

S.A. PROJECT # 21035.02

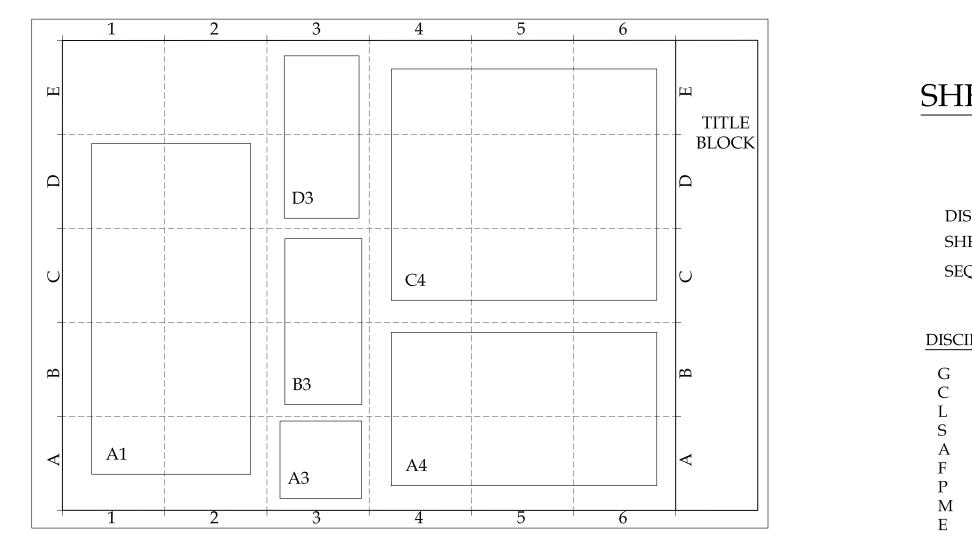
DATE: 07-29-2021

Interior Renovation to: Hearing Evaluation Services of Buffalo

2545 Sheridan Dr., Tonawanda, NY 14150

ARCHITECT:		<u>SHEET</u>
SILVESTRI ARCHITECTS, P.C.	ARCHITE	ECTURAL:
1321 MILLERSPORT HIGHWAY, SUITE 101 AMHERST, NY 14221	AD-101 A-001 A-002	DEMOLITION PLAN ACCESSIBILITY REQUIREMENTS 1 OF 2 ACCESSIBILITY REQUIREMENTS 2 OF 2
MEP ENGINEER:	A-003 A-010 A-101 A-401 A-601	PARTITION TYPES, DETAILS, & GENERAL NOTES CODE COMPLIANCE PLAN FLOOR PLAN & REFLECTED CEILING PLAN ENLARGED PLANS & ELEVATIONS ROOM FINISH SCHEDULE, LEGEND, & GENERAL NOTES
EBS ENGINEERING, P.C.	A-602 A-603 MECHAN	FINISH PLAN DOOR SCHEDULE, TYPES, & DETAILS NICAL:
2568 WALDEN AVENUE, SUITE 107 CHEEKTOWAGA, NY 14225	M-1 M-2 M-3	MECHANICAL LEGENDS & SCHEDULES MECHANICAL FLOOR PLAN & DETAILS MECHANICAL SPECIFICATIONS
	PLUMBIN	<u>NG:</u>
	ELECTRI	CAL:
	E-1 E-2 E-3 E-4 E-5	ELECTRICAL SCHEDULES & NOTES ONE-LINE DIAGRAM, PANEL SCHEDULE & DETAILS POWER & LIGHTING FLOOR PLAN ELECTRICAL SPECIFICATIONS ELECTRICAL SPECIFICATIONS

DRAWING AREA LOGIC



SHEET IDENTIFICATION LOGIC

	<u>A-101</u>
SCIPLINE DESIGNATOR —	
IEET TYPE DESIGNATOR —	
QUENCE NUMBER ———	

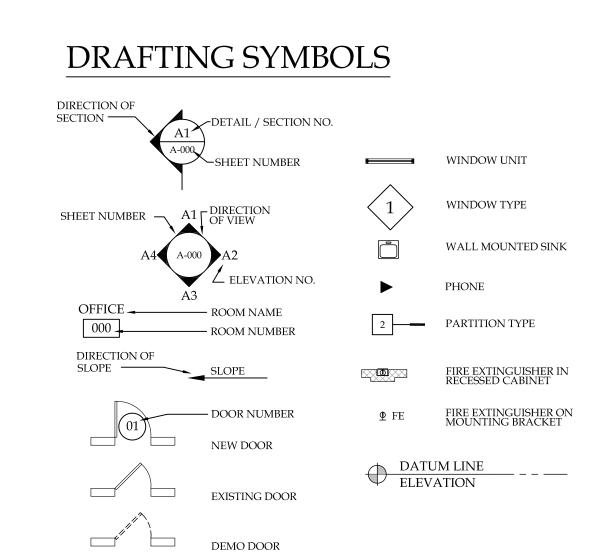
DISCIPLINE DESIGNATOR

GENERAL
CIVIL
LANDSCAPE
STRUCTURAL
ARCHITECTURAL
FIRE PROTECTION
PLUMBING
MECHANICAL
ELECTRICAL

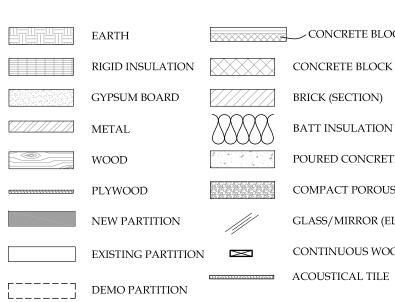
SHEET TYPE DESIGNATOR GENERAL PLANS ELEVATIONS SECTIONS LARGE SCALE VIEWS DETAILS SCHEDULES & DIAGRAMS

ABBREVIATIONS

A.F.F ACT. A.C. ALT. ALUM. APPROX.	ABOVE FINISH FLOOR ACOUSTICAL TILE AIR CONDITION ALTERNATE ALUMINUM APPROXIMATE ARCHITECTURAL		N.I.C. N.T.S. NOM NO.	NOT IN CONTRACT NOT TO SCALE NOMINAL NUMBER ON CENTER	
ARCH. AUTO BM BRG B.M.	AUTOMATIC BEAM BEARING BENCH MARK		OPNG OPP OPPH OH	OPENING OPPOSITE OPPOSITE HAND OVERHEAD	
BLK BLKG BD BOT BRK B.E.J. B.C. BLDG BUR	BLOCK BLOCKING BOARD BOTTOMS BRICK BRICK EXPANSION JOINT BRICK COURSE BUILDING BUILT-UP ROOFING		PMBC PNT PNL P.T.D. P.T.R. PVMT PG_BD PLAC	PRENGINEERED METAL BUILDING CONTRACTOR PAINT (ED) PANEL PAPER TOWEL DISPENSER PAPER TOWEL RECEPTOR PAVEMENT PEG BOARD PLACER	
CLG. CAB CPT C.W. CB. CEM CT CHBD CLR COL CONC. CMU CONT. CONTR CJT C.G. CRS	CEILING CABINET CARPET CASEWORK CATCH BASIN CEMENT CERAMIC TILE CHALK BOARD CLEAR COLUMN CONCRETE CONCRETE MASONRY UNI CONTRACTOR CONTRACTOR CONTRACTOR CONTROL JOINT CORNER GUARD COURSE	Т	PLAS. P. LAM PL POL PWD PT PSF P.P. PRE. FAB. PREF PROJ. PL QT RAD	PLASTER PLASTIC LAMINATE PLASTIC LAMINATE PLASTIC LAMINATE POLISHED PLYWOOD POINT POUNDS PER SQ. INCH POUNDS PER SQ. FOOT POWER PANEL PREFABRICATED PREFABRICATED PROJECTION PROPERTY LINE QUARRY TILE	
DET. DIA. DIM. DISP. DN DS DWG D.F. DIFF.	DETAIL DIAMETER DIMENSION DISPENSER DOWN DOWNSPOUT DRAWING DRINKING FOUNTAIN DIFFUSER		R.W.L. RECPT. REFR REG REINF. REQ'D RES R.C.P. RET	RADIUS RAIN WATER LEADER RECEPTACLE, ELECTRIC RECESS REFRIGERATOR REGISTER REINFORCE (D) (ING) REQUIRED RECESS (ED) REFLECTED CEILING PLAN RETURN RETURN	
EA EIFS EPNL ELEV. EQ EX. F. EXIST. EXP. JT.	EACH EXTERIOR INSULATION & FINISH SYSTEM ELECTRICAL ELECTRIC PANEL ELEVATOR ELEVATION EQUAL EXHAUST FAN EXISTING EXPANSION JOINT		RA RVS REV RH ROW R.D. RFG RM RND	RETURN AIR REVERSE REVISION RIGHT HAND RIGHT OF WAY RISER ROOF DRAIN ROOFING ROOM ROUND	
FB FIN F.A. FEC FHC F.P. FL. F.D. FT FT FT FT FTG FDTN FUR	FACE BRICK FINISH (ED) FIRE ALARM FIRE EXTINGUISHER CABIN FIRE HOSE CABINET FIRE PROOFING FLOOR DRAIN FOOT FACE WALL COVERING FOOTING FOUNDATION FURRING	VET	SDL STG SHTH SHT SIM SPKR SPEC SQ. SST SP STD SD S.G.T.	SADDLE SEATING SHEATHING SHEET SHOWER SIMILAR SPEAKER SPECIFICATIONS SQUARE STAINLESS STEEL STAND PIPE STAND PIPE STANDARD STORM DRAIN STRUCTURAL GLAZED TILE	
GAL GA G.C. GL. G.B. G.W.B. GYP.	GALLON GAGE GENERAL CONTRACTOR GLASS GRAB BAR GYPSUM WALL BOARD GYPSUM		STRUCT. SUSP. SW. SWBD SV	STRUCTURAL SUSPENDED SWITCH SWITCH BOARD SHEET VINYL	
HDW HD. WD. HVAC HC HM HORIZ HB H.W.	HARDWARE HARDWOOD HEATING, VENTILATING, & AIR CONDITIONING HEIGHT HOLLOW CORE HOLLOW METAL HORIZONTAL HOSE BIB HOT WATER		T.B. TEL TEMP TEX THK THR TP T/O TB TYP	TACKBOARD TELEPHONE TEMPERATURE TEXTURE THICK (NESS) THRESHOLD TOILET PAPER HOLDER TOP OF TOWEL BAR TYPICAL	
INSUL INS. GL INV INN	INSULATE (D) (ION) INSULATED GLASS INVERT JANITOR		U.C.L. U.C. UR	UNDER CABINET LIGHT UNDERCUT URINAL	
JT KIT KO	JOINT KITCHEN KNOCK OUT		V.T.R. VENT VERT	VENT THRU ROOF VENTILATOR VERTICAL	
LAM LAV LH LGT LT L.F. LTL LL LLH LLH LLV L.M.F. LVR L.P.	LAMINATED LAVATORY LEFT HAND LENGTH LIGHT LINEAR FEET LINTEL LIVE LOAD LONG LEG HORIZONTAL LONG LEG VERTICAL LIGHT GAUGE METAL FRAN LOUVER LOW POINT	MING	VEST V.C.T. V.I.F. V.W.C.	VESTIBULE VINYL COMPOSITE TILE VERIFY IN FIELD VINYL WALL COVERING WAINSCOT WEATHER STRIP WEIGHT WELDED WIRE FABRIC WHEELCHAIR DRINKING FO WITH WITHOUT WOOD	UNTAIN
MACH M.H. MFR MAS M.O. MATL MAX MECH MET MET M.T.P. MIN MISC. MULL	MACHINE MANHOLE MANUFACTURE MASONRY MASONRY OPENING MATERIAL MAXIMUM MECHANICAL MEMBRANE METAL METAL TOILET PARTITION MINIMUM MISCELLANEOUS MULLION				



MATERIAL SYMBOLS



CONCRETE BLOCK WALL CONCRETE BLOCK (SECTION) BRICK (SECTION) BATT INSULATION POURED CONCRETE COMPACT POROUS GRAVEL GLASS/MIRROR (ELEVATION) CONTINUOUS WOOD STUD

BUILDING DATA

LEVEL 2 ALTERATION OCCUPANCY CLASSIFICATION: B CONSTRUCTION TYPE: IIB GROSS PROJECT AREA: 2,035 SF

OCCUPANT LOAD: 14 PEOPLE

ISSUE

BID/PERMIT

14150 Tonawanda, Dr an herid $\overline{\mathbf{O}}$ 545

NTERIOR

APTAIN:

JOB

ARCHITECT:

PROJ

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PRINCIPAL

N: \triangleleft

PROJECT

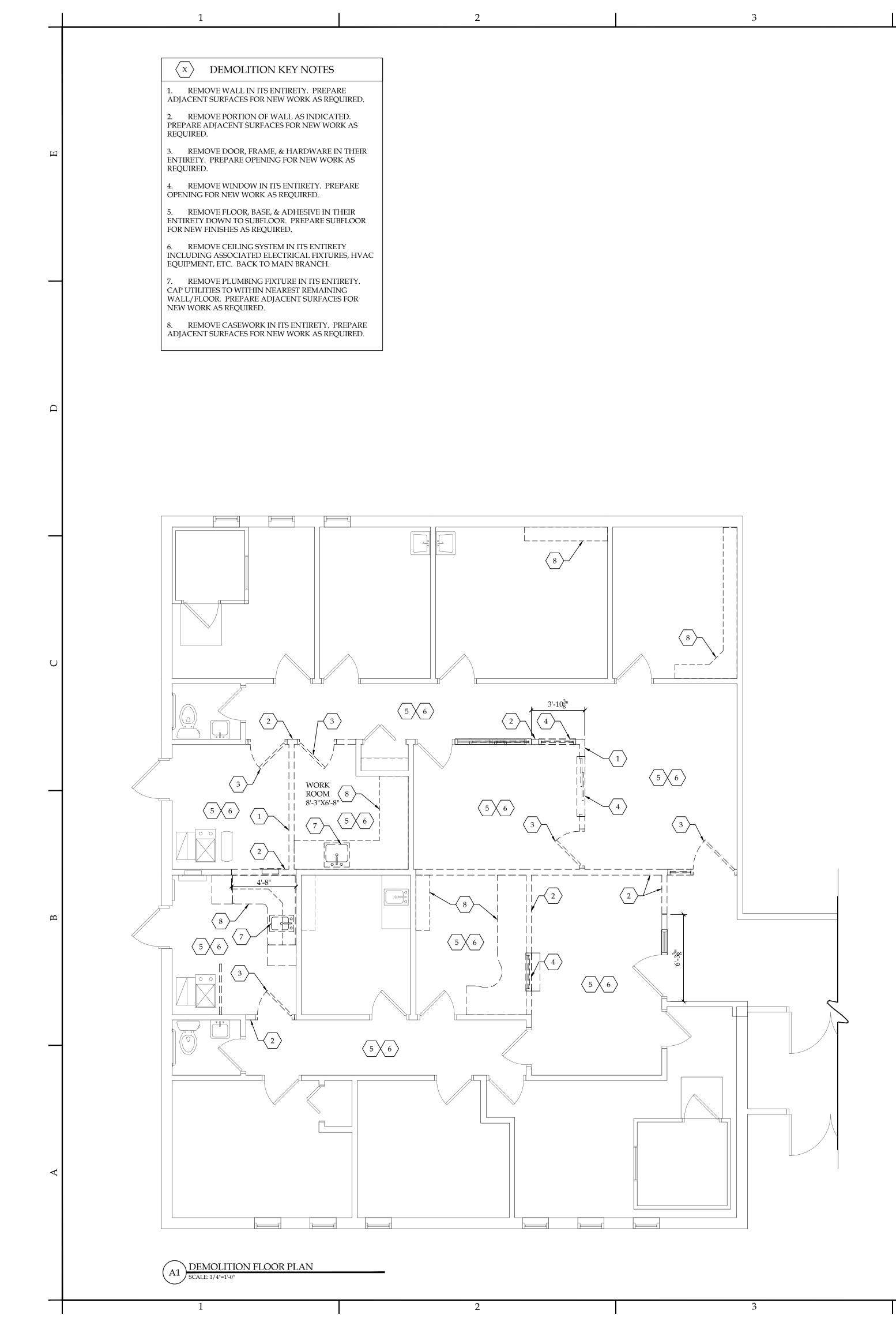
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Buffalo of CeS S C ON J **D** J 50 Hearin

Renovation to

Interior

T # 21035.02 -2021 A. PROJEC ATE: 07-29-



	GENERAL DEMOLITION NOTES		N O T I C E This document, the property of, prepared and issued
•	IN GENERAL, ITEMS TO BE REMOVED ARE SHOWN DASHED, HOWEVER, CONTRACTOR SHALL REMOVE ALL ITEMS AS REQUIRED TO ALLOW FOR NEW CONSTRUCTION.		This document, the property of, prepared and issued by the architect, is submitted for the specific project namely and the recipient by accepting this document assumes custody and agrees that this document will not be copied or reproduced in part or in whole, and any special features peculiar to this design shall not be
•	ALL ITEMS TO BE REMOVED SHALL BE RECYCLED WHERE FEASIBLE.		incorporated in any other project, unless prior agreement has been obtained in writing. These documents will be returned immediately upon
•	CONTRACTOR IS RESPONSIBLE FOR ALL DEMOLITION TO READY THE SITE/FLOOR FOR NEW CONSTRUCTION.	Щ	shall be lost by the filing of this document with any
•	CONTRACTOR TO REMOVE EXISTING ABANDONED ELECTRIC, TELEPHONE, & DATA CABLING & DEVICES, AS WELL AS ANY OTHER FIXTURES AS REQUIRED TO ACCOMMODATE NEW WORK.		and all public authorities for the purpose of compliance with Codes and or Ordinances, i.e. Building Permit, etc.
•	PRIOR TO DEMOLITION, CONTRACTOR TO VERIFY W/ OWNER WHAT, IF ANY, ITEMS ARE TO BE SALVAGED.		
•	CONTRACTOR TO PROTECT ALL EXISTING FINISHES TO REMAIN DURING CONSTRUCTION AND REPLACE DAMAGED FINISHES AS REQUIRED.		
•	CONTRACTOR TO VERIFY IN FIELD ANY ADDITIONAL DEMOLITION REQUIRED TO PREPARE AREA FOR NEW CONSTRUCTION PER PLANS.		
•	CONTRACTOR TO CONTACT ARCHITECT TO INSPECT POST-DEMO CONDITIONS PRIOR TO THE START OF NEW CONSTRUCTION.		Interior Renovations to:
•	CONTRACTOR TO REMOVE ALL EXISTING PLAQUES, SIGNAGE, WALL ART, ETC. PATCH ALL REMAINING WALLS AND PREP FOR PAINTING.		Hearing

D	Interior Renovations to: <u>Hearing</u> <u>Evaluation</u> <u>Services of</u> <u>Buffalo</u> 2545 Sheridan Drive, Tonawanda, NY 14150
C	ISSUE: SA PROJECT TEAM: PRINCIPAL P.Silvestri PROJ. ARCH. DRAFTER JOB CAPT. INTERIORS SEAL:
В	TITLE: DEMOLITION FLOOR PLAN
А	SA JOB #: DATE:
	SA JOB #. DATE. 21035.02 07-28-21 DRAWING #: AD-101

ICC ANSI A117.1-2009 HIS SHEET CONTAINS EXCERPTS FROM ICC A117.1-2009

REFER TO FULL DOCUMENT FOR MORE INFORMATION

302 FLOOR SURFACES

302.1 General. Floor surfaces shall be stable, firm, and slip resistant, and shall comply with Section 302. Changes in level in floor surfaces shall comply with 302.2 Carpet. Carpet or carpet tile shall be securely attached and shall have a firm

cushion, pad, or backing or no cushion or pad. Carpet or carpet tile shall have a level loop, textured loop, level cut pile, or level cut/uncut pile texture. The pile shall be 1/2 inch maximum in height. Exposed edges of carpet shall be fastened to the floor and shall have trim along the entire length of the exposed edge. Carpet edge trim shall comply with Section 303.

-1/4" Max

FIG. 303.2 CARPET ON FLOOR SURFACES 302.3 Openings. Openings in floor surfaces shall be of a size that does not permit the issage of a ¹/₂ inch diameter sphere, except as allowed in Sections 407.4.3, 408.4.3, 409.4.3, 410.4, and 805.10. Elongated openings shall be placed so that the long dimension is perpendicular to the predominant direction of travel.

303 CHANGES IN LEVEL

303.1 General. Changes in level in floor surfaces shall comply with Section 303. 303.2 Vertical. Changes in level of 1/4 inch maximum in height shall be permitted to be vertical. 303.3 Beveled. Changes in level greater than 1/4 inch in height and not more than

1/2 inch maximum in height shall be beveled with a slope not steeper than 1:2.

FIG. 303.3 BEVELED CHANGES IN LEVEL 303.4 Ramps. Changes in level greater than 1/2 inch in height shall be ramped and shall comply with Section 405 or 406.

304 TURNING SPACE

304.1 General. A turning space shall comply with Section 304. 304.2 Floor Surface. Floor surfaces of a turning space shall comply with Section 302. Changes in level are not permitted within the turning space.

EXCEPTION: Slopes not steeper than 1:48 shall be permitted. 304.3 Size. Turning spaces shall comply with Section 304.3.1 or 304.3.2. 304.3.1 Circular Space. The turning space shall be a circular space with a 60-inch

minimum diameter. The turning space shall be permitted to include knee and toe clearance complying with Section 306. 304.3.2 T-Shaped Space. The turning space shall be a T-shaped space within a 60-inch minimum square, with arms and base 36 inches minimum in width. Each

arm of the T shall be clear of obstructions 12 inches minimum in each direction, and the base shall be clear of obstructions 24 inches minimum. The turning space shall be permitted to include knee and toe clearance complying with Section 306 only at the end of either the base or one arm 304.4 Door Swing. Unless otherwise specified, doors shall be permitted to swing

into turning spaces. 305 CLEAR FLOOR SPACE

305.1 General. A clear floor space shall comply with Section 305.

305.2 Floor Surfaces. Floor surfaces of a clear floor space shall comply with Section 302. Changes in level are not permitted within the clear floor space EXCEPTION: Slopes not steeper than 1:48 shall be permitted.

305.3 Size. The clear floor space shall be 48 inches minimum in length and 30 inches minimum in width.

305.4 Knee and Toe Clearance. Unless otherwise specified, clear floor space shall be permitted to include knee and toe clearance complying with Section 306. 305.5 Position. Unless otherwise specified, the clear floor space shall be positioned for either forward or parallel approach to an element 305.6 Approach. One full, unobstructed side of the clear floor space shall adjoin or

overlap an accessible route or adjoin another clear floor space. 305.7 Alcoves. If a clear floor space is in an alcove or otherwise confined on all or part of three sides, additional maneuvering clearances complying with Sections 305.7.1 and 305.7.2 shall be provided, as applicable.

305.7.1 Parallel Approach. Where the clear floor space is positioned for a parallel approach, the alcove shall be 60 inches minimum in width where the depth exceeds

305.7.2 Forward Approach. Where the clear floor space is positioned for a forward approach, the alcove shall be 36 inches minimum in width where the depth exceeds

306 KNEE AND TOE CLEARANCE

306.1 General. Where space beneath an element is included as part of clear floor space at an element, clearance at an element, or a turning space, the space shall comply with Section 306. Additional space shall not be prohibited beneath an element, but shall not be considered as part of the clear floor space or turning space. 306.2 Toe Clearance.

306.2.1 General. Space beneath an element between the floor and 9 inches above the floor shall be considered to clearance and shall comply with Section 306.2. 306.2.2 Maximum Depth. Toe clearance shall be permitted to extend 25 inches maximum under an element

306.2.3 Minimum Depth. Where toe clearance is required at an element as part of a clear floor space complying with Section 305, the toe clearance shall extend 17 inches minimum beneath the element. 306.2.4 Additional Clearance. Space extending greater than 6 inches beyond the available knee clearance at 9 inches above the floor shall not be considered toe

306.2.5 Width. Toe clearance shall be 30 inches minimum in width.

306.3 Knee Clearance.

306.3.1 General. Space beneath an element between 9 inches and 27 inches above the floor shall be considered knee clearance and shall comply with Section 306.3 306.3.2 Maximum Depth. Knee clearance shall be permitted to extend 25 inches maximum under an element at 9 inches above the floor. 306.3.3 Minimum Depth. Where knee clearance is required beneath an element as part of a clear floor space complying with Section 305, the knee clearance shall be 11

inches minimum in depth at 9 inches above the floor, and 8 inches minimum in depth at 27 inches above the floor. 306.3.4 Clearance Reduction. Between 9 inches and 27 inches above the floor, the knee clearance shall be permitted to be reduced at a rate of 1 inch in depth for each

6 inches in height. 306.3.5 Width. Knee clearance shall be 30 inches minimum in width.

307 PROTRUDING OBJECTS 07.1 General. Protruding objects on circulation paths shall comply with Section

307.2 Protrusion Limits. Objects with leading edges more than 27 inches and not more than 80 inches above the floor shall protrude 4 inches maximum horizontally into the circulation path. EXCEPTION: Handrails shall be permitted to protrude 4 1/2 inches maximum.

-LOBBY-

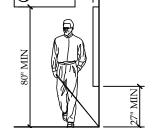


FIG. 307.2 LIMITS OF PROTRUDING OBJECTS

307.3 Post-Mounted Objects. Objects on posts or pylons shall be permitted to overhang 4 inches maximum where more than 27 inches and not more than 80 inches above the floor. Objects on multiple posts or pylons where the clear distance between the posts or pylons is greater than 12 inches shall have the lowest edge of such object either 27 inches maximum or 80 inches minimum above the floor. EXCEPTION: Sloping portions of handrails between the top and bottom riser of stairs and above the ramp run shall not be required to comply with Section 307.3. 307.4 Vertical Clearance. Vertical clearance shall be 80 inches minimum. Rails or other barriers shall be provided where the vertical clearance is less than 80 inches. The leading edge of such rails or barrier shall be located 27 inches maximum above

EXCEPTION: Door closers and door stops shall be permitted to be 78 inches minimum above the floor. 307.5 Required Clear Width. Protruding objects shall not reduce the clear width required for accessible routes.

308 REACH RANGES 308.1 General. Reach ranges shall comply with Section 308. 308.2 Forward Reach.

308.2.1 Unobstructed. Where a forward reach is unobstructed, the high forward reach shall be 48 inches maximum and the low forward reach shall be 15 inches minimum above the floor.

308.2.2 Obstructed High Reach. Where a high forward reach is over an obstruction, he clear floor space complying with Section 305 shall extend beneath the element for a distance not less than the required reach depth over the obstruction. The high forward reach shall be 48 inches maximum above the floor where the reach depth is 20 inches maximum. Where the reach depth exceeds 20 inches, the high forward reach shall be 44 inches maximum above the floor, and the reach depth shall be 25 inches maximum. 308.3 Side Reach.

308.3.1 Unobstructed. Where a clear floor space complying with Section 305 allows

a parallel approach to an element and the edge of the clear floor space is 10 inches maximum from the element, the high side reach shall be 48 inches maximum and the low side reach shall be 15 inches minimum above the floor. EXCEPTION: Existing elements that are not altered shall be permitted at 54 inches maximum above the floor.

308.3.2 Obstructed High Reach. Where a clear floor space complying with Section 305 allows a parallel approach to an element and the high side reach is over an obstruction, the height of the obstruction shall be 34 inches maximum above the floor and the depth of the obstruction shall be 24 inches maximum. The high side reach shall be 48 inches maximum above the floor for a reach depth of 10 inches maximum. Where the reach depth exceeds 10 inches, the high side reach shall be 46 inches maximum above the floor for a reach depth of 24 inches maximum EXCEPTION: At washing machines and clothes dryers, the height of the obstruction

309 OPERABLE PARTS

309.1 General. Operable parts required to be accessible shall comply with Section 309.2 Clear Floor Space. A clear floor space complying with Section 305 shall be

shall be permitted to be 36 inches maximum above the floor.

309.3 Height. Operable parts shall be placed within one or more of the reach ranges specified in Section 308. 309.4 Operation. Operable parts shall be operable with one hand and shall not

require tight grasping, pinching, or twisting of the wrist. The force required to activate operable parts shall be 5.0 pounds (22.2 N) maximum. 401 General

401.1 Scope. Accessible routes required by the scoping provisions adopted by the administrative authority shall comply with the applicable provisions of Chapter 4.

402 ACCESSIBLE ROUTES 402.1 General. Accessible routes shall comply with Section 402.

402.2 Components. Accessible routes shall consist of one or more of the following components: Walking surfaces with a slope not steeper than 1:20, doors and doorways, ramps, curb ramps excluding the flared sides, elevators, and platform lifts. All components of an accessible route shall comply with the applicable portions of this standard. 402.3 Revolving Doors, Revolving Gates, and Turnstiles. Revolving doors,

revolving gates, and turnstiles shall not be part of an accessible route. 403 WALKING SURFACES

403.1 General. Walking surfaces that are a part of an accessible route shall comply

with Section 403. 403.2 Floor Surface. Floor surfaces shall comply with Section 302. 403.3 Slope. The running slope of walking surfaces shall not be steeper than 1:20.

The cross slope of a walking surface shall not be steeper than 1:48. 403.4 Changes in Level. Changes in level shall comply with Section 303. 403.5 Clear Width. The clear width of an accessible route shall be 36 inches

EXCEPTION: The clear width shall be permitted to be reduced to 32 inches minimum for a length of 24 inches maximum provided the reduced width

segments are separated by segments that are 48 inches minimum in length and 36 inches minimum in width. 403.5.1 Clear Width at 180 Degree Turn. Where an accessible route makes a 180 degree turn around an object that is less than 48 inches in width, clear widths shall

be 42 inches minimum approaching the turn, 48 inches minimum during the turn, and 42 inches minimum leaving the turn. EXCEPTION: Section 403.5.1 shall not apply where the clear width during the turn is 60 inches minimum.

403.5.2 Passing Space. An accessible route with a clear width less than 60 inches shall provide passing spaces at intervals of 200 feet maximum. Passing spaces shall be either a 60-inch minimum by 60-inch minimum space, or an intersection of two walking surfaces that provide a T-shaped turning space complying with Section 304.3.2, provided the base and arms of the T-shaped space extend 48 inches ninimum beyond the intersection.

403.6 Handrails. Where handrails are required at the side of a corridor they shall comply with Sections 505.4 through 505.9.

404 DOORS AND DOORWAYS

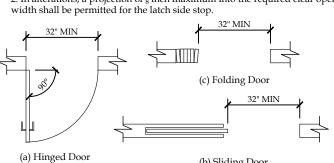
404.1 General. Doors and doorways that are part of an accessible route shall comply with Section 404. 404.2 Manual Doors. Manual doors and doorways, and manual gates, including ticket gates, shall comply with Section 404.2.

EXCEPTION Doors do security personnel shall not be required to comply with Sections 404.2.6, 404.2.7, and 404.2.8.

404.2.1 Double-Leaf Doors and Gates. At least one of the active leaves of doorways with two leaves shall comply with Sections 404.2.2 and 404.2.3 404.2.2 Clear Width. Doorways shall have a clear opening width of 32 inches minimum. Clear opening width of doorways with swinging doors shall be measured between the face of door and stop, with the door open 90 degrees. Openings more than 24 inches in depth at doors and doorways without doors shall

provide a clear opening width of 36 inches minimum. There shall be no projections into the clear opening width lower than 34 inches above the floor. Projections into the clear opening width between 34 inches and 80 inches above the floor shall not exceed 4 inches EXCEPTIONS:

1. Door closers and door stops shall be permitted to be 78 inches minimum above the floor. 2. In alterations, a projection of $\frac{5}{8}$ inch maximum into the required clear opening



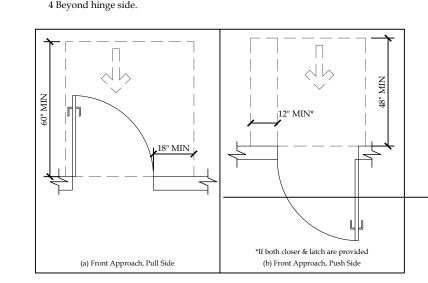
(b) Sliding Door 404.2.3 Maneuvering Clearances, Mini ing clearances at doors shall comply with Section 404.2.3 and shall include the full clear opening width of the doorway. Required door maneuvering clearances shall not include knee and toe

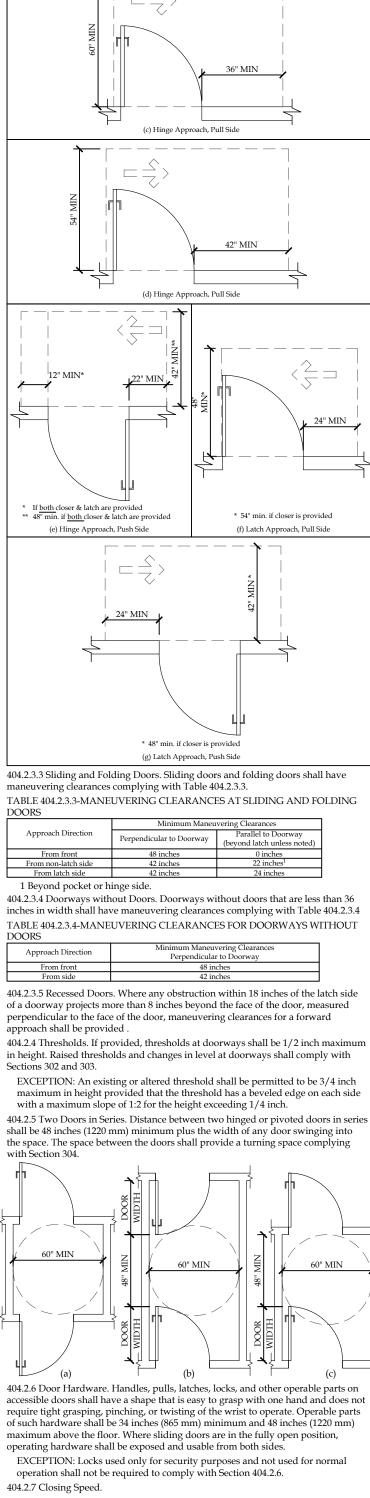
404.2.3.1 Floor Surface. Floor surface within the maneuvering clearances shall have a slope not steeper than 1:48 and shall comply with Section 302. 404.2.3.2 Swinging Doors. Swinging doors shall have maneuvering clearances

complying with Table 404.2.3.2. TABLE 404.2.3.2-MANEUVERING CLEARANCES AT MANUAL SWINGING DOORS

	Type	of Use	Maneuvering Clearances at Manual Swing Doors			
Approach Direction		Door Side	Perpendicular to Doorway	Parallel to Doorway (beyond latch unless		
				noted)		
	From front	Pull	60 inches	18 inches		
From front Push		48 inches	0 inches ³			
	From hinge side Pull		60 inches	36 inches		
	From hinge side Pull		54 inches	42 inches		
	From hinge side	Push	42 inches ¹	22 inches ^{3&4}		
From latch side Pull		48 inches ¹	24 inches			
From latch side Push		42 inches ²	24 inches			

1 Add 6 inches (150 mm) if closer and latch provided. 2 Add 6 inches (150 mm) if closer provided. 3 Add 12 inches (305 mm) beyond latch if closer and latch provided





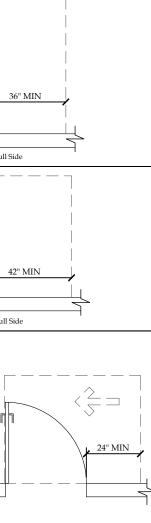
404.2.7.1 Door Closers. Door closers shall be adjusted so that from an open position of 90 degrees, the time required to move the door to an open position of 12 degrees shall be 5 seconds minimum. 404.2.7.2 Spring Hinges. Door spring hinges shall be adjusted so that from an open position of 70 degrees, the door shall move to the closed position in 1.5 seconds 404.2.8 Door-Opening Force. Fire doors shall have the minimum opening force

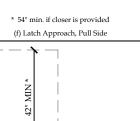
allowable by the appropriate administrative authority. The force for pushing or pulling open doors other than fire doors shall be as follows: 1. Interior hinged door 5.0 pounds maximum 2. Sliding or folding door: 5.0 pounds maximum These forces do not apply to the force required to retract latch bolts or disengage other devices that hold the door in a closed position. 404.2.9 Door Surface. Door surfaces within 10 inches of the floor, measured vertically, shall be a smooth surface on the push side extending the full width of the door. Parts creating horizontal or vertical joints in such surface shall be within 1/16inch of the same plane as the other. Cavities created by added kick plates shall be EXCEPTIONS: 1. Sliding doors shall not be required to comply with Section 404.2.9. 2. Tempered glass doors without stiles and having a bottom rail or shoe

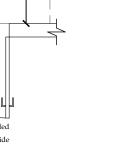
with the top leading edge tapered at no less than 60 degrees from the horizontal shall not be required to comply with the 10-inch bottom rail height requirement. 3. Doors that do not extend to within 10 inches of the floor shall not be required to comply with Section 404.2.9. 404.2.10 Vision Lites. Doors and sidelites adjacent to doors containing one or more glazing panels that permit viewing through the panels shall have the bottom of at east one panel on either the door or an adjacent sidelite 43 inches maximum above EXCEPTION: Vision lites with the lowest part more than 66 inches (1675 mm)

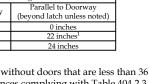
above the floor shall not be required to comply with Section 404.2.10. 404.3 Automatic Doors. Automatic doors and automatic gates shall comply with Section 404.3. Full powered automatic doors shall comply with ANSI/BHMA A 156.10 listed in Section 105.2.4. Power-assist and low-energy doors shall comply with ANSI/BHMA A 156.19 listed in Section 105.2.3. EXCEPTION: Boors, doorways, and gates designed to be operated only by scaling personners doorways, and gates designed to be operated only by and 404.3.5

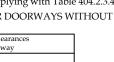
power-on and power-off mode. The minimum clear opening width for automatic loor systems shall be based on the clear opening width provided with all leafs in the open position 404.3.2 Maneuvering Clearances. Maneuvering clearances at power-assisted doors shall comply with Section 404.2.3, 404.3.3 Thresholds. Thresholds and changes in level at doorways shall comply with Section 404.2.4. 404.3.4 Two Doors in Series. Doors in series shall comply with Section 404.2.5. 404.3.5 Control Switches. Manually operated control switches shall comply with Section 309. The clear floor

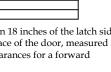


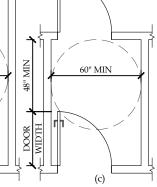












04.3.1 Clear Width. Doorways shall have a clear opening width of 32 inches in

space adjacent to the control switch shall be located beyond the arc of the door

EXCEPTION: In existing buildings or facilities, ramps shall be permitted to have slopes steeper than 1:12 complying with Table 405.2 where such slopes are ecessary due to space limitations TABLE 405.2-ALLOWABLE RAMP DIMENSIONS FOR CONSTRUCTION IN EXISTING SITES, BUILDINGS AND FACILITIES Maximum Rise

405.1 General. Ramps along accessible routes shall comply with Section 405.

EXCEPTION: In assembly areas, aisle ramps adjacent to seating and not serving

405.2 Slope. Ramp runs shall have a running slope greater than 1:20 and not steeper

elements required to be on an accessible route shall not be required to comply

405 RAMPS

than 1:12

with Section 405.

Steeper than 1:10 but not steeper than 1:8 3 inches Steeper than 1:12 but not steeper than 1:10 6 inches

405.3 Cross Slope. Cross slope of ramp runs shall not be steeper than 1:48. 405.4 Floor Surfaces. Floor surfaces of ramp runs shall comply with Section 302. 405.5 Clear Width. The clear width of a ramp run shall be 36 inches minimum Handrails and handrail supports that are provided on the ramp run shall not project into the required clear width of the ramp run. 405.6 Rise. The rise for any ramp run shall be 30 inches maximum

405.7 Landings. Ramps shall have landings at the bottom and top of each ramp run. Landings shall comply with Section 405.7. 405.7.1 Slope. Landings shall have a slope not steeper than 1:48 and shall comply

with Section 302. 405.7.2 Width. Clear width of landings shall be at least as wide as the widest ramp run leading to the landing

405.7.3 Length. Landings shall have a clear length of 60 inches minimum. 405.7.4 Change in Direction. Ramps that change direction at ramp landings shall be sized to provide a turning space complying with Section 304.3.

405.7.5 Doorways. Where doorways are adjacent to a ramp landing, maneuvering clearances required by Sections 404.2.3 and 404.3.2 shall be permitted to overlap the landing area. Where a door that is subject to locking is located adjacent to a ramp anding, the landing shall be sized to provide a turning space complying with Section 304.3.

405.8 Handrails. Ramp runs with a rise greater than 6 inches (150 mm) shall have handrails complying with Section 505. 405.9 Edge Protection. Edge protection complying with Section 405.9.1 or 405.9.2 shall be provided on each side of ramp runs and at each side of ramp landings.

EXCEPTIONS: 1. Edge protection shall not be required on ramps not required to have handrails and that have flared sides complying with Section 406.3.

2. Edge protection shall not be required on the sides of ramp landings serving an adjoining ramp run or stairway

3. Edge protection shall not be required on the sides of ramp landings having a vertical dropoff of 1/2 inch maximum within 10 inches (255 mm) horizontally of the minimum landing area specified in Section 405.7. 4. Edge protection shall not be required on the sides of ramped aisles where the

ramps provide access to the adjacent seats and aisle access ways. 405.9.1 Extended Floor Surface. The floor surface of the ramp run or ramp landing shall extend 12 inches minimum beyond the inside face of a railing complying with Section 505.

