Addendum No. 3

DATE: November 6, 2008

TO: All Bidders of Record

FROM: David Martinez, Senior Buyer

SUBJECT: Addendum No.3 to T-2739 Student Resource Center

This amendment becomes part of the Contract Documents and modifies the original bidding documents as noted below:

1. Will the bid date be extended?
   A. No. CNM representatives believe it is in the best interest of the project to adhere to the current bidding schedule.

2. Please provide a clarification to Section 00 10 00, page 8, section 1.10 Subcontractor Payment and Performance Bonds.
   A. CNM has officially updated and revised its policy. See attached specification.

3. Section 00 10 00-10. 1.16 List the Subcontractor Listing Threshold @ $5,000. Per the NM Subcontractor Fair Practices Act requires ½ of 1% of the Architects or Engineers Construction Estimate.
   A. This is a clarification to Addendum No. 1 item 17. The correct listing threshold is $105,000 based on the ½ of 1% formula of the estimated direct construction costs.

4. Sheet C01-02, Keyed Note 19; this is stating that the contractor is to obtain an easement. Is this correct? If so, how are we to go about obtaining this easement?
   A. Keyed note 19 has been changed to read “35” PUBLIC UTILITY EASEMENT, RECORDED WITH THE CITY OF ALBUQUERQUE IN NOVEMBER 2008, DOCUMENT NUMBER 2009-0033.” The contractor is not required to obtain any easements.

5. Spec Section 00 10 00, article 1.44; indicates a duration of 80 days. Please clarify.
   A. The specification section shall be revised to the following: The allowed total duration for construction will be 18months or 550 consecutive calendar days. The date of substantial completion to be no later than July 30, 2010.
6. Substitution request submitted by Insulation Solutions, Inc. for under slab vapor barrier.
   A. Approved. Refer to attached form.

7. Substitution request submitted by WR Meadows, Inc. for Sealtight products.
   A. Approved with the exception of Decra-seal. Although for exterior only; at 679 VOC g/l does not meet the LEED VOC requirements. Refer to attached form.

8. Section 10 11 00; Visual Display Surfaces - According to the specifications, marker boards should be placed at the locations indicated on drawings. Thus far, there appears to be no notes, callouts, and/or details regarding visual display on the drawings. Where can they be located?
   A. Refer to the attached updated specification section 10 11 00 which now includes room numbers and quantities for those rooms.

9. Is brick veneer required full height to deck at Conf 105 and Study 108, or is 6" above ceiling height ok?
   A. Full height.

10. What is ceiling height in Open Study 202 through 208, and within undesigned area South of O.S. 108?
    A. Ceiling height is +27=-0", refer to sheet A03-31.

11. Elevation B5 on Sheet A05-01, between Lines C and D, appears to indicate a height of 42'-8" at the brick parapet. Located in the same area, wall section A3 on sheet A06-16 appears to indicate a parapet height of 34'-0". Which is the correct height? Please clarify?
    A. The correct height is 41'-4". (Refer to sheet A05-01 issued with Addendum No. 2, copied here for convenience.)

12. Located on A03-11 between Conf 105 and Study 107, detail C3/A09-31 appears to indicate brick veneer on both sides of 12" CMU wall. However, on floor plan, Study 107 appears to be furred out. Ceiling plan seems to support this assumption. Please clarify.
    A. The detail C3/A09-31 is correct. The area above the bulkhead at both entrances to Room 107 has brick veneer.

13. Specifications 142400-9 Elevator descriptions state info about Elevator 1 and 2 but there is no information about Elevator #3 at the end of Corridor 186. Please provide information.
    A. The specification has been revised (attached).

14. In spec section 105113: Metal Lockers, it calls out for “Double-Tier Units”. On plan sheet FS00-01 on the food service equipment schedule, it calls for “3 Tier High Metal Lockers”. Please clarify.
    A. The lockers are triple tier; the specification has been updated (attached).

15. The specification for the portable table needs to be clarified, i.e. table size, height requirement, etc. The Blue Giant portable table that is closest to what is specified is the Series PSL-B?
    A. The specification has been updated (attached.)

16. Where is the designated construction parking located? Is there a parking permit cost involved?
    A. The designated construction parking for everyone is slated for the northeast corner of the pit (UNM basketball arena). This parking will be provided for free. The contractor is required to provide shuttle service. 20 spaces will be provided adjacent to the site in the lot directly to the south of the job site; also free parking.

17. What is the status of the construction permit?
    A. The permit will be ready before construction starts in January 2009.

18. Specification 001000 1.16 -the last paragraph states “Should the owner object to any listed supplier or subcontractor prior to the notice of award, and the contract fails to promptly secure an alternative subcontractor/supplier acceptable to owner, then such shall be a basis for the owner rejecting a bid as unresponsive”. Also, in the general conditions it states similar language. The question is: will the general contractor be reimbursed for any owner changes to the general contractor’s supplier and subcontractor list?
19. Is the owner going to provide a building envelope consultant to verify that the construction meets the Silver LEED status?
   A. No. An energy model was completed during the design phases of the project.

20. Please provide a specification for the drilled piers. More specifically, is a pier load test going to be required?
   A. The project geotechnical report is provided as an Appendix at the end of the specifications. Refer to the geotechnical report; it provides sufficient information for the pier drilling and installation. No a pier load test is not required.

21. Please clarify the window frame finish.
   A. The finish is to be Class II, Clear Anodic Finish.
   B. Updated specification sections attached.

22. Regarding section 00 20 00 1 Bid Response Form vs. Alternates section 012300-1. Does the bid consist of an add alternate No. 2?
   A. No.

All other specifications, terms and conditions remain unchanged. Bidders are required to acknowledge receipt of this Amendment in the space provided on Section 00 20 00-1.
Substitution Request

Project: CMN STUDENT RESOURCE CENTER

Date: October 31, 2008

To: Specification Writer or Project Architect

Specification Title: Vapor Retarders Description: Under Slab Vapor Barrier

Section: 03300_ Page: _ Article/Paragraph: _

Proposed Substitution: Viper® VaporCheck™ 10-mil, Viper® VaporCheck™ II 10-mil and/or Viper® VaporCheck™ II 15-mil Class A Vapor Barrier

Manufacturer: Insulation Solutions, Inc.
Address: 401 Truck Haven Road, East Peoria, IL 61611
Phone: 309.698.0062 Fax: 309.698.0065
Web Address: www.insulationsolutions.com

The undersigned certifies that the following paragraphs, unless modified by attachments, are correct:

1. The proposed substitution does not affect dimensions shown on drawings.
2. The proposed substitution will have no adverse affect on other trades or the construction schedule.
3. Products are readily available for this proposed substitution.

Attached data includes product descriptions, specifications, performance criteria, testing results from an independent lab proving compliance with ASTM E 1745, ASTM E 154, ASTM E 96, ASTM D 1709, ASTM D 828 and installation instructions adequate for evaluation of this substitution request.

No changes to the Contract Documents are anticipated if Viper® VaporCheck™ and/or Viper® VaporCheck™ II is approved. The undersigned further states that the function, appearance and quality of the proposed substitution are equivalent (or superior) to the specified item.

