

CENTENNIAL MIDDLE SECURITY UPGRADE

PROVO SCHOOL DISTRICT
305 EAST 2320 NORTH PROVO, UTAH

VCBO

ARCHITECTURE

524 SOUTH 600 EAST
SALT LAKE CITY, UT 84102
801.575.8800 | VCBO.COM



PROJECT TEAM

architect Brianna Bonaravage VCBO ARCHITECTURE 524 South 600 East Salt Lake City, UT 84102 bbonaravage@vcbo.com 801.575.8800	owner Stephen Canfield PROVO CITY SCHOOL DISTRICT 280 West 940 North Provo, UT 84604 stephen@provo.edu 801-616-1632
structural engineer Henning Ungerman CALDER RICHARDS CONSULTING ENGINEERS 634 South 400 West #100 Salt Lake City, UT 84101 henning@croeng.com 801-466-1699	door hardware consultant George Stromquist ALLEGION 240 E. Morris Avenue, Suite 203 Salt Lake City, UT 84115 george.stromquist@allegion.com 801-369-7905
electrical engineer Scott Kingery ENVISION ENGINEERING 240 EAST MORRIS AVE SUITE 200 SALT LAKE CITY, UT 84115 skingery@envisioneng.com 801.534.1130	

SYMBOL LEGEND

RM NAME XXX	ROOM NAME & NUMBER SYMBOL
FRAME MATERIAL FRAME TYPE DOOR TYPE DOOR NUMBER HARDWARE GROUP	DOOR SYMBOL
NOTE XX-XX	DETAIL REFERENCE MARK. SEE DETAILS

GENERAL NOTES

NOTES TO BIDDERS

- 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.
- 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 CONTRACTORS DISCRETION, BUT IT SHALL BE PROVIDED AS PART OF THE CONTRACT.
- IT IS THE CONTRACTORS RESPONSIBILITY TO REVIEW AND 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.
- 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.
- 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.

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.

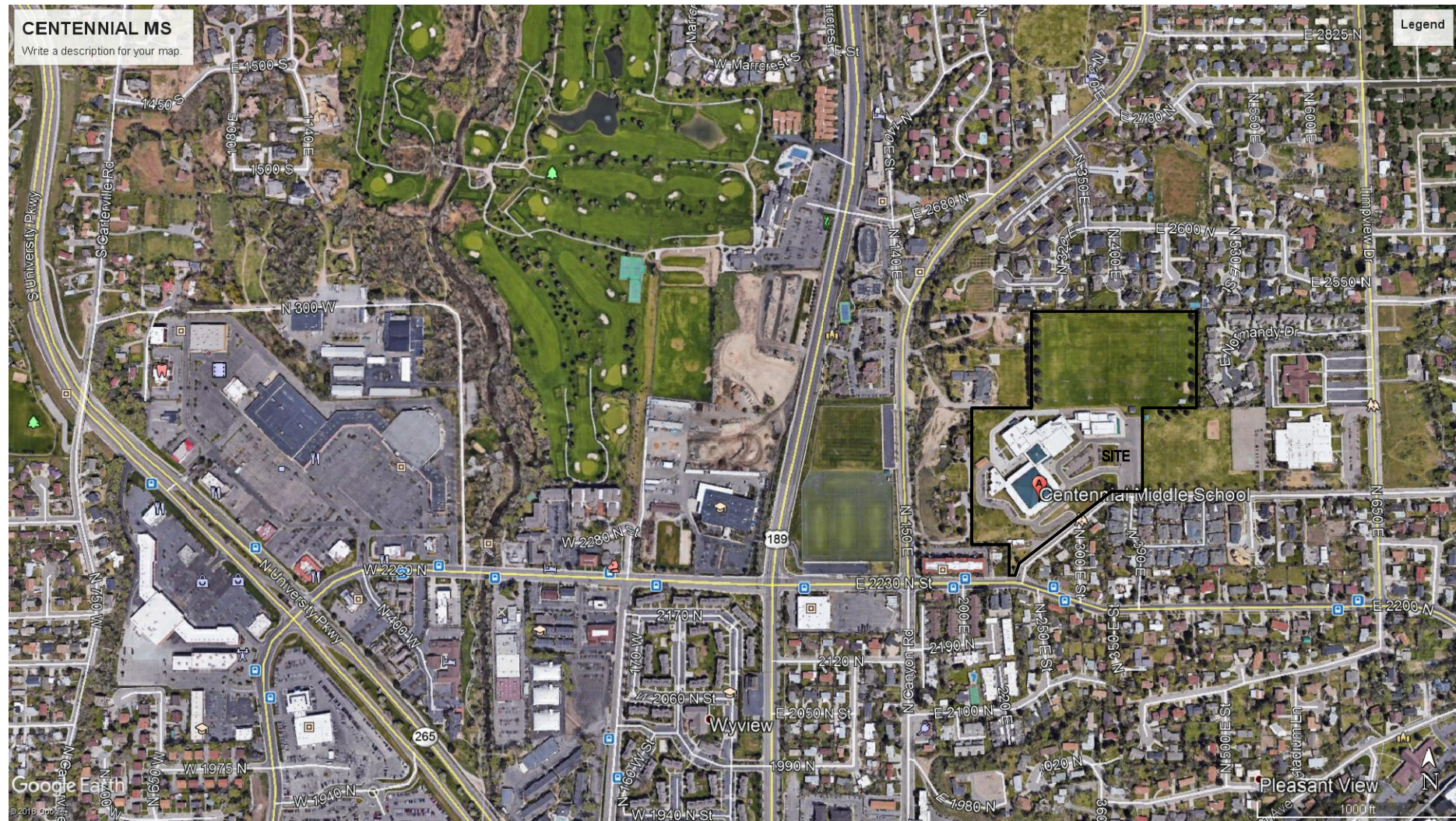
ABBREVIATIONS

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

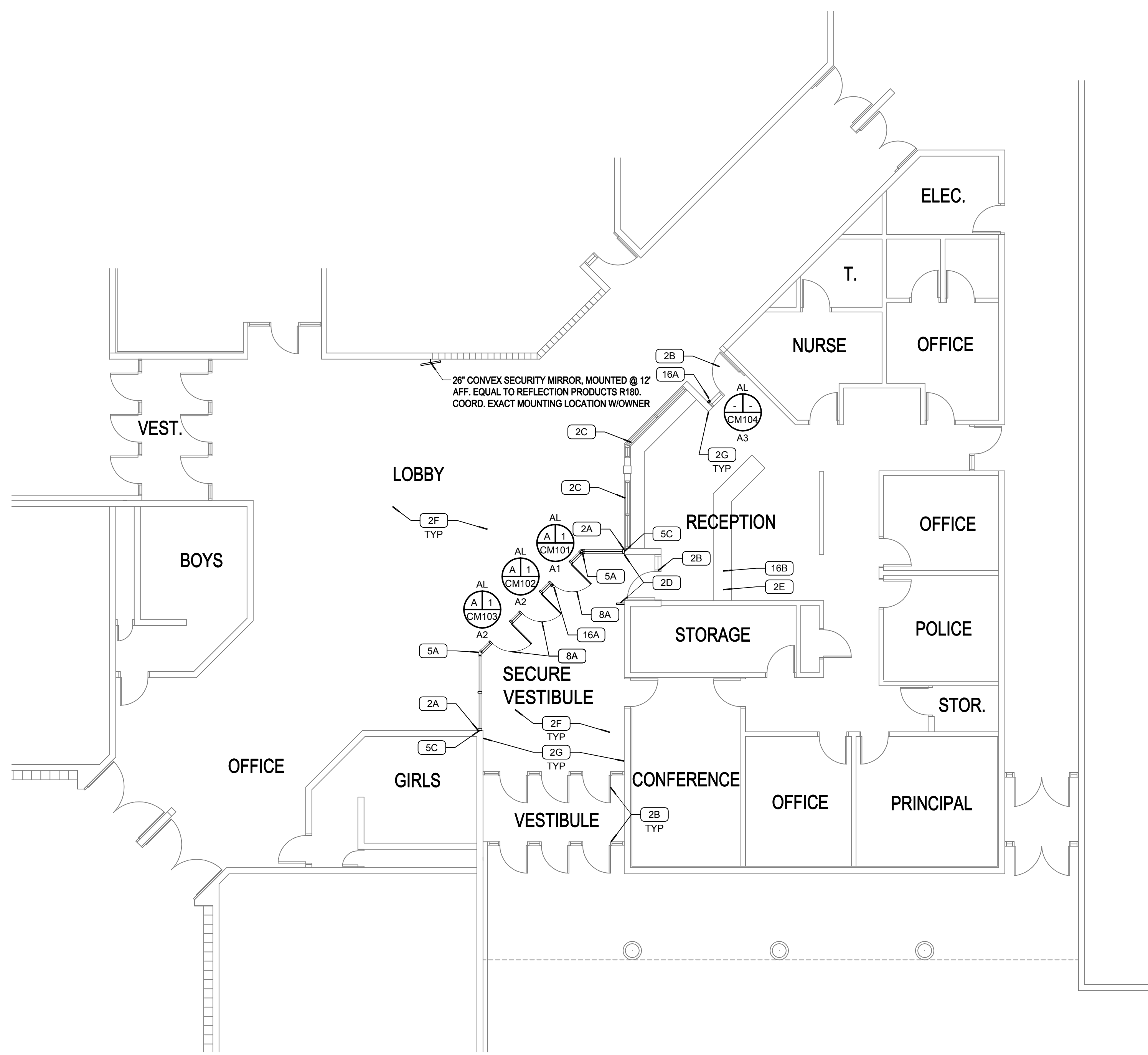
DRAWING INDEX

GENERAL	STRUCTURAL
G101 GENERAL INFORMATION	S001 STRUCTURAL FLOOR PLAN & DETAILS
ARCHITECTURAL	ELECTRICAL
A101 FLOOR PLAN & DETAILS	EG101 SYMBOLS, SCHEDULES & NOTES
A201 DOOR HARDWARE	EY101 LOBBY - SYSTEMS PLAN

