MECHANICAL SYMBOLS AND ABBREVIATIONS

SYMBOLS INDICATED HERE AND NOT USED IN THE CONTRACT DOCUMENTS DO NOT APPLY TO THIS PROJECT. ADDITIONAL SYMBOLS MAY BE INDICATED IN THE CONTRACT DOCUMENTS.

SHEET SYMBOLS

- EQ # — SCHEDULED EQUIPMENT DESIGNATION. -TOP INDICATES EQUIPMENT ABBREVIATION -BOTTOM INDICATES EQUIPMENT NUMBER REFER TO EQUIPMENT SCHEDULES
- 2 — SPECIALTY ITEMS. (I.E. GAUGE FILTER, ETC.) REFER TO EQUIPMENT LIST
- REFER M-1 — PLAN CONTINUATION REFERENCE. -BOTTOM INDICATES ON WHICH SHEET CONTINUATION APPEARS
- 1 / M-1 — SECTION DESIGNATION. -TOP INDICATES SECTION NUMBER, -BOTTOM INDICATES ON WHICH SHEET SECTION APPEARS
- 2 / M-1 — DETAIL REFERENCE. -TOP INDICATES SECTION NUMBER, -BOTTOM INDICATES ON WHICH SHEET SECTION APPEARS
- A/15B-6 — DETAIL REFERENCE. -TOP INDICATES SECTION NUMBER, -BOTTOM INDICATES ON WHICH SHEET SECTION APPEARS
- MATCHLINE DESIGNATION
- ELEVATION DESIGNATION. REFERENCE OFFICIAL PROJECT DATUM
- REVISION REFERENCE. REFER TO SHEET REVISION BLOCK
- SHEET KEYNOTE REFERENCE
- ROOM NAME / 101 — ROOM NAME & NUMBER DESIGNATION
- 100 — CONSTRUCTION BULLETIN REVISION NUMBER
- POINT OF NEW CONNECTION TO EXISTING
- HALFTONE LIGHT LINE INDICATES EXISTING WORK
- HEAVY DASHED LINE WITH HATCH INDICATES EXISTING WORK TO BE DEMOLISHED
- HEAVY LINE INDICATES NEW WORK

FIELD MOUNTED CONTROLS

- T — THERMOSTAT OR TEMPERATURE SENSOR
- H — HUMIDISTAT OR HUMIDITY SENSOR
- T N — NIGHT CYCLE CONTROL THERMOSTAT
- T A — ASPIRATING THERMOSTAT
- T B — THERMOSTAT WITH INSULATING BASE
- PT — PRESSURE TRANSMITTER
- PDT — PRESSURE DIFFERENTIAL TRANSMITTER
- F SD — DUCT SMOKE DETECTOR
- P — PRESSURE SENSOR
- A CO2 — CARBON DIOXIDE SENSOR
- A CO — CARBON MONOXIDE SENSOR
- A O2 — OXYGEN SENSOR
- A VOC — VOC SENSOR
- A R — REFRIGERANT SENSOR

COMMON INSTRUMENTATION DEVICES

- TI OR — TEMPERATURE INDICATOR (THERMOMETER) WITH THERMOWELL
- TI — TEMPERATURE INDICATOR (THERMOMETER) WITHOUT THERMOWELL (DIRECT INSERTION)
- TW — THERMOWELL
- TE — TEMPERATURE ELEMENT (DIRECT INSERTION)
- TS — STRAP ON PIPE TEMPERATURE INSTRUMENT (AQUASTAT)
- TT TE — TEMPERATURE ELEMENT WITH TRANSMITTER AND THERMOWELL
- PI OR — PRESSURE INDICATOR (PRESSURE GAUGE) WITH GAUGE VALVE
- GAUGE CONNECTION WITH GAUGE VALVE
- PDT — PRESSURE DIFFERENTIAL TRANSMITTER
- FE OR — FLOW ELEMENT (FLOW SENSOR)
- FT FE — FLOW ELEMENT WITH TRANSMITTER (FLOW METER)
- FI — FLOW INDICATOR/FLOW METER
- FS OR — FLOW SWITCH

DUCTWORK SPECIALTIES

- DUCT REHEAT COIL
- ACCESS DOOR
- BUTTERFLY TYPE VALVE WITH CONTROLLER LOCATED ON SIDE OF VALVE
- OR — BUTTERFLY TYPE VALVE WITH CONTROLLER ANGLED DOWN, SEE DETAIL
- VENTURI VALVE WITH CONTROLLER LOCATED ON SIDE OF VALVE
- OR — VENTURI VALVE WITH CONTROLLER ANGLED DOWN, SEE DETAIL
- FLEXIBLE DUCT
- DUCT FLEXIBLE CONNECTION
- POINT OF CHANGE IN DUCT CONSTRUCTION BY PRESSURE CLASS
- VAV SUPPLY AIR VALVE
- AM — AIR FLOW MEASURING STATION

DUCTWORK AT DIFFUSERS & GRILLES

SINGLE LINE-HARD OR FLEXIBLE CONNECTION / DOUBLE LINE-HARD OR FLEXIBLE CONNECTION

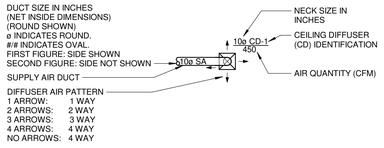
- SUPPLY DIFFUSER OR GRILLE (HORIZONTAL MOUNT)
- ROUND DIFFUSER
- RETURN REGISTER OR GRILLE (HORIZONTAL MOUNT)
- EXHAUST REGISTER OR GRILLE (HORIZONTAL MOUNT)
- EXHAUST OR RETURN REGISTER OR GRILLE (VERTICAL MOUNT)
- SUPPLY REGISTER OR GRILLE (VERTICAL MOUNT)

DAMPERS

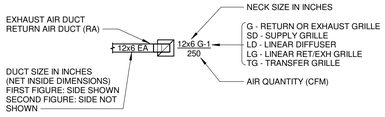
- MANUAL BALANCING DAMPER
- CONTROL DAMPER
- BD — BACKDRAFT DAMPER
- FA — 3 HOUR RATED FIRE DAMPER
- F — 1 1/2 HOUR RATED FIRE DAMPER
- BT — OR — BUBBLE TIGHT DAMPER
- S — SMOKE DAMPER
- FS — COMBINATION FIRE/ SMOKE DAMPER
- OPPOSED BLADE DAMPER
- PARALLEL BLADE DAMPER
- GENERAL

(XX) = DEFINES FAIL POSITION OR NORMAL POSITION
(FC) = FAIL CLOSED (DAMPER)
(FO) = FAIL OPEN (DAMPER)
(NC) = NORMALLY CLOSED (DAMPER)
(NO) = NORMALLY OPEN (DAMPER)

DIFFUSER NOTATION



GRILLE, REGISTER NOTATION



DUCTWORK

SINGLE / DOUBLE

- RECTANGULAR/ROUND BRANCH TAKE-OFF OR ROUND/ROUND BRANCH TAKE-OFF
- W, R=1.5W — RADIUS ELBOW
- 45° LATERAL BRANCH
- R=1.5W, W — RADIUS TEE
- SQUARE TEE (FOR LOW PRESSURE SA DIVERGING ONLY)
- BULLHEAD TEE (FOR LOW PRESSURE SA DUCTWORK ONLY)
- TRANSITION - ECCENTRIC — 15° MAX. FOR DIVERGING, 25° MAX FOR CONVERGING
- TRANSITION - CONCENTRIC — 15° MAX. FOR DIVERGING, 25° MAX FOR CONVERGING
- EXISTING DUCT TO REMAIN
- EXISTING DUCT TO BE REMOVED
- LINE CONTINUATION BREAK (RECTANGULAR, ROUND)
- SUPPLY AIR (SA) OR OUTDOOR AIR (OA) DUCT (SOLID LINES TYPICAL FOR SUPPLY AIR AND OUTDOOR AIR UP, HIDDEN LINE DOWN)
- RETURN AIR (RA), RELIEF AIR, OR TRANSFER AIR (TA) DUCT (SOLID LINES TYPICAL FOR RETURN, RELIEF,OR TRANSFER AIR UP, HIDDEN LINE DOWN)
- EXHAUST AIR (EA) DUCT (SOLID LINES TYPICAL FOR EXHAUST AIR UP, HIDDEN LINE DOWN)
- DUCT RISE/DROP W /90° ELBOWS (SUPPLY RECTANGULAR DUCT SHOWN)
- R — DUCT RISE (R)/DROP(D) W/ 45° ELBOWS (RECTANGULAR DUCTS)
- DUCT RISE/DROP W/ 90° ELBOWS (ROUND DUCTS)
- DUCT RISE/DROP W/ 90° ELBOWS (OVAL DUCTS)
- R — DUCT RISE(R)/DROP(D) W/ 45° ELBOWS (ROUND OR OVAL DUCTS)

ACTUATORS

- MANUAL
- GENERAL
- MODULATING
- MODULATING WITH PILOT POSITIONER
- S — SOLENOID
- M — ELECTRIC MOTOR DRIVEN
- TWO POSITION SPRING RETURN
- DOUBLE ACTING TWO POSITION
- FUSIBLE LINK

PIPING SPECIALTIES

- GENERAL PIPELINE STRAINER WITHOUT DRAIN BLOWDOWN VALVE
- GENERAL PIPELINE STRAINER WITH DRAIN BLOWDOWN VALVE
- STEAM & CONDENSATE PIPELINE STRAINER WITH BLOWDOWN VALVE
- WATER SYSTEM PIPELINE STRAINER WITH BLOWDOWN VALVE
- SUCTION DIFFUSER
- DUPLEX BASKET STRAINER
- BASKET STRAINER
- FLANGE
- UNION
- 2" AND SMALLER, CAP OR PLUG / 2-1/2" AND LARGER, BLIND FLANGE
- INVERTED BUCKET STEAM TRAP
- FLOAT AND THERMOSTATIC STEAM TRAP
- THERMOSTATIC STEAM TRAP
- THERMODYNAMIC STEAM TRAP
- B — BIMETAL STEAM TRAP
- EXPANSION JOINT
- PIPE FLEXIBLE CONNECTOR
- BALL JOINT
- FILTER/REGULATOR
- THERMOMETER
- PRESSURE GAUGE (WITH GAUGE VALVE)
- FLOW ELEMENT (SENSOR)
- FLOW SWITCH
- AUTOMATIC AIR VENT
- MANUAL AIR VENT
- THERMOSTATIC AIR VENT
- TEST PLUG (PRESSURE/TEMP.)
- ECCENTRIC REDUCER
- CONCENTRIC REDUCER
- DIRECTION OF PITCH (DOWN)
- PIPE GUIDE
- PIPE SLEEVE
- PIPE ANCHOR

PIPING

SINGLE-LINE / DOUBLE-LINE

- ELBOW DOWN
- ELBOW UP
- BOTTOM CONNECTION (45° OR 90°)
- TOPCONNECTION (45° OR 90°)
- R — 45° PIPE RISE(R) / DROP(D)
- TEE (REFER TO SPECIFICATION FOR SIDE, TOP OR BOTTOM TEE)
- EXISTING PIPING TO REMAIN
- EXISTING PIPING TO BE REMOVED
- LINE CONTINUATION BREAK
- FLOW DIRECTION
- N/A — CONNECTION POINT
- OR — ECCENTRIC REDUCER
- CONCENTRIC REDUCER

VALVES

- BUTTERFLY VALVE
- GATE VALVE
- GLOBE VALVE
- BALL VALVE
- SHUTOFF VALVE (BUTTERFLY VALVE FOR 2-1/2" AND LARGER, BALL VALVE FOR 2" AND SMALLER)
- GAUGE VALVE
- PLUG VALVE
- BALANCING VALVE
- THERMAL EXPANSION VALVE
- SPRING CHECK VALVE
- SWING CHECK VALVE
- DIAPHRAGM VALVE
- S — 2-WAY SOLENOID CONTROL VALVE (VALVE BODY AS SPECIFIED)
- XX — 2-WAY MOTOR CONTROL VALVE (VALVE BODY AS SPECIFIED)
- XX — 2-WAY CONTROL VALVE (VALVE BODY AS SPECIFIED)
- XX — 3-WAY MIXING VALVE WITH ARROW INDICATING FAIL POSITION
- 3-WAY DIVERTING VALVE WITH ARROW INDICATING FAIL POSITION
- TRIPLE DUTY VALVE
- GAS SHUTOFF VALVE
- ANGLE VALVE
- DRAIN VALVE W/ HOSE CONNECTION
- DRAIN VALVE W/ HOSE CONNECTION AND CAP
- LOCKSHIELD VALVE
- PRESSURE REDUCING VALVE - PRV (DOWNSTREAM CONTROL POINT)
- AIR-LOADED PRESSURE REDUCING VALVE - PRV (DOWNSTREAM CONTROL POINT)
- INLET PRESSURE REGULATING VALVE (UPSTREAM CONTROL POINT)
- GAS PRESSURE REGULATOR
- OR / RPBP — REDUCED PRESSURE BACKFLOW PREVENTER (RPBP)
- PRESSURE RELIEF VALVE (RV) OR SAFETY VALVE (SV)
- VACUUM RELIEF/VACUUM BREAKER
- RUPTURE DISK - PRESSURE RELIEF
- RUPTURE DISK - VACUUM RELIEF
- FLOAT OPERATED VALVE
- QUICK OPENING VALVE

(XX) = DEFINES FAIL POSITION OR NORMAL POSITION
(FC) = FAIL CLOSED (CONTROL VALVE)
(FO) = FAIL OPEN (CONTROL VALVE)
(NC) = NORMALLY CLOSED (CONTROL VALVE)
(NO) = NORMALLY OPEN (CONTROL VALVE)

PIPING SYSTEM LABELS

- CCC — COOLING COIL CONDENSATE
- CHS — CHILLED WATER SUPPLY
- CHR — CHILLED WATER RETURN
- HWR — HEATING HOT WATER RETURN
- HWS — HEATING HOT WATER SUPPLY
- CBR — CHILLED BEAM CHILLED WATER RETURN
- CBS — CHILLED BEAM CHILLED WATER SUPPLY

ABBREVIATIONS - GENERAL

ADJ	- ADJUSTABLE	L	- LENGTH
AFF	- ABOVE FINISHED FLOOR	LAT	- LEAVING AIR TEMPERATURE
AL	- ALUMINUM	LB	- POUND
ALT	- ALTERNATE	LBS	- POUNDS
AP	- ACCESS PANEL	LEA	- LABORATORY EXHAUST AIR
AVG	- AVERAGE	LP	- LOW POINT
		LSA	- LABORATORY SUPPLY AIR
BE	- BATTERY EXHAUST	LWT	- LEAVING WATER TEMPERATURE
BHP	- BRAKE HORSEPOWER		
BOD	- BOTTOM OF DUCT	MAX	- MAXIMUM
BOP	- BOTTOM OF PIPE	MBH	- THOUSANDS OF BTU PER HOUR
BTU	- BRITISH THERMAL UNIT	MC	- MECHANICAL CONTRACTOR
BTUH	- BRITISH THERMAL UNITS PER HOUR	MEP	- MECHANICAL, ELECTRICAL, AND PIPING
BWE	- BAKED WHITE ENAMEL	MER	- MECHANICAL EQUIPMENT ROOM
		MIN	- MINIMUM
CA	- COMBUSTION AIR		
CAP	- CAPACITY	NA	- NOT APPLICABLE
CAV	- CONSTANT AIR VOLUME	NC	- NORMALLY CLOSED
CE	- CAGEWISH EXHAUST	NIC	- NOT IN CONTRACT
CFCI	- CONTRACTOR FURNISHED, CONTRACTOR INSTALLED	NO	- NORMALLY OPEN
		NOM	- NOMINAL
CFH	- CUBIC FEET PER HOUR	NPS	- NOMINAL PIPE SIZE
CFM	- CUBIC FEET PER MINUTE	NPT	- NATIONAL PIPE THREAD
CL	- CENTERLINE	NTS	- NOT TO SCALE
CLG	- CEILING		
COND	- CONDENSATE / CONDENSER	OA	- OUTSIDE AIR
		OC	- ON CENTER
CONN	- CONNECTION	OED	- OPEN END DUCT
COP	- CENTER OF PIPE	OFCI	- OWNER FURNISHED, CONTRACTOR INSTALLED
CS	- CARBON STEEL		
CU	- COPPER	OFOI	- OWNER FURNISHED, OWNER INSTALLED
DAT	- DISCHARGE AIR TEMPERATURE	OV	- OUTLET VELOCITY
DB	- DRY BULB		
DDC	- DIRECT DIGITAL CONTROL	PA	- PLANT AIR
DE	- DISHWASHER EXHAUST	PC	- PLUMBING CONTRACTOR
DIA	- DIAMETER	PCF	- POUNDS PER CUBIC FOOT
DIM	- DIMENSION	PD	- PRESSURE DROP
DP	- DEW POINT	PG	- PROPYLENE GLYCOL
DX	- DIRECT EXPANSION	PH	- PHASE
		PP	- POLYPROPYLENE
EA	- EXHAUST AIR / EACH	PPH	- POUNDS PER HOUR
EAT	- ENTERING AIR TEMPERATURE	PSF	- POUNDS PER SQUARE FOOT
EC	- ELECTRICAL CONTRACTOR	PSI	- POUNDS PER SQUARE INCH
EDR	- EQUIVALENT DIRECT RADIATION	PSIA	- POUNDS PER SQUARE INCH ABSOLUTE
EFF	- EFFIDENCY		
EG	- ETHYLENE GLYCOL	PSIG	- POUNDS PER SQUARE INCH GAUGE
EL	- ELEVATION		
ESP	- EXTERNAL STATIC PRESSURE		
ETR	- EXISTING TO REMAIN	QTY	- QUANTITY
EWT	- ENTERING WATER TEMPERATURE		
EXH	- EXHAUST	RA	- RETURN AIR
		RH	- RELATIVE HUMIDITY
FA	- FIELD ADJUSTABLE	RPM	- REVOLUTIONS PER MINUTE
FAT	- FINAL AIR TEMPERATURE		
FC	- FAIL CLOSED	SA	- SUPPLY AIR
FE	- FUME HOOD EXHAUST	SCCR	- SHORT CIRCUIT CURRENT RATING
FLA	- FULL LOAD AMPS	SCH	- SCHEDULE
FLP	- FAIL LAST POSITION	SOG	- SLAB ON GRADE
FLR	- FLOOR	SP	- STATIC PRESSURE
FO	- FAIL OPEN	SQ	- SQUARE
FPI	- FINS PER INCH	SS	- STAINLESS STEEL
FPM	- FEET PER MINUTE		
FPS	- FEET PER SECOND	TA	- TRANSFER AIR
FT	- FEET	TBR	- TO BE REMOVED
		TCC	- TEMPERATURE CONTROL CONTRACTOR
GA	- GAUGE	TE	- TOILET EXHAUST
GAL	- GALLONS	TOB	- TOP OF BEAM
GC	- GENERAL CONTRACTOR	TOD	- TOP OF DUCT / TOP OF DECK
GE	- GENERAL EXHAUST		
GPM	- GALLONS PER MINUTE	TOJ	- TOP OF JOIST
GR	- GRAINS	TOP	- TOP OF PIPE
GS	- GALVANIZED STEEL	TOS	- TOP OF SLAB
		TSP	- TOTAL STATIC PRESSURE
H	- HEIGHT	TYP	- TYPICAL
HP	- HORSE POWER / HIGH POINT	V	- VOLTS
		VAV	- VARIABLE AIR VOLUME
HR	- HUMIDITY RATIO / HOUR	VEA	- VIVARIUM EXHAUST AIR
		VEL	- VELOCITY
HZ	- HERTZ	VP	- VELOCITY PRESSURE
		VSA	- VIVARIUM SUPPLY AIR
IA	- INSTRUMENT AIR	VTR	- VENT THRU ROOF
IE	- INVERT ELEVATION		
IN	- INCH	W	- WATT / WIDTH
KE	- KITCHEN EXHAUST	WB	- WET BULB
KO	- KNOCK-OUT	WC	- WATER COLUMN
KW	- KILOWATT	WG	- WATER GAUGE
KWH	- KILOWATT - HOUR	WMG	- WIRE MESH GRILLE
		WPD	- WATER PRESSURE DROP
		WWM	- WELDED WIRE MESH
		X	- EXISTING

ABBREVIATIONS - EQUIPMENT

AC	- AIR CONDITIONING UNIT / AIR COMPRESSOR	G	- GRILLE
ACB	- ACTIVE CHILLED BEAM	H	- HUMIDIFIER
ACC	- AIR COOLED CONDENSER	HC	- HEATING COIL
ACCU	- AIR COOLED CONDENSING UNIT	HP	- HEAT PUMP
ACU	- AIR CONDITIONING UNIT	HRC	- HEAT RECOVERY COIL
ACDH	- AIR CURTAIN DOOR HEATER	HR	- HOSE REEL
ADS	- AIR AND DIRT SEPARATOR	HRD	- HEAT RECLAIM DEVICE
AHU	- AIR HANDLING UNIT	HRW	- HEAT RECOVERY WHEEL
AMD	- AIR MIXING DEVICE	HT	- HEAT TRACE
AS	- AIR SEPARATOR	HX	- HEAT EXCHANGER
AT	- AIR TERMINAL DEVICE		
		IH	- INTAKE HOOD
B	- BOILER	IRH	- INFRARED RADIANT HEATER
BBS	- BOILER BLOWDOWN SEPARATOR		
		L	- LOUVER
BCU	- BLOWER COIL UNIT	LD	- LINEAR DIFFUSER\
BFS	- BOILER FEEDWATER SYSTEM	LG	- LINEAR GRILLE
BH	- BOOSTER HUMIDIFIER		
BHRS	- BOILER BLOWDOWN HEAT RECOVERY SYSTEM	MAU	- MAKE-UP AIR UNIT
		MCC	- MOTOR CONTROL CENTER
C	- CONVECTOR	P	- PUMP
CC	- COOLING COIL	PCB	- PASSIVE CHILLED BEAM
CD	- CEILING DIFFUSER	PHC	- PREHEAT COIL
CH	- CHILLER	PRV	- PRESSURE REDUCING VALVE / PRESSURE REGULATING VALVE
CP	- CONDENSATE PUMP / CONTROL PANEL		
CRAC	- COMPUTER ROOM AIR CONDITIONER	RCP	- RADIANT CEILING PANEL
CT	- COOLING TOWER	RF	- RETURN FAN
CTS	- COOLING TOWER SUMP	RH	- RELIEF HOOD
CUH	- CABINET UNIT HEATER	RC	- REHEAT COIL
CV	- CONVERTOR	RTU	- ROOF TOP AIR HANDLING UNIT
		RV	- RELIEF VALVE
D	- DAMPER		
DA	- DEAERATOR	SAD	- SOUND ATTENUATING DEVICE
DC	- DUST COLLECTOR / DRY COOLER	SC	- SOLAR COLLECTOR
		SD	- SUCTION DIFFUSER
DH	- DEHUMIDIFIER	SF	- SUPPLY FAN
DT	- DAY TANK	SG	- SUPPLY GRILLE
		SSRV	- STEAM SAFETY RELIEF VALVE
EF	- EXHAUST FAN	ST	- STEAM TRAP
EG	- EXHAUST GRILLE		
EH	- EXHAUST HOOD / ELECTRIC HEATER	T	- TANK
		TF	- TRANSFER FAN
EJ	- EXPANSION JOINT	TG	- TRANSFER GRILLE
ERW	- ENERGY RECOVERY WHEEL	TXV	- THERMAL EXPANSION VALVE
ET	- EXPANSION TANK		
EV	- EXHAUST VALVE	UH	- UNIT HEATER
EXV	- ELECTRONIC EXPANSION VALVE	USG	- UNFIRED STEAM GENERATOR
		UST	- UNDERGROUND STORAGE TANK
F	- FILTER	UV	- UNIT VENTILATOR
FAI	- FRESH AIR INTAKE		
FCU	- FAN COIL UNIT	V	- VALVE
FD	- FLOOR DRAIN / FLOOR DIFFUSER	VFD	- VARIABLE FREQUENCY DRIVE
		WCC	- WATER COOLED CONDENSER
FFU	- FAN FILTER UNIT	WCCU	- WATER COOLED CONDENSING UNIT
FOP	- FUEL OIL PUMP		
FOT	- FUEL OIL TANK	WF	- WATER FILTER
FR	- FIN TUBE RADIATION	WFM	- WATER FLOW METER
FT	- FLASH TANK		
FU	- FURNACE		

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MEP

Affiliated Engineers, Inc. (AEI)

Key Plan

No.	Date	Issue Description
3	11-30-2020	Issued for Bid
2	11-19-2020	Issued for JJC Review
1	09-18-2020	Schematic Design / Design Development

ECKENHOFF SAUNDERS
One Prudential Plaza
130 East Randolph Suite 1850
Chicago IL 60601
312.786.1204p esadesign.com

Client / Project Name
Joliet Junior College

Respiratory Therapy

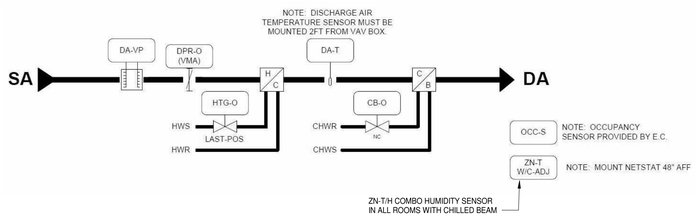
1215 Houblold Rd, Joliet, IL 60431

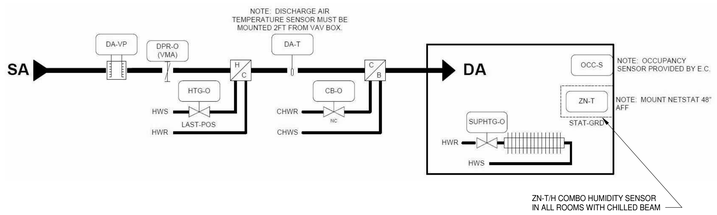
Sheet Title
Mechanical Symbols & Abbreviations

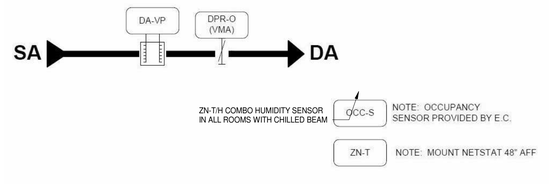
QAQC
SF

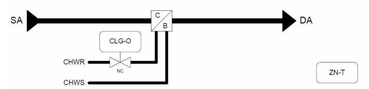
Project No.
19130

M0.00









TEMPERATURE CONTROLS GENERAL NOTES

1. ALL TEMPERATURE CONTROLS SHALL BE PROVIDED BY JOHNSON CONTROLS, INC
CONTACT INFORMATION:
JIM PERISIN
JOHNSON CONTROLS, INC.
1500 HUNTINGTON DRIVE
CALUMET CITY, IL 60409
OFFICE: 708-418-2268
JIM.PERISIN@JCI.COM

2. ALL TERMINAL SEQUENCES FOR CHILLED BEAMS, AIR TERMINAL BOXES AND FIN TUBE RADIATION SHALL MATCH EXISTING SEQUENCES CURRENTLY UTILIZED FOR SPACE TEMPERATURE CONTROL FOR THE BUILDING.

3. ALL CONTROL DEVICES AND INSTRUMENTATION SHALL FOLLOW ALL CAMPUS STANDARDS AND MATCH EXISTING BUILDING SYSTEMS.

TAB WITH HOT WATER REHEAT AND CHILLED BEAM CONTROL

SEQUENCE OF OPERATION
• THE FMCS SHALL MODULATE THE TAB DAMPER, TAB HOT WATER REHEAT COIL AND CHILLED BEAM CONTROL VALVE(S) TO MAINTAIN SPACE TEMPERATURE OF 72 DEG F (ADJ.) WITH A 2 DEG F (ADJ.) DEAD BAND BASED ON A SIGNAL FROM A WALL MOUNTED TEMPERATURE SENSOR. REFER TO THE DRAWINGS FOR TEMPERATURE SENSOR REQUIREMENTS.
• THE FMCS SHALL MODULATE THE TAB DAMPER TO MAINTAIN CONSTANT SUPPLY AIRFLOW TO THE ROOM.
• AT FULL COOLING, THE CHILLED BEAM CONTROL VALVE(S) SHALL BE OPEN. THE REHEAT COIL CONTROL VALVE SHALL BE CLOSED.
• UPON A FALL IN SPACE TEMPERATURE, THE CHILLED BEAM CONTROL VALVE SHALL MODULATE CLOSED UNTIL SPACE SETPOINT IS MAINTAINED.
• UPON A FURTHER FALL IN SPACE TEMPERATURE, THE CHILLED BEAM CONTROL VALVE, THE REHEAT COIL CONTROL VALVE SHALL MODULATE OPEN AS REQUIRED TO MAINTAIN SPACE TEMPERATURE. THE CHILLED BEAM CONTROL VALVE SHALL BE CLOSED.
• THE FMCS SHALL UTILIZE THE INPUT FROM THE LIGHTING OCCUPANCY SENSORS IN ALL THE ROOMS ASSOCIATED WITH AN INDIVIDUAL TAB TO DETERMINE IF THE TAB IS IN OCCUPIED OR UNOCCUPIED MODE. IF THE TAB IS IN UNOCCUPIED MODE THE TAB DAMPER SHALL CLOSE. IF THE SPACE TEMPERATURE RISES OR FALLS OUTSIDE THE SPACE DEAD BAND THE TAB DAMPER SHALL OPEN TO MAINTAIN SETPOINT. IF THE LIGHTING OCCUPANCY SENSOR(S) INDICATE THE SPACE IS OCCUPIED, THE TAB SHALL RESTART NORMAL CONTROL.
• IF A TAB SERVES A ROOM WHICH HAS NO LIGHTING OCCUPANCY SENSOR, OCCUPIED AND UNOCCUPIED MODE FOR THAT ROOM SHALL BE ESTABLISHED VIA A BUILDING SCHEDULE.
• THE FMCS SHALL UTILIZE FEEDBACK FROM ALL TERMINAL AIR BOX POSITIONS TO RESET THE SUPPLY DUCT DIFFERENTIAL STATIC PRESSURE.
ALARMS, INTERLOCKS AND SAFETIES:
• SEND AN ALARM TO THE FMCS OPERATOR INTERFACE IF THE SPACE TEMPERATURE IS 10 DEG F (ADJ.) ABOVE OR BELOW SETPOINT.

TAB WITH HOT WATER REHEAT, PERIMETER RADIATION AND CHILLED BEAM CONTROL

SEQUENCE OF OPERATION
• THE FMCS SHALL MODULATE THE TAB DAMPER, TAB HOT WATER REHEAT COIL CONTROL VALVE, PERIMETER RADIATION CONTROL VALVE(S) AND CHILLED BEAM CONTROL VALVE(S) TO MAINTAIN SPACE TEMPERATURE OF 72 DEG F (ADJ.) WITH A 2 DEG F (ADJ.) DEAD BAND BASED ON A SIGNAL FROM A WALL MOUNTED TEMPERATURE SENSOR. REFER TO THE DRAWINGS FOR TEMPERATURE SENSOR REQUIREMENTS.
• THE FMCS SHALL MODULATE THE TAB DAMPER TO MAINTAIN CONSTANT SUPPLY AIRFLOW TO THE ROOM.
• AT FULL COOLING, THE CHILLED BEAM CONTROL VALVE(S) SHALL BE OPEN. THE REHEAT COIL CONTROL VALVE AND PERIMETER RADIATION CONTROL VALVE(S) SHALL BE CLOSED.
• UPON A FALL IN SPACE TEMPERATURE, THE CHILLED BEAM CONTROL VALVE(S) SHALL MODULATE CLOSED UNTIL SPACE SETPOINT IS MAINTAINED.
• PERIMETER RADIATION CONTROLS SHALL BE ENABLED WHEN THE OUTSIDE AIR TEMPERATURE DROPS BELOW 40 DEG (ADJ.). WHEN THE OUTSIDE AIR TEMPERATURE RISES ABOVE 45 DEG (ADJ.) PERIMETER RADIATION CONTROLS SHALL BE DISABLED.
• UPON A FURTHER FALL IN SPACE TEMPERATURE, THE REHEAT COIL CONTROL VALVE AND PERIMETER RADIATION CONTROL VALVE(S) SHALL MODULATE OPEN AS REQUIRED TO MAINTAIN SPACE TEMPERATURE. THE CHILLED BEAM CONTROL VALVE SHALL BE CLOSED.
• THE FMCS SHALL UTILIZE THE INPUT FROM THE LIGHTING OCCUPANCY SENSORS IN ALL THE ROOMS ASSOCIATED WITH AN INDIVIDUAL TAB TO DETERMINE IF THE TAB IS IN OCCUPIED OR UNOCCUPIED MODE. IF THE TAB IS IN UNOCCUPIED MODE THE TAB DAMPER SHALL CLOSE. IF THE SPACE TEMPERATURE RISES OR FALLS OUTSIDE THE SPACE DEAD BAND AND PERIMETER RADIATION CONTROLS CANNOT MAINTAIN SPACE SETPOINT, THE TAB DAMPER SHALL OPEN TO MAINTAIN SETPOINT. IF THE LIGHTING OCCUPANCY SENSOR(S) INDICATE(S) THE SPACE IS OCCUPIED, THE TAB SHALL RESTART NORMAL CONTROL.
• IF A TAB SERVES A ROOM WHICH HAS NO LIGHTING OCCUPANCY SENSOR, OCCUPIED AND UNOCCUPIED MODE FOR THAT ROOM SHALL BE ESTABLISHED VIA A BUILDING SCHEDULE.
• THE FMCS SHALL UTILIZE FEEDBACK FROM ALL TAB DAMPER POSITIONS TO RESET THE SUPPLY DUCT DIFFERENTIAL STATIC PRESSURE.
ALARMS, INTERLOCKS AND SAFETIES:
• SEND AN ALARM TO THE FMCS OPERATOR INTERFACE IF THE SPACE TEMPERATURE IS 10 DEG F (ADJ.) ABOVE OR BELOW SETPOINT.

COOLING ONLY TAB CONTROL (AV CLOSET)

SEQUENCE OF OPERATION
• THE FMCS SHALL MODULATE THE TAB DAMPER TO MAINTAIN SPACE TEMPERATURE OF 72 DEG F (ADJ.) WITH A 2 DEG F (ADJ.) DEAD BAND BASED ON A SIGNAL FROM A WALL MOUNTED TEMPERATURE SENSOR. REFER TO THE DRAWINGS FOR TEMPERATURE SENSOR REQUIREMENTS.
• AT FULL COOLING, THE TAB DAMPER SHALL BE OPEN TO MAXIMUM CFM POSITION.
• UPON A FALL IN SPACE TEMPERATURE, THE TAB DAMPER SHALL MODULATE CLOSED UNTIL SPACE SETPOINT IS MAINTAINED OR UNTIL IT REACHES ITS MINIMUM SCHEDULED CFM POSITION PER THE TAB SCHEDULE.
• THE FMCS SHALL UTILIZE THE INPUT FROM THE LIGHTING OCCUPANCY SENSORS IN ALL THE ROOMS ASSOCIATED WITH AN INDIVIDUAL TAB TO DETERMINE IF THE TAB IS IN OCCUPIED OR UNOCCUPIED MODE. IF THE TAB IS IN UNOCCUPIED MODE THE TAB DAMPER SHALL CLOSE. IF THE SPACE TEMPERATURE RISES OR FALLS OUTSIDE THE SPACE DEAD BAND THE TAB DAMPER SHALL OPEN TO MAINTAIN SETPOINT. IF THE LIGHTING OCCUPANCY SENSOR(S) INDICATE THE SPACE IS OCCUPIED, THE TAB SHALL RESTART NORMAL CONTROL.
• IF A TAB SERVES A ROOM WHICH HAS NO LIGHTING OCCUPANCY SENSOR, OCCUPIED AND UNOCCUPIED MODE FOR THAT ROOM SHALL BE ESTABLISHED VIA A BUILDING SCHEDULE.
• THE FMCS SHALL UTILIZE FEEDBACK FROM ALL TERMINAL AIR BOX POSITIONS TO RESET THE SUPPLY DUCT DIFFERENTIAL STATIC PRESSURE.
ALARMS, INTERLOCKS AND SAFETIES:
• SEND AN ALARM TO THE FMCS OPERATOR INTERFACE IF THE SPACE TEMPERATURE IS 10 DEG F (ADJ.) ABOVE OR BELOW SETPOINT.

STAND ALONE CHILLED BEAM CONTROL (OFFICES)

CHILLED BEAM CONTROL
SEQUENCE OF OPERATION
• THE FMCS SHALL MODULATE THE CHILLED BEAM VALVE(S) TO MAINTAIN SPACE TEMPERATURE OF 72 DEG F (ADJ.) WITH A 2 DEG D (ADJ.) DEAD BAND BASED ON A SIGNAL FROM A WALL MOUNTED TEMPERATURE SENSOR. REFER TO THE DRAWINGS FOR TEMPERATURE SENSOR REQUIREMENTS.
• AT FULL COOLING, THE CHILLED BEAM CONTROL VALVE(S) SHALL BE OPEN.
• UPON A FALL IN SPACE TEMPERATURE, THE CHILLED BEAM CONTROL VALVE(S) SHALL MODULATE CLOSED UNTIL SPACE SETPOINT IS MAINTAINED.
ALARMS, INTERLOCKS AND SAFETIES:
• SEND AN ALARM TO THE FMCS OPERATOR INTERFACE IF THE SPACE TEMPERATURE IS 10 DEG F (ADJ.) ABOVE OR BELOW SETPOINT.

RADIANT PANEL HEATING CONTROL (RECEPTION)
• SPACE THERMOSTAT SHALL MODULATE CONTROL VALVE (FO) TO EACH UNIT TO MAINTAIN SPACE SET POINT TEMPERATURE.

CONTROL VALVES

PRODUCTS
A. Terminal Control Valves With Characterizing Disks (Reheat or Chilled Water):
1. Belimo, Johnson Controls, Siemens Building Technologies, Honeywell, TAC or approved equal
2. Provide two-way or three-way modulating control valves as required.
3. Valves shall be ball-type valves with characterizing disks for equal percentage flow response. Characterizing disks shall be securely fastened by a keyed ring to prevent the disk from movement.
4. Valves shall be forged bass body with nickel plating, NPT threaded ends, **1035 kPa(150 psig)** rating for **50 mm(2")** and smaller.
5. Valves shall be furnished with stainless steel ball and stem, and fiberglass reinforced Teflon seats and seals.
6. Terminal control valves near the end of the reheat supply lines on each floor shall be 3-way diverting type valves to provide minimum flow through the supply mains.
7. Actuators shall be spring return type for valves requiring fail position, floating control with fail last position type for areas such as animal rooms, offices or conference rooms.
8. Manufacturer shall warranty components for period of 5 yrs from date of production, with first 2 yrs unconditional.

EXECUTION
A. Furnish control valves as shown on drawings and/or as required to perform control sequences specified.
B. Control valves furnished by Control Contractor shall be installed by Mechanical Contractor under coordinating control and supervision of Control Contractor.
C. Increaser and decreaser fittings required to facilitate valve installations shall be provided by Mechanical Contractor.
D. Install control valve with visual indicators in such a manner that the visual indicator is visible to individual standing at floor level.

