

INTRODUCED: July 27, 2026

AN ORDINANCE No. 2026-192

To authorize the Chief Administrative Officer, for and on behalf of the City of Richmond, to accept funds in the amount of \$500,000.00 from the Historic Richmond Foundation and to amend the Fiscal Year 2026-2027 Special Fund Budget by creating a new special fund for the Department of Parks, Recreation and Community Facilities entitled “Pump House Roof Replacement – HRF Special Fund,” and appropriating the increase to the Department of Parks, Recreation and Community Facilities’ “Pump House Roof Replacement – HRF Special Fund” by \$500,000.00 for the purpose of providing funding for the Pump House Roof Replacement project.

Patron – Mayor Avula

Approved as to form and legality
by the City Attorney

PUBLIC HEARING: SEP 28 2026 AT 6 P.M.

THE CITY OF RICHMOND HEREBY ORDAINS:

§ 1. That the Chief Administrative Officer, for and on behalf of the City of Richmond, is hereby authorized to accept funds in the amount of \$500,000.00 from the Historic Richmond Foundation for the purpose of providing funding for the Pump House Roof Replacement project.

§ 2. That Article I, Section 2 of Ordinance No. 2026-063, adopted May 11, 2026, which adopted the Special Fund Budget for the fiscal year commencing July 1, 2026, and ending June

AYES: _____ NOES: _____ ABSTAIN: _____

ADOPTED: _____ REJECTED: _____ STRICKEN: _____

30, 2027, and made appropriations thereto, be and is hereby amended by creating a new special fund for the Department of Parks, Recreation and Community Facilities entitled “Pump House Roof Replacement – HRF Special Fund” for the purpose of providing funding for the Pump House Roof Replacement project.

§ 3. That the funds received from the Historic Richmond Foundation are hereby appropriated to the Special Fund Budget for the fiscal year commencing July 1, 2026, and ending June 30, 2027, by increasing estimated revenues by \$500,000.00, increasing the amount appropriated for expenditures by \$500,000.00, and allotting to the Department of Parks, Recreation and Community Facilities’ “Pump House Roof Replacement – HRF Special Fund” the sum of \$500,000.00 for the purpose of providing funding for the Pump House Roof Replacement project.

§ 4. This ordinance shall be in force and effect upon adoption.

City of Richmond

Intracity Correspondence

O&R Transmittal

DATE: June 26, 2026

TO: The Honorable Members of City Council

THROUGH: The Honorable Danny Avula, Mayor

THROUGH: Odie Donald II, Chief Administrative Officer

THROUGH: Tanikia Jackson, DCAO - Finance and Administration

THROUGH: Letitia Shelton, Director of Finance

THROUGH: Meghan Brown, Director of Budget and Strategic Planning

THROUGH: Alfred L. Wiggins, DCAO – Operations

FROM: Christopher E. Frelke, Director of Parks, Recreation & Community Facilities

RE: To accept funds in the amount of \$500,000.00 from the Historic Richmond Foundation for the purpose of providing funding for the Pump House Roof Replacement project.

ORD. OR RES. No. _____

PURPOSE: To authorize the Chief Administrative Officer, for and on behalf of the City of Richmond, to accept funds in the amount of \$500,000.00 from the Historic Richmond Foundation and to amend the Fiscal Year 2026-2027 Special Fund Budget by creating a new special fund for the Department of Parks, Recreation and Community Facilities entitled “Pump House Roof Replacement – HRF Special Fund,” and appropriating the increase to the Department of Parks, Recreation and Community Facility’s “Pump House Roof Replacement – HRF Special Fund” by \$500,000.00 for the purpose of providing funding for the Pump House Roof Replacement project.

BACKGROUND: Pursuant to a Memorandum of Agreement to be entered into between Historic Richmond Foundation and the City (“HRF”), HRF will provide \$500,000.00 for the purpose of the repair and restoration of the roof of the Byrd Park Pump House. The funding being provided by HRF is being used alongside a grant from the National Park Service and Department of Parks, Recreation and Community Facilities Capital Improvement funds.

COMMUNITY ENGAGEMENT: After introduction, the proposed ordinance will be referred to Finance and Economic Development Standing Committee meeting for discussion, where the public is encouraged to attend to provide comments. After the committee's recommendation to the City Council, Council will hold a public hearing regarding the proposed ordinance.

STRATEGIC INITIATIVES AND OTHER GOVERNMENTAL: Mayoral Action Plan: Thriving and Sustainable Built Environment, James River Park System Master Plan

CONSIDERATION BY OTHER GOVERNMENTAL ENTITIES: Budget, Finance

FISCAL IMPACT / COST: FY 2026-2027 Special Fund revenues will increase by \$500,000.00 and a new special fund titled "Pump House Roof Replacement – HRF Special Fund" will be created. In addition to the \$500,000.00 provided by HRF, the project is funded by FY 2024 CIP – James River Master Plan Implementation funding of \$1,549,369.00 and \$500,000.00 in grant funding from the National Park Service.

DESIRED EFFECTIVE DATE: Upon adoption

REQUESTED INTRODUCTION DATE: July 27, 2026

CITY COUNCIL PUBLIC HEARING DATE: September 14, 2026

REQUESTED AGENDA: Consent

RECOMMENDED COUNCIL COMMITTEE: Finance and Economic Development Standing Committee

AFFECTED AGENCIES: PRCF, Budget, Finance

RELATIONSHIP TO EXISTING ORD. OR RES.: Ord. No. 2026-080

ATTACHMENTS: Memorandum of Agreement

STAFF: Christopher Frelke, Director, PRCF
Nissa Richardson, Deputy Director, PRCF
Daniel Hazlett, Senior Management Analyst, PRCF

**MEMORANDUM OF AGREEMENT
BETWEEN
HISTORIC RICHMOND FOUNDATION
AND
CITY OF RICHMOND**

This Memorandum of Agreement (the “Agreement”) is entered into on the date of the City’s final signature set forth below (the “Effective Date”), by and between Historic Richmond Foundation, a Virginia nonstock corporation (“HRF”), and the City of Richmond, a municipal corporation and political subdivision of the Commonwealth of Virginia (the “City” and together with HRF, the “Parties”).

RECITALS

WHEREAS, the Byrd Park Pump House (also known currently as the New Pump House), is an iconic historic building in Byrd Park listed on the National Register of Historic Places and the Virginia Landmarks Register located at the Three-Mile Locks of the James River and the Kanawha Canal (the “Pump House”);

WHEREAS, the Pump House is owned by the City;

WHEREAS, HRF is a 501(c)3 non-profit that works to encourage preservation, rehabilitation and revitalization in Richmond working in collaboration with government, neighborhoods, businesses, organizations, foundations, and individuals;

WHEREAS, HRF desires to donate \$500,000.00 (the “HRF Donation”) for the sole purpose of the repair and restoration of the roof of the Pump House, exclusive of any work performed prior to the effective date of this Agreement (the “Roof Restoration Project”);

WHEREAS, the HRF Donation is conditioned upon, among other matters set forth herein, the City undertaking the Roof Restoration Project in accordance with the scope of work and the monitoring and reporting obligations set forth herein;

WHEREAS, the Parties desire to enter into this Agreement governing the HRF Donation for the Roof Restoration Project; and

WHEREAS, the City is authorized to accept the HRF Donation and execute this Agreement pursuant to Ordinance No. _____, adopted by the City Council for the City of Richmond, Virginia on _____, 2026.

NOW THEREFORE, in consideration of the undertakings contained herein, and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, and intending to be legally bound, the Parties hereto agree as follows:

I. PURPOSE

The purpose of this Agreement is to outline the responsibilities, terms, and conditions for the Parties in connection with HRF’s Donation for the Roof Restoration Project.

II. DURATION

The Agreement will remain in effect until December 31, 2027 (the “Completion Date”). The City will use reasonable efforts to complete the Roof Restoration

Project by the Completion Date. The Parties agree that this Agreement may be amended to extend completion of the Roof Restoration Project beyond the Completion Date pursuant to Section VI ("Modifications") of the Agreement. Any amendment to extend completion of the Roof Restoration Project will be subject to the terms stated in Section IV ("Conditions") of this Agreement.

III. INCORPORATED DOCUMENT

This Agreement incorporates, by reference, Attachment A: Construction Documents prepared by Quinn Evans, dated July 18, 2025, and named, "Pump House Reroof Bid Set" and "Pump House Reroof Project Manual"

IV. CONDITIONS

A. During the duration of this Agreement, HRF agrees to:

1. Transfer the HRF Donation to the City for the sole purpose of the Roof Restoration Project within thirty (30) days after (i) execution of this Agreement and (ii) the establishment of the accounting string for the special fund by the City's Department of Finance (the "Special Fund");
2. Assign a primary contact for HRF;
3. Review and comment on construction materials, designs, paint colors, shop drawings, and other submittals identified in the Construction Documents within two (2) weeks after initial technical review by the City, provided that final decision-making authority remains with the City and applicable regulatory bodies;
4. Upon reasonable notice to the City, review records related to expenditures from the Special Fund to confirm compliance with this Agreement;
5. In consultation with HRF and following written approval (which may be an e-mail approval), permit the City to alter the scope of work contained within Attachment A; and
6. Plan with the City to hold a ceremony celebrating completion of the Roof Restoration Project.

B. During the duration of this Agreement, the City agrees to:

1. Establish the Special Fund to be used solely for HRF's Donation to the Roof Restoration Project;
2. Complete the Roof Restoration Project in accordance with Attachment A or in accordance with any alterations to the scope of work contained in Attachment A as agreed upon by the Parties;
3. Provide HRF's assigned primary contact a monthly status report on the Roof Restoration Project, which will include an accounting of all expenditures from the Special Fund, the outcome of any applicable public procurement procedures, and updates on work initiated, under way, or completed;

4. Comply with all laws, statutes, ordinances, rules, regulations, or requirements of federal, state, and local government which relate to or in any manner affect the performance of this Agreement, including local procurement requirements;
5. Ensure that the Roof Restoration Project is performed in accordance with the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation and the National Historic Preservation Act.
6. Assign a Project Manager for the Roof Restoration Project from the Department of Parks, Recreation, and Community Facilities;
7. Obtain all required approvals from the Virginia Department of Historical Resources and National Park Service;
8. Obtain all required permits for the Roof Restoration Project;
9. Contract with a general contractor after, pursuant to the City's applicable public procurement requirements, to work on the Roof Restoration Project in accordance with the scope of work in Attachment A or in accordance with any alterations to the scope of work contained in Attachment A as agreed upon by the Parties;
10. Monitor the general contractor's work to determine if the Roof Restoration Project is being done in accordance with the scope of work in Attachment A or in accordance with any alterations to the scope of work contained in Attachment A as agreed upon by the Parties;
11. Consult with HRF regarding changes to the general contractor or key City personnel assigned to the Roof Restoration Project;
12. Promptly inform HRF in writing of any significant problems, delays, or adverse conditions that will materially impair the ability of the City to complete the Roof Restoration Project by the Completion Date;
13. Consult with HRF with respect to any unused portion of the HRF Donation, if any, that remains after completion of the Roof Restoration Project. If any remaining portion of the HRF Donation remains following completion of the Roof Restoration Project, the Parties will discuss in good faith the utilization of such remaining HRF Donation for the renovation of the Pump House;
14. Promptly inform HRF in writing if the City determines that the Roof Restoration Project cannot proceed due to funding shortfalls, contractor issues, regulatory barriers, or other material impediments and consult with HRF regarding next steps, including suspension, modification, or termination of this Agreement; and
15. Plan with HRF to hold a ceremony celebrating completion of the Roof Restoration Project.

V. NON-LIABILITY

HRF provides the HRF Donation under this Agreement solely as a charitable contribution in support of the Roof Restoration Project. HRF shall not be

responsible for, and shall have no liability for, the design, construction, means, methods, sequencing, safety, performance, or completion of the Roof Restoration Project, or for the acts or omissions of the City, its officers, employees, contractors, subcontractors, consultants, or agents.

Nothing in this Agreement shall be construed to create any duty, responsibility, or liability on the part of HRF for damages, losses, claims, or expenses of any kind arising out of or related to the Roof Restoration Project.

VI. MODIFICATIONS

Any modifications to this Agreement shall be in writing and are not effective until signed by the duly authorized representatives of the Parties.

VII. ENTIRETY OF THE AGREEMENT

This Agreement constitutes the entire agreement between the Parties and supersedes all prior negotiations, representations, agreements, and assignments, whether written or oral, with respect to the subject matter of this Agreement.

VIII. TERMINATION AND AWARD CLOSEOUT

- A. Either party may terminate this Agreement for any reason prior to the City entering into a contract with a general contractor for the Roof Restoration Project. Once the City has entered into a contract with a general contractor, termination may occur only if the Roof Restoration Project is unable to proceed due to funding shortfalls, contractor issues, regulatory barriers, or other material impediments. Any party requesting termination pursuant to this subsection must provide thirty (30) days' written notice to the other party in accordance with Section XV ("Notices") of this Agreement.
- B. If this Agreement is terminated pursuant to subsection (A) above, the City agrees to return any unexpended amounts of the HRF Donation to HRF within forty-five (45) days of the termination and provide HRF a final accounting of all expenditures from the Special Fund.
- C. The HRF Donation will be closed out on the expiration or termination of this Agreement.

IX. NO THIRD-PARTY BENEFICIARIES

Notwithstanding any other provision of this Agreement, HRF and the City hereby agree (i) no individual or entity shall be considered, deemed, or otherwise recognized to be a third-party beneficiary of this Agreement, (ii) the provisions of the Agreement are not intended to be for the benefit of any individual or entity other than HRF or the City, (iii) no individual or entity shall obtain any right to make any claim against HRF or the City under the provisions of the Agreement, and (iv) no provision of this Agreement shall be construed or interpreted to confer third-party beneficiary status on any individual or entity, including, but not limited to, individuals, contractors, subcontractors, vendors, sub-vendors, assignees, licensors, and sub-licensors, regardless of whether such individual or entity is named in this Agreement.

X. PROHIBITION ON ASSIGNMENT

Neither party may assign its rights or obligations under this Agreement without the written consent of the other party.

XI. SEVERABILITY

If any provision of this Agreement is held to be invalid or unenforceable for any reason, this Agreement shall remain in full force and effect in accordance with its terms, disregarding such unenforceable or invalid provision.

XII. CAPTIONS.

The caption headings contained herein are used solely for convenience and shall not be deemed to limit or define the provisions of this Agreement.

XIII. GOVERNING LAW

All issues and questions concerning the construction, enforcement, interpretation, and validity of this Agreement, or the rights and obligations of HRF and the City in connection with this Agreement, shall be governed by, and construed and interpreted in accordance with, the laws of the Commonwealth of Virginia, without giving effect to any choice of laws or conflict of laws rules or provisions, that would cause the application of the laws of any jurisdiction other than those of the Commonwealth of Virginia.

XIV. FORUM AND VENUE

Any and all disputes, claims, and causes of action arising out of or in connection with this Agreement, or any performances made hereunder, shall be brought, and any judicial proceedings shall take place, only in the Circuit Court for the City of Richmond, Virginia.

XV. NOTICES

Any notice to be given under this Agreement shall be in writing and delivered by hand, by electronic mail, or by regular mail. Notices shall be sent to the following designated representatives, or such other persons as designated in writing:

HISTORIC RICHMOND FOUNDATION

c/o Cyane Crump
Executive Director of HRF
Historic Richmond Foundation
4 East Main Street, Suite 1C
Richmond, Virginia 23219
ccrump@historicrichmond.com

CITY OF RICHMOND

c/o Christopher Frelke
Director, Parks, Recreation and Community Facilities
City of Richmond
2401 W. Leigh Street
Richmond, VA 23220
Christopher.Frelke@richmondgov.com

XVI. ELECTRONIC SIGNATURES

By signing this Agreement, the Parties acknowledge and certify HRF's agreement to the acceptance and use of electronic signatures for the purposes of this Agreement and any amendments or modifications thereto. HRF agrees that electronic signatures shall be treated the same as handwritten signatures for the purposes of validity, enforceability, and admissibility.

SIGNATURES ON THE FOLLOWING PAGE

IN WITNESS WHEREOF, the Parties have caused this Agreement to be executed by their undersigned officials as duly authorized.

HISTORIC RICHMOND FOUNDATION

By:

Signed by:



Date: 6/4/2026

Name: Cyane B. Crump
Title: Executive Director

CITY OF RICHMOND

By:

Date: _____

Odie Donald
Chief Administrative Officer
City of Richmond

APPROVED AS TO TERMS:

DocuSigned by:



6/4/2026

Christopher Frelke
Director Parks, Recreation and Community
Facilities, City of Richmond

APPROVED AS TO FORM:



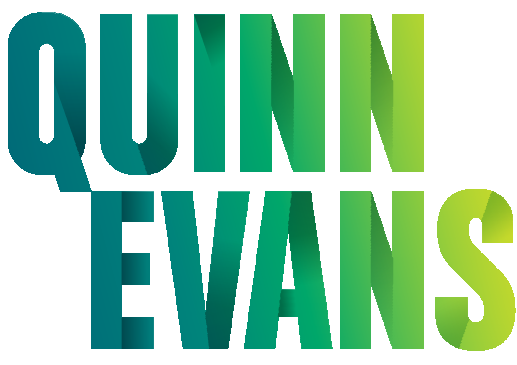
6/4/2026

Shannan M. Fitzgerald
Assistant City Attorney, City of Richmond

PUMPHOUSE REROOF DOCUMENTATION

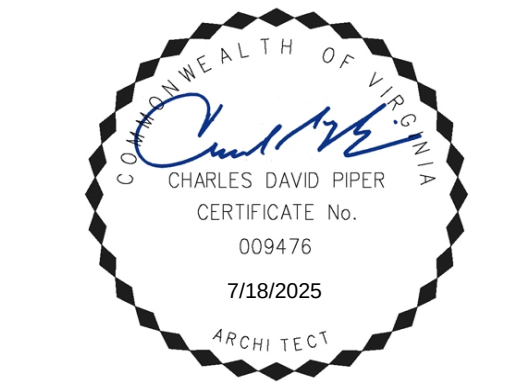
City of Richmond
1708 PUMP HOUSE DRIVE, RICHMOND VA 23221

Attachment A



1840 WEST BROAD STREET
SUITE 400
RICHMOND, VA 23220
v 804.788.4774

QUINNEVANS.COM



DRAWING INDEX

Sheet List	
A	Sheet Name
G001	COVER SHEET
A009	ROOF PLAN
A010	SECTION DETAILS
A101	PLAN DETAILS - ROOF
S0.01	GENERAL STRUCTURAL NOTES
S1.01	ROOF FRAMING PLAN
S2.01	ROOF FRAMING PLAN
S2.02	ROOF FRAMING PLAN

PUMPHOUSE REROOF DOCUMENTATION

City of Richmond

1708 PUMP HOUSE DRIVE, RICHMOND
VA 23221

PROJECT TEAM

QUINN EVANS
Architects

1840 West Broad Street
Suite 400
Richmond, Virginia 23220
v 804.788.4774

BALZER & ASSOCIATES
Structural

15871 City View Drive
Suite 200
Midlothian, VA 23113
o. 804.794.0571

VICINITY MAPS



KEY PLAN:

No.	Date	Description
PROJECT MANAGER:		
Checker		Author

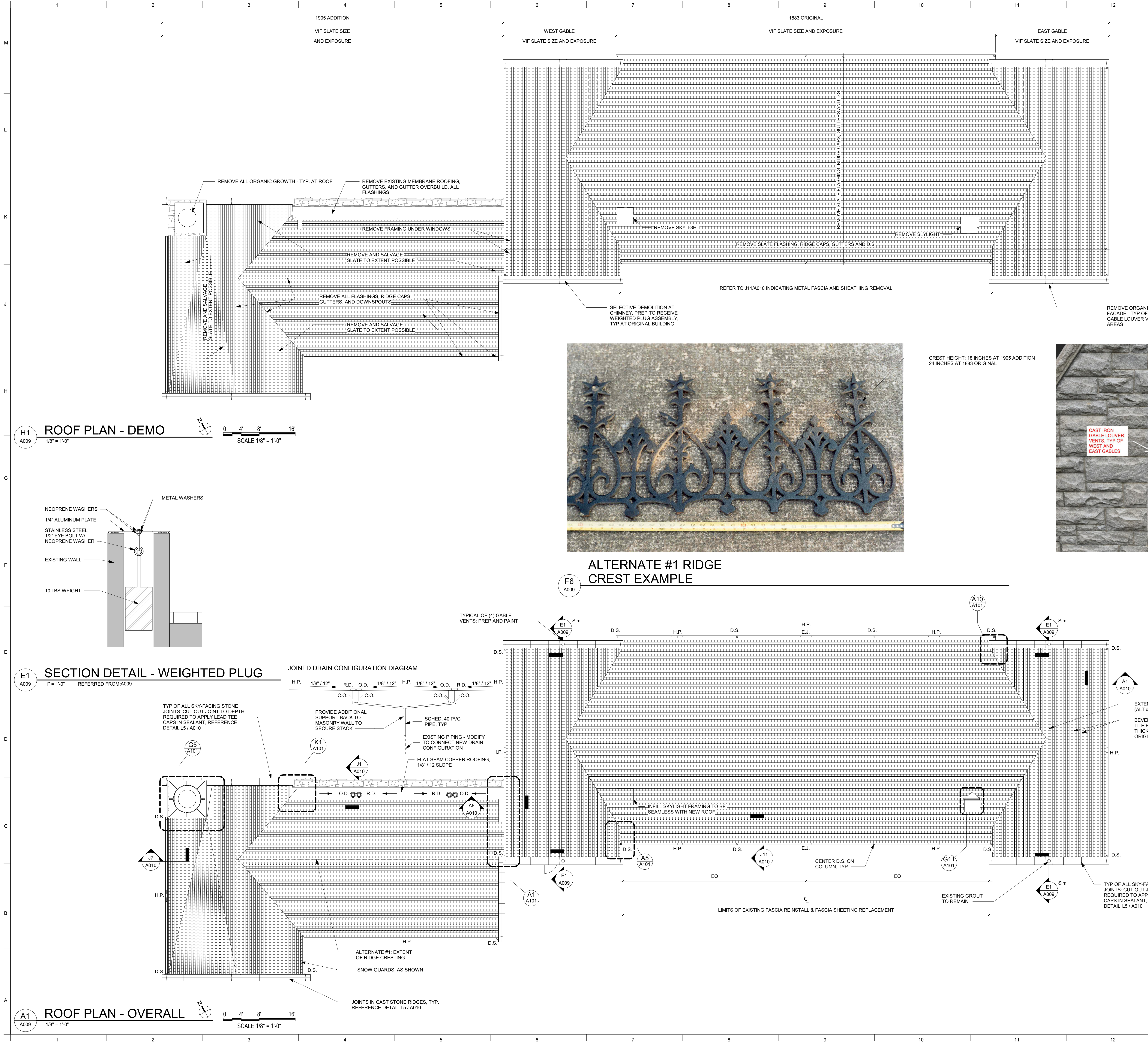
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BIDDING SET
7/18/2025

COVER SHEET

G001

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NOTES

1. SLOPE ALL GUTTERS 1/8" / 12"
2. PROVIDE COPPER GUTTER SCREEN AT ALL GUTTERS
3. PROVIDE DOWNSPOUT STRAINERS AT ALL DOWNSPOUTS

LEGEND

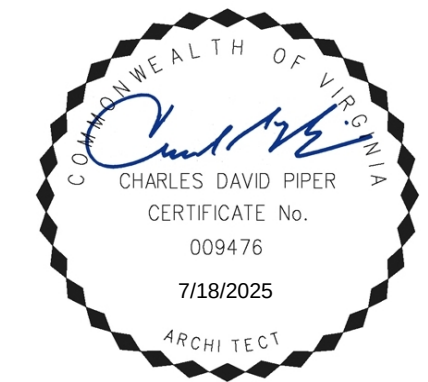
----- RIDGE CREST

**QUINN
EVANS**

1840 WEST BROAD STREET
SUITE 400
RICHMOND, VA 23220

v 804.788.4774

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PUMPHOUSE REROOF DOCUMENTATION

City of Richmond

1708 PUMP HOUSE DRIVE, RICHMOND
VA 23221

No.	Date	Description
PROJECT MANAGER:		
Checker		Author

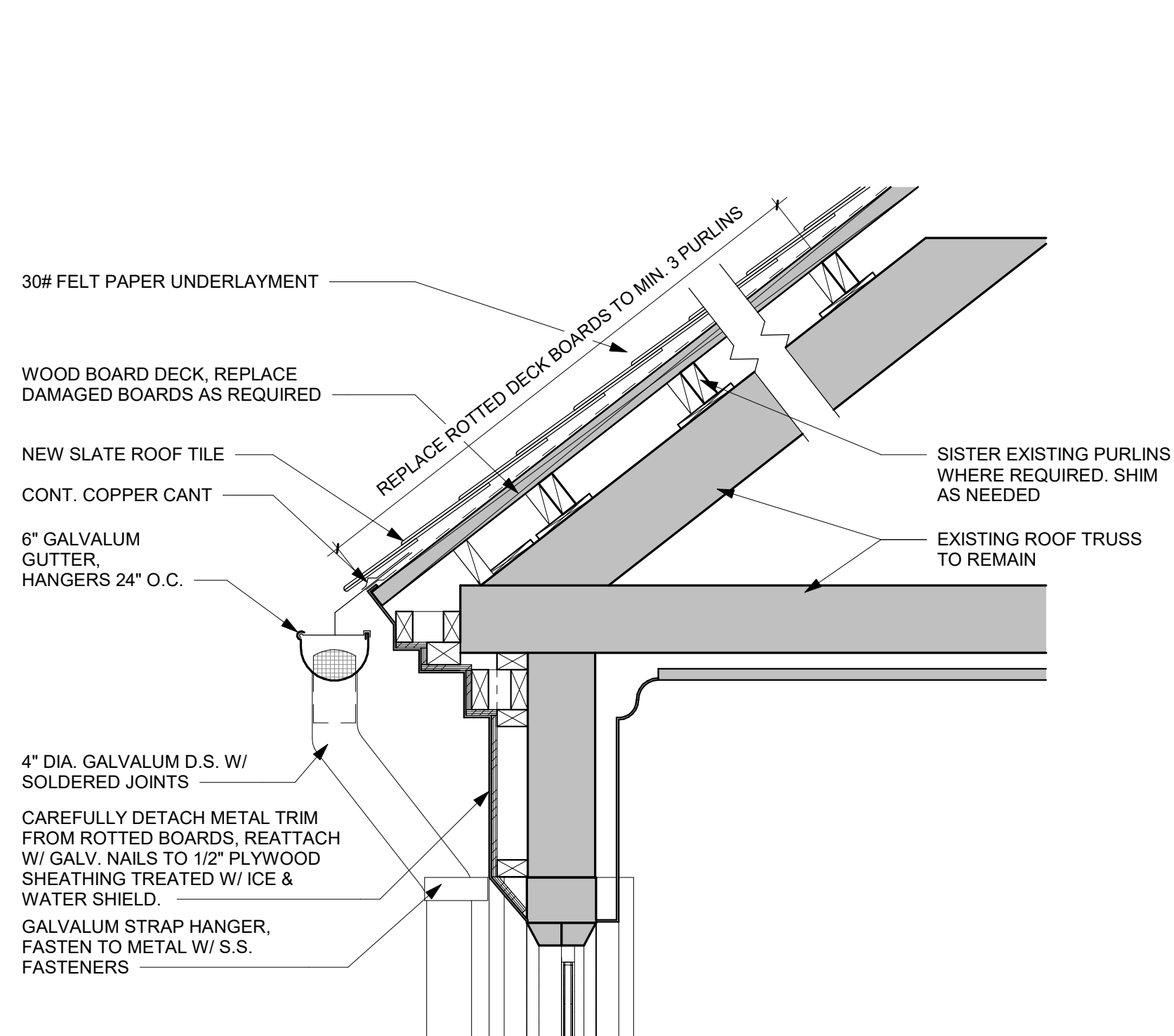
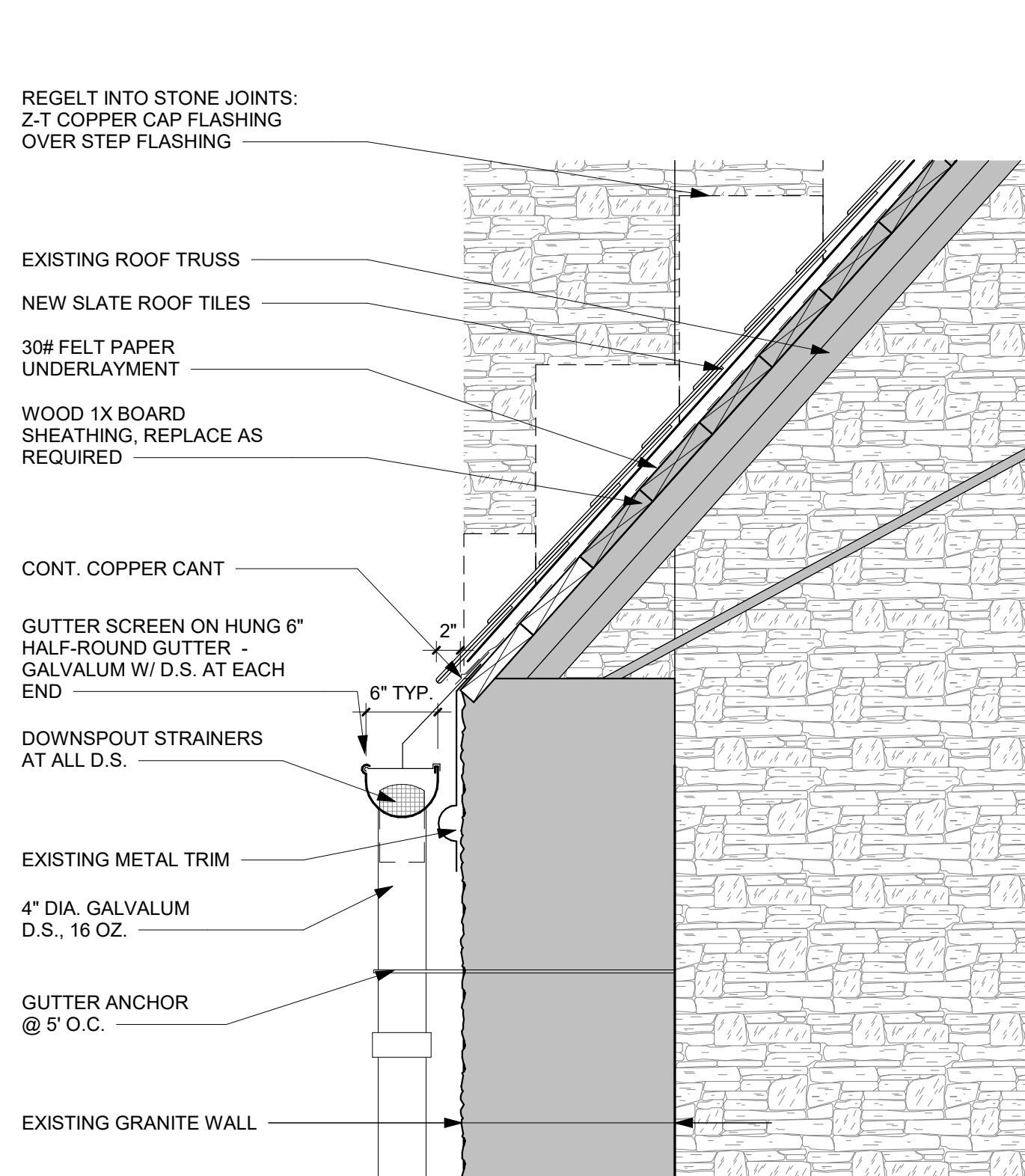
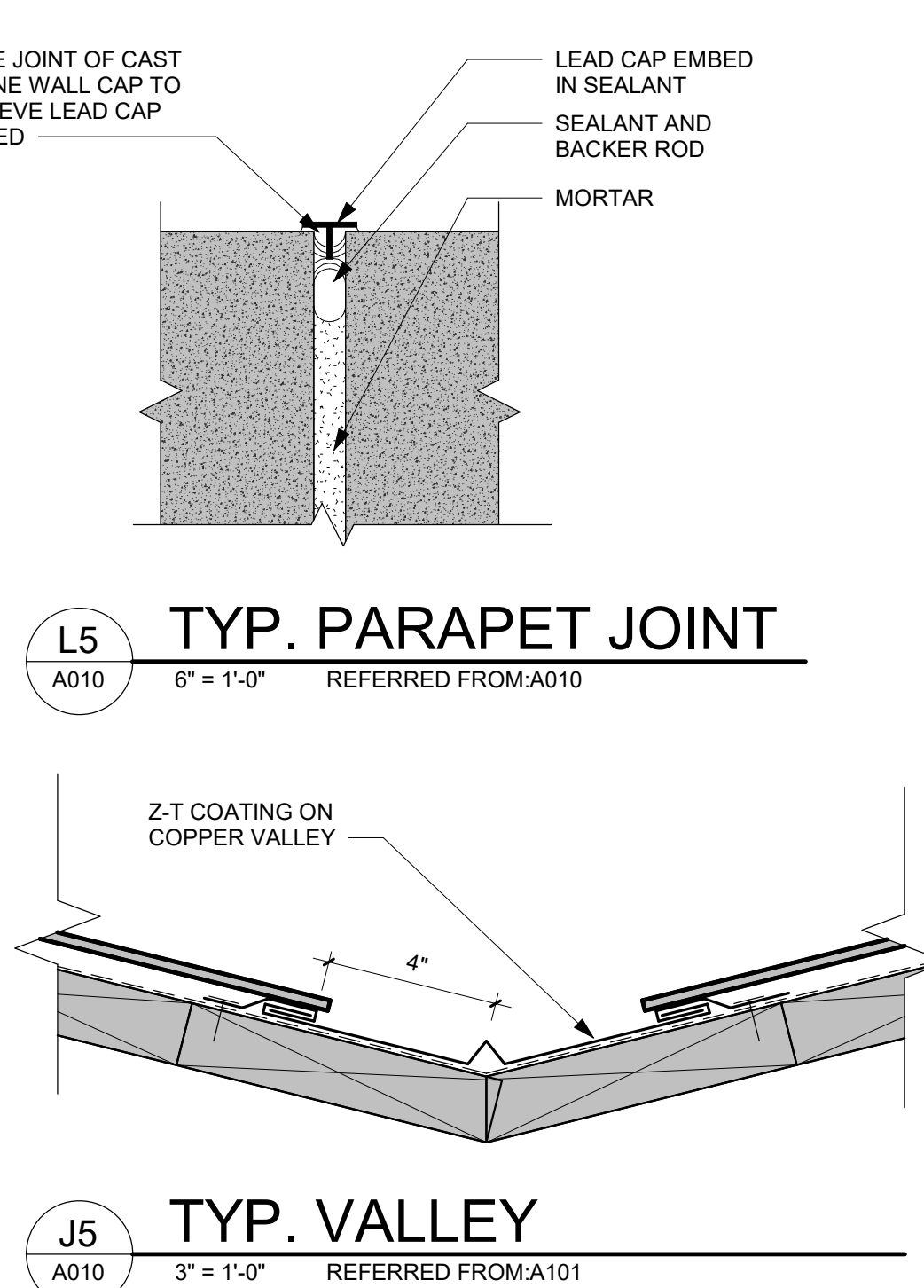
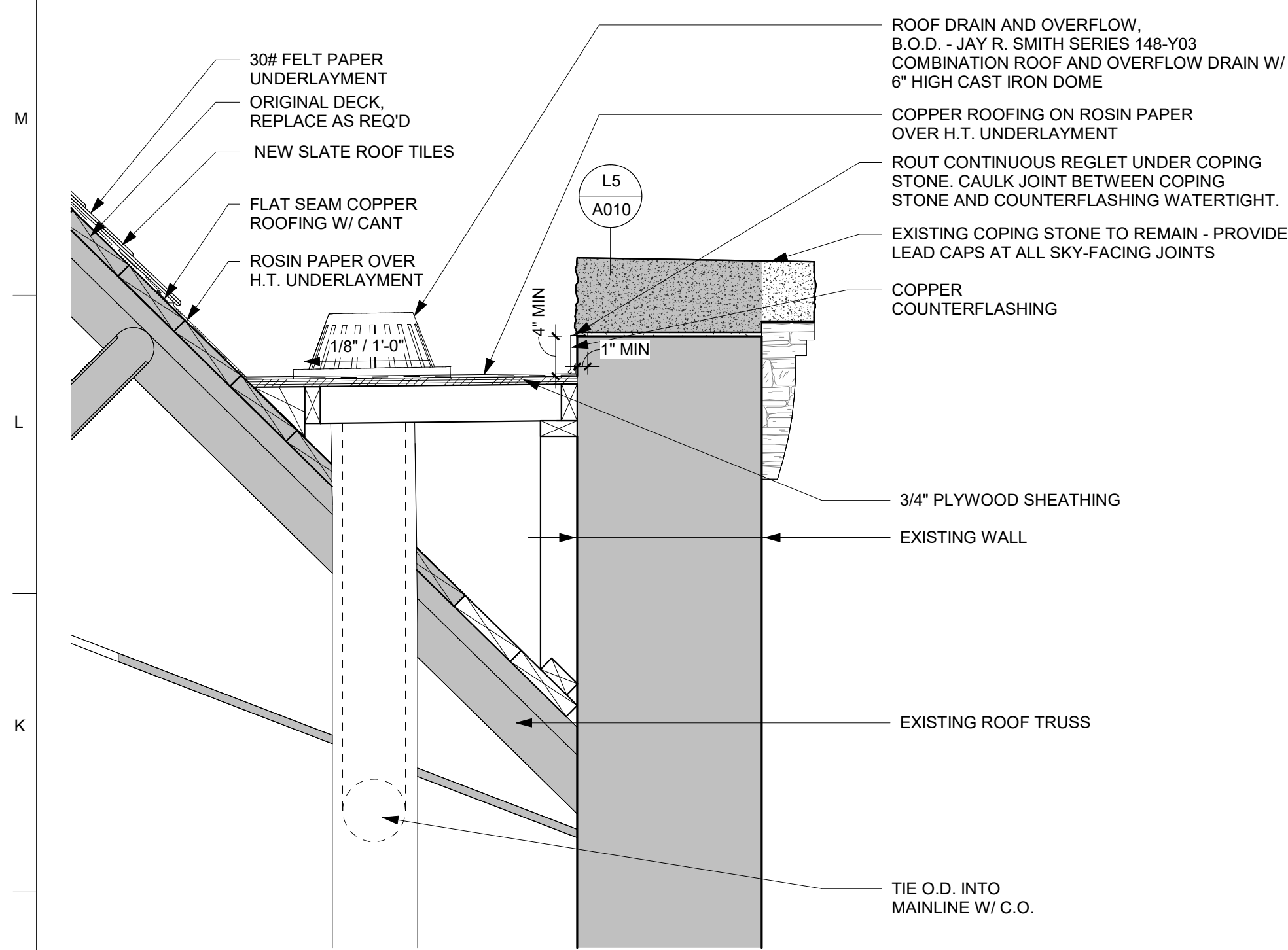
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7/18/2025

