack _____

SOILS OBSERVATIONS	Observed		Comments
Site Preparation	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A
Fill Placement:	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A
Material Type (Proper material used for construction)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A
Lift Size	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A
Compaction	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A
In-place Densities	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A
In-place Density Frequency	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A
<u>NON-CONFORMANCE ITEMS OBSERVED</u>			
Non-conformance item description:			
Action taken by SWCE:			
Person(s) Notified:			

Notes: Building #2 - Checked for frost by probing with a rod 12"-18" into subgrade - no frost was encountered at the probe locations. An E3000 Ground Heater and blankets used to heat ground the night before and morning of placement. Colex backfilled with structural fill placing two lifts at 12" per lift at the west half of retaining wall Bldg #1. Colex then worked towards the outside of the SW corner moving the west wall of the building. Several lifts were placed at 12" per lift. Colex was not able to compact or complete placement of fill on the downslope due to Morgan concrete working to complete west wall line. Subgrade on the inside face of wall was defrosted throughout the day with blankets and direct sunlight. Small tamp used to compact material. Field density tests performed with compaction results at 95% or above.

ATTACHMENTS Y N

Reviewed By: RED



Report of Field Density

ASTM D2922

Project: PORTLAND - PEARL PLACE PHASE I DEVELOPMENT - MATERIALS TESTING
 Client: AVESTA HOUSING

Project Number: 04-1212.2

Field Density Test Results

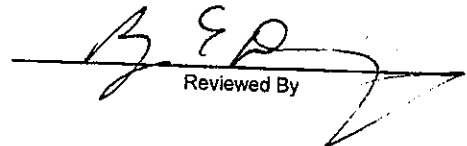
Test #	Test Date	Tech	Test Location	Elev Feet	Test Depth	Lab ID	Dry Density	Moisture Content Percent	Compaction Percent	Required Compaction
35	1/24/2007	VLT	2ND LIFT WEST HALF BUILDING #1 RTW WALL	15' 6"	10	6311G	110.4	4.4	96.1	95
36	1/24/2007	VLT	3RD LIFT WEST HALF BUILDING #1 RTW WALL	16' 6"	12	6311G	113.7	5.3	99.0	95
37	1/24/2007	VLT	2ND LIFT OUTSIDE SW CORNER WALL	23' 6"	12	6311G	113.3	4.1	98.6	95
38	1/24/2007	VLT	2ND LIFT OUTSIDE SW CORNER WALL	23' 6"	12	6311G	113.1	3.9	98.4	95
39	1/24/2007	VLT	3RD LIFT OUTSIDE SW CORNER WALL	24' 6"	10	6311G	113.3	4.4	98.6	95
40	1/24/2007	VLT	4TH LIFT OUTSIDE SW CORNER WALL	25' 6"	10	6311G	114.3	3.4	99.5	95
41	1/24/2007	VLT	5TH LIFT OUTSIDE SW CORNER WALL	26' 6"	12	6311G	111.1	4.1	96.7	95
42	1/24/2007	VLT	6TH LIFT OUTSIDE SW CORNER WALL	27' 6"	12	6311G	114.0	3.4	99.2	95

Laboratory Compaction Test Reference

Lab ID	Date Received	Material Source	Material Type	Method	Max Dry Density PCF	Optimum Moisture Content (%)	Comments
6311G	1/10/2007	On Site	Structural Fill	ASTM D-1557 Modified A	114.9	9.0	

Elevation Notes:

Comments:


 Reviewed By



SOILS OBSERVATION REPORT

Project Name: Pearl Place – Phase 1 **DRAFT**
Client: Avesta
Client's Rep.: Mike Myatt
Contractor: Ledgewood

Project No: 04-121.2
Date: Jan. 25, 2007
Page: 1 of 1
Technician: VLT

Weather	Site Conditions	Materials Used
<input checked="" type="checkbox"/> Clear <input type="checkbox"/> Snow <input type="checkbox"/> Warm <input type="checkbox"/> Overcast <input type="checkbox"/> Fog <input type="checkbox"/> Hot <input type="checkbox"/> Rain <input type="checkbox"/> Cold <input type="checkbox"/> Windy	<input type="checkbox"/> Clear <input type="checkbox"/> Dusty <input type="checkbox"/> Muddy <input type="checkbox"/> _____ <input checked="" type="checkbox"/> Frozen Temperatures: _____	<input type="checkbox"/> Site Fill <input checked="" type="checkbox"/> Non Frost Susceptible <input type="checkbox"/> Utility Bedding <input type="checkbox"/> Subbase <input type="checkbox"/> Base _____

Soils Worked Performed: Site Prep Earthwork Planting Soils
 Building Earthwork Utilities Earthwork _____

Compaction Equipment Used: Large Roller Small Roller Trench Roller Large Plate Tamp
 Small Tamp Jumping Jack _____

SOILS OBSERVATIONS	Observed	Comments
Site Preparation	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	N/A
Fill Placement:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	N/A
Material Type (Proper material used for construction)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	N/A
Lift Size	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	N/A
Compaction	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	N/A
In-place Densities	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	N/A
In-place Density Frequency	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	N/A
<u>NON-CONFORMANCE ITEMS OBSERVED</u>		
Non-conformance item description:		
Action taken by SWCE:		
Person(s) Notified:		

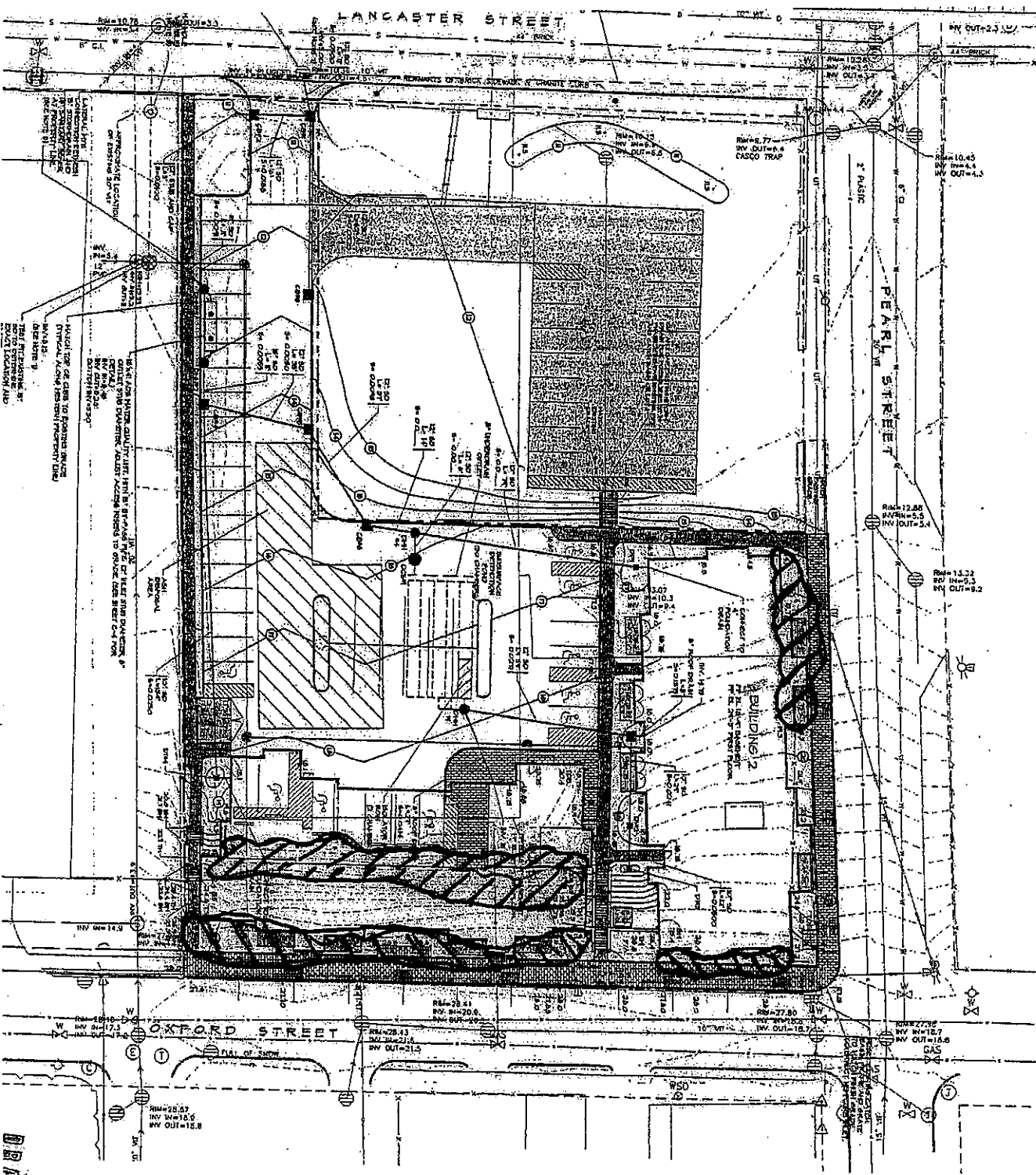
Notes: Matt Lilley checked for frost on the south side of the interior wall in Building #1 by digging into subgrade at several locations with a shove. No frost was encountered at the probe locations. Colex placed 6" to 12" lifts of structural fill and compacted with a small tamp. Field density tests performed with compaction results at 95% or above. Colex placed two rows of rigid insulation placed against wall.

ATTACHMENTS Y N

Reviewed By: RED



Access indicated to top of footing as of 1/26/07



NOTES:
1. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE NOTED.
2. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE NOTED.
3. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE NOTED.
4. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE NOTED.
5. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE NOTED.
6. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE NOTED.
7. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE NOTED.
8. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE NOTED.
9. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE NOTED.
10. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE NOTED.

Legend
DRAINAGE
FOOTING
FOUNDATION
STRUCTURE
PROPERTY LINE
EXISTING
PROPOSED

Scale: 1" = 20'
10' 5' 0' 10' 20' 40'

PEARL PLACE PHASE ONE
GRADING AND DRAINAGE PLAN

DRAPER

Owner:
Avisis Housing Development
Corporation
307 Dunbarland Avenue
Portland, Maine 04101
207-855-9777

Applicant:
Avisis Pearl Street One LLC
387 Commercial Avenue
Portland, Maine 04101
207-855-9777

Consultants:
Architect
Whelan Scott Associates
Portland, ME 04101
207-774-8811

Engineer:
Donald P. Parker, Consulting
Engineer, Inc.
P.O. Box 1327
Gray, Maine 04135
207-457-8910
207-457-8910

Notes:
1. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE NOTED.
2. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE NOTED.
3. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE NOTED.
4. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE NOTED.
5. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE NOTED.
6. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE NOTED.
7. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE NOTED.
8. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE NOTED.
9. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE NOTED.
10. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE NOTED.



Report of Field Density

ASTM D2922

Project: PORTLAND - PEARL PLACE PHASE I DEVELOPMENT - MATERIALS TESTING
 Client: AVESTA HOUSING

Project Number: 04-1212.2

Field Density Test Results

Test #	Test Date	Tech	Test Location	Elev Feet	Test Depth	Lab ID	Dry Density	Moisture Content Percent	Compaction Percent	Required Compaction
43	1/25/2007	VLT	4TH LIFT BUILDING #1 INTERIOR RTW EAST 1/2	18' 6"	12	6311G	112.5	3.3	97.9	95
44	1/25/2007	VLT	4TH LIFT BUILDING #1 INTERIOR RTW EAST 1/2	18' 6"	12	6311G	110.1	4.6	95.8	95
45	1/25/2007	VLT	5TH LIFT BUILDING #1 INTERIOR RTW EAST 1/2	19' 6"	12	6311G	111.1	4.6	96.7	95
46	1/25/2007	VLT	5TH LIFT BUILDING #1 INTERIOR RTW EAST 1/2	19' 6"	12	6311G	111.0	4.2	96.6	95
47	1/25/2007	VLT	6TH LIFT BUILDING #1 INTERIOR RTW EAST 1/2	20' 6"	12	6311G	114.2	3.7	99.4	95
48	1/25/2007	VLT	6TH LIFT BUILDING #1 INTERIOR RTW EAST 1/2	20' 6"	12	6311G	114.0	3.6	99.2	95

Laboratory Compaction Test Reference

Lab ID	Date Received	Material Source	Material Type	Method	Max Dry Density PCF	Optimum Moisture Content (%)	Comments
6311G	1/10/2007	On Site	Structural Fill	ASTM D-1557 Modified A	114.9	9.0	

Elevation Notes:

Comments:


 Reviewed By



SOILS OBSERVATION REPORT

Project Name: Pearl Place – Phase 1
Client: Avesta
Client's Rep.: Mike Myatt
Contractor: Ledgewood

Project No: 04-121.2
Date: Jan. 26, 2007
Page: 1 of 1
Technician: VLT

Weather			Site Conditions		Materials Used	
<input type="checkbox"/> Clear	<input type="checkbox"/> Snow	<input type="checkbox"/> Warm	<input type="checkbox"/> Clear	<input type="checkbox"/> Dusty	<input type="checkbox"/> Site Fill	<input type="checkbox"/> Non Frost Susceptible
<input type="checkbox"/> Overcast	<input type="checkbox"/> Fog	<input type="checkbox"/> Hot	<input type="checkbox"/> Muddy	<input type="checkbox"/> _____	<input type="checkbox"/> Utility Bedding	<input type="checkbox"/> Subbase
<input type="checkbox"/> Rain	<input checked="" type="checkbox"/> Cold	<input type="checkbox"/> Windy	<input checked="" type="checkbox"/> Frozen	Temperatures: _____	Base _____	

Soils Worked Performed:
 Site Prep
 Earthwork
 Planting Soils
 Building Earthwork
 Utilities Earthwork

Compaction Equipment Used:
 Large Roller
 Small Roller
 Trench Roller
 Large Plate Tamp
 Small Tamp
 Jumping Jack

SOILS OBSERVATIONS		Observed		Comments
Site Preparation	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A	
Fill Placement:	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A	
Material Type (Proper material used for construction)	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A	
Lift Size	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A	
Compaction	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A	
In-place Densities	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A	
In-place Density Frequency	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A	
NON-CONFORMANCE ITEMS OBSERVED				
Non-conformance item description:				
Action taken by SWCE:				
Person(s) Notified:				

Notes: _ Colex planned to excavate inside retaining wall in on the parking lot side and backfill footings inside and outside along Pearl Street of Building #2. Ground Heater and blankets were used to heat and protect ground around footings overnight. Frost was checked in building #2 and on none was found in tested areas and blankets were replaced

The ground heater set up around bldg #1 was not producing enough to heat subgrade properly. Ledgewood ordered new ground heater. . Colex excavator fuel filter froze and no further work could be completed due to air temperature -1 to 7 degrees.

ATTACHMENTS Y N

Reviewed By: RED



SOILS OBSERVATION REPORT

Project Name: Pearl Place – Phase 1
Client: Avesta Housing
Client's Rep.: Mike Myatt
Contractor: Ledgewood

Project No: 04-121.2
Date: 1/28/07
Page: 1 of 1
Technician: PJO

Weather			Site Conditions		Materials Used	
<input checked="" type="checkbox"/> Clear	<input type="checkbox"/> Snow	<input type="checkbox"/> Warm	<input type="checkbox"/> Clear	<input type="checkbox"/> Dusty	<input type="checkbox"/> Site Fill	<input checked="" type="checkbox"/> Non Frost Susceptible
<input type="checkbox"/> Overcast	<input type="checkbox"/> Fog	<input type="checkbox"/> Hot	<input type="checkbox"/> Muddy	<input type="checkbox"/> _____	<input type="checkbox"/> Utility Bedding	<input type="checkbox"/> Subbase
<input type="checkbox"/> Rain	<input type="checkbox"/> Cold	<input type="checkbox"/> Windy	<input checked="" type="checkbox"/> Frozen	Temperatures: 10 to 22	<input type="checkbox"/> Base	_____

Soils Worked Performed:
 Site Prep
 Earthwork
 Planting Soils
 Building Earthwork
 Utilities Earthwork

Compaction Equipment Used:
 Large Roller
 Small Roller
 Trench Roller
 Large Plate Tamp
 Small Tamp
 Jumping Jack

SOILS OBSERVATIONS	Observed		Comments
	Yes	No	
Site Preparation	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Fill Placement:	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Material Type (Proper material used for construction)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Lift Size	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	12" to 18"
Compaction	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
In-place Densities	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
In-place Density Frequency	Yes <input type="checkbox"/>	No <input type="checkbox"/>	As needed
NON-CONFORMANCE ITEMS OBSERVED			
Non-conformance item description:			
Action taken by SWCE:			
Person(s) Notified:			

Notes: Probes were made along the interior and exterior of Building #2 NE wall footings (adjacent to Pearl St.) in an attempt to locate any frozen soil. The existing foundation backfill (approximately 24" deep) appeared to be free of frost. We were not able to probe beneath the foundation footings. The foundation excavation sidewalls which consist of native soil or existing rubble fill are frozen. The majority of exposed subgrade material in the interior of both buildings remains exposed and is frozen.

Supplied heat in the form of blankets and ground heater hoses are currently being used in the NW corner of Building #1 and along the East wall of Building #2. Concrete and backfill are scheduled to take place in these areas within the next two days. Colex encountered a high volume of ground water originating beneath the interior wall footing and below the foundation drains as they excavated for the "L" footings in the interior of Building #1. A stiff brown clay and glacial till was encountered working from west to east. As excavation of the West "L" footing took place portions of fabric and stone enveloping the foundation drain were removed and will need to be addressed before the areas is backfilled. Gravel borrow was placed and compacted in the excavations beneath both "L" footings.

See attached footing backfill sketch

ATTACHMENTS Y N

Reviewed By: RED



SOILS OBSERVATION REPORT

Project Name: Pearl Place – Phase 1
Client: Avesta
Client's Rep.: Mike Myatt
Contractor: Ledgewood

Project No: 04-1212.2
Date: 1-30-07
Page: 1 of 1
Technician: PJO

<u>Weather</u>			<u>Site Conditions</u>		<u>Materials Used</u>	
<input checked="" type="checkbox"/> Clear	<input type="checkbox"/> Snow	<input type="checkbox"/> Warm	<input type="checkbox"/> Clear	<input type="checkbox"/> Dusty	<input type="checkbox"/> Site Fill	<input type="checkbox"/> Non Frost Susceptible
<input type="checkbox"/> Overcast	<input type="checkbox"/> Fog	<input type="checkbox"/> Hot	<input type="checkbox"/> Muddy	<input type="checkbox"/> _____	<input type="checkbox"/> Utility Bedding	<input type="checkbox"/> Subbase
<input type="checkbox"/> Rain	<input checked="" type="checkbox"/> Cold	<input type="checkbox"/> Windy	<input checked="" type="checkbox"/> Frozen	Temperatures: 10-20	<input type="checkbox"/> Base	_____

Soils Worked Performed:
 Site Prep
 Earthwork
 Planting Soils
 Building Earthwork
 Utilities Earthwork

Compaction Equipment Used:
 Large Roller
 Small Roller
 Trench Roller
 Large Plate Tamp
 Small Tamp
 Jumping Jack

<u>SOILS OBSERVATIONS</u>	<u>Observed</u>		<u>Comments</u>
Site Preparation	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Fill Placement:	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Material Type (Proper material used for construction)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Lift Size	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	12"
Compaction	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
In-place Densities	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
In-place Density Frequency	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
<u>NON-CONFORMANCE ITEMS OBSERVED</u>			
Non-conformance item description:			
Action taken by SWCE:			
Person(s) Notified:			

Notes: Colex excavated the pier footings for Building #1. Crushed stone and geo-textile fabric were placed on brown clay as ground water submerged the excavated area. As the day progressed the middle pier had taken on 4-inches of standing water as Morgan concrete installed pier formwork and reinforcement. Colex completed excavation of the North wall footing line in Building #1. Gravel borrow was placed and compacted over a stiff gray clay. Frost was probed along the West wall of Building #1 and found to still be present in the Gravel Borrow subbase, Ledgewood continued heating the area planning to backfill on Wednesday. Colex removed rubble between the South wall and retaining wall in Building #1. Hand shoveling was done along the interior footings to remove some of the snow for the installation of foundation drains.

ATTACHMENTS Y N

Reviewed By: RED



SOILS OBSERVATION REPORT

Project Name: Pearl Place – Phase 1
Client: Avesta
Client's Rep.: Mike Myatt
Contractor: Ledgewood

Project No: 04-1212.2
Date: 1-31-07
Page: 1 of 1
Technician: PJO

<u>Weather</u>			<u>Site Conditions</u>		<u>Materials Used</u>	
<input checked="" type="checkbox"/> Clear	<input type="checkbox"/> Snow	<input type="checkbox"/> Warm	<input type="checkbox"/> Clear	<input type="checkbox"/> Dusty	<input type="checkbox"/> Site Fill	<input type="checkbox"/> Non Frost Susceptible
<input type="checkbox"/> Overcast	<input type="checkbox"/> Fog	<input type="checkbox"/> Hot	<input type="checkbox"/> Muddy	<input type="checkbox"/> _____	<input type="checkbox"/> Utility Bedding	<input type="checkbox"/> Subbase
<input type="checkbox"/> Rain	<input checked="" type="checkbox"/> Cold	<input type="checkbox"/> Windy	<input type="checkbox"/> Frozen	Temperatures: 12-30	<input type="checkbox"/> Base	_____

Soils Worked Performed:
 Site Prep
 Earthwork
 Planting Soils
 Building Earthwork
 Utilities Earthwork

Compaction Equipment Used:
 Large Roller
 Small Roller
 Trench Roller
 Large Plate Tamp
 Small Tamp
 Jumping Jack

<u>SOILS OBSERVATIONS</u>	<u>Observed</u>		<u>Comments</u>
Site Preparation	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Fill Placement:	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Material Type (Proper material used for construction)	Yes <input checked="" type="checkbox"/>	No <input checked="" type="checkbox"/>	
Lift Size	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	12"
Compaction	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
In-place Densities	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
In-place Density Frequency	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
<u>NON-CONFORMANCE ITEMS OBSERVED</u>			
Non-conformance item description:	Backfilling foundation with Gravel Borrow subbase		
Action taken by SWCE:	Colex and Ledgewood were notified to use Structural Fill		
Person(s) Notified:	Jason Cole and Rick (Ledgewood)		

Notes: Frost was probed along North and West Wall footing sections in Building #1. Subbase material was probed from 12 to 18-inches below the surface. Material approximately two feet on either side of the footings appeared to be free of frost. The adjacent embankments however were frozen and backfill took place later in the day. Colex began compacting Gravel Borrow against the exterior foundation. Colex was notified that the proper material was not being placed and oversized aggregate was removed from the foundation and structural fill was used from that point forward. In-situ density tests were taken on subbase and structural fill material placed along the North Wall and West Wall footings. Results exceeded 95% compaction on material tested. Colex completed the excavation of the retaining wall in Building #2 crushed stone and geo-textile fabric were applied over stiff brown/gray clay. Pumping subgrade located in the "horse shoe" wall area has not been overexcavated and filled with concrete as discussed between SW Cole, Ledgewood and Colex. We understand Becker will review from structural aspect.

ATTACHMENTS Y N

Reviewed BY: RED



Report of Field Density

ASTM D2922

Project: PORTLAND - PEARL PLACE PHASE I DEVELOPMENT - MATERIALS TESTING
 Client: AVESTA HOUSING

Project Number: 04-1212.2

Field Density Test Results

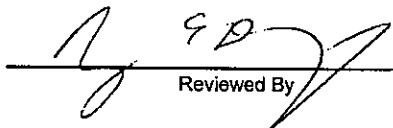
Test #	Test Date	Tech	Test Location	Elev Feet	Test Depth	Lab ID	Dry Density	Moisture Content Percent	Compaction Percent	Required Compaction
56	2/7/2007	VLT	BLDG#1 - EAST WALL SE CORNER	16'6"	12	6311G	109.2	3.6	95.0	95
57	2/7/2007	VLT	BLDG#1 - EAST WALL 20' S OF NE CORNER	16'6"	10	6311G	111.6	3.3	97.1	95
58	2/7/2007	VLT	BLDG#2 - WEST WALL 30'N OF SW CORNER	16'6"	10	6311G	103.2	5.2	89.8	95
59	2/7/2007	VLT	BLDG#1 - EAST WALL 50'N OF SE CORNER	17'6"	12	6311G	110.1	2.7	95.8	95
60	2/7/2007	VLT	BLDG#1 - EAST WALL NE CNR	17'6"	10	6311G	111.8	2.8	97.3	95
61	2/7/2007	VLT	BLDG#2 - WEST WALL 30'N OF SW CORNER	17'6"	10	6311G	110.8	3.2	96.4	95

Laboratory Compaction Test Reference

Lab ID	Date Received	Material Source	Material Type	Method	Max Dry Density PCF	Optimum Moisture Content (%)	Comments
6311G	1/10/2007	On Site	Structural Fill	ASTM D-1557 Modified A	114.9	9.0	

Elevation Notes:

Comments:



 Reviewed By



Report of Field Density

ASTM D2922

Project: PORTLAND - PEARL PLACE PHASE I DEVELOPMENT - MATERIALS TESTING
 Client: AVESTA HOUSING

Project Number: 04-1212.2

Field Density Test Results

Test #	Test Date	Tech	Test Location	Elev Feet	Test Depth	Lab ID	Dry Density	Moisture Content Percent	Compaction Percent	Required Compaction
62	2/12/2007	PJO	N FOOTING (INTERIOR FILL) + 35' FROM NW CORNER	16	10	6311G	112.6	3.6	98.0	95
63	2/12/2007	PJO	N FOOTING (INTERIOR FILL) + 55' FROM NW CORNER	16	10	6311G	112.2	3.8	97.7	95
64	2/12/2007	PJO	N FOOTING (INTERIOR FILL) + 35' FROM NE CORNER	16	10	6311G	113.1	3.8	98.4	95
65	2/12/2007	PJO	N FOOTING (INTERIOR FILL) + 45' FROM NE CORNER	16	10	6311G	112.7	4.0	98.1	95
66	2/12/2007	PJO	N FOOTING (EXTERIOR FILL) + 45' FROM NW CORNER	16.5	10	6311G	110.6	3.9	96.3	95
67	2/12/2007	PJO	N FOOTING (EXTERIOR FILL) + 40' FROM NE CORNER	16.5	10	6311G	109.6	3.3	95.4	95
68	2/12/2007	PJO	N FOOTING (INTERIOR FILL) + 55' FROM NW CORNER	17.5	8	6311G	109.8	3.7	95.6	95
69	2/12/2007	PJO	N FOOTING (INTERIOR FILL) + 70' FROM NW CORNER	17.5	12	6311G	109.4	3.9	95.2	95
70	2/12/2007	PJO	N FOOTING (EXTERIOR FILL) + 60' FROM NW CORNER	18.0	12	6311G	110.1	3.6	95.8	95
71	2/12/2007	PJO	N FOOTING (INTERIOR FILL) + 80' FROM NW CORNER	17.5	12	6311G	109.3	3.4	95.1	95
72	2/12/2007	PJO	N FOOTING (EXTERIOR FILL) + 40' FROM NE CORNER	18.0	12	6311G	109.6	3.6	95.4	95
73	2/12/2007	PJO	N FOOTING (INTERIOR FILL) + 50' FROM NW CORNER	19.0	12	6311G	109.8	3.7	95.6	95
74	2/12/2007	PJO	N FOOTING (EXTERIOR FILL) + 75' FROM NW CORNER	19.0	12	6311G	109.3	3.9	95.1	95
75	2/12/2007	PJO	N FOOTING (EXTERIOR FILL) + 60' FROM NW CORNER	19.5	12	6311G	109.4	3.7	95.2	95

Laboratory Compaction Test Reference

Lab ID	Date Received	Material Source	Material Type	Method	Max Dry Density PCF	Optimum Moisture Content (%)	Comments
6311G	1/10/2007	On Site	Structural Fill	ASTM D-1557 Modified A	114.9	9.0	

Elevation Notes:

Comments:
BUILDING #1 N FOOTING


 Reviewed By



Report of Field Density

ASTM D2922

Project: PORTLAND - PEARL PLACE PHASE I DEVELOPMENT - MATERIALS TESTING

Project Number: 04-1212.2

Client: AVESTA HOUSING

Field Density Test Results

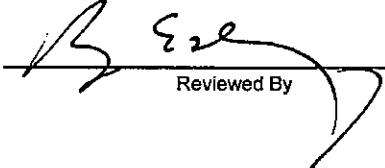
Test #	Test Date	Tech	Test Location	Elev Feet	Test Depth	Lab ID	Dry Density	Moisture Content Percent	Compaction Percent	Required Compaction
76	2/27/2007	DAC	5'N & 38'W OF BUILDING #1 SE CORNER	27.75	12	6311G	110.5	3.4	96.2	95
77	2/27/2007	DAC	4'N & 8'W OF BUILDING #1 SE CORNER	28	12	6311G	113.0	3.2	98.3	95
78	2/27/2007	DAC	7'N & 50'E OF BUILDING #1 SW CORNER	28	12	6311G	112.1	3.8	97.6	95
79	2/27/2007	DAC	6'N & 9'E OF BUILDING #1 SW CORNER	27.75	12	6311G	111.2	3.4	96.8	95
80	2/27/2007	DAC	6'N & 8'W OF BUILDING #1 SW CORNER	28.0	12	6311G	111.1	5.5	96.7	95
81	2/27/2007	DAC	5'S & 14'W OF BUILDING #2 NE CORNER	5.75'	12	6263G	118.3	7.9	92.4	95
82	2/27/2007	DAC	3'N & 13'W OF BUILDING #2 NE CORNER	6.0'	12	6263G	116.0	6.5	90.6	95
83	2/27/2007	DAC	5'S & 12'W OF BUILDING #2 NE CORNER	7.5'	12	6324G	130.1	3.4	96.1	95
84	2/27/2007	DAC	4'N & 18'W OF BUILDING #2 NE CORNER	7.5'	12	6324G	128.9	3.6	95.2	95

Laboratory Compaction Test Reference

Lab ID	Date Received	Material Source	Material Type	Method	Max Dry Density PCF	Optimum Moisture Content (%)	Comments
6263G	12/15/2006	On-site Stockpile	Gravel Borrow	ASTM D-1557 Modified C	128.0	7.6	
6311G	1/10/2007	On Site	Structural Fill	ASTM D-1557 Modified A	114.9	9.0	
6324G	1/15/2007	On Site	Aggregate Subbase	ASTM D-1557 Modified C	135.4	6.3	

Elevation Notes:

Comments:


 Reviewed By



Report of Field Density

ASTM D2922

Project: PORTLAND - PEARL PLACE PHASE I DEVELOPMENT - MATERIALS TESTING

Project Number: 04-1212.2

Client: AVESTA HOUSING

Field Density Test Results

Test #	Test Date	Tech	Test Location	Elev Feet	Test Depth	Lab ID	Dry Density	Moisture Content Percent	Compaction Percent	Required Compaction
85	2/28/2007	VLT	CENTER INSIDE RTW BUILDING 1 5' BELOW TOW	5' B FFG	10"	6311G	110.8	4.5	96.4	95
86	2/28/2007	VLT	NORTH WALL BUILDING 2 4' BELOW FTG	4' B FTG	10"	6324G	128.9	4.0	95.2	95
87	2/28/2007	VLT	N WALL BUILDNG 2 4' BELOW FTG	4' B FTG	10"	6324G	128.6	4.0	95.0	95
88	2/28/2007	VLT	N WALL BUILDNG 2 3' BELOW FTG	3' B FTG	8"	6324G	132.0	4.1	97.5	95
89	2/28/2007	VLT	N WALL BUILDNG 2 3' BELOW FTG	3' B FTG	10"	6324G	129.3	4.0	95.5	95
90	2/28/2007	VLT	CENTER INSIDE RTW BUILDING 1 3' BELOW TOW	3' B FFG	10"	6311G	113.2	3.1	98.5	95
91	2/28/2007	VLT	N WALL BUILDING 2 2' BELOW FTG	2' B FTG	10"	6324G	128.8	4.0	95.1	95
92	2/28/2007	VLT	N WALL BUILDING 2 2' BELOW FTG	2' B FTG	8"	6324G	131.0	4.0	96.8	95
93	2/28/2007	VLT	N WALL BUILDING 2 1' BELOW FTG	1' B FTG	12"	6324G	132.9	4.0	98.2	95
94	2/28/2007	VLT	N WALL BUILDING 2 @ BOTTOM OF FTG	10' 6"	12"	6324G	131.9	3.9	97.4	95

Laboratory Compaction Test Reference

Lab ID	Date Received	Material Source	Material Type	Method	Max Dry Density PCF	Optimum Moisture Content (%)	Comments
6311G	1/10/2007	On Site	Structural Fill	ASTM D-1557 Modified A	114.9	9.0	
6324G	1/15/2007	On Site	Aggregate Subbase	ASTM D-1557 Modified C	135.4	6.3	

Elevation Notes:

B = BELOW FFG=FINISH FLOOR GRADE
 FTG=FOOTING TOW=TOP OF WALL

Comments:


 Reviewed By



Report of Field Density

ASTM D2922

Project: PORTLAND - PEARL PLACE PHASE I DEVELOPMENT - MATERIALS TESTING
 Client: AVESTA HOUSING

Project Number: 04-1212.2

Field Density Test Results

Test #	Test Date	Tech	Test Location	Elev Feet	Test Depth	Lab ID	Dry Density	Moisture Content Percent	Compaction Percent	Required Compaction
95	3/5/2007	DMR	3' INSIDE NW CORNER UPPER LEVEL	5'BTW	12	6311G	112.3	5.9	97.7	95
96	3/5/2007	DMR	12' INSIDE NE CORNER LOWER LEVEL	8.6	1122	6311G	112.7	3.9	98.1	95
97	3/5/2007	DMR	16' INSIDE NE CORNER LOWER LEVEL	9.4	1122	6311G	115.3	4.8	100.3	95
98	3/5/2007	DMR	20' INSIDE NE CORNER LOWER LEVEL	10.6	12	6311G	111.8	5.2	97.3	95

Laboratory Compaction Test Reference

Lab ID	Date Received	Material Source	Material Type	Method	Max Dry Density PCF	Optimum Moisture Content (%)	Comments
6311G	1/10/2007	On Site	Structural Fill	ASTM D-1557 Modified A	114.9	9.0	

Elevation Notes:

BTW = BELOW TOP WALL

Comments:


 Reviewed By



Report of Field Density ASTM D2922

Project: PORTLAND - PEARL PLACE PHASE I DEVELOPMENT - MATERIALS TESTING

Project Number: 04-1212.2

Client: AVESTA HOUSING

Field Density Test Results

Test #	Test Date	Tech	Test Location	Elev Feet	Test Depth	Lab ID	Dry Density	Moisture Content Percent	Compaction Percent	Required Compaction
99	3/6/2007	VLT	100' S OF NE CORNER 15' OFF E WALL BUILDING #2	1' BFFG	10	6311G	111.9	4.0	97.4	95
100	3/6/2007	VLT	15' S OF ELEVATOR PIT - WEST WALL BUILDING #2	1' BFFG	10	6311G	108.3	4.0	94.3	95
101	3/6/2007	VLT	15' S OF ELEVATOR PIT - WEST WALL BUILDING #2	1' BFFG	12	6311G	112.4	4.2	97.8	95
102	3/6/2007	VLT	30' S OF ELEVATOR PIT - WEST WALL BUILDING #2	1' BFFG	10	6311G	112.8	3.9	98.2	95

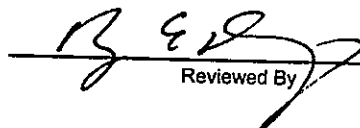
Laboratory Compaction Test Reference

Lab ID	Date Received	Material Source	Material Type	Method	Max Dry Density PCF	Optimum Moisture Content (%)	Comments
6311G	1/10/2007	On Site	Structural Fill	ASTM D-1557 Modified A	114.9	9.0	

Elevation Notes:

BFFG = BELOW FFG

Comments:


 Reviewed By



Report of Field Density

ASTM D2922

Project: PORTLAND - PEARL PLACE PHASE I DEVELOPMENT - MATERIALS TESTING

Project Number: 04-1212.2

Client: AVESTA HOUSING

Field Density Test Results

Test #	Test Date	Tech	Test Location	Elev Feet	Test Depth	Lab ID	Dry Density	Moisture Content Percent	Compaction Percent	Required Compaction
103	3/12/2007	VLT	SE CORNER BUILDING #1	FFG	12	6311G	114.1	3.9	99.3	95
104	3/12/2007	VLT	15' INSIDE SE CORNER BUILDING #1	FFG	12	6311G	114.7	4.3	99.8	95
105	3/12/2007	VLT	INSIDE RTW 30'W OF EAST ALL BUILDING	1' BFFG	12	6311G	110.0	3.8	95.7	95
106	3/12/2007	VLT	INSIDIE RTW 60'W OF EAST WALL BUILDING	1' BFFG	12	6311G	111.0	4.7	96.6	95
107	3/12/2007	VLT	INSIDIE RTW 30'W OF EAST WALL BUILDING	FFG	12	6311G	114.7	3.4	99.8	95
108	3/12/2007	VLT	INSIDIE RTW 30'W OF EAST WALL BUILDING	FFG	12	6311G	116.0	4.3	101.0	95
109	3/12/2007	VLT	INSIDE RTW 60'W OF EAST WALL BUILDING #1	FFG	12	6311G	112.3	3.4	97.7	95

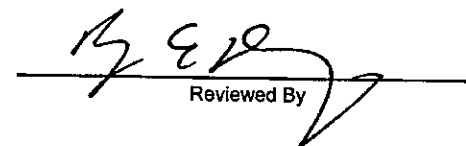
Laboratory Compaction Test Reference

Lab ID	Date Received	Material Source	Material Type	Method	Max Dry Density PCF	Optimum Moisture Content (%)	Comments
6311G	1/10/2007	On Site	Structural Fill	ASTM D-1557 Modified A	114.9	9.0	

Elevation Notes:

FFG = FINISH FLOOR GRADE; BFFG = BELOW FINISH FLOOR GRADE

Comments:


 Reviewed By



Report of Field Density

ASTM D2922

Project: PORTLAND - PEARL PLACE PHASE I DEVELOPMENT - MATERIALS TESTING
 Client: AVESTA HOUSING

Project Number: 04-1212.2

Field Density Test Results

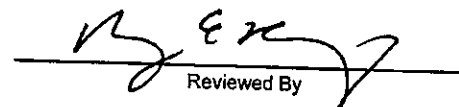
Test #	Test Date	Tech	Test Location	Elev Feet	Test Depth	Lab ID	Dry Density	Moisture Content Percent	Compaction Percent	Required Compaction
110	3/13/2007	JCM	BLDG 1 - FROM SOUTH WALL CENTER ENTRANCE 12'N 8'E	F	12"	6311G	117.6	5.4	102.3	95
111	3/13/2007	JCM	BLDG 1 - FROM SOUTH WALL CENTER ENTRANCE 23'N 2'W	F	12"	6311G	118.2	4.8	102.9	95
112	3/13/2007	JCM	BLDG 1 - FROM SOUTH WALL CENTER ENTRANCE 2'N	F	12"	6311G	114.6	4.3	99.7	95
113	3/13/2007	JCM	BLDG 1 - FROM SOUTH WEST CORNER ENTRANCE 5'N 25'W	F	12"	6311G	113.9	4.9	99.1	95
114	3/13/2007	JCM	BLDG 1 - FROM SOUTH WEST CORNER ENTRANCE 15'N 20'W	F	12"	6311G	114.5	4.6	99.7	95
115	3/13/2007	JCM	BLDG 1 - FROM SOUTH WEST CORNER ENTRANCE 6'N	F	12"	6311G	112.8	6.0	98.2	95
116	3/13/2007	JCM	BLDG 1 - FROM SOUTH WEST CORNER ENTRANCE 18'N 2'E	F	12"	6311G	115.8	4.8	100.8	95

Laboratory Compaction Test Reference

Lab ID	Date Received	Material Source	Material Type	Method	Max Dry Density PCF	Optimum Moisture Content (%)	Comments
6311G	1/10/2007	On Site	Structural Fill	ASTM D-1557 Modified A	114.9	9.0	

Elevation Notes:
 F = FINISH

Comments:


 Reviewed By



Report of Field Density

ASTM D2922

Project: PORTLAND - PEARL PLACE PHASE I DEVELOPMENT - MATERIALS TESTING
 Client: AVESTA HOUSING

Project Number: 04-1212.2

Field Density Test Results

Test #	Test Date	Tech	Test Location	Elev Feet	Test Depth	Lab ID	Dry Density	Moisture Content Percent	Compaction Percent	Required Compaction
117	3/15/2007	VLT	20' INSIDE SE CORNER BUILDING #2	FFG	12	6311G	112.9	6.4	98.3	95
118	3/15/2007	VLT	SW CORNER BUILDING 2	FFG	12	6311G	113.4	6.4	98.7	95
119	3/15/2007	VLT	SW CORNER INTERIOR RTW BUILDING #1	1' B FFG	12	6311G	114.3	5.3	99.5	95
120	3/15/2007	VLT	SW CORNER INTERIOR RTW BUILDING #1	FFG	10	6311G	110.2	7.6	95.9	95
121	3/15/2007	VLT	SW CORNER INTERIOR RTW BUILDING #1	FFG	12	6311G	113.7	5.3	99.0	95

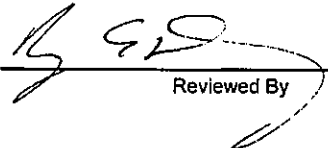
Laboratory Compaction Test Reference

Lab ID	Date Received	Material Source	Material Type	Method	Max Dry Density PCF	Optimum Moisture Content (%)	Comments
6311G	1/10/2007	On Site	Structural Fill	ASTM D-1557 Modified A	114.9	9.0	

Elevation Notes:

FFG=FINISH FLOOR GRADE; RTW=RETAINING WALL; CNR=CORNER; B=BELOW

Comments:



 Reviewed By



Report of Field Density ASTM D2922

Project: PORTLAND - PEARL PLACE PHASE I DEVELOPMENT - MATERIALS TESTING

Project Number: 04-1212.2

Client: AVESTA HOUSING

Field Density Test Results


Test #	Test Date	Tech	Test Location	Elev Feet	Test Depth	Lab ID	Dry Density	Moisture Content Percent	Compaction Percent	Required Compaction
122	3/23/2007	VLT	BLDG #2 SOUTH WALL W 15' N 15'	FFG	10	6311G	111.4	4.5	97.0	95
123	3/23/2007	VLT	BLDG #2 10' OFF WEST WALL 2' OFF S WALL	FFG	10	6311G	114.6	5.0	99.7	95
124	3/23/2007	VLT	5' OFF NE CORNER	FFG	12	6311G	112.2	3.4	97.7	95
125	3/23/2007	VLT	20' OFF NW CORNER	FFG	12	6311G	112.2	4.0	97.7	95

Laboratory Compaction Test Reference

Lab ID	Date Received	Material Source	Material Type	Method	Max Dry Density PCF	Optimum Moisture Content (%)	Comments
6311G	1/10/2007	On Site	Structural Fill	ASTM D-1557 Modified A	114.9	9.0	

Elevation Notes:

Comments:


 Reviewed By



Report of Field Density

ASTM D2922

Project: PORTLAND - PEARL PLACE PHASE I DEVELOPMENT - MATERIALS TESTING

Project Number: 04-1212.2

Client: AVESTA HOUSING

Field Density Test Results

Test #	Test Date	Tech	Test Location	Elev Feet	Test Depth	Lab ID	Dry Density	Moisture Content Percent	Compaction Percent	Required Compaction
126	4/13/2007	PJO	BUILDING #2 + 15' S FROM NW CORNER	SB	12"	6311G	114.9	3.3	100.0	95
127	4/13/2007	PJO	BUILDING #2 + 8' N OF ELEVATOR SHAFT	SB	12"	6311G	111.6	4.7	97.1	95
128	4/13/2007	PJO	BUILDING #2 + 10' N OF SW CORNER	SB	12"	6311G	114.7	2.8	99.8	95
129	4/13/2007	PJO	BUILDING #2 + 5' N OF SE CORNER	SB	12"	6311G	117.5	4.1	102.3	95
130	4/13/2007	PJO	BUILDING #2 + 30'S OF NW CORNER	SB	12"	6311G	119.4	4.3	103.9	95
131	4/13/2007	PJO	BUILDING #2 + 5'S OF NW CORNER	SB	12"	6311G	113.5	3.2	98.8	95

Laboratory Compaction Test Reference

Lab ID	Date Received	Material Source	Material Type	Method	Max Dry Density PCF	Optimum Moisture Content (%)	Comments
6311G	1/10/2007	On Site	Structural Fill	ASTM D-1557 Modified A	114.9	9.0	

Elevation Notes:

SB = SUBBASE MATERIAL FOR SLAB

Comments:

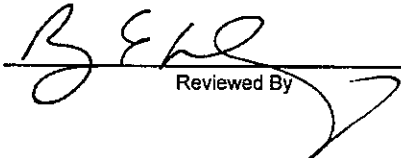

 Reviewed By

EXHIBIT B

03300 Cast-in-Place Concrete

Project: Pearl Place Building 1 & 2
 Date Prepared: October 11, 2006
Schedule of Special Inspections – Exhibit B
CONCRETE CONSTRUCTION

VERIFICATION AND INSPECTION	Y/N	EXTENT: CONTINUOUS, PERIODIC, SUBMITTAL, OR NONE	COMMENTS	AGENT	AGENT QUALIFICATION	DATE	REV
IBC Section 1704.4							
1. Inspection of reinforcing steel, including prestressing tendons, and placement	Y	P	ACI 318: 3.5, 7.1-7.7	SII/TAI	PE/SE or EIT	SEE ATTACHED REPORTS	
2. Inspection of reinforcing steel welding in accordance with Table 1704.3, Item 5B	N		Welding of Reinf Not Allowed				
3. Inspect bolts to be installed in concrete prior to and during placement of concrete where allowable loads have been increased	Y	C	IBC 1912.5	SII	PE/SE or EIT	SEE ATTACHED REPORTS	
4. Verifying use of required design mix	Y	P	ACI 318: Ch 4, 5.2-5.4	SII	PE/SE or EIT	SEE ATTACHED REPORTS	
5. At time fresh concrete is sampled to fabricate specimens for strength test, perform slump and air content test and temperature	Y	C	ASTM C 172 ASTM C 31 ACI 318: 5.6, 5.8	TAI	ACI-CFIT or ACI-STT	SEE ATTACHED REPORTS	
6. Inspection of concrete and shotcrete placement for proper application techniques	Y	C	ACI 318: 5.9, 5.10	SII	PE/SE or EIT	SEE ATTACHED REPORTS	
7. Inspection for maintenance of specified curing temperature and techniques	Y	P	ACI 318: 5.11-5.13	SII	PE/SE or EIT	SEE ATTACHED REPORTS	
8. Inspection of Prestressed Concrete							
a. Application of prestressing force.	N/A		ACI 318: 18.20				
b. Grouting of bonded prestressing tendons in seismic force resisting system	N/A		ACI 318: 18.18.21				
9. Erection of precast concrete members	N/A		ACI 318: Ch 16				
10. Verification of in-situ concrete strength, prior to stressing of tendons in post-tensioned concrete and prior to removal of shores and forms beams and structural slabs	N/A		ACI 318: 6.2				

Concrete Construction has been reviewed in accordance with section 1704.4 of the IBC Code

Special Inspector:  Date: 10/5/07

B E C K E R

structural engineers, inc

Field Report

No. 1481-1

Project: Pearl Place – Buildings 1 & 2
 Project #: WO 1481
 Date/Time: 12/15/2006, 11:30 am
 Observers James Fortin, P.E.

Distribution: Clint Gendreau, Ron Norton, Pandika Pleqi, Jim Fortin

I visited the above referenced project site and met with Ron Norton, Owners Representative, and Rick Nanartowich of Ledgewood Construction. At the time of the visit, concrete foundation wall and footing were complete at Building 2 along Oxford Street, and footings were being placed at Building 2 along Pearl Street. Earthwork was ongoing at Building 1 along Oxford Street, with footing placement for this wall anticipated to begin on Monday, December 18th.

The purpose of this visit was to review the current state of construction, as well as discuss issues with personnel on site. During this visit, the following items were discussed with Ron Norton and Rick Nanartowich. These issues will require additional attention from the General Contractor to meet project requirements.

Pearl Place – Field Visit Items			
Item	System	Description	Status
1	B2- Foundation	The foundation footing plan right of Stair 2-1, towards Oxford Street, has not been poured correctly. This footing was to step down from (21'-0") to (17'-9") in 3 steps. Instead, it only steps once and remains high until reaching the interior retaining wall at the stair, then steps again beyond the interior retaining wall location. The base of the retaining wall was to be at Elev (17'-9") per plan. But as poured, the wall would begin at Elev (+20'-0") +/- . The configuration was not as shown on approved shop drawings, as it is not understood what the rebar configuration is. It is necessary that the placed foundation is removed to the extents shown on the attached SSK-17 (also see attached photo of existing condition). Note that this sketch was updated to include the addendum information at the area in question only.	OPEN 12/15/06
2	B2- Foundation	Rebar placement reports completed to date are requested from SWCole.	OPEN 12/15/06
3	B2- Foundation	Foundation walls are placed without proper construction joint. See "Typical Construction Joint in Wall" Detail on Dwg. S2.1 A construction joint is required at all cold joints in the	OPEN 12/15/06

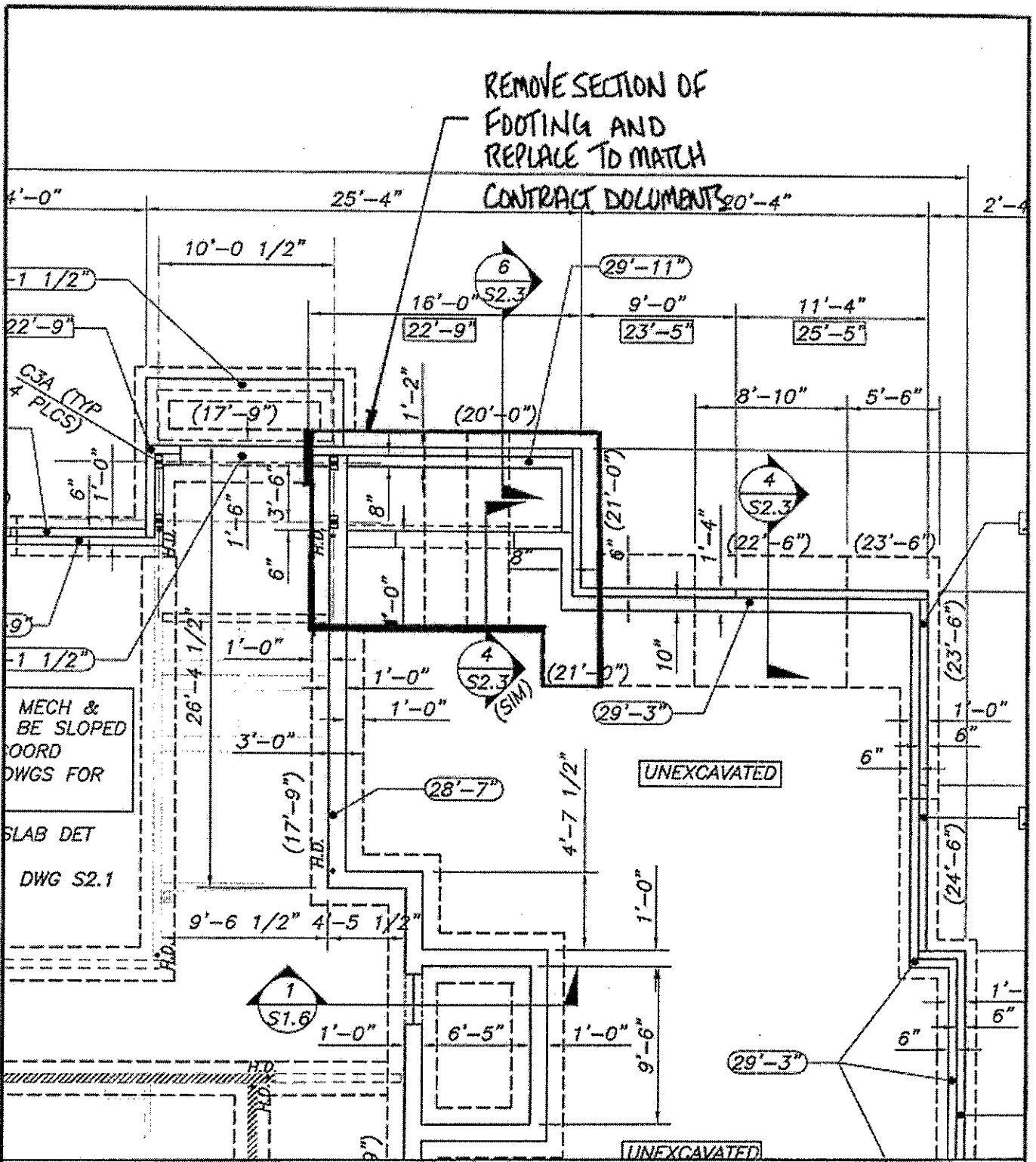
B E C K E R

structural engineers, inc

		foundation wall system.	
4	B2- Foundation	At the southern corner of Building 2, rebar does not extend adequately from the poured footing. This rebar shall be extended using bar couplers as stated in Response to RFI #5.	OPEN 12/15/06
5	B2- Foundation	At the southern corner of Building 2, a corner rebar is missing at the top of the foundation wall. This rebar shall be placed by drilling into the wall (along the length of the wall) and grouting a bent corner dowel into the wall.	OPEN 12/15/06
6	B2- Foundation	At two locations, the rebar as a footing step was found to be installed incorrectly. The "Z" bars were either not used or located incorrectly. At 1 location, the condition was corrected prior to pouring. At the second location, the bars can be seen extending above the finished concrete surface.	OPEN 12/15/06

REMOVE SECTION OF
FOOTING AND
REPLACE TO MATCH

CONTRACT DOCUMENTS



MECH &
BE SLOPED
COORD
DWGS FOR
SLAB DET
DWG S2.1

REF DWG S1.5
SCALE: 1/2" = 1'-0"
Becker Job Number
1481

BECKER
structural engineers, inc.

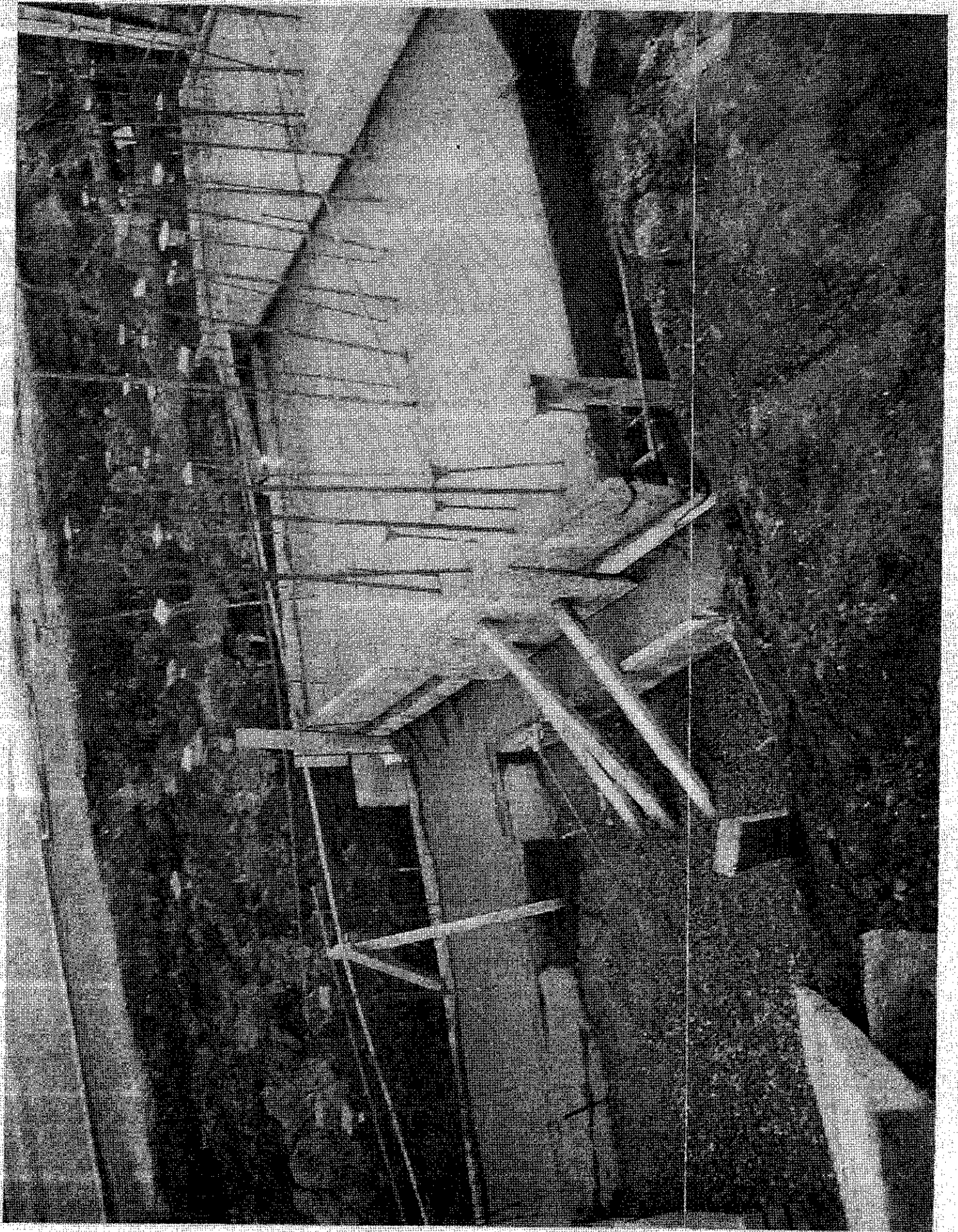
75 York Street
Portland, ME 04101-4701
info@beckerstructural.com

Tel 207-879-1838
Fax 207-879-1822
www.beckerstructural.com

Designed	JCF
Drawn	APP
Checked	
Scale	AS NOTED
Date	12/18/06

Pearl Place
Building 1&2
Portland, Maine

SSK-17



BECKER

structural engineers, inc.

Field Report

sv_12/20/06

Project: Pearl Place
Project #: 1605
Date/Time: 12/20/06-12:30PM to 3:30 PM
Observers Michael Cyr

Building 2:

The subcontractor was tying rebar for the south side of the foundation wall from the high corner adjacent to Oxford St. to the middle of the building.

Discrepancies with the rebar were verbally noted to the subcontractor and general contractor and corrected by the subcontractor before I left today.

Building 1:

Rebar for the foundation adjacent to the Oxford St. side of the building was in place and appeared to comply with our structural documents.

Concrete is scheduled for tomorrow morning at 11:00 AM.

