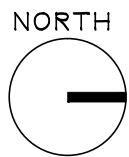


10TH FLOOR MECHANICAL ROOM ELECTRICAL PLAN  
SCALE: 1/4" = 1'-0"



ELECTRICAL EQUIPMENT & CONTROL SCHEDULE																				
EQUIPMENT						SUPPLY										CONTROL DEVICES			REFERENCE NOTES (SEE BELOW)	
DESIGNATION NUMBER	NAME	ROOM LOCATION	SIZE	VOLT/PHASE	PANEL OR CONTROL CENTER	CIRCUIT NUMBER	CIRCUIT BREAKER OR FUSED SWITCH	POWER WIRING FROM PANEL TO CONTROL UNIT		POWER WIRING FROM CONTROL UNIT TO EQUIPMENT		(SEE NEC TABLE 310.15)	CONTROLLER DEVICE TYPE REQUIRED & LOCATIONS							
								WIRE	CONDUIT	WIRE	CONDUIT		PACKAGED CONTROL UNIT	CONTROLLER DEVICE TYPE REQUIRED & LOCATIONS						
														VARIABLE FREQUENCY DRIVE	COMBINATION MAGNETIC STARTER	MAGNETIC STARTER				
														MANUAL STARTER	DISCONNECT (FUSED)	DISCONNECT (UNFUSED)	MOYER RATED SWITCH	AT UNIT		
1	PUMP HWP-505		MECH. PENTHOUSE	20 HP	208/3	EX. 10A-AC	-	100A/3P CB	3-#4	1-1/4"	3-#4	1-1/4"	#6	X		X			AT UNIT	1
2	PUMP HWP-506		MECH. PENTHOUSE	20 HP	208/3	EX. 10A-AC	-	100A/3P CB	3-#4	1-1/4"	3-#4	1-1/4"	#6	X		X			AT UNIT	1

- GENERAL NOTES (FOR ELECTRICAL EQUIPMENT & CONTROL SCHEDULE ONLY):
- DESIGNATION NUMBER IS USED TO IDENTIFY EQUIPMENT & ASSOCIATED CONTROL DEVICES.
  - VERIFY ALL MOTOR SIZES BEFORE ORDERING ANY CONTROL DEVICES.
  - ALL CONTROL DEVICES ARE PROVIDED BY CONTRACTOR UNLESS OTHERWISE NOTED.
  - VERIFY FEEDER SIZES FOR VOLTAGE DROP IN ACCORDANCE WITH NEC REQUIREMENTS BASED ON ACTUAL ROUTING DISTANCES IN FIELD. INCREASE WIRE AND CONDUIT SIZE IF REQUIRED.
- REFERENCE NOTES (FOR ELECTRICAL EQUIPMENT & CONTROL SCHEDULE ONLY):
- PROVIDING WIRING AND RACEWAY FROM PANELBOARD TO VFD, BETWEEN VFD AND DISCONNECT SWITCH, AND FROM DISCONNECT SWITCH TO EQUIPMENT TERMINAL CONNECTION AS REQUIRED.

