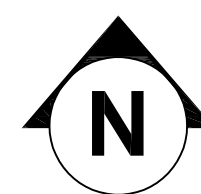
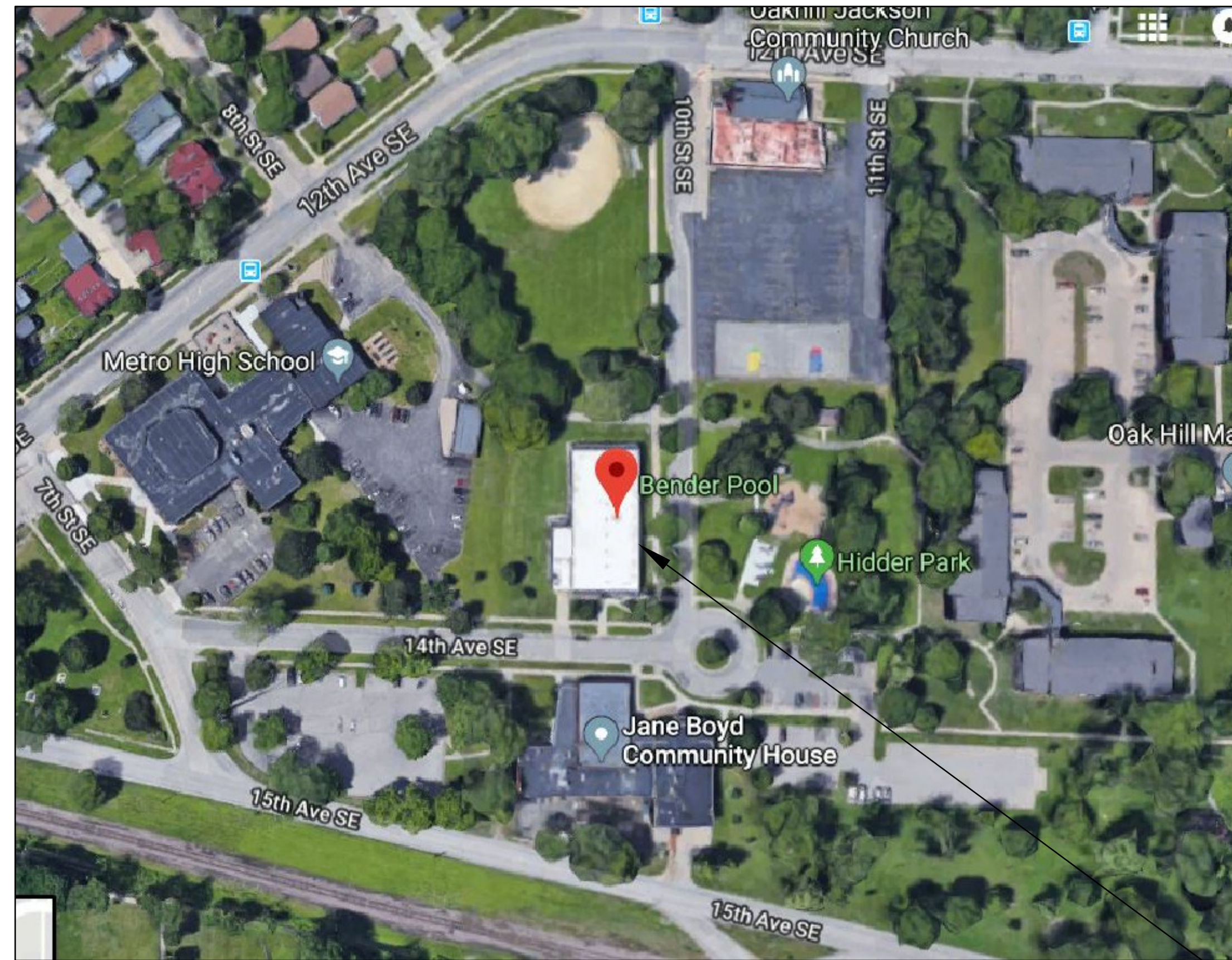


# CITY OF CEDAR RAPIDS BENDER POOL HVAC PROJECT

CEDAR RAPIDS, IOWA  
CONTRACT # 3602203-01

## PROJECT LOCATION MAP



PROJECT  
LOCATION

DRAWING INDEX		
SHEET	REV	TITLE
<b>GENERAL</b>		
G00	0	COVER SHEET AND DRAWING INDEX
<b>MECHANICAL</b>		
M01	0	MECHANICAL DEMOLITION
M02	0	MECHANICAL PLAN
M03	0	MECHANICAL - DETAILS
M04	0	MECHANICAL - SCHEDULES
<b>ELECTRICAL</b>		
E01	0	ELECTRICAL - PLAN
E02	0	ELECTRICAL - DETAILS & SCHEDULES

### Utility & Emergency Numbers

Parks & Recreation Department 319-286-5750  
 Police Department 319-286-5491  
 Fire Department 319-286-5200  
 Emergency 911  
 Alliant Energy 319-786-1912  
 Mid American Energy 319-298-5155  
 Water Department 319-286-5910  
 Qwest Communications 319-399-7600

Mayor: Bradley Hart  
 City Council

Tyler Olson  
 Susie Weinacht  
 Scott Overland  
 Scott Olson  
 Ann Poe  
 Martin Hoeger  
 Dale Todd  
 Ashley Vanorny



OWNER  
 CITY OF CEDAR RAPIDS  
 Facilities Maintenance Services  
 City of Cedar Rapids 500 15th Ave SW, Cedar  
 Rapids, Iowa 52404

ENGINEER OF RECORD:  
**IEI INNOVATIVE ENGINEERS, INC.**  
 2871 Hertz Rd, Suite B, Iowa City, IA 52240  
 T. 319.855.4115 | F. 319.351.0070  
[www.InnovativeEngineersInc.com](http://www.InnovativeEngineersInc.com)

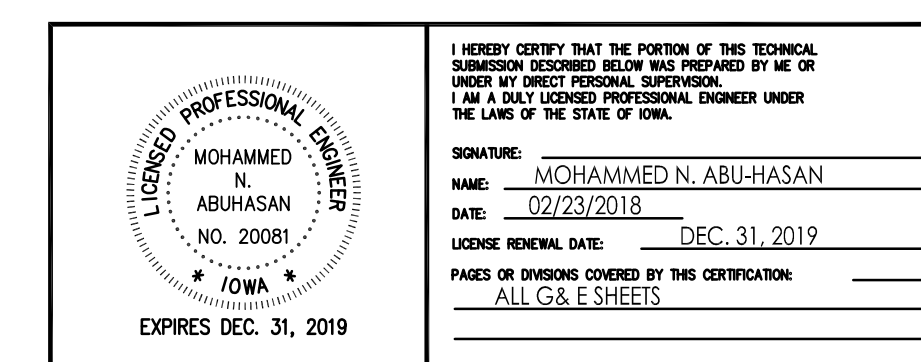
**CITY OF CEDAR RAPIDS  
 BENDER POOL HVAC PROJECT  
 CEDAR RAPIDS, IOWA  
 PROJECT # 3602203-01**

DESIGNED BY: MNA  
 DRAWN BY: JJH  
 CHECKED BY: MNA  
 DOCUMENT DATE: 07-17-2018  
 PROJECT NO.: 18-101213  
 CLIENT NO.:

