PROJECT MEMORANDUM

DATE: August 15, 2017

PROJECT: Renovations to
Franklin High School Annex Building
Williamson County Schools
J+B No. 1624
WCS RFB #1077

ARCHITECT: Johnson + Bailey Architects P.C.
City Center, Suite 700
100 East Vine Street
Murfreesboro, TN. 37130
FAX NO.: (615) 890-4564

TO: Boyce Ballard Construction
Deangelis Diamond Group
Dowdle Construction Group
Fellowship Construction
Holt Construction Group
McHugh Construction
Pride Concrete & Construction
Romach, Inc.
Sain Construction Company

Attached is Addendum No. 1 dated August 14, 2017, for the referenced project. Please sign
and return a copy of this Memorandum by Fax (615-890-4564) or e-mail
(mgannon@jbarchitects.com) indicating receipt of the Addendum.

CONFIRMATION OF RECEIPT - ADDENDUM NO. 1

COMPANY: ________________________________

BY: ________________________________

DATE RECEIVED: ________________________________

cc (via email): Kevin Fortney
Garri Hall
Kirk Elliott
Skip Decker
Entech Engineering
Prographics
Construction Market Data
Builders Exchange of Tennessee
ConstructConnect
Dodge Data & Analytics
ADDENDUM NO. 1

DATE: August 14, 2017

PROJECT: Renovations to
Franklin High School Annex Building
Williamson County Schools
J+B No. 1624
WCS RFB #1077
TFM # 11199 2017-07-07-01

ARCHITECT: Johnson + Bailey Architects, P.C.
City Center, Suite 700
100 East Vine Street
Murfreesboro, TN. 37130

The following Addendum adds to, corrects, or supersedes Contract Documents dated June 29, 2017, Revision #1, dated July 27, 2017 and is as follows:

CHANGES TO THE SPECIFICATIONS

SECTION 00 01 10 - TABLE OF CONTENTS

REFERENCE: DIVISION 00
ADD: Attached section 00 31 32 - INFORMATION AVAILABLE TO BIDDERS dated August 14, 2017.

REFERENCE: DIVISION 02

REFERENCE: DIVISION 23

SECTION 01 11 00 - SUMMARY AND SCHEDULING OF WORK

REFERENCE: Page 01 11 00 - 1, 1.2.B
DELETE: Paragraph 1.2.B in its entirety.
ADD: The following in place of the deleted:
"B. Substantial Completion for work shall be achieved on or before Friday December 22, 2017."

SECTION 07 65 26 - WALL FLASHING

REFERENCE: Page 07 65 26 - 1, 2.1.A
ADD: The following sentence:
"4. MEL-ROL Self-Adhering Waterproofing Membrane by W.R. Meadows"
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SECTION 08 16 13 - FRP DOORS

REFERENCE: Page 08 16 13 - 4, 2.2.A
CHANGE: The words, "Standard Wall Door Series FD25", to, "Heavy Wall Door Series FD55".

REFERENCE: Page 08 16 13 - 5, 2.2.D.3
DELETE: This sentence in its entirety.
ADD: The following in place of the deleted,
"3. Core insulation will be 25 psi density polystyrene."

REFERENCE: Page 08 16 13 - 5, 2.2.D.5
CHANGE: The words, "1/4 inch or 3/4 inch", to, "1 inch".

REFERENCE: Page 08 16 13 - 6, 2.5.A.1
CHANGE: The words, "FS-24", to, "FS-26".

REFERENCE: Page 08 16 13 - 6, 2.5.A.2
CHANGE: The words, "2" X 6 ™", to, "2" X 6".

SECTION 08 71 00 - FINISH HARDWARE

REFERENCE: Page 08 71 00 - 8, SET #1
DELETE: Hardware set #1 in its entirety.
ADD: The following in place of the deleted:

SET #01 - Openings: A101

<table>
<thead>
<tr>
<th>2 Continuous Hinge</th>
<th>FURNISHED UNDER SECTION 08255</th>
<th>SP28</th>
<th>VO</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Power Transfer (LHR Leaf)</td>
<td>EPT 10</td>
<td>SP28</td>
<td>VO</td>
</tr>
<tr>
<td>1 Flush Pull (LHR Leaf)</td>
<td>FURNISHED UNDER SECTION 08255</td>
<td>SP28</td>
<td>VO</td>
</tr>
<tr>
<td>1 Mullion</td>
<td>KR4954</td>
<td>SP28</td>
<td>VO</td>
</tr>
<tr>
<td>1 Wall Mounting Kit</td>
<td>MT54</td>
<td>SP28</td>
<td>VO</td>
</tr>
<tr>
<td>1 Exit Device (LHR Leaf)</td>
<td>SD-EL 99EO SNB</td>
<td>US26D</td>
<td>VO</td>
</tr>
<tr>
<td>1 Exit Device (RHR Leaf)</td>
<td>CD 99EO RX-LC SNB</td>
<td>US26D</td>
<td>VO</td>
</tr>
<tr>
<td>1 Electronic Exit Trim (RHR Leaf)</td>
<td>AD-400-993R-70-MTK-RHO JD CO6</td>
<td>626</td>
<td>LO</td>
</tr>
</tbody>
</table>
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5 Temp Construction Core
4 Cylinder Housing
5 Cylinder Core
1 Door Operator (LHR Leaf)
1 Mounting Plate
1 Closer (RHR leaf)
2 Kickplate
1 Mullion Seal
2 Wall Actuator (outside & inside)
1 Wireless Receiver (for actuator)
1 Keyswitch
1 Power Supply
1 Wireless Transmitter Kit
1 Wireless Receiver
1 Surface Mini Box
1 Power Supply

<table>
<thead>
<tr>
<th>Description of Operation: Door norm</th>
</tr>
</thead>
<tbody>
<tr>
<td>ally closed and latched, lever trim locked. Valid credential at AD-400 trim unlocks outside lever allowing entry by turning lever. Outside lever relocks after preset time delay. Signal from wireless push button inside Reception A103 causes latchbolts on LHR leaf exit device to retract, allowing entry by pulling door open. Latches re-lock after preset time delay. Wireless actuator inside and outside signals auto operator to retract latches on exit device and open door. Door closes and latches re-lock after preset time delay. Key switch mounted inside vestibule disables outside actuator. Red light on key switch indicates outside actuator is turned off, green light indicates actuator is turned on. RX-LC switch in exit device signals authorized egress through active leaf.</td>
</tr>
</tbody>
</table>

SECTION 10 51 13 - METAL LOCKERS

REFERENCE: Page 10 51 13 - 2, 2.4.A.2

ADD: The following words:

"WEC Manufacturing"

SECTION 10 73 26 - ALUMINUM WALKWAY COVERINGS

REFERENCE: Page 10 73 26 - 2, 2.1.B

ADD: The following sentence:

"5. Tennessee Valley Metals"

SECTION 12 35 53 - WOOD LABORATORY CASEWORK

REFERENCE: Page 12 35 53 - 2, 2.1.A
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ADD: The following sentences:

“8. Diversified Casework
9. Mott Manufacturing”

SECTION 28 31 00 - FIRE ALARM SYSTEM

REFERENCE: Entire Section

DELETE: Section 28 31 00 - FIRE ALARM SYSTEM in its entirety.

ADD: The attached specification section 28 31 00 - FIRE ALARM SYSTEM dated August 14, 2017.

CHANGES TO THE DRAWINGS

DRAWING A3.1

REFERENCE: Keyed Renovation Plan Notes; Note 36

DELETE: Note 36 in it entirety.

ADD: Note 36 to read as follows”

“36. REMOVE EXISTING HOLLOW METAL FRAME AND GLAZING. INSTALL AND PAINT NEW HOLLOW METAL FRAME. INSTALL NEW DOOR AND 1” INSULATED GLAZING AS INDICATED.

DRAWING A8.1

REFERENCE: Door and Frame Types; Type F2

REVISE: Frame elevation as shown on attached drawing RA8.1 dated August 14, 2017.

DRAWING M2.1

REFERENCE: OAU#1

ADD: Add note to read as follows:

“SCREEN WALL SUPPORTED FROM CURB AND UNIT (REFERENCE SPECIFICATIONS).”

- END OF ADDENDUM -
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ATTACHMENTS:

- Specification Section 00 31 32 - INFORMATION AVAILABLE TO BIDDERS dated 08-14-17 (1 Page)
- Specification Section 02 26 23 - ASBESTOS ASSESSMENT dated 08-14-17 (1 Page)
- Specification Section 23 75 05 - ROOF TOP EQUIPMENT SCREENS dated 08-14-17 (4 Pages)
- Specification Section 28 31 00 - FIRE ALARM SYSTEM dated 08-14-17 (7 Pages)
- Drawing RA8.1 dated 08-14-17
1.1 ASBESTOS ASSESSMENT

A. An AHERA Management Plan has been prepared for the existing building, and a report of the findings of this management plan are on file in the Architect's office.

