

# OAK HILL ES MODERNIZATION Center Joint Unified School District

## ADDENDUM 01

**PROJECT:** Oak Hill ES Modernization  
Project #23-03  
3909 North Loop Blvd.  
Antelope, CA 95843

**DATE:** 9/26/2023

**ACM PROJECT NO.:** 1815054.00

**DSA NO.:** 02-121265

The Following Changes, deletions, additions, and/or alterations in, on and to the drawings and specifications shall apply to proposals made for and to the execution of the various parts of the work affected thereby.

Careful Note of This Addendum shall be taken by all parties of interest so that the proper allowance may be made in all computations, estimates and contracts, and all trades affected shall be fully advised in the performance of the work which will be required of them.

In Case of Conflict Between Drawings, specifications, and this Addendum, this Addendum shall govern. This Addendum supersedes all previous drawings, specifications, and instructions pertaining to these items.

CLARIFICATION CONSISTS OF 19 PAGES TYPED AND 1 SKETCH.

### I. DRAWING CHANGES:

- a. Drawing A1.10: Provide exterior paint on portable classroom buildings shown on this sheet. This will be Additive Alternate No 4.
- b. Drawing A1.10: Remove and replace carpet and rubber base in portable classroom buildings shown on this sheet, except portables A, B and C. This will be Additive Alternate No 5.
- c. Drawing A2.1: Provide replacement flooring in Building A multipurpose room and adjoining corridor and storage room. See ASK-001 for extent of flooring. Tile to be RF1 as noted in part II paragraph c-1 below. This will be Additive Alternate No. 6.
- d. Drawing A2.3: Delete replacement of finish flooring in Building E.
- e. Drawing A2.4: Delete replacement of finish flooring in Buildings G and H.
- f. Drawing T2.1: Delete replacement of alarm / intrusion system and cameras.
- g. Drawing FA2.1: A new fire alarm control panel was needed and installed. Bid the fire alarm system per the fire alarm drawings as a complete system.
- h. Drawing T2.2 and T2.3: Provide 8 drops per classroom, 4 in the wall at the teacher workstation and 4 in the ceiling at the center of the room.

### II. SPECIFICATIONS CHANGES:

- a. Section 07 5216: Delete this Section and replace with new Section 07 5200.
- b. Section 08 7100: Locks at exterior doors will be electronic locks by Azuvo. Door locks will be OFCI. Additional data to be provided in next addendum.
- c. Section 09 6500: Article 2.01 and 2.02 flooring materials have been revised per paragraph below.
  1. RF1: Tarkett ID Latitude Stone & Concrete 7242 18" by 18" tile. Color: 7242 Hearthstone.
- d. Section 09 6813: Article 2.01 Carpet and walk off carpet specifications have been revised per paragraphs below.
  1. Carpet Tile: Shaw Patcraft. Style: 10353 Home Room V.3.0. Color: 00450 Swim Team.

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2. Walk off Carpet Tile: Shaw Philadelphia. Style: 54695 Succession II. Color: 00400 Laguna Bay.
  - e. Section 27 1500: Delete reference to CAT 5 and make cabling CAT 6 typical.
- III. NEW DRAWINGS ISSUED WITH THIS ADDENDUM:
- a. ASK-001 – Sketch showing extent of MPR flooring replacement
- IV. NEW SPECIFICATIONS ISSUED WITH THIS ADDENDUM:
- a. Section 07 5200, Modified Bituminous Membrane Roofing.
- V. CLARIFICATION:  
NONE
- VI. ATTACHMENTS:
- a. Pre-Bid meeting agenda
  - b. Pre-Bid meeting sign-in sheets
  - c. ASK-001 – Sketch showing extent of MPR flooring replacement
  - d. Section 07 5200, Modified Bituminous Membrane Roofing

END OF ADDENDUM

**Center Joint Unified School District  
Oak Hill Elementary School Modernization Project No. 23-03  
3909 North Loop Blvd., Antelope, California 95843**

**PRE-PROPOSAL CONFERENCE AGENDA**

**Date:** September 26, 2023    **Time:** 7:30am

**Project:** Oak Hill Elementary School Modernization Project No. 23-03

**SOQ Response Due:** Tuesday, October 24, 2023 at 3:00:00pm PST

**Location for**

**Receipt of SOQ:** Center Joint Unified School Facilities Office located at 8408-Watt Ave, Antelope, CA 95843

**I. Meeting Called to Order**

**II. Introduction of Project Team members:**

- A. District Representative(s) – Richard Putnam, Director of Facilities, Center Joint Unified School District & Angela Espinoza, Administrative Secretary – MOT Department
- B. Oak Hill Elementary School – Parveen Saenz, Principal
- C. DSA Inspector – Mason Donaldson
- D. Architect – Kenneth Dunn, Sr. Project Coordinator, and Dimitris Klapsis, Associate Principal, AC Martin
- E. Owner's Representative - Terra Carlson & Sharon Thomas, Capital Program Management, Inc.

**III. Bidding Documents: Available on the District Website or online Vendor Registry**

**IV. Contracting Format: Prime Contract – Lease-Leaseback Construction Services**

**V. Scope of Work Description:**

**Existing Elementary School Modernization**

Fire alarm replacement, digital intercom/clock bell/fiber backbone replacement, roofing, restrooms and drinking fountain upgrades to provide access compliance, assistive listening system, casework/sink upgrades, and paint and carpet in classrooms and workrooms.

**Site Improvements**

Parking lot and playground hardscape seal and stripe, ornamental site fencing, site concrete for path of travel improvements and signage upgrades to provide access compliance, and new trash enclosure.

**Additive Alternates**

1. Replace existing carpet, vinyl tile and rubber base in permanent classrooms as shown and described on plans and specifications with new carpet, rubber base and walk off carpet at entry and wet areas. Deep clean ceramic tile floors restrooms being renovated.
2. Paint interior walls, hard lid ceilings, interior and exterior doors and frames at each permanent classroom as shown and described on plans and specifications.
3. Provide a 30 year warranty on roofing material and installation.
4. Exterior paint on all portable buildings, including but not limited to walls/body, exterior doors/frames, trim, fascia, gutters and downspouts.
5. Remove and replace the carpet and rubber base in the portable classrooms.
6. Replace the floor in the MPR with Luxury Vinyl Tile by Tarkett ID Latitude Stone & Concrete 7242 18" x 18" Tile – Color: 7242 Hearthstone.

