

reCenter - Addendum No. 002

B/A No. 13143

08 October 2017

Notice:

- Receipt of this Addendum shall be acknowledged on the Bid Form.
- This Addendum forms part of the Contract Documents for the above referenced project and shall be incorporated integrally therewith.
- Bidder shall make necessary adjustments and submit his/her proposal with full knowledge of all modifications, clarifications, and supplemental data included therein. Where provisions of the following supplemental data differ from those of the original Contract Documents, this addendum shall govern and take precedence.
- Items revised on the Drawing Sketches (denoted as SK-000) are designated by a cloud line surrounding the revised section of the drawing and a delta (Δ) symbol with the corresponding revision number.
- Identified items revised on the Drawings are designated by a cloud line surrounding the revised section of the drawing and a delta (Δ) symbol with the corresponding revision number.

Modifications:

A. Changes to the Construction Drawings & Specifications (questions & clarifications):

Architectural Sheets

1. Question: Please clarify the size of the pavers as well as the grass pavers, will they be 2 3/8" or the 3 1/8"? Please advise.

Answer: All pavers to be 3 1/8".

2. Question: On sheet A.040 detail 17 the aggregate under the grass pavers shows 4" - 12", which is it? Also, please provide a specification for this aggregate. Please advise.

Answer: Per 32 14 13-7 permeable base & substrate aggregate to be 6" max. Aggregate standards can be found in 32 14 14-4,5

3. Question: RAM hotel window is noted on the window schedule A.841 (Type X), the details for the windows are storefront, see reference A.611/13/14, A.604/13. Please clarify which is required.

Answer: Type X windows are RAM Hotel windows with PTAC louver.

4. Question: With regard to the Pre-Engineered aluminum sunscreen shade, see A4.13 (5.68) and A.604.13, is the sunscreen based on a manufacturer's system and if so which manufacturer? Also, what is the design intent aesthetically? Please provide details on the form of attachment of the shade to the building? Please advise.

Answer: **Response pending.**

5. Question: With regard to specification section 08 41 00 Aluminum Entrance and Storefront, plan details do not match the approved product in the specifications, the plan details appear to be Kawneer's Encore System. Please advise which is required.

Answer: **Response pending.**

6. Question: Please provide the glass makeup of Type DC glass. See the email attachment as an example.

Answer: Type DC glass is specified in A.84: "LOW EMISSION, DOUBLE INSULATED, TEMPERED GLASS; PPG STARPHIRE". No attachment included in email.

7. Question: Please confirm that Fiber Cement Panels referenced in specification section 07 46 46 Fiber Cement Vertical Panel System is no longer a cladding option.

Answer: Stucco will be used in lieu of fiber cement panels. Disregard spec section 07 46 46. Please find attached specification 09 24 00 for Portland Cement Plaster (Stucco).

8. Question: With regard to the metal panels, please confirm that all exposed fasteners are to be painted matching the pertaining metal panels.

Answer: All exposed fasteners to match panel color.

9. Question: Please provide specification section and manufacturer for WD.1, is Trespa an acceptable manufacturer? Please advise.

Answer: WD.1 refers to exterior siding composed of treated and stained 1x6 dimensional lumber. Refer to specification 06 20 13. Trespa is not acceptable.

10. Question: C2.0 refers to existing buildings to be removed that are no longer on the site. Was the basement removed when the building was? If not, what fill was used. Please provide a current C2.0 drawing.

Answer: **Response pending.**

11. Question: With regard to waterproofing, in detail drawing sheets it indicates 7.06 Damp proofing, 7.18 Black UV stable water resistive vapor permeable air barrier for open-joint rain screen cladding and 7.35 Ice & water shield. I do not see these materials in the specifications. There is only one Vapor Permeable Air Barrier specified. Are we using this material for all conditions or we are expecting some more specifications. Please advise

Answer: For exterior stucco finish, use bituminous damp proofing (Specification 07 11 50 attached). For open-joint rain screens refer to Specification 07 27 10.

12. Question: With regard to waterproofing, is there a waterproofing detail for the elevator pit? A specification for elastomeric sheet waterproofing included, it this to be applied at the elevator pit? Please advise.

Answer: Elevator pit to be sealed with BASF MaterSeal 500 (or similar). Project Manual will be updated for construction set.

13. Question: Please include a specification for the 1" cementitious topping slab at Levels 4,5, where the flooring system is structural sheathing and 1" topping. DBC recommends the following product <https://www.usg.com/content/usgcom/en/products-solutions/products/performance-flooring/underlayment/usg-levelrock-3500-series-floor-underlayments.html>.

Answer: Proceed per DPR recommendation. Finish should be applied to 3, 4, & 5th floors. Final approval contingent upon DBC review.

14. Question: Kone Elevator is the basis of design for the elevator per specification section 14 21 00 Electric Traction Elevator. The specifications call for the elevator rated capacity of 2,500 LBS. The Kone elevator representative has indicated that for a 5-story building the rated capacity will need to be 3,500 LBS. If this is the case the elevator shaft will need to be modified. Please advise.

Answer: **Response pending.**

15. Question: Please provide the most current Davis-Bacon wages labor rates that will govern this project.

Answer: **Response pending.**

16. Question: Sheet FS-1 item 23 Fryer is shown with a quantity of zero, but one is still shown in the floorplan A/FS-1. Please advise

Answer: **Response pending.**

17. Question: Sheet FS-2 appears to indicate a quarry tile floor surface in the walk-in cooler/freezer. The finish schedule indicates sealed concrete. Please confirm sealed concrete is acceptable in this location.

Answer: **Response pending.**

18. Question: Please provide detail on window schedule for window V.

Answer: Please see attached SK001 for clarification.

19. Question: Window type "U" on Plans conflicts with Window Schedule type "U". Please clarify which window type is to be used.

