



**FINAL REPORT OF SPECIAL INSPECTIONS**

<b>PROJECT:</b>	<b>Maine Medical Center Office of Medical Education</b>
<b>LOCATION:</b>	<b>335 Brighton Avenue, Portland, Maine</b>
<b>PERMIT APPLICANT:</b>	<b>Hebert Construction LLC</b>
<b>APPLICANT'S ADDRESS:</b>	<b>9 Gould Road, Lewiston, Maine</b>

**Structural Engineer of Record:**

**Ronald Rideout, P.E.**

**SMRT, Inc.**

Name

Firm

**Architect of Record:**

**Craig Piper, A.I.A.**

**SMRT, Inc.**

Name

Firm

**General Contractor:**

**Hebert Construction LLC**

Name

Firm

The Special Inspections required for this project, as identified in the Statement of Special of Special Inspections are complete. The following discrepancies that were outstanding since the last interim report, No. 2 dated June 7, 2010, have been corrected:

There are no outstanding issues.

*(Use additional sheets, if necessary)*

Interim reports submitted to this final report, and numbered 1 and 2, in addition to inspection reports from Quality Assurance LabLabs, Inc. and Summit Geoengineering Services, form a basis for, and are to be considered an integral part of this final report. A copy of the completed Schedule of Special Inspections is attached.

Submitted By:

SPECIAL INSPECTOR

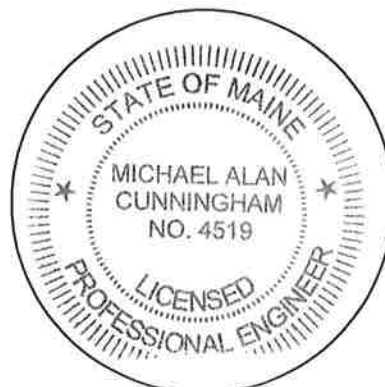
Michael A. Cunningham, P.E.

(Name)

*Michael A. Cunningham* 7/14/10

(Signature)

(Date)



Special Inspector's P.E. Seal

**Schedule of Special Inspection Services – IBC 2003**  
**FABRICATION AND IMPLEMENTATION PROCEDURES – STRUCTURAL STEEL**

VERIFICATION AND INSPECTION IBC Section 1704.2	Y/N	EXTENT: CONTINUOUS, PERIODIC, OR SUBMITTAL	COMMENTS	REFERENCE FOR CRITERIA (1)	AGENT	TASK COMPLETED
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.	Y	S	Fabricator shall submit one of the two qualifications		1 - 4	Y
2. AISC Certification. . . <del>OR-</del> Submit copy of certificate.						
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	1 - 4	Y

**Schedule of Special Inspections – IBC 2003**  
**STEEL CONSTRUCTION**  
**(This section includes Structural Steel, Steel Joists, & Steel Stairs)**

VERIFICATION AND INSPECTION IBC Section 1704.3	Y/N	EXTENT: CONTINUOUS, PERIODIC, OR SUBMITTAL	COMMENTS	REFERENCE FOR CRITERIA (1)	AGENT	TASK COMPLETED
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	P		Applicable ASTM material specifications; AISC 360, Section A3.3	1 - 4	Y
b. Manufacturer's certificate of compliance required.	Y	S			1 - 4	Y
2. Inspection of high-strength bolting						
a. Bearing-type connections.	Y	P		AISC 360 Section M2.5	1 - 4	Y
b. Slip-critical connections.	N	---		IBC Sect 1704.3.3		—
3. Material verification of structural steel:						
a. Identification markings to conform to ASTM standards specified in the approved construction documents.	Y	P		ASTM A 6 or ASTM A 568 IBC Sect 1708.4	1 - 4	Y
b. Manufacturers' certified mill test reports.	Y	S		ASTM A 6 or ASTM A 568 IBC Sect 1708.4	1 - 4	Y
4. Material verification of weld filler materials:						
a. Identification markings to conform to AWS specification in the approved construction documents.	Y	S		AISC 360, Section A3.5	1 - 4	Y

(1) Reference and criteria based on IBC 2006 and Structural Engineers Assoc. of Maine (SEAM) Publication and Recommendations.

**Schedule of Special Inspections – IBC 2003**  
**STEEL CONSTRUCTION (Continued)**

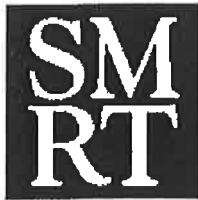
VERIFICATION AND INSPECTION  IBC Section 1704.3	Y/N	EXTENT: CONTINUOUS, PERIODIC, OR SUBMITTAL	COMMENTS	REFERENCE FOR CRITERIA (1)	AGENT	TASK COMPLETED	
b. Manufacturer's certificate of compliance required.	Y	S			1 - 4	Y	
5. Submit current AWS D1.1 welder certificate for all field welders who will be welding on this project.	Y	S		AWS D1.1	1 - 4	Y	
6. Inspection of welding:							
a. Structural steel:							
1) Complete and partial penetration groove welds.	N	---		IBC 1704.3.1 AWS D1.1		—	
2) Multipass fillet welds.	N	---				—	
3) Single-pass fillet welds > 5/16"	N	---				—	
4) Single-pass fillet welds < 5/16"	Y	P			5 or 6	Y	
5) Floor deck shear studs	N	---				—	
6) Floor and roof deck welds	Y	P		AWS D1.3	5 or 6	Y	
b. Reinforcing steel:							
1) Verification of weldability of reinforcing steel other than ASTM A706.	N	---		IBC Sect 1903.5.2 AWS D1.4 ACI 318: 3.5.2		—	
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	---				—	
3) Shear reinforcement.	N	---				—	
4) Other reinforcing steel.	N	---				—	
7. Inspection of steel frame joint details for compliance with approved construction documents:							
a. Details such as bracing and stiffening.	Y	P		IBC 1704.3.2	1 - 4	Y	
b. Member locations.	Y	P				1 - 4	Y
c. Application of joint details at each connection.	Y	P				1 - 4	Y
d. Floor deck shear studs locations.	N	---					—