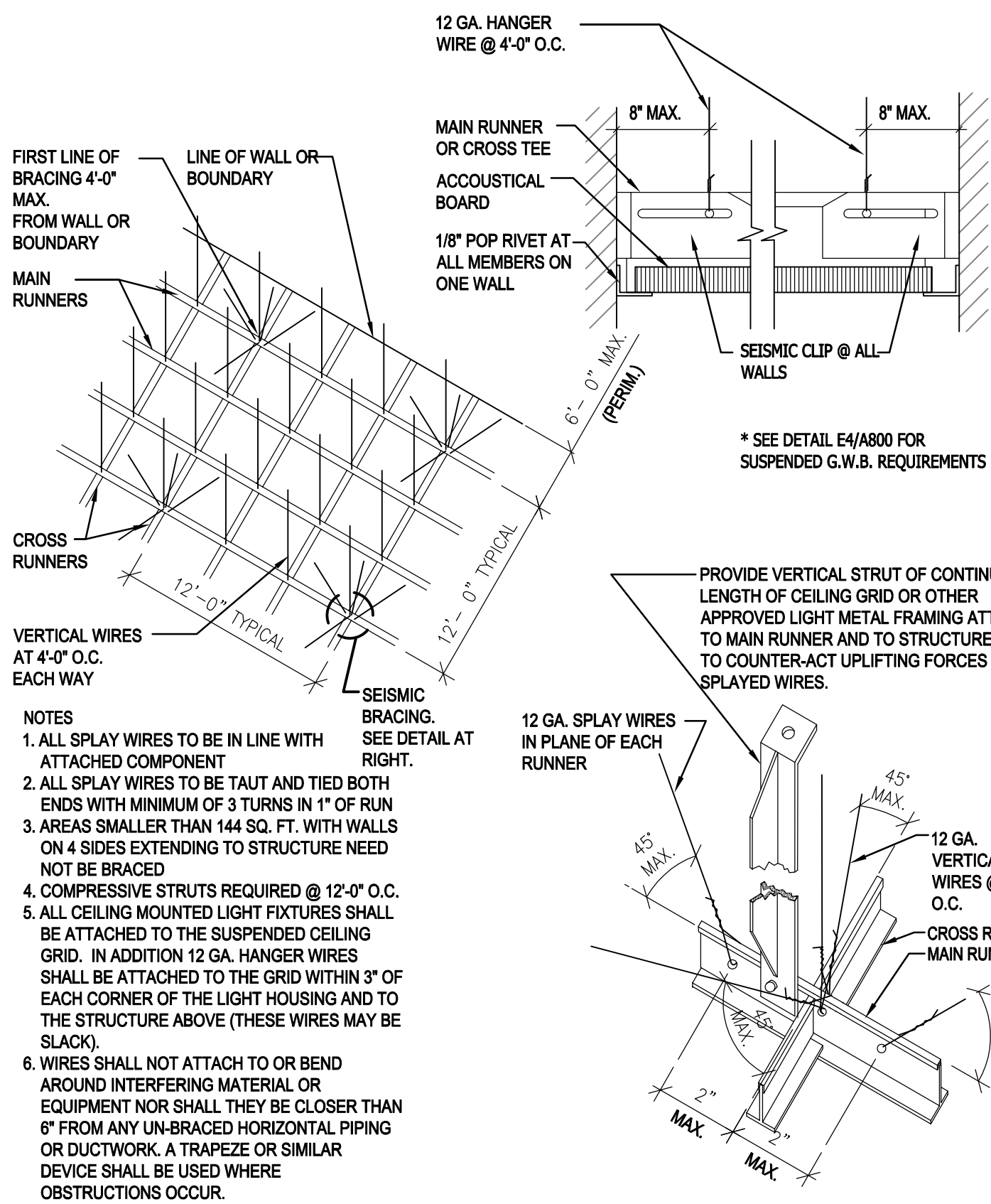
VICINITY MAP



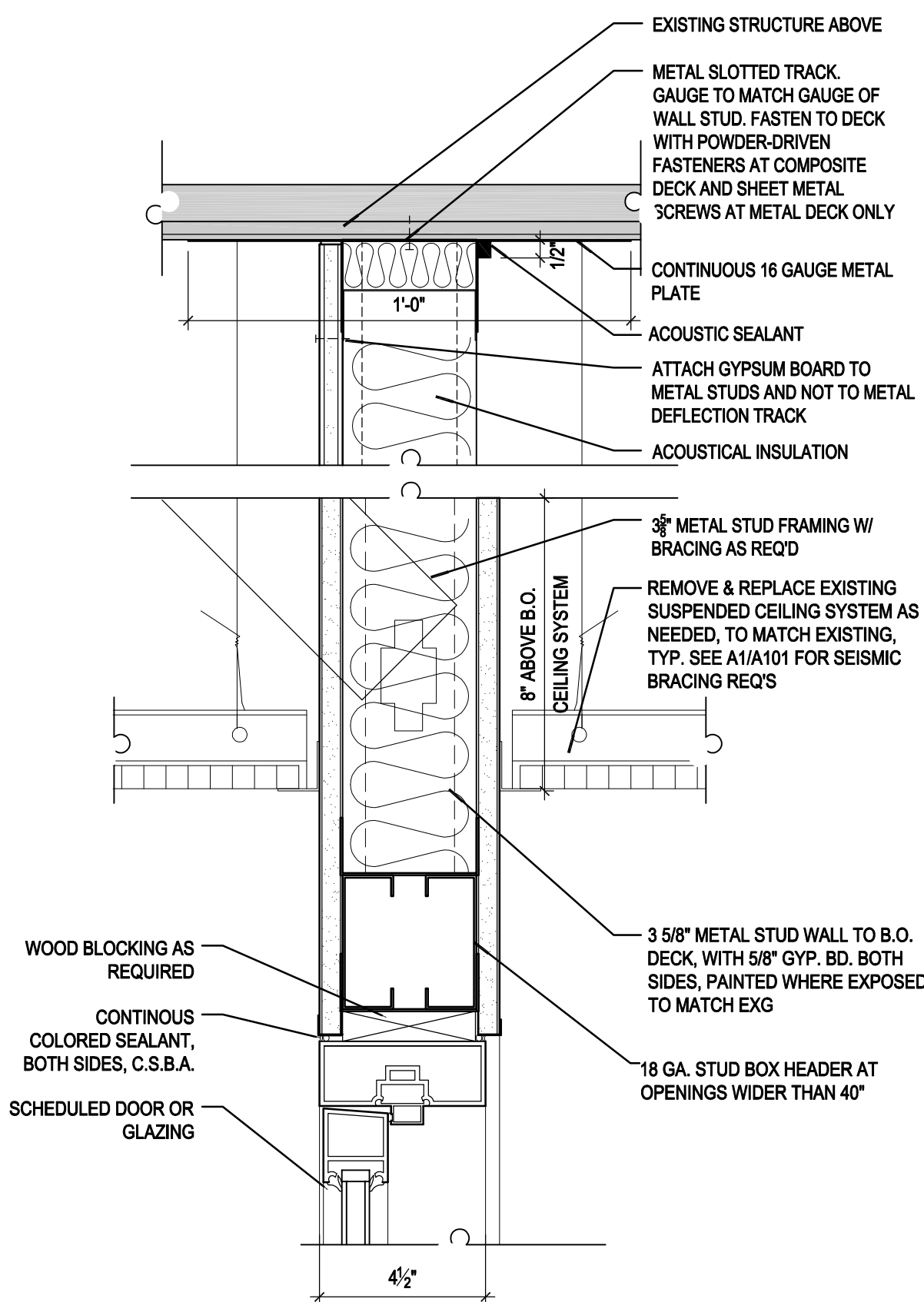
CONSTRUCTION DOCUMENTS
2018-08-13



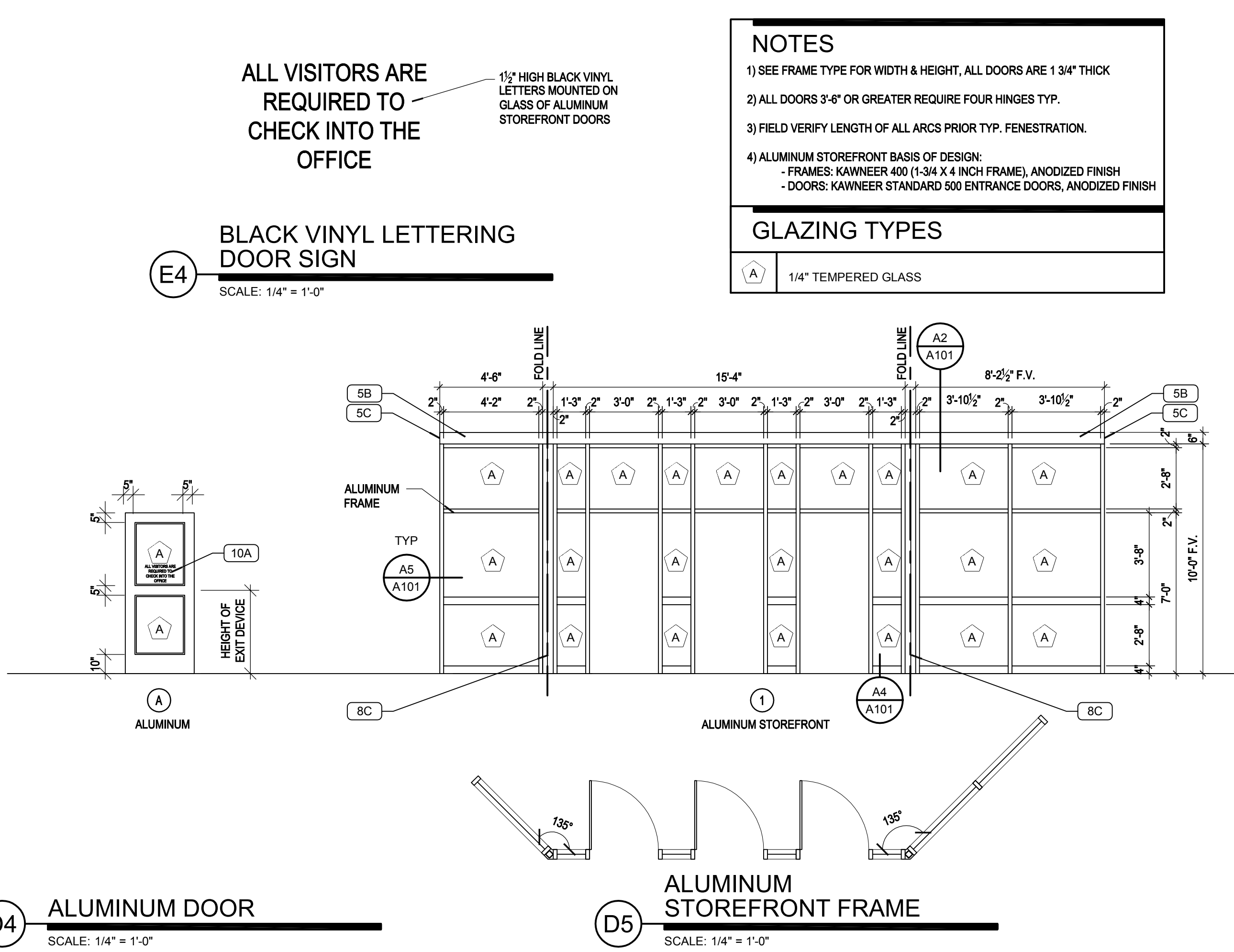
C2 FLOOR PLAN
SCALE: 1/8" = 1'-0"



