August 21, 2019

SAN BENITO CONS. IND. SCHOOL DISTRICT
ADDITIONS AND RENOVATIONS AT SAN BENITO HIGH SCHOOL
AND SULLIVAN ELEMENTARY
BID #RFCSP-0819-NEHSSL

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ADDENDUM NO. 2

A. PURPOSE AND INTENT

This addendum is issued for the purpose of modifying the plans and specifications for the San Benito Cons. Ind. School District Additions and Renovations at San Benito High School and Sullivan Elementary BID # RFCSP-0819-NEHSSL.

This addendum shall become part of the contract and all CONTRACTORS shall be bound by its content. All aspects of the specification and drawings not covered herein shall remain the same.

The General Conditions and Special Conditions of the specifications shall govern all parts of the work and apply full force to this addendum.

B. SCOPE

I. SPECIFICATIONS

Delete Roof Specifications from construction documents and in lieu of replace with the following Roof Specifications:

- 06100 Rough Carpentry (3 Pages)
- 07220 Roof and Deck Insulation (4 Pages)
- 07521 Coal Tar Modified Bituminous Membrane Roofing (17 Pages)
- 07600 Sheet Metal Flashing and Trim (9 Pages)

II. PLANS:

Bid Package “A” San Benito High School - See attached Sheet A2.01
Bid Package “B” Sullivan Elementary - See Attached Sheet B2.02

SECTION 06100 - ROUGH CARPENTRY

PART 1 GENERAL

1.01 SCOPE OF WORK:

A. Provide all labor, equipment, and materials to install new wood, nails bolts, framing anchors, rough hardware **to meet new insulation thickness** and other items needed or shown on the drawings for Rough Carpentry in this work.

B. Related Sections:

1. Section 07220 Roof & Deck Insulation
2. Section 07521 Coal Tar Modified Bituminous Membrane
3. Section 07600 Flashing and Sheet Metal

1.02 DELIVERY, STORAGE AND HANDLING:

A. Time delivery and installation of carpentry work to avoid delaying other trades whose work is dependent on or affected by the carpentry work. Keep materials dry during delivery

B. Store lumber and plywood in stacks with provisions for air circulation within stacks. Protect bottom of stacks against contact with damp or wet surfaces.

C. Protect exposed materials against water and wind. Remove damaged or unsuitable material from the job site.

1.03 QUALITY ASSURANCE:

A. Comply with governing codes and regulations. Use experienced installers.

B. Lumber Standards: American Softwood Lumber Standard PS 20-70 by the U.S. Department of Commerce.

C. Plywood Standards: U.S. product Standard PSI-74/ANSI A 199.1 or latest APA Performance Standards for American Plywood Association.

D. Factory Marking: Mark each piece of lumber or plywood to indicate type, grade, agency providing inspection service.

E. Size and Shape: Dress lumber 4 sides (S4S) and work to shapes and patterns shown. Nominal sizes shown and specified refer to undressed lumber dimensions. Detailed dimensions show actual lumber size required.

PART 2 PRODUCTS

2.01 MATERIALS:

A. Construction Lumber: Standard Grade Douglas Fir, Western Larch, Western Hemlock (WWPA or WCLB) or No. 2 dimension Southern Pine (SPIB).

B. Exterior Type Plywood: APA Rated sheathing, EXT.

C. Bucks, Nailers, Blocking, Etc.: No. 2 common grade of any WWPA or WCLA species or No. 2 Pine (SPIB).

D. Anchorage and Fastenings: Proper type, size material and finish for each application.

E. Quality: Sound, seasoned, well manufactured materials of longest practical lengths and sizes to minimize jointing. Free from warp which cannot be easily corrected by anchoring and attachment. Discard material with defects which would impair quality of work.

PART 3 EXECUTION

3.01 EXAMINATION:

A. Examine existing wood components and replace damaged members. Verify measurements and dimensions shown before proceeding with carpentry work.

B. Examine supporting structure and conditions under which carpentry work is to be installed. Do not proceed with installation until unsatisfactory conditions have been corrected.

C. Correlate location of nailers, blocking and similar supports for attached work.

D. Scribe and cope as required for accurate fit of carpentry work to other work.

3.02 PROTECTION:

A. Protect installed work from damage by other trades until acceptance of work.

3.03 INSTALLATION:

A. Provide nailers, blocking, sleepers where shown on the drawings or required for attachment of other work. **Coordinate with location with other work involved; refer to other Sections or shop drawings of**

such work.

B. Attach to substrate securely as required to support applied loading. Countersink bolts and nuts flush with surfaces.

C. Provide washers under bolt heads and nuts in contact with wood.

D. Do not wax or lubricate fasteners that depend on friction for holding power.

E. Select fasteners of size that will not penetrate members where opposite side will be exposed to view or will receive finish material.

F. Make tight connections between members. Install fasteners without splitting of wood; pre-drill as required. Do not drive threaded friction type fasteners; turn into place. Tighten bolts and lag screws at installation and re-tighten as required for tight connections prior to closing in or at completion of work.

END OF SECTION

SECTION 07220 - ROOF AND DECK INSULATION

PART 1 - GENERAL

1.01 SCOPE OF WORK

A. Provide all labor, equipment, and materials to install over the 22 ga. steel deck. Loose lay a minimum thickness of 1-1/2", 1/8" tapered Polyisocyanurate, ¼” inch Crickets followed by a 1/2" Securock cover board all fastened down to the steel deck with Trufast 3" metal Insulation Plates with Trufast HD fasteners. Install cants, crickets and saddles where required and/or shown on the drawings.

1.02 RELATED SECTIONS

A. Division 6 "Rough Carpentry"

B. Division 7 “Preparation for Re-roofing

C. Division 7 “Modified Bituminous Sheet Roofing”

1.03 SUBMITTALS

A. Samples and product literature for all products listed.

B. Design Loads: Submit copy of minimum design load calculations according to ASCE 7-10 for Components and Cladding. In no case shall the design loads be taken to be less than those detailed in article 1.06 of this specification.

1.04 DELIVERY, STORAGE AND HANDLING

A. Deliver materials in manufacturer's original unopened packages, dry, undamaged, seals and labels intact.

B. Store all insulation delivered to the site in enclosed trailers.

1.05 ENVIRONMENTAL REQUIREMENTS

A. Apply insulation only when the weather conditions are in compliance with the roof system limitations.

B. Protect the installed insulation from water penetration at the end of each day's work.

C. Application of the roof system shall immediately follow the installation of the roof insulation as it is installed.

1.06 DESIGN AND PERFORMANCE CRITERIA

A. Uniform Wind Uplift Load Capacity

1. Installed roof system over 22 ga. steel decks, shall withstand negative (uplift) design wind loading pressures complying with the structural drawings. Attachment shall be installed exactly as given in article 3.03.

Roof Area	**Design Uplift Pressure**
Zone 1 - Field of roof	- 25 psf
Zone 2 – Eaves and rakes	- 42 psf
Zone 3 - Corners	- 63 psf

PART 2 - PRODUCTS

2.01 GENERAL

A. When a particular make or trade name is specified, it shall be indicative of a standard required.

2.02 MATERIALS

A. Tapered ACFoam-III Polyiso Roof Insulation: 1/8” per foot, 1-1/2 minimum start.

B. Hinged Triangular One-Piece Pre-Cut Tapered and Fill Panels, Gemini Pre-Cut Crickets (CKT) Polyiso, 0.25” per ft

C. USG Securock® Gypsum-Fiber Roof Board, 1/2-inch (R- .39)

2.03 RELATED MATERIALS

A. As indicated on plans.

B. Fasteners & Plates: Steel Deck: TRUFAST® 3” Recessed Metal Insulation Plates & HD Fasteners.

C. Cant Strips: Fiberglass, Glass Cant.

D. As required by the membrane manufacturer.

PART 3 - EXECUTION

3.01 EXAMINATION

A. Examine substrate surfaces to receive roof and deck insulation and associated work and conditions under which insulation will be installed. Do not proceed with roofing until unsatisfactory conditions have been corrected in a manner acceptable to Installer.

B. Verify deck and surfaces are clean, smooth, dry, free of depressions or irregularities prior to beginning installation of materials.

C. Verify roof openings, curbs, pipes, sleeves, ducts, penetrations or vents through roof are solidly set, wood nailing strips are in place.

D. Verify all specifications related to Carpentry, have been followed prior to beginning installation of insulation. Beginning installation means acceptance of substrate.

3.02 PROTECTION

A. During execution of work covered by this Section, the Contractor shall provide protection for roof insulation from water and wind penetration at the end of each day's work.

B. Protect the roof insulation in areas that will receive excessive traffic with a surface protection such as plywood.

C. All workmen shall wear clean, soft rubber-soled shoes for any application work where they may be walking on the in-place insulation.

3.03 GENERAL INSTALLATION

A. Polyisocyanurate boards shall be installed loose laid and joints offset between boards. Securock shall be installed over the Tapered Polyisocyanurate boards, fully attached with specified fastening system as listed below.

1. STEEL DECKS

a. Fastener attachment shall be 1 per 1.33 sq. ft.

b. Placement of any fastener from edge of insulation board shall be a minimum of three inches, and a maximum of six (6) inches. .

B. Filler pieces of insulation require at least two fasteners per piece if size of insulation is less than four square feet.

C. Offset joints of Securock. Minimum penetration into deck shall be as recommended by the fastener manufacturer. There is a one (1) inch minimum for metal.

D. All boards shall be cut and fitted where the roof deck intersects a vertical surface. The boards shall be cut to fit a minimum of 1/4" away from the vertical surface.

E. Sump all roof boards at all scuppers.

F. Cant Strips/Tapered Edge/Crickets: Install preformed 45-degree cant strips at junctures of vertical surface. Install crickets where indicated on the plans.

END OF SECTION

SECTION 07521 - COAL TAR MODIFIED BITUMINOUS MEMBRANE ROOFING

PART 1 - GENERAL

1.01 RELATED DOCUMENT

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

B. Section 06100 - “Rough Carpentry".

C. Section 07565 - “Preparation for Re-Roofing”.

D. Section 07600 - “Sheet Metal Flashing and Trim".

1.02 DESCRIPTION

A. Cold Applied Modified bituminous sheet roofing work including but not limited to:

1. Base Ply: One (1) ply of 80 mil SBS modified, smooth surfaced, coal tar pitch base sheet membrane consisting of two layers of fiberglass reinforcement, set in asphalt modified polyether moisture-cured polymer adhesive.

2. Cap Sheet: One (1) ply of 160 mil Fire retardant SBS/Coal tar rubber modified mineral surfaced membrane utilizing polyester and fiberglass reinforcement, set in asphalt modified polyether moisture-cured polymer adhesive

3. Flashing Membrane System: One (1) ply of 80 mil SBS modified, smooth surfaced, coal tar pitch base sheet membrane consisting of two layers of fiberglass reinforcement, set in asphalt modified polyether moisture-cured polymer adhesive followed by One (1) ply of 160 mil Fire retardant SBS/Coal tar rubber modified mineral surfaced membrane utilizing polyester and fiberglass reinforcement, set in set in flashing membrane adhesive.

