SHEET NUMBER

T101

RPS PROJECT NO. 2134 IFB NO. 21-25

**PROJECT** 

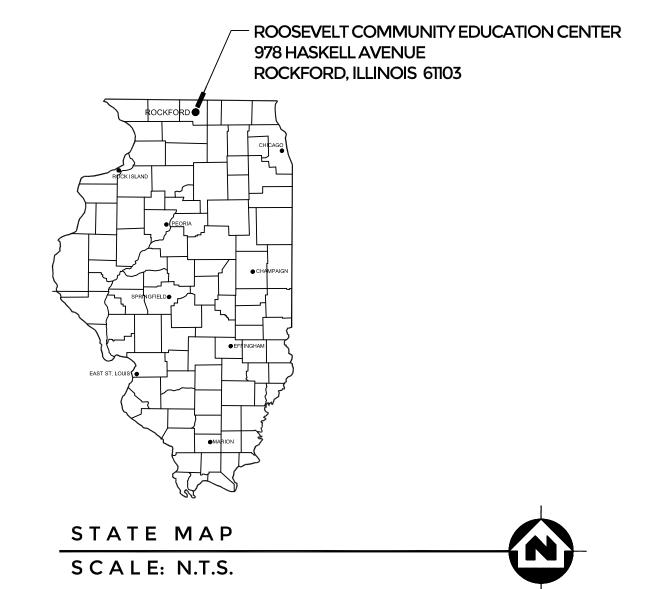
# SWITCHGEAR REPLACEMENT WORK AT ROOSEVELT COMMUNITY EDUCATION CENTER

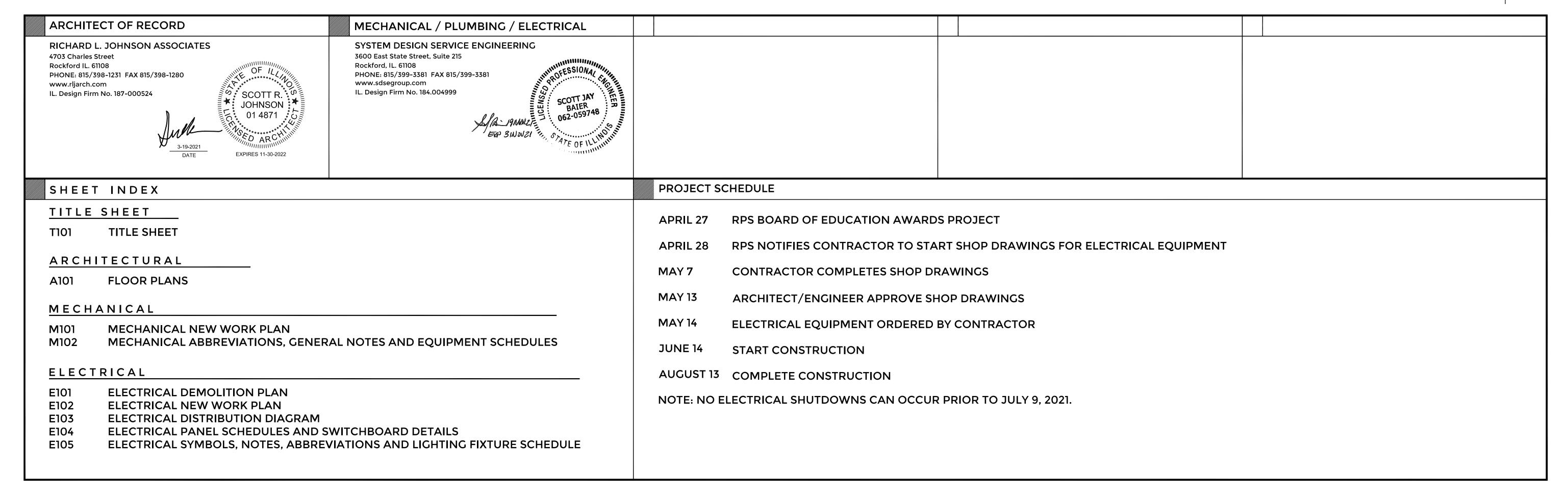
ROOSEVELT COMMUNITY EDUCATION CENTER 978 HASKELL AVENUE, ROCKFORD, ILLINOIS 61103

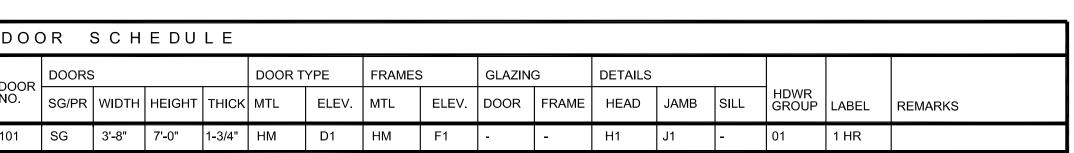
**OWNER** 

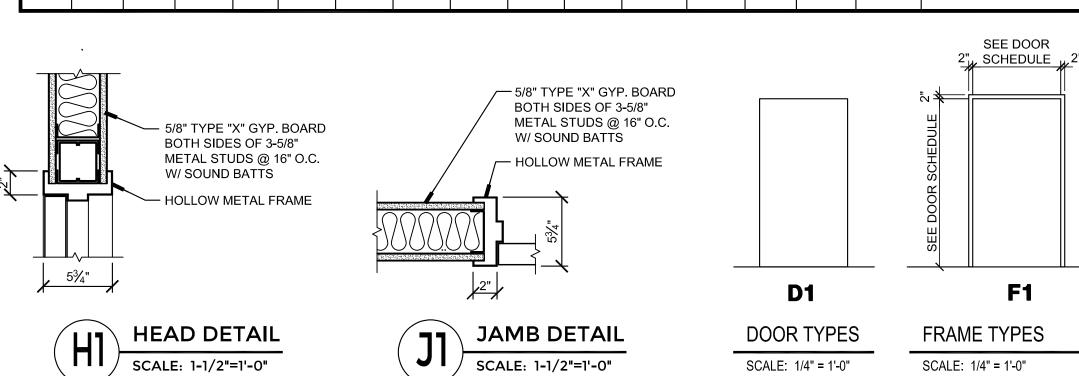
# ROCKFORD PUBLIC SCHOOL DISTRICT #205

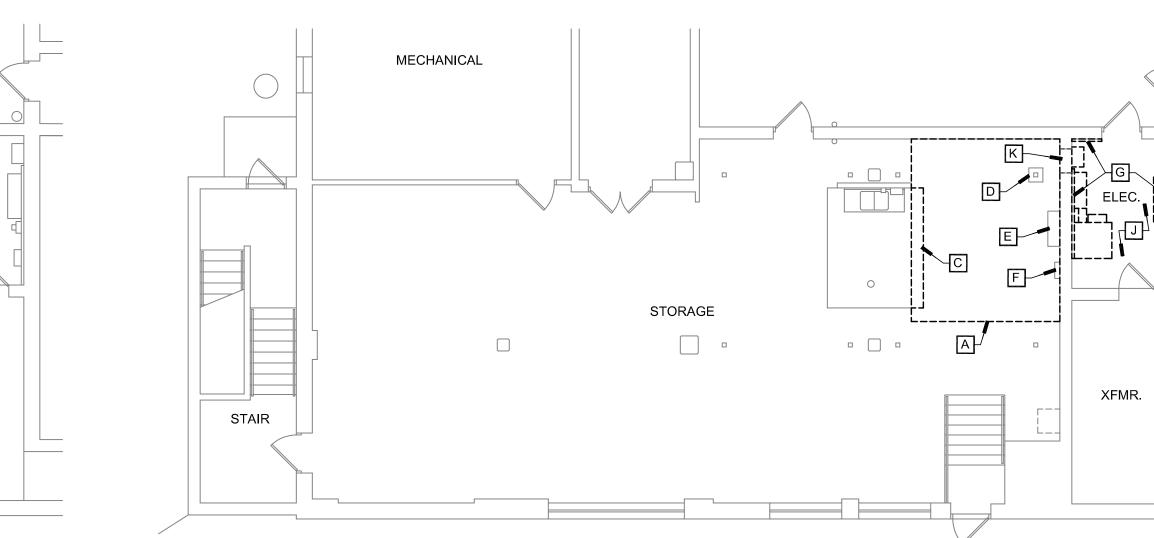
501 7TH STREET, ROCKFORD, ILLINOIS 61104

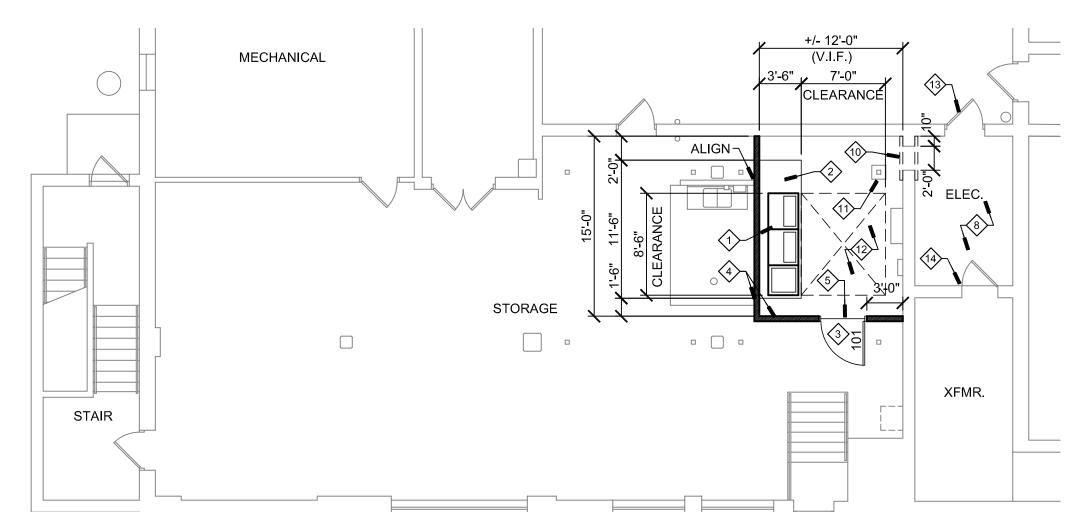






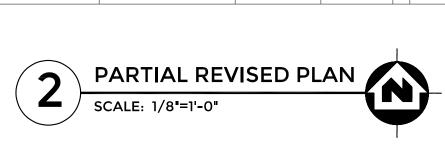


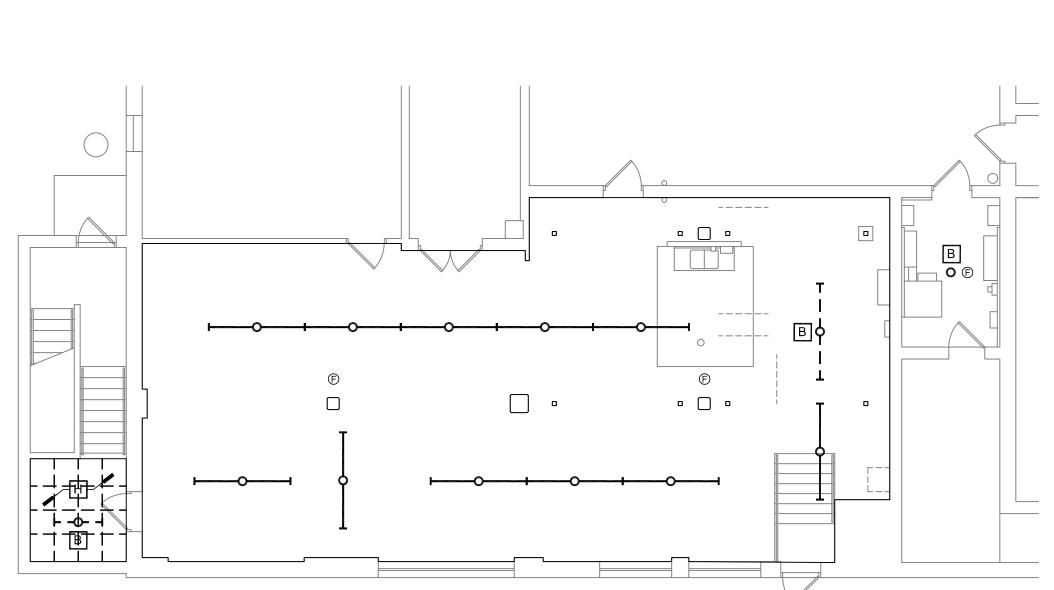




PARTIAL DEMOLITION PLAN

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





— (4) 5/8" DIA. HAS-E 55 THREADED

- C6x8.2 EACH SIDE OF WALL -

(FULLY FILLED HOLES)

RODS IN HILTI-RE 500 V3 EPOXY

PAINT LINTEL OUT WITH THE WALL

EXISTING CONCRETE WALL

T.O. OPENING +7'-0" A.F.F.

