



State of Utah

GARY R. HERBERT
Governor

GREGORY S. BELL
Lieutenant Governor

Department of Administrative Services

KIMBERLY K. HOOD
Executive Director

Division of Facilities Construction and Management

DAVID G. BUXTON
Director

ADDENDUM #1

Date: February 16, 2010

To: Contractors

From: Matt Boyer, Project Manager, DFCM

Reference: Stewart Library Reroof
Weber State University – Ogden, Utah
Project No. 09073810

Subject: **Addendum No. 1**

Pages	Addendum	1 page
	<u>Project Specifications</u>	<u>34 pages</u>
	Total	35 pages

Note: *This Addendum shall be included as part of the Contract Documents. Items in this Addendum apply to all drawings and specification sections whether referenced or not involving the portion of the work added, deleted, modified, or otherwise addressed in the Addendum. Acknowledge receipt of this Addendum in the space provided on the Bid Form. Failure to do so may subject the Bidder to Disqualification.*

While we contend that SB220 should only be potentially applicable to a contract issued after the effective date of said bill, this is to clarify that for purposes of this contract, regardless of the execution or effective dates of this contract, the status of Utah Law and remedies available to the State of Utah and DFCM, as it relates to any matter referred to or affected by said SB220, shall be the Utah law in effect at the time of the issuance of this Addendum.

1.1 **SCHEDULE CHANGES** – There are no changes to the project schedule.

1.2 **GENERAL** – Please see attached specs. This project is tax exempt.

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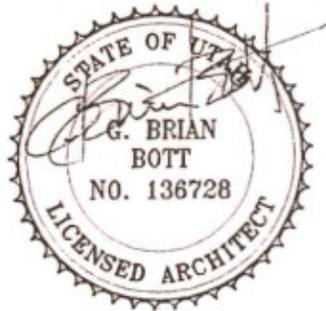
richards
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architecture

WSU - Stewart Library Reroof

**3850 University Circle
Ogden, Utah 84408**

rba project no: 0910
DFCM Project no: 09073810
dated: 01.18.10



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SECTION 05516 - WALL-MOUNTED LADDERS

PART 1 - GENERAL

1.1 SUMMARY

- A. Products Supplied and Installed Under This Section:
 - 1. Metal Ladders.

1.2 REFERENCES

- A. American National Standards Institute:
 - 1. ANSI A 14.3-92, 'American National Standard for Ladders - Fixed - Safety Requirements.'
- B. American Society For Testing And Materials:
 - 1. ASTM A 36-00a, 'Specification for Carbon Structural Steel.'

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Steel For Interior Ladders: Meet requirements of ASTM A 36.

2.2 COMPONENTS

- A. Stringers: 3/8 by 2-1/2 inch flat bar stock.
- B. Treads: One inch round rungs.
- C. Mounting Brackets: Drilled angles.

2.3 FABRICATION

- A. Fabricate ladders to comply with requirements of ANSI A 14.3.
- B. Weld joints. Grind joints to be smooth to the touch and finished to match adjoining surfaces.
- C. Space treads 12 inches on centers.
- D. Fabricate mounting brackets of drilled angles.
- E. Prime interior ladders.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Support ladder with welded steel brackets located at top and bottom, and equally spaced but no more than 60 inches on center between top and bottom where ladder is installed against a wall. Size brackets to support design loads specified in ANSI A 14.3.

END OF SECTION

SECTION 06100 - ROUGH CARPENTRY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Framing with dimension lumber.
 - 2. Rooftop equipment bases and support curbs.
 - 3. Wood blocking, cants, and nailers.

1.3 DEFINITIONS

- A. Rough Carpentry: Carpentry work not specified in other Sections and not exposed, unless otherwise indicated.
- B. Lumber grading agencies, and the abbreviations used to reference them, include the following:
 - 1. WCLIB - West Coast Lumber Inspection Bureau.
 - 2. WWPA - Western Wood Products Association.

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Stack lumber, plywood, and other panels; place spacers between each bundle to provide air circulation. Provide for air circulation around stacks and under coverings.

PART 2 - PRODUCTS

2.1 WOOD PRODUCTS, GENERAL

- A. Lumber: DOC PS 20 and applicable rules of lumber grading agencies certified by the American Lumber Standards Committee Board of Review.
 - 1. Factory mark each piece of lumber with grade stamp of grading agency.
 - 2. Where nominal sizes are indicated, provide actual sizes required by DOC PS 20 for moisture content specified. Where actual sizes are indicated, they are minimum dressed sizes for dry lumber.
 - 3. Provide dressed lumber, S4S, unless otherwise indicated.
 - 4. Provide dry lumber with 19 percent maximum moisture content at time of dressing for 2-inch nominal thickness or less, unless otherwise indicated.

2.2 WOOD-PRESERVATIVE-TREATED MATERIALS

- A. Preservative Treatment by Pressure Process: AWPA C2 (lumber) and AWPA C9 (plywood), except that lumber that is not in contact with the ground and is continuously protected from liquid water may be treated according to AWPA C31 with inorganic boron (SBX).
 - 1. Preservative Chemicals: Acceptable to authorities having jurisdiction and one of the following:
 - a. Chromated copper arsenate (CCA).
 - b. Ammoniacal copper zinc arsenate (ACZA).
- B. Kiln-dry material after treatment to a maximum moisture content of 19 percent for lumber. Do not use material that is warped or does not comply with requirements for untreated material.
- C. Mark each treated item with the treatment quality mark of an inspection agency approved by the American Lumber Standards Committee Board of Review.
- D. Application: Treat items indicated on Drawings, and the following:
 - 1. Wood cants, nailers, curbs, equipment support bases, blocking, stripping, and similar members in connection with roofing, flashing, vapor barriers, and waterproofing.
 - 2. Wood sills, sleepers, blocking, furring, stripping, and similar concealed members in contact with masonry or concrete.

2.3 MISCELLANEOUS LUMBER

- A. General: Provide lumber for support or attachment of other construction, including the following:
 - 1. Rooftop equipment bases and support curbs.
 - 2. Blocking.
 - 3. Nailers.
- B. For items of dimension lumber size, provide Standard, Stud, or No. 3 grade lumber with 19] percent maximum moisture content and the following species:
 - 1. Western woods; WCLIB or WWPA.
- C. For concealed boards, provide lumber with 19 percent maximum moisture content and the following species and grades:
 - 1. Western woods, Standard or No. 3 Common] grade; WCLIB or WWPA.
- D. For furring strips for installing plywood or hardboard paneling, select boards with no knots capable of producing bent-over nails and damage to paneling.

