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FINAL REPORT OF SPECIAL INSPECTIONS

PROJECT: 2003 Centralized Mechanical Plant

LOCATION: Building HO2 – Unum-Provident Campus, Portland, Me

PERMIT APPLICANT:

APPLICANT'S ADDRESS:

RECEIVED

JUL 15 2004

**MacMILLIN COMPANY
BEDFORD, NH**

STRUCTURAL ENGINEER OF RECORD: William P. Faucher, P.E. Allied Engineering Inc.
Name Firm

ARCHITECT OF RECORD: Guy Labreque, RA CWS Architects
Name Firm

GENERAL CONTRACTOR: Macmillan Company

To the best of my information, knowledge, and belief, the Special Inspections required for this project, and described in the Statement of Special Inspections submitted for the project, have been satisfactory completed and all discovered defects have been corrected.

Comments: See attached Special Inspection Form and Testing Result Documents.

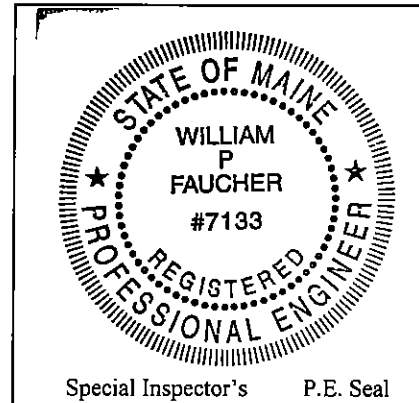
The Program of Special Inspections does not relieve the Contractor or its subcontractors of their responsibilities and obligations for quality control of the work, for any design work which is included in their scope of services, and for full compliance with the requirements of the Construction Documents. Furthermore, the detection of, or the failure to detect, deficiencies or defects in the work during Special Inspections 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 the work, and to otherwise comply with all requirements of the Construction Documents.

Respectfully Submitted:
STRUCTURAL ENGINEER OF RECORD

William P. Faucher, P.E.
NAME

SIGNATURE

7-13-04
DATE



SCHEDULE OF SPECIAL INSPECTION SERVICES

Project: 2003 Centralized Mechanical Plant - Nullifying HO2 - Unum-Provident Campus, Portland, ME

MATERIAL/ACTIVITY	ITEM	SERVICE	APPLICABLE TO THIS PROJECT				REV. No.
			Y/N	EXTENT (All, Sample, Other, None)	COMMENTS	AGENT No.	
1705.2 Steel Fabrication	1.00	In-plant review					
		Part A-Fabrication procedures	Yes	Review for AISC Certifications		1	17-Oct-03
		Review material certificates of compliance (bolts, nuts, washers, structural steel, & weld filler mat.)	Yes	Shop Drawing Submittal Review		1	17-Oct-03
		Review connections	Yes	Shop Drawing Submittal Review		1	37911
		Review welder certification	Yes	Shop Drawing Submittal Review		1	17-Oct-03
		Review material certificates of compliance (bolts, nuts, washers, & weld filler material)	Yes	Shop Drawing Submittal Review		1	17-Oct-03
		Review primary steel connections					
		Moment connections	Yes	Elite Inspection Services		3	17-Dec-03
		Shear connections	Yes	Elite Inspection Services		3	17-Dec-03
		Bracing connections	Yes	Elite Inspection Services		3	17-Dec-03
1705.3 Steel Erection		Review welded column splices	Yes	Elite Inspection Services		3	17-Dec-03
		Review Catwalk Construction Shops and Field					
		Framing	Yes	Shop Drawing Submittal Review		1	7-May-04
		Grating	Yes	Shop Drawing Submittal Review		1	7-May-04
		Site Inspection	Yes	AEI		1	14-Jun-04

Inspector:  Date: 11/3/07

All Steel Construction Special Inspections have been completed in accordance with BOCA 1989, Section 1705.2 and 1705.3

MATERIAL/ACTIVITY	ITEM	SERVICE	Y/N	EXTENT (All, Sample, Other, None)	COMMENTS	AGENT No.	DATE COMPLETED	REV. No.
1705.4 CONCRETE CONSTRUCTION	2.00							
Concrete Materials		Review materials (ACI Chapt. 3) Review mix design (ACI Chapt. 4) Review reinforcing certification & weldability (ASTM A706) if required Review condition & placement of reinforcing and prestressing steel (ACI 318 7.4-7.7)	Yes Yes Yes N/A	Shop Drawing Submittal Review Shop Drawing Submittal Review Shop Drawing Submittal Review		1 1 1	10-30-03 & 12-22-03 10-30-03 & 12-22-03 10-30-03 & 12-22-03	
Placing Reinforcement								
Formwork		Review formwork (ACI 3186.1) Review form removal & reshoring (ACI 3186.2)	N/A N/A					
Concrete Operations		Review concrete strength tests (ACI 3185.6) Review mix proportions and technique (ACI 3185.2.5.3 5.4, 5.8) Review concrete placement (ACI 3185.9 & 5.10) Review curing technique & temperature (ACI 3185.11.5.12 & 5.13)	N/A N/A N/A N/A					

