



TOWN OF TRUMBULL, CONNECTICUT

**REQUEST FOR PROPOSAL, CONDITIONS, SPECIFICATIONS,
SPECIAL PROVISIONS AND DRAWINGS**

**ROOF REPLACEMENT
TRUMBULL SENIOR CENTER
23 PRISCILLA PLACE
TRUMBULL, CONNECTICUT 06611**

RFQ #5918 DUE: MARCH 1, 2012 at 3:00PM

**PREPARED FOR THE TOWN OF TRUMBULL BY:
ANTINOZZI ASSOCIATES
271 Fairfield Avenue
Bridgeport, Connecticut 06604
(203) 377-1300 - (203) 378-300 -Fax**

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**TOWN OF TRUMBULL, CONNECTICUT
REQUEST FOR QUOTATION
REPLACEMENT OF ROOF AT THE TRUMBULL SENIOR CENTER
GENERAL INSTRUCTIONS TO BIDDERS
BID NUMBER: 5918 DUE: MARCH 1, 2012 @ 3:00PM**

The Town of Trumbull, Connecticut (hereinafter referred to as Town), through the Office of the Purchasing Agent, will accept sealed bids for the replacement of the roof at the Trumbull Senior Center, 23 Priscilla Pl., Trumbull, CT, in accordance with the attached specifications and scope of work.

1. PREPARATION OF BIDS

Bids shall be submitted by using the enclosed BID PROPOSAL FORM that accompanies this request. Submit one (1) ORIGINAL and one (1) EXACT COPY. Bidders should submit bids in a clear, concise and legible manner to permit proper evaluation of responsive bids.

Bidders must submit a list of all equipment to be used and specification sheets for the generator equipment to allow proper bid evaluation. Bidders may also submit, under separate cover with their proposal, any samples of reports and documents that are necessary to meet the requirements (deliverables) of this request should a purchase order be awarded

2. BID SUBMISSION

Bids are to be submitted in DUPLICATE in a sealed envelope and addressed as follows:

Purchasing Agent – BID NUMBER: 5918, DUE: March 1, 2012
Town of Trumbull
5866 Main Street
Trumbull, CT 06611

Please be advised that the person signing the formal proposal must be authorized by your organization to contractually bind your firm with regard to prices and related contractual obligations for the delivery period requested.

3. BID TIME

- a) Bids shall be received at the office of the Purchasing Agent, Town Hall, prior to the advertised hour of opening, at which time all proposals will be publicly opened and read aloud. Any bid received after the due date and time noted above shall not be accepted or opened.
- b) A bidder may withdraw a proposal at any time prior to the above scheduled date and time. Any bid received after the above scheduled date and time shall not be considered or opened.

4. TOWN OPTIONS

- a) The Town of Trumbull reserves the right to reject any and all bids and does not bind itself to accept the lowest bid or any proposal. The Town reserves the right to ask for new bids in whole or in part, or to reject any or all bids, or any part thereof, and to waive any requirements, irregularities, technical defects or service therein when it is deemed to be in the best interest of the Town.
- b) If a bid proposal does not meet or better the required specifications, requirements, and scope of work requested on all points that must be outlined in a letter attached to the bid proposal otherwise it will be presumed that the bid as proposed is in accordance with the required specifications.

5. TAXES

All purchases made by the Town, and associated with the award of this requirement shall be tax exempt. Any taxes must not be included in bid prices. A Town Tax Exemption Certificate shall be furnished upon request.

6. INQUIRIES AND SITE VISITS

All inquiries regarding this request shall be answered up to the close of business on **February 29, 2012** after which time no additional questions will be accepted. To ensure consistent interpretation of certain items, answers to questions the Town deems to be in the interest of all bidders will be made available in writing or by Fax as appropriate to all bidders. Inquiries or requests for on site visits may be directed to the Mr. Allen

White, Director of Facilities (203.452.5070); all other questions may be directed to the Mr. Robert J. Chimini, Purchasing Agent (203.452.5042). General inquiries for drawing or specification clarifications may be directed to Mr. Paul Lisi, Antinozzi Associates, (203.377.1300).

Additionally, after proposals are received, the Town reserves the right to communicate with any or all of the bidders to clarify the provisions of Proposals. The Town further reserves the right to request additional information from any bidder at any time after proposals are opened.

7. AWARD AND AUTHORITY

The Town Purchasing Agent will issue notification of award in writing.

8. PRICING

- a) Bidders are requested to quote as a complete "Turn Key" installation.
- b) All prices quoted are to be firm for a period of at least 180 days following bid opening.
- c) Special Consideration will be given to responses with extended firm price dates. The Town is always interested in any and all cost reduction opportunities.

9. ASSIGNMENT OF RIGHTS, TITLES, AND INTERESTS

Any assignment or subcontracting by a bidder, vendor, or contractor for work to be performed, or goods and/or services to be provided, in whole or in part, and any other interest in conjunction with Town procurement shall not be permitted without the express written consent of the Town of Trumbull.

10. HOLD HARMLESS CLAUSE

Bidder agrees to indemnify, hold harmless and defend the Town from and against any and all liability for loss, damage or expense which the Town may suffer or for which the Town may be held liable by reason of injury, including death, to any person or damage to any property arising out of or in any manner connected with the operations to be performed under an agreement with the Town, whether or not due in whole or in part of any act, omission or negligence of the Town or any of his representatives or employees.

11. WORK REGULATIONS AND STANDARDS

All work activities performed in association with this request must be performed and completed for the Town in accordance with current Federal State and Local regulations. All services performed shall also conform to the latest OSHA standards and/or regulations.

12. INSURANCE

The successful bidder shall provide the Town Purchasing Agent with a Certificate of Insurance before work commences. The Town shall be named as an additional insured with an Insurance Company licensed to write such insurance in Connecticut, against the following risks and in not less than the following amounts:

- Worker's Compensation
- Contractor's Public Liability and Property Damage
- Automobile Insurance

General Liability	Each Person	Each Occurrence	Aggregate
Bodily Injury Liability	\$1,000,000	\$1,000,000	\$5,000,000
Property Damage Liability		\$1,000,000	\$5,000,000
Personal Injury Liability		\$1,000,000	\$5,000,000
Comprehensive Automobile Liability			
Bodily Injury	\$1,000,000	\$1,000,000	\$5,000,000
Property Damage		\$1,000,000	\$5,000,000

Such policies shall provide that no coverage shall be changed or cancelled unless thirty- (30) days prior notice of such change or cancellation shall be made to the owner. Such notice shall be made by registered mail; postage prepaid, to the Purchasing Agent, Town of Trumbull, Town Hall, Trumbull, Connecticut 06611.

In the event of cancellation, the contractor shall cease all operations on or before the effective date of said cancellation and he shall not commence work again until he has obtained replacement insurance and has delivered a Certificate of Insurance to the office of the Owner's Purchasing Department.

13. **BID, PERFORMANCE AND PAYMENT BONDS**

- a) A Bid Bond payable to the Owner must accompany each Bid for ten (10%) percent of the total amount of the Bid. As soon as the Bid prices have been compared, the Owner will return the bonds of all except the three lowest responsible Bidders. When the Agreement is executed, the bonds of the two remaining unsuccessful Bidders will be returned. The Bid Bond of the successful Bidder will be retained until the Payment Bond and Performance Bond have been executed and approved, after which it will be returned. A certified check may be used in lieu of a Bid Bond.
- b) A Performance Bond and a Payment Bond, each in the amount of 100 percent (100%) of the Contract Price, with a corporate surety approved by the Owner, will be required for the faithful performance of the contract. Attorneys-in-fact who sign the Bid Bonds or Payment Bonds and Performance Bonds must file with each bond, a certified and effective dated copy of their power of attorney.
- c) The party to whom the contract is awarded will be required to execute the Agreement and obtain the Performance Bond and Payment Bond within ten (10) calendar days from the date when Notice of Award is delivered to the Bidder. The Notice of Award shall be accompanied by the necessary Agreement and Bond forms. In case of failure of the Bidder to execute the Agreement, the Owner may, at his option, consider the Bidder in default, in which case the Bid Bond accompanying the proposal shall become the property of the Owner.
- d) The Owner, upon receipt of acceptable Performance Bond, Payment Bond and Agreement signed by the Contractor, shall sign the Agreement and return to the Contractor an executed duplicate of the Agreement within a reasonable period of time. The returned executed Agreement by the Owner to the Contractor shall be accompanied with a Notice to Proceed.