405.9.2 Curb or Barrier. A curb complying with Section 405.9.2.1 or a barrier complying with Section 405.9.2.2 shall be provided. 405.9.2.1 Curb. A curb shall be a minimum of 4 inches in height. 405.9.2.2 Barrier. Barriers shall be constructed so that the barrier prevents the

passage of a 4-inch diameter sphere where any portion of the sphere is within 4 inches of the floor. 405.10 Wet Conditions. Landings subject to wet conditions shall be designed to prevent the accumulation of water.

504 STAIRWAYS

504.2 Treads and Risers. All steps on a flight of stairs shall have uniform riser height and uniform tread depth. Risers shall be 4 inches minimum and 7 inches maximum in height. Treads shall be 11 inches minimum in depth 504.3 Open Risers. Open risers shall not be permitted on accessible stairs. 504.4 Tread Surface. Stair treads shall comply with Section 302 and shall have a

slope not steeper than 1:48. 504.5 Nosings. The radius of curvature at the leading edge of the tread shall be $\frac{1}{2}$ inch maximum. Nosings that project beyond risers shall have the underside of the leading edge curved or beveled. Risers shall be permitted to slope under the tread

at an angle of 30 degrees maximum from vertical. The permitted projection of the nosing shall be $1\frac{1}{2}$ inches maximum over the tread or floor below. 504.5.1 Visual contrast. The leading 2 inches of the tread shall have visual contrast of dark-on-light or light-on-dark from the remainder of the tread. 504.6 Handrails. Stairs shall have handrails complying with Section 505.

504.7 Wet Conditions. Stair treads and landings subject to wet conditions shall be lesigned to prevent the accumulation of water. 504.8 Lighting. Lighting for interior stairways shall comply with Section 504.8.

504.8.1 Illumination Level. Lighting facilities shall be capable of providing 10 pot-candles (108 lux) of illuminance measured at the center of tread surfaces and on anding surfaces within 24 inches (610 mm) of step nosings. 504.8.2 Lighting Controls. If provided, occupancy sensing automatic controls shall activate the stairway lighting so the illuminance level required by Section 504.8.1 is

provided on the entrance landing, each stair flight adjacent to the entrance landing, and on the landings above and below the entrance landing prior to any step being 504.9 Stair Level Identification. Stair level identification signs in raised characters

and braille complying with Sections 703.3 and 703.4 shall be located at each floor level landing in all enclosed stairways adjacent to the door leading from the stairwell into the corridor to identify the floor level. The exit door discharging to the outside or to the level of exit discharge shall have a sign with raised characters and braille stating "EXIT."

505 HANDRAILS

505.1 General. Handrails required by Section 405.8 for ramps, or Section 504.6 for stairs, shall comply with Section 505 505.2 Location. Handrails shall be provided on both sides of stairs and ramps. EXCEPTIONS:

1. In assembly seating areas, handrails shall not be required on both sides along aisle stairs, provided with a handrail either at the side or within the aisle. 2. In assembly seating areas, handrails shall not be required on the sides of

ramped aisles serving seats. 505.3 Continuity. Handrails shall be continuous within the full length of each stair flight or ramp run. Inside handrails on switchback or dogleg stairs or ramps shall be continuous between flights or runs. Other handrails shall comply with Sections

505.10 and 307 EXCEPTION: Handrails shall not be required to be continuous in aisles serving seating where handrails are discontinuous to provide access to seating and to permit crossovers within the aisles.

505.4 Height. Top of gripping surfaces of handrails shall be 34 inches minimum and 38 inches maximum vertically above stair nosings, ramp surfaces and walking surfaces. Handrails shall be at a consistent height above stair nosings, ramp surfaces

and walking surfaces. 505.5 Clearance. Clearance between handrail gripping surface and adjacent surfaces shall be $1\frac{1}{2}$ inches minimum. $1\frac{1}{2}$ MIN.

FIG. 505.5 Handrail Clearance 505.6 Gripping Surface. Gripping surfaces shall be continuous, without interruption by newel posts, other construction elements, or obstructions.

EXCEPTIONS: 1. Handrail brackets or balusters attached to the bottom surface of the handrail

shall not be considered obstructions, provided the brackets or balusters comply with the following criteria: a. Not more than 20 percent of the handrail length is obstructed, b. Horizontal projections beyond the sides of the handrail occur 1¹/₂ inches

- minimum below the bottom of the handrail, and provided that for each 1/2 inch of additional handrail perimeter dimension above 4 inches, the vertical clearance dimension of $1\frac{1}{2}$ inch can be reduced by 1/8 inch, and
- c. Edges shall be rounded. 2. Where handrails are provided along walking surfaces with slopes not steeper than 1:20, the bottoms of handrail gripping surfaces shall be permitted to be obstructed along their entire length where they are integral to crash rails or
- bumper guards. 505.7 Cross Section. Handrails shall have a cross section complying with Section 505.7.1 or 505.7.2.
- 505.7.1 Circular Cross Section. Handrails with a circular cross section shall have an outside diameter of 1 1/4 inches minimum and 2 inches maximum. 505.7.2 Noncircular Cross Sections. Handrails with a noncircular cross section shall have a perimeter dimension of 4 inches minimum and 6 ¹/₄ inches maximum, and a
- ross-section dimension of 2 ¼ inches maximum 505.8 Surfaces. Handrails, and any wall or other surfaces adjacent to them, shall be free of any sharp or abrasive elements. Edges shall be rounded.
- 505.9 Fittings. Handrails shall not rotate within their fittings. 505.10 Handrail Extensions. Handrails shall extend beyond and in the same direction of stair flights and ramp runs in accordance with Section 505.10.
- EXCEPTIONS: Continuous handrails at the inside turn of stairs and ramps.
- 2. Handrail extensions are not required in aisles serving seating where the handrails are discontinuous to provide access to seating and to permit crossovers within the aisle.
- 3. In alterations, full extensions of handrails shall not be required where such extensions would be hazardous due to plan configuration. 505.10.1 Top and Bottom Extension at Ramps. Ramp handrails shall extend
- norizontally above the landing 12 inches minimum beyond the top and bottom of amp runs. Extensions shall return to a wall, guard, or floor, or shall be continuous to the handrail of an adjacent ramp run.

505 10.2 Top Extension at Stairs. At the top of a stair flight, handrails shall extend horizontally above the landing for 12 inches minimum beginning directly above the

anding nosing. Extensions shall return to a wall, guard, or the landing surface, or shall be continuous to the handrail of an adjacent stair flight. 505.10.3 Bottom Extension at Stairs. At the bottom of a stair flight, handrails shall extend at the slope of the stair flight for a horizontal distance equal to one tread depth beyond the bottom tread nosing. Extensions shall return to a wall, guard, or the landing surface, or shall be continuous to the handrail of an adjacent stair flight. 602 DRINKING FOUNTAINS 602.1 General. Accessible drinking fountains shall comply with Sections 602 and

602.2 Clear Floor Space. A clear floor space complying with Section 305, positioned for a forward approach to the drinking fountain, shall be provided. Knee and toe space complying with Section 306 shall be provided. The clear floor space shall be centered on the drinking fountain

EXCEPTIONS: 1. Drinking fountains for standing persons 2. Drinking fountains primarily for children's use shall be permitted where the

spout outlet is 30 inches maximum above the floor, a parallel approach omplying with Section 305 is provided and the clear floor space is centered on the drinking fountain

602.3 Operable Parts. Operable parts shall comply with Section 309. 602.4 Spout Outlet Height. Spout outlets of wheelchair accessible drinking fountains shall be 36 inches maximum above the floor. Spout outlets of drinking fountains for

standing persons shall be 38 inches minimum and 43 inches maximum above the 602.5 Spout Location. The spout shall be located 15 inches minimum from the

vertical support and 5 inches maximum from the front edge of the drinking fountain, including bumpers. Where only a parallel approach is provided, the spout shall be located $3\frac{1}{2}$ inches maximum from the front edge of the drinking fountain, including bumpers

(a) Plan 602.6 Water Flow. The spout shall provide a flow of water 4 inches minimum in

height. The angle of the water stream from spouts within 3 inches of the front of the drinking fountain shall be 30 degrees maximum, and from spouts between 3 inches and 5 inches from the front of the drinking fountain shall be 15 degrees maximum. measured horizontally relative to the front face of the drinking fountain.

603 TOILET AND BATHING ROOMS

5" MAX

603.1 General. Accessible toilet and bathing rooms shall comply with Section 603. 603.2 Clearances. 603.2.1 Turning Space. A turning space complying with Section 304 shall be

provided within the room . The required turning space shall not be provided within a toilet compartment. 603.2.2 Door Swing. Doors shall not swing into the clear floor space or clearance for

any fixture. EXCEPTIONS:

1. Doors to a toilet or bathing room for a single occupant, accessed only through a private office and not for common use or public use shall be permitted to swing into the clear floor space, provided the swing of the door can be reversed to comply with Section 603.2.2 2. Where the room is for individual use and a clear floor space complying with

Section 305.3 is provided within the room beyond the arc of the door swing, the door shall not be required to comply with Section 603.2.2. 603.3 Mirrors. Where mirrors are located above lavatories, a mirror shall be located over the accessible lavatory and shall be mounted with the bottom edge of the

reflecting surface 40 inches maximum above the floor. Where mirrors are located above counters that do not contain lavatories, the mirror shall be mounted with the bottom edge of the reflecting surface 40 inches maximum above the floor. EXCEPTION: Other than within Accessible dwelling or sleeping units, mirrors are not required over the lavatories or counters if a mirror is located within the

same toilet or bathing room and mounted with the bottom edge of the reflecting surface 35 inches maximum above the floor. 603.4 Coat Hooks and Shelves. Coat hooks shall be located within one of the reach ranges specified in Section 308. Shelves shall be 40 inches minimum and 48 inches

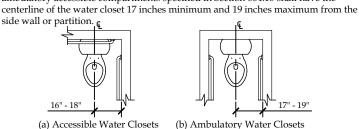
maximum above the floor. 603.5 Diaper Changing Tables. Diaper changing tables shall comply with Sections 309 and 902.

603.6 Operable Parts. Operable parts on towel dispensers and hand dryers serving accessible lavatories shall comply with Table 603.6.

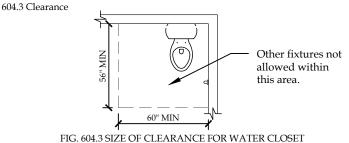
TABLE 603.6 MAXIMUM REACH DEPTH AND HEIGHT Max. Reach Depth 0.5" 2" 5" 6" 9" Max. Reach Height 48" 46" 42" 40" 36" 34"

604 WATER CLOSETS AND TOILET COMPARTMENTS 604.1 General. Accessible water closets and toilet compartments shall comply with Section 604. Compartments containing more than one plumbing fixture shall comply with Section 603. Wheelchair accessible compartments shall comply with Section 604.9. Ambulatory accessible compartments shall comply with Section

EXCEPTION: Water closets and toilet compartments primarily for children's use shall be permitted to comply with Section 604.11 as applicable. 604.2 Location. The water closet shall be located with a wall or partition to the rear and to one side. The centerline of the water closet shall be 16 inches minimum and 18 inches maximum from the side wall or partition. Water closets located in ambulatory accessible compartments specified in Section 604.10 shall have the



(a) Accessible Water Closets (b) Ambulatory Water Closets FIG. 604.2 WATER CLOSET LOCATION



604.3.1 Clearance width. Clearance around a water closet shall be 60 inches minimum in width, measured perpendicular from the sidewall. 604.3.2 Clearance Depth. Clearance around the water closet shall be 56 inches minimum in depth, measured perpendicular from the rear wall. 604.3.3 Clearance Overlap. The required clearance around the water closet shall be permitted to overlap the water closet, associated grab bars, paper dispensers, sanitary napkin receptacles, coat hooks, shelves, accessible routes, clear floor space

at other fixtures and the turning space. No other fixtures or obstructions shall be within the required water closet clearance. 604.4 Height. The height of water closet seats shall be 17 inches minimum and 19 inches maximum above the floor, measured to the top of the seat. Seats shall not be

sprung to return to a lifted position EXCEPTION: A water closet in a toilet room for a single occupant, accessed only through a private office and not for common use or public use, shall not be

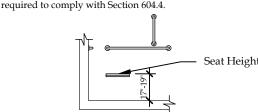


FIG. 604.4 WATER CLOSET SEAT HEIGHT 604.5 Grab Bars, Grab bars for water closets shall comply with Section 609 and shall be provided in accordance with Sections 604.5.1 and 604.5.2. Grab bars shall be provided on the rear wall and on the side wall closest to the water closet. EXCEPTIONS:

1. Grab bars are not required to be installed in a toilet room for a single occupant, accessed only through a private office and not for common use or public use, provided reinforcement has been installed in walls and located so as to permit the installation of grab bars complying with Section 604.5.

shall comply with Section 609.4.2.

2. In detention or correction facilities, grab bars are not required to be installed in housing or holding cells or rooms that are specially designed without protrusions for purposes of suicide prevention 604.5.1 Fixed Side Wall Grab Bars. Fixed side-wall grab bars shall be 42 inches

minimum in length, located 12 inches maximum from the rear wall and extending 54 inches minimum from the rear wall. In addition, a vertical grab bar 18 inches minimum in length shall be mounted with the bottom of the bar located 39 inches minimum and 41 inches maximum above the floor, and with the center line of the bar located 39 inches minimum and 41 inches maximum from the rear wall. EXCEPTION: The vertical grab bar at water closets primarily for children's use

entered on the water closet, where wall space does not permit a grab bar 36 inches minimum in length due to the location of a recessed fixture adjacent to the water closet. 2. Where an administrative authority requires flush controls for flush valves to be located in a position that conflicts with the location of the rear grab bar, that grab bar shall be permitted to be split or shifted to the open side of the toilet area.

Above Grab Bar

located on the open side of the water closet

paper flow

(a) Protruding Dispenser

and 48 inches (1220 mm) maximum above the floor

604.9 Wheelchair Accessible Compartments.

60" MIN

as required by Table 604.9.3.1.

Front Wall or Partition

Side Wall or Partition

Wall-Hung Water Closet

Side Wall or Partition

max or 56" mir

(a) Front partition

partition support members.

than 66 inches in width.

than 65 inches in depth.

than 66 inches in width.

(a) Elevation Adult

EXCEPTIONS:

EXCEPTIONS:

left-hand or right-hand approach to the water closet.

partments shall comply with Section 604.9.5.1.

depth with a floor-mounted water closet

1. To clearance at the front partition is not required in a compartment greate

(b) Elevation Children

Door Opening Location

Below Grab Bar

applicable.

to the rear wall.

FIG. 604.5.1 SIDE WALL GRAB BAR FOR WATER CLOSE 604.5.2 Rear Wall Grab Bars. The rear wall grab bar shall be 36 inches minimum in length, and extend from the centerline of the water closet 12 inches minimum on the side closest to the wall, and 24 inches minimum on the transfer side.

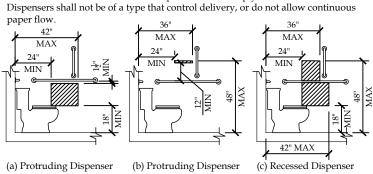
1. The rear grab bar shall be permitted to be 24 inches minimum in length,

FIG. 604.5.2 REAR WALL GRAB BAR FOR WATER CLOSET 604.6 Flush Controls. Flush controls shall be hand operated or automatic. Hand

operated flush controls shall comply with Section 309. Flush controls shall be EXCEPTION: In ambulatory accessible compartments complying with Section

604.10, flush controls shall be permitted to be located on either side of the water

604.7 Dispensers. Toilet paper dispensers shall comply with Section 309.4. Where the dispenser is located above the grab bar, the outlet of the dispenser shall be located within an area 24 inches minimum and 36 inches maximum from the rear wall. Where the dispenser is located below the grab bar, the outlet of the dispenser shall be located within an area 24 inches minimum and 42 inches maximum from the rear wall. The outlet of the dispenser shall be located 18 inches minimum and 48 inches maximum above the floor. Dispensers shall comply with Section 609.3.



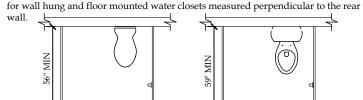
604.8 Coat Hooks and Shelves. Coat hooks provided within toilet compartment shall be 48 inches maximum above the floor. Shelves shall be 40 inches minimum

604.9.1 General. Wheelchair accessible compartments shall comply with Section

604.9.2 Size. Toilet compartments shall comply with Section 604.9.2.1 or 604.9.2.2 as

604.9.2.1 Minimum area. The minimum area of a wheelchair accessible artment shall be 60 inches minimum in width measured perpendicular to the side wall, and 56 inches minimum in depth for wall hung water closets, and 59 inches minimum in depth for floor mounted water closets measured perpendicular

604.9.2.2 Compartment for children's use. The minimum area of a wheelchair accessible compartment primarily for children's use shall be 60 inches minimum in width measured perpendicular to the side wall, and 59 inches minimum in depth



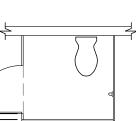
(a) Wall-Hung Water Closet - Adult (b) Floor-Mounted Water Closet - Adult

Wall-Hung & Floor Mounted - Children FIG. 604.9.2 WHEELCHAIR ACCESSIBLE TOILET COMPARTMENTS 604.9.3 Doors. Toilet compartment doors, including door hardware, shall comply with Section 404, except if the approach is to the latch side of the compartment door clearance between the door side of the stall and any obstruction shall be 42 inches minimum. The door shall be self-closing. A door pull complying with Section 404.2.6 shall be placed on both sides of the door near the latch. Toilet compartmen doors shall not swing into the required minimum area of the compartment. 604.9.3.1 Door Opening Location. The farthest edge of toilet compartment door



 om the front wall or partition
 4 inches maximum

 From the rear wall
 55 inches minimum
 oor-Mounted Water Closet From the front wall or partition 4 inches maximum



(b) Side wall or partition FIG. 604.9.3.1 - WHEELCHAIR ACCESSIBLE COMPARTMENT DOOR OPENINGS 604.9.4 Approach. Wheelchair accessible compartments shall be arranged for

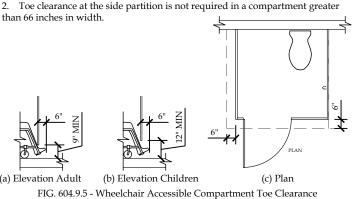
604.9.5 Toe Clearance. Toe clearance for compartments primarily for children's use shall comply with Section 604.9.5.2. Toe clearance for other wheelchair accessible 604.9.5.1 Toe Clearance at Compartments. The front partition and at least one side partition shall provide a toe clearance of 9 inches minimum above the floor and

extending 6 inches beyond the compartment side face of the partition, exclusive of

than 62 inches in depth with a wall-hung water closet, or greater than 65 inches in 2. Toe clearance at the side partition is not required in a compartment greater

604.9.5.2 Toe Clearance at Compartments for Children's Use. The front partition and at least one side partition of compartments primarily for children's use shall provide a toe clearance of 12 inches minimum above the floor and extending 6 inches beyond the compartment side face of the partition, exclusive of partition support

1. Toe clearance at the front partition is not required in a compartment greater



604.10.1 General. Ambulatory accessible compartments shall comply with Section 604.10 604.10.2 Size. The minimum area of an ambulatory accessible compartment shall be 60 inches minimum in depth and 36 inches in width. 604.10.3 Doors. Toilet compartment doors, including door hardware, shall comply with Section 404, except if the approach is to the latch side of the compartment doo the clearance between the door side of the compartment and any obstruction shall be 42 inches minimum. The door shall be self-closing. A door pull complying with Section 404.2.6 shall be placed on both sides of the door near the latch. Compartment doors shall not swing into the required minimum area of the

604.10 Ambulatory Accessible Compartments.

604.10.4 Grab Bars. Grab bars shall comply with Section 609. Side wall grab bars complying with Section 604.5.1 shall be provided on both sides of the compartment. 604.11 Water Closets and Toilet Compartments for Children's Use. 604.11.1 General. Accessible water closets and toilet compartments primarily for hildren's use shall comply with Section 604.11.

604.9.6 Grab Bars, Grab bars shall comply with Section 609. Side wall grab bars

rear wall grab bar complying with Section 604.5.2, shall be provided.

complying with Section 604.5.1 located on the wall closest to the water closet, and a

604.11.2 Location. The water closet primarily for children's use shall be located with a wall or partition to the rear and to one side. The centerline of the water closet shall be 12 inches (305 mm) minimum and 18 inches (455 mm) maximum from the side wall or partition. Water closets located in ambulatory accessible toilet compartments specified in Section 604.10 shall be located as specified in Section

604.11.3 Clearance. A clearance around the water closet primarily for children's use complying with Section 604.3 shall be provided. 604.11.4 Height. The height of water closet seats primarily for children's use shall be 11 inches minimum and 17 inches maximum above the floor, measured to the top of

the seat. Seats shall not be sprung to return to a lifted position. 604.11.5 Grab Bars. Grab bars for water closets primarily for children's use shall comply with Section 604.5.

604.11.6 Flush Controls. Flush controls primarily for children's use shall be hand operated or automatic. Hand operated flush controls shall comply with Sections 309.2 and 309.4 and shall be installed 36 inches maximum above the floor. Flush controls shall be located on the open side of the water closet.

EXCEPTION: In ambulatory accessible compartments complying with Section 604.10, flush controls shall be permitted to be located on either side of the water

604.11.7 Dispensers. Toilet paper dispensers primarily for children's use shall comply with Section The outlet of dispensers shall be located within an area 24 iches minimum and 42 inches maximum from the rear wall. The outlet of the lispenser shall be 14 inches minimum and 19 inches maximum above the floor. There shall be a clearance of $1\frac{1}{2}$ inches minimum below the grab bar. Dispensers shall not be of a type that control delivery or do not allow continuous paper flow. 604.11.8 Toilet Compartments. Toilet compartments primarily for children's use shall comply with Sections 604.9 and 604.10, as applicable.

05.1 General. Accessible urinals shall comply with Section 605. 605.2 Height and Depth. Urinals shall be of the stall type or shall be of the wall hung type with the rim at 17 inches maximum above the floor. Wall hung urinals shall be 13 1/2 inches minimum in depth measured from the outer face of the urinal rim to the wall.

605.3 Clear Floor Space. A clear floor space complying with Section 305, positioned for forward approach, shall be provided. 605.4 Flush Controls. Flush controls shall be hand operated or automatic. Hand operated flush controls shall comply with Section 309.

606 Lavatories and Sinks

606.1 General. Accessible lavatories and sinks shall comply with Section 606. 606.2 Clear Floor Space. A clear floor space complying with Section 305.3. positioned for forward approach, shall be provided. Knee and toe clearance complying with Section 306 shall be provided. The dip of the overflow shall not be onsidered in determining knee and toe clearances. EXCEPTIONS:

1. A parallel approach complying with Section 305 and centered on the sink, shall be permitted to a kitchen sink in a space where a cook top or conventional range is not provided.

. The requirement for knee and toe clearance shall not apply to a lavatory in a pilet or bathing facility for a single occupant, accessed only through a private office and not for common use or public use.

3. A knee clearance of 24 inches minimum above the floor shall be permitted at lavatories and sinks used primarily by children ages 6 through 12 where the rim or counter surface is 31 inches maximum above the floor.

4. A parallel approach complying with Section 305 and centered on the sink, shall be permitted at lavatories and sinks used primarily by children ages 5 and 5. The requirement for knee and toe clearance shall not apply to more than one

bowl of a multibowl sink. 6. A parallel approach complying with Section 305 and centered on the sink,

shall be permitted at wet bars. 606.3 Height. The front of lavatories and sinks shall be 34 inches maximum above

the floor, measured to the higher of the rim or counter surface. EXCEPTION: A lavatory in a toilet or bathing facility for a single occupant, accessed only through a private office and not for common use or public use, shall not be equired to comply with Section 606.3.



FIG. 606.3 HEIGHT OF LAVATORIES AND SINKS 606.4 Faucets. Faucets shall comply with Section 309. Hand-operated metering faucets shall remain open for 10 seconds minimum. 606.5 Lavatories with Enhanced Reach Range. Where enhanced reach range is equired at lavatories, faucets and soap dispenser controls shall have a reach depth

of 11 inches maximum or, if automatic, shall be activated within a reach depth of 11 inches maximum. Water and soap flow shall be provided with a reach depth of 11 inches maximum. 606.6 Exposed Pipes and Surfaces. Water supply and drainpipes under lavatories and sinks shall be insulated or otherwise configured to protect against contact. There shall be no sharp or abrasive surfaces under lavatories and sinks.

07 Bathtubs

607.1 General. Accessible bathtubs shall comply with Section 607. 607.2 Clearance. A clearance in front of bathtubs extending the length of the bathtub and 30 inches minimum in depth shall be provided. Where a permanent seat is provided at the head end of the bathtub, the clearance shall extend 12 inches ninimum beyond the wall at the head end of the bathtub.

607.3 Seat. A permanent seat at the head end of the bathtub or a removable in-tub seat shall be provided. Seats shall comply with Section 610. 607.4 Grab Bars. Grab bars shall comply with Section 609 and shall be provided in

accordance with Section 607.4.1 or 607.4.2. EXCEPTION: Grab bars shall not be required to be installed in a bathing facility for a single occupant accessed only through a private office and not for common use or public use, provided reinforcement has been installed in walls and located so as to permit the installation of grab bars complying with Section 607.4.

607.4.1 Bathtubs with Permanent Seats. For bathtubs with permanent seats, grab bars complying with Section 607.4.1 shall be provided. 607.4.1.1 Back Wall. Two horizontal grab bars shall be provided on the back wall, one complying with Section 609.4 and the other located 8 inches minimum and 10 nches maximum above the rim of the bathtub. Each grab bar shall be located 15 inches maximum from the head end wall and extend to 12 inches maximum from the control end wall.

607.4.1.2 Control End Wall. Control end wall grab bars shall comply with Section 607.4.1.2. EXCEPTION: An L-shaped continuous grab bar of equivalent dimensions and positioning shall be permitted to serve the function of separate vertical and norizontal grab bars

607.4.1.2.1 Horizontal Grab Bar. A horizontal grab bar 24 inches minimum in length shall be provided on the control end wall beginning near the front edge of the bathtub and extending toward the inside corner of the bathtub.

607.4.1.2.2 Vertical Grab Bar. A vertical grab bar 18 inches minimum in length shall be provided on the control end wall 3 inches minimum and 6 inches maximum bove the horizontal grab bar, and 4 inches maximum inward from the front edge of the bathtub. 607.4.2 Bathtubs without Permanent Seats. For bathtubs without permanent seats,

grab bars complying with Section 607.4.2 shall be provided. 607.4.2.1 Back Wall. Two horizontal grab bars shall be provided on the back wall, one complying with Section 609.4 and the other located 8 inches minimum and 10 inches maximum above the rim of the bathtub. Each grab bar shall be 24 inches minimum in length, located 24 inches maximum from the head end wall and extend

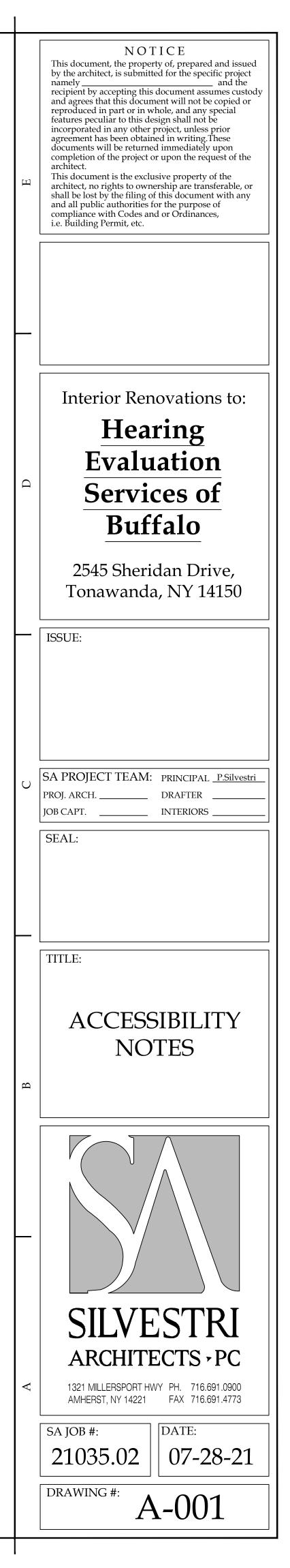
to 12 inches maximum from the control end wall. 607.4.2.2 Control End Wall. Control end wall grab bars shall comply with Section 607.4.1.2. 607.4.2.3 Head End Wall. A horizontal grab bar 12 inches minimum in length shall be provided on the head end wall at the front edge of the bathtub.

607.5 Controls. Controls, other than drain stoppers, shall be provided on an end wall, located between the bathtub rim and grab bar, and between the open side of the bathtub and the centerline of the width of the bathtub. Controls shall comply with Section 309.4.

607.6 Hand Shower. A hand shower with a hose 59 inches minimum in length, that can be used as both a fixed shower head and as a hand shower, shall be provided. The hand shower shall have a control with a nonpositive shut-off feature. Where provided, an adjustable-height hand shower mounted on a vertical bar shall be nstalled so as to not obstruct the use of grab bars. 607.7 Bathtub Enclosures. Enclosures for bathtubs shall not obstruct controls,

rim of the bathtub.

faucets, shower and spray units or obstruct transfer from wheelchairs onto bathtub seats or into bathtubs. Enclosures on bathtubs shall not have tracks installed on the 607.8 Water Temperature. Bathtubs shall deliver water that is 120°F maximum.



608.2 Size, clearance and seat. Shower compartments shall have sizes, clearances and seats complying with Section 608.2. 608.2.1 Transfer-type Shower Compartments. Transfer-type shower compartments shall comply with Section 608.2.1. 608.2.1.1 Size. Transfer-type shower compartments shall have a clear inside

dimension of 36 inches in width and 36 inches in depth, measured at the center point of opposing sides. An entry 36 inches minimum in width shall be provided. 608.2.1.2 Clearance. A clearance of 48 inches minimum in length measured perpendicular from the control wall, and 36 inches minimum in depth shall be provided adjacent to the open face of the compartment. 608.2.1.3 Seat. A folding or non-folding seat complying with Section 610 shall be

provided on the wall opposite the control wall. Exception: A seat is not required to be installed in a shower for a single occupant, accessed only through a private office and not for common use or public use, provided reinforcement has been installed in walls and located so as to permit the nstallation of a shower seat.

608.2.2 Standard Roll-in-type Shower Compartments. Standard roll-in-type shower compartments shall comply with Section 608.2.2. 608.2.2.1 Size. Standard roll-in-type shower compartments shall have a clear inside dimension of 60 inches minimum in width and 30 inches minimum in depth,

measured at the center point of opposing sides. An entry 60 inches minimum in width shall be provided 608.2.2.2 Clearance. A clearance of 60 inches minimum in length adjacent to the 60-inch width of the open face of the shower compartment, and 30 inches minimum

in depth, shall be provided. EXCEPTION: A lavatory complying with Section 606 shall be permitted at the end of the clearance opposite the seat. 608.2.2.3 Seat. A folding seat complying with Section 610 shall be provided on an

end wall. EXCEPTIONS: 1. A seat is not required to be installed in a shower for a single occupant

accessed only through a private office and not for common use or public use, provided reinforcement has been installed in walls and located so as to permit the nstallation of a shower seat. 2. A fixed seat shall be permitted where the seat does not overlap the minimum

clear inside dimension required by Section 608.2.2.1 608.2.3 Alternate Roll-in-type Shower Compartments. Alternate roll-in-type shower compartments shall comply with Section 608.2.3.

608.2.3.1 Size. Alternate roll-in shower compartments shall have a clear inside dimension of 60 inches minimum in width, and 36 inches in depth, measured at the center point of opposing sides. An entry 36 inches minimum in width shall be provided at one end of the 60-inch width of the compartment. A seat wall, 24 inches minimum and 36 inches maximum in length, shall be provided on the entry side of the compartment.

608.2.3.2 Seat. A folding seat complying with Section 610 shall be provided on the seat wall opposite the back wall. EXCEPTION: A seat is not required to be installed in a shower for a single

occupant, accessed only through a private office and not for common use or public use, provided reinforcement has been installed in walls and located so as to permit the installation of a shower seat. 608.3 Grab Bars. Grab bars shall comply with Section 609 and shall be provided in

accordance with Section 608.3. Where multiple grab bars are used, required horizontal grab bars shall be installed at the same height above the floor. EXCEPTION: Grab bars are not required to be installed in a shower for a single occupant, accessed only through a private office and not for common use or public use, provided reinforcement has been installed in walls and located so as

to permit the installation of grab bars complying with Section 608.3. 608.3.1 Transfer-Type Showers. Grab bars for transfer type showers shall comply with Section 608.3.1. 608.3.1.1 Horizontal Grab Bars. Horizontal grab bars shall be provided across the control wall and on the back wall to a point 18 inches from the control wall.

608.3.1.2 Vertical Grab Bar. A vertical grab bar 18 inches minimum in length shall be provided on the control end wall 3 inches minimum and 6 inches maximum above he horizontal grab bar, and 4 inches maximum inward from the front edge of the

608.3.2 Standard Roll-in-Type Showers. In standard roll-in type showers, a grab bar shall be provided on the back wall beginning at the edge of the seat. The grab bars shall not be provided above the seat. The back wall grab bar shall extend the length of the wall but shall not be required to exceed 48 inches in length. Where a side wall is provided opposite the seat within 72 inches of the seat wall, a grab bar shall be provided on the side wall opposite the seat. The side wall grab bar shall extend the length of the wall but shall not be required to exceed 30 inches in length. Grab bars

shall be 6 inches maximum from the adjacent wall. 60S.3.3 Alternate Roll-in-Type Showers. In alternate roll-in type showers, grab bars shall be provided on the back wall and the end wall adjacent to the seat. Grab bars shall not be provided above the seat. Grab bars shall be 6 inches maximum from the adjacent wall.

60S.4 Controls and Hand Showers. Controls and hand showers shall comply with Sections 608.4 and 309.4. 608.4.1 Transfer-Type Showers. In transfer-type showers, the controls and hand

shower shall be located: 1. On the control wall opposite the seat.

2. At a height of 38 inches minimum and 48 inches maximum above the shower floor, and 3. 15 inches maximum, from the centerline of the control wall toward the

shower opening. 608.4.2 Standard Roll-in Showers. In standard roll-in showers, the controls and hand shower shall be located on the back wall above the grab bar, 48 inches (1220 mm) maximum above the shower floor and 16 inches minimum and 27 inches maximum from the end wall behind the seat.

608.4.3 Alternate Roll-in Showers. In alternate roll-in showers, the controls and hand shower shall be located 38 inches minimum and 48 inches maximum above the shower floor. In alternate roll-in showers with controls and hand shower located on the end wall adjacent to the seat, the controls and hand shower shall be 27 inches maximum from the seat wall. In alternate roll-in showers with the controls and hand shower located on the back wall opposite the seat, the controls and hand shower shall be located within 15 inches, left or right, of the centerline of the seat. 608.5 Hand Showers. A hand shower with a hose 59 inches minimum in length, that can be used both as a fixed shower head and as a hand shower shall be provided. The hand shower shall have a control with a nonpositive shut-off feature. Where provided, an adjustable-height hand shower mounted on a vertical bar shall be installed so as to not obstruct the use of grab bars.

EXCEPTION: In other than Accessible units and Type A units, a fixed shower head located 48 inches maximum above the shower floor shall be permitted in lieu of a hand shower.

608.6 Thresholds. Thresholds in roll-in-type shower compartments shall be 1/2 inch maximum in height in accordance with Section 303. In transfer-type shower compartments, thresholds 1/2 inch maximum in height shall be beveled, rounded, or vertical.

EXCEPTION: In existing facilities, in transfer-type shower compartments where provision of a threshold 1/2 inch in height would disturb the structural reinforcement of the floor slab, a threshold 2 inches maximum in height shall be permitted.

608.7 Shower Enclosures. Shower compartment enclosures for shower compartments shall not obstruct controls or obstruct transfer from wheelchairs onto shower seats. 608.8 Water Temperature. Showers shall deliver water that is 120°F (49°C) maximum.

609 Grab Bars

609.1 General. Grab bars in accessible toilet or bathing facilities shall comply with Section 609. 609.2 Cross Section. Grab bars shall have a cross section complying with Section 609.2.1 or 609.2.2.

609.2.1 Circular Cross Section. Grab bars with a circular cross section shall have an outside diameter of 11/4 inch minimum and 2 inches maximum. 609.2.2 Noncircular Cross Section. Grab bars with a noncircular cross section shall

have a cross section dimension of 2 inches maximum, and a perimeter dimension of 4 inches minimum and 4.8 inches maximum.

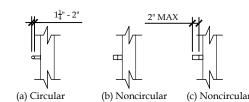


FIG. 609.2 SIZE OF GRAB BARS 609.3 Spacing. The space between the wall and the grab bar shall be 1½ inches. The space between the grab bar and projecting objects below and at the ends of the grab bar shall be 1¹/₂ inches minimum. The space between the grab bar and projecting objects above the grab bar shall be 12 inches minimum.

EXCEPTIONS: 1. The space between the grab bars and shower controls, shower fittings, and other grab bars above the grab bar shall be permitted to be $1\frac{1}{2}$ inches minimum. 2. Recessed dispensers projecting from the wall ¹/₄ inch maximum measured from the face of the dispenser and complying with Section 604.7 shall be

permitted within the 12-inch space above and the 11/2 inch spaces below and at the ends of the grab bar.

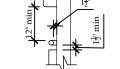


FIG. 609.3 SPACING OF GRAB BARS

609.4 Position of Grab Bars. 609.4.1 General, Grab bars shall be installed in a horizontal position, 33 inches minimum and 36 inches maximum above the floor measured to the top of the gripping surface or shall be installed as required by Items 1 through 3. 1. The lower grab bar on the back wall of a bathtub shall comply with Section

607.4.1.1 or 607.4.2.1.

1. Vertical grab bars shall comply with Sections 604.5.1, 607.4.1.2.2, 607.4.2.2, and 608.3.1.2 2. Grab bars at water closets primarily for children's use shall comply with Section 609.4.2.

609.4.2 Position of Children's Grab Bars. At water closets primarily for children's use complying with Section 604.11, grab bars shall be installed in a horizontal position 18 inches minimum and 27 inches maximum above the floor measured to he top of the gripping surface. A vertical grab bar shall be mounted with the bottom of the bar located between 21 inches minimum and 30 inches maximum above the floor and with the centerline of the bar located between 34 inches

minimum and 36 inches maximum from the rear wall. 609.5 Surface Hazards. Grab bars, and any wall or other surfaces adjacent to grab bars, shall be free of sharp or abrasive elements. Edges shall be rounded. 609.6 Fittings. Grab bars shall not rotate within their fittings. 609.7 Installation and Configuration. Grab bars shall be installed in any manner that

provides a gripping surface at the locations specified in this standard and does not obstruct the clear floor space. Horizontal and vertical grab bars shall be permitted to be separate bars, a single piece bar, or combination thereof. 609.8 Structural Strength. Allowable stresses shall not be exceeded for materials used where a vertical or horizontal force of 250 pounds is applied at any point on the grab bar, fastener mounting device, or supporting structure.

610 Seats 610.1 General. Seats in accessible bathtubs and shower compartments shall comply

with Section 610. 610.2 Bathtub Seats. The height of bathtub seats shall be 17 inches minimum and 19 inches maximum above the bathroom floor, measured to the top of the seat. Removable in-tub seats shall be 15 inches minimum and 16 inches maximum in depth. Removable in-tub seats shall be capable of secure placement. Permanent seats shall be 15 inches minimum in depth and shall extend from the back wall to or beyond the outer edge of the bathtub. Permanent seats shall be positioned at the head end of the bathtub.

610.3 Shower Compartment Seats. The height of shower compartment seats shall be 17 inches minimum and 19 maximum above the bathroom floor, measured to the top of the seat. In transfer-type and alternate roll-in-type showers, the seat shall extend along the seat wall to a point within 3 inches of the compartment entry. In standard roll-in-type showers, the seat shall extend from the control wall to a point within 3 inches of the compartment entry. Seats shall comply with Section 610.3.1 or

610.3.1 Rectangular Seats. The rear edge of a rectangular seat shall be 2 1/2 inches maximum and the front edge 15 inches minimum and 16 inches maximum from the seat wall. The side edge of the seat shall be 1 ½ inches maximum from the back wall of a transfer-type shower and 1 ½ inches maximum from the control wall of a roll-in-type shower

610.3.2 L-Shaped Seats. The rear edge of an L-shaped seat shall be 2 1/2 inches maximum and the front edge 15 inches minimum and 16 inches maximum from the seat wall. The rear edge of the "L" portion of the seat shall be 1 ¹/₂ inches maximum from the wall and the front edge shall be 14 inches minimum and 15 inches maximum from the wall. The end of the "L" shall be 22 inches minimum and 23

inches maximum from the main seat wall. 610.4 Structural Strength. Allowable stresses shall not be exceeded for materials used where a vertical or horizontal force of 250 pounds is applied at any point on

the seat, fastener mounting device, or supporting structure.

701 General 701.1 Scope. Communications elements and features required to be accessible by the scoping provisions adopted by the administrative authority shall comply with the applicable provisions of Chapter 7.