MEP

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Key Plan

No.	Date	Issue Description
2	11-30-2020	Issued for Bid
1	11-19-2020	Issued for JJC Review

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Joliet Junior College

Respiratory Therapy

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Sheet Title
Mechanical
Temperature Controls

QAQC
SF

Project No.
19130

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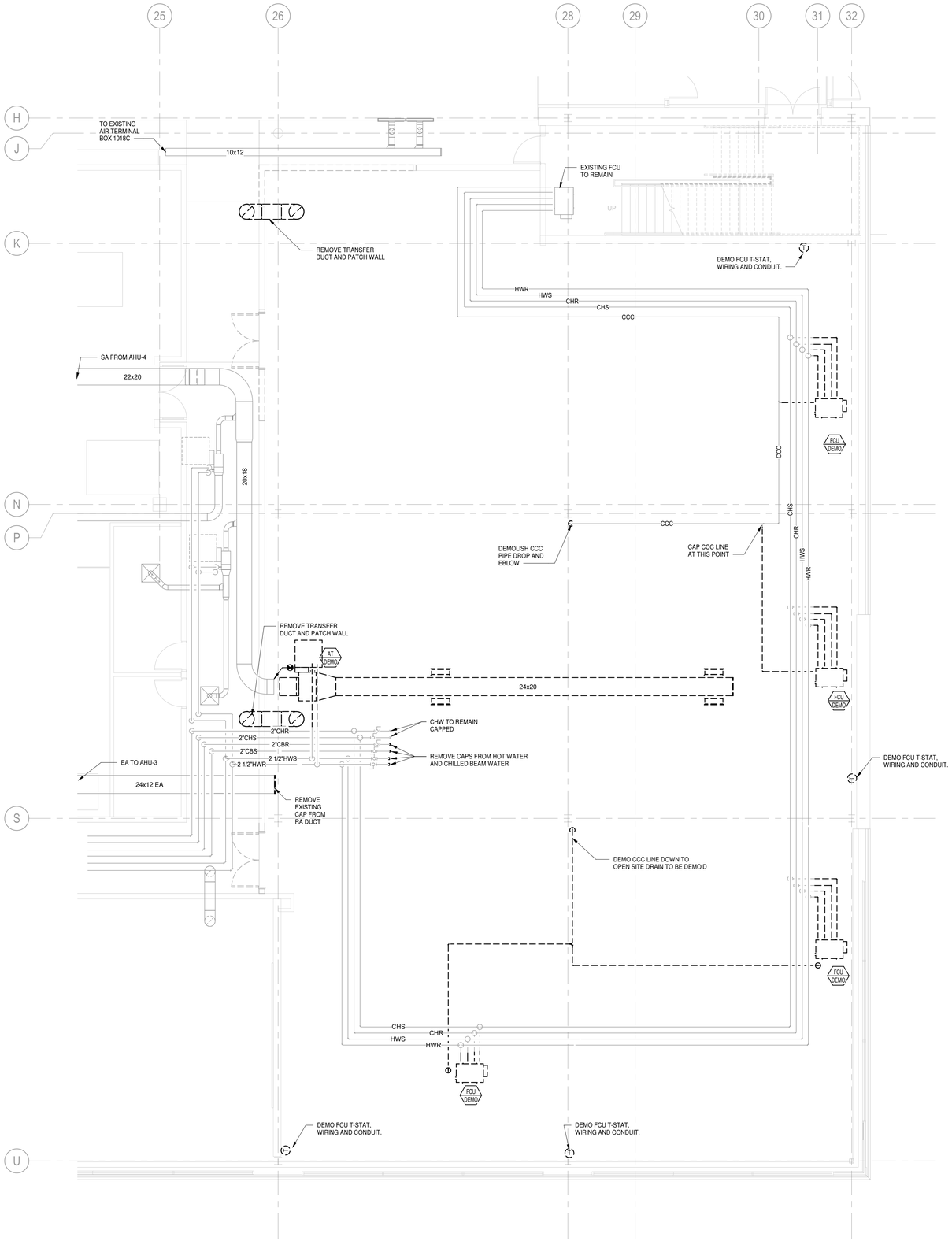

1 **MECHANICAL LEVEL 01 DEMOLITION WORK PLAN**
SCALE: 3/16" = 1'-0"

MECHANICAL DEMOLITION GENERAL NOTES

1 THE DEMOLITION DRAWINGS SHOW EXISTING EQUIPMENT AND DEVICES WHICH ARE INTENDED TO BE REMOVED. THESE DRAWINGS INDICATE THE REQUIRED SCOPE OF WORK AND ARE NOT INTENDED TO REFER TO EVERY PIECE OF DUCTWORK OR PIPE THAT MUST BE REMOVED IN ORDER TO COMPLETE THE WORK. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO VISIT THE SITE AND VERIFY THE CURRENT INSTALLATION BEFORE SUBMITTING A BID FOR THE VENTILATION WORK.

2 THE DEMOLITION DRAWINGS SHOW EXISTING EQUIPMENT AND DEVICES WHICH ARE INTENDED TO REMAIN.

3 REMOVE ALL EXISTING MATERIAL AND EQUIPMENT INDICATED AND SALVAGE TO USING AGENCY. THE USING AGENCY SHALL HAVE FIRST RIGHTS TO ALL EQUIPMENT TO BE REMOVED. DISPOSE OF ALL EQUIPMENT AND MATERIAL THAT IS NOT WANTED BY USING AGENCY IN AN APPROVED MANNER PER THE LOCAL DICTATING AUTHORITY.REMOVE THE INDICATED HVAC ITEMS AS SHOWN ON PLANS. THIS INCLUDES ALL HANGERS, STRAPS, AND RELATED MATERIAL.

4 WHEN MECHANICAL SYSTEMS ARE BEING REMODELED, COVER AND SEAL OPENINGS IN DUCTWORK, PIPING, OR VENTILATION EQUIPMENT TO REMAIN IN OPERATION THROUGH REMAINDER OF PROJECT.

5 WHEN NOTES CALL FOR "DISCONNECT AND REMOVE" MECHANICAL EQUIPMENT, COORDINATE WITH ELECTRICAL CONTRACTOR TO REMOVE ALL ASSOCIATED WIRE AND EXPOSED CONDUIT TO SOURCE.

6 THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR CUTTING AND PATCHING OF EXISTING CONSTRUCTION UNLESS OTHERWISE NOTED ON PLANS. NO CUTTING OF STRUCTURAL MEMBERS OR STRUCTURE WHICH WILL DETERIORATE THE INTEGRITY AND STRENGTH OF THE BUILDING WILL BE ALLOWED WITHOUT THE WRITTEN APPROVAL FROM THE STRUCTURAL ENGINEER.

7 THE MECHANICAL CONTRACTOR SHALL REMOVE ALL EXISTING CEILING TILES AND GRIDS AS REQUIRED FOR INSTALLATION OF NEW WORK. ANY DAMAGED TILES AND/OR GRIDS SHALL BE REPLACED WITH NEW TO MATCH AT THE CONTRACTORS EXPENSE.

8 PATCH AND REPAIR OPENINGS THROUGH WALLS AND FLOORS WHERE VENTILATION SYSTEMS WERE REMOVED TO MATCH EXISTING AND TO MAINTAIN FIRE RATINGS.

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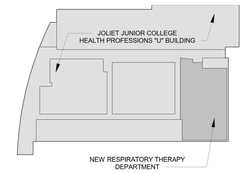

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Sheet Title
Mechanical Level 01 Demolition Plan

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Project No.
19130

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DATE: 11/30/2020 7:05:20 AM
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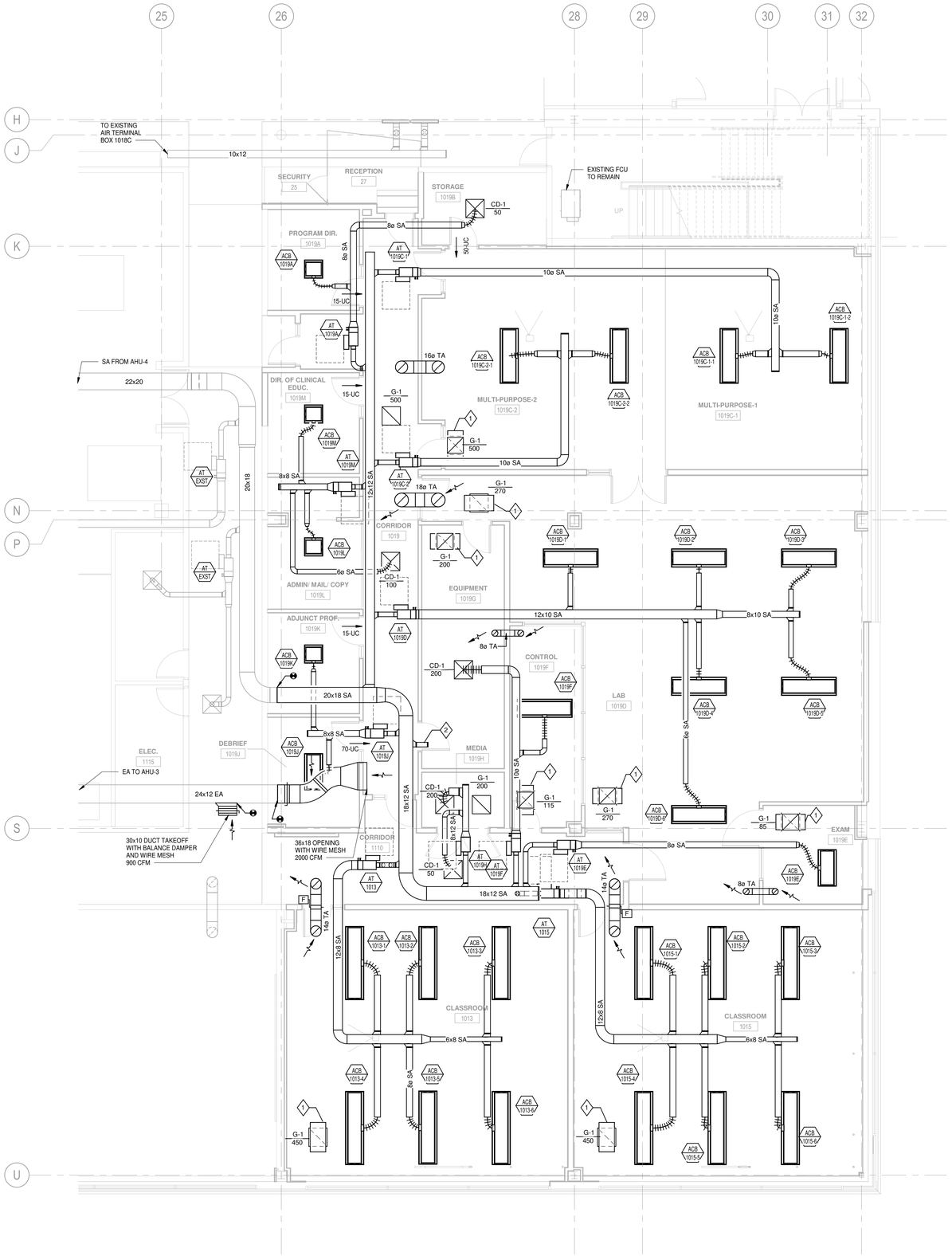

1 **MECHANICAL LEVEL 01 DUCTWORK FLOOR PLAN**
SCALE: 3/16" = 1'-0"

MECHANICAL VENTILATION GENERAL NOTES

1. PROVIDE BALANCING DAMPER AT EACH DIFFUSER, GRILLE AND BRANCH TAKE-OFF IN ALL SUPPLY, RETURN AND EXHAUST DUCTWORK. LOCATE BALANCING DAMPER AS CLOSE TO BRANCH TAKEOFF AS POSSIBLE.

2. DUCT SIZE TO DIFFUSERS, REGISTERS AND GRI LLES SHALL BE SAME AS NECK SIZE UNLESS OTHERWISE NOTED.

3. DUCT SIZE TO AIR TERMINAL DEVICES SHALL BE SAME AS NECK SIZE UNLESS OTHERWISE NOTED.

4. COORDINATE DIFFUSER, REGISTER AND GRILLE LOCATION WITH REFLECTED CEILING PLAN.

5. PROVIDE FLEXIBLE DUCTWORK FOR FINAL CONNECTIONS TO SUPPLY DIFFUSERS, REGISTERS AND GRILLES. FLEXIBLE DUCT SIZE SHALL BE SAME AS NECK SIZE OF DIFFUSER OR GRI LLE. REFER TO SPECIFICATIONS FOR REQUIREMENTS. FLEXIBLE DUCT ALLOWED ON LOW PRESSURE DUCTWORK. CONNECTION TO DI FFUSERS ONLY. MAXIMUM LENGTH OF FLEXIBLE DUCTWORK TO BE 5'-0".

6. FIRE DAMPERS SHALL BE PROVIDED WHERE DUCTS PASS THROUGH RATED WALLS, AND SMOKE DAMPERS SHALL BE PROVIDED AT ALL SMOKE PARTITIONS, REGARDLESS OF WHETHER LABELED ON PLANS OR NOT.

7. A MINIMUM OF 3 FOOT OF ACOUSTICAL FLEX DUCT SHALL BE PROVIDED TO ALL CHILLED BEAMS.

8. COORDINATE DUCT CROSSINGS THROUGH PLUMBING CHASES WITH PLUMBING EQUIPMENT AND PIPING.

9. LOCATE AIR TERMINAL DEVICES TO ALLOW ACCESS TO AIR TERMINAL DEVICE CONTROLLERS. ALL AIR TERMINAL BOXES TO HAVE AT LEAST 36" OF CLEAR SPACE ON THE ACTUATOR SIDE FOR MAINTENANCE.

10. IF DUCT SIZE NOT INDICATED FOR MAIN DUCT SECTION, USE DUCT SIZE OF UPSTREAM SECTION.

SHEET KEYNOTES

1 PROVIDE 24X24 FIBERGLASS LINED RETURN AIR CANOPY, SIMILAR TO PRICE MODEL RAC, OVER CEILING RETURN GRILLE.

2 6" DUCT TAKEOFF, CAP FOR FUTURE CONNECTION.

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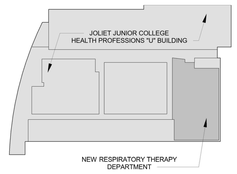

Key Plan

No.	Date	Issue Description
3	11-30-2020	Issued for Bid
2	11-19-2020	Issued for JJC Review
1	09-18-2020	Schematic Design / Design Development

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Mechanical Level 01 Ductwork Plan

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Project No.
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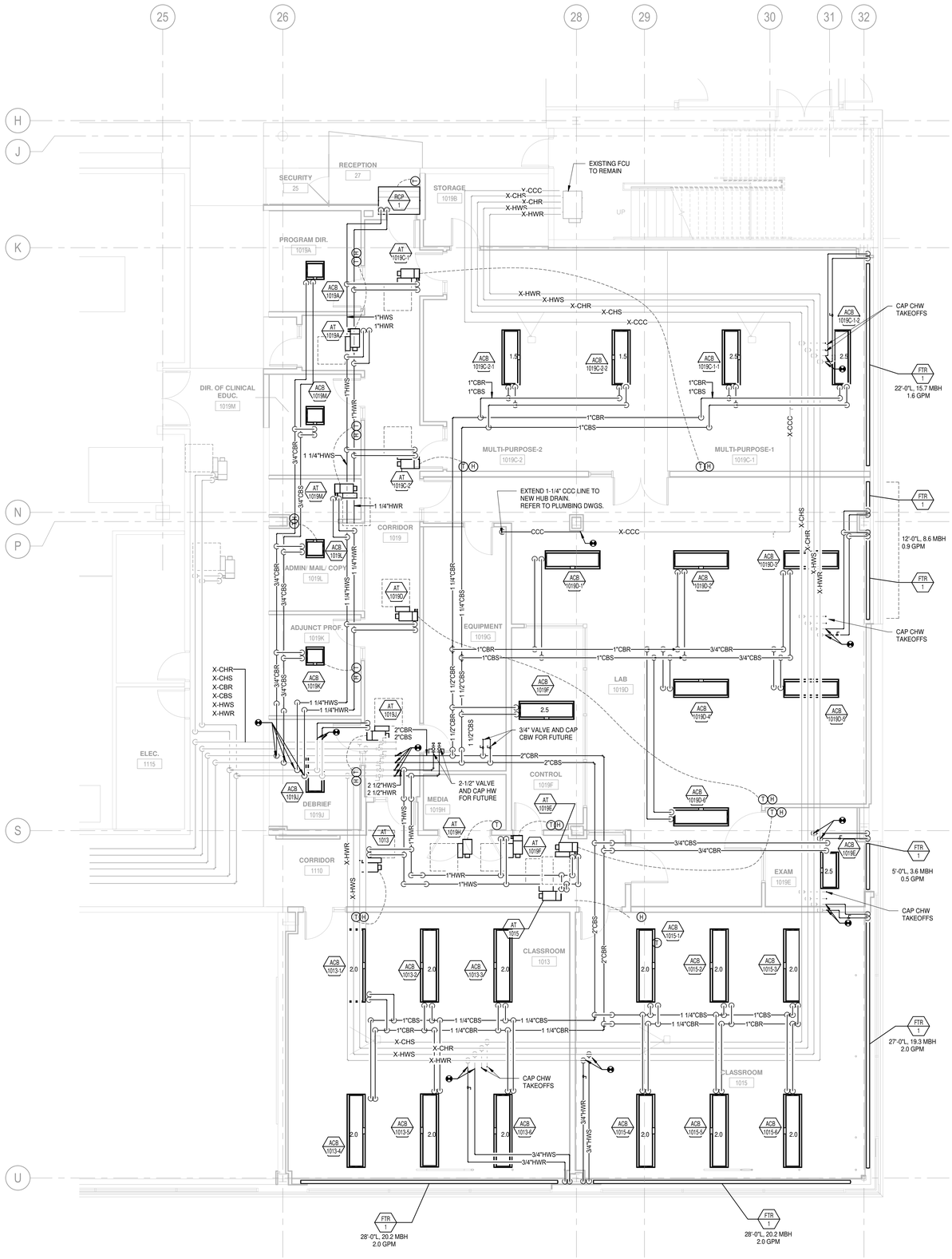

1 MECHANICAL LEVEL 01 PIPING FLOOR PLAN
SCALE: 3/16" = 1'-0"

MECHANICAL PIPING GENERAL NOTES

1. INSTALL BRANCH PIPING TO EACH TERMINIAL DEVICE WITH A MINIMUM OF THREE ELBOW FITTINGS TO ALLOW FOR EXPANSION AND CONTRACTION OF THE PIPING SYSTEM.

2. LOCATE TERMINAL DEVICE VALVES AND ASSOCIATED PIPE SPECIALTIES IMMEDIATELY ADJACENT TO TERMINAL DEVICE SERVED AND AT AN ELEVATION THAT ALLOWS ACCESS TO VALVES AND PIPE SPECIALTIES.

3. MAINTAIN WORKING CLEARANCE ON CONTROLLER SIDE OF TERMINAL DEVICE UNLESS OTHERWISE SHOWN OR NOTED. LOCATE VALVES AND PIPING TO MAINTAIN REQUIRED WORKING CLEARANCES AND ACCESS TO CONTROLLERS AND ELECTRICAL DEVICES.

4. IF PIPE SIZE NOT INDICATED, USE SIZE OF UPSTREAM PIPE SECTION.

5. BRANCH PIPING TO TERMINAL UNITS SHALL BE 3/4" UNLESS OTHERWISE NOTED.

6. FLOOR PLANS SHOW GENERAL PIPING ARRANGEMENT. REFER TO DETAILS AND SPECIFICATIONS FOR ADDITIONAL VALVES AND PIPE SPECIALITES REQUIRED.

7. PROVIDE SHUTOFF VALVES IN ALL SUPPLY AND RETURN BRANCH PIPING UNLESS OTHERWISE INDICATED. ALSO PROVIDE A BALANCE VALVE IN THE RETURN LINE. VALVES FOR FIN TUBE AND RADIANT CEILING PANELS SHAL BE ABOVE ACCESSIBLE CEILINGS, NEAR EQUIPMENT.

8. PROVIDE MANUAL AIR VENTS AT ALL HIGH POINTS AND DRAIN VALVES AT ALL LOW POINTS.

9. ALL BOXES TO HAVE AT LEAST 36" OF CLEAR SPACE ON THE ACTUATOR WTSIDE FOR MAINTENANCE.

10. CONTRACTOR TO CONFIRM PIPING AND CONTROL LOCATIONS WITH ARCHITECT FOR PERIMETER HEAT.

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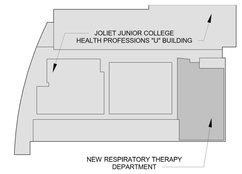

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Sheet Title
Mechanical Level 01 Piping Plan

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Project No.
19130

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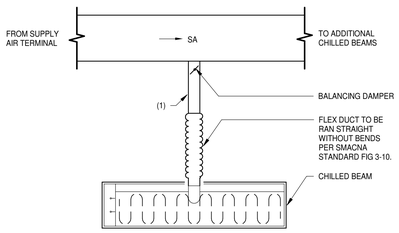
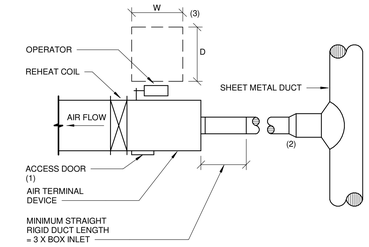


NOTES:

(1) UNLESS OTHERWISE SHOWN ON PLANS, RUNOUT SHALL BE SAME SIZE AS CHILLED BEAM INLET SIZE.

10 CHILLED BEAM DUCT CONNECTION

SCALE: NOT TO SCALE



NOTES:

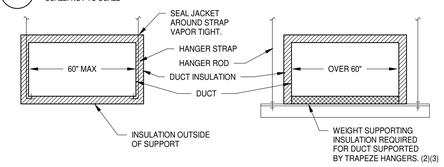
(1) ACCESS DOOR FURNISHED WITH UNIT.

(2) UNLESS OTHERWISE SHOWN, INCREASE INLET DUCT SIZE BY 2 INCHES IN DIAMETER IF RUNOUT IS LONGER THAN 8 FT.

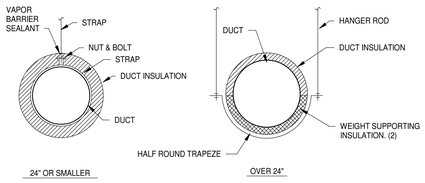
(3) WORKING SPACE FOR ELECTRICAL DEVICES:
-DEPTH (D) TO BE MINIMUM 3 FT.
-WIDTH (W) TO BE 30" OR WIDTH OF ELECTRICAL DEVICE, WHICHEVER IS GREATER

7 AIR TERMINAL DEVICE

SCALE: NOT TO SCALE



RECTANGULAR OR OVAL DUCT



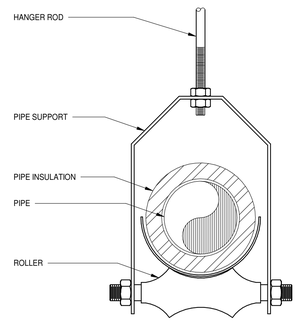
ROUND DUCT

NOTES:

(1) INSULATION AND JACKET MUST RUN CONTINUOUSLY BETWEEN DUCT AND DUCT SUPPORTS, EXCEPT ROUND DUCTS 24" OR SMALLER.

(2) REFER TO SPECIFICATION SECTION 20 0700 FOR WEIGHT-SUPPORTING INSULATION REQUIREMENTS.

(3) THIS DETAIL SHALL APPLY FOR DUCTS 60" AND SMALLER IF TRAPEZE HANGERS ARE USED.

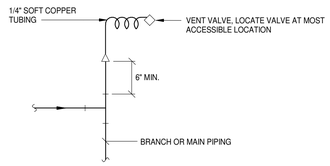


NOTES:

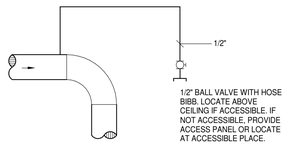
(1) REFER TO SPECIFICATION SECTION 20 0529 FOR INSULATED PIPE SUPPORTS, INSULATION PROTECTION SHIELDS AND SADDLES.

4 PIPE HANGER (ROLLER)

SCALE: NOT TO SCALE



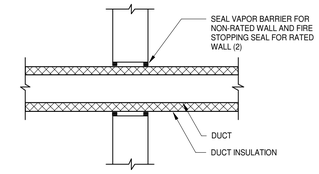
A COILS AND SUBCIRCUITS



B MAIN PIPES

5 AIR VENT PIPING

SCALE: NOT TO SCALE



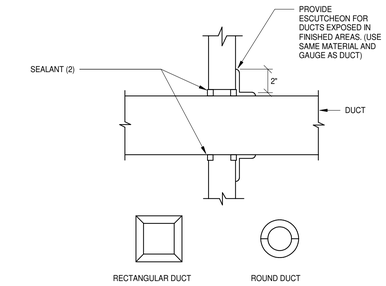
NOTES:

(1) THIS DETAIL APPLIES FOR INSULATED DUCTS THRU WALL WHERE FIRE DAMPER IS NOT REQUIRED.

(2) WHERE WALL IS FIRE RATED, COMBINATION OF SEALANT, BACKING MATERIAL AND INSULATION SHALL MEET THIS RATING. REFER TO SPECIFICATION SECTION 20 0573 FOR FIRE STOPPING SYSTEM MANUFACTURERS.

1 DUCT PENETRATION THRU INTERIOR WALL (INSULATED DUCTS)

SCALE: NOT TO SCALE

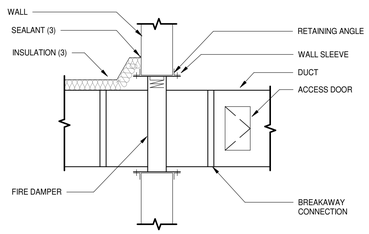


TYPICAL ESCUTCHEON

NOTES:

(1) THIS DETAIL APPLIES FOR NON-INSULATED DUCTS THRU WALL WHERE FIRE DAMPER IS NOT REQUIRED.

(2) WHERE WALL IS FIRE RATED, COMBINATION OF SEALANT AND BACKING MATERIAL SHALL MEET THIS RATING. REFER TO SPECIFICATION SECTION 20 0573 FOR FIRE STOPPING SYSTEM MANUFACTURERS.



NOTES:

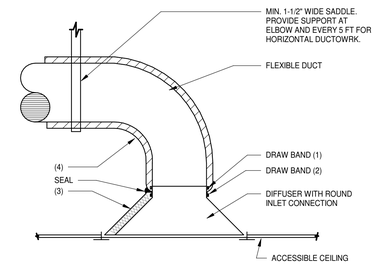
(1) ABOVE DETAIL SHOWS BASIC REQUIREMENT. INSTALL FIRE DAMPERS IN STRICT ACCORDANCE WITH MANUFACTURER'S UL INSTALLATION INSTRUCTION.

(2) VERTICAL CURTAIN TYPE DAMPER SHOWN. HORIZONTAL DAMPER , MULTIPLE BLADE DAMPER, AND COMBINATION FIRE/SMOKE DAMPER INSTALLATION SIMILAR.

(3) FOR DUCTWORK REQUIRING INSULATION, INSTALL INSULATION AND JACKET TO WALL (ALL SIDES) AND APPLY VAPOR BARRIER TAPE TO PREVENT CONDENSATION. TAPE SHALL BE COMPATIBLE WITH INSULATION JACKET AND WALL SURFACE. APPLY INSULATION OVER FIRE DAMPER AFTER INSPECTION HAS BEEN COMPLETED.

11 FIRE DAMPER

SCALE: NOT TO SCALE



NOTES:

(1) PULL FLEXIBLE DUCTS INNER LINER OVER DIFFUSER COLLAR AND SECURE WITH DRAW BAND.

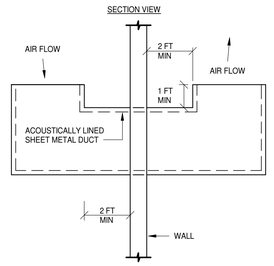
(2) SECURE FLEXIBLE DUCT INSULATION AND OUTER JACKET WITH DRAW BAND.

(3) REFER TO SECTION 20 0700 FOR DIFFUSER INSULATION REQUIREMENT.

(4) PROVIDE ELBOW SUPPORT DEVICE SIMILAR TO THERMAFLEX FLEXFLOW ELBOW IF 90° ELBOW SHAPE IS NOT MAINTAINED BY FLEXIBLE DUCT ITSELF.

8 INSULATED DUCT SUPPORTS (FLEX GLASS FIBER INSUL TYPE-F)

SCALE: NOT TO SCALE

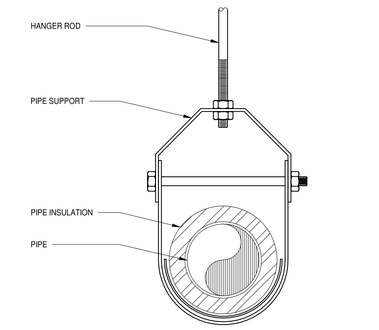


NOTES:

(1) REFER TO PLAN FOR DUCT DIMENSIONS.

6 TRANSFER DUCT (DUCT WITHOUT GRILLES)

SCALE: NOT TO SCALE



NOTES:

(1) REFER TO SPECIFICATION SECTION 20 0529 FOR INSULATED PIPE SUPPORTS, INSULATION PROTECTION SHIELDS AND SADDLES.

2 DUCT PENETRATION THRU INTERIOR WALL (NON-INSULATED DUCTS)

SCALE: NOT TO SCALE

3 PIPE HANGER (CLEVIS)

SCALE: NOT TO SCALE

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MEP

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Client / Project Name

Joliet Junior College

Respiratory Therapy

1215 Houblold Rd, Joliet, IL 60431

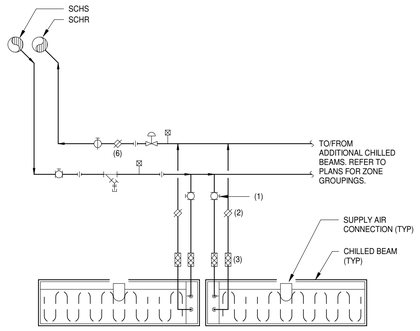
Sheet Title

Mechanical Details

OAOC
SF

Project No.
19130

M8.01



NOTES:

(1) UP TO TWO ADJACENT CHILLED BEAMS MAY BE SERVED BY SINGLE (COMMON) ISOLATION VALVE.

(2) UP TO TWO ADJACENT CHILLED BEAMS MAY BE SERVED BY SINGLE (COMMON) BALANCING VALVE IF UPSTREAM PIPING IS SYMMETRICAL.

(3) REFER TO SPECIFICATION SECTION 23 8214 FOR FLEXIBLE HOSE REQUIREMENTS.

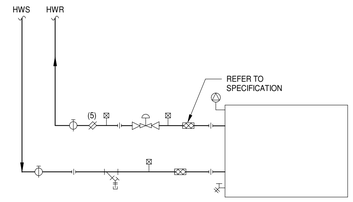
(4) REFER TO SPECIFICATION SECTION 23 2116 FOR UNION REQUIREMENTS.

(5) WHERE ONLY ONE CHILLED BEAM IS SERVED BY CONTROL VALVE, SECONDARY SHUTOFF VALVE AND BALANCING VALVE ARE NOT REQUIRED.

(6) BALANCING VALVE IS NOT REQUIRED WHEN PRESSURE INDEPENDENT CONTROL VALVE (PICV) IS USED.

4 CHILLED BEAM PIPING (2 PIPE CHILLED BEAM)

SCALE: NOT TO SCALE



NOTES:

(1) REFER TO SPECIFICATION SECTION 23 2116 FOR UNIONS AND REDUCING FITTINGS REQUIREMENTS.

(2) REFER TO SPECIFICATION SECTION 23 2118 FOR BALANCING VALVE SIZING AND STRAIGHT INLET AND OUTLET PIPING REQUIREMENTS.

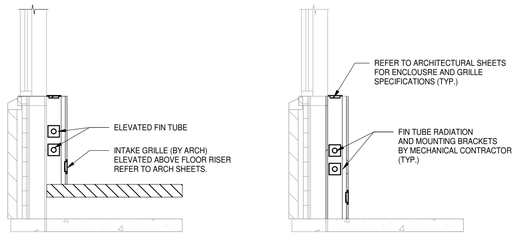
(3) PROVIDE MEANS OF BYPASSING COIL, CONTROL AND BALANCING VALVES DURING FLUSHING. REFER TO SPECIFICATION SECTION 23 2116.

(4) ARRANGE RUNOUTS AND HEADERS TO ALLOW FOR COIL PULL.

(5) BALANCING VALVE IS NOT REQUIRED WHEN PRESSURE INDEPENDENT CONTROL VALVE (PICV) IS USED.

5 HOT WATER HEATING COIL PIPING (2-WAY CONTROL VALVE)

SCALE: NOT TO SCALE

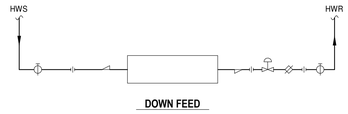


CLASSROOM (W/ FLOOR RISERS)

TYPICAL ROOM

6 PERIMETER RADIATION ENCLOSURE

SCALE: NOT TO SCALE



DOWN FEED

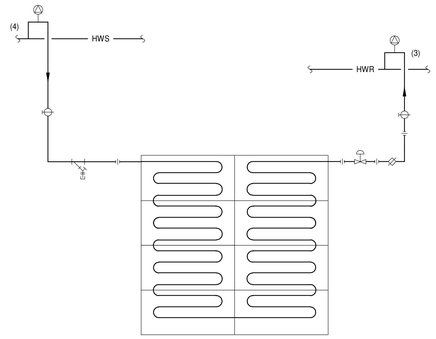
NOTES:

(1) REFER TO SPECIFICATION SECTION 23 2116 FOR UNION REQUIREMENTS.

(2) REFER TO SPECIFICATION SECTION 23 2118 FOR BALANCING VALVE SIZING AND STRAIGHT INLET AND OUTLET PIPING REQUIREMENTS.

1 HOT WATER FIN TUBE RADIATION PIPING (WITH CONTROL VALVE)

SCALE: NOT TO SCALE



NOTES:

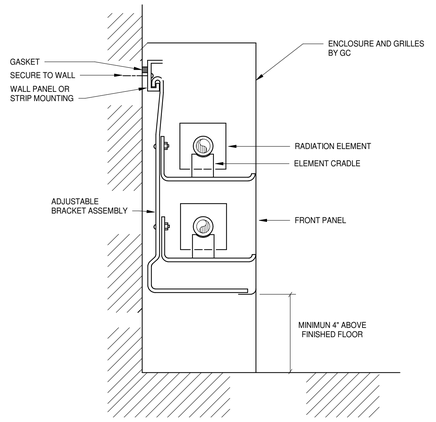
(1) REFER TO SPECIFICATION SECTION 23 2116 FOR UNION REQUIREMENTS.

(2) REFER TO SPECIFICATION SECTION 23 2118 FOR BALANCING VALVE SIZING AND STRAIGHT INLET AND OUTLET PIPING REQUIREMENTS.

(3) USE TOP OR TOP 45° CONNECTION.

2 RADIANT CEILING PANEL PIPING (HEATING ONLY)

SCALE: NOT TO SCALE



NOTES:

(1) REFER TO MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR COMPLETE MOUNTING DETAILS.

3 FIN TUBE RADIATION MOUNTING DETAIL

SCALE: NOT TO SCALE

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MEP

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Respiratory Therapy

1215 Houblold Rd, Joliet, IL 60431

Sheet Title

Mechanical Details

QAQC
SF

Project No.
19130

M8.02

ACTIVE CHILLED BEAMS

MARK ACB	ROOM NAME	ROOM NUMBER	PHYSICAL CHARACTERISTICS				PRIMARY AIR DATA (PER CHILLED BEAM)						COOLING PERFORMANCE (PER CHILLED BEAM)						MAX NC LEVEL	BASIS OF DESIGN		REMARKS
			QUANTITY OF BEAMS	NOMINAL LENGTH (FT)	NOMINAL WIDTH (IN)	THROW PATTERN	AIR INLET(S)		AIR FLOW			MAX APD ("W.G)	SENSIBLE CAPACITIES			COOLING COIL				MANUFACTURER	MODEL	
							QTY	DIA. (IN)	PER BEAM (CFM)	DB (°F)	WB (°F)		TOTAL (BTUH) (1)	WATER (BTUH)	AIR (BTUH)	EWT (°F)	FLOW (GPM)	WPD MAX (FT)				
1013	CLASSROOM	1013	6	8	2	2-WAY	1	5	75	55	49.2	0.75	6622	4974	1648	58	2.0	3.4	30	PRICE	ACBL-HE24-2W	
1015	CLASSROOM	1015	6	8	2	2-WAY	1	5	75	55	49.2	0.75	6622	4974	1648	58	2.0	3.4	30	PRICE	ACBL-HE24-2W	
1019A	PROGRAM DIR.	1019A	1	2	2	2-WAY	1	5	15	55	49.2	0.75	1236	906	330	58	0.5	0.4	<15	PRICE	ACBL-HE24-2W	
1019C-1	MULTIPURPOSE 1 (PERIMETER)	1019C-1	2	6	2	2-WAY	1	5	135	55	49.2	0.75	8116	5150	2966	58	2.5	4.3	29	PRICE	ACBL-HE24-2W	
1019C-2	MULTIPURPOSE 2 (INTERIOR)	1019C-2	2	6	2	2-WAY	1	8E	115	55	49.2	0.75	7140	4613	2527	58	1.5	7.3	25	PRICE	ACBL-HE24-2W	
1019D	LAB	1019D	6	6	2	2-WAY	1	5	90	55	49.2	0.75	5907	3929	1978	58	1.0	3.5	27	PRICE	ACBL-HE24-2W	
1019E	EXAM	1015E	1	4	2	2-WAY	1	5	85	55	49.2	0.75	5234	3366	1868	58	2.5	3.1	25	PRICE	ACBL-HE24-2W	
1019F	CONTROL	1019F	1	6	2	2-WAY	1	5	115	55	49.2	0.75	7613	5086	2527	58	2.5	4.3	27	PRICE	ACBL-HE24-2W	
1019J	DEBRIEF	1019J	1	4	2	2-WAY	1	5	70	55	49.2	0.75	3734	2196	1538	58	0.5	0.7	22	PRICE	ACBL-HE24-2W	
1019K	ADJUNCT PROF.	1019K	1	2	2	2-WAY	1	5	15	55	49.2	0.75	1236	906	330	58	0.5	0.4	<15	PRICE	ACBL-HE24-2W	
1019L	ADMIN / MAIL / COPY	1019L	1	2	2	2-WAY	1	5	20	55	49.2	0.75	1519	1080	439	58	0.6	0.6	<15	PRICE	ACBL-HE24-2W	
1019M	DIR. OF CLINICAL EDUC.	1019M	1	2	2	2-WAY	1	5	15	55	49.2	0.75	1236	906	330	58	0.5	0.4	<15	PRICE	ACBL-HE24-2W	

NOTES
(1) INCLUDES PRIMARY AIR LATENT COOLING CAPACITY

VARIABLE VOLUME REHEAT AIR TERMINAL DEVICES

MARK AT	LOCATION	MAX. CFM	MIN. CFM	MAX REHEAT CFM	MAX. UNIT PD ("WG)	MIN. INLET SP ("WG)	MIN. INLET SIZE (IN)	HEATING COIL						SOUND ATTEN.	REMARKS
								CAP. (MBH)	GPM	EWT (°F)	EAT (°F)	LAT (°F)	MAX PD (ft)		
1013	CORRIDOR	450	150	450	0.5	0.75	6	12.2	1.7	130	55	80.0	1.0	NO	
1015	CORRIDOR	450	150	450	0.5	0.75	6	12.2	1.7	130	55	80.0	1.0	NO	
1019A	CORRIDOR	65	30	65	0.5	0.75	4	1.8	0.5	130	55	80.0	1.0	NO	
1019C-1	CORRIDOR	270	100	270	0.5	0.75	6	7.3	0.7	130	55	80.0	1.0	NO	
1019C-2	CORRIDOR	230	100	100	0.5	0.75	6	2.7	0.5	130	55	80.0	1.0	NO	
1019D	CORRIDOR	540	200	540	0.5	0.75	6	14.6	2.7	130	55	80.0	1.0	NO	
1019E	CORRIDOR	85	50	85	0.5	0.75	4	2.3	0.5	130	55	80.0	1.0	NO	
1019F	CORRIDOR	315	100	100	0.5	0.75	6	2.7	0.5	130	55	80.0	1.0	NO	
1019H	CORRIDOR	250	50	N/A	0.5	0.75	6	COOLING ONLY BOX						NO	
1019J	CORRIDOR	85	50	85	0.5	0.75	4	2.3	0.5	130	55	80.0	1.0	NO	
1019M	CORRIDOR	135	50	50	0.5	0.75	4	1.4	0.5	130	55	80.0	1.0	NO	

* SEE SPECIFICATION FOR MAXIMUM SOUND POWER LEVEL PER OCTAVE BAND.
* NO REHEAT COIL REQUIRED IF SECTION IS BLANK

DIFFUSERS, REGISTERS, AND GRILLES

MARK	SERVICE	CFM RANGE	NECK SIZE (IN)	FACE SIZE (IN)	FACE TYPE	PATTERN	FINISH	MATERIAL	SELECTION BASED ON	REMARKS
CD-1	SA	0-100	6	24x24	FLAT PLATE	4-WAY	WHITE	STEEL	NAILOR UNI2	TYPICAL CLG DIFFUSER
		101-175	8	24x24	FLAT PLATE	4-WAY	WHITE	STEEL		
		176-275	10	24x24	FLAT PLATE	4-WAY	WHITE	STEEL		
		276-395	12	24x24	FLAT PLATE	4-WAY	WHITE	STEEL		
		396-535	14	24x24	FLAT PLATE	4-WAY	WHITE	STEEL		
G-1	RA	0-1000	21x21	24x24	LOUVERED / SINGLE DEFL.	-	WHITE	STEEL	NAILOR 6100	TYPICAL CEILING RETURN

FIN TUBE RADIATION

MARK FR	LOCATION	ENCLOSURE			RADIATION						ENT WATER TEMP (°F)	LVG WATER TEMP	REMARKS
		LENGTH (FT)	HEIGHT (IN)	DEPTH (IN)	ROWS	CAP (BTUH/FT)	ELEMENT						
							PIPE	MTRL	FIN	SERIES			
1	SEE PLAN	REFER TO ARCH			2	715	1"	CPR	4-1/4	50	130	110	

RADIANT CEILING PANELS (HEATING ONLY)

MARK	LOCATION	CAP (BTU/LF)	GPM	WPD PER 100'	AVER. WATER TEMP. (°F)	PANEL SIZE		REMARKS
						L	W	
RCP-1	RECEPTION	179	1.0	2.5	120	54"	30"	

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DATE: 11/30/2020 7:05:23 AM
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PIPING SYMBOLS AND ABBREVIATIONS

SYMBOLS INDICATED HERE AND NOT USED IN THE CONTRACT DOCUMENTS DO NOT APPLY TO THIS PROJECT.

