

1419 & 1425 SOUTH 13<sup>TH</sup> STREET  
BUILDING SHELL REHABILITATIONS  
OMAHA, NEBRASKA 68108



## **ADDENDUM 2**

APRIL 13th, 2017

To all known bidders: This addendum is issued by the Architect to all known bidders after the receipt of initial proposals. The purpose of these changes is to add, deduct or clarify scope of work contained in the drawings dated 1/12/17 and subsequent addenda. Bidders acknowledge the receipt of this Addendum by submitting their revised proposal. All information given herein shall become part of the Contract Documents. Prior to the award of contract, we will confirm the following as included or excluded from your bid.

### **DRAWINGS**

**A-1.3** Add door D105A to the floor plan – see attached drawing for location

**A-7.1** Change height of door type D-2 to "SEE SCHEDULE".

### **SPECIFICATONS**

SECTION 081113 METALS DOORS AND FRAMES

SECTION 083616 OVERHEAD DOORS

SECTION 087000 ADD HARDWARE SCHEDULE

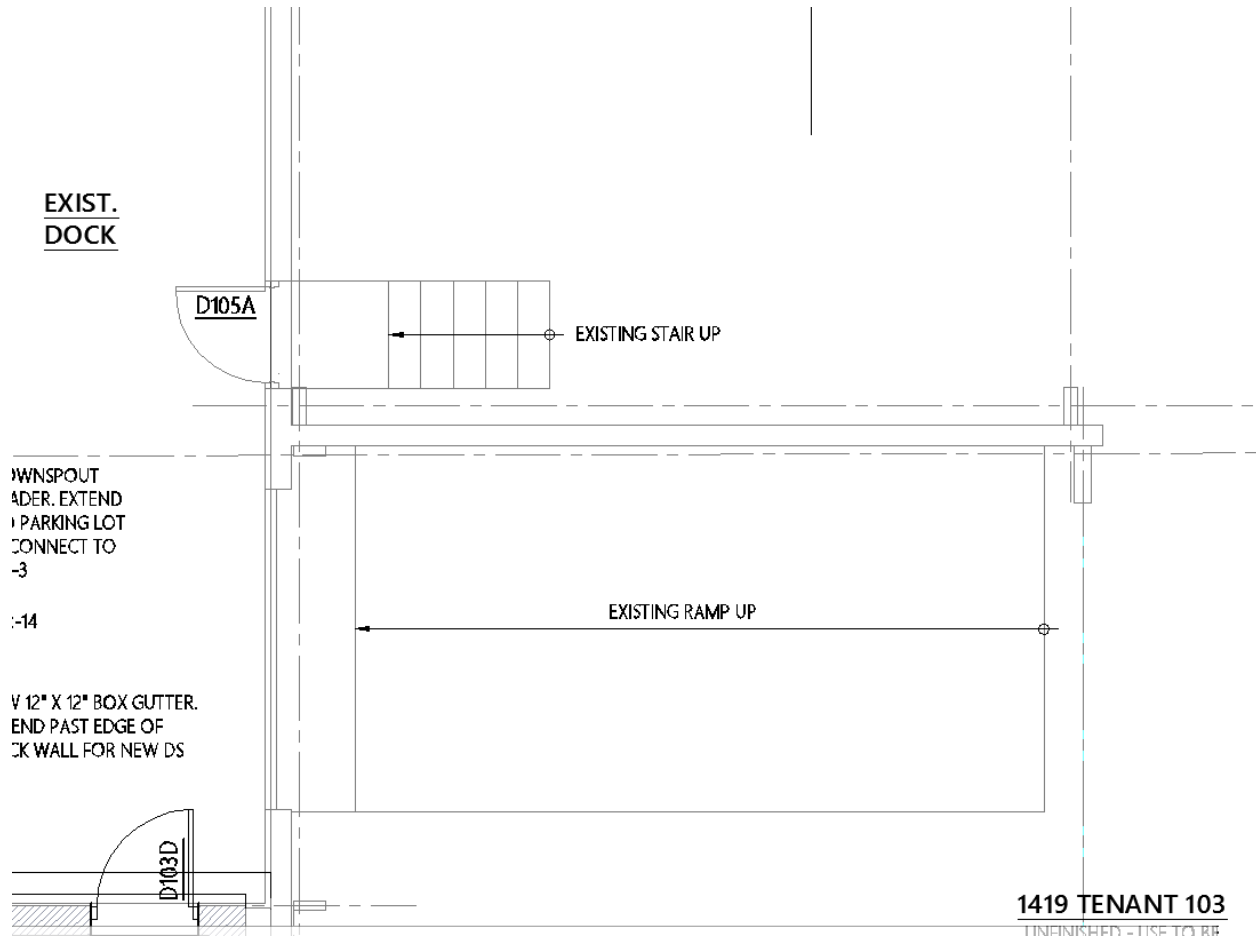
SECTION 088000 ADD DOOR SCHEDULE

### **MARQUEE SIGN RESTORATION SPECIFICATIONS**

Change lamp type to E14 LED (in lieu of C14)

REFERENCE ETI Addendum 2 for lighting manufacturer approval.