**CC: Mike Myatt, Ronald Norton, Pandika Pleqi, Rick Nanartowich, Clint Gendreau,
Job File--1605**

B E C K E R

structural engineers, inc.

Field Report

sv_12/21/06

Project: Pearl Place
Project #: 1605
Date/Time: 12/20/06-8:00AM to 12:30 PM
Observers Michael Cyr

Building 2:

The rebar subcontractor was making some finishing touches to forms and rebar when I arrived on site this morning. A discrepancy which I observed with the rebar for the step footing adjacent to Oxford St. and further away from Pearl St. was inadequate concrete cover for the bottom layer of reinforcement. I informed the subcontractor, and he corrected the discrepancies prior to the concrete pour.

Cutting of the concrete foundation adjacent to Pearl St. started this morning.

Note that the discrepancies at the foundation wall adjacent to Pearl St. will be reviewed prior to the next scheduled concrete pour.

Building 1:

The rebar for the portion of foundation adjacent to Oxford St. appeared to comply with our structural drawings. A discrepancy noted by Ron Norton (1 clay brick used as a rebar support instead of a concrete brick) was addressed to the foreman, Marty Morgan, and corrected prior to the concrete placement.

Concrete Pour:

Issues worth noting about today's concrete pour are as follows:

1. The driver for the first concrete truck that arrived on site added water to the concrete prior to the pour. I informed S.W. Cole's representative who is testing the concrete and the general contractor that it was not acceptable to add water to the concrete on site. As a result, a representative from Dragon, Mark West, came to the site and informed us that water was being withheld from the mix at the concrete plant and that it was permissible for the driver to add water when he arrived on site. I informed Mark that unless the amount of water being withheld from the mix at the plant is noted on the delivery ticket, it is not acceptable to add water to the mix.
2. The concrete pour began at building 2. It should be noted that the subcontractor began pouring concrete at the base of the step footing and worked his way up the footing. The concrete at the base of the footing was not partitioned with a bulkhead. Because the concrete was not being poured continuously at that end of the concrete placement, a cold-joint could have formed had the concrete had enough time to set prior to the next concrete placement. I informed the subcontractor about the possibility of a cold joint forming, and he began placing concrete at both ends intermittently until he finished with the step footing.

B E C K E R
structural engineers. inc.

Concrete placement should begin at one end of the formwork and move towards the other end partitioned off with forms.

CC: Mike Myatt, Ronald Norton, Pandika Pleqi, Rick Nanartowich, Clint Gendreau, David Schoenherr, Job File--1605

B E C K E R

structural engineers, inc.

Field Report

sv_12/22/06

Project: Pearl Place
Project #: 1605
Date/Time: 12/22/06-10:15AM to 11:30 AM
Observers Michael Cyr

Building 2:

Subcontractor had removed formwork from concrete poured yesterday from the step footing adjacent to building 1 towards middle of building layout. Subcontractor was tying wall reinforcement for this section.

The subcontractor was performing his wall layout for the section of wall adjacent to Pearl Street which was cut and removed yesterday.

I informed the subcontractor that he needed to drill and epoxy (8) # 4 x 4'-0" straight dowel bars into the existing foundation using an 8" embedment depth. The subcontractor should use Hilti HIT HY 150/HIT-ICE epoxy. I also informed him that the outside dowel bars must be at least 8" from the edge and all bars are to be evenly spaced at mid-depth of the footing. Sketch to follow.

Building 1:

Subcontractor was removing formwork from concrete poured yesterday for both step footings and footing adjacent to Oxford Street. The rebar for the walls in this section appeared to comply with our structural documents.

CC: Mike Myatt, Ronald Norton, Pandika Pleqi, Rick Nanartowich, Clint Gendreau, David Schoenherr, Job File--1605

B E C K E R

structural engineers, inc.

Field Report

sv_12/27/06

Project: Pearl Place
Project #: 1605
Date/Time: 12/27/06-9:30AM to 10:30 AM
Observers Michael Cyr

Building 2:

Subcontractor was erecting forms for walls parallel to and further away from Pearl Street.

I informed the subcontractor that the (2) #5 bars T & B (Ref: 5/S2.3) had to be spaced further apart.

I noticed that form seal had been accidentally sprayed onto the foundation wall reinforcement. I informed the subcontractor that this form seal could not be applied to the wall reinforcement, and the lubricant must be wiped off the reinforcement prior to the concrete pour.

I've attached a sketch for the footing splice along Pearl Street. The subcontractor has already performed the splice, and besides the (1) missing bar at the end closer to Pearl Street, the work appeared to comply with this sketch.

Building 1:

Subcontractor was erecting forms for the retaining wall along Oxford Street.

CC: Mike Myatt, Ronald Norton, Pandika Pleqi, Rick Nanartowich, Clint Gendreau, Dave Schoenherr, Job File--1605

BECKER

structural engineers, inc.

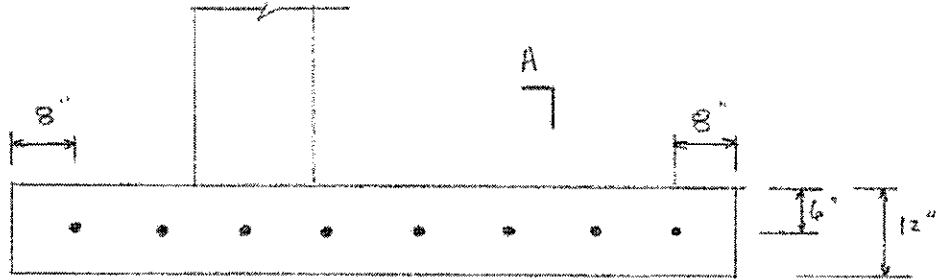
75 York Street, Portland, ME 04101-4550
Tel. 207-879-1838 ■ Fax 207-879-1822

Project: Pearl Place

W.O. _____ Sheet 1 Of 1

Calculated By: Mc Date 12/27/06

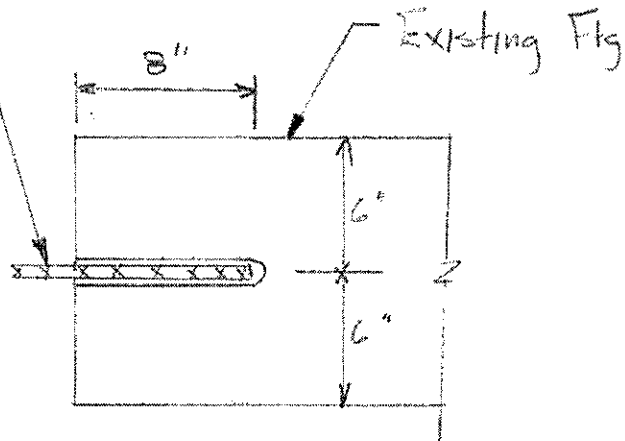
Checked By: _____ Date _____



[Ref: 4/SZ.3]

Bldg #2 Ftg Splice Detail

Drill a $5/8"$ ϕ Hole
8" Min. Embedment
Depth into Existing
Footing & Epoxy
Grout #4 x 4'-0"
Long Dowel



Use Hilti HIT HY 150/HIT-ICE
Epoxy

A-A

BECKER

structural engineers, inc.

Field Report

sv_12/28/06

Project: Pearl Place
Project #: 1605
Date/Time: 12/28/06-12:40 PM to 2:35 PM
Observers Michael Cyr

Building 2:

Subcontractor was tying steel for footing along Pearl Street. The steel reinforcement appeared to comply with our structural drawings.

Subcontractor intends to pour missing portions of footing along Pearl Street.

The retaining wall perpendicular to Oxford Street and further away from Pearl Street had the #7 bars in the wrong location (See Photo 1). This may affect the performance of the retaining wall, and may require additional work. This section of wall is not in tomorrow's concrete pour. Jim wants to look at this wall in further detail on Tuesday.

Wall openings in the smaller foundation walls had issues with reinforcement. Some of the additional reinforcement was missing; some was too short; and some was touching the forms. This section of wall is not in tomorrow's concrete pour.

Building 1:

Subcontractor was making finishing touches to forms for the retaining wall along Oxford Street.

Subcontractor had erected forms for retaining wall spread footing along A-Line

Concrete pour for the retaining wall along Oxford Street and spread footing along A-Line are scheduled for tomorrow at 11:00 AM.

CC: Mike Myatt, Ronald Norton, Pandika Pleqi, Rick Nanartowich, Clint Gendreau, Dave Schoenherr, Job File—1605

BECKER

structural engineers, inc.

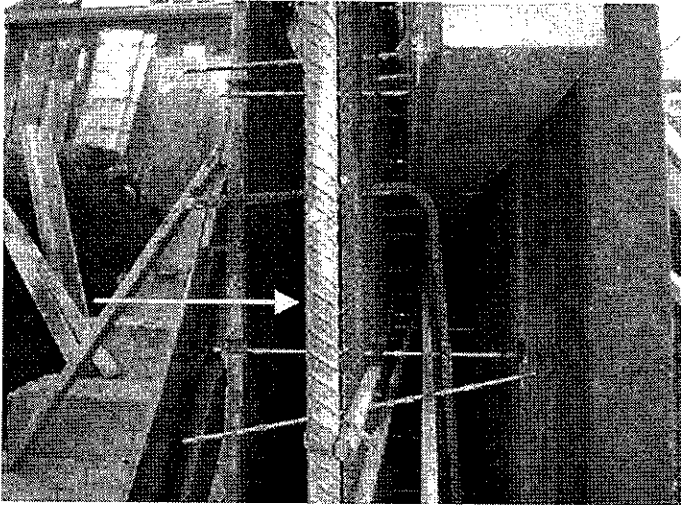


Photo 1: #7 bars should be closer to the inside face of the wall (more to the left)

BECKER

structural engineers, inc.

Field Report

sv_12/29/06

Project: Pearl Place
Project #: 1605
Date/Time: 12/29/06-10:20 AM to 12:45 PM
Observers Paul Becker, P.E., Michael Cyr

Building 2:

Subcontractor was tying steel for footing and wall reinforcement along Pearl Street. The concrete pour for the missing portions of footing along Pearl Street has been postponed until next week.

The retaining wall perpendicular to Oxford Street and further away from Pearl Street had the #7 bars in the wrong location. Additional reinforcement must be added to the lower steps of the foundation wall. A sketch for this work will follow.

Reference sketches SSK-22 and SSK-23 for additional information about the wall detail at the entrance.

Building 1:

Subcontractor began placing concrete at the wall along Oxford Street and will then place concrete at the spread footing along the A-Line. All of the reinforcement for today's concrete pour appeared to comply with our structural drawings.

CC: Mike Myatt, Ronald Norton, Pandika Pleqi, Rick Nanartowich, Clint Gendreau, Dave Schoenherr, Job File—1605

B E C K E R

structural engineers, inc.

Field Report

sv_2007/01/02

Project: Pearl Place
Project #: 1605
Date/Time: 1/2/07-9:20 AM to 10:50 AM
Observers Jim Fortin, Michael Cyr

Building 2:

Subcontractor was tying steel for footing and wall reinforcement for the exterior wall parallel to and further away from Pearl Street.

Jim Fortin identified several issues concerning wall reinforcement location and wall layout. The concrete pour for the portion of spread footing along Pearl Street and adjacent to Oxford Street has been postponed to accommodate the change in wall layout. The section of spread footing located along Pearl Street and closer to the field trailer is scheduled to be poured today.

We will perform calculation to verify the adequacy of as-built conditions with the spread footing along Pearl Street.

Building 1:

Subcontractor was removing forms for wall along Oxford Street and spread footing along the A-Line.

The next concrete pour scheduled for building #1 is Friday. This concrete pour will include the retaining wall along the A-Line and the two end connecting retaining walls adjacent to Oxford Street.

CC: Mike Myatt, Ronald Norton, Pandika Pleqi, Rick Nanartowich, Clint Gendreau, Dave Schoenherr, Job File—1605

BECKER

structural engineers, inc.

Field Report

sv_2007/01/03

Project: Pearl Place
Project #: 1605
Date/Time: 1/3/07-11:10 AM to 12:40 PM
Observers Michael Cyr

Building 2:

Subcontractor is scheduled to pour concrete for the spread footing along Pearl Street and closer to Oxford Street this afternoon. The reinforcement for this section appeared to comply with our structural drawings. Once the concrete for this portion of spread footing has been poured, the spread footing along Pearl Street will be complete.

The subcontractor was tying wall reinforcement for the portion of wall further away from Pearl Street.

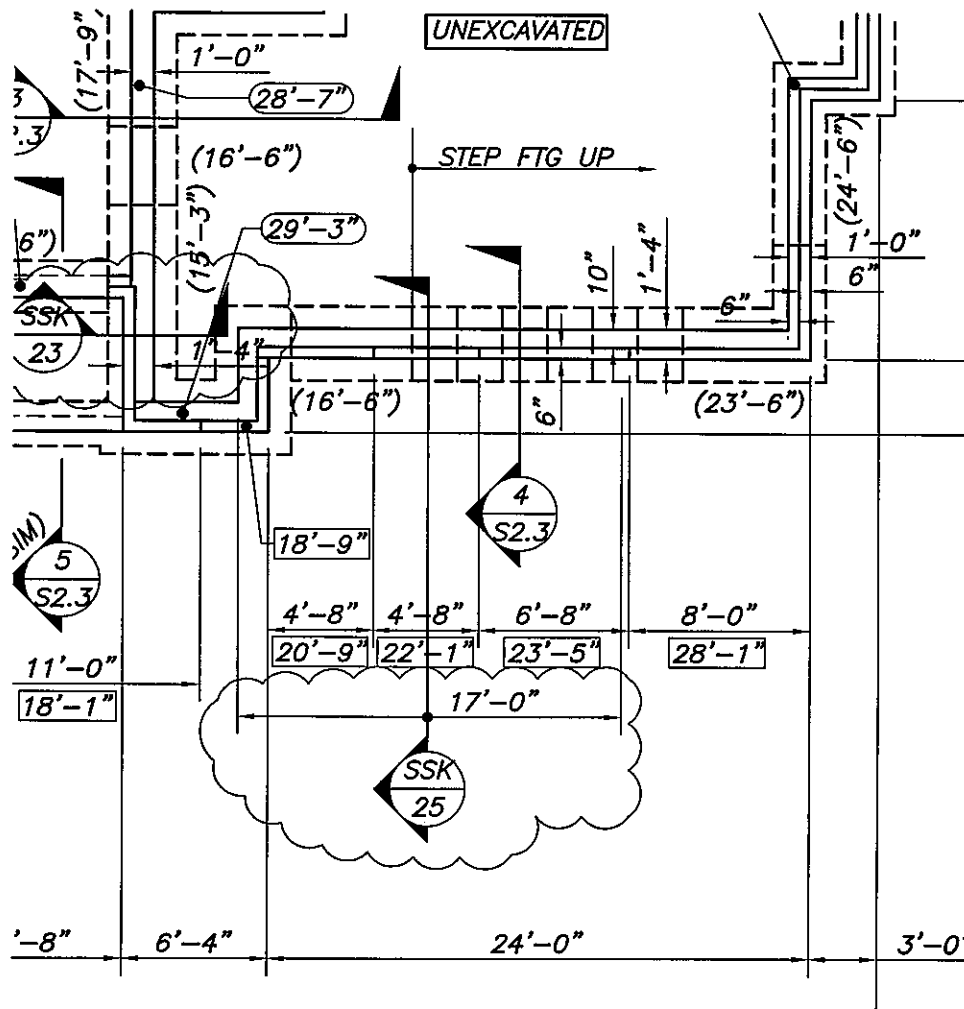
I've attached sketches SSK-24 and SSK-25. These sketches explain the repair detail needed for the retaining wall at the step footing adjacent to Oxford Street and further away from Pearl Street.

Building 1:

The subcontractor was erecting forms for the retaining wall along the A-Line.

The next concrete pour for Building 1 is scheduled for Tuesday 1/9/07. This concrete pour will include the retaining wall along the A-Line and the two end connecting retaining walls adjacent to Oxford Street.

CC: Mike Myatt, Ronald Norton, Pandika Pleqi, Rick Nanartowich, Clint Gendreau, Dave Schoenherr, Job File—1605



BUILDING #2
FOUNDATION PART PLAN

REF DWG S1.5
SCALE: 1/4" = 1'-0"

Becker Job Number
1481

BECKER
structural engineers, inc.

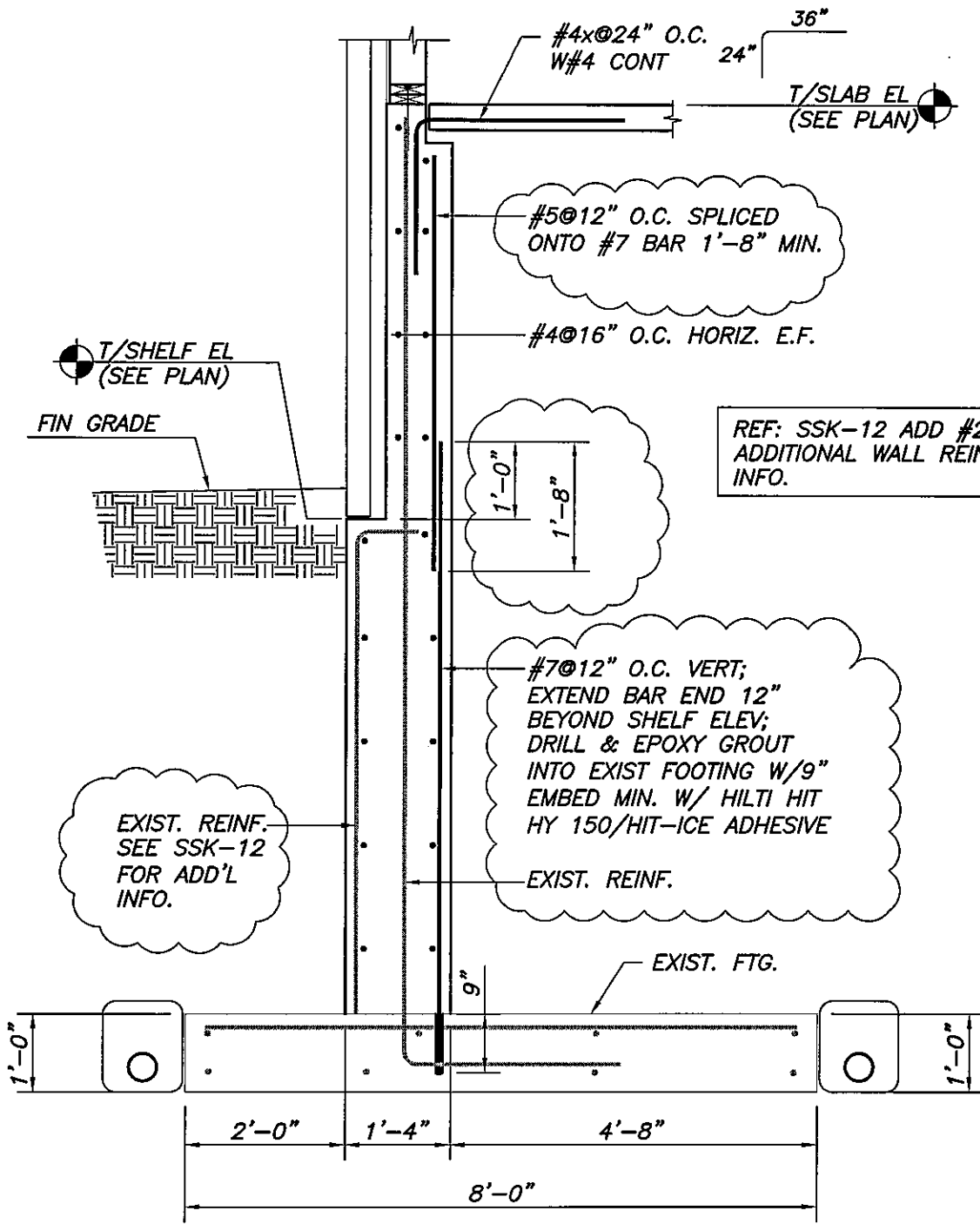
75 York Street
Portland, ME 04101-4701
Info@beckerstructural.com

Tel 207-879-1838
Fax 207-879-1822
www.beckerstructural.com

Designed JCF
Drawn MC
Checked PBB
Scale NOTED
Date 1/3/07

Pearl Place
Building 2
Portland, Maine

SSK-24



REF: SSK-12 ADD #2 FOR ADDITIONAL WALL REINF. INFO.

EXIST. REINF. SEE SSK-12 FOR ADD'L INFO.

#7@12" O.C. VERT; EXTEND BAR END 12" BEYOND SHELF ELEV; DRILL & EPOXY GROUT INTO EXIST FOOTING W/9" EMBED MIN. W/ HILTI HIT HY 150/HIT-ICE ADHESIVE

EXIST. REINF.

RETAINING WALL REPAIR DETAIL

REF DWG S1.5

BECKER
structural engineers, inc.

75 York Street
Portland, ME 04101-4701
info@beckerstructural.com

Tel 207-879-1838
Fax 207-879-1822
www.beckerstructural.com

Designed	JF
Drawn	MC
Checked	PBB
Scale	NOTED
Date	1/3/07

Pearl Place
Building 2
Portland, Maine

Becker Job Number
1481

SSK-25

BECKER

structural engineers, inc.

Field Report

sv_2007/01/04

Project: Pearl Place
Project #: 1605
Date/Time: 1/4/07-1:20 PM to 2:10 PM
Observers: Michael Cyr

Building 2:

The subcontractor was making finishing touches to the formwork for the portion of wall further away from Pearl Street. The subcontractor is scheduled to pour this portion of foundation wall tomorrow morning.

I provided the subcontractor a copy of sketches SSK-24 and SSK-25. This work is tentatively scheduled to begin tomorrow.

Building 1:

The subcontractor was erecting forms for the retaining wall along the A-Line.

The next concrete pour for Building 1 is scheduled for Tuesday, 1/9/07. This concrete pour will include the retaining wall along the A-Line and the two end connecting retaining walls adjacent to Oxford Street.

We have concluded that we need (3) #7-90 degree hook bars at the five locations where the thickened slab and/or dropped slab occur (Ref: S1.2 and S2.1). The #7 bars should have a 2'-0" and 6'-0" leg. The 2'-0" portion of the #7 bar is to be cast into the retaining wall along the A-Line and the 6'-0" shall be cast into the thickened slab or dropped slab. A detail will follow.

CC: Mike Myatt, Ronald Norton, Pandika Pleqi, Rick Nanartowich, Clint Gendreau, Dave Schoenherr, Job File—1605

B E C K E R

structural engineers, inc.

Field Report

sv_2007/01/09

Project: Pearl Place
Project #: 1605
Date/Time: 1/9/07-8:40 AM to 10:00 AM
Observers Michael Cyr

Building 2:

The subcontractor was tying steel for the wall at the entry referenced in my 12/29/06 field report. The steel appeared to comply with our sketches SSK-22 and SSK-23.

The subcontractor had already made the required corrections to the retaining wall perpendicular to Oxford Street and further away from Pearl Street. The new rebar appeared to comply with sketches SSK-24 and SSK-25 (Ref: 01/03/07 field report).

Building 1:

The subcontractor was erecting forms for the retaining wall along the A-Line and the two end connecting retaining walls adjacent to Oxford Street.

The concrete placement for this portion of wall is scheduled for Thursday, 1/11/2007.

I provided the GC and subcontractor sketches SSK-26, SSK-27 and SSK-28. I met with both and explained the work required in order to comply with the sketches.

CC: Mike Myatt, Ronald Norton, Pandika Pleqi, Rick Nanartowich, Clint Gendreau, Dave Schoenherr, Job File—1605

BECKER

structural engineers, inc.

Field Report

sv_2007/01/10

Project: Pearl Place
Project #: 1605
Date/Time: 1/10/07-12:40 PM to 2:00 PM
Observers Michael Cyr

Building 2:

The subcontractor was erecting forms for the retaining wall perpendicular to Oxford Street and further away from Pearl Street. The rebar for the retaining wall in this section appeared to comply with our structural drawings.

The concrete placement for this section is scheduled for Friday, 1/12/07. I intend to review this portion of wall again before the concrete placement.

Building 1:

The subcontractor was placing the #7 hook bars into the retaining wall along the A-Line as shown in sketch SSK-28. The rebar for the retaining wall along the A-Line appears to comply with our structural drawings.

The concrete placement for this portion of wall is scheduled for Thursday, 1/11/2007.

CC: Mike Myatt, Ronald Norton, Pandika Pleqi, Rick Nanartowich, Clint Gendreau, Dave Schoenherr, Job File—1605

B E C K E R

structural engineers, inc.

Field Report

sv_2007/01/11

Project: Pearl Place
Project #: 1605
Date/Time: 1/11/07-8:00 AM to 9:15 AM
Observers Michael Cyr

Building 2:

The subcontractor was making finishing touches to the forms and wall reinforcement for the retaining wall perpendicular to Oxford Street and further away from Pearl Street.

The concrete placement for this section is scheduled for Friday, 1/12/07. I intend to review this portion of wall again before the concrete placement.

Building 1:

The subcontractor was preparing for today's concrete pour: retaining wall along A-Line. The reinforcement and embed plates for the retaining wall appeared to comply with our structural drawings.

CC: Mike Myatt, Ronald Norton, Pandika Pleqi, Rick Nanartowich, Clint Gendreau, Dave Schoenherr, Job File—1605

Field Report

sv_2007/01/12

Project: Pearl Place
Project #: 1605
Date/Time: 1/12/07-8:10 AM to 10:00 AM, 10:50AM to 11:30 AM
Observers: Michael Cyr

Building 2:

I was notified this morning that today's concrete placement had been scheduled earlier in the morning than previously stated by the general contractor. Immediately upon listening to the message, I went to the site.

Once I arrived, I observed that the subcontractor had erected scaffolding along the top of the formwork for the retaining wall perpendicular to Oxford Street and further away from Pearl Street. This morning was the first time that I could look down into the formwork to observe the wall reinforcement in its completed state prior to the concrete placement. I could not do this without the scaffolding along the top of the wall because the wall retaining wall for this section ranges in height from 5'-9" to 12'-9".

Upon reviewing the wall reinforcement from the scaffolding, I observed the following discrepancies (Reference enclosed Bldg 2 Foundation Part Plan):

1. #4 Vertical Bars @16" O.C. near the brick shelf face were missing along wall sections A, B and C (Ref: SSK-12). The detail for this section of wall has not changed since addendum 2. I had made numerous observations of this wall section prior to today's site visit, but critical elements which affect the structural capacity of this retaining wall could not be made without wall layout information. I had made this known to the general contractor on first day of my site visits as IBC Special Inspector. As the work progressed and the wall forms for this retaining wall were erected, I observed that the wall reinforcement was incorrectly located within the wall. Upon reviewing the calculations for this retaining wall, we concluded that the misplaced wall reinforcement compromised the structural capacity of the wall. We provided sketch SSK-25 to direct the subcontractor on the proper means to correct the error. The design of this wall section has not changed.
2. #4 Horizontal Bars @ 16" O.C. near the brick shelf face were missing along wall sections A, B and C (Ref: SSK-12). The detail for this section of wall was revised in Addendum 2.
3. Vertical Bars beneath the slab seat were extending beyond the shelf blocking. Rather than cut the vertical bars to fit beneath the slab seat as shown in our details, the subcontractor wedged the shelf blocking in place, pushing the reinforcement away from the wall face as a result. This occurred along sections A, B and C.
4. Wall sections B and C were missing #7 Vertical Bars @12" O.C. near the inside face of wall (Ref: SSK-12). The wall height at this section is 12'-9" above the top of footing. The #7 vertical bars are critical for the structural capacity of the wall. At this time, I notified Jim Fortin, and we discussed possible solutions which could quickly correct the error. Because of the height of the wall, we both concluded that the #7 vertical bars were required. I immediately notified both the subcontractor and general contractor that this wall section had to be repaired in accordance with our structural drawings. I advised them both to comply with sketch SSK-25 to correct the deficiency. The subcontractor wanted to fix the discrepancies and proceed as scheduled with the concrete placement.

B E C K E R

structural engineers, inc.

The subcontractor and general contractor had already prepared the elevator slab and a small section of spread footing near the elevator for today's concrete placement. The general contractor decided to divert the concrete placement to this area in order to allow time for the subcontractor to fix the discrepancies at the retaining wall.

The subcontractor left the site in order to purchase Hilti HY150/HIT-ICE epoxy adhesive specified in SSK-25. At this time, I returned to our office in order to complete another task. I notified both the general contractor and subcontractor that I wanted to see the corrections prior to the concrete placement.

When I returned to the site, the subcontractor had added the vertical bars as specified in SSK-25. As I walked the scaffolding to see that the other deficiencies had been repaired, I noticed something that I hadn't seen earlier. The wall at section C was 12" as opposed to 16" (Reference S1.5 and SSK-12). This deficiency provided a 6" stem and not a 10" stem as shown on our drawings. Upon contacting Jim Fortin, he advised me to inform the subcontractor and general contractor that the wall had to comply with our structural drawings. Because of the labor required to repair the deficiency, the concrete placement was postponed to a later date. It is for this reason that we require 24 hours to review reinforcement prior to concrete placement.

Once the concrete placement was terminated, the general contractor and I reviewed the shop drawings to see what had been specified for that wall section. The wall section on the shop drawings did not specify the #7 vertical bars. This discrepancy was not noted during BSE's review of the shop drawings and the subcontractor had built the wall section in accordance with the shop drawings. The missing #7 bars were identified during the BSE field review and corrective work completed by the subcontractor in time for the placement.

The 6" wall stem was the critical item which prevented the concrete placement. Wall dimensions are not noted on the shop drawings for this section, therefore the shop drawings must be used in conjunction with the structural drawings. The wall thickness issue appears to be a result of a layout error. The dimensions for this wall section are noted on our structural drawings.

The subcontractor is using the shop drawings as the primary reference and not our structural drawings. On previous site visits, I had advised the subcontractor to reference our structural drawings when building the foundation and retaining walls and to reference the shop drawings only for the designated bar. I had told the subcontractor on many occasions that the shop drawings for this job are complex and should be used in conjunction with structural drawings. Discrepancies shall be brought to the attention of the engineer for resolution.

While rebar shops for area B and C did not correctly identify required bars, the shop drawings have in general been correct. The discrepancies being noted in the field placement of rebar are the result of the subcontractor's inexperience. The subcontractor for building 1 is using shop drawings from the same fabricator, and I have not identified discrepancies of the same frequency and magnitude as those observed from the subcontractor on building 2. The complexity of the foundations are similar for both buildings, with similar wall sections being used.

Building 1:

The subcontractor was removing forms from retaining wall along A-Line. Work was in accordance with the contract documents.

CC: Mike Myatt, Ronald Norton, Pandika Pleqi, Rick Nanartowich, Clint Gendreau, Dave Schoenherr, Job File—1605

B E C K E R

structural engineers, inc.

Field Report

sv_2007/01/15

Project: Pearl Place
Project #: 1605
Date/Time: 1/15/07-8:40 AM to 9:15 AM
Observers Michael Cyr

Building 2:

I received a phone call from Rick this morning informing me that they intend to place concrete for the retaining wall tomorrow morning at 10:30. I wanted to review the corrections made by the subcontractor over the weekend to make sure that the work was in compliance with our structural drawings.

The steel reinforcement subcontractor was not on site today because of the snow storm.

The forms were covered with thermal blankets to prevent the snow from falling between the forms.

I observed from the scaffolding that the wall forms had been widened at section C (Reference bldg 2 foundation part plan) in order to comply with our structural drawings. The reinforcement, however, was not correct. When the wall form was relocated in order to widen the wall, the reinforcement needed to be relocated as well. I could also see that a section about 2'-0" long did not have reinforcement as specified in SSK-25. The wall reinforcement for this section should comply with our sketch SSK-25.

I forgot to mention a discrepancy with the retaining wall adjacent to Pearl Street that I observed on Friday. The subcontractor had begun to erect formwork for that retaining wall. With the wall forms in place, I was able to observe that the reinforcement was not correctly located within the wall (Reference Photo 1).

I observed today that the subcontractor had repaired this section of wall in accordance with our structural sketch SSK-25 (Reference Photo 2).

Building 1:

The subcontractor was not on site today because of the snow storm.

CC: Mike Myatt, Ronald Norton, Pandika Pleqi, Rick Nanartowich, Clint Gendreau, Dave Schoenherr, Job File—1605

BECKER

structural engineers, inc.

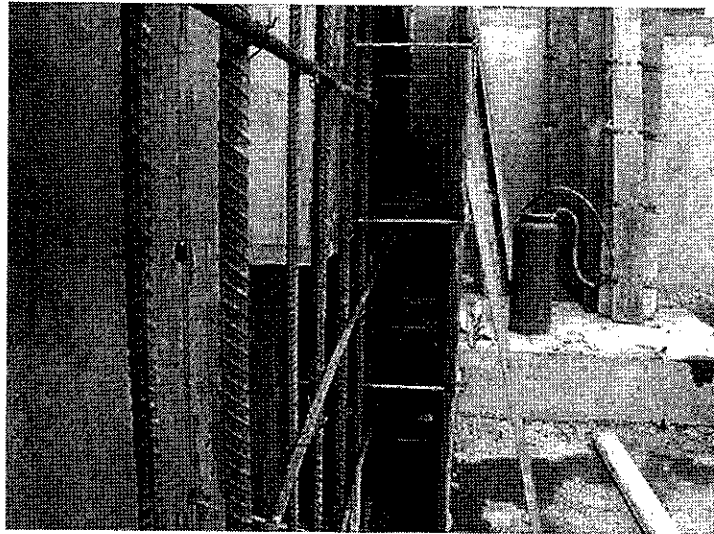


Photo 1: #7 dowels should be 2" from the inside face. The #7 dowels are adjacent to the brick shelf which is the outside face. The subcontractor should use SSK-25 to repair this discrepancy.

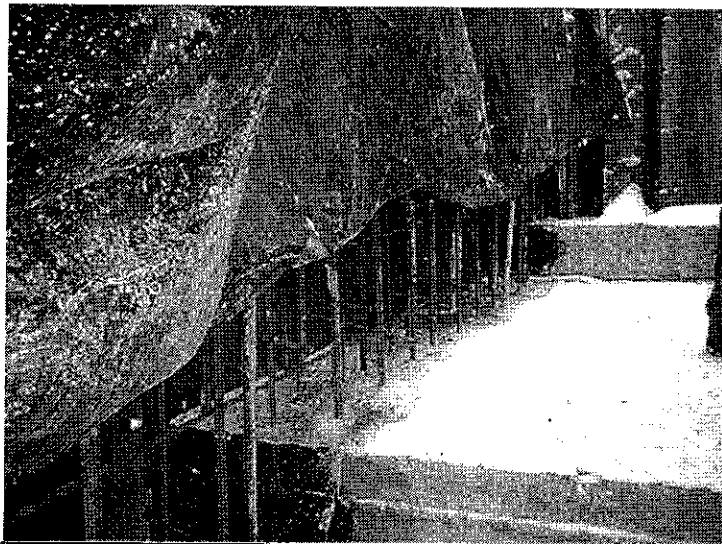


Photo 2: #7 dowels have been added as per the structural sketch SSK-25.

BECKER

structural engineers, inc.

Field Report

sv_2007/01/16

Project: Pearl Place
Project #: 1605
Date/Time: 1/16/07-8:10 AM to 11:00 AM
Observers: Michael Cyr, Jim Fortin

Building 2:

In yesterday's field report, I had reported not seeing #7 dowels in the footing at wall section C (Reference bldg 2 foundation part plan). While I was on site, the subcontractor removed a form at the bottom of the retaining wall at wall section C so that I could verify that the dowel bars had indeed been placed as per our structural sketch SSK-25.

When the wall form at the base was removed, I did see frost at the bottom of the wall section. I advised the subcontractor to remove the frost from within the forms.

Our concrete notes indicate that concrete shall not be placed on frozen ground. Jim Fortin and I discussed with Rick from Ledgewood that proper heating techniques are necessary prior to cold weather concrete placement. We discussed that the forms needed to be heated prior to placement of concrete to ensure that the temperature of the concrete footing surface and rebar are above freezing. Placing concrete against any frozen items can be detrimental to the concrete.

I reviewed the retaining wall parallel to Pearl Street and adjacent to Oxford Street with the subcontractor and the wall reinforcement in place appeared to comply with our structural drawings. I advised the subcontractor not to erect both sides of the wall forms for any of the future concrete placements until I had reviewed the wall reinforcement. This will prevent having to remove wall forms in order to repair unexpected deficiencies.

Building 1:

The subcontractor was removing the forms for the retaining wall adjacent to the A-line.

Building 1 and 2:

Jim Fortin discussed preparations for cold weather placement with Rick from Ledgewood and Patrick from S.W. Cole. The method is as follows:

1. Erect the forms and place the reinforcement for the spread footing as per the structural drawings.
2. Cover the concrete placement area with a cold weather blanket and apply heat. The tarp will protect the concrete placement area from the elements and help to retain the heat.
3. Prior to concrete placement, the subgrade will be checked to ensure that all frost has been removed. Jim Fortin recommended hammering pins/rebar into the ground to ensure the frost was removed completely and not just at the surface.

CC: Mike Myatt, Ronald Norton, Pandika Pleqi, Rick Nanartowich, Clint Gendreau, Dave Schoenherr, Job File—1605

B E C K E R

structural engineers, inc.

Field Report

sv_2007/01/17

Project: Pearl Place
Project #: 1605
Date/Time: 1/17/07-11:15 AM to 12:00 PM
Observers: Michael Cyr

Building 2:

After this morning's meeting, I reviewed the wall reinforcement for the section of retaining wall in the northeast section of the building (adjacent to Pearl Street and Oxford Street). I had the subcontractor relocate the hook #4 bars closer to the brick shelf and add the continuous #4 bar inside the inner radius of the hook bar. Refer to sketch SSK-12 for additional information. I allowed the subcontractor to complete the wall forms for this section of wall.

I've reviewed the wall reinforcement for both walls beneath the 1st floor balcony facing Pearl Street and adjacent to the stairs. I would like to see the additional wall reinforcement required at the doorway before the forms are completely erected in this section.

Building 1:

The subcontractor was not on site because of the cold weather.

CC: Mike Myatt, Ronald Norton, Pandika Pleqi, Rick Nanartowich, Clint Gendreau, Dave Schoenherr, Job File—1605

B E C K E R

structural engineers, inc.

Field Report

sv_2007/01/18

Project: Pearl Place
Project #: 1605
Date/Time: 1/18/07-3:15 PM to 3:50 PM
Observers Michael Cyr

Building 2:

Subcontractor was erecting forms and tying steel at the exterior wall entry near stair 2-1.

Building 1:

The subcontractor had erected forms and installed footing reinforcement for wall sections north of the A-line retaining wall from both sides. The eastern portion of wall has been formed from the retaining wall to the F48 footing on the 4-Line. This portion has been covered with a thermal blanket. I will return tomorrow prior to the concrete placement to observe the reinforcement. The subcontractor is currently working on the formwork for the western portion of wall from the retaining wall. The footing reinforcement was not all in place. I will observe this reinforcement tomorrow prior to the concrete placement.

The general contractor will apply heat to the areas mentioned above overnight to remove frost from the subgrade.

The concrete placement for this portion is scheduled for tomorrow afternoon at 12:30 PM.

CC: Mike Myatt, Ronald Norton, Pandika Pleqi, Rick Nanartowich, Clint Gendreau, Dave Schoenherr, Job File—1605

BECKER

structural engineers, inc.

Field Report

sv_2007/01/19

Project: Pearl Place
Project #: 1605
Date/Time: 1/19/07-9:45 AM to 11:00 AM
Observers Michael Cyr

Building 2:

The subcontractor was erecting wall reinforcement and wall formwork in the area of vestibule 2-110 and patios for units 2-102 and 2-103 (Ref: A/1.5). Concrete placement for this portion of foundation wall is scheduled for next Wednesday.

Building 1:

The subcontractor had erected forms and installed footing reinforcement for wall sections north of the A-line retaining wall from both sides. The East portion of wall has been formed from the retaining wall to the F48 footing on the 4-Line. The West portion of wall has been formed from the retaining wall up to the F48 footing on the 2-Line. The footing reinforcement was not all in place. The reinforcement in place appeared to comply with our structural drawings.

The general contractor had heat within these areas overnight, and the subgrade appeared to be rid of frost. Patrick from S.W. Cole was going to test the subgrade for frost.

The general contractor informed me of a possible conflict with a sewer manhole and structural foundation wall at the community room 1-B01 entrance (Ref: A/1.1). After reviewing the civil site plan C-2, and a discussion with the architect, it appears that the sewer manhole SMH#13 may be in the wrong location. Please have the civil engineer verify the location of this unit.

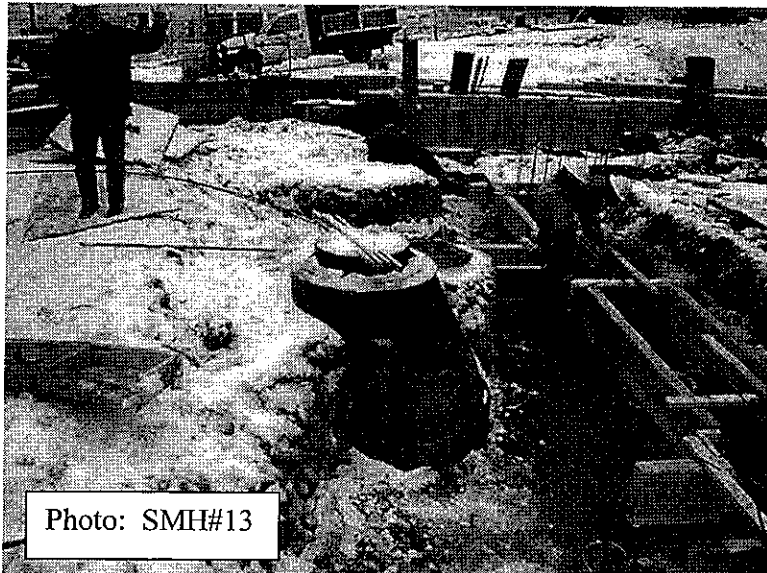


Photo: SMH#13

B E C K E R

structural engineers, inc.

Building 1 and 2:

We are concerned with the current means of cold weather protection being implemented for the new and existing foundations for both buildings.

Frost protection involves two steps:

The first step involves warming the existing subgrade prior to concrete placement so that the temperature of the elements in contact with the concrete is above freezing. This method, which we've previously discussed, is as follows:

1. Erect the forms and place the reinforcement for the spread footing as per the structural drawings.
2. Cover the concrete placement area with a cold weather blanket and apply heat. The tarp will protect the concrete placement area from the elements and help to retain the heat.
3. Prior to concrete placement, the subgrade will be checked to ensure that all frost has been removed. Jim Fortin recommended hammering pins/rebar into the ground to ensure the frost has been removed completely and not just at the surface.

The second step involves preventing frost from penetrating the subgrade beneath the existing foundations. The use of thermal blankets during these temperatures may be adequate, but only as a temporary means of protecting the existing foundations. Considering the temperature over the past two weeks, we are concerned that frost has penetrated the existing foundation subgrade.

It is very important that the existing wall footings receive the proper frost protection. The best means of frost protection is backfilling existing footings to an elevation 4'-6" above the bottom of footing elevation. Note that frost must be removed from beneath the existing footing prior to backfilling. We also recommend that a representative from S.W. Cole test the subgrade in all areas prior to backfilling.

If backfilling cannot be completed following wall form removal, we recommend that alternate means of protecting the footing subgrade be implemented. Possible alternate methods could involve placing hay bails against the foundation or maintaining a heat source at the foundation in conjunction with thermal blankets draped over the foundation. We recommend that periodic testing by S.W. Cole also be performed to ensure that frost has not occurred below the foundation.

CC: Mike Myatt, Ronald Norton, Pandika Pleqi, Rick Nanartowich, Clint Gendreau, Dave Schoenherr, Job File—1605

Field Report

sv_2007/01/23

Project: Pearl Place
Project #: 1605
Date/Time: 1/23/07-9:15 AM to 11:00 AM
Observers: James Fortin

Building 2:

The subcontractor was finishing the wall reinforcement and wall formwork in the area of vestibule 2-110 and patios for units 2-102 and 2-103 (Ref: A/1.5). The forms were installed for both sides of the wall. At a few locations, the proper rebar cover was not present, and this rebar was to be re-located to meet the cover requirements. Also, the size of the interior shelf for these walls was discussed. Detail 4/S2.3 (revised by SSK-12) shows the top stem for the wall to be the thickness of the stud wall and sheathing above, with the remainder of the wall held low. It was decided that a 4" x 4" shelf at this area was adequate. Lowering the shelf below this would require that the vertical bars are cut. When the concrete floor slab is poured, it is necessary that the slab contacts this shelf.

Concrete placement for this portion of foundation wall, along with the elevator pit walls, is scheduled for tomorrow (Wednesday).

Building 1:

The subcontractor was erecting foundation wall forms from Grid 4/C south to the building corner at Grid 7/E, they would also be erecting form for the high wall along the 7-Line. Not all reinforcement was in place at the time of this visit, but what was in place appeared to comply with our structural drawings. There were a couple locations where adequate rebar cover was not present, and was to be corrected. Once all reinforcement has been placed, this entire area will need a final review. It is anticipated that this area will be poured on Friday, January 26.

The subcontractor had a question on the column pier reinforcement, which has been answered in response to RFI #17. They also requested verification for the door location into the Mechanical Room 1-B02. It was verified with Pandika Pleqi at Winton Scott Architects that the correct dimension from building corner to the door opening was 10'-4".

The General Contractor also further discussed the location of the sewer manhole at the entrance into the Community Room. It appears this manhole will interfere with pouring the foundation walls for the entrance slab. Review of the civil site plan C-2 show that this manhole is in the bituminous parking area, and not on the sidewalk. If it interferes with the entrance slab, it may be located too close to the building. I have contacted Pandika Pleqi on this issue and she will be contacting Rick and Pat Carroll to discuss further.

Building 1 and 2:

It appears that work is progressing to provide proper frost protection for the poured foundations. Per discussion with Rick at Ledgewood, the ground heater is being used to drive frost out of the ground and SW Cole is inspecting the areas to ensure that all frost is removed. Once all frost is removed, they are backfilling to walls to 4feet above the bottom of footing elevation. A second ground heater was been brought to the site to assist in this process.

B E C K E R

structural engineers, inc.

It is requested that SW Cole forward all reports concerning frost removal to Becker Structural Engineers for review and record.

It is necessary to provide proper frost cover to completed foundations as quickly as is possible. For newly placed foundations poured from this point on, Ledgewood is planning to maintain heat at foundations from the time the area is excavated, through footing and wall placement (the formed spaces must be heated prior to pouring concrete to ensure the rebar, forms, and existing concrete surfaces are not frozen), and until the time when the foundation wall is backfilled. Just prior to backfilling, SW Cole representative to evaluate the area to be backfilled and confirm that frost is not present.

CC: Mike Myatt, Ronald Norton, Pandika Pleqi, Rick Nanartowich, Clint Gendreau, Dave Schoenherr, Roger Domingo, Job File—1605

B E C K E R

structural engineers, inc.

Field Report

sv_2007/01/26

Project: Pearl Place
Project #: 1605
Date/Time: 1/26/07-9:45 AM to 10:45 AM
Observers: Michael Cyr

Building 2:

The subcontractor was not on site at the time of my site visit. The temperature was below 0 degrees Fahrenheit with the wind chill. When I arrived, the general contractor was repositioning the ground heater's radiant heat cables along side the footing adjacent to Pearl Street. Van, the S.W. Cole representative, was having difficulty hammering a spike into the ground adjacent to the foundation along Pearl Street because of the frost.

I observed the wall reinforcement for the foundation wall adjacent to the bedroom in unit 2-105 and laundry room 2-106 and found that the wall reinforcement is correct as placed.

Building 1:

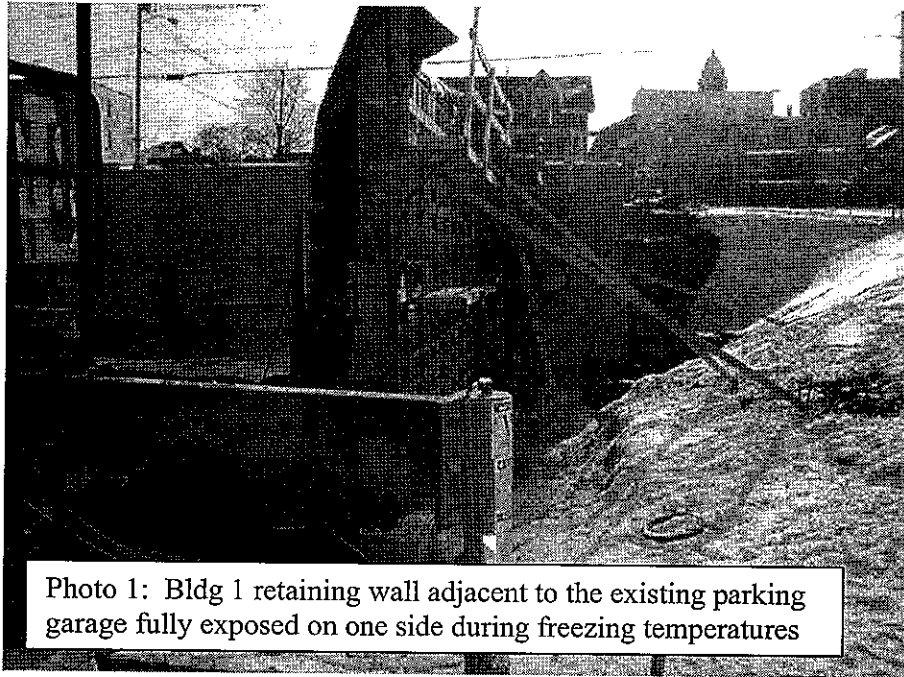
The general contractor has implemented their cold weather protection for the recently poured retaining wall adjacent to the existing parking garage. The general contractor has draped the ground heater's radiant heat cables on one side of the wall forms and draped a thermal blanket over the same side of the retaining wall (See Photo 1 on page 2 of this report).

Considering the freezing temperatures, large surface area of exposed wall, and use of metal formwork, we are skeptical that the current method of frost protection for this wall is adequate. Although the general contractor states that they have used this same system for a similar application in the past, we believe that draping a blanket on both sides of the wall is necessary to protect the wall from the elements and help retain heat generated from the ground heater and concrete. We strongly recommend that the general contractor place additional thermal blankets on the exposed face of wall for the remainder of the 3 day protection period.

CC: Mike Myatt, Ronald Norton, Pandika Pleqi, Rick Nanartowich, Clint Gendreau, Dave Schoenherr, Job File—1605

BECKER

structural engineers, inc.



B E C K E R

structural engineers, inc.

Field Report

sv_2007/01/30

Project: Pearl Place
Project #: 1605
Date/Time: 1/30/07-9:10 AM to 10:30 AM, 12:10 PM to 12:30 PM
Observers Michael Cyr

Building 2:

The subcontractor was erecting formwork for walls along Pearl Street. The subcontractor had questions about wall and shelf elevations, so I returned to the office to get clarification from Jim Fortin who coordinated with Trevor from the Architect's office. I've attached a copy of the sketch which I provided to the general contractor and subcontractor this afternoon on my return visit.

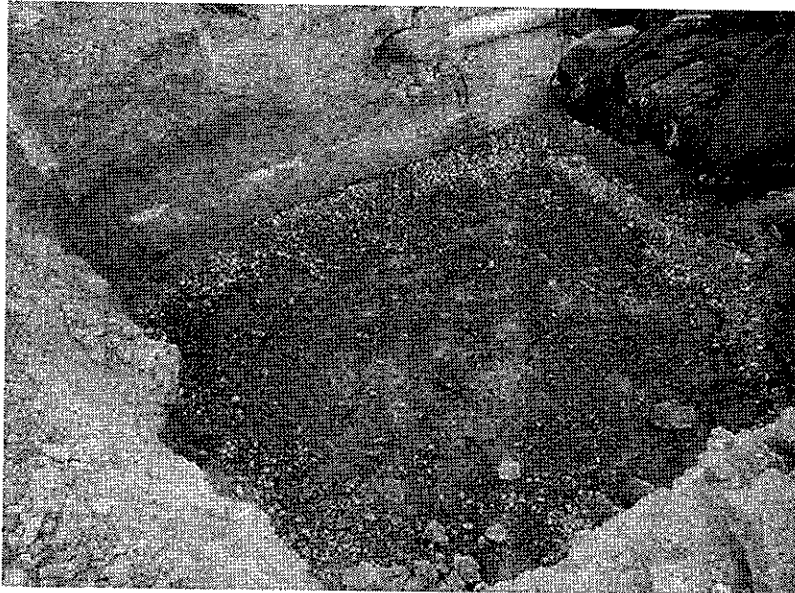
Building 1:

The site subcontractor has excavated for the interior footings adjacent to the retaining wall. During my morning site visit, frozen water was observed at the A-4 footing subgrade (See attached photos). During my return visit in the afternoon, the ground water had infiltrated all footings excavated earlier in the day. Our notes state that "concrete shall not be placed in water or on frozen ground." (Ref: Concrete Note # 7 on drawing S1.0). The next concrete placement is scheduled for this Thursday morning.



B E C K E R

structural engineers, inc.



CC: Mike Myatt, Ronald Norton, Pandika Pleqi, Rick Nanartowich, Clint Gendreau, Dave Schoenherr, Job File—1605

151'-4"

14'-0" 11'-4" 9'-10" 14'-0" 23'-0"

10'-0" 19'-5"

18'-1" 19'-5"

6'-0" 16'-9" BRICKSHELF @ 16'-9"

5 S2.3

6 S2.3

6'-0" 16'-9" C3A (TYP) 4 PLCS

BRICKSHELF @ 15'-5" 6 S2.3

(14'-0")

(13'-0")

(11'-6") (12'-6")

(15'-0")

3'-4"

1'-4"

1'-4"

1'-4"

1'-4"

1'-4"

(15'-0")

H.D.

H.D.

H.D.

H.D.

H.D.

23'-9"

18'-9"

18'-9"

BRICKSHELF @ 16'-9"

18'-1"

SSK-35

SSK-35

Ref: SV-2007/01/30
N.T.S.

P UP

T/SLAB
EL 17'-7"

BRICKSHELF @ 18'-1"

BRICKSHELF @ 16'-9"

BRICKSHELF @ 15'-5"

BRICKSHELF @ 16'-9"

(S)

B E C K E R

structural engineers, inc.

Field Report

sv_2007/01/31

Project: Pearl Place
Project #: 1605
Date/Time: 1/31/07-1:15 PM to 2:45 PM
Observers: Michael Cyr

Building 2:

During my site visit, the subcontractor was erecting formwork for walls along Pearl Street. I observed the wall reinforcement for the foundation wall adjacent to units 2-102 and 2-103 (Reference A 1.5). I informed the general contractor and subcontractor of the following concerns: (1) vertical reinforcing bar was touching the formwork, missing reinforcement at the door depressions. The concrete placement for this wall is scheduled for tomorrow morning.

The site subcontractor has begun to excavate for the interior retaining wall which runs parallel to Oxford Street.

Building 1:

I observed the wall reinforcement for the north and northeast foundation wall and noted that one wall opening was missing additional reinforcement as per our detail on drawing S2.1 (See photo 1). The subcontractor was not on site, so I informed the general contractor of this discrepancy. All of the other reinforcement appeared to comply with our structural drawings.

The general contractor was in the process of placing the ground heater tendons adjacent to the existing foundations for building 1. Once the tendons were in place, they draped thermal blankets over the tendons and exposed footing. They were also draping the ground heater tendons inside the formwork for the foundation walls and spread footings for tomorrow's concrete placement (See photo 2).

I mentioned in my last field report that ground water had seeped into the subgrade material for several spread footings scheduled in tomorrow's concrete placement. I informed the general contractor that concrete was not to be placed on standing water (Ref: Concrete note #7 on drawing S1.0).

BECKER

structural engineers, inc.

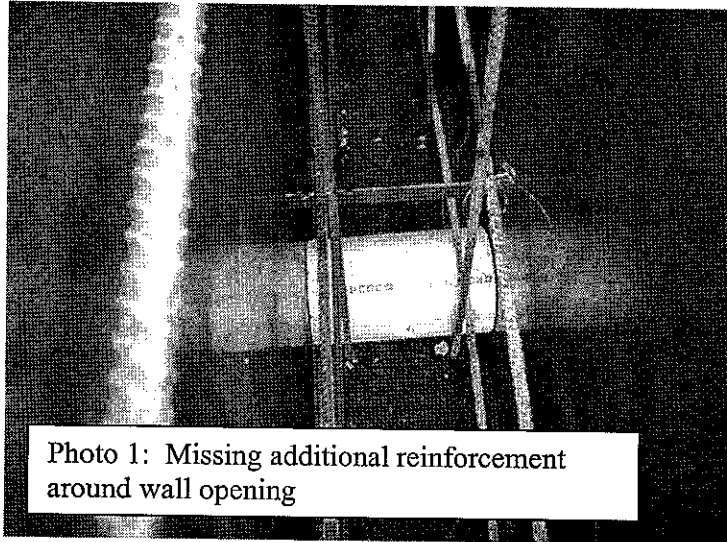


Photo 1: Missing additional reinforcement around wall opening



Photo 2: ground heater tendons draped inside forms for spread footing and covered with thermal blankets

CC: Mike Myatt, Ronald Norton, Pandika Pleqi, Rick Nanartowich, Clint Gendreau, Dave Schoenherr, Suzanne Hunt Job File—1605

BECKER

structural engineers, inc.

Field Report

sv_2007/02/01

Project: Pearl Place
Project #: 1605
Date/Time: 2/1/07-2:00 PM to 2:50 PM
Observers: Michael Cyr

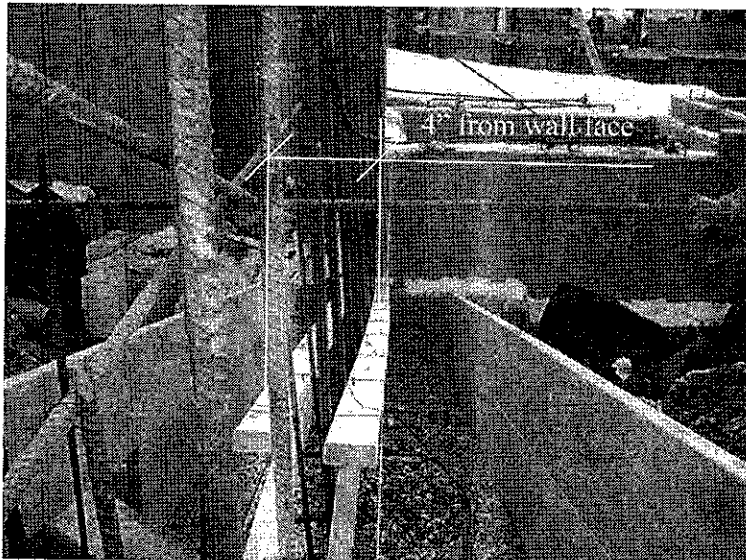
Building 2:

During my site visit, the subcontractor was erecting scaffolding for the formwork for walls along Pearl Street. The wall reinforcement was not complete, but the reinforcement in place appeared to comply with our structural drawings. I will need to review this section again before the concrete placement.

