

**ADDENDUM 01**

**To:** Bidders                                      **Subject:** Addendum 02                                      **Date:** May 13, 2019  
**From:** Jesse Allen, GSBS Architects                                      **Project:** MTOID Office Remodel                                      **Copies:** Dean Ayala, MTOID

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Construction Documents dated 04/18/2019 were posted on Mt. Olympus Improvement District's website on Friday, 04/19/2019. Items in this addendum apply to all drawings and specification sections whether referenced or not involving the portion of the work added, deleted, modified, or otherwise addressed in this addendum.

**Receipt of this addendum shall be acknowledged by inserting its number and date on the bid form.**

**This addendum consists of the following:**

- 1) Clarification of Roller Shade Fabric
  - a. Basis of design for roller shade fabric is Mecho ThermoVeil Dense Basket Weave, 3% open, 1504 Black/Brown, Tv: 5%
- 2) Clarification for window types sf3, sf4, sf5
  - a. It is acceptable to use (1) 3/8" glass lite on the top and bottom of the horizontal mullion, instead of the (3) separate lites as drawn
  - b. Reference elevation 3/AE502 for blast retention film info on these windows.
- 3) Clarification of Electrical and AV Systems
  - a. Question: The plans show A/V System with notes and comments but no specs for this equipment
    - i. Response: Keynotes have been updated on sheet E401 to reflect HDMI cables, and input plate requirements.
  - b. Question: The specs for the CCTV are only raceway are we only providing raceway to these locations
    - i. Response: Follow spec 28 2300. Raceway only to all camera locations as indicated.
  - c. Question: Can we get a complete one line diagram, the sheet E002 shows partial is all the panels existing or new, if new please provide feeder sizes
    - i. Response: One-line diagram is complete. Existing is indicated on the one-line. Keynotes indicate what is new and to be provided. Feeder requirements are also indicated.
  - d. Question: Please provide requires feeder schedule for proper calculation in spec section 26 2815
    - i. Response: Feeder schedule is shown on sheet E002.

**Attachments:**

Spec Section 282205, Sheet E001 and E401

**SECTION 28 2205****ACCESS CONTROL SYSTEM****PART 1 – GENERAL****1.1 RELATED DOCUMENTS:**

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division-1 Specification sections, apply to work of this section.
- B. Division-26, 27 & 28 basic materials and methods sections apply to work specified in this section.
- C. Refer to specification 26 0553 for cabling, conduit and junction box color requirements.
- D. Refer to specification 27 1500 for category and/or optical fiber cable and connectivity specifications and installation standards.
- E. All unshielded category 'UTP' and/or optical fiber cable, for security equipment, used on this project shall match the horizontal cabling within the building.

**1.2 DEFINITIONS:**

- A. ACS – Access Control System
- B. CSA – Client Software Application
- C. LPR – License Plate Recognition
- D. SDK – Software Development Kit
- E. UI – User Interface
- F. VMS – Video Management System
- G. SMS – Short Message Service
- H. OSDP: Open Supervised Device Protocol
- I. UPS: Uninterruptible Power Supply
- J. REX: Request to Exit
- K. DPS – Door Position Switch
- L. LDAP - Lightweight Directory Access Protocol
- M. AD – Active Directory

**1.3 ADMINISTRATIVE REQUIREMENTS:**

- A. BNA Project Contact:
  - 1. Brian Anderson
    - a. Phone: 801-532-2196
    - b. Email: [banderson@bnaconsulting.com](mailto:banderson@bnaconsulting.com)

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- B. Bid Submittal:
  - 1. Equipment Costs: Breakout cost of material and labor as different line items.
- C. Coordination:
  - 1. Coordinate final inspection of the systems installed, with Security Consultant, three (3) weeks in advance.
  - 2. Obtain GANTT chart for construction time frame from the General Contractor.
  - 3. Coordinate with owner, DIV 8, and electrical contractor PRIOR to rough-in to coordinate exact location of end devices and door functionality.
  - 4. Meet with electrical contractor prior to pathway rough-in to coordinate access control system requirements in each area.
  - 5. Coordinate meeting with owner's IT Department prior to ordering equipment to verify IT requirements and standards.
  - 6. Coordinate color and finish of all access control components with architect or electrical contractor as appropriate.
  - 7. Division 26, 27, and 28 contractors shall verify electrical service provided prior to ordering any electrical equipment serving electronic door hardware equipment and has the final responsibility for properly coordinating the electrical work, including the exact location of the electrical connection(s).
  - 8. Obtain submittals of all door hardware equipment from door hardware specification and Division 26 through 28 contractor(s). Carefully review door hardware submittal and advise in writing of any discrepancies.
  - 9. Notify engineer of any modifications between contract documents and submittals. It is the contractor's responsibility to ensure compliance with the documents.
  - 10. Coordinate all interfaces between door hardware and electrical contractor.
  - 11. Provide a dedicated 20-amp circuit for access control panel equipment.
  - 12. Electrical Contractor to provide 120V power to all locations requiring power.

**1.4 DESCRIPTION OF WORK:**

- A. Access control system (ACS) work is indicated by drawings and is hereby defined to include, but not be limited to, access control server, controller panels, power supplies, visitor management system, cabling, card readers, badge printers, credentials/cards, raceway, outlets, cover plates, backboards, cabinets, grounding and miscellaneous items required for complete system.
- B. Provide the specified systems in a complete and operating condition with all necessary materials and labor to fulfill the requirements and the intent of the drawings and specifications. Except as otherwise indicated, provide manufacturer's standard system components. Contractor shall furnish all cables, materials and equipment, whether specifically mentioned herein or not, to ensure a complete and functional system.
- C. Contractor is responsible for coordinating with all other trades for equipment locations, mounting requirements, supports and plenum space requirements.
- D. Refer to other Division-26 sections for requirements for raceways, trays, boxes and fittings, and supporting devices, and other sections, as applicable.

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~~E. Connect the ACS to the intercommunications system such that upon activation of an emergency lockdown or preventative lockdown from the administrative console, web browser, or app a communication protocol will be sent from the intercom system to the ACS that will allow for all controlled doors to be locked, a designated campus wide communication throughout the building, emails, SMS text, etc. A minimum of two types of initiations process shall be programmed e.g. "Emergency Lockdown" or "Preventative Lockdown" In addition, the contractor shall provide all controls necessary between the two systems such that the system can easily be reprogrammed to meet the needs of the owner.~~

#### 1.5 QUALITY ASSURANCE:

- A. MANUFACTURERS: Firms regularly engaged in manufacture of security system equipment and components of the types described here-in and whose products have been in satisfactory use in similar applications for not less than 5 years.
- B. Bidders wishing to provide equipment other than the equipment specified shall submit proposed substitute equipment to Security Consultant (8) working days prior to bidding. Submittals for prior approval shall include description of equipment, design intent, complete riser diagrams for proposed equipment, equipment specifications, cut sheets of proposed equipment, reason for alternate equipment. Security Consultant may request physical equipment to test and demo. Acceptance of proposed equipment by Security Consultant shall not relieve security contractor from responsibility to provide systems equal to those specified in this Section. Contractor shall be ultimately responsible for providing complete and working system that function, control and operate in the same manner as the specified equipment. Security Consultant has final say if proposed equipment is equal to the specified equipment. Equipment that Security Consultant is not familiar with will require the contractor to provide manufacturer training at manufacturer's facility and have a manufacturer representative present at time of commissioning.
- C. INSTALLER:
1. Integrating firm shall have worked satisfactorily for a minimum of (5) years of completing systems equal to this scope, quality, type and complexity.
  2. Key personnel assigned to the project shall each have minimum of (5) years of experience in completing systems equal to this scope, quality, type and complexity.
  3. Contractor shall be a factory authorized installer of all equipment specified for the geographical area of the project.
  4. Contractor shall maintain complete installation and service facilities for the duration of the project contract.
  5. Contractor shall have current manufacturer certifications for all security systems and equipment listed within this specification. Certifications must be from local office providing the install.
- D. All work shall be done by expert technicians qualified in the field with knowledge of specified systems. Workmanship shall comply with industry best practices concerning grounding, shielding, cable dressing, cable termination and equipment mounting.

