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August 1, 2016

**NOTICE OF ADDENDUM
ADDENDUM NO. 1**

**CONTRACT NO. 7758
POLICE DEPARTMENT WEST DISTRICT ROOF REPLACEMENT**

Revise and amend the contract document(s) for the above project as stated in this addendum, otherwise, the original document shall remain in effect.

Please acknowledge this addendum on page E1 of the contract documents and/or in Section E: Bidder's Acknowledgement on Bid Express.

Electronic version of these documents can be found on the Bid Express web site at:

<http://www.bidexpress.com>

If you are unable to download plan revisions associated with the addendum, please contact the Engineering office at 608-266-4751 receive the material by another route.

Sincerely,

Robert F. Phillips, P.E., City Engineer

Cc: Mike Dailey



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ADDENDUM NO. 1
City of Madison, Engineering Department

CONTRACT NO. 7758
POLICE DEPARTMENT WEST DISTRICT ROOF REPLACEMENT

This addendum is issued to modify, explain or correct the original Drawings, Specifications, or Contract Documents marked as *Police Department West District, City of Madison, Contract #7758, as issued on July 8, 2016* and is hereby made a part of the contract documents.

This addendum consists of the following documents:

- **Specification Section 07310 Asphalt Shingled Roof Specification**

Please attach these Addendum documents to the Drawings and Project manual in your possession.

1. **GENERAL CONTRACT CONDITIONS**

No new conditions.

2. **GENERAL QUESTIONS AND ANSWERS**

No new questions.

3. **ACCEPTABLE EQUIVALENTS**

This section is not used.

4. **SPECIFICATIONS**

A. Section 07310 Asphalt Shingled Roof Specification

5. **DRAWINGS**

No new drawings.

6. **PROPOSAL**

No Change

Please acknowledge this addendum on page E1 of the contract documents and/or in Section E: Bidder's Acknowledgement on Bid Express.

Electronic version of these documents can be found on Bid Express at <https://www.bidexpress.com/> and the City of Madison web site at <http://www.cityofmadison.com/business/PW/contracts/openforBid.cfm>

If you are unable to download plan revisions associated with the addendum, please contact the Engineering office at 608-266-4751 to receive the material by another method.

For questions regarding this bid, contact:

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Fax: 608-264-9275
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Asphalt Shingled Roof Specification

PART 1 GENERAL SECTION

- A. Asphalt roofing shingles.
- B. Leak barrier and deck protection.
- C. Metal flashing associated with shingle roofing.
- D. Attic Ventilation.

1.02 SUBMITTALS

- A. Submit copies of manufacturer's product data sheets, warranty, detail drawings and samples for each type of roofing product.

1.03 QUALITY ASSURANCE

- A. **Manufacturer Qualifications:** Provide all primary roofing products, including shingles, underlayment, self-adhering leak barrier, starter strips, ridge cap shingles and ventilation by a single manufacturer in order to obtain the specified warranty.
- B. **Installer Qualifications:** Installer must be approved by the manufacturer at the proper level for installation of all roofing products that are to be installed under this section in order to obtain the specified warranty. For the GAF-Elk roofing system the installer must have GAF Master Elite status. For other roofing systems the installer must have an equivalent qualification.
- C. **Manufacturer Inspection:** Provide for a manufacturer's factory representative to inspect the installation of the shingles and core accessory products in compliance with the manufacturer's warranty as in conformance with GAF Golden Pledge warranty or pre-approved equal.

1.04 REGULATORY REQUIREMENTS

- A. Provide a roofing system achieving an Underwriters Laboratories (UL) Class A fire classification.
- C. Install all roofing products in accordance with all federal, state and local building codes.
- D. All work shall be performed in a manner consistent with current OSHA guidelines.
- E. Obtain all necessary building permits.
- F. The contractor shall be responsible for meeting all the requirements of the Madison General Ordinance, Chapter 10, Section 10.185, Recycling and Reuse of Construction and Demolition Debris, for commercial buildings.

1.05 PRE-CONSTRUCTION MEETING

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- A. A pre-construction meeting shall take place prior to the start of the roofing installation. The contractor and any subcontractors will be required to attend.
- B. Attendees: Meeting's mandatory attendees shall include the certified contractor and the manufacturer's representative. Non-mandatory attendees shall include the owner's representative, architect or engineer's representative, and the general contractor's representative.
- C. Topics: Certified contractor and manufacturer's representative shall review all pertinent requirements for the project, including but not limited to, site product storage, scheduling, weather considerations, project duration, and requirements for the specified warranty.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Store all products in manufacturer's unopened, labeled packaging until they are ready for installation.
- B. Store products in a covered, ventilated area, at temperature not more than 110 degrees F (43 degrees C); do not store near steam pipes, radiators, or in direct sunlight.
- C. Store bundles on a flat surface. Maximum stacking height shall not exceed manufacturer's recommendations. Store all rolls on end.
- D. Store and dispose of solvent-based materials in accordance with all federal, state and local regulations.

