Save Our Heritage

Protecting the birthplace of the American Revolution,
the cradle of the American Environmental Movement,
and the home of the American Literary Renaissance.

Completion Report - Drawings

Colonel James Barrett Farm

Prepared for

Minute Man National Historical Park / Barrett Farm

National Park Service, Northeast Regional Office

Submitted by

Save Our Heritage, Inc.

57 Main St., Concord, MA 01742

Prepared by

Frederic Detwiller, Historic Architect, New England Landmarks and

Jim Cunningham, Barrett Farm Project Manager, Save Our Heritage, Inc

Beth Acly, Structures North, Inc

Paul Evans, Schnepel Woodworking and

Jeff Perley, Perley Engineering

Period of Restoration - From July 2005 to December 2012

Report Date – November 2016

1 Engineering Drawings

The drawings include:

- Architectural
- Structural
- Window
    - The Windows were made as detailed on D7.
    - Drawing D4a represents the Cap overhang/ reveal as fabricated.
    - Drawing 10 was a preliminary sketch. The Windows were made as detailed in the Revisions (D11 & D12).
- Drainage

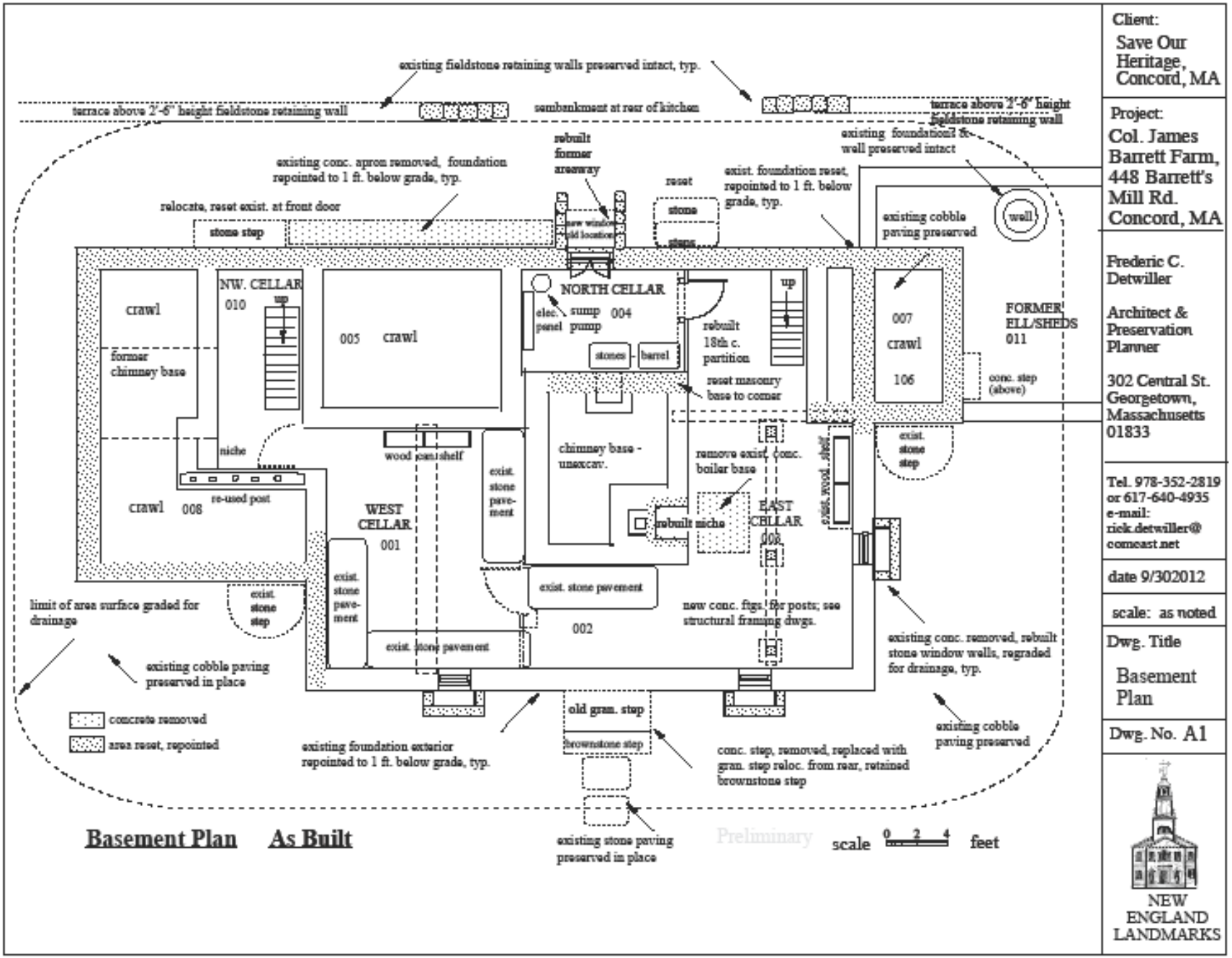


Figure 1 Drawing A1 - Basement Plan

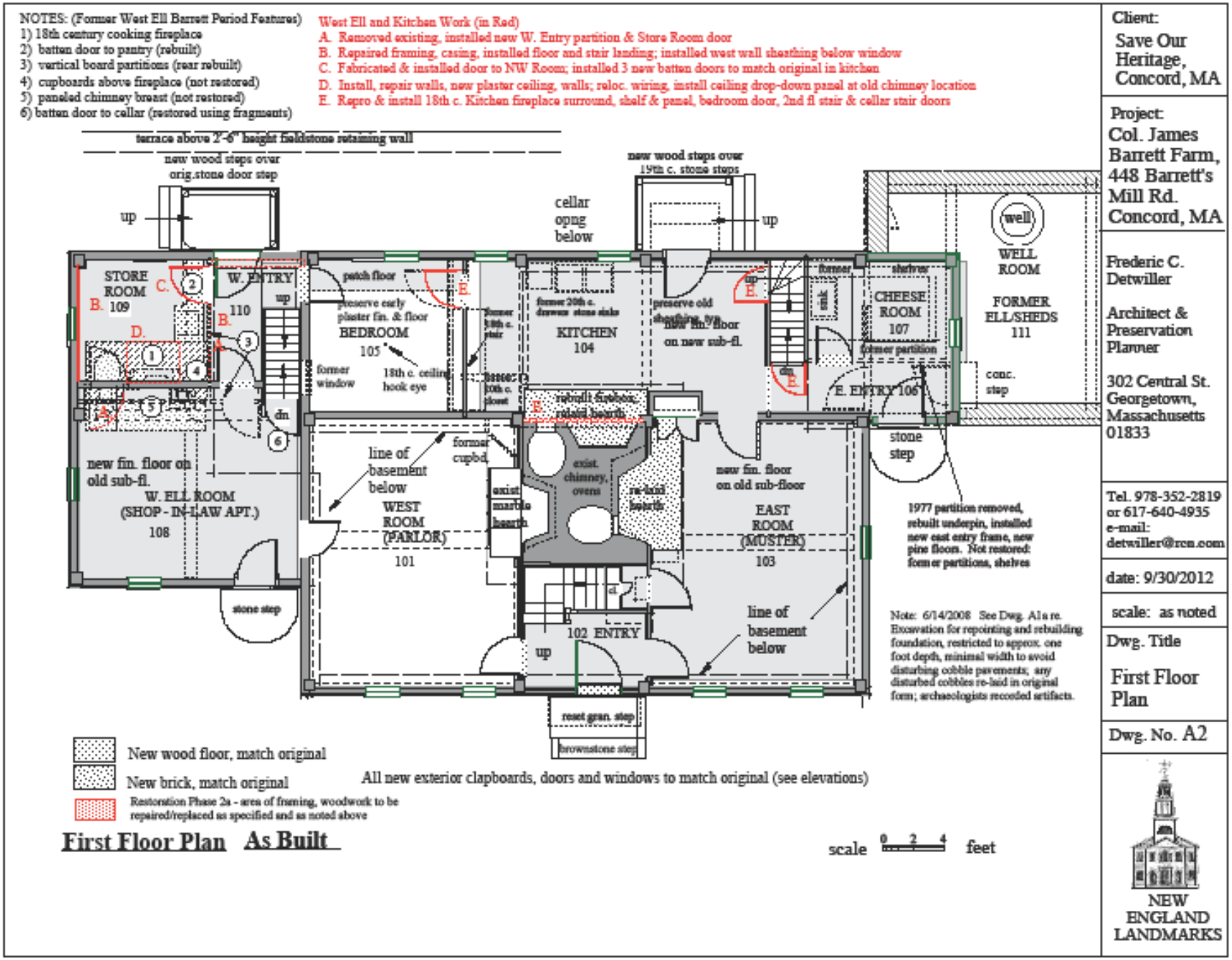
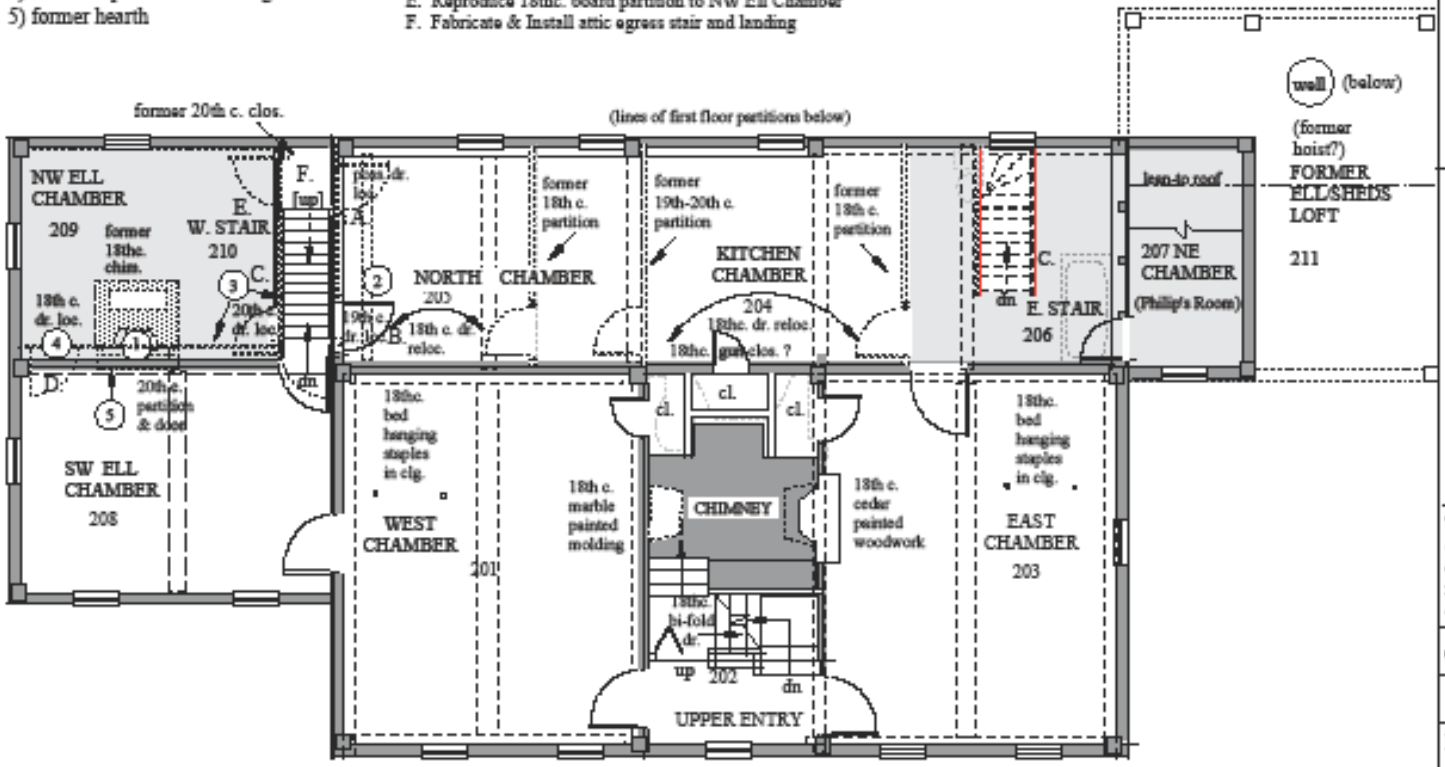


Figure 2 Drawing A2 – First Floor Plan As Built

NOTES: (West Ell Barrett Period Features)
1) former 18th century fireplace
2) former ca. 18th c. 4 pan. door to stair
3) former vertical board partitions
4) former 4 pan. door to storage area
5) former hearth

West Ell/Stairs Proposed Work
A. Former board partitions 18th-19th c.
B. Former 18th c. 4-panel door at 1810s location
C. Fabricate & install board partitions or stair railing.
D. Reproduce 18th c. reproduction doors to NW Ell Chamber
E. Reproduce 18thc. board partition to NW Ell Chamber
F. Fabricate & Install attic egress stair and landing



Restoration Phase 2a - area of framing, woodwork to be repaired/replaced as specified and as noted above

Second Floor – As Built Plan

Preliminary

scale 0 2 4 feet

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e-mail: rick.detwiller@comcast.net

date: 9/30/2012

scale: as noted

Dwg. Title
Second Floor Plan

Dwg. No. A3

NEW ENGLAND LANDMARKS

Figure 3 Drawing A3 – Second Floor Plan As Built

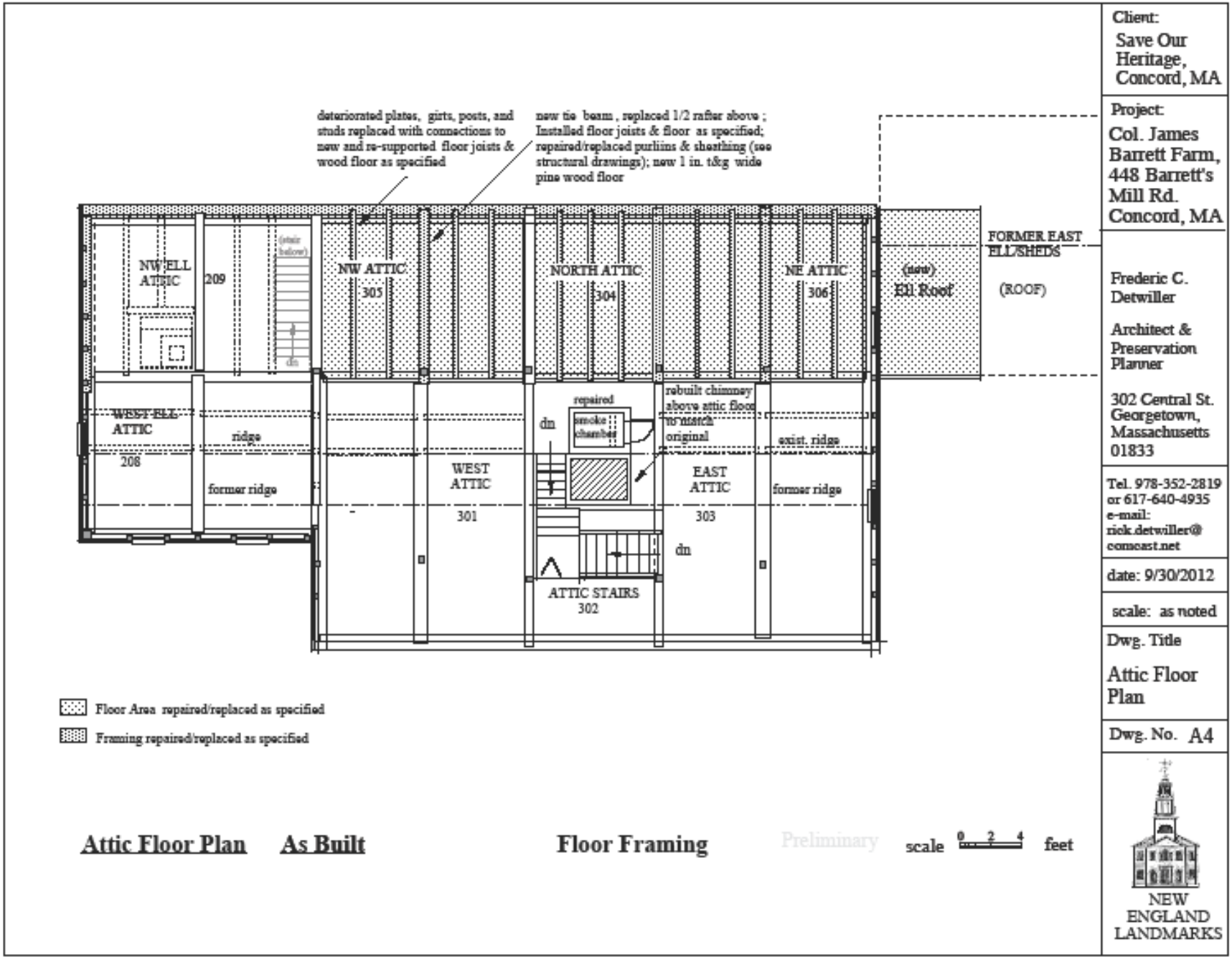


Figure 4 Drawing A4 – Attic Floor Plan As Built

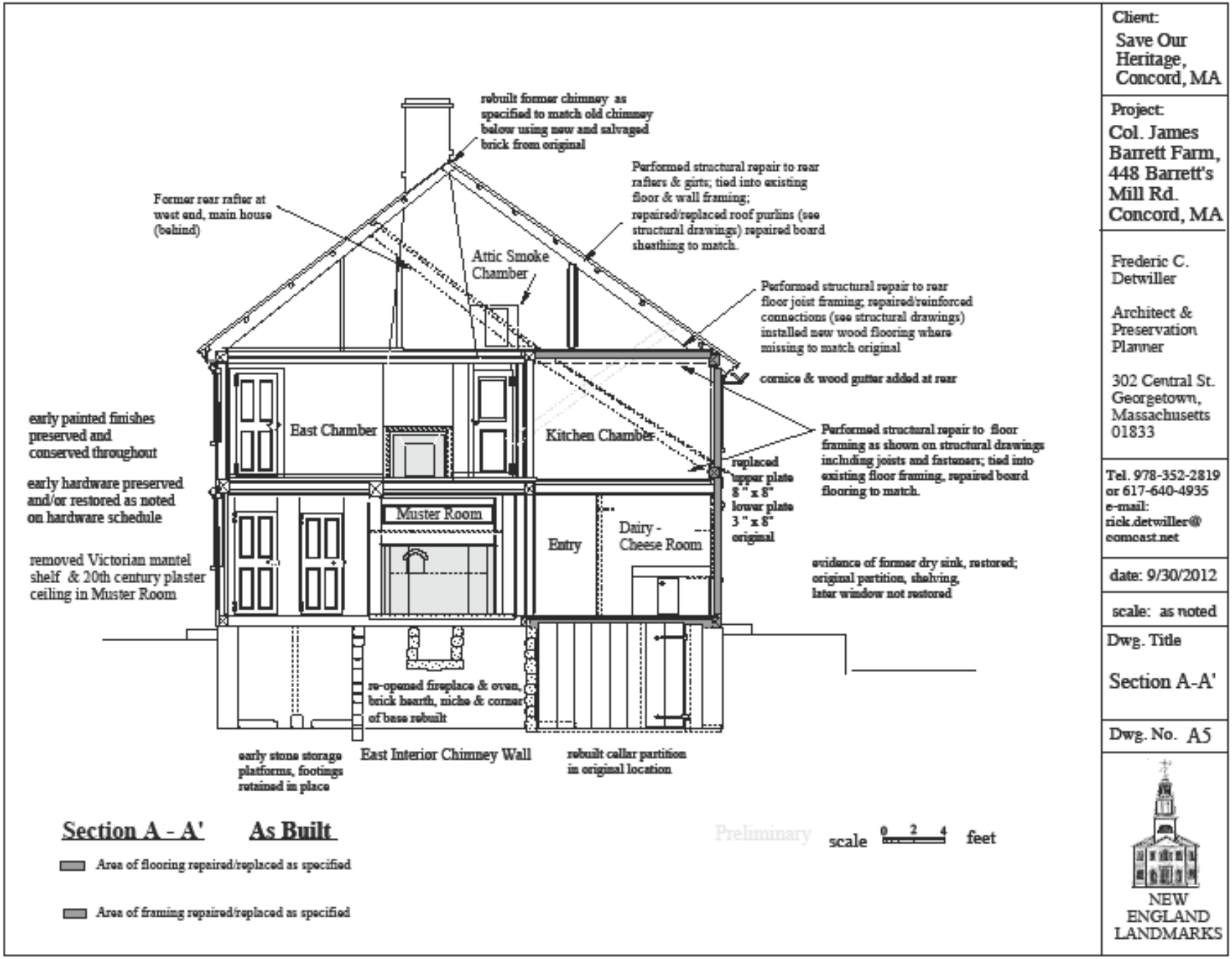


Figure 5 Drawing A5 – Section A-A'