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- E. All technicians are required to have proper state licensing to perform work within this specification.
- F. PRE-APPROVED INSTALLERS:
  - 1. Stone Security
  - 2. Wasatch Controls
  - 3. Global Surveillance
  - 4. Team Linx
  - 5. AVTEC
  - 6. Compunet
  - 7. Convergent Technologies / Alpha Corp.
  - 8. Stanley Security
  - 9. Utah Yamas Controls
  - 10. HEI Security
  - 11. Simplex Grinnell / JCI
- G. Bidders not pre-approved shall submit in writing the following for review at least (8) working days prior to bid: List of qualifications including:
  - 1. Industries certifications including manufacturers.
  - 2. Past and current projects within the last 5 years similar in scope and size.
  - 3. (3) Different referrals from the owners of (3) different projects within the last 5 years.

**1.6 SUBMITTALS:**

- A. Refer to specification 26 0500 for shop drawing submittal requirements. The following items shall be included in the shop drawings submittal. Submittals to be reviewed and approved prior to ordering equipment.
- B. All submittals shall be submitted in a digital format with bookmarks for each section of equipment. Any submittals that are partial or incomplete shall be rejected and count as one submittal against the submittal allowance. No hand-written documentation is allowed.
- C. Provide a complete bill of materials for all components, accessories and hardware to be provided in order to assemble a complete and working system as described within the contract documents.
- D. Submit manufacturer's data and installation details for all devices, panels, cables and head-end equipment. Product data showing multiple options, products and/or models shall be clearly marked identifying the specific options, products and/or models being provided.
- E. Submit dimensioned drawings and device wiring layouts for all equipment.
- F. Submit equipment rack elevation diagrams (if applicable).

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- G. Submit network switch port count and power requirements. Port count and POE switch requirements should be broken out per IDF/MDF closet.
- H. Submit manufacturer certifications for all systems provided. Certifications must be from local office providing the install.
- I. Provide the Owner the following upon project completion:
  - 1. A complete set of shop drawings indicating: Locations of all panels, power supplies and controllers; point-to-point wiring diagrams for all devices.
  - 2. A complete equipment list identifying: Type; model; manufacturer; manufacturer's data sheets.
  - 3. A list of IP and MAC addresses, username and passwords for network devices coordinated with door name and/or location.
  - 4. Serial and model numbers for all major components.
  - 5. Installation manuals and user manuals for all systems listed in these specifications.

**1.7 WARRANTY:**

- A. Systems shall be guaranteed for a period of one (1) year from the date of substantial completion against defective materials, inferior workmanship or improper installation adjustment. Guarantee shall cover all parts and labor.
- B. If system failure causes access control system to be inoperative or unusable for its intended purpose, contractor, when notified of the problem, shall repair system so it will be operational and usable within three (3) business days. If defective components cannot be repaired in time, provide temporary equipment as required.
- C. Systems designed for 24/7 operation shall be repaired and/or replaced within 24 hours of time of notification. If defective components cannot be repaired in time, provide temporary equipment as required.
- D. Contractor shall supply (1) year warranty on all system programming from the date of substantial completion. During this time period, upon owner request, the contractor shall provide programming changes up to (4) four times or 4 hours free of charge.
- E. Contractor shall honor equipment warranties for term established by manufacturer if greater than warranty time frame mentioned above.

**PART 2 – PRODUCTS**

**2.1 GENERAL REQUIRMENTS**

- A. Provide a complete and operable open platform Mercury based access control system which utilizes card readers, door switches, and motion detection devices to maintain building security.
- B. The ACS shall be an enterprise class access control software solution. All security systems shall allow the seamless integration of the ACS with an IP video management

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system (VMS).

- C. The ACS shall be scalable to support configurations consisting of thousands of doors with facilities spanning multiple geographic areas.
- D. The network appliance shall be capable of running on an existing TCP/IP network and shall be accessible, configurable, and manageable from any network-connected PC with a browser and/or client.
- E. The ACS shall support a variety of access control functionalities, including but not limited to:
  - 1. Elevator management
  - 2. Cardholder and cardholder group management, credential management, and access rule management.
  - 3. Badge printing and template creation.
  - 4. Visitor Management.
  - 5. Mustering.
  - 6. LDAP / Active Directory integration for single-user logon authentication.
  - 7. Access level disable for immediate lockdown.
  - 8. A completely customizable access level based on threat levels, multiple schedules, and user groups.
  - 9. The ACS shall support encrypted reader to panel communications using the SIA OSDP protocol.
- F. Manufacturer(s):
  - 1. Genetec
  - 2. Lenel
  - 3. S2 Security
  - 4. Software House

**2.2 GENERAL EQUIPMENT REQUIREMENTS:**

- A. Provide all necessary equipment to ensure a complete access control system is achieved. Provide the following equipment as a baseline for the access control system:
  - 1. Access control Panels

Description	Manufacturer	Part Number
Access control server		Per manufacturer
Mercury-intelligent Controller	Mercury Hardware	EP 1502
Mercury Reader Interface Module	Mercury Hardware	MR-52
4 Door Power Supply ACS Enclosure	Life Safety Power	FPO75-B100C4D8PE2M
8 Door Power Supply ACS Enclosure	Life Safety Power	FPO150-B100C8D8PE4M1
16 Door Power Supply ACS Enclosure	Life Safety Power	FPO150/250-2C82D8PE8M2
Battery (DC power supply)	Verify Manufacturer	7AH 12VDC

2. End Devices

Description	Manufacturer	Part Number
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RP40 Multi-class Reader	HID Global	920PTNNEK00000
RPK40 Multiclass Reader with keypad	HID Global	921PTNNEK00000
RP10 Multi-class Reader (Mullion)	HID Global	900PTNNEK00000
R40 iClass Reader	HID Global	920NTNNEK00000
<del>RK40 iClass Reader with keypad</del>	<del>HID Global</del>	<del>921NTNNEK00000</del>
<del>R10 iClass Reader Reader (Mullion)</del>	<del>HID Global</del>	<del>910NTNNEK00000</del>
Request to Exit	Interlogix	RCR-REX

3. A motion request to exit should only be used where an integrated request to exit (in the electrified lock) is not available.

<u>Description</u>	<u>Manufacturer</u>	<u>Part Number</u>
iClass Smart Card (quantity 200)	HID	SEOS / iClass 36 bit

- B. Equipment lists are provided to set equipment expectations and may not be complete. Coordinate with devices shown on drawings, system risers and equipment lists for system intent. Provide a complete and functional system as described within the construction documents.
- DIV. 8 to supply and install electrified door locks (strikes, crash bars, mag locks, locksets).
  - DIV. 28 to provide and install all integrated card reader / electrified lockset combinations.
  - DIV. 28 to provide all power supplies to power electrified locksets. Coordinate with DIV. for exact power needed.
  - Coordinate with electrical contractor / architect / and owner for exact door hardware provided.
  - Provide 1 year of software updates for access control software.

**2.3 POWER SUPPLIES:**

- The DC Voltage power supply shall provide dual output fused ports of either 12 or 24VDC and receive power inputs of either 120 or 230VAC. Unit shall be expandable by adding additional modules for up to three power modules. Power modules shall provide power capabilities from 75 to 250W. The system shall provide configurations for; power distribution, control and signaling, fire alarm interface or fail safe/fail secure locking control and shall be a standard feature of the system.
- Power supplies located at control panel. Provide additional enclosures as needed.
- Power supplies and access control panels should have a minimum of one 12VDC 7ah battery per panel.
- A network module shall be available as an optional device for remote functionality such as control, status reporting, information logging, remote battery testing, fault reporting / restore, and shall interface with multiple control and monitoring modules to extend the remote functionality to multiple individual outputs for direct control, extended information gathering and reporting.
- It is the DIVISION 28 contractor’s responsivity to provide power supplies for all electric locks, access control panels and access control devices to make an operations system.

