

## ADDENDUM NO. 3

### RFP 15-001

October 15, 2014

To All Bidders:

The following change is hereby made a part of RFP 15-001 – Key West City Hall at Glynn Archer, Phase 2 – New Construction and Major Renovation, as fully and as completely as if the same were fully set forth therein:

#### 1. Contractor Question:

For Conference rooms 113 and 216 you have specified the Polycom HDX7000 solution. This is an older product that has been effectively replaced by the Group Series, the Group 700 would be the correct product for this space, particularly since you have specified a future requirement in these rooms to support a secondary camera. All other videoconference rooms did specify the Group 500. Would the Group 700 be acceptable for rooms 113 and 216 as we expect the HDX7000 to go end of life soon.

**Answer: Group 700 Series is acceptable for Room 113 and 216**

#### 2. Contractor Question:

You have specified a total of 12 videoconferencing systems, I do not see any Videoconferencing infrastructure that would allow for Multipoint video calls, or the ability to call outside of the City network. Polycom has a package, their Video SmartStart 1800-500 package which would be a single part number and would provide all of the infrastructure required to support the 12 devices simultaneously.

The VSS1800-500,1y package is as follows:

RPCS1800 IP Only, 2x1080p60/5x1080p30/10x720p/20xSD. (allows for 20 simultaneous SVC calls)

CloudAXIS SW Bundle 100. (allows you to email a link that would allow someone to conference with you from their laptop or IPAD)

DMA7000, 500 calls. (provides for Gatekeeping, Dial Plan and Alias addressing also acts as SIP registrar)

RPRM, 500 devices. Entitlements to CMAD, RPM, RPD. (management platform for the solution also provides for Desktop and Mobile licensing)

RPAD, 50 calls. (Provides the ability to securely traverse the City firewall to communicate with entities outside the City network)

Adoption Portal, 200 users. (provides for training and adoption of this new technology)

Implementation+Premier, 1y Mnt (includes installation and one year of maintenance)

Part Number 2200-80000-351

**Answer: Smartstart Package is not covered under the scope and might already be implemented with other Video Conferencing systems on Key West WAN. Provide separate cost for this package for Key West IT for consider and allocate budget for if needed.**

**3. Contractor Question:**

On Sheets AV2-1 and AV2-2, the block diagrams for the Community Conference Room and Executive Conference Room are shown with additional inputs and outputs that appear to be run from and to an auxiliary input/output plate in the equipment rack. Is this the case, and if so, is there a layout for this plate?

**Answer: Provide a one rack unit panel with following connections:**

- Qty 2 - Microphone (XLR Female)
- Qty 1 – Computer Audio (3.5 mm TRS Female)
- Qty 1 - DVI (DVI-I Female)
- Qty 1 – HDMI (HDMI Female)

**Use detail 1 on AV4-0 as reference standard for connectors. Permissible to use manufactured panel equal to Extron AAP301 with appropriate AAP modules provide labeling is provided consistent with specifications. Mount panel in place of vent below.**

**4. Contractor Question:**

On Sheet AV2-3, the Control Room monitor speakers are shown as being powered by an amplifier designated PA-2. The only power amplifiers (2.4.A) in the equipment specs are 700W/channel. Is there a second specified power amp for this application? **Answer: For Control Room Monitors permissible to provide Labgruppen Lucia 240/2 in place of specified IPD 2400 in this application.**

**5. Contractor Question:**

The power amplifiers shown on Sheet 2-3 as connecting to the speaker zones in the Commission Chamber are shown as 4-channel amps on the block diagram, but the only amp in the equipment spec (2.4.A) is a 2 channel amp. Can we assume that the intention is to use (4) 2-channel amps rather than the (2) 4-channel amps on the block drawing? **Answer: For Commission Chambers 4-Channel Amplifiers permissible to provide Labgruppen C Series 28:4 in this application.**

**6. Contractor Question:**

On Sheet AV2-4, Fiber XMIT Type 1 and Fiber Rcvr Type 1 are shown as providing a signal pathway between the HD-SDI router in the AV Control Room and the TV Station. Are these devices in our scope of work? If so, please specify makes and models. **Answer: Provide Extron 3G HD-SDI SM Transmitters and Receiver. Coordinate with Owner for installation of Receiver at destination location.**

**7. Contractor Question:**

On Sheet AV2-5, the overhead flat panel displays (OFE) are labeled as Type 5 on the block diagram, but Type 5 is not specified in the equipment specs. Please clarify. **Answer: Flat Panel Displays and Monitors are Owner Furnished Items to be installed by the Contractor. Contractor to provide all mounting supplies and accessories.**

**8. Contractor Question:**

Also on Sheet AV2-5, the other overhead flat panel displays (OFE) for the audience of the Commission Chamber are labeled as Type 3 on the block diagram. Type 3 is a 21" computer monitor, also used on the Clerk's station, and not suitable for public presentation use. Which FPD Type will be used for these overhead displays? **Answer: Flat Panel Displays and Monitors are Owner Furnished Items to be installed by the Contractor. Contractor to provide all mounting supplies and accessories.**

**9. Contractor Question:**

How will the Type 3 flat panel displays on the Clerk's stations be mounted? Will they use the stand that is included with the display, or do we need to provide another type of mount? (e.g. a monitor arm) **Answer: Wall Mounted utilizing same series mounting bracket as specified for monitors of same size elsewhere in this project.**

**10. Contractor Question:**

On Sheet AV2-6, Diagram 1 references HDMI Switch Type 1, which is not specified in the equipment specs. Please provide make and model. **Answer: Wall Mounted.**

**11. Contractor Question:**

On Sheet AV2-6, the Overhead Audience Signal Light for the Speaking Timer system is specified as Bluetooth enabled, but the rest of the system is not. Is Bluetooth functionality required for this item? **Answer: Bluetooth option is not required.**

**12. Contractor Question:**

On Sheet AV4-3, Detail 2 specifies a unique AV Input Panel for the IT Training Room, Room 240. In the block diagrams, this room is shown as being the same as the rest of the Small Videoconferencing rooms. The input panel shown on AV4-3 will require different hardware than is shown on the standard block diagram. Is there another block diagram and equipment list for the IT Training room? **Answer: Provide Wall Plate Equal to Extron CRM104 with MAAP inserts matching those of similar conference room floor box applications.**

**13. Contractor Question:**

On Sheet AV3-1, there are (4) Digital Signage players indicated. Are these in our scope of work? If so, please provide make and model. **Answer: Provide AMX IS-XPT-2100 Player with is-Xpert Management Suite. Server to be provided by Owner.**

**14. Contractor Question:**

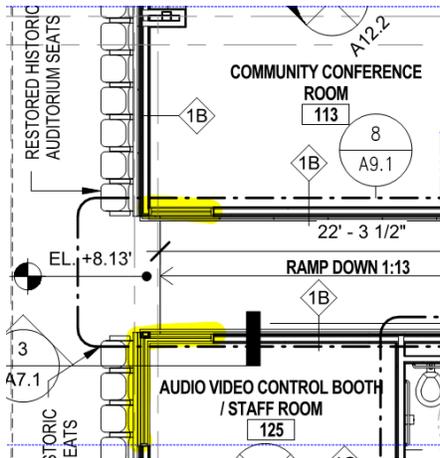
On Sheet AV5-0, the rack elevation indicates (1) rackmount UPS for each equipment rack in the Control Room. Is this in our scope of work? If so, will the consultant specify these units, or do we specify them? **Answer: Provide equal to APC SMX2000RMLV2U (Adjust to accommodate for 2RU) or equal.**

**15. Contractor Question:**

On Sheet AV5-0, the CATV rack in the Server Room is shown without a UPS. Will one be required, and who will provide it? **Answer: Not required in the scope of the AV/AVE Series Drawings and Section 27 41 00.**

**16. Contractor Question:**

The floor plan indicates interior storefront at both the Community room 113 and the Audio/Video booth 125. I found the 125 glass on a wall section 3 A7.1. Are the 3 units new work? Audio Control booth, any special call outs, i.e. STC rated glass, etc. **Answer: Sheets A12.1, A7.1, and A11.9 have been revised to show these windows, and are included in this Addendum.**



**17. Substitution Request - Hager Door Hardware:**

We have completed our review of this substitution request and found all items to be acceptable with two conditions:

1. Door closers shall be of the 'slim' type - they should be HAGER Series 5200, instead of the 5100 they submitted. We note this requirement is being changed via Addendum # 3 which is yet to be issued.
2. All substitution hardware for exterior doors shall be allowed to be installed on products holding current Miami-Dade or Florida Product Approval.

**18. Contractor Question:**

Referencing Addendum 002, line item 72 (copy attached)... for INTERIOR storefront, specifying a hurricane impact resistant framing system (IR500)....???? The YKK YES45 can come with a medium stile door or a wide stile door as necessary. The IR500 is not setup for 1/4" thick glazing...it's set up for heavy 9/16" glazing. ...keep the YKK and just specify a medium stile door and it's a done deal. Please advise... **Answer: Kawneer IR500 is available with a 1/4in glazing option (non-impact, e.g. interior use). It is understood from Addendum #2 RFI question #72 that wide stiles were needed.**

**19. Interior Signage Specification:**

A specification for Signage is attached to this Addendum. Attached to this Addendum is Section 101400 – SIGNAGE.

**20. Revised Specification 084313:**

Specification Section 084313 – Aluminum Framed Storefronts has been revised. The updated Section is attached to this Addendum.

**21. Revised Specification 087100:**

Specification Section 087100 – Door Hardware has been revised. The updated Section is attached to this Addendum.

**22. Contractor Question:**

Details 1, 2 and 3 on sheet S2.1 indicate to align bottom of new footing with bottom of existing footing. The existing bottoms of footings are not given. Please provide a depth of existing footing from which bids shall be based upon. **Answer: We field measured the top of existing footing to be approximately 1'-6" below current grade. We estimate the existing foundations to be 12"-16" deep. For bidding purposes, consider bottom of foundation to be 3'-0" below grade.**

**23. Contractor Question:**

Detail 5/A9.4 which is cut from the chamber stairs indicates to use a retrofit stair nosing shown in detail 10/A9.4. Should this section reference be 11/A9.4? **Answer: This is a new concrete stair. Detail 11/A9.4 is the correct detail.**

**24. Contractor Question:**

Please confirm that the only place for the retrofit nosings will be at the main entry stairs. **Answer: CONFIRMED.**

**25. Contractor Question:**

Reference item 65 in addendum 2; the original question should have referenced sheet L-10 note 15. Just to the east of the subject ramp, a planter is indicated with a planter wall, the planter wall is detailed on L-41. Section 11/S2.2 does not provide detail for relationship of ramp edge to the planter wall. Please provide details of planter wall footings, stepping required if any and also show the relationship of planter wall footing, planter wall, and ramp edge adjacent to planter wall. Also indicate the bottom of the planter depth, any waterproofing required, and drainage required if any. **Answer: The planter wall is the face of the ramp. See sheet L-43, which matches the structural detail shown in Section 11/S2.2**

**26. Contractor Question:**

Reference item 11 in addendum 2; with regard to the unknown work which will be determined after a complete evaluation is completed, is the city carrying a separate allowance for this work, or will an allowance be assigned to include in our bid? **Answer: Sheet A5.5, Photographic details, shows the extent and scope of typical repairs. Details 13 and 19 occur at every window. The West Façade of Building B is shown in Details 1,4 and 6. Sheets A1.2 thru A1.8 inclusive shows the extent of demolition. Everything you touch will require repair. The evaluation referenced in Section 030100.3.01.A refers to work that is visible or referenced in the documents. Truly unforeseen conditions will be covered by the owner's contingency referenced in the bid documents.**

**27. Contractor Question:**

Addendum 2, item 6, we cannot find the revised proposal form on Demandstar with 8 alternates. Please provide. **Answer: The revised Bid Form was included in Addendum Number 1 and includes all 8 alternates.**

**28. Contractor Question:**

Re: Sheet S1.1, note 17 "Sika Carbodur Type S 512 strips around column at 1'-6" O.C... Question - Could CFRP cloth be used? Carbodur strips cannot be "wrapped". **Answer: See revised sheet S1.1, note 17 submitted with Addendum 2.**

**29. Contractor Question:**

Re: Sheet S1.1 - Question - Dimensions of columns to be wrapped (W x D x H). **Answer: Columns are 18" x 18" with top of column elevation at approximately 11'-6" above finish grade (overall column height from top of footing approximately 13'-0"). Dimensions to be field verified.**

**30. Contractor Question:**

Re: A16.3, Detail 4: "Historic column capital to remain". Question: Does the wrap/strips stop at the bottom of the historic capitals, or to the top of the actual column? **Answer: The carbon fiber wrap and strips may stop at the bottom of the caps.**

**31. Contractor Question:**

**Re: Sheet S1.1, note 18 "...Strips shall be continuous for full height of wall floor-to-floor from just below roof coping to ground floor ledge."**

Question : On inside face, through roof to top of parapet at parapet coping, or to underside of new roof structure? Overall height of strip? **Answer: The carbon fiber strips shall stop at the underside of the roof deck. Overall height (top of first floor to underside of roof deck) = 30'-0".**

Question: On outside face, do the strips stop at the bottom of the cornice, or though the cornice to parapet coping? Overall height of strip? **Answer: The carbon fiber strips shall stop at the bottom of the cornice. Overall height (top of first floor to bottom of cornice) approximately 28'-6" (field verify).**

**32. Substitution Request – MAPEI CFRP products:**

The MAPEI products are an acceptable alternative to the Sika products as follows:

- A. MAPEI Carboplate E170/50/1,2 as an alternate for Sika Carbodur S 512 strips.
- B. MAPEI MapeWrap C Uni-AX 600 as an alternate for SikaWrap Hex 103C.

Each shall be applied with the corresponding primer and epoxy per the manufacturer.

**33. Contractor Question:**

Re: Door number 127, Room Number 127, Door Hardware group 45. Door contacts called for in 3.5 Schedule of Finish Hardware, but not on the drawings. Which is correct? **Answer: Finish Hardware Schedule is correct.**

**34. Contractor Question:**

Re: Door number 134, Room Number 134, Door Hardware group 17. Nothing on the plans showing access control but mentioned in 3.5 Schedule of Finish Hardware. Which is correct? **Answer: Finish Hardware Schedule is correct.**

**35. Contractor Question:**

Re: Door number 154, Room Number 154, Door Hardware group 46. Door contacts called for in 3.5 Schedule of Finish Hardware, but not on the drawings. Which is correct? **Answer: Finish Hardware Schedule is correct.**

**36. Contractor Question:**

Re: Door number 155, Room Number 155, Door Hardware group 45. Door contacts called for in 3.5 Schedule of Finish Hardware, but not on the drawings. Which is correct? **Answer: Finish Hardware Schedule is correct.**

**37. Contractor Question:**

Re: Door number 156, Room Number 156, Door Hardware group 9. Door contacts called for in 3.5 Schedule of Finish Hardware, but not on the drawings. Which is correct? **Answer: Finish Hardware Schedule is correct.**

**38. Contractor Question:**

Re: Door number 161, Room Number 161, Door Hardware group 14. Door contacts called for in 3.5 Schedule of Finish Hardware, but not on the drawings. Which is correct? **Answer: Finish Hardware Schedule is correct.**

**39. Contractor Question:**

Is there a sub-floor in Server/Telephone Room 244? **Answer: No.**

**40. Contractor Question:**

Is air aspirating smoke detection required in the Server/Telephone Room? **Answer: No. Optional Upgrade.**

**41. Contractor Question:**

Is an unconnected reserve Novec 1230 Tank required for this project? **Answer: No. Optional Upgrade.**

**42. Contractor Question:**

Is a dedicated graphic annunciator required for the Novec 1230 releasing panel? **Answer: No. Optional upgrade. There is a control panel included with the system. Limited number of devices in a single room.**

**43. Contractor Question:**

Re: Sheet FP2.2B, Server Phone Room 244: Please note that the above ceiling space is not indicated to be protected on the FP drawing for clean agent fire suppression. Please confirm the above ceiling space will not need protection. **Answer: A revised drawing is attached to this Addendum.**

**Attachments:**

- A. Specification Section 10 14 00 – Signage
- B. Revised Specification Section 08 43 13 – Aluminum Framed Storefronts
- C. Revised Specification Section 08 71 00 - Door Hardware
- D. Updated Architectural Sheets A7.1, A11.9, A12.1.
- E. Revised Fire Protection Sheet FP2.2B

All Bidders shall acknowledge receipt and acceptance of this Addendum No. 2 by acknowledging Addendum in their proposal or by submitting the addendum with the bid package. Bids submitted without acknowledgement or without this Addendum may be considered non-responsive.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Name of Business

SECTION 101400  
SIGNAGE

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Room and door signs.
- B. Directional and informational signs.
- C. Emergency evacuation map signs.
- D. Fire / smoke barrier identification signs.
- D. Three-dimensional fire extinguisher markers.
- E. Free-Standing Signage

1.02 RELATED REQUIREMENTS

- A. Section 013516.04 - LEED New Product Content Form
- B. Section 013516.05 - LEED New Product Source Form
- C. Section 013516.07 - LEED Prohibited Content Installer Certification
- D. Section 016116 - Volatile Organic Compound (VOC) Content Restrictions
  - 1. Attachment 1 - Accessory Material VOC Content Certification Form
- E. Section 092116 - Gypsum Board Assemblies:
  - 1. Fire / Smoke Barrier Identification Signs, to be installed on gypsum board walls/partitions within concealed spaces above decorative ceiling.

1.03 REFERENCE STANDARDS

- A. See Section 014219 - Reference Standards for additional information.
- B. American Architectural Manufacturers Association (AAMA):
  - 1. AAMA 611 -- Voluntary Specification for Anodized Architectural Aluminum
  - 2. AAMA 2605 -- Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminum Extrusions and Panels.
- C. American National Standards Institute (ANSI).
- D. Florida Building Code, 2010 edition (FBC):
  - 1. FBC-B -- Florida Building Code, Building (including 2013 Supplement).
  - 2. FBC-A -- Florida Building Code, Accessibility, 2012 edition.
- E. International Code Council, Inc. (ICC):
  - 1. ANSI/ICC A117.1 -- American National Standard for Accessible and Usable Buildings and Facilities.

2. IBC -- International Building Code.
  - a. IBC-2000 -- International Building Code; 2000 edition.
  - a. IBC-2003 -- International Building Code; 2003 edition.
- F. National Fire Protection Association (NFPA):
  1. NFPA 10 -- Standard for Portable Fire Extinguishers.

#### 1.04 SUBMITTALS

- A. Refer to Section 013000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Manufacturer's printed product literature for each type of sign, indicating sign styles, font, foreground and background colors, materials, and installation methods of each sign type.
- C. Shop Drawings:
  1. Indicate the following:
    - a. Complete details for each individual sign in the project, including but not limited to sign type, material(s), size, text, location, and mounting method.
    - b. Sign details, including overall dimensions and message layout for each individual sign in the project.
  2. Signage Schedule: Provide information sufficient to completely define each sign for fabrication, including room number, room name, other text to be applied, sign and letter sizes, fonts, and colors.
    - a. When room numbers to appear on signs differ from those on the drawings, include the drawing room number on schedule.
  3. Submit for approval prior to fabrication.
- D. Samples:
  1. Product Samples: Submit two samples of each type of sign, of size similar to that required for project, illustrating sign style, font, and method of attachment.
  2. Selection Samples: Where colors are not specified, submit two sets of color selection charts or chips.
  3. Verification Samples: Submit samples showing colors specified.
- E. LEED Report: Submit VOC content documentation for all materials, components and mounting adhesives and sealants.
- F. Manufacturer's Installation Instructions: Include a comprehensive Standards Manual in both a paper and PDF format. The manual shall include all graphic standards, sign type descriptions, renderings showing color, pattern and finish, engineering drawings, location plans, plots, artwork, insert templates, mounting detail, and reorder information.