ROOF PLAN

A009

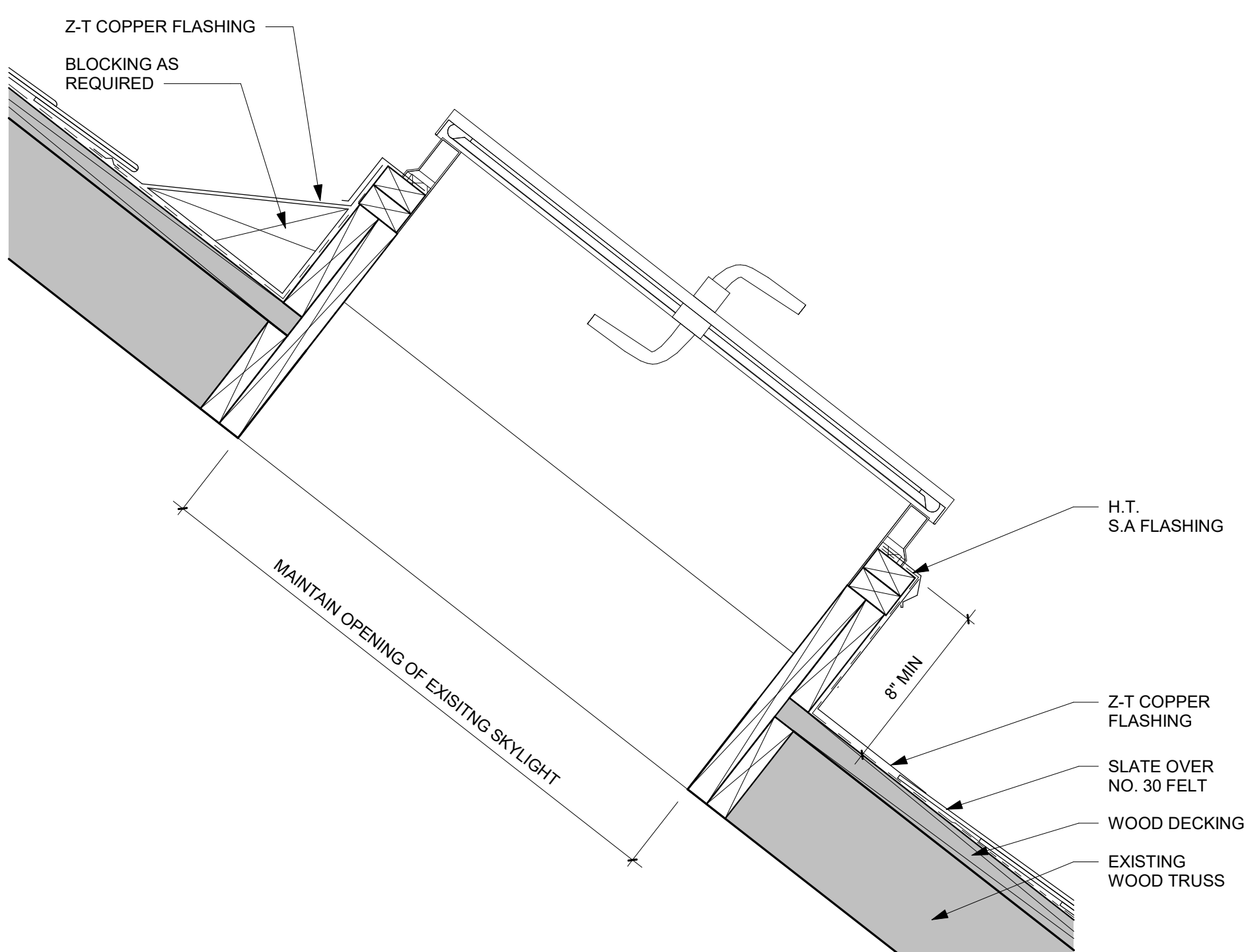
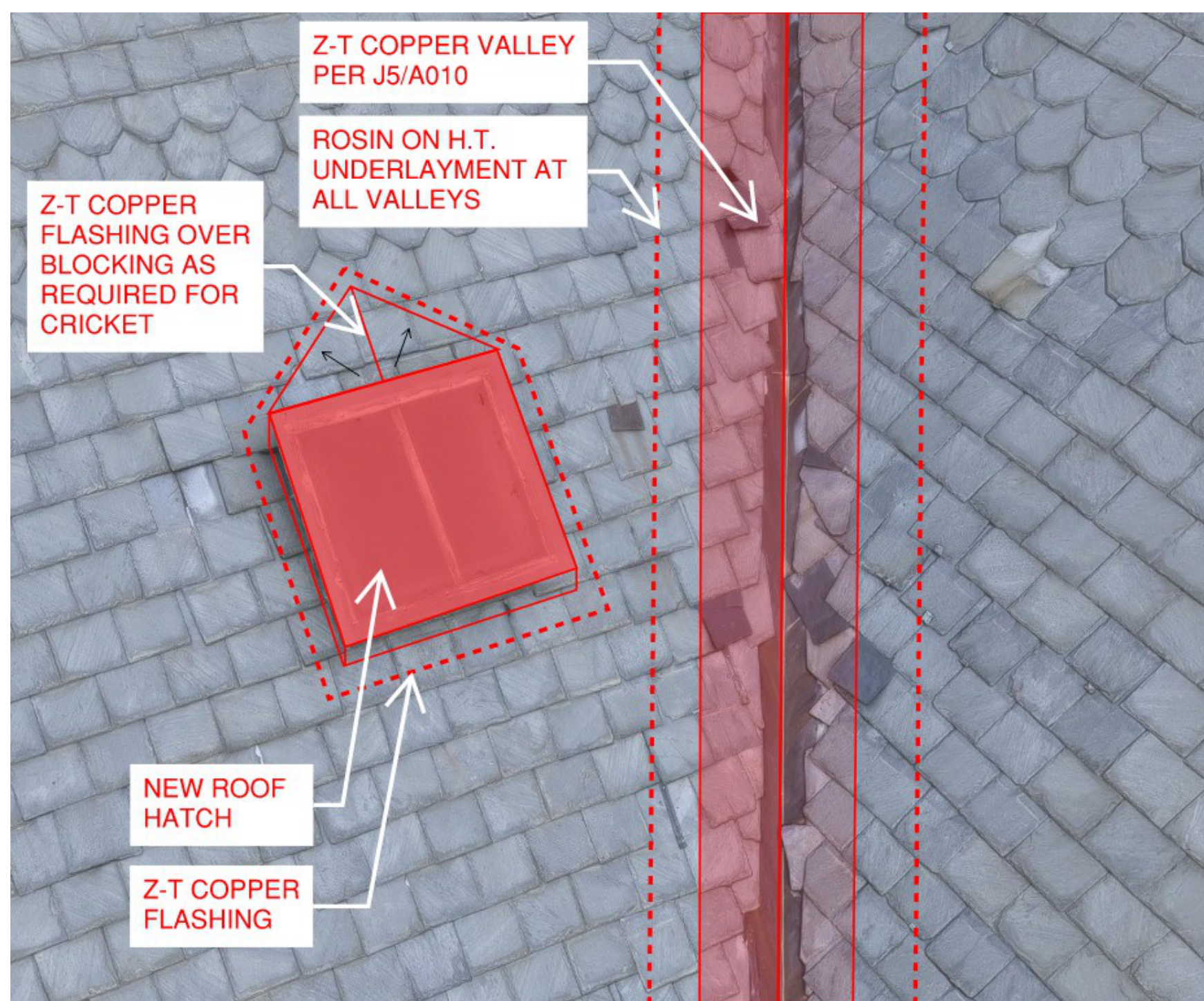
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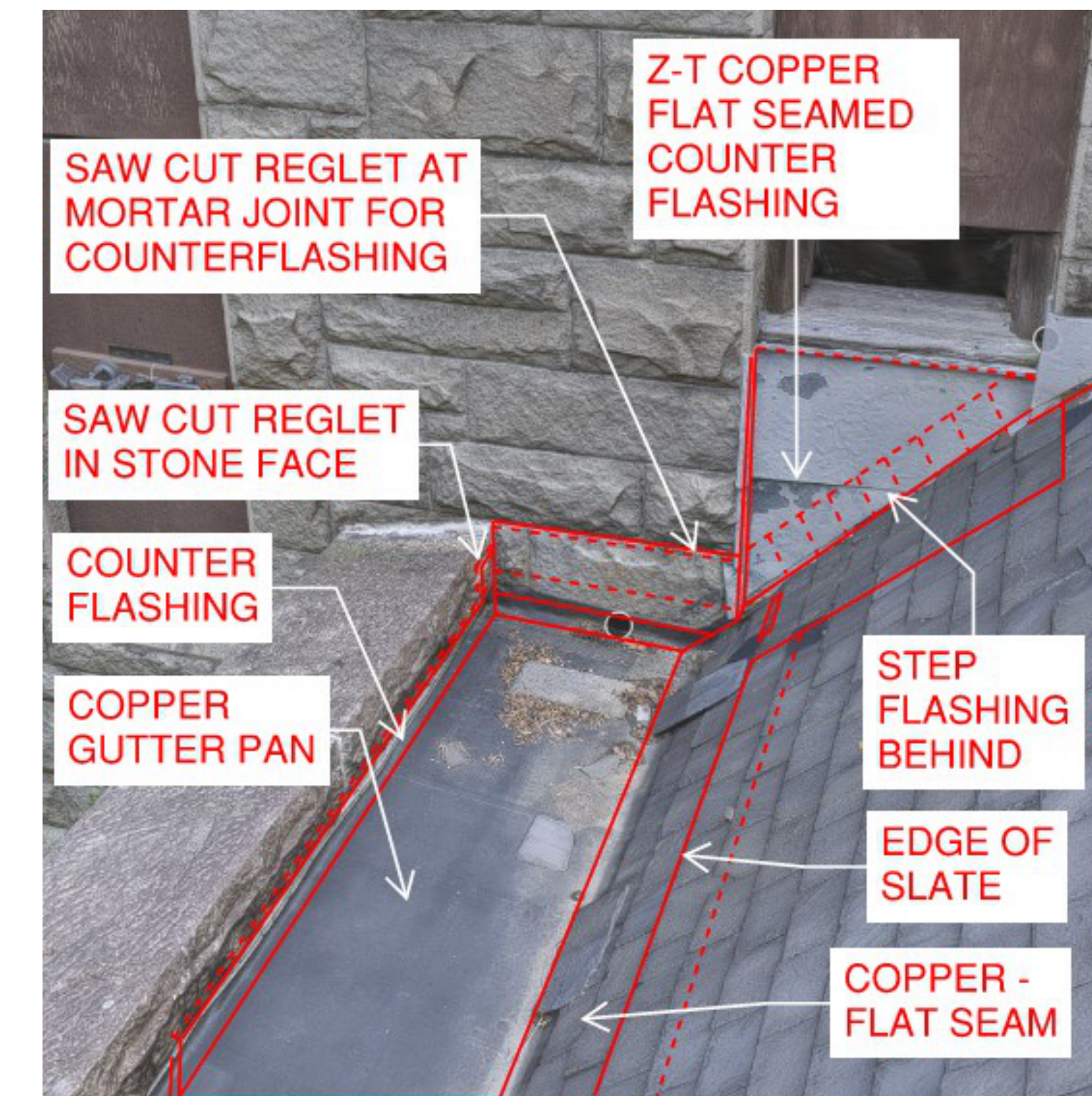
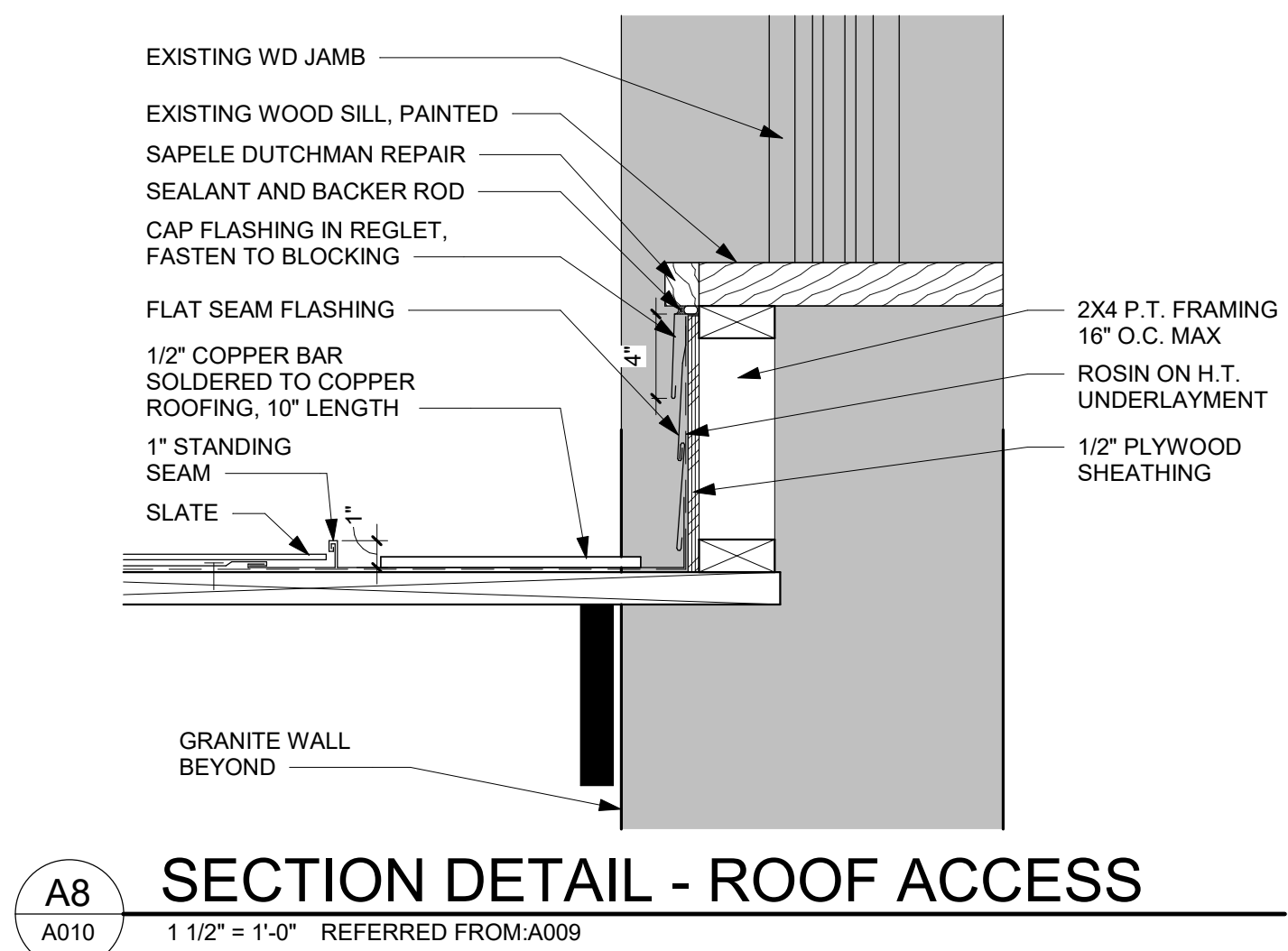
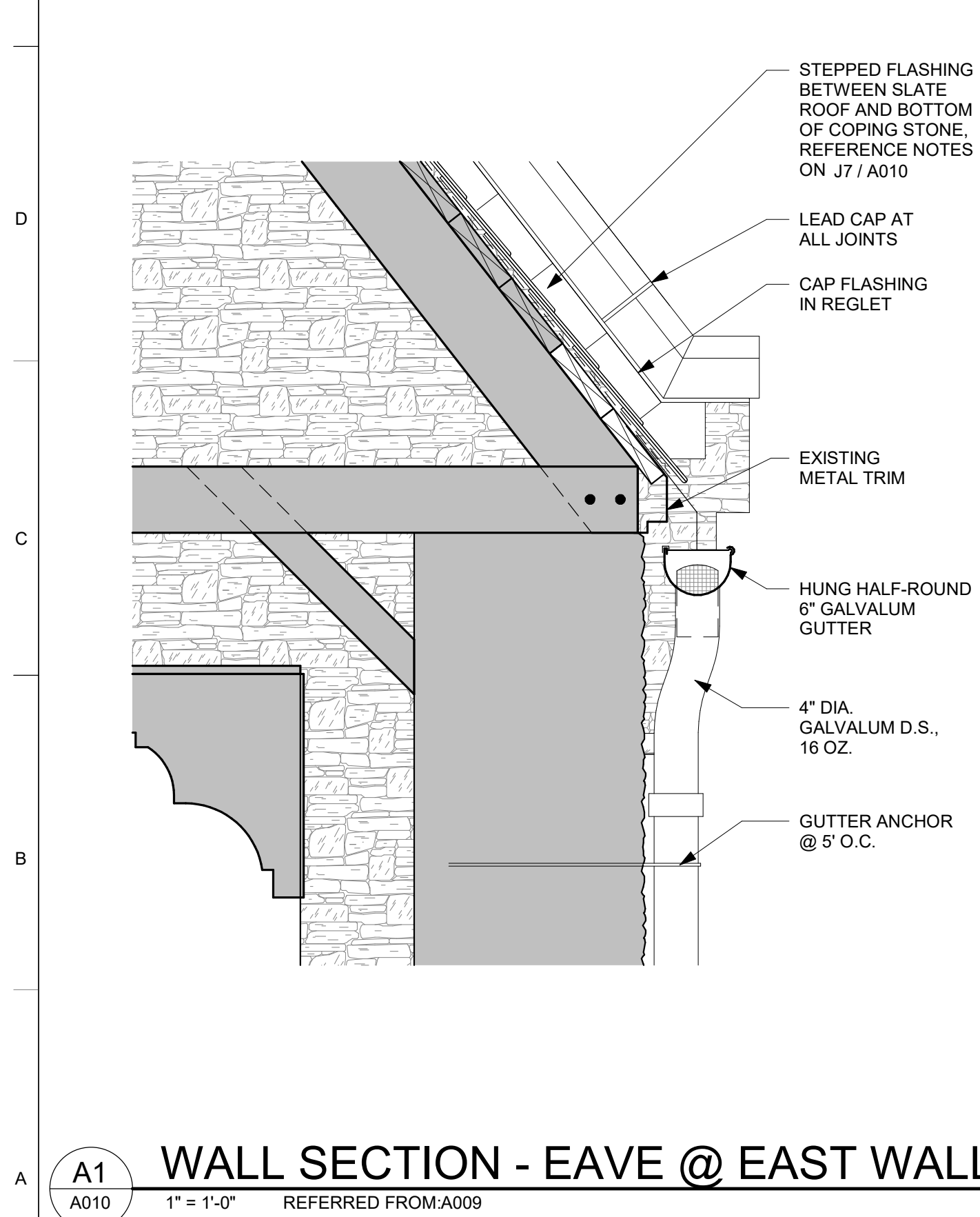
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J7 WALL SECTION - WEST ADDITION EAVE
A010 1" = 1'-0" REFERRED FROM:A006

J11 WALL SECTION - EAVE @ SOUTH PROMENADE
A010 1" = 1'-0" REFERRED FROM:A009



E7 SECTION DETAIL - ROOF HATCH
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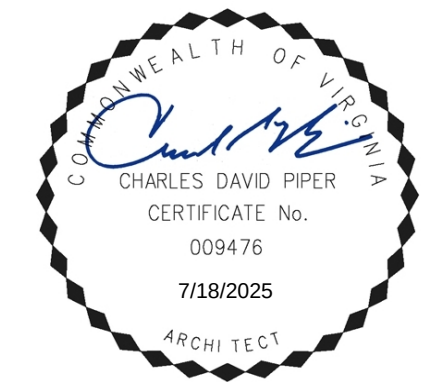
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SUITE 400
RICHMOND, VA 23220

v 804.788.4774

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PUMPHOUSE REROOF DOCUMENTATION

City of Richmond

1708 PUMP HOUSE DRIVE, RICHMOND
VA 23221

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DRAWN BY:	AUTHOR	

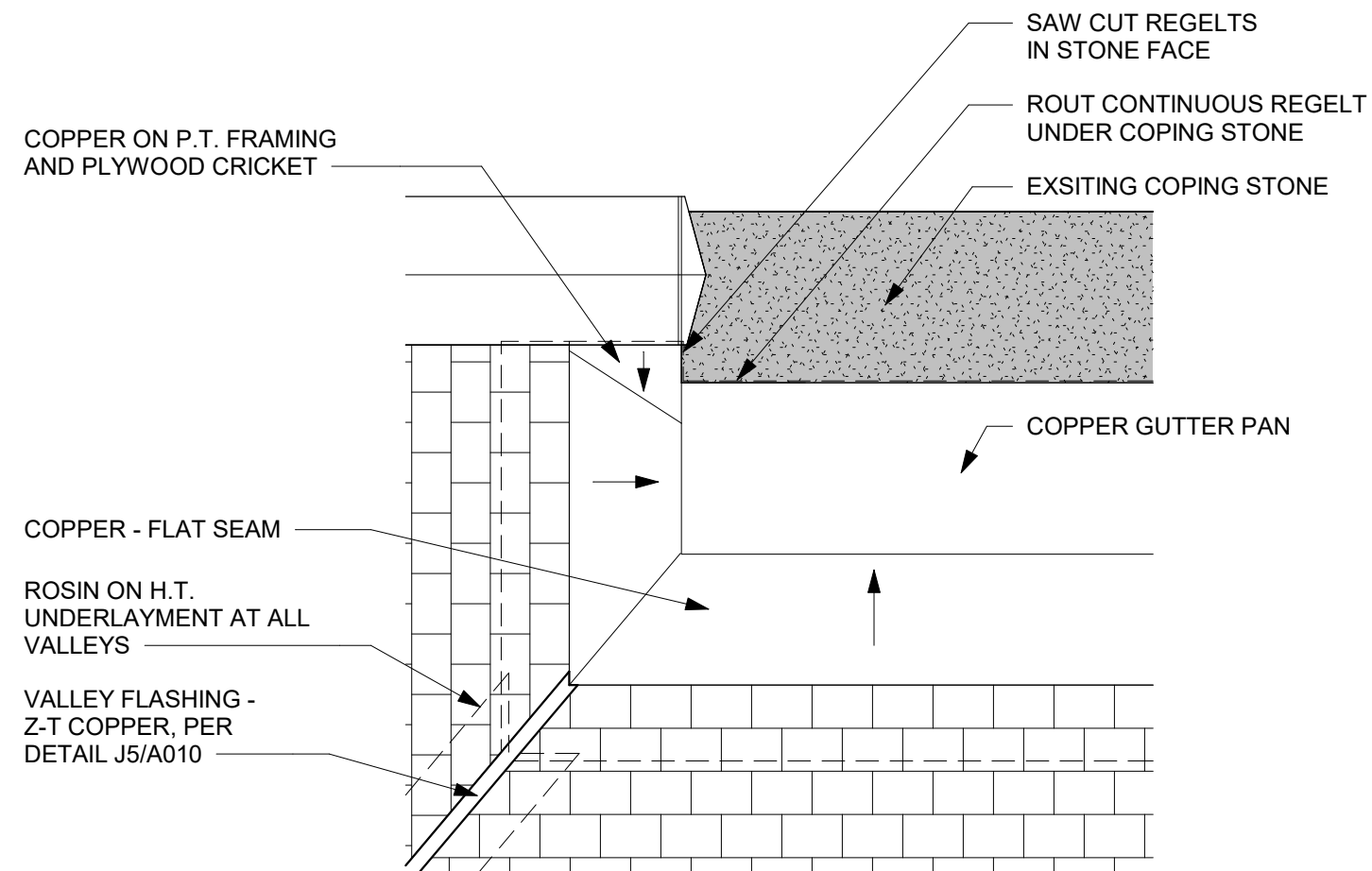
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7/18/2025

