

**CHABOT-LAS POSITAS COMMUNITY COLLEGE DISTRICT**

**REQUEST FOR INFORMAL BID NO.: 10-11-04**

**SPF Roof Replacement, Bldgs. 300/600 & 1300 –  
Las Positas College**

**Informal Bids Due:**

**August 31, 2010 at 2:00 P.M.**



**Return Bids To:  
District Office  
Facilities Planning & Management Department  
5020 Franklin Drive  
Pleasanton, California 94588**

**Tel.: (925) 485-5229  
Fax: (925) 485-5253**

**SECTION 00800  
SUPPLEMENTARY CONDITIONS**

**PART 1      GENERAL**

**1.01      PROJECT ENVIRONMENT**

- A.      **SAFETY AND HEALTH** - Consultants, contractors and subcontractors must make themselves aware of all applicable health and safety codes and ordinances and assure compliance therewith.
1.      The building design and construction must permit CLPCCD Facilities Management personnel to access and maintain building systems and equipment safely.
  2.      The Contractor must meet or exceed the criteria in the CLPCCD's Safety Guideline.
  3.      The contractor shall have a site-specific safety program in place at the start of any construction activity on site. The Contractor shall maintain one copy of the site-specific safety program and shall submit two copies to the CLPCCD Project Manager. The Project Manager shall retain one copy in the project files and submit one copy to be retained in the Project Management and Construction Plan Review Room.
  4.      The Contractor is responsible for maintaining fire and life safety access to the construction project at all times.
  5.      The Contractor must provide and maintain designated pedestrian paths around construction site limits and related barriers. Barriers are to display appropriate signage conveying detour routes. Site lighting shall illuminate peripheral areas adequately for safe pedestrian passage along detours at night. The CLPCCD Project Manager must approve any routes which cannot be provided as accessible
  6.      The detours must conform to ADA guidelines to provide access to all occupants of the campus. NOTE that yellow tape barricade at physical hazards is NOT acceptable. At open pits, ditches and other physical hazards, the contractor must provide adequate barricades. For temporary hazards (hazards present for three days or less) orange net fabric on stakes at a minimum of six feet (6') on center must be installed at a distance from the hazard to prevent visually impaired people from pushing through the barricade. For long term hazards (hazards present longer than three days) chain-link fencing must be installed.
- B.      **WATER DAMAGE DURING CONSTRUCTION** - The Contractor shall be responsible for all damage to or loss of interior finishes, equipment, supplies and personal property resulting from water entry through the roof during construction of the roof system. The CLPCCD shall have the final determination of as to the extent of damage or loss of interior finishes, equipment, supplies and personal property. The CLPCCD may take what ever action it deems necessary to prevent further loss once an event occurs, including, but not limited to, contracting with other contractors to provide emergency roof repairs, water extraction, drying, cleaning, and hazardous waste removal. All reasonable costs incurred by CLPCCD shall be deducted from the Contractor's final payment.
- C.      **SITE CONSTRAINTS** - The Contract Documents will show the limits of construction for

the site. The Contractor must develop a Construction Site Plan which locates all construction limits and locates staging, material storage, trailers, on-site contractor parking, vegetation protection areas, and other site specific concerns. Temporary site lighting, roads and fencing must be identified and approved by the CLPCCD 's Project Manager. Any deviation from the approved plan or encroachment into non-site areas must be corrected immediately upon notification. Remediation of areas where encroachment has taken place will be the responsibility of the Contractor and will be performed to the satisfaction of CLPCCD's Project Manager and the Facilities Management Grounds Manager.

- D. CONSTRUCTION PARKING - Chabot College may provide parking for workers on construction projects only after specific requests have been submitted and approved in writing. Campus parking of construction related vehicles outside of the construction site is prohibited. CLPCCD also prohibits the parking of construction related vehicles along residential streets off the campus property.
- E. PROTECTION OF EXISTING CONDITIONS - The contract documents and specifications shall insure that access routs to and from the project, and the project premises are protected from litter and debris of any form. All damage and temporary soiling of an area or misuse of property on or off the construction site must be restored to its original condition to the satisfaction of CLPCCD. The contractor is responsible for ensuring that these requirements are met at all times and the contractor will be held financially responsible for all corrective action required by the construction activities. Documentation of existing conditions is the responsibility of the Contractor. The Owner's Project Manager shall be available to assist and confirm the Contractor's documentation, at the Contractor's request.
- F. UTILITY SHUTDOWNS - All utility shutdowns affecting College facilities outside the construction project shall be scheduled through the CLPCCD Project Manager. A ten-(10) day notice is required. Utility interruptions must be scheduled during non-business hours.
- G. SITE HYGIENE - All contractors must provide temporary toilet facilities for their employees. Contractor employees are not allowed to use Chabot College's restroom.
- H. SITE CLEANLINESS - The construction site must appear clean and organized at all times, as judged by the CLPCCD Project Manager. The contractor will be responsible for cleaning up debris, graffiti or facilities immediately upon the Owner's request.

## 1.02 CONTRACTOR PERFORMANCE

- A. EMPLOYEE CONDUCT - At any time during the construction of a project at Chabot College, if the conduct of any worker is judged by the Owner, Contractor, Consultant to be a nuisance to the Owner, or a worker is considered to be incompetent or detrimental to the work, the contractor shall order such parties removed immediately from Chabot College property. The contractor shall be responsible for assuring these measures are executed and the Contractor has the right and responsibility to request the assistance of Chabot College's Police Department, if necessary. Dialogue between campus occupants and workers, whistling or other attention-attracting noises or gestures towards campus occupants are NOT permitted. Contractor personnel must not use campus toilets,

telephones, benches, dumpsters, containers, or enter CLPCCD facilities, unless accompanied by CLPCCD personnel. Entry of any campus facility or interface with any campus occupant outside of the construction site is grounds for immediate removal.

#### 1.03 DELAYS DUE TO WEATHER

- A. Weather days will be recorded weekly by the Contractor and forwarded to the CLPCCD Construction Manager within five (5) days of occurrence. Support of the claim for weather delays shall be accompanied with a weather summary provided by the National Weather Service available at <http://www.wrh.noaa.gov/Monterey/f6/> with a report from the Hayward station on form F-6.
- B. There shall be no increase in the contract sum nor remuneration of any kind by Owner to Contractor for extensions due to weather day delays.
- C. Should inclement weather occur and resulting water leak inside the building during construction, the Contractor shall be on site within 4 hours after being notified. Should Contractor not be able to be on site within 4 hours, another Contractor may be hired by the Owner to provide emergency leak services. Any and all costs incurred shall be back charged to the Contractor.

#### 1.04 HOLD HARMLESS

- A. The contractor shall hold harmless and indemnify the CLPCCD, the Board, and its officers and employees, Amtech Building Sciences, Inc., and its officers and employees, from every liability, claim or demand, which liability, claim or demand may be made by reason of:
  - 1. Any injury to person or property sustained by the Contractor or by any person, firm or corporation, employed directly or indirectly by it upon or in connection with its work.
  - 2. Any injury to person or property sustained by any person, firm or corporation, caused by any act, neglect, default, or omission of the Contractor or any person firm or corporation, directly or indirectly employed by it upon or in connection with the work.
  - 3. The Contractor furnishing or use of any copyrighted or uncopyrighted composition, secret process, patented or unpatented invention, article, or appliance under the contract.
- B. The Contractor at its own cost, expense and risk, shall defend all legal proceedings that may be brought against the CLPCCD, the Board, and its officers and employees, Amtech Building Sciences, Inc., and its officers and employees, on any such liability, claim or demand, and satisfy any resulting judgment that may be rendered against any of them whether or not the liability, claim or demand was actually or allegedly caused wholly or in part through the negligence or other tortious conduct by any of them.

#### 1.05 CONTRACTOR LICENSE

- A. Installation of roofing shall be by a qualified, licensed roofing Contractor, approved by the manufacturer to install his roofing material, and shall be applied in strict accordance

per manufacturer's specifications and recommendations. Where conflict may exist between these project specifications and the manufacturer's written specifications, the more stringent criteria shall prevail. All manufacturer recommendations and details apply with same force and effect as though repeated herein. Owner shall not be responsible for extra costs to meet the manufacturer requirements and it is understood that the Contractor shall bear the cost to meet all manufacturer detail requirements when not detailed in these specifications.

**PART 2 - PRODUCTS**

NOT USED

**PART 3 - EXECUTION**

NOT USED

END OF SECTION



## **Chabot-Las Positas Community College District**

**Request for Informal Bid No. 10-11-04**

### **SCOPE OF WORK, BIDDING SPECIFICATIONS AND DRAWINGS**

## **SCOPE OF WORK**

### **PART 1 – GENERAL**

#### **1.01 SUMMARY**

- A This section includes summary of work including:
  - 1. Work covered contract Documents
  - 2. Bid items, Allowances and Alternates
  - 3. Work under other contracts
  - 4. Future work
  - 5. Work sequence
  - 6. Cooperation of contractor and coordination with other work
  - 7. Maintenance
  - 8. Occupancy requirements
  - 9. Reference Standards
  - 10. Products ordered in advance
  - 11. CLPCCD furnished products

#### **1.02 WORK COVERED BY CONTRACT DOCUMENTS**

- A. The work shall include all work shown and specified except for work indicated "N.I.C." or "Not in Contract" or "Future".
- B. The contractor must maintain access to the existing buildings at all times during all phases. Contractor is to provide secure fencing and/or barricades to keep the general public from entering the work areas. Work hours shall be from 7:00 AM. to 7:00 P.M. on weekdays and 9:00 AM. to 6:00 P.M. on weekends. If the contractor chooses to work more than 8 hours per day or 5 days per week he shall be responsible for the overtime costs of the inspectors involved in that phase of the work.
- C. Unless provided otherwise in the Contract Documents, all risk of loss of Work covered by Contract Documents shall rest with Contractor until Final Completion and Acceptance of the Work.

#### **1.03 BID ITEMS**

- A. Any bid item may be deleted in total or in part prior to or after award of Contract without compensation in any form or adjustment of other bid items or prices therefore.
- B. Descriptions:
  - 1. Base Bid. Furnish any and all of the labor, materials, tools, equipment and services necessary to perform all work described and all other Contract Documents.  
  
In accordance with Scope of Work: Specification and Drawings provided by Amtech Building Services, Inc.
- C. Alternates:
  - 1. Alternate selection will be exercised at the option of CLPCCD.

2. Contractor must coordinate related work and modify surrounding work as required to complete Work, including changes under each Alternate designated in Contract Agreement.
3. Scope of Alternates:  
Not Applicable

#### **1.04 WORK UNDER OTHER CONTRACTS**

Not Applicable.

#### **1.05 FUTURE WORK**

Not Applicable.

#### **1.06 WORK SEQUENCE**

- A. Construct Work in stages and at times to accommodate CLPCCD operation requirements during the construction period; coordinate construction schedule and operations with Maintenance and Operations.

#### **1.07 COOPERATION OF CONTRACTOR AND COORDINATION WITH OTHER WORK.**

- A. Should construction work, or work of any other nature, be underway by other forces or by other contractors within or adjacent to the limits of the Work at the time the Work was advertised for bids, the Contractor shall cooperate with all such other contractors or forces to the end that any delay or hindrance to their work will be avoided. The cost of such cooperation will be considered as included in the prices bid and no direct or additional payment will be made therefore. Contractor shall coordinate with such other contractors and forces as required by General Conditions.
- B. CLPCCD reserves the right to perform other or additional work, within or adjacent to the limits of the work specified, at any time by the use of other forces. Contractor shall coordinate with CLPCCD and any CLPCCD forces, or other forces, engaged by CLPCCD, as required by General Conditions. In the event that the performance of such other or additional work materially increases or decreases Contractor's costs, the work and the amount to be paid therefore will be appropriately adjusted as determined by Maintenance & Operations.
- C. Limit use of the Site for Work and for construction operations to allow for:
  - a. CLPCCD operation
  - b. Work by other contractors and tenants
- D. Coordinate use of the Site and access to site with other contractors, utilities, and CLPCCD forces, as required by General Conditions. Maintenance & Operations has final authority over coordination, use of the Site, and access to site.
- E. Cooperate with CLPCCD and others who may occupy and begin work on site and inside building prior to completion of Work of this Contract.
- F. Cooperate with contractors for other area work, not included in Contract, but which may take place during construction period.

#### **1.08 MAINTENANCE**

- A. Cost of maintenance of systems and equipment prior to Final Acceptance will be considered as included in prices bid and no direct or additional payment will be made therefore.

## **1.09 OCCUPANCY REQUIREMENTS**

- A. Whenever, in the opinion of Maintenance & Operations, Work or any part thereof is in a condition suitable for use, and the best interest of CLPCCD requires such use, CLPCCD may take beneficial occupancy of and connect to, open for public use, or use the Work or such part thereof.
- B. Prior to date of Final Acceptance of the Work by CLPCCD, all necessary repairs or renewals in Work or part thereof so used, not due to ordinary wear and tear, but due to defective materials or workmanship or to operations of Contractor, shall be made at expense of Contractor, as required.
- C. Use by CLPCCD of Work or part thereof as contemplated by this section shall in no case be construed as constituting acceptance of Work or any part thereof. Such use shall neither relieve Contractor of any responsibilities under Contract, nor act as waiver by CLPCCD of any of the conditions thereof.
- D. CLPCCD may specify in the Contract Documents that portions of the Work, including electrical and mechanical systems or separate structures, shall be substantially completed on milestone dates prior to substantial completion of all of the Work. Contractor shall notify Maintenance & Operations in writing when Contractor considers any such part of the Work ready for its intended use and substantially complete.

## **PART 2 – PRODUCTS**

### **2.01 REFERENCE STANDARDS**

- A. For products specified by association or trade standards, comply with requirements of standard, except where more rigid requirements are specified or are required by applicable codes.

### **2.02 PRODUCTS ORDERED IN ADVANCE**

Not applicable.

### **2.03 CLPCCD FURNISHED PRODUCTS**

For CLPCCD finished products as specified, if any, shall be indicated on construction documents.

## **PART 3 – EXECUTION**

Not applicable.

**END OF SECTION**

## **REGULATORY REQUIREMENTS**

### **PART 1 – GENERAL**

#### **1.01 SUMMARY**

This section includes regulatory requirements applicable to Contract.

#### **1.02 REFERENCES TO REGULATORY REQUIREMENTS**

- A. Codes, laws, ordinances, rules and regulations referred to shall have full force and effect as though printed in full in these specifications.
- B. Conform to referenced codes, laws, ordinances, rules and regulations, which are in effect on date of receipt of bids.

#### **1.03 CODES**

Codes, which apply to Contract, include, but are not limited to, the following:

- A. California Building Code (Part 2, Title 24, C.C.R.)
- B. California Electrical Code (Part 3, Title 24, C.C.R.)
- C. California Mechanical Code (Part 4, Title 24, C.C.R.)
- D. California Plumbing Code (Part 5, Title 24, C.C.R.),
- E. State Elevator Safety Regulations (Part 7, Title 24, C.C.R.)
- F. Uniform Building Code

#### **1.04 LAWS, ORDINANCES, RULES AND REGULATIONS**

- A. During prosecution of Work to be done under Contract, comply with applicable laws, ordinances, rules and regulations, including, but not limited to, the following:
- B. Federal
  - 1. Americans With Disabilities Act
  - 2. 29 CFR, Section 1910.1001, Asbestos
  - 3. 40 CFR, Subpart M, National Emission Standards for Asbestos
  - 4. Executive Order 11246
- C. State of California
  - 1. California Code of Regulations, Titles 5, 8, 19, 21, 24
  - 2. California Education Code
  - 3. California Public Contract Code
  - 4. California Health and Safety Code
  - 5. California Government Code
  - 6. California Labor Code

7. California Civil Code
  8. California Code of Civil Procedure
  9. CPUC General Order 95, Rules for Overhead Electric Line Construction
  10. CPUC General Order 128, Rules for Construction of Underground Electric Supply and Communications Systems
- D. State of California Agencies
- Bay Area Air Quality Management District (BAAQMD / [www.baaqmd.gov](http://www.baaqmd.gov))
- State and Consumer Services Agency
- Department of General Services
- Division of the State Architect Office of the State Fire Marshall Office of Public School Construction
- E. Local Agencies:
- City of Livermore, California ([www.ci.livermore.ca.us](http://www.ci.livermore.ca.us))

#### **1.06 COMPLIANCE WITH AMERICANS WITH DISABILITIES ACT**

- A. Contractor acknowledges that, pursuant to the Americans with Disabilities Act (ADA), programs, services and other activities provided by a public entity to the public, whether directly or through a contractor, must be accessible to the disabled public. Contractor shall provide the services specified in this Agreement in a manner that complies with the ADA and any and all other applicable federal, state and local disability rights legislation. Contractor agrees not to discriminate against disabled persons in the provision of services, benefits or activities provided under this Agreement and further agree that any violation of this prohibition on the part of Contractor, its employees, agents or assigns shall constitute a material breach of this Agreement.