SHEET SYMBOLS

EQ # — SCHEDULED EQUIPMENT DESIGNATION.
-TOP INDICATES EQUIPMENT ABBREVIATION
-BOTTOM INDICATES EQUIPMENT NUMBER
REFER TO EQUIPMENT SCHEDULES

2 — SPECIALTY ITEMS
(I.E. GAUGE FILTER, ETC.)
REFER TO EQUIPMENT LIST

REFER M-1 — PLAN CONTINUATION REFERENCE.
-BOTTOM INDICATES ON WHICH SHEET CONTINUATION APPEARS

1 / M-1 — SECTION DESIGNATION.
-TOP INDICATES SECTION NUMBER,
-BOTTOM INDICATES ON WHICH SHEET SECTION APPEARS

2 / M-1 — DETAIL REFERENCE.
-TOP INDICATES SECTION NUMBER,
-BOTTOM INDICATES ON WHICH SHEET SECTION APPEARS

A/15B-6 — DETAIL REFERENCE.
-TOP INDICATES SECTION NUMBER,
-BOTTOM INDICATES ON WHICH SHEET SECTION APPEARS

MATCHLINE DESIGNATION

ELEVATION DESIGNATION.
REFERENCE OFFICIAL PROJECT DATUM

1 — REVISION REFERENCE.
REFER TO SHEET REVISION BLOCK

1 — SHEET KEYNOTE REFERENCE

ROOM NAME / 101 — ROOM NAME & NUMBER DESIGNATION

1001 — CONSTRUCTION BULLETIN REVISION NUMBER

POINT OF NEW CONNECTION TO EXISTING

HALFTONE LIGHT LINE INDICATES EXISTING WORK

HEAVY DASHED LINE WITH HATCH INDICATES EXISTING WORK TO BE DEMOLISHED

HEAVY LINE INDICATES NEW WORK

PIPING SYSTEM LABELS

WATER		WASTE OR STORM	
DCW	DOMESTIC COLD WATER	SAN	WASTE OR SOIL
DHW	DOMESTIC HOT WATER	SD	SUBSOIL DRAIN
DHR	DOMESTIC HOT WATER RETURN	S	STORM
CSW	COLD SOFT WATER	OD	OVERFLOW DRAIN
HT	HEAT TRACE HOT WATER	FM	FORCE MAIN
NPW	NON-POTABLE WATER	CWW	CLEARWATER WASTE
DI	DEIONIZED WATER	IW	INDIRECT WASTE
RO	REVERSE OSMOSIS WATER	GW	GREASE WASTE
PW	PURE WATER	CRW	CORROSION RESISTANT WASTE
PCW	PROCESS COLD WATER		UNDERFLOOR WASTE OR SOIL, SUBSOIL, STORM & FORCE MAIN
PHW	PROCESS HOT WATER		
PHR	PROCESS HOT WATER RETURN		
LCW	LAB COLD WATER		
LHW	LAB HOT WATER		
LHR	LAB HOT WATER RETURN		
TF	TRAP FILLER LINE		
TW	TEMPERED WATER		

VENT	
V	VENT
CWV	CLEARWATER VENT
CRV	CORROSION RESISTANT VENT

GASES	
AR	ARGON
CA	COMPRESSED AIR
CO2	CARBON DIOXIDE
H2	HYDROGEN
LA	LABORATORY COMPRESSED AIR
LN2	LIQUID NITROGEN
LVAC	LABORATORY VACUUM
MA	MEDICAL COMPRESSED AIR
MV	MEDICAL VACUUM
NG	NATURAL GAS
N2	NITROGEN
N2O	NITROUS OXIDE
O2	OXYGEN
WAGD	WASTE ANESTHETIC GAS DISPOSAL
WGE	WASTE GAS EVACUATION

PIPING SYMBOLS

SINGLE	DOUBLE	
		ELBOW DOWN
		ELBOW UP
		BOTTOM CONNECTION (45° OR 90°)
		TOP CONNECTION (45° OR 90°)
D		45° PIPE RISE(R) / DROP(D)
R		TEE (REFER TO SPECIFICATION FOR SIDE, TOP OR BOTTOM TEE)
		EXISTING PIPING TO REMAIN
		LINE CONTINUATION BREAK
		FLOW DIRECTION
	N/A	CONNECTION POINT
OR		ECCENTRIC REDUCER
		CONCENTRIC REDUCER

PIPE FITTINGS, VALVES, & SPECIALTIES

- BALL VALVE
- BALANCING VALVE
- CHECK VALVE
- PRESSURE REDUCING VALVE
- SOLENOID VALVE
- THERMOSTATIC MIXING VALVE
- PRESSURE RELIEF VALVE
- VALVE IN VERTICAL
- RPBP / OR — REDUCED PRESSURE BACKFLOW PREVENTER
- SLIDE-OXYGEN OR VACUUM BOTTLE
- OUTLET
- PIPE FLEXIBLE CONNECTION
- GENERAL PIPELINE STRAINER WITHOUT DRAIN
- WATER SYSTEM PIPELINE STRAINER
- UNION
- PIPE CAP
- FILTER
- THERMOMETER
- PRESSURE GAUGE (WITH GAUGE VALVE)
- WATER HAMMER ARRESTOR
- HOSE BIBB
- WALL HYDRANT

CIVIL UTILITIES SYSTEMS

W	WATER LINE		FIRE HYDRANT
SAN	SANITARY SEWER		MANHOLE
STM	STORM SEWER		CATCH BASIN OR INLET
FM	FORCE MAIN		CURB INLET
F	FIRE MAIN		
	SHUTOFF VALVE		
PIV	POST INDICATOR VALVE		

DRAINS AND CLEANOUTS

- FLOOR DRAIN/FLOOR SINK
- ROOF DRAIN
- HUB DRAIN
- FIXTURE WASTE TRAP
- CLEANOUT
- FCO — FLOOR CLEANOUT

FIXTURE INSTALLATION

FIXTURE	BARRIER FREE DESIGN	NON-BARRIER FREE
WATER CLOSET	FLOOR TO RIM - 17"	FLOOR TO RIM - 15"
URINAL	FLOOR TO RIM - 17", MIN. ONE PER ROOM	FLOOR TO RIM - 24"
LAVATORY	FLOOR TO RIM - 34", MAX. FLOOR TO UNDER APRON - 29"	FLOOR TO RIM - 31"
DRINKING FOUNTAIN	FLOOR TO SPOUT - 36", MAX. FLOOR TO UNDER APRON - 27"	FLOOR TO RIM - 40"
SHOWER VALVE	FLOOR TO VALVE - 42"	FLOOR TO VALVE - 48"
SHOWER HEAD	FLOOR TO HEAD - 60" ON HOSE ADJ. - 48"	FLOOR TO HEAD - 78", VARIES

ABBREVIATIONS

A	- AIR	L	- LENGTH
AAP	- AREA ALARM PANEL	LA	- LABORATORY COMPRESSED AIR
ACC	- ACCESS	LAV	- LAVATORY
ACFM	- ACTUAL CUBIC FEET PER MINUTE	LBS	- POUNDS
ADB	- ACID DILUTION BASIN	LTG	- LIGHTING
ADJ	- ADJUSTABLE	LWT	- LEAVING WATER TEMPERATURE
AFF	- ABOVE FINISHED FLOOR		
ALT	- ALTERNATE	MAP	- MASTER ALARM PANEL
AMPS	- AMPERES	MAX	- MAXIMUM
AP	- ACCESS PANEL	MB	- MOP BASIN
APPROX	- APPROXIMATE	MBH	- ONE THOUSAND BTUH
ARCH	- ARCHITECTURAL	MC	- MECHANICAL CONTRACTOR
ASME	- AMERICAN SOCIETY OF MECHANICAL ENGINEERS	MEZZ	- MEZZANINE
		MFR	- MANUFACTURER
ASSY	- ASSEMBLY	MH	- MANHOLE
		MIN	- MINIMUM / MINUTE
BHP	- BRAKE HORSEPOWER	MISC	- MISCELLANEOUS
BLDG	- BUILDING	MTD	- MOUNTED
BOP	- BOTTOM OF PIPE ELEVATION	MTG	- MOUNTING
BOT	- BOTTOM		
BT	- BATHTUB	NC	- NORMALLY CLOSED
BTU	- BRITISH THERMAL UNIT	NIC	- NOT IN CONTRACT
BTUH	- BRITISH THERMAL UNITS PER HOUR	NO	- NUMBER
		NOM	- NOMINAL
BTWN	- BETWEEN	NPSH	- NET POSITIVE SUCTION HEAD
		NPT	- NATIONAL PIPE THREAD
CA	- COMPRESSED AIR	NTS	- NOT TO SCALE
CFCI	- CONTRACTOR FURNISHED CONTRACTOR INSTALLED	OC	- ON CENTER
		OD	- OUTSIDE DIAMETER / OVERFLOW DRAIN
CFM	- CUBIC FEET PER MINUTE		
CLG	- CEILING	OFCI	- OWNER FURNISHED, CONTRACTOR INSTALLED
CM	- COFFEE MAKER		
CMU	- CONCRETE MASONRY UNIT	OFOI	- OWNER FURNISHED, OWNER INSTALLED
CO	- CLEANOUT		
CO2	- CARBON DIOXIDE		
CONN	- CONNECTION / CONNECT	P	- PUMP
CONTR	- CONTRACTOR	PC	- PLUMBING CONTRACTOR
CORR	- CORRIDOR	PH	- PHASE
CS	- CLINICAL SINK / COLD SOFT WATER / CUP SINK	PIV	- POST INDICATOR VALVE
		PLBG	- PLUMBING
CTR	- CENTER	PRESS	- PRESSURE
CU	- COPPER	PRV	- PRESSURE REDUCING VALVE
CRVTR	- CORROSIVE VENT THROUGH ROOF	PSF	- POUNDS PER SQUARE FOOT
		PSI	- POUNDS PER SQUARE INCH
CWW	- CLEARWATER WASTE	PSIG	- POUNDS PER SQUARE INCH GAUGE
D	- DEPTH / DRAIN LINE	PW	- PURE WATER
DCW	- DOMESTIC COLD WATER		
DET	- DETAIL	R	- RADIUS
DFU	- DRAINAGE FIXTURE UNIT	RAD	- REFRIGERATED AIR DRYER
DHR	- DOMESTIC HOT WATER RETURN	RD	- ROOF DRAIN
DHW	- DOMESTIC HOT WATER	REC	- RECESSED
DIA	- DIAMETER	RECPT	- RECEPTACLE
DIM	- DIMENSION	REF	- REFERENCE
DISCH	- DISCHARGE	REQD	- REQUIRED
DN	- DOWN / DOWNSPOUT NOZZLE	RI	- ROUGH-IN
DS	- DOWNSPOUT	RPM	- REVOLUTIONS PER MINUTE
DW	- DISHWASHER	RV	- RELIEF VALVE
DWG	- DRAWING		
		S	- STORM
EA	- EACH	SAN	- SANITARY
EEW	- EMERGENCY EYEWASH	SCH	- SCHEDULE
EFF	- EFFICIENCY	SCFM	- STANDARD CUBIC FEET PER MINUTE
EJ	- EXPANSION JOINT		
ELEC	- ELECTRICAL	SD	- SUBSOIL DRAIN
ELEV	- ELEVATION	SF	- SQUARE FEET
EQUIP	- EQUIPMENT	SH	- SHOWER
ET	- EXPANSION TANK	SHT	- SHEET
ETR	- EXISTING TO REMAIN	SPEC	- SPECIFICATION
ES	- EMERGENCY SHOWER	SQ	- SQUARE
EWC	- ELECTRIC WATER COOLER	SR	- SERVICE RECEPTOR
EWT	- ENTERING WATER TEMPERATURE	S/S	- STAINLESS STEEL
		STD	- STANDARD
EXP	- EXPANSION	STRU	- STRUCTURAL / STRUCTURE
EXT	- EXTERIOR	SUCT	- SUCTION
°F	- FAHRENHEIT	TD	- TRENCH DRAIN
FCO	- FLOOR CLEANOUT	TDH	- TOTAL DYNAMIC HEAD
FD	- FLOOR DRAIN	TEMP	- TEMPERATURE
FLA	- FULL LOAD AMPERES	TMV	- THERMOSTATIC MIXING VALVE
FLR	- FLOOR	TOB	- TOP OF BEAM
FM	- FORCE MAIN	TOD	- TOP OF DECK
FP	- FIREPROOF	TOJ	- TOP OF JOIST
FPM	- FEET PER MINUTE	TOS	- TOP OF SLAB / TOP OF STEEL
FS	- FLOOR SINK	TF	- TRAP FILLER
FSEC	- FOOD SERVICE EQUIPMENT CONTRACTOR	TP	- TRAP PRIMER
		TYP	- TYPICAL
FT	- FEET		
FTHD	- FEET HEAD	UR	- URINAL
FTG	- FOOTING		
G	- GAS	V	- VENT / VOLTS
GA	- GAUGE	VAC	- VACUUM
GAL	- GALLON	VEL	- VELOCITY
GALV	- GALVANIZED	VFD	- VARIABLE FREQUENCY DRIVE
GC	- GENERAL CONTRACTOR	VOL	- VOLUME
GPH	- GALLONS PER HOUR	VTR	- VENT THRU ROOF
GPM	- GALLONS PER MINUTE		
		W	- WASTE / WATER
HB	- HOSE BIBB	W/	- WITH
HD	- HUB DRAIN	W/O	- WITHOUT
HP	- HORSEPOWER	WAGD	- WASTE ANESTHETIC GAS DISPOSAL
HR	- HOSE REEL		
HT	- HEAT TRACE HOT WATER	WB	- WALL BOX
HTR	- HEATER	WC	- WATER CLOSET
HVAC	- HEATING, VENTILATING, & AIR CONDITIONING	WCO	- WALL CLEANOUT
		WGE	- WASTE GAS EXHAUST
HZ	- HERTZ	WH	- WALL HYDRANT
		WHA	- WATER HAMMER ARRESTOR
ID	- INSIDE DIAMETER	WHTR	- WATER HEATER
IE	- INVERT ELEVATION	WSFU	- WATER SUPPLY FIXTURE UNIT
IM	- ICE MAKER		
IN	- INCHES	X	- EXISTING
IN WC	- INCHES WATER COLUMN		
IW	- INDIRECT WASTE	YCO	- YARD CLEANOUT
JS	- JANITOR'S SINK	ZVB	- ZONE VALVE BOX
KW	- KILOWATT		

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Key Plan

No.	Date	Issue Description
3	11-30-2020	Issued for Bid
2	11-19-2020	Issued for JJC Review
1	09-18-2020	Schematic Design / Design Development

ECKENHOFF SAUNDERS
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Client / Project Name
Joliet Junior College

Respiratory Therapy

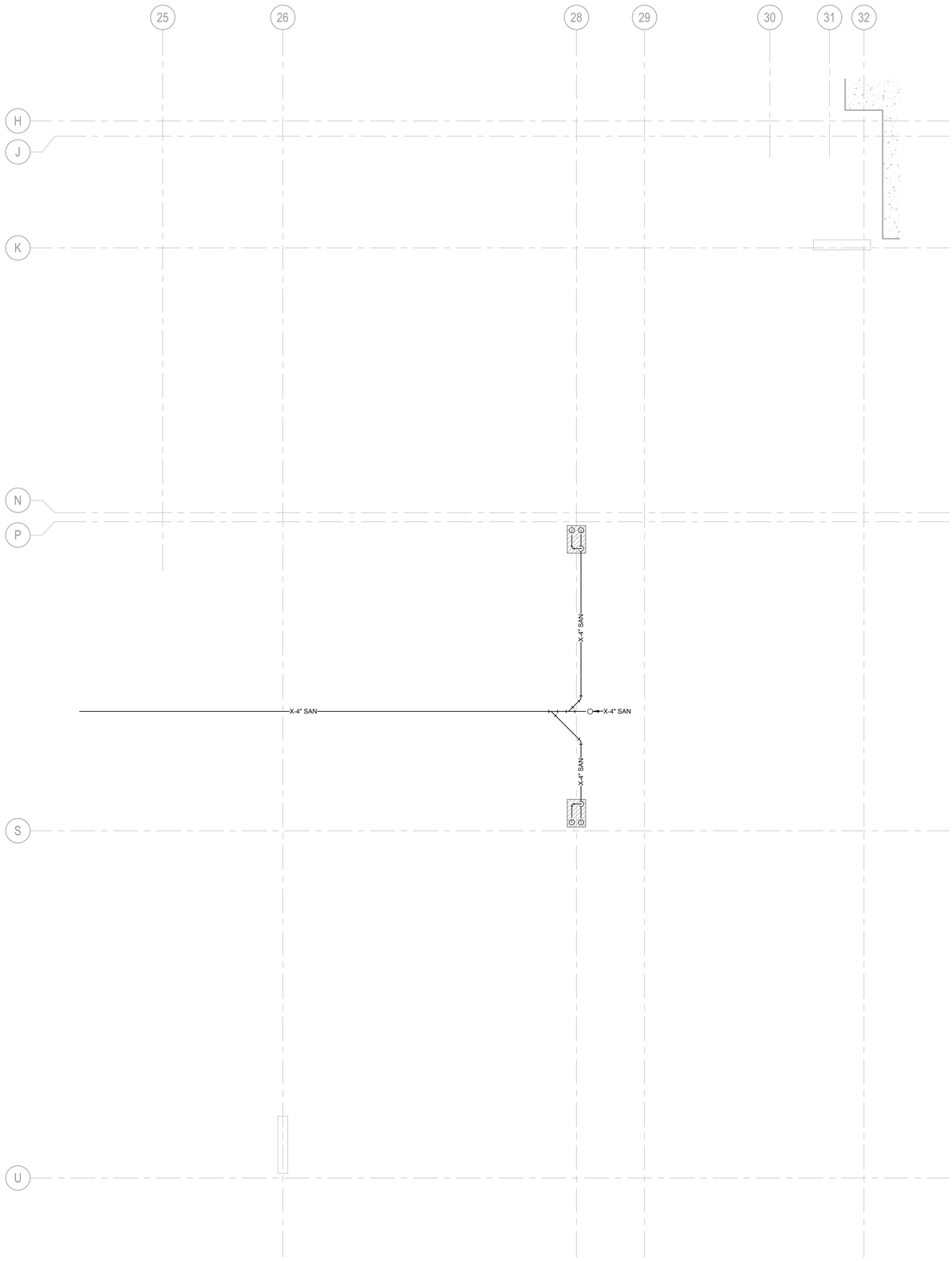
1215 Houbolod Rd, Joliet, IL 60431

Sheet Title
Plumbing Symbols & Abbreviations

QAQC
Checker

Project No.
19130

P0.00



1 **PLUMBING UNDERGROUND DEMOLITION PLAN**
SCALE: 3/16" = 1'-0"

PLUMBING DEMOLITION GENERAL NOTES

1. REFER TO GENERAL DEMOLITION NOTES ON ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION AND SCOPE OF WORK REQUIREMENTS. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONED FLOOR PLANS.
2. RESERVE RIGHT OF OWNER TO FIRST REFUSAL FOR ALL EXISTING PLUMBING FIXTURES OR EQUIPMENT REMOVED. FIXTURES AND EQUIPMENT NOT ACCEPTED FOR OWNER USE AND ALL DEBRIS SHALL BE REMOVED FROM SITE FOR PROPER DISPOSAL.
3. REMOVE ALL EXISTING PIPING SERVING PLUMBING FIXTURES OR EQUIPMENT BEING REMOVED. REMOVE PIPING BACK TO EXISTING MAINS AND CAP OR PLUGS AS REQUIRED. FIELD COORDINATE WITH OWNER REPRESENTATIVE AND ALL TRADES TO MINIMIZE DISRUPTION TO EXISTING SERVICES.
4. WHERE EXISTING WASTE, VENT, AND WATER SUPPLIES ARE TO PROVIDE NEW ROUGH-IN FOR NEW FIXTURE , LEAVE EXISTING PIPE SUITABLE FOR NEW PIPING.
5. EXISTING UNDERGROUND SANITARY PIPING SHALL BE REMOVED TO BELOW FLOOR SLAB. NO DEAD ENDS IN EXCESS OF 2'-0" SHALL BE LEFT. WHERE POSSIBLE, BOTH ENDS OF ABANDONED SANITARY DRAINS SHALL BE UNCOVERED AND CAPPED OR PLUGGED.

MEP

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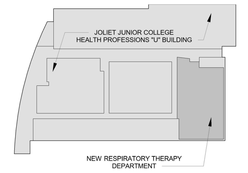

Key Plan

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Joliet Junior College

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Sheet Title
Plumbing Underground Demolition Plan

QAQC
Checker

Project No.
19130

P1.00

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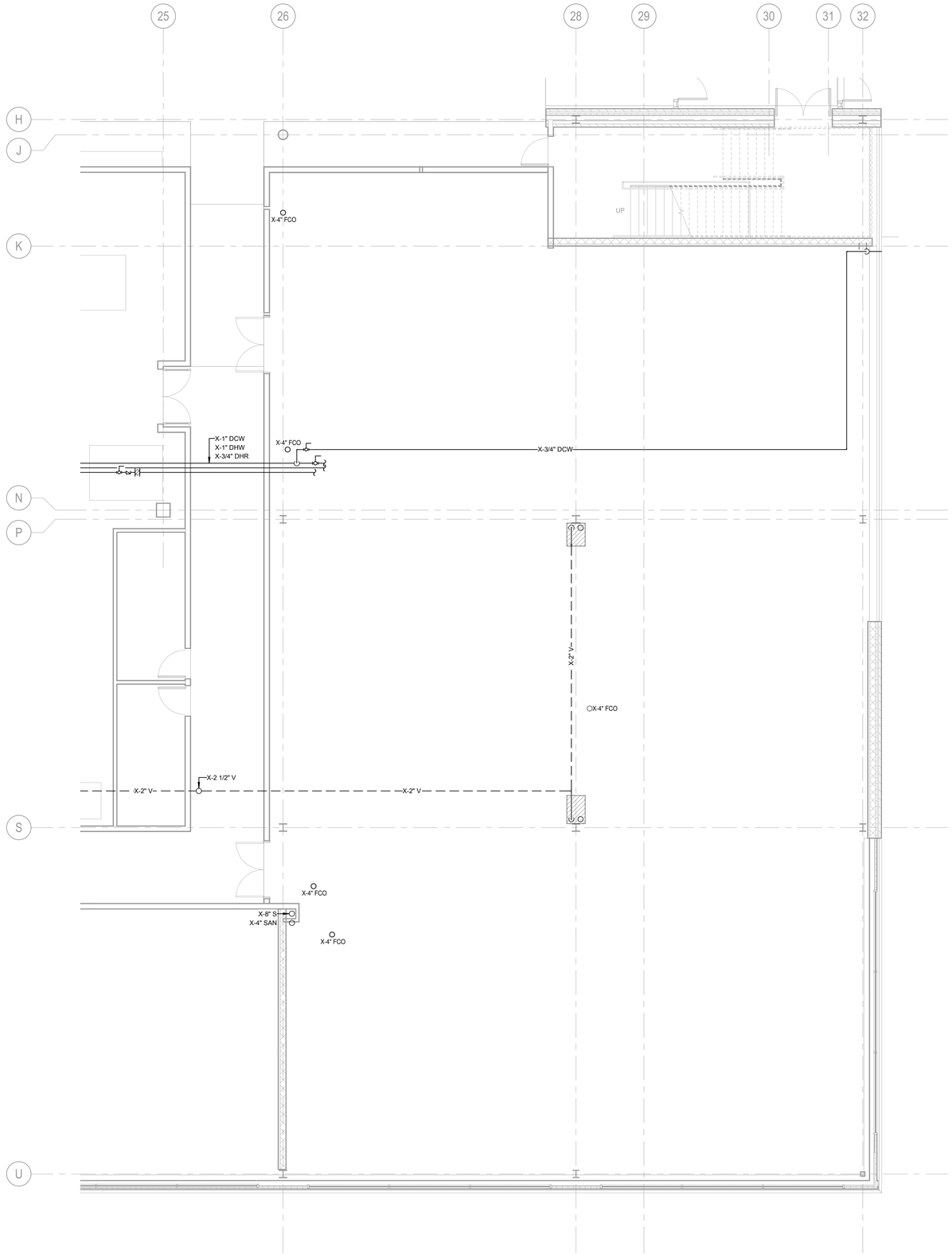

1 **PLUMBING LEVEL 01 DEMOLITION FLOOR PLAN**
SCALE: 3/16" = 1'-0"

PLUMBING DEMOLITION GENERAL NOTES

1. REFER TO GENERAL DEMOLITION NOTES ON ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION AND SCOPE OF WORK REQUIREMENTS. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONED FLOOR PLANS.
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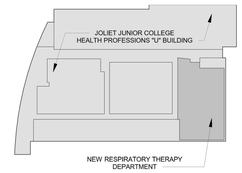
MEP

Affiliated Engineers, Inc. (AEI)



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Client / Project Name
Joliet Junior College

Respiratory Therapy

1215 Houblold Rd, Joliet, IL 60431

Sheet Title
Plumbing Level 01
Demolition Floor Plan

QAQC
Checker

Project No.
19130

P1.01

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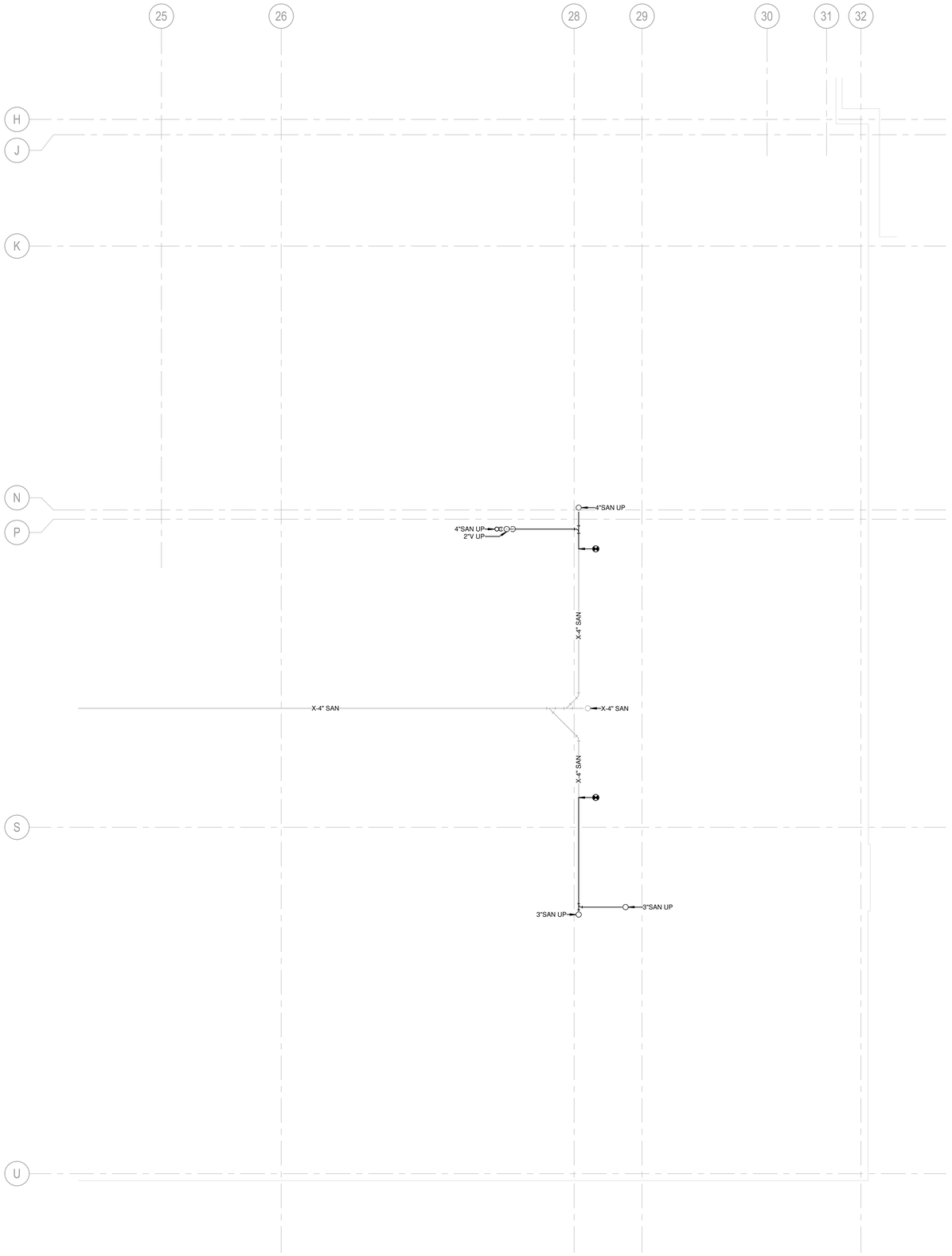

1 **PLUMBING UNDERGROUND PLAN**
SCALE: 3/16" = 1'-0"

PLUMBING GENERAL NOTES

1. ALL WORK, METHODS, AND INSTALLATIONS INVOLVED IN THE PLUMBING DESIGN SHALL BE IN ACCORDANCE WITH THE BUILDING AND INSPECTION REGULATIONS OF ALL OFFICIALS HAVING JURISDICTION.
2. DRAWINGS ARE DIAGRAMMATIC IN NATURE AND ARE TO BE USED IN CONJUCTION WITH THE SPECIFICATIONS INCLUDED IN THIS PACKAGE.
3. SLOPES AND PITCHES OF PIPING INSTALLED ARE TO COMPLY WITH THE RELEVANT SPECIFICATION SECTIONS INCLUDED WITH THIS PROJECT.
4. SLOPED PIPING SHALL BE GIVEN THE RIGHT OF WAY DURING COORDINATION DRAWING EFFORTS IN CONSTRUCTION. HOLD SLOPED PIPING AS HIGH AS POSSIBLE AGAINST STRUCTURE.
5. FIELD VERIFY ALL EXISTING CONDITIONS IN THE CEILING OF THIS SPACE TO CONFIRM EXACT ROUTING AND POTENTIAL CONFLICTS WITH OTHER TRADES. IF CONDITIONS PROHIBIT ROUTING OF PIPING AS INDICATED ON THIS PLAN, NOTIFY THE A/E IMMEDIATELY PRIOR TO ANY REROUTING OR INSTALLATION. TO VERIFY DESIGN INTENT OF THIS PROJECT AND FUTURE PROJECTS IN THIS BUILDING.
6. DO NOT SCALE PLUMBING DRAWINGS FOR FIELD ROUGH-IN WORK. CONTRACTOR SHALL REFER TO THE DIMENSIONED ARCHITECTURAL AND STRUCTURAL DRAWINGS TO FIELD DETERMINE EXACT LOCATIONS OF ROUGH-IN WORK.
7. CONTRACTOR SHALL PROVIDE LABOR AND MATERIALS AS REQUIRED TO MAKE FINAL CONNECTIONS FOR ALL PLUMBING FIXTURES, EQUIPMENT, AND RELATED ITEMS PROVIDED UNDER SEPARATE DIVISIONS.
8. CONTRACT SHALL COORDINATE WITH BUILDING MANAGEMENT SHUT-DOWNS AND DISTURBANCES NECESSARY TO PERFORM DEMOLITION AND NEW WORK IN THIS AREA. NO SHUT-DOWN OR DISTURBANCES TO EXISTING SERVICES SHALL BE ALLOWED WITHOUT PRIOR APPROVAL.
9. PROVIDE CLEANOUTS AT EACH CHANGE OF DRAINLINE DIRECTION GREATER THAN 45 DEGREES.
10. CONTRACTOR SHALL COORDINATE WITH STRUCTURAL CONDITIONS AS EXISTING AND PROVIDE PROPER PIPING INSTALLATIONS AS REQUIRED WITHOUT DAMAGE TO STRUCTURE. WHERE STRUCTURAL MODIFICATIONS ARE TO BE REQUIRED, CONTRACTOR SHALL FIRST RECEIVE WRITTEN APPROVAL OF THE ARCHITECT AND STRUCTURAL ENGINEER.
11. CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD COORDINATING LOCATIONS AND ELEVATIONS OF ALL PLUMBING PIPING WITH OTHER TRADES PRIOR TO INSTALLATION. WHERE RELOCATIONS OF NEW WORK ARE REQUIRED TO CORRECT CONFLICTS WITH OTHER TRADES, IT SHALL BE DONE AT NO ADDITIONAL COST TO OWNER.
12. ALL PIPE PASSING THROUGH FIRE RATED WALLS OR FLOOR SLAB SHALL BE SUPPORTED AT THE PENETRATION AND SHALL BE SEALED WITH APPROVED FIRE STOP MATERIALS AS SPECIFIED AND REQUIRED BY CODE AUTHORITIES HAVING JURISDICTION.
13. PROTECT EQUIPMENT AND WORK FROM DAMAGE DURING HANDLING INSTALLATION UNTIL COMPLETION OF CONSTRUCTION.
14. ALL SYSTEMS SHALL BE COMPLETE AND WORKING AT COMPLETION OF CONSTRUCTION.

MEP

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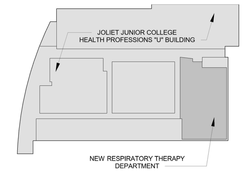

Key Plan

No.	Date	Issue Description
2	11-30-2020	Issued for Bid
1	11-19-2020	Issued for JJC Review

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Client / Project Name
Joliet Junior College

Respiratory Therapy

1215 Houblold Rd, Joliet, IL 60431

Sheet Title
Plumbing Underground Plan

QAQC
Checker

Project No.
19130

P2.00

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1 PLUMBING LEVEL 01 FLOOR PLAN
SCALE: 3/16" = 1'-0"

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JOLIET JUNIOR COLLEGE
HEALTH PROFESSIONS "U" BUILDING

NEW RESPIRATORY THERAPY DEPARTMENT

Key Plan

No.	Date	Issue Description
3	11-30-2020	Issued for Bid
2	11-19-2020	Issued for JJC Review
1	09-18-2020	Schematic Design / Design Development

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Client / Project Name
Joliet Junior College

Respiratory Therapy

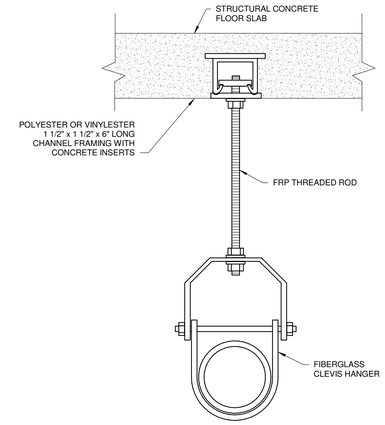
1215 Houblold Rd, Joliet, IL 60431

Sheet Title
Plumbing Level 01
Floor Plan

QA/QC
Checker

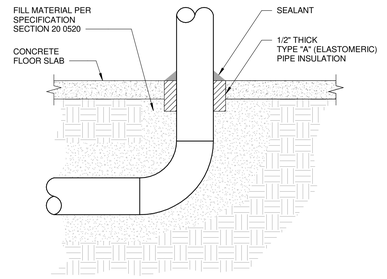
Project No.
19130

P2.01



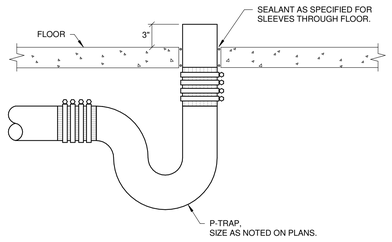
1 PIPE HANGER

SCALE: NOT TO SCALE



2 PIPE THROUGH SLAB ON GRADE

SCALE: NOT TO SCALE



3 HUB DRAIN

SCALE: NOT TO SCALE

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Client / Project Name

Joliet Junior College

Respiratory Therapy

1215 Houblold Rd, Joliet, IL 60431

Sheet Title

Plumbing Details

QAQC

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Project No.

19130

P8.01

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PLUMBING FIXTURES

TAG	FIXTURE					CONNECTION									
	TYPE	MANUFACTURER AND MODEL NUMBER	TYPE	MANUFACTURER AND MODEL NUMBER	DESCRIPTION	WASTE	VENT	TRAP	COLD WATER		HOT WATER		TEMPERED WATER	
									BRANCH SUPPLY	STOP INLET	BRANCH SUPPLY	STOP INLET	BRANCH SUPPLY	STOP INLET
SK	SINK SINGLE BOWL SOLID SURFACE	REFER TO ARCHITECTURAL PLANS FOR SPECIFICATIONS	FAUCET	CHICAGO FAUCET 201-AGN8AE35XKABCP-317CP	CAST OR COPPER ALLOY MIXING VALVE FAUCET, 8" SWING GOOSENECK, WRIST BLADE HANDLES, 1.5 GPM FLOW CONTROL, 8" FAUCET CENTERS, RENEWABLE OR REPLACEABLE OPERATING MECHANICSM, POLISHED CHROME FINISH	1-1/2"	1-1/2"	1-1/2"	1/2"	1/2"	1/2"	1/2"	-	-

MEDICAL GAS TERMINALS

TAG	SERVICE IDENTIFICATION	GENERAL LOCATION	REMARKS
V-1	VACUUM OUTLET	HEADWALL	PROVIDE WITH VACUUM SLIDE
O-1	OXYGEN OUTLET	HEADWALL	
A-1	AIR OUTLET	HEADWALL	

1. OUTLETS ARE FOR SIMULATED USE ONLY.
2. OUTLETS ARE NOT FOR HUMAN USE.
3. REFER TO ARCHITECTURAL PLANS FOR OUTLET ELEVATIONS.
4. BOD OUTLET TO BE BEACON MEDAES SSB-880-01.

MEP

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Client / Project Name
Joliet Junior College

Respiratory Therapy

1215 Houblold Rd, Joliet, IL 60431

Sheet Title
Plumbing Schedules

QAQC
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Project No.
19130

P9.01

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FIRE PROTECTION SYMBOLS AND ABBREVIATIONS

SYMBOLS INDICATED HERE AND NOT USED IN THE CONTRACT DOCUMENTS DO NOT APPLY TO THIS PROJECT.

