

W E T H E R H O L T   A N D   A S S O C I A T E S ,   I N C .

March 21, 2016  
Job# 0502-22A5

**To:   Bidders for the Roof Repair Work  
Bellevue Regional Library  
Upper Roof Areas & Select Metal Roof Areas**

**From: Don Davis, Wetherholt & Associates, Inc.**

**Ref:   ADDENDUM NO. 1  
Bellevue Regional Library  
Roof Repair Work  
1111 110<sup>th</sup> PINE  
Bellevue, Washington**

The additions, omissions, clarifications and corrections herein shall be made to the Project Manual for the above referenced Project and shall be included in the scope of work and proposals to be submitted. References made below shall be used as a general guide only. The Bidders themselves shall determine the work affected by the Addendum items.

Acknowledge receipt of Addendum No. 1 on bid form.

Item   Clarification or Change

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1.   Staging Areas: Refer to the enclosed marked up aerial view for available staging locations for the project.
2.   Core Cut Information: The following information was obtained from core cuts taken
  - a.   Upper Roof (West Roof): Metal deck, ~3.25" rigid insulation, EPDM roof membrane, and rock ballast.
  - b.   Low Roof (East Roof): Wood deck (drawings indicate 2.25" wood deck thickness), polyethylene, tapered rigid insulation (1/4" per foot), EPDM roof membrane, and rock ballast.
3.   Upper Roof (West Roof) Drains: Replace overflow clamping rings with standard clamping rings so that all drains act as main drains.
4.   Low Roof (East Roof) Drains: Revise tapered insulation layout to direct water to all drains. See revised roof plan, attached.

5. New Vent at Upper Roof: Contractor to provide boot flashing for new 3” diameter PVC vent to be installed on upper roof. Vent will be installed by Owner, adjacent to existing vent shown in photo below. PVC vent will have similar J-shape profile to the existing vent.