1.07 WEATHER CONDITIONS

- A. Proceed with work only when existing and forecasted weather conditions will permit work to be performed in accordance with the manufacturer's recommendations

1.08 WARRANTY, MINIMUM REQUIREMENTS

- A. Provide a manufacturer's forty (40) year written warranty to the City of Madison that includes a minimum of twenty (20) years non-prorated protection, where the manufacturer is responsible for the contractor's workmanship for 20 years and the contractor is required to be certified by the manufacturer. For the GAF roofing system this certification would be the Master Elite status. Other pre-approved roofing systems would require an equivalent certification. This warranty shall include the cost of labor to remove, dispose and replace part or all of the defective shingled roofing system that affects performance, including replacement of any or all manufacturer products and component due to material defect or workmanship by the contractor. This coverage includes a minimum of six (6) manufacturer products that composes the complete roofing system required to achieve the specified manufacturer warranty system. This includes shingles, underlayment, self-adhering leak barrier, starter strips, ridge cap shingles and ventilation. The Contractor shall provide and install all additional products, materials not specifically mentioned as required by the manufacturer's recommendation and/or system guarantee instructions, to obtain complete guarantee coverage for the project as required by this specification. The Contractor shall acquire current proof of manufacturer certification for the products to be installed on the project and submit such dated certification status to the City along with the product submittal

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package. The roofing system shall be installed such as to obtain the maximum wind speed rating of 130 mph.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Acceptable Manufacturer:

GAF Materials Corporation, 1361 Alps Road Wayne NJ, 07470, www.gaf.com.

Roofing systems manufactured by the companies listed below are acceptable provided they are completely equivalent or better in materials and warranty conditions:

CertainTeed Corporation, P.O. Box 860 Valley Forge, PA 19482, 800.233.8990

2.02 SHINGLES

- A. Heavyweight, granule surfaced, self sealing asphalt shingle with a strong fiberglass reinforced Micro Weave® core and StainGuard® protection, which prevents pronounced discoloration from blue-green algae through formulation/unique blends of granules. Architectural laminate styling provides a wood shake appearance with a 5 5/8" exposure. Features GAF patented High Definition® color blends and enhanced shadow effect. . UL 790 Class A rated with UL 997 Wind Resistance Label; ASTM D 7158, Class H; ASTM D 3161, Type 1; ASTM D 3018, Type 1; ASTM D 3462; CSA 123.5-98; Dade County Approved, Florida Building Code Approved, Texas Dept of Insurance Approved, ICC Report Approval. Timberline® Ultra® High Definition Shingles, by GAF or pre-approved equal.

1. Color: As selected from manufacturer's full range.

2.03 HIP AND RIDGE SHINGLES

- A. High profile self-sealing hip and ridge cap shingle matching the color of selected roof shingle. Each bundle covers approx. 20 lineal feet. Timbertex® Premium Ridge Cap Shingles, by GAF or pre-approved equal.

2.04 STARTER STRIP

- A. Self-sealing starter shingle designed for all roof shingles. Each bundle covers approx. 60/120 lineal feet (18288/36576 mm). ProStart™ Starter Strip by GAF or pre-approved equal.

2.05 LEAK BARRIER

- A. Self-adhering, self-sealing, bituminous leak barrier surfaced with fine, skid-resistant granules. Each Roll contains approx. 150 sq ft, 65 lbs (29.9 kg), 36" X 50' or 200 sq ft, 85 lbs (38.6 kg), 36" X 66.7'. 58 mils thick. WeatherWatch®, by GAF or pre-approved equal.

2.06 SHINGLE UNDERLAYMENT

- A. Premium, water repellent, breather type non-asphaltic underlayment. UV stabilized polypropylene construction. Meets or exceeds ASTM D226 and D4869. Approved by Dade

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County, Florida Building Code, and has a pending ICC Report Approval. Deck-Armor™ Premium Breathable Roof Deck Protection, by GAF or pre-approved equal.

2.07 ROOFING SEALANT

- A. General-purpose asphalt roofing cement meeting the requirements of ASTM D 4586, Type I or II. Matrix Standard Plastic Roof Cement #203, by BMCA or pre-approved equal
- B. General-purpose asphalt roofing cement meeting the requirements of ASTM D 4586, Type I or II. Matrix Standard Wet/Dry Roof Cement #204, by BMCA or pre-approved equal
- C. Asphalt Plastic Roofing Cement meeting the requirements of ASTM D 4586, Type I or II.

