ADDENDUM

PROJECT:	All Saints Catholic Church and School	**PROJECT NO.**	L11011.1
FROM:	BVH Architects	**DATE:**	2/13/2015
TO:	Cheever's Construction	**ADDENDUM NO.**	1

This Addendum is issued by the Architect to all bidders of record prior to receipt of proposals. Bidders shall acknowledge receipt of this addendum by so indicating on the Proposal Form. Failure to do so may subject Bidder to disqualification.

All information and instructions given herein shall become a part of the Contract Documents.

1.01 PROJECT MANUAL - ARCHITECTURAL

1. SECTION 088000 – GLAZING
    a. 2.01 GLAZING TYPES
        i. G. Type 3 – Decorative Glazing: Colored Glass. Change from "Type 3" to "Type 4".

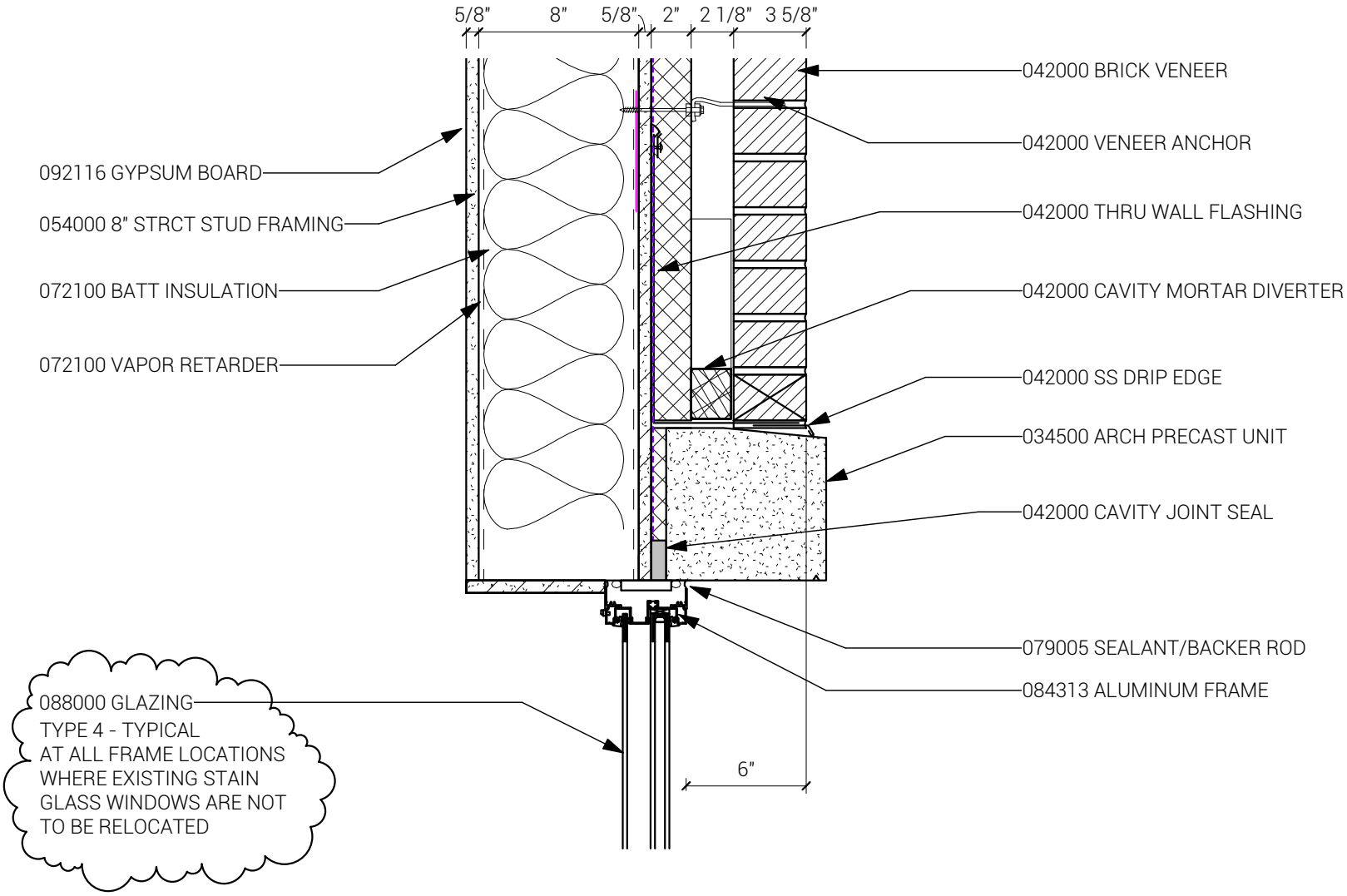
2.01 DRAWINGS - STRUCTURAL

1. See revised details for the cross size and shape as well as connection details.
2. See attached sketch for clarification on roof tie in at existing roof line.

3.01 SEE ATTACHED MECHANICAL ELECTRICAL ADDENDUM.

ALL SAINTS CHURCH AND SCHOOL
ADD #1

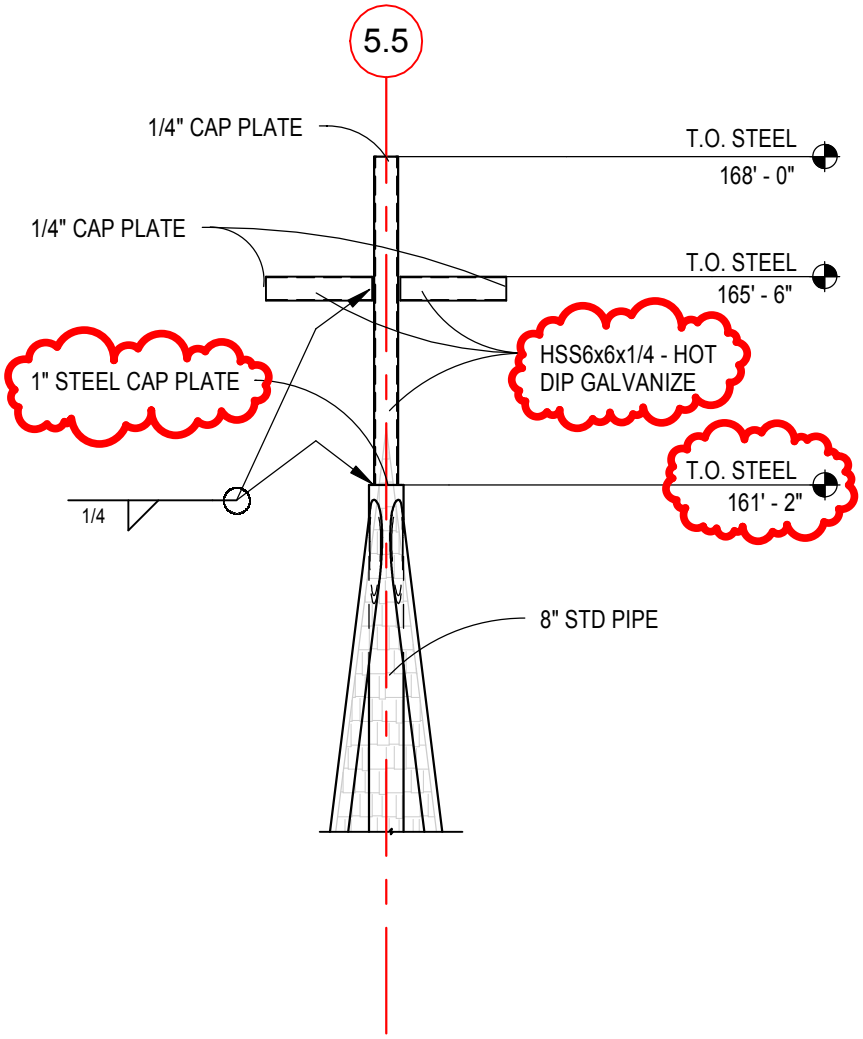
DATE: 02/16/15



H1 HEAD DETAIL

REFERENCE SHEET A5.1R

1 1/2" = 1'-0"



1
SA-2

TOP OF BELL TOWER ADDENDUM

SCALE: 1/4" = 1'-0"

structural[design]group, inc.
410 S 7th street
lincoln, nebraska 68508
402-438-7788

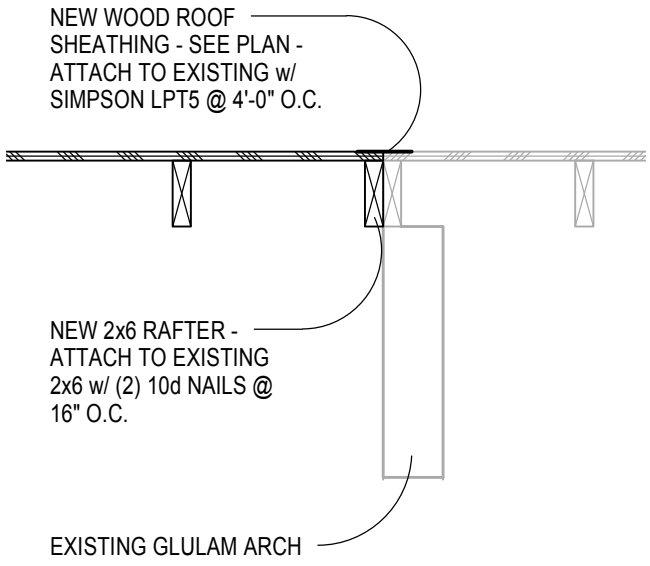
ALL SAINTS CHURCH AND SCHOOL ADDITION

TOP OF BELL TOWER ELEVATION

SA-2

Project number:	Drawn by: JTW	
Date: 02-12-15	Checked by: Checker	Scale 1/4" = 1'-0"

2/12/2015 2:47:42 PM



1 / SA-1 ROOF DETAIL AT EXISTING

SCALE: 3/4" = 1'-0"

structural[design]group, inc.
410 S 7th street
lincoln, nebraska 68508
402-438-7788

ALL SAINTS CHURCH AND SCHOOL ADDITION

ADDENDUM ROOF DETAIL

SA-1

Project number:	Drawn by: JTW	
Date: 02-12-15	Checked by:	Scale 3/4" = 1'-0"

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Alvine Engineering

Addendum 1

All Saints Church and School – Bid Package 2R
February 13, 2015

Bid Date: February 24, 2015

This addendum is hereby made a part of the contract documents to the same extent as though it were originally included therein. Specifications and drawings shall be considered modified or revised as hereinafter described. Revisions to the drawings are referenced by the drawing number.

