

TOWN OF GLASTONBURY

**GL-2011-01 Roof Replacement – Hebron Avenue School
Bid Due Date: March 30, 2010 at 11:00 A.M.**

ADDENDUM #2 – dated 03-25-2010

Additional Information:

Specification Section 07501 TORCH ROOFING SYSTEM is added by this addendum.

Chimney repairs as described in SECTION 01010 Summary of Work 1.2 A 8 have been **deleted** from this project.

Below are questions received from plan holders:

1. Question:

Is there a spec for the torch down system?

Answer:

Section 07051 TORCH ROOFING SYSTEM is included in this addendum

2. Question:

What is the existing construction?

Answer:

As per Page 32 in SECTION 07221, the construction is as follows:

Existing First Layer: Polyisocyanurate 2.5" (Roof Section 5 has 4" of Polyisocyanurate)

Existing Second Layer: Perlite 1" (Roof Section 5 has ½" layer of Perlite)

3. Question:

Will the Gas lines be the Contractor's responsibility to remove?

Answer:

Yes, the contractor will also be responsible for the patching of all openings created by the removal process.

4. Question:

Can the drawings be e-mailed for sight purposes?

Answer:

Yes, they are available from Greg Rose at grose@simonroofingproducts.com

5. Question:

When can we come back to look at the roof?

Answer:

As given at the mandatory walk thru, the building will be available on March 24 at 2:00 pm.

6. Question:

Are all fascia pieces part of the removal process?

Answer:

Yes, all fascia and extension pieces are being removed.

End of Addendum #2

SECTION 07501
TORCH ROOFING SYSTEM

1. PART 1 - GENERAL

1.1. RELATED DOCUMENTS:

- A. Documents affecting work of this Section include, but are not necessarily limited to, General Requirements, bidding documents and drawings.

1.2. GENERAL

- A. This portion of the specification sets forth the general requirements and describes materials and workmanship for installing the specified roofing system.
- B. Follow Factory Mutual System Requirements
- C. Roofing contractor shall furnish and install all materials described herein unless specifically noted otherwise.
- D. This section is for work on roofs: Section 5

1.3. INSPECTION

- A. Roofing Contractor shall verify installation conditions as satisfactory to receive work, including deck slope which may require insulation stops and/or backnailing by the warranty supplier based on specified system.
- B. The roofing contractor shall notify building owner, in writing of any defects in the substrate, and work shall not proceed until defects have been corrected.
- C. Do not install new roofing until all unsatisfactory conditions are corrected. Beginning work constitutes acceptance of conditions.
- D. Check projections, curbs, and deck for inadequate anchorage, foreign material, moisture, or unevenness that would prevent quality and execution of new roofing system.
- E. Start of work by the roofing contractor shall imply approval of deck surfaces and site conditions; and no claim in this respect will be considered valid in case of failure of the roofing components within the guarantee period.
- F. Roofing Contractor shall verify that work of other trades penetrating roof deck or requiring workers and equipment to transverse roof deck has been approved by owner, roofing system warrantor, and roofing contractor.

1.4. SCHEDULE

- A. Installation of the new roofing system should be scheduled after all other major rooftop construction is complete to minimize potential for damage to the new roofing system by others.

1.5. QUALITY ASSURANCE

- A. The roofing and associated work shall be contracted to a single firm, called the roofing contractor hereafter, specializing in the type of roofing required, so that there will be undivided responsibility for the performance of the work.

1.6. SUBMITTALS

- A. Related section: SECTION 01300 - SUBMITTALS
- B. Prior to starting work, the roofing contractor shall submit 3 copies of the technical data on roofing materials, including material specifications, Material Safety Data Sheets, and installation procedures.

1.7. JOB CONDITIONS

- A. Roofing work shall proceed only when weather conditions will permit the work to proceed in accordance with the roofing system warrantor's recommendations.

1.8. FIRE AND SMOKE PROTECTION

- A. Torches at the end of work periods shall be stored in those conditions to prevent combustion. Fire extinguishers shall be provided near torches for immediate use. A fire watch shall be conducted for a minimum of 1 hour after all torching stops at the end of the day's work.

1.9. SAFETY PRECAUTIONS

- A. All owner's and OSHA safety rules shall be adhered to in the execution of this work. The fumes of hot bituminous materials may be toxic to some workers. Adequate protection shall be provided, to prevent burns and skin irritation, in accordance with building owner safety requirements.