<sup>(1)</sup> Reference and criteria based on IBC 2006 and Structural Engineers Assoc. of Maine (SEAM) Publication and Recommendations.

**Schedule of Special Inspections – IBC 2003**  
**SPRAYED FIRE-RESISTANT MATERIALS**

VERIFICATION AND INSPECTION	Y/N	EXTENT: CONTINUOUS, PERIODIC, SUBMITTAL, OR NONE	COMMENTS	REFERENCE FOR CRITERIA (1)	AGENT	TASK COMPLETED
<b>IBC Section 1704.11</b>						
1. Surface Conditions: Verify surfaces are prepared in accordance with the approved fire-resistance design and the approved manufacturer's written instructions prior to application of the sprayed fire-resistant material	Y	P		IBC 1704.11.1	5	WAIVED
2. Application: Verify the substrate shall have a minimum ambient temperature before and after application as specified in the approved manufacturer's written instruction. The area for application shall be ventilate during and after application as required by the approved manufacturer's written instructions.	Y	P		IBC 1704.11.2	5	WAIVED
3. Thickness: Verify average thickness of the sprayed fire-resistant materials applied to structural elements shall not be less than the thickness required by the approved fire-resistance design.						
a. Floor, Roofs & Walls: The thickness of the sprayed fire-resistant material applied to floor, roof and wall assemblies shall be determined in accordance with ASTM E 605, taking the average of not less than four measurements for each 1,000 square feet (93 m2) of the sprayed area on each floor or part thereof.	Y	P		IBC1704.3.1; ASTM E605	5	Y
b. Structural Framing: The thickness of the sprayed fire-resistant material applied to structural members shall be determined in accordance with ASTM E 605. Thickness testing shall be performed on not less than 25 percent of the structural members on each floor.	Y	P		IBC1704.3.2; ASTM E605	5	Y
4. Density: Verify density of the sprayed fire-resistant material not be less than the density specified in the approved fire-resistant design.	Y	P		IBC1704.4; ASTM E605	5	Y
5. Bond: Verify the cohesive/adhesive bond strength of the cured sprayed fire-resistant material applied to structural elements shall not be less than 150 pounds per square foot (psf) (7.18 kN/m2). The cohesive/adhesive bond strength shall be determined in accordance with the field test specified in ASTM E 736 by testing in-place samples.						
a. The test samples for determining the cohesive/adhesive bond strength of the sprayed fire-resistant materials shall be selected from each floor, roof and wall assembly at the rate of not less than one sample for every 10,000 square feet (929 m2) or part thereof of the sprayed area in each story.	Y	P		IBC 1704.11.5.1; ASTM E 736	5	Y
b. The test samples for determining the cohesive/adhesive bond strength of the sprayed fire-resistant materials shall be selected from beams, girders, joists, trusses and columns at the rate of not less than one sample for each type of structural framing member for each 5,000 square feet (464 m2) of floor area or part thereof in each story.	Y	P		IBC 1704.11.5.2; ASTM E 736	5	Y

(1) Reference and criteria based on IBC 2006 and Structural Engineers Assoc. of Maine (SEAM) Publication and Recommendations.



ARCHITECTURE  
ENGINEERING  
PLANNING

# Special Inspections Interim Report No.#1

Project: MMC OME Date: 10/02/09  
Report By: Ronald W. Rideout Time: 1:00 P.M.  
Architect's Project #: 08093-00

\*Reference Special Inspection Schedule (Based on IBC 2006 schedule section 1704.3)

*Item	Extent	Observations	Acceptance (Y/N)
Steel Construction item-5	Welder certificate supplied.	Reference attached copy of Derrick Nye's Driver's License and Weld certification.	Y
Steel Construction item-7b	All members except for one had been placed in the proper locations.	Photos were taken and will be provided in final special inspections report.	Y
-	Grouting below beams where complete.	Observed grouting to have been completed at beam pockets by performing soundings. Beam pockets where constructed in accordance with details K14/SF501, J13/SF101, N13/SF101.	Y
-	Grout below column	Extensive grouting and reinforcing was completed below the new column at D.5-8. Grouting and channel installation was completed in accordance with detail K1/SF501 and the lower portion of detail A14/SF501. Photos were taken and will be provided in final special inspections report.	Y
-	Temporary shoring to be removed.	With the satisfactory completion of the above, verbal approval to remove temporary shoring was provided.	Y

*Item	Discrepancies
Steel Construct ion item- 6a-4	Welding of bearing plates of beams on line 6.7 and 8, westerly ends still need to be welded.
-	New beam installed on line-9 below existing beam will need to have steel shims installed at 2'-0" oc. to allow for welding of the two beams together.
-	Misc. connections and final welding and fastening to underside of deck will need to be inspected.

