

ADDENDUM NO.: #3

DATE OF ADDENDUM: February 14, 2017

**Roof Replacement
Albert J. Solnit Children's Center
915 River Road
Middletown, CT
BI – YS – 178**

Bid Due Date / Time:

March 8, 2017

1:00 pm

Previous Addenda: Addendum #2 dated 2/14/2017, Addendum #1 dated 1/24/2017

TO: Prospective Bid Proposers:

This Addendum forms part of the "Contract Documents" and modifies or clarifies the original "Contract Documents" for this Project dated 9/16/2017. Prospective Bid Proposers shall acknowledge receipt of the total number the Addenda issued for this Project on the space provided on Section 00 41 00 Bid Proposal Form. Failure to do may subject Bid Proposers to disqualification.

The following clarifications are applicable to drawings and specifications for the project referenced above.

Item 1

Delete: Section 07 52 16 "Styrene-Butadiene-Styrene (SBS) Modified Bituminous Membrane Roofing" in its entirety.

Add: Revised Section 07 52 16 "Styrene-Butadiene-Styrene (SBS) Modified Bituminous Membrane Roofing", attached to this Addendum.

Item 2

Question: Is a job trailer, computer etc. required or is an Office/Room to be provided within the building for meetings?

Response: No, a job trailer is NOT required.

Item 3

Question: Section 01 78 30 lists the Mod Bit Roofing Warranty as 15 year while 075216 lists as 30 Year – Please Clarify?

Response: Per Revised Specification Section 07 52 16 "Styrene-Butadiene-Styrene (SBS) Modified Bituminous Membrane Roofing", paragraph 1.11/A/2, issued in this Addendum, the Warranty is twenty (20) years.

Item 4

Question: 077100 lists Gutters and Downspouts fabricated from 16oz copper natural finish (no finish specified) while Gravel Stops and Scuppers are listed as 20oz + 16oz Zinc Coated Copper respectively, Is this correct?

Response: Per Specification Section 07 71 00 "Roof Specialties", all copper gutters and downspouts, as well as Stops and Scuppers, are zinc-tin alloy coated.

Yes, that is correct, the Gravel Stops and Scuppers are 20oz + 16oz Zinc Coated Copper respectively.

Item 5

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Question: Has there been a core sample performed to determine the exact amount of layers?

Response: Test data from Core Samples to be forthcoming.

Item 6

Question: Do you know if there are any asbestos concerns we need to know about?

Response: Please refer to Project Manual, Section 00 30 00 "Available Information", appended to end of Project Manual.

Item 7

Question: Can you please clarify warranty requirements section 07 71 00, 1.9 "Warranty"?

Response: Please refer to Revised Specification Section 07 71 00, Article 1.9 "Warranty", attached as part of this Addendum.

Item 8

Question: At the pre-bid I thought I heard roof system is SBS set in cold adhesive? The insulation is fastened with cover board set in adhesive not hot asphalt?

Response: Correct.

Item 9

Question: Insulation is iso or extruded polystyrene? If iso foil face or black craft felt face?

Response: Polyisocyanurate insulation, felt or glass-fiber mat facer on both major surfaces, per Project Manual.

Item 10

Question: General notes state all roofs get ¼" tapered insulation? Other notes state deck is sloped??

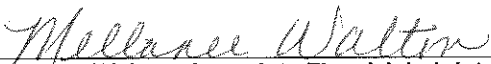
Response: Revise Spec Section 07 52 16 "Styrene-Butadiene-Styrene (SBS) Modified Bituminous Membrane Roofing", Article 2.5/D, to say "Tapered Insulation: Provide factory-tapered insulation boards fabricated to slope of 1/4 inch per 12 inches at Roofs A, B, C, D, E, F, G, H". At pitched (sloped) roof decks, insulation is as indicated on Drawings.

Item 11

Question: Have the test cuts been made to tell us what the existing assembly is?

Response: Test data from Core Samples are attached as part of this Addendum.