2.4 FASTENERS

- A. General: Provide fasteners of size and type indicated that comply with requirements specified in this Article for material and manufacture.
 - 1. Where rough carpentry is exposed to weather, in ground contact, or in area of high relative humidity, provide fasteners with hot-dip zinc coating complying with ASTM A 153/A 153M.
- B. Nails, Brads, and Staples: ASTM F 1667.
- C. Power-Driven Fasteners: CABO NER-272.

- D. Wood Screws: ASME B18.6.1.
- E. Screws for Fastening to Cold-Formed Metal Framing: ASTM C 954, except with wafer heads and reamer wings, length as recommended by screw manufacturer for material being fastened.
- F. Lag Bolts: ASME B18.2.1.
- G. Bolts: Steel bolts complying with ASTM A 307, Grade A; with ASTM A 563 hex nuts and, where indicated, flat washers.
- H. Expansion Anchors: Anchor bolt and sleeve assembly of material indicated below with capability to sustain, without failure, a load equal to 6 times the load imposed when installed in unit masonry assemblies and equal to 4 times the load imposed when installed in concrete as determined by testing per ASTM E 488 conducted by a qualified independent testing and inspecting agency.
 - 1. Material: Carbon-steel components, zinc plated to comply with ASTM B 633, Class Fe/Zn 5.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

- A. Set rough carpentry to required levels and lines, with members plumb, true to line, cut, and fitted. Fit rough carpentry to other construction; scribe and cope as needed for accurate fit. Locate furring, nailers, blocking, and similar supports to comply with requirements for attaching other construction.
- B. Do not use materials with defects that impair quality of rough carpentry or pieces that are too small to use with minimum number of joints or optimum joint arrangement.
- C. Apply field treatment complying with AWPA M4 to cut surfaces of preservative-treated lumber and plywood.
- D. Securely attach rough carpentry work to substrate by anchoring and fastening as indicated, complying with the following:
 - 1. CABO NER-272 for power-driven fasteners.
 - 2. Published requirements of metal framing anchor manufacturer.
 - 3. Table 23-II-B-1, "Nailing Schedule," and Table 23-II-B-2, "Wood Structural Panel Roof Sheathing Nailing Schedule," in the Uniform Building Code.
- E. Use common wire nails, unless otherwise indicated. Select fasteners of size that will not fully penetrate members where opposite side will be exposed to view or will receive finish materials. Make tight connections between members. Install fasteners without splitting wood; predrill as required.
- F. Use finishing nails for exposed work, unless otherwise indicated. Countersink nail heads and fill holes with wood filler.

3.2 WOOD FRAMING INSTALLATION, GENERAL

- A. Framing Standard: Comply with AFPA's "Manual for Wood Frame Construction," unless otherwise indicated.

END OF SECTION 06100

SECTION 07233 - ROOF HATCHES

PART 1 - GENERAL

1.1 SUMMARY

- A. Products Provided Under This Section:
1. Roof hatches.

PART 2 - PRODUCTS

2.1 MANUFACTURED UNITS

- A. Equipment Access:
1. Cover And Curb:
 - a. Cover: 11 ga mill finish aluminum.
 - b. Cover Lining: 18 ga mill finish aluminum cover liner.
 - c. Curb Height: 12 inches with 3-1/2 inch flange for mounting, with integral cap flashing.
 - d. Insulate curb and cover with one inch rigid fiberglass.
 2. Performance Standard: Bilco 'D' double leaf special scuttle for extra large openings.
- B. Type One Acceptable Manufacturers:
1. Babcock-Davis Hatchways Inc, Arlington, MA www.babcock-davis.com.
 2. The Bilco Co, New Haven, CT www.bilco.com.
 3. Dur-Red Products, Cudahy, CA www.dur-red.com.
 4. Milcor, Lima, OH www.milcorinc.com.
 5. Equal as approved by Architect before bidding. See Section 01 6200.

PART 3 - EXECUTION: Not Used

END OF SECTION

SECTION 07531 - SINGLE PLY MEMBRANE ROOFING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Membrane roofing
 - 2. Roof insulation
- B. Related Sections Include the following:
 - 1. Division 6 Section "Miscellaneous Carpentry" for wood nailers, curbs, and blocking.
 - 2. Division 7 Section "Sheet Metal Flashing and Trim" for metal roof penetration flashings, flashings, and counterflashings.
 - 3. Division 7 Section "Joint Sealants."

1.3 DEFINITIONS

- A. Roofing Terminology: Refer to ASTM D 1079 for definition of terms related to roofing work not otherwise defined in this Section.

1.4 PERFORMANCE REQUIREMENTS

- A. General: Install sheet membrane roofing and base flashing that are watertight; will not permit the passage of liquid water; and will withstand wind loads, thermally induced movement, and exposure to weather without failure.
- B. Material Compatibility: Provide roofing materials that are compatible with one another under conditions of service and application required, as demonstrated by roofing system manufacturer based on testing and field experience.
- C. FM Listing: Provide sheet membrane, base flashings, insulation and component materials that meet requirements of FM 4450 and FM 4470 as part of a roofing system and that are listed in FM's "Approval Guide" for Class 1 or noncombustible construction, as applicable. Identify materials with FM markings.
 - 1. Roofing system shall comply with the following:
 - a. Fire/Windstorm Classification: Class 1A-90.
- D. Roofing System Design: Provide a roofing system that complies with roofing system manufacturer's written design instructions and with the following:

1. Withstand wind gusts of 100 mph.

1.5 SUBMITTALS

- A. Product Data: For roofing product specified. Include data substantiating that materials comply with requirements.
- B. Installer Certificates: Signed by roofing system manufacturer certifying that Installer is approved, authorized, or licensed by manufacturer to install specified roofing system.
- C. Manufacturer Certificates: Signed by roofing manufacturer certifying that the roofing system complies with requirements specified in the "Performance Requirements" Article. Upon request, submit evidence of meeting requirements.
- D. Product Test Reports: Based on evaluation of tests performed by manufacturer and witnessed by a qualified independent testing agency, indicate compliance of components of roofing system with requirements based on comprehensive testing of current product compositions.
- E. Research/Evaluation Reports: Evidence of roofing system's compliance with building code in effect for Project, from a model code organization acceptable to authorities having jurisdiction.
- F. Maintenance Data: For roofing system to include in the maintenance manuals specified in division 1.
- G. Warranty: Warranty to be on approved DFCM Warranty form see: <http://dfcm.utah.gov/constManage/roofingNpaving.html>
- H. Inspection Report: Copy of roofing system manufacturer's inspection report of completed roofing installation.