Changes to the Project Manual

Electrical Specification Items:

1ES1. Section 28 31 00 – Fire Detection and Alarm

1. See attached specification section. This section has been updated to reflect a new Voice Evacuation Fire Alarm System.

Changes to the Drawings

Mechanical Drawing Items:

1MD1. Sheet M0.1R – First Floor Plan – Plumbing Demolition

1. Keep existing FUR-2 in operation per the attached Mechanical Sketch Sheet MS-1.

1MD2. Sheet M0.2R – First Floor Plan – HVAC Demolition

1. Remove the ductwork demolition work in Existing 127 per the attached Mechanical Sketch Sheet MS-2.
2. Remove Flag Note No. 10 from the floor plan and mark Flag Note No. 10 as “Not Used”.
3. Keep existing FUR-2 and ACCU-2 in operation per the attached Mechanical Sketch Sheet MS-2.
4. Keep the existing supply air ductwork in existing Office 114 per the attached Mechanical Sketch Sheet MS-2.

1MD3. Sheet M1.1R – First Floor Plan – Plumbing

1. Adjust the cold water through floor penetration for the WH-1 at the northwest corner of Nave 139 to be as far to the east as possible. Provide WH-1 with an operating rod long enough to keep the water shut off point on the warm side of the insulation. Coordinate with the General Contractor to make sure all piping is installed on the warm side of the insulation and that the walls are sealed to have as low of infiltration as possible.
2. Keep existing FUR-2 in operation per the attached Mechanical Sketch Sheet MS-3.
3. Install condensate piping from AC-3 to grade per the attached Mechanical Sketch Sheet MS-3.

SECTION 28 31 00
FIRE DETECTION AND ALARM

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Fire alarm system design and installation, including all components, wiring, and conduit.

B. Replacement and removal of existing fire alarm system components, wiring, and conduit.

C. Maintenance of fire alarm system under contract for specified warranty period.

1.02 REFERENCE STANDARDS

A. IEEE C62.41.2 - Recommended Practice on Characterization of Surges in Low-Voltage (1000 V and Less) AC Power Circuits.

B. NFPA 70 - National Electrical Code.

C. NFPA 72 - National Fire Alarm and Signaling Code.

1.03 DEFINITIONS

A. FACP: Fire Alarm Control Panel

1.04 SUBMITTALS

A. Submittals to Authorities Having Jurisdiction: Prior to submitting to the Architect/Engineer, submit product data and shop drawings to authorities having jurisdiction. Resubmit if required to make clarifications or revisions to obtain approval. On receipt of comments from authorities having jurisdiction, submit them to Architect/Engineer for review. Submittals received without the approval of authorities having jurisdiction will be returned with no action taken.

B. Specification Compliance Review: See Section 26 04 00 - Common Requirements for Electrical, for requirements.

C. Product Data: Manufacturer's data sheets for each system component.

D. Shop Drawings: Submit all information required for plan review and permitting by authorities having jurisdiction, including but not limited to floor plans, riser diagrams, and description of operation:
   1. Copy (if any) of list of data required by authority having jurisdiction.
   2. System interfaces to fire safety systems.
   3. Floor plans indicating locations of components; mark components with device addresses used in control unit programming. Show interconnection of devices.
   4. Riser Diagram: Indicate circuiting, device addresses and cable types.
   5. Calculations: Battery sizing, voltage drop, and audio amplifier sizing.
   6. List of all devices on each signaling line circuit, with spare capacity indicated.

E. Inspection and Test Reports:
   1. Submit inspection and test plan prior to closeout demonstration.
   2. Submit documentation of satisfactory inspections and tests.
   3. Submit NFPA 72 "Inspection and Test Form," filled out.

F. Operating and Maintenance Data: Revise and resubmit until acceptable; have one set available during closeout demonstration:

G. Maintenance Materials, Tools, and Software: Furnish the following for Owner's use in maintenance of project.

1. Furnish spare parts of same manufacturer and model as those installed; deliver in original packaging, labeled in same manner as in operating and maintenance data .
2. Furnish the following:
    a. Remote Indicating Lamp Units: Quantity equal to 5 percent of amount installed, but not less than 1 unit.
    b. Smoke and Heat Detectors: Quantity equal to 5 percent of amount of each type installed, but not less than 1 unit of each type.
    c. Detector Bases: Quantity equal to 5 percent of amount of each type installed, but not less than 1 unit of each type.
    d. Keys and Tools: One extra set.
    e. Audible and Visual Notification Appliances: One of each type installed.
    f. Audio Amplifier: One spare.
    g. Extra Fuses: Two for each installed fuse; store inside applicable control cabinet.

1.05 QUALITY ASSURANCE

A. Designer Qualifications: NICET Level III or IV (3 or 4) certified fire alarm technician or registered fire protection engineer, employed by fire alarm control panel manufacturer, Contractor, or installer .

B. Provide products listed and labeled by testing firm acceptable to the authority having jurisdiction as suitable for the purpose indicated.

1.06 WARRANTY

A. Provide control panel manufacturer's warranty that system components other than wire and conduit are free from defects and will remain so for 1 year after date of Substantial Completion.

B. Provide installer's warranty that the installation is free from defects and will remain so for 1 year after date of Substantial Completion.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Edwards Systems Technology: www.gesecurity.com

B. Fire-Lite: www.firelite.com

C. Gamewell-FCI: www.gamewell-fci.com

D. Notifier: www.notifier.com

E. Siemens Building Technologies: www.sbt.siemens.com

F. Silent Knight: www.silentknight.com

G. SimplexGrinnell: www.simplexgrinnell.com

H. Source Limitations: Furnish fire alarm components produced by a single manufacturer, where possible.

2.02 FIRE ALARM SYSTEM

A. Fire Alarm System: Provide a new automatic fire detection and alarm system:
    1. Provide all components necessary, regardless of whether shown in the contract documents or not.
    2. Comply with the following:
        a. The Americans With Disabilities Act (ADA).
        b. The requirements of the State Fire Marshal.
        c. The requirements of the local authority having jurisdiction .

d. NFPA 72 and other applicable codes.

3. FACP Display:
   a. Minimum of two lines
   b. Indicate location of device initiating alarm, supervisory or trouble condition by device address and by English-language description.
4. Signal Priority, not affected by order of occurrence:
   a. Alarm
   b. Supervisory
   c. Trouble
5. System Trouble or Supervisory Signal:
   a. Sound trouble signal and indicate at FACP and remote annunciator.
   b. Record event in system memory.
6. Alarm Signal:
   a. Indicate at FACP and remote annunciator.
   b. Record event in system memory.
   c. Operate notification appliances continuously, until silenced.
   d. Operate notification appliances throughout the building.
7. System Silencing and Reset:
   a. Controlled by buttons in the FACP and remote annunciator.
   b. Subsequent alarm signals reactivate notification appliances.
8. Voice Notification: Provide emergency voice/alarm communications with multichannel capability; digital. Notification occurs throughout the building.
9. Fire Alarm Control Panel (FACP): New.

B. Circuits:
   1. Signaling Line Circuits (SLC): Class B, Style 4.
   2. Notification Appliance Circuits (NAC): Class B, Style Y.

C. Spare Capacity:
   1. Initiating Device Circuits: Minimum 50 percent spare capacity.
   2. Notification Appliance Circuits: Minimum 50 percent spare capacity.
   3. Speaker Amplifiers: Minimum 50percent spare capacity.
   4. Fire Alarm Control Panel: Capable of handling all circuits utilized to capacity without requiring additional components other than plug-in control modules.

2.03 EXISTING COMPONENTS

A. Maintain existing fire alarm system in a fully operational condition until new equipment has been tested and accepted.

B. Do not interrupt fire alarm service to the facility unless approved by the Owner.
   1. Obtain written approval from the Owner.
   2. Provide notice two days in advance of interruption of service.
   3. Provide a temporary fire watch for the duration of the service interruption as required by the Owner or the authority having jurisdiction.

C. Existing Fire Alarm System: Remove existing system completely after new system is fully operational and tested.

D. Clearly label components that are "Not In Service."

E. Remove unused existing components and materials from site and dispose of properly.

2.04 FIRE SAFETY SYSTEMS INTERFACES

A. Supervision: Provide supervisory signals in accordance with NFPA 72 for the following:
   1. Sprinkler water control valves.

B. Alarm: Provide alarm initiation in accordance with NFPA 72 for the following:
   1. Sprinkler water flow.
   2. Manual stations.
   3. Heat detectors.
   4. Smoke detectors.

C. HVAC:
   1. Duct Smoke Detectors: Close associated smoke dampers; shut down associated air handling equipment.
   2. General alarm condition: Close smoke dampers in ducts serving the area where the alarm is initiated. Shut down air handling equipment serving the area where the alarm is located.

D. Doors:
   1. Door Magnetic Holders: Release upon general alarm condition.
   2. Electrically Locked Doors: Unlock doors in egress path.

2.05 COMPONENTS

A. General:
   1. Unless otherwise indicated, provide flush-mounted or semi-recessed units where installed in finished areas; in unfinished areas, surface-mounted units are acceptable.

B. Fire Alarm Control Units, Initiating Devices: Analog, addressable type; listed by Underwriters Laboratories or other testing agency acceptable to authority having jurisdiction as suitable for the purpose intended.

C. Fire Alarm Control Panel:
   1. Cabinet: Lockable steel enclosure. Arrange interior components so operations required for testing or for normal maintenance of the system are performed from the front of the enclosure. If more than one unit is required to form a complete control panel, fabricate with matching modular unit enclosure to accommodate components and to allow ample gutter space for field wiring and interconnecting panels.
      a. Mounting: Semi-flush.
      b. Keys: Common to all system components.
   2. Password Protection: Multi level.
   3. Communication Format: Digital poll/response protocol with each addressable device. The system shall verify that the type device at each address matches the software configuration.
   4. Event Storage:
      a. The system stores and logs alarm and trouble events. Each recorded event includes the time and date of the event's occurrence.
      b. The system has the capability of recalling alarms, [detector verifications,] trouble conditions, acknowledgments, and silencing and reset activities in chronological order for the purpose of recreating an event history.
      c. Memory: Battery protected random access memory.
      d. Alarm Log: 300 events.
      e. Trouble Log: 300 events.
      f. Available Reports:
         1) Alarm, trouble and test conditions including the time and date of each occurrence.
         2) Status of each device in the system.
   5. Alarm and Supervisory Systems: Separate and independent in the FACP. Alarm-initiating zone boards consist of plug-in cards. Construction requiring removal of field wiring for module replacement is unacceptable.
      a. Quantity of Simultaneous Alarms: Unlimited.

b. Maintenance Alert: Automatically warns of a contaminated detector prior to false alarm.