14. **CONFLICT OF INTEREST**

No purchase shall be made from nor shall services (other than services as an officer, agent, or employee of the Town) be secured from any officer or employee of the Town, or from any partnership or corporation in which such officer or employee is a partner or officer, or holds a substantial interest, unless such relationship and the fact that such purchase is contemplated shall be made known in writing to the agency making such purchase, and notice thereof posted, for at least five (5) days before such purchase be made, in the office of the agency making such purchase and in a public place in the Trumbull Town Hall.

15. **REFERENCES**

Bidders must provide five (5) commercial references using the attached form.

16. **SPECIFICATIONS**

- a) Should any Bidder find discrepancies in the Specifications, or be in doubt as to the exact meaning, notify the Town at once. The Town may then, at their option, issue Addenda clarifying same. The Town shall not be responsible for oral instructions or misinterpretations of Specifications.
- b) The Town reserves the right to issue Addenda at any time prior to the Bid Opening. All such Addenda become, upon issuance part of the Specification. Each Bidder shall cover such Addenda in the proposal and shall acknowledge receipt of same on the blank provided therefore.
- c) The Town reserves the right to require any or all Bidders to submit statements as to previous experience in performing comparable work; and as to financial and technical organizations and resources available for this work. The mere opening and reading aloud of a bid shall not constitute or imply the Town's acceptance of the suitability of a Bidder or the bid, nor shall possession of Drawings or Specifications constitute an invitation to bid. The competency and responsibility of Bidders as well as the number of working days required for completion will be considered in making an award.

17. **ADENDUMS**

It is the responsibility of the bidder to verify prior to final submittal of a bid or bid if any addenda to this request have been issued. Any addenda to this request shall be posted on the Town of Trumbull website www.trumbull-ct.gov under the Purchasing Department's section. Bidders also call the Purchasing Department directly 203.452.5042 for inquiries regarding addenda.

18. **PRIOR INSPECTION AND EXISTING CONDITIONS**

It is the responsibility of the bidder to visit the site and verify all field conditions prior to submitting their bid. Site visits can be arranged by calling the Senior Center (203.452.5199).

19 LIQUIDATED DAMAGES:

Non-compliance with the scheduled completion date of the Contract shall result in engineering charges as follows:

- The Contractor shall pay liquidated damages of \$250.00 per working day for each day after the agreed Contract completion date up to, and including, the actual date of completion.

20. GENERAL BID SPECIFICATIONS AND INFORMATION

- a. TIME IS OF THE ESSENCE after the bid is awarded, the Contractor and representatives from the TOWN shall meet to discuss scheduling of work, safety plans, and the coordination of any work to be provided by the contractor, any subcontractors, and the maintenance staff.
- b. A payment schedule shall be determined by the contractor and the TOWN plant administrator based upon the confirmed order of materials and parts, delivered equipment, and installation progress.
- c. Work may be scheduled during the day so long as any particular operation does not interrupt the safe and normal operation of the building. Tasks that may be disruptive need to be scheduled when the offices are not in session.
- d. Workers must follow all safety protocol while working in or around the building.

TOWN OF TRUMBULL, CONNECTICUT
REQUEST FOR QUOTATION
REPLACEMENT OF ROOF AT THE TRUMBULL SENIOR CENTER
BID NUMBER: 5918 DUE: MARCH 1, 2012 @ 3:00PM
REFERENCES

(To be submitted with proposal – attach additional pages as necessary)

List references for similar services provided for at least five (5) clients in the past five (5) years (attach any other client references if desired). PLEASE NOTE IT IS THE TOWN'S INTENT TO COMMUNICATE WITH THE REFERENCES LISTED HEREIN.

CLIENT 1:

Organization Name: _____
Contact Name: _____ Phone: _____
Service Dates: _____
Project(s): _____

CLIENT 2:

Organization Name: _____
Contact Name: _____ Phone: _____
Service Dates: _____
Project(s): _____

CLIENT 3:

Organization Name: _____
Contact Name: _____ Phone: _____
Service Dates: _____
Project(s): _____

CLIENT 4:

Organization Name: _____
Contact Name: _____ Phone: _____
Service Dates: _____
Project(s): _____

CLIENT 5:

Organization Name: _____
Contact Name: _____ Phone: _____
Service Dates: _____
Project(s): _____

**TOWN OF TRUMBULL, CONNECTICUT
REQUEST FOR QUOTATION
REPLACEMENT OF ROOF AT THE TRUMBULL SENIOR CENTER
BID PROPOSAL FORM
BID NUMBER: 5918 DUE: MARCH 1, 2012 @ 3:00PM
PROPOSAL**

Proposal of _____ (hereinafter called "Proposer, Bidder"), organized and existing under the laws of the State of Connecticut, doing business as to the Town of Trumbull, Connecticut (hereinafter called the "Owner").

In compliance with your Advertisement for Proposals, Proposer hereby proposes for the Roofing Project at the Trumbull Senior Center, in the Town of Trumbull, Connecticut together with all related incidental and appurtenant work as described in the specifications or outlined and/or shown on the drawings. The work is to be done in strict accordance with the Specifications, Drawings and all Contract Documents, within the time agreed to, and at the prices stated on the Proposal Schedule.

By submission of this Proposal, each Proposer certifies, that this Proposal has been arrived at independently, without consultation, communication, or agreement as to any matter relating to this Proposal with any other Proposer or with any competitor.

Proposer hereby agrees to commence work under this contract on or before a date to be specified in the "Notice to Proceed", and to fully complete the Project within sixty (60) consecutive calendar days thereafter.

Proposer further agrees to pay as liquidated damages, the sum of (\$250.00) two hundred and fifty dollars for each consecutive calendar day thereafter till completion of the full contract as provided in the General Conditions. Proposer further agrees that he will provide and sustain the required Bonds and Insurance Policies as required.

Proposer acknowledges receipt of the following Addendum:

Proposer understands that the Owner reserves the right to reject any or all proposals and to waive any informality in the bidding.

Proposer agrees that this proposal shall be good and may not be withdrawn for a period of sixty (60) calendar days after the scheduled closing time for receiving proposals.

Upon receipt of written notice of the acceptance of this proposal, proposer shall execute the formal contract attached within five (5) days and deliver a Surety Bond or Bonds as required in the General Conditions. The Bid Security attached in the sum of _____ Dollars (\$_____) is to become the property of the Owner in the event the contract and bond are not executed within the time above set forth, as liquidated damages for the delay and additional expense to the Owner caused thereby.

Company Name

Address

City, State

Date

By (Signature)

Print Name

Title

Telephone/Fax

PROPOSAL – ROOF REPLACEMENT AT TRUMBULL SENIOR CENTER (continued)

The undersigned hereby declares that in regard to all conditions affecting the work to be done and the labor and materials required, this proposal is based on his investigations and findings, and the Town of Trumbull and their officers, agents and employees shall not in any manner be held responsible for the accuracy of, or be bound by any estimates, borings, water or underground conditions relative to the proposed work, indicated in this or in the other contract documents; that no warranty or representation has been made by the Town of Trumbull or their officers, agents and employees as to subsurface soil or rock conditions, ground water, or other underground and similar conditions; nor has any representation or warranty been so made that the estimated quantities to be used for comparison of proposals will even approximate the actual quantities or materials and work which the Contractor may be required to furnish or perform.

Respectfully submitted,

Company Name

By (Signature)

Address

Print Name

Address

Title

(SEAL-if proposal is by a corporation)

Note: Insert Proposer's name. If a corporation, give the State of Incorporation using the phrase, "A corporation organized under the laws of

_____ composed of officers as follows:

President

Secretary

Vice President

Treasurer

If a partnership, give names of partners, using also the phrase, "co-partners trading and doing business under the firm name and style of _____, composed of partners as follows:

SECTION 01732 - SELECTIVE DEMOLITION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Demolition and removal of selected portions of a building or structure.
 - 2. Repair procedures for selective demolition operations.
- B. Related Sections include the following:
 - 1. Division 1 Section "Construction Facilities and Temporary Controls" for temporary construction and environmental-protection measures for selective demolition operations.
 - 2. Division 1 Section "Cutting and Patching" for cutting and patching procedures for selective demolition operations.

1.3 DEFINITIONS

- A. Remove: Detach items from existing construction and legally dispose of them off-site, unless indicated to be removed and salvaged or removed and reinstalled.
- B. Remove and Salvage: Detach items from existing construction and deliver them to Owner.
- C. Remove and Reinstall: Detach items from existing construction, prepare them for reuse, and reinstall them where indicated.
- D. Existing to Remain: Existing items of construction that are not to be removed and that are not otherwise indicated to be removed, removed and salvaged, or removed and reinstalled.