Answer: Please see attached SK001 for clarification.

20. Question: Please clarify whether mirrors in bathrooms, sheet A.104 & A.110 are to be Type C "Frameless" or Type 10.16 "Framed."

Answer: All mirrors are to be "frameless". Disregard keynote 10.16.

21. Question: Please clarify the location of the Metal Panel 2 at the parapet wall soffit @ east folding gate shown on detail 3 A.505

Answer: **Response pending.**

22. Question: Please identify where Cement Panels (HP.1, HP.2, & HP.3) are to be installed. A.153 indicates the Cement Panels to be an Exterior Finish.

Answer: Finishes HP.1, HP.2, & HP.3 removed from scope. These finishes have been replaced by interior gypsum wall at level 3, 4, and 5. Finish schedule will be updated for construction set.

23. Question: Item 8.42 refers to a Folding Security Gate on the Master Key Notes. However, this item cannot be found on the door schedule. Please identify this item and it's location.

Answer: Folding security gate removed from scope.

24. Question: With regard to the Concrete Countertops (M.CO.1), please provide a specification section.

Answer: **Response pending.**

25. Question: With regard to the Reclaimed Wood (M.WD.1) please provide a specification section.

Answer: M.WD.1 is like WD.1, treated and stained 1x6 dimensional lumber. Refer to specification 06 20 13.

26. Question: Drilled piers subcontractors are indicating that the foundation design may need to be reworked, depending on the existing state of the basement shown to be existing on the site, whether it is filled in or has been entirely removed. Subcontractors indicate that the bells on the larger belled piers are un-constructable due to being over 8'. They indicate that there are locations where the bells are too close to each other. One subcontractor recommends the following options. Option 1 - is simply backfill the basement with standard fill material and then take a drilled shaft rig and core a hole through the slab. Then come in behind that and install Auger-Cast Piles. Option 2 - If there is no slab being left in place, and you are removing all the underground concrete and backfilling it, then we would simply recommend replacing the belled piers with Auger Cast Piles. We could come up with the most cost effective pile size per the required capacity and prove it with a load test. Please let us know if this is an acceptable VE idea.

Answer: **Response pending.**

27. Question: Drawing EL.201 – Electrical Lighting First Floor Plan Note 9 states use Wiremold WS-400-W when referring to time clock switches. Is this a typo and referring to Watt Stopper WS-400-W timer switch?

Answer: **Response pending.**

28. Question: Drawing E.203 and E.204 3rd and 4th Floor Lighting Plans Note 1 indicate to use motion sensors 1=W500A, 2=W1000A, 3=W2000A, 4=W2000H, 5=#CI205. On location where motion sensor is used on drawing E.203 or E.204 there is no number reference 1-5 to indicate which motion sensor to use. We assume to use Watt Stopper Motion Sensor W1000A to match motion sensor indicated on drawing E.205 5th floor lighting drawing.

Answer: **Response pending.**

29. Question: Drawing EL.201 – Electrical Lighting Drawing indicates location of Fire Alarm Control Panel to be mounted in the same exact locations as panel IL and its 45kva transformer. Can Fire Alarm

Control Panel be mounted to adjacent wall opposite panel IL and its 45kva transformer? Please advise.

Answer: **Response pending.**

30. Question: Drawing EL.201 – Electrical Lighting Drawing indicated light fixtures “B” and “D” to be powered from the same lighting circuit. Lighting circuit is not indicated. Is it safe to assume the lighting circuit for light fixtures “B” and “D” is circuit IH-9? When referring to panel schedule for panel IH circuit 9 is listed as a 1st floor lighting circuit. Please advise.

Answer: **Response pending.**

31. Question: With regard to Question #13 from the RFI’s answered in Addendum #1 please provide the response from the Owner’s Geotechnical Engineer so that subcontractors have the information for bidding purposes.

Answer: **Response pending.**

32. Question: With regard to Question #14 from the RFI’s answered in Addendum #1 please clarify the splice requirements by class.

Answer: **Response pending.**

33. Question: This is a reissue of a question previously submitted but has not yet been addressed. With regard to sheet S101, IV. Foundation – General, Note E 4-7 - Notes require that prior to placing controlled fills, subgrade shall be Proof Rolled with heavy equipment. So as to preserve the integrity of proposed subgrade conditions, Contractor believes it is in the Owner’s interest to allow Proof Roll to take place 4”-6” higher than proposed subgrade and rely upon visual inspection when final subgrade is achieved. The proposed sequence would proceed as follows;

- SWPPP.
- Clear and Grub, Mass excavation to -2.0 below finished floor (roughly 5” higher than proposed subgrade).
- Proof Roll (Geotechnical Engineer, please stipulate equipment requirement).
- Mobilize and drill piers.
- Expose final subgrade and immediately place controlled fills.
- Complete underground plumbing and electrical, restore subgrade.
- Place vapor barriers and complete SOG.

Contractor believes this mitigates two key issues; If controlled fill were placed prior to drilled piers, the costs of restoration would be greater than the costs associated with proposed sequence. If drilled piers were to proceed from proposed subgrade, Contractor would be exposed to costs associated with restoration of subgrade exposed to weather and/or as a result of drilled pier construction. Contractor requests clarifications and acceptance of proposed means and methods.

Answer: **Response pending.**

34. Question: Page A841 interior elevations, the top row shows 1” insulated glass in a storefront system and the second row shows ½” glass in storefront system, is this correct? Please advise.

Answer: Proceed with glazing designations in A.841.

35. Question: The six elevation V windows are not on the window schedule, should this be storefront or Ram hotel windows? Please advise.

Answer: Type V is a RAM Hotel window. Please see SK001 for clarification.

36. Question: The plans ask for the storefront doors to be 10’ tall and narrow stile. Subcontractor indicates that there is no warranty for storefront doors taller than 9’ and no warranty on narrow stile doors taller than 8’. What do you want us to bid? Please advise.