1.6 QUALITY ASSURANCE

- A. Installer Qualifications: Engage an experienced installer to perform work of this Section who has specialized in installing roofing similar to that required for this Project and who is approved, authorized, or licensed by the roofing system manufacturer to install manufacturer's product.
- B. Fire-Test-Response Characteristics: Provide roofing materials with the fire-test-response characteristics indicated as determined by testing identical products per test method indicated below by UL, FM or another testing and inspecting agency acceptable to authorities having jurisdiction. Identify materials with appropriate markings of applicable testing and inspecting agency.
 1. Exterior Fire-Test Exposure: Class A; ASTM E 108, for application and slopes indicated.
- C. Preliminary Roofing Conference: Before starting roof deck construction, conduct conference at Project site. Meet with the same participants and review the same items listed for the preinstallation conference. In addition, review status of submittals and coordination of work related to roof construction. Notify participants at least 5 working days before conference.

- D. Preinstallation Conference: Before installing roofing system, conduct conference at Project site to comply with requirements of Division 1 Section "Project Meetings". Notify participants at least 5 working days before conference.
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 or roof accessories and roof mounted equipment.
 2. Review methods and procedures related to roofing installation, including manufacturer's written instructions.
 3. Examine deck substrate conditions and finishes for compliance with requirements, including flatness and fastening.
 4. Review loading limitations of deck during and after roofing.
 5. Review flashings, special roofing details, roof drainage, roof penetrations, equipment curbs, and condition of other construction that will affect roofing.
 6. Review governing regulations and requirements for insurance, certificates, and inspection and testing, if applicable.
 7. Review temporary protection requirements for roofing system during and after installation.
 8. Review roof observation and repair procedures after roofing installation.
 9. Document proceedings, including corrective measures or actions required, and furnish copy of record to each participant.
- E. Protection of existing structure: Protect existing building and grounds around building from any damage. Any existing landscape, concrete or paving damaged during construction will be replaced by Contractor at their expense.
- F. Protection of new membrane: Once new membrane has been laid do not store material on new membrane. Keep off of new membrane as much as possible to prevent any damage

1.7 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, 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.

1.8 PROJECT CONDITIONS

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

1.9 INSPECTION SERVICE

- A. Manufacturer agrees to re-inspect the completed roof not earlier than 18 nor later than 24 months after completion of the roofing, and if it is determined that there are defects in the roofing, then Manufacturer shall make, or cause to be made at its own expense, such repairs as are necessary to remedy said defects within the scope of its responsibility under the terms of this Warranty.

1.10 WARRANTY

- A. General Warranty: The warranties specified in this Article shall not deprive the Owner of other rights the Owner may have under other provisions of the Contract documents and shall be in addition to, and run concurrent with, other warranties made by the Contractor under requirements of the Contract Documents.
- B. Standard Roofing Manufacturer's Warranty: Submit a written warranty, no dollar limit, signed by roofing system manufacturer agreeing to promptly repair leaks (or to replace all or portions of the roof) resulting from defects in materials or workmanship for the following warranty period:
 - 1. Warranty Period: 20 years from date of Substantial Completion.
 - 2. Warranty to be on approved DFCM Warranty form see:
<http://dfcm.utah.gov/constManage/roofingNpaving.html>
- C. Special Project Warranty: Submit roofing Installer's warranty, signed by Installer, covering Work of this Section, including membrane roofing, sheet flashing, roof insulation, fasteners, and vapor retarders, if any, for the following warranty period:
 - 1. Warranty Period: 5 years from date of Substantial Completion.
- D. Warranty: Warranty to be on approved DFCM Warranty form see:
<http://dfcm.utah.gov/constManage/roofingNpaving.html>

PART 2 - PRODUCTS

2.1 MANUFACTURER'S REQUIREMENTS

- A. Manufacturer must be listed in NRCA's low slope roofing materials guide.
- B. Manufacturer must have a 10-year successful history as a roofing manufacturer.
- C. Manufacturer must show documented proof of how they plan to meet Warranty obligations. Must be provided in Contractor's Submittal Package.

- D. Manufacturers must agree to and be willing to sign the appropriate State of Utah (DFCM) Manufacturers Warranty for the roof system. The DFCM Warranty, not the Manufacturers Standard Warranty, will be required at project completion.
- E. Manufacturer must have a Certified Installer/Contractor Program. This program must include continuing education for the Contractor.
- F. Contractor must submit a Pre-installation Notice from Manufacturer prior to start of any work. This will include confirmation that the membrane and all accessories being used meet requirements of specification. This will also include confirmation that the Scope of Work is in accordance with published technical data as per manufacturer. This also includes confirmation that a warranty has been requested and will be issued on the DFCM Manufacturer Warranty form at the completion of roofing. This document must be included in Contractor's Submittal Package.
- G. Manufacturer will provide at no additional cost to Owner, start up meeting, progress inspections and finally warranty inspection at project completion by a full time technical representative. Manufacturer require inspections should be listed in specifications. All inspections will be scheduled by Project Architect.
- H. Any portion of specification that does not meet Manufacturer requirements will be installed per manufacturer requirements at no additional cost to Owner. Any portion of the specification that exceeds the Manufacturer's minimum requirements will be installed according to specifications no Manufacturer minimum requirements.
- I. Manufacturer must have a history of meeting Warranty obligations.
- J. Manufacturer is required to release all inspection reports concerning warranted roof system to the Contractor to submit to Project Architect.

2.2 SHEET

- A. KEE - Membrane Requirements:
 - 1. Must meet or exceed ASTM D 6754-02
 - 2. Must meet or exceed ASTM D 751
 - 3. Must meet or exceed ASTM D 2136
 - 4. Must meet or exceed ASTM D 5602
 - 5. Must be Energy Star & Leed Rated
 - 6. 10 year performance history on the membrane. Minor formulation changes are acceptable as long as the membrane has a successful history.
 - 7. Membrane must be manufactured with a non-wicking scrim.
 - 8. Only balanced sheets are acceptable. The scrim must be near the center of the sheet w/ a minimum of 14 mils polymer above scrim.
 - 9. Membrane should be a minimum of 45 nominal mils thickness, not overall thickness. Polymer should be measured between scrim. Variance to this will only be allowed by approval from the DFCM Project Roofing Manager & on performance type basis per project.
 - 10. Membrane rolls / sheets are not to be wider than eight feet on a mechanically fastened system.
 - 11. Approved Manufacture:
 - a. All Manufactures must be approved prior to bidding.

B. PVC - Membrane Requirements.

1. Membrane must be Energy Star Rated.
2. Only sheets with stable or low-migrating plasticizers will be acceptable.
3. 10-year minimum performance history on membrane. Minor formulation changes are acceptable as long as the membrane has a successful history.
4. Membrane must be manufactured with low-wicking scrim.
5. Only balanced sheets will be acceptable. Scrim must be near center of membrane with no less than 20 mils polymer above scrim.
6. Thickness: 60 mil (57 mil minimum) polymer thickness not over all thickness. Polymer should be measured between scrim. Variance from this will only be allowed by approval from DFCM Roofing Manager and on a performance type basis.
7. Must meet or exceed ASTM D 4434 for linear dimensional change and for heat aging.
8. Must meet or exceed ASTM D 5635 for dynamic impact resistance.
9. Must meet or exceed ASTM D 2136 for low temperature flexibility.
10. Exposed Face Color: White.
11. Membrane rolls / sheets are not to be wider than eight feet on a mechanically fastened system.
12. Approved Manufacture:
 - a. All Manufactures must be approved prior to bidding.