## **END OF ADDENDUM 2**



**PARTIAL FLOOR PLAN ON A1.3**

## SECTION 081113

### STEEL DOORS AND FRAMES

#### PART 1 GENERAL

##### 1.01 RELATED WORK SPECIFIED ELSEWHERE

- |                                     |                |
|-------------------------------------|----------------|
| A. Unit Masonry Assemblies          | Section 042000 |
| B. Caulking and sealants            | Section 079005 |
| D. Aluminum Storefronts             | Section 084313 |
| E. Hardware, including silencers    | Section 087100 |
| F. Glass and glazing                | Section 088000 |
| G. Grouting of frames in stud walls | Section 092116 |
| H. Paints                           | Section 099000 |

##### 1.02 SCOPE:

- A. PROVIDE ALL LABOR, MATERIALS, TOOLS, AND EQUIPMENT necessary for the furnishing and installation, complete, of all hollow metal doors and frames as shown on the drawings or specified, in accordance with the provisions of the Contract Documents and completely coordinated with that of all other trades.
- B. ALTHOUGH SUCH WORK IS NOT SPECIFICALLY SHOWN OR SPECIFIED, furnish and install all supplementary and miscellaneous items, appurtenances, and devices incidental to or necessary for a sound, secure, and complete installation.

##### 1.03 QUALITY ASSURANCE

- A. HOLLOW METAL DOORS AND FRAMES. Supplier shall be responsible for all coordination and preparation of all door hardware, hollow metal doors and frames as they relate to each other.
- B. DOORS AND FRAMES shall comply with the Steel Door Institute "Recommended Specifications: Standard Steel Doors and Frames" (SDI-100) and as herein specified.
- C. FIRE RATED ASSEMBLIES. Where noted or shown on the Drawings, provide fire-rated doors investigated and tested as fire door assemblies, complete with type of hardware to be used. Identify each fire door with recognized testing laboratory labels, indicating applicable fire rating of steel doors. Construct and install assemblies to comply with NFPA Standard No. 80, and as herein specified.

##### 1.04 HARDWARE TEMPLATES

- A. HARDWARE TEMPLATES shall be furnished to the fabricator by the hardware manufacturer. The fabricator shall drill and tap all holes, and make all cutouts and reinforcement in frames and doors to receive hardware in a neat and proper manner.

## **1.05 SUBMITTALS**

- A. SHOP DRAWINGS. Submit shop drawings to the Architect/Engineer in accord with the General Conditions and Section 013000. Include details of each frame type, elevations of door design types, conditions at openings, details of Construction, location and installation requirements of finish hardware and reinforcements, and details of joints and connections. Show anchorage and accessory items.
- B. Provide schedule of doors and frames using same reference numbers for details and openings as those on the Drawings.

## **1.06 DELIVERY, STORAGE AND HANDLING**

- A. DELIVERY AND STORAGE. Doors shall be shipped individually packed. Frames shall be shipped with angle spreaders at door opening bottoms. Doors and frames shall be stored on the building site, in an upright position, under cover, on wood sills or floors, in a manner that will prevent rust or damage. Ventilate canvas or plastic covers to prevent moisture traps.
- B. INSPECT hollow metal work upon delivery for damage. Minor damages may be repaired provided items are equal in all respects to new work and acceptable to the Architect. Rejected work shall be replaced with new items.

## **PART 2 PRODUCTS**

### **2.01 MATERIALS**

- A. STEEL SHEETS shall be cold-rolled, commercial quality carbon steel complying with ASTM A 366 and ASTM A 568.
- B. GALVANIZED STEEL SHEETS shall be zinc-coated carbon steel sheets of commercial quality, complying with ASTM A 526, ASTM A 642, hot dipped galvanized in accordance with ASTM A 525 with ASO or G60 coating designation, mill phosphated.
- C. SUPPORTS AND ANCHORS. Fabricate of not less than 18-gauge galvanized sheet steel unless otherwise noted.
- D. INSERTS, BOLTS AND FASTENERS shall be the manufacturer's standard units, except hot-dip galvanized items shall be built into exterior walls, complying with ASTM A 153, Class C or D as applicable.
- E. SHOP APPLIED PRIMER for all exterior doors, frames, and related accessories shall be rust-inhibitive enamel or paint, either air-dried or baked, suitable as a base for specified finish paints listed in 0 09900.
- F. EXPOSED FASTENERS. Unless otherwise indicated, provide countersunk flat Phillips heads for exposed screws and bolts.