Signature:  (Agent # 1)

cc: Proj. Mgr.: CDP, CAH  
File #46.4



Derrick Nye #	Test Date	Sup Code	Process	Gas	Filler	Metal	Base Metal	Position	Thickness	Expires
1	05/19/00	G D1.1	SMAW	N/A	F4	P1	P1	F	L	01/10/10
2	05/11/01	G D1.1	SMAW	N/A	F4	P1	P1	A	U	01/10/10



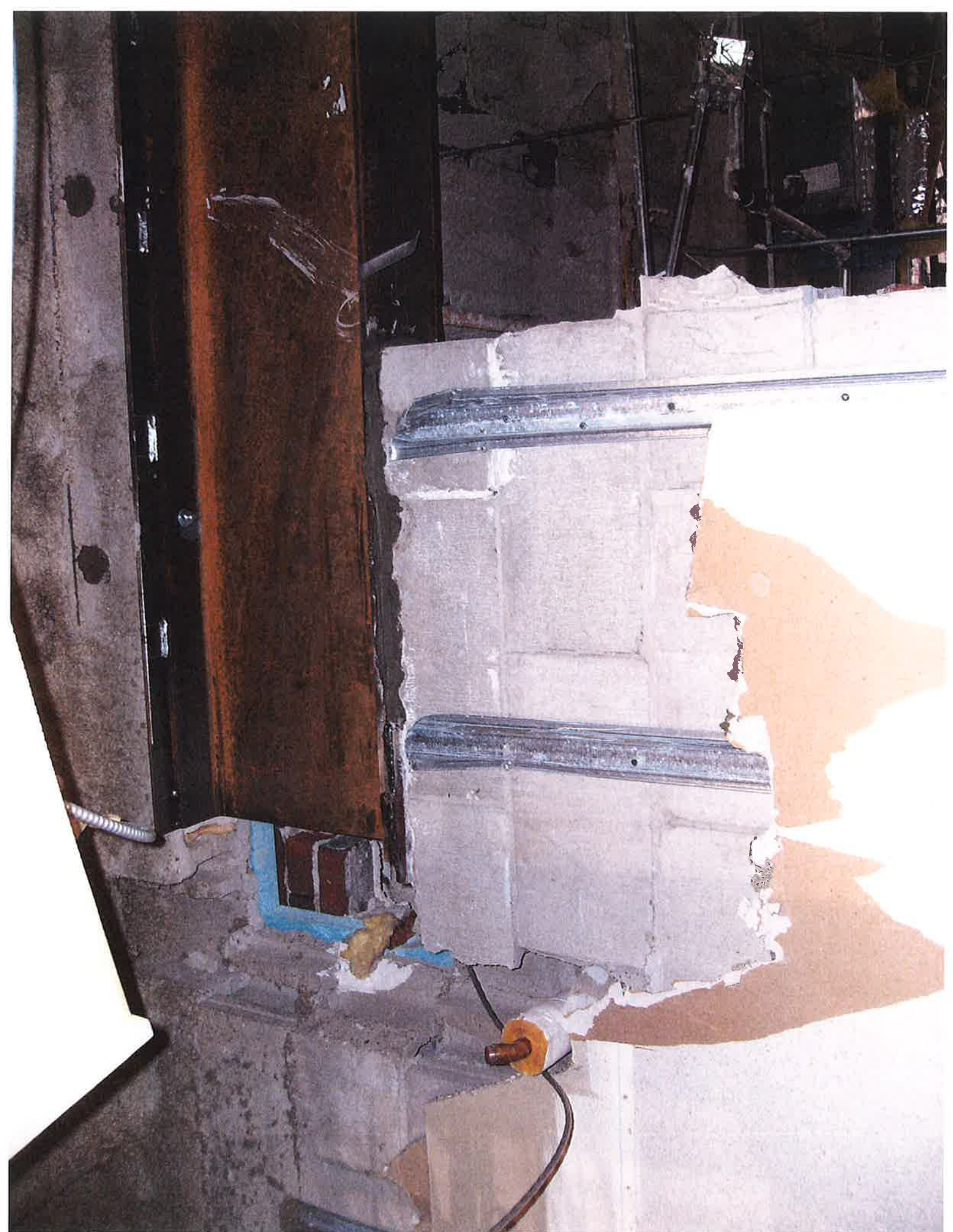








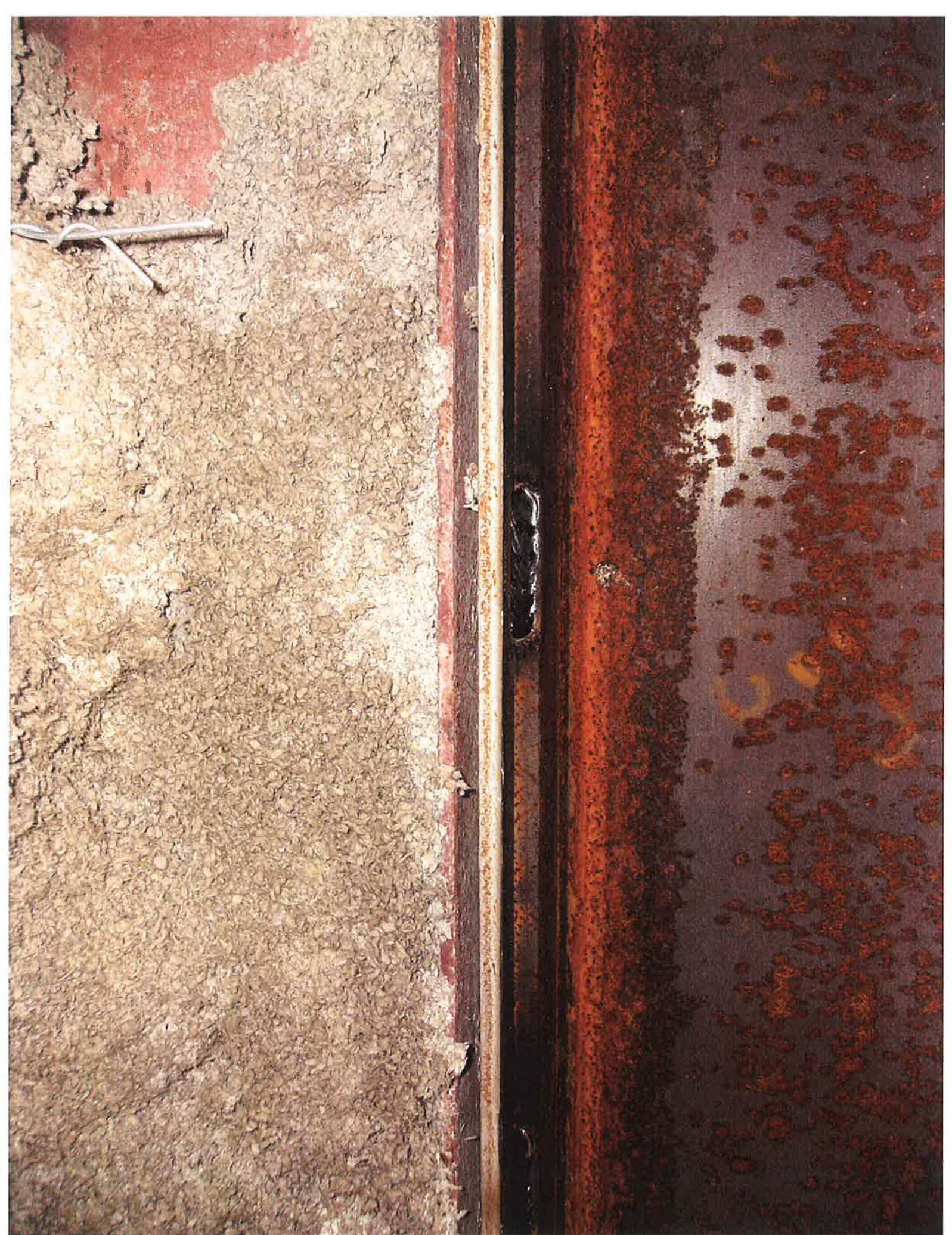