1.03 References: The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only.

A. American Society of Civil Engineers (ASCE):

1. ASCE 7-05, Minimum Design Loads for Buildings and Other Structures.

B. American Society for Testing and Materials (ASTM):

1. ASTM D451 Standard Test Method for Sieve Analysis of Granular Mineral Surfacing for Asphalt Roofing Products.

2. ASTM D1079 Standard Terminology Relating to Roofing, Waterproofing and Bituminous Materials.

3. ASTM D5147 Standard Test Method for Sampling and Testing Modified Bituminous Sheet Materials.

4. ASTM D6162 Standard Specification for Styrene Butadiene Styrene (SBS) Modified Bituminous Sheet Materials Using a Combination of Polyester and Glass Fiber Reinforcements.

5. ASTM E108 Standard Test Methods for Fire Test of Roof Coverings.

C. FACTORY MUTUAL GLOBAL RESEARCH, FACTORY MUTUAL APPROVALS (FM) .

1. FM A/S4470 Class 1 Roof Covers

D. National Roofing Contractors Association (NRCA):

1. Roofing and Waterproofing Manual.

E. Underwriters Laboratories, Inc. (UL):

1. Fire Hazard Classifications.

F. Warnock Hersey (WH):

1. Fire Hazard Classifications.

G. American National Standards Institute and Single Ply Roofing Institute (ANSI/SPRI)

1. ANSI/SPRI ES-1 Testing and Certification Listing of Shop Fabricated Edge Metal

1.04 REGULATORY REQUIREMENTS

A. Fire and Wind Uplift Rating: Provide modified bitumen roof system and

component materials that have been tested for application and slopes indicated that have been tested and listed by Factory Mutual, Underwriters Laboratories, Warnock Hersey or approved third party testing facility in accordance with ASTM E108, Class A for external fire and have been designed for listed wind loads in accordance with IBC 2015 and ASCE 7.

B. Provide roof-covering materials bearing Factory Mutual Classification Marking on bundle, package, or container indicating that materials have been produced under FM's Classification and Follow-up Service.

1.05 QUALITY ASSURANCE

A. Manufacturer Qualifications: Roofing system manufacturer shall be ISO 9001 Certified and have a minimum of 10 years experience in manufacturing modified bitumen roofing products in the United States. Show evidence that the products and materials are manufactured in the United States and that materials provided conform to all requirements specified herein, and are chemically and physically compatible with each other and are suitable for inclusion within the total roof system specified herein. The Roofing System Manufacturer shall Indemnify the Architect for attorney's fees, related expenses and judgments incurred through litigation arising out of application or performance of the roof system, even if the litigation is groundless, false or fraudulent. The Architect shall be indemnified for a maximum aggregate sum of amount of $100,000.

B. Installer Qualifications: Installer (Roofer) shall be specializing in Built-up bituminous roof application with minimum 5 years experience and who is currently certified by modified bituminous sheet roofing system manufacturer as qualified to install manufacturer's roofing materials. Any one or more of the following causes may be considered sufficient for the disqualification of installer:

1. Lack of responsibility as revealed by either financial, experience or equipment statements.

2. Lack of expertise as shown by past work and judged from the standpoint of workmanship and performance history.

3. Uncompleted work under other contracts which, in the judgment of the Owner, might hinder or prevent the prompt completion of additional work if awarded.

4. Being in arrears on existing contracts, in litigation with an Owner, or having defaulted on a previous contract.

C. Installer's Field Supervision: Installer to maintain a full-time supervisor/foreman on job site during all phases of modified bituminous sheet roofing work and at any time roofing work is in progress, proper

supervision of workmen shall be maintained. A copy of the Specifications shall be in the possession of the supervisor/foreman at all times.

D. It shall be the Contractor's responsibility to respond immediately to correction of roof leakage during construction.

E. Pre-application Roofing Conference: Before scheduled commencement of modified bitumen sheet roofing installation and associated work, meet at Project site with Installer, installer of each component of associated work, installers of deck or substrate construction to receive roofing work, installers of rooftop units and other work in and around roofing that must precede or follow roofing work (including mechanical work if any), Architect, Owner, roofing system manufacturer's representative, and other representatives directly concerned with performance of the Work, including test agencies, and governing authorities. Review foreseeable methods and procedures related to roofing work, including but not necessarily limited to the following:

1. Tour representative areas of roofing substrates (decks), inspect and discuss condition of substrate, roof drains, curbs, penetrations, and other preparatory work.

2. Review roofing system requirements (drawings, specifications, and other contract documents).

3. Review required submittals, both completed and yet to be completed.

4. Review and finalize construction schedule related to roofing work and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.

5. Review required inspection, testing, certifying, and material usage accounting procedures.

6. Review weather and forecasted weather conditions and procedures for coping with unfavorable conditions, including possibility of temporary roofing (if not a mandatory requirement).

7. Record (Contractor) discussions of conference, including decisions and agreements (or disagreements) reached, and furnish copy of record to each party attending. If substantial disagreements exist at conclusion of conference, determine how disagreements will be resolved and set date for reconvening conference.

1.06 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 Section 07220, article 3.03.

   a. Design Code: ASCE 7-10, Section 29.5.1 for Roof System & Components.

   b. Category III Building

   c. Wind Speed: 150 mph

   d. Exposure Category: B

Design Uplift Pressure

Zone 1 - Field of roof	- 25 psf
Zone 2 – Eaves and rakes	- 42 psf
Zone 3 - Corners	- 63 psf

1.07 SUBMITTALS

A. General: Submit the following according to Conditions of Contract and Division 1 Specification Sections.

B. TDI Listing: Submit copy of Texas Department of Insurance report with listing of Limitations & Installation method.

C. Manufacturer's Certification: (Use form attached to the end of this Section.) The Manufacturer's Certification Form must be signed by a corporate officer of the roofing system manufacturer with the Corporate Seal affixed thereto.

D. Product data for each type of product specified include manufacturer's technical product data, installation instructions, and recommendations for each type of roofing product required. Include data substantiating that materials comply with specified requirements.

E. For all modified bituminous sheet roofing include independent test data according to ASTM Designation D 5147-97 “Standard Test Methods for Sampling and Testing Modified Bituminous Sheet Material”, substantiating that materials comply with specified requirements.

F. Samples of the following:

Minimum, 3-by-5-inch samples of each colored modified bituminous mineral surfaced cap sheet and flashing materials to be exposed as finished roof surface.

G. Manufacturer's ISO 9001 Certification.

H. Manufacturer's Warranty: Submit sample copy of specified roofing manufacturer's “Thirty (30) Year NDL Warranty".

I. Manufacture’s Indemnification Agreement.

J. Manufacturer’s Inspection Reports: The Roofing System Manufacturer will provide, when the project is in progress the following:

1. Keeping the Architect informed as to the progress and quality of the work as observed.

2. Provide jobsite inspections at least two (2) times a week.

3. Provide detailed weekly written reports to the Architect along with digital photographs of work in progress. All reports and photographs shall be descriptive of actual work in progress and be presented in a pre-approved manner.

4. Reporting to the Architect in writing, any failure or refusal of the Contractor to correct unacceptable practices called to the Contractor's attention.

5. Confirming, after completion of the project and based on manufacturer's observations and tests, that manufacturer has observed no application procedures in conflict with the specifications other than those that may have been previously reported.

1.08 INSURANCE CERTIFICATION

A. The contractor shall employ an engineer licensed in the State of Texas (Qualified Inspector) to execute referenced forms.
Forms WPI-1 & WPI-2-BC-4 from the Texas Department of Insurance (TDI) **or** Texas Windstorm Insurance Association (TWIA) forms WPI-8-C and WPI-8s.

1.09 DELIVERY, STORAGE AND HANDLING

A. Deliver products to site with seals and labels intact, in manufacturer's original containers, dry and undamaged.

B. Store and handle roofing sheets in a dry, well-ventilated, weather-tight place to ensure no possibility of significant moisture exposure.

C. Store rolls of felt and other sheet materials on pallets or other raised surface. Stand all roll materials on end. Cover roll goods with a canvas tarpaulin or other breathable material (not polyethylene)

D. Do not leave unused rolled goods on the roof overnight or when roofing work is not in progress unless protected from weather and other moisture sources.

E. Handle and store materials or equipment in a manner to avoid significant or permanent deflection of deck.

1.10 PROJECT CONDITIONS

A. Weather Condition Limitations: Do not apply roofing membrane during inclement weather or when a 40% chance of precipitation is expected.

B. Do not apply roofing insulation or membrane to damp deck surface.

C. Do not expose materials vulnerable to water or sun damage in quantities greater than can be weatherproofed during same day.

D. Proceed with roofing work only when existing and forecasted weather conditions will permit unit of Work to be installed in accordance with manufacturers' recommendations and warranty requirements.

1.11 SEQUENCING AND SCHEDULING

A. Sequence installation of modified bituminous sheet roofing with related units of Work specified in other Sections to ensure that roof assemblies, including roof accessories, flashing, trim, and joint sealers, are protected against damage from effects of weather, corrosion, and adjacent construction activity. Phased construction will not be accepted.

1.12 WARRANTY

Manufacturer's Warranty: “Thirty (30) Year N.D.L Warranty", signed by a corporate officer of the corporation of modified bitumen sheet roofing system manufacturer, will pay all authorized cost or repair to the roof membrane system necessary to stop any leaks which occur during a Thirty (30) year period from the date of completion.

PART 2 - PRODUCTS

2.01 GENERAL

A. When a particular make, trade name or performance standard is specified, it shall be indicative of a minimum standard required. Products not meeting these minimum performance requirements, shall not be bid and will not be considered.

B. Provide as listed or approved substitution. All request for substitution must be submitted at least 7 DAYS prior to bidding and shall include the Substitution Request Form attached to the Bid Forms.

C. Obtain primary products, including each type of roofing sheet, bitumen, membrane flashings from a single manufacturer. Provide secondary products as recommended by manufacturer of primary products for use with roofing system specified.

2.02 BITUMINOUS MATERIALS

A. Cold Applied Solvent Free Membrane Adhesive: Asphalt modified polyether moisture-cure polymer adhesive, zero V.O.C. Performance Requirements: Green-Lock Membrane Adhesive.

Non-Volatile Content ASTM D4586 100%

Density ASTM D1475 11.4 lbs./gal.

Viscosity 20,000-50,000 cPs

Flash Point ASTM D93 400°F min.

Tack-Free Time @ 70° F 40-60 minutes

Coverage: 2 – 2.5 gal./100 sq.ft.

B. Cold Applied Trowel Grade Flashing Adhesive: zero V.O.C. compliant., 100% polyether moisture-cure polymer flashing adhesive Performance Requirements: Green-Lock Flashing Adhesive.