All Concrete Construction Special Inspections have been completed in accordance with BOCA 1999 Section 1705.4

Only involved interior concrete equipment pads. No material testing was requested by EOR.

Inspector: *[Signature]* Date: 7-1-07



Date: 7/14/04

RE: Unum Provident
Centralized Boiler and Chiller Plant
Portland, Maine

The following is the final structural punch list for the above referenced project as developed by allied engineering, inc. (AEI) on 7/13/04.

Present:

Ken Castor, MacMillon
Matt Minor, Unum Provident
Tony Davis, PE, AEI

This list includes deficiencies in workmanship and work not completed to date. The contractor, however, is not relieved from any contractual or deficient work not identified on this list. allied engineering, inc., and/or the Owner reserves the right to add or subtract from this list as deemed necessary to insure contractual obligations are met. The Contractor shall notify allied engineering, inc. upon completion of all items or within 2 weeks whichever comes first.

This list does not constitute a change request or permission to proceed with additional work not covered by the contract. If the contractor feels items in this list are outside the scope of this project the contractor shall notify the designer in writing of the conflict.

No deficiencies were noted on this date relative to the installation of structural systems and components applicable to the work of this contract. Previously identified deficiencies were inspected on this date and found to have been satisfactorily addressed.

The mechanical, electrical, site, and architectural punch lists shall be forthcoming under separate cover.

Anthony Davis, PE, Associate
Associate

cc:
all present
Nick Najafinia
William Faucher, PE
Peter Tremblay



FIELD OBSERVATION REPORT

AEI PROJECT NUMBER: 03033

Report Date: June 14, 2004

Project Name: Unum Provident 2003 Centralized Mechanical Plant

To: Nick Najafinia, Matt Minor

CC: Peter Tremblay, MacMillin Co.

Company: UnumProvident

AEI Observer: Tony Davis

Observation Date: **June 08, 2004**

Location: job site

Time: AM

of Pages: 2

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The following items were observed:

1. The variable frequency drives have been installed for the hot water heating pumps.
2. The VFD for the secondary chilled water pump has been re-supported. Installation is acceptable.
3. The base pad has been cast for the hot water heating pumps.
4. 17 of 18 conduit holes have been cored through the foundation wall at HO#2. The 18th hole could not be completed due to a conflict with a retaining wall footing discovered during excavation. Discussion ensued as to the practical resolution. A proposal is discussed for core drilling the 18th hole on the opposite side of the cluster to the footing.
Subsequent to the site visit, on Friday, June 11, 2004, it was brought to the attention of AEI that a decision was made to delete the 18th conduit. In house discussion at AEI revealed that the deletion will cause discrepancy to the original design intent. A separate electrical site visit is scheduled for Monday, June 14, 2004, subsequent to which a memo will be issued.
5. Underground heat piping is being installed adjacent to HO#1. Field welded joints have not yet been insulated.
6. The catwalk system has been completed. General items are as follows:
 - An angle within the path of foot traffic creates a tripping hazard. This should be clearly marked.
 - The control panel for tower CT 2-2 is not properly affixed to the tower.
 - A kick plate at the end of the catwalk needs to be removed to avoid a tripping hazard.

A more stringent inspection will be scheduled for Bill Faucher to report on this system.

If any information in this field observation report is incorrect or there are any questions, please let us know immediately.



FIELD OBSERVATION REPORT

AEI PROJECT NUMBER: 03033

Report Date: June 14, 2004

Project Name: Unum Provident 2003 Centralized Mechanical Plant

To: Nick Najafinia, Matt Minor

CC: Peter Tremblay, MacMillin Co.

Company: UnumProvident

AEI Observer: William Faucher, PE

Observation Date: **June 14, 2004**

Location: job site

Time: PM

of Pages: 1

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The catwalk system was inspected on this date. The following items were observed:

1. The grating system needs to be locked down to the framework, in similar fashion to the cooling tower system.
2. At one location, the grating is higher than a support beam by approximately $\frac{3}{4}$ ". This creates unstable footing at the area of the support beam flange. Install a plate at this area to level the surface.
3. Painting is required at many grind and weld joints throughout the area of the cooling towers.