#### 1.05 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum five years of documented experience.
- B. Single Sourcing: Obtain signs from one source and a single manufacturer.
- C. Installer Qualifications: Installation shall be performed by manufacturer's personnel trained and certified in manufacturer's methods and procedures.

## 1.06 DELIVERY, STORAGE, AND PROTECTION

- A. Package signs as required to prevent damage before installation.
- B. Package room and door signs in sequential order of installation, labeled by floor or building.
- C. Store pressure-sensitive adhesive at normal room temperature.

## 1.07 WARRANTY

- A. Provide manufacturer's warranty against defects in materials and workmanship for minimum 5 years.

## 1.08 ENVIRONMENTAL REQUIREMENTS

- A. Do not install pressure-sensitive adhesive when ambient temperature is lower than recommended by manufacturer.
- B. Maintain this minimum temperature during and after installation of signs.

## PART 2 - PRODUCTS

### 2.01 BASIS OF DESIGN

- A. Signage shall be as manufactured by Takeform Architectural Graphics; One Mahar Way; Medina, NY 14103; Tel. 1.800.528.1398; 585-798-8888; [www.takeform.net](http://www.takeform.net); or Architect approved equal.
- B. Other manufacturers:
  - 1. A.R.K. Ramos Architectural Signage Systems; Oklahoma City, OK; Tel. 800-725-7266 or 405-235-5505; Fax. 405-232-8516; [www.arkramos.com](http://www.arkramos.com).
  - 2. Best Sign Systems, Inc: [www.bestsigns.com](http://www.bestsigns.com).
  - 3. Gemini Incorporated: 103 Mensing Way; Cannon Falls, MN. 55009; Tel. 800-538-8377.
  - 4. Seton Identification Products; 20 Thompson Road; P.O. Box 819; Branford, CT 06405; Tel. 203-488-8059; [www.seton.com/aec](http://www.seton.com/aec).

### 2.02 GENERAL

- A. Signs shall comply with applicable requirements of the governing building code, including but not limited to signs shall comply with applicable requirements of the governing building code, including but not limited to FBC-B SECTIONS 435, 703, 713, 1006, 1011, 1022, 2603, 2611 and 3002, and FBC-A SECTIONS 216, 407, and 703.
  - 1. In the event of conflicting requirements, comply with the most comprehensive and specific requirements.
- B. Stairway Identification Sign Requirements: Stairway identification signs shall comply with all of the following requirements:
  - 1. Signs shall be a minimum size of 18 inches by 12 inches (457 mm by 305 mm).
  - 2. Letters designating the identification of the stair enclosure shall be a minimum of 1.5 inches (38 mm) in height.

3. Number designating the floor level shall be a minimum of 5.0 inches (127 mm) in height and located in the center of the sign.
4. All other lettering and numbers shall be a minimum of 1.0 inch (25 mm) in height.
5. Characters and their background shall have a non-glare finish. Characters shall contrast with their background, with either light characters on a dark background or dark characters on a light background.

C. Accessibility Requirements:

1. Signs shall be provided in accordance with FBC-A SECTION 216 and shall comply with FBC-A SECTION 703.
2. Designations: Signs identifying permanent rooms and spaces shall comply with FBC-A SECTIONS 703.1, 703.2, and 703.5. Where pictograms are provided as designations of permanent interior rooms and spaces, the pictograms shall comply with FBC-A SECTION 703.6 and shall have text descriptors complying with FBC-A SECTION 703.2 and 703.5.
3. Directional and Informational Signs: Signs that provide direction to or information about interior spaces and facilities of the site shall comply with FBC-A SECTION 703.5.
  - a. Information about interior spaces and facilities includes rules of conduct, occupant load, and similar signs.
  - b. Signs providing direction to rooms or spaces include those that identify egress routes.
4. Means of Egress: Signs for means of egress shall comply with FBC-A SECTION 216.4.
  - a. Exit Doors: Doors at stairways shall be identified by tactile signs complying with FBC-A SECTIONS 703.1, 703.2, and 703.5.
  - b. Areas of Refuge: Signs required by IBC-2000 SECTION 1003.2.13.5.4 or IC-2003 SECTION 1007.6.4 to provide instructions in areas of refuge shall comply with FBC-A SECTION 703.5.
  - c. Directional Signs: Signs required by IBC-2000 SECTION 1003.2.13.6 or IC-2003 SECTION 1007.7 to provide directions to accessible means of egress shall comply with FBC-A SECTION 703.5.
5. Tactile Signage: Tactile signage shall comply with ICC/ANSI A117.1 and applicable requirements of the governing building code, including but not limited to the following:
  - a. Raised characters shall comply with FBC-A SECTION 703.2, and shall be duplicated in Braille complying with FBC-A SECTION 703.3. Raised characters shall be installed in accordance with FBC-A SECTION 703.4.
6. International Symbol of Accessibility: The International Symbol of Accessibility shall comply with FBC-A FIGURE 703.7.2.1.

D. Typography:

1. Type Style: Copy shall be a true, clean, accurate reproduction of specified typeface(s). Upper case or all caps only, as indicated in Signage Drawings and Signage Schedule. Letter spacing to be normal and interline spacing shall be set by manufacturer.
  - a. Character Font: Helvetica, Arial, or other sans serif font, unless otherwise

- indicated.
- b. Lettering Height: 5/8 inch, unless otherwise indicated.
- 2. Arrows, Symbols and Logo Art: To be provided in style, size(s), color(s) and spacing as shown in drawings.
- 3. Graphics (Pictograms): International symbols for indicated information.
- 4. Grade II Braille: Utilize perfectly round, clear insertion beads.

## 2.03 ROOM AND DOOR SIGNS - Types E.2, E.3, F, G, G.2, H, I, J.2

### A. General:

- 1. All signs shall be by same manufacturer.
- 2. All signs shall comply with specified Accessibility Requirements.
  - a. Provide "tactile" signage, with letters raised minimum 1/32 inch (0.8 mm) and Grade II Braille.

### B. Construction:

- 1. General:
  - a. Edges: Square.
  - b. Corners: Square.
  - c. Sign Size(s): As indicated on drawings.
  - d. Colors:
    - 1) Background: As indicated on Drawings; if not indicated, to be selected by Architect, from manufacturer's complete range of colors.
    - 2) Message and Graphics: As indicated on Drawings; if not indicated, to be selected by Architect, from manufacturer's complete range of colors.
- 2. Materials:
  - a. Sign face shall be 0.035 inch (nominal) standard grade, high-pressure surface laminate.
    - 1) Painted sign face is not acceptable.
  - b. Substrate shall be a natural fiber wood product comprised of natural fiber reinforced thermoset composite and organic thermoset resin, with Sustainable Forestry Initiative (SFI) certification (e.g., Takeform Green 209, or equal).
  - c. Tactile lettering shall be precision machined, raised 1/32 inch, matte finished, polyethylene-terephthalate-glycol (PETG) and subsurface colored for scratch resistance.
  - d. Signs shall incorporate a metal accent bar of anodized aluminum with a brushed satin finish.
    - 1) Painted bar is not acceptable.
  - e. Sign and backer edge shall be treated/sealed for moisture integrity.
- 3. Fabrication:
  - a. Signage shall be capable of accepting paper or acetate inserts to show changing and updating as required. Insert components shall have a 0.080 inch thickness non-glare acrylic window and shall be inlaid flush to sign face for a smooth, seamless appearance.
  - b. Signage shall be a uniform 8-1/2 inches in width, to facilitate inserts printed on standard width paper.
  - c. Signage contractor shall provide and install all signage inserts.
  - d. Manufacturer shall provide a template containing layout, font, color, artwork

and trim lines to allow Owner to produce inserts on laser or ink jet printer. The template shall be in an Acrobat (.pdf) or MS Word (.doc) format.

- e. Signage shall include modules allowing for inserts, notice holders, occupancy sliders, marker, magnetic, and cork pin boards. All modules shall be flush to sign face for a smooth, seamless appearance.
- f. Signage laminates (front and back) shall be pressure laminated and precision machined together to a 90-degree angle. Edges shall be smooth, void of chips, burrs, sharp edges and marks.
- g. Signage shall utilize an acrylic sphere for Grade II Braille inserted directly into a scratch-resistant, high-pressure laminate sign face. Braille dots are to be pressure-fit in high-tolerance drilled holes.
- h. Braille dots shall be half-hemispherical, domed and protruding a minimum of 0.025 inch.
- i. Signage shall utilize a pressure activated, water-based adhesive complying with LEED VOC limits. The adhesive shall be non-hazardous and shall allow for flexing and deflection of adhered components due to changes in temperature and moisture without bond failures.
- j. All signs shall be provided with appropriate mounting hardware. Hardware shall be finished and architectural in appearance, and suitable for the mounting surface.

C. Message(s) and Graphics: As indicated in Signage Drawings and Signage Schedule; comply with Accessibility Requirements.

D. Product: "Fusion" series as manufactured by Takeform Architectural Graphics, or equal.

#### 2.04 DIRECTIONAL AND INFORMATIONAL SIGNS - Types A.6, B, B.2, C.3, L, M

##### A. General:

- 1. All signs shall be by same manufacturer.
- 2. All signs shall comply with specified Accessibility Requirements.
  - a. Provide "tactile" signage, with letters raised minimum 1/32 inch (0.8 mm) and Grade II Braille.

##### B. Construction:

- 1. General:
  - a. Edges: Square.
  - b. Corners: Square.
  - c. Sign Size(s): As indicated on drawings.
  - d. Colors:
    - 1) Background: As indicated on Drawings; if not indicated, to be selected by Architect, from manufacturer's complete range of colors.
    - 2) Message and Graphics: As indicated on Drawings; if not indicated, to be selected by Architect, from manufacturer's complete range of colors.
- 2. Materials:
  - a. Sign face shall be 0.035 inch (nominal) standard grade, high-pressure surface laminate.
    - 1) Painted sign face is not acceptable.

- b. Substrate shall be a natural fiber wood product comprised of natural fiber reinforced thermoset composite and organic thermoset resin, with Sustainable Forestry Initiative (SFI) certification (e.g., Takeform Green 209, or equal).
  - c. Tactile lettering shall be precision machined, raised 1/32 inch, matte finished, polyethylene-terephthalate-glycol (PETG) and subsurface colored for scratch resistance.
  - d. Signs shall incorporate a metal accent bar of anodized aluminum with a brushed satin finish.
    - 1) Painted bar is not acceptable.
  - e. Sign and backer edge shall be treated/sealed for moisture integrity.
3. Fabrication:
- a. Signage laminates (front and back) shall be pressure laminated and precision machined together to a 90-degree angle. Edges shall be smooth, void of ships, burrs, sharp edges and marks.
  - b. Signage shall utilize an acrylic sphere for Grade II Braille inserted directly into a scratch-resistant, high-pressure laminate sign face. Braille dots are to be pressure-fit in high-tolerance drilled holes.
  - c. Braille dots shall be half-hemispherical, domed and protruding a minimum of 0.025 inch.
  - d. Signage shall utilize a pressure activated, water-based adhesive complying with LEED VOC limits. The adhesive shall be non-hazardous and shall allow for flexing and deflection of adhered components due to changes in temperature and moisture without bond failures.
  - e. All signs shall be provided with appropriate mounting hardware. Hardware shall be finished and architectural in appearance, and suitable for the mounting surface.
  - f. Some signs may be installed on glass. A blank backer is required to be placed on the opposite side of the glass to cover tape and adhesive. The backer shall match the sign in size and shape.
  - g. Refer to Drawings for double-sided signs, including Flag Mount, Suspended and Free-Standing types.
- C. Sign Type T - Elevator Fire Warning Signage: Provide elevator fire warning sign, posted adjacent to the elevator call station, instructing occupants to use the exit stairways and not to use the elevators in case of fire, in accordance with requirements of FBC-B SECTION 3002.3.
- 1. General:
    - a. Sign Size(s): As indicated on drawings.
      - 1) Graphic Symbol Area: 6 x 6 inches, above text message.
  - 2. Text Message: Prior to submitting shop drawings, obtain acceptance for sign wording from Authority Having Jurisdiction.
    - a. Line 1: "IN FIRE EMERGENCY, DO NOT USE ELEVATOR".
    - b. Line 2: "USE EXIT STAIRS".
- D. Sign Type N - Stair Identification Signage: Provide stair identification signage in each exit enclosure designating the floor level, the terminus of the top and bottom of the exit enclosure and the identification of the stair.

1. General:
    - a. Sign Size(s): As indicated on drawings.
    - B. Sign(s) shall also state the story of, and the direction to, the exit discharge and the availability of roof access from the enclosure for the fire department.
  2. Text Message: As indicated on drawings.
- E. Sign Type E - Exit Stair Door Signage: At each exit stair door, provide tactile signage.
1. General:
    - a. Sign Size(s): As indicated on drawings.
  2. Text Message: "EXIT".
- F. Product: "Fusion" series as manufactured by Takeform Architectural Graphics, or equal.

## 2.05 SIGNAGE TYPE D - EMERGENCY EVACUATION MAP SIGNS

- A. General:
1. All signs shall be by same manufacturer.
- B. Construction:
1. General:
    - a. Edges: Square.
    - b. Corners: Square.
    - c. Sign Size(s): As indicated on drawings.
    - d. Colors:
      - 1) Background: As indicated on Drawings; if not indicated, to be selected by Architect, from manufacturer's complete range of colors.
      - 2) Message and Graphics: As indicated on Drawings; if not indicated, to be selected by Architect, from manufacturer's complete range of colors.
  2. Materials:
    - a. Sign face shall be 0.035 inch (nominal) standard grade, high-pressure surface laminate.
      - 1) Painted sign face is not acceptable.
    - b. Substrate shall be a natural fiber wood product comprised of natural fiber reinforced thermoset composite and organic thermoset resin, with Sustainable Forestry Initiative (SFI) certification (e.g., Takeform Green 209, or equal).
    - c. Signs shall incorporate a metal accent bar of anodized aluminum with a brushed satin finish.
      - 1) Painted bar is not acceptable.
    - d. Sign and backer edge shall be treated/sealed for moisture integrity.
  3. Fabrication:
    - a. Signage shall be capable of accepting paper or acetate inserts to show changing and updating as required. Insert components shall have a 0.080 inch thickness non-glare acrylic window and shall be inlaid flush to sign face for a smooth, seamless appearance.
    - b. Signage shall be a uniform 11 inches in width, to facilitate inserts printed on standard width paper.
    - c. Signage contractor shall provide and install all signage inserts.
    - d. Manufacturer shall provide a template containing layout, font, color, artwork

and trim lines to allow Owner to produce inserts on laser or ink jet printer. The template shall be in an Acrobat (.pdf) or MS Word (.doc) format.

- e. Signage shall include modules allowing for inserts, notice holders, occupancy sliders, marker, magnetic, and cork pin boards. All modules shall be flush to sign face for a smooth, seamless appearance.
- f. Signage laminates (front and back) shall be pressure laminated and precision machined together to a 90-degree angle. Edges shall be smooth, void of ships, burrs, sharp edges and marks.
- g. Signage shall utilize a pressure activated, water-based adhesive complying with LEED VOC limits. The adhesive shall be non-hazardous and shall allow for flexing and deflection of adhered components due to changes in temperature and moisture without bond failures.
- h. All signs shall be provided with appropriate mounting hardware. Hardware shall be finished and architectural in appearance, and suitable for the mounting surface.

C. Message(s) and Graphics: As indicated in Signage Drawings and Signage Schedule; comply with Accessibility Requirements.

D. Product: "Fusion" series as manufactured by Takeform Architectural Graphics, or equal.

## 2.09 SIGNAGE TYPE U - FIRE/SMOKE BARRIER PENETRATION IDENTIFICATION SIGNS

### A. General:

- 1. Provide signs at all new and existing fire walls, fire barriers, fire partitions, smoke barriers, smoke partitions and other walls required to have protected openings.
- 2. Signs shall comply with applicable requirements of the governing building code including but not limited to FBC-B SECTION 713.6.
- 3. Sign quantity and locations are not indicated on the drawings. Contractor shall provide signs in quantities and locations to be determined by the Architect during construction.

B. Fire walls, fire barriers, fire partitions, smoke barriers and smoke partitions or any other wall required to have protected openings shall be effectively and permanently identified with signs or stenciling in a manner acceptable to the Architect and AHJ.

- 1. Such identification shall be installed above the decorative ceiling and in concealed spaces at locations to be determined by the Architect during construction.
- 2. Text message to read as follows: "FIRE AND SMOKE BARRIER - PROTECT ALL OPENINGS," or as otherwise approved or directed by the AHJ.

## 2.07 SIGN TYPE V - THREE-DIMENSIONAL FIRE EXTINGUISHER MARKERS

### A. General:

- 1. The location of each fire extinguisher shall be marked with an angular sign specifically designed for marking the location of fire extinguisher, in accordance with NFPA 10.

B. Sign Material: Rigid vinyl.

- C. Sign Dimensions: 4 inches wide x 18 inches high.
- D. Colors:
  - 1. Background: White arrow on red field.
  - 2. Text: Red.
- E. Text Message: "FIRE EXTINGUISHER".
- F. Product: Model 39445 as manufactured by Seton, or equal.

## 2.08 SIGNAGE TYPE S.3 - DIRECTIONAL, Free Standing Signage

### A. General:

- 1. The signage shall incorporate a decorative laminate face with applied graphics.
- 2. The free-standing signs shall match in overall appearance including shape, finish, copy style and color other signage in the facility including but not limited to workstations, room ID's, directional and directories in order to achieve a consistence look throughout.

### B. Materials:

- 1. Sign construction shall be high pressure laminate finish on solid hardwood substrate. Edges shall match face. Unit shall have a furniture grade appearance.
- 2. Sign face shall be 0.035" (nominal) standard grade, high pressure surface laminate. A painted or printed sign face shall not be acceptable.

### C. Standard Colors:

- 1. Face/background color shall be standard grade, high pressure laminate, all colors and finishes. Refer to drawings.
- 2. Copy colors shall match manufacturer's standard color selection. Refer to drawings.

### D. Construction:

- 1. The unit shall be single or double-sided as shown on drawings. The appearance and functionality of the two sides shall be selectable by the Owner. Refer to drawings.
- 2. The unit shall be capable of accepting full length or half length printed inserts. The inserts shall be changeable by Owner. Functionality shall also include pamphlet and brochure holders, work surfaces, shelf, directory inserts, back-lit panels and graphic side panels. Refer to drawings.
- 3. All hardware including accent bar, support posts and clevises shall be brushed or polished aluminum and decorative in appearance. Painted hardware shall not be acceptable.
- 4. The unit shall be equipped with a weighted steel plate and shall retain positive stability up to a 17 degree tipping angle.
- 5. Insert components shall have a non-glare acrylic window and may be either flush mounted or with stand-offs. Refer to drawings.
- 6. The unit shall utilize a pressure activated adhesive. The adhesive shall be nonhazardous and shall allow for flexing and deflection of the adhered components due to changes in temperature and moisture without bond failure.

E. Printed Inserts:

1. The signage shall be capable of accepting paper or acetate inserts to allow changing and updating as required.
2. The manufacturer shall provide and install all inserts.
3. Manufacturer shall provide a template containing layout, font, color, artwork and trim lines to allow Owner to produce inserts on laser or ink jet printer. The template shall be in an Acrobat or Word format (.pdf).