A1 TYP. CEILING SUSPENSION & SEISMIC BRACING
SCALE: 6"=1'-0"

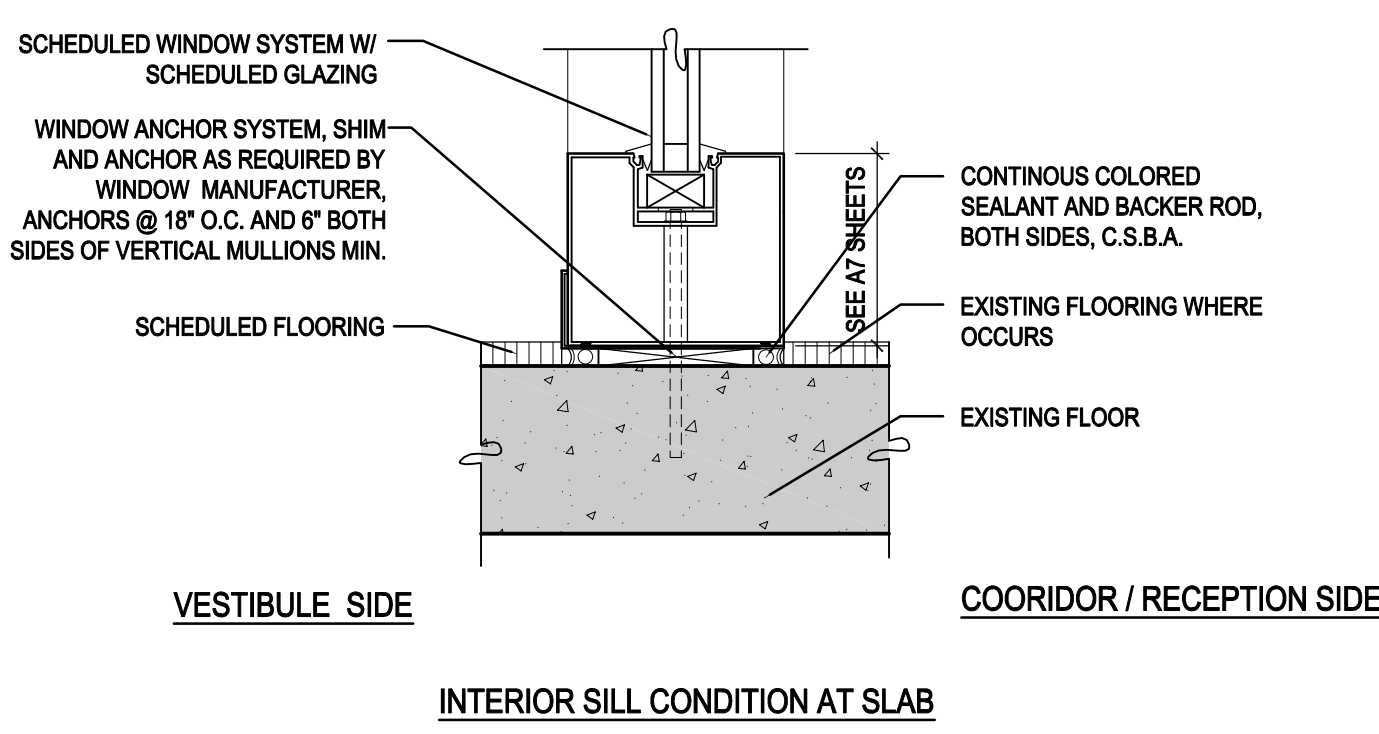


A2 ALUM. DOOR HEAD & JAMB DETAIL
SCALE: 3" = 1'-0"

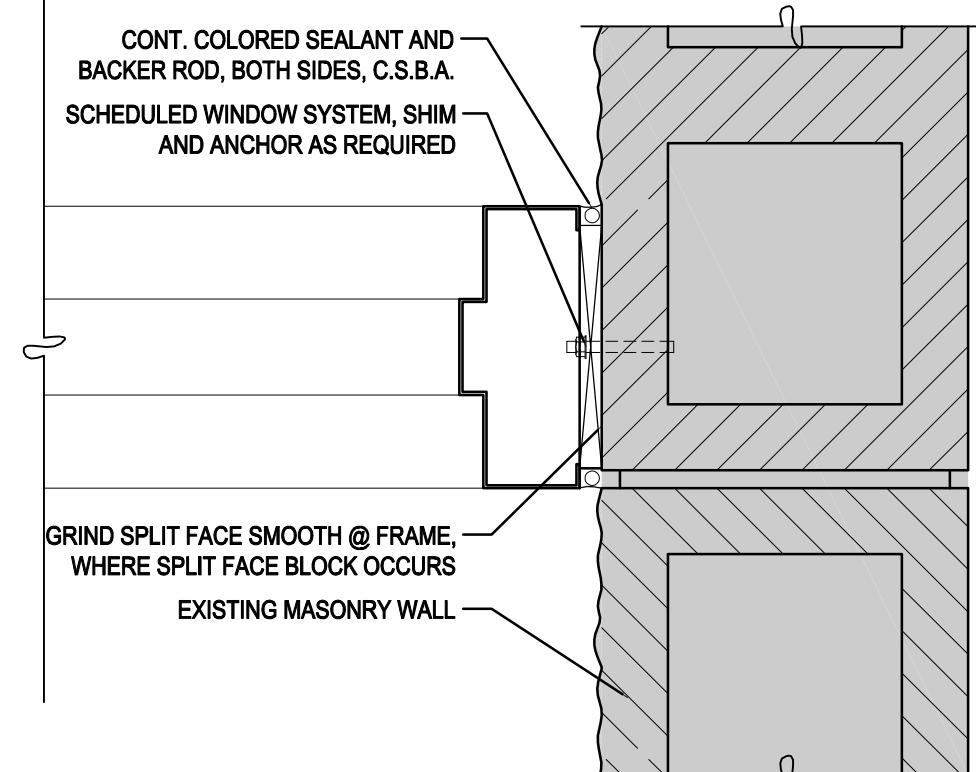


D4 ALUMINUM DOOR
SCALE: 1/4" = 1'-0"

D5 ALUMINUM STOREFRONT FRAME
SCALE: 1/4" = 1'-0"



A4 ALUMINUM WINDOW SILL TYP.
SCALE: 3" = 1'-0"



A5 ALUM. WINDOW TO PERPENDICULAR MASONRY
SCALE: 3"=1'-0"

SYMBOL LEGEND	
ROOM NAME ###	ROOM NAME ROOM NUMBER
FRAME MATERIAL TYPE DOOR TYPE BASE RAIL HARDWARE GROUP	 DOOR SYMBOL
GENERAL NOTES	
<p>1. THE CONTRACTOR MUST FIELD VERIFY ALL DIMENSIONS AND CONDITIONS INCLUDING EXISTING UTILITIES PRIOR TO BIDDING AS THE LOCATIONS SHOWN IN THE DOCUMENTS ARE APPROXIMATE. ALL VARIANCES NOT SHOWN IN THE DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO BID.</p> <p>2. CONTRACTOR TO COORDINATE WITH ELECTRICAL PLANS FOR LOCATIONS OF ALL EXISTING AND NEW EQUIPMENT, SYSTEMS, AND DEVICES.</p> <p>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.</p> <p>4. CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PROTECT THE EXISTING STRUCTURE, FINISHES, AND SITE ELEMENTS.</p> <p>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 CONTRACTOR'S EXPENSE.</p> <p>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.</p> <p>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.</p> <p>8. CONTRACTOR TO USE DUST CONTROL AND SOUND CONTROL IN ALL DEMOLITION AND CONSTRUCTION.</p> <p>9. ALL DOORS/FRAMES RECEIVING NEW HARDWARE TO BE PATCHED, REPAIRED, AND REFINISHED AS NEEDED.</p>	