2.3 ADHESIVES AND CLEANERS

A. Substrate Adhesive:

1. Use Manufactures approved adhesive and cleaners. Asphalt is not an approved adhesive material to use

2.4 AUXILIARY MATERIALS

A. General: Furnish auxiliary materials recommended by roofing system manufacturer for intended use and compatible with membrane roofing.

1. Furnish liquid-type auxiliary materials that meet VOC limits of authorities having jurisdiction.

B. Fasteners: Factory-coated steel fasteners and metal or plastic plates meeting corrosion-resistance provisions of FM 4470, designed for fastening sheet to substrate, and acceptable to roofing system manufacturer.

C. Miscellaneous Accessories: provide pourable sealers, preformed cone and vent sheet flashings, preformed inside and outside corner sheet flashings, T-joint covers, in-seam sealants, termination reglets, and other accessories recommended by roofing system manufacturer for intended use.

2.5 INSULATION/OVERLAYMENT/RECOVER BOARD

A. Insulation - Polyisocyanurate Insulation

B. Tapered Insulation system approved by manufacturer.

2.6 INSULATION ACCESSORIES

- A. General: Furnish roof insulation accessories recommended by insulation manufacturer for intended use and compatible with sheet roofing material.
- B. Fasteners: Factory-coated steel fasteners and metal or plastic plates meeting corrosion-resistance provisions of FM 4470, designed for fastening roof insulation to substrate, and acceptable to roofing system manufacturer.

2.7 PARAPET CAP / DRIP EDGE / FASCIA

- A. Aluminum:
 - 1. .032 inch thick minimum complete with accessories recommended by Manufacturer for proper installation.
 - 2. Fastening Devices: One inch zinc or cadmium plated screws.
 - 3. Finishes:
 - a. Face coating polyvinylidene Fluoride (PVF₂) Resin-base finish (Kynar 500 or Hylar 5000) for coil coating components containing 70 percent minimum PVF₂ in resin portion of formula. Thermo-cured two coat system consisting of corrosion inhibiting epoxy primer and top coat factory applied over properly pre-treated metal.
 - b. Color as selected by Architect from Manufacturer's standard colors
- B. Steel
 - 1. 24 ga thick minimum complete with accessories recommended by Manufacturer for proper installation.
 - 2. Fastening Devices: One inch zinc or cadmium plated screws.
 - 3. Finishes:
 - a. Face coating polyvinylidene Fluoride (PVF₂) Resin-base finish (Kynar 500 or Hylar 5000) for coil coating components containing 70 percent minimum PVF₂ in resin portion of formula. Thermo-cured two coat system consisting of corrosion inhibiting epoxy primer and top coat factory applied over properly pre-treated metal.
 - b. Color as selected by Architect from Manufacturer's standard colors

PART 3 - EXECUTION

3.1 APPROVED INSTALLERS

- A. Contractor must have Five (5) years experience as a Roofing Contractor.
- B. Contractor must have Five (5) years experience with the specified product.
- C. Contractor must be a Manufacturer Certified Installer of roofing system to be installed.
- D. Contractor must document continuing education for the foreman that will daily oversee the work on the roofing system. A minimum of 12 hours per year is required.
- E. On site foreman must be able to clearly communicate with building Owner/Occupants.

DIXON INFORMATION INC.

MICROSCOPY, ASBESTOS ANALYSIS & CONSULTING

A.I.H.A. ACCREDITED LABORATORY # 101579

NVLAP LAB CODE 101012-0

April 24, 2009

Jeff Rowland
Rowland Consulting, Inc.
7301 Paddington Road
West Jordan, UT 84084

Ref: Batch # 84155, Lab # ROW8812 - ROW8819
Received April 24, 2009
Test report
Weber State University - Stewart Library
Ogden, UT
Sampled by Jeff Rowland, 4/24/09 at 0800

Dear Mr. Rowland:

Samples ROW8812 through ROW8819 have been analyzed by visual estimation based on EPA-600/M4-82-020 December 1982, and EPA/600/R-93/116 July 1993 optical microscopy test methods. Appendix "A" contains statements which an accredited laboratory must make to meet the requirements of accrediting agencies. It also contains additional information about the method of analysis. This analysis is accredited by NVLAP. Appendix "A" must be included as an essential part of this test report. The data for this report is accredited by NVLAP for laboratory number 101012-0. It does not contain data or calibrations for tests performed under the AIHA program under lab code 101579.

This report may be reproduced but all reproduction must be in full unless written approval is received from the laboratory for partial reproduction. The results of analysis are as follows:

Lab ROW8812, Field 1 Roof (core) North Center Roof Drain

This sample contains four types of material: The first type is 5% fiberglass in black tar layers; the second type is black tar layers; the third type is soft heavy metal; the fourth type is brown wood fiber. This sample is non-homogeneous. **Asbestos is none detected.**

The first type is 35% of the sample. The second type is 35% of the sample. The third type is 20% of the sample. The fourth type is 10% of the sample.

Batch # 84155

Lab # ROW8812 - ROW8819

Page 2 of 3

Lab ROW8813, Field 2 Roof (core) West Skylight

This sample contains five types of material: The first type is 5% fiberglass in black tar layers; the second type is black tar layers; the third type is **10% chrysotile asbestos** in black tar sealant; the fourth type is soft heavy metal; the fifth type is brown wood fiber. This sample is non-homogeneous.

The first type is 20% of the sample. The second type is 35% of the sample. The third type is 15% of the sample. The fourth type is 20% of the sample. The fifth type is 10% of the sample.

Lab ROW8814, Field 3 Roof (core) Southwest Roof Drain

This sample contains five types of material: The first type is 5% fiberglass in black tar layers; the second type is black tar layers; the third type is **5% chrysotile asbestos** in black tar sealant; the fourth type is soft heavy metal; the fifth type is perlite and 50% plant fiber in brown insulation. This sample is non-homogeneous.

The first type is 28% of the sample. The second type is 30% of the sample. The third type is 2% of the sample. The fourth type is 20% of the sample. The fifth type is 20% of the sample.

