

September 6, 2019

ADDENDUM ACKNOWLEDGEMENT FORM

To Whom It May Concern:

Concerning the **PSJA ISD OLD SORENSEN RENOVATIONS BID # 18-19-055**, to be opened at 4:00 p.m., Thursday, September 19, 2019. Please consider the following:

Addendum Number:	Description of REVISED Addendum:
1	PRE-BID SIGN-IN SHEET QUESTIONS AND ANSWERS CLARIFICATIONS DRAWINGS

For any questions pertaining to these changes, please contact Emily Garza, Director of Purchasing at (956) 354-2000.

Sincerely,



Emily Garza
Director of Purchasing

With the acceptance of this form, I acknowledge that I have received the above **"ADDENDUM ACKNOWLEDGEMENT FORM"** for the **PSJA ISD OLD SORENSEN RENOVATIONS BID # 18-19-055**, to be opened at 4:00 p.m., Thursday, September 19, 2019. Please include a signed copy of this **"ADDENDUM ACKNOWLEDGMENT FORM"** with your bid/proposal.

Company Name:	_____	Authorized Signature:	_____
Address:	_____ _____	Authorized Signature (Print):	_____
City / State / Zip:	_____	Email:	_____
Telephone Number:	_____	Fax Number:	_____

START COLLEGE NOW! COMPLETE EARLY! GO FAR!

PRE-BID MEETING DATE: SEPTEMBER 5, 2019 @ 10:00 A.M.

[illegible]



ADDENDUM NUMBER: #1

Date: September 6, 2019

Project Name: PSJA ISD OLD SORENSEN RENOVATIONS
#18-19-055

Milnet Project No.: 219006

Date: September 6, 2019
Bid Date: September 19, 2019
Architect: Milnet Architectural Services
608 S. 12th St.
McAllen, TX 78501



NOTICE TO ALL BIDDERS

This Addendum forms a part of the Contract Document and modifies the original Drawings issued for bid, to the extent noted herein.

Careful note of this Addendum shall be taken by all parties of interest so that proper allowance is made in all computations, estimates and contracts and so that all trades affected are fully advised in the performance of work that will be required by them. Acknowledge receipt of this addendum by inserting its number and date of issue in the place provided for same in the proposal.

Items revised on the Drawings are designated by a cloud line and triangle surrounding the corresponding revision number.

This Addendum supersedes all previous Drawings, Specifications and instructions pertaining to these items. It is imperative that this addendum be inserted INTO set of specifications.

1.01 **Bidder Question:** As per the Specifications the following are NOT listed in the Table of Contents: 087100 Door Hardware / 107114 Metal Sun Shades / 260100 Summary of Electrical Work; The following are included in the Table of Contents BUT NOT in the Specifications: 260573 Power System Studies / 262213 Low Voltage Distribution Transformers / 265600 Exterior Lighting.

Answer: See enclosed revised TOC for sections 08 71 00 Door Hardware & 10 71 14 Metal Sun Shades, to replace TOC in project manual. See enclosed MEP TOC to replace MEP TOC in project manual. Section 26 56 00 Exterior Lighting to be included in the project manual.

1.02 **Bidder Question:** Page 001116-1 states a deposit of \$250.00 for Bid Documents, on page 002113-1 it states a deposit of \$100.00 for Bid Documents, which is correct? Thank you.

Answer: Correct deposit is \$250.00 See enclosed revised 00 21 13, to replace section 00 21 13 in project manual.

1.03 **Bidder Question:** Are doors 313 and 315 supposed to be Aluminum as shown on elevations or are they h.m./ solid core as listed in door schedule? If aluminum what hardware as there isn't any listed on the hardware schedule. There also isn't a



ADDENDUM NUMBER: #1

Date: September 6, 2019

Project Name: PSJA ISD OLD SORENSEN RENOVATIONS
#18-19-055

Milnet Project No.: 219006

spec. for the windows, are they thermal broke or standard frames for insulated glass? In the glazing section it calls for glass to be Bronze Tinted over Clear but the plans call for Low E glass. Which are they looking for? spec section 87100 hardware those doors do not have a hardware set

Answer: Door 313 should be 305 and door 315 should be 304, see revised sheets A1.0 and A7.0. They are to be aluminum as per revised door schedule, see hardware section 08 71 00 for specified hardware. Widows are aluminum storefront windows, see section 08 41 13 for aluminum framing and 08 81 00 for glazing. Glass is to be 1/4" bronze tinted insulated over 1/4" clear as per section 08 81 00 Glass and Glazing.

- 1.04 **Clarification:** On existing foundation to remain general contractor is to perform a test cut to verify the type of existing concrete foundation system, this is to be done in an area scheduled for new plumbing. **Re: SK 1** for additional information.
- 1.05 Included herein, Section **32 16 00 Concrete Sidewalks, 32 80 00 Irrigation, 32 84 12 Vegetative Watering, 32 84 23 Sprinkling, 32 90 00 Planting.** To be included in the project manual.

END OF ADDENDUM

Pharr-San Juan-Alamo I.S.D.
PSJA ISD Old Sorensen Re-Roofing &
Renovations Bid #18-19-055
San Juan TX 78589
MAS Project No. 219006

Division	Section Title	Pages
DIVISION 00 - PROCUREMENT AND CONTRACTING REQUIREMENTS		
00 11 00	ADVERTISEMENT AND INVITATION	1
00 11 16	REQUEST FOR COMPETITIVE SEALED BIDS	1
00 21 13	INSTRUCTIONS TO BIDDERS	4
00 25 13	PRE-BID MEETINGS	1
00 41 00	BID FORM FOR COMPETITIVE SEALED BIDS	3
00 52 13	AGREEMENT FORM – STIPULATED SUM	1
00 61 00	PERFORMANCE BOND AND LABOR AND MATERIAL PAYMENT BOND	1
00 62 76	TAX EXEMPT ORGANIZATION CERTIFICATE	1
00 73 00	SUPPLEMENTARY CONDITIONS	4
00 73 43	WAGE RATE REQUIREMENTS	8
DIVISION 01 - GENERAL REQUIREMENTS		
01 21 00	ALLOWANCES	1
01 25 00	SUBSTITUTION PROCEDURES	3
01 30 00	ADMINISTRATIVE REQUIREMENTS	3
01 33 00	SUBMITTALS	4
01 35 16	ALTERATION PROJECT PROCEDURES	3
01 40 00	QUALITY REQUIREMENTS	2
01 50 00	TEMPORARY FACILITIES AND CONTROLS	4
01 73 29	CUTTING AND PATCHING	3
01 77 00	CLOSEOUT PROCEDURES	5
DIVISION 02 – EXISTING CONDITIONS		
02 41 19	SELECTIVE DEMOLITION	2
DIVISION 3 - CONCRETE		
03 30 00	CAST IN PLACE CONCRETE	5
DIVISION 4 - MASONRY		
04 05 13	MORTAR	3
04 22 00	CONCRETE MASONRY UNIT	5
04 73 00	MANUFACTURER STONE VENEER	5
DIVISION 5 - METALS		
05 41 00	LIGHT GAGE METAL FRAMING SYSTEMS AND GYPSUM SHEATHING	4
05 52 00	HANDRAILS AND RAILINGS	4
DIVISION 6 - WOOD AND PLASTICS		
06 10 00	ROUGH CARPENTRY	3
06 10 53	MISCELLANEOUS CARPENTRY	5
06 40 23	INTERIOR ARCHITECTURAL WOODWORK	12
DIVISION 7 - THERMAL AND MOISTURE PROTECTION		
07 01 50.19	PREPARATION FOR RE-ROOFING	3
07 21 00	BUILDING INSULATION	5
07 21 29	SPRAY FOAM INSULATION	6

07 42 10	METAL WALL PANELS	9
07 54 50	ADHERED MULTI-PLY ROOF SYSTEM	19
07 62 00	SHEET METAL & MISCELLANEOUS ACCESSORIES	8
07 92 00	JOINT SEALANTS	6

DIVISION 8 - DOORS AND WINDOWS

08 11 13	HOLLOW METAL DOORS & FRAMES	9
08 14 16	FLUSH WOOD DOORS	5
08 41 13	ALUMINUM STOREFRONT	8
08 71 00	DOOR HARDWARE	14
08 81 00	GLASS AND GLAZING	4

DIVISION 9 - FINISHES

09 20 00	LATH AND PLASTER	5
09 21 16	INTERIOR DRYWALL SYSTEMS	8
09 22 00	PLASTER ACCESSORIES	8
09 27 23	ELASTOMERIC WALL COATINGS	6
09 30 00	WALL & FLOOR TILE	5
09 51 00	ACOUSTICAL CEILINGS	4
09 65 00	RESILIENT FLOORING AND BASE	4
09 65 16	RESILIENT VINYL SHEET FLOORING	9
09 91 00	PAINTING	5

DIVISION 10 – SPECIALTIES

10 14 00	GRAPHICS AND SIGNAGE	4
10 22 26	OPERABLE PARTITIONS	4
10 28 13	TOILET & BATH ACCESSORIES	2
10 71 14	METAL SUNSHADES	3

DIVISION 11 – EQUIPMENT

11 40 00	FOOD SERVICE EQUIPMENT	49
----------	------------------------	----

DIVISION 12 – FURNISHINGS

12 21 13	HORIZONTAL LOUVER BLINDS	3
----------	--------------------------	---

DIVISION 32 – EXTERIOR IMPROVEMENTS

32 16 00	CONCRETE SIDEWALKS	2
32 80 00	IRRIGATION	9
32 84 12	VEGETATIVE WATERING	1
32 84 23	SPRINKLING	1
32 90 00	PLANTING	10

END OF TABLE OF CONTENTS

9/6/2019



ADDENDUM

Project Name: PSJA ISD Old Sorensen Renovations
Project Number: 19.3.6
Architect: Milnet Architectural
Date: 9/6/2019

Note: The work shall be carried out in accordance with the following supplemental instructions issued in accordance with the Contract Documents without change in Contract Sum or Contract Time Proceeding with the Work in accordance with these instructions indicates your acknowledgement that there will be no change in the Contract Sum or Contract Time.

- I. Specifications:
 - A. Revise Electrical spec list sections, refer to attached.
 - B. Revise specification 265600, refer to attached.
- II. General:
- III. Mechanical: N/A
- IV. Electrical: N/A
- V. Plumbing: N/A
- VI. Fire Protection: N/A

9/6/2019

DIVISION 21 – FIRE SPRINKLER SYSTEM

21 13 13 WET-TYPE FIRE SPRINKLER SYSTEM

DIVISION 22 – PLUMBING

22 01 00 SUMMARY OF PLUMBING WORK
22 05 01 COMMON WORK RESULTS FOR PLUMBING
22 05 29 HANGERS AND SUPPORTS FOR PLUMBING PIPING
22 05 53 IDENTIFICATION FOR PLUMBING PIPES AND EQUIPMENT
22 07 19 PLUMBING PIPING INSULATION
22 11 16 DOMESTIC WATER PIPING
22 11 19 DOMESTIC WATER PIPING SPECIALTIES
22 13 13 FACILITY SANITARY SEWERS
22 13 19 SANITARY WASTER PIPING SPECIALTIES
22 34 00 FUEL-FIRED DOMESTIC WATER HEATERS
22 42 00 PLUMBING FIXTURES
22 47 13 DRINKING FOUNTAINS

DIVISION 23 – MECHANICAL

23 01 00 SUMMARY OF MECHANICAL WORK
23 05 10 BASIC MECHANICAL MATERIALS AND METHODS
23 05 29 HANGERS AND SUPPORTS
23 05 30 SUPPORTS AND ANCHORS
23 05 93 TESTING, ADJUSTING, AND BALANCING
23 06 01 MECHANICAL IDENTIFICATION
23 07 13 DUCT INSULATION
23 07 19 HVAC PIPING INSULATION
23 09 00 INSTRUMENTATION AND CONTROLS FOR HVAC
23 26 00 CONDENSATE DRAIN PIPING
23 31 00 DUCT ACCESSORIES
23 31 13 METAL DUCTS
23 33 46 FLEXIBLE DUCTS
23 34 23 CENTRIFUGAL FANS
23 37 13 REGISTERS AND GRILLES

DIVISION 26 – ELECTRICAL

26 00 00 ELECTRICAL
26 01 20 OPERATION AND MAINTENANCE OF LOW-VOLTAGE ELECTRICAL DISTRIBUTION
26 05 00 COMMON WORK RESULTS FOR ELECTRICAL
26 05 19 LOW-VOLTAGE ELECTRICAL POWER CONDUCTOR AND CABLES
26 05 26 GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS
26 05 29 HANGERS AND SUPPORTS FOR ELECTRICAL SYSTEMS
26 05 33 RACEWAYS AND BOXES FOR ELECTRICAL SYSTEMS
26 05 43 UNDERGROUND DUCTS AND RACEWAYS FOR ELECTRICAL SYSTEMS
26 05 53 IDENTIFICATION FOR ELECTRICAL SYSTEMS
26 09 23 LIGHTING CONTROL DEVICES
26 24 16 PANEL BOARDS
26 27 26 WIRING DEVICES



TRINITY

MEP ENGINEERING

3533 Moreland Dr. Suite A | Weslaco, Texas 78596

P: 956.973.0500 | F: 956.351.5750

www.trinitymep.com | Copyright 2017

Texas Registered Engineering Firm No. - F10362

26 28 13 FUSES
26 28 16.16 ENCLOSED SWITCHES
26 43 13 SURGE PROTECTIVE DEVICES FOR LOW-VOLTAGE ELECTRICAL SYSTEMS
26 51 00 INTERIOR LIGHTING
26 56 00 EXTERIOR LIGHTING
27 05 33 CONDUITS AND BACKBOXES FOR COMMUNICATIONS SYSTEMS
28 31 00 INTRUSION DETECTION
28 46 21.11 ADDRESSABLE FIRE ALARM SYSTEMS

SECTION 26 56 00 – EXTERIOR LIGHTING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes exterior lighting units with luminaires and lamps.
- B. Related Sections include the following:
 - 1. Section "Interior Lighting" for interior fixtures, lamps, ballasts, emergency lighting units, and accessories; and for exterior luminaires normally mounted on buildings.