702 Alarms

702.1 General. Accessible audible and visible alarms and notification appliances shall be nstalled in accordance with NFPA 72 listed in Section 105.2.2, be powered by a commercial light and power source, be permanently connected to the wiring of the premises electric system, and be permanently installed. 703 Signs

703.1 General. Accessible signs shall comply with Section 703. Tactile signs shall contain both raised characters and braille. Where signs with both visual and raised characters are equired, either one sign with both visual and raised characters, or two separate signs, one with visual, and one with raised characters, shall be provided. 703.1.1 Designations. Interior and exterior signs identifying permanent rooms and spaces shall comply with Sections 703.1, 703.2, and 703.3. EXCEPTION: Exterior signs that are not located at the door to the space they serve shall

not be required to comply with Section 703.3. 703.1.2 Directional and Informational Signs. Signs that provide direction to or information about interior spaces and facilities of the site shall comply with Section 703.2. 703.1.3 Pictograms. Where pictograms are provided as designations of permanent interior rooms and spaces, the pictograms shall comply with Section 703.5 and shall have text

lescriptors located directly below the pictogram field and complying with Sections 703.2 and 703.3 EXCEPTION: Pictograms that provide information about a room or space, such as "No Smoking", occupant logos, and the International Symbol of Accessibility, are not required to have text descriptors.

703.2 Visual Characters 703.2.1 General. Visual characters shall comply with the following:

1. Visual characters that also serve as raised characters shall comply with Section 703.3, . Visual characters on VMS signage shall comply with Section 703.7, or

Visual characters not covered in items 1 and 2 shall comply with Section 703.2. EXCEPTION: The visual and raised requirements of item 1 shall be permitted to be provided by two separate signs that provide corresponding information provided one sign complies with Section 703.2 and the second sign complies with Section 703.3. 703.2.2 Case. Characters shall be uppercase, lowercase, or a combination of both.

703.2.3 Style. Characters shall be conventional in form. Characters shall not be italic, oblique, script, highly decorative, or of other unusual forms. 703.2.4 Character Height. The uppercase letter "I" shall be used to determine the allowable height of all characters of a font. The uppercase letter "I" of the font shall have a minimum height complying with Table 703.2.4. Viewing distance shall be measured as the horizontal listance between the character and an obstruction preventing further approach towards the

EXCEPTION: In assembly seating where the maximum viewing distance is 100 feet or greater, the height of the uppercase "I" of fonts shall be permitted to be 1 inch for every 30 feet of viewing distance, provided the character height is 8 inches minimum. Viewing distance shall be measured as the horizontal distance between the character and where someone is expected to view the sign.

TABLE 703.2.4 - VISUAL CHARACTER HEIGHT Height above Floor to Baseline of Horizontal Viewing Distance Minimum Character Height

Character		
40 in sheet to loss them an equal to	Less than 6 feet	⁵ / ₈ inch
40 inches to less than or equal to 70 inches	6 feet and greater	$\frac{5}{8}$ inch, plus $\frac{1}{8}$ inch per foot of viewing distance above 6 feet
Greater than 70 inches to less than	Less than 15 feet	2 inches
or equal to 120 inches	15 feet and greater	2 inches, plus $\frac{1}{8}$ inch per foot of viewing distance above 15 feet
	Less than 21 feet	3 inches
Greater than 120 inches	12 feet and greater	3 inches, plus $\frac{1}{8}$ inch per foot of viewing distance above 21 feet

703.2.5 Character Width. The uppercase letter "0" shall be used to determine the allowable width of all characters of a font. The width of the uppercase letter "0" of the font shall be 55 percent minimum and 110 percent maximum of the height of the uppercase "I" of the font. 703.2.6 Stroke Width. The uppercase letter "I" shall be used to determine the allowable stroke width of all characters of a font. The stroke width shall be 10 percent minimum and

30 percent maximum of the height of the uppercase "I" of the font. 703.2.7 Character Spacing. Spacing shall be measured between the two closest points of adjacent characters within a message, excluding word spaces. Spacing between individual characters shall be 10 percent minimum and 35 percent maximum of the character height.

703.2.8 Line Spacing. Spacing between the baselines of separate lines of characters within a message shall be 135 percent minimum and 170 percent maximum of the character height. EXCEPTION: In assembly seating where the maximum viewing distance is 100 feet or greater, the spacing between the baselines of separate lines of characters within a nessage shall be permitted to be 120 percent minimum and 170 percent maximum of the character height.

703.2.9 Height Above Floor. Visual characters shall be 40 inches minimum above the floor of the viewing position, measured to the baseline of the character. Heights shall comply with Table 703.2.4, based on the size of the characters on the sign. EXCEPTION: Visual characters indicating elevator car controls shall not be required to

comply with Section 703.2.9. 703.2.10 Finish and Contrast. Characters and their background shall have a non-glare finish. Characters shall contrast with their background, with either light characters on a dark background, or dark characters on a light background. 703.3 Raised Characters.

703.3.1 General. Raised characters shall comply with Section 703.3, and shall be duplicated in braille complying with Section 703.4. 703.3.2 Depth. Raised characters shall be raised 1/32 inch minimum above their

background. 703.3.3 Case. Characters shall be uppercase.

703.3.4 Style. Characters shall be sans serif. Characters shall not be italic, oblique, script, highly decorative, or of other unusual forms.

703.3.5 Character Height. The uppercase letter "I" shall be used to determine the allowable height of all characters of a font. The height of the uppercase letter "I" of the font, measured vertically from the baseline of the character, shall be 5/8 inch minimum, and 2 inches

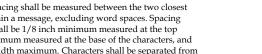
EXCEPTION: Where separate raised and visual characters with the same information are provided, the height of the raised uppercase letter "I" shall be permitted to be 1/2 inch minimum 703.3.6 Character Width. The uppercase letter "0" shall be used to determine the allowable

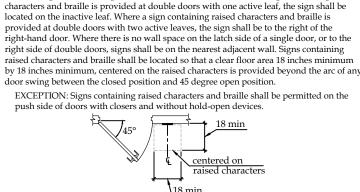
width of all characters of a font. The width of the uppercase letter "0" of the font shall be 55 percent minimum and 110 percent maximum of the height of the uppercase "I" of the font. 703.3.7 Stroke Width. Raised character stroke width shall comply with Section 703.3.7. The uppercase letter "I" of the font shall be used to determine the allowable stroke width of all characters of a font.

703.3.7.1 Maximum. The stroke width shall be 15 percent maximum of the height of the uppercase letter "I" measured at the top surface of the character, and 30 percent maximum of the height of the uppercase letter "I" measured at the base of the character. 703.3.7.2 Minimum. When characters are both visual and raised, the stroke width shall be 10 percent minimum of the height of the uppercase letter "I".

raised borders and decorative elements 3/8 inch minimum.

703.3.8 Character Spacing. Character spacing shall be measured between the two closest points of adjacent raised characters within a message, excluding word spaces. Spacing between individual raised characters shall be 1/8 inch minimum measured at the top surface of the characters, 1/16 inch minimum measured at the base of the characters, and four times the raised character stroke width maximum. Characters shall be separated from





character height.

with Section 703.3.10.



information are provided, raised characters are not required to have non-glare finish or to contrast with their background. 703.4 Braille 703.4.1 General. Braille shall be contracted (Grade 2) braille and shall comply with Section

703.4.2 Uppercase Letters. The indication of an uppercase letter or letters shall only be used before the first word of sentences, proper nouns and names, individual letters of the alphabet, initials, or acronyms. 703.4.3 Dimensions. Braille dots shall have a domed or rounded shape and shall comply with Table 703.4.3.

Measurement Range t base diamete nce between two dots in the same cell e between corresponding dots from one cell

tly below ¹ Measured center to center 703.4.4 Position. Braille shall be below the corresponding text. If text is multilined, braille shall be placed below entire text. Braille shall be separated 3/8 inch minimum from any other raised characters and 3/8 inch minimum from raised borders and decorative elements. Braille provided on elevator car controls shall be separated 3/16 inch minimum either directly below or adjacent to the corresponding raised characters or symbols. 703.4.5 Mounting Height. Braille shall be 48 inches minimum and 60 inches maximum above the floor, measured to the baseline of the braille cells. EXCEPTION: Elevator car controls shall not be required to comply with Section 703.4.5. 703.5 Pictograms 703.5.1 General. Pictograms shall comply with Section 703.5.

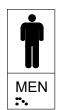


FIG. 703.5 PICTOGRAM FIELD 703.5.3 Finish and Contrast. Pictograms and their fields shall have a nonglare finish. Pictograms shall contrast with their fields, with either a light pictogram on a dark field or a lark pictogram on a light field 703.6 Symbols of Accessibility. 703.6.1 General. Symbols of accessibility shall comply with Section 703.6.

non-glare finish. Symbols of accessibility shall contrast with their backgrounds, with either a light symbol on a dark background or a dark symbol on a light background. 703.6.3 Symbols. 703.6 Symbols of Accessibility.

shall comply with Figure 703.6.3.1. 703.6.3.2 International Symbol of TTY. The International Symbol of TTY shall comply with Figure 703.6.3.2. 703.6.3.3 Assistive Listening Systems. Assistive listening systems shall be identified by the

field complying with Figure 703.6.3.4.



INTERNATIONAL SYMBOL

INTERNATIONAL TTY SYMBOL VOLUME-CONTROLLED TELEPHONE

703.3.9 Line Spacing. Spacing between the baselines of separate lines of raised characters within a message shall be 135 percent minimum and 170 percent maximum of the raised

703.3.10 Height above Floor. Raised characters shall be 48 inches minimum above the floor

measured to the baseline of the lowest raised character and 60 inches maximum above the floor, measured to the baseline of the highest raised character

EXCEPTION: Raised characters for elevator car controls shall not be required to comply

FIG. 703.3.10

Note: For braille character mounting height see Section 703.4.5

HEIGHT OF RAISED CHARACTERS ABOVE FLOOR

703.3.11 location. Where a sign containing raised characters and braille is provided at a door, the sign shall be alongside the door at the latch side. Where a sign containing raised

TABLE 703.4.3 BRAILLE MEASUREMENT

Maximum in inches

0.090 to 0.10 0.241 to 0.300

0.395 to 0.400

703.5.2 Pictogram Field. Pictograms shall have a field 6 inches minimum in height.

Characters or braille shall not be located in the pictogram field.

703.6.2 Finish and Contrast. Symbols of accessibility and their backgrounds shall have a

703.6.3.1 International Symbol of Accessibility. The International Symbol of Accessibility

International Symbol of Access for Hearing Loss complying with Figure 703.6.3.3.

703.6.3.4 Volume-Controlled Telephones. Telephones with volume controls shall be identified by a pictogram of a telephone handset with radiating sound waves on a square



INTERNATIONAL SYMBOL OF ACCESS FOR HEARING LOSS



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D	Interior Renovations to: Hearing Evaluation Services of Buffalo 2545 Sheridan Drive, Tonawanda, NY 14150
\vdash	ISSUE:
C	SA PROJECT TEAM: PRINCIPAL P.Silvestri PROJ. ARCH. DRAFTER JOB CAPT. INTERIORS SEAL:
	TITLE:
В	ACCESSIBILITY NOTES
А	SA JOB #: 21035.02 DRAWING #: ABULERSPORT HWY PH. 716.691.0900 FAX 716.691.4773 DATE: 07-28-21
	11-002

GENERAL NOTES

- 1. DO <u>NOT</u> SCALE DRAWINGS.
- 2. CONSTRUCTION SHALL CONFORM TO ALL APPLICABLE NEW YORK STATE BUILDING CODES, OSHA STANDARDS AND FIRE SAFETY CODE / RELEVANT SECTIONS OF THE N.F.P.A. & ANY LOCAL CODES BEING MORE RESTRICTIVE THAN THE MINIMUMS LISTED.
- 3. CONSTRUCTION MEANS, METHODS, TECHNIQUES AND CRAFTSMANSHIP ARE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR. G.C. SHALL VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD. CONTACT ARCHITECT IF MAJOR DISCREPANCIES OCCUR BETWEEN DRAWINGS AND EXISTING CONDITIONS.
- 4. THE CONTRACTOR IS REQUIRED TO INSPECT THE PROJECT SITE IN ORDER TO DETERMINE THE EXTENT OF THE REQUIRED WORK. THIS INSPECTION SHALL BE COMPLETED PRIOR TO THE SUBMISSION OF ANY PROPOSAL TO COMPLETE THIS PROJECT. INSPECTION TIMES SHALL BE COORDINATED WITH THE OWNER.
- 5. THE CONTRACTOR IS RESPONSIBLE FOR COMPLIANCE WITH ALL INFORMATION ON THE DRAWINGS.
- 6. THE CONTRACTOR'S ATTENTION IS DIRECTED TO THE FACT THAT DUE TO THE NATURE OF RECONSTRUCTION PROJECTS, THE EXACT EXTENT OF THE RECONSTRUCTION WORK CANNOT ALWAYS BE ACCURATELY DETERMINED PRIOR TO THE COMMENCEMENT OF THE WORK. THESE DOCUMENTS HAVE BEEN PREPARED BASED ON FIELD INSPECTIONS AND OTHER INFORMATION AVAILABLE AT THE TIME. ACTUAL FIELD CONDITIONS MAY REQUIRE MODIFICATION TO CONSTRUCTION DETAILS AND WORK QUANTITIES. THE CONTRACTOR SHALL BID & PERFORM THE WORK IN ACCORDANCE WITH THE FIELD CONDITIONS.
- 7. ALL DIMENSIONS SHOWN FOR EXISTING STRUCTURES ARE BASED ON RECORD DRAWINGS AND FIELD MEASUREMENTS. THE CONTRACTOR IS ADVISED THAT SAID DRAWINGS MAY NOT ACCURATELY REFLECT AS BUILT CONDITIONS. ACCURATE FIELD MEASUREMENTS SHOULD BE MADE PRIOR TO ORDERING ANY PREFABRICATED MATERIALS. DISCREPANCIES SHALL BE REPORTED TO THE ARCHITECT AND SHALL BE REFLECTED ON THE CONTRACTORS SHOP DRAWINGS.
- 8. THE DRAWINGS, SPECIFICATIONS AND OTHER DOCUMENTS FOR THIS PROJECT WILL BE COMPLETED TO THE SCOPE OF THE PROJECT IN COMPLIANCE WITH THE OWNER AND DESIGN TEAM. ANY CHANGES TO THESE DRAWINGS, SPECIFICATIONS AND OTHER DOCUMENTS WILL ONLY BE DONE BY A CHANGE ORDER THAT IS APPROVED BY THE OWNER'S REPRESENTATIVE.
- 9. CONSIDERATION WILL NOT BE GRANTED FOR ANY ALLEGED MISUNDERSTANDINGS AS TO THE AMOUNT AND / OR SCOPE OF WORK TO BE PERFORMED. TENDER OF PROPOSAL SHALL CONVEY FULL AGREEMENT TO THE ITEMS, AND CONDITIONS INDICATED IN THE CONSTRUCTION DOCUMENTS. SHOULD THE CONTRACTOR FIND DISCREPANCIES OR OMISSIONS IN THE CONSTRUCTION DOCUMENTS OR BE IN DOUBT AS TO THE INTENT THEREOF, THE CONTRACTOR SHALL IMMEDIATELY OBTAIN CLARIFICATION FROM THE ARCHITECT PRIOR TO SUBMITTING A PROPOSAL FOR THE WORK.
- 10. ALL OWNER SUPPLIED ITEMS WILL BE COORDINATED WITHIN THE GENERAL CONTRACTOR'S CONSTRUCTION SCHEDULES PRIOR TO COMMENCEMENT OF ANY WORK.
- 11. THE CONTRACTOR SHALL COORDINATE HIS WORK AND SCHEDULE WITH THE OWNER FOR ALL BUILDING AND CONSTRUCTION SIGNAGE.
- 12. THE CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION OF HIS WORK AND SCHEDULE WITH WORK BEING PERFORMED BY OTHERS AND THE USER/OWNER OF THE BUILDING.
- 13. ALL DIMENSIONS SHALL HAVE PRECEDENCE OVER SCALE. DO NOT SCALE DRAWINGS. ALL DIMENSIONS ARE TO FACE OF CONCRETE OR MASONRY, CENTERLINE OF COLUMNS AND BEAMS, AND FINISH TO FINISH, UNLESS OTHERWISE NOTED.
- 14. THE STRUCTURAL, MECHANICAL, ELECTRICAL AND PLUMBING

DRAWINGS ARE SUPPLEMENTARY TO THE ARCHITECTURAL DRAWINGS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CHECK WITH THE ARCHITECTURAL DRAWINGS BEFORE THE INSTALLATION OF STRUCTURAL, MECHANICAL, ELECTRICAL AND PLUMBING WORK. ANY DISCREPANCIES BETWEEN THE ARCHITECT'S AND ENGINEER'S DRAWINGS AND SPECIFICATIONS SHALL BE BROUGHT TO THE ARCHITECT'S ATTENTION FOR CLARIFICATION PRIOR TO PROCEEDING WITH SAID WORK.

- 15. DETAILS MARKED "TYPICAL" SHALL APPLY IN ALL CASES UNLESS SPECIFICALLY INDICATED OTHERWISE.
- 16. ALL SYMBOLS AND ABBREVIATIONS USED ON THE DRAWINGS ARE CONSIDERED TO BE CONSTRUCTION STANDARDS. IF THE CONTRACTOR HAS QUESTIONS REGARDING SOME, OR THEIR EXACT MEANING, THE ARCHITECT SHALL BE NOTIFIED FOR CLARIFICATION.
- 17. CONTRACTOR SHALL VERIFY AND ESTABLISH THE LOCATIONS AND ELEVATIONS OF ALL UTILITIES WITHIN THE WORK AREA, AND SHALL COORDINATE WITH THE OWNER AND THE UTILITY COMPANIES PRIOR TO THE START OF THE PROJECT.
- 18. THE CONTRACTOR SHALL PROVIDE ALL SHORING AND BRACING REQUIRED TO ADEQUATELY PROTECT PERSONAL AND ADJACENT PROPERTY AND TO INSURE SAFETY OF THE STRUCTURE THROUGHOUT THE CONSTRUCTION PERIOD.
- 19. ALL CEILING HEIGHTS AS SHOWN ON DETAILS OR PLANS OR NOTES ARE FROM TOP OF CONCRETE DECK TO FINISH CEILING. USE OF THE TERM ABOVE FINISH FLOOR (A.F.F.) MEANS MEASURED FROM THE TOP OF CONCRETE DECK. CONTRACTOR SHALL ALLOW FOR AND COORDINATE WORK WITH FLOOR FINISH MATERIAL AND INSTALLATION METHOD.
- 20. PROVIDE INDEPENDENT SUSPENSION FOR ALL LIGHT FIXTURES. SUSPENSION FOR CEILING AND LIGHT FIXTURES SHALL BE INDEPENDENT OF SUSPENSION FOR DUCT WORK.
- 21. ALL EQUIPMENT AND MATERIALS INSTALLED IN THIS JOB SHALL BE NEW AND FREE OF ANY DEFECTS UNLESS OTHERWISE NOTED.
- 22. CONTRACTORS SHALL RECORD ALL DEVIATIONS FROM THE DESIGN DOCUMENTS IN THE DRAWINGS, AND PROVIDE A COPY TO THE ARCHITECT UPON THE COMPLETION OF WORK.
- 23. PROVIDE APPROVED SEPARATION BY MEANS OF COATINGS, GASKETS, OR OTHER EFFECTIVE MEANS TO PREVENT GALVANIC CORROSION BETWEEN ALL DISSIMILAR METALS.
- 24. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING ANY DAMAGE CAUSED BY THE CONSTRUCTION OPERATIONS OF THIS PROJECT TO ADJACENT PROPERTY, UTILITIES, PAVEMENT, LANDSCAPING, STRUCTURES OR IMPROVEMENTS OF ANY KIND. THE GENERAL CONTRACTOR SHALL REPAIR ALL SUCH DAMAGE D ITEMS TO THE CONDITION THEY WERE IN PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITIES OR BETTER.
- 25. WHERE IT IS NECESSARY TO INSURE STABILITY, CONTRACTOR IS TO PROVIDE ADDITIONAL ANCHORING AND/OR BLOCKING IN STUD PARTITIONS OR BRACE PARTITIONS ABOVE CEILINGS.
- 26. CONTRACTOR TO COORDINATE LOCATIONS OF FLOOR DRAINS WITH PLUMBING CONTRACTOR.
- 27. CONTRACTOR TO COORDINATE SIZE OF LOCATION OF DEPRESSED SLAP AND TRENCH DRAIN REQUIRED FOR WASHING MACHINES PER MANUFACTURERS AND OWNERS SPECIFICATIONS AT LAUNDRY 110.
- 28. AUTOMATIC SPRINKLER PROTECTION IS REQUIRED. AUTOMATIC SPRINKLER TO BE CONFIGURED AS REQUIRED FOR NEW CONSTRUCTION. CONTRACTOR TO PROVIDE LAYOUT AND THE MINIMUM REQUIREMENTS FOR THE DESIGN AND INSTALLATION OF AUTOMATIC FIRE SPRINKLER SYSTEM AND EXPOSURE PROTECTION SPRINKLER SYSTEMS, INCLUDING THE CHARACTER AND ADEQUACY OF WATER SUPPLIES AND THE SELECTION OF SPRINKLERS, PIPING, VALVES AND ALL OTHER MATERIALS AND ACCESSORIES IN ACCORDANCE WITH NFPA 13 AND LOCAL

BUILDING CODES.

29. ROOM IDENTIFICATION AND INTERIOR SIGNAGE BY OWNER, SIGNAGE SHALL COMPLY WITH ADA REQUIREMENTS.

30. CONTRACTOR SHALL PROVIDE AND INSTALL FIRE EXTINGUISHERS PER CODE, INCLUDING NFPA 10, AND AS DIRECTED BY THE LOCAL FIRE DEPARTMENT THROUGHOUT BUILDING. FIRE EXTINGUISHER CABINETS SHALL NOT PROJECT MORE THAN 4" BEYOND THE FACE OF THE WALL RECESSED FIRE EXTINGUISHER CABINETS IN FIRE RATED WALLS SHALL HAVE THE SAME FIRE RATING AS THE WALL.

31. DIMENSIONS TO EXTERIOR WALLS ARE ASSUMED FACE OF FOUNDATION WALL UNLESS OTHERWISE NOTED. ALL INTERIOR. ALL INTERIOR DIMENSIONS ARE TAKEN FROM FACE OF FINISHED WALL. ALL EXTERIOR DIMENSIONS ARE TO FACE OF SHEATHING, UNLESS OTHERWISE NOTED.

32. BEFORE SUBMITTING BID, EXAMINE ALL DRAWINGS RELATED TO THE WORK, BECOME FULLY INFORMED AS TO THE EXTENT AND CHARACTER OF THE WORK OF ALL TRADES AND ITS RELATION TO THE WORK UNDER THE CONTRACT. NO CONSIDERATIONS WILL BE GIVEN FOR ALLEGED MISUNDERSTANDING OF THE MATERIALS TO BE FURNISHED OR THE WORK TO BE DONE.

33. CONTRACTOR SHALL REVIEW AND SUBMIT SHOP DRAWINGS SUFFICIENTLY IN ADVANCE OF THE WORK TO ALLOW PROPER TIME FOR REVIEW. MATERIALS SHALL NOT BE FABRICATED OR DELIVERED TO THE SITE BEFORE THE SHOP DRAWINGS HAVE BEEN REVIEWED AND APPROVED BY THE OWNER'S REPRESENTATIVE.

34. ALL SUBSTITUTE MANUFACTURERS, EQUIPMENT, MATERIALS AND PRODUCTS SHALL BE APPROVED BY THE OWNERS REPRESENTATIVE. THE CONTRACTORS IS RESPONSIBLE FOR ALL ASSOCIATED COSTS TO ANY AND ALL BUILDING COMPONENTS THAT ARE AFFECTED BY THE SUBSTITUTIONS. ADDITIONAL COSTS INCLUDE ANY REDESIGN THAT IS REQUIRED DUE TO THE SUBSTITUTION.

35. DO NOT SCALE DRAWINGS, THE DIMENSIONS SHOWN ON THE PLANS MAY VARY FROM THE ACTUAL DIMENSIONS IN THE FIELD. IT IS, THEREFORE, IMPERATIVE THAT THE CONTRACTOR, PRIOR TO COMMENCEMENT OF WORK, TAKE EXACT MEASUREMENTS TO VERIFY ALL DIMENSIONS SHOWN ON THE PLANS AND SHOP DRAWINGS. ALL WORKING DRAWINGS PREPARED BY THE CONTRACTOR SHALL INCLUDE A STATEMENT CERTIFYING THAT THOSE DRAWINGS HAVE BEEN PREPARED IN ACCORDANCE WITH THE FIELD MEASURED DIMENSIONS.

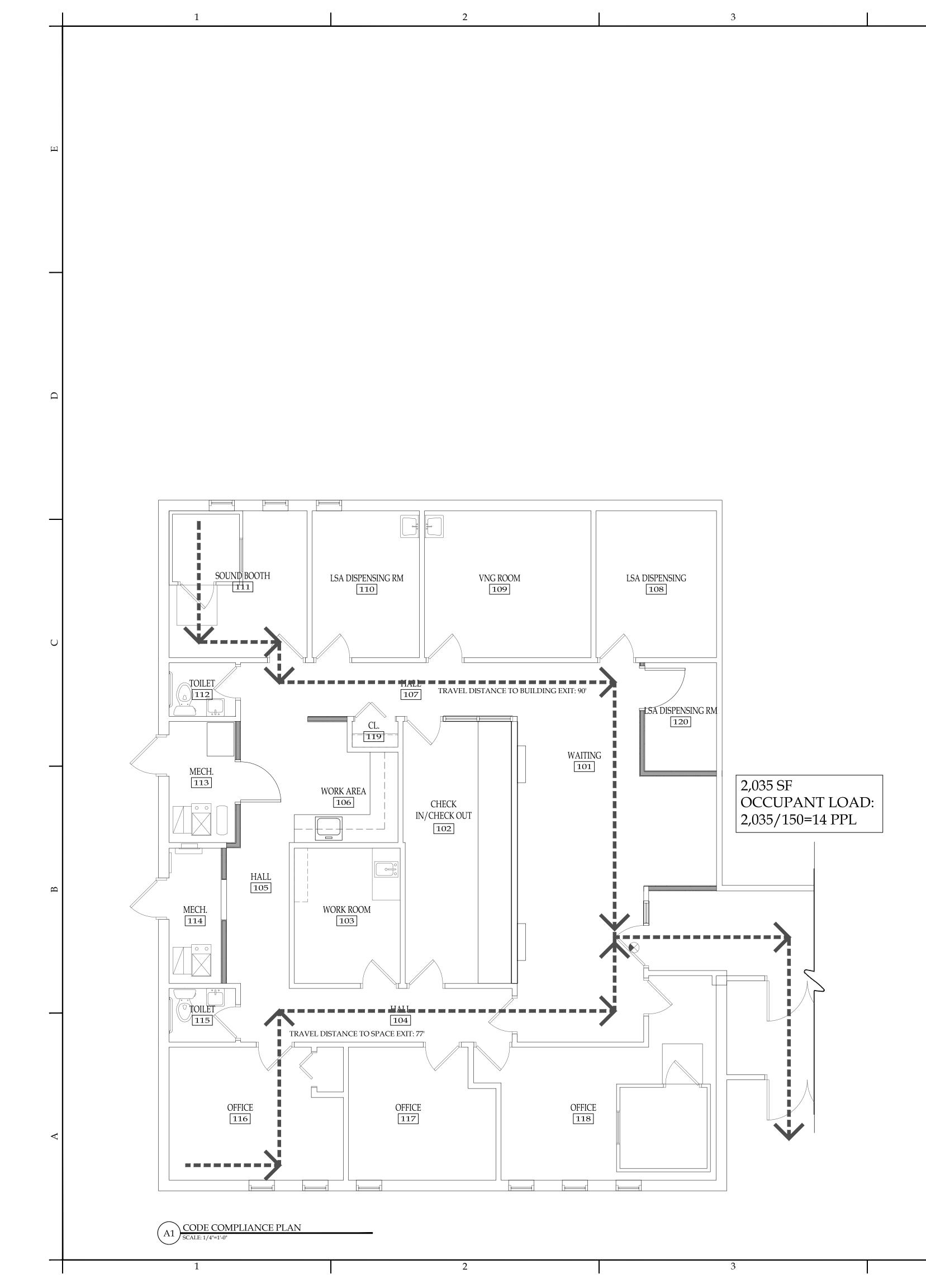
36. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT OF ANY AND ALL DISCREPANCIES BETWEEN FIELD CONDITIONS AND THE CONTRACT DOCUMENTS BEFORE PROCEEDING WITH THAT PORTION OF THE WORK. FAILURE TO NOTIFY THE ARCHITECT WILL NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY TO COMPLY WITH THE DOCUMENTS. THE CONTRACTOR SHALL CORRECT ANY AND ALL WORK ARISING FROM SUCH FAILURE AND COORDINATE DISCREPANCIES TO THE SATISFACTION OF THE ARCHITECT WITHOUT ADDITIONAL COST TO THE OWNER. RECOMMENDED BY MANUFACTURER.

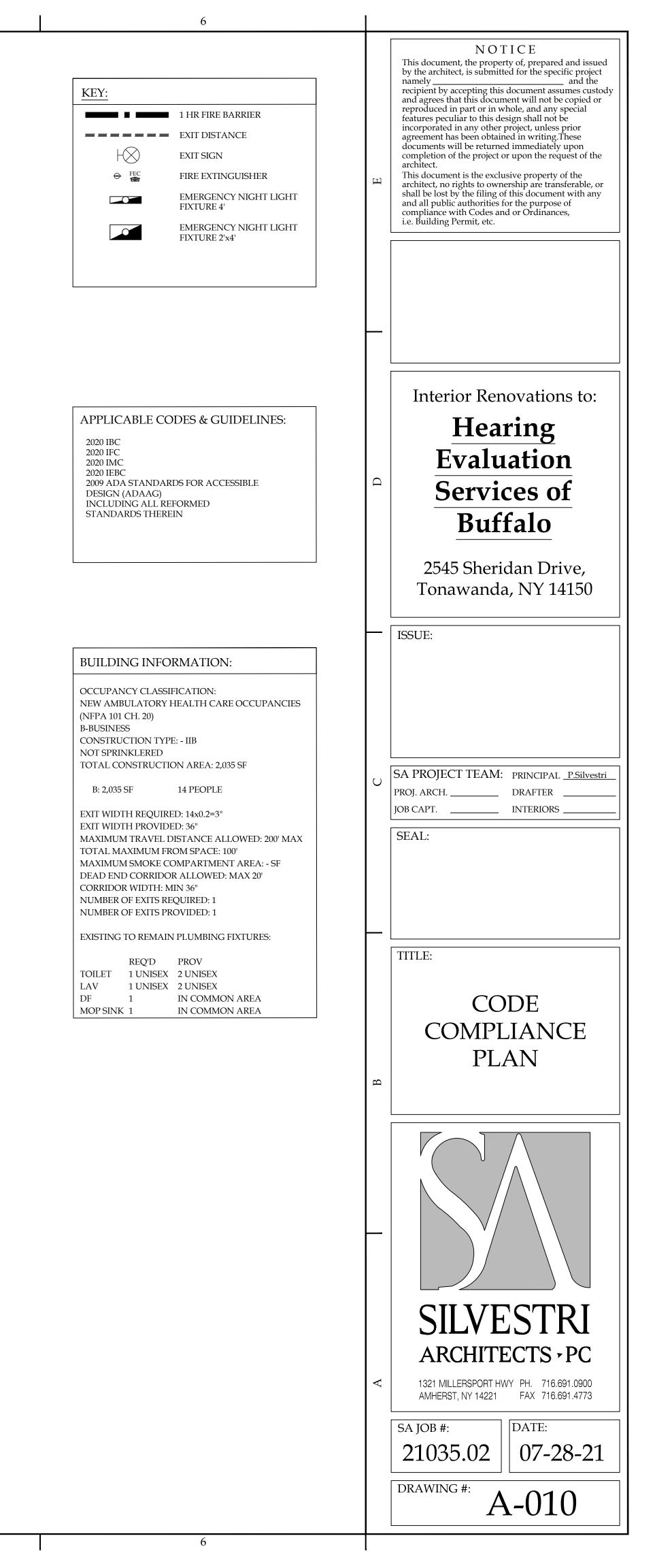
37. THE LOCATION FOR ALL ITEMS WHEN ON THE DRAWINGS OR CALLED FOR IN THE SPECIFICATIONS THAT ARE NOT DEFINITELY FIXED BY DIMENSIONS ARE DIAGRAMMATIC. THE EXACT LOCATIONS NECESSARY TO SECURE THE BEST CONDITIONS AND RESULTS MUST BE DETERMINED AT THE PROJECT AND SHALL HAVE THE APPROVAL OF THE OWNER'S REPRESENTATIVE BEFORE BEING INSTALLED. DO NOT SCALE DRAWINGS. THE CONTRACTOR SHALL FURNISH AND INSTALL, WITHOUT ADDITIONAL REMUNERATION, ANY COMPONENT NECESSARY TO COMPLETE THE SYSTEMS IN ACCORDANCE WITH THE BEST PRACTICE OF THE TRADE.

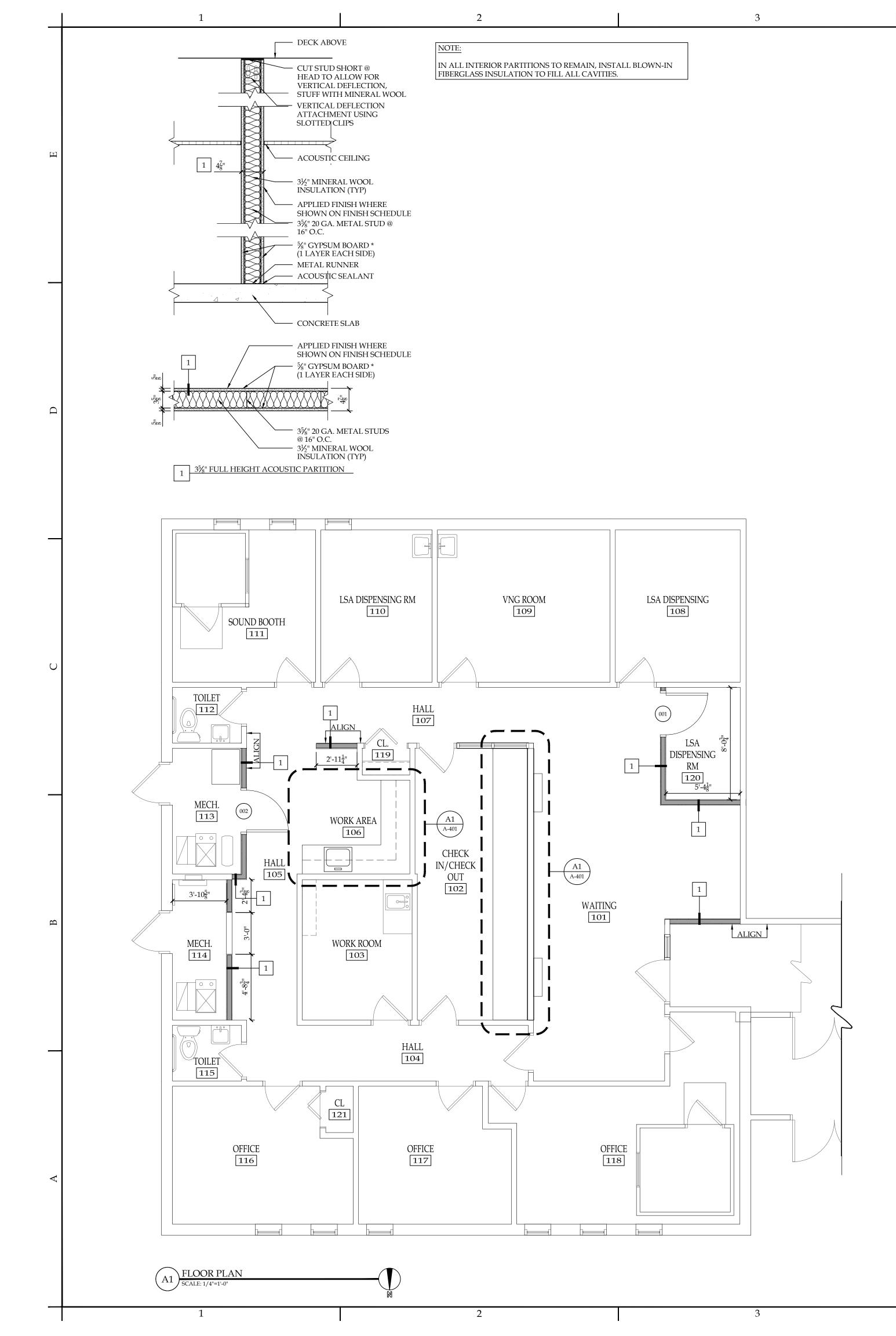
DATA, COMMUNICATION, CABLE, AND SECURITY SYSTEMS ARE PROVIDED BY THE OWNER'S VENDORS. HOWEVER THE ELECTRICAL CONTRACTOR SHALL PROVIDE APPROPRIATE WALL BOXES, CONDUIT WITH PULL STRINGS, ETC. AS REQUIRED FOR ROUGH-IN CONDITIONS. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE LOCATION OF THESE ITEMS WITH THE OWNER'S VENDORS. ADAAG COMPLIANCE SHALL APPLY.