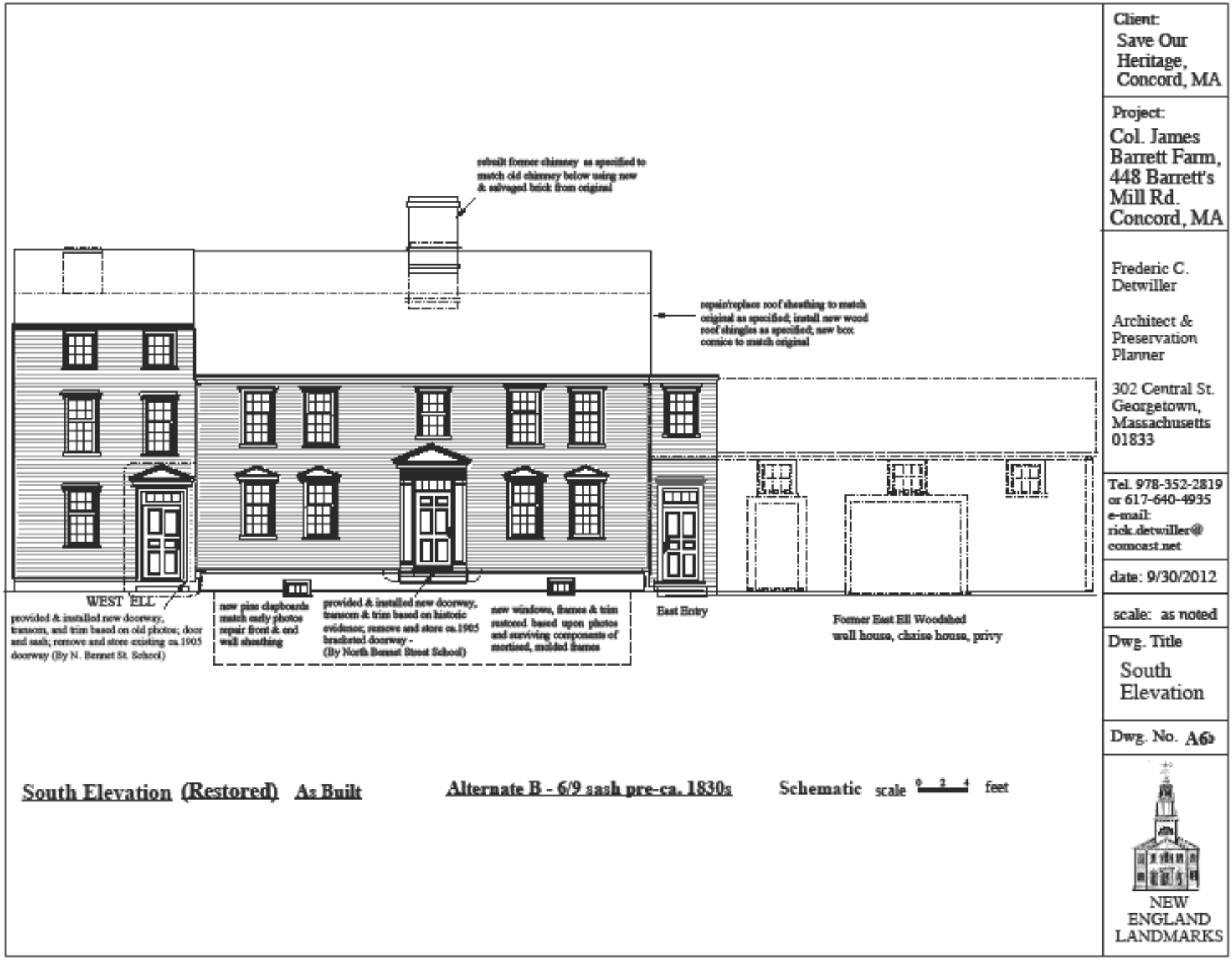


Figure 6 Drawing A6a – South Elevation

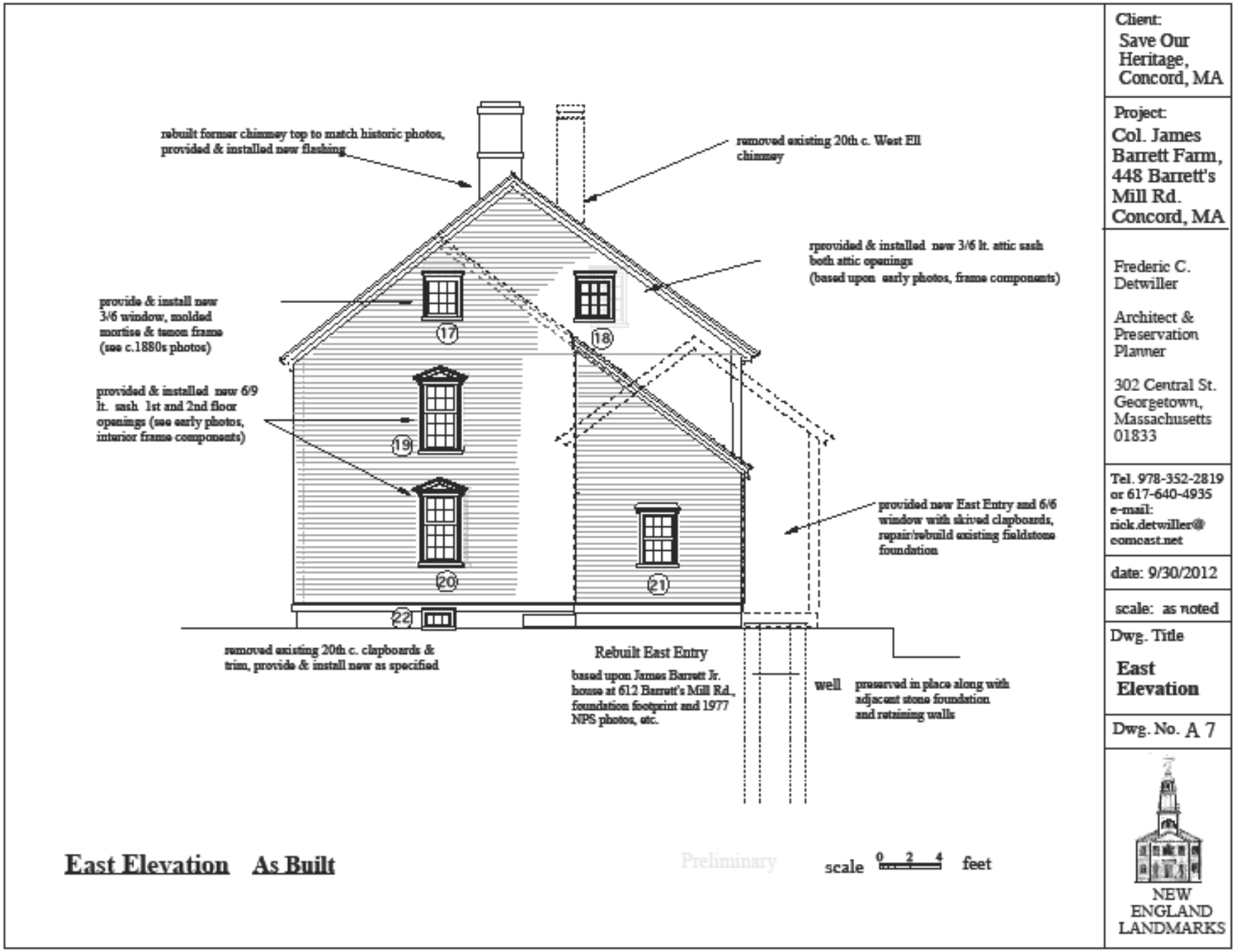


Figure 7 Drawing A7 – East Elevation

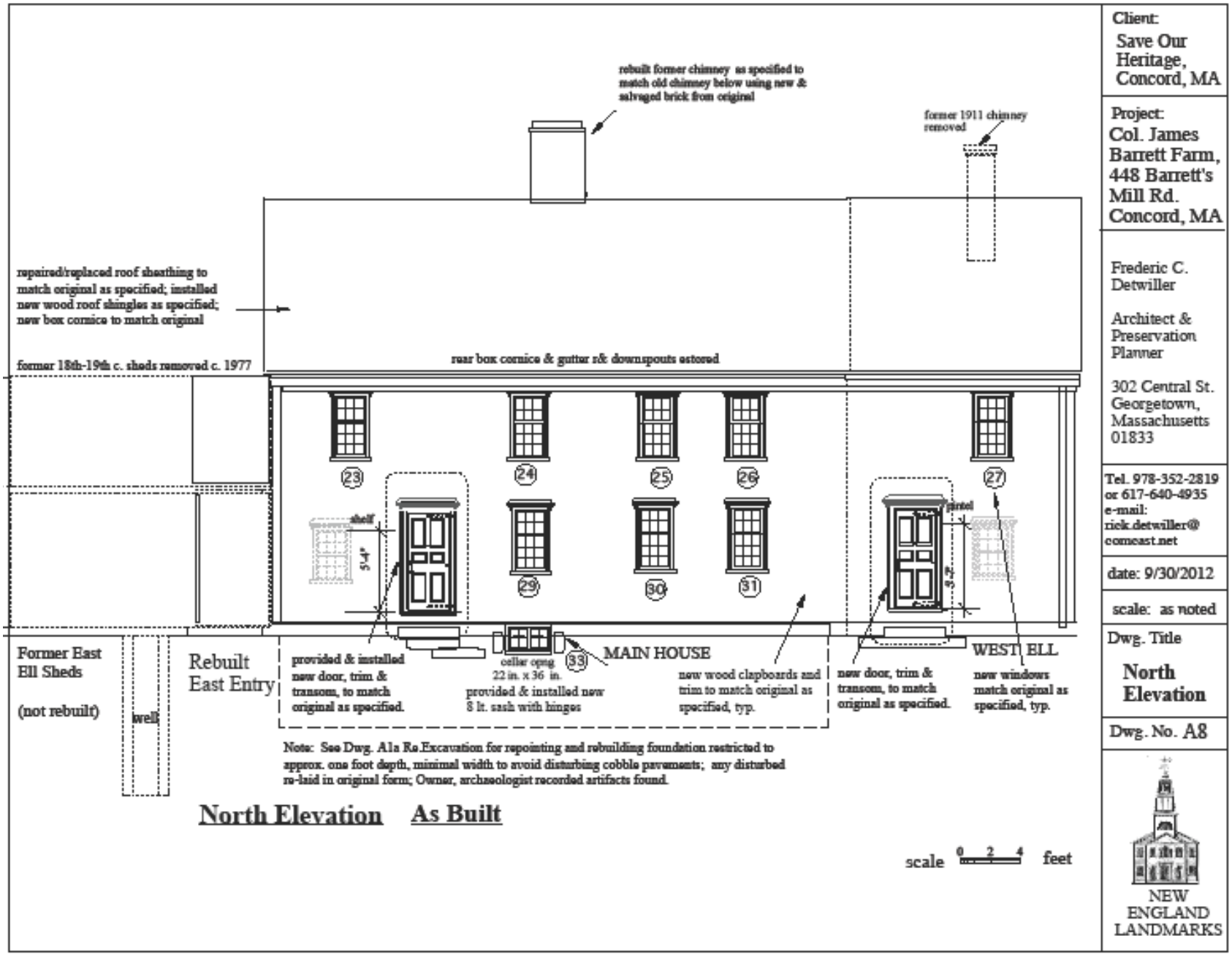


Figure 8 Drawing A8 – North Elevation

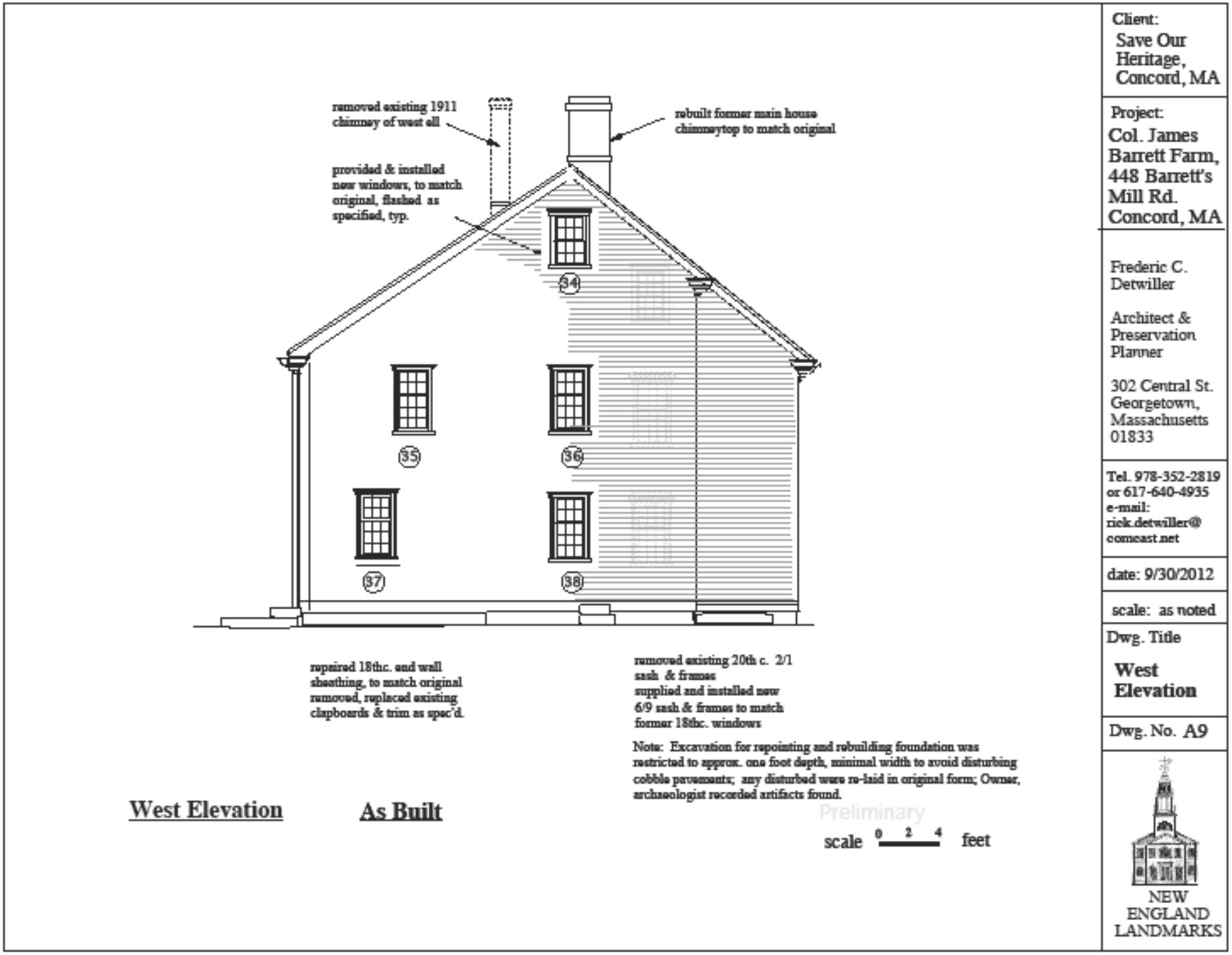


Figure 9 Drawing A9 – West Elevation

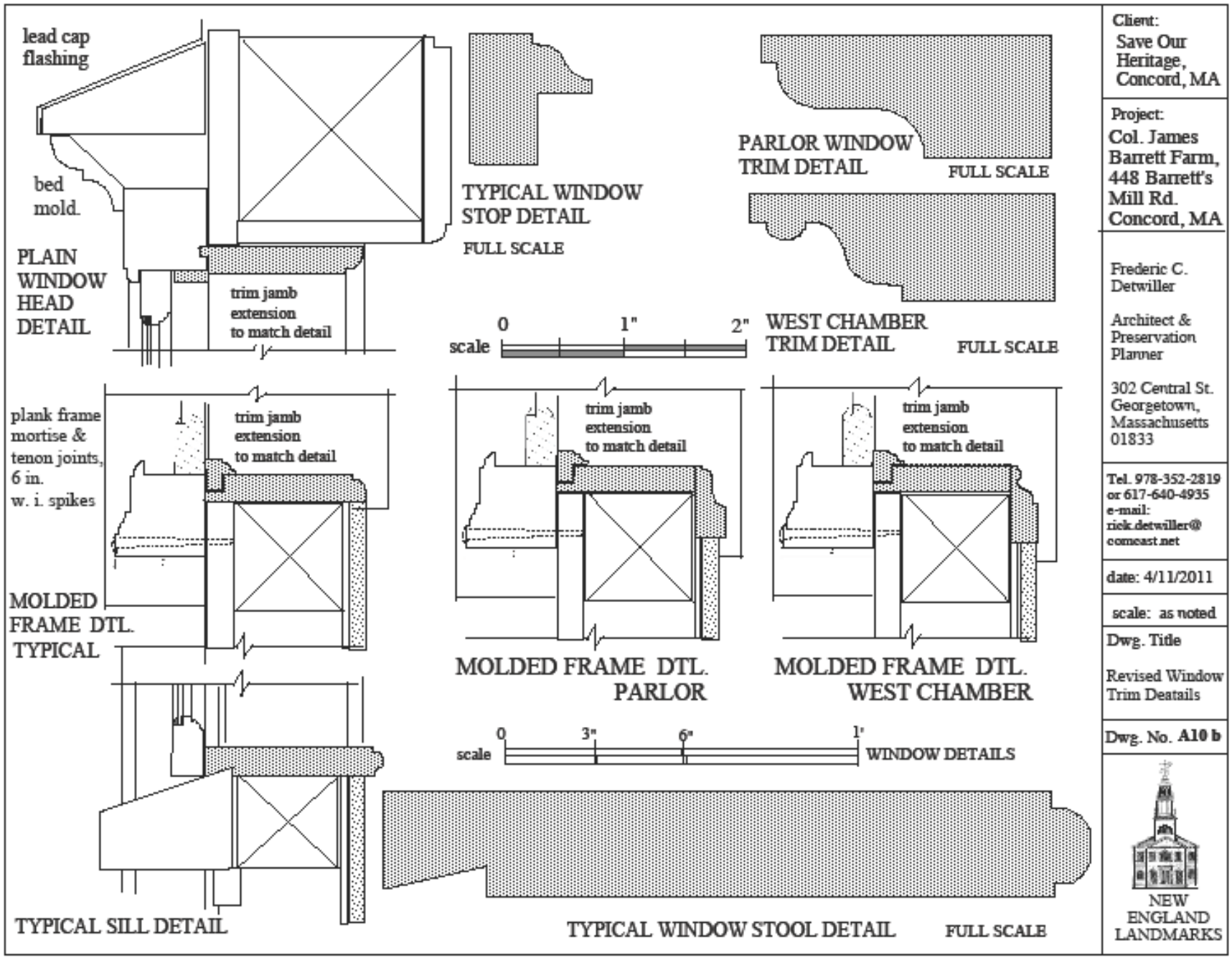
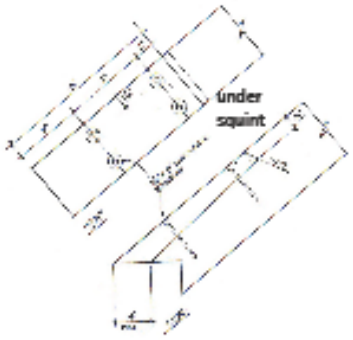
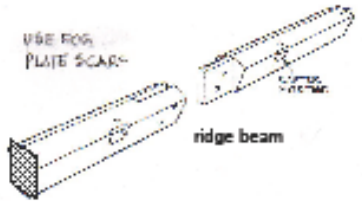