1.3 DEFINITIONS

- A. Lighting Unit: A luminaire or an assembly of luminaires complete with a common support, including pole, post, or other structure, and mounting and support accessories.
- B. Luminaire (Light Fixture): A complete lighting device consisting of lamp(s) and ballast(s), when applicable, together with parts designed to distribute light, to position and protect lamps, and to connect lamps to power supply.

1.4 SUBMITTALS

- A. Product Data: For each type of lighting unit indicated, arranged in order of lighting unit designation. Include data on features, accessories, finishes, and the following:
 - 1. Materials and dimensions of luminaires.
 - 2. Delete "independent" in subparagraph below if certified tests by manufacturer are adequate.
 - 3. Select one of two subparagraphs below. With second subparagraph, photometric tests by manufacturer's laboratory are acceptable.
 - 4. Certified results of independent laboratory tests for fixtures and lamps for electrical ratings and photometric data.
 - 5. Certified results of laboratory tests for fixtures and lamps for photometric performance.
 - 6. High-intensity-discharge luminaire ballasts.

- B. Product Certificates: Signed by manufacturers of lighting units certifying that products comply with requirements.
- C. Delete paragraph below except for projects with extensive tests of installations.
- D. Field Test Reports: Indicate and interpret test results for compliance with performance requirements.
- E. Maintenance Data: For lighting units to include in maintenance manuals specified in other sections.

1.5 QUALITY ASSURANCE

- A. Luminaires and Accessories: Listed and labeled as defined in NFPA 70, Article 100, for their indicated use, location, and installation conditions by acceptable to authorities having jurisdiction
- B. Comply with ANSI C2.
- C. Comply with NFPA 70.

1.6 WARRANTY

- A. General Warranty: LED fixture warranty is a five year limited warranty. Pole standard warranty is one year.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, the products indicated in the Exterior Lighting Unit Schedule at the end of Part 3.
- B. Retain above for nonproprietary or below for semiproprietary Specification, and name products in schedules or details.
- C. Products: Subject to compliance with requirements, provide one of the products indicated for each designation in the Interior Lighting Fixture Schedule in the plans. Submit Manufacturers as is in the Lighting Fixture Schedule or Equal. Submit Equal Manufacturers 10 days prior to bidding day for approval. For Equal Manufacturers submit lighting calculation for each equal fixture submitted for approval.

2.2 LUMINAIRES

- A. Comply with IESNA RP-8 for parameters of lateral light distribution patterns indicated for luminaires.
- B. Metal Parts: Free from burrs, sharp corners, and edges.
- C. Sheet Metal Components: Corrosion-resistant aluminum, unless otherwise indicated. Form and support to prevent warping and sagging.

- D. Housings: Rigidly formed, weather- and light-tight enclosures that will not warp, sag, or deform in use. Provide filter/breather for enclosed luminaires.
- E. Doors, Frames, and Other Internal Access: Smooth operating, free from light leakage under operating conditions, and arranged to permit relamping without use of tools. Arrange doors, frames, lenses, diffusers, and other pieces to prevent accidental falling during relamping and when secured in operating position. Provide for door removal for cleaning or replacing lens. Arrange to disconnect ballast when door opens.
- F. Exposed Hardware Material: Stainless steel.
- G. Plastic Parts: High resistance to yellowing and other changes due to aging, exposure to heat, and ultraviolet radiation.
- H. Reflecting Surfaces: Minimum reflectance as follows, unless otherwise indicated:
 - 1. White Surfaces: 85 percent.
 - 2. Specular Surfaces: 83 percent.
 - 3. Diffusing Specular Surfaces: 75 percent.
- I. Lenses and Refractors: Materials as indicated. Use heat- and aging-resistant, resilient gaskets to seal and cushion lens and refractor in luminaire doors.
- J. Photoelectric Relays: As follows:
 - 1. Contact Relays: Single throw, arranged to fail in the on position and factory set to turn light unit on at 1.5 to 3 fc (16 to 32 lx) and off at 4.5 to 10 fc (48 to 108 lx) with 15-second minimum time delay.
 - 2. Relay Mounting: In luminaire housing.
- K. High-Intensity-Discharge Ballasts: Comply with ANSI C82.4. Constant wattage autotransformer or regulating high-power-factor type, unless otherwise indicated.
 - 1. Single-Lamp Ballasts: Minimum starting temperature of minus 40 deg C.
 - 2. Open-circuit operation will not reduce average life.
 - 3. High-Pressure Sodium Ballasts: Equip with a solid-state igniter/starter having an average life in pulsing mode of 10,000 hours at an igniter/starter case temperature of 90 deg C.
 - 4. Noise: Uniformly quiet operation, with a noise rating of B or better.
- L. Lamps: Comply with the standard of the ANSI C78 series that is applicable to each type of lamp. Provide luminaires with indicated lamps of designated type, characteristics, and wattage. Where a lamp is not indicated for a luminaire, provide medium wattage lamp recommended by manufacturer for luminaire.

M. LED sources shall meet the following requirements:

1. Operating temperature rating shall be between -40 degrees C (-40 degrees F) and 50 degrees C (120 degrees F).
2. Correlated Color Temperature (CCT): 4000K
3. Color Rendering Index (CRI): ≥ 85 .
4. The manufacturer shall have performed reliability tests on the LEDs luminaires complying with Illuminating

LED DRIVERS

A. LED drivers shall meet the following requirements:

1. Drivers shall have a minimum efficiency of 85%.
2. Starting Temperature: -40 degrees C (-40 degrees F).
3. Input Voltage: 120 to 480 ($\pm 10\%$) volt.
4. Power Supplies: Class I or II output.
5. Surge Protection: The system must survive 250 repetitive strikes of "C Low" (C Low: 6kV/1.2 x 50 μ s, 10kA/8 x 20 μ s) waveforms at 1-minute intervals with less than 10% degradation in clamping voltage. "C Low" waveforms are as defined in IEEE/ASNI C62.41.2-2002, Scenario 1 Location Category C.
6. Power Factor (PF): ≥ 0.90 .
7. Total Harmonic Distortion (THD): $\leq 20\%$.
8. Comply with FCC Title 47 CFR Part 18 Non-consumer RFI/EMI Standards.
9. Drivers shall be reduction of hazardous substances (ROHS)-compliant.//

PART 3 - EXECUTION

3.1 CONNECTIONS

A. Ground equipment.

1. Tighten electrical connectors and terminals according to manufacturer's published torque-tightening values. If manufacturer's torque values are not indicated, use those specified in UL 486A and UL 486B.

B. Ground metal poles/support structures according to Section "Grounding and Bonding."

1. Nonmetallic Poles: Ground metallic components of lighting units and foundations. Connect luminaires to grounding system with No. 6 AWG conductor.

3.2 FIELD QUALITY CONTROL

- A. Inspect each installed unit for damage. Replace damaged units.
- B. Advance Notice: Give dates and times for field tests.
- C. Provide instruments to make and record test results.
- D. Tests and Observations: Verify normal operation of lighting units after installing luminaires and energizing circuits with normal power source, and as follows:

3.3 CLEANING AND ADJUSTING

- A. Clean units after installation. Use methods and materials recommended by manufacturer.

END OF SECTION

SECTION 00 21 13 — INSTRUCTIONS TO BIDDERS

PART 1 - GENERAL

1.1 SECURITY BOND:

- A. Security bond in the amount of five (5%) of the Bid must accompany each Bid. Security bond shall be issued by an insurance company authorized to provide bonds on work in the State of Texas and shall be payable to the Owner.

1.2 DOCUMENTS:

- A. Qualified offerors may obtain two (2) sets of Drawings and Project Manuals from: **MILNET ARCHITECTURAL SERVICES PLLC, 608 S. 12th St., McAllen, Texas 78501 (956) 688-5656**
- B. Subcontractors may obtain one (1) set of Drawings and Project Manuals from the office: **MILNET ARCHITECTURAL SERVICES PLLC, 608 S. 12th St., McAllen, Texas 78501 (956) 688-5656**
- C. A deposit of **TWO HUNDRED FIFTY DOLLARS (\$250.00)** will be required for each set of Drawings and Project Manuals issued. Partial sets will not be issued. Make checks payable to **MILNET ARCHITECTURAL SERVICES PLLC**.
- D. Deposits will be refunded to offerors and subcontractors provided that all sets are returned to the **MILNET ARCHITECTURAL SERVICES PLLC** within **TEN {10}** days after date of opening of Bids. The offeror awarded the Project may retain the Construction Documents, and his deposit will be refunded upon execution of the Contract.
- E. Deposit amount will be refunded as soon as practical, provided sets are in good condition. Costs of reproducing missing or damaged sheets or pages will be deducted from the deposit amount.
- F. Offerors may obtain additional sets by paying the cost of reproduction, which will not be refunded, and complete sets shall be returned to the Architects.
- G. Complete sets of Construction Documents shall be used in preparing Bids; neither the Owner nor the Architect assumes any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Construction Documents.
- H. The Owner or Architect in making copies of the Construction Documents available on the above terms, does so only for the purpose of obtaining Bids on the work and does not confer a license or grant for any other use.
- I. Complete sets of Drawings and Project Manuals are on file at the following locations and subcontractors may examine them there:
 - Milnet Architectural Services, 608 S. 12th St., McAllen, TX.
 - A.G.C. PLAN ROOMS, (McAllen, Harlingen, Brownsville)
 - DODGE REPORTS (Online)

1.3 EXAMINATION:

- A. Offerors shall carefully examine the Construction Documents and the construction site to familiarize themselves with existing local conditions under which the Work is to be performed.
- B. Extra payments will not be authorized for work that could have been foreseen by careful examination of the site. Submission of a Bid shall constitute acceptance, by the offeror, of existing site conditions ***work in and around the existing PSJA ISD Old Sorensen Elementary School*** as a part of the requirements for this work.
- C. Offerors shall carefully examine the Construction Documents to verify that they agree with the Table of Contents in the Project Manual, the Index of Drawings Sheet on the Drawings, and the Cover Page of all Addenda. Offerors shall be responsible for obtaining any pages or sheets which have been inadvertently left out during the printing process.
 - 1. All entities providing Bids on any portion of the work contained in the Construction Documents shall ascertain the completeness of the set of documents.
 - 2. The Construction Documents are printed by an independent vendor and, although the Architect endeavors to check the documents for completeness, the Architect has, in the past, discovered missing or misplaced sheets in the Drawings and the Specifications.
 - 3. Each entity receiving a set of Construction Documents shall check the indexes against the sheets or pages contained in the sets.
 - 4. Should pages or sheets be found to be misplaced or missing, immediately notify the Architect who will give direction as to placement or provide the sheets or pages that are missing.
 - 5. Failure to notify the Architect means the offeror is providing a Bid based on a complete set of Construction Documents.

1.4 INTERPRETATION OF CONSTRUCTION DOCUMENTS:

- A. Offerors shall promptly notify the PSJA ISD Director of Purchasing of any ambiguity, inconsistency or error which they may discover upon examination of the Construction Documents or of the site and local conditions (48) hours prior to opening of Bids.
- B. **Do not dimension the drawings. Any dimensions, questions, should be directed to the PSJA ISD Director of Purchasing.**
- C. Submit all questions regarding clarification or interpretation of Construction Documents through the PSJA ISD Electronic Bid Portal or emailed to the PSJA ISD Director of Purchasing: ***PSJA ISD Purchasing Department (Attn: Emily Garza, Director of Purchasing) emily.garza@psjaisd.us***
- D. Submit all questions by PSJA ISD Electronic Bid Portal or email only. Replies to questions will be issued to all Offerors in the form of an Addenda. General contractor and subcontractors shall submit questions in writing forty eight (48) hours prior to opening of Bids.
- E. Make requests for interpretations as early as possible so as to allow adequate time to prepare and issue Addenda.
- F. All Offerors shall check PSJA ISD Electronic Bid Portal prior to Opening of Bids to secure all Addenda. The Architect and PSJA ISD will not be responsible for oral clarification.

1.05 BASIS OF BIDS:

- A. Bids shall be on a lump sum basis for each and or combined Bid packages and shall include all costs for these projects as described and indicated by the Construction Documents. Basis for Bids shall be on brands, materials, processes, products, persons or organizations, etc.,
- B. Bids shall include all unit price costs and all Alternate costs as indicated by the Construction Documents and Bid Form.

1.06 ALTERNATES:

- A. The Owner may, at his option, elect to proceed with any or all Alternates as set forth in the Contract Requirements.
- B. Amount shown in Bid for each Alternate shall include profit, insurance, contingencies and other costs incidental to performance under under such Alternative.
- C. Amount shown in Bid for each Alternate shall include the making of all changes and the installation of all materials and equipment necessary to the accomplishment of the Alternate requirements.

1.07 BIDS:

- A. Bids shall be made on unaltered Bid Forms obtained from the PSJA ISD Electronic Bid Portal. No oral, telephone or personal Bids will be considered. All information required on form must be provided.
- B. Where so indicated by the makeup of the Bid Form, sums shall be expressed in both words and figures, and in case of discrepancy between the two, the written amount shall govern.
- C. Any alteration or erasure to information entered in the blank spaces must be initialed by the signer of the Bid.
- D. Original typed sheets shall be submitted, signed in longhand below the typed name of the person authorized to bind the offeror to a Contract.
- E. Where offeror is a corporation, Bid must be signed with the legal name of the corporation followed by the name of the State of Incorporation and the legal signature of a person authorized to bind the corporation to a Contract.
- F. Failure to submit a Bid on the form requested, or the inclusion of conditions, limitations or provisions distorting the intent of the Construction Documents, will render the Bid irregular and subject to rejection.

1.08 SUBMITTALS:

- A. Submit Bid, to be submitted electronically through the PSJA ISD Electronic Bid Portal. The Bid Bond is to be hand delivered in a sealed envelope to the Purchasing Department.

1.09 MODIFICATION OR WITHDRAWAL OF BID:

- A. A Bid may not be withdrawn or canceled by the offeror during the stipulated time period following the time and date designated for the receipt of Bids, unless the award of Contract has been delayed more than sixty (60) days.
- B. Prior to the time and date designated for receipt of Bids, Bids submitted early may be modified or withdrawn only by notice to the party receiving Bids at the place and prior to the time designated for receipt of Bids.

- B. Modification of Bids shall be in writing over the signature of the offeror or be by telegram; if by telegram, written confirmation over the signature of offeror must have been mailed and postmarked on or before the date and time set for receipt of Bids; it shall be so worded as not to reveal the amount of the original Bid.
- C. Withdrawn Bid may be resubmitted up to the time designated for the receipt of Bids provided that they are then fully in conformance with these Bid Instructions.
- B. Security bond shall be in an amount sufficient for the Bid as modified or resubmitted.