2B41/67  
30-109













2019  
30







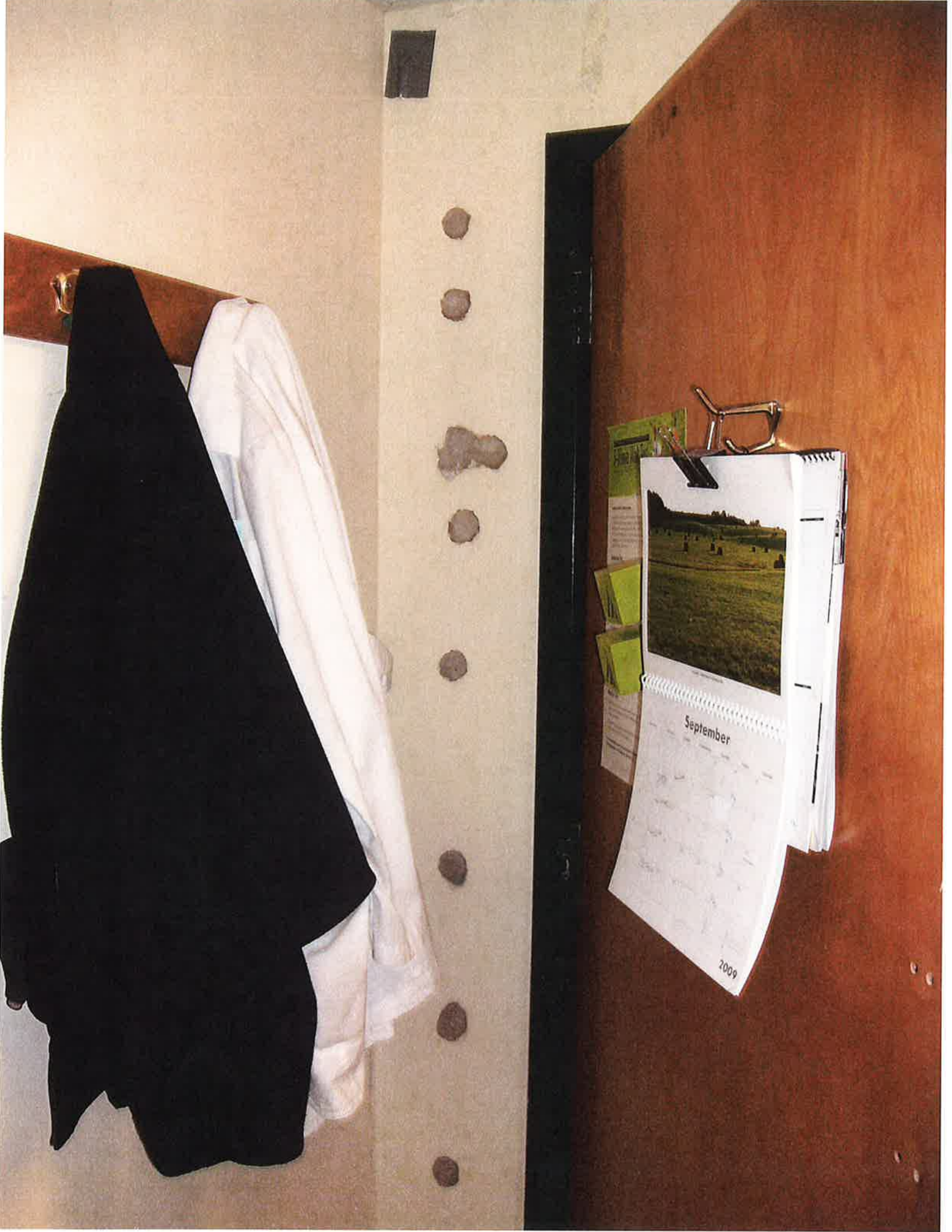
13

11 12

08

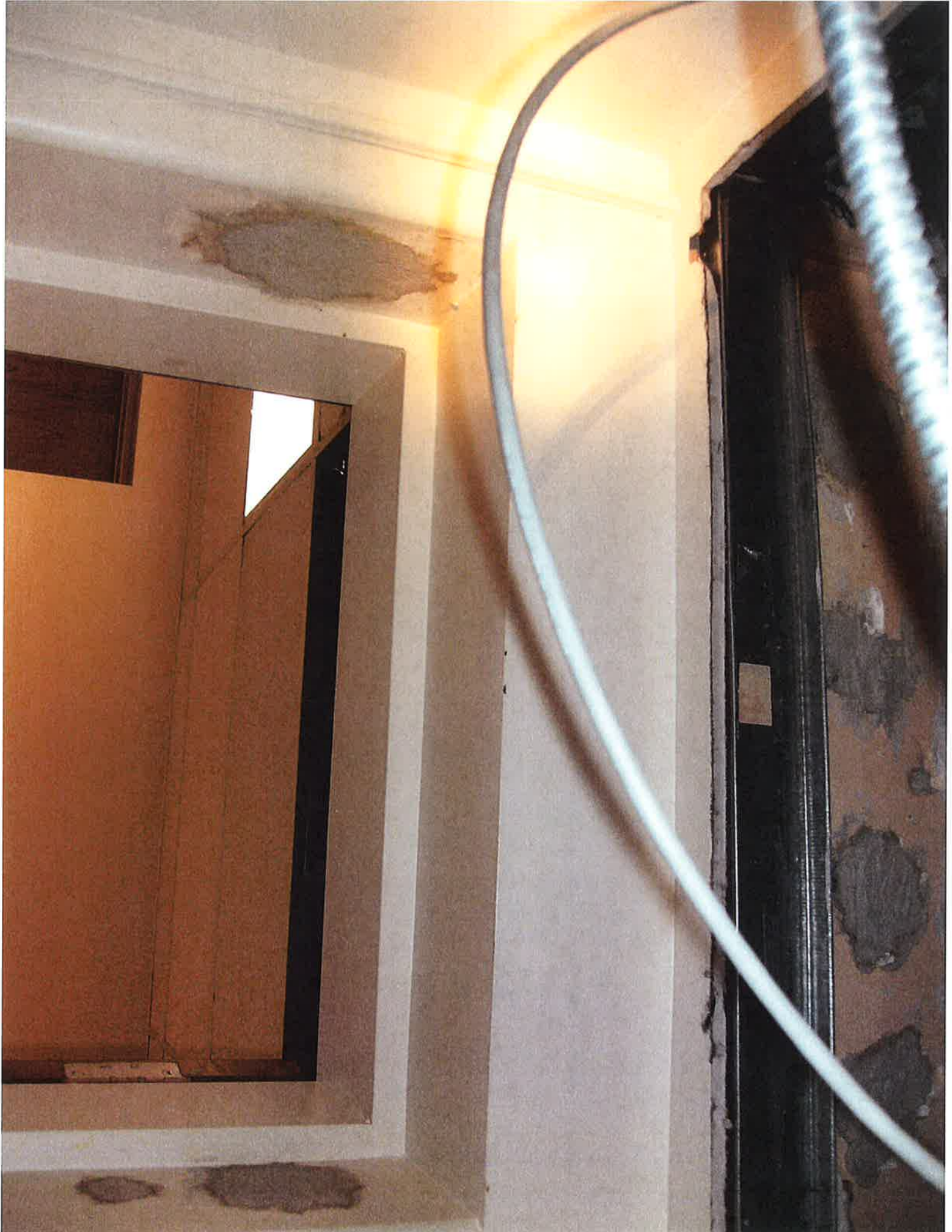












# Quality Assurance Labs Inc.

NON-DESTRUCTIVE TESTING AND INSPECTION SERVICES

80 PLEASANT AVENUE • SOUTH PORTLAND, MAINE 04106 • TEL: (207) 799-8911 • FAX: (207) 799-7251

## INSPECTION REPORT

CUSTOMER: SUMMIT GEOTECH ENGINEERING			PAGE 1 OF 1
ADDRESS: AUGUSTA, ME.			
ATTENTION: DARREL GILMAN			
COPIES: FILE			
PROJECT: M. M. C. @ BRIGHTON AVE., PORTLAND, ME.			
OWNER: SAME			
CONTRACTOR: HEBERT CONSTRUCTION			
JOB No.: 14318	REPORT No.: QAL-10-0856	P. O. NUMBER:	DATES INSPECTED: 05-18-10, 05-19-10