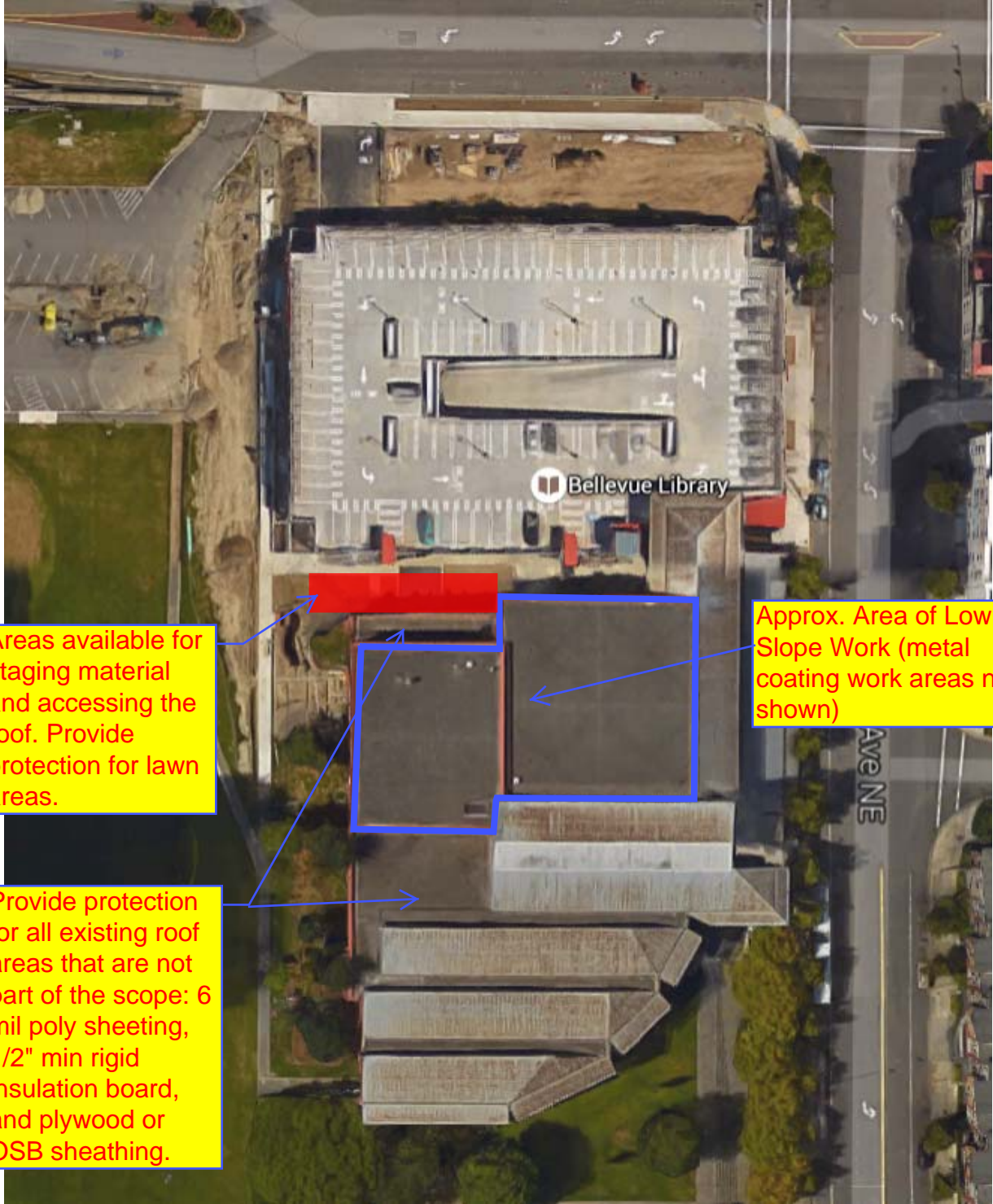


New vent to be similar to existing.

6. Metal Roof Coating Specification: Replace existing specification with new specification, enclosed.
7. Existing Roof Protection: Provide protection for all existing roof areas that are not part of the scope: 6 mil poly sheeting, 1/2" min rigid insulation board, and plywood or OSB sheathing.

Attachments: Aerial View of Staging Areas, New Roof Plan (R1), New Metal Roof Coating Specification (07015)

End of Addendum No. 1



Areas available for staging material and accessing the roof. Provide protection for lawn areas.

Approx. Area of Low Slope Work (metal coating work areas not shown)

Provide protection for all existing roof areas that are not part of the scope: 6 mil poly sheeting, 1/2" min rigid insulation board, and plywood or OSB sheathing.

**FLAG NOTES**

- 1 REMOVE (E) WALL CLADDING PANELS TO ALLOW FOR (N) RTW AND SADDLE FLASHINGS, AND (N) WRB INSTALLATION. REINSTALL PANELS.
- 2 REMOVE CAULKING AND RESEAL (E) SURFACE MOUNTED COUNTERFLASHING AT RAKE WALL.
- 3 REMOVE (E) INSULATION WHERE COMPRESSED, APPROX. 24 SQUARE FOOT AREA, AND REPLACE W/ (N) INSULATION TO MATCH EXISTING
- 4 REPLACE (E) SEALANT AROUND ALL WINDOW PERIMETERS AND INSTALL (N) TOOLED SEALANT JOINT. INSTALL (N) SEALANT TAPE AT FLASHING JOINTS ABOVE WINDOWS. WRAP TAPE ONTO TOP SURFACE OF FLASHING.
- 5 INSTALL (N) WINDOW STOP AT SILL TO REPLACE (E) SHORT STOP AT EAST MOST WINDOW LOCATIC
- 6 INSTALL (N) ZEE CLOSURES DOWNSLOPE FROM (E) ZEE CLOSURES. SEE DETAIL 2/R3.
- 7 REPLACE (E) RIDGE CAP W/ (N) OFFSET RIDGE CAP, SEE DETAIL 4/R4.
- 8 INSTALL NEW 1/2" PER FOOT TAPERED INSULATION CRICKETS, MECH. FASTENED OVER (E) EPDM