#### **PART 2 – PRODUCTS**

Not applicable.

#### **PART 3 – EXECUTION**

Not applicable.

**END OF SECTION**

## **REGULATORY REQUIREMENTS-HAZARDOUS WASTE**

### **PART 1 – GENERAL**

#### **1.01 SUMMARY**

- A. This section includes regulatory requirements applicable to Contract work in connection with hazardous waste abatement and disposal, including, but not limited to, asbestos and asbestos containing materials, lead based paint, polychlorinated biphenyls, petroleum contaminated soils and materials, construction and demolition debris and any other hazardous substance or hazardous waste.

#### **1.02 REFERENCES TO REGULATORY REQUIREMENTS**

- A. Codes, laws, ordinances, rules and regulations applicable to the Work shall have full force and effect as though printed in full in these specifications. Codes, laws, ordinances, rules and regulations are not furnished to Contractor, since Contractor is assumed to be familiar with their requirements. The listing herein of applicable codes, laws and regulations for hazardous waste abatement work is supplied to Contractor as a courtesy and shall not limit Contractor's responsibility for complying with all applicable laws, regulations or ordinances having application to the Work. Where conflict among the requirements or with these specifications exists, the most stringent requirements shall be used.
- B. Contractor's work shall conform to all applicable codes, laws, ordinances, rules and regulations that are in effect on date of receipt of bids.

#### **1.03 LAWS, ORDINANCES, RULES AND REGULATIONS**

- A. During prosecution of Work under Contract, Contractor shall comply with applicable laws, ordinances, rules and regulations, including, but not limited to, those listed below.
- B. Federal:
  - 1. Statutory Requirements:
    - a. Resource Conservation and Recovery Act, 42 U.S.C.. 6901 et seq.
    - b. Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended by the Superfund Amendments and Reauthorization Act of 1986,42 U.S. C" 9601 et seq.
    - c. Toxic Substances Control Act of 1976,15 U.S.C.. 2601 et seq.
    - d. Hazardous Materials Transportation Act of 1975, 49 U.S. C" 1801 et seq.
    - e. Clean Water Act, 33 U.S.C.. 1251 et seq.
    - f. Safe Drinking Water Act, 42 U.S. C.. 3001 et seq.
    - g. Clean Air Act, section 112, 42 U.S. C.. 7412
    - h. Occupational Safety and Health Act of 1970, 29 U.S.C.. 651 et seq.
    - i. Underground Storage Tank Law, 42 U.S. C.. 6991 et seq.
    - j. The Emergency Planning and Community Right to Know Act of 1986,42 U.S.C.. 11001 et seq. j.

2. Environmental Protection Agency (EPA):
    - a. 40 C.F.R. Parts. 260, 264, 265, 268, 270
    - b. 40 C.F.R. Parts 258 et seq.
    - c. 40 C.F.R. Part 761
    - d. 40 C.F.R. Parts 122-124
  3. Occupational Safety and Health Administration (OSHA):
    - a. OSHA Worker Protection Standards, Title 29 CFR Part 1926.58, Construction Standards and 29 CFR 1910.1001 General Industry Standard
    - b. OSHA, 29 C. F. R. Part 1926.1101, Construction Standards for Asbestos
    - c. OSHA, Lead Exposure in Construction: Interim Final Rule, 29 C.F.R. 1926.62
    - d. National Emission Standard for Hazardous Air Pollutants, Title 40 CFR Part 61
    - e. Asbestos Hazardous Emergency Response Act, Title 40 C.F.R. 763
  4. Department of Transportation:
    - a. Title 49 C.F.R. 173.1090
    - b. Title 49 C.F.R.172
    - c. Title 49 C.F.R. 173
    - d. DOT, HM 181 and MH126f
- C. State of California Requirements:
1. Statutory Law:
    - a. The Carpenter-Presley-Tanner Hazardous Substance Account Act, Cal. Health & Saf. Cod~ 25300 et seq.
    - b. Health and Safety Cod~ 25359.4
    - c. Hazardous Waste Control Law, Health & Safety Code. 25100 § seq.
    - d. Porter Cologne Water Quality Control Act, Cal. Water Cod~ 13000 et seq.
    - e. Health and Safety Cod~ 25915-25924
    - f. Cal. Labor Code Chapter 6, including, without limitation, . 6382, 6501.5-6501.9,6503.5, 9021.5, 9080
    - g. Cal. Bus. and Prof. Code, including without limitation, . 7058.5, 7065.01, 7118.5. Underground Storage of Hazardous Substance Act,
    - h. Cal. Health & Saf. Cod~ 25280 § seq.
    - i. Petroleum Underground Storage Tank Cleanup, Health and Safety Cod~ 25299.10 et seq.
    - j. Safe Drinking Water and Toxic Enforcement Act of 1986, Health & Saf. Cod~ 25249.5 et seq. (Proposition 65)
    - k. Above Ground Petroleum Storage Act, Health and Safety Code. 25270 et seq.
  2. Hazardous Materials Release Response Plans and Inventory, California Health and Safety Code Chapter 6.95.

3. Administrative Code and Regulations:
  - a. 22 C.C.R.. 6600 et seq.
  - b. Title 22 C.C.R.. Standards for Management of Hazardous and Extremely Hazardous Waste
  - c. DTSC Treatment Standard for PCB Wastes, Title 22 C.C.R.,. 66268.110
  - d. Cal OSHA Worker Protection Standards, Title 8 C.C.R.. 1529, 5208
  - e. Title 8 C. C. R.. 1532.1, Lead in Construction
  - f. 22 C.C.R.. 66999(b)
  - g. Title 23 C.C.R.. 2610 et seq.
4. Local Agency Requirements:
  - a. Bay Area Air Quality Management District, Fugitive Dust Rules
  - b. Bay Area Air Quality Management District Regulation 11-2-303
  - c. State Water Resource Control Board, General Construction Activity Stormwater Permit Requirements (Order 92-0S DWQ)
5. City Requirements:
  - a. Livermore Fire Department (<http://www.ci.livermore.ca.us/LPFD/index.html>)
  - b. Ordinances

#### **1.04 PERMITS**

- A. Contractor shall comply with, implement or acknowledge effectiveness of all CLPCCD held permits, and initiate and cooperate in securing all required notifications or approvals therefore, including but not limited to permits affecting environmental work and the following:
  1. BAAQMD, Permit to Excavate or Treat Contaminated Soil;
  2. State Water Resources Control Board, General Construction Activity Stormwater Permit;
  3. Underground Storage Tank Closure Permits.

#### **PART 2 – PRODUCTS**

Not used.

#### **PART 3 – EXECUTION**

Not used.

**END OF SECTION**

## **REFERENCES AND DEFINITIONS**

### **PART 1 – GENERAL**

#### **1.01 SUMMARY**

- A. This section includes reference standards, abbreviations, symbols and definitions used in Contract Documents.
- B. Material and workmanship specified by reference to number, symbol, or title of specific standard such as state standard, commercial standard, federal specifications, technical society, or trade association standard, or other similar standard shall comply with requirements of standards except when more rigid requirements are specified or required by applicable codes.
- C. Standards referred to, except as modified herein, shall have full force and effect as though printed in the Contract Documents. Standards are not furnished to Contractor, since manufacturers and trades involved are assumed to be familiar with their requirements.

#### **1.02 REFERENCE TO STANDARDS AND SPECIFICATIONS OF TECHNICAL SOCIETIES; REPORTING AND RESOLVING DISCREPANCIES:**

- A. Reference to standards, specifications, manuals or codes of any technical society, organization or association, or to the laws or regulations of any governmental authority, whether such reference be specific or by implication, shall mean the latest standard, specification, manual, code or laws or regulations in effect at the time of opening of Bids, except as may be otherwise specifically stated in the Contract Documents.
- B. If during the performance of the Work, Contractor discovers any conflict, error, ambiguity or discrepancy within the Contract Documents or between the Contract Documents and any provision of any such law or regulation applicable to the performance of the Work or of any such standard, specification, manual or code or of any instruction of any supplier, Contractor shall report it in writing at once to Inspector, with copies to Maintenance & Operations and Contractor shall not proceed with the Work affected thereby until consent to do so is given by the Maintenance & Operations.
- C. Except as otherwise specifically stated in the Contract Documents or as may be provided by Change Order, or supplemental instruction, the provisions of the Contract Documents shall take precedence in resolving any conflict, error, ambiguity or discrepancy between the Contract Documents and:
  - 1. The provisions of any such standard, specification, manual, code, or instruction (whether or not specifically incorporated by reference in the Contract Documents); or
  - 2. The provisions of any such laws or regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such law or regulation).

No provision of any such standard, specification, manual, code or instruction shall be effective to change the duties and responsibilities of CLPCCD, Contractor, Maintenance & Operations, or any of their subcontractors, consultants, agents, or employees, from those set forth in the Contract Documents, nor shall it be effective to assign to CLPCCD, Maintenance & Operations, or any of their consultants, agents or employees any duty or authority to supervise or direct the furnishing or performance of the Work or any duty or authority to undertake responsibility inconsistent with the provisions of the Contract Documents.

### 1.03 STANDARDS

- A. ACI (American Concrete Institute)  
Standard 318, Building Code Requirements for Reinforced Concrete
- B. AISC (American Institute of Steel Construction)  
Specifications and Code of Standard Practice for Steel Buildings and Bridges
- C. ANSI (American National Standards Institute, formerly American Standards Association)  
Standard C2, NESC (National Electrical Safety Code)
- D. ASTM (American Society for Testing and Materials)
  - 1. C31, Making and Curing Concrete Test Specimens in the Field
  - 2. C42, Obtaining and Testing Drilled Cores and Sawed Beams of Concrete
  - 3. C143, Test Method for Slump of Portland Cement Concrete
- E. IAPMO (International Association of Plumbing and Mechanical Officials)

### 1.02 UMC (Uniform Mechanical Code) UPC (Uniform Plumbing Code)

The minimum building standards applicable to public schools are set forth in Parts 4 (California Mechanical Code) and 5 (California Plumbing Code)

- F. ICBO (International Conference of Building Officials)
  - 1. UBC (Uniform Building Code)  
The minimum building standards applicable to public schools are set forth in Parts 2 (California Building Code), 3 (California Electrical Code), 4 (California Mechanical Code), 5 (California Plumbing Code) and 7 (State Elevator Safety Regulations)
  - 2. UBC Standard 26-8, Welding Reinforcing Steel, Sheet Metal inserts and Connections in Reinforced Concrete Construction
  - 3. UBC Standard 26-10, Concrete Tests
  - 4. UFC (Uniform Fire Code)
  - 5. UMC (Uniform Mechanical Code) UPC (Uniform Plumbing Code)  
The minimum building standards applicable to public schools are set forth in Parts 4 (California Mechanical Code) and Parts 5 (California Plumbing Code)
- G. NEMA (National Electric Manufacturer's Association)
- H. NFPA (National Fire Protection Association)
  - 1. Pamphlet 1, Fire Prevention Code
  - 2. Pamphlet 13, Sprinkler Systems, Installation
  - 3. Pamphlet 24, Private Fire Service Mains
  - 4. Pamphlet 70, NEC (National Electric Code)
  - 5. Pamphlet 71, Signaling Systems, Central Station

- 6. Pamphlet 80, Fire Doors and Windows
- 7. Pamphlet 101, Life Safety Code
- I. UL (Underwriters' Laboratories, Inc.)

**1.04 ABBREVIATIONS**

A. Following abbreviations may be used in Contract Documents:

AAP	Affirmative Action Program
ACI	American Concrete Institute
ADA	American Disabled Act
AISC	American Institute of Steel Construction
ANSI	American National Standards Institute (formerly American Standards Association)
ASI	Architect's Supplemental Instructions
ASTM	American Society for Testing and Materials
BIL	Basic Insulation Level
Cal/OSHA	California Occupational Safety and Health Administration
CCD	Construction Change Directive
CCR	California Code of Regulations
CFR	Code of Federal Regulations
CO	Change Order
CPUC	California Public Utilities Commission
CPM	Critical Path Method
DSA	Division of State Architect
HVAC	Heating, Ventilating and Air Conditioning
IAPMO	International Association of Plumbing and Mechanical Officials
ICBO	International Conference of Building Officials
I.D.	Identification
JATC	Joint Apprenticeship Training Committee
JV	Joint Venture
Kw	Kilowatt
LBE	Local Business Enterprise
MBE	Minority Business Enterprise
M/WBE	Minority and Woman-Owned Business Enterprise
ml	milliliter
mm	millimeter
NEC	National Electric Code
NEMA	National Electric Manufacturer's Association National Electrical Safety Code
NFPA	National Fire Protection Association
DSA	Division of State Architect (formerly known as the Office of the State Architect)
PM	Preventive Maintenance
PR	Proposal Request
RFI	Request for Information
RFS	Request for Substitution
SFM	State of California, Office of State Fire Marshal
SWPPP	Storm Water Pollution Prevention Plan
UBC	Uniform Building Code
UFC	Uniform Fire Code
UL	Underwriters' Laboratories, Inc. UMC Uniform Mechanical Code

UPC	Uniform Plumbing Code
WOBE	Woman-Owned Business Enterprise
WMBE	Woman/Minority Business Enterprise

B. Additional abbreviations, used only on drawings, are listed thereon.

## 1.05 SYMBOLS

Symbols, used only on Drawings, are shown thereon.

## 1.06 DEFINITIONS

A. Wherever any of the words or phrases defined below, or a pronoun used in place thereof, is used in any part of the Contract Documents, it shall have the meaning here set forth:

**ADDENDA:** Written or graphic instruments issued prior to the opening of Bids, which clarify, correct or change the bidding requirements or the Contract Documents. Addenda shall not include the minutes of the Pre-bid Conference and Site Visit.

**ADDITIVE BID:** The sum to be added to the Base Bid if the change in scope of work as described in Additive Bid is accepted by CLPCCD.

**AGREEMENT:** Agreement is the basic contract document that binds the parties to construction Work. Agreement defines relationships and obligations between CLPCCD and Contractor and by reference incorporates Conditions of Contract, Drawings, and Specifications and contains Addenda and all Modifications subsequent to execution of Contract.

**ALTERNATE:** Work added to or deducted from the Base Bid, if accepted by CLPCCD.

**APPROVED EQUAL:** Approved in writing by CLPCCD as being of equivalent quality, utility and appearance.

**BID:** The offer or proposal of the Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.

**BIDDER:** One who submits a Bid.

**CLPCCD:** Chabot-Las Positas Community College District. Unless otherwise expressly indicated or required by the context of usage, the terms "District" and "Owner" as used in the Contract Documents shall be deemed references to CLPCCD.

**CLPCCD-FURNISHED, CONTRACTOR-INSTALLED:** Items furnished by CLPCCD at its cost for installation by Contractor at its cost under this Contract.

**CLPCCD REPRESENTATIVE(S):** The person or persons assigned by CLPCCD to be CLPCCD's representatives or, if so designated, agent(s) at the site.

**BY CLPCCD:** Work that will be performed by CLPCCD or its agents at the CLPCCD's expense.

**BY OTHERS:** Work that is outside scope of Work to be performed by Contractor under this Contract, which will be performed by CLPCCD, other contractors, or other means.

**CHANGE ORDER:** A written instrument prepared by CLPCCD and signed by CLPCCD and Contractor, stating their agreement upon all of the following:

- a. a change in the Work,
- b. the amount of the adjustment in the Contract Sum, if any, and
- c. the amount of the adjustment in the Contract Time, if any.

**CONCEALED:** Work not exposed to view in the finished Work, including within or behind various construction elements.

**CONTRACT CONDITIONS:** Conditions of Contract define basic rights, responsibilities and relationships of Contractor and CLPCCD.