The supplemental steel tying crew was on site today to erect wall and footing reinforcement for the retaining wall parallel to Oxford Street (Reference sketch SSK-11, Add. 2). The wall reinforcement, however, was incorrectly located within the wall. The #7 bars were 4" from the wall face and should be 2" from the wall face as specified in concrete note 13 on drawing S1.0. The general contractor has already informed me that they intend to correct the discrepancy.

Building 1:

When I left the site today, the subcontractor had just completed today's concrete pour.



CC: Mike Myatt, Ronald Norton, Pandika Pleqi, Rick Nanartowich, Clint Gendreau, Dave Schoenherr, Suzanne Hunt Job File—1605

B E C K E R

structural engineers, inc.

Field Report

sv_2007/02/06

Project: Pearl Place
Project #: 1605
Date/Time: 2/6/07-2:40 PM to 3:30 PM
Observers: Michael Cyr

Building 2:

The subcontractor was not on site during my site visit. The general contractor has scheduled to place concrete tomorrow for the exterior foundation wall adjacent to Pearl Street from the corner bedroom 2 in Unit 2-104 to mechanical room 2-111. The general contractor had already draped the ground heater tendons inside the wall forms and covered the top of the wall with thermal blankets. I was able to move the thermal blankets to observe the wall reinforcement for the extents mentioned above. I noticed that the exterior patio wall for unit 2-104 was missing the #4 Richmond dowel bars noted in detail 6 on drawing S2.3. When I informed the general contractor of the missing bars, he notified me that the subcontractor was already aware of the missing bars and that he was going to place them tomorrow.

The wall dowels for the interior retaining wall parallel to Oxford Street have been correctly placed within the wall (Reference site visit 2007/02/01).

A small section of spread footing was excluded from previous concrete placements (See photo). As previously discussed on site yesterday with members of S.W. Cole, Ledgewood and Jim Fortin from our office, this small void is to be filled in during the concrete placement of the adjacent spread footing for the interior retaining wall. This area should have reinforcement as per SSK-12 from addendum #2. This includes #5 bars placed near the top of the footing and spaced at 9" O.C. These bars should extend up to the exterior edge of the existing stepped footing. I told the general contractor to also drill and dowel 8 #5 dowels into the existing footing and extend them into the footing of the interior retaining wall. The embedment of the #5 bars should be 6" minimum and Hilti HIT HY 150/HIT-ICE epoxy should be used.

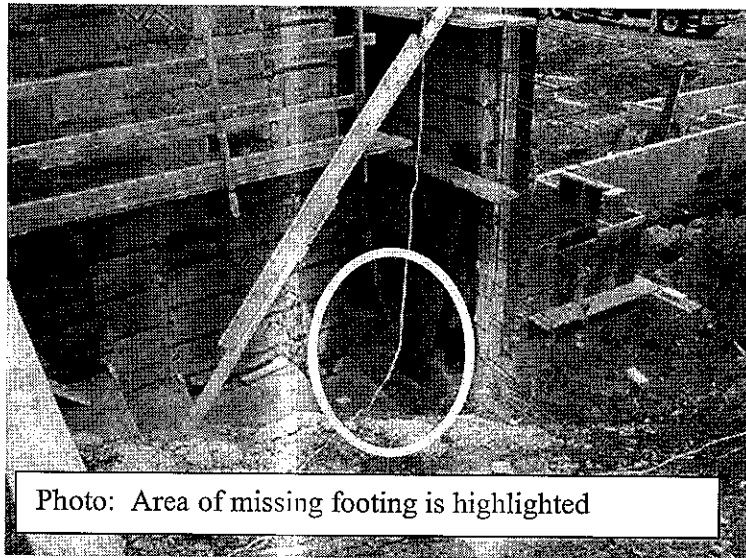
Building 1:

The subcontractor was still working on forming the remaining foundation walls and placing wall reinforcement. The wall reinforcement in place appeared to comply with our structural drawings.

CC: Mike Myatt, Ronald Norton, Pandika Pleqi, Rick Nanartowich, Clint Gendreau, Dave Schoenherr, Suzanne Hunt Job File—1605

BECKER

structural engineers, inc.



B E C K E R

structural engineers, inc.

Field Report

sv_2007/02/07

Project: Pearl Place
Project #: 1605
Date/Time: 2/7/07-9:50 AM to 10:50 AM, 12:00 PM to 12:25 PM
Observers: Michael Cyr

Building 2:

When I arrived on site, the subcontractor was adding the missing #4 Richmond dowel bars identified during yesterday's site visit.

Patrick from S.W. Cole had identified an issue with the spread footing for the interior retaining wall parallel to Oxford Street. The (3) #5 bars protruding from the existing footing into the spread footing formwork were bent upward. The #7 vertical dowel bars were resting on these bars which ultimately did not provide adequate embedment for the bars. I informed the general contractor of the discrepancy and he had someone from his crew lower the #7 dowels in order to provide sufficient embedment.

After removing the thermal blankets and heating tendons which had been in place during the evening, a surprisingly large quantity of ice remained in isolated areas within the projected concrete placement area (See photo 2). When I returned to the site at 12:00 PM, most of the ice had been removed. Using a special thermometer, I was able to determine that the temperature of the steel reinforcement within the projected concrete placement was below freezing. I advised the general contractor to heat the steel reinforcement to a temperature above freezing prior to the concrete placement.

The small section of spread footing excluded from previous concrete placements (See photo 1) will not be in today's concrete pour, but the (8) #5 bars embedded into the existing foundation were within the spread footing for today's concrete placement. This section will be properly excavated, prepared and poured at a later date.

Building 1:

The steel reinforcement for today's concrete placement appeared to comply with our structural drawings.

CC: Mike Myatt, Ronald Norton, Pandika Pleqi, Rick Nanartowich, Clint Gendreau, Dave Schoenherr, Suzanne Hunt Job File—1605

BECKER

structural engineers, inc.

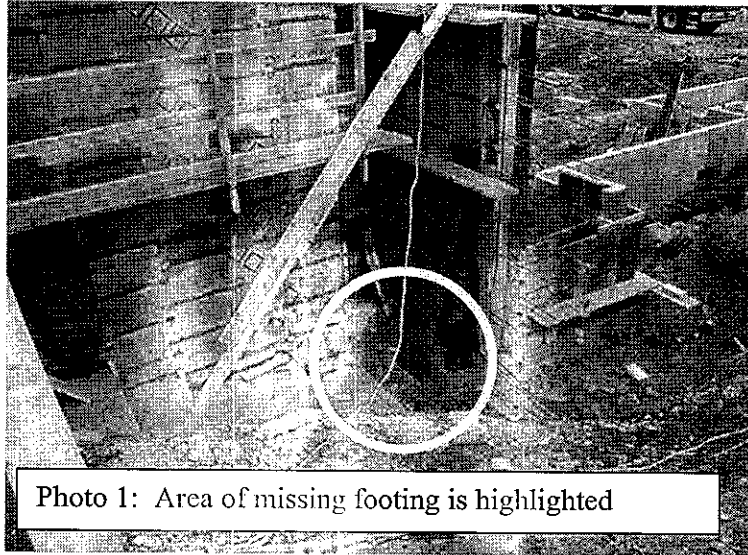


Photo 1: Area of missing footing is highlighted



Photo 2: Ice within the formwork of today's proposed concrete placement

BECKER

structural engineers, inc.

Field Report

sv_2007/02/09

Project: Pearl Place
Project #: 1605
Date/Time: 2/7/09-2:00 PM to 2:45 PM
Observers: Michael Cyr

Building 2:

The subcontractor was removing forms from the concrete wall along Pearl Street.

I observed the wall reinforcement for the interior concrete foundation wall which runs parallel to Oxford Street. The general contractor had snapped a chalk line on the foundation to identify the limits of the wall. Some of the #7 bars were 3" from the face of the wall. After reviewing the calculations, the as-built condition is considered acceptable.

Building 1:

The concrete foundation work appears complete. The waterproofing subcontractor was on site.

CC: Mike Myatt, Ronald Norton, Pandika Pleqi, Rick Nanartowich, Clint Gendreau, Dave Schoenherr, Suzanne Hunt Job File—1605

B E C K E R

structural engineers, inc.

Field Report

sv_2007/02/16

Project: Pearl Place
Project #: 1605
Date/Time: 2/16/07-1:00 PM to 1:45 PM
Observers Michael Cyr

Building 2:

The subcontractor has erected the wall forms for the interior concrete wall which runs parallel to Oxford Street. I was able to look into the formwork and observe that the wall reinforcement appeared to comply with our structural drawings. The concrete placement for this wall is scheduled for Tuesday afternoon 2/20/07. The site subcontractor was backfilling the foundation wall along Pearl Street.

Building 1:

General contractor was heating the subgrade behind the retaining wall prior to backfilling the retaining wall.

CC: Mike Myatt, Ronald Norton, Pandika Pleqi, Rick Nanartowich, Clint Gendreau, Dave Schoenherr, Suzanne Hunt Job File—1605

BECKER

structural engineers, inc.

Field Report

sv_2007/02/20

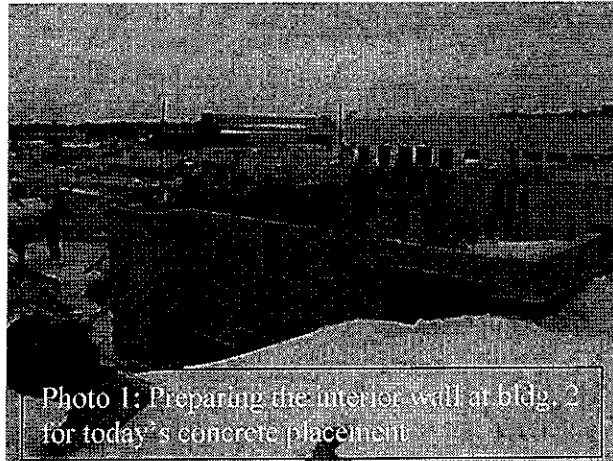
Project: Pearl Place
Project #: 1605
Date/Time: 2/20/07-10:40 AM to 11:15 AM
Observers: Michael Cyr

Building 2:

The subcontractor was making finishing touches to the formwork for the interior concrete wall which runs parallel to Oxford Street. I was able to look into the formwork and observe that the wall reinforcement appeared to comply with our structural drawings. The concrete placement for this wall is scheduled for 12:00 PM today. (See photo 1)

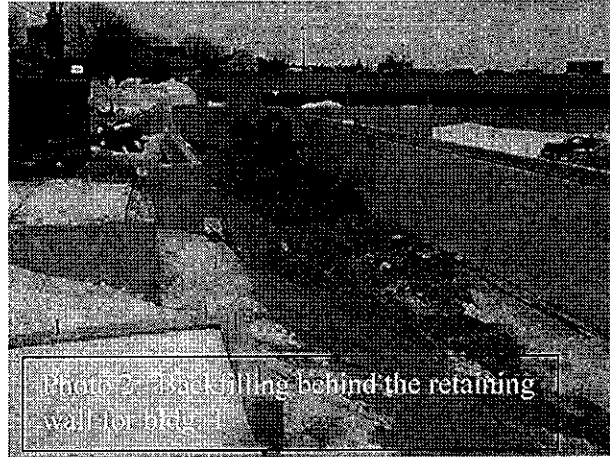
Building 1:

General contractor was backfilling behind the retaining wall. (See photo 2)



B E C K E R

structural engineers, inc.



CC: Mike Myatt, Ronald Norton, Pandika Pleqi, Rick Nanartowich, Clint Gendreau, Dave Schoenherr, Suzanne Hunt Job File—1605

B E C K E R

structural engineers, inc.

Field Report

sv_2007/02/28

Project: Pearl Place
Project #: 1605
Date/Time: 2/28/07-10:00 AM to 11:00 AM
Observers Michael Cyr

Building 2:

The concrete subcontractor was on site performing grinding uneven concrete along top of walls.
The civil site subcontractor was excavating soil for remaining foundation wall.

Building 1:

Steel erection started yesterday, and the erectors are moving quickly. An issue regarding the weld inspection prompted my site visit today. This issue regarding weld inspection is to be discussed further during tomorrow's weekly meeting.

CC: Mike Myatt, Ronald Norton, Pandika Pleqi, Rick Nanartowich, Clint Gendreau, Dave Schoenherr, Suzanne Hunt Job File—1605

Field Report

sv_2007/03/08

Project: Pearl Place
Project #: 1605
Date/Time: 3/08/07-9:00 AM to 10:30 AM
Observers James Fortin, P.E.

Building 1:

Welding of steel connections was ongoing. Moment frame connections at the beam top flanges were completed and inspected. Welder was finishing bottom flange welded connections, as well as completing the W8x10 welded connection to the embed plates at the foundation wall and the revised connection for the W18x40.

Metal deck for elevated slab was in place and welded, but the side-lap screws were not in place.

PT sill plates have been placed at the top of foundation walls. Oftentimes, the plate overhangs the foundation wall, which is not as detailed in the Contract Documents. Upon discussion with Rick N, these plates were not correctly located and will be re-located to bear completely on the concrete walls.

Rick N requested information on the bolts to be field installed at the shear wall holdowns, as well as for the sill anchors. This information will be collected and issued shortly.

Clint G. will forward the top of foundation wall elevation surveys to BSE for review and record.

Clint G will forward results probe tests on selected foundation walls at B1 and B2. Following receipt of probe test results, instruction for core tests will be provided.

Roger Domingo at SW Cole will be contacted to forward written documentation concerning the sub-grade issue beneath and around the NE corner of Building #2.

The following items require additional attention by the General Contractor:

- All steel connections must be completed and inspected prior to pouring elevated concrete slab.
- All deck side-lap screws must be placed prior to pouring slab. This issue was discussed and understood by Rick Nanartowich.
- PT sill plates shall be relocated to bear completely on the foundation walls.

Building 2:

There was no activity at Building 2 at the time of the visit.

CC: Mike Myatt, Ronald Norton, Pandika Pleqi, Rick Nanartowich, Clint Gendreau, Dave Schoenherr, Suzanne Hunt Job File—1605

BECKER

structural engineers, inc.

Field Report

sv_2007/03/12

Project: Pearl Place
Project #: 1605
Date/Time: 3/12/07-10:30 AM to 11:30 AM
Observers James Fortin, P.E.

Building 1:

3/12/07: At the time of this visit, the elevated concrete slab on deck had been poured and was being finished. The deck sidelap fasteners had been placed as specified and it appeared that all floor framing had been welded to the embed plates. Masonry wall construction was progressing at the elevator shaft as well as the storage area at the basement garage level.

The following items require additional attention by the General Contractor:

- Inspection reports for all field welding of the structural steel at Building 1
- PT sill plates shall be relocated to bear completely on the foundation walls.

Work being completed at the time of this visit appeared to meet contract requirements.

Building 2:

At the time of this visit, the footing reinforcement at the north-west wall of Building 2 was ready for review. A couple minor items were found that would be addressed by the concrete sub-contractor prior to pouring. These items included:

- Place a vertical wall dowel at all wall corners, both sides of wall
- Lift the top layer of footing rebar to be positioned at the top section of the footing, as shown in Section 4/Dwg. S2.3.
- Move bars away from forms as necessary to obtain the required concrete cover of the bars as specified in Dwg. S1.0.

General:

3/12/07: For field-placed sill plate anchors, use Simpson Titen HD - 5/8" diameter x 8" embed anchors. For field placed anchors that are part of the shear wall holdowns, use Simpson Acrylic-Tie (AT) adhesive with a 7/8" diameter x 15" embed ASTM A307 anchor. Follow all manufacturers installation instructions.

3/8/07: Clint G. will forward the top of foundation wall elevation surveys to BSE for review and record.

3/8/07: Clint G will forward results of probe tests on selected foundation walls at B1 and B2. Following receipt of probe test results, instruction for core tests will be provided.

3/8/07: Roger Domingo at SW Cole will forward written documentation concerning the sub-grade issue beneath and around the NE corner of Building #2.

CC: Mike Myatt, Ronald Norton, Pandika Pleqi, Rick Nanartowich, Clint Gendreau, Dave Schoenherr, Suzanne Hunt Job File—1605

BECKER

structural engineers, inc.

Field Report

sv_2007/03/13

Project: Pearl Place
Project #: 1605
Date/Time: 3/13/07-2:00 PM to 2:30 PM
Observers: James Fortin, P.E.

Building 1:

No items were reviewed at this building during this visit.

Building 2:

I was called this morning to come to the site to review the wall reinforcement for the north-west wall of Building 2. At the time of this visit, the reinforcement was in place and erection of the wall forms was in progress. The rebar appeared to meet the project requirements, but at locations where the forms were installed, the bar oftentimes contacted the form. The bar locations were to be moved to meet the clearance requirements specified. Once all forms are in place and the bar locations have been corrected, a final review will be conducted. This next review is currently scheduled for late morning on Thursday, March 15.

CC: Mike Myatt, Ronald Norton, Pandika Pleqi, Rick Nanartowich, Clint Gendreau, Dave Schoenherr, Suzanne Hunt Job File—1605

B E C K E R

structural engineers, inc.

Field Report

sv_2007/03/15

Project: Pearl Place
Project #: 1605
Date/Time: 3/15/07- 10:00 AM to 10:30 AM
Observers: James Fortin, P.E.

Building 1:

The area to receive the slab-on-ground, including the retaining wall ties beams (5 locations), were reviewed. The tie reinforcement appeared adequate, but it is recommended that the bars are placed on chairs prior to pouring to ensure they are straight, and the connections are tightened to ensure the bars are taut and there is no slack. It is also necessary to position the rigid insulation below the slab to be tight together with no gaps that concrete could fill in. Currently, there are a few areas where gaps greater than 1" were found. This is likely caused by travel across the area since the insulation sheets are not attached/taped together. These gaps can create concrete "bulges" at the bottom of the slab, which introduces a likely area for the concrete to crack. Also, prior to pouring, all surface water and any debris/dirt shall be removed from above the plastic barrier.

Building 2:

A final review of the wall reinforcement for the north-west wall of Building 2 was completed. At the time of this visit, all wall forms were all in place and the reinforcement appeared to meet the project requirements. There were a couple locations where the bars needed to be manipulated a bit to their proper location. These areas were explained to the concrete subcontractor, and the areas were being worked. Chairs were used in some areas to pull the vertical bars away from the form, to provide the proper concrete cover. This wall is expected to be poured this afternoon.

CC: Mike Myatt, Ronald Norton, Pandika Pleqi, Rick Nanartowich, Clint Gendreau, Dave Schoenherr, Suzanne Hunt Job File—1605

Clint Gendreau

From: Jim Fortin [jim@beckerstructural.com]
Sent: Friday, November 17, 2006 1:59 PM
To: Clint Gendreau; 'Pandika Pleqi'
Cc: 'Phil Nunley'
Subject: RE: Pearl Place - Concrete Mix Design

I have reviewed the letter from Dragon and it does address my comment. The requested information has been submitted and no further information is necessary. The mix design submittal can now be stamped "reviewed".

Thank you -

Jim

James Fortin, P.E.
Structural Engineer
BECKER structural engineers, inc.
75 York Street
Portland, ME 04101
(207) 879-1838
www.beckerstructural.com

-----Original Message-----

From: Clint Gendreau [mailto:cgendreau@ledgewoodconstruction.com]
Sent: Friday, November 17, 2006 1:20 PM
To: Pandika Pleqi; Jim Fortin
Cc: Phil Nunley
Subject: Pearl Place - Concrete Mix Design

See attached letter from Dragon Products concerning the comments on the Concrete Mix Designs (submittal # 03300-3). Please review and advise if this submittal is acceptable based on the attached document. Thanks, Clint

Clint Gendreau
Project Manager

Ledgewood Construction
27 Main Street
South Portland, ME 04106
207-767-1866
fax 207-767-1869
cell 207-415-7992

cgendreau@ledgewoodconstruction.com
<http://www.ledgewoodconstruction.com>

Please note our new address above.
Visit our new website at www.ledgewoodconstruction.com

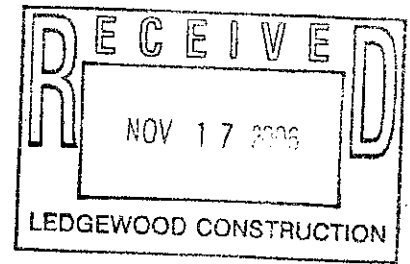
-----Original Message-----

From: scanned@ledgewoodconstruction.com
[mailto:scanned@ledgewoodconstruction.com]
Sent: Friday, November 17, 2006 5:05 AM
To: Clint Gendreau
Subject: Document from Ledgewood Office

You have received a PDF e-mail attachment from Ledgewood Construction.
Please read it for more information. Thank you



Corporate Offices
38 Preble St. • P.O. Box 1521
Portland, Maine 04104
207-774-6355 • Fax 207-761-5694



Mr. Clint Gendreau
Ledgewood Construction
27 Main Street
South Portland, Maine 04106

Re: Pearl Place Mix Design Submittal

Dear Clint,

Our submittal for the Pearl Place project proposed three different mix designs;

- Mix # 1 is a 3,000 PSI mix with air entrainment,
- Mix # 2 is a 3,000 PSI mix without air entrainment;
- Mix # 3 is a 4,500 PSI mix with air entrainment;

Test results from projects we have supplied at USM Gorham and the East End School in Portland were offered as back-up data for Mix #1

Since Mix #1 has acceptable test data and Mix #2 has a higher cement factor, (for the same design strength), we did not include any test data for this higher cement factor mix. The fact that non-air mixes break at higher strengths than similar mixes with air is another reason we did not include data for Mix #2. This is our normal practice when submitting several mixes for the same design strength.

The test results titled MTA CLASS AAA represent Mix #3 and were from work done for the Maine Turnpike Authority.

We ask that Dragon Products be added to the distribution list for any concrete test results that are generated from this project. Please contact me at 774-6355 if any questions remain.

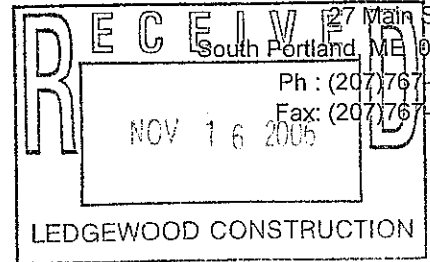
Sincerely,

Phil Nunley
Dragon Products Company

DRAGON®
PRODUCTS COMPANY



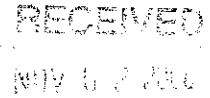
Ledgewood Construction
 27 Main Street
 South Portland, ME 04106
 Ph: (207) 767-1866
 Fax: (207) 767-1869



Submittal Cover Sheet

Job: 06 553
 Pearl Place - Building 1 & 2
 Pearl Street
 Portland, ME 04102

Spec Section No: 03300
Submittal No: 3
Revision No: 0
Sent Date: 10/31/2006



Spec Section Title: Cast-in-Place Concrete
Submittal Title: Cast-In-Place - Mix Designs

WINTON SCOTT ARCHITECTS

Contractor:
 Ledgewood Construction
 Clint Gendreau

Contractor's Stamp

Reviewed for general acceptance and compliance with contract documents. The subcontractor is responsible for all dimensions, correct fabrication and accurate fit with the work of other trades.

Ledgewood

By: BMK Date: 10.31.06
 Submittal Number: 06553-03300-3

Architect:
 Winton Scott Architects
 Pandika Pleqi
 06553

Architect's Stamp

- Reviewed
- Rejected
- Submit Specific Items
- Furnish as Corrected
- Revise and Resubmit

This review is only for general conformance with the design concept of the project and general compliance with the information given in the Contract Documents. Corrections or comments made on the shop drawings during this review do not relieve contractor from compliance with the requirements of the plans and specifications. Approval of a specific item shall not include approval of an assembly of which the item is a component. Contractor is responsible for: dimensions to be confirmed and correlated at the jobsite; information that pertains solely to the fabrication processes or to the means, methods, techniques, sequences and procedures of construction; coordination of his or her Work with that of all other trades; and for performing all work in a safe and satisfactory manner.

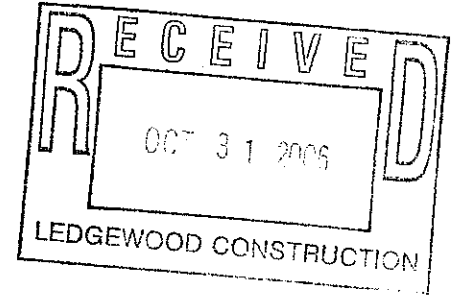
Engineer's Stamp

Becker Structural Engineers, Inc.
 Date 11/13/06 By JLE



Corporate Offices

38 Preble St. • P.O. Box 1521
Portland, Maine 04104
207-774-6355 • Fax 207-761-5694



October 30, 2006

Ledgewood, Inc.
PO Box 8107
Portland, Maine 04104-8107

RE: Pearl Place

Dear Sirs,

Enclosed please find a copy of the mix designs and a trailer card for the above reference project:

Mix #1: 3000 psi, 3/4-inch.	Optional: Mid-Range Water Reducer
Mix #2: 3000 psi, 3/4-inch, no air.	Optional: Mid-Range Water Reducer, Fiber
Mix #3: 4500 psi, 3/4-inch.	Optional: Mid-Range Water Reducer, Fiber

In order to better assure that the approved design mix is shipped, please be sure to use the above **mix number and description** when ordering concrete for your project. Please be sure that the appropriate personnel on your project have this mix design information.

Please include us on the distribution list for any concrete test reports that are generated from this project.

If you have any questions or I can be of any further assistance, please do not hesitate to contact me at 207-774-6355.

Sincerely,

Mark R. West
Technical Services

Enclosure
cc: Phil Nunley

DRAGON[®]
PRODUCTS COMPANY

**PROJECT MIX DESIGN
TRAILER CARD**

**Pearl Place
Ledgewood, Inc.**

Mix No.	Strength (psi)	Agg. Size	Description	Optional Admixtures
1	3000	¾-inch		Mid-Range Water Reducer
2	3000	¾-inch	No air.	Mid-Range Water Reducer, Fiber
3	4500	¾-inch		Mid-Range Water Reducer, Fiber

Supplied by: Dragon Concrete

**Dispatch:
800-773-2951**

Area Rep: Phil Nunley
Tech. Services: Mark West
207-774-6355

**Pearl Place
Ledgewood, Inc.**

Mix No.	Strength (psi)	Agg. Size	Description	Optional Admixtures
1	3000	¾-inch		Mid-Range Water Reducer
2	3000	¾-inch	No air.	Mid-Range Water Reducer, Fiber
3	4500	¾-inch		Mid-Range Water Reducer, Fiber

Supplied by: Dragon Concrete

**Dispatch:
800-773-2951**

Area Rep: Phil Nunley
Tech. Services: Mark West
207-774-6355



Corporate Offices

38 Preble St. • P.O. Box 1521
Portland, Maine 04104
207-774-6355 • Fax 207-761-5694

seeMIX II Mix Report
304120

Strength Compressive: 3,000 psi
10/27/2006

Contractor : LEDGEWOOD CONSTRUCTION
Project : PEARL PLACE
Source of Concrete : DRAGON PRODUCTS COMPANY
Construction Type : MIX #1
Placement : CHUTE, PUMP

	Weights per Cubic Yard (Saturated, Surface-Dry)		Yield, ft ³
	Quantity	Density	
DRAGON, TYPE II, lb	400	3.150	2.04
LAFARGE, NEWCEM, lb	100	2.820	0.57
Water, lb	265	1.000	4.25
3/4" QUARRY STONE, ASTM C-33, lb	1,750	2.700	10.39
FINE AGGREGATE, ASTM C-33, lb	1,352	2.650	8.18
MASTER BUILDERS: POZZOLITH 200N, oz (US)	15.0	1.000	0.02
MASTER BUILDERS: MICRO-AIR, oz (US)	2.5	1.000	0.00
(OPTIONAL) M.B.: POLYHEED 997, oz (US)	40.0	1.000	0.04
Total Air, %	6.0 ± 1.5		1.63
TOTAL			27.10

Water/Cement Ratio, lbs/lb 0.53
Slump, High, in 4.00
Low, in 2.00
Concrete Unit Weight, pcf 142.84
Yield, % 100.4

Exposure Condition : Severe exposure

NEWCEM PERCENTAGE MAY BE ADJUSTED FOR AMBIENT TEMP VARIATIONS
6" MAX SLUMP WITH POLYHEED

Prepared by :

TECHNICAL SERVICES

10/27/2006

DRAGON[®]
PRODUCTS COMPANY



Corporate Offices

38 Preble St. • P.O. Box 1521
Portland, Maine 04104
207-774-6355 • Fax 207-761-5694

seeMIX II Mix Report
304145

Strength Compressive: 3,000 psi
10/27/2006

Contractor : LEDGEWOOD CONSTRUCTION
Project : PEARL PLACE
Source of Concrete : DRAGON PRODUCTS COMPANY
Construction Type : MIX #2
Placement : CHUTE, PUMP

	Weights per Cubic Yard (Saturated, Surface-Dry)		Yield, ft ³
	Quantity	Density	
DRAGON, TYPE II, lb	416	3.150	2.12
LAFARGE, NEWCEM, lb	104	2.820	0.59
Water, lb	280	1.000	4.49
3/4" QUARRY STONE, ASTM C-33, lb	1,800	2.700	10.68
FINE AGGREGATE, ASTM C-33, lb	1,425	2.650	8.62
MASTER BUILDERS: POZZOLITH 200N, oz (US)	15.6	1.000	0.02
(OPTIONAL) M.B.: POLYHEED 997, oz (US)	41.6	1.000	0.04
Total Air, %	2.0 ± 1.0		0.54
		TOTAL	27.10
Water/Cement Ratio, lbs/lb	0.54		
Slump, High, in	4.00		
Low, in	2.00		
Concrete Unit Weight, pcf	148.68		
Yield, %	100.4		

NEWCEM PERCENTAGE MAY BE ADJUSTED FOR AMBIENT TEMP VARIATIONS
6" MAX SLUMP WITH POLYHEED. AIR CONTENT MAY EXCEED 3% WITH POLYHEED
(OPTIONAL) FIBERMESH: POLYPROPYLENE FIBER REINFORCEMENT

Prepared by :

TECHNICAL SERVICES



Corporate Offices

38 Preble St. • P.O. Box 1521
Portland, Maine 04104
207-774-6355 • Fax 207-761-5694

see MIX II Mix Report
454110

Strength Compressive: 4,500 psi
10/27/2006

Contractor : LEDGEWOOD CONSTRUCTION
Project : PEARL PLACE
Source of Concrete : DRAGON PRODUCTS COMPANY
Construction Type : MIX #3
Placement : CHUTE

	Weights per Cubic Yard (Saturated, Surface-Dry)		Yield, ft ³
	Quantity	Density	
DRAGON, TYPE II, lb	504	3.150	2.56
LAFARGE, NEWCEM, lb	126	2.820	0.72
Water, lb	265	1.000	4.25
3/4" QUARRY STONE, ASTM C-33, lb	1,830	2.700	10.86
FINE AGGREGATE, ASTM C-33, lb	1,159	2.650	7.01
MASTER BUILDERS: POZZOLITH 200N, oz (US)	18.9	1.000	0.02
MASTER BUILDERS: MICRO-AIR, oz (US)	3.2	1.000	0.00
(OPTIONAL) M.B.: POLYHEED 997, oz (US)	50.4	1.000	0.05
Total Air, %	6.0 ± 1.5		1.63
		TOTAL	27.10
Water/Cement Ratio, lbs/lb	0.42		
Slump, High, in	4.00		
Low, in	2.00		
Concrete Unit Weight, pcf	143.50		
Yield, %	100.4		
Exposure Condition : Severe exposure			

NEWCEM PERCENTAGE MAY BE ADJUSTED FOR AMBIENT TEMP VARIATIONS
6" MAX SLUMP WITH POLYHEED
(OPTIONAL) FIBERMESH: POLYPROPYLENE FIBER REINFORCEMENT

Prepared by :


TECHNICAL SERVICES

10/27/2006

DRAGON[®]
PRODUCTS COMPANY

1

HOW DO THESE RESULTS CORRELATE WITH PROPOSED MIX DESIGNS?
 RE-SUBMIT MIX RESULTS, W/ CORRESPONDING MIX DESIGN IDENTIFICATIONS, FOR RECORD

USM GORHAM
 Mix: WKUSMRES304111M F'c: 3000 psi
 10/27/06

MIX DESCRIPTION
 =====

WKUSMRES304111M ----- 3000 psi ----- 0/ 0/ 0

Sample Date	Sample ID	Air Tmp deg F	Con Tmp deg F	Air Cont %	Slump in	7 day Comp psi	28 day Comp psi	Moving Avg: 3 28 day Comp psi
5/18/ 6	01	53	65	5.4	3.00	3250	4845	-
5/31/ 6	05	75	70	7.0	3.50	3330	4465	-
6/ 1/ 6	06	75	73	6.4	3.75	2950	3775	4362
6/12/ 6	07	65	61	6.2	4.50	2640	3680	3973
6/12/ 6	08	65	61	5.6	4.50	2810	3535	3663
6/19/ 6	09	75	76	6.4	5.25	2800	3405	3540
6/22/ 6	10	-	73	5.8	5.00	3150	4130	3690
6/29/ 6	11	-	76	6.8	5.00	2850	3980	3838
6/29/ 6	12	75	78	6.5	4.50	3220	4120	4077
7/10/ 6	13	88	83	6.0	5.00	2440	3310	3803
7/10/ 6	14	89	87	5.7	5.00	2600	3575	3668
7/14/ 6	15	89	80	5.7	6.00	2550	3545	3477
7/19/ 6	16	80	78	5.4	5.50	2830	4065	3728
7/20/ 6	17	81	77	6.2	5.00	2810	4155	3922
7/25/ 6	18	85	79	6.1	4.50	3010	4085	4102
8/ 1/ 6	19	90	83	6.4	5.50	2800	4345	4195
8/ 9/ 6	22	80	83	6.9	6.50	1770	3430	3953
8/16/ 6	23	-	75	7.5	5.50	2370	4020	3932
8/16/ 6	24	-	75	7.5	5.75	2410	4015	3822
Count		15	19	19	19	19	19	17
Average		78	75	6.3	4.91	2768	3920	3867
Standard Deviation		11	7	0.6	0.86	372	402	234
Range		53	61	5.4	3.00	1770	3310	3477
		90	87	7.5	6.50	3330	4845	4362
Coefficient of Variation		13.54	9.49	10.11	17.50	13.43	10.25	6.05

EAST END SCHOOL
 Mix: WKEASTEND354120 F'c: 3000 psi
 10/27/06

MIX DESCRIPTION
 =====

WKEASTEND354120 ----- 3000 psi ----- 0/ 0/ 0

Sample Date	Sample ID	Air Tmp deg F	Con Tmp deg F	Air Cont %	Slump in	7 day Comp psi	28 day Comp psi	Moving Avg: 3 28 day Comp psi
12/15/ 4	01	-	56	6.3	3.00	2910	5030	-
12/20/ 4	02	-	60	5.7	2.75	3440	5510	-
12/20/ 4	03	-	56	5.9	3.25	3100	4915	5152
12/22/ 4	04	-	63	6.3	4.00	3340	4360	4928
12/23/ 4	05	-	62	7.0	3.25	2920	4145	4473
12/30/ 4	06	-	60	7.0	4.00	2610	3610	4038
1/ 3/ 5	07	-	62	4.2	3.50	3510	4510	4088
1/ 4/ 5	08	-	72	5.8	3.50	3610	4350	4157
1/ 7/ 5	09	-	60	4.0	2.25	3240	4415	4425
1/10/ 5	10	-	63	5.6	4.50	2650	3380	4048

1/11/ 5	11	-	59	2.6	2.00	3430	4690	4162
1/12/ 5	12	-	48	5.7	3.50	3190	4205	4092
1/13/ 5	13	-	61	5.4	2.75	2980	4435	4443
1/19/ 5	14	-	63	4.9	3.50	2780	4155	4265
1/25/ 5	15	-	49	6.7	3.00	2590	3450	4013
1/27/ 5	16	-	60	5.0	3.00	3220	4140	3915
1/28/ 5	17	-	52	6.0	3.00	3120	3935	3842
2/ 1/ 5	18	-	62	5.2	1.50	3410	4235	4103
2/ 2/ 5	19	-	54	6.1	3.00	3130	3925	4032
2/ 3/ 5	20	-	57	6.7	3.00	2820	3315	3825

2/ 7/ 5	21	-	60	6.1	3.00	2730	4165	3802
2/ 8/ 5	22	-	64	5.9	3.50	2980	3920	3800
2/ 9/ 5	23	-	73	5.9	2.75	2870	4000	4028
2/15/ 5	24	-	59	6.2	4.00	3270	4255	4058
2/17/ 5	25	-	60	7.5	4.25	2380	3190	3815
2/22/ 5	26	-	60	4.5	4.50	3740	4850	4098
2/24/ 5	27	-	60	6.8	3.50	2710	3970	4003
2/28/ 5	28	-	53	6.2	4.00	2530	3930	4250
3/ 3/ 5	29	-	53	6.8	4.00	2540	3840	3913
3/ 7/ 5	30	-	63	6.3	4.50	2880	3825	3865

3/11/ 5	31	-	56	5.4	5.00	2490	3980	3882
3/15/ 5	32	-	45	6.0	4.00	2390	3390	3732
3/22/ 5	34	-	65	6.0	5.00	2470	3570	3647

Concrete Test Report Summary

Sample Date	Sample ID	Air Tmp deg F	Con Tmp deg F	Air Cont %	Slump in	7 day Comp psi	28 day Comp psi	Moving Avg: 3 28 day Comp psi
4/ 6/ 5	37	-	66	5.0	4.00	3010	4825	3928
4/12/ 5	38	-	60	5.5	3.75	2720	3745	4047
4/20/ 5	39	-	63	5.7	3.50	2480	4515	4362
4/22/ 5	43	-	65	5.5	3.50	3060	4480	4247
Count		-	37	37	37	37	37	35
Average		-	60	5.8	3.49	2953	4139	4099
Standard Deviation		-	6	0.9	0.77	366	517	311
Range		-	45	2.6	1.50	2380	3190	3647
Coefficient of Variation		-	73	7.5	5.00	3740	5510	5152
		-	9.75	16.22	22.03	12.40	12.49	7.58

MTA CLASS AAA
 Mix: WK04MTACLSAAA F'c: 4500 psi
 10/27/06

MIX DESCRIPTION
 =====

WK04MTACLSAAA ----- 4500 psi ----- 0/ 0/ 0

Sample Date	Sample ID	Air Tmp deg F	Con Tmp deg F	Air Cont %	Slump in	7 day Comp psi	28 day Comp psi	Moving Avg: 3 28 day Comp psi
7/ 9/ 4	1	70	70	7.1	6.25	3790	5365	-
7/15/ 4	2	60	67	7.2	4.25	4250	5630	-
7/28/ 4	3	68	73	6.0	7.50	4030	6400	5798
7/28/ 4	4	68	72	6.5	7.50	4030	5175	5735
8/ 4/ 4	5	80	82	6.0	5.50	3730	4985	5520
8/10/ 4	6	80	75	7.7	5.00	3860	4830	4997
8/10/ 4	7	80	74	7.2	5.00	4000	4820	4878
8/18/ 4	8	78	82	5.5	5.00	4390	5090	4913
8/18/ 4	9	80	85	5.8	3.00	4480	5430	5113
8/25/ 4	10	60	68	6.2	7.25	4920	6830	5783
9/ 7/ 4	11	70	76	6.5	6.25	4250	6235	6165
9/ 7/ 4	12	80	79	5.5	4.25	4160	5625	6230
9/ 7/ 4	13	70	81	6.1	6.00	3910	5630	5830
9/24/ 4	14	80	74	5.9	5.00	3290	5005	5420
9/28/ 4	15	60	67	7.2	5.00	3500	5090	5242
10/12/ 4	16	40	74	7.1	6.00	3040	4820	4972
10/21/ 4	17	40	63	7.7	5.00	2570	6090	5333
10/25/ 4	18	50	62	4.1	5.25	3180	6450	5787
11/ 1/ 4	19	40	63	7.0	5.25	5080	7455	6665
11/ 1/ 4	20	50	60	5.5	7.25	3520	7225	7043
11/ 1/ 4	21	40	64	5.0	7.00	4530	7665	7448
11/ 4/ 4	22	30	64	7.2	4.75	3730	5300	6730
11/12/ 4	23	30	62	6.0	4.00	3250	5305	6090
11/18/ 4	24	40	64	6.1	5.00	3180	5505	5370
11/23/ 4	25	50	64	6.5	7.00	3520	5225	5345
12/ 6/ 4	26	27	60	5.5	2.75	2740	4755	5162
12/16/ 4	29	30	61	5.8	6.75	3400	5260	5080
4/11/ 5	30	55	68	5.5	6.00	3450	5925	5313
4/11/ 5	31	53	75	5.3	6.25	3820	5995	5727
4/25/ 5	32	42	56	6.3	6.25	3470	5870	5930
4/25/ 5	33	42	60	5.3	5.75	3820	6145	6003
4/25/ 5	34	62	58	6.0	7.00	3890	5765	5927
4/26/ 5	35	72	59	5.8	6.75	3520	5745	5885

Concrete Test Report Summary

Sample Date	Sample ID	Air Tmp deg F	Con Tmp deg F	Air Cont %	Slump in	7 day Comp psi	28 day Comp psi	Moving Avg: 3 28 day Comp psi
4/26/ 5	36	72	58	6.9	7.25	3150	5220	5577
5/ 2/ 5	37	70	67	6.5	5.50	3860	5050	5338
5/11/ 5	38	60	63	5.8	4.50	4260	5730	5333
5/11/ 5	39	-	68	6.0	5.50	3700	5415	5398
5/11/ 5	40	58	66	5.8	4.50	3980	5140	5428
6/ 8/ 5	44	-	74	6.9	7.00	3980	5300	5285
Count								
		37	39	39	39	39	39	37
Average								
		58	68	6.2	5.67	3775	5654	5670
Standard Deviation								
		17	8	0.8	1.20	536	720	590
Range								
		27	56	4.1	2.75	2570	4755	4878
		80	85	7.7	7.50	5080	7665	7448
Coefficient of Variation								
		29.10	11.18	12.58	21.21	14.19	12.74	10.41



P.O. Box 191, U.S. Route 1 • Thomaston, Maine 04861 • 207-594-5555

January 10, 2006

Dragon Products Company Inc
38 Preble Street
Portland, ME 04104
FAX (207) 553-7450

Attn: Mark West

At your request, we are supplying the following certification in accordance with the proposed usage of Dragon Products Company's Portland Cement, Type I/II.

It is herein certified that Dragon Products Company's Portland Cement, Type I/II, as manufactured at Thomaston, Maine, meets the requirements of ASTM Specification C-150 and AASHTO Specification M-85 for Type II Cement. This product will also meet or exceed the requirements of ASTM Specification C-150 and AASHTO M-85 for Type I Cement.

Dragon Products Company's Portland Cement, Type I/II conforms to the material requirements of ASTM Specification C-270 and when used with other materials and proportioning which meet the requirements of this Specification, produces mortar in compliance with ASTM Specification.C-270.

Very truly yours,

Jennifer K. Colburn

Quality Control Manager

Enclosure



P.O. Box 191, U.S. Route 1 • Thomaston, Maine 04861 • 207-594-5555

MILL TEST RESULTS Laboratory at Thomaston, Maine	Date: October, 2006 Cement Type: I/II
---	--

CHEMICAL DATA	Percent	PHYSICAL DATA
Silicon Dioxide.....	20.6	Specific Surface..... 372 Blaine (sq m /kg) (Per ASTM C 204)
Aluminum Dioxide.....	4.4	Percent Passing 325 Mesh. 93.2 (Per ASTM C 430)
Ferric Oxide.....	2.9	Compressive Strength (psi) (Per ASTM C 109)
Calcium Oxide.....	61.3	1 day..... 2480
Magnesium Oxide.....	3.4	3 day..... 3550
Sulphur Trioxide.....	3.7	7 day..... 4510
Loss on Ignition.....	1.9	28 day.....
Insoluble Residue.....	0.2	Vicat Setting Time (Per ASTM C 191)
Tricalcium Silicate.....	49	Initial (min.)..... 105
Dicalcium Silicate.....	22	Final (min.)..... 225
Tricalcium Aluminate.....	7	Air Content (%)..... 6.8 (Per ASTM C 185)
Sodium Oxide.....	0.4	Autoclave Expansion (%)... 0.11 (Per ASTM C 151)
Potassium Oxide.....	1.2	Expansion in water (%)..... 0.003 (Per ASTM C 1038)
Equivalent Alkalies..... 1.18 (Chemical Analysis all per ASTM C 114)		Certified by: Jennifer K. Colburn

We hereby certify that this cement complies with current ASTM C 150, AASHTO M-85 and CSA-A3000 - 03 Type GU specifications.

Testing was completed by Warren Kincaid, Donald Barbour and/or Brian Secord.
This mill test report is generated for silos produced in the calendar month prior to the date upon this report.



Cement

February 27, 2006

Mark West
Dragon Cement & Concrete
38 Preble Street
P. O. Box 1521
Portland, ME 04104

Dear Mr. West:

NewCem is a ground granulated blast furnace slag (GGBFS) cement. NewCem, Lafarge's GGBFS, is the nonmetallic by-product from a blast furnace when iron ore is reduced to pig iron. The slag is separated from the iron and then rapidly cooled to form granules, which are then ground to a fineness similar to Portland cement. NewCem is available for blending with conventional Portland cement at concrete plants to produce high-quality, durable concrete. NewCem used as a cementitious material conforms to the American Society of Testing and Materials (ASTM) Specification C 989 – Grade 120 and the American Association of State Highway and Transportation Officials (AASHTO) Specification M 302.

NewCem has both cementitious and pozzolonic properties when used in combination with Portland cement. In plastic (unhardened) concrete, NewCem can improve placeability and finishability. In properly designed mixes, NewCem can provide following hardened concrete properties: increased 28-day strengths, reduced permeability, improved durability, reduced heat of hydration, increased sulfate resistance, mitigation of alkali silica reaction, and an overall lighter surface color.

The utilization of NewCem in concrete lessens the burden on landfills, conserves a virgin manufactured product (Portland cement), and decreases the embodied energy of concrete through the partial replacement of Portland cement. The Leadership in Energy and Environmental Design (LEED) system developed by the United States Green Building Council is used to rate a building's environmental performance. This system has become the principal method by which buildings can achieve green building certification. The system is based on credits earned in five (5) major categories. NewCem can positively impact several credit categories, which may include:

- > Site credit for reduction of heat island
- > Materials credit for recycled content
- > Materials credit for use of local/regional materials

Concrete is a highly desirable building material for sustainable development, and the use of NewCem can enhance its characteristics. Should you require further assistance, please contact me at (508) 366-9001.

Regards,

A handwritten signature in black ink that reads 'Melissa A. Oliver'.

Melissa A. Oliver
Technical Sales Engineer
LEED Accredited Professional

Northeast Region

2001 Wharf Rd.; Baltimore, MD 21219

Office: (410) 388-1177 Ext. 304 Fax: (410) 388-1206

E-mail: melissa.oliver@lafarge-na.com

Web: www.lafargenorthamerica.com



NewCem

Mill Test Certificate - Sparrows Point Plant

Chemical

	<u>Specification</u>	
Sulfide Sulfur (S), %	1.0	2.5 max.
Sulfate Ion (as SO ₃), %	2.5	4.0 max.

Sample Identification

NewCem shipping composite sample
results for the month of :

August-06

Physical

	<u>Specification</u>	
Slag Activity Index, %:		
7 Day	105	95
28 Day	122	115
Compressive Strength: psi		
7 Day	5,058	n/a
28 Day	7,098	n/a
Fineness:		
Blaine cm ² /g	4,572	n/a
45 Micron % retain	2	20 max.
Air Content, %	3	12 max.

This ground granulated blast furnace slag complies with the current specification of the chemical and physical requirements of ASTM C-989, AASHTO M-302; Grade 120 and ASTM C-595M, AASHTO M-240 Type IS, when blended with Portland cement, conforming to ASTM C-150, at the prescribed proportions. NewCem is guaranteed to meet all applicable FDOT, GADOT, SCDOT, NYDOT and VADH specifications.

Northeast Region
Sparrows Point Plant
2001 Wharf Rd, Baltimore, MD 21219
Telephone: (410) 388-1177 x202

Thomas R. Griffiths Digitally signed by Thomas R. Griffiths
DN: CN = Thomas R. Griffiths, C = US,
O = Lafarge, OU = Sparrows Point Plant
Date: 2006.09.15 15:58:07 -04'00'

Quality Control Manager

9/15/2006
Date

BLUE ROCK INDUSTRIES
58 MAIN STREET
WESTBROOK, MAINE

Location: **WESTBROOK** Date: **2005**
 Subject: **YEARLY ANALYSIS** By: **LAB**

Product: **VARIOUS**
 Project:

Subject	3"	2 1/2"	2"	1 1/2"	1 1/4"	1"	3/4"	5/8"	1/2"	3/8"	#3	#4	#6	#8	#10	#20	#30	#40	#60	#100	#200	WASH
1 1/2" CR. STN.			100	100		90	54	29	10	4		2										0.8 WASH
DRAGON STN.					100	100	96	69	62	33		7		1								0.5 WASH
3/4" CR. STN.					100	100	90	81	32	5		1		0.6								0.8 WASH
1/2" CR. STN.						100	100		98	45	3	1		0.8								0.5 WASH
3/8" CR. STN.									100	99	57	28		2								0.5 WASH
1/4" CR. STN.			2003							100	94	66	31	20	7	2.6						1.5 WASH
W-STONE DUST										100	100			68	36	12				6		3 WASH
D-STONE DUST										100	99			75	45	23				18		14.2 WASH
W-50 SAND										100	97			91	71	16				5		1.5 WASH
R.A.P.										100	96			58	46	21				13		10.4 WASH
PRO-BAJE										86	96			57	43	19				12		6.3 WASH
POND FINES											100	100		100	98	95				83		90.6 WASH

Subject	Specific Gravity		L.A. Abrasion	Soundness		Unit Weight	
	Bulk	Apparent		NA-2	MG	Loose	Rodded
1 1/2" CR. STN.	2.853	2.705	0.30	24.3% TYPE III		2178	2507
DRAGON STN.	2.894	2.720	0.38	15.4% TYPE B		2301	2640
3/4" CR. STN.	2.702	2.719	0.23	15.7% TYPE B	0.46%	2294	2616
1/2" CR. STN.	2.720	2.745	0.34	17.2% TYPE C	0.21%	2218	2596
3/8" CR. STN.	2.890	2.720	0.42			2243	2579
1/4" CR. STN.	2.836	2.733	1.04			2288	2503
W-STONE DUST	2.660	2.728	0.94			2338	2694
D-STONE DUST	2.662	2.727	0.89			2773	3006
W-50 SAND	2.573	2.631	0.83		2.82%	2073	2365
R.A.P.	2.068	(Gas)				2226	2473

FRACTURE COUNT		FLAT & ELONG.
1 FACE	2 FACE	
3/4" CR. STN.	100%	3.5%
1/2" CR. STN.	100%	2.5%
3/8" CR. STN.	100%	0.0%

degussa.

Construction Chemicals

January 4, 2006

Master Builders, Inc.
New England Area
800-722-8899

Certificate of Conformance
Pozzolith 200N
Master Builders Admixture for Concrete

TO WHOM IT MAY CONCERN:

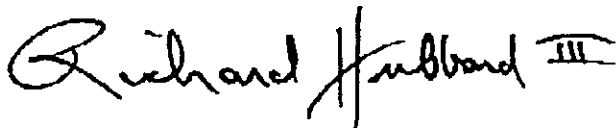
I, Richard Hubbard III, Technical Specialist for Degussa Admixtures, Inc., Cleveland, Ohio, certify:

That no calcium chloride or chloride based ingredient is used in the manufacture of Pozzolith 200N; and

That Pozzolith 200N, based on the chlorides originating from all the ingredients used in its manufacture, contributes less than 0.00013 percent (1.3 ppm) chloride ions by weight of the cement when used at the rate of 65 ml per 100 kg (1 fluid ounce per 100 pounds) of cement; and

That Pozzolith 200N meets the requirements for a Type A, Water-Reducing Admixture specified in ASTM C 494, Corps of Engineers' CRD-C 87, and AASHTO M194, the Standard Specifications for Chemical Admixtures for Concrete.

Richard Hubbard III

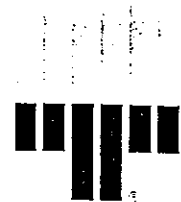


Technical Specialist, Technology Innovation & Sustainability Group



POZZOLITH® 200N

Concrete admixture



DESCRIPTION:

POZZOLITH 200N liquid admixture is ready-to-use for making more uniform and predictable quality concrete. It meets ASTM C-494 requirements for Type A water-reducing, Type B retarding and Type D retarding and water-reducing admixtures, specifically:

- Increased strength – compressive and flexural
- Relative durability to damage from freezing and thawing – wet above industry standards
- Reduced water content required for a given workability
- Normal setting characteristics

ADVANTAGES:

Concrete with POZZOLITH 200N admixture sets at a rate comparable to plain concrete while providing the following special qualities:

- Improved workability
- Reduced segregation
- Improved finishing characteristics for flatwork and cast surfaces
- Effective as a singular admixture or as a component in an admixture system

WHERE TO USE:

POZZOLITH 200N admixture is recommended for use in all types of concrete where normal-setting characteristics are desired.

As a result of the above advantages, this admixture improves pumped concrete, shotcrete (wet mix), and conventionally placed concretes. It improves plain, reinforced, precast, prestressed, lightweight or standard weight concrete.

POZZOLITH 200N admixture can be used with air-entraining cements and with air-entraining admixtures approved under AASHTO, ASTM and CRD specifications – including those manufactured by Master Builders – if air-entrained concrete is desired. When used in conjunction with another admixture, each admixture must be dispensed separately into the mix.

POZZOLITH 200N admixture will not initiate or promote corrosion of reinforcing steel in concrete. This admixture does not contain intentionally added calcium chloride or chloride-based ingredients. The admixture, due to chlorides originating from all the ingredients used in its manufacture, contributes less than 0.00015% (1.5 PPM) chloride ions by weight of the cement when used at the rate of 1 fl oz per 100 lb (65 ml per 100 kg) of cement.

POZZOLITH 200N admixture can be used in white, colored and architectural concrete.

QUANTITY TO USE:

POZZOLITH 200N admixture is recommended for use at a rate of 4 ± 2 fl oz per 100 lb (280 ± 65 ml per 100 kg) of cement for most concrete mixes using average concrete ingredients. However, it is appreciated that variations in job conditions and concrete materials may make usage rates outside the recommended dosage range desirable. In such cases, contact your local Master Builders representative.

PACKAGING:

POZZOLITH 200N admixture is supplied in 55 U.S. gallon (208 litre) drums and by bulk delivery.

TEMPERATURE PRECAUTION:

If POZZOLITH 200N admixture has frozen, thaw at 35 °F (2 °C) or above and completely reconstitute by mild mechanical agitation. Do not use pressurized air for agitation.

For additional information on POZZOLITH 200N admixture or on its use in developing a concrete mix with special performance characteristics, contact your local Master Builders representative.

Master Builders, Inc.

United States
23700 Chagrin Boulevard
Cleveland, Ohio 44122-5554
(800) MBT-9990
Fax (216) 831-6910

Canada
3637 Weston Road
Toronto, Ontario M9L 1W1
(800) 387-5862
Fax (416) 741-7925

Mexico
Blvd. M. Avila Camacho 80, 3er Piso
53390 Naucalpan, México
011-525-557-5544
Fax 011-525-395-7903

degussa.

Construction Chemicals

January 4, 2006

Master Builders, Inc.
New England Area
800-722-8899

Certificate of Conformance
Micro-Air
Degussa Admixtures Air-Entraining Admixture for Concrete

TO WHOM IT MAY CONCERN:

I, Richard Hubbard III, Technical Specialist for Degussa Admixtures, Inc., Cleveland, Ohio, certify:

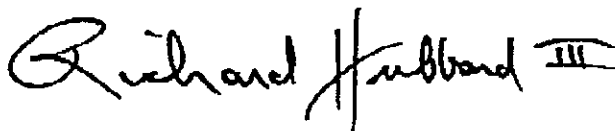
That Micro-Air is Master Builders air-entraining admixture for concrete; and

That no calcium chloride or chloride based ingredient is used in the manufacture of Micro-Air; and

That Micro-Air, based on the chlorides originating from all the ingredients used in its manufacture, contributes less than 0.0001 percent (1.0 ppm) chloride ions by weight of the cement when used at the rate of 65 ml per 100 kg (1 fluid ounce per 100 pounds) of cement; and

That Micro-Air meets the current requirements of ASTM C 260, Corps of Engineers CRD-C 13, and AASHTO M154, the Standard Specifications for Air-Entraining Admixtures for Concrete.

Richard Hubbard III

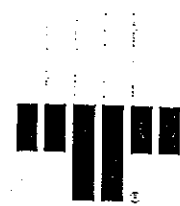


Technical Specialist, Technology Innovation & Sustainability Group



MICRO-AIR®

Admixture for entraining air in concrete



DESCRIPTION:

MICRO-AIR air-entraining admixture provides concrete with extra protection by creating ultrastable air bubbles that are strong, small and closely spaced—a characteristic especially useful in the types of concrete known for their difficulty to entrain and maintain the air content desired.

Even when used at a lower dosage rate than standard air-entraining admixtures, MICRO-AIR meets the requirements of ASTM C 260, AASHTO M 154, CRD-C 13 and other Federal and State specifications.

ADVANTAGES OF AIR ENTRAINMENT:

The entrainment of optimum air content in concrete results in the following improvements in concrete quality:

- Increased resistance to damage from freeze/thaw cycles and to scaling from deicing salts¹
- Reduced permeability—increased watertightness
- Reduced segregation and bleeding
- Improved plasticity and workability

¹Concrete durability research has established that the best protection for concrete from the adverse effects of freeze/thaw cycles and deicing salts results from: • proper air content in the hardened concrete; • a suitable air-void system in terms of bubble size and spacing; and • adequate concrete strength, assuming the use of sound aggregates and proper mixing, placing, handling and curing techniques.

When unusually low or high amounts of an air-entraining admixture are required to achieve normal ranges of air content or if the required amount of air-entraining admixture necessary to achieve required levels of air content is observed to change significantly under given conditions, the reason should be investigated. In such cases, it is especially important to determine: (a) that a proper amount of air is contained in the fresh concrete at the point of placement; and (b) that a suitable air-void system (spacing factor) is being obtained in the hardened concrete.