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**2.4 CARD READERS:**

- A. The contactless smart card reader shall comply with the following 13.56MHz-related standards: ISO 15693, ISO 14443A, ISO 14443B
- B. The contactless smart card reader shall provide universal compatibility with most access control systems by outputting card data in compliance with the SIA AC-01 Wiegand standard
- C. The card reader shall be configurable to provide secure, bidirectional communication in compliance with v2 of the SIA Open Supervised Device Protocol (OSDP) with an optional expansion module.
- D. The contactless smart card reader shall utilize an EAL5+ certified secure element to protect keys and execute cryptographic functions. It shall support 3DES and AES algorithms.
- E. The contactless smart card reader shall support secure sector read of iCLASS Seos credentials and Mobile Identities powered by Seos
- F. The contactless smart card reader must support Bluetooth Low Energy (BLE) and Near Field Communication (NFC) communication technologies ~~as an upgrade option.~~
- G. Optionally the reader shall support 125kHz HID Prox credentials.
- H. Mobile Identity operation must be configurable.
- I. The contactless smart card reader shall provide enhanced user feedback options through the use of tri-colored LEDs configurable to support any three-color combinations (RGB - Red, Green, and Blue).
- J. Reader behavior configuration options shall include Intelligent Power Management (IPM) mode to reduce power consumption by at least 59%.
- K. The Contactless smart card reader shall be connected with pigtail cable
- L. Tamper detection on card readers shall be programmed to send notification through access control system in the event of damaged or tampered with.

~~**2.5 INTRUSION DETECTION SYSTEM**~~

- ~~A. Alarm system shall be an extension of the access control system. Access control system to have the capability to accept motion detectors and auxiliary intrusion end-devices.~~
- ~~B. Program system to arm with keypad and send notifications via email and/or text message if system is activated.~~
- ~~C. All motion detectors to be 360° ceiling mount. Coordinate with architect or owner on exact mounting location.~~
- ~~D. Manufactures:~~
  - ~~1. Inevonics~~
  - ~~2. Bosch~~
  - ~~3. DMP~~
- ~~a. MOTION 360° EN1265 or approved equal~~
- ~~b. MOTION 360° High Ceiling ACC669 or approved equal~~
- ~~c. PANIC BUTTON EN1233D~~

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- ~~d. Door Release EN1233S~~
- ~~e. 16 Zone Receiver EN4216MR~~
- ~~f. 4 Zone Receiver EN4204R~~

~~2.6 VISITOR MANAGEMENT SYSTEM~~

~~A. VISITOR MANAGEMENT SOFTWARE~~

- ~~1. Manufacturer(s): HID – Easy Lobby or approved equal.~~

- ~~a. Provide visitor management system to integrate in to access control system. Provide all licenses and equipment needed for a complete and functional system.~~
- ~~b. Visitor management system to have the capability to have visitors check in via tablet or pre-check in online.~~
- ~~c. System shall have the capability upload non-discloser and safety record documents and have the ability for the visitor to view and digitally sign.~~
- ~~d. System shall have the capability to take a photo of the visitor via tablet or network attached camera to import into a visitor badge. Contractor shall provide the tablet or touchscreen device for check in.~~
- ~~e. System to have the capability to send email or text message notifications once a visitor has checked in.~~
- ~~f. Ability to pull reports and visitor data for auditing purposes and share a common data base.~~
- ~~g. With future upgrade, the ability to scan a passport and/or driver's license during check in.~~

~~B. BADGE PRINTER~~

- ~~1. Fargo DTC4500 or approved equal.~~
  - ~~g. Printer to have the capability of printing overlay onto the card.~~
  - ~~h. Printer shall be able to print double sided and in color on one side.~~
  - ~~i. Printer must have the capability of laminating cards.~~
  - ~~j. Provide all cards, ink ribbon, laminate, and software for a complete badge printing solution.~~

**PART 3 – EXECUTION**

**3.1 INSTALLATION OF ACCESS CONTROL SYSTEM:**

- A. GENERAL: Install access control system as indicated, in accordance with equipment manufacturers written instructions, and with recognized industry practices, to ensure that system equipment complies with requirements. Comply with requirements of NEC, and applicable portions of NECA's "Standards of Installation" practices.
- B. Review and coordinate access control system layout and wiring with owner and get approval prior to rough-in.

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- C. Coordinate all equipment locations and mounting details with other trades and suppliers.
- D. Mount access control devices a minimum of 3 feet from heat or air movement sources.
- E. Provide data cable per section 28 2300 to the intrusion detection panel and coordinate termination.
- F. GROUNDING: Provide grounding connections sufficiently tight to assure permanent and effective ground.
- G. TESTING: Upon completion of installation of system and after energized, demonstrate system compliance with intent.
- H. WIRING: Install all wiring in conduit raceway. Wire all components of the system in accordance with factory recommendations. The card reader cable shall be 3/P, 22 AWG, Shielded for distances up to 500 ft. All final connections shall be made by a qualified technician familiar with the owner's procedures and the manufacturer's equipment. Label wires in each box throughout system (including panel), 'Security' and indicate zone number.
- I. ZONING: Each detector, door switch, sensing device shall be considered a location. Multiple doors at a common entry shall be considered one location.
- J. LABELING: The contractor shall develop and submit for approval a labeling system for the cable installation. Coordinate with the owner and negotiate an appropriate labeling scheme with the contractor. At a minimum, the labeling system shall clearly identify all components of the system: racks, cables, panels and wall plates. The labeling system shall designate the cables origin and destination and a unique identifier for the cable within the system. All labeling information shall be recorded on the as-built drawings and all test documents shall reflect the appropriate labeling scheme.
  - 1. All labels shall meet UL 969 requirements for legibility, defacement and adhesion requirements. Handwritten labels are not allowed. All labels shall maintain consistent typeface, size and color.
  - 2. Provide laminated plans (minimum size 11x17) of all Security Systems as-built plans (including riser diagrams) at each telecom room/panel location.
- K. OCCUPANCY ADJUSTMENTS: When required within 1 year of date of substantial completion, provide on-site assistance in adjusting and reprogramming to suit actual occupied conditions. Provide 1 visit to the site for this purpose without additional cost.
- L. MOUNTING HEIGHT: Card readers and intercoms should meet all ADA mounting requirements. Card readers shall be mounted 48" from the floor to the top of the card reader.

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- M. ROOF HATCHES: Verify roof hatch locations and include door monitoring switch on all roof hatches. Roof hatch door contacts shall be tied into access control or intrusion detection system and provide scheduled notification when opened.

### 3.2 WIRING:

A. Pathway Requirements:

1. Prior to placing any cable pathways or cable, the contractor shall survey the site to determine job conditions will not impose any obstructions that would interfere with the safe and satisfactory placement of the cables.
2. All pathways shall be designed, constructed, grounded and installed in accordance with all recommendations delineated within TIA 569-B and Standard TIA 942-B.

B. Conduits:

1. Achieve the best direct route parallel with building lines with no single bend greater than 90 degrees or an aggregate of bends in excess of 180 degrees between pull points or pull boxes.
2. Provide large radius elbows on all bends.
3. Conduit runs shall not have continuous sections longer than 100 feet without a pull box. Refer to rough-in schedule for conduit fill capacity.
4. Conduits should not be routed over or adjacent to heat sources such as boilers, hot water lines, or steam lines. Neither should they be routed near large motors, generators, photocopy equipment, or electrical power cabling and transformers.
5. After installation, conduits shall be clean, dry, unobstructed, capped for protection, labeled for identification, reamed and fitted with bushings.
6. A 200lb pull cord (nylon, 1/8" minimum) shall be installed in any empty conduit.
7. All cabling shall be installed in a minimum of 3/4" conduit to accessible ceiling space unless otherwise noted. Provide conduit to accessible ceiling space and then utilize non-continuous open top cable supports every 5'.