1.10 CONSIDERATION OF BID:

- A. Properly identified Bids received on time will be considered.
- B. The Owner shall have the right to reject any or all Bid and in particular to reject a Bid not accompanied by any required security bond or data required by the Contract Documents or a Bid in any way incomplete or irregular.
- C. The Owner shall have the right to waive any formality or irregularity in any Bid received.
- D. If the Owner accepts any Alternates, he shall have the right to accept them in any order or combination.
- E. It is the intent of the Owner to award a contract to the offeror submitting the Bid providing the "best value" to the Owner provided the Bid has been submitted in accordance with the requirements of the Contract Documents.

1.11 LOCATION AND ACCESS TO PREMISES:

- A. The project site location: Refer to vicinity drawings.
- B. The offeror shall have free access to the premises for the purpose of acquainting himself with the conditions, delivering equipment, and performing the work necessary to fulfill the contract. Offeror shall cooperate with the other contractors who may concurrently be working on the premises, integrating his work with that of others, all to the best interest of the total work and its orderly completion.

1.12 STATE SALES TAX:

- A. This project is exempt from state taxes. A sales tax exemption certificate may be obtained from the State Comptroller.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION

SECTION 32 16 00 CONCRETE SIDEWALKS

PART 1 - GENERAL

1.01 DESCRIPTION

- A. This item shall govern the installation of sidewalks, with reinforcing steel, composed of Portland Cement concrete, constructed on an approved subgrades in conformity with the lines and grades established by the plans and details, and for the disposal of all material obtained from such installation. The work to be done under this item shall include all necessary forming, compaction, concrete work, and the removal of all structures or portions thereof such as trees, brush, mail boxes, and all other obstructions necessary to the proposed construction.

PART 2 - MATERIAL

2.01 Concrete

- A. Materials and proportions used in construction under this item shall conform to the requirements of Class "A" Concrete 4 ½ 5 sack cement mix and shall have a minimum compressive 28 days strength of 3,000 pounds per square inch.
- B. Reinforcing Steel - The reinforcing steel shall be a welded wire fabric made from cold-drawn wire smooth with a minimum yield strength of 56,000 pounds per square inch. The style designation shall be 6" x 6" x W 1.4 or Equal. (6" x 6" No. 10 6).

PART 3 - CONSTRUCTION METHOD

- A. The subgrade shall be excavated and shaped to line, grade and cross section and if considered necessary in the opinion of the ENGINEER, place 2" of sand cushion, hand tamped and sprinkled. The subgrade shall be moist at the time the concrete is placed.
- B. Forms shall be of wood or metal, straight, free from warp, and of a depth equal to the thickness of the finished work. They shall be securely staked to line and grade and maintained in a true position during the depositing of concrete.
- C. The reinforcing steel shall be placed in position as shown on the plans. Care shall be taken to keep all reinforcing steel in its proper locations.
- D. Sidewalks shall be constructed in sections of the lengths shown on plans. The different sections shall be separated by 2 pre-molded or board joint of the thickness shown on the plans, placed vertically and at right angles to the longitudinal axis of the sidewalk. Where the sidewalk abut a curb or retaining wall, approved expansion material shall be places along their entire length. Similar expansion material shall be placed around all obstructions protruding through sidewalk.
- E. Concrete shall be mixed in a manner satisfactory to the Engineer, placed in the forms to the depth specified and spaded and tamped until thoroughly compacted and mortar entirely covers the surface. The top surface shall be floated with a wooden float to a gritty texture to the satisfaction of the Architect and Owner.
- F. Sidewalks shall be marked into sections, each 6 feet maximum in length, by the use of approved jointing tools.
- G. When completed, the, sidewalks shall be cured in accordance with the requirements of the Item, "Membrane Curing", Type 2, white pigmented.

PART 4 - PAYMENT

- A. The work performed and materials furnished as prescribed by the item shall be measured by the square foot of surface area of completed sidewalk. This item will be paid for at contract unit price bid for "Concrete Sidewalks", which price shall be full compensation for preparing the subgrade; for furnishing and placing all materials, including all reinforcing steel and expansion joint materials; and for all manipulation, labor, tools, equipment and incidentals necessary to complete the work.

END OF SECTION

SECTION 328000 - IRRIGATION

1.00 GENERAL

1.01 SYSTEM DESIGN

- A. The irrigation system outlined on the Drawings indicates areas to be irrigated, but the sprinkler and drip irrigation systems must be designed by a licensed professional.
- B. The Contractor must submit the credentials for said professional for approval prior to proceeding with irrigation systems design and installation.
- C. The design plans shall be prepared by the approved professional, signed, stamped, and submitted for approval. Once approved, the irrigation system construction may begin.

1.02 WORK INCLUDED

- A. Trenching and other excavation.
- B. Irrigation lines, valve control circuits and appurtenances.
- C. Irrigation controllers and remote control valves.
- D. Electrical service and service installation if required.
- E. Testing.
- F. Backfill and compaction of backfill.
- G. Dust alleviation and control.
- H. Cleanup and disposal.
- I. Supplying all labor, materials, equipment, and apparatus not specifically mentioned herein or noted on the plans, but which are incidental and necessary to complete the work specified.

1.03 APPLICABLE PUBLICATIONS

- A. The publications listed below form a part of this specification to the extent referenced. The publications are referenced in the text by the general designation only.
- B. American Society for Testing and Materials (ASTM) Publications:
- C. D -1785, Pipe, Polyvinyl Chloride (PVC) Plastic Schedules 40, 80 and 120.
- D. D-1784, Pipe, Polyvinyl Chloride (PVC) Plastic Class 200.

1.04 QUALITY ASSURANCE

- A. Irrigation mains, lines and appurtenances shall be subject to successfully passing a leakage test as prescribed herein.
- B. Irrigation lines shall be installed after satisfactory completion of roadway or landscape subgrade.

- C. Submit catalogue cuts of irrigation valves, controllers, and associated equipment for approval.

1.05 JOB CONDITIONS

- A. Contractor shall conduct operations and schedule cleanup in a manner to cause the least possible obstruction and inconvenience to traffic, pedestrians, and any adjacent property owners or tenants.
- B. Locations for proposed irrigation controllers and/or electrical service points shown on the plans are approximate only and the exact locations for such shall be as established in the field by the Architect.
- C. Damage resulting from movement of the sides or bottom of trenches or other excavation which is attributable to the Contractor's acts or omissions, whether sides are braced or not, and any portions of the area and work affected by such movement, shall be satisfactorily repaired or restored.
- D. Contractor shall supply and deliver the following equipment and information prior to acceptance of the work:
 - 1. Three (3) each (if applicable) quick coupler valve keys and hose swivel ells.
 - 2. Two (2) sets of various special wrenches or tools that may be required for adjustment of sprinkler heads or equipment.
 - 3. Three (3) (if applicable) keys or wheel handles required to operate hose bibs.
 - 4. Two (2) copies of the instruction manual for each irrigation controller.
- E. Comply and conform to conditions and requirements indicated under Section 02202, Trenching and Backfill, of these Specifications.

2.00 PRODUCTS

2.01 PIPE AND FITTINGS FOR IRRIGATION MAINS

- A. Pressure mains and non-pressure mains shall be polyvinyl chloride(PVC) Schedule 40 conforming to the requirements of ASTM Designation D1785 or Class 200 (ASTM D1784) and shall be provided with solvent weld joints and fittings.
- B. All plastic fittings shall be Schedule 40 polyvinyl chloride (PVC) conforming to the requirements of ASTM Designation D1785 or Class 200 (ASTM D1784) and shall be specifically made for the type of pipe used.
- C. All nipples and fittings for risers shall be Schedule 80 polyvinyl-chloride (PVC) conforming to the requirements of ASTM Designation D1785. Nipples, fittings and risers shall be same size as sprinkler head inlets.
- D. All polyvinyl chloride (PVC) pipe and fittings shall be free from

imperfections.

- E. Metallic nipples and fittings for above-ground installation of backflow preventer systems shall be Schedule 40 or Class 200 brass nipples and class 125# bronze fittings. All brass nipples and bronze fittings shall be factory threaded.

2.02 JOINTS FOR POLYVINYL CHLORIDE (PVC) PIPE

- A. Rubber ring seal joints shall be made in accordance with the manufacturer's instructions and as indicated on the plans.
- B. Solvent weld joints shall be made using P-70 primer as manufactured by "Weld-On" or approved equal and "Weld-On" 710 joint cement or approved equal.
- C. All threaded joints shall be factory formed. Field threading of pipe or fittings will not be permitted. Threaded joint connections shall be made with virgin teflon tape, or approved equal.

2.03 VALVES AND VALVE BOXES

- A. Gate valves, where required on the plans, shall be the same size as the main line and shall be as shown on plans or approved equal. Size and type of valve shall be as indicated on the plans.
- B. Quick coupling valves shall be as manufactured by "Rainbird", brass or bronze one piece body designed for a working pressure of 125 psi and equipped with metal covers, or approved equal. Contractor shall provide the Architect with three (3) for each quick coupler keys and double lug hose swivel ells. Type and model of valve shall be as indicated on the plans.
- C. Remote control valves shall be as shown on plans, normally closed, diaphragm actuated, electrically operated from remote location by means of 18/24V, 50/60H, 7.5VA coil, with brass bleed plug for manual operation. Substitutions for irrigation controllers and/or remote control valves shall be at the sole option of the Architect and shall require prior written consent. Remote control valve sizes shall be the same as the supply runs on which they are to be installed.
- D. Valve boxes for gate valves and remote control valves in turf, shrub and ground cover areas shall be fiberglass reinforced plastic, color green, as manufactured by "Ametek", "Carson" or approved equal.
- E. Gate Valves Box Covers to be factory marked "Irrigation Control Valve" and shall have a valve number permanently stenciled on it with white exterior paint.
- F. Remote Control Valve Boxes shall be rectangular with a minimum dimension of 10-1/2" x 17-1/4" at the base. Cover to be factory marked "RCV" and shall have a station number permanently stenciled on it with

white exterior paint.

G. Valves shall be individually housed. Manifolding of valves in a single valve box shall not be permitted.

2.04 SPRINKLER HEADS

- A. All bubblers and stationary shrub sprays on risers, pop-up spray heads and gear-driven stream rotors for ground cover, shrubs and turf shall be as manufactured by "Toro" or approved equal. Type and model of such heads shall be as indicated on the plans.
- B. All pop-up spray heads and gear-driven stream rotors for ground cover, shrubs and turf shall be as manufactured by "Rainbird" or by "Hunter", or approved equal. Type and model of such heads shall be as indicated on the plans.

2.05 IRRIGATION LINE INSTALLATION

- A. Controllers for irrigation systems shall be solid state type controllers as manufactured by either Rainbird or Hunter or as shown. Controller installations shall consist of models to provide the required number of control valve stations to a maximum of twenty-four (24) stations per controller installation:
- B. Substitution for irrigation controllers on an "or equal" basis shall be at the sole option of, and shall require the prior written consent from the Architect.
- C. Remote final strength shall be verified by the contractor in presence of the project inspector prior to final installation to determine the need of a high gain antenna assembly.
- D. Irrigation controllers shall be mounted as specified in the Detail Drawings.
- E. Controllers shall be 120V from a metered power supply, unless solar or battery operated systems are specified.
- F. All electrical wires and cables, shall be placed in conduits (1" minimum diameter).
- G. Controller enclosures shall be furnished with acceptable keyed locking mechanisms and furnished with keys.

2.06 BACKFLOW PREVENTION DEVICE

- A. Backflow prevention devices shall be as required by Section 1003 of the Uniform Plumbing Code, and as approved by the City/County Public Health Department. Model and details of such devices shall be as indicated on the plans.

2.07 CONTROL VALVE CIRCUITS

- A. Wire for valve control circuits shall be UL-approved for direct burial in ground, size #14-l. Common ground wire shall have white insulating jacket. Control wire shall have jacket of color other than white and the jacket color for any circuit shall be continuous between controller and valve. A circuit color code schedule shall be posted inside each controller enclosure.
- B. Splices shall be made with #2006-S "Buchanon" splice caps and 3M #3576 "Scotchloc" seal packs or approved equal.

2.08 THRUST BLOCKS FOR RUBBER RING SEAL JOINTS

- A. Thrust blocks shall be provided where necessary to resist pressure on rubber ring seal joints. Concrete for thrust blocking shall conform to the requirements of Section 02550 of these specifications.

2.09 PIPE COVER MATERIAL

- A. Shall be in conformance to Section 02202, Trenching and Backfill, of these Specifications.

3.00 EXECUTION

3.01 TRENCHING, BACKFILLING AND COMPACTION

- A. Shall be in conformance to Section 02202, Trenching and Backfill, of these Specifications.