SHEET SYMBOLS

2 / M-1 — DETAIL REFERENCE.
-TOP INDICATES SECTION NUMBER,
-BOTTOM INDICATES ON WHICH SHEET SECTION APPEARS

MATCHLINE DESIGNATION

HEAVY LINE INDICATES NEW WORK

HALFTONE LIGHT LINE INDICATES EXISTING WORK

HEAVY DASHED LINE WITH HATCH INDICATES EXISTING WORK TO BE DEMOLISHED

POINT OF NEW CONNECTION TO EXISTING

1 — REVISION REFERENCE.
REFER TO SHEET REVISION BLOCK

1 — SHEET KEYNOTE REFERENCE

ROOM NAME / 101 — ROOM NAME & NUMBER DESIGNATION

FIRE PROTECTION SYMBOLS

XSPR — EXISTING SPRINKLER PIPE

SPR — NEW SPRINKLER PIPE

D — DRAIN LINE

ELBOW DOWN

ELBOW UP

TEE DOWN

TEE UP

PIPE CAP OR FLUSHING CONNECTION

PIPE SLEEVE

CONCENTRIC REDUCER

ECCENTRIC REDUCER

PIPE HANGER

SPRINKLER ZONE BOUNDARY

HYDRAULIC ZONE BOUNDARY

PIPE SIZE / PIPE LENGTH — SPRINKLER PIPE TEXT (TOP INDICATES PIPE SIZE) (BOTTOM INDICATES CENTER TO CENTER PIPE LENGTH)

ABBREVIATIONS

AC	-	AIR COMPRESSOR
ACC	-	ACCESS
ACV	-	ALARM CHECK VALVE
ADJ	-	ADJUSTABLE
AFF	-	ABOVE FINISHED FLOOR
ALT	-	ALTERNATE
AHJ	-	AUTHORITY HAVING JURISDICTION
AP	-	ACCESS PANEL
APPROX	-	APPROXIMATE
ARCH	-	ARCHITECTURAL
ASSY	-	ASSEMBLY
ATS	-	AUTOMATIC TRANSFER SWITCH
BLDG	-	BUILDING
BOP	-	BOTTOM OF PIPE
BOT	-	BOTTOM
BTWN	-	BETWEEN
CFCI	-	CONTRACTOR FURNISHED CONTRACTOR INSTALLED
CL	-	CENTERLINE
CLG	-	CEILING
CONN	-	CONNECTION / CONNECT
CONTR	-	CONTRACTOR
CORR	-	CORRIDOR
CU	-	COPPER
D	-	DRAIN LINE
DCBP	-	DOUBLE CHECK BACKFLOW PREVENTER
DDBP	-	DOUBLE DETECTOR BACKFLOW PREVENTER
DET	-	DETAIL
DIA	-	DIAMETER
DIM	-	DIMENSION
DN	-	DOWN
DSPR	-	DRY SPRINKLER PIPE
DWG	-	DRAWING
EA	-	EACH
ELEV	-	ELEVATION
EQUIP	-	EQUIPMENT
ETR	-	EXISTING TO REMAIN
EXT	-	EXTERIOR
F	-	FIRE SUPPLY
FACP	-	FIRE ALARM CONTROL PANEL
FDC	-	FIRE DEPARTMENT CONNECTION
FDV	-	FIRE DEPARTMENT VALVE
FHC	-	FIRE HOSE CABINET
FHR	-	FIRE HOSE RACK
FLR	-	FLOOR
FMG	-	FACTORY MUTUAL GLOBAL
FPC	-	FIRE PUMP CONTROLLER
FPTH	-	FIRE PUMP TEST HEADER
FS	-	FLOW SWITCH
FT	-	FEET
FTG	-	FOOTING
FVC	-	FIRE VALVE CABINET
GA	-	GAUGE
GAL	-	GALLON
GALV	-	GALVANIZED
GPM	-	GALLONS PER MINUTE
HD	-	HUB DRAIN
IBC	-	INTERNATIONAL BUILDING CODE
ID	-	INSIDE DIAMETER
IE	-	INVERT ELEVATION
IFC	-	INTERNATIONAL FIRE CODE
IN	-	INCHES
JP	-	JOCKEY PUMP
JPC	-	JOCKEY PUMP CONTROLLER
L	-	LENGTH
LBS	-	POUNDS
MAX	-	MAXIMUM
MEZZ	-	MEZZANINE
MFR	-	MANUFACTURER
MIN	-	MINIMUM
MISC	-	MISCELLANEOUS
MTD	-	MOUNTED
MTG	-	MOUNTING
NC	-	NORMALLY CLOSED
NFPA	-	NATIONAL FIRE PROTECTION ASSOCIATION
NO	-	NORMALLY OPEN
NOM	-	NOMINAL
NPT	-	NATIONAL PIPE THREAD
NTS	-	NOT TO SCALE
OC	-	ON CENTER
OD	-	OUTSIDE DIAMETER
OFCI	-	OWNER FURNISHED CONTRACTOR INSTALLED
OFOI	-	OWNER FURNISHED OWNER INSTALLED
PIV	-	POST INDICATOR VALVE
PLBG	-	PLUMBING
PRESS	-	PRESSURE
PRV	-	PRESSURE REDUCING VALVE
PSF	-	POUNDS PER SQUARE FOOT
PSI	-	POUNDS PER SQUARE INCH
PSIG	-	POUNDS PER SQUARE INCH GAUGE
RAD	-	RADIUS
REC	-	RECESSED
REQD	-	REQUIRED
RI	-	ROUGH-IN
RPM	-	REVOLUTIONS PER MINUTE
RPBP	-	REDUCED PRESSURE ZONE BACKFLOW PREVENTER
RV	-	RELIEF VALVE
SCH	-	SCHEDULE
SHT	-	SHEET
SPEC	-	SPECIFICATION
SPR	-	SPRINKLER
SQ	-	SQUARE
S/S	-	STAINLESS STEEL
STRU	-	STRUCTURAL / STRUCTURE
TEMP	-	TEMPERATURE
TC	-	TEST CELL
TOB	-	TOP OF BEAM
TOD	-	TOP OF DECK
TOJ	-	TOP OF JOIST
TOS	-	TOP OF SLAB / TOP OF STEEL
TYP	-	TYPICAL
UBC	-	UNIFORM BUILDING CODE
UFC	-	UNIFORM FIRE CODE
UNO	-	UNLESS NOTED OTHERWISE
V	-	VALVE
VEL	-	VELOCITY
VESDA	-	VERY EARLY SMOKE DETECTION APPARATUS
VOL	-	VOLUME
W	-	WIDTH
W/	-	WITH
W/O	-	WITHOUT

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MEP

Affiliated Engineers, Inc. (AEI)

Key Plan

No.	Date	Issue Description
2	11-30-2020	Issued for Bid
1	11-19-2020	Issued for JJC Review

ECKENHOFF SAUNDERS
One Prudential Plaza
130 East Randolph Suite 1850
Chicago IL 60601
312.786.1204p esadesign.com

Client / Project Name
Joliet Junior College

Respiratory Therapy

1215 Houblold Rd, Joliet, IL 60431

Sheet Title
Fire Protection Symbols & Abbreviations

QAQC
Checker

Project No.
19130

FP0.00

FIRE PROTECTION DEMOLITION GENERAL NOTES

1. AREA OF DEMOLITION SHOWN IS FOR APPROXIMATION PURPOSES ONLY. CONTRACTOR SHALL REFER TO ARCHITECTURAL DRAWINGS FOR EXACT AREA OF DEMOLITION.

2. CONTRACTOR SHALL OBTAIN PERMISSION FROM OWNERS REPRESENTATIVE TO SHUT OFF SERVICES OR SYSTEM, WHICH MAY AFFECT OTHER AREAS BEYOND THE LIMITS OF THE IMMEDIATE DEMOLITION AREA. SUCH PERMISSION WILL BE GRANTED ONLY AFTER OWNERS REPRESENTATIVE IS INFORMED AS TO THE REASON FOR AND DURATION OF THE SHUTDOWN AND IS SATISFIED THAT THE SHUTDOWN CAN BE MADE WITH AS LITTLE INCONVENIENCE TO OTHER AREAS AS POSSIBLE.

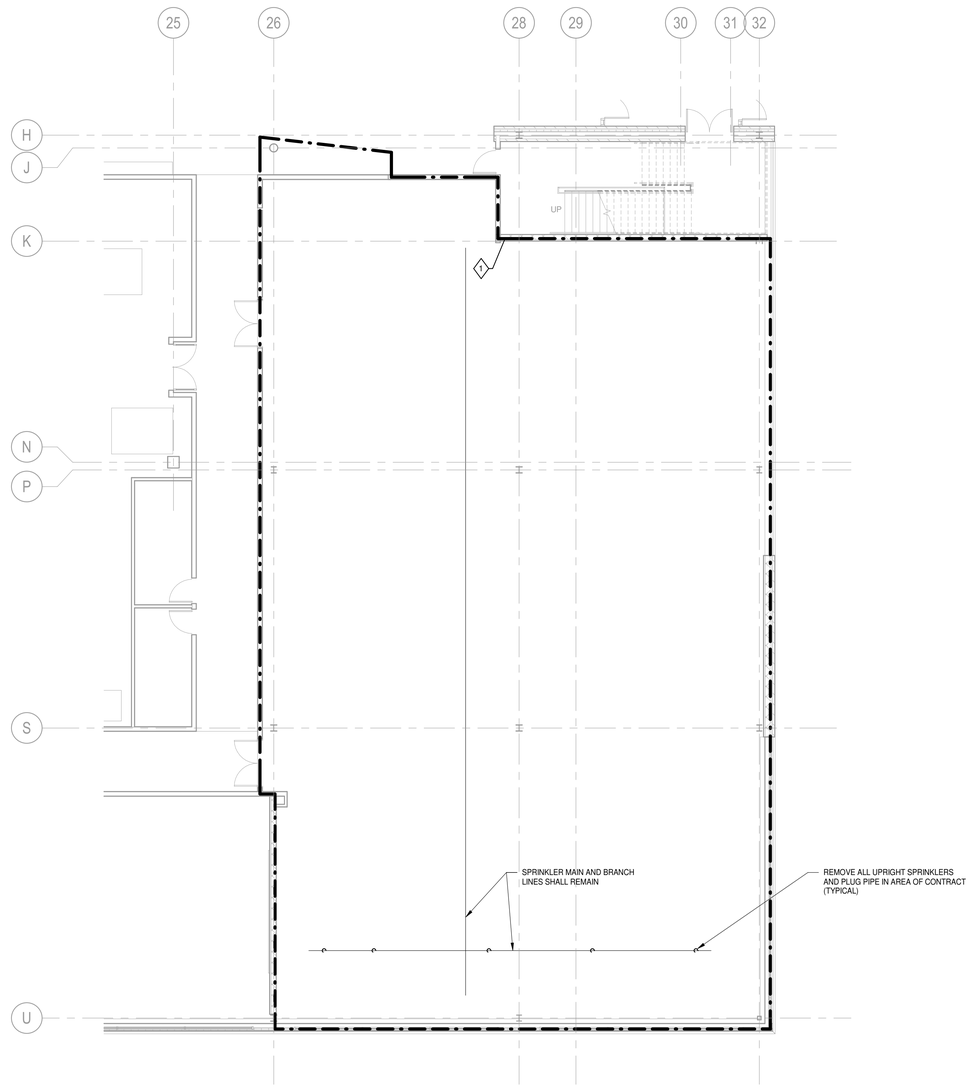
3. REMOVE ALL SPRINKLERS, INCLUDING EXTENDED COVERAGE UPRIGHT SPRINKLERS, WITHIN THE SCOPE OF WORK AREAS.

4. HANDLING OF ALL DEMOLISHED MATERIALS SHALL BE COORDINATED WITH CONSTRUCTION MANAGER PRIOR TO REMOVING OR DISCARDING ANY MATERIALS.

5. REFER TO SPECIFICATIONS 21 1314, AUTOMATIC FIRE PROTECTION SPRINKLER SYSTEM, FOR ADDITIONAL INFORMATION.

SHEET KEYNOTES

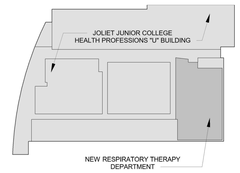
1 SPRINKLER SYSTEM BOUNDARY



1 **FIRE PROTECTION LEVEL 01 DEMOLITION FLOOR PLAN**
SCALE: 1/8" = 1'-0"

MEP

Affiliated Engineers, Inc. (AEI)



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Respiratory Therapy

1215 Houblold Rd, Joliet, IL 60431

Sheet Title
Fire Protection Level 01 Demolition Plan

QAQC
Checker

Project No.
19130

FP1.01

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FIRE PROTECTION GENERAL NOTES

1. SPRINKLER SYSTEM SHALL BE DESIGNED, MODIFIED, AND INSTALLED PER NFPA 13, AND LOCAL AND STATE CODES SO THAT COMPLETE AND UNOBSTRUCTED SPRINKLER COVERAGE IS PROVIDED.

2. CONTRACTOR SHALL EXAMIN REFLECTED CEILING DRAWINGS AS WELL AS MECHANICAL, ELECTRICAL, PIPING, INFORMATION TECHNONOLOGY, STRUCTURAL AND ARCHITECTURAL BUILDING PLANS PRIOR TO SYSTEM LAYOUT.

3. CONTRACTOR SHALL COORDINATE SPRINKLER PIPE ROUTING WITH ALL TRADES AS WELL AS PROJECT ARCHITECT. CONTRACTOR SHALL PARTICIPATE IN THE COORDINATION PROCESS AND SHALL NOT INSTALL PIPE PRIOR TO COORDINATION WITH OTHER TRADES.

4. SPRINKLERS SHALL BE OF THE QUICK RESPONSE TYPE.

5. UNDER FIXED OBSTRUCTIONS OVER 4 FEET WIDE SUCH AS DUCTS.

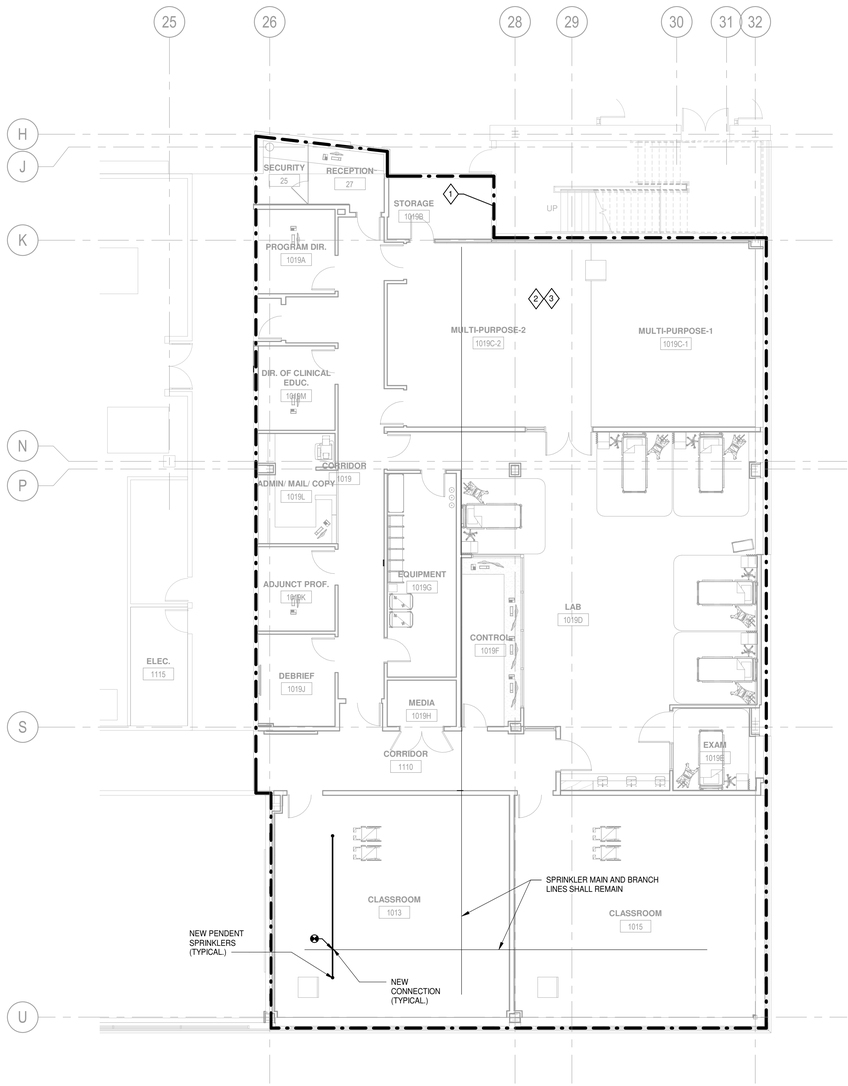
6. SPRINKLERS SHALL BE INSTALLED CENTER OF TILE. COORDINATE WITH ARCHITECTURAL REFLECTED CEILING PLANS AND MUST COMPLY WITH NFPA 13.

7. CONTRACTOR SHALL OBTAIN PERMISSION FROM OWNERS REPRESENTATIVE TO SHUT OFF SERVICES OR SYSTEM, WHICH MAY AFFECT OTHER AREAS BEYOND THE LIMITS OF THE IMMEDIATE DEMOLITION AREA. SUCH PERMISSION WILL BE GRANTED ONLY AFTER OWNERS REPRESENTATIVE IS INFORMED AS TO THE REASON FOR AND DURATION OF THE SHUTDOWN AND IS SATISFIED THAT THE SHUTDOWN CAN BE MADE WITH AS LITTLE INCONVENIENCE TO OTHER AREAS AS POSSIBLE.

8. REFER TO SPECIFICATION 21 0000, GENERAL FIRE SUPPRESSION REQUIREMENTS, AND 21 1314, AUTOMATIC FIRE SPRINKLER SYSTEM, FOR ADDITIONAL INFORMATION.

SHEET KEYNOTES

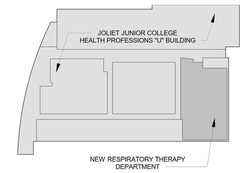
1 SPRINKLER SYSTEM BOUNDARY
2 INSTALLATION OF NEW SPRINKLER SYSTEM SHALL INCLUDE, AND NOT BE LIMITED TO, BRANCH LINES, SPRINKLERS, AND HANGER ASSEMBLIES.
3 CONTRACTOR SHALL MODIFY SPRINKLER PIPING AND EXTEND BRANCH LINES TO NEW SPRINKLER LOCATIONS AT CEILING LEVEL AS REQUIRED.



1 FIRE PROTECTION LEVEL 01 FLOOR PLAN
SCALE: 1/8" = 1'-0"

MEP

Affiliated Engineers, Inc. (AEI)



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Joliet Junior College

Respiratory Therapy

1215 Houblold Rd, Joliet, IL 60431

Sheet Title
Fire Protection Level 01 Floor Plan

QA/QC
Checker

Project No.
19130

FP2.01

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ELECTRICAL SYMBOLS AND ABBREVIATIONS

NOTES: ALL DIMENSIONS ARE CENTERLINE MEASURED FROM FINISHED FLOOR UNLESS OTHERWISE NOTED.

SHEET SYMBOLS

- EQ # — SCHEDULED EQUIPMENT DESIGNATION. -TOP INDICATES EQUIPMENT ABBREVIATION -BOTTOM INDICATES EQUIPMENT NUMBER. REFER TO EQUIPMENT SCHEDULES
- 2 — SPECIALTY ITEMS (I.E. GAUGE FILTER, ETC.) REFER TO EQUIPMENT LIST
- REFER M-1 — PLAN CONTINUATION REFERENCE. -BOTTOM INDICATES ON WHICH SHEET CONTINUATION APPEARS
- 1 / M-1 — SECTION DESIGNATION. -TOP INDICATES SECTION NUMBER. -BOTTOM INDICATES ON WHICH SHEET SECTION APPEARS
- 2 / M-1 — DETAIL REFERENCE. -TOP INDICATES SECTION NUMBER. -BOTTOM INDICATES ON WHICH SHEET SECTION APPEARS
- A/15B-6 — DETAIL REFERENCE. -TOP INDICATES SECTION NUMBER. -BOTTOM INDICATES ON WHICH SHEET SECTION APPEARS
- MATCHLINE DESIGNATION
- ELEVATION DESIGNATION. REFERENCE OFFICIAL PROJECT DATUM
- 1 — REVISION REFERENCE. REFER TO SHEET REVISION BLOCK
- 1 — SHEET KEYNOTE REFERENCE
- ROOM NAME: 101 — ROOM NAME & NUMBER DESIGNATION
- 1001 — CONSTRUCTION BULLETIN REVISION NUMBER
- POINT OF NEW CONNECTION TO EXISTING
- HALFTONE LIGHT LINE INDICATES EXISTING WORK
- HEAVY DASHED LINE WITH HATCH INDICATES EXISTING WORK TO BE DEMOLISHED
- HEAVY LINE INDICATES NEW WORK

BRANCH CIRCUIT SCHEDULE

BRANCH CIRCUIT	BREAKER SIZE	WIRE	CONDUIT
SINGLE POLE - SINGLE PHASE	20A-1P	2#12+1#12G	3/4"C
	30A-1P	2#10+1#10G	3/4"C
	40A-1P	2#8+1#10G	3/4"C
	50A-1P	2#6+1#10G	3/4"C
	60A-1P	2#4+1#10G	1 1/4"C
TWO POLE - SINGLE PHASE	20A-2P	2#12+1#12G	3/4"C
	30A-2P	2#10+1#10G	3/4"C
	40A-2P	2#8+1#10G	3/4"C
	50A-2P	2#6+1#10G	3/4"C
	60A-2P	2#4+1#10G	1 1/4"C
TWO POLE - SINGLE PHASE WITH NEUTRAL	20A-2P	3#12+1#12G	3/4"C
	30A-2P	3#10+1#10G	3/4"C
	40A-2P	3#8+1#10G	3/4"C
	50A-2P	3#6+1#10G	3/4"C
	60A-2P	3#4+1#10G	1 1/4"C
THREE POLE - THREE PHASE	20A-3P	3#12+1#12G	3/4"C
	30A-3P	3#10+1#10G	3/4"C
	40A-3P	3#8+1#10G	3/4"C
	50A-3P	3#6+1#10G	3/4"C
	60A-3P	3#4+1#10G	1 1/4"C
THREE POLE - THREE PHASE 4-WIRE WITH NEUTRAL	20A-3P	4#12+1#12G	3/4"C
	30A-3P	4#10+1#10G	3/4"C
	40A-3P	4#8+1#10G	3/4"C
	50A-3P	4#6+1#10G	1"C
	60A-3P	4#4+1#10G	1 1/4"C

LIGHTING

- UNSHADED REGION DESIGNATES LUMINAIRE FOR NORMAL OPERATION
- SHADED REGION DESIGNATES LUMINAIRE FOR LIFE SAFETY OPERATION
- SHADED REGION DESIGNATES LUMINAIRE FOR CRITICAL OPERATION

LUMINAIRE ID - SEE LUMINAIRE SCHEDULE (X# / ##Xx) — CIRCUIT/SWITCH

SUFFIX	DESCRIPTION
E	BATTERY PACK/INVERTER

^ ARROW ADDED TO LUMINAIRE SYMBOL TO INDICATE DIRECTION TOWARDS WHICH THE LUMINAIRE IS TO POINT.

LUMINAIRE SYMBOLS - REFER TO LUMINAIRE SCHEDULE FOR MORE INFORMATION

SMALL PROFILE LUMINAIRE

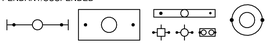
LIGHTING TRACK: TRACK HEAD

CEILING MOUNTED LUMINAIRES

RECESSED

SURFACE MOUNTED

PENDANT/SUSPENDED



WALL MOUNTED LUMINAIRES

RECESSED

SURFACE MOUNTED

EXIT SIGNS - CEILING MOUNTED: SINGLE FACE — DOUBLE FACE — DIRECTIONAL ARROW

EXIT SIGNS - WALL MOUNTED: SINGLE FACE — DOUBLE FACE — DIRECTIONAL ARROW

LIGHTING CONTROL

- XX / X — CONTROL STATION. MOUNTING LOCATION: WALL. MOUNTING HEIGHT: 3'-6". y=SWITCH DESIGNATION (lower case). XX= STATION TYPE: TC = TIMECLOCK; PC = PHOTOCELL; LC#= LIGHTING CONTROL STATION. X = TYPE DEFINITION (SEE BELOW)
- y $ X — SWITCH. MOUNTING LOCATION: WALL. MOUNTING HEIGHT: 3'-6". y=SWITCH DESIGNATION (lower case). X=TYPE DEFINITION (SEE BELOW)

TYPE DEFINITION:

X=TYPE DEFINITION
- 3 = THREE-WAY SWITCH
- 4 = FOUR-WAY SWITCH
- 2 = TWO POLE SWITCH
- 2P = 2 POLE, DUAL RELAY
- I = INDICATOR
- K = KEY SWITCH
- MC = MOMENTARY CONTACT
- D = DIMMER
- P = SWITCH WITH PILOT LIGHT
- TS = TIMER SWITCH
- LV,LV# = LOW VOLTAGE
- LV-M = LOW VOLTAGE "M"-MASTER SWITCH
- DM = REMOTE CONTROL FOR MOTORIZED DAMPER

C — LIGHTING CONTACTOR. MOUNTING LOCATION: WALL. MOUNTING HEIGHT: AS NOTED

- y $ Z — SENSOR SWITCH FOR LIGHTING CONTROL. MOUNTING LOCATION: WALL. MOUNTING HEIGHT: 3'-6". y = SWITCH DESIGNATION (lower case). Z = SENSOR TYPE DESIGNATION (SEE BELOW)
- y S Z — SENSOR FOR LIGHTING CONTROL. MOUNTING LOCATION: CEILING. y = SWITCH DESIGNATION (lower case). Z = SENSOR TYPE DESIGNATION (SEE BELOW)
- y S Z — SENSOR FOR LIGHTING CONTROL. MOUNTING LOCATION: WALL. MOUNTING HEIGHT: 8'-0". y = SWITCH DESIGNATION (lower case). Z = SENSOR TYPE DESIGNATION (SEE BELOW)

SENSOR TYPE DEFINITION:

Z = SENSOR TYPE DESIGNATION

OCCUPANCY MODE: AUTO ON, AUTO OFF
- PIR = PASSIVE INFRARED
- PIR/D = PASSIVE INFRARED WITH DIMMER
- PIRA = PASSIVE INFRARED WITH AMBIENT LIGHT
- 2P = 2 POLE, DUAL RELAY
- U = ULTRASONIC
- DT = DUAL TECHNOLOGY

VACANCY MODE: MANUAL ON, AUTO OFF
- VPIR = PASSIVE INFRARED
- VPIR/D = PASSIVE INFRARED WITH DIMMER
- VPIRA = PASSIVE INFRARED WITH AMBIENT LIGHT
- VDT = DUAL TECHNOLOGY

AMBIENT LIGHT
- AL = AMBIENT LIGHT SENSOR
- PC = PHOTOCELL

DAYLIGHT ZONES

PRIMARY ZONE — SECONDARY ZONE

RECEPTACLES

X = RECEPTACLE TYPE, REFER TO CHART BELOW
Y = NEMA CONFIGURATION, REFER TO CHART BELOW

MOUNTING LOCATION: WALL MOUNTING HEIGHT: 1'-6"
- X — DUPLEX RECEPTACLE
- X — DUPLEX RECEPTACLE, EMERGENCY CIRCUIT
- Xa — DUPLEX RECEPTACLE, UPPER HALF SWITCHED, LOWER HALF HOT
- X — SINGLE RECEPTACLE
- X — DOUBLE DUPLEX RECEPTACLE
- X — DOUBLE DUPLEX RECEPTACLE, EMERGENCY CIRCUIT
- LOCKING RECEPTACLE

ABOVE CASEWORK OR 2" ABOVE COUNTERTOP BACKSPLASH MOUNTING LOCATION: WALL MOUNTING HEIGHT: FIELD VERIFY
- X — DUPLEX RECEPTACLE
- X — DUPLEX RECEPTACLE, EMERGENCY CIRCUIT
- X — DOUBLE DUPLEX RECEPTACLE
- X — DOUBLE DUPLEX RECEPTACLE, EMERGENCY CIRCUIT

MOUNTING LOCATION: CEILING
- X — DUPLEX RECEPTACLE
- X — DUPLEX RECEPTACLE, EMERGENCY CIRCUIT
- X — DOUBLE DUPLEX RECEPTACLE
- X — DOUBLE DUPLEX RECEPTACLE, EMERGENCY CIRCUIT

FLOOR BOX MOUNTING LOCATION: FLOOR
- X — DUPLEX RECEPTACLE
- X — DOUBLE DUPLEX RECEPTACLE
- AV — MULTI-TRADE FLOOR BOX AV, POWER & DATA

RECEPTACLE TYPE DESIGNATION CHART

X = TYPE
- AF = AFCI RECEPTACLE
- CR = CONTROLLED RECEPTACLE
- DR = DEDICATED RECEPTACLE
- IG = ISOLATED GROUND RECEPTACLE
- GF = GFCI RECEPTACLE
- SP = SURGE PROTECTION RECEPTACLE
- SR = SPECIAL PURPOSE RECEPTACLE
- TR = TAMPER RESISTANT RECEPTACLE
- US = USB RECEPTACLE
- WP = WEATHERPROOF, GFCI RECEPTACLE

POKE THRU MOUNTING LOCATION: FLOOR
- DUPLEX RECEPTACLE
- DOUBLE DUPLEX RECEPTACLE
- AV — MULTI-TRADE AV, POWER & DATA

FIXED EQUIPMENT CONNECTION MOUNTING HEIGHT/LOCATION: COORDINATE W/ EQUIPMENT
- FIXED EQUIPMENT CONNECTION
- FIXED EQUIPMENT CONNECTION, EMERGENCY CIRCUIT
- FIXED EQUIPMENT CONNECTION, WALL MOUNT
- FIXED EQUIPMENT CONNECTION, WALL MOUNT, EMERGENCY CIRCUIT

MOUNTING LOCATION: SURFACE MOUNTED RACEWAY
- X — DUPLEX RECEPTACLE
- X — DUPLEX RECEPTACLE, EMERGENCY CIRCUIT
- Y — POWER OUTLET
- Y — POWER OUTLET, EMERGENCY CIRCUIT
- J — OUTLETS INSTALLED IN SURFACE MOUNTED RACEWAY

POWER OUTLET
- Y — WALL MOUNT, MOUNTING HEIGHT: 1'-6"
- Y — EMERGENCY CIRCUIT, WALL MOUNT MOUNTING HEIGHT: 1'-6"
- Y — CEILING MOUNT
- Y — EMERGENCY CIRCUIT, CEILING MOUNT

NEMA CONFIGURATION CHART

Y = NEMA CONFIGURATION
- A = 20A, 125V, NEMA 5-20R
- B = 20A, 125V, NEMA L5-20R
- C = 30A, 125V, NEMA 5-30R
- D = 30A, 125V, NEMA L5-30R
- E = 50A, 125V, NEMA 5-50R
- F = 50A, 125V, NEMA L5-50R
- G = 20A, 250V, NEMA 6-20R
- H = 20A, 250V, NEMA L6-20R
- J = 30A, 250V, NEMA 6-30R
- K = 30A, 250V, NEMA L6-30R
- L = 50A, 250V, NEMA 6-50R
- M= 50A, 250V, NEMA L6-50R
- N = 20A, 250V, NEMA 15-20R
- P = 20A, 250V, NEMA L15-20R
- Q = 30A, 277V, NEMA 7-30R
- R = 30A, 277V, NEMA L7-30R
- S = 20A, 125/250V, NEMA 14-20R
- T = 20A, 125/250V, NEMA L14-20R
- U = 30A, 125/250V, NEMA 14-30R
- V = 30A, 125/250V, NEMA L14-30R
- W= 50A, 125/208V, NEMA 18-50R
- Y = 30A, 125/250V, NEMA 15-30R

EQUIPMENT AND WIRING

- MOTOR
- T — TRANSFORMER
- PANELBOARD SURFACE MOUNTED
- PANELBOARD FLUSH MOUNTED
- DISTRIBUTION PANELBOARD (NOT TO SCALE)
- MCC — MOTOR CONTROL CENTER
- VFD — VARIABLE FREQUENCY DRIVE
- ATS — AUTOMATIC TRANSFER SWITCH
- XX-XX — PANEL DIVISION ARROW
- PANEL DIVISION LINE
- CABLE TAP BOX
- BUSWAY PLUG-IN UNIT
- GEN — REMOTE GENERATOR ANNUNCIATOR
- J — SURFACE JUNCTION BOX
- J — SURFACE JUNCTION BOX - WALL
- J — FLUSH JUNCTION BOX - CEILING
- J — FLUSH JUNCTION BOX - WALL
- J — FLUSH JUNCTION BOX - FLOOR
- R — RELAY - TYPE AS NOTED
- K — KIRK KEY INTERLOCK
- NON-FUSED DISCONNECT SWITCH
- F — FUSED DISCONNECT SWITCH
- B — ENCLOSED CIRCUIT BREAKER
- MAGNETIC MOTOR STARTER
- COMBINATION MOTOR STARTER
- PUSH BUTTON
- PUSH BUTTON - DOUBLE
- GROUND CONNECTION
- G — REMOTE GROUND INDICATOR
- G — ROOM REFERENCE GROUND POINT
- AIR TERMINAL
- GROUND ROD
- GROUND ROD WITH TEST WELL

HOMERUN A-1,3,5
- INDICATES NUMBER OF CONDUCTORS
- INDICATES NEUTRAL CONDUCTOR
- INDICATES GROUND CONDUCTOR

A-1,3,5 = PANEL AND CIRCUITS: PANEL A, CIRCUITS 1,3,5

FIRE ALARM

NOTES:
1. WALL MOUNTED NOTIFICATION DEVICES MOUNTING HEIGHT: 80" AFF TO BOTTOM OF FACEPLATE OR 6" FROM TOP OF FACEPLATE TO CEILING, WHICH EVER IS LOWER.
2. ALL CEILING MOUNTED DEVICES MOUNTED ON ACOUSTICAL CEILING TILE TO BE CENTERED ON TILE, UNO.
3. ALL CEILING MOUNTED DEVICES MOUNTED IN HARD LID CEILING TO BE CENTER ALIGNED WITH OTHER NEARBY CEILING EQUIPMENT, UNO.
4. PULL STATIONS TO BE MOUNTED 4'-0" AFF, UNO.

XX — MANUAL FIRE ALARM BOX TYPES XX=TYPE
- CO2 = CARBON DIOXIDE
- DC = DRY CHEMICAL
- DH = DOOR HOLDER
- HL = HALON
- F = PULL STATION/FIRE ALARM BOX
- FO = FOAM
- WC = WET CHEMICAL
- CA = CLEAN AGENT
- WM = WATER MIST
- DL = DELUGE FIRE SPRINKLER
- PRE = PREACTION
- MB = FIRE ALARM MASTER BOX
- DK = DRILL KEY
- DS = DOOR HOLDER W/ SMOKE DETECTOR

XX — SWITCH XX=TYPE
- M = MANUAL RELEASING SWITCH
- TS = TAMPER SWITCH
- WF = FLOW DETECTOR/SWITCH
- PS = PRESSURE DETECTOR/SWITCH
- LS = LEVEL DETECTOR/SWITCH
- TSS = TEMPERATURE SUPERVISORY SWITCH
- HT = HIGH TEMPERATURE SWITCH
- LT = LOW TEMPERATURE SWITCH
- VS = VALVE SUPERVISORY SWITCH

VS — VALVE WITH SUPERVISORY SWITCH

XX — ABORT SWITCH XX=TYPE
- A = ABORT SWITCH
- CO2 = CARBON DIOXIDE
- DC = DRY CHEMICAL
- HL = HALON
- FO = FOAM
- WC = WET CHEMICAL
- CA = CLEAN AGENT
- WM = WATER MIST
- DL = DELUGE FIRE SPRINKLER
- PRE = PREACTION

XX — HEAT DETECTOR/SENSOR XX=TYPE
- R/F = COMBINATION RATE OF RISE / FIXED TEMPERATURE
- R/C = RATE COMPENSATION
- F = FIXED TEMPERATURE
- R = RATE OF RISE ONLY

S XX — SMOKE DETECTOR/SENSOR XX=TYPE
- AS = AIR SAMPLING
- P = PHOTOELECTRIC
- I = IONIZATION
- R = RELAY BASE
- SS = SINGLE STATION
- SB = SOUNDER BASE
- ID = IN DUCT
- BT = BEAM TRANSMITTER
- BR = BEAM RECEIVER

I S — SMOKE DETECTOR/SENSOR FOR DUCT

XX — GAS DETECTOR/SENSOR XX=TYPE
- CO2 = CARBON DIOXIDE
- CO = CARBON MONOXIDE
- HCL = HYDROGEN CHLORIDE
- CH4 = METHANE

XX — FLAME DETECTOR/SENSOR XX=TYPE
- UV = ULTRAVIOLET
- IR = INFRARED
- UV/IR = COMBINATION UV / INFRARED
- VR = VISIBLE RADIATION

W XX — WATER DETECTOR

XXX # — MODULES XXX = TYPE
- AIM = ADDRESSABLE INPUT MONITOR MODULE
- AOM = ADDRESSABLE OUTPUT CONTROL MODULE
- IO = ISOLATION MODULE
- AIO = ADDRESSABLE INPUT/ OUTPUT MONITOR MOUDLE

# DENOTES NUMBER OF INPUTS/OUTPUTS

- F H — HORN ONLY
- F M — MINI-HORN
- F CH — CHIME - ELECTRONIC
- S — SPEAKER ONLY
- COMBINATION HORN/STROBE
- M cd — COMBINATION SPEAKER/VISIBLE cd = CANDELA RATING/SETTING
- M cd — EMERGENCY SPEAKER/VISIBLE cd = CANDELA RATING/SETTING
- F V — BELL - VIBRATING
- F SS — BELL - SINGLE STROKE
- F T — BELL - TROUBLE
- F G — BELL - GONG
- F CH — BELL - CHIME

FOR THE ABOVE SYMBOLS: C=CEILING MOUNTED W=WALL MOUNTED

- cd — VISIBLE ONLY (STROBE) WALL MOUNT cd = CANDELA RATING/SETTING
- cd — VISIBLE ONLY (STROBE) CEILING MOUNT cd = CANDELA RATING/SETTING
- M cd — EMERGENCY VISIBLE ONLY (STROBE) WALL MOUNT cd = CANDELA RATING/SETTING
- M cd — EMERGENCY VISIBLE ONLY (STROBE) CEILING MOUNT cd = CANDELA RATING/SETTING
- RI — REMOTE INDICATOR
- RI — CEILING MOUNT INDICATOR
- ROTATING BEACON
- RTS — REMOTE ALARM INDICATING AND TEST SWITCH
- A — FIRE SERVICE OR EMERGENCY PHONE STATION - ACCESSIBLE
- FIRE SERVICE OR EMERGENCY PHONE STATION - BASIC SHAPE
- H — FIRE SERVICE OR EMERGENCY PHONE STATION - HANDSET
- J — FIRE SERVICE OR EMERGENCY PHONE STATION - JACK
- FWS — FLOOR WARDEN STATION

XXXX — CONTROL PANELS/UNITS XXXX=TYPE
- FACP = FIRE ALARM CONTROL PANEL
- FAA = FIRE ALARM ANNUNCIATOR
- FACU = FIRE ALARM CONTROL UNIT
- FATC = FIRE ALARM TERMINAL CABINET
- ECCU = EMERGENCY COMMUNICATIONS CONTROL UNIT
- FSCP = FIRE SUPPRESSION CONTROL PANEL
- FSCU = FIRE SUPPRESSION CONTROL UNIT
- FAC = FIRE ALARM COMMUNICATOR
- SAP = SPRINKLER ALARM PANEL
- WCU = WIRELESS CONTROL UNIT
- MFACU = MASTER FIRE ALARM CONTROL UNIT
- BATT = BATTERY CABINET
- EVAC = VOICE EVACUATION CONTROL UNIT
- NPS = NOTIFICATION POWER SUPPLY
- GAP = GRAPHIC ANNUNCIATOR PANEL
- ARCM = AREA OF REFUGE MASTER UNIT
- ARCR = AREA OF REFUGE REMOTE UNIT