This AHERA Management Plan was obtained solely for planning and design purposes and is not a part of the Contract Documents. The use and interpretation of this information for any other purpose will be entirely the responsibility of the using party.

Upon request by any bidder, the AHERA Management Plan may be reviewed upon signing the following waiver:

"We acknowledge by the signature below that this AHERA Management Plan was prepared solely for the Owner's and Designer's use in the planning and design of this facility and will not be utilized as a basis for calculations in the preparation of our bid. The use and interpretation of this information for any other purposes will be entirely the responsibility of the using party."

Name of Firm: _____________________________________________

Signed by: ________________________________ Date: ____________

Title: __________________________________________

This waiver must be signed by a person or persons authorized to bind the Bidder to a contract.

- END OF SECTION -
SECTION 02 26 23 ASBESTOS ASSESSMENT

1.1 INFORMATION DATA

AHERA Management Plan has been prepared by:

Resolution Incorporated
1101A Darbytown Dr.
Nashville, TN 37207
Dated: July 17, 2017
Telephone: (615) 865-8813

1.2 The AHERA Management Plan has been made for the purposes of planning and for the use of the Owner and Architect. A digital copy of the AHERA Management Plan is available for the prospective bidders to review in Accordance with the provisions of Section 00 31 32, Information Available to Bidders. No responsibility for accuracy or completeness is assumed by the Owner or Architect.

- END OF SECTION -
SECTION 23 75 05
ROOF TOP EQUIPMENT SCREENS

PART 1 GENERAL

1.1 SECTION INCLUDES
A. Pre-formed thermoplastic panel for enclosing roof top mechanical equipment.
B. Aluminum assembly framing for direct attachment of screening panels to mechanical equipment; no base or curb required unless shown otherwise on drawings.
C. Sliding panels to permit easy access to mechanical equipment for servicing.

1.2 RELATED SECTIONS
A. Section 23 74 05 - Dedicated Outside Air System.

1.3 REFERENCES
C. American Society of Civil Engineers - ASCE 7-95 - Minimum Design Loads for Buildings and Other Structures.

1.4 SYSTEM DESCRIPTION
A. Design Criteria:
1. Manufacturer is responsible for the structural design of all materials, assembly and attachments to resist snow, wind, suction and uplift loading at any point without damage or permanent set.
2. Framing shall be designed in accordance with the Aluminum Design Manual to resist the following loading:
   a. ASCE 7-95 - Minimum Design Loads for Buildings and Other Structures; American Society of Civil Engineers.

1.5 SUBMITTALS
A. Product Data: Submit manufacturer’s catalog data, detail sheets, specification and other data sufficient to indicate compliance with these specifications.
B. Shop Drawings: Indicate layouts, heights, component connection details, and details of interface with adjacent construction. Mark data to indicate:
   1. Roof top mechanical equipment to be enclosed.
C. Samples:
   1. Samples of Materials: Thermoplastic panels.
   2. Color Selection: Submit paint chart with full range of colors available for Architect’s selection.

August 14, 2017 © 2017 JOHNSON + BAILEY ARCHITECTS P.C. 23 75 05 -1
D. Certification: Manufacturer's Certificate of Compliance certifying that thermoplastic panels supplied meet or exceed requirements specified.

E. Closeout Submittals: Warranty documents, issued and executed by manufacturer, countersigned by Contractor.

1.6 QUALITY ASSURANCE

A. Regulatory Requirements: Comply with requirements of building authorities having jurisdiction in Project location.

B. Manufacturer Qualifications: Minimum five (5) years documented experience producing systems specified in this section.

C. Pre-Installation Meeting:
   1. Convene at job site seven (7) calendar days prior to scheduled beginning of construction activities of this section to review requirements of this section.
   2. Require attendance by representatives of the installing subcontractor, (who will represent the system manufacturer) and other entities directly affected by construction activities of this section.
   3. Notify Architect four (4) calendar days in advance of scheduled meeting date.

1.7 DELIVERY, STORAGE AND HANDLING

A. Delivery: Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly indicating manufacturer and material.

B. Storage and Handling: Protect materials and finishes during handling and installation to prevent damage.

1.8 PROJECT CONDITIONS

A. Field Measurements: Take measurements of actual roof top unit for fit without gaps. Indicate measurements on shop drawings fully documenting any field condition that may interfere with the screen system installation.