Submitted by: Dario J. Lambertii

Signed by: ___________________________

Firm: Insulation Solutions, Inc.
Address: 401 Truck Haven Road, East Peoria, IL 61611
Phone Number: 309.698.0062 Fax: 309.698.0065

A/E's REVIEW AND ACTION
Approved _ X _ Approved as noted_________ Substitution rejected_________

SUPPORTING DATA ATTACHED: Drawings: ___ Product Data: _ X _ Samples: ___ Tests: _ X_
SUBSTITUTION REQUEST
(At the Bidding Phase)

Project: CNMCC Student Resource Center
Albuquerque, NM

To: DMJM & H&N
Fax: 602-337-2620

Re: Request For An Alternate Product

Specification Title: Vapor Barriers
Section: 033001

Substitution Request Number: 
From: Mike Sullivan
Date: 10/31/08
A/E Project Number: 100421980

Description: 
Article/Paragraph: 2.2 A

Proposed Substitution: Permeator 15 mil (Pre-moulded Membrane w/ Plasmatic Core does not meet ASTM E 1745)
Manufacturer: W.R. MEADOWS Address: 4220 S. Sarival Ave Goodyear, AZ Phone: 623-932-9383
Trade Name: SEALIGHT Model No.: 

Attached data includes product description, specifications, drawings, photographs, and performance and test data adequate for evaluation of the request; applicable portions of the data are clearly identified.

Attached data also includes a description of changes to the Contract Documents that the proposed substitution will require for its proper installation.

The Undersigned certifies:
- Proposed substitution has been fully investigated and determined to be equal or superior in all respects to specified product.
- Same warranty will be furnished for proposed substitution as for specified product.
- Same maintenance service and source of replacement parts, as applicable, is available.
- Proposed substitution will have no adverse effect on other trades and will not affect or delay progress schedule.
- Proposed substitution does not affect dimensions and functional clearances.
- Payment will be made for changes to building design, including A/E design, detailing, and construction costs caused by the substitution.

Submitted by: Mike Sullivan
Signed by: 
Firm: W.R. Meadows of Arizona
Address: 4220 S. Sarival Ave.
Goodyear, AZ 85338
Telephone: 623-932-5583, Fax: 623-932-1547

A/E's REVIEW AND ACTION

☒ Substitution approved - Make submittals in accordance with Specification Section 01330.
☐ Substitution approved as noted - Make submittals in accordance with Specification Section 01330.
☐ Substitution rejected - Use specified materials.
☐ Substitution Request received too late - Use specified materials.

Signed by: [Signature]
Date: 11/5/08

Supporting Data Attached: ☒ Drawings ☒ Product Data ☐ Samples ☐ Tests ☐ Reports ☐

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CSI Form 1.5C
SUBSTITUTION REQUEST
(During the Bidding Phase)

Project: CNMCC Student Resource Center
Albuquerque, NM

To: DMJM & H&N
Fax: 602-337-2620

Re: Request For An Alternate Product

Specification Title: Cast-In-Place Concrete
Section: 033000

Substitution Request Number:

From: Mike Sullivan
Date: 10/31/08
A/E Project Number: 1000521980

Contract For:

Description:

Article/Paragraph: 2.8.C

Proposed Substitution: Acry-Lok
Manufacturer: W. R. MEADOWS Address: 4220 S. Sarival Ave Goodyear, AZ Phone: 623-932-9383
Trade Name: SEALIGHT Model No.:

Attached data includes product description, specifications, drawings, photographs, and performance and test data adequate for evaluation of the request; applicable portions of the data are clearly identified.

Attached data also includes a description of changes to the Contract Documents that the proposed substitution will require for its proper installation.

The Undersigned certifies:
- Proposed substitution has been fully investigated and determined to be equal or superior in all respects to specified product.
- Same warranty will be furnished for proposed substitution as for specified product.
- Same maintenance service and source of replacement parts, as applicable, is available.
- Proposed substitution will have no adverse effect on other trades and will not affect or delay progress schedule.
- Proposed substitution does not affect dimensions and functional clearances.
- Payment will be made for changes to building design, including A/E design, detailing, and construction costs caused by the substitution.

Submitted by: Mike Sullivan
Signed by: W.R. Meadows of Arizona
Address: 4220 S. Sarival Ave.
Goodyear, AZ 85338
Telephone: 623-932-9383, Fax: 623-932-1547

A/E's REVIEW AND ACTION

Substitution approved - Make submittals in accordance with Specification Section 01330.
Substitution approved as noted - Make submittals in accordance with Specification Section 01330.
Substitution rejected - Use specified materials.
Substitution Request received too late - Use specified materials.

Signed by: Date: 11/5/08

Supporting Data Attached: [ ] Drawings [X] Product Data [ ] Samples [ ] Tests [ ] Reports [ ]

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CSI Form 1.5C
SUBSTITUTION REQUEST
(During the Bidding Phase)

Project: CNMCC Student Resource Center
Albuquerque, NM

To: DMJM & H&N
Fax: 602-337-2620

Re: Request For An Alternate Product

Specification Title: Cast-In-Place Concrete
Section: 033000

Description: 

Proposal Substitution: 1100 Clear or Decra-Seal
Manufacturer: W.R. MEADOWS
Address: 4220 S. Sarival Ave Goodyear, AZ
Phone: 623-932-9383
Trade Name: SEALIGHT
Model No.: 

The undersigned certifies:

- Proposed substitution has been fully investigated and determined to be equal or superior in all respects to specified product.
- Same warranty will be furnished for proposed substitution as for specified product.
- Same maintenance service and source of replacement parts, as applicable, is available.
- Proposed substitution will have no adverse effect on other trades and will not affect or delay progress schedule.
- Proposed substitution does not affect dimensions and functional clearances.
- Payment will be made for changes to building design, including A/E design, detailing, and construction costs caused by the substitution.

Submitted by: Mike Sullivan
Signed by: 
Firm: W.R. Meadows of Arizona
Address: 4220 S. Sarival Ave.
Goodyear, AZ 85338
Telephone: 623-932-9383, Fax: 623-932-1547

A/E's REVIEW AND ACTION

☐ Substitution approved - Make submittals in accordance with Specification Section 01330.
☐ Substitution approved as noted - Make submittals in accordance with Specification Section 01330.
☒ Substitution rejected - Use specified materials.
☐ Substitution Request received too late - Use specified materials.

Signed by: [Signature]
Date: 11/5/08

Supporting Data Attached: ☐ Drawings ☐ Product Data ☐ Samples ☐ Tests ☐ Reports ☐

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3. Prior to the award of the Contract, the Architect will notify the Bidder in writing if either the Owner or the Architect, after due investigation, has reasonable and substantial objection to any person or organization on such list, and refuses in writing to accept such person or organization. Thereupon, the Bidder may, at his option:
   a. Withdraw his Bid; or
   b. Submit an acceptable substitute Subcontractor. In the event of withdrawal under this Subparagraph, Bid Security will not be forfeited.

4. Persons and entities proposed by the Bidder and to whom the Owner and Architect have made no reasonable objection must be used on the Work for which they were proposed and shall not be changed except with the written consent of the Owner and Architect.