Answer: Price per bid documents.

37. Question: With regard to the Geotechnical Report please confirm what they used to fill the basement. Reference See IV. 2 in the geotechnical report.

Answer: **Response pending.**

38. Question: With regard to the Geotechnical Report section 2.7 under “Structural Fill and Subgrade Preparation”, please clarify what is meant by, “The select fill soil extending from the building towards the building line should be capped with on-site high plasticity clay soils in order to retard any water seepage into subgrade soils.”

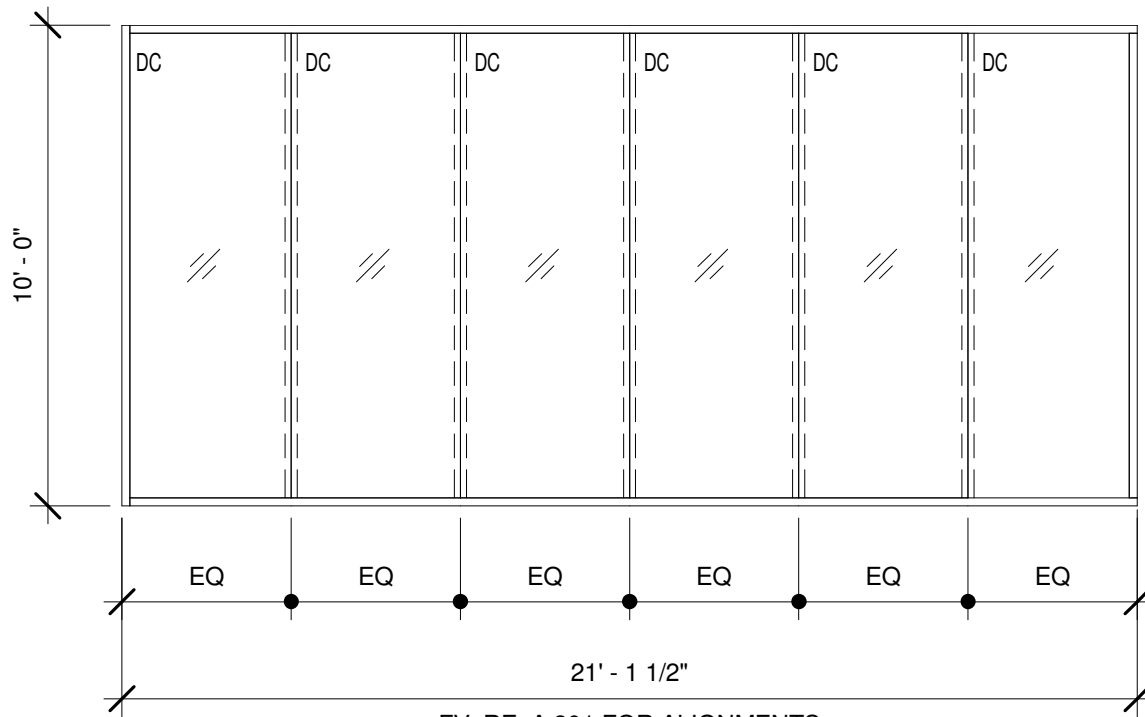
Answer: **Response pending.**

B. Attachments:

Sheet / Specification No.	Format	Date
SK001	pdf	10/08/17
071150 Bituminous Damp proofing	pdf	10/08/17
092400 Portland Cement Plaster (Stucco)	pdf	10/08/17

Christian Sheridan, AIA, LEED® AP

End of Addendum-No.002

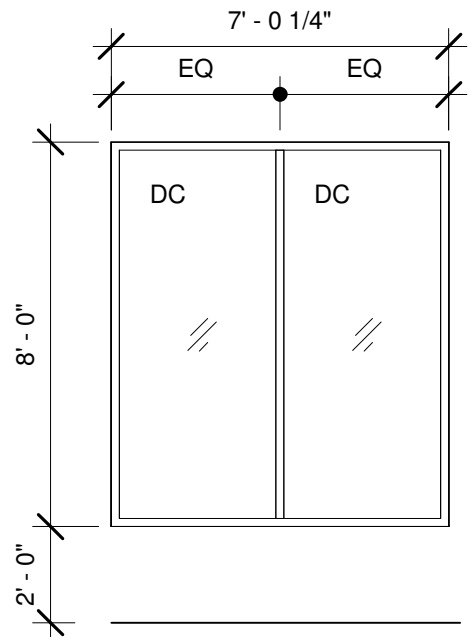


FV; RE: A.301 FOR ALIGNMENTS

U

ALUMINUM STOREFRONT WITH 4 SIDED
STRUCTURAL SILICONE GLAZING

2 TYPE U STOREFRONT
1/4" = 1'-0"



RAM HOTEL WINDOW

V

1 TYPE V WINDOW
1/4" = 1'-0"

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BID ADDENDA 002
10/08/17

SK001

SECTION 07 11 50

BITUMINOUS DAMPPROOFING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Harris County's General Conditions for Building Construction and Related Work, Facilities & Property Management Facility Standards, and Contract Documents apply to work of this Section.

1.2 SUMMARY

- A. Section includes bituminous dampproofing applied to exterior of all exterior sheathing.

1.3 RELATED SECTIONS

- A. Coordinate work of this Section with work of other sections, including Division 01 Sections, as required to properly execute the work and as necessary to maintain satisfactory progress of the work

1.4 SUBMITTALS

- A. Submit under provisions of Division 01 Section "Submittal Procedures".
- B. Product Data: For each type of product.

1.4 FIELD CONDITIONS

- A. Weather Limitations: Proceed with application only when existing and forecasted weather conditions permit dampproofing to be performed according to manufacturers' written instructions.
- B. Ventilation: Provide adequate ventilation during application of dampproofing in enclosed spaces. Maintain ventilation until dampproofing has cured.