#### GENERAL RENOVATION NOTES

- ALL WORK SHALL CONFORM TO ALL APPLICABLE RULES, REGULATIONS, AND CODES. PROVIDE ALL WORK IN ACCORDANCE WITH SPECIFICATIONS ASSOCIATED WITH THIS PROJECT.
- WALK-THRU WITH OWNER AND VERIFY ALL ELECTRICAL DEVICE LOCATIONS PRIOR TO INSTALLATION.
- ELECTRICAL EQUIPMENT LOCATIONS ARE APPROXIMATE. VERIFY EXACT EQUIPMENT LOCATIONS PRIOR TO FEEDER ROUGH-IN.
- TO MAINTAIN DRAWING CLARITY, CIRCUITRY FOR HVAC/PLUMBING EQUIPMENT MOTOR CONNECTIONS AND CONTROL DEVICES HAS NOT BEEN SHOWN. REFER TO ELECTRICAL EQUIPMENT & CONTROL SCHEDULE ON THIS DRAWING FOR HVAC/PLUMBING EQUIPMENT CIRCUITRY REQUIREMENTS AND ADDITIONAL INFORMATION.
- MOTOR CONNECTION LOCATIONS SHOWN ARE APPROXIMATE. VERIFY EXACT LOCATIONS WITH OTHER TRADES PRIOR TO FEEDER/ CONDUIT ROUGH-IN.
- THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL SUPPORT HARDWARE FOR SECURELY FASTENING THE HVAC/PLUMBING ELECTRICAL CONTROL DEVICES AND ENCLOSURES TO THE BUILDING STRUCTURE. THE REQUIRED HARDWARE INCLUDES, BUT IS NOT LIMITED TO, INTERMEDIATE STEEL ANGLE, UNISTRUT, FASTENERS, JOISTS CLAMPS, ETC. MOUNT STARTERS, VFDs, DISCONNECTS, RELAYS, AND OTHER HVAC/PLUMBING ELECTRICAL CONTROL DEVICES AND ENCLOSURES AT LOCATION(S) INDICATED IN ELECTRICAL EQUIPMENT & CONTROL SCHEDULE. ALLOW MAINTENANCE ACCESS AND SERVICE SPACE AT EACH LOCATION.
- WHERE NEW CIRCUIT BREAKERS ARE REQUIRED FOR INSTALLATION IN EXISTING ELECTRICAL PANELS, CONTRACTOR SHALL PROVIDE CIRCUIT BREAKERS WHICH ARE COMPATIBLE WITH EXISTING ELECTRICAL PANELS. MATCH FRAME SIZES, KICAT RATINGS, ETC.
- UNLESS NOTED AS EXISTING, CONTRACTOR SHALL PROVIDE ALL MATERIALS SHOWN ON DRAWINGS. ALL MATERIALS PROVIDED SHALL BE NEW, UNUSED CONDITION.
- UNLESS NOTED OTHERWISE, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE ALL CUTTING AND PATCHING REQUIRED TO PERFORM WORK. IN ADDITION, PATCH ALL OPENINGS CREATED BY REMOVAL ACTIVITIES WHICH ARE NOT BEING UTILIZED FOR CONSTRUCTION. PATCH TO MATCH EXISTING ADJACENT SURFACES IN MATERIAL, FINISH, TEXTURE AND COLOR.
- REMOVE & REINSTALL EXISTING CONSTRUCTION (LIGHTING, ELECTRICAL EQUIPMENT, FIRE ALARM DEVICES, FURNISHINGS, ETC.) AS NECESSARY TO COMPLETE THE REMOVALS & RENOVATION WORK REQUIRED BY THE DRAWINGS & SPECIFICATIONS. REPLACE ANY ITEMS DAMAGED BY OR DUE TO THIS REMOVAL & REINSTALLATION WITH NEW ITEMS TO MATCH EXISTING. (APPLIES TO AREAS WITHIN & OUTSIDE OF THE PROJECT AREA).
- ALL ITEMS THAT REQUIRE ACCESS, SUCH AS FOR OPERATING, CLEANING, SERVICING, MAINTENANCE, AND CALIBRATION, SHALL BE EASILY AND SAFELY ACCESSIBLE BY PERSONS STANDING AT FLOOR LEVEL, OR STANDING ON PERMANENT PLATFORMS, WITHOUT THE USE OF PORTABLE LADDERS. EXAMPLES OF THESE ITEMS INCLUDE, BUT ARE NOT LIMITED TO: ALL TYPES OF VALVES, FILTERS AND STRAINERS, TRANSMITTERS, CONTROL DEVICES. PRIOR TO COMMENCING INSTALLATION WORK, REFER CONFLICTS BETWEEN THIS REQUIREMENT AND CONTRACT DRAWINGS TO THE VA CDR FOR RESOLUTION.
- UPON COMPLETION OF THIS PROJECT, THE CONTRACTOR SHALL ALTER EXISTING PANELBOARD CIRCUIT BREAKER DIRECTORIES, MOUNTED IN EXISTING PANELBOARDS, TO DESCRIBE NEW EQUIPMENT AND DEFINE THEIR CORRESPONDING CIRCUIT BREAKER.
- THE CONTRACTOR IS RESPONSIBLE FOR REMOVAL OF AND RELOCATION OF OTHER ITEMS, NOT SHOWN ON DRAWINGS, AS REQUIRED TO COMPLETE ALL RENOVATIONS.

#### KEYED RENOVATION NOTES

- EXISTING 208/120V, 3 PHASE PANELBOARD '10A-AC' REMAINS. PROVIDE ONE (1) 100A/3P CB IN PANELBOARD FOR PUMP 'HWP-505'. PROVIDE ONE (1) 100A/3P CB IN PANELBOARD FOR PUMP 'HWP-506'.
- REFER TO 'M' DRAWINGS FOR PUMP LOCATION.

#### ELECTRICAL ABBREVIATIONS

AFF	ABOVE FINISHED FLOOR
B.L.D.G.	BUILDING
BMS	BUILDING MANAGEMENT SYSTEM
CB	CIRCUIT BREAKER
CHWR	CHILLED WATER RETURN
CHWS	CHILLED WATER SUPPLY
CKT	CIRCUIT
COND	CONDENSATE
DDC	DIRECT DIGITAL CONTROL
DEG F	DEGREES FAHRENHEIT
DPI	DIFFERENTIAL PRESSURE INLET
DWG	DRAWING
ELEC	ELECTRIC OR ELECTRICAL
EX	EXISTING
EXIST	EXISTING
FT	FEET
HWR	HOT WATER RETURN
HWS	HOT WATER SUPPLY
HP	HORSEPOWER
HZ	HERTZ
MCC	MOTOR CONTROL CENTER
MECH	MECHANICAL
OA	OUTSIDE AIR
RPM	REVOLUTIONS PER MINUTE
STM	STEAM
TEMP	TEMPERATURE
TYP	TYPICAL
UL	UNDERWRITERS LABORATORY
UNO	UNLESS NOTED OTHERWISE
V	VOLT
VA	VOLT AMPERE
VFD	VARIABLE FREQUENCY DRIVE