Non-Volatile Content ASTM D4586 100%

Density ASTM D1475 11.8 lbs./gal.

Viscosity ASTM D2196 400,000 cP

Lap Shear ASTM D3164 50 psi

Tensile Strength ASTM D412 50 psi

Flash Point ASTM D93 400°F min.

Coverage: 4-6 gal./100 sq.ft.

2.03 SHEET MATERIALS

A. Base Ply Roof Membrane: Millennium Base. 80 mil, Polyester/Fiberglass Reinforced base sheet coated on both sides with SBS polymer modified coal pitch compound conforming to the following minimum performance requirements according to ASTM D5147, 2 in/min. @ 73.4 ± 3.6°F:

	Machine Direction	Cross Machine Direction
Tensile Strength	310 lbf/in	310 lbf/in
Tear Strength	500 lbf	500 lbf
Elongation	3.5%	3.5%
Low Temperature Flex	Passes -76°F	
Compound Stability	225°F	
Recycled Content	65%	

B. Cap Sheet Membrane: Millennium FR Mineral. 160 Mil mineral surfaced Polyester/Fiberglass Reinforced Fire Retardant Modified Membrane, coated on both sides with SBS polymer modified coal pitch compound conforming to the following minimum performance requirements according to ASTM D5147, 2 in/min. @ 73.4 ± 3.6°F:

	Machine Direction	Cross Machine Direction
Tensile Strength	310 lbf/in	310 lbf/in
Tear Strength	500 lbf	500 lbf
Elongation	3.5%	3.5%
Low Temperature Flex	Passes -76°F	
Compound Stability	225°F	
Recycled Content	65%	

D. Flashing Membrane (Bottom): Same as Base Ply Roof Membrane, (Top):

Same as Cap Sheet Membrane.

2.04 MISCELLANEOUS MATERIALS

A. Fasteners for masonry walls and vertical surfaces: Provide hardened steel nails with flat heads, diamond shaped points, and mechanically deformed shanks not less one inch long for securing felts, modified bitumen sheets, and metal items to masonry or concrete walls and vertical surfaces. Use power-driven fasteners only when approved in writing.

B. Glass Fiber Cant: Continuous triangular cross Section made of inorganic fibrous glass used as a cant strip as recommended and furnished by the membrane manufacturer.

C. Pipe Supports: Adjustable Pipe Roller Supports

D. Manufactured Roof Expansion Joints: JM Expand-O-Flash

PART 3 - EXECUTION

3.01 EXAMINATION

A. Examine substrate surfaces to receive modified bitumen sheet roofing system and associated work and conditions under which roofing will be installed. Do not proceed with roofing until unsatisfactory conditions have been corrected in a manner acceptable to Installer.

3.02 GENERAL INSTALLATION REQUIREMENTS

A. Cooperate with manufacturer, inspection and test agencies engaged or required to perform services in connection with installing modified bitumen sheet roofing system.

B. Protect other work from spillage of modified bitumen roofing materials, and prevent liquid materials from entering or clogging drains and conductors. Replace or restore other work damaged by installation of modified bituminous sheet roofing system work.

C. Code Compliance: Where required, install and test modified bitumen sheet roofing system to comply with governing regulations and specified requirements.

D. Coordinate installing roofing system components so that insulation and roofing plies are not exposed to precipitation or left exposed overnight. Provide cut offs at end of each day's work to cover exposed ply sheets and insulation with a course of coated felt with joints and edges sealed with roofing cement. Remove cut offs immediately before resuming work.

E. Apply roofing materials as specified herein unless recommended otherwise by manufacturer's instructions. Keep roofing materials dry before and during application. Do not permit phased construction. Complete application of roofing plies, cap sheet and flashing in a continuous operation. Begin and apply only as much roofing in one day as can be completed that same day.

F. Water Cutoffs: At end of each day's roofing installation, protect exposed edge of incomplete work, including ply sheets and any insulation. Provide temporary covering of one plies of base sheet set in adhesive; remove at beginning of next day's work. Seal off flutes in metal decking along cut off edge. Pull membrane free or cut to expose the insulation when resuming work, and remove the insulation sheets used for fill-in.

3.03 BASE SHEET UNDERLAYMENT INSTALLATION

A. SBS Sheet: Install (1) 80 mil thick base sheet in two (2) to two and one half (2 ½) gallons per 100 square feet of cold applied membrane adhesive, shingled uniformly over the prepared substrate. Shingle in proper direction to shed water on each large area of roofing.

B. Lap ply sheet ends eight inches. Stagger end laps twelve inches minimum.

C. Extend plies two inches beyond top edges of cants at wall and projection bases.

D. The roll must push a puddle of adhesive in front of it with adhesive slightly visible at all side laps**. Care should be taken to eliminate air entrapment under the membranes by using a 150 lb weighted roller**

E. Allow the base sheet to cure at least thirty minutes before installing the modified cap membrane. However, the modified membrane must be installed the same day as the base ply.

3.05 MINERAL SURFACED COAL TAR MODIFIED MEMBRANE APPLICATION

A. Over the Base Sheet underlayment, Solidly bond to the base layers with specified cold adhesive at the rate of two (2) to two and one half (2 ½) gallons per 100 square feet of cold applied membrane adhesive, shingled uniformly over the prepared substrate. Shingle in proper direction to shed water on each large area of roofing.

B. The roll must push a puddle of adhesive in front of it with adhesive slightly visible at all side laps**. <u>Care should be taken to eliminate air entrapment under the membranes by using a 150 lb weighted roller</u>**

C. Subsequent rolls of modified shall be installed across the roof as above with a minimum of four (4") inch side laps and eight (8") inch end laps. The end laps shall be staggered. The modified membrane shall be laid in the same direction as the base layers but the laps shall not coincide with the laps of the base layers.

D. For best results, immediately after installing the cold adhesive layer the base ply into the adhesive and repeat this process for the top layer of modified membrane.

E. Extend membrane two (2") inches beyond top edge of all cants in full coverage of the cold adhesive.

F. Mineral Surfaced Membrane System: While bleed out from the side and end laps are still cold, hand broadcast minerals into adhesive bleed out for a monolithic appearance. Aluminize any areas of improper adherence of minerals and rebroadcast minerals while coating is still wet.

3.06 FLASHING MEMBRANE INSTALLATION

A. <u>All base flashings are to be installed and completed on a daily basis.</u> No condition should exist that will permit moisture entering behind, around, or under the roof or flashing membrane.

B. Seal all curb, wall and parapet flashings with an application of trowel grade flashing adhesive and mesh on a daily basis. Do not permit conditions to exist that will allow moisture to enter behind, around or under the roof or flashing membrane.

C. Prepare all walls, penetrations, expansion joints to be flashed with asphalt primer at the rate of one hundred (100) square feet per gallon. Allow primer to dry tack free

D. Use the modified base sheet and cap sheet membrane as the flashing membrane. Trowel to the underlying base flashing ply with specified flashing adhesive unless otherwise noted in these specifications. Nail off at a minimum of eight (8") inches o.c. from the finished roof at all vertical surfaces.

E. Solidly adhere the entire sheet of flashing membrane to the substrate. Tops of all flashings that are not run up and over curb shall be secured through termination bar six (6") inches (152mm) and sealed at top.

F. Seal all vertical laps of flashing membrane with an additional ply of 8-inch wide mineral surfaced membrane using flashing adhesive. All laps must be tested with a round nosed trowel putting pressure against the side lap to insure that a complete, positive bond has been achieved and to protect against a superficially closed lap.

G. Coordinate counter flashing, cap flashings, expansion joints and similar work with modified bitumen roofing work [as specified in other sections].

H. Coordinate roof accessories, miscellaneous sheet metal accessory items, including piping vents and other devices with the roofing system work [as specified in other sections]. When using mineralized cap sheet all stripping shall be installed prior to cap sheet installation

3.07 PROTECTION

A. During execution of work covered by this Section, the Contractor shall provide protection for equipment, materials, inside and outside the building against falling debris, sparks, and water. Protection shall be provided in a manner to minimize interference, interruption, and inconvenience to other trades.

B. Protect building surfaces against damage from roofing work.

C. All workmen shall wear clean, soft rubber-soled shoes for any application work where they may be walking on the in-place roofing membrane. Precautions shall be taken to protect the membrane and to maintain a clean appearance. Protect roofing during remainder of construction period.

D. At end of construction period, or at a time when remaining construction will in no way affect or endanger roofing, inspect roofing and prepare a written report, with copies to Owner, describing nature and extent of deterioration or damage found.

3.08 FINAL INSPECTION

A. At completion of roofing installation and associated work, meet with Installer, installer of associated work. Owner, Architect, roofing system manufacturer's representative and other representatives directly concerned with performance of roofing system.

B. Walk roof surface areas of the building, inspect perimeter building edges as well as flashing of roof penetrations, walls, curbs and other equipment. List all items requiring correction or completion and furnish copy of list to each party attending.

C. The Owner, Architect and Roofing System Manufacturer reserve the right to request a certified photographic and recorded thermographic scan of the roof during final inspection to determine if any damp or wet materials have been installed. The thermographic scan and photographic records shall be provided by the Roofing Contractor free of charge.

D. If core cuts verify the presence of damp or wet materials, the Roofing Contractor shall be required to replace the damaged areas at his own expense.

E. Repair or replace (as required) deteriorated or defective work found at time of above inspection to a condition free of damage and deterioration at time of Substantial Completion and according to warranty requirements.

F. The Contractor is to notify the Owner upon completion of corrections.

G. Following the final inspection, acceptance will be made in writing by the material manufacturer.

3.09 CLEANING

A. Remove drippage of the bitumen adhesives from all walls, windows, floors, ladders, and finished surfaces.

B. In areas where finished surfaces are soiled by asphalt or any other source of soiling caused by work of this Section, consult manufacturer of surfaces for cleaning advice and conform to their instructions.

3.10 DEMONSTRATION AND TRAINING

A. At a time and date agreed to by the Owner, instruct the Owner's facility manager, or other representative designated by the Owner, on the following procedures:

1. Roof troubleshooting procedures.

2. Notification procedures for reporting leaks or other apparent roofing problems.

3. Roofing maintenance.

4. The Owner's obligations for maintaining the roofing warranty in effect and force.

5. The Manufacturer's obligations for maintaining the roofing warranty in effect and force.

Roofing System Manufacturer's Certification Form

Project: SAN BENITO CISD
ADDITIONS AND RENOVATIONS AT SAN BENITO HS
AND SULLIVAN ELEMENTARY
RFCSP-0819-NEHSSL

_____Certifies that;
(Roofing System Manufacturer)

_____, is currently approved by the
(Roofing Contractor)

Roofing System Manufacturer to install the specified roofing system for the referenced project and that the Roofing System Manufacturer has a minimum of 10 years experience in manufacturing roofing products in the United States and is currently ISO 9001 certified to by the International Organization for Standardization.