1.5 WARRANTY

- A. One (1) full continuous year without failure.

PART 2 - PRODUCTS

2.1 MATERIALS, GENERAL

- A. Source Limitations: Obtain primary dampproofing materials and primers from single source from single manufacturer. Provide protection course, molded-sheet drainage panels, and auxiliary materials recommended in writing by manufacturer of primary materials.

2.2 APPROVED MANUFACTURERS/PRODUCTS

- A. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, the following:
1. Henry Company (Mastic #789)
999 North Sepulveda Blvd.
El Segundo, CA 90245
Telephone: (310) 955-9200
 2. BASF Construction Chemicals (MasterSeal 615 (Formerly Hydrocide 700B)
Master Builders
889 Valley Park Dr.
Shakopee, MN 55379
Telephone: (800) 433-9517
 3. ChemMasters (MasterGard 700)
300 Edwards Street
Madison, OH 44057
Telephone: (800) 486-7666

2.3 PRODUCT DESCRIPTION

- A. Type: Fibered Emulsion Coating and Dampproofing.
- B. Use: Dampproofing on exterior sheathing, masonry, and as an insulation adhesive.
- C. Composition and Materials: Asphaltic resin and clay colloidal emulsifiers.
- D. Limitations: Apply material when temperature is over 45 degrees F and protect from rain or freezing until completely dry. Do not apply where material will be in continuous contact with water or water situations similar to ponds.

2.4 TECHNICAL DATA

- A. Henry Mastic #789:
- | | | |
|----|---|---|
| 1. | Permeability, perm-inch: | 0.10 |
| 2. | Cured Film Properties: | |
| a. | Flammability: | No flash |
| b. | Firm set, hours, maximum (50 percent R.H., 70+ degrees F): | 24 |
| c. | Heat test, 212 degrees: | No blistering or sagging |
| d. | Flexibility, @ 180 degrees F arc, 2 inch mandrel, @ 32 degrees F: | No cracking |
| e. | Resistance to water: | No blistering, no re-emulsification after thorough curing |
| f. | Direct flame test: | No flame |

3. Henry Mastic #789 Fibered Emulsion meets ASTM D1227 Type IV Federal Spec. SS R-1781 Type 1. Military Spec. Mil-R-3472 Clay Type "Except fibers are not asbestos".

2.5 MISCELLANEOUS MATERIALS

- A. Provide primers, glass fabric scrim tape, mastic, and other materials not specifically described, but required for a complete and proper installation.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions with Applicator present, for compliance with requirements for surface smoothness, surface moisture, and other conditions affecting performance of bituminous dampproofing work.
 1. Test for surface moisture according to ASTM D 4263.
- B. Proceed with application only after substrate construction and penetrating work have been completed and unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Mask or otherwise protect adjoining exposed surfaces from being stained, spotted, or coated with dampproofing. Prevent dampproofing materials from entering and clogging weep holes and drains.
- B. Surface Preparation: All dust, dirt, old loose or scaling coatings should be removed from the surface before coating. All cracks, joints, penetrations, and splits should be sealed, repaired with four (4) inch wide glass fabric scrim tape embedded in Henry Brand Synko-Mastic #301. Dusty or porous masonry surfaces should be dampened with water. Highly porous masonry should be primed with Henry Mastic #792 Asphalt Primer or #788 Non-fibered Emulsion which has been thinned with one (1) gallon water per five (5) gallons of #788. Cleaned metal surfaces should also be primed. Architect shall approve the taping of joints and surface preparation prior to the application of the dampproofing.
- C. Working Conditions: Apply under normal working conditions above 45 degrees F and rising. Do not apply when rain is imminent.

3.3 APPLICATION

- A. Apply with brush or spray equipment. Soft brushes free from stiff bristles should be used and the material applied in even strokes. When spraying, apply in one coat with a 50% overlap of the spray patten to obtain a uniform and continuous coating.
 1. Insure continuous coating free of breaks, voids and pinholes.
 2. Thoroughly cover all cracks, joints, and corners.

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3. Provide dampproofing in all exterior cavity walls on concrete masonry units, and on all gypsum board sheathing including areas above soffits, doors, and windows.
- B. Coverage: Minimum 3/32 inch Dry Film Thickness.
- C. Storage: Keep container tightly sealed and protect from freezing in shipping and storage.

3.4 TESTING AND INSPECTING

- A. Twenty (20) days after completion of this portion of the work, at the discretion of the Architect, demonstrate by running water test that the work of this Section will successfully repel water.
1. Notify the Architect at least 72 hours in advance, and conduct the test in the Architect's presence.
 2. By means of an outrigger, or similar acceptable equipment, place the nozzle of a 3/4 inch garden hose at a point approximately 10 feet-0 inches away from top of wall where approved by the Architect, aiming the nozzle at slight downward angle to direct full stream of water onto wall.
 3. Run water onto wall at full available force for not less than four (4) hours.
 4. Upon completion of the four (4) hour period, inspect interior surfaces of wall for evidence of moisture penetration.
- B. If evidence of moisture penetration is discovered, apply an additional coat of approved water repellent to exterior surface in areas directed by the Architect, repeating application and testing (at no additional cost to the Owner) until no evidence of moisture penetration is found.

END OF SECTION

SECTION 09 24 00

PORTLAND CEMENT PLASTER (STUCCO)

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Harris County's General Conditions for Building Construction and Related Work, Facilities & Property Management Facility Standards, and Contract Documents apply to work of this Section.

1.2 SUMMARY

- A. Section includes materials and installation of exterior 3 coat stucco wall covering where indicated.