ADVANTAGES OF MICRO-AIR:

- Greatly improved stability of air-entrainment
- Improved air-void system in hardened concrete
- Improved ability to entrain and retain air in low-slump concrete; concrete containing high-carbon content fly ash; concrete containing large amounts of fine materials; concrete using high-alkali cements; high-temperature concrete; and concrete with extended mixing times

FEATURES/BENEFITS:

Ready to Use—Solution is the proper concentration for rapid, accurate dispensing.

Compatible for Use—MICRO-AIR admixture is compatible with concrete containing other admixtures—water-reducers, high-range water-reducers, accelerators, retarders, and water repellents.

The use of MICRO-AIR air-entraining admixture with Master Builders water-reducing, set-controlling admixtures forms a desirable combination for producing the highest quality, normal or lightweight concrete. Heavyweight concrete normally does not contain entrained air.

NOTE: As stated in ACI 212 and other publications, when two or more admixtures are used, they must be added to the mix separately (through dispensers or manually) and must not be mixed with each other prior to adding to the concrete mix.

For optimum, consistent performance, the air-entraining admixture should be dispensed on damp, fine aggregate or with the initial batch water. When using lightweight aggregate, field evaluations should be conducted to determine the best method to dispense the air-entraining admixture.

USAGE INFORMATION:

Add MICRO-AIR admixture to the concrete mix using a dispenser designed for air-entraining admixtures; or add manually using a suitable measuring device that ensures accuracy within plus or minus 3% of the required amount.

Measure the air content of the trial mix and either increase or decrease the quantity of MICRO-AIR admixture to obtain the desired air content in the production mix. Check the air content of the first batch and make further adjustments if needed. Due to possible changes in the factors that affect the dosage rate of MICRO-AIR, frequent checks should be made during the course of the work. Adjustments to the dosage should be based on the amount of entrained air in the mix at the point of placement.



QUANTITY TO USE:

There is no standard dosage rate for MICRO-AIR admixture. The exact quantity of air-entraining admixture needed for a given air content of concrete is not predictable because of differences in concrete making materials. Typical factors which might influence the amount of air entrained are: temperature, cement, sand grading, mix proportions, slump, means of conveying and placement, use of extra fine materials such as fly ash, etc.

The amount of MICRO-AIR admixture used will depend upon the amount of entrained air required under actual job conditions. In a trial mix, use 1/8 to 1-1/2 fl oz/100 lb (8 to 98 mL/100 kg) of cement. In mixes containing water-reducing, set-controlling admixtures, the amount of MICRO-AIR needed is somewhat less than the amount required in plain concrete. In mixes requiring a higher or lower dosage to obtain the desired air content, consult your local Master Builders representative.

AIR CONTENT DETERMINATION:

The total air content of normal weight concrete should be measured in strict accordance with ASTM C 231, "Standard Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method" or ASTM C 173, "Standard Test Method for Air Content of Freshly Mixed Concrete by the Volumetric Method." The air content of lightweight concrete should only be determined using the Volumetric Method.

The air content should be verified by calculating the gravimetric air content in accordance with ASTM C 138, "Unit Weight, Yield, and Air Content (Gravimetric) of Concrete." If the total air content, as measured by the Pressure Method or Volumetric Method and as verified by the Gravimetric Method, deviates by more than 1-1/2%, the cause should be determined and corrected through equipment calibration or by whatever process is deemed necessary.

TEMPERATURE PRECAUTION:

MICRO-AIR admixture should be stored and dispensed at 35 °F (2 °C) or higher. Although freezing does not harm this product, precautions should be taken to protect it from freezing. If it freezes, thaw and reconstitute by mild mechanical agitation. Do not use pressurized air for agitation.

PACKAGING:

MICRO-AIR admixture is supplied in 55 U.S. gallon (208 liter) drums and bulk delivery.

CAUTION:

MICRO-AIR admixture is a CAUSTIC solution. Chemical goggles and gloves are recommended if transferring or handling large quantities of material. (See MSDS and/or product label for complete information.)

NON-CHLORIDE, NON-CORROSIVE:

MICRO-AIR admixture will not initiate or promote corrosion of reinforcing steel embedded in concrete, prestressed concrete or concrete placed on galvanized steel floor and roof systems. Calcium chloride is not an added ingredient in the manufacture of MICRO-AIR admixture. Based on the chlorides originating from all ingredients used in manufacture, MICRO-AIR admixture contributes less than 0.0001% (1.0 ppm) chloride ions by weight of the cement when used at the rate of 1 fl oz per 100 lb (65 mL per 100 kg) of cement.

For suggested specification information or for additional product data on MICRO-AIR air-entraining admixture, contact your local Master Builders representative.

Master Builders, Inc.

United States
23700 Chagrin Boulevard
Cleveland, Ohio 44122-5554
(800) MBT-9990
Fax (216) 831-6910

Canada
3637 Weston Road
Toronto, Ontario M9L 1W1
(800) 387-5862
Fax (416) 741-7925

Mexico
Blvd. M. Avila Camacho 80, 3er Piso
53390 Naucalpan, México
011-525-557-5544
Fax 011-525-395-7903

degussa.

Construction Chemicals

January 10, 2006

Certificate of Conformance
PolyHeed 997
Degussa Admixtures

Master Builders, Inc.
New England Area
800-722-8899

TO WHOM IT MAY CONCERN:

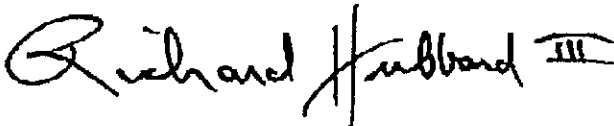
I, Richard Hubbard III, Technical Specialist for Degussa Admixtures, Inc., Cleveland, Ohio, certify:

That no calcium chloride or chloride based ingredient is used in the manufacture of PolyHeed 997; and

That PolyHeed 997, based on the chlorides originating from all the ingredients used in its manufacture, contributes less than 0.00012 percent (1.2 ppm) chloride ions by weight of the cement when used at the rate of 65 ml per 100 kg (1 fluid ounce per 100 pounds) of cement; and

That, depending on dosage, PolyHeed 997 meets the current requirements for a Type A, Water-Reducing, and Type F, High-Range Water-Reducing Admixture specified in ASTM C 494, Corps of Engineers' CRD-C 87, and AASHTO M194, the Standard Specifications for Chemical Admixtures for Concrete.

Richard Hubbard III



Technical Specialist, Technology Innovation & Sustainability Group





POLYHEED® 997

Superior pumping/finishing admixture

DESCRIPTION:

POLYHEED 997 multi-component, non-chloride, mid-range water-reducing admixture is formulated to produce:

1. True mid-range (5-18%) water reduction and excellent performance across a wide concrete slump range, especially the difficult slump range of 6-8 inches (150-200 mm);
2. Normal concrete setting time throughout the recommended dosage range;
3. Superior workability, pumpability and finishability qualities even in concrete mixes containing low amounts of cementitious materials;
4. Strength performance comparable to chloride-bearing, water-reducing admixtures at all ages;
5. Improved performance with a wide range of cements, fly ashes, silica fumes, granulated slags, and aggregates (including coarse and manufactured sands).

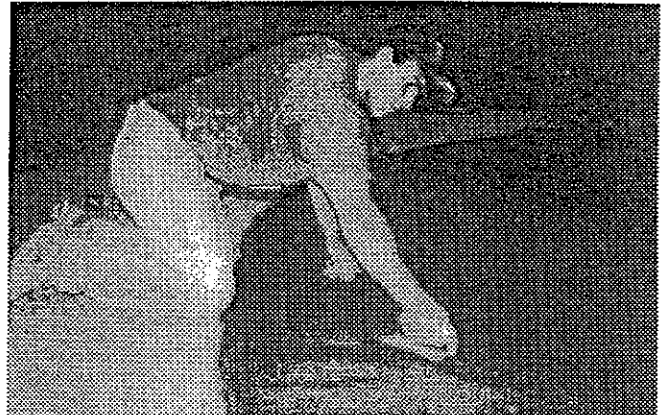
POLYHEED 997 admixture meets ASTM C 494 requirements for Type A, water-reducing admixtures, and Type F, water-reducing high-range admixtures, specifically:

- Reduced water content for a given slump
- Normal setting time characteristics
- Increased compressive and flexural strength performance at all ages
- Improved concrete durability to damage from freezing and thawing

ADVANTAGES:

POLYHEED 997 admixture facilitates the production of quality concrete through these special benefits:

- Superior workability and pumpability in various concrete applications
- Reduced segregation
- Superior finishing characteristics for residential/commercial flatwork and formed surfaces
- Consistent performance in low to high slump concrete mixtures, in particular, the mid-range slump of 6-8 inches (150-200 mm)
- Effective as a singular admixture or as a component in a Master Builders admixture system



PERFORMANCE CHARACTERISTICS:

MIX DATA

500 lb of Type I cement per cubic yard (295 kg/m³). Slump, 7 inches (180 mm), Non-air-entrained concrete; Concrete temperature 70 °F (21 °C), Ambient temperature, 70 °F (21 °C).

Setting Time Performance¹

Mix	Initial Set Hrs:Min	Difference Hrs. Min
Plain	4:46	—
POLYHEED 997 admixture		
5 fl oz/cwt (325 mL/100 kg)	4:32	-0:14
10 fl oz/cwt (650 mL/100 kg)	4:47	+0:01
15 fl oz/cwt (950 mL/100 kg)	5:14	+0:28

Compressive Strength Performance

Mix	7 Day			28 Day		
	PSI	MPa	%	PSI	MPa	%
Plain	3390	23.4	100	4230	29.2	100
POLYHEED 997 admixture						
5 fl oz/cwt (325 mL/100 kg)	4160	28.7	123	5620	38.7	132
10 fl oz/cwt (650 mL/100 kg)	4760	32.8	140	6070	41.8	143
15 fl oz/cwt (980 mL/100 kg)	4870	33.6	144	5970	41.2	141

'NOTE: The data shown is based on controlled laboratory tests. Reasonable variations from the results shown here may be experienced as a result of differences in concrete making materials and jobsite conditions.



WHERE TO USE:

POLYHEED 997 mid-range water-reducing admixture is recommended for use in all concrete where normal setting characteristics, and superior workability, pumpability and finishability qualities are desired.

POLYHEED 997 admixture is particularly useful in placing concrete in the mid-range slump of 6-8 inches (150-200 mm). Field data have consistently shown improved workability, pumpability and finishability versus conventional water-reducing admixtures.

This admixture improves conventionally placed concrete mixes containing a wide range of cements, granulated slags, Class C and F fly ashes, silica fumes, and aggregates. It improves reinforced, precast, prestressed, lightweight or normal weight concrete, and pumped concrete.

POLYHEED 997 admixture can be used with air-entraining admixtures approved under ASTM, AASHTO and CRD specifications when air-entrained concrete is specified or desired. Master Builders air-entraining admixtures are recommended for use with **POLYHEED 997** admixture when air-entrained concrete is specified or desired.

POLYHEED 997 admixture may be used in all colored and architectural concrete.

When used in conjunction with other admixtures, each admixture must be dispensed separately into the mix.

QUANTITY TO USE:

POLYHEED 997 mid-range water-reducing admixture has a recommended dosage range of 3-15 fl oz per 100 lb (195-975 mL per 100 kg) of cement for most concrete mixes.

As the dosage rate of **POLYHEED 997** admixture increases to 15 fl oz per 100 lb (975 mL per 100 kg) of cement, normal concrete setting time characteristics are maintained, and early and ultimate compressive strengths increase.

Master Builders does not recommend the use of dosage rates outside the recommended range without trial testing. Consult your local Master Builders sales representative for assistance in determining the dosage rate for optimum performance.

PACKAGING:

POLYHEED 997 is supplied in 55 U.S. gallon (208 liter) drums and by bulk delivery.

TEMPERATURE PRECAUTION:

If **POLYHEED 997** admixture freezes, thaw at 35 °F (2 °C) or above and completely reconstitute by mild mechanical agitation. **Do not use pressurized air for agitation.**

NON-CHLORIDE, NON CORROSIVE:

POLYHEED 997 admixture will not initiate or promote corrosion of reinforcing steel in concrete. This admixture does not contain intentionally added calcium chloride or chloride-based ingredients. The admixture, due to chlorides originating from all the ingredients used in its manufacture, contributes less than 0.00012% (1.2 ppm chloride ions) by weight of the cement when used at a dosage rate of 1 fl oz per 100 lb (65 mL per 100 kg) of cement.

For additional information on **POLYHEED 997** admixture or on its use in developing a concrete mixture with special performance characteristics, contact your local Master Builders representative.

Master Builders, Inc.

United States

23700 Chagrin Boulevard
Cleveland, Ohio 44122-5554
(800) MBT-9990
Fax (216) 831-6910

Canada

3637 Weston Road
Toronto, Ontario M9L 1W1
(800) 387-5862
Fax (416) 741-7925

Mexico

Blvd. M. Avila Camacho 80, 3er Piso
53390 Naucalpan, México
011-525-557-5544
Fax 011-525-395-7903



Concrete Construction Observation Report

Project Name: Pearl Place Housing Project No: 04-1212.2
 Client: AVESTA HOUSING Date: 12/13/06
 Placement Type: Footing Wall Column Slab Other
 Placement Location: Building # 2 - Foundation Wall on Oxford St.

PRE PLACEMENT OBSERVATIONS	In Compliance	N/O	Comments
Bar Size (diameter, length, bend and anchorage)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<input type="checkbox"/>	#4
Location (# of bars, spacing, and cover)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<input type="checkbox"/>	
Splicing (weld joint, overlap)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<input type="checkbox"/>	
Stability (wiring, chairs, and spacers)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<input type="checkbox"/>	
Reinforcement free from mud, oil, rust, or other nonmetallic coatings	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<input type="checkbox"/>	
Reinforcement appears in conformance to specifications	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<input type="checkbox"/>	
Soil subgrade prepared in accordance with project specifications	Yes <input type="checkbox"/> No <input type="checkbox"/>	<input checked="" type="checkbox"/>	

Referenced Drawings	Date	Page	Rev.	ASTM	GRADE
# 10023253 (RW4)	10/10/06	RD2	11/28/06	A 615 <input checked="" type="checkbox"/> A 616 <input type="checkbox"/> A 617 <input type="checkbox"/> A 706 <input type="checkbox"/>	40 <input type="checkbox"/> 50 <input type="checkbox"/> 60 <input checked="" type="checkbox"/> 75 <input type="checkbox"/> A 775 Epoxy <input type="checkbox"/>

CONCRETE PLACEMENT OBSERVATIONS	In Compliance	N/O	Comments
Required mix used	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<input type="checkbox"/>	3000 PSI
Placement and consolidation of concrete observed	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<input type="checkbox"/>	
Concrete properly conveyed to all areas of placement	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<input type="checkbox"/>	
Depth of layer maximum limits not exceeded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<input type="checkbox"/>	
Internal vibration (depth of insertion, spacing, time, vertical insertion, no conveyance of concrete by vibration)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<input type="checkbox"/>	
Even layering around openings and embedments	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<input type="checkbox"/>	
Removal of temporary ties and spacers	Yes <input type="checkbox"/> No <input type="checkbox"/>	<input checked="" type="checkbox"/>	

FIELD TESTING OF CONCRETE PERFORMED Yes No
 *CYLINDER SET NO: 708-3A-D ← refer to associated concrete test report

POST PLACEMENT OBSERVATIONS	In Compliance	N/O	Comments
Specified finish	Yes <input type="checkbox"/> No <input type="checkbox"/>	<input type="checkbox"/>	
Protection of surfaces from cracking due to rapid drying	Yes <input type="checkbox"/> No <input type="checkbox"/>	<input type="checkbox"/>	
Proper curing procedures implemented	Yes <input type="checkbox"/> No <input type="checkbox"/>	<input type="checkbox"/>	

NON-CONFORMANCE ITEMS OBSERVED Yes No
 Non-conformance item description:
 Action taken by SWCE:

N/O = Not Observed ATTACHMENTS Y N
 NOTES: 1st truck tested slumped at 4 1/2", Air tested at 4.9%

Concrete temperature was 63° ambient 48°. Vibrator used to consolidate concrete within walls. Anchor bolts were wet set while finish troweling took place.
 SWCE REPRESENTATIVE: [Signature] REVIEWED BY: [Signature]



Concrete Construction Observation Report

Project Name: Pearl Place Housing Project No: 04-1212.2m
 Client: Avesta Date: 12-15-06
 Placement Type: Footing Wall Column Slab Other
 Placement Location: Footings section adjacent to Pearl St Building #2

<u>PRE PLACEMENT OBSERVATIONS</u>	<u>In Compliance</u>		<u>N/O</u>	<u>Comments</u>
Bar Size (diameter, length, bend and anchorage)	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	<input type="checkbox"/>	
Location (# of bars, spacing, and cover)	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>Verts criss crossed</u>
Splicing (weld joint, overlap)	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	<input type="checkbox"/>	
Stability (wiring, chairs, and spacers)	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>bars pushing on forms</u>
Reinforcement free from mud, oil, rust, or other nonmetallic coatings	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	
Reinforcement appears in conformance to specifications	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	<input type="checkbox"/>	
Soil subgrade prepared in accordance with project specifications	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	

<u>Referenced Drawings</u>	<u>Date</u>	<u>Page</u>	<u>Rev.</u>	<u>ASTM</u>	<u>GRADE</u>
<u>10023253</u>	<u>11/28/06</u>	<u>ROL/ROIA</u>		A 615 <input checked="" type="checkbox"/>	40 <input type="checkbox"/> 50 <input type="checkbox"/> 60 <input checked="" type="checkbox"/>
				A 616 <input type="checkbox"/>	75 <input type="checkbox"/>
				A 617 <input type="checkbox"/>	
				A 706 <input type="checkbox"/>	A 775 Epoxy <input type="checkbox"/>

<u>CONCRETE PLACEMENT OBSERVATIONS</u>	<u>In Compliance</u>		<u>N/O</u>	<u>Comments</u>
Required mix used	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	<u>3000</u>
Placement and consolidation of concrete observed	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	
Concrete properly conveyed to all areas of placement	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	
Depth of layer maximum limits not exceeded	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	
Internal vibration (depth of insertion, spacing, time, vertical insertion, no conveyance of concrete by vibration)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	
Even layering around openings and embedments	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	
Removal of temporary ties and spacers	Yes <input type="checkbox"/>	No <input type="checkbox"/>	<input checked="" type="checkbox"/>	

FIELD TESTING OF CONCRETE PERFORMED Yes No
 *CYLINDER SET NO: 708-4A-D ←*refer to associated concrete test report

<u>POST PLACEMENT OBSERVATIONS</u>	<u>In Compliance</u>		<u>N/O</u>	<u>Comments</u>
Specified finish	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	
Protection of surfaces from cracking due to rapid drying	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	
Proper curing procedures implemented	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	

NON-CONFORMANCE ITEMS OBSERVED Yes No
 Non-conformance item description: Reinforcement not installed according to plan details.
 Action taken by SWCE: Notified Ledgerwood Inc.

N/O = Not Observed
 NOTES: Concrete within project specifications

ATTACHMENTS Y N
Pictures in file

SWCE REPRESENTATIVE: ISD REVIEWED BY: RLD



Concrete Construction Observation Report

Project Name: Pearl Place Housing Project No: 04-1212.2
 Client: Avesta Date: 12-20-06
 Placement Type: Footing Wall Column Slab Other
 Placement Location: Building #1 south footing + 20' East and West

PRE PLACEMENT OBSERVATIONS	In Compliance	N/O	Comments
Bar Size (diameter, length, bend and anchorage)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<input type="checkbox"/>	*Becker inspected ↓ SWCO
Location (# of bars, spacing, and cover)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<input type="checkbox"/>	
Splicing (weld joint, overlap)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<input type="checkbox"/>	
Stability (wiring, chairs, and spacers)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<input type="checkbox"/>	
Reinforcement free from mud, oil, rust, or other nonmetallic coatings	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<input type="checkbox"/>	
Reinforcement appears in conformance to specifications	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<input type="checkbox"/>	
Soil subgrade prepared in accordance with project specifications	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<input type="checkbox"/>	

Referenced Drawings	Date	Page	Rev.	ASTM	GRADE
# 10023253	12/7/06	RO2, RO2B		A 615 <input checked="" type="checkbox"/> A 616 <input type="checkbox"/> A 617 <input type="checkbox"/> A 706 <input type="checkbox"/>	40 <input type="checkbox"/> 50 <input type="checkbox"/> 60 <input checked="" type="checkbox"/> 75 <input type="checkbox"/> A 775 Epoxy <input type="checkbox"/>

CONCRETE PLACEMENT OBSERVATIONS	In Compliance	N/O	Comments
Required mix used	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<input type="checkbox"/>	3000
Placement and consolidation of concrete observed	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<input type="checkbox"/>	
Concrete properly conveyed to all areas of placement	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<input type="checkbox"/>	
Depth of layer maximum limits not exceeded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<input type="checkbox"/>	
Internal vibration (depth of insertion, spacing, time, vertical insertion, no conveyance of concrete by vibration)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<input type="checkbox"/>	
Even layering around openings and embedments	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<input type="checkbox"/>	
Removal of temporary ties and spacers	Yes <input type="checkbox"/> No <input type="checkbox"/>	<input checked="" type="checkbox"/>	

FIELD TESTING OF CONCRETE PERFORMED Yes No
 *CYLINDER SET NO: 708-SA-D ←*refer to associated concrete test report

POST PLACEMENT OBSERVATIONS	In Compliance	N/O	Comments
Specified finish	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<input type="checkbox"/>	Heat blankets
Protection of surfaces from cracking due to rapid drying	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<input type="checkbox"/>	
Proper curing procedures implemented	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<input type="checkbox"/>	

NON-CONFORMANCE ITEMS OBSERVED Yes No
 Non-conformance item description:
 Action taken by SWCE:

N/O = Not Observed ATTACHMENTS
 NOTES: Rebar inspected with Becker and Met their approval. Becker opted to add bars to the footing of retaining walls Shop drawings differed from structural plans Concrete tested was within project specifications

SWCE REPRESENTATIVE: PJD REVIEWED BY: RO2



Concrete Construction Observation Report

Project Name: Pearl Place Housing Project No: 04-1212.2
 Client: Avesta Date: 12/21/06
 Placement Type: Footing Wall Column Slab Other
 Placement Location: Building #2 +60 on West Footing

PRE PLACEMENT OBSERVATIONS

	In Compliance	N/O	Comments
Bar Size (diameter, length, bend and anchorage)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<input type="checkbox"/>	<u>Met Becker approval</u>
Location (# of bars, spacing, and cover)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<input type="checkbox"/>	
Splicing (weld joint, overlap)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<input type="checkbox"/>	
Stability (wiring, chairs, and spacers)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<input type="checkbox"/>	
Reinforcement free from mud, oil, rust, or other nonmetallic coatings	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<input type="checkbox"/>	
Reinforcement appears in conformance to specifications	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<input type="checkbox"/>	
Soil subgrade prepared in accordance with project specifications	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<input type="checkbox"/>	

Referenced Drawings	Date	Page	Rev.	ASTM	GRADE
<u>#10023253</u>	<u>11/20/06</u>	<u>RD10.10</u>		A 615 <input checked="" type="checkbox"/> A 616 <input type="checkbox"/> A 617 <input type="checkbox"/> A 706 <input type="checkbox"/>	40 <input type="checkbox"/> 50 <input type="checkbox"/> 60 <input checked="" type="checkbox"/> 75 <input type="checkbox"/> A 775 Epoxy <input type="checkbox"/>

CONCRETE PLACEMENT OBSERVATIONS

	In Compliance	N/O	Comments
Required mix used	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<input type="checkbox"/>	<u>3000</u>
Placement and consolidation of concrete observed	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<input type="checkbox"/>	
Concrete properly conveyed to all areas of placement	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<input type="checkbox"/>	
Depth of layer maximum limits not exceeded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<input type="checkbox"/>	
Internal vibration (depth of insertion, spacing, time, vertical insertion, no conveyance of concrete by vibration)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<input type="checkbox"/>	
Even layering around openings and embedments	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<input type="checkbox"/>	
Removal of temporary ties and spacers	Yes <input type="checkbox"/> No <input type="checkbox"/>	<input type="checkbox"/>	

FIELD TESTING OF CONCRETE PERFORMED

*CYLINDER SET NO: 768-4A-D ← refer to associated concrete test report

POST PLACEMENT OBSERVATIONS

	In Compliance	N/O	Comments
Specified finish	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<input type="checkbox"/>	
Protection of surfaces from cracking due to rapid drying	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<input type="checkbox"/>	<u>Thermal blankets</u>
Proper curing procedures implemented	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<input type="checkbox"/>	

NON-CONFORMANCE ITEMS OBSERVED

Non-conformance item description:
 Action taken by SWCE:

N/O = Not Observed ATTACHMENTS Y N

NOTES: Additional bars were added for the top mat of step footing @ building SW corner. Spacing and bar issues were addressed and changed prior to placing concrete. Concrete tested was within project specification.

SWCE REPRESENTATIVE: PTD REVIEWED BY: PTD



Concrete Construction Observation Report

Project Name: Pearl Place Housing **Project No:** 04-1212.2
Client: Avesta **Date:** 12-28-06
Placement Type: Footing Wall Column Slab Other
Placement Location: Building #2 Footing -East section. West wall +40' Building #2 South wall

<u>PRE PLACEMENT OBSERVATIONS</u>	<u>In Compliance</u>		<u>N/O</u>	<u>Comments</u>
Bar Size (diameter, length, bend and anchorage)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	Met Becker approval
Location (# of bars, spacing, and cover)	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	<input type="checkbox"/>	
Splicing (weld joint, overlap)	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	<input type="checkbox"/>	
Stability (wiring, chairs, and spacers)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	
Reinforcement free from mud, oil, rust, or other nonmetallic coatings	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	<input type="checkbox"/>	
Reinforcement appears in conformance to specifications	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	<input type="checkbox"/>	
Soil subgrade prepared in accordance with project specifications	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	

<u>Referenced Drawings</u>	<u>Date</u>	<u>Page</u>	<u>Rev.</u>	<u>ASTM</u>	<u>GRADE</u>
#10023253 building #2	10/10/06	R01&1A	11/28/6	A 615 <input checked="" type="checkbox"/>	40 <input type="checkbox"/> 50 <input type="checkbox"/> 60 <input checked="" type="checkbox"/>
#10023253 Building #1	12/7/06	R02A,B	12/7/06	A 616 <input type="checkbox"/> A 617 <input type="checkbox"/> A 706 <input type="checkbox"/>	75 <input type="checkbox"/> A 775 Epoxy <input type="checkbox"/>

<u>CONCRETE PLACEMENT OBSERVATIONS</u>	<u>In Compliance</u>		<u>N/O</u>	<u>Comments</u>
Required mix used	Yes <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Placement and consolidation of concrete observed	Yes <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Concrete properly conveyed to all areas of placement	Yes <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Depth of layer maximum limits not exceeded	Yes <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Internal vibration (depth of insertion, spacing, time, vertical insertion, no conveyance of concrete by vibration)	Yes <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Even layering around openings and embedments	Yes <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Removal of temporary ties and spacers	Yes <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

FIELD TESTING OF CONCRETE PERFORMED Yes No
***CYLINDER SET NO:** ←*refer to associated concrete test report

<u>POST PLACEMENT OBSERVATIONS</u>	<u>In Compliance</u>		<u>N/O</u>	<u>Comments</u>
Specified finish	Yes <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Protection of surfaces from cracking due to rapid drying	Yes <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Proper curing procedures implemented	Yes <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

NON-CONFORMANCE ITEMS OBSERVED Yes No

Non-conformance item description:
 Action taken by SWCE:

N/O = Not Observed
 NOTES: Prior to placement SWC representative met with Becker rep for rebar inspection of building #1 and #2. Becker was pleased with Morgan Concretes installation of reinforcement. Issue's addressed for building #1 were: Additional bars called for at foundation drains penetrating walls per typical detail (S2.1). Spacing of #4 bar for brick shelf at (RW 11). Becker made on site changes as rebar shop drawings differed from the structural.

ATTACHMENTS Y N

SWCE REPRESENTATIVE: PJO REVIEWED BY: RED



Concrete Construction Observation Report

Project Name: Pearl Place – Phase 1 **Project No:** 04-1212.2
Client: AVESTA Housing **Date:** 1/2/07
Placement Type: Footing Wall Column Slab Other
Placement Location: Building #2 – perimeter wall footing replacement adjacent to Oxford Street.

<u>PRE PLACEMENT OBSERVATIONS</u>	<u>In Compliance</u>		<u>N/O</u>	<u>Comments</u>
Bar Size (diameter, length, bend and	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	See Notes
Location (# of bars, spacing, and cover)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	
Splicing (weld joint, overlap)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	
Stability (wiring, chairs, and spacers)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	Concrete brick
Reinforcement free from mud, oil, rust, or	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	
Reinforcement appears in conformance to	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	
Soil subgrade prepared in accordance with	Yes <input type="checkbox"/>	No <input type="checkbox"/>	<input checked="" type="checkbox"/>	

<u>Referenced Drawings</u>	<u>Date</u>	<u>Page</u>	<u>Rev.</u>	<u>ASTM</u>	<u>GRADE</u>
Barker Steel	10/10/06	RO1, RO1 A-E	Eng Mark-up 11/28/06	A 615 <input checked="" type="checkbox"/> A 616 <input type="checkbox"/> A 617 <input type="checkbox"/> A 706 <input type="checkbox"/>	40 <input type="checkbox"/> 50 <input type="checkbox"/> 60 <input checked="" type="checkbox"/> 75 <input type="checkbox"/> A 775 Epoxy <input type="checkbox"/>
Becker Structural	9/22/06	SSK-12			

<u>CONCRETE PLACEMENT OBSERVATIONS</u>	<u>In Compliance</u>		<u>N/O</u>	<u>Comments</u>
Required mix used	Yes <input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3000 w/ Polyheed 997
Placement and consolidation of concrete observed	Yes <input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Concrete properly conveyed to all areas of placement	Yes <input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	tailgate
Depth of layer maximum limits not exceeded	Yes <input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Internal vibration (depth of insertion, spacing, time, vertical insertion, no conveyance of concrete by vibration)	Yes <input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Even layering around openings and embedments	Yes <input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Removal of temporary ties and spacers	Yes <input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

FIELD TESTING OF CONCRETE PERFORMED

Yes No
 *CYLINDER SET NO: 708-6 ←*refer to associated concrete test report

<u>POST PLACEMENT OBSERVATIONS</u>	<u>In Compliance</u>		<u>N/O</u>	<u>Comments</u>
Specified finish	Yes <input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	trowel
Protection of surfaces from cracking due to rapid drying	Yes <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
Proper curing procedures implemented	Yes <input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Insulation blanket

NON-CONFORMANCE ITEMS OBSERVED

Yes No
 Non-conformance item description: Missing horizontal & coverage issues
 Action taken by SWCE: Informed Ledgewood & resolved

N/O = Not Observed
 NOTES:

ATTACHMENTS Y N

SWCE REPRESENTATIVE: DAC

REVIEWED BY: RED



Concrete Construction Observation Report

Project Name: Pearl Place – Phase 1 **Project No:** 04-1212.2
Client: AVESTA Housing **Date:** 1/5/07
Placement Type: Footing Wall Column Slab Other
Placement Location: Building #2 – South wall – 68' E of SW corner to 40' W of SE corner.

<u>PRE PLACEMENT OBSERVATIONS</u>	<u>In Compliance</u>		<u>N/O</u>	<u>Comments</u>
Bar Size (diameter, length, bend and	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	See Notes
Location (# of bars, spacing, and cover)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	
Splicing (weld joint, overlap)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	
Stability (wiring, chairs, and spacers)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	Concrete brick
Reinforcement free from mud, oil, rust, or	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	
Reinforcement appears in conformance to	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	
Soil subgrade prepared in accordance with	Yes <input type="checkbox"/>	No <input type="checkbox"/>	<input checked="" type="checkbox"/>	

<u>Referenced Drawings</u>	<u>Date</u>	<u>Page</u>	<u>Rev.</u>	<u>ASTM</u>	<u>GRADE</u>
Barker Steel	10/18-06	RO1	Eng Mark-up 11/26/06	A 615 <input checked="" type="checkbox"/>	40 <input type="checkbox"/> 50 <input type="checkbox"/> 60 <input checked="" type="checkbox"/>
Barker Steel	10/16/06	RO1 A	Eng Mark-up 11/28/06	A 616 <input type="checkbox"/> A 617 <input type="checkbox"/> A 706 <input type="checkbox"/>	75 <input type="checkbox"/> A 775 Epoxy <input type="checkbox"/>

<u>CONCRETE PLACEMENT OBSERVATIONS</u>	<u>In Compliance</u>		<u>N/O</u>	<u>Comments</u>
Required mix used	Yes <input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3000 w/ Polyheed 997
Placement and consolidation of concrete observed	Yes <input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Concrete properly conveyed to all areas of placement	Yes <input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	tailgate
Depth of layer maximum limits not exceeded	Yes <input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Internal vibration (depth of insertion, spacing, time, vertical insertion, no conveyance of concrete by vibration)	Yes <input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Even layering around openings and embedments	Yes <input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Removal of temporary ties and spacers	Yes <input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

FIELD TESTING OF CONCRETE PERFORMED Yes No
***CYLINDER SET NO:** 708-9 ←*refer to associated concrete test report

<u>POST PLACEMENT OBSERVATIONS</u>	<u>In Compliance</u>		<u>N/O</u>	<u>Comments</u>
Specified finish	Yes <input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	trowel
Protection of surfaces from cracking due to rapid drying	Yes <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
Proper curing procedures implemented	Yes <input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Insulation blanket

NON-CONFORMANCE ITEMS OBSERVED Yes No
 Non-conformance item description: Some loose corner reinforcing bars
 Action taken by SWCE: Informed Ledgewood & resolved

N/O = Not Observed ATTACHMENTS Y N
 NOTES:

SWCE REPRESENTATIVE: DAC REVIEWED BY: RED



Concrete Construction Observation Report

Project Name: Pearl Place – Phase 1 **Project No:** 04-1212.2
Client: AVESTA Housing **Date:** 1/11/07
Placement Type: Footing Wall Column Slab Other
Placement Location: Building #1 Retaining Wall

<u>PRE PLACEMENT OBSERVATIONS</u>	<u>In Compliance</u>		<u>N/O</u>	<u>Comments</u>
Bar Size (diameter, length, bend and anchorage)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	See Notes
Location (# of bars, spacing, and cover)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	
Splicing (weld joint, overlap)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	
Stability (wiring, chairs, and spacers)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	
Reinforcement free from mud, oil, rust, or other nonmetallic coatings	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	
Reinforcement appears in conformance to specifications	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	
Soil subgrade prepared in accordance with project specifications	Yes <input type="checkbox"/>	No <input type="checkbox"/>	<input checked="" type="checkbox"/>	

<u>Referenced Drawings</u>	<u>Date</u>	<u>Page</u>	<u>Rev.</u>	<u>ASTM</u>	<u>GRADE</u>
#10023253	12/7/06	RO2AB		A 615 <input checked="" type="checkbox"/>	40 <input type="checkbox"/> 50 <input type="checkbox"/> 60 <input checked="" type="checkbox"/>
				A 616 <input type="checkbox"/>	75 <input type="checkbox"/>
				A 617 <input type="checkbox"/>	
				A 706 <input type="checkbox"/>	A 775 Epoxy <input type="checkbox"/>

<u>CONCRETE PLACEMENT OBSERVATIONS</u>	<u>In Compliance</u>		<u>N/O</u>	<u>Comments</u>
Required mix used	Yes <input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3000
Placement and consolidation of concrete observed	Yes <input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Concrete properly conveyed to all areas of placement	Yes <input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Depth of layer maximum limits not exceeded	Yes <input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Internal vibration (depth of insertion, spacing, time, vertical insertion, no conveyance of concrete by vibration)	Yes <input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Even layering around openings and embedments	Yes <input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Removal of temporary ties and spacers	Yes <input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

FIELD TESTING OF CONCRETE PERFORMED Yes No
 *CYLINDER SET NO: 708-10 thru 708-12 ←*refer to associated concrete test report

<u>POST PLACEMENT OBSERVATIONS</u>	<u>In Compliance</u>		<u>N/O</u>	<u>Comments</u>
Specified finish	Yes <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
Protection of surfaces from cracking due to rapid drying	Yes <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
Proper curing procedures implemented	Yes <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A

NON-CONFORMANCE ITEMS OBSERVED Yes No

Non-conformance item description:
 Action taken by SWCE:

N/O = Not Observed ATTACHMENTS Y N
 NOTES:

BSE inspected reinforcing and had additional #7 bars added. Concrete tested met project specifications. Slumped ranged from 5.25" - 7" w/MRWR, Air 6.8% - 7.2%, Conc. Temp. 55° - 58° F. 3 sets of cylinders were cast. Wall forms were heated prior and post placement.

SWCE REPRESENTATIVE: PJO

REVIEWED BY: RED



Concrete Construction Observation Report

Project Name: Pearl Place – Phase 1 **Project No:** 04-1212.2
Client: AVESTA Housing **Date:** 1/12/07
Placement Type: Footing Wall Column Slab Other
Placement Location: Building #2 – Retaining wall, elevator slab & west footing section at NW corner of building

<u>PRE PLACEMENT OBSERVATIONS</u>	<u>In Compliance</u>		<u>N/O</u>	<u>Comments</u>
Bar Size (diameter, length, bend and anchorage)	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	<input type="checkbox"/>	See Notes
Location (# of bars, spacing, and cover)	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	<input type="checkbox"/>	
Splicing (weld joint, overlap)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	
Stability (wiring, chairs, and spacers)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	
Reinforcement free from mud, oil, rust, or other nonmetallic coatings	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	
Reinforcement appears in conformance to specifications	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	<input type="checkbox"/>	
Soil subgrade prepared in accordance with project specifications	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	

<u>Referenced Drawings</u>	<u>Date</u>	<u>Page</u>	<u>Rev.</u>	<u>ASTM</u>	<u>GRADE</u>
#10023253 & SSK-25	12/7/06	RO2AB	1/3/07	A 615 <input checked="" type="checkbox"/>	40 <input type="checkbox"/> 50 <input type="checkbox"/> 60 <input checked="" type="checkbox"/>
				A 616 <input type="checkbox"/>	75 <input type="checkbox"/>
				A 617 <input type="checkbox"/>	
				A 706 <input type="checkbox"/>	A 775 Epoxy <input type="checkbox"/>

<u>CONCRETE PLACEMENT OBSERVATIONS</u>	<u>In Compliance</u>		<u>N/O</u>	<u>Comments</u>
Required mix used	Yes <input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3000 w/ Polyheed 997
Placement and consolidation of concrete observed	Yes <input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Concrete properly conveyed to all areas of placement	Yes <input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Depth of layer maximum limits not exceeded	Yes <input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Internal vibration (depth of insertion, spacing, time, vertical insertion, no conveyance of concrete by vibration)	Yes <input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Even layering around openings and embedments	Yes <input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Removal of temporary ties and spacers	Yes <input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

FIELD TESTING OF CONCRETE PERFORMED Yes No
***CYLINDER SET NO:** 708-13 ←*refer to associated concrete test report

<u>POST PLACEMENT OBSERVATIONS</u>	<u>In Compliance</u>		<u>N/O</u>	<u>Comments</u>
Specified finish	Yes <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
Protection of surfaces from cracking due to rapid drying	Yes <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
Proper curing procedures implemented	Yes <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A

NON-CONFORMANCE ITEMS OBSERVED Yes No

Non-conformance item description:
 Action taken by SWCE:

N/O = Not Observed ATTACHMENTS Y N
 NOTES:

BSE recommended postponement of today's placement for retaining wall due to an error found in approved shop drawings. SSK-25 requires additional reinforcement (#7 dowels) and a 10" wall. Foundation contractor drilled and epoxyed dowel bars, but will need to reset forms for 10" dimension. Concrete placed in elevator slab & footing met specification.

SWCE REPRESENTATIVE: PJO REVIEWED BY: RED



Concrete Construction Observation Report

Project Name: Pearl Place – Phase 1 **Project No:** 04-1212.2
Client: AVESTA Housing **Date:** 1/19/07
Placement Type: Footing Wall Column Slab Other
Placement Location: Building #1 – N, W, & E footings

<u>PRE PLACEMENT OBSERVATIONS</u>	<u>In Compliance</u>		<u>N/O</u>	<u>Comments</u>
Bar Size (diameter, length, bend and anchorage)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	Bar temp at ambient
Location (# of bars, spacing, and cover)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	
Splicing (weld joint, overlap)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	
Stability (wiring, chairs, and spacers)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	
Reinforcement free from mud, oil, rust, or other nonmetallic coatings	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	
Reinforcement appears in conformance to specifications	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	
Soil subgrade prepared in accordance with project specifications	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	Subgrade frost free

<u>Referenced Drawings</u>	<u>Date</u>	<u>Page</u>	<u>Rev.</u>	<u>ASTM</u>	<u>GRADE</u>
#1002353	10/26/06	RO2A		A 615 <input checked="" type="checkbox"/>	40 <input type="checkbox"/> 50 <input type="checkbox"/> 60 <input checked="" type="checkbox"/>
#1002353	10/26/06	RO2B		A 616 <input type="checkbox"/>	75 <input type="checkbox"/>
				A 617 <input type="checkbox"/>	
				A 706 <input type="checkbox"/>	A 775 Epoxy <input type="checkbox"/>

<u>CONCRETE PLACEMENT OBSERVATIONS</u>	<u>In Compliance</u>		<u>N/O</u>	<u>Comments</u>
Required mix used	Yes <input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3000 psi
Placement and consolidation of concrete observed	Yes <input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Concrete properly conveyed to all areas of placement	Yes <input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Depth of layer maximum limits not exceeded	Yes <input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Internal vibration (depth of insertion, spacing, time, vertical insertion, no conveyance of concrete by vibration)	Yes <input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Even layering around openings and embedments	Yes <input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Removal of temporary ties and spacers	Yes <input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

FIELD TESTING OF CONCRETE PERFORMED Yes No
***CYLINDER SET NO:** 708-15 ←*refer to associated concrete test report

<u>POST PLACEMENT OBSERVATIONS</u>	<u>In Compliance</u>		<u>N/O</u>	<u>Comments</u>
Specified finish	Yes <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
Protection of surfaces from cracking due to rapid drying	Yes <input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Proper curing procedures implemented	Yes <input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

NON-CONFORMANCE ITEMS OBSERVED Yes No

Non-conformance item description:
 Action taken by SWCE:

N/O = Not Observed ATTACHMENTS Y N
 NOTES:

A small section of the north footing in Building #1 was excavated on 1/18/07. A SWCE rep. was not on site to observe the excavation. Ledgewood indicated that clay was encountered at about 4.5' below the current. Subgrade fill beneath footings were frost free. Concrete tested fell within the project specifications.

SWCE REPRESENTATIVE: PJO REVIEWED BY: RED



Concrete Construction Observation Report

Project Name: Pearl Place – Phase 1 **Project No:** 04-1212.2
Client: AVESTA Housing **Date:** 1/24/07
Placement Type: Footing Wall Column Slab Other
Placement Location: Building #2- Elevator Pit walls, East wall section adjacent to Pearl St.

<u>PRE PLACEMENT OBSERVATIONS</u>	<u>In Compliance</u>		<u>N/O</u>	<u>Comments</u>
Bar Size (diameter, length, bend and anchorage)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	Inspected by BSE
Location (# of bars, spacing, and cover)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	
Splicing (weld joint, overlap)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	
Stability (wiring, chairs, and spacers)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	
Reinforcement free from mud, oil, rust, or other nonmetallic coatings	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	
Reinforcement appears in conformance to specifications	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	
Soil subgrade prepared in accordance with project specifications	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input checked="" type="checkbox"/>	

<u>Referenced Drawings</u>	<u>Date</u>	<u>Page</u>	<u>Rev.</u>	<u>ASTM</u>	<u>GRADE</u>
Barker Steel - Ftgs. & Walls Bldg. #2	10/16/06	RO1A	11/28/06	A 615 <input checked="" type="checkbox"/>	40 <input type="checkbox"/> 50 <input type="checkbox"/> 60 <input checked="" type="checkbox"/>
Barker Steel - Bending Details	10/10/06	RO1	11/28/06	A 616 <input type="checkbox"/> A 617 <input type="checkbox"/> A 706 <input type="checkbox"/>	75 <input type="checkbox"/> A 775 Epoxy <input type="checkbox"/>

<u>CONCRETE PLACEMENT OBSERVATIONS</u>	<u>In Compliance</u>		<u>N/O</u>	<u>Comments</u>
Required mix used	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	3000 psi
Placement and consolidation of concrete observed	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	
Concrete properly conveyed to all areas of placement	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	Pumped
Depth of layer maximum limits not exceeded	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	
Internal vibration (depth of insertion, spacing, time, vertical insertion, no conveyance of concrete by vibration)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	
Even layering around openings and embedments	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	
Removal of temporary ties and spacers	Yes <input type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	N/A

FIELD TESTING OF CONCRETE PERFORMED Yes No
 *CYLINDER SET NO: 708-16 ←*refer to associated concrete test report

<u>POST PLACEMENT OBSERVATIONS</u>	<u>In Compliance</u>		<u>N/O</u>	<u>Comments</u>
Specified finish	Yes <input type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	Trowled
Protection of surfaces from cracking due to rapid drying	Yes <input type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	
Proper curing procedures implemented	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	

NON-CONFORMANCE ITEMS OBSERVED Yes No

Non-conformance item description:
 Action taken by SWCE:

N/O = Not Observed

NOTES:

Pozzutec 20 (2%) added. Polyheed 997. Air content 7.8% on 2nd load (Ledgewood advised).
 Forms draped with heater hoses and insulation blankets before and after placement.

ATTACHMENTS Y N

SWCE REPRESENTATIVE: VLT

REVIEWED BY: RED



Concrete Construction Observation Report

Project Name: Pearl Place – Phase 1 **Project No:** 04-1212.2
Client: AVESTA Housing **Date:** 1/25/07
Placement Type: Footing Wall Column Slab Other
Placement Location: Building #1- Stub walls along north building line& wall section, between interior wall & NW corner of building

<u>PRE PLACEMENT OBSERVATIONS</u>	<u>In Compliance</u>		<u>N/O</u>	<u>Comments</u>
Bar Size (diameter, length, bend and anchorage)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	Inspected by BSE
Location (# of bars, spacing, and cover)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	
Splicing (weld joint, overlap)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	
Stability (wiring, chairs, and spacers)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	
Reinforcement free from mud, oil, rust, or other nonmetallic coatings	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	
Reinforcement appears in conformance to specifications	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	
Soil subgrade prepared in accordance with project specifications	Yes <input type="checkbox"/>	No <input type="checkbox"/>	<input checked="" type="checkbox"/>	

<u>Referenced Drawings</u>	<u>Date</u>	<u>Page</u>	<u>Rev.</u>	<u>ASTM</u>	<u>GRADE</u>
Barker Steel - Ftgs. & Walls Bldg. #1	10/16/06	RO2A	12/7/06	A 615 <input checked="" type="checkbox"/>	40 <input type="checkbox"/> 50 <input type="checkbox"/> 60 <input checked="" type="checkbox"/>
Barker Steel - Bending Details	10/10/06	RO2	12/7/06	A 616 <input type="checkbox"/> A 617 <input type="checkbox"/> A 706 <input type="checkbox"/>	75 <input type="checkbox"/> A 775 Epoxy <input type="checkbox"/>

<u>CONCRETE PLACEMENT OBSERVATIONS</u>	<u>In Compliance</u>		<u>N/O</u>	<u>Comments</u>
Required mix used	Yes <input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3000 psi
Placement and consolidation of concrete observed	Yes <input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Concrete properly conveyed to all areas of placement	Yes <input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Pumped
Depth of layer maximum limits not exceeded	Yes <input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Internal vibration (depth of insertion, spacing, time, vertical insertion, no conveyance of concrete by vibration)	Yes <input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Even layering around openings and embedments	Yes <input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Removal of temporary ties and spacers	Yes <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A

FIELD TESTING OF CONCRETE PERFORMED Yes No
***CYLINDER SET NO:** 708-17 ←*refer to associated concrete test report

<u>POST PLACEMENT OBSERVATIONS</u>	<u>In Compliance</u>		<u>N/O</u>	<u>Comments</u>
Specified finish	Yes <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Trowled
Protection of surfaces from cracking due to rapid drying	Yes <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Proper curing procedures implemented	Yes <input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

NON-CONFORMANCE ITEMS OBSERVED Yes No

Non-conformance item description:
 Action taken by SWCE:

N/O = Not Observed

NOTES:

Pozzutec 20 (2%) added. Polyheed 997.
 Forms draped with heater hoses and insulation blankets before and after placement.

ATTACHMENTS Y N

SWCE REPRESENTATIVE: VLT

REVIEWED BY: RED



Concrete Construction Observation Report

Project Name: Pearl Place – Phase 1 **Project No:** 04-1212.2
Client: AVESTA Housing **Date:** 2/1/07
Placement Type: Footing Wall Column Slab Other
Placement Location: West wall bldg #2, East and NE wall line bldg #1, Elevator pit, "L" footings and pier footings bldg #1

PRE PLACEMENT OBSERVATIONS

	<u>In Compliance</u>	<u>N/O</u>	<u>Comments</u>
Bar Size (diameter, length, bend and anchorage)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<input type="checkbox"/>	
Location (# of bars, spacing, and cover)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<input type="checkbox"/>	
Splicing (weld joint, overlap)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<input type="checkbox"/>	
Stability (wiring, chairs, and spacers)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<input type="checkbox"/>	
Reinforcement free from mud, oil, rust, or other nonmetallic coatings	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<input type="checkbox"/>	
Reinforcement appears in conformance to specifications	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<input type="checkbox"/>	
Soil subgrade prepared in accordance with project specifications	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<input type="checkbox"/>	

<u>Referenced Drawings</u>	<u>Date</u>	<u>Page</u>	<u>Rev.</u>	<u>ASTM</u>	<u>GRADE</u>
Barker Steel	10/26	RO2	12/7	A 615 <input checked="" type="checkbox"/>	40 <input type="checkbox"/> 50 <input type="checkbox"/> 60 <input checked="" type="checkbox"/>
Barker Steel	10/10	RO1	11/28	A 616 <input type="checkbox"/>	75 <input type="checkbox"/>
				A 617 <input type="checkbox"/>	
				A 706 <input type="checkbox"/>	A 775 Epoxy <input type="checkbox"/>

CONCRETE PLACEMENT OBSERVATIONS

	<u>In Compliance</u>	<u>N/O</u>	<u>Comments</u>
Required mix used	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<input type="checkbox"/>	3000 psi
Placement and consolidation of concrete observed	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<input type="checkbox"/>	
Concrete properly conveyed to all areas of placement	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<input type="checkbox"/>	
Depth of layer maximum limits not exceeded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<input type="checkbox"/>	
Internal vibration (depth of insertion, spacing, time, vertical insertion, no conveyance of concrete by vibration)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<input type="checkbox"/>	
Even layering around openings and embedments	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<input type="checkbox"/>	
Removal of temporary ties and spacers	Yes <input type="checkbox"/> No <input type="checkbox"/>	<input checked="" type="checkbox"/>	

FIELD TESTING OF CONCRETE PERFORMED

*CYLINDER SET NO: 708 18 & 19 Yes No
 ←*refer to associated concrete test report

POST PLACEMENT OBSERVATIONS

	<u>In Compliance</u>	<u>N/O</u>	<u>Comments</u>
Specified finish	Yes <input type="checkbox"/> No <input type="checkbox"/>	<input type="checkbox"/>	Trowled
Protection of surfaces from cracking due to rapid drying	Yes <input type="checkbox"/> No <input type="checkbox"/>	<input type="checkbox"/>	
Proper curing procedures implemented	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<input type="checkbox"/>	

NON-CONFORMANCE ITEMS OBSERVED

Yes No
 Non-conformance item description:
 Action taken by SWCE:

N/O = Not Observed

NOTES:

Pozzutec 20 (2%) added, Polyheed 997. Ice melted and water pumped from pier footings inside RTW. Same procedure for sump pit inside elevator pit. Forms draped w/ blankets after placement. Last 2 yd's tailgated.

ATTACHMENTS Y N

SWCE REPRESENTATIVE: VLT

REVIEWED BY: RED



Concrete Construction Observation Report

Project Name: Pearl Place – Phase 1 **Project No:** 04-1212.2
Client: AVESTA Housing **Date:** 2/1/07
Placement Type: Footing Wall Column Slab Other
Placement Location: West wall bldg #2, East and NE wall line bldg #1, Elevator pit, "L" footings and pier footings bldg #1

<u>PRE PLACEMENT OBSERVATIONS</u>	<u>In Compliance</u>	<u>N/O</u>	<u>Comments</u>
Bar Size (diameter, length, bend and anchorage)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<input type="checkbox"/>	
Location (# of bars, spacing, and cover)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<input type="checkbox"/>	
Splicing (weld joint, overlap)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<input type="checkbox"/>	
Stability (wiring, chairs, and spacers)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<input type="checkbox"/>	
Reinforcement free from mud, oil, rust, or other nonmetallic coatings	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<input type="checkbox"/>	
Reinforcement appears in conformance to specifications	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<input type="checkbox"/>	
Soil subgrade prepared in accordance with project specifications	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<input type="checkbox"/>	

<u>Referenced Drawings</u>	<u>Date</u>	<u>Page</u>	<u>Rev.</u>	<u>ASTM</u>	<u>GRADE</u>
Barker Steel	10/26	RO2	12/7	A 615 <input checked="" type="checkbox"/>	40 <input type="checkbox"/> 50 <input type="checkbox"/> 60 <input checked="" type="checkbox"/>
Barker Steel	10/10	RO1	11/28	A 616 <input type="checkbox"/>	75 <input type="checkbox"/>
				A 617 <input type="checkbox"/>	
				A 706 <input type="checkbox"/>	A 775 Epoxy <input type="checkbox"/>

<u>CONCRETE PLACEMENT OBSERVATIONS</u>	<u>In Compliance</u>	<u>N/O</u>	<u>Comments</u>
Required mix used	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<input type="checkbox"/>	3000 psi
Placement and consolidation of concrete observed	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<input type="checkbox"/>	
Concrete properly conveyed to all areas of placement	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<input type="checkbox"/>	
Depth of layer maximum limits not exceeded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<input type="checkbox"/>	
Internal vibration (depth of insertion, spacing, time, vertical insertion, no conveyance of concrete by vibration)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<input type="checkbox"/>	
Even layering around openings and embedments	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<input type="checkbox"/>	
Removal of temporary ties and spacers	Yes <input type="checkbox"/> No <input type="checkbox"/>	<input checked="" type="checkbox"/>	

FIELD TESTING OF CONCRETE PERFORMED Yes No
***CYLINDER SET NO:** 708 18 & 19 ←*refer to associated concrete test report

<u>POST PLACEMENT OBSERVATIONS</u>	<u>In Compliance</u>	<u>N/O</u>	<u>Comments</u>
Specified finish	Yes <input type="checkbox"/> No <input type="checkbox"/>	<input type="checkbox"/>	Trowled
Protection of surfaces from cracking due to rapid drying	Yes <input type="checkbox"/> No <input type="checkbox"/>	<input type="checkbox"/>	
Proper curing procedures implemented	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<input type="checkbox"/>	

NON-CONFORMANCE ITEMS OBSERVED Yes No

Non-conformance item description:
 Action taken by SWCE:

N/O = Not Observed ATTACHMENTS Y N
 NOTES:

Pozzutec 20 (2%) added, Polyheed 997. Ice melted and water pumped from pier footings inside RTW. Same procedure for sump pit inside elevator pit. Forms draped w/ blankets after placement. Last 2 yd's tailgated.

SWCE REPRESENTATIVE: VLT

REVIEWED BY: RED



Concrete Construction Observation Report

Project Name: Pearl Place – Phase 1 **Project No:** 04-1212.2
Client: AVESTA Housing **Date:** 2-7-07
Placement Type: Footing Wall Column Slab Other
Placement Location: BLDG #2 retaining wall footing and NE wall section (Pearl St.)

<u>PRE PLACEMENT OBSERVATIONS</u>	<u>In Compliance</u>		<u>N/O</u>	<u>Comments</u>
Bar Size (diameter, length, bend and anchorage)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	
Location (# of bars, spacing, and cover)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	#7's dropped in footing
Splicing (weld joint, overlap)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	
Stability (wiring, chairs, and spacers)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	
Reinforcement free from mud, oil, rust, or other nonmetallic coatings	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	
Reinforcement appears in conformance to specifications	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	
Soil subgrade prepared in accordance with project specifications	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	Ice chunks burned off

<u>Referenced Drawings</u>	<u>Date</u>	<u>Page</u>	<u>Rev.</u>	<u>ASTM</u>	<u>GRADE</u>
10023253		R02, A		A 615 <input checked="" type="checkbox"/>	40 <input type="checkbox"/> 50 <input type="checkbox"/> 60 <input checked="" type="checkbox"/>
				A 616 <input type="checkbox"/>	75 <input type="checkbox"/>
				A 617 <input type="checkbox"/>	
				A 706 <input type="checkbox"/>	A 775 Epoxy <input type="checkbox"/>

<u>CONCRETE PLACEMENT OBSERVATIONS</u>	<u>In Compliance</u>		<u>N/O</u>	<u>Comments</u>
Required mix used	Yes <input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3000 PSI
Placement and consolidation of concrete observed	Yes <input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Concrete properly conveyed to all areas of placement	Yes <input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Depth of layer maximum limits not exceeded	Yes <input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Internal vibration (depth of insertion, spacing, time, vertical insertion, no conveyance of concrete by vibration)	Yes <input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Even layering around openings and embedments	Yes <input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Removal of temporary ties and spacers	Yes <input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

FIELD TESTING OF CONCRETE PERFORMED Yes No
***CYLINDER SET NO:** 798-21 A-D ←*refer to associated concrete test report

<u>POST PLACEMENT OBSERVATIONS</u>	<u>In Compliance</u>		<u>N/O</u>	<u>Comments</u>
Specified finish	Yes <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Protection of surfaces from cracking due to rapid drying	Yes <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Proper curing procedures implemented	Yes <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

NON-CONFORMANCE ITEMS OBSERVED Yes No

Non-conformance item description: Retaining wall footing reinforcement needed to be further developed within the footing.
 Action taken by SWCE: Notified Ledgewood, Becker and Mcquin concrete.

N/O = Not Observed ATTACHMENTS Y N
 NOTES:

Reinforcement was added along the west end of bldg #1 retaining wall as dowels were drilled into the existing step footing connecting the two areas. Further reinforcement will be added in the "horse shoe" area as walls are erected. Retaining wall subgrade consisting of crushed stone was heated over night and remaining ice chunks were burned off with a torch prior to placement of concrete. Concrete tested fell within project specifications, one set of cylinders were cast.