**CONTRACT DOCUMENTS:** Contract Documents shall consist of the documents identified as the Contract Documents in Contract Agreement, plus all changes, addenda and modifications thereto.

**CONTRACT MODIFICATION:** Either:

- a. a written amendment to Contract signed by Contractor and CLPCCD; or
- b. a Change Order; or
- c. a written directive for a minor change in the Work issued by CLPCCD.

**CONTRACT SUM:** The sum stated in the Agreement and, including authorized adjustments, the total amount payable by CLPCCD to Contractor for performance of the Work and the Contract Documents. (Also referred to as the CONTRACT PRICE.)

**CONTRACT TIMES:** The number or numbers of days or the dates stated in the Agreement (i) to achieve completion of the Work or designated milestones and/or (ii) to complete the Work so that it is ready for final payment and is accepted.

**CONTRACTOR:** The person or entity identified as such in the Agreement and referred to throughout the Contract Documents as if singular in number and neuter in gender. The term "Contractor" means the Contractor or its authorized representative.

**CONTRACTOR'S EMPLOYEES:** Persons engaged in execution of Work under Contract as direct employees of Contractor, as subcontractors, or as employees of subcontractors.

**DAY:** One calendar day, unless the word "day" is specifically modified to the contrary.

**DEFECTIVE:** An adjective which, when modifying the word "Work", refers to Work that is unsatisfactory or unsuited for the use intended, faulty, or deficient, that it does not conform to the Contract Documents, or does not meet the requirements of any inspection, reference standard, test or approval referred to in the Contract Documents (including but not limited to approval of samples and "or equal" items), or has been damaged prior to final payment (unless responsibility for the protection thereof has been assumed by CLPCCD). Maintenance & Operations is the judge of whether Work is defective.

**DRAWINGS:** The graphic and pictorial portions of Contract Documents, wherever located and whenever issued, showing the design, location and dimensions of the Work, generally including plans, elevations, sections, details, schedules and diagrams.

**EQUAL:** Equal in opinion of Maintenance & Operations. Burden of proof of equality is responsibility of Contractor.

**EXPOSED:** Work exposed to view in the finished Work, including behind louvers, grilles, registers and various other construction elements.

**FINAL ACCEPTANCE or FINAL COMPLETION:** All Work satisfactorily completed in accordance with Contract Documents. It includes, but is not limited to:

- a. All Systems having been tested and accepted as having met requirements of Contract Documents.
- b. All required instructions and training sessions having been given by Contractor.
- c. All as-built drawings and operations and maintenance manuals and Machine Inventory Sheets having been submitted by Contractor, reviewed by Maintenance & Operations and accepted by CLPCCD.
- d. All punch list work, as directed by CLPCCD, having been completed by Contractor.
- e. Generally all work, except Contractor maintenance after Final Acceptance, having been completed to satisfaction of CLPCCD.

**FORCE-ACCOUNT:** Work directed to be performed without prior agreement as to lump sum or unit price cost thereof, and which is to be billed at cost for labor, materials, equipment, taxes, and other costs, plus a specified percentage for overhead and profit.

**FURNISH:** Supply only, do not install.

**INDICATED:** Shown or noted on the Drawings.

**INSTALL:** Install or apply only, do not furnish.

**LATENT:** Not apparent by reasonable inspection, including but not limited to, the inspections and research required as a condition to bidding under the General Conditions.

**MATERIAL OR MATERIALS:** These words shall be construed to embrace machinery, manufactured articles, materials of construction (fabricated or otherwise), and any other classes of material to be furnished in connection with Contract, except where a more limited meaning is indicated by context.

**MODIFICATION:** Same as Contract Modification.

**NOT IN CONTRACT:** Work that is outside the scope of work to be performed by Contractor under this Contract.

**NOTICE OF AWARD:** A written notice given by CLPCCD to lowest responsive, responsible bidder advising that Bidder's bid and other qualifying information is acceptable to CLPCCD.

**NOTICE TO PROCEED:** A written notice given by CLPCCD to Contractor fixing the date on which the Contract Time will commence to run and on which contractor shall start to perform Contractor's obligations under the Contract Documents.

**OFF SITE:** Outside geographical location of the Project.

**OWNER:** Chabot Las Positas Community College District (CLPCCD).

**PROJECT:** Total construction of which Work performed under this Contract may be whole or part.

**PROVIDE:** Furnish and install.

**REQUEST FOR INFORMATION (RFI):** A document prepared by Contractor, or CLPCCD requesting information from one of the parties regarding the Project or Contract Documents. The RFI system is also a means for CLPCCD and Maintenance & Operations to submit Contract Document clarifications or supplements to Contractor.

**RFI-REPLY:** A document consisting of supplementary details, instructions or information issued by the Maintenance & Operations, which clarifies or supplements Contract Documents and with which Contractor shall comply. RFI-Replies do not constitute changes in Contract Sum or Contract Times except as otherwise agreed in writing by CLPCCD. RFI-Replies will be issued through the RFI administrative system.

**SAMPLES:** Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and which establish the standards by which such portion of the Work will be judged.

**SHOP DRAWINGS:** All drawings, diagrams, illustrations, schedules and other data or information which are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the work.

**SHOWN:** As indicated on Drawings.

**SITE:** The particular geographical location of Work performed pursuant to Contract, including staging areas, work areas, storage and lay down areas, access and parking.

**SPECIFICATIONS:** The written portion of the Contract Documents consisting of requirements for materials, equipment, construction systems, standards and workmanship for the Work, and performance of related services.

**SPECIFIED:** As written in Specifications.

**SUBCONTRACTOR:** A person or entity who has a direct contract with Contractor to perform a portion of the Work at the site. The term "subcontractor" is referred to throughout the Contract Documents as if singular in number and neuter in gender and means a subcontractor or an authorized representative of the subcontractor. The term "subcontractor" does not include a separate contractor or subcontractors of a separate contractor.

**SUPPLEMENTAL INSTRUCTION:** A written work change directive to Contractor from Maintenance & Operations, ordering alterations or modifications which do not result in change in Contract Sum or Contract Times, and do not substantially change Drawings or Specifications.

**UNDERGROUND FACILITIES:** All pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels or other such facilities or attachments, and any encasements containing such facilities which have been installed underground to furnish any of the following services or

materials: Electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, sewage and drainage removal, traffic or other control systems or water.

**WORK:** The entire completed construction or the various separately identifiable parts thereof required to be furnished under the Contract Documents. Work includes and is the result of performing or furnishing labor and furnishing and incorporating materials and equipment into the construction, and performing or furnishing services and furnishing documents, all is required by the Contract Documents. Wherever the word "work" is used, rather than the word "Work", it shall be understood to have its ordinary and customary meaning.

- A. Wherever words "as directed", "as required", "as permitted", or words of like effect are used, it shall be understood that direction, requirements, or permission of CLPCCD or Maintenance & Operations is intended. Words "sufficient", "necessary", "proper", and the like shall mean sufficient, necessary or proper in judgment of CLPCCD or Maintenance & Operations. Words "approved", "acceptable", "satisfactory", "favorably reviewed" or words of like import, shall mean approved by, or acceptable to, or satisfactory to, or favorably reviewed by CLPCCD or Maintenance & Operations.
- B. Wherever the word "may" is used, the action to which it refers is discretionary. Wherever the word "shall" is used, the action to which it refers is mandatory.

## **PART 2 – PRODUCTS**

Not applicable.

## **PART 3 – EXECUTION**

Not applicable.

**END OF SECTION**

**SECTION 01110  
SITE CONDITIONS**

**PART 1 - GENERAL**

1.01 DESCRIPTION

- A. This section specified procedural requirements for:
  - 1. Maintaining all construction site areas, on the building, and the surrounding grounds;
  - 2. Maintaining quality assurance during the course of work;
  - 3. Identifying actions resulting from atmospheric conditions;
  - 4. Identifying actions necessary for the storage of materials;
  - 5. Identifying responsibilities for field measurements and takeoffs;
  - 6. Identifying existing conditions; required by various sections to amplify, expand and coordinate the information.

1.02 QUALITY ASSURANCE

- A. Contractor shall immediately stop work if any unusual or concealed condition is discovered and shall immediately notify CLPCCD of such condition in writing for correction at the CLPCCD's expense (letter copy to the manufacturer).
- B. All rooftop contamination that is anticipated or that is occurring shall be reported to the manufacturer to determine the corrective steps to be taken.
- C. The Contractor shall verify that all roof drain lines are functioning correctly (not clogged or blocked) before starting work. Contractor shall report any such blockages in writing to the CLPCCD's representative for corrective action prior to installation of the Roof System.
- D. Site cleanup, including both interior and exterior building areas which have been affected by construction, shall be completed to the CLPCCD's satisfaction.
- E. All landscaped areas damages by construction activities shall be repaired at no cost to the CLPCCD.
- F. The Contractor shall cause fastener pullout tests to be conducted in accordance with industry standards to help verify condition of deck/substrate and to confirm expected pullout values.

1.03 ATMOSPHERIC CONDITIONS

- A. Environmental Conditions:
  - 1. Do not proceed with application of polyurethane foam materials when ambient temperature is less than 35 degrees F.
- B. Only as much of the new roofing as can be made weather tight each day, including all flashing and detail work, shall be installed.
- C. All work shall be scheduled and executed without exposing the interior building areas to the effects of inclement weather The existing building, its contents and its operations

shall be protected against all risks.

- D. All surfaces to receive new roofing, or flashing, shall be dry.
- E. All new and temporary construction, including equipment and accessories, shall be secured in such a manner as to preclude wind blow-off and subsequent roof or equipment damage.
- F. Uninterrupted water stops shall be installed at the end of each day's work and shall be completely removed before proceeding with the next day's work.
- G. All costs to the Contractor for protecting, removing, and restoring existing improvements shall be absorbed in their bid.

#### 1.04 STORAGE OF MATERIALS

- A. The Contractor shall take precautions that storage and/or application of materials and/or equipment does not overload the roof deck or building structure.
- B. The Contractor shall follow all safety regulations as required by OSHA and any other applicable authorities having jurisdiction.
- C. All new roofing waste material (i.e. scrap roofing materials) shall be removed from the site daily by the Contractor and properly transported to a legal dumping area authorized to receive such material, in a legal manner.

#### 1.05 FIELD MEASUREMENTS

- A. Before submitting his bid, the Contractor shall visit the project site and **verify conditions, locations and dimensions** of all existing equipment, the structure, and the site conditions that pertain to this installation.
- B. The dimensions shown and the information provided are not represented or guaranteed by the CLPCCD or Consultant as being accurate as to the actual "as built" and present conditions. Bidding Contractor shall verify all conditions at the site and perform all work to complete the project under this contract, regardless of the variations that may be found.
- C. Failure to examine the project building and the site and to become familiar with the existing conditions shall not constitute cause for complaint or claim for extra payment. Contractor agrees to accept project site as it exists.
- D. Contractor shall have **SOLE AND COMPLETE** responsibility for accuracy of all measurements and estimates of material quantities, fitting of components, sizes and dimensions.

#### 1.06 EXISTING CONDITIONS

- A. The Contractor shall furnish and maintain in good condition all equipment and facilities as required for the proper execution and inspection of the work. Such equipment and facilities shall meet all requirements of the applicable ordinances and laws.

- B. Site will be available to Contractor upon receipt of the CLPCCD's written notice to proceed, unless otherwise indicated in these specifications. Care, custody, and control of the site work area, equipment area and material storage area are vested in the contractor during the term of operations under the contract.
- C. Access to roof shall be from exterior only. No roofing employees will be allowed within the building without prior notification of and approved by the CLPCCD Representative.
- D. Means of ingress and egress to buildings shall not be blocked for any reason or hamper the normal operation of the building in any way unless permission is first obtained from the CLPCCD. Fire protection and immediate access for fire fighting equipment must be maintained at all times. Parking equipment or staging materials in a RED curb zone shall be prohibited unless approved in writing by the Fire Marshall and local police.
- E. Precautions shall be taken when using adhesives at or near rooftop vents or air intakes. Adhesives odors could enter the building. Coordinate the operation of vents and air intakes in such a manner as to avoid the intake of adhesive odor while ventilating the building.
- F. It is the CLPCCD's intention that the building will be utilized in the usual manner in accordance with the normal schedule therefore, the Contractor, executing this contract work must schedule his work so as not to interfere with normal activities and shall coordinate his work with the CLPCCD for roof areas over interior spaces having critical requirements. Do not interrupt CLPCCD or tenant operations unless written approval is received from the CLPCCD.
- G. Work that might interfere with the use of the facilities by the CLPCCD shall be accomplished at a time approved beforehand by the CLPCCD.
- H. Coordinate all use of utilities with the CLPCCD. At no time shall utilities be wasted.
- I. Any worker creating a nuisance on the premises shall be discharged by the Contractor.
- J. Disturbing or disruptive noise that interferes with the normal building occupancy will not be permitted. Operations creating noise of this type must be scheduled in advance with the CLPCCD. Radios and tape players are not allowed on the roof or in the storage areas.
- K. Prior to final acceptance, Contractor shall restore all areas affected by his work to the original state of cleanliness and repair all damage done to the premises, including the grounds, by his workmen and equipment.
- L. Prior to start of work Contractor shall perform a thorough inspection of the building interior and exterior noting all existing damage, including past or current leakage. Documentation of this inspection shall be submitted to the CLPCCD's representative prior to beginning work. The Contractor shall be responsible for correction of any subsequent, undocumented damage or leakage.
- M. Protect building contents and grounds during the process of the work. Protect all paving and buildings adjacent to hoist prior to starting work. Windows, doorways, docks, walkways, etc., may require special protection measures.

- N. Contractor must take every precaution to prevent interior leakage, materials from falling into the interior, or other such occurrences.
- O. The Contractor shall prevent access by the public to materials, tools or equipment. The CLPCCD assumes no liability or responsibility whatsoever for any damage, theft, or other acts which occur to the Contractors material or equipment as a result of his negligence.
- P. The Contractor shall be responsible for damage to asphalt parking lots resultant of heavy dumpsters and/or truck loads driving over parking lot areas. Contractor shall obtain written permission for traffic across or placement of heavy loads on pathways.
- Q. The Contractor shall repair or replace all existing improvements which are damaged or removed as a result of his operations and which are not designated for removal (e.g. curbs, sidewalks, driveways, fences, walls, signage, utility installations, pavements, structures, etc.). Repairs and replacements shall be at least equal to existing improvements, and shall match them in finish and dimension.
- R. The Contractor shall cover damages to the building resulting from failure to prevent penetration of water during reroofing.

## **PART 2 PRODUCTS**

NOT USED

## **PART 3 EXECUTION**

### **3.01 ORGANIZATION OF WORK**

- A. Arrange work sequence to avoid use of newly-constructed roofing as a walking surface or for equipment movement and storage. Where such access is absolutely required, the Contractor shall provide all necessary protection and barriers to segregate the work area and to prevent damage to adjacent areas.
- B. Contractor shall check all roof drains prior to start of work in each drainage area to determine if the drain line is plugged or if the drain bowl or any of its components are damaged. Any of these items are to be brought to the attention of the CLPCCD's representative prior to starting work, and will be the CLPCCD's responsibility for correction, unless shown on the roof plan, which in this case the Contractor includes this in his/her bid. Any plugged or damaged drains brought to the attention of the CLPCCD after the work has started will be the responsibility of the Contractor to correct.
- C. Prior to and during application, all dirt, debris and dust shall be removed from surfaces by vacuuming, sweeping, or blowing with compressed air and/or similar methods.
- D. Roofing and flashing shall be installed and sealed in a watertight manner on same day of installation or before arrival of inclement weather.
- E. At the end of each working day, partial installation shall be sealed with water stops along edges to prevent water entry.

- F. Preparation work shall be limited to those areas that can be covered with installed roofing material on same day or before arrival of inclement weather. Phased construction prohibited.
- G. All areas around or on the building premises must be kept well policed daily as the work proceeds. Deposit all trash and debris into trucks or containers daily. All areas where foot traffic is present must be kept safe of debris and trash. All unusable materials removed shall be the responsibility of the Contractor and shall be disposed of away from the job site.
- H. Provide at site prior to commencing removal of debris, a dumpster or dump truck to be located adjacent to building where directed by the CLPCCD. Protect building surfaces at set-up area with tarpaulin. Secure tarpaulin. Remove dumpster from premises when full and empty at approved dumping or refuse area. Deliver empty dumpster to site for further use. Upon job completion, dumpster shall be removed from premises. Spilled or scattered debris shall be cleaned up immediately. Removed material to be disposed from roof as it accumulates.
- I. Arrange work sequence to avoid use of newly constructed roofing for storage, walking surface, and equipment movement. Move equipment and ground storage areas as work progresses.
- J. Special precautions must be taken at all times to ensure the safety of the tenants and employees of the CLPCCD, and the members of the public.