The Roofing System Manufacturer has reviewed all Bidding Documents in their entirety and approved of them as written and drawn.

Roofing System Manufacturer will provide a minimum of two weekly field inspection services by a full time employee of the manufacturer, during, and until all roof construction work is completed and accepted by the Architect and Owner.

The Roofing System Manufacturer shall indemnify the Architect for attorney's fees, related expenses and judgments incurred through litigation arising out of application or performance of the roof system, even if the litigation is groundless, false or fraudulent. The Architect shall be indemnified for a maximum aggregate sum of amount of $100,000.

Roofing System Manufacturer will provide the manufacturer’s Thirty (30) Year N.D.L warranty as stipulated in the Contract Documents upon completion of the project.

By: _____
Name

Its _____
Title

(Affix Corporate Seal)

Date _____

ROOFING SUBSTITUTION REQUEST - BIDDING PHASE (Page 1 of 2)

PROJECT: SAN BENITO CISD
ADDITIONS AND RENOVATIONS AT SAN BENITO HS
AND SULLIVAN ELEMENTARY
RFCSP-0819-NEHSSL

TO: GMS ARCHITECTS
1150 Paredes Line Road
Brownsville, Texas 78521

FROM:

_____

Bidder/Supplier hereby requests acceptance of the following product or system as a substitution in accord with provisions of the Bidding Documents:

1. SPECIFIED PRODUCT OR SYSTEM: Substitution request for (Generic Description)

_____

Specification Section No._____

Article(s)_____

Para.(s)_____

2. SUPPORTING DATA: **All items must be attached for verification**
* Product data, description of product(s)
* Factory Mutual 4470 Certification
* Independent Test Data according to ASTM-5147 @ 77^0F.
* Roofing System Manufacturer's ISO Certification
* Roofing System Manufacturer's Certification form
* Unexecuted copy of manufacturer's Warranty & Indemnification Agreement
* Sample(s) attached.

3. PREVIOUS INSTALLATIONS: Identification of three (3) similar projects on which proposed substitution was used. Include copies of issued manufacturer's warranty. Attach List Indicating;
* Project
* Address
* Architect
* Owner
* Date Installed
* Roof System

4. EFFECT OF SUBSTITUTION: __ No __ Yes (If yes, explain):

_____

_____

5. BIDDER'S/SUPPLIER'S STATEMENT OF CONFORMANCE OF PROPOSED SUBSTITUTION TO CONTRACT REQUIREMENT:

I/We have investigated the proposed substitution. I / We:

* Believe that it is equal or superior in all respects to specified product, except as stated above; and
* Will provide the same warranty as specified for specified product; and
* Have included complete implications of the substitution as specified; and
* Will pay redesign and other costs caused by the substitution which subsequently become apparent; and
* Will pay costs to modify all other parts of the Work as may be needed, to make all parts of the Work complete and functioning resulting from the substitution.

Bidder/Supplier:_____

By:_____

Date_____

Answer all questions and complete all blanks -- use "NA" if not applicable.

END OF SECTION

SECTION 07600 - SHEET METAL FLASHING AND TRIM

PART 1 — GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including the Conditions of the Contract and Division 01 Specification Sections apply to this section.

1.2 SUMMARY

A. Provide all labor, equipment, and materials to fabricate and install the following.

1. Metal flashings.
2. Fascia, Trim and edge metal.
3. Lead Jacks for vents
4. Sheet metal enclosures for equipment & roof penetrations.
5. Expansion Joints

B. Related Work Specified Elsewhere:

1. Division 06 Section Rough Carpentry
2. Division 07 Section Coal-Tar Modified Bituminous Membrane Roofing

1.3 REFERENCES

A. American Society for Testing and Materials (ASTM)

1. ASTM A653 Standard Specification for Steel Sheet, Zinc-Coated (galvanized) or Zinc-Iron Alloy-Coated (galvannealed) by the Hot-Dip Process.
2. ASTM A792 Standard Specification for Steel Sheet, 55% Aluminum-Zinc Alloy Coated by the Hot-Dip Process.
3. ASTM B209 Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate.
4. ASTM B221 Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.
5. ASTM D692 Standard Specification for Coarse Aggregate for Bituminous Paving Mixtures.

B. American National Standards Institute and Single Ply Roofing Institute (ANSI/SPRI)

1. ANSI/SPRI ES-1 Testing and Certification Listing of Shop Fabricated Edge Metal

C. Warnock Hersey International, Inc., Middleton, WI (WH)

D. Factory Mutual Research Corporation (FMRC)

E. Underwriters Laboratories (UL)

F. Sheet Metal and Air Conditioning Contractors National Association (SMACNA)

1. Latest Edition Architectural Sheet Metal Manual

G. National Roofing Contractors Association (NRCA)

1. Roofing and Waterproofing Manual

H. American Society of Civil Engineers (ASCE)

1. ASCE 7-05 Minimum Design Loads for Buildings and Other Structures.

1.4 SUBMITTALS FOR REVIEW

A. Product Data:

1. Provide manufacturer's specification data sheets for each product.

2. Metal material characteristics and installation recommendations.

3. Submit color chart prior to material ordering and/or fabrication so that equivalent colors to those specified can be approved.

B. Samples: Submit two (2) samples, illustrating typical metal edge, coping, gutters, fascia extenders for material and finish.

C. Shop Drawings

1. For manufactured and shop fabricated gravel stops, fascia, scuppers, and all other sheet metal fabrications.

2. Indicate material profile, jointing pattern, jointing details, fastening methods, flashing, terminations, and installation details.

3. Indicate type, gauge and finish of metal.

D. Specimen Warranty: Provide an unexecuted copy of the warranty specified for this Project, identifying the terms and conditions required of the Manufacturer and the Owner.

1.5 SUBMITTALS FOR INFORMATION

A. Design Loads: Any material submitted must be accompanied by a report signed by a registered testing agency. This report shall show that the submitted equal meets the wind uplift and perimeter attachment requirements according to ASCE 7-05 and ANSI/SPRI ES-1.

B. A letter from an officer of the manufacturing company certifying that the materials furnished for this project are the same as represented in tests and supporting data.

C. Mill production reports certifying that the steel thicknesses are within allowable tolerances of the nominal or minimum thickness or gauge specified.

D. Certification of work progress inspection. Refer to Quality Assurance Article below.

E. Certifications:

1. Submit certification that the perimeter/edge metal products being used on this project have been tested according to ANSI/SPRI ES-1 criteria. Certification submitted must be provided by either NRCA, Independent Test Agency or the perimeter/edge metal manufacturer.

1.6 QUALITY ASSURANCE

A. Engage an experienced roofing contractor specializing in sheet metal flashing work with a minimum of five (5) years experience.

B. Maintain a full-time supervisor/foreman who is on the job-site at all times during installation. Foreman must have a minimum of five (5) years experience with the installation of similar system to that specified.

C. Upon request fabricator/installer shall submit work experience and evidence of financial responsibility. The Owner's representative reserves the right to inspect fabrication facilities in determining qualifications.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Deliver materials in manufacturer's original, unopened containers or packages with labels intact and legible.

B. Stack pre-formed and pre-finished material to prevent twisting, bending, or abrasion, and to provide ventilation. Slope metal sheets to ensure drainage.

C. Prevent contact with materials which may cause discoloration or staining.

1.8 PROJECT CONDITIONS

A. Determine that work of other trades will not hamper or conflict with necessary fabrication and storage requirements for pre-formed metal edge system.

1.9 DESIGN AND PERFORMANCE CRITERIA

A. Wind Uplift Pressures: Metal edge system must meet minimum design load pressures as determined by ASCE 7. Provide completed calculations to show ANSI/SPRI ES-1 test results meet the minimum wind uplift pressures.

B. Thermal expansion and contraction:

1. Completed metal edge flashing system shall be capable of withstanding expansion and contraction of components caused by changes in temperature without buckling, producing excess stress on structure, anchors or fasteners, or reducing performance ability.

1.10 WARRANTIES

A. Owner shall receive one (1) warranty from manufacturer covering all of the following criteria. Multiple warranties are not acceptable.

1. Pre-finished metal material shall require a written twenty (20)-year non-prorated warranty covering fade, chalking and film integrity. The material shall not show a color change greater than 5 NBS color units per ASTM D2244 or chalking excess of 8 units per ASTM D659. If either occurs material shall be replaced per warranty, at no cost to the Owner.

2. Changes: Changes or alterations in the edge metal system without prior written consent from the manufacturer shall render the system unacceptable for a warranty.

3. Warranty shall commence on date of substantial completion or final payment, whichever is agreed by contract.

4. The Contractor shall provide the Owner with a notarized written warranty assuring that all sheet metal work including caulking and fasteners to be watertight and secure for a period of two years from the date of final acceptance of the building. Warranty shall include all materials and workmanship required to repair any leaks that develop, and make good any damage to other work or equipment caused by such leaks or the repairs thereof.

PART 2 — PRODUCTS

2.1 PRODUCTS, GENERAL

A. Refer to Division 01 Section "Common Product Requirements."

B. Comply with all manufacturer and contractor/fabricator quality and performance criteria specified in Part 1.

2.3 ACCEPTABLE FABRICATORS

A. Any fabricator which has been certified by the NRCA (National Roofing Contractors Association) to fabricate their ANSI/SPRI ES-1 tested profiles on their Gravel-Stop, Metal Edge, Fascia and Coping Cap products**.**

B. Provide a product carrying a signed and sealed Performance Test Report from a testing company for ANSI/SPRI ES-1 on their Gravel-Stop, Metal Edge, Fascia and Coping Cap products.

C. Any fabricator with a Gravel-Stop, Metal Edge, Fascia and Coping Cap products that has been tested in accordance with ANSI/SPRI ES-1 standards. Proof of this testing must be provided via a report signed and sealed by a qualified third party testing agency. This report shall show that the submitted equal meets the wind uplift and perimeter attachment requirements according to ASCE 7-05 and ANSI/SPRI ES-1. Substitution requests submitted without licensed engineer approval will be rejected for non-conformance

2.4 MATERIALS

A. Materials:

1. Exposed base metal material:

   a. Aluminum, ASTM B209, alloy 3105-H14, in thickness of .040" nom. or .050".

2. Unexposed base metal material:

   a. Zinc-coated steel, ASTM A653, coating designation G-90, in thickness of 0.0299 nom./ 22 gauge, 36" to 48" by coil length, chemically treated, commercial or lock-forming quality.

3. Minimum gauge of steel or thickness of Aluminum to be specified in accordance with Architectural Sheet Metal Manual, Sheet Metal and Air Conditioning Contractor's National Association, Inc. or Manufacturers recommendations.

B. Finishes:

1. Exposed surfaces for coated panels:

a. Steel Finishes: fluorocarbon finish. Epoxy primer baked both sides, .2-.25 mils thickness as approved by finish coat manufacturer.

Weathering finish as referred by National Coil Coaters Association (NCCA).