### REMARKS

>>>> SITE VISIT ON 05-18-10 TO VISUALLY INSPECT (16) LOCATIONS FOR SHEAR STUD PLACEMENT ON EXISTING TOP BEAM FLANGE. ALL LOCATIONS DISPLAYED CLEAN SHINING STEEL SURFACES PER AWS D1.1 REQUIREMENTS . ( all areas exceeded standard AWS D1.1 base metal prep requirements ).

>>>> SITE VISIT ON 05-19-10 TO VISUALLY INSPECT (16) LOCATIONS FOR COMPLETED SHEAR STUD HAND WELDING , REVEALED ALL LOCATIONS COMPLY WITH WELD SIZE AND VISUAL REQUIREMENTS OF AWS D1.1 .

END ITEMS ////



MICHAEL W. DREW  
CWI 99050211  
QC1 EXP. 04/09/11

**FAA REPAIR STATION NUMBER RX5R187N**  
METHOD(S),PROCESS(ES),PROCEDURE(S) MERCURY FREE

ADDITIONAL INFORMATION - SEE ATTACHED:  SKETCH(ES)  SUPPLEMENTARY SHEET(S)  NDT REPORTS  VIDEO

SIGNATURES		CERTIFICATION		DATE		
		LEVEL	M	D	Y	
INSPECTOR	M. Drew CWI # 99050211 <i>Michael Drew</i>	ASNT	II	05	20	10
SUPERVISOR						



## DAILY FIELD REPORT

**Date:** 12/11/09  
**Project:** Brighton Avenue MMC / OME  
**Project #:** 14318  
**Site Contacts:** Joe Chasse - Hebert Construction  
**Purpose of Visit:** Inspection of the Sprayed Resistive Fireproofing Material (SFRM) applied to the structural members.

**Work Activities:** A crew from New England Fireproofing has completed the application of Grace Products Z-106/HY medium density fire proofing for the new structural members of the third floor. All members were coated for a 2 hour rating, required thickness are from the submitted SFRM data sheet supplied by New England Fireproofing dated 12-10-09.

**Test Results:** The new structural members were inspected in accordance with specification section 78100.35 for thickness, density, and bond strength. All members checked for thickness meet or exceed the minimum required thickness.  
\*Bond strength exceed 520psf.  
In place density 29.7pcf.

**Remarks:** \* During the test for bond failure the adhesive used failed before the SFRM.

**Portal to Portal**

Leave:	<u>9:00</u>	<b><u>Expenses</u></b>	
Return:	<u>2:00</u>	Mileage:	<u>112</u>
TOTAL:	<u>5</u>	Density Gauge:	<u>          </u>
		Other:	<u>          </u>

**Signed:** Darrell Gilman  
**cc:**

Reviewed: Darrell A. Gilman, CMT Manager  
Date: 12/18/09



ARCHITECTURE  
ENGINEERING  
PLANNING

# Special Inspections Interim Report No.#2

Project: MMC OME Date: 06-07-10  
Report By: Andrerw Pytlak Time: 2:00 P.M.  
Architect's Project #: 08093-10

\*Reference Special Inspection Schedule (Based on IBC 2006 schedule section 1704.3)