1.3 RELATED SECTIONS

- A. Coordinate work of this Section with work of other sections, including Division 01 Sections, as required to properly execute the work and as necessary to maintain satisfactory progress of the work.
 - 1. Related Sections include:
 - a. Division 06 Section "Sheathing".
 - b. Division 07 Section "Bituminous Dampproofing".
 - c. Division 07 Section "Vapor and Air Barriers".
 - d. Division 07 Section "Joint Sealants".

1.4 DESIGN REQUIREMENTS

- A. Structural: (wind and axial loads)
 - 1. Design for maximum allowable deflection, normal to the plane of the wall of L/360.
 - 2. Design for wind load in conformance with building code requirements.
 - 3. Refer to applicable ICC ESR for wind load limitations that may apply.
- B. Moisture Control:
 - 1. Prevent the accumulation of water into or behind the stucco, either by condensation or leakage into the wall construction, in the design and detailing of the wall assembly.
 - a. Provide corrosion resistant flashing to protect exposed elements and to direct water to the exterior, including, above window and door heads, beneath window and door sills, at floor lines, at roof/wall intersections, decks, abutments of lower walls with higher walls, above projecting features, and at the base of the wall.
 - b. Air Leakage Prevention: Prevent excess air leakage in the design and detailing of the wall assembly. Provide continuity between air barrier components in the wall assembly.

- c. Vapor Diffusion and Condensation: Perform a dew point analysis and/or dynamic hygrothermal modeling of the wall assembly to determine the potential for accumulation of moisture in the wall assembly as a result of water vapor diffusion and condensation. Adjust wall assembly components accordingly to minimize the risk of condensation. Avoid the use of vapor retarders on the interior side of the wall in warm, humid climates.
- d. Provide Air/Moisture Barrier over sheathing, concrete and masonry.
- e. At through wall expansion joints and at joints formed with back-to-back casing beads, back joints with StoGuard Transition Membrane. Refer to Sto Guide Details at www.stocorp.com.
- f. Seal stucco terminations and accessory butt joints with appropriate sealant. Seal all penetrations through the stucco wall assembly with appropriate sealant, or backer rod and sealant, as dictated by joint type.

C. Joints and Accessories:

1. Provide two piece expansion joints in the stucco assembly where building movement is anticipated: at joints in the substrate or supporting construction, where the system is to be installed over dissimilar construction or substrates, at changes in building height, at floor lines, at columns and cantilevered areas.
2. Provide one piece expansion joints every 144 ft². Cut and wire tie lath to the expansion joint accessory so lath is discontinuous at or beneath the accessory. Do not exceed length to width ratio of 2-1/2:1 in expansion joint layout and do not exceed more than 18 feet in any direction without an expansion joint. Where casing bead is used back-to-back as the expansion joint, back the joint with StoGuard Transition Membrane.
3. Provide one piece expansion joints at through wall penetrations, for example, above and below doors or windows.
4. Provide minimum 3/8 inch wide joints where the system abuts windows, doors and other through wall penetrations.
5. Provide appropriate accessories at stucco terminations and joints.
6. Avoid the use of channel reveal accessories which can interfere with proper drainage and proper stress relief.
7. Provide appropriate sealant at stucco terminations and at stucco accessory butt joints.
8. Indicate location of joints, accessories and accessory type on Architectural Drawings.

D. Fire Protection:

1. Noncombustible Type Construction: provide full width firestops at floor lines, typically 4 pcf semi-rigid mineral wool, where metal framing runs continuously past floor line and provide minimum 3/4 inch uniform stucco thickness.
2. Fire Resistance Rated Non-load Bearing Wall Assembly: provide 7/8 inch uniform stucco thickness. Refer to Sto Guide Details for a one hour rated non-load bearing fire-resistive rated wall assembly.

E. Stucco Thickness: (does not include primer or textured finish coat)

1. Application to Metal Plaster Bases: stucco thickness shall be uniform 3/4 inch or 7/8 inch. Stucco thickness shall not exceed 7/8 inch.

2. Stucco shall be applied in 2 coats, scratch and brown coat, to achieve the prescribed thickness.
3. Thickness shall be uniform throughout the wall area

1.5 SUBMITTALS

- A. Submit under provisions of Division 01 Section "Submittal Procedures".
- B. Product Data:
 1. Manufacturer's specifications, details, and installation instructions.
 2. Manufacturer's code compliance report for air barrier and water-resistive barrier.
- C. Shop Drawings: Show locations and installation of control and expansion joints including plans, elevations, sections, details of components, and attachments to other work.
 1. Include project specific details (when required by Contract Documents).
- D. Manufacturer's standard warranty.
- E. Samples for approval as directed by Architect.
 1. Include for each type of finish coat indicated; 12 by 12 inches, and prepared on rigid backing.

1.6 QUALITY ASSURANCE

- A. This Section outlines only minimum standards and requirements. Refer to the Drawings and other sections of the specifications for additional requirements. Bring all conflicts and discrepancies to the attention of the Architect and do not start work until such conflicts and discrepancies are clarified and corrected.
- B. Source Limitations: Obtain stucco, primer and finish from single source manufacturer.
- C. Manufacturer Requirements:
 1. Stucco products manufacturer for a minimum of 20 years.
 2. Stucco finish products and air barrier products manufactured under ISO 9001:2008 Quality System and 14001:2004 Environmental Management System.
- D. Contractor Requirements:
 1. Licensed, insured and engaged in application of portland cement stucco for a minimum of three (3) years.
 2. Knowledgeable in the proper use and handling of Sto materials.
 3. Employ skilled mechanics who are experienced and knowledgeable in portland cement stucco application, and familiar with the requirements of the specified work.