C. Cabling System:

1. Follow T568B scheme for copper category cabling terminations.
2. In a false ceiling environment, a minimum of 3 inches shall be maintained between cable supports and false ceiling. At no point shall cable(s) rest on lay-in ceiling grids or panels.
3. Cable shall be installed above fire-sprinkler systems and shall not be attached to the system or any ancillary equipment or hardware. The cable system and support hardware shall be installed so that it does not obscure any valves, fire alarm conduit, boxes, or other control devices.
4. Cables shall not be attached to ceiling grid seismic support wires or lighting fixture seismic support wires. Where support for cable is required, the contractor shall install appropriate carriers to support the cabling. No exposed cabling is allowed.

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5. Any cable damaged or exceeding recommended installation parameters during installation shall be replaced by the contractor prior to final acceptance at no cost to the Owner.
  6. Cable shall not be draped on, tied or otherwise secured to electrical conduit, plumbing, ventilation ductwork or any other equipment. Cable shall be secured to building supports or hangers or to additional blocks or anchors specifically installed for this purpose.
- D. Access control Cable:
1. Provide the following wiring for the access control system components.
    - a. Windy City Wire UL Listed and Plenum Rated #446100
  2. All Security cable shall be yellow. UL Listed and Plenum Rated.
  3. Main Lockdown Card Reader: 3/P, 22 AWG, Shielded < 500 ft
  4. Secure Access Button: 4/C, 18 AWG, Shielded
  5. Each Access Control Door: Wire devices from junction box above the door per the following:
    - a. Card Reader 3/P, 22 AWG, Shielded
    - b. Request for Exit 4/C, 22 AWG Shielded
    - c. Door Locking Hardware 4/C, 18 AWG Shielded
    - d. Door Position Switch 2/C, 22 AWG Shielded
  6. ADA Door Opener/Actuator: Provide connection to door opener/actuator to access control system. Program card reader and ADA operator per owner's requirements.
  7. Wiring by Divisions 26: The electrical connections/terminations for certain equipment provided under door hardware divisions has not been specifically indicated on the electrical drawings and must be provided by and field coordinated by the door hardware trade requiring such electrical connections. Electrical contractor shall review architectural drawing, door hardware specifications and coordinate with said contractors to confirm electrical needs.

### **3.3 SYSTEM CONFIGURATION PROGRAMMING AND COMMISSIONING:**

- A. Configure the system for full operation. Include owner in the process as much as feasible to understand their intended operation and insure full transfer of operations to them.
- B. Provide a fully commissioned system to ensure the entire system is operating as intended and in accordance with Owner policy. Label cables on both ends in all boxes, panels and racks according to Owner standards.
- C. The contractor shall include in the base contract all costs required to program lockdown procedures based upon the requirements and direction of the owner.

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- D. The contractor shall include necessary programming for fire-alarm panel tie-in and door release based upon the requirements and direction of the owner and/or AHJ.

### 3.4 CYBER SECURITY

- A. Contractor shall change all default user-name and passwords for all network devices provided. A Strong Password **should** -
  - 1. Be at least 8 characters in length
  - 2. Contain both upper and lowercase alphabetic characters (e.g. A-Z, a-z)
  - 3. Have at least one numerical character (e.g. 0-9)
  - 4. Have at least one special character (e.g. ~!@#%&\*( )\_ -+=)
- B. No written username or passwords shall be located in any areas of installation.
- C. Network devices to be set up on a separate network other than owner's LAN ensuring no internal or external users can access system without authorization.
- D. Follow manufacturers hardening guide and use best industry practices to secure network and devices provided by contractor and associated with system.

### 3.5 OPERATING AND MAINTENANCE MANUALS:

- A. Operating and maintenance manuals shall be submitted prior to testing of system. Total of two (2) manuals, shall be delivered to the owner. Manuals shall include all model numbers, service, installation, and programming information. All information must be bookmarked with a table of contents.
- B. Include all the following information:
  - 1. Warranty
  - 2. Network settings (IP & MAC Addresses)
  - 3. User name and passwords
  - 4. Riser diagrams from Shop drawings
  - 5. Training videos
  - 6. USB Flash drive with programing source code and software editing programs.
  - 7. Installers and manufacturer contact information.

### 3.6 RECORD DRAWINGS:

- A. The Owner shall provide electronic (DWG) format of the access control system drawings

**INVITATIONS TO BID**

**28 2205-13  
ACCESS CONTROL SYSTEMS**

**MTOID OFFICE REMODEL  
GSBS PROJECT. NO. 2018.082.00**

that as-built construction information can be added to. These documents will be modified by the security contractor to denote as-built information as defined above and returned to the Owner.

- B. A complete set of CAD as-builts are expected to be maintained during project installation (progress-set) and submitted upon final completion. These as-builts shall show wire paths, final device location, color coding, specific interconnections between all equipment, and internal wiring of the equipment and any changes to the configuration of the original construction drawings. No hand written as-built documentation is allowed. Provide a complete set of "as built" drawings in paper and electronic (DWG and PDF) to owner.

### **3.7 TRAINING:**

- A. Provide a minimum of two sessions of (2) hours training on the operation and installation of access control system at job site. Ensure the owner is proficient in the control of the system with contact information readily available. Contractor shall provide a 3-month follow-up 2-hour training on advanced features of the system.

**END OF SECTION 28 2200**

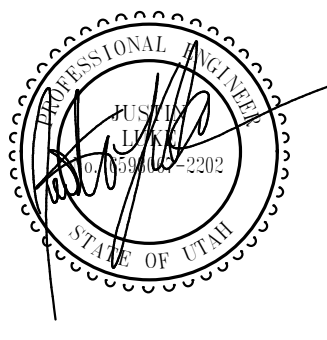
REVISIONS:

1	5/10/2019	Addendum # 2

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### GENERAL NOTES

- CONSULT ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATION OF ALL LIGHTING FIXTURES.
- VERIFY ALL EQUIPMENT DIMENSIONS AND LOCATIONS BEFORE BEGINNING ROUGH IN. CONSULT ALL APPLICABLE CONTRACT DRAWINGS AND SHOP DRAWINGS TO INSURE NEC CODE CLEARANCES REQUIRED AROUND ALL ELECTRICAL EQUIPMENT.
- CONTRACTOR SHALL VERIFY ALL ELECTRICAL LOADS (VOLTAGE, PHASE, CONNECTION REQUIREMENTS, ETC) OF ALL EQUIPMENT FURNISHED UNDER ALL DIVISIONS, INCLUDING ALL EXISTING EQUIPMENT TO BE RE-USED. REVIEW ALL SHOP DRAWINGS AND EXISTING EQUIPMENT BEFORE BEGINNING ROUGH-IN.
- SEE SECTION 265100 (16510) OF THE SPECIFICATION FOR REQUIRED COORDINATION MEETINGS WITH MECHANICAL AND CEILING CONTRACTORS.
- SEE APPLICABLE SHOP DRAWINGS FOR ROUGH IN LOCATION OF ALL EQUIPMENT, WIRING DEVICES, ETC. WHERE APPLICABLE MOUNT ALL WIRING DEVICES ABOVE BACK SPLASH EXCEPT THOSE SERVING UNDER COUNTER EQUIPMENT.
- SEE SPECIFICATION FOR ENERGY SAVING LAMP AND BALLAST REQUIREMENTS.
- FINISHES OF ALL LIGHT FIXTURES SHALL BE AS SELECTED BY ARCHITECT.
- THE ELECTRICAL CONTRACTOR SHALL NOTIFY AND COOPERATE WITH THE MECHANICAL CONTRACTOR SUCH THAT NO PIPING, DUCTS, OR EQUIPMENT FOREIGN TO THE OPERATION OF THE ELECTRICAL EQUIPMENT SHALL BE PERMITTED TO BE INSTALLED IN, ENTER OR PASS THRU ELECTRICAL ROOMS OR SPACES, OR ABOVE OR BELOW ELECTRICAL EQUIPMENT IN OTHER AREAS.
- ELECTRICAL BOXES SHALL NOT BE LOCATED IN MASONRY COLUMNS IN BRICK WALLS OR IN GROUTED CELLS ADJACENT TO OPENINGS. COORDINATE LOCATION OF BOXES WITH MASONRY CONTRACTOR.
- ALL PENETRATIONS OF FIRE RATED FLOORS, WALLS, AND CEILINGS SHALL BE SEALED WITH APPROVED MATERIAL TO MAINTAIN FIRE RATING OF SURFACE PENETRATED.
- CIRCUITS EXTENDING OVER 70' FOR 120 VOLT AND 115' FOR 277 VOLT 20 AMP CIRCUITS SHALL BE RUN WITH CONDUCTORS PER TABLE BELOW.