PROPERTY	TEST METHOD	FLUOROCARBON*
Pencil Hardness	ASTM D3363 NCCA II-2	HB-H
Bend	ASTM D-4145 NCCA II-19	O-T
Cross-Hatch Adhesion	ASTM D3359	no loss of adhesion
Gloss (60° angle)	ASTM D523	25+/-5%
Reverse Impact	ASTM D2794	no cracking or loss of adhesion
Nominal Thickness	ASTM D1005	
Primer		0.2 mils
Topcoat		0.8 mils
TOTAL		1.0 mils

* Subject to minimum quantity requirements

b. Color shall be selected by Architect from standard colors.

2. Exposed and unexposed surfaces for mill finish flashing, fascia, and coping cap, shall be as shipped from the mill.

3. Exposed and unexposed surfaces for anodized aluminum flashing, fascia, and coping cap, shall be as shipped from mill.

2.4 RELATED MATERIALS AND ACCESSORIES

A. https://www.jm.com/en/commercial-roofing/specialty-roofing-products/expansion-joint-covers---style-ej---cant-to-wall/.

B. Metal Primer: Zinc chromate type.

C. Plastic Cement: ASTM D 4586

D. Sealant: Tuff-Stuff One part polyurethane sealant.

E. Underlayment: Self adhering roofing membrane.

F. Slip Sheet: Rosin sized building paper.

G. Fasteners:

1. Corrosion resistant screw fastener as recommended by metal manufacturer. Finish exposed fasteners same as flashing metal.

2. Fastening shall conform to Factory Mutual requirements or as stated on section details, whichever is more stringent.

PART 3 — EXECUTION

3.1 EXECUTION, GENERAL

A. Refer to Division 07 Section Common Work Results for Thermal and Moisture Protection.

3.2 PROTECTION

A. Isolate metal products from dissimilar metals, masonry or concrete with bituminous paint, tape, or slip sheet. Use gasketed fasteners where required to prevent corrosive reactions.

3.3 GENERAL

A. Secure fascia to wood nailers at the bottom edge with a continuous cleat.

B. Fastening of metal to walls and wood blocking shall comply with building code standards.

C. All accessories or other items essential to the completeness of sheet metal installation, whether specifically indicated or not, shall be provided and of the same material as item to which applied.

D. Allow sufficient clearances for expansion and contraction of linear metal components. Secure metal using fasteners as required by the system. Exposed face fastening will be rejected.

3.4 INSPECTION

A. Verify that curbs are solidly set and nailing strips located.

B. Perform field measurements prior to fabrication.

C. Coordinate work with work of other trades.

D. Verify that substrate is dry, clean and free of foreign matter.

E. Commencement of installation shall be considered acceptance of existing conditions.

3.5 SHOP-FABRICATED SHEET METAL

A. Metal work shall be shop fabricated to configurations and forms in accordance with recognized sheet metal practices.

B. Hem exposed edges.

C. Angle bottom edges of exposed vertical surfaces to form drip.

D. Lap corners with adjoining pieces fastened and set in sealant.

E. Form joints for gravel stop fascia system, coping cap with a 3/8" opening between sections. Back the opening with an internal drainage plate formed to the profile of fascia piece.

F. Install sheet metal to comply with referenced ANSI/SPRI, SMACNA and NRCA standards.

3.7 CLEANING

A. Clean installed work in accordance with the manufacturer's instructions.

B. Replace damaged work than cannot be restored by normal cleaning methods.

3.8 CONSTRUCTION WASTE MANAGEMENT

A. Remove and properly dispose of waste products generated. Comply with requirements of authorities having jurisdiction

3.09 FINAL INSPECTION

A. At completion of installation and associated work, meet with Contractor, Architect, installer, installer of associated work, Owner, roofing system manufacturer's representative, and other representatives directly concerned with performance of roofing system.

B. Inspect work and flashing of roof penetrations, walls, curbs and other equipment. List all items requiring correction or completion and furnish copy of list to each party in attendance.

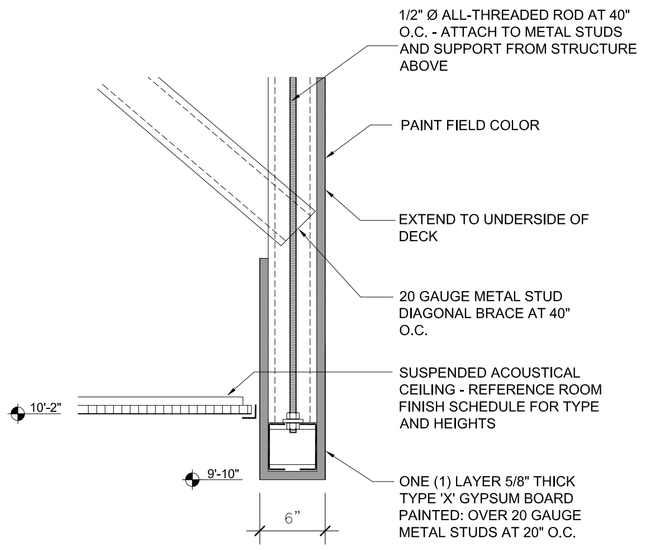
C. Repair or replace deteriorated or defective work found at time above inspection as required to a produce an installation which is free of damage and deterioration at time of Substantial Completion and according to warranty requirements.

D. Notify the Contractor upon completion of corrections.

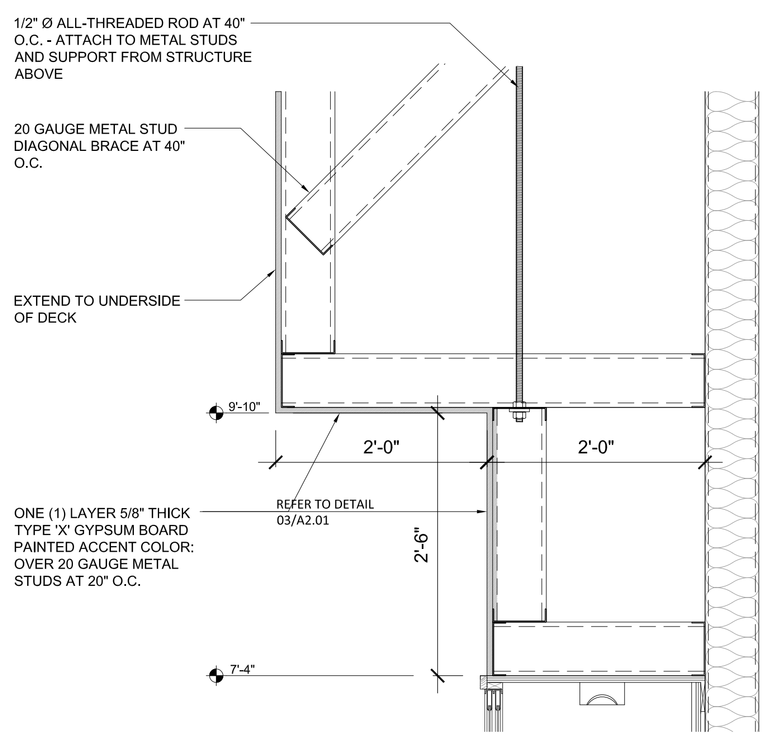
E. Following the final inspection, provide written notice of acceptance of the installation from the roofing system manufacturer.

F. Immediately correct roof leakage during construction. If the Contractor does not respond within twenty-four (24) hours, the Owner will exercise rights to correct the Work under the terms of the Conditions of the Contract.

END OF SECTION



04 SECTION DETAIL
SCALE 1" = 1'-0"



03 SECTION DETAIL
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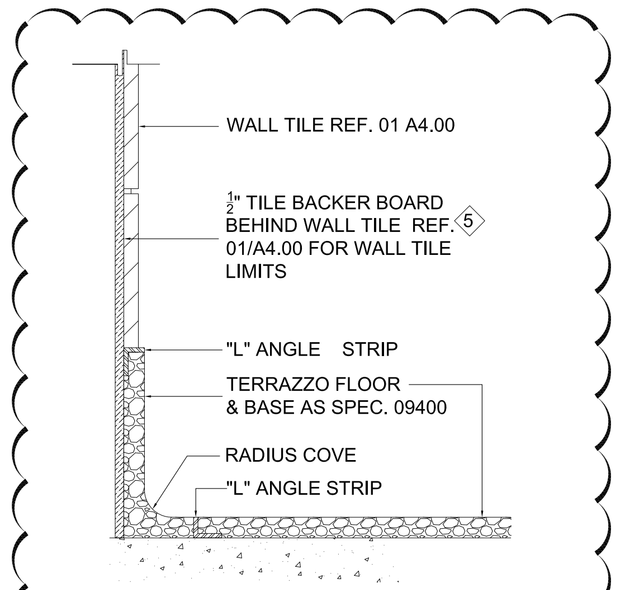


05 TERRAZZO DETAIL
SCALE 1" = 1'-0"

ALL WALLS TO BE PAINTED UNLESS NOTED OTHERWISE

ROOM FINISH SCHEDULE

THIS SCHEDULE BASED ON PLAN NORTH ORIENTATION

ROOM	ROOM NAME	BASE	FLR.	WALLS N	WALLS S	WALLS E	WALLS W	CLG.	CLG. HEIGHTS	REMARKS
100	ENTRY		CONC	BRICK				MTL	13'-8"	
101	ENTRY	TERAZ	TERAZ	GYP/PTD	GYP/PTD	GYP/PTD	GYP/PTD	GYP/PTD	VARIES	
102	RECEPTION	TERAZ	TERAZ	GYP/PTD	GYP/PTD	GYP/PTD	GYP/PTD	SAC I	9'-8"	
103	OFFICE	RUBBER	VCT	GYP/PTD	GYP/PTD	GYP/PTD	GYP/PTD	SAC I	9'-4"	3
104	ELECTRICAL	RUBBER	CONC	GYP/PTD	GYP/PTD	GYP/PTD	GYP/PTD		EXPOSED	
105	SUPPLY	RUBBER	VCT	GYP/PTD	GYP/PTD	GYP/PTD	GYP/PTD	SAC I	9'-4"	
106	OFFICE	RUBBER	VCT	GYP/PTD	GYP/PTD	GYP/PTD	GYP/PTD	SAC I	9'-4"	3
107	OFFICE	RUBBER	VCT	GYP/PTD	GYP/PTD	GYP/PTD	GYP/PTD	SAC I	9'-4"	3
108	CLASSROOM	RUBBER	VCT	GYP/PTD	GYP/PTD	GYP/PTD	GYP/PTD	SAC I	9'-8"	
109	LOBBY/DISPLAY	TERAZ	TERAZ	GYP/PTD	GYP/PTD	GYP/PTD	GYP/PTD		EXPOSED	3'-6" CT WAINSCOT

FINISH LEGEND:

RUBBER	RUBBER BASE
PTD	PAINTED
CMU/PTD	CONC. MASONRY UNIT PAINTED
GYP/PTD	GYPSUM BOARD PAINTED
CONC.	SEALED CONCRETE
MTL	METAL SOFFIT PANELS
C.T.	CERAMIC TILE BY DAL-TILE
VCT	VINYL TILE ALLOW FOR 3 COLORS
TERAZ	TERRAZZO

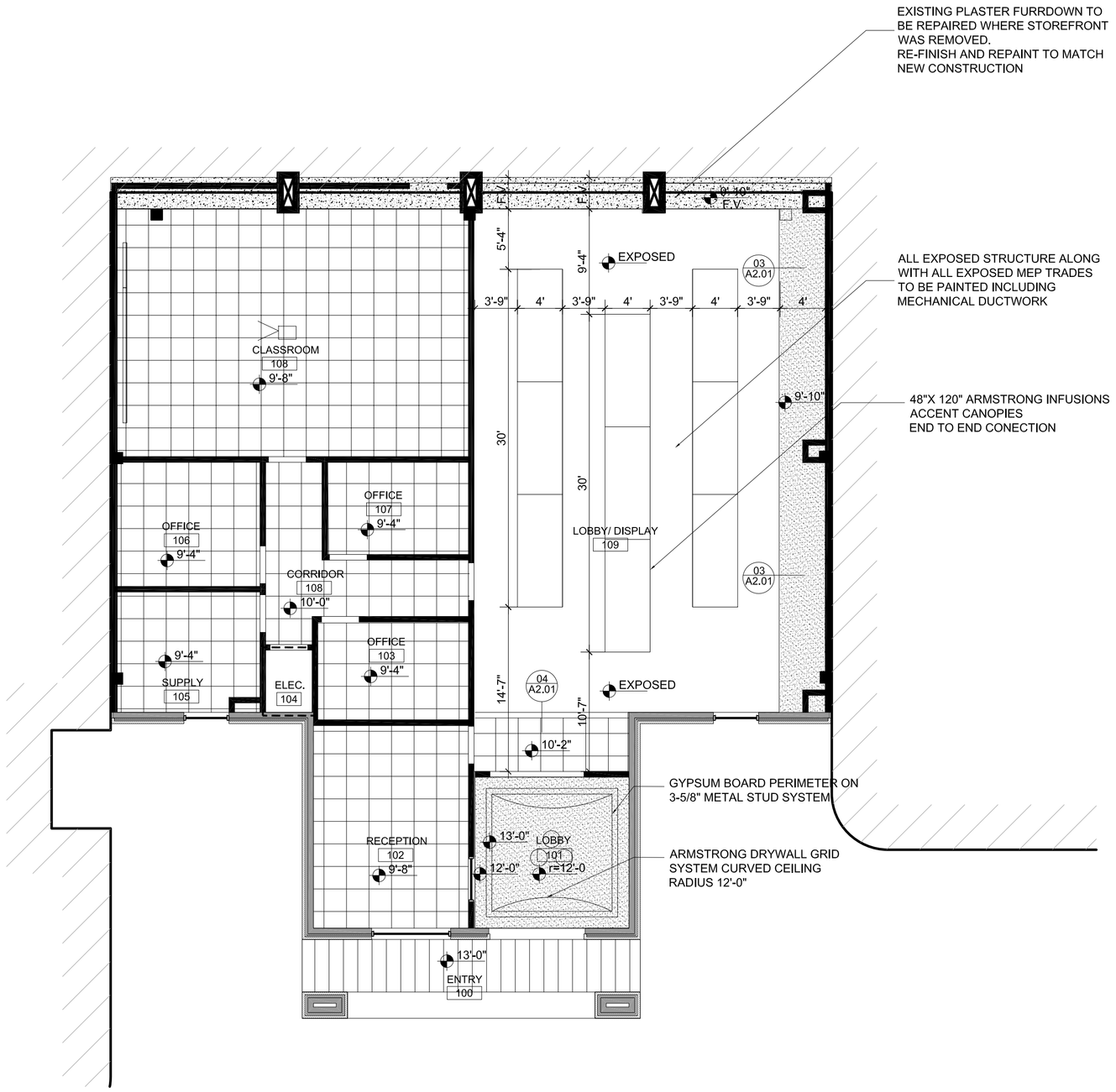
WALL TYPE LEGEND

1. WINDOW TO BE ELIMINATED NO WINDOW REQUIRED
2. ALLOW FOR 3 COLORS OF TERRAZZO PATTERN AS SHOWN COLORS TO BE SELECTED AT A LATER DATE
   PROVIDE COVE BASE REF 05/A2.01
3. OFFICES 103, 106, & 107 TO HAVE CARPET FLOORING IN LIEU OF VCT
   CARPRT EQUAL TO 24 X 24 PATCRAFT MODERN GEOMETRY AND MODERN GEOMETRY BITES INSTALLED AS PER MFG RECOMMENDATIONS
4. PROVIDE 7 FIRE EXTINGUISHER CABINETS AS SPECIFIED AT AREAS SHOWN
5. PROVIDE 1/2" TILE BACKER BOARD EQUAL TO HARDIE BACKER BEHIND ALL WALL TILE CONDITIONS

01 FLOOR PLAN
SCALE :1/8" = 1'=0"

GENERAL NOTES:

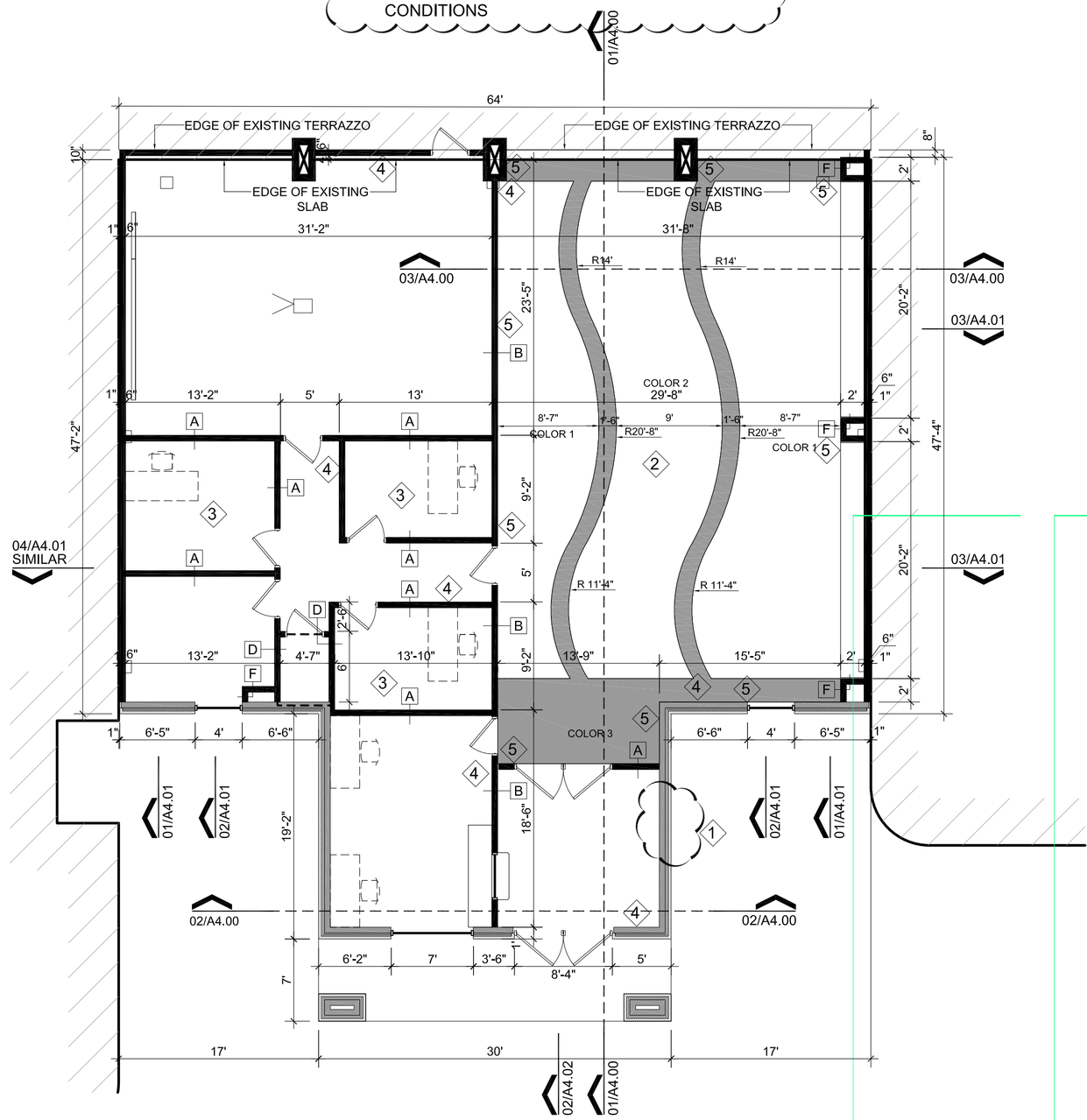
1. REFERENCE **A4.00 SERIES** FOR WALL SECTIONS NOTED ON THIS PLAN.
2. PROVIDE MASONRY CONTROL JOINTS AS PER STRUCTURAL STRUCTURAL .
3. PROVIDE TRANSITION STRIPS AT ALL DISSIMILAR FLOOR CONDITIONS
4. REFERENCE FIXTURE PLANS SHEET FOR FIXTURES, ACCESSORY REQUIREMENTS AND FLOOR TILE PATTERN LAYOUT



02 REFLECTED CEILING PLAN
SCALE :1/8" = 1'=0"

NOTE: REFER TO ROOM FINISHED SCHEDULE FOR CEILING TYPES TO BE USED ON THIS PLAN

PROVIDE FOR ALL STRUCTURE INCLUDED BUT NOT LIMITED TO PIPING, CONDUITS AND ANY METAL SUPPORT OR ANCHORING TO BE PAINTED WITH TNEMEC PAINT SYSTEM



01 FLOOR PLAN
SCALE: 1/8" = 1'-0"

PLAN NORTH

3790 TOTAL SQUARE FEET

No.	REVISIONS	BY
2	ADDENDA 2 09/19/2019	IO

GMS ARCHITECTS
1150 paredes line rd,
brownsville
texas 78526
(956) 546-0110
fax (956) 546-0196