1.4 MATERIALS OWNERSHIP

- A. Except for items or materials indicated to be reused, salvaged, reinstalled, or otherwise indicated to remain Owner's property, demolished materials shall become Contractor's property and shall be removed from Project site.
- B. Historic items, relics, and similar objects including, but not limited to, cornerstones and their contents, commemorative plaques and tablets, antiques, and other items of interest or value to Owner that may be encountered during selective demolition remain Owner's property.

Carefully remove and salvage each item or object in a manner to prevent damage and deliver promptly to Owner.

1.5 SUBMITTALS

- A. **Qualification Data:** For firms and persons specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include lists of completed projects with project names and addresses, names and addresses of architects and owners, and other information specified.
- B. **Proposed Dust-Control and Noise-Control Measures:** Submit statement or drawing that indicates the measures proposed for use, proposed locations, and proposed time frame for their operation. Identify options if proposed measures are later determined to be inadequate.
- C. **Stamped shoring layout drawings prepared by the General Contractor's Professional Engineer,** indicating location, method and design loads for the temporary shoring system utilized.
- D. **Schedule of Selective Demolition Activities:** Indicate the following:
 - 1. Detailed sequence of selective demolition and removal work, with starting and ending dates for each activity. Ensure Owner's on-site operations are uninterrupted.
 - 2. Interruption of utility services.
 - 3. Coordination for shutoff, capping, and continuation of utility services.
 - 4. Use of elevator and stairs.
 - 5. Locations of temporary partitions and means of egress.
 - 6. Coordination of Owner's continuing occupancy of portions of existing building and of Owner's partial occupancy of completed Work.
- E. **Inventory:** After selective demolition is complete, submit a list of items that have been removed and salvaged.
- F. **Predemolition Photographs or Videotape:** Show existing conditions of adjoining construction and site improvements, including finish surfaces, that might be misconstrued as damage caused by selective demolition operations. Submit before Work begins.
- G. **Landfill Records:** Indicate receipt and acceptance of hazardous wastes by a landfill facility licensed to accept hazardous wastes.

1.6 QUALITY ASSURANCE

- A. **Demolition Firm Qualifications:** An experienced firm that has specialized in demolition work similar in material and extent to that indicated for this Project.
- B. **Professional Engineer Qualifications:** Current Professional Engineer's License valid in the State of Connecticut.

- C. Regulatory Requirements: Comply with governing EPA notification regulations before beginning selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.
- D. Standards: Comply with ANSI A10.6 and NFPA 241.
- E. Predemolition Conference: Conduct conference at Project site to comply with requirements in Division 1 Section "Project Management and Coordination." Review methods and procedures related to selective demolition including, but not limited to, the following:
 - 1. Inspect and discuss condition of construction to be selectively demolished.
 - 2. Review structural load limitations of existing structure.
 - 3. Review and finalize selective demolition schedule and verify availability of materials, demolition personnel, equipment, and facilities needed to make progress and avoid delays.
 - 4. Review requirements of work performed by other trades that rely on substrates exposed by selective demolition operations.

1.7 PROJECT CONDITIONS

- A. Owner will occupy portions of site immediately adjacent to selective demolition areas. Conduct selective demolition so Owner's operations will not be disrupted. Provide not less than 72 hours' notice to the Owner's Representative of activities that will affect Owner's operations.
- B. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities.
 - 1. Do not close or obstruct walkways, corridors, or other occupied or used facilities without written permission from authorities having jurisdiction.
- C. Owner assumes no responsibility for condition of areas to be selectively demolished.
 - 1. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.
- D. Hazardous Materials: Hazardous materials, if present shall be the responsibility of the building owner. Do not disturb hazardous materials or items suspected of containing hazardous materials. The contractor shall contact the owner immediately upon discovery of suspect material.
- E. Storage or sale of removed items or materials on-site will not be permitted.
- F. Utility Service: Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.
 - 1. Maintain fire-protection facilities in service during selective demolition operations.

1.8 WARRANTY

- A. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during selective demolition, by methods and with materials so as not to void existing warranties.

PART 2 - PRODUCTS

2.1 REPAIR MATERIALS

- A. Use repair materials identical to existing materials.
 - 1. If identical materials are unavailable or cannot be used for exposed surfaces, use materials that visually match existing adjacent surfaces to the fullest extent possible.
 - 2. Use materials whose installed performance equals or surpasses that of existing materials.
- B. Comply with material and installation requirements specified in individual Specification Sections.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify that utilities have been disconnected and capped.
- B. Survey existing conditions and correlate with requirements indicated to determine extent of selective demolition required.
- C. Inventory and record the condition of items to be removed and reinstalled and items to be removed and salvaged.
- D. When unanticipated mechanical, electrical, or structural elements that conflict with intended function or design are encountered, investigate and measure the nature and extent of conflict. Promptly submit a written report to the Architect.
- E. Engage a professional engineer to survey condition of building to determine whether removing any element might result in structural deficiency or unplanned collapse of any portion of structure or adjacent structures during selective demolition operations. Professional Engineer shall develop shoring layout plan for all temporary shoring and supervise the General Contractor's implementation of that plan. See paragraph 1.5 for submittal requirements.
- F. Perform surveys as the Work progresses to detect hazards resulting from selective demolition activities.

3.2 UTILITY SERVICES

- A. Existing Utilities: Maintain services indicated to remain and protect them against damage during selective demolition operations.

- B. Do not interrupt existing utilities serving occupied or operating facilities unless authorized in writing by Construction Administrator and authorities having jurisdiction. Provide temporary services during interruptions to existing utilities, as acceptable to Owner and to authorities having jurisdiction.
 - 1. Provide at least 72 hours' notice to Construction Administrator if shutdown of service is required during changeover.
- C. Utility Requirements: Refer to Division 15 and 16 Sections for shutting off, disconnecting, removing or capping utilities. Do not start selective demolition work until utility disconnecting and sealing have been completed and verified in writing.

3.3 PREPARATION

- A. Dangerous Materials: Drain, purge, or otherwise remove, collect, and dispose of chemicals, gases, explosives, acids, flammables, or other dangerous materials before proceeding with selective demolition operations.
- B. Site Access and Temporary Controls: Conduct selective demolition and debris-removal operations to ensure minimum interference walks, walkways, and other adjacent occupied and used facilities.
 - 1. Do not close or obstruct walks, walkways, or other adjacent occupied or used facilities without permission from the owner's representative and authorities having jurisdiction. Provide alternate routes around closed or obstructed traffic ways if required by governing regulations.
 - 2. Erect temporary protection, such as walks, fences, railings, canopies, and covered passageways, where required by authorities having jurisdiction.
 - 3. Protect existing site improvements, appurtenances, and landscaping to remain.
- C. Temporary Facilities: Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.
 - 1. Provide protection to ensure safe passage of people around selective demolition area and to and from occupied portions of building.
 - 2. Provide temporary weather protection, during interval between selective demolition of existing construction on exterior surfaces and new construction, to prevent water leakage and damage to structure and interior areas.
 - 3. Protect walls, ceilings, floors, and other existing finish work that are to remain or that are exposed during selective demolition operations.
 - 4. Cover and protect furniture, furnishings, and equipment that have not been removed.
- D. Temporary Enclosures: Provide temporary enclosures for protection of existing building and construction, in progress and completed, from exposure, foul weather, other construction operations, and similar activities. Provide temporary weathertight enclosure for building exterior.
 - 1. Where heating and cooling is needed and permanent enclosure is not complete, provide insulated temporary enclosures. Coordinate enclosure with ventilating and material drying or curing requirements to avoid dangerous conditions and effects.

- E. Temporary Partitions: Erect and maintain dustproof partitions and temporary enclosures to limit dust and dirt migration and to separate areas from fumes and noise.
- F. Temporary Shoring: Provide and maintain interior and exterior shoring, bracing, or structural support to preserve stability and prevent movement, settlement, or collapse of construction to remain, and to prevent unexpected or uncontrolled movement or collapse of construction being demolished.
 - 1. Strengthen or add new supports when required during progress of selective demolition.

3.4 POLLUTION CONTROLS

- A. Dust Control: Use water mist, temporary enclosures, and other suitable methods to limit spread of dust and dirt. Comply with governing environmental-protection regulations.
 - 1. Do not use water when it may damage existing construction or create hazardous or objectionable conditions, such as ice, flooding and pollution.
 - 2. Wet mop floors to eliminate trackable dirt and wipe down walls and doors of demolition enclosure. Vacuum carpeted areas.
- B. Disposal: Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
 - 1. Remove debris from elevated portions of building by chute, hoist, or other device that will convey debris to grade level in a controlled descent.
- C. Cleaning: Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations. Return adjacent areas to condition existing before selective demolition operations began.