**SECTION** 

NOTES:

- STEEL: ASTM A36 Fy=36KSI - EPOXY AND DOWELS: HILTI

BRACING BY CONTRACTOR

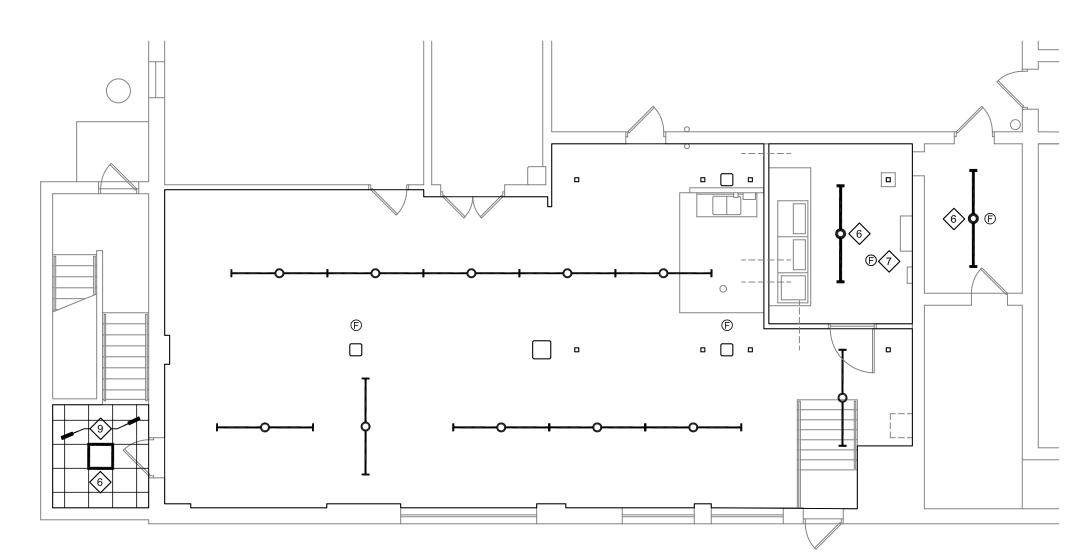
- CONCRETE: f'c = 2500 psi MINIMUM

- MEANS, METHODS, SHORING AND

MAX. OPENING

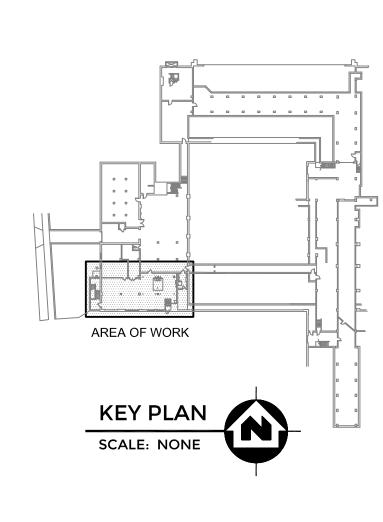
**ELEVATION** 











#### GENERAL NOTES

- THE DEMOLITION PLAN IS PROVIDED AS AN AID IN PLANNING AND DOES NOT RELIEVE THE CONTRACTOR'S RESPONSIBILITY IN FIELD VERIFYING THE EXISTING JOB SITE
- THE GENERAL CONTRACTOR IS TO COORDINATE AND PROVIDE ALL DEMOLITION AND REMOVAL OF DEBRIS NECESSARY TO ACCOMMODATE NEW CONSTRUCTION
- PROVIDE ALL TEMPORARY SHORING AS REQUIRED TO SUPPORT STRUCTURES AND FINISHES TO REMAIN
- ALL AREAS, FINISHES AND ITEMS NOT REQUIRING DEMOLITION MUST BE PROTECTED DURING DEMOLITION AND CONSTRUCTION WORK
- THIS DEMOLITION PLAN IS TO BE USED IN CONJUNCTION WITH THE REST OF THE SHEETS IN THE SET
- EACH CONTRACTOR IS RESPONSIBLE TO PATCH AND MATCH EXISTING WALLS, CEILINGS AND FLOORS AFTER DEMOLITION WORK IS COMPLETE.
- REFERENCE HVAC, PLUMBING, AND ELECTRICAL SHEETS FOR ITEMS TO BE REMOVED AND/OR RELOCATED.
- ALL ITEMS TO BE REMOVED SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR UNLESS NOTED OTHERWISE. VERIFY WITH OWNER WHAT ITEMS THEY WANT TO SALVAGE PRIOR TO REMOVING THEM OFF SITE.
- PATCH EXISTING FLOORS, WALLS AND CEILINGS OF EXISTING BUILDING AS REQUIRED AFTER DEMOLITION TO MATCH EXISTING.

#### DEMOLITION BOX NOTES

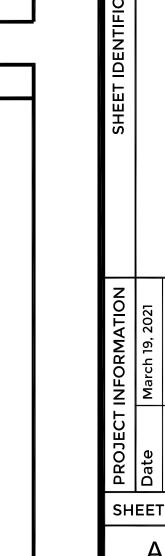
- A REMOVE EXISTING CARPET AND ADHESIVE.
- B REMOVE EXISTING LIGHT FIXTURE. SEE ELECTRICAL DRAWINGS.
- C REMOVE PORTION OF EXISTING VCT AND ADHESIVE.
- D EXISTING COLUMN AND BASE TO REMAIN.
- E EXISTING ELECTRICAL PANEL TO REMAIN.
- F EXISTING ELECTRICAL SUB-PANEL TO REMAIN.
- G REMOVE EXISTING WALL MOUNTED WOOD AND FASTENERS. PATCH HOLES.
- H REMOVE EXISTING LAY-IN CEILING SYSTEM.
- J REMOVE ELECTRICAL ITEMS. SEE ELECTRICAL DRAWINGS.
- K SAW CUT AND REMOVE PORTION OF EXISTING CONCRETE WALL.

#### **RENOVATION GENERAL NOTES**

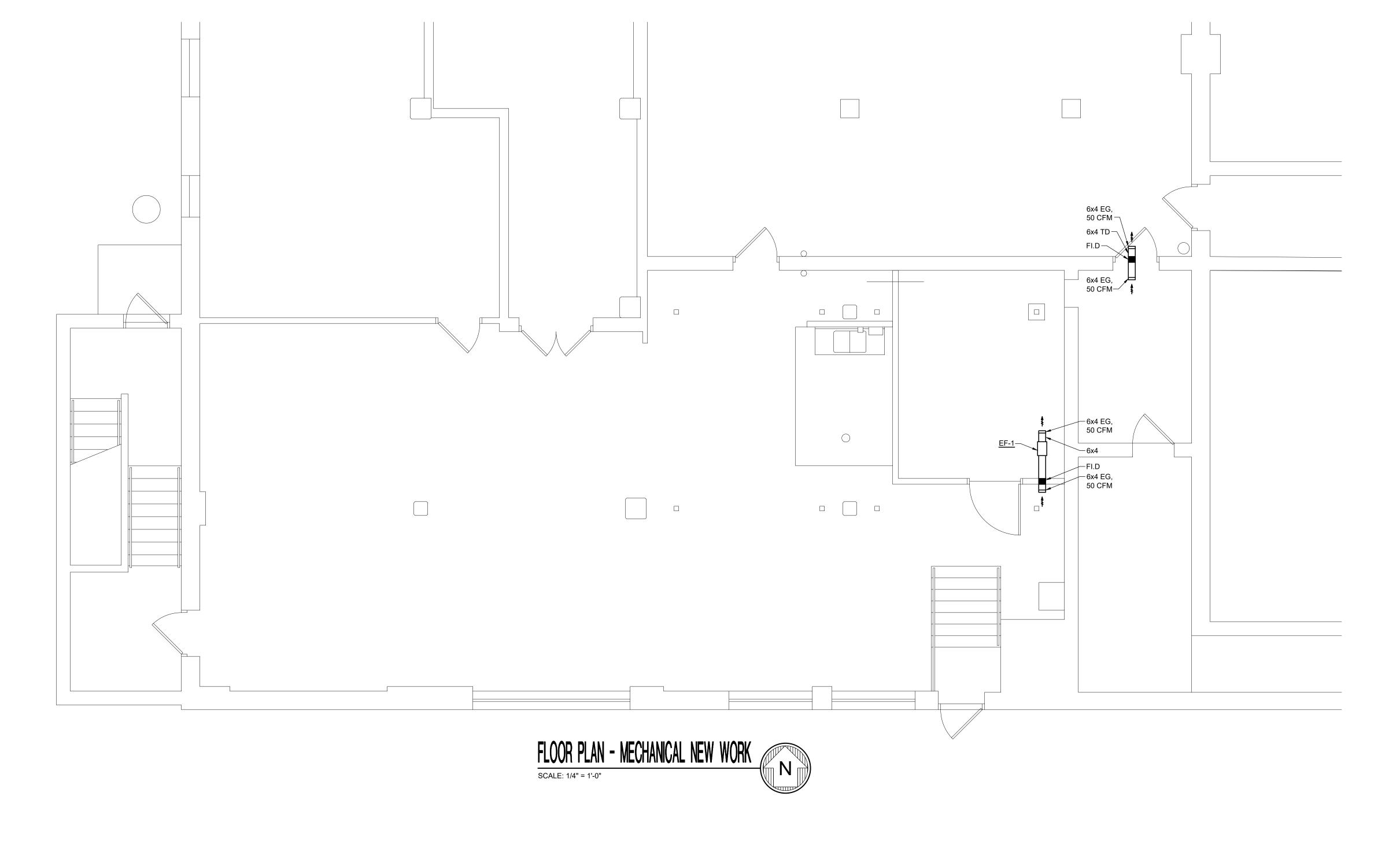
ALL PENETRATIONS THROUGH WALLS SHALL BE SEALED TIGHT.

### RENOVATION KEY NOTES

- ig<1ig> NEW SWITCHBOARD. SEE ELECTRICAL DRAWINGS.
- $\langle 2 
  angle$  4" CONCRETE PAD. DOWEL INTO EXISTING FLOOR. SEE DETAIL.
- (3) NEW HOLLOW METAL DOOR, FRAME AND HARDWARE. PAINT DOOR AND FRAME BOTH SIDES.
- 4 NEW 1 HOUR WALL CONSTRUCTION. 5/8" TYPE "X" GYP. BOARD BOTH SIDES OF 3-5/8" METAL STUDS @ 16" O.C. W/ SOUND BATTS. ASSEMBLY TO EXTEND FROM FLOOR TO DECK ABOVE. PAINT BOTH SIDES. FIRE SEAL PERIMETER BOTH SIDES AND ALL PENETRATIONS. PAINT BOTH SIDES. INSTALL 4" HIGH RUBBER BASE ON EACH SIDE OF THE WALL.
- $\langle 5 \rangle$  NEW TRANSITION STRIP.
- 6 NEW LED LIGHT FIXTURE. SEE ELECTRICAL DRAWINGS.
- $\langle 7 \rangle$  NEW FIRE DETECTOR. SEE ELECTRICAL DRAWINGS.
- (8) PAINT WALLS AND EXPOSED CEILING STRUCTURE INCLUDING DUCTS, CONDUITS, ETC..
- (9) NEW 2'x2' LAY-IN ACOUSTICAL CEILING SYSTEM. INSTALL AT SAME HEIGHT
- 10 NEW LINTEL. SEE DETAIL 5.
- $\stackrel{ au}{ ext{1}}$  PAINT EXISTING COLUMN AND CONCRETE BASE.
- (12) PAINT EXISTING EXPOSED CEILING STRUCTURE INCLUDING DUCTS,
- (13) PAINT EXISTING DOOR AND FRAME BOTH SIDES.
- (14) PAINT EXISTING FRAME.



SHEET NUMBER M101





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SHEET NUMBER M102

# MECHANICAL GENERAL NOTES:

BASIC ABBREVIATIONS

ACCESS DOOR

ACCESS PANEL

BOTTOM OF DUCT

BACK DRAFT DAMPER

BETWEEN JOISTS ABOVE

CUBIC FEET PER MINUTE

CLOSE TO FLOOR

DUCT COVERING

DUCT LINING

EXHAUST HOOD

EXHAUST FAN

EXHAUST GRILLE

FROM BELOW FLOOR

FROM FLOOR ABOVE

FROM FLOOR BELOW

GENERAL CONTRACTOR

IN WALL SPACE, CONCEALED

LIVAN CHEET METAL CAMBOLO

NYAU ONEET IMETAL OTIMDULO.

 $\bigcirc$ 

DCO

DV

 $\wedge$   $\wedge$ 

 $\wedge$   $\wedge$ 

X/Y,  $N \times O$ 

EQUIPMENT, | EQUIPMENT |

HEATING, VENTILATING & AIR CONDITION.

SEE SPECIFICATIONS FOR ADDITIONAL ABBREVIATIONS, PREFIXES, SUFFIXES, ETC.

= SUPPLY DUCT (SU.D.)

RETURN DUCT (RE.D.)

= EXHAUST DUCT (EX.D.)

VENT DUCT (VE.D.)

= OUTDOOR DUCT (OU.D.)