**VI. Construction Budget:**

- A. Estimated Construction Budget for this Project is \$4,900,000.

## **VII. Bidding and Contract Award Requirements:**

- A. License requirement: Class B
- B. Pre-Qualification of Bidders: Prequalification is required for GC's and MEP subcontractors; Interested Bidders will need to be prequalified before bid day. All prequalification questionnaires must be received ten (10) calendar days prior to the due date of RFP.
- C. Prevailing Wages – See Article 22 of Construction Services Agreement, Prevailing Rates of Wages; Records, Apprentices. Certified payrolls, payroll records and other documents shall be required along with your progress billings. [www.dir.ca.gov/dlsr/DPreWageDetermination.htm](http://www.dir.ca.gov/dlsr/DPreWageDetermination.htm).
- D. DIR Registration of Contractor and Subcontractor: See Article 25. Registration with Department of Industrial Relations, of Construction Services Agreement.
- E. Bond and Insurance Requirements: See Article 35. Insurance, of Construction Services Agreement.
- F. Proposal Form:
  - 1. Completed Forms No exclusions
  - 2. No fax or phone bids
  - 3. Bids shall be valid for 90 days

## **VIII. Schedule of Events:**

- A. Mandatory Project Walk-Through, September 26, 2023 at 7:30 AM
- B. Questions due by October 13, 2023
- C. SOQ Deadline on October 24, 2023 at 3:00: PM
- D. Notification of Shortlisted Firms October 27, 2023\*
- E. Interviews if Applicable/Fee Proposals due October 30-31\*
- F. Issue Notice of Intent to Award on November 1, 2023\*
- G. Board Approval November 15, 2023 \*

\* Estimated deadlines subject to revision at the District's discretion.

## **IX. Department of Justice (DOJ) Clearance, Badges and Security:** See Contractor Certification Regarding Background Checks in Project Manual

## **X. Site Information:**

- A. Site access, temporary facilities, staging areas and parking
- B. Working hours and project phasing: The work has been broken down into phases during the school year to accommodate school site activities and learning. Work conducted during Phases 2 through 6 will involve the upgrades to (3) classrooms at a time and can be accomplished during school hours. If Add Alternate # 4 is accepted, Phase B work to be conducted during swing shift and weekend hours

## **XI. Site Walk**

## **XII. General Questions**

## **XIII. Adjournment**

**Important note:** Responses to inquiries and discussions occurring at this pre-proposal walk-through shall in no way change or modify the RFP documents. The RFP documents will be affected only by addenda issued prior to the response date. We encourage all questions asked at the walk be followed up with an RFI.

**Send inquiries by 12:00pm on October 13, 2023, to:**

Terra Carlson at [terra@capitalpm.com](mailto:terra@capitalpm.com)  
Cc: Sharon Thomas at [sharont@capitalpm.com](mailto:sharont@capitalpm.com)  
Dimitris Klapsis at [dimitris.klapsis@acmartin.com](mailto:dimitris.klapsis@acmartin.com)  
Kenneth Dunn at [Kenneth.Dunn@acmartin.com](mailto:Kenneth.Dunn@acmartin.com)

Center Joint Unified School District  
**PRE-BID CONFERENCE & SITE VISIT SIGN IN SHEET**  
 Project No. 23-03  
 Oak Hill Elementary School Modernization  
 Tuesday, September 26, 2023  
 7:30 AM

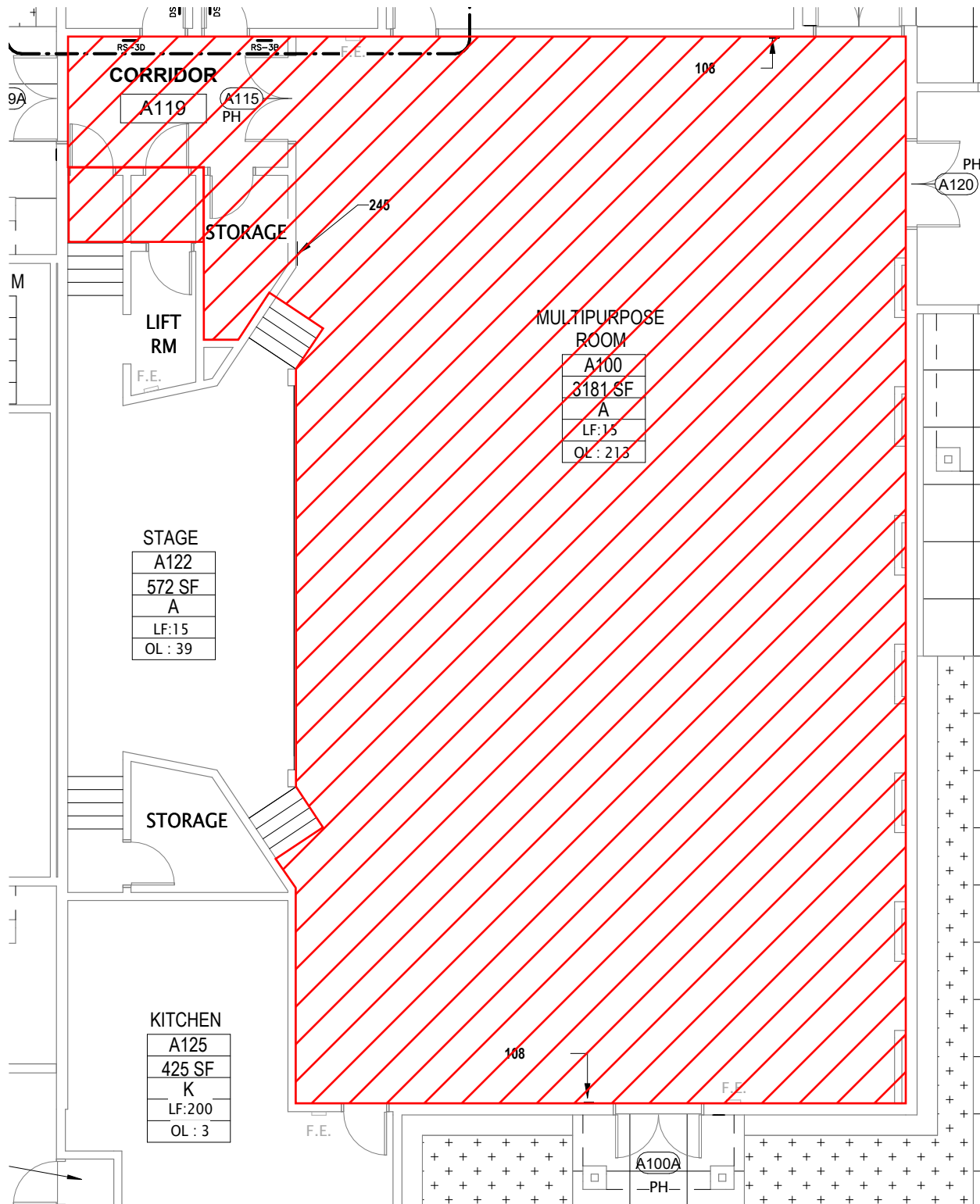
Company Name	Company Representative	Company City	Phone #	E-Mail
Clark Sullivan	Jason Angerer	Roseville	916-532-6796	Jangerer@clarksullivan.com
Abide Builders, Inc.	Meyah Masalosalo	West Sacramento	916-375-1009	bids@abidebuilders.com
Placer Complete Restoration, Inc.	John Wardlaw	Rocklin	916-632-2250	johnwardlaw@placercomplete.com
JLH PAINTING	ROB MILLER	AUBURN	530-308-2141	RM@JLHPAINTING.COM
Clark Sullivan	Shony Lozano	Roseville	209-207-8934	shlozano@clarksullivan.com
Creekside Commercial Builders, Inc.	Holly Hockett	Melleham	916-540-1389	hhockett@creeksideinc.net
Clark Sullivan	Ryan BAKER	Roseville	916-616-3609	rbaker@clarksullivan.com