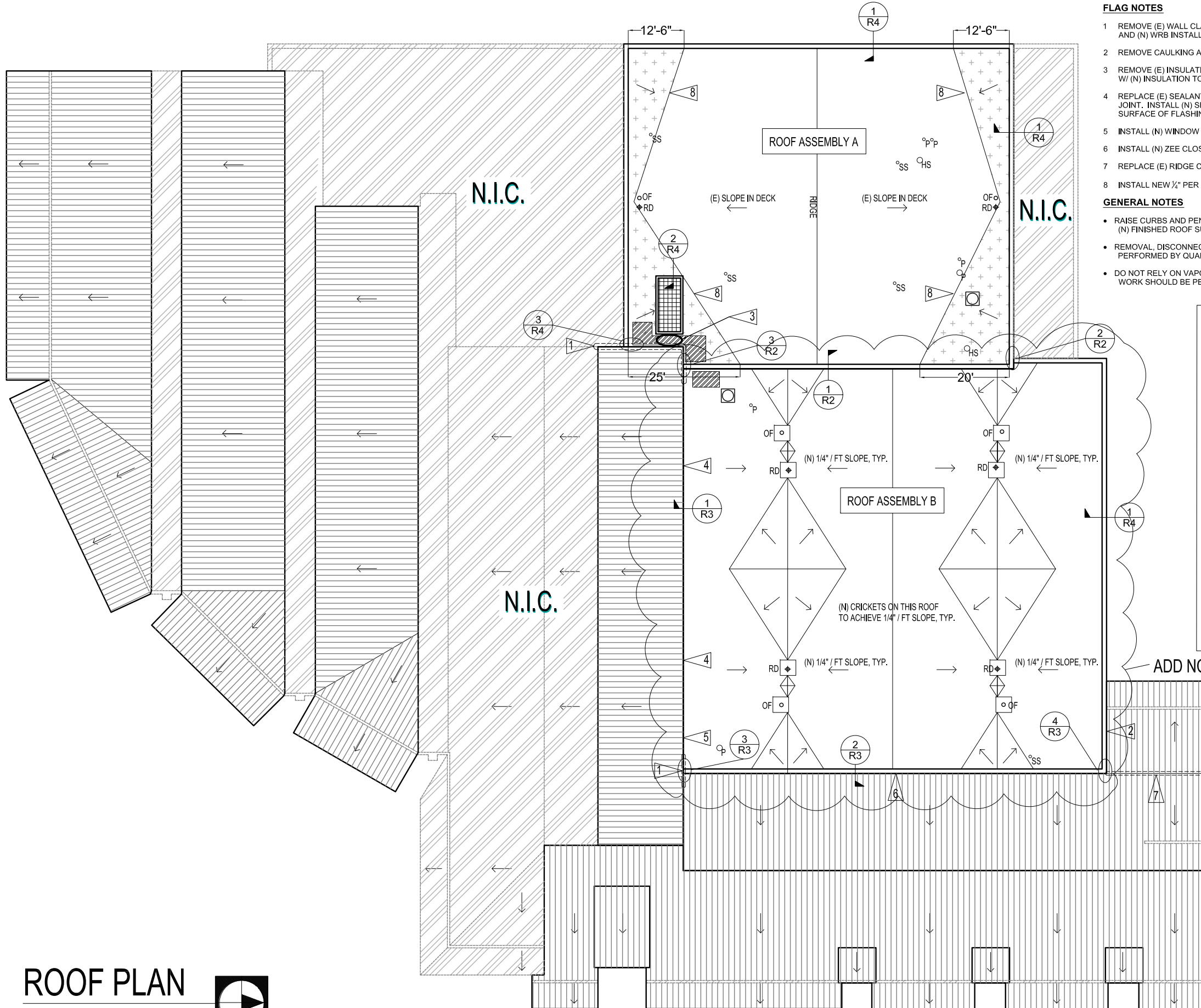
**GENERAL NOTES**

- RAISE CURBS AND PENETRATIONS AS NEEDED TO PROVIDE A MINIMUM 8" HEIGHT ABOVE THE (N) FINISHED ROOF SURFACE..
- REMOVAL, DISCONNECTION AND REINSTALLATION OF ALL MECHANICAL EQUIPMENT TO BE PERFORMED BY QUALIFIED CONTRACTOR.
- DO NOT RELY ON VAPOR RETARDER FOR TEMPORARY ROOF PROTECTION. PHASING OF WORK SHOULD BE PERFORMED AS REQUIRED TO MAINTAIN DRAINAGE.