3.02 IRRIGATION LINE INSTALLATION

- A. Pipe, valves, fittings, and appurtenances shall be installed as accurately as possible in accordance with the locations shown on the plans. All polyvinyl chloride (PVC) pipe shall be installed with identification markings facing upward, visible from the top of the trench. Cap or plug openings as pipeline is assembled to prevent entrance of dirt or obstructions. Remove caps or plugs only when necessary to continue assembly. Where pipes pass through sleeves, provide removable non-decaying plug at ends to prevent entrance of earth. No irrigation lines shall be constructed before subgrade for roadway and median areas have been satisfactorily completed.
- B. Depth of cover for pressure mains shall be twenty-four (24) inches below subgrade in areas to be paved and in landscape areas. Depth of cover

- for non-pressure lines shall be eighteen (18) inches below sub-grade in areas to be paved, eighteen (18) inches below subgrade for topsoil for mainlines and twelve (12) inches below subgrade for topsoil for lateral lines in landscape areas.
- C. Pipe, valves and fittings shall be carefully handled during hauling, unloading, and placing operations, so as to avoid breakage or damage. All polyvinylchloride (PVC) pipe shall be stored carefully, and protected from prolonged sunlight. Broken or damaged pipe or appurtenances will be rejected and shall be replaced.
 - D. Irrigation lines shall be installed as accurately as possible in accordance with the locations shown on the plans. The plans are diagrammatic only, and where irrigation lines on the plans are shown under paved areas but running parallel and adjacent to planted areas, the intent is to install the irrigation lines in the planted area. Irrigation lines shall have a minimum horizontal clearance of four (4) inches from each other, and a minimum horizontal clearance of twelve (12) inches from other underground lines (this requirement does not apply to any lines crossing at angles from 45 to 90 degrees with each other). A minimum of two (2) inches vertical clearance shall be maintained between lines which cross between these angles. No irrigation line shall be installed parallel to and directly over another line. Intermediate high spot along the irrigation line shall not be allowed.
 - E. All pipes shall be assembled free from dirt, shall be reamed and all burrs shall be removed. When pipe laying is not in progress, all open pipe ends shall be closed with watertight plugs in a manner satisfactory to the Architect. Before installation of irrigation lines, the Contractor shall remove all stakes, debris, loose rock and other hard material from the bottom of the trench.
 - F. After the final positioning, the pipe shall be held in place in the trench with backfill material placed equally on both sides of the pipe at as many locations as are required to hold the pipe section in place. After joints are completed, the backfill material shall be redistributed and compacted as herein required.
 - G. At the end of each day and when work is not in progress, the open ends of pipe installed in the line shall be closed with watertight plugs, and openings for valves and other appurtenances shall be suitably covered.
 - H. Concrete thrust blocks of the form and dimensions shown or noted on the plans shall be provided as indicated on the plans. Form thrust blocks in such a manner to prevent any concrete from coming in contact with the pipe. Thrust blocks shall be constructed to completely fill the void between solid soil and the fitting, and shall be installed in strict conformance with the applicable details shown or noted on the plans.

3.03 JOINT AND FITTING INSTALLATION

A. Rubber Ring Seal Joints

1. Use factory made male ends or prepared field cut male end joints to exact specifications of factory made ends. Join lengths of pipe by means of integrally formed bell end on pipe using rubber ring seal. Carefully clean bell or coupling and insert rubber ring without lubricant. Position ring carefully according to manufacturer's instructions.
2. Lubricate male end according to manufacturer's instructions and insert male end to specified depth. Use hands only when inserting PVC pipe.
3. Thrust blocks shall be provided where necessary to resist system pressure on joints or fittings made with rubber ring seal joint pipe in accordance with the details shown on the plans.

- #### B. Solvent Weld Joints
- Prepare joint by first making sure the pipe end is square, then deburring the pipe end and cleaning pipe of dirt, dust and moisture. Dry-insert pipe into fitting to check for proper sizing. Pipe should enter fitting 1/3 to 2/3 depth of socket. Coat the inside socket surface of the fitting and the external surface of the male end of the pipe with 711 primer manufactured by "Weld-On" or approved equal. Then, without delay, apply "Weld-On" 710 joint cement or approved equal liberally to the inside of the socket. At this time, apply a second coat of cement to the pipe end. Insert pipe immediately into fitting and turn 1/4 turn to distribute cement and remove air bubbles. The pipe must seat to the bottom of the socket and fitting. The fitting shall be properly aligned without strain. Hold joint still for approximately thirty (30) seconds and then wipe the excess cement from the pipe and fitting. Cure joint a minimum of thirty (30) minutes before handling and at least six (6) hours before allowing water in the pipe.

C. Threaded Joints

1. Field threading of plastic pipe or fittings is not permitted. Only factory formed threads and factory fabricated nipples or risers shall be permitted.
2. When assembling threaded plastic joints, take up joint no more than one full turn beyond hand tight.
3. Threaded joint connections shall be made up with virgin teflontape, or approved equal.

3.04 VALVE AND VALVE BOX INSTALLATION

- #### A. Valve boxes
- Valve boxes shall be grouped and located in shrub and ground cover areas wherever possible. Valves shall be installed no farther than twelve (12) inches from the main line and no closer than twelve (12) inches

from walk edges, buildings and walls.

- B. Thoroughly flush main line before installation. Valves shall be installed as indicated on the details shown on the plans.
- C. All control valves shall be three (3) inches minimum and eight (8) inches maximum below finish grade to the top of the flow control stem.
- D. Quick coupling valves shall be located as called for on the plans and installed as indicated on the details shown on the plans.
- E. Valve boxes shall be set flush with finish grade in lawn areas and one and one-half (1-1/2) inches above grade in shrub areas.

3.05 SPRINKLER HEAD INSTALLATION

- A. Lawn heads shall be located with a minimum of one (1) inch, a maximum of two (2) inches, clear from adjacent paving or headers, and flush with them where a potential hazard may occur. Other lawn heads shall be installed as indicated on the details shown on the plans.
- B. Pop-up heads of approved design shall be installed at edges of landscaped areas adjoining paved areas as indicated on the details shown on the plans. Interior shrub heads shall be either pop-up heads set level with finish grade or fixed heads set six (6) inches above finish grade.
- C. Individual heads shall be adjusted as required to obtain uniform coverage without overthrow onto buildings, paving, main walks, or other structures.
- D. Each section of lateral pipe shall be thoroughly flushed out before the sprinkler heads are attached.
- E. Sprinkler heads shall be located and installed as shown on the plans.

3.06 IRRIGATION CONTROLLER INSTALLATION

- A. Controller enclosures shall be located, and irrigation controllers and enclosures shall be installed, as shown on the plans. The sprinkler controller chart shall be a photostatic reproduction of the sprinkler or irrigation plan, provided and installed by the Contractor. It shall be laminated permanently in plastic and securely attached to the inside lid of the controller cabinet and shall correctly relate each section to its respective system.

3.07 CONTROL WIRE INSTALLATION

- A. Connection of control lines to controller shall be in sequential arrangement according to assigned identification number of valve. Connections shall be made by crimping bare wires with brass connectors and sealing with epoxy resin sealer packs. Control lines shall

be labeled at the controller with permanent non-fading labels indicating identification number of valve controlled.

- B. All control wiring shall be laid to minimum depth of eighteen (18) inches in common trenches with mainline piping wherever possible. Where control lines do not parallel mains, wires shall be strapped at intervals of at least ten (10) feet to the underside of two by four redwood boards.
- C. Where control lines pass under paving, they shall pass through Schedule 40 PVC conduit sleeves. Where control wires pass through sleeves, Contractor shall provide removable non-decaying plug at ends of the sleeve to prevent entrance of earth.
- D. Contractor shall loop a minimum of three (3) feet of extra wire in each valve box; both control wire and ground wire. All splices shall be made at a valve box only.

3.08 ELECTRICAL SERVICE INSTALLATION

- A. Make all electrical connections to 120 Volt service at each controller location. Install a disconnect switch inside the pedestal of the controller cabinet. All electrical work and materials shall comply with these specifications and any further requirements of the permit issued for the electrical service connection by the serving utility.

3.09 TESTING

- A. Hydrostatic and leakage tests shall be made only after the trenches have been backfilled sufficiently to hold the pipe firmly in position with no fittings being backfilled.
- B. All welded plastic pipe joints shall have cured for at least 24 hours. Provide all water necessary for filling and flushing at no additional expense to the Contract.
- C. Pressure irrigation mains shall be subjected to a hydrostatic test of 125 psi. Each section being tested shall be slowly filled with water, care being taken to expel all air from the pipe by such means as are necessary. The pipes must be flushed before testing to remove any foreign material. The test pressure shall be applied for not less than four (4) hours. Any leakage discovered in consequence of the pressure test shall be corrected and the test shall be repeated until satisfactory results are obtained. Any defective pipe, fittings, valves, or joints shall be repaired or replaced.
- D. Contractor shall provide water as necessary for hydrostatic testing.

END OF SECTION

SECTION 328412 – VEGETATIVE WATERING

(Referenced from 2004 TxDOT, ITEM 168 Vegetative Watering – references made to any other Sections of the 2004 TxDOT Manual shall become part of the Contract to be followed)

00168.1. Description. Provide and distribute water to promote growth of vegetation as directed.

00168.2. Materials. Use water that is clean and free of industrial wastes and other substances harmful to the growth of vegetation.

00168.3. Construction. Apply water when directed. Furnish and operate equipment to distribute water at a uniform and controllable rate. Ensure that watering does not erode soil or plantings. Apply water in the required quantity where shown on the plans or as directed.

00168.4. MEASUREMENT AND PAYMENT

- A. When listed as a separate contract pay item, shall be measured in accordance with “Measurement and Basis of Payment” section or as shown on the Bid Proposal Form.
- B. When not listed as a separate contract pay item, shall be considered as incidental work, and the cost thereof shall be included in such contract pay item(s) as are provided in the proposal contract.
- C. Compensation, whether by contract pay item or incidental work will be for furnishing all materials, labor, equipment, tools and incidentals required for the work, all in accordance with the plans and these specifications.

END OF SECTION

SECTION 329000 – PLANTING

1.00 GENERAL

1.01 SCOPE

A. Supply and installation of all approved materials, labor, equipment, transportation and services required and incidental thereto, in conformity with the plans and specifications, including but not limited to: vegetation protection/pruning, fine grading, earth mounding, bed excavation and preparation, bed edging, planting soil/mixes, fertilizer, mulch, trees, palms, shrubs, ground covers, staking, paving, clean-up, maintenance, and warranty.

B. Related Sections:

1. Irrigation – 32 80 00
2. Lawns – 32 9200

1.02 REFERENCE STANDARDS

A. General: "Hortus Third," 1976

B. Texas Association of Nurserymen, Grades and Standards for Nursery Stock

C. Plant Material: "American Standard for Nursery Stock," ANSI Z60.1-1990

D. National Arborist Association Standards

1.03 DEFINITIONS

A. Specimen Plants: Plants having exceptional character, superiority in form and branching, and the best attributes of the species; all as determined by the Architect, Landscape Designer or Owner.

1.04 QUALIFICATIONS

A. Landscape work to be performed by a single firm specializing in commercial landscape work with a minimum of five (5) years' experience on similar type projects. Owner to review qualifications and approve subcontractor prior to commencing work.

1.05 SUBMITTALS

- A. Submittals shall be formatted in a three-ring binder or digitally with tabs identifying each section. Landscape submittals shall also include submittal requirements for Section 32 80 00-Irrigaion, 32 14 13-Unit Pavers, and 32 92 00-Lawns. The following submittals are required for this section:
 - A. Landscape Construction Schedule
 - B. Edging
 - C. Post Emergent Herbicides
 - D. Pre-Emergent Herbicides
 - E. Soils, Compost and Mulch
 - F. Sources of all Plant Materials (including address and telephone numbers)
 - G. Product Data Material Safety Data Sheets
 - H. Paving Materials
 - I. Lawns (fertilizers, herbicides, maintenance)
 - J. Irrigation Product Information
 - K. Samples: One foot section of edging (as specified on plans), one pound bag sample of each; topsoil, lightweight planting mix, premium compost and mulch.
 - L. Name of Subcontractor for pruning trees (Certified I.S.A Arborist)

1.06 PROTECTION

- A. Before commencing work, contractor shall place orange construction fencing around all vegetation labeled "to remain" on landscape plans. Fencing shall be placed squarely around each tree 6' x 6' and at least 60" in height or continuously around groups of vegetation as shown on plans. No work may begin until this requirement is fulfilled. All other vegetation not labeled "to remain" shall be cleared and grubbed including root systems.
- B. In order to avoid damage to roots, bark or lower branches, no truck or other equipment shall be driven or parked within the drip line of any tree, unless the tree overspreads a paved way.
- C. The Contractor shall use any and all precautionary measure when performing work around trees, walks, pavements, utilities, and any other features either existing or previously installed under this Contract.
- D. The Contactor shall adjust depth of earthwork and loaming when working immediately adjacent to any of the aforementioned features in order to prevent disturbing tree roots, undermining walks and pavements, and damage in general to any existing or newly incorporated item.

- E. Where excavating, fill or grading is required within the branch spread of trees that are to remain, the work shall be performed as follows:
1. Trenching: When trenching occurs around trees to remain, the tree roots shall not be cut but the trench shall be tunneled under or around the roots by careful hand digging and without injury to the roots.
 2. Raising Grades: When the existing grade at tree is below the now finished grade, and fill not exceeding sixteen (16") inches is required, clean, washed gravel graded from one to two inches (1" - 2") in size shall be place directly around the tree trunk. The gravel shall extend out from trunk on all sides a minimum of eighteen (18") inches and finish approximately two (2") inches above the finished grade at tree. Install gravel before any earth fill is placed. New earth fill shall not be left in contact with the trunks of any trees requiring fill. Where fill exceeding sixteen (16") inches is required, a dry laid tree well shall be constructed around the trunk of the tree. The tree well shall extend out from the trunk on all sides a minimum of three (3') feet and to three (3") inches above finish grade. Coarse grade rock shall be placed directly around the tree well extending out the drip line of the tree. Clean, washed gravel graded from one to two (1" - 2") inches in size shall be placed directly over the coarse rock to the depth of three (3") inches. Approved backfill material shall be placed directly over the washed grave to desired finished grade
 3. Lowering Grades: Existing trees in areas where the now finished grade is to be lowered shall have regarding work done by hand to elevation as indicated. Roots as required shall be cut cleanly three (3") inches below finished grade and scars covered with tree paint.
 4. Trees marked for preservation that are located more than six (6") inches above proposed grades shall stand on broad rounded mounds and be graded smoothly into the lower level. Trees located more than sixteen (16") inches above proposed grades shall have a dry laid stonewall, or other retaining structure as detailed on the plans, constructed a minimum of five (5') feet from the trunk. Exposed or broken roots shall be cut clean and covered with topsoil.
- F. Contractor is responsible for all protection measures listed above. If these procedures are not followed, contractor is responsible for replacement of existing trees and approved trees of equal caliper and height.

1.07 DELIVERY, STORAGE, AND HANDLING

- A. Packing and Shipping: Transport plant materials covered or in closed vehicles to protect from exposure to heat and wind. Spray trees and in full leaf with anti-desiccant as recommended by the manufacturer, before shipping. Take precautions to protect plant materials from desiccation and from damage to bark, branches and roots. Do not allow root balls to crack. Schedule shipments to coincide with planting work schedule.
- B. Storage and Protection: If planting is delayed after delivery, keep plants in a shaded area, cover roots with mulch or topsoil, and keep plants constantly watered until planted.