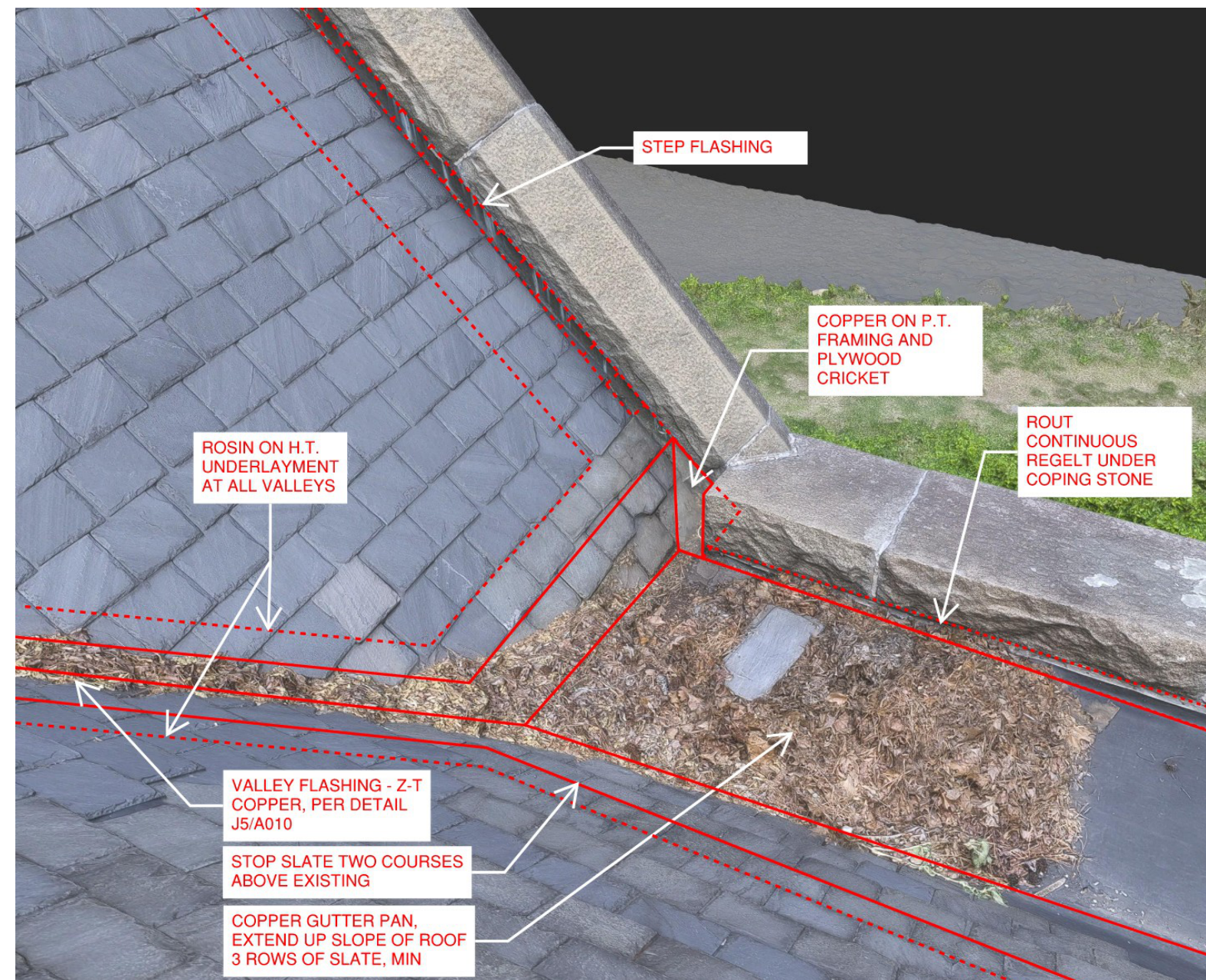
SECTION DETAILS

A010

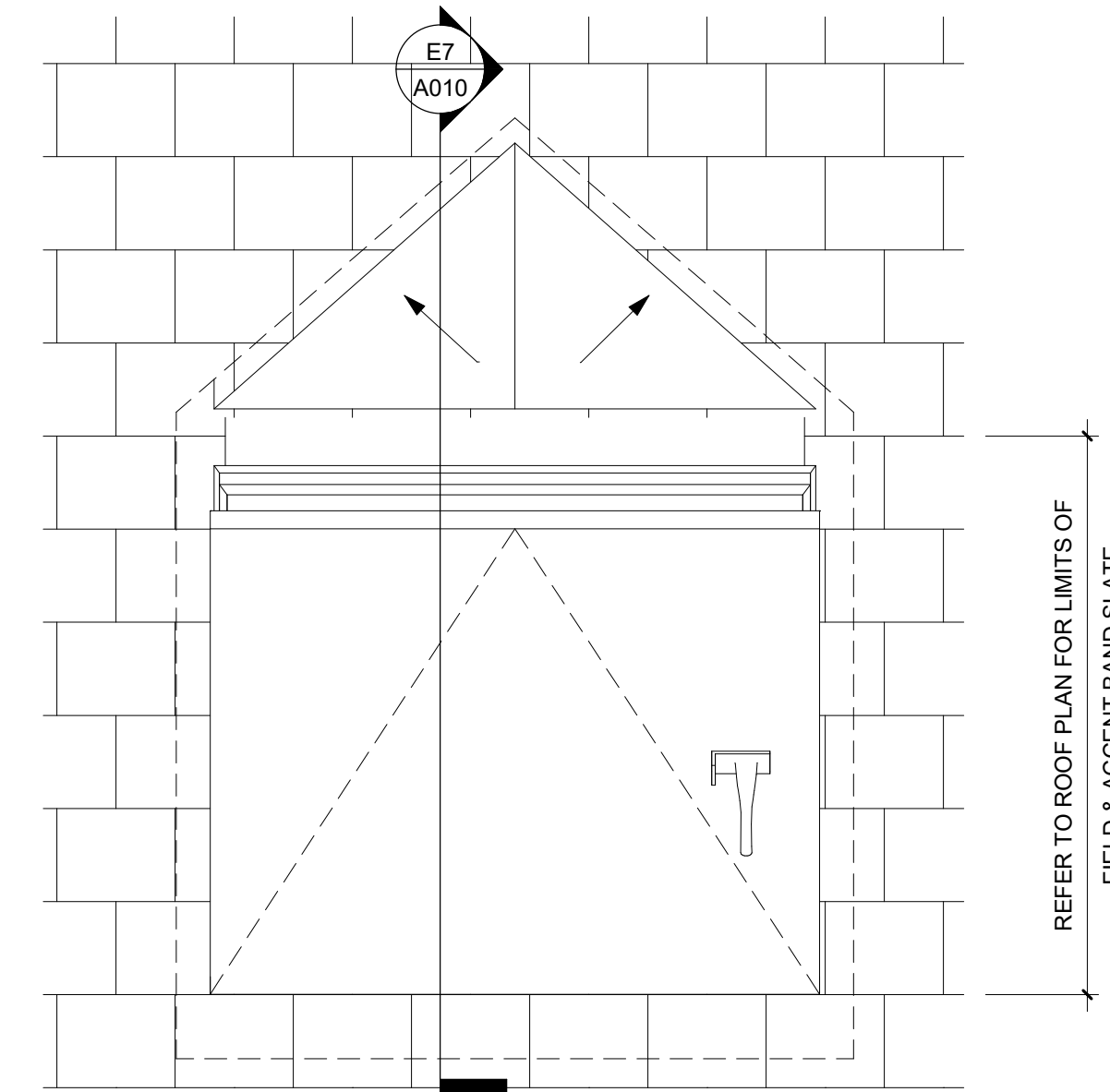
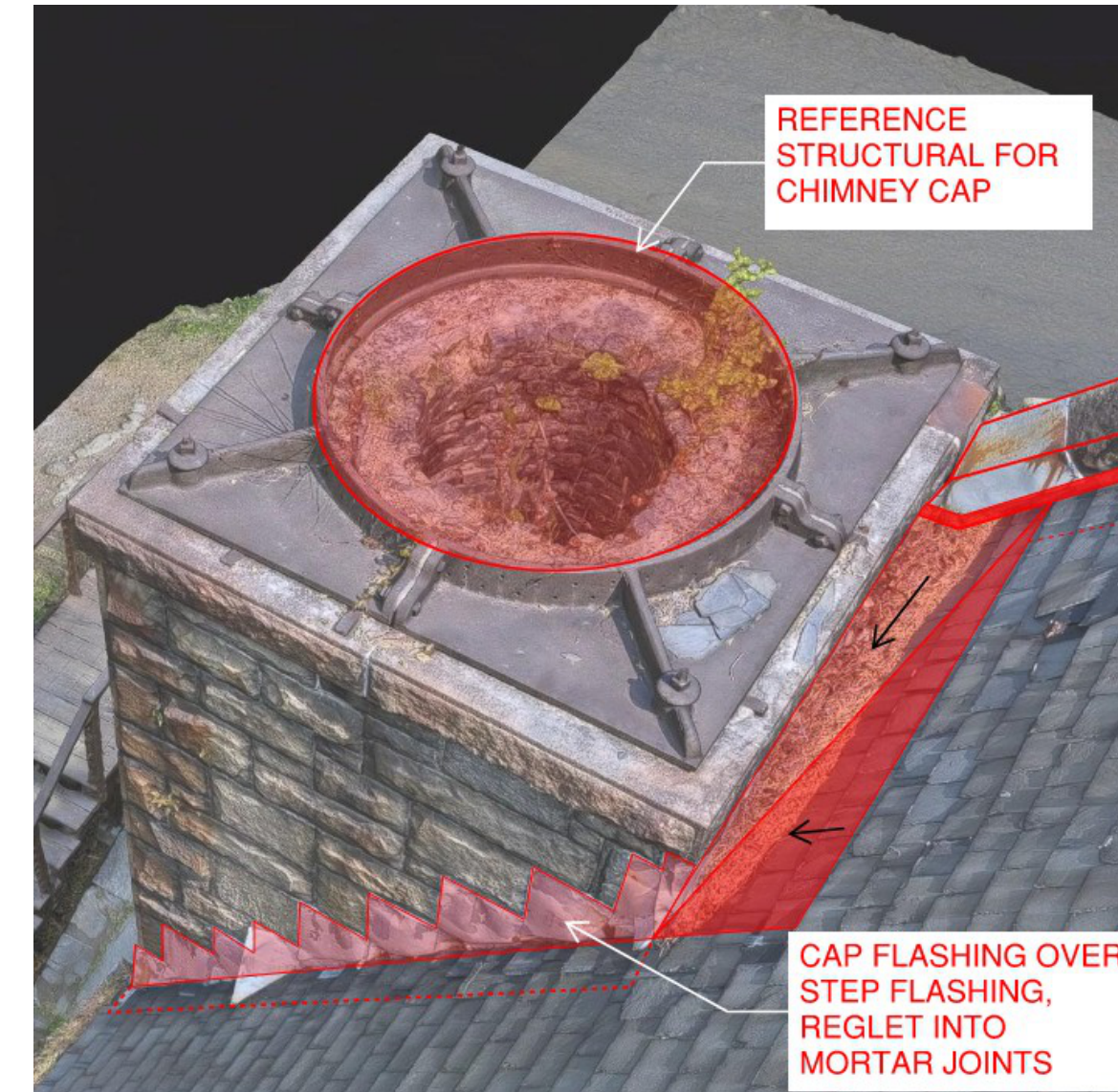
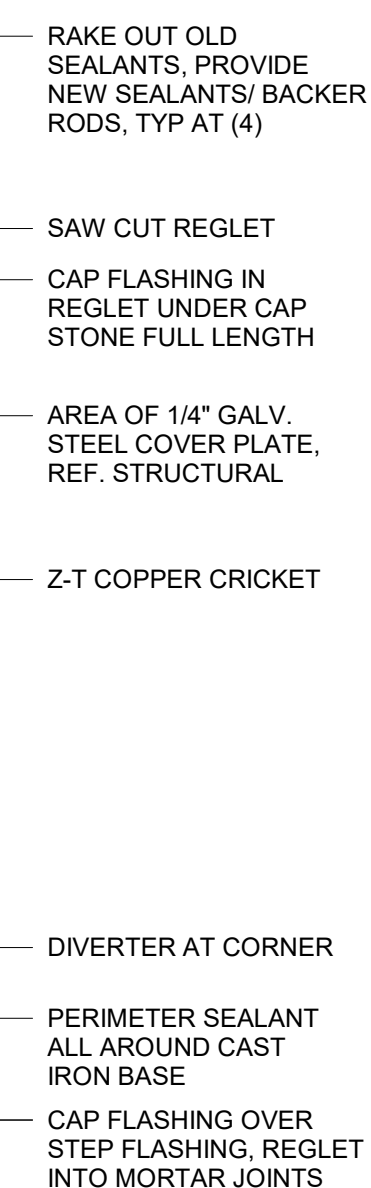
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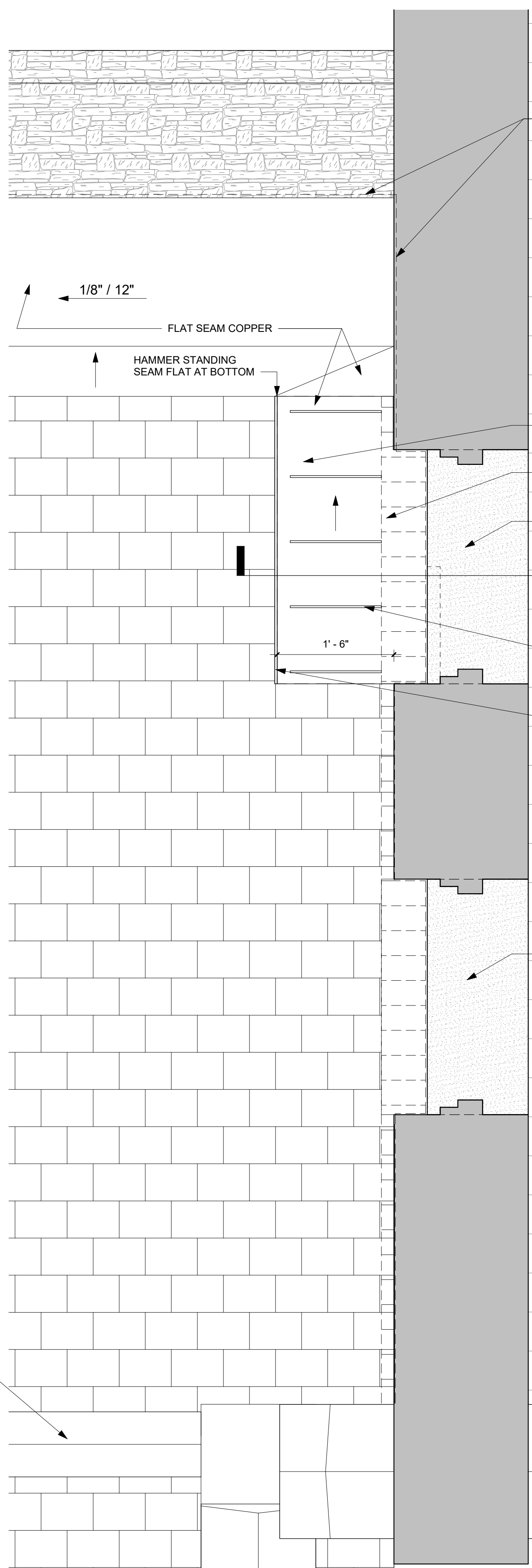
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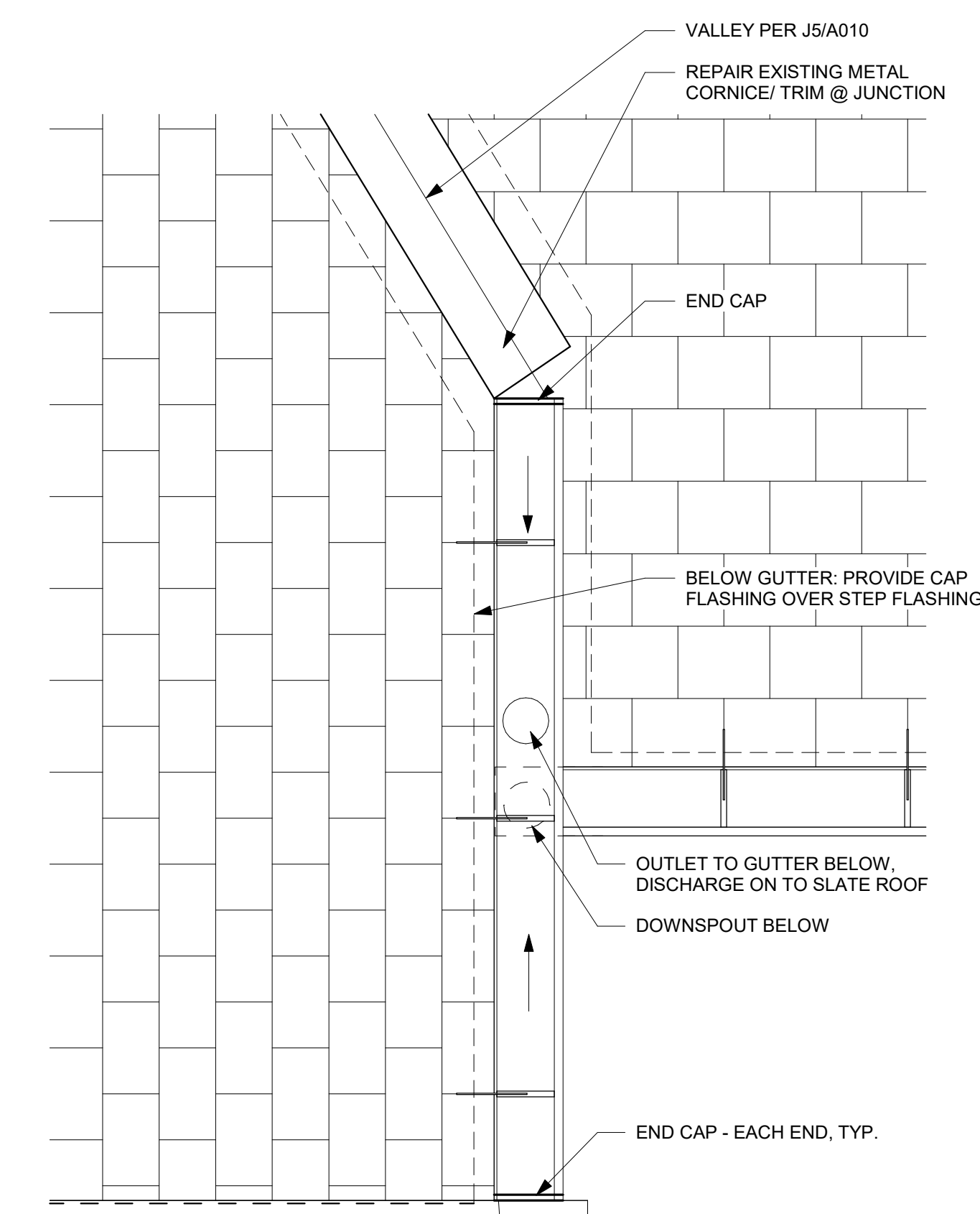
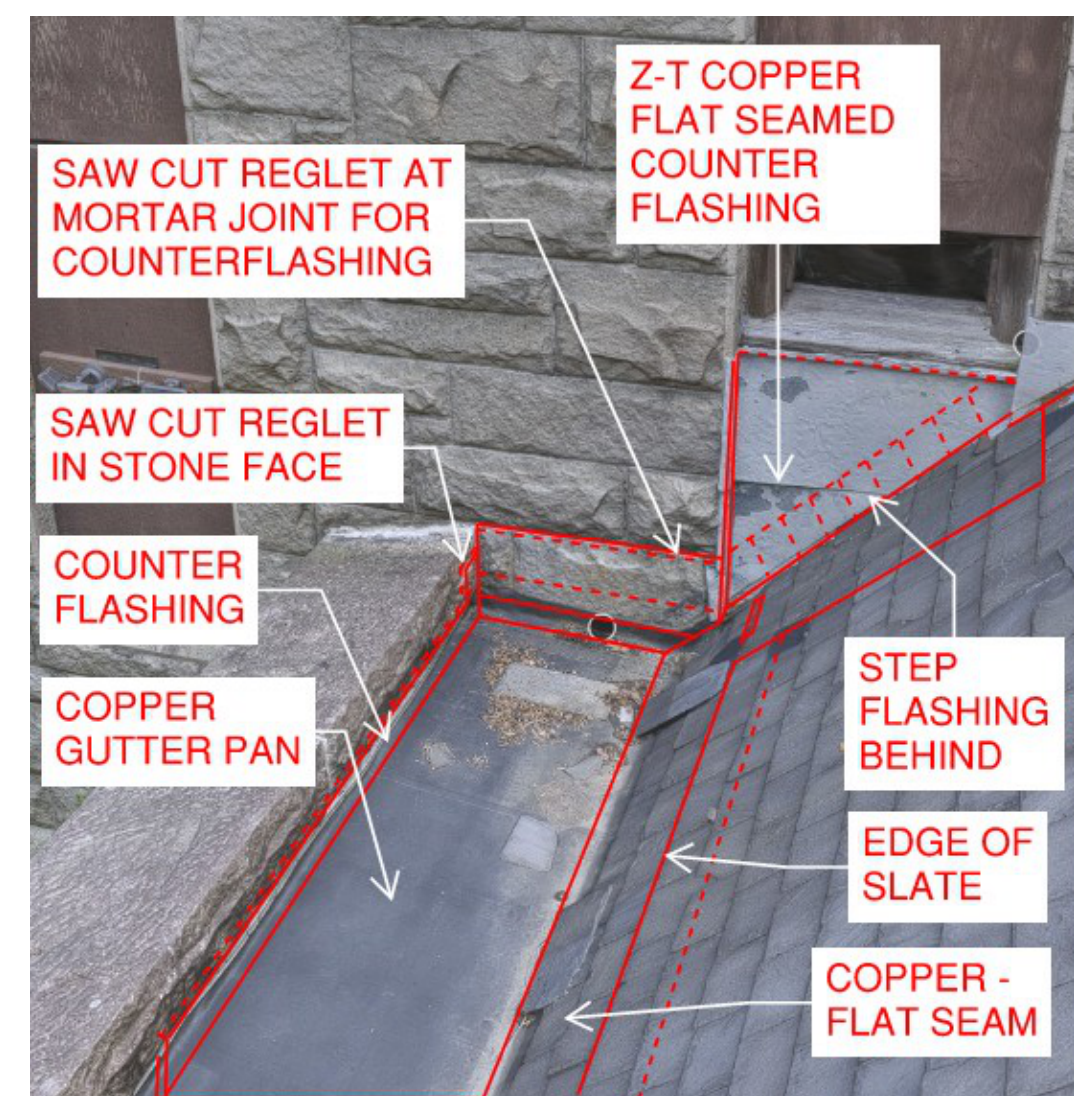
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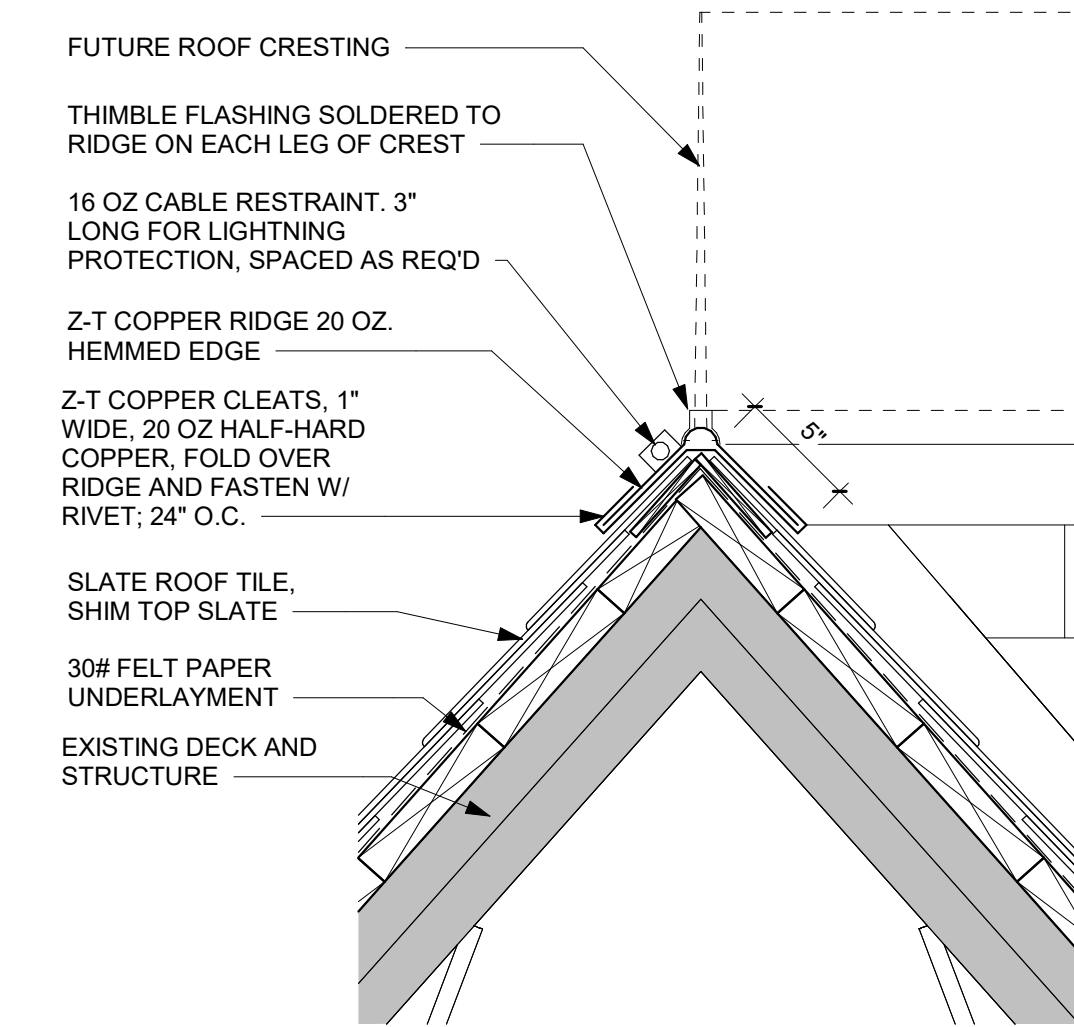
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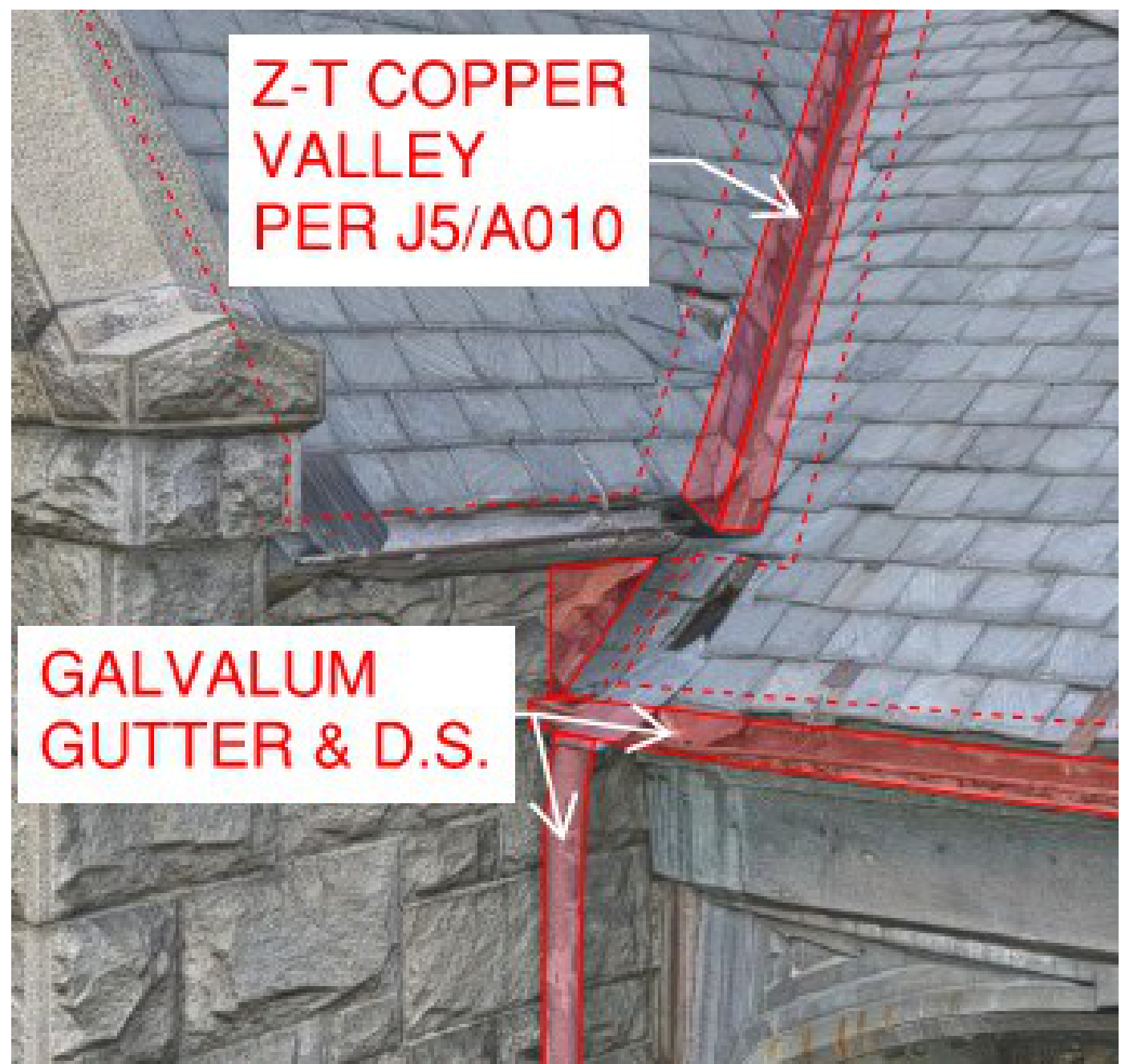
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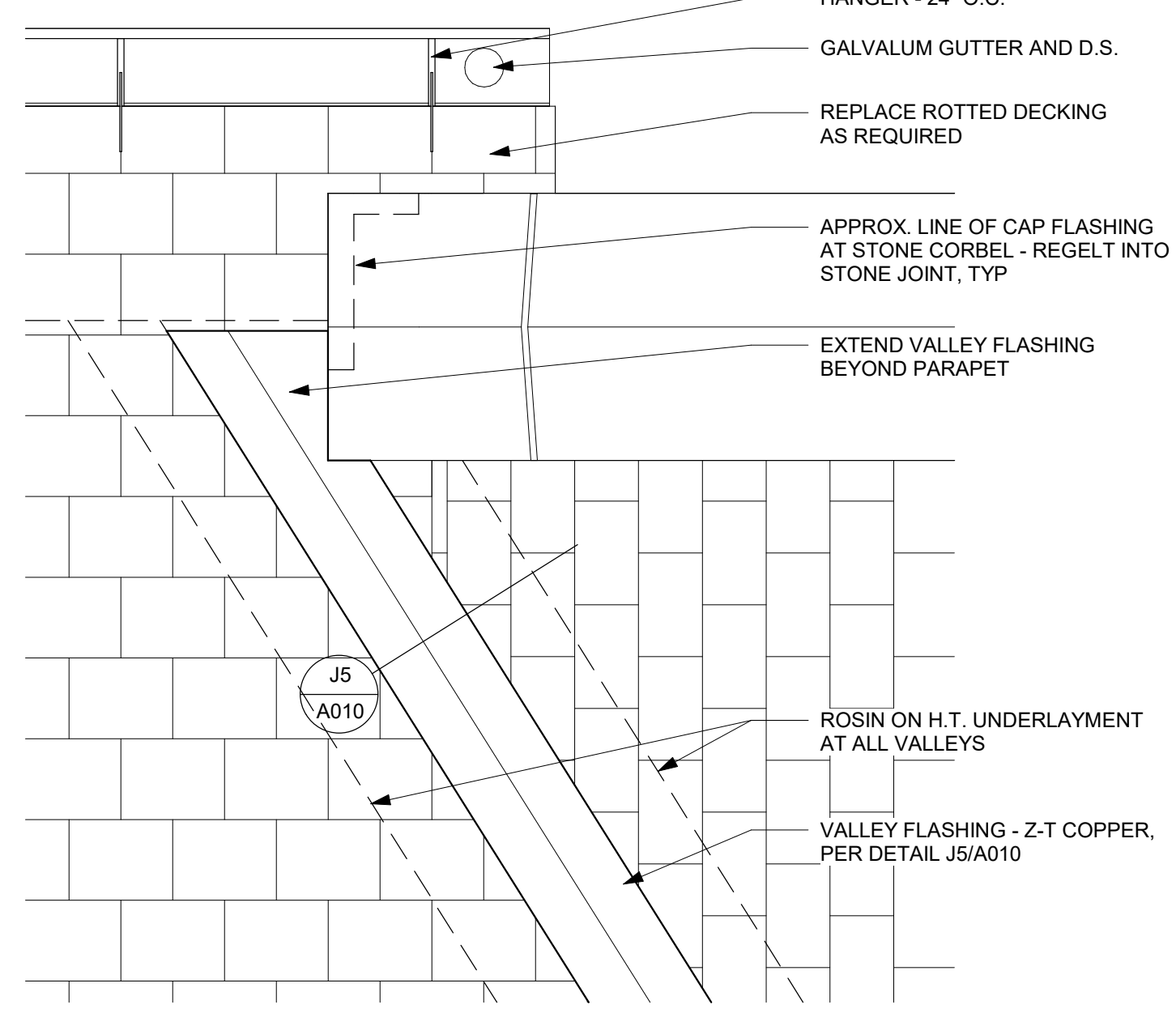
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PLAN DETAIL - ROOF VALLEY @ SOUTH PROMENADE



E8
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SECTION DETAIL - METAL RIDGE CAP



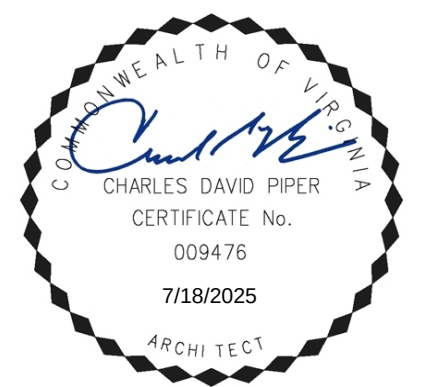
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A101
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PLAN DETAIL - ROOF VALLEY @ NORTH PROMENADE



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v 804.788.4774

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PUMPHOUSE REROOF DOCUMENTATION

City of Richmond

1708 PUMP HOUSE DRIVE, RICHMOND
VA 23221

No.	Date	Description
PROJECT MANAGER:	DRAWN BY:	
Checker	Author	

QEA No.42243671

BIDDING SET
7/18/2025

PLAN DETAILS -
ROOF

A101

N:\BAL\Drawings\2025\072025\01 BYRD PARK PUMP HOUSE REVISED.dwgBYRD PARK PUMP HOUSE STRUCTURAL R25.01

DIVISION 1 - GENERAL:

- The scope of this drawing is limited to the remedial structural work and reinforcements required to facilitate the support of a new finish slate roof to match the existing roof. The work to be completed herein has been designed and shall be constructed in accordance with the following codes:
 - 2021 Virginia Construction Code
 - ASCE 7-22 Minimum Design Loads and Associated Criteria for Buildings and Other Structures.
 - 2021 Virginia Existing Building Code
 - Other codes and standard practices for trade or material-specific installations as applicable.
 - Refer to architectural drawings for other codes and building classification.
- Structural drawings shall be used in conjunction with the architectural drawings, as well as any additional drawings provided by material & equipment suppliers. Contractor shall be responsible for coordinating the work of all other trades with the structure.
- Contractor shall strictly adhere to all safety regulations. The architect/ engineer shall not be responsible for construction means, methods, or procedures for safety precautions in connection with the work.
- Construction materials, equipment, or other heavy loads shall not be placed upon structural components in concentrated areas. construction material or equipment staging shall not impart loads to the structure greater than that shown in the design load schedule.
- Work not indicated on a part of the drawings, but reasonably implied to be similar to that shown at corresponding pieces, shall be repeated.
- Temporary bracing, sheeting, shoring, etc., required to ensure the structural integrity/stability of the existing buildings, sidewalks, utilities, etc. during construction is the Contractor's responsibility and shall be designed by a Professional Engineer licensed in the Commonwealth of Virginia.
- Shop Drawings:
 - Shop drawings for materials shall be submitted to the Architect for review prior to the start of fabrication or commencement of work.
 - No portion of the contract drawings may be reproduced for submittal as shop drawings unless authorized by Balzer and Associates, Inc. in writing. Violation of this provision will result in the rejection of the shop drawings and will be returned without being reviewed by the Architect or Structural Engineer.
 - Shop drawings shall bear the General Contractor's stamp of approval, which shall constitute certification that he has verified all field measurements, construction criteria, materials, and similar data and has checked each drawing for completeness, coordination, and compliance with the contract documents. Shop drawings not reviewed by the General Contractor prior to submittal will be rejected.
 - Changes to shop drawings that are re-submitted must be clouded or otherwise clearly indicate the changes that have been made to a previously issued and reviewed drawing.
 - The Contractor shall provide the Architect or Structural Engineer with written notice of deviations of any type from the requirements of the Construction Documents. The notice must be received prior to shop drawing submittal. The Contractor remains liable for any deviation unless reviewed by the Architect or Structural Engineer and acknowledged in writing, prior to receipt of the shop drawings.
 - Shop Drawings will be returned not later than 10 working days after receipt by the Architect or Structural Engineer.
 - Architect/Engineer shall not be liable for work performed without approved shop drawings.

DIVISION 4 - EXISTING MASONRY:

- No alterations or new work with existing masonry walls is explicitly required as part of the scope of this project. However, for any miscellaneous or incidental repairs or attachments to existing stone masonry which shall be discovered or required as art of the means and methods of performing the indicated scope, refer to the following notes and guidelines.
- New masonry units and mortar mixes shall be provided with materials as close to original composition as possible. New units and mortar mixes of greater compressive strength than original materials shall not be permitted.
- Mason to repoint all masonry where mortar joints have deteriorated.
- Typical repair details and notes shall be applied to the full extent of all existing masonry walls. General contractor shall coordinate with mason for full extent of repair work.
- Mason chosen for repair and rehabilitation of existing masonry walls shall be experienced in the materials and methods of historic masonry work.
- Epoxy adhesive to be used for anchoring of all threaded rods, bolts, pins, and/or dowels shall be Fast Set Extreme from Borstone (borstone.com) or an equivalent product suitable for stone applications as approved by the engineer. Cracks within individual stones shall also be repaired by injection of Fast Set Extreme into the crack. Provide adequate ventilation for interior applications and follow any and all manufacturer's installation instructions.
- Holes in stone masonry walls for anchor installation shall be drilled with a pneumatic rotary drill with a tungsten carbide bit, or by a suitable alternate method. Core drilling shall not be used for anchor installation.
- Drilled holes for anchor installation shall be brushed and blown free of all dust and debris prior to epoxy injection. Contractor shall coordinate with and have the first installation reviewed and approved by the Special Inspector prior to installing the epoxied anchors.
- Masonry shall not be supported on wood girders or other form of wood construction. Provide steel lintels bearing on solid masonry above all openings.
- Completed masonry work to be brushed and washed with warm clean water, and free of excess mortar. Clean all other work affected by mortar spills and washing.

DIVISION 5 - STRUCTURAL STEEL:

- No alterations or new work with existing steel framing members is explicitly required as part of the scope of this project. However, for any miscellaneous steel of steel components of structural repairs detailed as part of the indicated scope, refer to the following notes and guidelines:
 - Angles, channels, plates, bars, misc. shapes: ASTM A36 (fy = 36 ksi)
ASTM A276 TYPE S30400 (304) STAINLESS STEEL WHERE EXPOSED
ASTM A500, Grade C (fy = 50 ksi)
ASTM F593 STAINLESS STEEL ALLOY GROUP 1 OR 2 (S593 OR S93F MIN.)
ASTM F594 STAINLESS STEEL NUTS
SS304 WASHERS
ASTM F593A STAINLESS STEEL
ASTM A276 TYPE S30400 (304) STAINLESS STEEL
 - Pipes columns:
 - High strength bolts:
 - Common (non-high strength) bolts:
 - Threaded rod:
- Structural steel work and erection shall be in accordance with the Virginia Construction Code, 16th/ Edition AISC 360 "Manual of Steel Construction", and AISC "Code of Standard Practice", including the "Commentary" and supplements.
- Structural steel shall be new, clean and straight.
- Cuts, holes, copings, etc. in structural steel members required by work of other trades shall be made in the shop and shall be shown on the shop drawings. Burning of holes or cuts in structural steel members in the field will not be permitted without specific approval of the engineer.
- All structural steel exposed to elements shall be at minimum Type 304 stainless for corrosion protection. Existing steel or other metal building components found to be in the process of active corrosion in the course of this work shall be cleaned and painted for protection as required.
- Care shall be taken to prevent direct contact between new stainless steel and aluminum, carbon steel, and/or existing metals including cast iron to avoid galvanic contact corrosion. Use of neoprene washers, bearing pads, or other breaks shall be utilized to prevent contact.
- Do not weld new stainless steel to existing metals. Contact Engineer for further direction if welding shall be deemed necessary in field.

DIVISION 6 - WOOD CONSTRUCTION:

- New wood materials for use in construction shall be in accordance with the following specifications:
 - Dimensional lumber, 2x6 or larger: Southern Yellow Pine (SYP) #2 or greater as specified
2x6 or smaller: Spruce Pine Fir (SPF) #2 or greater as specified
 - Engineered lumber, joists: As specified on plans
Beams and girders: 2.0E, min. fb = 2,600 psi
Columns and posts: 1.8E, min. fb = 2,400 psi
 - Glue-laminated lumber, Beams and girders: 1.8E, min. fb = 2,400 psi
Columns and posts: 1.8E, min. fb = 2,400 psi
 - Decking: Southern Pine Select (1.6E, Fb=1400 psi) or match existing in kind
 - Nails specified on structural drawings to be common wire nails unless noted otherwise (refer to NDS for sizes other than listed)
8d: 0.131" $\varnothing$ x21/2"
10d: 0.148" $\varnothing$ x3"
16d: 0.162" $\varnothing$ x31/2"
30d: 0.207" $\varnothing$ x41/2"
Simpson, Fastenmaster LOK, USP, GRK
 - Wood screw manufacturers: (various types and applications, others available subject to approval of engineer)
 - Lag screws: Manufactured to ANSI B18.2.1
 - Bolts: ASTM A307 with common or plate washer under nut and head. Carriage bolts are not approved for structural applications
Simpson Strong-Tie or USP
 - Proprietary metal clips: min. 0.145" $\varnothing$ x27/8" max. length w/ washer
 - Power driven fasteners for sill plates:
- Wood construction shall conform to the requirements of the American Institute of Timber Construction and the 2018 "National Design Specification for Wood Construction" from the National Forest Products Association.
- Unless otherwise noted, all connections shall conform to the "Fastening Schedule", Table 2304.9.1 of the Virginia Construction Code (IBC 2015).
- All dimensional lumber to be surfaced dry and used at 19% maximum moisture content or equal.
- All members exposed to the weather, or in contact with masonry or concrete, shall be pressure-treated, or a naturally decay-resistant species and grade See structural drawings for additional notes and requirements.
- See architectural drawings for all fire blocking, draft stopping, and other miscellaneous blocking requirements.
- Bolts connecting wood members shall be ASTM F593A stainless steel bolts of a diameter shown on the structural drawings. Common washers shall be used under each bolt head and nut. Bolt holes shall be carefully centered and drilled not more than 1/16" larger than the bolt diameters.
- Fasteners for preservative treated and fire retardant-treated wood, or exposed to the elements shall be stainless steel, silicon bronze, or copper per VCC 2304.9.5, or of other proprietary manufacturer coating tested for such exposure.
- All wood framing shall be continuous unless otherwise indicated. All splices shall be only as shown on plans.
- Connection details shown are typical unless otherwise noted or submitted.
- Wood bearing under wood beams shall be solid and bearing parallel to grain, continuous through floors from beam bearing to concrete slab.