REVISIONS				
NO.	DATE	DESCRIPTION	BY	DWN
0	07-17-2018	OPB DRAWINGS	MNA	JJH

**COVER SHEET AND  
DRAWING INDEX**

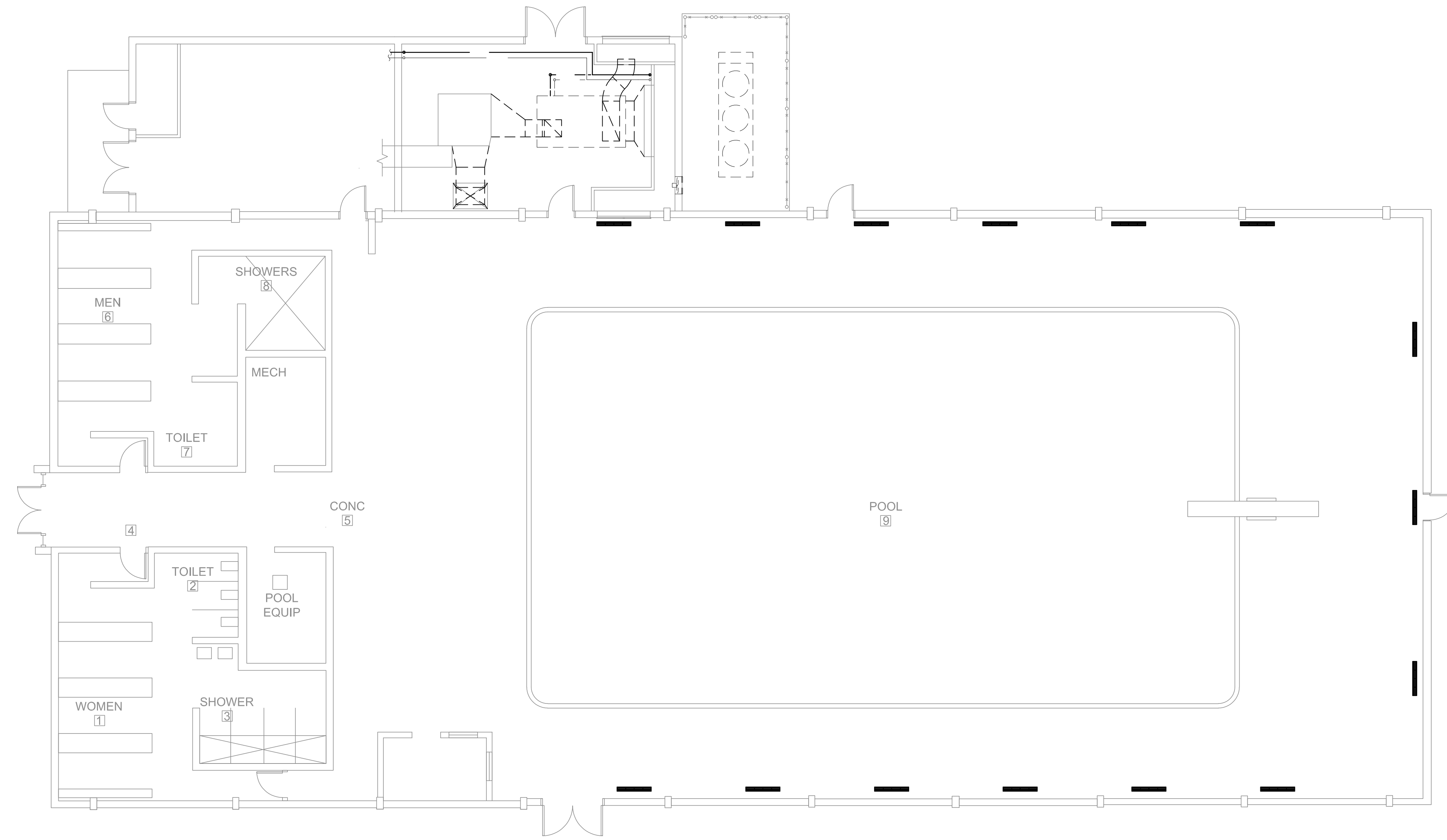
SHEET: **G00** REV: **0**



I HEREBY CERTIFY THAT THE PORTION OF THIS TECHNICAL SUBMISSION DESCRIBED BELOW WAS PREPARED BY ME OR UNDER MY DIRECT PERSONAL SUPERVISION.  
 I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF IOWA.  
 SIGNATURE: MOHAMMED N. ABU-HASAN  
 DATE: 02/23/2018  
 LICENSE NUMBER: DEC 31, 2019  
 PAGES OR FIGURES COVERED BY THIS CERTIFICATION: ALL G&E SHEETS


OWNER:  
CITY OF CEDAR RAPIDS  
Facilities Maintenance Services  
City of Cedar Rapids 500 15th Ave SW, Cedar Rapids, Iowa 52404

ENGINEER OF RECORD:  
**IE INNOVATIVE ENGINEERS, INC.**  
2871 Heinz Rd., Suite B, Iowa City, IA 52240  
T 319.855.4115 | F 319.351.0070  
www.InnovativeEngineersInc.com



**A**  
**M01** **MECHANICAL DEMOLITION PLAN**

SCALE 1/8" = 1'-0"



- GENERAL MECHANICAL DEMOLITION NOTES:
1. MC IS RESPONSIBLE FOR DEMOLITION OF ALL EQUIPMENT AND DUCTWORK AS INDICATED.
  2. MC CONTRACTOR TO CORRDINATE REQUIRED DEMOLITION OF MECHANICAL SYSTEMS WITH ALL OTHER TRADES..
  3. MC TO RETURN TO OWNER ANY EQUIPMENT REMOVED AS REQUESTED BY OWNER. ANY EQUIPMENT NOT RECLAIMED BY OWNER IS TO BE DISPOSED OF BY MC.
  4. MC IS ADVISED THAT ALL LOCATIONS ARE APPROXIMATE. VERIFY EXACT LIMITS ON SITE.
  5. MC IS RESPONSIBLE FOR HIS OWN DEMOLITION WORK AND SHALL PROTECT EXISTING EQUIPMENT AND STRUCTURES TO REMAIN FROM DAMAGE. ANY DAMAGE INCURRED TO EXISTING EQUIPMENT TO REMAIN OR TO SURROUNDING STRUCTURE NOT INDICATED FOR DEMOLITION BY THIS CONTRACTOR IS TO BE REPAIRED AT THIS CONTRACTOR'S EXPENSE.
  6. THESE DRAWINGS ARE NECESSARILY DIGRAMMATIC IN NATURE AND INDICATE DESIGN INTENT. NOT ALL FITTINGS, OFFSETS, VENTS, DRAINS, ETC., ARE SHOWN. CONTRACTOR SHALL PROVIDE ALL FITTINGS, OFFSETS, DRAINS, VENTS, ACCESSORIES, ETC. AS REQUIRED TO PROVIDE A COMPLETE AND FUNCTIONING SYSTEM.

**CITY OF CEDAR RAPIDS  
BENDER POOL HVAC PROJECT  
CEDAR RAPIDS, IOWA  
PROJECT # 3602203-01**

DESIGNED BY: MNA  
DRAWN BY: JJH  
CHECKED BY: MNA  
DOCUMENT DATE: 07-17-2018  
PROJECT NO.: 18-101213  
CLIENT NO.:

REVISIONS				
NO.	DATE	DESCRIPTION	BY	DWN
0	07-17-2018	OFB DRAWINGS	MNA	JJH

**MECHANICAL-DEMOLITION**

SHEET: **M01** REV: **0**

**CITY OF CEDAR RAPIDS  
BENDER POOL HVAC PROJECT  
CEDAR RAPIDS, IOWA  
PROJECT # 3602203-01**

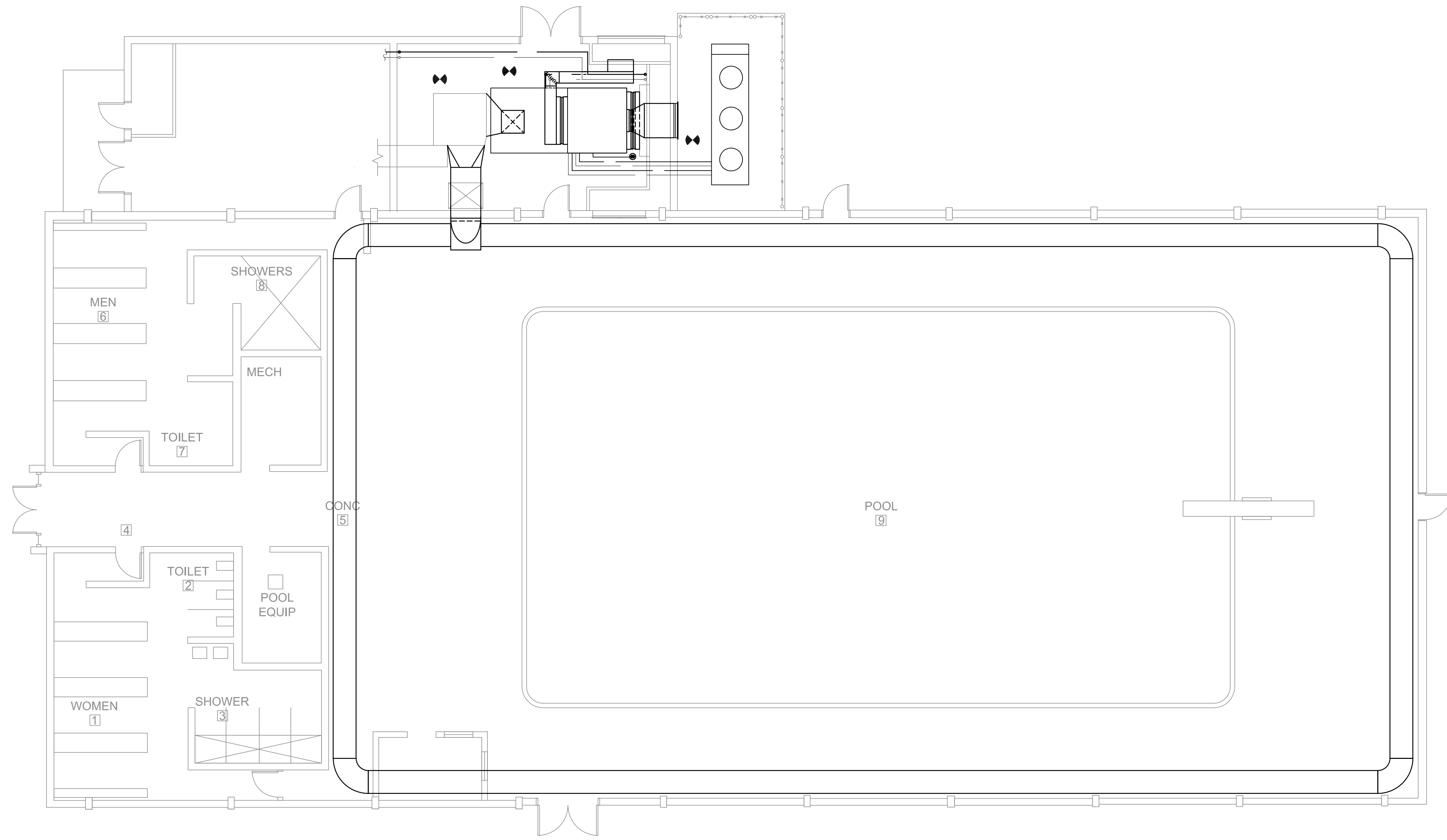
DESIGNED BY:	MNA
DRAWN BY:	JJH
CHECKED BY:	MNA
DOCUMENT DATE:	07-17-2018
PROJECT NO.:	18-101213
CLIENT NO.:	

REVISIONS				
NO.	DATE	DESCRIPTION	BY	DWN
0	07-17-2018	OFB DRAWINGS	MNA	JJH

**MECHANICAL-  
PLAN**

SHEET:	<b>M02</b>	REV:	<b>0</b>
--------	------------	------	----------

SEE DETAIL A/M03 AND B/M03 FOR ENLARGED MECHANICAL ROOM DETAIL AND MECHANICAL ROOM ELEVATION.