Lab ROW8815, Field 4 Roof (core) Southeast Roof Drain (North of Sat. Dish)

This sample contains four types of material: The first type is 5% fiberglass in black tar layers; the second type is black tar layers; the third type is soft heavy metal; the fourth type is brown wood fiber. This sample is non-homogeneous. **Asbestos is none detected.**

The first type is 30% of the sample. The second type is 40% of the sample. The third type is 20% of the sample. The fourth type is 10% of the sample.

Lab ROW8816, Field 6 Roof Flashing (East Side of East Skylight)

This sample contains three types of material: The first type is 5% plastic fiber in silver colored sealant; the second type is **10% chrysotile asbestos** in black tar sealant; the third type is 5% plant fiber in black tar sealant with 5% fiberglass. This sample is non-homogeneous.

The first type is 3% of the sample. The second type is 27% of the sample. The third type is 70% of the sample.

Lab ROW8817, Field 7 Roof Flashing (East Skylight)

This sample contains three types of material: The first type is 5% organic fiber in silver colored sealant; the second type is **10% chrysotile asbestos** in black tar sealant with limestone; the third type is 10% fiberglass in black tar. This sample is non-homogeneous.

The first type is 10% of the sample. The second type is 45% of the sample. The third type is 45% of the sample.

Batch #84155

Lab # ROW8812 - ROW8819

Page 3 of 3

Lab ROW8818, Field 8 Roof Flashing (West Side North Roof)

This is **10% chrysotile asbestos** in black tar sealant with limestone and a trace of silver colored sealant.

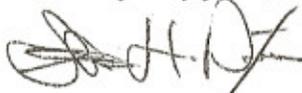
Lab ROW8819, Field 9 Roof Flashing (North Roof)

This sample contains two types of material: The first type is 5% organic fiber in silver colored sealant; the second type is **10% chrysotile asbestos** in black tar sealant with limestone. This sample is non-homogeneous.

The first type is 5% of the sample. The second type is 95% of the sample.

In order to be sure reagents and tools used for analysis are not contaminated with asbestos, blanks are tested. Asbestos was none detected in the blanks tested with this bulk sample set.

Very truly yours,



Steve H. Dixon, President

Analyst: Steve H. Dixon



Date Analyzed: April 24, 2009

Dixon Information Inc.
 78 West 2400 South
 South Salt Lake, Utah 84115
 Phone: 1-801-486-0800 Fax: 1-801-486-0849

BULK ANALYTICAL REQUEST FORM

Turnaround Time - Circle One

Batch Number 84155

Rush (24 hours \$25.00 per sample)

Non-rush (5 Working days \$17.00 per sample)

Name of location sample was taken at WEBER STATE UNIVERSITY - STEWART LIBRARY
 Street address sample was taken at EGDEN, UT
 Sampled by: STEFF ROWLAND

Report to be sent to: ROWLAND
 Company: _____
 Address: _____
 City: _____ State: _____
 Zip Code: _____
 Telephone #: _____
 Fax #: _____
 E-mail: _____

Billing to be sent to: ROWLAND
 Company: _____
 Address: _____
 City: _____ State: _____
 Zip Code: _____
 Telephone #: _____
 Fax #: _____
 PO #: _____

Field #	Description of Sample	Samples Collected		Lab #
		Date	Time	
1	ROOF (CORE) NORTH CENTER ROOF DRAIN	4/24/09	0900	8812
2	" WEST SKYLIGHT			8813
3	" SOUTH WEST ROOF DRAIN			8814
4	" SOUTHEAST ROOF DRAIN (NORTH OF SAT DSH)			8815
DNS → 7.5	" EAST ROOF DRAIN (NORTH OF EAST SKYLIGHT)			
6	ROOF FLASHING (EAST SIDE OF EAST SKYLIGHT)			8816
7	" (EAST SKYLIGHT)			8817
8	" (WEST SIDE NORTH ROOF)			8818
9	" (NORTH ROOF)			8819

Chain of Custody

Submission of asbestos samples for analysis and/or signing a chain of custody is the equivalent of submission of a purchase order and constitutes an agreement to pay for services provided at Dixon Information Incorporated standard schedule of fees for services.

Submitted by: JEFF ROWLAND
 Received by Lab: [Signature]
 Received by Analyst: [Signature]
 Returned by Lab: _____

Date: 4/24/09 Time: 1030
 Date: 4-27-09 Time: 10:40
 Date: 4.24.09 Time: 1300
 Date: _____ Time: _____

Photograph 1
WSU STEWART LIBRARY; roof
flashing, 10% *Chrysotile asbestos*.



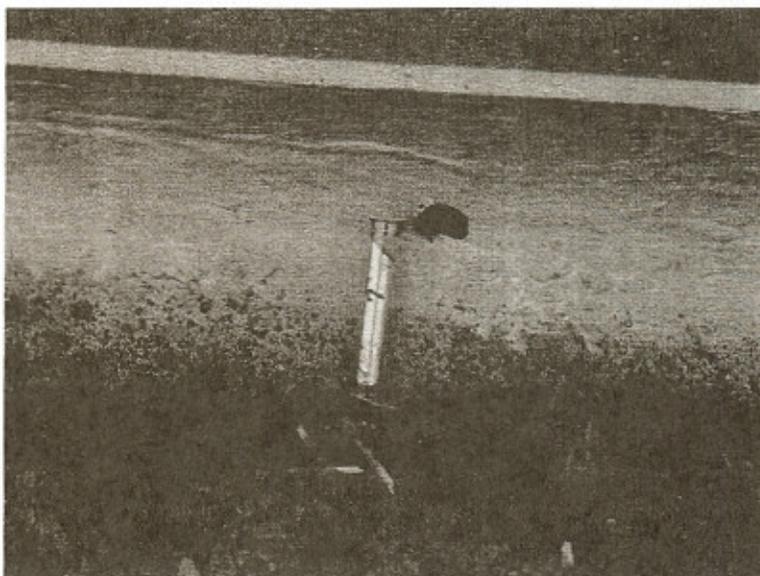
Photograph 2
WSU STEWART LIBRARY; roof
core sample.



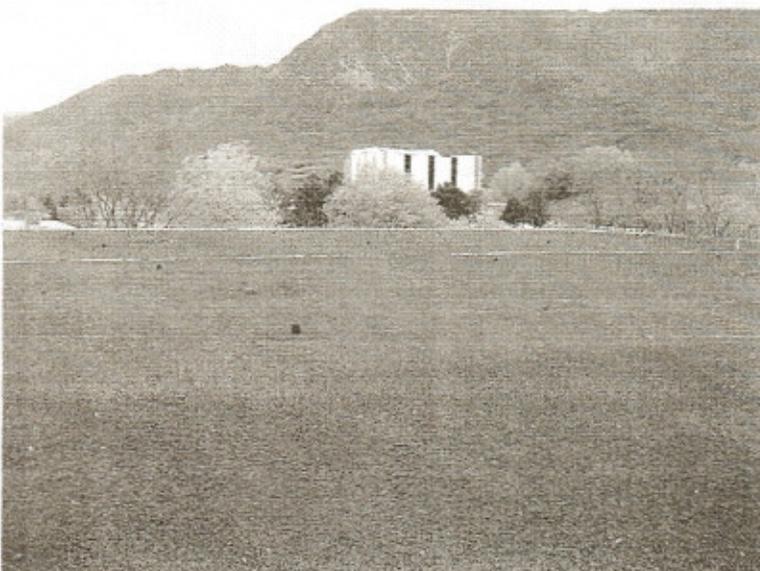
Photograph 3
WSU STEWART LIBRARY; roof
flashing.



