AMELIA EARHART ELEM. SECURITY UPGRADE

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SYMBOL LEGEND

Symbol	Description
RM NAME / XXX	ROOM NAME & NUMBER SYMBOL
FRAME MATERIAL — H.M.; FRAME TYPE — 1; DOOR TYPE — X; DOOR NUMBER — A100A; HARDWARE GROUP — H-X	DOOR SYMBOL
NOTE / X / AX.XX	DETAIL REFERENCE MARK. SEE DETAILS

DESIGN DATA

GOVERNING BUILDING CODES:
IBC 2015 TO INCLUDE APPENDIX J, ANSI 117.1 2009, IMC 2015, IPC 2015, IECC 2015, NEC 2014, IFGC 2015, NFPA 101 LIFE SAFETY 2015

TENANT IMPROVEMENT TO EXISTING BUILDING, NO STRUCTURAL CHANGES ARE BEING MADE.

AUTOMATIC SPRINKLER SYSTEM, 903.2.3 - YES

OCCUPANCY TYPE - (CH.3)
- E @EDUCATION

EXITING REQUIREMENTS UNCHANGED FROM ORIGINAL BUILDING.

DRAWING INDEX

GENERAL
G101 GENERAL INFORMATION

ARCHITECTURAL
A101 FLOOR PLAN & DETAILS

ARCHITECTURAL (CONT.)
A201 DOOR HARDWARE

ELECTRICAL
EG101 SYMBOLS, SCHEDULES & NOTES
EY101 LOBBY - SYSTEMS PLAN

GENERAL NOTES

1. IT IS THE CONTRACTORS RESPONSIBILITY TO REVIEW AND COORDINATE THE WORK OF ALL SUB-CONTRACTORS, TRADES AND SUPPLIERS WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS BEFORE COMMENCING CONSTRUCTION, AND TO ASSURE THAT ALL PARTIES ARE AWARE OF ALL REQUIREMENTS, REGARDLESS OF WHERE THE REQUIREMENTS OCCUR IN THE CONTRACT DOCUMENTS, WHICH MIGHT AFFECT THE WORK OF THAT PARTY.

2. AS PART OF THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE THE WORK OF ALL SUB-CONTRACTORS, TRADES AND SUPPLIERS, THE CONTRACTOR SHALL ENDEAVOR TO IDENTIFY AND NOTIFY THE ARCHITECT OF ANY CONFLICTS BETWEEN THE WORK OF DIFFERENT PARTIES AT THE EARLIEST POSSIBLE DATE SO AS TO ALLOW REASONABLE AND ADEQUATE TIME FOR THE CONFLICT TO BE RESOLVED WITHOUT DELAYING THE WORK. ALL DEVIATIONS FROM THAT WHICH IS REQUIRED BY THE CONTRACT DOCUMENTS MUST BE APPROVED IN ADVANCE BY THE ARCHITECT.

3. THE ARCHITECTURAL DRAWINGS ESTABLISH AND COORDINATE THE FINISHED APPEARANCE AND EXACT LOCATION OF ALL EXPOSED ELEMENTS OF THE WORK OF ALL THE TRADES, INCLUDING THAT WORK WHICH IS ILLUSTRATED PRIMARILY ON DRAWINGS OF OTHER DISCIPLINES. QUANTITIES ARE TO BE PROVIDED AS SHOWN ON DRAWINGS OF OTHER DISCIPLINES BUT LOCATIONS SHOWN ON OTHER DRAWINGS ARE SCHEMATIC, UNLESS OTHERWISE NOTED ON THE ARCHITECTURAL DRAWINGS. THE ARCHITECTURAL DRAWINGS TAKE PRECEDENCE FOR THE FINISHED APPEARANCE AND EXACT LOCATION OF ALL PARTS OF THE WORK.

4. EXCEPT WHERE DIRECTED TO PLACE ITEMS OF WORK AT THE APPROXIMATE LOCATION SHOWN; DO NOT SCALE DRAWINGS FOR DIMENSIONAL INFORMATION. ALL ELEMENTS OF THE DRAWINGS MAY NOT BE DRAWN TO EXACT SCALE. ALL DIMENSIONS REQUIRED ARE SHOWN OR MAY BE DERIVED FROM THOSE SHOWN ON THE FLOOR PLANS, DETAIL PLANS, ELEVATIONS, SECTIONS, DETAILS, SCHEDULES AND SPECIFICATIONS. IF DIMENSIONS ARE NOT PRESENT, THE ARCHITECT IS TO BE NOTIFIED SO THAT A CLARIFICATION CAN BE ISSUED.

NOTES TO BIDDERS

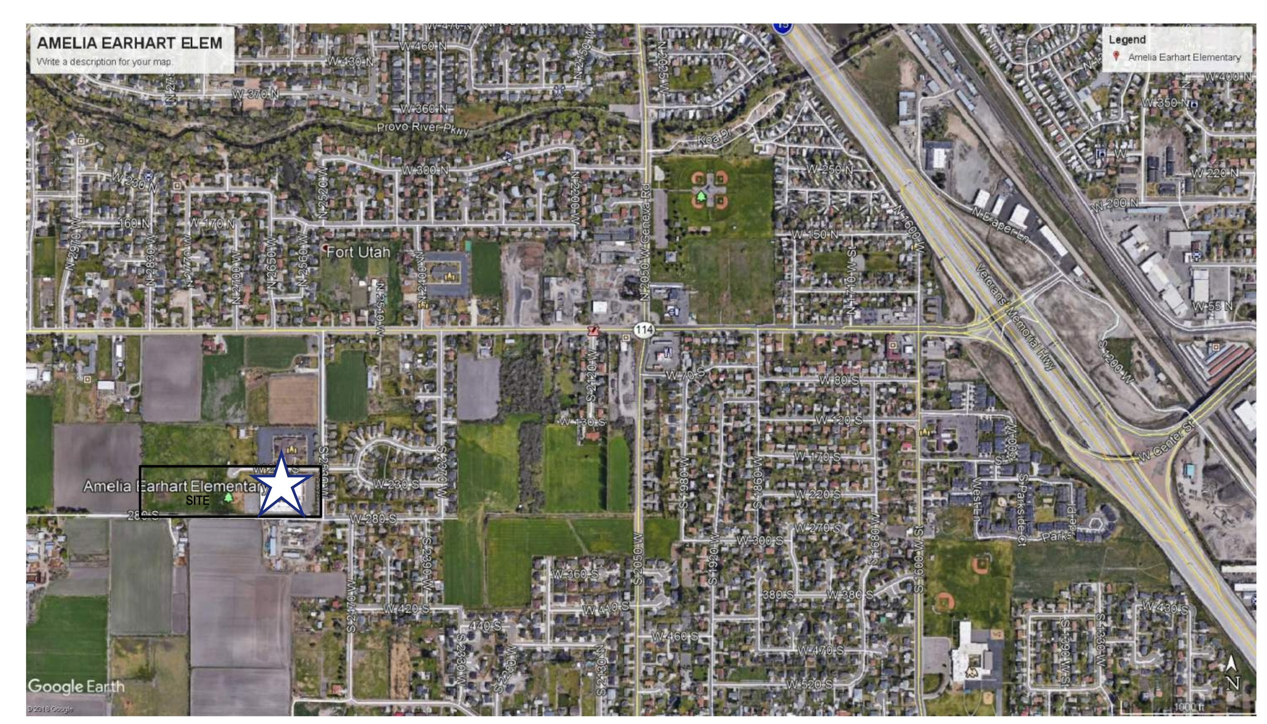
1. THIS SHEET CONTAINS A LIST OF DRAWINGS WHICH COMPRISE A FULL SET OF DRAWINGS FOR THIS PROJECT. ANY CONTRACTOR, SUBCONTRACTOR, VENDOR OR ANY OTHER PERSON PARTICIPATING IN OR BIDDING ON THIS PROJECT SHALL BE RESPONSIBLE FOR THE INFORMATION CONTAINED IN ANY AND ALL SHEETS OF DRAWINGS AND SPECIFICATIONS. IF ANY PERSON, PARTY OR ENTITY ELECTS TO SUBMIT BIDS FOR ANY PORTION, OR ALL, OF THIS PROJECT, THAT PERSON, PARTY OR ENTITY SHALL BE RESPONSIBLE FOR ANY AND ALL INFORMATION CONTAINED IN THESE DRAWINGS AND SPECIFICATIONS, INCLUDING, BUT NOT LIMITED TO, ANY SUBSEQUENT ADDENDUMS OR CLARIFICATIONS THAT MAY BE ISSUED.

2. THESE DOCUMENTS SHOW THE DESIGN INTENT. IT IS THE CONTRACTORS RESPONSIBILITY TO PROVIDE EVERYTHING SHOWN ON THE DRAWINGS OR SPECIFICATIONS, REGARDLESS OF WHERE IT IS SHOWN ON THE DRAWINGS OR IN THE SPECIFICATIONS. FOR EXAMPLE; SOME MILLWORK DETAILS HAVE STEEL FRAMES WHICH MAY BE PROVIDED BY DIVISION 05 OR WITH THE MILLWORK AT THE CONTRACTOR'S DISCRETION, BUT IT SHALL BE PROVIDED AS PART OF THE CONTRACT.