## **2.02 HOLLOW METAL DOORS - FULL FLUSH TYPE**

- A. FACE SHEETS AND FILLERS. Face sheets shall be 16-gauge, cold-rolled stretcher-leveled steel (galvanized at exterior doors), internally welded to steel stiffeners of sufficient strength and spacing to support the face sheets against impact and to assure flat face sheet surfaces, or shall be bonded to a rigid polystyrene or polyurethane core. If steel stiffeners are used, doors shall be filled with mineral rock wool or fiberglass.
- B. VERTICAL EDGES shall be minimum 14-gauge continuous channels (12-gauge continuous "C" channels at hinge edges) with each face sheet wrapped around the channels meeting at the center of the edge, with the resulting seam closed and continuously welded shut. Approved high-frequency hinge reinforcement is also acceptable.
- C. TOP AND BOTTOM EDGES shall be 16-gauge (14-gauge at the manufacturer's option) continuous steel channels. Back of channel shall align with the top of face sheets and shall be smooth, flush and sealed water tight for exterior doors. Flush plastic filler caps may be used in lieu of metal channel top closure for interior doors only. Inverted channels (legs down) shall be used as door bottoms.

## **2.03 HOLLOW METAL DOORS - STILE AND RAIL TYPE**

- A. FACE SHEETS AND FILLERS. Face sheets shall be 14-gauge, stretcher-leveled steel (galvanized at exterior doors), internally welded to 20-gauge steel vertical stiffeners. Doors shall be filled with mineral rock wool or fiberglass.
- B. REINFORCING at perimeter of light opening shall be 16-gauge steel and shall be an integral part of the concealed glass kit.
- C. VERTICAL EDGES shall be minimum 14-gauge continuous channels (12-gauge continuous "C" channels at hinge edges) with each face sheet wrapped around the channels meeting at the center of the edge, with the resulting seam closed and continuously welded shut. Approved high-frequency hinge reinforcement is also acceptable.
- D. TOP AND BOTTOM EDGES shall be 16-gauge (14-gauge at the manufacturer's option) continuous steel channels. Back of channel shall align with the top of face sheets and shall be smooth, flush and sealed water tight for exterior doors. Flush plastic filler caps may be used in lieu of metal channel top closure for interior doors only. Inverted channels (legs down) shall be used as door bottoms.

## **2.04 HOLLOW METAL FRAMES**

- A. PROVIDE METAL FRAMES for doors, sidelights, borrowed lights, and other openings, of types and styles as shown on the Drawings and Schedules. Conceal fastenings, unless otherwise indicated.
- B. FABRICATE FRAMES and associated members from 16-gauge (galvanized at exterior frames) cold-rolled steel.
- C. FRAME CORNERS for the 3-sided door frames shall be die-mitered with frame face continuously welded and ground smooth. Continuously backweld soffit and rabbets, Frame corners for sidelight and borrowed light frames shall be saw-mitered or butt joint. Intermediate

rail connections shall be coped and let into adjacent members and all corners and connections shall be continuously welded and ground smooth.

- D. DOOR SILENCERS. Prepare stops to receive 3 silencers on strike jambs of frames on single-leaf doors and 2 silencers on heads of frames on double-leaf doors. Silencers shall be type GJ64 manufactured by Glynn Johnson. Silencers shall not be omitted at doors scheduled to receive sound strips or weatherstripping. Silencers shall be furnished under 0 08710.
- E. STOPS shall be 5/8-inch high unless noted otherwise on the Drawings or required to achieve specified fire ratings.
- F. JAMB ANCHORS shall be standard wood stud anchors for wood stud/gypsum board partitions. Each jamb shall be anchored to the floor with an adjustable base anchor. Other types of anchors shall be provided when required for other conditions. Provide a minimum of 3 anchors per jamb for frames up to 90-inches high and 4 anchors per jamb for frames over 90-inches high.

## **2.05 FABRICATION**

- A. FABRICATE METAL DOORS AND FRAME UNITS to be rigid, neat in appearance and free from defects, warp or buckle. Wherever practicable, fit and assemble units in manufacturer's plant.
- B. WELDS shall be ground invisible and depressions shall be filled smooth.
- C. LIGHT OPENINGS in doors shall be fabricated with integral formed fixed square corner profile steel exterior stop on all opening edges and with removable interior square corner profile formed steel loose stops secured with evenly spaced oval head countersunk metal screws. Fit removable stops flush with the door edge and with tight butt joints at the corners. Aluminum and pressed steel overlay projecting profile lite opening frames are not acceptable.
- D. UNDERCUT doors 3/4-inch to clear carpet where carpet is indicated in the Room Finish Schedule. Pay particular attention to varying heights of different thresholds when setting door undercuts.