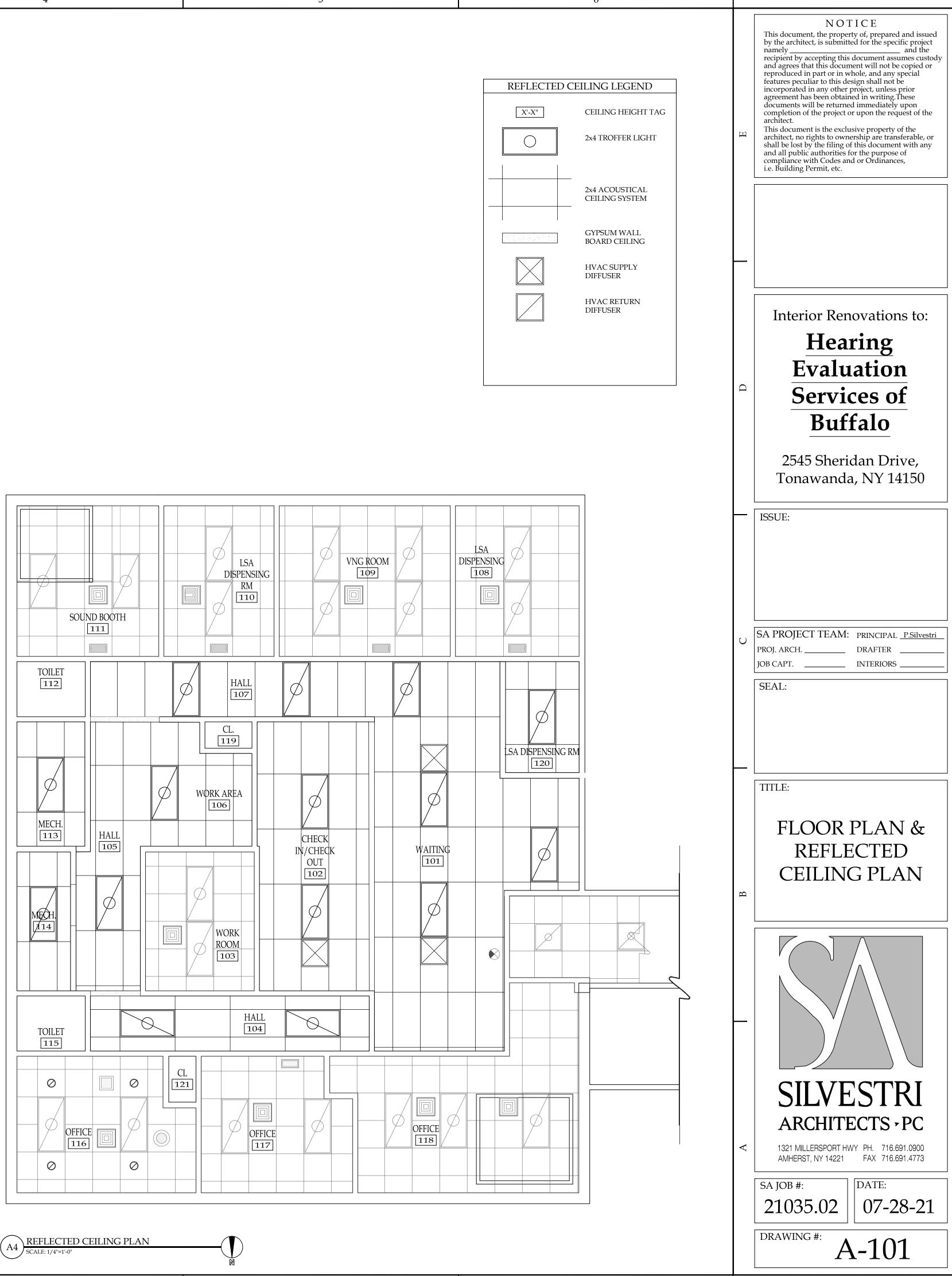
- 39. MECHANICAL, ELECTRICAL, AND PLUMBING, ARE SCHEMATIC IN NATURE. THEREFORE, IT IS THE GENERAL CONTRACTOR'S RESPONSIBILITY TO COORDINATE THE ROUTING OF THESE TRADES, AS WELL AS, THE OWNER'S WORK TO ASSURE THAT THESE SYSTEMS DO NOT CONFLICT WITH THE ARCHITECTURAL AND STRUCTURAL ELEMENTS OF THE BUILDING. IF THE GENERAL CONTRACTOR ROUTE THESE ITEMS TO AVOID A CONFLICT, THEN THEY SHALL NOTIFY THE ARCHITECT PRIOR TO STARTING ANY RELATED WORK.
- 40. CONTRACTOR TO PROTECT ALL NEW WORK DURING CONSTRUCTION AND REPLACE DAMAGED MATERIAL IN KIND.
- 41. ALL GYPSUM WALL BOARD TO BE TAPED AND SANDED AT INTERSECTION OF CONSTRUCTION (NO. "J" MOLD)
- 42. PROVIDE CORNER BEAD AT ALL EXPOSED GYPSUM WALL BOARD CORNERS.
- 43. DOOR OPENINGS SHALL BE LOCATED 4" FROM THE NEAREST FACE OF WALL IN MASONRY WALL CONSTRUCTION, UNLESS OTHERWISE NOTED.
- 44. CONTRACTOR SHALL PROVIDE ALL MATERIALS, FABRICATION, LABOR AND SUPERVISION, ERECTION EQUIPMENT AND APPLIANCES REQUIRED TO INSTALL ALL EQUIPMENT SHOWN ON DRAWINGS AS INDICATED IN THE SPECIFICATIONS.
- 45. THE TERM "PROVIDE" SHALL MEAN "FURNISH AND INSTALL, INCLUDING ALL LABOR, EQUIPMENT, MATERIALS AND PRODUCTS," UNLESS OTHERWISE NOTED.
- 46. CONTRACTOR SHALL COORDINATE HER/HIS WORK WITH THE OWNER SO THAT THERE IS NO INTERFERENCE WITH OWNER'S PERSONAL OR WORK SCHEDULE.
- 47. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INITIATING, MAINTAINING AND SUPERVISING ALL SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE PERFORMANCE OF THE CONTRACT.
- 48. SAVE WORKING CONDITIONS ARE ALL SAFETY REQUIREMENTS ESTABLISHED BY JURISDICTIONAL AGENCIES AND/OR THE OWNER SHALL BE OBSERVED. WHERE CONFLICTS EXIST, THE MORE STRINGENT REQUIREMENTS SHALL APPLY. CARE MUST BE EXERCISED TO AVOID ENDANGERING PERSONNEL OR THE STRUCTURE.
- 49. CONTRACTOR SHALL REMOVE ALL PROPERLY DISPOSE OF ALL DEBRIS FROM SITE AND LEAVE THE WORK AREA BROOM CLEAN ON A DAILY BASIS AND PROVIDE DUMPSTER SERVICE. PLACE DUMPSTERS AS DIRECTED BY THE "OWNER'S REPRESENTATIVE"
- 50. CONTRACTOR SHALL FURNISH ALL SCAFFOLDING, HOISTING EQUIPMENT AND ANY OTHER EQUIPMENT THAT MAY BE REQUIRED TO PERFORM THE WORK INDICATED IN A SAFE AND ORDERLY MANNER.
- 51. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO INSURE AGAINST DAMAGE TO EXISTING WORK TO REMAIN IN PLACE. ANY DAMAGE TO SUCH WORK SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE OWNER AT NO ADDITIONAL COST.
- 52. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SECURING AND PAYING FOR ALL PERMITS AND APPROVALS NECESSARY FOR THE COMPLETION OF THE PROJECT.
- 53. ALL NEW MATERIALS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS LATEST WRITTEN INSTRUCTIONS AND SPECIFICATIONS.
- 38. DATA, COMMUNICATION, CABLE, AND SECURITY SYSTEMS ARE PROVIDED BY THE OWNER'S VENDORS. HOWEVER THE ELECTRICAL
 54. THE CONTRACTOR SHALL COORDINATE ALL FINISHES AND COLOR SELECTIONS WITH THE OWNER.
 - 55. ALL FASTENERS INTO PRESSURE TREATED LUMBER ARE TO BE HOT DIPPED GALVANIZED OR STAINLESS STEEL AS RECOMMENDED BY MANUFACTURER.

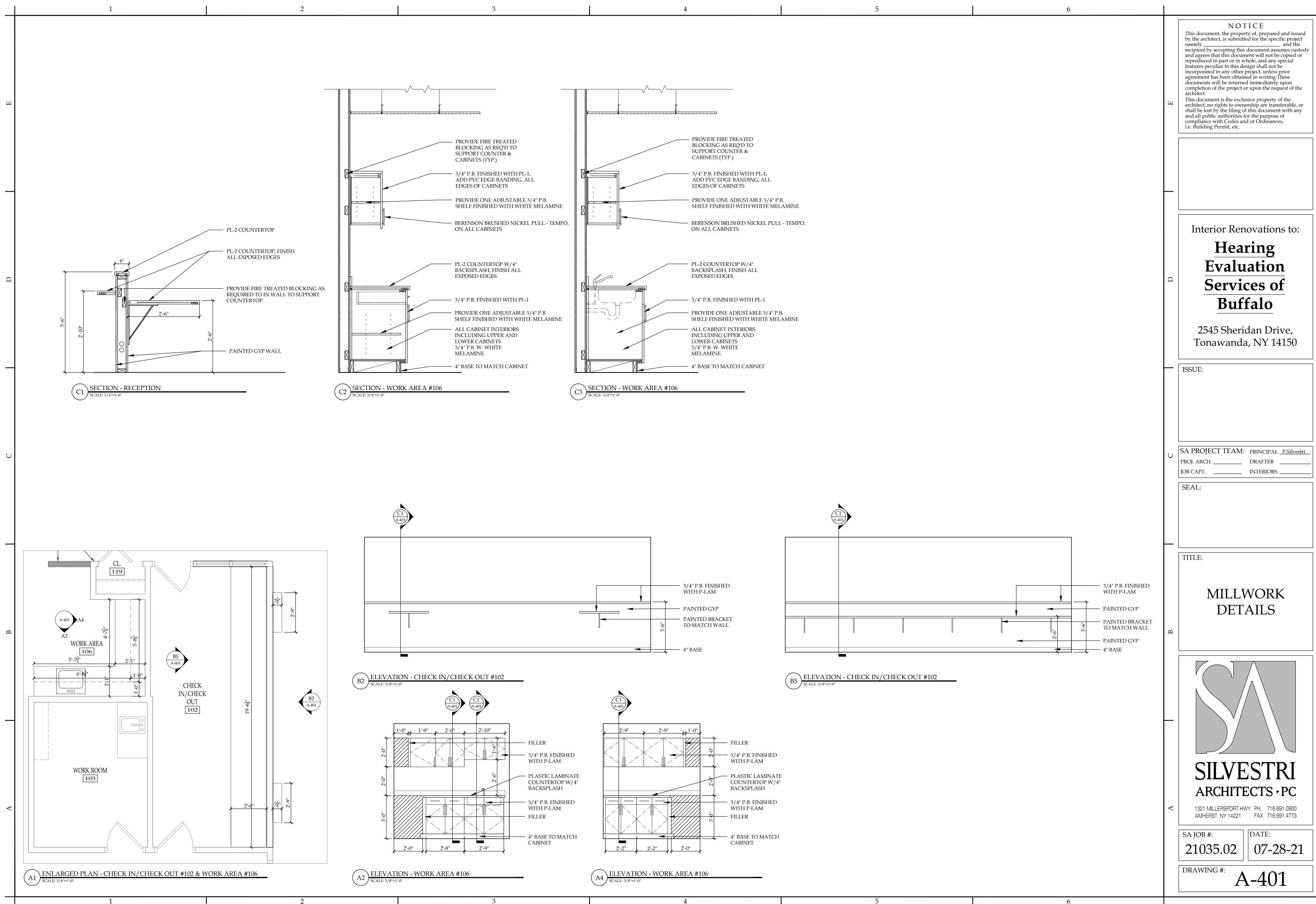
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THIS STATEMENT SHALL INCLUDE A COMPLETE LIST OF MATERIALS AND WORK REQUIRING SPECIAL INSPECTIONS BY THIS SECTION, THE INSPECTIONS TO BE PERFORMED AND A LIST OF THE INDIVIDUALS, APPROVED AGENCIES OR FIRMS INTENDED TO BE RETAINED FOR CONDUCTING SUCH INSPECTIONS. Interior Renovations to: • THE SPECIAL INSPECTOR SHALL KEEP RECORDS OF ALL INSPECTIONS AND SHALL FURNISH INSPECTION REPORTS TO THE Hearing Evaluation BUILDING OFFICIAL, STRUCTURAL ENGINEER AND ARCHITECT OF RECORD. DISCOVERED DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION. IF SUCH DISCREPANCIES ARE NOT CORRECTED, THE DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE BUILDING OFFICIAL, STRUCTURAL ENGINEER AND ARCHITECT OF RECORD. THE SPECIAL INSPECTION PROGRAM DOES NOT RELIEVE Services of THE CONTRACTOR OF HIS OR HER RESPONSIBILITIES. Buffalo 2545 Sheridan Drive Tonawanda, NY 14150 GENERAL WALL NOTES **ISSUE**: SEE SPECIFICATIONS FOR APPLICATIONS OF GYPSUM PRODUCTS, UNLESS NOTED ON DRAWINGS. REFER TO SPECIFICATIONS FOR SPECIAL APPLICATIONS, THICKNESS, AND TYPES. (I.E. MOLD & MOISTURE RESISTANCE, TILE BACKER BOARDS, ETC.) • REFER TO THE LATEST EDITION OF UNDERWRITERS LABORATORIES, INC. FIRE RESISTANCE DIRECTORY FOR ADDITIONAL REQUIREMENTS ON UL RATED ASSEMBLIES AS NOTED IN THE PARTITION DETAILS • USE ONLY PARTITIONS IDENTIFIED ON THE PLANS. SA PROJECT TEAM: PRINCIPAL P.Silvestri • STC = SOUND TRANSMISSION CLASS - REFER TO THE WALL PROJ. ARCH. ____ DRAFTER ____ SCHEDULE IN PLAN FOR WALLS THAT ARE SOUND RATED. JOB CAPT. _____ INTERIORS ALL SEALANTS IN RATED WALL LOCATIONS REFERENCED IN THE WALL TYPE DETAILS SHALL BE SELECTED AND INSTALLED IN SEAL: ACCORDANCE WITH THE MINIMUM REOUIREMENTS OF THE UNDERWRITERS LABORATORIES, INC FIRE RESISTANCE DIRECTORY. IN ADDITION TO FIRE RESISTANCE, WALL LOCATIONS CALLED OUT WITH REQUIRED ACOUSTICAL VALUE, AS NOTED IN WALL SCHEDULE, SHALL HAVE SEALANTS THAT MAINTAIN THE MINIMUM SOUNDS VALUE OF THE WALL PARTITION. | TITLE: **GENERAL NOTES** SOUND INSULATION NOTES ASSEMBLIES SHOULD BE AIRTIGHT. HAIRLINE CRACKS AND HOLES ARE NOT ALLOWED. • RECESSED WALL FIXTURES SUCH AS CABINETS, OUTLETS, AND OTHER ITEMS WHICH PENETRATE THE GYPSUM BOARD SURFACE SHOULD NOT BE LOCATED BACK TO BACK IN THE SAME STUD CAVITY. • ANY OPENINGS CUT FOR ANY FIXTURES SHALL BE CAREFULLY CUT TO SIZE, PROPERLY FASTENED, INSULATED PER WALL ASSEMBLY AND PROPERLY CAULKED. • THE ENTIRE PERIMETER OF A SOUND INSULATING ASSEMBLY MUST BE MADE AIRTIGHT TO PREVENT SOUND FROM "FLANKING". • AN ACOUSTICAL SEALANT SHOULD BE USED TO SEAL BETWEEN THE SOUND INSULATING ASSEMBLY AND ALL DISSIMILAR ASSEMBLIES AND BETWEEN THE ASSEMBLY AND SIMILAR SURFACES WHERE PERIMETER RELIEF IS REQUIRED. TAPING AND CAULKING OF GYPSUM BOARD WALL AND WALL-CEILING INTERSECTIONS PROVIDES AN ADEQUATE AIR SEAL AT THESE LOCATIONS. SILVESTRI • ALL SEALANTS IN RATED WALL LOCATIONS REFERENCED IN THE WALL TYPE DETAILS SHALL BE SELECTED AND INSTALLED IN ACCORDANCE WITH THE MINIMUM REQUIREMENTS OF THE **ARCHITECTS · PC** UNDERWRITERS LABORATORIES, INC FIRE RESISTANCE DIRECTORY IN ADDITION TO FIRE RESISTANCE, WALL LOCATIONS CALLED OUT WITH REQUIRED ACOUSTICAL VALUE, AS NOTED IN WALL SCHEDULE, SHALL HAVE SEALANTS THAT MAINTAIN THE 1321 MILLERSPORT HWY PH. 716.691.0900 MINIMUM SOUNDS VALUE OF THE WALL PARTITION. AMHERST, NY 14221 FAX 716.691.4773 ASTM RECOMMENDED PRACTICES E-497 SHOULD BE FOLLOWED FOR GOOD SOUND CONTROL. ALSO CONSULT THE DATE: SA JOB #: MANUFACTURER OF THE GYPSUM BOARD FOR ANY SPECIAL RECOMMENDATIONS RELATING TO THEIR SYSTEM. 07-28-21 21035.02 DRAWING #: A-003











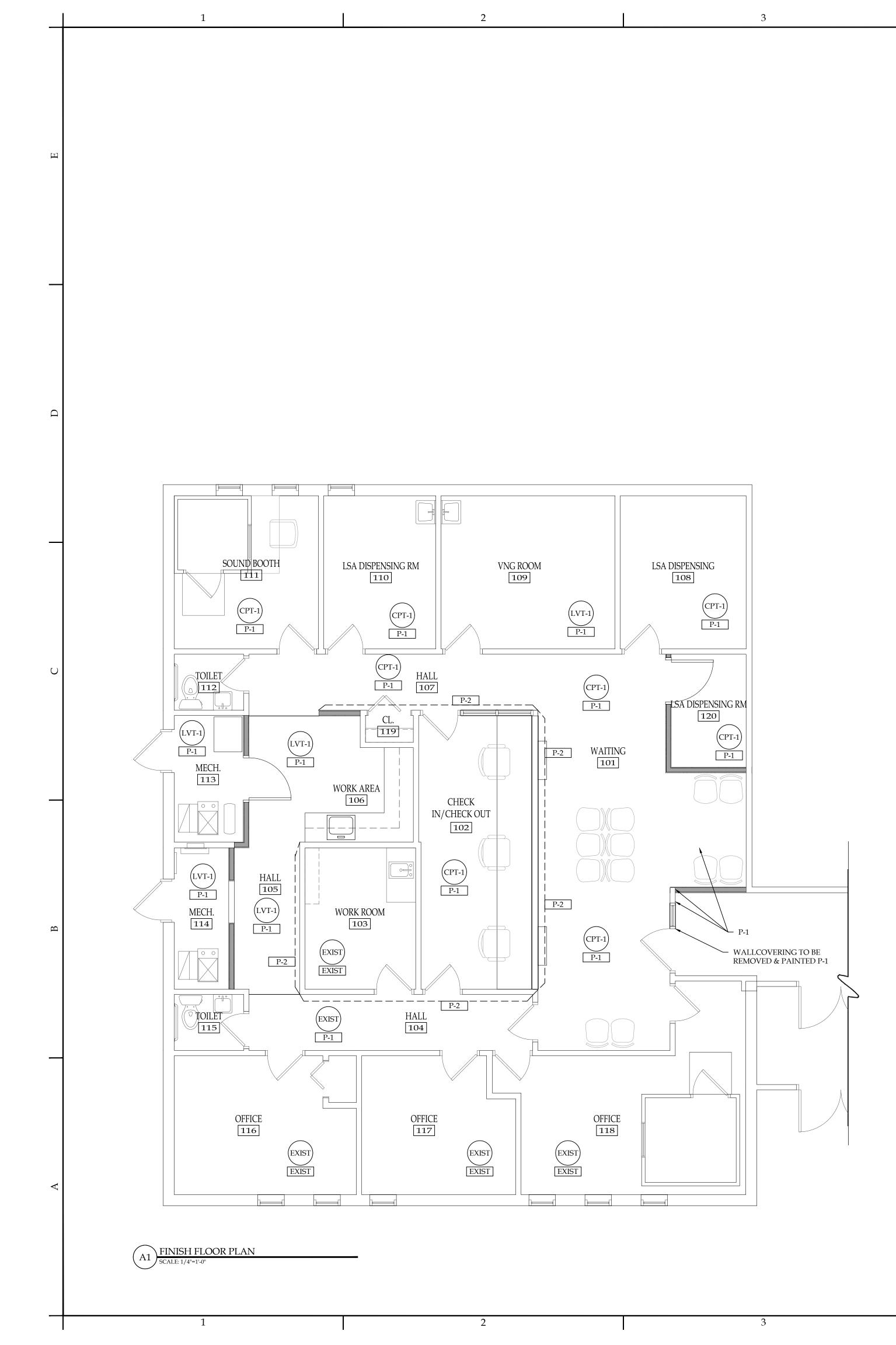
FIN CARPET (CPT-X): (CPT-1) (TYPICAL) MANUFACTURER: STYLE: COLOR: LUXURY VINYL TILE (LV (LVT-1) (TYPICAL) MANUFACTURER: STYLE:	NISH SELECTIONS INTERFACE CLOUD COVER TBD 7 T-X):	• ANY AND ALL FINISH SELECTIONS/ COLORS MUST BE SU FOR PROPER LEAD TIME. ANY FINISH THAT IS INSTALLED WITH REMOVED AND REPLACED BY THE GENERAL CONTRACTOR. IT ORDER ALL MATERIALS AT THE APPROPRIATE TIME. ANY FEE' ORDERED ON TIME WILL BE THE RESPONSIBILITY OF THE CONT	JBMITTED TO ARCHITECT FOR APPROVAL ACCOUN HOUT ARCHITECTS APPROVAL MAY BE REQUIRED I IS THE RESPONSIBILITY OF THE CONTRACTOR TO S INCURRED AS A RESULT OF FINISHES NOT BEING
(CPT-1) (TYPICAL) MANUFACTURER: STYLE: COLOR: LUXURY VINYL TILE (LV (LVT-1) (TYPICAL) MANUFACTURER:	CLOUD COVER TBD	FOR PROPER LEAD TIME. ANY FINISH THAT IS INSTALLED WITH REMOVED AND REPLACED BY THE GENERAL CONTRACTOR. IT ORDER ALL MATERIALS AT THE APPROPRIATE TIME. ANY FEE' ORDERED ON TIME WILL BE THE RESPONSIBILITY OF THE CONT	HOUT ARCHITECTS APPROVAL MAY BE REQUIRED I IS THE RESPONSIBILITY OF THE CONTRACTOR TO S INCURRED AS A RESULT OF FINISHES NOT BEING
LUXURY VINYL TILE (LV (LVT-1) (TYPICAL) MANUFACTURER:			
COLOR: NOTE:	INTERFACE STEADY STRIDE WOODGRAINS SPROUT 00173 CONTACT DONNALEE GUGLIEMINO	 ANY DISCREPANCIES BETWEEN ARCHITECTURAL ELEVA' BROUGHT TO ARCHITECTS ATTENTION. ARCHITECT MUST BE C WITH SPECIFIC DIRECTION PRIOR TO ANTICIPATED ACTION. ALL INTERIOR PRODUCTS TO MEET/EXCEED FLAME SPRE ALL FLOOR FINISHES TO EXTEND BENEATH ALL MILLWO 	EAD RATING PER CODE
PAINT (P-X): (P-1) (TYPICAL) MANUFACTURER: SIZE: FINISH:	FOR PRICING 585-200-1945 SHERWIN WILLIAMS TBD EGGSHELL	 ALL ELECTRICAL PANEL COVERS AND/OR MECHANICAL MATCH ADJOINING WALL. ANY CEILING HVAC SUPPLY/DIFFUSERS ETC. TO BE PAIN QUESTIONS OR CONCERN TO BE BROUGHT TO ARCHITECT'S A ORDER/INSTALL BY CONTRACTOR OR OTHER. 	TED TO MATCH SURROUNDING CEILING FINISH. A
(P-2) (ACCENT) MANUFACTURER: COLOR: FINISH:	SHERWIN WILLIAMS TBD EGGSHELL	 HORIZONTAL SURFACE OF ALL SOFFITS TO BE PAINTED T SPECIFIED. <u>CEILINGS:</u> ALL GYPSUM BOARD CEILINGS TO BE PAINTED IN A FLAT 	
(P-3) (DOOR FRAMES) MANUFACTURER: COLOR: FINISH:	SHERWIN WILLIAMS TBD SEMI-GLOSS	ALL EXPOSED MECHANICAL DUCT COVERS SHALL BE PA COLOR. PRIME AS NECESSARY. WALLS: PROVIDE (1) COAT IVAL & PRIMER FOLLOWER BY (2) COAT	
(PL-1) (CABINETS) MANUFACTURER: COLOR:	X): Formica TBD	 PROVIDE (1) COAT WALL PRIMER FOLLOWED BY (2) COAT UNLESS OTHERWISE NOTED IN SPECIFICATIONS. SEE SPEC FOR WHERE DARK PAINT COLORS ARE APPLIED, USE DEEP GR WALLS TO HAVE LEVEL 4 FINISH. 	DETAILS.
(PL-2) (COUNTERTOP) MANUFACTURER: FINISH:	WILSONART TBD	FLOORS: • NO CHANGES OR SUBSTITUTIONS WILL BE MADE TO THE OWNER OF ARCHITECT	E FOLLOWING FINISHES UNLESS DIRECTED BY THE
ACOUSTICAL CEILING T (ACT-1) MANUFACTURER: STYLE: STYLE #: SIZE: EDGE: COLOR:	TILE (ACT-X): USG RADAR 2410 2'X4' SQUARE WHITE	 CONTRACTOR TO PROVIDE (TS-1) AT ALL FLOORING MAT SIZES TO BE DETERMINED BY CONTRACTOR AND V.I.F. BASED O THAT EQUAL IN THICKNESS DO NOT NEED TRANSITION. <u>MILLWORK:</u> PROVIDE CLEAR BEAD OF SILICONE OR CLEAR CALK TO SUMPLY AND AND AND AND AND AND AND AND AND AND	ON MATERIAL THICKNESS. CARPET TO VINYL PLAI
SUSPENSION SYS.: RUBBER BASE (RB-X): (RB-1) MANUFACTURER: STYLE: COLOR:	DONN DX/DXL 15/16" Johnsonite 4" Cove base TBD	 ALL COLOR SELECTION OF PLASTIC LAMINATE SUPPORTS DOORS: ALL DOOR FRAMES TO BE PAINTED WITH P-3. ALL DOORS EXISTING TO REMAIN TO BE CLEANED. 	S TO MATCH ADJACENT WALL.
WOOD DOOR (WD-X): (WD-1) MANUFACTURER: STYLE: SPECIES: STAIN:	MASONITE CENDURA MATCH EXISTING STAIN IN FIELD TO MATCH EXISTING	OUTLETS: • ALL OUTLET SWITCHES AND COVERS TO BE WHITE.	
TRANSITION (TS-X): (TS-1) (GENERAL) MANUFACTURER: STYLE & SIZE: STYLE: LOCATION(S): NOTE(S):	SCHLUTER SYSTEMS RENO-TK SIZE TO BE V.I.F. IN ACCORDANCE WITH MATERIAL(S) THICKNESS CLEAR SATIN ANODIZED ALUMINUM FLOORING MATERIAL CHANGES AS NECESSARY. PLEASE SEE GENERAL NOTES RE:		
	TRANSITIONS		
		<u>FLOORS</u> CPT = CARPET LVT = LUXURY VINYL TILE <u>BASE</u>	<u>DOORS</u> WD = WOOD DOOR <u>MISCELLANEOUS</u> PL = PLASTIC LAMINATE
		RB = RUBBER BASE <u>WALLS</u> P = PAINT <u>CEILING</u> ACT = ACOUSTIC CEILING TILE CYP = CYPSUM BOARD	TS = TRANSITION STRIP MISC = MISCELLANEOUS <u>MATERIALS</u> P.B. = PARTICLE BOARD GYP. = GYPSUM BOARD
	MANUFACTURER: COLOR: FINISH: (P-3) (DOOR FRAMES) MANUFACTURER: COLOR: FINISH: PLASTIC LAMINATE (PL (PL-1) (CABINETS) MANUFACTURER: COLOR: (PL-2) (COUNTERTOP) MANUFACTURER: FINISH: ACOUSTICAL CEILING T (ACT-1) MANUFACTURER: STYLE: STYLE #: SIZE: EDGE: COLOR: SUSPENSION SYS.: RUBBER BASE (RB-X): (RB-1) MANUFACTURER: STYLE: COLOR: WOOD DOOR (WD-X): (WD-1) MANUFACTURER: STYLE:	MANUFACTURER: SHERWIN WILLIAMS COLOR: TBD FINISH: EGGSHELL (P-3) (DOOR FRAMES) MANUFACTURER: SHERWIN WILLIAMS COLOR: TBD FINISH: SEMI-GLOSS PLASTIC LAMINATE (PL-X): (PL-1) (CABINETS) MANUFACTURER: FORMICA COLOR: TBD (PL-2) (COUNTERTOP) MANUFACTURER: FIBD ACOUSTICAL CELLING TILE (ACT-X): (ACT-1) MANUFACTURER: USG STYLE: RADAR STYLE #: 2410 SIZE: 2YA' EDGE: SQUARE COLOR: WHITE SUSPENSION SYS: DONN DX/DXL 15/16" RUBBER BASE (RB-X): (RB-1) MANUFACTURER: JOHNSONITE STYLE: 4" COVE BASE COLOR: TBD WOOD DOOR (WD-X): (WD-1) MANUFACTURER: MASONITE STYLE: CENDURA SPECIES: MATCH EXSTEMS STAIN: STAIN IN FIELD TO MATCH EXISTING TRANSITION (TS-X): (TS-1) (GENERAL) MANUFACTURER: SCHLUTER SYSTEMS STYLE & SIZE: RENO-TK SIZE TO BE U.I.F. IN ACCOURD ALL STAIN AND COMPANY (TS-1) (GENERAL) MANUFACTURER: SCHLUTER SYSTEMS STYLE & SIZE: RENO-TK SIZE TO BE U.I.F. IN ACCORDANCE WITH MATERIAL(S) THICKNIESS STYLE: CLEAR SATIN ANDOIZD ALUMINUM LOCATION(S): FLOORING MATERIAL CHANGES AS NECESSARY.	(P-2) ACCENT) SPECTRON. WELL HANSE (CALCE IN THE STREEMENT NOT HANSE FORMALL SECTION OF MANDED CHEINES TO BE PAINTED IN A BLAD (P-3) COON FRAMES SPECTRON. NOT HANSE (CALCE IN THE STREEMENT NOT HANSE SPECTRON. NOT HANSE (CALCE IN THE STREEMENT NOT HANSE SPECTRON. NOT HANSE (CALCE AND ACCENTS TOTO (PARTICLE CHANNER OF LOCATION SPECTRON. SPECTRON. NOT HANSE AND ACCENTS SPECTRON. NOT HANSE AND ACCENTS (PARTICLE CHANNER OF LOCATION SPECTRON. SPE

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				ROOM FINIS	H SCHED	ULE		
T FOR APPROVAL ACCOUNTING ROVAL MAY BE REQUIRED TO BE OF THE CONTRACTOR TO .T OF FINISHES NOT BEING	ROOM NUMBER	ROOM NAME	BASE	FLOOR	WALLS	CEILING	MILL CABINET/ SHROUD	WORK COUNTERTOP/ BACKSPLASH
ULE(S) AND NOTES MUST BE APPROVAL TO MOVE FORWARD	101	WAITING	RB-1	CPT-1	P-1 / P-2	ACT-1		
	102	CHECK IN/CHECK OUT	RB-1	CPT-1	P-1	ACT-1		PL-2
	103	WORK ROOM	EXIST	EXIST	EXIST	EXIST		
DUCTING TO BE PAINTED TO	104	HALL	RB-1	EXIST	P-1 /P-2	ACT-1		
UNDING CEILING FINISH. ANY	105	HALL	RB-1	LVT-1	P-1 /P-2	ACT-1		
ECISION PRIOR TO	106	WORK AREA	RB-1	LVT-1	P-1	ACT-1	PL-1	PL-2
VALLS UNLESS OTHERWISE	107	HALL	RB-1	CPT-1	P-1 / P-2	ACT-1		
	108	LSA DISPENSING	RB-1	CPT-1	P-1	EXIST		
SPECIFIED.	109	VNG ROOM	RB-1	LVT-1	P-1	EXIST		
SURROUNDING WALL/ CEILING	110	LSA DISPENSING ROOM	RB-1	CPT-1	P - 1	EXIST		
	111	SOUND BOOTH	RB-1	CPT-1	P-1	EXIST		
INTERIOR WALL SURFACE	112	TOILET	EXIST	EXIST	EXIST	EXIST		
EVENT BURNISHING.	113	MECHANICAL	RB-1	LVT-1	P-1	ACT-1		
	114	MECHANICAL	RB-1	LVT-1	P-1	ACT-1		
UNLESS DIRECTED BY THE	115	TOILET	EXIST	EXIST	EXIST	EXIST		
ING THRESHOLDS. NECESSARY 55. CARPET TO VINYL PLANK	116	OFFICE	EXIST	EXIST	EXIST	EXIST		
S. CARLET TO VINTETEAUX	117	OFFICE	EXIST	EXIST	EXIST	EXIST		
DRK PIECES(IE: COUNTER TOP	118	OFFICE	EXIST	EXIST	EXIST	EXIST		
WALL.	119	CLOSET	RB-1	CPT-1	P-1	EXIST		
	120	LSA DISPENSING ROOM	RB-1	CPT-1	P-1	ACT-1		

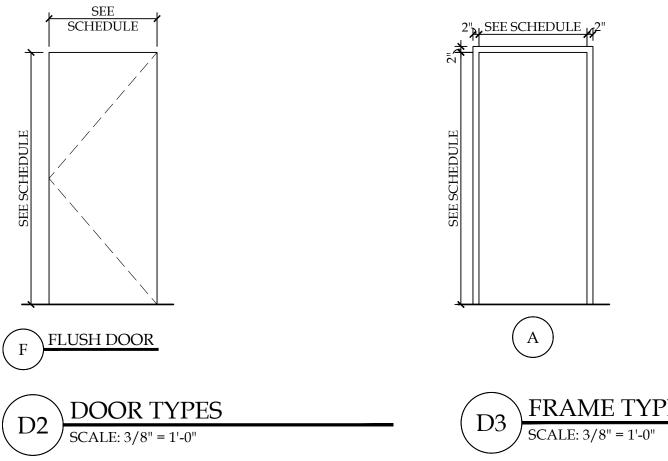
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D	Interior Renovations to: <u>Hearing</u> <u>Evaluation</u> <u>Services of</u> <u>Buffalo</u> 2545 Sheridan Drive, Tonawanda, NY 14150
	ISSUE:
C	SA PROJECT TEAM: PRINCIPAL <u>P.Silvestri</u> PROJ. ARCH DRAFTER JOB CAPT INTERIORS SEAL:
	TITLE:
В	ROOM FINISH SCHEDULE, LEGEND, & GENERAL NOTES
А	SA JOB #:
	21035.02 07-28-21
	DRAWING #: A-601



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D	Interior Renovations to: Hearing Evaluation Services of Buffalo 2545 Sheridan Drive, Tonawanda, NY 14150
C	ISSUE: ISSUE: SA PROJECT TEAM: PROJ. ARCH. DRAFTER JOB CAPT. INTERIORS
\vdash	TITLE:
В	FINISH FLOOR PLAN
А	SILVESTRI ARCHITECTS - PC
	SA JOB #: 21035.02 DRAMING #
	DRAWING #: A-602
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	DOOR AND FRAME SCHEDULE												
			DOOR FRAME								HDW		
				SIZE						DET	AIL		
MARK	LOCATION	TYPE	WD	HGT	THK	MATL	GLASS	MATL	TYPE	HEAD	JAMB	SET NO	NOTES
001	LSA DISPENSING ROOM 120	F	3'-0"	7'-0"	$1\frac{3}{4}$ "	WD		WD	А	H1	J1	1	
002	MECHANICAL 113	F	3'-0"	7'-0"	$1\frac{3}{4}$ "	WD		WD	А	H1	J1	1	

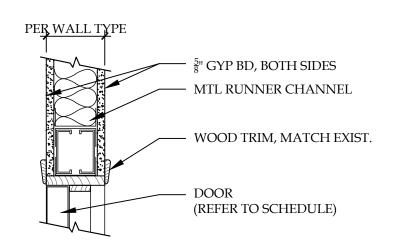


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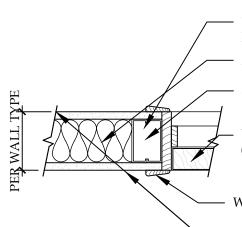
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(H1) WOOD FRAME HEAD AT GYP. BD. WALL



/----- WOOD BLOCKING REQD. FOR WOOD FRAMES — ACOUSTICAL BATT INSUL. — 3-5/8" METAL STUDS - DOOR

(REFER TO SCHEDULE)

— WOOD TRIM, MATCH EXIST. --- $\frac{5}{8}$ " GYP BD, BOTH SIDES

J1 WOOD FRAME JAMB AT GYP. BD. WALL



2

<u>c</u>	3	
Ĺ)	

HARDWARE SCHEDULE
 * PROVIDE SOLID WOOD BLOCKING AT ALL WALL STOPS * ALL HARDWARE TO BE ADA COMPLIANT * AT DOORS REQUIRED TO HAVE A FIRE RATING HARDWARE SHALL BE UL LISTED
HARDWARE SET #1 EACH DOOR TO HAVE: 3- HINGES 1- PASSAGE LEVER SET 1- WALL STOP

FRAME TYPES

4

MATERIAL LEGEND:

5

HM = HOLLOW METAL ALUM = ALUMINUM WD = WOOD $T = \frac{1}{4}$ " TEMPERED GLASS I = 1" INSULATING GLASS IT = 1" INSULATING TEMPERED GLASS 6

DOOR AND FRAME FINISHES:

HM = PAINT ALUM = CLEAR ANODIZED WD = STAIN

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	Щ	NOTICE This document, the property of, prepared and issued by the architect, is submitted for the specific project namely and the recipient by accepting this document assumes custody and agrees that this document will not be copied or reproduced in part or in whole, and any special features peculiar to this design shall not be incorporated in any other project, unless prior agreement has been obtained in writing. These documents will be returned immediately upon completion of the project or upon the request of the architect. This document is the exclusive property of the architect, no rights to ownership are transferable, or shall be lost by the filing of this document with any and all public authorities for the purpose of compliance with Codes and or Ordinances, i.e. Building Permit, etc.
	D	Interior Renovations to: Hearing Evaluation Services of Buffalo 2545 Sheridan Drive, Tonawanda, NY 14150
	C	ISSUE: SA PROJECT TEAM: PRINCIPAL P.Silvestri PROJ. ARCH. DRAFTER JOB CAPT. INTERIORS SEAL: SEAL:
		TITLE:
	В	DOOR SCHEDULE
	Α	SA JOB #: 21035.02 SA JOB #: 21035.02 SA JOB #: 21035.02 SA JOB #: 21035.02 SA JOB #: 07-28-21
		DRAWING #: A-603

	HVAC A	ABBREVIA	TIONS	HNHN	AC DUCTWORK SYMB	OLS		HVAC CONTROL SYMBOLS
FUE ANNUAL FU	JEL UTILIZATION	EFFICIENCY		SYMBOL	DESCRIPTION		SYMBOL	DESCRIPTION
FM CUBIC FEE	T PER MINUTE				SUPPLY DUCT RISER		S S	TEMPERATURE SENSOR
U CONDENSIN B DRY BULB					RETURN DUCT RISER			PROGRAMMABLE, 7-DAY, 24-HOUR THERMOSTAT
DC DIRECT DIG	SITAL CONTROL				EXHAUST DUCT RISER			- CONTROL WIRING (PLENUM RATED)
AT ENTERING / ER ENERGY EF /F EXHAUST F	AIR TEMPERATUR FICIENCY RATIO	RE			AIRFOIL TURNING VANES			
WH ELECTRIC V	WALL HEATER				DUCT RISE OR DROP FLEXIBLE DUCT			HVAC GE
FAHRENHEI CU FAN COIL					INTERNALLY LINED DUCTWORK		ARCHITECTURAL	
P HORSEPOW VAC HEATING, V	ER ÆNTILATING, AIR	CONDITIONING			MANUAL VOLUME DAMPERS		1. DO NOT SCALE CEILING PLANS ETC.	DRAWINGS. REFER TO ARCHITECTURAL DRAWINGS AND REFLECTED FOR EXACT LOCATION OF DOORS, WINDOWS, CEILING DIFFUSERS,
INCHES					DIRECTION OF SLOPE (DOWN IN DIRECTION	ON OF ARROW)	2. LIGHT FIXTURE	LOCATIONS TAKE PRECEDENCE OVER DIFFUSER AND GRILLE OCATE DIFFUSERS AND GRILLES TO ACCOMMODATE LIGHTING LAYOUT.
W KILOWATT				Ø	ROUND <u>SUPPLY AIR DEVICE –</u>			HITECTURAL FLOOR PLANS FOR LOCATION AND RATING OF ALL FIRE
T LEAVING AI BS POUNDS	R TEMPERATURE			- <u>200-1</u>	FIRST NO. CFM, SECOND NO. TYPE THIRD NO. NECK SIZE		GENERAL	
,	TISH THERMAL U				(REFER TO SCHEDULE FOR SIZE) RETURN / EXHAUST AIR DEVICE - FIRST NO. CEM SECOND NO. TYPE		PROJECT COND	TRACTOR SHALL VISIT THE JOB SITE AND BE FAMILIAR WITH ALL TIONS PRIOR TO FABRICATING DUCTWORK, EQUIPMENT, ETC. S WILL BE MADE FOR CONTRACTOR'S UNFAMILIARITY WITH PROJECT
ED OPEN END	DUCT			<u>200−2</u> - C	FIRST NO. CFM, SECOND NO. TYPE THIRD NO. NECK SIZE (IF REQUIRED) (REFER TO SCHEDULE FOR SIZE)		2. DUCTWORK ROL ANY ADDITIONAL	ITING SHOWN IS SCHEMATIC. HVAC CONTRACTOR SHALL PROVIDE
PM REVOLUTION	NS PER MINUTE JNIT			P>	POINT OF CONNECTION (NEW TO EXISTIN	IG)	PROPER INSTAL FIELD.	LATION AND TO MAINTAIN CLEARANCES AS ENCOUNTERED IN THE
EER SEASONAL	ENERGY EFFICIE	NCY RATIO					INSTALLATION A	ABOR, MATERIAL AND EQUIPMENT REQUIRED FOR THE COMPLETE ND OPERATION OF ALL SYSTEMS IN THIS SECTION OF WORK IN ITH ALL APPLICABLE CODES, ASHRAE, SMACNA, NFPA, EPA, ETC.
P STATIC PRE							SITE WITH GENE	ALLATION OF ASSOCIATED WORK; INSTALLER SHALL MEET AT PROJECT TRAL CONTRACTOR, INSTALLER OF EACH COMPONENT OF ASSOCIATED ION AND TESTING AGENCY REPRESENTATIVES (IF ANY), INSTALLERS OF
	AIR VOLUME						OTHER WORK R ARCHITECT / O	EQUIRING COORDINATION WITH WORK OF THIS SECTION AND WNER FOR PURPOSE OF COORDINATING LOCATIONS OF PROPOSED WING MATERIAL SELECTIONS, AND PROCEDURES TO BE FOLLOWED IN
/ WITH B WET BULB							PERFORMING TH	IE WORK IN COMPLIANCE WITH REQUIREMENTS SPECIFIED.
B WET BULB							PLUMBING PIPIN INSTALLING EQU	IG, ELECTRICAL CONDUIT, LIGHTING, ETC. PRIOR TO PURCHASING OR IPMENT AND MATERIALS.
			R DISTRIBUTION				BE FLASHED AN	CTS, VENTS, ETC. EXTENDING THROUGH WALLS AND ROOF SHALL ID COUNTERFLASHED IN A WATERPROOF MANNER. UM OF TEN (10) FEET BETWEEN OUTDOOR AIR INTAKES AND
							EXHAUST FAN [MBING DRAWINGS FOR LOCATION AND ROUTING OF ALL GAS PIPING
SYMBOL	STYLE & DEVICE	MOUNTING		DESCRIPTION	MANUFACTUREF	MODEL NO.	9. DIVISION 15 SH	ATER COMBUSTION / EXHAUST AIR DUCTWORK. ALL BE LICENSED TO PERFORM MECHANICAL WORK IN THE
	SIZE						10. DIVISION 15 S⊦	I WHICH THE PROJECT IS LOCATED. ALL GUARANTEE ALL WORK PERFORMED AND MATERIALS FURNISHED INTRACT AGAINST DEFECTS IN MATERIALS AND WORKMANSHIP FOR A
		1	S LOUVERED FACE, STEEL CC	UPPLY) BLADE		PERIOD OF ONE OF THE WORK.	ANY DEFECTS SHALL BE RECTIFIED BY DIVISION 15 WITHOUT ANY TO THE OWNER.
SD-1	SUPPLY 24x24	LAY-IN	VOLUME DAMPERS, PROVIDE AS SHOWN FOR FULL PANE FACE DIFFUSER, 4-WAY TH	E 18"x18" BACKPAN (1 EL LAY—IN APPLICATION	NECK SIZE	TDC	11. WORK SHALL C CODE, NEW YOI PROTECTION AN CODE, LANDLOR	OMPLY WITH THE LATEST REVISIONS OF NEW YORK STATE BUILDING RK STATE MECHANICAL CODE, NEW YORK STATE UNIFORM FIRE D CONSTRUCTION CODE, NEW YORK STATE ENERGY CONSERVATION DS LEASING SPECIFICATION, AND ANY LOCAL CODES OR REGULATIONS
SD-2	SUPPLY 24x24	SURFACE	LOUVERED FACE, STEEL CO VOLUME DAMPERS, PROVIDE AS SHOWN FOR FULL PANE FACE DIFFUSER, 4-WAY TH	E 18"x18" BACKPAN (N EL LAY—IN APPLICATION	NECK SIZE	TDC	THAT APPLY. A. IN CASE O OF CODES <u>EQUIPMENT</u>	F CONFLICTS BETWEEN DRAWINGS, SPECIFICATIONS, AND INTERPRETATION BY LOCAL AUTHORITY, LATER SHALL GOVERN.
SD-3	SUPPLY 18X18	LAY-IN	LOUVERED FACE, STEEL CO VOLUME DAMPERS, PROVIDE AS SHOWN FOR FULL PANE FACE DIFFUSER, 2-WAY TH	E 18"x18" BACKPAN (1 EL LAY—IN APPLICATION	NECK SIZE	TDC	AS SHOWN. U (IN KIND) JUST 1—INCHES THIC INSTALLED.	PMENT SHALL BE INSTALLED PER MANUFACTURER'S REQUIREMENTS TILIZE FACTORY FILTERS DURING CONSTRUCTION AND REPLACE PRIOR TO TESTING AND BALANCING. ALL FILTERS SHALL BE K. PROVIDE ONE (1) SET OF EXTRA FILTERS FOR EACH UNIT
			R	ETURN			2. ALL EQUIPMENT HAVE AN ADDIT EXCHANGERS S PROVIDE WRITTE	SHALL HAVE A ONE (1) YEAR WARRANTY; COMPRESSORS SHALL ONAL FIVE (5) YEAR EXTENDED WARRANTY, ROOFTOP UNIT HEAT HALL HAVE AN ADDITIONAL TEN (10) YEAR EXTENDED WARRANTY; IN GUARANTEE.
RR-1	RETURN 24x24	LAY-IN	PERFORATED FACE, STEEL VOLUME DAMPERS, PROVID PANEL LAY-IN APPLICATION	e 22"x22" backpan f		PAR	3. GENERAL CONTI DUCTWORK, ETC IN A DRY PLAC	RACTOR SHALL STORE ALL HVAC EQUIPMENT (ROOFTOP UNITS, C.) THAT ARRIVES AT THE PROJECT SITE. STORE ALL EQUIPMENT E, PROTECTING ALL EQUIPMENT FROM THE WEATHER, TRAFFIC AND THEFT.
RR-2	RETURN 24x12	LAY-IN	PERFORATED FACE, STEEL VOLUME DAMPERS, PROVID PANEL LAY—IN APPLICATION	e 23x11" backpan fo		PAR		
RR-3	RETURN 10x6	LAY-IN	PERFORATED FACE, STEEL VOLUME DAMPERS, PROVID PANEL LAY-IN APPLICATION	E 9"x5" BACKPAN FOR		PAR		
AIR DISTRIBUTION	DEVICE NOTE	<u>ES:</u>						
 ALL DEVICES MAXIMUM NO 	SHALL HAVE OF 20.	MATCHING MA	E MANUFACTURER. ATTE, WHITE FINISH (UNLESS D MODEL OF DIFFUSERS / G ALLING DIFFUSERS / GRILLES		DESCRIPTION ABOVE). T IN FIELD (TO MATCH EXISTING			