EXISTING WOOD:

- Existing wood components are to remain in place, except as shown on demolition plans for new openings. Existing rotted, bowed, cracked, or deteriorated wood members shall be reinforced or replaced in the field as conditions require. Contractor shall notify engineer of questionable members discovered not noted on plans for further direction.
- Existing wood members shall be properly cleaned and painted for protection or finishes as called for on architectural plans.
- Existing wood materials shall be investigated for proper wood density and/or possible presence of termite tunnels as necessary. Termite activity shall be reviewed by a professional wood borne insect expert and steps taken to ensure active infestation is not present. Damage to wood fibers and loss of density and wood cross-section shall require reinforcement or replacement of compromised member.
- Deteriorated, out-of-plumb, cracked, or damaged columns shall be replaced/repaired as required.
- Corroded or broken bolts, screws, nails, and/or metal connectors shall be brought to the attention of the structural engineer where not noted on plans for connection retrofit details.
- Rotted or softened bearing ends of wood joists and/or beams in masonry walls shall be reinforced with ledgers, splices, or member replacement as shown on structural drawings. Bring to the attention of the structural engineer any questionable bearing conditions not noted on the plans.
- New steel plates, angles, bars, or other reinforcing elements shall be in accordance with steel material specifications given above. Steel components exposed to weather or in contact with pressure-treated lumber shall be galvanized or stainless.
- Typical repair details and notes shall be applied to the full extent of all damaged existing wood members. General contractor shall coordinate with framer for full extent of repair work.
- Framing subcontractor chosen for repair and rehabilitation of historic wood construction shall be experienced in the materials and methods of historic timber work.

SYMBOL LEGEND

	GRID LINE MARK
CX.0	COLUMN MARK
FX.0	SPREAD FOOTING MARK
WFX.0	CONTINUOUS WALL FOOTING MARK
GBX.0	GRADE BEAM MARK
PX.0	PIER MARK
BX.0	BEAM MARK
LX.0	LINTEL MARK
S.J.	SLAB JOINT
C.J.	CONSTRUCTION JOINT
	ELEVATION
	STEEL MOMENT CONNECTION
	REVISION CLOUD
	REVISION TAG
	DETAIL SECTION
	DETAIL CALLOUT
	LETTER/NUMBER COMBINATION INDICATES ELEVATION OR DETAIL
	SHEET NUMBER WHERE ELEVATION, SECTION OR DETAIL IS DRAWN

DESIGN LOAD SCHEDULE (2021 VCC)

GOVERNING DESIGN LOAD CRITERIA:	ASCE 7-22
BUILDING RISK CATAGORY:	II
DEAD LOADS:	
ROOF DEAD LOAD:	20 psf
BALLROOM CEILING DEAD LOAD	13 psf
UNREDUCED LIVE LOADS:	
ROOF LIVE LOAD:	20 psf
ATTIC LIVE LOAD:	20 psf
RAIN LOADS:	
15-MINUTE RAINFALL INTENSITY:	I=6.05in/hr
FLOOD ZONE:	AE
SNOW LOADS:	
GROUND SNOW LOAD:	37 psf
SLOPED ROOF SNOW LOAD:	31.1 psf
SNOW EXPOSURE FACTOR:	1.0
WINTER WIND PARAMETER:	0.35
THERMAL FACTOR:	1.2

***THERE ARE NO CHANGES TO THE SNOW DRIFTING OR UNBALANCED SURCHARGE LOADS AS A RESULT OF THE PROPOSED NEW CONSTRUCTION.**

WIND LOAD DESIGN CRITERIA:	ASCE 7-22 CHAPTER 27
ANALYSIS PROCEDURE:	PARTIALLY ENCLOSED
BUILDING TYPE:	113 mph
ULTIMATE DESIGN WIND SPEED:	89 mph
NOMINAL DESIGN WIND SPEED (50-YEAR MRI):	B
EXPOSURE:	±0.55
INTERNAL PRESSURE COEFFICIENT:	

***THERE IS NO INCREASE IN THE WIND DEMAND NOR DECREASE IN THE CAPACITY OF THE EXISTING LATERAL FORCE RESISTING SYSTEM AS A RESULT OF THE PROPOSED NEW CONSTRUCTION.**

SEISMIC LOADS:	
IMPORTANCE FACTOR:	1.0
MAPPED SPECTRAL ACCELERATION:	S _e =0.25 S _w =0.06 D
SITE CLASS:	S _{cs} =0.20
SPECTRAL RESPONSE COEFFICIENT:	S _{rs} =0.08 B
SEISMIC DESIGN CATEGORY:	

***THERE IS NO INCREASE IN THE SEISMIC DEMAND NOR DECREASE IN THE CAPACITY OF THE EXISTING LATERAL FORCE RESISTING SYSTEMS AS A RESULT OF THE PROPOSED NEW CONSTRUCTION.**



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& ASSOCIATES
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BYRD PARK PUMP HOUSE
ROOF REPLACEMENT - BIDDING SET
GENERAL STRUCTURAL NOTES

1708 PUMP HOUSE DRIVE,
CITY OF RICHMOND, VA

DRAWN BY	HA/SHD
DESIGNED BY	RWT/HA
CHECKED BY	RWT
DATE	07/18/2025
SCALE	1/2" = 1'-0"
REVISIONS	

S0.01

PROJECT NO 57250022.00

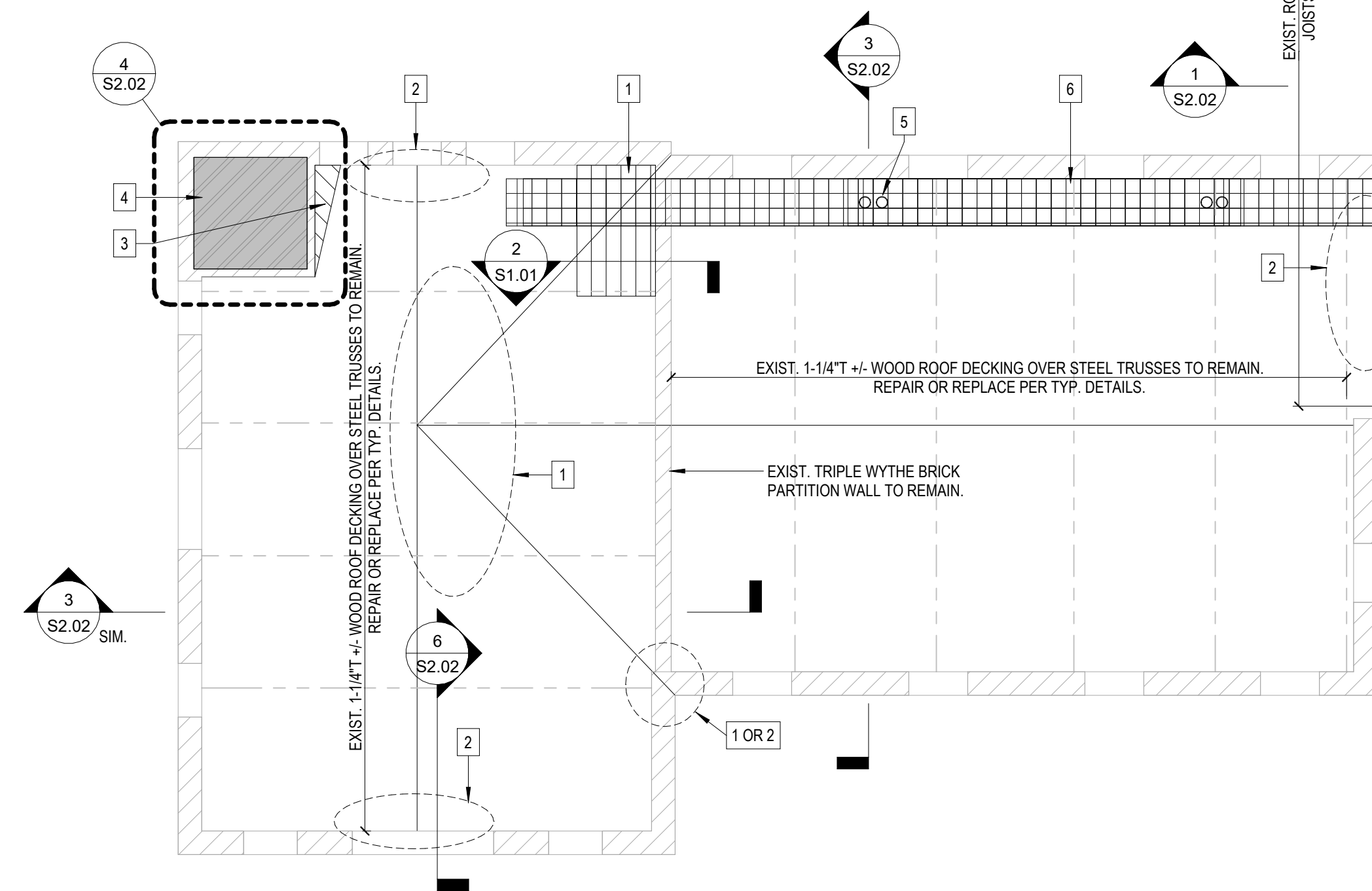
GENERAL ROOF FRAMING NOTES:

- REPLACE EXISTING DAMAGED ROOF DECKING PER THE FOLLOWING. COORDINATE WITH STRUCTURAL ENGINEER AS REQUIRED.
 - MEMBERS WITH SPACING <4'-0" O.C.: PROVIDE NEW 5/4X6 DECKING OR SIM. TO MATCH EXISTING THICKNESS. REFER TO SHEET S0.01 FOR WOOD SPECIES, GRADE, AND MINIMUM STRENGTH REQ'MTS. MEMBERS SHALL BE ATTACHED TO SUPPORT MEMBERS PER DETAIL.
 - MEMBERS WITH 4'-1" O.C.<SPACING<10'-0" PROVIDE NEW 3X6 DECKING OR SIM. TO MATCH EXISTING THICKNESS. REFER TO SHEET S0.01 FOR WOOD SPECIES, GRADE, AND MINIMUM STRENGTH REQ'MTS. MEMBERS SHALL BE ATTACHED TO SUPPORT MEMBERS PER DETAIL.
- ESTIMATE REPLACEMENT OF 5% OF TOTAL AREA OF ROOF DECKING. MOST DECKING REPLACEMENT TO BE CONCENTRATED IN AREAS CLOUDED ON PLAN. OTHER MAIN AREAS ARE ALONG VALLEYS AND AT OPEN RIDGES. INCLUDE CONTINGENCY FOR ADDITIONAL DECKING REPLACEMENT AS APPROPRIATE. REFER TO ARCH. DWGS. FOR ADD'L NOTES.
- REMOVE ALL EXISTING SLATE SHINGLES AND SALVAGE AS MUCH AS POSSIBLE. REPLACE ROOF. REFERENCE ARCH. DRAWINGS FOR NEW FLASHING, DRAINAGE, FINISH, AND COPING DETAILS.
- FASTEN NEW AND/OR SALVAGED EXISTING SLATE SHINGLES TO ROOF DECKING WITH A MINIMUM OF (2) ROOFING NAILS, OR AS DIRECTED BY MANUFACTURER. LARGER PIECES SHALL USE ADDITIONAL NAILS AS REQUIRED.
- PROVIDE CONT. RIDGE VENT AT ALL ROOF RIDGES TO PROTECT FROM ELEMENTS. REFERENCE ARCH. DRAWINGS FOR RIDGE DETAILS. PROVIDE ADDITIONAL WOOD BLOCKING FOR DECORATIVE RIDGE FINIAL AS DIRECTED IN ADD-ALTERNATE BID.

KEYNOTES:

- | | |
|----|--|
| 1 | REPLACE ROOF DECKING IN KIND PER TYPICAL DETAIL. (S1.01 - 2 ...OR... S2.01 - 1) |
| 2 | REINFORCE DAMAGED END OF EXISTING DECKING PER TYPICAL DETAIL. (S2.02 - 5) |
| 3 | OVERFRAME CRICKET W/ 2X BLOCKING OR TAPERED RIGID INSULATION AS REQUIRED @ EXISTING EXHAUST STACK. REFERENCE ARCH. DRAWINGS. |
| 4 | NEW 1/4" T X 6'-8" X 6'-8" TYPE 305 STAINLESS STEEL PLATE COVER OVER EXISTING EXHAUST STACK. REFERENCE DETAIL. |
| 5 | REMOVE EXIST. ROOF DRAIN & OVER-FRAMED GUTTER FRAMING. REPLACE W/ NEW MIN. 5/8" CDX PLYWOOD SHEATHING OVER 2X4 FRAMING, SLOPED E-W TO NEW DRAINS. REFER TO ARCH. DRAWINGS FOR DRAIN, OVERFLOW, AND FINISH FLASHING DETAILS. |
| 6 | SCRAPE LOOSE RUST & REPAINT EXISTING TRUSS ENDS POCKETED INTO STONE WALL. NOTIFY ENGINEER OF EXCESSIVE CORROSION FOUND. |
| 7 | REPLACE ROOF DECKING @ VALLEY IN KIND PER TYPICAL BALLROOM DETAIL. REMOVE AND/OR REPAIR IN PLACE PURLIN ENDS AS REQ'D FOR UNDERNEATH DECKING REPLACEMENT. |
| 8 | REPAIR OR REPLACE IN-KIND EXISTING RAFTER PER TYPICAL RAFTER DETAIL. (S2.01 - 4) |
| 9 | EXISTING RAFTER REPAIR TO REMAIN. |
| 10 | REPLACE EXISTING DAMAGED GIRDER W/ NEW MIN. 6-3/4"W X 8-1/4"D SP24F 1 BE EXT. GRADE GLULAM BEAM. OR MATCH EXIST. BEAM SIZE AS REQ'D. PROVIDE BEARING BLOCK @ TRUSS BEARING POINT TO MATCH EXISTING. REF. DETAIL. (S2.01 - 3) |
| 11 | REPLACE MISSING OR DAMAGED EXISTING PURLINS W/ NEW IN-KIND ROUGH CUT OR RIPPED 2X8 PURLIN. REF. TYPICAL PURLIN REPLACEMENT DETAIL. (S2.01 - 2) |
| 12 | REINFORCE REPLACEMENT SINGLE-SPAN DECKING W/ 2X4 BLOCKING PER DETAIL. |
| 13 | PROVIDE CONT. 2X4 BRIDGING @ TOP OF CEILING JOISTS EACH BEARING END. PROVIDE MIN. 2X8 BLOCKING AT MIDSPAN. REFER TO TYPICAL WING DETAIL. |
| 14 | INFILL EXIST. ROOF HATCH OPENING W/ NEW DECKING TO MATCH EXIST. PER TYP. DETAIL. |
| 15 | REMOVE EXIST. ROOF HATCH & REPLACE PER ARCH. DRAWINGS & DETAILS. PROVIDE NEW 2X12 CURB FRAMING AROUND OPENING IN EXISTING DECK & SUPPORT CUT PURLINS WITH (3) 3-1/2" SWD DBL. THREADED SCREWS PER DETAIL. |

*NOTE:
TRUSSES T1 & T13 HAVE PREVIOUSLY BEEN REPAIRED PER 2003 STRUCTURAL DETAIL PROVIDED BY ROBERT SILMAN ASSOCIATES. REPAIRS ARE COMPLETE AND PER DESIGN. NOTIFY ENGINEER IF FURTHER DAMAGE IS NOTED DURING THE COURSE OF NEW WORK.



ROOF FRAMING PLAN

1
S1.01 / 1/8" = 1'-0"

REPLACE DAMAGED DECKING IN KIND OR W/ NEW
SELECT GRADE PINE DECKING OF SAME THICKNESS.
FASTEN DECKING TO TRUSS CHORD W/ (2) 2-1/2"
SWD DBL THREADED SCREW @ EA. BOARD

NEW ROOFING UNDERLAYMENT & SHINGLES BY OTHERS

EXIST. SOUND ROOF DECKING TO REMAIN

EXIST. WOOD NAILER OVER STEEL TRUSS TO REMAIN

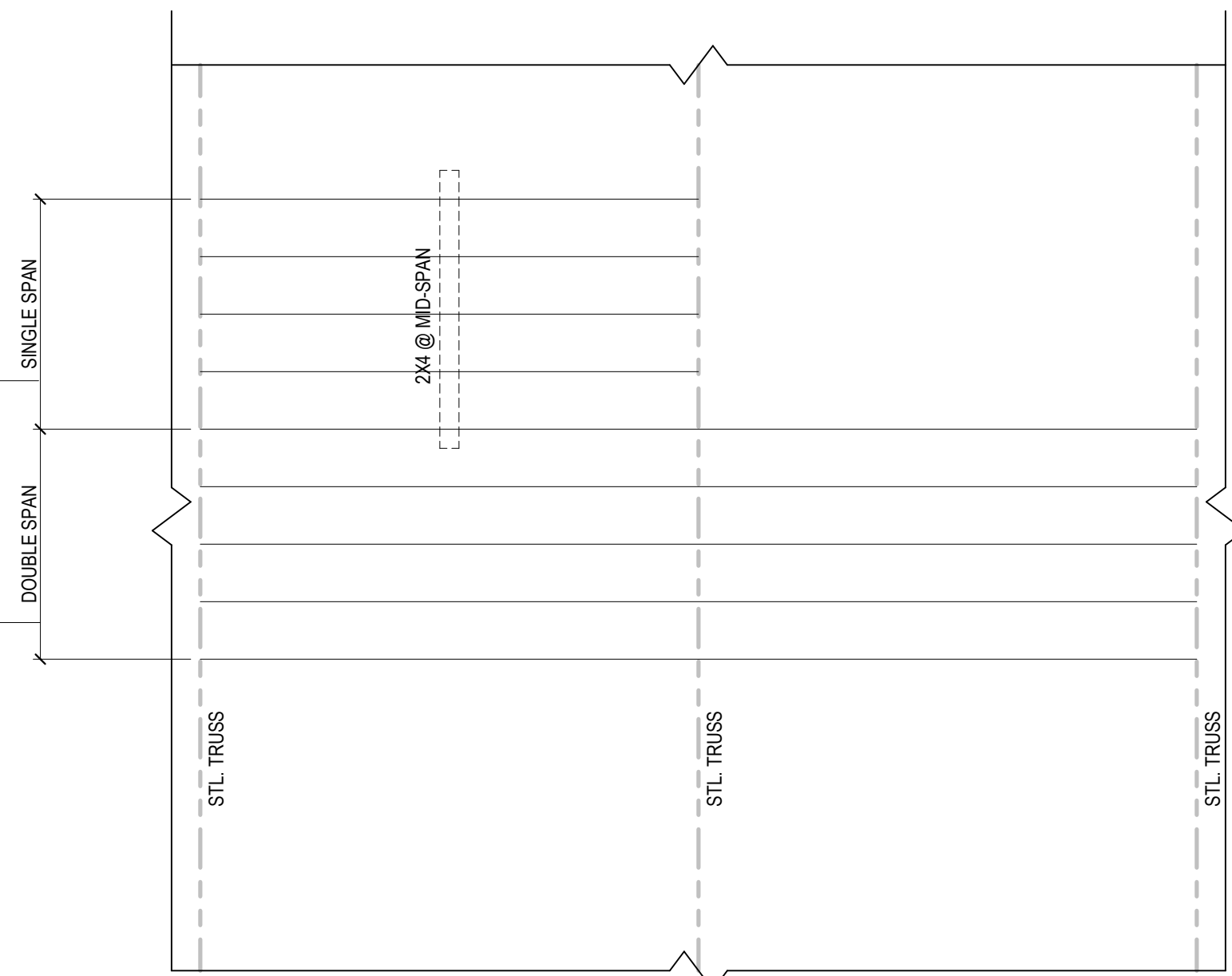
STEEL TRUSS

TYPICAL DECKING
REPLACEMENT @ ANNEX

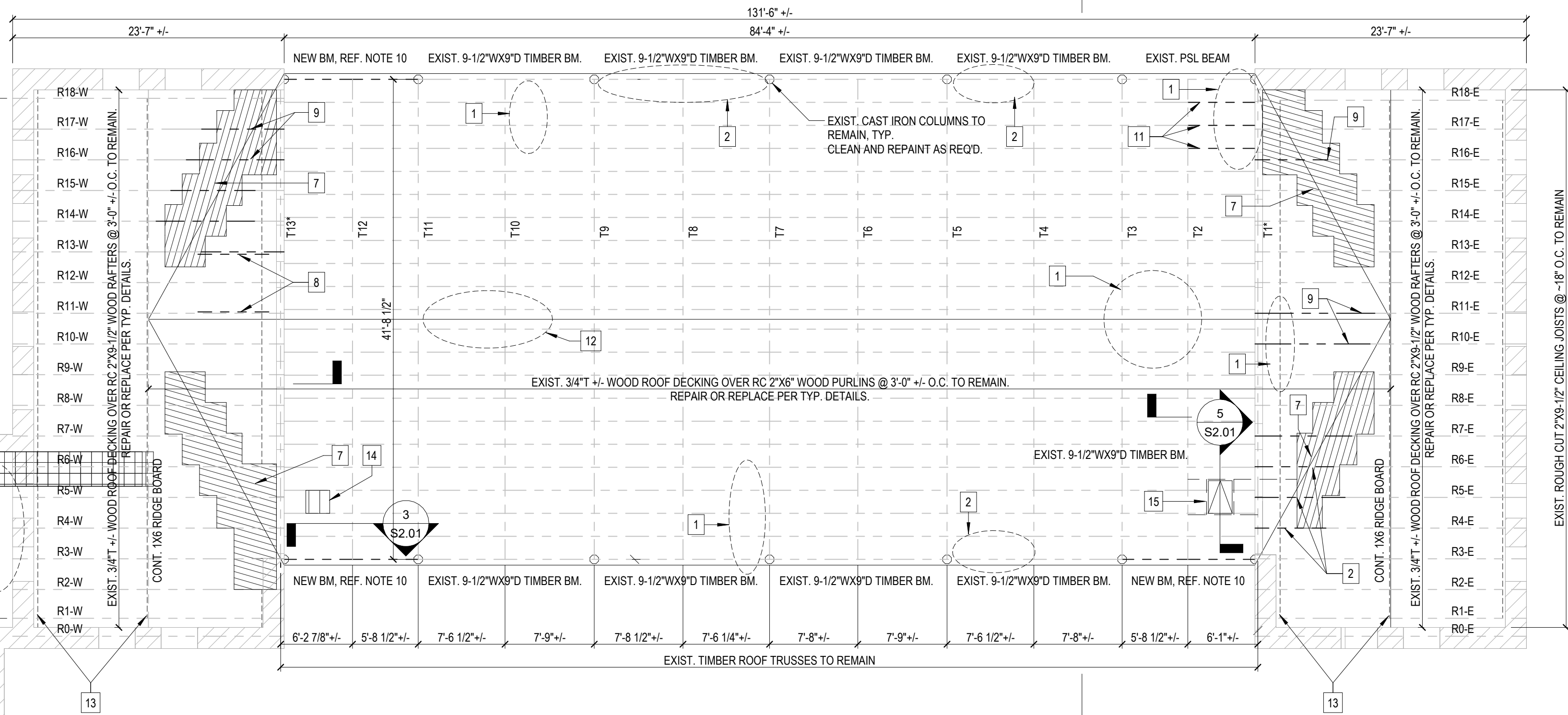
2
S1.01 / 1 1/2" = 1'-0"

DECKING REPLACED FOR SINGLE SPAN ONLY SHALL
BE REINFORCED W/ FLAT 2X4 @ MID-SPAN, FASTENED
TO EA. BD. @ UNDERSIDE W/ SWD SCREW & EXTEND
MIN. 1 BD. PAST REPLACEMENT AREA EA. SIDE

DECKING REPLACED CONTINUOUS OVER DOUBLE
SPANS CAN BE INSTALLED UNREINFORCED.



PLAN VIEW



BYRD PARK PUMP HOUSE
ROOF REPLACEMENT - BIDDING SET
ROOF FRAMING PLAN

DRAWN BY HA/SHD
DESIGNED BY RWTHA
CHECKED BY RWT
DATE 07/18/2025
SCALE As indicated
REVISIONS

HA/SHD
RWTHA
RWT
07/18/2025
As indicated

S1.01
PROJECT NO 57250022.00



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N:\BALZER\2025\07182025\01 BYRD PARK PUMP HOUSE REPAIR\DWG\BYRD PUMP HOUSE STRUCTURAL R20.d

REPLACE DAMAGED DECKING IN KIND OR W/ NEW
SELECT GRADE PINE DECKING OF SAME THICKNESS.
FASTEN DECKING TO PURLIN / RAFTER W/ (2) 2-1/2"L
SWD DBL THREADED SCREW @ EA. BOARD

NEW ROOFING UNDERLAYMENT & SHINGLES BY OTHERS

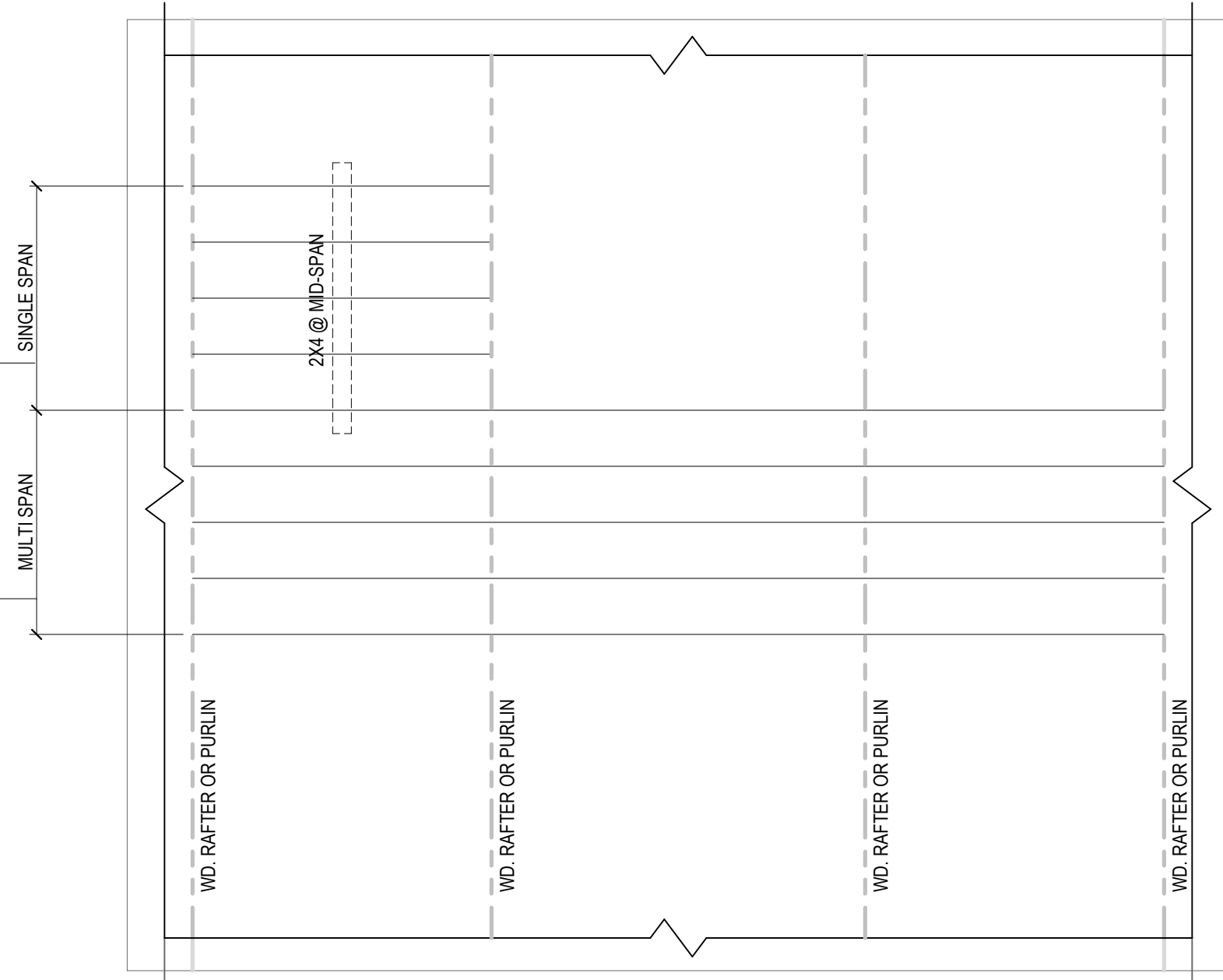
EXIST. SOUND ROOF DECKING TO REMAIN

EXIST. RAFTER OR PURLIN TO REMAIN, CONFIRM
CONDITION IN FIELD WHEN DECK IS REPLACED &
REPAIR OR REPLACE PER TYP. DETAIL AS REQ'D.

DECKING REPLACED FOR SINGLE SPAN ONLY SHALL
BE REINFORCED W/ FLAT 2X4 @ MID-SPAN, FASTENED
W/ Q.EA. BD. @ UNDERSIDE W/ SWD SCREW & EXTEND
MIN. 1 BD. PAST REPLACEMENT AREA EA. SIDE

DECKING REPLACED CONTINUOUS OVER TWO OR
MORE SPANS CAN BE INSTALLED UNREINFORCED.

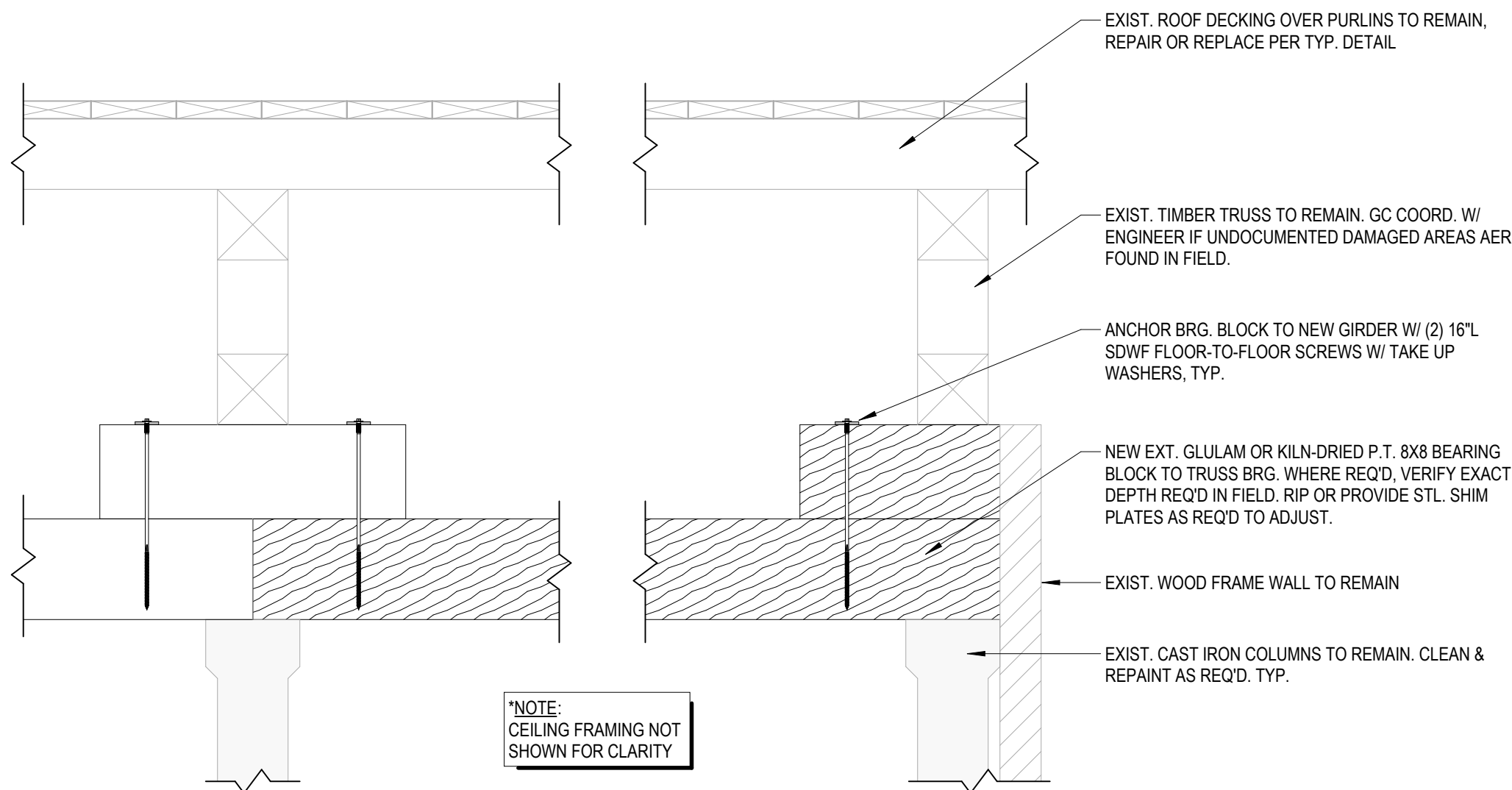
WOOD RAFTER OR PURLIN



PLAN VIEW

TYPICAL DECKING REPLACEMENT @ BALLROOM

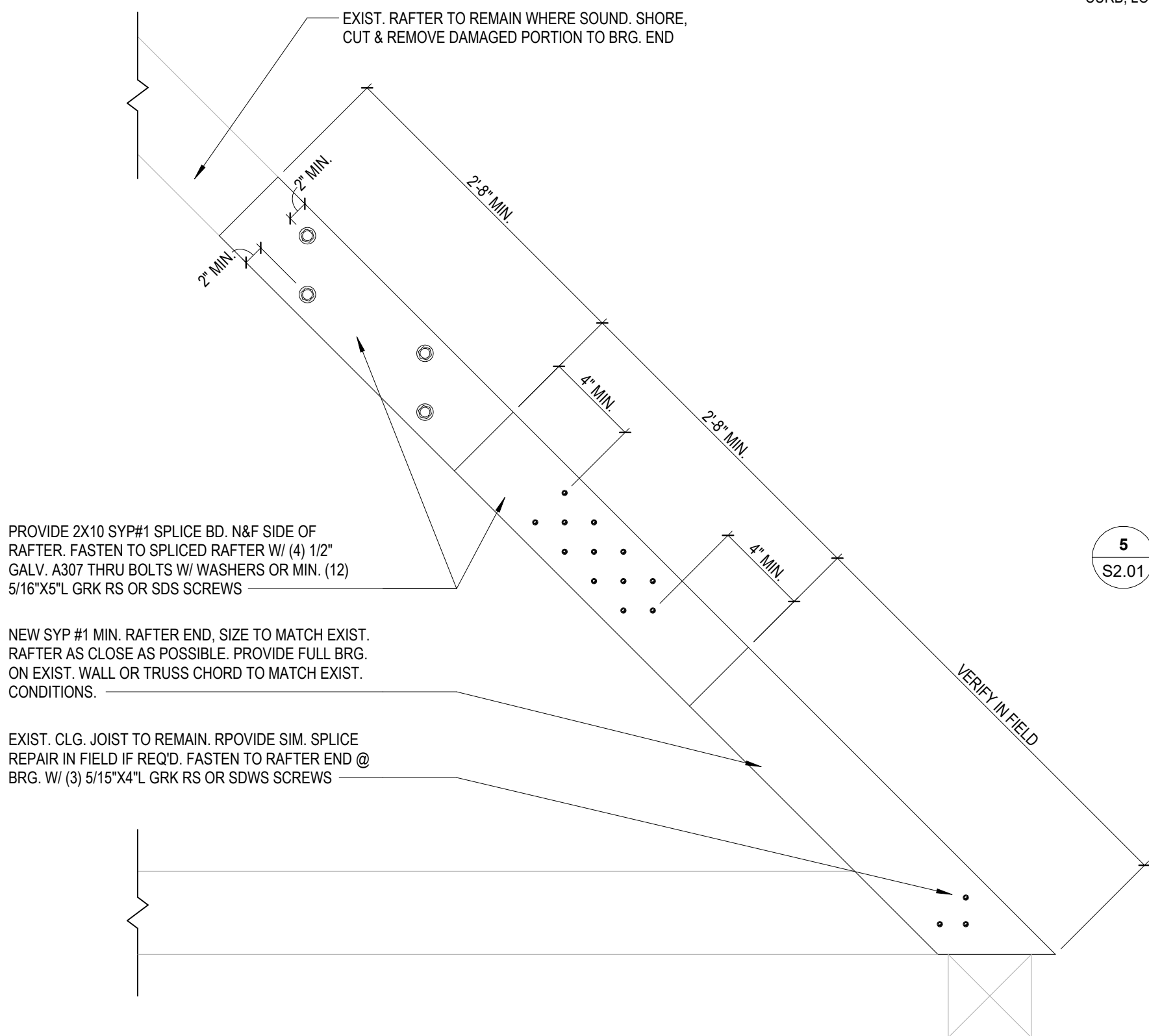
1
S2.01 1 1/2" = 1'-0"