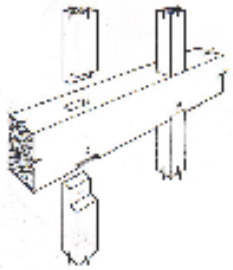
Figure 10 Drawing A10b – Window Trim Details



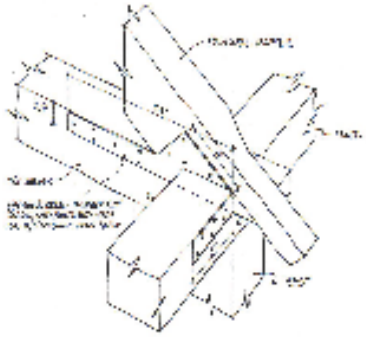
Rafter Foot Repair



Bridled Scarf Joint, Plate Repair



Stud & Girt Joint Details



Rafter Tie Gusset Connector

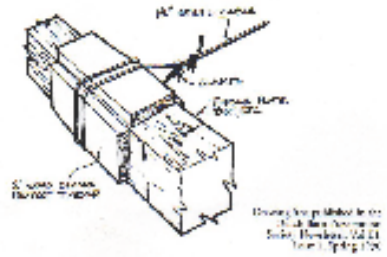
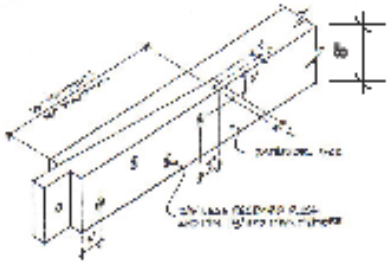
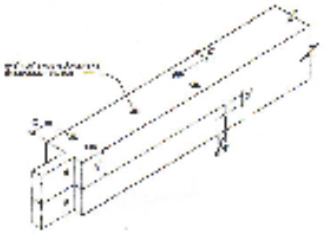


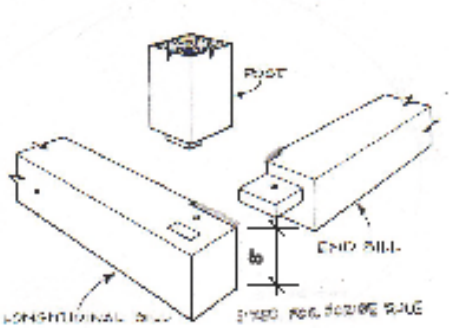
Plate Protection for Cabling



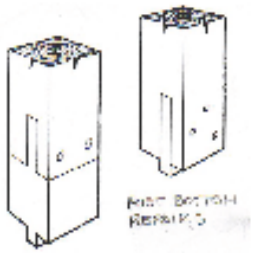
Beam End Repair



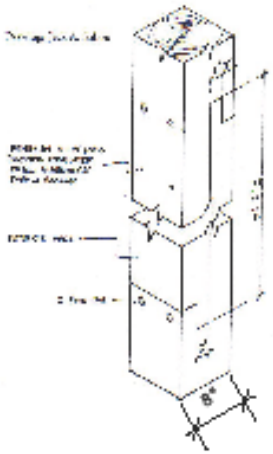
Beam Face Repair



Blind Mortise at Sill, Corner Post



Post Base & Free Tenon Repairs



Post Scarf Joint Repair

Framing Details

Note: See Structural drawings for additional details. These Joinery Details adapted from J.A. Sobon's American Timber Joinery, Timber Framers Guild