**END OF SECTION**

**SECTION 01340  
SHOP DRAWINGS**

**PART 1 - GENERAL**

The general provisions of the Contract, including General and Supplementary Conditions and the requirements of Division 01, apply to the work specified in this section.

1.01 REQUIREMENTS INCLUDED

- A. Submit shop drawings, product data and samples required by Contract Documents

1.02 RELATED REQUIREMENTS

- A. Conditions of the Contract: Definitions, and Additional Responsibilities of Parties.
- B. Section 01720: Project Documents

1.03 SHOP DRAWINGS

- A. Minimum sheet size: 8-1/2" x 11 inch.

1.04 PRODUCT DATA

- A. Preparation:
  - 1. Clearly mark each copy to identify pertinent products or models
  - 2. Show performance characteristics and capacities
  - 3. Show dimensions and clearances required
  - 4. Show wiring or piping diagrams and controls
- B. Manufacturer's standard schematic drawings and diagrams:
  - 1. Modify drawings and diagrams to delete information which is not Applicable to the work.
  - 2. Supplement standard information to provide information specifically Applicable to the work

1.05 SAMPLES

- A. Office samples shall be of sufficient size and quantity to clearly illustrate:
  - 1. Functional characteristics of the product, with integrally related parts and attachment devise
  - 2. Full range of color, texture and pattern

1.06 CONTRACTORS RESPONSIBILITIES

- A. Review shop drawings, product date and samples prior to submission
- B. Determine and verify:
  - 1. Field measurements
  - 2. Field construction criteria
  - 3. Catalog numbers and similar data

4. Conformance with specifications
- C. Coordinate each submittal with requirements of the work and of the Contract documents.
- D. Contractor shall submit two (2) copies of submitted detail. If approved without change or coercion two (2) approved copies will be furnished to the Contractor. If extensive additions or corrections are required, the Roof Consultant will return one marked up copy to the Contractor.
- E. Notify the District in writing, at the time of submission, of any deviations in the submittals from requirements of the Contract Documents.
- F. Allow four (4) working days in the Consultant's office for shop drawing turn around time.
- G. Begin no fabrication or work which requires submittals until return of submittals with Consultant's review stamp. All work or fabrication started or completed prior to acceptance by the District shall be subject to rejection.

#### 1.07 SUBMISSION REQUIREMENTS

- A. Contractor shall submit to District reviewed shop drawings as called for and/or where product type or application varies from the Contract Documents. If product specification and application conforms exactly to Contract Documents, Contractor shall submit to District a letter stating such, with a copy of each specification detail drawing signed and acknowledged as acceptable for installation.
- B. Shop drawings are required to provide complete dimensions of all metal components, and flashing conditions. These shall be prepared to thoroughly illustrate and depict the condition, component or detail being addressed, and prepared at the contractors expense. Drawings shall be of size and scale to accurately show clearing all necessary details and shall be transmitted by a letter to the Roof Consultant for approval or correction at least ten (10) days before commencing work.
  1. Dimensioned shop drawings which shall include:
    - a. Outline of roof and roof size, indicating location of detail.
    - b. Profile details of flashing methods for penetrations and terminations.
    - c. Technical acceptance from the membrane manufacturer.
- C. Make submittals promptly in accordance with approved schedule and in such sequence as to cause no delay in the work or in the work of any other contractor.
- D. Number of submittals required:
  1. Shop drawings: 3 opaque Reproductions.
  2. Product data: Submit the number of copies which the Contractor requires plus three (3) which will be retained by the District.
  3. Samples: Submit the number stated in each specification section.
- E. Submittals shall contain:
  1. The date of submission and the dates of any previous submissions
  2. The project title and number

3. Contract identification
4. The names of:
  - a. Consultant
  - b. Contractor
  - c. Subcontractor
  - d. Supplier
  - e. Manufacturer
  - f. Separate detailer when pertinent
  - g. Submittal number
5. Identification of the product, with the specification section number
6. Field dimensions, clearly identified as such
7. Relation to adjacent or critical features of the work or materials
8. Applicable standards, such as ASTM or Federal Specifications numbers
9. Identification of deviations from Contractor and Consultant stamps
10. Identification of revisions on resubmittals
11. A 5-inch x 3-inch blank space for Contractor and Consultant stamps
12. Contractor's stamp, initialed or signed, certifying to review of submittal
13. Verification of products, field measurements, and field construction criteria, and coordination of the information within the submittals with requirements of the work and of Contract Documents.
14. Incomplete submittals cannot be reviewed by Consultant.

#### 1.08 RE-SUBMISSION REQUIREMENTS

- A. Make any corrections or changes in the submittals required by the District and resubmit until approved.
- B. Shop drawings and product data:
  1. Revise initial drawings or data and resubmit as specified for the initial Submittals.
  2. Indicate any changes which have been made other than those requested by the District.
- C. Samples: Submit samples as required for initial submittal
- D. Any re-submission reviews due to incomplete submittals or lack of compliance with Documents shall be billed to the District at the rate of \$150.00 per hour, and The District will deduct these charged from the Contract on a monthly basis. Minimum charge for handling such a shop drawing re-submittal will be \$75.00.

#### 1.09 OWNER / CONSULTANT DUTIES

- A. Review submittals with reasonable promptness and in accordance with schedule. In general, allow for a five (5) working day turn around period.
- B. Affix stamp and initials or signature, and indicate requirements for resubmittal or approval of submittals.
- C. Return submittals to Contractor for distribution or for resubmission.

### **PART 2 - PRODUCTS**

NOT USED

**PART 3 - EXECUTION**  
NOT USED

**END OF SECTION**

**SECTION 01400**  
**QUALITY REQUIRMENTS**

**PART 1 - GENERAL**

1.01 DESCRIPTION

- A. Work Included:
  - 1. Provide assurances to the District that the work proceeds according to specifications.
  - 2. Use, location, provisions of the Specifications and Plans.
  - 3. Applicable codes and authorities.
  - 4. Roof system sampling.
  
- B. Related work:
  - 1. Documents affecting work of this Section including, but are not Necessarily limited to General Conditions, Supplementary Conditions, and Sections in Division 01 of these Specifications.

1.02 RELATED SECTIONS

- A. SITE CONDITIONS: Section 01110
  
- B. SHOP DRAWINGS - PRODUCT DATA - SAMPLES: Section 01340
  
- C. PRODUCT REQUIREMENTS: Section 01600

1.03 GENERAL

- A. Application standards:
  - 1. Regulatory Requirements
    - a. California Building Code, most current edition as adopted and amended by the State of California.
  - 2. ASTM E108, Class "A".
  - 3. Sheet Metal and Air Conditioning Contractors National Association (SMACNA): Architectural Sheet Metal Manual (Latest Edition).
  - 4. Underwriter's Laboratories (UL): 790 Fire Resistance of Roof Assemblies.
  - 5. Factor Mutual Global (FMG) Loss Prevention Date for Roofing Contractors.
  
- B. Roofing systems shall be applied only by Contractors authorized by the membrane manufacturer prior to advertised Notice to Contractors. The Roofing Contractor shall have at least five (5) years of experience as an applicator with the submitted manufacturer as certified by the manufacturer
  
- C. Upon completion of the installation, and the delivery to the District and membrane manufacturer by the Contractor of a certification that all work has been done in strict accordance with the contract specifications and the membrane manufacturer's requirements, an inspection shall be made by a technical representative of the membrane manufacturer to observe the completed roof system.

- D. There shall be no deviation made from the contract specification or the approved shop drawings without prior written approval by the District, the District's representative, and the membrane manufacturer.
- E. All work pertaining to the installation of the Roof Membrane and Flashing shall only be completed by Contractor personnel trained and authorized by the membrane manufacturer in those procedures.
- F. Manufacturer Experience & Formulation:
  - 1. The manufacturer shall have a minimum of 15 years of experience in the production with no formulation changes.
  - 2. Membrane to have no formulation changes in the last fifteen (15) years as certified by the manufacturer.

#### 1.04 PROJECT MEETINGS

- A. Pre-Construction Conference:
  - 1. Shall be scheduled by the District within fifteen (15) days after Notice To Proceed.
    - a. In attendance: Representative of the District, roofing material manufacturer, Contractor and the District's consultant.
    - b. Contractor is to coordinate and shall have membrane manufacturer, subcontractors attend the preconstruction meeting, trades affected include, but is not limited to: roofing, electrical, plumbing, decking, sheet metal, as applicable.
    - c. Shall have an agenda consisting of:
      - (1.) Submittal of insurance certificates.
      - (2.) Execution of District - Contractor Agreement.
      - (3.) Distribution of Contract Documents.
      - (4.) Submittal of list of subcontractors, material submittals, and progress schedule.
      - (5.) Designation of responsible personnel (superintendent and foremen names and pager numbers).
      - (6.) Walk-over inspection of roof conditions.
      - (7.) Designate work and material staging areas.
      - (8.) Review of warranties.
      - (9.) Review of Submittals for all materials to be used on the project.
      - (10.) Review of Contractor's safety program for workers and materials.
- B. Initial Roof Inspection: The application contractor, the Consultant, and the manufacturer's representative shall inspect the entire roof area prior to application of any material. This initial inspection shall be made to verify that all surfaces have been prepared properly as specified.
- C. Progress Meetings:
  - 1. Shall be scheduled by the District Representative weekly.
  - 2. Attendance: District's Representative, District's Consultant, Contractor, job superintendent, and subcontractors, as appropriate.
  - 3. Minimum Agenda:

- a. Review of Work progress;
- b. Field observations, problems, and decisions;
- c. Identification of problems which impede planned progress;
- d. Maintenance of progress schedule;
- e. Corrective measures to regain projected schedules;
- f. Planned progress during succeeding work period;
- g. Coordination of projected progress;
- h. Maintenance of quality and work stands;
- i. Effect of proposed changes on progress schedule and coordination;
- j. Other business relating to work;

D. Final Inspection:

- 1. Will be scheduled by Contractor with the Material Manufacturer and consultant upon completion:
  - a. Prior to, during installation and at completion of the installation, an inspection shall be made by a representative of the manufacturer in order to ascertain that the roofing system has been installed according to their published specifications, standards and details.
  - b. This final inspection shall be conducted for the sole purpose of determining whether the protective coating is free from pinholes and if the proper dry mil thickness has been achieved by the contractor. If any deficiencies exist, correct as directed by the protective coating manufacturer and an additional inspection shall take place.
- 2. Attendance: CLPCCD's Representative, CLPCCD Consultant, Contractor, SPF material manufacturer and protective coating manufacturer representative.
- 3. Minimum Agenda:
  - a. Walk-over roof inspection.
  - b. Identification of problems which may impede issuance of manufacturer's warranty.
  - c. Discussion of steps to be taken to correct all deficiencies necessary to comply with this specification.
  - d. Walk-over grounds inspection.

1.05 QUALITY CONTROL

- A. Initial Roof Inspection: The application contractor, the Consultant, and the coating manufacturer's representative shall inspect the entire roof area prior to application of any material. This initial inspection shall be made to verify that all surfaces have been prepared properly as specified.
- B. All work shall be in accordance with Documents No. AY102 and AY104 published by the Spray Polyurethane Foam Alliance (SPFA). Where conflict exists between SPFA and CLPCCD specifications the more stringent requirements shall apply.
- C. Coating application shall result in providing a solid continuous dry film fully adhered to the SPF surface. Air bubbles within dried film (coating) shall be considered unacceptable and cause for rejection. Additional coating shall be applied over the coating containing air bubbles to achieve the specified dry film thickness (DFT).

- D. Wheeled or other traffic over the partially or fully complete roof system shall not be permitted without the use of adequate protection, as determined by the manufacturer issuing the warranty for the polyurethane roofing system.
1. Roof deck surfaces shall be inspected and approved by the Quality Controller prior to initiating roof work. The roof deck and surfaces to receive primer and/or SPF materials shall be smooth and firm, and shall be free from ice, frost, surface moisture, dirt, projections, asphaltic, and other foreign materials.
  2. All required sheet metal accessories such as foam stops, scupper boxes, pitch pans, antennae anchors, drain basins, pipe flashing, etc., must be in place prior to the application of any primer or foam materials. All metal surfaces to which foam or primer materials are to be applied must be free of corrosion, loose particles, grease, oil, and moisture.

#### 1.06 AUTHORITIES

- A. The Consultant has the following authority:
1. To interpret the plans and specifications.
  2. To make minor changes in the location of features of the work where no change in cost is involved.
  3. To approve substitutes for material and equipment specified by propriety names when such material and equipment meet the contract documents and criteria.
  4. To approve shop drawings and submittals.
  5. To issue stop work orders when necessary to enforce the provisions of the contract.
  6. To make determinations of each working day to be charged against the contract time.
  7. To receive all correspondence and other documents pertaining to the scope of work from the contractor.
  8. To approve progress and final payments under the contract, including the provisions for withholding funds.
  9. To approve the substitution of a subcontractor, where allowed by law, if the listed subcontractor does not object when notified.
- B. Observer may be assigned to the project by the Consultant. Substitute observers may be used during the absence of the assigned observer. The observer has the following authority:
1. To view the work, ample and test components, and to discuss the work with the contractors field representative.
  2. To determine compliance with the plans, specifications, and other contract documents. He may issue warnings of non-compliance.
  3. To issue stop work notices only in the instance where the operation in progress, if continued for even a short period of time, could be adverse to the Districts interests.

#### 1.07 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Deliver only approved materials to the job site. Deliver materials in original sealed containers with seals unbroken and labels legible and intact. Each container of SPF, and each container of fluid applied waterproofing shall have a U.L. Listing mark or Classification Marking affixed to the side. Manufacturer's product shall be periodically inspected in accordance with U.L.'s Follow-Up Service Requirements.
- B. Materials shall be delivered in sufficient quantities so as not to cause delays in the work.
- C. Contractor for work under this section shall be responsible for storage and protection of all materials required. Store materials in a place which has been specifically assigned for that purpose. Do not store materials on the roof. Materials shall be protected from the weather and out of the direct rays of the sun. Materials shall be stored in a manner so as not to exceed the manufacturer's temperature limitations. In all cases, the storage and handling of materials shall conform to the requirements of the manufacturer and the applicable safety regulatory agencies.
- D. MSDS Posting: Where barrels of material are stored, clearly post all applicable MSDS data for all materials stored. MSDS shall be posted on a self supporting panel not less than 4'x4', painted white with letters 10" tall 1" wide, in black which read "MSDS". ALL MSDS data sheets shall be protected from the moisture and wind, mounted on the panel and be readily available and removable for inspection and review. Place panel directly in front of barrel storage.
- E. Material containers shall not be removed from the job site until final completion and/or until so authorized by the consultant. All waste materials and debris shall be cleaned up daily, and disposed of at an approved landfill.
- F. Any damaged materials or materials not conforming to the specified requirements shall be rejected by the consultant. Rejected materials shall be immediately removed from the job site and be replaced at no additional cost to the CLPCCD.

## 1.08 PLANS AND SPECIFICATIONS

- A. General:
  - 1. The Contractor shall keep at the work site a copy of the plans and specifications, to which the Consultant shall have access at all times.
  - 2. The plans, specifications, and other documents are intended to be complementary and cooperative and to describe and provide for a complete project. Anything in the specifications and not in the plans, or in the plans and not in the specifications, shall be as though written or shown in both.
  - 3. The Contractor shall upon discovering any error or omissions in the specifications immediately call it to the attention of the Consultant.
  - 4. The division of the plans into parts and into sections and parts are for the ease of reference only and does not imply the division of work between trades or Subcontractors. Captions accompanying specification sections, parts, and paragraphs are for convenience of reference only and do not limit the content of such section, part, or paragraph.

5. **No Contractor whose bid is accepted, shall substitute any person or firm as a Subcontractor in place of a licensed Subcontractor listed in the original bid other than for cause, and by procedures without prior written approval from the District.** Similarly no Subcontractor may be employed on this project which is not listed on the Subcontractor form submitted with the Bid.
6. Where a specialty Contractors license is required by law, or by the specification, in order to perform certain portions of the work, the Contractor may perform such portion with his own forces only if he holds a proper license. Otherwise, he shall employ a properly licensed Subcontractor to perform that portion of the work.