6. Control Modules: Include types and capacities required to perform all functions of fire alarm systems.
7. Indications: Local, visible, and audible indication of alarm, supervisory, and trouble conditions.
8. Resetting Controls: Prevent the resetting of alarm, supervisory, or trouble signals while the alarm or trouble condition still exists.
9. Alphanumeric Display and System Controls:
   a. Display: Liquid-crystal type, two lines, 40 characters per line, minimum. Displays the following:
   b. Alarm, supervisory and component status.
   c. Programming, display and control commands.
   d. Keypad: Arranged to permit entry and execution of programming, display, and control commands.
   e. Bypass Switches: Activation of a bypass switch allows system testing without operation of the bypassed circuit. A trouble condition is generated upon operation of a bypass switch. Provide bypass switches for the following:
      1) Remote monitoring station notification.
      2) Audio/visual circuits.
      3) Fire doors.
10. Programming:
    a. System Memory: Non-volatile, programmable.
    b. Loading or editing of special instructions and operating sequences allowed as required.
    c. Capable of on-site programming to accommodate and facilitate expansion, building parameter changes, or changes as required by local codes.
    d. Provisions for disabling and enabling all addressable devices, and all monitoring, signaling and control circuits individually for maintenance and testing purposes.
11. Voice Alarm: An emergency communication system, includes central voice alarm system components complete with microphones, preamplifiers, amplifiers, and tone generators. Features include the following:
    a. Multiple alarm channels permit simultaneous transmission of different announcements to different zones or floors automatically or by using the central control microphone. Announcements are made over dedicated, supervised communication lines. Provide a minimum of two channels.
    b. Signal: Slow whoop.
    c. Digitally factory-recorded voice messages:
       1) Church evacuation.
       2) School evacuation.
    d. Message Content: Wording as directed by the Owner and approved by the authority having jurisdiction.
    e. Alarm tone sounds for a maximum of 10 seconds followed by automatic pre-selected voice evacuation messages. At the end of each voice evacuation message, the alarm tone shall resume after an adjustable time delay. The alarm sequence shall continue until the alarm silence switch at the fire alarm control panel has been operated.
    f. Status annunciator indicates the status of each voice alarm speaker zone and the status of firefighters' two-way telephone communication zones.
    g. Manual control switch and gain control for each speaker circuit:
       1) Provide an “all speaker” talk switch.
       2) Provide momentary contact switches to manually select each speaker circuit separately.
       3) Provide a separate speaker zone for each building level or approved fire zone and outdoor speakers.

h. LED to indicate microphone push-to-talk button has been pressed.
i. Amplifiers:
1) Size: 100 watts, minimum.
2) Self-contained filtered 24V DC power supply.
3) Transformer and amplifier monitor circuits.
4) Output: 25 VRMS.
5) Frequency Response: 120 Hz to 12,000 Hz.
6) Sizing: 1 watt per speaker.
7) Quantity: As required to operate all system speakers simultaneously with 10 percent spare capacity.
8) Back-up amplifier quantity: One, configured to automatically back up any failed amplifier.
j. Microphone:
1) Hand-held, push-to-talk.
2) Dynamic communication type.
3) Frequency Range: 200 Hz to 4,000 Hz.
4) Self-winding five foot coiled cable.
5) Stored within control panel.

12. Digital Alarm Communicator Transmitter:
a. Listed and labeled under UL 864 and NFPA 72.
b. Transmits alarm, supervisory and trouble events to a central monitoring station via telephone lines. The unit supervises up to two telephone lines and reports loss of one line to the central monitoring station. If service is lost on both telephone lines, the local trouble signal is initiated.
c. Located within the FACP if possible. Provide integral batteries with an automatic charger if unit is located remotely from FACP.
13. Power Supply:
a. Primary: Dedicated branch circuits of the facility power distribution system.
b. Secondary: Storage batteries operating without an on-site emergency generator.
c. Battery Capacity: Sufficient to operate entire system for period specified by NFPA 72.
d. Battery Charger: Solid state, automatic with variable charging rate with capacity for 150 percent of connected system load while maintaining batteries at full charge.

D. Remote Annunciator:
1. Lockable steel flush-mounted enclosure.
2. Alphanumeric display and controls matching the FACP permit acknowledging, silencing, resetting, and testing functions for alarm, supervisory, and trouble signals.
3. Paging Controls: Allow control of voice evacuation system from the annunciator panel.
a. Microphone: Hand-held; push-to-talk; self-winding, five-foot coiled cable; stored within annunciator panel.
b. Switches: Momentary contact switches to allow selection of speaker circuits; number of individually selectable circuits matches control panel.

E. Signal Circuit Remote Power Supply
1. General: Filtered, regulated, power limited with trouble indication; with emergency power supply.
2. Cabinet: Lockable steel, surface-mounted enclosure.

F. Initiating Devices:
1. Manual Pull Stations:
a. Single-action.
b. Constructed of metal or plastic.
c. Integral addressable module.
d. Key-operated reset.
2. Smoke Detectors:

a. 24 Volt, DC
b. Photoelectric type.
c. Self-restoring.
d. Integral addressable module.
e. LED indicator to show detector status.
f. Plug-in mounting in fixed detector base.
g. Magnetically actuated test switch.

3. Duct Smoke Detectors:
   a. Photoelectric type.
   b. Sampling tube as required for the location where the detector is installed.
4. Individual dormitory sleeping room smoke detector:
   a. Photoelectric type.
   b. Low profile addressable base with sounder.
   c. Preset alarm setpoint.
   d. LED status indicator.
   e. Local strobe.
5. Heat Detectors:
   a. Combination fixed temperature and rate-of-rise.
   b. Analog temperature measuring device.
   c. Self-restoring.
   d. Integral addressable module.
   e. LED indicator to show detector status.
   f. Plug-in mounting in fixed detector base.

G. Addressable Interface Devices:
1. Monitor Module: Allows individual monitoring of non-addressable points.
2. Control Module: Provides a system address to relays for control functions.
   a. Relay: 24 VDC coil; contacts rated 10A, 115 VAC, minimum; suitable for control function required.

H. Remote Indicators and Test Switches
1. LED indicator connected to flash when the associated detector is in an alarm or trouble condition.
2. Combined with a keyed detector test switch where indicted.
3. Flush-mounted in a single gang wall plate.

I. Notification Appliances:
1. Combination devices consist of audible and visual devices, factory-assembled as a single assembly.
2. Horns: Electronic, multi-tone type, 24 Volt DC, sound pressure of 90 dB measured 10 feet from the horn.
3. Speakers:
   a. Alarm dB level as required for the installed location.
   b. Ceiling-mounted speakers: Flush-mounted with white baffle.
   c. Wall-mounted speakers: Semi-recessed, with red housing.
   d. Include backbox for speaker which does not mount over standard electrical box.
4. Strobes:
   a. Xenon strobe with clear polycarbonate lens.
   b. Rated light output: 15/75 candela unless otherwise indicated.
   c. Synchronized operation.

J. Magnetic Door Holders
1. Equipped for wall or floor mounting as indicated, with matching door plate.
2. Electromagnet: 25 lb. minimum holding force.
3. Wall-Mounted Units: Surface mounted, unless otherwise indicated.

4. Contact Plate: Adjustable.
5. Armature Plate: Door mounted, adjustable 95 degrees horizontal, 5 degrees vertical.
6. Rating: 24-V dc.
7. Material and Finish: Manufacturer's standard.

K. Guards for Physical Protection:
1. Manual Station Protective Shield:
a. Factory-fabricated clear plastic enclosure, hinged at the top to permit lifting for access to initiate an alarm, Safety Technology International, Inc. Stopper II series or equivalent.
b. Lifting the cover actuates an integral battery-powered audible horn intended to discourage false alarm operation.

L. Circuit Conductors:
1. Non-Power-Limited Circuits: Solid-copper conductors with 600-V rated, 75 degrees C, color-coded insulation.
a. Low-Voltage Circuits: No. 14 AWG, minimum.
b. Line-Voltage Circuits: No. 12 AWG, minimum.
2. Power-Limited Circuits: Types FPL, FPLR, or FPLP, as recommended by manufacturer.

M. Surge Protection: In accordance with IEEE C62.41.2 category B combination waveform and NFPA 70; except for optical fiber conductors.
1. Equipment Connected to Alternating Current Circuits: Maximum let through voltage of 350 V(ac), line-to-neutral, and 350 V(ac), line-to-line; do not use fuses.

N. Locks and Keys: Deliver keys to Owner.

PART 3 EXECUTION

3.01 INSTALLATION

A. The locations and spacing of alarm initiating devices and strobes indicated on the drawings are approximate. The equipment supplier shall verify device requirements and spacing and shall add devices as required to satisfy governing authorities. It shall be the responsibility of the equipment supplier or his representative to determine the type of detector required by local authorities for each type of installation.

B. Install the fire alarm system in accordance with approved manufacturer’s wiring diagrams. Furnish all conduit, wiring, outlet boxes, junction boxes, cabinets, and similar devices necessary for a complete installation. Boxes shall be installed in accessible spaces without requiring the removal of light fixtures or any other equipment.

C. Coordinate system programming with the authority having jurisdiction.

D. Provide 120 volt power to remote signal circuit power supplies.

E. Coordinate the installation of equipment and devices that pertain to the work of other trades with the appropriate contractors.

F. Install in accordance with applicable codes, NFPA 72, NFPA 70, and the contract documents.

G. Install wiring in metal raceways.

H. Conceal all wiring, conduit, boxes, and supports where installed in finished areas.

I. Install end-of-line resistors at farthest device from panel or module.

J. Ground cable shields and equipment according to manufacturer's instructions.

K. Install instruction cards and labels.

3.02 DEVICE INSTALLATION

A. Provide devices as indicated on drawings and as required to perform specified functions.

B. Initiating Devices:
   1. Smoke Detectors:
      a. Cover all smoke detection devices immediately after installation to maintain cleanliness.
      b. Install within five feet of each door held open by the fire alarm system.
      c. Where adjacent to an air shaft, supply diffuser or return grille, install smoke detector 36 inches minimum from the edge of the diffuser or grille.
      d. Provide a smoke detector within 10 feet of each remote power supply panel and each control panel or subpanel.
   2. Duct Detectors:
      a. Provide duct type smoke detectors in the supply and return ductwork of all air handling equipment with a flow rate greater than 2000 CFM.
      b. Provide duct type smoke detectors in the return ductwork of all air handling equipment which has a flow rate greater than 15,000 CFM and which serves more than one floor. Install at each story prior to the connection to a common return and prior to recirculation or fresh air inlet connection.
      c. Install duct detectors in accordance with NFPA 90A.
      d. Provide a remote alarm LED indicator for each duct smoke detector which is not readily visible or which is located above a ceiling or on a roof. Mount in an easily accessible and readily visible location. Label with the name of the unit served by the detector. Indicate whether the detector is installed in the supply or return ductwork.
      e. Provide a labeled test switch with LED indicator for each duct smoke detector. Install switch at a height between 48 inches and 72 inches above finished floor.
   3. Provide heat detectors in areas where smoke detectors would be subject to false alarm.
   4. Program address for each device as recommended by system supplier or Owner.
   5. Program device output text by address and geographic location (zone).
   6. Provide an addressable interface module for each non-addressable detector zone as indicated on drawings.
   7. Provide an addressable interface module for each non-addressable initiating device.