RFCSP-0819-NEHSSL

SAN BENITO CISD
ADDITIONS AND RENOVATIONS AT SAN BENITO HS AND SULLIVAN ELEMENTARY
RFCSP-0819-NEHSSL
SAN BENITO
TEXAS

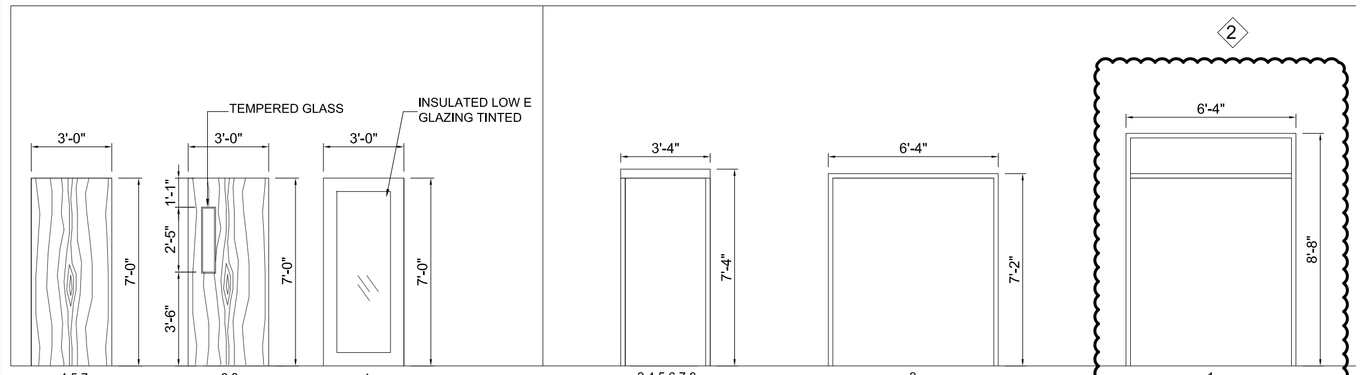
SAN BENITO HIGH SCHOOL

REGISTERED ARCHITECT JUAN GABRIEL SAENZ 23625 STATE OF TEXAS

DATE	MAY, 2019
SCALE	As Shown
DRAWN	R GOMEZ IO
JOB	S5001119
SHEET	A2.01

NOTE : PROVIDE LABELED DOORS AND HARDWARE AT ALL FIRE RATED PARTITIONS
NOTE : ALL EXTERIOR HOLLOW METAL DOORS & FRAMES TO BE HOT DIPPED Galv. - TYP.
NOTE : ALL GIVEN DIMENSIONS OF DOOR LITES ARE VISIBLE GLASS AREA - ACTUAL LIGHT OPENING TO VARY BY MANUFACTURE'S REQUIREMENTS

NOTE : REFER TO FIXTURE PLANS FOR CORRESPONDING DOOR HARDWARE SETS
NOTE : PROVIDE CYLINDERS OF ALL LOCKSETS TO BE KEYED TO EXISTING GRANDMASTER SYSTEM.
NOTE : CONTRACTOR MUST PROVIDE TRANSITION STRIPS AT ALL DISSIMILAR FLOOR CONDITIONS BETWEEN ROOMS AT DOOR SILLS



DOOR ELEVATIONS

SCALE 1/4" = 1'-0"

NOTE: ALL EXTERIOR HOLLOW METAL DOORS TO BE HOT DIPPED GALVANIZED REGARDLESS WHETHER NOTED OR NOT.

ALL EXTERIOR GLAZING ASSEMBLIES FOR WINDOWS & STOREFRONTS NEED TO BE DESIGNED TO MEET ASCE 7-05 WIND PRESSURES & SHALL BE IMPACT RESISTANT MEETING ASTM E 1996 FOR LARGE MISSILES.

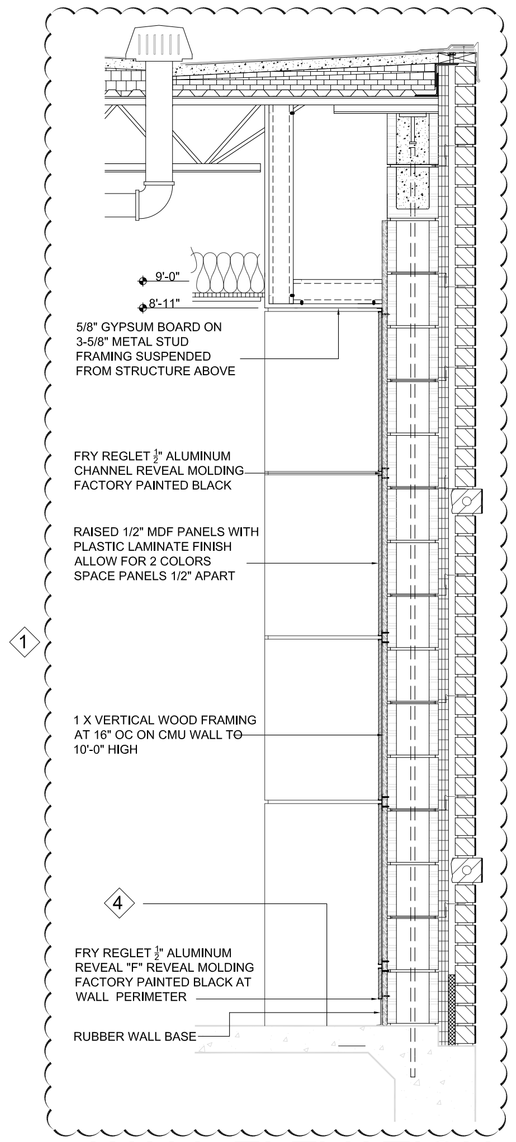
ALL EXTERIOR WINDOWS, DOORS, STOREFRONTS & O.H. DOOR ASSEMBLIES SHALL BE CERTIFIED TO MEET THE PROJECTS MINIMUM DESIGN WIND PRESSURES, REFERENCE STRUCTURAL DRAWINGS FOR DESIGN WIND PRESSURE REQUIREMENTS - TYPICAL THROUGHOUT PROJECT

DOOR FRAME ELEVATIONS

SCALE 1/4" = 1'-0"

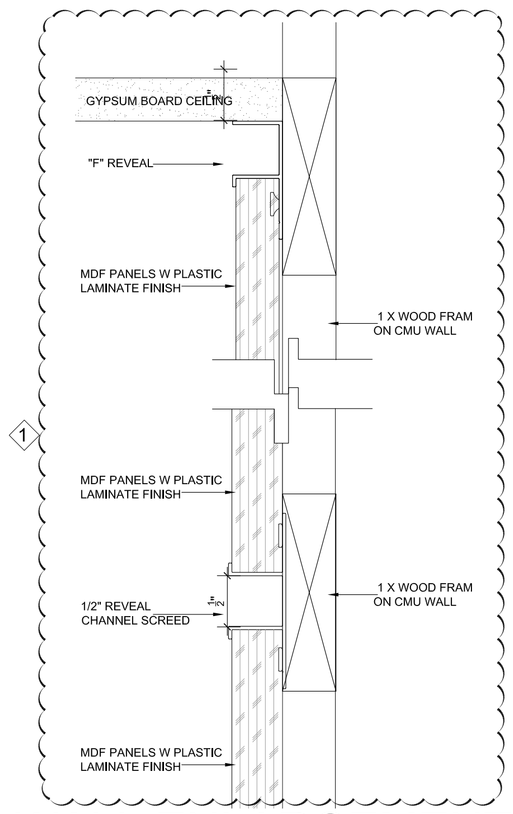
NOTE; ALL EXTERIOR HOLLOW METAL DOOR FRAMES TO BE HOT DIPPED GALVANIZED REGARDLESS WHETHER NOTED OR NOT.

1. PROVIDE PLASTIC LAMINATE FINISH AT BACK WALL WITH 1/2" ALUMINUM REVEALS FACTORY PAINTED ALLOW FOR 2 PLASTIC LAMINATE COLORS REFERENCE 05, 06 & 07/B2.02
2. REVISE DOOR FRAME #1 SIZE AS SHOWN DOOR #3 WILL NOT BE USED
3. PROVIDE 6 FIRE EXTINGUISHER CABINETS AS SPECIFIED AT AREAS SHOWN
4. CONFERENCE ROOM 105, TO HAVE CARPET FLOORING IN LIEU OF VCT CARPET EQUAL TO 24 X 24 PATCRAFT MODERN GEOMETRY AND MODERN GEOMETRY BITES INSTALLED AS PER MFG RECOMMENDATIONS



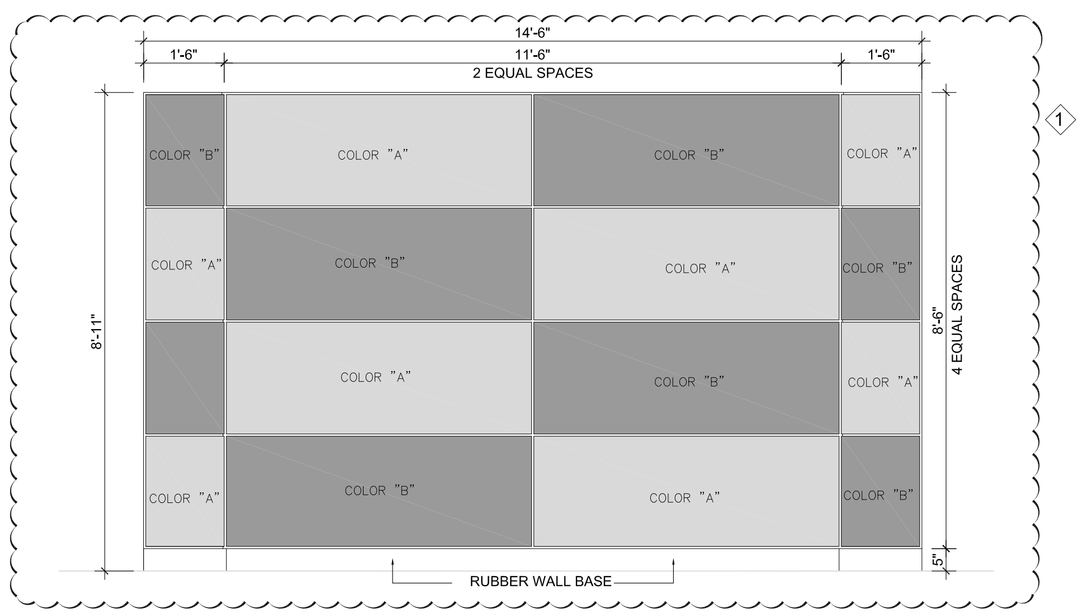
06 WALL ELEVATION

SCALE: 3/4" = 1'-0"



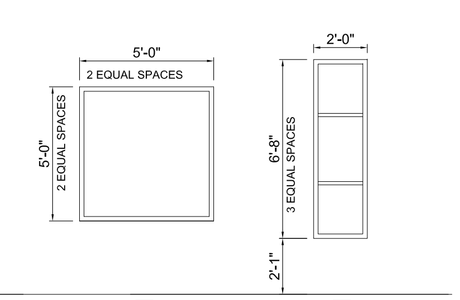
07 WALL ENLARGEMENT

SCALE: NTS



05 WALL ELEVATION

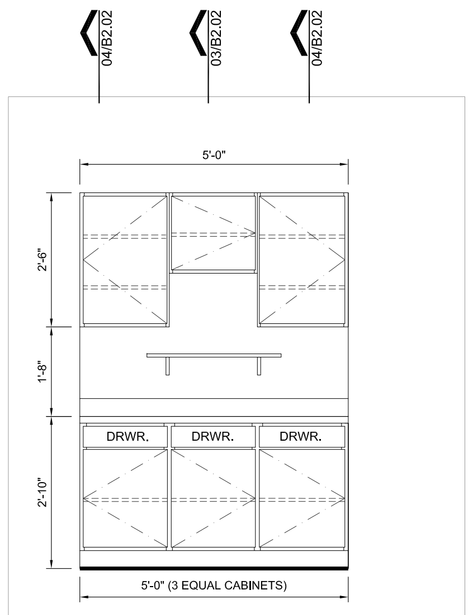
SCALE: 1/2" = 1'-0"