*NOTE:
CEILING FRAMING NOT
SHOWN FOR CLARITY

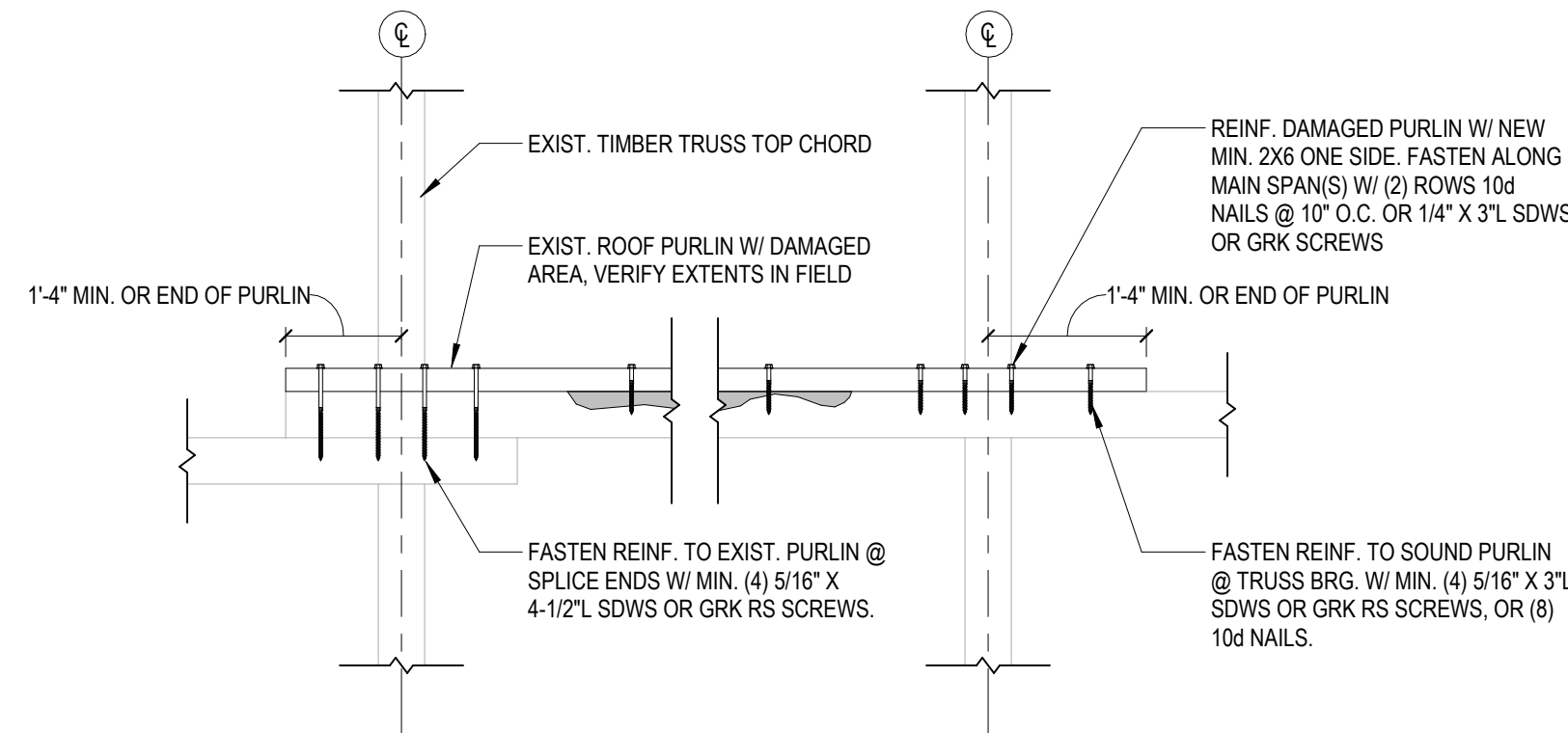
NEW GLULAM BEAM SUPPORT

3
S2.01 1" = 1'-0"



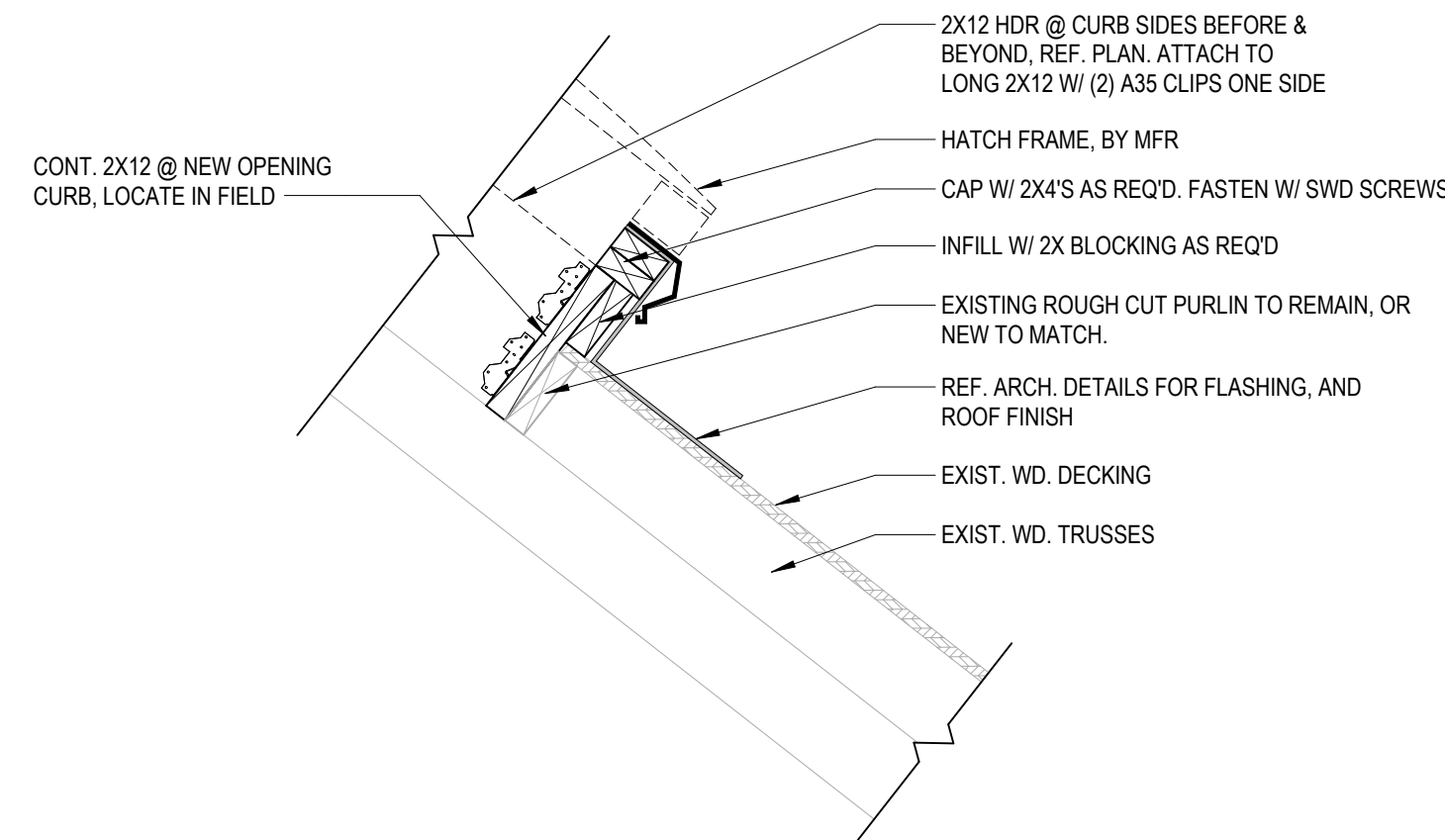
TYPICAL RAFTER REINF.

4
S2.01 1" = 1'-0"



TYPICAL PURLIN REINF.

2
S2.01 1" = 1'-0"



NEW ACCESS OPENING CURB

5
S2.01 1" = 1'-0"



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BYRD PARK PUMP HOUSE
ROOF REPLACEMENT - BIDDING SET
ROOF FRAMING PLAN

1708 PUMP HOUSE DRIVE,
CITY OF RICHMOND, VA

DRAWN BY HA/SHD
DESIGNED BY RWT/HA
CHECKED BY RWT
DATE 07/18/2025
SCALE As indicated
REVISIONS

S2.01

PROJECT NO 57250022.00



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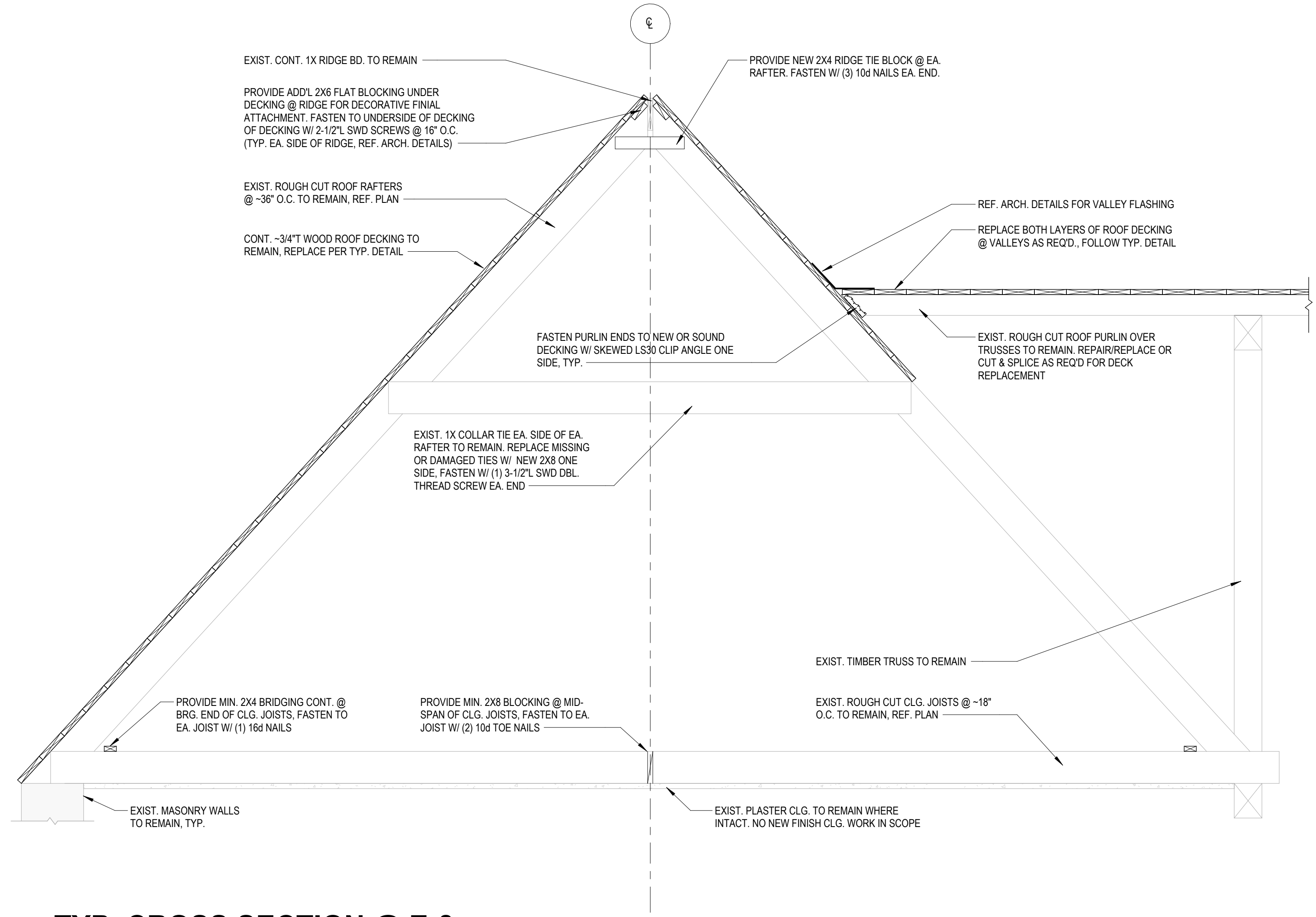
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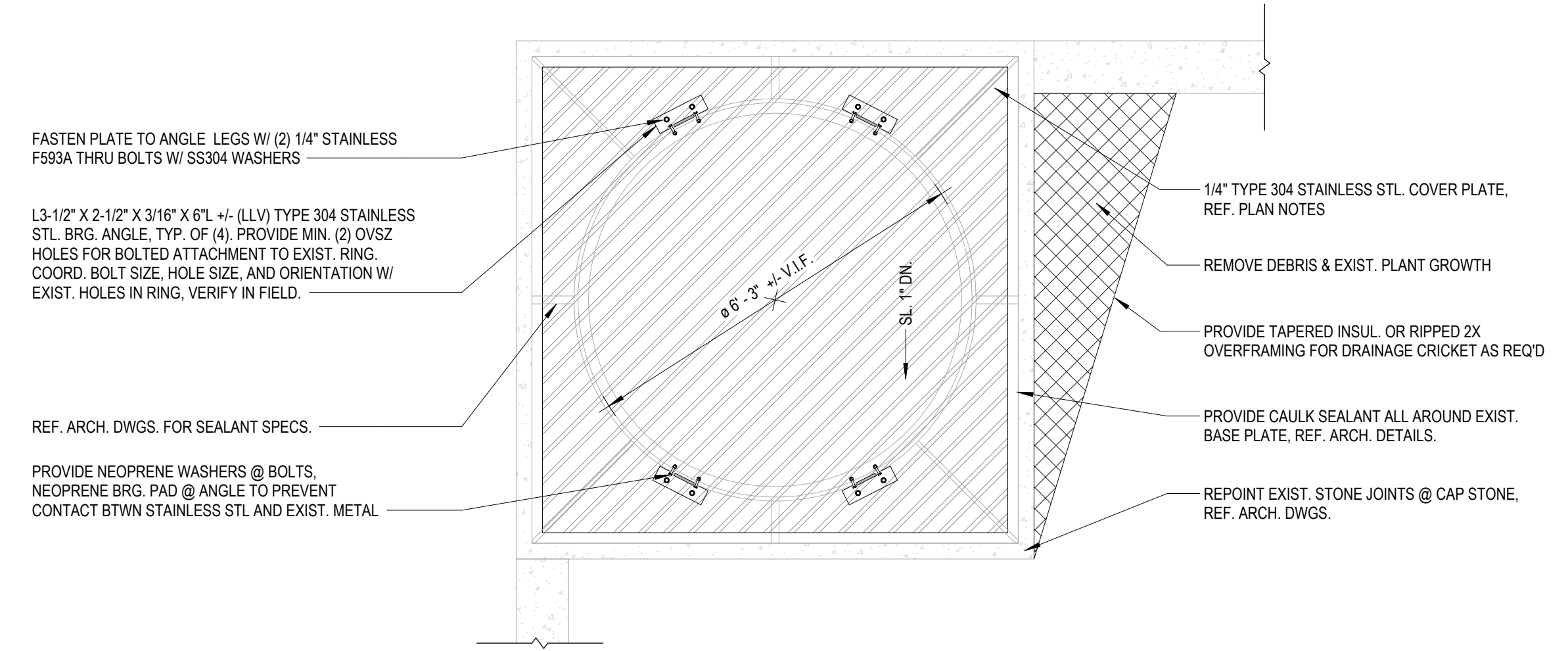
BYRD PARK PUMP HOUSE
ROOF REPLACEMENT - BIDDING SET
ROOF FRAMING PLAN

DRAWN BY HA/SHD
DESIGNED BY RWTH/HA
CHECKED BY RWT
DATE 07/18/2025
SCALE As indicated
REVISIONS

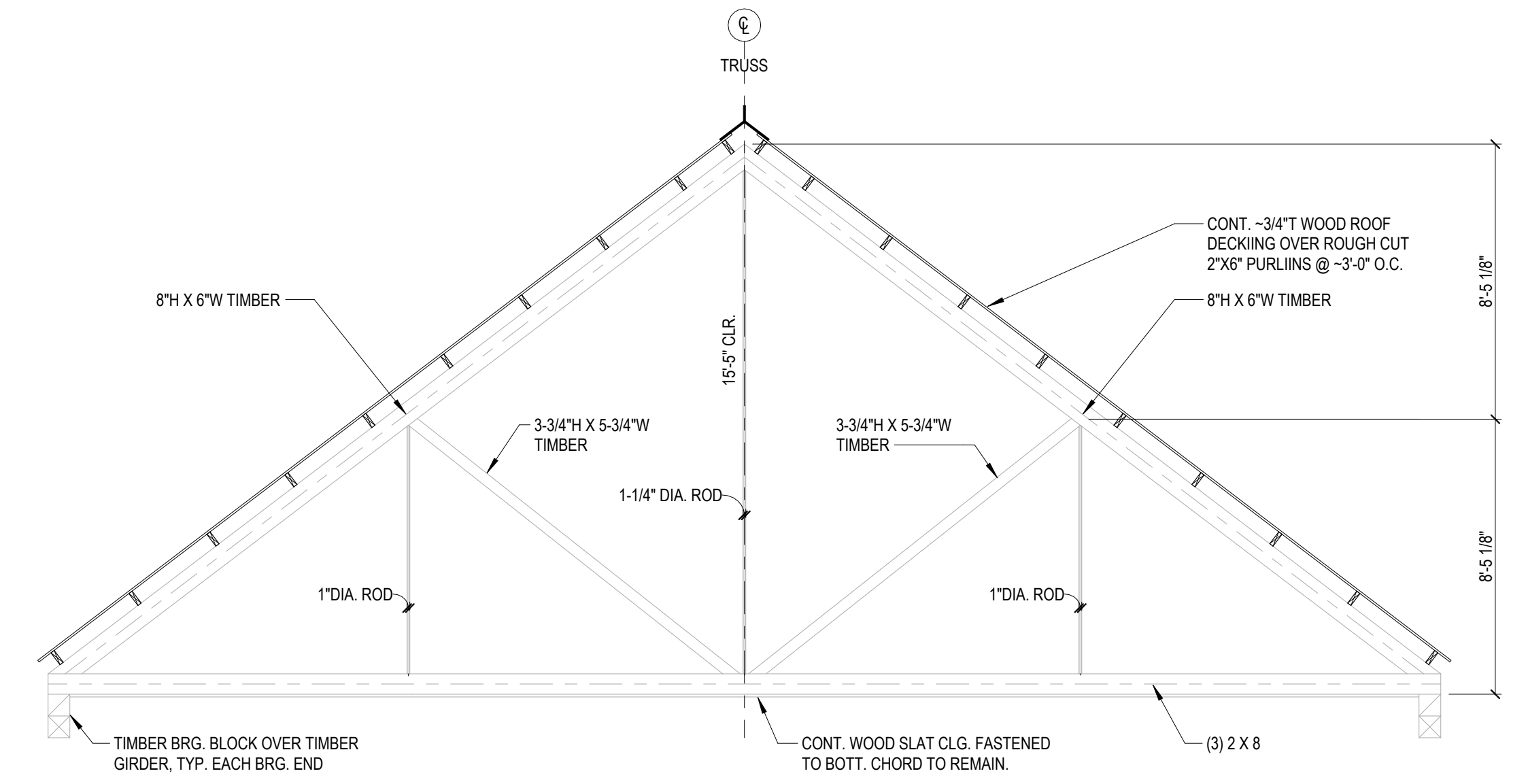
S2.02
PROJECT NO 57250022.00



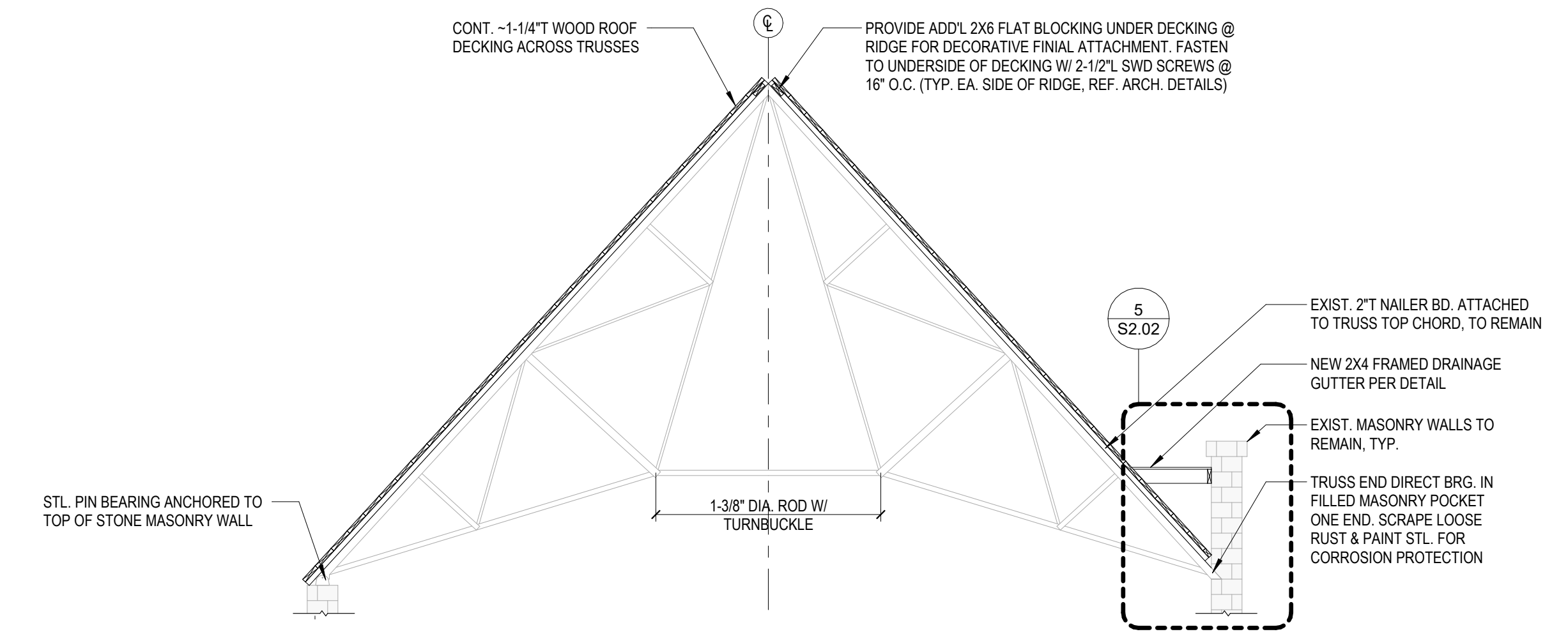
TYP. CROSS SECTION @ E & W WING
1
S2.02
1/2" = 1'-0"



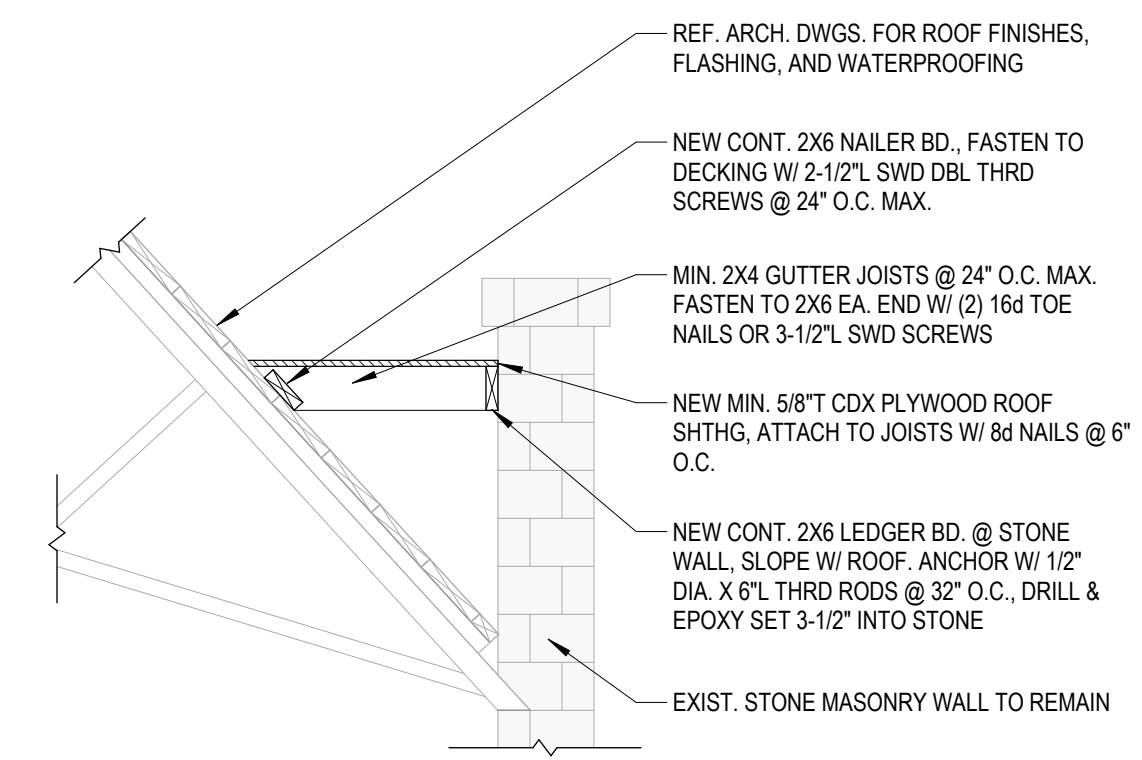
SMOKESTACK COVER PLATE DETAIL
4
S2.02
1/2" = 1'-0"



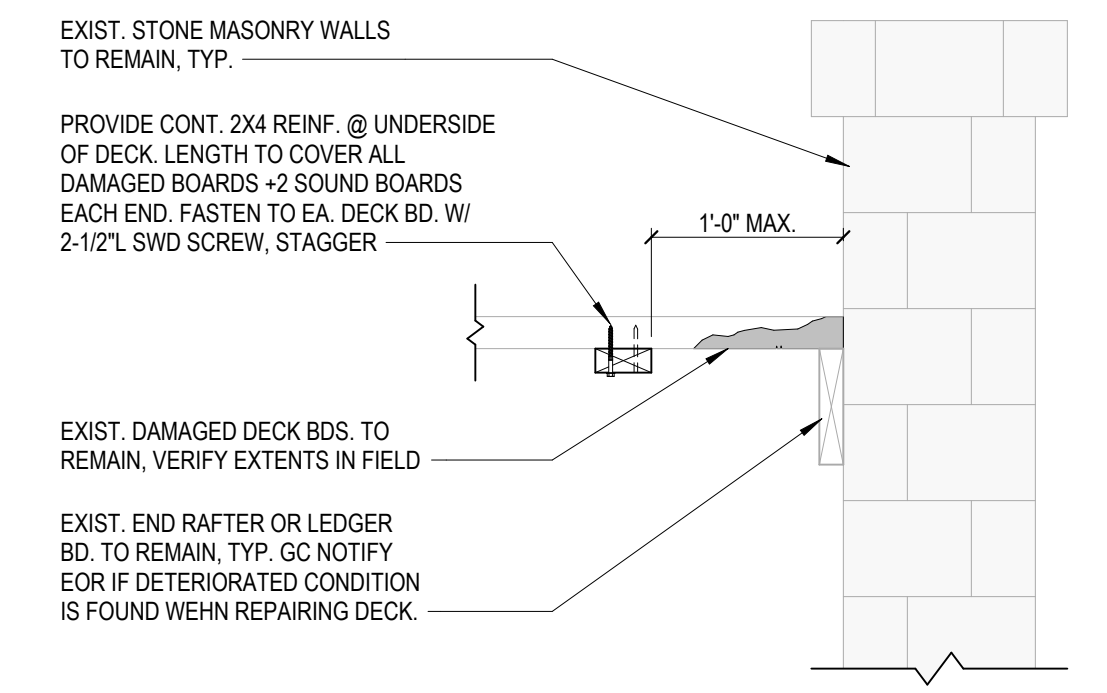
TYP. CROSS SECTION @ BALLROOM
2
S2.02
1/4" = 1'-0"



TYP. CROSS SECTION @ ANNEX
3
S2.02
1/4" = 1'-0"



TYP. NEW GUTTER FRAMING
5
S2.02
1/2" = 1'-0"



TYPICAL END OF DECK REINF.
6
S2.02
1" = 1'-0"

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Attachment A



PROJECT MANUAL

RICHMOND PUMP HOUSE REROOF

CITY OF RICHMOND

**DEPARTMENT OF PARKS,
RECREATION AND COMMUNITY
FACILITIES**

100% Construction Documents – Bid Set

July 18, 2025

QE No. 42243671

QUINN EVANS
1840 West Broad Street
Suite 400
Richmond, Virginia 23220
804.788.4774

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**SECTION 011000
SUMMARY**

PART 1 GENERAL

1.01 PROJECT

- A. Project Name: Richmond Pump House Reroof.
- B. Owner's Name: City of Richmond, Virginia..
- C. Architect's Name: Quinn Evans.
 - 1. Architect's Project Number: 42243671
- D. The Project consists of the complete reroofing of the historic Pump House including, but not limited to, the following:
 - 1. All existing slate, fasteners, flashings, gutters and downspouts to be removed.
 - 2. Existing slate to be salvaged and delivered to owner.
 - 3. Wood board roof decking to remain, with rotted, broken, and inadequately supported decking to be replaced in kind.
 - 4. New slate, flashings, gutters and downspouts to be installed.
 - 5. New built-in gutter, roof drains, and overflow drains tied into existing rain leader.
 - 6. New crickets and lead joint caps to be installed.

1.02 OWNER:

- A. Name: City of Richmond, Virginia.
 - 1. Address Line 1: 2401 W. Leigh Street.
 - 2. City: Richmond.
 - 3. State: Virginia.
 - 4. Zip Code: 23220.
 - 5. Telephone: (804) 646-5733.
- B. Primary Contact: All correspondence from the Contractor to the Architect will be through this party, unless alternate arrangements are mutually agreed upon at preconstruction meeting.
 - 1. Name: Allen McCown.
 - 2. Email: allen.mccown@rva.gov.

1.03 CONSULTANTS:

- A. Architect: Design Professional of Record. All correspondence from the Contractor regarding construction documents authored by Architect's consultants will be through this party, unless alternate arrangements are mutually agreed upon at preconstruction meeting.
 - 1. Company Name: Quinn Evans.
 - a. Address: 1840 West Broad Street, Suite 400.
 - b. City, State, Zip: Richmond, VA 23220.
 - c. Phone: (804) 788-4774.
 - 2. Primary Contact: Andrea Quilici .
 - a. Title: Project Manager.
 - b. Email: andrea.quilici@quinnevens.com.
 - c. Direct: (804) 533-4730.
- B. Structural Engineering Consultant:
 - 1. Company Name: Balzer and Associates.
 - a. Address Line 1: 15871 City View Drive.
 - b. Address Line 2: Suite 200.
 - c. City: Midlothian.
 - d. State: Virginia.
 - e. Zip Code: 23113.
 - f. Telephone: (804) 794-0571.
 - 2. Primary Contact: Rand Tritt, P.E..

- a. Title: Structural Department Manager.
- b. Email: rtritt@westwoodps.com.

1.04 CONTRACT DESCRIPTION

- A. Contract Type: A single prime contract based on a Stipulated Price.
- B. Project Delivery: Design-Bid-Build.

1.05 PROTECTION OF HISTORIC PROPERTIES

- A. This is a significant building which is recognized as a local landmark. The building shall be treated respectfully. Existing conditions are to be carefully respected and no material or building element shall be removed or disfigured unless specifically indicated on the drawings, specified herein, or directed by Owner.
- B. Building Security: Lock the building at conclusion of each work day using existing locks or with locks approved by Owner.
 - 1. Owner maintains materials within the structure. It is imperative the building be secured each day.

1.06 DIGITAL ASSETS FOR CONTRACTOR USE

- A. Owner has produced a navigable 3-dimensional photographic record of the Pump House for use in better understanding the existing conditions. This tool is for information only and is to be used only in cursory evaluation of conditions that may have changed in the intervening period since the assessment was completed, April 12, 2025.
 - 1. Exterior Photo Model: <https://aeco.nira.app/a/hL32pUNVTR-JtXSyeqZcSw/3>
 - 2. Attic (1883 portion only): <https://my.matterport.com/show/?m=deirorfQJfN>

1.07 DESCRIPTION OF ALTERATIONS WORK

- A. Scope of demolition and removal work is Indicated on drawings and specified in Section 020342 - Removal and Salvage of Period Construction Materials.
- B. Scope of alterations work is indicated on drawings.
- C. Plumbing: Limited to roof drains at built-in gutter, provide new drain bodies, piping, clean outs, and supports that tie into the existing internal rain leader.
- D. HVAC: N/A.
- E. Electrical Power and Lighting: N/A.
- F. Fire Suppression Sprinklers: N/A.
- G. Fire Alarm: N/A.
- H. Security System: Existing system to remain in place.

1.08 CONTRACTOR USE OF SITE AND PREMISES

- A. See also Section 015000 - Temporary Facilities and Controls.
- B. Site Utilization Plan: Provide a site plan for Owner and Architect approval indicating proposed use of site during construction, based on parameters shown on Drawings. Show proposed strategies for site use including, but not limited to, the following:
 - 1. Contractor parking.
 - 2. Material laydown and staging.
 - 3. Material delivery method to south side of canal.
 - 4. Perimeter fencing.
 - 5. Scaffolding strategy.
 - 6. Power generation.
- C. See also Section 013591 - Period Treatment Procedures for additional requirements and restrictions on use of the building.
- D. Construction Operations: Limited to areas noted on Drawings.

1. Coordination with Department of Public Utilities (DPU): DPU controls elements on the east end of the site including the eastern pedestrian bridge and concrete platform between the Pump House and adjacent structure to the east.
 - a. Any site access, scaffolding, or other access use must be coordinated with DPU.
2. Locate and conduct construction activities in ways that will limit disturbance to site.
 - a. Project is located on an environmentally sensitive property, surrounded by water used by the City of Richmond and discharging into the James River. Follow environmental controls required by authority(ies) having jurisdiction.
- E. Arrange use of site and premises to allow:
 1. Public use of site to the west of the building.
 - a. Project is located within the James River Park System and areas immediately adjacent to the Site will remain open to the public.
 - b. Provide fencing required to secure project site from park users.
- F. Employee Screening: Implement Owner requirements for drug and background screening of personnel with access to site.
 1. Provide Owner regularly updated list of approved personnel.
- G. Provide access to and from site as required by law and by Owner:
 1. Do not obstruct roadways, sidewalks, or other public ways without permit.
- H. Existing building spaces may not be used for storage, except as follows: Concrete floor of 1905 addition may be used subject to coordination with Owner and Friends of Pump House group.
 1. No flammable materials are to be stored in building at any time.
 2. No chargeable batteries are to be left in building overnight.
- I. Utility Outages and Shutdown:
 1. Prevent accidental disruption of utility services to adjacent facilities.
- J. Nonsmoking Building: Smoking is not permitted in building or within 25 feet of entrances, windows, or air intakes.