= EXHAUST REGISTER (ER)

VENT REGISTER (VR)

SUPPLY GRILLE (SG)

= DOOR CUT-OFF (DCO); BY OTHERS

SUPPLY CEILING DIFFUSER (SCD)

ADJACENT ACCESS DOOR

MUST BE ACCESSIBLE

= VANED ELBOW - SMACNA PLATE #22

= DIAMETER, DIMENSIONS IN INCHES.

-G = WITH GUARD, 4'-0" FOR HANDICAP.

= EQUIPMENT NOTE, DESIGNATION, OR ITEM.

DUCT R=RISE, D=DROP WITH DIRECTION OF AIR FLOW

U.L. FIRE DAMPER - SHEET METAL SLEEVE AROUND DUCT IN WALL,

4 WAY 3 WAY 2 WAY

ARROW INDICATES DIRECTION OF AIR FLOW

= MANUAL VOLUME DAMPER - MUST BE ACCESSIBLE

= RADIUS ELBOW - SMACNA PLATE #21 LOW VELOCITY

= THERMOSTAT - ARROW INDICATES UNITS CONTROLLED,

MOTORIZED VOLUME DAMPER - MUST BE ACCESSIBLE

BRANCH DUCT TAKE-OFF WITH MANUAL VOLUME EXTRACTOR,

ADJUSTABLE FLEXIBLE CONNECTION (AFC) BETWEEN DUCTS

= ADJUSTABLE FLEXIBLE CONNECTION TO REGISTER, DIFFUSERS, ETC.

= DUCT SIZE (1ST FIGURE SIDE SHOWN, 2ND FIGURE SIDE NOT SHOWN)

BOTH SIDES REFER TO INSIDE DIMENSION, DIMENSIONS IN INCHES.

= DOOR VENT (DV); BY OTHERS

(SEE SPECIFICATIONS FOR ADDITIONAL NOTES, SYMBOLS, ABBREVIATIONS, ETC.)

= SUPPLY CEILING DIFFUSER

= RETURN GRILLE (RG)

= EXHAUST GRILLE (EG)

──────── = VENT GRILLE (VG)

= RETURN REGISTER (RR)

FIRE DAMPER

HGBP | HOT GAS BYPASS PIPING

GAS PIPING

FURNISHED BY OTHERS

EXHAUST DUCT

EXPOSED

EXHAUST REGISTER

CLOSE TO CEILING (EXPOSED)

CLOSE TO WALL (EXPOSED)

DOOR CUTOFF (BY OTHERS)

DISCONNECT SWITCH

DOOR VENT (BY OTHERS)

**ELECTRICAL CONTRACTOR** 

COMBUSTION AIR DAMPER

CEILING DIFFUSER (S) SUPPLY (R) RETURN

ABOVE FINISH FLOOR

ABOVE SUSPENDED CEILING

AAD AUTOMATIC ALUMINUM DAMPERS

ACCU | AIR COOLED CONDENSING UNIT

ADJUSTABLE FLEXIBLE CONNECTION

MARK | DESCRIPTION

ALUM ALUMINUM

CEILING

DRAIN

MARK DESCRIPTION

MOUNTED

PRESENT

**NEW CONNECTION** 

OUTDOOR AIR DAMPER

OUTDOOR AIR INTAKE

PLUMBING CONTRACTOR

POWER ROOF EXHAUSTER

REFRIGERANT-LIQUID, SUCTION, HGBP

RETURN AIR DAMPER

RETURN AIR DUCT

RETURN GRILLE

ROOFTOP UNIT

SUPPLY GRILLE

SHEET METAL

SUPPLY DUCT

SUPPLY REGISTER

STAINLESS STEEL

TO BELOW FLOOR

TO FLOOR ABOVE

TO FLOOR BELOW

TRANSFER DUCT

TRANSFER GRILLE

THRU JOIST ABOVE

TOP OF DUCT

**TYPICAL** 

THROUGH ROOF

VENT AIR DUCT

VENT GRILLE

WITH

**VOLUME DAMPER** 

VENT THRU ROOF

 $\bigcirc$ 

 $\bigcirc$ 

SUFFIX (-W) = WALL MOUNT - CFM TYP.

SUFFIX (-#) = TYPE AS SCHEDULED

SUFFIX (-C) = CEILING MOUNT

= SUFFIX (-F) = FLOOR MOUNT

TEMPERATURE CONTROL

SIMILAR

RETURN REGISTER

SUPPLY CEILING DIFFUSER

SUPPLY LINEAR DIFFUSER

SLEEVE THRU WALL AND SEAL

REFERENCE

OUTDOOR AIR DUCT

OUTDOOR AIR

MTD

NC

OA

OAD

OU.D.

OAI

PC

PRE

RE.D.

REFRIG.

REF

RG

RR

RTU

SCD

SIM

SG

SLD

SR

STW

SU.D.

TBF

TC

TFA

TFB

TF.D.

TG

TOD

TYP

VE.D.

VD

VG

VTR

MECHANICAL CONTRACTOR

1. DRAWINGS ARE GENERALLY DIAGRAMMATIC. EACH CONTRACTOR SHALL MAKE REQUIRED CHANGES FROM THE GENERAL ROUTING SHOWN ON THESE DRAWINGS SUCH AS OFF SETS, BENDS OR CHANGES IN ELEVATION DUE TO COORDINATION WITH THE WORK OF OTHER TRADES AND THE BUILDING CONSTRUCTION. ALL CHANGES SHALL BE MADE WITHOUT ADDITIONAL COST TO THE OWNER. FOR PRESENT CONSTRUCTION, VERIFY ALL EXISTING CONDITIONS PRIOR TO BIDDING TO AVOID CONFLICT. IT IS INTENDED THAT ALL EQUIPMENT, MATERIAL, DEVICES, ETC., SHALL BE LOCATED SYMMETRICALLY WITH THE ARCHITECTURAL ELEMENTS, NOTWITHSTANDING THE FACT THAT LOCATIONS INDICATED BY THESE DRAWINGS MAY BE DISTORTED FOR CLEARNESS OF PRESENTATION.

CONTRACTOR IS ALLOWED TO MAKE MINOR CHANGES TO THE PIPING TO AVOID FIELD CONFLICTS AT NO ADDITIONAL COST TO THE OWNER AND AS LONG AS THE RELOCATION

EACH CONTRACTOR SHALL CHECK DRAWINGS OF THE OTHER CONTRACTORS TO VERIFY SPACES IN WHICH THEIR WORK WILL BE INSTALLED IS CLEAR OF OBSTRUCTIONS. MAINTAIN MAXIMUM HEADROOM AND SPACE CONDITIONS AT ALL POINTS IN THE BUILDING. WHERE HEADROOM OR SPACE CONDITIONS APPEAR INADEQUATE, NOTIFY ARCHITECT/ENGINEER BEFORE PROCEEDING WITH THE INSTALLATION.

FURNISH ALL TRADES ADVANCE INFORMATION ON LOCATIONS AND SIZES OF PIPING, DUCTWORK, EQUIPMENT, FRAMES, BOXES, SLEEVES AND OPENINGS NEEDED FOR WORK, AND ALSO FURNISH INFORMATION AND SHOP DRAWINGS TO PERMIT TRADES AFFECTED TO

WHERE THERE IS EVIDENCE THAT WORK OF ONE TRADE WILL INTERFERE WITH WORK OF OTHER TRADES, ALL TRADES SHALL ASSIST IN WORKING OUT SPACE CONDITIONS TO MAKE

CONTRACTOR TO REVIEW, PRIOR TO BIDDING, ALL DRAWINGS TO COORDINATE VARIOUS WORK AS CALLED FOR. CONTRACTOR SHALL CAREFULLY CHECK ALL DRAWINGS FOR ALL TRADES, AND ANY LACK OF COORDINATION BETWEEN HIS WORK AND DRAWINGS FOR JOB CONDITIONS SHALL BE IMMEDIATELY REPORTED TO ARCHITECT.

CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING AND PATCHING, INCLUDING CORE PATCHING AND PAYMENT OF SAID WORK SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR REQUIRING THE DISTURBANCE BUT SAME SHALL BE DONE BY A GENERAL CONTRACTOR. IT SHALL BE THE RESPONSIBILITY OF THE APPROPRIATE MECHANICAL CONTRACTOR TO GIVE QUANTITIES OF PATCHING REQUIREMENTS TO A GENERAL CONTRACTOR. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.

PRESENT CEILINGS, LIGHT FIXTURES, DIFFUSERS, DUCTWORK, PIPING, CONDUIT, ETC., AS REQUIRED FOR THE INSTALLATION OF HIS WORK. REMOVAL, REPLACEMENT AND PAYMENT FOR MECHANICAL/ELECTRICAL ITEMS SHALL BE THE RESPONSIBILITY OF THE APPLICABLE MECHANICAL CONTRACTOR. REMOVAL AND REPLACEMENT OF PRESENT CEILINGS, ETC., SHALL BE THE RESPONSIBILITY OF CONTRACTOR MAKING THE DISTURBANCE BUT SAME SHALL BE DONE BY A GENERAL CONTRACTOR. IT SHALL BE THE RESPONSIBILITY OF THE APPROPRIATE MECHANICAL CONTRACTOR TO GIVE QUANTITIES OF REMOVAL/REPLACEMENT REQUIREMENTS TO A GENERAL CONTRACTOR.

- HEATING, VENTILATING, AIR CONDITIONING, AND ELECTRICAL DESIGNS ARE BASED ON THE REQUIREMENTS FOR THE SPECIFIED EQUIPMENT MANUFACTURER. BASED ON THE REQUIREMENTS FOR THE SPECIFIED EQUIPMENT MANUFACTURER. CONDUITS, DISCONNECTS, BREAKERS, FUSES, AND WIRE SIZES ARE SELECTED ON THE BASIS OF SPECIFIED EQUIPMENT MANUFACTURER. INCREASED CURRENT REQUIREMENTS NECESSITATING LARGER WIRE, BREAKERS, FUSES, SWITCHES, ETC. TO ACCOMMODATE ANY ALTERNATE OR SUBSTITUTE MANUFACTURER'S EQUIPMENT OTHER THAN AS SHOWN ON DRAWINGS OR SCHEDULES SHALL BE PROVIDED WITHOUT INCREASE IN CONTRACT PRICE BY THE CONTRACTOR FURNISHING EQUIPMENT. WIRE SIZES ARE SELECTED ON THE BASIS OF SPECIFIED EQUIPMENT.
- REFRIGERANT PIPING TO BE SIZED, PIPED, AND QUANTITIES AS RECOMMENDED BY THE MANUFACTURER. FURNISH DRAWINGS IN THE FORM OF SHOP DRAWINGS SHOWING ALL PIPING SIZES, CONNECTIONS RISERS, TRAPS, REFRIGERANT DEVICES AND ACCESSORIES, ETC. FOR THE COMPLETE INSTALLATION OF EACH RESPECTIVE SYSTEM. CONNECTIONS TO CONDENSING UNITS SHALL BE MADE WITH REFRIGERANT TYPE VIBRATION ELIMINATORS. CONNECTIONS TO AIR HANDLING UNITS SHALL BE MADE WITH SWING TYPE OFFSETS TO ABSORB ANY VIBRATION THAT MAY BE EVIDENT. PRECHARGED REFRIGERANT PIPING WILL NOT BE ALLOWED. CONTRACTOR TO INSULATE ALL SUCTION AND HOT GAS LINES WITH 1/2" ARMAFLEX, RUBATEX, OR EQUIVALENT MAKE.
- 4. CONTRACTOR SHALL PROVIDE TRAPPED COOLING COIL CONDENSATE DRAIN LINES FROM
- 6. CONTRACTOR SHALL INCLUDE IN HIS WORK THE RELOCATION OF ALL CROSS BRACING, AS REQUIRED TO FIT DUCTS BETWEEN JOISTS. THIS WORK SHALL BE COORDINATED WITH THE GENERAL CONTRACTOR WITH ARCHITECTURAL APPROVAL.
- 7. CONTRACTOR SHALL PROVIDE ALL DUCT DROPS AND OFFSETS TO AVOID INTERFERENCES
- 8. ALL DUCTWORK TO BE HELD TIGHT TO STRUCTURAL ROOF JOISTS, BEAMS, ETC. AS CLEARANCE IS MINIMAL. COORDINATE WITH OTHER CONTRACTORS TO AVOID CONFLICT. ALL DUCTWORK IS ABOVE SUSPENDED CEILINGS, UNLESS NOTED OTHERWISE
- 9. SHEETMETAL DUCT SIZES MAY BE ALTERED TO FIT JOB CONDITIONS, BUT NET FREE AREAS MUST BE MAINTAINED. INCREASE SHEETMETAL DUCT SIZE TO ALLOW FOR DUCT LINING. INSULATE DUCTWORK AS NOTED.
- 10. INSTALL 1" OF NON-SHRINK GROUT AROUND DUCTWORK ON EACH WALL FACE TO SEAL OPENINGS AND ELIMINATE SOUND TRANSFER WITH AIR-TIGHT CONNECTIONS.
- CONSTRUCTION FOR ALL AIR HANDLING EQUIPMENT, FURNACES, ENERGY RECOVERY VENTILATORS, ROOFTOP UNITS, RETURN FANS, FILTER BOXES, FAN OPERATED VAV BOXES, ETC. CONTRACTOR PRIOR TO AIR BALANCING AND BUILDING OCCUPANCY SHALL INSTALL A COMPLETE SET OF CLEAN FILTERS. PROVIDE TO OWNER (1) COMPLETE SPARE/REPLACEMENT SET OF FILTERS FOR EACH PIECE OF EQUIPMENT. PROVIDE ALSO TO OWNER IN WRITING REPLACEMENT SIZES, TYPE, NUMBER PER EQUIPMENT, LOCATIONS,
- OWNER/ARCHITECT/ENGINEER THEN ADDITIONAL DAMPERS, BELTS, SHEAVES, OR PULLEYS WILL BE INSTALLED TO PROVIDE PROPER AIR QUANTITIES, ACCEPTABLE SOUND LEVELS AND TEMPERATURE/ HUMIDITY REQUIREMENTS BY THE HVAC CONTRACTOR WITHOUT INCREASE IN CONTRACT PRICE WITHIN THE GUARANTEE PERIOD.
- IN ATTIC SPACE.