End of Addendum #3


Mellanee Walton, Associate Fiscal Administrative Officer
State of Connecticut
Department of Administrative Services, Construction Services
Office of Legal Affairs, Policy and Procurement
Bidding & Contracts Unit
450 Columbus Boulevard, Suite 1302
Hartford, CT 06103

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:

- 1. Styrene-butadiene-styrene (SBS) modified bituminous membrane roofing.
- 2. Roof insulation.

- B. Related Sections:

- 1. Section 072100 "Thermal Insulation", for insulation specified as part of roofing construction.
- 2. Section 076200 "Sheet Metal Flashing and Trim" for sheet metal flashings.
- 3. Section 079200 "Joint Sealants" for joint sealants, joint fillers, and joint preparation.

1.3 DEFINITIONS

- A. Roofing Terminology: See ASTM D 1079 and glossary of NRCA's "The NRCA Roofing and Waterproofing Manual" for definition of terms related to roofing work in this Section.

1.4 PERFORMANCE REQUIREMENTS

- A. General Performance: Installed membrane roofing and base flashings shall withstand specified uplift pressures, thermally induced movement, and exposure to weather without failure due to defective manufacture, fabrication, installation, or other defects in construction. Membrane roofing and base flashings shall remain watertight.
- B. Material Compatibility: Provide roofing materials that are compatible with one another under conditions of service and application required, as demonstrated by membrane roofing manufacturer based on testing and field experience.
- C. Roofing System Design: Provide membrane roofing system that is identical to systems that have been successfully tested by a qualified testing and inspecting agency to resist uplift pressure calculated according to ASCE/SEI 7.
- D. FM Approvals Listing: Provide membrane roofing, base flashings, and component materials that comply with requirements in FM Approvals 4450 and FM Approvals 4470 as part of a membrane roofing system, and that are listed in FM Approvals' "RoofNav" for Class 1 or noncombustible construction, as applicable. Identify materials with FM Approvals markings.
 - 1. Fire/Windstorm Classification: Class 1A-120.

1.5 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated.

STYRENE-BITUDENE-STYRENE (SBS) MODIFIED BITUMINOUS MEMBRANE ROOFING

- B. Shop Drawings: For roofing system. Include plans, elevations, sections, details, and attachments to other work.
 - 1. Base flashings and membrane terminations.
 - 2. Tapered insulation, including slopes.
 - 3. Crickets, saddles, and tapered edge strips, including slopes.
 - 4. Insulation fastening patterns for corner, perimeter, and field-of-roof locations.

- C. Samples for Verification: For the following products:
 - 1. Sheet roofing materials, including base sheet, roofing membrane sheet, flashing backer sheet, membrane cap sheet and flashing sheet, of color specified.
 - 2. Roof insulation.
 - 3. Walkway pads or rolls, of color required.
 - 4. Six (6) insulation fasteners of each type, length, and finish.

1.6 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For qualified Installer, manufacturer and testing agency.
- B. Manufacturer Certificates: Signed by roofing manufacturer certifying that roofing system complies with requirements specified in "Performance Requirements" Article.
 - 1. Submit evidence of complying with performance requirements.
- C. Product Test Reports: Based on evaluation of comprehensive tests performed by manufacturer and witnessed by a qualified testing agency, for components of membrane roofing system.
- D. Research/Evaluation Reports: For components of membrane roofing system, from the ICC-ES.
- E. Warranties: Sample of special warranties.

1.7 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For roofing system to include in maintenance manuals.

1.8 QUALITY ASSURANCE

- A. Manufacturer Qualifications: A qualified manufacturer that is UL listed for membrane roofing system identical to that used for this Project.
- B. Installer Qualifications: A qualified firm that is approved, authorized, or licensed by membrane roofing system manufacturer to install manufacturer's product and that is eligible to receive manufacturer's special warranty.
- C. Source Limitations: Obtain components including roof insulation and fasteners for membrane roofing system from same manufacturer as membrane roofing or approved by membrane roofing manufacturer.
- D. Exterior Fire-Test Exposure: ASTM E 108, Class C; for application and roof slopes indicated, as determined by testing identical membrane roofing materials by a qualified testing agency. Materials shall be identified with appropriate markings of applicable testing agency.