3.5 SELECTIVE DEMOLITION

- A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows.
 - 1. Proceed with selective demolition systematically, from higher to lower level. Complete selective demolition operations above each floor or tier before disturbing supporting members on the next lower level.
 - 2. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. Use hand tools or small power tools designed for sawing or grinding, not hammering and chopping, to minimize disturbance of adjacent surfaces. Temporarily cover openings to remain.
 - 3. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.

4. Do not use cutting torches until work area is cleared of flammable materials. At concealed spaces, such as duct and pipe interiors, verify condition and contents of hidden space before starting flame-cutting operations. Maintain portable fire-suppression devices during flame-cutting operations.
 5. Maintain adequate ventilation when using cutting torches.
 6. Remove decayed, vermin-infested, or otherwise dangerous or unsuitable materials and promptly dispose of off-site.
 7. Remove structural framing members and lower to ground by method suitable to avoid free fall and to prevent ground impact or dust generation.
 8. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
 9. Dispose of demolished items and materials promptly.
 10. Return elements of construction and surfaces that are to remain to condition existing before selective demolition operations began.
- B. Existing Facilities: Protect existing elevators, stairs, walkways, loading docks, building entries, and other building facilities during selective demolition operations.
- C. Removed and Reinstalled Items: Comply with the following:
1. Clean and repair items to functional condition adequate for intended reuse. Paint equipment to match new equipment.
 2. Pack or crate items after cleaning and repairing. Identify contents of containers.
 3. Protect items from damage during transport and storage.
 4. Reinstall items in locations indicated. Comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make item functional for use indicated.
- D. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. When permitted by Construction Administrator, items may be removed to a suitable, protected storage location during selective demolition and cleaned and reinstalled in their original locations after selective demolition operations are complete.
- E. Concrete: Demolish in sections. Cut concrete full depth at junctures with construction to remain and at regular intervals, using power-driven saw, then remove concrete between saw cuts.
- F. Masonry: Demolish in small sections. Cut masonry at junctures with construction to remain, using power-driven saw, then remove masonry between saw cuts.
- G. Resilient Floor Coverings: Remove floor coverings and adhesive according to recommendations in RFCI-WP and its Addendum.
1. Remove residual adhesive and prepare substrate for new floor coverings by one of the methods recommended by RFCI.

3.6 PATCHING AND REPAIRS

- A. General: Promptly repair damage to adjacent construction caused by selective demolition operations.

- B. Patching: Comply with Division 1 Section "Cutting and Patching."
- C. Repairs: Where repairs to existing surfaces are required, patch to produce surfaces suitable for new materials.
 - 1. Completely fill holes and depressions in existing masonry walls that are to remain with an approved masonry patching material applied according to manufacturer's written recommendations.
- D. Finishes: Restore exposed finishes of patched areas and extend restoration into adjoining construction in a manner that eliminates evidence of patching and refinishing.
- E. Floors and Walls: Where walls or partitions that are demolished extend one finished area into another, patch and repair floor and wall surfaces in the new space. Provide an even surface of uniform finish color, texture, and appearance. Remove existing floor and wall coverings and replace with new materials, if necessary, to achieve uniform color and appearance.
 - 1. Patch with durable seams that are as invisible as possible. Provide materials and comply with installation requirements specified in other Sections of these Specifications.
 - 2. Where patching occurs in a painted surface, apply primer and intermediate paint coats over patch and apply final paint coat over entire unbroken surface containing patch. Provide additional coats until patch blends with adjacent surfaces.
 - 3. Where feasible, test and inspect patched areas after completion to demonstrate integrity of installation.
- F. Ceilings: Patch, repair, or rehang existing ceilings as necessary to provide an even-plane surface of uniform appearance.

3.7 DISPOSAL OF DEMOLISHED MATERIALS

- A. General: Promptly dispose of demolished materials. Do not allow demolished materials to accumulate on-site.
- B. Burning: Do not burn demolished materials.
- C. Disposal: Transport demolished materials off Owner's property and legally dispose of them.

3.8 SELECTIVE DEMOLITION SCHEDULE

- A. The general intent of scope for Selective Demolition is indicated on the Drawings.

END OF SECTION 01732

Section 099110 - Wood Replacement and Painting

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes rotten wood replacement, surface preparation and the application of paint systems on specified wood surfaces.

1.2 SUBMITTALS: Submit 3 sets and receive written approval from the Architect before ordering materials

- A. Product Data: For each type of product indicated.
- B. Samples: For each finish and for each color and texture required.
- C. Product List: Printout of current "MPI Approved Products List" for each product category specified in Part 2, with the proposed product highlighted.

1.3 QUALITY ASSURANCE

- A. MPI (Master Painters Institute) Standards:
 - 1. Products: Complying with MPI standards indicated and listed in "MPI Approved Products List." See www.paintinfo.com.
 - 2. Preparation and Workmanship: Comply with requirements in "MPI Architectural Painting Specification Manual" for products and paint systems indicated.
- B. Mockups: Apply benchmark sample to set quality standards for materials and execution.

PART 2 - PRODUCTS

2.1 PAINT, GENERAL

- A. Material Compatibility:
 - 1. Provide materials for use within each paint system that are compatible with one another and substrate indicated, under conditions of service and application as demonstrated by manufacturer, based on testing and field experience.
 - 2. For each coat in a paint system, provide products recommended in writing by manufacturers of topcoat for use in paint system and on substrate indicated.
- B. Color: White

2.2 BLOCK FILLERS

- A. Interior/Exterior Latex Block Filler: MPI #4.

2.3 WOOD PRIMERS

- A. Exterior Latex Wood Primer: MPI #6.

2.4 EXTERIOR LATEX PAINTS

- A. Exterior Latex (Semi gloss): MPI #11 (Gloss Level 5).

2.5 REPLACEMENT WOOD SOFFIT, FASCIA AND TRIM

- A. Exterior fascia and soffit boards to match existing
- B. Exterior Grade Crown Molding to match existing

PART 3 - EXECUTION**3.1 EXAMINATION**

- A. Examine all exterior painted surfaces and conditions, with Applicator present, for compliance with requirements for maximum moisture content and other conditions affecting performance of work.
- B. Replace rotten soffit, eave and fascia as directed by Architect.
 - 1. Extend replacement 2 feet beyond rotten areas.
 - a. Include a maximum of 12 feet of replacement.
- C. Maximum Moisture Content of Substrates: When measured with an electronic moisture meter as follows:
 - 1. Wood: 15 percent.
- D. Verify suitability of substrates, including surface conditions and compatibility with existing finishes and primers.
- E. Begin coating application only after unsatisfactory conditions have been corrected and surfaces are dry.
 - 1. Beginning coating application constitutes Contractor's acceptance of substrates and conditions.

3.2 PREPARATION AND APPLICATION

- A. Comply with manufacturers written instructions and recommendations in "MPI Painting Specification Manual" applicable to substrates and paint systems indicated.
- B. Clean all painted surfaces of substances that could impair bond of paints, including dirt, oil, grease, and incompatible paints and encapsulants.
 - 1. Remove incompatible primers and reprime substrate with compatible primers as required to produce paint systems indicated.
- C. Apply paints to produce surface films without cloudiness, spotting, holidays, laps, brush marks, roller tracking, runs, sags or other surface imperfections. Cut in sharp lines.
- D. Protect work of other trades against damage from paint application. Correct damage to work of other trades by cleaning, repairing, replacing, and refinishing, as approved by Owner, and leave in an undamaged condition.
- E. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces.

End of Section 099110

SECTION 07310 – CLAY TILE REPAIR

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Repair of existing clay tile roofing

1.2 REFERENCES

- A. American Society for Testing and Materials (ASTM) Philadelphia, PA.
- B. Architectural Sheet Metal, 5th Edition, Sheet Metal and Air Conditioning Contractors Association. (SMACNA), Chantilly, Virginia
- C. Copper and Common Sense, Revere Copper Products, Rome, NY

1.3 SUBMITTALS

- A. Submit three sets of the following to the Architect within 10 days after receiving a Notice to Proceed.
 - 1. Replacement tiles.
 - 2. Copper tile hooks.
 - 3. Samples of each length and gauge of fastener to be used.
 - 4. Clearly annotated Manufacturer's Product Data Sheets for materials and products to be used.
- B. Resumes for foreman and key skilled workmen who will be assigned to the Project.

1.4 QUALITY ASSURANCE

- A. Tile Applicator shall have a minimum of 10 years experience in successfully installing slate roofing.
- B. Foremen assigned to this project shall have 10 years demonstrable experience in the installation of tile roofing.