- DOES NOT AFFECT THE PERFORMANCE OF THE SYSTEM.

INSTALL THEIR WORK PROPERLY AND WITHOUT DELAY.

SATISFACTORY ADJUSTMENTS.

DRILLING, SAW CUTTING, ETC., AS REQUIRED TO ACCOMMODATE HIS WORK. CUTTING AND

CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL AND REPLACEMENT OF

- ALL ROOFTOP UNITS TO ROOF.
- 5. CONTRACTOR SHALL COORDINATE WITH GENERAL CONTRACTOR FOR ALL CEILING DIFFUSERS, REGISTERS, AND/OR GRILLES AS TO LOCATION, QUANTITIES AND PROPER TYPES FOR SURFACE MOUNT AND/OR LAY-IN SUSPENDED CEILINGS AND LIGHT PATTERNS. OPENINGS SHALL BE IN CENTER OF TILES OR AS DIRECTED BY ARCHITECT/ENGINEER.
- WITH JOISTS, OTHER DUCTS, LIGHTS, PIPES, ETC.
- 11. CONTRACTOR SHALL INCLUDE IN HIS WORK (1) SET OF FILTERS TO BE USED DURING
- 12. UPON BALANCING, IF SYSTEM(S) CANNOT BE SUCCESSFULLY BALANCED AS AGREED BY
- 13. SCHEDULE OF DUCT INSULATION:
- A. RECTANGULAR/ROUND SU.D/RE.D/VE.D, W/ 3" DC, MINIMUM INSTALLED R FACTOR OF 8;
- B. RECTANGULAR SU.D./VE.D, W/1-1/2" DL OR 2" DC, MINIMUM INSTALLED R FACTOR OF 6;

ASC OR IN NON-CONDITIONED SPACES.

C. ROUND SU.D./VE.D, W/2" DC, MINIMUM INSTALLED R FACTOR OF 6; ASC OR IN NON-CONDITIONED SPACES.

D. RECTANGULAR RE.D. W/1-1/2" DL, MINIMUM INSTALLED R FACTOR OF 6; WHERE

INDICATED ON DRAWINGS.

E. ROUND FLEXIBLE SU.D./VE.D, W/2" MINIMUM INSTALLED R FACTOR OF 6; PRE-INSULATED DC. 5 FT. 0 IN. MAX. LENGTH.

F. RECTANGULAR AND ROUND OU.D. W/2" DC. G. RECTANGULAR EX.D. FROM EXHAUST REGISTER W/1" DL TO 5 FT. DOWNSTREAM OF EXHAUST REGISTER, EXCEPT WET AREAS SUCH AS SHOWERS.

FIBERGLASS WITH FOIL FACE, MINIMUM INSTALLED R FACTOR OF 8; .020 ALUMINUM

H. ROUND OR RECTANGULAR EX.D. W/1" DC AT 5 FT. BEFORE EF OR 5 FT. BEFORE DUCT LEAVES INTERIOR, UNLESS DL IS CALLED FOR. EXTERIOR RECTANGULAR/ROUND SU.D/RE.D/VE.D, W/ 3" DC, 6 LB. DENSITY,

- JACKET. SEAL WEATHERTIGHT. 14. ALL THERMOSTATS LOCATED UP 4'-0" TO MEET ADA REQUIREMENTS WITH PLASTIC OR CAST GUARDS, AS SPECIFIED. ALL THERMOSTATS LOCATED ON EXTERIOR WALLS OR COLUMNS MUST BE MOUNTED ON THERMAL INSULATING BLOCKS.
- 18. PRESENT PAINTED CONSTRUCTION WHICH IS MARRED SHALL BE REPAINTED SAME AS NEW
- 19. THE USER OF THE DRAWINGS AGREES TO HOLD THE ENGINEER HARMLESS FOR ANY RESPONSIBILITY IN REGARD TO CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES AND FOR ANY SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK AND FURTHER SHALL HOLD THE ENGINEER HARMLESS FOR COST AND PROBLEMS ARISING FROM THE NEGLIGENCE OF THE CONTRACTOR, SUBCONTRACTOR, TRADESMEN OR WORKMEN. THE USE OF THESE DRAWINGS ALSO IMPLIES THAT THE ENGINEER SHALL TAKE NO RESPONSIBILITY FOR THE PLANNED USER'S FAILURE TO CARRY OUT THE WORK IN ACCORDANCE WITH THE DRAWINGS OR CONTRACT DOCUMENTS.
- 20. SEE SPECIFICATIONS FOR ADDITIONAL NOTES, SYMBOLS, ABBREVIATIONS, PREFIXES AND

## EXHAUST FAN (EF) SCHEDULE:

ELECTRICAL ROOM SERVICE MFGR. GREENHECK MODEL CSP-A110 TYPE INLINE CFM/ESP 50/0.1" FRACT./120-1-60 HP/VOLTAGE DRIVE/SPEEDS DIRECT/MULTI APPROX. WT. 20 LBS.

COORDINATE).

NOTES

NOTES: SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION. 1. PROVIDE UNIT WITH BACKDRAFT DAMPER, MOTOR RATED FOR CONTINUOUS USE, MOTOR THERMAL OVERLOAD

PROTECTION, SOLID STATE SPEED CONTROL FACTORY

MOUNTED TO UNIT, AND MOUNTING BRACKETS. UNIT TO BE CONTROLLED BY WALL MOUNTED SWITCH (PROVIDED AND INSTALLED BY ELECTRICAL CONTRACTOR,

3. UNIT TO BE INSTALLED PER MANUFACTURER'S INSTRUCTIONS.

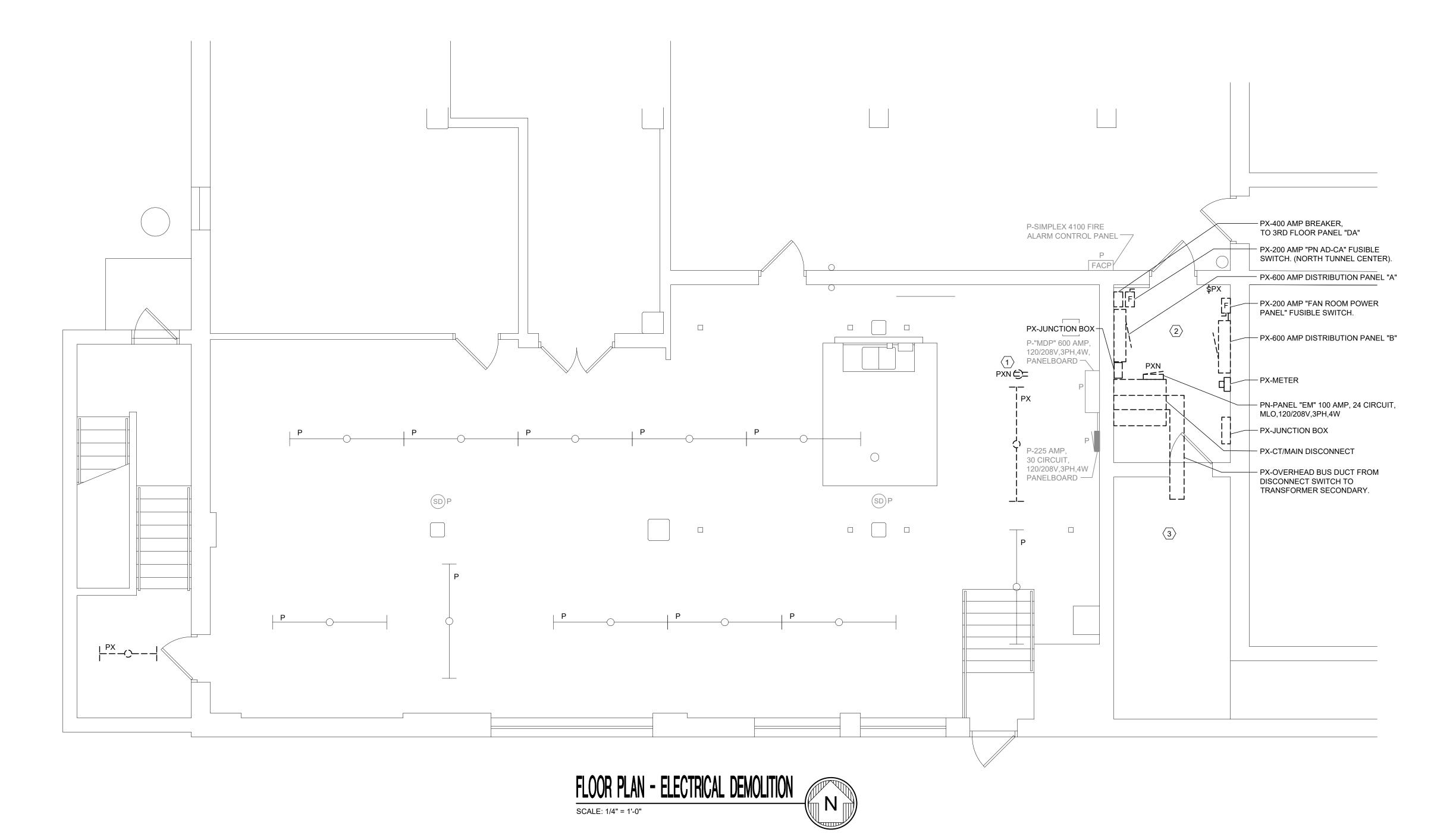
1-3



SHEET NUMBER E101

S YSTEMS DESIGN SERVICE

• 3600 EAST STATE STREET • SUITE 215 • ROCKFORD, ILLINOIS • 61108 PHONE (815) 399-3381 FAX (815) 399-3383 WWW.SDSEGROUP.COM IL PROF DESIGN FIRM #184.004999



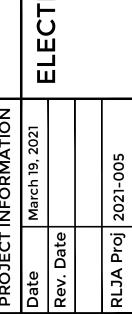
## ⋉ KEY NOTES FOR THIS SHEET

- RELOCATE EXISTING CEILING MOUNTED OUTLET TO FEED PRESENT FIXTURE.
   REWORK CORD AND PLUG TO REMAINING FIXTURE CONNECTED TO FIXTURE BEING
- REMOVED.
- REMOVE EXISTING LIGHT FIXTURES AND WALL BUTTON IN THIS ROOM.
   CONTRACTOR SHALL COORDINATE WITH Comed FOR REMOVAL OF EXISTING VAULT TRANSFORMER AND PRIMARY FEEDER CABLES



RICHARD ASSOCIATES





SHEET NUMBER S YSTEMS ESIGN SERVICE E102 3600 EAST STATE STREET • SUITE 215 • ROCKFORD, ILLINOIS • 61108
PHONE (815) 399-3381 FAX (815) 399-3383 WWW.SDSEGROUP.COM