approx. scale 0 2 feet

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date: 3/7/2008

scale: as noted

Dwg. Title
Framing Details

Dwg. No. A11

NEW ENGLAND LANDMARKS

Figure 11 Drawing A11 – Frame Details

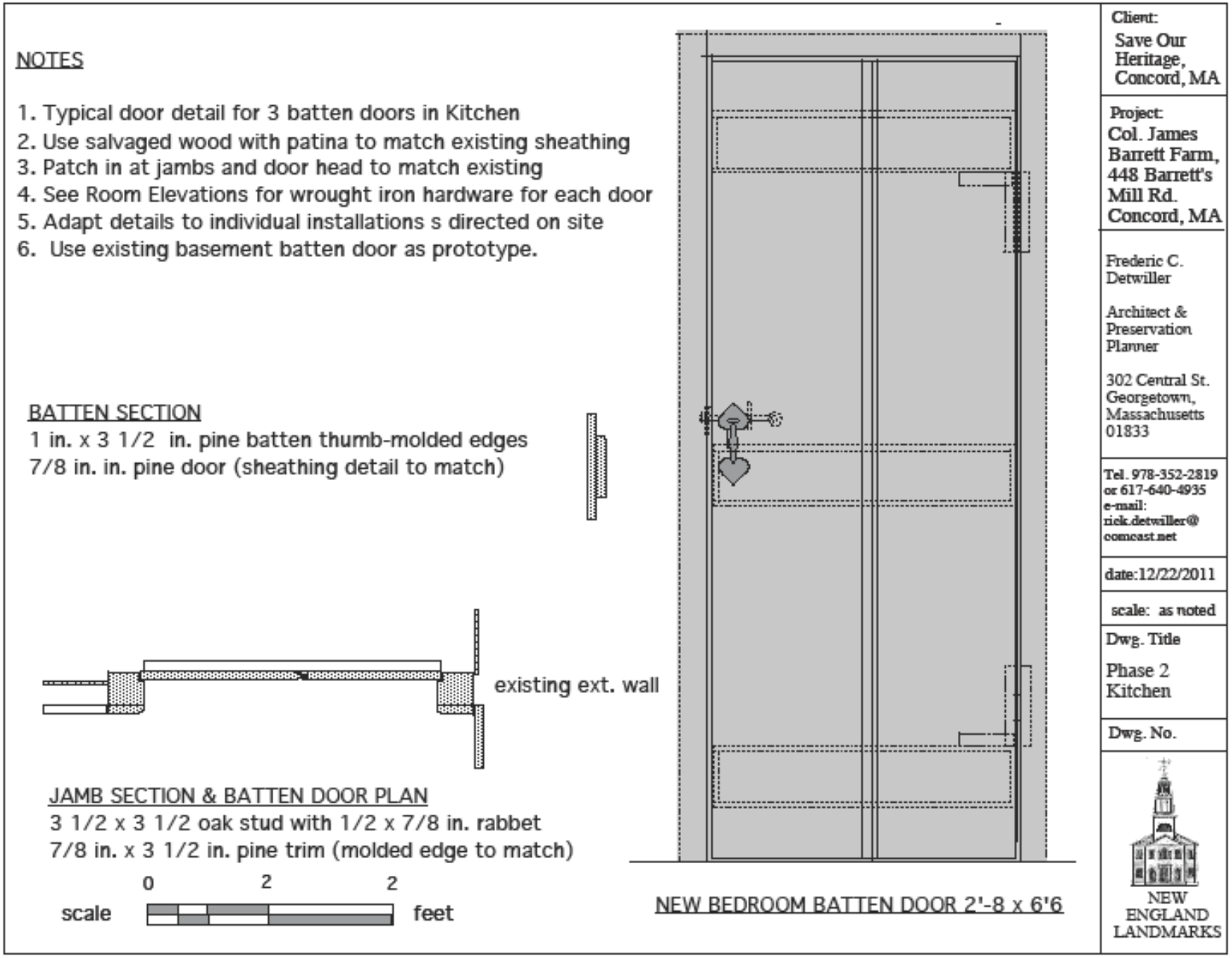


Figure 12 Drawing A12 – Kitchen/Bedroom Door

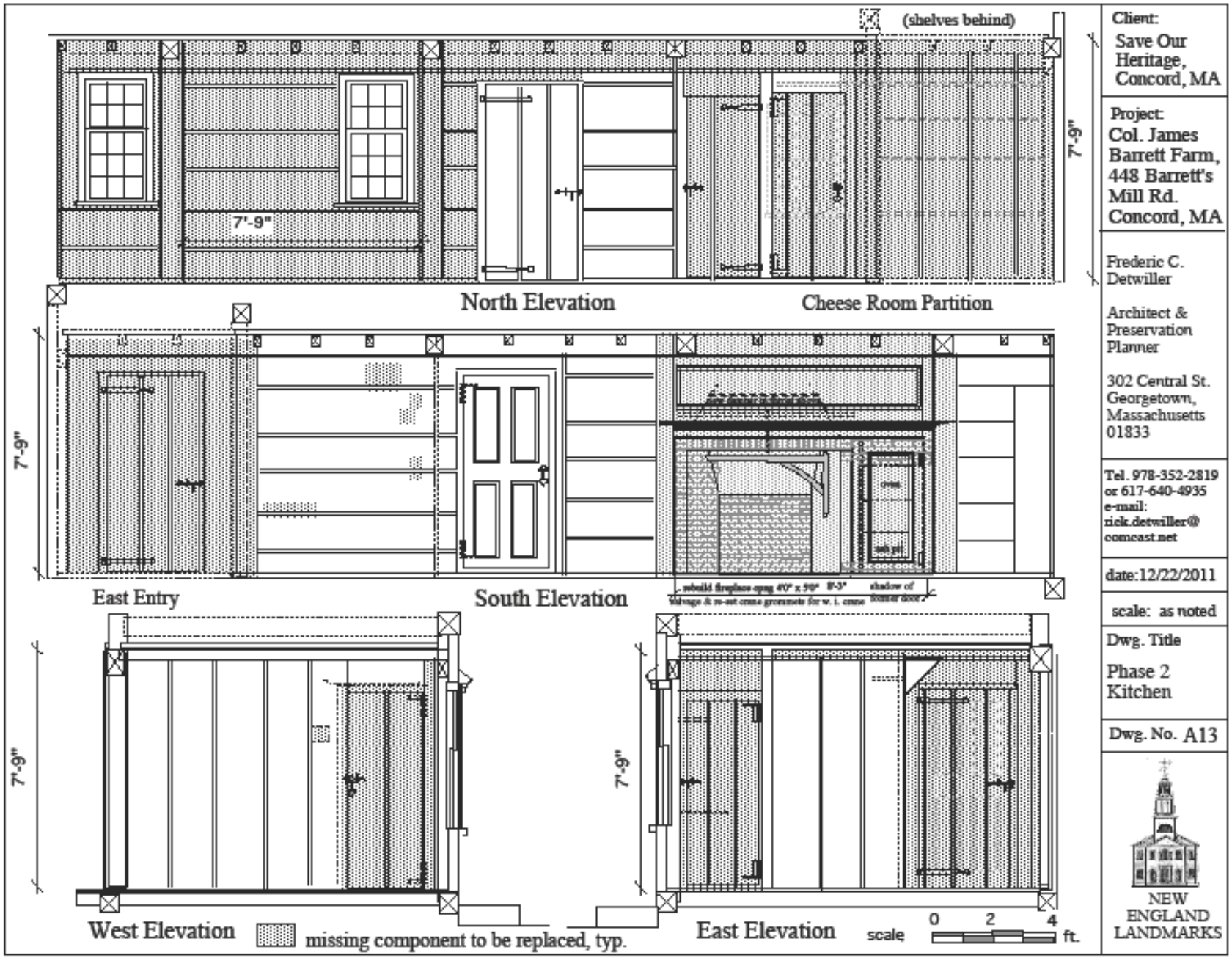


Figure 13 Drawing A13 – Kitchen Elevations

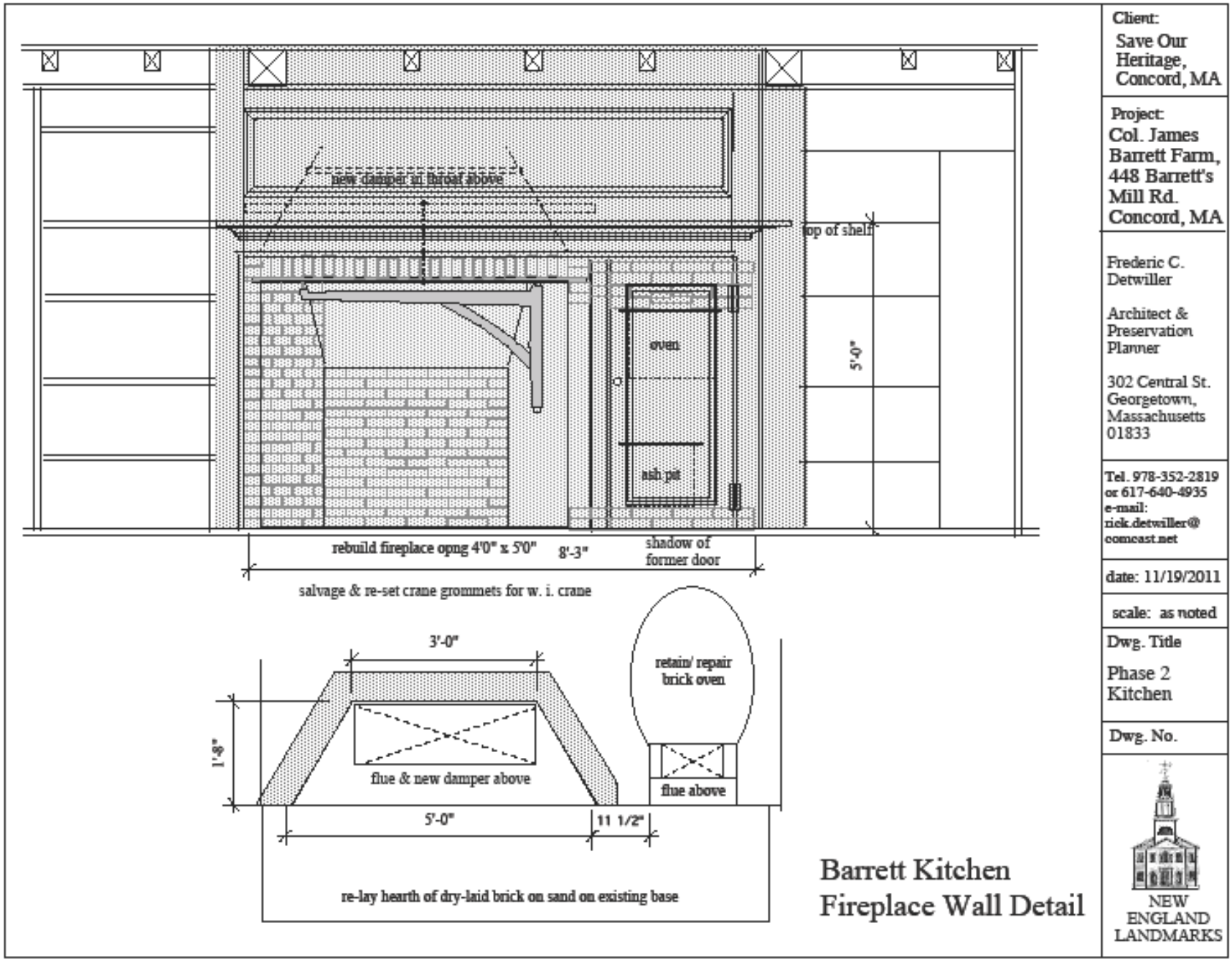


Figure 14 Drawing A14 – Kitchen Fireplace Details

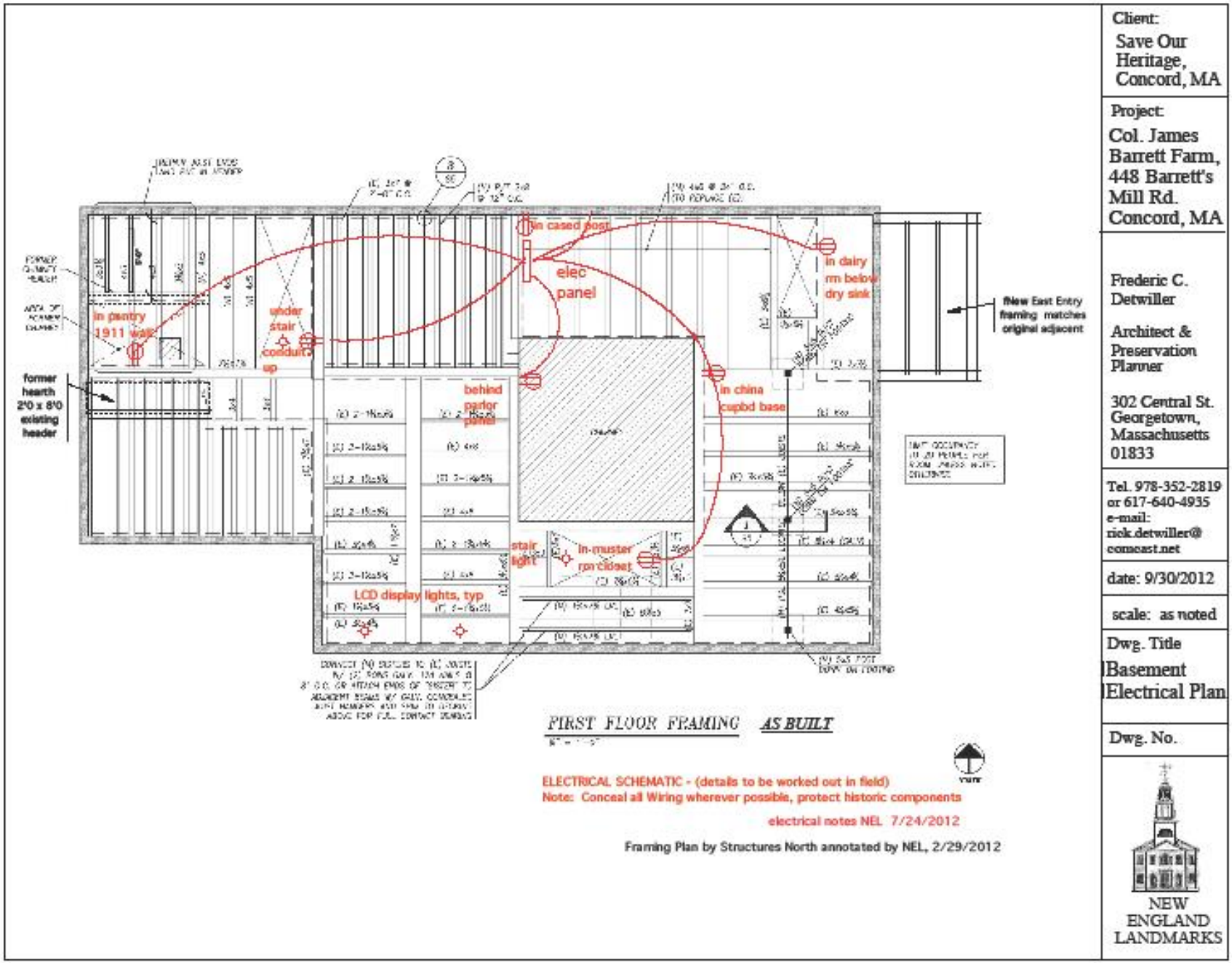


Figure 15 Drawing E1 - Basement Electrical Plan

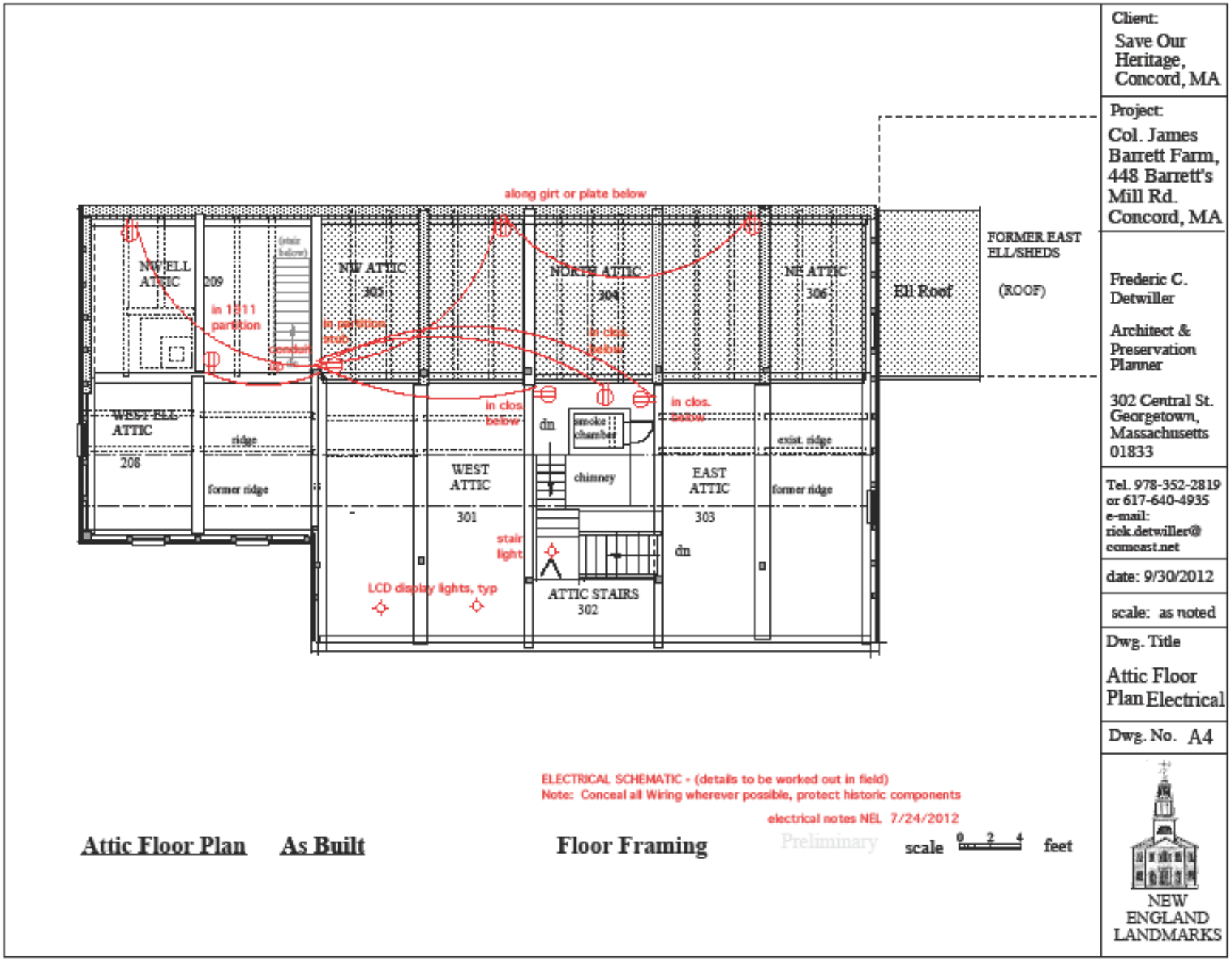


Figure 16 Drawing E2 - Attic Electrical Plan

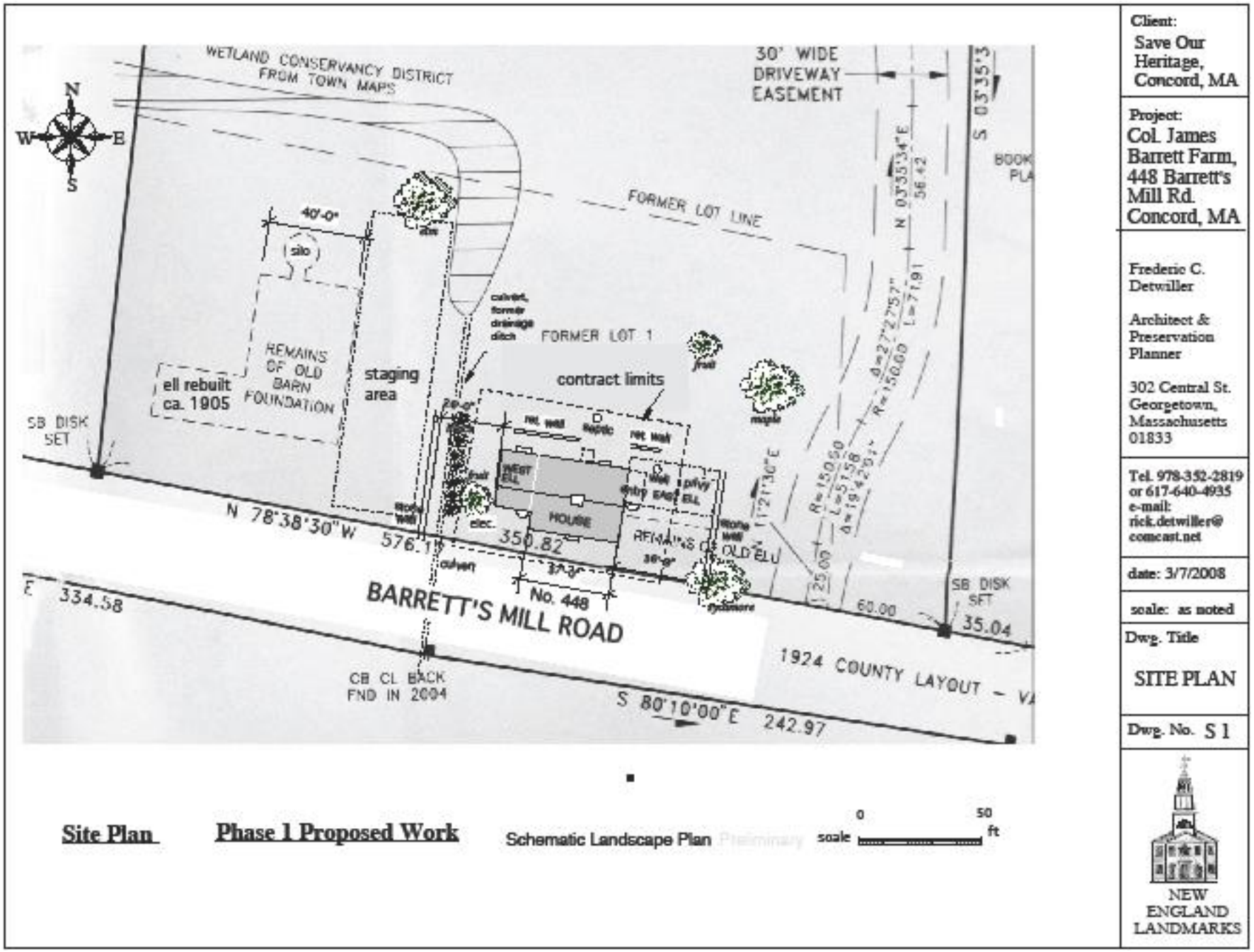


Figure 17 Drawing S1 - Site

A. GENERAL

1. ALL WORK SHALL COMPLY WITH THE FOLLOWING:

   MASSACHUSETTS STATE BUILDING CODE.
   AWS STRUCTURAL WELDING CODE
   AISC SPECIFICATION FOR THE DESIGN, FABRICATION, ERECTION OF STRUCTURAL STEEL FOR BUILDINGS.

2. ALL STRUCTURAL WORK SHALL BE COORDINATED BETWEEN ALL RELATED TRADES. STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH EXISTING CONDITIONS AND DIMENSIONS DATA TO BE COLLECTED AND VERIFIED BY THE CONTRACTOR.

3. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS AND SHALL BE RESPONSIBLE FOR DIMENSIONAL COORDINATION. NOTIFY THE ENGINEER OF ANY AND ALL DISCREPANCIES.

4. SUBMIT SHOP DRAWINGS FOR STRUCTURAL STEEL, MISCELLANEOUS STRUCTURAL PRODUCTS AND FABRICATIONS. WORK SHALL BE DONE FROM APPROVED SUBMITTALS ONLY.

5. ALL DETAILS SHALL BE CONSIDERED TYPICAL AND APPLICABLE TO ALL SIMILAR CONDITIONS UNLESS OTHERWISE NOTED OR INDICATED.

6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TEMPORARY SHORING AND GUYING OF THE EXISTING AND NEW STRUCTURE DURING THE WORK, AND FOR TEMPORARY PROTECTION OF THE SURROUNDING ENVIRONS.

7. THE CONTRACTOR SHALL COORDINATE INSPECTIONS OF STRUCTURE TO MEET THE REQUIREMENTS OF THE MASSACHUSETTS STATE BUILDING CODE AND REFERENCED STANDARDS. THE CONTRACTOR SHALL NOT PROCEED WITH ANY WORK THAT OTHERWISE CONCEALS ITEMS SCHEDULED FOR INSPECTION UNTIL INSPECTION HAS BEEN COMPLETED.

8. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL MEANS AND METHODS OF CONSTRUCTION EMPLOYED ON THIS PROJECT, AND FOR ALL TEMPORARY BRACING, SUPPORT, AND PROTECTION OF THE EXISTING STRUCTURE. CONTRACTOR SHALL BE PREPARED TO RETAIN THE SERVICES OF A MASSACHUSETTS REGISTERED PROFESSIONAL STRUCTURAL ENGINEER AT HIS OWN EXPENSE IF NECESSARY TO MAINTAIN SAFE, STABLE CONDITIONS ON THE PROJECT. ANY SEQUENCES OF WORK OR METHODS INDICATED OR IMPLIED IN THE CONTRACT DOCUMENTS ARE PRESENT ONLY AS ASSUMPTIONS ON WHICH THE DESIGN OF THE PERMANENT INSTALLATIONS ARE BASED AND TO BE CONSIDERED AS SUGGESTED OPTIONS FOR REVIEW BY THE CONTRACTOR.

9. FOLLOWING REVIEW OF EXISTING CONDITIONS AND THE SCOPE OF WORK, THE CONTRACTOR SHALL SUBMIT A WORK SCHEDULE AND KEEP THE ENGINEER ABREAST OF ALL PROGRESS AND THE BEGINNING AND COMPLETION OF EACH PHASE OR ITEM OF WORK.

10. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR MAINTAINING THE SAFETY AND STABILITY OF THE STRUCTURE, ITS OCCUPANTS, AND ALL ADJACENT STRUCTURES DURING ALL PHASES OF THE WORK, AND SHALL CORRECT ANY DEFECTS OR DAMAGE WHICH RESULTS FROM HIS ACTIONS.

B. DESIGN LOADS

1. THE FOLLOWING LOADS ARE CONSIDERED:
   ROOF SNOW LOAD: 35 PSF

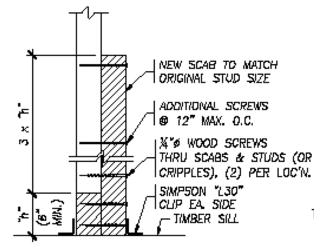
2. OCCUPANCIES OF BUILDING SHALL BE LIMITED DUE TO REDUCED ALLOWABLE CAPACITY OF EXISTING STRUCTURAL MEMBERS. OCCUPANCIES ARE NOTED ON STRUCTURAL PLANS. PER MASSACHUSETTS STATE BUILDING CODE, AREA WITH LIMITED CAPACITIES SHALL BE CLEARLY SIGNPOSTED.

C. TEMPORARY SHORING AND BRACING:

1. PROVIDE AND INSTALL TEMPORARY SHORING DESIGNED TO SUPPORT THE TEMPORARY STRUCTURAL LOADS OF THE SUPPORTED ITEMS. SUBMIT SHORING PRODUCTS, CONFIGURATION AND PROCEDURE, TO THE ENGINEER FOR RECORD AND REVIEW.

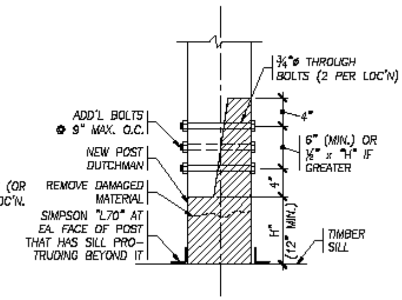
2. SHORING SHALL BE OF ANY MATERIAL WHICH IS SUITABLE FOR THE APPLICATION. TIMBER SHORING SHALL BE FULLY DRIED AND ALL END GRAIN SHALL BE SEALED TO PREVENT FLUCTUATIONS IS MOISTURE CONTENT. SHORING SHALL BE MADE STABLE, STIFF, AND SNUG FITTING SO AS NOT TO DEFLECT UNDER LOAD. PRE LOAD SUPPORTED ELEMENTS FOR SNUG FIT ONLY. SHORING SHALL ALLOW DEFLECTION OF NO MORE THAN THE GIVEN SPAN LENGTH DIVIDED BY 360 OR APPROPRIATE FOR THE MATERIAL.

3. BEARING SURFACES OF SHORING SHALL BE REVIEWED WITH ENGINEER AND SHALL TO PROVIDE FOR PROPER TRANSFER OF LOADS TO SUPPORTING AND SUPPORTED ELEMENTS.



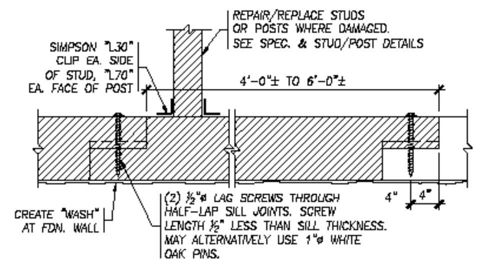
TYPICAL STUD REPAIR DETAIL
1" = 1'-0"

NOTES:
- REPLACEMENT WOOD & SCAB TO BE WHITE OAK #2.
- BORIC ACID–TREAT ALL WOOD.



TYPICAL POST DUTCHMAN DETAIL
1" = 1'-0"

NOTES:
- NEW WOOD TO BE WHITE OAK #2.
- BORIC ACID– TREAT ALL WOOD



TYPICAL SILL REPLACEMENT DETAIL
1" = 1'-0" (AS NEEDED)

NOTES:
- SILL MATERIAL TO BE WHITE OAK #2
- CUT JOIST POCKETS OR TRIM AND HANGER–SUPPORT JOISTS ON FAR SIDE
- BORIC ACID–TREAT ALL WOOD