1.9 PERFORMANCE BOND AND LABOR AND MATERIAL PAYMENT BOND

A. Security of Faithful Performance: The Bidder shall furnish bonds covering the faithful performance of the Contract and the payment of all obligations arising thereunder in an amount equal to one hundred percent (100%) of the Contract Sum including all Addenda/Amendments, applicable taxes and with such sureties secured through the Bidder's usual sources, licensed to do business in the State of New Mexico and as may be agreeable to the parties. The cost of such bonds shall be included in the Bid.

B. Time of Delivery and Form of Bonds:

1. The Bidder shall deliver the required bonds to the Owner not later than the date of the execution of the Contract, or if the Work is commenced prior thereto in response to a letter of Notice to Proceed, the Bidder shall, prior to commencement of Work submit evidence satisfactory to the Owner that such bonds will be furnished.

2. The bonds shall be written on the AIA Document A311, Performance Bond and Labor and Material Payment Bond and shall be dated on or after the date of the Contract.

3. The Bidder shall require the Attorney-in-Fact who executes the required bonds on behalf of the surety to affix thereto a certified and current copy of his Power of Attorney.

1.10 SUBCONTRACTOR PAYMENT AND PERFORMANCE BONDS

A. Senate Bill 227 (“SB 227”) (effective July 1, 2007) modifies the New Mexico Procurement Code to require that subcontractors whose contract for work to be performed on a project is One Hundred Twenty Five Thousand Dollars ($125,000.00) or more are required to provide a payment and performance bond. Contractors performing work on CNM Projects shall comply with SB 227 as follows:

1. All entities and persons doing business with CNM shall comply with SB 227.

2. Any subcontractors whose work to be performed on a CNM Project is $125,000.00 or more must provide payment and performance bonds.

3. Subcontractor is defined as a contractor who contracts directly with the general contractor (hereinafter “First Tier Subcontractor”).

4. CNM requires payment and performance bonds from all First Tier Subcontractors whose contracts, as determined by their bids submitted on bid day, are $125,000.00 or more.
5. The First Tier Subcontractor shall include in their payment and performance bond amounts, monies for any contractors, subcontractors, or suppliers with whom they contract for any CNM Project.

6. The subcontractor payment and performance bonds shall be issued by a corporate surety authorized to do business in New Mexico in accordance with the New Mexico Insurance Code, shall be sureties listed in the most current U.S. Treasury Circular 570, and shall name both the prime/general contractor and Central New Mexico Community College (CNM), as obligees.

7. The performance and payment bonds required under this section shall be provided to the general contractor at the time the subcontract is executed. The general contractor is required to provide CNM with certified copies of payment and performance bonds for all subcontracts of $125,000.00 or more prior to the (general contractor/subcontractor) starting work on any CNM Project.

8. The payment and performance bond shall be in the amount 100% of the subcontractor’s contract as determined by the bid submitted by the subcontractor on bid day.

9. The payment and performance bonds required by this section shall be provided at the expense of the subcontractor, who may include the bond premium in their bid. CNM will not pay additional monies, over and above the bid amount, for payment and performance bonds.

10. Nothing in this section relieves the general/prime contractor from its obligation to provide payment and performance bonds pursuant to N.M. Stat. Ann. §§ 13-4-18 and 19, New Mexico’s Little Miller Act.

11. The subcontractor payment and performance bonds required by this section shall be provided on AIA surety bond forms AIA document A312.

1.11 TIME OF COMPLETION AND LIQUIDATED DAMAGES

A. Bidder must agree to commence work on or before a date specified in a written Notice to Proceed issued by the Owner.

B. The Bidder must agree to complete the Project within 18 months

C. The Owner will suffer financial loss if the Project is not substantially complete on the date set forth on the Contract Documents. The Bidder (and his surety) shall be liable for and shall pay to the Owner, not as a penalty, but as fixed, agreed upon liquidated damages, the amount of $1,500.00 per calendar day of the delay after the Contract completion date until the Work is determined by the Architect to be substantially complete, and as set forth in paragraph 1.43A of these Instructions to Bidders.

1.12 UTILIZATION OF SMALL AND MINORITY BUSINESS ENTERPRISES. It is the policy of the Owner that Small and Minority Business Enterprises shall have the opportunity to participate in the award of contracts by the Owner. The Bidder hereby agrees to carry out this policy in the awarding of subcontracts consistent with the efficient performance of the Contract, if received. Bidders acting in good faith may rely on the written representations by their Subcontractors as to business size and type.

1.13 RESIDENT CONTRACTOR AND MATERIALS PREFERENCE AND CRIMINAL LAWS. Resident Bidders shall be given preference on award of the contract in accordance with State requirements for public works contracts. Materials produced, grown, processed or manufactured in New Mexico by citizens or residents of New Mexico shall be given preference on award of the
C. **SUBCONTRACTOR LISTING:**

The following subcontractors and suppliers will work on the construction of this Project if my Bid is accepted. (Refer to paragraph 1.08 and 1.15 of Instructions To Bidders section for requirements of New Mexico Subcontractors Fair Practices Act.) It is the Bidder’s responsibility to comply with the New Mexico Subcontractor’s Fair Practice Act.

The listing threshold for the Project is $105,000.00.

<table>
<thead>
<tr>
<th>Category of Work</th>
<th>Subcontractor Name</th>
<th>City or County of Subcontractors place of business</th>
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SECTION 084113 - ALUMINUM-FRAMED ENTRANCES AND STOREFRONTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:

1. Exterior storefront framing.
2. Interior storefront framing for window walls.
3. Exterior manual-swing entrance doors and door-frame units.

B. Related Sections:

1. Division 08 Section "Glazed Aluminum Curtain Walls" for curtain-wall systems that mechanically retain glazing on four sides.
2. Division 08 Section "Door Hardware" for aluminum storefront door hardware sets.

1.3 DEFINITIONS

A. ADA/ABA Accessibility Guidelines: U.S. Architectural & Transportation Barriers Compliance Board’s "Americans with Disability Act (ADA) and Architectural Barriers Act (ABA) Accessibility Guidelines for Buildings and Facilities."

1.4 PERFORMANCE REQUIREMENTS

A. General Performance: Aluminum-framed systems shall withstand the effects of the following performance requirements without exceeding performance criteria or failure due to defective manufacture, fabrication, installation, or other defects in construction:

1. Movements of supporting structure indicated on Drawings including, but not limited to, story drift and deflection from uniformly distributed and concentrated live loads.
2. Dimensional tolerances of building frame and other adjacent construction.
3. Failure includes the following:
   a. Deflection exceeding specified limits.
   b. Thermal stresses transferring to building structure.
   c. Framing members transferring stresses, including those caused by thermal and structural movements to glazing.
   d. Noise or vibration created by wind and by thermal and structural movements.
   e. Loosening or weakening of fasteners, attachments, and other components.
   f. Sealant failure.
1. Failures include, but are not limited to, the following:
   a. Structural failures including, but not limited to, excessive deflection.
   b. Noise or vibration caused by thermal movements.
   c. Deterioration of metals and other materials beyond normal weathering.
   d. Water leakage through fixed glazing and framing areas.
   e. Failure of operating components.