- E. Fire-Resistance Ratings: Where indicated, provide fire-resistance-rated roof assemblies identical to those of assemblies tested for fire resistance per ASTM E 119 by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.
- F. FM Global Requirements: Contractor must do one of the following:
1. Engage an independent testing agency to perform Roof Wind Uplift Test in accordance with FM Global Data Sheet 1-52 "Field Verification of Roof Wind Uplift Resistance." This test must be witnessed by Owner's Representative.

OR

2. Engage a full-time visual construction observer (VCO) during the roof system installation. VCO to record observations per FM Global Data Sheet 1-52, Section 3.5.
 3. Roof Wind Uplift Test or VCO during roof construction, whichever method is chosen, is limited to three (3) roofs - Roof "C", Roof "K" and Roof "L". Roof designations "C", "K" and "L" are indicated on Drawings.
- G. Preinstallation Roofing Conference: Conduct conference at Project site.
1. Meet with Owner, Architect, Owner's insurer if applicable, testing and inspecting agency representative, roofing Installer, roofing system manufacturer's representative, deck Installer, and installers whose work interfaces with or affects roofing, including installers of roof accessories and roof-mounted equipment.
 2. Review methods and procedures related to roofing installation, including manufacturer's written instructions.
 3. Review and finalize construction schedule and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
 4. Examine deck substrate conditions and finishes for compliance with requirements, including flatness and fastening.
 5. Review structural loading limitations of roof deck during and after roofing.
 6. Review base flashings, special roofing details, roof drainage, roof penetrations, equipment curbs, and condition of other construction that will affect roofing system.
 7. Review governing regulations and requirements for insurance and certificates if applicable.
 8. Review temporary protection requirements for roofing system during and after installation.
 9. Review roof observation and repair procedures after roofing installation.

1.9 DELIVERY, STORAGE, AND HANDLING

- A. Deliver roofing materials to Project site in original containers with seals unbroken and labeled with manufacturer's name, product brand name and type, date of manufacture, approval or listing agency markings, and directions for storing and mixing with other components.
- B. Store liquid materials in their original undamaged containers in a clean, dry, protected location and within the temperature range required by roofing system manufacturer. Protect stored liquid material from direct sunlight.
1. Discard and legally dispose of liquid material that cannot be applied within its stated shelf life.
- C. Protect roof insulation materials from physical damage and from deterioration by sunlight, moisture, soiling, and other sources. Store in a dry location. Comply with insulation manufacturer's written instructions for handling, storing, and protecting during installation.

- D. Handle and store roofing materials and place equipment in a manner to avoid permanent deflection of deck.

1.10 PROJECT CONDITIONS

- A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit roofing system to be installed according to manufacturer's written instructions and warranty requirements.

1.11 WARRANTY

- A. Special Warranty: Manufacturer's standard or customized form, without monetary limitation, in which manufacturer agrees to repair or replace components of membrane roofing system that fail in materials or workmanship within specified warranty period.
 - 1. Special warranty includes membrane roofing, base flashings, roof insulation, fasteners, cover boards, roofing accessories, and other components of membrane roofing system.
 - 2. Warranty Period: Twenty (20) years, non-prorated, from date of Substantial Completion.
- B. Provide self-adhesive emblems for each roof hatch, door or access way, notifying the user of the roof condition, precautionary measures and other conditions of use or maintenance of the roofing membranes.