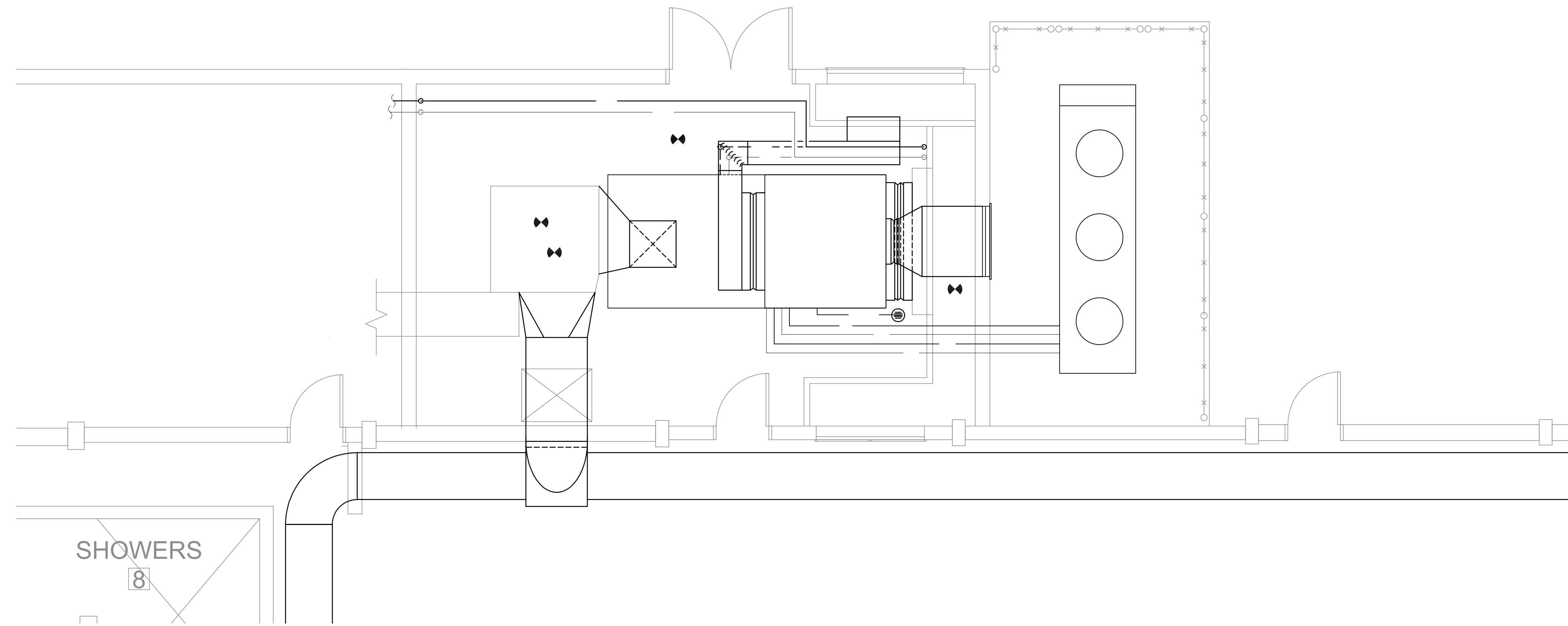


**A**  
**M02** **MECHANICAL PLAN**  
SCALE 1/8" = 1'-0"  
0' 5' 10' 20' 30'

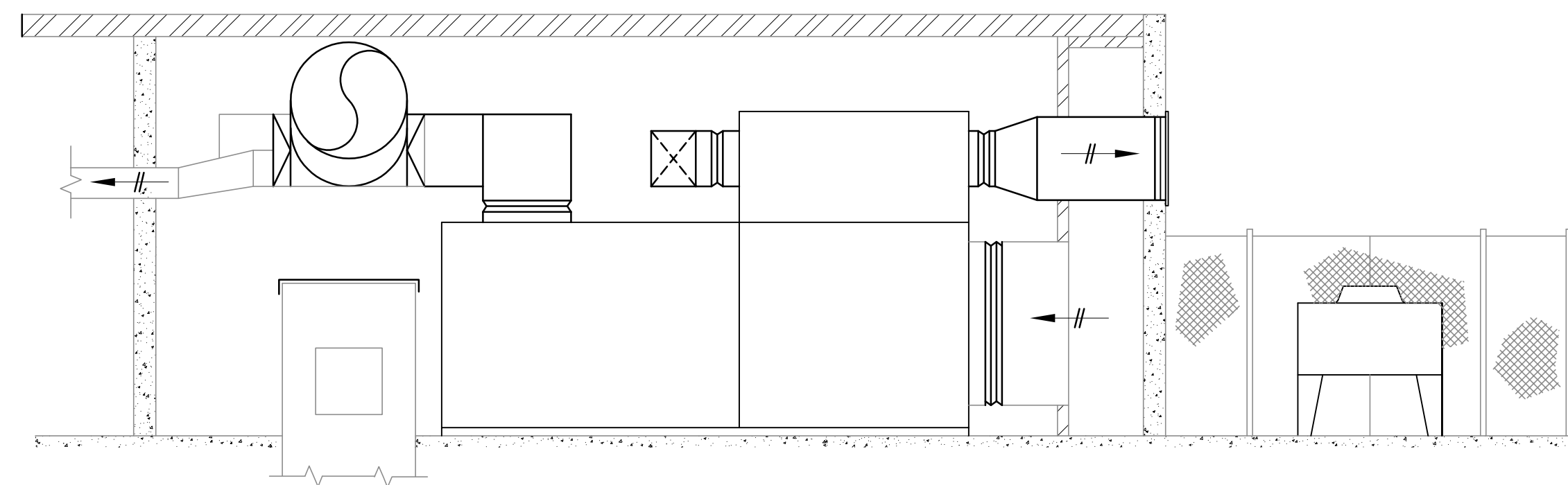
- GENERAL HVAC NOTES:
1. MC IS RESPONSIBLE FOR INSTALLING MECHANICAL SYSTEMS ACCORDING TO ALL APPLICABLE STATE AND LOCAL CODES AND ORDINANCES.
  2. MC TO CORRDIANATE INSTALLATION OF MECHANICAL SYSTEMS WITH ALL OTHER TRADES.
  3. MC IS ADVISED THAT ALL LOCATIONS ARE APPROXIMATE. COORDINATE FINAL LOCATIONS WITH ALL OTHER TRADES AND WITH OWNER WHERE REQUIRED.
  5. MC IS RESPONSIBLE FOR HIS OWN WORK AND SHALL PROTECT THE WORK OF OTHER TRADES ALREADY INSTALLED FROM DAMAGE. ANY DAMAGE INCURRED TO WORK OF OTHER TRADES BY THIS CONTRACTOR IS TO BE REPAIRED AT THIS CONTRACTOR'S EXPENSE.
  6. THESE DRAWINGS ARE NECESSARILY DIGRAMMATIC IN NATURE AND INDICATE DESIGN INTENT. NOT ALL FITTINGS, OFFSETS, VENTS, DRAINS, ETC., ARE SHOWN. CONTRACTOR SHALL PROVIDE ALL FITTINGS, OFFSETS, DRAINS, VENTS, ACCESSORIES, ETC. AS REQUIRED TO PROVIDE A COMPLETE AND FUNCTIONING SYSTEM.

OWNER:  
CITY OF CEDAR RAPIDS  
Facilities Maintenance Services  
City of Cedar Rapids 500 15th Ave SW, Cedar Rapids, Iowa 52404

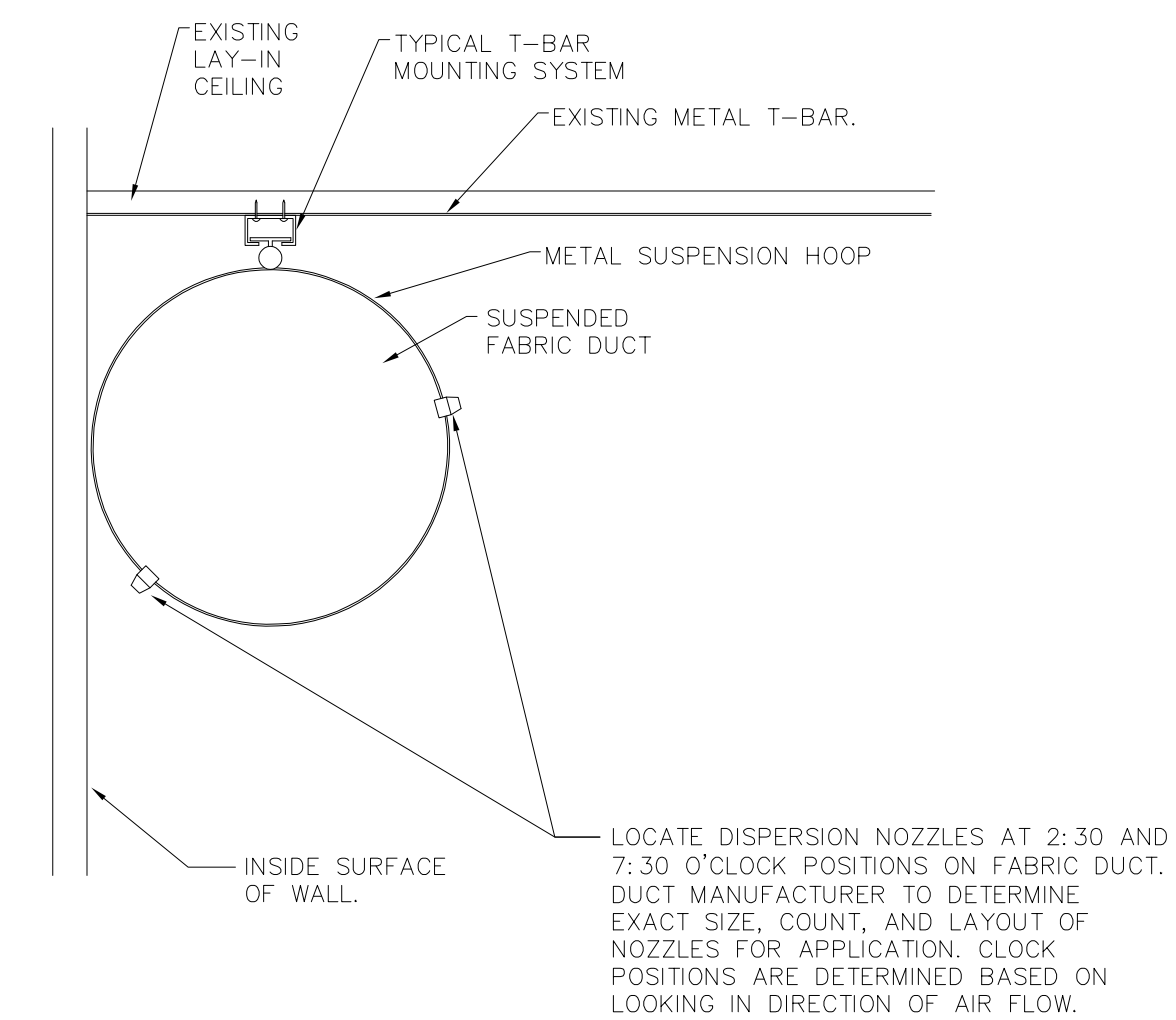
ENGINEER OF RECORD:  
**IEI INNOVATIVE ENGINEERS, INC.**  
2871 Heinz Rd., Suite B, Iowa City, IA 52240  
T 319.855.4115 | F 319.351.0070  
www.innovativeengineersinc.com



**A ENLARGED MECHANICAL ROOM PLAN**  
M03 SCALE 1/4"=1'-0" 



**B MECHANICAL ROOM ELEVATION**  
M03 SCALE 1/4"=1'-0"



**C FABRIC DUCT DETAIL**  
M03 NO SCALE

**CITY OF CEDAR RAPIDS  
BENDER POOL HVAC PROJECT  
CEDAR RAPIDS, IOWA  
PROJECT # 3602203-01**

DESIGNED BY: MNA  
DRAWN BY: JJH  
CHECKED BY: MNA  
DOCUMENT DATE: 07-17-2018  
PROJECT NO.: 18-101213  
CLIENT NO.:

REVISIONS				
NO.	DATE	DESCRIPTION	BY	DWN
0	07-17-2018	OFB DRAWINGS	MNA	JJH

**MECHANICAL-DETAILS**

SHEET: **M03** REV: **0**



AIR COOLED CONDENSER SCHEDULE											
UNIT TAG	MANUFACTURER AND MODEL	SERVES	AMBIENT TEMP			NO. FANS	ELECTRICAL V/PH/Hz	FLA (AMPS)	MCA (AMPS)	MOPD (AMPS)	REMARKS
CU-1	DESERT AIRE MODEL RC8S022C	DU-1	24.7	80/67	33,668	3	208/3/60	20.4	23.6	30	NOTES 1, 2

NOTES: 1. PROVIDE LOUVERED COIL GUARDS.  
2. OPERATION DOWN TO -20 DEG. F.