2. Warranty Period: Two years from date of Substantial Completion.

B. Special Finish Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components on which finishes do not comply with requirements or that fail in materials or workmanship within specified warranty period. Warranty does not include normal weathering.

1. Warranty Period: Five years from date of Substantial Completion.

1.9 MAINTENANCE SERVICE

A. Entrance Door Hardware:

   1. Maintenance Tools and Instructions: Furnish a complete set of specialized tools and maintenance instructions as needed for Owner's continued adjustment, maintenance, and removal and replacement of entrance door hardware.
   2. Initial Maintenance Service: Beginning at Substantial Completion, provide six months' full maintenance by skilled employees of entrance door hardware Installer. Include quarterly preventive maintenance, repair or replacement of worn or defective components, lubrication, cleaning, and adjusting as required for proper entrance door hardware operation at rated speed and capacity. Provide parts and supplies the same as those used in the manufacture and installation of original equipment.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Basis-of-Design Product: Subject to compliance with requirements, provide Vistawall ICR-225 1/4-inch x 4 1/2-inch Ribbon Window System Kawneer Model Trifab VG-451T for exterior storefront and Kawneer Model VG451 for interior storefront or comparable product by one of the following:

1. Arcadia, Inc.
2. Arch Aluminum & Glass Co., Inc.
3. CMI Architectural
5. EFCO Corporation.
6. Kawneer North America; an Alcoa company.
7. Leed Himmel Industries, Inc.
9. TRACO.
10. Tubelite.
2.2 MATERIALS

A. Aluminum: Alloy and temper recommended by manufacturer for type of use and finish indicated.
   2. Extruded Bars, Rods, Profiles, and Tubes: ASTM B 221.
   4. Structural Profiles: ASTM B 308/B 308M.
   5. Welding Rods and Bare Electrodes: AWS A5.10/A5.10M.

B. Steel Reinforcement: Manufacturer's standard zinc-rich, corrosion-resistant primer, complying with SSPC-PS Guide No. 12.00; applied immediately after surface preparation and pretreatment. Select surface preparation methods according to recommendations in SSPC-SP COM and prepare surfaces according to applicable SSPC standard.
   1. Structural Shapes, Plates, and Bars: ASTM A 36/A 36M.
   2. Cold-Rolled Sheet and Strip: ASTM A 1008/A 1008M.
   3. Hot-Rolled Sheet and Strip: ASTM A 1011/A 1011M.

2.3 FRAMING SYSTEMS

A. Framing Members: Manufacturer's standard extruded-aluminum framing members of thickness required and reinforced as required to support imposed loads.
   2. Glazing System: Retained mechanically with gaskets on four sides.

B. Brackets and Reinforcements: Manufacturer's standard high-strength aluminum with nonstaining, nonferrous shims for aligning system components.

C. Fasteners and Accessories: Manufacturer's standard corrosion-resistant, nonstaining, nonbleeding fasteners and accessories compatible with adjacent materials.
   1. Use self-locking devices where fasteners are subject to loosening or turning out from thermal and structural movements, wind loads, or vibration.
   2. Reinforce members as required to receive fastener threads.

D. Concrete and Masonry Inserts: Hot-dip galvanized cast-iron, malleable-iron, or steel inserts, complying with ASTM A 123/A 123M or ASTM A 153/A 153M.

E. Concealed Flashing: Manufacturer's standard corrosion-resistant, nonstaining, nonbleeding flashing compatible with adjacent materials.

F. Framing System Gaskets and Sealants: Manufacturer's standard, recommended by manufacturer for joint type.
G. Entrance Door Hardware Installation: Factory install entrance door hardware to the greatest extent possible. Cut, drill, and tap for factory-installed entrance door hardware before applying finishes.

H. After fabrication, clearly mark components to identify their locations in Project according to Shop Drawings.

2.8 ALUMINUM FINISHES

A. Class II, Clear Anodic Finish: AA-M12C22A31 (Mechanical Finish: nonspecular as fabricated; Chemical Finish: etched, medium matte; Anodic Coating: Architectural Class II, clear coating 0.010 mm or thicker) complying with AAMA 611.

A. High-Performance Organic Finish: 3-coat fluoropolymer finish complying with AAMA 2605 and containing not less than 70 percent PVDF resin by weight in both color coat and clear topcoat. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.


PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine areas and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

A. General:

1. Comply with manufacturer's written instructions.
2. Do not install damaged components.
3. Fit joints to produce hairline joints free of burrs and distortion.
4. Rigidly secure nonmovement joints.
5. Install anchors with separators and isolators to prevent metal corrosion and electrolytic deterioration.
6. Seal joints watertight unless otherwise indicated.

B. Metal Protection:

1. Where aluminum will contact dissimilar metals, protect against galvanic action by painting contact surfaces with primer or applying sealant or tape, or by installing nonconductive spacers as recommended by manufacturer for this purpose.
2. Where aluminum will contact concrete or masonry, protect against corrosion by painting contact surfaces with bituminous paint.
1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:

1. Interior manual-swinging all-glass entrance doors.

B. Related Sections:

1. Division 05 Section "Metal Fabrications" for overhead-steel support for all-glass systems.
2. Division 08 Section "Aluminum-Framed Entrances and Storefronts" for storefront systems that incorporate all-glass entrance doors.
3. Division 08 Section "Glazing" for general glass requirements.
4. Division 08 Section “Door Hardware” for all-glass entrance door hardware sets.

1.3 DEFINITIONS

A. ADA/ABA Accessibility Guidelines: U.S. Architectural & Transportation Barriers Compliance Board’s "Americans with Disability Act (ADA) and Architectural Barriers Act (ABA) Accessibility Guidelines for Buildings and Facilities."

1.4 PERFORMANCE REQUIREMENTS

A. General Performance: All-glass systems shall withstand the effects of the following performance requirements without exceeding performance criteria or failure due to defective manufacture, fabrication, installation, or other defects in construction.

B. Structural Performance: All-glass systems shall withstand the effects of gravity loads and the following loads and stresses within limits and under conditions indicated according to SEI/ASCE 7.

1. Wind Loads: As indicated on Drawings.
2. Seismic Loads: As indicated on Drawings.

C. Delegated Design: Design all-glass systems, including comprehensive engineering analysis by a qualified professional engineer, using performance requirements and design criteria indicated.

D. Thermal Movements: Allow for thermal movements resulting from the following ambient and surface temperature changes.
B. Push-Pull Set: As selected from manufacturer's full range.

C. Single-Door and Active-Leaf Locksets: Bottom-fitting or bottom-rail deadbolt.

2.5 FABRICATION

A. Provide holes and cutouts in glass to receive hardware, fittings, and accessory fittings before tempering glass. Do not cut, drill, or make other alterations to glass after tempering.

1. Fully temper glass using horizontal (roller-hearth) process, and fabricate so that when glass is installed, roll-wave distortion is parallel with bottom edge of door or lite.