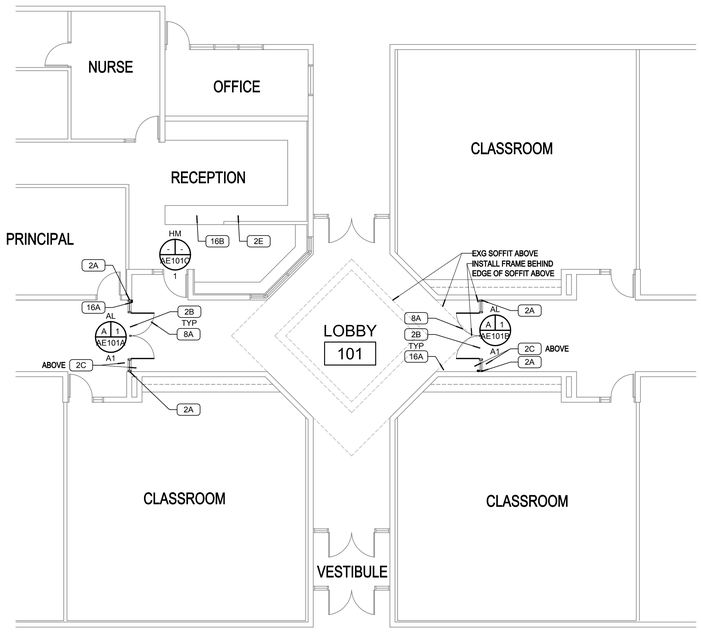
ABBREVIATIONS

A.F.F.	ABOVE FINISH FLOOR	F.A.	FIRE ALARM	R.O.	ROUGH OPENING
A.S.	AIR SPACE	FIN.	FINISHED	RM.	ROOM
ASPH.	ASPHALT	F.H.	FIRE HYDRANT	REINF.	REINFORCED
&	AND	F.V.	FIELD VERIFY	REC.	RECESSED
@	AT	G.W.B.	GYPSUM WALLBOARD	R.W.	RETAINING WALL
ALUM.	ALUMINUM	GYP.	GYPSUM	S.	SCUPPER
ARCH.	ARCHITECTURAL	GA.	GAUGE	S.B.U.	STRUCTURAL BRICK UNIT
BLDG.	BUILDING	GALV.	GALVANIZED	SF	SQUARE FOOT
BTM.	BOTTOM	G.I.	GALVANIZED IRON	STOR.	STORAGE
BD.	BOARD	H.M.	HOLLOW METAL	SIM.	SIMILAR
C.G.	CORNER GUARD	H.C.	HANDICAP	SUSP.	SUSPENDED
CTJ.	CONTRACTION JOINT	H.P.	HIGH POINT	SYS.	SYSTEM
CL	CENTER LINE	HT.	HEIGHT	SPECS.	SPECIFICATIONS
CONC.	CONCRETE	HORIZ.	HORIZONTAL	STRG.	STORAGE
C.M.U.	CONCRETE MASONRY UNIT	H.W.	HARDWOOD	STRUCT.	STRUCTURAL
CO	COMPANY	INSUL.	INSULATION	ST.	STEEL
CORR.	CORRIDOR	I.D.	INSIDE DIAMETER	SCH.	SCHEDULE
COL.	COLUMN	K.O.	KNOCK OUT	S.S.	STAINLESS STEEL
COMP.	COMPUTER	KW	KILOWATTS	S.W.	SOFT WOOD
CONT.	CONTINUOUS	LBS	POUNDS	SERV.	SERVICE
CLG.	CEILING	MECH.	MECHANICAL	TYP.	TYPICAL
C.S.	CLOSURE STRIP	MEZZ	MEZZANINE	TRANS.	TRANSFORMER
CLS	CLOSET	MFR/MNFR	MANUFACTURER	T & B	TOP AND BOTTOM
C.T.	CERAMIC TILE	MGR	MANAGER	T.O.	TOP OF
CLR	CLEAR	M.T.	MEN'S TOILET	T.	TOILET
C.O.	CLEAN OUT	MTL.	METAL	U.O.N./U.N.O.	UNLESS OTHERWISE NOTED
C.O.T.G.	CLEAN OUT TO GRADE	MAX.	MAXIMUM	UR.	URINAL
C.I.	CAST IRON	MIN.	MINIMUM	VAR.	VARIES
DEPT	DEPARTMENT	M.O.	MASONRY OPENING	VEST.	VESTIBULE
DIA.	DIAMETER	M.H.	MANHOLE	VERT.	VERTICAL
D.F.	DRINKING FOUNTAIN	MACH.	MACHINERY	W.C.	WATER CLOSET
DN	DOWN	M.C.C.	MOTOR CONTROL CENTER	W.H.	WATER HEATER
DISP.	DISPENSER	MISC.	MISCELLANEOUS	W.T.	WOMEN'S TOILET
DIM.	DIMENSION	N.	NORTH	WD.	WOOD
DT./DTL./DET.	DETAIL	NO.	NUMBER	WSCT.	WAINSCOT
DWG./DRWNG.	DRAWING	N.I.C.	NOT IN CONTRACT	W/	WITH
DRN.	DRAIN	NOM.	NOMINAL	W.W.F.	WELDED WIRE FABRIC
EA.	EACH	N.T.S.	NOT TO SCALE		
ELEV./EL.	ELEVATION	OPG.	OPENING		
EXIST./(E)	EXISTING	O.C.	ON CENTER		
ELECT.	ELECTRICAL	O.H.	OVERHEAD		
EQUIP.	EQUIPMENT	O.D.	OUTSIDE DIAMETER		
E.E.S.	EMERGENCY EYEWASH AND SHOWER	PERM.	PERIMETER		
E.J.	EXPANSION JOINT	PL.	PLATE		
EIF	EXTERIOR INSULATION SYSTEM	PNTH	PENTHOUSE		
EVAP.	EVAPORATIVE	PTN.	PARTITION		
EXP.	EXPANSION	P.W.	PLYWOOD		
F.G.	FINISH GRADE	P.O.C.	POINT OF CONNECTION		
F.D.	FLOOR DRAIN	P.C.	PORTLAND CEMENT		
FDN./FNDTN.	FOUNDATION	PNL.	PANEL		
F.E.	FIRE EXTINGUISHER	P.F.H.	PERIMETER FELT JOINT		
FTG.	FOOTING	Q.T.	QUARRY TILE		
FLR.	FLOOR	R.D.	ROOF DRAIN		

VICINITY MAP

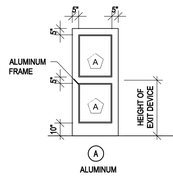


CONSTRUCTION DOCUMENTS
2018-08-13



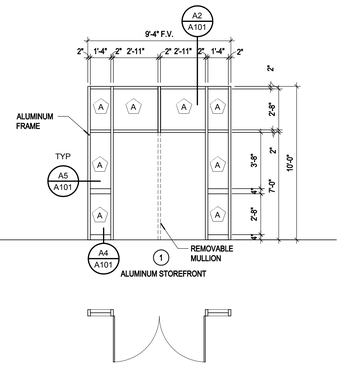
C2 ANNOTATED FLOOR PLAN

SCALE: 1/8" = 1'-0"



E3 ALUMINUM DOOR

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



E4 ALUMINUM STOREFRONT FRAME

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

NOTES

1) SEE FRAME TYPE FOR WIDTH & HEIGHT, ALL DOORS ARE 1 3/4" THICK

2) ALL DOORS 3'-6" OR GREATER REQUIRE FOUR HINGES TYP.

3) FIELD VERIFY LENGTH OF ALL ARCS PRIOR TYP. FENESTRATION.

4) ALUMINUM STOREFRONT BASIS OF DESIGN:
- FRAMES: KAWNEER 400 (1-3/4 X 4 INCH FRAME)
- DOORS: KAWNEER STANDARD 500 ENTRANCE DOORS

GLAZING TYPES

A	1/4" TEMPERED GLASS

SYMBOL LEGEND

ROOM NAME ##	ROOM NAME ROOM NUMBER
FRAME MATERIAL TYPE — HM — H.M. = HOLLOW METAL, ALL = ALUMINUM; DOOR TYPE — X 1 — FRAME TYPE; DOOR NUMBER — 100A; BASE BID HARDWARE GROUP — HW (ALT X) — HARDWARE ALTERNATE	DOOR SYMBOL

GENERAL NOTES

1. THE CONTRACTOR MUST FIELD VERIFY ALL DIMENSIONS AND CONDITIONS INCLUDING EXISTING UTILITIES PRIOR TO BIDDING AS THE LOCATIONS SHOWN IN THE DOCUMENTS ARE APPROXIMATED. ALL VARIANCES NOT SHOWN IN THE DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO BID.
2. CONTRACTOR TO COORDINATE WITH ELECTRICAL PLANS FOR LOCATIONS OF ALL EXISTING AND NEW EQUIPMENT, SYSTEMS, AND DEVICES.
3. AS SOME DEMOLITION WORK WILL BE SPECIFIC TO DIVISION 22, 23, 26, THE CONTRACTOR SHALL CROSS REFERENCE WITH ELECTRICAL PLANS FOR ADDITIONAL DEMOLITION WHICH IS REQUIRED, BUT NOT REFLECTED ON ARCHITECTURAL DRAWINGS. RELOCATE, REWIRE, AND/OR RECONNECT EXISTING ELECTRICAL AND MECHANICAL DEVICES OR EQUIPMENT THAT FOR ANY REASON OBSTRUCTS CONSTRUCTION.
4. CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PROTECT THE EXISTING STRUCTURE, FINISHES, AND SITE ELEMENTS.
5. ALL EXISTING INTERIOR FINISHES, MATERIALS, STRUCTURE, SYSTEMS, LANDSCAPING, AND SITE FEATURES, ETC., THAT ARE DAMAGED DURING THE PROCESS OF CONSTRUCTION SHALL BE RESTORED TO THEIR ORIGINAL CONDITION OR REPLACED TO MATCH AT THE CONTRACTORS EXPENSE.
6. CONTRACTOR IS TO COORDINATE ALL DEMOLITION AND CONSTRUCTION ACTIVITIES WITH THE ONGOING OPERATIONS OF ADJACENT BUILDING TENANTS. CONTRACTOR TO SCHEDULE WORK AND COORDINATE ANY UTILITY SHUT OFFS OR INTERRUPTIONS WITH BUILDING OWNER 2 WEEKS PRIOR TO OCCURRENCE.
7. IN AREAS WHERE CIRCUIT CONTINUITY IS INTERRUPTED, BUT MUST BE MAINTAINED, MAKE ALL NECESSARY MODIFICATIONS TO THE CIRCUITS IN ORDER TO MAINTAIN CIRCUIT INTEGRITY.
8. CONTRACTOR TO USE DUST CONTROL AND SOUND CONTROL IN ALL DEMOLITION AND CONSTRUCTION.
9. ALL DOORS/FRAMES RECEIVING NEW HARDWARE TO BE PATCHED, REPAIRED, AND REFINISHED AS NEEDED.

KEYED NOTES

DIVISION 2 - EXISTING CONDITIONS / DEMOLITION

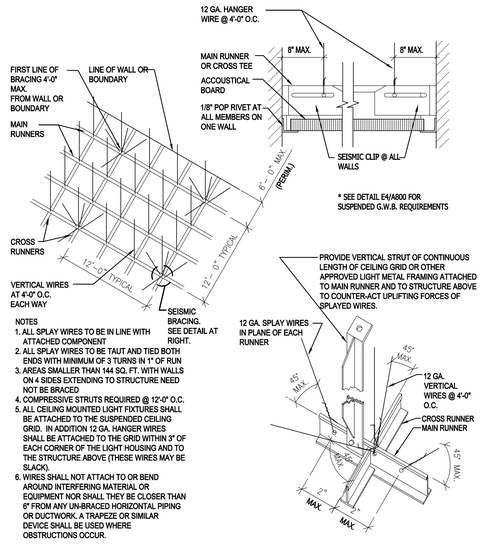
- 2A GRIND SMOOTH EXISTING SLIT FACE CMU BLOCK BAND WIDTH OF STOREFRONT SYSTEM.
- 2B EXG FLOOR COVERINGS, PROTECT IN PLACE
- 2C REMOVE EXG CEILING SYSTEM AS REQUIRED TO INSTALL NEW DOOR/HEADER. REPAIR/REPLACE TO MATCH EXG CEILING TYPE/HEIGHT
- 2E EXISTING MILLWORK, PROTECT IN PLACE

DIVISION 8 - DOORS & WINDOWS

- 8A SCHEDULED DOOR & FRAME

DIVISION 16 - ELECTRICAL

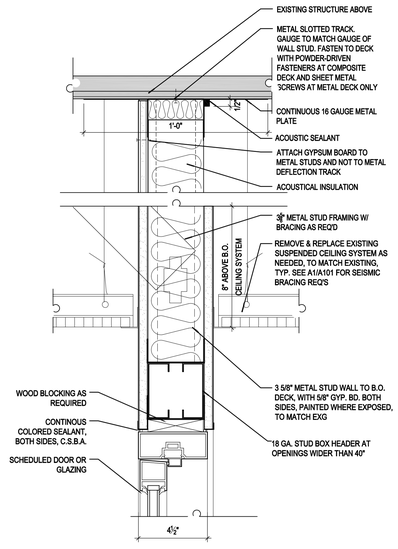
- 16A CARD READER
- 16B LOCKDOWN/DOOR RELEASE BUTTONS, MOUNTED UNDER COUNTERTOP. SEE ELECTRICAL DRAWING FOR DETAILS



NOTES
1. ALL SPLAY WIRES TO BE IN LINE WITH ATTACHED COMPONENT
2. ALL SPLAY WIRES TO BE TAUT AND TIED BOTH ENDS WITH MINIMUM OF 3 TURNS IN 1" OF RUN
3. AREAS SMALLER THAN 144 SQ. FT. WITH WALLS ON 4 SIDES EXTENDING TO STRUCTURE NEED NOT BE BRACED
4. COMPRESSIVE STRUTS REQUIRED @ 12'-0" O.C.
5. ALL CEILING MOUNTED LIGHT FIXTURES SHALL BE ATTACHED TO THE SUSPENDED CEILING GRID. IN ADDITION 12 GA. HANGER WIRES SHALL BE ATTACHED TO THE GRID WITHIN 3" OF EACH CORNER OF THE LIGHT HOUSING AND TO THE STRUCTURE ABOVE (THESE WIRES MAY BE SLACK).
6. WIRES SHALL NOT ATTACH TO OR BEND AROUND INTERFERING MATERIAL OR EQUIPMENT NOR SHALL THEY BE CLOSER THAN 6" FROM ANY UN-BRACED HORIZONTAL PIPING OR DUCTWORK. A TRAPEZE OR SIMILAR DEVICE SHALL BE USED WHERE OBSTRUCTIONS OCCUR.