KEYED NOTES	
DIVISION 2 - EXISTING CONDITIONS / DEMOLITION	
2A	GRIND SMOOTH EXISTING SPLIT FACE CMU BLOCK BAND WIDTH OF STOREFRONT SYSTEM
2B	EXISTING DOOR/WINDOW TO REMAIN, PROTECT IN PLACE
2C	EXISTING ALUMINUM WINDOW, PROTECT IN PLACE
2D	REMOVE & RELOCATE EXG SIGN AS SHOWN, PATCH/ REPAIR WALLS AS NEEDED
2E	EXISTING MILLWORK TO REMAIN, PROTECT IN PLACE
2F	EXISTING FLOOR COVERINGS TO REMAIN, PROTECT IN PLACE
2G	EXISTING WALL TO REMAIN, PROTECT IN PLACE, PATCH & REPAIR AS NEEDED
DIVISION 5 - METALS	
5A	HSS 3" x 3" COLUMN, SEE STRUCTURAL DRAWINGS
5B	HSS 8" x 5" HEADER BEAM W/ WELDED PLATES, SEE STRUCT. PAINTED WHERE EXPOSED, TO MATCH RED ACCENT ADJ.
5C	STEEL PLATE ANCHORED TO CMU WALL, SEE STRUCTURAL PAINTED WHERE EXPOSED, TO MATCH RED ACCENT ADJ.
DIVISION 8 - DOORS & WINDOWS	
8A	SCHEDULED DOOR & FRAME
8C	ALUMINUM BREAK METAL CLOSURE
DIVISION 10 - SPECIALTIES	
10A	SIGN, BLACK VINYL LETTERING, 1 1/2" HIGH LETTERS MOUNTED ON ALL NEW ALUMINUM DOORS.
DIVISION 16 - ELECTRICAL	
16A	CARD READER
16B	LOCK DOWN / DOOR RELEASE BUTTON, MOUNTED UNDER COUNTERTOP. SEE ELECTRICAL DRAWINGS FOR DETAILS