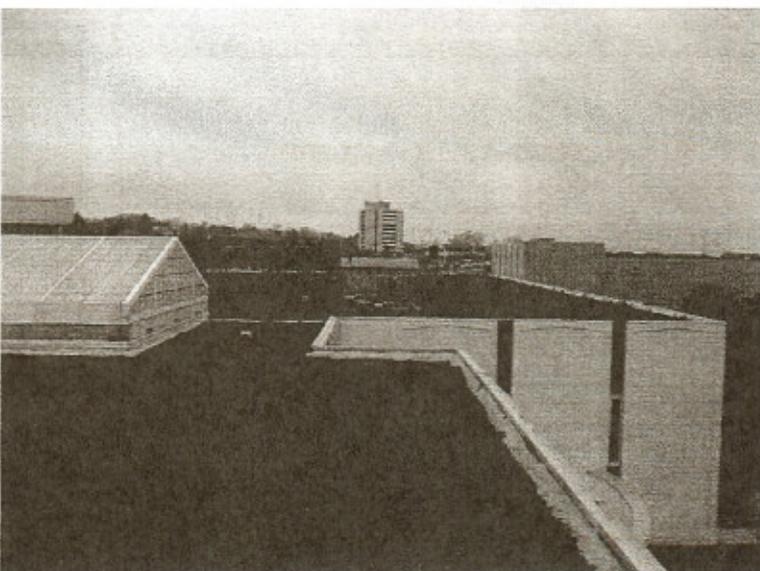
Photograph 4
WSU STEWART LIBRARY; roof
flashing (east skylight), 10%
Chrysotile asbestos.



Photograph 5
WSU STEWART LIBRARY;
view northeast.



Photograph 6
WSU STEWART LIBRARY;
view south.



Photograph 7
WSU STEWART LIBRARY;
view southeast.



Photograph 8
WSU STEWART LIBRARY;
view east.



Photograph 9
WSU STEWART LIBRARY;
view east of front entry.



- F. Contractor will provide a 24 hour emergency phone number to Project Manager and agency contact person.

3.2 EXAMINATION

- A. Examine substrates, areas, and conditions under which roofing will be applied, with Installer present, for compliance with requirements.
- B. Verify that roof openings and penetrations are in place and set and braced and that roof drains are properly clamped into position.
- C. Verify that wood nailers are in place and secured and match thicknesses of insulation required.

3.3 PREPARATION

- A. Clean substrate of dust, debris, 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. Complete terminations and base flashings and provide temporary seals to prevent water from entering completed sections of the roofing system at the end of the workday or when rain is forecast. Remove and discard temporary seals before beginning work on adjoining roofing.

3.4 INSULATION INSTALLATION

- A. Insulation shall be installed according to insulation manufacturer's instructions.
- B. Insulation shall be neatly cut to fit around penetrations and projections.
- C. Install tapered insulation in accordance with insulation manufacturer's shop drawings.
- D. Install tapered insulation around drains creating a drain sump.
- E. Do not install more insulation board than can be covered with membrane by the end of the day or the onset of inclement weather.
- F. Attachment:
 - 1. Fully adhered:
 - a. Low-rise foam.
 - b. Manufactures approved adhesive.
 - c. Asphalt is NOT an approved method to use.

3.5 FULLY ADHERED SHEET INSTALLATION

- A. Install sheet over area to receive roofing according to roofing system manufacturer's written instructions. Unroll sheet and allow to relax for a minimum of 30 minutes.

- B. Start installation of sheet in presence of roofing system manufacturer's technical personnel.
- C. Accurately align sheets and maintain uniform side and end laps of minimum dimensions required by manufacturer. Stagger end laps.

3.6 SEAM INSTALLATION

- A. Heat-weld seams according to roofing system manufacturer's requirements.

3.7 FLASHING INSTALLATION

- A. Install sheet flashings and preformed flashing accessories and adhere to substrates according to roofing system manufacturer's written instructions.
- B. Apply bonding adhesive to substrate and underside of flashing sheet as required rate and allow to partially dry. Do not apply bonding adhesive to seam area of flashing.
- C. Flash penetrations and field-formed inside and outside corners with cured or uncured sheet flashing as recommended by manufacturer.
- D. Terminate and seal top of sheet flashings and mechanically anchor to substrated.

3.8 FIELD QUALITY CONTROL

- A. Final Roof inspection: Arrange for roofing system manufacturer's technical personnel to inspect roofing installation on completion and submit report to Architect.
 - 1. Notify Architect or Owner 48 hours in advance of the date and time of inspection.

3.9 PROTECTING AND CLEANING

- A. Protect sheet membrane roofing from damage and wear during remainder of construction period. When remaining construction will not affect or endanger roofing, inspect roofing or 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 that does not comply with requirements, repair substrates, reinstall roofing, and repair sheet flashings to a condition free of damage and deterioration at the time of Substantial Completion and according to warranty requirements.

END OF SECTION 07531

SECTION 07600 - FLASHING AND SHEET METAL

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Sheet metal flashing and trim.
 - 2. Fasteners and attachment devices.
 - 3. Coatings and slip sheets to isolate dissimilar materials.
 - 4. Parapet Caps

1.2 SUBMITTALS

- A. Product Data.
- B. Samples: Submit 6-inch-square samples of each type of metal and finish required.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Galvanized Steel Sheet: ASTM A 526, commercial quality, G90 hot-dip galvanized.
- B. Aluminum Sheet: ASTM B 209, Type 3003 H14.
- C. Sheet Lead: Hard tempered, containing 4 to 6 percent antimony, 3.0 pounds per square foot minimum weight for exposed sheet. Soft lead sheet, 4.0 pounds per square foot minimum weight for concealed uses.
- D. Pre-finished Metal: 24 Ga. steel, polyvinylidene fluoride resin-base finish (Kynar 500 or Hylar 5000) for coil-coating components. Color as selected by Architect.