1.9 COORDINATION

A. Installer for work under this Section shall be responsible for coordination of panel and framing sizes and required options with the Contractor's requirements.
   1. Request information on sizes and options required from the Contractor.

B. Submit shop drawings to the Contractor and obtain written approval of shop drawing from the Contractor prior to fabrication.

1.10 WARRANTY

A. If any part of the rooftop equipment screen fails because of a manufacturing defect within one year from the date of substantial completion, the manufacturer will furnish without charge the required replacement part(s). Any local transportation, related service labor or diagnostic call charges are not included.

B. This warranty does not cover failure of your rooftop equipment screen if it is damaged by the Owner, or if the failure is caused by improper installation. In no event shall Warrantor be liable for incidental or consequential damages.
PART 2  PRODUCTS

2.1 MANUFACTURERS

A. Acceptable Products:
   2. Curbs Plus.

B. Substitutions: Submit in accordance with Division 01.

2.2 MATERIALS

A. Thermoformed Plastic Panels: Fabricated from rigid medium impact thermo-formed ABS (Acrylic Butylene Styrene) sheets.
   1. Minimum thickness: 3/16 inch (18mm).

B. Framing: Aluminum Plate, Shapes and Bar: ASTM B 221, alloy 6061-T5 or 6063-T5.

C. Threaded Fasteners: All screws, bolts, nuts and washers shall be Stainless steel.
   1. Corner assembly fasteners shall be #10-16 x stainless steel TEK screws. Length as required to develop full holding capacity of screw when fastened to Mechanical Equipment.
   2. Provide lock washer or other locking device at all bolted connections.

2.3 FABRICATION

A. Provide factory-formed panel systems with continuous interlocking panel connections and indicated or necessary components: Form all components true to shape, accurate in size, square and free from distortion or defects. Cut panels to precise lengths indicated on approved shop drawings.

B. Fabricate all panels to slide horizontally to allow access to unit access panels behind.

C. Panel Design, Style, Trim:
   1. Panel Style: Vertical.
   3. Decorative Top Trim Profile: Flat.

D. Trim and Closures: Fabricated from 24 gage metal, and finished with the manufacturers standard coating system, unless shown otherwise on drawings.

E. Framing: Fabricate and assemble components in largest practical sizes, for delivery to the site.
   1. Construct corner assemblies to required shape with joints tightly fitted.
   2. Supply components required for anchorage of framing. Fabricate anchors and related components of material and finish as required, or as specifically noted.

2.4 FINISHES

A. Aluminum Framing: Mill finish.

B. Panel Coating: Manufacturer's standard coating system, factory-applied.
   1. Color: Selected from full range of manufacturer's standard colors, as selected by Architect.
PART 3  EXECUTION

3.1  EXAMINATION

A. Installer's Examination: Examine conditions under which construction activities of this section are to be performed.
   1. Submit written notification to Architect and Screen manufacturer if such conditions are unacceptable.
   2. Beginning erection constitutes installer's acceptance of conditions.

3.2  INSTALLATION

A. Install units in accordance with the manufacturer's instructions and approved shop drawings. Keep perimeter lines straight, plumb, and level. Provide brackets, anchors, and accessories necessary for a complete installation.

B. Fasten structural supports to HVAC units without damaging operation of the unit.
   1. Provide corner and mid-span assemblies as required by approved shop drawings so that the panels are supported uniformly.
   2. Fastening bottom rail using bolts to permit ease of access to HVAC units.

C. Insert thermoplastic panels into structural supports, except where fixed attachments points are indicated. Butt thermoplastic panels to adjacent panels for uniform fit. Fasten fixed panels in accordance with the shop drawings.

D. Metal Separation: Where aluminum materials would contact dissimilar materials, insert rubber grommets at attachment points, thus eliminating where dissimilar metals would otherwise be in contact.

E. Do not cut or abrade finishes which cannot be restored. Return items with such finishes to shop for required alterations.

3.3  ERECTION TOLERANCES

A. Maximum misalignment from true position: 1/4 inch (12mm).

3.4  CLEANING AND PROTECTION

A. Remove all protective masking from material immediately after installation.

B. Protection:
   1. Ensure that finishes and structure of installed systems are not damaged by subsequent construction activities.
   2. If minor damage to finish occurs, repair damage in accordance with manufacturer's recommendations; provide replacement components if repaired finishes are unacceptable to Architect.