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date: 03/07/2008

scale: As Noted @ 18x24

Structures North

Dwg. Title
GENERAL NOTES & DETAILS

Dwg. No. S0

Figure 18 Structural Drawing S-0 – General Notes

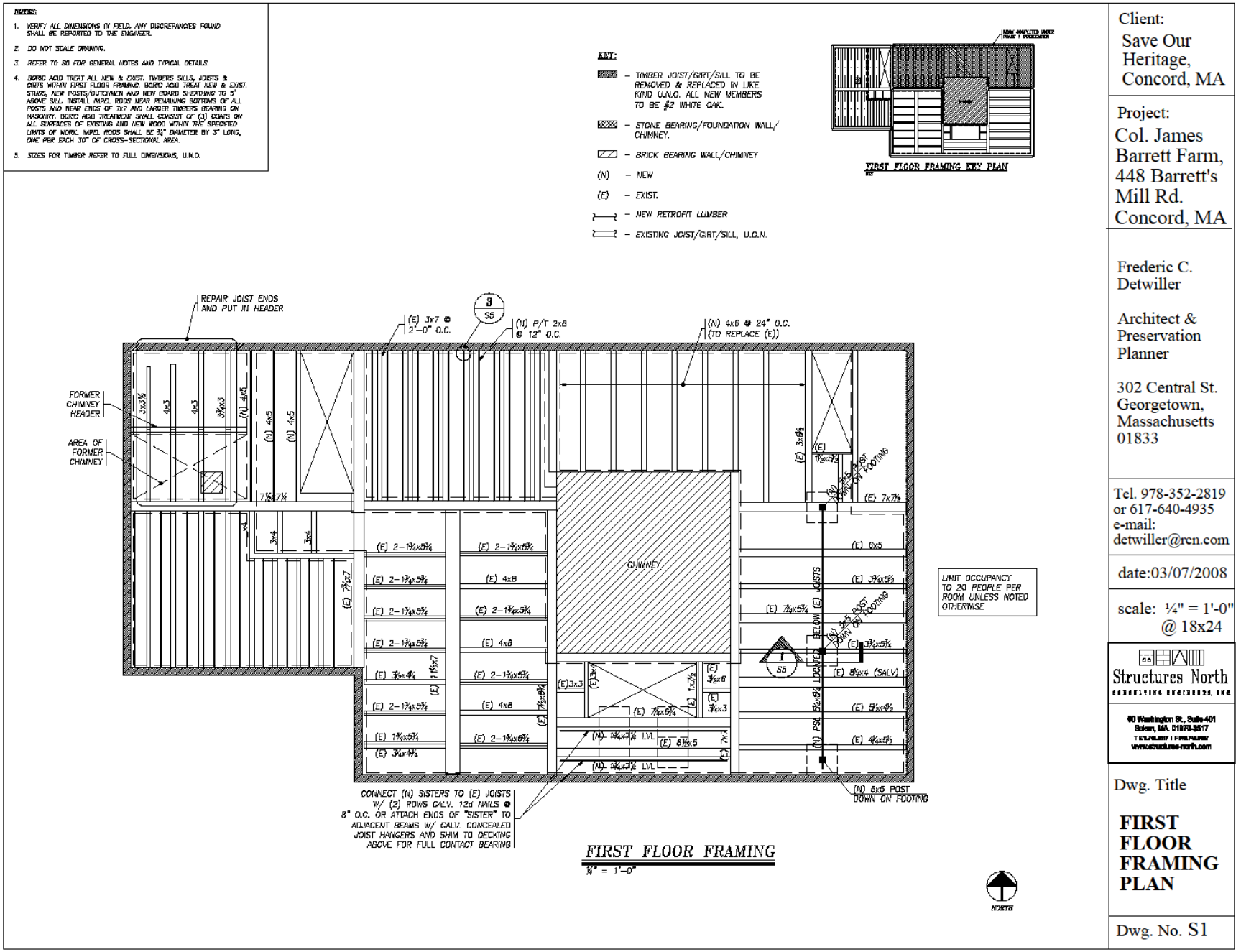


Figure 19 Structural Drawing S-1 – First Floor Framing

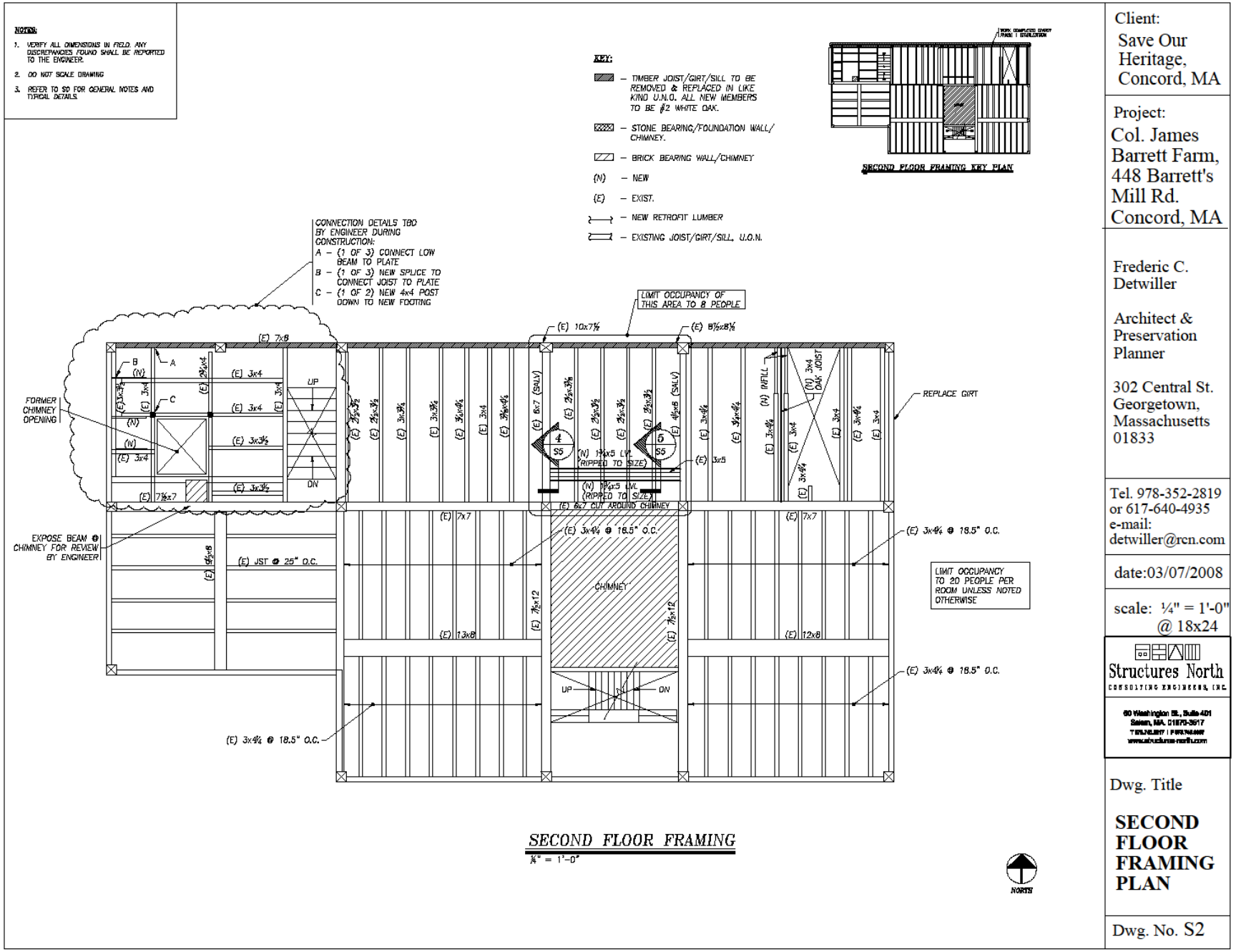


Figure 20 Structural Drawing S-2 – Second Floor Framing

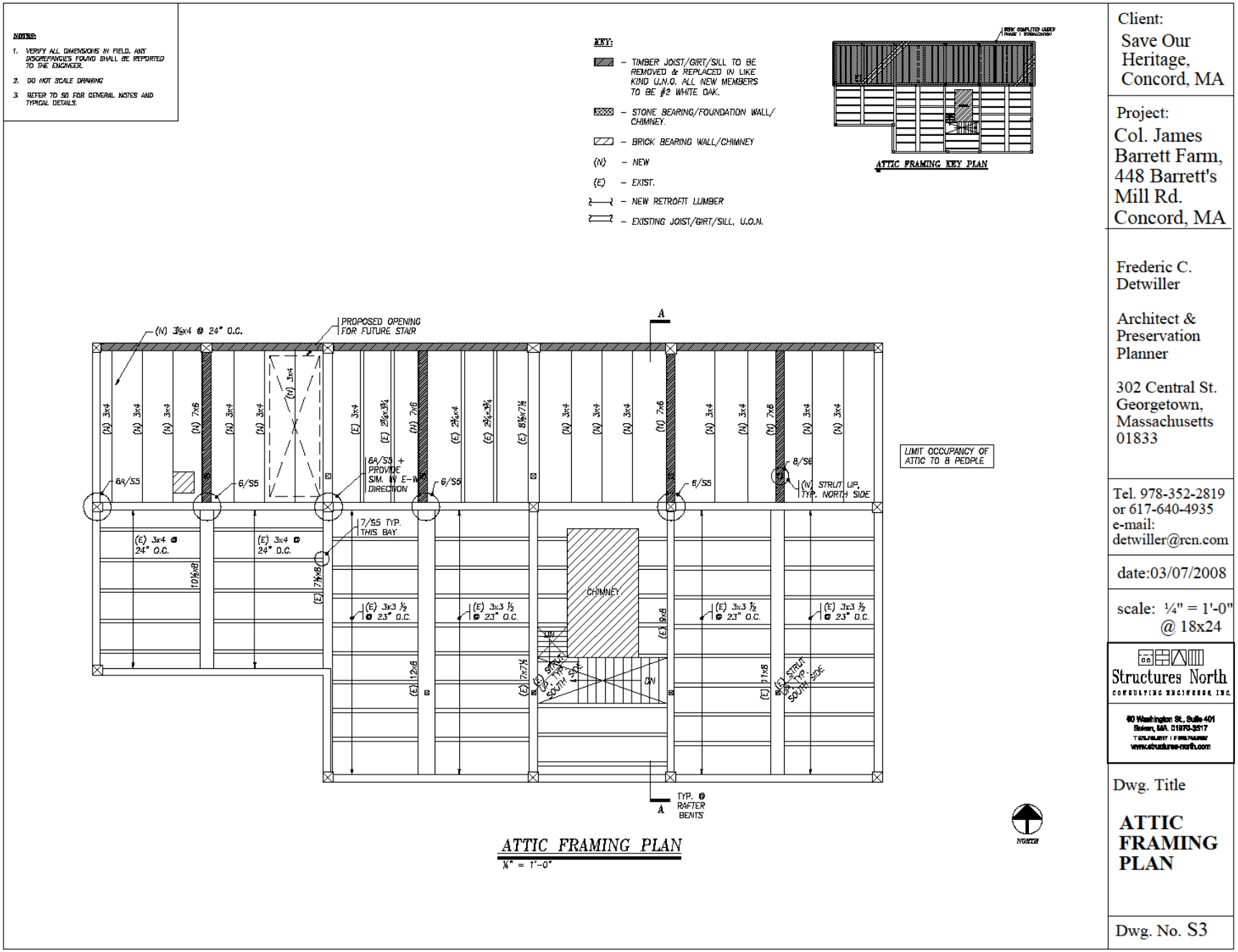


Figure 21 Structural Drawing S-3 – Attic Framing

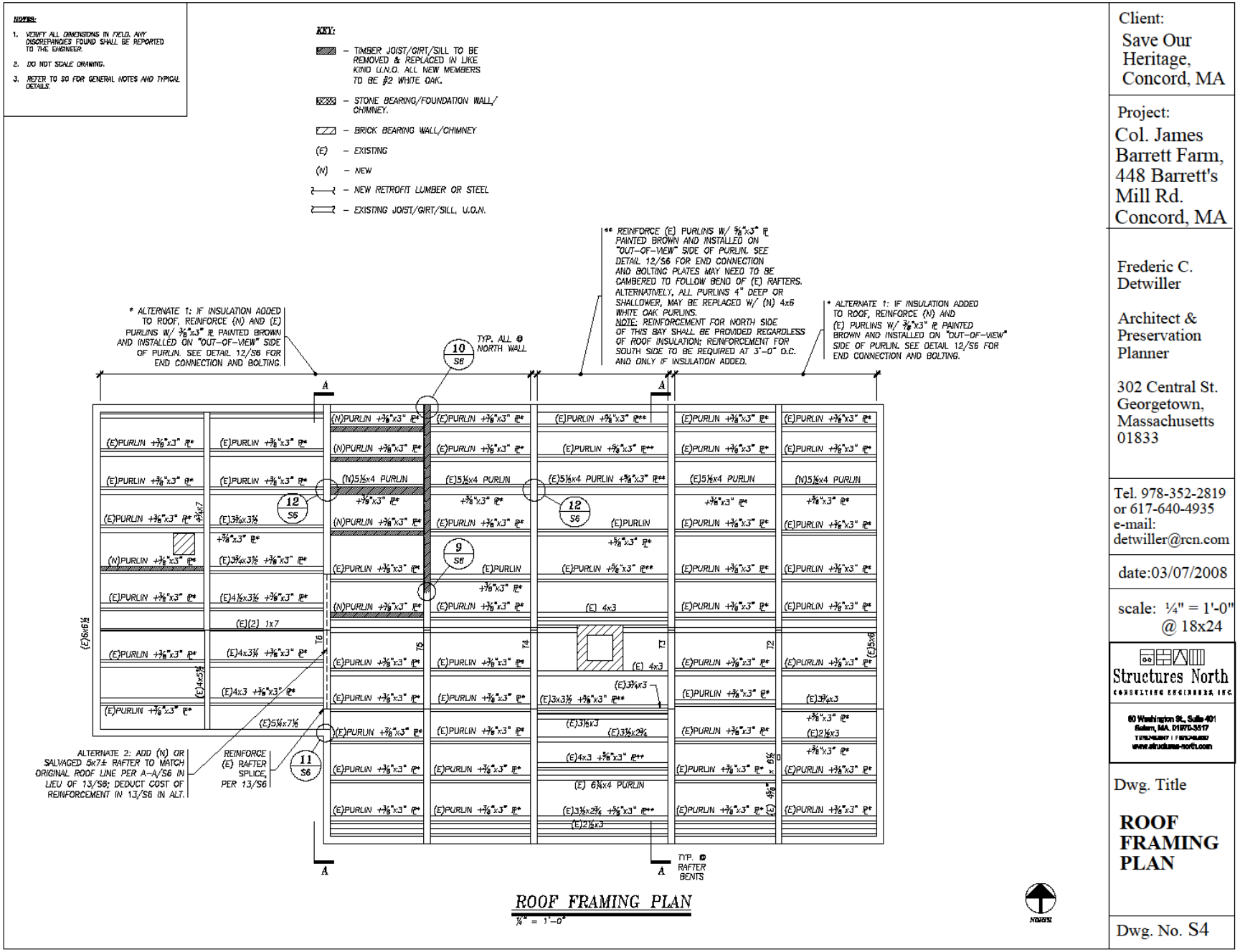


Figure 22 Structural Drawing S-4 – Roof Framing

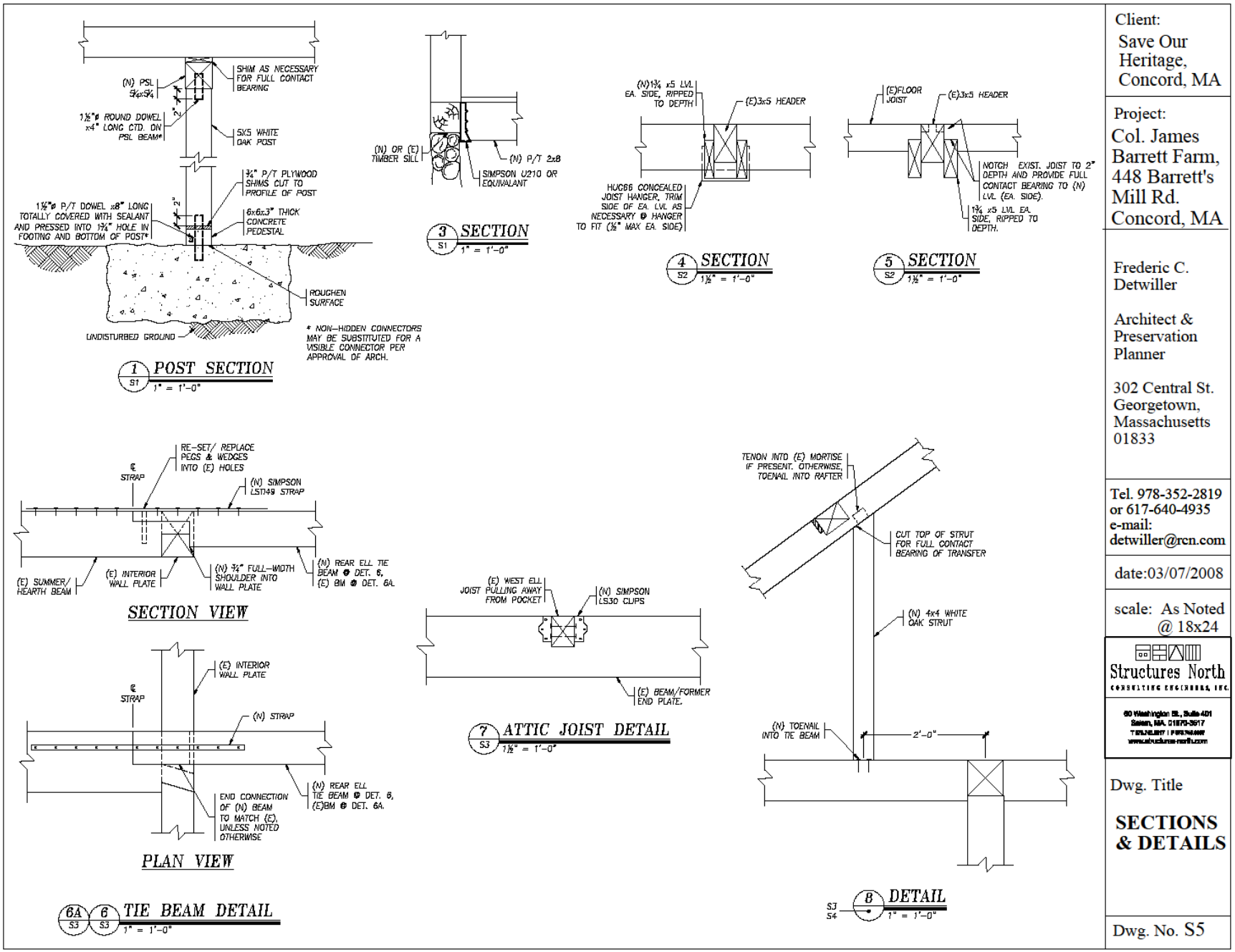
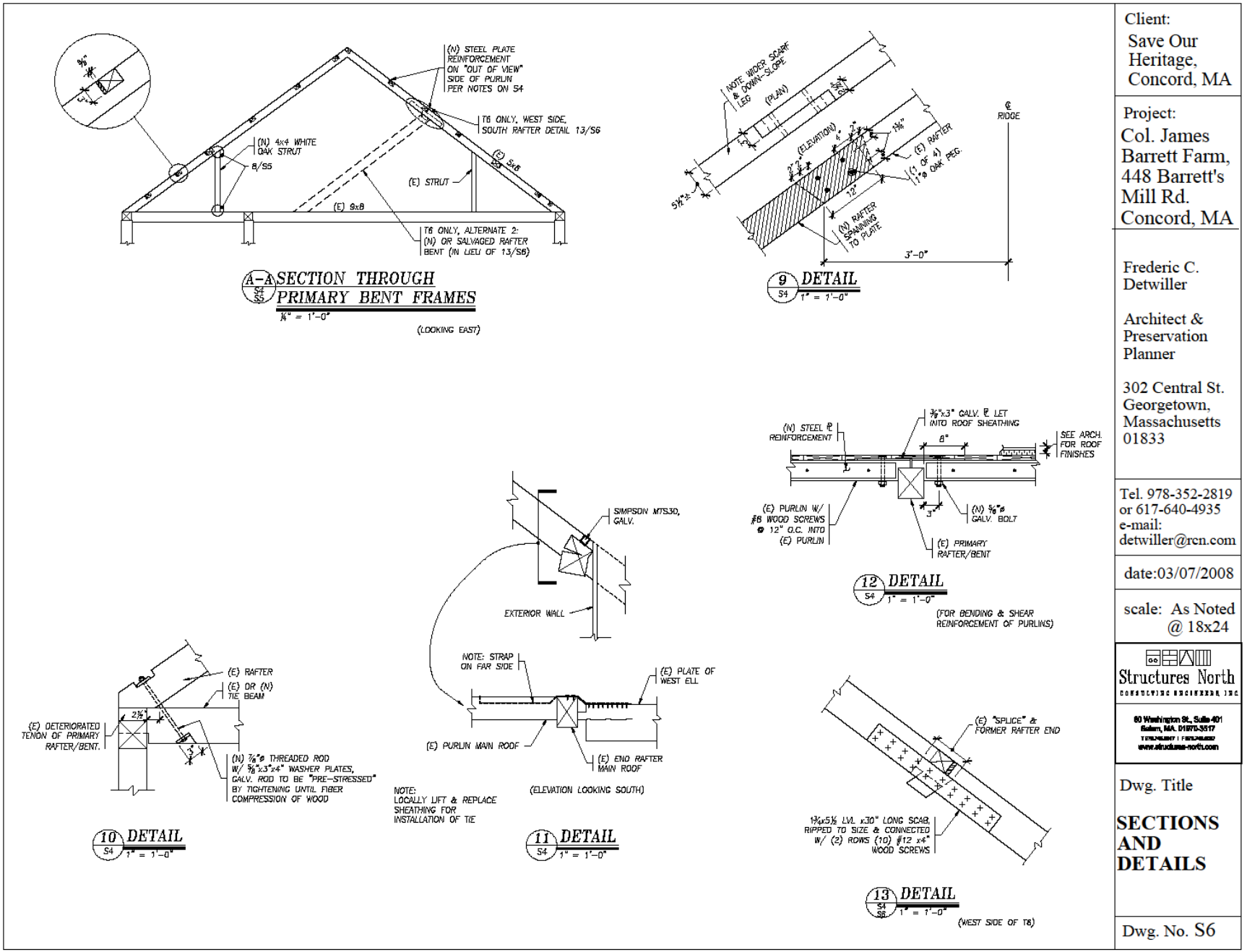


Figure 23 Structural Drawing S-5 – Sections and Details



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e-mail: detwiller@rcn.com

date:03/07/2008

scale: As Noted @ 18x24

Structures North
CONSULTING ENGINEERS, INC.
80 Washington St., Suite 401 Salem, MA. 01970-3517