C. Signaling Devices:
   1. Where plans indicate a signaling device installed adjacent to a manual station, install the signaling device on the wall directly above the manual station.
   2. Provide a minimum of one weatherproof audible signaling device of the same type as other signaling devices provided with the system. Mount device on the building exterior; verify location. Provide a separate circuit for exterior audible signaling devices.
   3. In sprinkled buildings, provide a 120 volt circuit to the fire sprinkler bell location.
   4. Set taps for toilet room speakers at 1/4 watt where toilet room is under 1000 square feet.

D. Control Devices:
   1. Provide a control module with relay for each fan requiring fire alarm shutdown or control.
   2. Provide one control module per air handling unit to signal the temperature control system to shut down fan-powered terminal units when their associated air handling unit is shut down by its duct detector(s).
   3. Provide a control module with relay for each door or group of doors to be held open.
   4. Provide control modules and relays as required to implement the required control sequences.
   5. Provide control modules and relays for remote indication of alarm and trouble conditions. Connect to nearest temperature control panel.

E. Door Holders:

1. Mount at the top of each door to be held open unless otherwise indicated.
2. Mount the magnet on the wall and the contact plate on the door. Provide extensions as necessary to assure proper mating between the magnet and contact plate.
3. See drawings for special applications.
4. Adjust so the door is held parallel to the wall on which the magnet is mounted.
5. Electromagnetic door holders which are indicated to be integral with a door closer shall be furnished by the General Contractor. Provide wiring so the door holders are normally energized from the fire alarm power supply.

F. Cabinets:
1. Mount FACP and remote cabinets a maximum of 72 inches above finished floor to the top of the cabinet. Provide a 4-inch space between adjacent cabinets.

3.03 INTERCONNECTION TO OTHER SYSTEMS

A. Alarm Indicating:
1. Provide 4-pair, 24 gauge, Category 3 cable in 3/4-inch conduit from control panel to main telephone terminal board for connection of Digital Alarm Communicator Transmitter. Allow adequate slack at terminal board for connection by Owner.

B. Fire Protection System:
1. Connect all sprinkler system flow detection devices and tamper switches, including post or wall indicator valves. Provide an addressable interface module for each device.
2. Verify exact quantities and locations of devices with Fire Protection Contractor.

3.04 IDENTIFICATION

A. Paint power-supply disconnect switch or breaker red and label "FIRE ALARM". Provide locking means.

B. Affix the name and telephone number of the local service organization to the inside of the door of the FACP and each remote cabinet.

C. Label each addressable device with its address using laminated tape. See Section 26 05 53 Identification for Electrical Systems for tape requirements. Attach label to detector base shroud so it is visible without removing detector or shroud.

D. Label each control module to indicate the equipment controlled.

E. Maintain wiring color codes throughout the system.

3.05 INSPECTION AND TESTING FOR COMPLETION

A. Notify Owner 7 days prior to beginning completion inspections and tests.

B. Notify authorities having jurisdiction and comply with their requirements for scheduling inspections and tests and for observation by their personnel.

C. Provide the services of a factory-authorized service representative to supervise inspection and testing, correction, and adjustments.

D. Prepare for testing by ensuring that all work is complete and correct; perform preliminary tests as required.

E. Provide all tools, software, and supplies required to accomplish inspection and testing.

F. Perform inspection and testing in accordance with NFPA 72 and requirements of local authorities; document each inspection and test.

G. Correct defective work, adjust for proper operation, and retest until entire system complies with contract documents and applicable standards.

3.06 OWNER PERSONNEL INSTRUCTION

A. Schedule training with the Owner through the Architect/Engineer, with at least seven days advance notice.

B. Provide a minimum of two hours training.

C. Provide the following instruction to designated Owner personnel:
   1. Hands-On Instruction: On-site, using operational system.

D. Furnish the services of the manufacturer's factory-authorized instructors; have copies of operation and maintenance data available during instruction.

3.07 MAINTENANCE

A. Occupancy Adjustments: When requested within one year of date of Substantial Completion, provide on-site assistance in adjusting sound levels, controls, and sensitivities to suit actual occupied conditions. Provide up to three requested visits to Project site for this purpose.

B. Provide to Owner, at no extra cost, a written maintenance contract for entire manufacturer's warranty period, to include the work described below.

C. Perform routine inspection, testing, and preventive maintenance required by NFPA 72, including:
   1. Maintenance of fire safety interface and supervisory devices connected to fire alarm system.
   2. Repairs required, unless due to improper use, accidents, or negligence beyond the control of the maintenance contractor.
   3. Record keeping required by NFPA 72 and authorities having jurisdiction.

D. Maintain a log at each fire alarm control unit, listing the date and time of each inspection and call-back visit, the condition of the system, nature of the trouble, correction performed, and parts replaced. Submit duplicate of each log entry to Owner's representative upon completion of site visit.

E. Comply with Owner's requirements for access to facility and security.

END OF SECTION

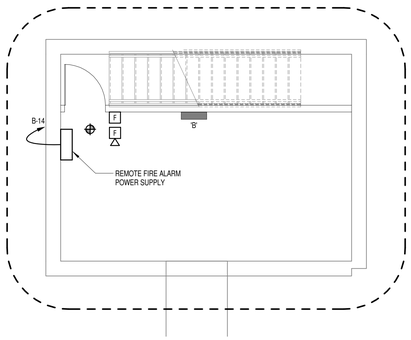
GENERAL NOTES

1. NO EXPOSED CONDUITS IN CHURCH. ROUTE CONDUIT HOMERUNS THROUGH SCHOOL AREA.
2. LIGHT LINE WEIGHT INDICATES EXISTING WORK.
3. HEAVY LINE WEIGHT INDICATES NEW WORK.
4. ALL WORK SHALL BE BID SEPARTELY AS IDENTIFIED AS BID PART A AND BID PART B AS INDICATED ON DRAWINGS.
5. ALL FIRE ALARM WORK SHALL BE BID AS PART A FOR BOTH BID PART A AND BID PART B AREAS.

FLAG NOTES

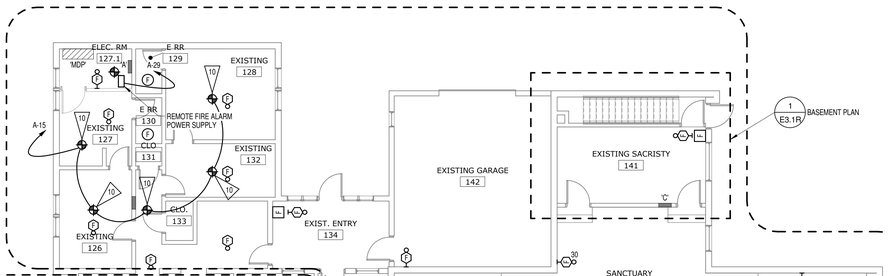
1. SEE FLAG NOTES 4 AND 5 ON SHEET E2.1.
2. PROVIDE A 4" X 4" METAL WIREWAY ATTACHED TO CEILING.
3. PROVIDE A COMMUNICATION OUTLET MOUNTING BRACKET WIREMOLD CAT. NO. V4047ZZ AND BLANK COVERPLATE.
4. PROVIDE A LIGHTNING ROD ATTACHED TO BACK OF CROSS. SEE ARCHITECTURAL DETAIL.
5. PROVIDE A LIGHTNING DOWN COPPER CONDUCTOR IN 1" PVC C. TO 10' X 3/4" COPPER CLAD DRIVEN GROUND ROD.
6. PROVIDE A 8" W X 2" D CABLE MANAGEMENT TRAY WITH COVERED BOTTOM.
7. PROVIDE A SINGLE GANG BOX WITH 1" C. TO COMMUNICATION CABINET. PROVIDE BLANK COVERPLATE.
8. ON END OF WIREWAY PROVIDE A 3" CHASE NIPPLE.
9. PROVIDE A SINGLE GANG BOX ON CEILING WITH BLANK COVERPLATE.
10. PROVIDE RESIDENTIAL STYLE SMOKE DETECTOR/ALARM, 120V./BATTERY POWERED.
11. PROVIDE A RECESSED FLOOR BOX, WITH BRASS COVERPLATE AND BRACKET FOR MICROPHONE JACK AND COMMUNICATION JACK. COORDINATE EXACT LOCATION WITH OWNER.
12. PROVIDE TWO TWISTED PAIR TELEPHONE CABLES IN 3/4" C. TO EXISTING TELEPHONE TERMINAL FIELD VERIFY LOCATION.
13. PROVIDE 3/4" C. WITH PULL CORD TO EXISTING SPEAKER/SOUND SYSTEM.
14. PROVIDE A FLUSH IN WALL COMMUNICATION CABINET 24" H X 24" W X 4" D. PENTAIR CAT. NO.: ATC243444F. PROVIDE FOUR 3/4" C. SPARE CONDUITS WITH BUSHING STUBBED UP TO CEILING.
15. ROUTE COMMUNICATION CONDUIT TO COMMUNICATION CABINET.
16. PROVIDE A PROTECTIVE LEXAN COVER.
17. PROVIDE A CEILING SPEAKER TO MATCH EXISTING AND PROVIDE WIRING IN CONDUIT TO EXISTING INTERCOM SYSTEM.
18. STUB-DOWN 3/4" C. INTO CRAWL SPACE.