F. Product: "Stance" as manufactured by Takeform Architectural Graphics, or equal.

2.09 SIGNAGE TYPE W - DIMENSIONAL BUILDING LETTERS AND NUMBERS:

- A. Fabrication: Letters shall be fabricated from cast bronze. Letters shall be cleaned by chemical etching or cleaned ultrasonically in a special degreasing bath. Letters shall be packaged for protection until installation.
- B. Typeface: Typeface shall be Trajan Bold, or Architect approved equal.
- C. Size: Letter size shall be as indicated on Drawings; if not indicated, 12 inches high.
- D. Finish: AAMA 2605 multiple coat, thermally cured polyvinylidene fluoride (PVDF) system.
  1. Color: Bronze
- E. Mounting: Threaded studs of number and size as recommended by manufacturer, shall be used for concealed anchorage. Letters which project from the building line shall have stud spacer sleeves. Letters, studs, and sleeves shall be of the same material. Templates for mounting shall be supplied.

2.10 SIGNAGE TYPE X - BUILDING DEDICATION PLAQUE

- A. General:
  1. Provide one building dedication plaque as indicated on Drawings.
- B. Cast Metal Plaque:
  1. Design of building dedication plaque shall be as shown on Drawings.
  2. Fabrication: Cast metal plaque shall have the logo, emblem and artwork cast in the flat relief technique. Plaques shall be fabricated from bronze.
    - a. Size: Plaque size shall be as shown.
    - b. Border: Border shall be plain edge.
    - c. Background: Background texture shall be fine pebble.
  3. Mounting: Mounting shall be concealed.
  4. Finish: Finishes shall consist of bronze with dark finish oxidized background. Letters shall be satin polished and entire plaque sprayed with two coats of clear lacquer.

2.11 ACCESSORIES

- A. Installation accessories specified in manufacturer's instructions.
- B. Tape Adhesive: Double sided tape, permanent adhesive.

- C. Concealed Screws: Stainless steel, galvanized steel, chrome-plated, or other non-corroding metal.
- D. Exposed Screws: Stainless steel.

## PART 3 - EXECUTION

### 3.01 EXAMINATION

- A. Verify that substrate surfaces are ready to receive work.
- B. Installer shall examine signs for defects, damage and compliance with specifications and accepted shop drawings.
- C. Installation shall not proceed until satisfactory conditions are corrected.

### 3.02 INSTALLATION

- A. Install in accordance with accepted shop drawings, manufacturer's instructions, and applicable requirements of the governing building code.
- B. Signs shall be level, plumb, and at heights indicated, with sign surfaces free from defects.
- C. Install signs in locations and at mounting heights indicated on Drawings, and as follows:
  - 1. Room and Door Signs:
    - a. Install on wall at latch side of door with centerline of sign at 60 inches (1524 mm) above finished floor.
  - 2. Directional and Informational Signs:
    - a. Elevator Fire Warning Signage: Install on wall adjacent to elevator hall controls, with centerline of sign at 60 inches (1524 mm) above finished floor.
    - b. Stair Identification Signage: Install sign in each exit enclosure, with centerline of sign at 60 inches (1524 mm) above finished floor in a position that is readily visible when the doors are in the open and closed positions.
    - c. Exit Stair Door Signage: Install on wall adjacent to latch side of exit stair door, with centerline of sign at 60 inches (1524 mm) above finished floor.
  - 3. Emergency Evacuation Maps:
    - a. Install signage in location(s) and at mounting height(s) indicated on Drawings.
  - 4. Fire/Smoke Barrier Identification Signs: Each fire or smoke barrier (i.e., fire wall, fire barrier, fire partition, smoke barrier, smoke partition, or other wall required to have protected openings) shall be effectively and permanently identified with signs in a manner acceptable to the Architect and Authority Having Jurisdiction (AHJ), in accordance with requirements of FBC-B SECTION 703.6, and as follows:
    - a. Signs shall be installed on surface of fire or smoke barrier above decorative ceiling, within accessible concealed floor-ceiling space.
    - b. Sign locations are not indicated on the drawings. At each fire or smoke barrier indicated on drawings, install signs on both sides of each such wall or partition, at intervals of minimum 30 feet (914 cm) on center measured horizontally along the fire or smoke barrier.
  - 5. Three-Dimensional Fire Extinguisher Markers:
    - a. Install above fire extinguisher cabinet at height indicated on drawings.

6. Raised Letter Signs:
    - a. Install signage in location(s) and at mounting height(s) indicated on Drawings.
  7. If no location or mounting height is indicated, obtain Architect's instructions.
- D. Upon completion of the work, remove unused or discarded materials, containers and debris from site.
- E. Protect from damage until Substantial Completion; repair or replace damage items.

### 3.03 SIGN SCHEDULE

- A. Refer to drawings.

END OF SECTION

SECTION 084313  
ALUMINUM-FRAMED STOREFRONTS

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Interior aluminum-framed glazed storefronts and storefront entrances.

1.02 RELATED REQUIREMENTS

- A. Section 013516.04 - LEED New Product Content Form
- B. Section 013516.05 - LEED New Product Source Form
- C. Section 013516.07 - LEED Prohibited Content Installer Certification
- D. Section 016116 - Volatile Organic Compound (VOC) Content Restrictions
  - 1. Attachment 1 - Accessory Material VOC Content Certification Form
- E. Section 079005 - Joint Sealers: Perimeter sealant and back-up materials.
- F. Section 087100 - Door Hardware: Hardware items other than specified in this section.
- G. Section 088000 - Glazing: Glass and glazing accessories.

1.03 REFERENCE STANDARDS

- A. For requirements relating to reference standards, see Section 014219 - Reference Standards.
- B. American Architectural Manufacturers Association
  - 1. AAMA CW-10 -- Care and Handling of Architectural Aluminum from Shop to Site.
  - 2. AAMA 611 -- Voluntary Specification for Anodized Architectural Aluminum.
- C. American Society for Testing and Materials (ASTM):
  - 1. ASTM B221 -- Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.
  - 2. ASTM B221M -- Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes [Metric].

1.04 ADMINISTRATIVE REQUIREMENTS

- A. Pre-installation Meeting: Conduct a pre-installation meeting one week before starting work of this section; require attendance by all affected installers.

1.05 SUBMITTALS

- A. General:
  - 1. For submittal procedures, refer to Section 007200 - General Conditions (AIA A201

- 2007SP, including but not limited to Section 3.12) and Section 013000 - Administrative Requirements.

- B. Product Data: Provide component dimensions, describe components within assembly, anchorage and fasteners, glass and glazing, and door hardware.
- C. Shop Drawings: Indicate system dimensions, framed opening requirements and tolerances, interfaces with adjacent and affected related Work (including finishes), expansion and contraction joint location and details, and field welding required. Manufacturer's standard details without adjacent and related Work will be returned unresponsive.
- D. Design Data: Provide framing member structural and physical characteristics, dimensional limitations.
- E. LEED Submittals:
  - 1. General:
    - a. Collect and submit data as required for completing the applicable LEED Submittal Template(s).
  - 2. Product Data for Credit MR 4.1 and Credit MR 4.2: For products having recycled content, submit documentation required to complete the recycled content calculation table in the LEED Submittal Template, including but not limited to: a tabulation of each such material, including a description of the material, the manufacturer of the material, the product cost, the pre-consumer and post-consumer recycled content percentages (by weight), and the source of the recycled content data.
  - 3. Submit VOC content documentation for all non-preformed sealants and touch-up paints and coatings.
- F. Hardware Schedule: Complete itemization of each item of hardware to be provided for each door, cross-referenced to door identification numbers in Contract Documents.
- G. Samples: Submit two sample mullions 12 inches (300 mm) in length illustrating finished aluminum surface and glazing materials.

#### 1.06 QUALITY ASSURANCE

- A. Manufacturer and Installer Qualifications: Company specializing in manufacturing aluminum glazing systems with minimum three years of documented experience.

#### 1.07 DELIVERY, STORAGE, AND HANDLING

- 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 that bond to aluminum when exposed to sunlight or weather.

#### 1.08 FIELD CONDITIONS

- A. Do not install sealants when ambient temperature is less than 40 degrees F (5 degrees C). Maintain this minimum temperature during and 48 hours after installation.

- B. Field Measurements: Verify actual measurements/openings by field measurements before fabrication; show recorded measurements on shop drawings. Coordinate field measurements, fabrication schedule with construction progress to avoid construction delays.

#### 1.09 WARRANTY

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

### PART 2 - PRODUCTS

#### 2.01 BASIS OF DESIGN -- FRAMING FOR MONOLITHIC GLAZING

- A. Storefront System (Center-Set Style):
  - 1. Basis of Design: IR500 Storefront System by the Kawneer Company, Inc.
  - 2. Vertical Mullion Dimensions: 2-1/2" x 5" (63.5 mm x 127 mm) nominal dimension; Non-Thermal; Center Plane for 1/4" (6.4 mm) Non-Impact Resistant Glazing, Screw Spline Fabrication.
- B. Storefront Entrance System:
  - 1. Basis of Design: Standard 500 Wide-Stile Entrance Doors by the Kawneer Company, Inc.
  - 2. The door stile and rail face dimensions of the 500 Series entrance door shall be as follows:
    - a. Vertical Stile: 5" (127 mm)
    - b. Top Rail: 5" (127 mm)
    - c. Bottom Rail: 6-1/2" (166 mm)
  - 3. Major portions of the door members to be 0.125" (3.2) nominal in thickness and glazing molding to be 0.05" (1.3) thick.
  - 4. Glazing gaskets shall be either EPDM elastomeric extrusions or a thermoplastic elastomer.
  - 5. Provide adjustable glass jacks to help center the glass in the door opening
- C. Substitutions: See Section 016000 - Product Requirements.
  - 1. For any product not identified as "Basis of Design", submit information as specified for substitutions.
  - 2. Other Manufacturers: Subject to compliance with the contract requirements, equivalent product manufactured by other listed manufacturers may be proposed in accordance with substitution provisions.

#### 2.02 STOREFRONT AND STOREFRONT ENTRANCES

- A. Aluminum-Framed Storefront: Factory fabricated, factory finished aluminum framing members with infill, and related flashings, anchorage and attachment devices.
  - 1. Finish: Class I color anodized finish.

- a. Factory finish all surfaces that will be exposed in completed assemblies.
- b. Coat concealed metal surfaces that will be in contact with cementitious materials or dissimilar metals with bituminous paint.
3. Fabrication: Joints and corners flush, hairline, and weatherproof, accurately fitted and secured; prepared to receive anchors and hardware; fasteners and attachments concealed from view; reinforced as required for imposed loads.
4. Expansion/Contraction: Provide for expansion and contraction within system components caused by cycling temperature range of 170 degrees F (95 degrees C) over a 12 hour period without causing detrimental effect to system components, anchorages, and other building elements.
5. Movement: Allow for movement between storefront and adjacent construction, without damage to components or deterioration of seals.
6. Perimeter Clearance: Minimize space between framing members and adjacent construction while allowing expected movement.

### 2.03 COMPONENTS

- A. Aluminum Framing Members: Tubular aluminum sections.
  1. Glazing Stops: Flush.
  2. Cross-Section: As indicated on drawings.
  3. Structurally Reinforced Members: Extruded aluminum with internal reinforcement of structural steel member.
- B. Glazing: Type 1CFT as specified in Section 088000 - Glazing.

### 2.04 MATERIALS

- A. Extruded Aluminum: ASTM B221 (ASTM B221M).
- B. Fasteners: Stainless steel.
- C. Perimeter Sealant: Type specified in Section 079005 - Joint Sealers.
- D. Glazing Gaskets: Provide permanently elastic, non-shrinking, and non-migrating type to suit application to achieve weather, moisture, and air infiltration requirements.
- E. Glazing Accessories: As specified in Section 088000 - Glazing.

### 2.06 FINISHES

- A. Class I Color Anodized Finish: AAMA 611 AA-M10C22A44 Integrally colored anodic coating or AAMA 612 electrolytically deposited colored anodic coating with electrolytically deposited organic seal; not less than 0.7 mils (0.018 mm) thick.
  1. Color: Black.
- C. Touch-Up Materials: As recommended by coating manufacturer for field application.

### 2.07 HARDWARE

- A. Coordinate and prepare storefront frames to receive hardware specified in Section 087100 - Door Hardware.

- B. Weatherstripping: Provide door weatherstripping on a single acting offset pivot or butt hung door and frame (single or pairs) comprised of a thermoplastic elastomer weatherstripping on a tubular shape with a semi-rigid polymeric backing.
- C. Brackets and Reinforcements: Manufacturer's standard high-strength aluminum, with non-staining, nonferrous shims for aligning system components.
- D. Fasteners and Accessories: Manufacturer's standard corrosion-resistant, non-staining, non-bleeding fasteners and accessories compatible with adjacent materials. Where exposed, components shall be stainless steel.
- E. Perimeter Anchors: When steel anchors are used, provide insulation between steel material and aluminum material to prevent galvanic action.

## 2.08 FABRICATION

- A. Fabricate components that, when assembled, have the following characteristics:
  1. Profiles that are sharp, straight, and free of defects or deformations.
  2. Accurately fit joints; make joints flush, hairline.
  3. Accommodations for thermal and mechanical movements of glazing and framing to maintain required glazing edge clearances.
  4. Provisions for field replacement of glazing.
  5. Fasteners, anchors, and connection devices that are concealed from view to greatest extent possible.
- B. Fabricate components for assembly using manufactures standard installation instructions.

## 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. Coordinate attachment and seal of perimeter air and vapor barrier materials.

- G. Pack fibrous insulation in shim spaces at perimeter of assembly to maintain continuity of thermal barrier.
- H. Set thresholds secure.
- I. Install hardware using templates provided.
  - 1. For hardware installation requirements, see Section 087100 - Door Hardware.
- J. Using glazing method required to achieve performance criteria, install glass in accordance with Section 088000 - Glazing.
- K. Install perimeter sealant in accordance with Section 079005 - Joint Sealers.
- L. Touch-up minor damage to factory applied finish; replace components that cannot be satisfactorily repaired.

### 3.03 TOLERANCES

- A. Maximum Variation from Plumb: 0.06 inches every 3 ft (1.5 mm/m) non-cumulative or 1/16 inches per 10 ft (1.5 mm/3 m), whichever is less.
- B. Maximum Misalignment of Two Adjoining Members Abutting in Plane: 1/32 inch (0.8 mm).

### 3.04 ADJUSTING

- A. Adjust operating hardware for smooth operation.

### 3.05 CLEANING

- 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.

### 3.06 PROTECTION

- A. Protect installed products from damage during subsequent construction.

END OF SECTION

## SECTION 08 71 00

### DOOR HARDWARE

#### PART 1 - GENERAL

##### 1.1 SUMMARY:

- A. Section Includes: Finish Hardware for door openings, except as otherwise specified herein.
1. Door hardware for steel (hollow metal) doors.
  2. Door hardware for aluminum doors.
  3. Door hardware for wood doors.
  4. Door hardware for other doors indicated.
  5. Keyed cylinders as indicated.
- B. Related Sections:
1. Section 061000 - Rough Carpentry.
  2. Division 8: Aluminum Doors and Frames
  3. Division 8: Hollow Metal Doors and Frames.
  4. Division 8: Wood Doors.
  5. Division 26 - Electrical
  6. Division 28 - Electronic Security
- C. References: Comply with applicable requirements of the following standards. Where these standards conflict with other specific requirements, the most restrictive shall govern.
1. Builders Hardware Manufacturing Association (BHMA)
  2. NFPA 101 - Life Safety Code
  3. NFPA 80 - Fire Doors and Windows
  4. ANSI-A156.xx - Various Performance Standards for Finish Hardware
  5. UL10C - Positive Pressure Fire Test of Door Assemblies
  6. ANSI-A117.1 - Accessible and Usable Buildings and Facilities
  7. DHI /ANSI A115.IG - Installation Guide for Doors and Hardware
  8. Florida Building Codes for Hurricane (NOA) for exterior openings.
- D. Intent of Hardware Groups
1. Should items of hardware not definitely specified be required for completion of the Work, furnish such items of type and quality comparable to adjacent hardware and appropriate for service required.
  2. Where items of hardware aren't definitely or correctly specified, are required for completion of the Work, a written statement of such omission, error, or other discrepancy to be submitted to Architect, prior to date specified for receipt of bids

for clarification by addendum; or, furnish such items in the type and quality established by this specification, and appropriate to the service intended.

E. Allowances

1. Refer to Division 1 for allowance amount and procedures.

F. Alternates

1. Refer to Division 1 for Alternates and procedures.

1.2 SUBSTITUTIONS:

- A. Comply with Division 1.

1.3 SUBMITTALS:

- A. Comply with Division 1.

- B. Special Submittal Requirements: Combine submittals of this Section with Sections listed below to ensure the "design intent" of the system/assembly is understood and can be reviewed together.

- C. Product Data: Manufacturer's specifications and technical data including the following:

1. Detailed specification of construction and fabrication.
2. Manufacturer's installation instructions.
3. Wiring diagrams for each electric product specified. Coordinate voltage with electrical before submitting.
4. Submit 6 copies of catalog cuts with hardware schedule.
5. Provide 9001-Quality Management and 14001-Environmental Management for products listed in Materials Section 2.2

- D. Shop Drawings - Hardware Schedule: Submit 6 complete reproducible copy of detailed hardware schedule in a vertical format.

1. List groups and suffixes in proper sequence.
2. Completely describe door and list architectural door number.
3. Manufacturer, product name, and catalog number.
4. Function, type, and style.
5. Size and finish of each item.
6. Mounting heights.
7. Explanation of abbreviations and symbols used within schedule.
8. Detailed wiring diagrams, specially developed for each opening, indicating all electric hardware, security equipment and access control equipment, and door and frame rough-ins required for specific opening.

- E. Templates: Submit templates and "reviewed Hardware Schedule" to door and frame supplier and others as applicable to enable proper and accurate sizing and locations of cutouts and reinforcing.
  - 1. Templates, wiring diagrams and "reviewed Hardware Schedule" of electrical terms to electrical for coordination and verification of voltages and locations.
- F. Samples: (If requested by the Architect)
  - 1. 1 sample of Lever and Rose/Escutcheon design, (pair).
  - 2. 3 samples of metal finishes
- G. Contract Closeout Submittals: Comply with Division 1 including specific requirements indicated.
  - 1. Operating and maintenance manuals: Submit 3 sets containing the following.
    - a. Complete information in care, maintenance, and adjustment, and data on repair and replacement parts, and information on preservation of finishes.
    - b. Catalog pages for each product.
    - c. Name, address, and phone number of local representative for each manufacturer.
    - d. Parts list for each product.
  - 2. Copy of final hardware schedule, edited to reflect, "As installed".
  - 3. Copy of final keying schedule
  - 4. As installed "Wiring Diagrams" for each piece of hardware connected to power, both low voltage and 110 volts.
  - 5. One set of special tools required for maintenance and adjustment of hardware, including changing of cylinders.

#### 1.4 QUALITY ASSURANCE

- A. Comply with Division 1.
  - 1. Exterior Openings Severe Windstorm Components testing: Listed and labeled by a testing and inspecting agency acceptable to authority having jurisdiction, based on testing according to ANSI A250.13. Further compliance with Florida Building Codes for Hurricane (NOA) for Exterior Openings.
  - 2. Statement of qualification for distributor and installers.
  - 3. Statement of compliance with regulatory requirements and single source responsibility.
  - 4. Distributor's Qualifications: Firm with 3 years experience in the distribution of commercial hardware.
    - a. Distributor to employ full time Architectural Hardware Consultants (AHC) for the purpose of scheduling and coordinating hardware and establishing keying schedule.