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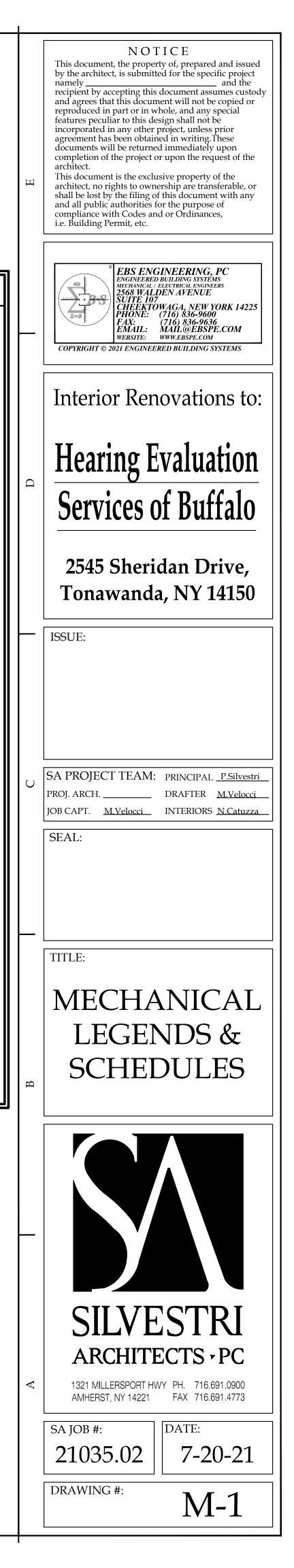
	HVAC A	ABBREVIA	TIONS] HV	AC DUCTW	ORK SYMBOI	_S		IVAC CONTROL SYMBOLS
	FUEL UTILIZATION ORSEPOWER	EFFICIENCY		SYMBOL		DESCRIPTION		SYMBOL	DESCRIPTION
CFM CUBIC FE CU CONDENS	EET PER MINUTE				SUPPLY DUCT RISER	2		S	TEMPERATURE SENSOR
DB DRY BUL DDC DIRECT D					RETURN DUCT RISEF	2		Ū	PROGRAMMABLE, 7-DAY, 24-HOUR THERMOSTAT
	DIGITAL CONTROL				EXHAUST DUCT RISE	R			CONTROL WIRING (PLENUM RATED)
EER ENERGY	GAIR TEMPERATUR				AIRFOIL TURNING VA	NES			
	WALL HEATER				DUCT RISE OR DROI	P			
F FAHRENH FCU FAN COIL					FLEXIBLE DUCT	UCTWORK		ARCHITECTURAL	HVAC GENEI
HP HORSEPO HVAC HEATING,	WER VENTILATING, AIR	CONDITIONING			MANUAL VOLUME DA			1. DO NOT SCALE E CEILING PLANS F	ORAWINGS. REFER TO ARCHITECTURAL DRAWINGS AND REFLECTED 4. OR EXACT LOCATION OF DOORS, WINDOWS, CEILING DIFFUSERS,
IN INCHES	,				DIRECTION OF SLOP	E (DOWN IN DIRECTION	OF ARROW)	ETC. 2. LIGHT FIXTURE LO	DCATIONS TAKE PRECEDENCE OVER DIFFUSER AND GRILLE ATE DIFFUSERS AND GRILLES TO ACCOMMODATE LIGHTING LAYOUT. 1.
KW KILOWATT				Ø	ROUND			3. REFER TO ARCHI	TATE DIFFUSERS AND GRILLES TO ACCOMMODATE LIGHTING LAYOUT. 1.
LAT LEAVING LBS POUNDS	AIR TEMPERATURE			- <u>200-1</u>	SUPPLY AIR DEVICE	COND NO. TYPE		WALLS. <u>GENERAL</u>	2.
MBH 1,000 BF	RITISH THERMAL U				(REFER TO SCHEDU	le for size)		PROJECT CONDITI	ACTOR SHALL VISIT THE JOB SITE AND BE FAMILIAR WITH ALL ONS PRIOR TO FABRICATING DUCTWORK, EQUIPMENT, ETC. 4.
MCA MINIMUM OED OPEN EN		ſ		<u>200-2</u> -C	FIRST NO. CFM, SEC THIRD NO. NECK SIZ	COND NO. TYPE		CONDITIONS.	WILL BE MADE FOR CONTRACTOR'S UNFAMILIARITY WITH PROJECT 5. ING SHOWN IS SCHEMATIC. HVAC CONTRACTOR SHALL PROVIDE
RPM REVOLUTI	ONS PER MINUTE			₽>	(REFER TO SCHEDU			ANY ADDITIONAL	OFFSETS AND FITTINGS, INCLUDING DIVIDED DUCTS, REQUIRED FOR 6. ATION AND TO MAINTAIN CLEARANCES AS ENCOUNTERED IN THE
	UNIT L ENERGY EFFICIE	NCY RATIO				· · · · · · · · · · · · · · · · · · ·		INSTALLATION AND	30R, MATERIAL AND EQUIPMENT REQUIRED FOR THE COMPLETE 7. D OPERATION OF ALL SYSTEMS IN THIS SECTION OF WORK IN H ALL APPLICABLE CODES, ASHRAE, SMACNA, NFPA, EPA, ETC.
SEER SEASONAI SP STATIC P TU TERMINAL								4. PRIOR TO INSTAL SITE WITH GENER	LATION OF ASSOCIATED WORK; INSTALLER SHALL MEET AT PROJECT 8. AL CONTRACTOR, INSTALLER OF EACH COMPONENT OF ASSOCIATED
	AIR VOLUME							ARCHITECT / OW	N AND TESTING AGENCY REPRESENTATIVES (IF ANY), INSTALLERS OF QUIRING COORDINATION WITH WORK OF THIS SECTION AND 9. NER FOR PURPOSE OF COORDINATING LOCATIONS OF PROPOSED
W/ WITH WB WET BUL								PERFORMING THE	ING MATERIAL SELECTIONS, AND PROCEDURES TO BE FOLLOWED IN WORK IN COMPLIANCE WITH REQUIREMENTS SPECIFIED. 10
WB WET BUL	В							PLUMBING PIPING	ALLATION AND LOCATIONS OF DUCTWORK WITH BUILDING STRUCTURE, , ELECTRICAL CONDUIT, LIGHTING, ETC. PRIOR TO PURCHASING OR MENT AND MATERIALS. 11
								6. ALL PIPING, DUC BE FLASHED AND	TS, VENTS, ETC. EXTENDING THROUGH WALLS AND ROOF SHALL COUNTERFLASHED IN A WATERPROOF MANNER.
			DISTRIBUTION D	EVICE SC	HEDULE			EXHAUST FAN DIS	M OF TEN (10) FEET BETWEEN OUTDOOR AIR INTAKES AND SCHARGE, PLUMBING VENTS, ETC.
SYMBOL	STYLE & DEVICE	MOUNTING	DES	SCRIPTION		MANUFACTURER	MODEL NO.	AND WATER HEAT	BING DRAWINGS FOR LOCATION AND ROUTING OF ALL GAS PIPING ER COMBUSTION / EXHAUST AIR DUCTWORK. LL BE LICENSED TO PERFORM MECHANICAL WORK IN THE
	SIZE							MUNICIPALITY IN 10. DIVISION 15 SHA	WHICH THE PROJECT IS LOCATED. <u>(</u> LL GUARANTEE ALL WORK PERFORMED AND MATERIALS FURNISHED 1
	1	1	SUPP			1		PERIOD OF ONE OF THE WORK.	TRACT AGAINST DEFECTS IN MATERIALS AND WORKMANSHIP FOR A (1) YEAR FROM THE DATE OF THE OWNER'S FINAL ACCEPTANCE ANY DEFECTS SHALL BE RECTIFIED BY DIVISION 15 WITHOUT ANY 2
SD-1	SUPPLY 24x24	LAY-IN	LOUVERED FACE, STEEL CONST VOLUME DAMPERS, PROVIDE 18 AS SHOWN FOR FULL PANEL L FACE DIFFUSER, 4-WAY THROW	3"x18" BACKPAN (N AY—IN APPLICATION	NECK SIZE	TITUS	TDC	CODE, NEW YOR PROTECTION AND CODE, LANDLORD	TO THE OWNER. MPLY WITH THE LATEST REVISIONS OF NEW YORK STATE BUILDING STATE MECHANICAL CODE, NEW YORK STATE UNIFORM FIRE CONSTRUCTION CODE, NEW YORK STATE ENERGY CONSERVATION S LEASING SPECIFICATION, AND ANY LOCAL CODES OR REGULATIONS
SD-2	SUPPLY 24x24	SURFACE	LOUVERED FACE, STEEL CONST VOLUME DAMPERS, PROVIDE 18 AS SHOWN FOR FULL PANEL L FACE DIFFUSER, 4-WAY THROW	3"x18" BACKPAN (N AY—IN APPLICATION	NECK SIZE	TITUS	TDC	THAT APPLY. A. IN CASE OF OF CODES E <u>EQUIPMENT</u>	CONFLICTS BETWEEN DRAWINGS, SPECIFICATIONS, AND INTERPRETATION BY LOCAL AUTHORITY, LATER SHALL GOVERN.
SD-3	SUPPLY 18X18	LAY-IN	LOUVERED FACE, STEEL CONST VOLUME DAMPERS, PROVIDE 18 AS SHOWN FOR FULL PANEL L FACE DIFFUSER, 2-WAY THROW	3"x18" BACKPAN (N AY—IN APPLICATION	NECK SIZE	TITUS	TDC	AS SHOWN. UTII (IN KIND) JUST I	MENT SHALL BE INSTALLED PER MANUFACTURER'S REQUIREMENTS LIZE FACTORY FILTERS DURING CONSTRUCTION AND REPLACE PRIOR TO TESTING AND BALANCING. ALL FILTERS SHALL BE PROVIDE ONE (1) SET OF EXTRA FILTERS FOR EACH UNIT
			RETUR					EXCHANGERS SH	SHALL HAVE A ONE (1) YEAR WARRANTY; COMPRESSORS SHALL NAL FIVE (5) YEAR EXTENDED WARRANTY, ROOFTOP UNIT HEAT ALL HAVE AN ADDITIONAL TEN (10) YEAR EXTENDED WARRANTY;
RR-1	RETURN 24x24	LAY-IN	PERFORATED FACE, STEEL CON VOLUME DAMPERS, PROVIDE 22 PANEL LAY-IN APPLICATION, W	2"x22" BACKPAN F		TITUS	PAR	IN A DRY PLACE,	CTOR SHALL STORE ALL HVAC EQUIPMENT (ROOFTOP UNITS, THAT ARRIVES AT THE PROJECT SITE. STORE ALL EQUIPMENT PROTECTING ALL EQUIPMENT FROM THE WEATHER, RAFFIC AND THEFT.
RR-2	RETURN 24x12	LAY-IN	PERFORATED FACE, STEEL CON VOLUME DAMPERS, PROVIDE 23 PANEL LAY-IN APPLICATION, W	3x11" BACKPAN FC		TITUS	PAR		
RR-3	RETURN 10x6	LAY-IN	PERFORATED FACE, STEEL CON VOLUME DAMPERS, PROVIDE 9' PANEL LAY—IN APPLICATION,	x5" BACKPAN FOR		TITUS	PAR		
 ALL DEVICE MAXIMUM N COORDINAT DIFFUSERS ACCESSORI A. OPERA AND / 	ES SHALL BE F ES SHALL HAVE NC OF 20. E EXACT MANU / GRILLES) P ES:	ROM A SINGLE MATCHING MA FACTURER ANE RIOR TO INSTA OLS DESIGNED ADJUSTMENT	MANUFACTURER. TTE, WHITE FINISH (UNLESS OTH MODEL OF DIFFUSERS / GRILL LLING DIFFUSERS / GRILLES. TO FIT THROUGH DIFFUSER FAC AND PRICE.	ES WITH ARCHITEC	T IN FIELD (TO MA	TCH EXISTING			

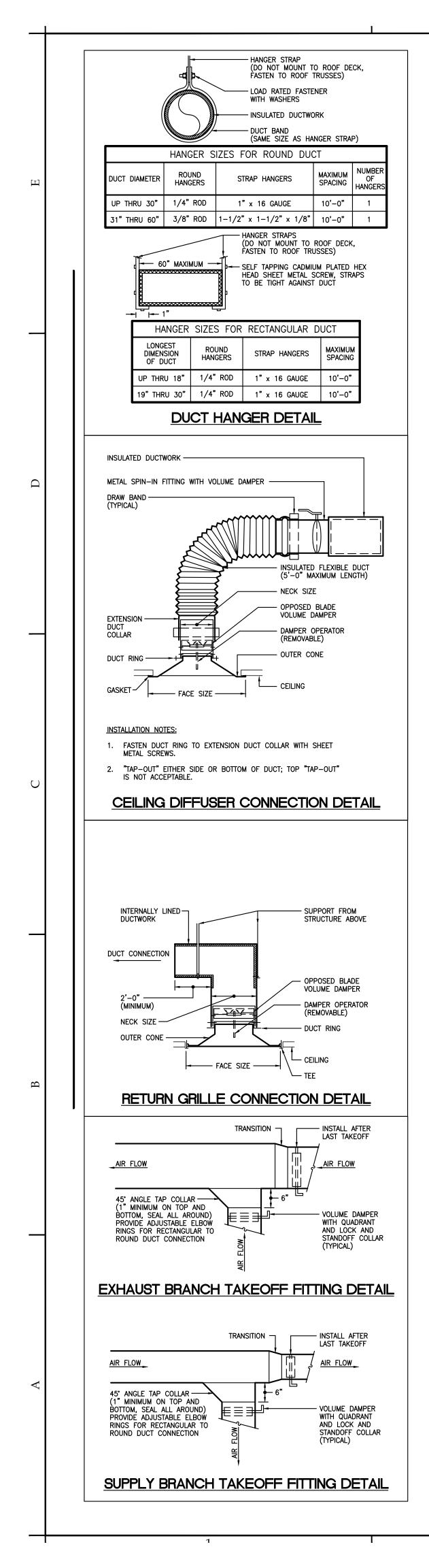
ERAL NOTES

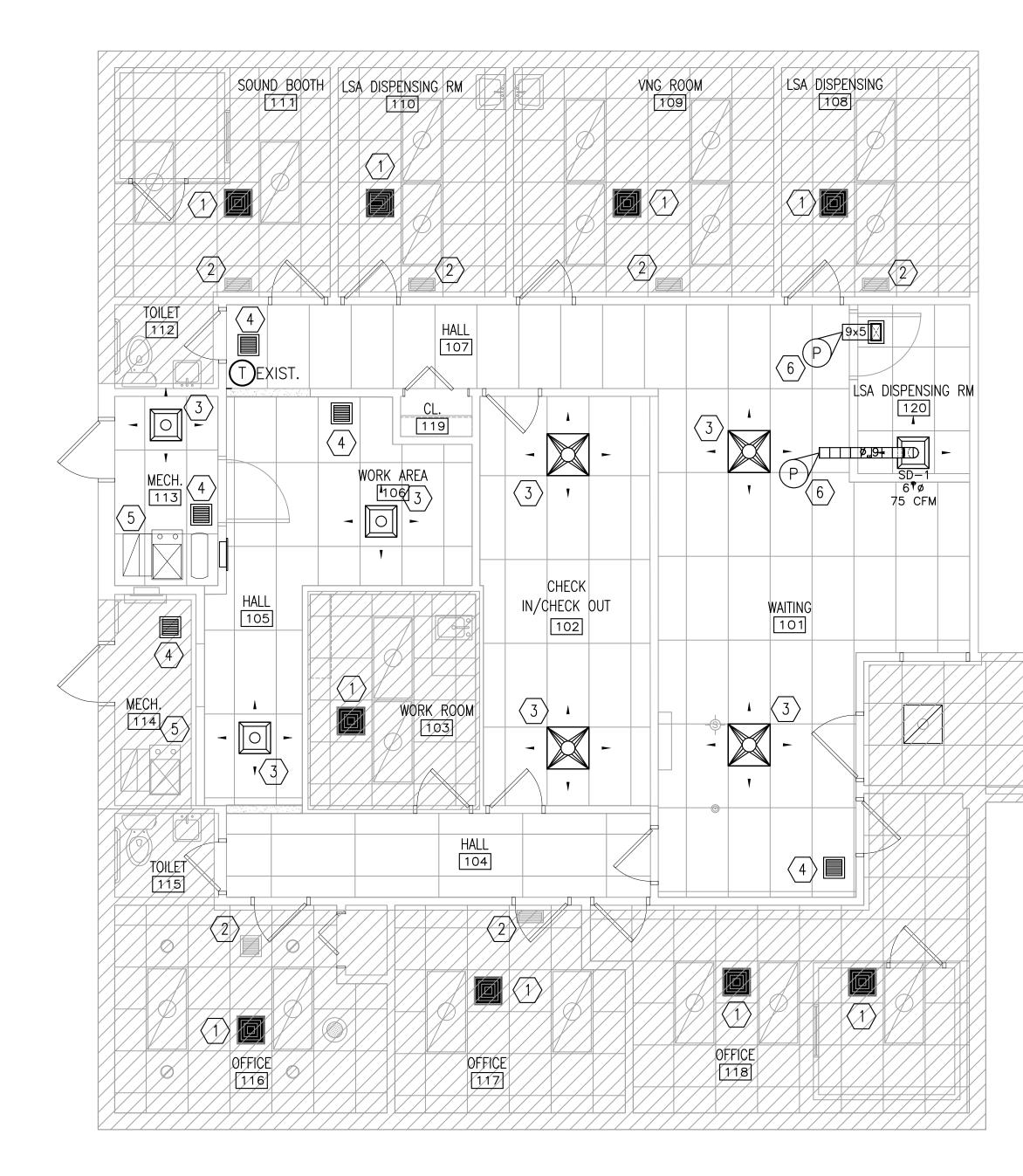
- 4. FLEXIBLE CONNECTORS SHALL BE INSTALLED ON SUPPLY, RETURN, AND EXHAUST AIR DUCTS AT ALL EQUIPMENT CONNECTIONS. <u>DUCTWORK</u>
- 1. RUN ALL DUCTWORK TIGHT TO BOTTOM OF STEEL AS POSSIBLE OR RUN THRU OPEN JOIST WEBBING.
- 2. DUCTWORK SHALL NOT BE SUPPORTED FROM BRIDGING, CONDUIT, PIPING, ETC. OF ANY KIND. DO NOT USE FASTENERS THAT PENETRATE ROOF DECKS.
- 3. ASPECT RATIO SHALL NOT EXCEED 3:1.
- 4. ALL DUCTWORK INSTALLATION SHALL RUN CONTINUOUSLY THROUGH PARTITIONS.
- 5. LOCATE ALL DUCT BALANCING DAMPERS AND CONTROL DAMPERS ABOVE ACCESSIBLE CEILINGS OR PROVIDE CEILING ACCESS DOORS. 6. PROVIDE VOLUME CONTROL DAMPERS WITH QUADRANT AND LOCK AND STANDOFF COLLAR AT ALL BRANCH DUCTS TO DIFFUSERS. INSTALL AT A MINIMUM OF TWO
- DUCT WIDTHS FROM BRANCH TAKEOFF. 7. DUCTWORK SIZES INDICATED ON DRAWINGS ARE INSIDE, FREE AND CLEAR
- DIMENSIONS. INCREASE DUCT OUTSIDE DIMENSION SIZE BY TWO (2) TIME THE THICKNESS OF THE INSULATION.
- 8. ALL DUCTWORK SHALL BE CONSTRUCTED AND INSTALLED IN ACCORDANCE WITH SMACNA STANDARDS.
- 9. ALL DUCTWORK SHALL BE GALVANIZED SHEET METAL IN AREAS WITH FINISHED CEILINGS.
- 10. WHERE RECTANGULAR DUCTWORK IS INDICATED, AND AT INSTALLERS OPTION, SPIRAL AND ROUND DUCTWORK MAY BE SUBSTITUTED FOR RECTANGULAR DUCTWORK PROVIDED THEY ARE EQUIVALENT TO THE RECTANGULAR DIMENSIONS INDICATED ON THE DRAWINGS (i.e.: $8x4 = 8^{\circ}\phi$, $10x6 = 10^{\circ}\phi$).
- PROVIDE INTERNALLY LINED SUPPLY AIR DUCTWORK FROM FURNACE UNITS TO A MINIMUM OF 10-FEET AWAY FROM THE UNIT.
- 12. ALL SQUARE ELBOWS SHALL HAVE AIRFOIL TYPE TURNING VANES.
- 13. ALL DUCT LINERS SHALL BE MINIMUM 1-1/2" THICK, COATED TO PREVENT ELEMENTS FROM ENTERING THE AIRSTREAM (COATING SHALL MEET ASHRAE 62 - LATEST EDITION), AND ENVIRONMENTALLY FRIENDLY WITH A MINIMUM R-VALUE OF R-6. LINER SHALL BE BLACK IN COLOR SO IT IS NOT NOTICEABLE FROM THE INSIDE OF REGISTERS AND GRILLES.
- <u>CONTROLS</u>

RATED.

- 1. ALL CONTROL WIRING AND CONDUIT SHALL COMPLY WITH THE NATIONAL ELECTRIC CODE (NEC) AND NFPA 70.
- 2. ALL CONTROL WIRING AND POWER CONDUCTOR INSULATION SHALL BE PLENUM
- 3. ALL EXPOSED CONTROL WIRING SHALL BE INSTALLED IN 3/4" EMT CONDUIT.
- 4. PROVIDE ALL RELAY, CONTACTORS, ETC. REQUIRED TO ACHIEVE INTERLOCK OPERATION OF EQUIPMENT.
- **BALANCING**
- 1. MECHANICAL CONTRACTOR, WHO IS CERTIFIED BY EITHER THE ASSOCIATED AIR BALANCE COUNCIL (AABC) OR NATIONAL ENVIRONMENTAL BALANCING BUREAU (NEBB); UPON COMPLETION OF THE PROJECT, SHALL PERFORM A COMPLETE TESTING AND BALANCING OF ALL EQUIPMENT. BALANCE SYSTEM TO WITHIN ±5% OF AIR QUANTITIES INDICATED ON PLANS AND SCHEDULES AND PROVIDE THE OWNER WITH A COMPLETE, SIGNED AND SEALED BALANCE REPORT.







M-2 SCALE: 1/4" = 1'-0"

NOTES:

- EXISTING SUPPLY DIFFUSER. CLEAN DIFFUSER THOROUGHLY AND MEASURE—RECORD AIRFLOW FOR OWNER'S RECORDS.
- EXISTING RETURN REGISTER. CLEAN REGISTER THOROUGHLY AND MEASURE-RECORD AIRFLOW FOR OWNER'S RECORDS.
- 3. DISCONNECT AND RELOCATE EXISTING SUPPLY TO NEW LOCATION SHOWN. CLEAN REGISTER THOROUGHLY AND MEASURE-RECORD AIRFLOW FOR OWNER'S RECORDS.
- DISCONNECT AND RELOCATE EXISTING RETURN TO NEW LOCATION SHOWN. CLEAN REGISTER THOROUGHLY AND MEASURE-RECORD AIRFLOW FOR OWNER'S RECORDS.
- 5. EXISTING FURNACE TO REMAIN. PROVIDE FOR MAINTENANCE FOR EXISTING EQUIPMENT. PROVIDE NEW FILTERS, CLEAN COILS, CHECK BELTS, PULLEYS, SHEAVES AND CHECK FOR PROPER CONDENSATE DRAINAGE. REPAIR AND REPLACE PARTS IF REQUIRED.
- 6. CONNECT TO EXISTING DUCTWORK.

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	BBS ENGINEERING, PC ENGINEERED BUILDING SYSTEMS MECHANICAL / ELECTRICAL ENGINEERS 2568 WALDEN AVENUE SUITE 107 CHEEKTOWAGA, NEW YORK 14225 PHONE: (716) 836-9600 FAX: (716) 836-9636 EMAIL: MAIL@EBSPE.COM WEBSITE: WWW.EBSPE.COM WEBSITE: WWW.EBSPE.COM
D	Interior Renovations to: Hearing Evaluation Services of Buffalo
	2545 Sheridan Drive, Tonawanda, NY 14150
U	SA PROJECT TEAM: PRINCIPAL P.Silvestri PROJ. ARCH. DRAFTER M.Velocci JOB CAPT. M.Velocci INTERIORS N.Catuzza
	SEAL:
В	MECHANICAL FLOOR PLAN & DETAILS
Α	SA JOB #:
	SA JOB #: DATE. 21035.02 7-20-21 DRAWING #: M-2

NOTICE

<u>– GENERAL</u>

ALITY ASSURANCE

MATERIALS AND EQUIPMENT SHALL BE PROVIDED BY ONE OF THE MANUFACTURERS LISTED IN PART 2 – PRODUCTS.

- 1. DIVISION 23 BIDS SHALL BE BASED ON THE MATERIAL MENTIONED OR SPECIFIED, AND AN PROPOSALS FOR A SUBSTITUTION SHALL BE MADE IN WRITING TO THE ARCHITECT / ENG ALLOWING ADEQUATE TIME FOR APPROPRIATE ACTION.
- 2. MATERIALS AND EQUIPMENT FROM OTHER MANUFACTURERS MAY BE ACCEPTED IF PROVENE EQUAL TO THOSE SPECIFIED.
- a. EQUIPMENT SELECTION OF HIGHER ELECTRICAL CHARACTERISTICS, PHYSICAL DIMENSION CAPACITIES, AND RATINGS MAY BE FURNISHED PROVIDED SUCH PROPOSED EQUIPMENT IS APPROVED IN WRITING AND CONNECTING MECHANICAL AND ELECTRICAL SERVICES, CIRCUIT BREAKERS, CONDUIT, MOTOR, BASES, AND EQUIPMENT SPACES ARE INCREASE
- DIVISION 23 ALSO IS LIABLE FOR ALL COSTS AND CHANGES IN THE WORK REI BY SUBSTITUTE EQUIPMENT – NO ADDITIONAL COSTS WILL BE APPROVED FOR INCREASES, IF LARGER EQUIPMENT IS APPROVED.
- 2). IF MINIMUM ENERGY RATINGS OR EFFICIENCIES OF EQUIPMENT ARE SPECIFIED, EQUIPMENT MUST MEET DESIGN AND COMMISSIONING REQUIREMENTS.
- 3. DIVISION 23 IS LIABLE FOR AND SHALL PAY FOR, ALL ARCHITECTURAL AND ENGINEERING REVIEWS AND REDESIGN COSTS FOR SUBSTITUTE MATERIALS AND EQUIPMENT.
- 3. THE LENGTH OF TIME THE MANUFACTURER HAS BEEN IN BUSINESS, THE LOCATION AND CA OF COMPLETE REPAIR FACILITIES, AVAILABILITY OF REPAIR PARTS AND ANNUAL MAINTENANCE CONTRACTS ALL WILL BE CONSIDERED IN DETERMINING EQUALITY.

VS, PERMITS, INSPECTIONS

WORK SHALL COMPLY WITH THE LATEST REVISIONS OF NEW YORK STATE BUILDING CODE, NEW YORK STATE MECHANICAL CODE, NEW YORK STATE UNIFORM FIRE PROTECTION AND CONSTRUCTION CODE, NEW YORK STATE ENERGY CONSERVATION CODE, AND ANY LOCAL CODE OR REGULATIONS THAT APPLY.

COMPLY WITH NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) CODES AS APPLICABLE.

COMPLY TO REQUIREMENTS OF DRAWINGS AND SPECIFICATIONS THAT ARE IN EXCESS OF GOVERNING CODES.

DO NOT INSTALL WORK AS SPECIFIED OR SHOWN IF IN CONFLICT WITH GOVERNING CODES.

1. NOTIFY ENGINEER IN WRITING AND REQUEST DIRECTION.

PAY ALL INSPECTION AND PERMIT FEES.

PROVIDE CERTIFICATE OF INSPECTION FROM ALL GOVERNING AUTHORITIES.

STALLERS QUALIFICATIONS

SKILLED MECHANICS WHO HAVE SUCCESSFULLY COMPLETED AN APPRENTICESHIP PROGRAM OF ANOTHER CRAFT TRAINING PROGRAM CERTIFIED BY THE U.S. DEPARTMENT OF LABOR, BUREAU OF APPRENTICESHIP AND TRAINING.

ISSIONS.

OMISSIONS, DISCREPANCIES OR POINTS OF QUESTION FOUND BY A BIDDER IN THE PLANS OF SPECIFICATIONS SHALL BE REFERRED TO THE ARCHITECT, WHO WILL FORWARD TO THE ENGIN TO MAKE ANY CLARIFICATIONS IN WRITING.

OP DRAWINGS

DIVISION 23 SUBMITTALS SHALL BE DELIVERED TO THE ENGINEER IN FIVE (5) COMPLETE SET WITH FOUR (4) BEING RETURNED.

- 1. DIVISION 23 SHALL CHECK, SIGN, STAMP AND DATE ALL SUBMITTALS BEFORE SENDING TO THE ENGINEER FOR REVIEW.
- 2. THE ENGINEER SHALL BE ALLOWED 10-WORKING DAYS FOR SUBMITTAL REVIEWS BEFORE RETURNING THEM TO THE DIVISION 23 CONTRACTOR.

CORD (AS-BUILT) DRAWINGS

DURING THE PROGRESS OF CONSTRUCTION, THE RECORD DRAWINGS SHALL BE CORRECTED B DIVISION 23 TO INDICATE ACTUAL INSTALLATIONS.

UPON COMPLETION OF THE PROJECT, 3-SETS OF FINAL RECORD DRAWINGS SHALL PRODUCE WITH 1-SET EACH BEING DELIVERED TO THE OWNER, ARCHITECT AND ENGINEER. OTECTION

CLOSE AND WATERPROOF BETWEEN OPENINGS AND VOIDS IN WALLS AND ROOF TO PREVENT ENTRANCE OF WATER OR MOISTURE.

SEAL ALL DUCTWORK, INCLUDING OPEN-ENDED DUCTWORK, AT THE END OF EACH DAY TO PREVENT DUST, DEBRIS, ETC. FROM ENTERING THE DUCTWORK.

ERATION DURING CONSTRUCTION

DIVISION 23 IS RESPONSIBLE FOR THE INSTALLATION AND OPERATION, SERVICE AND MAINTEN/ OF ALL NEW EQUIPMENT DURING CONSTRUCTION AND PRIOR TO ACCEPTANCE BY THE OWNER THE COMPLETED PROJECT. WARRANTY PERIODS SHALL NOT COMMENCE UNTIL FINAL ACCEPT/ BY THE OWNER.

OJECT COMPLETION.

Β

AT THE COMPLETION OF THE PROJECT, DIVISION 23 SHALL PROVIDE, TO THE OWNER, THREE (3) HARD BOUND VOLUMES OF MANUALS CONTAINING OPERATING SERVICE AND LUBRICATION INSTRUCTIONS, AND PARTS LISTS FOR ALL MAJOR EQUIPMENT AND MANUFACTURERS GUARANTIES OR WARRANTIES.

AC SCOPE OF WORK.

THE WORK INCLUDED UNDER THIS CONTRACT CONSISTS OF THE PROVIDING OF ALL LABOR, MATERIALS, TOOLS, TRANSPORTATION, SERVICES, ETC., NECESSARY TO COMPLETE THE INSTALLATION THE HEATING, VENTILATING, AND AIR CONDITIONING SYSTEMS, AND OTHER ITEMS HEREIN LISTED, AND AS DESCRIBED IN THESE SPECIFICATIONS, AS ILLUSTRATED IN THE ACCOMPANYING DRAWINGS,

OR AS DIRECTED BY THE OWNERS AUTHORIZED REPRESENTATIVE. HVAC WORK IS COMPRISED OF, BUT NOT LIMITED TO THE FOLLOWING PRINCIPAL ITEMS:

SUPPLY AND RETURN SYSTEMS INCLUDING DUCTS, GRILLES AND OUTLETS.
 EXHAUST SYSTEMS INCLUDING FANS, DUCTS, ETC.

3. INSULATION FOR DUCTS, ETC.

TEMPERATURE CONTROLS.
 COMPLETE DUCTWORK CLEANING.

6. FULL RTU UNIT AND CONDENSING UNIT SERVICING.

HVAC SPECIFICATIONS

	1.11	PUN	ICH L	LIST. 2	3 5	SHEET
IN		Α.		SION 23 SHALL SCHEDULE, THROUGH THE ARCHITECT WITH A MINIMUM OF 7-DAYS NOTICE, ENGINEER TO PERFORM THE FOLLOWING:	Þ	4. C A O
ANY NGINEER			1.	PRE–PUNCH LIST: VERIFICATION OF MECHANICAL ITEMS SUCH AS, BUT NOT LIMITED TO, DUCTWORK SIZES, LOCATIONS, METHODS OF ASSEMBLY / INSTALLATION, BEFORE ITEMS ARE ENCLOSED BY CEILINGS, WALLS, ETC.		1
NGINEEN				a. DIVISION 23 SHALL DELIVER TO BOTH THE ARCHITECT AND ENGINEER, A LETTER STATING THAT ALL ITEMS IN THE PRE-PUNCH LIST HAVE BEEN CORRECTED OR ADJUSTED ACCORDING TO THE GENERAL CONDITIONS OF THE CONTRACT BEFORE ANY CEILINGS, WALLS, ETC. CAN BE INSTALLED TO ENCLOSE MECHANICAL ITEMS.	E	3. G 1
'EN			2.	FINAL PUNCH LIST: VERIFICATION OF MECHANICAL ITEMS SUCH AS, BUT NOT LIMITED TO, UNIT OPERATION, SENSOR LOCATIONS, COLORS SELECTED BY ARCHITECT.		
SIONS, MENT IS,				a. BEFORE PROCEEDING WITH THE FINAL PUNCH LIST, DIVISION 23 SHALL PROVIDE THE ENGINEER WITH A COMPLETE SIGNED AND SEALED BALANCE REPORT.		SHEET A. M
EASED. EQUIRED				1). THE ENGINEER SHALL NOT PERFORM A FINAL PUNCH LIST UNTIL A COMPLETED BALANCE REPORT IS RECEIVED.		. Ji B. W
R THESE),				b. DIVISION 23 SHALL, AT THE REQUEST OF THE ENGINEER, PROVIDE A LADDER AND ONE EMPLOYEE TO REMOVE AND REPLACE CEILING TILES, OPEN ACCESS DOORS, ETC. FOR INSPECTION OF MECHANICAL ITEMS.		W C. S P
	,			 THE EMPLOYEE SHALL BE MADE IMMEDIATELY AVAILABLE TO REMOVE ITEMS THAT ARE REQUESTED BY THE ENGINEER. ANY CEILING TILE THAT IS DAMAGED SHALL BE REPLACED WITH NEW (TO MATCH EXISTING) AT DIVISION 23'S EXPENSE. 		DUCTW A. V
ICE				c. DIVISION 23 SHALL DELIVER TO BOTH THE ARCHITECT AND ENGINEER, A LETTER STATING THAT ALL ITEMS IN THE FINAL PUNCH LIST HAVE BEEN CORRECTED OR ADJUSTED ACCORDING TO THE GENERAL CONDITIONS OF THE CONTRACT.		1
	PART	2 -	- PRO	ODUCTS		
DES	2.1	FIRE		PPING		
		A.	FOR	WIDE UL LISTED AND TESTED FIRESTOPPING MATERIAL, SILICONE ELASTOMER SPECIFICALLY MULATED FOR USE IN HORIZONTAL AND VERTICAL APPLICATIONS.		
			1.	THE MATERIAL SHALL POSSESS INTUMESCENT CHARACTERISTICS, AND UPON EXPOSURE TO HEAT ABOVE 250° F, SHALL EXPAND TO NOT LESS THAN FIVE TIMES ITS ORIGINAL VOLUME TO FORM A FIREPROOF ENVELOPE UL RATED FOR 2 AND 3-HOURS PROTECTION, WHEN APPLIED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.		2
		В.		JSED SLOTS AND OTHER PENETRATIONS IN WALLS OR OTHER GENERAL CONSTRUCTION SHALL CLOSED AND SEALED WITH AN APPROVED FIRESTOPPING MATERIAL.		3
			1.	DUCT OPENINGS IN WALLS SHALL BE CLOSED WITH 16-GAUGE GALVANIZED STEEL SHEET SECURELY ATTACHED AT THE MIDPOINT OF THE WALL THICKNESS AND FIRESTOPPED ON BOTH SIDES OF THE STEEL SHEET WITH NOT LESS THAN 1/8-INCH THICK LAYER OF NON-SAGGING SILICONE ELASTOMER TO FULLY COVER THE OPENING.		4
OR AU			2.	WHERE DUCTWORK PASSES THROUGH A FIRE-RATED ASSEMBLY, AND THERE ARE NO FIRE DAMPERS SHOWN ON THE PLANS (DUCTWORK SIZE IS LESS THAN 100 SQUARE INCHES), PROVIDE THE FOLLOWING, MINIMUM:		т
OR INEER				 a. A MINIMUM OF 12-INCH LONG BY 0.060-INCH THICK STEEL SLEEVE SHALL BE CENTERED IN EACH DUCT OPENING. b. THE SLEEVE SHALL BE SECURED TO BOTH SIDES OF THE WALL / CEILING AND ALL FOUR SIDES OF THE SLEEVE WITH A MINIMUM OF 1-1/2" x 1-1/2" x 0.060" STEEL RETAINING ANGLES. c. THE RETAINING ANGLES SHALL BE SECURED TO THE SLEEVES AND THE WALL / CEILING WITH NO. 10 (M5) SCREWS. 		
ETS,				d. THE ANNULAR SPACE BETWEEN THE STEEL SLEEVE AND WALL / CEILING SHALL BE FILLED WITH SILICONE ELASTOMER TO PROVIDE A MINIMUM 2-HOUR RATED FIRESTOP.		5
	2.2	MEC		CAL IDENTIFICATION		
THEM		A.		T IDENTIFICATION DEVICES. PLASTIC DUCT MARKERS: MANUFACTURERS STANDARD LAMINATED PLASTIC, COLOR CODED,		
_			1.	CONTACT-TYPE, PERMANENT ADHESIVE.	c	
BY				a. LETTER SIZE: MINIMUM 1/4" FOR NAME OF UNITS IF VIEWING DISTANCE IS LESS 2. THAN 2'-0", 1/2" FOR VIEWING DISTANCES UP TO 6'-0", AND PROPORTIONALLY LARGER LETTERING FOR GREATER VIEWING DISTANCES.		DIFFUS A. C
CED,				 b. CONFORM TO THE FOLLOWING COLOR CODE: 1). GREEN: RETURN AIR. 2). YELLOW: SUPPLY AIR. 	f	C T B. P
				3). BLUE: EXHAUST AIR. 4). NOMENCLATURE: INCLUDE THE FOLLOWING, AS A MINIMUM:		V D
Т				a). DIRECTION OF AIRFLOW. b). DUCT SERVICE (SUPPLY, RETURN, EXHAUST, ETC.).	,	1
			2.	LOCATE DUCT MARKERS NEAT POINTS WHERE DUCTS ENTER INTO CONCEALED SPACES AND AT MAXIMUM INTERVALS OF 25'-0" IN EACH SPACE WHERE DUCTS ARE EXPOSED OR CONCEALED BY REMOVABLE CEILING SYSTEMS.	ſ	C. S 3
NANCE		В.	EQU	IPMENT IDENTIFICATION DEVICES.		
ER OF PTANCE			1.	EQUIPMENT NAMEPLATES: METAL NAMEPLATE WITH OPERATIONAL DATA ENGRAVED OR STAMPED, PERMANENTLY ATTACHED TO EQUIPMENT.		
				a. DATA: MANUFACTURER, PRODUCT NAME, MODEL NUMBER, SERIAL NUMBER, CAPACITY, OPERATING AND POWER CHARACTERISTICS, LABELS OF TESTED COMPLIANCES, AND SIMILAR ESSENTIAL DATA.		
E (3) STRUCTION	IS.			1) ENGRAVINGY MANUFACTURER'S STANDARD LETTER STYLE OF SIZES AND WITH TERMS		

- ENGRAVING: MANUFACTURER'S STANDARD LETTER STYLE, OF SIZES AND WITH TERMS TO MATCH EQUIPMENT IDENTIFICATION.
 THICKNESS: 1/16 INCH FOR UNITS UP TO 20 SQUARE INCHES OR 8-INCHES IN
- LENGTH, AND 1/8 INCH FOR LARGER UNITS.
- b. LOCATION: AN ACCESSIBLE AND VISIBLE LOCATION.c. FASTENERS: AS REQUIRED TO MOUNT ON EQUIPMENT.