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Company Name	Company Representative	Company City	Phone #	E-Mail
B3M Tear off	Justin Dumas	brunswick	925 628-3866	Jose@BuntourOff.com
SWINERTON	Quinn Hoffmann	SACRAMENTO	916 879-1693	QUINN.HOFFMANN@SWINERTON.COM
SWINERTON	CAROLINE HOEL	SACRAMENTO	916-204-0241	CAROLINE.HOEL@SWINERTON.CO
Bobo Construction, Inc.	Hyle Baker	EIK Grove	(916) 383-7777	bestimating@bobconstructioninc.com
HB. Restoration INC	Alex Mak	Rio Linda	916-368-5193	hbr-inc-17@gmail.com
RODAN BUILDERS	JEFF LOVITT	DAVIS	658-504-6063	bid@rodanbuilders.com
SCC Skutley Contracting Corp	Roy Salas	Yuba city	(916) 696-0086	Roy@skutleycontractingcorp.com
SKUTLEY CONTRACTING CORP	JOE SKUTLEY	YUBA CITY	530-695-6299	JOE@SKUTLEYCONTRACTINGCORP.COM
Placer Electric	Greg O'Connor	Sacramento	916-297-1903	grego@placerelectric.com

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**PRE-BID CONFERENCE & SITE VISIT SIGN IN SHEET**  
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Company Name	Company Representative	Company City	Phone #	E-Mail
Sausal Corporation	Teena Singley	Concord	925 568-2200	tsingley@sausal.net bids@sausal.net
Clark/Sullivan	Bill Frymond	Roseville	916 343-7650	bfrymond@clarksullivan.com
WICKMAN DEV <sub>CON</sub>	Jorge Flores	OAKLAND	916 248-3804	jorge@wickmandev.com
Ott Construction	Charles Munns	Sacramento	916 441 6670	cmunns@ottconstruction.com
BRCO Constructors	Matt Roth	Rochlin	916 253 9373	mroth@goBRCO.com
FRC	Brian Burris	Windsor	707-307-3402	Bids@FRCINC.BIZ
Swiwertow	Rocky Mann	Sec	916-956-0495	rocky.mann@swiwertow.com
Pro Line	Robert Howard	Roseville	916 470 2960	pfhoward2010@gmail.com
ALPHA TOWER ALARM Co	BRANDON DONNELLY	Sacramento	(209) 418-5257 (619) 699-9069	Art@ATAFIRE.CO (Project Manager) Brandon@ATAFIRE.CO (AH)
Schetter Electric	Brod Whitney	Sacramento	916 1446-2521	bwhitney@schetter.com
<del>Mark</del>				
DT Roofing	Mark Wilson	Rancho Cordova	916 925 4553	mwilson@dtroofing.com



**ac martin**  
 PLANNING  
 ARCHITECTURE  
 RESEARCH

**OAK HILL ES MODERNIZATION**

CENTER JOINT UNIFIED SCHOOL DISTRICT  
 3909 NORTH LOOP BOULEVARD  
 ANTELOPE, CA.

SCALE: **NTS**

DATE: **9/26/23**

W.O. # **1815054**

SKETCH NO. **ASK-001**

MODIFIES: **---**

ISSUED FOR: **ADDENDUM 01**



## SECTION 07 5200

### MODIFIED BITUMINOUS MEMBRANE ROOFING

#### PART 1 GENERAL

##### 1.1 SECTION INCLUDES

- A. Includes labor, materials, and equipment to install a modified bitumen roof system over the properly prepared substrate.
- B. Includes removal and disposal of existing roofing system(s), insulation board, gutters, flashings, sheet metal items, coping, etc. for a complete prepared roof surface to receive the new roofing system.
- C. Includes a new cold applied 2-ply asphalt roofing system with accessories as needed for a complete warrantable roofing system.

##### 1.2 RELATED SECTIONS

- A. Section 06 1000, Rough Carpentry.
- B. Section 07 2100, Thermal Insulation.
- C. Section 07 6200, Sheet Metal Flashing and Trim.
- D. Section 07 7123, Gutters and Downspouts.

