



**Bay Architects**

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**ADDENDUM NO. 07**

July 14, 2010

Project: Channelview Elementary School Additions  
Brown, DeZavala and McMullan

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7/14/10

Bay Project No.: 0938

Prepared for: Prospective Proposers

**PART A NOTICE TO PROPOSERS**

- 01. Receipt of this Addendum shall be acknowledged on the Proposal Form. Failure to do so may subject Proposers to disqualification. Each Proposer shall make necessary adjustments and submit his proposal with full knowledge of all modifications, clarification, and supplemental data included therein.
- 02. This Addendum forms part of the Contract Documents and shall be incorporated integrally therewith. Where provisions of the following supplemental data differ from those of previously issued documents, this Addendum shall govern.
- 03. The following Contract Documents have been issued to date delineating the Work (Project):
 

Construction Documents	June 14, 2010
Addendum 01	June 25, 2010
Addendum 02	July 1, 2010
Addendum 03	July 9, 2010
Addendum 04	July 9, 2010
Addendum 05	July 12, 2010
Addendum 06	July 13, 2010
- 04. Clarification to Pre Proposal Conference Agenda. Section IV Base Proposal Form. Revise to refer to specification section AB.05 for list of items due at bid and AB-12 for list of items due three days after proposal.
- 05. This Addendum consists of ADD7-1 through ADD7-2, Section 07415., Section 07565,.

**PART B CHANGES TO PRIOR ADDENDA**

- 06. None

**PART C CHANGES TO THE TABLE OF CONTENTS**

- 07. Add Section 07415 – Prefinished Metal Roofing
- 08. Add Section 07565 – Preparation for Roofing

**PART D CHANGES TO THE PROJECT MANUAL**

- 09. Section 07415 - Prefinished Metal Roofing
  - a. Add this Section in its entirety.
- 10. Section 07565
  - a. Add this Section in its entirety.

**PART E CHANGES TO THE DRAWINGS**

*“Changes are indicated on the enclosed 8 1/2 x 11 and/or 11” x 17” sheets.”*

McMullen

- 11. Sheet A2.01M
  - a. At corridor 100 and corridor 105, revise base to ceramic tile.

All Schools

- 12. Clarification
  - b. All P4.01 sheets, fixture L-2 replace 404-CW-E12VPJKCP WITH NUMBER 857-E12-665PSH.

**PART F NEW ISSUED DRAWING SHEETS**

- 13. None

**PART G RE-ISSUED DRAWING SHEETS**

- 14. None

**END OF ADDENDUM**

## SECTION 07415

### PREFINISHED METAL ROOFING

CONDITIONS OF THE CONTRACT, SECTIONS AA THROUGH CB AND DIVISION 1 APPLY TO THIS SECTION.

#### PART 1 - GENERAL

##### 1.1 DESCRIPTION

- A. Refer to Instructions to Proposers for substitutions.
- B. The work includes furnishing labor, materials and installation of pre-finished roofing, trim, flashing, and miscellaneous parts as indicated on drawings and described herein.

##### 1.2 WARRANTY

- A. Warrant the work specified herein for two years against becoming unserviceable or causing an objectionable appearance resulting from either defective or non-conforming materials and workmanship. Defects shall include but not be limited to the following:
  - 01 Leaking
  - 02 Cracking, chipping or peeling of finish.
  - 03 Wrinkling, undue expansion, lifting, loosening, and splitting seams.
- B. Provide manufacturers 20 year durability warranty against rupture, structural failure and perforation due to corrosion, and against chalking, cracking and peeling.
- C. Provide manufacturer's 20 year warranty for weather-tightness. Weather-tightness warranty shall include labor and materials and shall apply to the roof system specified including related flashings, valleys, ridges, and trim.