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SIZE AND TYPE OF THE GROUND WIRE AND BONDING

JUMPERS AS PER ARTICLE 250 OF THE 2017 NATIONAL

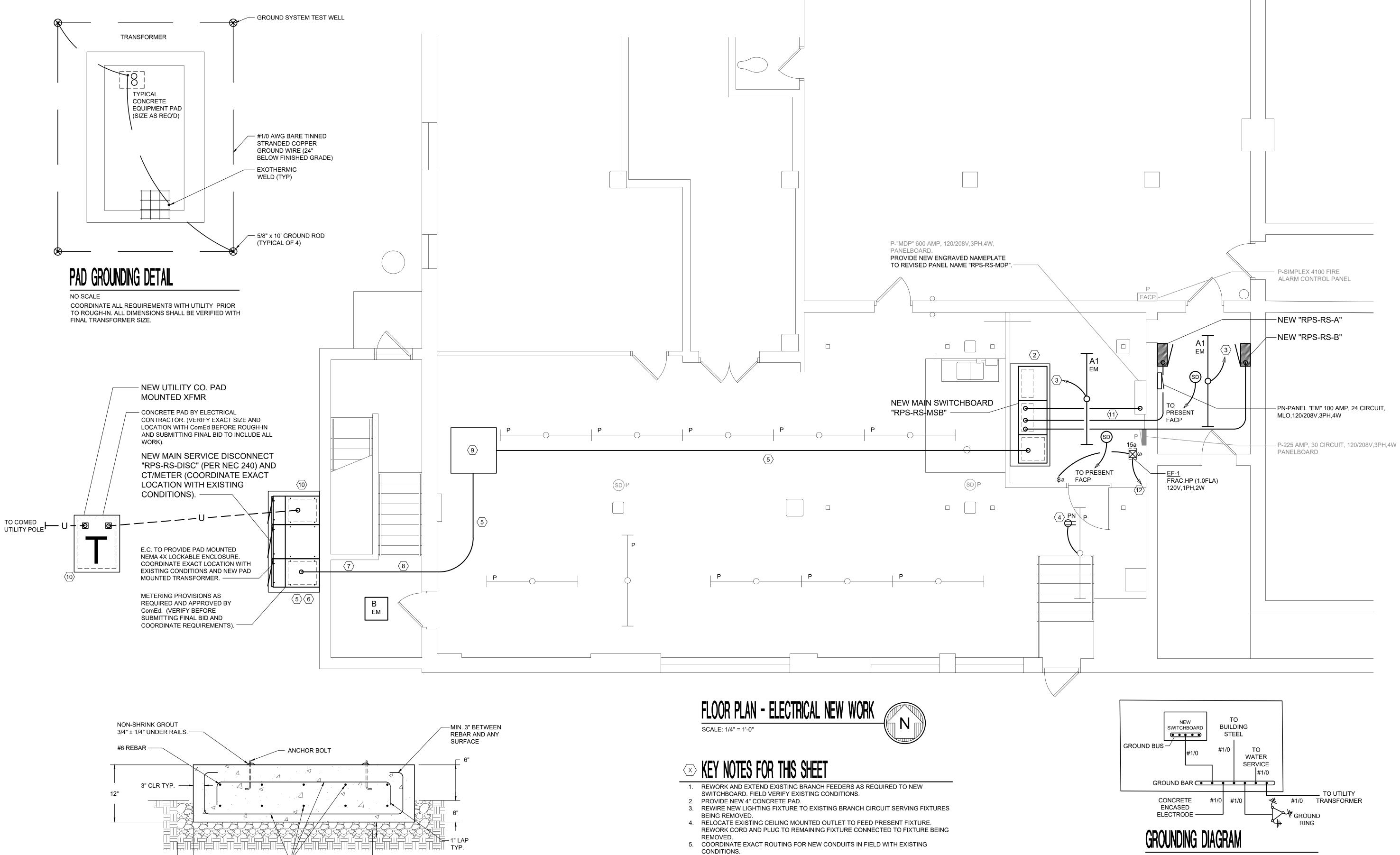
ELECTRICAL CODE. COORDINATE ALL REQUIREMENTS

WITH THE LOCAL AHJ ELECTRICAL INSPECTOR PRIOR TO

ROUGH-IN. PROVIDE A COMPLETE GROUNDING/BONDING

SYSTEM IN COMPLIANCE WITH THE 2017 NEC AND LOCAL

AUTHORITIES.



EQUIPMENT PAD DETAIL

3. PROVIDE NON-SHRINK GROUT UNDER RAILS AS REQUIRED BY EQUIPMENT MANUFACTURER.

1. PROVIDE GROUNDING RING PER DETAIL.

2. ADJUST CONCRETE PAD SIZE TO MATCH EQUIPMENT PROVIDED.

NO SCALE COORDINATE ALL REQUIREMENTS WITH UTILITY AND MANUFACTURER PRIOR TO ROUGH-IN.

- PROVIDE MIN. 6"

CRUSHED ROCK OVER

UNDISTURBED EARTH

- 6. E.C. TO RESTORE LANDSCAPE AREAS TO ORIGINAL CONDITION ONCE NEW TRANSFORMER, SWITCHBOARD AND CONDUITS ARE INSTALLED.
- 7. CORE AND SEAL CONDUIT PENETRATIONS THROUGH FOUNDATION WALL WATERTIGHT WHERE CONDUITS ENTER BUILDING.
- 8. REMOVE AND REINSTALL CEILINGS AS REQUIRED FOR NEW FEEDERS.
- 9. COORDINATE FINAL PULL BOX LOCATION WITH EXISTING MECHANICAL PIPING AND EXISTING CONDITIONS. SIZE PER NEC. 10. PROVIDE 10" CONCRETE PAD WITH 6" EXPOSED ABOVE GRADE.
- 11. ONLY 600A AND GREATER CONDUIT ROUTES ARE SHOWN FOR SIMPLICITY; ALL LOADS SHOWN ON ONE-LINE DIAGRAMS AND PANEL SCHEDULES SHALL BE
- 12. WIRE NEW EF-1 TO PRESENT 225 AMP, 120/208V,3PPH,4W PANEL ADJACENT TO PRESENT MDP. PROVIDE NEW 20A/1POLE BREAKER IN CIRCUIT #15 AND WIRE AS REQUIRED.

E103

DISTRIBUTION

# S YSTEMS ESIGN SERVICE



REFER TO FLOOR PLANS, PANEL SCHEDULES AND SPECIFICATIONS FOR ADDITIONAL INFORMATION. COORDINATE AVAILABLE FAULT CURRENT WITH THE LOCAL UTILITY COMPANY. (VERIFY PRIOR TO SUBMITTING FINAL BID). ADJUST A.I.C. RATINGS FOR ALL OVERCURRENT PROTECTION DEVICES AS REQUIRED. (VERIFY). COORDINATE EXACT EQUIPMENT LOCATIONS WITH ALL OTHER TRADE

CONTRACTORS ASSOCIATED WITH THIS PROJECT PRIOR TO ROUGH-IN OF ANY ELECTRICAL EQUIPMENT.

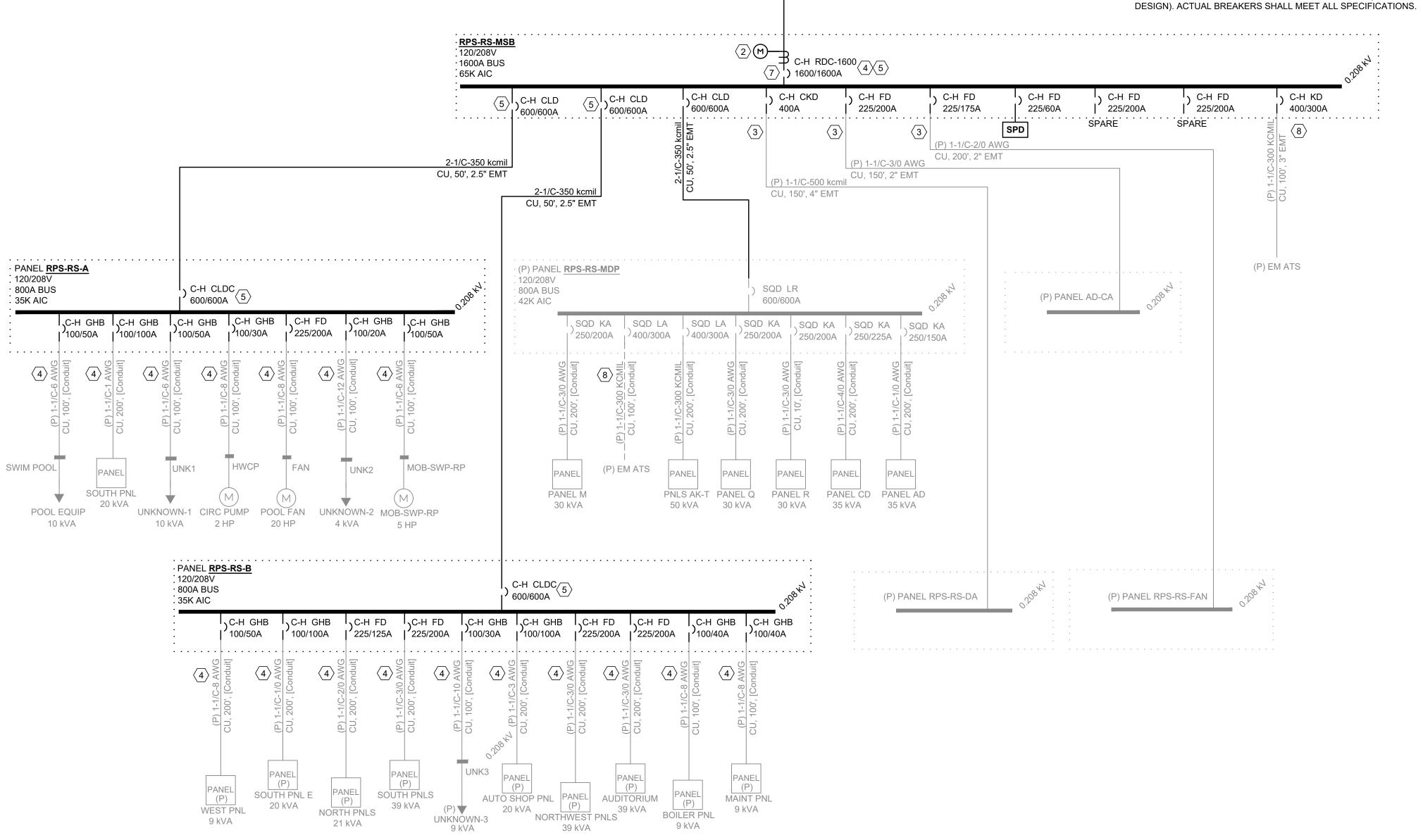
ELECTRICAL CONTRACTOR SHALL PROVIDE ARC FLASH CALCULATIONS AND LABELS FOR ALL DISTRIBUTION EQUIPMENT SHOWN ON THIS ONE-LINE DIAGRAM.

ALL EQUIPMENT SHALL BE PROVIDED WITH 90° CENTIGRADE LUGS FOR WIRING.

## **EXECUTE:** KEY NOTES FOR THIS SHEET

- 2. CUSTOMER DIGITAL METERING.
- 3. EXTEND EXISTING FEEDERS TO NEW SWITCHBOARD. 4. EXTEND EXISTING BRANCH CIRCUITS TO NEW PANELBOARD.
- 5. 100% RATED BREAKER. PROVIDE BREAKER WITH LSI-G TRIP UNIT
- PROVIDE BREAKER WITH LSI-A TRIP UNIT.
- 8. REMOVE EM ATS FEED FROM PANEL MDP AND MOVE TO NEW SWBD

- 1. ALL FEEDER LENGTHS ARE ESTIMATED AND SHALL NOT BE USED FOR BIDDING PURPOSES.
- 2. POLARIS SPLICE CONNECTORS ARE NOT PERMITTED FOR USE
- ON THIS PROJECT. 3. EXISTING SERVICE TO REMAIN ENERGIZED UNTIL ALL LOADS ARE CUTOVER TO NEW SERVICE. NO LOCALIZED BUILDING OUTAGE SHALL EXCEED 1 DAY. SEE SPECIFICATION SECTION 26
- 00 00 FOR DETAILED SEQUENCING. 4. BREAKER MODELS SHOWN ARE TYPICAL FOR EATON (BASIS OF



UTIL-COMED

1.92 (X/R) 44.3kA 1.92 (X/R)

**■ ■ ■** 46.4kA

(1)