PART 2 - PRODUCTS

2.1 THE ARCHITECT SHALL APPROVE TILE SUPPLIER. PREAPPROVED ARE:

- A. Ludowici Roof Tile · 4757 Tile Plant Rd. · PO Box 69 · New Lexington, Ohio 43764 · 800.945.8453 · 740.342.1995 · info@ludowici.com

2.2 MATERIALS

- A. Tiles: Ludowici Spanish Barrel Tile
 - 1. Grain: Parallel to the long dimension of the slate.
 - 2. Tile Colors: Match Existing
 - 3. Sizes: Match Existing
- B. Sealant: KARNAK: Karnastatic 197
- C. Nails: large head, 10 gauge solid copper nails. Nails shall be of sufficient length to penetrate a minimum of 1-1/2 inches into the underlying deck.
- D. Tile Hooks:
 - 1. Evergreen Slate
 - 2. 3 inch copper slate hooks
 - a. Manufactured from 10 gauge copper wire.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Remove dust, dirt, projecting nails or other protrusions.

3.2 TILE INSTALLATION

- A. Repair
 - 1. Remove and replace and all broken tiles.
 - a. 1/4 inch or larger piece missing defines a broken tile.
- B. General
 - 1. Move carefully on the tile roof if the Spanish tiles are flat. If the Spanish tiles are curved, they can break easily if walked upon. Use sheets of plywood, bags filled with sand or planks to evenly distribute your weight on the tiles. Perhaps you might also be able to hook a ladder from the peak of the roof.
 - 2. Remove the broken tile with a slate ripper, essentially a type of pry-bar. If this is not possible, insert a hack saw blade beneath the tile and saw through the nail.
 - 3. Use an alternate method to replace the nails in the new tile if the layers of undamaged tile cover the nail-hole location. A bent-over nail or clip will work well.
 - 4. Fasten specified tile hooks on the sheathing, and slip the replacement tile into place. Bend the copper hook over the tile to secure it in place.

END OF SECTION 07310

SECTION 01770 - CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:
 - 1. Inspection procedures.
 - 2. Final cleaning.
- B. Related Sections include the following:
 - 1. Division 1 Section "Payment Procedures" for requirements for Applications for Payment for Substantial and Final Completion.
 - 2. Division 1 Section "Execution Requirements" for progress cleaning of Project site.

1.3 SUBSTANTIAL COMPLETION

- A. Preliminary Procedures: Before requesting inspection for determining date of Substantial Completion, complete the following. List items below that are incomplete in request.
 - 1. Prepare a list of items to be completed and corrected (punch list), the value of items on the list, and reasons why the Work is not complete.
 - 2. Obtain and submit releases permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
 - 3. Terminate and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.
 - 4. Advise Owner of changeover in heat and other utilities.
 - 5. Complete final cleaning requirements, including touchup painting.
 - 6. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.
- B. Inspection: Submit a written request for inspection for Substantial Completion. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare the Certificate of Substantial Completion after inspection

or will notify Contractor of items, either on Contractor's list or additional items identified by Architect, that must be completed or corrected before certificate will be issued.

1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.
2. Results of completed inspection will form the basis of requirements for Final Completion.

1.4 FINAL COMPLETION

- A. Preliminary Procedures: Before requesting final inspection for determining date of Final Completion, complete the following:
1. Submit a final Application for Payment according to Division 1 Section "Payment Procedures."
 2. Submit certified copy of Architect's Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by Architect. The certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance.
- B. Inspection: Submit a written request for final inspection for acceptance. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare a final Certificate for Payment after inspection or will notify Contractor of construction that must be completed or corrected before certificate will be issued.
1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected. Expenses incurred by the Architect for more than one reinspection will be the responsibility of the Contractor and will be invoiced directly.

1.5 LIST OF INCOMPLETE ITEMS (PUNCH LIST)

- A. Preparation: Submit one copy of list. Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction.
1. Organize list of spaces in sequential order, starting with exterior areas first and proceeding into the building in order of the room numbers indicated on the Drawings.
 2. Organize items applying to each space by major element, including categories for ceiling, individual walls, floors, equipment, and building systems.
 3. Include the following information at the top of each page:
 - a. Project name.
 - b. Date.
 - c. Name of Architect.
 - d. Name of Contractor.
 - e. Page number.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.

PART 3 - EXECUTION

3.1 FINAL CLEANING

- A. General: Provide final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.
- B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer's written instructions.
 - 1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for a portion of Project:
 - a. Remove tools, construction equipment, machinery, and surplus material from Project site.
 - b. Clean exposed hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances.
 - c. Sweep concrete floors broom clean in unoccupied spaces.
 - d. Remove labels that are not permanent.
 - e. Touch up and otherwise repair and restore marred, exposed finishes and surfaces. Replace finishes and surfaces that cannot be satisfactorily repaired or restored or that already show evidence of repair or restoration.
- C. Comply with safety standards for cleaning. Do not dump debris or excess materials on Owner's property. Do not discharge volatile, harmful, or dangerous materials into drainage systems. Remove waste materials from Project site and dispose of lawfully.

END OF SECTION 01770

SECTION 07555 – SBS ROOFING

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Install a cold applied two-layer SBS roof membrane over a wood roof deck.

1.2 RELATED SECTIONS

- A. Section 07620: Sheet Metal
- B. Section 07310: Tile Repair
- C. Section 04550: Pointing

1.3 DESIGN BASIS: The design basis of this section is the Siplast, Inc., Paradiene 20/30FR system.

This is not intended to limit competition, and products of other Roofing System Manufacturers (RSM) may be submitted for approval.

Wherever the phrase “or as approved” is used in this section it means that materials, components and equipment may be proposed for work in lieu of those named. They will be considered acceptable if, in the opinion of the Architect, they will perform the functions imposed by the general design and, if they meet the standards of the items named and the Manufacturer agrees in writing to the provisions of this section of the specifications.

Potential Bidders may submit Requests for Evaluation for Approval to the Architect a minimum of 14 days before the published Bid Due date. Within 5 days of the Bid Date, if not earlier, all Bidders of Record will be notified of ‘approvals’ granted.

- A. At the completion of the Project provide:
 - 1. "As built" drawings showing the location of all projections and penetrations, and any modifications that were made.
 - 2. RSM's printed recommendations for proper maintenance of the roofing system including recommended inspection frequencies, roof modification notification policies, temporary repair recommendations and leak reporting procedures.

1.4 SUBMITTALS

- A. Submit 3 sets of the following to the Architect and receive written approval before ordering materials.
 - 1. Samples of materials to be used as part of the roofing system.
 - 2. Current RSM technical literature pertaining to the installation of the roofing system.
 - 3. Dimensioned roof plan, including defined "perimeter" and "corner" areas, and shop drawings bearing approval by the RSM. These, where applicable, should be prepared in conjunction with other Sections.
 - 4. A letter from an authorized technical representative of the RSM, including as an attachment a Contractor submitted "Project Registration" form and specimen warranty, stating:
 - a. The Contractor is an authorized applicator of the RSM's warranted roofing systems.
 - b. The RSM has reviewed and accepted the attached "Project Registration" form.
 - c. The specified RSM warranty will be issued upon successful completion of the project.
- B. Prior to the commencement of work the Contractor shall provide a resume for the Foreman and Project Manager assigned to the Project. If these individuals are replaced during the Project, resumes for their replacements shall also be submitted.
- C. At the completion of the Project provide:
 - 1. "As built" drawings showing the location of all projections and penetrations, and any modifications that were made.
 - 2. RSM's printed recommendations for proper maintenance of the roofing system including recommended inspection frequencies, roof modification notification policies, temporary repair recommendations and leak reporting procedures.

1.5 QUALITY ASSURANCE

- A. Roofing Installers must be authorized by the RSM to install the Roof System specified or approved.
 - 1. Installer of the roofing system must have had at least 10 years experience in the application of the specified or approved roofing systems on projects of similar scope.
 - 2. The Foreman, including any substitute or replacement Foreman, assigned to the Project must have a minimum of 10 years experience with built-up roofing membranes.

B. RSM Qualifications

1. Company specializing in the manufacture of the materials specified or submitted for approval for not less than 10 years in the United States.
2. RSM shall agree to perform weekly inspections with direct trained personnel and conduct a final inspection upon Project completion.
3. Materials shall be the products of or be approved by the RSM.

1.6 WARRANTY: Deliver to the owner

- A. Deliver to the Owner the RSM's 20-year labor and materials warranty. It shall cover all roofing system components. The warranty shall not be prorated nor shall it have any deductibles or limitation on coverage amount.
- B. Neither the Warranty nor any attachment referenced in the Warranty shall impose record keeping obligations on the Owner.
- C. The warranty shall contain no provisions that allow for post issuance cancellation based on failure of the warranted roof to conform to the RSM's technical specifications.