- 2.3 SHEET METAL MATERIALS
 - A. COMPLY WITH SMACNA'S "HVAC DUCT CONSTRUCTION STANDAR ACCEPTABLE MATERIALS, MATERIAL THICKNESSES, AND DUCT C OTHERWISE INDICATED.
 - 1. SHEET METAL MATERIALS SHALL BE FREE FROM VISUAL II SEAM MARKS, ROLLER MARKS, OIL CANNING, STAINS, DIS IMPERFECTIONS, INCLUDING THOSE WHICH WOULD IMPAIR
 - B. GALVANIZED SHEET STEEL.
 - LOCK-FORMING QUALITY; COMPLYING WITH ASTM A653/A6 DESIGNATION; DUCTS SHALL HAVE MILL-PHOSPHATIZED FI
- 2.4 SHEET METAL SEALANT MATERIALS

VIEW.

- A. MASTIC: NON-HARDENING, NON-MIGRATING MASTIC ELASTIC SE JOINTS AND SEAMS IN DUCTWORK.
- B. WATER-BASED JOINT AND SEAM SEALANT: FLEXIBLE, ADHESIVE WHEN CURED, UL 723 LISTED, AND COMPLYING WITH NFPA R
- C. SOLVENT-BASED JOINT AND SEAM SEALANT: ONE-PART, NONS
- POLYMERIZED BUTYL SEALANT FORMULATED WITH A MINIMUM DUCTWORK ACCESSORIES
- A. VOLUME DAMPERS.
 - LOW LEAKAGE VOLUME DAMPERS: MULTIPLE OR SINGLE-E LOW LEAKAGE RATING, LINKAGE OUTSIDE OF AIRSTREAM, VERTICAL APPLICATIONS.
 - a. STEEL FRAMES: HAT-SHAPED, GALVANIZED SHEET ST
 - THICK, WITH MITERED AND WELDED CORNERS; FRAME WALLS, FLANGELESS FRAMES FOR INSTALLATION IN D
 - b. ROLL-FORMED STEEL BLADES: 0.064" THICK, GALVAN
 c. BLADE AXLES: 1/2", GALVANIZED STEEL.
 - d. BEARINGS: TWO-PIECE MOLDED SYNTHETIC THRUST C e. BLADE SEALS: FELT OR NEOPRENE.
 - f. JAMB SEALS: CAMBERED STAINLESS STEEL.
 - g. TIE BARS AND BRACKETS: GALVANIZED STEEL. h. FINISH: MILL.
- 2. JACKSHAFT: 1" DIAMETER, GALVANIZED STEEL PIPE ROTATIN
- MOUNTED ON SUPPORTS AT EACH MULLION AND AT EACH 3. DAMPER HARDWARE: ZINC-PLATED, DIE-CAST CORE WITH THICK ZINC-PLATED STEEL, AND A 3/4" HEXAGON LOCKII
- a. INCLUDE CENTER HOLE TO SUIT DAMPER OPERATING-INCLUDE ELEVATED PLATFORM FOR INSULATED DUCT
- 4. DUCT ACCESSORY HARDWARE.
- QUADRANT LOCKS: PROVIDE FOR EACH VOLUME DAME END OF SHAFT; AND END BEARING PLATE ON OTHER 12".
- PROVIDE EXTENDED QUADRANT LOCKS FOR EXTERNATION OF A COMPLIANCE WITH LOCKS OF ONE OF THE FOLLOWING:
- a). VENT FABRICS, INC. b). YOUNG REGULATOR COMPANY.
- MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIRE OF ONE OF THE FOLLOWING:
- a. AIR BALANCE, INC. b. GREENHECK.
- c. McGILL AIRFLOW CORPORATION. d. RUSKIN COMPANY.
- 2.6 DIFFUSERS, REGISTERS AND GRILLES
- A. CEILING COMPATIBILITY: PROVIDE DIFFUSERS AND GRILLES WITH COMPATIBLE WITH ADJACENT CEILING SYSTEMS, AND THAT ARE TO FIT INTO CEILING MODULE AND WITH ACCURATE FIT AND A
- B. PERFORMANCE: PROVIDE CEILING DIFFUSERS THAT HAVE, AS M VELOCITY TRAVERSES, THROW AND DROP, AND NOISE CRITERIA DEVICE AS LISTED IN MANUFACTURERS CURRENT DATA.
- 1. NOISE LEVELS OF NC 25 OR LESS.
- C. SQUARE CEILING SUPPLY DIFFUSERS.
- 3. FLAT FACE DIFFUSER.
- a. MATERIAL: STEEL. b. FINISH: BAKED ENAMEL, WHITE.
- c. FACE SIZE.
- 1). 24"x24" SQUARE: PROVIDE 18"x18" BACKPAN (N FOR FULL PANEL APPLICATION) WITH FULL FACE OF CONCENTRIC LOUVERS (FLUSH WITH FACE),
- a). MINIMUM 22-GAUGE STEEL BACKPAN (WELI ARE NOT ACCEPTABLE).
- d. MOUNTING: T-BAR (LAY-IN).
 e. PATTERN (THROW): 4-WAY, FIXED, HORIZONTAL DISCH
 f. DAMPERS: ADJUSTABLE, OPPOSED-BLADE, KEY OPERA
 g. ACCESSORIES.
- 1). OPERATING KEYS: TOOLS DESIGNED TO FIT THRO
- VOLUME CONTROL DEVICE AND / OR PATTERN . D. CEILING RETURN / EXHAUST GRILLES.
- MATERIAL: STEEL.
 FINISH: BAKED ENAMEL, WHITE.
- FACE STYLE: FLUSH, HOUSING COVERED WITH REMOVABLE
 FACE SIZE.
- a. 24"x24" SQUARE: MINIMUM 22-GAUGE STEEL, PROVID AS SHOWN ON DRAWINGS, STANDARD NECK SIZE WH
 1). MINIMUM 22-GAUGE STEEL BACKPAN (WELDED-DARE NOT ACCEPTABLE).
- MOUNTING: T-BAR (LAY-IN).
 DAMPERS: ADJUSTABLE, OPPOSED-BLADE, KEY OPERATED
- E. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENT AND GRILLES OF ONE OF THE FOLLOWING:
- PRICE INDUSTRIES.
 TITUS.

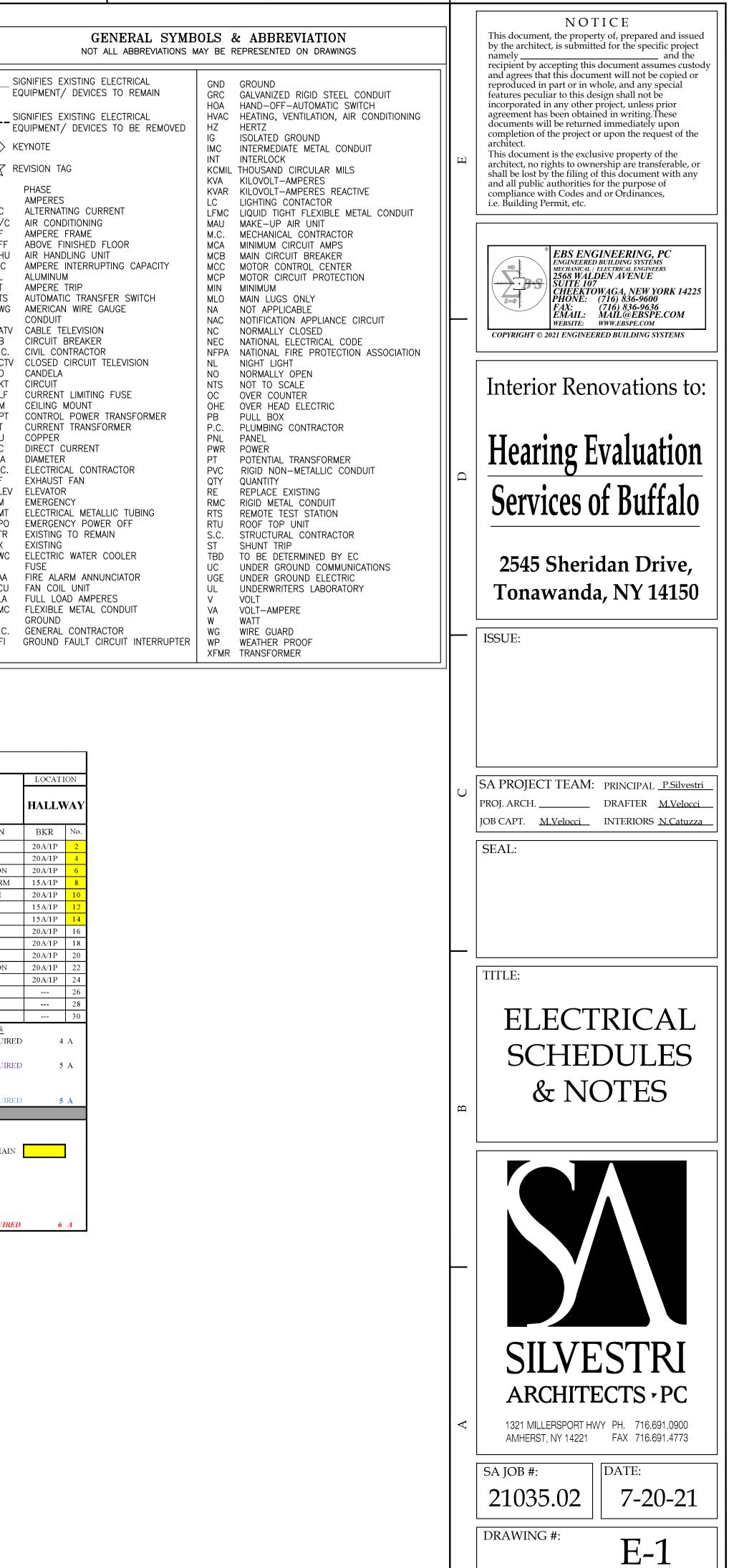
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		1 1 2 1 1 f
ARDS-METAL AND FLEXIBLE" FOR		
CONSTRUCTION METHODS, UNLESS	Е	2 2 2 2
DISCOLORATIONS, AND OTHER IR PAINTING.		i
A653M AND HAVING G90 ZINC COATING FINISH FOR SURFACES EXPOSED TO		
SEALANT SPECIFICALLY FOR SEALING		
VE SEALANT, RESISTANT TO UV LIGHT REQUIREMENTS FOR CLASS 1 DUCTS. NSAG, SOLVENT-RELEASE-CURING, 1 OF 75 PERCENT SOLIDS.		
-BLADE, OPPOSED BLADE DESIGN, I, AND SUITABLE FOR HORIZONTAL OR		
STEEL CHANNELS, MINIMUM OF 0.064" MES WITH FLANGES FOR ATTACHING TO DUCTS. VANIZED SHEET STEEL. F OR BALL.	D	-
TATING WITHIN PIPE-BEARING ASSEMBLY ACH END OF MULTIPLE DAMPER ASSEMBLIES. TH DIAL AND HANDLE MADE OF 3/32" CKING NUT. NG-ROD SIZE. CT MOUNTING.		
AMPER, QUADRANT LOCK DEVICE ON ONE IER END FOR DAMPER LENGTHS OVER		
XTERNALLY INSULATED DUCTWORK. VITH REQUIREMENTS, PROVIDE QUADRANT		
		SA
IIREMENTS, PROVIDE VOLUME DAMPERS	C	PR JO
		S
/ITH BORDER STYLES THAT ARE RE SPECIFICALLY MANUFACTURED		
ADEQUATE SUPPORT. 6 MINIMUM, TEMPERATURE AND RIA RATINGS FOR EACH SIZE		
		Т
(NECK SIZE AS SHOWN ON DRAWINGS		
ACÈ DIFFUSER, EASILY REMOVABLE CORE :), SQUARE OR ROUND DUCT CONNECTION. ELDED—IN INLETS AND CORNER JOINTS	В	
SCHARGE. PERATED FROM FACE OF DIFFUSER.		
HROUGH DIFFUSER FACE AND OPERATE N ADJUSTMENT.		
BLE FLAT PANEL		
DVIDE 22"x22" BACKPAN (NECK SIZE WHERE NOT INDICATED). D—IN INLETS AND CORNER JOINTS		
ED FROM FACE OF DIFFUSER.		
ENTS, PROVIDE DIFFUSERS, REGISTERS	Α	
		S

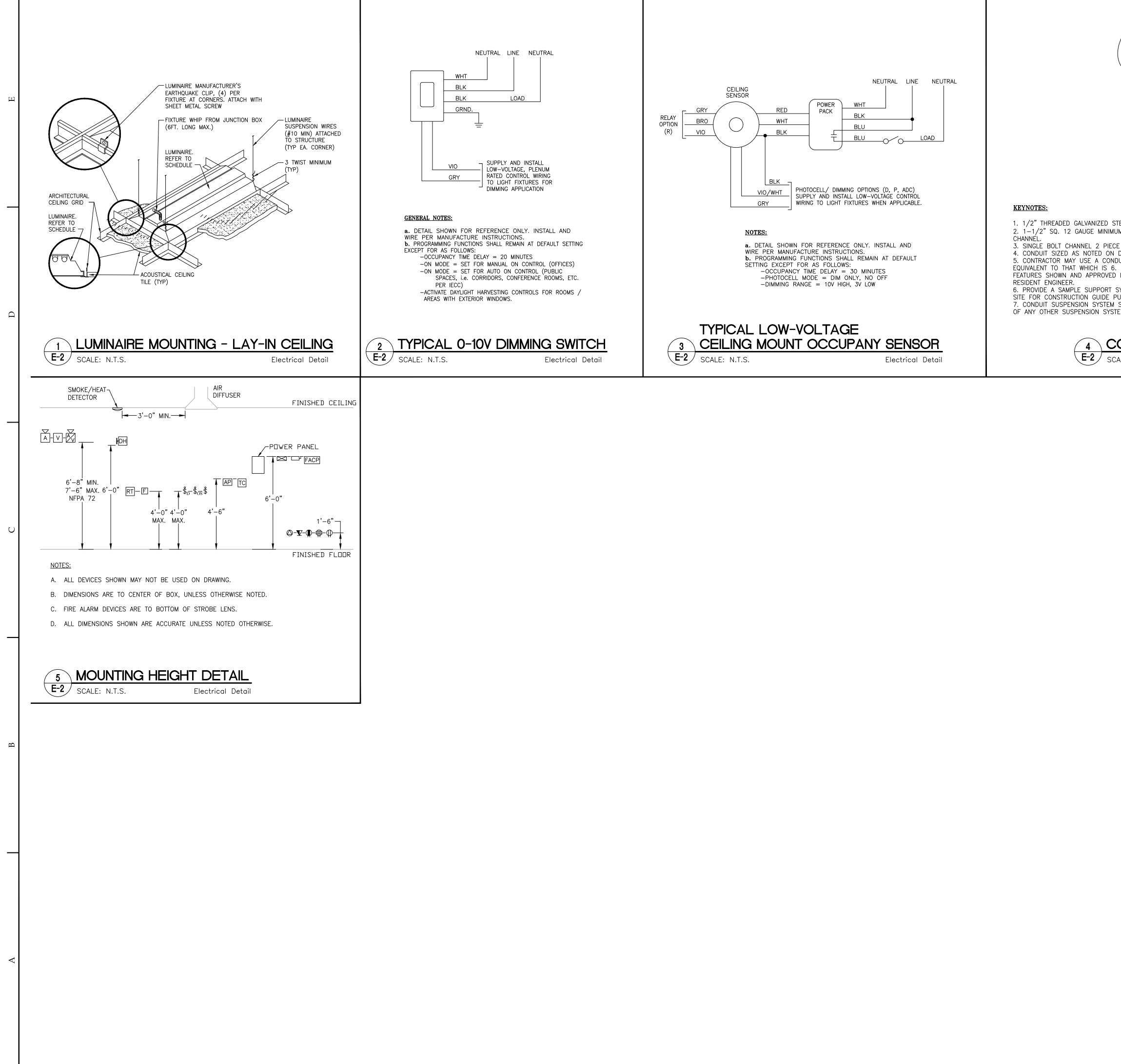
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	ISSUE:
U	SA PROJECT TEAM: PRINCIPAL P.Silvestri PROJ. ARCH. DRAFTER M.Velocci JOB CAPT. M.Velocci INTERIORS N.Catuzza
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	TITLE:
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	ELECTRICAL SYMBOLS LEGEND NOT ALL SYMBOLS MAY BE REPRESENTED ON DRAWINGS	LIGHTING FIXTURE SCHEDULE							
POWER SYMBOLS	LIGHTING CONTROL SYMBOLS	FIRE ALARM SYMBOLS	SYMBOL	DESCRIPTION	LAMP (QTY/TYPE/ COLOR)	VOLT VA	MOUNTING	MANUFACTURER/ MODEL #	
SIGNIFIES TWO(2) CONDUCTORS 2#12 + 1#12 GRND. IN ½" CONDUIT.	\$ TOGGLE SWITCH (SINGLE-POLE)	FACP FIRE ALARM CONTROL PANEL	• A1 •	2'X4' LED TROFFER WITH A CENTER "BASKET" STYLE ACRYLIC PRISMATIC RIBBED DIFFUSER AND 0–10V DIMMING DRIVER. DLC LISTED.	LED/4000*K 4000 LUMEN	120/ 277V 35W	LAY-IN	LITHONIA LIGHTING: 2BLT4-40L-ADP- EZ1-LP840	
SIGNIFIES THREE(3) CONDUCTORS 3#12 + 1#12 GRND. IN ½" CONDUIT.	\$ II,III,IV TOGGLE SWITCHES (SINGLE-POLE, GANGED)	AP FIRE ALARM REMOTE ANNUNCIATOR PANEL		COMBINATION LED EXIT SIGN / EMERGENCY LIGHTING UNIT, UNIVERSAL MOUNT WITH CANOPY, WHITE IMPACT & SCRATCH RESISTANT THERMOPLASTIC	LED (EXIT), TWO 1.5W/LEDs	120/ N/A	WALL	LITHONIA LIGHTING:	
SIGNIFIES FOUR(4) CONDUCTORS 4#12 + 1#12 GRND. IN ¾" CONDUIT.	\$3 TOGGLE SWITCH (SINGLE-POLE, 3-WAY)	FIRE ALARM PULLSTATION – INSTALL 48" A.F.F. TO CENTER OF BOX		HOUSING, 8" STENCILED RED LETTERS WITH, TWIN ADJUSTABLE HEADS FOR EMERGENCY LIGHTING & AN INTEGRAL BATTERY PACK.	FURNISHED WITH FIXTURE		±8'-6" A.F.F.	"QUANTUM" LHQM—LED—R	
SIGNIFIES FIVE(5) CONDUCTORS 5#12 + 1#12 GRND. IN ¾" CONDUIT.	3,11,111,11 TOGGLE SWITCH (SINGLE-POLE, 3-WAY, GANGED)	CARBON MONOXIDE DETECTOR WITH AUDIBLE BASE. WIRE INTO SUPERVISORY CIRCUITS OF BUILDING FIRE ALARM SYSTEM. INSTALL @ FINISHED CEILING.		EMERGENCY LED LIGHTING UNIT WITH A WHITE IMPACT & SCRATCH RESISTANT THERMOPLASTIC HOUSING, TWIN ADJUSTABLE HEADS & AN INTEGRAL	TWO 2.4W/220 LUMEN LEDs FURNISHED WITH	120/ N/A 277V N/A	WALL ±8'-6" A.F.F.	LITHONIA LIGHTING: "QUANTUM" ELM2L	
#10 SIGNIFIES TWO(2) CONDUCTORS 2#10 + 1#10 GRND. IN ¾" CONDUIT.	4 TOGGLE SWITCH (SINGLE-POLE, 4-WAY)	S PHOTOELECTRIC SMOKE DETECTOR WITH STANDARD BASE. WIRE INTO INITIATING CIRCUITS OF BUILDING FIRE ALARM SYSTEM. INSTALL @ FINISHED CEILING.		BATTERY PACK.	FIXTURES				
$_{-111}$ $_{-111}$ SIGNIFIES THREE(3) CONDUCTORS 3#10 + 1#10 GRND. IN $\frac{3}{4}$ " CONDUIT.	\$κ KEYED SWITCH (SINGLE-POLE)	COMBINATION CARBON MONOXIDE / PHOTOELECTRIC SMOKE							
#8_ SIGNIFIES TWO(2) CONDUCTORS 2#8 + 1#10 GRND. IN ¾" CONDUIT.	$_{\rm T}$ TIME DELAY SWITCH (SINGLE-POLE)	CS DETECTOR WITH AN AUDIBLE BASE. WIRE INTO INITIATING / SUPERVISORY / SIGNALING CIRCUITS OF BUILDING FIRE ALARM SYSTEM. INSTALL @ FINISHED CEILING.							
$_{\text{H8}}$ SIGNIFIES THREE(3) CONDUCTORS 3#8 + 1#10 GRND. IN $\frac{3}{4}$ " CONDUIT.	PL PILOT LIGHT SWITCH (SINGLE-POLE)	HEAT DETECTOR – FIXED TEMPERATURE OF 135°, WIRED INTO INITIATING CIRCUITS OF BUILDING FIRE ALARM SYSTEM. INSTALL @ FINISHED CEILING.							
#6SIGNIFIES_TWO(2)_CONDUCTORS 2#6 + 1#8_GRND. IN_1" CONDUIT.	D DIMMER (SINGLE-POLE)	COMBINATION CARBON MONOXIDE / HEAT DETECTOR, FIXED TEMPERATURE OF 135° WITH AN AUDIBLE BASE. WIRE INTO INITIATING / SUPERVISORY / SIGNALING CIRCUITS OF							
#6 SIGNIFIES THREE(3) CONDUCTORS 3#6 + 1#8 GRND. IN 1" CONDUIT.	M MOMENTARY CONTACT SWITCH (SINGLE-POLE)	INITIATING / SUPERVISORY / SIGNALING CIRCUITS OF BUILDING FIRE ALARM SYSTEM. INSTALL @ FINISHED CEILING.					SIGN SYMBOL LEG	DOUBLE	
HOMERUN TO PANELBOARD	DUAL TECHNOLOGY WALL SWITCH OCCUPANCY SENSOR OCCUPANCY TIME DELAY = 15 MINUTES. \$0\$ ACUITY CONTROLS - SENSOR SWITCH #WSX-PDT-SA-WH	DUCT SMOKE DETECTOR – WIRED INTO INITIATING CIRCUITS OF BUILDING FIRE ALARM SYSTEM. INSTALL WITHIN HVAC DUCTWORK.					UBLE FACE ACE DIRECTIONAL X# X	FACE DIRECTIONAL	
LOW VOLTAGE CONTROL WIRING	PROGRAM SENSOR FOR MANUAL / AUTOMATIC CONTROL IN INDIVIDUAL ROOMS PER CURRENT IECC REQUIREMENTS.	AUDIO DEVICE (WALL) – WIRED INTO SIGNALING CIRCUITS OF BUILDING FIRE ALARM SYSTEM. INSTALL 80" A.F.F. TO BOTTOM OF BOX			<u>[</u> 	XAMPLE OF THE (TURES, LABELS I	TYPICAL LABELS F MAY BE REPOSITIOI	OR ALL LIGHTING NED ON DRAWINGS	
J JUNCTION BOX (SIZE AS REQUIRED)	DL LOW-VOLTAGE DAYLIGHT CONTROLLER WITH NO MOTION CONTROL. DIMMING RANGE = 10V HIGH, 1V LOW. ACUITY CONTROLS - SENSOR SWITCH #CM-ADC (OR EQUAL)	VISUAL DEVICE (WALL) – WIRE INTO SIGNALING CIRCUITS OF BUILDING FIRE ALARM SYSTEM. INSTALL 80" A.F.F. TO BOTTOM OF BOX				TO ACCOM		<u>C LAYOUT.</u> S FIXTURE SHALL BE D BY AN EMERGENCY	
\sim CONDUIT/WIRE BREAK	PC EXTERIOR REMOTE PHOTOCELL TORK MODEL #2101 OR EQUAL.	COMBINATION AUDIO/VISUAL DEVICE (WALL) – WIRE INTO SIGNALING CIRCUITS OF BUILDING FIRE ALARM SYSTEM. INSTALL 80" A.F.F. TO BOTTOM OF BOX			FIXTUI		BATTERY INDICATE HAVE CO	POWER SOURCE. S FIXTURE SHALL DNSTANT POWER FOR	
C CONDUIT STUB OUT	LC LIGHTING CONTACTOR - INSTALL WITHIN A NEMA 1 ENCLOSURE	HDH MAGNETIC DOOR HOLDER – TO BE INSTALLED WITHIN WALL & WIRED INTO BUILDING FIRE ALARM SYSTEM AS REQUIRED.			TYPE	0 LABE	NIGHT L	IGHTING PURPOSES	
CONDUIT STUB-DOWN	TC TIME CLOCK	FLOW SWITCH – PROVIDED & INSTALLED BY SPRINKLER CONTRACTOR, WIRED INTO BUILDING FIRE ALARM SYSTEM BY ELECTRICAL CONTRACTOR.			PANEL CIRCU		- SWITCH / SENSOF		
O CONDUIT STUB-UP	UL924 EMERGENCY BYPASS / SHUNT-TRIP RELAY AS ER MANUFACTURED BY HUBBLE, WATT-STOPPER, FUNCTIONAL DEVICES, PHILIPS BODINE OR EQUAL.	TAMPER SWITCH – PROVIDED & INSTALLED BY SPRINKLER CONTRACTOR, WIRED INTO BUILDING FIRE ALARM SYSTEM BY ELECTRICAL CONTRACTOR.					FIXTURE IDENTIFIE CASE LETTERS (IE		
208Y/120V RECESSED OR SURFACE MOUNTED PANELBOARD	$\langle 0S \rangle$ LOW-VOLTAGE, DUAL TECHNOLOGY, SMALL MOTION CEILING OCCUPANCY SENSOR. OCCUPANCY TIME DELAY = 20 MINUTES. ACUITY CONTROLS - SENSOR SWITCH #CM-PDT-9 (OR EQUAL)	MM MONITORING MODULE							
480Y/277V RECESSED OR SURFACE MOUNTED PANELBOARD		CM CONTROL MODULE							
⊕ 1¢ POWER TERMINAL CONNECTION TO EQUIPMENT ITEM SUPPLIED BY OTHERS.	GENERAL NOTES TO ELECTRICAL SYMBOLS LEGEND:	RT REMOTE TEST STATION		ΓΙΕΛΤΟΙΛΑΙ	DANIELDAA	DDCU	гон г а		
30 POWER TERMINAL CONNECTION TO EQUIPMENT ITEM SUPPLIED BY OTHERS.	a. UTILIZE TYPE "MC" CABLE IN CONCEALED AREAS UNLESS NOTED OTHERWISE. EXPOSED ELECTRICAL WORK SHALL BE INSTALLED WITHIN CODE SIZED CONDUIT WITH STEEL SET SCREW FITTINGS.	4"SQ. ELECTRIC BOX INSTALLED 80" A.F.F. WITH A BLANK COVERPLATE FOR THE INSTALLATION OF A FIRE ALARM DEVICE AT A FUTURE DATE.	PAN	ELECTRICAL		ARD SCH	EDULE (F 1ø AIC: 10ka	3-WIRE	
HP ELECTRIC MOTOR – PROVIDED & INSTALLED BY OTHERS, WIRE BY E.C. XX = HORSE POWER RATING	b. MULTIWIRE BRANCH CIRCUITS SHALL BE INSTALLED PER ALL REQUIREMENTS OF N.E.C. ARTICLE 210.4. HANDLE TIES MUST BE						MTG: SURFACE ENCL: NEMA 1	ODIDTION CTTT	
HO RECEPTACLE (SIMPLEX)	INSTALLED TO IDENTIFY SINGLE-POLE, MULTIWIRE BRANCH CIRCUITS PER ALL REQUIREMENTS OF N.E.C. ARTICLE 240.15(B). c. ALL STANDARD RECEPTACLES SHALL BE INSTALLED 18" A.F.F., TO			BKRCIRCUIT DESCRIPTIONLOAD DESCRIPT20A/1PRECEPT ACLES IN ENTRYRECEPT20A/1PRECEPT ACLES IN RM #1RECEPT	ION LOAD (W) L1 0 0 0 0 0 0		AD (W) LOAD DES 0 REC 0 REC		
+ RECEPTACLE (DUPLEX)	CENTER OF BOX, FLUSH TO FINISHED WALL, UNLESS OTHERWISE NOTED. d. ALL INTERIOR GFI RECEPTACLES SHALL BE INSTALLED 18" A.F.F., TO		7	20A/1PRECEPT ACLES IN RM #2RECEPT20A/1PRECEPT ACLES IN RM #3RECEPT15A/1PLIGHTINGLIGHTS	0 0 0 0		360 REC 0 REC 0 REC	EPT RECEPT ACLES	
RECEPTACLE (QUAD)	CENTER OF BOX/ABOVE COUNTER TOP, FLUSH TO FINISHED WALL, UNLESS OTHERWISE NOTED. COORDINATE INSTALLATION HEIGHT WITH ARCHITECTURAL MILLWORK/ELEVATION PLANS WHEN APPLICABLE.		11	15A/IPLIGHTINGLIGHTS15A/IPHEATING UNITEQUIP	0 0		0 LIG 0 LIG	HTS LIGHTING HTS LIGHTING	
RECEPTACLE (DUPLEX) W/ GROUND FAULT PROTECTION	e. ALL EXTERIOR GFI RECEPTACLES SHALL BE INSTALLED HORIZONTALLY 24" A.F.G., TO CENTER OF BOX, FLUSH TO FINISHED WALL, UNLESS OTHERWISE NOTED. PROVIDE A WEATHERPROOF COVERPLATE FOR		15 17 19	30A/2P AC UNIT HVAC SP ACE SP ARE	0 0 0 385		0 SPA 165 SPA 385 LIG	RE NL/EMERGENC	
RECEPTACLE (QUAD) W/ GROUND FAULT PROTECTION	OTHERWISE NOTED. PROVIDE A WEATHERPROOF COVERPLATE FOR EXTERIOR USE. f. ALL TOGGLE SWITCHES, DIMMERS, KEYED SWITCHES ETC SHALL BE		21 23 25	SPACESPARESPACESPARESPACESPARE	0 0 0 0		360 REC 720 REC 0 SPA	EPT RECEPTACLES	
↔ WP RECEPTACLE (DUPLEX) W/ GROUND FAULT PROTECTION & A WEATHERPROOF COVER	INSTALLED 48" A.F.F., TO CENTER OF BOX, FLUSH TO FINISHED WALL, UNLESS OTHERWISE NOTED.		27 29	SPACESPARESPACESPARE	0		0 SPA 0 SPA	ARE SPACE	
ES 120V ELECTRONIC DOOR STRIKE. SUPPLIED & INSTALLED BY OTHERS, WIRED BY E.C.	 g. ELECTRICAL DEVICES WITHIN HANDICAP ACCESSIBLE ROOMS SHALL BE INSTALLED AT HEIGHTS PER ADA REQUIREMENTS. h. COMMUNICATION DEVICES (IE: TELEPHONE, DATA, CATV) SHALL BE 			PHASE LOAD TOTAL CONNECTED LOAI 20% FUTURE CAPACITY	(W) (W)	745 149		MINIMUN	
SPECIAL" RECEPTACLE – VERIFY NEMA TYPE AND INSTALLATION LOCATION IN FIELD.	INSTALLED 18" A.F.F., TO CENTER OF BOX, FLUSH TO FINISHED WALL, UNLESS OTHERWISE NOTED.			SUB TOTAL DEMAND FAC TOTAL LOAI	TOR	894 100% 894		MINIMUN	
\$™s MANUAL MOTOR STARTER	i. FIRE ALARM DEVICES SHALL BE INSTALLED AS NOTED IN INDIVIDUAL DESCRIPTIONS.			TOTAL LOAD (AMPI	CRES)	4.30		MINIMUN	
MAGNETIC MOTOR STARTER				LIGHT S RECEPT	385 kW 100' 1440 kW 144	% 0.385 kW 0 1.44 kW		EXIST ING CIRC	
COMBINATION MOTOR STARTER/FUSED				HVAC EQUIP MISC	0 kW 100 ⁰ 0 kW 100 ⁰ 0 kW 100 ⁰	% 0 kW		(SHOW NO LOA	
NON-FUSED DISCONNECT SWITCH				FEEDER SPARE	0 kW 100 0 kW 100	% 0 kW			
EH FUSED DISCONNECT SWITCH				TOTAL LOAD		1.825 kW		MINIMUN	

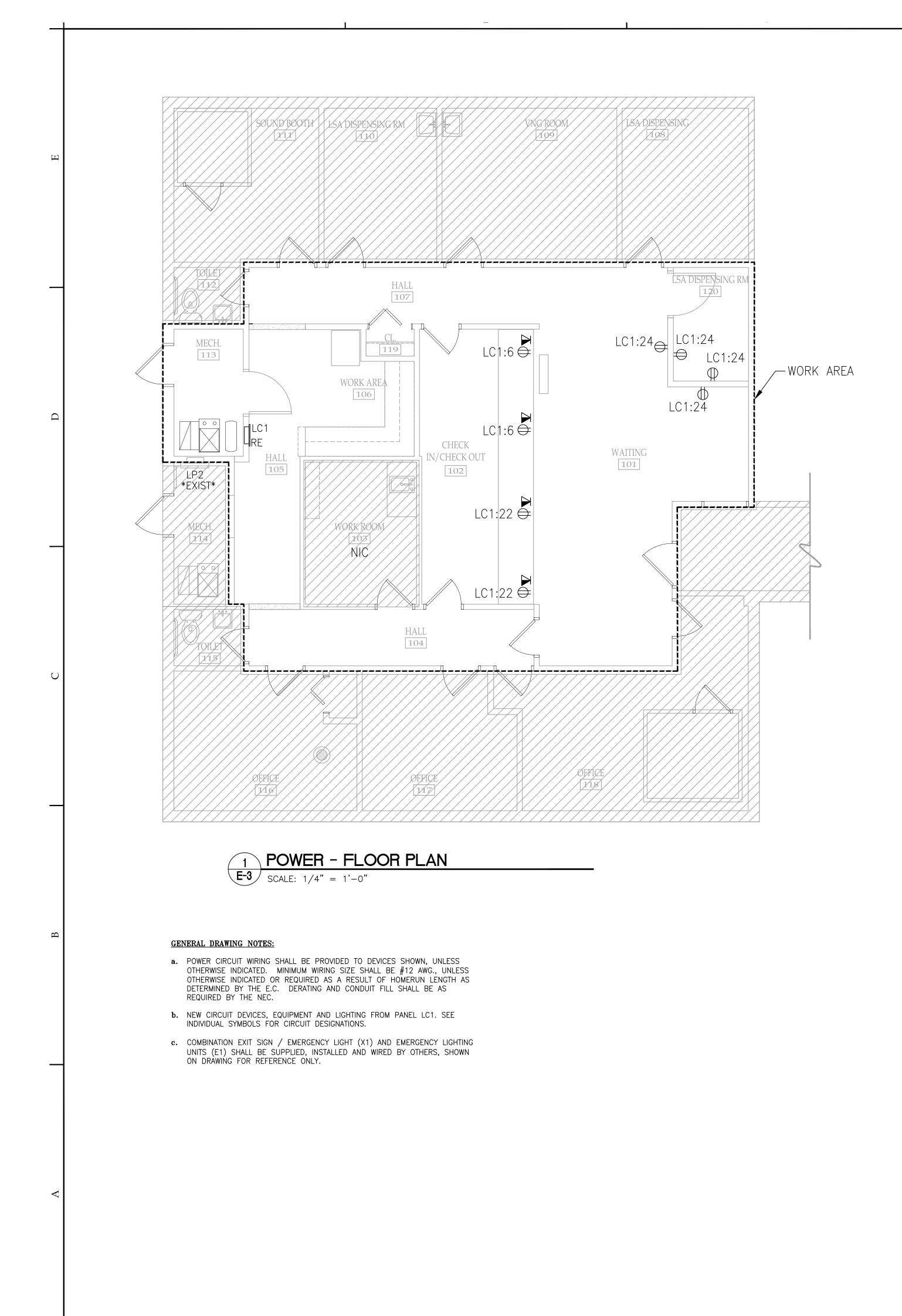
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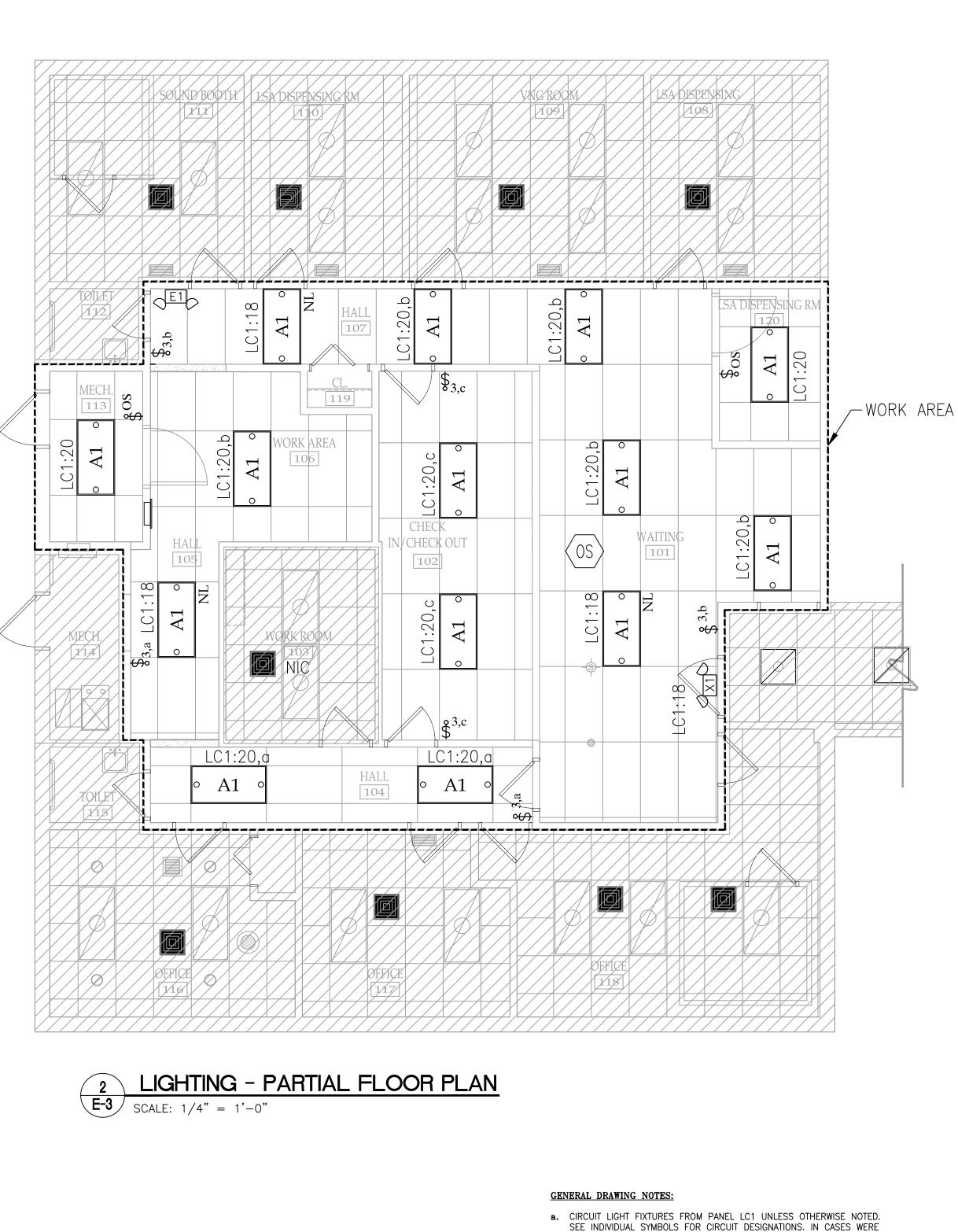
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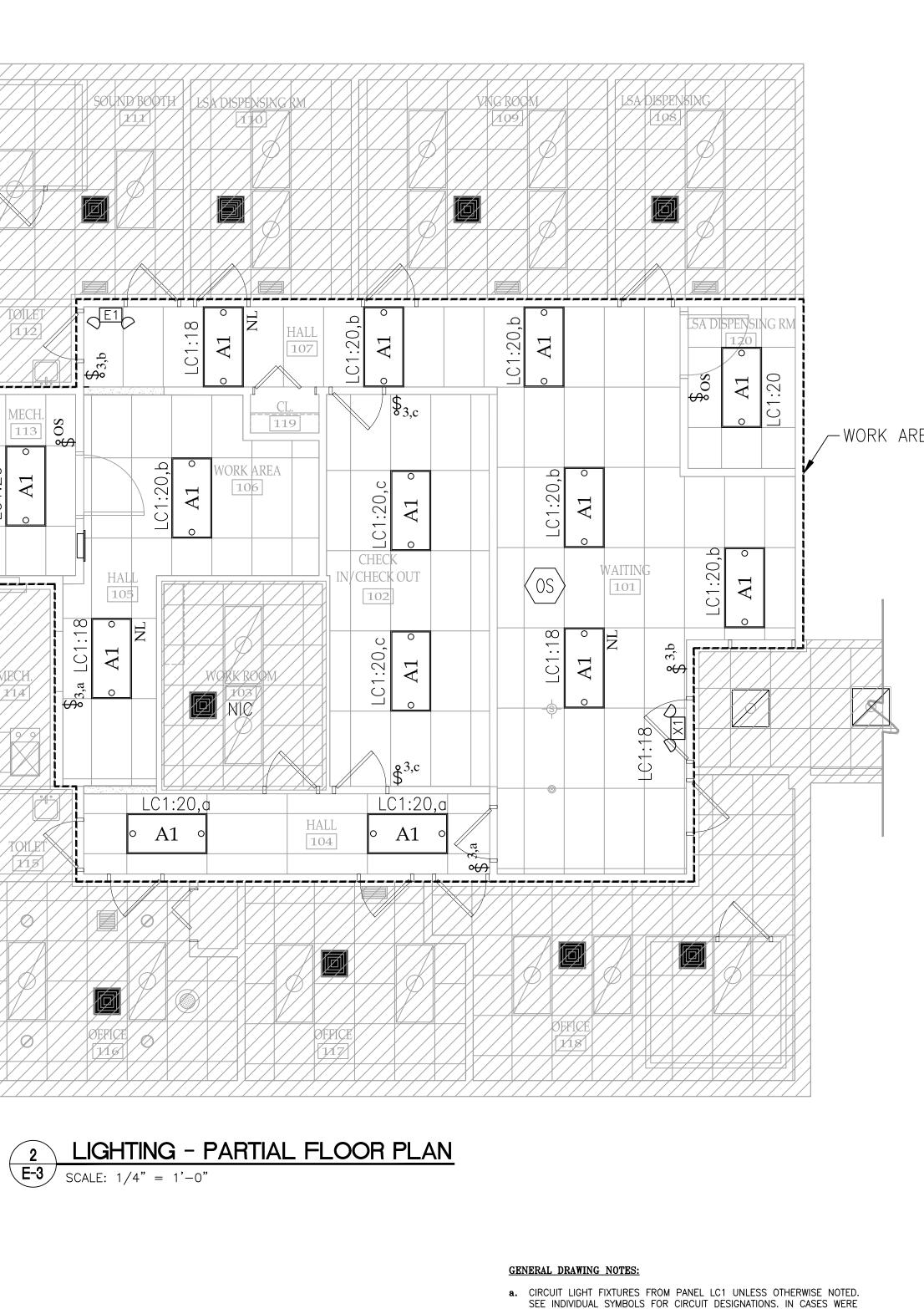