(5)(6)(1)1600/1600A

C-H RDC-1600

UTIL TX SEC

RPS-RS-DISC

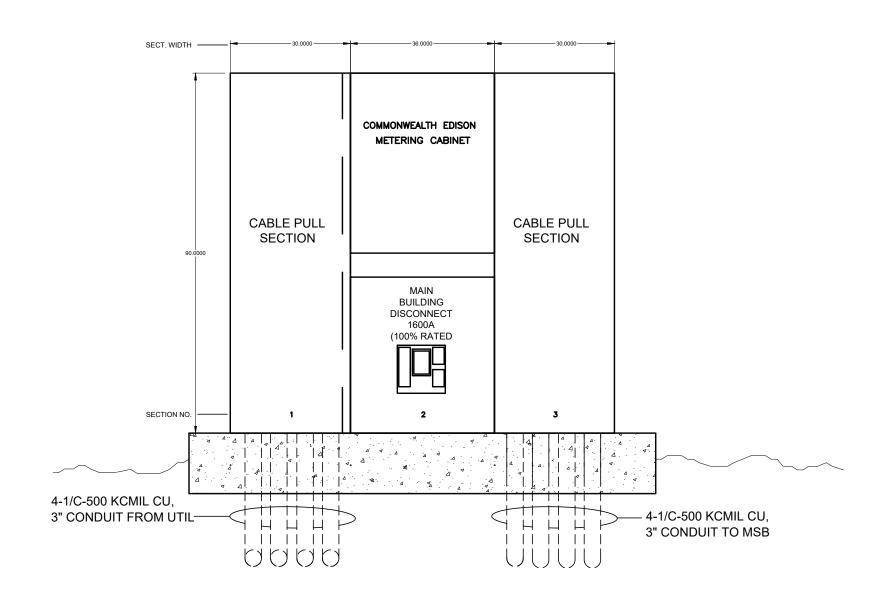
1600A BUS

65K AIC

NEW ONE-LINE DIAGRAM

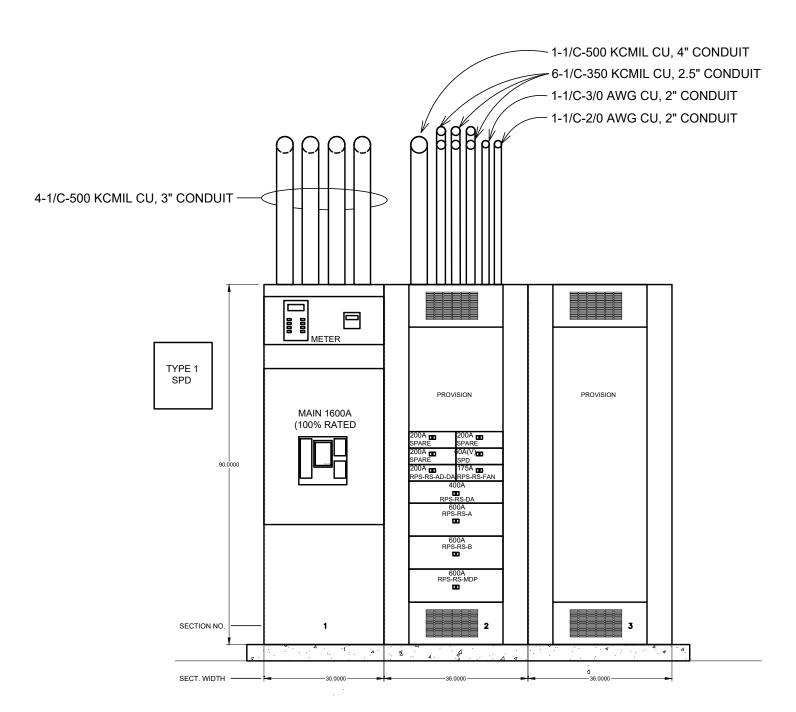


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## METERING SWITCHBOARD DETAIL RPS-RS-DISC

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



## DISTRIBUTION SWITCHBOARD DETAIL RPS-RS-MSB

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

## PANEL SCHEDULES

	LOCATION: SUPPLY FROM: MOUNTING: ENCLOSURE:	UTILITY SURFACE			VOLTAGE: PHASE: WIRE:	3	/120 V PH W					MAII MAINS	RATING: NS TYPE: RATING: RATING:	LSI 600	KAIC MCB A A (100% RATED)	
CK T	DESCRIPTION		TRIP	POLES	DEMAND CODE	,	A	E	3		;	DEMAND	POLES	TRIP	DESCRIPTION	C
1	BOILER RM SUMP PUMP		50	1	R	3,000	2,099					G				2
3	PRO ISOTION POOTI				R			2,600	2,099			G	3	30	HOT WATER CIRC PUMP	
5	PROJECTION BOOTH		50	2	R					2,600	2,099	G				
7					G	3,333	2,099					G			) MOB-SWP-RP 5 HP PUMP	
9	SWIMMING POOL CIRC	C PUMP	50	3	G			3,333	2,099			G	3	50		
11					G					3,333	2,099	G				
13					G	6,666	7,450					G			POOL FAN	
15	SOUTH PANEL D (1ST	FLOOR)	100	3	G			6,666	7,450			G	3 200	200		
17					G					6,666	7,450	G				
19					G	3,333	1,333					Н				
21	UNKNOWN-1		50	3	G			3,333	1,333			Н	3	20	UNKNOWN-2	
23					G					3,333	1,333	Н				
25	SPACE (PROVISION ONLY)												]			2
27				3									3		SPACE (PROVISION ONLY)	
29																3
31													3			
33	SPACE (PROVISION O	NLY)													SPACE (PROVISION ONLY)	;
35																3
37																
39	SPACE (PROVISION O	NLY)											3		SPACE (PROVISION ONLY)	
41																
					TOTAL CONN:	29,313	VA	28,913	VA	28,913	VA					
LOAI	D CLASSIFICATION	DEMAND CODE		CONNECTE	D LOAD	DEMAND	FACTOR	DEM	AND						PANEL TOTALS	
HVAC/MECH H		Н		3,999	VA	80.	.0%	3,199 VA					TOTAL CONN. LOAD: 87,139 VA			
RECEPTACLES R		R		8,200	VA	80.0%		0				TOTAL DEMAND LOAD: 74,392 VA				
LIGH	LIGHTING L			0	VA	100	).0%	0	VA							
GEN	ERAL	G		74,940	VA	95.	.0%	71,193 VA		1				тс	OTAL CONN. CURRENT: 242 A	
KITC	HEN	К		0	VA	100	0.0%	0 VA						тот	AL DEMAND CURRENT: 206 A	
LARC	GEST MOTOR	1 HP		0	VA	125	5.0%	<b>-</b>	VA	1						

	LOCATION: SUPPLY FROM: MOUNTING: ENCLOSURE:	UTILITY SURFACE			VOLTAGE: PHASE: WIRE:	3	/120 V PH W					MAII MAINS	RATING: NS TYPE: RATING: RATING:	LSI 600	kAIC MCB A A (100% RATED)	
CK T	DESCRIPTION		TRIP	POLES	DEMAND	,	4		В		C	DEMAND	POLES	TRIP	DESCRIPTION	
			+-	+	G	3,000	3,000					<b>CODE</b> G				
3	WEST WING PANEL		50	3	G	.,	-,	3,000	3,000			G	3	40	BOILER ROOM PANEL	
5					G			-,,,,,,	2,555	3,000	3,000	G	ľ	"	3	
7					G	6,666	6,666			0,000	0,000	G				
-	SOUTH PANEL "E"		100	3	G	3,000	3,000	6,666	6,666			G	3	100	AUTO SHOP PANEL	
11					G			3,000	3,000	6,666	6,666	G			THE STATE OF THE S	
13					G	7,000	13,000			3,555	0,000	G				
	NORTH CORRIDOR PA	NELS	125	3	G	.,000	.0,000	7,000	13,000			G	3 2	200	NORTHWEST CORRIDOR PANELS	
17					G			1,555	13,555	7,000	13,000	G		200		
19			1		G	13,000	13,000			.,000	. 5,555	L				
			200	3	G	.,	-,	13,000	13,000			<del>                                     </del>	3	200	AUDITORIUM LIGHTS	
23				G			-,	1,111	13,000	13,000						
25			1		G	3,000				13,555	13,555	<del>-</del> -				
27 MAINT. AREA		40	40	3	G	3,000		3,000					3	3	SPACE (PROVISION ONLY)	
29					G			1,111		3,000						
31					G	1,560				2,233						
33	── SPARE		30	2	G	1,000		1,560					3		SPACE (PROVISION ONLY)	
	SPACE (PROVISION O	NLY)		1				,,,,,,,								
37		,														
	SPACE (PROVISION O	NLY)		3								3		SPACE (PROVISION ONLY)		
41		,											1			
<u>''' l</u>				1	TOTAL CONN:	69,892	VA	69,892	VA	68,332	VA			<u> </u>		
LOAD CLASSIFICATION DEMAND CODE			CONNECTE	D LOAD	DEMAND FACTOR		DEM	AND					PANEL TOTALS			
HVAC/MECH H			0	VA	80.0%		0 VA		]					TOTAL CONN. LOAD: 208,116 VA		
RECEPTACLES R			0	VA	80.0%		0	VA	]					TOTAL DEMAND LOAD: 199,660 VA		
LIGHTING L			39,000	VA	100.0%		39,000	VA	]							
GENERAL G			169,116	VA	A 95.0%		160,660	0 VA					TO	OTAL CONN. CURRENT: 578 A		
KITCHEN K		К		0	VA	100	.0%	0	VA					тот	AL DEMAND CURRENT: 554 A	
LARG	EST MOTOR	1 HP		0	VA	125	.0%	0	VA							



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EAST STATE STREET SUITE 215 ROCKFORD, ILLINOIS 6110 E (815) 399-3381 FAX (815) 399-3383 WWW.SDSEGROUP.G IL PROF DESIGN FIRM #184.004999 SWITCHGEAR REPLACEMENT WORK AT ROOSEVELT COMMUNITY EDUCATION CENTER ROCKFORD, ILLINOIS

RICHARD L. JOHNSON ASSOCIATES | ARCHITECTS

ate March 19, 2021

SHEE

BY. Date

R SWITCHBO

E104 OF B. REMOVED PIPE AND WIRE MUST NOT BE REUSED.

C. ANY OF ABOVE EQUIPMENT WHICH IS NOT REUSED AND FOLLOWING REMOVED PRESENT EQUIPMENT SHALL BECOME PROPERTY OF CONTRACTOR, AND SHALL BE REMOVED FROM PREMISES BY HIM (PX).

1. EQUIPMENT SO DESIGNATED ON DRAWINGS.

D. FOLLOWING PRESENT EQUIPMENT SHALL BE CAREFULLY REMOVED, INTACT, MATCH MARKED, INSOFAR AS IS PRACTICAL, SHALL REMAIN PROPERTY OF OWNER, AND SHALL BE DELIVERED TO OWNER OUTSIDE OF BUILDING WHERE DIRECTED BY THE ENGINEER (PX-DO).

1. EQUIPMENT SO DESIGNATED ON DRAWINGS.

E. CONTRACTOR SHA

1. PROVIDE NEW FLOORS UNDER REMOVED PRESENT EQUIPMENT AND WHERE CALLED FOR

2. REPAIR FLOORS UNDER AND WALLS ADJACENT TO REMOVED EQUIPMENT, TO MATCH ADJACENT CONSTRUCTION.

3. FILL IN PRESENT CHASES WHICH ARE NO LONGER REQUIRED AND NEATLY PATCH TO MATCH

ADJACENT CONSTRUCTION.
4. CUT OPENINGS REQUIRED FOR:

A. HIS WORK;

B. ADMISSION OF NEW EQUIPMENT;

C. REMOVAL OF PRESENT EQUIPMENT;
D. NEW CONNECTION TO PRESENT CONSTRUCTION.

5. PATCH AND REPAIR UNUSED PRESENT HOLES AND OPENINGS, AND THOSE LEFT BY THE REMOVAL OF PRESENT EQUIPMENT AND ADMISSION OF NEW EQUIPMENT.

6. PATCH AND REPAIR PRESENT EQUIPMENT, AND BUILDING CONSTRUCTION WHICH HAS NOT BEEN CUT, REMOVED, DISTURBED OR MARRED, AS REQUIRED, TO RESTORE IT TO ORIGINAL CONDITION BEFORE BEING DISTURBED.

F. UNUSED OPENINGS IN ENCLOSURES, IN CONDUITS, BOXES, CABINETS, AND PANELS SHALL BE FILLED.

G. PRESENT PAINTED CONSTRUCTION WHICH IS MARRED SHALL BE REPAIRED SAME AS NEW CONSTRUCTION.

H. CERTAIN ABBREVIATIONS OR SYMBOLS, WHEN APPLIED TO PRESENT (TO EXISTING) LINE, DEVICE OR EQUIPMENT, SHALL HAVE THE FOLLOWING MEANINGS.

NEW CONNECTIONS TO PRESENT PIPING, DEVICE WIRING, EQUIPMENT, ETC. INSTALL, TEST, COVER, PAINT, ETC., SAME AS NEW WORK.

TO REMAIN UNCHANGED, IF CHANGE CANNOT BE AVOIDED, CHANGE "P" TO "PXR", AT NO INCREASE IN CONTRACT PRICE. VERIFY LOCATION.

TO BE COMPLETELY REMOVED, INCLUDING UNNEEDED CONNECTIONS, PIPING, DUCTS, WIRING, BASES, ETC., OF EVERY KIND. UNUSED OPENINGS PLUGGED OR CAPPED, TESTED, COVERED,

PAINTED SAME AS NEW WORK. OTHER DISTURBED WORK OF EVERY KIND RESTORED, PATCHED, TESTED, COVERED, PAINTED, ETC., TO EQUAL ORIGINAL CONDITION. REMOVED MATERIAL MUST NOT BE REUSED UNLESS OTHERWISE SPECIFIED OR DIRECTED BY ENGINEER.

PX-DO SAME AS "PX", EXCEPT REMOVED, CLEANED AND RESTORED INTACT, AS FAR AS PRACTICAL, MATCHED MARKED, AND OTHERWISE IDENTIFIED AS REQUIRED AND DELIVERED TO OWNER OUTSIDE OF BUILDING AS DIRECTED BY ENGINEER.

SAME AS "PX", EXCEPT REMOVED, CLEANED AND RESTORED TO GOOD OPERATING CONDITION AND REINSTALLED, SAME AS NEW WORK, IN ORIGINAL POSITION. IF RECONDITIONING IS IMPRACTICAL, PROVIDE NEW DEVICE, AS APPROVED BY ENGINEER, AT

NO INCREASE IN CONTRACT PRICE.