**LEGEND**

	SHAFT OPEN TO BELOW W/ ANGLE IRON AND REBAR GRATE
	CURB MOUNTED POWER VENT
	ROOF DRAIN
	OVERFLOW DRAIN
	(N) 1/2" PER FOOT TAPERED INSULATION CRICKET,
	HEAT STACK PENETRATION
	SOIL STACK PENETRATION
	PIPE PENETRATION
	SLOPE INDICATOR
	NEW WALK PAD
	ROOF ASSEMBLY C

ADD NO. 1 - MODIFIED TAPERED INSULATION LAYOUT



**ROOF PLAN**

NOT TO SCALE



**WETHERHOLT AND ASSOCIATES, INC.**  
 13104 NE 85th STREET  
 KIRKLAND, WASHINGTON 98033  
 PH: (425) 822-8397 FX: (425) 822-7595  
 2633 A PARKMONT LANE S.W. SUITE A-1  
 OLYMPIA, WASHINGTON 98502  
 PH: (360) 786-1660 FX: (360) 786-1696

**ROOF PLAN - ADD NO. 1**  
**Bellevue Regional Library**  
 CLIENT : King county Library System  
 ADDRESS : 1111 110th Avenue NE  
 Bellevue, Washington  
 PHONE : 425-369-3237

PRJ# : 0502-22A5  
 DRW : JJJ  
 CHK : DAD  
 DATE : 3/21/16

SHEET  
**R1 - Add No. 1**

**SECTION 07 015  
METAL ROOF COATING**

**PART 1 - GENERAL CONDITIONS**

**1.01 DESCRIPTION**

- A. This Section includes but is not limited to the following:
1. Provide labor, materials, equipment and supervision necessary to install elastomeric acrylic coating system as outlined in this specification to restore the aesthetics of the roof system. The manufacturer's application instructions and product data sheets for each product used are considered part of these specifications and should be followed at all times.

**1.02 QUALITY ASSURANCE**

- A. Qualifications of Contractor
1. The Contractor shall be approved by the Coatings Manufacturer for application of its roof coatings products, and shall have a minimum of three (3) years experience in the application of acrylic elastomeric coatings.
  2. The Contractor shall provide a list of project references similar in nature to the one proposed, including contact names and telephone numbers.
  3. The Contractor shall arrange for a minimum of one each pre job, during job and post job inspection, and provide a written report from the Manufacturer's Representative to the Owner's representative.
- B. Qualifications of Manufacturer
1. Manufacturer shall have a proven 20-Year track record utilizing elastomeric acrylic technology.
  2. Manufacturer shall be an ISO 9001:2000 Certified Company and be current with all methods and procedures as set forth in the program.
  3. Other Manufacturer's products shall be accepted for use on this project only after submittal of product data files to the Architect or Owner supporting quality, equality and full compliance with specifications herein. The Architect or Owner reserves the right to reject the substitution proposals should it be determined the submittals do not provide all functions required for application.
- C. Testing & Labeling
1. The elastomeric, fluorocarbon coating system and repair components must be U.L. 790 classified as a Class A fluid-applied system for maintenance and repair of existing Class A, B or C roofing construction. The Fluoropolymer coating system shall also be listed by Factory Mutual as an acceptable recoating system over existing metal roof substrates.  
Labels must include the following information or they will be rejected at the jobsite: Manufacturer's name, product name, type and class of material, U.L. sticker with classification issue number, Factory Mutual logo, batch number, mixing and application instructions, and precautions.

### **1.03 SUBMITTALS**

- A. Submit Manufacturer's literature, certificates and samples in a single package to the Architect or Owner in accordance with requirements specified in General Conditions and Division 1, General Requirements.
- B. Manufacturer's Literature: Manufacturer's literature on the protective coating, as well as related primers, sealants, reinforcement, etc., shall be submitted for review before work is started. Literature shall include material specifications, physical properties (including ASTM methods utilized), Manufacturer's estimated application rate for dry film thickness per warranty requirements, application instructions and Material Safety Data Sheets.
- C. Applicator's Qualifications: Submit a copy of Approved Applicator letter and/or certificate as issued by the Manufacturer of the coating system.
- D. Warranty: Submit a copy of the Coating Manufacturer's warranty and Installer's warranty as per project specifications.