1.10. ROOF TRAFFIC

- A. After work on roof is started, no traffic will be permitted on the roof other than that necessary for the roofing application and inspection. Materials shall not be piled on the roof to the extent that design live loads are exceeded. Roofing materials shall not be transported over unfinished or finished roofing or existing roofs unless adequate protection is provided.
- B. Any damage to existing roofs shall be repaired as directed by building owner at no expense to building owner.

1.11. PROTECTION AGAINST SOILAGE

- A. Surface of walls, walks, pavements, adjacent property, etc., shall be protected as necessary to prevent soiling or other damage resulting from the application of roofing or transporting of materials. If surfaces are stained or damaged in any way, they shall be restored by this contractor, at no cost to building owner, in a manner acceptable to building owner.
- B. Felt envelopes shall be installed where required to prevent bitumen drippage. Follow NRCA guidelines for felt enveloping techniques.

1.12. PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Materials shall be delivered to the site in an undamaged and dry condition.
- B. Material received which is not dry or is otherwise damaged shall be rejected. Storage should be either in a heated building or in a warehouse or similar type structure at ambient temperature and humidity. Conditions should be such that the moisture content of felts at time of use does not exceed the equilibrium moisture content (EMC) at 75% RH.
- C. Rolls of flashing and felts shall be stacked on their ends and never in contact with the ground. Bituminous emulsions shall be stored at temperatures above freezing.
- D. Proper storage on or off the site shall be the responsibility of the roofing contractor.
- E. Any unused roofing felt remaining on the roof at the end of the workday shall be returned to storage.

1.13. WORK SEQUENCE

- A. Once work is started on a roof or section, it shall continue without undue delay until that section is completed before starting another. The installation of flashings shall follow application of the roofing immediately.

1.14. FINAL INSPECTION

- A. Upon completion of the installation, an inspection shall be made by a representative of building owner to ascertain that the roofing system has been installed according to the roofing system warrantor's published specifications and details. The warranty will be issued upon approval of the installation and payment for all materials and fees.

1.15. ADJUSTMENT AND REPAIR

- A. Any roofing damaged or misapplication shall be repaired or replaced as designated by the building owner and roofing system warrantor. Repairs or replacement will be made by the contractor at no expense to building owner.

1.16. ROOFING WARRANTY

- A. Related section: SECTION 01740- WARRANTIES
- B. Upon project completion, acceptance by building owner and warrantor, and payment of all materials and fees, the specified warranty will be issued.

2. PART 2 - PRODUCTS

2.1. GENERAL

- A. Comply with Quality Control, References, Specification, and Manufacturer's data. Where conflict may exist, requirements that are more stringent govern.
- B. Provide primary products, including each type of roofing sheet (felt), bitumen, base flashings, miscellaneous flashing materials, and sheet metal components from a supplier/manufacturer, which has produced that type of product successfully for not less than three (3) years. Provide secondary products (insulation, mechanical fasteners, lumber, and etc.) only as recommended by the warrantor of primary products for use with roofing system specified.

2.2. SYSTEM ROOFING MATERIALS

- A. Roof System Description: SuperiorCraft™ SC2-2
A torch-applied or hot air welded roof system designed for exceptional flexibility and durability. This fire-rated, white surfaced energy star listed roofing system combines premium quality components for optimum rooftop endurance and value. Incorporating premium reinforcements and asphalt, this roof system is engineered to provide long-term performance.

B. Roof System Materials

Test	Typical Value	Test Method
Maximum Load @ 75°F.	119.8 lbf/in. MD 93.2 lbf/in. XMD	ASTM D 2523
Strain Maximum Load @ 75°F.	4.8% MD 26.8 % XMD	ASTM D 2523
Strain at Break @ 75°F.	21.1% MD 35.2 % XMD	ASTM D 2523
Maximum Load @ 0°F.	303.3 lbf/in. MD 226.3 lbf/in. XMD	ASTM D 2523
Strain Maximum Load @ 0°F.	2.9% MD 2.7 % XMD	ASTM D 2523
Strain at Break @ 0°F.	4.2% MD 4.1 % XMD	ASTM D 2523

C. Related Roofing System Materials

1 Asphalt Primer:

Test	Typical Value	Test Method
Asbestos Content	0%	EPA 600/R-93/116

Viscosity	100-200 cps	ASTM D 2196
Density	7.2 lbs/gal.	ASTM D 1475
Solids by Weight	43%	ASTM D 4479
Flash Point	101°F minimum	ASTM D 93