ELECTRICAL EQUIPMENT DESIGNATION CODE

01NPLA2

LEVEL:
- 00 - GROUND
- 01 - LEVEL 1
- 02 - LEVEL 2
- 03 - LEVEL 3
- 04 - LEVEL 4
- 05 - LEVEL 5
- 0R - ROOF

APPLICATION:
- N - NORMAL BRANCH
- Z - EQUIPMENT BRANCH - PRIORITY "0"
- C - CRITICAL BRANCH - PRIORITY "1"
- S - LIFE SAFETY BRANCH - PRIORITY "1"
- E - EQUIPMENT BRANCH - PRIORITY "2"
- O - OPTIONAL EQUIPMENT BRANCH - PRIORITY "3"
- U - UNINTERUPTABLE POWER SUPPLY (UPS)
- G - GENERATOR (NON-TRANSFER SWITCH)

PANEL:
1, 2, 3, 4, ...ETC

AREA:
- A - ELECTRICAL ROOM
- B - ELECTRICAL ROOM
- ...ETC

VOLTAGE:
- V - 15KV (UTILITY)
- H - 480V, 480Y/277V
- L - 240V, 208Y/120V

EQUIPMENT:
- M - MEDIUM VOLTAGE GEAR
- G - SWITCHGEAR
- S - SWITCHBOARD
- D - DISTRIBUTION PANEL
- P - BRANCH CIRCUIT PANELBOARD
- A - AUTOMATIC TRANSFER SWITCH
- T - TRANSFORMER
- B - BUSWAY
- LCP- LIGHTING CONTROL PANEL
- U - UNINTERRUPTIBLE POWER SUPPLY
- I - ISOLATION POWER PANEL

ELECTRICAL ABBREVIATIONS

A	- AMPERES	LAN	- LOCAL AREA NETWORK
AC	- ABOVE CEILING / ALTERNATING CURRENT	LED	- LIGHT EMITTING DIODE
		LI	- LONG-TIME/INSTANTANEOUS
ADO	- AUTOMATIC DOOR OPENER	LSI	- LONG-TIME/SHORT-TIME/ INSTANTANEOUS
AF	- AMPERE FRAME		
AFCI	- ARC FAULT CIRCUIT INTERRUPTER	LSIA	- LONG-TIME/SHORT-TIME/ INSTANTANEOUS/GROUND
AFF	- ABOVE FINISHED FLOOR	ALARM	
AIC	- AMP INTERRUPTING CAPACITY	LSIG	- LONG-TIME/SHORT-TIME/ INSTANTANEOUS/GROUND
ALT	- ALTERNATE		
ARCH	- ARCHITECTURAL	LTCP	- LOCAL TEMPERATURE CONTROL PANEL
ASC	- ABOVE SUSPENDED CEILING		
AT	- AMPERE TRIP	LTG	- LIGHTING
ATC	- ASTRONOMIC TIME CLOCK	LTS	- LIGHTS
ATS	- AUTOMATIC TRANSFER SWITCH	LV	- LOW VOLTAGE
AUTO	- AUTOMATIC		
		MATV	- MASTER ANTENNA TELEVISION
BC	- BARE COPPER	MC	- MECHANICAL CONTRACTOR
BFC	- BELOW FINISH CEILING	MCB	- MAIN CIRCUIT BREAKER
BFL	- BELOW FLOOR LEVEL	MCC	- MOTOR CONTROL CENTER
BLDG	- BUILDING	MCP	- MOTOR CIRCUIT PROTECTOR
BPIP	- BOILER PLANT INSTRUMENTATION PANEL	MER	- MECHANICAL EQUIPMENT ROOM
		MH	- MANHOLE
BRKR	- BREAKER	MLO	- MAIN LUGS ONLY
		MPTB	- MUSIC & PAGE TERMINAL BOX
C	- CONDUIT	MTD	- MOUNTED
CB	- CIRCUIT BREAKER	MTG	- MOUNTING
CCTV	- CLOSED CIRCUIT TELEVISION	MTG HGT	- MOUNTING HEIGHT
CFCI	- CONTRACTOR FURNISHED, CONTRACTOR INSTALLED	MTR	- MOTOR / METER
		MV	- MEDIUM VOLTAGE
CGL	- CEILING		
CKT	- CIRCUIT	NA	- NOT APPLICABLE
CO	- CONDUIT ONLY	NAC	- NOTIFICATION APPLIANCE CIRCUIT
CONTR	- CONTRACTOR		
CORR	- CORRIDOR	NC	- NORMALLY CLOSED
CR	- CONTROL RELAY	NEC	- NATIONAL ELECTRICAL CODE
CT	- CURRENT TRANSFORMER	NIC	- NOT IN CONTRACT
		NO	- NORMALLY OPEN
DB	- DIRECT BURIAL	NTS	- NOT TO SCALE
DC	- DIRECT CURRENT		
DED	- DEDICATED	OC	- ON CENTER
DET	- DETAIL	OFCI	- OWNER FURNISHED, CONTRACTOR INSTALLED
DIA	- DIAMETER		
DISC	- DISCONNECT	OFOI	- OWNER FURNISHED, OWNER INSTALLED
DN	- DOWN		
DP	- DISTRIBUTION PANEL		
DS	- DISCONNECT SWITCH	P	- POLE
		PA	- PUBLIC ADDRESS
EC	- ELECTRICAL CONTRACTOR	PB	- PULL BOX / PUSHBUTTON
EDB	- ELECTRIC DUCT BANK	PC	- PLUMBING CONTRACTOR / PHOTOCELL
EGC	- EQUIPMENT GROUND CONDUCTOR	PDU	- POWER DISTRIBUTION UNIT
EGS	- ENGINE GENERATOR SET	PF	- POWER FACTOR
EJ	- EXPANSION JOINT	PH	- PHASE
ELEC	- ELECTRIC / ELECTRICAL	PLBG	- PLUMBING
ELL	- EMERGENCY LIFE SAFETY LIGHTING	PNL	- PANEL
		POD	- POWER OPERATED DAMPER
ELP	- EMERGENCY LIFE SAFETY POWER	PS	- POWER SUPPLY
		PT	- POTENTIAL TRANSFORMER
EM/EMER	- EMERGENCY	PTRV	- POWER TYPE ROOF VENTILATOR
EMI	- ELECTROMAGNETIC INTERFERENCE	PWR	- POWER
EMT	- ELECTRICAL METALLIC TUBING		
EQUIP	- EQUIPMENT	REC	- RECESSED
ESM	- ELECTRIC STRIP MOLD	RECEP	- RECEPTACLE
ETR	- EXISTING TO REMAIN	REL	- RELOCATE
EWC	- ELECTRIC WATER COOLER	REQD	- REQUIRED
		RMC	- RIGID METAL CONDUIT
FA	- FIRE ALARM	RVAT	- REDUCED VOLTAGE AUTO TRANSFORMER
FACP	- FIRE ALARM CONTROL PANEL		
FCU	- FAN COIL UNIT		
FDR	- FEEDER	SCCR	- SHORT CIRCUIT CURRENT
FDS	- FUSED DISCONNECT SWITCH	RATING	
FIXT	- FIXTURE	SHT	- SHEET
FL	- AT FLOOR LINE	SIG	- SIGNAL
FLA	- FULL LOAD AMPERES	SIM	- SIMILAR
FLEX	- FLEXIBLE	SPD	- SURGE PROTECTIVE DEVICE
FLR	- FLOOR	SPEC	- SPECIFICATION
FLUOR	- FLUORESCENT	SS	- SAFETY SWITCH
FS	- FLOW SWITCH	SSBJ	- SUPPLY SIDE BONDING JUMPER
FSCP	- FLAME SAFEGUARD CONTROL PANEL	STA	- STATION
		STR	- STARTER
FVNR	- FULL VOLTAGE NON-REVERSING	SW	- SWITCH
		SWBD	- SWITCHBOARD
GC	- GENERAL CONTRACTOR	SWGR	- SWITCHGEAR
GEN	- GENERATOR		
GFCI	- GROUND FAULT CIRCUIT INTERRUPTER	TEL	- TELEPHONE
		TFA	- TO FLOOR ABOVE
GFI	- GROUND FAULT INTERRUPTER	TFB	- TO FLOOR BELOW
GFP	- GROUND FAULT PROTECTION	TS	- TAMPER SWITCH / TIME SWITCH
GND	- GROUND	TV	- TELEVISION
GTB	- GROUND TERMINAL BOX	TVTC	- TELEVISION TERMINAL CABINET
		TYP	- TYPICAL
HH	- HANDHOLE		
HOA	- HAND OFF AUTOMATIC	UC	- UNDER COUNTER
HP	- HORSE POWER	UG	- UNDERGROUND
HT	- HEIGHT / HEAT TRACE	UH	- UNIT HEATER
HV	- HIGH VOLTAGE	UNO	- UNLESS NOTED OTHERWISE
		UPS	- UNINTERRUPTED POWER SUPPLY
IMC	- INTERMEDIATE METAL CONDUIT		
INV	- INVERTER	V	- VOLTAGE
		VFD	- VARIABLE FREQUENCY DRIVE
J or JB	- JUNCTION BOX	VP	- VAPOR PROOF
KV	- KILOVOLT	W	- WIRE
KVA	- KILOVOLT-AMPERES	W/	- WITH
KW	- KILOWATTS	WP	- WEATHERPROOF
KWH	- KILOWATT HOURS	WS	- WALL SURFACE
		WT	- WATER TIGHT
		XFMR	- TRANSFORMER
		XP	- EXPLOSION PROOF

MEP

Affiliated Engineers, Inc. (AEI)

Key Plan

No.	Date	Issue Description
3	11-30-2020	Issued for Bid
2	11-19-2020	Issued for JJC Review
1	09-18-2020	Schematic Design / Design Development

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Client / Project Name

Joliet Junior College

Respiratory Therapy

1215 Houblold Rd, Joliet, IL 60431

Sheet Title

Electrical Symbols & Abbreviations

QAQC: FM

Project No.: 19130

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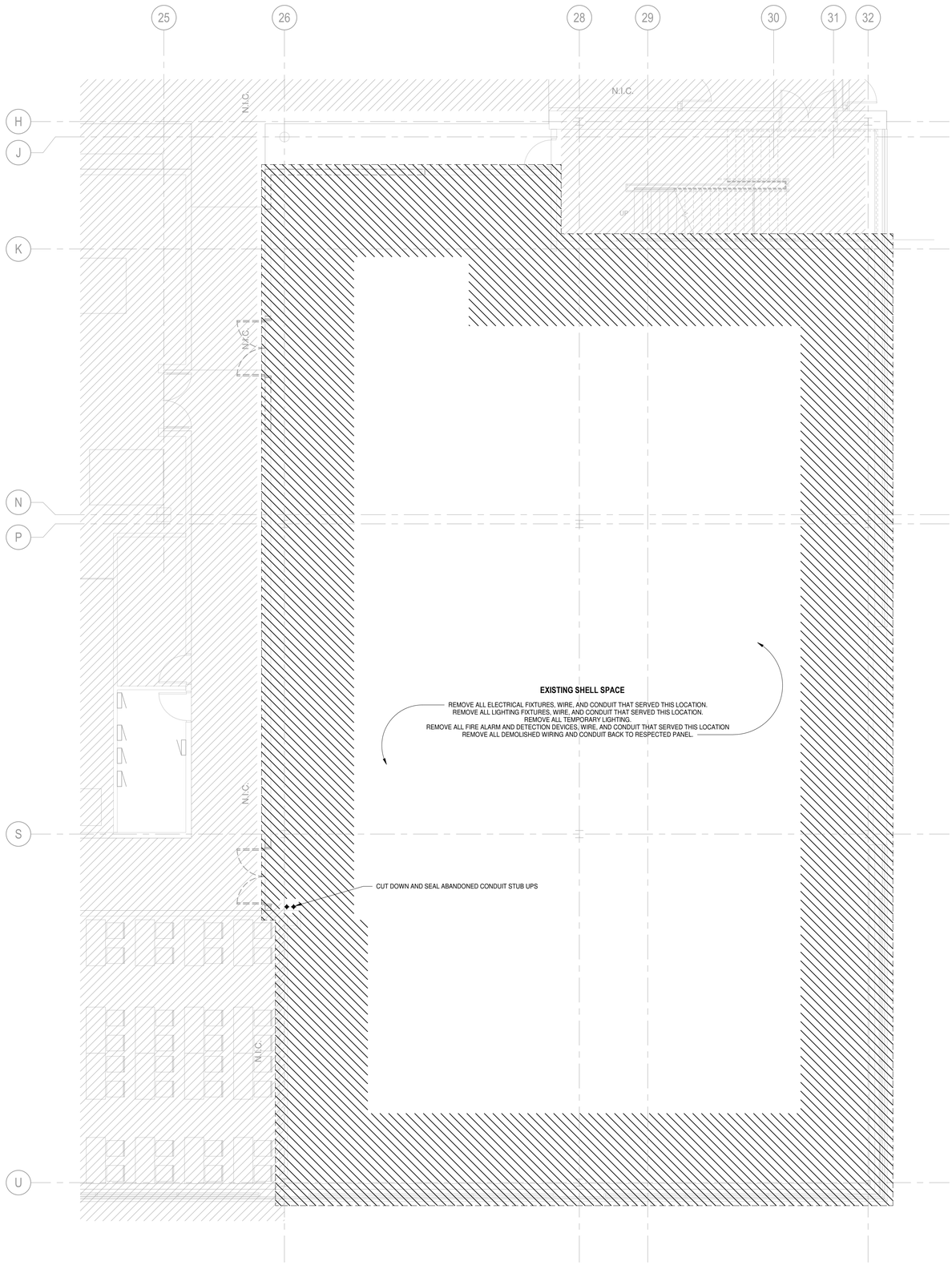

1 ELECTRICAL DEMO LEVEL 01 FLOOR PLAN
SCALE: 3/16" = 1'-0"

ELECTRICAL DEMOLITION GENERAL NOTES

1. REFER TO SPECIFICATIONS FOR DIRECTIONS REGARDING DEMOLITION WORK.
2. AREA OF DEMOLITION SHOWN IS FOR APPROXIMATION PURPOSES ONLY. CONTRACTOR SHALL REFER TO ARCHITECTURAL DRAWINGS FOR EXACT AREA OF DEMOLITION.
3. EQUIPMENT LOCATIONS SHOWN ARE APPROXIMATE AND SHALL BE FIELD VERIFIED.
4. DEMOLITION DRAWINGS SHOWING EXISTING CONDITIONS HAVE BEEN PREPARED BASED ON FIELD OBSERVATION AND EXISTING ELECTRICAL DRAWINGS. ADDITIONAL COMPONENTS MAY EXIST WHICH DO NOT SHOW AND SUCH ITEMS SHALL BE DEALT WITH IN A MANNER SIMILAR TO THOSE ITEMS, WHICH DO SHOW.
5. FURNISH ALL LABOR, MATERIALS AND EQUIPMENT REQUIRED TO COMPLETE DEMOLITION OF EXISTING ELECTRICAL EQUIPMENT AS SPECIFIED OR INDICATED. DISCONNECT, REMOVE AND RELOCATE ALL ITEMS AS REQUIRED TO FACILITATE THE NEW CONSTRUCTION.
6. CONTRACTOR SHALL THOROUGHLY FAMILIARIZE HIMSELF WITH EXISTING ELECTRICAL SYSTEM, WHICH WILL BE AFFECTED BY THE DEMOLITION AND REMODELING WORK.
7. CONTRACTOR SHALL OBTAIN PERMISSION FROM OWNERS REPRESENTATIVE TO SHUT OFF SERVICES OR SYSTEM, WHICH MAY AFFECT OTHER AREAS BEYOND THE LIMITS OF THE IMMEDIATE DEMOLITION AREA. SUCH PERMISSION WILL BE GRANTED ONLY AFTER OWNERS REPRESENTATIVE IS INFORMED AS TO THE REASON FOR AND DURATION OF THE SHUTDOWN AND IS SATISFIED THAT THE SHUTDOWN CAN BE MADE WITH AS LITTLE INCONVENIENCE TO OTHER AREAS AS POSSIBLE.
8. WHERE REMOVAL OF CONDUIT AND WIRING AFFECTS THE OPERATION OF "UPSTREAM" AND/OR "DOWNSTREAM" UTILIZATION EQUIPMENT WHICH IS NOT INDICATED TO BE REMOVED, PROVIDE ADDITIONAL CONDUIT AND WIRING TO RESTORE THE "UPSTREAM" AND "DOWNSTREAM" UTILIZATION EQUIPMENT TO ITS NORMAL OPERATION.
9. WIRING SHALL BE REMOVED, TERMINATED OR EXTENDED AS REQUIRED TO MAINTAIN CIRCUIT CONTINUITY AS CONDITIONS MAY DICTATE. ALL BRANCH CIRCUITS TO BE DISCONNECTED SHALL BE IDENTIFIED AS TO LOCATION OR ITEM SERVED BEFORE DISCONNECTING. CIRCUITS SERVING AREAS BEYOND THE IMMEDIATE DEMOLITION AND REMODELING SHALL BE MAINTAINED.
10. IN DEMOLITION AND REMODELED AREAS ANY FEEDERS, CONDUITS, BRANCH CIRCUITS, SIGNAL AND TELEPHONE CIRCUITS, ETC. PASSING THROUGH THESE AREAS TO SERVE REMOTE OR SURROUNDING AREAS THAT ARE TO REMAIN, SHALL BE RETAINED AND KEPT OPERATIONAL AND SHALL BE REROUTED IN ALL CASES WHERE THEY INTERFERE WITH ANY NEW WORK.
11. ALL EXISTING ELECTRICAL EQUIPMENT AND MATERIAL IN AREAS TO BE REMODELED/ALTERED SHALL BE REMOVED. UNLESS NOTED OTHERWISE ON DRAWING TO BE RETAINED OR RELOCATED.
12. REMOVE ALL ELECTRICAL COMPONENTS WITHIN AREA OF DEMOLITION. REMOVE ALL JUNCTION BOXES AND CONDUIT ASSOCIATED WITH DEVICES. REMOVE ALL CIRCUIT WIRING FROM COMPONENT BACK TO ORIGIN (PANELBOARD, MOTOR CONTROL CENTER, ETC.), UNLESS IT IS REQUIRED TO MAINTAIN CIRCUIT CONTINUITY TO COMPONENTS OUTSIDE OF THE AREA OF DEMOLITION. IF CIRCUIT CONTINUITY IS REQUIRED REWORK CONDUIT AND WIRE SO THAT THE NEW ROUTE IS OUTSIDE OF THE AREA TO BE DEMOLISHED.
13. ALL LUMINAIRES, DISCONNECTS, TIME CLOCKS, PANELS, ETC. REMOVED SHALL REMAIN THE PROPERTY OF THE OWNER AND BE TURNED OVER TO THE OWNER. CONDUIT, BOXES, WIRING AND MISCELLANEOUS ELECTRICAL SCRAP SHALL BE REMOVED FROM THE JOB SITE BY THE ELECTRICAL CONTRACTOR.
14. REMOVE ALL EXISTING WIRING/CABLING FROM ALL EXISTING CONCEALED RACEWAYS IN PARTITIONS THAT ARE TO REMAIN.
15. REMOVE ALL ELECTRICAL EQUIPMENT ON OR IN EXISTING WALLS, CEILINGS AND PARTITIONS THAT ARE TO BE DEMOLISHED.
16. REMOVE ABANDONED WIRING TO SOURCE OF SUPPLY.
17. CONDUITS, BOXES, ETC. SHALL BE REMOVED AS REQUIRED BY WALL DEMOLITION.
18. WHERE EXISTING WALLS ARE TO REMAIN, REMOVE ALL EXPOSED RACEWAYS, SURFACE AND RECESSED BOXES THAT ARE NOT TO BE REUSED.
19. DISCONNECT ABANDONED OUTLETS AND REMOVE DEVICES. REMOVE ABANDONED OUTLETS IF CONDUIT SERVICING THEM IS ABANDONED AND REMOVED. PROVIDE BLANK COVER FOR ABANDONED OUTLETS, WHICH ARE NOT REMOVED.

MEP

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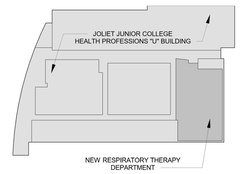

Key Plan

No.	Date	Issue Description
2	11-30-2020	Issued for Bid
1	11-19-2020	Issued for JJC Review

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Client / Project Name
Joliet Junior College

Respiratory Therapy

1215 Houblold Rd, Joliet, IL 60431

Sheet Title
Electrical Demo Level 01 Floor Plan

QAQC
FM

Project No.
19130

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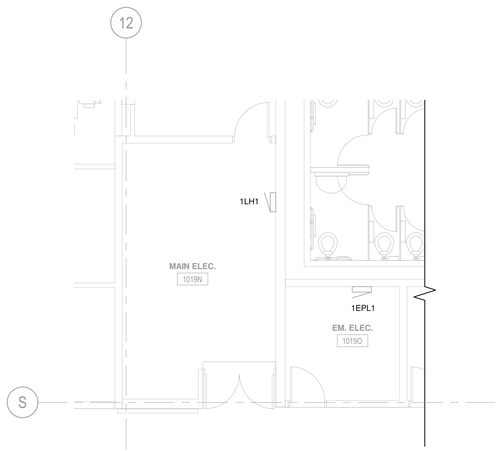
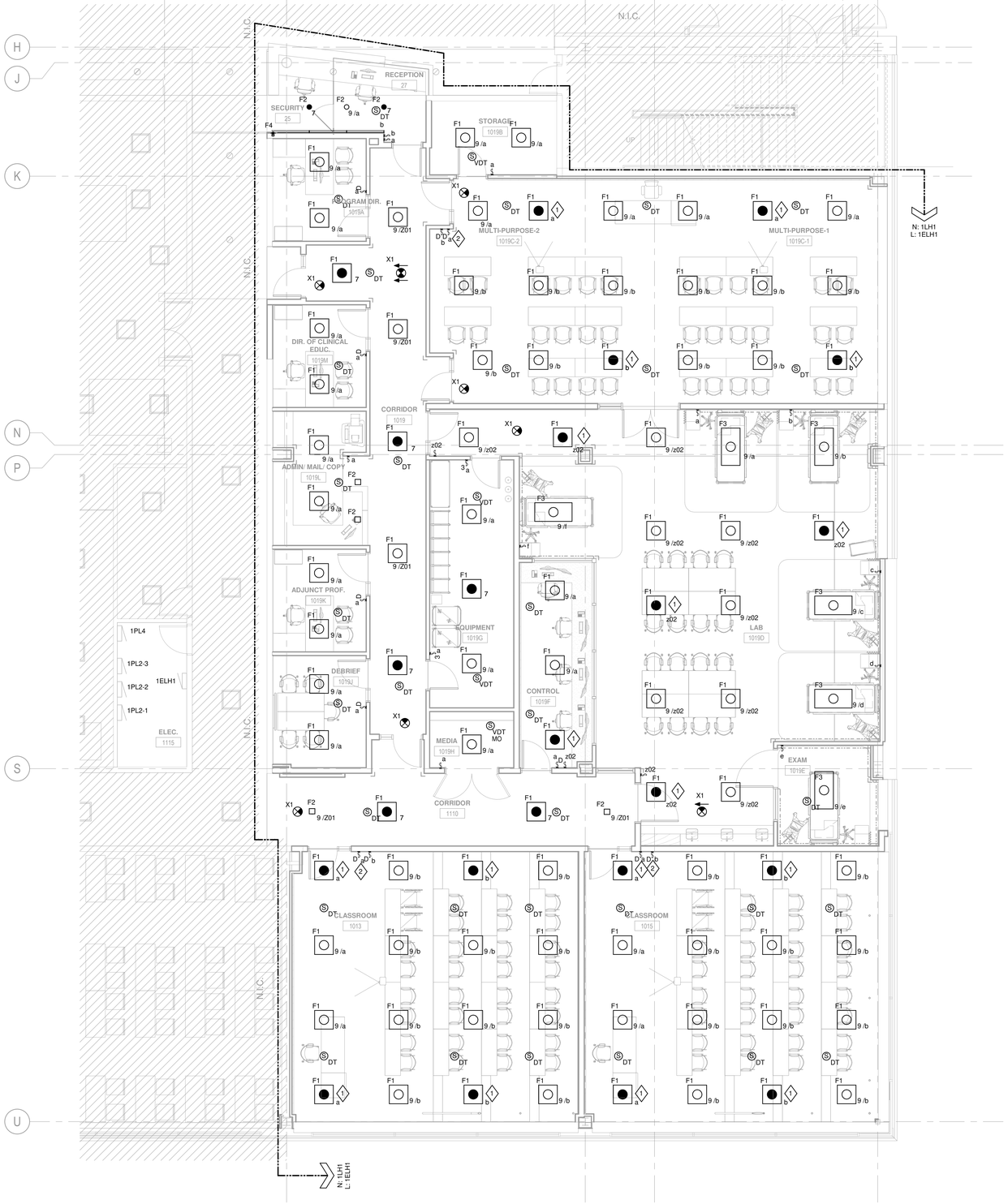
LIGHTING FIXTURE SCHEDULE

TYPE	MANUFACTURE	MODEL NO.	LAMP WATTS	VOLTS	MOUNTING	DESCRIPTION	COMMENTS
F1	LITHONIA	EPANL 2X2 4000LM 80CRI 50K MIN10 ZT MVOLT	31	MVOLT	CEILING/FLUSH	2X2 LED TROFFER LIGHT	
F2	LITHONIA	LDN6SQ-50/20 L56AR LD	23	MVOLT	RECESSED	6" LED RECESSED SQUARE LIGHT	
F3	LITHONIA	EPANL 2X4 4800LM 80CRI 50K MIN 10 ZT MVOLT	48	MVOLT	CEILING/FLUSH	2X4 LED TROFFER LIGHT	
F4	FOCAL POINT	FSM2L-TF--375-50K-1C-UNV-LD1-XFF-WH-12'	96	MVOLT	RECESSED	CUSTOM LENGTH 4" LED LINEAR LIGHT	SEE ARCHITECTURAL PLANS FOR LIGHTING DESIGN
	FOCAL POINT	FSM2L-FL-375-50K-1C-UNV-LD1-XFF-WH-9'-8"	76				
	MARK LIGHT (ALT)	SL2L-LOP-LENGTH-FLP-FL-80CRI-50K-800LMF-120-90DEG INSIDE CORNER					
	NULITE(ALT)	RM/RW2-03-L50-UNV-D-1C-ST-F-WH-12'-CONT LENS (ALT)					
	NULITE(ALT)	RM/RW2-03-L50-UNV-D-1C-ST-F-WH-9'-8"-CONT LENS (ALT)					
X1	LITHONIA	EDG/R-W-FACE#-COLOR	4	MVOLT	CEILING/FLUSH	EXIT SIGN WITH RED LETTERS	



2 ELECTRICAL LIGHTING LEVEL 01 FLOOR PLAN

SCALE: 3/16" = 1'-0"



1 ELECTRICAL LIGHTING LEVEL 01 FLOOR PLAN

SCALE: 3/16" = 1'-0"

ELECTRICAL LIGHTING GENERAL NOTES

1. LIGHTING FIXTURES SHOWN ARE FOR CIRCUITING AND SWITCHING INFORMATION ONLY. SEE ARCHITECTURAL PLANS FOR ACTUAL FIXTURE LOCATIONS.
2. ALL RACEWAYS ARE TO CONTAIN NO MORE THAN NINE CURRENT CARRYING CONDUCTORS AND A CODE SIZED EQUIPMENT GROUNDING CONDUCTOR.
3. EACH EXIT SIGN & EMERGENCY LIGHTING CIRCUIT SHALL HAVE ITS OWN NEUTRAL. MULTIWIRE BRANCH CIRCUITS ARE NOT ALLOWED.
4. SEAL ALL RACEWAYS AND PENETRATIONS BOTH INTERNALLY AND EXTERNALLY WHERE TRANSITIONS ARE MADE FROM CONDITIONED SPACES TO OUTDOOR OR UNDERGROUND. RACEWAYS ARE TO BE SEALED TO PREVENT AIR, MOISTURE, AND RODENT MIGRATION THROUGH AND AROUND RACEWAYS.
5. COORDINATE FIRE SEPARATION BARRIER PENETRATIONS WITH ARCHITECT'S DRAWINGS. USE APPROVED FIRE STOPPING SEALANT AROUND PENETRATION AFTER RACEWAYS ARE INSTALLED.
6. CONNECT ZONED LIGHTING TO EXISTING LUTRON PANEL U1114B

SHEET KEYNOTES

1 PROVIDE UL924 RELAY DEVICE FOR EM LIGHTING. UL924 DEVICE SHALL BE POWERED AND SWITCHED RESPECTIVELY WITH OTHER DEVICES IN LOCATION USING PANEL 1LH1 AND GET EMERGENCY POWER FROM EMERGENCY PANEL 1ELH1 WITH NEW 20A 1P CIRCUIT BREAKER.

2 PROGRAMABLE SWITCH CONNECTED TO LUTRON PANEL U1114B. SWITCH TO BE PROGRAMMED FOR DIFFERENT LIGHTING SCENES.

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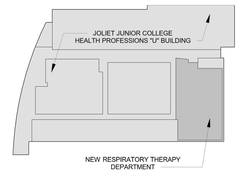

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Respiratory Therapy

1215 Houbolld Rd, Joliet, IL 60431

Sheet Title

Electical Lighting Level 01 Floor Plan

QA/QC: FM

Project No.: 19130

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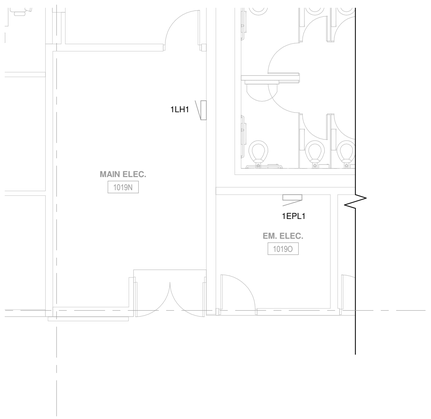
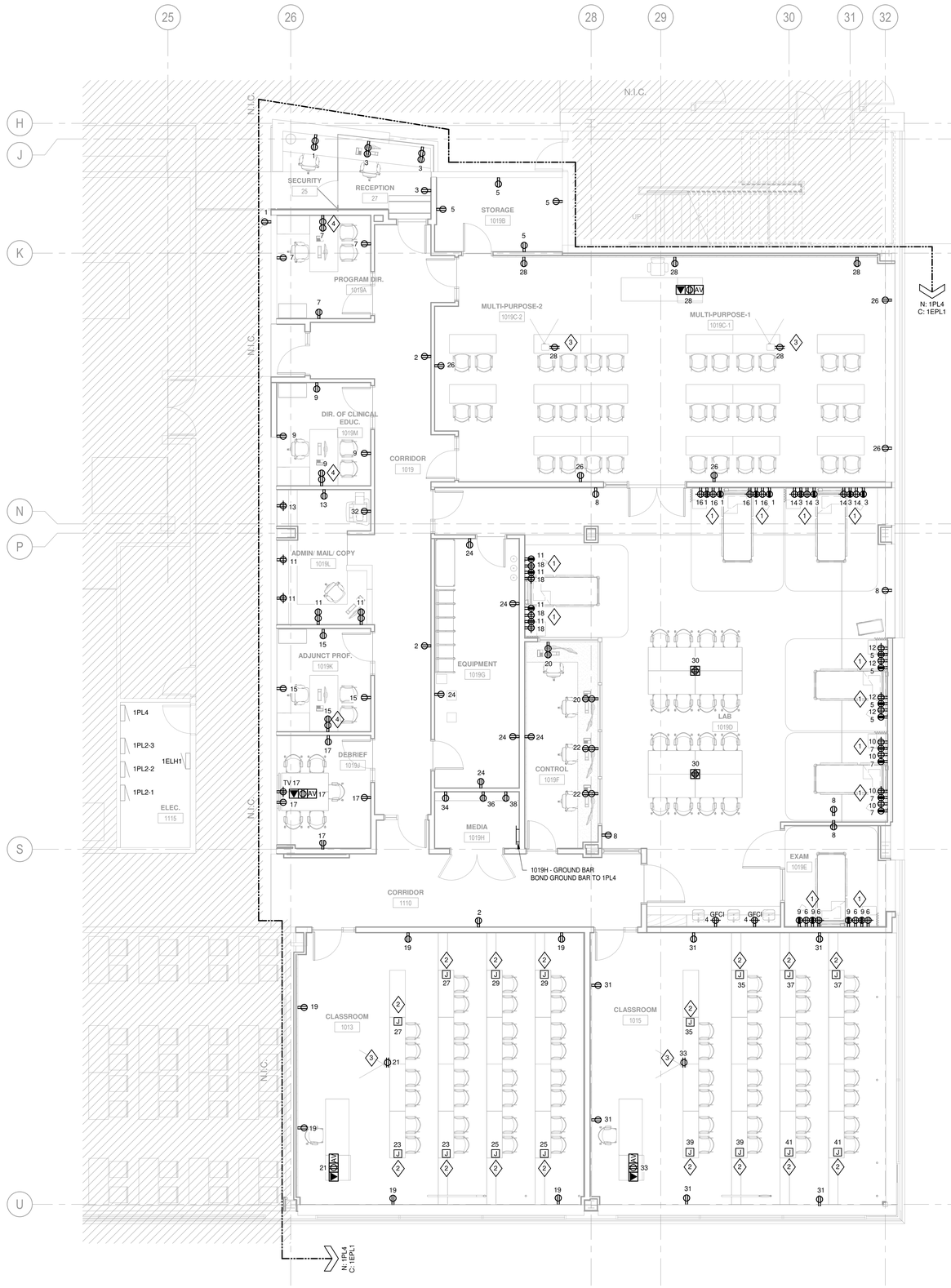


2 ELECTRICAL POWER LEVEL 01 FLOOR PLAN

SCALE: 3/16" = 1'-0"



1 ELECTRICAL POWER LEVEL 01 FLOOR PLAN

SCALE: 3/16" = 1'-0"

ELECTRICAL POWER GENERAL NOTES

1. CONDUCTOR SIZES ARE BASED ON COPPER THHN/THWN IN METALLIC RACEWAY. 60°C CONDUCTOR USED FOR AMPERAGES LESS THAN 100. 75°C CONDUCTOR USED FOR AMPERAGES GREATER THAN OR EQUAL TO 100.
2. VERIFY EQUIPMENT LOCATIONS AND CONDUCTOR LENGTHS PRIOR TO INSTALLATION. CONSULT ENGINEER IF INCREASED CONDUCTOR LENGTHS RESULT IN UNACCEPTABLE VOLTAGE DROP (3% OR GREATER).
3. ALL RACEWAYS ARE TO CONTAIN NO MORE THAN NINE CURRENT CARRYING CONDUCTORS AND A CODE SIZED EQUIPMENT GROUNDING CONDUCTOR.
4. EACH CIRCUIT IS TO HAVE ITS OWN NEUTRAL. MULTIWIRE BRANCH CIRCUITS ARE NOT ALLOWED.
5. SEAL ALL RACEWAYS AND PENETRATIONS BOTH INTERNALLY AND EXTERNALLY WHERE TRANSITIONS ARE MADE FROM CONDITIONED SPACES TO OUTDOOR OR UNDERGROUND. RACEWAYS ARE TO BE SEALED TO PREVENT AIR, MOISTURE, AND RODENT MIGRATION THROUGH AND AROUND RACEWAYS.
6. COORDINATE FIRE SEPARATION BARRIER PENETRATIONS WITH ARCHITECTS DRAWINGS. USE APPROVED FIRE STOPPING SEALANT AROUND PENETRATION AFTER RACEWAYS ARE INSTALLED.
7. SEE ARCHITECT'S DRAWINGS FOR ADDITIONAL RECEPTACLE LOCATIONS AND MOUNTING HEIGHTS.
8. ALL MECHANICAL, PLUMBING, AND FIRE PROTECTION EQUIPMENT SHOWN ON PLANS ARE TO INDICATE LOCATION. REFER TO "ELECTRICAL MOTOR SCHEDULE", FOR ADDITIONAL MECHANICAL, PLUMBING, AND FIRE PROTECTION COORDINATION INFORMATION INCLUDING CIRCUITING, STARTER, AND MEANS OF DISCONNECT REQUIREMENTS. COORDINATE LOCATION OF ELECTRICAL EQUIPMENT ASSOCIATED WITH MECHANICAL, PLUMBING, AND FIRE PROTECTION EQUIPMENT WITH FINAL ROOM LAYOUT.
9. PROVIDE 120V LIFE SAFETY CONNECTION FOR NOTIFICATION APPLIANCE CIRCUIT PANEL (NAC) FROM NEAREST LIFE SAFETY PANEL. COORDINATE PANEL LOCATIONS WITH FIRE ALARM CONTRACTOR.
10. COORDINATE MOUNTING OF RECEPTACLES AND LOW VOLTAGE ROUGH-IN WITH FURNITURE PROVIDER AND ARCHITECTURAL ELEVATIONS.
11. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT FLOOR BOX LOCATIONS.
12. RIGID METAL CONDUIT SHALL BE USED UNDER ALL PAVED AREAS AS REQUIRED.
13. IDENTIFY CONDUCTOR LOCATION TO PREVENT CONSTRUCTION DAMAGE BEFORE SLAB IS POURED.
14. BACKBOXES & WIRING DEVICES FOUND INSTALLED IN NON-COMPLIANCE WITH ARCHITECTURAL AND ELECTRICAL SHALL BE COMPLETELY REMOVED WITH CONTRACTOR RESPONSIBLE FOR RE-FINISHING WALL PER ARCHITECTURAL SPECIFICATIONS AS REQUIRED BY STAGE OF PROGRESS OF CONSTRUCTION. INSTALLATION OF BLANKOFF PLATES IS NOT ACCEPTABLE.
15. RECEPTACLE CIRCUITS WITH STAND-BY POWER HAVE CIRCUIT NUMBERS FOR INTENT ONLY. ACTUAL CIRCUIT NUMBERS WILL DIFFER IN THE FIELD.

SHEET KEYNOTES

1 RECEPTACLES SHOWN FOR CIRCUITING INFORMATION. SEE ARCHITECTURAL DRAWINGS AND ELEVATIONS FOR EXACT LOCATION.
2 PROVIDE JUNCTION BOX IN FLOOR / RAISED SEATING FOR FIXED CONNECTION FOR FURNITURE WITH BUILT IN RECEPTACLES.
3 PROVIDE RECEPTACLE FOR CEILING MOUNTED PROJECTOR
4 COORDINATE OUTLET WITH FFE LAYOUT.