Existing Third floor-framing, support frames @ IBC-L & IDC units

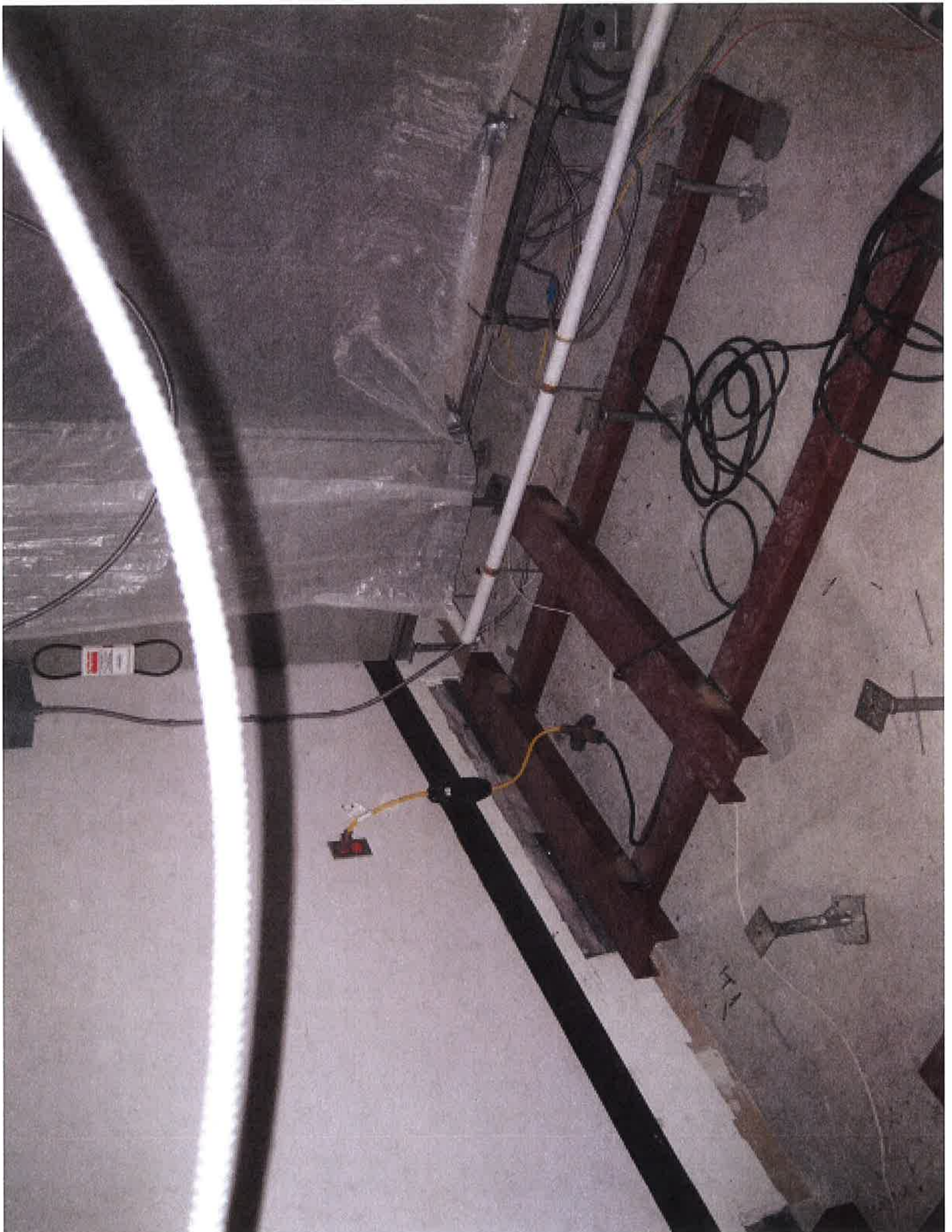
*Item	Extent	Observations	Acceptance (Y/N)
1.1F	Welded connections	Welding was done as shown on drawings, at time of inspection.	Y
1.1g	Bolted connections	Fastening of 18 GA. angle connecting existing studs to HSS tube is completed as shown in section N7/SF102. Fastening of 1/4" plate to conc. as shown in the same section, was not yet completed at time of inspection.	Y
1.1i	Review structural steel	Observed all steel members and sizes are as shown on drawings, and/or approved substitutes.	Y

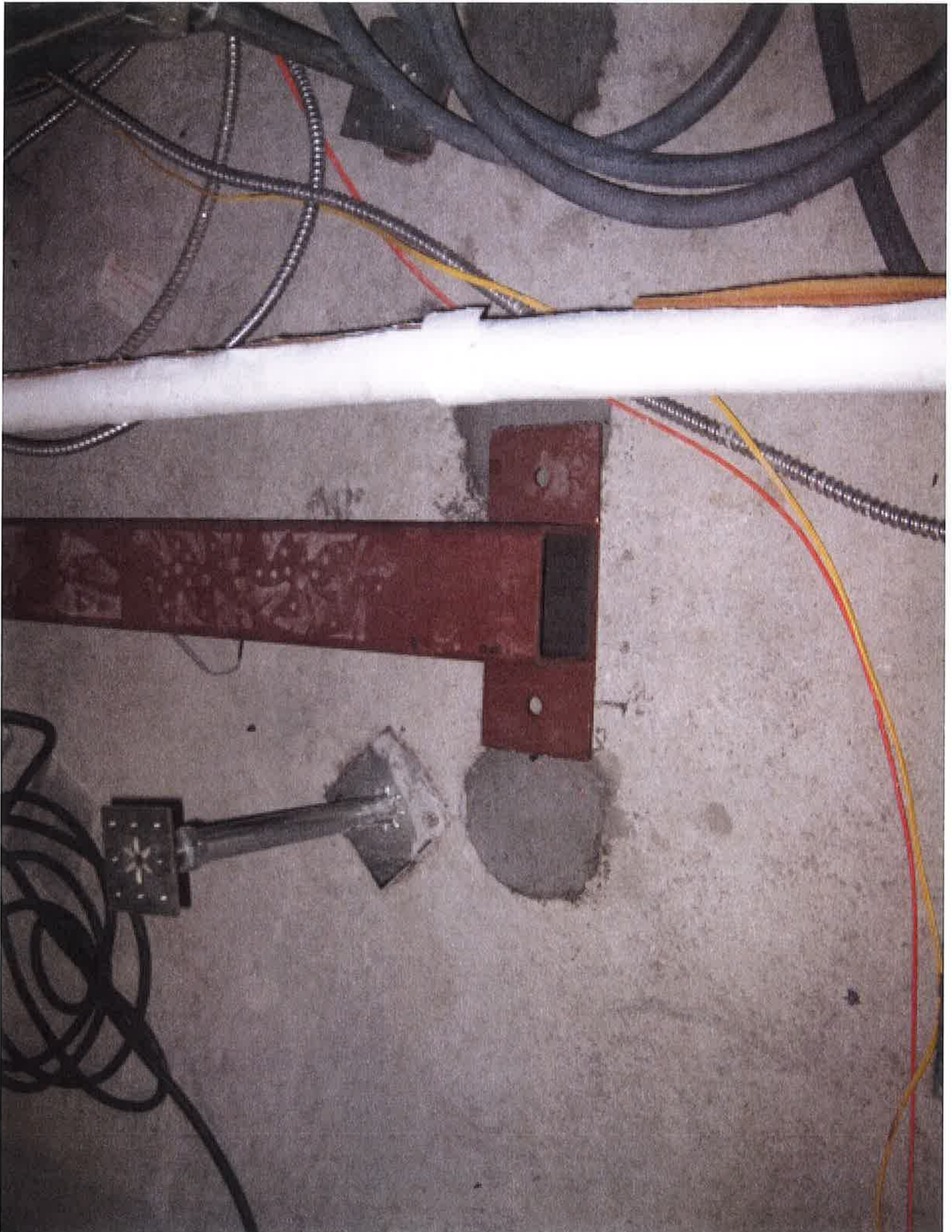
Existing Roof Framing - Condensing Units Support Plan