## **2.06 MISCELLANEOUS ITEMS**

- A. FABRICATE SPECIAL SHAPES for special conditions as shown on the Drawings and all special head, jamb or sill anchors as may be shown on the Drawings or otherwise required for a complete installation. These items shall be fabricated from 16-gauge steel unless noted otherwise.

## **2.07 FINISH HARDWARE PREPARATION**

- A. PREPARE DOORS AND FRAMES to receive mortised and concealed finish hardware in accordance with final Finish Hardware Schedule and templates provided by hardware supplier. Comply with the applicable requirements of ANSI A 115 Series Specifications for door and frame preparation for hardware.
- B. DOORS AND FRAMES shall be mortised, reinforced, drilled and tapped for scheduled mortised hardware. See Section 087100 for mounting heights of all hardware.

C. REINFORCE DOORS AND FRAMES to receive surface-applied hardware. Drilling and tapping for surface-applied finish hardware may be done at project site.

D. FRAME REINFORCEMENT FOR EXTERIOR OPENINGS:

Hinge Minimum 3/16-inch thick steel bar extending continuous one piece from top to bottom of door frame, or high frequency hinge reinforcement at all hinge locations is also acceptable.

Closer/Holder Minimum 3/16-inch by 1-1/2-inch thick steel plate extending continuous one piece, full width of frame opening.

Strike 14-gauge steel.

E. FRAME REINFORCEMENT FOR INTERIOR OPENINGS:

Hinge 7-gauge hinge reinforcements by 10-inches long welded to frames.

Strike 14-gauge steel

Closer 3/16-inch by 1-1/2-inch by 14-inch steel plate.

F. DOOR REINFORCEMENT FOR ALL DOORS:

Closer/Holder Stop: Minimum 12-gauge tubular 5-inch by 18-inch length, or as required.

Hinge As described earlier in this Section.

Other Per Steel Door Institute Standards unless noted otherwise in this Section.

G. ADDITIONAL FRAME REQUIREMENTS:

1. Install 1-inch by 2-inch by length required, foam insulation where grouted frames must be penetrated by machine or sheet metal screws for attachment of closers, rim panic strikes, or jamb weatherstrip. Attach securely with tape or adhesive as required.
2. Apply "Rusco Permanent Sealer" to soffits, stops, and rabbets of corner joints that will be exposed to the weather.
3. Plaster guard covers are to be welded in place over all drilled reinforcements of frames.
4. At frames scheduled to receive future security contactors, factory install a single gang electrical box at the proper location in the frame head, with 1/2" conduit connection to the jamb frame. Conduit will be continued by Electrical from the door or borrow light jamb to the nearest adjacent accessible ceiling.

## 2.08 SHOP PAINTING

A. CLEAN STEEL SURFACES of mill scale, rust, oil, grease, dirt, and other foreign materials before application of paint.

B. APPLY SHOP COAT of prime paint of even consistency to all doors and frames to provide a uniform and smooth finished surface ready to receive finish paint, including back surfaces of all

frames.

## **PART 3 - EXECUTION**

### **3.01 INSPECTION**

- A. INSTALLER MUST EXAMINE substrate and conditions under which steel doors and frames are to be installed and must notify Contractor in writing of conditions detrimental to proper and timely completion of work. Do not proceed with work until unsatisfactory conditions have been corrected in manner acceptable to the installer.

### **3.02 INSTALLATION - GENERAL**

- A. COMPLY with provisions of SDI-105 "Recommended Erection Instructions for Steel Frames", unless otherwise indicated.
- B. SCHEDULING. Place frames prior to construction of enclosing walls and ceilings. After wall construction is completed, remove temporary braces and spreaders leaving surfaces smooth and undamaged.
- C. INSTALL FRAMES accurately in position, plumbed, aligned, and braced securely until permanent anchors are set. Anchor frames securely to floor and at jambs. Weld all field joints, grind smooth, and fill with body putty to completely conceal seams and to form a smooth, unbroken finish surface.
- D. SPOT GROUT at all jambs of frames set into wood stud construction where standard wood anchors not welded to the frame are used. This work is included under Section 092116.
- E. WHERE FRAMES ARE ANCHORED WITH BOLTS, bolts shall be countersunk, and surface shall be made smooth with putty.
- F. INSTALL FIRE-RATED FRAMES in accordance with NFPA Standard No. 80.

### **3.03 DOOR INSTALLATION**

- A. FIT HOLLOW METAL DOORS accurately in frames, within clearances specified in SDI-100.
- B. PLACE FIRE-RATED DOORS with clearances as specified in NFPA Standard No. 80.

### **3.04 ADJUST AND CLEAN**

- A. PRIME COAT TOUCH-UP. Immediately after erection, sand smooth any rusted or damaged areas of prime coat and apply touch-up of compatible air-drying primer.
- B. FINAL ADJUSTMENTS. Check and readjust operating finish hardware items, leaving steel doors and frames undamaged and in complete and proper operating condition.