1.7 DELIVERIES, STORAGE AND HANDLING

- A. **Packing and Shipping:** Deliver materials in manufacturer's original, unopened containers and rolls with labels intact and legible. Deliver materials requiring fire resistance classification with labels attached and packaged as required by labeling service. Deliver materials in sufficient quantity to allow continuity of roofing installation.
- B. **Storage and Protection**
 1. Handle rolled goods so as to prevent damage to edge or ends. Select and operate material handling equipment without damaging existing construction or installed roofing.
 2. Store insulation, roofing and related materials on clean, raised platform with weather-protective covering when stored outdoors. Properly secure insulation to prevent blow-off. Store rolled goods on end. Provide continuous protection of materials against wetting and moisture absorption. Protect materials against damage by construction traffic. Manufacturers' wrappings do not constitute weather protective covering.
 - a. Comply with fire and safety regulations.
 - b. Store adhesives and sealants in secure, well-ventilated, watertight place. Do not leave unused materials on roof overnight or when roofing installation is not in progress.
 3. Remove wet material from Site.

1.8 PROJECT / SITE CONDITIONS

- A. Environmental Conditions: Proceed with roofing installation only when weather conditions comply with RSM's recommended limitations, and when conditions permit installation to proceed in accordance with specified requirements and RSM's recommendations.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. This section is based principally on specified products manufactured by Siplast, Inc., Arkadelphia, Arkansas.
- B. Single Source - Maintain single source responsibility for performance of membrane system and comply with Manufacturer's warranty requirements.
 - 1. Obtain SBS based roofing and flashing sheets, stripping plies, SBS adhesives, asphalt primers, asphalt mastics from a single RSM.
 - 2. Obtain other components of the roofing system covered by Roofing System Manufacturer's Warranty from suppliers approved by the RSM.

2.2 SBS MINERAL SURFACED ROOFING

- A. Roof membrane assembly consisting of two layers of a prefabricated, reinforced, homogeneous Styrene-Butadiene-Styrene (SBS) block copolymer modified asphalt membrane, applied over a prepared substrate. Both reinforcement mats shall be impregnated/saturated and coated each side with an SBS modified bitumen blend and coated one side with a SBS bitumen blend adhesive layer. The roof system shall pass 500 cycles of ASTM D 5849 Resistance to Cyclic Joint Displacement (fatigue) at 14°F (-10°C). Passing results shall show no signs of membrane cracking or interply delamination after 500 cycles. The roof system shall pass 200 cycles of ASTM D 5849 after heat conditioning performed in accordance with ASTM D 5147. The assembly shall possess waterproofing capability, such that a phased roof application, with only the modified bitumen base ply in place, can be achieved for prolonged periods of time without detriment to the watertight integrity of the entire roof system.
 - 1. Modified Bitumen Base Layer and Stripping Ply: Siplast Paradiene 20
 - 2. Modified Bitumen Top Layer: Siplast Paradiene 30 FR
 - 3. Modified Bitumen Flashing Layer: Siplast Aluminum Veral
- B. Base Sheet: Siplast Parabase
- C. Membrane Adhesive: Siplast SFT Adhesive
- D. Flashing Adhesive: Siplast SFT Cement
- E. Low Point Filling Material: Siplast Paraslope

- F. Fluid Applied Flashing shall be a catalyzed acrylic resin system: Siplast Parapro 123 or approved equal. The system shall be a specialty flashing consisting of a liquid-applied, fully reinforced, multi-component acrylic membrane installed over a prepared or primed substrate. The flashing system consists of a catalyzed acrylic resin primer, basecoat and topcoat, combined with a non-woven polyester fleece. The resin and catalyst are pre-mixed immediately prior to installation.

2.6 BITUMINOUS CUTBACK MATERIALS

- A. Primer: Siplast PA-1125 Asphalt Primer or as approved
- B. Mastic: Siplast PA-828 or as approved non-asbestos product.

2.7 RELATED COMPONENTS

- A. Sealants
1. Sealant: Siplast PS 304 elastomeric sealant or as approved by RSM.
 2. Butyl tape: shall be 1/8 inch thick X 1/2 inch wide Tremco 440 or as approved.
- B. Mineral Granules: Siplast supplied mineral granules or as approved by RSM
- C. Walktread: A prefabricated, puncture resistant, polyester core reinforced, polymer modified bitumen sheet material topped with a ceramic-coated wearing surface conforming to the following:
Thickness: 0.217 inches
Weight: 1.8 lb./square foot
Width: 30 inches
1. Siplast Paratread Protection Material, or as approved by RSM.
- D. Rough Carpentry. Lumber used for nailers, curbs, cants, etc., shall be No. 2 kiln dried (19% maximum moisture content after treatment), grade marked, and surfaced on four sides.
- E. Siliconized Gypsum (Chimney's)
1. 1/4 inch Dens-Deck Prime
- F. Fasteners
1. Base Sheet Fasteners: Siplast Parafast Insulation Fasteners and Plates.
 2. Wood to wood: Rawl: # 12 Perma-seal deck screws or as approved. Length shall be sufficient to achieve 1-inch penetration. Nails are not permitted.
 3. Fasteners for securing wood nailers to steel angles: Dekfast #14
 4. Fasteners for securing membrane to concrete or brick: RAWL: stainless steel Zamac Nailin® or as approved. Length shall be sufficient to achieve 1-inch embedment.

PART 3 - EXECUTION

3.1 GENERAL

These Specifications may limit the installation options from those generally acceptable to the RSM. These conditions shall also apply to any materials approved as an equal

These requirements include:

- A. Application of the top layer of modified material may not be installed until
 1. The first layer has been completed in its entirety.
 2. The metal edging, drains and other flanged penetrations have been installed and stripped.
 3. The first layer of roofing has been inspected and approved by both the Architect and a technical representative of the RSM.
- B. Apply Adhesive Bleed Granules to all bleeds, regardless of width, at the time the top layer is installed. Work shall not proceed unless granules are on site.
- C. Maximum width of flashing shall be the width of the roll.
- D. Do not proceed with roof membrane demolition in a drain's contributory area until the drain body is in place and connected to internal discharge lines.

3.2 SUBSTRATE PREPARATION

- A. Remove existing roofing, insulation, base flashings and related components.
- B. Wood Blocking
 1. Re secure existing perimeter nailers:
 - a. One fastener within 6 inches of the end of each length of nailer and one fastener per 2 lineal feet.
 - b. Replace damaged nailers. Allow for the replacement of 50 lineal feet of 2 inch by 8 inch nailer in your Bids
 2. New Blocking:
 - a. Install wood blocking around perimeter to receive metal edging using specified fasteners.
 - b. Install blocking as required by the RSM at walls and around penetrations as per RSM requirements.
 - c. Anchor new blocking sufficiently to resist a 200 pound per lineal foot
 - d. Use only specified threaded fasteners.

C. Drains

1. Install new drain body level with the deck. Do not proceed with work in the contributory area of an individual drain until that drain has been replaced (or in the case of a new drain location, installed for the first time) and connected to interior plumbing.
2. Install overflow drains 3 inches above the drain ring of the primary drain. Pipe overflow drains out the low eave of the East side of the building. Supply all hangers and pipe to reach the desired point of exit. Submit shop drawing for approval prior to proceeding with this work.

D. Roof Deck Replacement

1. Replace damaged or deteriorated wood deck as directed by Architect. Replacement wood decking to match existing decking is size type and securement. Include 50 square feet of deck replacement in your Bid.

E. Low Point Filling Material

1. Include 200 Square Feet x 2 inches deep in base bids.

F. General

1. Remove only that amount of roofing that can be covered with the base layer in that same day.
2. Leave roof in watertight condition at end of each workday.
3. Removals shall not proceed if rain is forecast for any portion of the time that the roof covering will be removed. Maintain on hand on the roof level being worked, for emergency tarpaulins or other covering materials in sufficient quantity to temporarily cover open areas on the roof in the event of unanticipated rainfall.
4. Maintain operating water pumps and hoses to keep areas free of standing water.

3.3 INSTALLATION

Although this Specification is based principally on products manufactured by Siplast, the requirements contained herein may be more stringent.

- A. Comply with instructions and recommendations of roofing materials manufacturer for specified roofing system to ensure watertight installation in normal weather exposures and no deterioration in excess of manufacturer's published limitations.
 1. Membrane Adhesives to be applied per manufacturer recommendations.
 2. Confinement of Materials: Do not allow fluid and plastic materials to spill or migrate beyond surfaces of intended application, or to flow into drains or conductors.
- B. Base Sheet Installation: Comply with recommendations and instructions of SBS roofing system manufacturer.