SWCE REPRESENTATIVE: PJO

REVIEWED BY: RED



Concrete Construction Observation Report

Project Name: Pearl Place – Phase 1 **Project No:** 04-1212.2
Client: AVESTA Housing **Date:** 2-7-07
Placement Type: Footing Wall Column Slab Other
Placement Location: BLDG #1 "L" frost walls, piers N of retaining wall and NE frost walls.

<u>PRE PLACEMENT OBSERVATIONS</u>	<u>In Compliance</u>		<u>N/O</u>	<u>Comments</u>
Bar Size (diameter, length, bend and anchorage)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	
Location (# of bars, spacing, and cover)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	
Splicing (weld joint, overlap)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	
Stability (wiring, chairs, and spacers)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	
Reinforcement free from mud, oil, rust, or other nonmetallic coatings	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	
Reinforcement appears in conformance to specifications	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	
Soil subgrade prepared in accordance with project specifications	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	

<u>Referenced Drawings</u>	<u>Date</u>	<u>Page</u>	<u>Rev.</u>	<u>ASTM</u>	<u>GRADE</u>
10023253	12-7-06	Ro1B		A 615 <input checked="" type="checkbox"/>	40 <input type="checkbox"/> 50 <input type="checkbox"/> 60 <input checked="" type="checkbox"/>
				A 616 <input type="checkbox"/>	75 <input type="checkbox"/>
				A 617 <input type="checkbox"/>	
				A 706 <input type="checkbox"/>	A 775 Epoxy <input type="checkbox"/>

<u>CONCRETE PLACEMENT OBSERVATIONS</u>	<u>In Compliance</u>		<u>N/O</u>	<u>Comments</u>
Required mix used	Yes <input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3000 PSI
Placement and consolidation of concrete observed	Yes <input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Concrete properly conveyed to all areas of placement	Yes <input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Depth of layer maximum limits not exceeded	Yes <input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Internal vibration (depth of insertion, spacing, time, vertical insertion, no conveyance of concrete by vibration)	Yes <input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Even layering around openings and embedments	Yes <input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Removal of temporary ties and spacers	Yes <input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

FIELD TESTING OF CONCRETE PERFORMED Yes No
 *CYLINDER SET NO: 708-20 A-D ←*refer to associated concrete test report

<u>POST PLACEMENT OBSERVATIONS</u>	<u>In Compliance</u>		<u>N/O</u>	<u>Comments</u>
Specified finish	Yes <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Protection of surfaces from cracking due to rapid drying	Yes <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Proper curing procedures implemented	Yes <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

NON-CONFORMANCE ITEMS OBSERVED Yes No

Non-conformance item description:
 Action taken by SWCE:

N/O = Not Observed ATTACHMENTS Y N
 NOTES:

Heat was supplied overnight within the formwork melting any ice that had built up on footings. At the time concrete was placed reinforcement was consistent with ambient temperatures which ranged from 6-18 degrees. Concrete tested fell within project specifications, one set of cylinders were cast during today's placement. Heat blankets and hoses were draped over newly placed concrete.

SWCE REPRESENTATIVE: PJO

REVIEWED BY: RED



Concrete Construction Observation Report

Project Name: Pearl Place – Phase 1 **Project No:** 04-1212.2
Client: AVESTA Housing **Date:** 3/12/07
Placement Type: Footing Wall Column Slab Other
Placement Location: Footing North Wall Bldg #2, Grade beams inside South Wall bldg #2

PRE PLACEMENT OBSERVATIONS

	<u>In Compliance</u>	<u>N/O</u>	<u>Comments</u>
Bar Size (diameter, length, bend and anchorage)	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<input type="checkbox"/>	Dowels wrong length
Location (# of bars, spacing, and cover)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<input type="checkbox"/>	Inspected by Becker
Splicing (weld joint, overlap)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<input type="checkbox"/>	
Stability (wiring, chairs, and spacers)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<input type="checkbox"/>	
Reinforcement free from mud, oil, rust, or other nonmetallic coatings	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<input type="checkbox"/>	
Reinforcement appears in conformance to specifications	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<input type="checkbox"/>	
Soil subgrade prepared in accordance with project specifications	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<input type="checkbox"/>	

<u>Referenced Drawings</u>	<u>Date</u>	<u>Page</u>	<u>Rev.</u>	<u>ASTM</u>	<u>GRADE</u>
Barker Steel	10/26	RO2	12/7	A 615 <input checked="" type="checkbox"/>	40 <input type="checkbox"/> 50 <input type="checkbox"/> 60 <input checked="" type="checkbox"/>
				A 616 <input type="checkbox"/>	75 <input type="checkbox"/>
				A 617 <input type="checkbox"/>	
				A 706 <input type="checkbox"/>	A 775 Epoxy <input type="checkbox"/>

CONCRETE PLACEMENT OBSERVATIONS

	<u>In Compliance</u>	<u>N/O</u>	<u>Comments</u>
Required mix used	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<input type="checkbox"/>	3000 psi
Placement and consolidation of concrete observed	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<input type="checkbox"/>	Not present for 1 st load
Concrete properly conveyed to all areas of placement	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<input type="checkbox"/>	Tailgated
Depth of layer maximum limits not exceeded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<input type="checkbox"/>	
Internal vibration (depth of insertion, spacing, time, vertical insertion, no conveyance of concrete by vibration)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<input type="checkbox"/>	
Even layering around openings and embedments	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<input type="checkbox"/>	
Removal of temporary ties and spacers	Yes <input type="checkbox"/> No <input type="checkbox"/>	<input checked="" type="checkbox"/>	

FIELD TESTING OF CONCRETE PERFORMED

*CYLINDER SET NO: 708-24

Yes No

←*refer to associated concrete test report

POST PLACEMENT OBSERVATIONS

	<u>In Compliance</u>	<u>N/O</u>	<u>Comments</u>
Specified finish	Yes <input type="checkbox"/> No <input type="checkbox"/>	<input type="checkbox"/>	Trowel
Protection of surfaces from cracking due to rapid drying	Yes <input type="checkbox"/> No <input type="checkbox"/>	<input type="checkbox"/>	
Proper curing procedures implemented	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<input type="checkbox"/>	Thermal blankets

NON-CONFORMANCE ITEMS OBSERVED

Yes No

Non-conformance item description:

Action taken by SWCE:

N/O = Not Observed

NOTES:

ATTACHMENTS Y N

Ledgewood did not call to schedule placement. Ledgewood stated Becker inspected rebar and could show the report. Tech not present for 1st load. Tested 2nd load and made cylinders. Ledgewood stated dowels would be cut to correct length by MacQuinn Concrete.

SWCE REPRESENTATIVE: VLT

REVIEWED BY: RED



Concrete Construction Observation Report

Project Name: Pearl Place – Phase 1 **Project No:** 04-1212.2
Client: AVESTA Housing **Date:** 3/12/07
Placement Type: Footing Wall Column Slab Other
Placement Location: 2nd floor deck building #1

<u>PRE PLACEMENT OBSERVATIONS</u>	<u>In Compliance</u>		<u>N/O</u>	<u>Comments</u>
Bar Size (diameter, length, bend and anchorage)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	
Location (# of bars, spacing, and cover)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	Wire mesh
Splicing (weld joint, overlap)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	
Stability (wiring, chairs, and spacers)	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	<input type="checkbox"/>	No chairs used
Reinforcement free from mud, oil, rust, or other nonmetallic coatings	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	
Reinforcement appears in conformance to specifications	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	
Soil subgrade prepared in accordance with project specifications	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	

<u>Referenced Drawings</u>	<u>Date</u>	<u>Page</u>	<u>Rev.</u>	<u>ASTM</u>	<u>GRADE</u>
Barker Steel	10/26	RO2	12/7	A 615 <input checked="" type="checkbox"/>	40 <input type="checkbox"/> 50 <input type="checkbox"/> 60 <input checked="" type="checkbox"/>
				A 616 <input type="checkbox"/>	75 <input type="checkbox"/>
				A 617 <input type="checkbox"/>	
				A 706 <input type="checkbox"/>	A 775 Epoxy <input type="checkbox"/>

<u>CONCRETE PLACEMENT OBSERVATIONS</u>	<u>In Compliance</u>		<u>N/O</u>	<u>Comments</u>
Required mix used	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	3000 psi
Placement and consolidation of concrete observed	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	No air
Concrete properly conveyed to all areas of placement	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	Pumped
Depth of layer maximum limits not exceeded	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	
Internal vibration (depth of insertion, spacing, time, vertical insertion, no conveyance of concrete by vibration)	Yes <input type="checkbox"/>	No <input type="checkbox"/>	<input checked="" type="checkbox"/>	
Even layering around openings and embedments	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	
Removal of temporary ties and spacers	Yes <input type="checkbox"/>	No <input type="checkbox"/>	<input checked="" type="checkbox"/>	

FIELD TESTING OF CONCRETE PERFORMED Yes No
***CYLINDER SET NO:** 708-23 ←*refer to associated concrete test report

<u>POST PLACEMENT OBSERVATIONS</u>	<u>In Compliance</u>		<u>N/O</u>	<u>Comments</u>
Specified finish	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	Trowel and screed
Protection of surfaces from cracking due to rapid drying	Yes <input type="checkbox"/>	No <input type="checkbox"/>	<input checked="" type="checkbox"/>	
Proper curing procedures implemented	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	Thermal blankets

NON-CONFORMANCE ITEMS OBSERVED Yes No

Non-conformance item description:
 Action taken by SWCE:

N/O = Not Observed ATTACHMENTS Y N
 NOTES:

No Midrange in load 1 and 2. Slumps stayed consistent 5 ½ to 6". Midrange ordered and in loads 3 & 4. Wire mesh touching walls in areas. Advised Ledgewood and Concrete Craftsmen rep. Thermal blankets used to cover slab.

SWCE REPRESENTATIVE: VLT

REVIEWED BY: RED



Concrete Construction Observation Report

Project Name: Pearl Place – Phase 1 **Project No:** 04-1212.2
Client: AVESTA Housing **Date:** 3/15/07
Placement Type: Footing Wall Column Slab Other
Placement Location: North Wall Bldg #2, NW CNR Bldg #2 + 20'

<u>PRE PLACEMENT OBSERVATIONS</u>	<u>In Compliance</u>		<u>N/O</u>	<u>Comments</u>
Bar Size (diameter, length, bend and anchorage)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	Inspected by Becker
Location (# of bars, spacing, and cover)	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	<input type="checkbox"/>	Rebar touching form
Splicing (weld joint, overlap)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	
Stability (wiring, chairs, and spacers)	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	<input type="checkbox"/>	ties missing
Reinforcement free from mud, oil, rust, or other nonmetallic coatings	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	<input type="checkbox"/>	Water inside form
Reinforcement appears in conformance to specifications	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	See notes
Soil subgrade prepared in accordance with project specifications	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	

<u>Referenced Drawings</u>	<u>Date</u>	<u>Page</u>	<u>Rev.</u>	<u>ASTM</u>	<u>GRADE</u>
Barker Steel Co.	10/10/06	RO1		A 615 <input checked="" type="checkbox"/>	40 <input type="checkbox"/> 50 <input type="checkbox"/> 60 <input checked="" type="checkbox"/>
				A 616 <input type="checkbox"/>	75 <input type="checkbox"/>
				A 617 <input type="checkbox"/>	
				A 706 <input type="checkbox"/>	A 775 Epoxy <input type="checkbox"/>

<u>CONCRETE PLACEMENT OBSERVATIONS</u>	<u>In Compliance</u>		<u>N/O</u>	<u>Comments</u>
Required mix used	Yes <input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Placed in the rain
Placement and consolidation of concrete observed	Yes <input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Concrete properly conveyed to all areas of placement	Yes <input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Depth of layer maximum limits not exceeded	Yes <input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Internal vibration (depth of insertion, spacing, time, vertical insertion, no conveyance of concrete by vibration)	Yes <input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Even layering around openings and embedments	Yes <input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Removal of temporary ties and spacers	Yes <input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

FIELD TESTING OF CONCRETE PERFORMED Yes No
***CYLINDER SET NO:** 708-25 ←*refer to associated concrete test report

<u>POST PLACEMENT OBSERVATIONS</u>	<u>In Compliance</u>		<u>N/O</u>	<u>Comments</u>
Specified finish	Yes <input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Troweled
Protection of surfaces from cracking due to rapid drying	Yes <input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Proper curing procedures implemented	Yes <input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Thermal blankets

NON-CONFORMANCE ITEMS OBSERVED Yes No

Non-conformance item description: Ties and chairs missing from horizontal mat. outside face
 Action taken by SWCE: Advised Ledgewood who directed MacQuinn Concrete to added chairs and ties

N/O = Not Observed ATTACHMENTS Y N
 NOTES:

Advised Ledgewood of missing ties and chairs along outside face of north wall reinforcement. While pointing out missing ties and chairs to Ledgewood tech noticed 3rd horizontal bar down from top of wall touching form. MacQuinn used a 2x4 to pull rebar away from form. MacQuinn also used wagon wheels to create space between rows of rebar and forms. Ledgewood stated that Becker inspected rebar but Concrete contractor had not taken action as directed by Becker.

SWCE REPRESENTATIVE: VLT

REVIEWED BY: RED



Concrete Construction Observation Report

Project Name: Pearl Place – Phase 1 **Project No:** 04-1212.2
Client: AVESTA Housing **Date:** 3/23/07
Placement Type: Footing Wall Column Slab Other
Placement Location: 2nd Floor Deck Bldg #1

<u>PRE PLACEMENT OBSERVATIONS</u>	<u>In Compliance</u>		<u>N/O</u>	<u>Comments</u>
Bar Size (diameter, length, bend and anchorage)	Yes <input type="checkbox"/>	No <input type="checkbox"/>	<input checked="" type="checkbox"/>	
Location (# of bars, spacing, and cover)	Yes <input type="checkbox"/>	No <input type="checkbox"/>	<input checked="" type="checkbox"/>	
Splicing (weld joint, overlap)	Yes <input type="checkbox"/>	No <input type="checkbox"/>	<input checked="" type="checkbox"/>	
Stability (wiring, chairs, and spacers)	Yes <input type="checkbox"/>	No <input type="checkbox"/>	<input checked="" type="checkbox"/>	
Reinforcement free from mud, oil, rust, or other nonmetallic coatings	Yes <input type="checkbox"/>	No <input type="checkbox"/>	<input checked="" type="checkbox"/>	
Reinforcement appears in conformance to specifications	Yes <input type="checkbox"/>	No <input type="checkbox"/>	<input checked="" type="checkbox"/>	
Soil subgrade prepared in accordance with project specifications	Yes <input type="checkbox"/>	No <input type="checkbox"/>	<input checked="" type="checkbox"/>	

<u>Referenced Drawings</u>	<u>Date</u>	<u>Page</u>	<u>Rev.</u>	<u>ASTM</u>	<u>GRADE</u>
				A 615 <input type="checkbox"/>	40 <input type="checkbox"/> 50 <input type="checkbox"/> 60 <input type="checkbox"/>
				A 616 <input type="checkbox"/>	75 <input type="checkbox"/>
				A 617 <input type="checkbox"/>	
				A 706 <input type="checkbox"/>	A 775 Epoxy <input type="checkbox"/>

<u>CONCRETE PLACEMENT OBSERVATIONS</u>	<u>In Compliance</u>		<u>N/O</u>	<u>Comments</u>
Required mix used	Yes <input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Fibermesh in every load
Placement and consolidation of concrete observed	Yes <input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3000 psi
Concrete properly conveyed to all areas of placement	Yes <input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	No air
Depth of layer maximum limits not exceeded	Yes <input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Internal vibration (depth of insertion, spacing, time, vertical insertion, no conveyance of concrete by vibration)	Yes <input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Even layering around openings and embedments	Yes <input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Removal of temporary ties and spacers	Yes <input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

FIELD TESTING OF CONCRETE PERFORMED Yes No
 *CYLINDER SET NO: 708-26 & 27 ←*refer to associated concrete test report

<u>POST PLACEMENT OBSERVATIONS</u>	<u>In Compliance</u>		<u>N/O</u>	<u>Comments</u>
Specified finish	Yes <input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Screed and trowel
Protection of surfaces from cracking due to rapid drying	Yes <input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Proper curing procedures implemented	Yes <input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

NON-CONFORMANCE ITEMS OBSERVED Yes No

Non-conformance item description:
 Action taken by SWCE:

N/O = Not Observed ATTACHMENTS Y N
 NOTES:

No rebar. Fibermesh added to batch mix per Ledgewood. Insulation and vapor barrier under slab. Polyheed 997 and Pozzutec 20 2% were admixtures. Location: 2nd floor deck slab closest to Oxford Street. Slumps were consistent. Non air mix.

SWCE REPRESENTATIVE: VLT REVIEWED BY: RED



Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: PORTLAND - PEARL PLACE PHASE I DEVELOPMENT - MATERIALS TESTING

Project Number: 04-1212.2

Client: AVESTA HOUSING

Client Contract Number:

General Contractor:

Concrete Supplier: DRAGON PRODUCTS

PLACEMENT INFORMATION

Date Cast: 12/6/2006 **Time Cast:** 2:50

Date Received: 12/7/2006

Placement Location: FOOTINGS

Placement Method: TAILGATE

Placement Vol. (yd³): 8.5

Cylinders Made By: JCM

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) **Maximum (°F)**

DELIVERY INFORMATION

Admixtures: MID-RANGE

TEST RESULTS

Slump (in) (C-143): 5.75

Load Number: 1

Air Content (%) (C-231): 6.8

Mixer Number: 192

Air Temp (°F): 43

Ticket Number: A524478

Conc. Temp (°F) (C-1064): 62

Cubic Yards: 8.5

Design (psi): 3000

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In) ²	Date Of Test	Cure Type	Age (days)	Fracture Type	Load (kips)	Strength (psi)
708-1A		6.00	28.27	12/13/2006	Lab	7	4	69.5	2460
708-1B		6.00	28.27	1/3/2007	Lab	28	4	121.0	4280
708-1C		6.00	28.27	1/3/2007	Lab	28	4	108.0	3820
708-1D				Hold	Lab				

Fracture Types



Cone



Cone and Split



Cone and Shear



Shear



Columnar

Remarks:



Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: PORTLAND - PEARL PLACE PHASE I DEVELOPMENT - MATERIALS TESTING

Project Number: 04-1212.2

Client: AVESTA HOUSING

Client Contract Number:

General Contractor:

Concrete Supplier: DRAGON PRODUCTS

PLACEMENT INFORMATION

Date Cast: 12/13/2006 **Time Cast:** 11:00 **Date Received:** 12/14/2006

Placement Location: FOUNDATION WALL BUILDING #2; ADJACENT TO OXFORD ST.

Placement Method: TAILGATE

Placement Vol. (yd³): 18

Cylinders Made By: PJO

Aggregate Size (in): 3/4 STONE

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) **Maximum (°F)**

DELIVERY INFORMATION

Admixtures: POLYHEED 997

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 4.25

Load Number: 1

Air Content (%) (C-231): **Air WR:** 4.9

Mixer Number: 176

Air Temp (°F): 44

Ticket Number: 4524573

Conc. Temp (°F) (C-1064): 62

Cubic Yards: 10

Design (psi): 3000

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In) ²	Date Of Test	Cure Type	Age (days)	Fracture Type	Load (kips)	Strength (psi)
708-2A		6.00	28.27	12/20/2006	Lab	7	4	70.0	2480
708-2B		6.00	28.27	1/10/2007	Lab	28	4	104.0	3680
708-2C		6.00	28.27	1/10/2007	Lab	28	4	99.0	3500
708-2D				Hold	Lab				

Fracture Types



Cone



Cone and Split



Cone and Shear



Shear



Columnar

Remarks:



Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: PORTLAND - PEARL PLACE PHASE I DEVELOPMENT - MATERIALS TESTING
 Project Number: 04-1212.2
 Client: AVESTA HOUSING
 Client Contract Number:
 General Contractor:
 Concrete Supplier: DRAGON PRODUCTS

PLACEMENT INFORMATION

Date Cast: 12/15/2006 Time Cast: 10:30 Date Received: 12/16/2006
 Placement Location: FOOTING OF BUILDING #2 ADJACENT TO PEARL STREET
 Placement Method: TAILGATE
 Cylinders Made By: PJO
 Placement Vol. (yd³): 26.5
 Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) Maximum (°F)

DELIVERY INFORMATION

Admixtures: POLYHEED 997

TEST RESULTS

Slump (in) (C-143): Slump WR: 3.75 Load Number: 1
 Air Content (%) (C-231): Air WR: 5.3 Mixer Number: 183
 Air Temp (°F): 40 Ticket Number: 4524631
 Conc. Temp (°F) (C-1064): 58 Cubic Yards: 10
 Design (psi): 3000

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In) ²	Date Of Test	Cure Type	Age (days)	Fracture Type	Load (kips)	Strength (psi)
708-3A		6.00	28.27	12/22/2006	Lab	7	4	80.5	2850
708-3B		6.00	28.27	1/12/2007	Lab	28	4	124.0	4390
708-3C		6.00	28.27	1/12/2007	Lab	28	4	134.0	4740
708-3D				Hold	Lab				

Fracture Types



Cone



Cone and Split



Cone and Shear



Shear



Columnar

Remarks:



Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: PORTLAND - PEARL PLACE PHASE I DEVELOPMENT - MATERIALS TESTING

Project Number: 04-1212.2

Client: AVESTA HOUSING

Client Contract Number:

General Contractor:

Concrete Supplier: DRAGON PRODUCTS

PLACEMENT INFORMATION

Date Cast: 12/21/2006 **Time Cast:** 11:45
Placement Location: BUILDING #2 EAST FOOTING +60'

Date Received: 12/22/2006

Placement Method: PUMP
Cylinders Made By: PJO

Placement Vol. (yd³): 70
Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) **Maximum (°F)**

DELIVERY INFORMATION

Admixtures: POLYHEED 997 - POZZUTEC 20 2%

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 3.25
Air Content (%) (C-231): **Air WR:** 5.8
Air Temp (°F): 45
Conc. Temp (°F) (C-1064): 61

Load Number: 1
Mixer Number: 173
Ticket Number: 4524734
Cubic Yards: 10
Design (psi): 3000

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area (in) ²	Date Of Test	Cure Type	Age (days)	Fracture Type	Load (kips)	Strength (psi)
708-4A		6.00	28.27	12/28/2006	Lab	7	4	97.0	3430
708-4B		6.00	28.27	1/18/2007	Lab	28	4	135.5	4790
708-4C		6.00	28.27	1/18/2007	Lab	28	4	148.0	5240
708-4D				Hold	Lab				

Fracture Types



Cone



Cone and Split



Cone and Shear



Shear



Columnar

Remarks:



Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: PORTLAND - PEARL PLACE PHASE I DEVELOPMENT - MATERIALS TESTING

Project Number: 04-1212.2

Client: AVESTA HOUSING

Client Contract Number:

General Contractor:

Concrete Supplier: DRAGON PRODUCTS

PLACEMENT INFORMATION

Date Cast: 12/21/2006 Time Cast: 1:45 Date Received: 12/22/2006

Placement Location: BUILDING #1 SOUTH FOOTING & = 20' EAST & WEST

Placement Method: PUMP

Placement Vol. (yd³): 70

Cylinders Made By: PJO

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) Maximum (°F)

DELIVERY INFORMATION

Admixtures: POLYHEED 997 / POZZUTEC 20 2%

TEST RESULTS

Slump (in) (C-143):	Slump WR:	4	Load Number:	6
Air Content (%) (C-231):	Air WR:	6.3	Mixer Number:	170
Air Temp (°F):			Ticket Number:	4524734
Conc. Temp (°F) (C-1064):	63		Cubic Yards:	60
			Design (psi):	3000

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(in) ²	Date Of Test	Cure Type	Age (days)	Fracture Type	Load (kips)	Strength (psi)
708-5A		6.00	28.27	12/28/2006	Lab	7	4	91.0	3220
708-5B		6.00	28.27	1/18/2007	Lab	28	4	130.5	4620
708-5C		6.00	28.27	1/18/2007	Lab	28	4	123.0	4350
708-5D				Hold	Lab				

Fracture Types



Cone



Cone and Split



Cone and Shear



Shear



Columnar

Remarks:



Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: PORTLAND - PEARL PLACE PHASE I DEVELOPMENT - MATERIALS TESTING

Project Number: 04-1212.2

Client: AVESTA HOUSING

Client Contract Number:

General Contractor:

Concrete Supplier: DRAGON PRODUCTS

PLACEMENT INFORMATION

Date Cast: 12/29/2006 **Time Cast:** 12:00 **Date Received:** 12/30/2006
Placement Location: BUILDING 1 - OXFORD STREET WALL LINE FOOTING FOR RETAINING WALL BUILDING 1

Placement Method: PUMP

Placement Vol. (yd³): 80

Cylinders Made By: VLT

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) **Maximum (°F)**

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 6
Air Content (%) (C-231): **Air WR:** 6.8
Air Temp (°F): 25
Conc. Temp (°F) (C-1064): 58

DELIVERY INFORMATION

Admixtures: POLYHEED 997,
POZZUTEC 20 2%

Load Number: 2
Mixer Number: 156
Ticket Number: 4524820
Cubic Yards: 10
Design (psi): 3000

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area (in) ²	Date Of Test	Cure Type	Age (days)	Fracture Type	Load (kips)	Strength (psi)
708-6A		6.00	28.27	1/5/2007	Lab	7	4	89.5	3170
708-6B		6.00	28.27	1/26/2007	Lab	28	4	124.5	4400
708-6C		6.00	28.27	1/26/2007	Lab	28	4	123.0	4350
708-6D				Hold	Lab				

Fracture Types



Cone



Cone and Split



Cone and Shear



Shear



Columnar

Remarks:

Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: PORTLAND - PEARL PLACE PHASE I DEVELOPMENT - MATERIALS TESTING

Project Number: 04-1212.2

Client: AVESTA HOUSING

Client Contract Number:

General Contractor:

Concrete Supplier: DRAGON PRODUCTS

PLACEMENT INFORMATION

Date Cast: 12/29/2006 **Time Cast:** 2:15 **Date Received:** 12/30/2006
Placement Location: BUILDING 1 - OXFORD STREET WALL LINE FOOTING FOR RETAINING WALL BUILDING 1

Placement Method: PUMP

Cylinders Made By: VLT

Placement Vol. (yd³): 80

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) **Maximum (°F)**

DELIVERY INFORMATION

Admixtures: POLYHEED 997,
POZZUTEC 20 2%

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 6
Air Content (%) (C-231): **Air WR:** 6.5
Air Temp (°F): 25
Conc. Temp (°F) (C-1064): 57

Load Number: 6
Mixer Number: 173
Ticket Number: 4524827
Cubic Yards: 10
Design (psi): 3000

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In) ²	Date Of Test	Cure Type	Age (days)	Fracture Type	Load (kips)	Strength (psi)
708-7A		6.00	28.27	1/5/2007	Lab	7	4	88.0	3110
708-7B		6.00	28.27	1/26/2007	Lab	28	4	133.5	4720
708-7C		6.00	28.27	1/26/2007	Lab	28	4	131.0	4630
708-7D				Hold	Lab				

Fracture Types



Cone



Cone and Split



Cone and Shear



Shear



Columnar

Remarks:



Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: PORTLAND - PEARL PLACE PHASE I DEVELOPMENT - MATERIALS TESTING
Project Number: 04-1212.2
Client: AVESTA HOUSING
Client Contract Number:
General Contractor:
Concrete Supplier: DRAGON PRODUCTS

PLACEMENT INFORMATION

Date Cast: 1/2/2007 **Time Cast:** **Date Received:** 1/3/2007
Placement Location: BUILDING #2 FOOTING: SOUTH WALL BETWEEN 34'4" E OF SW CORNER TO 65'E AND NORTH WALL NW CORNER TO 38'E
Placement Method: TAILGATE **Placement Vol. (yd³):** 25
Cylinders Made By: DAC **Aggregate Size (in):** 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) **Maximum (°F)**

DELIVERY INFORMATION

Admixtures: 2% POZZUTEC 20, HOT H2O & POLYHEED 997

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 4.5 **Load Number:** 1
Air Content (%) (C-231): **Air WR:** 5.0 **Mixer Number:** 192
Air Temp (°F): 44 **Ticket Number:** 4524835
Conc. Temp (°F) (C-1064): 64 **Cubic Yards:** 10
Design (psi): 3000

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In) ²	Date Of Test	Cure Type	Age (days)	Fracture Type	Load (kips)	Strength (psi)
708-8A		6.00	28.27	1/9/2007	Lab	7	4	103.0	3640
708-8B		6.00	28.27	1/30/2007	Lab	28	4	151.0	5340
708-8C		6.00	28.27	1/30/2007	Lab	28	4	158.5	5610
708-8D				Hold	Lab				

Fracture Types



Cone



Cone and Split



Cone and Shear



Shear



Columnar

Remarks:



Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: PORTLAND - PEARL PLACE PHASE I DEVELOPMENT - MATERIALS TESTING **Project Number:** 04-1212.2
Client: AVESTA HOUSING **Client Contract Number:**
General Contractor: **Concrete Supplier:** DRAGON PRODUCTS

PLACEMENT INFORMATION

Date Cast: 1/5/2007 **Time Cast:** 11:15 **Date Received:** 1/6/2007
Placement Location: SOUTH WALL 68'E FROM SW CORNER TO 40'W OF SE CORNER
Placement Method: TAILGATE **Placement Vol. (yd³):** 10.5
Cylinders Made By: JCM **Aggregate Size (in):** 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) **Maximum (°F)**

DELIVERY INFORMATION

Admixtures: POLYHEED 997,
 POZZUTEC 20 2%

TEST RESULTS

Slump (in) (C-143): 6
Air Content (%) (C-231): 6.2
Air Temp (°F): 50
Conc. Temp (°F) (C-1064): 63

Load Number: 1
Mixer Number: 192
Ticket Number: 4524905
Cubic Yards: 10.5
Design (psi): 3000

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In) ²	Date Of Test	Cure Type	Age (days)	Fracture Type	Load (kips)	Strength (psi)
708-9A		6.00	28.27	1/12/2007	Lab	7	4	77.5	2740
708-9B		6.00	28.27	2/2/2007	Lab	28	4	111.0	3930
708-9C		6.00	28.27	2/2/2007	Lab	28	4	120.0	4250
708-9D				Hold	Lab				

Fracture Types



1
Cone



2
Cone and Split



3
Cone and Shear



4
Shear



5
Columnar

Remarks:



Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: PORTLAND - PEARL PLACE PHASE I DEVELOPMENT - MATERIALS TESTING

Project Number: 04-1212.2

Client: AVESTA HOUSING

Client Contract Number:

General Contractor:

Concrete Supplier: DRAGON PRODUCTS

PLACEMENT INFORMATION

Date Cast: 1/11/2007 **Time Cast:** 10:50

Date Received: 1/12/2007

Placement Location: BUILDING #1 - RETAINING WALL

Placement Method: PUMP

Placement Vol. (yd³): 120

Cylinders Made By: PJO

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) **Maximum (°F)**

DELIVERY INFORMATION

Admixtures: RHEOBUILD 1000;
POZZUTEC 20 2%

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 6

Load Number: 2

Air Content (%) (C-231): **Air WR:** 7.2

Mixer Number: 190

Air Temp (°F): 28

Ticket Number: 4524965

Conc. Temp (°F) (C-1064): 58

Cubic Yards: 10

Design (psi): 3000

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In ²)	Date Of Test	Cure Type	Age (days)	Fracture Type	Load (kips)	Strength (psi)
708-10A		6.00	28.27	1/18/2007	Lab	7	4	87.0	3080
708-10B		6.00	28.27	2/8/2007	Lab	28	4	106.0	3750
708-10C		6.00	28.27	2/8/2007	Lab	28	4	109.5	3870
708-10D				Hold	Lab				

Fracture Types



Cone



Cone and Split



Cone and Shear



Shear



Columnar

Remarks:



Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: PORTLAND - PEARL PLACE PHASE I DEVELOPMENT - MATERIALS TESTING

Project Number: 04-1212.2

Client: AVESTA HOUSING

Client Contract Number:

General Contractor:

Concrete Supplier: DRAGON PRODUCTS

PLACEMENT INFORMATION

Date Cast: 1/11/2007 **Time Cast:** 12:25

Date Received: 1/12/2007

Placement Location: BUILDING #1 - RETAINING WALL

Placement Method: PUMP

Placement Vol. (yd³): 120

Cylinders Made By: PJO

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) **Maximum (°F)**

DELIVERY INFORMATION

Admixtures: RHEOBUILD 1000;
POZZUTEC 20 2%

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 5.25
Air Content (%) (C-231): **Air WR:** 6.9
Air Temp (°F): 30
Conc. Temp (°F) (C-1064): 57

Load Number: 7
Mixer Number: 176
Ticket Number: 4524972
Cubic Yards: 10
Design (psi): 3000

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In) ²	Date Of Test	Cure Type	Age (days)	Fracture Type	Load (kips)	Strength (psi)
708-11A		6.00	28.27	1/18/2007	Lab	7	4	93.5	3310
708-11B		6.00	28.27	2/8/2007	Lab	28	4	122.0	4320
708-11C		6.00	28.27	2/8/2007	Lab	28	4	123.5	4370
708-11D				Hold	Lab				

Fracture Types



Cone



Cone and Split



Cone and Shear



Shear



Columnar

Remarks:



Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: PORTLAND - PEARL PLACE PHASE I DEVELOPMENT - MATERIALS TESTING

Project Number: 04-1212.2

Client: AVESTA HOUSING

Client Contract Number:

General Contractor:

Concrete Supplier: DRAGON PRODUCTS

PLACEMENT INFORMATION

Date Cast: 1/11/2007 **Time Cast:** 2:40

Date Received: 1/12/2007

Placement Location: BUILDING #1 - RETAINING WALL

Placement Method: PUMP

Placement Vol. (yd³): 120

Cylinders Made By: PJO

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) **Maximum (°F)**

DELIVERY INFORMATION

Admixtures: RHEOBUILD 1000;
POZZUTEC 20 2%

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 5.25
Air Content (%) (C-231): **Air WR:** 6.8
Air Temp (°F): 28
Conc. Temp (°F) (C-1064): 55

Load Number: 11
Mixer Number: 180
Ticket Number: 4524979
Cubic Yards: 10
Design (psi): 3000

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In) ²	Date Of Test	Cure Type	Age (days)	Fracture Type	Load (kips)	Strength (psi)
708-12A		6.00	28.27	1/18/2007	Lab	7	4	88.0	3110
708-12B		6.00	28.27	2/8/2007	Lab	28	4	125.0	4420
708-12C		6.00	28.27	2/8/2007	Lab	28	4	125.5	4440
708-12D				Hold	Lab				

Fracture Types



Cone



Cone and Split



Cone and Shear



Shear



Columnar

Remarks:



Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: PORTLAND - PEARL PLACE PHASE I DEVELOPMENT - MATERIALS TESTING

Project Number: 04-1212.2

Client: AVESTA HOUSING

Client Contract Number:

General Contractor:

Concrete Supplier: DRAGON PRODUCTS

PLACEMENT INFORMATION

Date Cast: 1/12/2007 **Time Cast:** 9:50 **Date Received:** 1/15/2007
Placement Location: BUILDING #2 - ELEVATOR PIT AND ADJACENT FOOTING UNTIL NW CORNER OF BUILDING
Placement Method: TAILGATE/PUMP **Placement Vol. (yd³):** 18
Cylinders Made By: PJO **Aggregate Size (in):** 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) **Maximum (°F)**

DELIVERY INFORMATION

Admixtures: POLYHEED 997;
POZZUTEC 20 2%

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 4 **Load Number:** 1
Air Content (%) (C-231): **Air WR:** 6.7 **Mixer Number:** 192
Air Temp (°F): 38 **Ticket Number:** 4524988
Conc. Temp (°F) (C-1064): 52 **Cubic Yards:** 10
Design (psi): 3000

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	Age (days)	Fracture Type	Load (kips)	Strength (psi)
708-13A		6.00	28.27	1/19/2007	Lab	7	4	82.5	2920
708-13B		6.00	28.27	2/9/2007	Lab	28	4	129.0	4560
708-13C		6.00	28.27	2/9/2007	Lab	28	4	125.0	4420
708-13D				Hold	Lab				

Fracture Types



Cone



Cone and Split



Cone and Shear



Shear



Columnar

Remarks:



Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: PORTLAND - PEARL PLACE PHASE I DEVELOPMENT - MATERIALS TESTING
Project Number: 04-1212.2
Client: AVESTA HOUSING
Client Contract Number:
General Contractor:
Concrete Supplier: DRAGON PRODUCTS

PLACEMENT INFORMATION

Date Cast: 1/16/2007 **Time Cast:** 11:00 **Date Received:** 1/17/2007
Placement Location: BUILDING #2 - WALL SECTION + 20' FROM SW CORNER OF BUILDING AND RETAINING WALL (HORSESHOE)
Placement Method: PUMP **Placement Vol. (yd³):** 30
Cylinders Made By: PJO **Aggregate Size (in):** 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) **Maximum (°F)**

DELIVERY INFORMATION

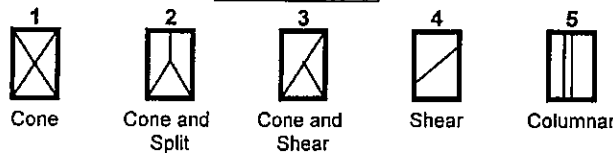
Admixtures: POLYHEED 997
 POZZUTEC 20 2%

TEST RESULTS

Slump (in) (C-143):	Slump WR: 6	Load Number: 1
Air Content (%) (C-231):	Air WR: 7.1	Mixer Number: 181
Air Temp (°F): 22		Ticket Number: 4525010
Conc. Temp (°F) (C-1064): 50		Cubic Yards: 10
		Design (psi): 3000

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In) ²	Date Of Test	Cure Type	Age (days)	Fracture Type	Load (kips)	Strength (psi)
708-14A		6.00	28.27	1/23/2007	Lab	7	4	72.0	2550
708-14B		6.00	28.27	2/13/2007	Lab	28	4	107.5	3800
708-14C		6.00	28.27	2/13/2007	Lab	28	4	104.5	3700
708-14D				Hold	Lab				

Fracture Types



Remarks:



Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: PORTLAND - PEARL PLACE PHASE I DEVELOPMENT - MATERIALS TESTING **Project Number:** 04-1212.2
Client: AVESTA HOUSING **Client Contract Number:**
General Contractor: **Concrete Supplier:** DRAGON PRODUCTS

PLACEMENT INFORMATION

Date Cast: 1/19/2007 **Time Cast:** 1:00 **Date Received:** 1/20/2007
Placement Location: BUILDING #1 N,W,E FOOTINGS

Placement Method: PUMP **Placement Vol. (yd³):** 30
Cylinders Made By: PJO **Aggregate Size (in):** 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) **Maximum (°F)**

DELIVERY INFORMATION

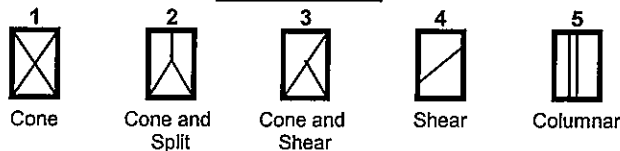
Admixtures: POLYHEED 997
 POZZUTEC 2%

TEST RESULTS

Slump (in) (C-143):	Slump WR: 3.75	Load Number: 1
Air Content (%) (C-231):	Air WR: 6.3	Mixer Number: 180
Air Temp (°F): 31		Ticket Number: 4525067
Conc. Temp (°F) (C-1064): 61		Cubic Yards: 10
		Design (psi): 3000

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area (In)²	Date Of Test	Cure Type	Age (days)	Fracture Type	Load (kips)	Strength (psi)
708-15A		6.00	28.27	1/26/2007	Lab	7	4	89.0	3150
708-15B		6.00	28.27	2/16/2007	Lab	28	4	121.0	4280
708-15C		6.00	28.27	2/16/2007	Lab	28	4	119.0	4210
708-15D				Hold	Lab				

Fracture Types



Remarks:



Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: PORTLAND - PEARL PLACE PHASE I DEVELOPMENT - MATERIALS TESTING **Project Number:** 04-1212.2

Client: AVESTA HOUSING **Client Contract Number:**

General Contractor:

Concrete Supplier: DRAGON PRODUCTS

PLACEMENT INFORMATION

Date Cast: 1/24/2007 **Time Cast:** 11:30 **Date Received:** 1/25/2007

Placement Location: ELEVATOR PIT, WALLS RW 10, 9, 8, W30 BUILDING #2

Placement Method: PUMP

Placement Vol. (yd³): 30

Cylinders Made By: VLT

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) **Maximum (°F)**

DELIVERY INFORMATION

Admixtures: POZZUTEC 20 2%, POLYHEED 997

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 6.25

Load Number: 2

Air Content (%) (C-231): **Air WR:** 7.8

Mixer Number: 190

Air Temp (°F): 38

Ticket Number: 4525093

Conc. Temp (°F) (C-1064): 56

Cubic Yards: 10

Design (psi): 3000

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In) ²	Date Of Test	Cure Type	Age (days)	Fracture Type	Load (kips)	Strength (psi)
708-16A		6.00	28.27	1/31/2007	Lab	7	4	67.5	2390
708-16B		6.00	28.27	2/21/2007	Lab	28	4	95.0	3360
708-16C		6.00	28.27	2/21/2007	Lab	28	4	100.5	3560
708-16D				Hold	Lab				

Fracture Types



Cone



Cone and Split



Cone and Shear



Shear



Columnar

Remarks:



Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: PORTLAND - PEARL PLACE PHASE I DEVELOPMENT - MATERIALS TESTING

Project Number: 04-1212.2

Client: AVESTA HOUSING

Client Contract Number:

General Contractor:

Concrete Supplier: DRAGON PRODUCTS

PLACEMENT INFORMATION

Date Cast: 1/25/2007 **Time Cast:** 1:30 **Date Received:** 1/26/2007

Placement Location: WALLS OUTSIDE LINE 7, LINE 7,6,5,4,B,D,E,F

Placement Method: PUMP

Placement Vol. (yd³): 30

Cylinders Made By: VLT

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) **Maximum (°F)**

DELIVERY INFORMATION

Admixtures: POZZUTEC 20 2%,
POLYHEED 997

TEST RESULTS

Slump (in) (C-143):	Slump WR:	4.5	Load Number:	2
Air Content (%) (C-231):	Air WR:	6.5	Mixer Number:	170
Air Temp (°F):	22		Ticket Number:	4525107
Conc. Temp (°F) (C-1064):	52		Cubic Yards:	10
			Design (psi):	3000

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In) ²	Date Of Test	Cure Type	Age (days)	Fracture Type	Load (kips)	Strength (psi)
708-17A		6.00	28.27	2/1/2007	Lab	7	4	106.5	3770
708-17B		6.00	28.27	2/22/2007	Lab	28	4	126.0	4460
708-17C		6.00	28.27	2/22/2007	Lab	28	4	130.5	4620
708-17D				Hold	Lab				

Fracture Types



Cone



Cone and Split



Cone and Shear



Shear



Columnar

Remarks:



Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: PORTLAND - PEARL PLACE PHASE I DEVELOPMENT - MATERIALS TESTING

Project Number: 04-1212.2

Client: AVESTA HOUSING

Client Contract Number:

General Contractor:

Concrete Supplier: DRAGON PRODUCTS

PLACEMENT INFORMATION

Date Cast: 2/1/2007 **Time Cast:** 11:15 **Date Received:** 2/2/2007

Placement Location: WALLS - WEST SIDE BUILDING 2

Placement Method: PUMP

Placement Vol. (yd³): 62

Cylinders Made By: VLT

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) **Maximum (°F)**

DELIVERY INFORMATION

Admixtures: POLYHEED 997,
POZZUTEC 20 2%

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 6
Air Content (%) (C-231): **Air WR:** 7.2
Air Temp (°F): 32
Conc. Temp (°F) (C-1064): 52

Load Number: 2
Mixer Number: 192
Ticket Number: 4525166
Cubic Yards: 10
Design (psi): 3000

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area (in) ²	Date Of Test	Cure Type	Age (days)	Fracture Type	Load (kips)	Strength (psi)
708-18A		6.00	28.27	2/8/2007	Lab	7	4	74.0	2620
708-18B		6.00	28.27	3/1/2007	Lab	28	4	103.5	3660
708-18C		6.00	28.27	3/1/2007	Lab	28	4	110.5	3910
708-18D				Hold	Lab				

Fracture Types



Cone



Cone and Split



Cone and Shear



Shear



Columnar

Remarks:



Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: PORTLAND - PEARL PLACE PHASE I DEVELOPMENT - MATERIALS TESTING

Project Number: 04-1212.2

Client: AVESTA HOUSING

Client Contract Number:

General Contractor:

Concrete Supplier: DRAGON PRODUCTS

PLACEMENT INFORMATION

Date Cast: 2/1/2007 **Time Cast:** 2:35 **Date Received:** 2/2/2007
Placement Location: EAST SIDE & NORTH SIDE BUILDING #1 3 PIER FOOTINGS ALONG RTW ELEVATOR PIT, FOOTINGS; NORTH SIDE BUILDING #1 WEST SIDE INSIDE WALL
Placement Method: PUMP **Placement Vol. (yd³):** 62
Cylinders Made By: VLT **Aggregate Size (in):** 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) **Maximum (°F)**

DELIVERY INFORMATION

Admixtures: POLYHEED 997,
POZZUTEC 20 2%

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 5 **Load Number:** 6
Air Content (%) (C-231): **Air WR:** 4.9 **Mixer Number:** 170
Air Temp (°F): 34 **Ticket Number:** 4525180
Conc. Temp (°F) (C-1064): 55 **Cubic Yards:** 10
Design (psi): 3000

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In²)	Date Of Test	Cure Type	Age (days)	Fracture Type	Load (kips)	Strength (psi)
708-19A		6.00	28.27	2/8/2007	Lab	7	4	80.5	2850
708-19B		6.00	28.27	3/1/2007	Lab	28	4	135.0	4780
708-19C		6.00	28.27	3/1/2007	Lab	28	4	131.5	4650
708-19D				Hold	Lab				

Fracture Types



Cone



Cone and Split



Cone and Shear



Shear



Columnar

Remarks:



Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: PORTLAND - PEARL PLACE PHASE I DEVELOPMENT - MATERIALS TESTING

Project Number: 04-1212.2

Client: AVESTA HOUSING

Client Contract Number:

General Contractor:

Concrete Supplier: DRAGON PRODUCTS

PLACEMENT INFORMATION

Date Cast: 2/7/2007 **Time Cast:** 1:15 **Date Received:** 2/8/2007

Placement Location: BLDG 1: "L" WALLS, PIERS N OF RETAINING WALL NE FROST WALLS

Placement Method: PUMP

Placement Vol. (yd³): 68

Cylinders Made By: PJO

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) **Maximum (°F)**

DELIVERY INFORMATION

Admixtures: POLYHEED 997, POZZUTEC 2%

TEST RESULTS

Slump (in) (C-143):	Slump WR: 4	Load Number: 2
Air Content (%) (C-231):	Air WR: 6.8	Mixer Number: 192
Air Temp (°F): 19		Ticket Number: 4525212
Conc. Temp (°F) (C-1064): 49		Cubic Yards: 10
		Design (psi): 3000

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In) ²	Date Of Test	Cure Type	Age (days)	Fracture Type	Load (kips)	Strength (psi)
708-20A		6.00	28.27	2/14/2007	Lab	7	4	83.0	2940
708-20B		6.00	28.27	3/7/2007	Lab	28	4	123.0	4350
708-20C		6.00	28.27	3/7/2007	Lab	28	4	117.0	4140
708-20D				Hold	Lab				

Fracture Types



Cone



Cone and Split



Cone and Shear



Shear



Columnar

Remarks:



Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: PORTLAND - PEARL PLACE PHASE I DEVELOPMENT - MATERIALS TESTING

Project Number: 04-1212.2

Client: AVESTA HOUSING

Client Contract Number:

General Contractor:

Concrete Supplier: DRAGON PRODUCTS

PLACEMENT INFORMATION

Date Cast: 2/7/2007 **Time Cast:** 3:00 **Date Received:** 2/8/2007
Placement Location: BUILDING #2: RETAINING WALL FOOTING, NE WALL SECTION (PEARL ST.)

Placement Method: PUMP

Placement Vol. (yd³): 68

Cylinders Made By: PJO

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) **Maximum (°F)**

DELIVERY INFORMATION

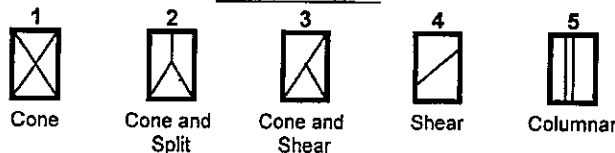
Admixtures: POLYHEED 997,
POZZUTEC 2%

TEST RESULTS

Slump (in) (C-143):	Slump WR:	6	Load Number:	5
Air Content (%) (C-231):	Air WR:	6.2	Mixer Number:	170
Air Temp (°F):	18		Ticket Number:	4525215
Conc. Temp (°F) (C-1064):	53		Cubic Yards:	10
			Design (psi):	3000

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In) ²	Date Of Test	Cure Type	Age (days)	Fracture Type	Load (kips)	Strength (psi)
708-21A		6.00	28.27	2/14/2007	Lab	7	4	86.0	3040
708-21B		6.00	28.27	3/7/2007	Lab	28	4	111.5	3940
708-21C		6.00	28.27	3/7/2007	Lab	28	4	114.5	4050
708-21D				Hold	Lab				

Fracture Types



Remarks:



Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: PORTLAND - PEARL PLACE PHASE I DEVELOPMENT - MATERIALS TESTING

Project Number: 04-1212.2

Client: AVESTA HOUSING

Client Contract Number:

General Contractor:

Concrete Supplier: DRAGON PRODUCTS

PLACEMENT INFORMATION

Date Cast: 2/20/2007 **Time Cast:** 1:00 **Date Received:** 2/21/2007

Placement Location: UPPER PORTION OF SOUTH WALLS ON BUILDING #2

Placement Method: PUMP TRUCK

Placement Vol. (yd³): 28

Cylinders Made By: JCM

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) **Maximum (°F)**

DELIVERY INFORMATION

Admixtures: POLYHEED 997
POZZUTEC 20 2%

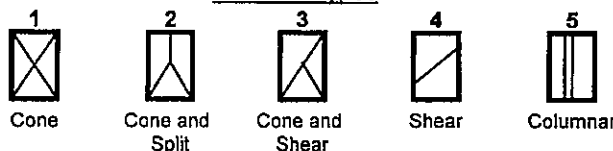
TEST RESULTS

Slump (in) (C-143): 5.5
Air Content (%) (C-231): 6.7
Air Temp (°F): 28
Conc. Temp (°F) (C-1064): 57

Load Number: 1
Mixer Number: 181
Ticket Number: 4525283
Cubic Yards: 10
Design (psi): 3000

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In) ²	Date Of Test	Cure Type	Age (days)	Fracture Type	Load (kips)	Strength (psi)
708-22A		6.00	28.27	2/27/2007	Lab	7	4	72.5	2570
708-22B		6.00	28.27	3/20/2007	Lab	28	4	106.5	3770
708-22C		6.00	28.27	3/20/2007	Lab	28	4	106.0	3750
708-22D				Hold	Lab				

Fracture Types



Remarks:



Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: PORTLAND - PEARL PLACE PHASE I DEVELOPMENT - MATERIALS TESTING

Project Number: 04-1212.2

Client: AVESTA HOUSING

Client Contract Number:

General Contractor:

Concrete Supplier: DRAGON PRODUCTS

PLACEMENT INFORMATION

Date Cast: 3/12/2007 **Time Cast:** 8:45
Placement Location: 2ND FLOOR DECK - BUILDING #1

Date Received: 3/13/2007

Placement Method: PUMP
Cylinders Made By: VLT

Placement Vol. (yd³): 40
Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) **Maximum (°F)**

DELIVERY INFORMATION

Admixtures: POZZUTEC 20 2%, POLYHEED 997

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 5.25
Air Content (%) (C-231): **Air WR:** 1.7
Air Temp (°F): 35
Conc. Temp (°F) (C-1064): 70

Load Number: 2
Mixer Number: 176
Ticket Number: 3927242
Cubic Yards: 10
Design (psi): 3000

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In) ²	Date Of Test	Cure Type	Age (days)	Fracture Type	Load (kips)	Strength (psi)
708-23A		6.00	28.27	3/19/2007	Lab	7	4	87.0	3080
708-23B		6.00	28.27	4/9/2007	Lab	28	4	104.0	3680
708-23C		6.00	28.27	4/9/2007	Lab	28	4	117.5	4160
708-23D				Hold	Lab				

Fracture Types



Cone



Cone and Split



Cone and Shear



Shear



Columnar

Remarks:



Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: PORTLAND - PEARL PLACE PHASE I DEVELOPMENT - MATERIALS TESTING

Project Number: 04-1212.2

Client: AVESTA HOUSING

Client Contract Number:

General Contractor:

Concrete Supplier: DRAGON PRODUCTS

PLACEMENT INFORMATION

Date Cast: 3/12/2007 **Time Cast:** 1:30 **Date Received:** 3/13/2007
Placement Location: FOOTING NORTH WALL BUILDING #2 GRADES BEAMS INSIDE SOUTH WALL BUILDING #2

Placement Method: TAILGATE

Placement Vol. (yd³): 28

Cylinders Made By: VLT

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) **Maximum (°F)**

DELIVERY INFORMATION

Admixtures: POLYHEED 997,
POZZUTEC 20 2%

TEST RESULTS

Slump (in) (C-143):	Slump WR: 5.25	Load Number: 2
Air Content (%) (C-231):	Air WR: 7.4	Mixer Number: 180
Air Temp (°F): 52		Ticket Number: 3927248
Conc. Temp (°F) (C-1064): 68		Cubic Yards: 10
		Design (psi): 3000

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	Age (days)	Fracture Type	Load (kips)	Strength (psi)
708-24A		6.00	28.27	3/19/2007	Lab	7	4	81.0	2870
708-24B		6.00	28.27	4/9/2007	Lab	28	4	109.5	3870
708-24C		6.00	28.27	4/9/2007	Lab	28	4	104.5	3700
708-24D				Hold	Lab				

Fracture Types



Cone



Cone and Split



Cone and Shear



Shear



Columnar

Remarks:



Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: PORTLAND - PEARL PLACE PHASE I DEVELOPMENT - MATERIALS TESTING
 Client: AVESTA HOUSING
 General Contractor:
 Project Number: 04-1212.2
 Client Contract Number:
 Concrete Supplier: DRAGON PRODUCTS

PLACEMENT INFORMATION

Date Cast: 3/15/2007 Time Cast: 1:50 Date Received: 3/16/2007
 Placement Location: NORTH WALL BUILDING #2, NW CORNER + 30' BUILDING #2

Placement Method: PUMP Placement Vol. (yd³): 22
 Cylinders Made By: VLT Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) Maximum (°F)

TEST RESULTS

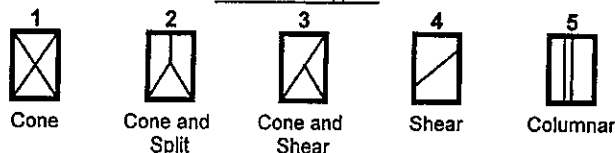
Slump (in) (C-143): Slump WR: 6 Load Number: 2
 Air Content (%) (C-231): Air WR: 6.4 Mixer Number: 183
 Air Temp (°F): 49 Ticket Number: 4525481
 Conc. Temp (°F) (C-1064): 60 Cubic Yards: 10
 Design (psi): 3000

DELIVERY INFORMATION

Admixtures: POLYHEED 997, POZZUTEC 20 2%

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	Age (days)	Fracture Type	Load (kips)	Strength (psi)
708-25A		6.00	28.27	3/22/2007	Lab	7	4	101.0	3570
708-25B				4/12/2007	Lab	28			
708-25C				4/12/2007	Lab	28			
708-25D				Hold	Lab				

Fracture Types



Remarks:



Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: PORTLAND - PEARL PLACE PHASE I DEVELOPMENT - MATERIALS TESTING

Project Number: 04-1212.2

Client: AVESTA HOUSING

Client Contract Number:

General Contractor:

Concrete Supplier: DRAGON PRODUCTS

PLACEMENT INFORMATION

Date Cast: 3/23/2007 **Time Cast:** 9:15 **Date Received:** 3/24/2007
Placement Location: SLAB 2ND FLOOR DECK BUILDING #1

Placement Method: PUMP
Cylinders Made By: VLT

Placement Vol. (yd³): 80
Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) **Maximum (°F)**

TEST RESULTS

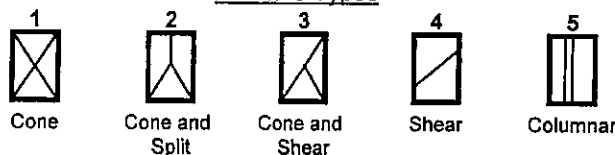
Slump (in) (C-143): **Slump WR:** 4
Air Content (%) (C-231): **Air WR:** 2.3
Air Temp (°F): 50
Conc. Temp (°F) (C-1064): 66

DELIVERY INFORMATION

Admixtures: POLYHEED 997,
 POZZUTEC 20 2%,
 FIBERMESH
Load Number: 5
Mixer Number: 170
Ticket Number: 4525588
Cubic Yards: 10
Design (psi): 3000

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In) ²	Date Of Test	Cure Type	Age (days)	Fracture Type	Load (kips)	Strength (psi)
708-26A		6.00	28.27	3/30/2007	Lab	7	4	82.0	2900
708-26B		6.00	28.27	4/20/2007	Lab	28	4	119.5	4230
708-26C		6.00	28.27	4/20/2007	Lab	28	4	133.0	4700
708-26D				Hold	Lab				

Fracture Types



Remarks:



Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: PORTLAND - PEARL PLACE PHASE I DEVELOPMENT - MATERIALS TESTING

Project Number: 04-1212.2

Client: AVESTA HOUSING

Client Contract Number:

General Contractor:

Concrete Supplier: DRAGON PRODUCTS

PLACEMENT INFORMATION

Date Cast: 3/23/2007 **Time Cast:** 9:54 **Date Received:** 3/24/2007
Placement Location: SLAB 2ND FLOOR DECK BUILDING #1

Placement Method: PUMP
Cylinders Made By: VLT

Placement Vol. (yd³): 80
Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) **Maximum (°F)**

DELIVERY INFORMATION

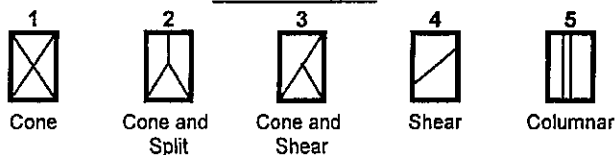
Admixtures: POLYHEED 997,
 POZZUTEC 20 2%,
 FIBERMESH

TEST RESULTS

Slump (in) (C-143):		Slump WR:	5	Load Number:	7
Air Content (%) (C-231):		Air WR:	3.2	Mixer Number:	172
Air Temp (°F):	56			Ticket Number:	4525591
Conc. Temp (°F) (C-1064):	57			Cubic Yards:	10
				Design (psi):	3000