**END OF SECTION**



**SECTION 08360**  
**OVERHEAD DOORS**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Overhead sectional doors, manually operated.
- B. Operating hardware and supports.

**1.02 RELATED SECTIONS**

- A. Section 05500 - Metal Fabrications: Steel structural supports.

**1.03 REFERENCES**

- B. ASTM E 330 - Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference; 2002.
- C. DASMA 102 - American National Standard Specifications for Sectional Overhead Type Doors; Door & Access Systems Manufacturers' Association, International; 2003.

**1.04 PERFORMANCE REQUIREMENTS**

- A. Design and size components to withstand dead loads and positive and negative wind loads as calculated in accordance with 2006 International Building code as measured in accordance with ASTM E 330.

**1.05 SUBMITTALS**

- A. See Section 01300 - Administrative Requirements, for submittal procedures.
- B. Shop Drawings: Indicate opening dimensions and required tolerances, connection details, anchorage spacing, hardware locations, and installation details.
- C. Product Data: Show component construction, anchorage method, and hardware.
- D. Manufacturer's Installation Instructions: Include any special procedures required by project conditions.
- E. Maintenance Data: Include data for motor and transmission, shaft and gearing, lubrication frequency, spare part sources.
- F. Warranty: Submit manufacturer warranty and ensure forms have been completed in Owner's name and registered with manufacturer.

**1.06 QUALITY ASSURANCE**

- A. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years of documented experience.
- B. Installer: Company specializing in performing the work of this section with minimum three years of experience.
- C. Conform to applicable code for motor and motor control requirements.
- D. Products Requiring Electrical Connection: Listed and classified by Underwriters Laboratories, Inc., as suitable for the purpose specified.

**1.07 WARRANTY**

- A. See Section 01780 - Closeout Submittals for warranty requirements.
- B. Correct defective Work within a five year period after Date of Substantial Completion.

## **PART 2 PRODUCTS**

### **2.01 MANUFACTURERS**

- A. Overhead Door Corporation; Product 511 Series.
- B. Other Acceptable Manufacturers:
  - 1. Arm-R-Lite. 800-554-5816
  - 2. Raynor.
  - 3. Clopay.
  - 4. Substitutions: See Section 01600 - Product Requirements.

### **2.02 DOOR PANEL COMPONENTS**

- B. Door Panels: Glazed aluminum door panel as indicated on the drawings. 6063-T6 rails. Provide 1" vertical muntin bars as indicated between glass panels.
  - 1. Door Nominal Thickness: 1 3/4 inches thick.
  - 2. Exterior Finish: Black Anodized Aluminum
  - 3. Interior Finish: Black Anodized Aluminum
  - 4. Operation: Manual with chain hoist.
  - 5. Glass: 1/2" thick tempered insulated panel (G-2 similar)

### **2.03 DOOR COMPONENTS**

- A. Track: 3" Rolled galvanized steel, 0.090 inch thick, continuous one piece per side; galvanized steel mounting brackets 1/4 inch thick.
- B. Hinge and Roller Assemblies: Heavy duty hinges and adjustable roller holders of galvanized steel; floating hardened steel bearing rollers, located at top and bottom of each panel, each side.
- C. Lift Mechanism: Torsion spring on cross head shaft, with braided galvanized steel lifting cables.
- D. Sill Weatherstripping: Resilient hollow rubber strip, one piece; fitted to bottom of door panel, full length contact.
- E. Jamb Weatherstripping: Roll formed steel section full height of jamb, fitted with resilient weatherstripping, placed in moderate contact with door panels.
- F. Head Weatherstripping: EPDM rubber seal, one piece full length.
- G. Panel Joint Weatherstripping: Neoprene foam seal, one piece full length.

**END OF SECTION**

## SECTION 084313

### METAL-FRAMED STOREFRONTS

#### PART 1 GENERAL

##### 1.01 SECTION INCLUDES

- A. Aluminum-framed storefront, with vision glass, including butt-glazed.
- B. Aluminum doors and frames.
- C. Extruded Aluminum Sill Flashing.
- D. Perimeter sealant.
- E. Hardware.
- F. Removable mullions.

##### 1.02 RELATED SECTIONS

- A. Section 042000 – Unit Masonry: Adjacent work to receive work.
- B. Section 092116 - Gypsum Board Assemblies: Preparation of adjacent work to receive work of this section.
- C. Section 079005 - Joint Sealers: Perimeter sealant and back-up materials.
- E. Section 087100 - Door Hardware
- F. Section 088000 - Glazing.