### **1.04 PRODUCT DELIVERY, STORAGE, AND HANDLING**

- A. Delivery of Materials: Materials shall be delivered to the jobsite in Manufacturer's original, sealed containers with labels legible and intact.
- B. Storage of Materials: Materials shall be stored in an area specifically designated for that purpose, in accordance with Manufacturer's recommendations, where temperatures will not be less than 50°F (10°C) or higher than 100°F (38°C).
- C. Material Handling: Materials shall be handled, stored and installed as per Manufacturer's instructions and all applicable safety regulatory agencies.
- D. Damaged Materials: Contaminated, damaged or unsealed materials, or materials not conforming to the specified requirements shall not be used in the installation. Rejected materials shall be immediately removed from the jobsite and replaced at no additional cost to the Owner.

### **1.05 ENVIRONMENTAL CONDITIONS**

- A. Install all materials in strict accordance with Manufacturer's published safety and weather precautions.
- B. Do not apply elastomeric acrylic coating system components when the ambient and/or surface temperature is below 50°F (10°C) or above 110°F (43°C), if any surface moisture is present, when the dew point is within 5°F (3°C) of the surface temperature or when there is a possibility of temperatures falling below 32°F (0°C) within a 24 hour period. Do not apply if weather conditions will not permit complete cure before rain, dew, fog or freezing temperatures occur. Do not spray apply if the wind velocity exceeds 10 mph (16 kph) without taking proper precautions to eliminate overspray.
- C. Take all measures necessary to protect unrelated surfaces from coating overspray or spillage.
- D. Do not apply dark tinted finish colors when metal surface temperatures are above 90°F

## 1.06 JOB CONDITIONS

- A. The Applicator shall determine the condition of the roof system. Problematic conditions or deteriorated materials shall be identified and brought to the attention of the Owner or Owner's Representative prior to cover.
- B. Spring scale peel adhesion tests are required when the substrate is unknown and recommended on previously coated roofs. The Applicator must conduct the spring scale peel adhesion test prior to bid to verify the adhesion of the roof coating to the substrate. Submit peel adhesion test findings to Owner, Architect and Manufacturer.
- C. The Applicator:
  - 1. Shall verify that all drain lines are connected and in good working order before starting work. Drains that are not connected or are not functioning properly shall be reported in writing to the Owner's Representative and/or design professional.
  - 2. Shall take necessary measures to protect unrelated work and other adjacent surfaces from overspray and spillage.
  - 3. Shall take necessary precautions when using roof coatings and accessories around air in-takes. The smell of the roof coatings and accessories may be a disturbance to the building owner and occupants. It is the Applicator's responsibility to notify the Owner and take the proper precautions.
  - 4. Shall follow all safety regulations as required by OSHA and any other applicable authority having jurisdiction, including collection and filtration of run-off water from cleaning the roof.
  - 5. Shall take precautions to avoid overloading the roof or building structure.
  - 6. Must protect the installed roof coating system and coordinate with other trades and building occupants to avoid construction traffic or equipment storage on newly installed roof coating system. The Applicator must provide all necessary temporary protection and barriers to segregate the work area and to prevent damage. Any damage that occurs to the roof coating system is to be repaired according to the manufacturer's recommendations.
  - 7. The minimum recommendations for roof coating usage are for ideal conditions. The number of square feet per gallon may need to increase due to uneven application, rough surface texture, wind conditions while spraying and/or other variables.
- D. The roof coating system shall be fully bonded to the substrate on which it is applied. Voids left under the system are not acceptable and must be repaired.
- E. If any unusual or concealed condition is discovered, stop work and notify the Owner's Representative and/or design professional immediately, in writing.
- F. All waste material (e.g. empty containers of coating and other accessories) shall be removed from the site by the Applicator and properly transported to a legal dumping area authorized to receive such material.
- G. All new and temporary construction, including equipment, material and accessories, shall be secured in such a manner, at all times, as to preclude wind blow-off or damage.
- H. Site cleanup, including both interior and exterior building areas in any way affected by the construction, shall be complete and to the Owner's satisfaction.