MAXIMUM LENGTH CONDUCTOR LENGTH (FT)	BRANCH CIRCUIT VOLTAGE	
	120 VOLT	277 VOLT
<70	MIN. #12 AWG	MIN. #12 AWG
70 - 115	MIN. #10 AWG	MIN. #12 AWG
115 - 170	MIN. #8 AWG	MIN. #10 AWG
170 - 270	MIN. #6 AWG	MIN. #8 AWG
271 - 380	NOTE B	MIN. #8 AWG
>380	NOTE B	NOTE B

- THESE ARE BASED ON MAXIMUM LENGTH OF CIRCUIT.
  - PERFORM VOLTAGE DROP CALCULATIONS AND PROVIDE CONDUCTOR SIZE TO KEEP BRANCH CIRCUIT VOLTAGE DROP LESS THAN 3% WITH A 15 AMP LOAD.
  - CONTRACTOR SHALL ENSURE THAT THE INSTALLATION OF EACH BRANCH CIRCUIT STAYS WITHIN 3% VOLTAGE DROP FOR A 15 AMP LOAD. IF NECESSARY, CONTRACTOR SHALL INCREASE WIRE AND CONDUIT SIZE TO MEET THE STANDARD AT NO ADDITIONAL COST TO OWNER.
- CONTRACTOR SHALL VERIFY FURNITURE LAYOUT PRIOR TO ANY FLOORBOX OR POKE-THRU INSTALLATION. COORDINATE EXACT LOCATION OF FLOOR BOX OR POKE-THRU WITH OWNER AND FURNITURE PROVIDER PRIOR TO ROUGH-IN.
  - PROVIDE A 100A 208V/3P TEMPORARY FEED FROM THE BUILDING ELECTRICAL SYSTEM. PROVIDE ALL NECESSARY CONDUCTORS, BREAKERS, CONNECTIONS, AND LABOR IN ELECTRICAL BID TO COMPLETE THE TEMPORARY SERVICE.

### SHEET INDEX

E001	SYMBOLS, SCHEDULES AND NOTES
E002	SCHEDULES AND NOTES
E101	LEVEL 00 DEMOLITION SHEET
E201	LEVEL 00 LIGHTING SHEET
E301	LEVEL 00 POWER SHEET
E401	LEVEL 00 SYSTEMS SHEET
E501	ELECTRICAL DIAGRAMS

### ABBREVIATIONS INDEX

ABBREV.	DESCRIPTION	ABBREV.	DESCRIPTION
#	NUMBER	MH	MANHOLE
AC	ALTERNATING CURRENT	MIC	MICROPHONE
A.F.F.	ABOVE FINISH FLOOR	MIN	MINIMUM
AIC	AMPS INTERRUPTING CAPACITY	MTG	MOUNTING
AM	AMPS METER	MTR	MOTOR
AMP	AMPERE	N/A	NOT APPLICABLE
ANN	ANNUNCIATOR	NC	NORMALLY CLOSED
ATS	AUTOMATIC TRANSFER SWITCH	NEC	NATIONAL ELECTRICAL CODE
AUX	AUXILIARY	NEMA	NATIONAL ELECT. MANUFAC. ASSOC.
AWG	AMERICAN WIRE GAUGE	NFC	NATIONAL FIRE CODE
BC	BARE COPPER	NFPA	NATIONAL FIRE PROTECTION ASSOC.
BFG	BELOW FINISH GRADE	N.I.C.	NOT IN CONTRACT
C	CONDUIT	NO	NORMALLY OPENED
CAB	CABINET	NTS	NOT TO SCALE
CATB	COMMUNITY ANTENNA TELEVISION	OS & Y	OUTSIDE SCREW & YOKE
CATV	CABLE TELEVISION	PB	PUSHBUTTON
CKT	CIRCUIT	PF	POWER FACTOR
CLG	CEILING	PFR	PHASE FAILURE RELAY
CONTR	CONTRACTOR	PNL	PANEL
C.O.	CONDUIT ONLY	PT	POTENTIAL TRANSFORMER
CRT	COMPUTER TERMINAL	PVC	POLYVINYL CHLORIDE CONDUIT
CT	CURRENT TRANSFORMER	(R)	RELOCATE
CU	COPPER	RECEP	RECEPTACLE
C/W	COMPLETE WITH	REQ	REQUIREMENT
DB	DECIBEL	RLA	RATED LOAD AMPS
DC	DIRECT CURRENT	RMS	ROOT MEAN SQUARE
DWG	DRAWING	SE	SERVICE ENTRANCE
(E)	EXISTING	SPEC	SPECIFICATIONS
EC	EMPTY CONDUIT	SPKR	SPEAKER
EG	EMERGENCY GENERATOR	SS	SELECTOR SWITCH
EMT	ELECTRICAL METALLIC TUBING	SW	SWITCH
EX	EXPLOSION PROOF	SWBD	SWITCHBOARD
FACP	FIRE ALARM CONTROL PANEL	SWGR	SWITCHGEAR
FC	FOOT CANDLE	TTB	TELEPHONE TERMINAL BOARD
FT	FOOT	TTC	TELEPHONE TERMINAL CABINET
GFI	GROUND FAULT INTERRUPTER	TV	TELEVISION
GND	GROUND	TYP	TYPICAL
GRC	GALVANIZED RIGID CONDUIT	UG	UNDERGROUND
HP	HORSE POWER	UP	UTAH POWER
HZ	HERTZ	UPS	UNINTERRUPTED POWER SUPPLY
IG	ISOLATED GROUND	V	VOLT (KV-KILOVOLT)
IMC	INTERMEDIATE METALLIC CONDUIT	VAR	VOLT-AMPS/REACTIVE
IN	INCH	VM	VOLT METER
J-BOX	JUNCTION BOX	W	WATTS
KV	KILOVOLT	W/	WITH
KVA	KILOVOLT AMPERES	WH	WATTHOUR METER
KVAR	KILOVARS	W/O	WITHOUT
KW	KILOWATT	WP	WEATHERPROOF
LRA	LOCKED ROTOR AMPS	XFMR	TRANSFORMER
LTG	LIGHTING	XFMR SW	TRANSFER SWITCH
MNF	MANUFACTURER	XP	EXPLOSION PROOF
MATV	MASTER ANTENNA TELEVISION	1P	SINGLE-PHASE
MAX	MAXIMUM	2P	TWO-POLE
MB	MAIN BUS	3P	THREE-POLE
MCC	MOTOR CONTROL CENTER	4P	FOUR-POLE
MCM	1000 CIRCULAR MILLS	Ø	PHASE