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In) ²	Date Of Test	Cure Type	Age (days)	Fracture Type	Load (kips)	Strength (psi)
708-27A		6.00	28.27	3/30/2007	Lab	7	4	81.0	2870
708-27B		6.00	28.27	4/20/2007	Lab	28	4	134.0	4740
708-27C		6.00	28.27	4/20/2007	Lab	28	4	136.5	4830
708-27D				Hold	Lab				

Fracture Types



Remarks:



Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: PORTLAND - PEARL PLACE PHASE I DEVELOPMENT - MATERIALS TESTING

Project Number: 04-1212.2

Client: AVESTA HOUSING

Client Contract Number:

General Contractor:

Concrete Supplier: DRAGON PRODUCTS

PLACEMENT INFORMATION

Date Cast: 3/30/2007 **Time Cast:** 9:50 **Date Received:** 3/31/2007
Placement Location: SLAB PLACEMENT: TENANT STORAGE & MECHANICAL ROOM BUILDING 2 UPPER SLAB

Placement Method: PUMP

Placement Vol. (yd³): 57

Cylinders Made By: DMR

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) **Maximum (°F)**

DELIVERY INFORMATION

Admixtures: POLYHEED 997,
FIBERMESH, 2%
POLARSET

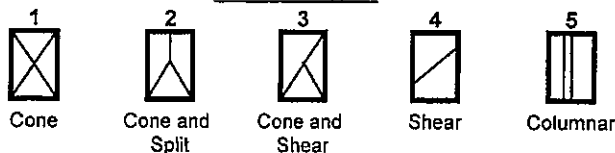
TEST RESULTS

Slump (in) (C-143): 5.5
Air Content (%) (C-231): 1.9
Air Temp (°F): 40
Conc. Temp (°F) (C-1064): 63

Load Number: 4
Mixer Number: 172
Ticket Number: 3927267
Cubic Yards: 10
Design (psi): 3000

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area (in) ²	Date Of Test	Cure Type	Age (days)	Fracture Type	Load (kips)	Strength (psi)
708-28A		6.00	28.27	4/6/2007	Lab	7	4	69.0	2440
708-28B		6.00	28.27	4/27/2007	Lab	28	4	125.5	4440
708-28C		6.00	28.27	4/27/2007	Lab	28	4	130.5	4620
708-28D				Hold	Lab				

Fracture Types



Remarks:



Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: PORTLAND - PEARL PLACE PHASE I DEVELOPMENT - MATERIALS TESTING

Project Number: 04-1212.2

Client: AVESTA HOUSING

Client Contract Number:

General Contractor:

Concrete Supplier: DRAGON PRODUCTS

PLACEMENT INFORMATION

Date Cast: 4/20/2007 **Time Cast:** 8:05

Date Received: 4/21/2007

Placement Location: BLDG 2 1ST FLOOR SLAB

Placement Method: PUMP

Placement Vol. (yd³): 80

Cylinders Made By: DMR

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) **Maximum (°F)**

DELIVERY INFORMATION

Admixtures: POLYHEED 997 & FIBERS 1% POLARSET

TEST RESULTS

Slump (in) (C-143): 5.5
Air Content (%) (C-231): 2.4
Air Temp (°F): 45
Conc. Temp (°F) (C-1064): 64

Load Number: 4
Mixer Number: 186
Ticket Number: 4525965
Cubic Yards: 10
Design (psi): 3000

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In) ²	Date Of Test	Cure Type	Age (days)	Fracture Type	Load (kips)	Strength (psi)
708-29A		6.00	28.27	4/27/2007	Lab	7	4	74.0	2620
708-29B		6.00	28.27	5/18/2007	Lab	28	4	116.5	4120
708-29C		6.00	28.27	5/18/2007	Lab	28	4	126.0	4460
708-29D				Hold	Lab				

Fracture Types



Cone



Cone and Split



Cone and Shear



Shear



Columnar

Remarks:

EXHIBIT B

05120 Structural Steel

Project: Pearl Place Building 1 & 2
 Date Prepared: October 11, 2006

Schedule of Special Inspections – Exhibit B
STEEL CONSTRUCTION

VERIFICATION AND INSPECTION	Y/N	EXTENT: CONTINUOUS, PERIODIC, SUBMITTAL, OR NONE	COMMENTS	AGENT	AGENT QUALIFICATION	DATE	REV
IBC Section 1704.3							
1. Material verification of high-strength bolts, nuts and washers:							
a. Identification markings to conform to ASTM standards specified in the approved construction documents.	Y	S	Applicable ASTM material specifications; AISC 335, Section A3.4; AISC LRFD, Section A3.3	SII	PE/SE or EIT	SEE ATTACHED REPORTS	
b. Manufacturer's certificate of compliance required.		S		SII	PE/SE or EIT	✓	
2. Inspection of high-strength bolting							
a. Bearing-type connections.	Y	P	AISC LRFD Section M2.5 IBC Sect 1704.3.3	TL	AWS/AISC-SSI	SEE ATTACHED REPORT	
b. Slip-critical connections.	N/A	C or P (method dependent)		TL	AWS/AISC-SSI		
3. Material verification of structural steel (IBC Sect 1708.4):							
a. Identification markings to conform to ASTM standards specified in the approved construction documents.	Y	S	ASTM A 6 or ASTM A 568 IBC Sect 1708.4	SII	PE/SE or EIT	✓	
b. Manufacturers' certified mill test reports.	Y	S	ASTM A 6 or ASTM A 568 IBC Sect 1708.4	SII	PE/SE or EIT	N/A	
4. Material verification of weld filler materials:							
a. Identification markings to conform to AWS specification in the approved construction documents.	Y	S	AISC, ASD, Section A3.6; AISC LRFD, Section A3.5	SII	PE/SE or EIT	✓	
b. Manufacturer's certificate of compliance required.	Y	S		SII	PE/SE or EIT	✓	

Project: Pearl Place Building 1 & 2
 Date Prepared: October 11, 2006

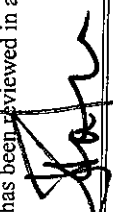
VERIFICATION AND INSPECTION

IBC Section 1704.3

Y/N	EXTENT: CONTINUOUS, PERIODIC, SUBMITTAL, OR NONE	COMMENTS	AGENT	AGENT QUALIFICATION	DATE	REV
Y	S	5. Submit current AWS D1.1 welder certificate for all field welders who will be welding on this project.	SII	PE/SE or EIT	✓	
		6. Inspection of welding (IBC 1704.3.1): a. Structural steel:				
Y	C	1) Complete and partial penetration groove welds.	TAI	AWS-CWI	SEE ATTACHED REMIAR	
Y	C	2) Multipass fillet welds.	TAI	AWS-CWI	N/A	
Y	C	3) Single-pass fillet welds > 5/16"	TAI	AWS-CWI	N/A	
Y	P	4) Single-pass fillet welds < 5/16"	TAI	AWS-CWI	✓	
Y	P	5) Floor and deck welds.	TAI	AWS-CWI	✓	
		b. Reinforcing steel (IBC Sect 1903.5.2):			SEE ATTACHED	
N		1) Verification of weldability of reinforcing steel other than ASTM A706.	N/A			
N/A		2) Reinforcing steel-resisting flexural and axial forces in intermediate and special moment frames, and boundary elements of special reinforced concrete shear walls and shear reinforcement.				
N/A		3) Shear reinforcement.				
N	P	4) Other reinforcing steel.	TAI	AWS-CWI		
		7. Inspection of steel frame joint details for compliance (IBC Sect 1704.3.2) with approved construction documents:				
Y	P	a. Details such as bracing and stiffening.	SII	PE/SE or EIT	✓	
Y	P	b. Member locations.	SII	PE/SE or EIT	✓	
Y	P	c. Application of joint details at each connection.	SII	PE/SE or EIT	✓	

Steel Construction has been reviewed in accordance with section 1704.3 of the IBC Code

Special Inspector



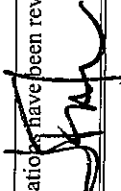
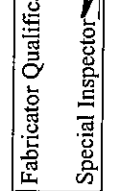
Date

12/5/07

Project: Pearl Place Building 1 & 2
 Date Prepared: October 11, 2006

Schedule of Special Inspection Services – Exhibit B
FABRICATION AND IMPLEMENTATION PROCEDURES – STRUCTURAL STEEL

VERIFICATION AND INSPECTION	Y/N	EXTENT: CONTINUOUS, PERIODIC, SUBMITTAL, OR NONE	COMMENTS/AGENT	AGENT QUALIFICATION	DATE	REV
IBC Section 1704.2 1. Fabrications Procedures: Review of fabricator's written procedural and quality control manuals and periodic auditing of fabrication practices by an approved special inspection agency. At the completion of fabrication, the approved fabricator shall submit a certificate of compliance to the building code official stating that the work was performed in accordance with the approved construction documents. -OR- 2. AISC or SFNE Certification	Y	S	Fabricator shall submit one of the two qualifications	PE/SE or EIT	COMPLIANCE STATEMENT ATTACHED	
3. At completion of fabrication, the approved fabricator shall submit a certificate of compliance to the building code official stating that the work was performed in accordance with the approved construction documents.	Y	S	IBC 1704.2.2	PE/SE or EIT	ATTACHED	

Fabricator Qualification  have been reviewed in accordance with section 1704.2 of the IBC Code
 Special Inspector  Date 12/5/07

BECKER

structural engineers, inc.

Field Report

sv_2007/04/03

Project: Pearl Place
Project #: 1605
Date/Time: 4/03/07- 9:15 AM to 9:45 AM
Observers: James Fortin, P.E.

Building 1:

Rick requested that I visit the site to review the connection of the 24" deep channels framing above the garage. At some locations, the channel attachment to the floor beam bottom flange was not fabricated correctly. Either the angle attachment did not contact the beam flange, or the holes did not line up. At locations where the angle did not contact the flange, it is necessary to weld a steel shim to the beam flange to fill the gap (weld all around shim to beam), then weld the angle to the shim. Coordinate gap width to minimize the number of shims (2 shims maximum). At locations where the holes do not line up, weld the angle leg to the beam flange. At all locations, provide 2" long -3/16" fillet weld at 3 sides of angle leg.

It is necessary that a 3" diameter hole is drilled through the web of a W8x10 at the first floor of Building 1 (Line 5, from Line A to Line B). Reinforcements to this beam will be required after this hole is drilled. Instructions to reinforce the beam will be provided by April 5.

A few cracks have occurred at the slab-on-grade against Oxford Street. Cracks shall be monitored to ensure they will not affect finishes.

Building 2:

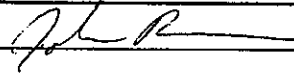
The pressure treated sill plates have been installed at some locations and they overhang the inside face of the concrete foundation walls. Especially at bearing wall locations, this overhang will not be acceptable. GC to coordinate field dimensions of the foundation and coordinate wall panel & floor truss construction to suit field conditions.

CC: Mike Myatt, Ronald Norton, Pandika Pleqi, Rick Nanartowich, Clint Gendreau, Dave Schoenherr, Suzanne Hunt Job File—1605

Quality Assurance Labs Inc.

NON-DESTRUCTIVE TESTING AND INSPECTION SERVICES
 80 PLEASANT AVENUE • SOUTH PORTLAND, MAINE 04106 • TEL: (207) 799-8911 • FAX: (207) 799-7251

ULTRASONIC INSPECTION REPORT

CUSTOMER: S.W. COLE ENG.		DATE OF INSPECTION	M	D	Y
ATTENTION: CRAIG		REPORT No.	03	12	07
PROJECT: PEARL PLACE		PAGE	1	OF	1
COMPONENT INSPECTED: MOMENT CONNECTIONS		JOB No.	041212.		
AREA OF INTEREST:		P.O. No.			
COMPONENT LOCATION:		INSTRUMENT			
CUSTOMER WORK ORDER No: 041212.2	PART No.:	MAKE:	PANAMETRICS		
MATERIAL: CARBON STEEL	HEAT No.:	MODEL:	EPOCH III MDL 2300		
COMPONENT SURFACE CONDITION: AS WELDED		EQUIPMENT No.:			
EXAMINATION DATA		MATERIAL THICKNESS:	VARIABLE		
Project Code/Spec	AWS D1.1 SECTION 6	SCREEN RANGE:	10"		
U.T. Procedure No.	QC-TOP-UT-1 (REV. 0)	COUPLANT:	ECHO GEL		
U.T. Technique No.		TRANSDUCERS			
RESULTS: ACCEPTABLE	INDICATIONS: NONE	MAKE:	HARISONIC		
REMARKS:		FREQ.:	2.25 MHz	ANGLE:	70°
THE FOLLOWING CONNECTIONS WERE ULTRASONIC INSPECTED IAW AWS D1.1:		SIZE:	19.05 mm (0.750 in.)		
CONNECTIONS BOTTOM FLANGE: 1-D NORTH, 1-A SOUTH, 2-A SOUTH, 2-C NORTH, 4-A SOUTH, 4-C NORTH, 5-B SOUTH, 5-D NORTH, 5-F EAST, 6-F WEST,		STYLE:	DUAL	SHAPE:	SQUARE
CONNECTIONS BOTTOM FLANGE: 1-D EAST, 2-A EAST, 2-D WEST, 3-A EAST, 4-A WEST, 5-D WEST, 4-D EAST		EQUIPMENT No.:			
CONNECTIONS BOTTOM FLANGE: 2-C EAST, 3-A SOUTH, 3-C NORTH, 3-C WEST, 3-C EAST, 4-C WEST, 6-E EAST, 7-E WEST		MAKE:	HARISONIC		
ALL OF THE ABOVE LISTED CONNECTIONS WERE FOUND TO BE ACCEPTABLE		FREQ.:	2.25 MHz	ANGLE:	0°
///LAST ITEM///		SIZE:	25.4 mm (1.000 in.)		
		STYLE:	DUAL	SHAPE:	ROUND
		EQUIPMENT No.:			
		MAKE:			
		FREQ.:		ANGLE:	
		SIZE:			
		STYLE:		SHAPE:	
		EQUIPMENT No.:			
		REFERENCE BLOCKS			
		MAKE:	PANAMETRICS		
		TYPE:	IIW BLOCK		
		MATERIAL:	CARBON STEEL		
		EQUIPMENT No.:			
		SENSITIVITY:	62Db		
		TRANSFER VALUE:			
ADDITIONAL INFORMATION - SEE ATTACHED: <input type="checkbox"/> SKETCH(IES) <input type="checkbox"/> SUPPLEMENTARY SHEET(S) <input type="checkbox"/> VIDEO					
SIGNATURES		CERTIFICATION	DATE		
INSPECTOR JOHN BOWEN 		ASNT	II	03	12
SUPERVISOR					
AUTHORIZED INSPECTOR					
CUSTOMER REPRESENTATIVE					

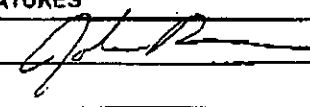
Mar. 1. 2007 5:08PM

Quality Assurance Labs Inc.

No. 4998 P. 3

NON-DESTRUCTIVE TESTING AND INSPECTION SERVICES
 80 PLEASANT AVENUE • SOUTH PORTLAND, MAINE 04106 • TEL: (207) 799-8911 • FAX: (207) 799-7251

ULTRASONIC INSPECTION REPORT

CUSTOMER: S.W. COLE ENG.		DATE OF INSPECTION	M	D	Y	
ATTENTION: CRAIG		REPORT No.	03	1	07	
PROJECT: PEARL PLACE		PAGE	1	OF	1	
COMPONENT INSPECTED: MOMENT CONNECTIONS		JOB No.	041212.			
AREA OF INTEREST:		P.O. No.				
COMPONENT LOCATION:		INSTRUMENT				
CUSTOMER WORK ORDER No: 041212.2	PART No.:	MAKE: PANAMETRICS				
MATERIAL: CARBON STEEL	HEAT No.:	MODEL: EPOCH III MDL 2300				
COMPONENT SURFACE CONDITION: AS WELDED		EQUIPMENT No.:				
EXAMINATION DATA		MATERIAL THICKNESS: VARIABLE				
Project Code/Spec AWS D1.1 SECTION 6		SCREEN RANGE: 10"				
U.T. Procedure No. QC-TOP-UT-1 (REV. D)		U.T. Technique No.				
RESULTS: ACCEPTABLE		INDICATIONS: NONE				
REMARKS: THE FOLLOWING CONNECTIONS WERE ULTRASONIC INSPECTED IAW AWS D1.1: REPAIR OF CONNECTION 4-D EAST ACCEPT: NO RELEVANT INDICATIONS NOTED ///LAST ITEM!!! FAA REPAIR STATION NUMBER RX6R187N METHOD(S),PROCESS(ES),PROCEDURE(S) MERCURY FREE		TRANSDUCERS				
		MAKE: HARISONIC				
		FREQ.: 2.25 MHz	ANGLE: 70°			
		SIZE: 19.05 mm (0.750 in.)				
		STYLE: DUAL	SHAPE: SQUARE			
		EQUIPMENT No.:				
		MAKE: HARISONIC				
		FREQ.: 2.25 MHz	ANGLE: 0°			
		SIZE: 25.4 mm (1.000 in.)				
		STYLE: DUAL	SHAPE: ROUND			
EQUIPMENT No.:						
MAKE:						
FREQ.:	ANGLE:					
SIZE:						
STYLE:	SHAPE:					
EQUIPMENT No.:						
REFERENCE BLOCKS						
MAKE: PANAMETRICS						
TYPE: IIW BLOCK						
MATERIAL: CARBON STEEL						
EQUIPMENT No.:						
SENSITIVITY: 62Db						
TRANSFER VALUE:						
ADDITIONAL INFORMATION - SEE ATTACHED: <input type="checkbox"/> SKETCH(ES) <input type="checkbox"/> SUPPLEMENTARY SHEET(S) <input type="checkbox"/> VIDEO						
SIGNATURES		CERTIFICATION		DATE		
INSPECTOR JOHN BOWEN 		LEVEL	M	D	Y	
SUPERVISOR		ASNT	II	03	01 07	
AUTHORIZED INSPECTOR						
CUSTOMER REPRESENTATIVE						

Mar. 1. 2007 5:08PM

Quality Assurance Labs Inc.

No. 4998 P. 2

NON-DESTRUCTIVE TESTING AND INSPECTION SERVICES
80 PLEASANT AVENUE • SOUTH PORTLAND, MAINE 04106 • TEL: (207) 789-8911 • FAX: (207) 789-7251

ULTRASONIC INSPECTION REPORT

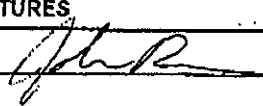
CUSTOMER: S.W. COLE ENG.		DATE OF INSPECTION	M	D	Y		
ATTENTION: CRAIG		REPORT No.	03	1	07		
PROJECT: PEARL PLACE		PAGE 1 OF 1					
COMPONENT INSPECTED: MOMENT CONNECTIONS		JOB No. 041212.					
AREA OF INTEREST:		P.O. No.					
COMPONENT LOCATION:		INSTRUMENT					
CUSTOMER WORK ORDER No: 041212.2	PART No.:	MAKE: PANAMETRICS					
MATERIAL: CARBON STEEL	HEAT No.:	MODEL: EPOCH III MDL 2300					
COMPONENT SURFACE CONDITION: AS WELDED		EQUIPMENT NO.:					
EXAMINATION DATA		MATERIAL THICKNESS: VARIABLE					
Project Code/Spec	AWS D1.1 SECTION 6	SCREEN RANGE: 10"					
U.T. Procedure No.	QC-TOP-UT-1 (REV. 0)	COUPLANT: ECHO GEL					
U.T. Technique No.		TRANSDUCERS					
RESULTS: ACCEPTABLE	INDICATIONS: NONE	MAKE: HARISONIC					
REMARKS: THE FOLLOWING CONNECTIONS WERE ULTRASONIC INSPECTED IAW AWS D1.1: CONNECTIONS: 1-D NORTH, 1-A SOUTH, 2-A SOUTH, 2-C NORTH, 4-A SOUTH, 4-C NORTH, 5-B SOUTH, 5-D NORTH, 5-F EAST, 8-F WEST, THE FOLLOWING CONNECTIONS WERE ULTRASONIC INSPECTED WITH LIMITATIONS TO THE INTERPRETATION OF THE ROOT AREA DUE TO THE FIT UP OF MOMENT CONNECTIONS. CONNECTIONS 1-D EAST, 2-A EAST, 2-D WEST, 3-A EAST, 4-A WEST, 5-D WEST THE FOLLOWING CONNECTIONS HAD LIMITED INSPECTION PERFORMED ON THEM DUE TO OBSTRUCTION IN THE PATH OF THE TRANSDUCER. 1 INCH ON EACH SIDE OF CLIPS WAS INSPECTED IAW AWS D1.1. CONNECTIONS: 2-C EAST, 3-A SOUTH, 3-C NORTH, 3-C WEST, 3-C EAST, 4-C WEST ALL OF THE ABOVE LISTED CONNECTIONS WERE FOUND TO BE ACCEPTABLE CONNECTION 4-D EAST WAS REJECTED DUE TO LACK OF PENETRATION 4-D EAST REJECTED CONNECTIONS 6-E EAST AND 7-E WEST WERE NOT INSPECTED DUE TO OBSTRUCTION FAA REPAIR STATION NUMBER RX6R187N METHOD(S), PROCESS(ES), PROCEDURE(S) MERCURY FREE		FREQ.: 2.25 MHz				ANGLE: 70°	
		SIZE: 19.05 mm (0.750 in.)					
		STYLE: DUAL		SHAPE: SQUARE			
		EQUIPMENT No.:					
		MAKE: HARISONIC					
		FREQ.: 2.25 MHz		ANGLE: 0°			
		SIZE: 25.4 mm (1.000 in.)					
		STYLE: DUAL		SHAPE: ROUND			
		EQUIPMENT No.:					
		MAKE:					
FREQ.:		ANGLE:					
SIZE:							
STYLE:		SHAPE:					
EQUIPMENT No.:							
REFERENCE BLOCKS							
MAKE: PANAMETRICS							
TYPE: IIW BLOCK							
MATERIAL: CARBON STEEL							
EQUIPMENT No.:							
SENSITIVITY: 62Db							
ADDITIONAL INFORMATION - SEE ATTACHED: <input type="checkbox"/> SKETCH(ES) <input type="checkbox"/> SUPPLEMENTARY SHEET(S) <input type="checkbox"/> VIDEO							
SIGNATURES		CERTIFICATION		DATE			
INSPECTOR JOHN BOWEN 		ASNT	II	03	01 07		
SUPERVISOR							
AUTHORIZED INSPECTOR							
CUSTOMER REPRESENTATIVE							
				TRANSFER VALUE:			

EXHIBIT B

06100 Wood Framing

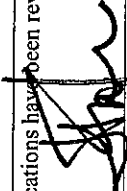
06190 Wood Truss

Project: Pearl Place Building 1 & 2
 Date Prepared: October 11, 2006

Schedule of Special Inspection Services – Exhibit B
FABRICATION AND IMPLEMENTATION PROCEDURES – WOOD TRUSSES


VERIFICATION AND INSPECTION	Y/N	EXTENT: CONTINUOUS, PERIODIC, SUBMITTAL, OR NONE	COMMENTS/AGENT	AGENT QUALIFICATION	DATE	REV
<p>IBC Section 1704.2</p> <p>1. Fabrications Procedures: Review of fabricator's written procedural and quality control manuals and periodic auditing of fabrication practices by an approved special inspection agency. At the completion of fabrication, the approved fabricator shall submit a certificate of compliance to the building code official stating that the work was performed in accordance with the approved construction documents. -OR- 2. TPI Inspection Program: Fabricator shall participate in the TPI Quality Assurance Inspection Program, and maintain a copy of the Quality Assurance Procedures Manual, QAP-90. Submit copy of certificate. All trusses shall bear the TPI Registered Mark. 3. At completion of fabrication, the approved fabricator shall submit a certificate of compliance to the building code official stating that the work was performed in accordance with the approved construction documents</p>	Y	S	Fabricator shall submit one of the two qualifications	PE/SE or EIT	TPI Certificate Submitted	
	Y	S	IBC 1704.2.2	PE/SE or EIT	Attached	

Fabricator Qualifications have been reviewed in accordance with section 1704.2 of the IBC Code

Special Inspector  Date 12/5/07

Project: Pearl Place Building 1 & 2
 Date Prepared: October 11, 2006
Schedule of Special Inspections – Exhibit B
WOOD CONSTRUCTION

VERIFICATION AND INSPECTION	Y/N	EXTENT: CONTINUOUS, PERIODIC, SUBMITTAL, OR NONE	COMMENTS	AGENT	AGENT QUALIFICATION	DATE	REV
1. Fabrication of high-load diaphragms							
a. Verify wood structural panel sheathing for grade and thickness	Y	P	IBC 1704.6	SII	PE/SE or EIT	SEE ATTACHED REPORT	
b. Verify the nominal size of framing members at adjoining panel edges	Y	P	IBC 1704.6	SII	PE/SE or EIT	"	
b. Verify the nail or staple diameter and length	Y	P	IBC 1704.6	SII	PE/SE or EIT	"	
b. Verify the number of fastener lines	Y	P	IBC 1704.6	SII	PE/SE or EIT	"	
b. Verify the spacing between fasteners in each line and at edge margins	Y	P	IBC 1704.6	SII	PE/SE or EIT	"	
2. Load Tests for Joist Hangers: Provide evidence of manufacturer's load test in accordance with ASTM D1761 including the vertical load bearing capacity, torsional moment capacity, and deflection characteristics when there is no calculated procedure recognized by the code.	Y	S	IBC 1715 [submit ICBO reports]	SII	PE/SE or EIT	✓	

Wood Construction has been reviewed in accordance with section 1704.6 of the IBC Code
 Special Inspector:  Date: 12/5/07

 **STRUCTURES**
CANATRUISS INC.

1760 SETLAKWE - THETFORD MINES (QUEBEC) G6G 8B2 - Canada
PHONE : 418.338.2888 • FAX : 418.338.4688
E-MAIL : info@CANATRUISS.COM

September 10, 2007

Mr. Clint Gendreau
Project Manager
Ledgewood Construction
27 Main Street
South Portland, ME 04106

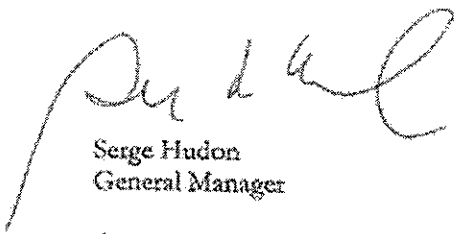
Re : Pearl Place Buil #2
Letter of guarantee

Dear Mr. Gendreau ,

Structures Canatruuss hereby warrants and/or guarantees that the trusses & walls, which we have furnished for the above referenced project, have been completed in accordance with the Specs and Plans. Specifically, D-Blaze treated lumber has been used where specified.

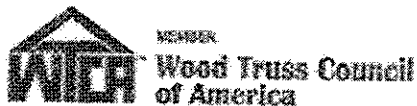
Sincerely,

STRUCTURES CANATRUISS INC.



Serge Hudon
General Manager

/nm



TRUSS PLATE INSTITUTE
QUALITY ASSURANCE
LICENSEE



TRUSS PLATE INSTITUTE
 218 N. Lee Street, Suite 312
 Alexandria, VA 22314
 Ph. 703-683-1010 or 808-833-5900
www.tpinst.org

September 10, 2007

Structures Canatruss, Inc. - TPI Plant W619

To Whom It May Concern:

Please be advised, Structures Canatruss (SC) located in Thetford Mines, Quebec is an active participant in good standing with the Truss Plate Institute's Quality Assurance Inspection Program. The TPI program is recognized by the International Code Council in accordance with ICC's International Accreditation Service Report AA-648 Type A (Third-Party) Body (<http://www.iasonline.org/PDF/AA/aa648.pdf>); it serves as a means for truss manufacturers to comply with IBC Section 1704.2. Based on random, unannounced inspections and/or audits of in-house QC records conducted by TPI staff, SC's truss design and manufacturing quality are in accordance with ANSI/TPI 1-2002 referenced in ICC's "International Building Code 2003 & 2006".

SC is authorized to affix TPI's Quality Assurance Stamp (TPI Plant No. W619) provided that it maintains continued satisfactory conformance with the above requisites of ANSI/TPI 1 & IRC & IBC2003 & 2006 Standards. The stamp is the property of Truss Plate Institute at all times. Its approved usage signifies that the truss manufacturer licensee is complying with the applicable provisions of the model building code. In the event of unsatisfactory performance (cycle of non-conforming reports), TPI quality stamps may be removed from the premises of the TPI licensee and decertification proceedings initiated.

If TPI can be of further assistance in familiarizing you with its voluntary Quality Assurance Inspection Program, the ongoing status of Structures Canatruss, or the status of other TPI Quality Assurance Licensees (+450); please do not hesitate to contact us, or visit our website at... http://www.tpinst.org/my_QAP_listing.html for a complete listing of truss manufacturers participating (approved vs. pending) in our quality auditing program.

Sincerely,

TRUSS PLATE INSTITUTE

Charles B. Goehring
 Director of Inspection Services

"TPI MISSION STATEMENT - Established in 1960 to maintain the wood truss industry on a sound engineering basis. To accomplish its purpose, the Truss Plate Institute establishes methods of design and construction (ANSI/TPI 1) for wood trusses in accordance with the American National Standards Institute's accredited consensus procedures for coordination and development of American National Standards."

STRUCTURAL SPECIAL INSPECTIONS

BUILDING 1

Item No.	Date	Location	Description	Status
B1-0.1	04/09	B1 – Basement Wall Panels	Nails have been overdriven into the plywood sheathing, resulting in the need to evaluate the effect on the required shear capacity. Generally, the head of the nail is into the sheathing by approximately half the sheathing thickness. Walls need to be repaired. 5/17/07: Repairs have been made to Basement level panels in coordination with the supplemental information provided in field report dated 4/9/07. 5/24/07: (1) panel still remained unaddressed and blocking is missing in bays with hold-downs, blocking must be replaced or reinstalled where found missing. 6/28/07: Nailing to P.T. Sill has not been completed 7/5/07: Plywood sheathing has been nailed to the PT sill plate with galvanized nails.	CLOSED 7/5/07
B1-1.1	04/09	B1- 1ST Floor Steel Framing	For the W21x73 beams supporting the elevated concrete slab above the garage, it has been requested that two web openings are increased in size from the 5" diameter hole originally specified. These increased hole sizes has been analyzed and it is acceptable to elongate the hole to maintain 5" wide x 7" deep. Cut away the additional material carefully to create an elongated circle. Maintain the difference between centerline of beam depth and centerline of hole to within 1".	CLOSED 5/17/07
B1-1.2	04/19	B1- 1st Floor Wall Panels	At the first floor wall panels reviewed, the previously identified issue with the overdriven fasteners does not appear to have been addressed. Rick N. of Ledgewood stated that these panels were already in production when they spoke to Canatruss about the issue, and that is the reason for it. The next floor level is expected to be constructed adequately. 5/4/07: Ledgewood has proposed adding a new layer of plywood to the inside face of the walls and nailing to the framing per the contract requirements. This is an acceptable option. 7/25/07: GC has decided to follow original corrective procedure of adding new vertical studs and blocking, and nailing the sheathing to this new framing. All blocking is in place except for 1 interior wall location (GC aware of location). The nailing of the sheathing to the new framing is not completed any locations at this time. PLEASE DO NOT FORGET NAILING OF PLYWOOD TO PT SILL PLATE WITH GALVANIZED FASTENERS. 7/30/07: Blocking has been installed as necessary except at the interior shear walls. At these walls, blocking was not placed in the top 18" of the wall	CLOSED 8/6/07

			<p>(within the truss space). This was due to the fact the sheetrock was already in place. This condition has been reviewed and it is not possible to obtain the necessary loads across this section of wall. The option to add plywood on top of the sheetrock was discussed on site, but it does not appear to be adequate solution. In lieu of remaining the sheetrock to install the blocking, it is necessary to remove the top layer of plywood on the stair sides of the walls, and replacing with new plywood nailed into the existing framing.</p> <p>8/6/07: Plywood sheathing was reviewed for additional nailing and all areas appeared to have been corrected as directed.</p>	
B1-1.3	04/19	B1 – 1ST Floor Wall Panels	<p>There are some locations where the bottom plate does not contact the PT sill plate. At these locations, it is necessary to solidly fill the gap with full width framing, then attach all plates to the concrete following the instructions identified in Item #B1-1.13. The overall length of the fastener must be field verified to suit the condition.</p> <p>7/25/07: Four locations were found where a gap existed that needs to be addressed (GC is aware of the locations). Areas found below window sills do not require that additional shims are placed. At all areas where a gap exists, the plates must be nailed together with 16d (3 ½" long) nails at 8" o.c.</p> <p>7/30/07: Gaps have been filled and plates nailed at all locations previously identified.</p>	CLOSED 7/30/07
B1-1.4	04/19	B1 – 1ST Floor – Holdown at Grid 7/E	<p>The steel holdown at the exterior corner of Grid 7/E must be replaced with a holdown located at the opposite side of the window opening. For this condition, provide a Simpson HDU8-SDS2.5 holdown anchor with a 7/8" diameter ASTM A307 bolt fastened through the top flange of the W18x40 beam. Locate the bolt to the "exterior" side of the beam flange, and locate the bolt centerline 1 ½" maximum from the centerline of the beam web. GC ensure the bolt location coordinates with the holdown location for adequate contact with the vertical wall studs.</p> <p>7/25/07: Item completed as explained above.</p>	CLOSED 7/25/07
B1-1.5	04/26	B1 – 1st Floor Wall Panel Attachment	<p>Attachment of the steel holdowns to the wall panels was discussed. At the intersection of the exterior wall panel along the C-Line, and the interior wall panel between Units 2-201 & 2-202, it is necessary that the wall panel studs at both panels are attached together using (2) 8" long Timberlock fasteners at 8" o.c. vertically.</p>	CLOSED 5/17/07
B1-1.6	04/26	B1 – 1ST Floor Header H7 Wall Jamb	<p>At three locations of Building 1 along Oxford Street there is an H7 header required per SSK-29. At these headers, the corner jamb detail should be constructed of (5) 2x6 members (per SSK-33), but at the opposite side of the header, the jamb should be a 5 ¼" x 5 ¼" PSL post, per SSK-31 and Addendum #1 – Line #5 (for Dwg. S1.3). The PSL posts are not constructed per drawing requirements and the existing jamb will need to be removed and replaced with the full-height PSL post specified.</p>	CLOSED 5/17/07

B1-1.7	05/08	B1 – 1ST Floor Steel Hold-down at Grid C-2	<p>The shearwall hold-down should be directly fastened to (3)2x6 post. 1/2" Plywood blocking must be removed and hold-down removed. Studs that are not full height shall be removed and new blocking installed at panel edges in affected bay. See item no. B1-1.4 for information on installation of new hold-down.</p> <p>7/25/07: Use of a plywood shim found to be acceptable with use of longer fasteners, ensuring 3" embedment of fasteners into framing. Existing holddown is acceptable as constructed.</p>	CLOSED 7/25/07
B1-1.8	05/08	B1 – 1ST Floor Steel Hold-down at Grid C-3	<p>The shearwall hold-down should be directly fastened to (3)2x6 post. 1x dimensional blocking must be removed and hold-down removed. Studs that are not full height shall be removed and replaced along with new blocking at panel edges in effected bay. Fasten (3) 2x6 post together with approved schedule on drawing S3.3. See item no. B1-1.4 for information on installation of new hold-down.</p> <p>7/25/07: Use of a plywood shim found to be acceptable with use of longer fasteners, ensuring 3" embedment of fasteners into framing. Wall studs were removed to fasten this anchor. An additional stud is required below the LVL and an MSTC 32 strap placed across the LVL attaching studs above and below.</p> <p>7/30/07: Work completed as specified.</p>	CLOSED 7/30/07
B1-1.9	05/08	B1 – 1ST Floor Steel Hold-down at Grid A-3	<p>The shearwall hold-down should be directly fastened to (3)2x6 post. 1x dimensional blocking must be removed and hold-down removed. Studs that are not full height shall be removed and full height (3) 2x6 post installed along with new blocking @ panel Edges in effected bay. See item no. B1-1.4 for information on installation of new hold-down.</p> <p>7/25/07: Use of a plywood shim found to be acceptable with use of longer fasteners, ensuring 3" embedment of fasteners into framing. Existing holddown is acceptable as constructed.</p>	CLOSED 7/25/07
B1--1.10	05/08	B1 – 1ST Floor Steel Hold-down at Grid C-4	<p>The shearwall hold-down should be directly fastened to (3)2x6 post. 1x dimensional blocking must be removed and hold-down removed. (3) 2x6 post is split and needs to be replaced with new (3) 2x6 post. Studs that are not full height shall be removed and new blocking installed at panel edges in effected bay. See item no. B1-1.4 for information on installation of new hold-down.</p> <p>7/25/07: Use of a plywood shim found to be acceptable with use of longer fasteners, ensuring 3" embedment of fasteners into framing. Existing holddown is acceptable as constructed.</p>	CLOSED 7/25/07
B1-1.11	05/08	B1 – 1ST Floor Steel Hold-down at Grid E-6	<p>(3) 2x6 post is split and needs to be replaced with new (3) 2x6 post.</p> <p>7/25/07: Work appears complete. New studs have been placed (different color of wood) and the framing does not appear split.</p>	CLOSED 7/25/07

B1-1.13	04/19	B1 – 1 st Floor Wall Panel PWD overlap on PT sill	<p>At numerous wall panels on the first floor, the plywood sheathing does not overhang the panel bottom plate for attachment to the field installed sill plate. At these locations, it is necessary to complete either of the following (GC to submit which option was chosen)</p> <p><u>OPTION 1:</u> At all Bearing Conditions: Remove the sheathing and re-install a 4'-0" wide section of sheathing that will overhang the bottom plate, and fasten per the contract requirements. Blocking would be required behind all new plywood joints.</p> <p><u>OPTION 2:</u> For Panel Bearing on Concrete Slab-on-Deck: Bolt the Doug-Fir panel bottom plate(s) and the PT sill plate to the concrete with 5/8" diameter HILTI KwikBolt II Expansion Anchor by 2 3/4" embed into concrete (use bolts 5/8" diameter x 8 1/2" long minimum). Space the bolts at 12" oc at shear walls and 24" o.c at non-shear walls. It is necessary for GC to ensure that the deck flutes are low at the locations where these fasteners are used. For Panels Bearing on Concrete Foundation Walls: Bolt the Doug-Fir panel bottom plate(s) and the PT sill plate to the concrete wall with 5/8" diameter HILTI KwikBolt II Expansion Anchor by 4" embed into concrete. Space the bolts at 12" oc at shear walls and 24" o.c at non-shear walls. For Panels Bearing Directly on Steel Beams: Bolt the Doug-Fir panel bottom plate(s) and the PT sill plate to the top flange of the steel beam with 5/8" diameter through-bolts at 24" o.c max. (3 bolts per wall panel, minimum) This condition only occurs at 2 walls where the French balcony is present. Locate the through-bolt to be on the "exterior" side of the beam flange, and locate the bolt centerline 1 1/2" maximum from the centerline of the beam web. NOTE: ALL PLATES BETWEEN WALL PANEL AND STEEL BEAM SHALL BE DOUG-FIR MATERIAL AT THIS LEVEL.</p> <p>7/25/07: Item is completed at attachments directly t steel beams. Panels along the parking area face of the building require attachments of the plates to the concrete slab-on-deck.</p> <p>7/30/07: Anchors had originally been placed to attach PT sill plate to concrete slab-on-deck. Placement of additional anchors into the concrete is not necessary. All plates were instead screwed to the PT plate using Timberlock fasteners. Fasteners were spaced (2) at 8" o.c. for shear walls and (1) at 12" o.c. at other walls. Work was reviewed and appears complete.</p>	CLOSED 7/30/07
B1-1.14	07/25	B1 – 1 st Floor – Shear Wall at Unit G-108	The plywood sheathing for this shearwall is not completed. The plywood needs to be installed at the interior side of the "exterior" section of the shear wall. At the interior side of the framing, the plywood needs to be placed to attach the 2 sections of the shear wall	CLOSED 8/8/07
B1-2.1	05/04	B1 – 2 nd Floor Wall Panels	Pre-fabricated wall panels arrived with tybar barrier attached. It is not possible to inspect sheathing nailing as such, and tybar needs to be removed.	CLOSED 7/10/07

B1-2.2	05/04	B1 – 2nd Floor Panel to Panel Vertical Plywood Overlap	<p>The plywood sheathing at the 2nd floor panels was to be coordinated to overlap the lower panels for attachment between panels. Based on reviewed shop drawings, the overlap was to be 1 ¾", overlapping 1" onto the lower panel plates. This has not occurred. Ledgewood has agreed that in lieu of replacing in-place plywood and installing new sheets to span the joint between panels, all plates will be screwed together using Timberlock fasteners at 8" o.c. Use 8" long fasteners at bearing walls and 6" long fasteners at non-bearing walls.</p> <p>7/5/07: Timberlock screws are in place at all locations observed. Exterior plywood still needs to be nailed into the top plates of the 1st floor wall panels.</p> <p>7/16/07: Nailing was place at all locations observed.</p>	CLOSED 7/16/07
B1-2.3	05/24	B1 – 2nd Floor Header H7 Wall Jamb	<p>At one location of Building 1 along Oxford Street there is an H7 header required per SSK-29. At these headers, the corner jamb detail should be constructed of (5) 2x6 members (per SSK-33), but at the opposite side of the header, the jamb should be a 5 ¼" x 5 ¼" PSL post, per SSK-31 and Addendum #1 – Line #5 (for Dwg. S1.3).</p> <p>7/5/07: Jamb has been corrected.</p>	CLOSED 7/5/07
B1-2.4	06/14	B1- 2nd Floor Wall Panels	<p>At the second floor wall panels reviewed, the previously identified issue with the overdriven fasteners does not appear to have been addressed. G/C shall correct any areas where nailing is deficient and provide means for engineer to observe the corrections upon completion.</p> <p>7/5/07: To date, Becker has only reviewed 1 side of the building to identify sheathing with overdriven fasteners. Access with a lift is required to remove the shop-installed tyar and review all exterior wall panels.</p> <p>7/16/07: From all locations observed, 2 areas were found that required additional nailing. These areas were identified to Dave Chabe of Ledgewood. At the center shear wall on the Oxford Street side, it is necessary to place 8" long Timberlock fasteners at 8 o.c. through the top plates of the 2nd floor panel, the truss seats/blocking, and the bottom plate of the 3rd floor. At the center shear panel on the opposite side of the building, additional blocking shall be installed and fastened to the vertical studs to allow for additional nailing of the sheathing (10d at 4" o.c.). Notify BSE to observe repairs when complete.</p> <p>7/25/07: For review of 2 areas identified on 7/16, the center shear wall section at the Pearl Street side could not be reviewed as the sheetrock was in place. On the opposite side, blocking and nailing was in place as directed. GC to forward documentation to BSE on company letterhead certifying that fasteners were placed prior to placing sheetrock.</p> <p>7/26/07: Documentation received from Ledgewood construction certifying that the anchors have been installed as specified.</p>	CLOSED 7/26/07

B1-2.5	07/10	B1 – 2 nd Floor – Shear Wall at Unit C-203	The plywood sheathing for this shearwall is not completed. The plywood needs to be installed at the “exterior” section of the shear wall and extend to the “interior” section. 7/25/07: Plywood was in place as necessary and appears to be fastened as necessary.	CLOSED 7/25/07
B1-2.6	07/10	B1 – 2 nd Floor – Shear Wall at Unit G-208	The plywood sheathing for this shearwall is not completed. The plywood needs to be installed at the “exterior” section of the shear wall on both sides of the framing. On the interior side of the framing, the plywood needs to be placed to attach the 2 sections of the shear wall (the exterior panel to the interior panel.) 7/25/07: Plywood placed on the exterior face, but not on the interior face. Work will be completed once wall is insulated. 7/30/07: Plywood on the interior face of this wall was in place and nailed adequately.	CLOSED 7/30/07
B1-R.1	05/24	B1 – Roof No Truss Support	No interior bearing for trusses on Line 5 at the roof level. Infill over existing post with 2x dimensional lumber so that truss seat directly bears on infill.	CLOSED 6/28/07
B1 – R.2	05/31	B1 – Roof Conn. of Roof Sheathing to Stair Shear Walls	It is necessary that the roof sheathing is directly attached to the stair shear walls for load transfer. The shear wall sections extend above the roof sheathing, not allowing the sheathing to be nailed to the wall. Attach the roof truss to the vertical wall using Simpson A23 angles at 24” o.c., Provide 2x6 blocking between wall studs as necessary for nailing of the angle. It is acceptable to nail through the plywood sheathing. (typ. 4 wall locations)	CLOSED 6/28/07
B1-S.1	05/24	B1 – Stair Missing Hangers	Install hangers for 3 1/2x11 7/8 LVL per section 2 on drawing A14.3 at (6) locations. 7/5/07: Use Simpson LSSU410 for these conditions as shown in revised details issued July 3, 2007 8/20/07: This item superseded by Item B1-S.9.	CLOSED 8/20/07
B1-S.2	05/24	B1 – Stair Stringer to Beam Connection	Several locations where (2)2x8 stringers are fastened to blocking below landing header. Stringers must be directly fastened to landing header per section 6 on drawing A14.3 7/25/07: A second LVL will be added below the existing to provide adequate support for the stringers. LVL will attach to (3) 2x6 or (2) 2x8 post within wall with hanger as specified. 8/20/07: Work appears to have been completed as identified.	CLOSED 8/20/07
B1-S.3	05/24	B1 – Stair Hanger Installation	All hangers must have all holes filled with manufacturer specified fasteners 7/25/07: At LVL stringer closest to the wall, the specified hanger cannot be installed. In lieu of using this hanger, install a 3 1/2 x 3 1/2 PSL post below the LVL stringer. Locate the post to bear on the thickened concrete ramp slab as close as possible to the end of the stringer. Attach the stringer to the landing LVL with (2) Simpson LS70 angles on the accessible side. 8/20/07: Only (1) LS70 installed in center, not leaving enough room above or below for installation of the second one. In lieu of the second LS70, install an L30 above and below the LS70.	CLOSED 9/24/07

			9/24/07: Work appears complete	
B1-S.4	05/24	B1 – Stair Shearwall PWD overlap	At (4) shearwall locations at the stairs, the plywood sheathing does not overlap from panel above to panel below. Install (1) 6” Timberlock screw @8” o.c. through bottom plate into top plate of wall below.	CLOSED 6/28/07
B1-S.5	05/24	B1 – Stair Bearing of Landing Header	At several locations landing headers are bearing on hangers which are in turn only fastened to the flat face of (1) 2x8. If hangers are to be used, a minimum post of (3)2x6 or (2) 2x8 flat – full length is necessary. Fasten post together w/ (2) rows of 10d Nails @8” o.c. Remove and reinstall nails at face of hanger into new post. Headers may bear directly on top of post or bear as shown on detail 7 on drawing A14.2. Supporting posts must continue down to foundation in all cases. 8/20/07: This item superseded by Item B1-S.9	CLOSED 8/20/07
B1 – S.6	05/24	B1 – Stair Attachment of Plywood to entry corner	Sheathing at the exterior corners at the stairway entries must be fastened to stud framing. Studs must be placed in the corner in order to fasten the sheathing at these locations. Sheathing should be removed from corner to nearest stud and replaced upon installation of corner framing. 8/20/07: Work appears to have been completed as identified.	CLOSED 8/20/07
B1 – S.7	07/30	B1 – Stair Shear Wall Sheathing	There is sheathing missing from the shear walls at the sides of the stair towers. Plywood must be placed, with all edges blocked and nailed with 10d nails at 4” o.c. 10/9/07 – There was a limited area of plywood sheathing exposed at time of visit due to drywall installation. From what was observed, there were panels of sheathing which were not fastened to the end post of the shearwall. ALL panels running over the end post are to be fastened to the end post with previous specified nailing. 11/1/07: Per Rick Nanartowich of Ledgewood Construction, area was addressed as instructed, but covered up with gypsum prior to re-inspection by BSE personnel (see attached e-mail from Rick Nanartowich).	CLOSED 11/2/07
B1 – S.8	07/30	B1 – Stair Shear Wall Straps	It is necessary to place Simpson straps between floors at each end of the shear wall sections at the side of the stairs. 10/9/07 – There were limited number of straps exposed at the time of visit due to drywall installation. From what was observed, straps were installed at the shearwall end posts. Only (4) location were available to be observed, Dave Chabbe of Ledgewood Construction informed me that photos were taken of all strap locations prior to drywall installation and he would forward all photos to Jim Fortin of BSE for review. 11/1/07: Photos of straps have been submitted for review. The photos are close-ups of each strap and thus do not clearly identify that the straps were located at the proper locations on the shear wall. It is	CLOSED 11/14/07

			necessary the Ledgewood submit written signed certification that the straps were installed at the correct locations. 11/14/07: Certification letter from Ledgewood submitted.	
B1 – S.9	07/25	B1 – Stair Landing Construction	It was decided that at all landings, a new LVL beam would be placed below the existing beam that would span the entire width of the stair shaft. This new LVL would be supported at the walls with a Simpson hanger fastened to a (3) 2x6 (or 2-2x8 flat) post in the wall. This post shall be constructed of full-height studs. The new LVL would be scribed to clear the exg. LVL hanger and allow complete contact between the LVL's. The new LVL would be attached to the existing LVL with 16d nails at 6" o.c. each side. 8/6/07: <u>Revised Information:</u> Place ½" thick plywood panels on the back side of the LVL's (not the stringer side). Locate PWD panels between the 2x10 landing joists from underside of landing floor sheathing to bottom of new LVL. Fasten PWD to the LVL's with 4 rows of 3- 8d nails (1 row into the top and bottom of existing LVL, 1 row at the top and bottom of new LVL). 8/20/07: Work appears to have been completed satisfactorily.	CLOSED 8/20/07
B1-G.1	04/09	B1-General Floor Trusses	It is necessary that the floor trusses line up directly above the wall studs. At some locations, there is an offset. This issue will be compounded when the upper floors are erected. It is imperative that trusses line up directly below wall studs. Modify truss layout to account for minor mis-alignment. Additional full-height wall studs (down to foundation) will be necessary where the trusses do not line up. Completed at Basement Level. 6/28/07: At Basement and 3 rd floor level, no deficient areas appear to exist. 7/5/07: At 2 nd floor level, a couple areas exist where the trusses do not line up with the vertical wall studs. These areas were identified to Dave Chabe of Ledgewood. 7/10/07: At 2 nd floor level, additional vertical studs were added in all locations necessary. 7/25/07: Entire first floor was reviewed and trusses appear to line up adequately above studs. When they are not perfectly in line, they are within acceptable tolerance.	CLOSED 7/25/07
B1-G.2	04/09	B1-General Blocking	At truss bearing on all 2x6 stud walls and shear walls, it is necessary to block between the truss seats from top plate to underside of sheathing. The blocking must be solid, full width of wall (ie. 5.5") and full height. Nail blocking to top plate and to other blocking per IBC Fastening Schedule (per email issued on April 5, 2007). Completed at Basement Level 6/28/07: At Basement and 3 rd floor level, no deficient areas found. 7/5/07: At 2 nd floor level, no deficient areas found 7/25/07: At 1 st floor level, no deficient areas found.	CLOSED 7/25/07

B1-G.3	04/09	B1-General Floor Sheathing	<p>Floor sheathing must be attached to all support framing with 8d Nails at 6" o.c. At balcony locations, the nailing shall be 10d Common nails at 4" o.c. per Detail 5/S3.1. 8d @6" o.c. appears to be completed at 1st Floor. Nailing at balconies has not been reviewed.</p> <p>6/28/07: At 3rd floor level, no deficient areas found. 7/5/07: At 2nd floor level, no deficient areas found. 7/25/07: At 1st floor level, no deficient areas found. Note that entire floor areas were not reviewed. Review consisted of numerous spot checks as areas throughout the floor.</p>	CLOSED 7/25/07
B1-G.4			NOT USED	
B1-G.5	04/22	B1 – General Adjacent Shear Wall Attachment	<p>At any locations where 1 shear wall segment includes more than 1 pre-fab wall panel, it is necessary that the panels are attached to each other using (2) Timberlock fasteners at 8" o.c. plus the sheathing must overlap to tie both panels together. Use Timberlock fasteners with an adequate length to get through all the studs at the panel ends.</p> <p>5/24/07: Observed (4) locations where only (1) fastener at 8" o.c. was present. All other locations had no Timberlock fasteners present. Where gaps are present between adjacent end posts, shim solid prior to installing fasteners.</p> <p>6/28/07: At Basement and 3rd floor level, no deficient areas found.</p> <p>7/5/07: At 2nd floor level, the Timberlock fasteners have not been placed at the sides walls of the 2 stair towers (4 walls total). These areas were identified to Dave Chabe of Ledgewood.</p> <p>7/10/07: At 2nd floor level, the Timberlock fasteners have been placed at the sides walls of the 2 stair towers (4 walls total).</p> <p>7/25/07: At the 1st floor level, all adjacent wall panel sections forming 1 shear wall appeared adequately attached to each other.</p>	CLOSED 7/25/07
B1-G.6	04/22	B1- General Wall Studs & Plumbing	<p>At six locations in the basement and first floor level, vertical wall studs were cut away due to plumbing interferences. At these locations, place a header above the piping interference to span between the adjacent full-height stud groups. Use a 3 1/2" x 9 1/4" LVL header with (2)-2x6 jack studs at each end nailed to the full-height stud group. Jack studs are required above and below</p>	CLOSED 5/17/07
			<p>the new headers if this issue occurs on more than 1 floor level. Fasten header to top plate with .148" x 3" long nails at 6" o.c. Locate the header in the center of the wall width and strap for plywood / sheetrock placement. This solution works at these locations only, and it should not be assumed that this corrective work is acceptable at any future locations. Damage to the framing system must be evaluated on a case-by-case basis.</p>	

B1-G.7	04/22	B1 – General Shear Wall Holdowns & Straps	<p>The shear wall holdown locations were field coordinated and Steve Quattropani of Ledgewood sprayed orange paint to identify the locations. At all locations, it is necessary that the holdown is directly attached to three full-height 2x6 studs nailed together with 10d at 4" o.c. nails. At some locations, additional full-height studs will need to be installed and fastened. 5/30/07: It is acceptable to have a maximum 3/4" thick plywood plate between the holdown and the (3) 2x6 post. Replace the SDS screws at connections utilizing the plywood plate with longer SDS screws that provide a minimum of 3" embedment into the post (ie. 3 1/2" SDS screws required when using a 1/2" thick plywood plate). Also, at locations where the (3) 2x6 post is not constructed of full height members (broken by header), it is necessary to place a Simpson MSTC52 at one side of the post centered across the header. Attach using 16d sinker nails (.148" diameter x 3 1/4" long) following manufacturers instructions.</p> <p>6/28/07: At the 3rd floor level, additional studs were placed where necessary to ensure a (3) 2x6 post at all shear wall ends. No straps were necessary across the header.</p> <p>7/5/07: At the Basement Level, the MSTC52 strap is located at the inside face wherever necessary.</p> <p>7/5/07: At the 2nd floor level, the strap across the header has been installed where necessary except at 1 location, which was identified to Dave Chabe of Ledgewood.</p> <p>7/10/07: At the 2nd floor level, missing strap identified on 7/5/07 has been installed.</p> <p>7/25/07: At the 1st floor level, 1 strap requires additional fastening. GC is aware of location. Also, all holdown nuts need to be tightened.</p> <p>7/30/07: All work appears to have been completed adequately.</p>	CLOSED 7/30/07
B1G.8	05/01	B1 -General Wall Panel Attachment to PT Sill	<p>Fasteners for the attachment of the wall panel sheathing to pressure-treated sill plate shall be hot-dipped galvanized. Where existing fastening is not galvanized, the existing fastening shall be removed and replaced with the proper galvanized fasteners.</p> <p>7/5/07: At Basement Level, the sheathing has been attached to the PT sill plate using galvanized fasteners.</p>	CLOSED 7/5/07
B1 -- G.9	05/01	B1-General Panel to Panel Connection	<p>We observed lack of direct panel-panel connectivity. All panels must be connected to adjacent panels either through both overlapping of wall sheathing with approved nailing and overlapping of top plate, or directly fastening end posts to each other with Timberlock screws @ 8" o.c. At shearwalls, sheathing and top plate MUST overlap between adjacent panel segments that form the shear wall segment.</p> <p>6/28/07: At Basement and 3rd floor level, adjacent panels are attached as stated.</p> <p>7/5/07: At 2nd floor level, most adjacent panels have been attached together. The areas found to require additional fastening were identified to Dave Chabe of</p>	CLOSED 7/30/07

			<p>Ledgewood.</p> <p>7/10/07: At the 2nd floor level, all areas identified to require additional attachments from 7/5/07 have been addressed.</p> <p>7/25/07: Three locations were found (and marked) that need additional fastening (GC is aware of locations)</p> <p>7/30/07: Additional fastening was completed in areas previously identified.</p>	
B1-G.10	05/01	<p>B1 – General</p> <p>Floor to floor straps at shear walls</p>	<p>Attachment of strap anchor to shearwall end post above and below floor diaphragm was discussed. It is necessary that straps are installed on opposite faces of the (3)2x6 shearwall end post. Also, straps at the top of the post must be directly fastened to the same (3)2x6 post as the strap/anchor at the bottom of the post in order to maintain a continuous load path. 5/4/07: Ledgewood has proposed replacing the straps with Simpson holdown which will be located against the underside of the top plates of the lower panel and the bottom plates of the upper panel. This is an acceptable option. Use Simpson HDU5-SDS2.5 at all locations. <u>This option is to replace the strap ties at all exterior wall locations at BUILDING 1 ONLY.</u></p> <p>7/5/07: Ledgewood has been able to get the strap detail to work at all locations. The straps have not been replaced by holdown anchors.</p>	<p>CLOSED</p> <p>7/5/07</p>