2.08 ATTIC VENTILATION

- A. Roof ventilation shall be achieved utilizing passive ventilation products. Exhaust ventilation shall be achieved by using Cobra® Snow Country™ ridge vent providing 18.0 sq inches Net Free Ventilation Area per lineal foot. Cobra® Snow Country™ ridge vent shall be installed at all ridge tops as indicated on the plans.
- B. Presently, roofs 4, and 5 are not ventilated and shall receive ThermaCal 1 ventilated roofing panels that will be integrated with soffit vent modifications at roofs 3 & 6 to achieve a properly ventilated roof.

2.09 NAILS

- A. Standard round wire, zinc-coated steel or aluminum; 10 to 12 gauge, barbed or deformed shank, with heads 3/8 inch (9.5 mm) to 7/16 inch (11 mm) in diameter. Length must be sufficient to penetrate into solid wood at least 3/4 inch (19 mm) or through plywood or oriented strand board by at least 1/8 inch.

2.10 METAL FLASHING/EAVE EDGE FLASHING

- A. Metal flashing and eave edge flashing shall be removed and replace with like kind and color as applicable.
- B. Drip edge shall be a minimum 24 gauge galvanized sheet metal prefinished with Kynar and brake formed to provide details as shown on the plans. Furnish in 8' or 10' lengths. Color: color to be determined from manufacture full range of colors.
- C. Valley flashing, 24 gage galvanized sheet metal with Kynar paint finish, complying with ASTM A653/A 653M, G90/Z275.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Do not begin installation until the roof deck has been properly prepared.

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3.02 PREPARATION

- A. Remove all existing roofing down to the roof deck including eave edge metal flashing and metal valley flashing.
- B. Verify that the deck is dry, sound, clean and smooth. It shall be free of any depressions, waves, and projections. Cover with sheet metal, all holes over 1 inch (25 mm) in diameter, cracks over 1/2 inch (12 mm) in width, loose knots and excessively resinous areas.
- C. Replace damaged deck and fascia with new materials. The contractor shall mark all areas that are recommended to be replaced. The project manager must approve before proceeding with the replacement. **Bidder shall include unit prices per square foot for deck replacement:**

The final contract amount will be the contract amount adjusted by the actual amount of removal and replacement of decking required.

- D. Clean deck surfaces thoroughly prior to installation of eaves protection membrane and underlayment.

3.03 INSTALLATION OF UNDERLAYMENTS

A. General:

- 1. Install using methods recommended by manufacturer, in accordance with local building codes. When local codes and application instructions are in conflict, the more stringent requirements shall take precedence.

B. Eaves:

- 1. Install eaves edge metal flashing tight with fascia boards; lap joints 2 inches (50 mm) and seal with plastic cement; nail at the top of the flange.
- 2. Manufacturer's workmanship coverage shall require eaves protection membrane up the slope from eaves edge at least a full **72 inches** or to at least 24 inches (610 mm) beyond the interior "warm wall", whichever is greater. Lap ends 6 inches (150 mm) and bond.

C. Valleys:

- 1. Install eaves protection membrane/leak barrier at least **72 inches** wide and centered on the valley. If the distance from the valley to the hip is less than 36 inches then the membrane shall extend to the hip. Lap ends 6 inches (150 mm) and seal.
- 2. Where valleys are indicated to be "open valleys", install metal flashing over eaves protection membrane before roof deck underlayment is installed; **DO NOT** nail through the flashing. Secure the flashing by nailing at 18 inches (457 mm) on center just beyond edge of flashing so that nail heads hold down the edge.

D. Roof Deck:

- 1. Install one layer of roof deck underlayment over the entire area not protected by eaves or valley membrane. Install sheets horizontally so water sheds and nail in place.