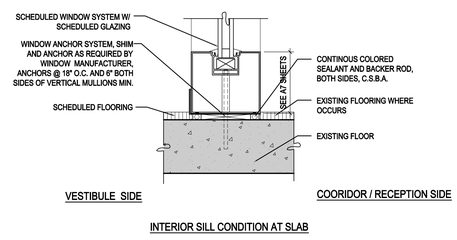
A1 TYP. CEILING SUSPENSION & SEISMIC BRACING

SCALE: 6"=1'-0"



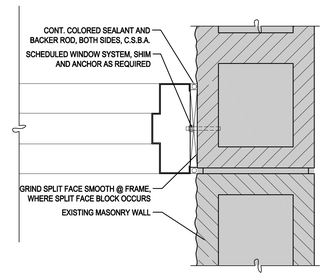
A2 ALUM. DOOR HEAD & JAMB DETAIL

SCALE: 3" = 1'-0"



A4 ALUMINUM WINDOW SILL TYP.

SCALE: 3" = 1'-0"



A5 ALUM. WINDOW TO PERPENDICULAR MASONRY

SCALE: 3"=1'-0"

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REV	DATE	DESCRIPTION

VCBO NUMBER: 18365
CLIENT NUMBER:
DATE ISSUED: 2018-08-13

AMELIA EARHART ELEM. SECURITY UPGRADE

PROVO SCHOOL DISTRICT
2585 WERST 200 SOUTH PROVO, UTAH

CONSTRUCTION DOCUMENTS

FLOOR PLAN & DETAILS

A101

SECTION 08 7100

DOOR HARDWARE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. **This Section includes** the following:
1. Commercial door hardware for the following:
   a. Swinging doors.
2. Cylinders for doors specified in other Sections.
3. Electrified door hardware.

B. **Related Sections include** the following:
1. Section 08 4100 "Aluminum-Framed Entrances and Storefronts"
2. Division 26 Sections for connections to electrical power system and for low-voltage wiring work.
3. Division 28 Section "Access Control" for access control devices installed at door openings and provided as part of a security access system.
4. Division 28 Section "Intrusion Detection" for detection devices installed at door openings and provided as part of an intrusion detection system.

C. **Products furnished, but not installed**, under this Section include the following. Coordinating, purchasing, delivering, and scheduling remaining requirements of this Section.
1. Thresholds, weather stripping, and cylinders for locks specified in other Sections.

1.3 REFERENCED STANDARDS

A. **Provide hardware** in accordance with the following standards in addition to those specified in Division 01 Section "References".
1. American National Standards Institute (ANSI), A117.1: Accessible and Usable Buildings and Facilities, edition as adopted by local Authority Having Jurisdiction (AHJ).
2. Builders Hardware Manufacturer's Association (BHMA)
   a. ANSI/BHMA A156.3: Exit Devices, 2008 edition
   b. ANSI/BHMA A156.4: Door Controls - Closers, 2008 edition
   c. ANSI/BHMA A156.18: Materials and Finishes, 2006 edition
3. Door and Hardware Institute (DHI)
   a. Recommended Locations for Architectural Hardware for Standard Steel Doors and Frames, 2004 edition
   b. Installation Guide for Doors and Hardware, 1994 edition
   c. Keying Systems and Nomenclature, 2003 edition
   d. Sequence and Format for the Hardware Schedule, 2001 edition
4. National Fire Protection Association (NFPA)
   a. NFPA 70: National Electrical Code, edition as adopted by local AHJ.

1.4 SUBMITTALS

A. **Product Data**: Include construction and installation details, material descriptions, dimensions of individual components and profiles, and finishes.

B. **Shop Drawings**: Details of electrified door hardware, indicating the following:
1. Wiring Diagrams: Power, signal, and control wiring. Include the following:
   a. System schematic.
   b. Point-to-point wiring diagram.
   c. Riser diagram.
   d. Elevation of each door.
2. Detail interface between electrified door hardware and fire alarm, access control, security, building control system.
3. Operation Narrative: Describe the operation of doors controlled by electrified door hardware.

C. **Samples for Verification**: For exposed door hardware of each type, in specified finish, full size. Tag with full description for coordination with the door hardware sets. Submit Samples before, or concurrent with, submission of the final door hardware sets, if requested.
1. Samples will be returned to Contractor. Units that are acceptable and remain undamaged through submittal, review, and field comparison process may, after final check of operation, be incorporated into the Work, within limitations of keying requirements.

D. **Qualification Data**: For Installer

E. **Product Test Reports**: Based on evaluation of comprehensive tests performed by manufacturer and witnessed by a qualified testing agency, for locks, latches, and closers as requested.

F. **Maintenance Data**: For each type of door hardware to include in maintenance manuals. Include final hardware and keying schedule.

G. **Warranty**: Special warranty specified in this Section.

H. **Door Hardware Sets**: Prepared by or under the supervision of Architectural Hardware Consultant, detailing fabrication and assembly of door hardware, as well as procedures and diagrams. Coordinate the final door hardware sets with doors, frames, and related work to ensure proper size, thickness, hand, function, and finish of door hardware.
1. Format: Use same scheduling sequence and format and use same door numbers as in the Contract Documents.
2. Content: Include the following information:
   a. Identification number, location, hand, fire rating, and material of each door and frame.
   b. Type, style, function, size, quantity, and finish of each door hardware item.
   c. Complete designations of every item required for each door or opening including name and manufacturer.
   d. Fastenings and other pertinent information.
   e. Location of each door hardware set, cross-referenced to Drawings, both on floor plans and in door and frame schedule.
   f. Explanation of abbreviations, symbols, and codes contained in schedule.
   g. Mounting locations for door hardware.
   h. Door and frame sizes and materials.

   i. Description of each electrified door hardware function, including location, sequence of operation, and interface with other building control systems.
      1) Sequence of Operation: Include description of component functions that occur in the following situations: authorized person wants to enter; authorized person wants to exit; unauthorized person wants to enter; unauthorized person wants to exit.
   j. List of related door devices specified in other Sections for each door and frame.
3. Submittal Sequence: Submit the final door hardware sets at earliest possible date, particularly where approval of the door hardware sets must precede fabrication of other work that is critical in Project construction schedule. Include Product Data, Samples, Shop Drawings of other work affected by door hardware, and other information essential to the coordinated review of the door hardware sets.

I. **Keying Schedule**: Prepared by or under the supervision of Architectural Hardware Consultant, detailing Owner's final keying instructions for locks. Include schematic keying diagram and index each key set to unique door designations.

1.5 QUALITY ASSURANCE

A. **Installer Qualifications**: An employer of workers trained and approved by lock manufacturer.
1. Installer's responsibilities include supplying and installing door hardware and providing a qualified Architectural Hardware Consultant available during the course of the Work to consult with Contractor, Architect, and Owner about door hardware and keying.
2. Installer shall have warehousing facilities in Project's vicinity.
3. Scheduling Responsibility: Preparation of door hardware and keying schedules.
4. Engineering Responsibility: Preparation of data for electrified door hardware, including Shop Drawings, based on testing and engineering analysis of manufacturer's standard units in assemblies similar to those indicated for this Project.

B. **Architectural Hardware Consultant Qualifications**: A person who is currently certified by DHI as an Architectural Hardware Consultant and who is experienced in providing consulting services for door hardware installations that are comparable in material, design, and extent to that indicated for this Project.

C. **Source Limitations**: Obtain each type and variety of door hardware from a single manufacturer, unless otherwise indicated.
1. Provide electrified door hardware from same manufacturer as mechanical door hardware, unless otherwise indicated. Manufacturers that perform electrical modifications and that are listed by a testing and inspecting agency acceptable to authorities having jurisdiction are acceptable.

D. **Electrified Door Hardware**: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.

E. **Keying Conference**: Conduct conference at Project site to comply with requirements in Division 01 Section "Project Management and Coordination." In addition to Owner, Construction Manager, Contractor, and Architect, conference participants shall also include Installer's Architectural Hardware Consultant and Owner's Security Consultant. Incorporate keying conference decisions into final keying schedule after reviewing door hardware keying system including, but not limited to, the following:
1. Function of building, flow of traffic, purpose of each area, degree of security required, and plans for future expansion.
2. Preliminary key system schematic diagram.
3. Requirements for key control system.
4. Address for delivery of keys.

F. **Pre-installation Conference**: Conduct conference at Project site to comply with requirements in Division 01 Section "Project Management and Coordination."

1.6 DELIVERY, STORAGE, AND HANDLING

A. **Inventory door hardware** on receipt and provide secure lock-up for door hardware delivered to Project site.

B. **Tag each item or package** separately with identification related to the final door hardware sets, and include basic installation instructions, templates, and necessary fasteners with each item or package.

C. **Deliver keys** to Owner's Representative by registered mail or overnight package service.

1.7 COORDINATION

A. **Coordinate layout and installation** of recessed hardware with floor construction. Cast anchoring inserts into concrete. Concrete, reinforcement, and formwork requirements are specified in Division 03.

B. **Templates**: Distribute door hardware templates for doors, frames, and other work specified to be factory prepared for installing door hardware. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing door hardware to comply with indicated requirements.

C. **Coordinate with aluminum entrance door supplier** for door hardware installation.

D. **Electrical System Roughing-in**: Coordinate layout and installation of electrified door hardware with connections to power supplies, fire alarm system and detection devices, access control system, security system, and building control system.

1.8 WARRANTY

A. **Special Warranty**: Manufacturer's standard form in which manufacturer agrees to repair or replace components of door hardware that fail in materials or workmanship within specified warranty period.
1. Failures include, but are not limited to, the following:
   a. Structural failures including excessive deflection, cracking, or breakage.
   b. Faulty operation of operators and door hardware.
   c. Deterioration of metals, metal finishes, and other materials beyond normal weathering and use.

2. Warranty Period: Three (3) years from date of Substantial Completion, except as follows:
   a. Continuous Hinges: Lifetime of Building
   b. Exit Devices: Three (3) years from date of Substantial Completion.
   c. Manual Closers: Thirty (30) years from date of Substantial Completion.
   d. Electrified Hardware Items: One (1) year from date of Substantial Completion.

1.9 MAINTENANCE SERVICE

A. **Maintenance Tools and Instructions**: Furnish a complete set of specialized tools and maintenance instructions as needed for Owner's continued adjustment, maintenance, and removal and replacement of door hardware.

B. **Maintenance Service**: Beginning at Substantial Completion, provide six (6) months' full maintenance by skilled employees of door hardware Installer. Include quarterly preventive maintenance, repair or replacement of worn or defective components, lubrication, cleaning, and adjusting as required for proper door hardware operation. Provide parts and supplies same as those used in the manufacture and installation of original products.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. **Manufacturers**: Subject to compliance with requirements of Contract Documents, provide products by one of the following:
1. Continuous Hinges: Ives, Stanley, Hager, Select, McKinney, Pemko
2. Operating Door Trim: Ives, Rockwood, Hager, Trimco
3. Cylinders and Cores: Schlage, Match Existing Keyway Owner's Standard
4. Exit Devices: Von Duprin, Owner's Standard
5. Mechanical Door Closers: LCN, Owner's Standard
6. Overhead Stops and Holders: Glynn Johnson, Rixson, ABH
7. Electronic Accessories: Schlage Electronics / Von Duprin, Security Door Controls,

B. **Substitutions** submitted in compliance with Division 01 Section "Substitutions" requirements will be reviewed for conformance to basis of design.

2.2 SCHEDULED HARDWARE

A. **Requirements for design, grade, function, finish, size, and other distinctive qualities** of each type of finish hardware are indicated in the "Hardware Schedule" at the end of this Section. Products are identified by using hardware designation numbers of the following:
1. Manufacturer's Product Designations: The product designation and name of one manufacturer are listed for each hardware type required for the purpose of establishing minimum requirements. Provide either the product designated or, where more than one manufacturer is specified under the Article "Manufacturers" in Part 2 for each hardware type, the comparable product of one of the other manufacturers that complies with requirements.