<div>SECTION 08 7100</div> <div>DOOR HARDWARE</div> <div>PART 1 - GENERAL</div> <div>1.1 RELATED DOCUMENTS</div> <div>A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.</div> <div>1.2 SUMMARY</div> <div>A. This Section includes the following:<div>1. Commercial door hardware for the following:<div>a. Swinging doors.</div><div>b. Cylinders for doors specified in other Sections.</div><div>c. Electrified door hardware.</div></div></div> <div>B. Related Sections include the following:<div>1. Section 08 4100 "Aluminum-Framed Entrances and Storefronts"</div><div>2. Division 26 Sections for connections to electrical power system and for low-voltage wiring work.</div><div>3. Division 28 Section "Access Control" for access control devices installed at door openings and provided as part of a security access system.</div><div>4. Division 28 Section "Intrusion Detection" for detection devices installed at door openings and provided as part of an intrusion detection system.</div></div> <div>C. Products furnished, but not installed, under this Section include the following:<div>Coordinating, purchasing, delivering, and scheduling remain requirements of this Section.</div><div>1. Thresholds, weather stripping, and cylinders for locks specified in other Sections.</div></div> <div>1.3 REFERENCED STANDARDS</div> <div>A. Provide hardware in accordance with the following standards in addition to those specified in Division 01 Section "References."<div>1. American National Standards Institute (ANSI), A117.1: Accessible and Usable Buildings and Facilities, edition as adopted by local Authority Having Jurisdiction (AHJ).</div><div>2. Builders Hardware Manufacturer's Association (BHMA)<div>a. ANSI/BHMA A156.3: Exit Devices, 2008 edition</div><div>b. ANSI/BHMA A156.4: Door Controls - Closers, 2008 edition</div><div>c. ANSI/BHMA A156.18: Materials and Finishes, 2006 edition</div></div><div>3. Door and Hardware Institute (DHI)<div>a. Recommended Locations for Architectural Hardware for Standard Steel Doors and Frames, 2004 edition</div><div>b. Installation Guide for Doors and Hardware, 1994 edition</div><div>c. Keying Systems and Nomenclature, 2003 edition</div><div>d. Sequence and Format for the Hardware Schedule, 2001 edition</div></div><div>4. National Fire Protection Association (NFPA)<div>a. NFPA 70: National Electrical Code, edition as adopted by local AHJ.</div></div></div>	<div>1.4 SUBMITTALS</div> <div>A. Product Data: Include construction and installation details, material descriptions, dimensions of individual components and profiles, and finishes.</div> <div>B. Shop Drawings: Details of electrified door hardware, including the following:<div>1. Wiring Diagrams: Power, signal, and control wiring. Include the following:<div>a. System schematic.</div><div>b. Point-to-point wiring diagram.</div><div>c. Riser diagram.</div><div>d. Elevation of each door.</div></div><div>2. Detail interface between electrified door hardware and fire alarm, access control, security, building control system.</div><div>3. Operation Narrative: Describe the operation of doors controlled by electrified door hardware.</div></div> <div>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.<div>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.</div></div> <div>D. Qualification Data: For Installer</div> <div>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.</div> <div>F. Maintenance Data: For each type of door hardware to include in maintenance manuals. Include final hardware and keying schedule.</div> <div>G. Warranty: Special warranty specified in this Section.</div> <div>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.<div>Format: Use same scheduling sequence and format and use same door numbers as in the Contract Documents.</div><div>1. Content: Include the following information:<div>a. Identification number, location, hand, fire rating, and material of each door and frame.</div><div>b. Type, style, function, size, quantity, and finish of each door hardware item.</div><div>c. Complete designations of every item required for each door or opening including name and manufacturer.</div><div>d. Fastenings and other pertinent information.</div><div>e. Location of each door hardware set, cross-referenced to Drawings, both on floor plans and in door and frame schedule.</div><div>f. Explanation of abbreviations, symbols, and codes contained in schedule.</div></div></div>	<div>g. Mounting locations for door hardware.</div> <div>h. Door and frame sizes and materials.</div> <div>i. Description of each electrified door hardware function, including location, sequence of operation, and interface with other building control systems.<div>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.</div><div>2. Final keying schedule for locks.</div><div>3. List of related door devices specified in other Sections for each door and frame.</div></div> <div>3. Submittal Schedule: 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.</div> <div>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.</div> <div>1.5 QUALITY ASSURANCE</div> <div>A. Installer Qualifications: An employer of workers trained and approved by lock manufacturer.<div>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.</div><div>2. Installer shall have warehousing facilities in Project's vicinity.</div><div>3. Scheduling Responsibility: Preparation of door hardware and keying schedule.</div><div>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.</div></div> <div>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.</div> <div>C. Source Limitations: Obtain each type and variety of door hardware from a single manufacturer, unless otherwise indicated.<div>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.</div></div> <div>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.</div>	<div>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:<div>1. Function of building, flow of traffic, purpose of each area, degree of security required, and plans for future expansion.</div><div>2. Preliminary key system schematic diagram.</div><div>3. Requirements for key control system.</div><div>4. Address for delivery of keys.</div></div> <div>F. Pre-installation Conference: Conduct conference at Project site to comply with requirements in Division 01 Section "Project Management and Coordination."</div> <div>1.6 DELIVERY, STORAGE, AND HANDLING</div> <div>A. Inventory door hardware on receipt and provide secure lock-up for door hardware delivered to Project site.</div> <div>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.</div> <div>C. Deliver keys to Owner's Representative by registered mail or overnight package service.</div> <div>1.7 COORDINATION</div> <div>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.</div> <div>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.</div> <div>C. Coordinate with aluminum entrance door supplier for door hardware installation.</div> <div>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.</div> <div>1.8 WARRANTY</div> <div>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.<div>1. Failures include, but are not limited to, the following:<div>a. Structural failures including excessive deflection, cracking, or breakage.</div><div>b. Faulty operation of operators and door hardware.</div><div>c. Deterioration of metals, metal finishes, and other materials beyond normal weathering and use.</div></div></div>	<div>2. Warranty Period: Three (3) years from date of Substantial Completion, except as follows:<div>a. Continuous Hinges: Lifetime of Building</div><div>b. Exit Devices: Three (3) years from date of Substantial Completion.</div><div>c. Manual Closers: Thirty (30) years from date of Substantial Completion.</div><div>d. Electrified Hardware Items: One (1) year from date of Substantial Completion.</div></div> <div>1.9 MAINTENANCE SERVICE</div> <div>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.</div> <div>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.</div> <div>PART 2 - PRODUCTS</div> <div>2.1 MANUFACTURERS</div> <div>A. Manufacturers: Subject to compliance with requirements of Contract Documents, provide products by one of the following:<div>1. Continuous Hinges: Ives, Stanley, Hager, Select, McKinney, Pemko</div><div>2. Operating Door Trim: Ives, Rockwood, Hager, Trimco</div><div>3. Cylinders and Cores: Schlage, Match Existing Keyway Owner's Standard</div><div>4. Electric Strikes: Von Duprin, Owner's Standard</div><div>5. Exit Devices: Von Duprin, Owner's Standard</div><div>6. Mechanical Door Closers: LCN, Owner's Standard</div><div>7. Overhead Stops and Holders: Glynn Johnson, Rixson, ABH</div></div> <div>B. Substitutions submitted in compliance with Division 01 Section "Substitutions" requirements will be reviewed for conformance to basis of design.</div> <div>2.2 SCHEDULED HARDWARE</div> <div>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:<div>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.</div></div>	<div>2.3 MATERIALS AND FABRICATION</div> <div>A. General<div>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.</div><div>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. 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.</div><div>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.</div></div> <div>B. Fasteners<div>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 other work as closely as possible including "prepared for paint" surfaces to receive painted finish.</div><div>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.</div></div> <div>2.4 CONTINUOUS HINGES</div> <div>A. Acceptable Products:<div>1. Ives: 112HD</div><div>2. Stanley: 661HD</div><div>3. Hager: 780-112HD</div><div>4. Select: SL11HD</div><div>5. McKinney: MCK-12HD</div><div>6. Pemko: FMSLFDH</div></div> <div>B. Requirements:<div>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 hinges as scheduled in each set. Geared hinges are to be UL 10C tested and approved for 90 minutes.</div></div> <div>2.5 ELECTRIC STRIKES</div> <div>A. Acceptable Products:<div>1. Von Duprin: 6300 Series</div><div>2. Match existing facility standard</div></div>	<div>B. Requirements:</div> <div>1. Provide electric strikes that are continuous duty rated without the use of external rectifiers.</div> <div>2. Provide electric strikes with function (fail safe, fail secure) and power requirements as scheduled.</div> <div>3. Where scheduled, provide electric strikes with monitor switches.</div> <div>2.6 CYLINDERS AND CORES</div> <div>A. Acceptable Products:<div>1. Schlage: Match Existing Keyway</div></div> <div>B. Requirements:</div> <div>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.<div>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.</div></div> <div>2. 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.</div> <div>3. 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:<div>a. Construction Control Keys: 2 each</div><div>b. Construction Change Keys: 12 each</div><div>c. Permanent Control Keys: 2 each</div><div>d. Split Key Voiding Keys: 2 each</div><div>e. Permanent Master Keys: 2 each</div><div>f. Permanent Change Keys: 4 per core</div></div> <div>2.7 EXIT DEVICES</div> <div>A. Acceptable Products:<div>1. Von Duprin: 98 Series</div><div>2. Match existing facility Owner's standard.</div></div> <div>B. Requirements:</div> <div>1. ANSI Grade: BHMA/ANSI A156.3, Grade 1.</div> <div>2. Device Construction:<div>a. Exit device(s) shall have a mechanism case constructed of extruded aluminum or wrought stainless steel, base plates 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 exit devices with no exposed fasteners or nuts visible through glass. Where required by stile width, provide narrow-stile type device.</div></div>	<div>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.</div> <div>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.</div> <div>d. Plastic or nylon used for the push pad, or parts in the dogging mechanism or latchbolt mechanism are unacceptable.</div> <div>e. Sound Dampening: Device shall be provided with factory-installed sound dampening materials.</div> <div>f. Provide device type, function, and trim style as indicated in hardware schedules.</div> <div>3. Where exit device(s) are provided for fire rated door, provide with fire listing and label indicating "Fire Exit Hardware." If device is mounted on wood doors, provide sex nuts and bolts.</div> <div>4. Provide shim kits, filler plates, and other accessories as required for each opening.</div> <div>5. Unless otherwise indicated in the sets, provide device with roller-type strike.</div> <div>6. Where scheduled, provide removable multibits by same manufacturer as provided exit devices. Provide multibit stabilizers, key removable option, strike preps, and fire rating as indicated in sets.</div> <div>2.8 MECHANICAL DOOR CLOSERS</div> <div>A. General:<div>1. Valves: Closers shall have separate valves for latch speed, main speed, and back check. Valves shall be staked to prevent accidental removal.</div><div>2. Provide the appropriate closer body, handing, and brackets to mount closer inside the building on the least-public side of the door.<div>a. Where closers are to be mounted parallel arm, provide with heavy duty, fully forged arms.</div><div>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.</div></div><div>3. Integrated Stop Closer Arms: Where a closer with integrated stop is required, provide the appropriate closer and arm as follows:<div>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.</div><div>b. Parallel arm with dead stop arm: Provide where door is obstructed from opening to 95 degrees and requires a parallel arm mount closer.</div><div>c. Regular arm with push side surface-mounted overhead stop: Provide where door closer should mount on pull side of door.</div></div><div>4. Hold Open Arms: Provide closer arms with mechanical hold-opens as scheduled.</div><div>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.</div></div>	<div>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 corrode floor or floor covering fires. Upon request, provide data indicating thermal properties of fluid.</div> <div>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.</div> <div>B. Heavy Duty Door Closers:<div>1. Acceptable Products:<div>a. LCN: 4040XP</div><div>b. Match existing facility Owner's standard.</div></div><div>2. Requirements:<div>a. ANSI Grade: BHMA/ANSI A156.4, Grade 1.</div><div>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.</div><div>c. Provide closers with spring size adjustment dial for ease of adjusting.</div></div></div>	<div>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.</div> <div>D. The designations used in schedules and elsewhere to indicate hardware finishes are the industry-recognized standard commercial finishes, except as otherwise noted:<div>1. Brushed Chrome and/or Stainless Steel Appearance <div>a. Brushed Stainless Steel, no coating: ANSI 630.</div><div>b. Sain Chrome, Clear Coated: ANSI 658, ANSI 652.</div><div>c. Powder Coated Aluminum finish: ANSI 689.</div><div>d. Saddle and Pine: Thresholds: Mill Aluminum finish.</div><div>e. Weatherstrip and Gasket: Clear Anodized Aluminum finish.</div></div></div>	<div>PSD CENTENNIAL MS SECURITY UPGRADE DOOR HARDWARE 03 AUG 2018 - VCBO 18375 SECTION 08 7100 - PAGE 1</div>	<div>PSD CENTENNIAL MS SECURITY UPGRADE DOOR HARDWARE 03 AUG 2018 - VCBO 18375 SECTION 08 7100 - PAGE 2</div>	<div>PSD CENTENNIAL MS SECURITY UPGRADE DOOR HARDWARE 03 AUG 2018 - VCBO 18375 SECTION 08 7100 - PAGE 3</div>	<div>PSD CENTENNIAL MS SECURITY UPGRADE DOOR HARDWARE 03 AUG 2018 - VCBO 18375 SECTION 08 7100 - PAGE 4</div>	<div>PSD CENTENNIAL MS SECURITY UPGRADE DOOR HARDWARE 03 AUG 2018 - VCBO 18375 SECTION 08 7100 - PAGE 5</div>	<div>PSD CENTENNIAL MS SECURITY UPGRADE DOOR HARDWARE 03 AUG 2018 - VCBO 18375 SECTION 08 7100 - PAGE 6</div>
<div>HW SET NO: 01</div> <div>DOOR NUMBER: (INCLUDES BUT IS NOT LIMITED TO THE FOLLOWING DOORS)</div> <div>CM104</div> <div>EACH TO HAVE:</div> <div>1 EA CLASSROOM LOCK L9070L 06B 626 SCH</div> <div>1 EA PROVIDED BY OWNER PERMANENT CYL CORE B/O</div> <div>1 EA MORTISE CYLINDER 20-059 626 SCH</div> <div>1 EA HOUSING</div> <div>1 EA ELECTRIC STRIKE 6212 FSE ✓ 630 VON</div> <div>1 EA REMOTE SWITCH BY DIV 28 ✓ B/O</div> <div>KEY SIDE OF LOCK TO BE LOCATED IN OFFICE. INGRESS FROM CORRIDOR ALWAYS ALLOWED. ELECTRIC STRIKE MAY BE REMOTELY RELEASED FROM RECEPTION. PATCH, REPAIR, REFINISH DOOR AND FRAME AS REQUIRED. REPLACE ANY ADDITIONAL HARDWARE IF DAMAGED.</div>	<div>1 EA SURFACE CLOSER 4040XP EDW/R2G MC 689 LCN</div> <div>1 EA PA MOUNTING PLATE 4040-18PA 689 LCN</div> <div>1 EA 5TH SCREW SUPPORT 4040XP-30 689 LCN</div> <div>1 SET PERIMETER SEALS DOOR MFG STD B/O</div> <div>1 EA DOOR CONTACT 679-05HM BLK SCE</div> <div>EXIT DEVICE MAY BE MECHANICALLY DOGGED BY CYLINDERS FOR PUSH/PULL OPERATION. DOOR POSITION IS MONITORED THROUGH ACCESS CONTROL SYSTEM.</div>	<div>PSD CENTENNIAL MS SECURITY UPGRADE DOOR HARDWARE 03 AUG 2018 - VCBO 18375 SECTION 08 7100 - PAGE 8</div>	<div>PSD CENTENNIAL MS SECURITY UPGRADE DOOR HARDWARE 03 AUG 2018 - VCBO 18375 SECTION 08 7100 - PAGE 9</div>	<div>PSD CENTENNIAL MS SECURITY UPGRADE DOOR HARDWARE 03 AUG 2018 - VCBO 18375 SECTION 08 7100 - PAGE 10</div>	<div>PSD CENTENNIAL MS SECURITY UPGRADE DOOR HARDWARE 03 AUG 2018 - VCBO 18375 SECTION 08 7100 - PAGE 11</div>	<div>PSD CENTENNIAL MS SECURITY UPGRADE DOOR HARDWARE 03 AUG 2018 - VCBO 18375 SECTION 08 7100 - PAGE 12</div>									
<div>HW SET NO: A1</div> <div>DOOR NUMBER: (INCLUDES BUT IS NOT LIMITED TO THE FOLLOWING DOORS)</div> <div>CM101</div> <div>EACH TO HAVE:</div> <div>1 EA CONT. HINGE 112HD 628 IVE</div> <div>1 EA PANIC HARDWARE LD-98-NL-OP-110MD 626 VON</div> <div>1 EA RIM CYLINDER 20-057 626 SCH</div> <div>1 EA ELECTRIC STRIKE 6300 FSE ✓ 630 VON</div> <div>1 EA 90 DEG OFFSET PULL 8190HD 10" 630 IVE</div> <div>1 EA OH STOP & HOLDER 100H ADJ 630 GLY</div> <div>1 EA SURFACE CLOSER 4040XP EDW/R2G MC 689 LCN</div> <div>1 EA PA MOUNTING PLATE 4040-18PA 689 LCN</div> <div>1 EA 5TH SCREW SUPPORT 4040XP-30 689 LCN</div> <div>1 SET PERIMETER SEALS DOOR MFG STD B/O</div> <div>1 EA CREDENTIAL READER BY DIVISION 28 ✓ B/O</div> <div>1 EA DOOR CONTACT 679-05HM ✓ BLK SCE</div> <div>1 EA REMOTE SWITCH BY DIV 28 ✓ B/O</div> <div>CARD IN. USER PRESENTS CREDENTIAL. ELECTRIC STRIKE KEEPER RELEASES. USER OPENS DOOR TO ENTER. DOOR POSITION IS MONITORED THROUGH ACCESS CONTROL SYSTEM. ELECTRIC STRIKE MAY BE REMOTELY RELEASED FROM RECEPTION.</div>	<div>1 EA SURFACE CLOSER 4040XP EDW/R2G MC 689 LCN</div> <div>1 EA PA MOUNTING PLATE 4040-18PA 689 LCN</div> <div>1 EA 5TH SCREW SUPPORT 4040XP-30 689 LCN</div> <div>1 SET PERIMETER SEALS DOOR MFG STD B/O</div> <div>1 EA DOOR CONTACT 679-05HM BLK SCE</div> <div>EXIT DEVICE MAY BE MECHANICALLY DOGGED BY CYLINDERS FOR PUSH/PULL OPERATION. DOOR POSITION IS MONITORED THROUGH ACCESS CONTROL SYSTEM.</div>	<div>PSD CENTENNIAL MS SECURITY UPGRADE DOOR HARDWARE 03 AUG 2018 - VCBO 18375 SECTION 08 7100 - PAGE 13</div>	<div>PSD CENTENNIAL MS SECURITY UPGRADE DOOR HARDWARE 03 AUG 2018 - VCBO 18375 SECTION 08 7100 - PAGE 14</div>	<div>PSD CENTENNIAL MS SECURITY UPGRADE DOOR HARDWARE 03 AUG 2018 - VCBO 18375 SECTION 08 7100 - PAGE 15</div>	<div>PSD CENTENNIAL MS SECURITY UPGRADE DOOR HARDWARE 03 AUG 2018 - VCBO 18375 SECTION 08 7100 - PAGE 16</div>	<div>PSD CENTENNIAL MS SECURITY UPGRADE DOOR HARDWARE 03 AUG 2018 - VCBO 18375 SECTION 08 7100 - PAGE 17</div>	<div>PSD CENTENNIAL MS SECURITY UPGRADE DOOR HARDWARE 03 AUG 2018 - VCBO 18375 SECTION 08 7100 - PAGE 18</div>								