DEHUMIDIFIER SCHEDULE																		
UNIT TAG	MANUFACTURER AND MODEL	AIR CAPACITIES				REFRIGERATION CAPACITIES				REFRIG. TYPE	FAN CHARACTERISTICS				ELECTRICAL			REMARKS
		SUPPLY (CFM)	OUTDOOR (CFM)	EXHAUST (CFM)	RETURN (CFM)	TOT. CAP (MBH)	SENSIBLE (MBH)	MOISTURE REMOVAL (LB/HR)	HEAT OF REJECTION (MBH)		SUP & RET ESP (IN. WC)	SUP FAN TSP (IN. WC)	EXH ESP (IN. WC)	EXH TSP (IN. WC)	V/PH/Hz	MCA	MOCp	
DU-1	DESERT AIRE MODEL SA40AF7MME	17,000	2450	2550	17,000	515	263.38	237.9	649	R-410A	1.80	3.35	1.00	2.04	208/3/60	449	500	NOTE 1, 2

NOTES:  
1. UNIT SHALL HAVE SEPARATE 120V/1PH POWER CONNECTION FOR CONTROL CIRCUIT. UNIT TO INCLUDE CONTROL PANEL, DUCT MOUNTED TEMPERATURE AND RH SENSORS, VARIABLE FREQUENCY DRIVE, OUTLET DAMPERS, AND 30% FILTERS. UNIT TO BE PREWIRED WITH DISCONNECT SWITCH AND TESTED PRIOR TO SHIPMENT.  
2. PROVIDE FACTORY SPLITS AS REQUIRED TO ALLOW UNIT INTO MECHANICAL ROOM THROUGH EXISTING 87"W x 92"H ACCESS DOOR.

LOUVER SCHEDULE								
UNIT TAG	MANUFACTURER AND MODEL	LOCATION	FUNCTION	SIZE W" X H"	PD (IN. WC)	VELOCITY (FT/SEC)	FREE AREA VELOCITY (FPM)	REMARKS
L-1	UNITED ENERTECH MODEL CFL-D-4	EXTERNAL WALL	EXHAUST	48" X 30"	0.035	610	610	NOTES 1,2,3

NOTES: 1. PROVIDE WITH BIRD SCREEN.  
2. PROVIDE WHITE KYNAR FINISH.  
3. PROVIDE WITH 1-1/2" WALL FLANGE.

MECHANICAL SYMBOLS AND ABBREVIATIONS	
SYMBOL	DESCRIPTION
	SUPPLY AIR DUCT (TOWARD)
	SUPPLY AIR DUCT (AWAY)
	RETURN AIR DUCT (TOWARD)
	RETURN AIR DUCT (AWAY)
	EXHAUST AIR DUCT (TOWARD)
	EXHAUST AIR DUCT (AWAY)
	DUCT DIMENSIONS, W X H
	AIR FLOW DIRECTION
	PIPE ELBOW UP
	PIPE ELBOW DOWN
	CONNECT TO EXISTING
	MECHANICAL CONTRACTOR
	ELECTRICAL CONTRACTOR
	GENERAL CONTRACTOR
	HOT WATER SUPPLY
	HOT WATER RETURN
	CONDENSATE DRAIN

OWNER:  
CITY OF CEDAR RAPIDS  
Facilities Maintenance Services  
City of Cedar Rapids 500 15th Ave SW, Cedar Rapids, Iowa 52404

ENGINEER OF RECORD:  
**IEI INNOVATIVE ENGINEERS, INC.**  
2871 Heinz Rd., Suite B, Iowa City, IA 52240  
T 319.855.4115 | F 319.351.0070  
www.innovativeengineersinc.com

**CITY OF CEDAR RAPIDS  
BENDER POOL HVAC PROJECT**  
  
**CEDAR RAPIDS, IOWA  
PROJECT # 3602203-01**

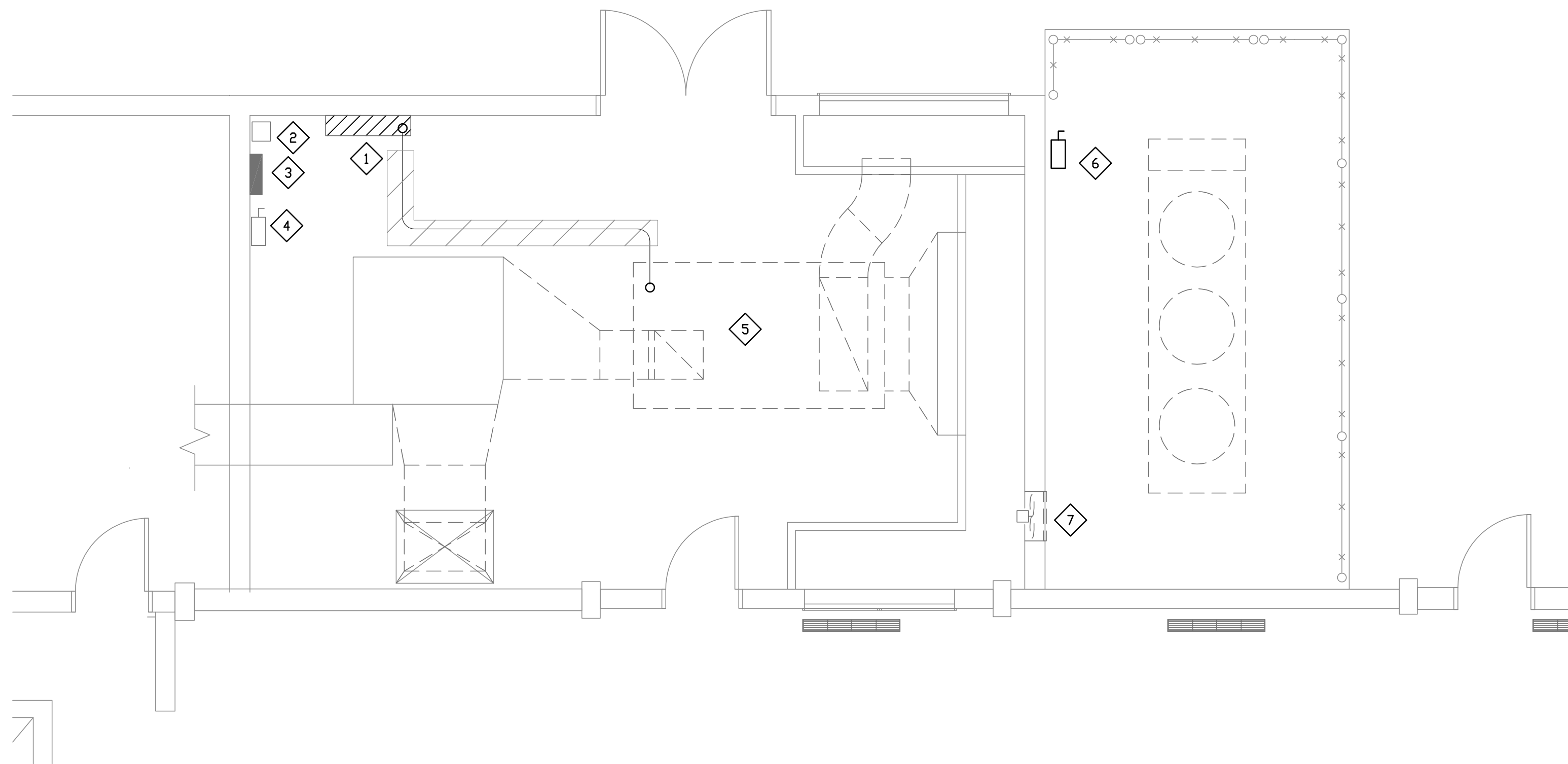
DESIGNED BY: MNA  
DRAWN BY: JJH  
CHECKED BY: MNA  
DOCUMENT DATE: 07-17-2018  
PROJECT NO.: 18-101213  
CLIENT NO.:

REVISIONS				
NO.	DATE	DESCRIPTION	BY	DWN
0	07-17-2018	OFB DRAWINGS	MNA	JJH

**MECHANICAL SCHEDULES**

SHEET: **M04** REV: **0**

POWER EQUIPMENT & CIRCUITRY NOT SHOWN IS EXISTING TO REMAIN.