1.08 MAINTENANCE/WARRANTY

- A. Maintenance Requirements: Maintain the work of this Section for ninety (90) days after “substantial completion” and until final written acceptance by Owner. Notify the owner in writing of “substantial completion”. Maintenance period begins after owner’s written acceptance of “substantial completion”.
- B. Maintenance Service: Perform the following maintenance operations at least one a week:
 - 1. Remove and replace dead plant material. Prune plants to remove dead wood and to maintain health of plants.
 - 2. Maintain all mulched areas at a two (2”) inch depth. Remove weeds and grass from shrub and ground cover areas and from watering basins.
 - 3. Provide insect and disease control to maintain health of plants.
 - 4. Irrigation:
 - a. If the irrigation system is operating, program and monitor the system to provide adequate water for plants.
 - b. If the irrigation system is not operating, hand water plants. Deep water trees each week.
 - 5. Dispose of all maintenance debris/clippings off-site. Owner’s dumpsters shall not be used.
 - 6. Keep all site areas tidy and free of grass clippings, mulch or other foreign materials.
 - 7. Submit receipts/dates of all maintenance operations to Owner/Architect for approval.
 - 8. Remove staking materials at end of maintenance period and deliver to Owner.
- C. Warranty: Warranty shall cover all shrubs/groundcovers for a period of three (3) months and trees/palms for a period of one (1) year from the

date of final acceptance. Any plant material deemed dead or unrecoverable by the owner shall be replaced with similar species and size within two weeks of notification from owner.

1.09 RIGHT OF REJECTION

A. The Owner/Architect reserves the right to inspect and reject plants at any time and at any place.

2.00 PRODUCTS

2.01 MATERIALS

A. Fertilizer: 13 13 13 Osmocote slow release fertilizer granules, or approve equal.

B. Planting Tablets: Agraform 21 gram slow release fertilizer tablets, or approved equal.

C. Compost: Premium grade compost (Earthwise Organics, or approved equal).

D. Topsoil: Fertile, agricultural soil, typical for locality capable of sustaining vigorous plant growth, taken from drained site; free of subsoil, clay or impurities, plants, weeds, and roots; minimum pH value of 5.4 and maximum 7.0; organic matter to exceed 1.5%, magnesium to exceed 100 units; phosphorus to exceed 150 units; potassium to exceed 120 units; soluble salts/conductivity not to exceed 900 ppm/0.9 mmhos/cm in soil.

E. Mulch:

1. Shrub and Ground Cover Planting Areas: Grade A Shredded Hardwood; long, fibrous bark strands free from wood chips. Texas Natives, or approved equal.
2. Watering Basins: Grade A Shredded Hardwood; long, fibrous bark strands free from wood chips. Texas Natives, or approved equal.

F. Plants:

1. General: Provide plant materials that are healthy and free from disease, insects, and larvae and without damage to bark, branches and roots. Refer to drawings for landscape type and set up.

2. Approval: All trees/palms must be inspected, approved and tagged by Owner at their place of origin or as directed in writing by Owner.
3. Sizes: Measured after pruning and in accordance with the plant schedule.
4. Root Treatment: As follows in accordance with the Reference Standards:
 - a. Palms: Balled and burlapped or containerized if they have been in the container for at least one growing season.
 - b. Trees, Shrubs, Ground Cover Plants: Container grown with a well-established fibrous root system.
5. Palms: All new palms shall be field dug or containerized material in specified sizes in plant schedule. All palms shall have good form (straight trunks) consistent of this species, free of scares/abrasions/burn marks and disease and insects, with large healthy root systems.

G. Staking Material:

1. Stakes shall be commercial grade T-Posts, 1.25 Gauge, 8' Ht., Green with orange safety caps on tops. Note: Do not drive through stakes through root balls.
2. Tree ties shall be Poly Chain Lock – 1" width, black, ProLock or approved equal.
3. Stakes shall be hardwood 2 x 2's or commercial grade T-Stakes (do not drive through rootball).

H. Edging:

1. Concrete Edging: Extruded, colored, fibermesh reinforced concrete edging (per details) Curb Appeal, or approved equal.
2. Tree Rings: 5" x 30" Black Anodized Aluminum tree rings (painted black or green). Dreamscapes, or approved equal.
3. Aluminum Edging: 5" commercial grade black anodized aluminum edging (black anodized). Dreamscapes, or approved equal.

2.02 PLANTING SOILS

- A. Planting Mix: 75% Sandy-Loam Topsoil; 25% Premium Compost; (3:1 ratio by volume); and specified fertilizer or planting tablets.
- B. Shrub and Ground Cover Areas:
 1. Where topsoil has been installed: Apply one (1") inch layer in planting bed; till into the top six inches of soil.

2. Where no topsoil has been installed: Remove twelve inches of existing soil and replace with ten inches of "Planting Mix" as described in Item "A" above.

3.00 EXECUTION

3.01 EXAMINATION

- A. Verification of Conditions: Examine the site and conditions under which landscape work is to be performed. Have the installer notify the Contractor in writing, with a copy of drawings if the site is unsatisfactory. Do not begin the work until unsatisfactory conditions have been corrected in a manner acceptable to installer. Beginning of work indicates acceptance of the site as satisfactory by the installer.

3.02 EXECUTION

- A. Site Preparation: Contractors must visit and review site prior to bidding. Compacted soils and sub-soils from construction activities must be ripped and tilled until a loose, friable and free-draining condition is met. All existing weeds, grass, stabilized sub-base material, rubble, excavated soil and other material shall be removed from the site and disposed of by the contractor prior to starting any new landscape work. Soil conditions around entire site must be approved by Owner prior to rough and finished grading operations. Contractor shall not install any fill or topsoil in landscape areas prior to site condition approval by Owner.
- B. Drainage: Landscape contractor shall follow grading as shown and specified on Civil Engineer's grading plans. Landscape Contractor shall coordinate grading operations with site contractor. Landscaper Contractor shall ensure final grades conform to the Civil Engineer's grading plan including grades around buildings, swales, sidewalk under drains/swales, roof drains, splash blocks and rock swales through planting beds.
- C. Vegetation Protection: Contractors are responsible for protection of existing vegetation labeled on plans "to remain". Protection of existing vegetation includes supply and installation of protective fencing around all existing planting areas.
- D. Bed Preparation and herbicide: All planting areas shall be free of weeds, grass insects, or any other deleterious material prior to bed

- preparation. Contractor shall herbicide all planting areas with "Round- Up" or approved equal at least two times prior to installation of any new plants. Pre-emergent herbicide shall be applied after planting and before placement of mulch.
- E. Planting Beds: Excavate 12" of existing soil within planting beds and replace with 8" of imported topsoil and 2" of premium compost. Mechanically till into top six inches of bed until a loose, friable soil condition is met. Final grades within all planting beds shall be 2-3" below adjacent curbs to allow for mulch. Contractor to ensure positive drainage throughout entire landscape areas. Adjust grades as necessary to direct water away from planting beds. Report any discrepancies on all drainage issues in writing to Construction Manager or to the Architect. Owner or Architect will approve planting beds prior to planting operations.
 - F. Edging: Edging shall be installed as shown on plans. Edging shall allow for tapered drainage points to ensure free drainage away from all structures and walkways. Edging shall be set flush with adjacent paving, sidewalks or driveways.
 - G. Grass Areas: Scarify, float and fine grade all areas to receive sod or hydromulch for approval by Construction Manager prior to placement of sod or application of hydromulch. Supply additional topsoil as necessary to fill any/all low areas and ensure positive drainage away building/planting beds.
 - H. Berms and Mounding: Supply topsoil and construct berms as indicated on plans. Berms shall have a maximum slope of 1:4. Owner or Architect shall approve berms and mounding prior to planting operations.
 - I. Planting:
 - 1. Installation:
 - a. Excavate planting pit to depth and width indicated on Drawings.
 - b. Set root ball on undisturbed or compacted soil in planting pit. Remove burlap, rope, wire, and all other wrapping material from top of ball. Remove any binding rope which is not biodegradable completely.
 - c. Fill planting pit 2/3 full with planting mix, soak with water and allow settling, and adding fertilizer tablets as detailed. Finish filling pit with planting mix and tamp lightly.

- d. Construct a watering basin as detailed and install 2" of mulch. Water-in to completely saturate the root ball and planting mix. Add planting mix where any settling or air pockets occur.
 - e. Stake all trees/palms immediately after planting as detailed.
- 2. Planting Holes: All planting holes shall be excavated with a diameter at least two times the rootball size and to the depth equal to the height of the rootball. The bottoms and sides of each hole shall be scarified with a pick to allow for free drainage and maximum root penetration. After plant placement, the hole shall be backfilled with mixture of excavated soil and premium compost mixture (Earthwise Organics "RGV" Mix, or approved equal. All holes shall be tested/inspected by Architect for free drainage prior to installation of trees.
- 3. Watering Basins: Watering basins for all plants shall be constructed in a ring shape around each tree or palm trunk. This earthen berm shall be constructed 6" in height and 36" in diameter so as to hold water and allow infiltration around root ball. A minimum of 2 inches of cypress mulch shall be placed within the watering basin. Watering basins must be maintained and kept free of weeds during the entire maintenance period.
- J. Insect and Disease Control: Apply treatment as frequently as required during construction and 90-day maintenance period to prevent damage to plant material. Use only chemicals specifically approved by TCEQ.
- K. Pruning: All existing and new vegetation shall be pruned/trimmed by a certified ISA Arborist, as directed on site by Architect.