##### 1.3 SUBMITTALS

- A. Comply with Section 01300.
- B. Product Data: Manufacturer's specifications and other data for all products proposed to be furnished as needed to prove compliance with specified requirements. Manufacturer's installation instructions.
- C. Shop Drawings: including layouts of panels, details of edge conditions, joints, corners, custom profiles, supports, anchorages, trim, flashing, closures and special details. Distinguish between factory and field assembly work.
  - 01 Shop drawings and details shall be specific to this installation and interface with adjacent work. Generic details are not acceptable.
- D. Samples
  - 01 Colored metal samples from the manufacturers standard line of Kynar 500 finishes for Architect's selection.
  - 02 Sample of coated panel, clip, fastener, and spacer block.
- E. Manufacturer's complete installation instructions.

##### 1.4 REFERENCES

- A. ASTM
  - 01 ASTM A-653 – Standard Specification for Steel Sheet, Zinc-Coated (Galvanized).
  - 02 ASTM E-1680-95 – Standard Test Method for Rate of Air Leakage Through Exterior Metal Roof Panel Systems
  - 03 ASTM E-1646-95 - Standard Test Method for Rate of Water Penetration of Exterior Metal Roof Panel Systems
  - 04 ASTM E-1952 - Standard Test Method for Thermal Conductivity and Thermal Diffusivity of Exterior Metal Roof Panel Systems

- B. Factory Mutual: I-120 rated wind uplift
- C. Underwriters Laboratories: UL 90 and UL Fire Resistance Listed.
- D. SMACNA: Architectural Sheet Metal Manual

## 1.5 QUALITY ASSURANCE

- A. Installer shall be certified / approved by the manufacturer to install the specified metal roofing system
- B. Installer of pre-formed metal roofing shall be experienced in the work and shall have installed a minimum of ten (10) pre-formed metal roof systems of the type specified prior to this work.

## PART 2 - PRODUCTS

### 2.1 MATERIALS

- A. Design is based on Berridge Manufacturing “Zee Lock Standing Seam Roof System” mechanically seamed 180 degrees in field.
- B. Roof panels: Precision rolled-formed or cold-formed hot dipped galvanized steel, one-piece for length and height of panel.
  - 01 Style: 2" high profile standing seam; 16" nominal pan width with 2" high seam male to female locking system.
  - 02 Prefinished Metal shall be hot-dipped galvanized - ASTM A446-85 Grade C G90 Coating A525-86 24 Gauge core steel; 24 gauge HDG steel, G-90, ASTM A445-76, Class A.
  - 03 Trim: Manufacturer's standard to match panel finish; other profiles as detailed on drawings.
  - 05 Underlayment: One layer of #30 asphalt saturated felt laid dry; minimum 12" end laps, 2" salvage laps starting at eave.
  - 06 Concealed Weather Seal: Extruded vinyl.
  - 07 Finish: Kynar 500 Fluorocarbon coating with a top side dry film thickness 0.90 mil maximum over .35 mil prime coat to provide a total thickness of 1.25 mil. Bottom side shall be coated with a primer coat 0.25 mil thickness.
- C. Flashing and Trim
  - 01 All materials shall be the same gauge and finish as the roofing panel.
  - 02 Provide manufacturer's standard profiles and custom fabrications as required for a complete weather-tight assembly, properly interfaced with adjacent work.
- D. Accessories:
  - 01 Manufacturer's standard clips (concealed)
  - 02 Fasteners: Galvanized or stainless steel, self tapping screws.
  - 03 Exposed fasteners shall be minimized; and where required, shall match panel finish.
  - 04 Vinyl weather-seal insert at seamed joint.
- E. Underlayment:
  - 01 All metal roofing installed over a solid substrate shall be installed over a self adhered film.
  - 02 Self adhering membrane composed of high strength polyethylene film coated with a layer of rubberized asphalt adhesive.
  - 03 Properties:
    - a. Thickness: minimum 40 Mil (ASTM D3767 – Method A)
    - b. Tensile Strength: minimum 250 PSI (ASTM D412)
    - c. Permeance: maximum 0.05 perms
  - 04 Design is based on Grace Construction Products “Ice & Water Shield Membrane”

### 2.2 MANUFACTURERS

- A. The following manufacturers / systems are acceptable provided proposed products meet or exceed all specified requirements and attributes.
  - 01 Berridge Roofing Co. “Zee-Lock Standing Seam Roof Panel” (basis of design)