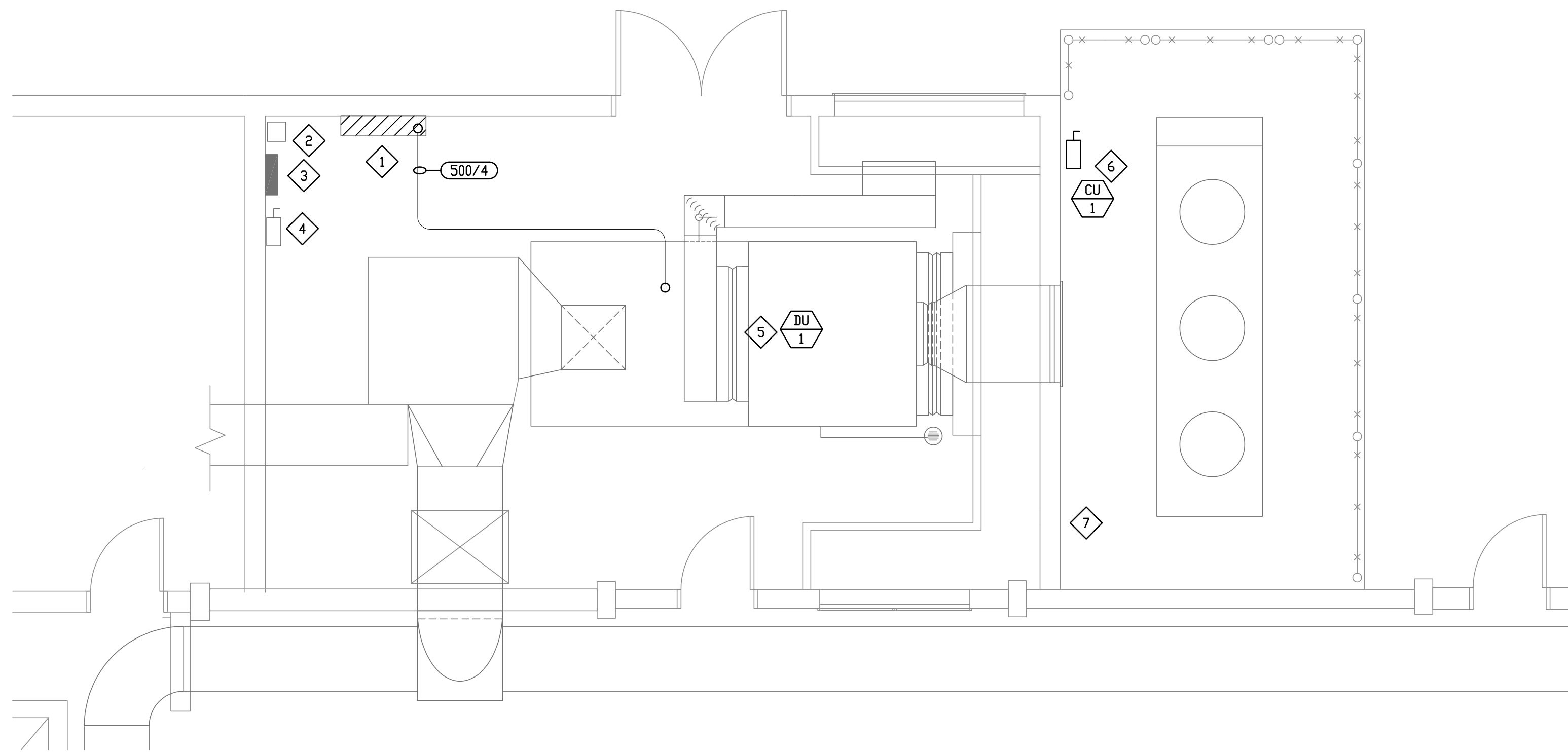
**A**  
**E01**  
SCALE 1/8" = 1'-0"  
0 5 10 20 30  
**ELECTRICAL - DEMOLITION PLAN**

- GENERAL ELECTRICAL DEMOLITION NOTES:**
1. E.C. SHALL VERIFY THE EXISTING CONDITIONS AT THE PROJECT SITE BEFORE SUBMITTING BID.
  2. THE E.C. SHALL VISIT THE SITE TO VERIFY DEVICES AND EQUIPMENT NOT SHOWN.
  3. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR HIS OWN DEMOLITION REMOVAL, CAPPING, ABANDONING, DISCONNECTING OF EXISTING ELECTRICAL EQUIPMENT AND MATERIAL. ALL CUTTING, PATCHING, REPAIRING, REPLACEMENT AND REFINISHING, SHALL MATCH THE EXISTING CONSTRUCTION AS NEARLY AS POSSIBLE.
  4. THE OWNER SHALL HAVE THE FIRST CHOICE TO ACCEPT EXISTING DEVICES AND EQUIPMENT BEING REMOVED AND NOT REUSED.

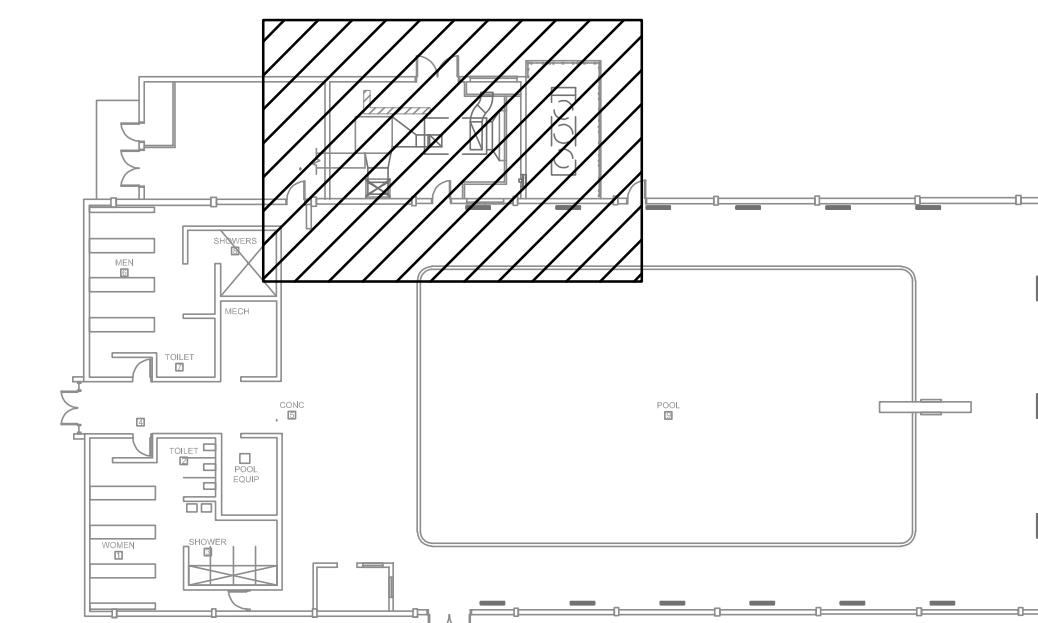
- KEYED ELECTRICAL NOTES - DETAIL A:**
- 1 EXISTING DISTRIBUTION PANEL LABELED **MDP** IN THE FIELD TO REMAIN 800A, 3PH, 208.120V. MANUFACTURED BY GE.
  - 2 DRY-TYPE STEP DOWN TRANSFORMER IS EXISTING TO REMAIN.
  - 3 EXISTING DISTRIBUTION PANEL LABELED **A** IN THE FIELD TO REMAIN 200A, 3PH, 208.120V. MANUFACTURED BY GE.
  - 4 EXISTING DISCONNECT SWITCH 100A, 3PH, 208V TO REMAIN.
  - 5 EXISTING DEHUMIDIFIER TO BE REMOVED. REMOVE EXISTING CONDUIT & WIRING BACK TO SERVING PANEL.
  - 6 EXISTING AIR CONDENSER TO BE REMOVED. EXISTING DISCONNECT SWITCH 30A, 3PH, 208V TO REMAIN TO BE REUSED AFTER THE INSTALLATION OF NEW CONDENSER.
  - 7 EXISTING EXHAUST FAN TO BE REMOVED. REMOVE ASSOCIATED CONDUIT AND WIRING BACK TO THE SERVING POWER PANEL.