4. Successful completion of minimum of three (3) projects of similar size and complexity to the specified Project.
 5. Provide the proper equipment, manpower and supervision on the job site to install the system in compliance with Sto's published specifications and details and the project Plans and Specifications.
- E. Preinstallation Conference: Conduct conference at Project site to comply with requirements in Division 01 Section, "Project Management and Coordination".
- F. Testing: If requested by the Architect or Owner
1. Construct full-scale mock-up of typical stucco/window wall assembly with specified tools and materials and test air and water infiltration and structural performance in accordance with ASTM E 283, ASTM E 331 and ASTM E 330, respectively, through independent laboratory. Mock-up shall comply with requirements of project specifications. Where mock-up is tested at job site maintain approved mock-up at site as reference standard. If tested off-site accurately record construction detailing and sequencing of approved mock-up for replication during construction.
 2. Conduct air barrier adhesion testing in accordance with ASTM D 4541.
 3. Conduct air barrier assembly testing in accordance with ASTM E 783.
 4. Conduct pull-out or withdrawal capacity testing of proposed fasteners for lath attachment into concrete or masonry and verify adequacy with respect to negative design wind pressure. Conduct sufficient tests such that reliable and predictable pull-out values are obtained. Verify adequacy of pull-out or withdrawal capacity of fasteners used for frame construction with manufacturer in relation to negative design wind pressures.
 5. Conduct pH testing to check stucco surface alkalinity before application of primer or finish materials. Where alkaline resistant primer is used pH testing may be waived.
 6. Conduct wet sealant adhesion testing in accordance with sealant manufacturer's field quality control test procedure.
 7. Notify Architect minimum 7 days prior to testing.
- G. Inspections:
1. Provide independent third party inspection where required by code or Contract Documents.
 2. Conduct inspections in accordance with code requirements and Contract Documents.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Deliver all materials in their original sealed containers bearing manufacturer's name and identification of product.
- B. Protect coatings (pail products) from freezing and temperatures in excess of 90 degrees F. Store away from direct sunlight.

- C. Protect portland cement based materials (bag products) from moisture and humidity. Store under cover off the ground in a dry location.
- D. Handle all products as directed on labeling.

1.8 PROJECT/ SITE CONDITIONS

- A. Maintain ambient and surface temperatures above 40 degrees F during application and for 24 hours after set of stucco, and after application of air/moisture barrier and finish materials.
- B. Provide supplementary heat for installation in temperatures less than 40 degrees F such that material temperatures are maintained as in 1.8, A. Prevent concentration of heat on uncured stucco and vent fumes and other products of combustion to the outside to prevent contact with stucco.
- C. Prevent uneven or excessive evaporation of moisture from stucco during hot, dry or windy weather. For installation under any of these conditions provide special measures to properly moist cure the stucco. Do not install stucco if ambient temperatures are expected to rise above 100 degrees F within a 24 hour period.
- D. Provide protection of surrounding areas and adjacent surfaces from application of materials.

1.9 COORDINATION/SCHEDULING

- A. Protect sheathing from climatic conditions to prevent weather damage until the installation of the air/moisture barrier.
- B. Install diverter flashings wherever water can enter the wall assembly to direct water to the exterior.
- C. Coordinate installation of foundation waterproofing, roofing membrane, windows, doors and other wall penetrations to provide a continuous air barrier and continuous moisture protection. Provide protection of rough openings before installing windows, doors, and other penetrations through the wall and provide sill flashing. Coordinate installation of air/moisture barrier components with window and door installation to provide weather proofing of the structure and to prevent moisture infiltration and excess air infiltration.
- D. Install window and door head flashing immediately after windows and doors are installed.
- E. Protect air/moisture barrier with stucco cladding within 180 days of installation.
- F. Commence the stucco installation after completion of all floor, roof construction and other construction that imposes dead loads on the walls to prevent excessive deflection (and potential cracking) of the stucco.
- G. Sequence interior work such as drywall installation prior to stucco installation to prevent stud distortion (and potential cracking) of the stucco.

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- H. Provide site grading such that the stucco terminates above earth grade minimum 4 inches and above finished grade (pavers/sidewalk) minimum 2 inches. Provide increased clearance in freeze/thaw climate zones.
- I. Install copings and sealant immediately after installation of the stucco and when finish coatings are dry.
- J. Attach penetrations through stucco to structural support and provide air tight and water tight seals at penetrations.

1.10 WARRANTY

- A. Provide manufacturer's standard warranty.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Specifications are based on products manufactured by Sto Corp., Atlanta, GA; (800) 221-2397, or Architect approved equal. Other manufacturers must have a minimum of 20 years experience manufacturing products meeting or exceeding the specifications and comply with Division 01 Sections regarding substitutions to be considered.

2.2 WATER-RESISTIVE BARRIER

- A. Minimum No. 15 asphalt saturated felt complying with ASTM D 226, Type 1, or one layer of Grade D kraft building paper, or paper-backed stucco lath conforming to 2.4.

2.3 LATH

- A. Minimum 2.5 lb./yd² self furred galvanized steel diamond mesh metal lath in compliance with ASTM C 847.

2.4 MECHANICAL FASTENERS

- A. Non-corroding fasteners in compliance with AISI S200 - 2007 and ASTM C 1513:
 - 1. Wood Framing: Minimum 11 gauge, 7/16 inch diameter head galvanized roofing nails with minimum 3/4 inch penetration into studs or minimum #8 Type S wafer head fully threaded corrosion resistant screws with minimum 3/4 inch penetration into studs.
 - 2. Steel Framing: Minimum #8 Type S or S-12 wafer head fully threaded corrosion resistant screws with minimum 3/8 inch and three thread penetration into studs.
 - 3. Concrete or Masonry: Minimum # 8 wafer head fully threaded corrosion resistant screws for masonry with minimum 1 inch penetration into substrate.
- B. Tie Wire: 18 gauge galvanized and annealed low-carbon steel in compliance with ASTM A 641 with Class I coating.