C. Prior to Substantial Completion: Remove dust or other foreign matter from component surfaces; clean finishes in accordance with manufacturer's instructions.
   1. Clean units in accordance with the manufacturer's instructions.

END OF SECTION
SECTION 28 31 00
FIRE ALARM SYSTEM

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Fire alarm control and annunciator panels.
B. Manual fire alarm stations.
C. Automatic smoke and heat detectors.
D. Fire alarm signaling appliances.
E. Auxiliary fire alarm equipment.

1.2 RELATED SECTIONS

A. Division 08 - Sectional Overhead Doors.
B. Division 14: Elevators.
C. Section 21 13 13 - Sprinkler Systems.
D. Division 23: Exhaust Hoods.
E. Section 26 05 19 - Building Wire and Cable.
F. Section 26 05 33 - Conduit.

1.3 REFERENCES

A. NFPA 70 - National Electrical Code.
B. NFPA 72 - Installation, Maintenance, and Use of Protective Signaling Systems.
D. Americans with Disabilities Act (ADA).

1.4 SYSTEM DESCRIPTION

A. Fire Alarm System: NFPA 72, manual and automatic local fire alarm system (intelligent and addressable analog) with connections to a central system, as required by the local authority. System shall be designated as a certificated system based on NFPA 72 and U.L.

1.5 SUBMITTALS

A. Submit under provisions of Division 01.
B. Shop Drawings: Provide annunciator layout and system wiring diagram showing each device and wiring connection required. Provide nominal 11 x 17 inch CADD generated building map indicating devices and connections. Map to be in aluminum frame with Plexiglas cover, color per Division 09.

C. Product Data: Provide electrical characteristics and connection requirements.

D. Test Reports: Indicate satisfactory completion of required tests and inspections, including detector sensitivity and all requirements of the regulatory agencies. Provide reports per NFPA 72. Furnish U.L. certificated system report using a U.L. Listed alarm service company.

E. Manufacturer's Installation Instructions: Indicate application conditions and limitations of use stipulated by Product testing agency. Include instructions for storage, handling, protection, examination, preparation, installation, and starting of products.

F. Submit Power Supply and Battery sizing calculations.

G. A certification report, signed by the U.L. Listed alarm service company shall be submitted at the final inspection listing each smoke detector and the test method used to obtain the manufacturer's calibrated sensitivity. Testing shall be accomplished in accordance with NFPA-72 and U.L.

1.6 PROJECT RECORD DOCUMENTS

A. Submit under provisions of Division 01.

B. Record actual locations of initiating devices, signaling appliances, end-of-line devices, power supplies, control units, batteries, power source panel/breaker, DACT, and voice evacuation panels.

1.7 OPERATION AND MAINTENANCE DATA

A. Submit under provisions of Division 01. A one-year maintenance contract and a year-end U.L. Inspection certification report are required. The maintenance contractor shall be a U.L. Listed alarm service company.

B. Operation Data: Operating instructions.

C. Maintenance Data: Maintenance and repair procedures.

1.8 QUALIFICATIONS

A. Manufacturer: Company specializing in manufacturing the products specified in this section with minimum three (3) years documented experience, and with service facilities within 100 miles of Project.

B. Contractor: The fire alarm contractor must be certified in accordance with the Tennessee Alarm Contractors Licensing Act of 1991, TCA Title 62, Chapter 32. The fire alarm contractor shall be a U.L. Listed alarm service company.

1.9 MAINTENANCE SERVICE

A. Furnish service and maintenance of fire alarm system for one (1) year from Date of Substantial Completion. Use only a U.L. Listed alarm service company.
B. Provide a year-end U.L. inspection certification report.

1.10 EXTRA MATERIALS

A. Furnish under provisions of Division 01.
B. Provide ten (10) manual station break-glass rods.
C. Provide six (6) keys of each type.
D. Provide three (3) of each type of automatic smoke detector without base.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Silent Knight 5820XL using SD protocol.
B. No substitutions.