B. Precedence of contract documents:

1. If there is a conflict between documents, the document highest in precedence shall control. The precedence shall be:  
First: Specifications  
Second: Plans  
Third: Permits from codes as may be required by law
2. Change orders, supplemental agreements and approved revisions to plans and specifications will take precedence over 2 and 3 above. Detailed plans shall take precedence over general plans.

**PART 2 - PRODUCTS**

NOT USED

**PART 3 - EXECUTION**

3.01 RANDOM SAMPLING

A. Roofing Material

1. 3" round core samples or 3" long by 1" deep slit samples as directed by the Consultant. Repair in accordance with manufacturer requirements.

**END OF SECTION**

**SECTION 01500**  
**TEMPORARY CONSTRUCTION FACILITIES**

**PART 1. GENERAL**

1.01 SECTION INCLUDES

- A. Temporary Utilities: Electricity, Lighting, Telephone Service, Water, and Sanitary Facilities.
- B. Temporary Controls: Barriers, Enclosures and Fencing, Protection of the Work, and Water Control.
- C. Construction Facilities: Parking, Project Signage, and Temporary Buildings.

1.02 RELATED SECTIONS

- A. None

1.03 TEMPORARY ELECTRICITY

- A. Provide power outlets for construction operations.

1.04 TEMPORARY LIGHTING

- A. Provide, maintain, and pay for lighting as required to maintain specified conditions for construction.

1.05 TEMPORARY VENTILATION

- A. None.

1.06 TELEPHONE SERVICE

- A. Foreman shall have cell phone and number shall be made available to CLPCCD staff and Consultant.

1.07 TEMPORARY SANITARY FACILITIES

- A. Provide and maintain CAL OSHA required portable facilities and enclosures.
- B. At end of construction, return facilities and restore grounds to same or better condition than originally found.

1.09 BARRIERS

- A. Provide barriers to prevent unauthorized entry to construction material storage areas, to allow for District's use of site, and to protect existing facilities and adjacent properties from damage from construction operations.

- B. Protect non-company owned vehicular traffic, stored materials, site and structures from damage.
- 1.10 FENCING
- A. Provide 72" high continuous barricade around all ground equipment, and material storage areas.
- 1.11 EXTERIOR ENCLOSURES
- A. None
- 1.13 INTERIOR ENCLOSURES
- A. None.
- 1.14 PROTECTION OF INSTALLED WORK
- A. Protect installed Work and provide special protection where specified in individual specification Sections.
  - B. Provide temporary and removable protection for installed roofing. Control activity in immediate work area to restrict traffic over new membrane.
  - C. Prohibit traffic from landscaped areas.
- 1.15 SECURITY
- A. Contractor shall be solely responsible for security of all tools, equipment, and materials stored on site.
- 1.16 PARKING
- A. Limited number of marked company vehicles will be allowed to park next to the build during work hours. Employee personal vehicles may be allowed to park on District property with special permit.
  - B. Trucks over 2 ton GVW must have individual specific approval to drive on campus. Coordinate with Maintenance Director
- 1.17 PROJECT IDENTIFICATION
- A. No Contractor signage (other than on vehicles) shall be permitted on District property.
- 1.18 MSDS POSTING
- A. MSDS Posting: Where barrels of material are stored, clearly post all applicable MSDS data for all materials stored. MSDS shall be posted on a self supporting panel not less than 4'x4', painted white with letters 10" tall 1" wide, in black which read "MSDS". ALL MSDS data sheets shall be protected from the moisture and wind, and be readily

available and removable for inspection and review. Place panel directly in front of barrel storage.

1.19 FIELD OFFICES AND SHEDS

A. None

**PART 2 - PRODUCTS**  
NOT USED

**PART 3 - EXECUTION**  
NOT USED

**END OF SECTION**

**SECTION 01600  
PRODUCT REQUIREMENTS**

**PART 1 - GENERAL**

**1.0 SUMMARY**

- A. Related Documents: Conditions of the Contract, this Section and other sections of Division 1 - General Requirements, and Drawings apply to entire Work of the Contract.
- B. Related Sections:
  - 1. Section 01500 - Temporary Facilities and Controls: Protection of installed work.

**1.2 QUALITY ASSURANCE**

- A. Contract is based upon products and standards established in Contract Documents without consideration of proposed substitutions.
- B. Products specified define standard of quality, type, function, dimension, appearance and performance required.
- C. Substitution Proposals: Permitted for specified products, except where specified otherwise.
  - 1. Do not substitute products unless substitution has been accepted and approved in writing by Owner.

**1.3 PRODUCT OPTIONS**

- A. Products Specified by Reference Standards: Select any product by any manufacturer which can be shown to comply with referenced documents. Evidence of compliance will be required at time of product data or shop drawing submittals.
- B. Products Specified by Naming Several Products: Select any product named, pending compliance with specified performance criteria.
- C. Acceptable Product: Term used to assist user in locating specified product and not intended to denote sole source for product specified. Acceptable product listed denotes typical product by one of listed acceptable manufacturers. Products by other listed manufacturers meeting or exceeding characteristics of listed product and specified performance criteria may be used without following substitution procedures.
- D. Products Specified by Naming One Manufacturer's Model or Performance Criteria with Reference to Other Acceptable Manufacturers: Products of other listed manufacturers shall meet or exceed characteristics of model number listed and other specified performance criteria. Products by other listed manufacturers meeting or exceeding characteristics of listed product and other specified criteria may be used without following substitution procedures.
- E. Products Specified by Naming One Product or Indicating Option of Selecting Equivalent Products by Stating "Equivalent to", "or Other Acceptable Manufacturers", or Other Similar Language:

- F. Products Specified by Naming Only One Product Followed By "No Substitutions", Or Other Similar Language: There is no option. The District has determined that the product/s specified is necessary to match existing materials, performance, dimension, and aesthetics

## 1.5 TIME OF SUBSTITUTION REQUESTS

- A. Within 5 work days before bid date, Consultant will consider formal substitution requests from Licensed Contractors only. No requests for substitutions will be accepted after that time without Owner's authorization and with following stipulation.
- B. Consultant will record time required for evaluating substitutions proposed by Contractor after time period indicated above, and for making changes in the Contract Documents. Whether or not Consultant accepts Contractor proposed substitution, Contractor shall reimburse Owner for charges of Consultant and Consultant's consultants for evaluating each proposed substitution.
- C. No additional substitutions will be considered after this initial process unless a substitution is required due to specified product being removed from or unavailable in market place.

## 1.6 SUBSTITUTION PROCEDURES

- A. Limit each request to one proposed substitution.
- B. When a particular make or trade name is specified, it shall be indicative of the type and standard required and is in no way done to restrict completion. All other products of verifiable equality or superiority will be considered.
- C. Contractors wishing to submit a product for consideration and evaluation by the Owner as an equal to materials called out in the contract specifications and documents must do so at least **5 work days prior to the bid date**. Only products approved and acknowledged through written addendum shall be recognized. In order to properly evaluate various proposals for alternate materials that Bidders may submit to the Owner for their consideration, the following submittals are required, and if approved, must accompany each Bidder's bid package. These submittals, by their inclusion, become part of the Contract Documents. Failure to include any or all of these documents shall result in rejection of the Bidder's proposal. Any request for approval must be accompanied by all the following information. All required submittals shall be submitted in duplicate for Owner's and Roof Consultant's review in two complete packages. If the Owner approves such substitution, and addendum of such approval will be FAXED to each bidder of record, in order that every bidder may have equal opportunity to base his bid on the approved substitution. **When bidding materials as specified indicate "materials as specified" on the BID Form and the following items need not be submitted.**
  - 1. Written application with explanation of why it should be considered.
  - 2. Sample of every membrane adhesive, fastener, mastic, or sealant.
  - 3. Copies of Underwriter's Laboratories 790 Classification Cards for the proposed single ply membrane system.
  - 4. Manufacturer's Warranty Specimen showing specified term.

5. Manufacturer's Minimum coating thickness Requirements.
  6. Laboratory analysis indicating compliance with the specified properties of the materials signed by an officer of the manufacturing company/ies.
  7. A list of 20 projects within 50 miles on which the identical materials submitted for approval have been used, showing at least 10 projects which are at least ten (10) years old.
    - a. Provide written approval from the manufacture for slits to be taken from the warranted projects during a visit by the manufacturer's representative and the District Consultant.
  8. Itemized point-by-point comparison of proposed substitution with specified product, listing variations in quality, performance and other pertinent characteristics.
  9. Copies of all relevant product literature which indicate more than one product or system on a sheet shall be clearly marked to indicate the only applicable item. Non-applicable materials shall be crossed out.
  10. Cost data comparing proposed substitution with specified product and amount of net change to Contract Sum.
  11. Changes required in other Work.
  12. A detailed statement by the manufacturer issuing the Warranty describing what criteria is used to approve the applicator status of an installing contractor, with a statement indicating the length of time the Contractor has been an approved applicator for the manufacturer.
  13. Other information as necessary to assist Consultant's evaluation.
  14. Certificate of Compliance and Compatibility of Materials from the Manufacturer issuing the Warranty signed by an officer of the company, which states the following: *"The specifications have been fully reviewed for compatibility of all materials and fitness of purpose, and the specified system is fully compliant with our requirements for issuance of the specified warranty for conditions and term. We will issue said warranty upon completion of work in compliance with the specifications and when full payment has been received for all material and warranty invoices"*.
- D. All tests of materials shall be completed by National Voluntary Laboratory Accreditation Program (NVLAP) laboratory or by lab accepted by the Owner prior to testing.
- E. All costs for tests to verify equality and conformance with specified materials shall be born by submitting contractor.
- F. A request for substitution constitutes representation that the Contractor:
1. Has investigated proposed product and determined that it is equal or superior in all respects to specified product.
  2. Will provide identical warranty as required for specified product.
  3. Will coordinate installation and make changes to other Work which may be required.
  4. Waives claims for additional costs or time extension which may subsequently become apparent.
  5. Certifies that proposed product will not affect or delay Construction Progress Schedule.
  6. Will pay for changes to building design, including architectural or engineering design, detailing, and construction costs caused by the requested substitution.

- G. Substitutions will not be considered when:
1. Indicated or implied on Shop Drawings or Product Data submittals without formal request submitted in accordance with this Section. Substitution Requests may be submitted at the same time as Product Data and Shop Drawing submittals, but time established for Consultant review of submittals will not commence until review of substitution has been completed.
  2. Submittal for substitution request has not been reviewed and approved by Contractor.
  3. Acceptance will require substantial revision of Contract Documents or other items of the Work.

## **1.7 CONSULTANT'S AND OWNER'S REVIEW**

- A. Consultant will review requests for proposed substitutions and make recommendations to Owner in 3 working days.
- B. Considerations for acceptance will be based on conformance with Contract Documents, including following as applicable:
1. Physical dimension and clearance requirements to satisfy space limitations.
  2. Static and dynamic weight limitations; structural properties.
  3. Interchangeability of parts or components.
  4. Design.
  5. Colors, textures, and finishes.
  6. Compatibility with other materials, products, assemblies, and components.
- C. Owner's decision to approve or reject requested substitution will be indicated on Substitution Request Form. Approval of substitution not valid without Owner's signature.
- D. Rejection of proposed substitution by Owner requires use of specified product.

## **1.8 DELIVERY, STORAGE, AND HANDLING**

- A. Delivery: Arrange deliveries in accordance with construction progress schedules. Schedule deliveries to allow adequate time for product inspection prior to installation. Schedule shall also take into consideration and allow adequate time for reordering of products damaged during delivery or do not meet Contract requirements.
1. Coordinate to avoid conflict with Work and conditions at site.
  2. Deliver products in undamaged condition, in manufacturer's original unopened containers or packaging, with identifying labels intact and legible.
  3. Promptly inspect shipments to ensure that products comply with requirements, quantities are correct, and products are undamaged.
- B. Storage: Store and protect products in accordance with manufacturer's instructions with labels intact and legible.
1. Store environmentally sensitive products in weather tight, climate controlled enclosures.
  2. Provide off site storage and protection when site does not permit on site storage.
  3. Protect and cover products subject to deterioration with impervious sheet covering. Provide ventilation to avoid condensation.

4. Arrange storage to permit access for inspection. Periodically inspect to ensure products are undamaged and are maintained under specified conditions.
  5. Store loose granular materials on solid flat surfaces in well-drained area. Prevent contamination with other materials.
- C. Handling: Handle products in accordance with manufacturer's instructions.
1. Do not load structure during construction by storing products with load greater than structure is calculated to safely support.
  2. Provide equipment and personnel to store products by methods to prevent soiling, disfigurement, or damage.
- D. Do not use products in Work which have deteriorated, become damaged, or are otherwise unfit for use.

## **PART 2 - PRODUCTS**

### **2.1 MANUFACTURERS**

- A. Confirm manufacturer's production capacity is capable of providing sufficient product, on time, to meet project requirements.

### **2.2 PRODUCTS**

- A. Products: Comply with specified requirements and reference standards as minimum requirements.
- B. Components Supplied in Quantity within Specification Section: Same, interchangeable, and of one manufacturer.
- C. Products: New unless otherwise specified, free of defects and of types specified.
1. Hazardous Materials: Do not furnish or install materials which contain asbestos, lead, chromates, PCB's, or other known materials or components which will create hazards to health or property.
  2. Do not use materials and equipment removed from existing structure, except as specifically required, or allowed, by Contract Documents.
  3. Container Labels: Include the following on label of each container:  
Manufacturer's name, product name, type and class of material, density of foam, Underwriters Laboratories, Inc. classification issue number, batch or lot number, mixing instructions, and precautions. Containers without the U.L. listing mark or classification marking or products not subject to the U.L. follow-up service will be rejected at the job site.

## **PART 3 - EXECUTION**

### **3.1 PRODUCT INSTALLATION**

- A. General: Install, erect, connect, condition, use, adjust, and clean products in accordance with manufacturer's instructions and in conformity with specified requirements.

1. Verify and coordinate clearances, dimensions and installation of adjoining construction, equipment, piping, ducts, conduits, or other mechanical or electrical items or apparatus.
  2. Prior to fabrication, field measure actual existing conditions to ensure proper fit.
  3. Inspect each item of material or equipment immediately prior to installation. Reject damaged and defective items.
  4. Recheck measurements and dimensions of Work, as an integral step of starting each installation. Whenever stock manufactured products are specified, verify actual space requirements for setting or placing into allotted space. No extra cost will be allowed for adjustment of Work to accommodate particular product.
- B. Attachment: Provide attachment and connection devices and methods for securing work to withstand stresses, vibration, physical distortion, disfigurement, or racking.
1. Secure work true to line and level, and within specified tolerances, or if not specified, industry recognized tolerances.
  2. Physically separate, provide electrical insulation, or provide protective coatings to prevent galvanic action or corrosion between dissimilar metals.

**END OF SECTION**

**SECTION 01720  
PROJECT DOCUMENTS**

**PART 1 - GENERAL**

1.01 The general provisions of the Contract, including General and Supplementary Conditions and the requirements of Division 01, apply to the work specified in this section.

1.02 REQUIREMENTS INCLUDED

- A. Maintain at the site during the entire period of work for the District one record copy of:
  - 1. Drawings
  - 2. Specifications
  - 3. Addenda
  - 4. List of all material (adhesives, insulation & membrane) batch or lot numbers used on the project
  - 5. Change Orders and other modifications to the Contract
  - 6. Consultant Field Orders or written instructions
  - 7. Approved shop drawings, product data and samples
  - 8. Field test records
  - 9. Construction photographs

1.03 RELATED REQUIREMENTS

- A. Shop Drawings / Product Data / Samples - SECTION 01340

1.04 MAINTENANCE OF DOCUMENTS AND SAMPLES

- A. Maintain documents in a clean, dry, legible condition and in good order. Do not use record documents for construction purposes.
- B. Make documents and samples available at all times for inspection by Consultant.