- 02 ATAS International "Field-Lok"
- 03 AEP Span "Span-Lok"
- 04 MBCI "SuperLok"
- 05 Architectural Building Components "200DL Series"

### **PART 3 - EXECUTION**

#### **3.1 PREPARATION PRODUCT HANDLING, STORAGE AND DELIVERY**

- A. Immediately upon delivery to job site, place materials in area protected from weather. Materials shall be sorted and handled to prevent inclusion of foreign materials and damage by water or weather.
  - 01 Storage: Store in original packages until ready for use. Store in an area that will provide protection of any film protector applied to the panels.
  - 03 Do not permit unnecessary walking on finished roof. All personnel installing finished roof shall be required to wear rubber sole shoes.
- B. Thoroughly inspect all substrate and interfacing work to verify suitability for the work of this section to proceed.

#### **3.2 INSTALLATION OF STANDING SEAM ROOFING OVER PLYWOOD**

- A. Apply specified roofing underlayment over entire area to be covered by metal roofing.
  - 01 Install in strict accordance with manufacturer's standards and recommendations.
  - 03 Lap membrane with flashings as necessary to provide a positive barrier against penetration of water.
- B. Install metal roof panels in full lengths where ever possible.
- C. Install trim, flashing and related items in conformance with reviewed shop drawings and manufacturer's instructions, as indicated on drawings.
- D. Attach roof panels continuous over plywood using concealed clips and other accessories as instructed by manufacturer.
- E. Weather tightness shall be maintained in end laps with specially swaged design in end of top panel to permit precise end-lock with bottom panel.
- F. Install pans in strict accordance with approved samples and manufacturer's printed instructions.
  - 01 Do not drive nails through pans or seams.
  - 02 Press seams tightly together in each operation.
- G. Lock standing seams to form a tight mechanical joint by using special rib-locking crimping machine made expressly for the purpose.
  - 01 All seams shall be 180 degree seams.
  - 02 Use of hand tools or other improvised equipment is not permitted, unless specifically directed by the manufacturer..

#### **3.3 WORKMANSHIP**

- A. Install panel systems straight and true, free from defects. Isolate dissimilar metal contact with proper taping and/or coatings. Install flashing and corners to provide a watertight system.

#### **3.4 INSPECTION**

- A. Architect and Contractor reserve the right to inspect the work during application. Upon completion of the work, if inspection discloses that roofing is not according to specifications or has been damaged, Contractor agrees to furnish additional materials necessary to make repairs and place work in an acceptable condition.

**END OF SECTION**

## SECTION 07565

### PREPARATION FOR ROOFING

#### PART 1 - GENERAL

##### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General, Supplementary and Special Conditions and other Division 1 Specification Sections, apply to this Section.
- B. Refer to Instructions to Proposers for substitutions of materials and products.
- C. Addenda issued during the proposal period that affect this section of the specifications.

##### 1.2 SCOPE OF WORK

- A. Remove existing roofing and related components down to the deck surface at designated areas. Prepare lightweight concrete deck and install fiberglass vented base sheet as specified. Raise all curbs and related items to achieve a finished 8" minimum base flashing height.

##### 1.3 PRE-INSTALLATION CONFERENCE

- A. Review installation procedures and coordination required with related work. Insure deck surface is suitable for base sheet and roof membrane application.

##### 1.4 ENVIRONMENTAL REQUIREMENTS

- A. Do not install base sheet when weather conditions threaten the integrity of the new roofing materials. Maintain continued temporary protection prior to installation of the new roofing system.

##### 1.5 PROTECTION

- A. It shall be the Contractor's responsibility to respond immediately to correction of roof leakage in areas of new roofing during construction. A four (4) hour time limit shall be given from the time of notification of emergency conditions. In the event of water penetration during rain or a storm, the Contractor shall provide for repair or protection of the building contents and interior. If the Contractor does not respond or cannot be contacted, the Owner will effect repairs or emergency action and the Contractor shall be back charged for all expenses and damages, if any.

##### 1.6 SCHEDULING

- A. Schedule work to coincide with commencement of installation of new roofing system.