MEP

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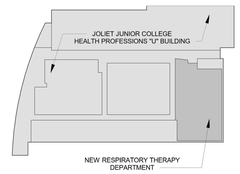

Key Plan

No.	Date	Issue Description
3	11-30-2020	Issued for Bid
2	11-19-2020	Issued for JJC Review
1	09-18-2020	Schematic Design / Design Development

ECKENHOFF SAUNDERS
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Chicago IL 60601
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Client / Project Name

Joliet Junior College

Respiratory Therapy

1215 Houblold Rd, Joliet, IL 60431

Sheet Title

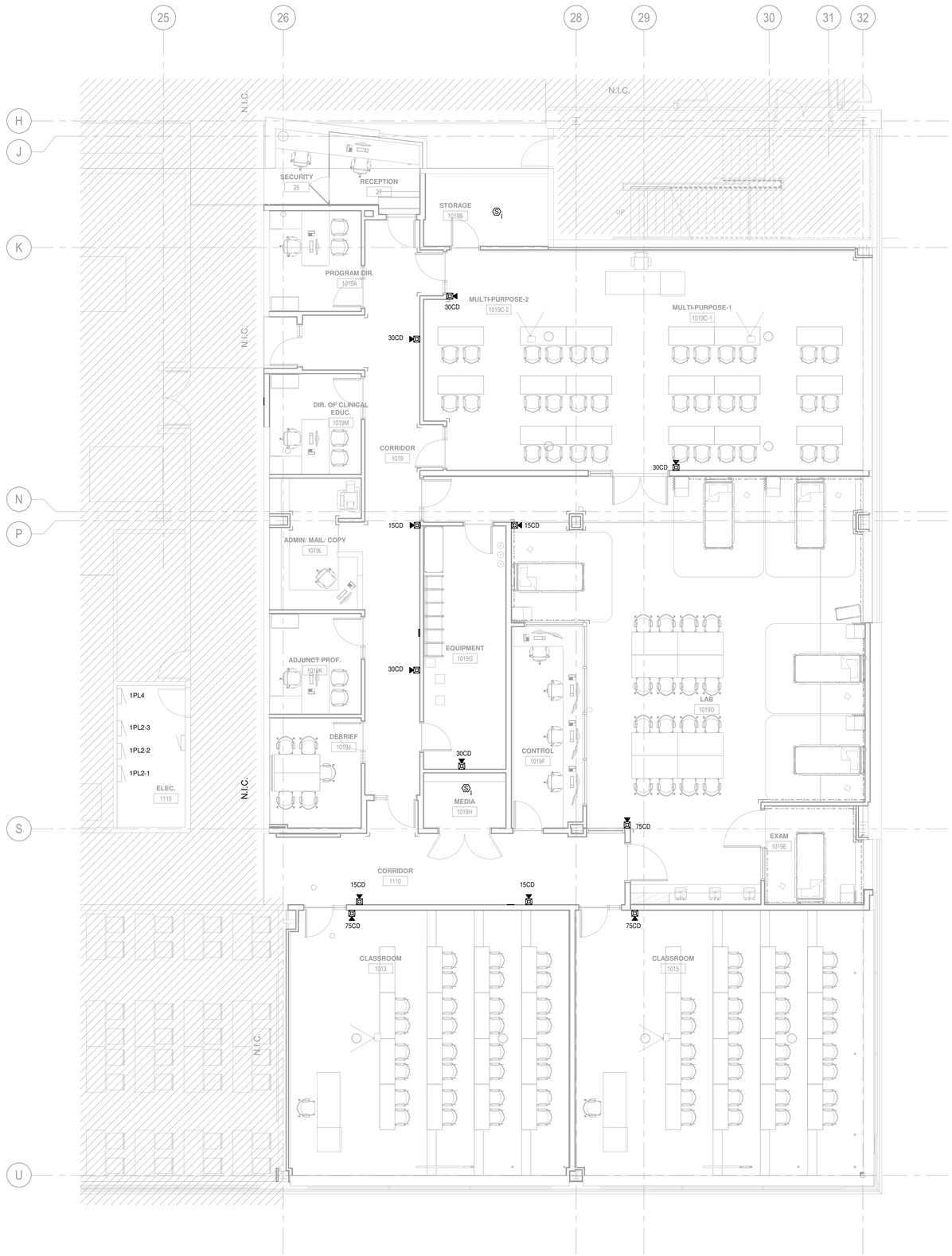
Electrical Power Level 01 Floor Plan

QAQC
FM

Project No.
19130

E3.01

DATE: 11/30/2020 9:07:04 AM
FILE: C:\Users\caugustyn\Documents\Revit 2020 Local Copy\AEI_JJC_MEP_R20_caugustyn.rvt



1 **ELECTRICAL SYSTEMS LEVEL 01 FLOOR PLAN**

SCALE: 3/16" = 1'-0"

ELECTRICAL FIRE ALARM GENERAL NOTES

1. THE COMPLETE FIRE ALARM SYSTEM SHALL MEET ALL APPLICABLE CODES, FIRE MARSHAL REQUIREMENTS, AND MANUFACTURER'S RECOMMENDATIONS.
2. ALL NECESSARY RELAYS MAY NOT BE SHOWN ON THIS PLAN, BUT WHERE REQUIRED FOR PROPER OPERATION OF THE SYSTEM, THEY SHALL BE PROVIDED BY THIS CONTRACTOR.
3. ALL FIRE ALARM WIRING SHALL BE INSTALLED IN CONDUIT.
4. FIRE ALARM VENDOR SHALL PROVIDE A REMOTE INDICATOR DEVICE WITH EACH DUCT SMOKE DETECTOR DEVICE AND FOR EACH HEAT AND SMOKE DETECTOR THAT IS NOT VISIBLE FROM THE FLOOR. REMOTE INDICATOR DEVICES SHALL BE MOUNTED AT 46" AFF AS CLOSE TO DETECTOR AS POSSIBLE. VERIFY FINAL LOCATION WITH ARCHITECT PRIOR TO INSTALLATION.
5. IN ADDITION TO WORK SHOWN ON ELECTRICAL DRAWINGS, CONTRACTOR SHALL MAKE FIRE ALARM AND POWER CONNECTIONS TO FIRE/SMOKE DAMPERS AT LOCATIONS SHOWN ON THE MECHANICAL DRAWINGS AND AS SPECIFIED.
6. CONTRACTOR SHALL FURNISH NOTIFICATION APPLIANCE EXTENDER PANELS AS REQUIRED.
7. REFER TO MECHANICAL DRAWINGS FOR EXACT LOCATION AND QUANTITIES OF SMOKE DAMPERS, SUPPLY AND RETURN DUCTWORK REQUIRING DUCT SMOKE DETECTOR INSTALLATIONS. ALSO REFER TO SPECIFICATION SECTION 283116 FOR FURTHER REQUIREMENTS AND DETAILS PERTAINING TO PROVISIONS AND INSTALLATION OF DUCT SMOKE DETECTORS.
8. ALL ALARM SEQUENCES FOR FIRE ALARM SYSTEM SHALL BE COORDINATED AND VERIFIED WITH OWNER.
9. ALL 120V WIRING REQUIRED FOR OPERATION OF THE SYSTEM AS DESCRIBED IN THE CONSTRUCTION DOCUMENTS SHALL BE PROVIDED BY THIS CONTRACTOR.
10. BUILDING FIRE ALARM SYSTEM IS EXISTING. NEW FIRE ALARM INSTALLATION SHALL BE COMPATIBLE WITH AND INTERFACED INTO EXISTING BUILDING FIRE ALARM SYSTEM. PROVIDE ALL PROGRAMMING REQUIRED TO INTERFACE NEW FIRE ALARM INSTALLATION WITH EXISTING BUILDING FIRE ALARM SYSTEM AND COORDINATE SCHEDULING OF INTERFACE TO EXISTING BUILDING FIRE ALARM SYSTEM WITH OWNER PRIOR TO WORK.

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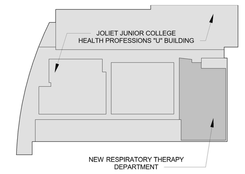

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Sheet Title

Electrical Systems
Level 01 Floor Plan

QA/QC
FM

Project No.
19130

E4.01

DATE: 11/30/2020 9:07:06 AM
FILE: C:\Users\cagustyn\Documents\Revit 2020 Local Copy\AEI_JJC_MEP_R20_cagustyn.rvt

1LH1

MAIN TYPE MCB
MAIN RATING 100 A
BUS RATING 100 A
VOLTAGE 480/277 Wye
3 **PHASE** 4 **WIRE**
MOUNTING Recessed
ENCLOSURE Type 1
LOCATION T/ 1ST FLOOR,MAIN ELEC....
FED FROM
SCCR kA
CALCULATED AVAILABLE FAULT... kA

REMARKS: EXISTING PANEL. NEW CIRCUIT IS SHOWN FOR INTENT ONLY. PLACE NEW CIRCUIT ON NEXT AVAILABLE BREAKER.

				LEFT SIDE, kVA			RIGHT SIDE, kVA							
DESCRIPTION	BRKR NOTES	BRKR AMP, POLES	CKT NO	A	B	C	A	B	C	CKT NO	BRKR AMP, POLES	BRKR NOTES	DESCRIPTION
EXISTING CIRCUIT		20 A 1	1	0.00			0.00			2	1 20 A		EXISTING CIRCUIT
			3							4			
			5							6			
			7							8			
NEW FIT OUT LIGHTING		20 A 1	9		2.40					10			
			11							12			
			13							14			
			15							16			
			17							18			
			19							20			
			21							22			
			23							24			
			25							26			
			27							28			
			29							30			
			31							32			
			33							34			
			35							36			
			37							38			
			39							40			
			41							42			

TOTAL PHASE SUMMARY

	A	B	C
PHASE SUBTOTAL (kVA):	0.00...	2.40...	0.0...
PHASE SUBTOTAL (AMPS):	0 A	9 A	0 A

LOAD CLASSIFICATION	CONNECTED (KVA)	DEMAND FACTOR	DEMAND (KVA)
POWER	0.00 kVA	100%	0.00 kVA
LIGHTING	2.40 kVA	125%	3.00 kVA
MOTOR	0.00 kVA	125% LARGEST, 100% OTHER	0.00 kVA
RECEPTACLE	0.00 kVA	100% FIRST 10KVA, 50% OTHER	0.00 kVA
HEATING	0.00 kVA	125%	0.00 kVA
TOTAL LOAD	2.40 kVA		3.00 kVA
TOTAL AMPS	3 A		4 A

1PL4

MAIN TYPE MCB
MAIN RATING 100 A
BUS RATING 100 A
VOLTAGE 120/208 Wye
3 **PHASE** 4 **WIRE**
MOUNTING Recessed
ENCLOSURE Type 1
LOCATION T/ 1ST FLOOR,ELEC. 1115
FED FROM 1PL2-3
SCCR kA
CALCULATED AVAILABLE FAULT... kA

REMARKS: EXISTING PANELBOARD

				LEFT SIDE, kVA			RIGHT SIDE, kVA							
DESCRIPTION	BRKR NOTES	BRKR AMP, POLES	CKT NO	A	B	C	A	B	C	CKT NO	BRKR AMP, POLES	BRKR NOTES	DESCRIPTION
RECEPTACLE SECURITY 25		20 A 1	1	0.54			0.54			2	1 20 A		RECEPTACLE ROOM 1019, 1110
RECEPTACLE RECEPTION 27		20 A 1	3		0.54			0.36		4	1 20 A		RECEPTACLE LAB 1019D
RECEPTACLE STORAGE 1019B		20 A 1	5			0.72			0.72	6	1 20 A		RECEPTACLE EXAM 1019E
RECEPTACLE PROGRAM DIR. 1019A		20 A 1	7	0.72			0.90			8	1 20 A		RECEPTACLE ROOM 1019E, 1019D
RECEPTACLE DIR. OF CLINICAL...		20 A 1	9		0.72			0.72		10	1 20 A		RECEPTACLE LAB 1019D
RECEPTACLE ADMIN/ MAIL/ COPY...		20 A 1	11			0.72			0.72	12	1 20 A		RECEPTACLE LAB 1019D
RECEPTACLE ADMIN/ MAIL/ COPY...		20 A 1	13	0.36			0.72			14	1 20 A		RECEPTACLE LAB 1019D
RECEPTACLE ADJUNCT PROF. 1019K		20 A 1	15		0.72			0.72		16	1 20 A		RECEPTACLE LAB 1019D
RECEPTACLE DEBRIEF 1019J		20 A 1	17			0.90			0.72	18	1 20 A		RECEPTACLE LAB 1019D
RECEPTACLE CLASSROOM 1013		20 A 1	19	1.08			0.36			20	1 20 A		RECEPTACLE CONTROL 1019F
RECEPTACLE CLASSROOM 1013		20 A 1	21		0.36			0.36		22	1 20 A		RECEPTACLE CONTROL 1019F
POWER CLASSROOM 1013		20 A 1	23			0.72			1.08	24	1 20 A		RECEPTACLE ROOM 1019G, 1019F
POWER CLASSROOM 1013		20 A 1	25	0.72			0.90			26	1 20 A		RECEPTACLE ROOM 1019C-2,...
CLASSROOM 1013		20 A 1	27		0.72			1.26		28	1 20 A		RECEPTACLE ROOM 1019C-2,...
POWER CLASSROOM 1013		20 A 1	29			0.72			0.36	30	1 20 A		RECEPTACLE LAB 1019D
RECEPTACLE CLASSROOM 1015		20 A 1	31	1.08			0.18			32	1 20 A		RECEPTACLE ADMIN/ MAIL/ COPY...
RECEPTACLE CLASSROOM 1015		20 A 1	33		0.36			0.18		34	1 20 A		RECEPTACLE MEDIA 1019H
CLASSROOM 1015		20 A 1	35			0.72			0.36	36	1 20 A		RECEPTACLE MEDIA 1019H
POWER CLASSROOM 1015		20 A 1	37	0.72			0.36			38	1 20 A		RECEPTACLE MEDIA 1019H
POWER CLASSROOM 1015		20 A 1	39		0.72					40			
POWER CLASSROOM 1015		20 A 1	41			0.72				42			

TOTAL PHASE SUMMARY

	A	B	C
PHASE SUBTOTAL (kVA):	9.18...	7.74...	9.1...
PHASE SUBTOTAL (AMPS):	78 A	65 A	78 A

LOAD CLASSIFICATION	CONNECTED (KVA)	DEMAND FACTOR	DEMAND (KVA)
POWER	5.76 kVA	100%	5.76 kVA
LIGHTING	0.00 kVA	125%	0.00 kVA
MOTOR	0.00 kVA	125% LARGEST, 100% OTHER	0.00 kVA
RECEPTACLE	20.34 kVA	100% FIRST 10KVA, 50% OTHER	15.17 kVA
HEATING	0.00 kVA	125%	0.00 kVA
TOTAL LOAD	26.10 kVA		20.93 kVA
TOTAL AMPS	72 A		58 A

1ELH1

MAIN TYPE MCB
MAIN RATING 100 A
BUS RATING 100 A
VOLTAGE 480/277 Wye
3 **PHASE** 4 **WIRE**
MOUNTING Recessed
ENCLOSURE Type 1
LOCATION T/ 1ST FLOOR,ELEC. 1115
FED FROM
SCCR kA
CALCULATED AVAILABLE FAULT... kA

REMARKS: EXISTING PANEL. NEW CIRCUIT IS SHOWN FOR INTENT ONLY. PLACE NEW CIRCUIT ON NEXT AVAILABLE BREAKER.

				LEFT SIDE, kVA			RIGHT SIDE, kVA							
DESCRIPTION	BRKR NOTES	BRKR AMP, POLES	CKT NO	A	B	C	A	B	C	CKT NO	BRKR AMP, POLES	BRKR NOTES	DESCRIPTION
EXISTING CIRCUIT		20 A 1	1	0.00			0.00			2	1 20 A		EXISTING CIRCUIT
			3							4			
			5							6			
LIGHTING		20 A 1	7	0.23						8			
			9							10			
			11							12			
			13							14			
			15							16			
			17							18			
			19							20			
			21							22			
			23							24			
			25							26			
			27							28			
			29							30			
			31							32			
			33							34			
			35							36			
			37							38			
			39							40			
			41							42			

TOTAL PHASE SUMMARY

	A	B	C
PHASE SUBTOTAL (kVA):	0.23...	0.00...	0.0...
PHASE SUBTOTAL (AMPS):	1 A	0 A	0 A

LOAD CLASSIFICATION	CONNECTED (KVA)	DEMAND FACTOR	DEMAND (KVA)
POWER	0.00 kVA	100%	0.00 kVA
LIGHTING	0.23 kVA	125%	0.29 kVA
MOTOR	0.00 kVA	125% LARGEST, 100% OTHER	0.00 kVA
RECEPTACLE	0.00 kVA	100% FIRST 10KVA, 50% OTHER	0.00 kVA
HEATING	0.00 kVA	125%	0.00 kVA
TOTAL LOAD	0.23 kVA		0.29 kVA
TOTAL AMPS	0 A		0 A

1EPL1

MAIN TYPE MCB
MAIN RATING 100 A
BUS RATING 100 A
VOLTAGE 120/208 Wye
3 **PHASE** 4 **WIRE**
MOUNTING Recessed
ENCLOSURE Type 1
LOCATION T/ 1ST FLOOR,EM. ELEC. 1019O
FED FROM
SCCR kA
CALCULATED AVAILABLE FAULT... kA

REMARKS: EXISTING PANEL. NEW CIRCUIT IS SHOWN FOR INTENT ONLY. PLACE NEW CIRCUIT ON NEXT AVAILABLE BREAKER.

				LEFT SIDE, kVA			RIGHT SIDE, kVA							
DESCRIPTION	BRKR NOTES	BRKR AMP, POLES	CKT NO	A	B	C	A	B	C	CKT NO	BRKR AMP, POLES	BRKR NOTES	DESCRIPTION
RECEPTACLE LAB 1019D		20 A 1	1	0.72						2			
RECEPTACLE LAB 1019D		20 A 1	3		0.72					4			
RECEPTACLE LAB 1019D		20 A 1	5			0.72				6			
RECEPTACLE LAB 1019D		20 A 1	7	0.72						8			
RECEPTACLE EXAM 1019E		20 A 1	9		0.72					10			
RECEPTACLE LAB 1019D		20 A 1	11			0.72				12			
			13							14			
			15							16			
			17							18			
			19							20			
			21							22			
			23							24			
			25							26			
			27							28			
			29							30			
			31							32			
			33							34			
			35							36			
			37							38			
			39							40			
			41							42			

TOTAL PHASE SUMMARY

	A	B	C
PHASE SUBTOTAL (kVA):	1.44...	1.44...	1.4...
PHASE SUBTOTAL (AMPS):	12 A	12 A	12 A

LOAD CLASSIFICATION	CONNECTED (KVA)	DEMAND FACTOR	DEMAND (KVA)
POWER	0.00 kVA	100%	0.00 kVA
LIGHTING	0.00 kVA	125%	0.00 kVA
MOTOR	0.00 kVA	125% LARGEST, 100% OTHER	0.00 kVA
RECEPTACLE	4.32 kVA	100% FIRST 10KVA, 50% OTHER	4.32 kVA
HEATING	0.00 kVA	125%	0.00 kVA
TOTAL LOAD	4.32 kVA		4.32 kVA
TOTAL AMPS	12 A		12 A

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MEP

Affiliated Engineers, Inc. (AEI)

Key Plan

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2	11-30-2020	Issued for Bid
1	11-19-2020	Issued for JJC Review

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Client / Project Name
Joliet Junior College

Respiratory Therapy

1215 Houblold Rd, Joliet, IL 60431

Sheet Title
Electrical Panel Schedules

OAOC
FM

Project No.
19130

E8.01

TECHNOLOGY SYMBOLS AND ABBREVIATIONS

NOTE: SYMBOLS INDICATED HERE AND NOT USED IN THE CONTRACT DOCUMENTS DO NOT APPLY TO THIS PROJECT. ADDITIONAL SYMBOLS MAY BE INDICATED IN THE CONTRACT DOCUMENTS. UNLESS OTHERWISE NOTED, DIMENSIONS LISTED ARE MEASURED FROM FINISHED FLOOR TO CENTERLINE.

TELECOMMUNICATIONS OUTLET CONFIGURATION SCHEDULE

CONFIGURATION SUFFIX	USAGE / SUPPORTED DEVICE(S)	MOUNTING HEIGHT (UON)	MIN CONDUIT SIZE	MIN BACK BOX SIZE (WxHxD)	FACEPLATE SIZE (GANGS)	FACEPLATE PORT QTY	PORT 1 INSERT TYPE / COLOR	PORT 2 INSERT TYPE / COLOR	PORT 3 INSERT TYPE / COLOR	PORT 4 INSERT TYPE / COLOR	PORT 5 INSERT TYPE / COLOR	PORT 6 INSERT TYPE / COLOR	NOTES
1	VOICE / ETHERNET	+18" AFF	3/4"	5"x5"x2-7/8"	1	2	CAT 6A / BLACK	BLANK	N/A	N/A	N/A	N/A	[5] [6]
2	VOICE / ETHERNET	+18" AFF	1"	5"x5"x2-7/8"	1	4	CAT 6A / BLACK	CAT 6A /WHITE	BLANK	BLANK	N/A	N/A	[5] [6]
3	VOICE / ETHERNET	+18" AFF	1"	5"x5"x2-7/8"	1	4	CAT 6A / BLACK	CAT 6A /WHITE	CAT 6A /BLACK	BLANK	N/A	N/A	[5] [6]
4	VOICE / ETHERNET	+18" AFF	1"	5"x5"x2-7/8"	1	4	CAT 6A / BLACK	CAT 6A /WHITE	CAT 6A /BLACK	CAT 6A /WHITE	N/A	N/A	[5] [6]
5	VOICE / ETHERNET	+18" AFF	1-1/4"	5"x5"x2-7/8"	2	6	CAT 6A / BLACK	CAT 6A /WHITE	CAT 6A / BLACK	CAT 6A /WHITE	CAT 6A /BLACK	BLANK	[5] [6]
6	VOICE / ETHERNET	+18" AFF	1-1/4"	5"x5"x2-7/8"	2	6	CAT 6A / BLACK	CAT 6A /WHITE	CAT 6A /BLACK	CAT 6A /WHITE	CAT 6A /BLACK	CAT 6A /WHITE	[5] [6]
FB2	VOICE / ETHERNET	FLOOR	1"	REFER TO NOTES	1	2	CAT 6A / BLACK	CAT 6A /WHITE	N/A	N/A	N/A	N/A	[4] [6]
FB4	VOICE / ETHERNET	FLOOR	1-1/4"	REFER TO NOTES	1	4	CAT 6A / BLACK	CAT 6A /WHITE	CAT 6A /BLACK	CAT 6A /WHITE	N/A	N/A	[4] [6]
FB6	VOICE / ETHERNET	FLOOR	1-1/4"	REFER TO NOTES	2	6	CAT 6A / BLACK	CAT 6A /WHITE	CAT 6A /BLACK	CAT 6A /WHITE	CAT 6A /BLACK	CAT 6A /WHITE	[4] [6]
TV	TELEVISION	+84" AFF	1-1/4"	5"x5"x2-7/8"	1	2	CAT 6A / BLACK	BLANK	N/A	N/A	N/A	N/A	[5] [6]
W	WALL PHONE	+42" AFF	3/4"	4"x4"x2-7/8"	1	1	CAT 6A / BLACK	N/A	N/A	N/A	N/A	N/A	[1] [5] [6]
WAP	WIRELESS ACCESS POINT	CEILING	1"	4"x4"x2-7/8"	1	2	CAT 6A / BLACK	BLANK	N/A	N/A	N/A	N/A	[2] [3] [6]
AV-1	AUDIOVISUAL	REFER TO NOTES	1"	5"x5"x2-7/8"	1	2	CAT 6A / BLACK	BLANK	N/A	N/A	N/A	N/A	[5] [7]
AV-2	AUDIOVISUAL	REFER TO NOTES	1"	5"x5"x2-7/8"	1	4	CAT 6A / BLACK	CAT 6A /WHITE	BLANK	BLANK	N/A	N/A	[5] [7]
AV-3	AUDIOVISUAL	REFER TO NOTES	1"	5"x5"x2-7/8"	1	4	CAT 6A / BLACK	CAT 6A /WHITE	CAT 6A /BLACK	BLANK	N/A	N/A	[5] [7]
AV-4	AUDIOVISUAL	REFER TO NOTES	1-1/4"	5"x5"x2-7/8"	1	4	CAT 6A / BLACK	CAT 6A / ORANGE	CAT 6A /BLACK	CAT 6A /WHITE	N/A	N/A	[5] [7]
AV-5	AUDIOVISUAL	REFER TO NOTES	1-1/4"	5"x5"x2-7/8"	2	6	CAT 6A / BLACK	CAT 6A / ORANGE	CAT 6A /BLACK	CAT 6A /WHITE	CAT 6A /BLACK	N/A	[5] [7]
AV-6	AUDIOVISUAL	REFER TO NOTES	1-1/4"	5"x5"x2-7/8"	2	6	CAT 6A / BLACK	CAT 6A / ORANGE	CAT 6A /BLACK	CAT 6A /WHITE	CAT 6A /BLACK	CAT 6A /WHITE	[5] [7]
AV-C	AUDIOVISUAL CAMERA	CEILING	1"	4"x4"x2-7/8"	1	2	CAT 6A / BLACK	BLANK	N/A	N/A	N/A	N/A	[2] [7]
AVTV	AUDIOVISUAL	REFER TO NOTES	1-1/4"	5"x5"x2-7/8"	1	2	CAT 6A / BLACK	BLANK	N/A	N/A	N/A	N/A	[5] [7]
DS	DIGITAL SIGNAGE MONITOR	+84" AFF	1"	5"x5"x2-7/8"	1	2	CAT 6A / BLACK	BLANK	N/A	N/A	N/A	N/A	[5] [6]
CAM	CAMERA	CEILING	1"	4"x4"x2-7/8"	1	N/A	CAT 6A / BLACK	BLANK	N/A	N/A	N/A	N/A	[2]
CR	CARD READER	REFER TO NOTES	1"	N/A	N/A	N/A	446100/WHITE	N/A	N/A	N/A	N/A	N/A	[9]

GENERAL NOTES:
1. REFER TO ARCHITECTURAL ELEVATIONS FOR ADDITIONAL MOUNTING HEIGHT INFORMATION. FIELD-COORDINATE FINAL TELECOMMUNICATIONS OUTLET LOCATIONS AND MOUNTING HEIGHTS WITH OWNER, ARCHITECT, AND OTHER TRADES PRIOR TO ROUGH-IN.
2. CONDUIT AND BACK BOX SIZES LISTED ARE MINIMUMS. SIZE CONDUITS AND BACK BOXES PER APPLICABLE CODES, STANDARDS, GUIDELINES, AND CABLE AND CONNECTIVITY MANUFACTURER'S RECOMMENDATIONS AND PROVIDE LARGER CONDUITS AND/OR BACK BOXES WHERE NECESSARY.
3. UNLESS NOTED OTHERWISE, ROUTE CONDUITS TO NON-CONTINUOUS CABLE PATHWAY OR CABLE TRAY ABOVE NEAREST ACCESSIBLE CEILING. TERMINATE CONDUITS ORIENTED HORIZONTALLY AT THE HEIGHT OF THE ASSOCIATED NON-CONTINUOUS CABLE PATHWAY OR CABLE TRAY. [UNLESS NOTED OTHERWISE, ROUTE CONDUITS TO TELECOMMUNICATIONS ROOM.]
4. WHERE NO COLOR IS LISTED FOR FACEPLATE PORT INSERT, COLOR SHALL MATCH COLOR OF FACEPLATE.
5. ALL NURSE CALL CABLE TO BE CATEGORY 6A UTP CABLE HOME RUN FROM EXISTING IDF U1120.

SCHEDULE NOTES:
1. PROVIDE 1-PORT STAINLESS STEEL FACEPLATE WITH TELEPHONE MOUNTING LUGS FOR OWNER-PROVIDED WALL-MOUNTED TELEPHONE. PRIOR TO ROUGH-IN, COORDINATE ON SITE WITH WORK BY OTHER TRADES TO ENSURE A MINIMUM OF 8" CLEAR ABOVE, BELOW, AND ON BOTH SIDES OF FACEPLATE AT COMPLETION OF PROJECT TO ACCOMMODATE MOUNTED TELEPHONE.
2. FOR ABOVE CEILING LOCATIONS, INSTALL 6" TO 24" ABOVE ACCESSIBLE CEILING SURFACE-MOUNTED AT STRUCTURE IN ACCESSIBLE CEILING AREAS, AND INSTALL FLUSH MOUNT AT FINISHED CEILING INACCESSIBLE CEILING AREAS. AT CEILING LOCATIONS, INSTALL WITH 20-FOOT SERVICE LOOP AT LAST CABLE SUPPORT BEFORE TELECOMMUNICATIONS OUTLET TO FACILITATE FUTURE RELOCATION OF OWNER-PROVIDED CONTRACTOR INSTALLED WIRELESS ACCESS POINT, CAMERA, OR OTHER CEILING DEVICE.
3. INSTALL OWNER-PROVIDED WIRELESS ACCESS POINT ENCLOSURE AT WAP OUTLET LOCATION. PROVIDE 2-PORT FACEPLATE MOUNTED INSIDE WIRELESS ACCESS POINT ENCLOSURE, LOCATED TO AVOID SPATIAL CONFLICT WITH OWNER-PROVIDED WIRELESS ACCESS POINT AND TO FACILITATE ORDERLY ROUTING OF PATCH CABLE FROM JACK(S) TO ETHERNET CONNECTOR(S) OF WIRELESS ACCESS POINT. INSTALL OWNER-FURNISHED WIRELESS ACCESS POINT IN ENCLOSURE.
4. INSTALL IN E.C.-PROVIDED FLOOR BOX OR POKE-THROUGH. REFER TO ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION. PROVIDE FACEPLATE TYPE AND ADAPTER FRAME ACCESSORIES NECESSARY TO INSTALL FACEPLATE AND FACEPLATE INSERTS IN FLOOR BOX OR POKE-THROUGH OPENING. COORDINATE REQUIREMENTS AND INSTALLATION WITH ELECTRICAL CONTRACTOR PRIOR TO ROUGH-IN.
5. INSTALL IN E.C.-PROVIDED RECESSED WALLBOX. REFER TO ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION. PROVIDE FACEPLATE TYPE ADAPTER FRAME ACCESSORIES NECESSARY TO INSTALL FACEPLATE AND FACEPLATE INSERTS IN RECESSED WALLBOX OPENING. COORDINATE REQUIREMENTS AND INSTALLATION WITH ELECTRICAL CONTRACTOR PRIOR TO ROUGH-IN.
6. ALL LOCAL AREA NETWORK CATEGORY 6A VOICE, DATA AND VIDEO CABLE TO BE HOME RUN FROM EXISTING IDF U1120.
7. ALL AUDIOVISUAL CATEGORY 6A CABLE TO BE HOME RUN FROM NEW AUDIOVISUAL MEDIA CLOSET 1019H.
8. INSTALL IN AV.C.-PROVIDED FACEPLATE SHARED BY CO-LOCATED AV CONNECTIONS AND TELECOMMUNICATIONS OUTLETS. PROVIDE FACEPLATE TYPE ADAPTER FRAME ACCESSORIES AND INSERT TYPE NECESSARY TO INSTALL FACEPLATE INSERTS IN SHARED FACEPLATE. COORDINATE FINAL BACK BOX SIZE AND OTHER REQUIRMENTS AND INSTALLATION WITH OWNER'S A/V CONTRACTOR PRIOR TO ROUGH-IN. FOR WALL LOCATIONS, COORDINATE FINAL LOCATION AND MOUNTING HEIGHT WITH OWNER, ARCHITECT, A/V CONTRACTOR, AND ELECTRICAL CONTRACTOR PRIOR TO ROUGH-IN.
9. PROVIDE AND INSTALL ONE (1) CARD READER SECURITY CABLE (WINDY CITY WIRE P/N 446100 PLENUM) FROM IDF U1120 TO EACH DOOR MARKED WITH "CR". LABEL EACH WITH ASSOCIATED DOOR IDENTIFIER. LEAVE 25' SLACK COILED FOR EACH CABLE IN IDF FOR TERMINATION BY OWNER. DOOR FRAMES SHALL BE DRILLED WITH A 1/2" DIAMETER HOLE 42" A.F.F. ON THE CARD READER SIDE OF DOOR FRAME. INSTALL CABLE THROUGH DOOR FRAME DOWN AND THROUGH HOLE FOR TERMINATION BY OWNER. CONTRACTOR SHALL MOUNT AND TERMINATE OWNER FURNISHED VON DUPRIN 6211 ELECTRIC STRIKE INTO PREPPED DOOR FRAME.

TELECOMMUNICATIONS OUTLETS

= OUTLET CONFIGURATION. REFER TO TELECOMMUNICATIONS OUTLET CONFIGURATION SCHEDULE

- TELECOMMUNICATIONS OUTLET - FLUSH WALL
- TELECOMMUNICATIONS OUTLET - SURFACE WALL
- TELECOMMUNICATIONS OUTLET - FLUSH WALL, 4" ABOVE BACKSPLASH
- TELECOMMUNICATIONS OUTLET - SURFACE WALL, 4" ABOVE BACKSPLASH
- TELECOMMUNICATIONS OUTLET - SURFACE RACEWAY. REFER TO DIVISION 26 DOCUMENTS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
- TELECOMMUNICATIONS OUTLET - MODULAR FURNITURE
- TELECOMMUNICATIONS OUTLET - MOUNTED IN FLOOR/POKE THRU
- TELECOMMUNICATIONS OUTLET - MOUNTED IN FLOORBOX
- TELECOMMUNICATIONS OUTLET - FLUSH CEILING
- TELECOMMUNICATIONS OUTLET - ABOVE ACCESSIBLE CEILING
- WAP — TELECOMMUNICATIONS OUTLET - CEILING MOUNTED WIRELESS ACCESS POINT (WAP) WITH ENCLOSURE

TECHNOLOGY ABBREVIATIONS

A	- AMPERES	MATV	- MASTER ANTENNA TELEVISION
ABV	- ABOVE	MC	- MECHANICAL CONTRACTOR
AC	- ABOVE CEILING	MDF	- MAIN DISTRIBUTION FACILITY
ACP	- ACCESS CONTROL PANEL	MER	- MAIN EQUIPMENT ROOM
ACT	- ACOUSTICAL CEILING TILE	MH	- MAINTENANCE HOLE
AFF	- ABOVE FINISHED FLOOR	MIC	- MICROPHONE LEVEL AUDIO
ALT	- ALTERNATE	MM	- MULTIMODE
AP	- ACCESS POINT	MP	- MUSIC & PAGE
ARCH	- ARCHITECTURAL	MTD	- MOUNTED
ASC	- ABOVE SUSPENDED CEILING	MTG	- MOUNTING
AUTO	- AUTOMATIC	MTG HGT	- MOUNTING HEIGHT
AV	- AUDIOVISUAL		
AVC	- AUDIOVISUAL CONTRACTOR	NA	- NOT APPLICABLE
AVMC	- AUDIOVISUAL MEDIA CLOSET	NC	- NEW CONNECTION / NORMALLY CLOSED
AWG	- AMERICAN WIRE GAUGE	NIC	- NOT IN CONTRACT
BAS	- BUILDING AUTOMATION SYSTEM	NO	- NORMALLY OPEN
BCS	- BUILDING CONTROL SYSTEM	NTS	- NOT TO SCALE
BEF	- BUILDING ENTRANCE FACILITY		
BFC	- BELOW FINISH CEILING	OC	- ON CENTER
BFL	- BELOW FLOOR LEVEL	OFCI	- OWNER FURNISHED CONTRACTOR INSTALLED
BLDG	- BUILDING		
BMS	- BUILDING MANAGEMENT SYSTEM	OFOI	- OWNER FURNISHED OWNER INSTALLED
BU	- BASE UNIT	OSP	- OUTSIDE PLANT
C	- CONDUIT	P	- POLE
CAB	- CABINET	P-P	- POINT TO POINT
CAT	- CATEGORY	PA	- PUBLIC ADDRESS
CATV	- COMMUNITY ACCESS TELEVISION	PB	- PULL BOX / PUSH-BUTTON
		PBX	- PRIVATE BRANCH EXCHANGE
CCTV	- CLOSED CIRCUIT TELEVISION	PC	- PHOTOCELL
CFCI	- CONTRACTOR FURNISHED, CONTRACTOR INSTALLED	PD	- PROJECTION DISTANCE
		PDU	- POWER DISTRIBUTION UNIT
CLG	- CEILING	PH	- PHASE
CO	- CONDUIT ONLY	PIR	- PASSIVE INFRARED DETECTOR
CONTR	- CONTRACTOR	PNL	- PANEL
CORR	- CORRIDOR	PP	- PATCH PANEL
CP	- CONSOLIDATION POINT	PR	- PAIR
CT	- CABLE TRAY	PRT	- PORT
CU	- COPPER	PS	- POWER SUPPLY
CV	- COMPOSITE VIDEO	PTZ	- PAN, TILT, ZOOM
		PWR	- POWER
D	- DATA		
DAS	- DISTRIBUTED ANTENNA SYSTEM	QTY	- QUANTITY
DB	- DIRECT BURIAL		
DC	- DIRECT CURRENT	R	- RACK
DED	- DEDICATED	RC	- RELAY CONTACT
DET	- DETAIL	REC	- RECESSED
DIA	- DIAMETER	RECEP	- RECEPTACLE
DIG	- DIGITAL	REL	- RELOCATE
DN	- DOWN	REQD	- REQUIRED
		RGBHV	- RED, GREEN, BLUE, HORIZONTAL SYNC, VERTICAL SYNC
EC	- ELECTRICAL CONTRACTOR		
EDB	- ELECTRIC DUCT BANK	RS	- RECOMMENDED STANDARD
EF	- ENTRANCE FACILITY	RS-232	- EIA STANDARD RS-232-C (RECOMMENDED STANDARD 232)
EG	- EQUIPMENT GROUND		
EJ	- EXPANSION JOINT	RSVD	- RESERVED
ELEC	- ELECTRIC / ELECTRICAL	RU	- RACK UNIT
ELEV	- ELEVATOR		
EMER	- EMERGENCY	SHT	- SHEET
EMI	- ELECTROMAGNETIC INTERFERENCE	SIG	- SIGNAL
		SIM	- SIMILAR
EMT	- ELECTRICAL METALLIC TUBING	SIO	- STANDARD INFORMATION OUTLET
EQ	- EQUAL		
EQUIP	- EQUIPMENT	SM	- SINGLE MODE
ER	- EQUIPMENT ROOM	SPEC	- SPECIFICATION
ET	- ELAPSED TIMER	SPK	- SPEAKER
ETR	- EXISTING TO REMAIN	STD	- STANDARD
		STA	- STATION
F/FC	- FLUSH WITH FINISHED CEILING	SW	- SWITCH
F/FF	- FLUSH WITH FINISHED FLOOR	SYS	- SYSTEM
F/FW	- FLUSH WITH FINISHED WALL		
FA	- FIRE ALARM	TBB	- TELECOMMUNICATIONS BACKBONE
FACP	- FIRE ALARM CONTROL PANEL		
FATC	- FIRE ALARM TERMINAL CABINET	TELE	- TELECOMMUNICATIONS
FB	- FLOOR BOX	TELECOM	- TELECOMMUNICATIONS
FL	- AT FLOOR LINE	TFA	- TO FLOOR ABOVE
FLEX	- FLEXIBLE / FLEXIBLE CONDUIT	TFB	- TO FLOOR BELOW
FLR	- FLOOR	T(M)GB	- TELECOMMUNICATIONS (MAIN) GROUND BUSBAR.
FO	- FIBER OPTIC		
FOC	- FIBER OPTIC CABLE / FACE OF COLUMN	TO	- TELECOMMUNICATIONS OUTLET
		TP	- TAMPER PROOF
FOE	- FIBER OPTIC ENCLOSURE	TR	- TELECOM ROOM
		TS	- TAMPER SWITCH
G	- GROUND	TV	- TELEVISION
GBIC	- GIGABIT INTERFACE CONVERTER	TYP	- TYPICAL
GC	- GENERAL CONTRACTOR	UC	- UNDER COUNTER
GND	- GROUND	UF	- UNDER FLOOR
GRC	- GALVANIZED RIGID CONDUIT	UG	- UNDERGROUND
		UON	- UNLESS OTHERWISE NOTED
HH	- HANDHOLE	UPS	- UNINTERRUPTABLE POWER SUPPLY
HT	- HEIGHT		
		USB	- UNIVERSAL SERIAL BUS
IC	- INSTALLED BY CONTRACTOR		
IDF	- INTERMEDIATE DISTRIBUTION FACILITY	V	- VOICE / VOLTAGE
		VGA	- VIDEO GRAPHICS ARRAY CONNECTOR
IH	- IMAGE HEIGHT		
IMC	- INTERMEDIATE METAL CONDUIT	VoIP	- VOICE OVER INTERNET PROTOCOL
IS	- INFORMATION SERVICES		
IT	- INFORMATION TECHNOLOGY	VP	- VIDEO PROJECTOR
IW	- IMAGE WIDTH	VPS	- VIDEO PROJECTION SCREEN
JB	- JUNCTION BOX	W	- WIRE / WALL / WATT
JJC	- JOLIET JUNIOR COLLEGE	W/	- WITH
		WAP	- WIRELESS ACCESS POINT
KO	- KNOCK-OUT	WP	- WEATHERPROOF
		WS	- WALL SURFACE
LA	- LINE LEVEL AUDIO	WT	- WATER TIGHT
LAN	- LOCAL AREA NETWORK		
LGT	- LIGHT	X	- EXISTING
L/R	- STEREO LINE LEVEL AUDIO	XP	- EXPLOSION PROOF
LV	- LOW VOLTAGE		

TECHNOLOGY NOTES

1. FEATURES SHOWN ON FLOOR PLAN AND ENLARGED PLANS ARE INDICATED FOR GENERAL REFERENCE ONLY. REFER TO APPLICABLE DISCIPLINE'S DRAWINGS AND DETAILS TO DETERMINE ACTUAL FEATURES AND CONDITIONS TO BE MET IN COORDINATING INSTALLATION REQUIREMENTS.
2. LOCATION AND DETAIL OF EQUIPMENT CONNECTIONS AND DEVICES ARE SCHEMATIC. COORDINATE INFORMATION AND EQUIPMENT DETAILS WITH THE CONTRACTOR PROVIDING THE EQUIPMENT AND WITH APPROVED SUBMITTALS. AMEND INSTALLATION DETAILS TO COMPLY WITH CODES AND STANDARDS PRIOR TO ROUGH-IN.
3. COORDINATE WITH DIVISION 26 CONTRACTOR TO ASSURE EACH DEVICE OR EQUIPMENT ITEM REQUIRING A GROUND CONDUCTOR IS CONNECTED APPROPRIATELY AND CONDUCTOR IS SIZED PER CURRENT REQUIREMENTS OF THE NEC OR TO MANUFACTURER SPECIFIED REQUIREMENTS.
4. REFER TO ARCHITECTURAL DRAWINGS FOR FLOOR, WALL, AND CEILING TYPES AND FOR EXACT LOCATIONS, MOUNTING HEIGHTS, FINISH, ETC. OF WORK INDICATED ON THESE DRAWINGS. COORDINATE EXACT LOCATIONS OF WORK INDICATED ON THESE DRAWINGS TO SERVE WORK BY OTHER TRADES WITH OTHER TRADES PRIOR TO ROUGH-IN. WHERE ADJUSTMENTS TO LOCATIONS OF WORK ARE MADE AS A RESULT OF COORDINATION WITH ARCHITECTURAL DRAWINGS AND WORK BY OTHER TRADES, MAINTAIN GENERAL PATTERN AND SPACING OF RELOCATED WORK, e.g., SPEAKERS, WIRELESS ACCESS POINTS, CAMERAS, ETC.
5. ENCLOSURES SHALL MEET NEMA REQUIREMENTS FOR THE ENVIRONMENT OF INSTALLATION.
6. ONLY CONDUITS THAT SERVE THE IDF/AVMC ROOMS ARE ACCEPTABLE TO PASS THROUGH THE ROOMS.
7. PRIOR TO ORDERING AND PURCHASING MATERIALS, CONTRACTOR SHALL VERIFY AS CORRECT: AMPERAGE AND VOLTAGE INPUT REQUIRED BY EQUIPMENT IS SUPPORTED BY PROJECT POWER DISTRIBUTION, AND THAT CORDAGE PROVIDED WITH EQUIPMENT INCLUDES PLUG CONFIGURATION INSTALLED BY DIVISION 26 CONTRACTOR. ANY ERRORS DUE TO THE LACK OF COORDINATION ARE THE RESPONSIBILITY OF THE CONTRACTOR.
8. DATA PROVIDED WITHIN THESE DOCUMENTS IS AS ACCURATE AS COULD BE SECURED AND ABSOLUTE ACCURACY IS NOT GUARANTEED. THE CONTRACTOR SHALL OBTAIN AND VERIFY EXACT LOCATIONS, MEASUREMENTS, LEVELS, SPACE REQUIREMENTS, POTENTIAL CONFLICTS WITH OTHER TRADES, ETC. AT THE SITE AND SHALL SATISFACTORILY ADAPT THE WORK TO ACTUAL CONDITIONS AT THE BUILDING OR STRUCTURE. THE DRAWINGS ARE DIAGRAMMATICAL IN NATURE AND SHALL NOT BE SCALED. ANY EXISTING CONDITIONS THAT VARY DO NOT RELIEVE ANY CONTRACTOR FROM COORDINATING THE WORK WITH OTHER TRADES AND FROM ADJUSTING THE WORK AS REQUIRED BY THE ACTUAL CONDITIONS OF THE PROJECT.
9. SEISMIC RESTRAINT OF DEVICES AND EQUIPMENT PROVIDED WITHIN THESE PLANS, SCHEDULES AND SPECIFICATIONS SHALL BE COORDINATED TO IBC AND ASCE REQUIREMENTS.