1.05 PLANS AND SPECIFICATIONS

- A. General:
  - 1. The Contractor shall keep at the worksite a copy of the plans and specifications, to which the Consultant shall have access at all times.
  - 2. The plans, specifications, and other documents are intended to be complementary and cooperative and to describe and provide for a complete project. Anything in the specifications and not in the plans, or in the plans and not in the specifications, shall be as though written or shown in both.
  - 3. The Contractor shall upon discovering any error or omissions in the specifications, immediately call it to the attention of the Consultant. The division of the plans into parts and into sections and parts are for the ease of reference only and does not imply the division of work between trades or Subcontractors. Captions accompanying specification sections, parts, and paragraphs are for convenience of reference only and do not limit the content of such section, part, or paragraph.
  - 4. No Contractor, whose bid is accepted, shall substitute any person as a

Subcontractor in place of a licensed Subcontractor listed in the original bid other than for cause, and by procedures without prior written approval from the District.

5. Where a specialty Contractors license is required by law, or by the specifications, in order to perform certain portions of the work, the Contractor may perform such portions with his own forces only if he holds a proper license. Otherwise, he shall employ a properly licensed Subcontractor to perform that portion of work.

B. Precedence of contract documents:

1. If there is a conflict between documents, the document highest in precedence shall control. The precedence shall be:
  - First: Specifications
  - Second: Plans
  - Third: Permits from codes as may be required by law
2. Change orders, supplemental agreements and approved revisions to plans and specifications shall take precedence over 2 and 3 above. Detailed plans shall take precedence over general plans.

1.06 RECORDING

- A. Label each document "PROJECT RECORD" in neat, large, printed letters.
- B. Record information concurrently with construction progress.
- C. Drawings: Legibly mark to record actual construction:
  1. Field changes of dimension and detail
  2. Changes made by Field Order or by Change Order
  3. Details not on original contract drawings
- D. Specifications and addenda: Legibly mark each section to record:
  1. Manufacturer, trade name, catalog number, and supplier of each product and item of equipment actually installed
  2. Changes made by Field Order or by Change Order

1.07 SUBMITTAL

- A. Accompany submittal with transmittal letter in triplicate, containing:
  1. Date
  2. Project title and number
  3. Contractor's name and address
  4. Title and number of each Record Documents
  5. Signature of Contractor or his authorized representative

**PART 2 - PRODUCTS**

NOT USED

**PART 3 - EXECUTION**

NOT USED

**END OF SECTION**

**SECTION 01740  
WARRANTIES AND BONDS**

**PART 1 - GENERAL**

1.01 DESCRIPTION

- A. Final Inspection to be conducted by the CLPCCD's Roof Consultant accompanied by the Contractor. Any deficiencies found shall be corrected by applicator at no cost to the CLPCCD prior to issuance of Warranty. If re-inspection is required of the roof consultant by the CLPCCD, cost of the Consultant shall be paid by contractor.
- B. The Contractor shall provide CLPCCD a two (2) year workmanship Warranty at the completion of this work to cover repair of leaks due to faulty workmanship, to become effective when all of the Contractor's invoices have been paid. The warranty shall have a starting date when substantial completion was noticed by the Contractor to CLPCCD .
  - 1. Upon completion of installation of the roof system, submit executed contractor's Warranty to receive final retention funds held.
  - 2. Under the terms of the warranty, damage to the roof system caused by acts of God or man made mechanical damage shall be the responsibility of the District and repaired by the contractor.
- C. Provide a written ten (10) year Warranty from the Coating Manufacturer to the CLPCCD which shall cover the completed SPF roof system against defects in materials and/or installation labor which results in leaks. Additionally for the first five (5) years of the warranty period, defects in materials and/or installation labor which result in blisters that occur in the SPF or coating or in the bond between the SPF and coating shall be repaired by the Coating Manufacturer at no cost to the CLPCCD. The Coating Manufacturer's exclusive remedy to repair defects shall limited to providing complete labor and materials as necessary to remove all blisters and install new SPF and coating in compliance with these project specifications.
  - 1. The roof shall be inspected annually, within 30 days of the anniversary of the warranty date. A written report documenting the observations made during that inspection shall be submitted to the District and Amtech Building Sciences within 30 of the inspection.
  - 2. Upon completion of installation of the roof system, submit executed manufacturer's Warranty to receive final retention funds held.
  - 3. Under the terms of the warranty, damage to the roof system caused by acts of God or man made mechanical damage shall be the responsibility of the CLPCCD and repaired by the manufacturer or contractor or their approved designate.
- D. Final Inspection to be by the CLPCCD's Roof Consultant. Any deficiencies found shall be corrected by applicator at no cost to the CLPCCD prior to issuance of Warranty. If re-inspection is required of the roof consultant by the CLPCCD, cost of the Consultant shall be paid by contractor.
- E. Bonds required for this project shall be set forth in the CLPCCDs General Conditions.
- F. Provide completed and fully executed and notarized copies of the following:
  - 1. **MANUFACTURER'S PROJECT ACKNOWLEDGMENT NOTICE** - At start of project

2. **ROOFING MANUFACTURER ADVANCE ACKNOWLEDGMENT OF WARRANTY ADDENDUM** - At start of project
3. **ROOFING APPLICATOR GUARANTY FOR ROOFING** - At start of project
4. **CONTRACTOR'S FINAL STATEMENT OF COMPLIANCE**
5. **MANUFACTURER'S ADVANCE ACKNOWLEDGMENT EMERGENCY REPAIR AGREEMENT** - At start of project

G. Related work:

1. Documents affecting work of this Section are not necessarily limited General Conditions, Supplementary Conditions, and Sections in Division 01 of these Specifications.

**PART 2 - PRODUCTS**

A. Warranty Plaques

1. Upon final acceptance of this work, the contractor shall provide and install one laser engraved, 8"x 10" anodized BLACK aluminum plaque for each roof location with the following text:

**THIS ROOF IS UNDER WARRANTY UNTIL  
Month XX, 20XX  
Warranty No. Xxxxx xxxx  
by (manufacturer name & phone 800#)  
City, State, Telephone Number**

**DO NOT MAKE REPAIRS OR ALTERATIONS TO THIS ROOF**

WITHOUT APPROVAL FROM THE  
**(Name of Manufacturer)**

Roof installed by (name & phone # of contractor)

Amtech Building Sciences, Inc., (972) 690-6044

2. Final text size and copy shall be approved by the District.
3. Mounting location of the plaque/s shall be at the direction of the District.

**PART 3 - EXECUTION**

NOT USED

**END OF SECTION**

See attached forms - 9 pages  
Consultants, Inc.

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**MANUFACTURER’S PROJECT ACKNOWLEDGMENT NOTICE**

Whereas \_\_\_\_\_ herein called the “Manufacturer” hereby gives notice to:

**Chabot Las Positas Community College Dist., 5020 Franklin Drive, Pleasanton, CA 94588**

For the Project: **Las Positas College - SPF Roof Replacement, Bldgs. 300/600/1300**

The Manufacturer hereby gives notice that the Manufacturer has visited the Project, reviewed the existing conditions, reviewed the Project's contract specifications, and that the construction documents incorporating the Manufacturer's \_\_\_\_\_ roofing system(s) or product(s) can be installed in accordance with the contract documents and gives notice of their intent to issue a roof warranty, per the attached pages, to the Owner for the Project.

The Manufacturer hereby gives notice, per the attached pages, of a detailed list of the Manufacturer's roofing system(s) components and products that are included in the roof warranty, and a list of secondary products that are acceptable to the Manufacturer for incorporation into the roof warranty.

The Manufacturer hereby gives notice to provide the manufacturer’s field inspection and services per the Contract Documents.

The Manufacturer hereby gives notice of \_\_\_\_\_ as a qualified installer of the Manufacturer's roofing system listed (shown) above and eligible to provide the roof guarantee, per the attached pages.

By signing below, the Authorized Representative of said Manufacturer certifies and represents that he is a full-time employee of the Manufacturer with the authority to make the above representations to the Owner.

By: \_\_\_\_\_  
Signature of Authorized Representative / Date

\_\_\_\_\_  
Printed Name of Authorized Representative

Sworn to and subscribed before me this \_\_\_\_ day of \_\_\_\_\_, 2010.

\_\_\_\_\_  
(Signature of Notary Public)

\_\_\_\_\_  
(Print, Type or Stamp Commissioned Name of Notary Public)

Personally Known \_\_\_ OR Produced Identification \_\_\_ Type of Identification Produced \_\_\_\_\_

*Submit executed copy with Submittal Package prior to start of work*



*Submit executed copy with Submittal Package prior to start of work*

**ROOFING MANUFACTURER ADVANCE ACKNOWLEDGMENT OF WARRANTY  
ADDENDUM**

Whereas (Roofing Manufacturer)

\_\_\_\_\_

(Address)

\_\_\_\_\_

hereby guarantees to the Owner that, subject to the terms and conditions set forth, in the Warranty No. \_\_\_\_\_ to be issued upon satisfactory completion of this project and with all Contractor's invoices paid, will make repairs and/or replacements to the below listed as necessary to correct leaks and defects while this Warranty is in effect.

- A. The spray polyurethane foam (SPF), coating, and related materials
- B. Repair blisters in the SPF or coating for the first five (5) years of the Warranty.
- C. Acknowledge the Owner's right to make emergency repairs without violating the warranty, provided that the Manufacturer is notified of any leak or defect within ten (10) days of discovery of said leak or defect.
- D. Acknowledge that written reports by the Owner or Contractor and resulting maintenance are sufficient to fulfill the periodic inspection requirements of the warranty, if required.

By: \_\_\_\_\_

Date: \_\_\_\_\_

*Submit executed copy with Submittal Package prior to start of work*



## **MANUFACTURER'S ADVANCE ACKNOWLEDGMENT OF EMERGENCY REPAIR AGREEMENT**

Whereas \_\_\_\_\_, herein called the "Manufacturer" hereby gives notice to Chabot Las Positas Community College Dist., herein called the "Owner",

For the Project: **Las Positas College - SPF Roof Replacement, Bldgs. 300/600/1300**

The Manufacturer hereby agrees, subject only to the terms, conditions, and limitations herein set forth, that during the project's roof's warranty period, that the Owner may, at his own cost, and expense, make or cause to be made such emergency repairs as necessary to maintain said project in a watertight condition during the warranty period.

This acknowledgment is made subject to the following terms and conditions:

- A. Repairs are defined to include small cuts and tears caused by others, and repairs not covered under this warranty.
- B. Repairs are defined as not to include the flashing of new roof top equipment penetrations, curbs.
- C. The Owner shall notify the manufacturer of the repair by written explanation, drawings, and photographs as necessary, within 48 hours of the repair.
- D. The Manufacturer shall have the right to inspect the repair for acceptance or rejection. If the repair is rejected, the Manufacturer may require repair by others, and charge for the re-inspection of the completed repair.
- E. The Owner shall purchase, and maintain roofing materials, and equipment for making repairs acceptable to the Manufacturer.
- F. This acknowledgment shall not replace or supersede any common law warranties or guarantees, either implied at law, or any combination thereof, but shall operate in addition to all common law, and contractual guarantees and warranties available. This acknowledgment shall not operate to restrict or cut off the Owner for any and all other remedies, and resources lawfully available to him in cases of roofing failures; specifically, this acknowledgment shall not operate to relieve the Manufacturer of responsibility for performance of the warranty.

By signing below, the Authorized Representative for the Manufacturer certifies, and represents that he has the authority to make the above representations to the Owner.

IN WITNESS HEREOF, this instrument has been duly executed on this \_\_\_\_ day of \_\_\_\_\_, 2\_\_\_\_.

MANUFACTURER

(SEAL)

\_\_\_\_\_

(Authorized Representative)

Sworn to and subscribed before me this \_\_\_\_ day of \_\_\_\_\_, 2\_\_\_\_.

\_\_\_\_\_  
(Signature of Notary Public)

\_\_\_\_\_  
(Print, Type or Stamp Commissioned Name of Notary Public)

Personally Known \_\_\_\_ OR Produced Identification \_\_\_\_

Type of Identification Produced \_\_\_\_\_

By signing below, the Authorized Representative for the Manufacturer certifies, and represents that he has the authority to make the above representations to the Manufacturer.

\_\_\_\_\_  
Witness

\_\_\_\_\_  
(Authorized Representative)

*Submit executed copy with Submittal Package prior to start of work*

**ROOFING APPLICATOR GUARANTY FOR ROOFING**

WHEREAS

\_\_\_\_\_  
(Roofing Contractor)

\_\_\_\_\_  
(Address)

herein called the "Roofing Contractor" hereby gives notice to:

**Chabot Las Positas Community College Dist.  
5020 Franklin Drive  
Pleasanton, CA 94588**

of having performed the roofing, flashing and sheet metal and related work on the following Project:

**Las Positas College - SPF Roof Replacement, Bldgs. 300/600/1300**

WHEREAS, the Roofing Contractor has contracted directly with the Owner, for the benefit of the Owner to guaranty said work against leaks and faulty or defective materials and workmanship for the designated guaranty period.

Date of Final Acceptance: \_\_\_\_\_

Designated Guaranty Period: Two (2) Years

Date of Guaranty Expiration: \_\_\_\_\_

NOW THEREFORE, the Roofing Contractor hereby guarantees, subject only to the terms, conditions, and limitations herein set forth, that during guaranty period he will at his own cost and expense, make or cause to be made such repairs to or replacements of such work or materials as are necessary to correct faulty and defective work, as are necessary to maintain said Work in a water tight condition during the guaranty period.

This guaranty is made subject to the following terms and conditions:

1. Specifically excluded from this guaranty are damages to the work and other parts of the building and to the building contents caused by:
  - a. Lightning
  - b. Fires
  - c. Earthquakes
  - d. Acts of vandalism or civil disobedience
  - e. Failure of the roofing system substrate, including deflection in excessive of normal deterioration, and decomposition.
2. When work has been damaged by any of the foregoing causes, the guaranty shall be null and void until such damage has been repaired by the Roofing Contractor and until cost

expense thereof has been paid by the Owner or by another responsible party so designated.

3. The Roofing Contractor is responsible for any and all damage, deterioration, or failure for any reason of the work covered by this guaranty, except those items specifically excluded above.
4. The Owner shall promptly notify The Roofing Contractor of observed, known or suspected leaks, defects, or deterioration. The Roofing Contractor shall guaranty to respond to all notifications within forty-eight (48) hours and to make all such repairs as deemed necessary to correct said leaks or defects to the satisfaction of the Owner, such satisfaction will not be unreasonably withheld. Repairs shall be made by workmen in the current employment of the Roofing Contractor and subcontracting of the repair work is not permitted except repairs made pursuant to the Surety Bond attached hereto upon execution or upon express approval of the Owner.
  - a. Acknowledge the Owner's right to make emergency repairs without violating the Guarantee, if the Roofing Contractor does not respond within 48 hours of written notification by the Owner of a defect or leak.
5. This guaranty shall not replace or supersede any common law warranties or guarantees, either implied at law, or part of any construction or purchase contract between the Roofing Contractor and Owner, or any combination thereof, but shall operate in addition to all common law and contractual guarantees and warranties available. This agreement shall not operate to restrict or cut off the Owner from any and all other remedies and recourses lawfully available to him in cases of roofing failures. Specifically, this guaranty shall not operate to relieve Roofing Contractor of responsibility for performance of the original work in accordance with the requirement of contract directly with the Owner.
6. The Roofing Contractor shall provide a surety bond in the full amount of the Contract through an insurance entity acceptable to the Owner for the duration of the guaranty period. A certified copy of the surety bond shall be attached hereto.

By signing the below, the Authorized Representative of said entity certifies and represents that he is an officer of the entity with the authority to contract and make the above representations to the Owner.

IN WITNESS HEREOF, this instrument has been duly executed on this \_\_\_ day of \_\_\_\_\_, 2\_\_\_\_.

**ROOFING CONTRACTOR**

(SEAL)

\_\_\_\_\_  
(Authorized Representative)

Sworn to and subscribed before me this \_\_\_ day of \_\_\_\_\_, 2\_\_\_\_.

\_\_\_\_\_  
(Signature of Notary Public)

\_\_\_\_\_  
(Print, Type or Stamp Commissioned Name of Notary Public)

Personally Known \_\_\_ OR Produced Identification \_\_\_

Type of Identification Produced \_\_\_\_\_

**SURETY**

(SEAL)

\_\_\_\_\_  
(Authorized Representative)

Sworn to and subscribed before me this \_\_\_ day of \_\_\_\_\_, 2\_\_\_\_.