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E CONDUIT STRAPS. DRAWINGS. DUIT SUSPENSION SYSTEM DETAILED. HAVING THE IN ADVANCE BY THE SYSTEM TO KEEP ON JOB PURPOSES. SHALL BE INDEPENDENT TEM. ONDUIT/TRAPEZE MOUNTING DETAIL ALE: N.T.S. Electrical Detail	D	Interior Renovations to: Hearing Evaluation Services of Buffalo 2545 Sheridan Drive, Tonawanda, NY 14150
	C	ISSUE: SA PROJECT TEAM: PRINCIPAL P.Silvestri PROJ. ARCH DRAFTER M.Velocci JOB CAPT. M.Velocci INTERIORS N.Catuzza SEAL:
	В	TITLE: ONE-LINE DIAGRAM, PANEL SCHEUDLE & DETAILS
	A	SILVESTRATESILVESTRATEARCHITECTS - PC1321 MILLERSPORT HWY PH. 716.691.0900AMHERST, NY 14221FAX 716.691.4773
٤		SA JOB #: 21035.02 DATE: 7-20-21 DRAWING #: E-2





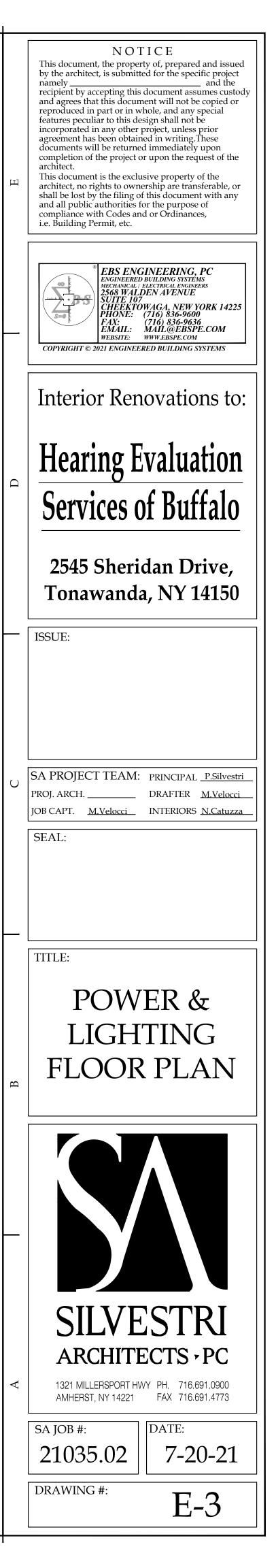


- SEE INDIVIDUAL SYMBOLS FOR CIRCUIT DESIGNATIONS. IN CASES WERE LIGHT FIXTURES ARE CIRCUITED FROM AN ALTERNATE PANEL, THEY WILL HAVE PANEL AND CIRCUIT DESIGNATIONS IDENTIFIED; EXAMPLE. PP1:20 = PANEL PP1, CKT.20.
- b. EXIT SIGNS, EMERGENCY LIGHTING UNITS AND LIGHT FIXTURES WITH "NL" DESIGNATIONS SHALL BE WIRED WITH A CONSTANT 120V POWER CONNECTION AHEAD OF ALL MANUAL AND AUTOMATIC CONTROLS.
- c. TOGGLE SWITCH, WALL SWITCH OCCUPANCY SENSOR AND CEILING OCCUPANCY SENSORS SHALL BE WIRED TO CONTROL LIGHT FIXTURES LOCATED WITHIN ASSOCIATED ROOM. IN AREAS WHERE SWITCHING SCHEME IS NOT OBVIOUS, LOWERCASE LETTERS (IE: "a", "b", "c" ETC.) WILL BE SHOWN TO IDENTIFY SWITCHING SCHEME.

<u>LIGHTING KEYNOTES:</u>

1. NEW COMBO EM/EXIT LIGHT AND EXTERIOR EGRESS HEAD. WIRE TO TENANT PANEL AHEAD OF LOCAL LIGHTING CIRCUIT CONTROLS. EGRESS LIGHTING SHALL BE PROVIDED AT THE EXIT DOORS. INTERIOR EMERGENCY LIGHTING PROVIDED AND WIRED TO LC1 AHEAD OF LOCAL LIGHTING CONTROLS.

9 WIDE OCCUDANCY SENSOD IN MECHANICAL DOOM & WAITING ADEA IN



	GENERAL PROVISIONS	
	 A. <u>GENERAL:</u> 1. REQUIREMENTS SPECIFIED ON COVER SHEET, ALONG WITH ELECTRICAL SPECIFICATIONS AND ALL ITS SECTIONS, COMPRISE THE CONTRACT DOCUMENTS FOR THE ELECTRICAL CONTRACT. DRAWINGS AND ALL THEIR REVISIONS UP TO THE BID SUBMITTAL DATE BECOME A BINDING PART OF THE CONTRACT, ALONG WITH THESE SPECIFICATIONS AS THOUGH THEY WERE ONE, AND ANYTHING IMPLIED BY THE SPECIFICATIONS SHALL BE INTERPRETED AS ALSO IMPLIED BY THE DRAWINGS AND VICE VERSA. PROVIDE NECESSARY ITEMS FOR A COMPLETE INSTALLATION OF ALL ELECTRICALLY OPERATED EQUIPMENT LISTED IN THE SPECIFICATIONS OR SHOWN ON THE CONTRACT DRAWINGS. 	J. <u>LABOR:</u> 1. THE ELECTRICAL CONTRACTOR SHALL F WORK, WHO SHALL BE ON THE SITE D THESE SPECIFICATIONS AND WHEN THE LABOR AND PERFORM IN A FIRST-CLA
Е	2. THE ARCHITECTURAL, STRUCTURAL, MECHANICAL, PLUMBING AND EQUIPMENT DRAWINGS AND SPECIFICATIONS ARE INCORPORATED INTO, AND BECOME A PART OF THIS DIVISION. THIS CONTRACTOR SHALL EXAMINE ALL SUCH DRAWINGS AND SPECIFICATIONS AND BECOME THOROUGHLY FAMILIAR WITH THE PROVISIONS CONTAINED THEREIN. THE SUBMISSION OF HIS BID SHALL INDICATE SUCH KNOWLEDGE.	 K. <u>STORAGE AND PROTECTION:</u> 1. THE ELECTRICAL CONTRACTOR SHALL E AND ITS CONTENTS CAUSED BY HIS EI REPAIRED OR THE ITEMS REPLACED, TO
	 ELECTRICAL DRAWINGS ARE DIAGRAMMATIC. THEY ARE INTENDED TO SHOW THE APPROXIMATE LOCATIONS OF EQUIPMENT AND CONDUIT. DIMENSIONS GIVEN ON THE PLANS, IN FIGURES, SHALL TAKE PRECEDENCE OVER SCALED DIMENSIONS AND SHALL BE VERIFIED IN THE FIELD. THE ELECTRICAL CONTRACTOR SHALL LAYOUT ALL EQUIPMENT ROOMS TO MAKE SURE THE EQUIPMENT, AS PURCHASED, FITS IN THE ROOM OR SPACE SHOWN. EXACT LOCATION OF ALL EQUIPMENT SHALL BE VERIFIED IN THE FIELD AND ROUTING OF CONDUITS SHALL SUIT FIELD CONDITIONS. UNTIL THE TIME OF INSTALLATION, THE ARCHITECT RESERVES THE RIGHT TO MAKE MINOR CHANGES IN THE LOCATION OF CONDUIT AND EQUIPMENT WITHOUT ADDITIONAL COST TO THE CONTRACT. 	 VERIFICATION OF MEASURMENTS: 1. BEFORE ORDERING ANY MATERIAL OR MEASUREMENTS AT THE BUILDING AND EXTRA CHARGE OR COMPENSATION WIL ACTUAL DIMENSIONS AND THE MEASUR MAY BE FOUND, SHALL BE SUBMITTED WITH THE WORK.
	5. THE ELECTRICAL DRAWINGS AND SPECIFICATIONS ARE INTENDED TO SUPPLEMENT EACH OTHER. MATERIAL AND LABOR NECESSARY TO THE PROJECT SHALL BE FURNISHED AND INSTALLED EVEN THOUGH NOT SPECIFICALLY MENTIONED IN BOTH. LABOR AND/OR MATERIALS NEITHER SHOWN NOR SPECIFIED, BUT OBVIOUSLY NECESSARY FOR THE COMPLETION AND PROPER FUNCTIONING OF THE SYSTEM, SHALL BE FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR AT NO ADDITIONAL	BASIC ELECTRICAL MATERIALS AND METHODS A. <u>NAMEPLATES:</u> 1. GENERAL: FURNISH AND MOUNT ON EA
	COST. 6. ARRANGE ALL EQUIPMENT SUBSTANTIALLY AS SHOWN ON THE DRAWINGS. MAKE DEVIATIONS ONLY WHERE NECESSARY TO AVOID INTERFERENCE. CHECK ALL EQUIPMENT SIZES AGAINST AVAILABLE SPACE PRIOR TO SHIPMENT TO AVOID INTERFERENCE. 7. EXAMINE THE WORK OF OTHER TRADES INSOFAR AS THEIR WORK COMES IN CONTACT WITH OR IS CONTROL TO THE WORK OF OTHER TRADES INSOFAR AS THEIR WORK COMES IN CONTACT WITH OR IS	LARGE JUNCTION BOX, SAFETY SWITCH, SIMILAR CONTROLS, A NAMEPLATE DES 2. PROVIDE BLACK AND WHITE NAMEPLATE CENTER CORE. LETTERS SHALL BE EN FASTEN THE NAMEPLATES WITH SCREWS
	COVERED BY THIS WORK. IN NO CASE ATTACH TO, OR FINISH AGAINST ANY DEFECTIVE WORK OR INSTALL WORK IN A MANNER WHICH WILL PREVENT PROPER INSTALLATION OF THE WORK OF OTHER TRADES. 8. ELECTRICAL CONTRACTOR SHALL VERIFY WITH OTHER TRADES ALL ELECTRICAL CHARACTERISTICS OF EQUIPMENT REQUIRING ELECTRICAL CONNECTIONS. CONTRACTOR SHALL VERIFY VOLTAGE, PHASE AND HORSEPOWER AND SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO START OF WORK.	 B. <u>MOUNTING ACCESSORIES:</u> 1. THIS CONTRACTOR SHALL FURNISH ANI HANGERS, CONCRETE OR PLYWOOD RE EQUIPMENT OR DEVICE CALLED FOR OF
0	ELECTRICAL CONTRACTOR SHALL PROVIDE DISCONNECTING MEANS AND OVERLOAD PROTECTION FOR ALL EQUIPMENT, UNLESS FURNISHED INTEGRAL WITH EQUIPMENT PACKAGE. 9. IT IS THE INTENT OF THESE DRAWINGS THAT THIS BE A COMPLETE ELECTRICAL JOB. ANY ERRORS OR OMISSIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT, PRIOR TO BIDDING THE JOB, WHO WILL MAKE CLARIFICATIONS IN WRITING.	 SUPPORTING MATERIAL SHALL BE COMI NECESSARY ACCESSORIES TO MAKE A GALVANIZED, PAINTED OR OTHERWISE S RACO WILL BE ACCEPTABLE. ALL SURFACE-MOUNTED EQUIPMENT O BACKBOARD. ALL FLOOR-MOUNTED EQUIPMENT O
D	 B. <u>VISIT TO THE SITE:</u> 1. THIS CONTRACTOR SHALL VISIT THE SITE OF THE WORK AND FAMILIARIZE HIMSELF WITH ALL CONDITIONS AFFECTING HIS WORK. THE SUBMISSION OF HIS PROPOSAL SHALL INDICATE SUCH KNOWLEDGE. NO ADDITIONAL PAYMENT SHALL BE MADE ON CLAIMS THAT ARISE FROM A LACK OF KNOWLEDGE OF THE EXISTING CONDITIONS. 	HOUSEKEEPING PAD. C. <u>EXECUTION:</u> 1. THE ELECTRICAL WORK FOR CONSTRUC STATE, ALL SPECIFIC SAFETY REQUIREN
	 C. <u>CODE AND PERMITS:</u> 1. INSTALLATION SHALL BE IN FULL ACCORDANCE WITH ALL CODES, RULES AND REGULATIONS OF MUNICIPAL, CITY, COUNTY, STATE AND PUBLIC UTILITIES AND ALL OTHER AUTHORITIES HAVING JURISDICTION OVER THE PREMISES. 2. COMPLY WITH ANY SPECIFICATION REQUIREMENTS THAT ARE IN EXCESS BUT NOT IN CONFLICT WITH CODE REQUIREMENTS. 	THE NEC. 2. CHECK THE HVAC AND PLUMBING SPE SAME IN THE CONTRACT COST. 3. EQUIPMENT CONNECTIONS, STARTERS, I PUSHBUTTON STATIONS FOR THE EQUIF CONTRACT SHALL BE INSTALLED AND C
	 THE CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS, PLAN REVIEWS AND CERTIFICATES OF INSPECTION IN CONNECTION WITH HIS WORK, REQUIRED BY THE FOREGOING AUTHORITIES. BEFORE FINAL PAYMENT OF THE CONTRACT IS ALLOWED, ALL CERTIFICATES SHALL BE DELIVERED TO THE ARCHITECT IN DUPLICATE. ELECTRICAL MATERIAL AND EQUIPMENT SHALL BE LISTED TO A NATIONALLY RECOGNIZED TESTING LABORATORY, SUCH AS UL, CSA, ETL OR APPROVED EQUIVALENT. 	CONTRACT DRAWINGS. 4. ALL CUTTING, PATCHING, EXCAVATING, WILL BE THE RESPONSIBILITY OF THE THE RESPONSIBILITY OF PROVIDING TH ELECTRICAL INSTALLATION AND FOR TH ARCHITECT. ALL HOLES SHALL BE CO
	 D. <u>ELECTRICAL INSPECTION:</u> 1. ALL ELECTRICAL INSPECTIONS SHALL BE BY A 3RD PARTY AGENCY APPROVED BY THE LOCAL TOWN. E. <u>RECORD DRAWINGS:</u> 1. IMMEDIATELY AFTER THE CONTRACT IS SIGNED, THE CONTRACTOR SHALL OBTAIN A COMPLETE SET OF 	THROUGH FIRE—RATED WALLS, FLOORS CREATED THROUGH FOUNDATION WALLS 5. THIS CONTRACTOR SHALL BE RESPONS FOR HIS WORK, COORDINATE WITH ARC
	 REPRODUCTIONS OF THE CONTRACT DRAWINGS. THESE WILL BE THE BASIC RECORD DRAWINGS, TO BE DELIVERED TO THE ARCHITECT WITH TWO SETS OF PRINTS, UPON COMPLETION OF THE PROJECT, PRIOR TO REQUEST FOR FINAL PAYMENT. DURING THE PROGRESS OF THE JOB, THE RECORD DRAWINGS SHALL BE CORRECTED FROM MONTH-TO-MONTH TO SHOW THE WORK AS ACTUALLY INSTALLED. F. STANDARDS AND SUBSTITUTIONS: 	 D. <u>OPENINGS AND CHASES:</u> 1. DETERMINE AND BE RESPONSIBLE FOR REQUIRED. INSTALL ALL SLEEVES NEC THROUGH ANY WALL, THE OPENING SH CONTRACTOR. PIPING THROUGH FOUN
C	 STANDARDS AND SUBSTITUTIONS. WHEREVER THE WORDS "APPROVED BY", "APPROVED EQUAL", "AS DIRECTED" OR SIMILAR PHRASES ARE USED IN THE FOLLOWING SPECIFICATIONS, THEY SHALL BE UNDERSTOOD TO REFER TO THE OWNER AS THE APPROVING AGENCY. THE NAME OR MAKE OF ANY EQUIPMENT OR MATERIALS NAMED IN THIS SPECIFICATION (WHETHER OR NOT THE WORDS "OR APPROVED EQUAL" ARE USED) SHALL BE KNOWN AS THE "STANDARD". 	THIS CONTRACTOR. E. <u>MATERIALS AND WORKMANSHIP:</u> 1. ALL WORK SHALL BE INSTALLED IN A IN THE SEVERAL TRADES NECESSARY.
	2. THESE SPECIFICATIONS ESTABLISH QUALITY STANDARD OF MATERIALS AND EQUIPMENT TO BE PROVIDED. SPECIFIC ITEMS ARE IDENTIFIED BY MANUFACTURER, TRADE NAME OR CATALOG DESIGNATION. THIS CONTRACTOR SHALL SUBMIT HIS BASE BID PRICE BASED UPON STANDARD SPECIFIED EQUIPMENT DESCRIBED HEREIN AND AS DETAILED ON DRAWINGS AND ASSOCIATED CONTRACT DOCUMENTS. THESE SPECIFICATIONS ARE NOT TO BE CONSIDERED PROPRIETARY. THE CONTRACTOR MAY SUBMIT INFORMATION ON MATERIALS AND MANUFACTURERS (OTHER THAN THOSE LISTED) FOR REVIEW BY THE	 ALL MATERIALS SHALL BE NEW AND FF KINDS UNLESS SPECIFIED OR INDICATE DURING EACH PHASE AND AT THE COM REMOVE ALL DEBRIS AND EXCESS MAT OPERATION BROOM CLEAN. ALL ELECTRICAL EQUIPMENT SHALL BE
	CONTRACTOR SHALL SUBMIT HIS BASE BID PRICE BASED UPON STANDARD SPECIFIED EQUIPMENT DESCRIBED HEREIN AND AS DETAILED ON DRAWINGS AND ASSOCIATED CONTRACT DOCUMENTS. THESE SPECIFICATIONS ARE NOT TO BE CONSIDERED PROPRIETARY. THE CONTRACTOR MAY SUBMIT INFORMATION ON MATERIALS AND MANUFACTURERS (OTHER THAN THOSE LISTED) FOR REVIEW BY THE ARCHITECT AND ENGINEER NO LATER THAN TEN (10) DAYS BEFORE BIDS ARE SUBMITTED. IN ADDITION, SAMPLES OF PROPOSED EQUIPMENT MAY BE REQUIRED TO BE SUBMITTED TO THE ENGINEER FOR REVIEW NO LATER THAN TEN (10) DAYS BEFORE BIDS ARE SUBMITTED. MANUFACTURERS OF PRODUCTS ACCEPTED BY THE ARCHITECT AND ENGINEER WILL BE LISTED IN AN ADDENDUM TO THE SPECIFICATIONS AS AN ACCEPTABLE SUBSTITUTION EQUIPMENT ACCEPTED AS DETAILED BELOW AND SHALL BE SHOWN AS A SEPARATE ADD OR DEDUCT PRICE TO BE FACTORED INTO THE BASE BID PRICE BY THE ARCHITECT AND OWNER IF ACCEPTED	5. THIS CONTRACTOR SHALL GUARANTEE PERIOD OF ONE YEAR FROM THE DATE ORDER AT THE COMPLETION. SHOULD CONTRACTOR SHALL, UPON NOTICE OF OTHER WORK OR FURNISHINGS CAUSED
	3. <u>SHOULD THE CONTRACTOR PROPOSE TO FURNISH MATERIALS AND EQUIPMENT OTHER THAN THOSE</u> <u>SPECIFIED OR APPROVED BY ADDENDUM, SUBMIT A WRITTEN REQUEST FOR SUBSTITUTIONS TO THE</u> <u>ARCHITECT AT THE BID OPENING.</u> THE REQUEST SHALL BE AN ALTERNATE TO THE ORIGINAL BID; BE ACCOMPANIED WITH COMPLETE DESCRIPTIVE (MANUFACTURER, BRAND NAME, CATALOG NUMBER, ETC.)	F. <u>FIRE STOPPING:</u> 1. FIRE-STOPPING FOR OPENINGS THROU SHALL BE LISTED OR CLASSIFIED BY A "THROUGH-PENETRATION FIRE-STOP S"
	AND TECHNICAL DATA FOR ALL ITEMS. FAILURE BY THIS CONTRACTOR TO SUBMIT THE REQUISITE DOCUMENTATION DETAILED ABOVE SHALL BE UNDERSTOOD BY THE ARCHITECT AND ENGINEER TO INDICATE THAT SUBSTITUTE EQUIPMENT WILL NOT BE PRESENTED BY THE CONTRACTOR FOR CONSIDERATION. SUCH SUBSTITUTIONS WILL NOT BE CONSIDERED AFTER THE BID OPENING DATE AND DELAY OF PROJECT WILL NOT BE PERMITTED FOR FURTHER INSPECTION AND EVALUATION AFTER THIS DATE.	"FIDE TEOTO DE TUDALIAL DENETRATIO
В	 WHERE SUCH SUBSTITUTIONS ALTER THE DESIGN OR SPACE REQUIREMENTS INDICATED ON THE DRAWINGS, INCLUDE ALL ITEMS OF COST FOR THE REVISED DESIGN AND CONSTRUCTION INCLUDING COST OF ALL ALLIED TRADES INVOLVED. ACCEPTANCE OR REJECTION OF THE PROPOSED SUBSTITUTIONS SHALL BE SUBJECT TO APPROVAL OF THE ARCHITECT AND ENGINEER. IF REQUESTED, THE CONTRACTOR SHALL SUBMIT (AT HIS COST) INSERCTION SAMPLES OF DOTU THE SPECIFIED AND PROPOSED SUBSTITUTE ITEMS. 	d. CARBORUNDUM FYRE PUTTY e. HILTI FIRESTOP SYSTEMS
	 6. IN ALL CASES WHERE SUBSTITUTIONS ARE PERMITTED, THE CONTRACTOR SHALL BEAR ANY EXTRA COST OF EVALUATING THE QUALITY OF THE MATERIAL AND EQUIPMENT TO BE PROVIDED, INCLUDING ALL ARCH/ENGINEER FEES ASSOCIATED WITH CHANGE. 	ELECTRICAL BUSWAYS/CABLES/V PENETRATE FIRE RATED WALL O AND WALL FOR DRY WALL CON b. PROVIDE INTUMESCENT INSERT FIRESTOP INSERT, OR APPROVE
	 G. <u>TESTING AND PLACING IN SERVICE:</u> 1. ANY MATERIAL OR EQUIPMENT FAILING A TEST SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE. 2. TESTS SHALL INCLUDE THE FOLLOWING: a. MEASURE THE LOAD ON EACH PHASE OF THE MAIN SERVICE AND EACH PHASE OF EVERY FEEDER 	WATERTIGHT SEAL. d. THE METHODS USED SHALL INC
	 UNDER FULL LOAD CONDITIONS. b. MEASURE THE NO-LOAD AND FULL-LOAD VOLTAGES (PHASE TO PHASE, PHASE TO NEUTRAL AND PHASE TO GROUND FOR EACH PHASE OF EACH SERVICE, OF EACH SEPARATELY DERIVED SYSTEM, AND AT EACH PANELBOARD OR TRANSFORMER). c. MEASURE THE GROUND RESISTANCE OF THE MAIN SERVICE GROUNDING ELECTRODE AND THE GROUND RESISTANCE OF EACH SEPARATELY DERIVED SYSTEM'S GROUNDING ELECTRODE. d. MAKE INSULATION RESISTANCE TESTS ON ALL DRY TYPE TRANSFORMERS AND MOTORS. 	ADDITION OF ELECTRICAL CONDU THE PRODUCT SHALL ADHERE T MATERIAL AND PERMIT THE VIBE THROUGH THE PENETRATION WI RATING. e. PROVIDE RIGID STEEL SLEEVES WALLS AND BARRIERS.
	 H. <u>INTERFERENCES:</u> 1. BEFORE THE INSTALLATION OF ANY ITEM BEGINS, THE ELECTRICAL CONTRACTOR SHALL CAREFULLY ASCERTAIN THAT IT DOES NOT INTERFERE WITH CLEARANCES FOR THE ERECTION OF FINISH BEAMS, COLUMNS, PILASTERS, WALLS OR OTHER STRUCTURAL OR ARCHITECTURAL MEMBERS AS SHOWN ON THE 	
А	 ARCHITECTURAL DRAWINGS. IF ANY WORK IS INSTALLED AND THE ARCHITECTURAL DESIGN CANNOT BE FOLLOWED, THIS CONTRACTOR SHALL, AT HIS OWN EXPENSE, MAKE CHANGES IN HIS WORK AS DIRECTED BY THE ARCHITECT TO PERMIT THE COMPLETION OF THE ARCHITECTURAL WORK IN ACCORDANCE WITH DRAWINGS AND SPECIFICATIONS. IT SHALL BE THE DUTY OF THIS CONTRACTOR TO REPORT ANY INTERFERENCES BETWEEN HIS WORK AND THAT OF ANY OF THE OTHER CONTRACTORS AS SOON AS THEY ARE DISCOVERED. THE 	
	ARCHITECT AND / OR ENGINEER SHALL DETERMINE WHICH EQUIPMENT WILL BE RELOCATED, REGARDLESS OF WHICH WAS INSTALLED FIRST. THEIR DECISION WILL BE FINAL. I. <u>QUALITY ASSURANCE:</u> 1. ALL PRODUCTS SHALL BE NEW AND OF THE TYPE AND QUALITY SPECIFIED. WHERE MATERIALS,	
	EQUIPMENT, APPARATUS OR OTHER PRODUCTS ARE SPECIFIED BY MANUFACTURER, BRAND NAME, TYPE OF CATALOG NUMBER, SUCH DESIGNATION SHALL ESTABLISH THE STANDARDS OF THE DESIRED QUALITY AND STYLE. IT IS THE INTENT OF THESE SPECIFICATIONS TO ESTABLISH A STANDARD OF QUALITY OF MATERIALS AND EQUIPMENT INSTALLED.	

R SHALL HAVE COMPETENT SUPERVISION IN RESPONSIBLE CHARGE OF THE HE SITE DURING THE ERECTION OF THE MATERIAL FURNISHED UNDER WHEN THE SYSTEM IS PUT INTO OPERATION. USE ONLY COMPETENT TRST-CLASS MANNER.

R SHALL BE RESPONSIBLE FOR ALL LOSS OR DAMAGE TO THE BUILDING BY HIS EMPLOYEES OR EQUIPMENT. ALL SUCH DAMAGE SHALL BE PLACED, TO THE SATISFACTION OF THE ARCHITECT.

ERIAL OR DOING ANY WORK, THIS CONTRACTOR SHALL VERIFY ALL DING AND SHALL BE RESPONSIBLE FOR THE CORRECTNESS OF SAME. NO ATION WILL BE ALLOWED ON ACCOUNT OF THE DIFFERENCE BETWEEN E MEASUREMENTS INDICATED ON THE DRAWINGS. ANY DIFFERENCE WHICH SUBMITTED TO THE ARCHITECT FOR CONSIDERATION, BEFORE PROCEEDING

INT ON EACH PANELBOARD, SWITCHBOARD (INCLUDING BRANCH SWITCHES), Y SWITCH, STARTER, REMOTE CONTROL, PUSH BUTTON STATION, AND ALL PLATE DESCRIPTIVE OF THE EQUIPMENT OR EQUIPMENT CONTROLLED. NAMEPLATES CONSTRUCTED FROM LAMINATED PHENOLIC WITH A WHITE ALL BE ENGRAVED IN THE PHENOLIC TO FORM WHITE LETTERS 3/8" HIGH. I'H SCREWS AND AN ADHESIVE TYPE FASTENER.

RNISH AND INSTALL ALL ANGLE IRON, CHANNEL IRON, RODS, SUPPORTS, WOOD REQUIRED TO INSTALL, MOUNT AND SUPPORT ANY ELECTRICAL ED FOR ON THE PLANS. BE COMPLETE WITH HANGERS, CONNECTORS, BOLTS, CLAMPS AND

MAKE A COMPLETE INSTALLATION. SUPPORTING MATERIAL SHALL BE HERWISE SUITABLY FINISHED. PRODUCTS BY BRINKLEY, STEEL CITY OR

IPMENT ON BLOCK WALLS SHALL BE MOUNTED ON 3/4" PAINTED PLYWOOD DUNTED EQUIPMENT SHALL BE INSTALLED ON A 4" HIGH CONCRETE

CONSTRUCTION PROPOSED SHALL CONFORM TO ALL FEDERAL (OSHA), REQUIREMENTS AND THE REQUIREMENTS OF THE CURRENT EDITION OF

BING SPECIFICATIONS FOR ELECTRICAL REQUIREMENTS AND INCLUDE THE T.

TARTERS, DISCONNECT SWITCHES, CONTROL TRANSFORMERS AND THE EQUIPMENT FURNISHED BY THE OWNER OR UNDER A SEPARATE .ED AND CONNECTED UNDER THIS DIVISION, AS INDICATED ON THE

CAVATING, BACKFILLING AND CONCRETE WORK RELATED TO THIS CONTRACT OF THE ELECTRICAL CONTRACTOR. THIS CONTRACTOR SHALL ASSUME VIDING THE SLEEVES, CHASES AND OPENINGS NECESSARY FOR THE D FOR THEIR REPAIR IN AN ACCEPTABLE MANNER, AS DETERMINED BY THE ALL BE CORE-DRILLED. PROVIDE FIRE STOP IN ALL OPENINGS CREATED S, FLOORS OR CEILINGS. PROVIDE WATER TIGHT SEALS FOR ALL OPENINGS ION WALLS OR EXTERIOR WALLS. RESPONSIBLE FOR PROVIDING ALL REQUIRED ACCESS PANELS NECESSARY WITH ARCHITECT PRIOR TO INSTALLATION.

SIBLE FOR PROPER SIZE AND LOCATION OF OPENINGS AND CHASES EVES NECESSARY FOR THE WORK. WHEREVER ANY PIPING PASSES 'ENING SHALL BE SEALED TIGHT AGAINST THE PIPING BY THIS

JGH FOUNDATION WALLS AND ROOFS SHALL BE SEALED WATERTIGHT BY

LED IN A PRACTICAL AND WORKMANLIKE MANNER, BY MECHANICS SKILLED CESSARY.

W AND FREE FROM DEFECTS AND SHALL BE THE BEST OF THEIR SEVERAL NDICATED ON THE DRAWINGS TO THE CONTRARY. THE COMPLETION OF THE CONSTRUCTION, THIS CONTRACTOR SHALL CESS MATERIALS CAUSED BY HIS WORK. HE SHALL LEAVE THE AREA OF

SHALL BEAR THE UNDERWRITERS LABORATORIES LABEL OR ETL LABEL. ARANTEE HIS WORKMANSHIP AND MATERIAL (LAMPS EXCEPTED) FOR A THE DATE OF BUILDING OPENING AND LEAVE HIS WORK IN PERFECT SHOULD DEFECTS DEVELOP WITHIN THE GUARANTEE PERIOD, THE NOTICE OF THE SAME, REMEDY THE DEFECTS AND HAVE ALL DAMAGES TO SS CAUSED BY THE REPAIRS CORRECTED AT HIS EXPENSE TO THE

GS THROUGH FIRE AND SMOKE RATED WALLS AND ALL FLOOR ASSEMBLIES FIED BY AN APPROVED INDEPENDENT TESTING LABORATORY FOR E-STOP SYSTEMS." THE SYSTEM SHALL MEET THE REQUIREMENTS OF ENETRATION FIRE-STOPS" DESIGNATED ASTM E814.

-STOP SYSTEM FOAMS AND SEALANTS IRE-STOP SYSTEM PUTTY, CLK AND WRP · S-100 FS500/600

PPING FOR OPENINGS THROUGH FIRE AND SMOKE RATED WALLS AND BE AS FOLLOWS:

SYSTEM SEALS AT ALL LOCATIONS WHERE PIPING, TUBING, CONDUIT, /CABLES/WIRES, DUCTWORK AND SIMILAR UTILITIES PASS THROUGH OR ID WALL OR FLOOR ASSEMBLY. PROVIDE FIRESTOP SEAL BETWEEN SLEEVE WALL CONSTRUCTION.

T INSERT (SPECIFIED TECHNOLOGIES, INC. SERIES EP POWERSHIELD APPROVED EQUIVALENT) IN ALL ELECTRICAL SWITCH, OUTLET AND TALLED IN A FIRE RATED WALL ASSEMBLY.

ED FIRE RESISTANCE RATINGS OF THE WALL OR FLOOR ASSEMBLY SHALL IE FIRE—STOP SYSTEM. THE INSTALLATION SHALL PROVIDE AN AIR AND

SHALL INCORPORATE QUALITIES THAT PERMIT THE EASY REMOVAL OR CAL CONDUITS OR CABLES WITHOUT DRILLING OR USE OF SPECIAL TOOLS. ADHERE TO ITSELF TO ALLOW REPAIRS TO BE MADE WITH THE SAME THE VIBRATION, EXPANSION AND/OR CONTRACTION OF ANY ITEMS PASSING RATION WITHOUT CRACKING, CRUMBLING AND RESULTING REDUCTION IN FIRE

SLEEVES WHERE NON-ARMORED CABLES PASS THROUGH FIRE RATED

SCOPE OF WORK:

- THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIAL, STORAGE, UNPACKING AND PLACEMENT; TO INCLUDE BUT NOT BE LIMITED TO, THE FOLLOWING ITEMS:
 a. COMPLETE POWER AND LIGHTING DISTRIBUTION SYSTEM AS INDICATED ON DESIGN DOCUMENTS.
- b. COMPLETE POWER WIRING FOR ALL AIR CONDITIONING EQUIPMENT, PLUMBING SYSTEM, HEATING EQUIPMENT, VENTILATING AND EXHAUST EQUIPMENT.
- c. WIRING DEVICES.
- d. COMPLETE LIGHTING FIXTURE INSTALLATION INCLUDING ALL REQUIRED LAMPS.
- e. ILLUMINATED EXIT LIGHT SYSTEM. f. LIGHTING CONTROLS.
- g. OUTDOOR LIGHTING AND CONTROLS.
- h. FIRE ALARM SYSTEM. i. GROUNDING OF THE ELECTRICAL SYSTEM.
- j. TESTING OF ALL CABLES AND CIRCUIT WIRING AFTER INSTALLATION. k. ELECTRIC SERVICE.
- I. IDENTIFY RACEWAYS AND CABLES WITH COLOR BANDING AS FOLLOWS:

a). FIRE ALARM SYSTEM: RED m. TEMPORARY ELECTRICAL POWER AND LIGHTING AS REQUIRED FOR CONSTRUCTION.

TEMPORARY SERVICE:

- THE ELECTRICAL CONTRACTOR SHALL FURNISH, INSTALL AND REMOVE AS REQUIRED ALL TEMPORARY POWER AND TEMPORARY LIGHTING IN ALL AREAS AND INDIVIDUAL ROOMS WHEN NEEDED BY THE INDIVIDUAL TRADES IN THE PERFORMANCE OF THEIR WORK. THIS CONTRACTOR SHALL PROVIDE A MINIMUM OF TWENTY (20) FOOTCANDLES OF ILLUMINATION FOR TEMPORARY LIGHTING. ANY ADDITIONAL LIGHTING REQUIRED BY INDIVIDUAL TRADES SHALL BE PROVIDED BY THE INDIVIDUAL TRADES INCLUDING POWER FOR THE LIGHTING. THE ELECTRICAL WORK FOR CONSTRUCTION PURPOSES SHALL CONFORM TO ALL FEDERAL (OSHA), STATE, SPECIFIC SAFETY REQUIREMENTS, AS WELL AS THE REQUIREMENTS OF THE NATIONAL ELECTRIC CODE AND NATIONAL ELECTRICAL SAFETY CODE. THE ELECTRICAL CONTRACTOR SHALL OBTAIN AND PAY FOR ALL REQUIRED APPLICATIONS, PERMITS AND INSPECTIONS PERTAINING TO THIS WORK. THIS COST SHALL BE INCLUDED IN THE CONTRACTOR'S PRICE.
 NEW LIGHT FIXTURES SHALL NOT BE USED FOR TEMPORARY LIGHTING.
- Z. NEW LIGHT FIXTURES SHALL NOT BE USED FOR TEMPORARY
- ELECTRIC SERVICE:
- PROVIDE METERING TO POWER COMPANY SPECIFICATIONS.
 PAY THE COST OF ALL POWER COMPANY CHARGES CONNECTED WITH PERMANENT ELECTRIC SERVICE
- FOR NEW TENANT. 3. COORDINATE ALL WORK WITH THE POWER COMPANY AND PERFORM ANY WORK NECESSARY TO ASSURE A COMPLETE WORKING INSTALLATION. THE ENTIRE SERVICE INSTALLATION SHALL BE IN COMPLETE CONFORMANCE WITH THE POWER COMPANY'S REQUIREMENTS.