If any information in this field observation report is incorrect or there are any questions, please let us know immediately.

END OF FIELD OBSERVATION



RECEIVED

JAN 15 2004
• Geotechnical Engineering • Field & Lab Testing • Scientific & Environmental Consulting

MacMILLIN COMPANY
BEDFORD, NH

Letter Of Transmittal

To: MacMillin Company Attn: Peter Tremblay Bedford Place 40 South River Road, Unit #35 Bedford, NH 03110	Date: January 12, 2004
	Project No: 03-0887
	Subject: Centramech – Mat. Testing Portland, Maine

We are sending you: Attached Under Separate Cover

Investigation Report Prints Samples

Laboratory Test Report(s) Copy of Letter(s) Invoice

Field Test Report(s) Specifications Other

Description: Elite Inspection Services, Inc. report dated December 17, 2003.

These are transmitted as checked below:

For your information For your use

As requested Returned

Remarks:

Copy to:

Ken Castor-MacMillin Field Office

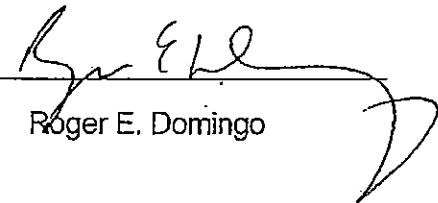
Nick Najafinia-UnumProvident

Ian MacDonald-Allied Engineering

Bill Hoffman-Deluca-Hoffman

Jeannie Bourke-City of Portland

S. W. COLE ENGINEERING, INC.

BY: 

Roger E. Domingo

Elite Inspection Services Inc.

220 Industrial Way, Unit #1
Portland, Me 04103

Telephone: (207) 797-2496
Fax: (207) 797-2284

December 17, 2003

S. W. Cole Engineering, Inc.
286 Portland Rd.
Gray, Me. 04039

Re: Inspection of Structural Steel and Bolted Connections.
Cust. #03-0887 EISI # 534-03-VT

Att: Roger Domingo

Dear Sir,

This letter shall serve as the report for the Visual Inspection that was performed at Unum Provident in Portland, Maine on December 17, 2003. Below is a listing of the areas inspected, their location and the results.

Inspection of Roof Add-on HVAC Area - Column Line 4-6,C-D.8 Structural Steel

- 1) Column and Diagonal Brace Modifications Reference Allied Engineering Drawings SKS-03 & SKS-03A:
 - a) Two (2) Diagonal 4x4x1/4" are complete and acceptable.
 - b) Column HSS 4x4 shows Incomplete welds and Untorqued Bolts.

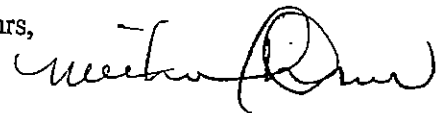
Roof Area

- 1) Bolted Connections for 3/4" A325 shows need for Final Torque in All Areas.
- 2) Diagonal Bracing welds are complete and acceptable.
- 3) Cross Bracing welds are in progress.