##### 1.03 REFERENCES

- A. AA DAF-45 - Designation System for Aluminum Finishes; The Aluminum Association, Inc.; 1997, Eighth Edition.
- B. AAMA CW-10 - Care and Handling of Architectural Aluminum From Shop to Site; American Architectural Manufacturers Association; 1997.
- C. AAMA 501.2 - Field Check of Metal Storefronts, Curtain Walls, and Sloped Glazing Systems for Water Leakage; American Architectural Manufacturers Association; 1994 (part of AAMA 501).
- D. AAMA 611 - Voluntary Specification for Anodized Architectural Aluminum; American Architectural Manufacturers Association; 1998.
- E. ASCE 7 - Minimum Design Loads for Buildings and Other Structures; American Society of Civil Engineers; 1995 (ANSI/ASCE 7-95).
- F. ASTM A 36/A 36M - Standard Specification for Carbon Structural Steel; 1996.
- G. ASTM A 123/A 123M - Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products; 1997a.
- H. ASTM B 209 - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate; 1996.
- I. ASTM B 209M - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate (Metric); 1995.
- J. ASTM B 221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire,

Profiles, and Tubes; 1996.

- K. ASTM B 221M - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes (Metric); 1996.
- L. ASTM E 283 - Standard Test Method for Determining the Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen; 1991.
- M. ASTM E 330 - Standard Test Method for Structural Performance of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference; 1996.
- N. ASTM E 331 - Standard Test Method for Water Penetration of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference; 1996.
- O. SSPC-Paint 20 - Zinc-Rich Primers (Type I, "Inorganic," and Type II, "Organic"); Society for Protective Coatings; 1991 (Part of Steel Structures Painting Manual, Vol. Two).

#### 1.04 PERFORMANCE REQUIREMENTS

- A. Design and size components to withstand the following load requirements, as measured in accordance with ASTM E 330:
  - 1. Wind loads: Comply with requirements of ASCE 7 for the following wind loadings:
    - a. Storefronts Less Than 10' Above Grade: Minimum 25 PSF.
    - b. Storefronts More Than 10' Above Grade: Minimum 29 PSF.
  - 2. Member deflection: Limit member deflection to flexure limit of glass in any direction, with full recovery of glazing materials.
- B. Movement: Accommodate movement between storefront and perimeter framing and deflection of lintel, without damage to components or deterioration of seals.
- C. Air Infiltration: Limit air infiltration through assembly to 0.06 cu ft/min/sq ft of wall area, measured at a reference differential pressure across assembly of 1.57 psf as measured in accordance with ASTM E 283.
- D. Water Leakage: None, when measured in accordance with ASTM E 331 with a test pressure difference of 2.86 lbf/sq ft.
- E. System Internal Drainage: Drain to the exterior by means of a weep drainage network any water entering joints, condensation occurring in glazing channel, and migrating moisture occurring within system.
- F. Expansion/Contraction: Provide for expansion and contraction within system components caused by cycling temperature range of 170 degrees F over a 12 hour period without causing detrimental effect to system components, anchorages, and other building elements.

#### 1.05 SUBMITTALS

- A. See Section 013000 - Submittals, for submittal procedures.
- B. Product Data: Provide component dimensions, describe components within assembly, anchorage and fasteners, glass and infill, door hardware, internal drainage details.
- C. Shop Drawings: Indicate system dimensions, framed opening requirements and tolerances, affected related Work, expansion and contraction joint location and details, attachment details and field welding required.
- D. Design Data: Provide framing member structural and physical characteristics, engineering calculations, dimensional limitations.
- E. Warranty: Submit manufacturer warranty and ensure forms have been completed in Owner's name and registered with manufacturer.

## 1.06 QUALITY ASSURANCE

- A. Where heights exceed system limitations, design structural support framing components under direct supervision of a Professional Structural Engineer experienced in design of this Work and licensed at State of Nebraska.
- B. Manufacturer and Installer: Company specializing in manufacturing aluminum glazing systems with minimum three years of documented experience.

## 1.07 DELIVERY, STORAGE, AND PROTECTION

- A. Handle products of this section in accordance with AAMA CW-10.
- B. Protect finished aluminum surfaces with wrapping. Do not use adhesive papers or sprayed coatings which bond to aluminum when exposed to sunlight or weather.

## 1.08 ENVIRONMENTAL REQUIREMENTS

- A. Do not install sealants when ambient temperature is less than 40 degrees F. Maintain this minimum temperature during and 48 hours after installation.

## 1.09 WARRANTY

- A. See Section 017800 - Closeout, for additional warranty requirements.
- B. Correct defective Work within a five year period after Date of Substantial Completion.
- C. Provide five year manufacturer warranty against excessive degradation of exterior finish. Include provision for replacement of units with excessive fading, chalking, or flaking.