*Item	
-	At time of inspection the work had already been completed, and the roof membrane had been replaced and resealed. G.C. stated that a (3)2x10 buildup was required in addition to the wood curb shown in section G7/SF102, and the resealing was completed as indicated per architectural detail.

Signature: Andrerw Pytlak (Agent # 3)

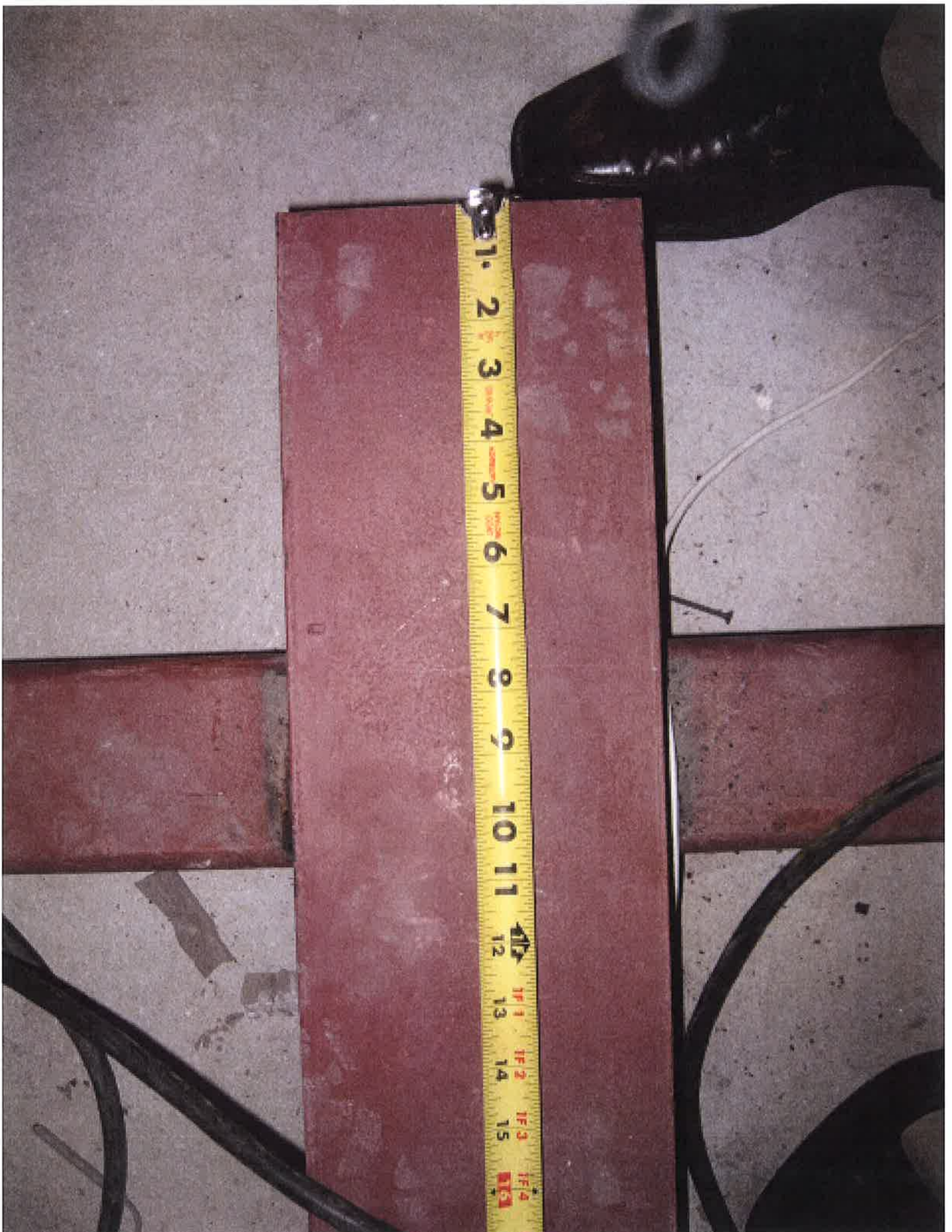
cc: Proj. Mgr.: CDP, CAH  
File #46.4











1. 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20



3F 1 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54