B. Factory assemble components and factory install hardware and fittings to greatest extent possible.

2.6 ALUMINUM FINISHES

A. Class II, Clear Anodic Finish: AA-M12C22A31 (Mechanical Finish: nonspecular as fabricated; Chemical Finish: etched, medium matte; Anodic Coating: Architectural Class II, clear coating 0.010 mm or thicker) complying with AAMA 611

  A. Clear Anodic Finish: AAMA 611, AA-M12C22A41, Class I, 0.018 mm or thicker.
  
  B. Color Anodic Finish: AAMA 611, AA-M12C22A42/A44, Class I, 0.018 mm or thicker.

  1. Color: As selected by Architect from full range of industry colors and color densities.

2.7 STAINLESS-STEEL FINISHES

A. Surface Preparation: Remove tool and die marks and stretch lines, or blend into finish.

B. Polished Finishes: Grind and polish surfaces to produce uniform finish, free of cross scratches.

  1. Run grain of directional finishes with long dimension of each piece.
  2. When polishing is completed, passivate and rinse surfaces. Remove embedded foreign matter and leave surfaces chemically clean.
  3. Directional Satin Finish: No. 4.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine areas and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION
1.8 PROJECT CONDITIONS

A. Field Measurements: Verify actual locations of structural supports for glazed aluminum curtain walls by field measurements before fabrication and indicate measurements on Shop Drawings.

   1. Established Dimensions: Where field measurements cannot be made without delaying Work, establish dimensions and proceed with fabricating glazed aluminum curtain wall systems without field measurements. Coordinate construction to ensure that actual dimensions correspond to established dimensions.

1.9 WARRANTY

A. Special Assembly Warranty: Standard form in which manufacturer agrees to repair or replace components of glazed aluminum curtain walls that do not comply with requirements or that fail in materials or workmanship within specified warranty period.

   1. Failures include, but are not limited to, the following:

      a. Structural failures including, but not limited to, excessive deflection.
      b. Noise or vibration created by wind and thermal and structural movements.
      c. Failure of system to meet performance requirements.
      d. Deterioration of metals, metal finishes, and other materials beyond normal weathering.
      e. Water penetration through fixed glazing and framing areas.
      f. Failure of operating components to function normally.
      g. Glass breakage.
      h. Corrosion of fasteners.

   2. Warranty Period: Five years from date of Substantial Completion.

B. Special Finish Warranty: Standard form in which manufacturer agrees to repair finishes or replace aluminum that shows evidence of deterioration of factory-applied finishes within specified warranty period.

   1. Deterioration includes, but is not limited to, the following:

      a. Color fading more than 5 Hunter units when tested according to ASTM D 2244.
      b. Chalking in excess of a No. 8 rating when tested according to ASTM D 4214.
      c. Cracking, checking, peeling, or failure of paint to adhere to bare metal.

   2. Warranty Period: 10 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Basis-of-Design Product: Subject to compliance with requirements, provide Vistawall Reliance™ 2 1/2-inch x 7 1/4-inch Captured Curtain Wall with modified horizontal SSG detail or comparable product by one of the following:
A.B. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

1. Conventionally Glazed Aluminum Curtain Walls:
   a. EFCO Corporation.
   b. Kawneer North America; an Alcoa company.
   c. Vistawall Architectural Products; (Basis of Design: Reliance 2 1/2 x 7 1/4 SSG Curtain Wall System)
   d. Wausau Window and Wall Systems.

2.2 MATERIALS
A. Aluminum: Alloy and temper recommended by manufacturer for type of use and finish indicated.
   2. Extruded Bars, Rods, Profiles, and Tubes: ASTM B 221.
   4. Structural Profiles: ASTM B 308/B 308M.
   5. Welding Rods and Bare Electrodes: AWS A5.10/A5.10M.

B. Steel Reinforcement: Manufacturer’s standard zinc-rich, corrosion-resistant primer complying with SSPC-PS Guide No. 12.00; applied immediately after surface preparation and pretreatment. Select surface preparation methods according to recommendations in SSPC-SP COM and prepare surfaces according to applicable SSPC standard.
   1. Structural Shapes, Plates, and Bars: ASTM A 36/A 36M.
   2. Cold-Rolled Sheet and Strip: ASTM A 1008/A 1008M.
   3. Hot-Rolled Sheet and Strip: ASTM A 1011/A 1011M.

2.3 FRAMING
A. Framing Members: Manufacturer’s standard extruded- or formed-aluminum framing members of thickness required and reinforced as required to support imposed loads.

B. Fasteners and Accessories: Manufacturer’s standard corrosion-resistant, nonstaining, nonbleeding fasteners and accessories compatible with adjacent materials.
   1. Use self-locking devices where fasteners are subject to loosening or turning out from thermal and structural movements, wind loads, or vibration.
   2. Reinforce members as required to receive fastener threads.
   3. Use exposed fasteners only where specifically indicated on accepted Shop Drawings. Where allowed, use countersunk Phillips screw heads, finished to match framing system.
   4. At movement joints, use slip-joint linings, spacers, and sleeves of material and type recommended by manufacturer.

C. Anchors: Three-way adjustable anchors with minimum adjustment of 1 inch that accommodate fabrication and installation tolerances in material and finish compatible with adjoining materials and recommended by manufacturer.
D. Fabricate components that, when assembled, have the following characteristics:

1. Internal guttering system or other means to drain water passing joints, condensation occurring within framing members, and moisture migrating within glazed aluminum curtain wall to exterior.

E. After fabrication, clearly mark components to identify their locations in Project according to Shop Drawings.

2.8 SOURCE QUALITY CONTROL

A. Perform quality control procedures complying with ASTM C 1401 recommendations including, but not limited to, assembly material qualification procedures, sealant testing, and assembly fabrication reviews and checks.

2.9 ALUMINUM FINISHES

A. General: Comply with NAAMM’s “Metal Finishes Manual for Architectural and Metal Products” for recommendations for applying and designating finishes.

1. Components shall be fully formed and fabricated prior to finishing. Exposed surfaces shall receive specified finish with no mill finish aluminum exposed unless otherwise indicated.

2. Appearance of Finished work: Variations in appearance of abutting or adjacent pieces are acceptable if they are within 1/2 of range of approved Samples. Noticeable variations in same piece are not acceptable. Variations in appearance of other components are acceptable if they are within range of accepted Samples and are assembled or installed to minimize contrast, subject to Architect’s approval.

3. Exercise extreme care to protect finishes during manufacture and installation. Damaged elements will be rejected by Architect. Touch-up procedures which do not meet finish requirements specified are not permitted.

B. Finish designations prefixed by AA comply with system established by Aluminum Association for designating aluminum finishes.

C. Class II, Clear Anodic Finish: AA-M12C22A31 (Mechanical Finish: nonspecular as fabricated; Chemical Finish: etched, medium matte; Anodic Coating: Architectural Class II, clear coating 0.010 mm or thicker) complying with AAMA 611

C. High-Performance Organic Finish: Three coat fluoropolymer finish complying with AAMA 2605 and containing not less than 50 percent PVDF resin by weight in both color coat and clear topcoat. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers’ written instructions.

1. Color and Gloss: As selected by Architect from manufacturer’s full range.
A. Insulating Materials: Specified in Division 07 Section “Thermal Insulation.”

B. Bituminous Paint: Cold-applied asphalt-mastic paint complying with SSPC-Paint 12 requirements except containing no asbestos, formulated for 30-mil thickness per coat.