BID PART A

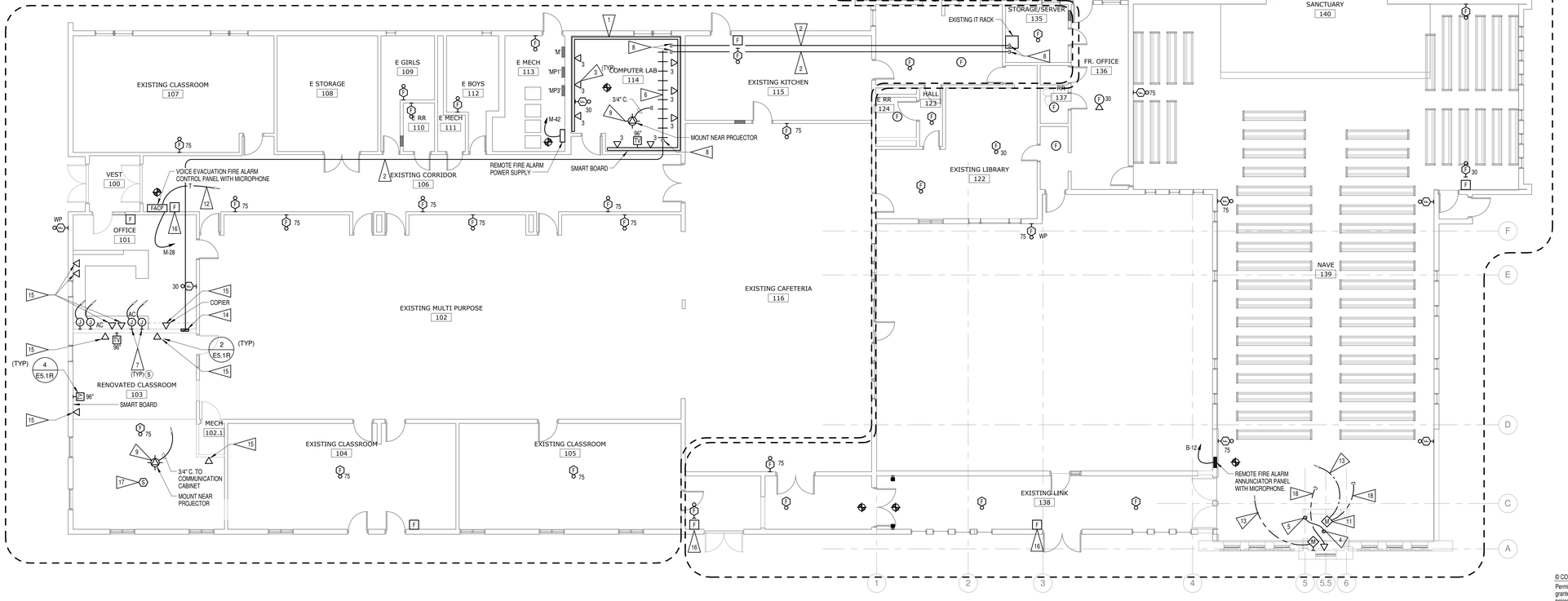


1 ENLARGED BASEMENT FLOOR PLAN-SPECIAL SYSTEMS
1/4" = 1'-0" 2' 4' 8' 12' 16' 20'

BID PART A



BID PART B



2 FIRST FLOOR PLAN - SPECIAL SYSTEMS
1/8" = 1'-0" 4' 8' 16' 24' 32' 40'

BVH ARCHITECTS

ARCHITECT
BAHR VERMEER HAECKER ARCHITECTS
440 N 8TH ST STE 100
LINCOLN NE 68508
V 402 475 4551
F 402 475 0226
bvh.com

CIVIL ENGINEER
OLSSON ASSOCIATES
701 4th Avenue, Suite 2C
Holdrege, NE 68949
V 308.995.8706
F 308.995.8921

STRUCTURAL ENGINEER
STRUCTURAL [DESIGN] GROUP
410 SOUTH 7TH ST.
LINCOLN, NE 68508
V 402 438 7788
F 402 438 7790

MECHANCIAL ELECTRICAL ENGINEERS
ALVINE ENGINEERING
1800 O St - SUITE 104
LINCOLN, NE 68508
V 402 477 6161
F 402 477-9616

REVISIONS SCHEDULE		
MARK	DATE	DESCRIPTION

BID PACKAGE 2R

ALL SAINTS CHURCH AND SCHOOL

PROJECT L11011.1 DATE: 02/13/2015

NOTE:

DO NOT SCALE DRAWINGS. VERIFY ALL DIMENSIONS and clearances from ARCHITECTURAL, STRUCTURAL, shop and other appropriate drawing or at site. Lay out and coordinate all work prior to installation to provide clearances required for operation, maintenance, and codes and verify non-interference with other work. DO NOT FABRICATE PRIOR TO VERIFICATION OF CLEARANCE FOR ALL TRADES. READ SPECIFICATIONS.

Alvine Engineering

Omaha: 1102 Douglas on the Mall, Omaha, Nebraska 68102, Phone: (402) 346-7007, Fax: (402) 346-9576
Lincoln: 1800 O Street, Suite 104, Lincoln, Nebraska 68508, Phone: (402) 477-6161, Fax: (402) 477-9616
Oklahoma City: 13431 Broadway Extension, Suite 101, Oklahoma City, Oklahoma 73114, Phone: (405) 936-3480, Fax: (405) 751-6567
Des Moines: 400 East Court Ave, Suite 130, Des Moines, Iowa 50309, Phone: (515) 243-0569, Fax: (515) 243-1755

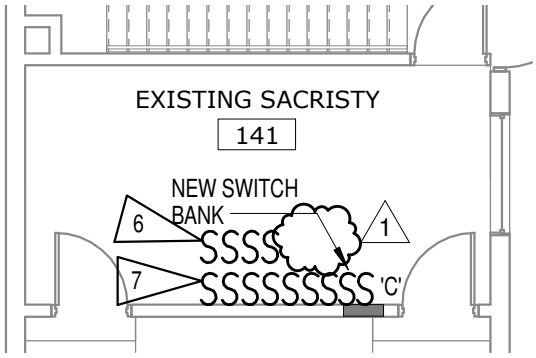
01/26/15

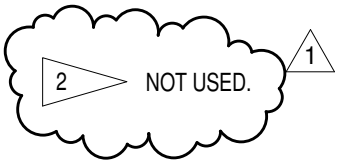
FIRST FLOOR PLAN - SPECIAL SYSTEMS

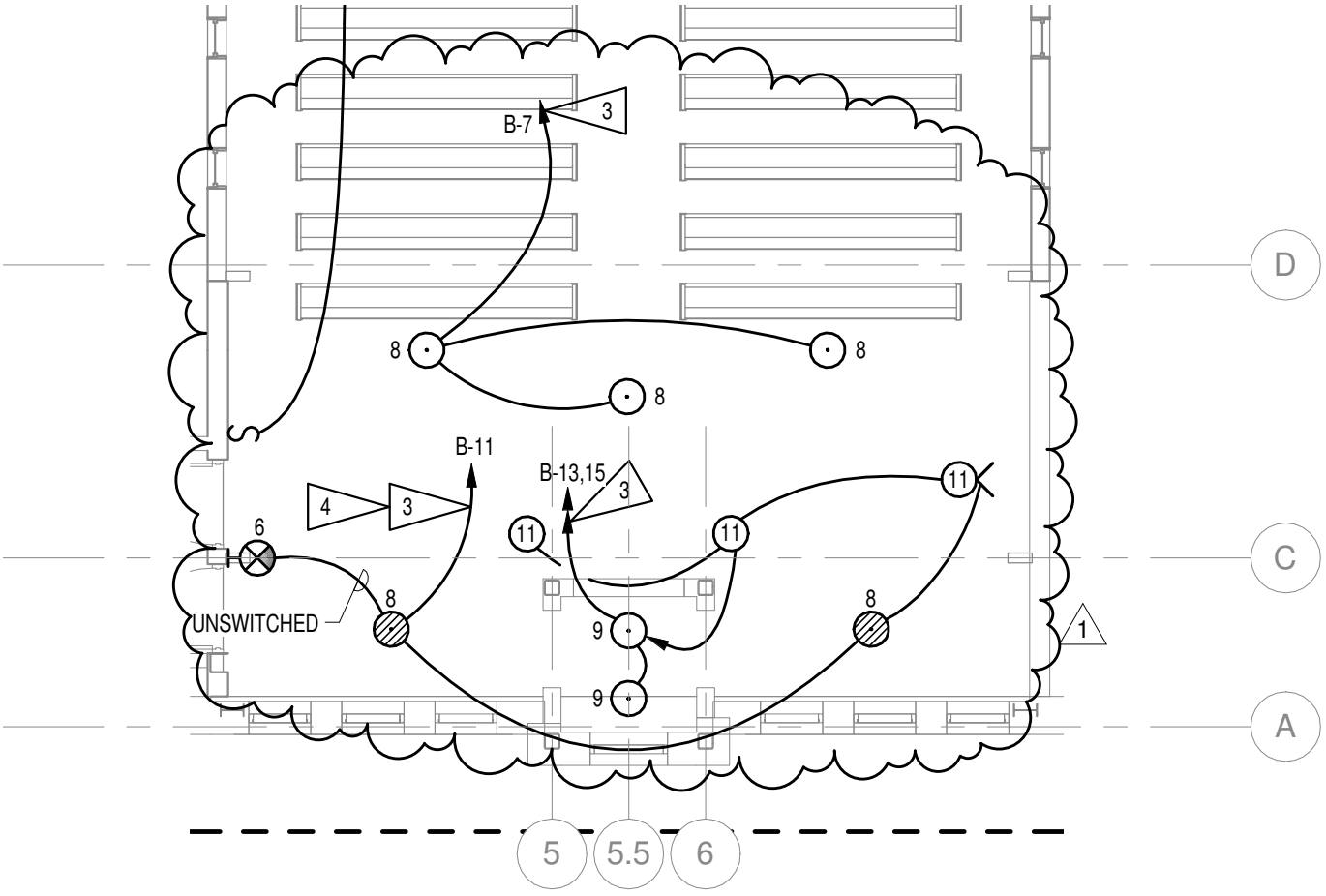
NORTH

E3.1R

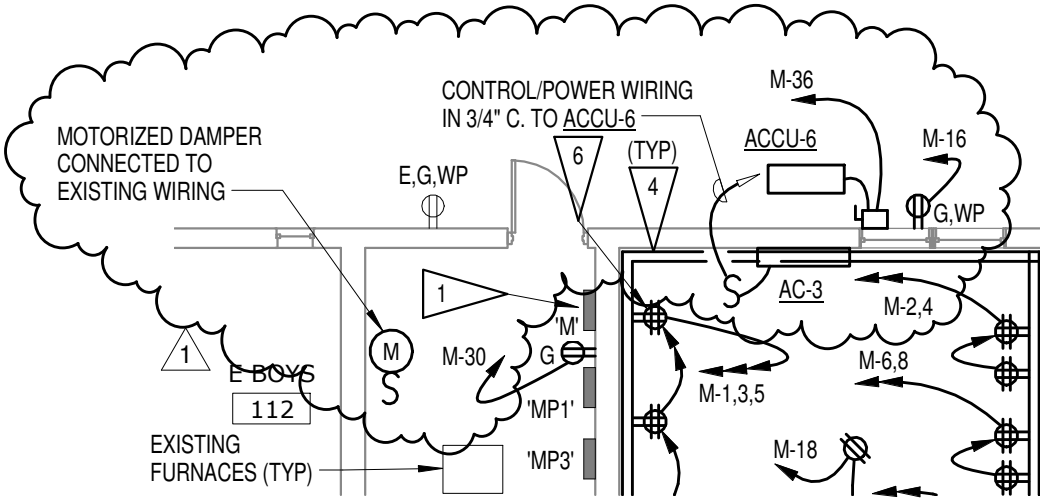
2/13/2015 2:38:31 PM C:\Users\jkromberg\Documents\20133925MEPT_14_jkromberg.rvt