STRUCTURAL NOTES

STRUCTURAL DESIGN CRITERIA

RISK CATEGORY: IIII
LOAD(S):
DEAD LOAD: DL = 20 PSF
LIVE LOAD(S): LL = 20 PSF
WIND LOAD: WL = 5 PSF (INTERIOR)
SEISMIC:
PROCEDURE: EQUIVALENT LATERAL FORCE
SITE CLASS: D
IMPORTANCE FACTOR: I = 1.0
SEISMIC DESIGN CATEGORY: D
SPECTRAL RESPONSE:
ACCELERATIONS: S_s = 1.201
S₁ = 0.449
S_{D1} = 0.816
S_{D1} = 0.464
SPECTRAL RESPONSE COEF: SDS = 0.816
SD1 = 0.464

SOILS:
NET ALLOWABLE SOIL PRESSURE = 1500 PSF, TO BE VERIFIED.

GENERAL

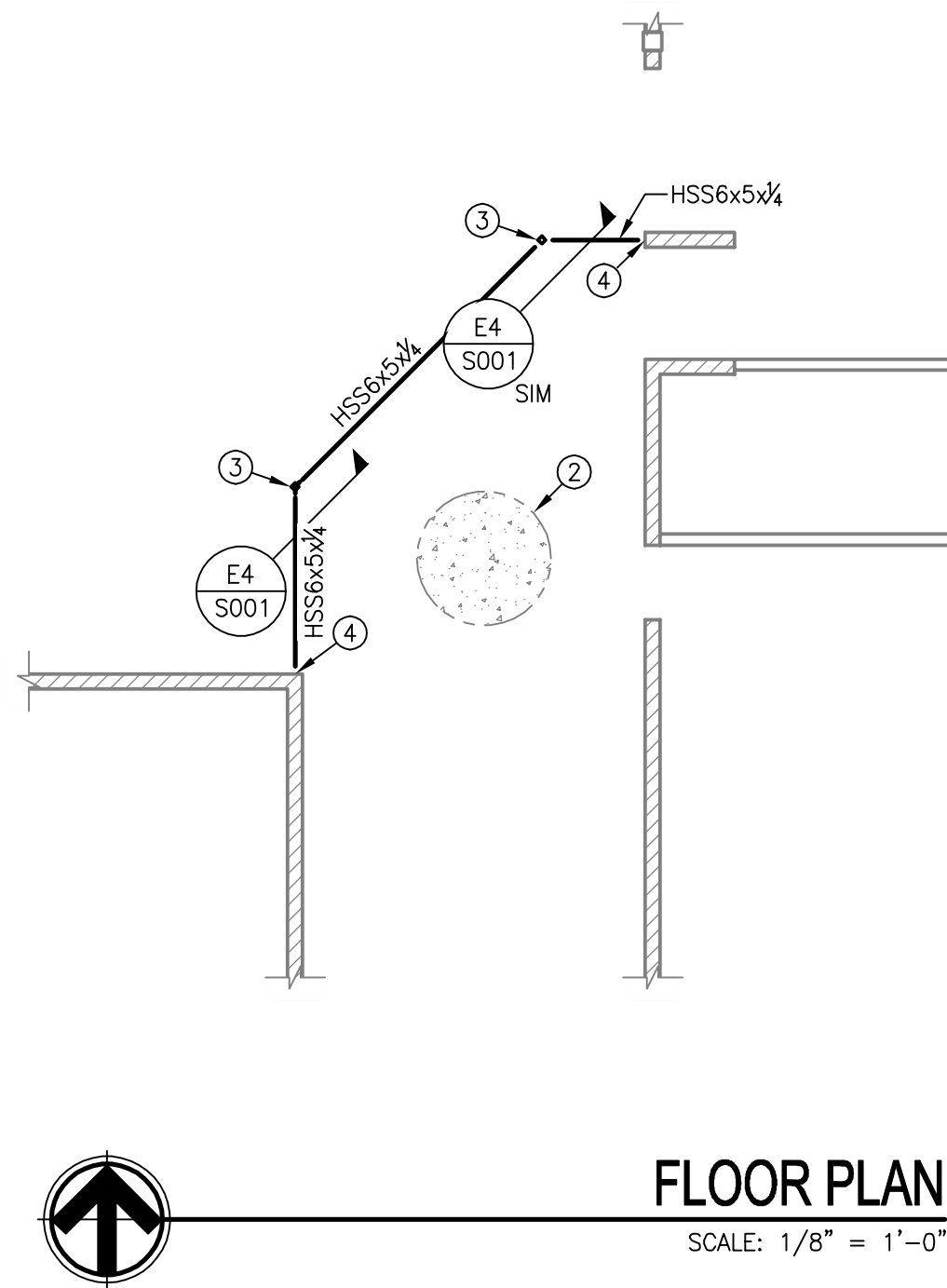
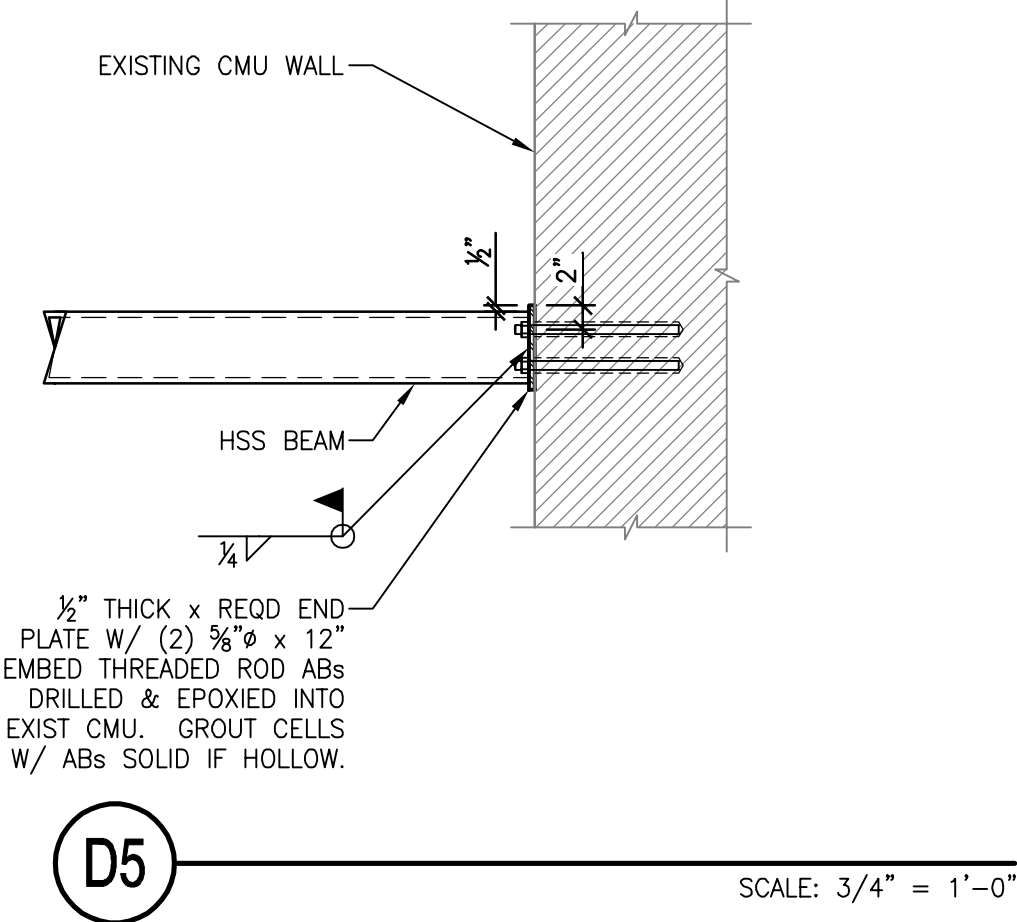
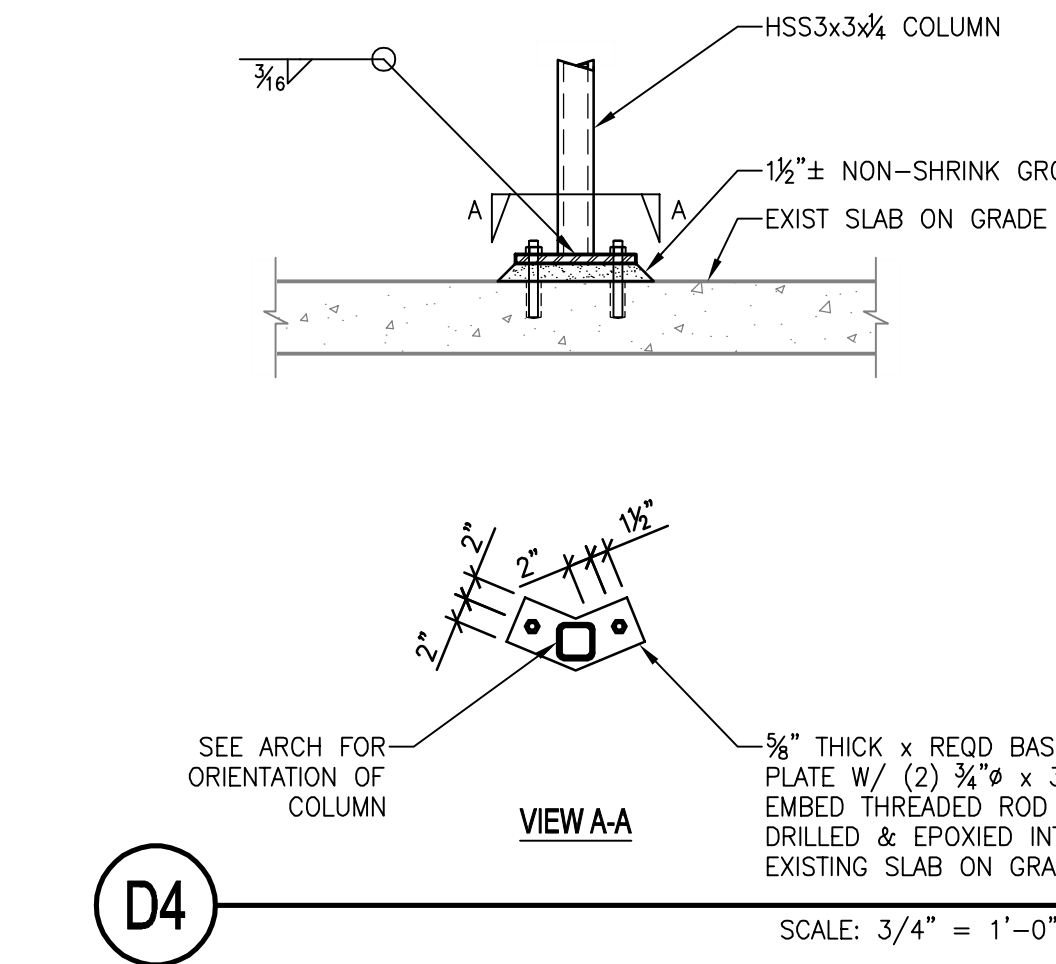
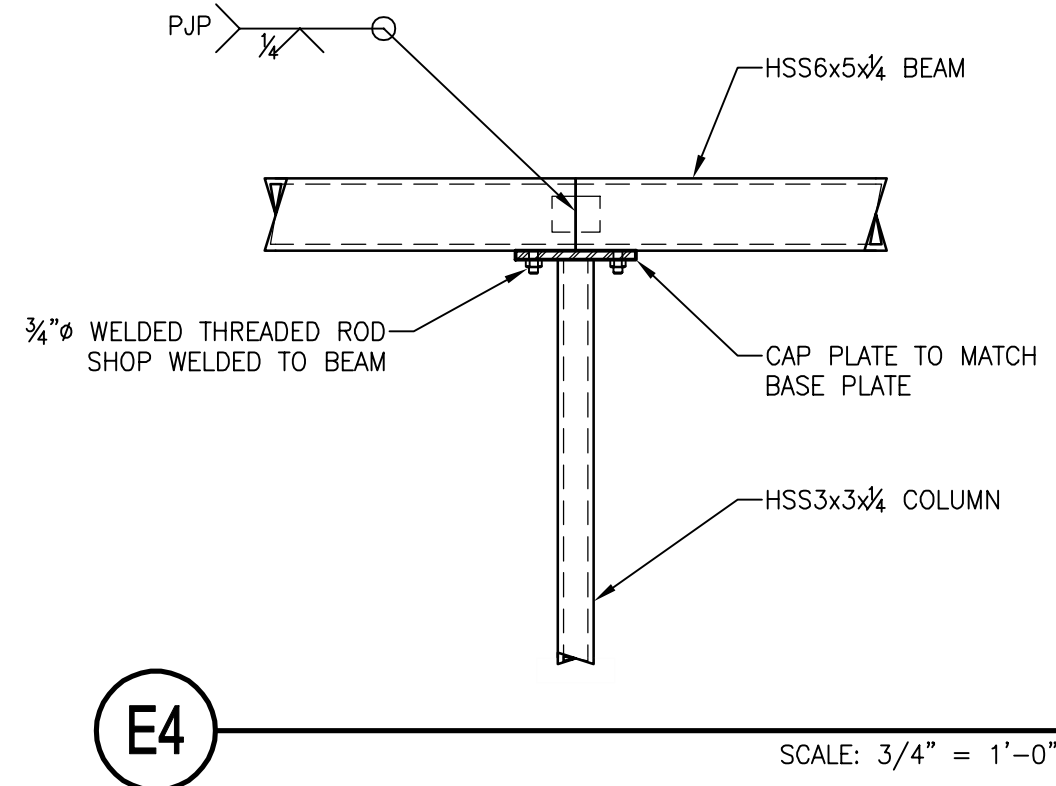
- ALL DETAILS, SECTIONS, AND NOTES SHOWN ON THE DRAWINGS ARE INTENDED TO BE TYPICAL AND SHALL APPLY TO SIMILAR SITUATIONS ELSEWHERE UNLESS NOTED OR SHOWN OTHERWISE. NOTES AND DETAILS ON DRAWINGS SHALL TAKE PRECEDENCE OVER THESE GENERAL NOTES. GENERAL NOTES SHALL TAKE PRECEDENCE OVER THE SPECIFICATIONS.
- REFER TO THE SPECIFICATIONS FOR INFORMATION NOT COVERED BY THESE GENERAL NOTES OR THE STRUCTURAL DRAWINGS.
- ALL DESIGN, CONSTRUCTION, AND INSPECTION SHALL BE IN CONFORMANCE WITH THE 2012 INTERNATIONAL BUILDING CODE.
- THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AT THE SITE.
- ALL OMISSIONS OR CONFLICTS BETWEEN THE VARIOUS ELEMENTS OF THE WORKING DRAWINGS AND/OR SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND/OR STRUCTURAL ENGINEER BEFORE PROCEEDING WITH ANY WORK INVOLVED.
- DRAWINGS INDICATE THE FINISHED PRODUCT. THEY DO NOT INDICATE A METHOD OF CONSTRUCTION. CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PROTECT THE STRUCTURE DURING CONSTRUCTION. SUCH PRECAUTIONS SHALL INCLUDE, BUT NOT BE LIMITED TO, BRACING, SHORING FOR CONSTRUCTION EQUIPMENT, ETC.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPENSATING THE OWNER FOR ANY CHANGES MADE AS A RESULT OF A DEVIATION FROM THE CONTRACT DOCUMENTS. DEVIATION FROM THE SPECIFICATIONS, FAULTY MATERIALS, OR FAULTY WORKMANSHIP.
- CONTRACTOR SHALL BE RESPONSIBLE FOR SAFETY AND PROTECTION WITHIN AND ADJACENT TO THE JOB SITE.
- DURING AND AFTER CONSTRUCTION THE CONTRACTOR AND/OR OWNER SHALL KEEP LOADS ON THE STRUCTURE WITHIN THE LIMITS OF THE DESIGN LOADS.
- SIZES, LOCATIONS, AND ANCHORAGES OF EQUIPMENT SHALL BE VERIFIED IN THE FIELD WITH EQUIPMENT MANUFACTURERS (SUPPLIERS) PRIOR TO PLACING CONCRETE OR FABRICATING STEEL.