Dwg. Title

SECTIONS AND DETAILS

Dwg. No. S6

Figure 24 Structural Drawing S-6 – Roof Truss

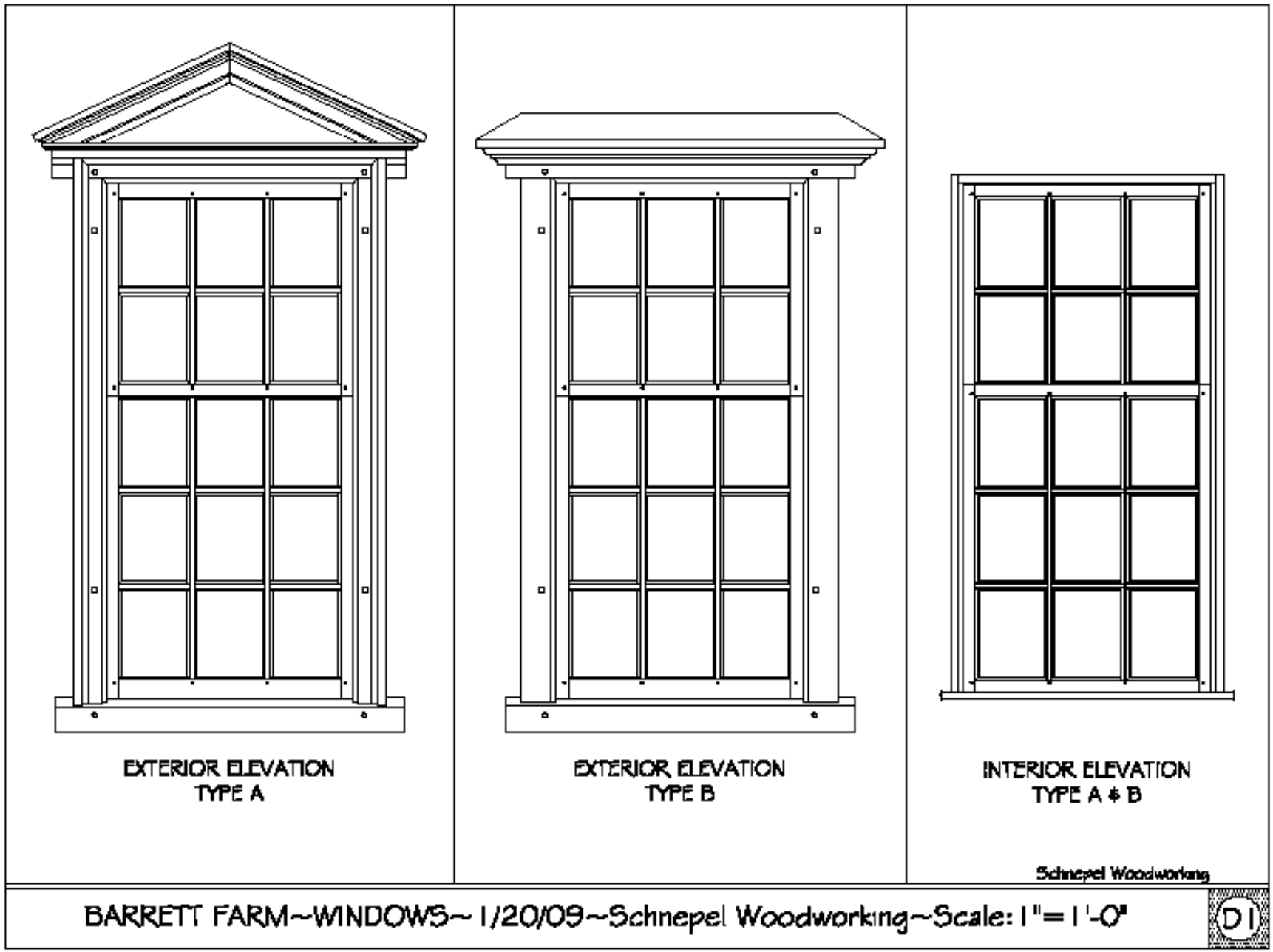


Figure 25 Window Drawing D1 - Types

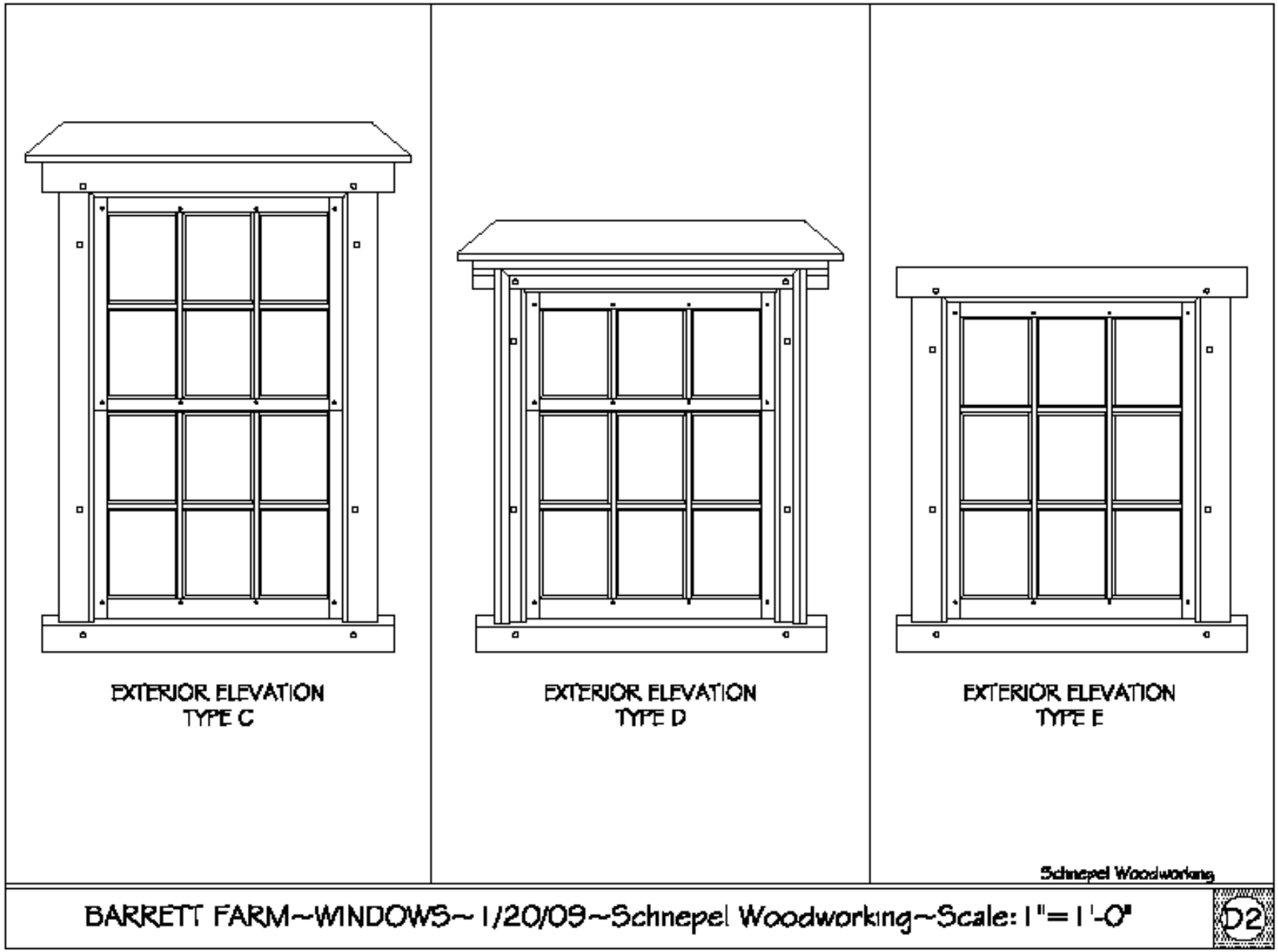


Figure 26 Window Drawing D2 - Types

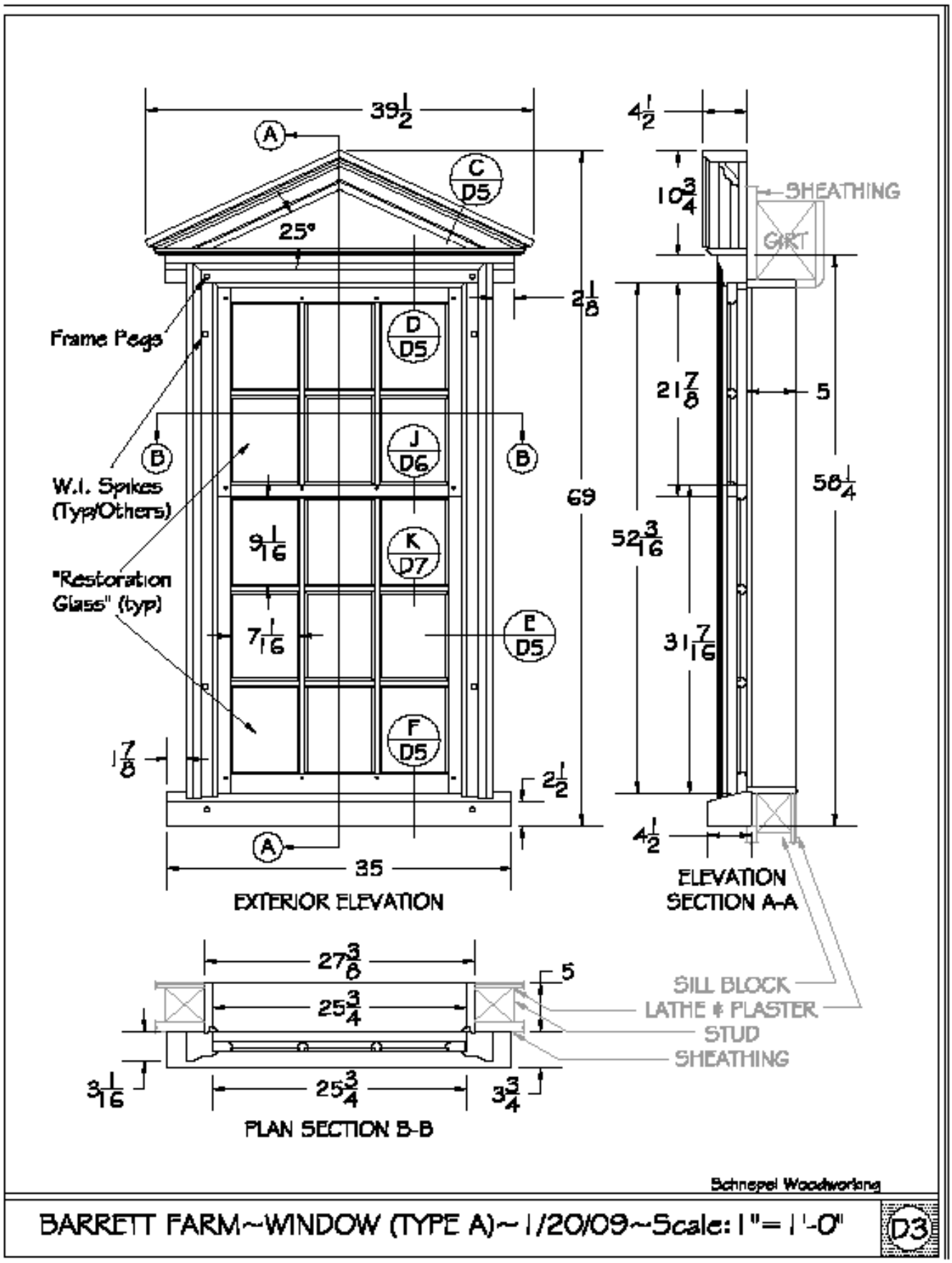


Figure 27 Window Drawing D3 – Type A

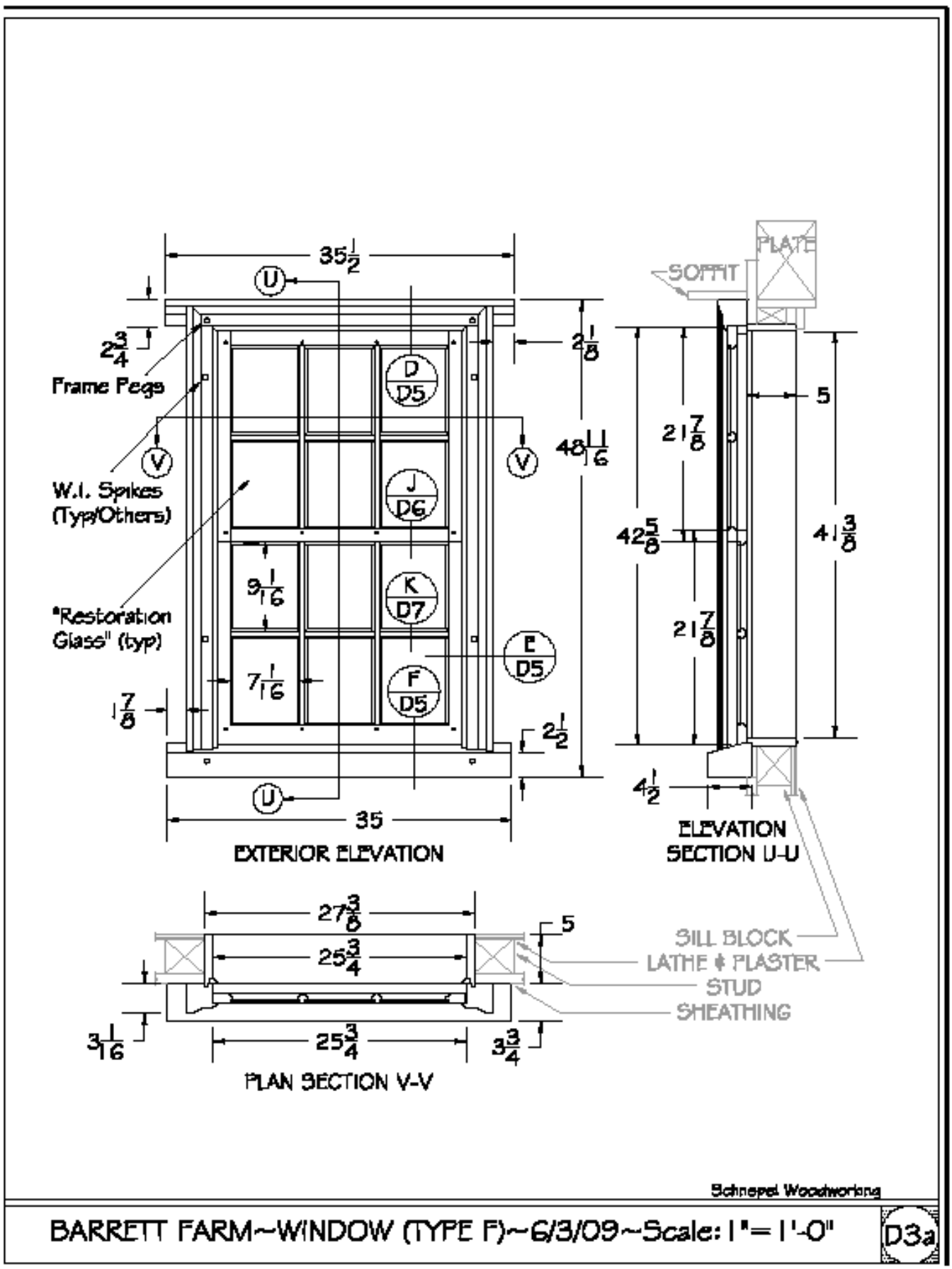


Figure 28 Window Drawing D3a – Type F

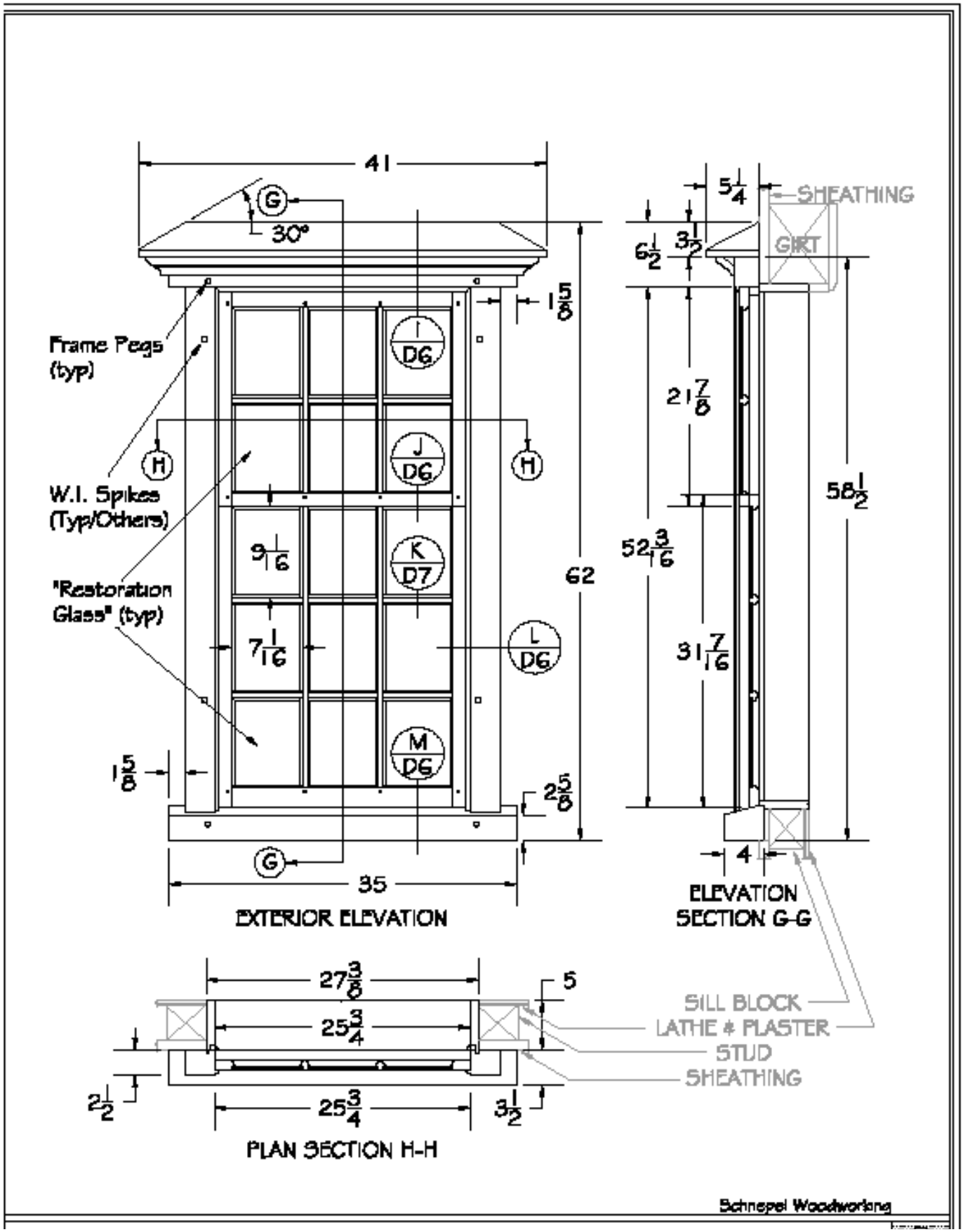


Figure 29 Window Drawing D4

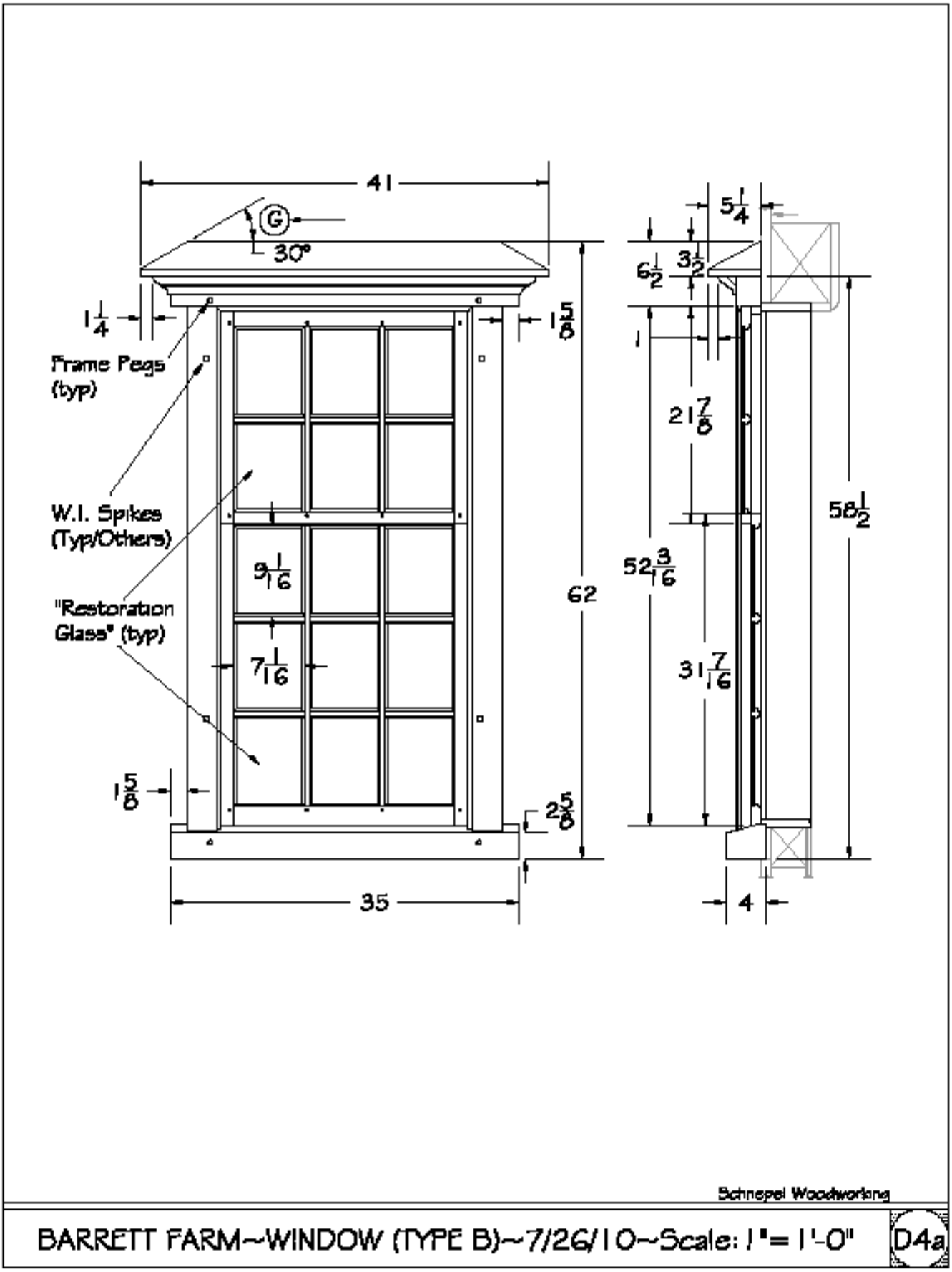


Figure 30 Window Drawing D4a – Type B

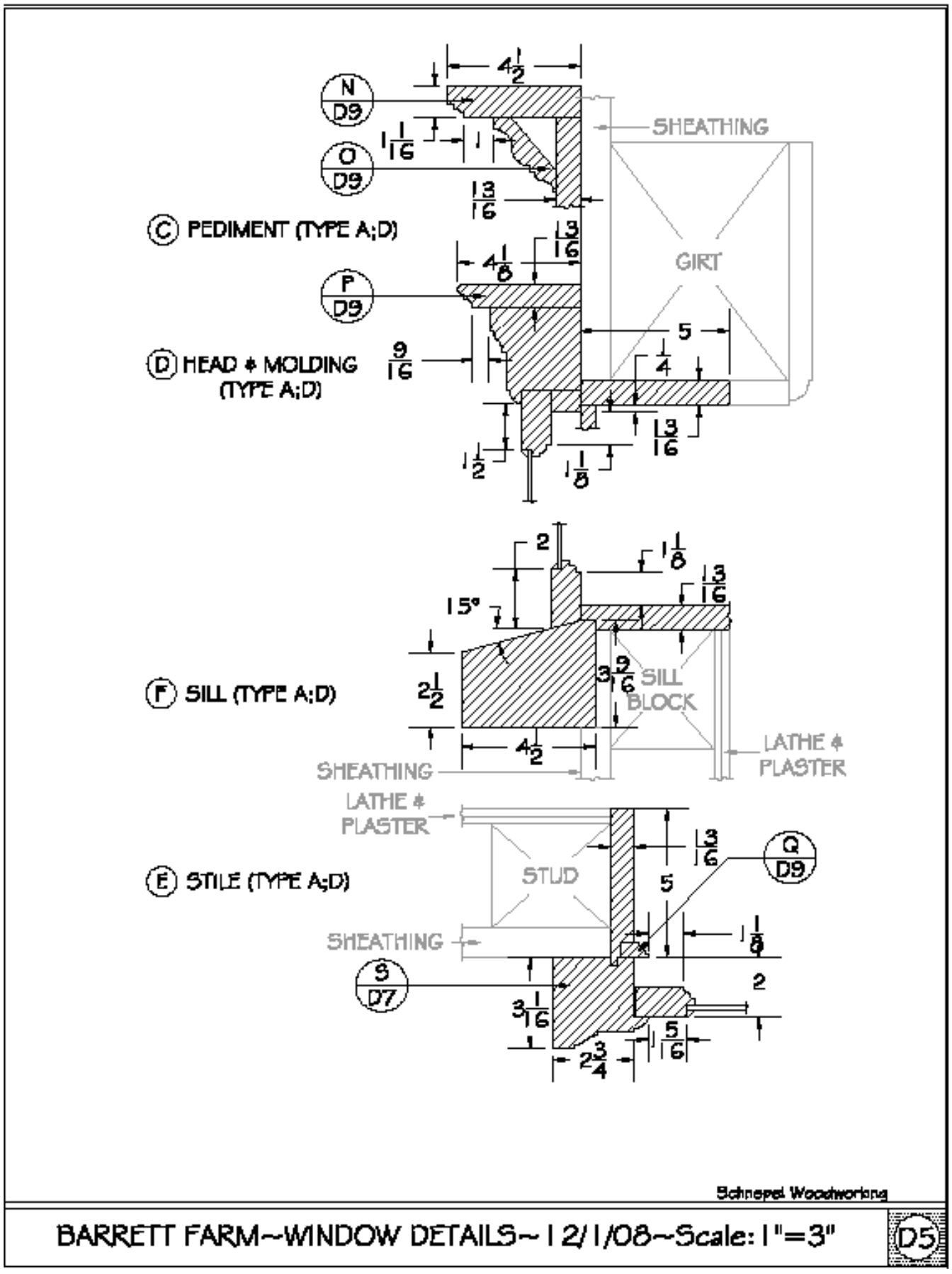


Figure 31 Window Drawing D5 – Cross Sections