PART 2 - PRODUCTS

2.1 SBS-MODIFIED ASPHALT-SHEET MATERIALS

- A. SBS-Modified Bituminous Membrane Roofing:
 - 1. Basis of Design:
 - a. Siplast, Inc.; **Paradiene 20/30**
 - 2. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - a. CertainTeed Corp.
 - b. Firestone Building Products
 - c. GAF Materials Corporation
 - d. Garland Company, Inc. (The)
 - e. Johns Manville
 - f. Soprema.
 - g. Substitutions: Under provisions of Section 012000 "Contract Considerations".
- B. Roofing Membrane Sheet: ASTM D 6164, Grade S, Type I or II, SBS-modified asphalt sheet (reinforced with polyester fabric); smooth surfaced; suitable for application method specified.
- C. Granule-Surface Roofing Membrane Cap Sheet: ASTM D 6164, Grade G, Type I or II, SBS-modified asphalt sheet (reinforced with polyester fabric); granular surfaced; suitable for application method specified, and as follows:
 - 1. Granule Color: White.

2.2 BASE-SHEET MATERIALS

- A. Base Sheet: ASTM D 2626, asphalt-saturated and -coated organic felt, dusted with fine mineral surfacing on both sides.

2.3 BASE FLASHING SHEET MATERIALS

- A. Backer Sheet: ASTM D 6164, Grade S, Type I or II, SBS-modified asphalt sheet (reinforced with polyester fabric) smooth surfaced; suitable for application method specified.
- B. Granule-Surfaced Flashing Sheet: ASTM D 6164, Grade G, Type I or II, SBS-modified asphalt sheet (reinforced with polyester fabric) granular surfaced; suitable for application method specified, and as follows:
 - 1. Granule Color: White.

2.4 AUXILIARY ROOFING MEMBRANE MATERIALS

- A. General: Auxiliary materials recommended by roofing system manufacturer for intended use and compatible with roofing membrane.
 - 1. Liquid-type auxiliary materials shall comply with VOC limits of authorities having jurisdiction.
- B. Asphalt Primer: ASTM D 41.
- C. Roofing Asphalt: ASTM D 312, Type IV.
- D. Cold-Applied Adhesive: Roofing system manufacturer's standard asphalt-based, one- or two-part, asbestos-free, cold-applied adhesive specially formulated for compatibility and use with roofing membrane and base flashings.
- E. Asphalt Roofing Cement: ASTM D 4586, asbestos free, of consistency required by roofing system manufacturer for application.
- F. Mastic Sealant: Polyisobutylene, plain or modified bitumen; nonhardening, nonmigrating, nonskinning, and nondrying.
- G. Roofing Granules: Ceramic-coated roofing granules, No. 11 screen size with one hundred percent (100%) passing No. 8 sieve and ninety-eight percent (98%) of mass retained on No. 40 sieve, color to match roofing membrane.
- H. Fasteners: Factory-coated steel fasteners and metal or plastic plates complying with corrosion-resistance provisions in FM Approvals 4470, designed for fastening roofing membrane components to substrate; tested by manufacturer for required pullout strength, and acceptable to roofing system manufacturer.
- I. Metal Flashing Sheet: As specified in Section 076200 "Sheet Metal Flashing and Trim."
- J. Miscellaneous Accessories: Provide those recommended by roofing system manufacturer.
- K. Penetration Flashing: Two-part, liquid-applied flashing material that cures to a durable, elastomeric film. Flashing system consists of primer, flashing cement and polyester scrim.
 - 1. Basis of Design:

- a. Johns Manville; **PermaFlash System**
2. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Certaineed Corporation.
 - b. Firestone Building Products
 - c. Substitutions: Under provisions of Section 012000 "Contract Considerations".
3. System must be compatible with roofing membrane system and be part of the warranty.

2.5 ROOF INSULATION

- A. General: Preformed roof insulation boards manufactured or approved by roofing manufacturer, selected from manufacturer's standard sizes suitable for application, of thicknesses indicated.
- B. Polyisocyanurate Board Insulation: ASTM C 1289, Type II, Class 1, Grade 2, felt or glass-fiber mat facer on both major surfaces.
- C. Perlite Board Insulation: ASTM C 728, rigid, mineral-aggregate thermal insulation board composed of expanded perlite, cellulosic fibers, binders, and waterproofing agents with top surface seal coated.
- D. Tapered Insulation: Provide factory-tapered insulation boards fabricated to slope of ½ inch per 12 inches unless otherwise indicated.
- E. Provide preformed saddles, crickets, tapered edge strips, and other insulation shapes where indicated for sloping to drain. Fabricate to slopes indicated.