SAME AS "PXR" EXCEPT REMOVED, CLEANED AND RESTORED TO GOOD OPERATING
CONDITION AND REINSTALLED SAME AS NEW WORK, IN NEW POSITION MARKED "PN", IF

RECONDITION AND REINSTALLED SAME AS NEW WORK, IN NEW POSITION MARKED. PN . IF RECONDITIONING IS IMPRACTICAL, PROVIDE NEW DEVICE, AS APPROVED BY ENGINEER, AT NO INCREASE IN CONTRACT PRICE.

PN ETC. COMPLETELY REINSTALL DEVICE, LINE OR EQUIPMENT REMOVED, AT NEW LOCATION, SAME,

SO THAT

1. ELECTRICAL SERVICES TO PRESENT BUILDINGS OR PORTIONS OF BUILDING WILL NOT BE INTERRUPTED

I. WORK OF EVERY DIVISION SHALL BE COORDINATED WITH ALL OTHER WORK AND PRESENT CONDITIONS,

1. ELECTRICAL SERVICES TO PRESENT BUILDINGS OR PORTIONS OF BUILDING WILL NOT BE INTERRUPTED DURING PERIODS WHEN THOSE SERVICES ARE NEEDED.

2. SPECIAL SYSTEMS SUCH AS FIRE ALARM, SOUND, ETC., OF EVERY KIND TO PRESENT BUILDINGS WILL NOT BE INTERRUPTED DURING WORKING AND/OR OCCUPIED HOURS, EXCEPT AS APPROVED BY ENGINEER.

J. NEW CONDUIT SERVING NEW AND/OR PRESENT ELECTRICAL DEVICES IN FINISHED PRESENT ROOMS OR SPACES SHALL BE CONCEALED IN FINISHED ROOMS, WHERE POSSIBLE OR SHALL BE RUN IN ADJOINING UNFINISHED ROOMS, SHAFTS, STORAGE ROOMS, ETC., WHERE EXPOSED CONDUIT IS PERMITTED IN FINISHED PRESENT ROOMS BY ARCHITECT IN WRITING, IT SHALL BE WIREMOLD, WITH MATCHING BOXES, RUN INCONSPICUOUSLY AS POSSIBLE, IN STRAIGHT LINES, PARALLEL TO WALLS AND CEILINGS, WITH NEAT BENDS, UNNEEDED BOXES, SWITCHES AND WIRING SHALL BE COMPLETELY REMOVED AND OPENINGS PATCHED. IN PRESENT ROOMS OR LOCATIONS WHERE NEW LIGHTING EQUIPMENT IS SHOWN. PRESENT FIXTURES, BOXES, WIRING, SWITCHES, ETC. SHALL BE REMOVED AS PER NOTE "PX" UNLESS ANOTHER SYMBOL IS SHOWN ON DRAWINGS. WHERE SPECIFICALLY APPROVED BY ARCHITECT IN WRITING, BOXES MAY BE PERMITTED TO REMAIN AND BE PROVIDED WITH NEAT FLUSH COVERS, EXTENDING OVER ENTIRE WALL OPENING.

K. UNNEEDED ELECTRICAL FIXTURES, SWITCHES, STARTERS, DEVICES, ETC., SHALL BE COMPLETELY REMOVED; AND CONSTRUCTION PATCHED AS PER NOTE "PX" NEW CONNECTIONS TO PRESENT EQUIPMENT, SHALL BE MADE, TESTED, COVERED, PAINTED, ETC., SAME AS NEW EQUIPMENT. PRESENT EQUIPMENT, AND OTHER COVERING DISTURBED BY CONTRACTOR SHALL BE REPAIRED TO EQUAL NEW CONDITION AND PAINTED SAME AS NEW COVERING.

L. WHERE DEVICES ARE OMITTED FROM PRESENT BRANCH CIRCUITS, THE REMAINING DEVICES, ON THE SAME CIRCUIT AND/OR CONDUIT RUN, SHALL BE REWIRED, IF NEEDED AND AS REQUIRED, TO REMAIN ON THEIR RESPECTIVE CIRCUITS AND IN OPERATING CONDITION.

M. LIGHTING FIXTURES WHICH ARE REUSED SHALL HAVE LENS AND REFLECTORS CLEANED. ALL FIXTURES SHALL BE PROVIDED WITH NEW LAMPS.

N. WORK SHALL BE COORDINATED SO THAT HEATING, PLUMBING, ELECTRICAL, AND TELEPHONE SERVICES TO THE PRESENT BUILDING WILL NOT BE INTERRUPTED, EXCEPT AS APPROVED BY THE ARCHITECT.

### ELECTRICAL SYMBOLS

F1(R)#a RECESSED CEILING FIXTURE (>=WALL WASHER) SURFACE OR PENDANT CEILING FIXTURE BRACKET FIXTURE RECESSED LED FIXTURE NUMBER=CIRCUIT -SURFACE OR PENDANT LED FIXTURE LETTER=SWITCH  $\vdash$ WALL LED FIXTURE (VERIFY HEIGHT) F1,F2,F3=FIXTURE BRACKET EXIT LIGHT SEE SPECIFICATIONS → DIRECTIONAL ARROW CEILING EXIT LIGHT AND FIXTURE SCHEDULE LIGHT TRACK EXTERIOR POLE FIXTURE **BOLLARD FIXTURE** 

BATTERY EMERGENCY FIXTURE (R=REMOTE HEAD)

SINGLE POLE SWITCH

THREE WAY SWITCH

FOUR WAY SWITCH

SWITCH WITH PILOT LIGHT

K-GH

OCCUPANCY SENSOR SWITCH (EQUAL TO LEVITON DECORA INFRARED ODS15-ID,UNO)

BATTERY EMERGENCY FIXTURE (R=REMOTE HEAD)

UP 4'-0", UNLESS NOTED OTHERWISE

DIMMER CONTROL SWITCH

SWITCH WITH GROUNDED DUPLEX RECEPTACLE

REMOTE CONTROL SWITCH OR PUSH BUTTON

GROUNDED DUPLEX RECEPTACLE
GROUNDED DUPLEX RECEPTACLE MOUNTED ABOVE COUNTER HEIGHT
GROUNDED DUPLEX GFCI RECEPTACLE
GROUNDED DUPLEX GFCI RECEPTACLE MOUNTED ABOVE COUNTER HEIGHT
GROUNDED SINGLE RECEPTACLE

POWER, DATA AND TELEPHONE FLUSH FLOOR BOX WITH COVER.

SPECIAL GROUNDED RECEPTACLE, SIZE AND TYPE AS SPECIFIED
GROUNDED FLUSH FLOOR RECEPTACLE
—WM— PLUGMOLD (VERIFY TYPE AND MOUNTING)

PROVIDE EMPTY CONDUIT FOR DATA/TELEPHONE TO ABOVE SUSPENDED CEILING AS REQUIRED. SEE LOW VOLTAGE CONDUIT SIZING TABLE. (VERIFY) OUTLET WITH FINAL CONNECTIONS TO EQUIPMENT. EQUIPMENT FURNISHED BY OTHERS (FBO). PROVIDE NECESSARY RECEPTACLE, SAFETY SWITCH, WIRING ETC. FOR COMPLETE INSTALLATION VERIFY EXACT LOCATION AND HEIGHT BEFORE ROUGH-IN.

CEILING JUNCTION BOX WITH FLUSH COVER
 WALL JUNCTION BOX SAFETY SWITCH (F=FUSED)

SURFACE ELECTRICAL PANELBOARD
RECESSED ELECTRICAL PANELBOARD
MOTOR CONTROLLER
CONTROL RELAY (LETTER=FLOOR, NUMBER=NO. OF RELAY)

TRANSFORMER

CONDUIT RUN CONCEALED (OR PARTIALLY CONCEALED) IN CEILINGS OR WALLS

CHARACTER MARKS=

IF NONE ARE SHOWN

TWO ARE REQUIRED

NUMBER OF WIRES,

CONDUIT RUN CONCEALED IN OR UNDER FLOORS
CONDUIT RUN EXPOSED, IN STRAIGHT LINES
CONDUIT RUN UNDERGROUND
EMERGENCY WIRING, IN CONDUIT, CONCEALED

HOMERUN TO PANEL, IN CONDUIT, CONCEALED
ARROWS INDICATE NUMBER OF CIRCUITS
TELEPHONE CONDUIT RUN ABOVE CEILINGS

TELEPHONE CONDUIT RUN ABOVE CEILINGS
OR IN WALLS
TELEPHONE CONDUIT RUN IN OR UNDER FLOORS

EMPTY CONDUIT
CONCEALED

TELECOMMUNICATIONS OUTLET

+ $\top$ 

-- U--

ELECTRICAL OUTLET BOXES INSTALLED IN FIRE RATED ASSEMBLIES SHALL COMPLY WITH LATEST IBC, SECTION 712 (NOT LESS THAN 24" O.C.)

ELECTRICAL DEVICES INSTALLED IN ACCORDANCE WITH ADA SPECIFICATIONS. VERIFY HEIGHTS AND SPECIFIC DIMENSIONS.

ELECTRICAL CONTRACTOR SHALL PROVIDE ALL NECESSARY LIGHTING CONTROLS AS TO COMPLY WITH LOCAL ENERGY CODE REQUIREMENTS. ENERGY MANGAGEMENT PRODUCTS SHALL BE EQUAL TO SENSORSWITCH. E.C. TO DETERMINE IF WALL OR CEILING OCCUPANCY DEVICE TYPE IS REQUIRED BASED ON PROJECT DESIGN AND IDEAL USE OF DEVICE. PROVIDE CONTROL DEVICE WITH SUITABLE FEATURES FOR INSTALLATION LOCATIONS OF THE CONTROL DEVICES REQUIRED FOR ENERGY CODE COMPLIANCE.

## ELECTRICAL ABBREVIATIONS

AC	ABOVE COUNTER	HP	HORSEPOWER
AFF	ABOVE FINISHED FLOOR	IWS	IN WALL SPACE
ASC	ABOVE SUSPENDED CEILING	JB	JUNCTION BOX
С	CONDUIT	KW	KILOWATTS
CF	CARPET FLANGE	LTG	LIGHTING
CTC	CLOSE TO CEILING	MAX	MAXIMUM
CTF	CLOSE TO FLOOR	MFG	MANUFACTURER
CTW	CLOSE TO WALL	MIN	MINIMUM
E	EMERGENCY	MOB	MOTOR OUTLET BOX
EBBC	ELECTRIC BASEBOARD	MTD	MOUNTED
	CONVECTOR	NEC	NATIONAL ELECTRICAL CODE
EDH	ELECTRIC DUCT HEATER	NL	NIGHT LIGHT
ESUH	ELECTRIC SUSPENDED UNIT	OS	OCCUPANCY SENSING DEVICE
	HEATER	PH	PHASE (Ø)
EWC	ELECTRIC WATER COOLER	PNL	PANEL
EWH	ELECTRIC WATER HEATER	SW	SWITCH
FAAP	FIRE ALARM ANNUNCIATOR PANEL	TFA	TO FLOOR ABOVE
FACP	FIRE ALARM CONTROL PANEL	TFB	TO FLOOR BELOW
FBO	FURNISHED BY OTHERS	TTC	TELEPHONE TERMINAL CABINET
FFA	FROM FLOOR ABOVE	UNO	UNLESS NOTED OTHERWISE
FFB	FROM FLOOR BELOW	V	VOLTS
FLA	FULL LOAD AMPS	W	WIRE
GFI	GROUND FAULT INTERRUPTER	WP	WEATHER PROOF

## FIRE ALARM SYSTEM SYMBOLS

ACP EXISTING FIRE ALARM CONTROL PANEL SIMPLEX

F FIRE ALARM SYSTEM WIRING IN CONDUIT, CONCEALED WHERE POSSIBLE

FIRE ALARM SYSTEM CEILING MOUNTED SMOKE DETECTOR

## FIRE ALARM SYSTEM NOTES:

FIRE ALARM SYSTEM SHALL BE INSTALLED AND WIRED IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS AND WIRING DIAGRAMS. CONTRACTOR SHALL PROVIDE IN SHOP DRAWINGS THE FINAL WIRING SCHEMATIC & ZONE SCHEDULE & BATTERY CALC'S AS REQUIRED.

E.C. TO VERIFY ALL LOCAL REQUIREMENTS WITH LOCAL AUTHORITY PRIOR TO SUBMITTING FINAL BID TO INCLUDE ALL NECESSARY MATERIALS REQUIRED FOR A COMPLETE SYSTEM.

ELECTRICAL CONTRACTOR TO INCLUDE ALL NECESSARY LABOR AND MATERIALS REQUIRED FOR FIRE ALARM SYSTEM EXPANSION. ALL LABOR AND MATERIALS SHALL BE INCLUDED IN FINAL BID. COORDINATE WITH THE LOCAL AUTHORITY PRIOR TO SUBMITTING FINAL BIDS TO INCLUDE ALL MATERIAL AND LABOR.

#### ALL CANDELA INTENSITIES SHALL BE FIELD ADJUSTED PER NFPA 72 SECTION 7.5. (TYPICAL).

ALL NEW ALARM DEVICES SHALL MEET ALL NFPA AND A.D.A OPERATION AND MOUNTING REQUIREMENTS.