### **1.07 FIELD QUALITY CONTROL**

- A. The overall weather conditions, including surface temperature, surface moisture, ambient temperature, relative humidity and wind velocity shall be recorded by the Contractor, at designated time intervals, on the Daily Quality Control Report form if so requested by the Architect or Owner.
- B. Verification of Protective Coating Thickness: The wet film thickness shall be measured and recorded daily, along with the quantity and batch numbers of the material applied and total square feet coated, on the Daily Quality Control form.

### **1.08 BIDDING REQUIREMENTS**

- A. Pre-Bid Meeting: A pre-bid meeting shall be held with the Owner's Representative and all involved trades to discuss all aspects of the project including the spring scale peel adhesion test results, if conducted. The Applicator's field representative or roofing foreman for the work shall be in attendance.
- B. Site Visit: Bidders shall visit the site and carefully examine the areas in question as to conditions that may affect proper execution of the work. All dimensions and quantities shall be determined or verified by the Applicator. No claims for extra costs will be allowed because of lack of full knowledge of the existing conditions unless agreed to in advance with the Owner or Owner's Representative.

### **1.09 WARRANTIES**

- A. Upon completion of the roof coating system, the Coating Manufacturer's Representative, Owner's Representative, Architect and Applicator shall make a final inspection to determine the dry film thickness of the fluid-applied coating system, and to verify that the system meets the Manufacturer's requirements for warranty. The Contractor shall notify all interested parties in advance of said inspection.
- B. As a condition of the project's completion and acceptance, deliver to the Owner a copy of the fully executed Warranty from the Coating Manufacturer, providing the following:
  - 1. 15 Year Warranty on KYMAX finish coat covering the following items for the entire warranty period:
  - 2. KYMAX will retain 90% of its original reflectance value.
  - 3. KYMAX will resist the development of biological growth under normal conditions.
  - 4. KYMAX will retain its factory approved original color within ten (10) Delta "E" units when tested in accordance with ASTM D 2244, compared to unweathered specimen.
- C. Applicator's Warranty: The Applicator shall supply the Owner with a separate two (2) year workmanship warranty. In the event any work related to the roof coating application is found to be within the Applicator warranty term, defective or otherwise not in accordance with Contract Documents, the Applicator shall be responsible for the repair. The Applicator's warranty obligation shall run directly to the Owner, and a copy shall be sent to the manufacturer.



## **PART 2 - PRODUCTS**

### **2.01 DESCRIPTION**

- A. A seamless, fluid applied fluorocarbon membrane system designed for application over metal roof substrates. Approved system shall be UNITED COATINGS (GAF) KYMAX Metal Roof Repair System consisting of ACRYLEX 400, PRIMER 302 LV, KYMAX BASE COAT, KYMAX and UNITED CLEANING CONCENTRATE (UCC).

### **2.02 MATERIALS**

- A. Biodegradable Cleaner: UNITED CLEANING CONCENTRATE (UCC), water-reducible, non-phosphate cleaner as supplied by Coating Manufacturer for use in cleaning metal substrates prior to coating.
- B. Corrosion Resistant Primer: ACRYLEX 400, single component acrylic metal primer as supplied by Coating Manufacturer to provide corrosion protection, flash rust resistance and enhanced adhesion over steel, aluminum and galvanized and Fluoropolymer finished metal surfaces.
- C. Corrosion and Adhesion Primer: Primer 302 LV, two component solvent base primer as supplied by Coating Manufacturer to provide corrosion protection on heavily rusted metal and NON Fluoropolymer metal finishes.
- D. Basecoat: KYMAX Basecoat, single component modified acrylic basecoat as supplied by Coating Manufacturer
- E. Colored Finish Coat: KYMAX Fluoropolymer colored finish Topcoat to match color as specified by owner and meeting the following minimum properties:
  - 1. Fluorocarbon Content – 70% resin by weight
  - 2. Weight solids – ASTM D1644: 52% (±2)
  - 3. Volume solids – ASTM D2697: 37% (±2)
  - 4. Elongation – ASTM D2370: 250% (±25), ASTM D412: 300 % (±25)
  - 5. Tensile Strength – ASTM D2370: 800 psi (±150), ASTM D412: 1200 psi (±25)
  - 6. Color stability – ASTM D2244:  $\Delta E < 3.0$  CIE units after 1000 hours
  - 7. Fungi Resistance – ASTM G21: Zero rating
  - 8. Gloss retention – ASTM D5523: >80% after 1000 hours
  - 9. Chalking – ASTM D4214: 9 minimum after 1000 hours
  - 10. Extended Accelerated Weathering – ASTM D 4798/G155 or G154 UVB-313: Pass 4000 hour exposure