2.2 ACCESSORY MATERIALS

- A. Fasteners: Corrosion-resistant metal of same material as the material being fastened, or other material recommended by sheet metal manufacturer. Match finish and color of exposed fastener heads to finish and color of sheet material being fastened.
- B. Joint Adhesive: Two-component noncorrosive epoxy adhesive, recommended by metal manufacturer for sealing of nonmoving joints.
- C. Bituminous Coating: Heavy bodied, sulfur-free, asphalt-based paint; FS TT-C-494.

2.3 PREFORMED REGLET FLASHING SYSTEMS

- A. General: Fabricate reglet flashing system from 24 gage galvanized steel sheet formed to provide secure interlocking of separate reglet and counterflashing pieces.

- B. Types Required:
 - 1. Surface-mounted type: Provide with slotted holes for fastening to substrate, with neoprene or other suitable weatherproofing washers, and with channel for sealant at top edge.

2.4 FABRICATION - GENERAL

- A. Fabricate sheet metal using sheet metal thicknesses indicated on the drawings or schedules.
- B. Form sheet metal to match profiles indicated, substantially free from oil-canning, fish-mouths, and other defects.
- C. Comply with SMACNA "Architectural Sheet Metal Manual" for applications indicated.
- D. Provide for thermal expansion of exposed sheet metal work exceeding 15 feet running length.
 - 1. Flashing and trim: Provide movement joints at maximum spacing of 10 feet; no joints allowed within 2 feet of corner or intersection.
- E. Conceal fasteners and expansion provisions wherever possible.
 - 1. Exposed fasteners are not allowed on faces of sheet metal exposed to public view.
- F. Fabricate cleats and attachment devices from same material as sheet metal component being anchored or from compatible, noncorrosive metal recommended by sheet metal manufacturer.
 - 1. Gage: As recommended by SMACNA or metal manufacturer for application, but in no case less than gage of metal being secured.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Isolate dissimilar metals by means of a heavy bituminous coating, approved paint coating, adhered polyethylene sheet, or other means approved by the architect.

3.2 INSTALLATION

- A. General: Except as indicated otherwise, comply with sheet metal manufacturer's installation instructions and recommendations in the SMACNA "Architectural Sheet Metal Manual."
- B. Roof Edge Flashings: Secure metal flashings at roof edges to comply with Factory Mutual Loss Prevention Data 1-49 for Zone 1 wind exposure.
- C. Counterflashings: Coordinate installation of counterflashings with installation of assemblies to be protected by counterflashing. Install counterflashings in reglet or receiver of other sheet metal fabrication. Secure in a waterproof manner by means of snap-in installation and sealant, lead wedges and sealant, interlocking folded seam, or blind rivets and sealant. Lap counterflashing joints a minimum of 2 inches and bed with sealant.

3.3 CLEANING AND PROTECTION

- A. Repair or replace work which is damaged or defaced, as directed by the architect.
- B. Remove from sheet metal surfaces any debris or substances which will inhibit uniform weathering.
- C. Protect sheet metal work as recommended by the installer so that completed work will be clean, secured, and without damage at substantial completion.

END OF SECTION 07600

SECTION 07600 - FLASHING AND SHEET METAL

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Sheet metal flashing and trim.
 - 2. Fasteners and attachment devices.
 - 3. Coatings and slip sheets to isolate dissimilar materials.
 - 4. Parapet Caps

1.2 SUBMITTALS

- A. Product Data.
- B. Samples: Submit 6-inch-square samples of each type of metal and finish required.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Galvanized Steel Sheet: ASTM A 526, commercial quality, G90 hot-dip galvanized.
- B. Aluminum Sheet: ASTM B 209, Type 3003 H14.
- C. Sheet Lead: Hard tempered, containing 4 to 6 percent antimony, 3.0 pounds per square foot minimum weight for exposed sheet. Soft lead sheet, 4.0 pounds per square foot minimum weight for concealed uses.
- D. Pre-finished Metal: 24 Ga. steel, polyvinylidene fluoride resin-base finish (Kynar 500 or Hylar 5000) for coil-coating components. Color as selected by Architect.

2.2 ACCESSORY MATERIALS

- A. Fasteners: Corrosion-resistant metal of same material as the material being fastened, or other material recommended by sheet metal manufacturer. Match finish and color of exposed fastener heads to finish and color of sheet material being fastened.
- B. Joint Adhesive: Two-component noncorrosive epoxy adhesive, recommended by metal manufacturer for sealing of nonmoving joints.
- C. Bituminous Coating: Heavy bodied, sulfur-free, asphalt-based paint; FS TT-C-494.

2.3 PREFORMED REGLET FLASHING SYSTEMS

- A. General: Fabricate reglet flashing system from 24 gage galvanized steel sheet formed to provide secure interlocking of separate reglet and counterflashing pieces.

- B. Types Required:
 - 1. Surface-mounted type: Provide with slotted holes for fastening to substrate, with neoprene or other suitable weatherproofing washers, and with channel for sealant at top edge.

2.4 FABRICATION - GENERAL

- A. Fabricate sheet metal using sheet metal thicknesses indicated on the drawings or schedules.
- B. Form sheet metal to match profiles indicated, substantially free from oil-canning, fish-mouths, and other defects.
- C. Comply with SMACNA "Architectural Sheet Metal Manual" for applications indicated.
- D. Provide for thermal expansion of exposed sheet metal work exceeding 15 feet running length.
 - 1. Flashing and trim: Provide movement joints at maximum spacing of 10 feet; no joints allowed within 2 feet of corner or intersection.
- E. Conceal fasteners and expansion provisions wherever possible.
 - 1. Exposed fasteners are not allowed on faces of sheet metal exposed to public view.
- F. Fabricate cleats and attachment devices from same material as sheet metal component being anchored or from compatible, noncorrosive metal recommended by sheet metal manufacturer.
 - 1. Gage: As recommended by SMACNA or metal manufacturer for application, but in no case less than gage of metal being secured.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Isolate dissimilar metals by means of a heavy bituminous coating, approved paint coating, adhered polyethylene sheet, or other means approved by the architect.

3.2 INSTALLATION

- A. General: Except as indicated otherwise, comply with sheet metal manufacturer's installation instructions and recommendations in the SMACNA "Architectural Sheet Metal Manual."
- B. Roof Edge Flashings: Secure metal flashings at roof edges to comply with Factory Mutual Loss Prevention Data 1-49 for Zone 1 wind exposure.
- C. Counterflashings: Coordinate installation of counterflashings with installation of assemblies to be protected by counterflashing. Install counterflashings in reglet or receiver of other sheet metal fabrication. Secure in a waterproof manner by means of snap-in installation and sealant, lead wedges and sealant, interlocking folded seam, or blind rivets and sealant. Lap counterflashing joints a minimum of 2 inches and bed with sealant.