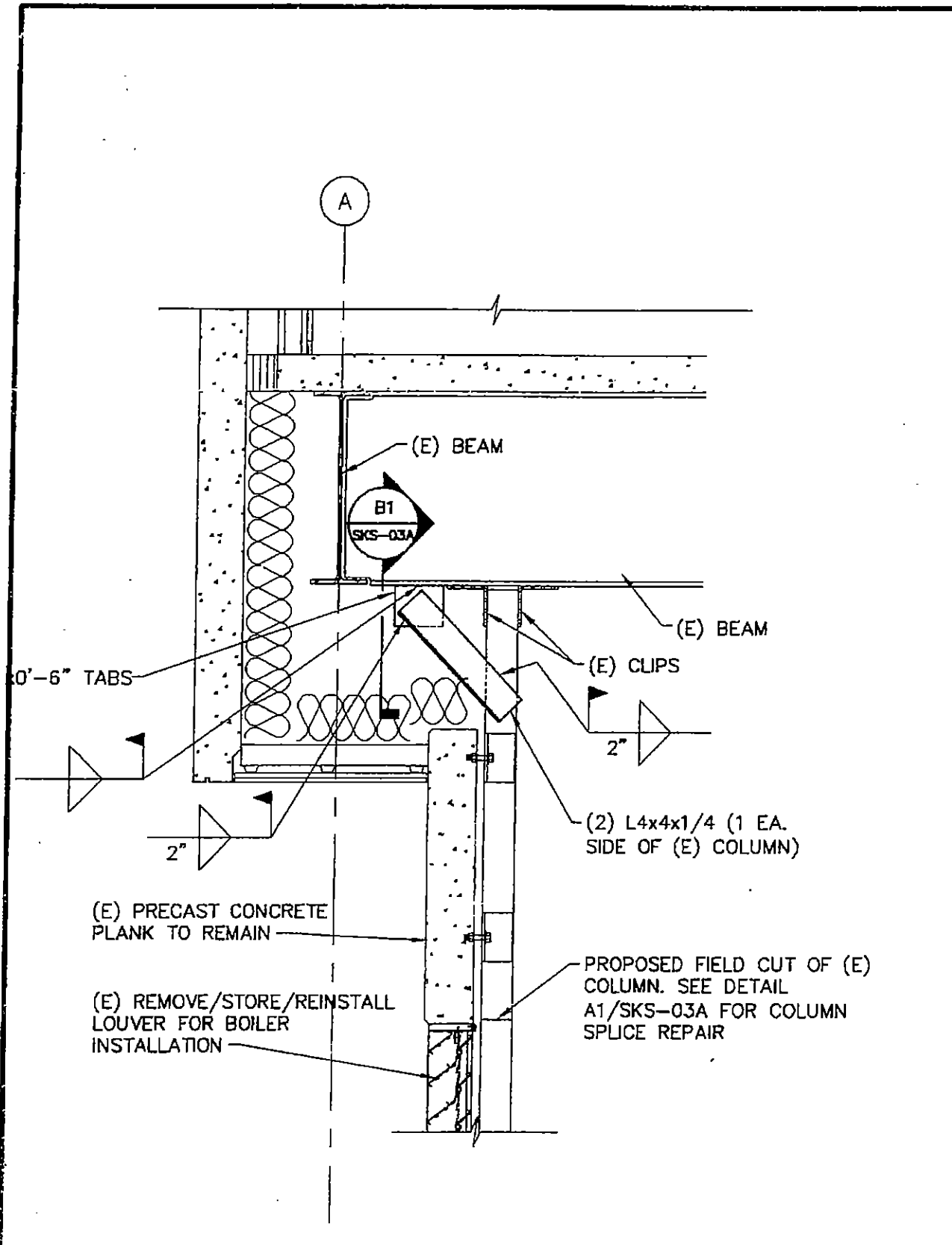
NOTE: Quality of Welding is Very Good!

All acceptable welds to be IAW A.W.S. D1.1 and all applicable drawings. If you have any further questions concerning these results, please feel free to call this office anytime.