- KEYED ELECTRICAL NOTES - DETAIL B:**
- 1 EXISTING DISTRIBUTION PANEL LABELED **MDP** IN THE FIELD TO REMAIN 800A, 3PH, 208.120V. MANUFACTURED BY GE. PROVIDE A NEW 600A BREAKER. REFERENCE ONE-LINE FOR ADDITIONAL INFORMATION.
  - 2 DRY-TYPE STEP DOWN TRANSFORMER IS EXISTING TO REMAIN.
  - 3 EXISTING DISTRIBUTION PANEL LABELED **A** IN THE FIELD TO REMAIN 200A, 3PH, 208.120V. MANUFACTURED BY GE.
  - 4 EXISTING DISCONNECT SWITCH 100A, 3PH, 208V TO REMAIN.
  - 5 NEW DEHUMIDIFIER. PROVIDE A 500A, 3PH, 4W FEEDER PER ONE-LINE ON SHEET E02. PROVIDE FINAL CONNECTIONS.
  - 6 NEW AIR CONDENSER. RE-USE EXISTING DISCONNECT SWITCH 30A, 3PH, 208V. PROVIDE FINAL CONNECTIONS.
  - 7 EXISTING EXHAUST FAN TO BE REMOVED. REMOVE ASSOCIATED CONDUIT AND WIRING BACK TO THE SERVING POWER PANEL.

POWER EQUIPMENT & CIRCUITRY NOT SHOWN IS EXISTING TO REMAIN.



**B**  
**E01**  
SCALE 1/8" = 1'-0"  
0 5 10 20 30  
**ELECTRICAL - NEW WORK PLAN**



**KEY PLAN**  
NO SCALE



OWNER:  
CITY OF CEDAR RAPIDS  
Facilities Maintenance Services  
City of Cedar Rapids 500 15th Ave SW, Cedar Rapids, Iowa 52404

ENGINEER OF RECORD:  
**IE** INNOVATIVE ENGINEERS, INC.  
2871 Heinz Rd, Suite B, Iowa City, IA 52240  
T 319.855.4115 | F 319.351.0070  
www.InnovativeEngineersinc.com

**CITY OF CEDAR RAPIDS  
BENDER POOL HVAC PROJECT  
CEDAR RAPIDS, IOWA  
PROJECT # 3602203-01**

DESIGNED BY: MNA  
DRAWN BY: JJH  
CHECKED BY: MNA  
DOCUMENT DATE: 07-17-2018  
PROJECT NO.: 18-101213  
CLIENT NO.:

REVISIONS				
NO.	DATE	DESCRIPTION	BY	DWN
0	07-17-2018	OFB DRAWINGS	MNA	JJH

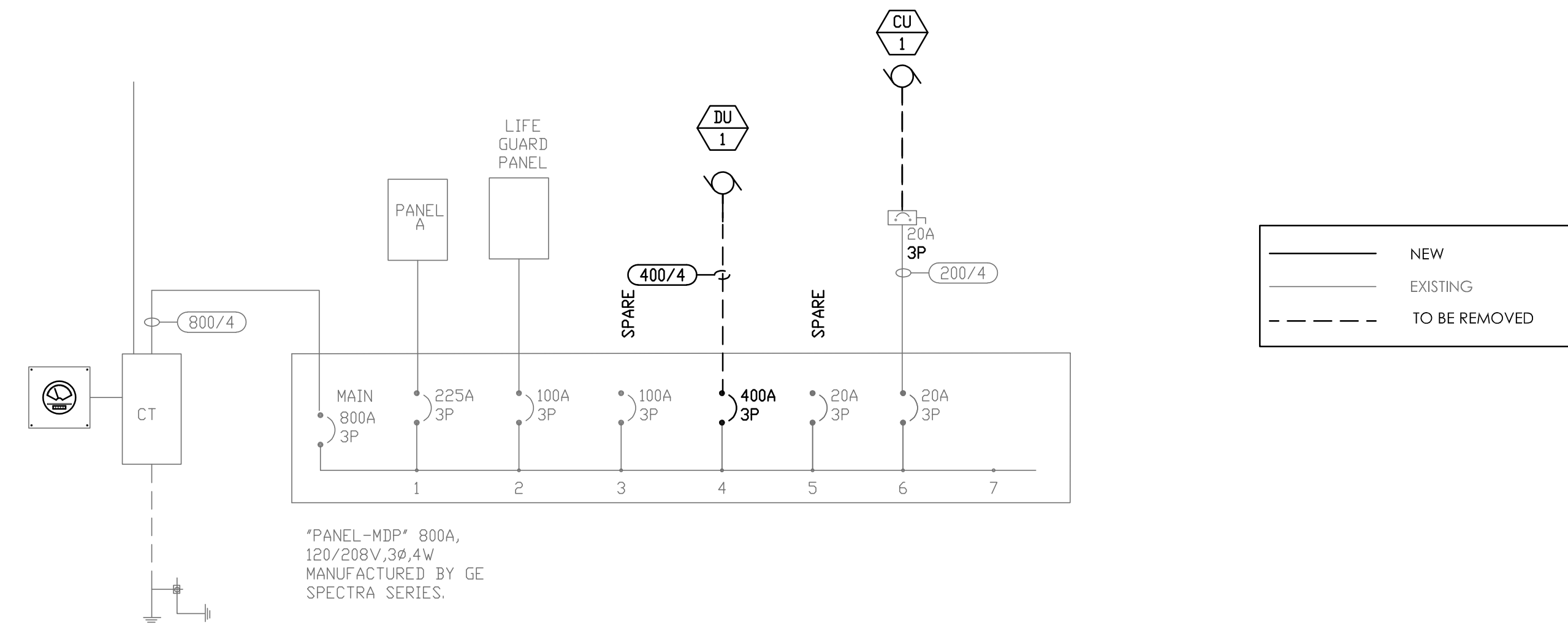
**ELECTRICAL PLAN**

SHEET: **E01** REV: **0**

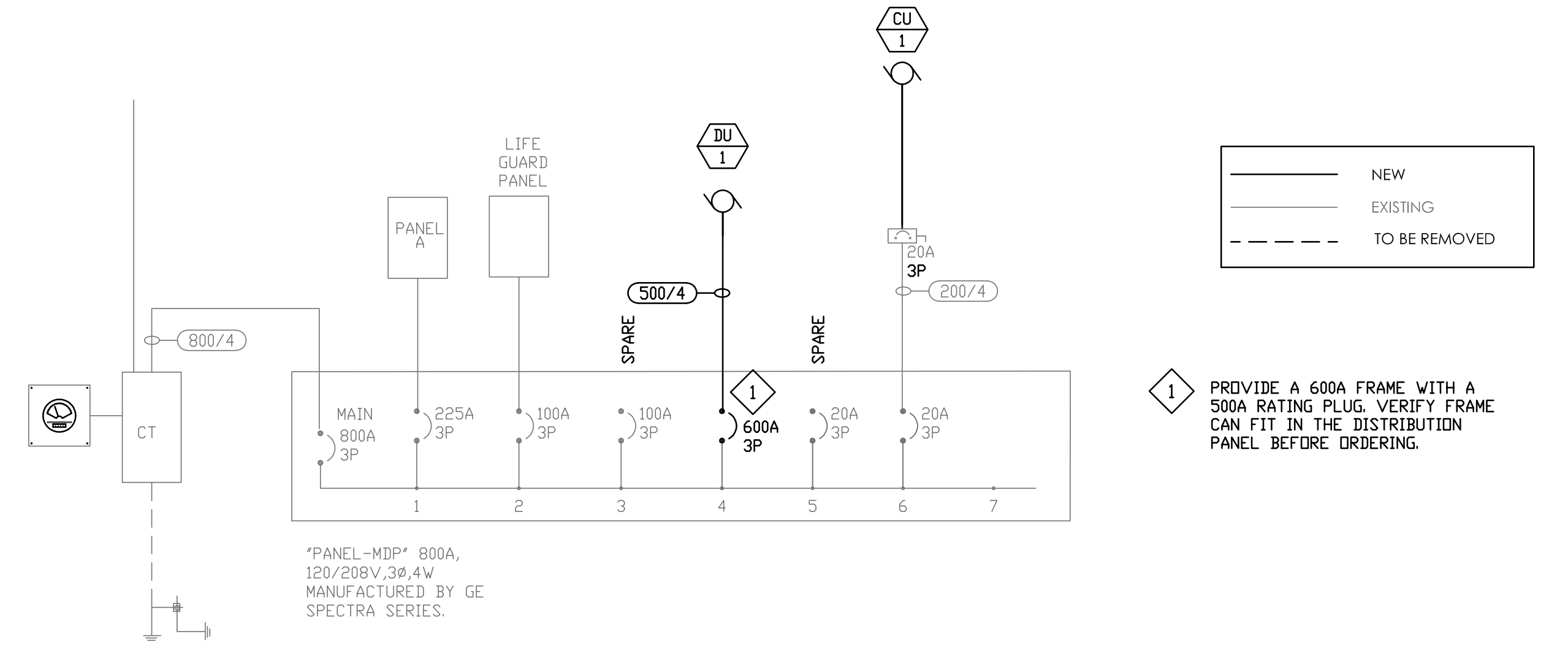
POWER SYSTEMS	
SYMBOL	DESCRIPTION
	DISTRIBUTION PANEL WITH DESIGNATION
	BRANCH PANEL WITH DESIGNATION
	MECHANICAL EQUIPMENT CONNECTION WITH DESIGNATION
	MOTOR WITH DESIGNATION
	DISCONNECT SWITCH
	JUNCTION BOX

**GENERAL ELECTRICAL NOTES**

- ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE (N.E.C.) AND GOVERNING MUNICIPAL, STATE AND LOCAL CODES. ALL MATERIAL SHALL BE NEW AND SHALL BEAR THE U.L. LABEL WHERE APPLICABLE.
- CONTRACTOR SHALL MAKE ALL NECESSARY CUTTING AND DO ALL THE REPATCHING AS NECESSARY FOR THE PROPER EXECUTION OF THIS WORK.
- AFTER COMPLETION OF THE INSTALLATION, THE SYSTEM SHALL TEST FREE FROM SHORT CIRCUITS AND GROUNDS.
- WHERE ELECTRICAL CONDUCTORS ARE INSTALLED IN CONDUIT, THE CONDUIT SHALL COMPLY WITH THE N.E.C. REQUIREMENTS.
- ALL CONDUCTOR SHALL BE COPPER. NO CONDUCTOR SHALL BE SMALLER THAN #12 AWG AND SHALL BE RATED FOR 600VOLTS THWN OR THHN INSULATION. INSTALL A GROUNDING CONDUCTOR WITH ALL CIRCUITS, UNLESS NOTED OTHERWISE, SIZED PER N.E.C.250-122.
- VERIFY BREAKER AND CORRESPONDING WIRE SIZES FOR ALL ELECTRICAL EQUIPMENT. DONOT ORDER MATERIAL BEFORE VERIFYING BREAKER & WIRE SIZE. REPORT ANY DISCREPANCY IMMEDIATELY TO THE ENGINEER OF RECORD.
- VERIFY AVAILABLE INTERRUPTING CURRENT(AIC) WITH POWER COMPANY. EQUIPMENT AIC RATING MUST BE LARGER THAN THE POWER COMPANY AIC OR MUST BE PROTECTED ON THE LINE SIDE WITH A CURRENT LIMITING DEVICE.
- SAFETY SWITCHES SHALL BE SQUARE 'D', GENERAL ELECTRIC, OR WESTINGHOUSE, FUSED OR NON-FUSED AND SIZED AS INDICATED. NEMA 3R WHEN EXPOSED TO WEATHER
- PANELS SHALL BE SQUARE 'D', GENERAL ELECTRIC OR EQUAL, TYPE AND NUMBER OF BREAKERS AS INDICATED ON PANEL SCHEDULE. STENCIL PANEL DESIGNATION ON INSIDE OF PANEL. ALL TWO-POLE BREAKERS SHALL BE COMMON TRIP. PROVIDE TYPE WRITTEN SCHEDULE IN EACH LOAD CENTERS. CONNECTION TO MAIN BUS SHALL BE WITH BURNDY ANNULAR COMPRESSION LUGS.
- ALL EXTERIOR ELECTRICAL EQUIPMENT SHALL BE ANCHORED TO COMPLY WITH LOCAL CODE FOR WIND RESISTANCE.
- IT IS NOT THE INTENT OF THESE PLANS TO SHOW EVERY MINOR DETAIL OF CONSTRUCTION. THE CONTRACTOR IS EXPECTED TO FURNISH AND INSTALL ALL ITEMS FOR A COMPLETE ELECTRICAL SYSTEM AND PROVIDE ALL REQUIREMENTS NECESSARY FOR EQUIPMENT TO BE PLACED IN PROPER WORKING ORDER.
- ALL WORK SHALL BE PERFORMED BY A LICENSED ELECTRICAL CONTRACTOR IN A FIRST CLASS WORKMANLIKE MANNER. THE COMPLETED SYSTEM SHALL BE FULLY OPERATIVE AND ACCEPTED BY THE OWNER.
- LOAD DATA IS BASED ON INFORMATION GIVEN ENGINEER AT TIME OF DESIGN. VERIFY ALL EQUIPMENT AND PANEL SIZES BEFORE ORDERING AND BEFORE INSTALLATION.
- ALL BRANCH CIRCUITS SHALL HAVE GROUND CONDUCTORS.
- THE ELECTRICAL CONTRACTOR SHALL PROVIDE, IF REQUIRED, ADJUSTMENTS (±) 6"-0" IN THE LOCATION OF ALL SYSTEM DEVICES, FIXTURES, OUTLETS, PANELS, ETC. IN ORDER TO EXPEDITE THE ELECTRICAL WORK. THE POSITION OF ALL WORK AS SHOWN IS INTENDED TO BE FIXED AND IN THE PROPER LOCATION. SUCH REQUIRED ADJUSTMENT SHALL BE DETERMINED BY THE A/E.
- PROVIDE SEPARATE NEUTRAL FOR EACH BRANCH CIRCUIT PHASE CONDUCTOR.



**EXISTING ELECTRICAL ONE-LINE DIAGRAM**  
NTS



**NEW ELECTRICAL ONE-LINE DIAGRAM**  
NTS

**1** PROVIDE A 600A FRAME WITH A 500A RATING PLUG. VERIFY FRAME CAN FIT IN THE DISTRIBUTION PANEL BEFORE ORDERING.



OWNER:  
CITY OF CEDAR RAPIDS  
Facilities Maintenance Services  
City of Cedar Rapids 500 15th Ave SW, Cedar Rapids, Iowa 52404

ENGINEER OF RECORD:  
**IEI INNOVATIVE ENGINEERS, INC.**  
2871 Heinz Rd, Suite B, Iowa City, IA 52240  
T 319.855.4115 | F 319.351.0070  
www.InnovativeEngineersInc.com

**CITY OF CEDAR RAPIDS  
BENDER POOL HVAC PROJECT  
CEDAR RAPIDS, IOWA  
PROJECT # 3602203-01**

DESIGNED BY: MNA  
DRAWN BY: JJH  
CHECKED BY: MNA  
DOCUMENT DATE: 07-17-2018  
PROJECT NO.: 18-101213  
CLIENT NO.:

REVISIONS				
NO.	DATE	DESCRIPTION	BY	DWN
0	07-17-2018	OFB DRAWINGS	MNA	JJH

**ELECTRICAL ONE-LINE & NOTES**

SHEET: **E02** REV: **0**