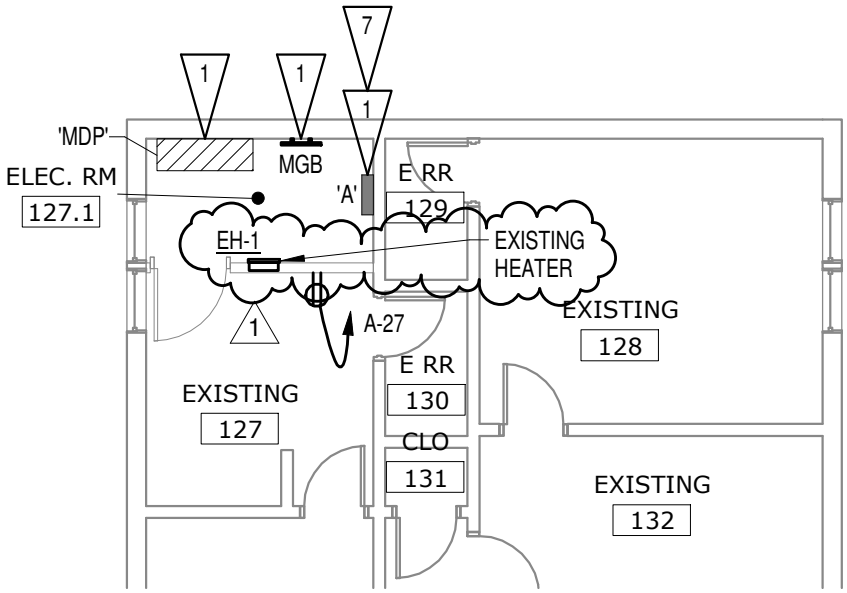






Alvine Engineering	ALL SAINTS CHURCH AND SCHOOL BID PACKAGE 2R			
PROJECT NO.	DATE	DRAWING REFERENCED: E1.1R		SKETCH
L11011.1	02/13/2015	ADDENDUM NO.: 1		ES-1





Alvine Engineering	ALL SAINTS CHURCH AND SCHOOL BID PACKAGE 2R			
PROJECT NO.	DATE	DRAWING REFERENCED: E2.1R		SKETCH
L11011.1	02/13/2015	ADDENDUM NO.: 1		ES-2

PANEL B

208/120V	3 PHASE 4 WIRE	SURFACE MOUNTED		PROVIDE BREAKERS AS REQUIRED TO
225 AMP	MLO W/GROUND BAR			CONNECT EXISTING LOADS. FIELD VERIFY.
17,576	AMPS AVAIL FAULT			INSTALLED IN PHASE 1
42 POLES	ONE SECTION	SOURCE	MDP	

DESCRIPTION	LOAD VA	REMARKS	O/C	CKT #	PH	CKT #	O/C	REMARKS	LOAD VA	DESCRIPTION
1 LIGHTING RM 139	1500		20/1	7	A	8	20/1		540	RECEP RM 139
SPARE	0		20/1	9	B	10	20/1		180	OUTSIDE RECEP
LIGHTING RM 139	200		20/1	11	C	12	20/1			SPARE
LIGHTING RM 139	800		20/1	13	A	14	20/1		600	FIRE ALARM POWER SUPPLY
LIGHTING RM 139	400		20/1	15	B	16	20/1		0	SPARE
SPARE			15/1	17	C	18	20/1			SPARE

PANEL M

208/120V	3 PHASE 4 WIRE	SURFACE MOUNTED		INSTALLED IN PHASE 1
225 AMP	MLO W/GROUND BAR			
17,244	AMPS AVAIL FAULT			
42 POLES	ONE SECTION	SOURCE	MDP	

DESCRIPTION	LOAD VA	REMARKS	O/C	CKT #	PH	CKT #	O/C	REMARKS	LOAD VA	DESCRIPTION
1 EXTERIOR RECEP	180		20/1	29	C	30	20/1		180	RECEP RM 113
SPARE	4000		40/2	31	A	32	60/2			SPARE
-	-		*	33	B	34	*		-	-
SPARE			20/1	35	C	36	30/2		5200	ACCU-6
ACCU-1	3600		40/3	37	A	38	*		-	-
-	-		*	39	B	40	20/1			SPARE
-			*	41	C	42	20/1		600	FIRE ALARM POWER SUPPLY

Alvine Engineering

ALL SAINTS CHURCH AND SCHOOL
BID PACKAGE 2R

PROJECT NO.	DATE	DRAWING REFERENCED: E4.1R	SKETCH
20133925	02/13/2015	ADDENDUM NO.: 1	ES–3

LUMINAIRE SCHEDULE

LUM. NO.	MANUFACTURER	CATALOG NO.	LAMP DATA	VOLTAGE	DESCRIPTION	MOUNTING	ALTERNATE MANUFACTURERS	REMARKS
7	NOT USED							
8	–	–	–	120	PENDANT (MAXIMUM 150W)	CEILING	–	3,5
9	–	–	–	120	PENDANT	CEILING	–	3,6
10	NOT USED							
11	–	–	–	120	WALL WASHER	CEILING	–	3,7

REMARKS

1 WITH LAMP JACKETS

2 WITH INTEGRAL PHOTOCELL

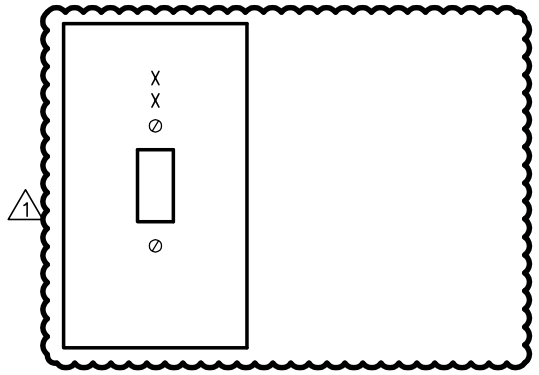
3 SELECTED BY OWNER, FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR

4 SEE DETAIL 1/E5.1

5 PROVIDE A $1,500 ALLOWANCE PER LIGHTING FIXTURE.

6 PROVIDE A $500 ALLOWANCE PER LIGHTING FIXTURE.

7 PROVIDE A $300 ALLOWANCE PER LIGHTING FIXTURE.



SWITCHBANK ELEVATION

NO SCALE

CT_SwitchbankElevation 2/2/98

5
E5.1R

SCHEQUIPMENT CONNECTION 08-16-03

EQUIPMENT CONNECTION SCHEDULE

MARK	DESCRIPTION	HP	CIRCUIT BREAKER	VOLTS	PH	DISCONNECT (1)	FEEDER	REMARKS
AC–1	INVERTER	–	–	208	1	30A. 3P. TOGGLE SWITCH	NOTE 2	NOTE 3
AC–2	INVERTER	–	–	208	1	30A. 3P. TOGGLE SWITCH	NOTE 2	NOTE 3
AC–3	INVERTER	–	–	208	1	30A. 3P. NF TOGGLE SWITCH	NOTE 2	NOTE 3
ACCU–1	AIR COOLED CONDENSING UNIT	–	40/3	208	3	60A. 3P. RT FUSED AT 35A	3#8, #10 GND – 1"C.	
ACCU–6	AIR COOLED CONDENSING UNIT	–	30/2	208	1	30A. 2P. RT FUSED AT 25A	2#10, #10 GND – 3/4"C.	
RR–1	RR BRANCH BOX	–	–	208	1	60A. 2P. RT NF	2#6, #10 GND – 1"C.	