1.09 DOCUMENT CONVENTIONS

- A. Specification Content: Technical writing conventions are used throughout the Project Manual, including the following:
 1. The imperative mood and concise language are generally used. The words "shall", "shall be", or "shall comply with", depending on context, are implied where a colon (:) is used within a sentence or phrase.
 2. Text Color: Unless noted otherwise, text color does not imply any other meaning.
 3. Hypertext: Hypertext links, if used, are for convenience only, and linked information is not a part of the Contract Documents.
- B. Division 00 and Division 01 Sections apply to the Work of all Sections in the Specifications.
- C. Drawing Coordination: Materials and products may be identified on Drawings by one or more of the following:
 1. Terminology: Typical generic terms for materials and products as used in individual Specifications Sections.
 2. Abbreviations: Abbreviations for materials and products are scheduled on Drawings and published as part of the U.S. National CAD Standard.
 3. Keynoting: Keynotes reference specification section numbers and may include additional material or product characteristics. The keynote may only reference the first two numbers of the specification section, establishing the appropriate specification division.

1.10 ADDITIONAL PROVISIONS

- A. Any conflict between and within Drawings and Specifications shall be brought to attention of Architect. Neither Drawings nor Specifications are assumed to take precedence.
- B. For purposes of pricing only, the more expensive option indicated shall be assumed.

- C. Materials used in project shall be free of hazardous materials noted in Sustainability sections of this Manual and as mandated by governing codes.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

**SECTION 012000
PRICE AND PAYMENT PROCEDURES**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Procedures for preparation and submittal of applications for progress payments.
- B. Change procedures.

1.02 SCHEDULE OF VALUES

- A. Electronic media printout including equivalent information will be considered in lieu of standard form specified; submit draft to Architect for approval.
- B. Forms filled out by hand will not be accepted.
- C. Format: Utilize the Table of Contents of this Project Manual. Identify each line item with number and title of the specification section. Identify site mobilization.
- D. Include in each line item, the amount of Allowances specified in this section. For unit cost Allowances, identify quantities taken from Contract Documents multiplied by the unit cost to achieve the total for the item.

1.03 APPLICATIONS FOR PROGRESS PAYMENTS

- A. Payment Period: Submit at intervals stipulated in the Agreement.
- B. Use Form acceptable to Owner.
- C. Electronic media printout including equivalent information will be considered in lieu of standard form specified; submit sample to Architect for approval.
- D. Forms filled out by hand will not be accepted.
- E. For each item, provide a column for listing each of the following:
 - 1. Item Number.
 - 2. Description of work.
 - 3. Scheduled Values.
 - 4. Previous Applications.
 - 5. Work in Place and Stored Materials under this Application.
 - 6. Authorized Change Orders.
 - 7. Total Completed and Stored to Date of Application.
 - 8. Percentage of Completion.
 - 9. Balance to Finish.
 - 10. Retainage.
- F. Execute certification by signature of authorized officer.
- G. Use data from approved Schedule of Values. Provide dollar value in each column for each line item for portion of work performed and for stored products.
- H. List each authorized Change Order as a separate line item, listing Change Order number and dollar amount as for an original item of work.
- I. Submit one electronic and three hard-copies of each Application for Payment.
- J. Include the following with the application:
 - 1. Transmittal letter as specified for submittals in Section 013000.
 - 2. Partial release of liens from major subcontractors and vendors.
 - 3. Affidavits attesting to off-site stored products.
- K. When Architect requires substantiating information, submit data justifying dollar amounts in question. Provide one copy of data with cover letter for each copy of submittal. Show application number and date, and line item by number and description.

1.04 MODIFICATION PROCEDURES

- A. For minor changes not involving an adjustment to the Contract Sum or Contract Time, Architect will issue instructions directly to Contractor.
- B. For other required changes, Architect will issue a document signed by Owner instructing Contractor to proceed with the change, for subsequent inclusion in a Change Order.
 - 1. The document will describe the required changes and will designate method of determining any change in Contract Sum or Contract Time.
 - 2. Promptly execute the change.
- C. For changes for which advance pricing is desired, Architect will issue a document that includes a detailed description of a proposed change with supplementary or revised drawings and specifications, a change in Contract Time for executing the change with a stipulation of any overtime work required and the period of time during which the requested price will be considered valid. Contractor shall prepare and submit a fixed price quotation within ____ days.
- D. Computation of Change in Contract Amount: As specified in the Agreement and Conditions of the Contract.
- E. Substantiation of Costs: Provide full information required for evaluation.
 - 1. On request, provide the following data:
 - a. Quantities of products, labor, and equipment.
 - b. Taxes, insurance, and bonds.
 - c. Overhead and profit.
 - d. Justification for any change in Contract Time.
 - e. Credit for deletions from Contract, similarly documented.
 - 2. Support each claim for additional costs with additional information:
 - a. Origin and date of claim.
 - b. Dates and times work was performed, and by whom.
 - c. Time records and wage rates paid.
 - d. Invoices and receipts for products, equipment, and subcontracts, similarly documented.
 - 3. For Time and Material work, submit itemized account and supporting data after completion of change, within time limits indicated in the Conditions of the Contract.
- F. Execution of Change Orders: Architect will issue Change Orders for signatures of parties as provided in the Conditions of the Contract.
- G. After execution of Change Order, promptly revise Schedule of Values and Application for Payment forms to record each authorized Change Order as a separate line item and adjust the Contract Sum.
- H. Promptly revise progress schedules to reflect any change in Contract Time, revise sub-schedules to adjust times for other items of work affected by the change, and resubmit.

1.05 APPLICATION FOR FINAL PAYMENT

- A. Prepare Application for Final Payment as specified for progress payments, identifying total adjusted Contract Sum, previous payments, and sum remaining due.
- B. Application for Final Payment will not be considered until the following have been accomplished:
 - 1. All closeout procedures specified in Section 017000.

END OF SECTION

**SECTION 012100
ALLOWANCES**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Unit-cost allowances.
- B. Contingency allowance.
- C. Payment and modification procedures relating to allowances.

1.02 RELATED REQUIREMENTS

- A. Section 012000 - Price and Payment Procedures: Additional payment and modification procedures.

1.03 ALLOWANCES - GENERAL

- A. Costs Included in Allowances: Cost of product to Contractor or subcontractor, less applicable trade discounts
- B. Costs Not Included in Allowances: Product delivery to site and handling at the site, including unloading, uncrating, and storage; protection of products from elements and from damage; and labor for installation and finishing shall all be included in the Base Bid (Lump Sum) Amount.
- C. Architect Responsibilities:
 - 1. Prepare Change Order.
- D. Contractor Responsibilities:
 - 1. Obtain proposals from suppliers and installers and offer recommendations.
 - 2. On notification of which products have been selected, execute purchase agreement with designated supplier and installer.
 - 3. Arrange for and process shop drawings, product data, and samples. Arrange for delivery.
 - 4. Promptly inspect products upon delivery for completeness, damage, and defects. Submit claims for transportation damage.
- E. Differences in costs between actual purchase amounts and allowances will be adjusted by Change Order.
 - 1. If requested prepare explanation and documentation to substantiate distribution of overhead costs and other margins claimed.

1.04 CONTINGENCY ALLOWANCE

- A. Contractor's costs for products, delivery, installation, labor, insurance, payroll, taxes, bonding, equipment rental, overhead and profit will be included in Change Orders authorizing expenditure of funds from this Contingency Allowance.
- B. Funds will be drawn from the Contingency Allowance only by Change Order.
- C. At closeout of Contract, funds remaining in Contingency Allowance will be credited to Owner by Change Order.

1.05 ALLOWANCES SCHEDULE

- A. Allowance No. 1:
 - 1. Structural Sheet Specification; Unit-Cost Allowance: This area is in addition to areas shown on structural drawings.
 - 2. Assume 900 sq. ft. of decking area.
 - 3. Provide unit cost based on above and as described in Section 012200 - Unit Prices.
- B. Contingency Allowance: Include the stipulated sum/price of \$100,000 for use upon Owner's instructions.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

**SECTION 012200
UNIT PRICES**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. List of unit prices, for use in preparing Bids.
- B. Defect assessment and non-payment for rejected work.

1.02 RELATED REQUIREMENTS

- A. Section 012000 - Price and Payment Procedures: Additional payment and modification procedures.

1.03 COSTS INCLUDED

- A. Unit Prices included on the Bid Form shall include full compensation for all required labor, products, tools, equipment, plant, transportation, services and incidentals; erection, application or installation of an item of the Work; overhead and profit.

1.04 MEASUREMENT OF QUANTITIES

- A. Take all measurements and compute quantities. Measurements and quantities will be verified by Architect.
- B. Assist by providing necessary equipment, workers, and survey personnel as required.
- C. Measurement by Area: Measured by square dimension using mean length and width or radius.

1.05 PAYMENT

- A. Payment for Work governed by unit prices will be made on the basis of the actual measurements and quantities of Work that is incorporated in or made necessary by the Work and accepted by the Architect, multiplied by the unit price.
- B. Payment will not be made for any of the following:
 - 1. Products wasted or disposed of in a manner that is not acceptable.
 - 2. Products determined as unacceptable before or after placement.
 - 3. Products not completely unloaded from the transporting vehicle.
 - 4. Products remaining on hand after completion of the Work.
 - 5. Loading, hauling, and disposing of rejected Products.

1.06 SCHEDULE OF UNIT PRICES

- A. Unit Price No. 1: Removal of unsatisfactory wood roof decking and replacement in kind with satisfactory wood decking beyond quantity indicated on Drawings to be included in Base Bid.
 - 1. Description: Work includes, but is not limited to, removal of rotted, broken, or cracked wood decking, and wood decking not adequately supported across at least three supports. Provide wood meeting requirements indicated on Structural Drawings.
 - 2. Unit of Measurement: Provide proposed cost per square foot of decking.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

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**SECTION 012300
ALTERNATES**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Description of Alternates.
- B. Procedures for pricing Alternates.

1.02 PROCEDURES

- A. Refer to Schedule of Alternates at the end of this Section.
 - 1. Alternate descriptions are general only and are not intended to be complete tabulation of Work which may be affected by alternate.
 - 2. Refer to related Drawings and Specifications for detailed requirements for each alternate.
- B. Carefully examine Contract Documents and determine extent of Work of each Alternate, including:
 - 1. Alternate-related work as indicated in Contract Documents.
 - 2. Coordination of work of all trades affected by Alternate.
 - 3. Adjustments to or revisions to other work as necessary to completely integrate work of Alternate.
 - 4. Miscellaneous devices, accessories and other items incidental to or required for a complete installation of alternate, whether or not indicated as part of alternate.
- C. Submit price for each Alternate listed on Bid Form.
 - 1. State dollar amount to be added to or deducted from Base Bid, or indicate "No Change" in Base Bid.
 - 2. Alternate prices shall not increase by change in material prices, wage rates, or other escalatory factors.
 - 3. Alternate prices are all-inclusive, and include labor, materials, supervision, tools, equipment, taxes, overhead and profit.
- D. Notification: Immediately following award of Contract, notify each party involved, in writing, of status of each alternate. Indicate if alternates have been accepted, rejected, or deferred for later consideration.
 - 1. Include complete description of negotiated modifications to alternates, if applicable..
- E. Execution: Execute accepted alternates under the same conditions as other Work of the Contract.
 - 1. In executing Base Bid Work, make provisions for future completion of alternates where indicated in the Contract Documents.

1.03 ACCEPTANCE OF ALTERNATES

- A. Owner reserves the following Rights:
 - 1. To reject Alternates.
 - 2. To accept Alternates regardless of order or combination.
 - 3. To determine low bidder based on the sum of Base Bid and accepted Alternates.
 - 4. To delay decisions on Alternates and to accept or reject Alternates within 60 days after bid date, unless longer Alternate time frames are indicated.
- B. Coordinate related work and modify surrounding work to integrate the Work of each Alternate.

1.04 SCHEDULE OF ALTERNATES

- A. Alternate No. 1:
 - 1. Base Bid Item: No Ridge Cresting. Z-T coated copper ridge cap installed with slate roofing as indicated in Drawings.
 - 2. Alternate Item: Decorative Ridge Cresting with ridge cap modified to accept cresting.
 - a. Decorative Ridge Cresting: Water jet cut, 1/4 inch thick stainless steel plate.

- 1) 1905 Building: Assume 101 LF (VIF), 18 inches tall, design as shown on Drawings.
- 2) 1883 Building: Assume 201 LF (VIF), 24 inches tall version of same design.
- b. Finish Options: Architect to select from three options. Final color for first two options to be selected by Architect from manufacturer's full range. Provide separate line item cost for each of the following:
 - 1) Powder Coating: Color to be charcoal / dark gray, matte finish.
 - 2) PVDF Paint: AAMA 2605, color charcoal / dark gray, matte finish.
 - 3) Blackened Stainless: Using chemical or electrochemical process to create a black oxide finish.
- c. Z-T coated copper ridge cap installed with slate roofing, modified to allow installation of decorative ridge:
 - 1) Provide penetrations through ridge cap for cresting supports, with thimble flashing at each penetration soldered to ridgecap and sealed to each leg of cresting.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

**SECTION 013000
ADMINISTRATIVE REQUIREMENTS**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. General administrative requirements.
- B. Web-based project software service.
- C. Preconstruction meeting.
- D. Progress meetings.
- E. Construction progress schedule.
- F. Progress photographs.
- G. Number of copies of submittals.
- H. Requests for Interpretation (RFI) procedures.
- I. Submittal procedures.

1.02 GENERAL ADMINISTRATIVE REQUIREMENTS

- A. Comply with requirements of Section 017000 - Execution and Closeout Requirements for coordination of execution of administrative tasks with timing of construction activities.
- B. Make the following types of submittals to Architect:
 - 1. Requests for Interpretation (RFI).
 - 2. Requests for substitution.
 - 3. Shop drawings, product data, and samples.
 - 4. Test and inspection reports.
 - 5. Design data.
 - 6. Manufacturer's instructions and field reports.
 - 7. Applications for payment and change order requests.
 - 8. Progress schedules.
 - 9. Coordination drawings.
 - 10. Correction Punch List and Final Correction Punch List for Substantial Completion.
 - 11. Closeout submittals.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 WEB-BASED PROJECT SOFTWARE SERVICE

- A. Web-Based Project Software Service: Provide, administer, and use web-based project software to host and manage project communication and documentation.
 - 1. Include, at minimum, the following features:
 - a. Project directory, including Owner, Contractor, subcontractors, Architect, Architect's consultants, and other entities involved in the project. Include names of contact persons and contact information for each entity.
 - b. Access control for each entity and for each workflow process to determine each entity's digital rights to create, modify, view, and print documents.
 - c. Creation, logging, tracking, and notification for project communications.
 - d. Tracking of project communication statuses in real time, including timestamped response log.
 - e. Procedures for viewing PDFs or similar file formats, allowing markups by each entity. Provide security features to lock markups against changes once submitted.
 - f. Processing and tracking of payment applications.
 - g. Processing and tracking of contract modifications.
 - h. Creation and distribution of meeting minutes.

- i. Document management for drawings and specifications.
 - j. Management of construction progress photographs.
 - k. Creation and export of editable logs for software functions. Provide Owner, Architect, and Architect's consultants with rights and ability to download logs when requested.
2. Provide user licenses for use by Owner, Architect, Architect's consultants, and other entities involved in the project.
3. Comply with the software service's current published licensing agreements.
4. Training: Provide one-hour, web-based training session for users of software service. Further training is the responsibility of the user.
 - a. Representatives of Owner are scheduled and included in this training.
5. Project Closeout: Architect determines when to terminate the software service for the project and is responsible for obtaining archive copies of files for Owner.
6. Web-Based Project Software Services: The selected service is:
 - a. Newforma, Inc; Newforma Project Center (NPC) with Newforma Info Exchange (NIX): www.newforma.com/#sle.

3.02 PROGRESS MEETINGS

- A. Schedule and administer meetings throughout progress of the work at maximum bi-monthly intervals.
- B. Make arrangements for meetings, prepare agenda with copies for participants, preside at meetings.
- C. Attendance Required:
 1. Contractor.
 2. Owner.
 3. Architect.
 4. Contractor's superintendent.
 5. Major subcontractors.
- D. Agenda:
 1. Review minutes of previous meetings.
 2. Review of work progress.
 3. Field observations, problems, and decisions.
 4. Identification of problems that impede, or will impede, planned progress.
 5. Review of submittals schedule and status of submittals.
 6. Review of RFIs log and status of responses.
 7. Maintenance of progress schedule.
 8. Corrective measures to regain projected schedules.
 9. Planned progress during succeeding work period.
 10. Maintenance of quality and work standards.
 11. Effect of proposed changes on progress schedule and coordination.
 12. Other business relating to work.
- E. Record minutes and distribute copies within two days after meeting to participants, with two copies to Architect, Owner, participants, and those affected by decisions made.

3.03 CONSTRUCTION PROGRESS SCHEDULE

- A. Within 10 days after date of the Agreement, submit preliminary schedule defining planned operations for the first 60 days of work, with a general outline for remainder of work.
- B. If preliminary schedule requires revision after review, submit revised schedule within 10 days.
- C. Within 20 days after review of preliminary schedule, submit draft of proposed complete schedule for review.
 1. Include written certification that major contractors have reviewed and accepted proposed schedule.
- D. Within 10 days after joint review, submit complete schedule.

- E. Submit updated schedule with each Application for Payment.

3.04 PROGRESS PHOTOGRAPHS

- A. Submit photographs with each application for payment, taken not more than 3 days prior to submission of application for payment.
- B. Photography Type: Digital; electronic files.
- C. Provide photographs of site and construction throughout progress of work produced by an experienced photographer, acceptable to Architect.
- D. In addition to periodic, recurring views, take photographs of each of the following events:
 - 1. Final completion, minimum of ten (10) photos.
- E. Take photographs as evidence of existing project conditions as follows:
 - 1. Exterior views: Fully describe roof conditions including parapet joints, copings, finials, flashings, roof/wall intersections, smokestack, and built-in gutter.
 - 2. Provide documentary photos during and after removal of overbuild at built-in gutter and adjacent framing under wooden window sills.
- F. Views:
 - 1. Provide non-aerial photographs from four cardinal views at each specified time, until date of Substantial Completion.
 - 2. Consult with Architect for instructions on views required.
 - 3. Provide factual presentation.
 - 4. Provide correct exposure and focus, high resolution and sharpness, maximum depth of field, and minimum distortion.
- G. Digital Photographs: 24 bit color, minimum resolution of 1024 by 768, in JPG format; provide files unaltered by photo editing software.
 - 1. Delivery Medium: Via email or upload to project website as agreed upon prior to start.
 - 2. File Naming: Include project identification, date and time of view, and view identification.
 - 3. PDF File: Assemble all photos into printable pages in PDF format, with 2 to 3 photos per page, each photo labeled with file name; one PDF file per submittal.

3.05 REQUESTS FOR INTERPRETATION (RFI)

- A. Definition: A request seeking one of the following:
 - 1. An interpretation, amplification, or clarification of some requirement of Contract Documents arising from inability to determine from them the exact material, process, or system to be installed; or when the elements of construction are required to occupy the same space (interference); or when an item of work is described differently at more than one place in Contract Documents.
 - 2. A resolution to an issue which has arisen due to field conditions and affects design intent.
- B. Whenever possible, request clarifications at the next appropriate project progress meeting, with response entered into meeting minutes, rendering unnecessary the issuance of a formal RFI.
- C. Preparation: Prepare an RFI immediately upon discovery of a need for interpretation of Contract Documents. Failure to submit a RFI in a timely manner is not a legitimate cause for claiming additional costs or delays in execution of the work.
 - 1. Prepare a separate RFI for each specific item.
 - 2. Prepare in a format and with content acceptable to Owner.
- D. Reason for the RFI: Prior to initiation of an RFI, carefully study all Contract Documents to confirm that information sufficient for their interpretation is definitely not included.
 - 1. Unacceptable Uses for RFIs: Do not use RFIs to request the following:
 - a. Approval of submittals (use procedures specified elsewhere in this section).
 - b. Changes that entail change in Contract Time and Contract Sum (comply with provisions of the Conditions of the Contract).
- E. Content: Include identifiers necessary for tracking the status of each RFI, and information necessary to provide an actionable response.

1. Official Project name and number, and any additional required identifiers established in Contract Documents.
 2. Owner's, Architect's, and Contractor's names.
 3. Discrete and consecutive RFI number, and descriptive subject/title.
 4. Issue date, and requested reply date.
 5. Reference to particular Contract Document(s) requiring additional information/interpretation. Identify pertinent drawing and detail number and/or specification section number, title, and paragraph(s).
 6. Annotations: Field dimensions and/or description of conditions which have engendered the request.
 7. Contractor's suggested resolution: A written and/or a graphic solution, to scale, is required in cases where clarification of coordination issues is involved, for example; routing, clearances, and/or specific locations of work shown diagrammatically in Contract Documents. If applicable, state the likely impact of the suggested resolution on Contract Time or the Contract Sum.
- F. Attachments: Include sketches, coordination drawings, descriptions, photos, submittals, and other information necessary to substantiate the reason for the request.
- G. RFI Log: Prepare and maintain a tabular log of RFIs for the duration of the project.
1. Indicate current status of every RFI. Update log promptly and on a regular basis.
- H. Review Time: Architect will respond and return RFIs to Contractor within seven calendar days of receipt. For the purpose of establishing the start of the mandated response period, RFIs received after 12:00 noon will be considered as having been received on the following regular working day.
1. Response period may be shortened or lengthened for specific items, subject to mutual agreement, and recorded in a timely manner in progress meeting minutes.
- I. Responses: Content of answered RFIs will not constitute in any manner a directive or authorization to perform extra work or delay the project. If in Contractor's belief it is likely to lead to a change to Contract Sum or Contract Time, promptly issue a notice to this effect, and follow up with an appropriate Change Order request to Owner.
1. Response may include a request for additional information, in which case the original RFI will be deemed as having been answered, and an amended one is to be issued forthwith. Identify the amended RFI with an R suffix to the original number.
 2. Do not extend applicability of a response to specific item to encompass other similar conditions, unless specifically so noted in the response.
 3. Upon receipt of a response, promptly review and distribute it to all affected parties, and update the RFI Log.
 4. Notify Architect within seven calendar days if an additional or corrected response is required by submitting an amended version of the original RFI, identified as specified above.

3.06 SUBMITTALS FOR REVIEW

- A. When the following are specified in individual sections, submit them for review:
1. Product data.
 2. Design data (delegated design).
 3. Shop drawings.
 4. Samples for selection.
 5. Samples for verification.
- B. Submit to Architect for review for the limited purpose of checking for compliance with information given and the design concept expressed in Contract Documents.
- C. Samples will be reviewed for aesthetic, color, or finish selection.

- D. After review, provide copies and distribute in accordance with SUBMITTAL PROCEDURES article below and for record documents purposes described in Section 017800 - Closeout Submittals.

3.07 SUBMITTALS FOR PROJECT CLOSEOUT

- A. Submit Correction Punch List for Substantial Completion.
- B. Submit Final Correction Punch List for Substantial Completion.
- C. When the following are specified in individual sections, submit them at project closeout in compliance with requirements of Section 017800 - Closeout Submittals:
 - 1. Project record documents.
 - 2. Operation and maintenance data.
 - 3. Warranties.
 - 4. Bonds.
 - 5. Other types as indicated.
- D. Submit for Owner's benefit during and after project completion.

3.08 NUMBER OF COPIES OF SUBMITTALS

- A. Electronic Documents: Submit one electronic copy in PDF format; an electronically-marked up file will be returned. Create PDFs at native size and right-side up; illegible files will be rejected.
- B. Samples: Submit the number specified in individual specification sections; one of which will be retained by Architect.
 - 1. After review, produce duplicates.
 - 2. Retained samples will not be returned to Contractor unless specifically so stated.

3.09 SUBMITTAL PROCEDURES

- A. General Requirements:
 - 1. Sequentially identify each item. For revised submittals use original number and a sequential numerical suffix.
 - 2. Identify: Project; Contractor; subcontractor or supplier; pertinent drawing and detail number; and specification section number and article/paragraph, as appropriate on each copy.
 - 3. Apply Contractor's stamp, signed or initialed certifying that review, approval, verification of products required, field dimensions, adjacent construction work, and coordination of information is in accordance with the requirements of the work and Contract Documents.
 - 4. Deliver each submittal on date noted in submittal schedule, unless an earlier date has been agreed to by all affected parties, and is of the benefit to the project.
 - a. Send submittals in electronic format via project management software to Architect.
 - 5. Identify variations from Contract Documents and product or system limitations that may be detrimental to successful performance of the completed work.
 - 6. Provide space for Contractor and Architect review stamps.
 - 7. When revised for resubmission, identify all changes made since previous submission.
 - 8. Distribute reviewed submittals. Instruct parties to promptly report inability to comply with requirements.
 - 9. Incomplete submittals will not be reviewed, unless they are partial submittals for distinct portion(s) of the work, and have received prior approval for their use.
- B. Product Data Procedures:
 - 1. Submit only information required by individual specification sections.
 - 2. Collect required information into a single submittal.
 - 3. Submit concurrently with related shop drawing submittal.
 - 4. Do not submit (Material) Safety Data Sheets for materials or products.
- C. Shop Drawing Procedures:
 - 1. Prepare accurate, drawn-to-scale, original shop drawing documentation by interpreting Contract Documents and coordinating related work.

2. Do not reproduce Contract Documents to create shop drawings.
 3. Generic, non-project-specific information submitted as shop drawings do not meet the requirements for shop drawings.
- D. Samples Procedures:
1. Transmit related items together as single package.
 2. Identify each item to allow review for applicability in relation to shop drawings showing installation locations.

3.10 SUBMITTAL REVIEW

- A. Submittals for Review: Architect will review each submittal, and approve, or take other appropriate action.
- B. Submittals for Information: Architect will acknowledge receipt and review. See below for actions to be taken.
- C. Architect's actions will be reflected by marking each returned submittal using virtual stamp on electronic submittals.
1. Notations may be made directly on submitted items and/or listed on appended Submittal Review cover sheet.
- D. Architect's and consultants' actions on items submitted for review:
1. Authorizing purchasing, fabrication, delivery, and installation:
 - a. "Approved", or language with same legal meaning.
 - b. "Approved as Noted, Resubmission not required", or language with same legal meaning.
 - 1) At Contractor's option, submit corrected item, with review notations acknowledged and incorporated.
 - c. "Approved as Noted, Resubmit for Record", or language with same legal meaning.
 - 1) Resubmit corrected item, with review notations acknowledged and incorporated. Resubmit separately, or as part of project record documents.
 2. Not Authorizing fabrication, delivery, and installation:
 - a. "Submit Specified Item".
 - 1) Resubmit with item(s) noted. If other items included in same submittal are found compliant, those items will be noted with an appropriate action.
 - b. "Revise and Resubmit".
 - 1) Resubmit revised item, with review notations acknowledged and incorporated.
- E. Architect's and consultants' actions on items submitted for information:
1. Items for which no action was taken:
 - a. "Received" - to notify the Contractor that the submittal has been received for record only.
 2. Items for which action was taken:
 - a. "Reviewed" - no further action is required from Contractor.

END OF SECTION

SECTION 013591
PERIOD TREATMENT PROCEDURES

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Construction procedures appropriate for working with historic sites and structures.

1.02 RELATED REQUIREMENTS

- A. Section 020342 - Removal and Salvage of Period Construction Materials.

1.03 DEFINITIONS

- A. Dismantle: Disassemble and detach items by hand from existing construction to the limits indicated, using small hand tools and small one-hand power tools, to protect nearby historic surfaces, and legally dispose of dismantled items off-site, unless indicated to be salvaged or reinstalled.
- B. Existing to Remain: Existing items that are not to be removed or dismantled. Protect materials as indicated.
- C. In-Kind: Matching existing in physical and visual aspects including, but not limited to, material, form, color, texture, and workmanship.
- D. Matching: Blending with adjacent construction and showing no apparent difference in material type, form, detail, color, texture, finish, or other visible and readily discernible characteristics, as determined and approved by Architect.
- E. Preserve: Apply measures to sustain existing form, integrity, and materials of a historic property; may include preliminary measures to protect and stabilize the property.
- F. Protect: Take precautions to keep historic materials of the building from damage or injury.
- G. Refinish: Remove existing finishes from base material and apply new finish to match original or as otherwise indicated.
- H. Remove: Detach or dismantle items from existing construction and dispose of them off-site, unless items are indicated to be salvaged or reinstalled.
- I. Remove and Reinstall: Detach or dismantle items from existing construction in a manner to prevent damage. Clean and prepare for reuse and reinstall in original location or in other location where indicated.
- J. Remove and Salvage: Detach or dismantle items from existing construction in a manner to prevent damage. Clean, package, label, and deliver salvaged items to Owner in ready-for-reuse condition.
- K. Repair: Correct damage and defects, retaining existing materials, features, and finishes and employing as few new materials as possible. Includes patching, piecing-in, splicing, consolidating, or reinforcing or upgrading materials with appropriate and approved materials and methods.
- L. Replace: Remove, duplicate, and reinstall entire item with new material. Use original item as the pattern unless noted otherwise.
- M. Replicate or Reproduce: Fabricate a new item in exact detail, materials, and finish as the original, unless otherwise indicated; referred to as replicas or reproductions.
- N. Restore: Return to original condition; return to the condition extant during the period of interpretation.
- O. Retain: Existing to remain; keep existing items that are not to be removed or dismantled.
- P. Reversible: New construction work, treatment, or processes that can be removed or undone in the future without damaging historic materials.
- Q. Stabilize: Provide reinforcement of unsafe or deteriorated items and maintain the present, essential form; reestablish weather-resistant enclosure.

- R. Strip: Remove existing finish down to base material, unless otherwise indicated.

1.04 REFERENCE STANDARDS

- A. NFPA 241 - Standard for Safeguarding Construction, Alteration, and Demolition Operations; 2022, with Errata (2021).

1.05 ADMINISTRATIVE REQUIREMENTS

- A. Preinstallation Meeting: Conduct a preinstallation meeting one week prior to the start of the work of this section; require attendance by affected installers.

1.06 SUBMITTALS

- A. See Section 013000 - Administrative Requirements for submittal procedures.
- B. Project supervisor's qualification statement.
- C. Existing Conditions Documentation: Owner has procured digital photographic surveys of the roof (original and addition) and the attic area of the original 1883 building. The digital surveys may be accessed via website links shown in Section 011000 - Summary. Confirm existing conditions at start of Work and advise Architect of any substantive changes that could affect project cost or timeline.
- D. Project Record Documents:
1. Record of conditions encountered before, during, and after completion of work.

1.07 QUALITY ASSURANCE

- A. Project Supervisor: Master craftsperson with at least three years of documented experience in leading work similar in size and scope to this project.
1. Be present when a craftsperson begins to perform the work; explain the intended procedures.
 2. Supervise and actively participate in specific procedures.
- B. Craftspersons: Perform specific cleaning, repairing, and refinishing tasks; have demonstrated applicable successful experience in past historical preservation and restoration projects.

1.08 DELIVERY, STORAGE, AND HANDLING

- A. Storage and Protection: See also Section 011000 - Summary for Contractors use of site and premises.
1. Protect materials during storage and construction from rain, snow, or groundwater and from soiling with earth or other materials.
 - a. Store cementitious materials off ground, under cover, and in a dry location. Protect liquid components from freezing.
 - b. Comply with manufacturer's recommendations for minimum and maximum temperature requirements for storage.
 2. Store restoration and cleaning chemicals off-site or in metal cabinets on-site. Do not leave cans open or out of the cabinet overnight. Do not store in unlabeled containers.

1.09 FIELD CONDITIONS

- A. Smoking and use of tobacco products by personnel performing work on or about designated period treatment areas is not allowed.
- B. Environmental Requirements:
1. Wet or Humid Weather:
 - a. Do not remove exterior elements of structures when raining or rain is forecasted.
 - b. Do not apply primer, paint, putty, or epoxy when the relative humidity is above 80 percent and in accordance with manufacturer's recommendations.
 - c. Do not repair exterior features in rain or fog.
 2. Cold Weather: Do not perform exterior wet work when the air temperature is below 40 degrees F (4.4 degrees C).
 - a. Do not begin cleaning, patching, and similar work when frost or freezing temperatures are forecasted.

- C. Exterior Cleaning Procedures: Perform cleaning and rinsing of the exterior elements only during daylight hours.
- D. Protection of Existing Elements: In accordance with manufacturer's recommendations for use of proposed products and procedures and compatibility with adjacent historic building materials, components, vegetation, and waterways.

PART 2 - PRODUCTS

2.01 PROTECTION PRODUCTS

- A. Provide plywood protection of recently replaced windows that may be subject to damage from construction activity.

2.02 CLEANING MATERIALS

- A. General: Do not use incompatible materials that may contribute to damage of the element being cleaned.
- B. Use products specifically intended by the manufacturer for cleaning historic materials or elements.
- C. Use only approved environmentally friendly non-toxic products.

2.03 REPAIR MATERIALS

- A. General: Do not use incompatible materials contributing to damage of repaired elements.
- B. Matching: Unless otherwise required, use new materials that match historic materials in type, design, dimension, texture, detailing, and external appearance.

PART 3 - EXECUTION

3.01 PREPARATION

- A. Dismantling: Follow the reverse order of original construction to the extent practicable.

3.02 PERIOD TREATMENT SPECIAL PROCEDURES

- A. Comply with NFPA 241 including, but not limited to, applicable recommendations in Annex A.
 - 1. The building does not have fire suppression systems and is not monitored for vandalism or fire.
- B. Period Treatment Work: Intended to halt deterioration and stabilize the condition of building elements. Repair is necessary where preservation is not sufficient to ensure mid- to long-term survival. Select repair means and methods based on minimal disturbance of existing materials, systems, and assemblies.
- C. Metal Cornice and Trim Repair:
 - 1. Where it is determined existing trim cannot be adequately reattached to new decking, review condition with Architect. Where replacement is determined to be best solution, each profile is to be replicated in-kind.
- D. Selective removal of identified historic items and materials and removal of rubbish and debris.
 - 1. Perform work in accordance with requirements of Section 020342.
- E. Review proposed procedures for each type of element with Architect. Obtain approval from Architect before commencing work.
- F. Repair rather than replace architectural features wherever possible. Repair or replace missing features with accurate duplications.
- G. Use methods that do not significantly change the aesthetic effect of existing elements.
- H. Document condition of items being worked on before, during, and after work is completed.
- I. Provide Owner's written approval of changes, additions, or removal of historic structural fabric or historic property.
- J. Protect existing materials and substrates from damage.
- K. Protect existing elements and features removed, cleaned, and reused from material damage.

1. Label salvaged items and features and store at project site, in designated location; protect from damage.
 2. Permanently label new or replacement materials and features in an unobtrusive manner. Record type of identification and location of labels.
- L. Exterior Work Procedures: Protect parts of the facility not included in this work from damage.
1. Do not attach scaffolding, ladders, and working platforms to building unless approved in writing by the Architect.
 - a. Necessary attachments are never to be installed directly into stone work. Make attachments into mortar joints only.
 2. Protect waterways on each side of structure. Do not allow materials or debris of any kind to fall into waterways.

END OF SECTION

**SECTION 015000
TEMPORARY FACILITIES AND CONTROLS**

PART 1 GENERAL

1.01 TEMPORARY UTILITIES

- A. Provide and pay for all electrical power and water required for construction purposes.
 - 1. Provide generator(s) if necessary. Indicate proposed location of generator(s) on Site Utilization Plan.
- B. Existing facilities may not be used.
 - 1. Electrical System: The building electrical system is of limited capacity and unknown condition and is not to be used during construction.
 - 2. Do not leave any operating electrical item, including charging battery packs, overnight in the building.

1.02 TEMPORARY SANITARY FACILITIES

- A. Provide and maintain required facilities and enclosures. Provide at time of project mobilization.
- B. Maintain daily in clean and sanitary condition.

1.03 BARRIERS

- A. Provide barriers to prevent unauthorized entry to construction areas, to prevent access to areas that could be hazardous to workers or the public, to allow for owner's use of site and to protect existing facilities and adjacent properties from damage from construction operations and demolition.
- B. Protect non-owned vehicular traffic, stored materials, site, and structures from damage.