3.03 CLEANUP AND PROTECTION

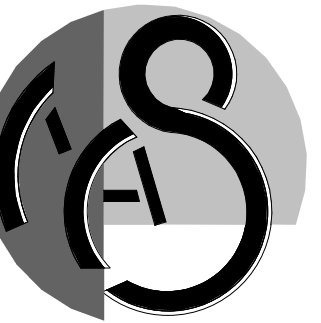
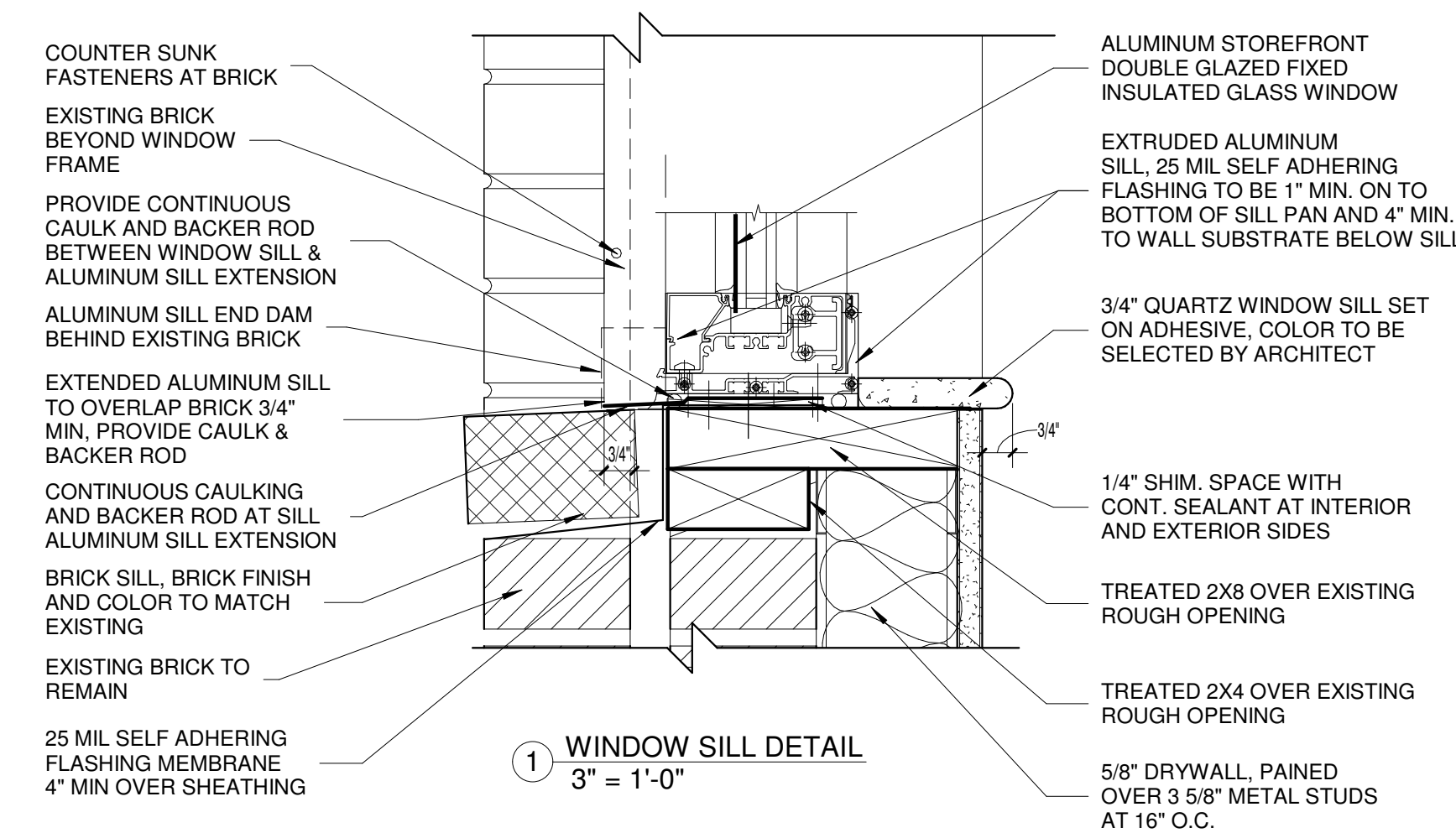
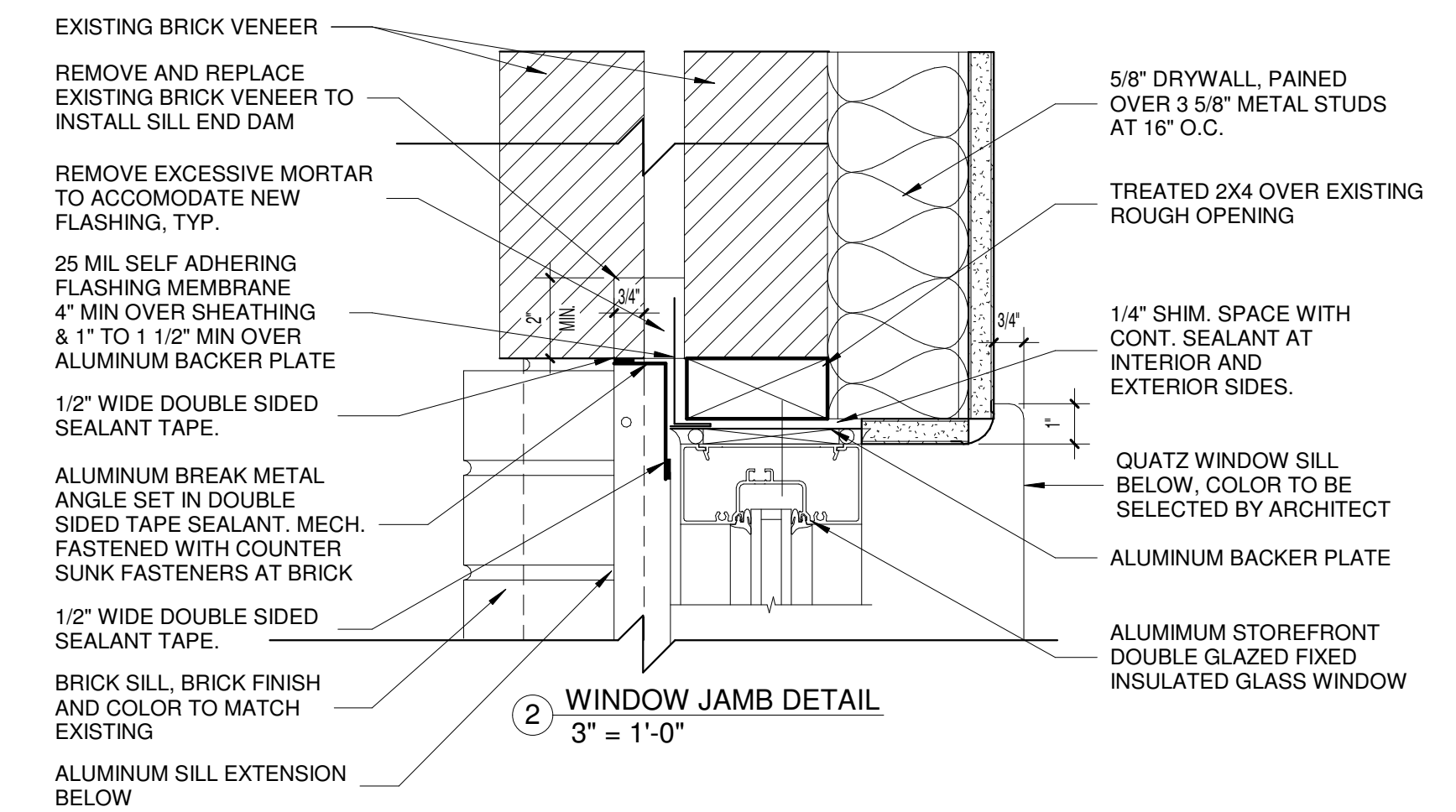
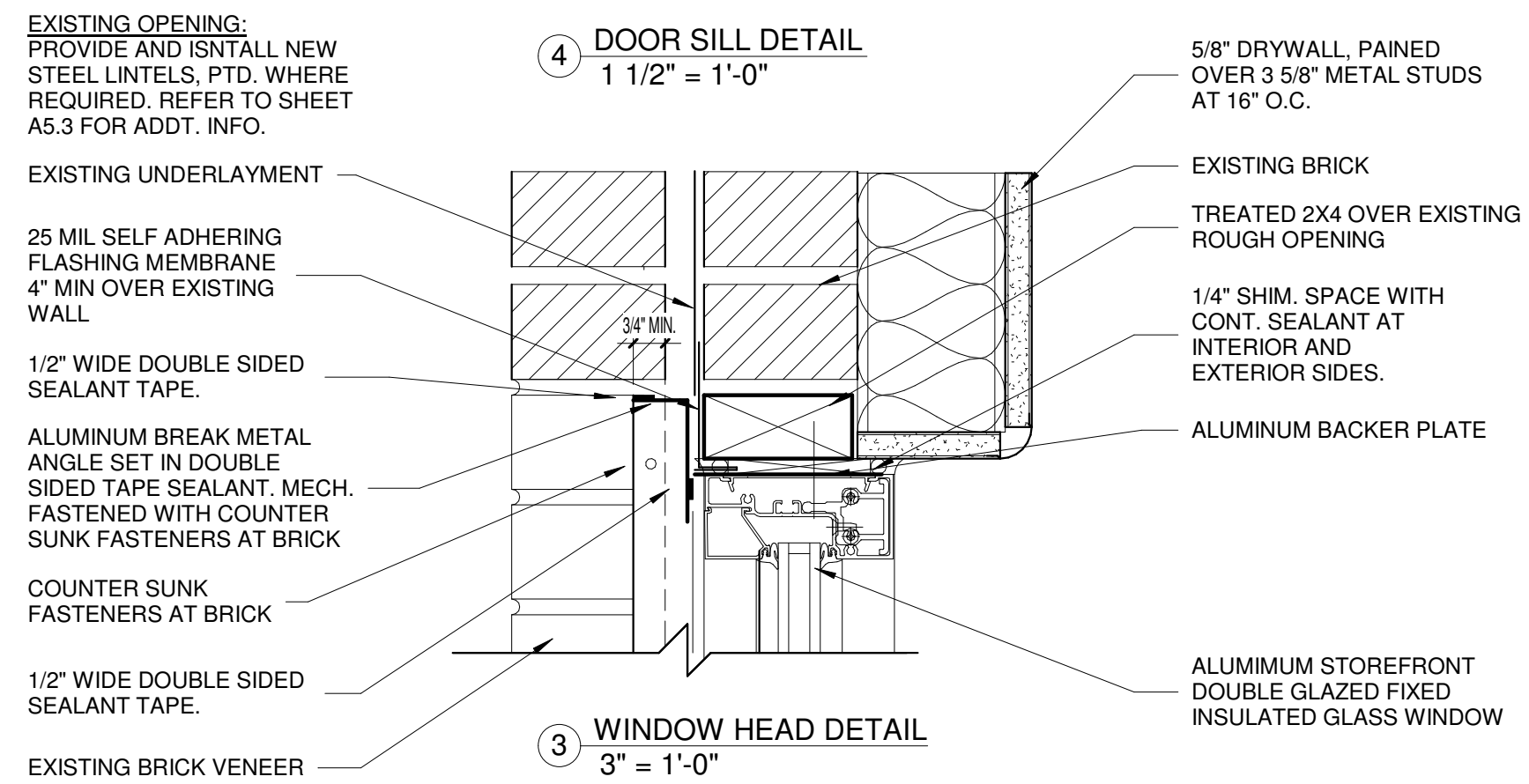
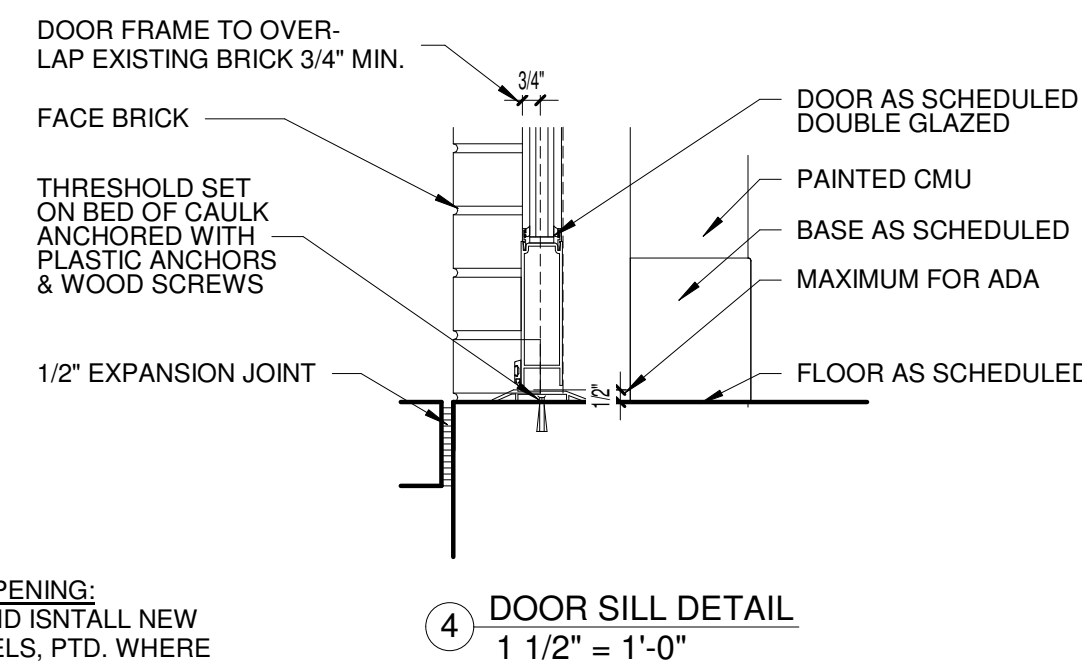
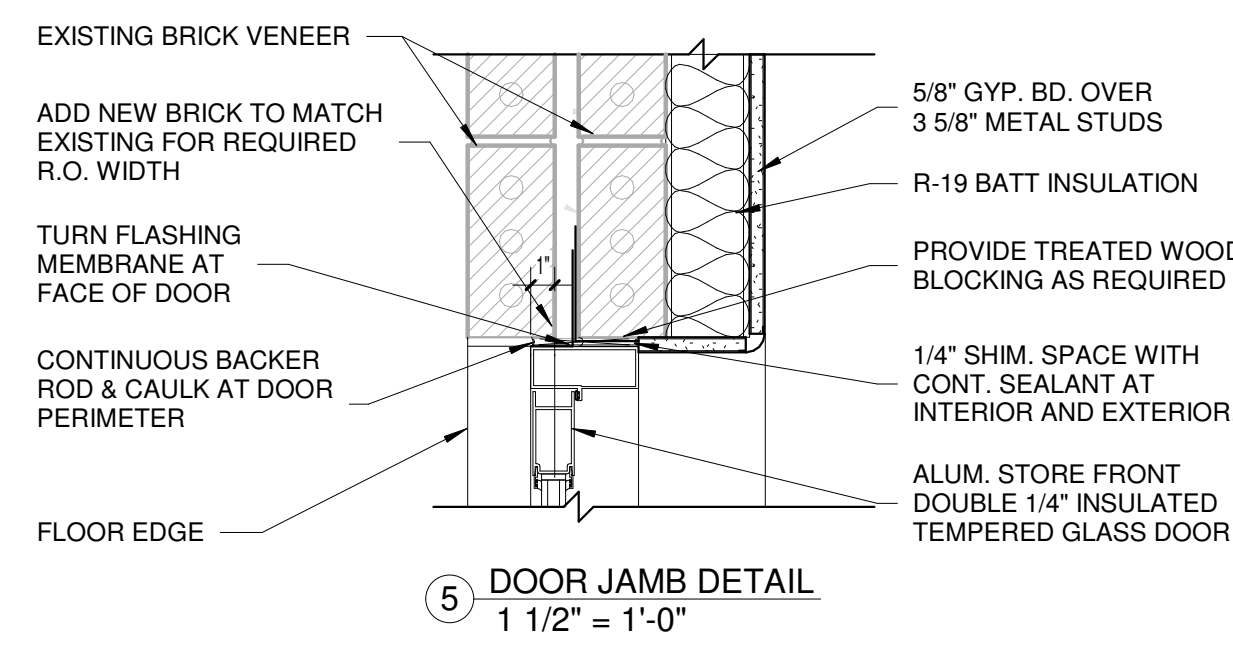
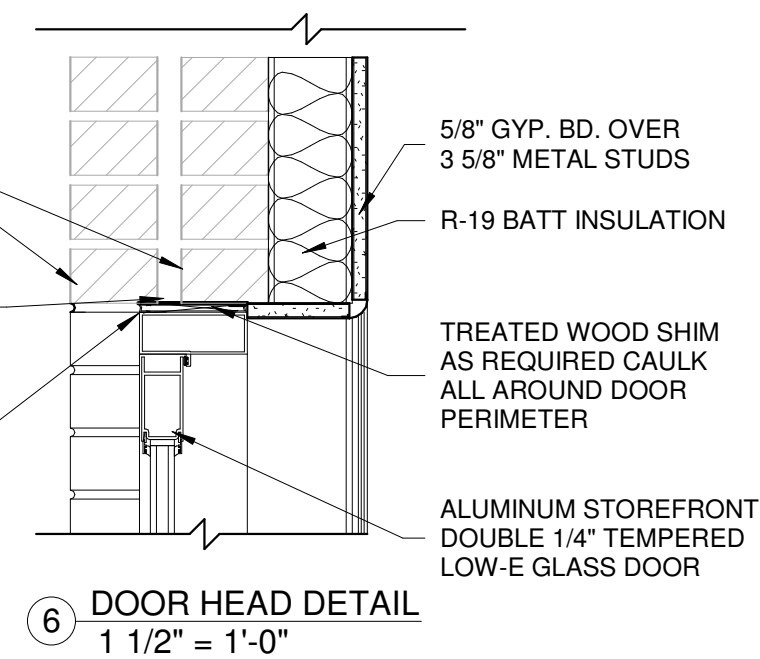
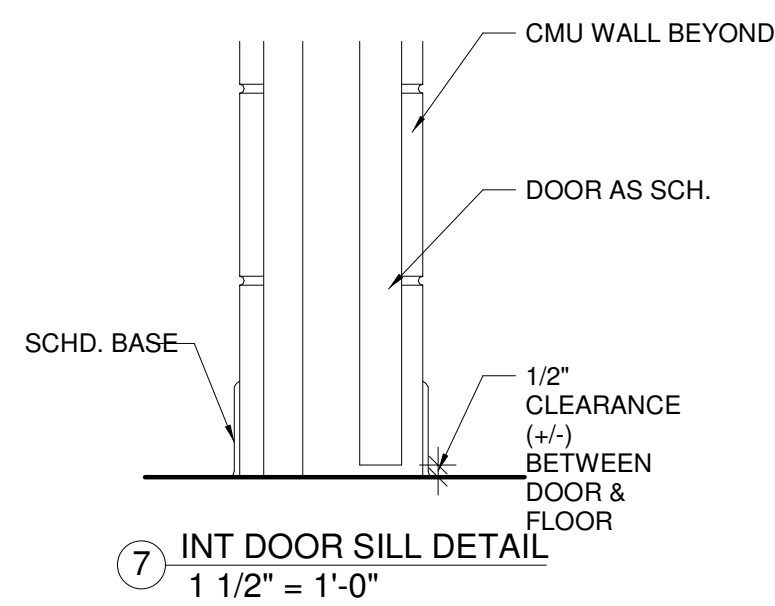
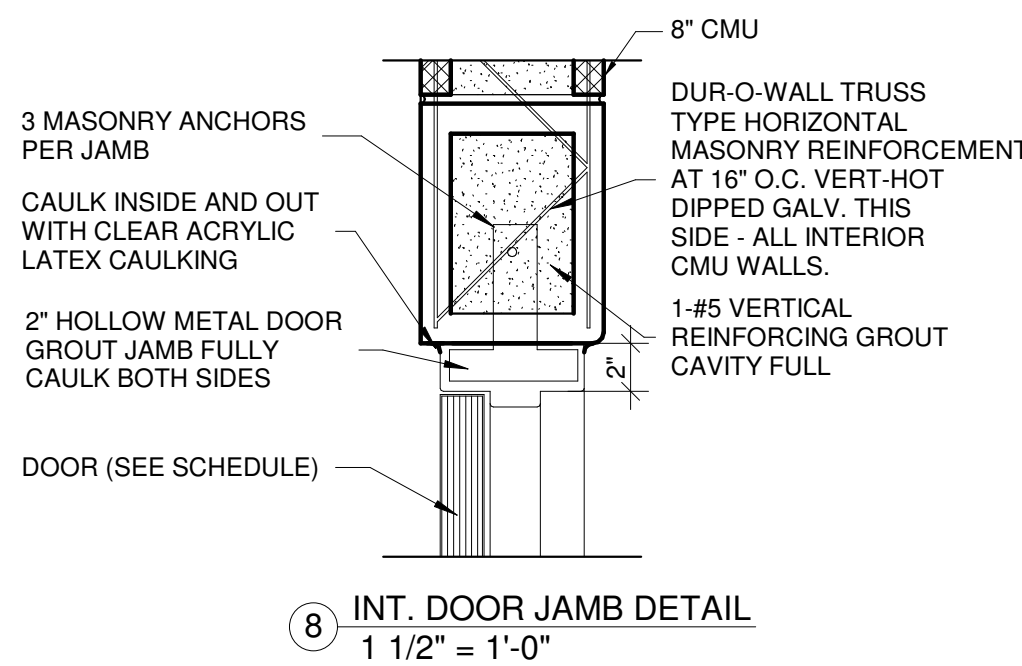
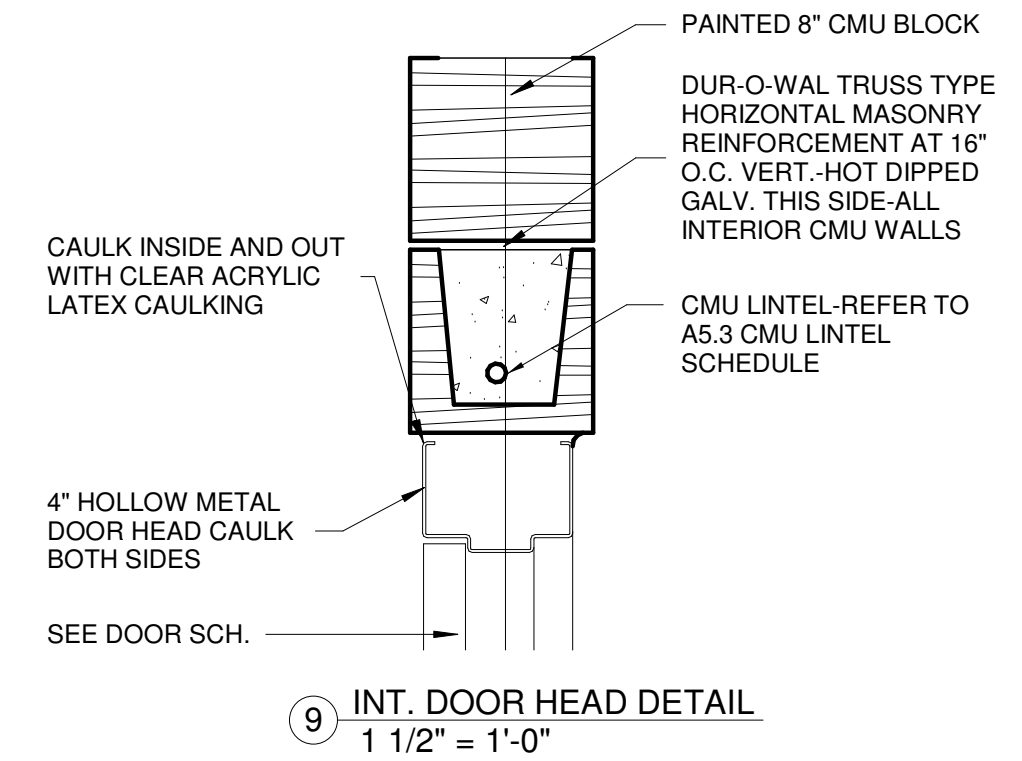
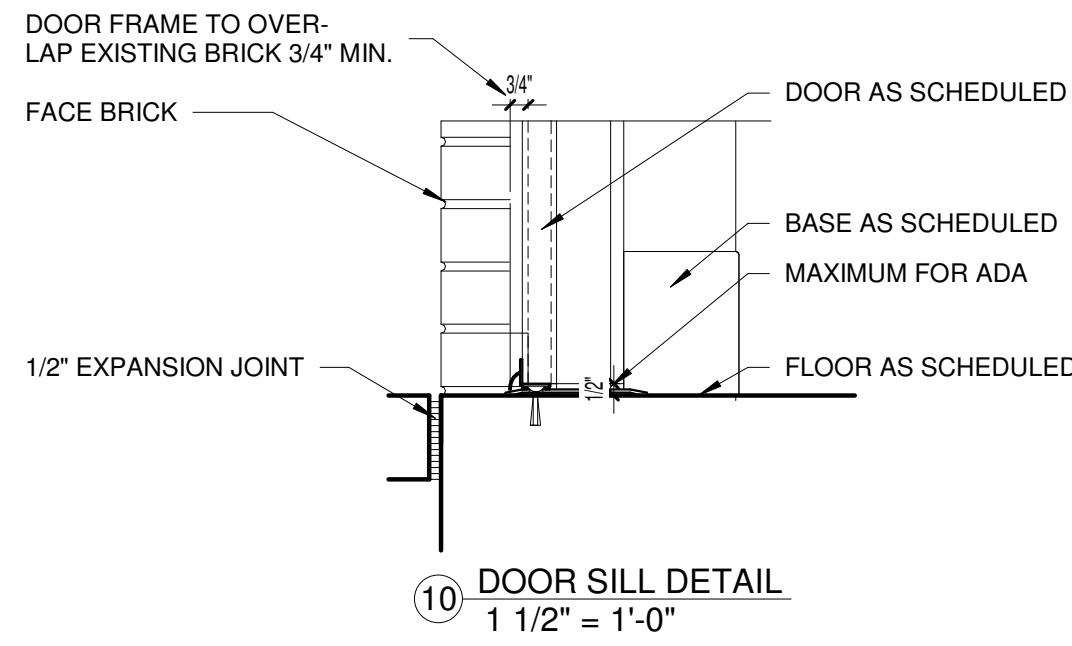