- b. Hardware Schedule shall be prepared and signed by an AHC.
  - 5. Installer's Qualifications: Firm with 3 years experienced in installation of similar hardware to that required for this Project, including specific requirements indicated.
  - 6. Regulatory Label Requirements: Provide testing agency label or stamp on hardware for labeled openings.
    - a. Provide UL listed hardware for labeled and 20 minute openings in conformance with requirements for class of opening scheduled.
    - b. Underwriters Laboratories requirements have precedence over this specification where conflict exists.
  - 7. Single Source Responsibility: Except where specified in hardware schedule, furnish products of only one manufacturer for each type of hardware.
- B. Review Project for extent of finish hardware required to complete the Work. Where there is a conflict between these Specifications and the existing hardware, notify the Architect in writing and furnish hardware in compliance with the Specification unless otherwise directed in writing by the Architect.
- 1.5 DELIVERY, STORAGE, AND HANDLING
- A. Packing and Shipping: Comply with Division 1.
- 1. Deliver products in original unopened packaging with legible manufacturer's identification.
  - 2. Package hardware to prevent damage during transit and storage.
  - 3. Mark hardware to correspond with "reviewed hardware schedule".
  - 4. Deliver hardware to door and frame manufacturer upon request.
- B. Storage and Protection: Comply with manufacturer's recommendations.
- 1.6 PROJECT CONDITIONS:
- A. Coordinate hardware with other work. Furnish hardware items of proper design for use on doors and frames of the thickness, profile, swing, security and similar requirements indicated, as necessary for the proper installation and function, regardless of omissions or conflicts in the information on the Contract Documents.
- B. Review Shop Drawings for doors and entrances to confirm that adequate provisions will be made for the proper installation of hardware.
- 1.7 WARRANTY:
- A. Refer to Conditions of the Contract
- B. Manufacturer's Warranty:

1. Closers: Ten years
2. Exit Devices: Three Years
3. Locksets & Cylinders: Three years
4. All other Hardware: Two years.

1.8 OWNER’S INSTRUCTION:

- A. Instruct Owner’s personnel in operation and maintenance of hardware units.

1.9 MAINTENANCE:

- A. Extra Service Materials: Deliver to Owner extra materials from same production run as products installed. Package products with protective covering and identify with descriptive labels. Comply with Division 1 Closeout Submittals Section.
  1. Special Tools: Provide special wrenches and tools applicable to each different or special hardware component.
  2. Maintenance Tools: Provide maintenance tools and accessories supplied by hardware component manufacturer.
  3. Delivery, Storage and Protection: Comply with Owner’s requirements for delivery, storage and protection of extra service materials.
- B. Maintenance Service: Submit for Owner’s consideration maintenance service agreement for electronic products installed.

PART 2 - PRODUCTS

2.1 MANUFACTURERS:

- A. The following manufacturers are approved subject to compliance with requirements of the Contract Documents. Approval of manufacturers other than those listed shall be in accordance with Division 1.

<u>Item:</u>	<u>Manufacturer:</u>	<u>Approved:</u>
Hinges	Stanley	Bommer,
Locksets	Best	Sargent, Schlage
Cylinders	Best Patented Cormax	Schlage, Sargent
Exit Devices	Precision	Von Duprin, Sargent
Narrow Stile Fire Rated	Dorma	Von Duprin
Closers	Stanley Commercial	LCN 4040XP, Norton 7500
Push/Pull Plates	Trimco	Don-Jo, Burns
Push/Pull Bars	Trimco	Don-Jo, Burns
Protection Plates	Trimco	Don-Jo, Burns
Overhead Stops	ABH	Don-Jo
Door Stops	Trimco	Don-Jo, Burns
Flush Bolts	Trimco	Don-Jo, Burns
Coordinator & Brackets	Trimco	ABH, Rockwood
Threshold & Gasketing	Reese	Zero

## 2.2 MATERIALS:

### A. Hinges: Shall be Five Knuckle Ball bearing hinges

1. Template screw hole locations
2. Bearings are to be fully hardened.
3. Bearing shell is to be consistent shape with barrel.
4. Minimum of 2 permanently lubricated non-detachable bearings on standard weight hinge and 4 permanently lubricated bearing on heavy weight hinges.
5. Equip with easily seated, non-rising pins.
6. Non Removable Pin screws shall be slotted stainless steel screws.
7. Hinges shall be full polished, front, back and barrel.
8. Hinge pin is to be fully plated.
9. Bearing assembly is to be installed after plating.
10. Sufficient size to allow 180-degree swing of door
11. Furnish five knuckles with flush ball bearings
12. Provide hinge type as listed in schedule.
13. Furnish 3 hinges per leaf to 7 foot 6 inch height. Add one for each additional 30 inches in height or fraction thereof.
14. Tested and approved by BHMA for all applicable ANSI Standards for type, size, function and finish
15. UL10C listed for Fire rated doors.

### B. Electrified Functions for Hinges: Comply with the following:

1. Power Transfer: Concealed PTFE-jacketed wires, secured at each leaf and continuous through hinge knuckle. Provide wire quantity and sizes required for electric hardware be served.
2. Monitoring: Concealed electrical monitoring switch.
3. Power Transfer and Monitoring: Concealed PTFE-jacketed wires, secured at each leaf and continuous through hinge knuckle, and with concealed electrical monitoring switch.

### C. Mortise Type Locks and Latches:

1. Tested and approved by BHMA for ANSI A156.13, Series 1000, Operational Grade 1, Extra-Heavy Duty, Security Grade 2 and be UL10C.
2. Furnish UL or recognized independent laboratory certified mechanical operational testing to 4 million cycles minimum.
3. Provide 9001-Quality Management and 14001-Environmental Management.
4. Fit ANSI A115.1 door preparation
5. Functions and design as indicated in the hardware groups
6. Solid, one-piece, 3/4-inch (19mm) throw, anti-friction latchbolt made of self-lubricating stainless steel
7. Deadbolt functions shall have 1 inch (25mm) throw bolt made of hardened stainless steel
8. Latchbolt and Deadbolt are to extend into the case a minimum of 3/8 inch (9.5mm) when fully extended

9. Auxiliary deadlatch to be made of one piece stainless steel, permanently lubricated
  10. Provide sufficient curved strike lip to protect door trim
  11. Lever handles must be of forged or cast brass, bronze or stainless steel construction and conform to ANSI A117.1. Levers that contain a hollow cavity are not acceptable
  12. Lock shall have self-aligning, thru-bolted trim
  13. Levers to operate a roller bearing spindle hub mechanism
  14. Mortise cylinders of lock shall have a concealed internal setscrew for securing the cylinder to the lockset. The internal setscrew will be accessible only by removing the core, with the control key, from the cylinder body.
  15. Spindle to be designed to prevent forced entry from attacking of lever
  16. Provide locksets with 7-pin removable and interchangeable core cylinders
  17. Each lever to have independent spring mechanism controlling it
  18. Core face must be the same finish as the lockset.
- D. Electronic Operated IDH Mortise Locks includes door position indicator and RQE switch.
- E. Exit Devices:
1. Exit devices to meet or exceed BHMA for ANSI 156.3, Grade 1.
  2. Exit devices to be tested and certified by UL or by a recognized independent laboratory for mechanical operational testing to 9 million cycles minimum with inspection confirming Grade 1 Loaded Forces have been maintained.
  3. Exit devices chassis to be investment cast steel, zinc dichromate.
  4. Exit devices to have stainless steel deadlocking ¾" through latch bolt.
  5. Exit devices to be equipped with sound dampening on touchbar.
  6. Non-fire rated exit devices to have cylinder dogging.
  7. Non-fire rated exit devices to have ¼" minimum turn hex key dogging.
  8. Touchpad to be "T" style constructed of architectural metal with matching metal end caps.
  9. Touchbar assembly on wide style exit devices to have a ¼" clearance to allow for vision frames.
  10. All exposed exit device components to be of architectural metals and "true" architectural finishes.
  11. Provide strikes as required by application.
  12. Fire exit hardware to conform to UL10C and UBC 7-2. UL tested for Accident Hazard.
  13. Exit device to be heavy investment cast stainless steel with black powder coated finish.
  14. Exit devices to have field reversible handing.
  15. Provide heavy duty vandal resistant lever trim with heavy duty investment cast stainless steel components and extra strength shock absorbing overload springs. Lever shall not require resetting. Lever design to match locksets and latchsets.
  16. Provide 9001-Quality Management and 14001-Environmental Management.

17. Vertical Latch Assemblies to have gravity operation, no springs.
18. Approved Manufacturers
  - a. The following manufacturers will be approved contingent on meeting or exceeding the above performance criteria:
    - 1) Precision Manufactured by Stanley Security Solutions

F. Cylinders:

1. Provide the necessary cylinder housings, collars, rings & springs as recommended by the manufacturer for proper installation.
2. Provide the proper cylinder cams or tail piece as required to operate all locksets and other keyed hardware items listed in the hardware sets.
3. Coordinate and provide as required for related sections.

G. Door Closers shall:

1. Tested and approved by BHMA for ANSI 156.4, Grade 1
2. UL10C certified
3. Provide 9001-Quality Management and 14001-Environmental Management.
4. Closer shall have extra-duty arms and knuckles
5. Conform to ANSI 117.1
6. Maximum 2 7/16 inch case projection with non-ferrous cover
7. Separate adjusting valves for closing and latching speed, and backcheck
8. Provide adapter plates, shim spacers and blade stop spacers as required by frame and door conditions
9. Full rack and pinion type closer with 1½" minimum bore
10. Mount closers on non-public side of door, unless otherwise noted in specification
11. Closers shall be non-handed, non-sized and multi-sized.

H. Door Stops: Provide a dome floor or wall stop for every opening as listed in the hardware sets.

1. Wall stop and floor stop shall be wrought bronze, brass or stainless steel.
2. Provide fastener suitable for wall construction.
3. Coordinate reinforcement of walls where wall stop is specified.
4. Provide dome stops where wall stops are not practical. Provide spacers or carpet riser for floor conditions encountered

I. Over Head Stops: Provide a Surface mounted or concealed overhead when a floor or wall stop cannot be used or when listed in the hardware set.

1. Concealed overhead stops shall be heavy duty bronze or stainless steel.
2. Surface overhead stops shall be heavy duty bronze or stainless steel.

J. Push Plates: Provide with four beveled edges ANSI J301, .050 thickness, size as indicated in hardware set. Furnish oval-head countersunk screws to match finish.

- K. Pulls with plates: Provide with four beveled edges ANSI J301, .050 thickness Plates with ANSI J401 Pull as listed in hardware set. Provide proper fasteners for door construction.
- L. Kickplates: Provide with four beveled edges ANSI J102, 10 inches high by width less 2 inches on single doors and 1 inch on pairs of doors. Furnish oval-head countersunk screws to match finish.
- M. Door Bolts: Flush bolts for wood or metal doors.
1. Provide a set of Automatic bolts, Certified ANSI/BHMA 156.3 Type 25 for hollow metal label doors.
  2. Provide a set of Automatic bolts, Certified ANSI/BHMA 156.3 Type 27 at wood label doors.
  3. Manual flush bolts, Certified ANSI/BHMA 156.16 at openings where allowed local authority.
  4. Provide Dust Proof Strike, Certified ANSI/BHMA 156.16 at doors with flush bolts without thresholds.
- N. Coordinator and Brackets: Provide a surface mounted coordinator when automatic bolts are used in the hardware set.
1. Coordinator, Certified ANSI/BHMA A1156.3 Type 21A for full width of the opening.
  2. Provide mounting brackets for soffit applied hardware.
  3. Provide hardware preparation (cutouts) for latches as necessary.
- O. Quick Connect Power Transfer: Power transfer device shall be a steel housing and flexible tube. Secure and inconspicuous channel is to bring power from the frame to the door.
1. Precision EPT-12C
  2. Tube shall contain 12 Wire bundle with Stanley Quick Connect Connectors one 4 wire connector consisting of two 18AWG wires and 2 24AWG wires and one 8 wire connector with 8 24AWG wires.
- P. Power Supply: UL Listed, Field Selectable 12VDC or 24VDC output. The power supply will specifically designed to support electric locks and access controls. The power supply uses 115 VAC at 800mA input. The power shall be able to be expanded to four station controls. The filtered and regulated output power is field selectable for 12 or 24 VDC.
1. Fire Alarm/Life Safety emergency release included in power supply.
  2. Available options for multiple door options four or more control stations, Adjustable Time delay relay, Battery charging, Battery Back up.
- Q. Electric Door Strike: Certified by ANSI/BHMA 156.31, Grade 1. and listed for Burglary Protection ANSI/ UL1034 Grade 1.

1. For General use provide fail-secure electric strike and with fire-rated device.
  2. Listed UL10C for Fire Door assemblies
  3. Latchbolt monitor switch option when specified in hardware sets.
  4. Provide the electric strike in the appropriate model that will accept a 5/8" or 3/4" latchbolt.
- R. Door Position Switch: Provide door position switch for door status monitoring as indicated in hardware sets.
1. At all fired rated doors the door and frames, position switch preparation will be provided by the door and frame manufacturer or by an authorized label service agent.
- S. Seals: All seals shall be finished to match adjacent frame color. Seals shall be furnished as listed in schedule. Material shall be UL listed for labeled openings.
- T. Weatherstripping: Provide at head and jambs only those units where resilient or flexible seal strip is easily replaceable. Where bar-type weatherstrip is used with parallel arm mounted closers install weatherstrip first.
1. Weatherstrip shall be resilient seal of (Neoprene, Polyurethane, Vinyl, Pile, Nylon Brush, Silicone)
  2. UL10C Positive Pressure rated seal set when required.
- U. Door Bottoms/Sweeps: Surface mounted or concealed door bottom where listed in the hardware sets.
1. Door seal shall be resilient seal of (Neoprene, Polyurethane, Nylon Brush, Silicone)
  2. UL10C Positive Pressure rated seal set when required.
- V. Thresholds: Thresholds shall be aluminum beveled type with maximum height of 1/2" for conformance with ADA requirements. Furnish as specified and per details. Provide fasteners and screws suitable for floor conditions.
- W. Provide one wall mounted Telkee, Lund or MMF series key cabinet complete with hooks, index and tags to accommodate 150% expansion. Coordinate mounting location with architect.
- X. Silencers: Furnish silencers on all interior frames, 3 for single doors, 2 for pairs. Omit where any type of seals occur.

## 2.3 FINISH:

- A. Designations used in Schedule of Finish Hardware - 3.05, and elsewhere to indicate hardware finishes are those listed in ANSI/BHMA A156.18 including coordination with traditional U.S. finishes shown by certain manufacturers for their products

- B. Powder coat door closers to match other hardware, unless otherwise noted.
- C. Aluminum items shall be finished to match predominant adjacent material. Seals to coordinate with frame color.

#### 2.4 KEYS AND KEYING:

- A. Provide keyed brass construction cores and keys during the construction period. Construction control and operating keys and core shall not be part of the Owner's permanent keying system or furnished in the same keyway (or key section) as the Owner's permanent keying system. Permanent cores and keys (prepared according to the accepted keying schedule) will be furnished to the Owner.
- B. Cylinders, removable and interchangeable core system: Best CORMAX™ Patented 7-pin.
- C. Permanent keys and cores: Stamped with the applicable key mark for identification. These visual key control marks or codes will not include the actual key cuts. Permanent keys will also be stamped "Do Not Duplicate."
- D. Transmit Grand Masterkeys, Masterkeys and other Security keys to Owner by Registered Mail, return receipt requested.
- E. Furnish keys in the following quantities:
  - 1. 1 each Grand Masterkeys
  - 2. 4 each Masterkeys
  - 3. 2 each Change keys each keyed core
  - 4. 15 each Construction masterkeys
  - 5. 1 each Control keys
- F. The Owner, or the Owner's agent, will install permanent cores and return the construction cores to the Hardware Supplier. Construction cores and keys remain the property of the Hardware Supplier.
- G. Keying Schedule: Arrange for a keying meeting, and programming meeting with Architect Owner and hardware supplier, and other involved parties to ensure locksets and locking hardware, are functionally correct and keying and programming complies with project requirements. Furnish 3 typed copies of keying and programming schedule to Architect.

### PART 3 - EXECUTION

#### 3.1 EXAMINATION

- A. Verification of conditions: Examine doors, frames, related items and conditions under which Work is to be performed and identify conditions detrimental to proper and or timely completion.

1. Do not proceed until unsatisfactory conditions have been corrected.

### 3.2 HARDWARE LOCATIONS:

- A. Mount hardware units at heights indicated in the following publications except as specifically indicated or required to comply with the governing regulations.
  1. Recommended Locations for Builder's Hardware for Standard Steel Doors and Frames, by the Door and Hardware Institute (DHI).
  2. Recommended locations for Architectural Hardware for flush wood doors (DHI).
  3. WDMA Industry Standard I.S.-1A-04, Industry Standard for Architectural wood flush doors.

### 3.3 INSTALLATION:

- A. Install each hardware item per manufacturer's instructions and recommendations. Do not install surface mounted items until finishes have been completed on the substrate. Set units level, plumb and true to line and location. Adjust and reinforce the attachment substrate as necessary for proper installation and operation.
- B. Conform to local governing agency security ordinance.
- C. Install Conforming to ICC/ANSI A117.1 Accessible and Usable Building and Facilities.
  1. Adjust door closer sweep periods so that from the open position of 70 degrees, the door will take at least 3 seconds to move to a point 3 inches from the latch, measured to the landing side of the door.
- D. Installed hardware using the manufacturers fasteners provided. Drill and tap all screw holes located in metallic materials. Do not use "Riv-Nuts" or similar products.

### 3.4 FIELD QUALITY CONTROL AND FINAL ADJUSTMENT

- A. Contractor/Installers, Field Services: After installation is complete, contractor shall inspect the completed door openings on site to verify installation of hardware is complete and properly adjusted, in accordance with both the Contract Documents and final shop drawings.
  1. Check and adjust closers to ensure proper operation.
  2. Check latchset, lockset, and exit devices are properly installed and adjusted to ensure proper operation.
    - a. Verify levers are free from binding.
    - b. Ensure latchbolts and dead bolts are engaged into strike and hardware is functioning.

3. Report findings, in writing, to architect indicating that all hardware is installed and functioning properly. Include recommendations outlining corrective actions for improperly functioning hardware if required.

### 3.5 SCHEDULE OF FINISH HARDWARE:

#### Manufacturer List

<u>Code</u>	<u>Name</u>
AB	ABH Manufacturing Inc.
BE	Best Access Systems
BY	By Others
DM	Dorma Door Controls
DY	DynaLock Corp.
PR	Precision
RS	Reese Enterprises Inc.
SE	Securitech
SH	Stanley Commercial Hardware
ST	Stanley
TR	Trimco

#### Finish List

<u>Code</u>	<u>Description</u>
GR	Grey
PC	Prime Coat
626	Satin Chromium Plated
630	Satin Stainless Steel
689	Aluminum Painted
US26D	Chromium Plated, Dull
US32D	Stainless Steel, Dull

#### Option List

	<u>Code</u>	<u>Description</u>
HING	54	CONCEALED WIRES (4) STAINLESS STEEL
	56	CONCEALED WIRES (6)
HING	58	CONCEALED WIRES (8) STAINLESS STEEL
	BF	Barrier Free
	C4	CAM-STANDARD CAM
	CE	CONC. WIRES-USE WITH 18,54,56,58 SUFFIX
	ES	ELECTRIC LATCH RETRACTION
	RP	RINGS-RIM CYLINDER
	B4E	BEVELED 4 EDGES - KICK PLATES
	IDH	Integrated Dr. Hardware (45HW,47HW)

	LBR	LESS BOTTOM ROD
	NRP	NON REMOVEABLE PIN STD/HEAVY WT
HINGE		
	RP3	RINGS-7 PIN MORTISE
	VIN	Visual Indicator
	LM/MS	LATCH & TOUCHBAR MONITOR
	C-SUNK HOLES	COUNTER SINKING OF KICK and MOP
PLATES		

NOTE: Exterior doors are to be equipped with hardware that is in compliance with the projects building requirements for Windstorm and hurricane, ICC500 and or FEMA361. Hardware for these openings is to be determined based on the Security provider's requirements and the approved tested hardware for the doors being supplied to meet the wind loads and the large missile impact requirements. Coordinate all requirements with the architect, Door provider and Security Provider before providing the hardware.