##### 1.3 REFERENCES

- A. ASTM D 41 - Standard Specification for Asphalt Primer Used in Roofing, Dampproofing, and Waterproofing.
- B. ASTM D 312 - Standard Specification for Asphalt used in Roofing.
- C. ASTM D 451 - Standard Test Method for Sieve Analysis of Granular Mineral Surfacing for Asphalt Roofing Products.
- D. ASTM D 1970 - Specification for Sheet Materials, Self-Adhering Polymer Modified Bituminous, Used as Steep Roofing Underlayment for Ice Dam Protection.
- E. ASTM D 1079 Standard Terminology Relating to Roofing, Waterproofing and Bituminous Materials.
- F. ASTM D 1227 Standard Specification for Emulsified Asphalt Used as a Protective Coating for Roofing.
- G. ASTM D 1863 Standard Specification for Mineral Aggregate Used as a Protective Coating for Roofing.
- H. ASTM D 2178 Standard Specification for Asphalt Glass Felt Used in Roofing and Waterproofing.
- I. ASTM D 2824 Standard Specification for Aluminum-Pigmented Asphalt Roof Coating.
- J. ASTM D 4586 Standard Specification for Asphalt Roof Cement, Asbestos-Free.

- K. ASTM D 4601 Standard Specification for Asphalt Coated Glass Fiber Base Sheet Used in Roofing.
- L. ASTM D 5147 Standard Test Method for Sampling and Testing Modified Bituminous Sheet Materials.
- M. ASTM D 6162 Standard Specification for Styrene Butadiene Styrene (SBS) Modified Bituminous Sheet Materials Using a Combination of Polyester and Glass Fiber Reinforcements.
- N. ASTM D 6163 Standard Specification for Styrene Butadiene Styrene (SBS) Modified Bituminous Sheet Materials Using Glass Fiber Reinforcements.
- O. ASTM D 6164 - Standard Specification for Styrene Butadiene Styrene (SBS) Modified Bituminous Sheet Materials Using Polyester Reinforcements.
- P. ASTM D 6757 - Standard Specification for Underlayment Felt Containing Inorganic Fibers Used in Steep-Slope Roofing.
- Q. ASTM E 108 - Standard Test Methods for Fire Test of Roof Coverings
- R. Factory Mutual Research (FM): Roof Assembly Classifications.
- S. National Roofing Contractors Association (NRCA): Roofing and Waterproofing Manual.
- T. Sheet Metal and Air Conditioning Contractors National Association, Inc. (SMACNA) - Architectural Sheet Metal Manual.
- U. Underwriters Laboratories, Inc. (UL): Fire Hazard Classifications.
- V. Warnock Hersey (WH): Fire Hazard Classifications.
- W. ANSI-SPRI ES-1 Wind Design Standard for Edge Systems used with Low Slope Roofing Systems.
- X. ASCE 7, Minimum Design Loads for Buildings and Other Structures
- Y. UL - Fire Resistance Directory.
- Z. FM Approvals - Roof Coverings and/or RoofNav assembly database.
- AA. California Title 24 Energy Efficient Standards.

#### 1.4 DESIGN / PERFORMANCE REQUIREMENTS

- A. Perform work in accordance with all federal, state and local codes.
- B. Exterior Fire Test Exposure: Roof system shall achieve a UL, FM or WH Class rating for roof slopes indicated on the Drawings as follows:
  - 1. Factory Mutual Class A Rating.
  - 2. Underwriters Laboratory Class A Rating.
  - 3. Warnock Hersey Class A Rating.
- C. Design Requirements:
  - 1. Uniform Wind Uplift Load Capacity
    - a. Installed roof system shall withstand negative (uplift) design wind loading pressures complying with the following criteria.
      - 1) Design Code: ASCE 7, Method 2 for Components and Cladding.

- 2) Importance Category:
    - a) III.
  - 3) Importance Factor of:
    - a) 1.0
  - 4) Wind Speed: \_\_\_ mph
  - 5) Ultimate Pullout Value: \_\_\_ pounds per each of the fastener
  - 6) Exposure Category:
    - a) B.
    - b) C.
    - c) D.
  - 7) Design Roof Height: 20 feet.
  - 8) Minimum Building Width: 30 feet.
  - 9) Roof Pitch: ¼ :12.
  - 10) Roof Area Design Uplift Pressure:
    - a) Zone 1 - Field of roof \_\_\_ psf
    - b) Zone 2 - Eaves, ridges, hips and rakes \_\_\_ psf
    - c) Zone 3 - Corners \_\_\_ psf
2. Live Load: 20 psf, or not to exceed original building design.
  3. Dead Load:
    - a. Installation of new roofing materials shall not exceed the dead load capacity of the existing roof structure.
- D. Energy Star: Roof System shall comply with the initial and aged reflectivity required by the U.S. Federal Government's Energy Star program.
- E. Roof System membranes containing recycled or bio-based materials shall be third party certified through UL Environment.
- F. Roof system shall have been tested in compliance with the following codes and test requirements:
1. International Code Council Evaluation Service (ICC-ES):
    - a. Membrane Systems
      - 1) ESR-\_\_\_\_\_
  2. Underwriters Laboratories:
    - a. Certification TGFU.R \_\_\_\_\_
  3. Warnock Hersey
    - a. ITS Directory of Listed Products
  4. FM Approvals:
    - a. RoofNav Website

## 1.5 SUBMITTALS

- A. Product Data: Manufacturer's data sheets on each product to be used, including:
  1. Preparation instructions and recommendations.
  2. Storage and handling requirements and recommendations.
  3. Installation instructions.
- B. Shop Drawings: Submit shop drawings including installation details of roofing, flashing, fastening, insulation and vapor barrier, including notation of roof slopes and fastening patterns of insulation and base modified bitumen membrane, prior to job start.
- C. Design Pressure Calculations: Submit design pressure calculations for the roof area in accordance with ASCE 7 and local Building Code requirements. Include a roof system attachment analysis report, certifying the system's compliance with applicable wind load requirements before Work begins.