2.6 INSULATION ACCESSORIES

- A. General: Furnish roof insulation accessories recommended by insulation manufacturer for intended use and compatibility with membrane roofing.
- B. Fasteners: Factory-coated steel fasteners and metal or plastic plates meeting corrosion-resistance provisions in FM Approvals 4470, designed for fastening roof insulation to substrate, and acceptable to roofing system manufacturer.
- C. Insulation Adhesive: Insulation manufacturer's recommended adhesive formulated to attach roof insulation to substrate or to another insulation layer as follows:
 1. Modified asphaltic, asbestos-free, cold-applied adhesive.
- D. Insulation Cant Strips: ASTM C 728, perlite insulation board.
- E. Wood Nailer Strips: Comply with requirements in Section 061053 "Miscellaneous Rough Carpentry."
- F. Tapered Edge Strips: ASTM C 728, perlite insulation board.
- G. Cover Board: ASTM C 1177, glass-mat, water-resistant gypsum substrate, ½ inch thick.
 1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:

- a. Georgia-Pacific Corporation; **Dens Deck**.
- b. Substitutions: Under provisions of Section 012000 "Contract Considerations".

H. Substrate Joint Tape: 6- or 8-inch-wide, coated, glass-fiber joint tape.

2.7 WALKWAYS

A. Walkway Pads: Reinforced asphaltic composition pads with slip-resisting mineral-granule surface, manufactured as a traffic pad for foot traffic and acceptable to roofing system manufacturer, 3/8 inch thick, minimum.

- 1. Pad Size: Manufacturer's standard.
- 2. Color: In contrasting color of roofing membrane.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with the following requirements and other conditions affecting performance of roofing system:
- 1. Verify that roof openings and penetrations are in place and curbs are set and braced and that roof drain bodies are securely clamped in place.
 - 2. Verify that wood cants, blocking, curbs, and nailers are securely anchored to roof deck at penetrations and terminations and that nailers match thicknesses of insulation.
 - 3. Verify that surface plane flatness and fastening of steel roof deck complies with requirements in Section 053100 "Metal Deck."
 - 4. Verify that minimum concrete drying period recommended by roofing system manufacturer has passed.
 - 5. Verify that concrete substrate is visibly dry and free of moisture. Test for capillary moisture by plastic sheet method according to ASTM D 4263.
 - a. Test for moisture by pouring 1 pint of hot roofing asphalt on deck at start of each day's work and at start of each roof area or plane. Do not proceed with roofing work if test sample foams or can be easily and cleanly stripped after cooling.
 - 6. Verify that concrete-curing compounds that will impair adhesion of roofing components to roof deck have been removed.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Clean substrate of dust, debris, moisture, and other substances detrimental to roofing installation according to roofing system manufacturer's written instructions. Remove sharp projections.
- B. Prevent materials from entering and clogging roof drains and conductors and from spilling or migrating onto surfaces of other construction. Remove roof-drain plugs when no work is taking place or when rain is forecast.
- C. Prime surface of concrete deck with asphalt primer at a rate of 3/4 gal./100 sq. ft. and allow primer to dry.