ALL SAINTS CHURCH AND SCHOOL
BID PACKAGE 2R

SKETCH ES–4

DRAWING REFERENCED: E5.1R

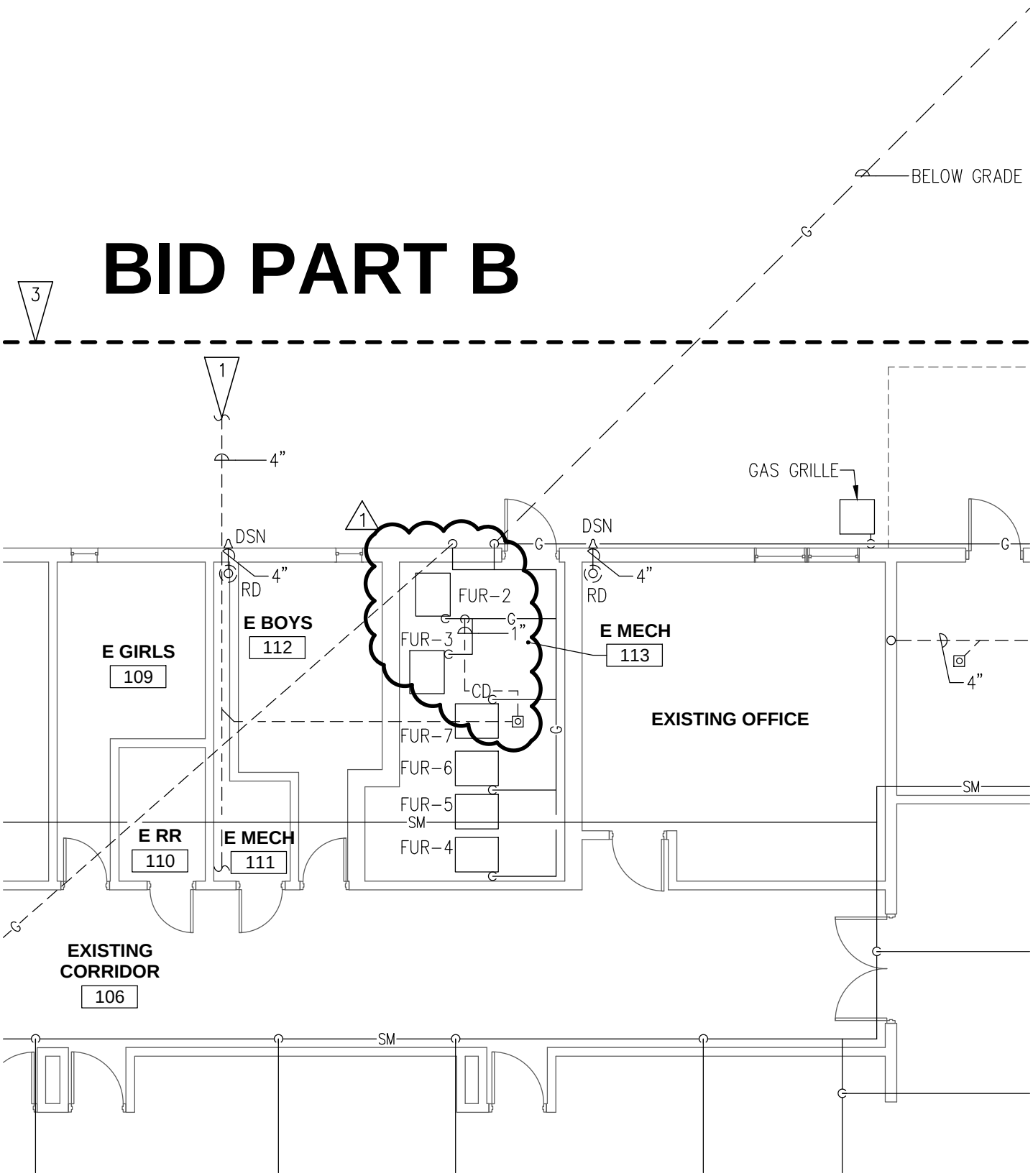
ADDENDUM NO.: 1

DATE 02/13/2015

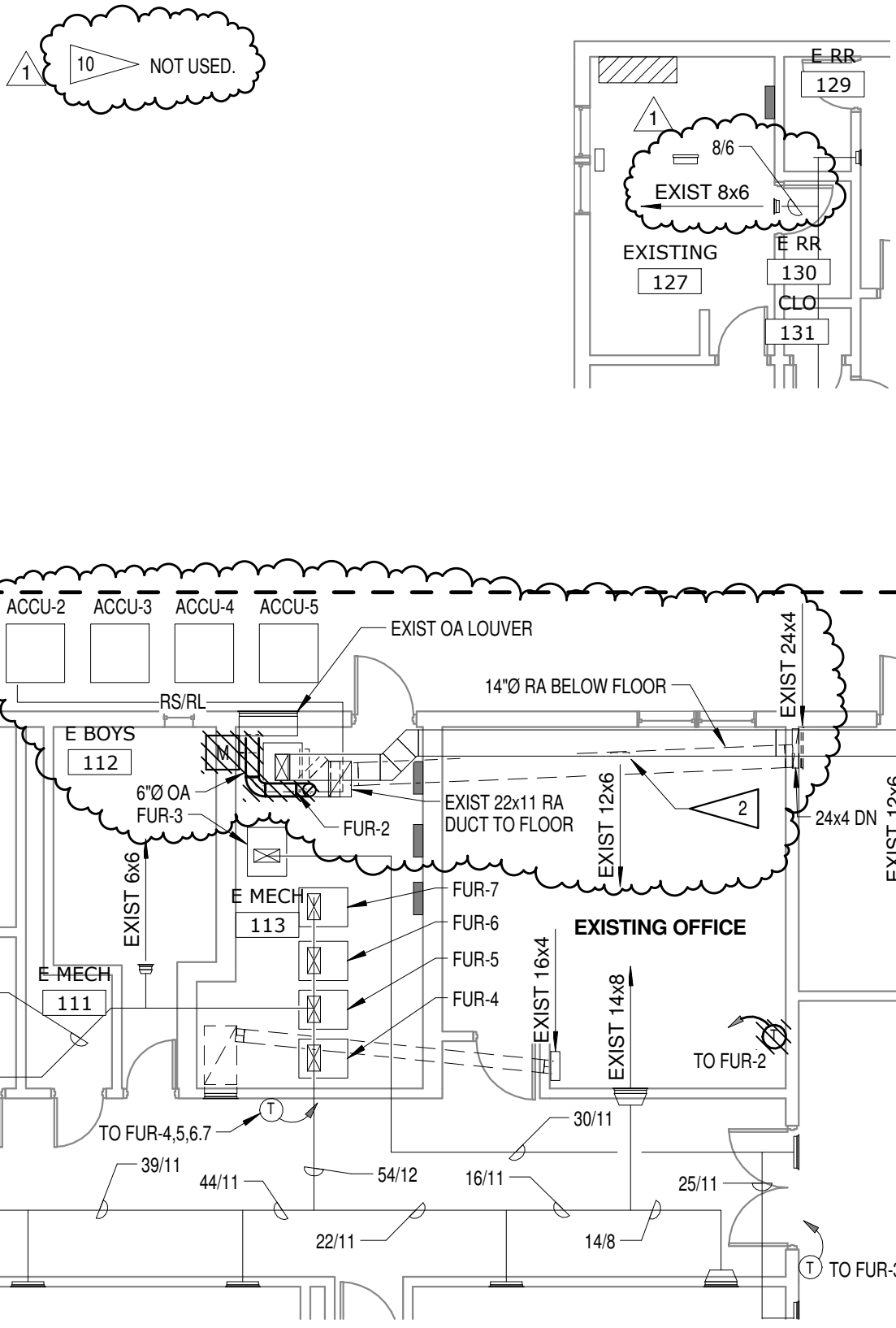
PROJECT NO. 20133925

Alvine Engineering

BID PART B



Alvine Engineering	ALL SAINTS CHURCH AND SCHOOL BID PACKAGE 2R		
PROJECT NO. L11011.1	DATE 02/13/2015	DRAWING REFERENCED: M0.1R ADDENDUM NO.: 1	SKETCH MS-1



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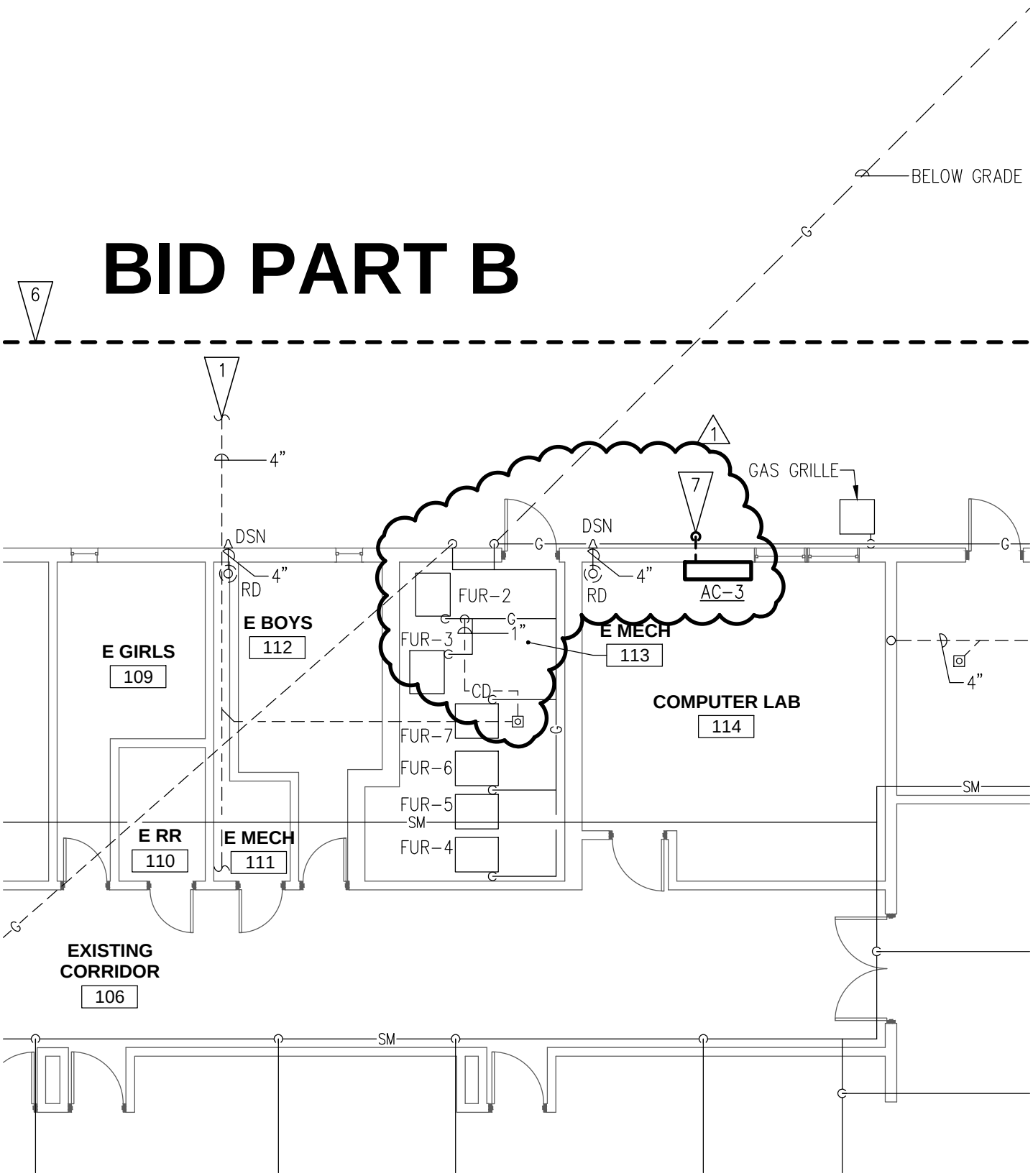
ALL SAINTS CHURCH AND SCHOOL
BID PACKAGE 2R

PROJECT NO.	DATE	DRAWING REFERENCED: M0.2R	SKETCH
L11011.1	02/13/2015	ADDENDUM NO.: 1	MS-2

BID PART B



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ALL SAINTS CHURCH AND SCHOOL
BID PACKAGE 2R