## PART 2 PRODUCTS

### 2.01 MANUFACTURERS

- A. Storefront: Kawneer ENCORE, Series storefront with medium stile doors.
- B. Other Acceptable Manufacturers:
  - 1. Vistawall
  - 2. EFCO
  - 3. Substitutions: See Section 016000 - Product Requirements.

### 2.02 COMPONENTS

- A. Aluminum-Framed Storefront: Factory fabricated, factory finished aluminum framing members with related flashings, anchorage and attachment devices.
- B. Aluminum Framing Members: Tubular aluminum sections, thermally broken with interior section insulated from exterior, drainage holes and internal weep drainage system.
  - 1. Framing members for interior applications need not be thermally broken.
  - 2. Glazing stops: Flush.
  - 3. Cross-Section: 1 3/4" x 4-1/2" inch nominal dimension.
- C. Structural Silicone: At butt-glazed joints – Refer to Drawings.
- D. Doors: Kawneer Series 350 Medium-stile series
  - 1. Thickness: 1 3/4 inches.
  - 2. Top Rail: 3 1/2 inches wide.

3. Vertical Stiles: 3 1/2 inches wide.
4. Bottom Rail: 6 inches wide.
5. Finish: Same as storefront.

### 2.03 MATERIALS

- A. Extruded Aluminum: ASTM B221 (ASTM B221M).
- B. Sheet Aluminum: ASTM B209 (ASTM B209M).
- C. Structural Steel Sections: ASTM A 36/A 36M; galvanized in accordance with ASTM A 123/A 123M at 2.0 oz/sq ft.
- D. Fasteners: Stainless steel.
- E. Exposed Flashings: 0.032 inch thick aluminum sheet; finish to match framing members.
- F. Concealed Flashings: 0.018 inch thick galvanized steel.
- G. Perimeter Sealant: Type specified in Section 079005.
- H. Glass:
  - G-1: 1" thick insulated panel with stainless steel seal, clear glass, low-e coating on 2<sup>nd</sup> surface, dry argon gas filled, fully tempered.
  - G-2: 5/8" thick insulated panel with stainless steel seal, clear glass, low-e coating on 2<sup>nd</sup> surface, dry argon gas filled, fully tempered.
- I. Glazing Gaskets: Type to suit application to achieve weather, moisture, and air infiltration requirements.
- J. Touch-Up Primer for Galvanized Steel Surfaces: SSPC-Paint 20, zinc rich.
- K. Structural Glazing Adhesive: Silicone, neutral cure; formulated specifically for structural sealant glazing and complying with ASTM C 1184.
  1. Ultraviolet radiation resistant for 2000 to 4000 micro-watts minimum for 21 days.
  2. Adhesion when subjected to ultraviolet radiation through glass in accordance with ASTM C 794 without failure.
  3. Minimum adhesion tensile strength of 100 psi.
  4. Tested for compatibility with glazing accessories and weatherseal sealant.
  5. Manufacturers:
    - a. Momentive Performance Materials, Inc (formerly GE Silicones): [www.momentive.com](http://www.momentive.com).
- H. Weatherseal Sealant: Silicone, type recommended by glazing adhesive manufacturer.

### 2.04 FINISHES

- A. Comply with AA DAF-45 for aluminum finishes required.
- B. Class II Anodized Finish: AAMA 611 AA-M12C22A41 Colored anodic coating not less than 0.4 mils thick, for storefront and doors.
  1. Finish AL-1: Class I colored anodized, 0.4 mils thick. Color: Clear.
- C. Permadyze Harcoat Finish: AAMA 2604 50% kynar coating.
  2. Finish AL-2: Black #29 (simulated black anodized)

## 2.05 HARDWARE

- A. Thresholds: ½" x 4" aluminum mill finish, ADA compliant.
- B. Hinges: Butt hinges, quantity per system limitations for each hinge load.
- C. Exit Devices: See hardware Schedule. (by others)
- D. Pulls: See hardware Schedule. (by others)
- E. Weatherstripping: Bulb polymeric type with EPDM blade gasket sweep, applied to bottom door rail with concealed fasteners.
- F. Closers: LCN 4040 Surface closer with back-check and adjustable hold-open arms.
- G. Cylinders: By Hardware Supplier - Refer to Section 087100.

## 2.06 FABRICATION

- A. Fabricate components with minimum clearances and shim spacing around perimeter of assembly, yet enabling installation and dynamic movement of perimeter seal.
- B. Accurately fit and secure joints and corners. Make joints flush, hairline, and weatherproof. Provide sill flashings. Secure heavy concealed reinforcement brackets with screws and weld with deep penetration fillet welds.
- C. Prepare components to receive anchor devices. Fabricate anchors.
- D. Coat concealed metal surfaces that will be in contact with cementitious materials or dissimilar metals with bituminous paint.
- E. Arrange fasteners and attachments to conceal from view.
- F. Reinforce components internally for door hardware and door operators.
- G. Reinforce framing members for imposed loads.
- H. Finishing: Apply factory finish to all surfaces that will be exposed in completed assemblies.
  - 1. Touch-up surfaces cut during fabrication so that no natural aluminum is visible in completed assemblies, including joint edges.