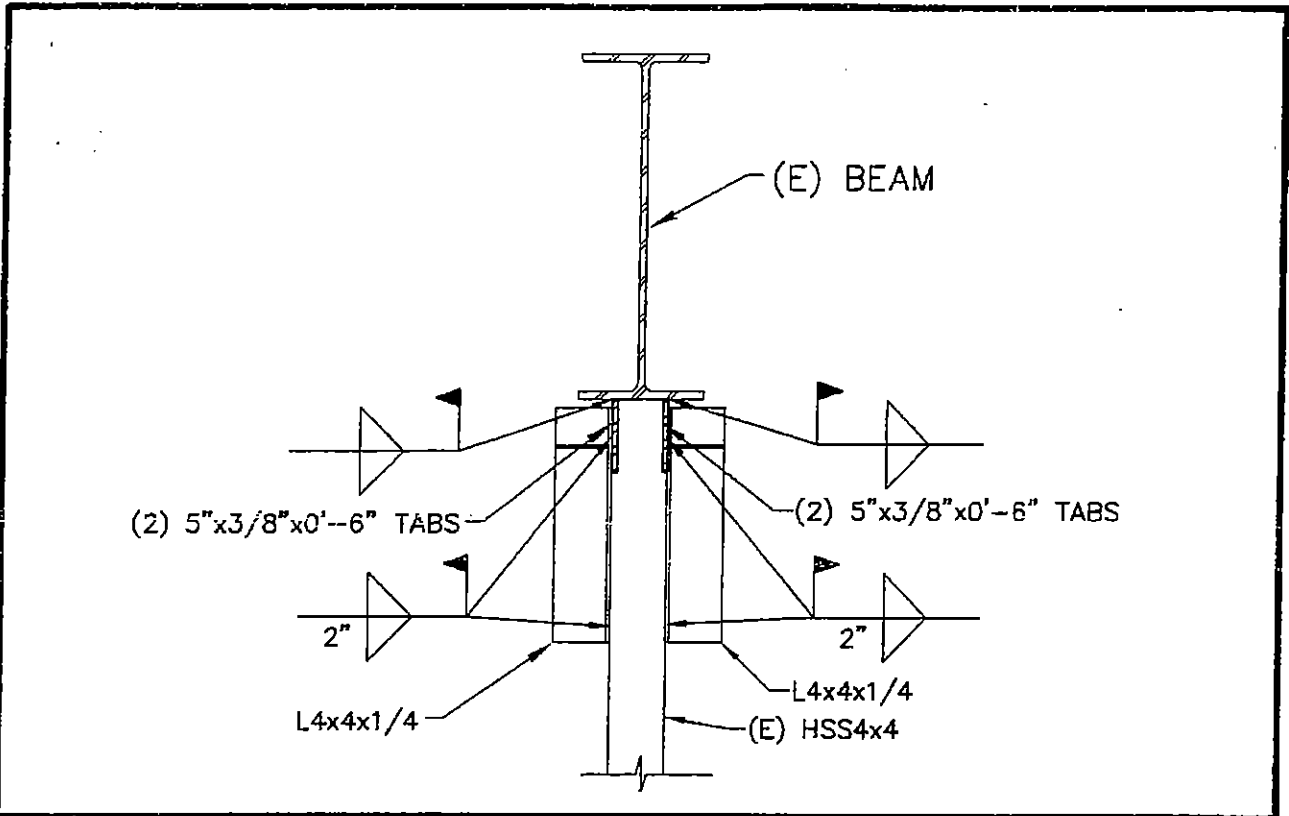
Respectfully yours,



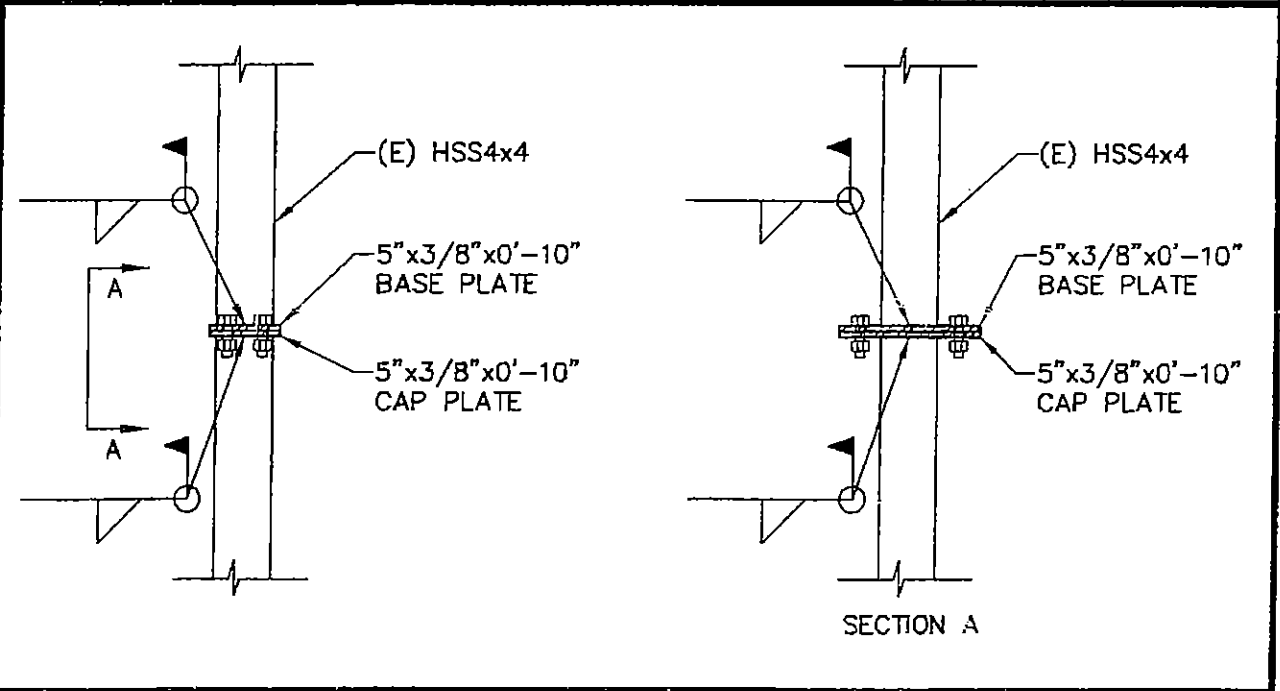
Mike Drew
CWI 99050211



SKS-03	REMOVAL OF EXISTING COLUMN		allied <i>engineering, inc.</i>	
	UNUM PROVIDENT PORTLAND, MAINE			
	Scale: NONE	Project No: 03033	One Westbrook Common, Westbrook, Maine 04092-2804 Telephone No: 207-854-0126 • Fax No: 207-854-0603 E-Mail: info@allied-eng.com • www.allied-eng.com	
	Date: 12/04/03	CAD File: 03033S.DWG		



B1	COLUMN SUPPORT DETAIL
1" = 1'-0"	



A1	COLUMN SPLICE DETAIL
1" = 1'-0"	

SKS-03A	DETAILS	
	UNUM PROVIDENT PORTLAND, MAINE	
	Scale: NONE	Project No: 03033
	Date: 11/05/03	CAD FILE: 03033S.DWG

allied
engineering, inc.

One Westbrook Common, Westbrook, Maine 04092-2804
 Telephone No: 207-854-8128 • Fax No: 207-854-0503
 E-Mail: info@allied-eng.com • www.allied-eng.com





STATEMENT OF SPECIAL INSPECTIONS

PROJECT: 2003 Centralized Mechanical Plant

LOCATION: Building HO3 – Unum-Provident Campus, Portland, ME

PERMIT APPLICANT:

APPLICANT'S ADDRESS:

STRUCTURAL ENGINEER OF RECORD: William P. Faucher, P.E. allied engineering, inc
Name Firm

ARCHITECT OF RECORD: Guy Labreque, RA CWS Architects
Name Firm

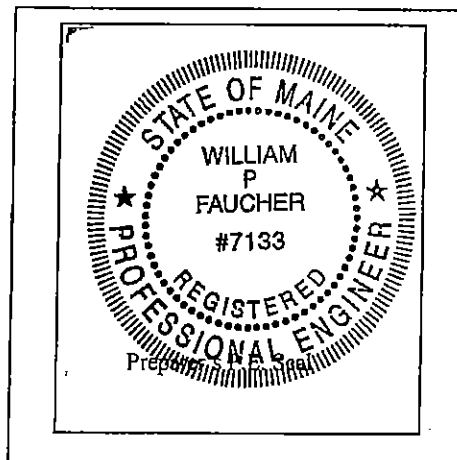
This Statement of Special Inspections is submitted in accordance with Section 1705.1.1 of the 1999 BOCA National Building Code. It includes a listing of special inspections applicable to this project as well as the name of the Special Inspector, and the names of other agencies intended to be retained for conducting these inspections.