1.04 FENCING

- A. Construction: Commercial grade chain link fence.
- B. Provide 6 foot (1.8 m) high fence around construction site; equip with vehicular and pedestrian gates with locks.

1.05 EXTERIOR ENCLOSURES

- A. Protect recently replaced windows that may be impacted by construction operations.

1.06 SECURITY

- A. Existing security cameras to remain in operation.

1.07 VEHICULAR ACCESS AND PARKING

- A. Coordinate access and haul routes with governing authorities and Owner.
- B. Provide and maintain access to fire hydrants, free of obstructions.
- C. Provide means of removing mud from vehicle wheels before entering streets.
- D. Existing parking areas located at Pump House Drive may be used for construction parking.

1.08 WASTE REMOVAL

- A. Provide waste removal facilities and services as required to maintain the site in clean and orderly condition.
- B. Provide containers with lids. Remove trash from site periodically.
- C. Open free-fall chutes are not permitted. Terminate closed chutes into appropriate containers with lids.

1.09 FIELD OFFICES

- A. Coordinate with Owner to provide space for Project meetings within existing structure, with table and chairs to accommodate 6 persons.

1.10 REMOVAL OF UTILITIES, FACILITIES, AND CONTROLS

- A. Remove temporary utilities, equipment, facilities, materials, prior to Date of Substantial Completion inspection.
- B. Clean and repair damage caused by installation or use of temporary work.
- C. Restore existing facilities used during construction to original condition.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

**SECTION 016000
PRODUCT REQUIREMENTS**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Re-use of existing products.
- B. Transportation, handling, storage and protection.
- C. Product option requirements.
- D. Substitution limitations.
- E. Maintenance materials, including extra materials, spare parts, tools, and software.

1.02 RELATED REQUIREMENTS

- A. Section 017419 - Construction Waste Management and Disposal: Waste disposal requirements potentially affecting product selection, packaging and substitutions.

1.03 SUBMITTALS

- A. Proposed Products List: Submit list of major products proposed for use, with name of manufacturer, trade name, and model number of each product.
 - 1. Submit within 15 days after date of Agreement.
- B. Product Data Submittals: Submit manufacturer's standard published data. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information specific to this Project.
- C. Shop Drawing Submittals: Prepared specifically for this Project. Show products in context of project.
- D. Sample Submittals: Illustrate functional and aesthetic characteristics of the product, with integral parts and attachment devices. Coordinate sample submittals for interfacing work.
 - 1. For selection from standard finishes, submit samples of the full range of the manufacturer's standard colors, textures, and patterns.

PART 2 PRODUCTS

2.01 EXISTING PRODUCTS

- A. Do not use materials and equipment removed from existing premises unless specifically required or permitted by Contract Documents.
- B. Unforeseen historic items encountered remain the property of the Owner; notify Owner promptly upon discovery; protect, remove, handle, and store as directed by Owner.
- C. Existing materials and equipment indicated to be removed, but not to be re-used, relocated, reinstalled, delivered to the Owner, or otherwise indicated as to remain the property of the Owner, become the property of the Contractor; remove from site.

2.02 NEW PRODUCTS

- A. Provide new products unless specifically required or permitted by Contract Documents.

2.03 PRODUCT OPTIONS

- A. Products Specified by Reference Standards or by Description Only: Use any product meeting those standards or description.
- B. Products Specified by Naming One or More Manufacturers: Use a product of one of the manufacturers named and meeting specifications, no options or substitutions allowed.
- C. Products Specified by Naming One or More Manufacturers with a Provision for Substitutions: Submit a request for substitution for any manufacturer not named.
- D. Products Specified as Basis-of-Design: Submit substitution requests for unnamed products to Architect for evaluation.

2.04 MAINTENANCE MATERIALS

- A. Furnish extra materials, spare parts, tools, and software of types and in quantities specified in individual specification sections.
- B. Deliver to Project site; obtain receipt prior to final payment.

PART 3 EXECUTION - NOT USED

3.01 TRANSPORTATION AND HANDLING

- A. Package products for shipment in manner to prevent damage; for equipment, package to avoid loss of factory calibration.
- B. If special precautions are required, attach instructions prominently and legibly on outside of packaging.
- C. Coordinate schedule of product delivery to designated prepared areas in order to minimize site storage time and potential damage to stored materials.
- D. Transport and handle products in accordance with manufacturer's instructions.
- E. Transport materials in covered trucks to prevent contamination of product and littering of surrounding areas.
- F. Promptly inspect shipments to ensure that products comply with requirements, quantities are correct, and products are undamaged.
- G. Provide equipment and personnel to handle products by methods to prevent soiling, disfigurement, or damage, and to minimize handling.
- H. Arrange for the return of packing materials, such as wood pallets, where economically feasible.

3.02 STORAGE AND PROTECTION

- A. Designate receiving/storage areas for incoming products so that they are delivered according to installation schedule and placed convenient to work area in order to minimize waste due to excessive materials handling and misapplication. See Section 017419.
- B. Store and protect products in accordance with manufacturers' instructions.
- C. Store with seals and labels intact and legible.
- D. Store sensitive products in weathertight, climate-controlled enclosures in an environment favorable to product.
- E. For exterior storage of fabricated products, place on sloped supports above ground.
- F. Protect products from damage or deterioration due to construction operations, weather, precipitation, humidity, temperature, sunlight and ultraviolet light, dirt, dust, and other contaminants.
- G. Comply with manufacturer's warranty conditions, if any.
- H. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to prevent condensation and degradation of products.
- I. Prevent contact with material that may cause corrosion, discoloration, or staining.
- J. Provide equipment and personnel to store products by methods to prevent soiling, disfigurement, or damage.
- K. Arrange storage of products to permit access for inspection. Periodically inspect to verify products are undamaged and are maintained in acceptable condition.

END OF SECTION

**SECTION 017000
EXECUTION AND CLOSEOUT REQUIREMENTS**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Examination, preparation, and general installation procedures.
- B. Cutting and patching.
- C. Cleaning and protection.
- D. Closeout procedures, including Contractor's Correction Punch List, except payment procedures.

1.02 RELATED REQUIREMENTS

- A. Section 017800 - Closeout Submittals: Project record documents, operation and maintenance data, warranties, and bonds.

1.03 REFERENCE STANDARDS

- A. NFPA 241 - Standard for Safeguarding Construction, Alteration, and Demolition Operations; 2022, with Errata (2021).

1.04 SUBMITTALS

- A. See Section 013000 - Administrative Requirements, for submittal procedures.
- B. Cutting and Patching: Submit written request in advance of cutting or alteration that affects:
 - 1. Structural integrity of any element of Project.
 - 2. Integrity of any historic element or material.
 - 3. Integrity of weather exposed or moisture resistant element.
 - 4. Efficiency, maintenance, or safety of any operational element.
 - 5. Visual qualities of sight exposed elements.
 - 6. Work of Owner or separate Contractor.

1.05 QUALIFICATIONS

- A. For design of temporary shoring and bracing, employ a Professional Engineer experienced in design of this type of work and licensed in the State in which the Project is located.

1.06 PROJECT CONDITIONS

- A. Erosion and Sediment Control: Plan and execute work by methods to control surface drainage from use of vehicles and lifts, staging of materials, and waste disposal areas. Prevent erosion and sedimentation.
- B. Pollution Control: Provide methods, means, and facilities to prevent contamination of soil, water, and atmosphere from discharge of noxious, toxic substances, and pollutants produced by construction operations. Comply with federal, state, and local regulations.

PART 2 PRODUCTS

2.01 PATCHING MATERIALS - ROOF DECKING

- A. New Materials: As specified in product sections; match existing products and work for patching and extending work.
- B. Type and Quality of Existing Products: Determine by inspecting and testing products where necessary, referring to existing work as a standard.
- C. Product Substitution: For any proposed change in materials, submit request for substitution described in Section 016000 - Product Requirements.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that existing site conditions and substrate surfaces are acceptable for subsequent work. Start of work means acceptance of existing conditions.
- B. Verify that existing substrate is capable of structural support or attachment of new work being applied or attached.
- C. Examine and verify specific conditions described in individual specification sections.
- D. Take field measurements before confirming product orders or beginning fabrication, to minimize waste due to over-ordering or misfabrication.
- E. Verify that utility services are available, of the correct characteristics, and in the correct locations.
- F. Prior to Cutting: Examine existing conditions prior to commencing work, including elements subject to damage or movement during cutting and patching. After uncovering existing work, assess conditions affecting performance of work. Beginning of cutting or patching means acceptance of existing conditions.

3.02 PREPARATION

- A. Clean substrate surfaces prior to applying next material or substance.
- B. Apply manufacturer required or recommended substrate primer, sealer, or conditioner prior to applying any new material or substance in contact or bond.

3.03 GENERAL INSTALLATION REQUIREMENTS

- A. In addition to compliance with regulatory requirements, conduct construction operations in compliance with NFPA 241, including applicable recommendations in Appendix A.
- B. Install products as specified in individual sections, in accordance with manufacturer's instructions and recommendations, and so as to avoid waste due to necessity for replacement.

3.04 CUTTING AND PATCHING

- A. Whenever possible, execute the work by methods that avoid cutting or patching.
- B. Perform whatever cutting and patching is necessary to:
 - 1. Complete the work.
 - 2. Fit products together to integrate with other work.
 - 3. Match work that has been cut to adjacent work.
 - 4. Repair areas adjacent to cuts to required condition.
 - 5. Repair new work damaged by subsequent work.
 - 6. Remove samples of installed work for testing when requested.
 - 7. Remove and replace defective and non-complying work.
- C. Employ original installer to perform cutting for weather exposed and moisture resistant elements, and sight exposed surfaces.
- D. Cut rigid materials using masonry saw or core drill. Pneumatic tools not allowed without prior approval.
- E. Restore work with new products in accordance with requirements of Contract Documents.
- F. Fit work air tight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.
- G. At penetrations of fire rated walls, partitions, ceiling, or floor construction, completely seal voids with fire rated material in accordance with Section 078400, to full thickness of the penetrated element.

3.05 PROGRESS CLEANING

- A. Maintain areas free of waste materials, debris, and rubbish. Maintain site in a clean and orderly condition.

- B. Collect and remove waste materials, debris, and trash/rubbish from site periodically and dispose off-site; do not burn or bury.

3.06 PROTECTION OF INSTALLED WORK

- A. Protect installed work from damage by construction operations.
- B. Provide special protection where specified in individual specification sections.
- C. Provide temporary and removable protection for installed products. Control activity in immediate work area to prevent damage.
- D. Provide protective coverings at walls, projections, jambs, sills, and soffits of openings.
- E. Protect finished floors, stairs, and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects, by protecting with durable sheet materials.
- F. Prohibit traffic or storage upon waterproofed or roofed surfaces. If traffic or activity is necessary, obtain recommendations for protection from waterproofing or roofing material manufacturer.
- G. Remove protective coverings when no longer needed; reuse or recycle coverings if possible.

3.07 ADJUSTING

- A. Adjust operating products and equipment to ensure smooth and unhindered operation.

3.08 FINAL CLEANING

- A. Execute final cleaning prior to final project assessment.
- B. Use cleaning materials that are nonhazardous.
- C. Clean roof surfaces exposed to view; remove temporary labels, stains and foreign substances.
- D. Remove all labels that are not permanent. Do not paint or otherwise cover fire test labels or nameplates on mechanical and electrical equipment.
- E. Clean equipment and fixtures to a sanitary condition with cleaning materials appropriate to the surface and material being cleaned.
- F. Clean filters of operating equipment.
- G. Clean debris from roofs, gutters, and downspouts.
- H. Clean site; sweep paved areas, rake clean landscaped surfaces.
- I. Remove waste, surplus materials, trash/rubbish, and construction facilities from the site; dispose of in legal manner; do not burn or bury.

3.09 CLOSEOUT PROCEDURES

- A. Make submittals that are required by governing or other authorities.
- B. Accompany Project Coordinator on preliminary inspection to determine items to be listed for completion or correction in the Contractor's Correction Punch List for Contractor's Notice of Substantial Completion.
- C. Notify Architect when work is considered ready for Architect's Substantial Completion inspection.
- D. Submit written certification containing Contractor's Correction Punch List, that Contract Documents have been reviewed, work has been inspected, and that work is complete in accordance with Contract Documents and ready for Architect's Substantial Completion inspection.
- E. Conduct Substantial Completion inspection and create Final Correction Punch List containing Architect's and Contractor's comprehensive list of items identified to be completed or corrected and submit to Architect.
- F. Correct items of work listed in Final Correction Punch List and comply with requirements for access to Owner-occupied areas.

- G. Notify Architect when work is considered finally complete and ready for Architect's Substantial Completion final inspection.
- H. Complete items of work determined by Architect listed in executed Certificate of Substantial Completion.

END OF SECTION

**SECTION 017419
CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL**

PART 1 GENERAL

1.01 WASTE MANAGEMENT REQUIREMENTS

- A. Owner requires that this project generate the least amount of trash and waste possible.
- B. Employ processes that ensure the generation of as little waste as possible due to error, poor planning, breakage, mishandling, contamination, or other factors.
- C. Minimize trash/waste disposal in landfills; reuse, salvage, or recycle as much waste as economically feasible.
- D. Required Recycling, Salvage, and Reuse: The following may not be disposed of in landfills or by incineration:
 - 1. Aluminum and plastic beverage containers.
 - 2. Corrugated cardboard.
 - 3. Wood pallets.
 - 4. Clean dimensional wood.
 - 5. Metals, including packaging banding, metal studs, sheet metal, structural steel, piping, reinforcing bars, door frames, and other items made of steel, iron, galvanized steel, stainless steel, aluminum, copper, zinc, lead, brass, and bronze.
- E. Contractor Reporting Responsibilities: Submit periodic Waste Disposal Reports; report landfill disposal, incineration, recycling, salvage, and reuse regardless of to whom the cost or savings accrues; use the same units of measure on required reports.
- F. Develop and follow a Waste Management Plan designed to implement these requirements.
- G. Methods of trash/waste disposal that are not acceptable are:
 - 1. Burning on the project site.
 - 2. Burying on the project site.
 - 3. Dumping or burying on other property, public or private.
 - 4. Other illegal dumping or burying.
- H. Regulatory Requirements: Contractor is responsible for knowing and complying with regulatory requirements, including but not limited to Federal, state and local requirements, pertaining to legal disposal of all construction and demolition waste materials.

1.02 RELATED REQUIREMENTS

- A. Section 013000 - Administrative Requirements: Additional requirements for project meetings, reports, submittal procedures, and project documentation.
- B. Section 015000 - Temporary Facilities and Controls: Additional requirements related to trash/waste collection and removal facilities and services.
- C. Section 016000 - Product Requirements: Waste prevention requirements related to delivery, storage, and handling.
- D. Section 017000 - Execution and Closeout Requirements: Trash/waste prevention procedures related to demolition, cutting and patching, installation, protection, and cleaning.

1.03 DEFINITIONS

- A. Clean: Untreated and unpainted; not contaminated with oils, solvents, caulk, or the like.
- B. Construction and Demolition Waste: Solid wastes typically including building materials, packaging, trash, debris, and rubble resulting from construction, remodeling, repair and demolition operations.
- C. Hazardous: Exhibiting the characteristics of hazardous substances, i.e., ignitibility, corrosivity, toxicity or reactivity.
- D. Nonhazardous: Exhibiting none of the characteristics of hazardous substances, i.e., ignitibility, corrosivity, toxicity, or reactivity.

- E. Nontoxic: Neither immediately poisonous to humans nor poisonous after a long period of exposure.
- F. Recyclable: The ability of a product or material to be recovered at the end of its life cycle and remanufactured into a new product for reuse by others.
- G. Recycle: To remove a waste material from the project site to another site for remanufacture into a new product for reuse by others.
- H. Recycling: The process of sorting, cleansing, treating and reconstituting solid waste and other discarded materials for the purpose of using the altered form. Recycling does not include burning, incinerating, or thermally destroying waste.
- I. Return: To give back reusable items or unused products to vendors for credit.
- J. Reuse: To reuse a construction waste material in some manner on the project site.
- K. Salvage: To remove a waste material from the project site to another site for resale or reuse by others.
- L. Sediment: Soil and other debris that has been eroded and transported by storm or well production run-off water.
- M. Source Separation: The act of keeping different types of waste materials separate beginning from the first time they become waste.
- N. Toxic: Poisonous to humans either immediately or after a long period of exposure.
- O. Trash: Any product or material unable to be reused, returned, recycled, or salvaged.
- P. Waste: Extra material or material that has reached the end of its useful life in its intended use. Waste includes salvageable, returnable, recyclable, and reusable material.

1.04 SUBMITTALS

- A. See Section 013000 - Administrative Requirements for submittal procedures.
- B. Waste Management Plan: Include the following information:
 - 1. Analysis of the trash and waste projected to be generated during the entire project construction cycle, including types and quantities.
 - 2. Landfill Options: The name, address, and telephone number of the landfill(s) where trash/waste will be disposed of, the applicable landfill tipping fee(s), and the projected cost of disposing of all project trash/waste in the landfill(s).
 - 3. Landfill Alternatives: List all waste materials that will be diverted from landfills by reuse, salvage, or recycling.
 - 4. Transportation: Identify the destination and means of transportation of materials to be recycled; i.e. whether materials will be site-separated and self-hauled to designated centers, or whether mixed materials will be collected by a waste hauler.
- C. Waste Disposal Reports: Submit at specified intervals, with details of quantities of trash and waste, means of disposal or reuse, and costs; show both totals to date and since last report.
 - 1. Submit updated Report with each Application for Progress Payment; failure to submit Report will delay payment.
 - 2. Submit Report on a form acceptable to Owner.
 - 3. Landfill Disposal: Include the following information:
 - a. Identification of material.
 - b. Amount, in tons or cubic yards (cubic meters), of trash/waste material from the project disposed of in landfills.
 - c. State the identity of landfills, total amount of tipping fees paid to landfill, and total disposal cost.
 - d. Include manifests, weight tickets, receipts, and invoices as evidence of quantity and cost.
 - 4. Recycled and Salvaged Materials: Include the following information for each:

- a. Identification of material, including those retrieved by installer for use on other projects.
- b. Amount, in tons or cubic yards (cubic meters), date removed from the project site, and receiving party.
- c. Transportation cost, amount paid or received for the material, and the net total cost or savings of salvage or recycling each material.
- d. Include manifests, weight tickets, receipts, and invoices as evidence of quantity and cost.
- e. Certification by receiving party that materials will not be disposed of in landfills or by incineration.

PART 3 EXECUTION

2.01 WASTE MANAGEMENT PROCEDURES

- A. See Section 013000 for additional requirements for project meetings, reports, submittal procedures, and project documentation.
- B. See Section 015000 for additional requirements related to trash/waste collection and removal facilities and services.
- C. See Section 016000 for waste prevention requirements related to delivery, storage, and handling.
- D. See Section 017000 for trash/waste prevention procedures related to demolition, cutting and patching, installation, protection, and cleaning.

2.02 WASTE MANAGEMENT PLAN IMPLEMENTATION

- A. Communication: Distribute copies of the Waste Management Plan to job site foreman, each subcontractor, Owner, and Architect.
- B. Instruction: Provide on-site instruction of appropriate separation, handling, and recycling, salvage, reuse, and return methods to be used by all parties at the appropriate stages of the project.
- C. Recycling: Separate, store, protect, and handle at the site identified recyclable waste products in order to prevent contamination of materials and to maximize recyclability of identified materials. Arrange for timely pickups from the site or deliveries to recycling facility in order to prevent contamination of recyclable materials.
- D. Salvage: Set aside, sort, and protect products to be salvaged for reuse off-site.

END OF SECTION

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**SECTION 017800
CLOSEOUT SUBMITTALS**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Project record documents.
- B. Warranties and bonds.

1.02 RELATED REQUIREMENTS

- A. Section 013000 - Administrative Requirements: Submittals procedures, shop drawings, product data, and samples.
- B. Individual Product Sections: Warranties required for specific products or Work.

1.03 SUBMITTALS

- A. Project Record Documents: Submit documents to Architect with claim for final Application for Payment.
- B. Warranties and Bonds:
 - 1. For equipment or component parts of equipment put into service during construction with Owner's permission, submit documents within 10 days after acceptance.
 - 2. Make other submittals within 10 days after Date of Substantial Completion, prior to final Application for Payment.
 - 3. For items of Work for which acceptance is delayed beyond Date of Substantial Completion, submit within 10 days after acceptance, listing the date of acceptance as the beginning of the warranty period.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 PROJECT RECORD DOCUMENTS

- A. Maintain on site one set of the following record documents; record actual revisions to the Work:
 - 1. Drawings.
 - 2. Specifications.
 - 3. Addenda.
 - 4. Change Orders and other modifications to the Contract.
- B. Ensure entries are complete and accurate, enabling future reference by Owner.
- C. Store record documents separate from documents used for construction.
- D. Record information concurrent with construction progress.
- E. Specifications: Legibly mark and record at each product section description of actual products installed, including the following:
 - 1. Changes made by Addenda and modifications.
- F. Record Drawings: Legibly mark each item to record actual construction including:
 - 1. Field changes of dimension and detail.
 - 2. Details not on original Contract drawings.

3.02 WARRANTIES AND BONDS

- A. Obtain warranties and bonds, executed in duplicate by responsible Subcontractors, suppliers, and manufacturers, within 10 days after completion of the applicable item of work. Except for items put into use with Owner's permission, leave date of beginning of time of warranty until Date of Substantial completion is determined.
- B. Verify that documents are in proper form, contain full information, and are notarized.
- C. Co-execute submittals when required.
- D. Retain warranties and bonds until time specified for submittal.

- E. Manual: Bind in commercial quality 8-1/2 by 11 inch (216 by 279 mm) three D side ring binders with durable plastic covers.
- F. Cover: Identify each binder with typed or printed title WARRANTIES AND BONDS, with title of Project; name, address and telephone number of Contractor and equipment supplier; and name of responsible company principal.
- G. Table of Contents: Neatly typed, in the sequence of the Table of Contents of the Project Manual, with each item identified with the number and title of the specification section in which specified, and the name of product or work item.
- H. Separate each warranty or bond with index tab sheets keyed to the Table of Contents listing. Provide full information, using separate typed sheets as necessary. List Subcontractor, supplier, and manufacturer, with name, address, and telephone number of responsible principal.

END OF SECTION

SECTION 020342
REMOVAL AND SALVAGE OF PERIOD CONSTRUCTION MATERIALS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Work includes deconstruction and salvage of identified historic items and materials and removal of rubbish and debris.
- B. Specified procedures required for restoration treatment areas.
- C. Historic items and materials are indicated on drawings.

1.02 RELATED REQUIREMENTS

- A. Section 011000 - Summary: Contract descriptions and use of site and premises.
- B. Section 013591 - Period Treatment Procedures for general historic preservation project requirements.

1.03 DEFINITIONS

- A. Debris: Nonhistoric building materials and contents destroyed during demolition.
- B. Deconstruction: Systematic dismantling and removal of a structure or its parts and salvage of elements and components for reuse, recycling, and retaining maximum value.

1.04 REFERENCE STANDARDS

- A. NFPA 241 - Standard for Safeguarding Construction, Alteration, and Demolition Operations; 2022, with Errata (2021).

1.05 SUBMITTALS

- A. See Section 013000 - Administrative Requirements for submittal procedures.
- B. Deconstruction Crew's Qualification Statement: Documentation of three consecutive years of work of this type, including similar projects identifying when, where, and for whom the work was performed.
- C. Work Plan: Detailed, proposed instructions for each type of operation of procedures for accomplishment of deconstruction work, including detailed description of the methods and equipment to be used and sequence of operations. Include the following:
 - 1. Extent of deconstruction, removal sequences, temporary and permanent bracing and shoring, and location and construction of barricades and fences.
 - 2. Instructions for removal and disposition of period materials specified to be salvaged or recycled.
 - 3. Protection of property to remain undisturbed.
 - 4. Safe conduct of the work. Submit for information only.

1.06 QUALITY ASSURANCE

- A. Deconstruction Crew Qualifications: Workers trained and experienced in removal and salvage of historic materials.

1.07 FIELD CONDITIONS

- A. Comply with applicable requirements of NFPA 241.
- B. Protection of Existing Historic Property: Before beginning removal, salvage, or demolition work, survey the site and examine the drawings and specifications to determine the extent of the work. Take necessary precautions to avoid damage to existing items to remain in place, be reused, or remain Owner's property. Repair or restore to original condition items damaged by Contractor, using approved means, methods, and techniques. Replace items that cannot be successfully repaired or restored to original condition.
 - 1. Construct and maintain shoring, bracing, and supports required as a result of cutting, removal, or demolition work
 - 2. Ensure that structural elements are not overloaded.

- C. Store materials to be salvaged or recycled daily, out of contact with the ground, under weathertight covering, in areas designated by Owner, and in the manner direct by Owner.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.01 PERIOD TREATMENT, GENERAL

- A. See Section 013591 for special procedure requirements related to elements and features of historical significance and value.

3.02 MATERIALS OWNERSHIP

- A. Unless otherwise indicated, demolition waste becomes property of Contractor.
- B. Slate Roofing: Unbroken, salvaged slate shingles shall be crated and reviewed with Owner for suitability for future use by Owner.
- C. If found, historic items, relics, antiques, and similar objects including, but not limited to, cornerstones and their contents, commemorative plaques and tablets, and other items of interest or value to Owner that may be uncovered during demolition remain the property of Owner.

3.03 GENERAL PROCEDURES

- A. Drawings indicating existing construction are based on non-invasive digital documentation. Conditions of substrates below surface elements have not been confirmed.
 - 1. Verify that construction arrangements are as indicated.
 - 2. Report discrepancies to Architect before disturbing existing historic elements.
 - 3. Beginning of work constitutes acceptance of existing conditions that are apparent upon examination at that time.
- B. Maintain weatherproof exterior building enclosure except for interruptions required for replacement or modifications; exercise care to prevent water damage.

3.04 ENVIRONMENTAL CONTROLS

- A. Comply with federal, state, and local regulations pertaining to water, air, solid waste, recycling, chemical waste, sanitary waste, sediment, and noise pollution.
- B. Protection of Natural Resources: Preserve the natural resources within the project boundaries or restore to an equivalent condition.
- C. Confine removal activities to roof area indicated.
 - 1. Temporary Construction: At the conclusion of the project, remove indications of temporary construction facilities, such as stockpiles, or waste areas.
 - 2. Water Resources: Comply with applicable regulations concerning direct or indirect discharge of pollutants to underground and natural surface waters.
 - 3. Oily Substances: Prevent oily or other hazardous substances from entering the ground, drainage areas, or local bodies of water in such quantities as to affect normal use, aesthetics, or produce a measurable ecological impact on the area.
 - a. Store and service construction equipment at areas designated for collection of oil wastes.

3.05 ITEMS TO BE SALVAGED

- A. General: Salvage slate shingles to the maximum extent possible. Maintain a chain of custody of salvaged materials, including the condition of such materials before and after salvage operations.
 - 1. Take care not to damage historic portions of the structure scheduled to remain or items identified for salvage.

3.06 MATERIALS TO BE REMOVED

- A. Remove existing nonhistoric elements as indicated and as required to allow direct access to period construction elements indicated to be restored or salvaged for reuse.

- B. Protect existing historic elements.
 - 1. Hauling equipment and other materials shall be of sizes that clear surfaces within historic spaces, areas, rooms, and openings, including temporary protection, by 12 inches (300mm) or more.
 - 2. Prevent movement of structure; provide temporary, removable shoring and bracing if necessary.
 - 3. Perform cutting to accomplish removals neatly, minimizing overcutting.

3.07 CLEANING

- A. Upon completion of work, clean dust, dirt, and debris caused by salvage and demolition operations from portions of existing structure to remain and adjacent areas. Remove and transport debris and rubbish in a manner that prevents spillage on streets or adjacent areas. Obey local regulations regarding hauling and disposal.

END OF SECTION

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**SECTION 040300
MASONRY PARAPET JOINTS**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Raking and repointing of existing mortar joints.
- B. Masonry joint prep and lead tee-caps.

1.02 RELATED REQUIREMENTS

- A. Section 013591 - Period Treatment Procedures for general historic preservation project requirements.

1.03 REFERENCE STANDARDS

- A. ASTM C144 - Standard Specification for Aggregate for Masonry Mortar; 2024.
- B. ASTM C150/C150M - Standard Specification for Portland Cement; 2024.
- C. ASTM C207 - Standard Specification for Hydrated Lime for Masonry Purposes; 2024.
- D. ASTM C661 - Standard Test Method for Indentation Hardness of Elastomeric-Type Sealants by Means of a Durometer; 2015 (Reapproved 2022).
- E. ASTM C920 - Standard Specification for Elastomeric Joint Sealants; 2018 (Reapproved 2024).

1.04 ADMINISTRATIVE REQUIREMENTS

- A. Preinstallation Meeting: Convene one week prior to commencing work of this section.
 - 1. Require attendance of parties directly affecting work of this section.
 - 2. Review installation conditions, procedures, and coordination with related work.

1.05 SUBMITTALS

- A. See Section 013000 - Administrative Requirements for submittal procedures.
- B. Product Data: For each type of product indicated. Provide test data substantiating products comply with requirements.
- C. Samples: Submit two samples of proposed tee cap, 6 inches long.
 - 1. Include color sample of tee manufacturer's recommended sealant.
- D. Manufacturer's Instructions: For cleaning materials, indicate special procedures, conditions requiring special attention.

1.06 MOCK-UPS

- A. Cut out two stone joints to recommended depth, apply sealant, backer, and lead tee caps.
- B. Locate mock-up areas accessible to Architect and Owner representatives.
- C. Approved restoration mock-up areas, including results of procedures employed, will remain and become the quality standard for work of this section.

PART 2 PRODUCTS

2.01 MORTAR MATERIALS

- A. Hydrated Lime: ASTM C207, Type S.
- B. Portland Cement: ASTM C150/C150M, Type I; color required to match approved color sample.
- C. Water: Clean and free of oils, acids, alkalies, salts, organic materials, or other substances that are deleterious to mortar or metal it comes in contact with.
- D. Sand: ASTM C144.

2.02 MORTAR MIXING:

- A. General Requirements:
 - 1. Exterior Masonry Mortar Proportions: Type O 1/2/9.
 - 2. Match the historic mortar in color, texture, and tooling .

3. Provide mortar that has same vapor permeability and same or slightly lower compressive strength than the historic mortar.
4. Basis-of-Design Product: Provide mortar from York Workrite Cements or a comparable product from one of the following:
 - a. Otterbein.
 - b. U.S. Heritage.

2.03 ACCESSORY MATERIALS

- A. Lead Covers for Sealant Joints: T-shaped lead profile for embedment into freshly-applied joint sealant.
 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following;
 - a. Litsco; Lead Tee Joints; www.litsco.com.
 - b. Nuclead Manufacturing Co., Inc; Lead T-Caps; www.nuclead.com.
 - c. Weathercap, Inc; Tee Cap: www.weathercap.net/#sle.
 - d. Substitutions: See Section 016000 - Product Requirements.
 2. Width: Joint width plus 1/4 inch minimum.
 3. Sealant:
 - a. Hybrid Elastomeric Sealant: ASTM C920, Grade NS, Uses M and A; single component; not expected to withstand continuous water immersion or traffic.
 - 1) Movement Capability: Plus and minus 50 percent, minimum.
 - 2) Hardness Range: 15 to 25, Shore A, when tested in accordance with ASTM C661.
 - 3) Color: Match adjacent finished surfaces.
 - 4) Service Temperature Range: Minus 75 to 300 degrees F (Minus 60 to 150 degrees C).
 - 5) Products: Subject to compliance with requirements, provide sealant from one of the following:
 - (a) Dow: www.dow.com/#sle.
 - (b) Master Builders Solutions; MasterSeal NP100: www.master-builders-solutions.com/en-us/#sle.
 - (c) Sherwin-Williams Company; Stampede 100 Low-Modulus Hybrid Urethane Sealant: www.sherwin-williams.com/#sle.
 - (d) Sika Corporation; Sikaflex HY 100: usa.sika.com/#sle.
 - (e) Tremco Commercial Sealants and Waterproofing; Dymonic FC: www.tremcosealants.com/#sle.

PART 3 EXECUTION

3.01 PERIOD TREATMENT, GENERAL

- A. See Section 013591 for special procedure requirements related to elements and features of historical significance and value.

3.02 EXAMINATION

- A. Verify joints to have stone flashing strips are cut out to correct depth and clean.

3.03 PREPARATION

- A. Protect other elements from damage that may result from restoration procedures.
- B. Protect nonrestoration areas from restoration areas to prevent damage.
- C. Protect roof membrane and flashings from damage with 1/2-inch (13 mm) plywood laid on roof surfaces over entire work area and traffic route.
- D. When using liquid cleaning methods, provide drainage devices to prevent runoff over adjacent surfaces, unless those surfaces are impervious to damage from runoff.
- E. Do not allow cleaning runoff to drain into sanitary, storm sewers or waterways.

- F. Do not attach scaffolding, ladders, or working platforms to the building without written authorization and instructions from Architect.

3.04 INSTALLATION

- A. Do not mix or apply materials when the ambient temperature or humidity are outside of range recommended by their manufacturers.
- B. Schedule conservation treatments to be carried out during appropriate environmental conditions to avoid weather-related failures.

3.05 REPOINTING - PARAPET JOINTS

- A. Repoint all parapet coping joints, finishing with tee cap joint covers on skyfacing joints.
- B. Perform repointing prior to cleaning masonry surfaces.
- C. Cut out loose or disintegrated mortar in joints to minimum 1/2-inch (6 mm) depth or until sound mortar is reached.
- D. Use hand tools only. Do not use power tools.
- E. Exercise appropriate caution to prevent damage to existing masonry.
- F. When cutting is complete, remove dust and loose material with air jet.
- G. Premoisten joints and apply pointing mortar. Pack tightly in maximum 1/4-inch (6 mm) layers. Form a smooth, compact concave joint to match existing.
- H. Moist cure for 72 hours.

3.06 LEAD JOINT COVERS

- A. Mask off joints, apply joint sealant, and install lead joint cover in accordance with manufacturer's instructions and as follows:
 - 1. Wear protective gloves when working with lead products.
 - 2. Cut strips to conform to stone profile with length adequate to allow end turn-down of 1 inch minimum front and back of stone coping.
 - 3. Miter or cope intersecting joints to create close fitting, weather resisting joint.
 - 4. Install backer rod 1/4 inch below tip of tee cap.
 - 5. Mask off stone on either side of joint.
 - 6. Prime stone as recommended by sealant manufacturer.
 - 7. Fill joint with sealant slightly above masonry surface and press tee cap into sealant, filling bonding grooves leaving no voids between cap and masonry.
 - 8. Clean off excess sealant and leave masonry clean. Remove masking.

3.07 CLEANING

- A. Remove stains, efflorescence, or other excess resulting from the work of this section. Do without delay to avoid penetration and setting.
- B. Remove excess mortar, smears, and droppings as work proceeds and upon completion.
- C. Clean surrounding surfaces.

END OF SECTION

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**SECTION 060300
WOOD REPAIR**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Repair of damaged wood components (window sills).

1.02 RELATED REQUIREMENTS

- A. Section 013591 - Period Treatment Procedures for general historic preservation project requirements.

1.03 DEFINITIONS

- A. Consolidant: Chemical product to strengthen loose or deteriorated wood.
- B. Dutchman: Repair method in which deteriorated wood component is removed in part and replaced with salvaged, harvested, or new wood.
- C. In situ: Repair procedure in which wood elements and components remain in place and are repaired without removal from the system they are a part of.
- D. Patch: Use of substitute repair materials to treat damaged or deteriorated components in situ.
- E. Surface Treatment: Application of traditional materials or contemporary chemical products to the surface of wood components to provide protection and reduce water infiltration.

1.04 REFERENCE STANDARDS

- A. ASTM D638 - Standard Test Method for Tensile Properties of Plastics; 2022.
- B. ASTM D695 - Standard Test Method for Compressive Properties of Rigid Plastics; 2023.
- C. ASTM D790 - Standard Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials; 2017.