ELECTRICAL CONTRACTOR SHALL INCLUDE IN HIS FINAL BID ANY ADDITIONAL COMPONENTS REQUIRED FOR NEW DEVICES TO BE TIED INTO THE EXISTING FACP AS REQUIRED. ALL FIRE ALARM SYSTEM EXPANSION WORK SHALL BE FIELD VERIFIED AND ALL LABOR AND MATERIALS SHALL BE INCLUDED IN THE FINAL SUBMITTED BID. PROVIDE ALL REQUIRED DEVICES REQUIRED FOR CONNECTION TO EXISTING FACP. BID SHALL INCLUDE ALL LABOR AND RELATED EQUIPMENT REQUIRED FOR

## FIRE ALARM SYSTEM SPECIFICATIONS

GENERAL

A. CONTRACTOR SHALL FIELD VERIFY EXISTING FACP AND PROVIDE A FULLY FUNCTIONAL ALARM SYSTEM

WITH NEW DEVICES AS INDICATED ON PLAN.

THE CONTRACTOR SHALL PROVIDE ALL WIRING AND SYSTEM EXPANSION AS REQUIRED TO COMPLETE WORK, INCLUDING, BUT NOT LIMITED TO: INSTALLATION AND RE-WIRING OF ANY SMOKE AND HEAT DETECTORS, INSTALLATION AND WIRING OF ALL VISUAL AND AUDIBLE NOTIFICATION APPLIANCES, ADDITIONAL NAC POWER DEVICES FOR NAC CIRCUITS AS REQUIRED, ADDITIONAL EXPANSION CARDS OR SOFTWARE PROGRAMMING FOR THE EXISTING FACP TO PROVIDE THE ADDITIONAL ZONING FOR THE ALTERATIONS, AND SYSTEM TESTING/VERIFICATION.

C. THE INSTALLATION SHALL CONFORM TO NFPA 72, STATE AND LOCAL CODES AS WELL AS THOSE AUTHORITIES HAVING JURISDICTION.

. EXISTING FIRE ALARM SYSTEM CONTROL PANEL

EXISTING FACP MANUF/MODEL: SIMPLEX 4100
 ANNUNCIATION: OPERATION OF ALARM INITIATING DEVICES SHALL BE ANNUNCIATED AT THE FACP, THE FAAP, AND ALL REMOTE ANNUNCIATORS, INDICATING THE LOCATION AND TYPE OF DEVICE AT THE FACP.

B. SMOKE AND HEAT DETECTORS
 1. DETECTORS SHALL MEET THE REQUIREMENTS OF THE ADA (AMERICANS WITH DISABILITIES ACT) AS WELL AS UL STANDARD 1971.

A. ELECTRICAL CONTRACTOR TO COMPLETELY WIRE AND RE-PROGRAM SYSTEM AS REQUIRED.

GENERAL ALARM: A SYSTEM GENERAL ALARM SHALL INCLUDE:

1. INDICATION OF ALARM CONDITION AT THE FACP AND ANY REQUIRED REMOTE ANNUNCIATOR(S).

INDICATION OF ALARM CONDITION AT THE FACP AND ANY REQUIRED REMOTE ANNUNCIATOR(S).
 IDENTIFICATION OF THE DEVICE THAT IS THE SOURCE OF THE ALARM AT THE FACP AND ANY REQUIRE DEMOTE ANNUNCIATOR(S).

OPERATION OF AUDIBLE AND VISIBLE NOTIFICATION APPLIANCES THROUGHOUT THE BUILDING UNTIL SILENCED AT FACP. AUDIBLE AND VISUAL ALARM NOTIFICATION SHALL OPERATE UNDER SYNCHRONIZE TEMPORAL CODE.

4. UNLOCKING DESIGNATED DOORS.

CODES SHALL BE PROVIDED FOR THE FACP.

5. SHUTTING DOWN SUPPLY AND RETURN FANS SERVING ZONE WHERE ALARM IS INITIATED.6. INITIATION OF SMOKE CONTROL SEQUENCE.

INITIATION OF SMOKE CONTROL SEQUENCE.
 a. NOTIFYING THE LOCAL FIRE DEPARTMENT.

7. ALL CIRCUITS REQUIRING SYSTEM-OPERATING POWER SHALL BE 24 VDC AND SHALL BE INDIVIDUALLY FUSED AT THE CONTROL PANEL.

C. AN UPDATED. TYPED DEVICE DIRECTORY. IDENTIFYING EACH INDIVIDUAL SLC/NAC CIRCUIT. ZONES AND DEVICE

## LIGHTING FIXTURE SCHEDULE

AND TYPE

FIXTURE | LAMP SIZE

TYPE

A1	80 CRI L.E.D., 4000K LP840, 10,000 LUMENS (81 WATTS)	PENDANT MOUNTED TO CEILING (VERIFY)	LITHONIA NO. TZL1D-L96-10000LM-FST- MVOLT-40K-80CRI-E15WLCP- LBOZU-WH-SQ*. *=PROVIDE MOUNTING ACCESSORIES AS REQUIRED FOR INSTALL.	2.2"W X 96"L PENDANT MOUNTED LED FIXTURE WITH FROSTED DIFFUSER LENS, MULTI-VOLT LED DRIVER WITH INTEGRAL EMERGENCY BATTERY AND OCCUPANCY SENSOR.		
B1	80 CRI L.E.D., 4000K LP840, 4800 LUMENS (37 WATTS)	RECESSED IN GRID CEILING (VERIFY)	LITHONIA NO. EPANL-2X2-48LM-80CRI- 40K-MIN1	2' X 2' LED RECESSED EDGE-LIT FLAT PANEL WITH SATIN WHITE ACRYLIC LENS, MULTI-VOLT, LED 0-10V DIMMING DRIVER.		
NOTES:	PROVIDE UL APPROVE	D LUMINAIRE D		S ILLUMINATION UPON POWER LOSS		

THE FIXTURE SCHEDULE DOES NOT NECESSARILY LIST ALL ACCESSORIES AND HARDWARE

CONSTRUCTION TO BE ENCOUNTERED FOR THIS PROJECT. IT IS THE ELECTRICAL CONTRACTORS

ACCESSORIES AND HARDWARE AS REQUIRED FOR THE INSTALLATION. ALL ADDITIONAL HARDWARE

NECESSARY FOR THE COMPLETION OF INSTALLATION, NOR DOES IT DETAIL THE CEILING

RESPONSIBILITY TO PROPERLY DETERMINE AND PROVIDE THE CORRECT COMPONENTS,

NUMBER

MANUFACTURER'S

REMARKS

MOUNTING

## GENERAL NOTES APPLY TO ALL SHEETS

SEE DETAILS AND SCHEDULES ON DRAWINGS AND SPECIFICATIONS FOR MEANING OF ABBREVIATIONS AND ADDITIONAL REQUIREMENTS AND INFORMATION. CHECK ARCHITECTURAL, STRUCTURAL, AND OTHER MECHANICAL AND ELECTRICAL DRAWINGS FOR SCALE, SPACE LIMITATIONS, BEAMS, DOOR SWINGS, WINDOWS, COORDINATION, ADDITIONAL INFORMATION, ETC. AND REPORT ANY DESCREPANCIES, CONFLICTS, ETC. TO ARCHITECT PRIOR TO SUBMITTING BID.

FOR MOUNTING FIXTURES SHALL BE PROVIDED AT NO EXTRA COST

ALL EQUIPMENT FURNISHED BY OTHERS (FBO) SHALL BE PROVIDED WITH PROPER MOTOR STARTERS, DISCONNECTS, CONTROLS, ETC. BY THE ELECTRICAL CONTRACTOR UNLESS SPECIFICALLY NOTED OTHERWISE. THE ELECTRICAL CONTRACTOR SHALL INSTALL AND COMPLETELY WIRE ALL ASSOCIATED EQUIPMENT IN ACCORDANCE WITH THE MANUFACTURER'S WIRING DIAGRAMS AND AS REQUIRED FOR A COMPLETE OPERATING INSTALLATION. ELECTRICAL CONTRACTOR SHALL VERIFY AND COORDINATE ELECTRICAL CHARACTERISTICS AND REQUIREMENTS OF (FBO) EQUIPMENT PRIOR TO ROUGH-IN OF CONDUIT AND WIRING TO AVOID CONFLICTS.

CONTRACTOR SHALL VERIFY FINAL LOCATIONS AND CEILING TYPES FOR ALL ELECTRICAL EQUIPMENT WITH ARCHITECTURAL REFLECTED CEILING PLAN AND ALL TRADES BEFORE ORDERING OR ROUGH-IN OF EQUIPMENT TO AVOID CONFLICTS.

CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING AND PATCHING, INCLUDING CORE DRILLING, SAW CUTTING, ETC., AS REQUIRED TO ACCOMMODATE HIS WORK. CUTTING AND PATCHING AND PAYMENT OF SAID WORK SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR REQUIRING THE DISTURBANCE BUT SAME SHALL BE DONE BY A GENERAL CONTRACTOR. IT SHALL BE THE RESPONSIBILITY OF THE APPROPRIATE ELECTRICAL CONTRACTOR TO GIVE QUANTITIES OF PATCHING REQUIREMENTS TO A GENERAL CONTRACTOR.

CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL AND REPLACEMENT OF PRESENT CEILINGS, LIGHT FIXTURES, DIFFUSERS, DUCTWORK, PIPING, CONDUIT, ETC., AS REQUIRED FOR THE INSTALLATION OF HIS WORK. REMOVAL, REPLACEMENT AND PAYMENT FOR MECHANICAL/PLUMBING ITEMS SHALL BE THE RESPONSIBILITY OF THE APPLICABLE ELECTRICAL CONTRACTOR. REMOVAL AND REPLACEMENT OF PRESENT CEILINGS, ETC., SHALL BE THE RESPONSIBILITY OF CONTRACTOR MAKING THE DISTURBANCE BUT SAME SHALL BE DONE BY A GENERAL CONTRACTOR. IT SHALL BE THE RESPONSIBILITY OF THE APPROPRIATE ELECTRICAL CONTRACTOR TO GIVE QUANTITIES OF REMOVAL/REPLACEMENT REQUIREMENTS TO A GENERAL CONTRACTOR.

ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR LEGALLY DISPOSING OF ALL FIXTURE BALLASTS AND LAMPS FROM THE OWNER'S PROPERTY. MANAGEMENT AND DISPOSAL OF FLUORESCENT LIGHT BULBS AND OTHER MERCURY-CONTAINING BULBS SHALL COMPLY WITH THE RESOURCE CONSERVATION AND RECOVERY ACT (RCRA) UNIVERSAL WASTE RULE (UWR) AND SUBTITLE C HAZARDOUS WASTE REGULATIONS. REFER TO SPECIFICATIONS SECTION 017419 FOR ADDITIONAL INFORMATION.

## ELECTRICAL COORDINATION NOTE

THE ELECTRICAL CONTRACTOR SHALL COORDINATE ALL ELECTRICAL REQUIREMENTS ASSOCIATED WITH ALL OTHER TRADES THAT INVOLVE THE ELECTRICAL CONTRACTOR TO PROVIDE POWER WIRING FOR DEVICES AND SYSTEMS PROVIDED BY OTHER TRADES.

ELECTRICAL CONTRACTOR SHALL COORDINATE ALL ASPECTS OF WORK RELATED TO THESE SYSTEMS AND DEVICES PRIOR TO SUBMITTING FINAL BID. INCLUDE ALL NECESSARY LABOR AND MATERIALS ASSOCIATED WITH OTHER TRADES AS REQUIRED FOR COMPLETE OPERATIONAL SYSTEMS THAT REQUIRE THE ELECTRICAL CONTRACTOR TO WIRE.

## GENERAL DEMOLITION NOTE

FOR ALL WALLS, CEILINGS, FLOORS, ETC. REQUIRED FOR CONSTRUCTION DEMOLITION WORK OR NEW CONSTRUCTION WORK, INCLUDING, BUT NOT LIMITED TO ITEMS SHOWN REMOVE (PX) AND/OR REMOVE AND RELOCATE (PXN-PN): ALL ELECTRICAL EQUIPMENT, DEVICES, BOXES, CONDUIT, WIRING, ETC., AS REQUIRED, FOR DEMOLITION OF PRESENT CONSTRUCTION AND TO AVOID INTERFERENCE WITH NEW CONSTRUCTION. (VERIFY BEFORE BIDDING TO INCLUDE ALL NECESSARY MATERIALS AND LABOR)

## EXISTING PANELBOARD NOTES

ELECTRICAL CONTRACTOR SHALL FIELD VERIFY USE OF EXISTING BRANCH CIRCUITS BEING REUSED FOR NEW. UPDATE ALL PANEL SCHEDULES AS REQUIRED. REWORK BRANCH CIRCUITS INDICATED IF NEEDED TO ACCOMMODATE NEW ELECTRICAL DEVICES. TYPICAL FOR ANY EXISTING PANELS BEING REVISED.



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RICHARD L. JOHN ASSOCIATES | ARCHIT

STRICAL SYMBOLS, NOTES
REVIATIONS AND LIGHTIN

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