2.3 MATERIALS AND FABRICATION

A. **General**
1. Manufacturer's Name Plate: Do not use manufacturers' products that have manufacturer's name or trade name displayed in a visible location (omit removable nameplates) except in conjunction with required fire-rated labels and as otherwise acceptable to Architect.
   a. Manufacturer's identification will be permitted on rim of lock cylinders only.
2. Base Metals: Produce hardware units of basic metal and forming method indicated using manufacturer's standard metal alloy, composition, temper, and hardness, but in no case of lesser (commercially recognized) quality than specified for applicable hardware units for finish designations indicated.
3. Provide hardware manufactured to conform to published templates generally prepared for machine screw installation. Do not provide hardware that has been prepared for self-tapping sheet metal screws, except as specifically indicated.

B. **Fasteners**
1. Furnish screws for installation with each hardware item. Provide Phillips flat-head screws except as otherwise indicated. Furnish stainless steel (exposed under any condition) screws to match hardware finish or, if exposed in surfaces of other work, to match finish of this other work as closely as possible including "prepared for paint" surfaces to receive painted finish.
2. Provide concealed fasteners for hardware units that are exposed when door is closed except to the extent no standard units of type specified are available with concealed fasteners. Use through bolts only as indicated in this section unless their use is the only means of reinforcing the work adequately to fasten the hardware securely. Where thru-bolts are used as a means of reinforcing the work, provide sleeves for each thru-bolt or use sex screw fasteners.

2.4 CONTINUOUS HINGES

A. **Acceptable Products**:
1. Ives: 112HD
2. Stanley: 661HD
3. Hager: 780-112HD
4. Select: SL11HD
5. McKinney: MCK-12HD
6. Pemko: FMSLFHD

B. **Requirements**:
1. Geared Continuous Hinges: Shall utilize a single gear section for the door leaf and a separate gear section for the frame side of the door. Provide full mortise or surface applied hinge as scheduled in each set. Geared hinges are to be UL 10C tested and approved for 90 minutes.

2.5 CYLINDERS AND CORES

A. **Acceptable Products**:
1. Schlage: Match Existing Keyway

B. **Requirements**:
1. Full Size Interchangeable Cylinders: Provide cylinders of quantity and type and with the appropriate cam/tailpiece to be compatible with the locking hardware provided. Provide cylinder housings ready to accept 6-pin, Full-Size Interchangeable Cores (FSIC), where scheduled.
   a. Temporary Construction Keying: Provide each cylinder housing and/or lock lever with keyed construction core during the construction period. Cores will remain property of the contractor and will be returned upon installation of owner's permanent key system.
   b. Permanent Cores: Provide factory keyed cores that are utility patented until at least 2029. Provide cores with a geographically exclusive factory-restricted keyway. Ship cores directly to owner's representative. At substantial completion, accompany the owner's representative while replacing temporary construction cores with the owner's permanent key system.
2. Keys: Provide cylinder manufacturer's standard keys. Keys shall be shipped separate from cores directly to owner's representative. For estimating purposes, provide keys in the following quantities:
   a. Construction Control Keys: 2 each
   b. Construction Change Keys: 12 each
   c. Permanent Control Keys: 2 each
   d. Split Key Voiding Keys: 2 each
   e. Permanent Master Keys: 2 each
   f. Permanent Change Keys: 4 per core

2.6 EXIT DEVICES

A. **Acceptable Products**:
1. Von Duprin: 98 Series
2. Match existing facility Owner's standard.

B. **Requirements**:
1. ANSI Grade: BHMA/ANSI A156.3, Grade 1.
2. Device Construction:
   a. Exit device(s) shall have a mechanism case constructed of extruded aluminum or wrought stainless steel case parts constructed of cold rolled or cast steel, push pad of extruded aluminum with stainless steel covering or wrought stainless steel, and end caps with flush mounted, sloped design. At full-glass doors, provide end caps with no exposed fasteners or rivets visible through glass. Where required by stile width, provide narrow-stile type device.
   b. Latchbolt: Provide Pullman-type deadlocking latch bolts constructed of stainless steel. Where specified provide high security Pullman-type latchbolt that collapses to be square faced under high pull forces. Latch return springs shall be compression type. Tension and Torsion latch return springs are not acceptable.
   c. Dogging Mechanism: where dogging or latch-retraction options are not specifically scheduled for non-fire rated doors, provide device with a hex-key activated hook-type dogging mechanism constructed of steel.
   d. Plastic or nylon used for the push pad, or parts in the dogging mechanism or latchbolt mechanism are unacceptable.
   e. Sound Dampening: Device shall be provided with factory-installed sound dampening materials.
   f. Provide device type, function, and trim style as indicated in hardware schedules.

3. Where exit device(s) are provided for fire rated door, provide with fire listing and label indicating "Fire Exit Hardware". Device is mounted on wood doors, provide sex nuts and bolts.
4. Provide shim kits, filler plates, and other accessories as required for each opening.
5. Unless otherwise indicated in the sets, provide device with roller-type strike.
6. Where scheduled, provide removable mullions by same manufacturer as provided exit devices. Provide mullion stabilizers, key removable option, strike preps, and fire rating as indicated in sets.
7. Concealed vertical exit devices shall be a cable-actuated concealed vertical latch system available in two-point and less bottom latch (LBL) configurations. Vertical rods are not acceptable.
   a. Cable shall include color-coded stainless steel with polytetrafluoroethylene (Teflon®) liner and stainless steel core wire. Latches and center slides are color coded to aid in installation. Conduit and core wire ends snap into latch and center slides without the use of tools. Latchbolts and blocking cams shall be manufactured from sintered metal low carbon copper- infiltrated steel, with a molybdenum disulfide coating for low friction and consistent performance.
   b. Top latchbolt shall have a minimum 0.382 inch and greater than 90 degree engagement with strike to prevent door and frame separation under high static load. Bottom latchbolt, when used, shall have a minimum of 0.44 inch engagement with strike.
   c. Product cycle life shall exceed 1,000,000 cycles.
   d. Latch release does not require separate trigger mechanism.
   e. Top and bottom latch must operate independently of each other. Top latch will fully engage top strike even when bottom latch is compromised.
   f. Cable and latching system shall have the ability to:
      1) Be assembled as a complete assembly and function prior to being installed in the door.
      2) Install into the door as a one-piece single assembly
      3) Be installed independently of device installation and function on door even prior to device and trim installation.
      4) Connect to the exit device at a single attachment point.
      5) Adjust bottom latch height from a single point, after the system is installed and connected to exit device, while the door is hanging
      6) Alter latch position up and down within two-inches without additional adjustment.
      7) Ability to remove the system while door is hanging.
      8) Configure latchbolt mounting: double or single tab mount for steel doors, and wood doors, face mount for aluminum doors, eliminating requirement of tabs.
      9) Provide adjustable exit device to latch center line adjustment. Ensures double tab mounting option for top latch, regardless of exit device centerline.

2.7 MECHANICAL DOOR CLOSERS

A. **General**:
1. Valves: Closers shall have separate valves for latch speed, main speed, and back check. Valves shall be staked to prevent accidental removal.
2. Provide the appropriate closer body, handing, and brackets to mount closer inside the building on the least-public side of the door.
   a. Where closers are to be mounted parallel arm, provide with heavy duty, fully forged arms.
   b. Where closers are to be mounted regular arm and the opening can otherwise be opened to 180 degrees, provide closer with the appropriate special templating to allow 180 degree door swing. Where a special template is not available for 180 degree swing, provide closer arm with integrated stop.
3. Integrated Stop Closer Arms: Where a closer with integrated stop is required, provide the appropriate closer and arm as follows:
   a. Parallel arm with spring-cushioned stop arm: Provide where door is otherwise able to open to 95 degrees and requires a parallel arm mount closer.
   b. Parallel arm with dead stop arm: Provide where door is obstructed from opening to 95 degrees and requires a parallel arm mount closer.
   c. Regular arm with push side surface-mounted overhead stop: Provide where door closer should mount on pull side of door.
4. Hold Open Arms: Provide closer arms with mechanical hold-opens as scheduled.
5. Provide closers with any special templates, brackets, plates, or other accessories required for interface with header, door, wall, and other hardware. Provide closers with screw packs containing thru-bolts, machine screws, and wood screws.
6. Closers shall be provided with all-weather fluid and shall not require readjustment from 120 degrees F to -30 degrees F. Fluid shall be non-flaming and shall not fuel door or floor covering fires. Upon request, provide data indicating thermal properties of fluid.
7. Closers shall close and latch door when adjusted to meet accessibility requirements for door opening force: 8.5 lbs at exterior doors, 5 lbs at interior doors, and 15 lbs at labeled fire doors.

B. **Heavy Duty Door Closers**:
1. Acceptable Products:
   a. LCN: 4040XP
   b. Match existing facility Owner's standard.
2. Requirements:
   a. ANSI Grade: BHMA/ANSI A156.4, Grade 1.
   b. Closer Construction: Closer shall have cast iron or aluminum alloy body with 1-1/2 inch steel piston, double heat treated pinion, 5/8 inch bearing journals, and full complement needle or caged ball bearings. Closer shall be adjustable from sizes 1 through 6.
   c. Provide closers with spring size adjustment dial for ease of adjusting.

2.8 OVERHEAD STOPS AND HOLDERS

A. **Acceptable Products**:
1. Glynn Johnson: 100 Series
2. ABH: 1000 Series

B. **Requirements**:
1. Provide overhead stops and holders as scheduled, sized per manufacturer's recommendations based on door width.
2. Provide concealed overhead stops with adjustable jamb bracket.
3. Where possible without conflicting with other hardware, mount surface overhead stops on least public side of door.
4. Provide stops with any special templates, brackets, plates, or other accessories required for interface with header, door, wall, and other hardware.

2.9 ELECTRONIC ACCESSORIES

A. **Power Supplies**
1. Acceptable Products:
   a. Schlage Electronics: PS900 Series
   b. No Substitution, Match existing facility standard
2. Requirements:
   a. Provide power supplies, recommended and approved by the manufacturer of the electrified locking component, for the operation of electrified locks, electrified exit devices, magnetic locks, electric strikes, and other components requiring a power supply.
   b. Provide the appropriate quantity of power supplies necessary for the proper operation of the electrified locking component and/or components as recommended by the manufacturer of the electrified locking components with consideration for each electrified component utilizing the power supply, the location of the power supply, and the approved wiring diagrams. Locate the power supplies as directed by the Architect.
   c. Provide a power supply that is regulated and filtered 24 VDC, or as required, and UL class 2 listed.
   d. Options: Provide the following options.
      1) Provide a power supply, where specified, with the internal capability of charging optional sealed backup batteries 24 VDC, or as required, in addition to operating the DC load.
      2) Provide sealed batteries for battery back-up at each power supply where scheduled.
      3) Provide keyed power supply cabinet.
      4) Provide a power supply complete requiring only 120VAC to the fused input and shall be supplied in an enclosure.
   e. Provide a power supply with emergency release terminals, where required, that allow the release of all devices upon activation of the fire alarm system complete with fire alarm input for initiating "no delay" exiting mode.

B. **Electric Power Transfers**
1. Acceptable Products:
   a. Von Duprin: EPT-10
   b. No Substitution, Match existing facility standard
2. Requirements:
   a. Provide edge-mounted electric power transfer with either two 18 gauge wires or ten 24 gauge wires as scheduled.
   b. Provide transfer capable of carrying a 16 Amp current for a minimum of 0.3 seconds.

C. **Door Contacts**
1. Acceptable Products:
   a. Schlage Electronics: 679-05
2. Requirements:
   a. Provide concealed, edge-mounted door contacts as appropriate for door/frame material.

2.10 FINISHES

A. **Match items** to the manufacturer's standard color and texture finish for the latch and locksets (or push-pull units if no latch or locksets).

B. **Provide quality of finish**, including thickness of plating or coating (if any), composition, hardness, and other qualities complying with manufacturer's standards, but in no case less than specified by referenced standards for the applicable units of hardware.

C. **The designations used in schedules** and elsewhere to indicate hardware finishes are those listed in ANSI/BHMA A156.18, "Materials and Finishes," including coordination with the traditional U.S. finishes shown by certain manufacturers for their products.