2.5 ACCESSORIES

- A. Weep screed, casing bead, corner bead, corner lath, expansion and control joint accessories. All accessories shall meet the requirements of ASTM C 1063 and its referenced documents.
 - 1. PVC plastic in compliance with ASTM D 1784, cell classification 13244C.
 - 2. Zinc in compliance with ASTM B 69.
 - 3. Galvanized metal in compliance with ASTM A 653 with G60 coating.

2.6 JOB MIXED INGREDIENTS

- A. Water: Clean and potable.
- B. Sand: in compliance with ASTM C 897 or ASTM C 144, for use with one coat and ASTM C 926 stucco concentrates.

2.7 STUCCO

- A. 108 StoPowerwall Scratch & Brown: portland cement-based stucco concentrate in compliance with ASTM C 926.

2.8 PRIMER (As required)

- A. StoPrime Hot: Acrylic based primer/sealer for freshly placed (minimum 4 day old) and high pH stucco surfaces.
- B. StoPrime Sand: Acrylic based tinted, sanded primer for fully cured (minimum 28 day old or pH less than 10) stucco surfaces.
- C. StoPrime: Acrylic based tinted primer for fully cured (minimum 28 day old or pH less than 10) stucco surfaces.

2.9 FINISH COAT

- A. Stolit Milano Acrylic Finish.
 - 1. White, Smooth Finish.

2.10 MIXING

- A. Sto Powerwall Stucco: Refer to mix instructions on packaging. **USE ONLY THE AMOUNT OF WATER NECESSARY FOR A WORKABLE MIX.** Use of excess water is detrimental to performance.
- B. Primer: Mix with a clean, rust-free high speed mixer to a uniform consistency.
- C. Finish: Mix with a clean, rust-free electric drill and paddle. A small amount of water may be added to adjust workability. Limit addition of water to amount needed to achieve the

finish texture.

- D. Mix only as much material as can readily be used.
- E. Do not use anti-freeze compounds or other additives.

PART 3 - EXECUTION

3.1 ACCEPTABLE INSTALLERS

- A. Pre-qualify installers under Quality Assurance requirements of this Section.

3.2 EXAMINATION

- A. Inspect surfaces for:
 - 1. Contamination: Algae, chalkiness, dirt, dust, efflorescence, form oil, fungus, grease, laitance, mildew or other foreign substances.
 - 2. Surface absorption and chalkiness.
 - 3. Cracks: Measure crack width and record location of cracks.
 - 4. Damage and deterioration.
 - 5. Moisture damage: Record all areas of moisture damage.
- B. Inspect sheathing application for compliance with applicable requirement:
 - 1. Glass Mat Faced Gypsum Sheathing in compliance with ASTM C 1177 - refer to manufacturer's instructions and/or ICC evaluation report.
- C. Report deviations from the requirements of project specifications or other conditions that might adversely affect the stucco installation to the General Contractor. Do not proceed with stucco installation until deviations are corrected.

3.3 SURFACE PREPARATION

- A. Sheathing:
 - 1. Remove surface contaminants and replace damaged sheathing.
 - 2. All sheathing must be handled and installed in compliance with applicable building code and/or manufacturer requirements. Installed sheathing must be clean, dry and free from damage, frost, and all bond-inhibiting materials. Abut gypsum sheathing joints.

3.4 SHEET WATER-RESISTIVE BARRIER INSTALLATION

- A. Install in compliance with the applicable building code requirements for building paper. Lap paper over foundation weep screed attachment flange, floor line flashing, and window/door head flashings. Refer to Sto Guide Details.

3.5 STUCCO INSTALLATION

- A. Apply the stucco in discrete panels without interruption to avoid cold joints and differences in appearance. Abut wet stucco to set stucco at natural or architectural breaks in the wall such as expansion joints, pilasters, terminations, or changes in plane. Hot or dry conditions accelerate drying and moisture loss from stucco which can diminish strength and resistance to cracking. Under these conditions adjustments in the application, scheduling and curing of stucco to prevent rapid loss of moisture are necessary to achieve a satisfactory stucco installation. Cold temperatures retard drying and strength gain and adjustments may have to be made in the application, scheduling and curing of stucco to prevent damage from frost and other trades. Do not install stucco during extremely hot, dry and/or windy conditions. Do not install stucco during freezing conditions or on frozen substrates. Do not install stucco onto grounds of accessories. Completely embed lath and flanges of accessories and completely cover fastener attachments with stucco. Moist cure stucco minimum 48 hours for optimum strength gain and resistance to cracking. Allow final stucco application to completely dry (28 days) before applying primer or finish. The finished installation must be true, plumb and square. Should stucco get into control or expansion joints, remove the stucco from within the joint before the stucco sets.
- B. After satisfactory inspection of surfaces and correction of any deviations from specification requirements commence the stucco installation as described below:
1. Weep Screed Installation: Install foundation weep screed at the base of the wall securely to solid substrate or framing with the appropriate fastener. Locate foundation weep screed so that it overlaps the joint between the foundation and framing by a minimum of 1 inch. Locate the foundation weep screed nosing minimum 4 inches above earth grade, 2 inches above finished grade (paved surfaces, for example). Lap waterproof air barrier, sheet water-resistive barrier, and drainage mat over the weep screed attachment flange.
 2. Casing Bead and Two Piece Expansion Joint Installation: Install casing beads at stucco terminations - doors, windows and other through wall penetrations. Install two piece expansion joints (or back-to-back casing beads) at building expansion joints, thru-wall joints in concrete or CMU, where the stucco is to be installed over dissimilar construction or substrates, at changes in building height, at floor lines, columns, and cantilevered areas. Install full accessory pieces where possible and avoid small pieces. Seal adjoining pieces by embedding ends in sealant. Abut horizontal into vertical joint accessories (except where horizontal movement joints exist that prevent continuous vertical runs of accessories). Attach at no more than 7 inches into solid substrate/framing with appropriate fasteners.
 3. Lath Installation:
 - a. Diamond Mesh Metal Lath: Conform to ASTM C 1063.
 - 1) General: Install metal lath with the long dimension at right angles to structural framing (horizontally on solid substrates). Terminate lath at expansion joints. Do not install continuously at joints.