### **2.03 SUBSTITUTIONS**

- A. Materials such as cementitious, ceramic-filled or asphaltic based coatings, moisture-cured urethanes, Silicones, Kraton based rubbers, Hypalons are not considered acceptable substitutes for materials specified herein.

### **2.04 ACCESSORIES**

- A. Repair Fleece: Sikacoat RF400D; a 3 ounce, soft finish stitch-bonded polyester fabric used as reinforcement when applying a three-course application at details or when repairing existing roof defects such as cracks, tears, open seams or deteriorated flashings prior to installing the roof coating system.

- B. Repair Sealant: Sikacoat S400; a high quality, water-based, elastomeric acrylic sealant. Sikacoat S400 is used for repairs and sealing around flashings and penetrations prior to applying the roof coating system.
- C. Rubber Flashing Boots:
  - 1. Portals Plus, Deck-Mate flashing, sized to accommodate the penetration, with stainless steel band clamp at the top edge. EPDM for standard penetrations, Silicone for high-temperature applications.
  - 2. Sealant: Butyl gun grade sealant to be installed under flange of rubber boot.
  - 3. Fasteners: Neoprene gasketed screw fasteners installed at 1.5 inches o.c.

## **PART 3 - EXECUTION**

### **3.01 EXAMINATION**

- A. Examine all surfaces to receive roof coating system to ensure they are clean, smooth, sound, properly prepared, and free of moisture, frost, ice, snow, dirt, debris, contaminants, or other conditions that may impair the application and performance of the roof coating system. Notify the Owner in writing of any such conditions. Do not commence work until all conditions are remedied.
- B. Applicator shall be responsible for acceptance or provision of proper substrate to receive roof coating system.
- C. Applicator shall verify that the work done under related sections meets the following conditions:
  - 1. Roof drains and/or scuppers are clean and in working order.
  - 2. Roof curbs, cants, edge metal, equipment supports, vents and other roof penetrations are properly secured and prepared to receive roof coating system.
  - 3. All air conditioning and air intake vents are adequately protected or closed.
  - 4. All building areas and property around the vicinity of the roof coating application and equipment are adequately protected from overspray and spillage.

### **3.02 SUBSTRATE PREPARATION**

- A. Inspect metal roofing for voids or gaps of 1/4 inch (6.3 mm) or greater. Repair or close any gaps using self-tapping screws to bring sides flush. Repair any voids using appropriate sheet metal and attach with self-tapping screws.
- B. Inspect metal roof for loose or missing fasteners. Replace all missing fasteners. Tighten any loose fasteners. Remove and replace all stripped, severely corroded or damaged fasteners. All fasteners being replaced should be replaced with a larger diameter fastener to insure tight grip. Any missing, damaged or weathered washers shall be replaced with new butyl rubber or acceptable washers.
- C. Remove all loose, flaking or peeling coatings with stiff broom, or scraper. Remove any old repairing compounds that are loose, cracked or split or have excessively heavy build-up. **Do not sand or abrade the surface of the TCS panels.** Metal panels deteriorated to the point that their structural integrity is compromised shall be replaced.