D. **The designations used in schedules** and elsewhere to indicate hardware finishes are the industry-recognized standard commercial finishes, except as otherwise noted.
1. Brushed Chrome and/or Stainless Steel Appearance
   a. Brushed Stainless Steel, no coating: ANSI 630.
   b. Satin Chrome, Clear Coated: ANSI 626, ANSI 652.
   c. Powder Coated Aluminum finish: ANSI 689.
   d. Saddle and Panic Thresholds: Mill Aluminum finish.
   e. Weatherstrip and Gasket: Clear Anodized Aluminum finish.

PART 3 - EXECUTION

3.1 EXAMINATION

A. **Examine doors and frames**, with Installer present, for compliance with requirements for installation tolerances, labeled fire door assembly construction, wall and floor construction, and other conditions affecting performance.

B. **Examine roughing-in** for electrical power systems to verify actual locations of wiring connections before electrified door hardware installation.

C. **Proceed with installation only after** unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. **Steel Doors and Frames**: Comply with DHI A115 Series.
1. Surface-Applied Door Hardware: Drill and tap doors and frames according to ANSI A250.6.

B. **Wood Doors**: Comply with DHI A115-W Series.

3.3 INSTALLATION

A. **Pre-installation conference** shall be conducted prior to installation of hardware at Project site. Meet with the, Owner, Contractor, installer, and manufacturer's representatives. A separate pre-installation conference shall be conducted prior to the installation of electronic security hardware with the electrical contractor Review catalogs, brochures, templates, installation instructions, and the approved hardware schedule. Survey installation procedures and workmanship, with special emphasis on unusual conditions, as to ensure correct technique of installation, and coordination with other work. Notify participants at least ten, 10 working days before conference.

B. **Hardware Installers must have a minimum of five (5) years' experience** in installation of hardware. Provide verification of installer's qualification to Consultant for approval. All installers to attend review meetings with the hardware distributor.

C. **Install hardware using only** manufacturer supplied and approved fasteners in strict adherence with manufacturers published installation instructions.

D. **Install head seal** prior to installation of "PA"-parallel arm mounted door closers and push side mounted door stops/holders. Trim, cut and notch thresholds and saddles neatly to minimally fit the profile of the door frame. Install thresholds and saddles in a bed of caulking completely sealing the underside from water and air penetration.

E. **Counter sink through bolt** of door pull under push plate during installation.

F. **Mounting Heights**: Mount door hardware units at heights indicated, as follows, unless otherwise indicated or required to comply with governing regulations.
1. Standard Steel Doors and Frames: DHI's "Recommended Locations for Architectural Hardware for Standard Steel Doors and Frames."
2. Custom Steel Doors and Frames: DHI's "Recommended Locations for Builders' Hardware for Custom Steel Doors and Frames."
3. Wood Doors: DHI WDHS.3, "Recommended Locations for Architectural Hardware for Wood Flush Doors."

G. **Install each door hardware item** to comply with manufacturer's written instructions. Where cutting and fitting are required to install door hardware onto or into surfaces that are later to be painted or finished in another way, coordinate removal, storage, and reinstallation of surface protective trim units with finishing work specified in Divisiion 09 Sections. Do not install surface-mounted items until finishes have been completed on substrates involved.
1. Set units level, plumb, and true to line and location. Adjust and reinforce attachment substrates as necessary for proper installation and operation.
2. Drill and countersink units that are not factory prepared for anchorage fasteners. Space fasteners and anchors according to industry standards.

H. **Furnish wiring diagrams** to electrical contractor for use in installing electrical hardware products.
1. Electrical contractor to run all wiring and make all final connections for electrified hardware. Hardware supplier shall be responsible to furnish all wiring diagrams to operate electrified hardware. Access control material and electrified hardware to interface at junction boxes.

I. **Thresholds**: Set thresholds for exterior and acoustical doors in full bed of sealant complying with requirements specified in Division 07 Section "Joint Sealants."

3.4 FIELD QUALITY CONTROL

A. **Architectural Hardware Consultant**: Architect shall engage a qualified Architectural Hardware Consultant to perform inspections and to prepare inspection reports.

B. **Architectural Hardware Consultant** shall inspect door hardware and state in each report whether installed work complies with or deviates from requirements, including whether door hardware is properly installed and adjusted.

3.5 ADJUSTING

A. **Initial Adjustment**: Adjust and check each operating item of door hardware and each door to ensure proper operation or function of every unit. Replace units that cannot be adjusted to operate as intended. Adjust door control devices to compensate for final operation of heating and ventilating equipment and to comply with referenced accessibility requirements.
1. Door Closers: Unless otherwise required by authorities having jurisdiction, adjust sweep period so that, from an open position of 70 degrees, the door will take at least 3 seconds to move to a point 3 inches (75 mm) from the latch, measured to the leading edge of the door.

B. **Occupancy Adjustment**: Approximately six months after date of Substantial Completion, Installer's Architectural Hardware Consultant shall examine and readjust, including adjusting operating forces, each item of door hardware as necessary to ensure function of doors, door hardware, and electrified door hardware.

3.6 CLEANING AND PROTECTION

A. **Clean adjacent surfaces** soiled by door hardware installation.

B. **Clean operating items** as necessary to restore proper function and finish.

C. **Provide final protection and maintain conditions** that ensure that door hardware is without damage or deterioration at time of Substantial Completion.

3.7 DEMONSTRATION

A. **Engage a factory-authorized service representative** to train Owner's maintenance personnel to adjust, operate, and maintain door hardware and door hardware finishes. Refer to Division 01 Section "Demonstration and Training."

3.8 DOOR HARDWARE SETS

A. **The following schedule of hardware sets** shall be considered a guide and the supplier is cautioned to refer to general conditions, special conditions, and the full requirements of this section. It shall be the hardware supplier's responsibility to furnish all required hardware.

B. **Where items of hardware are not definitely or correctly specified** and are required for completion of the Work, a written statement of such omission, error, conflict, or other discrepancy shall be sent to the Architect, prior to date specified for receipt of bids, for clarification by addendum.

C. **Adjustments to the Contract Sum will not be allowed** for omissions or items of hardware not clarified prior to bid opening.

HW SET NO: 01
DOOR NUMBER: (INCLUDES BUT IS NOT LIMITED TO THE FOLLOWING DOORS)
AE101C

EACH TO HAVE:

1 EA	ENTRANCE LOCK	ND53LD RHO	626	SCH
1 EA	PROVIDED BY OWNER	PERMANENT CYL CORE		B/O
	RE-USE REMAINING	EXISTING HARDWARE		EXI

PATCH, REPAIR, REFINISH DOOR AND FRAME AS REQUIRED. REPLACE ANY ADDITIONAL HARDWARE IF DAMAGED.

HW SET NO: A1
DOOR NUMBER: (INCLUDES BUT IS NOT LIMITED TO THE FOLLOWING DOORS)
AE101A AE101B

EACH TO HAVE:

2 EA	CONT. HINGE	112HD EPT		628	IVE
2 EA	POWER TRANSFER	EPT10	✓	689	VON
1 EA	REMOVABLE MULLION	KR4854-B		689	VON
2 EA	ELECTRIC STRIKES	6300 FSE		630	VON
1 EA	PANIC HARDWARE	98-EO	✓	626	VON
1 EA	PANIC HARDWARE	98-NL-OP-110MD	✓	626	VON
2 EA	PROVIDED BY OWNER	PERMANENT CYL CORE			B/O
1 EA	MORTISE CYLINDER	20-059		626	SCH
	HOUSING	(MULLION)			
1 EA	RIM HOUSING	20-079		626	SCH
2 EA	90 DEG OFFSET PULL	8190HD 10"		630	IVE
2 EA	SURFACE CLOSER	4040XP HEDA/62G MC		689	LCN
2 EA	PA.MOUNTING PLATE	4040-18PA		689	LCN
2 EA	STH SCREW SUPPORT	4040XP-30		689	LCN
2 EA	FLOOR STOP	FS439		630	IVE
1 SET	PERIMETER SEALS	DOOR MFG STD			B/O
1 EA	CREDENTIAL READER	BY DIV 28	✓		B/O
2 EA	DOOR CONTACT	679-05HM	✓	BLK	SCE
1 EA	REMOTE SWITCH	BY DIV 28			B/O

AUTO LOCK/UNLOCK THROUGH ACCESS CONTROL SYSTEM FOR PUSH/PULL OPERATION DURING NORMAL BUSINESS HOURS. CARD ENTRANCE AFTER HOURS. USER PRESENTS CREDENTIAL, ELECTRIC STRIKE KEEPER RELEASES, USER OPENS DOOR TO ENTER. DOOR POSITION IS MONITORED BY ACCESS CONTROL SYSTEM. REMOTE RELEASE FROM RECEPTION.

END OF SECTION

VCBO ARCHITECTURE
324 SOUTH 400 EAST
SALT LAKE CITY, UTAH 84102
(801) 363-8800
www.vcbo.com

REV	DATE	DESCRIPTION

VCBO NUMBER: 18365
CLIENT NUMBER:
DATE ISSUED: 2018-08-13

AMELIA EARHART ELEM. SECURITY UPGRADE
2585 WERST 200 SOUTH PROVO, UTAH
CONSTRUCTION DOCUMENTS

DOOR HARDWARE
A201

ABBREVIATION SCHEDULE

NOTE: NOT ALL ABBREVIATIONS MAY BE USED.

A	ABOVE COUNTER	ISO	ISOLATED
A	AMP OR AMPS	KVA	KILO VOLT AMPERES
ADJ	ADJACENT	KW	KILOWATTS
AFF	ABOVE FINISHED FLOOR	LFMC	LIQUID-TIGHT METAL CONDUIT
AHJ	AUTHORITY HAVING JURISDICTION	LFNC	LIQUID-TIGHT NONMETAL CONDUIT
AL	ALUMINUM	MCA	MINIMUM CIRCUIT AMPS
C	CONDUIT	MLO	MAIN LUGS ONLY
CB	CIRCUIT BREAKER	N.C.	NORMALLY CLOSED
CKT	CIRCUIT	N.I.C.	NOT IN CONTRACT
C.O.'S	CONVENIENCE OUTLETS	N.L.	NIGHT LIGHT
CU	COPPER	N.O.	NORMALLY OPEN
EA	EACH	O.C.	ON CENTER(S)
ELEC	ELECTRICAL	OCP	OVER CURRENT PROTECTION
EM	EMERGENCY	QTY	QUANTITY
EMT	ELECTRIC METALLIC TUBING	R	REMOVE
ENT	ELECTRIC NONMETALLIC TUBING	REQ.	REQUIREMENTS
EQUIP	EQUIPMENT	RMC	RIGID METAL CONDUIT
EWC	ELECTRIC WATER COOLER	RNC	RIGID NONMETALLIC CONDUIT
E, EX	EXISTING	RR	REMOVE AND RELOCATE
EXP	EXPLOSION PROOF	SS	SURGE SUPPRESSION
FA	FIRE ALARM	SCP	SECURITY CONTROL PANEL
FACP	FIRE ALARM CONTROL PANEL	TR	TAMPER RESISTANT
FLA	FULL LOAD AMPS	TYP	TYPICAL
FMC	FLEXIBLE METAL CONDUIT	TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSOR
FOB	FREIGHT ON BOARD	UF	UNDER FLOOR
GND	GROUND CONDUCTOR	UG	UNDERGROUND
HOA	HAND-OFF-AUTO	U.N.O.	UNLESS NOTED OTHERWISE
HP	HORSE POWER	W/	WITH
IG	ISOLATED GROUND	WP	WEATHER PROOF
IMC	INTERMEDIATE METAL CONDUIT	XFMR	TRANSFORMER
INS	INSULATED		

LIGHTING SYMBOLS

1. LIGHT FIXTURE SYMBOLS ARE GENERAL IN NATURE AND MAY BE SHOWN ON THE DRAWINGS IN VARIOUS SIZES AND SHAPES. REFER TO THE LIGHT FIXTURE SCHEDULE FOR SPECIFICATION INFORMATION.
2. ARROWS INDICATE AIMING DIRECTION.