### DEMOLITION NOTES

- COORDINATE ALL NEW ELECTRICAL EQUIPMENT REQUIREMENTS AND MAKE CONNECTION TO EXISTING SYSTEMS. THIS INCLUDES LIGHTING, POWER, SIGNAL, RACEWAY AND OTHER SYSTEMS INCLUDED UNDER DIVISION 26 (16).
- RELOCATE, REWIRE AND/OR RECONNECT EXISTING ELECTRICAL DEVICES AND/OR EQUIPMENT THAT FOR ANY REASON OBSTRUCTS CONSTRUCTION.
- CONCEAL ALL RACEWAY AND WIRING IN EXISTING WALLS, CEILINGS, FLOORS, ETC. EXCEPT WHERE THE USE OF SURFACE METAL RACEWAYS (E.G. WIRE MOLD) IS INDICATED ON DRAWINGS OR IN SPEC.
- LEAVE ALL EXISTING EQUIPMENT, IN PORTIONS OF THE BUILDING NOT BEING REMODELED, IN WORKING CONDITION. RESTORE ALL INTERRUPTED BRANCH CIRCUITS, FEEDERS, ETC. TO WORKING CONDITION.
- EXISTING RACEWAYS MAY BE REUSED (IN PLACE) WHERE POSSIBLE, AND WHERE IN COMPLIANCE WITH THE SPECIFICATIONS AND THE INTENT OF THE CONTRACT DOCUMENTS. INSURE INTEGRITY OF EXISTING RACEWAY BEFORE REUSE.
- REMOVE ALL RACEWAYS, CONDUCTORS, BOXES, DEVICES, EQUIPMENT, ETC. THAT ARE NOT TO BE REUSED.
- REMOVE EXISTING LIGHT FIXTURES WHICH ARE NOT TO BE REUSED, PLACE IN CARTON, LABEL APPROPRIATELY, AND RETURN TO OWNER, OR PROPERLY DISPOSE OF FIXTURES THAT THE OWNER CHOOSES NOT TO KEEP.
- DO NOT PENETRATE STRUCTURAL ELEMENTS OF FLOORS, WALLS, CEILINGS, ROOFS, ETC.
- DISCONNECT AND RECONNECT ANY/ALL FIXTURES, DEVICES, EQUIPMENT, ETC. REQUIRED FOR PROPER COMPLETION OF THE WORK.

### SENSOR GENERAL NOTES

- THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE SENSOR MANUFACTURER FOR PROPER PLACEMENT AND ADJUSTMENT OF OCCUPANCY SENSORS.
- EACH ZONE SHALL HAVE COVERAGE BY OCCUPANCY SENSOR SUCH THAT NO BLIND SPOT EXIST.
- UPON COMPLETION OF THE INSTALLATION, THE SYSTEM SHALL BE COMPLETELY COMMISSIONED BY THE MANUFACTURER'S FACTORY AUTHORIZED TECHNICIAN WHO WILL VERIFY ALL ADJUSTMENTS AND SENSOR PLACEMENT TO ENSURE A TROUBLE FREE INSTALLATION.
- THE LOCATION AND QUANTITIES OF SENSORS SHOWN ON THE DRAWINGS ARE DIAGRAMMATIC AND INDICATE ONLY THE ROOMS WHICH ARE TO BE PROVIDED WITH SENSORS. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ADDITIONAL SENSORS IF REQUIRED TO PROPERLY COVER THE RESPECTIVE ROOM.

### ELECTRICAL SYMBOL SCHEDULE

- SEE FIXTURE SCHEDULE FOR TYPE, MOUNTING AND WATTAGE.
- HEIGHT MEASURED TO CENTER LINE OF THE BOX FROM THE FINISH FLOOR.
- REFER TO DRAWINGS FOR DIRECTIONAL ARROWS.
- SUBSCRIPT KEYS SWITCH TO FIXTURES CONTROLLED.
- NEMA TYPE 'ND' NON-FUSED UNLESS NOTED 'F' (FUSED). USE 'HD' 480 V.
- HEIGHT MEASURED TO TOP OF THE BOX FROM FINISH FLOOR.
- PROVIDE H.O.A. AND S.S. PUSHBUTTONS AS REQUIRED.
- DOUBLE ARROWS DENOTE A DOUBLE FACE UNIT.
- COORDINATE WITH MILLWORK SHOP DRAWINGS AND ELEVATIONS FOR HEIGHT.
- SUBSCRIPT DENOTES NEMA CONFIGURATION.
- HEIGHT MEASURED TO BOTTOM OF THE BOX FROM FINISH FLOOR.
- COORDINATE WITH DOOR HARDWARE SUPPLIER.