SHEET SYMBOLS

- EQ / # — SCHEDULED EQUIPMENT REFERENCE. TOP INDICATES EQUIPMENT TYPE IDENTIFIER. BOTTOM INDICATES EQUIPMENT NUMBER.
- 2 — SPECIALTY ITEMS (E.G., GAUGE FILTER, ETC.) REFER TO EQUIPMENT LIST
- REFER / M-1 — PLAN CONTINUATION REFERENCE. BOTTOM INDICATES SHEET ON WHICH CONTINUATION APPEARS.
- 1 / M-1 — SECTION REFERENCE. TOP INDICATES SECTION NUMBER, BOTTOM INDICATES SHEET ON WHICH SECTION APPEARS.
- 2 / M-1 — DETAIL REFERENCE. TOP INDICATES DETAIL NUMBER, BOTTOM INDICATES SHEET ON WHICH DETAIL APPEARS.
- A/15B-6 — DETAIL REFERENCE, INDICATING DETAIL NUMBER / SHEET ON WHICH DETAIL APPEARS.
- ELEVATION DESIGNATION. REFERENCE OFFICIAL PROJECT DATUM
- 1 — REVISION REFERENCE. REFER TO SHEET REVISION BLOCK
- 1 — SHEET KEYNOTE REFERENCE
- ROOM NAME / 101 — ROOM NAME & NUMBER DESIGNATION
- 001 — CONSTRUCTION BULLETIN REVISION NUMBER
- POINT OF NEW CONNECTION TO EXISTING
- HALFTONE LIGHT LINE INDICATES EXISTING TO REMAIN
- HEAVY DASHED LINE WITH HATCH INDICATES EXISTING WORK TO BE DEMOLISHED
- HEAVY LINE INDICATES NEW WORK
- DASHED LINE INDICATES CONCEALED WORK
- X/XXX — SHEET REFERENCE
- MATCHLINE
- IDF xxx / IDF xxx — IDF SERVICE AREA DIVISION LINE

NURSE CALL

"V" SUBSCRIPT INDICATES VANDAL-RESISTANT.
"S" INDICATES SURFACE MOUTED. IF NO 'S' DEVICE IS FLUSH MOUNTED.

- XX — NURSE CALL DEVICE, CEILING MOUNTED - (1) CATEGORY 6A UTP CABLE FROM IDF "XX" INDICATES DEVICE TYPE AS NOTED BELOW.
- XX — NURSE CALL DEVICE, WALL MOUNTED LIGHT - (1) CATEGORY 6A UTP CABLE FROM IDF "XX" INDICATES DEVICE TYPE AS NOTED BELOW.
- XX — NURSE CALL DEVICE, WALL MOUNTED - (1) CATEGORY 6A UTP CABLE FROM IDF "XX" INDICATES DEVICE TYPE AS NOTED BELOW.
- XX — NURSE CALL DEVICE, DESKTOP/COUNTERTOP - (1) CATEGORY 6A UTP CABLE FROM IDF "XX" INDICATES DEVICE TYPE AS NOTED BELOW.

NURSE CALL DEVICE TYPE KEY:
CB = CODE BLUE
CL = CORRIDOR CEILING LIGHT
MS = MASTER STATION
P1 = PATIENT STATION

AUDIO / VISUAL

- AV — AV INPUT/OUTPUT PANEL. REFER TO SYSTEM DIAGRAMS FOR CABLING AND CONNECTIONS.
- M — CEILING-MOUNTED MICROPHONE. (1) 2C-SHIELDED MICROPHONE CABLE PER AV MASTER CABLE SCHEDULE 274100.2.
- S1 — CEILING-MOUNTED LOUDSPEAKER. (1) 2C #18 CABLE PER AV MASTER CABLE SCHEDULE 274100.2.
- VD — VIDEO DISPLAY ROUGH-IN, FSR MODEL PWB-320-ESK. COLOCATE POWER, DATA, AND AV CONNECTIONS INSIDE BOX.
- CAM — CEILING-MOUNTED VIDEO CAMERA. (1) CATEGORY A UTP CABLE FROM MEDIA ROOM 1019F

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MEP

Affiliated Engineers, Inc. (AEI)

Key Plan

No.	Date	Issue Description
3	11-30-2020	Issued for Bid
2	11-19-2020	Issued for JJC Review
1	09-18-2020	Schematic Design / Design Development

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Client / Project Name
Joliet Junior College

Respiratory Therapy

1215 Houblold Rd, Joliet, IL 60431

Sheet Title
Technology Symbols & Abbreviations

QA/QC
AS

Project No.
19130

T0.00

1 **TECHNOLOGY LEVEL 01 FLOOR PLAN**

SCALE: 3/16" = 1'-0"

TECHNOLOGY GENERAL NOTES

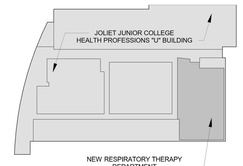
1. ALL CABLE, TELECOMMUNICATION PATHWAYS, TELECOMMUNICATION SPACES, AND INSTALLATION METHODS AND PROCEDURES SHALL COMPLY WITH JOLIET JUNIOR COLLEGE CURRENT TELECOMMUNICATIONS POLICIES AND PROCEDURES STANDARDS.
2. ALL CABLE, TELECOMMUNICATION PATHWAYS, TELECOMMUNICATION SPACES, INSTALLATION METHODS AND PROCEDURES SHALL COMPLY WITH ALL LOCAL MUNICIPAL, STATE, AND FEDERAL CODES AND REGULATIONS, IN ADDITION TO MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS.
3. DIVISION 27 CONTRACTOR SHALL PROVIDE ALL CABLING, PATCH PANELS, HORIZONTAL WIRE MANAGEMENT, TERMINATIONS, AND TESTING FOR A HORIZONTAL STRUCTURED CABLE SYSTEM FOR ALL VOICE, DATA, VIDEO, AV, SECURITY, NURSE CALL, MEDICAL EQUIPMENT, AND OTHER SUCH SYSTEMS. ALL PRODUCTS SHALL BE OF A PANDUIT SOLUTION PER THE PROJECT SPECIFICATIONS. CABLING SHALL BE NEATLY DRESSED ON LADDER RACK OR PLACED WITHIN MESH CABLE SOCK OR EQUIVALENT. ALL HORIZONTAL VOICE AND DATA CABLES SHALL TERMINATE AT THE FLOOR SERVING IDF ON THE SAME LEVEL AS THE DATA OUTLET. ALL HORIZONTAL AUDIO VISUAL CABLES SHALL TERMINATE AT THE FLOOR SERVING AUDIO VISUAL MEDIA CLOSET ROOM 1019H.
4. DIVISION 27 CONTRACTOR SHALL COORDINATE WITH ALL VOICE, DATA, VIDEO, AV, SECURITY, NURSE CALL, MEDICAL EQUIPMENT, AND OTHER SUCH SYSTEMS PROJECT DOCUMENTS TO ENSURE THAT ALL CONNECTIVITY REQUIREMENTS ARE COMPLETE AND COORDINATED. REFER TO ARCHITECTURAL, AV, NURSE CALL, MEDICAL EQUIPMENT, AND SECURITY DRAWINGS FOR MOUNTING HEIGHTS, LOCATIONS, AND OTHER INSTALLATION DETAILS.
5. COORDINATE FIRE SEPARATION BARRIER PENETRATIONS WITH ARCHITECT'S DRAWINGS. USE APPROVED FIRE STOPPING SEALANT AROUND PENETRATION AFTER RACEWAYS ARE INSTALLED. BASIS OF DESIGN FOR WALL PENETRATIONS SHALL BE THE STI EZ-PATH SERIES, HILTI SPEED SLEEVES, OR EQUIVALENT. INCREASE QUANTITIES OF EZ-PATH SLEEVES AS REQUIRED TO ENSURE MAXIMUM OF 50% FILL OF ALL SLEEVES UPON PROJECT COMPLETION.
6. COORDINATE FIRE SEPARATION BARRIER PENETRATIONS WITH ARCHITECT'S DRAWINGS. USE APPROVED FIRE STOPPING SEALANT AROUND PENETRATION AFTER RACEWAYS ARE INSTALLED.
7. SEE ARCHITECT'S DRAWINGS FOR ADDITIONAL RECEPTACLE LOCATIONS AND MOUNTING HEIGHTS.
8. DIVISION 26 CONTRACTOR SHALL PROVIDE ALL RACEWAYS AND BOXES FOR PATHWAY SYSTEMS, FLOORBOX LOCATIONS, AND IN-WALL LOCATIONS. THE DIVISION 27 CONTRACTOR SHALL PROVIDE ALL OTHER REQUIRED RACEWAYS, PANELS, ENCLOSURES, BOXES, AND HARDWARE AS REQUIRED FOR A COMPLETE INSTALLATION. ALL PATHWAYS AND CABLE TRAY ROUTING SHALL BE COORDINATED WITH ALL OTHER TRADES PRIOR TO INSTALLATION.
9. DIVISION 26 CONTRACTOR SHALL SUPPLY A NEW TELECOMMUNICATIONS BONDING BACKBONE FROM THE EXISTING IDF U1120 TO A NEW TELECOMMUNICATIONS GROUNDING BUSBAR IN THE AV MEDIA CLOSET 1019H.
10. DIVISION 27 CONTRACTOR SHALL PROVIDE ALL GROUNDING AND BONDING CONNECTIONS FROM THE EXISTING TGB WITHIN THE IDF TO ALL NEW EQUIPMENT AND MATERIAL AS REQUIRED WITHIN THE IDF, AND FROM THE NEW TGB IN THE AV MEDIA CLOSET TO ALL NEW EQUIPMENT AND MATERIAL AS REQUIRED WITHIN THE AV MEDIA CLOSET.
11. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT FLOOR BOX LOCATIONS.
12. ALL CABLE SHALL BE SUPPORTED BY WIDE BASE J-HOOKS WHERE CONCEALED IN ACCESSIBLE CEILING WHEN NOT INSTALLED WITHIN CABLE TRAY OR CONDUIT RACEWAYS.
13. PROVIDE A 20' SLACK LOOP OF CABLE COILED AT EACH CEILING MOUNTED DEVICE FOR FUTURE LOCATION ADJUSTMENT.

SHEET KEYNOTES

1. CEILING DATA LOCATION FOR OVERHEAD PROJECTOR. PROVIDE ADDITIONAL CATEGORY 6 CABLE FROM PROJECTOR LOCATION TO FLOOR BOX AT CLASSROOM PODIUM. TERMINATE ALL ENDS WITH SPECIFIED DATA OUTLETS.
2. ALL AUDIOVISUAL CABLING TO BE HOME RUN FROM AUDIOVISUAL MEDIA CLOSET 1019H. AUDIOVISUAL LOCATIONS WILL BE DESIGNATED WITH AV TAG.
3. PROVIDE ONE 19" 2-POST PANDUIT DATA RACK WITH 8" WIDE DOUBLE SIDED VERTICAL WIRE MANAGERS MOUNTED ON EITHER SIDE OF RACK. MOUNT ALL AV JACK PANELS, AV PATCH PANELS, AND CABLE MANAGERS INTO DATA RACK.
4. PROVIDE ONE (1) 12-STRAND SINGLEMODE FIBER OPTIC CABLE WITHIN 1" INNERDUCT FROM EXISTING IDF U1120 TO NEW AV MEDIA CLOSET 1019H, TERMINATE ALL STRANDS WITH LC CONNECTORS AND TEST. PROVIDE FIBER OPTIC PATCH PANEL AND ADAPTER PANELS FOR MOUNTING.
5. CUT A HOLE FOR CEILING TILE SPEAKERS IN TWO (2) DROP CEILING TILE LOCATIONS THIS CLASSROOM. COORDINATE EXACT LOCATION OF OFOI SPEAKERS AND HOLE SIZING WITH JJC AV/IT DEPARTMENT CAMERON COURTER (CCOURTER@JJC.EDU).
6. CUT A HOLE FOR CEILING TILE SPEAKERS IN FOUR (4) DROP CEILING TILE LOCATIONS THIS CLASSROOM. COORDINATE EXACT LOCATION OF OFOI SPEAKERS AND HOLE SIZING WITH JJC AV/IT DEPARTMENT CAMERON COURTER (CCOURTER@JJC.EDU).
7. PROVIDE 4-PORT FACEPLATE AT PODIUM FLOORBOX FOR ADDITIONAL CATEGORY 6 CABLE FEED FROM PROJECTOR.
8. PROVIDE EMPTY WALL BOX WITH SINGLE GANG OPENING AND 1/2" CONDUIT STUBBED 12" ABOVE CEILING LEVEL FOR FUTURE PANIC BUTTON LOCATION. WALL BOX TO BE 44" A.F.F. ON CENTER.
9. NURSE CALL CEILING LIGHT TO BE CENTERED IN CEILING TILE IMMEDIATELY OUTSIDE EXAM ROOM 1019E. CEILING LIGHT SHALL BE PROGRAMMED TO ACTIVATE UPON ACTIVATION OF NURSE CALL DEVICES WITHIN EXAM ROOM 1019E.
10. CARD READER THIS LOCATION FOR ADJACENT GLASS DOOR 1102B. PROVIDE IN-WALL RACEWAY AND WALLBOX FOR CARD READER AND CABLING.
11. ALL VOICE, DATA, AND NURSE CALL CABLING TO BE HOME RUN FROM IDF U1120.

MEP

Affiliated Engineers, Inc. (AEI)



Key Plan

No.	Date	Issue Description
3	11-30-2020	Issued for Bid
2	11-19-2020	Issued for JJC Review
1	09-18-2020	Schematic Design / Design Development

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Client / Project Name

Joliet Junior College

Respiratory Therapy

1215 Houbolod Rd, Joliet, IL 60431

Sheet Title

Technology Level 01 Floor Plan

QAQC: AS

Project No.: 19130

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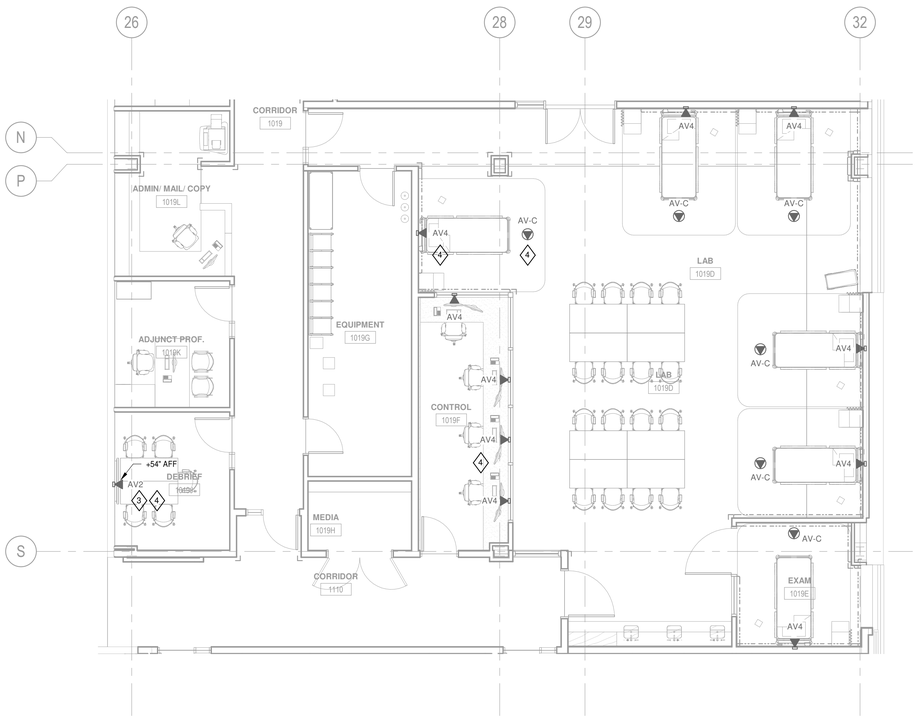
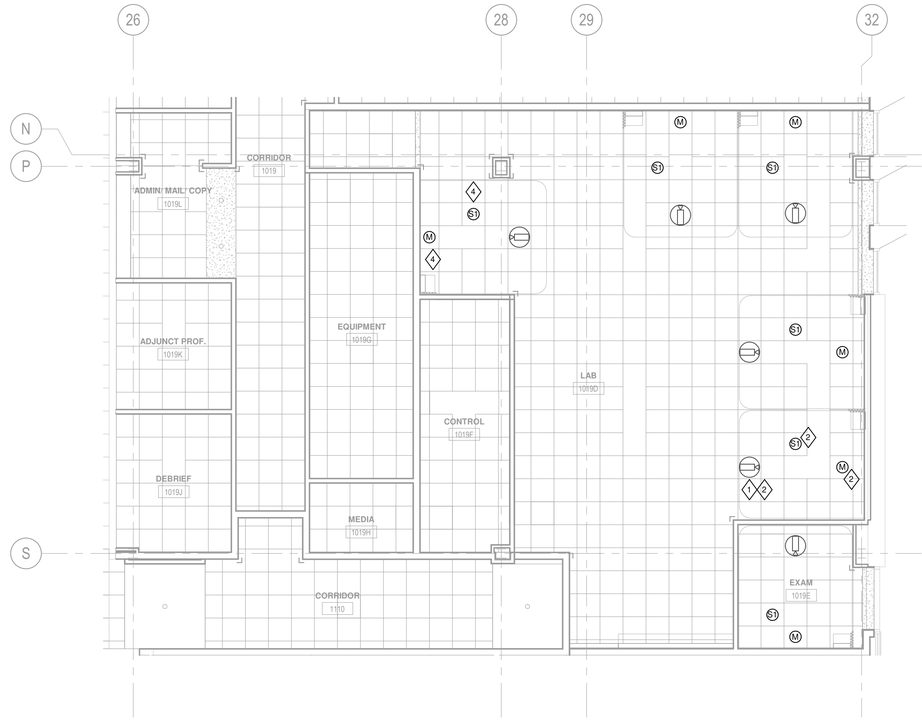


2 AUDIO/VISUAL FLOOR PLAN

SCALE: 3/16" = 1'-0"



1 AUDIO/VISUAL REFLECTED CEILING PLAN

SCALE: 3/16" = 1'-0"

TECHNOLOGY GENERAL NOTES

1. ALL CABLE, TELECOMMUNICATION PATHWAYS, TELECOMMUNICATION SPACES, AND INSTALLATION METHODS AND PROCEDURES SHALL COMPLY WITH JOLIET JUNIOR COLLEGE CURRENT TELECOMMUNICATIONS POLICIES AND PROCEDURES STANDARDS.
2. ALL CABLE, TELECOMMUNICATION PATHWAYS, TELECOMMUNICATION SPACES, INSTALLATION METHODS AND PROCEDURES SHALL COMPLY WITH ALL LOCAL MUNICIPAL, STATE, AND FEDERAL CODES AND REGULATIONS, IN ADDITION TO MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS.
3. DIVISION 27 CONTRACTOR SHALL PROVIDE ALL CABLING, PATCH PANELS, HORIZONTAL WIRE MANAGEMENT, TERMINATIONS, AND TESTING FOR A HORIZONTAL STRUCTURED CABLE SYSTEM FOR ALL VOICE, DATA, VIDEO, AV, SECURITY, NURSE CALL, MEDICAL EQUIPMENT, AND OTHER SUCH SYSTEMS. ALL PRODUCTS SHALL BE OF A PANDUIT SOLUTION PER THE PROJECT SPECIFICATIONS. CABLING SHALL BE NEATLY DRESSED ON LADDER RACK OR PLACED WITHIN MESH CABLE SOCK OR EQUIVALENT. ALL HORIZONTAL VOICE AND DATA CABLES SHALL TERMINATE AT THE FLOOR SERVING IDF ON THE SAME LEVEL AS THE DATA OUTLET. ALL HORIZONTAL AUDIO VISUAL CABLES SHALL TERMINATE AT THE FLOOR SERVING AUDIO VISUAL MEDIA CLOSET ROOM 1019H.
4. DIVISION 27 CONTRACTOR SHALL COORDINATE WITH ALL VOICE, DATA, VIDEO, AV, SECURITY, NURSE CALL, MEDICAL EQUIPMENT, AND OTHER SUCH SYSTEMS PROJECT DOCUMENTS TO ENSURE THAT ALL CONNECTIVITY REQUIREMENTS ARE COMPLETE AND COORDINATED. REFER TO ARCHITECTURAL, AV, NURSE CALL, MEDICAL EQUIPMENT, AND SECURITY DRAWINGS FOR MOUNTING HEIGHTS, LOCATIONS, AND OTHER INSTALLATION DETAILS.
5. COORDINATE FIRE SEPARATION BARRIER PENETRATIONS WITH ARCHITECT'S DRAWINGS. USE APPROVED FIRE STOPPING SEALANT AROUND PENETRATION AFTER RACEWAYS ARE INSTALLED. BASIS OF DESIGN FOR WALL PENETRATIONS SHALL BE THE STI EZ-PATH SERIES, HILTI SPEED SLEEVES, OR EQUIVALENT. INCREASE QUANTITIES OF EZ-PATH SLEEVES AS REQUIRED TO ENSURE MAXIMUM OF 50% FILL OF ALL SLEEVES UPON PROJECT COMPLETION.
6. COORDINATE FIRE SEPARATION BARRIER PENETRATIONS WITH ARCHITECT'S DRAWINGS. USE APPROVED FIRE STOPPING SEALANT AROUND PENETRATION AFTER RACEWAYS ARE INSTALLED.
7. SEE ARCHITECT'S DRAWINGS FOR ADDITIONAL RECEPTACLE LOCATIONS AND MOUNTING HEIGHTS.
8. DIVISION 26 CONTRACTOR SHALL PROVIDE ALL RACEWAYS AND BOXES FOR PATHWAY SYSTEMS, FLOORBOX LOCATIONS, AND IN-WALL LOCATIONS. THE DIVISION 27 CONTRACTOR SHALL PROVIDE ALL OTHER REQUIRED RACEWAYS, PANELS, ENCLOSURES, BOXES, AND HARDWARE AS REQUIRED FOR A COMPLETE INSTALLATION. ALL PATHWAYS AND CABLE TRAY ROUTING SHALL BE COORDINATED WITH ALL OTHER TRADES PRIOR TO INSTALLATION.
9. DIVISION 26 CONTRACTOR SHALL SUPPLY A NEW TELECOMMUNICATIONS BONDING BACKBONE FROM THE EXISTING IDF U1120 TO A NEW TELECOMMUNICATIONS GROUNDING BUSBAR IN THE AV MEDIA CLOSET 1019H.
10. DIVISION 27 CONTRACTOR SHALL PROVIDE ALL GROUNDING AND BONDING CONNECTIONS FROM THE EXISTING TGB WITHIN THE IDF TO ALL NEW EQUIPMENT AND MATERIAL AS REQUIRED WITHIN THE IDF. AND FROM THE NEW TGB IN THE AV MEDIA CLOSET TO ALL NEW EQUIPMENT AND MATERIAL AS REQUIRED WITHIN THE AV MEDIA CLOSET.
11. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT FLOOR BOX LOCATIONS.
12. ALL CABLE SHALL BE SUPPORTED BY WIDE BASE J-HOOKS WHERE CONCEALED IN ACCESSIBLE CEILING WHEN NOT INSTALLED WITHIN CABLE TRAY OR CONDUIT RACEWAYS.
13. PROVIDE A 20' SLACK LOOP OF CABLE COILED AT EACH CEILING MOUNTED DEVICE FOR FUTURE LOCATION ADJUSTMENT.

SHEET KEYNOTES

1. REFER TO T3.01 FOR NETWORK CONNECTION LOCATIONS FOR ALL AV CAMERAS.
2. CENTER DEVICE IN CEILING TILE, TYPICAL FOR ALL LOCATIONS.
3. LOCATE AV DATA OUTLETS IN DISPLAY ROUGH-IN.
4. ROUTE AV CABLING TO MEDIA ROOM 1019H. LEAVE 10' SLACK AT EACH END FOR TERMINATIONS. TYPICAL FOR ALL SIMILAR DEVICES.

MEP

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Key Plan

No.	Date	Issue Description
2	11-30-2020	Issued for Bid
1	11-19-2020	Issued for JJC Review

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Client / Project Name

Joliet Junior College

Respiratory Therapy

1215 Houblold Rd, Joliet, IL 60431

Sheet Title

Audio/Visual Level 01
Floor and Ceiling Plan

QAQC: AS

Project No. 19130

TA3.01

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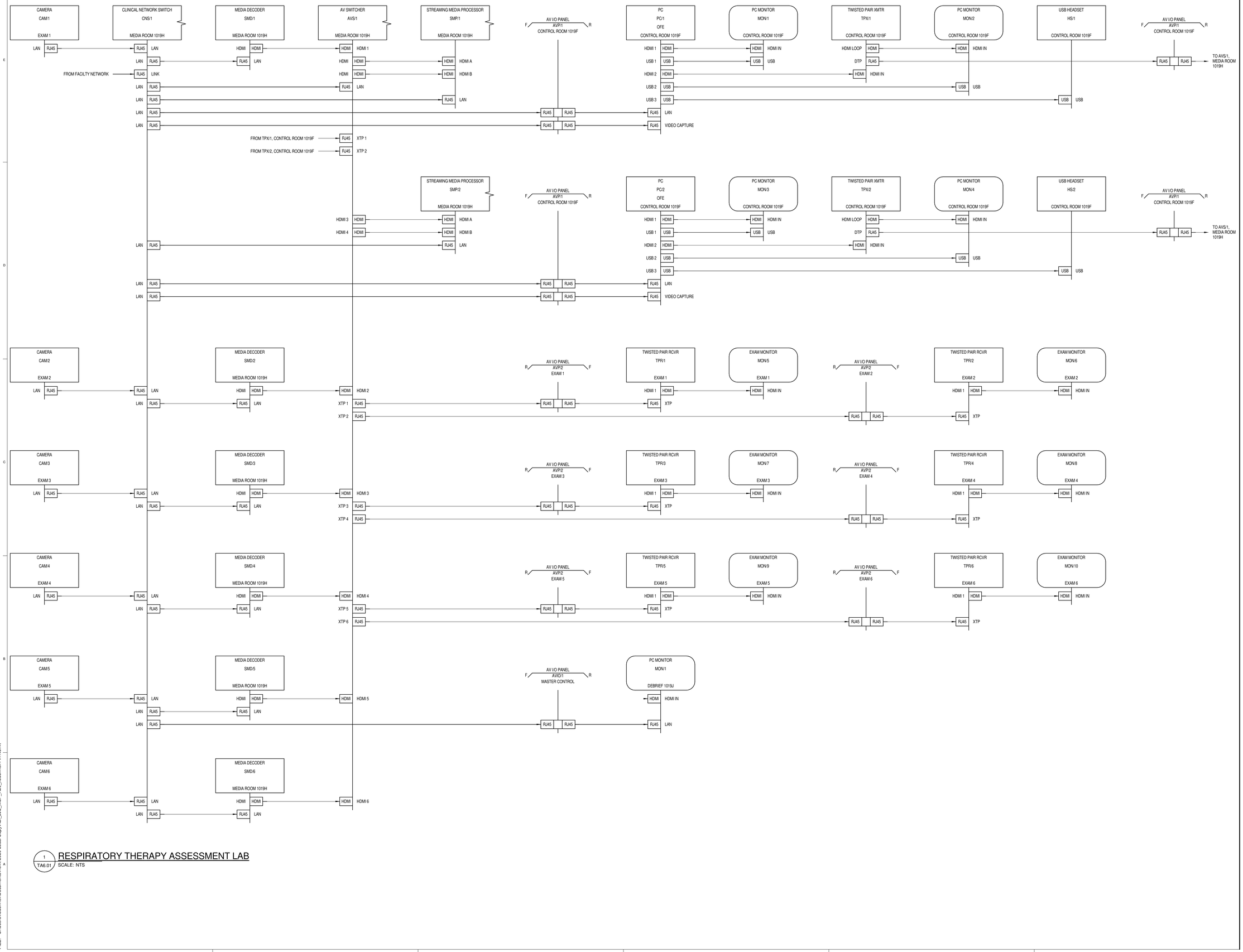

1 TA6.01 RESPIRATORY THERAPY ASSESSMENT LAB

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Respiratory Therapy

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Sheet Title

Clinical Assessment Lab Video and Network System Diagram

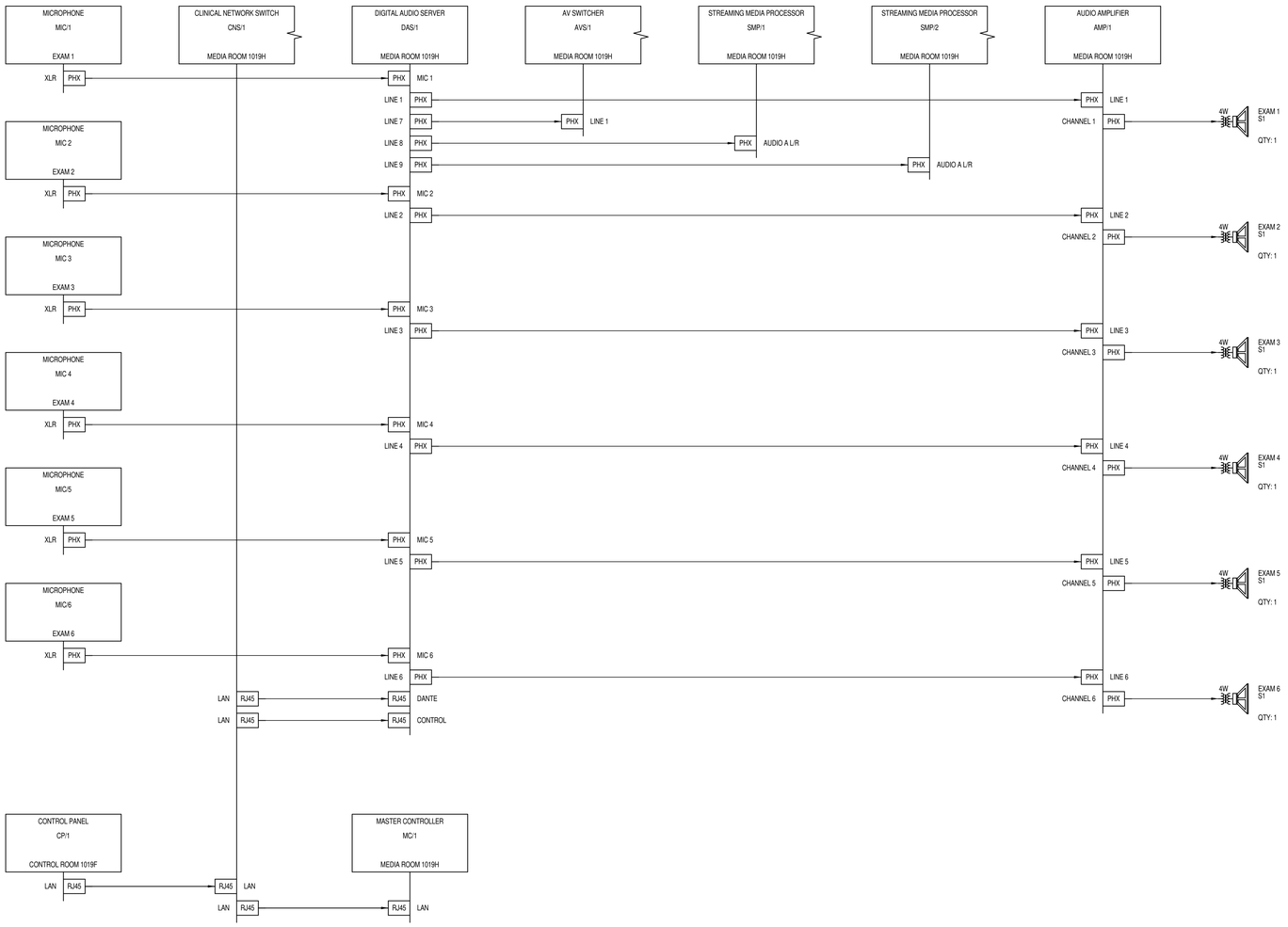
QAQC

AS

Project No.