#### Hardware Sets

##### SET #1

3 Hinges	FBB179 4 1/2 X 4 1/2 NRP	US26D	ST
1 Lockset	45H-7AB14H PATD	626	BE
1 Door Closer	QDC111 BF	689	SH
NOTE: Mount closer on least public view side of door			
1 Wall Bumper	1270WV	630	TR
3 Door Silencers	1229A		TR

##### SET #2

3 Hinges	FBB179 4 1/2 X 4 1/2	US26D	ST
1 Lockset	45H-7AB14H PATD	626	BE
1 Door Closer	QDC111 BF	689	SH
NOTE: Mount closer on least public view side of door			
1 Wall Bumper	1270WV	630	TR
3 Door Silencers	1229A		TR

##### SET #3 - Aluminum Storefront Doors # 150, 151, 224

3 Hinges	FBB179 4 1/2 X 4 1/2	US26D	ST
1 Lockset	45H-7AB14H PATD	626	BE
1 Wall Bumper	1270WV	630	TR
1 Gasketing	By Dr. Mfg.		BY

##### SET #4

3 Hinges	FBB179 4 1/2 X 4 1/2 NRP	US26D	ST
1 Lockset	45H-7AB14H PATD	626	BE
1 Wall Bumper	1270WV	630	TR
3 Door Silencers	1229A		TR

SET #5 - Aluminum Storefront Door # 103

4 Hinges	FBB179 4 1/2 X 4 1/2	US26D	ST
1 Lockset	45H-7R14H PATD	626	BE
1 Door Closer	QDC211 w/ Slim Case	689	SH
	NOTE: Mount closer on least public view side of door		
1 Wall Bumper	1270WV	630	TR
1 Gasketing	By Dr. Mfg.		BY

SET #6

3 Hinges	FBB179 4 1/2 X 4 1/2	US26D	ST
1 Lockset	45H-7D14H PATD	626	BE
1 Wall Bumper	1270WV	630	TR
3 Door Silencers	1229A		TR

NOTE: Card Reader where shown. See specifications.

SET #7 - VDS CONTRAFLAM 60 Door

4 Hinges	FBB168 4 1/2 X 4 1/2 NRP	US26D	ST
1 Exit Device	F9700BB x ZC03R ES LM/MS	630	DM
1 Rim Cylinder	12E-72 PATD RP	626	BE
1 Door Closer	QDC211 w/ Slim Case	689	SH
	NOTE: Mount closer on least public view side of door		
1 Wall Bumper	1270WV	630	TR
1 Card Reader	By Security Provider		BY
1 Power Transfer	EPT-12C	PR	
1 Power Supply	PS501		DM
1 Conc. Door Position Switch	By Security Provider		BY
1 Gasketing	797W		RS

NOTE: Card Reader unlocks the electric exit device allowing entry, LM/MS switches monitors latch bolt and request to exit. Coordinate electrical requirements with the related trades.

SET #8 - Aluminum Storefront Doors # 101, 116, 220, 231, 259

4 Hinges	FBB179 4 1/2 X 4 1/2	US26D	ST
1 Lockset	45H-7R14H PATD	626	BE
1 Door Closer	QDC211 with Slim Case	689	SH
	NOTE: Mount closer on least public view side of door		
1 Wall Bumper	1270WV	630	TR
	NOTE: Floor Stop 1211 at door 220 and 231 only		
1 Gasketing	By Dr. Mfg.	BY	

SET #9 - Hurricane Compliant

6 Hinges	FBB199 5 X 4 1/2 NRP	US32D	ST
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2 Exit Device	CRL Jackson 20 series Panic Bar	630	
2 Cylinder	12E or 1E PATD as Required	626	BE
2 Door Closer	QDC117	689	SH
2 Kick Plate	KO050 10" X 1"LDW B4E C-SUNK	630	TR
2 Conc. Door Position Switch	By Security Provider		BY
1 Weatherstrip	769A @ Head and Jambs		RS
2 Meeting Stile Astragals	M35A		RS
2 Door Sweep	323A		RS
1 Threshold	S206A		RS

NOTE: Provide Hurricane Compliant hardware sufficient to meet ICC500 and or FEMA 361 windstorm standards.

NOTE: Install door hardware in strict accordance with Miami-Dade NOA.

SET #10 - Hurricane Compliant

6 Hinges	FBB199 5 X 4 1/2 NRP	US32D	ST
2 Exit Device	Lever Exit Classroom function	630	SE
2 Cylinder	12E or 1E PATD as Required	626	BE
2 Door Closer	QDC117	689	SH
2 Kick Plate	KO050 10" X 1"LDW B4E C-SUNK	630	TR
2 Conc. Door Position Switch	By Security Provider		BY
1 Weatherstrip	769A @ Head and Jambs		RS
2 Meeting Stile Astragals	M35A		RS
2 Door Sweep	323A		RS
1 Threshold	S206A		RS

NOTE: Provide Hurricane Compliant hardware sufficient to meet ICC500 and or FEMA 361 windstorm standards.

NOTE: Install door hardware in strict accordance with Miami-Dade NOA.

SET #11

3 Hinges	FBB179 4 1/2 X 4 1/2	US26D	ST
1 Pull Plate	1018-3	630	TR
1 Door Closer	QDC111 BF	689	SH
	NOTE: Mount closer on least public view side of door		
1 Push Plate	1001-3	630	TR
1 Kick Plate	KO050 10" X 2"LDW B4E C-Sunk	630	TR
1 Wall Bumper	1270WV	630	TR
3 Door Silencers	1229A		TR

SET #12

3 Hinges	FBB179 4 1/2 X 4 1/2 NRP	US26D	ST
1 Lockset	45H-7R14H PATD	626	BE
1 Door Closer	QDC111 BF	689	SH
	NOTE: Mount closer on least public view side of door		
1 Kick Plate	KO050 10" X 2"LDW B4E C-Sunk	630	TR

1 Wall Bumper	1270WV	630	TR
3 Door Silencers	1229A		TR

NOTE: Card reader where shown on Door Hardware Schedule.

SET #13

5 Hinges	FBB179 4 1/2 X 4 1/2 NRP	US26D	ST
1 Elect Hinge	CE FBB179 4 1/2 X 4 1/2 56	US26D	ST
1 Set Auto Flush Bolts	3825L X 3815L	626	TR
1 Electro-mech Lock	45HW-7DEU14H PATD IDH	626	BE
1 Coordinator	3094B Series	PC	TR
2 Kick Plate	KO050 10" X 1"LDW B4E C-SUNK	630	TR
2 Wall Bumper	1270WV	630	TR
1 Card Reader	By Security Provider		BY
2 Mounting Bracket	3095 or 3096 as Req.	PC	TR
1 Dustproof Strike	3910	630	TR
1 Conc. Door Position Switch	By Security Provider		BY
1 Power Supply	5025	GR	DY
1 Astragal	By Dr. Mfg.		BY
1 Gasketing	797W		RS

NOTE: Card Reader unlocks the electric lock includes the RQE request to exit switch, Door position switch.

SET #14

1 Door Position Switch	By Security Provider		BY
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NOTE: Roll up door all hardware by the door Mfg. Coordinate security and the electrical requirements with the related trades.

SET #15

2 Hinges	FBB179 4 1/2 X 4 1/2	US26D	ST
1 Elect Hinge	CE FBB179 4 1/2 X 4 1/2 56	US26D	ST
1 Electro-mech Lock	45HW-7DEU14H PATD IDH	626	BE
1 Door Closer	QDC111 BF	689	SH
NOTE: Mount closer on least public view side of door			
1 Kick Plate	KO050 10" X 2"LDW B4E C-Sunk	630	TR
1 Floor Stop	1211	626	TR
1 Card Reader	By Security Provider		BY
1 Conc. Door Position Switch	By Security Provider		BY
1 Power Supply	5025	GR	DY
3 Door Silencers	1229A		TR

NOTE: Card Reader unlocks the electric lock and the RQE request to exit switch

SET #16

3 Hinges	FBB179 4 1/2 X 4 1/2	US26D	ST
1 Privacy Set	45H-0L14H VIN	626	BE
1 Door Closer	QDC111 BF	689	SH
NOTE: Mount closer on least public view side of door			
1 Kick Plate	KO050 10" X 2"LDW B4E C-Sunk	630	TR
1 Wall Bumper	1270WV	630	TR
3 Door Silencers	1229A		TR

SET #17

3 Hinges	FBB179 4 1/2 X 4 1/2 NRP	US26D	ST
1 Lockset	45H-7D14H PATD	626	BE
1 Door Closer	QDC111	689	SH
NOTE: Mount Closer on least public view side of door			
1 Wall Bumper	1270WV	630	TR
1 Gasketing	797W		RS
NOTE: Card reader where shown. See specifications.			

SET #18

3 Hinges	FBB168 4 1/2 X 4 1/2 NRP	US26D	ST
1 Lockset	45H-7AB14H PATD	626	BE
1 Door Closer	QDC111	689	SH
NOTE: Mount Closer on least public view side of door			
1 Wall Bumper	1270WV	630	TR
1 Gasketing	797W		RS
NOTE: UL 'C' Label rated door.			

SET #19

3 Hinges	FBB168 4 1/2 X 4 1/2	US26D	ST
1 Lockset	45H-7AB14H PATD	626	BE
1 Door Closer	QDC111 BF	689	SH
NOTE: Mount closer on least public view side of door			
1 Kick Plate	KO050 10" X 2"LDW B4E C-Sunk	630	TR
1 Floor Stop	1211	626	TR
1 Sound Gasketing	33C 1 x 42" 2 x 84"		RS
1 Auto Door Bottom	370A 42"		RS

SET #20

6 Hinges	FBB168 4 1/2 X 4 1/2 NRP	US26D	ST
1 Exit Device	2208 X 4908D LBR	630	PR
1 Exit Device	2201 LBR	630	PR
1 Rim Cylinder	12E-72 PATD RP	626	BE
2 Door Closer	QDC117	689	SH
2 Kick Plate	KO050 10" X 1"LDW B4E C-SUNK	630	TR
2 Door Silencers	1229A		TR

SET #21

2 Hinges	FBB179 4 1/2 X 4 1/2 NRP	US26D	ST
1 Elect Hinge	CE FBB179 4 1/2 X 4 1/2 56	US26D	ST
1 Electro-mech Lock	45HW-7DEU14H PATD IDH	626	BE
1 Door Closer	QDC113	689	SH
1 Kick Plate	KO050 10" X 2"LDW B4E C-Sunk	630	TR
1 Card Reader	By Security Provider		BY
1 Power Supply	5025	GR	DY
3 Door Silencers	1229A		TR

NOTE: Card Reader unlocks the electric lock and the lock includes, RQE request to exit switch, Door monitoring position switch

SET #22 - Aluminum Storefront Door # 132

3 Hinges	FBB179 4 1/2 X 4 1/2	US26D	ST
1 Passage Set	45H-0N14H	626	BE
1 Door Closer	QDC211 with Slim Case	689	SH
NOTE: Mount closer on least public view side of door			
1 Floor Stop	1211	626	TR
1 Gasketing	By Dr. Mfg.		BY

SET #23

3 Hinges	FBB179 4 1/2 X 4 1/2 NRP	US26D	ST
1 Lockset	45H-7D14H PATD	626	BE
1 Door Closer	QDC113	689	SH
1 Gasketing	797W		RS

SET #24 - Storefront

3 Hinges	FBB179 4 1/2 X 4 1/2	US26D	ST
1 Lockset	45H-7AB14H PATD	626	BE
1 Floor Stop	1211	626	TR
1 Gasketing	By Dr. Mfg.		BY

SET #25 - Aluminum Storefront Doors 138, 256

3 Hinges	FBB179 4 1/2 X 4 1/2	US26D	ST
1 Passage Set	45H-0N14H	626	BE
1 Floor Stop	1211	626	TR
1 Gasketing	By Dr. Mfg.		BY

SET #26

3 Hinges	FBB179 4 1/2 X 4 1/2	US26D	ST
1 Passage Set	45H-0N14H	626	BE
1 Wall Bumper	1270WV	630	TR
3 Door Silencers	1229A		TR

SET #27

3 Hinges	FBB179 4 1/2 X 4 1/2	US26D	ST
1 Lockset	45H-7D14H PATD	626	BE
1 Door Closer	QDC111 BF	689	SH
NOTE: Mount closer on least public view side of door			
1 Wall Bumper	1270WV	630	TR
3 Door Silencers	1229A		TR

SET #28 - Exterior Fixed Door

4 Hinges	FBB199 4 1/2 X 4 1/2 NRP	US32D	ST
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NOTE: Fixed exterior historic door, Provide hinges only for effect, Door not operable.

SET #29 - Aluminum Storefront Doors # 207, 208, 209, 210, 216, 216A, 219, 221, 222, 225, 227, 232, 233, 234, 236, 237, 246

4 Hinges	FBB179 4 1/2 X 4 1/2	US26D	ST
1 Lockset	45H-7AB14H PATD	626	BE
1 Floor Stop	1211	626	TR
1 Gasketing	By Dr. Mfg.		BY

SET #30 - Hurricane Compliant

3 Hinges	FBB199 4 1/2 X 4 1/2 NRP	US32D	ST
1 Electric Hinge	CE FBB199 4 1/2 X 4 1/2 54	US32D	ST
1 Mulp Lock	To be determined	630	SE
NOTE: Mulp Lock with Request to exit switch			
1 Door Closer	QDC117	689	SH
1 Conc. Door Position Switch	By Security Provider		BY
1 Weatherstrip	769A @ Head and Jambs		RS
1 Door Sweep	353A		RS
1 Threshold	S205A 36"		RS

NOTE: Provide Hurricane Compliant hardware sufficient to meet ICC500 and or FEMA 361 windstorm standards. Mulp Lock with Request to exit switch, No exterior trim or cylinder.

NOTE: Provide and install stamped metal sign at interior stating 'NO EXIT'.

SET #31

3 Hinges	FBB179 4 1/2 X 4 1/2 NRP	US26D	ST
1 Lockset	45H-7D14H PATD	626	BE
1 Wall Bumper	1270WV	630	TR
3 Door Silencers	1229A		TR

SET #32 - Storefront Door # 205A

3 Hinges	FBB179 4 1/2 X 4 1/2	US26D	ST
1 Lockset	45H-7R14H PATD	626	BE
1 Door Closer	QDC211 with Slim Case	689	SH
NOTE: Mount Closer on least public view side of door			
1 Wall Bumper	1270WV	630	TR
1 Gasketing	By Dr. Mfg.		BY

SET #33 - Storefront Door # 205

4 Hinges	FBB179 4 1/2 X 4 1/2 NRP	US26D	ST
1 Lockset	45H-7R14H PATD	626	BE
1 Door Closer	QDC211 with Slim Case	689	SH
1 Gasketing	By Dr. Mfg.		BY

SET #34

3 Hinges	FBB179 4 1/2 X 4 1/2 NRP	US26D	ST
1 Lockset	45H-7D14H PATD	626	BE
1 Overhead Stop	4420 Series	US32D	AB
3 Door Silencers	1229A		TR

SET #35

6 Hinges	FBB179 4 1/2 X 4 1/2 NRP	US26D	ST
1 Set Auto Flush Bolts	3825L X 3815L	626	TR
1 Lockset	45H-7D14H PATD	626	BE
1 Coordinator	3094B Series	PC	TR
2 Door Closer	QDC111	689	SH
NOTE: Mount Closer on least public view side of door			
2 Wall Bumper	1270WV	630	TR
2 Mounting Bracket	3095 or 3096 as Req.	PC	TR
1 Dustproof Strike	3910	630	TR
1 Astragal	By Dr. Mfg.		BY
1 Gasketing	797W		RS

NOTE: UL 'C' Label rated door.

SET #36 - Hurricane Compliant +120 -120

3 Hinges	FBB199 4 1/2 X 4 1/2 NRP	US32D	ST
1 Multiple Point Lock	84L44G4HVL F	630	SE
1 Mortise Cylinder	1E-74 PATD C4 RP3	626	BE
1 Door Closer	QDC113	689	SH
1 Weatherstrip	769A @ Head and Jambs		RS
1 Door Sweep	353A		RS
1 Threshold	S205A 36"		RS

NOTE: Door to remain locked from Corridor 229 side of door, Free egress at all times from Chiller side of door

SET #39 - Storefront Door # 243

4 Hinges	FBB179 4 1/2 X 4 1/2 NRP	US26D	ST
1 Lockset	45H-7R14H PATD	626	BE
1 Door Closer	QDC211 with Slim Case	689	SH
	NOTE: Mount Closer on least public view side of door		
1 Wall Bumper	1270WV	630	TR
1 Gasketing	By Dr. Mfg.	BY	

SET #40 - Hurricane Compliant

5 Hinges	FBB199 5 X 4 1/2 NRP	US32D	ST
1 Electric Hinge	CE FBB199 5 X 4 1/2 54	US32D	ST
	NOTE: Electric hinge on active door		
2 Surface Bolt	3923	630	TR
	NOTE: Mount on inactive leaf		
1 Mulp Lock	To be determined	630	SE
	NOTE: Mulp Lock with Request to exit switch		
2 Door Closer	QDC113	689	SH
2 Conc. Door Position Switch	By Security Provider		BY
1 Astragal	By Dr. Mfg.		BY
1 Weatherstrip	769A @ Head and Jambs		RS
2 Door Sweep	353A		RS
1 Threshold	S206A		RS

NOTE: Provide Hurricane Compliant hardware sufficient to meet ICC500 and or FEMA 361 windstorm standards. Mulp Lock with request to exit Request to exit switch, No exterior trim or cylinder.

SET #41 - Hurricane Compliant

4 Hinges	FBB199 5 X 4 1/2 NRP	US32D	ST
1 Electric Hinge	CE FBB199 5 X 4 1/2 58	US32D	ST
	NOTE: Electric hinge on active door		
1 Electric Hinge	CE FBB199 5 X 4 1/2 54	US32D	ST
	NOTE: Electric hinge on inactive door		
2 Exit Device	Panic Bar Exit Device Von Duprin Model WS9927F	630	
	NOTE: Provide Electric trim on active door only, RQE switch on both exit devices		
1 Cylinder	12E or 1E PATD as Required	626	BE
2 Door Closer	QDC117	689	SH
2 Kick Plate	KO050 10" X 1"LDW B4E C-SUNK	630	TR
1 Card Reader	By Security Provider		BY
1 Power Supply	As Required to be Determined		DM
2 Conc. Door Position Switch	By Security Provider		BY
1 Weatherstrip	769A @ Head and Jambs		RS
2 Meeting Stile Astragals	M35A		RS

2 Door Sweep	323A		RS
1 Threshold	S206A		RS

NOTE: Provide Hurricane Compliant hardware sufficient to meet ICC500 and or FEMA 361 windstorm standards. Card Reader unlocks the electric Trim allowing access, RQE request to exit switch signals authorized exiting. Coordinate security and electrical requirements with the related trades.

NOTE: Panic bar as tested is Von Duprin Model WS9927F Surface Vertical Mount Exit Hardware.