- D. All metal surfaces, whether new or existing, shall be cleaned using United Cleaning Concentrate (UCC). Dilute UCC at the rate of 1 part concentrate to 10 parts water. Apply the dilute mixture under low pressure spray at the rate of 200 sq. ft. per gallon (4.8 m<sup>2</sup>/l). After allowing to sit for 15 to 20 minutes, rinse thoroughly with fresh water under high pressure (minimum 2,000 psi/13,790 kPa) to remove the solution from the roof, along with any existing loose paint or coating. Heavy deposits of dirt or contamination may require agitation with a stiff-bristle broom or other mechanical scrubber. Allow the roof to dry thoroughly.
- E. Fluoropolymer (KYNAR) finishes: All surfaces to be coated including existing "sound" rusted, new metal surfaces or uncoated areas shall be primed with Acrylex 400 using airless spray equipment at the rate of approximately 200 sq. ft. per gallon (4.8 m<sup>2</sup>/l). Medium to Heavy Rusted Areas: Apply two (2) coats of Acrylex 400 at the approximate rate of 300 sq. ft. per gallon (7.3 m<sup>2</sup>/l) per coat.
- F. Non-Fluoropolymer finishes: All non-Fluoropolymer finished metal shall be primed with Primer 302 LV at the rate of approximately 200 sq. ft. per gallon (4.8 m<sup>2</sup>/l).
- G. Debris Filters: Provide filters at downspout outlets in gutters to prevent debris from travelling down the downspouts and into the storm drainage. Contractor to provide means and methods as necessary to prevent contamination of storm system from wash water runoff.

### **3.03 KYMAX FINISH APPLICATION**

- A. All roof preparation materials shall be allowed to fully dry prior to full roof surface application of the KYMAX finish.
- B. Immediately prior to application of the finish, all dust, dirt and other contaminants shall be blown off the roof surfaces to be coated using high-pressure compressed air.
- C. Apply one coat of KYMAX Basecoat at a minimum rate of 1 gallon per 200 sq. ft. (.2 l/m<sup>2</sup>). Allow basecoat to completely dry prior to applying additional coatings.
- D. The entire roof substrate shall receive KYMAX fluoropolymer finish coating applied as follows:
  - 1. Apply the first coat of KYMAX at a minimum rate of 1 gallon per 200 sq. ft. (.2 l/m<sup>2</sup>).
  - 2. After allowing the first coat to dry, apply a second coat of KYMAX at a minimum rate of 1 gallon per 200 sq. ft. (.2 l/m<sup>2</sup>). A third coat of KYMAX may be necessary to achieve color uniformity when using extremely dark or intense colors.
- E. The KYMAX application shall extend up and over all roof substrates on vent pipes, parapets and other protrusions to terminate a minimum of 3" (8 cm) above the substrate, creating a self-terminating flashing, and so as to provide an aesthetically pleasing appearance.

### **3.04 SEAMS AND FLASHING**

- A. Seal all exposed fasteners and rivets with Sikacoat S400 or Sikacoat S450 sealant. Using small brush, finger or bulk caulking gun, completely cover each fastener head and completely bond to metal deck around head.

- B. Do not allow the RF400D detailing fabric to bridge or tent over fastener heads leaving a void. Where fabric rides over fastener heads it may be necessary to clip or cut the fabric so as to fit around the fastener head. Make a 1/2 in (12.7 cm) straight or “X” cut in the fabric at the location of the fastener head with scissors or razor and smooth the fabric around the fastener head with brush or finger. Allow to dry then inspect for any voids, severe wrinkles or “fishmouths”. Repair any such irregularities with additional application of S400 sealant using RF400D detailing fabric if necessary.
- C. Rubber Flashing Boots: Remove existing rubber boot flashings at penetrations, including all existing sealant residue, and install new flashings; Portals Plus, Deck-Mate flashing, sized to accommodate the penetration, with stainless steel band clamp at the top edge. EPDM for standard penetrations, Silicone for high-temperature applications. Bed flange in a continuous application of butyl sealant. Fasten flange with neoprene gasketed screw fasteners installed at 1.5 inches o.c. Fasteners shall not penetrate substrate below.

### **3.05 CLEANING**

Applicator shall clean up and restore any areas of overspray or spills. All debris from completion of work shall be removed from the project site and properly disposed.

### **3.06 COMPLETION**

Prior to demobilization from the site, the work shall be reviewed by the Owner's Representative and the Applicator. All defects noted and non-compliances with the Specifications or the recommendations of the manufacturer shall be itemized in a punch list. These items must be corrected by the Applicator to the satisfaction of the Owner's Representative prior to demobilization.

**END OF SECTION**