2.2 FIRE ALARM AND SMOKE DETECTION CONTROL PANEL

A. Control Panel: Modular construction with surface wall-mounted enclosure.
B. Power supply: Adequate to serve control panel modules, remote detectors, remote annunciators, door holders, smoke dampers, relays, and alarm signaling devices. Include battery-operated emergency power supply with capacity for operating system in standby mode for 24 hours followed by alarm mode for 5 minutes. Locate all power supplies in accessible locations to be coordinated with Electrical Engineer.
C. System Supervision: Component or power supply failure places system in trouble mode.
D. Initiating Device Circuits: Supervised zone module with alarm and trouble indication; occurrence of single ground or open condition places circuit in trouble mode but does not disable that circuit from initiating an alarm.
E. Indicating Appliance Circuits: Supervised march time signal module, sufficient for signal devices connected to system; occurrence of single ground or open condition places circuit in trouble mode but does not disable that circuit from signaling an alarm.
F. Remote Station Signal Transmitter: Electrically supervised digital alarm communicator transmitter, capable of transmitting alarm and trouble signals over IP primary with cellular backup to central station receiver. Locate the remote station signal transmitter in the fire alarm panel. Annunciate trouble signal at the control panel and at the remote annunciator. Equal to Silent Knight IPGSM-4G and listed compatible with the control panel.
G. Auxiliary Relays: Provide sufficient SPDT auxiliary relay contacts for each detection zone to provide accessory functions specified. All normally open and normally closed contacts shall perform in the fail-safe mode. Reference Division 15 control diagrams for fire alarm connections and HVAC unit shutdown requirements.
H. Provide TROUBLE ACKNOWLEDGE, DRILL, and ALARM SILENCE switch.
I. Trouble Sequence of Operation: System or circuit trouble places system in trouble mode, which causes the following system operations:
1. Visual and audible trouble alarm indicated by zone at fire alarm control panel.
2. Visual and audible trouble alarm indicated at remote annunciator panel.
3. Trouble signal transmitted to central station.
4. Manual acknowledge function at fire alarm control panel silences audible trouble alarm; visual alarm is displayed until initiating failure or circuit trouble is cleared.

J. Alarm Sequence of Operation: Actuation of initiating device places circuit in alarm mode, which causes the following system operations:
1. Sound and display local fire alarm signaling devices with march time signal.
2. Transmit zone-coded signal to central station.
3. Indicate location of alarm zone and device on fire alarm control panel and on remote annunciator panel.
4. Transmit signal by zone to building smoke removal system.
5. Transmit signal to building mechanical systems to initiate shutdown of fans and damper operation.
6. Transmit signal to release door hold-open devices.
7. Transmit signal to release smoke curtain hold-open devices.
8. Transmit signal to release door locking system.

K. Alarm Reset: System remains in alarm mode until manually reset with key-accessible reset function; system resets only if initiating circuits are out of alarm mode.

L. Lamp Test: Manual lamp test function causes alarm indication at each zone at fire alarm control panel and at annunciator panel.

M. Drill Sequence of Operation: Manual drill function causes alarm mode operation as described above.

N. Zoning: Each addressable device is considered a zone.

O. Surge Protection: Provide type required by Section 26 35 53 and regulatory agency. Verify protection for power input and each input from exterior devices, including telephone lines used by the DACT.

2.3 INITIATING DEVICES


B. Spot Heat Detector: Combination rate-of-rise and fixed temperature (addressable type), rated 135 degrees F, and temperature rate of rise of 15 degrees F addressable.

C. Ceiling Mounted Smoke Detector: NFPA 72, photoelectric addressable type with adjustable sensitivity, plug-in base with auxiliary relay contact and visual indication of detector actuation, suitable for mounting on 4 inch (102 mm) outlet box. Provide two-wire detector with common power supply and signal circuits.

D. Duct Mounted Smoke Detector: NFPA 72, photoelectric addressable type Model SD505-DUCTR with relay module and SD505-DTS-K key-operated NORMAL-RESET-TEST switch, duct sampling tubes extending width of duct, and visual indication of detector actuation, in duct-mounted housing. Provide two-wire detector with common power supply and signal circuits.
E. Water flow and Tamper Switches: By Division 21. Install addressable adapter modules as required. Exterior junction boxes shall have tamper proof screws.

F. Hood Suppression Micro Switches: By Division 23. Install addressable adapter and control devices as required.

### 2.4 SIGNALING APPLIANCES

A. Alarm Lights: ADA and NFPA 72, strobe lamp and flasher with red lettered “FIRE” on white housing.

B. Alarm Horn/Strobe: ADA and NFPA 72, flush type fire alarm horn. Sound Rating: 87 dB at 10 feet (3M). Provide integral lamp and flasher with red lettered “FIRE” on white housing.