1. Layout the base sheet on top of wood decking. Side laps shall be two inches and end laps shall be 4 inches. In field of roof, fasten base sheet 9 inches OC in the laps and down the longitudinal center of each felt place two rows of fasteners spaced approximately 11 inches apart with the fasteners staggered on approximately 18 inch centers. At the perimeters and corners, double the number of fasteners.
 2. Perimeters are defined on these roofs as extending 4 feet in from the edge of the roof. Corners are defined as the intersections of perimeters.
- C. Installation of Roofing System: Install roofing system in strict accordance with manufacturer's recommendations and instructions, unless otherwise indicated. Thoroughly clean debris from surface of insulation prior to installation of roofing system. Install flashings in strict accordance with manufacturer's recommendations.

3.4 PHASED CONSTRUCTION REQUIREMENT

- A. The top layer of SBS may not be installed until after installation of the bottom layer is completed, metal-flanged components have been stripped in; and this portion of the work has been inspected and approved by the Manufacturer and the Architect.

END OF SECTION 07555

SECTION 07620 – ROOF RELATED SHEET METAL

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. This Section includes proprietary metal edging, gutter, leaders, proprietary through wall counterflashing and removal and reinstallation of front (West) gutter to provide proper drainage.
- B. Refer to Drawings and referenced literature for other pertinent information.
- C. SMACNA references are to SMACNA Architectural Sheet Metal Manual, 5th Edition.
- D. Masonry unit removal and replacement.

1.2 RELATED SECTIONS

- A. Section 07311: Clay Tile Repair
- B. Section 07555: SBS Roofing
- C. Section 04550: Pointing

1.3 SUBMITTALS: Submit 3 sets of the following to the Architect and receive written approval before ordering materials.

- A. Samples of proposed formed sections, if requested.
- B. Shop Drawings for basic conditions, showing dimensions for sheet metal and wood blocking as well as fastening specifics: type, length and density. Prepare Shop Drawings in conjunction with those prepared to fulfill the requirements of Section 07311.
- D. Replacement masonry units and mortar.

1.4 QUALITY ASSURANCE

- A. Comply with the standards specified in this section, those shown on the Project Drawings and as listed elsewhere.
- B. Qualifications of the Manufacturers: Products used in the work of this section shall be produced by manufacturers regularly engaged in the manufacture of similar items and with a history of successful production and product installations.

- C. Qualifications of Installers: Installers shall be thoroughly trained and experienced in the necessary crafts.

In the acceptance or rejection of the Work of this section, no allowance will be made for lack of skill or specification understanding on the part of the workers. It shall be incumbent upon the Contractor to use adequate numbers of skilled installers and to instruct them in the requirements of the project specifications.

PART 2 - PRODUCTS

- 2.1 PROPRIETARY METAL EDGE: Siplast Paraguard Proform Gravel Stop System or equal supplied by the primary Roofing System Manufacturer fabricated from 0.40 Aluminum.
 - A. Thickness of gravel stops and extenders: Thickness of splice plates and cleats shall be per RSM recommendation.
 - B. Color: Architect shall select from standard color chart.
 - C. Provide extenders per RSM recommendations where sheet metal covered surface is greater than 10 inches.
- 2.2 GUTTER
 - A. Fabricate new 8 inch gutter from 0.50 Aluminum
 - B. All gutter runs to be fabricated from single section of gutter.
 - C. Use factory-fabricated transitions and endcaps.
 - D. Fabricate 4"x5" downspouts (leaders) from .040 Aluminum
 - E. Color: Architect shall select from standard color chart
- 2.3 THROUGH WALL COUNTERFLASHING: Two-piece counterflashing shall be equal to those manufactured by the Keystone Flashing Company, Philadelphia
 - A. Two piece counterflashing shall be equal to those manufactured by the Keystone Flashing Company, Philadelphia
 - B. Receiver shall be of fabricated to match the profile shown on the Project Drawings and shall have a 1-inch face on the inside of the parapet. The receiver shall have a ¼ inch hem return on the outside edge.
 - C. Receiver shall be formed of 16-ounce lead coated copper with a special vertical locking slot that requires no malleting or bending to hold the insert member in place.

- D. See drawings for insert exposed face dimension. The insert members shall be formed of 16-ounce lead coated copper and designed to snap lock into the receiver portion and provide a spring like hug against the base flashing.
 - E. Lock/rivet and solder joints.
 - F. Install expansion joints in counterflashing every 30 lineal feet to allow for expansion and contraction. Expansion Joints to be installed per SMACNA recommendations.
- 2.4 SOLDER:
- A. 50% block tin and 50 % pig lead, conforming to ASTM B32
- 2.5 FLUX:
- A. Muriatic acid killed with zinc, or as approved
- 2.6 RIVETS:
- A. 1/8 inch Copper
- 2.7 MASONRY: Replacement of masonry units used to restore walls opened to install new through wall flashings.
- A. Replacement units: Conform to ASTM 126 SW. Match existing. Provide units matching sample approved by Architect. Removed units may be reinstalled provided they are sound.
 - B. Mortar: Type N. Color to match existing
 - C. Weeps: Masonpro Rectangular Weeps with wick and stainless steel screen. Dimensions - 3/8" x 1 1/2" x 3 1/2"

PART 3 - EXECUTION

3.1 GENERAL

- A. Examine the areas and conditions under which the Work of this section will be performed. Correct detrimental conditions.
- B. Do not permit dissimilar metals to come in contact with one another. Provide bituminous paint or other protective coating on concealed surfaces to prevent interaction of materials.
- C. Field verify dimensions shown on the Drawings; form sheet metal accurately and to the required dimensions and shapes.

- D. Comply with pertinent recommendations contained in "Owners Architectural Sheet Metal Manual", 1993 (5th) edition, as published by SMACNA.

3.2 METAL EDGING

- A. Install proprietary metal edging per manufacturers recommendations.
- B. Maximum vertical face without an extender: 10 inches
- C. Maintain uniform face height.

3.3 GUTTER

- A. Install gutter where shown on drawings.

3.4 THROUGH WALL COUNTERFLASHING

- A. Install where depicted on drawings
- B. Fasten and seal back vertical leg of counterflashing to wall with fluid applied flashing specified in section 07555.

3.5 MASONRY: Replacement of masonry units used to restore walls opened to install new through wall flashings.

- A. Install new masonry to match existing construction (Joint sizing, etc.)
- B. Install specified weep tubes at every other brick.

3.6 FRONT (WEST) GUTTER

- A. Remove entire gutter on the front of the building.
- B. Reinstall existing gutter to provide positive slope of the existing leaders.
- C. Assure all connections are completed to match existing construction.
- D. Seal all joints and transitions with fluid applied flashing specified in section 07555.

END OF SECTION 07620

SECTION 04550 – POINTING AND REPLACEMENT

PART 1 - GENERAL

1.1 DESCRIPTION OF WORK

The work in this section includes, but is not limited to, the following:

- A. Rake out all joints in the existing masonry chimney.
- B. Rake out and remove all inappropriate existing joints, including caulked joints.
 - 1. Inappropriate masonry joints are defined as joints filled or sealed with sealants and or mastic.
- C. Point raked joints with new masonry mortar to match the originals in color, texture and profile.
- D. Removal and replacement of spalling masonry units.
 - 1. Spalling masonry is defined as bricks which are losing or have lost their exposed surface.

1.2 RELATED SECTIONS

- A. Section 07555: SBS Roofing
- B. Section 07620: Sheet Metal
- C. Section 07310: Tile Repair

1.3 COORDINATION

- A. Coordinate the work of this section with all other sections for the successful completion of the Contract.

1.4 APPLICABLE CODES AND STANDARDS

- A. American Society for Testing and Materials (ASTM)
 - 1. ASTM C270: Standard Specification for Mortar for Unit Masonry
 - 2. ASTM specifications regulating the quality of any product specified herein
- B. Secretary of the Interior Standards for Rehabilitation

1.5 QUALITY ASSURANCE

- A. Submit resume demonstrating a minimum of five (5) years experience re-pointing masonry. Provide at least three references for projects of similar size and materials. Carefully supervise mechanics to ensure that the work is accomplished to meet or exceed the highest standards of the trade.
- B. Maintain a steady work crew made up of qualified workers and a full time Foreman who speaks, reads, and writes fluent English. Confirm that all workers understand the job's requirements.
- C. Order sufficient materials to cover entire project.
- D. Provide regular access to the scaffolding and worksite so that the Architect's Representative may easily inspect work being performed.
- E. Replace at no additional expense to the Architect all broken, lost, damaged material resulting from the work conducted in this section.
- F. Performed work on a daily basis without interruption unless directed otherwise by the Architect.
- G. In acceptance or rejection of re-pointing operations, no allowance will be made for lack of skill on the part of the mechanics.