SYMBOL	DESCRIPTION	MOUNTING	REMARKS
	ARM-MOUNTED SINGLE-HEAD LIGHT FIXTURE AND POLE	AS SPECIFIED OR DETAILED	
	ARM-MOUNTED DOUBLE-HEAD LIGHT FIXTURE AND POLE	AS SPECIFIED OR DETAILED	
	POST-TOP SINGLE-HEAD, LIGHT FIXTURE AND POLE	AS SPECIFIED OR DETAILED	
	WALL-MOUNTED FIXTURE	AS SPECIFIED OR DETAILED	REFER TO ARCHITECTURAL EXTERIOR ELEVATIONS FOR MOUNTING HEIGHT
	LIGHT BOLLARD	AS SPECIFIED OR DETAILED	
	FLOOD LIGHT	AS SPECIFIED OR DETAILED	
	RECESSED WALL FIXTURE OR STEP LIGHT	AS SPECIFIED OR DETAILED	REFER TO ARCHITECTURAL EXTERIOR ELEVATIONS FOR MOUNTING HEIGHT
	FLUORESCENT LIGHT FIXTURES	AS SPECIFIED OR DETAILED	
	PARABOLIC - LOUVERED LIGHT FIXTURES	AS SPECIFIED OR DETAILED	
	RECESSED INDIRECT FLUORESCENT LIGHT FIXTURES	AS SPECIFIED OR DETAILED	
	WALL-MOUNTED LINEAR FLUORESCENT LIGHT FIXTURE	AS SPECIFIED OR DETAILED	
	FLUORESCENT LINEAR WALL WASHER	AS SPECIFIED OR DETAILED	
	RECESSED DOWN LIGHT	AS SPECIFIED OR DETAILED	
	RECESSED WALL-WASHER OR DIRECTIONAL DOWNLIGHT	AS SPECIFIED OR DETAILED	IF SHOWN, ARROW INDICATES AIMING DIRECTION
	SURFACE OR PENDANT-MOUNTED LIGHT FIXTURE	AS SPECIFIED OR DETAILED	
	WALL-MOUNTED LIGHT FIXTURE	AS SPECIFIED OR DETAILED	REFER TO ARCHITECTURAL EXTERIOR ELEVATIONS FOR MOUNTING HEIGHT
	TRACK OR MONO-POINT LIGHT FIXTURE	AS SPECIFIED OR DETAILED	IF SHOWN, ARROW INDICATES AIMING DIRECTION
	WALL SCONCE	AS SPECIFIED OR DETAILED	
	FLUORESCENT EGRESS LIGHT FIXTURE	AS SPECIFIED OR DETAILED	THIS IS AN EXAMPLE OF AN EGRESS LIGHT FIXTURE. EGRESS LIGHT FIXTURES ARE HALF-SHADED DIAGONALLY.
	FLUORESCENT EMERGENCY (NON-EGRESS) LIGHT FIXTURE	AS SPECIFIED OR DETAILED	THIS IN AN EXAMPLE OF AN EMERGENCY (NON-EGRESS) LIGHT FIXTURE. EMERGENCY FIXTURES ARE FULLY-SHADED.
	CEILING MOUNTED EXIT SIGN	CEILING	DARKENED PORTION OF SIGN INDICATES FACE(S); ARROW(S) INDICATE CHEVRON DIRECTION(S)
	WALL-MOUNTED EXIT SIGN	WALL ABOVE DOOR	
	WALL-MOUNTED EXIT SIGN W/ EMERGENCY LIGHT FIXTURE	WALL ABOVE DOOR	
TC	TIME CLOCK	+60"	
	EMERGENCY LIGHT FIXTURE	AS NOTED	
P	ELECTRIC PHOTOCELL	N/A	MOUNT ON ROOF FACING NORTH SKY
XX	LIGHT FIXTURE CALLOUT (LETTER DENOTES FIXTURE TYPE)		

GENERAL PROJECT NOTES:

1. DIVISION 26 CONTRACTOR IS RESPONSIBLE FOR READING AND APPLYING WHAT IS IN THE SPECIFICATIONS TO THIS PROJECT. ANYTHING THAT IS NOT INCLUDED ON THE PROJECT THAT IS CALLED OUT IN THE SPECIFICATION SHALL BE LISTED ON THE SUBSTANTIAL COMPLETION PUNCHLIST. THE CONTRACTOR WILL BE REQUIRED TO REMEDY THESE DEFICIENCIES. THERE WILL BE NO EXCEPTIONS.
2. THE CONTRACTOR MAY SCHEDULE A PRE-CONSTRUCTION MEETING , AT THEIR DISCRETION WITH THE ELECTRICAL ENGINEER AND REVIEW THE DRAWINGS AND SPECIFICATIONS. THE MEETING SHALL BE A MAXIMUM OF ONE HOUR AND SHALL TAKE PLACE AT THE ENGINEER'S OFFICE.
3. THE FOLLOWING ITEMS ARE SOME OF THE REQUIREMENTS THAT ARE LISTED IN THE SPECIFICATIONS, THESE ITEMS DO NOT REPRESENT ALL ITEMS AND THE CONTRACTOR IS RESPONSIBLE FOR MEETING ALL REQUIREMENTS OF THE SPECIFICATIONS:
   A. INSULATED THROAT CONNECTORS OR PLASTIC BUSHINGS SHALL BE UTILIZED FOR ALL CONDUIT SIZES USED ON THIS PROJECT.
   B. THE CONTRACTOR SHALL LABEL ALL ELECTRICAL EQUIPMENT AS IT IS CALLED OUT IN THE SPECIFICATIONS.
   C. THE CONTRACTOR SHALL PROVIDE SEISMIC SUPPORT AND BRACING FOR ALL ELECTRICAL EQUIPMENT AS REQUIRED BY LOCAL AND NATIONAL CODE.
4. THE CONTRACTOR IS RESPONSIBLE TO ENSURE THE WIRE IS LARGE ENOUGH FOR VOLTAGE DROP.
5. TTHE CONTRACTOR SHALL VISIT THE SITE BEFORE SUBMITTING THE BID, AND SHALL EXAMINE ALL PHYSICAL CONDITIONS WHICH MAY BE MATERIAL TO THE PERFORMANCE OF HIS WORK. NO EXTRA PAYMENTS WILL BE ALLOWED TO THE CONTRACTOR AS A RESULT OF EXTRA WORK MADE NECESSARY BY HIS FAILURE TO DO SO. ANY CASE OF DISCREPANCY OR LACK OF CLARITY SHALL BE PROMPTLY IDENTIFIED TO THE OWNER'S REPRESENTATIVE AND THE ENGINEER FOR CLARIFICATION.
6. THE CONTRACTOR SHALL MAKE SURE THAT ALL BRANCH CIRCUITS THAT ARE AFFECTED BY THIS PROJECT ARE NOT OVERLOADED. PROVIDE ADDITIONAL BRANCH CIRCUITS FROM ELECTRICAL PANELS AS NECESSARY TO COMPLY WITH THE BRANCH CIRCUIT LOADING REQUIREMENTS. PROVIDE ALL MATERIAL AND LABOR AS NECESSARY FOR A COMPETE AND OPERATING SYSTEM.
7. PROVIDE UPDATED, TYPED PANELBOARD SCHEDULE(S) TO REFLECT ALL THE CHANGES MADE INCLUDING EXISTING LOADS. THE EXISTING LOADS SHALL BE NAMED THE SAME AS LISTED ON THE EXISTING PANELBOARD SCHEDULE.

SECURITY SYMBOLS

SYMBOL	DESCRIPTION	MOUNTING	REMARKS
MD	MOTION DETECTOR	CEILING	SUBSCRIPT DENOTES DEGREES OF MONITORED AREA
KP	KEYPAD	+48"	
OHS	OVERHEAD MAGNETIC CONTACT DOOR SWITCH	DOOR	
D	MAGNETIC CONTACT DOOR SWITCH	DOOR	
G	GLASS BREAK DETECTOR	CEILING	
S	SIREN	+90"	

ACCESS CONTROL SYMBOLS

SYMBOL	DESCRIPTION	MOUNTING	REMARKS
REX	REQUEST-TO-EXIT MOTION DETECTOR	CEILING	
S	ELECTROMAGNETIC DOOR STRIKE	DOOR	
D	MAGNETIC DOOR CONTACT SWITCH	DOOR	
M	MAGNETIC LOCK	DOOR	
$_D$	DURESS PUSH-BUTTON	BELOW DESK	
$_{LD}$	LOCK DOWN PUSH-BUTTON	DESK	
	DOOR CONTROL PUSH-BUTTON	DESK	
PR	PROXIMITY CARD READER	+48"	
PIM	WIRELESS ACCESS PANEL INTERFACE MODULE	ABOVE CLG	
PK	PROXIMITY CARD READER / KEYPAD	+48"	
MR	MAGNETIC STRIP CARD READER	+48"	

CLOSED CIRCUIT TELEVISION SYMBOLS

SYMBOL	DESCRIPTION	MOUNTING	REMARKS
FIX	CLOSED CIRCUIT TELEVISION CAMERA (FIXED)	CEILING	
PTZ	CLOSED CIRCUIT TELEVISION CAMERA (PAN/TILT/ZOOM)	CEILING	
PTZ	CLOSED CIRCUIT TELEVISION CAMERA (HIGH SPEED DOME WITH PAN / TILT / ZOOM HEAD)	CEILING	
TV	CLOSED CIRCUIT TELEVISION MONITOR	DESK	
MATRIX	MATRIX SWITCHER	DESK	
FJ	FIBER JUNCTION BOX	72" TO TOP OF BOX	

GEAR AND CONTROL SYMBOLS

SYMBOL	DESCRIPTION	MOUNTING	REMARKS
$\$_T$	MANUAL STARTER WITH THERMAL OVERLOAD(S)	AT EQUIPMENT	
	ELECTRIC MOTOR		
	NON-FUSED DISCONNECT SWITCH	TOP AT +48"-72"	
F	FUSED DISCONNECT SWITCH	TOP AT +48"-72"	
	CIRCUIT BREAKER AND ENCLOSURE	TOP AT +48"-72"	
	MAGNETIC STARTER	TOP AT +48"-72"	
	COMBINATION MAGNETIC STARTER / NON-FUSED DISCONNECT	TOP AT +48"-72"	
	COMBINATION MAGNETIC STARTER / FUSED DISCONNECT	TOP AT +48"-72"	
	COMB. MAGNETIC STARTER / MOTOR CIRCUIT PROTECTOR (MCP)	TOP AT +48"-72"	
VFD	COMB. VARIABLE FREQUENCY DRIVE / MOTOR CIRCUIT PROTECTOR (MCP)	FLOOR OR WALL AS SPECIFIED	TOP AT +72" IF WALL MOUNTED
RVS	REDUCED VOLTAGE STARTER	FLOOR OR WALL AS SPECIFIED	TOP AT +72" IF WALL MOUNTED
	LOAD CENTER (SURFACE-MOUNTED)	TOP AT +72"	14"W X 3"D
	LOAD CENTER (FLUSH-MOUNTED)	TOP AT +72"	14"W X 3"D
	LIGHTING AND APPLIANCE PANELBOARD (SURFACE-MOUNTED)	TOP AT +72"	20"W X 6"D
	LIGHTING AND APPLIANCE PANELBOARD (FLUSH-MOUNTED)	TOP AT +72"	20"W X 6"D
	POWER DISTRIBUTION PANELBOARD	WALL	THESE SYMBOLS ARE GENERAL IN NATURE AND MAY VARY IN SIZE AND SHAPE TO SUIT APPLICATION. CROSS HATCHING INDICATES "MAIN PANELBOARD OR SWITCHBOARD" NAME IS INDICATED IN SEMI-QUOTES (I.E. 'L2A', 'MDP')
	SWITCHBOARD	FLOOR	
	METER BASE	TOP AT +72"	FURNISH SWITCH UNLESS FURNISHED BY ANOTHER DIVISION. INSTALL AND CONNECT COMPLETE. REFER TO RELATED SPECIFICATION SECTIONS.
	OPEN - STOP - CLOSE SWITCH	+60"	
T	HVAC THERMOSTAT	+60"	PROVIDED BY DIVISION 15000 U.N.O.
	HAND - OFF - AUTO SWITCH	+60"	
GF	GROUND FAULT PROTECTION		