- D. Recycled or Bio-Based Materials: Provide third party certification through UL Environment of roof System membranes containing recycled or bio based materials.
- E. Verification Samples: For each modified bituminous membrane ply product specified, two samples, minimum size 6 inches (150 mm) square, representing actual product, color, and patterns.
- F. Manufacturer's Certificates: Provide to certify products meet or exceed specified requirements.
- G. Test Reports: Submit test reports, prepared by an independent testing agency, for all modified bituminous sheet roofing, indicating compliance with ASTM D5147.
- H. Manufacturer's Fire Compliance Certificate: Certify that the roof system furnished is approved by Factory Mutual (FM), Underwriters Laboratories (UL), Warnock Hersey (WH) or approved third party testing facility in accordance with ASTM E108, Class A for external fire and meets local or nationally recognized building codes.
- I. Closeout Submittals: Provide manufacturer's maintenance instructions that include recommendations for periodic inspection and maintenance of all completed roofing work. Provide product warranty executed by the manufacturer. Assist Owner in preparation and submittal of roof installation acceptance certification as may be necessary in connection with fire and extended coverage insurance on roofing and associated work.

#### 1.6 QUALITY ASSURANCE

- A. Perform Work in accordance with NRCA Roofing and Waterproofing Manual.
- B. Manufacturer Qualifications: Company specializing in manufacturing products specified with documented ISO 9001 certification and minimum of twelve years of documented experience and must not have been in Chapter 11 bankruptcy during the last five years.
- C. Installer Qualifications: Company specializing in performing Work of this section with minimum five years documented experience and a certified Pre-Approved Garland Contractor.
- D. Installer's Field Supervision: Maintain a full-time Supervisor/Foreman on job site during all phases of roofing work while roofing work is in progress.
- E. Product Certification: Provide manufacturer's certification that materials are manufactured in the United States and conform to requirements specified herein, are chemically and physically compatible with each other, and are suitable for inclusion within the total roof system specified herein.
- F. Source Limitations: Obtain all components of roof system from a single manufacturer. Secondary products that are required shall be recommended and approved in writing by the roofing system Manufacturer. Upon request of the Architect or Owner, submit Manufacturer's written approval of secondary components in list form, signed by an authorized agent of the Manufacturer.

#### 1.7 PRE-INSTALLATION MEETINGS

- A. Convene minimum two weeks prior to commencing Work of this section.
- B. Review installation procedures and coordination required with related Work.
- C. Inspect and make notes of job conditions prior to installation:
  1. Record minutes of the conference and provide copies to all parties present.

2. Identify all outstanding issues in writing designating the responsible party for follow-up action and the timetable for completion.
3. Installation of roofing system shall not begin until all outstanding issues are resolved to the satisfaction of the Architect.

#### 1.8 DELIVERY, STORAGE, AND HANDLING

- A. Deliver and store products in manufacturer's unopened packaging with labels intact until ready for installation.
- B. Store all roofing materials in a dry place, on pallets or raised platforms, out of direct exposure to the elements until time of application. Store materials at least 4 inches above ground level and covered with "breathable" tarpaulins.
- C. Stored in accordance with the instructions of the manufacturer prior to their application or installation. Store roll goods on end on a clean flat surface except store KEE-Stone FB 60 rolls flat on a clean flat surface. No wet or damaged materials will be used in the application.
- D. Store at room temperature wherever possible, until immediately prior to installing the roll. During winter, store materials in a heated location with a 50 degree F (10 degree C) minimum temperature, removed only as needed for immediate use. Keep materials away from open flame or welding sparks.
- E. Avoid stockpiling of materials on roofs without first obtaining acceptance from the Architect/Engineer.
- F. Adhesive storage shall be between the range of above 50 degree F (10 degree C) and below 80 degree F (27 degree C). Area of storage shall be constructed for flammable storage.

#### 1.9 COORDINATION

- A. Coordinate Work with installing associated metal flashings as work of this section proceeds.

#### 1.10 PROJECT CONDITIONS

- A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

### **PART 2 PRODUCTS**

#### 2.1 MANUFACTURERS

- A. Acceptable Manufacturer: Garland Company, Inc. (The); 3800 E. 91st St., Cleveland, OH 44105. ASD. Toll Free: 800-321-9336. Phone: 216-641-7500. Fax: 216-641-0633. Web Site: [www.garlandco.com](http://www.garlandco.com). Local representative Dan Mc Cready (916) 865-7753 [dmccready@garlandind.com](mailto:dmccready@garlandind.com)
- B. The Products specified are intended and the Standard of Quality for the products required for this project. If other products are proposed the bidder must disclose in the bid the manufacturer and the products that they intend to use on the Project. If no manufacturer and products are listed, the bid may be accepted only with the use of products specified.
  1. Bidder will not be allowed to change materials after the bid opening date.
  2. If alternate products are included in the bid, the products must be equal to or exceed the products specified. Supporting technical data shall be submitted to the Architect/ Owner for approval prior to acceptance.

3. In making a request for substitution, the Bidder/Roofing Contractor represents that it has:
  - a. Personally investigated the proposed product or method, and determined that it is equal or superior in all respects to that specified.
  - b. Will provide the same guarantee for substitution as for the product and method specified.
  - c. Will coordinate installation of accepted substitution in work, making such changes as may be required for work to be completed in all respects.
  - d. Will waive all claims for additional cost related to substitution, which consequently become apparent.
  - e. Cost data is complete and includes all related cost under his/her contract or other contracts, which may be affected by the substitution.
  - f. Will reimburse the Owner for all redesign cost by the Architect for accommodation of the substitution.
4. Architect/ Owner reserves the right to be the final authority on the acceptance or rejection of any or all bids, proposed alternate roofing systems or materials that has met ALL specified requirement criteria.
5. Failure to submit substitution package, or any portion thereof requested, will result in immediate disqualification and consideration for that particular contractors request for manufacturer substitution.