The Special Inspector shall keep records of all inspections listed herein, and shall furnish inspection reports to the Code Official and to the Registered Design Professional of Record. All discrepancies shall be brought to the immediate attention of the Contractor for correction. If the discrepancies are not corrected, the discrepancies shall be brought to the attention of the Code Official and to the Registered Design Professional of Record. Interim reports shall be submitted to the Code Official and to the Registered Design Professional of Record monthly, unless more frequent submissions are requested by the Code Official.

Job site safety is solely the responsibility of the Contractor. Materials and activities to be inspected are not to include the Contractor's equipment and methods used to erect or install the materials listed.

Prepared By:

William P. Faucher, P.E.
Structural Engineer of Record



Applicant's Authorization:

SIGNATURE DATE



LIST OF AGENTS

PROJECT: 2003 Centralized Mechanical Plant
Building HO3 - Unum-Provident Campus, Portland, ME

STRUCTURAL ENGINEER OF RECORD: William P. Faucher, P.E. allied engineering, inc
One Westbrook Common
Westbrook, Maine 04092
(Tel) 207-854-8126 X107; (Fax) 207-854-0603
mailto:wfaucher@allied-eng.com

ARCHITECT OF RECORD: Guy Labreque, R.A., CWS Architects
434 Cumberland Ave.
Portland, ME 04101
(Tel) 207-774-4441; (Fax) 207-774-4016
mailto:glabreque@cwsarch.com

Following is the List of Agents selected for performance of Special Inspections for this project:

Table with 3 columns: Item Number, Name, Firm. Contains 10 rows of inspection agent information.