2.5 FABRICATION

A. Fabricate aluminum components before finishing.

B. Fabricate aluminum components that, when assembled, have the following characteristics:
   1. Profiles that are sharp, straight, and free of defects or deformations.
   2. Accurately fitted joints with ends coped or mitered.
   3. Internal guttering systems or other means to drain water passing joints, condensation occurring within framing members, and moisture migrating within skylight to exterior.
   4. Physical and thermal isolation of glazing from framing members.
   5. Accommodations for thermal and mechanical movements of glazing and framing to maintain required glazing edge clearances.

C. Fabricate aluminum sill closures with weep holes and for installation as continuous component.

D. Reinforce aluminum components as required to receive fastener threads.

E. Weld aluminum components in concealed locations to greatest extent possible to minimize distortion or discoloration of finish. Remove weld spatter and welding oxides from exposed surfaces by descaling or grinding.

F. Factory-Glazed Units:
   1. Factory install glazing to comply with requirements in Division 08 Section “Glazing.”

G. After fabrication, clearly mark components to identify their locations in Project according to Shop Drawings.

2.6 ALUMINUM FINISHES

A. General: Comply with NAAMM’s "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.

B. Finish designations prefixed by AA comply with the system established by the Aluminum Association for designating aluminum finishes.

C. Class II, Clear Anodic Finish: AA-M12C22A31 (Mechanical Finish: nonspecular as fabricated; Chemical Finish: etched, medium matte; Anodic Coating: Architectural Class II, clear coating 0.010 mm or thicker) complying with AAMA 611.

D. Class I, Clear Anodic Finish: AA-M12C22A41 (Mechanical Finish: nonspecular as fabricated; Chemical Finish: etched, medium matte; Anodic Coating: Architectural Class I, clear coating 0.018 mm or thicker) complying with AAMA 611.
E. Class I, Color Anodic Finish: AA-M12C22A42/A44 (Mechanical Finish: non-specular as fabricated; Chemical Finish: etched, medium matte; Anodic Coating: Architectural Class I, integrally colored or electrolytically deposited color coating 0.018 mm or thicker) complying with AAMA 611.

1. Color: As selected by Architect from full range of industry colors and color densities.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine areas, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of work.

1. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

A. General:

1. Comply with manufacturer's written instructions.
2. Do not install damaged components.
3. Fit joints between aluminum components to produce hairline joints free of burrs and distortion.
4. Rigidly secure nonmovement joints.
5. Install anchors with separators and isolators to prevent metal corrosion and electrolytic deterioration and to prevent impeding movement of moving joints.
6. Weld components in concealed locations to minimize distortion or discoloration of finish.
7. Seal joints watertight, unless otherwise indicated.

B. Metal Protection: Where aluminum will contact dissimilar materials, protect against galvanic action by painting contact surfaces with bituminous paint or by installing non-conductive spacers as recommended in writing by manufacturer for this purpose.

C. Install continuous aluminum sill closure with weatherproof expansion joints and locked and sealed or welded corners. Locate weep holes at rafters.

D. Install components to drain water passing joints, condensation occurring within framing members, and moisture migrating within skylight to exterior.

E. Install components plumb and true in alignment with established lines and elevations.

F. Erection Tolerances: Install metal-framed skylights to comply with the following maximum tolerances:

1. Alignment: Limit offset from true alignment to 1/32 inch where surfaces abut in line, edge to edge, at corners, or where a reveal or protruding element separates aligned surfaces by less than 3 inches; otherwise, limit offset to 1/8 inch.
SECTION 101100 - VISUAL DISPLAY SURFACES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:

1. Markerboards.
2. Mobile marker board
3. Mobile printable white board (Smart Board)

B. Related Sections:

1. Division 01 Section “Alternates” for Add Alternate 1.
2. Division 10 Section “Directories” for bulletin boards within built-in directories.

1.3 DEFINITIONS

A. Tackboard: Framed or unframed, tackable, visual display board assembly.

B. Visual Display Surface: Surfaces that are used to convey information visually, including surfaces of chalkboards, markerboards, and surfacing materials that are not fabricated into composite panel form but are applied directly to walls.

1.4 SUBMITTALS

A. Product Data: For each type of product indicated. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for visual display surfaces.

B. LEED Submittals:

1. Product Data for Credit EQ 4.4: For composite wood products, documentation indicating that the product contains no urea formaldehyde.

C. Shop Drawings: For visual display surfaces. Include plans, elevations, sections, details, and attachments to other work.

1. Show locations of panel joints.
2. Show locations of special-purpose graphics for visual display surfaces.
3. Include sections of typical trim members.
D. Samples for Verification: For each type of visual display surface indicated.
   1. Visual Display Surface: Not less than 8-1/2 by 11 inches, mounted on substrate indicated for final Work. Include one panel for each type, color, and texture required.
   2. Trim: 6-inch- long sections of each trim profile.
   4. Accessories: Full-size Sample of each type of accessory.

E. Product Schedule: For visual display surfaces. Use same designations indicated on Drawings.

F. Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency, for surface-burning characteristics of fabrics.

G. Maintenance Data: For visual display surfaces to include in maintenance manuals.

H. Warranties: Sample of special warranties.

1.5 QUALITY ASSURANCE

A. Source Limitations: Obtain visual display surfaces from single source from single manufacturer.

B. Surface-Burning Characteristics: As determined by testing identical products according to ASTM E 84 by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.
   1. Flame-Spread Index: 25 or less.
   2. Smoke-Developed Index: 50 or less.

C. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver factory-built visual display surfaces, including factory-applied trim where indicated, completely assembled in one piece without joints, where possible. If dimensions exceed maximum manufactured panel size, provide two or more pieces of equal length as acceptable to Architect. When overall dimensions require delivery in separate units, prefet components at the factory, disassemble for delivery, and make final joints at the site.

B. Store visual display surfaces vertically with packing materials between each unit.

1.7 PROJECT CONDITIONS

A. Environmental Limitations: Do not deliver or install visual display surfaces until spaces are enclosed and weathertight, wet work in spaces is complete and dry, work above ceilings is complete, and temporary HVAC system is operating and maintaining ambient temperature and humidity conditions at occupancy levels during the remainder of the construction period.

1.8 WARRANTY
A. Special Warranty for Porcelain-Enamel Face Sheets: Manufacturer’s standard form in which manufacturer agrees to repair or replace porcelain-enamel face sheets that fail in materials or workmanship within specified warranty period.

1. Failures include, but are not limited to, the following:
   a. Surfaces lose original writing and erasing qualities.
   b. Surfaces exhibit crazing, cracking, or flaking.

2. Warranty Period: 50 years from date of Substantial Completion.

B. Warranty for Mobile Marker Board:

1. Failures include, but are not limited to:
   a. Surfaces lose original writing and erasing qualities.
   b. Surfaces exhibit crazing, cracking or flaking.