##### 1.7 DESIGN AND PERFORMANCE CRITERIA

- A. Uniform Wind Uplift Load Capacity
  - 1. Installed roof system shall withstand negative (uplift) design wind loading pressures complying with the following criteria. Attachment shall be installed exactly as given in Part 3.
    - a. Design Code: ASCE 7-05, Method 2 for Components and Cladding.
    - b. Category [III] Building with an Importance Factor of [1.15]

## **PART 2 - PRODUCTS**

### **2.1 MATERIALS**

- A. Temporary protection; Sheet Polyethylene. Provide weights or fasteners to retain sheeting in position.
- B. Base Sheet: ASTM D-4601 Type II. Fiberglass reinforced with channel indentions and minerals on one side.
- C. Fasteners: ES FM-90 or Olympic 1.75" CR-Base Sheet Fastener.

## **PART 3 - EXECUTION**

### **3.1 EXAMINATION**

- A. Roofing Contractor to verify existing site conditions, including roof dimensions.
- B. Verify that existing deck surface is clear and ready for work of the Section.

### **3.2 MATERIAL REMOVAL**

- A. Remove all membrane, insulation, cant strips, base flashings and items shown on the drawings. The complete removal of all nails and insulation to leave a smooth even surface for re-roofing.
- B. Under certain conditions it will be necessary and desirable to incorporate on or more of the following methods for removal of dirt, silt, gravel, debris, roof membrane and insulation from the roof surface in order to preserve the ecology, eliminate unsightly conditions and protect building:
  - 01. Roof vacuum system.
  - 02. Crane and hopper with dump truck system.
  - 03. Enclosed shuts with protective shrouds on building and ground surfaces.
- C. All debris dumped from the roof shall be transported from the roof via chutes into dumpsters or trucks, and this debris shall, be removed from the premises when vehicles are full. No debris shall be transported from the area being worked over an existing finished roof without and underlayment of 3/4" plywood.
- D. All roof equipment not in use or left filled will be parked on the column lines on 3/4" plywood.
- E. Contractor shall provide tie-ins at the end of each days work. Area of tie-in shall be spudded clean of all existing gravel.

### **3.3 VENTED BASE SHEET APPLICATION**

- A. Once all debris are removed from the lightweight insulating concrete, and the deck is found to be in good condition, the contractor shall roll out the vented fiberglass base sheet, channel side down, over the surface. Lap subsequent sheets 4" over the preceding one. Extend sheet over and down wood blocking or existing fascia and tack in place.

(THESE ARE APPROXIMATE FASTENING PATTERNS, THE ROOFING SYSTEM MANUFACTURER SHALL PROVIDE EXACT SPACING FOR EACH ZONE ACCORDING TO ASCE 7-05 AND PROVIDE STAMPED DRAWING FROM A TEXAS LICENSED PROFESSIONAL ENGINEER PRIOR TO CONSTRUCTION)

**ZONE 1(FIELD OF ROOF):** Mechanically attach the base sheet laps at 7" centers, and down the longitudinal center of each sheet nail two rows of nails equally spaced at 7" apart and nails staggered on approximately 7" centers.

**ZONE 2 (PERIMETER):** Mechanically attach the base sheet laps at 5" centers, and down the longitudinal center of each sheet nail two rows of nails equally spaced at 5" apart and nails staggered on approximately 5" centers. Edge zone is 12 feet.

**ZONE 3 (CORNERS):** Mechanically attach the base sheet laps at 3.5" centers, and down the longitudinal center of each sheet nail two rows of nails equally spaced at 3.5" apart and nails staggered on approximately 3.5" centers. Edge zone is 16 feet.

- B. Extend sheet over wood blocking and down face; base sheet must extend continuously and evenly throughout the roof plane to provide a tight seal against the penetration of moisture vapor from below.

### **3.4 TEMPORARY PROTECTION**

- A. Provide temporary protective sheeting over uncovered deck surfaces if required.
- B. Turn sheeting up and over parapets and curbing. Retain sheeting in position with weights or temporary fasteners.
- C. Provide for surface drainage from sheeting to existing drainage facilities.
- D. Do not permit traffic over unprotected deck surface.

**END OF SECTION**