WIRING DEVICE SYMBOLS

SYMBOL	DESCRIPTION	MOUNTING	REMARKS
$\$$	SINGLE-POLE TOGGLE SWITCH	+48"	
$\$^a$	SINGLE-POLE TOGGLE SWITCH	+48"	SUBSCRIPT KEYS SWITCH TO FIXTURES CONTROLLED.
$\$_2$	DOUBLE-POLE TOGGLE SWITCH	+48"	
$\$_3$	THREE-WAY TOGGLE SWITCH	+48"	
$\$_4$	FOUR-WAY TOGGLE SWITCH	+48"	
$\$_K$	KEY-OPERATED SINGLE-POLE TOGGLE SWITCH	+48"	
$\$_P$	SINGLE-POLE TOGGLE SWITCH WITH PILOT LIGHT	+48"	
$\$_{DIM}$	DIMMER SWITCH	+48"	RATE DIMMER SWITCH FOR MAXIMUM POSSIBLE WATTAGE
$\$_{TIM}$	TIMER SWITCH	+48"	
$\$\$$	(2) SINGLE-POLE TOGGLE SWITCH	+48"	DUAL LEVEL SWITCH OUTBOARD LAMPS SEPARATELY FROM INBOARD LAMPS.
$\$^a_{LV}$	LOW VOLTAGE MOMENTARY CONTACT SWITCH	+48"	
$\$_{3PM}$	3-POSITION MOMENTARY CONTACT SWITCH	+48"	REFER TO DETAIL UP-ON; CENTER-NEUTRAL; DOWN-OFF
$\$_{3PN}$	3-POSITION MAINTAINED CONTACT SWITCH	+48"	UP-ON; CENTER-OFF; DOWN-ON
	OCCUPANCY SENSOR	AS NOTED	CEILING MOUNTED WITH SUBSCRIPT 'C'; WALL-MOUNTED WITH SUBSCRIPT 'W'
	SPLIT-WIRED DUPLEX RECEPTACLE	+18"	
	SIMPLEX RECEPTACLE	+18"	
	DUPLEX RECEPTACLE	+18"	
	125/250V RECEPTACLE	+18"	RANGE -- NEMA 14-50R DRYER -- NEMA 14-30R
	FOURPLEX RECEPTACLE	+18"	
	GROUND FAULT CIRCUIT INTERRUPTER DUPLEX RECEPTACLE	+18"	
	GROUND FAULT CIRCUIT INTERRUPTER FOURPLEX RECEPTACLE	+18"	
	EMERGENCY DUPLEX RECEPTACLE	+18"	
	EMERGENCY FOURPLEX RECEPTACLE	+18"	
J	MULTI-OUTLET ASSEMBLY	4" ABOVE BACKSPLASH	
	POWER / TELEPHONE POLE	FLOOR/CEILING	
	CORD DROP WITH DUPLEX RECEPTACLE		REFER TO DETAIL
(5-20R)	SPECIAL PURPOSE OUTLET	+18"	SUBSCRIPT IN PARENTHESIS INDICATES NEMA CONFIGURATION IF SHOWN. REFER TO DRAWINGS AND/OR EQUIPMENT SCHEDULES. CONFIRM EXACT CONFIGURATION WITH OWNER PRIOR TO INSTALLATION.

ELECTRICAL SYMBOL SCHEDULE GENERAL NOTES

1. MOUNT ALL OUTLETS, DEVICES, AND EQUIPMENT AT HEIGHTS INDICATED BELOW, UNLESS NOTED OTHERWISE ON THE DRAWINGS. UNLESS NOTED OTHERWISE, HEIGHTS ARE GIVEN FROM FINISHED FLOOR TO CENTER OF OUTLET BOX.
2. WHERE OUTLETS, DEVICES, AND EQUIPMENT ARE NOTED BY SUBSCRIPTS, REFER TO ABBREVIATION SCHEDULE FOR DEFINED REQUIREMENTS.
3. WHERE OUTLETS, DEVICES AND EQUIPMENT ARE NOTED BY THE SUBSCRIPT 'A', MOUNT AT 4" ABOVE COUNTER. IF COUNTER HAS A BACK SPLASH, MOUNT AT 4" ABOVE BACK SPLASH. REFER TO ARCHITECTURAL INTERIOR ELEVATIONS AND COORDINATE WITH CASEWORK SUPPLIER.
4. NOT ALL ELECTRICAL SYMBOLS MAY BE USED.

GENERAL SYMBOLS

SYMBOL	DESCRIPTION	REMARKS
XX	KEYED NOTE	
1 / E-1	DETAIL REFERENCE	TOP NUMBER INDICATES DETAIL NUMBER; BOTTOM LETTER-NUMBER INDICATES DRAWING SHEET WHERE DETAIL IS SHOWN; WHERE NOT SPECIFICALLY REFERENCED, DETAIL IS GENERAL IN NATURE AND SHALL APPLY WHERE APPLICABLE.
2 / E-1	ELEVATION REFERENCE	TOP NUMBER INDICATES ELEVATION NUMBER; BOTTOM LETTER-NUMBER INDICATES WHERE ELEVATION IS SHOWN.
3 / E-1	SECTION REFERENCE	TOP NUMBER INDICATES SECTION NUMBER; BOTTOM LETTER NUMBER INDICATES WHERE SECTION IS SHOWN.
100	ARCHITECTURAL ROOM NUMBER	
AHU / 1	EQUIPMENT NAME / NUMBER	TOP NUMBER ABBREVIATES EQUIPMENT NAME OR TYPE; BOTTOM NUMBER INDICATES EQUIPMENT NUMBER. REFER TO EQUIPMENT SCHEDULE.
1	REVISION NUMBER	USED TO DENOTE CHANGES EITHER ISSUED BY ADDENDUM OR DURING CONSTRUCTION AND TO DENOTE RECORD DRAWING CHANGES.
	BREAKLINE	USED TO BREAK DRAWINGS.

FIRE ALARM SYMBOLS

SYMBOL	DESCRIPTION	MOUNTING	REMARKS
BDT	BEAM DETECTOR - TRANSMITTER	4" BELOW CEILING TO TOP OF DETECTOR	
BDR	BEAM DETECTOR - RECEIVER	4" BELOW CEILING TO TOP OF DETECTOR	
EOL	END OF LINE DEVICE	PER MANUFACTURER RECOMMENDATIONS	
T	TAMPER SWITCH	AT VALVE	
W	WATER FLOW INDICATOR	ON FIRE RISER	
FSD	FIRE/SMOKE DAMPER	TOP AT 72"	
	HEAT DETECTOR	CEILING	
	SMOKE DETECTOR	CEILING	
D	DUCT SMOKE DETECTOR	SIDE OF DUCT	
F	FIRE ALARM MANUAL STATION	+48"	
Z	CONTROL MODULE	AT DEVICE(S) TO BE CONTROLLED	
I	MONITOR MODULE	AT DEVICE(S) TO MONITOR	
R	FAN SHUTDOWN RELAY	AT FAN CONTROL PANEL	
D	MAGNETIC DOOR HOLDER	COORDINATE WITH DOOR INSTALLER	COORDINATE WITH DOOR INSTALLER; SUBSCRIPT 'F' INDICATES TO MOUNT AT FLOOR LEVEL
WF	WATER FLOOD INDICATOR	FLOOR	
H	AUDIO HORN	MOUNT PER ALL NFPA 72 REQUIREMENTS.	SUBSCRIPT 'WP' INDICATES THAT A WEATHER PROOF BACK BOX IS REQ. SUBSCRIPT 'C' INDICATES CEILING MOUNTING. NUMERIC SUBSCRIPT INDICATES CANDELLA RATING OF STROBE (I.E. - 15, 75, 110)
M	MINI AUDIO HORN		
	FIRE ALARM VISUAL STROBE		
	FIRE ALARM AUDIO/VISUAL HORN/STROBE		
M	MINI AUDIO/VISUAL HORN/STROBE		
S	FIRE ALARM AUDIO SPEAKER		
	FIRE ALARM AUDIO/VISUAL SPEAKER/STROBE		
F	FIRE FIGHTERS TELEPHONE JACK	+48"	
	FIRE PROTECTION SPRINKLER RISER BELL	+90"	FURNISHED BY FIRE PROTECTION CONTRACTOR AND INSTALLED AND CONNECTED BY DIV. 16000

BRANCH CIRCUITING SYMBOLS

SYMBOL	DESCRIPTION	REMARKS
	1 CIRCUIT, 2 WIRE BRANCH CIRCUIT HOME RUN TO PANEL	ARROWS: NUMBER OF ARROWS INDICATES NUMBER OF CIRCUITS REQUIRED. SHORT CROSS LINES: NUMBER OF SHORT CROSS LINES INDICATES NUMBER OF PHASE, TRAVELER, AND/OR SWITCHED CONDUCTORS REQUIRED IF GREATER THAN 1 (ONE). LONG CROSS LINES: NUMBER OF LONG CROSS LINES INDICATES NUMBER OF NEUTRAL CONDUCTORS REQUIRED FOR MULTI-WIRE HOME RUNS. EQUIPMENT GROUND AND ISOLATED GROUND CONDUCTORS: EQUIPMENT GROUND AND ISOLATED GROUND CONDUCTORS ARE NOT SHOWN, BUT ARE REQUIRED AS NOTED ON THE DRAWINGS OR IN THE SPECIFICATIONS.
	2 CIRCUIT, 3 WIRE BRANCH CIRCUIT HOME RUN TO PANEL	
	3 CIRCUIT, 4 WIRE BRANCH CIRCUIT HOME RUN TO PANEL	
	MULTIPLE WIRE BRANCH CIRCUITING BETWEEN FIXTURES, SWITCHES, DEVICES, ETC.	
	BRANCH CIRCUITING (U.N.O.) TURNED UP OR TOWARDS OBSERVER.	
	BRANCH CIRCUITING (U.N.O.) TURNED DOWN OR AWAY FROM OBSERVER.	
	BRANCH CIRCUITING (U.N.O.) CONTINUATION	
	CONDUIT STUB-IN	CAP AND MARK
	INCOMING SERVICE	
J	JUNCTION BOX	MOUNT AS NOTED. SUBSCRIPT 'F' INDICATES TO PROVIDE A FLOOR BOX WITH BLANK COVERPLATE

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REV	DATE	DESCRIPTION

VCBO NUMBER: 18365
CLIENT NUMBER:
DATE ISSUED: 7-13-18

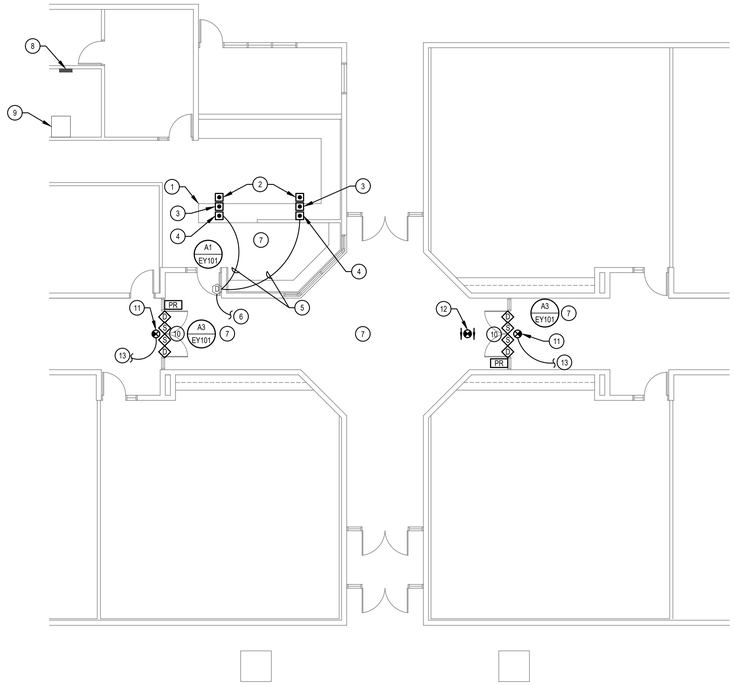
AMELIA EARHART ELEM. SECURITY UPGRADE

PROVO SCHOOL DISTRICT
2585 WERST 200 SOUTH PROVO, UTAH

CONSTRUCTION DOCUMENTS

SYMBOLS AND NOTES

EG101



C3 LOBBY - SYSTEMS PLAN
SCALE: 1/8" = 1'-0"