SET #42 - Hurricane Compliant

3 Hinges	FBB199 4 1/2 X 4 1/2 NRP	US32D	ST
1 Electric Hinge	CE FBB199 4 1/2 X 4 1/2 54	US32D	ST
1 Mulp Lock	To Be Determined	630	SE
NOTE: Mulp Point lock lever with key outside, RQE switch to exit			
1 Mortise Cylinder	1E-74 PATD C4 RP3	626	BE
1 Door Closer	QDC117	689	SH
1 Conc. Door Position Switch	By Security Provider		BY
1 Weatherstrip	769A @ Head and Jambs		RS
1 Door Sweep	353A		RS
1 Threshold	S205A 36"		RS

NOTE: Provide Hurricane Compliant hardware sufficient to meet ICC500 and or FEMA 361 windstorm standards. Mulp Lock with request to exit Request to exit switch, Lever exterior trim with cylinder.

SET #43 - Hurricane Compliant

2 Hinges	FBB199 4 1/2 X 4 1/2 NRP	US32D	ST
1 Electric Hinge	CE FBB199 4 1/2 X 4 1/2 54	US32D	ST
1 Exit Device	CRL Jackson 20 series Panic Bar	630	
1 Mulp Lock	To be determined	630	SE
NOTE: Mulp Lock with Request to exit switch			
1 Door Closer	QDC117	689	SH
1 Conc. Door Position Switch	By Security Provider		BY
1 Weatherstrip	769A @ Head and Jambs		RS
1 Door Sweep	353A		RS
1 Threshold	S205A 36"		RS

NOTE: Provide Hurricane Compliant hardware sufficient to meet ICC500 and or FEMA 361 windstorm standards. Mulp Lock with Request to exit switch, No exterior trim or cylinder.

NOTE: Install door hardware in strict accordance with Miami-Dade NOA.

SET #44 -

2 Hinges	FBB199 4 1/2 X 4 1/2 NRP	US32D	ST
1 Electric Hinge	CE FBB199 4 1/2 X 4 1/2 54	US32D	ST
1 Mulp Lock	To Be Determined	630	SE
NOTE: Mulp Point lock lever with key outside, RQE switch to exit.			
1 Mortise Cylinder	1E-74 PATD C4 RP3	626	BE
1 Door Closer	QDC117	689	SH
1 Card Reader	By Security Provider		BY
NOTE: Intrusion Alarm Keypad			
1 Power Supply	To be Determined		DM
1 Conc. Door Position Switch	By Security Provider		BY
1 Weatherstrip	769A @ Head and Jamb		RS
1 Door Sweep	323A		RS
1 Threshold	S205A 36"		RS

NOTE: Provide Hurricane Compliant hardware sufficient to meet ICC500 and or FEMA 361 windstorm standards. Mulp Lock with request to exit Request to exit switch and Electric Trim.

SET #45 - Hurricane Compliant

3 Hinges	FBB199 4 1/2 X 4 1/2 NRP	US32D	ST
1 Exit Device	Lever Exit Classroom function	630	SE
1 Mortise Cylinder	1E-74 PATD C4 RP3	626	BE
1 Door Closer	QDC113	689	SH
1 Conc. Door Position Switch	By Security Provider		BY
1 Weatherstrip	769A @ Head and Jamb		RS
1 Door Sweep	323A		RS
1 Threshold	S205A 36"		RS

NOTE: Provide Hurricane Compliant hardware sufficient to meet ICC500 and or FEMA 361 windstorm standards.

NOTE: UL 'C' Label rated door.

SET #46 - Hurricane Compliant

6 Hinges	FBB199 5 X 4 1/2 NRP	US32D	ST
2 Surface Bolt	3923	630	TR
1 Mulp Lock	To be determined	630	SE
NOTE: Mulp Point lock Lever handle, storeroom function			
1 Mortise Cylinder	1E-74 PATD C4 RP3	626	BE
2 Door Closer	QDC113	689	SH
2 Conc. Door Position Switch	By Security Provider		BY
1 Astragal	By Dr. Mfg.		BY
1 Weatherstrip	769A @ Head and Jamb		RS
2 Door Sweep	353A		RS
1 Threshold	S206A		RS

NOTE: Provide Hurricane Compliant hardware sufficient to meet ICC500 and or FEMA 361 windstorm standards. Mulp Lock with lever handle, storeroom function

SET #47 - Gate

1 Exit Device	2103 CD	630	PR
1 Rim Cylinder	12E-72 PATD RP	626	BE
1 Mortise Cylinder	1E-74 PATD C4 RP3	626	BE
1 Door Pull	1117-1	626	TR

NOTE: See detail 2/A19.3 for additional hardware required.

NOTE: Ornamental Gate mounting boxes needed for hardware must be provided by gate manufacturer.

OPENING LIST

<u>Opening</u>	<u>Hdw Set</u>	<u>Opening Label</u>
100A	9	
101	8	
102	3	
103	5	
104	4	
105	6	
106	3	
107	15	
107A	17	
108	16	
109	16	
110	10	
110A	9	
111	11	
112	11	
113	12	
114	13	
114A	27	
115	41	60
115A	7	60
116	8	
117	2	
117A	4	
118	1	
119	10	
120	3	
121	3	
122	3	
123	34	

124	20	
124A	42	
124B	43	
124C	42	
124D	43	
125	19	
126	18	60
127	45	60
128	44	
129	9	
129A	9	
129B	9	
130	2	
130A	2	
130B	10	
131	3	
132	22	
133	3	
134	17	
135	21	
135A	21	
136	26	
137	47, also SEE 2/A19.3	
138	25	
139	3	
140	3	
141	24	
141A	24	
142	41	
142A	7	
143	47, also SEE 2/A19.3	
144	27	
144A	28	
145	16	
146	16	
147	12	
148	15	
149	3	
150	3	
151	3	
152	10	
154	46	
155	45	
156	9	60
161	14	
162	47, also SEE 2/A19.3	

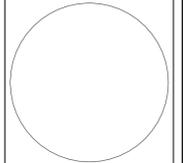
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212	31	
213	3	
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238	6	
239	3	
240	3	
241	27	
242	7	60
243	39	
244	17	60
246	29	
248	35	60

249	17
250	31
251	12
252	3
254	27
255	24
255A	3
256	25
257	24
258	24
259	8
259A	30
260	3
261	6
262	24
263	24
265	16
266	16

END OF SECTION

NO.	DESCRIPTION	DATE
3	ADDENDUM 3	10/15/14

KEY WEST CITY HALL  
AT GLYNN ARCHER  
PHASE 2  
1300 WHITE STREET KEY WEST, FLORIDA  
CITY OF KEY WEST



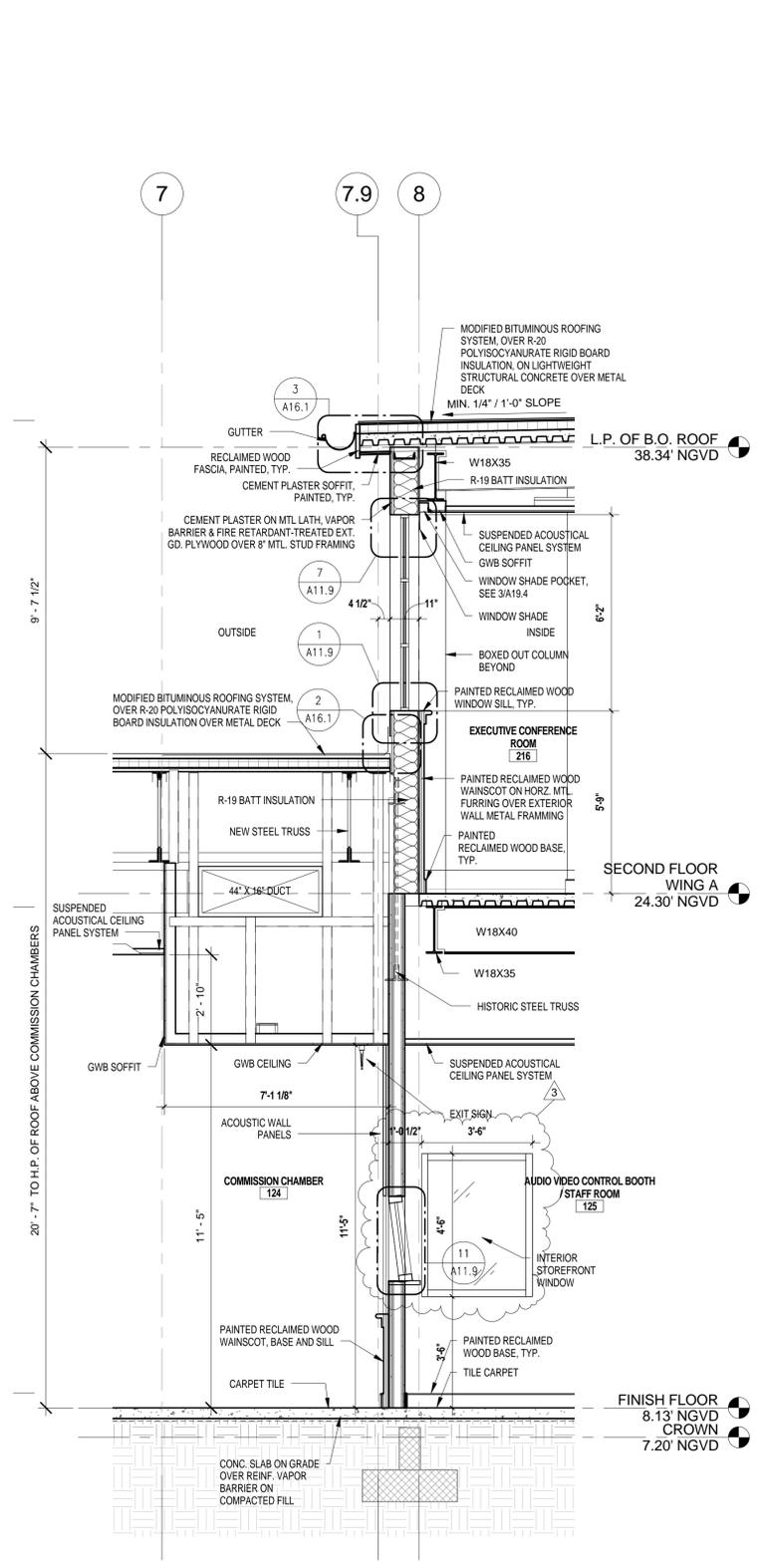
MCHARRY ASSOCIATES  
ARCHITECTURE ENGINEERING INTERIORS  
AIA/CES#0986 EB001663  
2780 SW DOUGLAS ROAD, SUITE 302  
MIAMI, FLORIDA 33135 (305)445-2165  
WWW.MCHARRY.COM

410 Angela Street  
Key West, Florida 33040  
Telephone (305) 296-1317  
Facsimile (305) 296-2527  
Florida License AIC020222

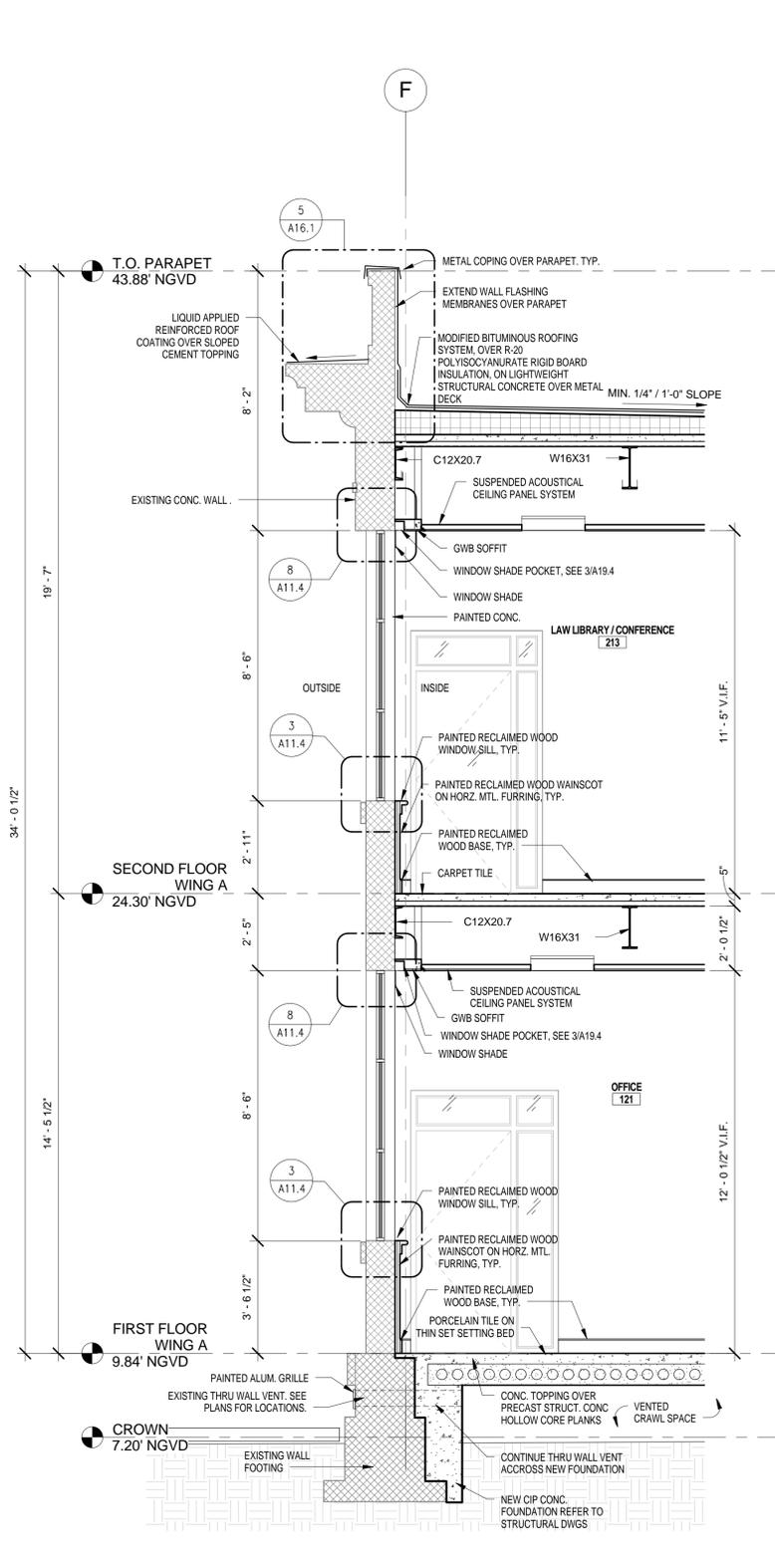
Bender & Associates  
ARCHITECTS  
p.a.

Project No: 1305  
WALL SECTIONS  
Date: 08/08/14

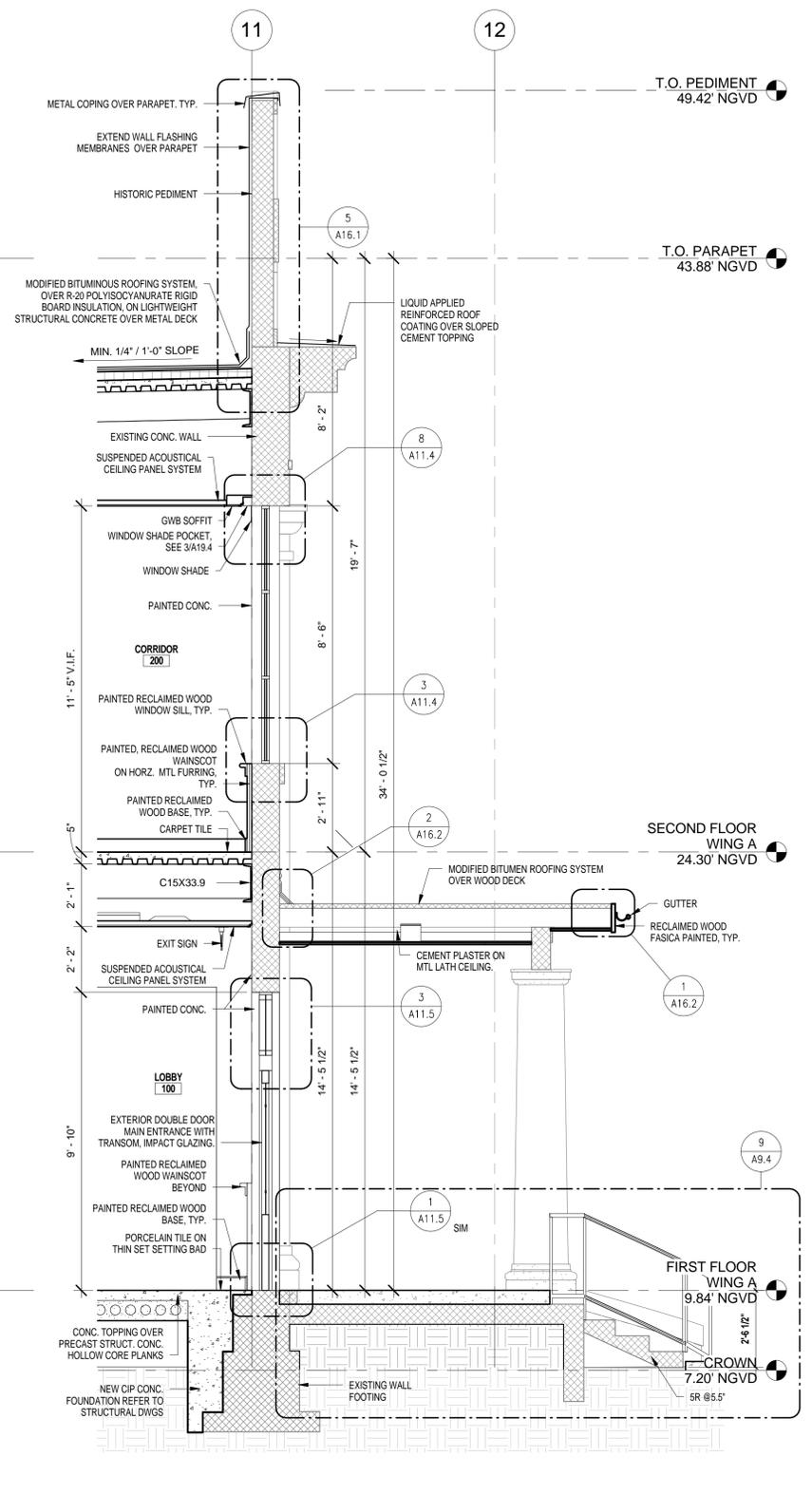
PERMIT SET  
A7.1  
OF



3 WALL SECTION  
A2.1A | A7.1 | 3/8" = 1'-0"



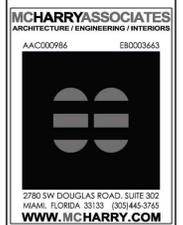
1 WING A WALL SECTION  
A6.3 | A7.1 | 3/8" = 1'-0"



2 WALL SECTION - MAIN ENTRANCE  
A6.1 | A7.1 | 3/8" = 1'-0"

NO.	DESCRIPTION	DATE
1	ADDENDUM 2	10/02/14
2	ADDENDUM 3	10/15/14

KEY WEST CITY HALL  
AT GLYNN ARCHER  
1300 WHITE STREET  
CITY OF KEY WEST  
KEY WEST, FLORIDA

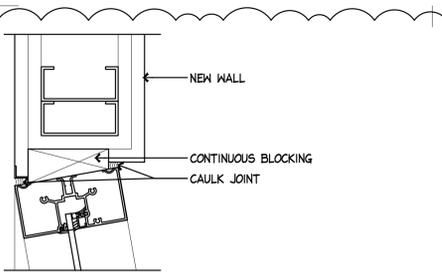


410 Angela Street  
Key West, Florida 33040  
Telephone (305) 296-1347  
Facsimile (305) 296-2727  
Florida License AIC002022

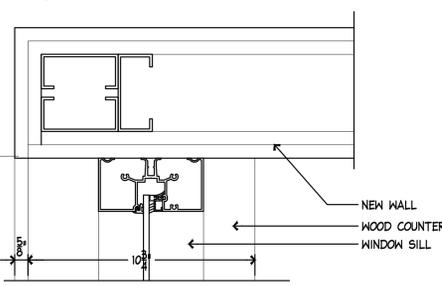
Bender & Associates  
ARCHITECTS  
p.c.