\_\_\_\_\_  
(Signature of Notary Public)

\_\_\_\_\_  
(Print, Type or Stamp Commissioned Name of Notary Public)

Personally Known \_\_\_ OR Produced Identification \_\_\_

Type of Identification Produced \_\_\_\_\_

**CONTRACTOR’S FINAL STATEMENT OF COMPLIANCE**

Whereas (Roofing Contractor) \_\_\_\_\_

(Address) \_\_\_\_\_

herein called the “Roofing Contractor" hereby gives notice to the Owner:

**Chabot Las Positas Community College Dist.  
5020 Franklin Drive  
Pleasanton, CA 94588**

For the Project: **Las Positas College - SPF Roof Replacement, Bldgs. 300/600/1300**

The Roofing Contractor certifies to the Owner that the roofing, flashing, sheet metal, and related work is complete, and to the Roofing Contractor’s knowledge, information, and belief, the quality of the Work is in accordance with the Contract Documents. The Roofing Contractor certifies to the Owner that no asbestos containing materials were supplied and/or incorporated in the construction of the Project.

By signing below, the Roofing Superintendent for the Roofing Contractor certifies the above statement.

\_\_\_\_\_  
Signature of Roofing Superintendent

\_\_\_\_\_  
Printed/ Typed Name

By signing below, the Project Manager for the Roofing Contractor certifies and responds that the Roofing Superintendent is a full time employee of the Contractor with the authority to make the above representations.

\_\_\_\_\_  
Signature of Project Manager

\_\_\_\_\_  
Printed/ Typed Name

**SECTION 01770  
CLOSE-OUT PROCEDURES**

**PART 1 - GENERAL**

**1.01 PRE-CLOSE-OUT SUBMITTALS**

- A.** Submit required billing tabulations when Work reaches seventy-five percent completion; however, regardless of percent completion, submit not later than 30 days prior to the scheduled date on which Substantial Completion is required.

**1.02 REQUEST FOR CLOSE-OUT INSPECTION**

**A. SUBSTANTIAL COMPLETION:**

When Contractor considers Work substantially complete, Contractor shall submit to Consultant:

1. Written assertion that Work is Substantially Complete;
2. A list of items to be completed or corrected and dates scheduled for completion or correction of each item, and;
3. Written assertion that an application for payment will be prepared commensurate with the degree of completion and submitted at the Substantial Completion inspection.

**B. PREREQUISITES FOR FINAL COMPLETION**

1. Complete items in following paragraphs before requesting final acceptance and final payment. List known exceptions, if any, in request.
2. When Contractor considers Work to be complete, submit written certification that:
  - a. Contract Documents have been reviewed.
  - b. Work has been examined for compliance with Contract Documents.
  - c. Work has been completed in accordance with Contract Documents.
  - d. Work is completed and ready for final inspection.
3. Submittals: Submit following:
  - a. Final punch list indicating all items have been completed or corrected. Final payment request with final releases and supporting documentation not previously submitted and accepted. Include certificates of insurance for products and completed operations where required.
  - b. Specified warranties, workmanship/maintenance bonds, maintenance agreements, and other similar documents.
  - c. Updated accounting statement for final changes to Contract Sum.
  - d. Consent of surety to final payment.
4. Perform final cleaning and repair for Contractor soiled and damaged areas as necessary.

**C. FINAL INSPECTION:**

When Contractor considers Work complete, Contractor shall submit to Consultant:

1. Certification that a qualified person authorized by Contractor has reviewed the Contract Documents and inspected the Work;
2. Written assertion that the Work is complete and in accordance with Contract

- Documents and ready for Final Inspection;
3. Written assertion that additional materials necessary to augment the Operating & Maintenance Data Binders with instructions for adding these to the Binders, or full replacement Binders, are complete and available or will be prior to inspection;
  4. Written assertion that Project Data Binders and Construction Record Documents are complete and available or will be prior to inspection; and,
  5. An application for final payment.

**D. FINAL COMPLETION INSPECTION**

1. Within ten days after receipt of request for final inspection, Consultant will make inspection to determine whether Work or designated portion is complete following procedures indicated in Conditions of the Contract.
2. In the event Consultant considers Work to be incomplete or defective:
  - a. Consultant will promptly notify Contractor, in writing, listing incomplete or defective work.
  - b. Contractor shall take immediate steps to remedy stated deficiencies and send second written request to Consultant that Work is complete.
  - c. Consultant will re-inspect Work.

**1.03 RESULTS OF CLOSE-OUT INSPECTIONS**

- A.** Should the Consultant determine that Work is not complete to the degree asserted by Contractor, Consultant will promptly notify Contractor in writing stating the deficiencies. Contractor shall take immediate steps to remedy deficiencies and make a request for Re-Inspection.

**B. SUBSTANTIAL COMPLETION:**

Consultant will prepare a letter containing a list of items to be completed or corrected, and will submit the letter to the Contractor and Owner for signature, when the Consultant verifies that the work is Substantially Complete based on an inspection conducted pursuant to an appropriate request for close-out inspection;

**C. FINAL INSPECTION:**

Consultant will certify that the Work is Complete, and will initiate Final Adjustments, when Consultant verifies that:

1. Work is complete in accordance with Contract Documents based on an inspection conducted pursuant to an appropriate request for close-out inspection;
2. Project Data Binder and Construction Record Documents are complete and have been delivered to the Consultant.
  - a. Project Data Binder shall include a copy of:
    - (1) the specifications, drawings, and addenda;
    - (2) the approved final submittal package;
    - (3) Consultant Field Orders or written instructions;
    - (4) List of all material batch or lot numbers used on the project;
    - (5) All approved change orders;
    - (6) Manufacturer's final inspection report;
    - (7) Manufacturer warranty;
    - (8) Contractor warranty.

**1.04 RE-INSPECTION FEES:**

- A. If the Work fails a close-out inspection, and a subsequent inspection is requested and conducted based on Contractor assertion of the same stage of completion, Owner will compensate Consultant for performing such Re-Inspection as additional services, and deduct the amount of such compensation from the Contract Sum by appropriate modification.

**1.05 FINAL ADJUSTMENTS**

- A. When Consultant has determined that the Work is complete, Consultant will determine whether modification is needed to reflect appropriate adjustments to Contract Sum which were not previously effected. If such modification is needed, Consultant shall assist the Owner in its preparation and deliver it to Contractor, who in the case of a change order, shall sign and return it to Consultant.
- B. When Consultant has certified that the Work and needed modifications to the Contract are complete, and if necessary, Consultant will instruct Contractor to submit a revised final application for payment.

**1.05 TWO-YEAR CORRECTIVE INSPECTION**

- A. An inspection will be scheduled and conducted at project site prior to two years from date Substantial Completion was achieved, but as close to the end of the second year as is reasonably possible.
- B. The inspection will be attended by at least one representative each of Owner, Consultant, and Contractor.
- C. The inspection will confirm non-conforming items previously identified for correction by the Owner, and whether corrections have been completed or are still outstanding, and is intended to be an opportunity for Contractor to become aware of any outstanding corrections needed.

**END OF PART ONE**

**PART 2 - PRODUCTS**

NOT USED

**PART 3 - EXECUTION**

NOT USED

**END OF SECTION**

**SECTION 01810  
CLEANING AND CLEAN UP**

**PART 1 - GENERAL**

1.01 DESCRIPTION

- A. Work Included:
  - 1. Maintain premises and public properties free from accumulations of waste, debris, and rubbish caused by operations. No burning or burying of trash allowed.
  - 2. At completion of work, remove waste materials, rubbish, tools, and equipment, machinery and surplus materials, clean all sight exposed surfaces within Contract limits.
  - 3. Store volatile waste in covered metal containers, and remove from premises daily.
- B. Related work:
  - 1. Documents affecting work of this Section including, but are not necessarily limited General Conditions, Supplementary Conditions, and Sections in Division 01 of these Specifications.
- C. Clean up:
  - 1. Note that Consultant may, at any time during construction, order a General clean up of site within Contract limits as part of work under this section.
  - 2. Note that location of dump for trash and debris and length of haul is the concern of this section and the responsibility of the Contractor.

**PART 2 - PRODUCTS**

2.01 MATERIALS

- A. Use only cleaning materials recommended by manufacturer of surface to be cleaned.

**PART 3 - EXECUTION**

3.01 FINAL CLEANING OF BUILDING

- A. Thoroughly clean all portions of building dirtied during construction, utilizing professional building cleaners, and prior to final inspection by Consultant and after construction work is essentially complete. Remove defacements of every sort, including those of vandals.

3.02 FINAL SITE CLEANUP

- A. Clean entire site areas of construction thoroughly, prior to final inspection, and put it into neat, acceptable conditions. Remove from entire site within Contract limits, construction waste and unused materials, dunnage, and debris of any description resulting from work. Hose down and scrub, where necessary, concrete and asphalt pavement and walks dirtied as a result of work under this contract.

**END OF SECTION**

**SECTION 07540**  
**SPRAYED POLYURETHANE FOAM ROOFING**

**PART 1 GENERAL**

1.01 RELATED DOCUMENTS

- A. Attached GENERAL NOTES, INSTRUCTIONS TO BIDDERS AND BID FORM, are components of this section.
- B. The following SECTIONS: 01110; 01340; 01400; 01600; 01720; 01740; 01810

1.02 SCOPE OF WORK

- A. Clean all debris and loose granules from the roof. Prime the surface as required by SPF manufacturer.
- B. Cut and fasten all blistered membrane to the deck.
- C. Install new 24 GA steel foam stop edge metal. Paint the face of the metal edge to match adjacent color.
- D. After proper preparation, apply sprayed-in-place SPF and specified minimum DFT of acrylic weather coating, over existing roof assemblies, as described herein.
  - 1. Fluid applied insulation shall be a complete system of compatible materials supplied by approved manufacturer to create a seamless waterproof membrane.
- E. Complete the work outlined above in a professional manner acceptable to the Owner.
- F. Provide a written Ten (10) Year No Leak System Warranty and Five (5) year Blister Warranty from the Coating Manufacturer. See SECTION 01740.
- G. To protect the health and safety of the public and staff of the District, and **in accordance with the California Code of Regulations, Title 8, § 16200**, all SPF spray applications shall occur on weekends when the building is not occupied. Proposed work schedule shall be submitted to the District for approval prior to start of work.
  - 1. Use of electric or gas powered air blowers are prohibited during school hours.

1.03 REFERENCES

- A. ASTM - Latest Editions
  - C-273 Test for Shear Properties in Flatwise Plane of Flat Sandwich Construction or Sandwich Cores
  - C-501 Test for Relative Resistance to Wear of Unglazed Ceramic Tile by the Taber Abrader
  - C-518 Test for Steady-State Heat Flux Measurements and Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus

- D-412 Test for Rubber Properties in Tension
- D-471 Test for Rubber Property - Effect of Liquids
- D-624 Test for Rubber Property - Tear Resistance
- D-822 Standard Practice for Operating Light and Water Exposure Apparatus (Carbon-Arc Type) for Testing Paint and Related Coatings and Materials
- D-903 Test for Peel or Stripping Strength of Adhesive Bonds
- D-1353 Test for Nonvolatile Matter in Volatile Solvents for Use in Paint, Varnish, Lacquer, and Related Products
- D-1621 Test for Compressive Properties of Rigid Cellular Plastics
- D-1622 Test for Apparent Density of Rigid Cellular Plastics
- D-1623 Test for Tensile and Tensile Adhesion Properties of Rigid Cellular Plastics
- D-2126 Test for Response of Rigid Cellular Plastics to Thermal and Humid Aging
- D-2240 Test for Rubber Property - Durometer Hardness
- D-2842 Test for Water Absorption of Rigid Cellular Plastics
- D-6083 Test for Combined Properties of Acrylic Coating over SPF
- E-84 Test for Surface Burning Characteristics of Building Materials
- E-96 Test for Water Vapor Transmission of Materials
- E-108 Test for Fire Tests of Roof Coverings
- B. CLPCCD Chabot Las Positas Community College District, Pleasanton, CA
- C. Factory Mutual Global (FMG), Norwalk, MA: Hail Test
- D. SPFA Spray Polyurethane Foam Alliance – Publications AY104, AY104 Latest Editions.
  - GS-1-4/89 *Spray Polyurethane Foam Systems for New and Remedial Roofing*
  - PC1-1/88 *A Guide for Selection of Protective Coatings, Over Sprayed Polyurethane Foam Systems*
  - AP1-1/89 Accreditation Program Handbook and Enrollment Guide
- E. National Roofing Contractors Association: *NRCA Manual of Roofing and Waterproofing*, Latest Edition

#### 1.04 SUBMITTALS

- A. See SECTION 01340 and 01600
- B. In order to allow every potential bidder equal opportunity to bid the same or similar system, specific requirements are provided under the **PRODUCT REQUIREMENTS** section 01600 which mandate that all substitutions be submitted for analysis and possible acceptance five (5) days prior to Bid Date. When bidding materials as specified, indicate “materials as specified” on the Bid Form

#### 1.05 SITE CONDITIONS

- A. Environmental Conditions:
  1. Do not proceed with application of urethane foam materials when ambient temperature is less than 60 degrees F (15.6 degrees C) or when temperature is <5 F of dew point, or wind velocity is above 15 mph. NOTE: Special foams are available for temperatures below 60 degrees F (15.6 degrees C) and wind screens must be used when wind velocity is >15 mph..

2. Do not proceed with application of coating materials when surface temperature is less than 40 degrees F (4.4 degrees C) or if precipitation is imminent.
3. Do not apply material unless surface to receive urethane foam and/or coating is clean and dry.
4. This information shall be recorded at the time intervals listed on the Daily Quality Control Report form approved by the consultant. This information shall be recorded a minimum of two (2) times a day. Upon completion of the work, contractor shall submit three (3) copies of the completed forms to the consultant for record purposes.

B. Protection:

1. Warn personnel against breathing of vapors and contact of materials with skin or eyes.
  - a. In confined areas, workmen shall wear approved fresh air supplied masks during foam and coating operations.
  - b. Wear protective coating.
2. Keep products away from heat, sparks, and flames. Do not allow use of spark producing equipment during application and until vapors are gone. Post "No Smoking" signs.
3. Protect plants, vegetation, other building components (windows, trim etc.) which might be affected by foam or coating. Use drop cloths, plastic or masking as required. Vegetation damaged from covering shall be replaced at the expense of the contractor.
4. Coordinate with CLPCCD all advisories to staff, students, or tenants regarding the closing of vents, doors, windows and miscellaneous vehicle parking areas.

1.08 SUBSTITUTIONS

- A. See SECTION 01600

1.09 BID ITEMS

- A. Provide prices for all work as requested on the Bid Form.

1.10 WARRANTY AND MAINTENANCE AGREEMENT

- A. See SECTION 01740 WARRANTIES

1.11 SAFETY:

- A. All regulations pertaining to safety as noted in OSHA Standard shall be strictly adhered to by the contractor and his subcontractors. Particular care shall be exercised in connection with operation of vehicles and other equipment on the job site. Safety barriers and equipment shall be provided by the contractor as required by the Owner.

END OF PART ONE

## **PART 2 PRODUCTS**

### **2.01 GENERAL**

- A. Comply with Quality Control, References, Specifications, and Manufacturer's data. Where conflict may exist, more stringent requirements govern.
- B. Use of manufacturer's brand and/or trade names is done only to establish a standard by which others will be compared, and not done to restrict or limit competition. See SECTION 01600 for SUBSTITUTIONS.
- C. CLPCCD shall be the final authority as to acceptance of any changes in materials.
- D. All materials used shall be accepted and approved by roof coating manufacturer.

### **2.02 APPROVED MANUFACTURERS**

- A. Sprayed Polyurethane Foam
  - 1. BASF
  - 2. Bayer Material Science
- B. Elastomeric Coatings
  - 1. Bayer Material Science
  - 2. BASF
  - 3. United Coatings
  - 4. Neogard

### **2.03 MATERIAL PERFORMANCE CRITERIA**

- A. SPF insulation shall be an HFC-blown, Zero Ozone-Depleting two-component, rigid-class, sprayed-in-place, polyurethane foam (SPF) having a minimum core density of 2.7 lbs. per cubic foot, and shall provide a minimum of 45 psi compressive strength (ASTM D-1621) when sprayed at sea level. The foam system shall be a 1:1 ratio polyurethane spray foam system formulated for roofing application where smooth surface profiles are desired. Submittals for approved equal status must be accompanied by data sheets which compare performance criteria to the characteristics below.
- B. All approved manufacturers materials shall meet these specified product requirements.