3.3 CLEANING AND PROTECTION

- A. Repair or replace work which is damaged or defaced, as directed by the architect.
- B. Remove from sheet metal surfaces any debris or substances which will inhibit uniform weathering.
- C. Protect sheet metal work as recommended by the installer so that completed work will be clean, secured, and without damage at substantial completion.

END OF SECTION 07600

SECTION 07920 - JOINT SEALANTS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. The sealing of joints indicated on schedule at the end of this section.
 - 2. The sealing of other joints indicated on drawings.

1.2 DEFINITIONS

- A. Substrates:
 - 1. M-type substrates: Concrete, concrete masonry units, brick, mortar, natural stone. The term "masonry" means brick, stone, and concrete masonry work.
 - 2. G-type substrates: Glass and transparent plastic glazing sheets.
 - 3. A-type substrates: Metals, porcelain, glazed tile, and smooth plastics.
 - 4. O-type substrates: Wood, unglazed tile; substrates not included under other categories.

1.3 SUBMITTALS

- A. Product data.
- B. Samples for Color Selection. (Products exposed to view only.)

1.4 PROJECT CONDITIONS

- A. Environmental Limitations: Do not install sealers if any of the following conditions exist:
 - 1. Air or substrate temperature exceeds the range recommended by sealer manufacturers.
 - 2. Substrate is wet, damp, or covered with snow, ice, or frost.
- B. Dimensional Limitations: Do not install sealers if joint dimensions are less than or greater than that recommended by sealer manufacturer; notify the architect and get sealer manufacturer's recommendations for alternative procedures.

PART 2 - PRODUCTS

2.1 MATERIALS - GENERAL

- A. General: Provide only products which are recommended and approved by their manufacturer for the specific use to which they are put and which comply with all requirements of the contract documents.
 - 1. Provide only materials which are compatible with each other and with joint substrates.
 - 2. Colors of exposed sealers: As selected by the architect from manufacturer's standard colors.

2.2 ELASTOMERIC SEALANTS

- A. Elastomeric Sealants - General: Chemically curing elastomeric sealants of types indicated, complying with ASTM C 920, including specific Type, Grade, Class, and Uses indicated, as well as all other requirements specified.

1. Where movement capability exceeding that measured by ASTM C 920 is specified, sealant shall withstand the total movement indicated while remaining in compliance with the other requirements specified, when tested in accord with ASTM C 719, with base joint width measured at the time of application.
 2. For M-type substrates: Comply with requirements for Use M.
 3. For A-type substrates: Comply with requirements for Use A.
 4. For O-type substrates: Comply with requirements for Use M (minimum) and Use O for the particular substrate.
- B. Two-Part Nonsag Polysulfide Sealant: Type M, Grade NS, Class 12-1/2, Use NT.
- C. Silicone Sealant: One-part, non-acid curing, Type M, Grade NS, Class 25, USENT, Use M, plus movement capability of 50 percent in both extension and compression.
- D. All-Purpose Urethane Sealant: Multipart, nonsag, Type M, Grade NS, Class 25, Uses NT, M, G and A.

2.3 SEALANT BACKERS

- A. Backers - General: Nonstaining; recommended or approved by sealant manufacturer for specific use.

PART 3 - EXECUTION

3.1 CONDITIONS

- A. Do not begin joint sealer work until unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Masking Tape: Use masking tape to keep primers and sealers off of adjacent surfaces which would be damaged by contact or by cleanup. Remove tape as soon as practical.

3.3 INSTALLATION

- A. Comply with sealer manufacturers' installation instructions and recommendations, except where more restrictive requirements are specified.

3.4 SCHEDULE OF JOINT SEALERS

- A. Exterior Joints:
1. Use one of the following sealants:
 - a. High movement silicone sealant.
 2. Backer: Backer rod.

END OF SECTION 07900

SECTION 10431 - SIGNS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Panel signs.
 - 2. Signage accessories.

1.3 SUBMITTALS

- A. Product Data: Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for each type of sign.
- B. Samples for Initial Selection: For each type of sign material indicated that involves color selection.

1.4 QUALITY ASSURANCE

- A. Regulatory Requirements: Comply with the Americans with Disabilities Act (ADA) and with code provisions as adopted by authorities having jurisdiction.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. In other Part 2 articles where titles below introduce lists, the following requirements apply for product selection:
 - 1. Manufacturers: Subject to compliance with requirements, provide products by the manufacturers specified.

2.2 PANEL SIGNS

- A. General: Provide panel signs that comply with requirements indicated for materials, thicknesses, finishes, colors, designs, shapes, sizes, and details of construction.

1. Produce smooth panel sign surfaces constructed to remain flat under installed conditions within tolerance of plus or minus 1/16 inch (1.5 mm) measured diagonally.
- B. Manufacturers:
1. Allenite Signs; Allen Marking Products, Inc.
 2. APCO Graphics, Inc.
 3. ASI Sign Systems, Inc.
 4. Best Manufacturing Co.
 5. Grimco, Inc.
 6. Kaltech Industries Group, Inc.
 7. Mohawk Sign Systems.
 8. Seton Identification Products.
 9. Signature Signs, Inc.
- C. Cast-Acrylic Sheet: Manufacturer's standard and as follows:
1. Color: As selected by Architect from manufacturer's full range.
- D. Unframed Panel Signs: Fabricate signs with edges mechanically and smoothly finished to comply with the following requirements:
1. Edge Condition: Square cut.
 2. Corner Condition: Rounded to 1/2" radius.

2.3 ACCESSORIES

- A. Mounting Methods: Use double-sided vinyl tape fabricated from materials that are not corrosive to sign material and mounting surface.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of work.
- B. Examine supporting members to ensure that surfaces are at elevations indicated or required to comply with authorities having jurisdiction and are free from dirt and other deleterious matter.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. General: Locate signs and accessories where indicated, using mounting methods of types described and in compliance with manufacturer's written instructions.

1. Install signs level, plumb, and at heights indicated, with sign surfaces free from distortion and other defects in appearance.
- B. Wall-Mounted Panel Signs: Attach panel signs to wall surfaces using methods indicated below:
 1. Mechanically attach.

3.3 CLEANING AND PROTECTION

- A. After installation, clean soiled sign surfaces according to manufacturer's written instructions. Protect signs from damage until acceptance by Owner.

3.4 SIGN SCHEDULE

- A. Sign at roof access point:

Caution - This roof is under warranty until (insert year) with (insert manufacturer). All access is to be restricted without facilities manager's permission & log entry. Repair work if necessary should be performed only by an authorized applicator. For leak repairs contact (insert manufacturer) @ (insert manufacturer warranty claim department phone number).

Warranty #
Original Contractor:
Warranty Type:
Contractor Telephone #:
Installation Date:
Contractor Address:
Roof Membrane Type:
Manufacturer's Address:

END OF SECTION 10431