WINDOW ELEVATIONS

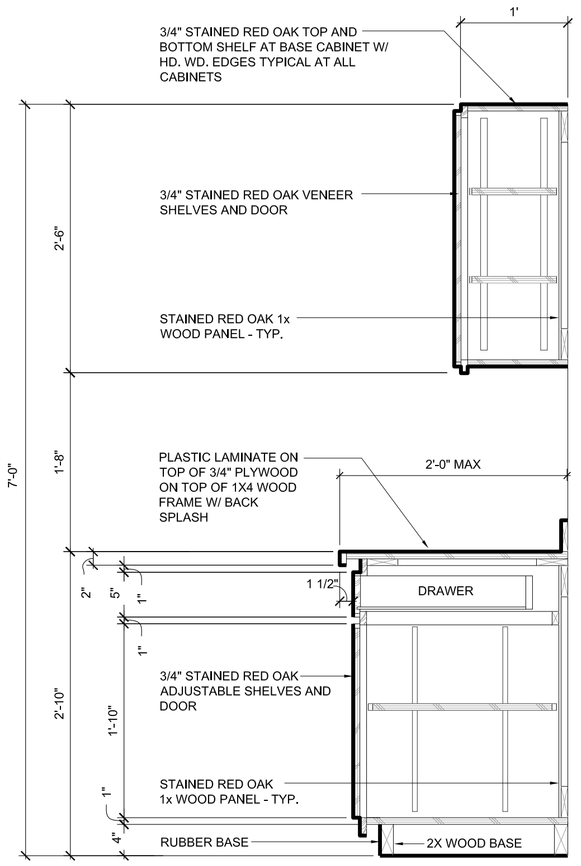
SCALE 1/4" = 1'-0"

NOTE: 1.) ALL EXTERIOR WINDOW FRAMES AND GLAZING TO MEET STRUCTURAL WIND LOAD PRESSURES.



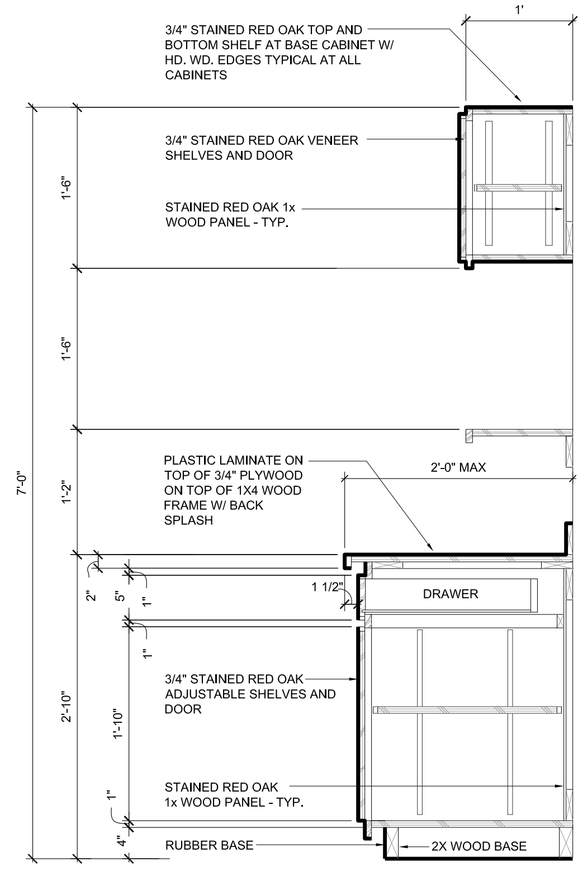
02 CABINET ELEVATION

SCALE 1" = 1'-0"



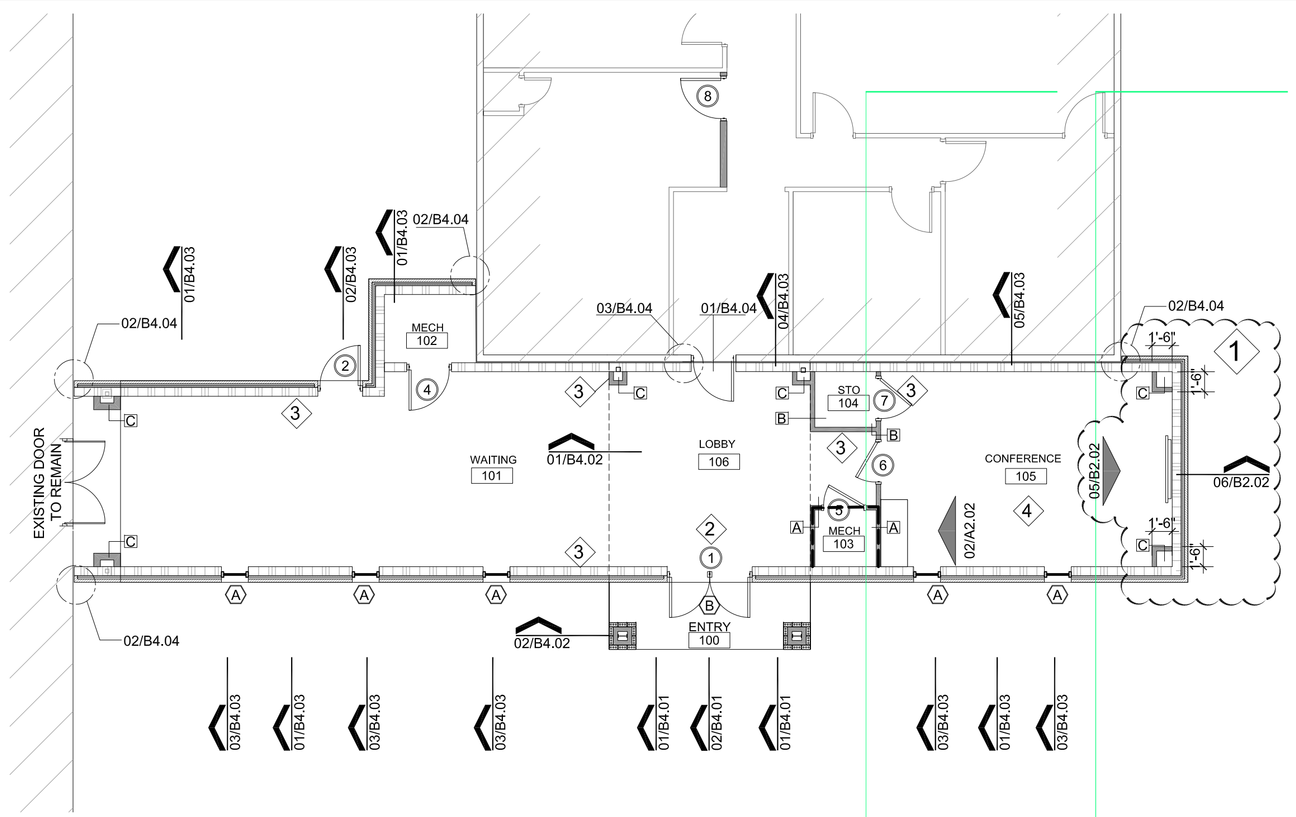
04 CABINET SECTION

SCALE 1" = 1'-0"



03 CABINET SECTION

SCALE 1" = 1'-0"



01 FIXTURE PLAN

SCALE: 1/8" = 1'-0"

PLAN NORTH

No.	REVISIONS	BY
2	ADDENDA 2 09/19/2019	IO

DOOR SCHEDULE

DOOR NO.	DOOR MATL.	DOOR W	DOOR H	DOOR T	FRAME MATL.	FRAME W	FRAME H	FRAME T	HDWR	DETAIL JAMB	DETAIL HEAD	DETAIL SILL	REMARKS
1	ALUM.	PR - 3'-0"	7'-0"	1 3/4"	ALUM.	9'-4"	11'-4"	VERIFY		11/A3.02	12/A3.02	01/A3.02	
2	S.C.	PR - 3'-0"	7'-0"	1 3/4"	ALUM.	6'-4"	7'-2"	VERIFY		11/A3.02	12/A3.02	01/A3.02	
3	NOT USED		NOT USED		NOT USED				NOT USED				2
4	S.C.	3'-0"	7'-0"	1 3/4"	H.M.	3'-4"	7'-4"	VERIFY		11/A3.02	12/A3.02	01/A3.02	
5	S.C.	3'-0"	7'-0"	1 3/4"	H.M.	3'-4"	7'-4"	VERIFY		11/A3.02	12/A3.02	01/A3.02	
6	S.C.	3'-0"	7'-0"	1 3/4"	H.M.	3'-4"	7'-4"	VERIFY		11/A3.02	12/A3.02	01/A3.02	
7	S.C.	3'-0"	7'-0"	1 3/4"	H.M.	3'-4"	7'-4"	VERIFY		11/A3.02	12/A3.02	01/A3.02	
8	S.C.	3'-0"	7'-0"	1 3/4"	H.M.	3'-4"	7'-4"	VERIFY		11/A3.02	12/A3.02	01/A3.02	
9	S.C.	3'-0"	7'-0"	1 3/4"	H.M.	3'-4"	7'-4"	VERIFY		11/A3.02	12/A3.02	01/A3.02	

WINDOW SCHEDULE

WDW NO.	MATL	SIZE W	SIZE H	ELEVATION HEAD	ELEVATION SILL	GLASS	DETAIL JAMB	DETAIL HEAD	DETAIL SILL	REMARKS
A	BRNZ-ALUM	2'-0"	6'-8"			LOW- E INSUL OPAQUE	02/A3.02	03/A3.02	04/A3.02	
B	BRNZ-ALUM	5'-0"	5'-0"			LOW- E INSUL OPAQUE	10/A3.02	12/A3.02	11/A3.02	

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RFCSP-0819-NEHSSL

SAN BENITO CISD
ADDITIONS AND RENOVATIONS AT SAN BENITO HS AND SULLIVAN ELEMENTARY
RFCSP-0819-NEHSSL
SAN BENITO
TEXAS

BID PACKAGE "B"
SAN BENITO SULLIVAN

DATE	MAY, 2019
SCALE	As Shown
DRAWN	R GOMEZ IO
JOB	S5001119
SHEET	B2.02