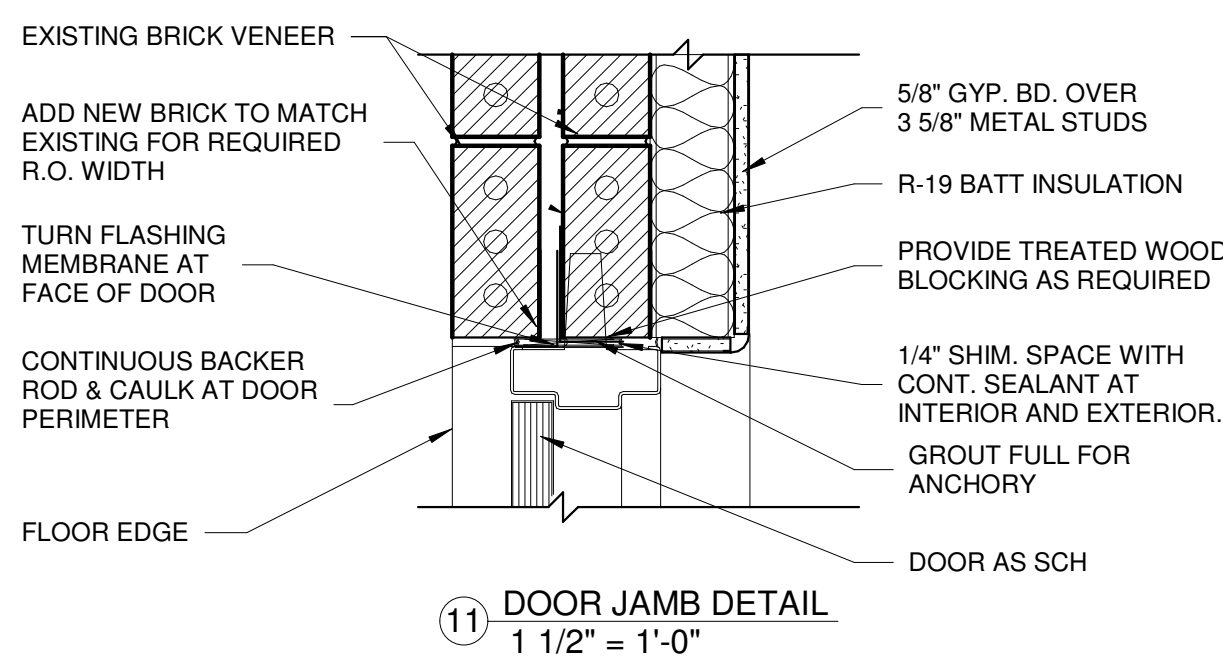
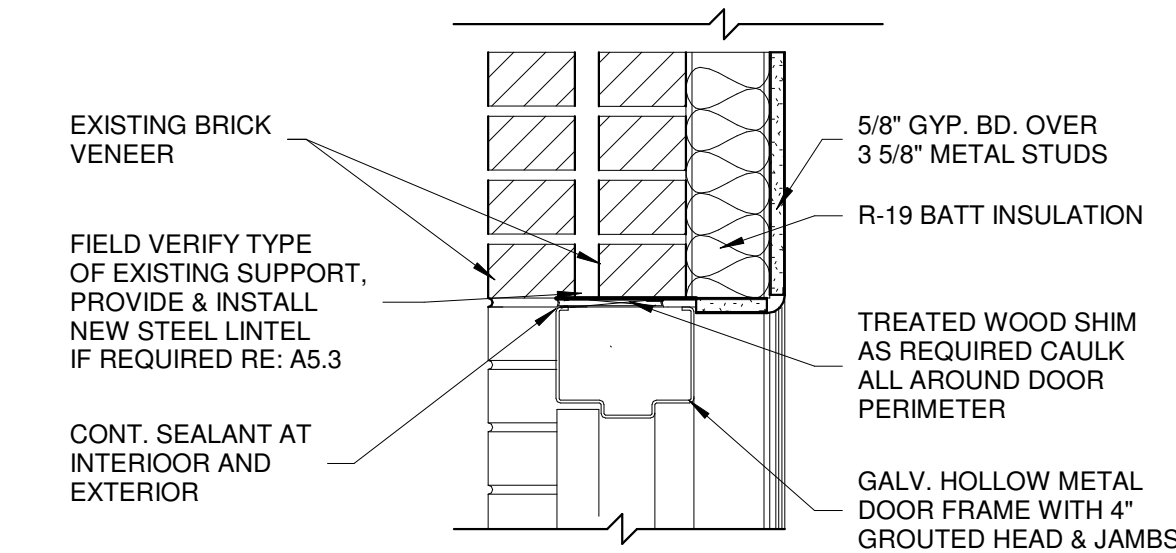
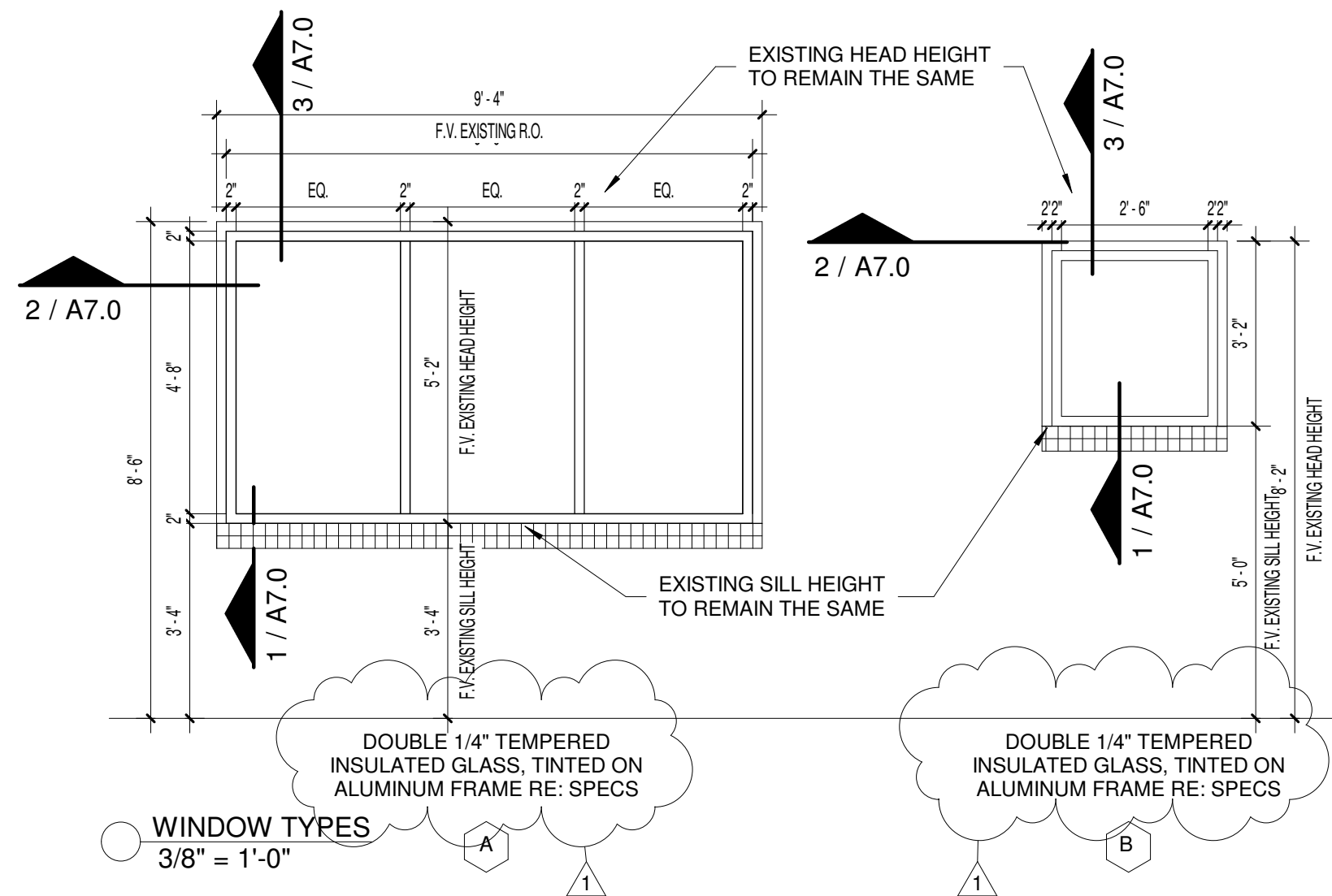
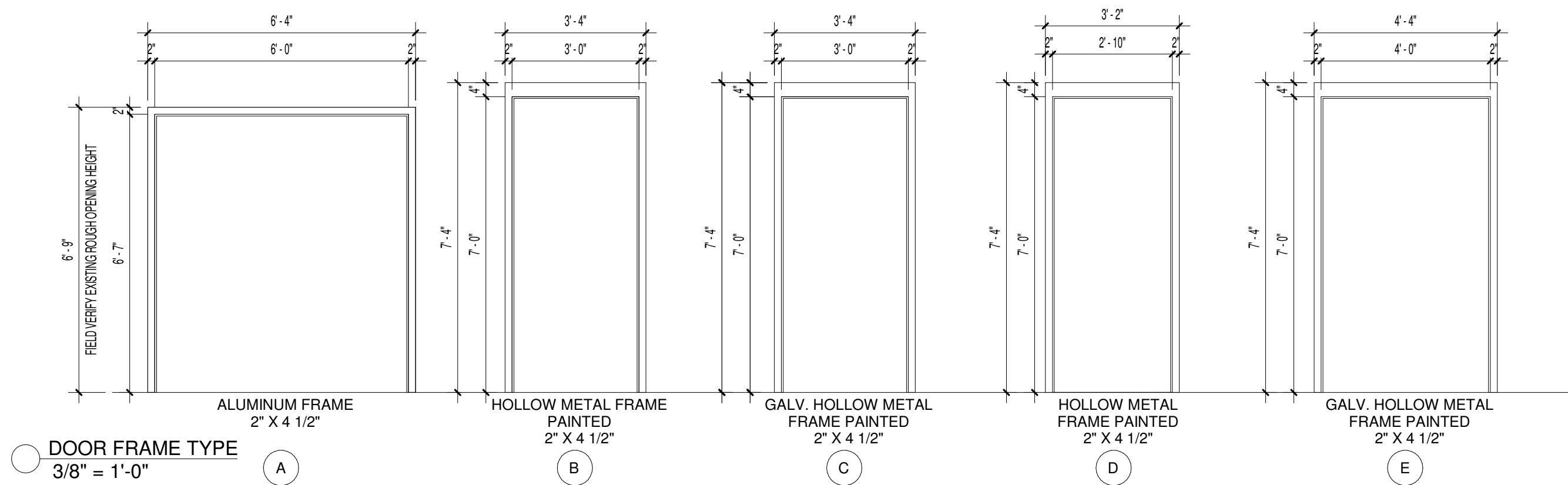
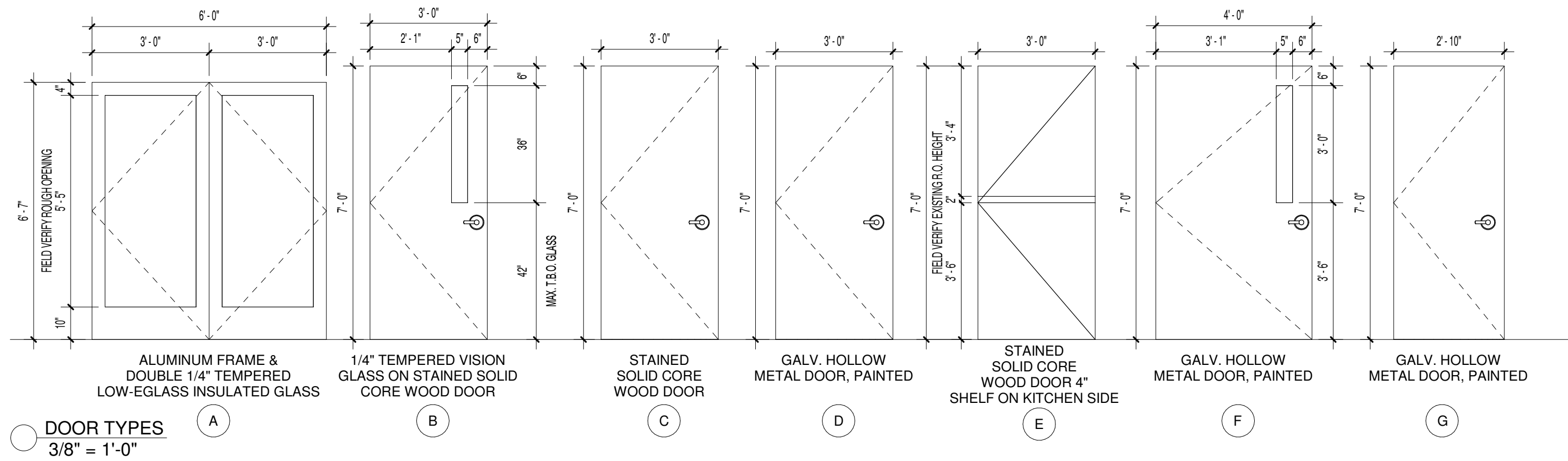
- A. Remove debris from landscaped areas daily and sweep clean adjacent pavements, if soiled by landscape activities.
- B. Provide temporary barriers or fences as required to protect landscaping from damage or theft until final acceptance.