3.3 INSULATION INSTALLATION

- A. Comply with roofing system manufacturer's written instructions for installing roof insulation.
- B. Insulation Cant Strips: Install and secure preformed 45-degree insulation cant strips at junctures of roofing membrane system with vertical surfaces or angle changes more than 45 degrees.
- C. Install tapered insulation under area of roofing to conform to slopes indicated.
- D. Install insulation with long joints of insulation in a continuous straight line with end joints staggered between rows, abutting edges and ends between boards. Fill gaps exceeding ¼ inch with insulation.
 - 1. Cut and fit insulation within ¼ inch of nailers, projections, and penetrations.
- E. Install insulation under area of roofing to achieve required thickness. Where overall insulation thickness is 2.7 inches or more, install two (2) or more layers with joints of each succeeding layer staggered from joints of previous layer a minimum of 6 inches in each direction.
 - 1. Where installing composite and noncomposite insulation in two (2) or more layers, install noncomposite board insulation for bottom layer and intermediate layers, if applicable, and install composite board insulation for top layer.
- F. Trim surface of insulation where necessary at roof drains so completed surface is flush and does not restrict flow of water.
- G. Install tapered edge strips at perimeter edges of roof that do not terminate at vertical surfaces.
- H. Mechanically Fastened and Adhered Insulation (Metal Decks): Install first layer of insulation to deck using mechanical fasteners specifically designed and sized for fastening specified board-type roof insulation to deck type.
 - 1. Fasten first layer of insulation to resist uplift pressure at corners, perimeter, and field of roof.
 - 2. Set each subsequent layer of insulation in a solid mopping of hot roofing asphalt applied within plus or minus 25 deg F (14 deg C) of equiviscous temperature.
- I. Install cover boards over insulation with long joints in continuous straight lines with end joints staggered between rows. Offset joints a minimum of 6 inches in each direction from joints of insulation below. Loosely butt cover boards together. Tape joints if required by roofing system manufacturer.
 - 1. Apply hot roofing asphalt to underside, and immediately bond cover board to substrate.

3.4 ROOFING MEMBRANE INSTALLATION, GENERAL

- A. Install roofing membrane system according to roofing system manufacturer's written instructions and applicable recommendations in ARMA/NRCA's "Quality Control Guidelines for the Application of Polymer Modified Bitumen Roofing" and as follows:
 - 1. Deck Type: I (insulated).
 - 2. Adhering Method: L (cold applied adhesive).
 - 3. Base Sheet: One (1).
 - 4. Number of SBS-Modified Asphalt Sheets: Two (2).

5. Surfacing Type: M (mineral-granule-surfaced cap sheet).
- B. Start installation of roofing membrane in presence of roofing system manufacturer's technical personnel.
- C. Cooperate with testing agencies engaged or required to perform services for installing roofing system.
- D. Coordinate installation of roofing system so insulation and other components of the roofing membrane system not permanently exposed are not subjected to precipitation or left uncovered at the end of the workday or when rain is forecast.
 1. At end of each day's work, provide tie-offs to cover exposed roofing membrane sheets and insulation with a course of coated felt set in roofing cement or hot roofing asphalt, with joints and edges sealed.
 2. Complete terminations and base flashings and provide temporary seals to prevent water from entering completed sections of roofing system.
 3. Remove and discard temporary seals before beginning work on adjoining roofing.
- E. Substrate-Joint Penetrations: Prevent roofing asphalt and adhesives from penetrating substrate joints, entering building, or damaging roofing system components or adjacent building construction.

3.5 BASE-SHEET INSTALLATION

- A. Install lapped base-sheet course, extending sheet over and terminating beyond cants. Attach base sheet as follows:
 1. Adhere to substrate in a uniform coating of cold-applied adhesive.
 2. Laps: 2 inch side laps and 4 inch end laps.

3.6 SBS-MODIFIED BITUMINOUS MEMBRANE INSTALLATION

- A. Install modified bituminous roofing membrane sheet and cap sheet according to roofing manufacturer's written instructions, starting at low point of roofing system. Extend roofing membrane sheets over and terminate beyond cants, installing in one (1) of the following ways:
 1. Adhere to substrate in cold-applied adhesive.
 2. Unroll roofing membrane sheets and allow them to relax for minimum time period required by manufacturer.
- B. Laps: Accurately align roofing membrane sheets, without stretching, and maintain uniform side and end laps. Stagger end laps. Completely bond and seal laps, leaving no voids.
 1. Repair tears and voids in laps and lapped seams not completely sealed.
 2. Apply roofing granules to cover exuded bead at laps.

- C. Install roofing membrane sheets so side and end laps shed water.