**STANDARD MOUNTING HEIGHT UNLESS OTHERWISE NOTED ON PLANS**

SYMBOL	DESCRIPTION	MOUNTING HEIGHT	NOTES	SYMBOL	DESCRIPTION	MOUNTING HEIGHT	NOTES
→	ONE CIRCUIT, HOME RUN TO PANEL			⊘	CLOCK OUTLET	+7'-6"	8.
→→	2 CIRCUIT, HOME RUN TO PANEL			⊞	FLOOR BOX - SEE SCHEDULE	FLOOR	SEE DIAGRAM, SPEC.
→→→	3 CIRCUIT, HOME RUN TO PANEL			⊞	POKE THRU - SEE SCHEDULE	FLOOR	SEE DIAGRAM, SPEC.
→	CONDUIT RUN CONCEALED IN WALL OR CEILING			⊞	FLIP-TOP BOX		9.
→	CONDUIT RUN CONCEALED IN FLOOR OR GROUND			⊞	JUNCTION BOX (F' IN FLOOR)	AS NOTED	
○	CONDUIT UP			⊞	MOTOR OUTLET	TO SUIT EQUIP.	
●	CONDUIT DOWN			■	PUSHBUTTON	+4'-0"	6.
⊞	CONDUIT STUB LOCATION	CAP CONDUIT		□	NON-FUSED DISCONNECT SWITCH	+5'-0"	5.
→	CONDUIT/CIRCUIT CONTINUATION			⊞	FUSED DISCONNECT SWITCH	+5'-0"	5.
≡	CABLE TRAY	AS NOTED		\$	MANUAL STARTER THERMAL OVERLOAD SWITCH WITH PILOT LIGHT	+4'-0"	2.
○	CEILING LIGHT FIXTURE	CEILING	1.	⊞	MAGNETIC STARTER	+5'-0"	7.
⊞	WALL LIGHT FIXTURE	AS NOTED	1.	⊞	MAGNETIC STARTER / DISCONNECT COMBINATION	+5'-0"	
⊞	RECESSED DOWNLIGHT FIXTURE	CEILING	1.	⊞	VARIABLE FREQUENCY DRIVE	+6'-6"	
⊞	RECESSED WALLWASH DOWNLIGHT FIXTURE	CEILING	1.	■	PANEL BOARD	TOP AT +6'-0"	
○	LIGHT FIXTURE	AS NOTED	1	▨	MAIN DISTRIBUTION PANEL		
⊞	EGRESS LIGHT FIXTURE	AS NOTED	UNSWITCHED	⊞	TELEPHONE TERMINAL BOARD		
⊞	AREA LIGHT POLE AND FIXTURE	CONCRETE BASE	SEE DIAGRAM	⊞	GROUND BUS BAR		
⊞	FLOOD OR TRACK FIXTURE	AS NOTED		⊞	EQUIPMENT CABINET/RACK		CIRCUIT TO 120V
⊞	CEILING/WALL MOUNTED EXIT LIGHT	CEILING/ AS NOTED	1.3.8.	⊞	BELL	+7'-6"	
⊞	SINGLE POLE SWITCH	+4'-0"	6. 4.	⊞	CHIME	+7'-6"	
⊞	THREE-WAY SWITCH	+4'-0"	6.	⊞	FIRE ALARM MANUAL STATION	+4'-0"	6.
⊞	FOUR-WAY SWITCH	+4'-0"	6.	⊞	FIRE ALARM SIGNAL HORN/STROBE	+8'-0"	6.
⊞	KEY OPERATED SWITCH	+4'-0"	6.	⊞	CONCEALED FIRE ALARM SIGNAL HORN/STROBE	CEILING	
⊞	SWITCH WITH PILOT LIGHT	+4'-0"	6.	⊞	FIRE ALARM SIGNAL SPEAKER/STROBE	+8'-0"	6.
⊞	VARIABLE INTENSITY SWITCH	+4'-0"	6.	⊞	CONCEALED FIRE ALARM SIGNAL SPEAKER/STROBE	CEILING	
⊞	TIMER SWITCH	+4'-0"	6.	⊞	FIRE ALARM STROBE	+8'-0"	6.
⊞	MOMENTARY CONTACT SWITCH	+4'-0"	6.	⊞	FIRE ALARM SPEAKER ONLY	+8'-0"	6.
⊞	LOW VOLTAGE WALL STATION (SUBSCRIPT INDICATES CONFIGURATION & CONTROL SEQUENCE)	+4'-0"	6. SEE DIAGRAM SPEC.	⊞	FIRE ALARM SIGNAL STROBE WITH BLUE COLORED LENS (CO VISUAL ALARM)	CEILING/ +8'-0"	MOUNT AS PER MFR.
⊞	CEILING/WALL MOUNTED OCCUPANCY SENSOR (SUBSCRIPT A=ANALOG, D = DIGITAL)	CEILING/ +4'-0"	6.	⊞	ASPIRATING SMOKE DETECTION SYSTEM	CEILING	MOUNT AS PER MFR.
⊞	POWER PACK	CEILING	SEE DIAGRAM, SPEC.	⊞	SMOKE DETECTOR	CEILING	
⊞	DIGITAL ROOM CONTROLLER (SUBSCRIPT INDICATES NUMBER OF RELAYS)	CEILING	SEE DIAGRAM, SPEC.	⊞	SMOKE/CARBON MONOXIDE DETECTOR	CEILING	
⊞	EMERGENCY LIGHTING CONTROL UNIT	ABOVE CEILING	SEE DIAGRAM, SPEC.	⊞	CARBON MONOXIDE DETECTOR	CEILING	
⊞	RECEPTACLE SWITCH PACK	CEILING		⊞	HEAT DETECTOR	CEILING	
⊞	AUTOMATIC RELAY PACK	CEILING	SEE DIAGRAM, SPEC.	⊞	DUCT SMOKE DETECTOR		MTD. IN DUCT
⊞	LOW VOLTAGE TRANSFORMER			⊞	FIRE/SMOKE DAMPER		
⊞	PHOTO-ELECTRIC CONTROL	AS NOTED	TORK 2000A	⊞	DOOR HOLDER	AS NOTED	
⊞	TIME CLOCK	+5'-0"	2.	⊞	FLOW SWITCH		
⊞	DUPLEX RECEPTACLE	+16" OR AS NOTED	9. 11.	⊞	TAMPER SWITCH		
⊞	DUPLEX RECEPTACLE UPPER OUTLET SWITCH CONTROLLED	+16" OR AS NOTED	9. 11.	⊞	WATER FLOOD INDICATOR		
⊞	DUPLEX RECEPTACLE WITH USB OUTLET	+16" OR AS NOTED	9. 11.	⊞	FIRE ALARM RELAY OR SECURITY RELAY		
⊞	CONTROLLED RECEPTACLE	+16" OR AS NOTED	9. 11.	⊞	FIRE ALARM CONTROL MODULE		
⊞	DUPLEX RECEPTACLE		9.	⊞	FIRE ALARM MONITOR MODULE		
⊞	ELECTRIC WATER COOLER RECEPTACLE		SEE DIAGRAM	⊞	TWO-WAY COMMUNICATION SYSTEM ANNUNCIATOR PANEL	+4'-0"	6.
⊞	WEATHERPROOF RECEPTACLE	+24" OR AS NOTED	2. 9.	⊞	TWO-WAY COMMUNICATION SYSTEM CALL STATION	+4'-0"	6.
⊞	ISOLATED GROUND RECEPTACLE	+16" OR AS NOTED	2. 9.	⊞	DURESS PUSHBUTTON	+4'-0"	6.
⊞	GROUND FAULT INTERRUPTER DUPLEX RECEPTACLE	+16" OR AS NOTED	9. 11.	⊞	SECURITY SYSTEM DOOR SWITCH	DOOR JAMB	
⊞	DUPLEX RECEPTACLE EMERGENCY POWER (RED)	+16" OR AS NOTED	9. 11.	⊞	SECURITY SYSTEM OVERHEAD DOOR SWITCH	CEILING	MOUNT AS PER MFR.
⊞	FOURPLEX RECEPTACLE	+16" OR AS NOTED	9. 11.	⊞	MAGNETIC SHEAR LOCK		
⊞	GROUND FAULT INTERRUPTER FOURPLEX RECEPTACLE	+16" OR AS NOTED	9. 11.	⊞	SECURITY SYSTEM KEYED ACCESS SWITCH	+4'-0"	6.
⊞	FOURPLEX RECEPTACLE EMERGENCY POWER (RED)	+16" OR AS NOTED	9. 11.	⊞	SECURITY SYSTEM KEYPAD	+4'-0"	6.
⊞	TVSS PROTECTED RECEPTACLE	+16" OR AS NOTED	9. 11.	⊞	INFRARED SENSOR	AS NOTED	
⊞	SPECIAL PURPOSE OUTLET	+16" OR AS NOTED	10. WITH CAP. 11	⊞	SECURITY MOTION DETECTOR		MOUNT AS PER MFR.
⊞	PLUGMOLD	+46" OR AS NOTED		⊞	SECURITY SYSTEM POP-IT		MOUNT AS PER MFR.
⊞	TELEVISION OUTLET	+16" OR AS NOTED	11.	⊞	GLASS BREAK DETECTOR	CEILING	
⊞	POWER POLE			⊞	ELECTRIC DOOR STRIKE		12.
⊞	FLAT PANEL DISPLAY WALL BOX TVSS RECEPT. DATA AND OTHER DEVICES. REFER TO DIAGRAMS	AS NOTED	SEE DIAGRAM, SPEC. 26 2726	⊞	ELECTRIC DOOR LOCK		12.
⊞	CEILING PROJECTION SYSTEM CEILING BOX	ABOVE CEILING	SEE DIAGRAM, SPEC.	⊞	ACCESS CONTROL SYSTEM, REQUEST TO EXIT		
⊞	DATA OUTLET, ONE CABLE	+16" OR AS NOTED	9. 11.	⊞	ACCESS CONTROL CARD READER	+4'-0"	6.
⊞	DATA OUTLET, TWO CABLES	+16" OR AS NOTED	9. 11.	⊞	ACCESS CONTROL BIOMETRIC READER	+4'-0"	6.
⊞	DATA OUTLET, THREE CABLES	+16" OR AS NOTED	9. 11.	⊞	CAMERA - SEE SCHEDULE	AS NOTED	SEE DIAGRAM, SPEC.
⊞	DATA OUTLET (SUBSCRIPT INDICATES CABLE QTY)	+16" OR AS NOTED	9. 11.	⊞	DOOR POSITION INDICATING SWITCH		
⊞	WIRELESS ACCESS POINT, TWO CABLES	CEILING		⊞	LIGHT FIXTURE (LETTER DESIGNATES TYPE)		
⊞	HDMI INPUT, WALL PLATE	+16" OR AS NOTED	9. 11.	⊞	EQUIPMENT NUMBER		
⊞	EQUIPMENT TEXT DESIGNATES TYPE			⊞	ARCHITECTURAL ROOM NUMBER		
⊞	SEE SCHEDULE						