**POLYURETHANE FOAM** shall conform to the following minimum physical properties when sprayed-in-place at sea level:

Physical Property	Foam Insulation	ASTM Test Method
Density (core)	2.7 pcf	D1622
Compressive Strength - parallel to rise	45 psi	D1621
Tensile Strength	80 psi	D2856
Water vapor transmission	3.0 Perm Inch	D1623
Shear Strength	40 - 60 psi	C 273
Closed Cell Content	>90%	D 1622
Insulation Values - R Value (aged)	6.4 per inch	C 518
Dimensional Stability	Percent Volume Change	
Age 7 days at 158°F - 100% RH	<1%	D 2126
Age 7 days at 200°F - 100% RH	<1%	D 2126
Age 7 days at -20°F - 100% RH	<1%	D 2126

All foam materials shall be stored according to the manufacturer's written shelf life data requirements.

**A. POLYURETHANE FOAM COATING SYSTEM:**

1. WHITE - Colored coating may be used below the white top surface coat, however a minimum of 16 mils of white top coating shall be applied. Performance Requirements for Elastomeric Coating: The minimum performance requirements for the 100% acrylic elastomeric coating to be used for this project are:

Property	ASTM Method	Results
Tensile Strength, psi	D2370	530 psi @ 20 mils
% Elongation	D412	900% @ 20 mil
Hardness	ASTM C661	723
Weight per Gallon		11.2
Fire Rating	UL 790 - Class A	Combustible Deck - Class B
Solids by Volume %	D6083	55% ( ±2)
Solids by Weight %	D1644	65% ( ±2)

- A.** The SPF coating system shall also have the following characteristics with which all approved manufacturers shall conform:
1. Good resistance to ponding water.
  2. Contain no plasticizers.
  3. Contain no migrating fire retardants.
  4. "Class A" fire rating on a noncombustible deck when tested according to the procedures outlined in ASTM E-108.

- B. Sealant: For use around roof penetrations or to fill in rough or irregular foam surfaces: Sika 1A; Sonneborn NP1; or equal one-part polyurethane elastomeric sealant meeting Federal Specification TT-S-00230C, Type II, Class A. Color of sealant shall be manufacturer's standard white. Shall be approved by coating manufacturer.
- C. Miscellaneous Materials: Miscellaneous materials such as adhesives, elastomeric expansion joint membranes, and similar materials shall be a composite part of the roof system and shall be those recommended and/or supplied by the manufacturer.
- D. Rigid water resistant, fiberglass faced gypsum board: 1/4" Dens Deck Prime by Georgia Pacific
- E. Foam Stop Edge Metal: 24 GA factory painted Kynar color to blend with existing trim color. Form to comply with detail drawings.
- F. Fasteners:
  - 1. For fastening foam stop edge flashing - Aluminum nails or 304 Stainless Steel nails
  - 2. For fastening gutter - 304 Stainless Steel screws.
- G. Conduit and Pipe support stands:
  - 1. C Strut by C-Port
  - 2. E-Versiblock
  - 3. or approved equal
- H. Miscellaneous Items
  - 1. BayBlock Premium Caulk (or approved equal)
  - 2. BayBlock 701 Polyester Fabric (or approved equal)

END OF PART TWO

## PART 3 EXECUTION

### 3.01 INSPECTION

- A. Do not install new roofing until all unsatisfactory conditions are corrected. Beginning work constitutes acceptance of all conditions.
- B. Grease, oil or other obvious contaminants must be removed as required by the foam manufacturer.
- C. Supporting members of roof-mounted equipment, such as air conditioners, evaporative coolers, fans, ducts pipes, etc. shall be examined to assure that they can be properly flashed with SPF.
- D. Manufacturer's representative, consultant, contractor and applicator shall meet at the job site for a Pre-Roofing Conference prior to commencement of work.
- E. Metal surfaces to be foamed shall be free of rust, loose scale, dust, dirt, grease, oil or other contaminants and then primed with a compatible metal primer recommended by the SPF manufacturer.
- F. **Water Test of Drains / Down Spouts** - All roof drains and down spouts shall be water tested with a hose for 1 minute in each drain prior to start of work. Notify CLPCCD Maintenance staff when plugged pipes are located.
- G. Upon completion of the roof covering, coating manufacturer's representative, consultant, and applicator shall make a final inspection to verify the SPF insulation/fluid applied waterproofing system meets manufacturer's requirements for warranty. Contractor shall notify all parties 48 hours in advance of such inspections.

### 3.02 PREPARATION

- A. **DEMOLITION AND DISPOSAL:**
  - 1. All debris shall be removed from the job site each day. Upon completion of the project, the contractor shall remove all rubbish, accumulated materials, empty containers and scrap from the premises leaving the job site in a clean, acceptable condition. Any adjacent areas which are damaged by the contractor due to demolition or removal shall be repaired to the satisfaction of the CLPCCD authorized representative, or replaced. All scrap, debris, and empty containers shall be disposed of off-site, unless otherwise approved by CLPCCD.
- B. **RAISE ALL MECHANICAL CURBS**
  - 1. Raise mechanical curbs to provide 8" clearance between the top of the curb and the finished roof surface.
- C. **SURFACE PREPARATION**
  - 1. Vacuum and sweep the surface to remove all loose gravel and debris. Slice all bridging

membrane to allow it to lay flat on the substrate, and cement down to concrete deck.

- D. All surfaces must be primed with appropriate primer as recommended by foam manufacturer prior to foam application.
- E. Temporary masking shall be installed to protect surfaces (such as vent stack covers, conduit, gutters, and drains) from SPF and coating.

### 3.03 SPRAY POLYURETHANE FOAM APPLICATION

- A. Techniques used to apply urethane foam to roof shall be as recommended by the manufacturer of the spray urethane foam, including equipment type.
- B. Spray foam operations shall be performed only during periods of calm, open weather. All surfaces to receive spray foam shall be dry and free of dew, moisture, or frost. Primers shall be dry and free of solvent before foaming. Spraying operations shall not be conducted when wind velocity exceeds 15 MPH or if precipitation threatens. Spraying operations shall cease if substrate temperatures come within 5 degrees F of dew point.
- C. All off-ratio spray foam to be removed and refoamed immediately during foaming operations.
- D. Surface texture of the applied spray foam shall be free of excessive ridges, bumps, pinholes, etc. Acceptable foam profile shall be "smooth" or "orange peel" foam texture as defined by the SPFA Document AY104. All other surfaces shall be removed by means of grinding smooth or the foam shall be cut out and removed, and the area refoamed, at the option of the District.
- E. Remove all foam over spray from electrical conduits and gas piping to allow proper coating of same. Foam shall terminate a minimum of 6" above the field of the roof and roof penetrations where possible. Foam at all roof penetrations, perimeters, and deck/parapet junctures shall be applied and dressed to prevent water damming or ponding and provide a smooth transition from vertical to horizontal.
  - 1. All reglet and wall flashing shall be considered as part of the roof with regard to foam and coating thickness and texture requirements.
  - 2. Any "folds" or other irregularities at these locations shall be removed by sawing, planing and filing. Undercuts to be caulked flush with urethane caulking and allowed to cure.
  - 3. Any flashing required at gutters or expansion joints shall be 60 mil uncured EPDM sheet applied foam prior to coating application.
  - 4. Verge of Popcorn foam texture may be rejected at the discretion of CLPCCD. If rejected, the area shall be cut out and refoamed.
  - 5. All overhanging roof perimeters shall be planed and filed to prevent damming or ponding at roof edges. In no instance shall foam be allowed to "curl" over roof edge or be visible from below. Foam shall be applied to taper to 1" between 12" to 4" of the roof edge. Masking shall be in place to protect the outside 4" of roof edge from SPF allowing only coating to reach the edge of the roof.
  - 6. All wall flashing shall be considered as part of the field of the roof with regard to foam

and coating thickness and texture requirements.

F. FINISHED FOAM THICKNESS

1. SPF shall be applied in such a manner to provide a **minimum of 1.5" thickness** over all smooth surfaces and a **minimum of 2" thickness** over all gravel surfaces. Foam passes shall be at least ½" in thickness but not more than 1½" in thickness.
2. All SPF in any area shall be applied to full finished thickness the same day. "Drying in" of the structure will not be permitted unless this requirement can be met. Foam shall be terminated neatly a minimum of 3-inches above the high water line at all penetrations (except drains, parapet walls, or building junctions).
3. **All SPF shall be covered with a primer or base coat at the end of each day's work.**
4. All existing and new curb caps and other sheet metal detailing that is related to equipment service shall remain exposed. Under no circumstances may conduits, gas piping, or other roof accessories that may require service by CLPCCD or other trades be covered by sprayfoam.
5. Foamed-in-place cants shall be smooth and uniform to allow positive drainage.

G. FOAM SURFACE CONDITION

1. The SPF surface shall be allowed to cure sufficiently according to the manufacturer's recommendation and in accordance with the ambient temperature conditions. If, due to weather conditions, more than 48 hours elapse between foam and coating application, the foam shall be inspected for degradation or contamination.

H. SLIP SHEETS

1. Under mechanical equipment or conduit where it is not possible to properly directly spray SPF, use ¼" Dens Deck Prime as a base for slip sheets. Apply 2" of SPF over Dens Deck and fasten at perimeters with 4" roof insulation screws and 3" plates to roof deck at 8" O.C..

I. DRAINAGE

1. Finished SPF surface shall have sufficient slope to prevent excessive ponding water. Excessive ponding is defined as "as areas of 50 square feet or more in area which holds in excess of ½" deep of water as measured 24 hours after a rainfall in >60 degree temperatures."
2. Small areas of standing water (bird baths) are acceptable. If the substrate does not have sufficient slope, then excessive ponding of water must be eliminated, either by building in slope by the application of additional spray foam or by the installation of pre-formed crickets.
3. All SPF installed for drainage correction ("crickets" or slope) shall be installed directly upon the Dens Deck or roof surface, and beneath the final foam membrane "lift".
4. Drainage correction by means of tapering the top "lift" of foam first, except for minor detailing, will not be permitted.

3.04 EQUIPMENT PENETRATIONS / VENTS

- A. Take care to prevent roofing materials or debris from entering the building below. Exposed curbing shall then be cleaned, primed, and made ready to accept spray foam materials. Once primer has dried, spray foam shall be applied to restore water tightness prior to end of daily roofing operations or immediately if precipitation is imminent.
- B. All roof top HVAC units shall be pressure washed, primed and painted with 12 mils white roof coating. Protect all vents, coils, drains and inlets from coating.
- C. Conduit and Gas Lines - All pipe/conduit larger than 1½ " diameter, or all runs of pipe/conduit with more than 4 pipe/conduit of any size shall be supported on C-Port pipe supports spaced at distances as prescribed by the building code. C-Port stands or wood blocks shall be only set on the surface of cured roof coating and shall not be adhered or sealed in place.

### 3.05 APPLICATION OF PROTECTIVE COATING OVER SPF

- A. General Requirements: Protective coating system shall be spray-applied over all SPF surfaces in accordance with the manufacturer's printed instruction.
  - 1. The composite system shall include waterproofing of all "on roof" expansion joints, flashing, penetrations, elastomeric roofing membrane, foam insulation, and all materials and techniques required to properly adapt the roofing system to the particular substrate involved.
  - 2. SPF and adjacent surfaces to be coated shall be completely free of any degraded foam, foam over spray, grease, oil, dirt or other contaminates which will interfere with proper coating adhesion.
  - 3. Any physical damage to the SPF shall be repaired before coating application commences. All oxidized SPF shall be repaired or replaced.
    - a. First Coat: The same day the foam is applied, the base coat shall be applied. After the base coat has been applied, the roof shall be inspected for damage and all damage shall be repaired prior to application of the second coat.
  - 4. The first coat of the protective coating shall be applied on the same day that SPF is applied, but only after the foam has sufficient time to cure. Depending upon weather conditions, this is normally achieved within four hours after application. Do not apply protective coating to the exposed leading edge of the foam at unfinished areas.
  - 5. Protective coating shall extend up and over all SPF on vent pipes, parapets and other penetrations and terminated a minimum of 3" above the foam creating a self-terminating flashing.
  - 6. If, due to unforeseen conditions, the SPF remains uncoated for more than **48 hours**, the uncoated foam must be inspected by the coating manufacturer prior to coating. Should UV damage occur, the foam surface shall be treated as prescribed by the Coating Manufacturer.
  - 7. Contractor shall have a tall times in close proximity to the spraying operations sufficient buckets for depositing solvent when flushing catalyzed material from the gun. Exercise extreme care so as not to contaminate roof surface with solvent
  - 8. Refer to manufacturer's printed application instructions for specific details on mixing and equipment settings.
  - 9. Do not apply acrylic elastomeric coating below 50 F.

10. All foam that has been cut or ground down removing the skin shall have the first application of coating applied by medium nap roller to fully seal the exposed foam cells.
- B. Spray Technique: Protective coating shall be all white coating.
1. Criss-cross or cross-spray technique shall be used to assure positive coverage. Aesthetics are essential to the successful completion of his project. Visible coating / granule pass lines shall not be accepted on the final surface.
  2. The second coat shall be applied in a direction perpendicular to the first coat at soon as the first coat has dried sufficiently to allow applicator to walk on.
  3. The top coat shall be applied as soon as the second coat has dried sufficiently to allow applicator to walk on.
  4. Finished dry film of coating shall be composed of a solid thickness of coating, without bubbles, pinholes or voids. Should bubbles, pinholes or voids be found in slit samples, the area shall be recoated to achieve finished mil thickness as specified without bubbles, pinholes or voids.
- C. Apply the base coat according to the procedure as prescribed by the manufacturer to the sprayed polyurethane prepared dry foam. The composite coating systems include the following:
1. To all properly prepared and dry surfaces, spray apply base acrylic roof coating in sufficient number of applications with a minimum of two alternating colors without blistering or runs.
    - a. **Total system minimum coating thickness, 35 dry mils before granules.**
- D. Granule application: Over the specified minimum coating thickness, apply additional roof coating in sufficient quantity to adhere specified roofing granules. Granules shall be applied at a sufficient rate to prevent a space between granules that will not exceed the size of one average granule. Adhesion of granules shall be adequate to resist abrasion by a 30" push broom. Excessive loose granules shall be removed from the roof surface.
- E. **All applications of urethane sealant shall be allowed to cure for 7 days and then covered with specified acrylic coating.**

### 3.06 BLDG. 300 REPAIRS AND COATING

- A. Sweep clean all loose granules from the surface. Pressure wash surface to remove all embedded dirt.
- B. Repair all exposed SPF by removing all damaged SPF. Prime surface as necessary to receive new SPF.
- C. Install new foam stop on the top of all coping as shown in project details. Prime metal to receive SPF.
- D. Apply SPF to foam stop edge and onto existing flashing below.

- E. Apply coating over the entire roof. Recoat existing coating with minimum DFT 20 mils, and over new foam stop edge DFT 35 mils. No granules are required on Bldg 300 recoat.

3.07 INSPECTIONS:

- A. The cured dry film thickness of the finished membrane application shall be confirmed by the removal of slit samples from the roofing system, after which they shall be examined under magnification by means of an 10x optical comparator. CLPCCD'S Consultant may direct the Contractor to extract slit or core samples from the roof at any point to determine SPF system compliance.
- B. If finished installation is found to be specifically deficient, CONTRACTOR shall bring installation into compliance before notice of substantial completion is issued to CLPCCD. Release of job retainage funds shall be contingent on receipt by CLPCCD of duly executed MANUFACTURER'S warranty documents.
- C. During the term of the Contractor warranty, CONTRACTOR shall inspect finished installation annually, making note of any repairs required and informing CLPCCD of the same. CONTRACTOR shall maintain inspection records on file for the term of the warranty.

3.08 CLEAN-UP AND CORRECTION OF DEFICIENCIES

- A. All over spray and associated damage and clean-up to CLPCCD's, employees, public and neighbor's property shall be the entire responsibility of the Contractor.
- B. All masking and all masking adhesive shall be removed at the completion of the project. Any over-spray shall be removed from windows, and wood or metal surfaces with over-spray shall be cleaned or repainted.
- C. All deficiencies shall be repaired within 5 working days after final inspection.
  - 1. Areas of thin coating shall be cleaned of all loose granules, primed and recoated with additional top coat.

END OF SECTION