## 2.2 COLD APPLIED 2-PLY ROOF SYSTEM - STRESSPLY, OPTIMAX, OR VERSIPLY

- A. Nailable Base Sheet: One ply fastened to the deck per wind uplift calculations.
  1. Red Rosin Paper
- B. Insulation: As Specified in Section 07 2100
  1. In absence of section 07220 at minimum one layer of six sided primed ½" woodfiber insulation board is to be installed with mechanical fasteners per ASCE 7.
- C. Base (Ply) Sheet: One ply bonded to the prepared substrate with Interply Adhesive:
  1. StressBase 80:
- D. Modified Cap (Ply) Sheet: One ply bonded to the prepared substrate with Interply Adhesive:
  1. StressPly FR Mineral:
- E. Interply Adhesive: (1 and 2)
  1. GreenLock Membrane Adhesive:
- F. Flashing Base Ply: One ply bonded to the prepared substrate with Interply Adhesive:
  1. StressBase 80:
- G. Flashing Cap (Ply) Sheet: One ply bonded to the prepared substrate with Interply Adhesive:
  1. StressPly FR Mineral:
- H. Flashing Ply Adhesive:
  1. GreenLock Flashing Adhesive:
- I. Surfacing: Requires 30 day wait before applying.
  1. Surface Coatings:
    - a. Pyramic Plus LO:

## **PART 3 EXECUTION**

### **3.1 EXAMINATION**

- A. Do not begin installation until substrates have been properly prepared.
- B. Inspect and approve the deck condition, slopes and fastener backing if applicable, parapet walls, expansion joints, roof drains, stack vents, vent outlets, nailers and surfaces and elements.
- C. Verify that work penetrating the roof deck, or which may otherwise affect the roofing, has been properly completed.
- D. If substrate preparation and other conditions are the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

### **3.2 PREPARATION**

- A. General: Clean surfaces thoroughly prior to installation.
  - 1. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
  - 2. Fill substrate surface voids that are greater than 1/4 inch wide with an acceptable fill material.
  - 3. Roof surface to receive roofing system shall be smooth, clean, free from loose gravel, dirt and debris, dry and structurally sound.
  - 4. Wherever necessary, all surfaces to receive roofing materials shall be power broom and vacuumed to remove debris and loose matter prior to starting work.
  - 5. Do not apply roofing during inclement weather. Do not apply roofing membrane to damp, frozen, dirty, or dusty surfaces.
  - 6. Fasteners and plates for fastening components mechanically to the substrate shall provide a minimum pull-out capacity of 300 lbs. (136 k) per fastener. Base or ply sheets attached with cap nails require a minimum pullout capacity of 40 lb. per nail.
  - 7. Prime decks where required, in accordance with requirements and recommendations of the primer and deck manufacturer.

### **3.3 INSTALLATION - GENERAL**

- A. Install modified bitumen membranes and flashings in accordance with manufacturer's instructions and with the recommendations provided by the National Roofing Contractors Association's Roofing & Waterproofing Manual, the Asphalt Roofing Manufacturers Association, and applicable codes.
- B. General: Avoid installation of modified bitumen membranes at temperatures lower than 40-45 degrees F. When work at such temperatures unavoidable use the following precautions:
  - 1. Take extra care during cold weather installation and when ambient temperatures are affected by wind or humidity, to ensure adequate bonding is achieved between the surfaces to be joined. Use extra care at material seam welds and where adhesion of the applied product to the appropriately prepared substrate as the substrate can be affected by such temperature constraints as well.
  - 2. Unrolling of cold materials, under low ambient conditions must be avoided to prevent the likelihood of unnecessary stress cracking. Rolls must be at least 40 degrees F at the time of application. If the membrane roll becomes stiff or difficult to install, it must be replaced with roll from a heated storage area.
- C. Commence installation of the roofing system at the lowest point of the roof (or roof area), working up the slope toward the highest point. Lap sheets shingle fashion so as to constantly shed water

- D. Slopes greater than 2:12 require back-nailing to prevent slippage of the ply sheets. Use ring or spiral-shank 1 inch cap nails, or screws and plates at a rate of 1 fastener per ply (including the membrane) at each insulation stop. Place insulation stops at 16 ft o.c. for slopes less than 3:12 and 4 feet o.c. for slopes greater than 3:12. On non-insulated systems, nail each ply directly into the deck at the rate specified above. When slope exceeds 2:12, install all plies parallel to the slope (strapping) to facilitate backnailing. Install 4 additional fasteners at the upper edge of the membrane when strapping the plies.

### 3.4 INSTALLATION COLD APPLIED ROOF SYSTEM

- A. Base Ply: Cut base ply sheets into 18 foot lengths and allow plies to relax before installing. Install base sheet in Interply Adhesive: applied at the rate required by the manufacturer. Shingle base sheets uniformly to achieve one ply throughout over the prepared substrate. Shingle in proper direction to shed water on each large area of roofing.
  - 1. Lap ply sheet ends 8 inches. Stagger end laps 12 inches minimum.
  - 2. Solidly bond to the substrate and adjacent ply with specified cold adhesive at the rate of 2 to 2-1/2 gallons per 100 square feet.
  - 3. Roll must push a puddle of adhesive in front of it with adhesive slightly visible at all side laps. Use care to eliminate air entrapment under the membrane.
  - 4. Install subsequent rolls of modified across the roof as above with a minimum of 4 inch side laps and 8 inch staggered end laps. Lay modified membrane in the same direction as the underlayers but the laps shall not coincide with the laps of the base layers.
  - 5. Extend plies 2 inches beyond top edges of cants at wall and projection bases.
  - 6. Install base flashing ply to all perimeter and projection details.
  - 7. Allow the one ply of base sheet to cure at least 30 minutes before installing the modified membrane. However, the modified membrane must be installed the same day as the base plies.
- B. Modified Cap Ply(s): Cut cap ply sheets into 18 foot lengths and allow plies to relax before installing. Install in interplay adhesive applied at the rate required by the manufacturer. Shingle sheets uniformly over the prepared substrate to achieve the number of plies specified. Shingle in proper direction to shed water on each large area of roofing.
  - 1. Lap ply sheet ends 8 inches. Stagger end laps 12 inches minimum.
  - 2. Solidly bond to the base layers with specified cold adhesive at the rate of 2 to 2-1/2 gallons per 100 square feet.
  - 3. Roll must push a puddle of adhesive in front of it with adhesive slightly visible at all side laps. Care should be taken to eliminate air entrapment under the membrane.
  - 4. Install subsequent rolls of modified across the roof as above with a minimum of 4 inch side laps and 8 inch staggered end laps. Lay modified membrane in the same direction as the underlayers but the laps shall not coincide with the laps of the base layers.
  - 5. Allow cold adhesive to set for 5 to 10 minutes before installing the top layer of modified membrane.
  - 6. Extend membrane 2 inches beyond top edge of all cants in full moppings of the cold adhesive as shown on the Drawings.
- C. Fibrous Cant Strips: Provide non-combustible perlite or glass fiber cant strips at all wall/curb detail treatments where angle changes are greater than 45 degrees. Cant may be set in approved cold adhesives, hot asphalt or mechanically attached with approved plates and fasteners.
- D. Wood Blocking, Nailers and Cant Strips: Provide wood blocking, nailers and cant strips as specified in Section 06 1000.
  - 1. Provide nailers at all roof perimeters and penetrations for fastening membrane flashings and sheet metal components.