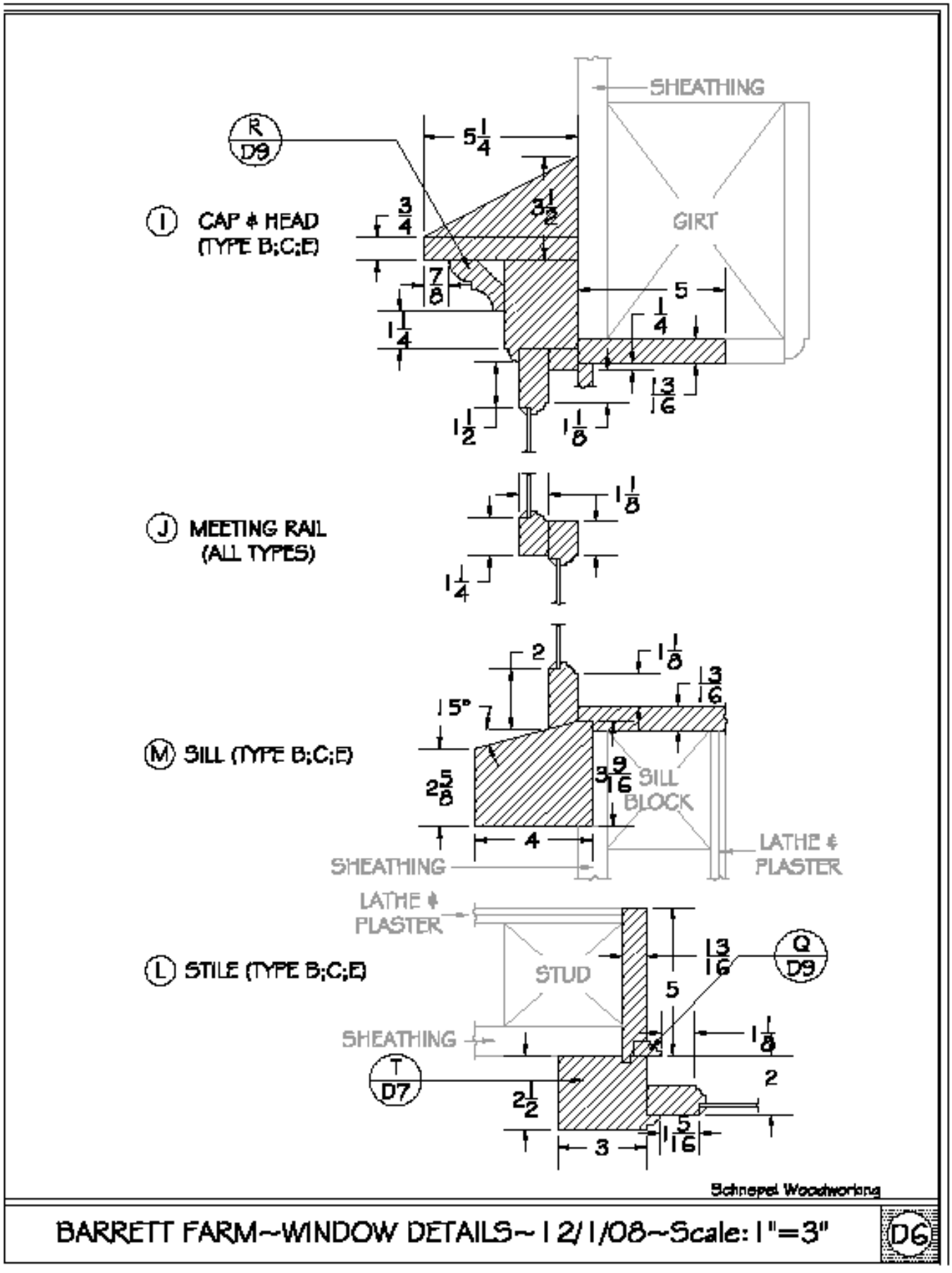


Figure 32 Window Drawing D6 – Section Types

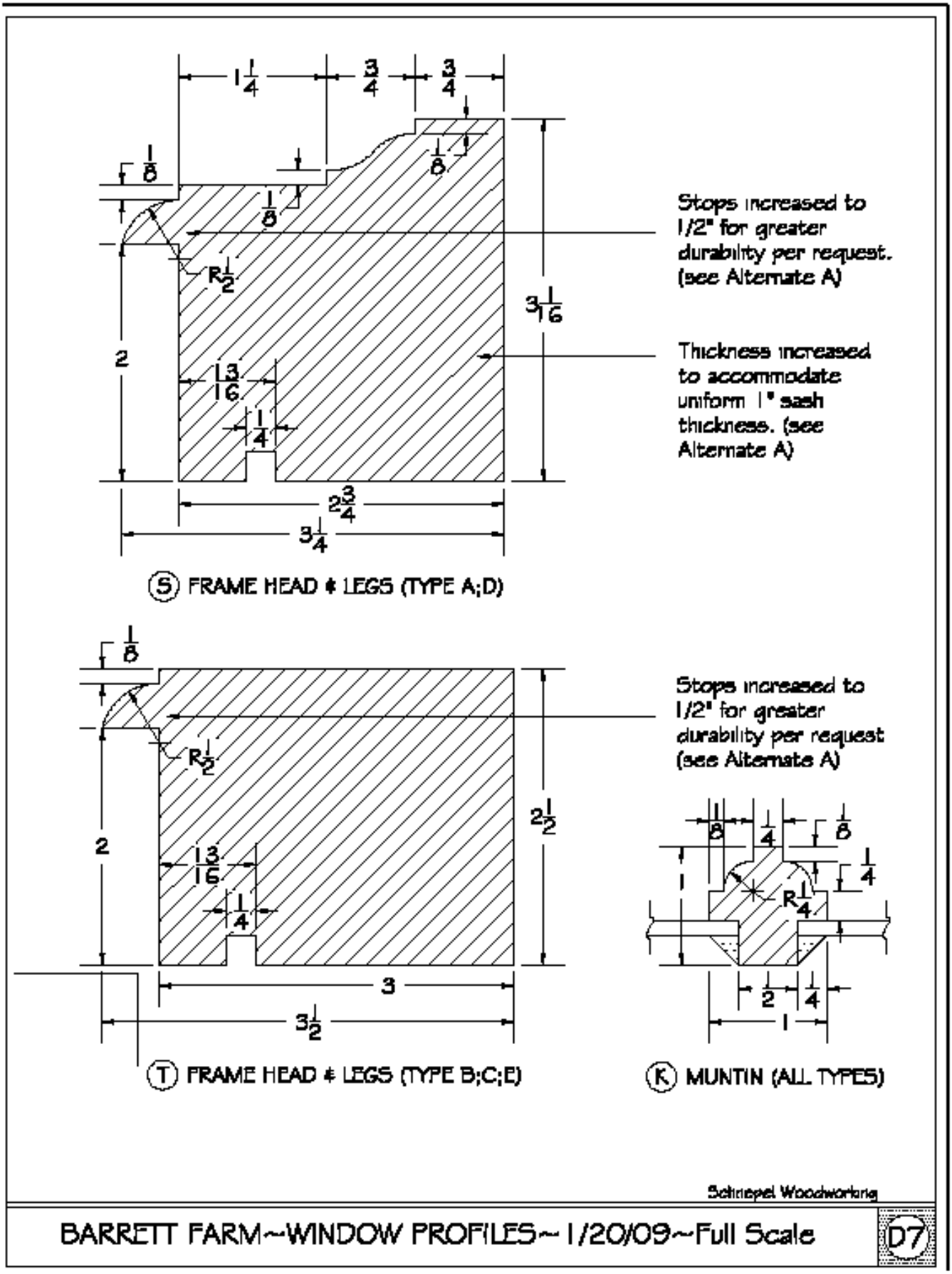
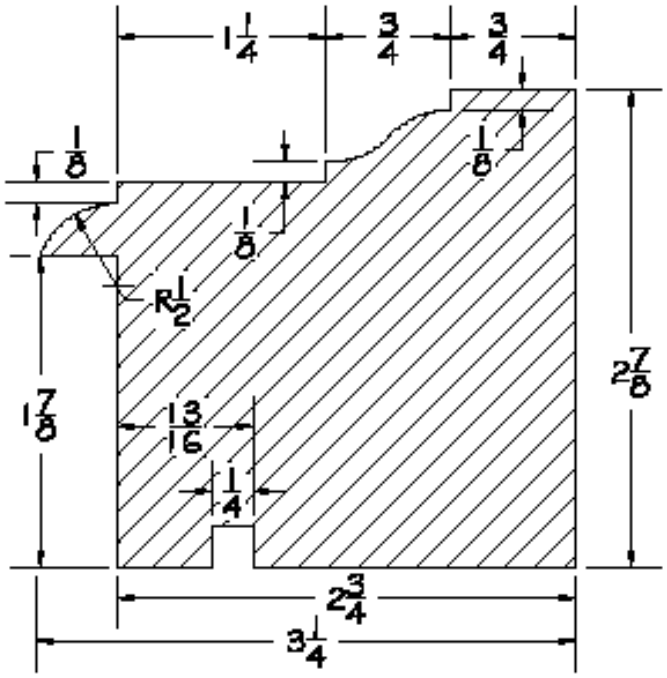
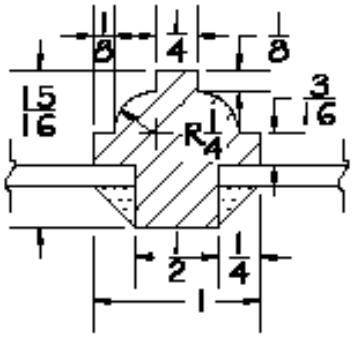


Figure 33 Window Drawing D7 – Window Profiles



FRAME HEAD & LEGS (TYPE A;D)
ALTERNATE A



MUNTIN (TYPE A;D)
ALTERNATE A

This Frame detail most closely approximates the "original" sample which was used as blocking for later window replacements (Attic- east elevation).

This Muntin detail has been borrowed from "The Buckman Tavern; Survey #MA-547;HABS; Transom". Its thickness (15/16") has been reduced to fit the Frame as drawn.