STRUCTURAL SPECIAL INSPECTIONS

BUILDING 2

Item No.	Date	Location	Description	Status
B2-1.1	04/19	B2- Fdn Wall Mis-Aligned	There are 3 locations where the foundation wall was mis-located approximately 5". These are at the patio exterior wall at Unit 2-103, the vestibule and patio wall at Unit 1-102, and the patio wall at Unit 1-101. At these locations, the foundation wall was thickened for placement of the patio slab haunched over the wall. To properly support the overhanging sill plate (and subsequent bearing wall panels), it is necessary to pour an extension to the thickened wall section to the underside of the plate, with new reinforcement drilled and epoxy grouted into the existing foundation. Place #4 bars at 16" oc max. vertically. Embed the bars 6" into the existing foundation and field verify the extension to maintain proper concrete cover of the bars. Place #4 bars at 16" o.c. horizontally into the higher stem section of the wall. Embed the bars 4" into the foundation and verify the extension to maintain proper concrete cover of the bars. Either the vertical bars or the horizontal bars shall be fabricated with a bend to completely lap the straight bars. Lastly, place a continuous #4 horizontally at the "bend" in this new rebar. Use HILTI HIT HY 150 adhesive for embedment of bars into concrete. This wall addition needs to be a separate pour from the patio slab placement.	CLOSED 04/26/07
B2-1.2	04/19	B2- Fdn Sill Anchor Locations	Sill anchors are located in the center of the plate width, with a maximum allowable offset of 1" from center. At locations where this does not occur, anchors must be added.	CLOSED 5/17/07
B2-1.3	04/19	B2 - 1st Floor Sill Plates	Other than the areas corrected per Item B2-1.1, it is agreed that any overhanging sill plates will be moved to bear on the foundation walls, with modifications to the wall panels and floor truss design to suit the field conditions. In re-locating the plates, it is expected that the maximum overhang will be 1/2" when the concrete slab will be placed in contact with the sill plate, and 0" (full bearing) when the foundation wall is higher than the slab elevation. 5/17/07: Panels have been erected on sill plates that overhang the foundation wall approx. 1" at locations where the foundation wall is higher than slab elevation. Additional construction in this area is necessary. A sketch will be provided in the near future. 8/3/07: At the wall in Mechanical Room 2-111, the foundation wall is elevated 5'-0" above the concrete slab-on-ground, and the sill plate overhangs approx. 1". It is necessary to place a P.T. SYP stud flat	CLOSED 8/13/07

			<p>against the concrete wall below each vertical stud group. These new studs shall be bolted into the concrete wall with Hilti Kwik Bolt 3 hot-dipped galvanized expansion anchors. Use 1/2" x 7" long bolts and ensure 3 1/2" embedment into the concrete. The bolts cannot be countersunk into the 2x section. Place 1 bolt 3" from top of foundation wall and (1) bolt 3" above the concrete slab. Equally space (2) additional bolts between the top and bottom bolts (should be 18" o.c.). It is also necessary to coordinate with the Architect to determine any additional wall finishing instructions necessary at this location.</p> <p>8/13/07: Additional framing installed as instructed. Item is CLOSED.</p>	
B2-1.4	05/17	B2 – 1st Floor – Ext Wall at Stair 2-1	<p>The bond-out for the door opening is larger than the framed opening in the wall panel. The panel does not currently have complete support on the foundation. The entrance slab shall be poured prior to loading this wall panel.</p> <p>8/13/07: GC states that placement of concrete entrance slabs to begin within the next week.</p> <p>11/2/07: It appears that the 2x6 PT was placed as needed between the panel bottom plate and the concrete foundation.</p>	CLOSED 11/2/07
B2-1.5	05/17	B2 – 1st Floor – Sheathing Nailing in Blocking	<p>There are numerous locations at the wall panels where the sheathing nailing is not properly embedded into the blocking. The nails protrude out of the blocking or miss the blocking completely. All affected areas shall be corrected by replacing the inadequate fasteners.</p> <p>8/13/07: GC to review all blocking and add nails where necessary.</p> <p>8/20/07: GC states that additional nailing has been installed where necessary. Item could not be reviewed during field visit.</p>	CLOSED 8/20/07
B2-1.6	05/17	B2 – 1st Floor – Sill Anchors	<p>Except for the shear wall located in the center of the building at the wall against Pearl Street, sill anchors at the shear walls were not placed prior to pouring the foundation walls. Anchors are necessary at 1'-0" o.c for the shear walls shown on drawings S1.5 & S1.6. Place 5/8" diameter x 4" embed (min.) HILTI Kwik-Bolt 3 Anchors at 1'-0" o.c. max. Provide verification that Hilti product was used in this application.</p> <p>8/13/07: Simpson Titen HD anchors were used as an approved alternate. All anchors appear to be installed as specified.</p>	CLOSED 8/13/07
B2-1.7	05/17	B2 – 1st Floor – Shear Wall Strap	<p>At the shear wall section at the North Wall of Unit 2-103 (in bedroom 1), the strap attachment is not attached to a (3) 2X6 post. It is necessary to add 2 new full-height fire retardant treated studs at this location.</p> <p>8/13/07: Only 1 stud added, creating a (2) 2x6 king post at jamb. Need to place a Simpson MSTC52 strap across header, attaching the jack stud and king stud above and below the header, with nailing of the strap to the header.</p> <p>8/20/07: Simpson strap installed as identified.</p>	CLOSED 8/20/07

B2-1.8	05/31	B2 – 1st Floor – Ext. Wall Panel at Vestibule 2-110	The wall studs in the exterior wall panel to the right of Vestibule 2-110 have been removed. There is a floor truss directly above that is not adequately supported. Replace the removed wall studs with new studs to support the truss. Fasten the studs to the panel and to each other following project requirements. 8/13/07: Studs have been replaced.	CLOSED 8/13/07
B2 – 1.9	05/31	B2 – 1st Floor – Canopy Column Base	At the canopy outside of Vestibule 2-110, the HSS 3x3 column at the right side is not properly attached to the concrete foundation. The anchors are to be drilled and epoxied into the foundation using Hilti HIT HY-150 Adhesive system, as specified on Dwg. S1.1. Remove and replace to meet project requirements. 8/13/07: Anchors are acceptable. Ensure spalled area of concrete is filled when placing the exterior slab.	CLOSED 8/13/07
B2-1.10	05/31	B2- 1st Floor – Shear Wall Holdowns	Holes have been drilled into the top of the foundation walls at locations where shear wall holdowns are specified. The holdown anchor rod shall be epoxied into the foundation wall using the Hilti HIT HY150 Adhesive System. This installation shall be monitoring by an SWCole representative at all locations, with a report submitted to Becker Structural Engineers when work is complete. 8/13/07: It appears all anchors have been placed at holdowns.	CLOSED 8/13/07
B2-1.11	05/31	B2- 1st Floor – Header Location at Corridor Shear Wall	At the interior corridor shear wall, it is necessary that the bottom of the (3) 2x8 headers at each door are located at 8'-0" above finish floor, and the wall area above the header is sheathed with plywood. This corridor shear wall was designed as 1 wall and sheathing is required above the door openings. 7/16/07: The header will remain where located, and new framing will be placed below the header to (+8'-4"). Place (2) 2x6 members flat at the 8'-4" elevation and add cripple studs above. Sheath with ½" plywood, overlapping the new sheathing 1 full stud width on each side. Fasten with 10d nails at 4" o.c. 8/13/07: Work completed as specified.	CLOSED 8/13/07
B2-1.12	05/31	B2- 1st Floor Wall Studs & Plumbing	At one location at the first floor level, vertical wall studs were cut away due to plumbing interferences. At this location, place a header above the piping interference to span between the adjacent full-height stud groups. Use a 3 ½" x 9 ¼" LVL header with (2)-2x6 jack studs at each end nailed to the full-height stud group. Jack studs are required above and below the new headers if this issue occurs on more than 1 floor level. Fasten header to top plate with .148" x 3" long nails at 6" o.c. Locate the header in the center of the wall width and strap for plywood / sheetrock placement. This solution works at this location only, and it should not be assumed that this corrective work is acceptable at any future locations. Damage to the framing system must be evaluated on a case-by-case basis. 8/13/07: Work appears to have been completed as specified.	CLOSED 8/13/07

B2 – 1.13	06/14	B2 – 1st Floor – Interior H5 Jamb	At mark H5 header locations, jambs were cut shorter than floor to floor and flat 2x6 shim was observed above header at jamb as well as under the jamb or no shim at all above the header. Per Note 3 in Addendum #1 for dwg S1.6 – “Provide PSL above and below LVL for continuous load transfer.” Blocking should be removed at all locations and replaced with PSL such that the grain is oriented the same as the in-place jamb. <u>We strongly recommend making this repair prior to installation of H5 header on floors above.</u> 8/13/07: Work appears to have been addressed as specified.	CLOSED 8/13/07
B2 – 1.14	06/14	B2 – 1st Floor – Canopy Column	At the canopy outside of Stair 2-1, the HSS 3x3 column at the corner of unit J is not in the correct location. The tube should match the location of the tube across the stair. No steel should be into the living space, it should be contained to the exterior stair walls only. 8/13/07: Canopy structure is acceptable as constructed at this corner. Architect has approved alternate room layout to hide the canopy section that protrudes into the room.	CLOSED 8/13/07
B2- 1.15	08/13	B2- Fastening of PT ledger to Elevator CMU	It is necessary to place anchor bolts to attach the PT ledger boards to the elevator CMU shaft wall on the vestibule side of the elevator 8/20/07: Anchors were installed as identified.	CLOSED 8/20/07
B2 – 1.16	08/13	B2 – Blocking at PWD joints	GC to review all areas and install any missing blocking at plywood joints. 8/20/07: Blocking appears to have been installed as identified.	CLOSED 8/20/07
B2-2.1	05/31	B2- 2nd Floor Trusses	A plywood gusset repair has been completed at two trusses bearing on the wall to the patio at Unit 2-104. It is necessary to submit a complete design of the repair, with supporting calculations, to Becker Structural Engineers for review and record. The submittal shall have the stamp of a professional engineer registered in Maine. 11/2/07: Stamped design was provided to BSE on 11/2/07. The actual repair completed could not be reviewed against the sketch as the gypsum ceiling was in place. Steve Quattropani of Ledgewood Construction states that work was completed as detailed. It is necessary that Ledgewood submit written signed certification that work was completed as specified on the repair sketch. 12/5/07: Documentation received from Ledgewood Construction certifying that the work was completed as outlined.	CLOSED 12/5/07
B2-2.2	05/31	B2 – 2nd Floor Trusses – Ledger at CMU	Per the details submitted by the truss manufacturer, it is believed that (2) 2x10 ledgers are necessary to support the top chord bearing trusses. The double ledger shall be bolted into solid grouted CMU bond beam using 5/8” diameter x 5” embed Hilti HY 150 Adhesive anchors (as specified in plan). 8/13/07: Double 2x10 PT ledgers are installed at all locations where trusses are supported.	CLOSED 8/13/07

B2 – 2.3	05/31	B2 – 2nd Floor Framing – 2x8 at corridor	For the 2x8 floor framing at Stair 2-1, it is necessary that the joists bear on the wall top plates a minimum of 2 ¾". GC verify conditions and replace joists if necessary. 8/20/07: Area appears to be constructed satisfactorily.	CLOSED 8/20/07
B2-2.4	05/31	B2 – 2nd Floor Framing – LVL Mark H6 outside Stair 2-1	The 3 ½" x 9 ¼" LVL supporting 2x8 corridor framing outside of Stair 2-1 was incorrectly marked on the plan. This header supports bearing walls at all floor above, and it is necessary to replace this header with a 5 ¼" x 16" Versa Lam Beam. Support the beam at the stud wall end with th 5 ¼" square PSL post as originally specified. Support the beam at the concrete wall with a L4x4x3/8" x 8" long angle seat below the header. Bolt the angle to the wall with (2) - 1" diameter x 8 ¼" embedment Hilti HIT HY-150 Adhesive anchors. Ensure a ¼" gap between the header and the concrete surface. Space the bolts 5 ½" apart, centered on angle. An RFP will be issued for this item. 7/16/07: This item was discussed with Steve Q, and considering that additional work has been completed in this area, it will be more work to complete this item as originally explained. Instead, the new LVL shall be placed below the existing LVL. Attach the new LVL to the existing LVL with 16d nails at 6" o.c, each side. Also, brace the new LVL at midspan with 2x4 diagonals back to the 2x floor framing. Support the new LVL as identified above. This has been discussed with the Architect, and a revision to RFP #35 will be generated. 7/25/07: The new 5 ¼" x 16" LVL shall be placed below the existing LVL. A ½" thick plywood panel shall be placed on each side of the LVL's. The plywood shall extend from just below the 2x8 floor joists to the bottom of the new LVL, and be fastened to the LVL's with 3 rows of 8d nails at 12" o.c. horizontal (1 row into the existing LVL, 1 row at the top of the new LVL, and 1 row at the bottom of the new LVL). Support the beam at both ends with a 5 ¼" square full-height PSL post (provide a PT sill plate against the concrete slab). Locate the post against the existing stud wall and attach to the wall with 8" long Timberlock screws at 8" o.c. Locate the post near the concrete wall and allow a ½" gap between the post and the wall.	CLOSED 7/25/07
B2-2.5	06/14	B2- 2nd Floor – Header Location at Corridor Shear Wall	At the interior corridor shear wall, it is necessary that the bottom of the (3) 2x8 headers at each door are located at 8'-0" above finish floor, and the wall area above the header is sheathed with plywood. This corridor shear wall was designed as 1 wall and sheathing is required above the door openings.	CLOSED 8/13/07
B2-2.6	06/14	B2- 2nd Floor – Shear wall Strap	At many locations straps are absent at shearwall end posts. 8/13/07: It appears straps have been placed at all necessary locations. Final inspection to occur on 8/20 and tracked under separate document.	CLOSED 8/13/07

B2-2.7	06/14	B2- 2 nd Floor – Shearwall end post strap	At the interior end post of the shearwall located between Stair 2-1 and Unit 2-206, the post is being utilized as a post for the header mark H6. Since this post is not continuous to the floor sheathing above, a Simpson MSTC40 strap must be used due to the larger gap between posts. 8/13/07: Simpson MSTC 52 strap installed.	CLOSED 8/13/07
B2-2.8	06/14	B2- 2 nd Floor – Header post	The posts for the header mark H6 as described in B2-2.7 bears on a built-up 2x6 post. By design a 5 1/4x5 1/4 PSL post should be used for the bearing of the header. Remove the existing posts and install the appropriate posts. 8/13/07: Additional studs were added in lieu of replacing to a PSL post. Item is satisfactory.	CLOSED 8/13/07
B2-2.9	06/14	B2- 2 nd Floor – Shearwall end post bearing	Continuous bearing must be provided at shearwall end posts. No gaps shall be present between top of post and floor above. Blocking shall be installed at all locations where gaps are present. Anchor straps shall not be fastened to blocking. 8/13/07: It appears work has been completed as specified.	CLOSED 8/13/07
B2 – 2.10	06/14	B2 –2 ND Floor – Canopy connection of tapered C12 to HSS	At the canopy outside of Vestibule 2-110, the C12 at the right side is not properly fastened to the HSS 3x3 column per the drawings. Top and bottom flanges must be welded to the column with a full penetration weld. 8/20/07: Welds must be cleaned up. Visual inspector required for fillet welds. Full penetration welds specified on the drawing shall receive non-destructive testing (either RT or UT) per Spec. 05120, Section 3.02, C.4.b. 9/24/07: Ledgewood states that inspection was completed by SW Cole, but a report needs to be forwarded to Becker Structural Engineers for review and record. 12/5/07: Documentation received from Ledgewood Construction certifying that the work was completed as outlined.	CLOSED 12/5/07
B2 – 2.11	06/14	B2 –2 ND Floor – Canopy cap plate connection (left side)	At the canopy outside of Vestibule 2-110, the cap plates for the HSS3x3 columns at the left side are at an elevation above the wall top plate and above the wall bottom plate of the floor above. (2)2x6 solid blocking between the effected studs at that bay must be installed above the in-field elevation of the cap plate. Blocking must be installed on both side of the column. Exterior wall sheathing must be fastened to the blocking with 10d Common nails @4" O.C. Where wall plates have been discontinued, provide a Simpson LSTA18 each side of wall plate to connect the discontinued plate. 8/13/07: Repair work at this location appears to have been completed adequately.	CLOSED 8/13/07
B2 – 2.12	06/14	B2 –2 ND Floor – Canopy cap plate connection (right side)	At the canopy outside of Vestibule 2-110, the cap plates for the HSS3x3 columns at the right side are at an elevation above the wall top plate and above the wall bottom plate of the floor above. (2)2x6 solid blocking between the effected studs at that bay must be installed above the in-field elevation of the cap plate. Blocking must be installed on both side of the	CLOSED 8/20/07

			<p>column. Exterior wall sheathing must be fastened to the blocking with 10d Common nails @4" O.C. Where wall plates have been discontinued, provide a Simpson LSTA18 each side of wall plate to connect the discontinued plate. In addition, a 3/16"x3"x2'-0" steel strap shall be welded to the side of the HSS3x3 and extend alongside the existing shearwall. (2)2x6 solid blocking shall be installed in the first (2) bays of the adjacent shear wall at the elevation of the strap. Attach the strap to the blocking with Simpson SDS1/4x3" screws @6"o.c. Fasten the blocking to the shearwall plywood with 10d Common nails @4"o.c.</p> <p>8/13/07: Information provided above to be updated as provided here. Bend a Simpson MSTC 52 strap around the top of the HSS and tie to both sides of shear wall framing interior to the post. Add flat blocking above the bottom plate of the wall panel to fasten the strap to. Nail blocking to wall plate with (2) 16d nails at 6" o.c. max.</p> <p>8/20/07: Strap was installed as identified. Work appears to have been completed satisfactorily.</p>	
B2 – 2.13	06/14	B2 –2 nd Floor – Interior H5 Jamb	<p>At mark H5 header locations, jambs were cut shorter than floor to floor and flat 2x6 shim was observed above header at jamb as well as under the jamb. Per Note 3 in Addendum #1 for dwg S1.6 – "Provide PSL above and below LVL for continuous load transfer." Blocking should be removed at all locations and replaced with PSL such that the grain is oriented the same as the in-place jamb. <u>We strongly recommend making this repair prior to installation of H5 header on floors above.</u></p> <p>8/13/07: Work appears to have been addressed as specified.</p>	CLOSED 8/13/07
B2 – 2.14	06/14	B2 –2 nd Floor – H7 Header	<p>At mark H7 header locations, LVL headers were observed. Exterior headers cannot be composed of engineered lumber. Remove header and install flitch beam per SSK-32R.</p> <p>8/20/07: It does not appear that the bolted flitch beam has been installed at (1) location at the 2nd floor at Unit 2-204. The flitch beam will need to be installed at shown in SSK-32R, dated 3/23/07. Based on te parameters, and to control lateral buckling of the plate, it is not adequate to place the steel plate on the exterior of the wood header. The steel plate shall be sandwiched between the 2x framing and be bolted as together as specified.</p> <p>9/24/07: Flitch beam has been constructed. MSTC 52 straps across header ends to attach to jambs have not yet been placed.</p> <p>10/24/07: Flitch plate is installed at (1) remaining locations and MSTC 52 straps have been placed</p>	CLOSED 10/24/07

B2 – 4.1	08/13	B2 – 4th Floor - Shear Wall Sheathing	<p>The plywood sheathing for this shearwall is not completed. The plywood needs to be installed at the interior side of the "exterior" section of the shear wall. At the interior side of the framing, the plywood needs to be placed to attach the 2 sections of the shear wall</p> <p>8/20/07: Ledgewood states that this work has been completed but the area has gypsum installed and cannot be reviewed. Ledgewood to submit written signed certification that work was completed as described.</p> <p>12/5/07: Documentation received from Ledgewood Construction certifying that the work was completed as outlined.</p>	CLOSED 12/5/07
B2 – 3.1	06/14	B2 –3 rd Floor – Floor Framing	<p>2x8 @12" o.c. floor framing in the corridor near Stair 2-1 is oriented in the wrong direction. The wall at the bottom edge of the stair as well as header mark H6 were not intended for carrying this part of the floor. Framing should be rotated 90 degrees from current orientation.</p> <p>8/13/07: Item is acceptable as constructed if approved by the Architect.</p>	CLOSED 8/13/07
B2 – 3.2	06/14	B2 –3 rd Floor – Floor Framing	<p>Framing noted in item B2-3.1 shall bear at one end on shearwall framing. Sheathing must continue to floor above at this location. Install 2x8 rim joist at end of floor joists for sheathing to run past.</p> <p>8/13/07: Addition of blocking is necessary. This areas was discussed with the GC.</p> <p>8/20/07: Work appears to have been completed adequately.</p>	CLOSED 8/20/07
B2 – S.1	07/25	B2- Stair Shear Walls	<p>The plywood sheathing at the stair shear walls was located at the incorrect side. As such, the plywood is broken at all floors and cannot be connected to adjacent panels. To replace this connection, it is necessary to place (1) 6" long Timberlock screw at 6" o.c maximum in the center-width of the plates. Determine length of screw to fully connect all plates.</p> <p>8/20/07: Ledgewood states that this work has been completed but the area has gypsum installed and cannot be reviewed. Ledgewood to submit written signed certification that work was completed as described.</p> <p>12/5/07: Documentation received from Ledgewood Construction certifying that the work was completed as outlined.</p>	CLOSED 12/5/07
B2 – S.2	07/25	B2 – Stair Landing Construction	<p>It was decided that at all landings, a new LVL beam would be placed below the existing beam that would span the entire width of the stair shaft. This new LVL would be supported at the walls with a Simpson hanger fastened to a (3) 2x6 (or 2-2x8 flat) post in the wall. This post shall be constructed of full-height studs. The new LVL would be scribed to clear the exg. LVL hanger and allow complete contact between the LVL's. The new LVL would be attached to the existing LVL with 16d nails at 6" o.c. each side. A ½" thick plywood panel shall also be placed on the back side of the LVL's (not the stringer side). The plywood should extend from just below the 2x8 floor joists to the bottom of the new LVL, and be fastened</p>	CLOSED 9/24/07

			<p>to the LVL's with 3 rows of 8d nails at 12" o.c. horizontal (1 row into the existing LVL, 1 row at the top of the new LVL, and 1 row at the bottom of the new LVL).</p> <p>9/24/07: It appears that all work specified has been completed.</p>	
B2 – S.3	07/02	B2-Stair Exterior Corners	<p>Framing must be installed in the exterior building corners of each stair such that the edge of the sheathing can be fastened.</p> <p>9/24/07: It appears that all work specified has been completed.</p>	CLOSED 9/24/07
B2 – S.4	10/24	B2-Angle Stair Header Support	<p>A number of angles referenced in SSK-48R2 were observed to be notched and cut with only (1) ½" diameter lag screw on the vertical face. All angles that are notched or cut to accommodate landing framing shall be removed and replaced. Landing framing shall be relocated where is will not interfere with angle connection. A ledger shall be installed where free edges of floor sheathing are present.</p> <p>11/2/07: All areas were reviewed. At locations where the stringer comes down to the LVL beam, it is necessary to fit a solid block between the bottom sloping surface of the stringer and the extending angle leg. The block must contact the entire stringer and LVL. Pre-drill (2) 3/16" diameter holes through the block and LVL, and attach block to LVL with (2) 5/16" diameter x 4" long RSS structural fasteners. The angles where the vertical leg was clipped off were reviewed, and due to the placement of the ½" diameter x 4" long at the bottom of the angle, the assembly remains capable of withstanding the anticipated stringer capacity.</p> <p>11/4/07: Work appears to have been completed as outlined.</p>	CLOSED 11/4/07
B2-G.1	05/01	B2- General Wall Panel Fasteners	<p>The fasteners to be used for the fire retardant framing and sheathing shall be as the manufacturers recommendations. Please note that galvanized fasteners are not always suitable with fire-treated lumber, and it is necessary that the fastener used is submitted to Becker Structural Engineers for record. See Spec. 06100, Section 2.04 D.4, which states: Fasteners used in conjunction with Fire Retardant Lumber shall be coated per the manufacturer's recommendations. Some Fire Retardants may require the use of stainless steel fasteners. If the manufacturer has no specific recommendation, provide Hot Dipped Galvanized fasteners, ASTM A153. 05/17/07: We have observed panels delivered have galvanized fasteners in the exterior walls as required.</p>	CLOSED 5/17/07
B2-G.2	05/01	B2 – General Fire Retardant Framing	<p>The fire retardant to be used on this project, as specified, is called D-Blaze. The fire-retardant decreases the strength of the lumber, and the framing at B2 has been designed using the reduction factors specified for the D-Blaze product.</p>	CLOSED 5/17/07

B2-G.3	05/17	B2 – General D-Blaze	<p>Per manufacturers requirements, D-Blaze treated material should not get wet. Exposure to precipitation during shipping, storage, or installation shall be avoided. If the treated product gets wet, it must be allowed to dry to a maximum 19% moisture content for the lumber and 15% for the plywood prior to covering or enclosure by wall board or other construction materials. Moisture testing will be coordinated once sections of the building are closed in.</p> <p>9/24/07: Documentation of tests has been submitted by Ledgewood, and the results appear adequate.</p>	CLOSED 9/24/07
B2-G.4	05/24	B2 – General D-Blaze with Composite Lumber	<p>At B2-1st floor wall panels, composite wood headers have been provided at some locations. These headers do not meet the drawing requirements. Before evaluating the capacity of the in-place header, certification that it is acceptable to use D-Blaze product on composite wood framing must be provided by the D-Blaze manufacturer. D-Blaze website information states that it can be used in both solid lumber and plywood products. Typically, composite framing is not identified as solid lumber.</p> <p>5/30/07: It is not acceptable to keep the fire-treated composite headers in place. Remove the headers and replace with a new header constructed of fire-retardant treated lumber as per the drawing requirements.</p> <p>6/14/07: B2 – 2nd Floor wall panels include composite wood headers. Remove and replace with a new header constructed of fire-retardant treated lumber as per the drawing requirements.</p> <p>8/13/07: It appears that all composite headers have been removed and replaced with dimensional lumber headers as specified.</p>	CLOSED 8/13/07
B2 – G.5	05/31	B2 – General Floor Truss Layout	<p>It is necessary that the floor trusses line up directly above the wall studs. At numerous locations, there is an offset. This issue will be compounded when the upper floors are erected. It is imperative that trusses line up directly below wall studs. Modify truss layout to account for minor mis-alignment. Additional full-height wall studs (down to foundation) will be necessary where the trusses do not line up.</p> <p>6/14/07: Observed many locations where truss did not line up with studs below, at some locations there are no studs present at all.</p> <p>8/13/07: It appears that GC has installed additional framing where necessary to ensure trusses bear mainly over vertical studs.</p>	CLOSED 8/13/07
B2-G.6	06/14	B2 – General Blocking at Trusses	<p>Observed a number of locations where there was no blocking present between truss seats. THERE MUST BE BLOCKING BETWEEN ALL TRUSS SEATS.</p> <p>8/13/07: Blocking appears to have been installed as specified. A few locations are missing due to passage of pipes, etc. This is acceptable.</p>	CLOSED 8/13/07

B2-G.7	06/14	B2 – General Exterior Sheathing Overlap floor-floor	The plywood sheathing at all floor panels were to be coordinated to overlap the lower panels for attachment between panels. Based on reviewed shop drawings, the overlap was to be 1 ¾", overlapping 1" onto the lower panel plates. This has not occurred. All plates will be screwed together using Timberlock fasteners at 8" o.c. Use 8" long fasteners at bearing walls and 6" long fasteners at non-bearing walls. 8/20/07: A close-up inspection was performed at numerous areas of the building, and it appears that the sheathing overlap was satisfactory to attach panels together vertically. Any minor areas requiring additional nailing was completed at the time.	CLOSED 8/20/07
B2-G.8	06/14	B2 -General Wall Panel Attachment to PT Sill	Fasteners for the attachment of the wall panel sheathing to pressure-treated sill plate shall be hot-dipped galvanized. Where existing fastening is not galvanized, the existing fastening shall be removed and replaced with the proper galvanized fasteners. 8/20/07: At all shear walls, Simpson Titen HD anchors were installed that bolted the panel bottom pkates and the PT sill plates directly to the concrete foundation wall. At other areas, galvanized fasteners were noted.	CLOSED 8/20/07
B2-G.9	07/02	B2 – General Exterior Shearwall Strap Anchors	Where strap anchors are to be installed on the exterior of the building, they must be placed and observed by the engineer prior to installation of Tyvek. 8/20/07: All straps were visually observed.	CLOSED 8/20/07
B2-G.10	07/02	B2-General Exterior Stair Corner	Framing must be installed in the exterior building corners of each stair such that the edge of the sheathing can be fastened. 8/20/07: Will be tracked as Item B2 – S.3	CLOSED 8/20/07
B2-G.11	07/02	B2- Wall Panels	At the first and second floor wall panels reviewed, locations exist where overdriven fasteners are present. Orange spray paint was used to note panels that need to be evaluated by the G/C and repairs made accordingly. G/C shall provide means for engineer to review 2 nd floor panels and above. G/C shall notify engineer when all panels have been addressed. Repaired panels shall be observed by engineer prior to installation of Tyvek. 8/20/07: : A close-up inspection was performed at numerous areas of the building, and it appears that the overdriven fasteners are very localized and within allowable range. Additional repair work does not appear to be warranted.	CLOSED 8/20/07
B2-G.12	08/13	B2- Hanger Attachment to Girder Trusses	At the truss connections between header trusses and girder trusses at the chases, a hanger must be installed and fully fastened to the trusses. 8/20/07: It appears work was completed as identified.	CLOSED 8/20/07
B2-G.13	08/13	B2- Interior shear wall layout	The interior shear wall panels are offset vertically between floors. GC to take measurements of offset between all floors and forward to BSE. GC to review all interior shear walls need to determine if offsets exist between floors, and document offset distances. 8/20/07: Offsets have been determined by GC and	CLOSED 9/24/07

			forwarded to BSE for review. Additional information to be provided shortly. 9/24/07: Offsets have been reviewed and additional work is not required.	
B2-G.14	08/13	Shear Wall Sheathing	At interior shear wall at Oxford Street side, need to extend sheathing between interior and exterior wall panels and nail per drawings. 8/20/07: Work appears to have been completed adequately.	CLOSED 8/20/07

BECKER

structural engineers, inc.

Project: Pearl Place
Location: Portland, ME
Becker Job No: 1481

Legend:
 A: Acceptable/Complete
 X: Completed/Not Acceptable (see comments)
 O: Work Ongoing, not complete

Balcony #	Date:	SSK-50 Det.A	SSK-50 Sec.A-A	SSK-51 Det.B	SSK-52 Det.C	Comments
Building 1: Level 1						
1-103	31-Oct-07	A	A	A	O	Bot. plate screws corrected
	2-Nov-07	A	A	A	A	Repair work accepted/complete
Building 1: Level 2						
1-201	30-Oct-07	O	A	A	O	Repair work accepted/complete
	2-Nov-07	A	A	A	A	
1-202	30-Oct-07	O	A	A	O	Bot. plate screws corrected
	2-Nov-07	A	A	A	A	Repair work accepted/complete
1-203	30-Oct-07	O	A	A	O	
	2-Nov-07	A	A	A	A	Repair work accepted/complete
1-204	30-Oct-07	O	A	A	O	
	1-Nov-07	A	A	A	A	Repair work accepted/complete
1-205	30-Oct-07	O	A	A	O	
	1-Nov-07	A	A	A	A	Repair work accepted/complete
1-206	30-Oct-07	O	A	A	O	
	1-Nov-07	A	A	A	A	Repair work accepted/complete
1-207	30-Oct-07	O	A	A	O	
	1-Nov-07	A	A	A	A	Repair work accepted/complete
1-208	30-Oct-07	O	A	A	O	
	2-Nov-07	A	A	A	A	Repair work accepted/complete

BECKER

structural engineers, inc.

Building 1: Level 3

1-301	30-Oct-07	O	A	A	O	Repair work accepted/complete
	2-Nov-07	A	A	A	A	
1-302	30-Oct-07	O	A	A	O	Repair work accepted/complete
	2-Nov-07	A	A	A	A	
1-303	30-Oct-07	O	A	A	O	Repair work accepted/complete
	2-Nov-07	A	A	A	A	
1-304	30-Oct-07	O	A	A	O	Repair work accepted/complete
	1-Nov-07	A	A	A	A	
1-305	30-Oct-07	O	A	A	O	Repair work accepted/complete
	1-Nov-07	A	A	A	A	
1-306	30-Oct-07	O	A	A	O	Repair work accepted/complete
	1-Nov-07	A	A	A	A	
1-307	30-Oct-07	O	A	A	O	Repair work accepted/complete
	1-Nov-07	A	A	A	A	
1-308	30-Oct-07	O	A	A	O	Repair work accepted/complete
	2-Nov-07	A	A	A	A	

Building 2: Level 2

2-201	7-Nov-07	O	A	O	O	Repair work accepted/complete
	9-Nov-07	A	A	A	A	
2-202	7-Nov-07	A	A	A	A	Repair work accepted/complete
	7-Nov-07	O	A	O	O	
2-203	9-Nov-07	A	A	A	A	Repair work accepted/complete
	7-Nov-07	O	A	O	O	
2-204	7-Nov-07	A	A	A	A	Repair work accepted/complete
	13-Nov-07	A	A	A	A	
2-205	7-Nov-07	O	A	O	O	Repair work accepted/complete
	9-Nov-07	A	A	A	A	

B E C K E R

structural engineers, inc.

2-206	7-Nov-07	O	A	O	O	Repair Work Accepted/Complete
	13-Nov-07	A	A	A	A	
	13-Nov-07	A	A	A	A	
2-208	7-Nov-07	O	A	O	O	Repair Work Accepted/Complete
	13-Nov-07	A	A	A	A	
	13-Nov-07	A	A	A	A	

Building 2: Level 3

2-301	7-Nov-07	A	A	A	A	Repair Work Accepted/Complete
	7-Nov-07	A	A	A	A	
	7-Nov-07	O	A	O	O	
2-302	7-Nov-07	A	A	A	A	Repair Work Accepted/Complete
	7-Nov-07	A	A	A	A	
	7-Nov-07	O	A	O	O	
2-303	7-Nov-07	A	A	A	A	Repair Work Accepted/Complete
	7-Nov-07	A	A	A	A	
	7-Nov-07	O	A	O	O	
2-304	7-Nov-07	A	A	A	A	Repair Work Accepted/Complete
	7-Nov-07	A	A	A	A	
	7-Nov-07	O	A	O	O	
2-305	7-Nov-07	A	A	A	A	Repair Work Accepted/Complete
	7-Nov-07	A	A	A	A	
	7-Nov-07	O	A	O	O	
2-306	7-Nov-07	A	A	A	A	Repair Work Accepted/Complete
	7-Nov-07	A	A	A	A	
	7-Nov-07	O	A	O	O	
2-307	7-Nov-07	A	A	A	A	Repair Work Accepted/Complete
	7-Nov-07	A	A	A	A	
	7-Nov-07	O	A	O	O	
2-308	7-Nov-07	A	A	A	A	Repair Work Accepted/Complete
	7-Nov-07	A	A	A	A	
	7-Nov-07	O	A	O	O	

Building 2: Level 4

2-401	7-Nov-07	A	A	A	A	Repair Work Accepted/Complete
	7-Nov-07	A	A	A	A	
	7-Nov-07	A	A	A	A	
2-402	7-Nov-07	A	A	A	A	Repair Work Accepted/Complete
	7-Nov-07	A	A	A	A	
	7-Nov-07	O	A	O	O	
2-403	7-Nov-07	A	A	A	A	Repair Work Accepted/Complete
	7-Nov-07	A	A	A	A	
	7-Nov-07	O	A	O	O	
2-404	7-Nov-07	A	A	A	A	Repair Work Accepted/Complete
	7-Nov-07	A	A	A	A	
	7-Nov-07	O	A	O	O	
2-405	7-Nov-07	A	A	A	A	Repair Work Accepted/Complete
	7-Nov-07	A	A	A	A	
	7-Nov-07	O	A	O	O	
2-406	7-Nov-07	A	A	A	A	Repair Work Accepted/Complete
	7-Nov-07	A	A	A	A	
	7-Nov-07	O	A	O	O	

BECKER

structural engineers, inc.

2-407	7-Nov-07	O	A	O	O	Repair Work Accepted/Complete
	9-Nov-07	A	A	A	A	Repair Work Accepted/Complete
2-408	7-Nov-07	A	A	A	A	Repair Work Accepted/Complete
Building 2: Level 5						
2-501	7-Nov-07	A	A	A	A	Repair Work Accepted/Complete
2-502	7-Nov-07	A	A	A	A	Repair Work Accepted/Complete
2-503	7-Nov-07	A	A	A	A	Repair Work Accepted/Complete
2-504	7-Nov-07	O	A	O	O	
	13-Nov-07	A	A	A	A	Repair Work Accepted/Complete
2-505	7-Nov-07	O	A	O	O	
	13-Nov-07	A	A	A	A	Repair Work Accepted/Complete
2-506	7-Nov-07	O	A	O	O	
	13-Nov-07	A	A	A	A	Repair Work Accepted/Complete
2-507	7-Nov-07	A	A	A	A	Repair Work Accepted/Complete

B E C K E R

structural engineers, inc.

Field Report

sv_2007/04/09

Project: Pearl Place
Project #: 1605
Date/Time: 4/09/07 & 4/11/07
Observers James Fortin, P.E.

Building 1:

I visited the site to review the wood stud wall panels erected at the Basement Level of Building 1. The following is noted as a result of this visit.

- Nail spacing appears to be adequate in most locations. GC to review all fastening to ensure it meets the design. Two nails were pulled from the panels and were confirmed to be .148" diameter x 3" long, as required.
- Overall, the nail have been overdriven into the sheathing, resulting in the need to evaluate the effect on the required shear capacity. Generally, the head of the nail is into the sheathing by approximately half the sheathing thickness. The effect of this will be researched and additional instruction will be provided in the near future.
- It is necessary that the floor trusses line up directly above the wall studs. At some locations, there is an offset. This issue will be compounded when the upper floors are erected. It is imperative that trusses line up directly below wall studs. Modify truss layout to account for minor mis-alignment, and contact Engineer immediately when this does not resolve the issue.
- At truss bearing on all 2x6 stud walls and shear walls, it is necessary to block between the truss seats from top plate to underside of sheathing. The blocking must be solid, full width of wall (ie. 5.5") and full height.
- Floor sheathing must be attached to all support framing with 8d Nails at 6" o.c. This includes all floor trusses and shear/bearing walls supporting the floor sheathing.
- For the W21x73 beams supporting the elevated concrete slab above the garage, it has been requested that two web openings are increased in size from the 5" diameter hole originally specified. These increased hole sizes has been analyzed and it is acceptable to elongate the hole to maintain 5" wide x 7" deep. Cut away the additional material carefully to create an elongated circle. Maintain the difference between centerline of beam depth and centerline of hole to within 1".

Building 2:

The overhanging PT sill plates have been further reviewed and was agreed that modifications will be as follows. This has been discussed with Rick Nanartowich to ensure he felt these instructions were reasonable.

- For members that overhang more than ¾". It is necessary to move the plate onto the wall and modify the wall panel and floor truss layouts to suit the dimension change.
- At locations where the overhang will occur at an area where the concrete floor slab will haunch onto a lowered shelf of the foundation wall, it is acceptable to keep the plate as installed with the expectation that the plate will be fully supported prior to

B E C K E R

structural engineers, inc.

erecting wall panels (ie. place the concrete slabs first and allow the concrete slab to obtain design strength).

Also, It is necessary that the sill anchors are located in the center of the plate width, with a maximum allowable offset of 1" from center. At locations where this does not occur, anchors must be added.

Please contact me with any questions or concerns.

Thank you –

CC: Mike Myatt, Ronald Norton, Pandika Pleqi, Rick Nanartowich, Clint Gendreau, Dave Schoenherr, Suzanne Hunt Job File—1605

BECKER

structural engineers, inc.

Field Report Supplemental Information

sv_2007/04/09-Supp

Project: Pearl Place
Project #: 1605
Date/Time: 4/09/07 & 4/11/07
Observers James Fortin, P.E.

This will serve to provide supplemental information concerning the issue of overdriven sheathing fasteners for the wall panels erected at the Basement Level of Building 1.

Due to the extent of overdriven fasteners, and the depth to which they are overdriven, we are not able to substantiate the remaining capacity of the panels. We have researched this issue with the American Plywood Association, the American Forest and Paper Association, the American Wood Council, and the International Building Code Council. In all instances, we have found the literature requires that fasteners are placed with the head flush with the face of sheathing, with a maximum allowance of 1/16" overdriven without effect on capacity. Literature further limits the maximum overdriven depth to 3/16" for only a small percentage (1 of every 5+ nails) of the fasteners placed, with substantial decreases in capacity. With this limit in place, there is probability that overdriven depths beyond the limit potentially eliminates effective capacity of the fastener to sheathing connection.

As a result of the research completed, it will be necessary to re-fasten the panels for the Basement Level of Building 1 to ensure that the design capacity of the wall is achieved. Design guidelines limit nail spacing in a single 2x member to 4" o.c., thus additional framing will be required to suit the additional nailing. All new nailing must have nail heads flush with the surface of the plywood sheathing to an maximum overdriven depth of 1/16".

- For the vertical wall studs, (3) 2x6 built-up posts exist at 24" o.c. It is expected that the plywood panel edge is located at the center of this stud group, resulting in fastening to the center 2x member (GC to confirm prior to completing work). Additional nailing of the sheathing to each "outside" member (2 studs) shall be completed with .148" diameter x 3" long nails at 4" o.c.
- At the horizontal blocking locations, it is necessary to place a new 2x member above and below the existing blocking. Each new blocking shall be nailed to the vertical wall studs and to the existing blocking using .162" diameter x 3 1/2" long nails (place (2) nails from blocking to stud and (8) nails from blocking to blocking - spaced equally in 2 rows). Nail the sheathing to each new piece of blocking with .148" diameter x 3" long nails at 4" o.c.
- At the top and bottom plate locations, blocking will need to be placed against the plates between the studs for nailing attachment. Each new blocking shall be nailed to the vertical wall studs and to the existing plates using .162" diameter x 3" long nails (place (2) nails from blocking to stud and (8) nails from blocking to plate - spaced equally in 2 rows). Nail the sheathing to each new piece of blocking with .148" diameter x 3" long nails at 4" o.c.

Please contact me with any questions on the information provided.

Thank you –

CC: Mike Myatt, Ronald Norton, Pandika Pleqi, Rick Nanartowich, Clint Gendreau, Dave Schoenherr, Suzanne Hunt Job File—1605

BECKER

structural engineers, inc.

Field Report

sv_2007/04/19

Project: Pearl Place
Project #: 1605
Date/Time: 4/19/07 8:30am – 10:30am , 1:30pm – 2:30pm
Observers James Fortin, P.E.

The following notes are provided as a result of my visit to the site today.

Building 1:

- At the first floor wall panels reviewed, the previously identified issue with the overdriven fasteners does not appear to have been addressed. Rick N. of Ledgewood stated that these panels were already in production when they spoke to Canatruess about the issue, and that is the reason for it. The next floor level is expected to be constructed adequately. It appears that the wall panels on this floor level will need to be field-corrected following the instructions provided in Report SV_2007/04/09-SUPP. Once all panels are erected, a review of the location of the plywood sheathing joint in relation to the (2) 2x6 vertical studs will be completed to determine whether additional vertical studs are required.
- Nail spacing appears to be adequate in most locations. GC to review all fastening to ensure it meets the design. Once the majority of panels at this level are erected, nail spacing will be reviewed for all panels and nail type will be validated for all fastening conditions by requesting that random fasteners are pulled and replaced.
- At numerous wall panels on the first floor, the plywood sheathing does not overhang the panel bottom plate for attachment to the field installed sill plate. At these locations, it is necessary to complete either of the following (GC to submit which option was chosen)

OPTION 1:

- At all Bearing Conditions: Remove the sheathing and re-install a 4'-0" wide section of sheathing that will overhang the bottom plate, and fasten per the contract requirements. Blocking would be required behind all new plywood joints.

OPTION 2:

- For Panel Bearing on Concrete Slab-on-Deck: Bolt the Doug-Fir panel bottom plate(s) and the PT sill plate to the concrete with 5/8" diameter HILTI KwikBolt II Expansion Anchor by 2 3/4" embed into concrete (use bolts 5/8" diameter x 8 1/2" long minimum). Space the bolts at 12" oc at shear walls and 24" o.c at non-shear walls. It is necessary for GC to ensure that the deck flutes are low at the locations where these fasteners are used.
- For Panels Bearing on Concrete Foundation Walls: Bolt the Doug-Fir panel bottom plate(s) and the PT sill plate to the concrete wall with 5/8" diameter HILTI KwikBolt II Expansion Anchor by 4" embed into concrete. Space the bolts at 12" oc at shear walls and 24" o.c at non-shear walls.
- For Panels Bearing Directly on Steel Beams: Bolt the Doug-Fir panel bottom plate(s) and the PT sill plate to the top flange of the steel beam with 5/8" diameter through-bolts at 24" o.c max. (3 bolts per wall panel, minimum) This

B E C K E R

structural engineers, inc.

condition only occurs at 2 walls where the French balcony is present. Locate the through-bolt to be on the "exterior" side of the beam flange, and locate the bolt centerline 1 ½" maximum from the centerline of the beam web. NOTE: ALL PLATES BETWEEN WALL PANEL AND STEEL BEAM SHALL BE DOUG-FIR MATERIAL AT THIS LEVEL.

- There are some locations where the bottom plate does not contact the PT sill plate. At these locations, it is necessary to solidly fill the gap with full width framing, then attach all plates to the concrete following the instructions identified above. The overall length of the fastener must be field verified to suit the condition.
- The steel holdown at the exterior corner of Grid 7/E must be replaced with a holdown located at the opposite side of the window opening. For this condition, provide a Simpson HDU8-SDS2.5 holdown anchor with a 7/8" diameter ASTM A307 bolt fastened through the top flange of the W18x40 beam. Locate the bolt to the "exterior" side of the beam flange, and locate the bolt centerline 1 ½" maximum from the centerline of the beam web. GC ensure the bolt location coordinates with the holdown location for adequate contact with the vertical wall studs.

Building 2:

Additional instruction for corrections to PT sill plates overhanging the foundation walls is provided below:

- There are 3 locations where the foundation wall was mis-located approximately 5". These are at the patio exterior wall at Unit 2-103, the vestibule and patio wall at Unit 1-102, and the patio wall at Unit 1-101. At these locations, the foundation wall was thickened for placement of the patio slab haunched over the wall. To properly support the overhanging sill plate (and subsequent bearing wall panels), it is necessary to pour an extension to the thickened wall section to the underside of the plate, with new reinforcement drilled and epoxy grouted into the existing foundation. Place #4 bars at 16" oc max. vertically. Embed the bars 6" into the existing foundation and field verify the extension to maintain proper concrete cover of the bars. Place #4 bars at 16" o.c. horizontally into the higher stem section of the wall. Embed the bars 4" into the foundation and verify the extension to maintain proper concrete cover of the bars. Either the vertical bars or the horizontal bars shall be fabricated with a bend to completely lap the straight bars. Lastly, place a continuous #4 horizontally at the "bend" in this new rebar. Use HILTI HIT HY 150 adhesive for embedment of bars into concrete. This wall addition needs to be a separate pour from the patio slab placement. Also, extending the outside face of wall will decrease the shelf width, requiring additional instruction for placement of the exterior slabs. This information will be developed and issued in the near future.
- At the corner wall at Unit 2-103, running parallel with Pearl Street, the sill plate overhangs 1"+. At this location, the concrete slab haunches over a lowered shelf in the foundation wall. Dowels have been placed that tie the slab to the wall. Once placed, this slab shall support the overhanging sill plate
- At any other locations, it is agreed that any overhanging sill plates will be moved to bear on the foundation walls, with modifications to the wall panels and floor truss design to suit the field conditions. In re-locating the plates, it is expected that the

BECKER

structural engineers, inc.

maximum overhang will be ½" when the concrete slab will be placed in contact with the sill plate, and 0" (full bearing) when the foundation wall is higher than the slab elevation.

- It is necessary that the sill anchors are located in the center of the plate width, with a maximum allowable offset of 1" from center. At locations where this does not occur, anchors must be added.

Please contact me with any questions or concerns.

Thank you –

CC: Mike Myatt, Ronald Norton, Pandika Pleqi, Rick Nanartowich, Clint Gendreau, Dave Schoenherr, Suzanne Hunt Job File—1605

BECKER

structural engineers, inc.

Field Report

sv_2007/04/20

Project: Pearl Place
Project #: 1605
Date/Time: 4/20/07 7:00am – 9:00am
Observers James Fortin, P.E.

I visited the site this morning to observe placement of the ground floor slab-on-grade at Building 2. When I arrived, the placement was just beginning.

While reviewing the area, the following items were noted:

- It was realized that reinforcement was missing from the haunch areas on each side of the ramp at Stair 2-2. It was not possible to place this amount of reinforcement at this time, so these areas were bulk-headed off and will be poured at a future date. No.4 slab dowels were placed at 16" o.c. at the construction joint.
- The thickened slab section adjacent to the elevator was not in place. This small area was immediately dug out and new reinforcement was placed.
- Various horizontal bars were not placed on blocks and spaced evenly within the thickened slab section. These bars were moved as necessary prior to placing concrete. The horizontal bars were lifted off of the sub-grade with concrete blocks. They were not, however, fully restrained against displacement from concrete placement or from workers walking through the wet concrete .
- At the dowel extending out of the foundation wall into the slab, it was noted that care should be taken to ensure the bars are located properly within the slab depth and do not protrude to the top of the slab. Some manipulation may be necessary to achieve this.

When I left the site, the slab had been placed from the interior retaining wall parallel to Oxford Street to approximately the location of the elevator shaft.

Please contact me with any questions or concerns.

Thank you –

CC: Mike Myatt, Ronald Norton, Pandika Pleqi, Rick Nanartowich, Clint Gendreau, Dave Schoenherr, Suzanne Hunt Job File—1605

BECKER

structural engineers, inc.

Field Report

sv_2007/04/22

Project: Pearl Place
Project #: 1605
Date/Time: 4/22/07 11:30 am – 12:30pm
Observers James Fortin, P.E.

Steve Quattropani of Ledgewood Construction called this morning to ask if I would visit the site to coordinate the shear wall tie down locations and look at a few areas where plumbing pipe has disrupted the vertical wall studs. The following is provided to address the items discussed.

- The shear wall holddown locations were coordinated and Steve sprayed orange paint to identify the locations. At all locations, it is necessary that the holddown is directly attached to three full-height 2x6 studs nailed together with 10d at 4" o.c. nails. At some locations, additional full-height studs will need to be installed and fastened.
- There are locations where 1 shear wall includes both an exterior and interior wall section. The exterior and interior walls were constructed separately. It is necessary that the panels are attached to each other using (2) Timberlock fasteners at 8" o.c. plus the sheathing must overlap to tie both panels together. Use Timberlock fasteners with an adequate length to get through all the studs at the panel ends.
- At six locations in the basement and first floor level, vertical wall studs were cut away due to plumbing interferences. At these locations, place a header directly below the wall top plates to span between the adjacent full-height stud groups. Use a 3 1/2" x 9 1/4" LVL header with (2)-2x6 jack studs at each end nailed to the full-height stud group. Fasten header to top plate with .148" x 3" long nails at 6" o.c. Locate the header in the center of the wall width and strap for plywood / sheetrock placement. This solution works at these locations only, and it should not be assumed that this corrective work is acceptable at any future locations. Damage to the framing system must be evaluated on a case-by-case basis.

All areas that will be modified per the instruction above must remain visibly accessible to future inspection.

Please contact me with any questions or concerns.

Thank you –

CC: Mike Myatt, Ronald Norton, Pandika Pleqi, Rick Nanartowich, Clint Gendreau, Dave Schoenherr, Suzanne Hunt Job File—1605

BECKER

structural engineers, inc.

Field Report

sv_2007/04/26

Project: Pearl Place
Project #: 1605
Date/Time: 4/26/07 8:00 am – 9:00am
Observers James Fortin, P.E.

This visit was completed to review completion of previously documented items, plus discuss additional items with the General Contractor.

- As noted in SV_2007/04/22, a new LVL header was to be installed at all locations where piping interrupted vertical stud placement. The header was placed just above the piping, which is acceptable. There was 1 location remaining to be completed at the time of this visit.
- Attachment of the steel holdowns to the wall panels was discussed. At the intersection of the exterior wall panel along the C-Line, and the interior wall panel between Units 2-201 & 2-202, it is necessary that the wall panel studs at both panels are attached together using (2) 8" long Timberlock fasteners at 8" o.c. vertically.
- At three locations of Building 1 along Oxford Street there is an H7 header required per SSK-29. At these headers, the corner jamb detail should be constructed of (5) 2x6 members (per SSK-33), but at the opposite side of the header, the jamb should be a 5 1/4" x 5 1/4" PSL post, per SSK-31 and Addendum #1 - Line #5 (for Dwg. S1.3). The PSL posts are not constructed per drawing requirements and the existing jamb will need to be removed and replaced with the full-height PSL post specified.

Please contact me with any questions or concerns.

Thank you –

CC: Mike Myatt, Ronald Norton, Pandika Pleqi, Rick Nanartowich, Clint Gendreau, Dave Schoenherr, Suzanne Hunt Job File—1605

Memorandum

TO: Mike Myatt, Ron Norton
FROM: James Fortin, P.E.
DATE/TIME: May 1, 2007
SUBJECT: Pearl Place – Wall Panel Construction and Inspection Process

Gentlemen –

We arrived on site this morning to review the erected wall panels for the first floor of Building 1. Since all panels had been erected, we wanted to ensure that all comments provided by us during the shop drawing review had been incorporated into the panel construction. Upon arrival, we realized that our comments had not been incorporated. We spoke with Rick Nanartowich of Ledgewood, and he explained that the panel manufacturer was not necessarily waiting for the return of our reviewed submittal to begin construction. Instead, Ledgewood accepted that additional field work will be necessary to address the shop drawing review comments. Ledgewood is planning to review the shop drawings against the in-place panels and make all necessary repairs in the field. They do expect the upper levels to have less repair work, as typical comments generated for the lower levels are incorporated by the wall panel detailer.

In an effort to efficiently complete the Special Inspections for the wood wall panel construction, we have requested that Ledgewood notify us when an area of wall panels are ready for review. We will not perform any Special Inspection services on the wood wall panel construction without assurance from Ledgewood that the area to be inspected has been reviewed by them and they believe all contract requirements and shop drawing comments have been incorporated into the construction. Please note that this arrangement is limited to the inspection of the wall panels only, and we will continue to perform periodic visits to the site to review the overall progress of construction.

The following is a summary of the areas that must be inspected and thus need to remain accessible until we have completed our review.

- Wall panel sheathing nailing
- Overall panel framing
- Panel-to-panel attachments (either both sheathing and top plate overlaps, or fastening of panel end studs together)
- Field constructed floor and roof framing (ie. 2x8's at corridors)
- Shear wall holdown connections at base level
- Shear wall strap connections at all other levels
- Nailing of all field installed components (as listed in a previous e-mail titled: "IBC Fastening Schedule, dated April 5, 2007)

If you have any questions or concerns, please feel free to call me at any time.

Thanks –

Jim

BECKER

structural engineers, inc.

Field Report

sv_2007/05/01

Project: Pearl Place
Project #: 1605
Date/Time: 5/1/07 10:00 am – 12:00pm
Observers James Fortin, P.E. & Nathan Merrill, E.I.

This visit was completed to review completion of previously documented items, plus discuss additional items with the General Contractor.

- Attachment of the wall panel sheathing to pressure-treated sill plate was discussed. As noted in the contract documents all fasteners to pressure-treated lumber shall be hot-dipped galvanized. Where existing fastening is not galvanized, the existing fastening shall be removed and replaced with the proper galvanized fasteners.
- We observed lack of direct panel-panel connectivity. All panels must be connected to adjacent panels either through both overlapping of wall sheathing and overlapping of top plate, or directly fastening end posts to each other with Timberlock screws @ 8" o.c. At shearwalls sheathing and top plate MUST overlap between adjacent panel segments.
- Attachment of strap anchor to shearwall end post above and below floor diaphragm was discussed. It is necessary that straps are installed on opposite faces of the (3)2x6 shearwall end post. Also, straps at the top of the post must be directly fastened to the same (3)2x6 post as the strap/anchor at the bottom of the post in order to maintain a continuous load path.
- Where sheathing extends past panel end posts and overlaps adjacent panel end posts, sheathing must be fastened to adjacent panel end posts with the approved nailing schedule.
- The fasteners to be used for the fire retardant framing and sheathing shall be as the manufacturers recommendations. Please note that galvanized fasteners are not always suitable with fire-treated lumber, and it is necessary that the fastener used is submitted to Becker Structural Engineers for record. See Spec. 06100, Section 2.04 D.4, which states: Fasteners used in conjunction with Fire Retardant Lumber shall be coated per the manufacturer's recommendations. Some Fire Retardants may require the use of stainless steel fasteners. If the manufacturer has no specific recommendation, provide Hot Dipped Galvanized fasteners, ASTM A153.
- The fire retardant to be used on this project, as specified, is called D-Blaze. The fire-retardant decreases the strength of the lumber, and the framing at B2 has been designed using the reduction factors specified for the D-Blaze product.

Please contact me with any questions or concerns.

Thank you –

CC: Mike Myatt, Ronald Norton, Pandika Pleqi, Rick Nanartowich, Clint Gendreau, Dave Schoenherr, Suzanne Hunt Job File—1605

B E C K E R

structural engineers, inc.

Field Report

sv_2007/05/04

Project: Pearl Place
 Project #: 1605
 Date/Time: 5/4/07 1:00 pm – 3:00 pm
 Observers James Fortin, P.E.

I visited the site this afternoon to meet with Rick Nanartowich and Pandika Pleqi to discuss resolution of construction issues identified during previous field visits. This report will address the items discussed, as well as introduce a table to track items.

STRUCTURAL SPECIAL INSPECTIONS				
Item No.	Date	Location	Description	Status
1	04/09	B1 – Basement Wall Panels	Nails have been overdriven into the plywood sheathing, resulting in the need to evaluate the effect on the required shear capacity. Generally, the head of the nail is into the sheathing by approximately half the sheathing thickness. Walls need to be repaired. 5/4/07: Ledgewood has proposed adding a new layer of plywood to the inside face of the walls and nailing to the framing per the contract requirements. This is an acceptable option.	OPEN
2	04/09	B1- Floor Trusses	It is necessary that the floor trusses line up directly above the wall studs. At some locations, there is an offset. This issue will be compounded when the upper floors are erected. It is imperative that trusses line up directly below wall studs. Modify truss layout to account for minor mis-alignment. Additional full-height wall studs (down to foundation) will be necessary where the trusses do not line up	OPEN
3	04/09	B1- Blocking	At truss bearing on all 2x6 stud walls and shear walls, it is necessary to block between the truss seats from top plate to underside of sheathing. The blocking must be solid, full width of wall (ie. 5.5") and full height. Nail blocking to top plate and to other blocking per IBC Fastening Schedule (per email issued on April 5, 2007).	OPEN
4	04/09	B1- Floor Sheathing	Floor sheathing must be attached to all support framing with 8d Nails at 6" o.c. At balcony locations, the nailing shall be 10d Common nails at 4" O.c. per Detail 5/S3.1.	OPEN

B E C K E R

structural engineers, inc.

Field Report

sv_2007/05/08

Project: Pearl Place
 Project #: 1605
 Date/Time: 5/8/07 9:00 – 10:00 am
 Observers Nathan Merrill, E.I.

I visited the site this morning to document the condition of each individual shearwall hold-down at steel beam locations. This report addresses the items previously discussed, as well as introduces the items found today.