3.04 CLOSE-OUT DOCUMENTS

- A. As-Built Drawings: Submit “As-Built” drawings before project close-out showing the landscape layout, including revised plant material, and other installation information.
- B. Warranty Letters: Submit warranty letters for trees / palms / shrubs / ground covers / amenities.

END OF SECTION

DOOR SCHEDULE														
Mark	DESCRIPTION	Type Mark	Width	Height	Thickness	PAIR OR SINGLE	MATERIAL	FINISH	FRAME TYPE	DOOR HARDWARE	HEAD DETAIL	JAMB DETAIL	SILL DETAIL	Comments
300	KITCHEN	F	4'-0"	7'-0"	0'-1 3/4"	SINGLE	HOLLOW METAL	PAINTED	E	RE: SPECS	12/A7.0	11/A7.0	10/A7.0	
300A	KITCHEN	E	3'-0"	7'-0"	0'-1 3/4"	SINGLE	SOLID CORE WOOD	STAINED	B	RE: SPECS	9/A7.0	8/A7.0	7/A7.0	
301	RESTROOM	C	3'-0"	7'-0"	0'-1 3/4"	SINGLE	SOLID CORE WOOD	STAINED	B	RE: SPECS	9/A7.0	8/A7.0	7/A7.0	
302	OFFICE	B	3'-0"	7'-0"	0'-1 3/4"	SINGLE	SOLID CORE WOOD	STAINED	B	RE: SPECS	9/A7.0	8/A7.0	7/A7.0	
303	STORAGE	B	8'-0"	7'-0"	0'-1 3/4"	SINGLE	SOLID CORE WOOD	STAINED	B	RE: SPECS	9/A7.0	8/A7.0	7/A7.0	
304	CONFERENCE ROOM 1	A	6'-0"	6'-7"	0'-1 3/4"	PAIR	ALUMINUM	ANODIZED	A	RE: SPECS	6/A7.0	5/A7.0	4/A7.0	
304A	CONFERENCE ROOM 1	D	3'-0"	7'-0"	0'-1 3/4"	SINGLE	HOLLOW METAL	PAINTED	C	RE: SPECS	12/A7.0	11/A7.0	10/A7.0	
305	CONFERENCE ROOM 2	A	6'-0"	6'-7"	0'-1 3/4"	PAIR	ALUMINUM	ANODIZED	A	RE: SPECS	6/A7.0	5/A7.0	4/A7.0	
306	RESTROOM	C	3'-0"	7'-0"	0'-1 3/4"	SINGLE	SOLID CORE WOOD	STAINED	B	RE: SPECS	9/A7.0	8/A7.0	7/A7.0	
309	RESTROOM	C	3'-0"	7'-0"	0'-1 3/4"	SINGLE	SOLID CORE WOOD	STAINED	B	RE: SPECS	9/A7.0	8/A7.0	7/A7.0	
310	RISER	G	2'-10"	7'-0"	0'-1 3/4"	SINGLE	HOLLOW METAL	PAINTED	D	RE: SPECS	12/A7.0	11/A7.0	10/A7.0	
311	A/C	C	3'-0"	7'-0"	0'-1 3/4"	SINGLE	SOLID CORE WOOD	STAINED	B	RE: SPECS	9/A7.0	8/A7.0	7/A7.0	



MILNET
ARCHITECTURAL
SERVICES

AMERICAN INSTITUTE OF ARCHITECTS



OLD SORENSEN ELEMENTARY
RENOVATIONS BID #18-19-055

PSJA ISD
SAN JUAN, TEXAS

PROJECT NUMBER
219006

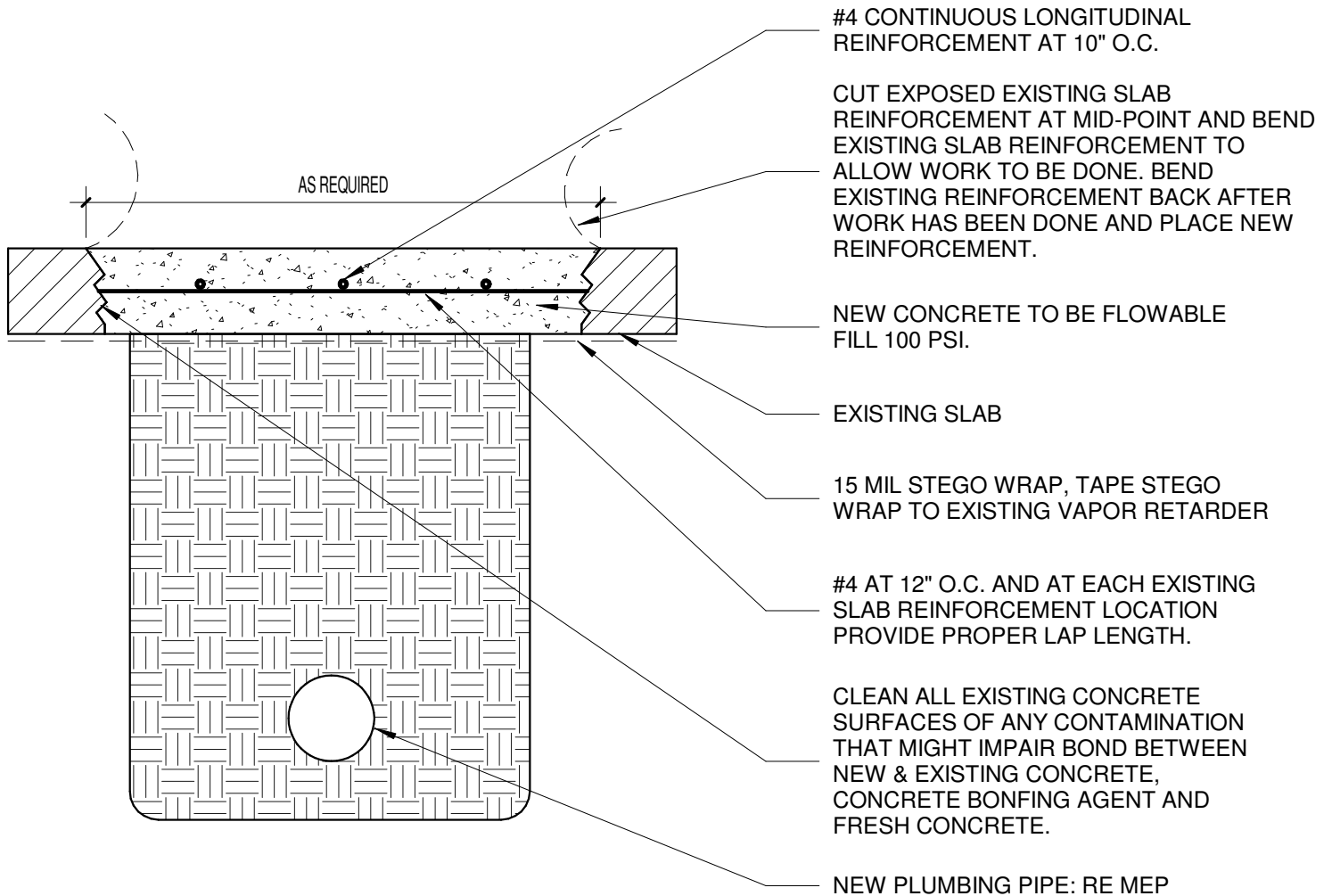
DATE
AUGUST 26, 2019

ISSUE FOR BIDS

ADD #1 9-6-2019

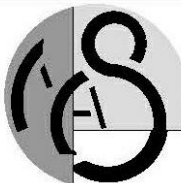
SHEET NUMBER

A7.0



① REPAIR OF EXISTING FOUNDATION
N.T.S.

SK 1



**MILNET
ARCHITECTURAL
SERVICES**
Ph: (956) 688-5656
Fax: (956) 687-9289
Email: milnet@awbell.net

Project name: OLD SORENSEN ELEMENTARY RENOVATIONS BID #18-19-055
Address: SAN JUAN, TEXAS
Date: 09/05/19
Project number: 219006