2. Wood nailers should match the height of any insulation, providing a smooth and even transition between flashing and insulation areas.
  3. Nailer lengths should be spaced with a minimum 1/8 inch gap for expansion and contraction between each length or change of direction.
  4. Nailers and flashings should be fastened in accordance with Factory Mutual "Loss Prevention Data Sheet 1- 49, Perimeter Flashing" and be designed to be capable of resisting a minimum force of 200 lbs/lineal foot in any direction.
- E. Metal Work: Provide metal flashings, counter flashings, parapet coping caps and thru-wall flashings as specified in Section 07 6200 or Section 07 7123. Install in accordance with the SMACNA "Architectural Sheet Metal Manual" or the NRCA Roofing Waterproofing manual.
- F. Termination Bar: Provide a metal termination bar or approved top edge securement at the terminus of all flashing sheets at walls and curbs. Fasten the bar a minimum of 8 inches (203 mm) o/c to achieve constant compression. Provide suitable, sealant at the top edge if required.
- G. Flashing Base Ply: Install flashing sheets by the same application method used for the base ply.
1. Seal curb, wall and parapet flashings with an application of mastic and mesh on a daily basis. Do not permit conditions to exist that will allow moisture to enter behind, around or under the roof or flashing membrane.
  2. Prepare all walls, penetrations, expansion joints and where shown on the Drawings to be flashed with required primer at the rate of 100 square feet per gallon. Allow primer to dry tack free.
  3. Adhere to the underlying base ply with specified flashing ply adhesive unless otherwise specified. Nail off at a minimum of 8 inches (203 mm) o.c. from the finished roof at all vertical surfaces.
  4. Solidly adhere the entire flashing ply to the substrate. Secure the tops of all flashings that are not run up and over curb through termination bar fastened at 6 inches (152 mm) O.C. and sealed at top.
  5. Seal all vertical laps of flashing ply with a three-course application of trowel-grade mastic and fiberglass mesh.
  6. Coordinate counter flashing, cap flashings, expansion joints and similar work with modified bitumen roofing work as specified.
  7. Coordinate roof accessories, miscellaneous sheet metal accessory items, including piping vents and other devices with the roofing system work.
  8. Secure the top edge of the flashing sheet using a termination bar only when the wall surface above is waterproofed, or nailed 4 inches on center and covered with an acceptable counter flashing.
- H. Flashing Cap Ply:
1. Seal curb, wall and parapet flashings with an application of mastic and mesh on a daily basis. Do not permit conditions to exist that will allow moisture to enter behind, around or under the roof or flashing membrane.
  2. Prepare all walls, penetrations, expansion joints and where shown on the Drawings to be flashed with required primer at the rate of 100 square feet per gallon. Allow primer to dry tack free.
  3. Adhere to the underlying base flashing ply with specified flashing ply adhesive unless otherwise specified. Nail off at a minimum of 8 inches (203 mm) o.c. from the finished roof at all vertical surfaces.
  4. Coordinate counter flashing, cap flashings, expansion joints and similar work with modified bitumen roofing work as specified.
  5. Coordinate roof accessories, miscellaneous sheet metal accessory items with the roofing system work.
  6. All stripping shall be installed prior to flashing cap sheet installation.

7. Heat and scrape granules when welding or adhering at cut areas and seams to granular surfaces at all flashings.
  8. Secure the top edge of the flashing sheet using a termination bar only when the wall surface above is waterproofed, or nailed 4 inches on center and covered with an acceptable counter flashing.
- I. Surface Coatings: Apply roof coatings in strict conformance with the manufacturer's recommended procedures.
  - J. Roof Walkways: Provide walkways in areas indicated on the Drawings.

### 3.5 CLEANING

- A. Clean-up and remove daily from the site all wrappings, empty containers, paper, loose particles and other debris resulting from these operations.
- B. Remove asphalt markings from finished surfaces.
- C. Repair or replace defaced or disfigured finishes caused by Work of this section.

### 3.6 PROTECTION

- A. Provide traffic ways, erect barriers, fences, guards, rails, enclosures, chutes and the like to protect personnel, roofs and structures, vehicles and utilities.
- B. Protect exposed surfaces of finished walls with tarps to prevent damage.
- C. Plywood for traffic ways required for material movement over existing roofs shall be not less than 5/8 inch (16 mm) thick.
- D. In addition to the plywood listed above, an underlayment of minimum 1/2 inch (13 mm) recover board is required on new roofing.
- E. Special permission shall be obtained from the Manufacturer before any traffic shall be permitted over new roofing.

### 3.7 FIELD QUALITY CONTROL

- A. Inspection: Provide manufacturer's field observations at start-up and at intervals of approximately 30 percent, 60 percent and 90 percent completion. Provide a final inspection upon completion of the Work.
  1. Warranty shall be issued upon manufacturer's acceptance of the installation.
  2. Field observations shall be performed by a Sales Representative employed full-time by the manufacturer and whose primary job description is to assist, inspect and approve membrane installations for the manufacturer.
  3. Provide observation reports from the Sales Representative indicating procedures followed, weather conditions and any discrepancies found during inspection.
  4. Provide a final report from the Sales Representative, certifying that the roofing system has been satisfactorily installed according to the project specifications, approved details and good general roofing practice.