STRUCTURAL SPECIAL INSPECTIONS				
Item No.	Date	Location	Description	Status
1	04/09	B1 – Basement Wall Panels	Nails have been overdriven into the plywood sheathing, resulting in the need to evaluate the effect on the required shear capacity. Generally, the head of the nail is into the sheathing by approximately half the sheathing thickness. Walls need to be repaired. 5/4/07: Ledgewood has proposed adding a new layer of plywood to the inside face of the walls and nailing to the framing per the contract requirements. This is an acceptable option.	OPEN
2	04/09	B1- Floor Trusses	It is necessary that the floor trusses line up directly above the wall studs. At some locations, there is an offset. This issue will be compounded when the upper floors are erected. It is imperative that trusses line up directly below wall studs. Modify truss layout to account for minor mis-alignment. Additional full-height wall studs (down to foundation) will be necessary where the trusses do not line up	OPEN
3	04/09	B1- Blocking	At truss bearing on all 2x6 stud walls and shear walls, it is necessary to block between the truss seats from top plate to underside of sheathing. The blocking must be solid, full width of wall (ie. 5.5") and full height. Nail blocking to top plate and to other blocking per IBC Fastening Schedule (per email issued on April 5, 2007).	OPEN
4	04/09	B1- Floor Sheathing	Floor sheathing must be attached to all support framing with 8d Nails at 6" o.c. At balcony locations, the nailing shall be 10d Common nails at 4" O.c. per Detail 5/S3.1.	OPEN



Your complimentary
use period has ended.
Thank you for using
PDF Complete.

C K E R

Structural engineers, inc.

Click Here to upgrade to
Unlimited Pages and Expanded Features

Field Report

sv_2007/05/17

Project: Pearl Place
Project #: 1605
Date/Time: 5/17/07 9:00 – 11:00 am
Observers Nathan Merrill, E.I. , James Fortin, P.E.

We visited the site this morning to observe the progress of the repairs to Building 1, as well as the erection of wall panels at Building 2. This report will update the status of items that have been identified in previous site visits, as well as identify items found during this visit. Please note that the table has been completely re-organized to group items per building and per floor.

STRUCTURAL SPECIAL INSPECTIONS				
BUILDING 1				
Item No.	Date	Location	Description	Status
B1-0.1	04/09	B1 – Basement Wall Panels	Nails have been overdriven into the plywood sheathing, resulting in the need to evaluate the effect on the required shear capacity. Generally, the head of the nail is into the sheathing by approximately half the sheathing thickness. Walls need to be repaired. 5/17/07: Repairs have been made to Basement level panels in coordination with the supplemental information provided in field report dated 4/9/07. (1) panel still remained unaddressed and blocking is missing in bays with hold-downs, blocking must be replaced or reinstalled where found missing.	OPEN
B1-1.1	04/09	B1- 1 ST Floor Steel Framing	For the W21x73 beams supporting the elevated concrete slab above the garage, it has been requested that two web openings are increased in size from the 5" diameter hole originally specified. These increased hole sizes has been analyzed and it is acceptable to elongate the hole to maintain 5" wide x 7" deep. Cut away the additional material carefully to create an elongated circle. Maintain the difference between centerline of beam depth and centerline of hole to within 1".	CLOSED 5/17/07
B1-1.2	04/19	B1- 1 ST Floor Wall Panels	At the first floor wall panels reviewed, the previously identified issue with the overdriven fasteners does not appear to have been addressed. Rick N. of Ledgewood stated that these panels were already in production when they spoke to Canatruss about the issue, and that is the reason for it. The next floor level	OPEN

B E C K E R

structural engineers, inc.

Field Report

sv_2007/05/24

Project: Pearl Place
 Project #: 1605
 Date/Time: 5/24/07 10:00 – 11:30 am
 Observers Nathan Merrill, E.I.

I visited the site this morning to observe the progress of the work, including the erection of roof trusses on Building 1. This report will update the status of items that have been identified in previous site visits, as well as identify items found during this visit. Please note that the table has been completely re-organized to group items per building and per floor.

STRUCTURAL SPECIAL INSPECTIONS				
BUILDING 1				
Item No.	Date	Location	Description	Status
B1-0.1	04/09	B1 – Basement Wall Panels	Nails have been overdriven into the plywood sheathing, resulting in the need to evaluate the effect on the required shear capacity. Generally, the head of the nail is into the sheathing by approximately half the sheathing thickness. Walls need to be repaired. 5/17/07: Repairs have been made to Basement level panels in coordination with the supplemental information provided in field report dated 4/9/07. (1) panel still remained unaddressed and blocking is missing in bays with hold-downs, blocking must be replaced or reinstalled where found missing.	OPEN
B1-1.1	04/09	B1- 1 ST Floor Steel Framing	For the W21x73 beams supporting the elevated concrete slab above the garage, it has been requested that two web openings are increased in size from the 5" diameter hole originally specified. These increased hole sizes has been analyzed and it is acceptable to elongate the hole to maintain 5" wide x 7" deep. Cut away the additional material carefully to create an elongated circle. Maintain the difference between centerline of beam depth and centerline of hole to within 1".	CLOSED 5/17/07
B1-1.2	04/19	B1- 1 ST Floor Wall Panels	At the first floor wall panels reviewed, the previously identified issue with the overdriven fasteners does not appear to have been addressed. Rick N. of Ledgewood stated that these panels were already in production when they spoke to Canatruss about the issue, and that is the reason for it. The next floor level is expected to be constructed adequately. 5/4/07: Ledgewood has proposed adding a new layer of plywood to the inside face of the walls and nailing to the framing per the contract requirements. This is an acceptable option.	OPEN

BECKER

structural engineers, inc.

Field Report

sv_2007/05/31

Project: Pearl Place
Project #: 1605
Date/Time: 5/31/07 9:00 am – 11:00 am
Observers James Fortin, P.E.

I visited the site Thursday morning to attend the weekly meeting and observe the progress of the work completed since the previous visit. During the visit, the review was limited to the 1st floor wall panel and floor truss construction at Building 2, and the roof framing at Building 1. Previously identified Building 1 items have not all been addressed by the General Contractor and they have not yet released any floors for final structural inspection.

The attached table has been updated to provide additional information for items identified in previous site visits, as well as identify new items found during this visit. All new information is BOLD.

Please contact me with any questions or concerns.
Thank you –

CC: Mike Myatt, Ronald Norton, Pandika Pleqi, Rick Nanartowich, Clint Gendreau, Dave Schoenherr, Suzanne Hunt Job File—1605

BECKER

structural engineers, inc.

Field Report

sv_2007/06/14

Project: Pearl Place
Project #: 1605
Date/Time: 6/14/07 1:00 pm – 3:00 pm
Observers Nathan Merrill, E.I.

I visited the site Thursday afternoon to observe the progress of the work completed since the previous visit. During the visit, the review was limited to the 2nd floor wall panel and floor truss construction at Building 2, and the wall sheathing at Building 1. Previously identified Building 1 items have not all been addressed by the General Contractor and they have not yet released any floors for final structural inspection.

The attached table has been updated to provide additional information for items identified in previous site visits, as well as identify new items found during this visit. All new information is BOLD.

Please contact me with any questions or concerns.
Thank you –

CC: Mike Myatt, Ronald Norton, Pandika Pleqi, Rick Nanartowich, Clint Gendreau, Dave Schoenherr, Suzanne Hunt Job File—1605

BECKER

structural engineers, inc.

Field Report

sv_2007/06/22

Project: Pearl Place
Project #: 1605
Date/Time: 6/23/07 8:30 am – 10:30 am
Observers Jim Fortin, P.E. & Nathan Merrill, E.I.

We visited the site this morning to review all structural components at the Basement Level and 3rd Floor Level at Building 1. The visit was arranged with Rick Nanartowich to occur once all items identified in previous field reports had been completed along with comments from our shop drawing review. We met with Clint Gendreau at the site to walk through these floors.

A number of items had been completed and/or corrected, but a fair amount of work remains to address the items documented. At times, the item occurs at numerous locations throughout the building and some locations have not been corrected. We used red spray paint to identify a majority of the locations where additional work is necessary, but did not mark all areas where typical corrections are necessary. A summary of the items that still require some work is provided below.

Building 1 – Basement Level:

- Blocking is missing at plywood edges at shear walls
- Nailing of plywood to PT sill plate with galvanized fasteners is not completed
- Shear wall holdowns attached to less than (3) 2x6 post at window jambs. The strap hangers (2 per end) to attach the jack studs across the header is not in place.

Building 1 – 3rd Floor Level:

- Shear wall straps are missing at numerous locations.
- Plywood sheathing is missing at (1) exterior shear wall and the (4) shear walls at the stair towers.
- Locations where the strap is attached to less than (3) 2x6 post at end of shearwall. Need to add studs.
- Panel to panel connectivity is not adequate at numerous locations. Not all areas were marked with spray paint. GC needs to review all corners and panel-to-panel joints and ensure all panels are attached to adjacent panels per instructions previously provided.
- Plywood nailing of 3rd floor panels to top plates of 2nd floor panels is not complete. Either nail plywood to panel or screw all plates together with Timberlock screws per instructions previously provided.
- At the four shear walls at the stair towers, the bottom plates of the third floor panels need to be screwed to the top plates of the second floor panels with Timberlock screws.

Please contact me with any questions or concerns.

Thank you –

CC: Mike Myatt, Ronald Norton, Pandika Pleqi, Rick Nanartowich, Clint Gendreau, Dave Schoenherr, Suzanne Hunt Job File—1605

BECKER

structural engineers, inc.

Field Report

sv_2007/06/27

Project: Pearl Place
Project #: 1605
Date/Time: 6/27/07 10:00 am – 11:00 am
Observers Nathan Merrill, E.I.

I visited the site this morning to review the repairs to structural components which had not been addressed prior to our last review of the Basement Level and 3rd Floor Level at Building 1 (see report dated 6/22/07 for list of unaddressed issues). The visit was arranged with Rick Nanartowich to occur once all items identified in the previous field report (dated 6/22/07) had been completed. I met with Rick at the site to review the repairs.

A number of the unaddressed items had been completed and/or corrected, but a few locations remained unaddressed. Red spray paint was used to identify a majority of the locations where additional work was necessary, but I still observed locations where the paint was present but work had not been completed. A summary of the items that still require some work is provided below.

Building 1 – Basement Level:

- Blocking is missing at plywood edges at shear walls
- Nailing of plywood to PT sill plate with galvanized fasteners is not completed
- Shear wall holdowns attached to less than (3) 2x6 post at window jambs. The strap hangers (2 per end) to attach the jack studs across the header is not in place.

Building 1 – 3rd Floor Level:

- Shear wall straps are missing at (4) locations.
- Plywood sheathing is missing at (1) exterior shear wall and the (4) shear walls at the stair towers. Rick informed me that these repairs would not take place until completion of insulation placement.
- Panel to panel connectivity is not adequate at (1) location. GC was made aware of location and how to proceed with repair.
- Plywood nailing of 3rd floor panels to top plates of 2nd floor panels is not complete. Either nail plywood to panel or screw all plates together with Timberlock screws per instructions previously provided.
- At the four shear walls at the stair towers, the bottom plates of the third floor panels need to be screwed to the top plates of the second floor panels with Timberlock screws. See Item B1-S.4 for spacing.

Please contact me with any questions or concerns.

Thank you –

CC: Mike Myatt, Ronald Norton, Pandika Pleqi, Rick Nanartowich, Clint Gendreau, Dave Schoenherr, Suzanne Hunt Job File—1605

BECKER

structural engineers, inc.

Field Report

sv_2007/06/28

Project: Pearl Place
Project #: 1605
Date/Time: 6/28/07 8:00 am – 10:00 am
Observers Nathan Merrill, E.I.

I visited the site this morning to review the repairs to structural components which had not been addressed prior to my last review of the Basement Level and 3rd Floor Level at Building 1 (see report dated 6/27/07 for list of unaddressed issues). The visit was arranged with Rick Nanartowich to occur once all items identified in the previous field report (dated 6/27/07) had been completed. I met with Rick at the site to review the repairs.

A number of the unaddressed items had been completed and/or corrected, but a couple locations remained unaddressed. Red spray paint was used to identify a majority of the locations where additional work was necessary, but I observed locations where the paint was present but work had not been completed. A summary of the items that still require some work is provided below.

Building 1 – Basement Level:

- Nailing of plywood to PT sill plate with galvanized fasteners is not completed
- Shear wall holdowns attached to less than (3) 2x6 post at window jambs. The strap hangers ((1) 52" strap each end) to attach the jack studs across the header are not in place.

Building 1 – 3rd Floor Level:

- Plywood sheathing is missing at (1) exterior shear wall and the (4) shear walls at the stair towers. Rick informed me that these repairs would not take place until completion of insulation placement at a later date.
- Plywood nailing of 3rd floor panels to top plates of 2nd floor panels is not complete. Either nail plywood to panel or screw all plates together with Timberlock screws per instructions previously provided. Rick informed me that they were not able to complete this due to exposed power lines. Once the power lines are covered the repairs will be made.

All structural work which required to be completed prior to insulation placement has been completed; I was informed that the remaining items on the 3rd floor will be completed at a later date.

Please contact me with any questions or concerns.

Thank you –

CC: Mike Myatt, Ronald Norton, Pandika Pleqi, Rick Nanartowich, Clint Gendreau, Dave Schoenherr, Suzanne Hunt Job File—1605

BECKER

structural engineers, inc.

Field Report

sv_2007/07/02

Project: Pearl Place
Project #: 1605
Date/Time: 7/02/07 2:00 pm – 3:30 pm
Observers Jim Fortin, P.E. & Nathan Merrill, E.I.

We visited the site this afternoon to review fastening of exterior plywood of Building #2. The 1st floor wall panels as well as portions of the 2nd floor wall panels were observed and several locations were found to be overdriven, however we were not able to fully observe all of the panels on the 2nd floor. We request a lift to observe panels above the 1st floor so that we can accurately access the nailing. Please contact engineer to schedule a time when a lift is available for our use.

Please contact me with any questions or concerns.
Thank you –

CC: Mike Myatt, Ronald Norton, Pandika Pleqi, Rick Nanartowich, Clint Gendreau, Dave Schoenherr, Suzanne Hunt Job File—1605

BECKER

structural engineers, inc.

Field Report

sv_2007/07/05

Project: Pearl Place
Project #: 1605
Date/Time: 7/05/07 1:15 pm – 3:00 pm
Observers Jim Fortin, P.E. & Nathan Merrill, E.I.

BUILDING 1:

This visit was scheduled with Ledgewood Construction to review the 2nd floor of Building 1. This review was to evaluate completion of previously documented deficient conditions in order to ensure all structural remediation work was complete prior to insulating the exterior walls. At the time of our visit, the insulation was in progress, but all areas that needed to be looked at remained accessible. We met with Dave Chabe during this visit, as arranged by Rick Nanartowich prior to his vacation.

Overall, the previously identified items documented in the Structural Special Inspections table have been addressed. A few areas that require additional work were identified to Dave Chabe, and he marked all areas with red spray paint. These areas were also numbered for identification purposes, and will be reviewed again once we are notified that the work has been completed. Most of the remaining items need to be addressed prior to placing insulation.

Also note that we DID NOT review the stair construction at this visit. Revised details were submitted on July 3, 2007 that modified attachment details for the stair stringers and landing beams. Additional framing must be placed in the walls to support the landings. GC to coordinate completion of stair construction and notify Becker Structural Engineers to schedule a final review.

BUILDING 2:

We are requesting that Ledgewood coordinate a lift for access to all exterior walls to review the plywood fastening. This was originally documented in our field report dated 7/02/07. The 1st floor wall panels as well as portions of the 2nd floor wall panels were observed and some locations were found to be overdriven, however we were not able to fully observe all of the panels on the 2nd floor. Prior to completing this review, we request that all exterior plywood nailing is complete, including all panel to panel sheathing connections, that all shear wall strap ties are fully nailed, and that all additional framing required at the exterior corners of the stair tower walls are in place. This will ensure that 1 review can observe all necessary components at the exterior face of the walls.

Also, Ledgewood Construction is requested to develop a schedule for Structural Special Inspection visits at Building 2, similar to that completed at Building 1. At this point, we have reviewed most of the 1st and 2nd floor only. We are ready to begin review of this building once the Contractor submits that they have fully reviewed the areas themselves and believe that all required construction has been adequately completed.

Please contact me with any questions or concerns.

Thank you –

CC: Mike Myatt, Ronald Norton, Pandika Pleqi, Rick Nanartowich, Clint Gendreau, Dave Schoenherr, Suzanne Hunt Job File—1605

BECKER

structural engineers, inc.

Field Report

sv_2007/07/10

Project: Pearl Place
Project #: 1605
Date/Time: 7/10/07 9:00 am – 10:00 am
Observers Jim Fortin, P.E.

BUILDING 1:

This visit was conducted to review the items that had been documented during our last review of the Second Floor of Building 1. All but 2 of the items found within the interior of the second floor that required attention have all been adequately addressed. These items have been added to the table as B1-2.5, and B1-2.6

There are 2 additional items remaining at the second floor that involve the exterior sheathing attachments. They are listed in the attached Special Inspections table as Items B1-2.2 and B1-2.4.

Please note that there is strong concern that these items have not been resolved prior to placing insulation. Item B1-2.4 involves a review of all exterior plywood fastening to ensure that the fasteners are not overdriven into the plywood. If the nails are found to be overdriven, the corrective action is to add new vertical studs and blocking in the walls. This activity will be very difficult with the sprayed insulation in place.

Please contact me with any questions or concerns.
Thank you –

CC: Mike Myatt, Ronald Norton, Pandika Pleqi, Rick Nanartowich, Clint Gendreau, Dave Schoenherr, Suzanne Hunt Job File—1605

BECKER

structural engineers, inc.

Field Report

sv_2007/07/16

Project: Pearl Place
Project #: 1605
Date/Time: 7/16/07 10:30 am – 12:30 pm, 1:30 pm – 2:30 pm
Observers Jim Fortin, P.E. & Nathan Merrill E.I.

BUILDING 1:

This visit was conducted to review the exterior sheathing attachments at the 2nd floor of Building 1. The tybar barrier was removed wherever requested, and all shear walls fastening was reviewed. Also, non-shear wall sections were randomly chosen for review. A few areas were found to require additional nailing, and the nailing was completed immediately. Two areas were found to require additional work that could not be completed while we were there. These areas were identified to Dave Chabe of Ledgewood, and listed in Item B1-2.4.

BUILDING 2:

Steve Q had a couple of questions on Building 2, and our discussions are summarized in Items B2-1.11 and B2-2.4 of the attached table. Rick N also informed us that a schedule will be developed for structural review of Building 2 and inspections should commence with the next couple of weeks. I did observe light-gauge wall framing in place, and feel that it is imperative that we begin inspections soon to ensure that all repairs can be completed without too much interference.

Please contact me with any questions or concerns.

Thank you –

CC: Mike Myatt, Ronald Norton, Pandika Pleqi, Rick Nanartowich, Clint Gendreau, Dave Schoenherr, Suzanne Hunt Job File—1605

BECKER

structural engineers, inc.

Field Report

sv_2007/07/25

Project: Pearl Place
Project #: 1605
Date/Time: 7/25/07 10:00 am -- 2:00 pm
Observers Jim Fortin, P.E.

BUILDING 1:

This visit was conducted at the request of the General Contractor to review completion of structural components on the 1st floor of Building 1, as well as a couple remaining items on the 2nd floor. The Structural Special Inspections report has been updated as a result of this review. Many of the previously identified items have been addressed, and a few items require some additional work before they can be closed. Please note that the Report only includes Building 1 items at this time.

BUILDING 2:

The General Contractor plans to begin remediation work in Building 2 within the next couple of days. Per Rick Nanartowich, the plan is for Ledgewood to go through the entire building to ensure that construction meets the requirements of the drawings. They also plan to address all similar conditions that were documented in Building 1, and have them completed prior to initial inspection. BSE is waiting until the General Contractor has completed their work before starting inspections within Building 2 to decrease the number of items being recorded in the Structural Special Inspections report.

BUILDING 1 & BUILDING 2:

A meeting was held on site with Pandika Pleqi, Ron Norton, Rick Nanartowich, and myself concerning various construction items.

STAIR CONSTRUCTION:

It was decided that at all landings, a new LVL beam would be placed below the existing beam that would span the entire width of the stair shaft. This new LVL would be supported at the walls with a Simpson hanger fastened to a (3) 2x6 (or 2-2x8 flat) post in the wall. This post shall be constructed of full-height studs. The new LVL would be scribed to clear the exg. LVL hanger and allow complete contact between the LVL's. The new LVL would be attached to the existing LVL with 16d nails at 6" o.c. each side. A 1/2" thick plywood panel shall also be placed on the back side of the LVL's (not the stringer side). The plywood should extend from just below the 2x8 floor joists to the bottom of the new LVL, and be fastened to the LVL's with 3 rows of 8d nails at 12" o.c. horizontal (1 row into the existing LVL, 1 row at the top of the new LVL, and 1 row at the bottom of the new LVL).

BUILDING 2: STAIR TOWER SHEAR WALL ATTACHMENTS:

The plywood sheathing at the stair shear walls was located at the incorrect side. As such, the plywood is broken at all floors and cannot be connected to adjacent panels. To replace this connection, it is necessary to place (1) 6" long Timberlock screw at 6" o.c maximum in the center-width of the plates. Determine length of screw to fully connect all plates.

BALCONY ATTACHMENTS:

It was discovered that SSK-36 had been issued that showed the fasteners for the guardrail attachments as they have been supplied in the field. It is acceptable to countersink the fastener into the framing, as shown on the SSK. Trim the threads protruding from the top of the nut to minimize the countersink depth. Use a lock nut to attach the guardrail angle to the through bolt.

B E C K E R

structural engineers, inc.

It was also realized that due to differences in the jamb thickness between the balcony door and the adjacent window, there may be an issue with attachment of the guardrail angle to the jambs at some locations. The through bolts were to be located in the center of the jamb, at approximately 6'-6" apart. (the balconies have all been built at 6'-8" wide). Since the centerline distance between the jambs differs, and it is possible that the bolts will not be able to be located appropriately in the jambs. It is requested that the General Contractor measure the distance between jamb centers, and document any areas where the dimension is not adequate for attachment. The centerline of the bolt hole must be at least 1 ½" from the edge of the jamb.

The following is an update to Item B2-2.4 in the Structural Special Inspections Report (Reference RFP#35):

7/25/07: The new 5 ¼" x 16" LVL shall be placed below the existing LVL. A ½" thick plywood panel shall be placed on each side of the LVL's. The plywood shall extend from just below the 2x8 floor joists to the bottom of the new LVL, and be fastened to the LVL's with 3 rows of 8d nails at 12" o.c. horizontal (1 row into the existing LVL, 1 row at the top of the new LVL, and 1 row at the bottom of the new LVL). Support the beam at both ends with a 5 ¼" square full-height PSL post (provide a PT sill plate against the concrete slab). Locate the post against the existing stud wall and attach to the wall with 8" long Timberlock screws at 8" o.c. Locate the post near the concrete wall and allow a ½" gap between the post and the wall.

Please contact me with any questions or concerns.

Thank you –

CC: Mike Myatt, Ronald Norton, Pandika Pleqi, Rick Nanartowich, Clint Gendreau, Dave Schoenherr, Suzanne Hunt Job File—1605

B E C K E R

structural engineers, inc.

Field Report

sv_2007/07/30

Project: Pearl Place
Project #: 1605
Date/Time: 7/30/07 10:00 am – 12:00 pm
Observers Jim Fortin, P.E.

BUILDING 1:

This visit was a follow-up to the visit conducted on 7/25 to review the last few items that needed attention. These items were addressed adequately, and the Structural Special Inspections Table for Building 1 has been updated accordingly. There are only a few items that remain open in this Table, and most concern the stair construction and shear walls framing the stairs. The General Contractor has stated that the stair items will be addressed within the next couple weeks once the material arrives on site.

BUILDING 2:

The General Contractor has requested an inspection of Building 2 structural components on Monday, August 6, 2007. This review will be of all interior areas, but may not include review of the exterior sheathing and fastening. As stated earlier, the plan is for Ledgewood to go through the entire building to ensure that construction meets the requirements of the drawings. They also plan to address all similar conditions that were documented in Building 1, and have them corrected as necessary prior to initial inspection.

BUILDING 1 & BUILDING 2:

Please keep in mind the following item on the balcony construction that needs to be addressed by the General Contractor.

BALCONY ATTACHMENTS:

It was discovered that SSK-36 had been issued that showed the fasteners for the guardrail attachments as they have been supplied in the field. It is acceptable to countersink the fastener into the framing, as shown on the SSK. Trim the threads protruding from the top of the nut to minimize the countersink depth. Use a lock nut to attach the guardrail angle to the through bolt.

It was also realized that due to differences in the jamb thickness between the balcony door and the adjacent window, there may be an issue with attachment of the guardrail angle to the jambs at some locations. The through bolts were to be located in the center of the jamb, at approximately 6'-6" apart. (the balconies have all been built at 6'-8" wide). Since the centerline distance between the jambs differs, and it is possible that the bolts will not be able to be located appropriately in the jambs. It is requested that the General Contractor measure the distance between jamb centers, and document any areas where the dimension is not adequate for attachment. The centerline of the bolt hole must be at least 1 1/2" from the edge of the jamb.

Please contact me with any questions or concerns.

Thank you –

CC: Mike Myatt, Ronald Norton, Pandika Pleqi, Rick Nanartowich, Clint Gendreau, Dave Schoenherr, Suzanne Hunt Job File—1605

B E C K E R

structural engineers, inc.

Field Report

sv_2007/08/06

Project: Pearl Place
Project #: 1605
Date/Time: 8/06/07 7:00 am – 12:30 pm
Observers Jim Fortin, P.E. & Nathan Merrill, E.I.

BUILDING 1:

Nate Merrill reviewed the additional fastening of the exterior plywood sheathing to the new framing/blocking installed at the first floor level (due to the existing fasteners being overdriven into the sheathing). All areas reviewed appeared adequate, and Item B1-1.2 of the Structural Steel Inspections report is CLOSED.

BUILDING 2:

The General Contractor requested a walk-through of Building 2 structural components today. It does appear that prior to scheduling this visit, Ledgewood addressed a number of issues with the pre-engineered framing that had also been identified in Building 1. The attached summary sheet identifies the items found during this walk-through. The number corresponding to the item was written on the framing in the area, and Steve Q was present for the entire walk-through.

Please contact me with any questions or concerns.

Thank you –

CC: Mike Myatt, Ronald Norton, Pandika Pleqi, Rick Nanartowich, Clint Gendreau, Dave Schoenherr, Suzanne Hunt Job File—1605

B E C K E R

structural engineers, inc.

Field Report

sv_2007/08/13

Project: Pearl Place
Project #: 1605
Date/Time: 8/13/07 10:00 am – 12:30 pm
Observers Jim Fortin, P.E.

BUILDING 2:

This visit was a follow-up to the visit on August 6th, to review completion of the previously identified list of items, as well as review of the first floor level. Only a few remaining items exist that were brought to the attention of the General Contractor and will be addressed shortly. Please review the Structural Special Inspections table (attached) which lists all remaining items requiring attention by the General Contractor.

Also please note the following:

- If interior gypsum sheathing is to be completed prior to a review of all exterior components, it is necessary to mark all locations where a 28" Simpson MSTC strap shall be located (ie. a strap is located on the interior side of wall). At all unmarked locations, it is expected that a 52" strap will be located on the exterior side. Notify BSE to place these markings if necessary.
- Exterior components of Building 2 were not reviewed during this walk-through
- Stair Construction was not reviewed during this walk-through
- Shear walls at the sides of the stairs were not fully reviewed during this walk-through.

The next visit is scheduled for August 20th at 10am to review the last items that remain open, as well as review all the exterior elements of Building 2.

Please contact me with any questions or concerns.

Thank you –

CC: Mike Myatt, Ethan Boxer-Macomber, Ronald Norton, Pandika Pleqi, Rick Nanartowich, Clint Gendreau, Dave Schoenherr, Suzanne Hunt Job File--1605

BECKER

structural engineers, inc.

Field Report

sv_2007/08/20

Project: Pearl Place
Project #: 1605
Date/Time: 8/20/07 10:00 am – 1:00 pm
Observers Jim Fortin, P.E.

BUILDING 1:

The final items remaining on the stair construction were reviewed. See the attached Structural Special Inspections table for Building 1 for remaining items requiring review.

BUILDING 2:

The remaining items within the interior components of the building were reviewed, as well as all exterior sheathing fastening around the building. See the attached Structural Special Inspections table for Building 2 for remaining items requiring review. At Building 2, the construction of the stair areas has not yet been completed, including the stairs and all walls forming the stair volume.

GENERAL:

Please note that the following will also need to be reviewed (list may not be complete)

- French Balconies
- Connections for Guardrails at B2 Roof Deck
- B2 Sunshade

The next visit will be scheduled by the General Contractor as construction progresses. If any questions or concerns arise, please do not hesitate to contact me.

Thank you –

CC: Mike Myatt, Ethan Boxer-Macomber, Ronald Norton, Pandika Pleqi, Rick Nanartowich, Clint Gendreau, Dave Schoenherr, Suzanne Hunt Job File—1605

BECKER

structural engineers, inc.

Field Report

sv_2007/09/24

Project: Pearl Place
Project #: 1605
Date/Time: 9/24/07 1:00 am – 2:30 pm
Observers Jim Fortin, P.E.

BUILDING 1 & BUILDING 2:

The final items remaining from the Special Inspections Table were reviewed for completion. Any updates are provided within the attached Table.

In the last Field Report dated 8/20/07, it was stated that the following items needed to be reviewed (list may not be complete): French Balconies, Connections for Guardrails at B2 Roof Deck, B2 Sunshade. The next Special Inspections visit was to be scheduled by the General Contractor as construction progresses.

During this visit, it was found that all the fasteners to attach the French Balcony and Guardrail to the building were in place. In Building 1 and part of Building 2, the interior finishes had been installed making it impossible to review the connection details. These connections are critical to supporting the balconies. At the lower floors of Building 2, I did look at some of the connections. I will schedule a follow-up visit on Wednesday 9/26/07 to review all exposed conditions.

Thank you –

CC: Mike Myatt, Ethan Boxer-Macomber, Ronald Norton, Pandika Pleqi, Rick Nanartowich, Clint Gendreau, Dave Schoenherr, Suzanne Hunt Job File—1605

BECKER

structural engineers, inc.

Field Report

sv_2007/09/26

Project: Pearl Place
Project #: 1605
Date/Time: 9/26/07 7:30 am – 8:30 am
Observers Jim Fortin, P.E.

BUILDING 1 & BUILDING 2 FRENCH BALCONY CONNECTIONS TO BUILDING:

This visit was conducted as a follow-up to the Sept. 24th visit to review the French Balcony connections to the structure. At the time of this visit, only the 2nd floor (first elevated floor) was exposed for review. At the remaining floors of Building 2, and all of Building 1, sheetrock was in place and the connections could not be reviewed from the interior.

From the areas accessible, the following is noted:

1. At the two end connections of the balcony floor channel to the structure, the incorrect plate was installed. The plan detail on Dwg S3.1, along with SSK-6 & SSK-36, specify a single 6" x 6" plate with (2) bolt holes. Instead, 2 separate smaller plates were installed. This condition was observed at all locations accessible for review.
2. At some locations, the bolts for the balcony channel attachment are skewed and thus are not properly located at the interior side of the wall framing as detailed (Section 5/S3.1). It is necessary that wood framing is located behind the entire plate washer. Add additional blocking as necessary.
3. There was (1) location observed where the guardrail bolts were attached directly to the exterior plywood. The jamb between the window and the door had not been filled solid.
4. At some locations, it was observed that plywood sheets were used to fill the jamb between the door and window. It had been directed that a minimum of (3) 2x6 is necessary to fill this space.
5. At many locations, it is observed from the exterior that the guardrail bolts do not line up vertically. Offsets in the range of 1" are observed (although not measured).

The concern is that only a small percentage of the connections could be reviewed, and a number of areas did not match the contract documents. These connections are critical in supporting the balconies off the exterior walls. Based on the areas reviewed, assurance that all the inaccessible areas have been constructed correctly is in question. I would recommend that a site meeting is scheduled to discuss this further. I am available on Friday, September 28th.

Thank you –

CC: Mike Myatt, Ethan Boxer-Macomber, Ronald Norton, Pandika Pleqi, Rick Nanartowich, Clint Gendreau, Dave Schoenherr, Suzanne Hunt Job File—1605

B E C K E R

structural engineers, inc.

Field Report

sv_2007/10/09

Project: Pearl Place
Project #: 1605
Date/Time: 10/9/07 9:00 am – 9:30 am
Observers Nathan Merrill, E.I.

BUILDING 1 STAIRWAY SHEARWALL SHEATHING ATTACHMENT:

This visit was conducted to review the progress of the shearwalls at the stairs in Building #1. At the time of this visit, only the 1st floor of the stairway shearwalls were exposed for review. At the remaining floors, sheetrock was in place and the connections could not be reviewed.

Review of accessible areas found that shearwall plywood was not fastened to end posts at several locations. Since only this floor was available for observation, it is uncertain if this occurs at other locations.

The concern is that only a small percentage of the plywood could be reviewed, and a number of areas did not match the contract documents. These connections are critical in transferring the lateral load from the sheathing into the end post and to the foundation. Ledgwood Construction shall provide photos of unobserved strap locations for record.

Thank you –

CC: Mike Myatt, Ethan Boxer-Macomber, Ronald Norton, Pandika Pleqi, Rick Nanartowich, Clint Gendreau, Dave Schoenherr, Suzanne Hunt Job File—1605

B E C K E R

structural engineers, inc.

Field Report

sv_2007/10/24

Project: Pearl Place
Project #: 1605
Date/Time: 10/24/07 8:30 am – 9:15 am
Observers Nathan Merrill, E.I. & Chris Williams E.I.

This visit was conducted to review the progress of the remaining punchlist items in Building #2. At the time of this visit, items B2-2.14 and B2-S.1 were complete. (4) Items remain incomplete; please see the attached revised punchlist for these items and additional items observed during the visit.

Work associated with SSK-46 and 47 was observed to be complete.

Thank you –

CC: Mike Myatt, Ethan Boxer-Macomber, Ronald Norton, Pandika Pleqi, Rick Nanartowich, Clint Gendreau, Dave Schoenherr, Suzanne Hunt Job File—1605

B E C K E R

structural engineers, inc.

Field Report

sv_2007/10/30


Project: Pearl Place
Project #: 1605
Date/Time: 10/30/07 8:15 am – 8:45 am
Observers Jim Hughes, E.I.

This visit was conducted to review the progress of the interior work in building 1 associated with SSKs 49 – 52. Work completed was reviewed, and is identified in the attached table. This table will serve to document the state of completed work at each building.

If you have any questions or comments feel free to email or call.

Thank you –

CC: Mike Myatt, Ethan Boxer-Macomber, Ronald Norton, Pandika Pleqi, Rick Nanartowich, Clint Gendreau, Dave Schoenherr, Suzanne Hunt Job File—1605

 **PDF Complete**
Your complimentary use period has ended.
Thank you for using PDF Complete.
[Click Here to upgrade to Unlimited Pages and Expanded Features](#)

C K E R
Civil engineers, inc.

Field Report

sv_2007/11/01

Project: Pearl Place
Project #: 1605
Date/Time: 11/1/07 8:00 am – 8:30 am
Observers Jim Hughes, E.I.

This visit was conducted to review the progress of the interior work in building 1 associated with SSKs 49 – 52. Work completed was reviewed, and is identified in the attached table. This table will serve to document the state of completed work at each building.

If you have any questions or comments feel free to email or call.

Thank you –

CC: Mike Myatt, Ethan Boxer-Macomber, Ronald Norton, Pandika Pleqi, Rick Nanartowich, Clint Gendreau, Dave Schoenherr, Suzanne Hunt Job File—1605

B E C K E R

structural engineers, inc.

Field Report

sv_2007/11/02

Project: Pearl Place
Project #: 1605
Date/Time: 11/2/07 8:00 am – 10:00 am
Observers Jim Hughes, E.I., Jim Fortin, P.E.

This visit was conducted to review the progress of the balcony repair work in building 1 associated with SSKs 49 – 52. Measurements were made to ensure that screws associated with SSK-50 Detail A actually penetrated into the studs in the jamb between window and door. Two locations were identified where horizontal screws did not appear to penetrate the bottom plate. These locations were corrected before leaving the site. This completes the inspection process for all the balconies at building 1. All work completed is identified in the attached table. This table will serve to document the state of completed work at both buildings.

We also noticed that there are various locations at building 2 where the exterior P.T. blocking at the balconies is made up of two separate pieces of ripped 2x. This is unacceptable and must be corrected in order to be approved. This information was discussed with Steve Q. during the walkthrough.

If you have any questions or comments feel free to email or call.

Thank you –

CC: Mike Myatt, Ethan Boxer-Macomber, Ronald Norton, Pandika Pleqi, Rick Nanartowich, Clint Gendreau, Dave Schoenherr, Suzanne Hunt Job File—1605

B E C K E R

structural engineers, inc.

Field Report

sv_2007/11/07

Project: Pearl Place
Project #: 1605
Date/Time: 11/7/07 8:00 am – 8:45 am
Observers Jim Hughes, E.I.

This visit was conducted to review the progress of the balcony repair work in building 2 associated with SSKs 49 – 52. All of the interior work has been completed in building 2, but the exterior work has not all been checked/completed. All work completed is identified in the attached table. This table will serve to document the state of completed work at both buildings. If you have any questions or comments feel free to email or call.

Thank you –

CC: Mike Myatt, Ethan Boxer-Macomber, Ronald Norton, Pandika Pleqi, Rick Nanartowich, Clint Gendreau, Dave Schoenherr, Suzanne Hunt Job File—1605

B E C K E R

structural engineers, inc.

Field Report

sv_2007/11/09

Project: Pearl Place
Project #: 1605
Date/Time: 11/9/07 8:00 am – 8:30 am
Observers Jim Hughes, E.I.

This visit was conducted to review the progress of the balcony repair work in building 2 associated with SSKs 49 – 52. All work completed is identified in the attached table. This table will serve to document the state of completed work at both buildings.
If you have any questions or comments feel free to email or call.

Thank you –

CC: Mike Myatt, Ethan Boxer-Macomber, Ronald Norton, Pandika Pleqi, Rick Nanartowich, Clint Gendreau, Dave Schoenherr, Suzanne Hunt Job File—1605

B E C K E R

structural engineers, inc.

Field Report

sv_2007/11/13

Project: Pearl Place
Project #: 1605
Date/Time: 11/13/07 8:00 am – 8:30 am
Observers Jim Hughes, E.I.

This visit was conducted to review the progress of the balcony repair work in building 2 associated with SSKs 49 – 52 as well as the addition of RSS screws to the blocking associated with SSK-48R2. This report marks the completion of all the work associated with the balconies of both buildings one and two. The work associated with SSK-48R2 also appeared to be complete. The balcony work is documented and identified in the attached table.

If you have any questions or comments feel free to email or call.

Thank you –

CC: Mike Myatt, Ethan Boxer-Macomber, Ronald Norton, Pandika Pleqi, Rick Nanartowich, Clint Gendreau, Don McGilvery, Suzanne Hunt Job File—1605



November 14, 2007

James Fortin
Becker Structural Engineers, Inc.
75 York Street
Portland, ME 04101-4701

Re: Special Inspections

Dear Mr. Fortin,

Please be advised that item # B1-S.8, of your Special Inspections report, pertaining to Shear Wall Straps at the stairway shear walls, has been corrected per your directive. Photos of these corrections have previously been sent to you via email.

Please call with any questions.

Sincerely,

A handwritten signature in black ink, appearing to read 'Clint Gendreau', with a long horizontal line extending to the right.

Clint Gendreau
Project Manager

C: PB, File



December 5, 2007

James Fortin
Becker Structural Engineers, Inc.
75 York Street
Portland, ME 04101-4701

Re: Special Inspections – Building # 2

Dear Mr. Fortin,

Please be advised that item # B2-2.1 of your Special Inspections report, concerning repairs to trusses. Trusses have been corrected per the truss manufacturer's recommendations.

Item # B2-2.10, Inspection of welds at exterior canopies. The welds were inspected by a third party engineer hired by S.W. Cole. The inspector verbally approved these welds. Today, after repeated requests, we have not received written documentation from S.W. Cole.

Item #'s B2-4.1 and B2-S.1, shear wall repairs. These shearwalls have been corrected, per your directive, as noted in your special inspections reports.

Please call with any questions.

Sincerely,

A handwritten signature in black ink, appearing to read 'Clint Gendreau', with a long horizontal line extending to the right.

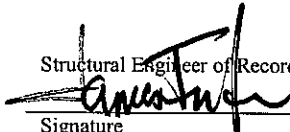
Clint Gendreau
Project Manager

C: PB, File

Quality Assurance Plan – Exhibit C
QUALITY ASSURANCE FOR SEISMIC RESISTANCE CHECK LIST [IBC 1705]

SEISMIC DESIGN CATEGORY: C	
QUALITY ASSURANCE PLAN REQUIREMENTS	
(A Quality Assurance Plan, enacted through the Special Inspections requirements for this project, are in place for the following systems)	
<input checked="" type="checkbox"/> FOR SEISMIC DESIGN CATEGORY C OR HIGHER:	
Structural: <input checked="" type="checkbox"/> The seismic-force-resisting systems <input type="checkbox"/> Steel Braced Frames and associated connections/anchorage <input checked="" type="checkbox"/> Steel Moment Frames and associated connections <input type="checkbox"/> Shear walls: <input type="checkbox"/> CMU <input checked="" type="checkbox"/> Wood <input type="checkbox"/> Concrete <input type="checkbox"/> Other: <input checked="" type="checkbox"/> Diaphragms: <input checked="" type="checkbox"/> Floor <input checked="" type="checkbox"/> Roof	SER
Mechanical/Piping: <input type="checkbox"/> Heating, ventilating and air-conditioning (HVAC) ductwork containing hazardous materials and anchorage of such ductwork <input type="checkbox"/> Hazardous Material: <input type="checkbox"/> Hazardous Material: <input type="checkbox"/> Piping systems and mechanical units containing flammable, combustible or highly toxic materials <input type="checkbox"/> Material: <input type="checkbox"/> Material:	MER
Electrical: <input type="checkbox"/> Anchorage of electrical equipment used for emergency or standby power systems <input type="checkbox"/> Equipment: <input type="checkbox"/> Equipment: <input type="checkbox"/> Equipment:	EER
<input type="checkbox"/> ADDITIONAL SYSTEMS FOR SEISMIC DESIGN CATEGORY D OR HIGHER:	
Architectural: <input type="checkbox"/> Exterior wall panels and their anchorage <input type="checkbox"/> Precast Concrete <input type="checkbox"/> Brick <input type="checkbox"/> Stone: <input type="checkbox"/> Other: <input type="checkbox"/> Suspended ceiling systems and their anchorage <input type="checkbox"/> Access floors and their anchorage <input type="checkbox"/> Steel storage racks and their anchorage <input type="checkbox"/> Retail Storage Racks <input type="checkbox"/> High Density Files <input type="checkbox"/> Other: <input type="checkbox"/> Life-safety component required to function after an earthquake: <input type="checkbox"/> Engineered Egress Stairs <input type="checkbox"/> Fire Protection Sprinkler System <input type="checkbox"/> Other: <input type="checkbox"/> Other: <input type="checkbox"/> Other:	RAR
<input type="checkbox"/> ADDITIONAL SYSTEMS FOR SEISMIC DESIGN CATEGORY D OR HIGHER:	
Electrical: <input type="checkbox"/> Electrical equipment	EER

Project: Pearl Place Building 1 & 2
Date Prepared: October 11, 2006

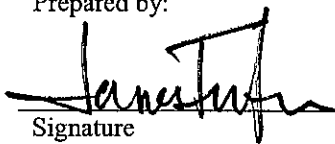
Structural Engineer of Record (SER):

 Signature _____ Date 11/20/07
 Mechanical Engineer of Record (MER):
 Signature _____ Date _____
 Building Code Official's Acceptance:
 Signature _____ Date _____

Registered Architect of Record (RAR):
 Signature _____ Date _____
 Electrical Engineer of Record (EER):
 Signature _____ Date _____

Quality Assurance Plan – Exhibit C
Wind Exposure

Wind Exposure Category

REQUIRED	NOT REQUIRED	NOT APPLICABLE	
			QUALITY ASSURANCE PLAN REQUIREMENTS (A Quality Assurance Plan is required where indicated below)
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	In wind exposure Categories A and B, where the 3-second-gust basic wind speed is 120 miles per hour (mph) (52.8 m/sec) or greater.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	In wind exposure Categories C and D, where the 3-second-gust basic wind speed is 110 mph (49 m/sec) or greater.

Prepared by:

 Signature _____ Date 11/20/07

Building Code Official's Acceptance:
 Signature _____ Date _____

EXHIBIT C

01000 Quality Assurance

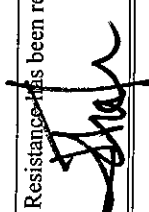
Project: Pearl Place Building 1 & 2
 Date Prepared: October 11, 2006

Schedule of Special Inspections – Exhibit C

SEISMIC RESISTANCE - STRUCTURAL

VERIFICATION AND INSPECTION	Y/N	EXTENT: CONTINUOUS, PERIODIC, SUBMITTAL, OR NONE	COMMENTS	AGENT	AGENT QUALIFICATION	DATE	REV
IBC Section 1707			Seismic Design Category: C				
1. Special inspections for seismic resistance. Special inspection as specified in this section is required for the following: a. The seismic-force-resisting systems in structures assigned to Seismic Design Category C, D, E or F	Y	P	IBC 1707.1	SII	PE/SE or EIT	SEE ATTACHED REPORT ✓	
2. Structural steel: Continuous special inspection for structural welding in accordance with AISC 341.	Y	P	IBC 1702.2	TA1	AWS-CWI		
3. Structural wood: a. Continuous special inspection during field gluing operations of elements of the seismic-force-resisting system. b. Periodic special inspections for nailing, bolting, anchoring and other fastening of components within the seismic-force-resisting system, including drag struts, braces and hold-downs	Y	C	IBC 1702.3	SII	PE/SE or EIT	✓	
4. Cold-formed steel framing: Periodic special inspections during welding operations of elements of the seismic-force-resisting system. Periodic special inspections for screw attachment, bolting, anchoring and other fastening of components within the seismic-force-resisting system, including struts, braces, and hold-downs	Y	P	IBC 1702.3	SII	PE/SE or EIT	✓	
4. Seismic isolation system. Provide periodic special inspection during the fabrication and installation of isolator units and energy dissipation devices if used as part of the seismic isolation system	N/A	N	CESEF for this project not part of the primary seismic-force-resisting system.				
	N/A	N	IBC 1707.9: Seismic isolators not used				

Structural Seismic Resistance has been reviewed in accordance with section 1707 of the IBC Code

Special Inspector 

Date

12/5/07

EXHIBIT D

Statements of Responsibility

Project: Pearl Place Building 1 & 2
Date Prepared: October 11, 2006

SWCOLE - GEOTECHNICAL ENGINEER

Statement of Special Inspections (Continued) - Exhibit A
Special Inspector's/Agent's Final Report

Project: Pearl Place Building 1 & 2
Special Inspector or Agent: _____
Designation: (name) (firm)

To the best of my information, knowledge and belief, the Special Inspections or testing required for this project, and designated for this Inspector/Agent in the *Statement of Special Inspections* submitted for permit, have been performed and all discovered discrepancies have been reported and resolved other than the following:

Comments:

See attached memo regarding subgrade observations.

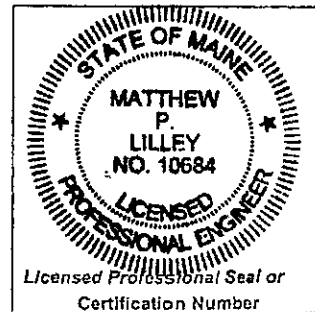
(Attach continuation sheets if required to complete the description of corrections)

Interim reports submitted prior to this final report form a basis for and are to be considered an integral part of this final report.

Respectfully submitted,
Special Inspector or Agent:

Matthew P. Lilley
(Type or print name)

Matthew P. Lilley 11/20/07
Signature Date





• Geotechnical Engineering • Field & Lab Testing • Scientific & Environmental Consulting

MEMORANDUM

To: Mike Myatt / Avesta
From: Matthew Lilley, P.E. / S. W. COLE ENGINEERING, INC. *MLL*
Project No.: 04-1212.2
Date: 2/27/07- 3/6/07
Subject: Summary – Subgrade Observations
Proposed Building 2
Pearl Place
Portland, ME

Between February 28 and March 6, 2007, SWCE was at the site to observe subgrade conditions in the northerly end of Building 2. Several feet of structural fill had been previously placed over the proposed north wall line and northerly end of the slab area to reduce the effects of construction traffic on the subgrade and to provide access to the interior of the building. The structural fill was stripped away to expose the subgrade for preparation in accordance with the project specifications. The westerly and easterly foundation walls had been placed to approximately the northwesterly and northeasterly building corners respectively.

During excavation of the structural fill, existing unsuitable fill, including loose sand and gravel and organics, brick, pipe, and timbers, was encountered at pre-construction ground grade elevations beneath the northerly half of the proposed interior slab on grade and the northerly foundation wall. Similar unsuitable fill material had been encountered beneath the northerly end of the westerly wall and northwesterly corner of the building foundation (see report dated 1/4/07). The unsuitable material was found to be at depths of approximately 6.5 to 7 feet below the proposed foundation wall footing elevation and tapered in depth to several feet below bottom of slab elevation moving southerly toward the building interior. Native soil at the bottom of the excavation consisted of soft clay near the wall line and transitioned to stiff clay and glacial till beneath the slab. The unsuitable material was removed from beneath the slab section and replaced with structural fill and compacted with a large vibratory compactor.

During the excavation work a section of timber was observed that extended beneath a portion of the foundation at the northeasterly corner of the building that had been placed earlier in the project. The section of timber was embedded in soft clay at the bottom of the excavation at a depth of approximately 6.5 feet below the bottom of the existing footing.

In order to determine if additional unsuitable material was beneath the existing footing, a continuous excavation was made along the exterior of the northerly and easterly sides of the northeasterly corner of the foundation. The excavation generally encountered gravel and sand

GRAY, ME OFFICE
286 Portland Road, Gray, ME 04039 • Tel (207) 657-2866 • Fax (207) 657-2840 • E-Mail
infogray@swcole.com • www.swcole.com

Other offices in Augusta, Bangor and Caribou, Maine & in Somersworth, New Hampshire

fill to a depth of approximately 6.5 feet. We did not observe any unsuitable materials, such as brick, pipe, and timbers in the excavation. It did not appear that the section of timber observed on the westerly side of the wall extended beneath the entire footing.

We were requested to assess the existing conditions beneath the building corner and provide recommendations. Based on the depth of the portion of the timber that remained beneath the footing and the granular soils encountered beneath and around the footing, SWCE recommended the section of timber could remain in place provided that structural fill was placed in the excavation and compacted.

Based on our observations, it is our opinion that the subgrades below the foundation and slab in the northerly end of Building #2 should have a suitable bearing capacity to support the building. As discussed, some post-construction settlement of the northeasterly corner of the building should be anticipated.

c: Ron Norton / Avesta
Jim Fortin / Becker Structural Engineers
Rick Nanartowich / Ledgewood
Clint Gendreau / Ledgewood
Pandika Pleqi / Winton Scott Architects
David Schoenherr / Maine Housing



SOILS OBSERVATION REPORT

Project Name: Pearl Place - Phase 1
Client: Avesta
Client's Rep.: Mike Myatt
Contractor: Ledgewood

Project No: 04-1212.2
Date: 3-06-07
Page: 1 of 1
Technician: RED

Weather			Site Conditions		Materials Used	
<input checked="" type="checkbox"/> Clear	<input type="checkbox"/> Snow	<input type="checkbox"/> Warm	<input type="checkbox"/> Clear	<input type="checkbox"/> Dusty	<input type="checkbox"/> Granular	<input type="checkbox"/> Non Frost
<input type="checkbox"/> Overcast	<input type="checkbox"/> Fog	<input type="checkbox"/> Hot	<input type="checkbox"/> Muddy	<input type="checkbox"/> _____	Borrow	<input type="checkbox"/> Susceptible
<input type="checkbox"/> Rain	<input checked="" type="checkbox"/> Cold	<input type="checkbox"/> Windy	<input type="checkbox"/> Frozen	Temperatures: teen's	<input type="checkbox"/> Utility Bedding	<input type="checkbox"/> Subbase
					<input type="checkbox"/> Base	_____

Soils Worked Performed:
 Site Prep
 Earthwork
 Planting Soils
 Building Earthwork
 Utilities Earthwork

Compaction Equipment Used:
 Large Roller
 Small Roller
 Trench Roller
 Large Plate Tamp
 Small Tamp
 Jumping Jack

SOILS OBSERVATIONS	Observed		Comments
Site Preparation	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
Fill Placement:	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
Material Type (Proper material used for construction)	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
Lift Size	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
Compaction	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
In-place Densities	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
In-place Density Frequency	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
NON-CONFORMANCE ITEMS OBSERVED			
Non-conformance item description:	Fill removal from under wall in Bldg#2.		
Action taken by SWCE:	Discussed with Colex & Ledgewood		
Person(s) Notified:			

Notes: Colex continued placement of structural fill beneath northerly end of Building 2 slab after stripping off approximately 4" of frozen material placed on 3-5-07. Material was compacted with a large self-propelled vibratory roller compactor to achieve the specified compaction of 95%.

Colex excavated a 8 foot wide trench along the exterior of northeasterly building corner. The trench extended approximately 10 feet west and south from the corner. The excavation encountered approximately 1 foot of structural fill over 2.5 to 3 feet of sand and gravel fill over approximately 2 to 3 feet of sand fill. The excavation was terminated in the fill at a depth of about 6.5'. Colex placed structural fill in the excavation along the north and east walls. A large self-propelled vibratory roller compactor was used to achieve the specified compaction of 95%.

Discussed our observations with Colex and Ledgewood.

Reviewed BY:

Project: Pearl Place Building 1 & 2
Date Prepared: October 11, 2006

Contractor's Statement of Responsibility –Exhibit D

Each contractor responsible for the construction or fabrication of a system or component designated in the Quality Assurance Plan must submit a Statement of Responsibility. The Statement of Responsibility is required for Seismic Design Category C or higher. Make additional copies of this form as required.

Project: *Pearl Place Building 1 & 2*

Contractor's Name:

Address:

License No.:


Description of designated building systems and components included in the Statement of Responsibility:

Steel fabrication

Contractor's Acknowledgment of Special Requirements

I hereby acknowledge that I have received, read, and understand the Quality Assurance Plan and Special Inspection program.

I hereby acknowledge that control will be exercised to obtain conformance with the construction documents approved by the Building Official.


Signature

DEC 4, 07
Date

Contractor's Provisions for Quality Control

Procedures for exercising control within the contractor's organization, the method and frequency of reporting and the distribution of reports is attached to this Statement.

Identification and qualifications of the person(s) exercising such control and their position(s) in the organization are attached to this Statement.

Project: Pearl Place Building 1 & 2
Date Prepared: October 11, 2006

WOOD WALL PANEL MANUFACTURER

Contractor's Statement of Responsibility - Exhibit D

Each contractor responsible for the construction or fabrication of a system or component designated in the Quality Assurance Plan must submit a Statement of Responsibility. The Statement of Responsibility is required for Seismic Design Category C or higher. Make additional copies of this form as required.

Project: Pearl Place Building 1 + 2

Contractor's Name: Structures Canatrust

Address: 1760 Setlakwe Street, Thetford Mines (Quebec) G6G 8B2

License No:

N/A

Description of designated building systems and components included in the Statement of Responsibility:

1) Wall Panels

Contractor's Acknowledgment of Special Requirements

I hereby acknowledge that I have received, read, and understand the Quality Assurance Plan and Special Inspection program.

I hereby acknowledge that control will be exercised to obtain conformance with the construction documents approved by the Building Official.


Signature

November 27, 2007
Date

Contractor's Provisions for Quality Control

Procedures for exercising control within the contractor's organization, the method and frequency of reporting and the distribution of reports is attached to this Statement.

Identification and qualifications of the person(s) exercising such control and their position(s) in the organization are attached to this Statement.

CASE Form 103 • Contractor's Statement of Responsibility • ©CASE 2004

Project: Pearl Place Building 1 & 2
Date Prepared: October 11, 2006

WOOD TRUSS MANUFACTURER

Contractor's Statement of Responsibility - Exhibit D

Each contractor responsible for the construction or fabrication of a system or component designated in the Quality Assurance Plan must submit a Statement of Responsibility. The Statement of Responsibility is required for Seismic Design Category C or higher. Make additional copies of this form as required.

Project: ~~Pearl Place Building 1 & 2~~

Contractor's Name: Structures Canatrust

Address: 1760 Setlakwe Street, Theford Mines (Québec) G6G 8B2

License No.:

Description of designated building systems and components included in the Statement of Responsibility: N/A

- 1) Floor Trusses
- 2) Roof Trusses

Contractor's Acknowledgment of Special Requirements

I hereby acknowledge that I have received, read, and understand the Quality Assurance Plan and Special Inspection program.

I hereby acknowledge that control will be exercised to obtain conformance with the construction documents approved by the Building Official.


Signature

November 27, 2007
Date

Contractor's Provisions for Quality Control

Procedures for exercising control within the contractor's organization, the method and frequency of reporting and the distribution of reports is attached to this Statement.

Identification and qualifications of the person(s) exercising such control and their position(s) in the organization are attached to this Statement.

CASE Form 103 • Contractor's Statement of Responsibility • ©CASE 2004

Contractor's Statement of Responsibility –Exhibit D

Each contractor responsible for the construction or fabrication of a system or component designated in the Quality Assurance Plan must submit a Statement of Responsibility. The Statement of Responsibility is required for Seismic Design Category C or higher. Make additional copies of this form as required.

Project: *Pearl Place Building 1 & 2*

Contractor's Name: *Ledge wood Construction*

Address: *27 Main Street South Portland ME*

License No.:

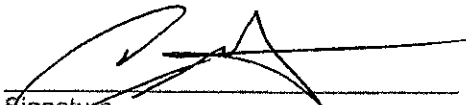
Description of designated building systems and components included in the Statement of Responsibility:

*Connection elements of shear walls
fastening plywood to trusses
fastening wall panels to each other*

Contractor's Acknowledgment of Special Requirements

I hereby acknowledge that I have received, read, and understand the Quality Assurance Plan and Special Inspection program.

I hereby acknowledge that control will be exercised to obtain conformance with the construction documents approved by the Building Official.


Signature

12/4/07
Date

Contractor's Provisions for Quality Control

Procedures for exercising control within the contractor's organization, the method and frequency of reporting and the distribution of reports is attached to this Statement.

Identification and qualifications of the person(s) exercising such control and their position(s) in the organization are attached to this Statement.

End of Special Inspections Report