1.05 SUBMITTALS

- A. See Section 013000 - Administrative Requirements for submittal procedures.
- B. Product Data: Provide data on wood repair products.

1.06 QUALITY ASSURANCE

- A. Restorer Qualifications: Company specializing in period wood restoration with minimum five years of documented experience.
 - 1. Use experienced carpenters who have demonstrated proficiency in properly operating tools on historic elements.

PART 2 PRODUCTS

2.01 REPLACEMENT FINISH CARPENTRY MATERIALS - DUTCHMAN REPAIR

- A. Exterior Finish Carpentry Items: Matching existing elements.
 - 1. Species: Sapele.
 - 2. Window Sills: Prepare for opaque finish.

2.02 WOOD REPAIR MATERIALS

- A. Source Limitations: Obtain compatible consolidants and patching and filling compounds from single manufacturer.
- B. Manufacturers:
 - 1. Abatron: www.abatron.com/#sle.
 - 2. Conserve Epoxy: www.conserveepoxy.com/#sle.
 - 3. Protective Coatings Company: www.pcepoxy.com/#sle.
 - 4. Substitutions: Not permitted.
- C. Consolidants:

1. Water Based: Single-component, low-viscosity adhesive to penetrate and restore deteriorated wood.
 - a. Primer for patching and filling compounds.
- D. Patching and Filling Compounds:

2.03 BONDING ADHESIVES

- A. Manufacturers:
 1. Abatron: www.abatron.com/#sle.
 2. Protective Coatings, Inc: www.pcepoxy.com/#sle.
 3. Conserve Epoxy: www.conservepoxy.com/#sle.
- B. General: Products for repairing and bonding wood and wood-based materials.
- C. Epoxy Adhesive: Two-part; clear resin and amber hardener adhesive with medium viscosity.
 1. Mix Ratio: Recommended by manufacturer.
 2. Cured Properties:
 - a. Tensile Strength: 2,044 psi (14.04 MPa) minimum at 7 days, tested in accordance with ASTM D638.
 - b. Compressive Strength: 8,182 psi (56.41 MPa) minimum at 7 days, tested in accordance with ASTM D695.
 - c. Flexural Strength: 9,896 psi (68.23 MPa) minimum at 7 days, tested in accordance with ASTM D790.

2.04 FIELD FINISHING MATERIALS

- A. Prep, prime and paint window sills using exterior paint system matching recently installed windows.
 1. Primer coat plus minimum two top coats.

PART 3 EXECUTION

3.01 PERIOD TREATMENT, GENERAL

- A. See Section 013591 for special procedure requirements related to elements and features of historical significance and value.

3.02 EXAMINATION

- A. Verify that surfaces to be cleaned and restored are ready for work of this section.

3.03 PREPARATION

- A. Protect surrounding elements from damage that may result due to performance of restoration procedures.
- B. Mask or cover adjacent surfaces and permanent equipment. Secure coverings without nails or tapes that leave residue. Do not use impervious sheeting which produces condensation.
 1. Use materials that withstand cleaning and restoration procedures.
- C. When using liquid cleaning methods, install drainage devices to prevent runoff over adjacent surfaces unless those surfaces are impervious to damage from runoff.
- D. Do not allow cleaning runoff to drain into sanitary or storm sewers.

3.04 IN SITU RESTORATION

- A. Do not mix or apply materials or products when the ambient temperature or humidity are outside range recommended by their manufacturers.
- B. Schedule conservation treatments to avoid weather-related failures.

3.05 REPLACEMENT ELEMENT INSTALLATION

- A. Match existing elements unless otherwise required for protection of wood materials from the weather and approved by Architect.
- B. Maintain continuity of historic architectural fabric.

C. Finish Carpentry:

1. Exterior Elements: Coordinate sequence of reinstallation with period treatment sequences of other exterior elements.
 - a. General: Use corrosion-resistant fasteners.
 - b. Set and secure materials and components in place, plumb, and level.
 - c. Scribe to abutting components, with gaps of 1/32 inch (0.79 mm), maximum. Do not use overlay trim to conceal larger gaps.
2. Field Finishing: Prepare elements for field finishing.
 - a. Preparation: On exposed portions of woodwork remove handling marks or effects of exposure to moisture by sanding exposed surfaces with appropriate grit sandpaper.
 - b. Set exposed fasteners. Apply wood filler in exposed fastener indentations. Sand work smooth.

3.06 REPAIR

- A. Consolidation: For wood elements indicated on drawings.
 1. Apply consolidant to deteriorated wood by brushing, pouring, or injection, as required.
- B. Dutchman Installation: For window sills indicated on drawings.
 1. Trim and square area of replacement.
 2. Check prepared dutchman piece for proper fit.
 3. Mix adhesive components as recommended by manufacturer.
 4. Spread adhesive thinly on both faces keeping adhesive away from edges to avoid squeezing out.
 5. Press dutchman into place.
 6. Remove excess adhesive at glue line.

END OF SECTION

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**SECTION 073126
SLATE SHINGLES**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Slate roofing shingles.
- B. Water-resistant underlayment.
- C. Metal roof flashing.
- D. Replacement roof boards.

1.02 RELATED REQUIREMENTS

- A. Section 077200 - Roof Accessories: Snow guards.

1.03 REFERENCE STANDARDS

- A. ASTM B32 - Standard Specification for Solder Metal; 2020.
- B. ASTM B370 - Standard Specification for Copper Sheet and Strip for Building Construction; 2022.
- C. ASTM C406/C406M - Standard Specification for Roofing Slate; 2015.
- D. ASTM C920 - Standard Specification for Elastomeric Joint Sealants; 2018 (Reapproved 2024).
- E. ASTM C1311 - Standard Specification for Solvent Release Sealants; 2022.
- F. ASTM D226/D226M - Standard Specification for Asphalt-Saturated Organic Felt Used in Roofing and Waterproofing; 2017 (Reapproved 2023).
- G. ASTM D1970/D1970M - Standard Specification for Self-Adhering Polymer Modified Bituminous Sheet Materials Used as Steep Roofing Underlayment for Ice Dam Protection; 2021.
- H. ASTM E96/E96M - Standard Test Methods for Gravimetric Determination of Water Vapor Transmission Rate of Materials; 2024a.
- I. NRCA (RM) - The NRCA Roofing Manual; 2025.

1.04 SUBMITTALS

- A. See Section 013000 - Administrative Requirements for submittal procedures.
- B. Product Data: Manufacturer's data sheets on slate roofing, including material characteristics, application limitations, and recommendations for installation.
- C. Shop Drawings: Details for specially configured metal flashing, joint configurations, and flashing locations.
- D. Verification Samples: Actual shingles in each selected color and finish, illustrating full range of color and texture variation to be anticipated in the finished work.
- E. Installer's qualification statement.
- F. Specimen warranty.
- G. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
 - 1. See Section 016000 - Product Requirements for additional provisions.
 - 2. Extra Shingles: Quantity equal to 3 percent of total installed, but not less than one full carton.

1.05 QUALITY ASSURANCE

- A. Source Limitations: Obtain slate required for this project from one quarry with adequate resources to ensure consistent quality and appearance for project.
- B. Installer Qualifications: Company specializing in installing slate roofing, with at least three years of documented experience.

1.06 MOCK-UPS

- A. Provide a mock-up for evaluation of overall installed appearance.
 - 1. Apply slate shingles in 3-course diamond/beveled pattern with two courses of standard pattern above and below accent courses;
 - 2. Ridge Cap: Include example installation of ridge flashing with cleats.
 - 3. Minimum size of mock-up is 100 sq ft (9.3 sq m).
 - 4. Do not proceed with remaining work until workmanship and overall appearance and pattern are approved by Architect.
 - 5. Ridge Cresting (Alternate - Pending Approval): Include example installation of 2 foot long ridge crest element complete with thimble flashing and modifications to ridge cap.
 - 6. Approved mock-up may not remain as part of work.

1.07 DELIVERY, STORAGE, AND HANDLING

- A. Deliver shingles to project site in fabricator's unopened crates or cartons, clearly labeled and identified.
- B. Handle shingles to avoid chipping, breakage, soiling, or other damage. Protect edges with wood or other cushioning and protective material.
- C. Stack skids and slate cartons to distribute weight evenly and to avoid breakage or cracking.
- D. Immediately prior to installation, distribute stacked slate shingles on roof to facilitate installation and to avoid overloading roofing substrate.

1.08 FIELD CONDITIONS

1.09 WARRANTY

- A. See Section 017800 - Closeout Submittals for additional warranty requirements.
- B. Manufacturer Warranty: Provide 2-year manufacturer warranty for defective materials and workmanship. Complete forms in Owner's name and register with manufacturer.

PART 2 PRODUCTS

2.01 MANUFACTURERS - SLATE

- A. Basis-of-Design Manufacturer, Slate Shingles: Subject to compliance with requirements, provide slate shingles from Vermont Structural Slate Company, Inc. subsidiary, James River Slate Company, Buckingham County, Virginia, Grayson Slate Roofing.

2.02 ROOFING MATERIALS

- A. Slate Shingles: Hard, dense, sound rock, free of ribbons.
 - 1. Type: Traditional; drilled or punched with two nail holes per shingle, located for headlap as specified under installation.
 - 2. Classification: Grade S1, expected service life over 75 years, complying with ASTM C406/C406M.
 - 3. Texture: Natural cleft matching original slates as closely as possible.
 - 4. Thickness: 3/16 inch (5 mm) to 1/4 inch (6 mm), nominal.
 - 5. Length:
 - a. 1883 Original Building: Potentially made up of two lengths, one length on the gable roofs on each side of the main roof, and another on the main roof. Verify in field prior to procurement.
 - b. 1905 Addition: Approximately 16 inches (406 mm); verify in field; match existing.
 - 6. Head Lap: Minimum 3 inches.
 - 7. Exposure:
 - a. 1883 Original Building: Made up of two exposures, one exposure on the gable roofs on each side of the main roof, and another on the main roof. Verify in field prior to procurement.
 - 1) Approximately 7 1/2 inches; match existing.
 - b. 1905 Addition: Approximately 6 1/2 inches; verify in field, match existing.

8. Width:
 - a. 1883 Original Building: Made up of two widths, one width on the East and West Gable roofs, and another on the main roof. Verify in field prior to procurement.
 - b. 1905 Addition: 8-1/2 inches, nominal. Verify in field, match existing.
9. Butt Shape: Field is Standard square cut.
10. Accent Courses: Match diamond / bevel cut slates on 1883 Original structure. There are two sizes of slates. 3 courses on East and West Gable roofs roughly match up to 4 courses on main roof. Verify size in field to match.
11. Color: Unfading, gray black.
- B. Underlayment: ASTM D226/D226M, Type II No. 30 asphalt felt.
- C. Underlayment, High Temperature Self Adhered: Under flat-seam copper built-in gutter, valleys and ridges, and where indicated on Drawings, apply high temperature type self-adhering polymer modified asphalt sheet complying with ASTM D1970/D1970M, with strippable release film and top surface of woven polypropylene sheet.
 1. Underlayment Cover: Provide water-resistant rosin-sized building paper on underlayment below exposed metal roof surfaces.
 2. Sheet Thickness: 40 mils, 0.040 inch (1.02 mm), minimum.
 3. Self Sealability: Nail sealability in accordance with ASTM D1970/D1970M.
 4. Low Temperature Flexibility: Comply with ASTM D1970/D1970M.
 5. Water Vapor Permeance: 0.1 perm (5.72 ng/Pa s sq m), maximum, when tested in accordance with ASTM E96/E96M using Desiccant Method (Method A).
 6. Functional Temperature Range: Minus 45 degrees F (Minus 42.8 degrees C) to 250 degrees F (121 degrees C).
 7. Products:
 - a. Certaineed Roofing; WinterGuard HT - High Temperature Waterproofing Underlayment: www.certaineed.com/#sle.
 - b. Henry Company; Blueskin RF200: www.henry.com/#sle.
 - c. Polyglass USA, Inc; Polystick MTS Self-Adhered High Temperature Roof Underlayment: www.polyglass.us/#sle.
 - d. Substitutions: See Section 016000 - Product Requirements.

2.03 ACCESSORIES

- A. Flashing Applications: Use tin-zinc coated copper for most visible flashings: step flashings and cap flashings, ridge, and where indicated.
 1. Copper, Tin-Zinc Coated: ASTM B370 copper, cold rolled. Coated both sides with tin-zinc alloy a minimum of 0.0005 inches thick per side.
 - a. Solder for Tin-Zinc Coated Copper: ASTM B32, pure tin or lead-free, high-tin.
 - b. Copper Weight: H00-H01, cold rolled.
 - 1) Step and Cap/C Flashing: 16 oz/sq ft (0.0216 inches) minimum.
 - 2) Ridge and Valley Flashing: 20 oz/sq ft (0.027 inches).
 2. Copper: ASTM B370 copper, cold rolled, 16 oz/sq ft (0.56 mm thick).
 - a. Use copper at built-in gutter and where indicated in Drawings.
- B. Attachment Members:
 1. Material: Wood; pressure preservative treated.
 2. Sizes and Spacings: As indicated.
 3. Nailers: Nominal 2 inches (50 mm) wide by 1-inch (25 mm) thick members, or thickness as required for specific conditions.
 4. Cant Strips: Minimum 16 ounce copper edging with built-in 1/4 inch cant installed under starter slates and where required for slate support.
- C. Nails: Slater's large-headed copper ring shank nails, length not less than twice slate thickness plus 1 inch (25 mm), or long enough to penetrate completely through roof sheathing.
- D. Butyl Sealant: ASTM C1311 one-part non-sag polymerized butyl sealant.

- E. Sealant: ASTM C920 low-modulus silicone joint sealer.

2.04 REPLACEMENT ROOF BOARDS

- A. Replace rotted or cracked board sheathing where required using in-kind material matching adjacent roof boards in thickness.
- B. Replace existing board sheathing that does not span across at least three supports. Saw cut adjacent boards to allow for longer replacement boards. Sister supports/girts if necessary to provide adequate support for modified and added roof boards.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that roofing accessories and roofing penetrations are complete and properly flashed.
- B. Verify that roof openings are correctly framed.
- C. Verify that roof deck surfaces are dry and free of ridges, warping, and voids.
 - 1. Confirm all roof deck boards are supported across three or more supports where possible.

3.02 PREPARATION

- A. Prepare deck surfaces using methods recommended by slate shingle manufacturer for existing project conditions.
- B. Broom clean roof deck thoroughly prior to beginning installation.

3.03 INSTALLATION

- A. Install slate shingle roofing system in accordance with manufacturer's instructions and NRCA (RM) applicable requirements.
- B. Sheet Metal Flashing: Install flashing as indicated and as required by project conditions.
 - 1. Install flashing at each location where slate roof intersects other roofs, walls, parapets, and similar projections.
 - 2. Fabricate flashings at open valleys with standing rib at center of valley, not less than 1 inch (25 mm) high; extend flashing not less than 12 inches (305 mm) onto roof deck on each side of valley.
 - 3. Attach shingles at valleys using copper wires to copper straps nailed beyond edge of flashing sheets.
 - 4. Repair and/or reinstall existing metal trims and cornices prior to installing underlayment.
 - 5. Install metal ridge cap in accordance with details on drawings.
- C. Underlayment:
 - 1. Install felt underlayment over entire deck surface in half-lapped double layer.
 - 2. Apply self-adhered underlayment not less than 36 inches (914 mm) wide at valleys, ridges, and where indicated on Drawings. Shingle each type of underlayment to shed water as required depending on location.
- D. Wood Attachment Members:
 - 1. Cants: Install cant strips at eaves on top of underlayment, spaced for drainage.
 - 2. Nailers: Install nailers at ridge and hips, directly over underlayment. Protect with additional layer of underlayment before installing ridge and hip slates and accessories.
- E. Slate Shingles:
 - 1. Pull slates from multiple pallets simultaneously to blend various pallets uniformly on roof.
 - 2. Double shingles at eaves and cornice line. Beginning at eaves, project shingles minimum uniform dimension of 1-1/2 inches (38 mm) and lay shingles in horizontal courses. Install shingles with minimum of 3-inch (76 mm) headlaps, and stagger joints between courses a minimum of 3 inches (76 mm).
 - 3. Cut and fit shingles neatly around vents, pipes, and other projections.

3.04 CLEANING

- A. See Section 017000 - Execution and Closeout Requirements for additional requirements.

- B. Clean exposed work upon completion of installation; remove grease and oil films, excess joint sealer, handling marks, and debris from installation, leaving work clean and unmarked, free from dents, creases, waves, scratch marks, or other damage to finish.

3.05 PROTECTION

- A. Do not walk on slate roof.
- B. Remove and replace damaged or broken slate shingles before Date of Substantial Completion.

END OF SECTION

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**SECTION 077123
MANUFACTURED GUTTERS AND DOWNSPOUTS**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Galvalume gutters and downspouts.

1.02 REFERENCE STANDARDS

- A. ASTM A792/A792M - Standard Specification for Steel Sheet, 55% Aluminum-Zinc Alloy-Coated by the Hot-Dip Process; 2023.

1.03 SUBMITTALS

- A. See Section 013000 - Administrative Requirements for submittal procedures.
- B. Product Data: Provide data on prefabricated components.
- C. Shop Drawings: Indicate locations, configurations, jointing methods, fastening methods, locations, and installation details including SMACNA expansion joints.

1.04 DELIVERY, STORAGE, AND HANDLING

- A. Stack material to prevent twisting, bending, or abrasion, and to provide ventilation. Slope to drain.
- B. Prevent contact with materials that could cause discoloration, staining, or damage.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Gutters and Downspouts: Galvalume metal.
 - 1. Berger; Metal half round gutter system: www.bergerbp.com.
 - 2. K&M Sheet Metal; www.kmsheetmetal.com
 - 3. Riverside Sheet Metal; Metal half round gutter system: www.riversidesheetmetal.net.
 - 4. Substitutions: See Section 016000 - Product Requirements.

2.02 MATERIALS

- A. Galvalume Steel Sheet: ASTM A792/A792M, minimum 0.025 inch thick base metal, with minimum 0.8 mil coating thickness.

2.03 COMPONENTS

- A. Gutters: Traditional Euro bead half round style profile.
- B. Downspouts: SMACNA round profile. Provide downspout strainers at each downspout.
- C. Anchors and Supports: Profiled to suit gutters and downspouts.
 - 1. Anchoring Devices: In accordance with SMACNA requirements.
 - 2. Gutter Supports: Bar hanger with rod and nut. Hanger to be metal compatible with gutter metal.
 - 3. Downspout Supports: Straps. Anchor only into stone joints, do not anchor into stone.
- D. Fasteners: Same material and finish as gutters and downspouts or stainless steel.

2.04 FABRICATION

- A. Form gutters and downspouts of profiles and size indicated.
- B. Fabricate with required connection pieces. Provide SMACNA expansion joints where indicated on drawings.
- C. Form sections square, true, and accurate in size, in maximum possible lengths, free of distortion or defects detrimental to appearance or performance.
- D. Hem exposed edges of metal.
- E. Fabricate gutter and downspout accessories; seal watertight.

2.05 ACCESSORIES

- A. Gutter Guard: Galvanized screen sized to fit gutter profile shown.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify existing conditions before starting work.

3.02 PREPARATION

- A. Paint concealed sheet metal surfaces and surfaces in contact with dissimilar metals with protective backing paint to a minimum dry film thickness of 15 mil, 0.015 inch (0.381 mm).

3.03 INSTALLATION

- A. Install gutters, downspouts, and accessories in accordance with manufacturer's instructions.
- B. Sheet Metal: Join lengths with formed seams sealed watertight. Flash and seal gutters to downspouts and accessories.
- C. Slope gutters 1/8 inch per foot (9 mm/m) , one percent minimum.

END OF SECTION

**SECTION 077200
ROOF ACCESSORIES**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Roof hatches.
- B. Snow guards.

1.02 RELATED REQUIREMENTS

- A. Section 077123 - Manufactured Gutters and Downspouts: Half-round gutters and downspouts.

1.03 SUBMITTALS

- A. See Section 013000 - Administrative Requirements for submittal procedures.
- B. Product Data: Manufacturer's data sheets on each product to be used.
 - 1. Preparation instructions and recommendations.
 - 2. Storage and handling requirements and recommendations.
 - 3. Installation methods.
 - 4. Maintenance requirements.
- C. Shop Drawings: Submit detailed layout developed for this project and provide dimensioned location and number for each type of roof accessory.
 - 1. Snow Guards: Submit design calculations for loadings and spacings based on manufacturer testing.
- D. Warranty Documentation:
 - 1. Submit manufacturer warranty.
 - 2. Ensure that forms have been completed in Owner's name and registered with manufacturer.

1.04 DELIVERY, STORAGE, AND HANDLING

- A. Store products in manufacturer's unopened packaging until ready for installation.
- B. Store products under cover and elevated above grade.

PART 2 PRODUCTS

2.01 ROOF HATCHES

- A. Roof Hatch Manufacturers:
 - 1. Basis-of-Design Manufacturer: Subject to compliance with requirements, provide Nystrom Inc, Retrofit Roof Hatch, or an approved comparable product from one of the following:
 - 2. Activar Construction Products Group, Inc. - JL Industries: www.activarcpg.com/#sle.
 - 3. Babcock-Davis: www.babcockdavis.com/#sle.
 - 4. Bilco Company: www.bilco.com/#sle.
 - 5. Substitutions: See Section 016000 - Product Requirements.
- B. Frames: Manufacturer's standard fully welded frame sized to fit curb indicated.
 - 1. Material: Galvaneal steel, 14 gauge, 0.0747 inch (1.90 mm).
 - 2. Size: 30 inches by 36 inches.
 - 3. Finish: Gray powder coat.
 - 4. Curb: 4 inch tall double wall curb with stainless steel mounting clips.
- C. Metal Covers: Flush, insulated, hollow metal construction.
 - 1. Capable of supporting 40 psf (1.92 kPa) live load.
 - 2. Material: Galvaneal steel; outer cover 14 gauge, 0.0747 inch (1.90 mm) thick.
 - 3. Finish: Gray powder coat.
 - 4. Insulation: Manufacturer's standard 1 inch (25 mm) rigid glass fiber.
 - 5. Gasket: EPDM, continuous around cover perimeter.

2.02 SNOW GUARDS

- A. Unit Snow Guards: Individual projecting metal shapes, set between roofing shingles/tiles, and mechanically fastened to roof deck.
 - 1. Projecting Metal Shapes: Aluminum, ornamental design.
 - 2. Finish: Mill.
 - 3. Placement: Drawings indicate Architect's preferred configuration. Provide shop drawing for review of manufacturer's recommended configuration.
 - 4. Products:
 - a. Berger Building Products; #95: www.bergerbp.com/#sle.
 - b. Jalco; The Classic, all aluminum: www.jalcosnowguards.com

PART 3 EXECUTION

3.01 EXAMINATION

- A. Do not begin installation until substrates have been properly prepared.
- B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.02 PREPARATION

- A. Clean surfaces thoroughly prior to installation.
- B. Prepare surfaces using methods recommended by manufacturer for achieving acceptable results for applicable substrate under project conditions.

3.03 INSTALLATION

- A. Roof Hatch: Install in accordance with manufacturer's instructions, in manner that maintains roofing system weather-tight integrity.
- B. Snow Guards: Modify slates to accept guards. Layout guards to work with width and length of slates.

3.04 CLEANING

- A. Clean installed work to like-new condition.

END OF SECTION

**SECTION 099600
HIGH-PERFORMANCE COATINGS**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. High performance coatings.
- B. Surface preparation.

1.02 REFERENCE STANDARDS

- A. 40 CFR 59, Subpart D - National Volatile Organic Compound Emission Standards for Architectural Coatings; U.S. Environmental Protection Agency; Current Edition.
- B. ASTM D4259 - Standard Practice for Preparation of Concrete by Abrasion Prior to Coating Application; 2024.
- C. MPI (APL) - Master Painters Institute Approved Products List; Master Painters and Decorators Association; Current Edition.
- D. MPI (APSM) - Master Painters Institute Architectural Painting Specification Manual; Current Edition.
- E. SSPC-SP 1 - Solvent Cleaning; 2015, with Editorial Revision (2016).
- F. SSPC-SP 2 - Hand Tool Cleaning; 2024.
- G. SSPC-SP 11 - Power-Tool Cleaning to Bare Metal; 2020.

1.03 SUBMITTALS

- A. See Section 013000 - Administrative Requirements for submittal procedures.
- B. Product Data: Provide complete list of all products to be used in table format, with the following information for each:
 - 1. Manufacturer's name, product name and/or catalog number, and general product category (e.g. "alkyd enamel").
 - 2. MPI product number (e.g. MPI #47).
 - 3. Cross-reference to specified coating system(s) product is to be used in; include description of each system.
- C. Samples: Submit two samples 8 by 8 inch (203 by 203 mm) in size illustrating colors available for selection.

1.04 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing the Products specified in this section with minimum three years documented experience.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Deliver products to site in sealed and labeled containers; inspect to verify acceptability.
- B. Container Label: Include manufacturer's name, type of coating, brand name, lot number, brand code, coverage, surface preparation, drying time, cleanup requirements, color designation, and instructions for mixing and reducing.
- C. Coating Materials: Store at minimum ambient temperature of 45 degrees F (7 degrees C) and a maximum of 90 degrees F (32 degrees C), in ventilated area, and as required by manufacturer's instructions.

1.06 FIELD CONDITIONS

- A. Follow manufacturer's recommended procedures for producing best results, including testing of substrates, moisture in substrates, and humidity and temperature limitations.
- B. Do not apply exterior coatings during rain or snow, or when relative humidity is outside the humidity ranges required by the coating product manufacturer.

- C. Do not install materials when temperature is below 55 degrees F (13 degrees C) or above 90 degrees F (32 degrees C).
- D. Maintain this temperature range, 24 hours before, during, and 72 hours after installation of coating.

1.07 WARRANTY

- A. Correct defective Work within a five year period after Date of Substantial Completion.
- B. Warranty: Include coverage for bond to substrate.

PART 2 PRODUCTS

2.01 APPLICATIONS

- A. Gable louver vents, inside and outside faces and frames.

2.02 MANUFACTURERS

- A. Only materials (primers, coatings, etc.) listed in the latest edition of the MPI (APL) are acceptable for use on this project.
- B. Provide high performance coating products from the same manufacturer to the greatest extent possible.
- C. Basis-of-Design Manufacturer: Subject to compliance with requirements, provide products from Sherwin-Williams Company, or one of the following:
 - 1. PPG Paints: www.ppgpaints.com/#sle.
 - 2. Tnemec Company, Inc: www.tnemec.com/#sle.
 - 3. Substitutions: Section 016000 - Product Requirements.

2.03 HIGH-PERFORMANCE COATINGS

- A. MPI Standards: Provide products that comply with MPI standards indicated and are listed in MPI Approved Products List.

2.04 TOP COAT MATERIALS

- A. Coatings - General: Provide complete multi-coat systems formulated and recommended by manufacturer for the applications indicated, in the thicknesses indicated; number of coats specified does not include primer or filler coat.
 - 1. Lead Content: Not greater than 0.06 percent by weight of total nonvolatile content.
 - 2. Chromium Content, as Hexavalent Chromium, Zinc Chromate, or Strontium Chromate: None.
 - 3. Colors: Selected from manufacturer's standard colors.
- B. Urethane Coating:
 - 1. Number of Coats: Two.
 - 2. Product Characteristics:
 - a. Percentage of solids by volume: 63 percent plus or minus 4 percent, minimum.
 - b. Dry film thickness, per coat: three mils, minimum.
 - c. Comply with the performance requirements specified above for moderate exposure.
 - 3. Top Coat(s): Polyurethane, Two-Component; MPI #72, #174.
 - a. Sheen: Semi-Gloss.
 - b. Products:
 - 1) Sherwin-Williams Hi Solids Polyurethane 250, B65 Series: www.protective.sherwin-williams.com/#sle.

2.05 PRIMERS

- A. Primers: Provide the following unless other primer is required or recommended by coating manufacturer.
 - 1. Primer for Galvanized Metal, Water Based; MPI #134.
 - a. Products:
 - 1) Sherwin-Williams Pro Industrial Pro-Cryl Universal Acrylic Primer.

2.06 ACCESSORY MATERIALS

- A. Accessory Materials: Provide primers, sealers, cleaning agents, cleaning cloths, sanding materials, and clean-up materials as required for final completion of coated surfaces.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify existing conditions before starting work.
- B. Do not begin application of coatings until substrates have been properly prepared.
- C. Verify that substrate surfaces are ready to receive work as instructed by the coating manufacturer. Obtain and follow manufacturer's instructions for examination and testing of substrates.
- D. Examine surfaces scheduled to be finished prior to commencement of work. Report any condition that may potentially affect proper application.
- E. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.
- F. Test shop-applied primer for compatibility with subsequent cover materials.
- G. Measure moisture content of surfaces using an electronic moisture meter. Do not apply finishes unless moisture content of surfaces are below the following maximums:
 - 1. Cementitious Substrates: Do not begin application until substrate has cured 28 days minimum and measured moisture content is not greater than 12 percent.
 - 2. Masonry, Concrete, and Concrete Unit Masonry: 12 percent.
 - 3. Wood: Do not begin application if substrate has moisture content over 12 percent.
- H. Proceed with coating application only after unacceptable conditions have been corrected.
 - 1. Commencing coating application constitutes Contractor's acceptance of substrates and conditions.

3.02 PREPARATION

- A. Protect adjacent surfaces and materials not receiving coating from spatter and overspray; mask if necessary to provide adequate protection. Repair damage.
- B. Clean surfaces of loose foreign matter.
- C. Remove substances that would bleed through finished coatings. If unremovable, seal surface with shellac.
- D. Existing Painted and Sealed Surfaces:
 - 1. Remove loose, flaking, and peeling paint. Feather edge and sand smooth edges of chipped paint.
 - 2. Clean with mixture of trisodium phosphate and water to remove surface grease and foreign matter.
- E. Galvanized Surfaces:
 - 1. Remove surface contamination and oils and wash with solvent according to SSPC-SP 1.
 - 2. Prepare surface according to SSPC-SP 2.
- F. Ferrous Metal:
 - 1. Solvent clean according to SSPC-SP 1.
 - 2. Shop-Primed Surfaces: Sand and scrape to remove loose primer and rust. Feather edges to make touch-up patches inconspicuous. Clean surfaces with solvent. Prime bare steel surfaces. Re-prime entire shop-primed item.
 - 3. Remove rust, loose mill scale, and other foreign substances using methods recommended in writing by paint manufacturer and power tools in accordance with SSPC-SP 11, and protect from corrosion until coated.

3.03 PRIMING

- A. Apply primer to all surfaces, unless specifically not required by coating manufacturer. Apply in accordance with coating manufacturer's instructions.

3.04 COATING APPLICATION

- A. Apply coatings in accordance with manufacturer's written instructions, to thicknesses specified and recommendations in MPI - Architectural Painting and Specification Manual.
- B. Apply in uniform thickness coats, without runs, drips, pinholes, brush marks, or variations in color, texture, or finish. Finish edges, crevices, corners, and other changes in dimension with full coating thickness.

3.05 CLEANING

- A. Collect waste material that could constitute a fire hazard, place in closed metal containers, and remove daily from site.
- B. Clean surfaces immediately of overspray, splatter, and excess material.
- C. After coating has cured, clean and replace finish hardware, fixtures, and fittings previously removed.

3.06 PROTECTION

- A. Protect finished work from damage.

END OF SECTION

**SECTION 264100
FACILITY LIGHTNING PROTECTION**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Strike (air) terminals and interconnecting conductors.
- B. Grounding and bonding for lightning protection.

1.02 REFERENCE STANDARDS

- A. NFPA 780 - Standard for the Installation of Lightning Protection Systems; 2026.
- B. UL 96 - Lightning Protection Components; Current Edition, Including All Revisions.

1.03 ADMINISTRATIVE REQUIREMENTS

- A. Coordination with Roofing Work: Ensure adequate attachment of strike terminals and conductors without damage to roofing.
- B. Preinstallation Meeting: Convene meeting at least at least two weeks prior to commencement of work affected by lightning protection system requirements to discuss prerequisites and coordination required by other installers; require attendance by representatives of installers whose work will be affected.

1.04 SUBMITTALS

- A. See Section 013000 - Administrative Requirements for submittal procedures.
- B. Shop Drawings: Indicate location and layout of air terminals, grounding electrodes, and bonding connections to structure and other metal objects. Include terminal, electrode, and conductor sizes, and connection and termination details.
 - 1. Where conductors or grounds are to be embedded or concealed in other construction, submit shop drawings at least 30 days prior to start of construction.
 - 2. Include data on actual ground resistance determined by field measurement in accordance with NFPA 780.
 - 3. Include engineering analysis of equalization of potential to metal bodies within structure.
 - 4. Include access panels, test holes, and disconnecting means for maintenance.
- C. Product Data: Provide dimensions and materials of each component, indication of testing agency listing, and installation instructions.
- D. Manufacturer's Certificate: Certify that products meet or exceed specified requirements.
- E. Installation Certification: Submit copy of certification agency's approval.
- F. Operation and Maintenance Data: Provide recommended inspection and testing plan, including recommended intervals, to achieve periodic maintenance as recommended in NFPA 780; provide customized plan reflecting actual installation configuration with specific installed components identified.
- G. Project Record Documents: Record actual locations of air terminals, grounding electrodes, bonding connections, and routing of system conductors in project record documents.

1.05 QUALITY ASSURANCE

- A. Maintain one copy of each referenced system design standard on site.
- B. Delegated Design - Designer Qualifications: Person or entity, employed by installer, who specializes in lightning protection system design with minimum three years documented experience.
- C. Installer Qualifications: Capable of providing specified certification of installed system.
- D. Products: Listed, classified, and labeled as suitable for purpose intended.

PART 2 PRODUCTS

2.01 LIGHTNING PROTECTION SYSTEM

- A. Lightning Protection System: Provide design and complete system complying with NFPA 780, including air terminals, bonding, interconnecting conductors and grounding electrodes.
 - 1. Provide system that protects:
 - a. Entire structure.
 - 2. Determine ground resistance by field measurement.
 - 3. Provide copper, bronze, or stainless steel components, as applicable; no aluminum.
 - 4. Provide disconnecting means and access panels or similar devices to allow complete periodic inspection and testing as described by NFPA 780 Annex D.
 - 5. Provide system certified by Underwriters Laboratories or Lightning Protection Institute.
- B. Strike Terminals: Provide strike (air) terminals on the following:
 - 1. Roofs.
 - 2. Parapet finials.
 - 3. Other locations proposed by system designer to be reviewed by Architect as part of shop drawings.

2.02 COMPONENTS

- A. All Components: Complying with applicable requirements of UL 96.
- B. Strike (Air) Terminals: Copper, solid, with adhesive bases for single-ply roof installations.
- C. Grounding Rods: Solid copper.
- D. Ground Plate: Copper.
- E. Conductors: Copper cable.
- F. Connectors and Splicers: Bronze.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that field measurements are as indicated on shop drawings.
- B. Coordinate work with installation of roofing.

3.02 INSTALLATION

- A. Install in accordance with referenced system standards and as required for specified certification.
- B. Roof Ridge: Run cable along ridge lines where possible. Secure cable to ridge cap by soldering restraints to cap. Do not penetrate cap with fasteners.
- C. Parapets: Run cable on back side of stone parapets. Secure cable with restraints fastened into mortar joints. Do not fasten into stone.
- D. Connect conductors using mechanical connectors or exothermic welding process; protect adjacent construction elements and finishes from damage.

3.03 FIELD QUALITY CONTROL

- A. Perform visual inspection as specified in NFPA 780 as if this were a periodic follow-up inspection.
- B. Perform continuity testing as specified in NFPA 780 as if this were testing for periodic maintenance.
- C. Obtain services of specified certification agency to provide inspection and certification of lightning protection system, including performance of other testing required by that agency.

END OF SECTION