WIRE AND CABLE:

- 1. UNLESS OTHERWISE SPECIFIED, MC CABLE MAY BE UTILIZED FOR BRANCH WIRING WHEN CONCEALED WITHIN WALLS OR ABOVE FINISHED CEILINGS. EXPOSED INSTALLATIONS ARE NOT PERMITTED.
- 2. CONDUCTORS SHALL BE ANNEALED COPPER, STRANDED 98% CONDUCTIVITY, 600 V RATED FOR FEEDERS AND BRANCH CIRCUITS, TYPE THHN/THWN INSULATION, MINIMUM #12 AWG SIZE FOR BRANCH CIRCUITS. PROVIDE #10 AWG MINIMUM SIZE FOR BRANCH CIRCUIT RUNS EXCEEDING 100 FEET. ALUMINUM CONDUCTORS SHALL NOT BE USED FOR BRANCH CIRCUITS. ANACONDA, GENERAL CABLE, ROME CABLE OR ACCEPTED EQUAL.
- 3. COLOR CODE CONDUCTORS (EXCEPT CONTROL AND INSTRUMENTATION CONDUCTORS) AS FOLLOWS:
 a. 240/120V 1Ø SYSTEM PHASE A-BLACK; PHASE B-RED; NEUTRAL-WHITE; GROUND-GREEN
 b. 208/120V 3Ø SYSTEM PHASE A-BLACK; PHASE B-RED; PHASE C-BLUE; NEUTRAL-WHITE; GROUND-GREEN
- 4. #12 AND #10 CONDUCTORS SHALL HAVE CONTINUOUS INSULATION COLOR, AS LISTED ABOVE.
- 5. COLOR CODE CONDUCTORS LARGER THAN ABOVE, WHICH DO NOT HAVE CONTINUOUS INSULATION COLOR BY APPLICATION OF AT LEAST TWO LAPS OF COLORED TAPE ON EACH CONDUCTOR AT ALL POINTS OF ACCESS INCLUDING JUNCTION BOXES. COLOR TAPE SHALL BE THE EQUAL OF 3M PRODUCTS SCOTCH #35.
- 6. FLEXIBLE CORD SHALL BE HEAVY DUTY TYPE SO WITH AN EQUIPMENT GROUND CONDUCTOR IN ADDITION TO THE CURRENT CARRYING CONDUCTORS.
 7. CONTROL CONDUCTORS SHALL BE #14 MINIMUM FOR NEC CLASS LAND #16 FOR NEC CLASS L
- 7. CONTROL CONDUCTORS SHALL BE #14 MINIMUM FOR NEC CLASS I AND #16 FOR NEC CLASS II. 8. CONDUCTORS #8 AWG AND LARGER SHALL BE STRANDED.
- 9. CONDUCTORS #10 AWG AND SMALLER SHALL BE SOLID.
- 10.INSTALL SEPARATE NEUTRALS FOR EACH SINGLE PHASE BRANCH CIRCUIT. 11.CONNECT #10 AND SMALLER WIRES WITH CONSTANT PRESSURE EXPANDABLE SPRING TYPE
- CONNECTORS, "SCOTCHLOK" BY 3M OR B-CAP BY BUCHANAN.
- 12.CONNECT #8 AND LARGER WIRES WITH COMPRESSION CONNECTORS OR SPLICES AS MANUFACTURED BY BURNDY OR T&B.
- 13.INSULATE SPLICING CONNECTORS TO AT LEAST 200% OF THE WIRE INSULATION. USE
 PRE-STRETCHED TUBING CONNECTOR INSULATORS, 3M PST FOR #2 AND LARGER CONDUCTORS.
 14.PULL CONDUCTORS USING RECOGNIZED METHODS AND EQUIPMENT LEAVING AT LEAST 6" WIRE AT
- ALL JUNCTIONS USING RECOGNIZED METHODS AND EQUIPMENT LEAVING AT LEAST ALL JUNCTION BOXES FOR CONNECTIONS.
- 15.CLEANOUT EACH CONDUIT SYSTEM BEFORE PULLING WIRE. 16.PULL CONDUCTORS USING RECOGNIZED METHODS AND EQUIPMENT LEAVING AT LEAST 6" WIRE AT ALL JUNCTION BOXES FOR CONNECTIONS.
- 17.FORM AND TIE ALL WIRING IN PANELBOARDS.
- 18.THERE SHALL BE NO WIRENUT JOINTS OR SPLICES MADE INSIDE SWITCHBOARDS/PANELBOARDS.
 19.MAKE ALL CONNECTIONS TO DISCONNECT SWITCHES, MOTOR CONTROLLERS, MOTORS AND OTHER EQUIPMENT SHOWN ON THE PLANS. EXIT LIGHTS, FIRE ALARM AND EMERGENCY CIRCUITS SHALL BE INSTALLED IN SEPARATE CONDUIT SYSTEMS. INSTALL A MAXIMUM OF 3 SINGLE PHASE CIRCUITS IN A SINGLE RACEWAY, UNLESS OTHERWISE SPECIFICALLY CALLED FOR (SIX (6) CURRENT CARRYING CONDUCTORS MAXIMUM PLUS GROUND).
- 20.INSTALL MULTIWIRE BRANCH CIRCUITS PER ALL REQUIREMENTS OF N.E.C. ARTICLE 210.4. HANDLE TIES MUST BE INSTALLED TO IDENTIFY SINGLE-POLE, MULTIWIRE BRANCH CIRCUITS PER ALL REQUIREMENTS OF N.E.C. ARTICLE 240.15(B).
- 21.BRANCH CIRCUIT WIRE SIZES (AND CONDUITS) SHALL BE INCREASED FROM THOSE INDICATED ON THE PLANS TO PREVENT EXCESSIVE VOLTAGE DROP. BRANCH CIRCUITS SHALL BE INSTALLED WITH WIRES OF SUFFICIENT SIZE SO THAT VOLTAGE DROP BETWEEN THE PANEL AND THE LOADS DOES NOT EXCEED LIMIT OF 3%.

RACEWAYS AND BOXES

A. <u>RACEWAYS:</u>

 ALL WIRE SHALL BE RUN IN ACCORDANCE WITH CODE IN CORROSION RESISTANT, RIGID, THREADED, METAL CONDUIT OR ELECTRICAL METALLIC TUBING (E.M.T.) UNLESS OTHERWISE SPECIFICALLY STATED HEREIN.

a. CONDUIT IN EXTERIOR WALLS, BELOW FLOOR SLAB, OR UNDERGROUND SHALL BE RIGID, THREADED, GALVANIZED, HEAVY WALL TYPE.
b. CARLON PVC TYPE 40 HEAVY WALL CONDUIT WITH GROUND WIRE MAY BE USED BELOW FLOOR SLAB OR UNDERGROUND IN LIEU OF RIGID, THREADED, GALVANIZED CONDUIT. PVC SCHEDULE 40 CONDUIT SHALL NOT BE RUN IN OR ABOVE FLOOR SLAB. PVC CONDUIT SHALL TERMINATE BELOW FLOOR SLAB WITH RIGID, THREADED METAL CONDUIT ADAPTER. CONDUIT ABOVE SLAB SHALL BE

c. CONDUIT RUN EXPOSED TO THE WEATHER SHALL BE HEAVY WALL, METAL THREADED TYPE. 2. CONDUIT SIZE SHALL BE 1/2" MINIMUM.

 CONDUIT SHALL BE SECURELY FASTENED IN PLACE.
 ALL CONDUIT SHALL BE CONCEALED IN WALLS, FLOOR AND CEILINGS WHEREVER POSSIBLE. EXPOSED CONDUIT IN FINISHED AREAS WILL NOT BE PERMITTED. EXPOSED CONDUIT WILL BE PERMITTED IN UNFINISHED AREAS WITH THE SPECIFIC APPROVAL OF THE ARCHITECT.
 USE FLEXIBLE CONDUIT FOR THE CONNECTION TO RECESSED OR SEMI-RECESSED LIGHTING FIXTURES

(6' LENGTH MAXIMUM). USE LIQUID TIGHT METAL CONDUIT FOR ALL CONNECTIONS TO MOTORS AND OTHER EQUIPMENT SUBJECT TO VIBRATION AND IN AREAS SUBJECT TO MOISTURE.
6. USE WATERTIGHT JOINTS WITH BURIED AND CONCRETE ENCASED CONDUIT. ALL BURIED CONDUITS

OUTSIDE OF BUILDINGS SHALL HAVE A MINIMUM OF 24" OF COVER UNLESS SHOWN OTHERWISE. METAL CONDUITS BURIED IN EARTH SHALL BE PAINTED (TWO COATS) WITH HEAVY ASPHALTUM PAINT. 7. SUPPORT RUNS OF CONDUIT AS DETAILED IN THE APPROPRIATE TABLE OF THE NATIONAL ELECTRICAL CODE (NEC).

8. INSTALL EXPOSED RUNS OF CONDUIT AND CONDUIT ABOVE LAY-IN CEILINGS PARALLEL OR PERPENDICULAR TO THE WALLS, STRUCTURAL MEMBERS OF INTERSECTIONS OF VERTICAL PLANES AND CEILINGS. PROVIDE RIGHT ANGLE TURNS USING FITTINGS OR SYMMETRICAL BENDS. SUPPORT CONDUITS WITHIN 1" OF ALL CHANGES IN DIRECTION.

9. IF CONDUIT IS SUSPENDED, IT SHALL BE SUPPORTED ON TRAPEZE HANGERS WHICH USE "ALL-THREAD" RODS FROM THE STRUCTURAL STEEL. THE USE OF CEILING SUPPORT WIRE OR SIMILAR MATERIAL WILL NOT BE ACCEPTED.

10.INSTALL EMPTY CONDUIT FOR FUTURE USE AS INDICATED ON THE DRAWINGS. CONDUIT SHALL BE COMPLETE WITH JETLINE OR PULL ROPE, JUNCTION/OUTLET BOXES, TILE RINGS AND APPROPRIATE COVER PLATES.

11.PROVIDE PITCHPOCKETS WHERE CONDUITS PENETRATE THE ROOF. 12.THREAD LUBRICATION/SEALANT IS REQUIRED ON OUTDOOR AND UNDERGROUND THREADED METAL

JOINTS. 13.INSTALL FIRE SEAL FITTINGS WHERE CONDUITS PENETRATE CONCRETE FLOOR SLABS OR MASONRY

WALLS REQUIRED TO BE FIRE RATED. 14.HORIZONTAL PORTION OF CONDUIT EXPOSED ON THE ROOF AND FEEDING EQUIPMENT SHALL NOT BE MORE THAN 5'-O" UNLESS THE WRITTEN APPROVAL FROM ARCHITECT OR ENGINEER IS OBTAINED.

B. <u>PULL & JUNCTION BOXES:</u>
1. INSTALL PULL AND JUNCTION BOXES WHERE SHOWN ON THE DRAWINGS, AND WHERE REQUIRED FOR CHANGES IN DIRECTION, AT JUNCTION POINTS, AND TO FACILITATE WIRE PULLING. FURNISH BOX SIZES IN ACCORDANCE WITH NEC UNLESS LARGER BOXES ARE INDICATED.

 PROVIDE STEEL BOXES AND REMOVABLE COVERS OF CODE GAGE, HOT ROLLED SHEET STEEL, HOT DIPPED GALVANIZED INSIDE AND OUTSIDE, FOR ABOVE GROUND WORK. FURNISH WEATHERPROOF BOXES WHEN INSTALLED ABOVE GROUND OUTSIDE.

3. PROVIDE CAST IRON BOXES, HOT DIPPED GALVANIZED INSIDE AND OUTSIDE WHERE SHOWN ON THE DRAWINGS. FURNISH REMOVABLE COVERS WITH GASKETS AND STAINLESS STEEL, BRASS OR BRONZE SCREWS.

4. PROVIDE CONCRETE BOXES FOR UNDERGROUND WORK UNLESS OTHERWISE INDICATED ON THE DRAWINGS. FURNISH STEEL FRAMES AND COVERS WITH THE COVER ATTACHED TO THE FRAME WITH HEXAGON HEAD, BRASS OR BRONZE CAP SCREWS, 3/8" DIAMETER. PROVIDE A RUBBER GASKET FOR SEALING BETWEEN THE COVER AND THE FRAME. PAINT THE COVER WITH TWO COATS OF HEAVY ASPHALTUM.

5. PROVIDE SIZE AS REQUIRED FOR NUMBER AND SIZE OF CONDUIT AND CONDUCTORS. COORDINATE DEPTH TO SUIT WALL DEPTH AND CONSTRUCTION. MAXIMUM NUMBER OF CONDUCTORS PERMITTED IN STANDARD BOXES SHALL BE AS LISTED IN N.E.C. INSTALL FLUSH RECESSED WHEREVER POSSIBLE AND SECURELY SUPPORTED FROM BUILDING CONSTRUCTION., O.Z./GEDNEY, CROUSE HINDS, T&B, STEEL CITY, RACO OR ACCEPTED EQUAL.

GROUNDING AND BONDING

A. <u>GENERAL:</u>
 1. ALL GROUNDING AND GROUNDING CIRCUITRY SHALL MEET OR EXCEED THE REQUIREMENTS OF NEC 2014, ARTICLE 250. RACEWAY SYSTEMS WHICH INCLUDES ALL METAL CONDUIT, PULLBOXES, JUNCTION BOXES, ENCLOSURES, MOTOR FRAMES, ETC. SHALL BE MADE TO FORM A CONTINUOUS CONDUCTING, PERMANENT GROUND CIRCUIT OF THE LOWEST PRACTICAL IMPEDANCE TO ENHANCE THE SAFE CONDUCTION OF GROUND FAULT CURRENTS AND TO PREVENT OBJECTIONABLE DIFFERENCES IN VOLTAGE BETWEEN METAL CURRENT CARRYING PARTS OF THE ELECTRICAL SYSTEM. PROVIDE A GREEN GROUNDING CONDUCTOR IN ALL CIRCUITS. CONDUIT SYSTEM SHALL NOT BE USED AS THE EQUIPMENT GROUNDING CONDUCTOR. CONDUCTOR SIZE SHALL BE AS REQUIRED BY NEC, ARTICLE 250. ALL EQUIPMENT GROUND BUS, GROUND PADS, FRAMES, ENCLOSURES, ETC SHALL HAVE SURFACES AT THE POINT OF CONNECTION THOROUGHLY CLEANED AND BRIGHTENED JUST PRIOR TO ACTUALLY MAKING THE CONNECTION. TOUCH-UP DAMAGED PAINTED SURFACES. SPLICES IN WIRE OR CABLE GROUNDING CONDUCTORS ARE PROHIBITED. SOLDER PROHIBITED FOR CONNECTIONS.

 ALL CONDUITS SHALL CONTAIN A CODE-SIZED GROUND WIRE SIZE PER N.E.C. IN ADDITION TO THE CONDUCTORS SHOWN ON THE PLANS. WHERE CIRCUIT CONDUCTORS ARE INCREASED IN SIZE FOR VOLTAGE DROP, THE GROUND WIRE SIZE SHALL BE INCREASED PROPORTIONATELY.
 ALL GROUNDING SYSTEMS SHALL BE INSTALLED IN A NEAT AND WORKMANLIKE MANNER. ALL METHODS OF CONSTRUCTION THAT ARE NOT SPECIFICALLY DESCRIBED OR INDICATED IN THE CONTRACT DOCUMENTS SHALL BE SUBJECT TO THE CONTROL AND APPROVAL OF THE OWNER'S REPRESENTATIVE.
 GROUND EACH OUTSIDE LIGHTING POLE SEPARATELY.

5. SEE CONTRACT DOCUMENTS FOR ADDITIONAL GROUNDING INFORMATION SPECIFIC TO THIS PROJECT.

B. <u>CONDUCTORS:</u>

 EXPOSED GROUNDING CONDUCTORS SUCH AS BARS, STRAPS, CABLES, FLEXIBLE JUMPERS, BRAIDS, SHUNTS, ETC., SHALL BE BARE COPPER UNLESS OTHERWISE CALLED FOR.
 CONDUCTORS SHALL BE COPPER.

 PROVIDE CONDUCTORS WITH THHN/THWN INSULATION. SIZES #10 AWG AND SMALLER SHALL BE GREEN IN COLOR. CONDUCTOR SIZES #8 AWG AND LARGER MAY HAVE GREEN TAPED BANDS AT EACH END AND IN ALL PULLBOXES.

C. <u>GROUND RODS:</u>

SOLID COPPER OR COPPER CLAD STEEL CYLINDRICAL RODS, % MINIMUM DIAMETER, MINIMUM 8' LONG.
 <u>CONNECTORS, CLAMPS, TERMINALS</u>:

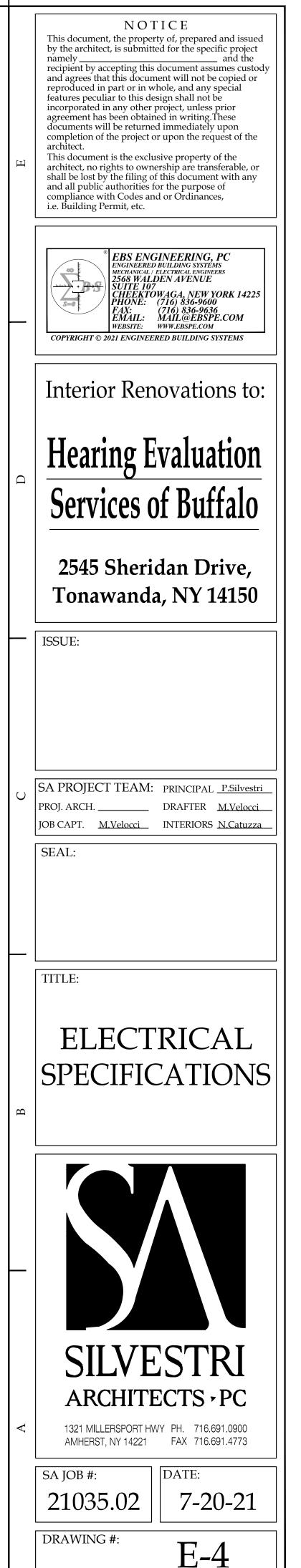
1. PROVIDE BRONZE MECHANICAL CONNECTORS AND CLAMPS. SOLDERLESS COMPRESSION TERMINALS

SHALL BE COPPER, LONG BARREL, NEMA TWO BOLT. E. <u>TESTS:</u>

1. GROUNDS AND GROUNDING SYSTEM SHALL HAVE A RESISTANCE TO SOLID EARTH GROUND NOT TO EXCEED THE FOLLOWING VALUES:
 a. FOR GROUNDING SECONDARY SERVICE NEUTRAL; 25 OHMS

 FOR GROUNDING NON-CURRENT CARRYING METAL PARTS ASSOCIATED WITH SECONDARY DISTRIBUTION SYSTEM; 25 OHMS

2. PROVIDING GROUNDING TESTS TO VERIFY THE ABOVE VALUES. WHERE THESE VALUES ARE NOT MET, ADD ADDITIONAL GROUND RODS OR CONNECTIONS IN ORDER TO MEET THESE VALUES.



WIRING	DEVICES
<u></u>	DETIOLO

A. <u>GENERAL:</u>

- PROVIDE WIRING DEVICES, IN TYPES, CHARACTERISTICS, GRADES AND ELECTRICAL RATINGS FOR APPLICATIONS INDICATED WHICH ARE UL LISTED AND WHICH COMPLY WITH NEMA WD 1 AND OTHER APPLICABLE UL AND NEMA STANDARDS.
- 2. WIRING DEVICE COLOR SHALL BE SELECTED BY ARCHITECT, UNLESS OTHERWISE INDICATED. 3. PROVIDE COVER OR DEVICE PLATES FOR OUTLET BOXES AS FOLLOWS UNLESS OTHERWISE NOTED:
- a. FINISHED AREAS: THERMOPLASTIC COLOR TO MATCH DEVICE.
 b. UNFINISHED AREAS: ZINC COATED SHEET METAL, ALUMINUM, OR CAST METAL, AS APPROPRIATE FOR THE TYPE OF BOX.
- c. EXTERIOR AREAS: COPPER FREE ALUMINUM WITH GRAY, POWDER EPOXY FINISH, GASKET, WEATHERPROOF, CROUSE-HINDS "WLRD" FOR DUPLEX RECEPTACLES AND "WLRS" FOR SINGLE RECEPTACLES OR EQUAL.
- d. TELEPHONE, COMMUNICATION, AND SIGNAL OUTLET PLATES, SHALL MATCH THOSE USED FOR RECEPTACLES AND SWITCHES. ALL OUTLET AND/OR JUNCTION BOXES SHALL BE COMPLETE WITH A COVER PLATE BY THIS CONTRACTOR.
- e. WHERE DEVICES ARE GANGED, THEY SHALL BE INSTALLED UNDER A COMMON COVERPLATE.
 3. LOCATE SWITCHES AND WALL SWITCH SENSORS AT A MAXIMUM HEIGHT OF 4'-0" A.F.F., MEASURED TO CENTER OF BOX, OR NEAREST BLOCK COURSE (WITHIN A.D.A. REQUIREMENTS) UNLESS OTHERWISE
- INDICATED. THE LONG DIMENSION OF THE SWITCHES SHALL BE VERTICAL. INSTALL ALL SWITCHES ON STRIKE SIDE OF DOOR.
- 4. LOCATE RECEPTACLES AT A MINIMUM HEIGHT OF 1"-6" A.F.F., MEASURED TO CENTER OF BOX, OR NEAREST BLOCK COURSE (WITHIN A.D.A. REQUIREMENTS), UNLESS NOTED OTHERWISE. THE LONG DIMENSION OF RECEPTACLES SHALL BE VERTICAL.
- 5. ALL WIRING DEVICES SHALL BE INSTALLED NEATLY AND PARALLEL WITH BUILDING LINES.
- B. <u>SUBMITTALS:</u> 1. SUBMIT DEVICE PRODUCT DATA SHEETS IDENTIFYING MANUFACTURE AND MODEL NUMBERS.

C. <u>RECEPTACLES:</u>

- PROVIDE NEMA CONFIGURATION 5-20R DUPLEX 125 VOLT GROUNDING TYPE RECEPTACLES RATED FOR 20 AMPERES UNLESS OTHERWISE INDICATED ON THE DRAWINGS.
 STANDARD RECEPTACLES SHALL BE SPECIFICATION GRADE.
- 3. GFI RECEPTACLES SHALL BE SPECIFICATION GRADE.
- 4. RECEPTACLES REQUIRING AMPERAGES, VOLTAGES OR CONFIGURATIONS DIFFERENT FROM THE DUPLEX CONVENIENCE RECEPTACLES ABOVE SHALL BE AS INDICATED ON THE DRAWINGS OR AS REQUIRED FOR EQUIPMENT SUPPLIED BY OTHERS.
- 5. CONNECT WIRING DEVICE GROUNDING TERMINAL TO BRANCH CIRCUIT EQUIPMENT GROUNDING CONDUCTOR.
- 7. PROVIDE OTHER RECEPTACLES OF A QUALITY, MATERIAL AND WORKMANSHIP EQUAL TO THAT OF ABOVE DESCRIPTIONS.
- ACCEPTABLE MANUFACTURES INCLUDED EATON/ARROW HART, LEGRAND (P&S), LUTRON, LEVITON OR APPROVED EQUAL. ALL DEVICES SELECTED FOR PROJECT SHALL BE SUPPLIED BY THE SAME MANUFACTURE.

D. <u>WALL SWITCHES:</u>

 PROVIDE SINGLE-POLE, THREE_WAY, AND FOUR_WAY 20A, 120/277 VOLT HEAVY-DUTY SPECIFICATION GRADE DEVICES WITH COPPER ALLOY CONTACT ARM, HEAVY DUTY BUMPER PADS FOR QUIET, SMOOTH OPERATION, HIGH STRENGTH THERMOPLASTIC POLYCARBONATE TOGGLE, AND SILVER ALLOY CONTACTS.
 ACCEPTABLE MANUFACTURES INCLUDE EATON/ARROW HART, LUTRON, LEVITON, LEGRAND OR APPROVED EQUAL. ALL DEVICES SELECTED FOR PROJECT SHALL BE SUPPLIED BY THE SAME MANUFACTURE.

E. <u>WALL SIWTCHES:</u>

- INCLE DIMPONED.
 PROVIDE SINGLE-POLE, THREE_WAY 120/277 VOLT SPECIFICATION GRADE 0-10V LED DIMMER DEVICES WITH THERMOPLASTIC POLYCARBONATE CONSTRUCTION, SEPERATE ON/OFF CONTROL AND SLIDE ADJUSTER FOR DIMMING. FOR USE WHEN SERVING LED FIXTURES WITH 0-10V DIMMING DRIVERS. INCLUDE LOW-VOLTAGE CONTROL WIRING INSTALLED FROM SENSOR TO DESIGNATED LIGHT FIXTURES FOR DIMMING OPERATION.
- 2. ACCEPTABLE MANUFACTURERS INCLUDE EATON/ARROW HART, LUTRON, LEVITON, LEGRAND OR APPROVED EQUAL. ALL DEVICES SELECTED FOR PROJECT SHALL BE SUPPLIED BY THE SAME MANUFACTURE.
- F. <u>AUTOMATIC LIGHTING CONTROL DEVICES:</u>
- ALL LIGHTING CONTROL DEVICES MUST BE SELECTED, INSTALLED AND WIRED TO MEET CURRENT LOCAL AND STATE ENERGY CODE REQUIREMENTS. WHEN LOCAL AND STATE CODES ARE NOT APPLICABLE THE 2015 IECC (INTERNATIONAL ENERGY CONSERVATION CODE) SHALL BE APPLIED. ANY DISCREPANCIES BETWEEN THESE DESIGN DOCUMENTS AND CURRENT ENERGY CODES MUST BE BROUGHT TO THE ENGINEERS ATTENTION PRIOR TO BID SUBMISSION.
- 2. PROVIDE SINGLE RELAY, DUAL TECHNOLOGY, 120/277 VOLT, OCCUPANCY SENSOR WALL SWITCH, UNLESS OTHERWISE INDICATED IN DESIGN DOCUMENTS. BASIC PROGRAMMING SHALL INCLUDE MANUAL ON, AUTOMATIC OFF WITH THE OCCUPANCY SENSOR TIME DELAY SET FOR 15 MINUTES IN OFFICES, JANITOR CLOSETS, STORAGE RMS ETC. PER IECC. ALTERNATE PROGRAMMING SHALL INCLUDE AUTOMATIC ON, AUTOMATIC OFF WITH THE OCCUPANCY SENSOR TIME DELAY SET FOR 15 MINUTES IN RESTROOMS, CONFERENCE ROOMS, ETC. PER IECC. REMAINING PROGRAMMING OPTIONS SHALL BE FACTORY DEFAULT UNLESS OTHERWISE INDICATED OR REQUIRED.
- 3. PROVIDE SINGLE ZONE, DUAL TECHNOLOGY 120/277V CEILING MOUNT DIMMING AND PHOTOCONTROL OCCUPANCY SENSOR WITH 360 DEGREE VIEWING ANGLE, UNLESS OTHERWISE INDICATED IN DESIGN DOCUMENTS. PROVIDE ALL REQUIRED POWER PACKS, SLAVE POWER PACKS, CONTROL UNITS, RELAYS, BACKBOXES, MOUNTING PLATES AND OTHER EQUIPMENT NECESSARY FOR PROPER SYSTEM OPERATION. BASIC PROGRAMMING SHALL INCLUDE OCCUPANCY SENSOR TIME DELAY SET FOR 15 MINUTES AND DIMMING SET TO 3V. REMAINING PROGRAMMING OPTIONS SHALL BE FACTORY DEFAULT UNLESS OTHERWISE INDICATED.
- 4. ACCEPTABLE MANUFACTURERS INCLUDE SENSOR SWITCH, WATTSTOPPER, EATON/ARROW HART, LUTRON, LEVITON, LEGRAND OR APPROVED EQUAL. ALL DEVICES SELECTED FOR PROJECT SHALL BE SUPPLIED BY THE SAME MANUFACTURE.

<u>LIGHTING</u>

- A. <u>GENERAL</u>:
- 1. SEE SHEET E-1 FOR PROJECT LIGHT FIXTURE SPECIFICATIONS.
- ALL LIGHTING FIXTURES SHALL BE UL LISTED AND BARE THE UL LABEL OF APPROVAL
 LIGHT FIXTURE HOUSINGS RECESSED WITHIN FIRE RATED CEILINGS MUST BE SUPPLIED WITH FIRE RATED COVERS. UTILIZE TENMAT PRODUCTS OR EQUAL. CONFIRM FIRE RATED CEILING LOCATIONS AND TYPES WITH ARCHITECTURAL DRAWINGS.
- 4. SET LEVEL, PLUMB, AND SQUARE WITH CEILINGS AND WALLS UNLESS OTHERWISE INDICATED.
- 5. INSTALL LAMPS IN EACH LUMINAIRE AS NEEDED.
- FIXTURES SHALL BE SUPPORTED FROM BUILDING STRUCTURE.
 WHERE FIXTURES ARE INSTALLED ON DRYWALL CEILINGS, THEY SHALL BE SUPPORTED FROM THE CEILING FRAMING SYSTEM OR THE BUILDING STRUCTURE. SUPPORT FROM DRYWALL IS NOT ACCEPTABLE.
- 8. NFPA 70 REQUIRES MINIMUM SUPPORT FOR FIXTURES. REFER TO "LAY-IN CEILING LIGHTING FIXTURES SUPPORTS" PARAGRAPH BELOW FOR MORE SPECIFIC SUPPORT REQUIREMENTS AND FOR REQUIREMENTS EXCEEDING CODE MINIMUMS. FOR PROJECTS REQUIRING SEISMIC DESIGN, ADDITIONAL SUPPORTS, AND RESTRAINING DEVICES BEYOND THOSE SPECIFIED HERE MAY BE REQUIRED.

B. <u>SUBMITTALS:</u>

1. SUBMIT LIGHT FIXTURE DATA SHEETS IDENTIFYING MANUFACTURE AND MODEL NUMBERS.

C. <u>LAY-IN CEILING LIGHTING FIXTURES SUPPORTS</u> 1. USE GRID AS A SUPPORT ELEMENT.

- 2. INSTALL CEILING SUPPORT SYSTEM RODS OR WIRES FOR EACH FIXTURE. LOCATE NOT MORE THAN 6 INCHES FROM LIGHTING FIXTURE CORNERS.
- 3. SUPPORT CLIPS: FASTEN TO LIGHTING FIXTURES AND TO CEILING GRID MEMBERS AT OR NEAR EACH FIXTURE CORNER WITH CLIPS THAT ARE UL LISTED FOR THE APPLICATION.
- 4. FIXTURES OF SIZES LESS THAN CEILING GRID: INSTALL AS INDICATED ON REFLECTED CEILING PLANS OR CENTER IN ACOUSTICAL PANEL, AND SUPPORT FIXTURES INDEPENDENTLY WITH AT LEAST TWO 3/4-INCH METAL CHANNELS SPANNING AND SECURED TO CEILING TEES.
- D. <u>GYPSUM CEILING LIGHTING FIXTURE SUPPORT</u>
- 1. USE CEILING BEAMS AS SUPPORT ELEMENT.
- 2. INSTALL CEILING SUPPORT SYSTEM WIRES FOR EACH FIXTURE. LOCATE NOT MORE THAN 6 INCHES FROM LIGHTING FIXTURE CORN
- 3. SUPPORT SCREWS / WIRE TIES: FASTEN TO LIGHTING FIXTURES AND TO CEILING BEAMS AT OR NEAR FIXTURE CORNER
- E. IMMEDIATELY PRIOR TO OCCUPANCY, DAMP CLEAN ALL DIFFUSERS, GLASSWARE, FIXTURE TRIMS, REFLECTORS, LAMPS AND REPLACE BURNED OUT LAMPS.

SAFETY SWITCHES & FUSES

A. <u>SWITCHES:</u>

- 1. SAFETY SWITCHES SHALL BE THE ENCLOSED HEAVY-DUTY TYPE (TYPE HD) WITH QUICK-MAKE,
- QUICK-BREAK MECHANISM AND EXTERNAL PAD LOCKABLE OPERATING HANDLE. 2. SAFETY SWITCHES SHALL BE RATED FOR 240 OR 600 VOLTS AS APPLICABLE. THEY SHALL BE HORSEPOWER RATED WHEN USED IN MOTOR CIRCUITS.
- 3. SAFETY SWITCHES SHALL BE FUSIBLE OR NON-FUSIBLE, 2, 3, OR 4 POLE AS INDICATED ON THE
- DRAWINGS. 4. SAFETY SWITCHES SHALL BE SINGLE THROW UNLESS OTHERWISE INDICATED ON THE DRAWINGS.
- 5. ENCLOSURES SHALL BE NEMA 1 INDOORS AND NEMA 3R OUTDOORS UNLESS OTHERWISE INDICATED ON DRAWINGS.
- 6. MANUFACTURER SHALL BE SQUARE D, SIEMENS, OR CUTLER-HAMMER. ALL SAFETY SWITCHES SHALL BE BY ONE MANUFACTURER.
- 7. MOUNT THE SAFETY SWITCHES SECURELY BETWEEN 3' X 6' LEVELS ABOVE THE FLOOR UNLESS
- OTHERWISE INDICATED ON THE DRAWINGS. 8. SWITCHES ON BLOCK WALLS SHALL BE MOUNTED ON A 3/4" PLYWOOD BACKBOARD, WHERE LOCATED INDOORS.

B. <u>FUSES:</u>

- THE CONTRACTOR SHALL FURNISH A COMPLETE SET OF FUSES FOR ALL SWITCHES, PLUS FUSIBLE EQUIPMENT FURNISHED BY OTHER TRADES. UNLESS INDICATED OTHERWISE ON PLANS, THE FUSES SHALL BE OF THE FOLLOWING TYPES:
- a. FUSES 601 TO 6000 AMPS SHALL BE UL CLASS. TRADE TYPE SHALL BE KRP-C AS MANUFACTURED BY THE BUSSMANN COMPANY.
- b. FUSES 1/10 TO 600 AMPS SHALL BE UL CLASS RK1. TRADE TYPE SHALL BE LOW PEAK LPS-RK
- (600V) AND LPN-RK (250V) AS MANUFACTURED BY BUSSMANN COMPANY.
 c. ALL OTHER FUSES SHALL BE DUAL-ELEMENT CURRENT-LIMITING TYPE WITH 200,000 AMPERES SYMMETRICAL INTERRUPTING CAPACITY.
- d. FUSES SHALL BE MANUFACTURED BY BUSSMANN, GOULD-SHAUMUTT, OR RELIANCE.
- e. SPARE FUSES AMOUNTING TO A DUPLICATE SET OF EACH SIZE INSTALLED SHALL BE TURNED OVER TO THE OWNER UPON COMPLETION OF THE PROJECT. PROVIDE AND PLACE IN A SPARE FUSE CABINET SIMILAR TO BUSSMANN # SFC.
- f. THIS CONTRACTOR SHALL REPLACE ALL FUSES BLOWN DURING CONSTRUCTION.

C. MOTOR CONTROLLERS:

- 1. TYPE A (FULL VOLTAGE, NON-MAGNETIC, SINGLE PHASE): TOGGLE SWITCH, STAINLESS STEEL
- ENCLOSURE, THERMOPLASTIC COVERPLATE; SIEMENS CLASS SMF SERIES, OR ACCEPTED EQUAL. 2. TYPE A1 (FULL VOLTAGE, NON-MAGNETIC SINGLE PHASE): SIMILAR TO TYPE A ABOVE, EXCEPT WITH
- RED PILOT LIGHT; SIEMENS CLASS SMF SERIES, OR ACCEPTED EQUAL. 3. TYPE B (FULL VOLTAGE MAGNETIC): NEMA 1 ENCLOSURE WITH PILOT LIGHT; SIEMENS CLASS 14
- SERIES WITH AUXILIARY CONTACTS, OR ACCEPTED EQUAL.
 4. TYPE B1 (FULL VOLTAGE, COMBINATION MAGNETIC): FUSIBLE DISCONNECT SWITCH TYPE, NEMA 1 ENCLOSURE, PILOT LIGHT AND HOA IN COVER; SIEMENS CLASS 17 SERIES WITH AUXILIARY CONTACTS, OR ACCEPTED EQUAL.

PANELBOARDS

- A. <u>MANUFACTURER:</u>
- ALL EQUIPMENT IDENTIFIED IN THIS SECTION, AND THROUGHOUT DESIGN DOCUMENTS, IS BASED ON THE MANUFACTURER OF SQUARE-D. ACCEPTABLE ALTERNATE MANUFACTURES INCLUDE CUTLER-HAMMER, SIEMENS OR EQUAL PROVIDED EQUIPMENT MEETS ALL DESIGN CRITERIA AND PHYSICAL CHARACTERISTICS OF THE PROJECT.
- B. <u>SUBMITTALS:</u>
- SUBMIT EQUIPMENT DATA SHEETS INCLUDING CIRCUIT BREAKERS AND ALL ASSOCIATED ACCESSORIES INFORMATION SHALL INCLUDE EQUIPMENT MANUFACTURE, MODEL NUMBERS AND APPLICABLE SHOP DRAWINGS.

C. <u>GENERAL:</u>

- 1. PANELBOARDS SHALL BE FULLY RATED TO INTERRUPT SYMMETRICAL SHORT CIRCUIT AT THE TERMINALS.
- 2. PANELBOARDS SHALL BE LABELED WITH PHENOLIC NAMEPLATES INSCRIBED AS INDICATED ON THE DRAWINGS. PROVIDE ARC FLASH ANALYSIS WITH WARNING LABELS AFFIXED TO PANELBOARDS AS REQUIRED BY NFPA 70E.
- 3. PANELBOARDS SHALL BE ENCLOSED DEAD FRONT SAFETY TYPE WITH FEATURES AND RATINGS AS SCHEDULED ON THE DRAWINGS.
- 4. PANELBOARDS SHALL HAVE COPPER OR ALUMINUM (SEE #5 BELOW) BUS WITH BOLTED BREAKERS, FULLY RATED NEUTRAL BUS AND FULLY RATED INTERRUPTING CAPACITY; NO SERIES RATED SYSTEM PERMITTED. PROVIDE WITH BLANK END WALLS (NO PRE-PUNCHED BOXES), DOOR-IN-DOOR OR HINGED TRIM, INTERRUPTING RATING AS CALLED FOR, 24 CIRCUIT MINIMUM PANEL SIZE, FLUSH OR SURFACE MOUNTED AS INDICATED.
- 5. ALL BUS BARS SHALL BE RECTANGULAR SOLID COPPER. ALUMINUM BUS BARS ARE ACCEPTABLE WHEN ALUMINUM FEEDERS ARE SPECIFIED.
- 6. PANELS KNOWN AS "LOAD CENTERS" ARE UNACCEPTABLE.
- 7. SPACES, AS IDENTIFIED IN PANEL SCHEDULES, FOR FUTURE PROTECTIVE DEVICES SHALL INCLUDE BUS AND SUPPORT.
- 8. INSTALL CABINETS SO THAT CENTER OF THE TOP BREAKER DOES NOT EXCEED 6'-6" ABOVE THE FINISHED FLOOR. APARTMENT UNIT LOAD CENTERS SHALL BE INSTALLED AT HEIGHTS TO MEET ADA REQUIREMENTS.
- MOLDED CASE CIRCUIT BREAKERS SHALL BE AS SCHEDULED ON THE DRAWINGS AND SPECIFIED IN THIS DIVISION.
 ALL BREAKERS SHALL BE BOLT-ON TYPE. PUSH-ON TYPE ARE ONLY ACCEPTABLE FOR USE IN
- "LOAD CENTERS". 11.ALL BOLTED CONNECTIONS SHALL BE TORQUED IN ACCORDANCE WITH MANUFACTURER'S
- STANDARDS. 12.ELECTRICAL CONTRACTOR SHALL ARRANGE CIRCUITS AS NEAR AS POSSIBLE TO CIRCUIT NUMBERS
- ON THE DRAWINGS. AT COMPLETION OF JOB, ELECTRICAL CONTRACTOR SHALL TAKE CURRENT READING CHECKS OF RESPECTIVE PHASES. A MINIMUM OF CIRCUIT CONNECTIONS SHALL BE REARRANGED TO BALANCE, AS CLOSELY AS POSSIBLE, THE LOAD IN THE PANEL.
- 13.GFCI CIRCUIT BREAKERS: SINGLE-POLE AND TWO-POLE CONFIGURATIONS WITH CLASS A GROUND-FAULT PROTECTION (6-MA TRIP).
- 14.GROUND-FAULT EQUIPMENT PROTECTION (GFEP) CIRCUIT BREAKERS: CLASS B GROUND-FAULT PROTECTION (30-MA TRIP).
- 15.ARC-FAULT CIRCUIT INTERRUPTER (AFCI) CIRCUIT BREAKERS: COMPLY WITH UL 1699; 120/240-V, SINGLE-POLE CONFIGURATION.
- 16.PROVIDE (3) SPARE 1" CONDUITS INTO ACCESSIBLE CEILING SPACE WHERE PANELS ARE FLUSH-MOUNTED. PROVIDE REMOVABLE CAP OR PLUG AT CONDUIT AND ABOVE CEILING.
- 17.ENTRIES ON DIRECTORY CARDS SHALL BE TYPED, COMPLETE AND ACCURATE.