C. Remote Annunciator: Provide supervised remote annunciator including audible and visual indication of fire alarm by zone, and audible and visual indication of system trouble. Install in flush wall-mounted enclosure.


E. Fire Evacuation Speakers: UL Standard 464, 8 inch recessed ceiling mounted with 70.7v line transformer and supervision capacitor. Rating: 87db at 10 feet. Unit shall have combination strobe.

### 2.5 AUXILIARY DEVICES

A. Door Holders: Magnetic door holder with integral diodes to reduce buzzing. Coil voltage: Match system.

B. Install addressable adapter modules for sprinkler, system switches, hood suppression switch and each HVAC unit for shutdown as per Division 23 control drawings. Provide “total building” shutdown or “per zone” shutdown as required by local authority.

C. Provide “lock-on” device for breaker(s) serving fire alarm control units.

### PART 3 EXECUTION

#### 3.1 INSTALLATION

A. Install products in accordance with manufacturer’s instructions.

B. Install manual station with operating handle 48 inches above floor, to centerline. Install audible and visual signal devices 7 feet 4 inches above floor, to centerline.

C. Use #12 AWG solid minimum size conductors for signal circuits and #16 AWG solid minimum size conductors for detection data circuits. Increase conductor size as required to compensate for excessive voltage drop. Install all wiring in conduit. Use fire alarm cable approved by NEC Article 760. For exterior lines serving addressable adapter modules, use shielded cable in conduit. The installation method shall conform with Class B wiring. No other wiring shall share raceways or be bundled with fire alarm wiring.
D. Flashing strobe lights shall be wired separately from audible signal devices. Strobe lights shall be wired in such a way that when the alarm signal is silenced, the strobe light shall continue to flash. The strobe shall flash until the alarm condition responsible for the system initiation has been corrected or reset.

E. Mount end-of-line device in separate box flush in ceiling adjacent to last device in circuit. Provide engraved label on plate.

F. Mount outlet box for electric door holder to withstand 80 pounds pulling force.

G. Make conduit and wiring connections to door release devices, sprinkler flow switches, sprinkler valve tamper switches, fire suppression system control panels, duct and ceiling smoke detectors, HVAC unit controls and telephone lines for central station reporting.

H. Automatic Detector Installation: Conform to NFPA 72.

I. Install a separate voice evacuation panel for each assembly area noted.

J. Provide ceiling mounted smoke detector for each control unit, auxiliary power supply, voice panel, remote DACT or other fire alarm control unit.

3.2 FIELD QUALITY CONTROL

A. Test in accordance with NFPA 72 and local fire department requirements. See paragraphs 1.7 and 1.8, this Section.

3.3 MANUFACTURER'S FIELD SERVICES

A. Prepare and start systems under direct supervision of the manufacturer's representative.

B. Include services of manufacturer's technician to supervise installation, adjustments, final connections, and system testing.

C. Coordinate signal requirements by the DACT with Owner's central station provider. Verify provider is U.L. Listed monitoring company and obtain a copy of their certification for on-site display.

D. Verify two (2) separate telephone service carriers will be used for dialing.

3.4 FIRE ALARM WIRE AND CABLE COLOR CODE

A. Provide fire alarm circuit conductors with insulation color coded as follows, or using colored tape at each conductor termination and in each junction box.

B. Power Branch Circuit Conductors: Black, red, white.

C. Initiating Device Circuit: Black, red.

D. Duct Detector: Pink, gray.

E. Signal Device Circuit: Yellow, purple.

F. Voice Evac Speakers: Green, white.
G. Door Release: Brown, yellow.
H. S-Bus: Black, red, white and blue.
I. Central Station Trip Circuit: Orange, orange.
J. Central Station Fire Alarm Loop: Black, white.
K. Junction and pull boxes: Red label "FA".

3.5 DEMONSTRATION

A. Provide systems demonstration under provisions of Division 01 and (all local, state, and federal) regulatory agencies having jurisdiction. Fire alarm service company must be present at all such demonstrations.

B. Demonstrate normal and abnormal modes of operation, and required responses to each.

C. At the beginning of each demonstration, furnish all required documentation and equipment required for testing the system to the regulatory agency present at that test.

END OF SECTION
PARTIAL REVISED
DOOR AND FRAME TYPES

1 INDICATES TEMPERED GLASS

SCALE 1/4" = 1'-0"

RA8.1