2 Asphalt Mastic:		
<u>Test</u>	<u>Typical Value</u>	<u>Test Method</u>
Asbestos Content	0%	EPA 600/R-93/116
Non-Volatile Matter by Weight	76-82%	ASTM D 4586
Viscosity @ 77°F	450,000 - 950,000 cps	ASTM D 2196
Density @ 77°F	9.5 - 10.0 lb/gal.	ASTM D 1475
Resistance to Sag @ 140°F	1/8" maximum	ASTM D 4586
Adhesion to Wet Surfaces	55%	ASTM D 3409
Moisture by Weight	1.5%	ASTM D 4586
Mineral or Other Stabilizers by Weight	38%	ASTM D 4586
Asphalt by Weight	40%	ASTM D 4586
Uniformity & Workability	Acceptable as described	ASTM D 4586
Behavior @ 140°F	No blistering	ASTM D 4586
Pliability @ 32°F	No cracking/separation	ASTM D 45

3. PART 3 – EXECUTION

3.1. MEMBRANE

- A. Back Nailing:
 - 1 The contractor shall determine back nailing requirements of membrane manufacturer and follow those requirements.
- B. Membrane Installation:
 - 1 Mechanically attached specified base sheet over insulation. Align specified sheet roll with edge of roof in lowest area, melt bottom side of roll with propane torch evenly and sufficient for full adhesion, but not to the point that membrane is deformed or reinforcement is exposed. Install two plies of the specified torched base sheet.
 - 2 Align on one ply line of previously applied roll(s) and repeat above procedure.
- C. Cap Sheet Installation:
 - 1 Align specified sheet roll with edge of roof in lowest area, melt bottom side of roll with propane torch evenly and sufficient for full adhesion, but not to the point that membrane is deformed or reinforcement is exposed.
 - 2 Align on one ply line of previously applied roll(s) and repeat above procedure.
- D. Membrane installation further requirements:
 - 1 Follow warranty supplier's recommendations for back nailing requirements.
 - 2 Place ply sheets to ensure water will flow over or parallel to, but never against, exposed edges.
 - 3 When using adhesives, ply should never touch ply even at roof edges, laps, tapered edge strips, and cants.
 - 4 Apply specified adhesive no more than ten feet ahead of each roll being embedded, less in cool weather.
 - 5 Avoid excessive application of adhesive over top ply, leave top ply exposed with minimal adhesive at ply lines or back-line on the insulation.

- 6 Light brooming or squeegeeing may be required to aid adhesion of ply sheets, base sheets, and/or cap sheets.
- 7 Avoid traffic on all newly installed membrane.
- 8 Overlap previous day's work 24 inches.
- 9 Lap ply sheet ends six inches. Stagger end laps twelve inches minimum.
- 10 Fit plies into roof drain rims, install metal flashing and finishing plies, secure clamping collars, and install domes.
- 11 Cut out fish mouths/side laps that are not completely sealed. Replace all sheets that are not fully and continuously bonded.
- 12 Roof is to be inspected and approved by representative from roof system warrantor before application of surfacing.

3.2. DAILY WATERSTOP/TIE-INS

- A. Install "deadman" insulation filler at insulation staggers.
- B. Extend roofing plies at least twelve inches onto prepared area of adjacent roofing. Embed plies into Specified Interply Adhesive. Strip edges with twelve-inch wide ply sheet embedded completely in alternate uniform courses of Specified Adhesive.
- C. At beginning of next day's work, remove temporary connection by cutting felts evenly along edge of existing roof system. Remove "deadman" insulation fillers.

3.3. ADJUSTING AND CLEANING

- A. Repair of Deficiencies: Installations or details noted as deficient during inspections must be repaired and corrected by applicator, and made ready for re-inspection within five working days.
- B. Clean up: Immediately upon job completion, roof membrane and flashing surfaces shall be cleaned of debris.

3.4. ADJUSTING AND CLEANING

- A. Repair of Deficiencies: Installations or details noted as deficient during inspections must be repaired and corrected by applicator, and made ready for reinspection within five working days.
- B. Clean up: Immediately upon job completion, roof membrane and flashing surfaces shall be cleaned of debris.

* * * END OF SECTION 07501 * * *