2. Warranty Period: 12 years

C. Warranty for Mobile Printable Marker Board:

1. Covers full parts and labor.
2. Warranty Period: Two years

PART 2 - PRODUCTS

2.1 MATERIALS, GENERAL

A. Manufacturer: Subject to requirements, provide products by one of the following or approved equal:

1. Porcelain Enamel Markerboards:
   a. Carolina Chalkboard Co.
   b. Claridge Products and Equipment, Inc.
   c. Greensteel, Inc.
   e. Newline

B. Provide 96-inch wide x 48-inch height wall mounted white boards in the following rooms:

   1. 110 (2)
   2. 147
   3. 148
   4. 152 (2) with 8-foot chart holders (2)
   5. 153
   6. 154
   7. 155
   8. 156 (2) with 8-foot chart holders (2)
   9. 157
   10. 158
11. 159
12. 165 (2) with 8-foot chart holders (2)
13. 166 (4)
14. 190 (3)
15. 191 (3)
16. 192 (3)
17. 193 (3)
18. 194 (3)
19. 195 (3)
20. 263
21. 264 (2)
22. 272 (2)
23. 280 (3)

C. Provide 26-inch x 36-inch x 60-inch mobile marker boards in the following rooms:
1. 102
2. 104
3. 106
4. 108
5. 132
6. 203
7. 204
8. 205
9. 206
10. 207
11. 208
12. 222
13. 250

D. Provide mobile printable white boards (smart boards) in the following rooms:
1. 105
2. 151 (2)
3. 251
4. 252
5. 253
6. 254
7. 255
8. 272

C.E. Plastic-Impregnated Cork Sheet: Seamless, homogeneous, self-sealing sheet consisting of granulated cork, linseed oil, resin binders, and dry pigments that are mixed and calendared onto fabric backing; with washable vinyl finish and integral color throughout with surface-burning characteristics indicated.

D.F. Extruded Aluminum: ASTM B 221, Alloy 6063.

2.2 MARKERBOARD ASSEMBLIES

A. Porcelain-Enamel Markerboards: Balanced, high-pressure, factory-laminated markerboard assembly of three-ply construction consisting of backing sheet, core material, and backing.
1. Manufacturer's Standard Core: Minimum 3/8 inch thick, with manufacturer's standard moisture-barrier backing.
2. Laminating Adhesive: Manufacturer's standard, moisture-resistant thermoplastic type.

2.3 MARKERBOARD ACCESSORIES

A. Aluminum Frames and Trim: Fabricated from not less than 0.062-inch thick, extruded aluminum; standard size and shape indicated on Drawings.

B. Chalktray: Manufacturer's standard, continuous.
   1. Solid Type: Extruded aluminum with ribbed section and smoothly curved exposed ends.

C. Map Rail: Provide the following accessories:
   1. Display Rail: Continuous and integral with map rail; fabricated from cork approximately 1 to 2 inches wide.
   2. End Stops: Located at each end of map rail.
   3. Map Hooks: Two map hooks for every 48 inches of map rail or fraction thereof.

2.4 MOBILE MARKER BOARDS

A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
   1. Claridge Products and Equipment, Inc.
   2. Egan Visual Inc.
   3. Bretford, Inc.
   4. Herman Miller, Inc.
   5. PolyVision Corporation; a Steelcase company.
   6. Peter Pepper, Inc.

B. Mobile Marker Board: Factory-fabricated mobile unit consisting of a two-sided high-performance write dry-erase surface.
   1. Frame exterior dimensions shall be no less than 36"W x 26"D x 60"H.
   2. Frame shall be fabricated from formed tubular square steel, with four heavy duty twin wheel plate casters. At least two casters shall be locking.
   3. Writing surface shall have a pen tray, and shall match marker board finishes.
   4. Paper pad holder. Marker board shall have adjustable sliding pegs to hold flip chart pad.
   5. Finish: As selected by Architect from Manufacturer’s full range.

2.5 MOBILE PRINTABLE ELECTRONIC WHITEBOARD

A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
1. Panasonic
2. Plus
3. 3M
4. Hitachi
5. Teamboard
6. Quartet

B. Mobile Printable electronic whiteboard:

2. Wall mount kit standard
3. Plain paper printer
4. Black and white copier
5. One touch design
6. Compatible with Windows 98, ME, 2000 and XP.
7. Panel size with stand shall be 36”H x 50”H
8. Surface material shall be touch-sensitive, Teflon coated, dry erase, low glare, projection-optimized surface
9. Power requirements are AC 100-120V, 50-60hz, power supply.
10. Overall Width: 54”
11. Overall Height: 53”
12. Base Depth: 9”

C. Accessories: Shall include

1. Integrated printer
2. Electronic pen holders
3. Marker kit with eraser
4. Power cable
5. Manual

2.42.6 FABRICATION

A. Porcelain-Enamel Visual Display Assemblies: Laminate porcelain-enamel face sheet and backing sheet to core material under heat and pressure with manufacturer's standard flexible, waterproof adhesive.

B. Visual Display Boards: Factory assemble visual display boards unless otherwise indicated.

1. Where factory-applied trim is indicated, trim shall be assembled and attached to visual display boards at manufacturer's factory before shipment.

2.52.7 GENERAL FINISH REQUIREMENTS

A. Comply with NAAMM's “Metal Finishes Manual for Architectural and Metal Products” for recommendations for applying and designating finishes.

B. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.
C. Appearance of Finished Work: Noticeable variations in same piece are not acceptable. Variations in appearance of adjoining components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

2.62.8 ALUMINUM FINISHES

A. Clear Anodic Finish: AAMA 611, AA-M12C22A31, Class II, 0.010 mm or thicker.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates and conditions, with Installer present, for compliance with requirements for installation tolerances, surface conditions of wall, and other conditions affecting performance of the Work.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Comply with manufacturer's written instructions for surface preparation.

B. Clean substrates of substances that could impair the performance of and affect the smooth, finished surfaces of visual display boards, including dirt, mold, and mildew.

C. Prepare surfaces to achieve a smooth, dry, clean surface free of flaking, unsound coatings, cracks, defects, projections, depressions, and substances that will impair bond between visual display surfaces and wall surfaces.

D. Prepare recesses for sliding visual display units as required by type and size of unit.

3.3 INSTALLATION, GENERAL

A. General: Install visual display surfaces in locations and at mounting heights indicated on Drawings, or if not indicated, at heights indicated below. Keep perimeter lines straight, level, and plumb. Provide grounds, clips, backing materials, adhesives, brackets, anchors, trim, and accessories necessary for complete installation.

3.4 INSTALLATION OF FACTORY-FABRICATED VISUAL DISPLAY BOARDS AND ASSEMBLIES

A. Visual Display Boards: Attach concealed clips, hangers, and grounds to wall surfaces and to visual display boards with fasteners at not more than 16 inches o.c. Secure both top and bottom of boards to walls.

3.5 CLEANING AND PROTECTION
A. Clean visual display surfaces according to manufacturer’s written instructions. Attach one cleaning label to visual display surface in each room.