## PART 3 EXECUTION

### 3.01 EXAMINATION

- A. Verify dimensions, tolerances, and method of attachment with other work.
- B. Verify that wall openings and adjoining air and vapor seal materials are ready to receive work of this section.

### 3.02 INSTALLATION

- A. Install wall system in accordance with manufacturer's instructions.
- B. Attach to structure to permit sufficient adjustment to accommodate construction tolerances and other irregularities.
- C. Provide alignment attachments and shims to permanently fasten system to building structure.
- D. Align assembly plumb and level, free of warp or twist. Maintain assembly dimensional tolerances, aligning with adjacent work.
- E. Provide thermal isolation where components penetrate or disrupt building insulation.
- F. Install continuous sub sill flashings. Turn up ends and edges; seal to adjacent work to form water tight

dam.

- G. Coordinate attachment and seal of perimeter air and vapor barrier materials.
- H. Pack fibrous insulation in shim spaces at perimeter of assembly to maintain continuity of thermal barrier.
- I. Install hardware using templates provided.
- J. Install glass using glazing method required to achieve performance criteria.
- K. Install perimeter sealant in accordance with Section 079005.
- L. Install thresholds in continuous bed of sealant.

### 3.03 ERECTION TOLERANCES

- A. Maximum Variation from Plumb: 0.06 inches every 3 ft non-cumulative or 1/16 inches per 10 ft, whichever is less.
- B. Maximum Misalignment of Two Adjoining Members Abutting in Plane: 1/32 inch.

### 3.04 FIELD QUALITY CONTROL

- A. Test installed storefront for water leakage in accordance with AAMA 501.2.

### 3.05 ADJUSTING

- A. Adjust operating hardware and sash for smooth operation.

### 3.06 CLEANING AND PROTECTION

- A. Remove protective material from pre-finished aluminum surfaces.
- B. Wash down surfaces with a solution of mild detergent in warm water, applied with soft, clean wiping cloths. Take care to remove dirt from corners. Wipe surfaces clean.
- C. Remove excess sealant by method acceptable to sealant manufacturer.
- D. Touch-up minor damage to factory applied finish; replace components that cannot be satisfactorily repaired.
- E. Protect finished work from damage.

END OF SECTION



087000 - DOOR HARDWARE SCHEDULE

SET LIST																
SET #	FUNCTION	DEVICE	DEADBOLT	CLOSER	FINISH	HINGES	PLATES			PULL BAR	WALL STOP	CARD PHOB	MAG LOCK	SENSOR	THRESHOLD	WEATHERSTRIPING
							PUSH	KICK	OTHER							
0	EXISTING		NEW CYLINDER													
1	STOREROOM	QCL 170E		QDC112	US32D	1 1/2 PAIR					X					
2	CLASSROOM	2401 CD PAIR		by AL	AL-1	AL			RM4418 Aluminum PAIR					by AL	by AL	
3	CLASSROOM	2401 CD PAIR		by AL	AL-1	AL			RM4412 Aluminum	X				by AL	by AL	
4	CLASSROOM	2401 CD PAIR		by AL	AL-2	AL			RM7900-60" Stiainless PAIR					by AL	by AL	
5	CLASSROOM	2401 CD		by AL	AL-2	AL			RM7900-18" Stainless PAIR	X				by AL	by AL	
6	STOREROOM	QCL 170 E		QDC112	US32D	1 1/2 PAIR				X				X	X	
7	CLASSROOM	QCL 160 E		QDC112	US32D	1 1/2 PAIR				X						

NOTES:

**by AL** (by Aluminum door) ALL HARDWARE COMES AS PART OF SPECIFIED DOOR  
HARDWARE SUPPLIER SHALL PROVIDE OWNER WITH CONSULTATION TO SET INDIVIDUAL KEYING WITH MASTER KEY  
PROVIDE SHOP DRAWINGS FOR ARCHITECT APPROVAL OF ALL HARDWARE PRIOR TO ORDERING

ITEM	PRODUCTS
STOREROOM LOCKS	STANLEY QCL 170E
CLASSROOM LOCKS	STANLEY QCL 160E
SURFACE CLOSERS	STANLEY QDC 100 SERIES
HINGES	STANLEY FBB179 4.5 X 4.5
PANIC HARDWARE	STANLEY 2400 SERIES
WALL STOPS	IVES WS407CCV
PULL BARS	ROCKWOOD
THRESHOLDS	NGP 425DKB 36"
SEALS	NGP 160UDKB 1/36" 2/96"
DOOR SWEEPS	NGP 200NKB 36"