STRUCTURAL STEEL

- ALL STRUCTURAL STEEL AND STRUCTURAL STEEL WORK SHALL COMPLY WITH BOTH THE AISC "MANUAL OF STEEL CONSTRUCTION" CONTAINING THE SPECIFICATIONS FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL BUILDINGS, INCLUDING THE "CODE OF STANDARD PRACTICES" (LATEST EDITION), AND WITH THE IBC 2012 EDITION.
- ALL WIDE FLANGE STRUCTURAL STEEL SHALL BE ASTM A992 AND ALL MISCELLANEOUS SHAPES SHALL BE ASTM A36, UNLESS NOTED OTHERWISE.
- STRUCTURAL STEEL TUBING SHALL CONFORM TO ASTM A500 GRADE B; YIELD STRESS = 46 KSI.
- USE A325 BOLTS FOR STEEL TO STEEL CONNECTIONS, F1554 GR36 FOR ANCHOR BOLTS, AND A307 BOLTS FOR ALL OTHER CONNECTIONS (UNLESS SPECIFIED OTHERWISE ON DRAWINGS). USE 3/4" DIAMETER MINIMUM.
- PRIOR TO FABRICATION AND ERECTION, SHOP DRAWINGS FOR ALL STEEL ITEMS SHALL BE REVIEWED BY THE STRUCTURAL ENGINEER. THE CONTRACTOR SHALL VERIFY ALL SHOP DRAWING DIMENSIONS WITH STRUCTURAL AND ARCHITECTURAL PLANS AND DETAILS.
- ALL WELDS SHALL BE MADE WITH E70XX ELECTRODES AND BY WELDERS CERTIFIED BY AWS STANDARDS WITHIN THE PAST 12 MONTHS; PROVIDE WRITTEN CERTIFICATION IF REQUESTED. ALL WELDS SHALL HAVE A MINIMUM CHARPY V-NOTCH TOUGHNESS OF 20 FOOT-POUND (27.1N-m) AT 0° F UNLESS NOTED OTHERWISE ON THE PLANS.
- ALL HIGH-STRENGTH BOLTS SHALL BE TIGHTENED TO THE APPROPRIATE MINIMUM BOLT TENSION IN ACCORDANCE WITH AISC "SPECIFICATIONS FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS. THE PREFERRED METHOD OF TIGHTENING IS BY USE OF "TWIST OFF TYPE TENSION CONTROL BOLT ASSEMBLIES." "DIRECT TENSION INDICATOR" AND THE TURN-OF-NUT METHOD MAY ALSO BE USED.
- ALL BEAM CONNECTIONS, NOT SHOWN TO BE MOMENT CONNECTIONS AND NOT DETAILED OTHERWISE, SHALL BE MADE USING AISC STEEL CONSTRUCTION MANUAL (14TH EDITION) TABLE 10-10 "SINGLE PLATE CONNECTIONS" WITH THE MAXIMUM NUMBER OF ROWS SHOWN FOR THAT BEAM.