3.7 FLASHING AND STRIPPING INSTALLATION

- A. Install base flashing over cant strips and other sloped and vertical surfaces and at roof edges; secure to substrates according to roofing system manufacturer's written instructions, and as follows:

1. Prime substrates with asphalt primer if required by roofing system manufacturer.
 2. Backer Sheet Application: Adhere backer sheet to substrate in cold applied adhesive at rate required by roofing system manufacturer.
 3. Flashing Sheet Application: Adhere flashing sheet to substrate in cold applied adhesive. Apply cold roofing asphalt to back of flashing sheet if recommended by roofing system manufacturer.
- B. Extend base flashing up walls or parapets a minimum of 8 inches above roofing membrane and 4 inches onto field of roofing membrane.
- C. Mechanically fasten top of base flashing securely at terminations and perimeter of roofing.
1. Seal top termination of base flashing.
- D. Install roofing membrane cap-sheet stripping where metal flanges and edgings are set on membrane roofing according to roofing system manufacturer's written instructions.
- E. Roof Drains: Set 30-by-30-inch-square metal flashing in bed of asphalt roofing cement on completed roofing membrane. Cover metal flashing with roofing membrane cap-sheet stripping and extend a minimum of 6 inches beyond edge of metal flashing onto field of roofing membrane. Clamp roofing membrane, metal flashing, and stripping into roof-drain clamping ring.
1. Install stripping according to roofing system manufacturer's written instructions.
- F. Penetration Flashing: Tape off area to be flashed. Prime protrusion with system approved primer. Apply system base coat. While tacky, embed system polyester scrim. Apply system top coat. Remove masking tape.

3.8 WALKWAY INSTALLATION

- A. Walkway Pads: Install walkway pads using units of size indicated or, if not indicated, of manufacturer's standard size according to walkway pad manufacturer's written instructions.
1. Set walkway pads in cold-applied adhesive.