PROJECT NO.	DATE	DRAWING REFERENCED: M1.1R	SKETCH
L11011.1	02/13/2015	ADDENDUM NO.: 1	MS-3

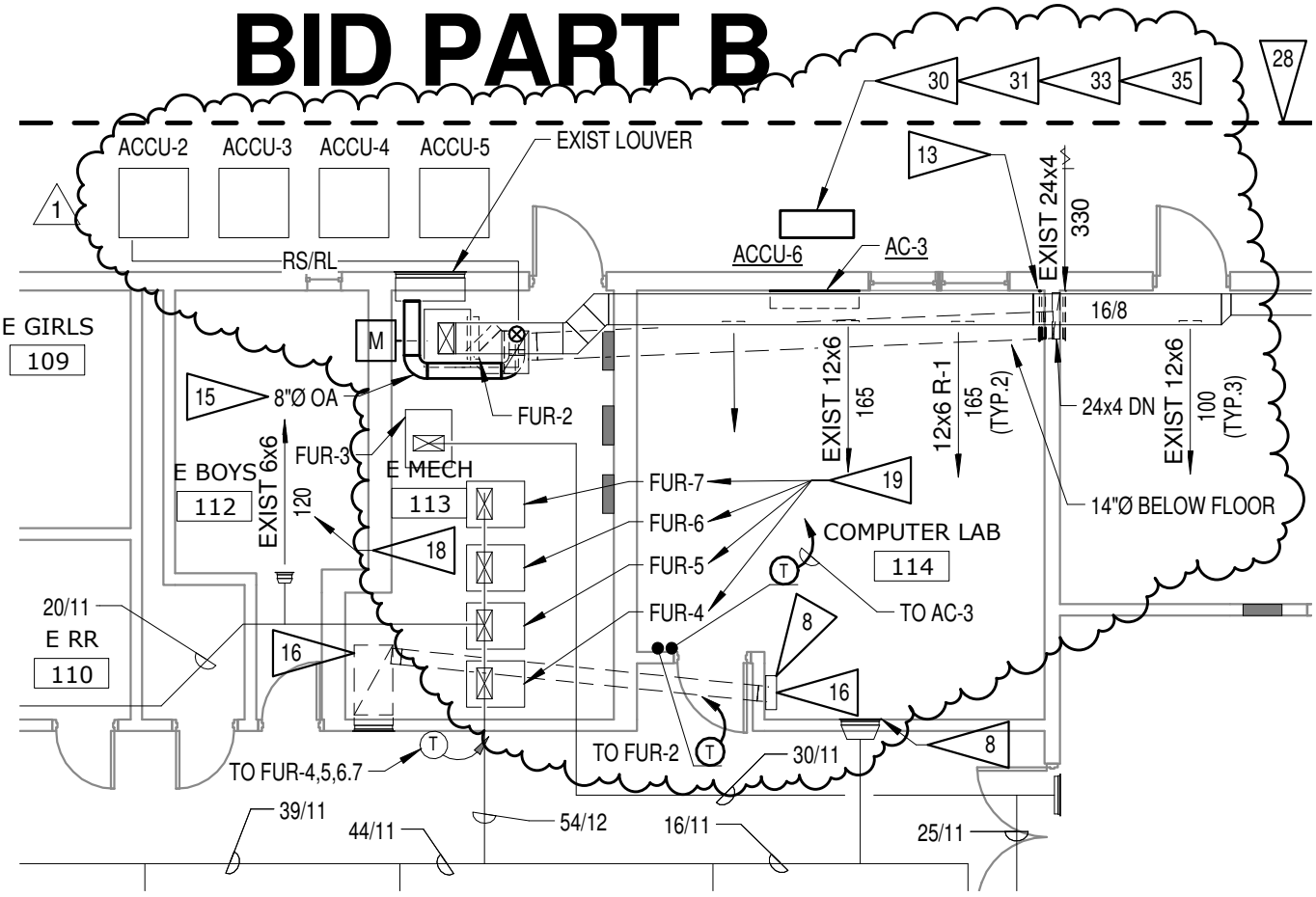
1 / 1 — NOT USED.

1 / 14 — NOT USED.

1 / 30 — LOCATE EQUIPMENT CLEAR OF EXISTING OBSTRUCTIONS PER MANUFACTURER'S RECOMMENDATIONS. COORDINATE THE EXACT LOCATION WITH THE OWNER.

1 / 31 — BOLT EQUIPMENT DOWN TO NEW 4" CONCRETE PAD.

BID PART B



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ALL SAINTS CHURCH AND SCHOOL
BID PACKAGE 2R

PROJECT NO.	DATE	DRAWING REFERENCED: M2.1R	SKETCH
L11011.1	02/13/2015	ADDENDUM NO.: 1	MS-4

1 SplitSystem 01-03-2013

SPLIT-SYSTEM SCHEDULE

SERVES		RM 114	
INDOOR UNIT	MARK	AC-3	
	LOCATION	RM 114	
	TYPE	(4)	
	MAXIMUM WEIGHT (LBS)	46	
	AIRFLOW (CFM)	775	
	TOTAL COOLING (BTUH)	24,000	
	ENTERING AIR TEMP. (DB/WB)	80/67	
	DIMENSIONS (LxWxH) (IN)	46x12x15	
OUTDOOR UNIT	MARK	ACCU-6	
	LOCATION	SEE PLANS	
	TYPE	(5)	
	MAXIMUM WEIGHT (LBS)	165	
	ENTERING AIR DB	95/75	
	TOTAL COOLING CAPACITY (BTUH)	24,000	
	COMPRESSOR TYPE	(6)	
	NUMBER OF COMPRESSORS	1	
	REFRIGERANT	R-410A	
	SOUND POWER (dBA) (1)	48	
	MINIMUM EER/SEER (AHRI)	10.8/17.0	
	DIMENSIONS (LxWxH) (IN)	38x14x38	
ELECTRICAL DATA	VOLTAGE	208	
	PHASE	1	
	MCA (2)	18	
	FUSE/BREAKER AMPS	30	
	CONTROL DEVICE	(7)	
MANUFACTURER		MITSUBISHI	
MODEL NUMBER	(INDOOR)	PKA-A24KA4	
	(OUTDOOR)	PUY-A24NHA4	
REMARKS		(3) (8)	

REMARKS:

(1) OVERALL "A" WEIGHTED SCALE IN ACCORDANCE WITH ARI STANDARD 370.

(2) INDOOR UNIT IS POWERED THROUGH THE OUTDOOR UNIT. COORDINATE WITH ELECTRICAL CONTRACTOR INTERCONNECTED WIRING.

(3) PROVIDE WITH DEFROST/DEICING, RESTART DELAY, INVERTER, SELF DIAGNOSIS, SOFT START, AUTO RESTART, BUILT-IN LOW AMBIENT AND ANTI-CORROSION TREATMENT.

(4) WALL MOUNTED DUCTLESS COOLING ONLY SPLIT SYSTEM.

(5) GRADE MOUNTED ACCU.

(6) DC INVERTER-DRIVEN TWIN ROTARY.

(7) PROVIDE WITH WIRELESS WALL-MOUNTED REMOTE CONTROLLER KIT (MHK1).

(8) PROVIDE WITH WIND BAFFLE FOR FIELD INSTALLATION BY MECHANICAL CONTRACTOR.

1MD4. Sheet M2.1R – First Floor Plan – HVAC

1. Remove Flag Note No. 1 from the floor plan and mark Flag Note No. 1 as "Not Used".
2. Remove Flag Note No. 14 from the floor plan and mark Flag Note No. 14 as "Not Used".
3. Keep existing FUR-2 and ACCU-2 in operation per the attached Mechanical Sketch Sheet MS-4.
4. Install AC-3 and ACCU-6 per the attached Mechanical Sketch Sheet MS-4.
5. FUR-2 shall provide the first stage of cooling and AC-3 shall provide the second stage of cooling. Set the thermostat setpoint for AC-3 at 2°F above the setpoint for the thermostat for FUR-2.
6. Install two supply air registers in Computer Lab 114 and balance the FUR-2 supply air system per the attached Mechanical Sketch Sheet MS-4.

1MD5. Sheet M4.1R – Mechanical Schedules

1. Add the Ductless Split System Schedule per the attached Mechanical Sketch Sheet MS-5.

<u>Electrical Drawing Items:</u>

1ED1. Sheet E0.1R – First Floor Plan – Electrical Demolition

1. Remove the existing wall mounted electric unit heater from the south wall of existing Office 114. Retain for possible reuse.

1ED2. Sheet E1.1R – First Floor Plan – Lighting

1. Modified lighting layout in the southern part of Nave Room No. 139. See Sketch Sheet ES-1.
2. Modified lighting switch bank located in the Existing Sacristy Room No. 141. See Sketch Sheet ES-1.
3. Remove Flag Note No. 2 and mark Flag Note No. 2 as "Not Used." See Sketch Sheet ES-1.

1ED3. Sheet E2.1R – First Floor Plan – Power

1. Electrical Unit Heater "EH-1" was installed in a previous phase. Plans have been updated to indicate existing electrical unit heater location for reference only. See Sketch Sheet ES-2.
2. Add power for HVAC Split System (AC-3 and ACCO-6). Coordinate all work with HVAC Contractor. See Sketch Sheet ES-2.
3. Removed HP-1 and FCO-1 from Existing Mechanical Room No. 113. See Sketch Sheet ES-2.

1ED4. Sheet E3.1R – First Floor Plan – Special Systems

1. Changed fire alarm devices from Horn/Stobes to Annunciator/Stobes. Associated fire alarm device layout has been modified.
2. Changed fire alarm control panel to a voice evacuation fire alarm control panel with microphone.
3. Added a remote fire alarm annunciator panel to NAVE Room No. 139.
4. Added smoke detector to NAVE Room No. 139.
5. Added Flag Note No. 18.
6. Modified Flag Note No. 11.
7. Added data outlet on wall and floor box outlet to NAVE Room No. 139.
8. See attached revised Sheet E3.1R.

1ED5. Sheet E4.1R – Electrical Riser Diagram and Schedules

1. Modified Panelboard 'B' schedule for Circuits 9, 11, 12, 13, and 16. See Sketch Sheet ES-3.
2. Modified Panelboard 'M' schedule for Circuits 31, 32, 33, 34, 36, and 38. See Sketch Sheet ES-3.

1ED6. Sheet E5.1R – Electrical Detail and Schedules.

1. Modified Luminaire Schedule for Fixtures 7, 8, 9, and 10. See Sketch Sheet ES-4.
2. Modified Remarks 3,5,6,7 associated with Luminaire Schedule. See Sketch Sheet ES-4.
3. Modified Detail 5 - Switch bank elevation. See Sketch Sheet ES-4.
4. Modified equipment connection schedule to include "AC-3" and "ACCU-6". See Sketch Sheet ES-4.

END