KEYED NOTES:

1. CONFIRM EXACT MOUNTING LOCATION OF ALL DOOR RELEASE BUTTONS AT THE RECEPTION DESK WITH THE OWNER PRIOR TO ANY ROUGH-IN. ALL CABLING TO BUTTONS SHALL BE CONCEALED IN THE CEILING AS WALLS. ROUTE CABLING SURFACE BELOW THE DESK. LABEL BUTTONS AS DIRECTED BY THE OWNER.
2. PUSH BUTTON TO RELEASE EAST DOOR. PROVIDE LABEL ON BUTTON INDICATING DOOR CONTROLLED. CONFIRM LABELING WITH OWNER.
3. PUSH BUTTON TO RELEASE WEST DOOR. PROVIDE LABEL ON BUTTON INDICATING DOOR CONTROLLED. CONFIRM LABELING WITH OWNER.
4. PUSH BUTTON TO RELEASE DOOR HOLDER. PROVIDE LABEL ON BUTTON INDICATING DOOR CONTROLLED. CONFIRM LABELING WITH OWNER.
5. PROVIDE ALL CABLING, CONTACTS / CONTROLS AS NECESSARY TO RELEASE DOOR HOLDER ONCE PUSH BUTTON IS ACTIVATED AT RECEPTION DESK.
6. DOOR HOLDER TO RELEASE UPON ACTIVATION OF THE FIRE ALARM SYSTEM. CONTRACTOR TO VERIFY OPERATION. IF DOOR DOES NOT RELEASE UPON ACTIVATION OF THE FIRE ALARM SYSTEM, PROVIDE CONNECTIONS TO THE FIRE ALARM SYSTEM AS NECESSARY.
7. ROUTE ALL CABLING THROUGH THE DOOR MULLION AND INTO THE ACCESSIBLE CEILING SPACE. ALL NEW CABLING SHALL BE CONCEALED TO THE GREATEST EXTENT POSSIBLE. SURFACE RACEWAY MAY BE USED WHERE CABLING IS EXTENDED TO THE RECEPTION DESK(S) WERE BLOCK WALLS EXIST. CONFIRM ALL SURFACE RACEWAY LOCATIONS AND ROUTING WITH THE OWNER PRIOR TO INSTALLING ANY SURFACE RACEWAYS.
8. EXISTING PANELBOARD.
9. EXISTING DATA RACK.
10. PROVIDE SEPARABLE CONNECTOR FOR WIRING HARNESS AT REMOVABLE MULLION SO WIRING CAN BE DISCONNECTED WHEN MULLION IS REMOVED. COORDINATE CONNECTOR TYPE WITH ACCESS CONTROL MANUFACTURE.
11. PROVIDE NEW EXIT SIGN LITHONIA #LQM S W R EL N (OR APPROVED EQUIVALENT).
12. REMOVE EXISTING SINGLE FACE EXIT SIGN AND PROVIDE NEW DOUBLE FACE EXIT SIGN LITHONIA #LQM S W R EL N (OR APPROVED EQUIVALENT). RECONNECT TO EXISTING BRANCH CIRCUIT.
13. CONNECT NEW EXIT SIGN TO EXISTING BRANCH CIRCUIT FEEDING EXIT SIGNS IN THE SPACE. CONTRACTOR TO CONFIRM CIRCUIT PRIOR TO INSTALLATION.

GENERAL NOTES:

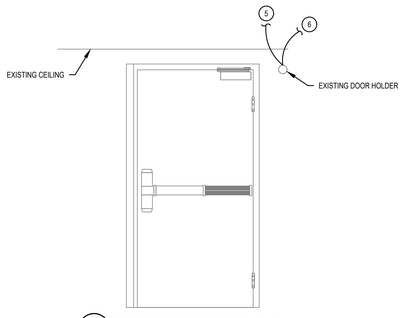
1. THE CONTRACTOR SHALL VISIT THE SITE BEFORE SUBMITTING THE BID, AND SHALL EXAMINE ALL PHYSICAL CONDITIONS WHICH MAY BE MATERIAL TO THE PERFORMANCE OF HIS WORK. NO ADDITIONAL PAYMENTS WILL BE ALLOWED TO THE CONTRACTOR AS A RESULT OF EXTRA WORK MADE NECESSARY BY HIS FAILURE TO DO SO. ANY CASE OF DISCREPANCY OR LACK OF CLARITY SHALL BE PROMPTLY IDENTIFIED TO THE OWNER'S REPRESENTATIVE AND THE ENGINEER FOR CLARIFICATION.
2. CONTRACTOR SHALL WORK CLOSELY WITH THE OWNER FOR DOOR REQUIREMENTS, ROUGH-IN AND WIRING.
3. CONTRACTOR TO REFER TO THE MANUFACTURES WRITTEN INSTRUCTION FOR ALL REQUIRED INSTALLATION REQUIREMENTS AND WIRING REQUIREMENTS.
3. INSTALL ACCESS CONTROL ON THE RIGHT HAND DOOR UNLESS OTHERWISE DIRECTED BY THE OWNER. VERIFY DOOR ROUGH-IN WITH THE OWNER PRIOR TO ANY ROUGH-IN.

CAT 6 CABLING GENERAL NOTES:

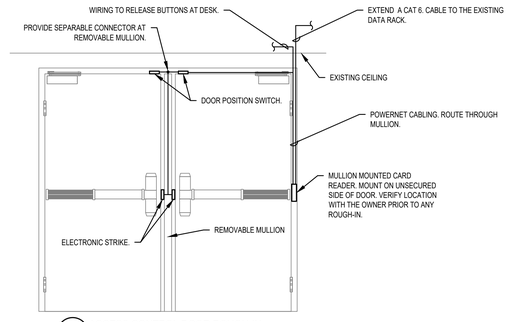
1. CONTRACTOR SHALL COORDINATE ALL CABLING REQUIREMENTS AND WORK WITH OWNERS IT MANAGER PRIOR TO ROUGH-IN OR PULLING ANY CABLING.
2. ALL CABLES SHALL BE TERMINATED AND LABELED AT BOTH ENDS. PROVIDE LABELING AS DIRECTED BY OWNERS IT MANAGER.
3. CONTRACTOR IS RESPONSIBLE FOR TESTING ALL CABLES AND CONNECTIONS TO ENSURE BICSI AND EIA/TIA STANDARDS ARE MET. PROVIDE A WRITTEN REPORT TO OWNER FOR EACH CABLE TESTED.
4. ALL CABLING SHALL BE RUN IN CABLE TRAY WHERE AVAILABLE. WHERE CABLES ARE ROUTED IN ACCESSIBLE CEILINGS, SECURE AND SUPPORT CABLES WITH J-HOOKS. INSTALL EXPOSED CABLES PARALLEL AND PERPENDICULAR TO SURFACES OR EXPOSED STRUCTURAL MEMBERS, AND FOLLOW SURFACE CONTOURS. USE UL-LISTED PLENUM CABLE THROUGHOUT THE ENTIRE SYSTEM.
5. THE CONTRACTOR SHALL PROVIDE ONE (1) PATCH CABLE PER INSTALLED CABLE. CONFIRM LENGTH WITH OWNERS IT MANAGER PRIOR TO ORDERING.

SURFACE RACEWAY

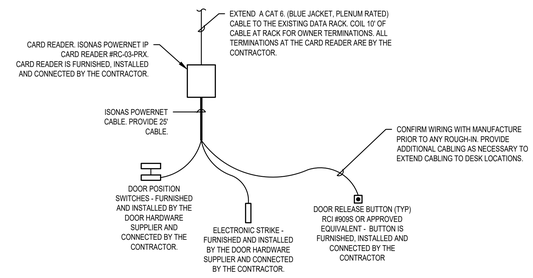
1. PROVIDE WIREMOLD #2900 SERIES LATCHING RACEWAY SYSTEM (OR APPROVED EQUIVALENT).
2. THE LATCHING RACEWAY AND ALL SYSTEM COMPONENTS MUST EXHIBIT NONFLAMMABLE SELF-EXTINGUISHING CHARACTERISTICS, TESTED TO COMPARABLE SPECIFICATIONS OF UL94V-0.
3. THE 2900 SERIES LATCHING RACEWAY SHALL BE MANUFACTURED WITH A CO-EXTRUDED DESIGN OF RIGID PVC COMPOUND WITH A FLEXIBLE PVC HINGE. THE RACEWAY SHALL HAVE A SMOOTH FINISH, COLOR AS DETERMINED BY ARCHITECT AND SCHOOL DISTRICT.
4. THE LATCHING RACEWAY SHALL BE A ONE-PIECE DESIGN WITH A FLEXIBLE HINGE. THE COVER SHALL OPEN TO PROVIDE ACCESSIBILITY AND LATCH SECURELY CLOSED. TOTAL WIDTH SHALL BE 1.00" BY 0.50" DEEP WITH AN APPROXIMATE THICKNESS OF .04". THE RACEWAY SHALL BE AVAILABLE IN 6' AND 8' LENGTHS AND BE SUPPLIED WITH ADHESIVE TAPE BACKING. SUPPORT RACEWAY A MINIMUM OF EVERY 4' WITH AN APPROVED LAG TYPE FASTING DEVICE.
5. PROVIDE ALL FITTINGS (2900 SERIES) INCLUDING BUT NOT LIMITED TO FLAT, INTERNAL AND EXTERNAL ELBOWS, TEES, DROP CEILING FITTING, COVER CLIPS, AND END CAPS. FIBER OPTIC FITTINGS MUST BE AVAILABLE INCLUDING, BUT NOT LIMITED TO FLAT, INTERNAL AND EXTERNAL ELBOWS AND TEES. THESE FITTINGS SHALL BE OF TWO-PIECE CONSTRUCTION (BASE AND COVER) WITH SWEPT BEND RADII OF 1.25" MINIMUM. THESE FITTINGS SHALL HAVE INTEGRATED CABLE RETENTION FEATURES TO ALLOW CABLE LAY-IN, THUS AVOIDING EXCESSIVE LOADING. FITTINGS SHALL INCORPORATE PROTECTIVE FLANGES ELIMINATING CABLE SCUFFING BY SCREW HEADS. THEY SHALL BE MANUFACTURED OF A RIGID PVC COMPOUND. THE FITTINGS SHALL HAVE A SMOOTH TEXTURE, COLORS TO MATCH THE RACEWAY. THEY SHALL OVERLAP THE RACEWAY TO HIDE UNEVEN CUTS.
6. DEVICE BOXES SHALL BE AVAILABLE FOR MOUNTING STANDARD DEVICES AND FACEPLATES. DEVICE BOXES SHALL BE SNAPPED ONTO A BASE. THEY SHALL BE MANUFACTURED OF RIGID PVC COMPOUND. THEY SHALL BE IN COLORS TO MATCH THE RACEWAY.
7. ALL WORK SHALL INCLUDE FURNISHING ALL RACEWAY AND APPROPRIATE FITTINGS AND DEVICE PLATES TO INSTALL A NONMETALLIC SURFACE RACEWAY SYSTEM. INSTALLER SHALL COMPLY WITH DETAILED MANUFACTURER'S INSTRUCTION SHEETS, WHICH ACCOMPANY SYSTEM COMPONENTS, AS WELL AS SYSTEM INSTRUCTION SHEETS.
8. KEEP SURFACE RACEWAYS TO A MINIMUM. SURFACE RACEWAY SHALL BE FROM THE CEILING SPACE TO THE DEVICE.



A1 ACCESS CONTROL DOOR ROUGH-IN
SCALE: NONE



A3 ACCESS CONTROL DOOR ROUGH-IN
SCALE: NONE



A5 TYPICAL DOOR RISER DIAGRAM
SCALE: NONE

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LOBBY - SYSTEMS PLAN

EY101