Schimpel Woodworking

BARRETT FARM–WINDOW (ALTERNATE A)– 1/20/09–Full Scale D8

Figure 34 Window Drawing D8 – Alternate A

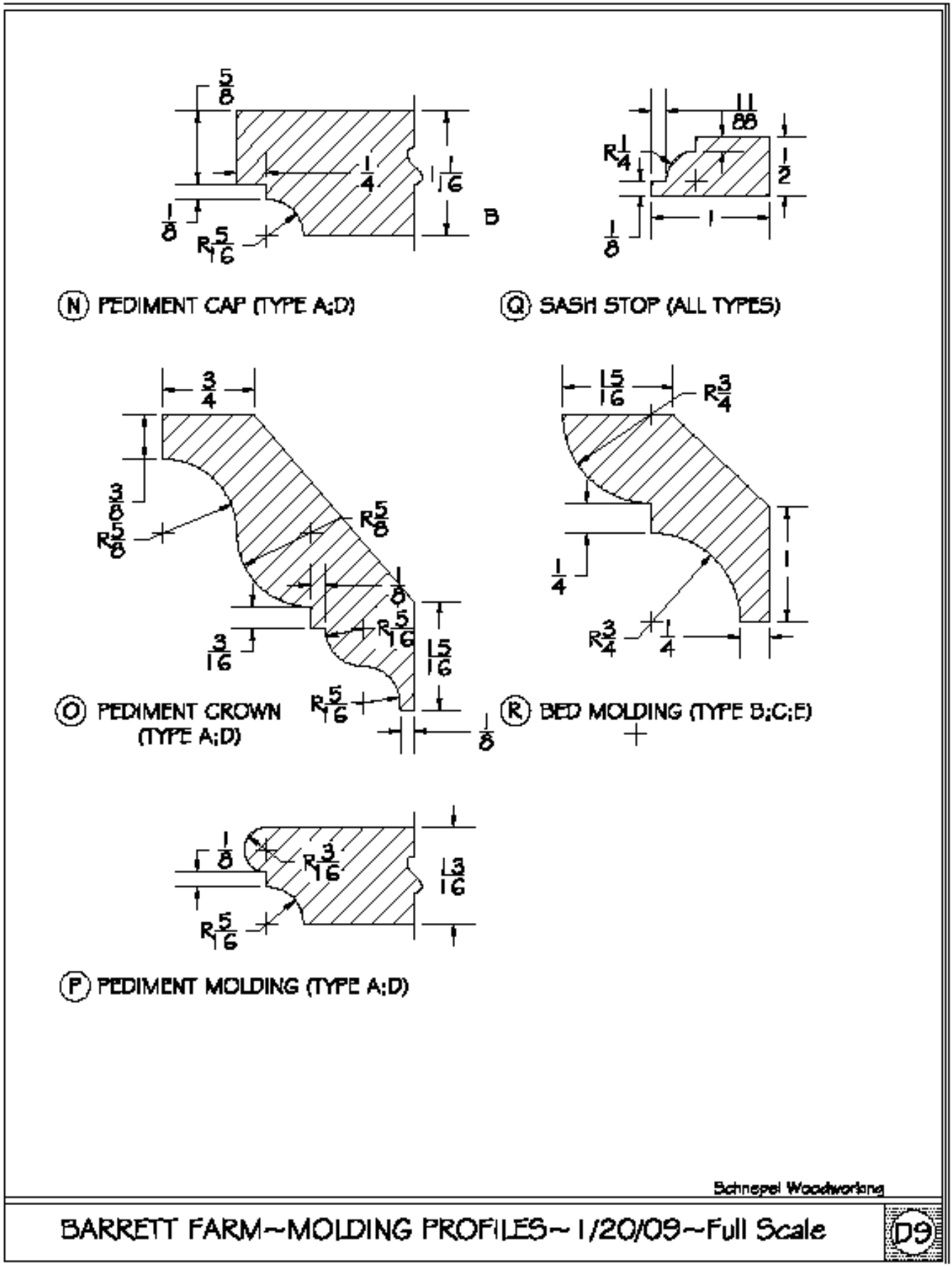


Figure 35 Window Drawing D9 – Molding Profiles

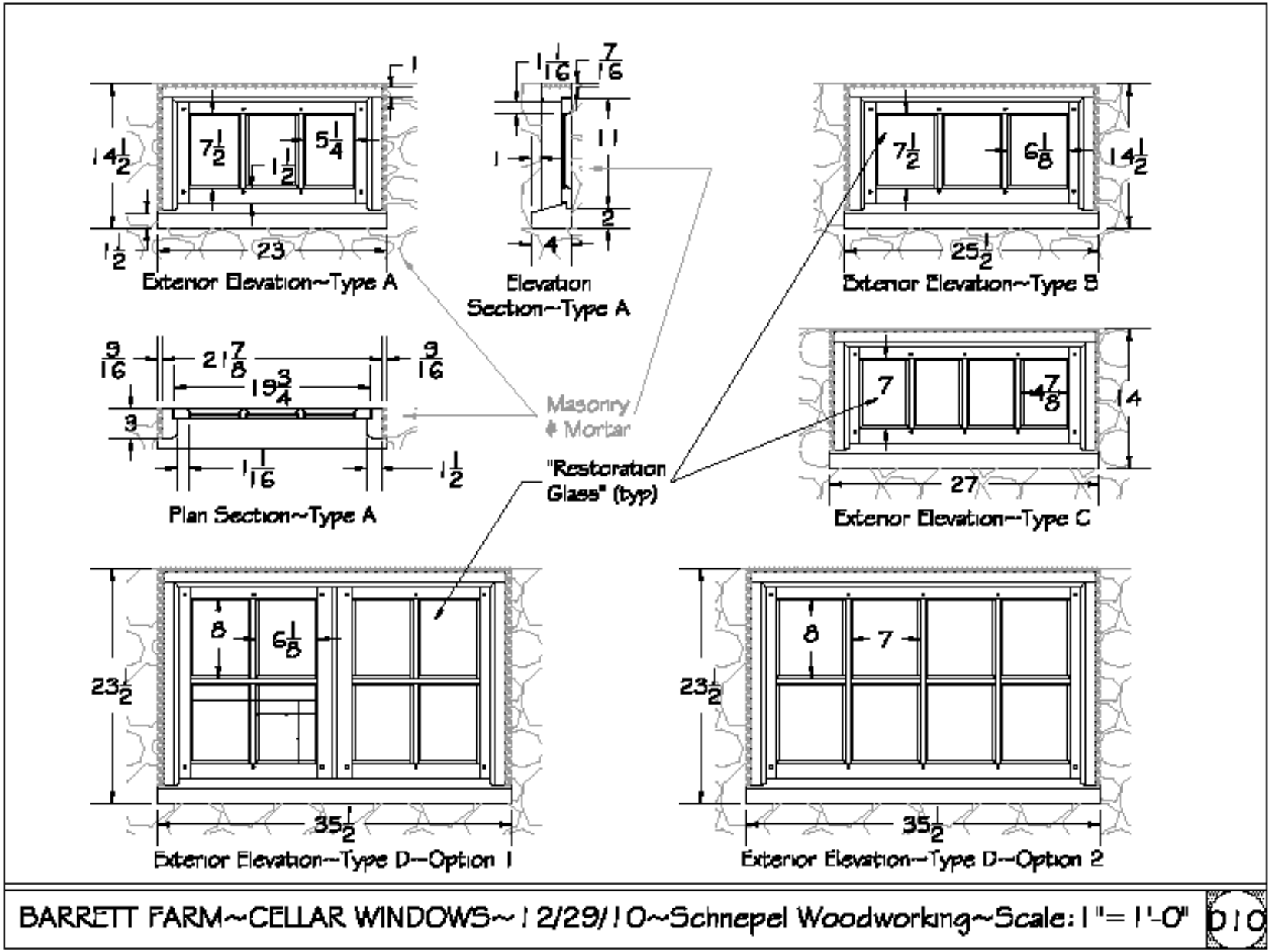
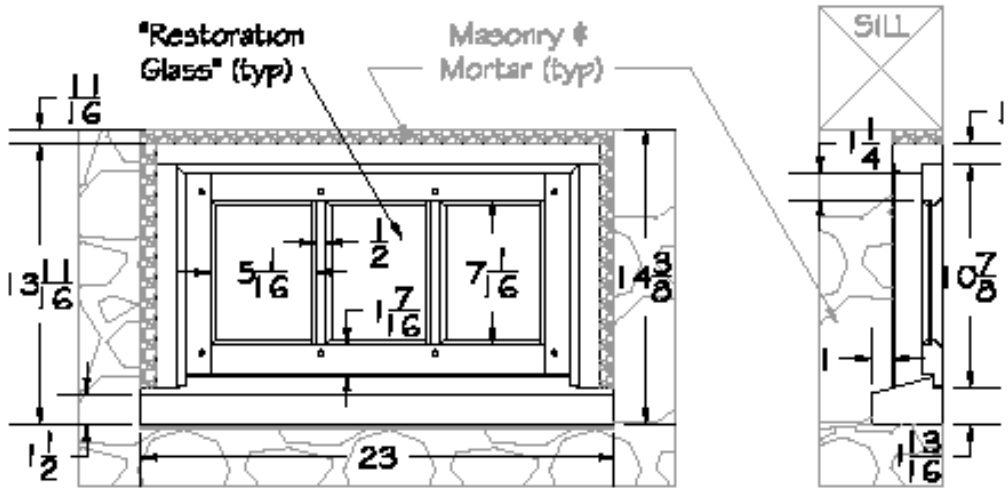
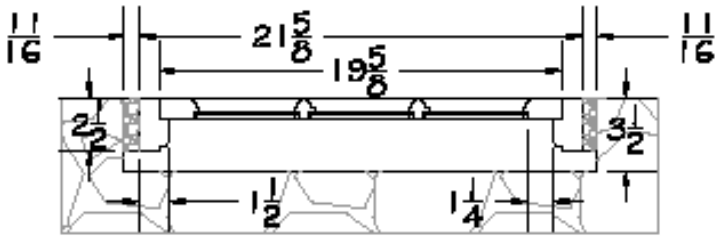


Figure 36 Window Drawing D10 – Cellar



Exterior Elevation—Type A

Elevation Section—Type A



Plan Section—Type A

GENERAL NOTES—CELLAR WINDOWS

1) Frames and sashes are fabricated of S.A. Cedar and dipped in "Preservative Treatment".
2) Cellar sashes are glazed with 100% linseed oil putty; profiles "match" the primary sashes.
3) Masonry Openings vary in dimension. Type A Windows (2 South; 1 East) are made of uniform size to accommodate the shortest width (of the 3 openings) x shortest height (of the three openings). Type B Window is sized to accomodate the shortest minimum height (only) of the South opening.
4) Type A Windows are to be top hinged/ inswinging (Awning). Type B Windows are to be side hinged/ inswinging (Casement) and have lapped and beaded meeting stiles. Hardware is to be installed and supplied by others.
5) Window placement and masonry reveals are drawn for illustration purposes only.

Schnepel Woodworking – Revision 1

BARRETT FARM—CELLAR WINDOWS—1/6/11—Scale: 1 1/2"=1'-0" D11

Figure 37 Window Drawing D11 - Cellar

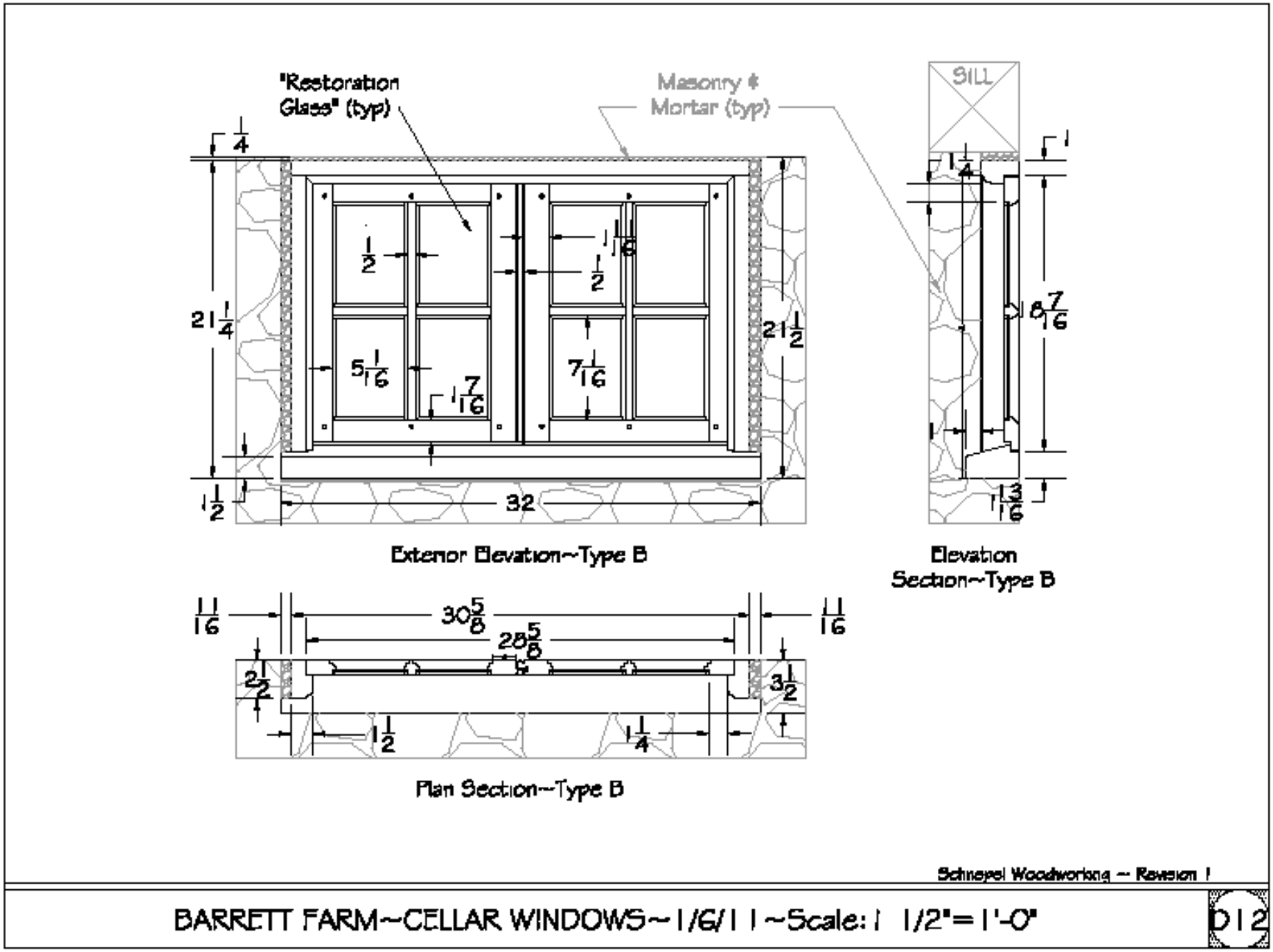


Figure 38 Window Drawing D12 - Cellar

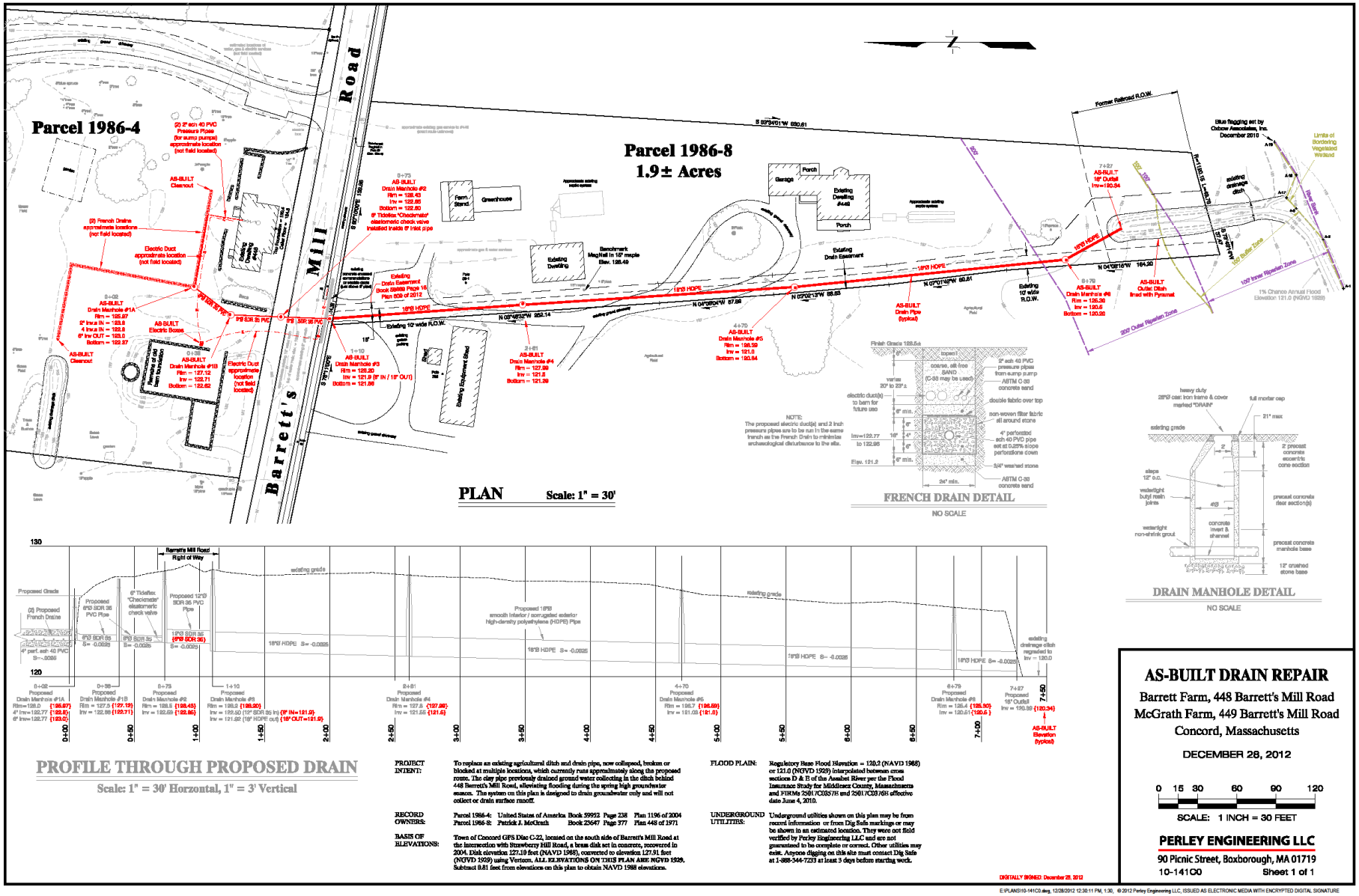


Figure 39 Drainage – Layout and Profile

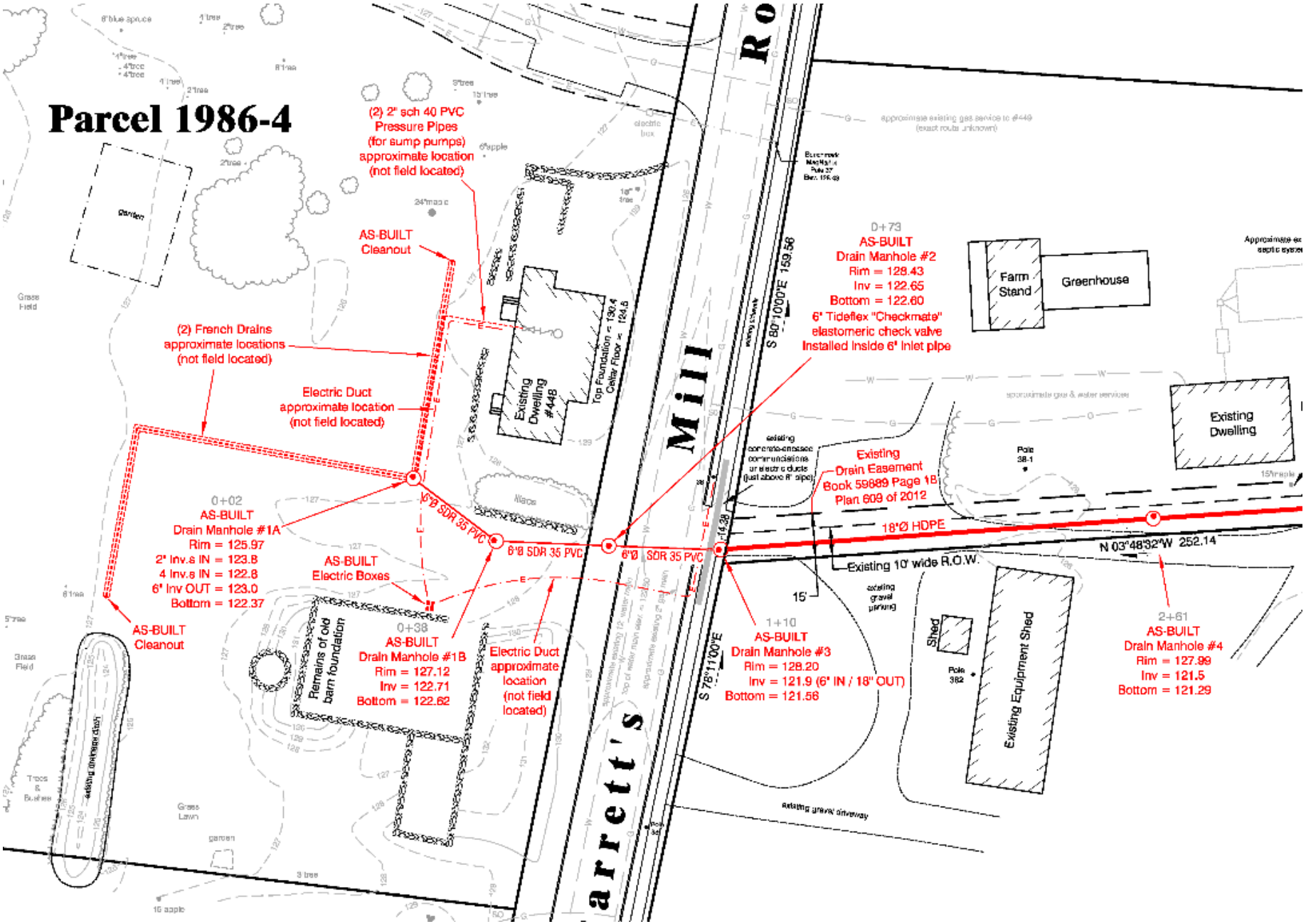


Figure 40 Drainage – Layout and Profile – Detail Around House

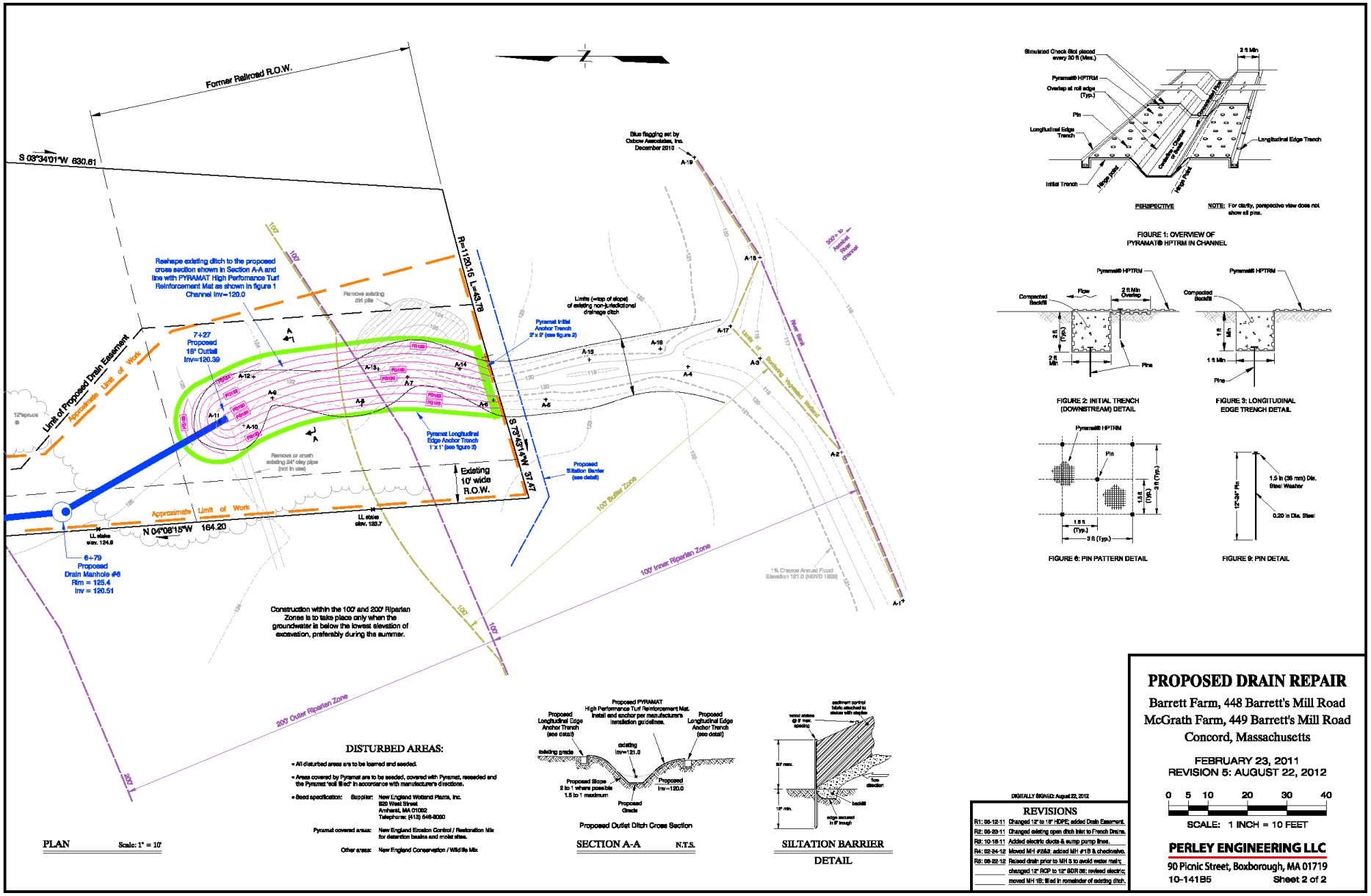


Figure 41 Drainage – Ditch Detail