19130

TA6.01



1 / TA6.02 RESPIRATORY THERAPY ASSESSMENT LAB - AUDIO & CONTROL SYSTEM DIAGRAM
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2 / TA6.01 MEDIA ROOM 1019H RACK ELEVATION
SCALE: NTS

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Sheet Title
Clinical Assessment Lab Audio and Control Network System Diagram

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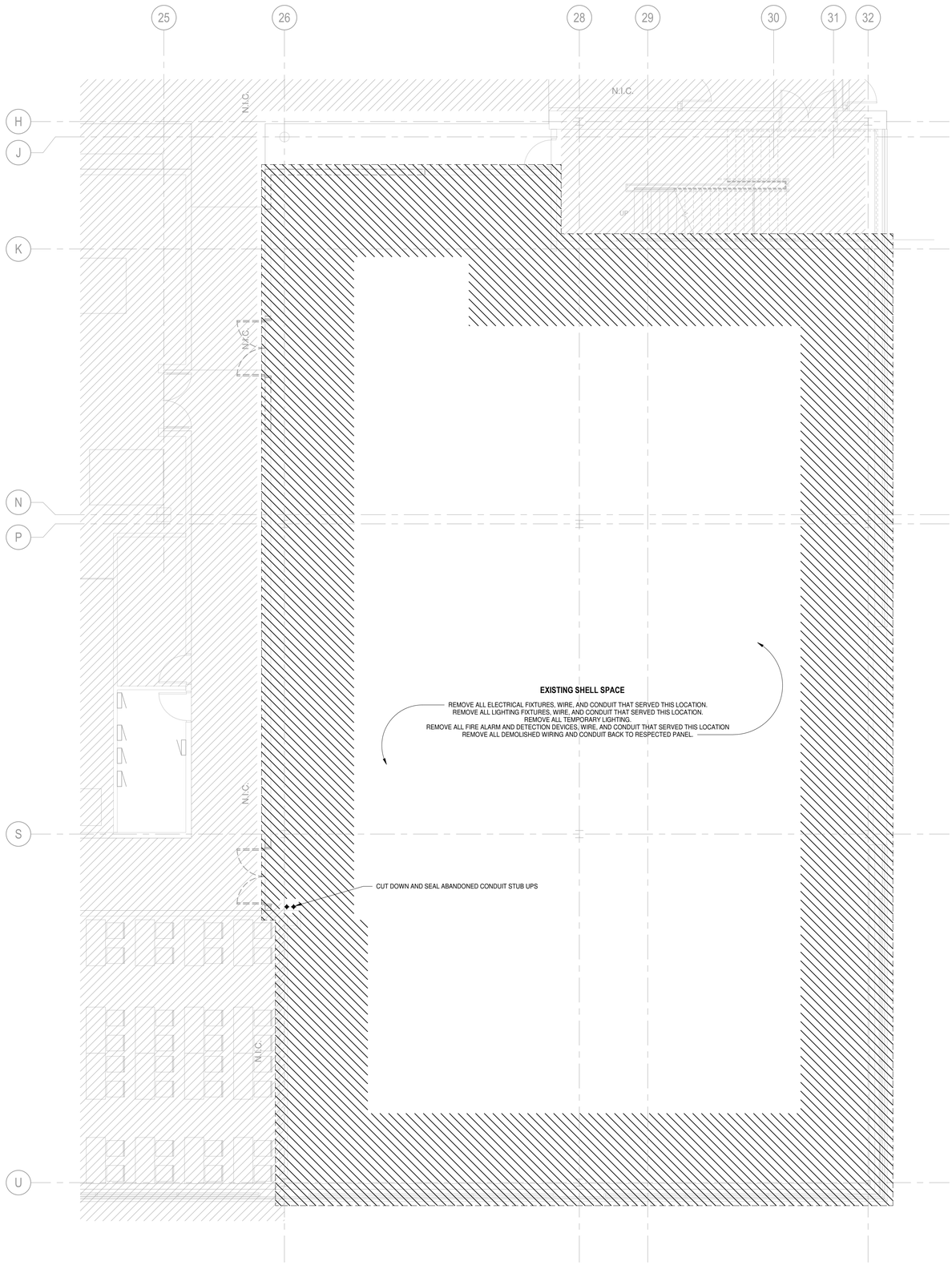
AS

Project No.
19130

TA6.02



1 ELECTRICAL DEMO LEVEL 01 FLOOR PLAN
SCALE: 3/16" = 1'-0"

ELECTRICAL DEMOLITION GENERAL NOTES

1. REFER TO SPECIFICATIONS FOR DIRECTIONS REGARDING DEMOLITION WORK.
2. AREA OF DEMOLITION SHOWN IS FOR APPROXIMATION PURPOSES ONLY. CONTRACTOR SHALL REFER TO ARCHITECTURAL DRAWINGS FOR EXACT AREA OF DEMOLITION.
3. EQUIPMENT LOCATIONS SHOWN ARE APPROXIMATE AND SHALL BE FIELD VERIFIED.
4. DEMOLITION DRAWINGS SHOWING EXISTING CONDITIONS HAVE BEEN PREPARED BASED ON FIELD OBSERVATION AND EXISTING ELECTRICAL DRAWINGS. ADDITIONAL COMPONENTS MAY EXIST WHICH DO NOT SHOW AND SUCH ITEMS SHALL BE DEALT WITH IN A MANNER SIMILAR TO THOSE ITEMS, WHICH DO SHOW.
5. FURNISH ALL LABOR, MATERIALS AND EQUIPMENT REQUIRED TO COMPLETE DEMOLITION OF EXISTING ELECTRICAL EQUIPMENT AS SPECIFIED OR INDICATED. DISCONNECT, REMOVE AND RELOCATE ALL ITEMS AS REQUIRED TO FACILITATE THE NEW CONSTRUCTION.
6. CONTRACTOR SHALL THOROUGHLY FAMILIARIZE HIMSELF WITH EXISTING ELECTRICAL SYSTEM, WHICH WILL BE AFFECTED BY THE DEMOLITION AND REMODELING WORK.
7. CONTRACTOR SHALL OBTAIN PERMISSION FROM OWNERS REPRESENTATIVE TO SHUT OFF SERVICES OR SYSTEM, WHICH MAY AFFECT OTHER AREAS BEYOND THE LIMITS OF THE IMMEDIATE DEMOLITION AREA. SUCH PERMISSION WILL BE GRANTED ONLY AFTER OWNERS REPRESENTATIVE IS INFORMED AS TO THE REASON FOR AND DURATION OF THE SHUTDOWN AND IS SATISFIED THAT THE SHUTDOWN CAN BE MADE WITH AS LITTLE INCONVENIENCE TO OTHER AREAS AS POSSIBLE.
8. WHERE REMOVAL OF CONDUIT AND WIRING AFFECTS THE OPERATION OF "UPSTREAM" AND/OR "DOWNSTREAM" UTILIZATION EQUIPMENT WHICH IS NOT INDICATED TO BE REMOVED, PROVIDE ADDITIONAL CONDUIT AND WIRING TO RESTORE THE "UPSTREAM" AND "DOWNSTREAM" UTILIZATION EQUIPMENT TO ITS NORMAL OPERATION.
9. WIRING SHALL BE REMOVED, TERMINATED OR EXTENDED AS REQUIRED TO MAINTAIN CIRCUIT CONTINUITY AS CONDITIONS MAY DICTATE. ALL BRANCH CIRCUITS TO BE DISCONNECTED SHALL BE IDENTIFIED AS TO LOCATION OR ITEM SERVED BEFORE DISCONNECTING. CIRCUITS SERVING AREAS BEYOND THE IMMEDIATE DEMOLITION AND REMODELING SHALL BE MAINTAINED.
10. IN DEMOLITION AND REMODELED AREAS ANY FEEDERS, CONDUITS, BRANCH CIRCUITS, SIGNAL AND TELEPHONE CIRCUITS, ETC. PASSING THROUGH THESE AREAS TO SERVE REMOTE OR SURROUNDING AREAS THAT ARE TO REMAIN, SHALL BE RETAINED AND KEPT OPERATIONAL AND SHALL BE REROUTED IN ALL CASES WHERE THEY INTERFERE WITH ANY NEW WORK.
11. ALL EXISTING ELECTRICAL EQUIPMENT AND MATERIAL IN AREAS TO BE REMODELED/ALTERED SHALL BE REMOVED. UNLESS NOTED OTHERWISE ON DRAWING TO BE RETAINED OR RELOCATED.
12. REMOVE ALL ELECTRICAL COMPONENTS WITHIN AREA OF DEMOLITION. REMOVE ALL JUNCTION BOXES AND CONDUIT ASSOCIATED WITH DEVICES. REMOVE ALL CIRCUIT WIRING FROM COMPONENT BACK TO ORIGIN (PANELBOARD, MOTOR CONTROL CENTER, ETC.), UNLESS IT IS REQUIRED TO MAINTAIN CIRCUIT CONTINUITY TO COMPONENTS OUTSIDE OF THE AREA OF DEMOLITION. IF CIRCUIT CONTINUITY IS REQUIRED REWORK CONDUIT AND WIRE SO THAT THE NEW ROUTE IS OUTSIDE OF THE AREA TO BE DEMOLISHED.
13. ALL LUMINAIRES, DISCONNECTS, TIME CLOCKS, PANELS, ETC. REMOVED SHALL REMAIN THE PROPERTY OF THE OWNER AND BE TURNED OVER TO THE OWNER. CONDUIT, BOXES, WIRING AND MISCELLANEOUS ELECTRICAL SCRAP SHALL BE REMOVED FROM THE JOB SITE BY THE ELECTRICAL CONTRACTOR.
14. REMOVE ALL EXISTING WIRING/CABLING FROM ALL EXISTING CONCEALED RACEWAYS IN PARTITIONS THAT ARE TO REMAIN.
15. REMOVE ALL ELECTRICAL EQUIPMENT ON OR IN EXISTING WALLS, CEILINGS AND PARTITIONS THAT ARE TO BE DEMOLISHED.
16. REMOVE ABANDONED WIRING TO SOURCE OF SUPPLY.
17. CONDUITS, BOXES, ETC. SHALL BE REMOVED AS REQUIRED BY WALL DEMOLITION.
18. WHERE EXISTING WALLS ARE TO REMAIN, REMOVE ALL EXPOSED RACEWAYS, SURFACE AND RECESSED BOXES THAT ARE NOT TO BE REUSED.
19. DISCONNECT ABANDONED OUTLETS AND REMOVE DEVICES. REMOVE ABANDONED OUTLETS IF CONDUIT SERVICING THEM IS ABANDONED AND REMOVED. PROVIDE BLANK COVER FOR ABANDONED OUTLETS, WHICH ARE NOT REMOVED.

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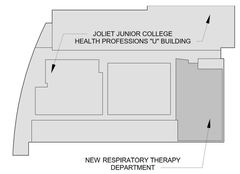

Key Plan

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Client / Project Name
Joliet Junior College

Respiratory Therapy

1215 Houblold Rd, Joliet, IL 60431

Sheet Title
Electrical Demo Level 01 Floor Plan

QAQC
FM

Project No.
19130

E1.01

DATE: 11/30/2020 9:08:57 AM
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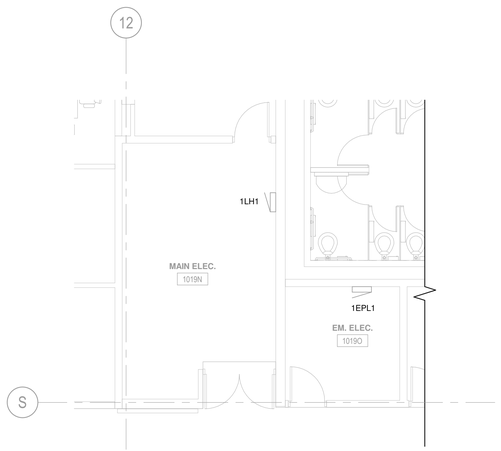
LIGHTING FIXTURE SCHEDULE

TYPE	MANUFACTURE	MODEL NO.	LAMP WATTS	VOLTS	MOUNTING	DESCRIPTION	COMMENTS
F1	LITHONIA	EPANL 2X2 4000LM 80CRI 50K MIN10 ZT MVOLT	31	MVOLT	CEILING/FLUSH	2X2 LED TROFFER LIGHT	
F2	LITHONIA	LDN6SQ-50/20 L56AR LD	23	MVOLT	RECESSED	6" LED RECESSED SQUARE LIGHT	
F3	LITHONIA	EPANL 2X4 4800LM 80CRI 50K MIN 10 ZT MVOLT	48	MVOLT	CEILING/FLUSH	2X4 LED TROFFER LIGHT	
F4	MARK LIGHTING NULITE(ALT)	FSM2L-TF--375-50K-1C-UNV-LD1-XFF-WH-12' FSM2L-FL-375-50K-1C-UNV-LD1-XFF-WH-9'-8" SL2L-LOP-LENGTH-FLP-FL-80CRI-50K-800LMF-120-90DEG INSIDE CORNER RM/RW2-03-L50-UNV-D-1C-ST-F-WH-12'-CONT LENS (ALT) RM/RW2-03-L50-UNV-D-1C-ST-F-WH-9'-8"-CONT LENS (ALT)	96 76	MVOLT	RECESSED	CUSTOM LENGTH 4" LED LINEAR LIGHT	SEE ARCHITECTURAL PLANS FOR LIGHTING DESIGN
X1	LITHONIA	EDG/R-W-FACE#-COLOR	4	MVOLT	CEILING/FLUSH	EXIT SIGN WITH RED LETTERS	



2 ELECTRICAL LIGHTING LEVEL 01 FLOOR PLAN
SCALE: 3/16" = 1'-0"

1 ELECTRICAL LIGHTING LEVEL 01 FLOOR PLAN
SCALE: 3/16" = 1'-0"

ELECTRICAL LIGHTING GENERAL NOTES

1. LIGHTING FIXTURES SHOWN ARE FOR CIRCUITING AND SWITCHING INFORMATION ONLY. SEE ARCHITECTURAL PLANS FOR ACTUAL FIXTURE LOCATIONS.
2. ALL RACEWAYS ARE TO CONTAIN NO MORE THAN NINE CURRENT CARRYING CONDUCTORS AND A CODE SIZED EQUIPMENT GROUNDING CONDUCTOR.
3. EACH EXIT SIGN & EMERGENCY LIGHTING CIRCUIT SHALL HAVE ITS OWN NEUTRAL. MULTIWIRE BRANCH CIRCUITS ARE NOT ALLOWED.
4. SEAL ALL RACEWAYS AND PENETRATIONS BOTH INTERNALLY AND EXTERNALLY WHERE TRANSITIONS ARE MADE FROM CONDITIONED SPACES TO OUTDOOR OR UNDERGROUND. RACEWAYS ARE TO BE SEALED TO PREVENT AIR, MOISTURE, AND RODENT MIGRATION THROUGH AND AROUND RACEWAYS.
5. COORDINATE FIRE SEPARATION BARRIER PENETRATIONS WITH ARCHITECT'S DRAWINGS. USE APPROVED FIRE STOPPING SEALANT AROUND PENETRATION AFTER RACEWAYS ARE INSTALLED.
6. CONNECT ZONED LIGHTING TO EXISTING LUTRON PANEL U1114B

SHEET KEYNOTES

1 PROVIDE UL924 RELAY DEVICE FOR EM LIGHTING. UL924 DEVICE SHALL BE POWERED AND SWITCHED RESPECTIVELY WITH OTHER DEVICES IN LOCATION USING PANEL 1LH1 AND GET EMERGENCY POWER FROM EMERGENCY PANEL 1ELH1 WITH NEW 20A 1P CIRCUIT BREAKER.

2 PROGRAMABLE SWITCH CONNECTED TO LUTRON PANEL U1114B. SWITCH TO BE PROGRAMMED FOR DIFFERENT LIGHTING SCENES.

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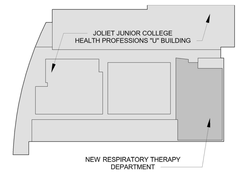

Key Plan

No.	Date	Issue Description
3	11-30-2020	Issued for Bid
2	11-19-2020	Issued for JJC Review
1	09-18-2020	Schematic Design / Design Development

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Client / Project Name
Joliet Junior College

Respiratory Therapy

1215 Houbolid Rd, Joliet, IL 60431

Sheet Title
Electical Lighting Level 01 Floor Plan

QA/QC
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Project No.
19130

E2.01

DATE: 11/30/2020 9:07:01 AM
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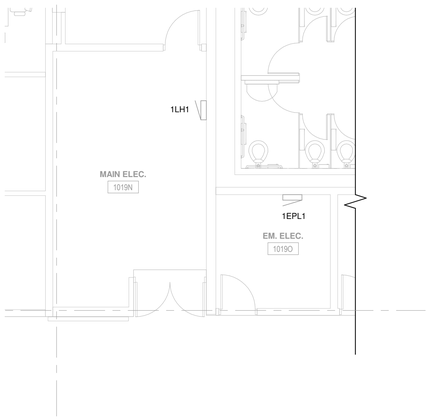
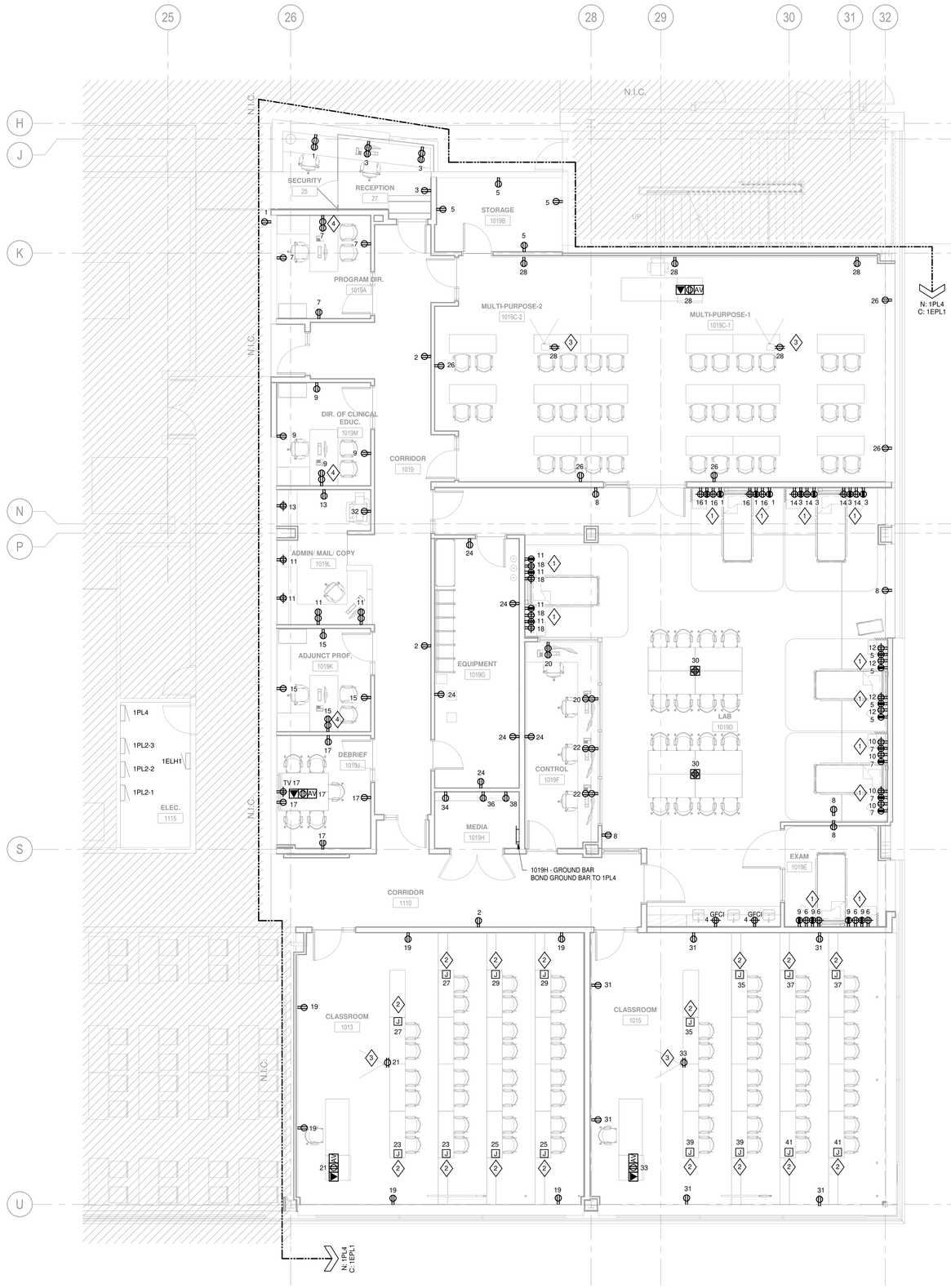


2 ELECTRICAL POWER LEVEL 01 FLOOR PLAN

SCALE: 3/16" = 1'-0"



1 ELECTRICAL POWER LEVEL 01 FLOOR PLAN

SCALE: 3/16" = 1'-0"

ELECTRICAL POWER GENERAL NOTES

1. CONDUCTOR SIZES ARE BASED ON COPPER THHN/THWN IN METALLIC RACEWAY. 60°C CONDUCTOR USED FOR AMPERAGES LESS THAN 100. 75°C CONDUCTOR USED FOR AMPERAGES GREATER THAN OR EQUAL TO 100.
2. VERIFY EQUIPMENT LOCATIONS AND CONDUCTOR LENGTHS PRIOR TO INSTALLATION. CONSULT ENGINEER IF INCREASED CONDUCTOR LENGTHS RESULT IN UNACCEPTABLE VOLTAGE DROP (3% OR GREATER).
3. ALL RACEWAYS ARE TO CONTAIN NO MORE THAN NINE CURRENT CARRYING CONDUCTORS AND A CODE SIZED EQUIPMENT GROUNDING CONDUCTOR.
4. EACH CIRCUIT IS TO HAVE ITS OWN NEUTRAL. MULTIWIRE BRANCH CIRCUITS ARE NOT ALLOWED.
5. SEAL ALL RACEWAYS AND PENETRATIONS BOTH INTERNALLY AND EXTERNALLY WHERE TRANSITIONS ARE MADE FROM CONDITIONED SPACES TO OUTDOOR OR UNDERGROUND. RACEWAYS ARE TO BE SEALED TO PREVENT AIR, MOISTURE, AND RODENT MIGRATION THROUGH AND AROUND RACEWAYS.
6. COORDINATE FIRE SEPARATION BARRIER PENETRATIONS WITH ARCHITECTS DRAWINGS. USE APPROVED FIRE STOPPING SEALANT AROUND PENETRATION AFTER RACEWAYS ARE INSTALLED.
7. SEE ARCHITECT'S DRAWINGS FOR ADDITIONAL RECEPTACLE LOCATIONS AND MOUNTING HEIGHTS.
8. ALL MECHANICAL, PLUMBING, AND FIRE PROTECTION EQUIPMENT SHOWN ON PLANS ARE TO INDICATE LOCATION. REFER TO "ELECTRICAL MOTOR SCHEDULE", FOR ADDITIONAL MECHANICAL, PLUMBING, AND FIRE PROTECTION COORDINATION INFORMATION INCLUDING CIRCUITING, STARTER, AND MEANS OF DISCONNECT REQUIREMENTS. COORDINATE LOCATION OF ELECTRICAL EQUIPMENT ASSOCIATED WITH MECHANICAL, PLUMBING, AND FIRE PROTECTION EQUIPMENT WITH FINAL ROOM LAYOUT.
9. PROVIDE 120V LIFE SAFETY CONNECTION FOR NOTIFICATION APPLIANCE CIRCUIT PANEL (NAC) FROM NEAREST LIFE SAFETY PANEL. COORDINATE PANEL LOCATIONS WITH FIRE ALARM CONTRACTOR.
10. COORDINATE MOUNTING OF RECEPTACLES AND LOW VOLTAGE ROUGH-IN WITH FURNITURE PROVIDER AND ARCHITECTURAL ELEVATIONS.
11. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT FLOOR BOX LOCATIONS.
12. RIGID METAL CONDUIT SHALL BE USED UNDER ALL PAVED AREAS AS REQUIRED.
13. IDENTIFY CONDUCTOR LOCATION TO PREVENT CONSTRUCTION DAMAGE BEFORE SLAB IS POURED.
14. BACKBOXES & WIRING DEVICES FOUND INSTALLED IN NON-COMPLIANCE WITH ARCHITECTURAL AND ELECTRICAL SHALL BE COMPLETELY REMOVED WITH CONTRACTOR RESPONSIBLE FOR RE-FINISHING WALL PER ARCHITECTURAL SPECIFICATIONS AS REQUIRED BY STAGE OF PROGRESS OF CONSTRUCTION. INSTALLATION OF BLANKOFF PLATES IS NOT ACCEPTABLE.
15. RECEPTACLE CIRCUITS WITH STAND-BY POWER HAVE CIRCUIT NUMBERS FOR INTENT ONLY. ACTUAL CIRCUIT NUMBERS WILL DIFFER IN THE FIELD.

SHEET KEYNOTES

1 RECEPTACLES SHOWN FOR CIRCUITING INFORMATION. SEE ARCHITECTURAL DRAWINGS AND ELEVATIONS FOR EXACT LOCATION.
2 PROVIDE JUNCTION BOX IN FLOOR / RAISED SEATING FOR FIXED CONNECTION FOR FURNITURE WITH BUILT IN RECEPTACLES.
3 PROVIDE RECEPTACLE FOR CEILING MOUNTED PROJECTOR
4 COORDINATE OUTLET WITH FFE LAYOUT.

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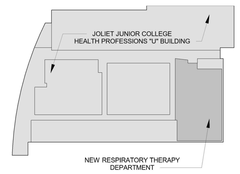

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Sheet Title

Electrical Power Level 01 Floor Plan

QAQC
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Project No.
19130

E3.01

DATE: 11/30/2020 9:07:04 AM
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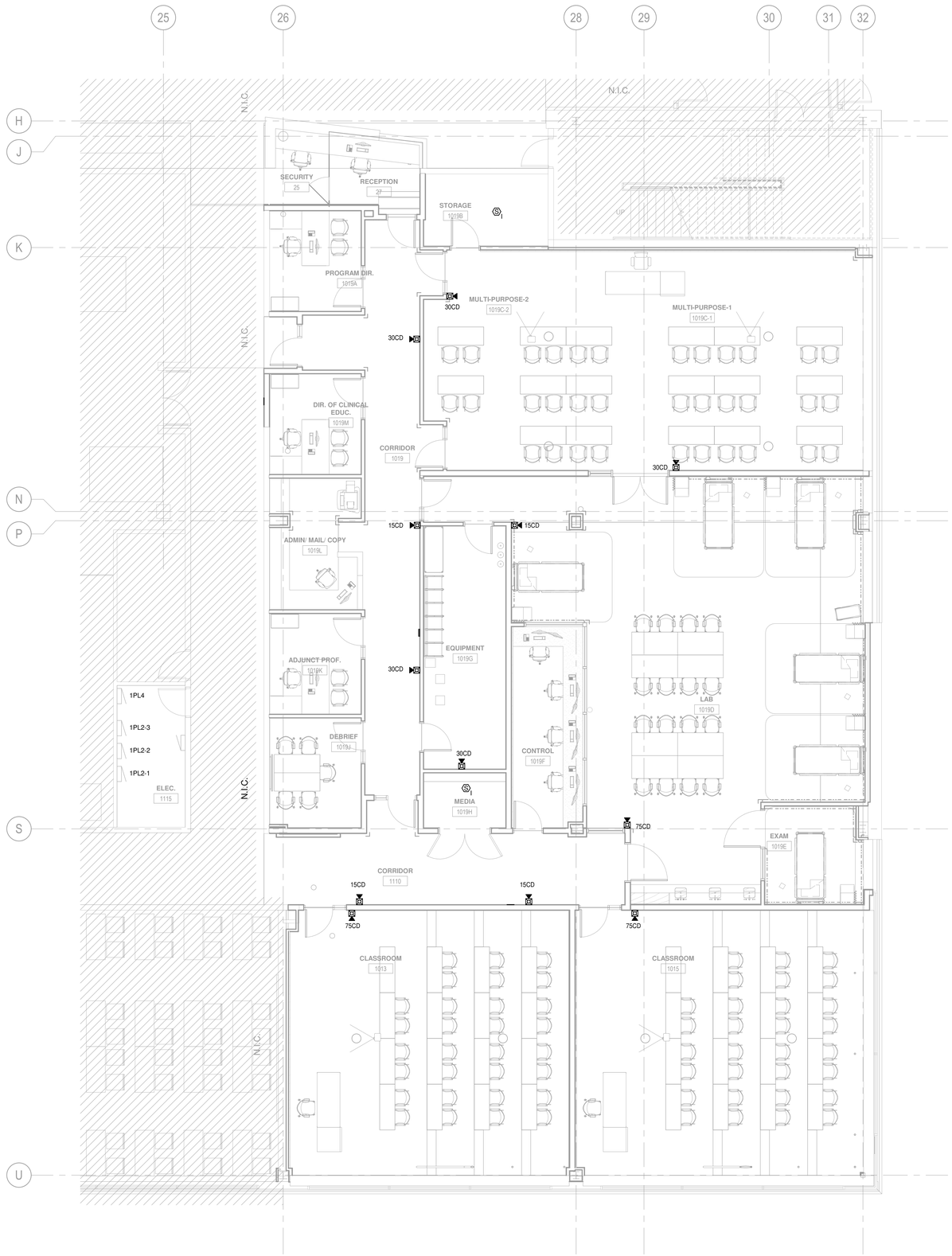

1 **ELECTRICAL SYSTEMS LEVEL 01 FLOOR PLAN**

SCALE: 3/16" = 1'-0"

ELECTRICAL FIRE ALARM GENERAL NOTES

1. THE COMPLETE FIRE ALARM SYSTEM SHALL MEET ALL APPLICABLE CODES, FIRE MARSHAL REQUIREMENTS, AND MANUFACTURER'S RECOMMENDATIONS.
2. ALL NECESSARY RELAYS MAY NOT BE SHOWN ON THIS PLAN, BUT WHERE REQUIRED FOR PROPER OPERATION OF THE SYSTEM, THEY SHALL BE PROVIDED BY THIS CONTRACTOR.
3. ALL FIRE ALARM WIRING SHALL BE INSTALLED IN CONDUIT.
4. FIRE ALARM VENDOR SHALL PROVIDE A REMOTE INDICATOR DEVICE WITH EACH DUCT SMOKE DETECTOR DEVICE AND FOR EACH HEAT AND SMOKE DETECTOR THAT IS NOT VISIBLE FROM THE FLOOR. REMOTE INDICATOR DEVICES SHALL BE MOUNTED AT 46" AFF AS CLOSE TO DETECTOR AS POSSIBLE. VERIFY FINAL LOCATION WITH ARCHITECT PRIOR TO INSTALLATION.
5. IN ADDITION TO WORK SHOWN ON ELECTRICAL DRAWINGS, CONTRACTOR SHALL MAKE FIRE ALARM AND POWER CONNECTIONS TO FIRE/SMOKE DAMPERS AT LOCATIONS SHOWN ON THE MECHANICAL DRAWINGS AND AS SPECIFIED.
6. CONTRACTOR SHALL FURNISH NOTIFICATION APPLIANCE EXTENDER PANELS AS REQUIRED.
7. REFER TO MECHANICAL DRAWINGS FOR EXACT LOCATION AND QUANTITIES OF SMOKE DAMPERS, SUPPLY AND RETURN DUCTWORK REQUIRING DUCT SMOKE DETECTOR INSTALLATIONS. ALSO REFER TO SPECIFICATION SECTION 283116 FOR FURTHER REQUIREMENTS AND DETAILS PERTAINING TO PROVISIONS AND INSTALLATION OF DUCT SMOKE DETECTORS.
8. ALL ALARM SEQUENCES FOR FIRE ALARM SYSTEM SHALL BE COORDINATED AND VERIFIED WITH OWNER.
9. ALL 120V WIRING REQUIRED FOR OPERATION OF THE SYSTEM AS DESCRIBED IN THE CONSTRUCTION DOCUMENTS SHALL BE PROVIDED BY THIS CONTRACTOR.
10. BUILDING FIRE ALARM SYSTEM IS EXISTING. NEW FIRE ALARM INSTALLATION SHALL BE COMPATIBLE WITH AND INTERFACED INTO EXISTING BUILDING FIRE ALARM SYSTEM. PROVIDE ALL PROGRAMMING REQUIRED TO INTERFACE NEW FIRE ALARM INSTALLATION WITH EXISTING BUILDING FIRE ALARM SYSTEM AND COORDINATE SCHEDULING OF INTERFACE TO EXISTING BUILDING FIRE ALARM SYSTEM WITH OWNER PRIOR TO WORK.

MEP

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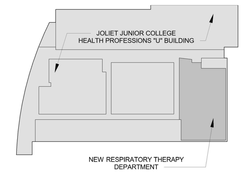

Key Plan

No.	Date	Issue Description
2	11-30-2020	Issued for Bid
1	11-19-2020	Issued for JJC Review

ECKENHOFF SAUNDERS
One Prudential Plaza
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Client / Project Name

Joliet Junior College

Respiratory Therapy

1215 Houblold Rd, Joliet, IL 60431

Sheet Title

Electrical Systems
Level 01 Floor Plan

QA/QC
FM

Project No.
19130

E4.01

DATE: 11/30/2020 9:07:06 AM
FILE: C:\Users\cagustyn\Documents\Revit 2020 Local Copy\AEI_JJC_MEP_R20_cagustyn.rvt

1LH1

MAIN TYPE MCB
MAIN RATING 100 A
BUS RATING 100 A
VOLTAGE 480/277 Wye
3 **PHASE** 4 **WIRE**
MOUNTING Recessed
ENCLOSURE Type 1
LOCATION T/ 1ST FLOOR,MAIN ELEC....
FED FROM
SCCR kA
CALCULATED AVAILABLE FAULT... kA

REMARKS: EXISTING PANEL. NEW CIRCUIT IS SHOWN FOR INTENT ONLY. PLACE NEW CIRCUIT ON NEXT AVAILABLE BREAKER.

				LEFT SIDE, kVA			RIGHT SIDE, kVA							
DESCRIPTION	BRKR NOTES	BRKR AMP, POLES	CKT NO	A	B	C	A	B	C	CKT NO	BRKR AMP, POLES	BRKR NOTES	DESCRIPTION
EXISTING CIRCUIT		20 A 1	1	0.00			0.00			2	1 20 A		EXISTING CIRCUIT
			3							4			
			5							6			
			7							8			
NEW FIT OUT LIGHTING		20 A 1	9		2.40					10			
			11							12			
			13							14			
			15							16			
			17							18			
			19							20			
			21							22			
			23							24			
			25							26			
			27							28			
			29							30			
			31							32			
			33							34			
			35							36			
			37							38			
			39							40			
			41							42			

TOTAL PHASE SUMMARY

	A	B	C
PHASE SUBTOTAL (kVA):	0.00...	2.40...	0.0...
PHASE SUBTOTAL (AMPS):	0 A	9 A	0 A

LOAD CLASSIFICATION	CONNECTED (KVA)	DEMAND FACTOR	DEMAND (KVA)
POWER	0.00 kVA	100%	0.00 kVA
LIGHTING	2.40 kVA	125%	3.00 kVA
MOTOR	0.00 kVA	125% LARGEST, 100% OTHER	0.00 kVA
RECEPTACLE	0.00 kVA	100% FIRST 10KVA, 50% OTHER	0.00 kVA
HEATING	0.00 kVA	125%	0.00 kVA
TOTAL LOAD	2.40 kVA		3.00 kVA
TOTAL AMPS	3 A		4 A

1PL4

MAIN TYPE MCB
MAIN RATING 100 A
BUS RATING 100 A
VOLTAGE 120/208 Wye
3 **PHASE** 4 **WIRE**
MOUNTING Recessed
ENCLOSURE Type 1
LOCATION T/ 1ST FLOOR,ELEC. 1115
FED FROM 1PL2-3
SCCR kA
CALCULATED AVAILABLE FAULT... kA

REMARKS: EXISTING PANELBOARD

				LEFT SIDE, kVA			RIGHT SIDE, kVA							
DESCRIPTION	BRKR NOTES	BRKR AMP, POLES	CKT NO	A	B	C	A	B	C	CKT NO	BRKR AMP, POLES	BRKR NOTES	DESCRIPTION
RECEPTACLE SECURITY 25		20 A 1	1	0.54			0.54			2	1 20 A		RECEPTACLE ROOM 1019, 1110
RECEPTACLE RECEPTION 27		20 A 1	3		0.54			0.36		4	1 20 A		RECEPTACLE LAB 1019D
RECEPTACLE STORAGE 1019B		20 A 1	5			0.72			0.72	6	1 20 A		RECEPTACLE EXAM 1019E
RECEPTACLE PROGRAM DIR. 1019A		20 A 1	7	0.72			0.90			8	1 20 A		RECEPTACLE ROOM 1019E, 1019D
RECEPTACLE DIR. OF CLINICAL...		20 A 1	9		0.72			0.72		10	1 20 A		RECEPTACLE LAB 1019D
RECEPTACLE ADMIN/ MAIL/ COPY...		20 A 1	11			0.72			0.72	12	1 20 A		RECEPTACLE LAB 1019D
RECEPTACLE ADMIN/ MAIL/ COPY...		20 A 1	13	0.36			0.72			14	1 20 A		RECEPTACLE LAB 1019D
RECEPTACLE ADJUNCT PROF. 1019K		20 A 1	15		0.72			0.72		16	1 20 A		RECEPTACLE LAB 1019D
RECEPTACLE DEBRIEF 1019J		20 A 1	17			0.90			0.72	18	1 20 A		RECEPTACLE LAB 1019D
RECEPTACLE CLASSROOM 1013		20 A 1	19	1.08			0.36			20	1 20 A		RECEPTACLE CONTROL 1019F
RECEPTACLE CLASSROOM 1013		20 A 1	21		0.36			0.36		22	1 20 A		RECEPTACLE CONTROL 1019F
POWER CLASSROOM 1013		20 A 1	23			0.72			1.08	24	1 20 A		RECEPTACLE ROOM 1019G, 1019F
POWER CLASSROOM 1013		20 A 1	25	0.72			0.90			26	1 20 A		RECEPTACLE ROOM 1019C-2,...
CLASSROOM 1013		20 A 1	27		0.72			1.26		28	1 20 A		RECEPTACLE ROOM 1019C-2,...
POWER CLASSROOM 1013		20 A 1	29			0.72			0.36	30	1 20 A		RECEPTACLE LAB 1019D
RECEPTACLE CLASSROOM 1015		20 A 1	31	1.08			0.18			32	1 20 A		RECEPTACLE ADMIN/ MAIL/ COPY...
RECEPTACLE CLASSROOM 1015		20 A 1	33		0.36			0.18		34	1 20 A		RECEPTACLE MEDIA 1019H
CLASSROOM 1015		20 A 1	35			0.72			0.36	36	1 20 A		RECEPTACLE MEDIA 1019H
POWER CLASSROOM 1015		20 A 1	37	0.72			0.36			38	1 20 A		RECEPTACLE MEDIA 1019H
POWER CLASSROOM 1015		20 A 1	39		0.72					40			
POWER CLASSROOM 1015		20 A 1	41			0.72				42			

TOTAL PHASE SUMMARY

	A	B	C
PHASE SUBTOTAL (kVA):	9.18...	7.74...	9.1...
PHASE SUBTOTAL (AMPS):	78 A	65 A	78 A

LOAD CLASSIFICATION	CONNECTED (KVA)	DEMAND FACTOR	DEMAND (KVA)
POWER	5.76 kVA	100%	5.76 kVA
LIGHTING	0.00 kVA	125%	0.00 kVA
MOTOR	0.00 kVA	125% LARGEST, 100% OTHER	0.00 kVA
RECEPTACLE	20.34 kVA	100% FIRST 10KVA, 50% OTHER	15.17 kVA
HEATING	0.00 kVA	125%	0.00 kVA
TOTAL LOAD	26.10 kVA		20.93 kVA
TOTAL AMPS	72 A		58 A

1ELH1

MAIN TYPE MCB
MAIN RATING 100 A
BUS RATING 100 A
VOLTAGE 480/277 Wye
3 **PHASE** 4 **WIRE**
MOUNTING Recessed
ENCLOSURE Type 1
LOCATION T/ 1ST FLOOR,ELEC. 1115
FED FROM
SCCR kA
CALCULATED AVAILABLE FAULT... kA

REMARKS: EXISTING PANEL. NEW CIRCUIT IS SHOWN FOR INTENT ONLY. PLACE NEW CIRCUIT ON NEXT AVAILABLE BREAKER.

				LEFT SIDE, kVA			RIGHT SIDE, kVA							
DESCRIPTION	BRKR NOTES	BRKR AMP, POLES	CKT NO	A	B	C	A	B	C	CKT NO	BRKR AMP, POLES	BRKR NOTES	DESCRIPTION
EXISTING CIRCUIT		20 A 1	1	0.00			0.00			2	1 20 A		EXISTING CIRCUIT
			3							4			
			5							6			
LIGHTING		20 A 1	7	0.23						8			
			9							10			
			11							12			
			13							14			
			15							16			
			17							18			
			19							20			
			21							22			
			23							24			
			25							26			
			27							28			
			29							30			
			31							32			
			33							34			
			35							36			
			37							38			
			39							40			
			41							42			

TOTAL PHASE SUMMARY

	A	B	C
PHASE SUBTOTAL (kVA):	0.23...	0.00...	0.0...
PHASE SUBTOTAL (AMPS):	1 A	0 A	0 A

LOAD CLASSIFICATION	CONNECTED (KVA)	DEMAND FACTOR	DEMAND (KVA)
POWER	0.00 kVA	100%	0.00 kVA
LIGHTING	0.23 kVA	125%	0.29 kVA
MOTOR	0.00 kVA	125% LARGEST, 100% OTHER	0.00 kVA
RECEPTACLE	0.00 kVA	100% FIRST 10KVA, 50% OTHER	0.00 kVA
HEATING	0.00 kVA	125%	0.00 kVA
TOTAL LOAD	0.23 kVA		0.29 kVA
TOTAL AMPS	0 A		0 A

1EPL1

MAIN TYPE MCB
MAIN RATING 100 A
BUS RATING 100 A
VOLTAGE 120/208 Wye
3 **PHASE** 4 **WIRE**
MOUNTING Recessed
ENCLOSURE Type 1
LOCATION T/ 1ST FLOOR,EM. ELEC. 1019O
FED FROM
SCCR kA
CALCULATED AVAILABLE FAULT... kA

REMARKS: EXISTING PANEL. NEW CIRCUIT IS SHOWN FOR INTENT ONLY. PLACE NEW CIRCUIT ON NEXT AVAILABLE BREAKER.

				LEFT SIDE, kVA			RIGHT SIDE, kVA							
DESCRIPTION	BRKR NOTES	BRKR AMP, POLES	CKT NO	A	B	C	A	B	C	CKT NO	BRKR AMP, POLES	BRKR NOTES	DESCRIPTION
RECEPTACLE LAB 1019D		20 A 1	1	0.72						2			
RECEPTACLE LAB 1019D		20 A 1	3		0.72					4			
RECEPTACLE LAB 1019D		20 A 1	5			0.72				6			
RECEPTACLE LAB 1019D		20 A 1	7	0.72						8			
RECEPTACLE EXAM 1019E		20 A 1	9		0.72					10			
RECEPTACLE LAB 1019D		20 A 1	11			0.72				12			
			13							14			
			15							16			
			17							18			
			19							20			
			21							22			
			23							24			
			25							26			
			27							28			
			29							30			
			31							32			
			33							34			
			35							36			
			37							38			
			39							40			
			41							42			

TOTAL PHASE SUMMARY

	A	B	C
PHASE SUBTOTAL (kVA):	1.44...	1.44...	1.4...
PHASE SUBTOTAL (AMPS):	12 A	12 A	12 A

LOAD CLASSIFICATION	CONNECTED (KVA)	DEMAND FACTOR	DEMAND (KVA)
POWER	0.00 kVA	100%	0.00 kVA
LIGHTING	0.00 kVA	125%	0.00 kVA
MOTOR	0.00 kVA	125% LARGEST, 100% OTHER	0.00 kVA
RECEPTACLE	4.32 kVA	100% FIRST 10KVA, 50% OTHER	4.32 kVA
HEATING	0.00 kVA	125%	0.00 kVA
TOTAL LOAD	4.32 kVA		4.32 kVA
TOTAL AMPS	12 A		12 A

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MEP

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Sheet Title
Electrical Panel Schedules

OAOC
FM

Project No.
19130

E8.01