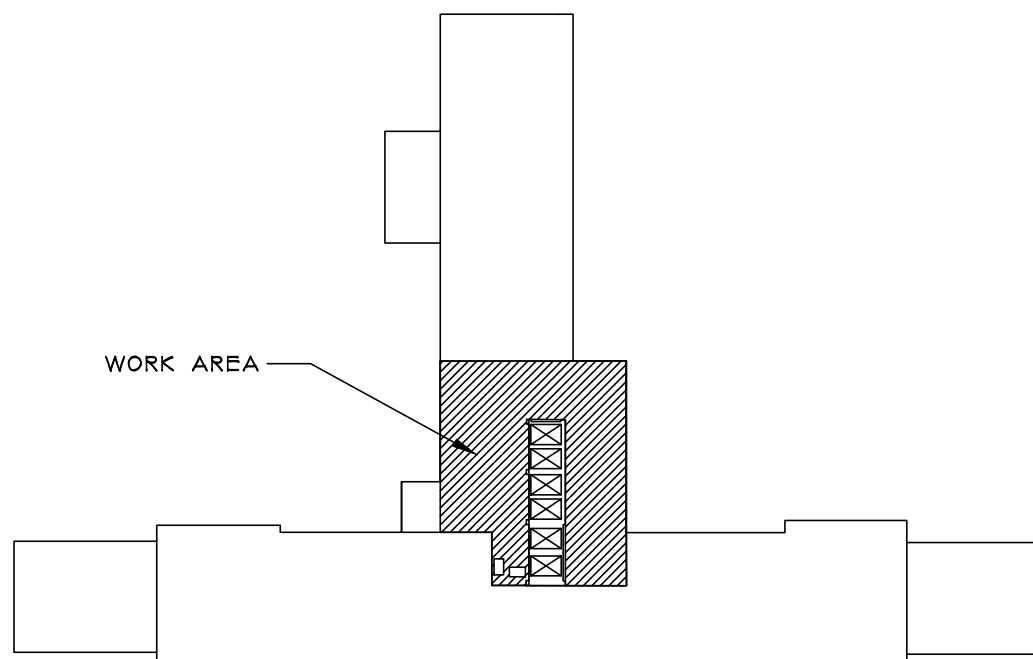
NOTE: NOT ALL ABBREVIATIONS ARE NECESSARILY USED ON THESE DRAWINGS.

#### ELECTRICAL SYMBOLS

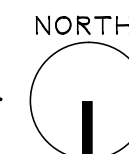
- NEW EQUIPMENT
- EXISTING EQUIPMENT TO REMAIN
- INDICATES KEYED NOTE
- PROVIDE MOTOR CONNECTION. # = EQUIPMENT DESIGNATION NUMBER. REFER TO ELECTRICAL EQUIPMENT & CONTROL SCHEDULE FOR DETAILS.
- EXISTING PANELBOARD TO REMAIN

#### DEFINITIONS

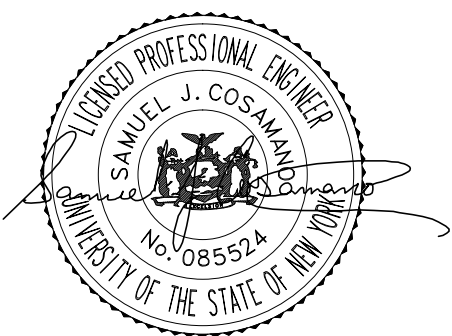
- RECONNECT EXISTING CIRCUITRY = MODIFY AND EXTEND EXISTING WIRING AND CONDUITS AS REQUIRED TO RECONNECT CIRCUITRY TO ELECTRICAL DEVICE. PROVIDE NECESSARY JUNCTION BOXES, EXTENSION BOXES, SPLICES, RACEWAYS, WIRING, CONNECTORS, ETC. AS REQUIRED.
- CIRCUITRY = UNLESS NOTED OTHERWISE, CIRCUITRY INCLUDES, BUT IS NOT LIMITED TO, WIRING, OUTLETS, BOXES, JUNCTION BOXES, RELAYS, WIREMOLD, SURFACE MOUNTED RACEWAY, CONDUITS, CONTROL DEVICES, ETC.



10TH FLOOR KEY PLAN  
SCALE: NONE



Revisions	Date



**IPD: Engineering**  
INTEGRATED PROJECT DELIVERY

ONE WEBSTER'S LANDING  
SYRACUSE, NEW YORK 13202  
315.423.0185

IPD PROJECT # 11-7061-8

Drawing Title  
ELECTRICAL PLAN

Project Title  
ADD HEATING HOT WATER TO  
SHAFTS #3 & #4

Date  
11-16-12

Project No.  
528A7-11-711

Building Number  
1

Checked  
SBG

Drawn  
CAL

Location  
SYRACUSE

DRAWING NO.  
EP-101

Dwg. 8 of 8