- 2) Seams/Overlaps: Overlap side seams minimum 1/2 inch and end seams minimum 1 inch. Stagger end seams. Overlap casing beads and expansion joints minimum 1 inch over narrow wing accessories, minimum 2 inches over expanded flange accessories. Do not install lath continuously beneath expansion joints.
 - 3) Attachment: Fasten securely into solid substrates or through sheathing into structural framing at 7 inches on center maximum vertically and 16 inches on center horizontally in*. Wire tie at no more than 9 inches on center at: side laps, accessory overlaps, and where end laps occur between supports.
- b. Paper-backed lath: Follow installation as for diamond mesh metal lath. Lap lath over lath, not paper to lath overlap. For horizontal overlaps the paper backing must lap shingle style behind the lath to lath overlap.

*NOTE: The type fastener selected, its layout and pullout or withdrawal value from the supporting construction must be verified and approved by the project engineer/architect with respect to design wind load and local building code requirements. Exercise care when attaching metal lath and accessories through the water-resistive barrier so that fasteners go into and not between framing supports. Do not use power, powder-actuated or other fastening tools/methods that can damage the air/moisture barrier, water-resistive barrier or substrate.

4. One Piece Expansion Joint Installation: Install one piece expansion joints at through wall penetrations, for example, above and below doors and windows. Install one piece expansion joints at every 144 ft². Wire tie one piece expansion joints to lath at no more than 7 inches on center. Seal adjoining pieces by embedding ends in sealant. Make certain lath is DISCONTINUOUS at or beneath joints.
5. Inside and Outside Corners: Install corner lath at inside corners and corner bead at outside corners over lath. Attach through lath into solid substrate or framing at no more than 7 inches on center with appropriate fasteners.
6. Stucco Installation:
 - a. Scratch Coat: apply stucco with sufficient pressure to key into and embed the metal lath. Apply sufficient material, 3/8 or 1/2 inch, to cover the metal lath and to permit scoring the surface. Score the stucco upon completion of each panel in preparation for a second coat. Score horizontally.
 - b. Brown Coat: as soon as the first coat is firm enough to receive the second coat without damage, apply the second coat. Alternatively, moist cure the first coat up to 48 hours and dampen the scratched surface with water immediately before applying the second coat. Apply the second coat with sufficient pressure to ensure intimate contact with the first coat and as needed to bring the stucco to a uniform thickness that matches the grounds of the accessories. Use a rod or straight edge to bring the surface to a true, even plane. Fill depressions in plane with stucco. Final

thickness of stucco shall be uniform throughout the wall area and shall be either 3/4 inch or 7/8 inch, and shall not exceed 7/8 inch.

- c. After the stucco has become slightly firm float the surface lightly with a darby or wood float to densify the surface and to provide a smooth, even surface. The proper time to float is when the wood float no longer sticks to the surface of the stucco.
- d. Moist cure after the stucco has set by lightly fogging for at least 48 hours. Fog as frequently as required during the 48 hour period to prevent loss of moisture from the stucco. Avoid eroding the stucco surface with excess moisture. If relative humidity exceeds 75 percent the frequency of moist curing can be diminished.

C. Primer Installation: (As required)

1. StoPrime Hot: Moist cure stucco for a minimum of 48 hours. Allow stucco to dry an additional 48 hours, then apply primer evenly with brush, roller or proper spray equipment over the clean, dry stucco and foam build-outs, and allow to dry. Final age of primed stucco application must be minimum 7 days before application of finish.
2. StoPrime Sand: Moist cure stucco for a minimum of 48 hours. Wait until stucco is 28 days old or the pH level of the surface is below 10 before applying primer. Final age of primed stucco application must be minimum 28 days before application of finish or pH must be below 10.
3. StoPrime: Moist cure stucco for a minimum of 48 hours. Wait until stucco is 28 days old or the pH level of the surface is below 10 before applying primer. Final age of primed stucco application must be minimum 28 days before application of finish or pH must be below 10.

D. Finish Installation:

1. Comply with manufacturer's instructions.
2. Sand the base coat to remove trowel lines and other surface imperfections.
3. Remove surface dust.
4. Apply Sto primer uniformly in an even coat by spray or roller and allow to dry.
5. Apply a uniform coat of Stolit Milano by trowel and allow to dry.
6. Apply a second uniform coat of Stolit Milano by trowel and allow to dry.

3.6 PROTECTION

- A. Provide protection of installed materials from water infiltration into or behind them.
- B. Provide protection of installed stucco from dust, dirt, precipitation, and freezing.
- C. Provide protection of installed primer and finish from dust, dirt, precipitation, freezing and continuous high humidity until fully dry.
- D. Provide sealant and backer material at stucco terminations and at fixture penetrations through the stucco to protect against air, water and insect infiltration. Provide weeps at floor lines, window and door heads, and other areas to conduct water to the exterior.

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3.7 CLEANING, REPAIR AND MAINTENANCE

- A. Clean and maintain the stucco finish for a fresh appearance and to prevent water entry into and behind the stucco. Repair cracks, impact damage, spalls or delamination promptly.
- B. Maintain adjacent components of construction such as sealants, windows, doors, and flashing, to prevent water entry into the wall assembly.
- C. Repair surfaces stained, marred, or otherwise damaged during plastering at no expense to Owner.
- D. Remove and legally dispose of debris and surplus materials from Project site.

END OF SECTION