END OF SECTION 101100
2.2 STANDARD METAL LOCKERS

A. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:

1. Art Metal Products; Artisan Silent, or Standard Quiet or Quiet II Lockers.
2. ASI Storage Solutions Inc.; Traditional Collection.
4. General Storage Systems Ltd.; Decor Tri-Lok Eclipse, or Smart Line or Titan II.
5. Hadrian Manufacturing Inc.; Emperor Lockers.
7. Lyon Workspace Products, LLC; Standard Lockers.
8. Penco Products, Inc.; Guardian or Vanguard Lockers.
9. Republic Storage Systems Company; Designer, Quiet or Standard Lockers.
10. Shanahan's Manufacturing Limited; Deluxe Series Lockers.
11. Tennsco Corp.; Tennsco Lockers.

B. Locker Arrangement: Double/Triple tier.

C. Material: Cold-rolled steel sheet.

D. Body: Assembled by riveting or bolting body components together. Fabricate from unperforated steel sheet as follows:

1. Tops, Bottoms, and Intermediate Dividers: 0.024-inch (0.61-mm) nominal thickness, with single bend at sides.
2. Backs and Sides: 0.024-inch (0.61-mm) nominal thickness, with full-height, double-flanged connections.
3. Shelves: 0.024-inch (0.61-mm) nominal thickness, with double bend at front and single bend at sides and back.

E. Frames: Channel formed; fabricated from 0.060-inch (1.52-mm) nominal-thickness steel sheet; lapped and factory welded at corners; with top and bottom main frames factory welded into vertical main frames. Form continuous, integral door strike full height on vertical main frames.

1. Frame Vents: Fabricate face frames with vents.

F. Doors: One piece; fabricated from 0.060-inch nominal-thickness steel sheet; formed into channel shape with double bend at vertical edges and with right-angle single bend at horizontal edges.

1. Doors less than 12 inches wide may be fabricated from 0.048-inch nominal-thickness steel sheet.
2. Doors for box lockers less than 15 inches wide may be fabricated from 0.048-inch nominal-thickness steel sheet.
3. Reinforcement: Manufacturer's standard reinforcing angles, channels, or stiffeners for doors more than 15 inches wide; welded to inner face of doors.
4. Stiffeners: Manufacturer's standard full-height stiffener fabricated from 0.048-inch nominal-thickness steel sheet; welded to inner face of doors.
5. Sound-Dampening Panels: Manufacturer's standard, designed to stiffen doors and reduce sound levels when doors are closed, of die-formed metal with full perimeter flange and sound-dampening material; welded to inner face of doors.

Door Style: Vented panel as follows:
A. Steel Plates, Shapes, and Bars: ASTM 36/A 36M.

B. Rolled-Steel Floor Plate: ASTM A 786/A 786M, rolled from steel plate complying with ASTM A 572/A 572M, Grade 55 (380).

C. Steel Tubing: ASTM A 500, cold formed.

2.2 PORTABLE BATTERY-OPERATED TABLE LIFT

A. General: Portable hydraulic dock lift of capacity, size, and construction indicated; complete with controls, safety devices, and accessories required.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

   a. Advance Lifts, Inc.
   b. Autoquip Corporation.
   c. Beacon Industries, Inc.
   d. Blue Giant Equipment Corporation. (Basis of Design)
   e. ECOA Industrial Products, Inc.
   f. Nordock Inc.
   g. Pentalift Equipment Corporation.
   h. Rol-Lift Corporation.
   i. SPX Dock Products - Kelley.
   j. SPX Dock Products - Serco.
   k. Vestil Manufacturing Company.

B. Standard: MH 29.1.

C. Rated Capacity: Lifting capacity of not less than 1000 lbs.

D. Platform size: 40” X 60”

E. Vertical travel: 36”

D.F. Platform: Nonskid, safety-tread heavy steel deck plate.

   1. Platform Size: As indicated on Drawings.
   2. Platform Guarding: Enclosure to comply with requirements in MH 29.1.

E.G. Hydraulic Operating System: Self-contained, electric, hydraulic power unit for raising and lowering lift; of size, type, and operation needed for capacity of lift indicated; controlled from a push-button station located on unit.

   1. Power Unit: Consisting of 12 v DC battery with charger.

E.H. Construction: Fabricate lift from structural-steel shapes rigidly welded and reinforced for maximum strength, safety, and stability. Design assembly to withstand deformation during both operating and stored phases of service.

1. Scissors Mechanism: Fabricate leg members from heavy, steel-formed tube or plate members to provide maximum strength and rigidity.
3. Bearings: Pivot points with permanently lubricated antifriction bushings or sealed ball-bearings for minimum maintenance.


1. Paint yellow to comply with ANSI Z535.1.

2.3 GENERAL FINISH REQUIREMENTS

A. Finish loading dock equipment after assembly and testing.

2.4 STEEL FINISHES

A. Galvanizing: Hot-dip galvanize components as indicated to comply with the following:

1. ASTM A 123/A 123M for iron and steel loading dock equipment.
2. ASTM A 153/A 153M or ASTM F 2329 for iron and steel hardware for loading dock equipment.

B. Galvanized-Steel and Steel Finish: Immediately after cleaning and pretreating, apply manufacturer's standard two-coat, baked-on finish consisting of prime coat and thermosetting topcoat in manufacturer's standard color.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine areas and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of loading dock equipment.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

A. General: Install loading dock equipment, including motors, control stations, wiring, safety devices, and accessories as required for a complete installation according to manufacturer’s written instructions.

3.3 ADJUSTING
ASME A17.1, adjacent to position indicators. Provide illuminated signal that indicates when normal power supply has failed.

L. Corridor Call Station Pictograph Signs: Provide signs matching hall push-button stations, with text and graphics as required by authorities having jurisdiction, indicating that in case of fire elevators are out of service and exits should be used instead. Provide one sign at each hall push-button station, unless otherwise indicated.

2.9 ELEVATORS

A. Elevator Description:

1. Group Number: 1
2. Elevator Number(s): 1, 2 and 3 as shown on Drawings.
3. Type: Holeless, beside-the-car, twin-acting, dual cylinder.
5. Rated Speed: 100 fpm - 125 fpm.
7. Auxiliary Operations:
   a. Standby power operation.
   b. Standby-powered lowering.
   c. Battery-powered lowering.
   d. Automatic dispatching of loaded car.
   e. Nuisance call cancel.
   f. Priority service at all floors.
   g. Independent service for all cars in group.
   h. Loaded-car bypass.

9. Car Enclosures:
   a. Inside Width: Elevator 1: 68 inches; Elevator 2 and 3: 80 inches from side wall to side wall.
   b. Inside Depth: Elevator 1: 51 inches; Elevator 2 and 3: 65 inches from back wall to front wall (return panels).
   c. Inside Height: 94 inches to underside of ceiling.
   d. Front Walls (Return Panels): Satin stainless steel, No. 4 finish with integral car door frames.
   e. Car Fixtures: Satin stainless steel, No. 4 finish.
   f. Side and Rear Wall Panels: Enameled steel.
   g. Reveals: Satin stainless steel, No. 4 finish.
   h. Door Faces (Interior): Satin stainless steel, No. 4 finish.
   i. Door Sills: Aluminum, mill finish.
   k. Floor prepared to receive resilient tile (specified in Division 09 Section "Resilient Tile Flooring").

10. Hoistway Entrances:
   a. Width: 42 inches.
   b. Height: 96 inches.
   c. Type: Single-speed center opening.