### 3.8 SCHEDULES

- A. Base (Ply) Sheet:
  1. StressBase 80: 80 mil SBS (Styrene-Butadiene-Styrene) rubber modified roofing base sheet reinforced with a fiberglass scrim, performance requirements according to ASTM D 5147.

- a. Tensile Strength, ASTM D 5147
    - 1) 2 in/min. @ 0 +/- 3.6 deg. F MD 100 lbf/in XD 100 lbf/in
    - 2) 50mm/min. @ -17.78 +/- 2 deg. C MD 17.5 kN/m XD 17.5 kN/m
  - b. Tear Strength, ASTM D 5147
    - 1) 2 in/min. @ 73.4 +/- 3.6 deg. F MD 110 lbf XD 100 lbf
    - 2) 50mm/min. @ 23 +/- 2 deg. C MD 489 N XD 444 N
  - c. Elongation at Maximum Tensile, ASTM D 5147
    - 1) 2 in/min. @ 0 +/- 3.6 deg. F MD 4 % XD 4 %
    - 2) 50mm/min @ -17.78 +/- 2 deg. C MD 4 % XD 4 %
  - d. Low Temperature Flexibility, ASTM D 5147, Passes -40 deg. F (-40 deg. C)
- B. Thermoplastic/Modified Cap (Ply) Sheet:
- 1. StressPly FR Mineral: 145 mil SBS (Styrene-Butadiene-Styrene) mineral surfaced, rubber modified roofing membrane with fire retardant characteristics, and dual fiberglass reinforced scrim. ASTM D 6163, Type III Grade G
    - a. Tensile Strength, ASTM D 5147
      - 1) 2 in/min. @ 73.4 +/- 3.6 deg. F MD 225 lbf/in XD 225 lbf/in
      - 2) 50 mm/min. @ 23 +/- 2 deg. C MD 39.0 kN/m XD 39.0 kN/m
    - b. Tear Strength, ASTM D 5147
      - 1) 2 in/min. @ 73.4 +/- 3.6 deg. F MD 300 lbf XD 300 lbf
      - 2) (50 mm/min. @ 23 +/- 2 deg. C MD 1335 N XD 1335 N
    - c. Elongation at Maximum Tensile, ASTM D 5147
      - 1) 2 in/min. @ 73.4 +/- 3.6 deg. F MD 6% XD 8%
      - 2) 50 mm/min. @ 23 +/- 2 deg. C MD 6% XD 8%
    - d. Low Temperature Flexibility, ASTM D 5147, Passes -15 deg. F (-26 deg. C)
- C. Interply Adhesive:
- 1. GreenLock Membrane Adhesive: High performance asphalt forced process roofing systems. Performance Requirements:
    - a. Non-Volatile Content ASTM D 4586 100%
    - b. Density ASTM D1475 11.4 lbs./gal.
    - c. Viscosity Stormer ASTM D562 900-1100 grams
    - d. Flash Point ASTM D 93 100 deg. F min.
    - e. Slope: up to 3:12
    - f. V.O.C. 0
- D. Flashing Base Ply:
- 1. StressBase 80: 80 mil SBS (Styrene-Butadiene-Styrene) rubber modified roofing base sheet reinforced with a fiberglass scrim, performance requirements according to ASTM D 5147.
    - a. Tensile Strength, ASTM D 5147
      - 1) 2 in/min. @ 0 +/- 3.6 deg. F MD 100 lbf/in XD 100 lbf/in
      - 2) 50 mm/min. @ -17.78 +/- 2 deg. C MD 17.5 kN/m XD 17.5 kN/m
    - b. Tear Strength, ASTM D 5147
      - 1) 2 in/min. @ 73.4 +/- 3.6 deg. F MD 110 lbf XD 100 lbf
      - 2) 50 mm/min. @ 23 +/- 2 deg. C MD 489 N XD 444 N
    - c. Elongation at Maximum Tensile, ASTM D 5147
      - 1) 2 in/min. @ 0 +/- 3.6 deg. F MD 4 % XD 4 %
      - 2) 50 mm/min. @ -17.78 +/- 2 deg. C MD 4 % XD 4 %
    - d. Low Temperature Flexibility, ASTM D 5147
      - 1) Passes -40 deg. F (-40 deg. C)
- E. Flashing Ply Adhesive:
- 1. GreenLock Flashing Adhesive: Type II trowel grade flashing adhesive.
    - a. Non-Volatile 100%
    - b. Density ASTM D 1475 11.8 lbs./gal. (1kg/l)

- c. Flash Point 400 deg. F

F. Surfacing:

1. Flashing Cap (Ply) Sheet:

- a. StressPly FR Mineral: 145 mil SBS (Styrene-Butadiene-Styrene) mineral surfaced, rubber modified roofing membrane with fire retardant characteristics, and dual fiberglass reinforced scrim. ASTM D 6163, Type III Grade G
  - 1) Tensile Strength, ASTM D 5147
    - a) 2 in./min. @ 73.4 +/- 3.6 deg. F MD 225 lbf/in XD 225 lbf/in
    - b) 50 mm/min. @ 23 +/- 2 deg. C MD 39.0 kN/m XD 39.0 kN/m
  - 2) Tear Strength, ASTM D 5147
    - a) 2 in./min. @ 73.4 +/- 3.6 deg. F MD 300 lbf XD 300 lbf
    - b) (50 mm/min. @ 23 +/- 2 deg. C MD 1335 N XD 1335 N
  - 3) Elongation at Maximum Tensile, ASTM D 5147
    - a) 2 in./min. @ 73.4 +/- 3.6 deg. F MD 6% XD 8%
    - b) 50 mm/min. @ 23 +/- 2 deg. C MD 6% XD 8%
  - 4) Low Temperature Flexibility, ASTM D 5147, Passes -15 deg. F (-26 deg. C)

2. Surface Coatings:

a. Surfacing:

- 1) Pyramic Plus LO: White elastomeric roof coating, Energy Star approved acrylic roof coating:
  - a) Weight/Gallon 11.7 lbs./gal. (1.40 g/cm<sup>3</sup>)
  - b) Non-Volatile % (ASTM D 1644) 63 min
  - c) Reflectance 83%

END OF SECTION