### CONSTRUCTION DOCUMENTS

## MT. OLYMPUS IMPROVEMENT DISTRICT OFFICE REMODEL

3932 500 E Millcreek, UT 84107

### MT. OLYMPUS IMPROVEMENT DISTRICT

3932 500 E Millcreek, UT 84107

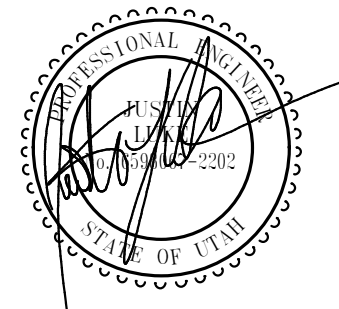
OWNER PROJECT NO.:  
GSBS PROJECT NO.: 2018.082.00  
ISSUED DATE: 04/18/2019

### SYMBOLS, SCHEDULES AND NOTES

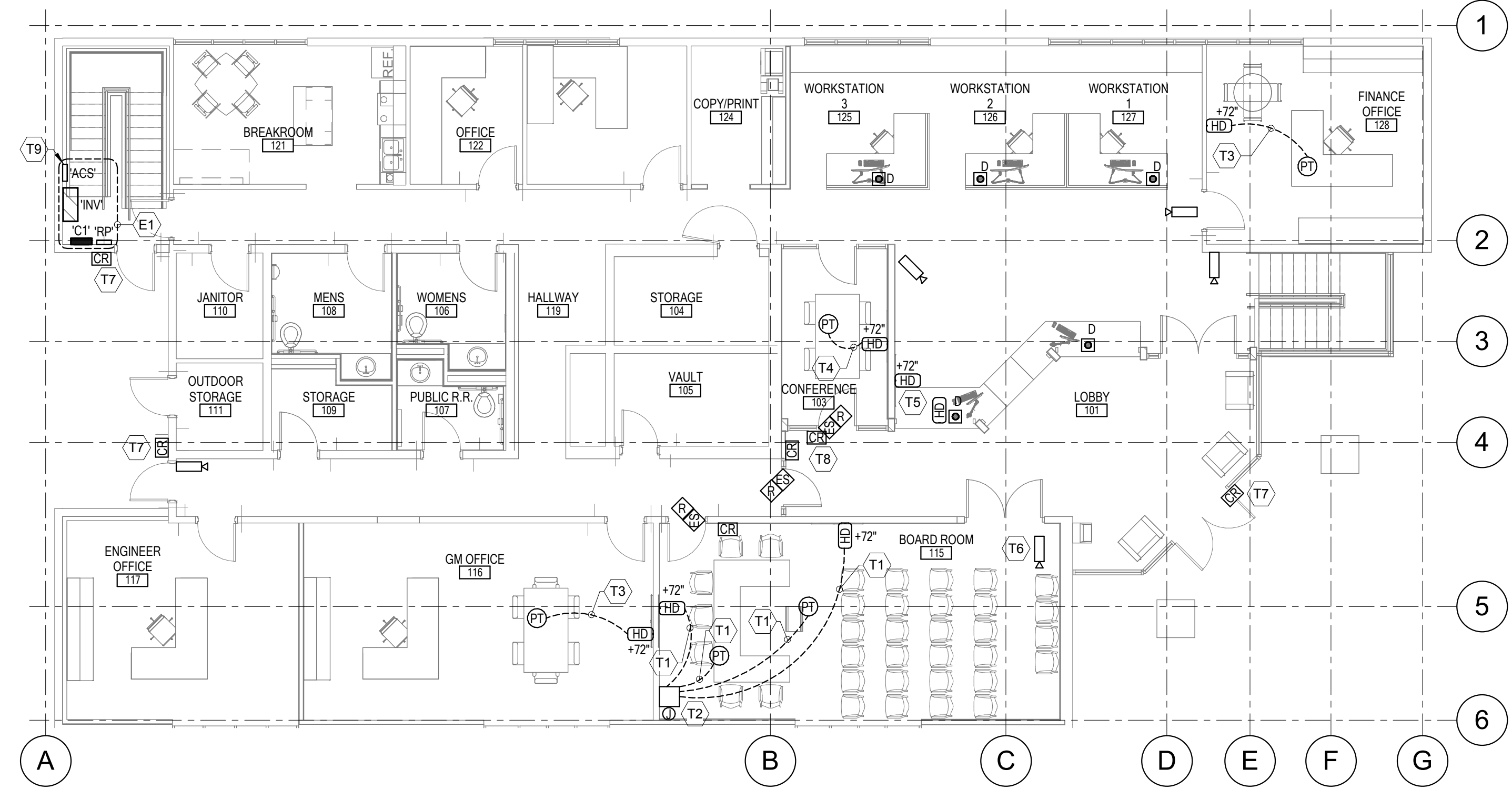


REVISIONS:

1	5/10/2019	Addendum # 2



- ### SHEET KEYNOTES
- E1 INDICATED NEW/EXISTING ELECTRICAL EQUIPMENT IS LOCATED THE BASEMENT OF THE BUILDING. THE CONTRACTOR IS RESPONSIBLE FOR THE VERIFICATION OF ALL EXISTING CONDITIONS PRIOR TO SUBMITTING THE PROJECT BID. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR CHANGES WHICH OCCUR AFTER BIDS ARE SUBMITTED AND ARE A RESULT OF EXISTING CONDITIONS. SITE VISITS MUST BE FULLY COORDINATED WITH THE OWNER.
  - T1 PROVIDE 1-1/4" CONDUIT TO JUNCTION BOX BEHIND AV CABINET. PROVIDE (1) HDMI CABLE (KRAMER CP-HM/HM/ETH) IN EACH CONDUIT WITH A SERVICE LOOP AT EACH END. PROVIDE EXTRON-WPD 110A WALL PLATE FOR IN-WALL JUNCTION BOXES AND EXTRON 70-617-12 FOR POKE-THRU DEVICES.
  - T2 PROVIDE A 6"x6" JUNCTION BOX IN WALL BEHIND AV CABINET.
  - T3 PROVIDE 1-1/4" CONDUIT TO POKE THRU AT DESK. PROVIDE (1) HDMI CABLE (KRAMER CP-HM/HM/ETH) IN EACH CONDUIT WITH A SERVICE LOOP AT EACH END. PROVIDE EXTRON-WPD 110A WALL PLATE FOR IN-WALL JUNCTION BOXES AND EXTRON 70-617-12 FOR POKE-THRU DEVICES.
  - T4 PROVIDE 1-1/4" CONDUIT TO POKE THRU AT CONFERENCE ROOM TABLE. PROVIDE (1) HDMI CABLE (KRAMER CP-HM/HM/ETH) IN EACH CONDUIT WITH A SERVICE LOOP AT EACH END. PROVIDE EXTRON-WPD 110A WALL PLATE FOR IN-WALL JUNCTION BOXES AND EXTRON 70-617-12 FOR POKE-THRU DEVICES.
  - T5 PROVIDE 1-1/4" CONDUIT TO AV JUNCTION BOX AT ADJACENT WORK STATION CONFERENCE ROOM TABLE. PROVIDE (1) HDMI CABLE (KRAMER CP-HM/HM/ETH) IN CONDUIT WITH A SERVICE LOOP AT EACH END. PROVIDE EXTRON-WPD 110A WALL PLATE FOR IN-WALL JUNCTION BOXES
  - T6 CAMERA MOUNTED TO THE EXTERIOR OF THE BUILDING. COORDINATE EXACT LOCATION PRIOR TO ROUGH-IN.
  - T7 REPLACE THE EXISTING CARD READER WITH A CARD READER INDICATED IN SPECIFICATIONS SECTION 28 2205. UTILIZE ALL EXISTING ELECTRIFIED HARDWARE CURRENTLY INSTALLED AT DOOR. ENSURE DOOR FUNCTIONS THE SAME AS IT DID PRIOR TO DEVICE REPLACEMENT.
  - T8 CARD READER TO BE MULLION MOUNTED.
  - T9 REPLACE THE EXISTING ACCESS CONTROL HEADEND. INSTALL IN THE SAME LOCATION AS THE EXISTING CABINET. RECONNECT ALL CONTROLLED DOORS THAT ARE EXISTING TO REMAIN.



**LEVEL 00 SYSTEM PLAN**  
SCALE = 1/8" = 1'-0"

**CONSTRUCTION DOCUMENTS**  
**MT. OLYMPUS IMPROVEMENT DISTRICT OFFICE REMODEL**

3932 500 E  
Millcreek, UT 84107  
**MT. OLYMPUS IMPROVEMENT DISTRICT**  
3932 500 E  
Millcreek, UT 84107

OWNER PROJECT NO.: 2018.082.00  
GSBS PROJECT NO.: 04/18/2019  
ISSUED DATE:  
**LEVEL 00 SYSTEMS SHEET**