3.9 FIELD QUALITY CONTROL

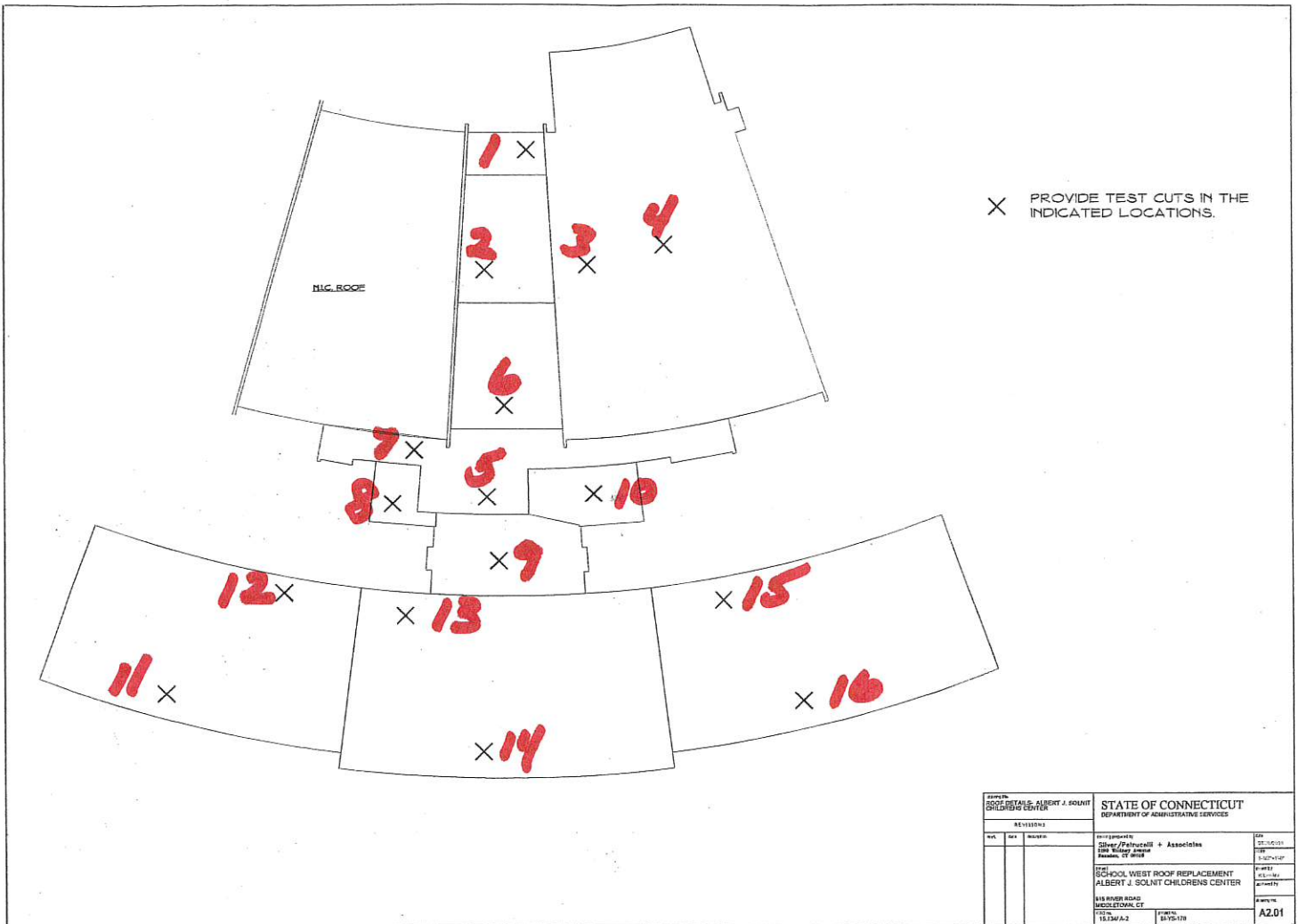
- A. Testing Agency: Owner will engage a qualified testing agency to perform tests and inspections and to prepare test reports.
- B. Final Roof Inspection: Arrange for roofing system manufacturer's technical personnel to inspect roofing installation on completion.
1. Notify Architect and Owner forty-eight (48) hours in advance of date and time of inspection.
- C. Roofing system will be considered defective if it does not pass tests and inspections.
1. Additional testing and inspecting, at Contractor's expense, will be performed to determine if replaced or additional work complies with specified requirements.

3.10 PROTECTING AND CLEANING

- A. Protect roofing system from damage and wear during remainder of construction period. When remaining construction will not affect or endanger roofing, inspect roofing for deterioration and damage, describing its nature and extent in a written report, with copies to Architect and Owner.

- B. Correct deficiencies in or remove roofing system that does not comply with requirements, repair substrates, and repair or reinstall roofing system to a condition free of damage and deterioration at time of Substantial Completion and according to warranty requirements.

END OF SECTION 075216



NOTE: # 1 has 3 Roofs Deep Deck
 ALL OTHERS have 2 Roof
 ALL have steel deck

- # 1 - 2 Roofs 1" ISO 4ply gravel - 1" Fiberglass
& 1" fesco, Torch down Steel Deck
- # 2 ^{2 roofs} Steel Deck 1" Fesco Board 4ply gravel
1" Fiberglass 1" Fesco Board, Torch Down Roof.
- # 3. ^{Steel Deck} 2 Roofs 2.5" ISO 4ply gravel - 1" Fiberglass &
1" Fesco Board, Torch down roof
- # 4 Same as #3
- # 5 steel deck Same as #3
- # 6 steel Deck 1" ISO 4ply gravel - 1" Fiberglass
1" Fesco Board, Torch down roof
- # 7 Same as #6
- # 8 # 9 # 10 Same as #6
- # 11 # 12 Same as #6
- # 13 - steel deck 1" ISO 4ply gravel, 1" Fiberglass
& 1" Fesco Board Torch Down Roof
Also Lightweight gyp. crickets
- # 14 # 15 # 16. Same as # 6