DRILL & EPOXY

- USE HILTI RE 500 SD ADHESIVE SYSTEM OR EQUIVALENT FOR CONCRETE AND SOLID GROUTED MASONRY CONNECTIONS.
- TEN PERCENT OF ALL ANCHORS PLACED SHALL BE RANDOMLY TESTED TO 100% OF MANUFACTURER'S SPECIFIED ALLOWABLE LOAD. IF ANY ANCHOR FAILS IT SHALL BE REPLACED AND RETESTED AT NO ADDITIONAL COST TO THE OWNER. IF AN ANCHOR FAILS, 100% OF ALL OTHER ANCHORS INSTALLED BY THAT SAME CREW SHALL BE TESTED AT NO ADDITIONAL COST TO THE OWNER.



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	M.O.	MANU LUS ONLY
CB	CIRCUIT BREAKER	N.C.	NORMALLY CLOSED
CKT	CIRCUIT	N.I.C.	NIGHT LIGHT
C.O.'S	CONVENIENCE OUTLETS	N.L.	NIGHT LIGHT
CU	COPPER	N.O.	NORMALLY OPEN
ELEC	ELECTRICAL	O.C.	ON CENTER(S)
EA	EACH	O.P.	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
EWIC	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 IS 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	
	TIME CLOCK	+60"	
	EMERGENCY LIGHT FIXTURE	AS NOTED	
	ELECTRIC PHOTOCCELL	N/A	MOUNT ON ROOF FACING NORTH SKY
	LIGHT FIXTURE CALLOUT (LETTER DENOTES FIXTURE TYPE)		

GENERAL PROJECT NOTES:

- 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.
- 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.
- 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:
 - INSULATED THROAT CONNECTORS OR PLASTIC BUSHINGS SHALL BE UTILIZED FOR ALL CONDUIT SIZES USED ON THIS PROJECT.
 - THE CONTRACTOR SHALL LABEL ALL ELECTRICAL EQUIPMENT AS IT IS CALLED OUT IN THE SPECIFICATIONS.
 - THE CONTRACTOR SHALL PROVIDE SEISMIC SUPPORT AND BRACING FOR ALL ELECTRICAL EQUIPMENT AS REQUIRED BY LOCAL AND NATIONAL CODE.
- THE CONTRACTOR IS RESPONSIBLE TO ENSURE THE WIRE IS LARGE ENOUGH FOR VOLTAGE DROP.
- 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 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 OWNERS REPRESENTATIVE AND THE ENGINEER FOR CLARIFICATION.
- 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 COMPLETE AND OPERATING SYSTEM.
- 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
	MOTION DETECTOR	CEILING	SUBSCRIPT DENOTES DEGREES OF MONITORED AREA
	KEYPAD	+48"	
	OVERHEAD MAGNETIC CONTACT DOOR SWITCH	DOOR	
	MAGNETIC CONTACT DOOR SWITCH	DOOR	
	GLASS BREAK DETECTOR	CEILING	
	SIREN	+60"	

ACCESS CONTROL SYMBOLS			
SYMBOL	DESCRIPTION	MOUNTING	REMARKS
	REQUEST-TO-EXIT MOTION DETECTOR	CEILING	
	ELECTROMAGNETIC DOOR STRIKE	DOOR	
	MAGNETIC DOOR CONTACT SWITCH	DOOR	
	MAGNETIC LOCK	DOOR	
	DURESS PUSH-BUTTON	BELOW DESK	
	LOCK DOWN PUSH-BUTTON	DESK	
	DOOR CONTROL PUSH-BUTTON	DESK	
	PROXIMITY CARD READER	+48"	
	WIRELESS ACCESS PANEL INTERFACE MODULE	ABOVE CLG	
	PROXIMITY CARD READER / KEYPAD	+48"	
	MAGNETIC STRIP CARD READER	+48"	

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

GEAR AND CONTROL SYMBOLS			
SYMBOL	DESCRIPTION	MOUNTING	REMARKS
	MANUAL STARTER WITH THERMAL OVERLOAD(S)	AT EQUIPMENT	
	ELECTRIC MOTOR		
	NON-FUSED DISCONNECT SWITCH	TOP AT +48"-72"	
	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"	
	FLOOR OR WALL AS SPECIFIED	FLOOR OR WALL AS SPECIFIED	TOP AT +72" IF WALL MOUNTED
	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', 'MCP')
	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"	
	HVAC THERMOSTAT	+60"	PROVIDED BY DIVISION 15000 U.N.O.
	HAND - OFF - AUTO SWITCH	+60"	
	GROUND FAULT PROTECTION		

WIRING DEVICE SYMBOLS			
SYMBOL	DESCRIPTION	MOUNTING	REMARKS
	SINGLE-POLE TOGGLE SWITCH	+48"	
	SINGLE-POLE TOGGLE SWITCH	+48"	SUBSCRIPT KEYS SWITCH TO FIXTURES CONTROLLED.
	DOUBLE-POLE TOGGLE SWITCH	+48"	
	THREE-WAY TOGGLE SWITCH	+48"	
	FOUR-WAY TOGGLE SWITCH	+48"	
	KEY-OPERATED SINGLE-POLE TOGGLE SWITCH	+48"	
	SINGLE-POLE TOGGLE SWITCH WITH PILOT LIGHT	+48"	
	DIMMER SWITCH	+48"	RATE DIMMER SWITCH FOR MAXIMUM POSSIBLE WATTAGE
	TIMER SWITCH	+48"	
	(2) SINGLE-POLE TOGGLE SWITCH	+48"	DUAL LEVEL SWITCH OUTBOARD LAMPS SEPARATELY FROM INBOARD LAMPS.
	LOW VOLTAGE MOMENTARY CONTACT SWITCH	+48"	
	3-POSITION MOMENTARY CONTACT SWITCH	+48"	REFER TO DETAIL UP-ON, CENTER-NEUTRAL, DOWN-OFF
	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 14-30R 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"	
	MULTI-OUTLET ASSEMBLY	+4" ABOVE BACKSPLASH	
	POWER / TELEPHONE POLE	FLOOR/CEILING	
	CORD DROP WITH DUPLEX RECEPTACLE		REFER TO DETAIL
	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.
	(5-20R)		

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
	KEYED NOTE	
	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.
	ELEVATION REFERENCE	TOP NUMBER INDICATES ELEVATION NUMBER; BOTTOM LETTER-NUMBER INDICATES WHERE ELEVATION IS SHOWN.
	SECTION REFERENCE	TOP NUMBER INDICATES SECTION NUMBER. BOTTOM LETTER NUMBER INDICATES WHERE SECTION IS SHOWN.
	ARCHITECTURAL ROOM NUMBER	
	EQUIPMENT NAME / NUMBER	TOP NUMBER ABBREVIATES EQUIPMENT NAME OR TYPE. BOTTOM NUMBER INDICATES EQUIPMENT NUMBER. REFER TO EQUIPMENT SCHEDULE.
	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
	BEAM DETECTOR - TRANSMITTER	4" BELOW CEILING TO TOP OF DETECTOR	
	BEAM DETECTOR - RECEIVER	4" BELOW CEILING TO TOP OF DETECTOR	
	END OF LINE DEVICE		PER MANUFACTURER RECOMMENDATIONS
	TAMPER SWITCH	AT VALVE	
	WATER FLOW INDICATOR	ON FIRE RISER	
	FIRE/SMOKE DAMPER	TOP AT 72"	
	HEAT DETECTOR	CEILING	
	SMOKE DETECTOR	CEILING	
	DUCT SMOKE DETECTOR	SIDE OF DUCT	
	FIRE ALARM MANUAL STATION	+48"	
	CONTROL MODULE	AT DEVICE(S) TO BE CONTROLLED	
	MONITOR MODULE	AT DEVICE(S) TO MONITOR	
	FAN SHUTDOWN RELAY	AT FAN CONTROL PANEL	
	MAGNETIC DOOR HOLDER	COORDINATE WITH DOOR INSTALLER	COORDINATE WITH DOOR INSTALLER; SUBSCRIPT 'F' INDICATES TO MOUNT AT FLOOR LEVEL
	WATER FLOOD INDICATOR	FLOOR	
	AUDIO HORN		
	MINI AUDIO HORN		SUBSCRIPT 'WP' INDICATES THAT A WEATHER PROOF BACK BOX IS REQ.
	FIRE ALARM VISUAL STROBE	MOUNT PER ALL NFPA 72 REQUIREMENTS	SUBSCRIPT 'C' INDICATES CEILING MOUNTING.
	FIRE ALARM AUDIO/VISUAL HORN/STROBE		
	MINI AUDIO/VISUAL HORN/STROBE		
	FIRE ALARM AUDIO SPEAKER		NUMERIC SUBSCRIPT INDICATES CANDELLA RATING OF STROBE (I.E. -15, 75, 110)
	FIRE ALARM AUDIO/VISUAL SPEAKER/STROBE		
	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).
	2 CIRCUIT, 3 WIRE BRANCH CIRCUIT HOME RUN TO PANEL	LONG CROSS LINES: NUMBER OF LONG CROSS LINES INDICATES NUMBER OF NEUTRAL CONDUCTORS REQUIRED FOR MULTI-WIRE HOME RUNS.
	3 CIRCUIT, 4 WIRE BRANCH CIRCUIT HOME RUN TO PANEL	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.
	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	
	JUNCTION BOX	MOUNT AS NOTED SUBSCRIPT 'F' INDICATES TO PROVIDE A FLOOR BOX WITH BLANK COVERPLATE