Project No: 1306  
DETAILS  
Date: 8/8/14

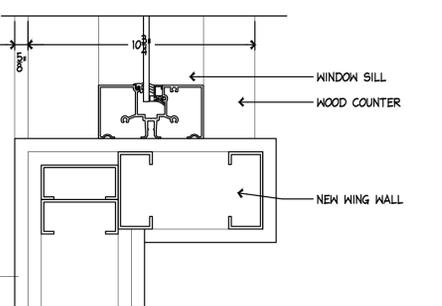
PERMIT SET  
A11.9  
OF



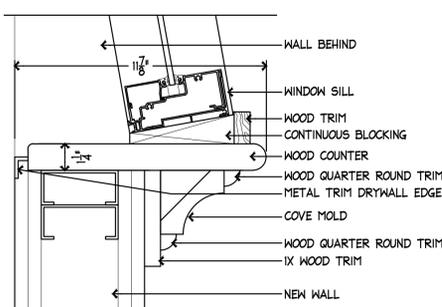
24 CANTED WINDOW HEAD  
A11.9 3" = 1'-0"



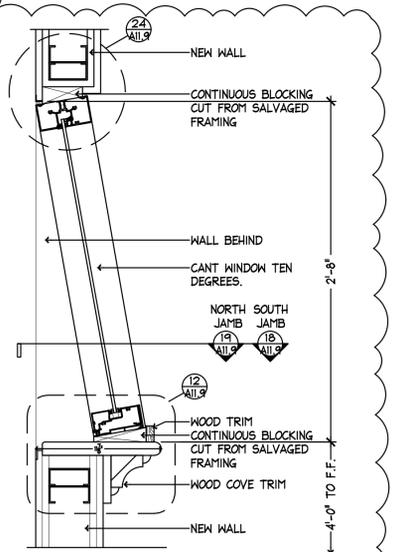
19 CANTED WINDOW NORTH JAMB  
A11.9 3" = 1'-0"



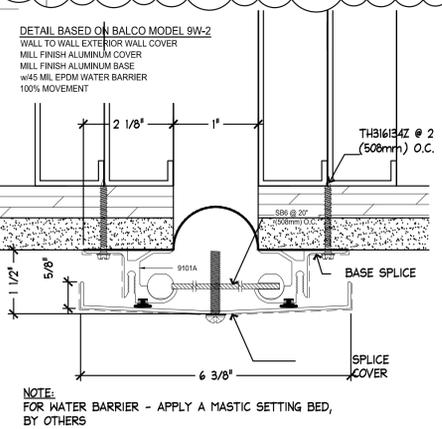
18 CANTED WINDOW SOUTH JAMB  
A11.9 3" = 1'-0"



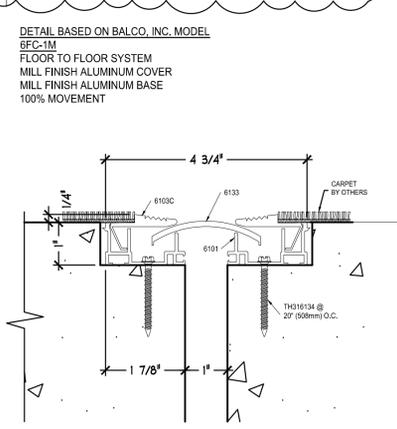
12 CANTED WINDOW SILL  
A11.9 3" = 1'-0"



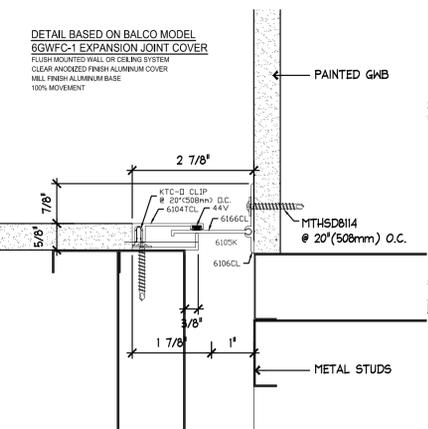
11 CANTED WINDOW  
A11.9 1 1/2" = 1'-0"



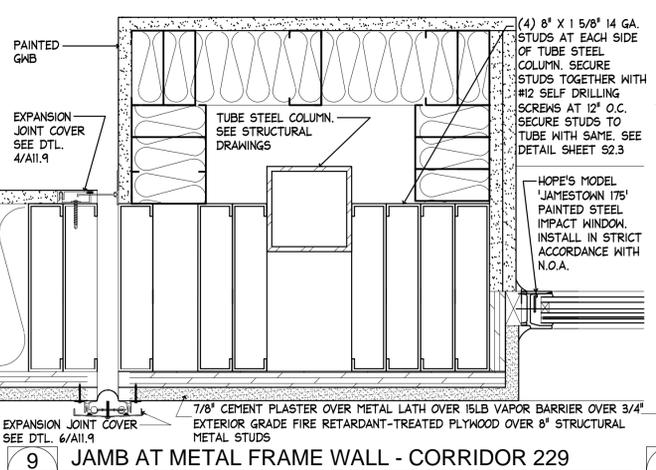
6 EXTERIOR WALL EXPANSION JT.  
A11.9 6" = 1'-0"



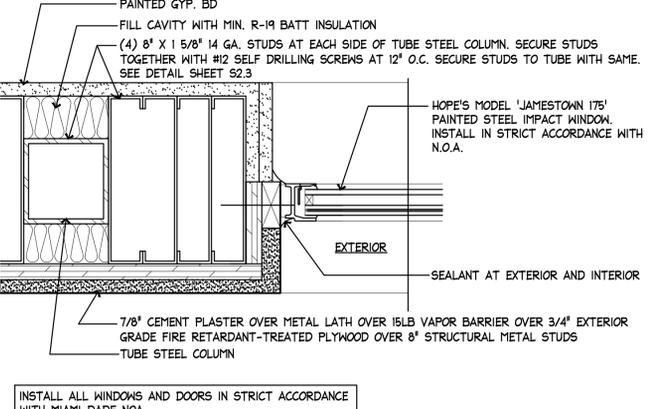
5 FLOOR EXPANSION JOINT  
A11.9 6" = 1'-0"



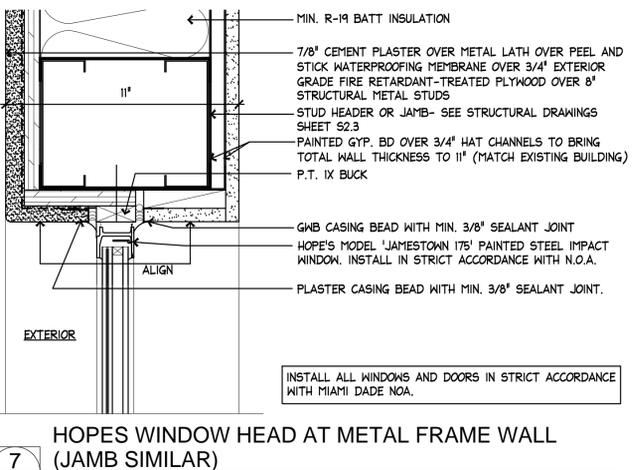
4 INTERIOR WALL EXPANSION JT.  
A11.9 6" = 1'-0"



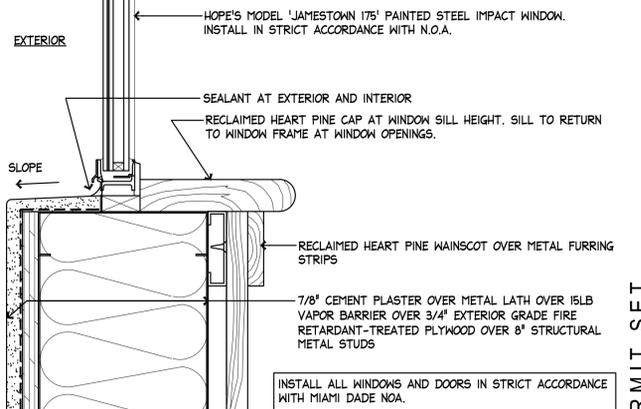
9 JAMB AT METAL FRAME WALL - CORRIDOR 229  
A11.9 3" = 1'-0"



3 JAMB AT METAL FRAME WALL - CORRIDOR 229  
A11.9 3" = 1'-0"



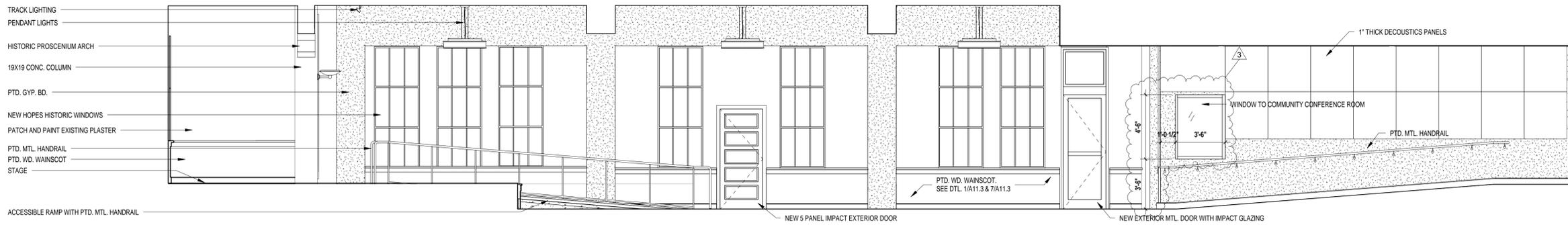
7 HOPES WINDOW HEAD AT METAL FRAME WALL (JAMB SIMILAR)  
A11.9 3" = 1'-0"



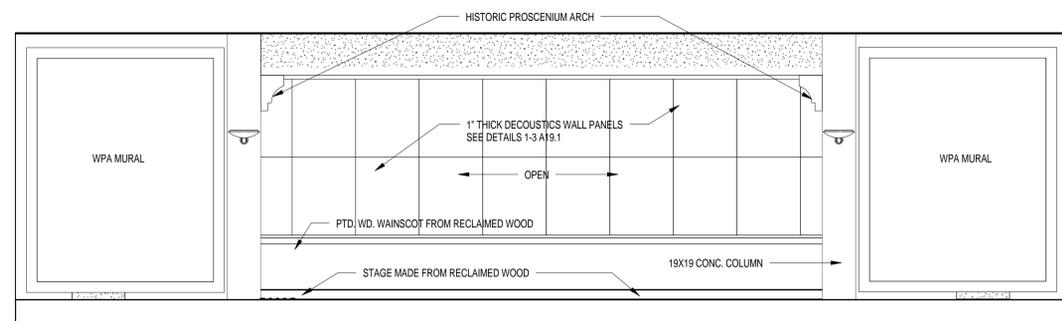
1 HOPES SILL AT METAL FRAME WALL  
A11.9 3" = 1'-0"

INSTALL ALL WINDOWS AND DOORS IN STRICT ACCORDANCE WITH MIAMI DADE NOA.

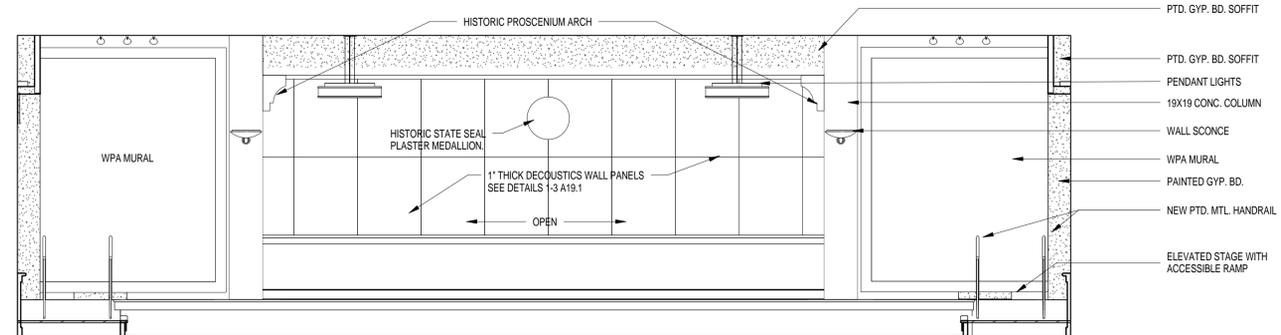
INSTALL ALL WINDOWS AND DOORS IN STRICT ACCORDANCE WITH MIAMI DADE NOA.



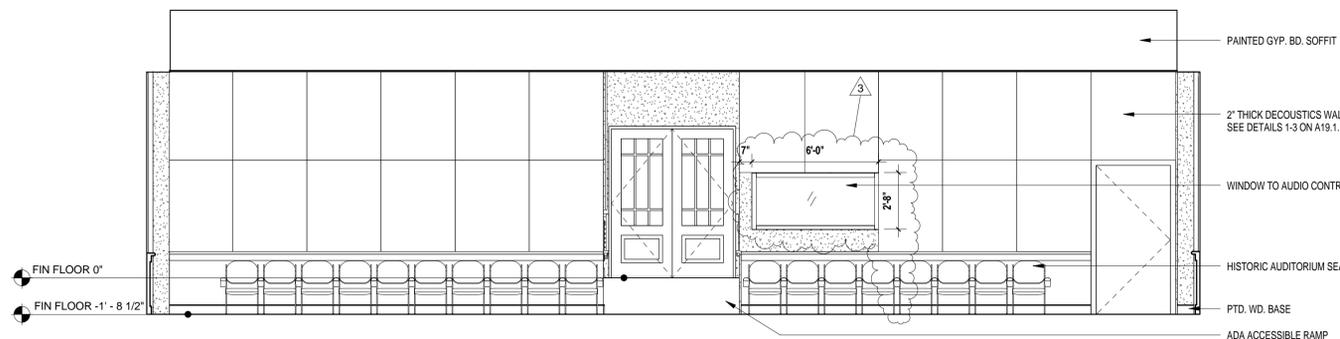
**8** 124 Commission Chamber - North  
A12.1 1/4" = 1'-0"



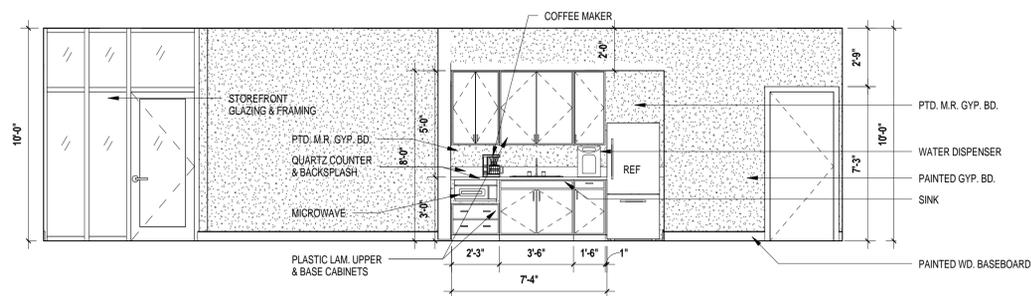
**7** 124 Commission Chamber - Stage and Proscenium  
A12.1 1/4" = 1'-0"



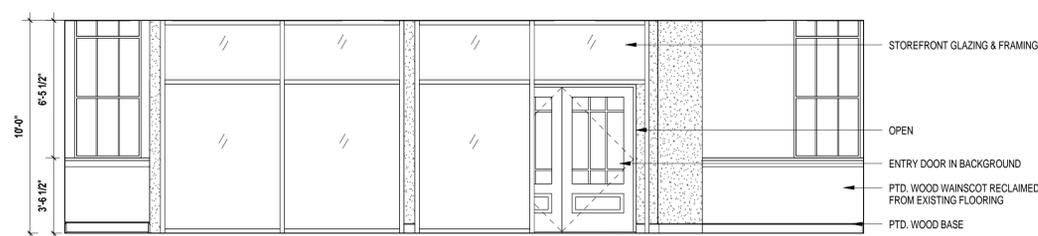
**6** 124 Commission Chamber - West  
A12.1 1/4" = 1'-0"



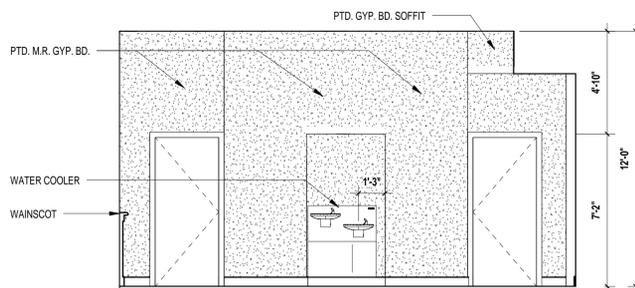
**5** 124 Commission Chamber - East  
A12.1 1/4" = 1'-0"



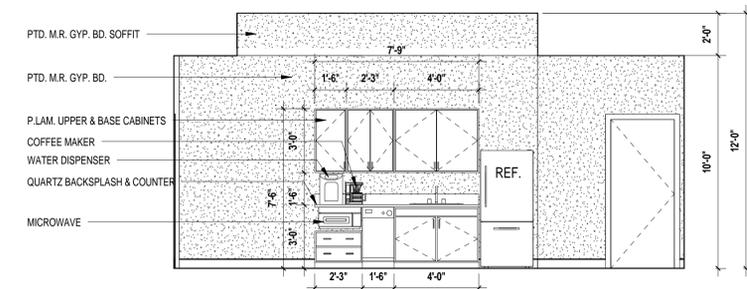
**4** 116 Reception - South  
A12.1 1/4" = 1'-0"



**3** 116 Reception - North  
A12.1 1/4" = 1'-0"



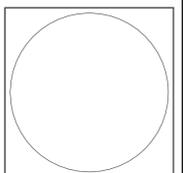
**2** 107 Fitness Break Room - West  
A12.1 1/4" = 1'-0"



**1** 107 Fitness Break Room - North  
A12.1 1/4" = 1'-0"

NO.	DESCRIPTION	DATE
3	ADDENDUM 3	10/15/14

KEY WEST CITY HALL  
AT GLYNN ARCHER  
PHASE 2  
1300 WHITE STREET KEY WEST, FLORIDA  
CITY OF KEY WEST



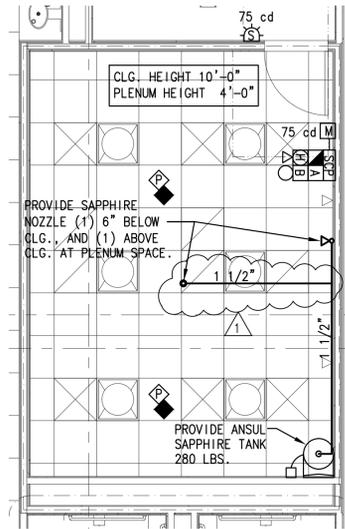
MCHARRY ASSOCIATES  
ARCHITECTURE | ENGINEERING | INTERIORS  
A.A.C. 000986 EB0001663  
2780 SW DOUGLAS ROAD, SUITE 302  
MIAMI, FLORIDA 33156 (305) 445-2765  
WWW.MCHARRY.COM

410 Angela Street  
Key West, Florida 33040  
Telephone (305) 296-1317  
Facsimile (305) 296-2727  
Florida License AIC002022

Bender & Associates  
ARCHITECTS  
p.a.