1.6 SUBMITTALS

- A. Product Literature: Submit copies of the manufacturer's technical data for each product including their recommendations for installation and use. Include any product data and MSDS. Include test reports and certificates that verify the product's compliance with the specification's requirements.
- B. Samples:
 - 1. Provide cured samples of each pointing mortar in the form of 6 inch long by ½ inch wide sample strips of mortar set in aluminum or plastic channels.
 - 2. Provide a sample (minimum 50 grams) of the aggregate to be used in each pointing mortar.
 - 3. Masonry unit to match existing.

1.7 MOCK - UPS

- A. Prepare two sample areas measuring approximately 3 square feet.
 - 1. Provide one sample area for demonstrating methods and quality of workmanship expected in the removal of mortar from joints and,
 - 2. Provide one sample area for demonstrating the quality of materials and workmanship in pointing mortar joints.

1.8 PRODUCT HANDLING

- A. Deliver materials to the job site in original, unopened containers bearing manufacturer name and label. Store and handle materials in strict compliance with manufacturer's instructions. Do not store on ground.
- B. Protect materials from tampering, acts of vandalism, possible injury to workers, the general public, intrusion of foreign materials, and moisture. All vessels shall have tight fitting covers.

1.9 PROJECT CONDITIONS

- A. Weather: Perform exterior pointing work only when existing temperature is between 40°F and 80°F and will remain so for at least 48 hours after completion of work. Protect newly finished work from direct rainfall.
- B. Protection: Prevent mortar from staining faces of the masonry. Protect all adjacent surfaces, ledges, and projects from mortar droppings.

PART 2 - PRODUCTS

2.1 TOOLS

- A. Use only an approved power-operated rotary hand-held grinder to cut out mortar in horizontal joints. Grinder shall have a blade no thicker than 1/16 inch. Submit All blades to the Architect's approval. Prove to the satisfaction of the Architect that mechanics are sufficiently proficient with the grinder that it can be used without damaging the surrounding masonry.
- B. Use chisels for vertical joints that are narrower in diameter than the width of the joint in which they are used (less than 1/8 inch in diameter).
- C. Use stiff, natural bristle brushes for cleaning areas to be replaced.
- D. Repointing slicker for may require modification for thin joints.
- E. Use hacksaw (18T x 12-inch blade), pliers and clippers to cut, notch and band lead cap as required by installation.
- E. Use utility knife for cutting out caulked joints.

2.2 MORTAR PRODUCTS

- A. Match color, texture, joint size, and type of original mortar as closely as possible. Mortar is to be approved by Architect prior to installation.
- B. Aggregate: Provide aggregate to match existing aggregate in terms of color, angularity, and gradation. Note: this may require the use of 'specialty' aggregate.

- C. Cement: Provide Portland Cement, Type I, in accordance with ASTM C150
- D. Lime: Hydrated lime shall be in accordance with ASTM C207 and shall be Type S.
- E. Pigment: Use only alkali-stable inorganic pigments with proven record of satisfactory performance. Mortar colors are to be approved by Architect before installation.
- F. Water: Potable.

2.3 POINTING MORTAR MIXES

- A. Mortar mix shall be Type N.
- B. Submit samples of each replication for Architect approval. Do not adjust mix proportions after obtaining Architect's approval.
- C. Do not use admixtures of any specified mortar.
- D. Measure cement, lime, and aggregate materials in a dry condition by volume. Do not measure by shovel. Use a measure of known volume. Mix materials in a clean dry mechanical batch mixer.

2.4 MASONRY UNITS

- A. Replacement units: Conform to ASTM 126 SW. Match existing. Provide units matching sample approved by Owners representative. Removed units may be reinstalled provided they are sound.

PART 3 - EXECUTION

3.1 INSPECTION

- A. Examine substrates, supports, and conditions under which this work is to be performed and notify the Architect in writing of conditions detrimental to the proper completion of the work. Do not proceed with work until unsatisfactory conditions are corrected. Beginning work signifies installer's acceptance of substrates and conditions.

3.2 JOINT RAKING AND PREPARATION

- A. Carefully document joint profile and width prior to raking activities.
- B. Rake out mortar from joints to depths equal to 2 ½ times their widths, but not less than ½ inch, to expose sound mortar. Remove mortar to provide reveals with square backs and to expose masonry for contact with pointing mortar. Brush, vacuum, or flush joints to remove all dirt and loose debris.

- C. Cut out old mortar by hand and chisel. Or, use a grinder to make one cut down the center of the horizontal joint. The mortar along the top and bottom of that slice must be removed using a hammer and chisel. Power operated, rotary hand held angle saws and grinders will be permitted with the approval of the Architect for use on the horizontal joints only if the Contactor can submit a satisfactory quality control program and demonstrate the ability of the operators to use tools without damaging the masonry. Quality control program will include provisions for supervising performance and preventing damage due to worker fatigue. If power tools cause masonry damage, only chisels and mallets will be permitted for the remainder of the project.
- D. Do not break or mar edges of masonry units or widen joints. Replace in kind all masonry units, which become damaged.

3.3 POINTING

- A. Rinse masonry joint surfaces with fresh water to remove all dust and loose mortar particles. Time application of rinsing so that, at time of pointing, excess water has evaporated or run off, and joint surfaces are damp, but free of standing water.
- B. Apply first layer of pointing mortar to areas where existing mortar was removed to depths greater than surrounding areas. Apply in layers not greater than 3/8 inch. Compact each layer thoroughly and allow it to become thumbprint-hard before applying next layer.
- C. After joints have been filed to a uniform depth, apply pointing mortar in three steps. Each of the first and second steps should fill approximately 2/5 of joint depth and third step should fill the remaining 1/5 of joint depth. Fully compact at each step and allow the layer to become thumbprint hard before applying the next step. Take care not to spread mortar over edges onto exposed masonry surfaces, or to feather edge the mortar.
- D. When mortar is thumbprint hard, tool joints to match original appearance of joints and approved mock ups. Expose aggregate by brushing, or using a brush in a stippling fashion.
- E. Cure mortar by maintaining a damp condition for not less than 72 hours.

3.4 MASONRY UNIT REPLACEMENT

- A. Masonry: Replacement of masonry units used to restore walls opened to remove spalled units.
- B. Install new masonry to match existing construction (Joint sizing, etc.)

3.5 FINAL CLEANING

- A. After mortar has fully hardened, thoroughly clean exposed masonry surfaces of excess mortar and foreign matter using stiff nylon or Tampico bristle brushes and clean water spray applied at low pressure (> 500 psi).
- B. Do not use metal scrapers or brushes.

END OF SECTION 04550

ANNOTATED PHOTOS



Photo 1:

Replace all broken / missing hip tiles shown here and elsewhere. See section 07310.



Photo 2:

Replace all broken / missing tiles in field of roof here and elsewhere. Include 100 field tiles and 20 cap tiles. See section 07310.



Photo 3:
Replace broken cap tiles here and elsewhere.



Photo 4:
Waterproof concrete chimney cap with fluid applied flashing specified in section 07555. Extend flashing to top edge of clay chimney.



Photo 5:

Remove cap tiles, flash wall according to construction drawings and reinstall cap tiles.



Photo 6: ALTERNATE #1

Replace spalling bricks and repoint chimney. Spalling bricks are defined as bricks with loose or missing surfaces.



Photo 7:

Here and elsewhere. Remove loose / dislodged masonry and patch, remove wood access doors and replace with copper, secure ½ inch plywood with Zamac nail ins, flash entire chimney with fluid applied flashing specified in section 07555. Tie fluid applied flashing into new roof system and existing lead coated copper apron flashing. Turn flashing down chimney openings a minimum of 2 inches.

ALTERNATE #2: Remove both chimneys to the underside of the roof decking to meet the requirements of the architect. Infill deck to match existing construction and roof in. Be sure to continue existing perimeter continuous in the event ALTERNATE #2 is accepted.



Photo 8:

Remove gutter where shown on drawings, Resecure all existing blocking behind existing gutter, add new blocks between all existing blocks, install new continuous gutter securing to existing and new blocks, install new leaders to drain at existing locations.



Photo 9:

Remove existing gutter and leaders to allow access to rotten fascia. Replace all rotten and loose fascia to match existing construction. Extend replacement of rotten wood 2 feet beyond rotten areas. Reinstall existing gutter and leaders. Submit shop drawing to architect for approval prior to commencement of this work. See section 099110.