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2. On roofs sloped at more than 4 in 12, lap horizontal edges at least 3 inches (76 mm) and at least 6" inches (152 mm) on end laps and offset from adjacent end laps by 3' (914mm). Along eave edges completely cover leak barrier protection and install on to the non corrosive metal edge.
 3. On roofs sloped between 2 in 12 and 4 in 12, overlap a full 28.5" over the underlying course. Continue up the roof using 25.5" (648mm) exposure. Overlap 12" (305mm) at the end lap and offset the adjacent end lap by 6'. Standard application for low slope requires deck protection to have seams taped with butyl adhesive based tape or waterproof cloth duct tape.
- E. Shingle Underlayment Application:
1. Shingle underlayment shall be installed over a clean, dry deck.
 2. Install leak barrier at eaves, valleys, rakes, skylights, dormers and other vulnerable leak areas.
 3. Lay shingle underlayment over deck and overlap 3" at side laps and 6" at end laps.
 4. For exposure to rain or snow, overlap 12" at end laps.
 5. For side and end laps: fasten shingle underlayment 12" o.c. (6" o.c. for high wind areas). Fasten Deck Armor or equivalent underlayment with plastic cap nails or staples with plastic caps in accordance with appropriate installation instructions.
 6. For middle of the roll: fasten shingle underlayment 24" o.c. (12" o.c. for high wind areas).
 7. For exposure to rain or snow, completely cover all side laps, end laps and fasteners with tape.
 8. For long-term exposure see complete shingle underlayment installation instructions for side lap detail.
 9. If roof may be exposed to high winds, apply tape over all fasteners at the center of the roll to prevent rain or snow from entering at the fasteners.
 10. For slopes less than 2:12, a double application of shingle underlayment is required. See complete underlayment (Deck-Armor or equivalent) installation instructions for more information.
- F. Penetrations:
1. Vent pipes: Install a 24 inch (610 mm) square piece of leak barrier protection membrane lapping over roof deck underlayment; seal tightly to pipe.
 2. Vertical walls: Install leak barrier protection membrane extending at least 6 inches (150 mm) up the wall and 12 inches (305 mm) on to the roof surface. Lap the membrane over the roof deck underlayment.
 3. Skylights, curbs and roof hatches: Install eaves protection membrane from under the built-in counterflashing and 12 inches (305 mm) on to the roof surface lapping over roof deck underlayment.
 4. Chimneys: Install eaves protection membrane around entire chimney extending at least 6 inches (150 mm) up the wall and 12 inches (305 mm) on to the roof surface. Lap the membrane over the roof deck underlayment.
 5. Rake Edges: Install metal edge flashing over eaves protection membrane and roof deck underlayment; set tight to rake boards; lap joints at least 2 inches (50 mm) and seal with plastic cement; secure with nails. Provide maximum wind resistance as required elsewhere by installing manufacturers starter with factory adhesive run vertically up the full length of the rake edge. Position the starter so that it overlaps the eave edge starter at least 3" (76mm). Nail vertically along a line 1 1/2" to 3" in from the rake edge.

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3.04 INSTALLATION OF SHINGLES

A. General:

1. Install in accordance with manufacturer's instructions and local building codes. When local codes and application instructions are in conflict, the more stringent requirements shall take precedence.
2. Minimize breakage of shingles by avoiding dropping bundles on edge.
3. Separate shingles carefully (not by "breaking" over ridge or bundles).
4. Take extra precautions in temperatures below 40 degrees F (4 degrees C).
5. Handle carefully in hot weather to avoid scuffing the surfacing, or damaging the shingle edges.

B. Placement and Nailing:

1. Secure with 6 nails per shingle per manufacturer's instructions or local codes so as to meet manufacturer's requirements for 130 mph wind warranty. (Also see manufacturer's requirement to run starter with factory adhesive entire vertical length of rake edge.
2. Placement of nails varies based on the type of shingle specified. Consult the application instructions for the specified shingle for details.
3. Nails must be driven flush with the shingle surface. Do not overdrive or underdrive the nails.
4. Shingle offset varies based on the type of shingle specified. Consult the application instructions for the specified shingle for details.

C. Valleys

1. Install valleys using the "open valley" method:
 - a) Snap diverging chalk lines on the metal flashing, starting at 3 inches (75 mm) each side of top of valley, spreading at 1/8 inch per foot (9 mm per meter) to the eaves
 - b) Use metal flashing gauge for valley as previously specified. Replace metal flashing with like kind material.
 - c) Place nails so that nail heads hold the metal in place. Do not puncture the metal with the nail.
 - d) Run shingles to chalk line. Cover the metal 4" minimum for sealing. Clip the shingle corner and seal ends in plastic roof cement to keep water flow from running under the shingle and to direct toward the valley center.
 - e) Trim last shingle in each course to match the chalk line; do not trim shingles to less than 12 inches (305 mm) wide.
 - f) Apply a 2 inch (50 mm) wide strip of plastic cement under ends of shingles, sealing them to the metal flashing.

D. Penetrations

1. All Penetrations are to be flashed according to manufacturers, ARMA and NRCA application instructions and construction details.

3.05 VENTILATION

A. General

1. Ventilation must meet or exceed current F.H.A., H.U.D. and local code requirements.

3.06 PROTECTION

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- A. Any roof areas that are not completed by the end of the workday are to be protected from moisture and contaminants.

END OF SECTION