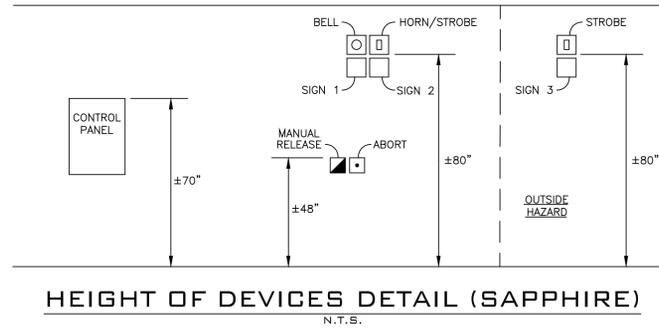
Project No: 1305  
INTERIOR ELEVATIONS  
Date: 08/08/14

PERMIT SET  
A12.1  
OF



### HEIGHT REQUIREMENTS FOR WALL-MOUNTED DEVICES

- EACH MANUAL FIRE ALARM BOX SHALL BE SECURELY MOUNTED, THE OPERABLE PART FOR EACH MANUAL FIRE ALARM BOX SHALL NOT BE MORE THAN 48" (1.37 M) ABOVE FLOOR LEVEL.
- WHERE CEILING HEIGHTS ALLOW, WALL-MOUNTED APPLIANCES SHALL HAVE THEIR BOTTOMS AT 80" A.F.F.
- WALL-MOUNTED VISUAL APPLIANCES SHALL BE MOUNTED 80 IN. (2 M) FROM THE BOTTOM OF THE DEVICE TO THE FINISHED FLOOR.
- WHERE COMBINATION AUDIBLE/VISIBLE APPLIANCES ARE INSTALLED, THE LOCATION OF THE INSTALLED APPLIANCE SHALL BE DETERMINED BY VISIBLE APPLIANCES.



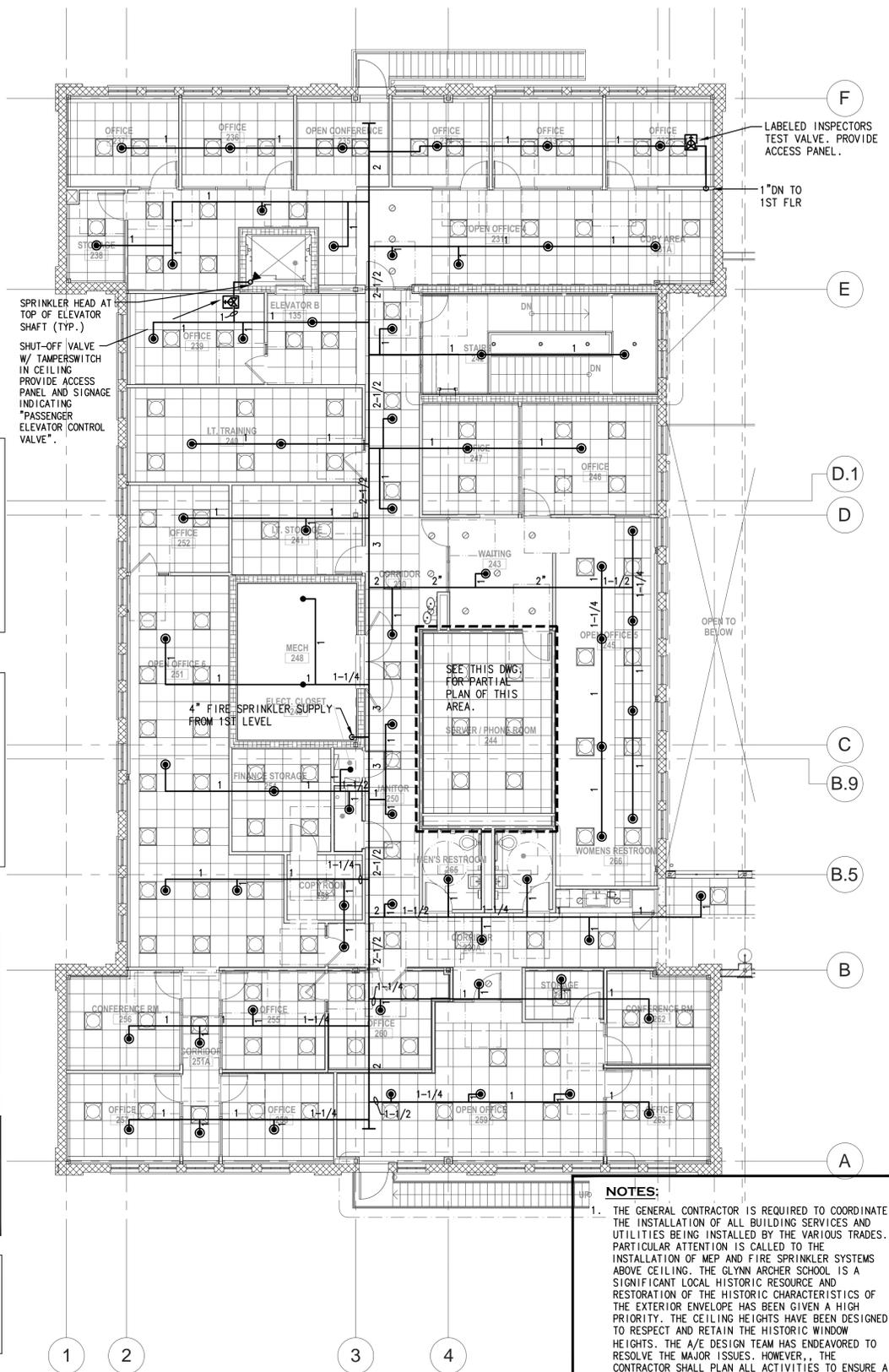
**First Alarm**  
Triangle Fire, Inc.  
305-592-3011

**Second Alarm Discharge Countdown Initiated**  
Triangle Fire, Inc.  
305-592-3011

**CAUTION**  
When Light Is Flashing Agent Has Discharged  
Triangle Fire, Inc.  
305-592-3011

**KEEP DOOR CLOSED**  
AREA PROTECTED BY SAPPHIRE SYSTEM  
Triangle Fire, Inc.  
305-592-3011

**DOOR SIGN**



## 2 PARTIAL PLAN I.T. ROOM FIRE SUPPRESSION SYSTEM PLAN

SCALE 1/4" = 1'-0" (REFER TO DWGS. FP2-203A & B FOR FURTHER INFORMATION)

**INSTALLATION NOTE:**  
THE INTENT OF THIS DRAWING IS TO PROVIDE THE SYSTEM INSTALLER WITH THE NECESSARY INFORMATION AS HOW TO WIRE FIELD DEVICES: ACTUAL CONDUIT ROUTING, CIRCUIT DIVISION, AND FIELD DEVICE LOCATIONS SHALL BE DETERMINED BY THE SYSTEM INSTALLER IN THE FIELD.

### INSTALLATION TEST PROCEDURES FOR SAPPHIRE FIRE SUPPRESSION SYSTEM

- DISABLE EACH AGENT STORAGE CONTAINER RELEASE MECHANISM SO THAT ACTIVATION OF THE RELEASE CIRCUIT WILL NOT RELEASE THE AGENT.
- PIPING SHALL BE PNEUMATICALLY TESTED IN A CLOSED CIRCUIT FOR A PERIOD OF 10 MINUTES AT 40 PSIG. AT THE END OF 10 MINUTES, THE PRESSURE DROP SHALL NOT EXCEED 20% OF THE TEST PRESSURE.
- A FLOW TEST USING COMPRESSED AIR SHALL BE PERFORMED ON THE PIPING NETWORK TO VERIFY THAT FLOW IS CONTINUOUS AND THAT THE PIPING AND NOZZLES ARE UNOBSTRUCTED.
- VERIFY THE ENCLOSURE INTEGRITY PER NFPA 2001, VAL OF THE DOOR FAN TEST.
- RECONNECT THE RELEASE CIRCUIT WITH A FUNCTIONAL DEVICE (24VOLT LAMP, FLASH BULBS, CIRCUIT BREAKERS) OR PNEUMATICALLY ACTIVATED RELEASE MECHANISM IN LIEU OF AGENT STORAGE CONTAINER RELEASE MECHANISM.
- CHECK ALL THE SUPERVISED CIRCUITS FOR PROPER OPERATION AND CONFIRM THE SUPERVISED CIRCUITS FOR PROPER OPERATION AND CONFIRM THE SUPERVISORY SIGNALS ARE RECEIVED AT THE CONTROL PANEL (AUDIBLE AND VISUAL).
  - CHECK BELLS, SUPERVISED CIRCUITS FOR PROPER TROUBLE RESPONSE.
  - CHECK ABORT SWITCHES, SUPERVISED CIRCUITS FOR PROPER TROUBLE RESPONSE.
  - CHECK PULL STATION, SUPERVISED CIRCUITS FOR PROPER TROUBLE RESPONSE.
- CHECK ALL MANUAL RELEASE SWITCHES TO VERIFY THE AGENT RELEASE, CHECK FOR TWO SEPARATE AND DISTINCT ACTIONS AND THAT THE SWITCHES ARE PROPERLY IDENTIFIED.
- CHECK DETECTION DEVICES FOR A FIRST ALARM FUNCTION.
- OPERATE THE NECESSARY CIRCUIT TO INITIATE A SECOND ALARM TO ACTIVATE AGENT RELEASE LAMP.
- CHECK THAT EACH AIR CONDITIONING UNIT SHUT OFF AND THE DAMPERS FUNCTIONED PROPERLY.
- CHECK THE POWER TO THE CONTROL PANEL, VERIFY IT IS A DEDICATED CIRCUIT AND PROPERLY LABELED.
- CHECK POLARITY ON EACH ALARM DEVICE AT THE PANEL.
- REMOVE DETECTORS AT RANDOM FROM THE BASE TO CHECK THE SUPERVISORY FUNCTION.
- TEST ABORT SWITCH TO VERIFY THE MANUAL RELEASE SWITCH WILL ACTIVATE THE RELEASE AGENT SOLENOID WHILE THE ABORT BUTTON IS DEPRESSED.
- VERIFY RECEIPT OF PROPER TROUBLE & ALARM SIGNAL AT BUILDING FIRE ALARM PANEL AND/OR REMOTE MONITOR.
- RECONNECT THE AGENT RELEASE ACTUATE RELEASE DEVICE.

### SAPPHIRE FIRE SUPPRESSION LEGEND

SYMBOL	DESCRIPTION
[S.C.P.]	SUPPRESSION CONTROL PANEL (S.C.P.) MTG. HEIGHT +5'-0" AFF
[A]	ABORT SWITCH MTG. HEIGHT +4'-0" AFF
[M]	MANUAL PULL STATION MTG. HEIGHT +4'-0" AFF
[P]	PHOTOELECTRIC SMOKE DETECTOR
[P]	PHOTOELECTRIC SMOKE (DETECTOR-PLENUM)
[B]	ALARM BELL MTG. HEIGHT +7'-0" AFF
[H]	HORN/LIGHT COMBINATION MTG. HEIGHT +7'-0" AFF
[S]	DISCHARGE STROBE MTG. HEIGHT +7'-0" AFF
[M]	MAINTENANCE BY-PASS SWITCH MTG. HEIGHT +4'-0" AFF
[M]	AGENT STORAGE CONTAINER WITH BRACKETS MOUNTED ON WALL.

**NOTE:** ALL SMOKE DETECTORS ARE TO BE LOCATED A MIN. OF 3' AWAY FROM A/C DIFFUSERS AND RETURN GRILLES

1 HR. RATED FIRE WALL PROTECTING CONTROL & COMMUNICATIONS ROOMS EXPOSURES SURROUNDING AREA ARE NORMALLY OCCUPIED. LOCAL SYSTEM. ALL DOORS TO HAVE CLOSERS, (BY OTHERS) ALL DOORS TO SWING OUT, (BY OTHERS) ALL DOORS EQUIPPED WITH PANIC HARDWARE, (BY OTHERS) SYSTEM IS SAPPHIRE (NOVEC 1230) SAPPHIRE DOES NOT DEplete OXYGEN LEVEL AFTER DISCHARGE AND IS SAFE FOR OCCUPIED SPACES. RE: SUBMITTAL SHEET SAPPHIRE CLEAN AGENT

### SEQUENCE OF OPERATION

- 1ST ALARM** - WHEN ANY DETECTOR GOES INTO ALARM, IT WILL ACTIVATE THE FOLLOWING:
- BELLS WILL SOUND THE FIRST ALARM TONE.
  - ALARM CONTACTS WILL NOTIFY THE BUILDING FIRE ALARM SYSTEM.
- 2ND ALARM** - WHEN ANY OTHER DETECTOR IN THE ZONE GOES INTO ALARM THE FOLLOWING WILL ACTIVATE:
- HORN/STROBES WILL SOUND THE SECOND ALARM TONE (NON-SILENCIBLE 60-PULSE-PER-SECOND). THIS WILL ALSO BEGIN THE 30-SECOND DISCHARGE COUNTDOWN.
  - THE APPROPRIATE AIR HANDLERS/FANS WILL BE SHUTDOWN (IF REQUIRED).
  - DAMPER CLOSURE (IF REQUIRED).
- DISCHARGE** - WHEN THE 30-SECOND TIME DELAY HAS EXPIRED THE SYSTEM WILL ACTIVATE THE FOLLOWING:
- THE CLEAN AGENT CYLINDERS WILL DISCHARGE.
  - THE DISCHARGE STROBES WILL ACTIVATE.
  - THE NON-SILENCIBLE SECOND ALARM TONE WILL BECOME A NON-SILENCIBLE CONTINUOUS DISCHARGE TONE.
- MANUAL RELEASE** - WHEN A MANUAL RELEASE STATION IS ACTIVATED THE FOLLOWING WILL OPERATE:
- ALARM CONTACTS WILL ACTIVATE THE BUILDING FIRE ALARM.
  - THE CLEAN AGENT CYLINDERS WILL DISCHARGE.
  - THE HORN/STROBES WILL SOUND A NON-SILENCIBLE CONTINUOUS DISCHARGE TONE.
  - THE DISCHARGE STROBES WILL ACTIVATE.
  - THE APPROPRIATE AIR HANDLERS/FANS WILL BE SHUTDOWN (IF REQUIRED).
  - DAMPER CLOSURE (IF REQUIRED).
- ABORT** - WHEN AN ABORT STATION IS ACTIVATED THE FOLLOWING WILL OCCUR:
- THE 30-SECOND DELAY (WHICH IS ACTIVATED BY (2) ALARMS IN THE ZONE) WILL BE INTERRUPTED. THE TIME WILL RESET BACK TO ITS ORIGINAL VALUE OF 30 SECONDS AND HOLD THERE UNTIL THE ABORT BUTTON IS RELEASED. AT WHICH TIME THE SYSTEM RESUMES ITS COUNTDOWN TO DISCHARGE. THE ACTIVATION OF A MANUAL RELEASE STATION WILL OVERRIDE THE ABORT FUNCTION (EVEN IF THE ABORT IS ACTIVE), WHICH WILL RESULT IN IMMEDIATE DISCHARGE OF THE SAPPHIRE (NOVEC 1230) GAS.

### INPUT/OUTPUT MATRIX

TIME DELAY: 0 (X) 60 OTHER	SMOKE DETECTOR (INITIAL)	SMOKE DETECTOR (SECOND)	MANUAL RELEASE STATION	DISCHARGE COUNTDOWN COMPLETE	ABORT INPUT (ALARM)	ABORT INPUT (NON-ALARM)	TROUBLE INPUT	SUPERVISORY INPUT
1	1	1	1	1	1	1	1	1
2	1	1	1	1	1	1	1	1
3	1	1	1	1	1	1	1	1
4	1	1	1	1	1	1	1	1
5	1	1	1	1	1	1	1	1
6	1	1	1	1	1	1	1	1
7	1	1	1	1	1	1	1	1
8	1	1	1	1	1	1	1	1
9	1	1	1	1	1	1	1	1
10	1	1	1	1	1	1	1	1
11	1	1	1	1	1	1	1	1
12	1	1	1	1	1	1	1	1
13	1	1	1	1	1	1	1	1
14	1	1	1	1	1	1	1	1
15	1	1	1	1	1	1	1	1
16	1	1	1	1	1	1	1	1

### CLEAN AGENT CALCULATION

AREA/ZONE	CONTROL & COMMUNICATIONS
SOURCE TANKS	1
PROTECTED SPACE CUFT	4,060 CU.FT.
FLOODING FACTOR	.0429 (4.7%) @ 70'
NOVEC 1230 REQUIRED	175.0 lbs. ⚠
TANK MAIN: 1-280 lb. CAPACITY CYLINDER @ 175.0 lbs.	
TOTAL NOVEC 1230 SUPPLIED	= 175.0 lbs.
ADJUSTED CONCENTRATION (CEILING):	> 4.7%
DISCHARGE TIME:	9.1 sec

### PIPE HANGER SPACING

PIPE SIZE IN.	MAXIMUM SPACING FT.
3/8	5.0
1/2	5.0
3/4	6.0
1	7.0
1-1/4	7.0
1-1/2	9.0
2	11.0
2-1/2	11.0
3	12.0
4	14.0
6	17.0

**PIPE HANGERS:**  
PIPE HANGERS MUST BE SPACED ACCORDING TO THE SIZE OF THE PIPE:

- HANGERS MUST BE PLACED WITHIN 12" OF THE DISCHARGE NOZZLE.
- HANGERS MUST BE PLACED BETWEEN ELBOWS THAT ARE MORE THAN 12" APART.
- HANGERS MUST BE FIXED TO A STRUCTURE CAPABLE OF SUPPORTING THE PIPEWORK.

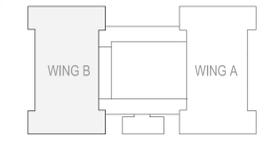
**CODE SUMMARY:**  
FIRE SUPPRESSION SYSTEM DESIGNED IN ACCORDANCE WITH:

- FLORIDA FIRE PREVENTION CODE, 2010 EDITION.
- NFPA 72, 2007 EDITION
- NFPA 2001, 2008 EDITION
- RULES & REGULATIONS OF THE STATE FIRE MARSHALS OFFICE, AND ALL STATE AND LOCAL CODES.

**FOR INFORMATION CONCERNING THE SAPPHIRE SYSTEM CONTACT TRIANGLE FIRE**  
ATTN: ORLANDO ALFONSO  
7720 NW 53RD ST  
MIAMI, FL 33166  
TEL: (305) 592-3011

## 1 2ND FLOOR FIRE PROTECTION PLAN - WING B

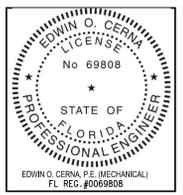
FP2.2B 1/8" = 1'-0"



REVISIONS:

NO.	DESCRIPTION	DATE
1	ADDENDUM #3	10/15/14

**KEY WEST CITY HALL AT GLYNN ARCHER**  
PHASE 2  
1300 WHITE STREET KEY WEST, FLORIDA  
CITY OF KEY WEST



M.E.P.F. ENGINEER:  
**H.N.G.S. ENGINEERS**  
HURSEY, NICOLAIDES, GARCIA, SUAREZ  
CONSULTING ENGINEERS  
4605 S.W. 76th Court, Miami, Florida 33155  
(305) 270-9925 Fax (305) 666-0891  
MESA # 15-2008  
ENRIQUE J. SUAREZ, P.E. (MECHANICAL)  
FL REG. #00092008  
CARLOS GARCIA, P.E. (ELECTRICAL)  
FL REG. #00092008

410 Angela Street  
Key West, Florida 33040  
Telephone (305) 296-1347  
Facsimile (305) 296-2727  
Florida License AC002022

**Bender & Associates ARCHITECTS**  
P.A.

Project N° 1305  
2ND FLOOR FIRE PROTECTION PLAN - WING B

Date: 8/8/14

**FP2.2B**

PERMIT SET